



Selection Guide

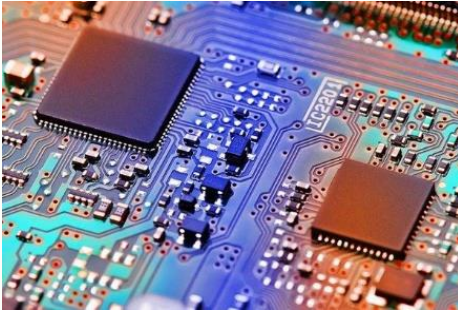
DC/DC

AC/DC

PMIC

Battery

Module



INDUSTRY 4.0



Lighting

Backlighting

Power Switch

ESD

Sensor

Motor

LDO

Audio

Gauge

BMS

Q2 2025



“

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The main products include: DC/DC, AC/DC, PMIC, LED lighting, BMS, light sensor, motor driver, audio power amplifier, power module, protection switch, Energy measurement, metering and signal chains solutions.

Silergy has the industry-leading process technology to design innovative mixed-signal and analog IC. Our products are widely used in automotive, industrial, consumer, computing and telecom equipment. We have always been committed to providing our customers with better performance and higher reliability analog IC.

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DC/DC

Single Output Step Down (Buck) Converter V_{IN} Max < 7V

Part Number	V_{IN}		I_{OUT} (Max) (A)	f_{SW} (MHz)	V_{OUT} (Min) (V)	Voltage Accuracy	MOSFET (Ron H/L) (mΩ)	Quiescent Current (μA)	Package	Feature/ Special Function
	Min (V)	Max (V)								
SY8018ADFC	2.5	5.5	0.45	/	0.6	±2%	400/200	1.5	DFN2×2-8	Power Good Indicator, Ultra Low Quiescent Current
SY8851DFC	2.2	5.5	0.5	1	1.2	±1.5%	280/120	0.4	DFN2×2-8	Power Good Indicator, Output Auto Discharge
SY8078BDTC	1.85	5.5	0.6	3	0.4	±2%	350/250	40	DFN1.45×1-6	
SY8088IAAC	2.5	5.5	1	1.5	0.6	±1.5%	260/170	50	SOT23-5	Output Auto Discharge
SY8088A1AAC	2.5	5.5	1	1.5	0.6	±1.5%	260/160	50	SOT23-5	
SY8080AAC	2.5	5.5	1	3	0.6	±2%	270/160	40	SOT23-5	
SY8077AAC	2.5	6.5	1	1.5	0.6	±2%	260/170	40	SOT23-5	
SY8891ARC	2.5	5.5	1	1.5	0.6	±1.5%	170/100	55	SOT563	Power Good Indicator, Hic-cup SCP, Auto Discharge
SY8891EARC	2.5	5.5	1	1.5	0.6	±1.5%	170/100	/	SOT563	Power Good Indicator, FCCM, Hic-cup SCP, Auto Discharge
SY8061IDEC	2.5	5.5	1	1.5	0.6	±1.5%	220/130	50	DFN2×2-6	Auto Discharge
SY8081DQC	2.5	5.5	1	2.5	0.6	±2%	230/150	40	DFN1.5×1.5-6	Output Auto Discharge
SY8871BDFC	2.4	6	1	1	1.2	±1.5%	300/130	400nA@STB=0 15μA @STB=1	DFN2×2-8	Power Good Indicator, ultra low I_Q , Hic-cup SCP, Auto Discharge
SY8841ARC	2.6	5.5	1.5	2		±1%	180/100	55	SOT563	Output Auto Discharge
SY8842QWC	2.6	5.5	1.5	2	0.6	±1%	180/100	55	QFN1.5×1.5-7	Power Good Indicator, Auto Discharge
SY8089A1AAC	2.7	5.5	2	1.5	0.6	±1.5%	130/85	50	SOT23-5	Output Auto Discharge
SY8089IAAC	2.5	5.5	2	1.5	0.6	±1.5%	130/85	50	SOT23-5	Latch-off Protection
SY8089E1AAC	2.5	5.5	2	1.5	0.6	±1.5%	130/85	/	SOT23-5	Hic-cup SCP, Auto Discharge
SY8002A1ABC	2.5	5.5	2	1.5	0.6	±1.5%	130/85	50	SOT23-6	Power Good Indicator, Hic-cup Protection
SY8002IABC	2.5	5.5	2	1.5	0.6	±1.5%	130/85	50	SOT23-6	Power Good Indicator, Latch-off Protection
SY8002E1ABC	2.5	5.5	2	1.5	0.6	±1.5%	130/85	/	SOT23-6	Power Good Indicator, Hic-cup SCP, Output Auto Discharge
SY8032IABC	2.7	5.5	2	1.5	0.6	±1.5%	130/85	50	SOT23-6	Power Good Indicator
SY8892ARC	2.5	5.5	2	1.5	0.6	±1.5%	125/75	55	SOT563	Power Good Indicator, Hic-cup SCP, Auto-discharge
SY8892EARC	2.5	5.5	2	1.5	0.6	±1.5%	125/75	/	SOT563	Power Good Indicator, Hic-cup SCP, Forced PWM, Auto Discharge
SY80072ART	2.5	5.5	2	1.5	0.6	±1.5% (-40~125°C)	45/35	21	SOT563	PFM Mode for Light Load Efficiency, Auto Discharge, ultra low I_Q
SY80073ART	2.5	5.5	3	1.5	0.6	±1.5% (-40~125°C)	45/35	21	SOT563	PFM Mode for Light Load Efficiency, Auto Discharge, ultra low I_Q
SY80083ABT	2.5	5.5	3	1	0.6	±1.5%	85/60	55	SOT23-6	W/I PG, PFM, 100% Dropout Operation
SY80063ABC	2.5	5.5	3	1	0.6	±1.5%	85/60	55	SOT23-6	Power Good Indicator, Latch off Protection, Auto Discharge
SY80063AABC	2.5	5.5	3	1	0.6	±1.5%	85/60	55	SOT23-6	Power Good Indicator, Hic-cup SCP, Auto Discharge
SY80063EABC	2.5	5.5	3	1	0.6	±1.5%	85/60	/	SOT23-6	Power Good Indicator, Hic-cup SCP, Forced PWM, Auto Discharge

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Single Output Step Down (Buck) Converter V_{IN} Max < 7V

Part Number	V_{IN}		I_{OUT} (Max) (A)	f_{SW} (MHz)	V_{OUT} (Min) (V)	Voltage Accuracy	MOSFET (R_{on} H/L) (m Ω)	Quiescent Current (μ A)	Package	Feature/ Special Function
Min (V)	Max (V)									
NEW SY80033DFD	2.5	5.5	3	1	0.6	±1.5%	85/60	55	DFN2×2-8	Power Good Indicator, Auto-Recovery Protection, Output Auto Discharge
NEW SY80033LDFD	2.5	5.5	3	1	0.6	±1.5%	85/60	55	DFN2×2-8	Power Good Indicator, Latch-off Protection, Output Auto Discharge
SY8883DFC	2.5	5.5	3	1	0.6	±1.5%	85/60	55	DFN2×2-8	Power Good Indicator, Latch off Protection, Auto Discharge
SY8883ADFC	2.5	5.5	3	1	0.6	±1.5%	85/60	55	DFN2×2-8	Power Good Indicator, Hic-cup SCP, Auto Discharge
SY8883EDFC	2.5	5.5	3	1	0.6	±1.5%	85/60	/	DFN2×2-8	Power Good Indicator, Hic-cup SCP, Forced PWM, Auto Discharge
SY8003CDFC	2.7	5.5	3	3	0.6	±2%	100/80	55	DFN2×2-8	Power Good Indicator
SY8893ARC	2.5	5.5	3	1.2	0.6	±1.5%	100/60	50	SOT563	Power Good Indicator, Output Auto Discharge
SY8893LARC	2.5	5.5	3	1.2	0.6	±1.5%	100/60	50	SOT563	Power Good Indicator, Latch-off Protection, Output Auto Discharge
SY8893EARC	2.5	5.5	3	1.2	0.6	±1.5%	100/60	/	SOT563	Power Good Indicator, Hic-cup SCP, Forced PWM, Output Auto Discharge
SY8053DBC	2.5	5.5	3	1	0.6	±1.5%	85/60	55	DFN3×3-10	Power Good Indicator, Latch off Protection, Auto Discharge
NEW SY80083AAT	2.5	5.5	3	1	0.6	±1.5%	85/60	55	SOT23-5	Auto-Recovery Protection, Output Auto Discharge, MSL1
SY8843QWC	2.7	5.5	3	1.5	0.6	±1%	85/50	65	QFN1.5×1.5-7	Power Good Indicator, Auto Discharge
SY8843LQWC	2.7	5.5	3	1.5	0.6	±1%	85/50	65	QFN1.5×1.5-7	Power Good Indicator, Auto Discharge
SY8859QWC	2.7	5.5	3	1	0.6	±1%	85/50	55	QFN1.5×1.5-7	Power Good Indicator, Light Load Mode Selection
SY8859LQWC	2.7	5.5	3	1	0.6	±1%	85/50	55	QFN1.5×1.5-7	Power Good Indicator, Light Load Mode Selection
SY80053DQC	2.4	5.5	3	2.2	0.6	±1%	35/25	16	DFN1.5×1.5-6	Power Good Indicator, Hic-cup SCP/OVP/OTP, Auto Discharge, PFM Mode
NEW SY80053BDQD	2.5	5.5	3	2.2	0.45	±1%	35/25	16	DFN1.5×1.5-6	Power Good Indicator, Auto-Recovery Protection, Output Auto-Discharge, Support 0.5V Output for LPDDR5
SY80003DQD	2.5	5.5	3	2.2	0.6	±1%	38/30	21	DFN1.5×1.5-6	Power Good Indicator, Hic-cup SCP/OVP/OTP, Auto Discharge
SY80003EDQD	2.5	5.5	3	2.2	0.6	±1%	38/30	/	DFN1.5×1.5-6	Power Good Indicator, Hic-cup SCP, Auto-recovery OVP/OTP, Forced CCM, Output Auto Discharge
SY80054DQC	2.4	5.5	4	2.2	0.6	±1%	35/25	16	DFN1.5×1.5-6	Power Good Indicator, Hic-cup SCP/OVP/OTP, Auto Discharge, PFM Mode
SY80004DQD	2.5	5.5	4	2.2	0.6	±1%	38/30	21	DFN1.5×1.5-6	Power Good Indicator, Hic-cup SCP/OVP/OTP, Auto Discharge
SY8884ADFC	2.5	5.5	4	1	0.6	±1.5%	85/60	55	DFN2×2-8	Power Good Indicator, Hic-cup SCP, Auto Discharge
SY8824BAIC	2.6	5.5	4	1.8	/	±1%	70/40	80	TSOT23-8	Programmable Output Voltage: 0.7625V to 1.55V in 12.5mV Steps; Default 1.15V Output Voltage
SY8824CAIC	2.6	5.5	4	1.8	/	±1%	70/40	80	TSOT23-8	Programmable Output Voltage: 0.7625V to 1.55V in 12.5mV Steps; Default 1.05V Output Voltage
SY8047QDC	2.5	5.5	4	1.25	0.6	±1.5%	75/55	18	QFN3×3-16	Power Good Indicator
SY8057DQDC	2.5	5.5	4	1	/	±1%	70/40	30	QFN3×3-16	Power Good Indicator, VID control, Latch OVP/SCP/OTP, 4A Continuous, 7A Peak Load Current
SY8057FQDC	2.5	5.5	4	1	/	±1%	70/40	30	QFN3×3-16	Power Good Indicator, VID control, Latch-off OVP/SCP/OTP, 4A Continuous, 7A Peak Load Current
SY8856DFC	2.7	5.5	4	3	0.6	±1.5%	35/15	60	DFN2×2-8	Power Good Indicator

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Single Output Step Down (Buck) Converter V_{IN} Max < 7V

Part Number	V_{IN}		I_{OUT} (Max) (A)	f_{SW} (MHz)	V_{OUT} (Min) (V)	Voltage Accuracy	MOSFET (Ron H/L) (mΩ)	Quiescent Current (μA)	Package	Feature/ Special Function
Min (V)	Max (V)									
SY80704SYC	2.5	6	4	2.4	0.6	±1.5% (-40~125°C)	25/17	23	DFN2×2-7	Auto Discharge, hic-cup SCP
SY8825QUC	2.5	5.5	5	2	0.6	±1.5%	55/35	18	QFN2×1.5-8	Power Good Indicator
SY80706SYC	2.5	6	6	1	0.6	±1.5% (-40~125°C)	22/12	23	DFN2×2-7	Auto Discharge, hic-cup SCP
SY8036DBC	2.7	5.5	6	1	0.6	±1.5%	50/40	150	DFN3×3-10	Power Good Indicator, EXT SS
SY8816DFC	2.75	6	6	1.2	0.6	±1.5%	35/15	60	DFN2×2-8	Power Good Indicator, OCP/UVLO/OTP Protections
SY8876DFC	2.7	6.5	6	1.2	0.6	±1.5%	38/15	60	DFN2×2-8	Power Good Indicator, OCP/UVLO/OTP
SY8827KPKC	2.5	5.5	6	2.4		±1.5%	28/17	65	CSP1.56×1.96-20	I ² C Programmable V_{OUT} : 0.7125V~1.5V in 12.5mV steps, ADDR: 1000001x
SY8810QQC	2.7	5.5	12	1.5		±1%	12/6	95	QFN3×3-12	Programmable Output Voltage: 0.6V to 1.5V in 11mV steps
SY8030LDEC*	2.5	5.5	0.6	2.25	0.6	±1.5%	300/200	50	DFN2×2-6	
SY8088AAC*	2.5	5.5	1	1.5	0.6	±2%	260/170	40	SOT23-5	
SY8088LACC*	2.5	5.5	1	1.5	0.6	±2%	260/170	40	TSOT23-5	
SY8010DEC*	2.5	5.5	1	1.5	0.6	±1.5%	200/150	50	DFN2×2-6	
SY8011ADQC*	2.5	5.5	1	1.5	0.6	±2%	230/150	40	DFN1.5×1.5-6	
SY8061ADEC*	2.5	5.5	1	1.5	0.6	±2%	260/170	60	DFN2×2-6	Auto Discharge
SY8065LABC*	2.5	5.5	1	1.5	0.6	±2%	250/200	90	SOT23-6	Power Good Indicator
SY8071AAC*	2.5	5.5	1	2	0.6	±2%	260/170	40	SOT23-5	
SY8011BDQC*	2.5	5.5	1.5	1.5	0.6	±2%	210/130	60	DFN1.5×1.5-6	
SY8030DEC*	2.5	5.5	1.5	2.25	0.6	±1.5%	200/150	50	DFN2×2-6	Ext Mode
SY8002EABC*	2.7	5.5	2	1	0.6	±2%	110/80	/	SOT23-6	Power Good Indicator, Force PWM
SY8003LDFC*	2.7	5.5	2	1	0.6	±2%	120/90	55	DFN2×2-8	Power Good Indicator
SY8079PABC*	2.7	6.5	2	1	0.6	±2%	125/95	55	SOT23-6	Power Good Indicator, Non-latch off OVP
SY8079AAC*	2.7	6.5	2	1	0.6	±2%	125/95	55	SOT23-5	3A Peak Load Current
SY8089AAAC*	2.7	5.5	2	1	0.6	±2%	110/80	55	SOT23-5	Non Latch off Protection
SY8089AAC*	2.7	5.5	2	1	0.6	±2%	110/80	55	SOT23-5	Latch off Protection
SY8032ABC*	2.7	5.5	2.5	1	0.6	±2%	100/80	80	SOT23-6	Power Good Indicator
SY8032EABC*	2.7	5.5	2.5	1	0.6	±2%	100/80	/	SOT23-6	Power Good Indicator, Force CCM
SY8003DFC*	2.7	5.5	3	1	0.6	±2%	110/80	55	DFN2×2-8	Power Good Indicator, Latch SCP/OVP

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Single Output Step Down (Buck) Converter V_{IN} Max < 7V

Part Number	V_{IN}		I_{OUT} (Max) (A)	f_{SW} (MHz)	V_{OUT} (Min) (V)	Voltage Accuracy	MOSFET (R_{on} H/L) (m Ω)	Quiescent Current (μ A)	Package	Feature/ Special Function
	Min (V)	Max (V)								
SY8003EDFC*	2.7	5.5	3	1	0.6	$\pm 2\%$	110/80	-	DFN2 $\times$ 2-8	Power Good Indicator, Force CCM
SY8003FDFC*	2.7	5.5	3	1	0.6	$\pm 1.5\%$	110/80	/	DFN2 $\times$ 2-8	Power Good Indicator
SY8003GDFC*	2.7	5.5	3	1	0.6	$\pm 1.5\%$	110/80	55	DFN2 $\times$ 2-8	Power Good Indicator, Latch SCP/OVP
SY8043AQDC*	2.7	5.5	3	1.25	0.6	$\pm 2\%$	75/55	18	DFN3 $\times$ 3-16	Power Good Indicator
SY8047LQDC*	2.5	5.5	3	1.25	0.6	$\pm 2\%$	75/55	18	QFN3 $\times$ 3-16	Power Good Indicator
SY8823QUC*	2.5	5.5	3.5	2	0.6	$\pm 1.5\%$	55/35	18	QFN2 $\times$ 1.5-8	Power Good Indicator
SY8057QDC*	2.5	5.5	4	1	/	/	70/40	30	QFN3 $\times$ 3-16	Power Good Indicator, VID control, Latch OVP/SCP/OTP
SY8057BQDC*	2.5	5.5	4	1	/	$\pm 1\%$	70/40	30	QFN3 $\times$ 3-16	Power Good Indicator, VID control, Latch OVP/SCP/OTP, 4A Continuous, 7A Peak Load Current

* Not recommended for new design

Dual Output Step Down (Buck) Converter V_{IN} Max < 7V

Part Number	V_{IN}		I_{OUT} (Max) (A)	f_{SW} (MHz)	V_{OUT} (Min) (V)	Voltage Accuracy	MOSFET (R_{on} H/L) (m Ω)	Quiescent Current (μ A)	Package	Feature/ Special Function
	Min (V)	Max (V)								
SY8092ADBC	2.5	5.5	1A x2	2	0.6	$\pm 2\%$	220/180	35	DFN3 $\times$ 3-10	Individual EN
SY8831AIC	2.5	5.5	1A x2	1.5	0.6	$\pm 2\%$	260/180	45/55	TSOT23-8	Individual EN
SY8832AIC	2.5	5.5	2A x2	2	0.6	$\pm 2\%$	125/100	35/45	TSOT23-8	Individual EN
SY8024DCC	2.7	5.5	3A x2	1.5	0.6	$\pm 2\%$	105/85	80	DFN3 $\times$ 3-12	Individual EN
SY8821SAC	2.5	5.5	1A/1.5A	2	0.6	$\pm 2\%$	125/100	45	DFN2 $\times$ 1.5-8	Individual EN
SY8821BSAC	2.3	5.5	1Ax2	2	0.6	$\pm 2\%$	125/100	45	DFN2 $\times$ 1.5-8	Individual EN

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Single Output Step down (Buck) Converter 16V <V_{IN} Max ≤18V

Part Number	V _{IN}		I _{OUT} (Max) (A)	f _{SW} (MHz)	V _{OUT} (Min) (V)	Voltage Accuracy	MOSFET (Ron H/L) (mΩ)	Quiescent Current (μA)	Package	Feature/ Special Function
	Min (V)	Max (V)								
SY8121B1ABC	4.5	18	2	1.4	0.6	±1.5%	130/105	/	SOT23-6	Hic-cup SCP, FCCM
SY8121C1ABC	4.2	18	2	1.2	0.6	±1.5%	130/105	250	SOT23-6	Hic-cup SCP
SY81057ABT	4.5	18	2	0.5	0.6	±1.5%	130/105	200	SOT23-6	PFM, hic-cup UVP, auto-recovery OTP, Support smooth startup with pre-biased output
SY81057EABT	4.5	18	2	0.5	0.6	±1.5%	130/105	200	SOT23-6	FCCM, hic-cup UVP, auto-recovery OTP, Support smooth startup with pre-biased output
NEW SY81057TABT	4.5	18	2	0.5	0.765	±1%	130/105	200	SOT23-6	Auto-recovery Protection, Cycle by Cycle Bottom and Peak Current Limit, Auto-Recovery Protection, MSL1
SY81102ABT	4.5	18	2	0.5	0.6	±1%	130/105	200	SOT23-6	Hic-cup SCP, Auto-recovery OVP/OTP
NEW SY81102BABT	4.5	18	2	1.4	0.6	±1.5%	130/105	NA	SOT23-6	FCCM, Auto-recovery Protection, Cycle by Cycle Bottom and Peak Current Limit, Auto-Recovery Protection, Stable with 10μF C _{OUT} , MSL1
SY81102CABT	4.5	18	2	1.2	0.6	±1.5%	130/105	200	SOT23-6	Smooth Pre-bias Startup, PFM, Stable with 10μF C _{OUT}
SY81102EABT	4.5	18	2	0.5	0.6	±1%	130/105	/	SOT23-6	Hic-cup SCP, Auto-recovery OVP/OTP, Forced CCM
SY81103ABT	4.5	18	3	0.5	0.6	±1.5%	80/40	200	SOT23-6	Hic-cup SCP
SY81103EABT	4.5	18	3	0.5	0.6	±1.5%	80/40	200	SOT23-6	FCCM, hic-cup UVP, auto-recovery OTP, Support smooth startup with pre-biased output
SY8113B1ADC	4.5	18	3	1.4	0.6	±1.5%	80/40	/	TSOT23-6	Hic-cup SCP
SY8113C1ADC	4.2	18	3	1.2	0.6	±1.5%	80/40	270	TSOT23-6	Hic-cup SCP, Output Auto Discharge
SY8113E1ADC	4.5	18	3	0.5	0.6	±1.5%	80/40	/	TSOT23-6	FCCM, Hic-cup SCP
SY8113DAIC	4.5	18	3	0.5	0.6	±1.5%	80/40	100	TSOT23-8	Power Good Indicator, Hic-cup SCP, EXT SS
SY81003EADC	4.2	18	3	0.6	0.6	±1.0%	80/40	/	TSOT23-6	Hic-cup SCP, Output auto discharge
SY81058ABT	4.5	18	3	0.5	0.6	±1.5%	80/40	200	SOT23-6	Hic-cup SCP
NEW SY81058EABT	4.5	18	3	0.5	0.6	±1.5%	80/40	NA	SOT23-6	MSL1, FCCM, Auto-recovery Protection, Cycle by Cycle Bottom and Peak Current Limit, Auto-Recovery Protection, Stable with 10μF C _{OUT} , MSL1
NEW SY81058TABT	4.5	18	3	0.5	0.765	±1%	80/40	200	SOT23-6	Auto-recovery Protection, Cycle by Cycle Bottom and Peak Current Limit, Auto-Recovery Protection, MSL1
SY81103BABT	4.5	18	3	1.2	0.6	±1.5%	80/40	/	SOT23-6	Smooth Pre-bias Startup, FCCM, Stable with 10μF C _{OUT}
SY81103CABT	4.5	18	3	1.2	0.6	±1.5%	80/40	200	SOT23-6	Smooth Pre-bias Startup, PFM, Stable with 10μF C _{OUT}
SY8104IADC	4.2	18	4	0.5	0.6	±1.5%	55/36	200	TSOT23-6	Hic-cup SCP
SY8105IADC	4.5	18	5	0.5	0.6	±1.5%	41/27	250	TSOT23-6	
SY8156IADC	4.5	18	6	0.4	0.6	±1.0%	29/19	200	TSOT23-6	Output Auto Discharge, SCP
SY81050RRC	2.85	18	12	0.5/ 0.75/1/ 1.25	0.6	±1.0%	15/4.5	540	QFN3×4-14	Power Good Indicator, selectable Hic-cup/Latch-off SCP, 12A Continuous/15A Peak Current Capability, Programmable Soft-start Time
SY81012VDC	2.7	16	12	0.6/ 0.8/1	0.6	±1.0% (-40~125°C)	12.6/4.3	650	QFN3×4-19	Power Good Indicator, Remote sense, Seamless ILMT, Pre-bias startup, FCCM/PFM, Hic-cup SCP, Programmable Soft-start Time
NEW SY81047BWZQ	4.5	17	12	0.4/0.8 /1.2	0.6	±1.0%	9.8/4.5	600	QFN3.5×3.5-18	Power Good Indicator, pre-bias startup, FCCM/PFM, Ultra fast load transient
SY81020VDC	2.9	16	20	0.6/ 0.8/1	0.6	±1.0% (-40~125°C)	7.5/2.4	550	QFN3×4-19	Power good Indicator, Remote sense, Seamless ILMT, Pre-bias startup, FCCM/PFM, Hic-cup SCP, Programmable Soft-start Time
SY8120IABC*	4.2	18	2	0.5	0.6	±1.5%	130/105	200	SOT23-6	Hic-cup SCP
SY81052ABC*	4.2	18	2	0.5	0.6	±1.5%	130/105	200	SOT23-6	Hic-cup SCP, Low ripple in PFM

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Single Output Step down (Buck) Converter 16V < V_{IN} Max ≤18V

Part Number	Min (V)	Max (V)	I _{OUT} (Max) (A)	f _{SW} (MHz)	V _{OUT} (Min) (V)	Voltage Accuracy	MOSFET (Ron H/L) (mΩ)	Quiescent Current (μA)	Package	Feature/ Special Function
SY8120E1ABC*	4.5	18	2	0.5	0.6	±1.5%	130/105	/	SOT23-6	FCCM, Hic-cup SCP
SY8120B1ABC*	4.5	18	2	0.5	0.6	±2.0%	130/120	400	SOT23-6	
SY8121ABC*	4.5	18	2	1	0.6	±2.0%	170/160	400	SOT23-6	
SY8121BABC*	4.35	18	2	1.2	0.6	±2.0%	170/160	/	SOT23-6	1.2MHz, FCCM
SY8121CABC*	4.5	18	2	1.2	0.6	±2.0%	130/120	400	SOT23-6	
SY8121DEC*	4.5	18	2	1	0.6	±2.0%	170/160	400	DFN2×2-6	
SY8113BADC*	4.5	18	3	0.5	0.6	±1.5%	80/40	100	TSOT23-6	Hic-cup SCP
SY8113CADC*	4.5	18	3	1	0.6	±1.5%	80/40	100	TSOT23-6	Hic-cup SCP
SY8113GADC*	4.5	18	3	0.5	0.6	±1.5%	80/40	100	TSOT23-6	Hic-cup SCP, FCCM
SY8113IADC*	4.2	18	3	0.5	0.6	±1.5%	80/40	200	TSOT23-6	Hic-cup SCP
SY81003ADC*	4.2	18	3	0.5	0.6	±1.0%	80/40	250	TSOT23-6	Hic-cup SCP, Output auto discharge
SY8104AADC*	4.5	18	4	0.5	0.6	±1.5%	50/30	100	TSOT23-6	Instant PWM architecture
SY8104ADC*	4.5	18	4	0.5	0.6	±1.5%	50/30	100	TSOT23-6	
SY8105AADC*	4.5	18	5	0.5	0.6	±1.5%	40/20	100	TSOT23-6	Instant PWM architecture
SY8105ADC*	4.5	18	5	0.5	0.6	±1.5%	50/30	100	TSOT23-6	
SY8182QCC*	4	18	12	0.2~1	0.6	±1.0%	18/6	/	QFN4×4-20	Power Good Indicator

* Not recommended for new design

Single Output Step down (Buck) Converter 23V ≤ V_{IN} Max ≤24V

Part Number	Min (V)	Max (V)	I _{OUT} (Max) (A)	f _{SW} (MHz)	V _{OUT} (Min) (V)	Voltage Accuracy	MOSFET (Ron H/L) (mΩ)	Quiescent Current (μA)	Package	Feature/ Special Function
SY8232FAC	4.5	23	2	0.5	0.6	±1.5%	150/110	400	SO8	EXT SS, Hic-cup SCP
SY8233FCC	4.5	23	3	0.5	0.6	±1.5%	130/90	400	SO8E	EXT SS
SY8253ADC	4.5	23	3	0.5	0.6	±1.5%	105/50	100	TSOT23-6	Hic-cup SCP
SY8253AIC	4.5	23	3	0.5	0.6	±1.5%	105/50	100	TSOT23-8	Power Good Indicator, EXT SS, Hic-cup SCP
SY82003ABT	4.5	24	3	0.5	0.6	±1.0%	120/60	130	SOT23-6	PFM, hic-cup UVP, auto-recovery OTP, Support smooth startup with pre-biased output
SY8254RAC	4	23	4	0.6	0.6	±1.0%	85/35	130	QFN3×3-20	Power Good Indicator, Output Discharge, SCP/OVP, UVLO
SY8284RAC	4	23	4	0.5	0.6	±1.0%	85/35	121	QFN3×3-20	Power Good Indicator, Output Discharge, SCP/OVP, UVLO
SY8284BRAC	4	23	4	0.6	Fixed 3.338	±1.0%	85/35	80	QFN3×3-20	Power Good Indicator, Output Discharge, SCP/OVP, UVLO
SY8284CRAC	5.5	23	4	0.6	Fixed 5.1	±1.0%	85/35	115	QFN3×3-20	Power Good Indicator, Output Discharge, SCP/OVP, UVLO
SY8386BRHC	4.5	24	6	0.6	Fixed 3.338	±1.0%	36/18	75	QFN2.5×2.5-16	Power Good Indicator, Latch-off Protection, Output Discharge
SY8386CRHC	5.5	24	6	0.6	Fixed 5.1	±1.0%	36/18	130	QFN2.5×2.5-16	Power Good Indicator, Latch-off Protection, Output Discharge
SY8388ARHC	4	24	8	0.6	0.6	±1.0%	20/10	140	QFN2.5×2.5-16	Power Good Indicator, Hic-cup UVP, Output discharge
SY8388RHC	4.5	24	8	0.5	0.6	±1.0%	30/15	100	QFN2.5×2.5-16	Power Good Indicator, Output Discharge, Latch-off UVP/OVP

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Single Output Step down (Buck) Converter $23V \leq V_{IN}$ Max $\leq 24V$

Part Number	V_{IN} Min (V) Max (V)		I_{OUT} (Max) (A)	f_{SW} (MHz)	V_{OUT} (Min) (V)	Voltage Accuracy	MOSFET (R_{on} H/L) (m Ω)	Quiescent Current (μ A)	Package	Feature/ Special Function
SY8388BRHC	4.5	24	8	0.6	Fixed 3.338	$\pm 1.0\%$	30/15	75	QFN2.5 $\times$ 2.5-16	Power Good Indicator, Latch-off Protection, Auto-discharge
SY83086ARHC	4.5	24	6	0.6	0.6	$\pm 1.0\%$	28/16	190	QFN2.5 $\times$ 2.5-16	Power Good Indicator, Hic-cup SCP, Auto-recovery OVP/OTP, Selectable PFM/FCCM, up to 98% Duty Cycle
SY8388B3RHC	4	24	8	0.6	Fixed 3.338	$\pm 1.0\%$	20/10	85	QFN2.5 $\times$ 2.5-16	Power Good Indicator, Latch-off Protection, Auto-discharge
SY8388C3RHC	5.5	24	8	0.6	Fixed 5.1	$\pm 1.5\%$	20/10	85	QFN2.5 $\times$ 2.5-16	Power Good Indicator, Latch-off Protection, Auto-discharge
SY83088CRHC	5.5	24	8	0.6	Fixed 5.1	$\pm 1.5\%$	20/10	96	QFN2.5 $\times$ 2.5-16	Power Good Indicator, Latch-off Protection, Auto-discharge
SY8388D3RHC	4	24	8	0.5	0.6	$\pm 1\%$	20/10	140	QFN2.5 $\times$ 2.5-16	Power Good Indicator, Latch-off Protection, Auto-discharge
SY83088ARHC	4	24	8	0.6	0.6	$\pm 1\%$	20/10	160	QFN2.5 $\times$ 2.5-16	On Time Stretch, Selectable PFM/FCCM, BYP Input, Current Limit Programmable, Output Discharge, Power Good Indicator, Auto-Recovery Protection
SY8310RAC	4	24	9	0.6	0.6	$\pm 1.0\%$	27/9	85 in S3 125 in S0	QFN3 $\times$ 3-20	Power Good Indicator, 9A continuous/14A peak current capability, Latch-off UVP/OVP, $\pm 1A$ Source/Sink Current Capability of the VTT LDO
SY8310DRAC	4	24	9	0.6	0.6	$\pm 1.0\%$	27/9	65 in S3 110 in S0	QFN3 $\times$ 3-20	Power Good Indicator, 9A Continuous/12A Peak Current Capability, Latch-off UVP/OVP, $\pm 1A$ Source/Sink Current Capability of the VDDQ LDO
SY8371BTMC	4	24	10	0.6	Fixed 3.36	$\pm 1.0\%$	18/8	85	QFN3 $\times$ 4-13	Power Good Indicator, Latch-off Protection, Auto-discharge
SY8370C1TMC	5.5	24	11	0.6	Fixed 5.15	$\pm 1.5\%$	17/7.5	110	QFN3 $\times$ 4-13	Power Good Indicator, Latch-off UVP/OVP, Output Discharge
SY8370TMC	4	24	11	0.5	0.6	$\pm 1.0\%$	17/7.5	140	QFN3 $\times$ 4-13	Power Good Indicator, Latch-off UVP/OVP, Output Discharge
SY8370FTMC	5.5	24	11	0.6	1	$\pm 1.0\%$	17/7.5	180	QFN3 $\times$ 4-13	High Duty Cycle Capable using On-Time Stretch, Power Good Indicator, Auto-Discharge
SY8222DBC*	4.5	23	2	0.5	0.6	$\pm 1.5\%$	150/110	400	DFN3 $\times$ 3-10	Power Good Indicator, EXT SS, Hic-cup SCP
SY8203ADBC*	4.5	23	3	1	0.6	$\pm 1.5\%$	120/85	400	DFN3 $\times$ 3-10	Power Good Indicator, EXT SS
SY8223DBC*	4.5	23	3	0.5	0.6	$\pm 1.5\%$	120/85	400	DFN3 $\times$ 3-10	Power Good Indicator, EXT SS, Hic-cup SCP
SY8286RAC*	4	23	6	0.5	0.6	$\pm 1.0\%$	38/19	120	QFN3 $\times$ 3-20	Power Good Indicator, Output Auto Discharge, Latch-off Protection
SY8286ARAC*	4	23	6	0.6	0.6	$\pm 1.0\%$	38/19	120	QFN3 $\times$ 3-20	Power Good Indicator, Output Auto Discharge, Hic-cup SCP
SY8286BRAC*	4	23	6	0.6	Fixed 3.37	$\pm 1.5\%$	38/19	75	QFN3 $\times$ 3-20	Power Good Indicator, Output Auto Discharge, Latch-off Protection
SY8286CRAC*	5.5	23	6	0.6	Fixed 5.1	$\pm 1.5\%$	38/19	108	QFN3 $\times$ 3-20	Power Good Indicator, Output Auto Discharge, Latch-off Protection
SY8386ARHC*	4.5	24	6	0.6	0.6	$\pm 1.0\%$	38/19	100	QFN2.5 $\times$ 2.5-16	Power Good Indicator, Output Discharge, Hic-cup UVP
SY8386RHC*	4.5	24	6	0.5	0.6	$\pm 1.0\%$	38/19	100	QFN2.5 $\times$ 2.5-16	Power Good Indicator, Output Discharge, Latch-off UVP/OVP/OTP
SY8288ARAC*	4	23	8	0.6	0.6	$\pm 1.0\%$	22/11	120	QFN3 $\times$ 3-20	Power Good Indicator, Output Discharge, Hic-cup SCP
SY8288BRAC*	4	23	8	0.6	Fixed 3.37	$\pm 1.5\%$	22/11	75	QFN3 $\times$ 3-20	Power Good Indicator, Output Discharge, Latch-off UVP/OVP
SY8288CRAC*	5.5	23	8	0.6	Fixed 5.1	$\pm 1.5\%$	22/11	108	QFN3 $\times$ 3-20	Power Good Indicator, Output Discharge, Latch-off UVP/OVP
SY8288RAC*	4	23	8	0.5	0.6	$\pm 1.0\%$	30/10	105	QFN3 $\times$ 3-20	Power Good Indicator, Output Discharge, Latch-off UVP/OVP
SY8270TMC*	4	23	10	0.5	0.6	$\pm 1.0\%$	28/8	100	QFN3 $\times$ 4-13	Power Good Indicator, Latch-off OVP/SCP

* Not recommended for new design

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Single Output Step down (Buck) Converter $27V \leq V_{IN}$ Max $\leq 30V$

Part Number	V _{IN}		I _{OUT} (Max) (A)	f _{SW} (MHz)	V _{OUT} (Min) (V)	Voltage Accuracy	MOSFET (Ron H/L) (mΩ)	Quiescent Current (μA)	Package	Feature/ Special Function
SY8201ABC	4.5	27	1	0.5	0.6	±2.0%	350/150	400	SOT23-6	
SY8201CABC	4.5	27	1	1.15	0.6	±2.0%	350/150	400	SOT23-6	Force CCM
SY8202ADC	4.5	28	1.7	0.5	0.6	±2.0%	350/150	400	TSOT23-6	Cycle-by-cycle Valley Current Limitation
SY82802ABT	4.5	30	2	0.6	0.6	±1%	150/115	250	SOT23-6	Hic-cup SCP, Auto-recovery OVP/OTP
SY82852ABT	4.5	30	2	0.6	0.6	±1%	150/115	250	SOT23-6	Hic-cup SCP, Auto-recovery OVP/OTP
SY8263AIC	4.5	30	3	0.5~2.5	0.6	±1.5%	110/70	19	TSOT23-8	Hic-cup SCP
SY8205DNC	4.5	30	5	0.5	0.6	±1.5%	70/40	200	DFN3×4-12	Power Good Indicator, EXT SS
SY8205FCC	4.5	30	5	0.5	0.6	±1.5%	70/40	200	SO8E	EXT SS
SY8366QNC	4	28	6	0.8	0.6	±1.5%	40/20	100	QFN3x3-10	Power Good Indicator, Latch-off SCP/OVP, 12A Peak Current Capability, Programmable peak current limit
SY8366AQQC	4	28	6	0.8	0.6	±1.5%	40/20	100	QFN3x3-12	Power Good Indicator, Hic-cup SCP/OVP, 12A Peak current capability, programmable peak current limit
SY8366HQQC	4	28	6	0.8	0.6	±1.5%	40/20	100	QFN3×3-12	Power Good Indicator, Hic-cup SCP, 12A Peak current capability, programmable peak current limit
SY8366KQQC	4	28	6	0.5	0.6	±1.5%	40/20	100	QFN3×3-12	Power Good Indicator, Hic-cup SCP, 12A peak current capability, programmable peak current limit
SY83086RHC	4.5	24	6	0.5	0.6	±1%	28/16	190	QFN2.5×2.5-16	Power Good Indicator, Latch-off SCP/OVP/OTP, Selectable P, Programmable Current Limit
SY83086BRHC	4.5	24	6	0.6	Fixed 3.338	±1.0%	28/16	100	QFN2.5×2.5-16	Fixed 3.338V output, with 100mA 3.3V LDO, PFM/USM, latch off UVP/OVP/OTP
SY8368AQQC	4	28	8	0.8	0.6	±1.0%	20/10	100	QFN3×3-12	Power Good Indicator, Hic-cup SCP, 16A Peak current capability, programmable output current limit
SY8368LQQC	4.5	28	8	0.5	0.6	±1.0%	20/10	100	QFN3×3-12	Power Good Indicator, OVP
SY83088BRHC	4	24	8	0.6	Fixed 3.338	±1.0%	20/10	80	QFN2.5×2.5-16	Fixed 3.338V output, with 100mA 3.3V LDO, PFM/USM, latch off UVP/OVP/OTP
SY82808WYQ	4.5	30	8	0.5	0.6	±1.5% full temperat ure	20/10	120	QFN2×3-14	On Time Stretch, Selectable PFM/FCCM, BYP Input, Current Limit Programmable, Output Discharge, Power Good Indicator, Auto-Recovery Protection
SY83088RHC	4	24	8	0.5	0.6	±1.0%	20/10	140	QFN2.5×2.5-16	Selectable PFM/USM, BYP Input, Current Limit Programmable, Output Discharge, Power Good Indicator, Latch-off Protection
SY8213FCC*	4.5	30	3	0.5	0.6	±1.5%	80/50	200	SO8E	Power Good Indicator, EXT SS
SY8210AQVC*	4	28	10	0.6	0.6	±1.5%	25/8	300	QFN4×3-19	Power Good Indicator, Memory power, 10A VDDQ/2A VTT LDO, 16A Peak Current capability, Latch off UVP/OVP, Over temperature alert
SY8210DQVC*	4	28	10	0.6	0.6	±1.5%	25/8	300	QFN4×3-19	Power Good Indicator, Memory power, 10A VDDQ/1A VTT LDO, 16A Peak Current capability, Latch-off UVP/OVP, Over temperature alert

* Not recommended for new design

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Single Output Step down (Buck) Converter $36V \leq V_{IN} \text{ Max} \leq 40V$

Part Number	V_{IN}		I_{OUT}	f_{SW}	V_{OUT} (Min)	Voltage Accuracy	MOSFET (Ron H/L)	Quiescent Current (μA)	Package	Feature/ Special Function
	Min (V)	Max (V)	(Max) (A)	(MHz)	(V)		(m Ω)			
SY8290ABC	5	40	0.3	2	0.6	$\pm 2.0\%$	2000/-	160	SOT23-6	
SY8301ABC	4.5	40	1	2	0.8	$\pm 1.0\%$	380/180	18	SOT23-6	Hic-cup SCP
SY8291ABC	5	40	1.2	0.8	0.6	$\pm 2.0\%$	180/-	160	SOT23-6	
SY8291FABC	9	36	1.2	0.3	0.81	$\pm 2.0\%$	180/-	160	SOT23-6	
SY8292ABC	5	40	2	0.8	0.6	$\pm 2.0\%$	180/-	160	SOT23-6	
SY8293FCC	5	40	3	0.8	0.6	$\pm 2.0\%$	180/-	160	SO8E	
SY8303AAIC	4.5	40	3	0.5~2.5	0.6	$\pm 1.5\%$	110/70	18	TSOT23-8	
SY8308RBC	4	40	8	0.35/ 0.5	0.6	$\pm 1.0\%$	25/12	60	QFN3.5 $\times$ 3.5-20	Power Good Indicator, programmable soft-start & valley current limit, hic-cup SCP, selectable switching frequency

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Single Output Step down (Buck) Converter V_{IN} Max $\geq 50V$

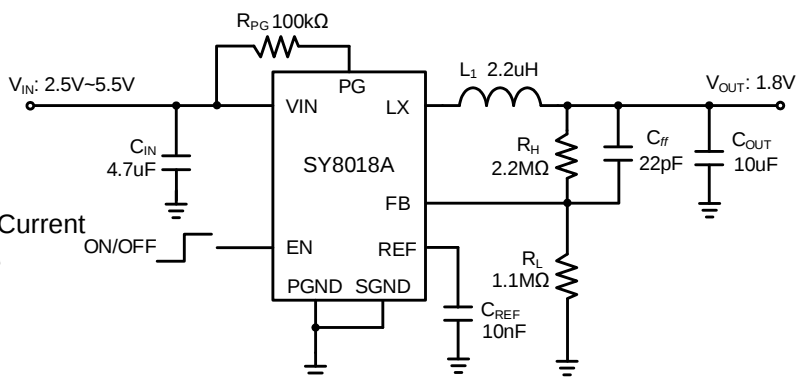
Part Number	V_{IN}		I_{OUT} (Max) (A)	f_{SW} (MHz)	V_{OUT} (Min) (V)	Voltage Accuracy	MOSFET (Ron H/L) (m Ω)	Quiescent Current (μA)	Package	Feature/ Special Function
Min (V)	Max (V)									
SY8401ABC	4.5	50	0.8	1.2	0.6	$\pm 1.0\%$	700/-	150	SOT23-6	
SY8492FCC	4.5	60	2	0.1~1	0.8	$\pm 1.0\%$	175/-	100	SO8E	Power Good Indicator, Hic-cup SCP, Adjustable Switching Frequency
SY8493FCC	4.5	60	3	0.1~0.5	0.8	$\pm 1.0\%$	150/-	100	SO8E	Adjustable switching frequency range: 100kHz ~500kHz, hic-cup SCP
SY89695FCP	4.5	60	5	0.5	0.8	$\pm 2.0\%$	95/-	152	SO8E	Adjustable Switching Frequency range: 100kHz~2500kHz
SY8502AFCC	7	85	1.2	0.2~0.5	1.2	$\pm 2.0\%$	500/240	/	SO8E	Programmable Switching Frequency /FCCM, 1.2A Continuous/1.8A Peak Output Current Capability
SY8502FCC	7	85	1.2	0.2~0.5	1.2	$\pm 2.0\%$	500/240	400	SO8E	Programmable Switching Frequency, 1.2A Continuous/1.8A Peak Output Current Capability
SY8511ADC	4.5	100	0.6	0.2	0.6	$\pm 1.0\%$	1000/-	100	TSOT23-6	Hic-cup SCP
SY89000FCC	7	100	0.6	0.2~0.6	1.225	$\pm 2.0\%$	500/285	/	SO8E	Programmable Switching Frequency
SY8501FCC	7	100	1	0.2~1	1.2	$\pm 2.0\%$	500/240	400	SO8E	Programmable Switching Frequency
SY89001FCC	7	100	1	0.2~0.6	1.225	$\pm 2.0\%$	500/240	/	SO8E	Programmable Switching Frequency
SY8511BADC	4.5	100	1.2	0.2	0.6	$\pm 1.0\%$	1000/-	100	TSOT23-6	Hic-cup SCP
SY8512FCC	4.5	100	2	0.1~1	0.8	$\pm 1.0\%$	175/-	100	SO8E	Power Good Indicator, Hic-cup SCP, Adjustable Switching Frequency
SY8513FCC	4.5	100	3	0.1~0.5	0.8	$\pm 1.0\%$	150/-	100	SO8E	Power Good Indicator, Hic-cup SCP, Adjustable Switching Frequency

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SY8018ADFC - High Efficiency, 1.5 μ A Ultra Low Quiescent Current, Synchronous Step Down Regulator

Features

- 2.5~5.5V Input Voltage Range
- 1.5 μ A Typical Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) : 0.4/0.2 Ω
- Typical 450mA Peak Current Limit
- Internal Soft-start Limits the Inrush Current
- RoHS Compliant and Halogen Free
- Compact Package: DFN2x2-8



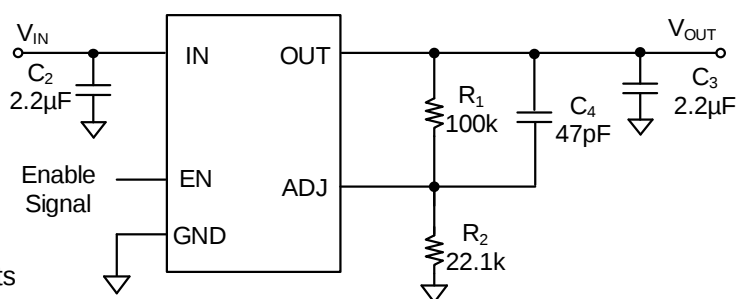
Applications

- Battery Powered Applications
- Consumer and Portable Medical Products
- Personal Care Products

SY8851DFC - 400nA Low-IQ, 5.5V, 500mA, 1MHz Synchronous Step-Down Regulator

Features

- 2.2~5.5V Input Voltage Range
- Ultra Low Quiescent Current Down to 400nA
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 280m Ω /120m Ω
- Instant PWM Control to Achieve Ultra Fast Load Transient Speed.
- High Switching Frequency 1.0MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- Power Good Indicator
- Hiccup Mode for Output Short Circuit Protection
- 100% Drop Out Operation
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: DFN2x2-8



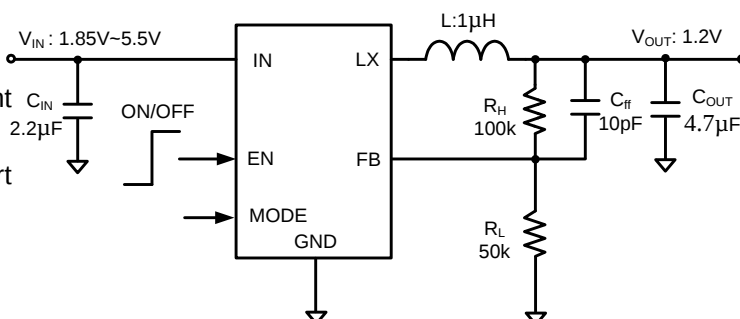
Applications

- Battery Powered Applications
- Consumer and Portable Medical Products
- Personal Ware Products

SY8078BDTC - High Efficiency 3.0MHz, 0.6A Synchronous Step Down Regulator

Features

- 1.85~5.5V input voltage range
- 3MHz switching frequency
- 40uA low quiescent current
- Low $R_{DS(ON)}$ for internal switches (PFET/NFET):
- 350mΩ/250mΩ
- Fixed 100us soft-start time
- PFM/CCM operation mode during light load programmed by MODE pin
- Hic-cup mode protection for hard short condition
- RoHS Compliant and Halogen Free
- Compact package: DFN1.45x1-6



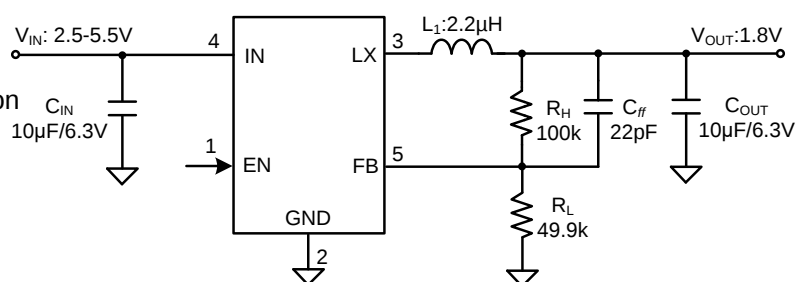
Applications

- Portable Audio, Portable Media
- Cell phones
- Digital Cameras

SY8088IAAC - High-Efficiency, 1.5MHz, 1A Synchronous Step-Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- Up to 1A Output Current
- Low $R_{DS(ON)}$ for Internal Switches: 260mΩ Top, 160mΩ Bottom
- Low 50μA Quiescent Current
- High 1.5MHz Switching Frequency Minimizes Required External Components
- Constant-Off-Time and Peak-Current-Mode Control
- Internal Soft-Start Limits the Inrush Current
- 100% Dropout Operation
- Power-Good Indicator
- Hiccup Mode for Short-Circuit Protection
- Output Auto-Discharge Function
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT23-5



Applications

- Set-Top Box
- USB Dongle
- Media Player
- Smart phone

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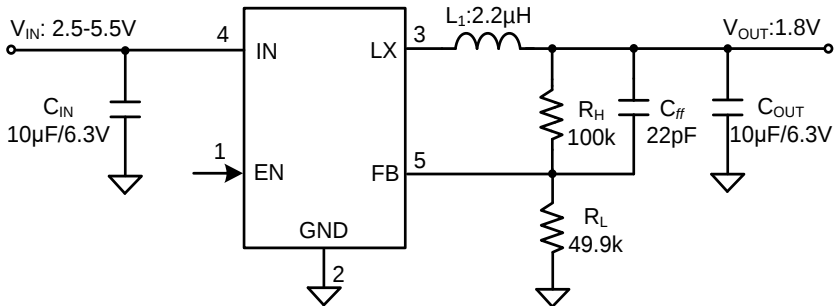
SY8088A1AAC - High Efficiency, 1.5MHz, 1ASynchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- 50μA Low Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 260mΩ /160mΩ
- High Switching Frequency 1.5MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Reliable Short Circuit Protection
- Without Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: SOT23-5

Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart phone



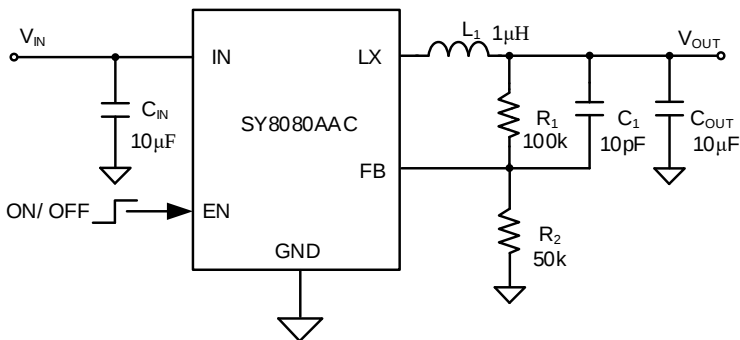
SY8080AAC - High Efficiency 3MHz, 1A Synchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for internal switches (top/bottom) 270mΩ/160mΩ
- 2.5~5.5V input voltage range
- High switching frequency 3.0MHz minimizes the external components
- Internal soft-start limits the inrush current
- 100% dropout operation
- RoHS Compliant and Halogen Free
- Compact package: SOT23-5

Applications

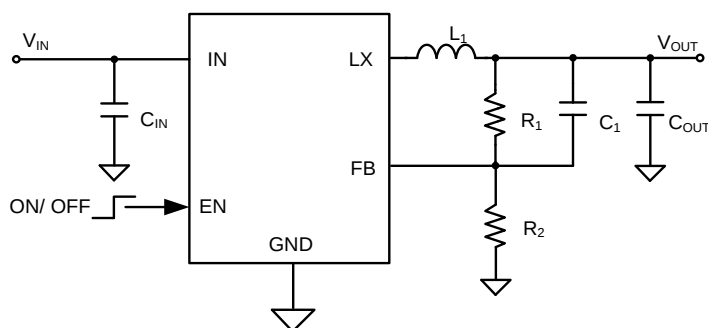
- Portable Navigation Device
- Set Top Box
- USB Dongle
- General DescriptionMedia Player
- Smart phone



SY8077AAC - High Efficiency 1.5MHz, 1A Synchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for internal switches (top/bottom) 260mΩ/170mΩ
- 2.5~6.5V input voltage range
- 40μA typical quiescent current
- High light load efficiency
- High switching frequency 1.5MHz minimizes the external components
- Internal soft-start limits the inrush current
- 100% dropout operation
- RoHS Compliant and Halogen Free
- Compact package: SOT23-5



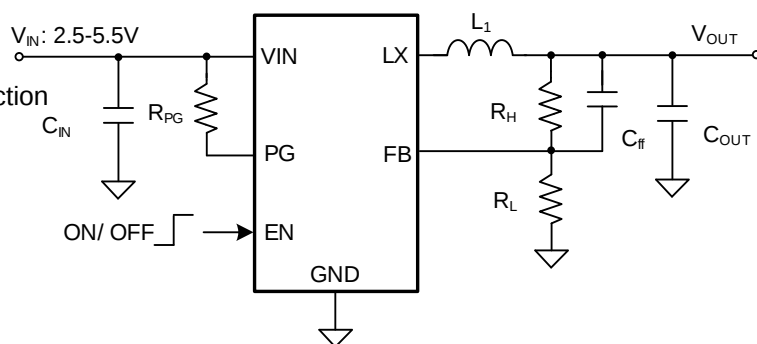
Applications

- Portable Navigation Device
- Set Top Box
- USB Dongle
- Media Player
- Smart phone

SY8891ARC - High Efficiency 3MHz, 1A Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- Up to 1A Output Current
- 55μA Low Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches: 170mΩ Top, 100mΩ Bottom
- 1.5MHz Switching Frequency Minimizes Required External Components
- Internal Soft-Start Limits Inrush Current
- 100% Dropout Operation
- Power-Good Indicator
- Hiccup Mode for Short-Circuit Protection
- Output Auto-Discharge Function
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT563



Applications

- Set-Top Boxes
- USB Dongles
- Media Players
- Smartphones

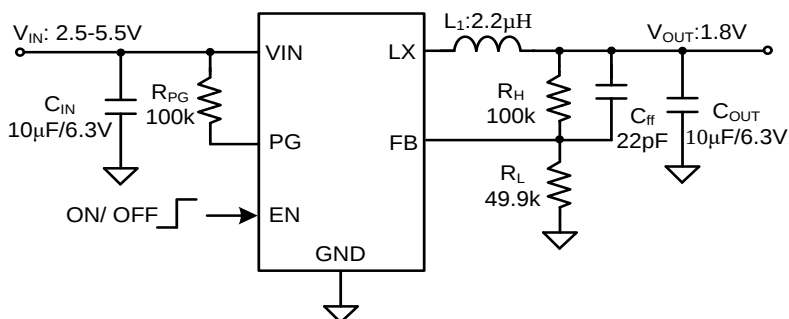
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Features

- 2.5V to 5.5V Input Voltage Range.
- Low $R_{DS(ON)}$ for Internal Switches (top/bottom)
170m Ω /100m Ω
- High Switching Frequency 1.5MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Forced PWM Operation
- Power Good Indicator
- Hic-cup for Short Circuit Protection
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: SOT563

Applications

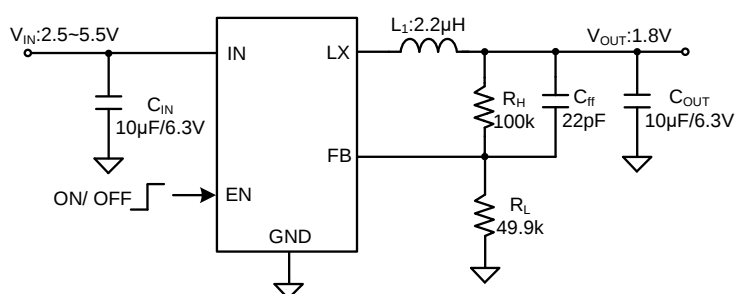
- Set Top Box
- USB Dongle
- Media Player
- Smart Phone



SY8061IDEC - High Efficiency, 1.5MHz, 1A Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- 50 μ A Low Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 220m Ω /130m Ω
- High Switching Frequency 1.5MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Reliable Short Circuit Protection
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: DFN2x2-6



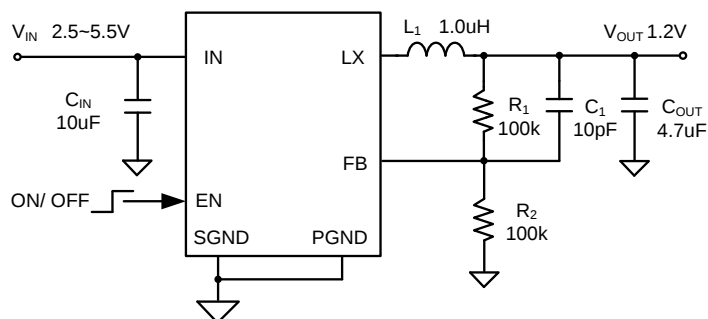
Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart phone

SY8081DQC - High Efficiency 2.5MHz, 1A Synchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for internal switches (top/bottom) 230m Ω /150m Ω
- 2.5~5.5V input voltage range
- High switching frequency 2.5MHz minimizes the external components
- Internal soft-start limits the inrush current
- 100% dropout operation
- RoHS Compliant and Halogen Free
- Output auto discharge function
- Compact package: DFN1.5x1.5-6



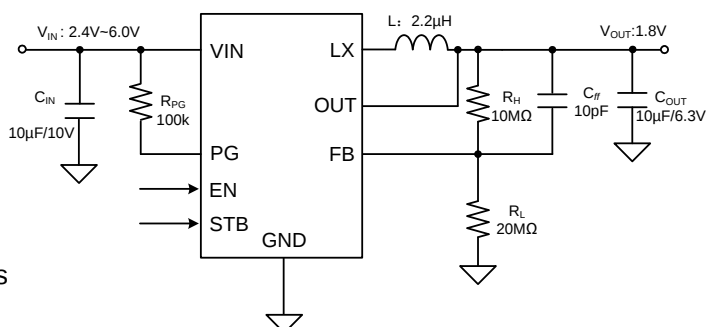
Applications

- Portable Navigation Device
- Set Top Box
- USB Dongle
- Media Player
- Smart phone

SY8871BDFD - 400nA ultra low IQ, 1.0MHz, 1.0A continuous Synchronous Step Down Regulator

Features

- 2.4~6.0V Input Voltage Range
- Ultra Low Quiescent Current Down to 400nA
- Low $R_{DS(ON)}$ for the Internal Switches (Top/Bottom) 300m Ω /130m Ω
- Instant PWM Control to Achieve the Ultra Fast Load Transient Speed
- High Switching Frequency 1.0MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- Power Good Indicator
- Hiccup Mode for Output Short Circuit Protection
- 100% Drop Out Operation
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: DFN2x2-8



Applications

- Battery Powered Applications
- Consumer and Portable Medical Products
- Personal Ware Products

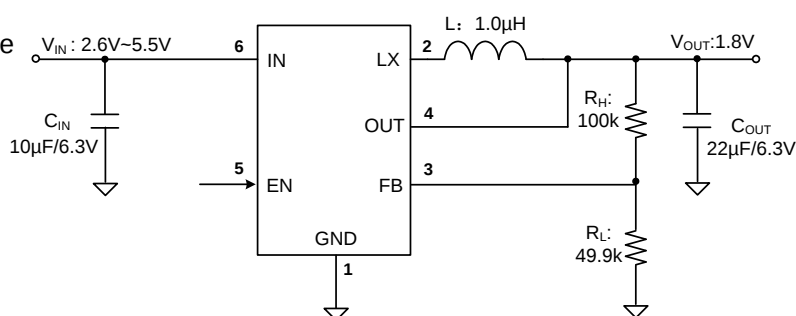
SY8841ARC - High Efficiency 2.0MHz, 1.5A Synchronous Step Down Regulator

Features

- 2.6~5.5V Input Voltage Range
- 55µA Low Quiescent Current
- Ultra Fast Load Transient Speed
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 180m Ω /100m Ω
- High Switching Frequency 2.0MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: SOT563

Applications

- Smart Phone
- Net PC
- Mini-notebook PC
- Access Point Router



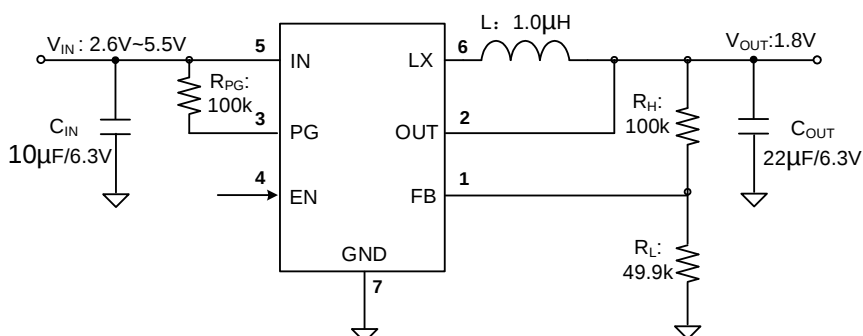
SY8842QWC - High Efficiency 2.0MHz, 1.5A Synchronous Step Down Regulator

Features

- 2.6~5.5V Input Voltage Range
- 55 μ A Low Quiescent Current
- Ultra Fast Load Transient Speed
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 180m Ω /100m Ω
- High Switching Frequency 2.0MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- Power Good Indicator
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: QFN1.5x1.5-7

Applications

- Smart Phone
- Net PC
- Mini-notebook PC
- Access Point Router



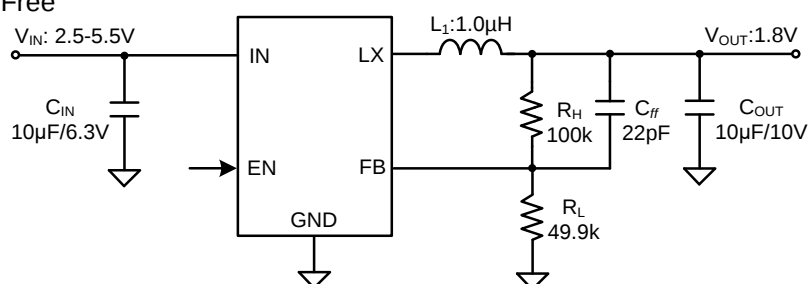
SY8089A1AAC - High Efficiency, 1.5MHz, 2A Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- 50 μ A Low Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 130m Ω /85m Ω
- High Switching Frequency 1.5MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Hic-cup for Short Circuit Protection
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: SOT23-5

Applications

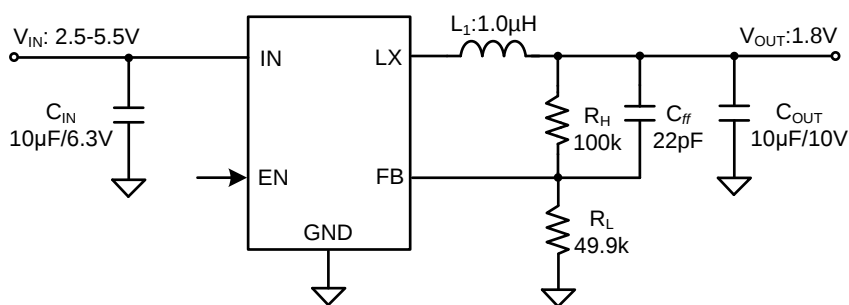
- Set Top Box
- USB Dongle
- Media Player
- Smart Phone


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SY8089IAAC - High Efficiency, 1.5MHz, 2A Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- 50μA Low Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 130mΩ /85mΩ
- High Switching Frequency 1.5MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Reliable Latch off Function When:
 - Output Short
 - Thermal Shutdown
 - Output Voltage >120% of Regulated Voltage
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: SOT23-5



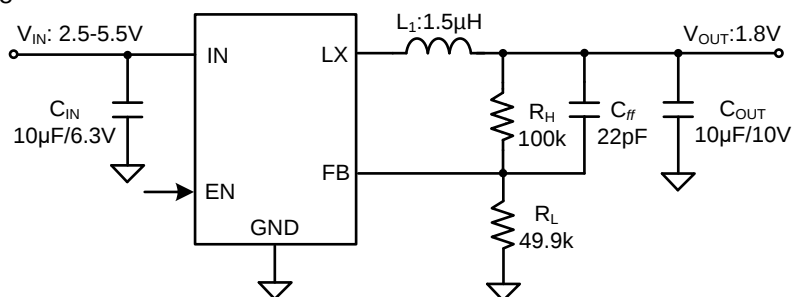
Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart phone

SY8089E1AAC - High Efficiency, 1.5MHz, 2A Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 130mΩ /85mΩ
- High Switching Frequency 1.5MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- Forced PWM Operation
- 100% Dropout Operation
- Hiccup for Short Circuit Protection
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: SOT23-5



Applications

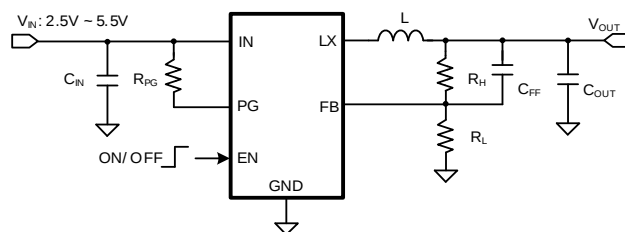
- Set Top Box
- USB Dongle
- Media Player
- Smart phone

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SY8002A1ABC - High Efficiency, 1.5MHz, 5.5V, 2A Synchronous Buck Regulator

Features

- Low $R_{DS(ON)}$ for Internal Switches: 130m Ω Top, 85m Ω Bottom
- 2.5V ~ 5.5V Input Voltage Range
- Up to 2A Output Current
- 50 μ A Low Quiescent Current
- 1.5MHz High Switching Frequency Minimizes Required External Components
- Constant Off-Time and Peak Current Mode Control
- Internal Soft-Start Limits Inrush Current
- 100% Dropout Operation
- Power-Good Indicator
- Hiccup Mode for Short-Circuit Protection
- Output Auto-Discharge Function
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact SOT23-6 Package



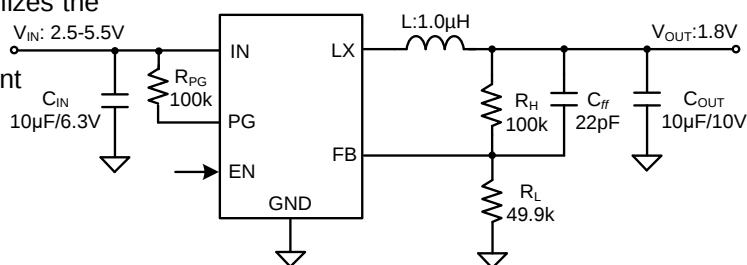
Applications

- Set-Top Box
- USB Dongle
- Media Player
- Smartphone

SY8002IABC - High Efficiency, 1.5MHz, 2A Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- 50 μ A Low Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom)
130m Ω /85m Ω
- High Switching Frequency 1.5MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Power Good Indicator
- Reliable Latch off Function When:
 - Output Short
 - Thermal Shutdown
 - Output Voltage > 120% of Regulated Voltage
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: SOT23-6



Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart phone

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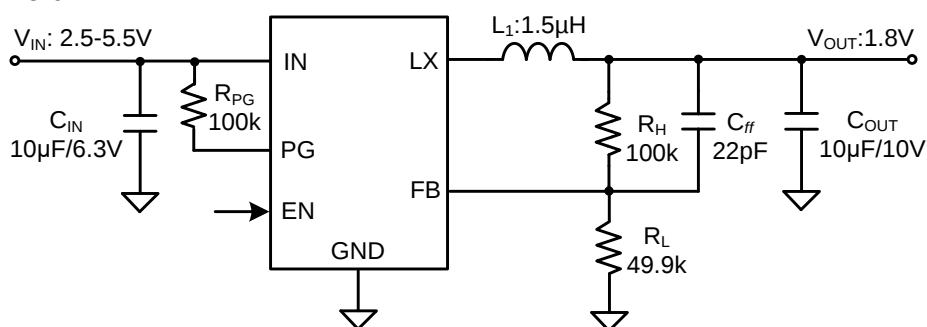
SY8002E1ABC - High Efficiency, 1.5MHz, 2A Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 130m Ω /85m Ω
- High Switching Frequency 1.5MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- Forced PWM Operation
- 100% Dropout Operation
- Hiccup for Short Circuit Protection
- Power Good Indicator
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: SOT23-6

Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart phone



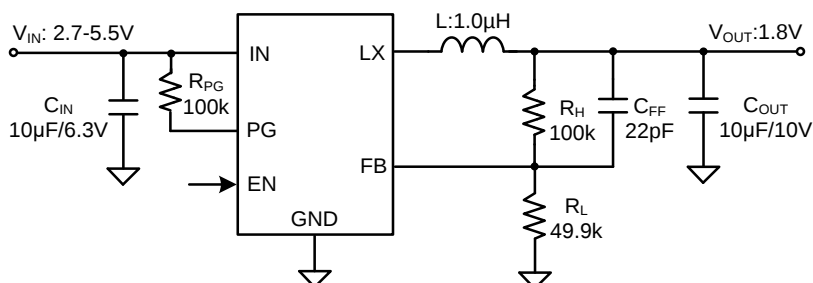
SY8032IABC - High Efficiency, 1.5MHz, 2A Synchronous Step Down Regulator

Features

- 2.7V to 5.5V Input Voltage Range
- 50µA Low Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 130m Ω /85m Ω
- High Switching Frequency 1.5MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Reliable Short Circuit Protection
- Power Good Indicator
- RoHS Compliant and Halogen Free
- Compact Package: SOT23-6

Applications

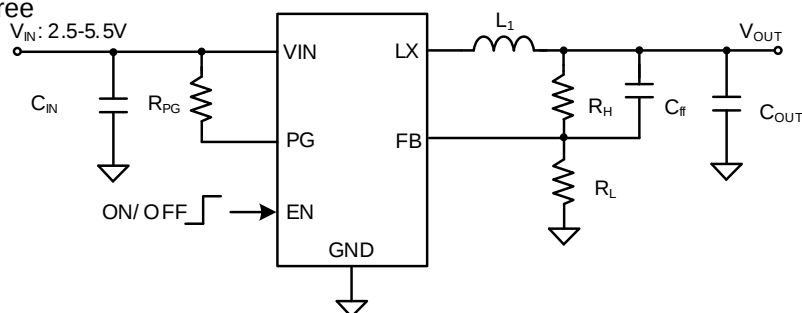
- Set Top Box
- USB Dongle
- Media Player
- Smart Phone


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SY8892ARC - High-Efficiency, 1.5MHz 2A Synchronous Step-Down Regulator

Features

- 2.5V–5.5V Input Voltage Range
- Up to 2A Output Current
- Low $R_{DS(ON)}$ for Internal Switches: 125m Ω Top, 75m Ω Bottom
- Low 55 μ A Quiescent Current
- High 1.5MHz Switching Frequency Minimizes Required External Components
- Internal Soft-Start Limits Inrush Current
- 100% Dropout Operation
- Power-Good Indicator
- Hiccup Mode for Short-Circuit Protection
- Output Auto-Discharge Function
- RoHS-Compliant and Halogen-Free
- Compact SOT563 Package



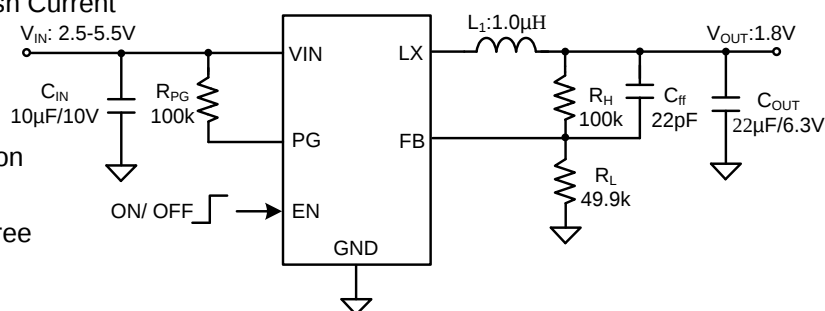
Applications

- Set-Top Box
- USB Dongle
- Media Player
- Smartphone

SY8892EARC - High Efficiency, 1.5MHz, 2A Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range.
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 125m Ω / 75m Ω
- High Switching Frequency 1.5MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Forced PWM Operation
- Power Good Indicator
- Hic-cup for Short Circuit Protection
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: SOT563



Applications

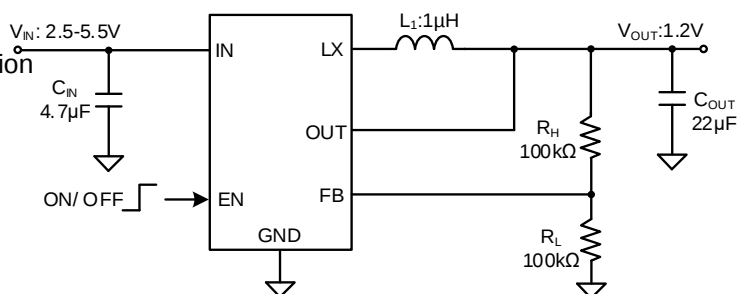
- Set Top Box
- USB Dongle
- Media Player
- Smart Phone

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SY80072ART - 21μA Ultra Low IQ, 1.5MHz, 2A Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- Ultra-Fast Load Transient Speed
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 45mΩ /35mΩ
- High Switching Frequency 1.5MHz Minimizes the External Components
- $\pm 1.0\%$ Feedback or Output Voltage Accuracy Over $0^{\circ} \text{ C} \sim 85^{\circ} \text{ C}$ Temperature Range
- $\pm 1.5\%$ Feedback or Output Voltage Accuracy Over $-40^{\circ} \text{ C} \sim 125^{\circ} \text{ C}$ Temperature Range
- PFM Mode for Light Load Efficiency
- 21μA Operating Quiescent Current
- Internal Soft-Start Limits the Inrush Current
- 100% Dropout Operation
- Output Auto Discharge Function
- Auto Recovery for SCP/OVP/OTP Protection
- RoHS Compliant and Halogen Free
- Compact Package: SOT563



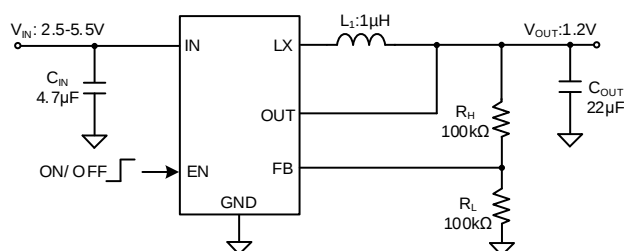
Applications

- Portable Electronics
- Industrial PC
- Smart Phone

SY80073ART - 21μA Ultra Low IQ, 1.5MHz, 3A Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- Ultra-Fast Load Transient Speed
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 45mΩ /35mΩ
- High Switching Frequency 1.5MHz Minimizes the External Components
- $\pm 1.0\%$ Feedback or Output Voltage Accuracy Over $0^{\circ} \text{ C} \sim 85^{\circ} \text{ C}$ Temperature Range
- $\pm 1.5\%$ Feedback or Output Voltage Accuracy Over $-40^{\circ} \text{ C} \sim 125^{\circ} \text{ C}$ Temperature Range
- PFM Mode for Light Load Efficiency
- 21μA Operating Quiescent Current
- Internal Soft-Start Limits the Inrush Current
- 100% Dropout Operation
- Output Auto Discharge Function
- Auto Recovery for SCP/OVP/OTP Protection
- RoHS Compliant and Halogen Free
- Compact Package: SOT563



Applications

- Portable Electronics
- Industrial PC
- Smart Phone

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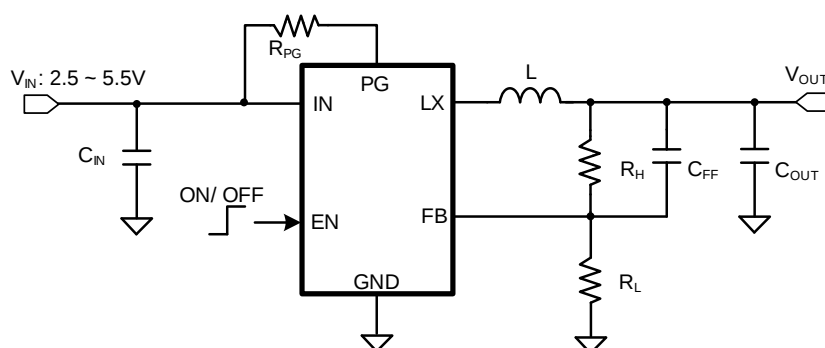
SY80083ABT - High Efficiency, 1MHz, 3A, 5.5V Input Synchronous Buck Converter

Features

- Low RDS(ON) for Internal MOSFETs: 85mΩ Top, 60mΩ Bottom
- Wide Input Voltage Range: 2.5V ~ 5.5V
- Up to 3A Output Current
- $\pm 1.5\%$ 0.6V Reference
- PFM Light Load Operation for High Efficiency
- Internal Soft-Start Limits the Inrush Current
- 1MHz Switching Frequency Minimizes the External Components
- Constant Off-time and Peak Current Mode Control to Achieve Fast Transient Responses
- 100% Dropout Operation
- Power Good Indicator for SY80083ABT
- Output Auto Discharge Function
- Cycle-by-Cycle Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT23-5/SOT23-6

Applications

- Set-Top Box
- USB Dongle
- Media Player
- Smart Phone



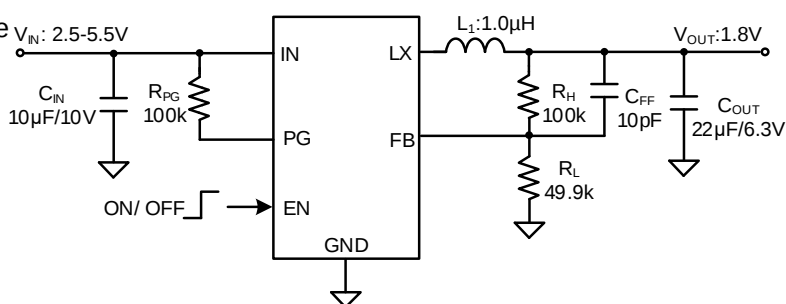
SY80063ABC - High Efficiency, 1MHz, 3A Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- 55 μ A Low Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 85m Ω /60m Ω
- High Switching Frequency 1MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Power Good Indicator
- Reliable Latch off Function When:
 - Output Under Voltage
 - Thermal Shutdown
 - Output Voltage>120% of Regulated Voltage
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: SOT23-6

Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart Phone



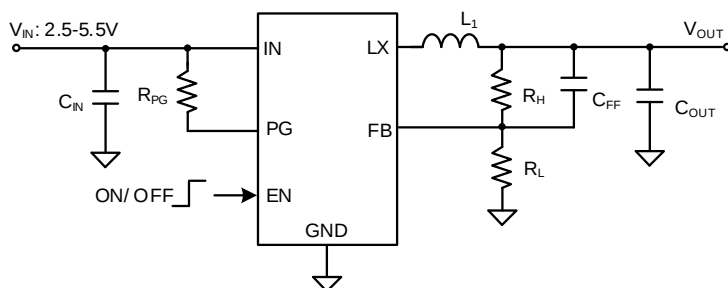
SY80063AABC - High-Efficiency, 1MHz, 3A Synchronous Step-Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- Up to 3A Output Current
- Low $R_{DS(ON)}$ for Internal Switches: 85m Ω Top, 60m Ω Bottom
- Low 50 μ A Quiescent Current
- High 1MHz Switching Frequency Minimizes Required External Components
- Constant-Off-Time and Peak-Current-Mode Control
- Internal Soft-Start Limits the Inrush Current
- 100% Dropout Operation
- Power-Good Indicator
- Hiccup Mode for Short-Circuit Protection
- Output Auto-Discharge Function
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT23-6

Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart Phone

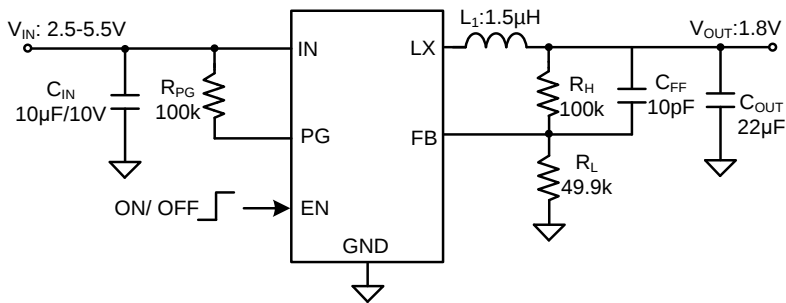

[Back](#)

Features

- 2.5V to 5.5V Input Voltage Range
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 85mΩ /60mΩ
- High Switching Frequency 1MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Power Good Indicator
- Hic-cup for Short Circuit Protection
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: SOT23-6

Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart Phone



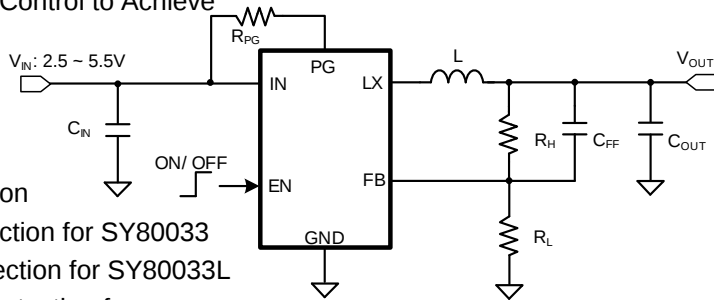
SY80033DFD/SY80033LDFD - High Efficiency, 1MHz, 3A, 5.5V Input Synchronous Buck Converter

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 85mΩ Top, 60mΩ Bottom
- Wide Input Voltage Range: 2.5V ~ 5.5V
- Up to 3A Output Current
- $\pm 1.5\%$ 0.6V Reference
- PFM Light Load Operation for High Efficiency
- Internal Soft-Start Limits the Inrush Current
- 1MHz Switching Frequency Minimizes the External Components
- Constant Off-time and Peak Current Mode Control to Achieve Fast Transient Responses
- 100% Dropout Operation
- Power Good Indicator
- Output Auto Discharge Function
- Cycle-by-Cycle Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection for SY80033
- Latch-off Mode Output Under Voltage Protection for SY80033L
- Auto-Recovery Mode Over Temperature Protection for SY80033
- Latch-off Mode Over Temperature Protection for SY80033L
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: DFN2×2-8

Applications

- Set-Top Box
- USB Dongle
- Media Player
- Smart Phone



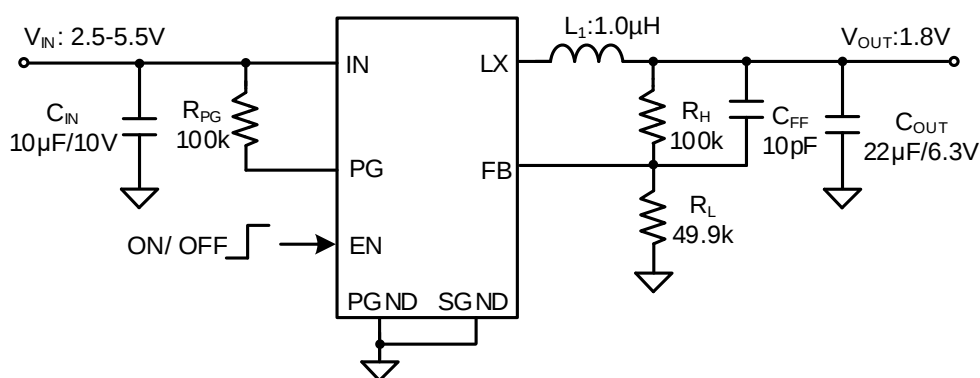
SY8883DFC - High Efficiency, 1MHz, 3A Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- 55 μ A Low Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom):
85m Ω /60m Ω
- High Switching Frequency 1MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Power Good Indicator
- Reliable Latch off Function When:
 - Output Under Voltage
 - Thermal Shutdown
 - Output Voltage>120% of Regulated Voltage
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: DFN2 $\times$ 2-8

Applications

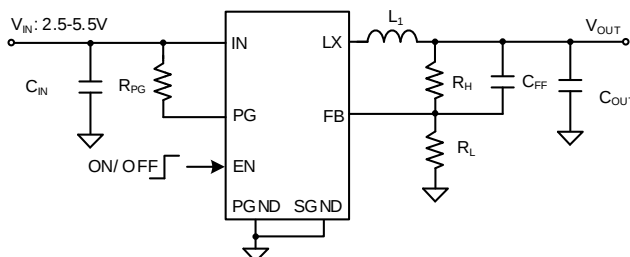
- Set Top Box
- USB Dongle
- Media Player
- Smart Phone



SY8883ADFC - High-Efficiency, 1MHz, 3A Synchronous Step-Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- Up to 3A Output Current
- Low $R_{DS(ON)}$ for Internal Switches: 85m Ω Top, 60m Ω Bottom
- Low 55 μ A Quiescent Current
- High 1MHz Switching Frequency Minimizes Required External Components
- Internal Soft-Start Limits the Inrush Current
- 100% Dropout Operation
- Power-Good Indicator
- Hiccup Mode for Short-Circuit Protection
- Output Auto-Discharge Function
- RoHS-Compliant and Halogen-Free
- Compact Package: DFN2x2-8



Applications

- Set-Top Box
- USB Dongle
- Media Player
- Smartphone

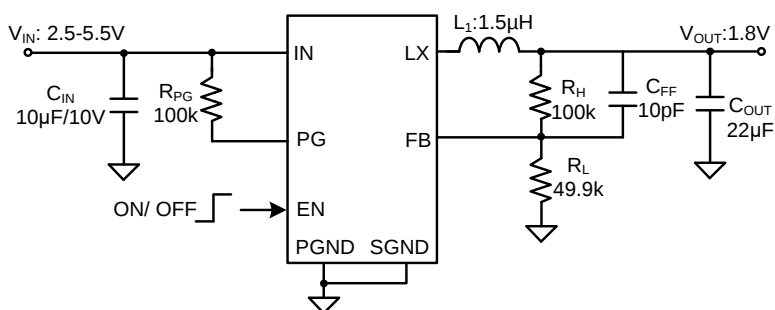
SY8883EDFC - High Efficiency, 1MHz, 3A Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 85m Ω /60m Ω
- High Switching Frequency 1MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Power Good Indicator
- Hic-cup for Short Circuit Protection
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: DFN2x2-8

Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart Phone


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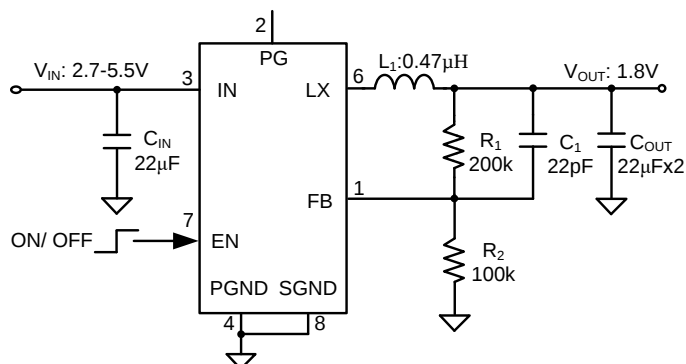
SY8003CDFC - High Efficiency 5.5V, 3A Continuous, 3MHz Synchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal Switches
- (Top/Bottom): 110m Ω /80m Ω
- 3A Continuous Load Current Capability
- 2.7-5.5V Input Voltage Range
- High Switching Frequency Minimizes the External Components: 3MHz
- Internal Soft-start Limits the Inrush Current
- Hic-cup Mode Protection
- 100% Dropout Operation
- RoHS Compliant and Halogen Free
- Compact Package: DFN2x2-8

Applications

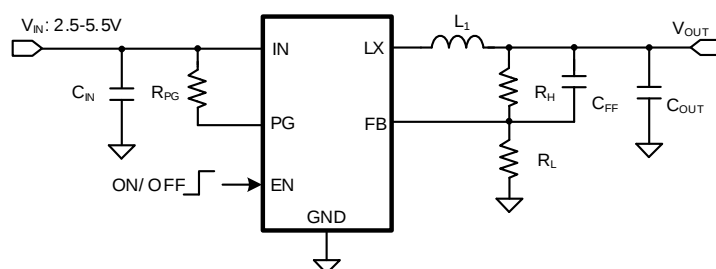
- LCD TV
- Set Top Box
- Net PC
- Mini-Notebook PC
- Access Point Router



SY8893ARC - High-Efficiency, 5.5V, 3A, 1.2MHz Synchronous Step-Down Regulator

Features

- 2.5V~5.5V Input Voltage Range
- Up to 3A Output Current
- Constant Off-time and Peak Current Mode Control
- Low $R_{DS(ON)}$ for Internal Switches: 100m Ω Top, 60m Ω Bottom
- Low 50μA Quiescent Current
- High 1.2MHz Switching Frequency Minimizes Required External Components
- Internal Soft-Start Limits Inrush Current
- 100% Dropout Operation
- Power-Good Indicator
- Hiccup Mode for Short-Circuit Protection
- Output Auto-Discharge Function
- RoHS-Compliant and Halogen-Free
- Compact SOT563 Package



Applications

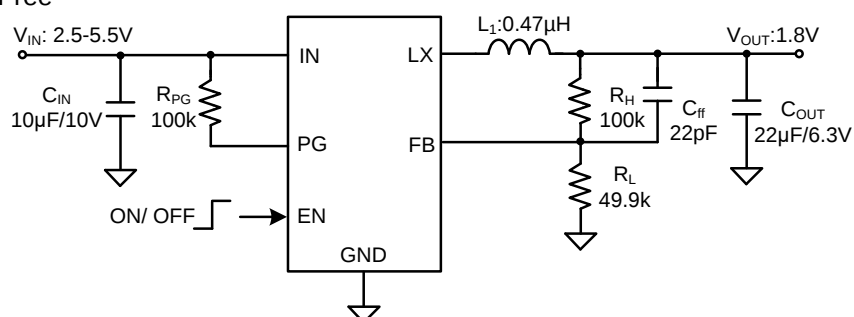
- Set-Top Box
- USB Dongle
- Media Player
- Smartphone

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SY8893LARC - High Efficiency, 1.2MHz, 3A Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- 50 μ A Low Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 100m Ω /60m Ω
- High Switching Frequency 1.2MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Power Good Indicator
- Reliable Latch off Function When:
 - Output Under Voltage
 - Thermal Shutdown
 - Output Voltage>120% of Regulated Voltage
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: SOT563



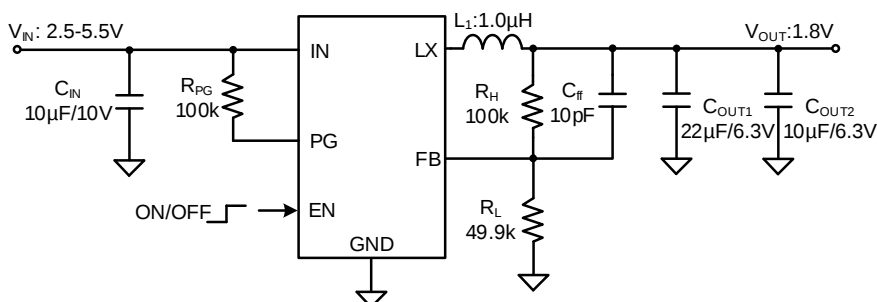
Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart phone

SY8893EARC - High Efficiency, 1.2MHz, 3A Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 100m Ω /60m Ω
- High Switching Frequency 1.2MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- Forced PWM Operation
- 100% Dropout Operation
- Power Good Indicator
- Hic-cup for Short Circuit Protection
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: SOT563



Applications

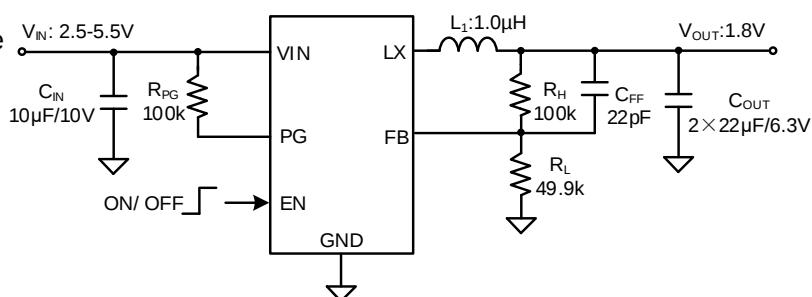
- Set Top Box
- USB Dongle
- Media Player
- Smart phone

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SY8053DBC - High Efficiency, 1MHz, 3A Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- 55μA Low Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 85mΩ /60mΩ
- High Switching Frequency 1MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Power Good Indicator
- Reliable Latch off Function When:
 - Output Under Voltage
 - Thermal Shutdown
 - Output Voltage >120% of Regulated Voltage
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: DFN3x3-10



Applications

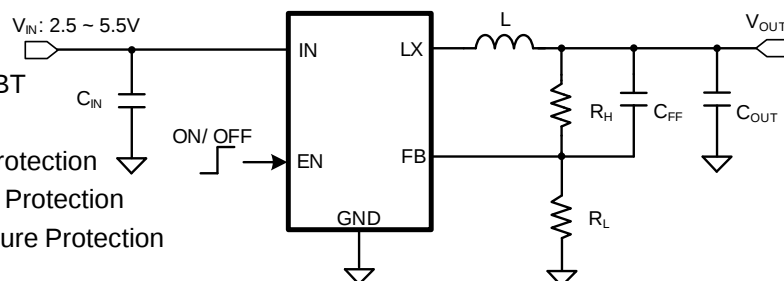
- Set Top Box
- USB Dongle
- Media Player
- Smart Phone

SY80083AAT - High Efficiency, 1MHz, 3A, 5.5V Input Synchronous Buck Converter

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 85mΩ Top, 60mΩ Bottom
- Wide Input Voltage Range: 2.5V ~ 5.5V
- Up to 3A Output Current
- $\pm 1.5\%$ 0.6V Reference
- PFM Light Load Operation for High Efficiency
- Internal Soft-Start Limits the Inrush Current
- 1MHz Switching Frequency Minimizes the External Components
- Constant Off-time and Peak Current Mode Control to Achieve Fast Transient Responses

- 100% Dropout Operation
- Power Good Indicator for SY80083ABT
- Output Auto Discharge Function
- Cycle-by-Cycle Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT23-5/SOT23-6



Applications

- Set-Top Box
- USB Dongle
- Media Player
- Smart Phone

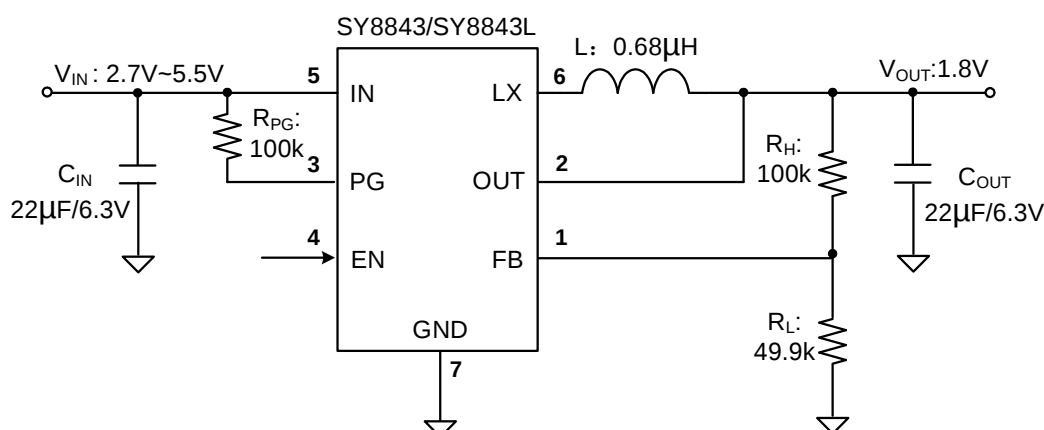
SY8843QWC/SY8843LQWC - High Efficiency 1.5MHz, 3A Ultra Fast Dynamic Response Synchronous Step Down Regulator

Features

- 2.7~5.5V Input Voltage Range
- 65 μ A Low Quiescent Current
- Ultra Fast Load Transient Speed
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 85m Ω /50m Ω
- High Switching Frequency 1.5MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- Reliable Short Circuit Protection
 - SY8843: Hic-cup Mode Protection
 - SY8843L: Latch Off Protection
- Reliable OVP and OTP Protection
 - SY8843: No Latch Off Protection
 - SY8843L: Latch Off Protection
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: QFN1.5x1.5-7

Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart Phone



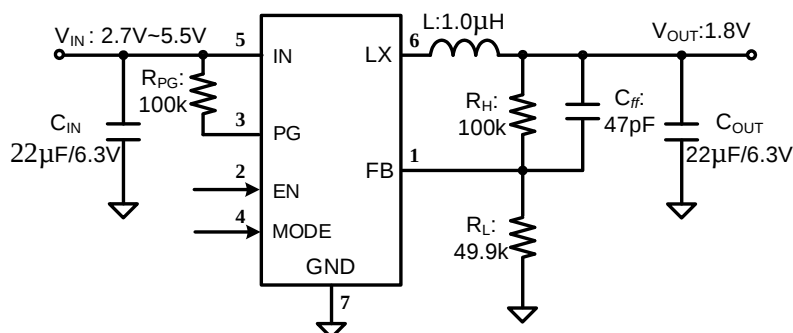
SY8859QWC - High Efficiency 1.0MHz, 3A Synchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 85m Ω /50m Ω
- 2.7~5.5V Input Voltage Range
- 55 μ A Low Quiescent Current
- Ultra Fast Load Transient Speed
- High Switching Frequency 1.0MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- Reliable Short Circuit Protection
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: QFN1.5x1.5-7

Applications

- Smart Phone
- LCD TV
- Set Top Box
- Mini-Notebook PC
- Access Point Router



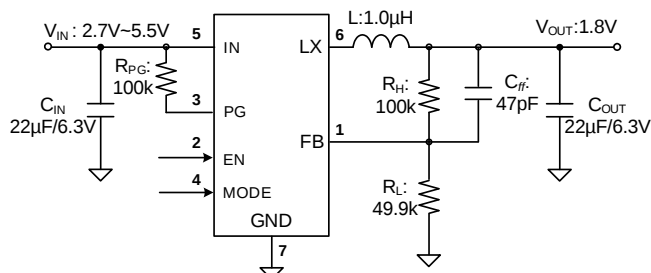
SY8859LQWC - High Efficiency 1.0MHz, 3A Synchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 85m Ω /50m Ω
- 2.7~5.5V Input Voltage Range
- 55 μ A Low Quiescent Current
- Ultra Fast Load Transient Speed
- High Switching Frequency 1.0MHz Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- Reliable Latch off Function When:
 - Output Short
 - Thermal Shutdown
 - Output Voltage > 120% of Regulated Voltage
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: QFN1.5x1.5-7

Applications

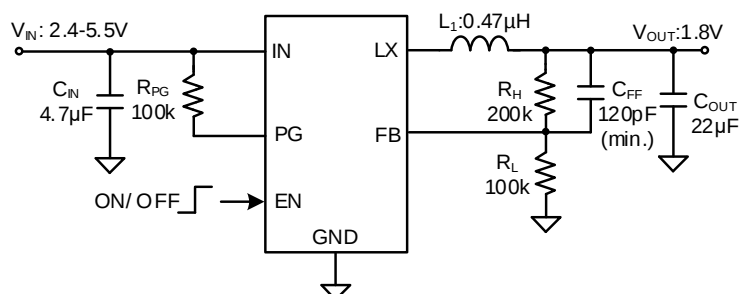
- Smart Phone
- LCD TV
- Set Top Box
- Mini-Notebook PC
- Access Point Router


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SY80053DQC - 16 μ A Ultra Low IQ, 2.2MHz Synchronous Step Down Regulator

Features

- 2.4V to 5.5V Input Voltage Range
- Ultra-fast Load Transient Speed
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 35m Ω / 25m Ω
- High Switching Frequency 2.2MHz Minimizes the External Components
- $\pm 1\%$ Feedback or Output Voltage Accuracy
- (Full Temperature Range)
- PFM Mode for Light Load Efficiency
- 16 μ A Operating Quiescent Current
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Output Auto Discharge Function
- Power Good Indicator
- Auto Recovery for SCP/OVP/OTP Protection
- RoHS Compliant and Halogen Free
- Compact Package: DFN1.5x1.5-6



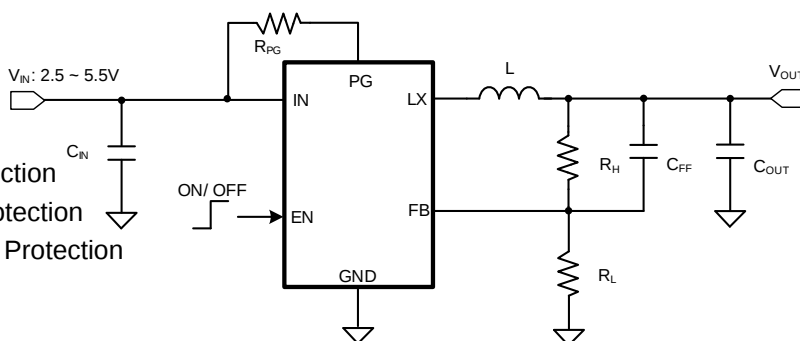
Applications

- Portable Electronics
- Industrial PC
- Smart Phone

SY80053BDQD - 16 μ A Ultra Low IQ, 2.2MHz Synchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 35m Ω Top, 25m Ω Bottom
- Wide Input Voltage Range: 2.5V ~ 5.5V
- Up to 3A Output Current
- $\pm 1\%$ 0.45V Reference
- PFM Light Load Operation for High Efficiency
- Internal Soft-Start Limits the Inrush Current
- 2.2MHz Switching Frequency Minimizes the External Components
- Advanced Constant On-time and Ripple-Based Control to Achieve Fast Transient Responses
- 100% Dropout Operation
- Power Good Indicator
- Output Auto Discharge Function
- Cycle-by-Cycle Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: DFN1.5 1.5-6



Applications

- Portable Electronics
- Industrial PC
- Smart Phone

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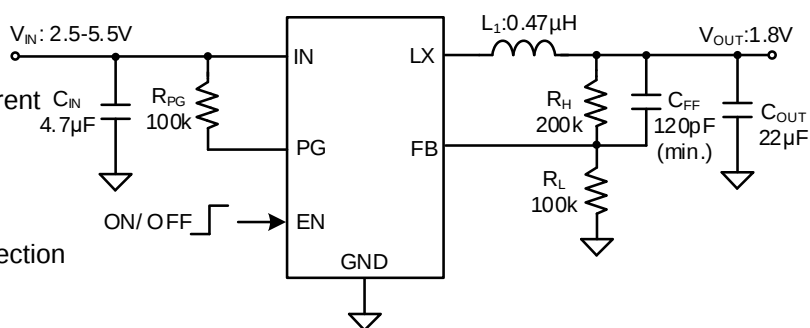
SY80003DQD - 21 μ A Ultra Low IQ, 2.2MHz Synchronous Step Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- Ultra-Fast Load Transient Speed
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom):
38m Ω /30m Ω
- High Switching Frequency 2.2MHz Minimizes the External Components
- $\pm 1\%$ Feedback or Output Voltage Accuracy (Full Temperature Range)
- PFM Mode for Light Load Efficiency-
- 21 μ A Operating Quiescent Current
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Output Auto Discharge Function
- Power Good Indicator
- Auto Recovery for SCP/OVP/OTP Protection
- RoHS Compliant and Halogen Free
- Compact Package: DFN1.5x1.5-6

Applications

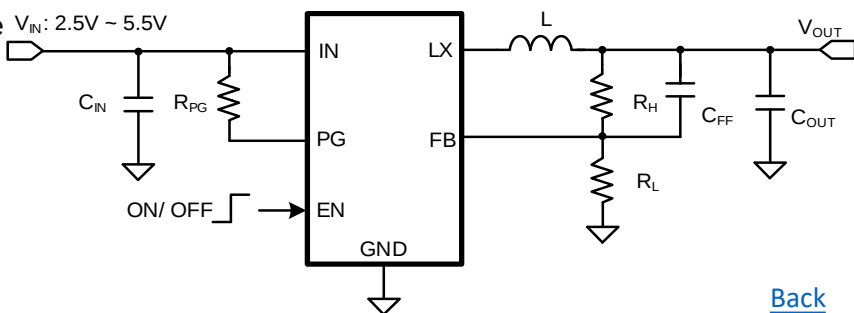
- Portable Electronics
- Industrial PC
- Smart Phone



SY80003EDQD - 21 μ A Ultra Low IQ, 2.2MHz Synchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 38m Ω Top, 30m Ω Bottom
- Wide Input Voltage Range: 2.5V ~ 5.5V
- Up to 3A Output Current
- $\pm 1\%$ 0.6V Reference over Temperature from -40° C to 125° C
- 2.2MHz High Switching Frequency Minimizes the External Components
- Advanced Constant On-time and Ripple-Based Control to Achieve Fast Transient Responses
- Forced Continuous Conduction Mode (FCCM) Operation
- Internal Soft-Start Limits the Inrush Current
- 100% Dropout Operation
- Power Good Indicator
- Cycle-by-Cycle Valley, Peak and Reverse Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- RoHS-Compliant and Halogen-Free
- Compact Package: DFN1.5x1.5-6



Applications

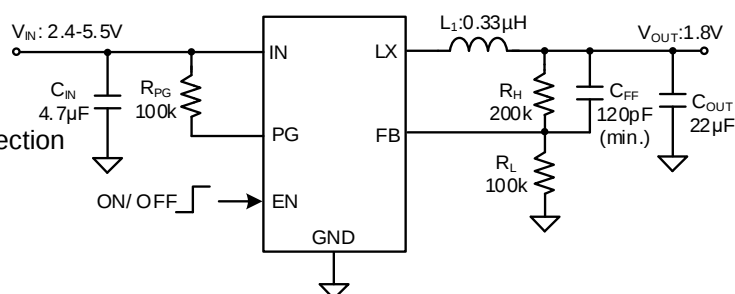
- Portable Electronics
- Industrial PC
- Smart Phone

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SY80054DQC - 16 μ A Ultra Low IQ, 2.2MHz Synchronous Step Down Regulator

Features

- 2.4V to 5.5V Input Voltage Range
- Ultra-fast Load Transient Speed
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 35m Ω / 25m Ω
- High Switching Frequency 2.2MHz Minimizes the External Components
- $\pm 1\%$ Feedback or Output Voltage Accuracy
- (Full Temperature Range)
- PFM Mode for Light Load Efficiency
- 16 μ A Operating Quiescent Current
- Internal Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Output Auto Discharge Function
- Power Good Indicator
- Auto Recovery for SCP/OVP/OTP Protection
- RoHS Compliant and Halogen Free
- Compact Package: DFN1.5x1.5-6



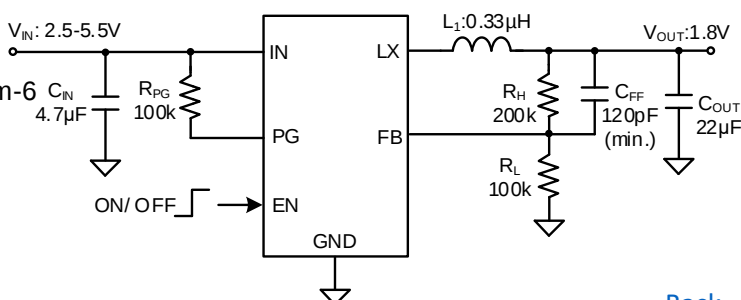
Applications

- Portable Electronics
- Industrial PC
- Smart Phone

SY80004DQD - 21 μ A Ultra-Low IQ, 2.2MHz Synchronous Step-Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- Fast Load-Transient Response
- Low $R_{DS(ON)}$ for Internal Switches: 38m Ω Top, 30m Ω Bottom
- 2.2MHz Switching Frequency
- $\pm 1\%$ Output Voltage Accuracy (Full Temperature Range)
- PFM Mode for Light-Load Efficiency
- 21 μ A Operating Quiescent Current
- Internal Soft-Start Limits Inrush Current
- 100% Duty Cycle Enables Dropout Operation
- Output Auto-Discharge Function
- Power-Good Indicator
- Autorecovery for Short-Circuit, Overvoltage, and Overtemperature Protection
- RoHS-Compliant and Halogen-Free
- Compact Package: DFN1.5mm x 1.5mm-6



Applications

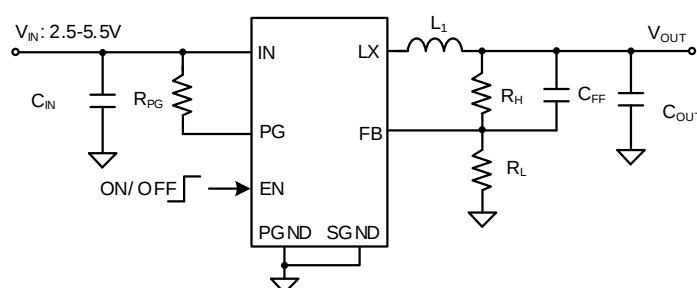
- Portable Electronics
- Industrial PC
- Smart Phone

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SY8884ADFC - High-Efficiency, 1MHz, 4A Synchronous Step-Down Regulator

Features

- 2.5V to 5.5V Input Voltage Range
- Up to 4A Output Current
- Low $R_{DS(ON)}$ for Internal Switches: 85m Ω Top, 60m Ω Bottom
- Low 55 μ A Quiescent Current
- High 1MHz Switching Frequency Minimizes Required External Components
- Internal Soft-Start Limits the Inrush Current
- 100% Dropout Operation
- Power-Good Indicator
- Hiccup Mode for Short-Circuit Protection
- Output Auto-Discharge Function
- RoHS-Compliant and Halogen-Free
- Compact Package: DFN2x2-8



Applications

- Set-Top Box
- USB Dongle
- Media Player
- Smartphone

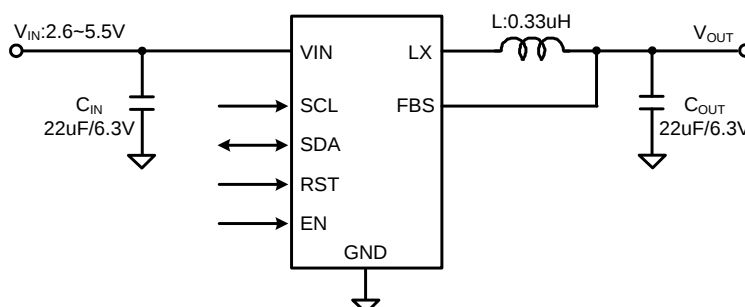
SY8824BAIC - 4A, 1.8MHz, I2C Programmable Synchronous Step Down Regulator

Features

- 2.6V to 5.5V input voltage range
- Fixed frequency operation: 1.8MHz
- Low $R_{DS(ON)}$ for internal switches (top/bottom): 70m Ω /40m Ω
- Programmable Output Voltage: 0.7625V to 1.55V in 12.5mV/step
- Default 1.15V output voltage
- 4A output current capability
- Capable for 0.33 μ H inductor and 22 μ F Ceramic Capacitor
- PFM/PWM operation for optimum increased efficiency
- OVP/OCP/UVLO/OTP protections
- Compact package: TSOT23-8

Applications

- Smart phone
- MID



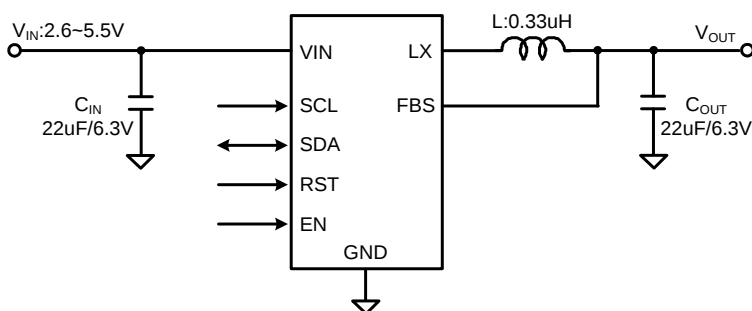
SY8824CAIC - 4A, 1.8MHz, I2C Programmable Synchronous Step Down Regulator

Features

- 2.6V to 5.5V Input Voltage Range
- Fixed Frequency Operation: 1.8MHz
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 70m Ω /40m Ω
- Programmable Output Voltage: 0.7625V to 1.55V in 12.5mV Steps
- Default 1.05V Output Voltage
- 4A Output Current Capability
- Capable for 0.33 μ H Inductor and 22 μ F Ceramic Capacitor
- PFM/PWM Operation for Optimum Increased Efficiency
- OVP/OCP/UVLO/OTP Protections
- RoHS Compliant and Halogen Free
- Compact Package: TSOT23-8

Applications

- Smart Phone
- MID



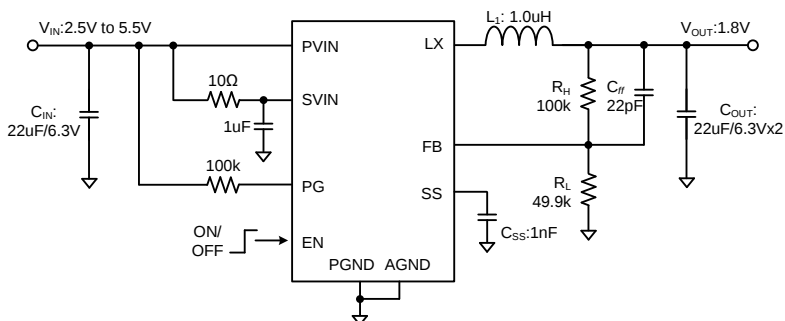
SY8047QDC - Ultra Low Quiescent Current 1.25MHz, 4A Sync Buck

Features

- Input Voltage Range: 2.5V to 5.5V
- 1.25MHz Switching Frequency
- Max Output Current: 4.0A
- Peak Current Mode Control for the Fast Transient Speed
- 100% Drop Out Function
- Typical 18 μ A Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches (PFET/NFET): 75m Ω /55m Ω
- Hic-cup Mode Protection for Hard Short Condition
- RoHS Compliant and Halogen Free
- Compact Package: QFN3x3-16

Applications

- Set Top Box
- Net PC
- Mini-Notebook PC
- Access Point Router

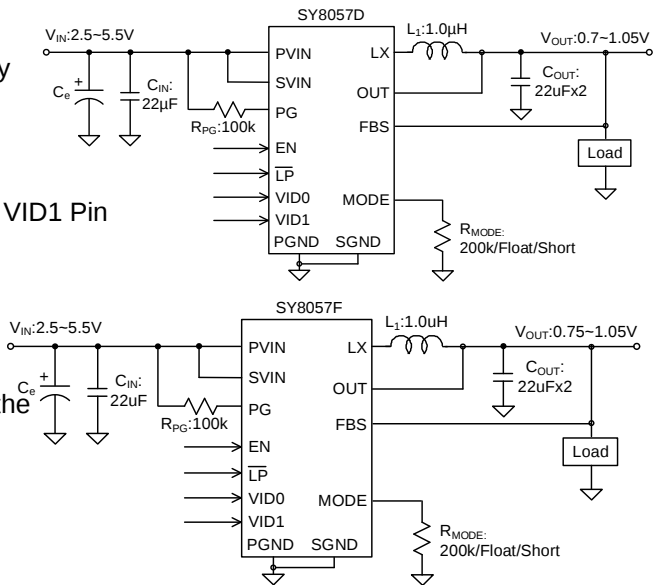

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Features

- 2.5V to 5.5V Input Voltage Range
- Low $R_{DS(ON)}$ for Internal Switches (PFET/NFET): 70m Ω / 40m Ω
- 4A Continuous, 7A Peak Load Current Capability
- $\pm 1\%$ Output Voltage Accuracy at PWM Mode
- PFM Mode at Light Load for High Efficiency
- Selectable Fixed Output Voltage Through VID0, VID1 Pin
- Support for Low Power Mode Logic Input
- Typical 30 μ A Typical Quiescent Current
- Ultra Fast Load Transient Performance
- Flexible MODE Pull Down Resistor to Program the Required Power Rail
- Power Good Indicator
- OVP/SCP/OTP Latch-off Protection
- Compact Package: QFN3x3-16

Applications

- NB Application



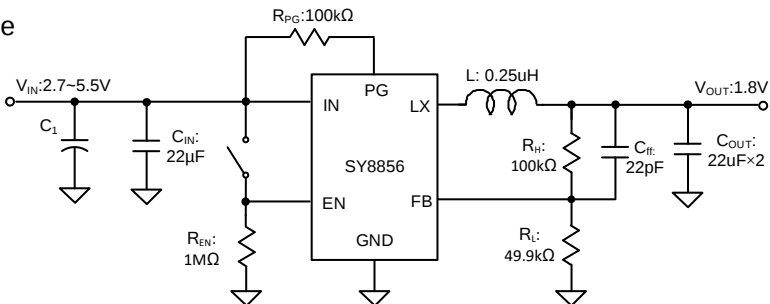
SY8856DFC - 3MHz, 4A Sync Buck

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 35/15 m Ω
- 2.7-5.5V Input Voltage Range
- 3MHz Switching Frequency Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- Up to 92% Efficiency
- 4A Continuous Output Current Capability
- Shutdown Mode Draws<0.1 μ A Supply Current
- 100% Dropout Operation
- Power Good Indicator
- OCP/UVLO/OTP Protections
- RoHS Compliant and Halogen Free
- Compact Package: DFN2x2-8

Applications

- High definition Set Top Box
- LCD TV
- Notebook PC



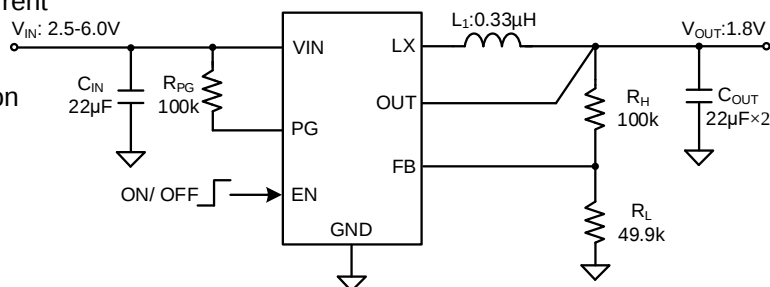
SY80704SYC -2.4MHz, 4A Sync Buck

Features

- 2.5~6.0V Input Voltage Range
- 23 μ A Low Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom) 25m Ω /17m Ω
- Instant PWM Control Achieve Ultra Fast Dynamic Response
- 2.4MHz Switching Frequency Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Drop Out Operation
- Output Auto Discharge Function
- Hiccup Mode for Short Circuit Protection
- RoHS Compliant and Halogen Free
- Compact Package: DFN2x2-7

Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart Phone



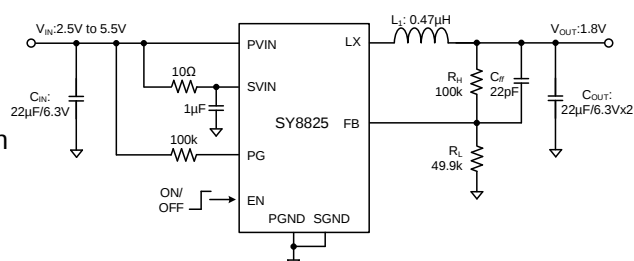
SY8825QUC - Ultra Low Quiescent Current 2.0MHz, 5A Sync Buck

Features

- Input Voltage Range: 2.5V to 5.5V
- 2.0 MHz Switching Frequency
- 5A Maximum Output Current
- Peak Current Mode Control for the Fast Transient Speed
- 100% Drop Out Function
- Typical 18 μ A Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches (PFET/NFET): 55m Ω /35m Ω
- Hic-cup Mode Protection for Hard Short Condition
- RoHS Compliant and Halogen Free
- Compact Package: QFN2x1.5-8

Applications

- Set Top Box
- Net PC
- Mini-Notebook PC
- Access Point Router



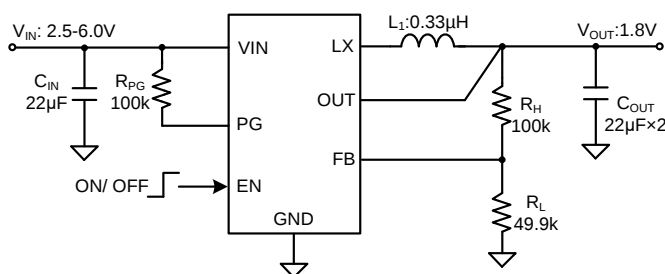
SY80706SYC - 1MHz, 6A Sync Buck

Features

- 2.5~6.0V Input Voltage Range
- 23 μ A Low Quiescent Current
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom)
22m Ω /12m Ω
- Instant PWM Control Achieve Ultra Fast Dynamic Response
- 1.0MHz Switching Frequency Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- 100% Drop Out Operation
- Output Auto Discharge Function
- Hic-cup Mode for Short Circuit Protection
- RoHS Compliant and Halogen Free
- Compact Package: DFN2x2-7

Applications

- Set Top Box
- USB Dongle
- Media Player
- Smart Phone



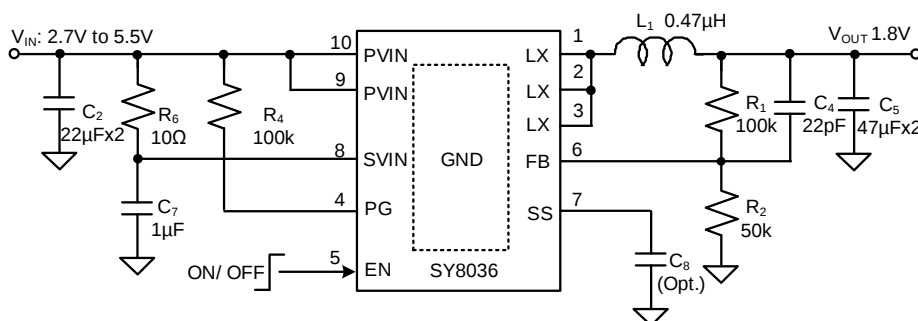
SY8036DBC - 1MHz, 5.5V/6A Sync Buck

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 40/30m Ω
- Input Voltage Range: 2.7-5.5V
- 1 MHz Switching Frequency Minimizes External Components
- External Adjustable Soft-start Limits the Inrush Current
- 100% Dropout Operation
- Power Good Indicator
- RoHS Compliant and Halogen Free
- Compact Package: DFN3x3-10

Applications

- LCD TV
- Access Point Router
- Notebook PC
- Server


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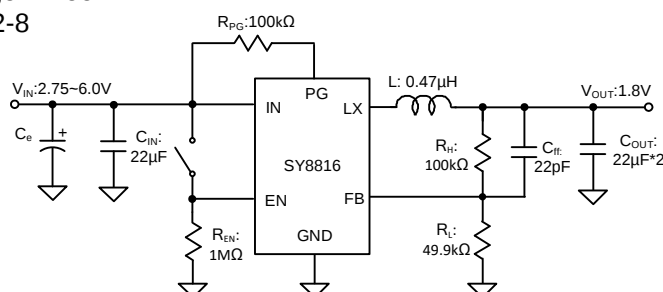
SY8816DFC -1.2MHz, 6A /6.5V Sync Buck

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 38/15 m Ω
- 2.7-6.5V Input Voltage Range
- 1.2 MHz Switching Frequency Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- Up to 94% Efficiency
- 6A Continuous Output Current Capability
- Shutdown Mode Draws <0.1 μ A Supply Current
- 100% Dropout Operation
- Power Good Indicator
- OCP/UVLO/OTP Protections
- RoHS Compliant and Halogen Free
- Compact Package: DFN2x2-8

Applications

- High definition Set Top Box
- LCD TV
- Notebook PC



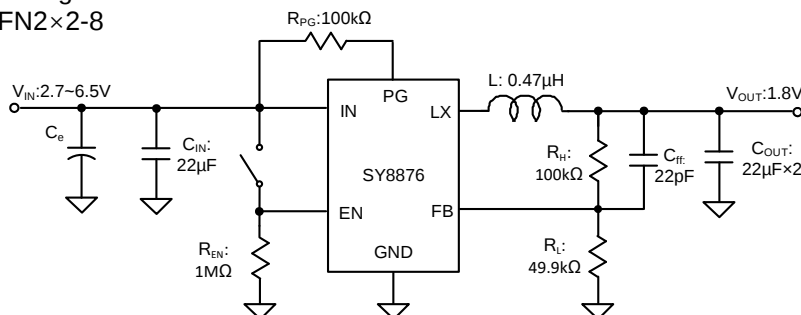
SY8876DFC - 6.5V, 6A, 1.2MHz Synchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 38/15 m Ω
- 2.7-6.5V Input Voltage Range
- 1.2 MHz Switching Frequency Minimizes the External Components
- Internal Soft-start Limits the Inrush Current
- Up to 94% Efficiency
- 6A Continuous Output Current Capability
- Shutdown Mode Draws <0.1 μ A Supply Current
- 100% Dropout Operation
- Power Good Indicator
- OCP/UVLO/OTP Protections
- RoHS Compliant and Halogen Free
- Compact Package: DFN2x2-8

Applications

- High Definition Set Top Box
- LCD TV
- Notebook PC


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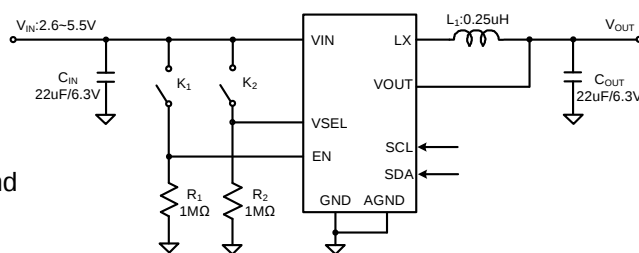
SY8827KPKC -12A, 1.5MHz, I2C Programmable, with VOUT Remote Sense Sync Buck

Features

- 2.7V to 5.5V Input Voltage Range
- Pseudo-constant Frequency: 1.5MHz
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 12m Ω /6m Ω
- Programmable Output Voltage: 0.6V to 1.5V in 10mV Steps
- 12A Continuous, 15A Peak Load Current Capability
- Capable for 0.25 μ H Inductor and 2 $\times$ 22 μ F Ceramic Capacitor
- PFM/PWM Operation for Optimum Increased Efficiency
- Remote Sensing at Point of Load Side
- 2 Different I²C Address Selectable
- I²C Interface Support 100kHz Standard Mode and 400kHz Fast Mode
- Thermal Shutdown with Auto Recovery
- RoHS Compliant and Halogen Free
- Compact Package: QFN3x3-12

Applications

- Smart-phone
- Web-tablets



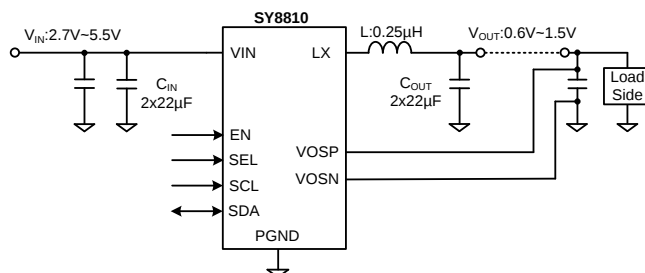
SY8810QQC - 12A, 1.5MHz, I2C Programmable, with VOUT Remote Sense Synchronous Step Down Regulator

Features

- 2.7V to 5.5V Input Voltage Range
- Pseudo-constant Frequency: 1.5MHz
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 12m Ω /6m Ω
- Programmable Output Voltage: 0.6V to 1.5V in 10mV Steps
- 12A Continuous, 15A Peak Load Current Capability
- Capable for 0.25 μ H Inductor and 2 $\times$ 22 μ F Ceramic Capacitor
- PFM/PWM Operation for Optimum Increased Efficiency
- Remote Sensing at Point of Load Side
- 2 Different I²C Address Selectable
- I²C Interface Support 100kHz Standard Mode and 400kHz Fast Mode
- Thermal Shutdown with Auto Recovery
- Compact Package: QFN3x3-12

Applications

- Smart-phone
- Web-tablets


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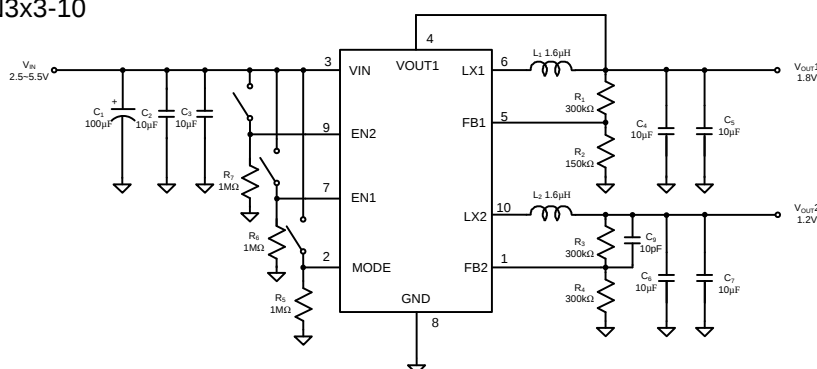
SY8092ADBC - 5.5V, Dual 1A, 2MHz Sync Buck

Features

- Input range: 2.5V to 5.5V
- 2MHz switching frequency
- 180° out of phase operation
- Output current: 1A per channel
- +/-1% DC output voltage accuracy at forced PWM mode
- Low Quiescent Current: <35uA when both channels are enabled
- Low $R_{DS(ON)}$ for internal switches (PFET/NFET): 220mΩ/180mΩ
- Internal softstart
- 100% dropout operation
- RoHS Compliant and Halogen Free
- Compact package: DFN3x3-10

Applications

- SSD
- Cell Phones
- Digital Cameras
- PDAs
- Portable Media Players



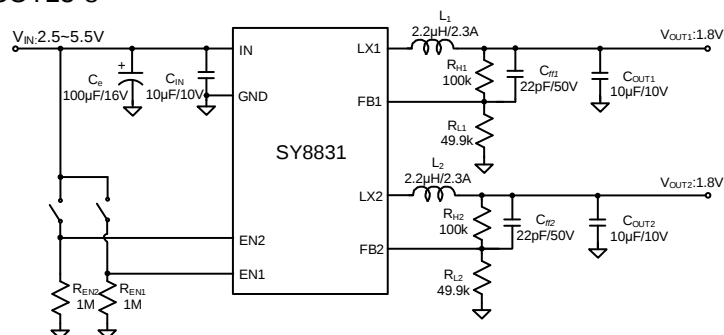
SY8831AIC - Dual 1A, 1.5MHz Sync Buck

Features

- 2.5V to 5.5V Input Voltage
- 1.5MHz Switching Frequency
- 180° Out of Phase Operation
- Output Current: 1A per Channel
- Quiescent Current: Typical 55uA for both Channels
- Low $R_{DS(ON)}$ for Internal Switches (PFET/NFET): 260mΩ/180mΩ
- Internal Soft-start
- 100% Dropout Operation
- RoHS Compliant and Halogen Free
- Compact Package: TSOT23-8

Applications

- SSD
- Cell Phones
- Digital Cameras
- PDAs
- Portable Media Players


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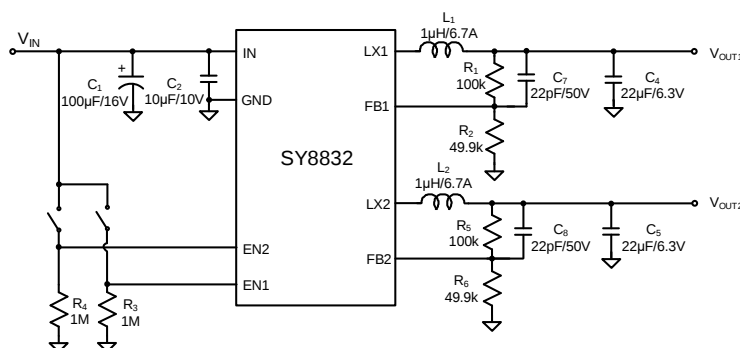
SY8832AIC - Dual 2A, 2MHz Sync Buck

Features

- 2.5V to 5.5V Input Voltage
- 2MHz Switching Frequency
- 180° Out of Phase Operation
- Output Current: 2A per Channel
- Low Quiescent Current: <45μA for Both Channels
- Low $R_{DS(ON)}$ for Internal Switches (PFET/NFET): 125mΩ/100mΩ
- Internal Soft-start
- 100% Dropout Operation
- RoHS Compliant and Halogen Free
- Compact Package: TSOT23-8

Applications

- SSD
- Cell Phones
- Digital Cameras
- PDAs
- Portable Media Players



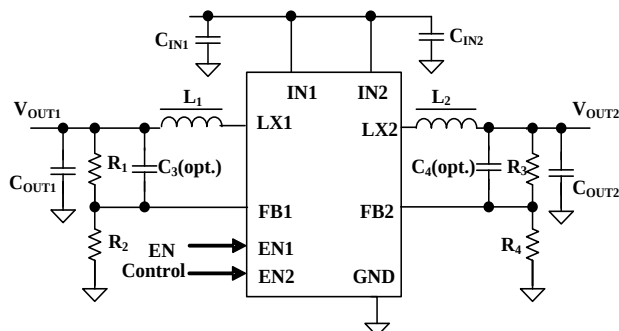
SY8024DCC - Dual 3A, 1.5MHz Sync Buck

Features

- Low $R_{DS(ON)}$ for internal switches (top/bottom): 105/85mΩ
- 2.7-5.5V input voltage range
- 1.5MHz switching frequency minimizes the external components
- Internal soft-start limits the inrush current
- 100% dropout operation
- RoHS Compliant and Halogen Free
- Compact and thermally enhanced package: DFN3x3-12

Applications

- WiFi Card
- LCD TV
- GPS
- Access Point Router
- Smart Phone



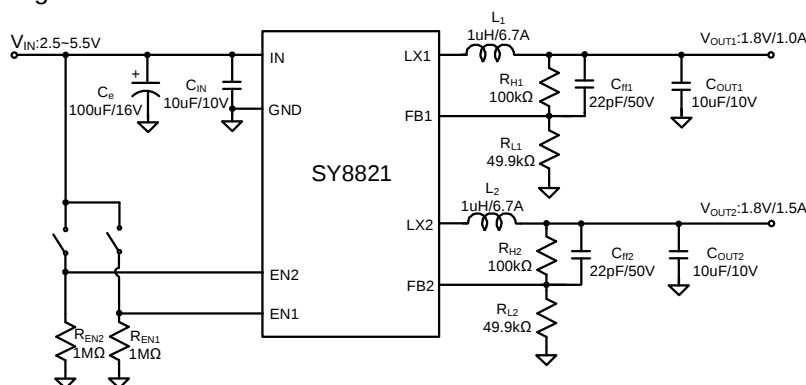
SY8821SAC - Dual 1A/1.5A, 2MHz Sync Buck

Features

- Input Range: 2.5V to 5.5V Input Voltage
- 2MHz Switching Frequency
- 180° out of Phase Operation
- Output Current: 1.0A for Channel 1
- 1.5A for Channel 2
- Low Quiescent Current: <45 μ A for both channels
- Low $R_{DS(ON)}$ for Internal Switches (PFET/NFET): 125m Ω /100m Ω
- Internal soft-start
- 100% Dropout Operation
- RoHS Compliant and Halogen Free
- Compact Package: DFN2x1.5-8

Applications

- SSD
- Cell Phones
- Digital Cameras
- PDAs
- Portable Media Players



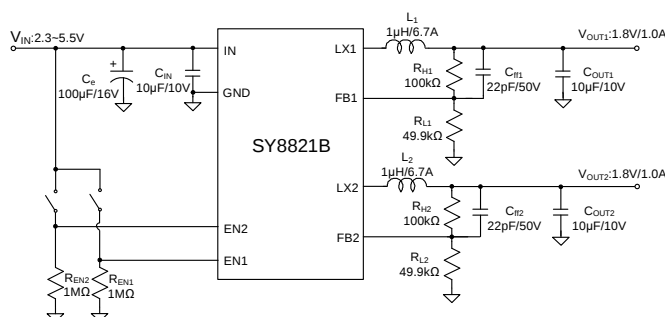
SY8821BSAC - Dual 1A, 2MHz Sync Buck

Features

- 2.3V to 5.5V Input Voltage
- 2MHz Switching Frequency
- 180° Out of Phase Operation
- Output Current: 1.0A for Each Channel
- Low Quiescent Current: Typical 45 μ A for Both Channels
- Low $R_{DS(ON)}$ for Internal Switches (PFET/NFET): 125m Ω /100m Ω
- Internal Soft-start
- 100% Dropout Operation
- RoHS Compliant and Halogen Free
- Compact Package: DFN2x1.5-8

Applications

- SSD
- Cell Phones
- Digital Cameras
- PDAs
- Portable Media Players


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2A, 18V Input Sync

SY8121B1ABC

Features

- 4.2-18V Input Voltage Range
- 2A Output Current Capability
- 500kHz Switching Frequency Minimize the External Components
- Instant PWM Architecture to Achieve Fast Transient Responses
- Internal Soft-start Limits the Inrush Current
- **SY8120E1ABC: Forced PWM Operation**
- Cycle-by-cycle Peak/Valley Current Limitation
- Hic-cup Mode Output Short Circuit Protection
- Thermal Shutdown with Auto Recovery
- Compact Package SOT23-6

Applications

- Set Top Box
- Portable TV
- DSL Modem
- LCD TV
- IP CAM
- Networking

SY8121C1ABC

Features

- 4.2V to 18V Input Voltage Range
- Up to 2A Output Current
- Quiescent Current I_Q : 200 μ A (typ.)
- Shutdown Current I_{SHDN} : 5 μ A (typ.)
- **SY8121C1ABC: 1.2MHz**
- Constant-On-Time and Ripple-Based Control
- Instant-PWM Architecture to Achieve Fast Transient Responses
- Cycle-by-Cycle Peak/Valley Current Limits
- Internal Soft-Start Limits the Inrush Current
- Hiccup Mode for Short-Circuit Protection
- Thermal Shutdown with Auto-Recovery
- Output Auto-Discharge Function
- Compact Package: DFN2x2-6/SOT23-6

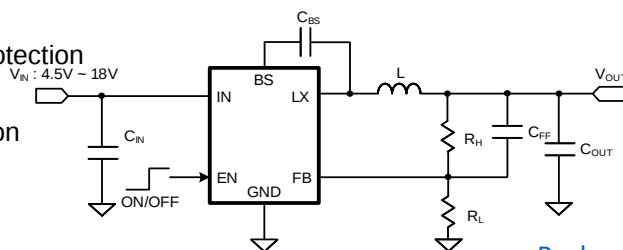
SY81103ABT/SY81103EABT- 3A, 18V Input Sync Buck

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 80m Ω Top, 40m Ω Bottom
- Wide Input Voltage Range: 4.5V ~ 18V
- Up to 3A Output Current
- $\pm 1.5\%$ 0.6V Reference
- Precise EN Threshold
- Pulse-Frequency Modulation (PFM) Mode Operation for SY81103
- Forced Continuous Conduction Mode (FCCM) Operation for SY81103E
- Internal Soft-Start Limits the Inrush Current
- Support Smooth Startup with Pre-Biased Output
- 500kHz Switching Frequency Minimizes the External Components
- Constant On-time and Ripple-Based Control to Achieve Fast Transient Responses
- Stable with 10 μ F C_{OUT}
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT23-6

Applications

- Set-Top Box
- Portable TV
- DSL Modem
- LCD TV
- IP Camera
- Networking


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High Efficiency, 2A, 18V Input Synchronous Buck Converter

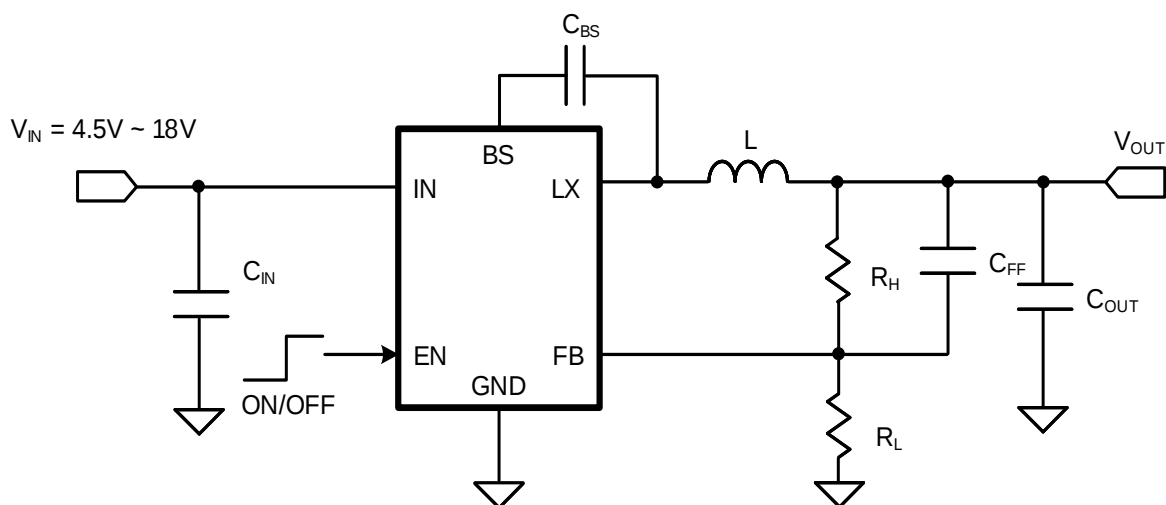
SY81102ABT/SY81102BABT/SY81102CABT/SY81102EABT

Features

- Low RDS(ON) for Internal MOSFETs: 130mΩ Top, 105mΩ Bottom
- Wide Input Voltage Range: 4.5V ~ 18V
- Up to 2A Output Current
- $\pm 1.5\%$ 0.6V Reference
- Precise EN Threshold
- Pulse-Frequency Modulation (PFM) Mode Operation for SY81102 and SY81102C
- Forced Continuous Conduction Mode (FCCM) Operation for SY81102E and SY81102B
- Internal Soft-Start Limits the Inrush Current
- Support Smooth Startup with Pre-Biased Output
- 500kHz Switching Frequency Minimizes the External Components for SY81102 and SY81102E
- 1200kHz Switching Frequency Minimizes the External Components for SY81102C
- 1400kHz Switching Frequency Minimizes the External Components for SY81102B
- Constant On-time and Ripple-Based Control to Achieve Fast Transient Responses
- Stable with 10μF COUT
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT23-6

Applications

- Set-Top Box
- Portable TV
- DSL Modem
- LCD TV
- IP Camera
- Networking



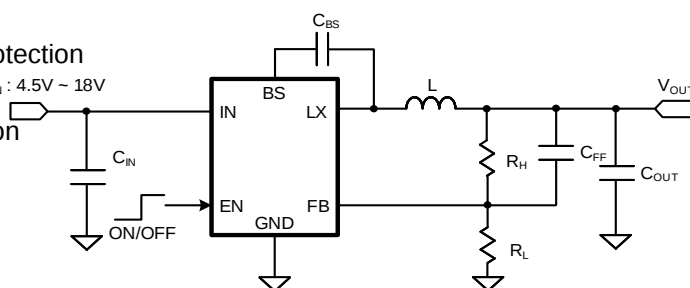
SY81058ABT/SY81058EABT - High Efficiency, 500kHz, 3A, 18V Input Synchronous Buck Converter

Features

- Low RDS(ON) for Internal MOSFETs: 80mΩ Top, 40mΩ Bottom
- Wide Input Voltage Range: 4.5V ~ 18V
- Up to 3A Output Current
- $\pm 1.5\%$ 0.6V Reference
- Precise EN Threshold
- Pulse-Frequency Modulation (PFM) Mode Operation for SY81058
- Forced Continuous Conduction Mode (FCCM) Operation for SY81058E
- Internal Soft-Start Limits the Inrush Current
- Support Smooth Startup with Pre-Biased Output
- 500kHz Switching Frequency Minimizes the External Components
- Constant On-time and Ripple-Based Control to Achieve Fast Transient Responses
- Stable with 10μF COUT
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection $V_{IN} : 4.5V \sim 18V$
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT23-6

Applications

- Set-Top Box
- Portable TV
- DSL Modem
- LCD TV
- IP Camera
- Networking



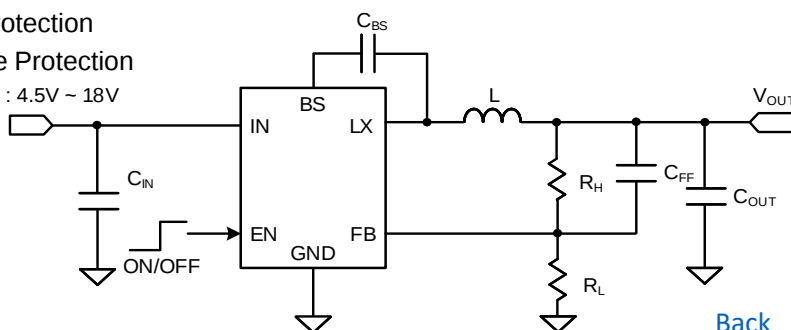
SY81058TABT - High Efficiency, 3A, 18V Input Synchronous Buck Converter

Features

- Low RDS(ON) for Internal MOSFETs: 80mΩ Top, 40mΩ Bottom
- Wide Input Voltage Range: 4.5V ~ 18V
- Up to 3A Output Current
- $\pm 1\%$ 0.765V Reference
- Precise EN Threshold
- Pulse-Frequency Modulation (PFM) Mode Operation
- Internal Soft-Start Limits the Inrush Current
- Support Smooth Startup with Pre-Biased Output
- 500kHz Switching Frequency Minimizes the External Components
- Constant On-time and Ripple-Based Control to Achieve Fast Transient Responses
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO) $V_{IN} : 4.5V \sim 18V$
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT23-6
- MSL Rating: MSL1 (SOT23-6)

Applications

- Set-Top Box
- Portable TV
- DSL Modem
- LCD TV
- IP Camera
- Networking

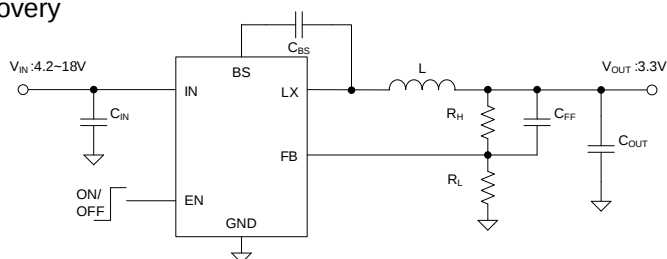

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3A, 18V Input Sync Buck

SY8113B1ADC/SY8113C1ADC/SY8113E1ADC/SY81003EADC-

Features

- 4.2V to 18V Input Voltage Range
- Up to 3A Output Current
- Low $R_{DS(ON)}$ for Internal Switches: 80m Ω Top, 40m Ω Bottom
- **SY81003EADC-600MHz**
- **SY8113B1ADC- 1.4MHz**
- **SY8113C1ADC/SY8113E1ADC- 1.2MHz**
- **SY8113B1ADC- Forced PWM Operation**
- **SY8113C1ADC/SY8113E1ADC-Instant PWM Architecture to Achieve Fast Transient Responses**
- Cycle-by-Cycle Top/Bottom Current Limits
- Internal Soft-Start Limits Inrush Current
- **SY81003EADC-Startup from Pre-biased Output**
- Hiccup Mode Output Short-Circuit Protection
- Overtemperature Protection with Auto-Recovery
- Output Auto-Discharge Function
- RoHS-Compliant and Halogen-Free
- Compact Package: TSOT23-6

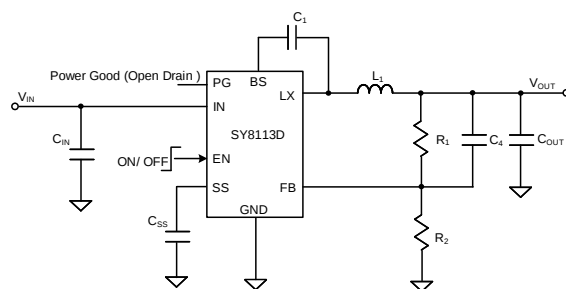


SY8113DAIC-High Efficiency, 500kHz, 3A, 18V Input Synchronous Step Down Regulator

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 80m Ω /40m Ω
- 4.5-18V Input Voltage Range
- 3A Output Current Capability
- 500KHz Switching Frequency
- Instant PWM Architecture to Achieve Fast Transient Responses
- Cycle-by-cycle Current Limitation
- Hiccup Mode Short Circuit Protection
- Power Good Indicator
- Programmable Soft-start Time to Limit the Inrush Current
- $\pm 1.5\%$ 0.6V Reference
- Thermal Shut Down With Auto-recovery
- RoHS Compliant and Halogen Free
- TSOT23-8 Package

Applications

- Set Top Box
- Portable TV
- DSL Modem
- LCD TV
- IP Camera
- Networking



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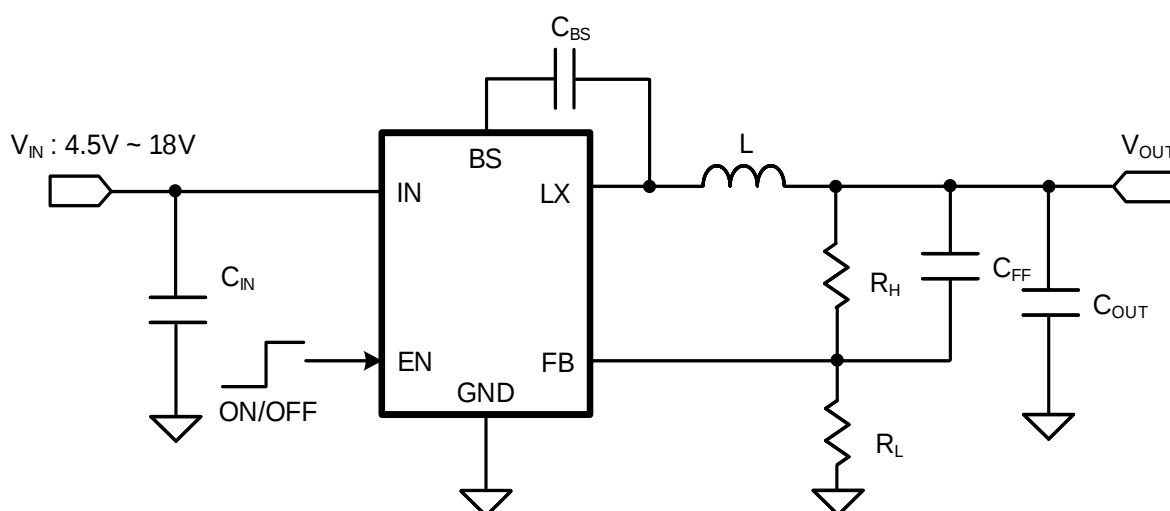
SY81103B/CABT - 3A, 18V Input Sync Buck

Features

- Low RDS(ON) for Internal MOSFETs: 80mΩ Top, 40mΩ Bottom
- Wide Input Voltage Range: 4.5V ~ 18V
- Up to 3A Output Current
- $\pm 1.5\%$ 0.6V Reference
- Precise EN Threshold
- Pulse-Frequency Modulation (PFM) Mode Operation for SY81103 and SY81103C
- Forced Continuous Conduction Mode (FCCM) Operation for SY81103E and SY81103B
- Internal Soft-Start Limits the Inrush Current
- Support Smooth Startup with Pre-Biased Output
- 500kHz Switching Frequency Minimizes the External Components for SY81103 and SY81103E
- 1200kHz Switching Frequency Minimizes the External Components for SY81103C and SY81103B
- Constant On-time and Ripple-Based Control to Achieve Fast Transient Responses
- Stable with 10μF C_{OUT}
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT23-6

Applications

- Set-Top Box
- Portable TV
- DSL Modem
- LCD TV
- IP Camera
- Networking



SY8104IADC - 4A, 18V Input Sync Buck

Features

- 4.2-18V Input Voltage Range
- 4A Output Current Capability
- 500kHz Switching Frequency Minimize the External Components
- Instant PWM Architecture to Achieve Fast Transient Responses
- Internal Soft-Start Limits the Inrush Current
- Cycle-by-cycle Peak/Valley Current Limitation
- Hic-cup Mode Output Short Circuit Protection
- Thermal Shutdown with Auto Recovery
- Output Auto Discharge Function
- Compact Package: TSOT23-6

Applications

- Set Top Box
- Portable TV
- DSL Modem
- LCD TV
- IP CAM
- Networking

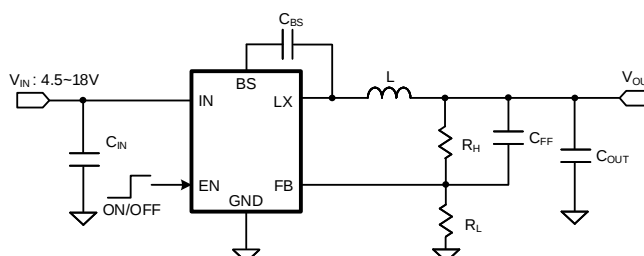
SY8105IADC - 5A, 18V Input Sync Buck

Features

- 4.5V to 18V Input Voltage Range
- Up to 5A Output Current
- 500kHz Switching Frequency Minimizes Required External Components
- Constant-On-Time and Ripple-Based Control to Achieve Fast Transient Responses
- Cycle-by-Cycle Top/Bottom Current Limits
- Internal Soft-Start Limits Inrush Current
- Hiccup Mode for Short-Circuit Protection
- Overtemperature Protection with Auto-Recovery
- Output Auto-Discharge Function
- RoHS-Compliant and Halogen-Free
- Compact Package: TSOT23-6

Applications

- Set-Top Box
- Portable TV
- DSL Modem
- LCD TV
- IP Camera
- Networking



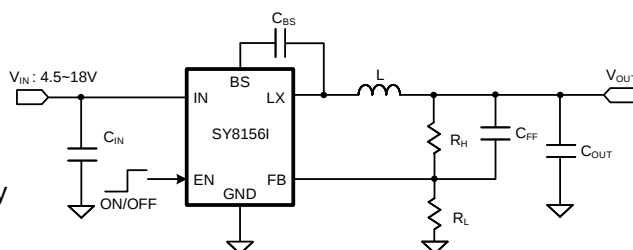
SY8156IADC- 6A, 18V Input, Sync Buck

Features

- 4.5V to 18V Input Voltage Range
- Up to 6A Output Current
- Low $R_{DS(ON)}$ for Internal Switches: 29m Ω Top, 19m Ω Bottom
- 400kHz Switching Frequency Minimizes Required External Components
- Constant-On-Time and Ripple-Based Control to Achieve Fast Transient Responses
- Stable with 22 μ F C_{OUT} and 1 μ H Inductor
- Cycle-by-Cycle Top/Bottom Current Limits
- Internal Soft-Start Limits the Inrush Current
- Hiccup Mode for Short-Circuit Protection
- Over-temperature Protection with Auto-Recovery
- Output Auto-Discharge Function
- RoHS-Compliant and Halogen-Free
- Compact Package: TSOT23-6

Applications

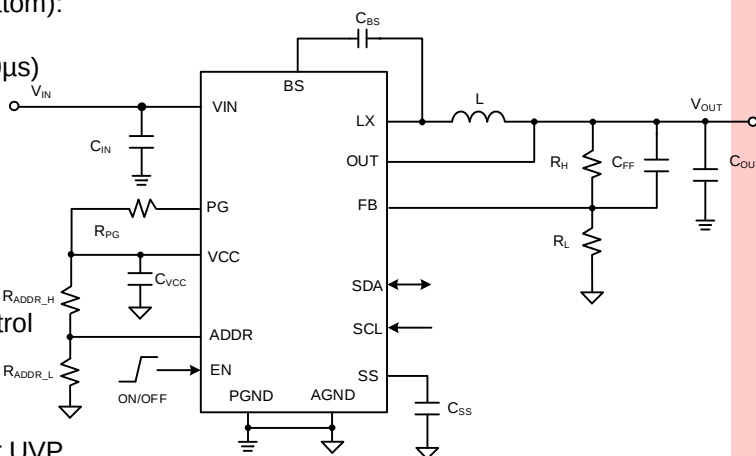
- Set-Top Boxes
- Portable TVs
- DSL Modems
- LCD TVs
- IP Cameras
- Networking



SY81050RRC- 18V Input, 12A Sync Buck with I2C Interface

Features

- 2.85V to 18V Input Voltage Range
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 15m Ω /4.5m Ω
- 12A Continuous, 15A Peak (Duration<100 μ s) Output Current Capability
- $\pm 1\%$ Reference Voltage Accuracy
- External Programmed Soft Start
- Pre-biased Startup
- Power Good Indicator
- I2C Programmed Function:
 - Selectable Reference Range from 0.6V to 1.108V in 4mV Steps with Slew Rate Control
 - Selectable Switching Frequency: 500kHz, 750kHz, 1MHz and 1.25MHz
- Selectable PFM and FCCM Mode
- Selectable Hic-cup and Latch off Mode for UVP and OVP
- Programmable Peak and Valley Current Limit
- Selectable Output Discharge
- Output Voltage and Output Current Monitor
- Auto-recovery for Over Temperature Protection
- RoHS Compliant and Halogen Free
- Compact Package: QFN3x4-14



Applications

- Smart-phone
- Web-tablets
- SSD

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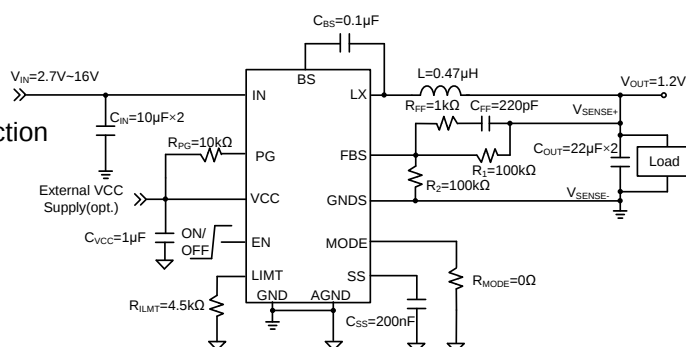
SY81012VDC- 12A, 16V Input, Sync Buck

Features

- Wide Input Voltage Range:
- 3.6V to 16V if VCC is Supplied by Internal LDO
- 2.7V to 16V if VCC is Supplied by External 3.3V DC Source
- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 12.6m Ω /4.3m Ω
- 0.6V $\pm$ 1% Voltage Reference Over Temperature Range
(TJ = -40° C to 125° C)
- Adopt Constant-on-time Architecture and Frequency Lock Loop
- Instant PWM Architecture to Achieve Fast Transient Response.
- 600kHz, 800kHz and 1000kHz Switching Frequency Operation Selected by MODE Pin
- PFM/FCCM Light Load Operation Mode Selected by MODE pin.
- Programmable Bottom Valley Limit by ILMT pin
- Reliable Protection Mode: Auto-Recovery Mode for UVP, UVLO, OTP and OVP
- Cycle-by-cycle Valley Current Limit and Peak Current Limit
- Cycle-by-cycle Reverse Current Limit
- Internal Soft-start Limits the Inrush Current
- Programmable Soft-start Time by SS Pin
- Smooth Soft-start with Output Pre-biased Function
- Adjustable Input Voltage UVLO by EN Pin
- Power Good Indicator
- Differential Output Voltage Remote Sense
- Output Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: QFN3x4-19

Applications

- Power Module
- Telecom and Networking Systems
- Servers
- LCD-TV/Net-TV/3DTV
- Set Top Box
- Notebook
- High Power AP



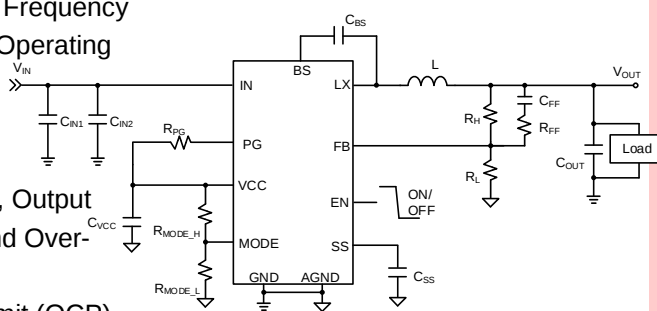
SY81047BWZQ- High Efficiency, 12A, 17V Input Synchronous Step-down Regulator

Features

- Wide Input Voltage Range: 4.5-17V
- Internal 9.8m Ω Power Switch and 4.5m Ω Synchronous Rectifier
- Accurate Feedback Set Point: 0.6V $\pm$ 1%
- Fast Transient Response
- Selectable 400kHz, 800kHz and 1200kHz Operating Frequency
- Selectable Automatic High-efficiency Discontinuous Operating Mode at Light Loads
- Selectable Valley Current Limit
- Reliable Built-in Protections:
- Automatic Recovery for Input Under-voltage (UVLO), Output Under-voltage (UVP), Output Over-voltage (OVP) and Over-temperature (OTP) Conditions
- Cycle-by-cycle Reverse, Valley and Peak Current Limit (OCP)
- Internal, Adjustable Soft-Start to limit Inrush Current
- Smooth Pre-biased Startup
- Power Good Output Monitor for Under-voltage and Over-voltage

Applications

- Telecom and Networking Systems
- Servers


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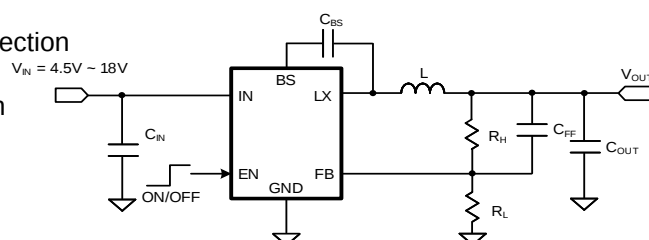
SY81057ABT/ SY81057EABT - High Efficiency, 2A, 18V Input Synchronous Buck Converter

Features

- Low RDS(ON) for Internal MOSFETs: 130mΩ Top, 105mΩ Bottom
- Wide Input Voltage Range: 4.5V ~ 18V
- Up to 2A Output Current
- $\pm 1.5\%$ 0.6V Reference
- Precise EN Threshold
- Pulse-Frequency Modulation (PFM) Mode Operation for SY81057
- Forced Continuous Conduction Mode (FCCM) Operation for SY81057E
- Internal Soft-Start Limits the Inrush Current
- Support Smooth Startup with Pre-Biased Output
- 500kHz Switching Frequency Minimizes the External Components
- Constant On-time and Ripple-Based Control to Achieve Fast Transient Responses
- Stable with 10μF COUT
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT23-6

Applications

- Set-Top Box
- Portable TV
- DSL Modem
- LCD TV
- IP Camera
- Networking



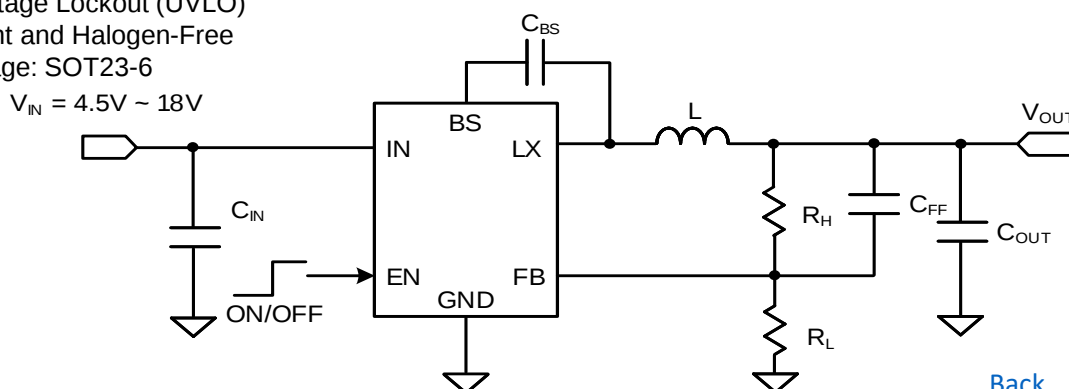
SY81057TABT- High Efficiency, 2A, 18V Input Synchronous Buck Converter

Features

- Low RDS(ON) for Internal MOSFETs: 130mΩ Top, 105mΩ Bottom
- Wide Input Voltage Range: 4.5V ~ 18V
- Up to 2A Output Current
- $\pm 1\%$ 0.765V Reference
- Precise EN Threshold
- Pulse-Frequency Modulation (PFM) Mode Operation
- Internal Soft-Start Limits the Inrush Current
- Support Smooth Startup with Pre-Biased Output
- 500kHz Switching Frequency Minimizes the External Components
- Constant On-time and Ripple-Based Control to Achieve Fast Transient Responses
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT23-6

Applications

- Set-Top Box
- Portable TV
- DSL Modem
- LCD TV
- IP Camera
- Networking


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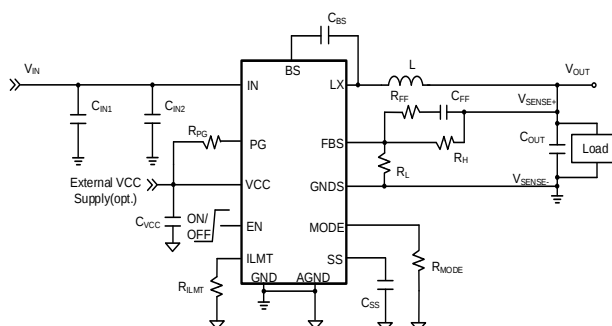
SY81020VDC - 20A, 16V Input, Synchronous Step-Down Regulator

Features

- Wide Input Voltage Range: 3.6-16V, and as Low as 2.9V with External VCC Applied
- Internal 7.5mΩ Power Switch and 2.4mΩ Synchronous Rectifier
- Accurate Feedback Set Point: 0.6V $\pm$ 1%
- Differential Remote Sense
- Fast Transient Response
- 600kHz, 800kHz and 1000kHz Operating Frequency
- Selectable Automatic High-Efficiency Discontinuous Operating Mode At Light Loads
- Programmable Valley Current Limit
- Automatic Recovery for Input Under-voltage (UVLO), Output Under-voltage (UVP) and Over-temperature (OTP) Conditions
- Cycle-by-cycle Valley and Peak Current Limit (OCP)
- Cycle-by-cycle Reverse Current Limit
- Internal, Adjustable Soft-Start Limits Inrush Current
- Smooth Pre-Biased Startup
- Power Good Output Monitor for Under-Voltage and Over-Voltage

Applications

- Telecom and Networking Systems
- Servers
- High Power Access Points
- Storage Systems
- Cellular Base Stations



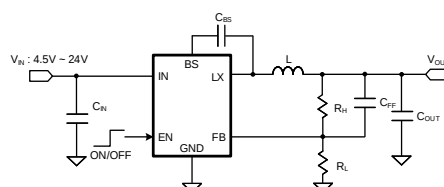
SY82003ABT - 20A, 16V Input, Synchronous Step-Down Regulator

Features

- Low RDS(ON) for Internal MOSFETs: 120mΩ Top, 60mΩ Bottom
- Wide Input Voltage Range: 4.5V ~ 24V
- Up to 3A Output Current
- $\pm$ 1% 0.6V Reference Accuracy
- Precise EN Threshold
- PFM Light Load Operation for High Efficiency
- Internal Soft-Start Limits the Inrush Current
- Support Smooth Startup with Pre-Biased Output
- 500kHz Switching Frequency Minimizes the External Components
- Constant On-Time and Ripple-Based Control to Achieve Fast Transient Responses
- Stable with 10μF COUT
- Output Auto-Discharge Function
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT23-6

Applications

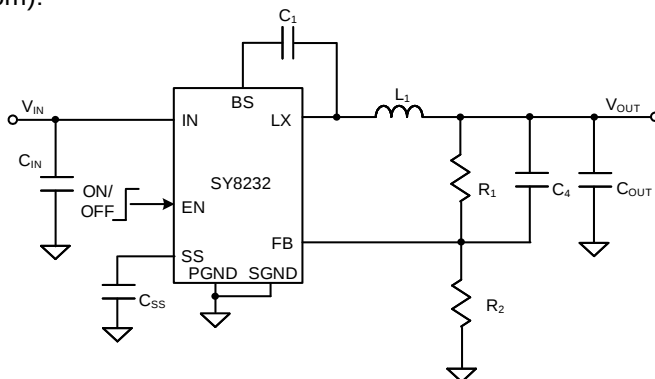
- Set-Top Box
- Portable TV
- DSL Modem
- LCD TV
- IP Camera
- Networking



SY8232FAC- 2A, 23V Input, Synchronous Step-Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 150/110 m Ω
- 4.5-23V Input Voltage Range
- Instant PWM Architecture to Achieve Fast Transient Responses
- Programmable Soft-start Limits the Inrush Current
- Pseudo-constant Frequency: 500kHz
- 2A Output Current Capability
- 1.5% 0.6V Reference
- RoHS Compliant and Halogen Free
- Compact Package: SO8



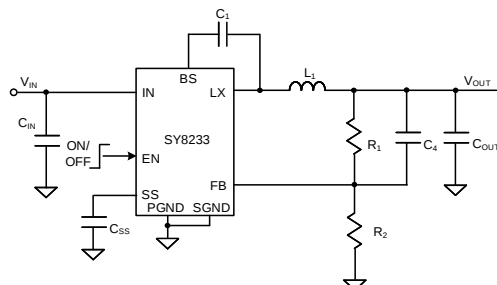
Applications

- Set Top Box
- Portable TV
- Access Point Router
- DSL Modem
- LCD TV

SY8233FCC- 3A, 23V Input, Synchronous Step-Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 130/90 m Ω
- 4.5-23V Input Voltage Range
- Instant PWM Architecture to Achieve Fast Transient Responses
- Programmable Softstart Limits the Inrush Current
- Pseudo-constant Frequency: 500khz
- 3A Output Current Capability
- 1.5% 0.6V Reference
- RoHs Compliant and Halogen Free
- Compact Package: SO8E



Applications

- Set Top Box
- Portable TV
- Access Point Router
- DSL Modem
- LCD TV

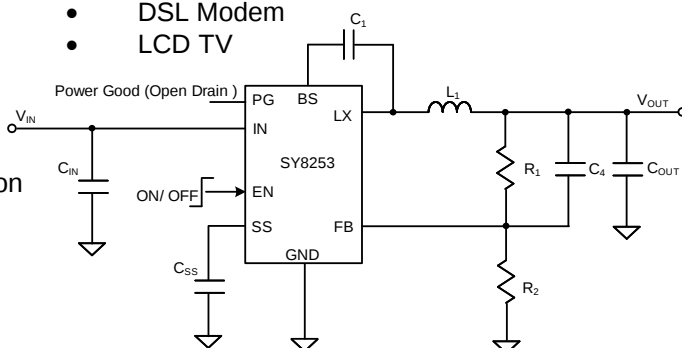
SY8253ADC/SY8253AIC- 3A, 23V Input, Sync Buck

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 105m Ω /50m Ω
- 4.5-23V Input Voltage Range
- 3A Output Current Capability
- 500 kHz Switching Frequency
- Instant PWM Architecture To Achieve Fast Transient Responses.
- Cycle-by-cycle Peak Current Limitation
- Internal Softstart Limits The Inrush Current
- Hic-Cup Mode Output Short Circuit Protection
- $\pm 1.5\%$ 0.6V Reference
- Power Good Indicator (SY8253AIC Only)
- TSOT23-8/ TSOT23-6 Package

Applications

- Set Top Box
- Portable TV
- Access Point Router
- DSL Modem
- LCD TV



SY8254RAC,SY8284RAC/BRAC/CRAC- 4A, 23V Input, Sync Buck

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 85/35m Ω
- Wide Input Voltage Range: 4-23V
- SY8284/B/C-Instant PWM Architecture to Achieve Fast Transient Responses
- SY8254/8284B-Internal 1.2ms Soft-start Limits the Inrush Current
- SY8284-Internal 600 μ s Soft-start Limits the Inrush Current
- SY8284C-Internal 800 μ s Soft-start Limits the Inrush Current
- Pseudo-constant Frequency: 600kHz
- 4A Output Current Capability
- SY8284B/C-100mA LDO Current Capability
- SY8284B-Fixed 3.338V Output Voltage
- SY8284B/C-Fixed 5.1V Output Voltage
- $\pm 1\%$ Internal Reference Voltage
- SY8254-PFM/FCCM Selectable Light Load Operation mode
- Optional Bypass Input
- Power Good Indicator
- Output Discharge Function
- Output Current Limit Protection
- SY8254/SY8284: Hiccup Mode Output Short Circuit Protection
- Output Under Voltage Protection
- Output Over Voltage Protection
- SY8284B/C-Latch off Mode Output Under Voltage Protection
- SY8284B/C-Latch-off Mode Output Over Voltage Protection
- SY8284B/C-Latch-off Mode Over Temperature Protection
- Programmable Bottom FET Current Limit
- Input Under Voltage Lock-out(UVLO)
- Over Temperature Protection With Auto Recovery
- RoHS Compliant and Halogen Free
- Compact Package: QFN3 $\times$ 3-20

Applications

- LCD-TV/Net-TV/3DTV
- Set Top Box
- Notebook
- High Power AP

6A, 24V Input, Sync Buck

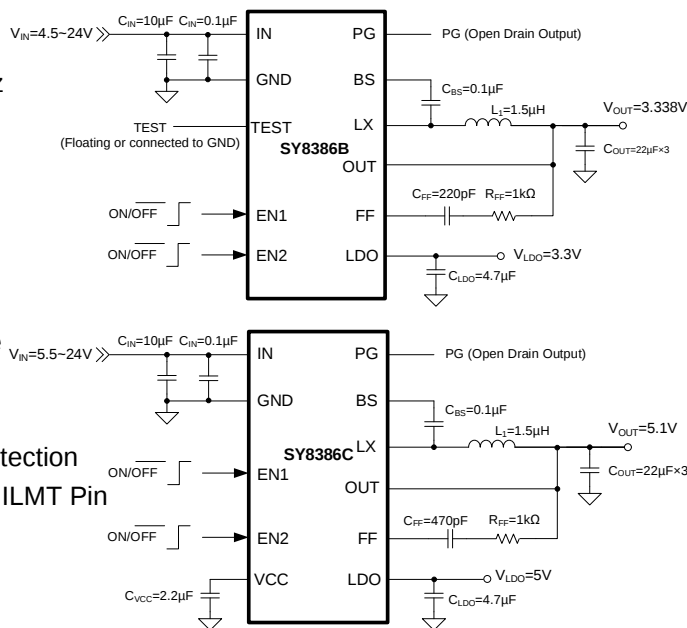
SY8386BRHC/SY8386CRHC-

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 38/19m Ω
- Wide Input Voltage Range: 4.5~24V
- Integrated Bypass Switch: 1.2 Ω
- Instant PWM Architecture to Achieve Fast Transient Responses
- Internal Soft-start Limits the Inrush Current
- Pseudo-Constant Frequency: 500kHz
- SY8386B/C-Pseudo-constant Frequency: 600kHz
- SY8386B-Fixed 3.338V Output Voltage
- SY8386C-Fixed 5.1V Output Voltage
- Adjustable Output Voltage Application
- 6A Output Current Capability
- SY8386B/C-100mA LDO Current Capability
- $\pm 1\%$ Internal Reference Voltage
- PFM/USM Selectable Light Load Operation Mode
- Power Good Indicator
- Output Discharge Function
- Cycle-by-cycle Valley and Peak Current Limit Protection
- Programmable Valley Current Limit Threshold by ILMT Pin
- Latch-off Mode Output Under Voltage Protection
- Latch-off Mode Output Over Voltage Protection
- Latch-off Mode Over Temperature Protection
- Input UVLO
- Compact Package: QFN2.5 $\times$ 2.5-16

Applications

- LCD TV/3DTV
- Set-Top Box
- Notebook
- High-Power AP



8A, 24V Input, Sync Buck

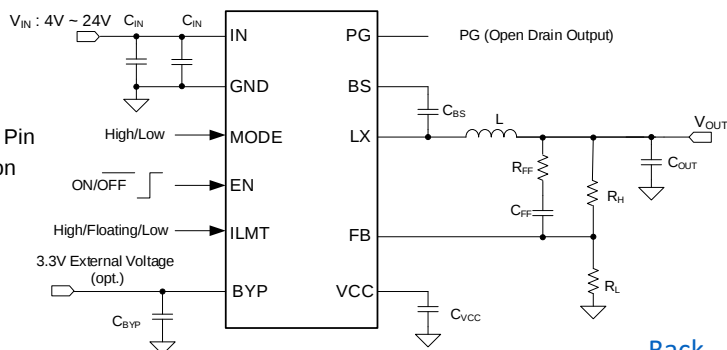
SY83088ARHC

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 20m Ω Top, 10m Ω Bottom
- Wide Input Voltage Range: 4V ~ 24V
- Adjustable Output Voltage: 0.6V ~ 12.5V
- Large Duty Cycle On-Time Stretch
- 8A Continuous Output Current Capability
- 600kHz Pseudo-Constant Frequency
- $\pm 1\%$ Internal Reference Voltage
- Internal 1ms Soft-Start Limits the Inrush Current
- Constant On-Time and Ripple-Based Control to Achieve Fast Transient Responses
- Integrated 1.5 Ω Bypass Switch
- PFM/FCCM Selectable Light Load Operation Mode
- Power Good Indicator
- Output Auto-Discharge Function
- Programmable Valley Current Limit Threshold by ILMT Pin
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Output Over Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS Compliant and Halogen Free
- Compact Package: QFN2.5 $\times$ 2.5-16

Applications

- LCD-TV/Net-TV/3D-TV
- Set Top Box
- Notebook
- High Power AP


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8A, 24V Input, Sync Buck

SY8388ARHC-

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 20/10 m Ω
- Wide Input Voltage Range: 4~24V
- Integrated Bypass Switch: 1.5 Ω
- Instant PWM Architecture to Achieve Fast Transient Responses
- Internal Soft-Start Limits the Inrush Current
- Pseudo-Constant Frequency: 600kHz
- Adjustable Output Voltage Application
- 8A Output Current Capability
- $\pm 1\%$ Internal Reference Voltage
- PFM/FCCM Selectable Light Load Operation Mode
- Power Good Indicator
- Output Discharge Function
- Cycle-by-cycle Valley and Peak Current Limit Protection
- Programmable Valley Current Limit Threshold by ILMT Pin
- Hic-cup Mode Output Under Voltage Protection
- Auto-recovery Mode Output Over Voltage Protection
- Auto-recovery Mode Over Temperature Protection
- Input UVLO
- Compact Package: QFN2.5 $\times$ 2.5-16

Applications

- LCD-TV/Net-TV/3DTV
- Set Top Box
- Notebook
- High Power AP

SY8388RHC/SY8388BRHC/SY8388B3RHC/SY8388C3RHC/SY8388D3RHC-

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 30/15m Ω
- Wide Input Voltage Range: 4.5~24V
- Integrated Bypass Switch
- Instant PWM Architecture to Achieve Fast Transient Responses
- Internal Soft-start Limits the Inrush Current
- Pseudo-Constant Frequency: 500kHz(SY8388) 600kHz(SY8388B/B3/C3/D3)
- SY8388-Adjustable Output Voltage Application
- SY8388B/B3-Fixed 3.338V Output Voltage
- SY8388C3/D3-Fixed 5.1V Output Voltage
- 8A Output Current Capability
- SY8388B/D3-100mA LDO Current Capability
- $\pm 1\%$ Internal Reference Voltage
- PFM/USM Selectable Light Load Operation Mode
- Power Good Indicator
- Output Discharge Function
- Cycle-by-cycle Valley and Peak Current Limit Protection
- Programmable Valley Current Limit Threshold by ILMT Pin
- Latch-off Mode Output Under Voltage Protection
- Latch-off Mode Output Over Voltage Protection
- Latch-off Mode Over Temperature Protection
- Input UVLO
- Compact Package: QFN2.5 $\times$ 2.5-16

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9A,28V Input Sync Buck

SY8310RAC/SY8310DRAC Features

- 4–24V Input Voltage Range
- SY8310: Up to 9A Continuous/14A Peak Output Current
- SY8310D: 9A Continuous/12A Peak Output Current Capability of the VDD2 Regulator
- SY8310D: Compatible for LPDDR4X Application
- Low $R_{DS(ON)}$ for Internal Switches: 27m Ω Top, 9m Ω Bottom
- Integrated 1.2 Ω Bypass Switch
- SY8310: COT Ripple-Based Control to Achieve Fast Transient Responses
- PFM/USM Selectable Light Load Operation Mode
- 450 μ s Soft-Start Inrush Current Limit
- Pseudoconstant Frequency: 600kHz
- SY8310: Adjustable Output Voltage
- SY8310D: Fixed 0.61V VDDQ Reference
- SY8310: $\pm 1\%$ 0.6V Internal Reference Voltage
- SY8310D: $\pm 1.0\%$ 0.6V VDD2 Reference
- SY8310: $\pm 1A$ Source/Sink Current Capability
- SY8310D: $\pm 1A$ Source/Sink Current Capability of the VDDQ LDO
- SY8310: Buffered Low-Noise $\pm 10mA$ VTTREF Output
- Power-Good Indicator
- Support for VTT LDO High-Z in S3
- Output Tracking Discharge Function for the Regulator and VTT LDO
- Cycle-by-Cycle Valley/Peak-Current Limit
- Latch-Off Mode Output Undervoltage (UVP), Overvoltage (OVP), and Overtemperature (OTP)
- Input and Bias Undervoltage (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: QFN3mm $\times$ 3mm-20

Applications

- LCD TV/3DTV
- Set-Top Box
- Notebook
- High-Power AP

High Efficiency Fast Response, 98% Duty, 6A, 24V Input Synchronous Buck Converter

SY83086ARHC

Features

- Low RDS(ON) for Internal MOSFETs: 28m Ω Top, 16m Ω Bottom
- Wide Input Voltage Range: 4.5V ~ 24V
- Adjustable Output Voltage: 0.6V ~ 12.5V
- High Duty Cycle Capable using On-Time Stretch
- 6A Continuous Output Current Capability
- 600kHz Pseudo-Constant Frequency
- $\pm 1\%$ Internal Reference Voltage
- Internal 1.2ms Soft-Start Limits the Inrush Current
- Constant On-Time and Ripple-Based Control to Achieve Fast Transient Responses
- Integrated 1.2 Ω Bypass Switch
- PFM/FCCM Selectable Light Load Operation Mode
- Power Good Indicator
- Output Auto-Discharge Function
- Adjustable Valley Current Limit Threshold by ILMT Pin
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Output Over Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS Compliant and Halogen Free
- Compact Package: QFN2.5 $\times$ 2.5-16

Applications

- LCD-TV/Net-TV/3D-TV
- Set Top Box
- Notebook
- High Power AP

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High Efficiency Fast Response, 8A, 28V Input, Fixed 5.1V Output Synchronous Buck Converter with 100mA 5V LDO

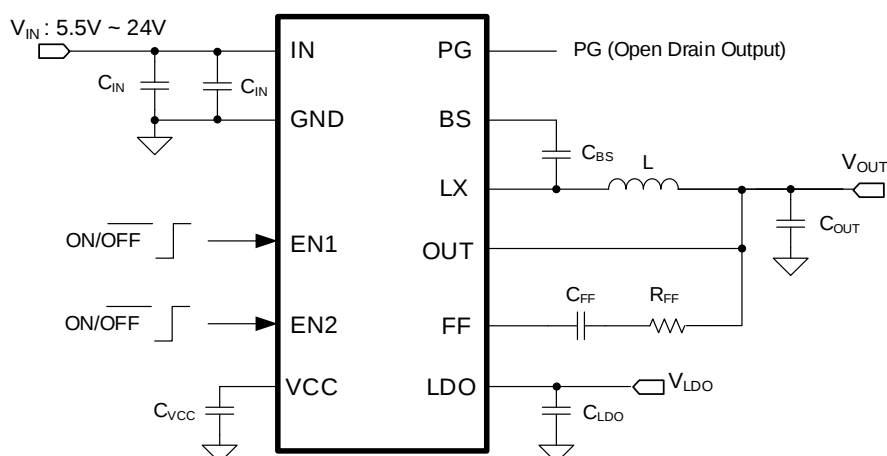
SY83088CRHC

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 20m Ω Top, 10m Ω Bottom
- Wide Input Voltage Range: 5.5V ~ 24V
- Fixed 5.1V Output Voltage
- Large Duty Cycle On-Time Stretch
- 8A Continuous Output Current Capability
- 100mA LDO Current Capability
- 600kHz Pseudo-Constant Frequency
- $\pm 1.5\%$ Internal Reference Voltage
- Internal 0.8ms Soft-Start Limits the Inrush Current
- Constant On-Time and Ripple-Based Control to Achieve Fast Transient Responses
- Integrated 1.5 Ω Bypass Switch
- PFM/USM Selectable Light Load Operation Mode
- Power Good Indicator
- Output Auto-Discharge Function
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Latch-Off Mode Output Under Voltage Protection for Buck
- Latch-Off Mode Output Over Voltage Protection for Buck
- Latch-Off Mode Over Temperature Protection for Buck
- Auto-Recovery Mode Output Under Voltage Protection for LDO
- Auto-Recovery Mode Over Temperature Protection for LDO
- Input Under Voltage Lockout(UVLO)
- RoHS Compliant and Halogen Free
- Compact Package: QFN2.5x2.5-16

Applications

- LCD-TV/Net-TV/3D-TV
- Set Top Box
- Notebook
- High Power AP



SY8371BTMC - 10A, 28V Input, Sync Buck

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 18/8m Ω
- Wide Input Voltage Range: 4~24V
- Integrated Bypass Switch: 1.5 Ω
- Instant PWM Architecture to Achieve Fast Transient Responses
- Internal Soft-start Limits the Inrush Current
- Pseudo-constant Frequency: 600kHz
- Fixed 3.36V Output Voltage
- 10A Output Current Capability
- 100mA LDO Current Capability
- $\pm 1\%$ Internal Reference Voltage
- PFM/USM Selectable Light Load Operation Mode
- Power Good Indicator
- Output Discharge Function
- Cycle-by-cycle Valley Current and Peak Current Limit Protection
- Latch-off Mode Output Under Voltage Protection for Buck
- Latch-off Mode Output Over Voltage Protection for Buck
- Latch-off Mode Over Temperature Protection for Buck
- Auto-recovery Mode Output Under Voltage Protection for LDO
- Auto-recovery Mode Over Temperature Protection for LDO
- Input Under Voltage Lock-out(UVLO)
- Compact Package: QFN3x4-13

Applications

- LCD-TV/Net-TV/3DTV
- Set Top Box
- Notebook
- High Power AP
- Desk-top

SY8370TMC/SY8370C1TMC/SY8370FTMC - 11A, 28V Input Sync Buck

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 17/7.5m Ω
- Wide Input Voltage Range: 5.5~24V
- Integrated Bypass Switch: 1.5 Ω
- Instant PWM Architecture to Achieve Fast Transient Responses
- Internal Soft-start Limits the Inrush Current
- Pseudo-constant Frequency: 600kHz
- SY8370: Adjustable Output Voltage Application
- SY8370C1: Fixed 5.15V Output Voltage
- SY8370F: Adjustable Output Voltage: 1V ~ 12V
- 11A Output Current Capability
- 100mA LDO Current Capability
- $\pm 1.5\%$ Internal Reference Voltage
- PFM/USM Selectable Light Load Operation Mode
- Power Good Indicator
- Output Discharge Function
- Cycle-by-cycle Valley and Peak Current Protection for Buck
- Latch-off Mode Output Under Voltage Protection for Buck
- Latch-off Mode Output Over Voltage Protection for Buck
- Latch-off Mode Over Temperature Protection for Buck
- Auto-recovery Mode Output Under Voltage Protection for LDO
- Auto-recovery Mode Over Temperature Protection for LDO
- Input Under Voltage Lock-out(UVLO)
- Compact package: QFN3 $\times$ 4-13

Applications

- LCD-TV/Net-TV/3DTV
- Set Top Box
- Notebook
- High Power AP

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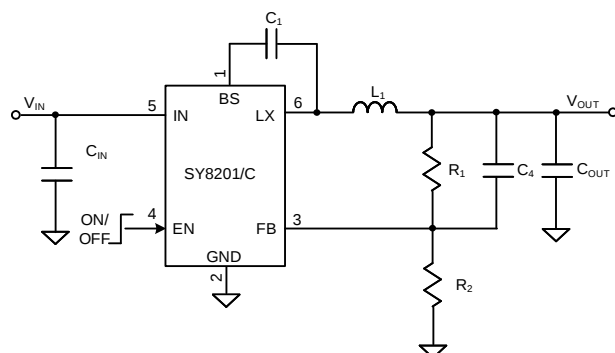
SY8201ABC/SY8201CABC- High Efficiency Fast Response, 1A, 27V Input Sync Buck

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 350/150 m Ω
- 4.5-27V Input Voltage Range
- Instant PWM Architecture to Achieve Fast Transient Responses
- Internal Soft-start Limits the Inrush Current
- 2% 0.6V Reference
- RoHS Compliant and Halogen Free
- Compact Package: SOT23-6

Applications

- Set Top Box
- Portable TV
- Access Point Router
- DSL Modem
- LCD TV



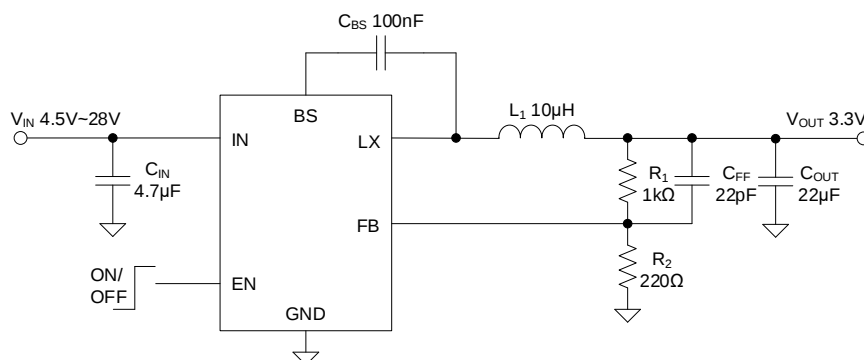
SY8202ADC- 1.7A, 28V Input Sync Buck

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 350m Ω /150m Ω
- 4.5V-28V Input Voltage Range
- 1.7A Output Current Capability
- 500kHz Switching Frequency Minimizes the External Components
- Instant PWM Architecture to Achieve Fast Transient Responses
- Internal Soft-start Limits the Inrush Current
- Cycle-by-cycle Valley Current Limitation
- $\pm 2.0\%$ 0.6V Reference
- RoHS Compliant and Halogen Free
- Compact Package: TSOT23-6

Applications

- Set Top Box
- Portable TV
- Access Point Router
- DSL Modem
- LCD TV



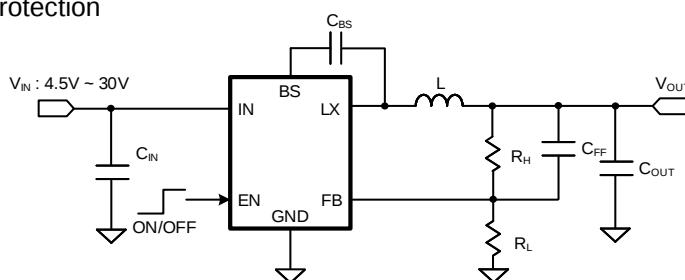
SY82802ABT - High Efficiency, 600kHz, 2A, 30V Input Synchronous Buck Converter

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 150m Ω Top, 115m Ω Bottom
- Wide Input Voltage Range: 4.5V ~ 30V
- Up to 2A Output Current
- $\pm 1\%$ 0.6V Reference over Temperature from -40° C to 125° C
- Precise EN Threshold
- PFM Light Load Operation for High Efficiency
- Internal Soft-Start Limits the Inrush Current
- Support Smooth Startup with Pre-Biased Output
- 600kHz Switching Frequency Minimizes the External Components
- Advanced Constant On-time and Ripple-Based Control to Achieve Fast Transient Responses
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT23-6

Applications

- Set Top Box
- Portable TV
- DSL Modem
- LCD TV
- IP CAM
- Networking



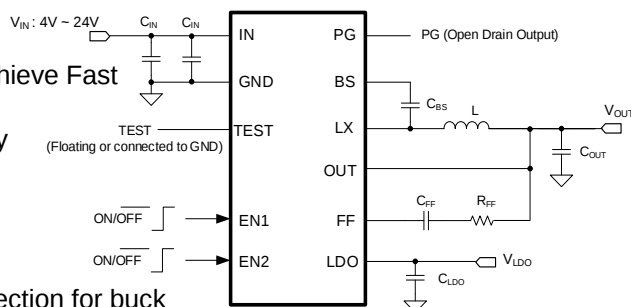
SY83088BRHC - High Efficiency Fast Response, 8A, 28V Input Synchronous Buck Converter with 100mA 3.3V LDO

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 20m Ω Top, 10m Ω Bottom
- Wide Input Voltage Range: 4V ~ 24V
- Fixed 3.338V Output Voltage
- 8A Continuous Output Current Capability
- 600kHz Pseudo-Constant Frequency
- $\pm 1\%$ Internal Reference Voltage
- Internal 1.2ms Soft-Start Limits the Inrush Current
- Constant On-Time and Ripple-Based Control to Achieve Fast Transient Responses
- Integrated 3.3V LDO with 100mA Current Capability
- Integrated 1.5 Ω Bypass Switch
- PFM/USM Selectable Light Load Operation Mode
- Power Good Indicator
- Output Auto-Discharge Function
- Cycle-by-Cycle Valley and Peak Current Limit Protection for buck
- Latch-off Mode Output Under Voltage Protection for buck
- Latch-off Mode Output Over Voltage Protection for buck
- Latch-off Mode Over Temperature Protection for buck
- Auto-Recovery Mode Output Under Voltage Protection for LDO
- Auto-Recovery Mode Over Temperature Protection for LDO
- Input Under Voltage Lockout (UVLO)
- RoHS Compliant and Halogen Free
- Compact package: QFN2.5 $\times$ 2.5-16

Applications

- LCD-TV/Net-TV/3DTV
- Set Top Box
- Notebook
- High Power AP


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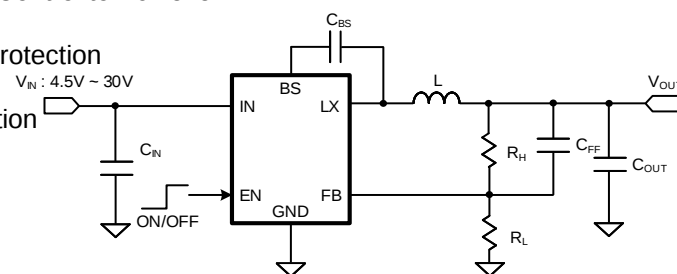
SY82852ABT - High Efficiency, 600kHz, 2A, 30V Input Synchronous Buck Converter

Features

- Low RDS(ON) for Internal MOSFETs: 150mΩ Top, 115mΩ Bottom
- Wide Input Voltage Range: 4.5V ~ 30V
- Up to 2A Output Current
- $\pm 1\%$ 0.6V Reference over Temperature from -40°C to 125°C
- Precise EN Threshold
- PFM Light Load Operation for High Efficiency
- Internal Soft-Start Limits the Inrush Current
- Support Smooth Startup with Pre-Biased Output
- 600kHz Switching Frequency Minimizes the External Components
- Advanced Constant On-time and Ripple-Based Control to Achieve Fast Transient Responses
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT23-6

Applications

- Set Top Box
- Portable TV
- DSL Modem
- LCD TV
- IP CAM
- Networking



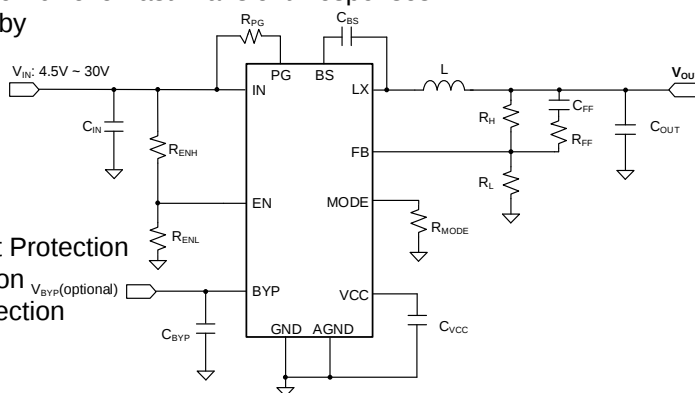
SY82808WYQ - High Efficiency Fast Response, 98% Duty, 8A, 30V Input Synchronous Buck Converter

Features

- Low RDS(ON) for Internal MOSFETs: 20mΩ Top, 10mΩ Bottom
- Wide Input Voltage Range: 4.5V ~ 30V
- Adjustable Output Voltage: 0.6V ~ 24V
- High Duty Cycle Capable using On-Time Stretch
- 8A Continuous Output Current Capability
- 500kHz Pseudo-Constant Frequency
- $\pm 1.5\%$ 0.6V Reference under $-40^{\circ}\text{C} \sim 125^{\circ}\text{C}$
- Precise EN Threshold
- Internal 1ms Soft-Start Limits the Inrush Current
- Support Smooth Startup with Pre-Biased Output
- Constant On-time and Ripple-Based Control to Achieve Fast Transient Responses
- Selectable PFM/FCCM Light Load Operation by MODE Pin
- Power Good Indicator
- Optional BYP Input for Power Saving
- Output Auto-Discharge Function
- Selectable Peak and Valley Current Limit Threshold by MODE Pin
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Hic-Cup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS Compliant and Halogen Free
- Compact Package: QFN2 $\times$ 3-14

Applications

- LCD-TV/Net-TV/3DTV
- Set Top Box
- Monitor
- High Power AP



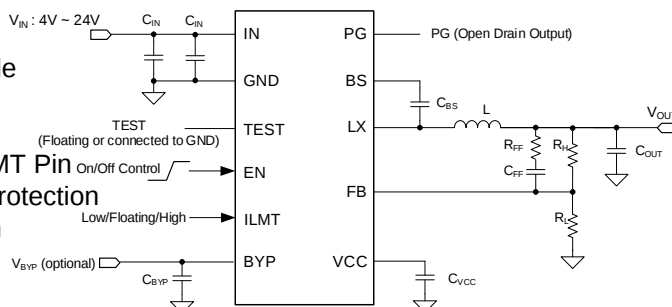
SY83088RHC - High Efficiency, Fast Response, 8A, 28V Input Synchronous Buck Converter

Features

- Low RDS(ON) for Internal MOSFETs: 20mΩ Top, 10mΩ Bottom
- Wide Input Voltage Range: 4V ~ 24V
- Adjustable Output Voltage: 0.6V ~ 2.5V
- 8A Continuous Output Current Capability
- 500kHz Pseudo-Constant Frequency
- $\pm 1\%$ Internal Reference Voltage
- Internal 0.6ms Soft-Start Limits the Inrush Current
- Support Smooth Startup with Pre-Biased Output
- Constant On-Time and Ripple-Based Control to Achieve Excellent Dynamic Performance
- Integrated 1.5Ω Bypass Switch
- PFM/USM Selectable Light Load Operation Mode
- Power Good Indicator
- Output Auto-Discharge Function
- Adjustable Valley Current Limit Threshold by ILMT Pin
- Cycle-by-Cycle Peak and Valley Current Limit Protection
- Latch-off Mode Output Under Voltage Protection
- Latch-off Mode Output Over Voltage Protection
- Latch-off Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS Compliant and Halogen Free
- Compact package: QFN2.5 $\times$ 2.5-16

Applications

- LCD-TV/Net-TV/3D-TV
- Set Top Box
- Notebook
- High Power AP


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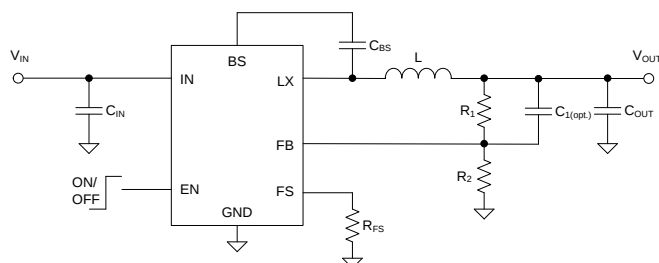
SY8263AIC- 3A, 30V Input, Sync Buck

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 110/70 m Ω
- 4.5-30V Input Voltage Range
- Internal Compensation
- Internal 1ms Soft-start Limits the Inrush Current
- Adjustable Switching Frequency Range: 500kHz to 2.5MHz
- 3A Output Current Capability
- 1.5% 0.6V Reference
- Low Quiescent Current
- Cycle-by-cycle Peak Current Limit
- Short Circuit Protection
- Thermal Shutdown and Auto Recovery
- RoHS Compliant and Halogen Free
- Compact Package: TSOT23-8

Applications

- LCD-TV
- SetTop Box
- Notebook
- Storage
- High Power AP Router
- Networking



SY8205DNC/SY8205FCC - 5A, 30V Input, Synchronous Step-Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal Switches
- 4.5-30V Input Voltage Range
- Instant PWM Architecture to Achieve Fast Transient Responses
- External Soft-start Limits the Inrush Current
- Pseudo-constant Frequency: 500kHz at Heavy Loads
- 5A Continuous, 6A /10A Peak Load Current Capability

SY8205FCC(QFN)

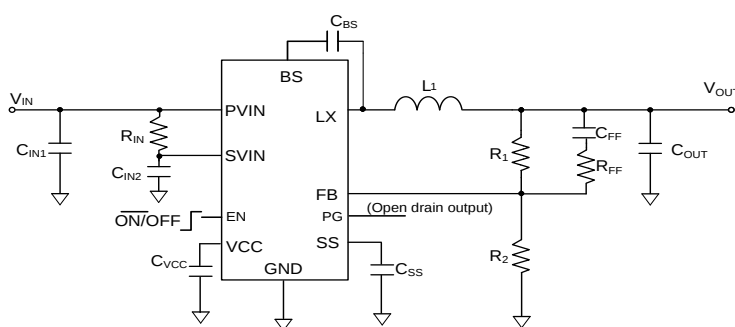
- Internal 400 μ s Soft-start Limits the Inrush Curr
- $\pm 1.0\%$ 0.6V Reference
- Programmable Valley Current Limit
- Power Good Indicator
- Output Discharge Function
- Short Circuit Latch Off Protection
- Over Voltage Latch Off Protection
- Input UVLO

SY8205(DFN/SO8)

- 1.5% 0.6V Reference
- Output Over Current Limit
- Output Short Circuit Protection with Current Fold Back
- Thermal Shutdown and Auto Recovery
- RoHS Compliant and Halogen Free
- Compact Package: DFN4 $\times$ 3-12/SO8E/QFN3x4-13

Applications

- LCD-TV
- SetTop Box
- Notebook
- Storage
- High Power AP Router
- Networking



6A, 28V Input, Sync Buck

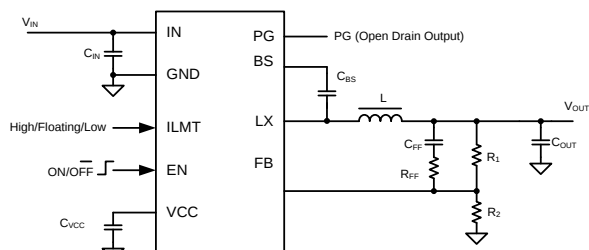
SY8366QNC/SY8366AQQC/SY8366HQQC/SY8366KQQC

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 40/20m Ω
- Wide Input Voltage Range: 4-28V
- Instant PWM Architecture to Achieve Fast Transient Responses
- SY8366: Internal 400 μ s Soft-start
- SY8366H/K/SY8366A: Internal 600 μ s Soft-start
- **SY8366H/K/SY8366A**: Pseudo-constant Frequency: 800kHz
- **SY8366K**: Pseudo-constant Frequency: 500kHz.
- 6A Continuous/12A Peak Output Current Capability
- $\pm 1.5\%$ 0.6V Reference
- Programmable Peak Current Limit
- Power Good Indicator
- Output Discharge Function
- Short Circuit Latch Off Protection
- Over Voltage Latch Off Protection
- SY8366H/K/SY8366A: Hic-cup Mode Output Short Circuit Protection
- SY8366A: Hic-cup mode output over voltage protection
- Input UVLO
- Over Temperature Protection
- RoHS Compliant and Halogen Free
- Compact Package: QFN3x3-10

Applications

- LCD-TV/Net-TV/3DTV
- Set Top Box
- Notebook
- High Power AP



6A, 28V Input, Sync Buck

SY8368AQQC/SY8368LQQC

Features

- 4.0-28V Wide Input Voltage Range
- Low $R_{DS(ON)}$ for Internal Switches: 20/10m Ω
- Instant PWM Architecture to Achieve Fast Transient Response
- Internal 600 μ s Soft-start Limits the Inrush Current
- SY8368A: Pseudo-constant Frequency: 800kHz
- SY8368L: Pseudo-constant Frequency: 500kHz
- 8A Continuous, 16A Peak Output Current Capability
- $\pm 1\%$ 0.6V Reference Voltage
- Hiccup Mode SCP, OVP
- SY8368L: PSM/FCCM Selectable Light Load Operation Mode
- SY8368L: Latch Off Mode Output Under Voltage and Over Voltage Protection
- Cycle-by-Cycle Current Limit
- Thermal Shutdown with Auto Recovery
- Power Good Indicator
- Compact Package: QFN3x3-12

Applications

- LCD-TV/Net-TV/3DTV
- Set Top Box
- Notebook
- High Power AP

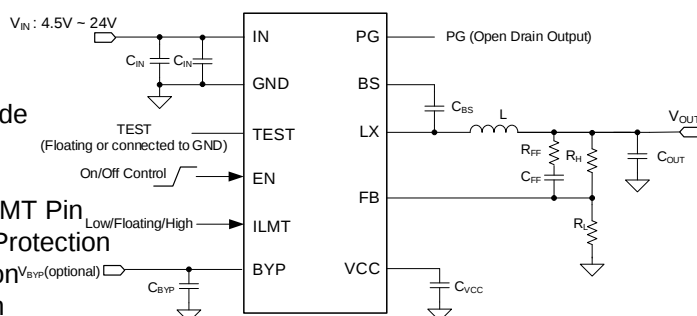
SY83086RHC - High Efficiency, Fast Response, 6A, 28V Input Synchronous Buck Converter

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 28m Ω Top, 16m Ω Bottom
- Wide Input Voltage Range: 4.5V ~ 24V
- Adjustable Output Voltage: 0.6V ~ 2.5V
- 6A Continuous Output Current Capability
- 500kHz Pseudo-Constant Frequency
- $\pm 1\%$ Internal Reference Voltage
- Internal 0.6ms Soft-Start Limits the Inrush Current
- Constant On-Time and Ripple-Based Control
- Excellent Dynamic Performance
- Integrated 1.2 Ω Bypass Switch
- PFM/USM Selectable Light Load Operation Mode
- Power Good Indicator
- Output Auto-Discharge Function
- Adjustable Valley Current Limit Threshold by ILMT Pin
- Cycle-by-Cycle Peak and Valley Current Limit Protection
- Latch-Off Mode Output Under Voltage Protection V_{BYP} (optional)
- Latch-Off Mode Output Over Voltage Protection
- Latch-Off Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS Compliant and Halogen Free
- Compact package: QFN2.5x2.5-16

Applications

- LCD-TV/Net-TV/3D-TV
- Set Top Box
- Notebook
- High Power AP



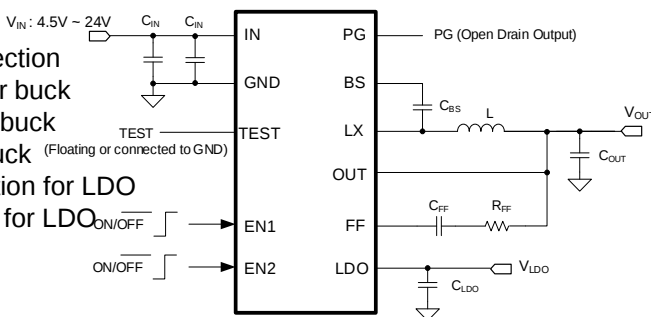
SY83086BRHC - High Efficiency, Fast Response, 6A, 28V Input, Fixed 3.338V Output Synchronous Buck Converter with 100mA 3.3V LDO

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 28m Ω Top, 16m Ω Bottom
- Wide Input Voltage Range: 4.5V ~ 24V
- Fixed 3.338V Output Voltage
- 6A Continuous Output Current Capability
- 100mA LDO Current Capability
- 600kHz Pseudo-Constant Frequency
- $\pm 1\%$ Internal Reference Voltage Accuracy
- Internal 1.2ms Soft-Start Limits the Inrush Current
- Support Smooth Startup with Pre-Biased Output
- Constant On-Time and Ripple-Based Control to Achieve Fast Transient Responses
- Integrated 1.2 Ω Bypass Switch
- PFM/USM Selectable Light Load Operation Mode
- Power Good Indicator
- Output Auto-Discharge Function
- Cycle-by-Cycle Valley and Peak Current Limit Protection
- Latch-Off Mode Output Under Voltage Protection for buck
- Latch-Off Mode Output Over Voltage Protection for buck
- Latch-Off Mode Over Temperature Protection for buck
- Auto-Recovery Mode Output Under Voltage Protection for LDO
- Auto-Recovery Mode Over Temperature Protection for LDO ON/OFF
- Input Under Voltage Lockout(UVLO)
- RoHS Compliant and Halogen Free
- Compact Package: QFN2.5 $\times$ 2.5-16

Applications

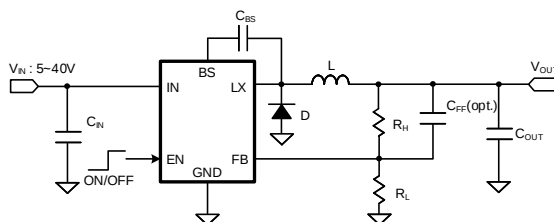
- LCD-TV/Net-TV/3D-TV
- Set Top Box
- Notebook
- High Power AP


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SY8290ABC - High-Efficiency, 2MHz, 40V Input, 300mA Asynchronous Buck Converter

Features

- Low $R_{DS(ON)}$ for Internal N-Channel Power FET: 2Ω
- 5V to 40V Input Voltage Range
- Up to 300mA Output Current
- 2MHz Switching Frequency
- Constant Off-Time and Peak-Current Mode Control
- Internal Soft-Start Limits Inrush Current
- $\pm 2\%$ 0.6V Reference
- Output Short-Circuit Protection
- Cycle-by-Cycle Peak Current Limit
- Over Temperature Protection
- RoHS-Compliant and Halogen-Free
- Compact SOT23-6 Package



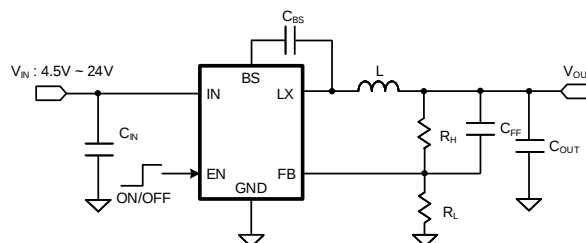
Applications

- Smart Meter
- Set-Top Box
- Portable TV
- Access Point Router
- DSL Modem
- LCD TV

SY8301ABC - High Efficiency, 22 μ A IQ, 2MHz, 1A, 40V Input Synchronous Buck Converter

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 380m Ω Top, 180m Ω Bottom
- Wide Input Voltage Range: 4.5V ~ 40V
- 1A Output Current Capability
- $\pm 1\%$ 0.8V Reference Voltage
- 22 μ A Low Quiescent Current
- 2MHz Fixed Switching Frequency
- Constant Frequency and Peak Current Mode Control
- Internal Soft-Start Limits Inrush Current
- Hiccup Mode Output Under Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: SOT23-6



Applications

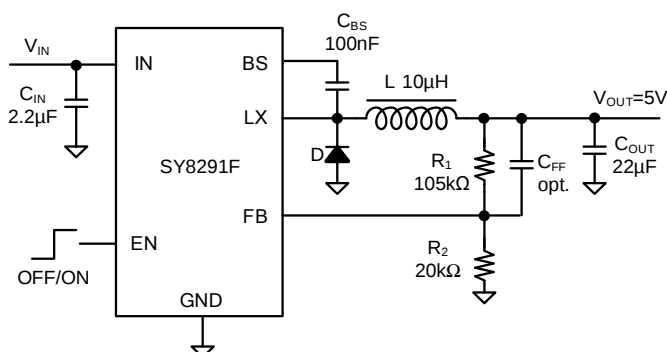
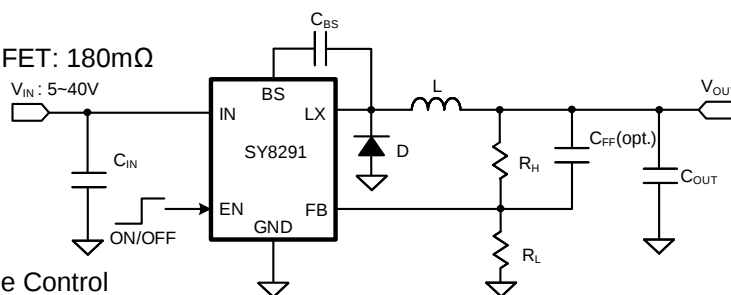
- LCD-TV
- Set-Top Box
- Notebook
- Storage
- High-Power AP Router
- Networking

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SY8291ABC/SY8291FABC - High Efficiency, 1.2A, Asynchronous Buck Converter

Features

- Low $R_{DS(ON)}$ for Internal N-channel Power FET: 180m Ω
- Input Voltage Range:
 - SY8291 : 5V to 40V
 - SY8291F: 9V to 36V
- Up to 1.2A Output Current
- 800kHz (SY8291)/ 300kHz (SY8291F) Switching Frequency
- Constant Off-Time and Peak Current Mode Control
- Internal Soft-Start Limits Inrush Current
- SY8291 : $\pm 2\%$ 0.6V Reference
- SY8291F: $\pm 2\%$ 0.81V Reference
- Output Short Circuit Protection
- Cycle-by-Cycle Peak Current Limit
- Over Temperature Protection
- RoHS-Compliant and Halogen-Free
- Compact SOT23-6 Package



Applications

- Smart Meter
- Set-Top Box
- Portable TV
- Access Point Router
- DSL Modem
- LCD TV

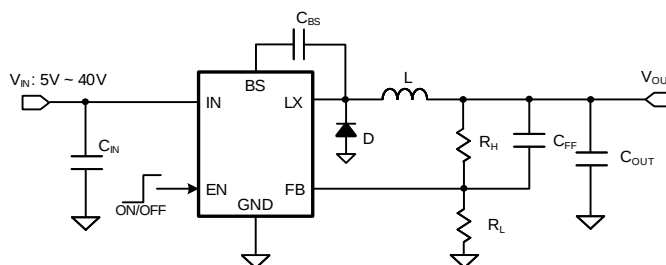
SY8292ABC - High Efficiency, 800kHz, 2A, 40V Input Asynchronous Buck Converter

Features

- Low $R_{DS(ON)}$ for Internal N-Channel Power FET: 180m Ω
- 5V to 40V Input Voltage Range
- Up to 2A Output Current
- 800kHz Switching Frequency
- Constant Off-Time and Peak Current Mode Control
- Internal Soft-Start Limits Inrush Current
- $\pm 2\%$ 0.6V Reference
- Auto-Recovery Mode Output Short Circuit Protection
- Cycle-by-Cycle Power FET Current Limit Protection
- Over Temperature Protection
- RoHS-Compliant and Halogen-Free
- Compact SOT23-6 Package

Applications

- Set-Top Box
- Access Point Router
- DSL Modem
- LCD TV


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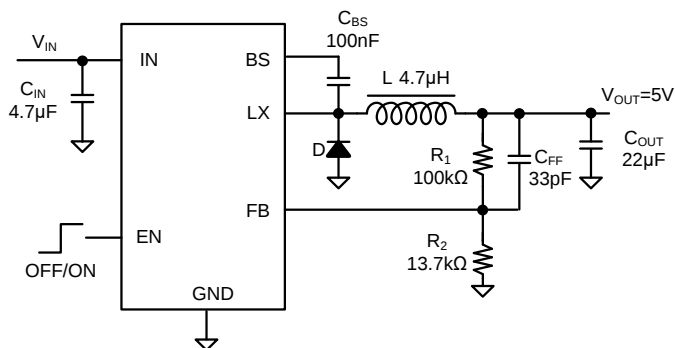
SY8293FCC - High Efficiency, 800kHz, 40V Input, 3A Non-synchronous Step Down Regulator

Features

- 5-40V Input Voltage Range
- Low $R_{DS(ON)}$ for Internal N-Channel Power FET: 180 m Ω
- 800kHz Switching Frequency
- Adaptive Constant OFF Time Control
- Internal Soft-start Limits the Inrush Current
- 2% 0.6V Reference
- RoHS Compliant and Halogen Free
- Compact Package: SO8E

Applications

- Set-Top Box
- Portable TV
- Access Point Router
- DSL Modem
- LCD TV



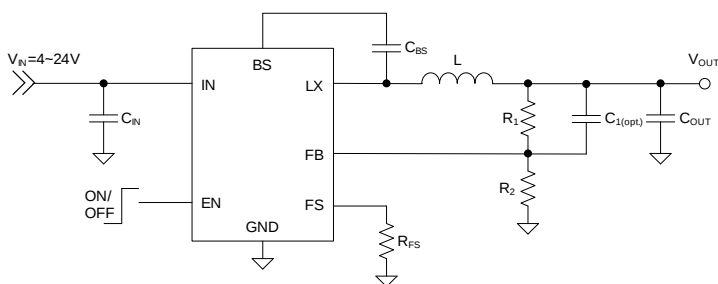
SY8303AAIC - High-Efficiency, Fast-Response, 40V Input, 3A Synchronous Step-Down Regulator

Features

- 4.5 to 40V Input Voltage Range
- 3A Output Current Capability
- Low $R_{DS(ON)}$ for Internal Switches: 110m Ω Top, 70m Ω Bottom
- Adjustable Switching Frequency Range: 500kHz to 2.5MHz
- 1.5% 0.6V Reference Voltage
- Low 19μA Quiescent Current
- Internal Compensation
- Internal 1ms Soft-Start Limits Inrush Current
- Cycle-by-Cycle Peak-Current Limit
- Hiccup Mode Short-Circuit Protection
- Thermal Shutdown and Auto-Recovery
- RoHS-Compliant and Halogen-Free
- Compact Package: TSOT23-8

Applications

- LCD-TV
- Set-Top Box
- Notebook
- Storage
- High-Power AP Router
- Networking


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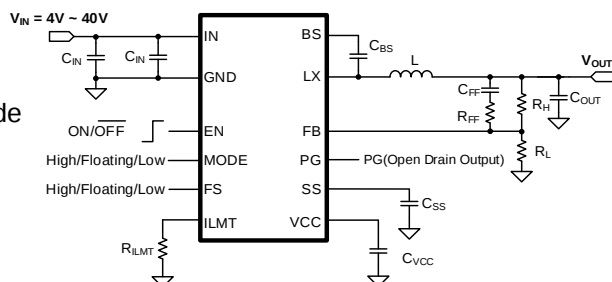
SY8308RBC - High Efficiency, 8A, 40V Input Synchronous Buck Converter

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 25m Ω Top, 12m Ω Bottom
- Wide Input Voltage Range: 4V ~ 40V
- Up to 8A Output Current Capability
- Precise $\pm 1\%$ 0.6V Reference
- COT Ripple-Based Control to Achieve Fast Transient Response
- Internal Soft-Start Limits the Inrush Current
- Power Good Indicator
- Output Auto-Discharge Function
- 350kHz/500kHz Selectable Switching Frequency
- PFM/FCCM Selectable Light Load Operation Mode
- Programmable Valley Current Limit Threshold
- Cycle-by-Cycle Peak and Valley Current Limit Protection
- Hiccup Mode Output Short Circuit Protection
- Auto-Recovery Mode Output Over Voltage Protection
- Auto-Recovery Mode Over Temperature Protection
- Input Under Voltage Lockout (UVLO)
- RoHS-Compliant and Halogen-Free
- Compact Package: QFN3.5 $\times$ 3.5-20

Applications

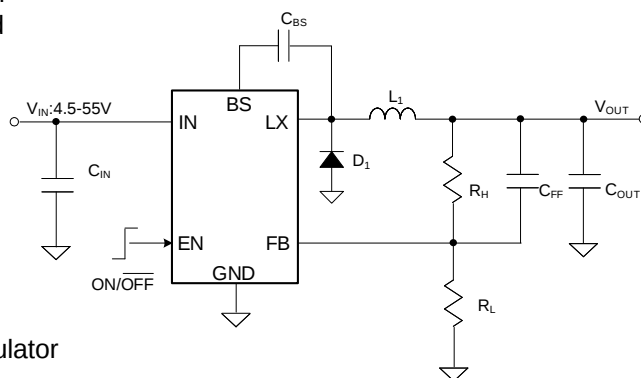
- LCD TV
- Set-Top Box
- Notebook
- High-Power AP Router



SY8401ABC - High Efficiency, 1.2MHz, 55V Input, 0.8A Asynchronous Step-Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal N-channel Power FET: 700m Ω
- 4.5-55V Input Voltage Range
- 0.8A Output Current Capability
- 1.2MHz Pseudo Constant Switching Frequency
- Internal Soft-start Limits the Inrush Current
- Hic-cup Mode Output Short Circuit Protection
- EN ON/OFF Control with Accurate Threshold
- Cycle by Cycle Peak Current Limit
- 0.6V $\pm$ 1% Reference Voltage
- SOT23-6 Package



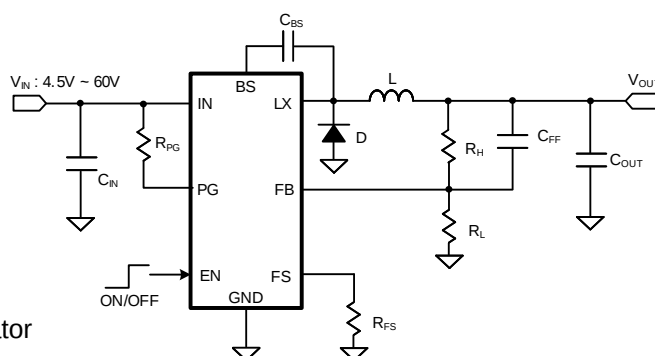
Applications

- Non-Isolated Telecommunication Buck Regulator
- Secondary High Voltage Post Regulator
- Automotive Systems

SY8492FCC - High-Efficiency, 2A, 60V Input Asynchronous Buck Converter

Features

- Low $R_{DS(ON)}$ for Internal N-channel Power FET: 175m Ω
- 4.5V to 60V Input Voltage Range
- Up to 2A Output Current
- Adjustable Switching Frequency Range: 100kHz to 1MHz
- Constant Off-Time and Peak Current Mode Control
- Internal Soft-Start Limits Inrush Current
- $\pm$ 1% 0.8V Reference
- EN ON/OFF Control with Accurate Threshold
- Hiccup Mode Output Short Circuit Protection
- Cycle-by-Cycle Peak Current Limit
- Over Temperature Protection
- RoHS-Compliant and Halogen-Free
- Compact SO8E Package



Applications

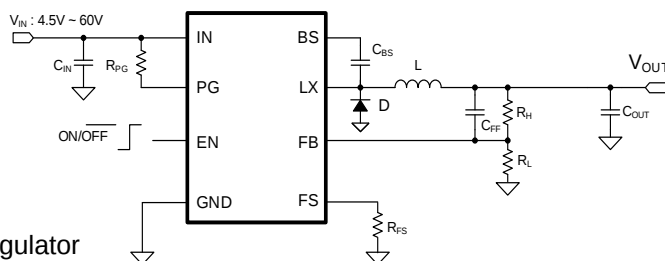
- Non-Isolated Telecommunication Buck Regulator
- Secondary High-Voltage Post Regulator
- Automotive Systems
- Electric Bicycle

[Back](#)

SY8493FCC - High-Efficiency, 3A, 60V Input Asynchronous Buck Converter

Features

- Low $R_{DS(ON)}$ for Internal N-Channel Power FET: 150m Ω
- 4.5V to 60V Input Voltage Range
- Up to 3A Output Current Capability
- Constant Off-Time and Peak-Current Mode Control
- Internal Soft-Start Limits the Inrush Current
- $\pm 1\%$ 0.8V Reference
- Adjustable Switching Frequency Range: 100kHz to 1MHz
- EN ON/OFF Control with Accurate Threshold
- Hiccup Mode Output Short Circuit Protection
- Cycle-by-Cycle Peak Current Limit
- RoHS-Compliant and Halogen-Free
- Compact Package: SO8E



Applications

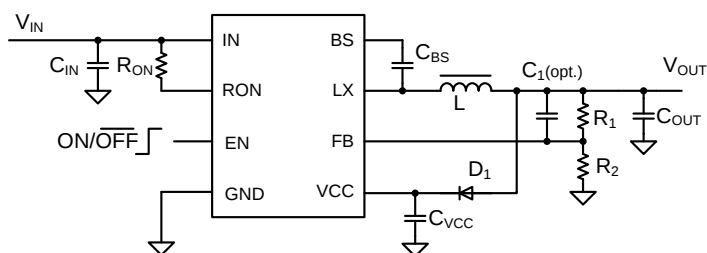
- Non-Isolated Telecommunication Buck Regulator
- Secondary High-Voltage Post Regulator
- Automotive Systems
- Electric Bicycle

SY8502FCC/SY8502AFCC

- High Efficiency, 1.2A Continuous, 1.8A Peak, 85V Input Synchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 500m Ω /240m Ω
- 7-85V Input Voltage Range
- 1.2A Continuous, 1.8A Peak Output Current Capability
- Adjustable Switching Frequency
- Instant PWM Architecture to Achieve Fast Transient Responses.
- Programmable Switching Frequency Range: 200~500 kHz.
- 2ms Internal Soft-start Limits the Inrush Current
- Precise $\pm 2\%$ 1.2V Reference
- RoHS Compliant and Halogen Free
- Compact Package SO8E



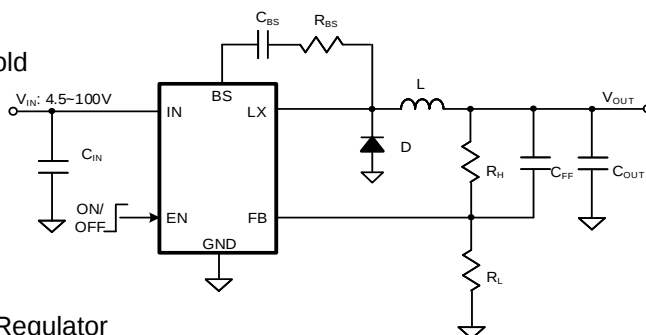
Applications

- Non-isolated Telecommunication Buck Regulator
- Secondary High Voltage Post Regulator
- Automotive Systems

SY8511ADC/B- High-Efficiency, 200kHz, 100V Input, 0.6A/1.2A Asynchronous Step-Down Regulator

Features

- 4.5V to 100V Input Voltage Range
- Up to 0.6A(SY8511)/ 1.2A (SY8511B) Output Current
- Low $R_{DS(ON)}$ for Internal N-Channel power FET: 1Ω
- 200kHz Pseudo-constant Switching Frequency
- Constant Off-Time and Peak-Current-Mode Control
- Internal Soft-Start
- $0.6V \pm 1\%$ Reference
- Hiccup Mode Short-Circuit Protection
- EN On/Off Control with Accurate Threshold
- Cycle-by-Cycle Peak Current limit
- Compact TSOT23-6 Package



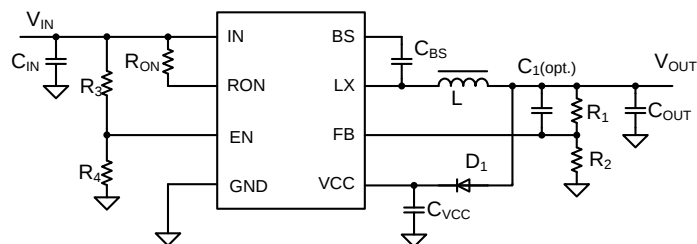
Applications

- Non-Isolated Telecommunication Buck Regulator
- Secondary High-Voltage Post Regulator
- Automotive Systems
- Electric Bicycle

SY89000FCC - High Efficiency, 0.6A, 100V Input Synchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): $500m\Omega/285m\Omega$
- 7~100V Input Voltage Range
- 0.6A Output Current Capability
- Constant On-time Control
- Instant PWM Architecture to Achieve Fast Transient Responses
- Programmable Switching Frequency Range: 200kHz~600kHz.
- 2ms Internal Soft-start Limits the Inrush Current
- Precise $\pm 2\%$ 1.225V Reference over
- $-40^\circ C$ to $+125^\circ C$ Temperature Range
- Cycle-by-cycle Peak Current Limit
- Over Temperature Protection with Auto Recovery
- RoHS Compliant and Halogen Free
- Compact Package SO8E



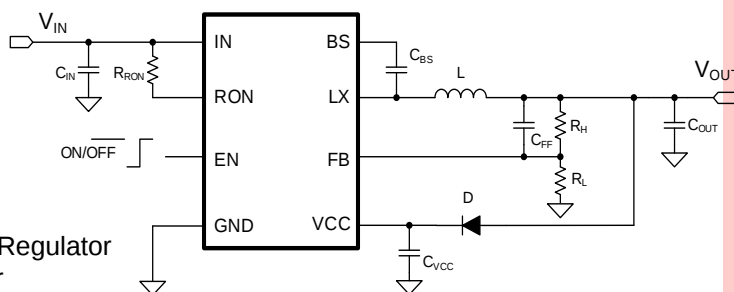
Applications

- Isolated Telecom Bias Supply
- Secondary High Voltage Post Regulator
- Automotive Systems

SY8501FCC - High-Efficiency, 1A, 100V Input, Synchronous Buck Converter

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 500m Ω Top, 240m Ω Bottom
- 7V to 100V Input Voltage Range
- Up to 1A Output Current Capability
- Adjustable Switching Frequency
- COT Ripple-Based Control to Achieve Fast Transient Responses
- 2ms Internal Soft-start Limits the Inrush Current
- Precise $\pm 2\%$ 1.2V Reference
- Output Short Circuit Protection
- Cycle-by-Cycle Peak and Valley Current Limit
- Over Temperature Protection
- Output Auto-Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: SO8E



Applications

- Non-Isolated Telecommunication Buck Regulator
- Secondary High-Voltage Post Regulator
- Automotive Systems

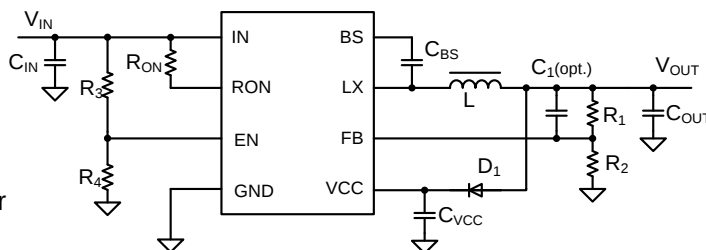
SY89001FCC - High Efficiency, 1A, 100V Input Synchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 500m Ω /240m Ω
- 7-100V Input Voltage Range
- 1A Output Current Capability
- Constant On-time Control
- Instant PWM Architecture to Achieve Fast Transient Responses
- Programmable Switching Frequency Range: 200kHz ~600kHz
- 2ms Internal Soft-start Limits the Inrush Current
- Precise $\pm 2\%$ 1.225V Reference over
- -40°C to +125°C Temperature Range
- Cycle-by-cycle Peak Current Limit
- Over Temperature Protection with Auto Recovery
- RoHS Compliant and Halogen Free
- Compact Package SO8E

Applications

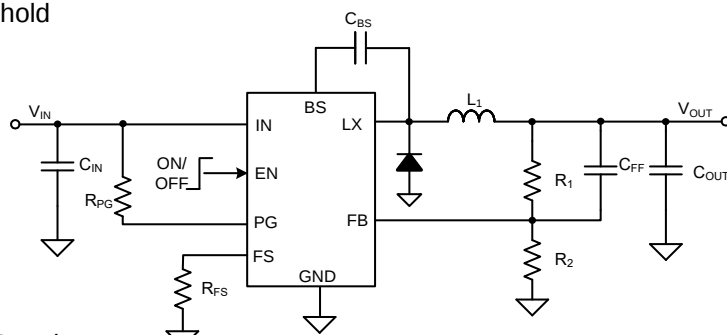
- Isolated Telecom Bias Supply
- Secondary High Voltage Post Regulator
- Automotive Systems



SY8512FCC - High Efficiency, 100V Input, 2A Asynchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal N-channel Power FET(TOP):175m Ω
- 4.5-100V Input Voltage Range
- 2A Output Current Capability
- Adjustable Switching Frequency Range: 100kHz to 1MHz
- Internal Soft-start Limits the Inrush Current
- Hic-cup Mode Output Short Circuit Protection
- EN ON/OFF Control with Accurate Threshold
- Cycle-by-cycle Peak Current Limit
- 0.8V $\pm$ 1% Reference Voltage Accuracy
- Compact Package: SO8E



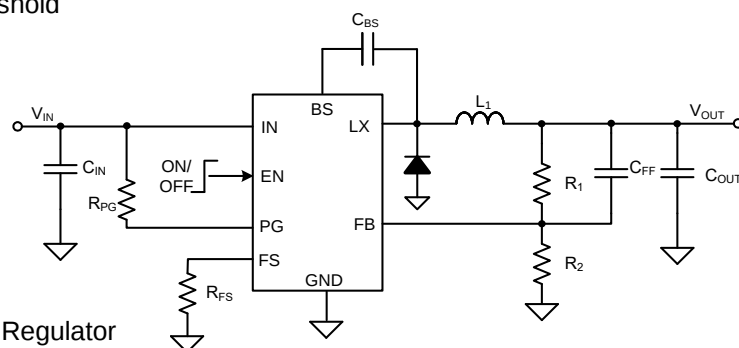
Applications

- Non-isolated Telecommunication Buck Regulator
- Secondary High Voltage Post Regulator
- Automotive Systems
- Electric Bicycle

SY8513FCC - High Efficiency, 100V Input, 3A Asynchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal N-channel Power FET(TOP):150m Ω
- 4.5-100V Input Voltage Range
- 3A Output Current Capability
- Adjustable Switching Frequency Range: 100kHz to 500kHz
- Internal Soft-start Limits the Inrush Current
- Hic-cup Mode Output Short Circuit Protection
- EN ON/OFF Control with Accurate Threshold
- Cycle-by-cycle Peak Current Limit
- 0.8V $\pm$ 1% Reference Voltage Accuracy
- Compact Package: SO8E



Applications

- Non-isolated Telecommunication Buck Regulator
- Secondary High Voltage Post Regulator
- Automotive Systems
- Electric Bicycle

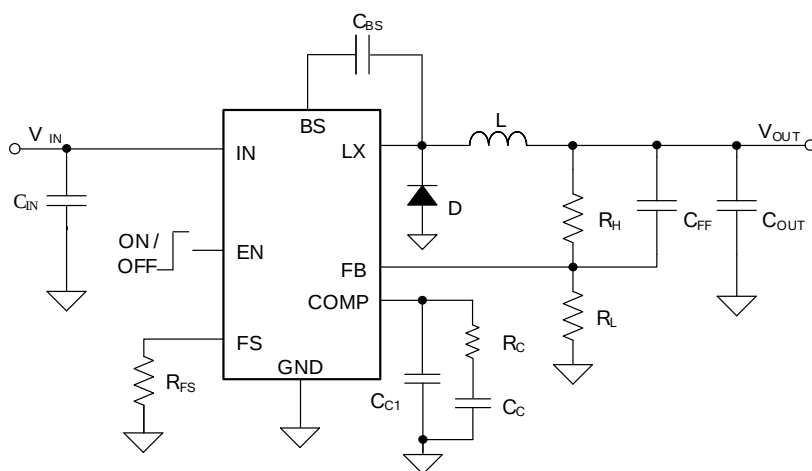
SY89695FCP - High Efficiency, 60V Input, 5A Asynchronous Step Down Regulator

Features

- Wide Input Voltage Range: 4.5V ~ 60V
- Output Current Capability: 5A
- Low RDS(ON) for Internal N-Channel Power MOSFET (TOP): 95mΩ
- Accurate Feedback Set Point: 0.8V $\pm$ 1% from -40°C to 125°C
- Adjustable Switching Frequency: 100kHz to 2500kHz
- High Efficiency at Light Loads with Pulse Skipping Mode
- Cycle by Cycle Peak Current Limit Protection
- Automatic Recovery for UVLO, OVP and OTP Conditions
- Hiccup Mode for UVP Condition
- Compact Package: SO8E

Applications

- 5G AAU/RRU
- Industrial
- High-Voltage DC-DC Converters



Single Output Step Up (Boost) Converter (Low Voltage)

Part Number	V _{IN}		I _{LIM} (A)	F _{SW} (MHz)	V _{OUT} (Max) (V)	Sync Boost	Fixed Output Voltage (V)	V _{FB} / Accuracy	Quiescent Current Input (μA)	Quiescent Current output (μA)	MOSFET R _{on} (H/L)(mΩ)	Feature/ Special Function	Package
SY7070AAC	0.7	5	0.35	/	/	✓	3.3	/	0.5	5.5	700/500	Pass-through Function@ Shutdown	SOT23-5
SY7070AAAC	0.7	5	0.35	/	/	✓	3	/	0.5	5.5	700/500		SOT23-5
SY7071AHC	0.7	5	0.35	/	5.25	✓	/	1.0V±3%	0.5	5	700/500	Pass-through Function@ Shutdown	SOT-363
SY7071AAHC	0.7	5	0.35	/	/	✓	5	/	0.5	7	500/400	Pass-through Function@ Shutdown; OVP	SOT-363
SY7072DABC	0.85	5.5	0.6	1	5.5	✓	/	0.5V±1.5%	0.7	5	170/100	Auto Bypass Mode When V _{IN} ≥ V _{OUT} ; OVP	SOT23-6
SY87092SUD	1.8	5.5	1	1	5.5	✓	/	1.2V±1.5%	/	/	125/70	Auto Bypass Mode When V _{IN} ≥ V _{OUT} ; OVP, CCM Only	DFN2×1.5-6
SY7072AABC	0.85	5.5	2	1	5.5	✓		1.2V±1.5%	0.7	5	170/100	Auto Bypass Mode When V _{IN} ≥ V _{OUT} ; OVP	SOT23-6
SY7072ABC	1.8	5.5	2	1	5.5	✓		1.2V±1.5%	0.7	5	170/100	Auto Bypass Mode When V _{IN} ≥ V _{OUT} ; OVP	SOT23-6
SY7092SUC	0.85	5.5	2	1	5.5	✓	/	1.2V±1.5%	0.7	5	125/70	Auto Bypass Mode When V _{IN} ≥ V _{OUT} ; OVP	DFN2×1.5-6
SY7063QMC	1.8	5.25	3	0.5	5.5	✓	/	1.2V±1.5%	10	27	40/36	Output Disconnect @Shutdown	QFN2×2-10
SY7069ADC	2.5	5.5	3	1	5.5	✓	/	1.2V±1.5%	8	32	90/50	Auto Bypass Mode When V _{IN} ≥ V _{OUT} ; OVP	TSOT23-6
SY7069BADC	2.5	5.5	3	1	5.5	✓	/	1.2V±1.5%	8	32	90/50	Auto Bypass Mode When V _{IN} ≥ V _{OUT} ; OVP	TSOT23-6
SY7069CUMC	2.5	5.5	3	1	5.6	✓	/	1.2V±1.5%	8	32	100/70	Auto Bypass Mode When V _{IN} ≥ V _{OUT} ; OVP	CSP1.54×0.9-6
SY7065QMC	1.8	5.25	5	0.5	5.5	✓	/	1.2V±1.5%	10	27	40/20	Auto Output Discharge Function, Input Battery Voltage Monitor, OVP	QFN2×2-10
SY7065AQMC	1.8	5.25	5	0.5	5.5	✓	/	1.2V±1.5%	10	27	40/20	No Output Discharge Function, Input Battery Voltage Monitor, OVP	QFN2×2-10
SY7076QMC	2	5.5	6	0.5	5.5	✓	/	1.2V±1.5%	10	27	40/20	Selectable Forced PWM Mode, Programmable Output Current Limit, OVP	QFN2×2-10
SY7066QMC	1.8	5.25	6	0.5	5.5	✓	/	1.2V±1.5%	10	27	40/20	Auto Output Discharge Function, Input Battery Voltage Monitor, OVP	QFN2×2-10
SY7066AQMC	1.8	5.25	6	0.5	5.5	✓	/	1.2V±1.5%	10	27	40/20	No Output Discharge Function, Input Battery Voltage Monitor, OVP	QFN2×2-10
SY7066BQMC	1.8	5.25	6	0.5	5.5	✓	/	1.2V±1.5%	10	27	40/20	Selectable Forced PWM Mode, OVP	QFN2×2-10
SY7060LAHC*	0.7	5	0.2	/	5.25	✓	/	0.5V±3%	0.5	18	800/450	Pass-through Function@ Shutdown; OVP	SOT-363
SY7060AHC*	0.7	5	0.4	/	5.25	✓	/	0.5V±3%	0.5	18	800/450	Pass-through Function@ Shutdown; OVP	SOT-363
SY7080ABC*	0.9	4	1.8	1.2	4	✓	/	1.2V±3%	65	/	200/90	Output Disconnect @Shutdown	SOT23-6
SY7088DGC*	2.3	5.25	3	1	5.5	✓		1.2V±1.5%	2	30	85/70	OVP	DFN2×3-8
SY7088EDGC*	2.3	5.25	3	1	5.5	✓	/	1.2V±1.5%	/	/	85/70	FCCM, OVP	DFN2×3-8

* Not recommended for new design

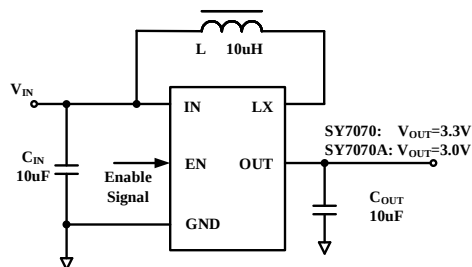
[Back](#)

SY7070/A

- 0.7V Minimum Input, Fixed Output 100mA Maximum Output Current Synchronous Boost

Features

- 0.7V Minimum Input Voltage
- 5.5uA Typical Quiescent Current
- Input Under Voltage Lockout
- Bypass Function During Shutdown
- Low RDS(ON) (Main Switch/Synchronous Switch) at Output: 0.5/0.7ohm
- Fixed Output Voltage
 - SY7070: Fixed 3.3V
 - SY7070A: Fixed 3.0V
- Typical 350mA Peak Current Limit
- Compact SOT23-5 Package.



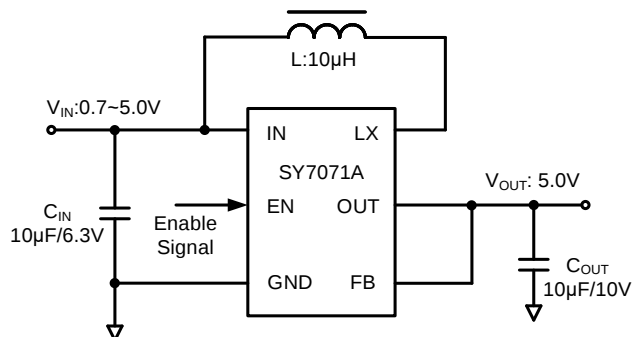
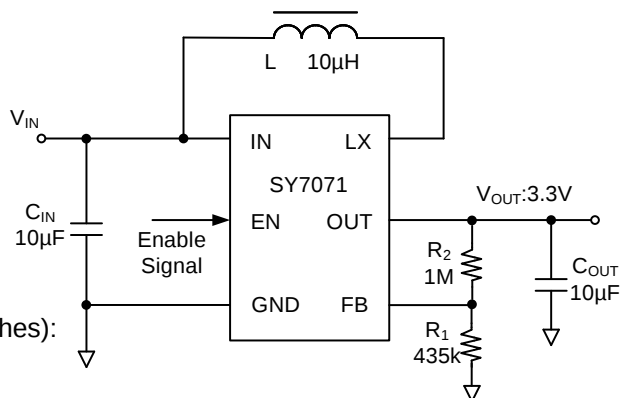
Applications

- Battery Powered Applications
- Consumer And Portable Medical Products
- Personal Care Products
- Smartphones
- White or Status LEDs

SY7071/A- 0.7V Minimum Input Voltage Synchronous Boost

Features

- 0.7V to 5V Input Voltage Range
- Fixed 5V Output Voltage (SY7071A)
- Low Quiescent Current
- 1 μ A Shutdown Current (Max.)
- 95% Peak Efficiency
- Input Under Voltage Lockout
- Pass-through Function During Shutdown
- Low RDS(ON) (Main Switch/Synchronous Switches):
 - SY7071: 0.5/0.7 Ω
 - SY7071A: 0.4/0.5 Ω
- Typical 350mA Peak Current Limit
- RoHS Compliant and Halogen Free
- Compact Package: SOT-363



Applications

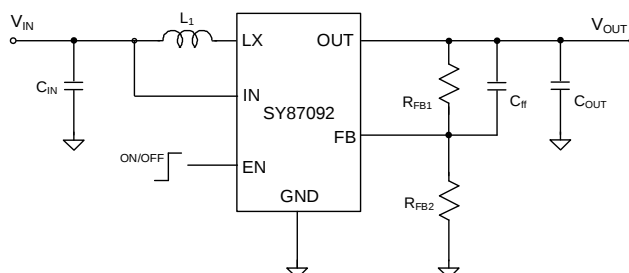
- Battery Powered Applications
- Consumer and Portable Medical Products
- Personal Care Products
- Smartphones
- White or Status LEDs

[Back](#)

SY87092- 1.8V Minimum Input and 5.5V Maximum Output High Efficiency 1A Valley Current Synchronous Boost

Features

- 1.8V Minimum Input Voltage
- Adjustable Output Voltage from 1.8V to 5.5V
- Min 1A Valley Current Limit
- CCM Only Operation
- Load Disconnect During Shutdown
- Low $R_{DS(ON)}$ (Main Switch/Synchronous Switch) at 3.3V Output: 70/125m Ω
- Output OVP
- RoHS Compliant and Halogen Free
- Auto Bypass Mode When $V_{IN} \geq V_{OUT}$
- Compact Package DFN2 $\times$ 1.5-6



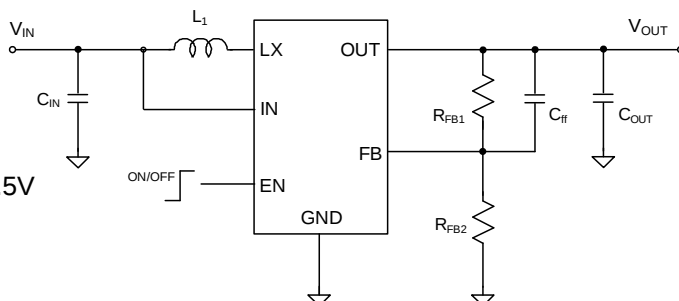
Applications

- All Single Cell Li or Dual Cell Battery Operated Products as MP-3 Player, PDAs, and Other Portable Equipment

SY7072/A/D- 5.5V Maximum Output High Efficiency Synchronous Boost Converter

Features

- Minimum Input Voltage:
SY7072D: 0.85V
SY7072A: 0.85V
SY7072: 1.8V
- Adjustable Output Voltage from 1.8V to 5.5V
- Min Valley Current Limit
SY7072D: 0.6A
SY7072A: 2A
SY7072: 2A
- 5 μ A Typical Quiescent Current
- Load Disconnect During Shutdown
- Low $R_{DS(ON)}$ (Main Switch/Synchronous Switch) at 3.3V Output: 100/170m Ω
- Output OVP
- RoHS Compliant and Halogen Free
- Auto Bypass Mode When $V_{IN} \geq V_{OUT}$
- Compact Package SOT23-6



Applications

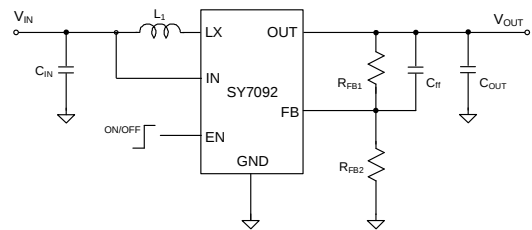
- All Single Cell Li or Dual Cell Battery Operated Products as MP-3 Player, PDAs, and Other Portable Equipment

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SY7092- 0.85V Minimum Input and 5. 5V Maximum Output
High Efficiency 2A Valley Current Synchronous Boost

Features

- 0.85V Minimum Input Voltage
- Adjustable Output Voltage From 1.8V to 5.5V
- Min 2A Valley Current Limit
- 5 μ A Typical Quiescent Current
- Load Disconnect During Shutdown
- Low $R_{DS(ON)}$ (Main Switch/Synchronous Switch) at 3.3V Output: 70/125m Ω
- Output OVP
- RoHS Compliant and Halogen Free
- Auto Bypass Mode When $V_{IN} \geq V_{OUT}$
- Compact Package DFN2x1.5-6



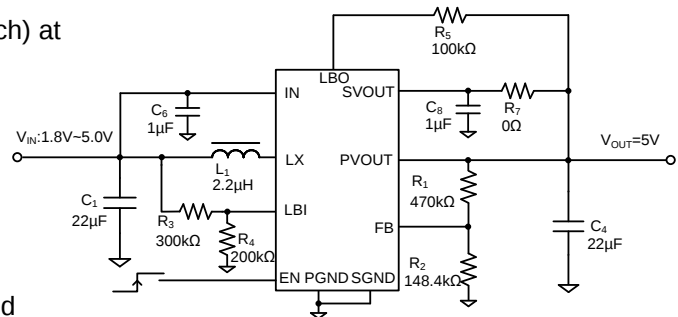
Applications

- All Single Cell Li or Dual Cell Battery Operated Products as MP-3 Player, PDAs, and Other Portable Equipment

SY7063- 1.8V Minimum Input and 5. 5V Maximum Output
3A Peak Current Synchronous Boost with Output Disconnect

Features

- 1.8V Minimum Input Voltage
- Adjustable Output Voltage from 2.5V to 5. 5V
- 3A Peak Current Limit
- Input Under Voltage Lockout
- Load Disconnect during Shutdown
- Output Over Voltage Protection
- Input Battery Voltage Monitor
- Low $R_{DS(ON)}$ (Main Switch/Synchronous Switch) at 5.0V Output: 36/40m Ω
- Output Auto-discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: QFN2 $\times$ 2-10



Applications

- All Single-cell Li or Dual-cell Battery Operated Products as MP-3 Player, PDAs, and Other Portable Equipment

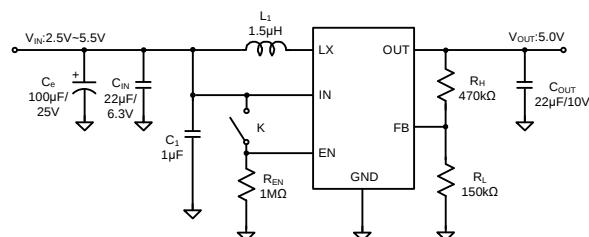
SY7069/B/C- 5.5V/5.6V Maximum Output, 3A Valley Current 1MHz Synchronous Boost Converter

Features

- 2.5V Minimum Input Voltage
- Adjustable Output Voltage :
 - SY7069/B: from 2.5V to 5.5V
 - SY7069C: from 2.5V to 5.6V
- Minimum 3A Valley Current Limit
- Capable of Seamless Transition between Boost and Bypass Mode
- Load Disconnect During Shutdown
- Low $R_{DS(ON)}$ at 5.0V Output:
 - SY7069/B: 50mΩ Main, 90mΩ Synchronous
 - SY7069C: 70mΩ Main, 100mΩ Synchronous
- Output Overvoltage Protection (OVP)
- RoHS-Compliant and Halogen-Free
- Compact Package:
 - SY7069/B: TSOT23-6
 - SY7069C: CSP1.54×0.9-6

Applications

- Single-cell lithium or dual-cell nickel battery-powered devices (MP3 players, PDAs, etc.)



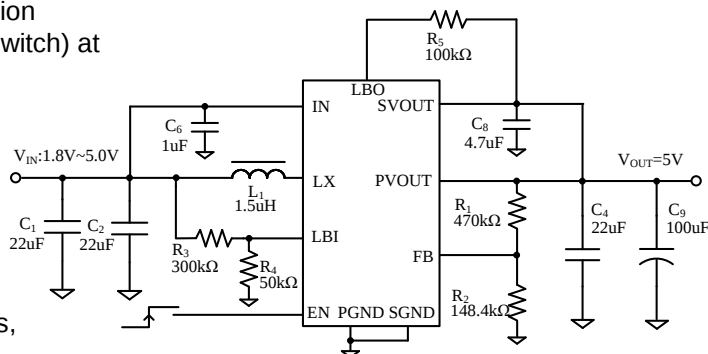
SY7065/A - 1.8V Minimum Input and 5. 5V Maximum Output 5A Peak Current Synchronous Boost with Output Disconnect

Features

- 1.8V Minimum Input Voltage
- Adjustable Output Voltage from 2.5V to 5.5V
- 5A Peak Current Limit
- Input Under Voltage Lockout
- Load Disconnect during Shutdown
- Output Over Voltage Protection
- Input Battery Voltage Monitor
- Automatic Output Discharge at Shutdown:
 - SY7065: Auto Output Discharge Function
 - SY7065A: No Output Discharge Function
- Low $R_{DS(ON)}$ (Main Switch/Synchronous Switch) at 5.0V Output: 20/40mΩ
- Compact Package: QFN2×2-10

Applications

- All Single-cell Li or Dual-cell Battery Operated Products as MP-3 Player, PDAs, and Other Portable Equipment



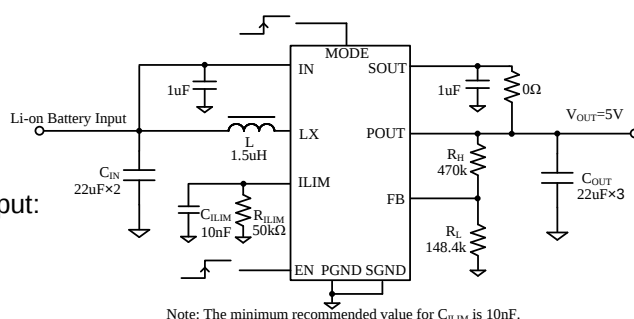
SY7076- 2V Minimum Input, 5.5V Maximum Output, 6A Peak Current Synchronous Boost Converter with Output Current Limit

Features

- 2V Minimum Input Voltage
- Adjustable Output Voltage from 2.5V to 5.5V
- 6A Peak Current Limit
- Input Undervoltage Lockout
- Load Disconnect During Shutdown
- Programmable Output Current Limit Protection
- $\pm 10\%$ Output Current Limit Accuracy
- Selectable Forced-PWM Mode
- Hiccup Mode for Short-Circuit Protection
- Low $R_{DS(ON)}$ for Internal Switches at 5.0V Output:
20m Ω Main, 40m Ω Synchronous
- Output Overvoltage Protection (OVP)
- Compact Package: QFN2mmx2mm-10

Applications

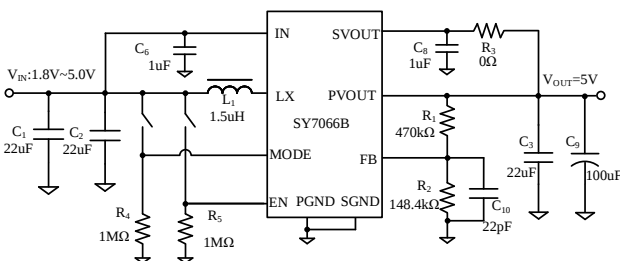
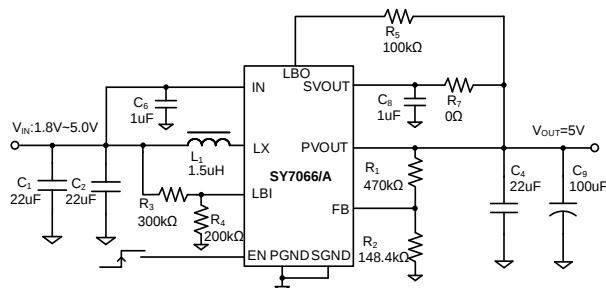
- Single-cell Lithium or Dual-Cell Nickel Battery-Powered Devices (MP3 players, PDAs, etc.)



SY7066/A/B - 1.8V Minimum Input, 5.5V Maximum Output, 6A Peak-Current Synchronous Boost Converter with Output Disconnect

Features

- 1.8V Minimum Input Voltage
- Adjustable Output Voltage from 2.5V to 5.5V
- 6A Peak Current Limit
- Input Undervoltage Lockout
- Quiescent Current: 27 μ A (typ.)
- Shutdown Current: 0.1 μ A (typ.)
- Load Disconnect During Shutdown
- Selectable Forced PWM Mode Operation (SY7066B)
- Input Battery Voltage Monitor (SY7066/A)
- Output Overvoltage Protection
- Low $R_{DS(ON)}$ for Internal Switches at 5.0V Output:
20m Ω Main, 40m Ω Synchronous
- Automatic Output Discharge at Shutdown:
 - SY7066: Automatic Output Discharge Function
 - SY7066A/B: No Output Discharge Function
- Compact Package: QFN2mmx2mm-10



Applications

- Single-cell Lithium or Dual-Cell Nickel Battery-Powered Devices (MP3 players, PDAs, etc.)

Single Output Step Up (Boost) Converter (High Voltage)

Part Number	V _{IN}		I _{LIM} (A)	F _{SW} (MHz)	V _{OUT} (Max) (V)	Sync Boost	V _{FB} / Accuracy	Input Quiescent Current (μA)	MOSFET (Ron H/L) (mΩ)	Feature/ Special Function	Package
SY7208CABC	3	25	0.6	1	25		0.6V±2%	100	-/150	Internal SS/Comp	SOT23-6
SY7152AABC	3	8	2	1	16		0.6V±2%	100	-/130	Internal SS/Comp	SOT23-6
SY7208LABC	3	25	2	1	25		0.6V±2%	100	-/150	Internal SS/Comp	SOT23-6
SY7302ABC	3	33	2	1	33		0.6V±2%	100	-/200	Internal SS/Comp	SOT23-6
SY7388ABC	3.5	30	2	0.85	30		1V±2%	150	-/200	Accurate input current limit	SOT23-6
SY7102ABC	2	6	2.5	1	6		0.6V±2%	200	-/120	Internal SS/Comp	SOT23-6
SY7104ADBC	2	6	4	1	6		0.6V±2%	100	-/90	Internal SS/Comp	DFN3×3-10
SY7304DBC	3	33	4	1	33		0.6V±2%	100	-/120		QFN3×3-10
SY7205ADBC	8.6	15.9	4.5	0.5	16		1.25V±1.5%	120	-/75	Adjustable soft-start time, OVP	DFN3×3-10
SY7982QDC	3	9	6	1	13	✓	1V±2%	600	40/80	Power Good Indicator, Integrated 40mΩ Disconnection FET, True Shutdown	QFN3×3-16
SY7219DBC	3	5.5	9	/	36		1.25V±2%	380	-/65	EXT Comp	DFN3×3-10
SY7215ARDC	3	16	15	0.25~1	16	✓	1V±1.5%	230	12/9	Power Good Indicator, Integrated 12mΩ Disconnection FET, Internal SS, OVP/SCP/ True shutdown Programmable Switching Frequency: 0.25~1MHz	QFN4×4-18
SY7315RDC	4.5	30	15	0.2~1	30	✓	1V±1.5%	230	18/16	Integrated 18mΩ Disconnect ion FET, OVP/OTP/SCP, True Shutdown, Programmable Switching Frequency: 0.2~1MHz, Power Good Indicator	QFN4×4-18
SY7120RAC	2.8	16	2~10	0.3~2	16	✓	1V±1%	200	20/10	PFM/PWM light load operation mode, Programmable Switching Frequency: 0.3~2MHz, Programmable I _{LIM} : 2~10A, OVP	QFN3×3-20

DC-DC PWM Controller (External Switch)

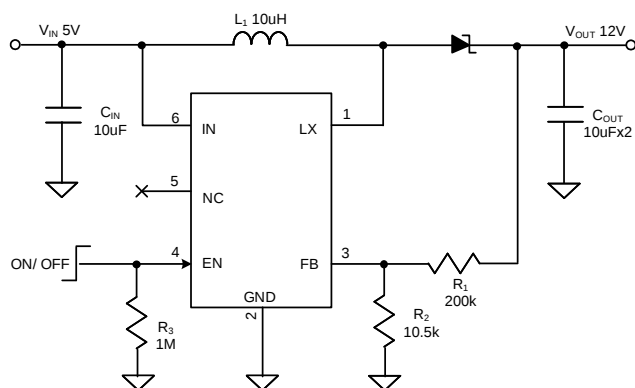
Part Number	V _{IN}		F _{SW} (MHz)	V _{REF} (V)	Function	Package
SY7901DBC	3	25	0.5	1	Current mode DC/DC controller targeted for Boost, SEPIC, Flyback and Forward applications with DC Input Current Limit	DFN3×3-10
SY7902AFHC	3	25	0.3	1	Current mode DC/DC controller targeted for both Boost and SEPIC applications with DC Output Current Limit	SOP10

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SY7208C/SY7208L - High Efficiency 1MHz Step-Up Regulator

Features

- 3V to 25V Bias Input Range, $25V_{OUT,MAX}$
- **SY7208C**: Up to 600mA Output Current
- **SY7208L**: Up to 2A Output Current
- Low $R_{DS(ON)}$ for Internal N-Channel MOSFET: 150m Ω
- 1MHz Switching Frequency
- Minimum On-Time: 100ns Typical
- Minimum Off-Time: 100ns Typical
- Internal Soft-Start Limits Inrush Current
- $\pm 2\%$ 0.6V Reference
- RoHS-Compliant and Halogen-Free
- Compact SOT23-6 Package



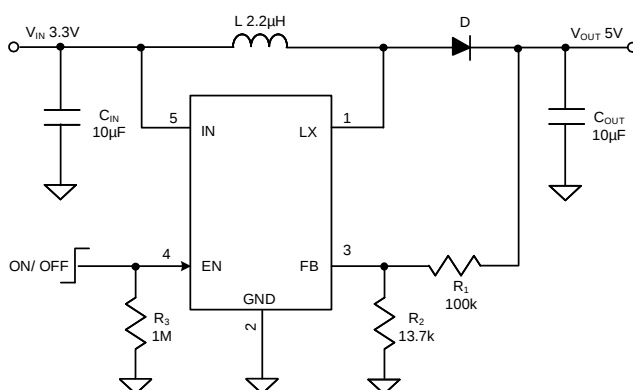
Applications

- WLED Drivers
- Networking Cards Powered From PCI Or PCI-Express Slots

SY7152A - High Efficiency 1MHz, 2A Current Limit Step-Up Regulator

Features

- 3V to 8V Input Voltage Range
- Up to 2A Output Current
- 15 μ A Shutdown Current (Max.)
- 100 μ A I_q (Typ.)
- Low $R_{DS(ON)}$ for Internal N-Channel MOSFET: 130m Ω
- 1MHz Switching Frequency
- Minimum On-Time: 100ns Typical
- Minimum Off-Time: 100ns Typical
- Internal Soft-Start Limits Inrush Current
- $\pm 2\%$ 0.6V Reference
- RoHS-Compliant and Halogen-Free
- Compact SOT23-6 Package



Applications

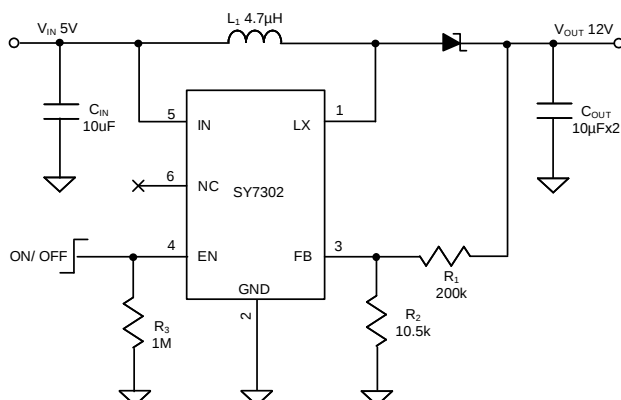
- WLED Drivers
- Networking Cards Powered From PCI Or PCI-Express Slots

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SY7302- High Efficiency 1MHz, 2A Current Limit Step-Up Regulator

Features

- 3V to 33V Input Voltage Range
- 33V Maximum VOUT
- 2A Internal MOSFET Current Limit
- 5 μ A Shutdown Current (Typ.)
- 100 μ A Iq (Typ.)
- Low RDS(ON) for Internal N-Channel MOSFET: 200m Ω
- 1MHz Switching Frequency
- Minimum On-Time: 100ns Typical
- Minimum Off-Time: 100ns Typical
- Internal Soft-Start
- $\pm 2\%$ 0.6V Reference
- RoHS-Compliant and Halogen-Free
- Compact SOT23-6 Package



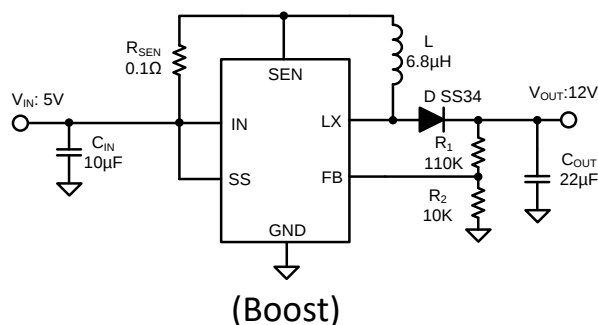
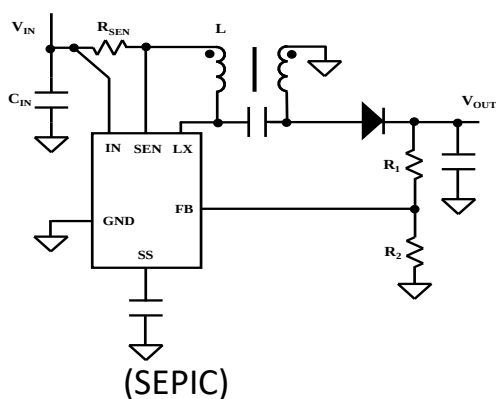
Applications

- Digital Camera
- Cell Phone
- PDA, PMP, MP3

SY7388 - Low Noise, High Efficiency 850kHz Step-Up Regulator with Accurate Input Current Limit

Features

- Wide 3.5V to 30V Input Range
- 30V Maximum Output Voltage
- 150 μ A Iq (Typ.)
- Low 200m Ω RDS(ON) for Internal Switch
- 850kHz Switching Frequency
- Minimum On-Time: 100ns Typical
- Minimum Off-Time: 100ns Typical
- Optional Input Overvoltage Protection
- RoHS-Compliant and Halogen-Free
- Compact SOT23-6 Package



Applications

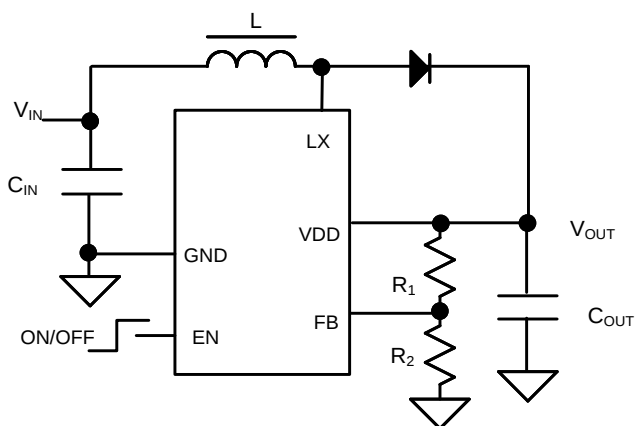
- GPS Navigation Systems
- Handheld Devices
- Portable Media Player

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SY7102- High Efficiency 6V, 1MHz, 2.5A Current Limit Step-Up Regulator

Features

- Wide 2V to 6V Input Range
- Up to 6V Output Voltage
- Low RDS(ON) for Internal N-Channel MOSFET: 120mΩ
- 2.5A Minimum Switch Current Limit
- 1MHz Switching Frequency
- Minimum On-Time: 100ns Typical
- Minimum Off-Time: 100ns Typical
- Internal Soft-Start Limits Inrush Current
- $\pm 2\%$ 0.6V Reference
- RoHS-Compliant and Halogen-Free
- Compact SOT23-6 Package



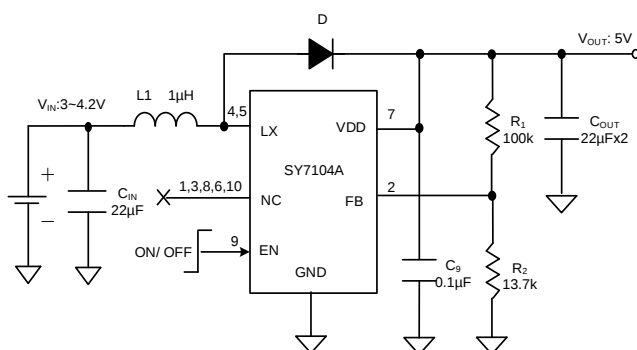
Applications

- Solar Battery Charger
- Backup Battery

SY7104A - High Efficiency 6V, 4A, 1MHz Step-Up Regulator

Features

- 2V to 6V Input Voltage Range
- Up to 6V Output Voltage
- Low RDS(ON) for Internal N-Channel MOSFET: 90mΩ Typical
- 1MHz Switching Frequency
- Minimum On-Time: 100ns Typical
- Minimum Off-Time: 100ns Typical
- Internal 4A Switch
- Internal Soft-Start Limits Inrush Current
- $\pm 2\%$ 0.6V Reference
- Overtemperature Protection
- Overcurrent Protection
- RoHS-Compliant and Halogen-Free
- Compact DFN3mmx3mm-10 Package



Applications

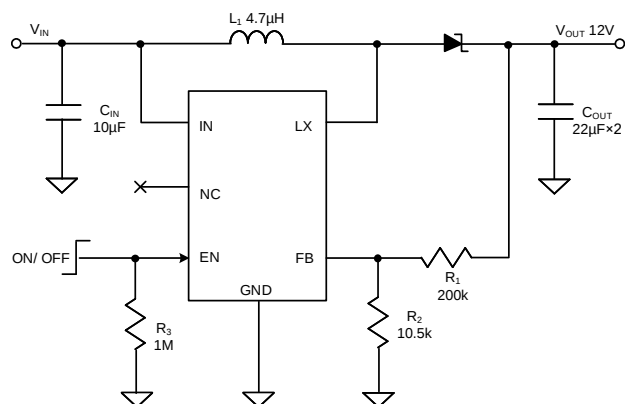
- Single-Cell Li-ion Battery-Powered Applications
- Portable Devices

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SY7304- High Efficiency 33V, 1MHz, 4A Current Limit Step-Up Regulator

Features

- 3V to 33V Input Voltage Range
- 33V Maximum Output Voltage
- 4A Main MOSFET Current Limit
- 15 μ A Shutdown Current (Max.)
- 100 μ A Quiescent Current (Typ.)
- Low RDS(ON) for Internal N-Channel MOSFET: 120m Ω
- 1MHz Switching Frequency
- Internal Soft-Start
- $\pm 2\%$ 0.6V Reference
- Cycle-by-Cycle Peak Current Limit
- Overtemperature Protection
- RoHS-Compliant and Halogen-Free
- Compact DFN3mmx3mm-10 Package



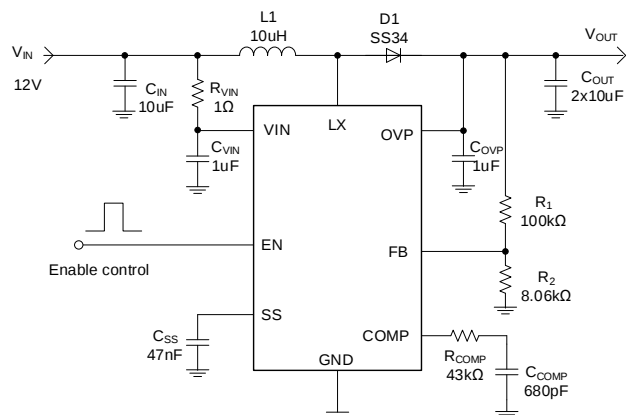
Applications

- Portable Devices
- Battery Powered Systems
- Networking Cards Powered from PCI or PCI-Express Slots

SY7205A- High-Performance Boost Regulator for UHD TV Display

Features

- Wide 8.6V–15.9V Input Voltage Range
- Low RDS(ON) for N-channel MOSFET: 75m Ω (typical)
- 95% Typical Efficiency
- Feedback Reference Voltage: 1.25V $\pm$ 1.5%
- 500kHz Fixed Switching Frequency
- Pulse Skipping Mode at Light Load
- Adjustable Soft-Start Limits Inrush Current
- EN ON/OFF Control
- Overvoltage Protection
- Cycle-by-Cycle Current-Limiting Protection
- Input UVLO
- Thermal Shutdown with Automatic Recovery
- Compact DFN3 $\times$ 3-10 Package



Applications

- TFT LCD Panels AVDD

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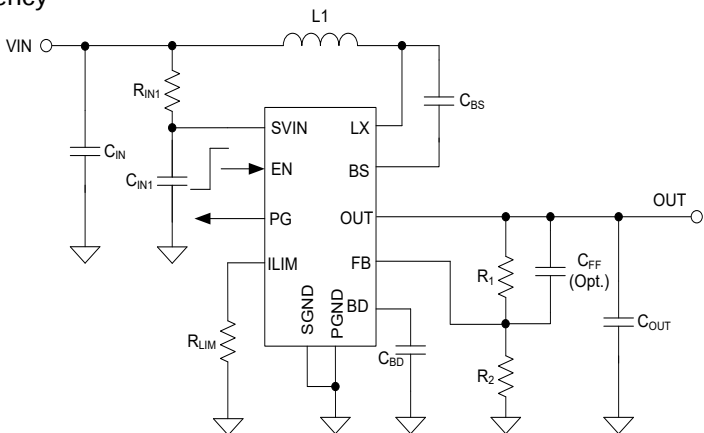
SY7982 - High Efficiency 1MHz, 16V, 6A Synchronous
Step-Up Regulator with Accurate Output Current Limit

Features

- 3V to 9V Input Voltage Range
- 6A (Min.) Main MOSFET Current Limit
- 7 μ A Shutdown Current (Max.)
- 600 μ A Quiescent Current (Typ.)
- Programmable Output Current Limit
- Low RDS(ON) for Internal N-Channel MOSFET:
80m Ω Main, 40m Ω Rectifier, 40m Ω Disconnection
- Synchronous Rectification for High Efficiency
- Pseudoconstant 1MHz Frequency
- Enable Control
- Input Voltage UVLO
- Output Overvoltage Protection
- Overtemperature Protection
- Output Short-Circuit Protection
- Power-Good Indicator
- True Shutdown Function
- RoHS-Compliant and Halogen-Free
- Compact QFN3mm $\times$ 3mm-16 Package

Applications

- Power Bank
- High Power Application
- SSD



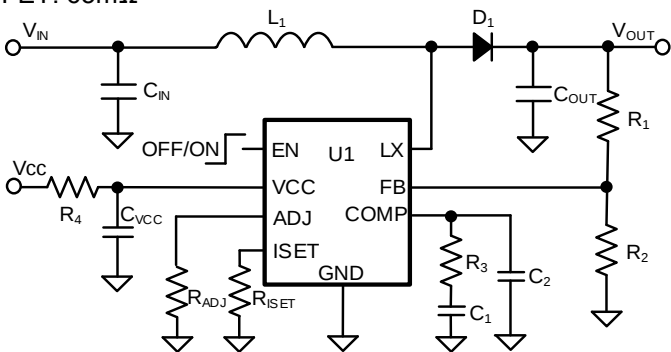
SY7219- Current Limit Step-Up Regulator

Features

- 3V to 5.5V Input Range
- 30V Maximum Output Voltage
- 1 μ A Shutdown Current (Typ.)
- 380 μ A Quiescent Current (Typ.)
- Programmable Peak Current Limit
- Programmable Constant Off-Time
- Low RDS(ON) for Internal 9A N-Channel MOSFET: 65m Ω
- Internal Soft-Start
- RoHS-Compliant and Halogen-Free
- Compact DFN3mm $\times$ 3mm-10 Package

Applications

- Industrial Control Systems
- Battery Powered Devices
- LED Drivers



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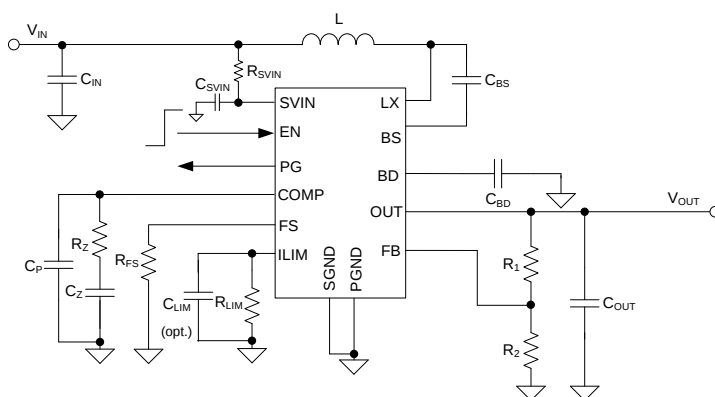
SY7215A/SY7315 - High Efficiency 15A Step-Up Regulator with Accurate Output Current Limit

Features

- Input Voltage Range :
 - SY7215A: 3V to 16V
 - SY7315: 4.5V to 30V
- Up to 15A Output Current
- Programmable Output Current Limit
- Low $R_{DS(ON)}$ for Internal N-Channel MOSFET:
 - SY7215A: 9m Ω Main, 12m Ω Rectifier, 12m Ω Disconnection FET
 - SY7315: 16m Ω Main, 18m Ω Rectifier, 18m Ω Disconnection FET
- Programmable Pseudoconstant Frequency:
 - SY7215A: 250kHz to 1MHz
 - SY7315: 200kHz to 1MHz
- Enable Control
- Input Voltage UVLO
- Output Overvoltage Protection
- Overtemperature Protection
- Output Short-Circuit Protection
- True Shutdown Function
- RoHS-Compliant and Halogen-Free
- Compact QFN4mm $\times$ 4mm-18 Package

Applications

- Power Bank
- High Power Application



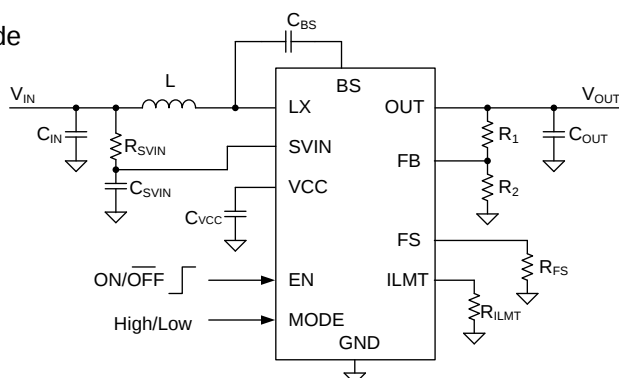
SY7120 - High Efficiency, 16V, 10A Synchronous Step Up Regulator

Features

- Input Voltage Range: 2.8-16V
- Programmable Pseudo-constant Frequency: 300kHz-2MHz
- Low $R_{DS(ON)}$ for Internal Switch
 - Main FET: 10m Ω
 - Rectifier FET: 20m Ω
- PFM/PWM Selectable Light Load Operation Mode
- Internal Loop Compensation
- Programmable Peak Current Limit
- Internal Soft-start Time Limit the Inrush Current
- Input Voltage UVLO
- Over Temperature Protection
- Over Voltage Protection
- RoHS Compliant and Halogen Free
- Compact Package: QFN3 $\times$ 3-20

Applications

- Power Bank
- High Power AP
- E-cigarette
- Bluetooth Speaker


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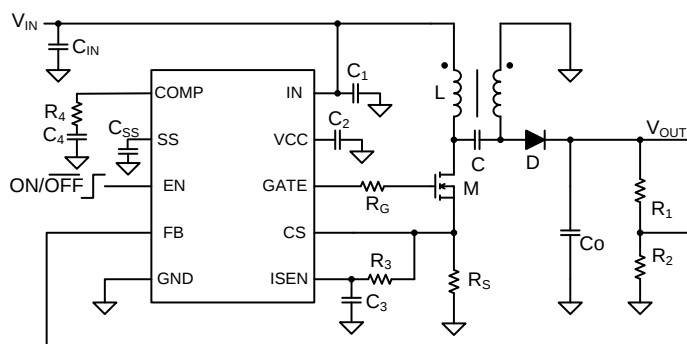
SY7901- High Efficiency 500kHz, 25V PWM Controller with DC Input Current Limit

Features

- Input Voltage Range 3V to 25V
- 500kHz Fixed Switching Frequency
- An Accurate DC Input Current Limit
- External Compensation
- Internal Soft-start Limits the Inrush Current
- Integrated Low Side Driver: 1.5A Sourcing and 3A Sinking
- RoHS Compliant and Halogen Free
- Compact Package: DFN3×3-10

Applications

- GPS Navigation Systems
- Handheld Devices
- Portable Media Player



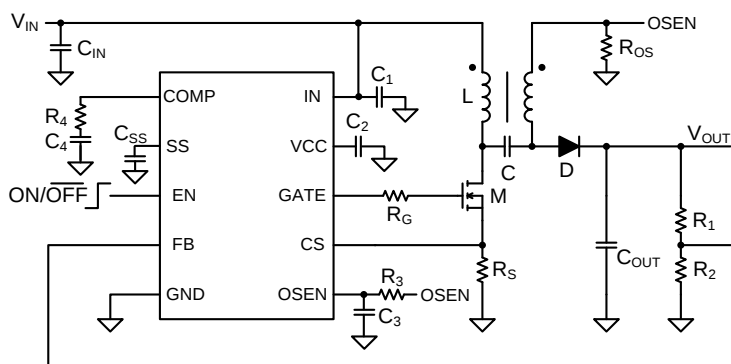
SY7902A - High Efficiency 300kHz, 25V Boost/SEPIC Controller with Output Current Limit

Features

- Input Voltage Range 3V to 25V
- 300kHz Fixed Switching Frequency
- Output Current Limit
- External Compensation
- Programmable Soft-start Limits the Inrush Current
- Integrated Low Side Driver: 1.5A Sourcing and 3A Sinking
- RoHS Compliant and Halogen Free
- Compact Package: SSOP10

Applications

- GPS Navigation Systems
- Handheld Devices
- Portable Media Player


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Step Up/Down Regulator (Power Switch Integrated)

Part Number	V _{IN} Min Max (V) (V)		I _{LIM} (A)	F _{SW} (MHz)	V _{OUT} (max) (V)	V _{FB} / Accuracy	Input Quiescent Current (μA)	MOSFET Ron (H/L) (mΩ)	I ² C	Feature/ Special Function	Package
SY9702QOC	2.6	5.5	2	1	3.8	0.6V±1.5%	60	50/50		Output Disconnect @Shutdown	QFN2×3-13
SY9701ADPC	2.6	5.5	1.2	1	3.8	0.6V±1.5%	60	100/100		Output Disconnect @Shutdown	DFN3×3-14
SY9329QFC	4	28	Programmable 6A/8A/10A	0.25/0.5/ 0.75/1	28	adjustable	310	25/25	√	Selectable Inductor Current Limit and VBUS Output Current Limit Selectable VBUS Output Voltage:5V, 7V, 9V, 12V, 15V, 20V	QFN4×4-32
SY9329BQFC	4	28	Programmable 6A/8A/10A	0.25/0.5/ 0.75/1	28	adjustable	310	25/25	√	Selectable Inductor Current Limit and VBUS Output Current Limit Selectable VBUS Output Voltage:5V, 9V, 10V, 12V, 15V, 20V	QFN4×4-32
SY9329CQFC	4	28	Programmable 6A/10A	0.25/0.5	28	1V±1.5%	300	25/25		Programmable Output Current Limitation with Ext. Sensing Resistor	QFN4×4-32
SY9228QEC	4	28	Programmable 6A/8A/10A	0.25/0.5/ 0.75/1	28	adjustable	450	19/19		VBUS Output Voltage can be Configured in 0.1V per Step from 3.6V to 21V Selectable Inductor Current Limit and Output Current Limit	QFN5×5-32

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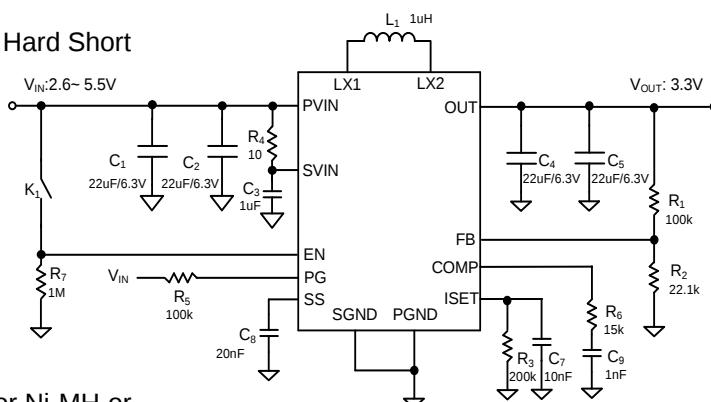
SY9702- High Efficiency, 1MHz, 2A Buck-Boost DC/DC Regulator

Features

- 2.6V to 5.5V Input Voltage Range
- 2A Continuous Output Current Capability
- Adjustable Output Voltage between 2.6V and 3.8V Independent of the Input Voltage
- 1 MHz (typ.) Fixed Frequency Operation
- Four low RDSON Internal Power Switches
- Seamless Buck-Boost Transition
- Output Disconnect During Shutdown
- Power Good Indicator
- Built In Thermal Shut Down Protection, Hard Short Protection

Applications

- Handheld Instruments
- MP3/MP4 Players
- Digital Cameras/Camcorders
- Personal Medical Products
- High Power LED's
- Two-cell and three-cell alkaline, Ni-Cd or Ni-MH or single cell Li battery powered products



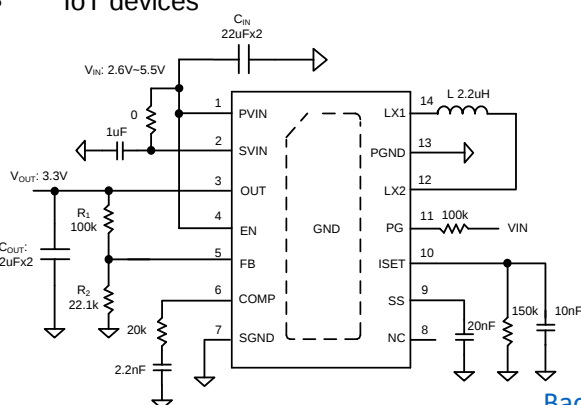
SY9701A - High Efficiency, 1MHz, 1.2A Buck-Boost DC/DC Regulator

Features

- 2.6V to 5.5V Input Voltage Range
- 1.2A Output Current capability
- 1 MHz Fixed Frequency Operation
- 60 μ A Quiescent Current (no load, typ.)
- 0.1 μ A Shutdown Current (typ.)
- Seamless Transition Between Operating Modes
- Output disconnect during shutdown
- Application configurable soft-start
- Power Good Indicator
- Built in Thermal, Output Short UVLO and OVP Protections
- Compact Package: DFN3 $\times$ 3-14

Applications

- Two cell and three cell alkaline, Ni-Cd or Ni-MH, or single cell Li batteries used in portable applications
- Handheld Instruments
- MP3/MP4 Players
- Digital Cameras/Camcorders
- IoT devices


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SY9329/B - High Efficiency, 28V Input

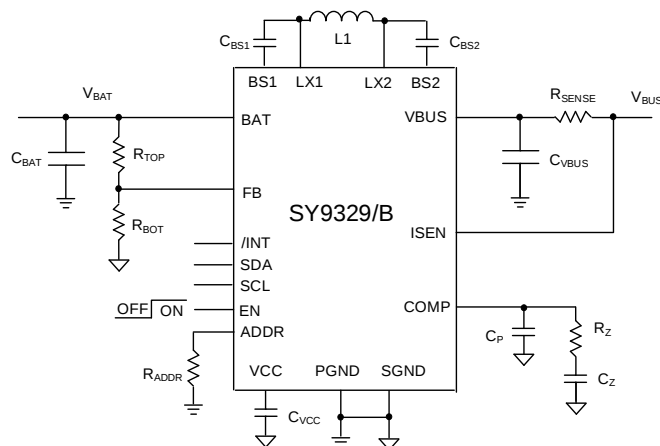
Single Inductor Synchronous Step Up/Down Regulator

Features

- Bidirectional Power Delivery: Source Mode and Sink Mode
- 4V to 28V Input Voltage Range
- Low RDS(ON) for Internal Switches: 25mΩ
- Internal Soft Start
- 8-bit ADC for Output Voltage, Input Voltage and VBUS Output Current Detection
- Fully Protected for Output Over Current, Short-circuit and Over-temperature
- **I²C Compatible Interface**
- Support Interrupt for Status Feedback
- Selectable Switching Frequency:
 - 250kHz, 500kHz, 750kHz, 1MHz
- Selectable VBUS Output Voltage:
 - SY9329: 5V, 7V, 9V, 12V, 15V, 20V
 - SY9329B: 5V, 9V, 10V, 12V, 15V, 20V
- Selectable Inductor Current Limit and VBUS Output Current Limit
- Compact Package: QFN4×4-32

Applications

- Docking Station
- Laptop
- High-End Power Bank
- Monitor
- Car Charger
- USB PD

**SY9329C** - High-Efficiency, 38V Maximum Input

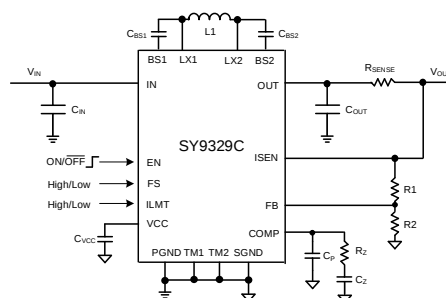
Single-Inductor Synchronous Step-Up/Down Regulator

Features

- 4V to 28V Operating Input Voltage Range
- 38V Absolute Maximum Input Voltage
- Low RDS(ON) for Internal Switches: 25mΩ
- 250kHz/500kHz Selectable Switching Frequency
- Soft-Start Inrush Current limit
- Hiccup Mode for Output Overcurrent,
- Short-Circuit and Overvoltage Protection
- Thermal Shutdown with Auto-Recovery
- 6A/10A Selectable Average Inductor Current Limit
- 1.0V ± 1.5% Reference Voltage Accuracy
- Resistor Programmable Output Current Limit
- RoHS-Compliant and Halogen-Free
- Compact Package: QFN4×4-32

Applications

- Docking Station
- Laptop
- High-End Power Bank
- Monitor
- Car Charger
- USB PD

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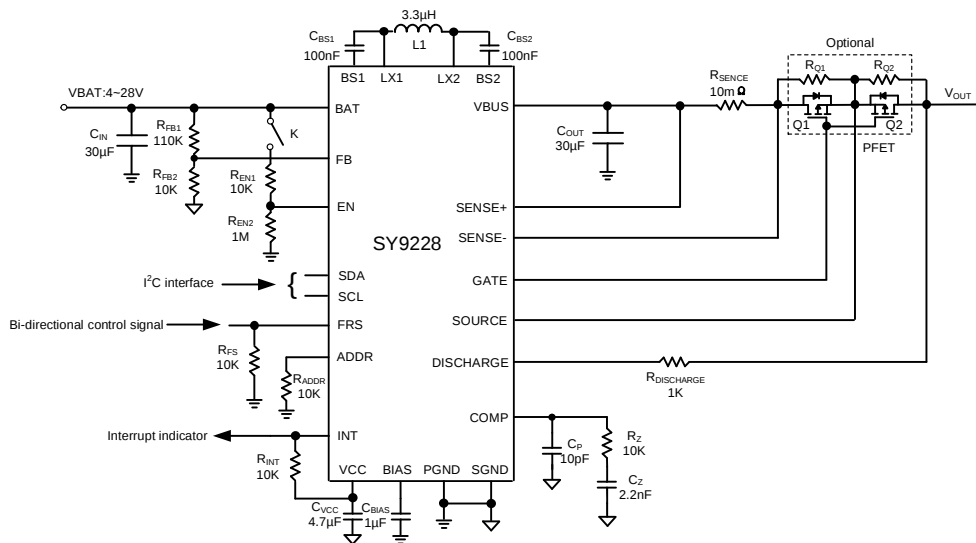
SY9228- High Efficiency, 28V Input
Single Inductor Synchronous Step Up/Down Regulator

Features

- Bidirectional Power Delivery: Source Mode and Sink Mode
- 4V to 28V Input Voltage Range
- Low RDS(ON) for Internal Switches: 19mΩ
- Internal soft-start
- Support Interrupt for Status Feedback
- Optional External P-channel FET Driver
- Cable Impedance Compensation
- 8-bit ADC for Output Voltage, Input Voltage and Output Current Detection
- Fully Protected for Output Over Current, Short-circuit and Over-temperature
- I²C Compatible Interface
 - Support Interrupt for Status Feedback
 - Selectable Switching Frequency: 250kHz, 500kHz, 750kHz, 1MHz
 - VBUS Output Voltage can be Configured in 0.1V per Step from 3.6V to 21V
 - Selectable Inductor Current Limit and Output Current Limit
- Compact Package: QFN5 × 5-32
- UL Certificate Number E491480
- IEC 62368-1 Certified

Applications

- Docking Station
- Laptop
- Power Bank
- Monitor
- USB PD

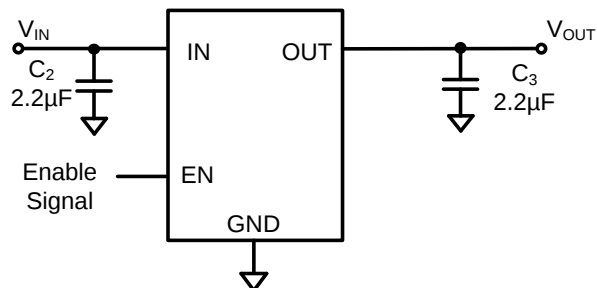


Part Number	V _{IN} (Min)(V)	V _{IN} (Max)(V)	V _{OUT} (V)	I _{OUT} (A)	Dropout Voltage (mV)	Package	Function
SY6340BAAC	3.6	30	3.3	0.05	100	SOT23-5	Reverse Blocking Function
SY6340DEC	2.3	30	Adjustable	0.15	300	DFN2×2-6	Reverse Blocking Function
SY6340AAC	2.3	30	Adjustable	0.15	300	SOT23-5	Reverse Blocking Function
SY6340ZDED	2.5	30	Adjustable	0.15	150	DFN2×2-6	LDO Reg.
SY6345AAC	4	40	Adjustable	0.3	300	SOT23-5	LDO Reg.
SY6307BSCC	0.8	5.5	Adjustable	0.5	90	DFN1.2×1.2-6	Current Limiting Protection, Auto-discharge
SY6301DSC	1.6	5.5	Adjustable	1	0.32V @ I _{OUT} =1A, V _{OUT} =1.5V 0.18V @ I _{OUT} =1A, V _{OUT} =2.8V	DFN3×3-6	Current Limiting Protection, Auto-discharge
SY6301BAJC	1.6	5.5	3.3	1	200	SOT223	Current Limiting Protection
NEW SY6321CSED	1.65	6.5	Adjustable	1	0.2V @ I _{OUT} =1A	DFN2.5×2.5-10	Adjustable Start-Up Inrush Control with Selectable Soft-Start Charge Current, PG
SY6321DAC	1.4	6	Adjustable	2	0.45V @ I _{OUT} =2A	DFN3×3-8	Reverse Blocking from Output to Input, OCP & OTP
NEW SY6321FCC	1.4	6	Adjustable	2	0.45V @ I _{OUT} =2A	SO8E	Reverse Blocking from Output to Input, OCP & OTP
NEW SY6321BSED	1.8	6.5	Adjustable	2	0.4V @ I _{OUT} =2A	DFN2.5×2.5-10	Adjustable Start-Up In-Rush Control with Selectable Soft-start Charging Current, PG
SY6103JBC	3	18	Adjustable	3	0.48V @ I _{OUT} =3A	TO252-5	Zero-current Shutdown Mode; Output Short Circuit Protection
SY6103MAC	3	18	Adjustable	3	0.48V @ I _{OUT} =3A	TO263-5	Zero-current Shutdown Mode; Output Short Circuit Protection
SY6103BMAB	3	18	Adjustable	3	0.48V @ I _{OUT} =3A	TO263-5	Zero-current Shutdown Mode
SY6353MAC	3	55	Adjustable	3	0.45V @ Full Load 3A	TO263-5	Zero-current Shutdown Mode Over Input Voltage Protection
SY6353BMAB	3	55	Adjustable	3	0.45V @ Full Load 3A	TO263-5	Zero-current Shutdown Mode
SY6355DBC	2.375	3.5	Adjustable	3	/	DFN3×3-10	Sink and Source DDR Termination Regulator
SY6355BTDD	2.375	3.5	Adjustable	2	/	DFN2×2-10	Sink and Source DDR Termination Regulator

SY6340B- 3.3V Fixed Output/50mA, 30V Input, LDO

Features

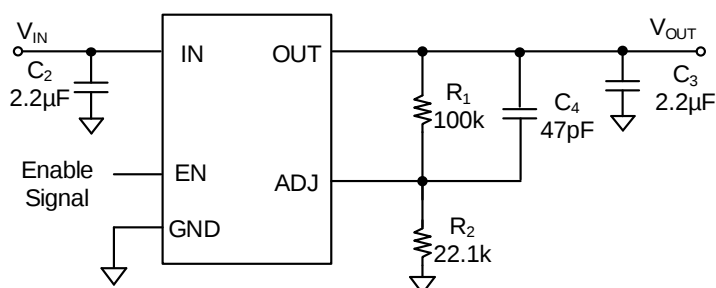
- Wide Input Voltage Range: 3.6V to 30V
- 3.3V Fixed Output Voltage
- Low Dropout Voltage(100mV @ 50mA)
- Low Ground Current
- Ultra Low Shutdown Current
- $\pm 2\%$ Output Voltage Accuracy
- Stable with Small Ceramic Capacitors
- Excellent Load and Line Regulation
- 50mA Output Current Capability
- Output Current Limitation
- Reverse Leakage Current Protection
- Reverse Input Voltage Protection
- TTL Logic Enable Input
- Thermal Shutdown
- RoHS Compliant and Halogen Free
- Compact SOT23-5 Package



SY6340/Z - 150mA LDO Regulator

Features

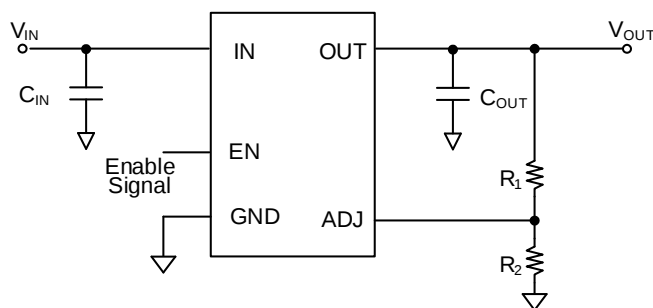
- Input Voltage Range:
 - SY6340: 2.3V to 30V
 - SY6340Z: 2.5V to 30V
- Low Dropout Voltage:
 - SY6340: 300mV @ 150mA
 - SY6340Z: 150mV @ 150mA
- 150mA Output Current Capability
- Low Ground Current
- Ultra-Low Shutdown Current
- High Output Accuracy of $\pm 2\%$ Over Operating Temperature Range
- Stable with Small Ceramic Capacitors
- Excellent Load and Line Regulation
- Reverse Leakage Current Protection (SY6340)
- Reverse Input Voltage Protection (SY6340)
- TTL Logic Enable Input
- Thermal Shutdown
- RoHS Compliant and Halogen Free
- Compact Package:
 - SY6340: SOT23-5/ DFN2 $\times$ 2-6
 - SY6340Z: DFN2 $\times$ 2-6


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SY6345- 40V Input, 300mA LDO

Features

- Wide Input Voltage Range: 4V to 40V
- Low Dropout Voltage (300mV at 300mA)
- Low Quiescent Current (10 μ A max)
- Very Low Shutdown Current (1.25 μ A max)
- Stable with Tantalum or Ceramic Capacitors
- Excellent Load and Line Regulation
- $\pm 2\%$ 0.6V Reference Accuracy
- 300mA Maximum Load Current
- Enable Control Input
- Overcurrent Protection
- Thermal Shutdown
- Compact SOT23-5 Package



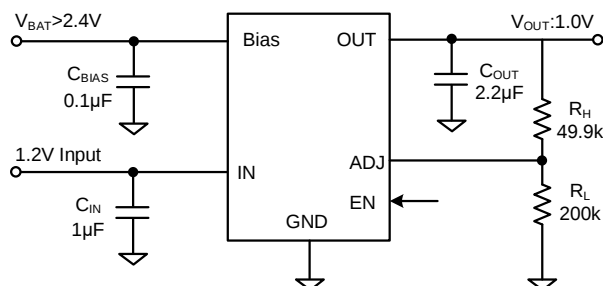
Applications

- Battery-Powered Applications
- Automotive Applications
- Gateway Applications
- Remote Keyless Entry Systems
- SMPS Post-Regulator/ DC-DC Modules

SY6307B - 500mA Low Dropout Bias Rail LDO Regulator

Features

- Input Voltage Range: 0.8V-5.5V
- Bias Voltage Range: 2.4V-5.5V
- Output Voltage Accuracy: $\pm 1\%$
- Bias Input Quiescent Current: 110 μ A (typ.)
- Bias Shutdown current: 0.1 μ A (typ.)
- Up to 500mA Output Current
- Current Limit Protection
- Over Temperature Shutdown
- Output Auto-Discharge Resistor: 130 Ω
- RoHS Compliant and Halogen Free
- Compact Package: DFN1.2 $\times$ 1.2-6



Applications

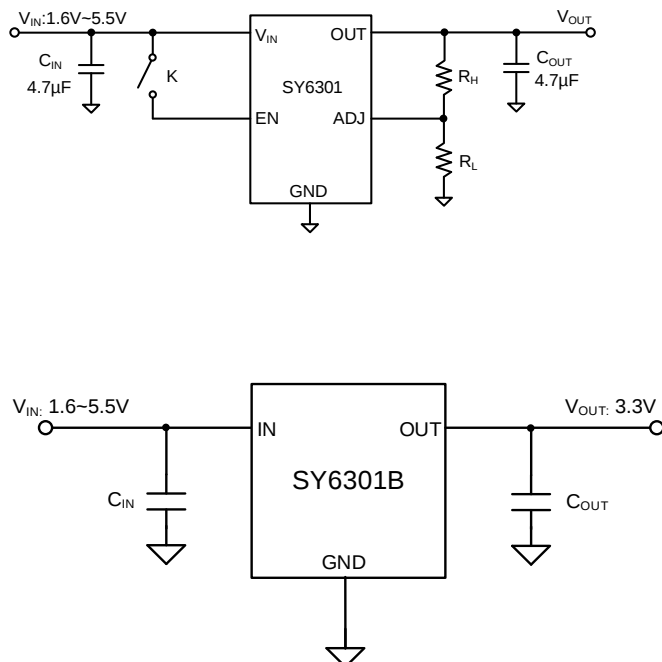
- Battery-Powered Equipment
- Smartphones, Tablets
- Cameras, DVRs, STB and Camcorders

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SY6301/B- Low Dropout 1A LDO Regulator

Features

- Input Voltage Range: 1.6-5.5V
- Up to 1A Output Current
- Output Voltage Accuracy: $\pm 3\%$
- Low Dropout Voltage (SY6301):
Typ. 0.32V at $I_{OUT}=1A$, $V_{OUT}=1.5V$
Typ. 0.18V at $I_{OUT}=1A$, $V_{OUT}=2.8V$
- Current Limiting Protection
- Thermal Shutdown Protection
- Output Auto-discharge Function
- Over Temperature Protection
- RoHS Compliant and Halogen Free
- Compact Package: SY6301: DFN3 $\times$ 3-6
SY6301B: SOT-223



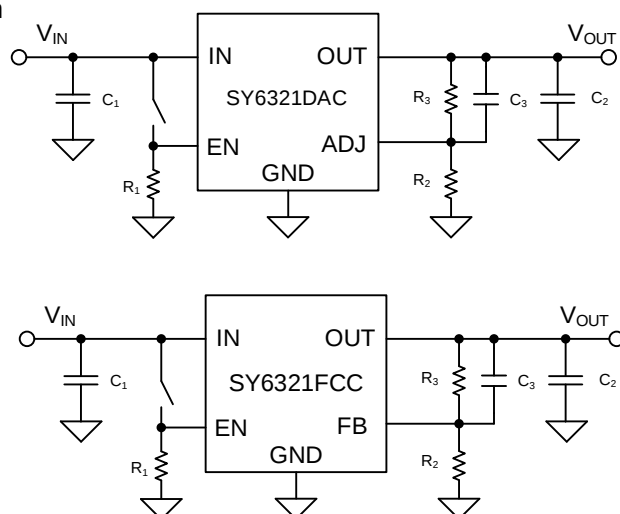
Applications

- Portable Communication Equipment
- Hand-Held Instruments, Notebook PCs
- Camcorders and Cameras

SY6321- Low Input/Low dropout, 2A LDO with Enable

Features

- Input Voltage as Low as 1.4V
- 450mV Dropout @ 2A
- Adjustable Output from 0.5V
- 0.9ms Internal Soft-start Minimizes Inrush Current
- 10 μA Quiescent Current in Shutdown
- Over Current and Over Temperature Protection
- Enable Control: Default High
- Reverse Blocking from Output to Input
- RoHS Compliant and Halogen Free
- Package: DFN3 $\times$ 3-8 /SO8E



Applications

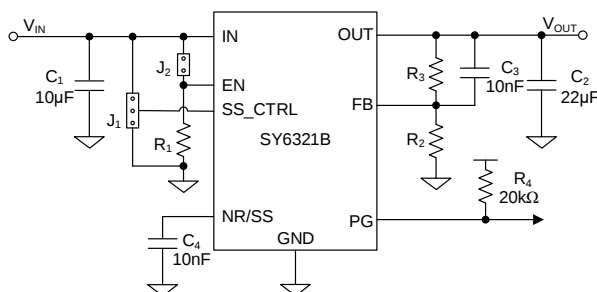
- Telecom/Networking Cards
- Motherboards/Peripheral Cards
- Industrial Applications
- Wireless Infrastructure
- Set Top Box
- Medical Equipment
- Notebook Computers
- Battery Powered Systems

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SY6321B- 2A, High Accuracy, Low Noise LDO Regulator

Features

- 2.0% Accuracy Over Line, Load and Temperature
- Low Dropout: 200 mV (Typ) at 2 A
- Wide Input Voltage Range: 1.8 V to 6.5 V
- Wide Output Voltage Range: 0.8 V to 5.2V
- Fast Transient Response
- Adjustable Start-up In-Rush Control with Selectable Soft-start Charging Current
- Open-Drain Power-Good (PG) Output
- Stable with a 22 μ F or Larger Ceramic Output Capacitor
- RoHS Compliant and Halogen Free
- 2.5mm $\times$ 2.5mm, 10-Pin DFN Package



Applications

- High Speed Analog Circuits: VCO, ADC, DAC, LVDS
- Imaging: CMOS Sensors, Video ASICs
- Test and Measurement
- Instrumentation, Medical, and Audio
- Digital Loads: SerDes, FPGA, DSP

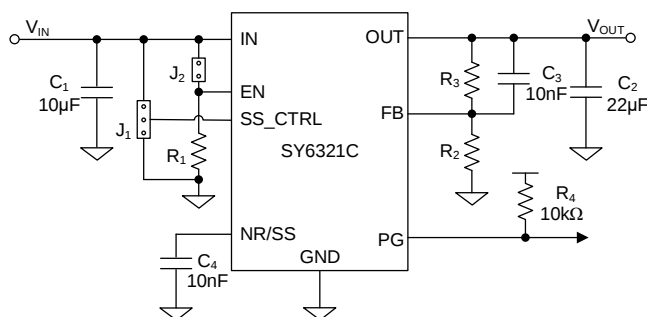
SY6321C- 1A, High Accuracy, LDO Regulator

Features

- 2.0% Accuracy Over Line, Load, and Temperature
- Low Dropout: 200 mV (Max) at 1 A
- Wide Input Voltage Range: 1.65V to 6.5 V
- Wide Output Voltage Range: 0.8 V to 5.2V
- Fast Transient Response
- Adjustable Start-Up Inrush Control with Selectable Soft-Start Charge Current
- Open-Drain Power Good (PG) Output
- RoHS Compliant and Halogen Free
- Compact Package: DFN 2.5 $\times$ 2.5-10

Applications

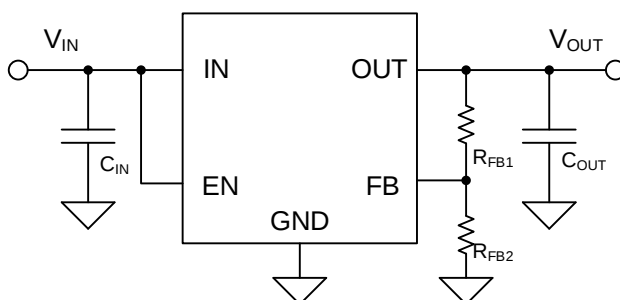
- High Speed Analog Circuits: VCO, ADC, DAC, LVDS
- Imaging: CMOS Sensors, Video ASICs
- Test and Measurement
- Instrumentation, Medical, and Audio
- Digital Loads: SerDes, FPGA, DSP



SY6103/B- 18V Input, 3A Fast-Response LDO Regulator

Features

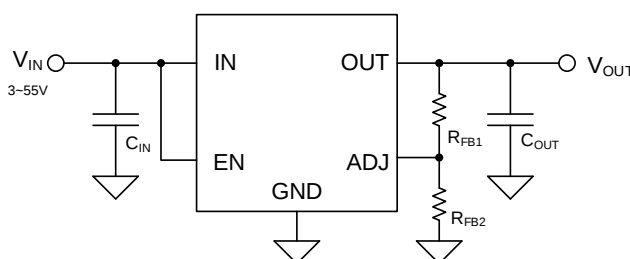
- 3V to 18V Input Voltage Range
- Low Dropout Voltage: 480mV at Full Load 3A
- High Current Capability: 3A Over Full Temperature Range
- Fast Transient Response
- Zero-Current Shutdown Mode
- Adjustable Output Voltage
- Low Ground Current
- Over Current Limit
- Output Short Circuit Protection (SY6103)
- Over Temperature Protection
- Package: TO263-5/TO252-5
- RoHS Compliant and Halogen Free



SY6353/B - 3A, 55V Input Fast-Response LDO Regulator

Features

- 3V to 55V Input Voltage Range
- Adjustable Output Voltage
- Low Dropout Voltage: 450mV at Full Load 3A (Typ.)
- High Current Capability: 3A Over Full Temperature Range
- Fast Transient Response
- Low Current Shutdown Mode (1 μ A Typ.)
- Low Ground Current
- Current Limiting Protection
- Over Temperature Protection
- Input Voltage Protection
- Package: TO263-5
- RoHS Compliant and Halogen Free



$$V_{OUT} = 1.24 \times \left(\frac{R_{FB1} + R_{FB2}}{R_{FB2}} \right)$$

Applications

- Industrial Applications
- Medical Imaging
- Smart Metering

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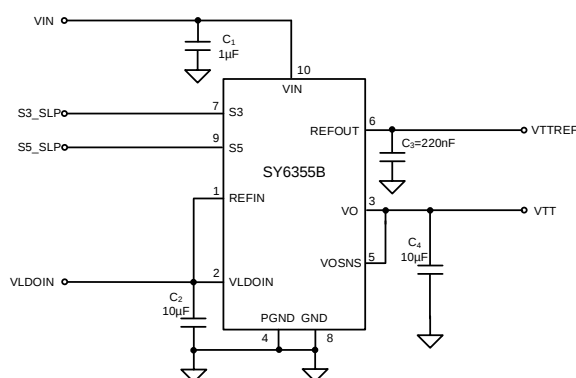
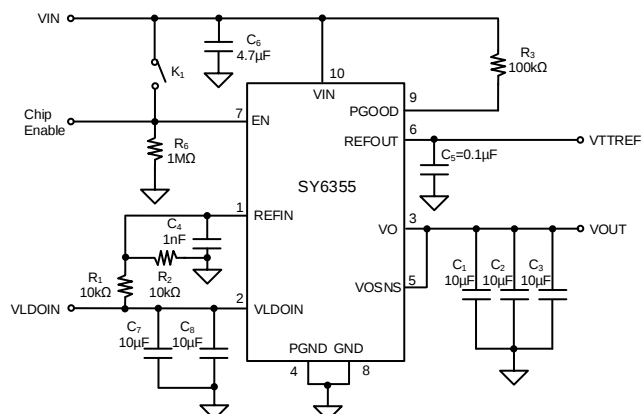
SY6355/B- Sink and Source DDR Termination Regulator

Features

- Input Voltage: Supports 2.5V Rail and 3.3V Rail
- VLDOIN Voltage Range: 1.1V to 3.5V
- Sink and Source Termination Regulator Includes Droop Compensation
- Requires Minimum Output Capacitance of 20 μ F (Typically 3 $\times$ 10 μ F MLCCs) for Memory.
- PGOOD to Monitor Output Regulation
- Enable Function Option
- REFIN Input Allows for Flexible Input Tracking either Directly or Through Resistor Divider
- Remote Sensing(VOSNS)
- $\pm$ 10mA Buffered Reference(REFOUT)
- Built-in Soft-start, UVLO, and OCL
- Thermal Shutdown Protection
- Supports DDR, DDR2, DDR3, DDR3L, Low Power DDR3, DDR4 VTT Applications
- Compacted Package:
 - SY6355: DFN3 $\times$ 3-10 with Thermal Pad
 - SY6355B: DFN2 $\times$ 2-10 with Thermal Pad

Application

- Memory Termination Regulator for DDR, DDR2, DDR3, DDR3L, Low-Power DDR3 and DDR4
- Notebooks, Desktops, and Servers
- Base Stations



Protection Switch

Part Number	Package	Enable Logic	OC	OVP	No. of Channels	V _{IN} (V)	I _{OUT} (A)	R _{DS(ON)} (mΩ)	Special Function
SY6288AAAC	SOT23-5	H	✓		1	2.5~5.5	0.6	80	Output discharge at shutdown Reverse Blocking, OCB indicator
SY6288BAAC	SOT23-5	L	✓		1	2.5~5.5	0.6	80	Output discharge at shutdown Reverse Blocking, OCB indicator
SY6811PDC	CSP0.9×0.9-4	H			1	1.05~1.95	1	45@V _{IN} =1.2V 35@V _{IN} =1.8V	Auto output cap discharge function, ultra low input voltage
SY6829PRC	CSP0.79×0.79-4	H		✓	1	2.5~6	1	96	Precise clamping output voltage
SY6819AFAC	SO8	H	✓		1	4.5~18	1.2	110@V _{IN} =12V	Programmable blanking time for DFF control, Default Off when EN ON
SY6819FAC	SO8	H	✓	✓	1	4.5~18	1.2	110@V _{IN} =12V	Programmable blanking time for DFF control, Default On when EN ON
NEW SY86201FAAT	SOT23-5	H	✓		1	2.5~5.5	1.4	65	1.57A±9% Current Limit Accuracy, , Fast Reverse Recovery, OCB Indicator
SY6829BPRC	CSP0.79×0.79-4	H			1	1.8~5.5	1.5	80	Independent ON/OFF Control Input
SY6280DAAT	SOT23-5	H	✓		1	2.5~5.5	0.1~2	65	Programmable current limit, reverse blocking
SY6280AAAC	SOT23-5	H	✓		1	2.4~5.5	0.4~2	63	Programmable current limit, reverse blocking
SY6281AAAC	SOT23-5	L	✓		1	2.4~5.5	0.4~2	63	Programmable current limit, reverse blocking
SY6288C20AAC	SOT23-5	H	✓		1	2.5~5.5	2	65	Output discharge at shutdown Reverse Blocking, OCB indicator
SY6288D20AAC	SOT23-5	L	✓		1	2.5~5.5	2	65	Output discharge at shutdown Reverse Blocking, OCB indicator
SY6882ADFC	DFN2×2-8	H		✓	1	3~23	2	100	Fixed internal OVP@7.1V, Thermal Shutdown Protection & Auto Recovery
SY6882BDFC	DFN2×2-8	H		✓	1	3~23	2	100	Programmable OVP Threshold Thermal Shutdown Protection & Auto Recovery
SY6883ABC	SOT23-6	H		✓	1	3~23	2	100	Programmable OVP Threshold Thermal Shutdown Protection & Auto Recovery
SY6287CABC	SOT23-6	H	✓		1	2.5~5.5	2	65	TUV/CB, UL Certificate
SY6287BDEC	DFN2×2-6	L	✓		1	2.5~5.5	0~2	65	High accurate programmable current limit, reverse blocking
SY6287CDEC	DFN2×2-6	H	✓		1	2.5~5.5	0~2	65	High accurate programmable current limit and reverse blocking, TUV/CB, UL Certificate
SY6287ZDEC	DFN2×2-6	H	✓		1	2.5~5.5	2	65	Output discharge at shutdown Reverse Blocking, OCB indicator
SY6287LABC	SOT23-6	H	✓		1	2.5~5.5	2	65	Adjustable Current Limit up to 2.0A, OCP/OTP with Latch Off Function
SY6816APAC	CSP0.78×0.78-4	H			1	1.05~5.5	2	37@V _{IN} =5V 38@V _{IN} =3.3V 43@V _{IN} =1.8V	load switch with controlled slew rate
SY6816GPAC	CSP0.78×0.78-4	L			1	1.05~5.5	2	37@V _{IN} =5V 38@V _{IN} =3.3V 43@V _{IN} =1.8V	Load Switch with Controlled Slew Rate
SY6829APRC	CSP0.79×0.79-4	H			1	1.8~5.5	2	95	Ultra low quiescent current for IoT application
NEW SY86201EDED	DFN2×2-6	H	✓		1	2.5~5.5	2	65	Programmable Current Limit, Fast Reverse Recovery, OCB Indicator
NEW SY86201EABT	SOT23-6	H	✓		1	2.5~5.5	2	65	Programmable Current Limit, Fast Reverse Recovery, OCB Indicator

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Protection Switch

Part Number	Package	Enable Logic	OCP	OVP	No. of Channels	V _{IN} (V)	I _{OUT} (A)	R _{DS(ON)} (mΩ)	Special Function
SY6288C7AAC	SOT23-5	H	✓		1	2.5~5.5	2.5	70	Output discharge at shutdown Reverse Blocking, OCB indicator
SY6288D7AAC	SOT23-5	L	✓		1	2.5~5.5	2.5	70	Output discharge at shutdown Reverse Blocking, OCB indicator
SY6288C5CAC	MSOP8	H	✓		1	2.5~5.5	2.5	70	Output discharge at shutdown Reverse Blocking, OCB indicator
SY6288D5CAC	MSOP8	L	✓		1	2.5~5.5	2.5	70	Output discharge at shutdown Reverse Blocking, OCB indicator
SY6282LACC	TSOT23-5	H	✓		1	2.4~6	2.5	80	Programmable Current limit
SY6280CAAT	SOT23-5	H	✓		1	2.5~5.5	0.1~2.5	65	Programmable current limit, reverse blocking
SY6288F3ABC	SOT23-6	H	✓		1	2.5~5.5	0~3	45	programmable current limit and reverse blocking
SY6288E1AAC	SOT23-5	H	✓		1	2.5~5.5	3	45	Output discharge at shutdown Reverse Blocking, OCB indicator
SY6288E2AAC	SOT23-5	L	✓		1	2.5~5.5	3	45	Output discharge at shutdown Reverse Blocking, OCB indicator
SY6288F2ABC	SOT23-6	L	✓		1	2.5~5.5	3	45	Output discharge at shutdown Reverse Blocking, OCB indicator
SY6282ACC	TSOT23-5	H	✓		1	2.4~6	3	50	Output discharge at shutdown Reverse Blocking, OCB indicator
SY6283ADRC	DFN1.2×1.6-4	H	✓		1	2.5~5.5	3	60	Output discharge at shutdown Reverse Blocking
SY6283DRC	DFN1.2×1.6-4	H	✓		1	2.5~5.5	3	60	Reverse blocking output, ultra low input voltage
SY6813PEC	6 ball CSP	H			1	1.2~5.5	3	22	Auto output cap discharge function
SY6813APEC	6 ball CSP	H			1	1.2~5.5	3	22	No output cap discharge function
SY6821AAC	SOT23-5	H			1	0.6~3.6	3	45	Programmable turn-on delay, Automatic shutdown discharge
SY6863B2ABC	SOT23-6	L	✓	✓	1	2.5~5.5	3	45	Support Fast Role Swap, OCB, Reverse Block up to 28V, TUV/CB, UL Certificate
SY6863B3ABC	SOT23-6	H	✓	✓	1	2.5~5.5	3	45	Support Fast Role Swap, OCB, Reverse Block up to 28V, TUV/CB, UL Certificate
SY6863B4ABC	SOT23-6	L	✓	✓	1	2.5~5.5	3	45	Support Fast Role Swap, OCB, Reverse Block up to 28V, TUV/CB, UL Certificate
SY6886UGC	CSP1.50×1.64-12	H	✓	✓	1	3~18	3	45	OCP/TSD/OVP Protection; Auto-recovery; Programmable current limit, Reverse blocking
SY6886BUGC	CSP1.50×1.64-12	H	✓	✓	1	3~18	3	45	OCP/TSD/OVP Protection; Auto-recovery; Programmable current limit
SY6821ADQC	DFN1.5×1.5-6	H			1	0.6~3.6	4	16	Programmable turn-on delay & Automatic shutdown discharge
SY6823DFC	DFN2×2-8	H			2	0.6~5.5	4	28	Programmable turn-on delay & ramp-up time, integrated OTP SCP
SY6874DBC	DFN3×3-10	H	✓	✓	1	2.5~30	4	50	Programmable soft-start & current limit, 3.3V/5V/12V selectable clamping output
SY6818PLC	CSP1.73×1.73-12	H		✓	1	2.5~30	5	R _{PWPT} =53mΩ (typ.)	Programmable OVP with Integrated Reverse Blocking FET, accurate current level indicator

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Protection Switch

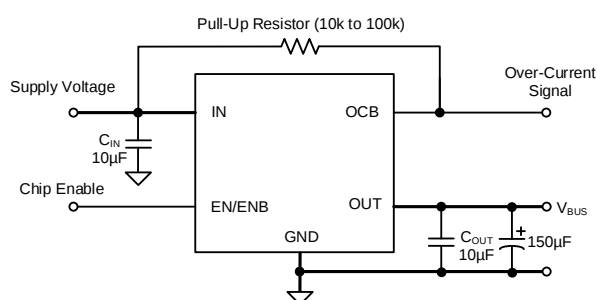
Part Number	Package	Enable Logic	OCP	OVP	No. of Channels	V _{IN} (V)	I _{OUT} (A)	R _{DS(ON)} (mΩ)	Special Function
SY6875ADBC	DFN3×3-10	H	✓	✓	1	2.5~30	5	40	Programmable soft-start & current limit, 3.3V/5V/12V selectable clamping output
SY6875CDBC	DFN3×3-10	H	✓	✓	1	2.5~30	5	50	Programmable soft-start & current limit, 3.3V/5V/12V selectable clamping output
SY6875DDBC	DFN3×3-10	H	✓	✓	1	2.5~30	5	40	Programmable soft-start & current limit, 3.3V/5V/9V selectable clamping output
SY6875FDBC	DFN3×3-10	H	✓	✓	1	2.5~30	5	50	Programmable soft-start & current limit, 3.3V/5V/12V selectable clamping output
SY6895ADBC	DFN3×3-10	H	✓	✓	1	2.5~12	5	40	Fixed Current Limit, Prog. SS
SY6895CDBC	DFN3×3-10	H	✓	✓	1	2.5~12	5	40	Fixed Current Limit, Prog. SS
SY6884PYC	CSP0.89×1.43-6	H		✓	2	2.5~25	5	30	Programmable Over Voltage Threshold
SY6862CQLC	QFN3×4-16	H	✓	✓	2	HV: 4.5~23 5V: 4~5.5	HV: 5A 5V: 3A	35 (HV Power Path) 50 (5V Power Path)	I ² C interface, 2 to 1 Power MUX, Fast Role Swap, 2.7×I _{LIMIT} Short Circuit Protection Threshold for HV Channel, RVS_MasK bit, Lower 25mΩ ON Resistance of CC Bypass
SY6862DQLC	QFN3×4-16	H	✓	✓	2	HV: 4.5~23 5V: 4~5.5	HV: 5A 5V: 3A	35 (HV Power Path) 50 (5V Power Path)	I ² C interface, 2 to 1 Power MUX, Fast Role Swap, 2.7×I _{LIMIT} Short Circuit Protection Threshold for HV Channel, RVS_MasK bit, Lower 25mΩ ON Resistance of CC Bypass, Stronger Noise Immunity On CC Channel
SY6880CPGC	CSP1.8×2-12	H		✓	1	2.5~28	5A continuous, 8A peak	38	Fixed internal OVP@6.8V, Reverse block, Surge protection up to 80V
SY6880APGC	CSP1.8×2-12	H		✓	1	2.5~28	5A continuous, 8A peak	38	Programmable Over Voltage Threshold from +4V to +7V
SY6881PTC	CSP1.32×1.86-12	H		✓	1	2.5~28	Programmable 5A	R _{PWPT} =32mΩ (typ.)	Programmable Over Voltage Threshold from +4V to +22V
SY6898ERYC	QFN2×2-9	H	✓		1	2.95~6.5	5	30	Selectable Clamping Output Voltage
SY6896RYC	QFN2×2-9	H	✓		1	2.7~5.5	5	30	Programmable high current limit, reverse blocking, VIN state indicate, Selectable Clamping Output
SY6897ATLC	QFN2×2-12	H	✓		1	2.5~16	1~5	30	Programmable OUT Slew Rate
SY86802LTLC	QFN2×2-12	H	✓		1	2.5~16	5	30	Blocking FET Control, Programmable OUT Slew Rate Built-in Thermal Shutdown and Latch-off
SY6876AQSC	QFN3×4-20	H	✓	✓	1	2.7~18	0.6~5.3	42	True reverse blocking, programmable current limit & dV/dt control, power good and fault outputs
SY6234DUC	DFN3×2-14	H	✓		2	0.8~5.5	6	18	Dual-channel, Programmable soft-start time
SY6210DHC	DFN2×3-10	H			1	0.6~5.5	10	2.8	Controlled and Adjustable Slew Rate through C _{SST} , PG Indicator
SY86011BWPQ	QFN1.5×2-10	H			1	0.285~5.5	10	5.3	Auto Output Discharge

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SY6288- 5.5V Low Loss Power Distribution Switch

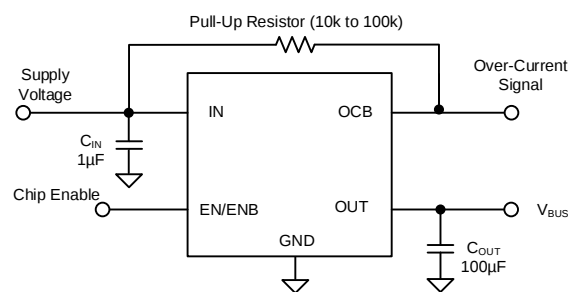
Features

- Distribution Voltage: 2.5V to 5.5V
- Over Temperature Shutdown and Automatic Retry
- Reverse Blocking (No Body Diode)
- At Shutdown, OUT can be Forced Higher than IN
- Fault Flag (OCB) Output for Over Current, Thermal Shut Down or Reverse Blocking
- Auto Output Discharge Function
- Built-in Soft-start
- 0.4ms Rise Time (SY6288A/B/C7/D7)
- 1.6ms Rise Time at 3.3V_{IN} Conditions (SY6288C20/D20)
- RoHS Compliant and Halogen Free
- Compact Packages : SOT23-5, MSOP8



Note: If 1uF input cap will lead to large V_{in} voltage spike, it is strongly recommended to add additional 10uF ceramic cap.

(SY6288A/B/C5/D5/C7/D7)



Note: If 1uF input cap will lead to large V_{in} voltage spike, it is strongly recommended to add additional 10uF ceramic cap.

(SY6288C20/D20/E1/E2)

Ordering Number	Package Type	Enable Logic	Output Current
SY6288AAAC	SOT23-5	Active High	0.6A
SY6288BAAC	SOT23-5	Active Low	0.6A
SY6288C5CAC	MSOP8	Active High	2.5A
SY6288D5CAC	MSOP8	Active Low	2.5A
SY6288C7AAC	SOT23-5	Active High	2.5A
SY6288D7AAC	SOT23-5	Active Low	2.5A
SY6288C20AAC	SOT23-5	Active High	2A
SY6288D20AAC	SOT23-5	Active Low	2A
SY6288E1AAC	SOT23-5	Active High	3A
SY6288E2AAC	SOT23-5	Active Low	3A

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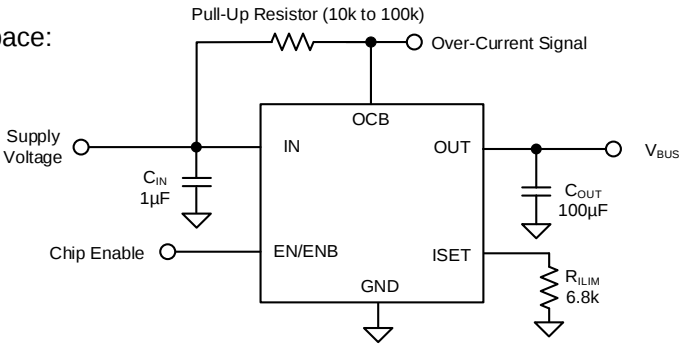
SY6288F- 5.5V, 3A Low Loss Power Distribution Switch

Features

- Input Voltage: 2.5V to 5.5V
- Extremely Low Power Path Resistance: 45mΩ (typ.)
- 3A Load Current Capability
- Over Temperature Shutdown and Automatic Retry
- Reverse Blocking (No Body Diode)
- Fault Flag (OCB) Output for Over Current and Fault Conditions
- Programmable Current Limitation
- At Shutdown, OUT Can be Forced Higher than IN
- Built-in Soft-start
- Compact Package Minimizes the Board Space: SOT23-6
- RoHS Compliant and Halogen Free

Applications

- USB 3.1 Application
- USB 3G Datacard
- USB Dongle
- MiniPCI Accessories
- USB Charger
- Public Place Multi-USB Charger

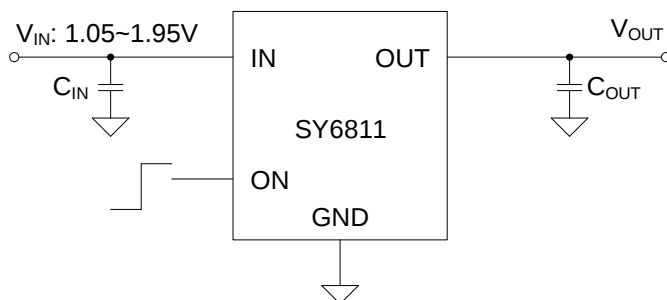


Ordering Number	Package Type	Enable Logic	Output Current	Note
SY6288F2ABC	SOT23-6	Active Low	3A	Output Discharge Function
SY6288F3ABC	SOT23-6	Active High	3A	No Output Discharge

SY6811 - Low ON-Resistance, Slew-Rate-Controlled Load Switch

Features

- Input Voltage Range: 1.05V to 1.95V
- Low $R_{DS(ON)}$ for Internal Pass Switch:
45m Ω at $V_{IN}=1.2V$
35m Ω at $V_{IN}=1.8V$
- 1A Continuous Load Current Capability
- ON/OFF Control Input
- Output Capacitor Auto Discharge Function.
- RoHS Compliant and Halogen Free
- Ultra Small CSP-4 Package 0.9 mm $\times$ 0.9mm, 0.5-mm Pitch, 0.5-mm Height



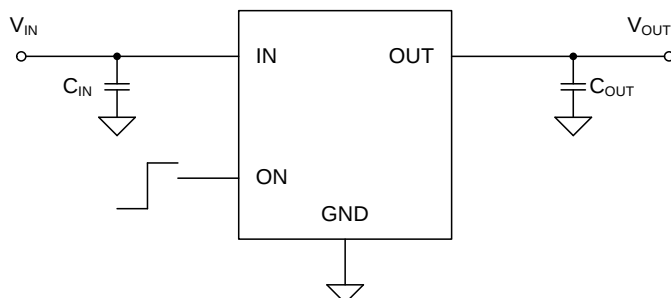
Applications

- Smartphones, Tablet PCs
- MIDs, E-Books
- Storage, DSLR, and Portable Devices

SY6829/A/B - Low ON-Resistance Load Switch

Features

- Input Voltage Range:
 - SY6829: 2.5V to 6V
 - SY6829A/B: 1.8V to 5.5V
- Low $R_{DS(ON)}$:
 - SY6829: 96m Ω
 - SY6829A/B: 80m Ω
- Continuous Load Current Capability:
 - SY6829: 1A
 - SY6829A/B: 1.5A
- 100nA Shutdown Current (SY6829A/B)
- Independent ON/OFF Control Input
- Ultra Compact CSP0.79 $\times$ 0.79-4 0.3mm Package
- RoHS Compliant and Halogen Free



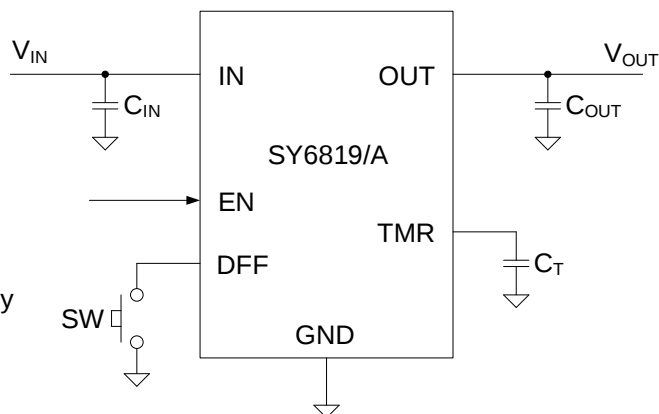
Applications

- Smartphones, Tablet PCs
- MIDs, E-Books
- Storage, DSLR, and Portable Devices

SY6819/A - 1.2A Load Switch with D Flip Flop Control

Features

- Wide Input Voltage Range: 4.5 to 18V
- Up to 1.2A Continuous Load Current Capability
- Low $R_{DS(ON)}$: 110m Ω at $V_{IN}=12V$
- Programmable Blanking Time for DFF Control
- Start-Up Sequence:
 - SY6819: Default ON when EN high
 - SY6819A: Default OFF when EN high
- Low Shutdown Current
- Controlled Turn-On Slew Rate to Avoid Inrush Currents
- Over Temperature Shutdown with Auto Recovery
- RoHS Compliant and Halogen Free
- Compact Package: SO8



Applications

- Industrial Control
- Set-top Boxes

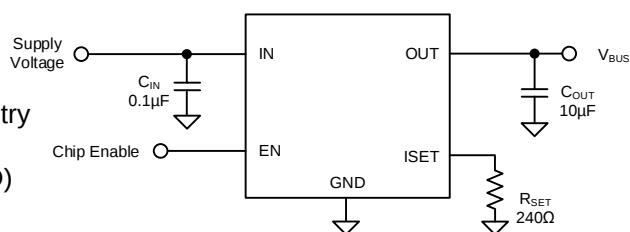
SY6280A/C/D - Low Loss Power Distribution Switch with Programmable Current Limit

Features

- Input Voltage:
 - SY6280A: 2.4V to 5.5V
 - SY6280C/D: 2.5V to 5.5V
- Low Power Path Resistance:
 - SY6280A: 63m Ω (typ.)
 - SY6280C/D: 65m Ω (typ.)
- Low Quiescent Current I_Q
- Low Shutdown Current I_{SHDN}
- Adjustable Current Limit :
 - SY6280A: from 400mA to 2A
 - SY6280C: from 100mA to 2.5A
 - SY6280D: from 100mA to 2A
- Overtemperature Shutdown and Automatic Retry
- Reverse Blocking (No Body Diode)
- Output Capacitor Auto-Discharge (SY6280C/D)
- Built-in Soft-Start
- RoHS Compliant and Halogen Free
- Compact Package: SOT23-5

Applications

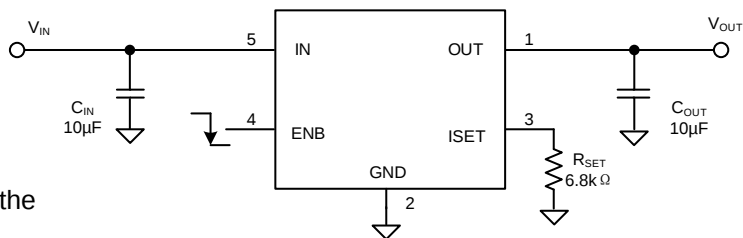
- USB 3.1 Applications
- USB Dongles
- PC Accessories
- USB Chargers
- Public Place Multi-USB Chargers
- PC Card Hotswap Applications



SY6281A - 5.5V, 2A Low Loss Power Distribution Switch

Features

- Input voltage: 2.4V to 5.5V
- 2A load current capability
- Programmable current limit
- Enable polarity: active low
- Over temperature protection
- Reverse blocking (no body diode)
- OUT can be forced higher than IN at shutdown
- Compact SOT23-5 package minimizes the board space



(1A current limit)

Applications

- USB 3G Datacard
- USB Dongle
- MiniPCI Accessories

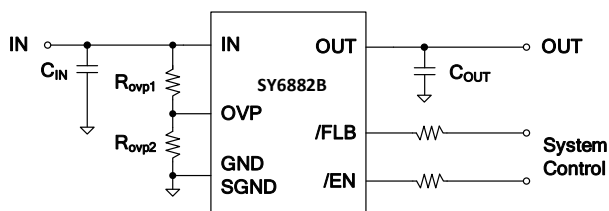
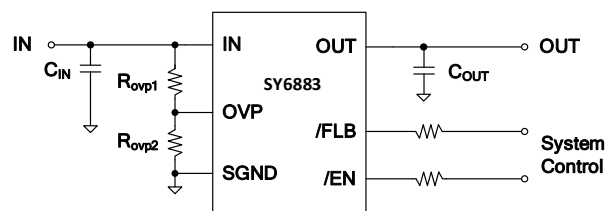
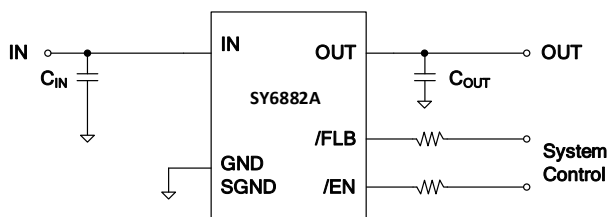
SY6883/SY6882A/SY6882B - Over Voltage Protection Switch

Features

- Low $R_{DS(ON)}$ for the N-channel MOSFET Switch: 100 mΩ typical
- 2.0A Maximum Continuous Current
- Over-voltage Protection up to 25V
 - **SY6882A** — Internal Fixed Over-Voltage Protection Threshold at 7.1V
 - **SY6883/ SY6882B** — External Programmable Over-Voltage Protection Threshold
- Thermal Shutdown Protection & Auto Recovery
- OVP and OTP Fault Flag
- 300μA MAX Quiescent Current
- 20μA MAX in Shutdown Mode
- RoHS Compliant and Halogen Free
- Compact package:
 - SY6883: SOT23-6
 - SY6882A/B: DFN2×2-8

Applications

- Cell Phones
- Digital Still Cameras
- GPS
- MP3 Players
- Personal Data Assistants(PDAs)
- USB Hot Swap/Live Insertion Device



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SY6287B/C/L/Z - Low Loss Power Distribution Switch With Programmable Current Limit

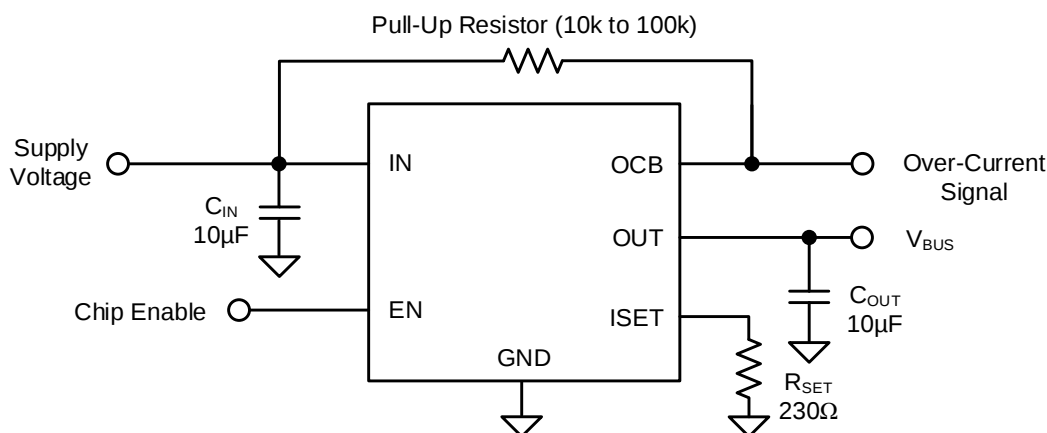
Features

- Input Voltage: 2.5V to 5.5V
- Extremely Low Power Path Resistance: 65mΩ (Typ.)
- Adjustable Current Limit Up to 2.0A
- Overtemperature Shutdown and Automatic Retry
 - SY6287B/C/Z: Automatic Retry
 - SY6287L: Latch Off After Current Limit 2ms
- Automatic Output Discharge at Shutdown
 - SY6287L/Z: Auto Output Voltage Discharge
 - SY6287B/C: No Output Voltage Discharge
- Fast Trip Protection Logic During V_{OUT} Hard Short
 - SY6287Z: 2μs short circuit response time
 - SY6287B/C/L: 25μs current limit response time
- Enable Polarity
 - SY6287C/L/Z: Active High
 - SY6287B: Active Low
- Reverse Blocking (No Body Diode)
- Fault Flag (OCB) Output for Over Current and Fault Conditions
- Built-in Soft-Start
- Compact Package: DFN2×2-6/SOT23-6
- RoHS Compliant and Halogen Free
- UL(CB) Certification No. E491480

Applications

- USB 3.1 Applications
- USB 3G Data Cards
- USB Dongles
- Mini PCI Accessories
- USB Chargers
- Public Place Multi-USB Chargers
- PC Card Hotswap Applications

Part Number	Package Type
SY6287BDEC	DFN2×2-6
SY6287CDEC	DFN2×2-6
SY6287CABC	SOT23-6
SY6287LABC	SOT23-6
SY6287ZDEC	DFN2×2-6



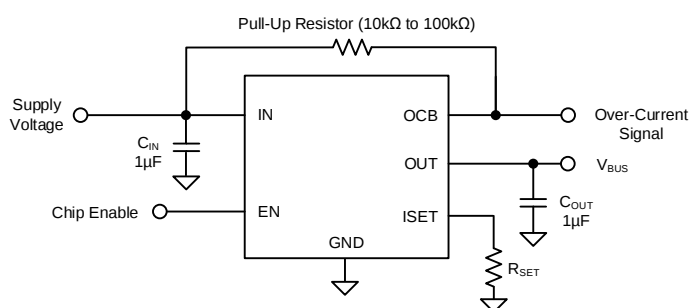
SY86201E - Low Loss Power Distribution Switch with Programmable Current limit

Features

- Input Voltage: 2.5V to 5.5V
- Extremely Low Power Path Resistance: 65mΩ (Typ.)
- Adjustable Current Limit up to 2A
- Reverse Blocking (No Body Diode)
- Fast Reverse Recovery
- Fault Flag (OCB) Output for Over Current and Fault Conditions
- During Shutdown, OUT Can Be Forced Higher than IN
- Built-In Soft-Start
- MSL1
- RoHS Compliant and Halogen Free
- Compact Package Minimizes Board Space: DFN2×2-6/ SOT23-6

Applications

- USB 3.1 Applications
- USB 3G Data Cards
- USB Dongles
- Mini PCI Accessories
- USB Chargers
- Multi-USB Chargers
- PC Card Hot-Swap Applications



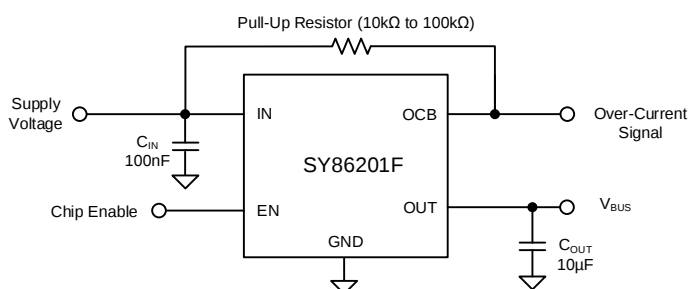
SY86201F - Low Loss Power Distribution Switch with 1.57A Fixed Current Limit

Features

- Input Voltage: 2.5V to 5.5V
- Extremely Low Power Path Resistance: 65mΩ (Typ.)
- 1.57A ± 9% Current Limit Accuracy
- Reverse Blocking (No Body Diode)
- Fast Reverse Recovery
- Fault Flag (OCB) Output for Over Current and Fault Conditions
- At Shutdown, OUT Can Be Forced Higher than IN
- Built-in Soft-start
- RoHS Compliant and Halogen Free
- Compact Package Minimizes the Board Space: SOT23-5

Applications

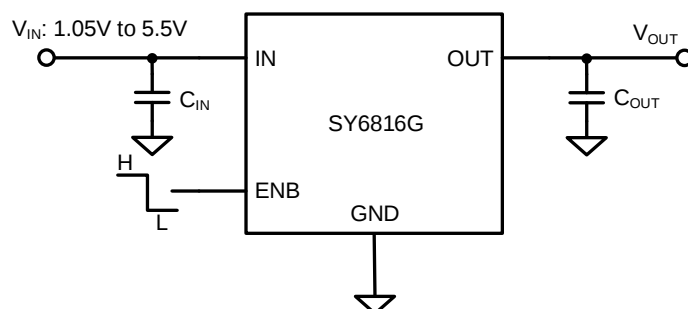
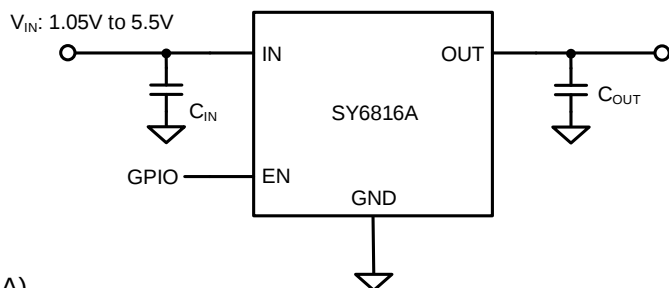
- USB 3.1 Applications
- USB 3G Data Cards
- USB Dongles
- USB Chargers
- Public Place Multi-USB Charger
- PC Card Hot-Swap Applications



SY6816A/G - 1.05V to 5.5V 2A Load Switch

Features

- Input Voltage Range: 1.05V to 5.5V
- 2A Load Current Capability
- Ultra-low $R_{DS(ON)}$:
 - 37m Ω (typ) at $V_{IN} = 5V$
 - 38m Ω (typ) at $V_{IN} = 3.3V$
 - 43m Ω (typ) at $V_{IN} = 1.8V$
- Quiescent Current: 9.7 μA (typ) at $V_{IN}=3.3V$
- Controlled Slew Rate:
 - 910 μs rise time at $V_{IN}=3.3V$ (SY6816A)
 - 1200 μs rise time at $V_{IN}=3.3V$ (SY6816G)
- Compact Package: CSP 0.78mm $\times$ 0.78mm-4



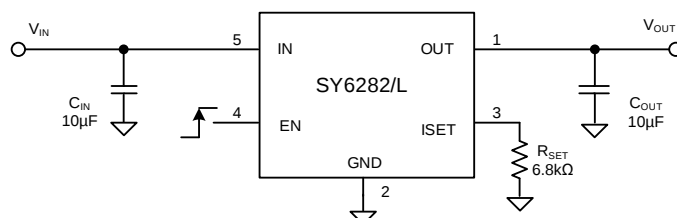
Applications

- Notebook
- Cell Phone
- Digital Cameras
- IoT devices

SY6282/L - 6V, 3A/2.5A Low Loss Power Distribution Switch

Features

- Input Voltage: 2.4V to 6V
- 3A(SY6282)/ 2.5A (SY6282L) Load Current Capability
- Quiescent Current I_Q 38 μA (typ.)
- Shutdown Current I_{SHDN} 0.2 μA (typ.)
- Programmable Current Limit
- Overtemperature Protection
- Reverse Blocking (No Body Diode)
- OUT Can be Forced Higher than IN During Shutdown
- Compact Package: TSOT23-5
- RoHS Compliant and Halogen Free



Applications

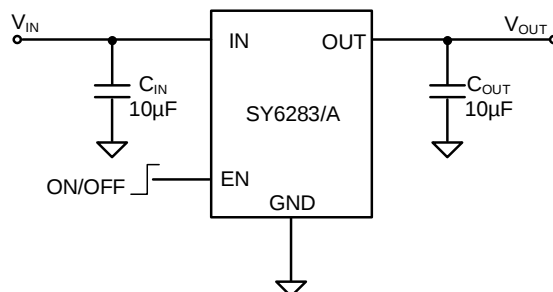
- Battery Operated Products
- USB Dongles
- Mini PCI Accessories
- USB Chargers
- Public Place Multi-USB Chargers

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SY6283/A - 3A Continuous, 4A Peak Current, Low Loss Power Distribution Load Switch

Features

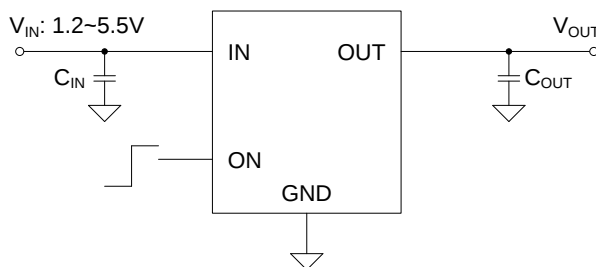
- Distribution Voltages: 2.5V to 5.5V
- Over Temperature Shutdown and Automatic Retry
- Reverse Blocking (No Body Diode)
- At shutdown, OUT Can Be Forced Higher than IN
- Built-in Soft-start
- Output Discharge Function
- ✧ SY6283: No Output Discharge Function
- ✧ SY6283A: Auto Output Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package Minimize Board Space: DFN1.2×1.6-4



SY6813/A - 3A Ultra-Low Loss Switch

Features

- Input Voltage Range: 1.2V to 5.5V
- Low $R_{DS(ON)}$ for Internal Pass Switch: 22mΩ at $V_{IN}=5V$
- 3A Continuous Load Current Capability
- Operating Current $I_q = 4\mu A$ (typ.)
- Shutdown Current $I_{SHDN} = 1\mu A$ (max.)
- Reverse Blocking (No Body Diode)
- ON/OFF Control Input
- Controlled Turn-On Slew Rate
- Auto Output Capacitor Discharge Function:
 - SY6813: Auto Output Capacitor Discharge Function
 - SY6813A: No Output Capacitor Discharge Function
- RoHS Compliant and Halogen Free
- Compact CSP-6 Package: 1.0mm × 1.5mm, 0.5mm Pitch, 0.5mm Height



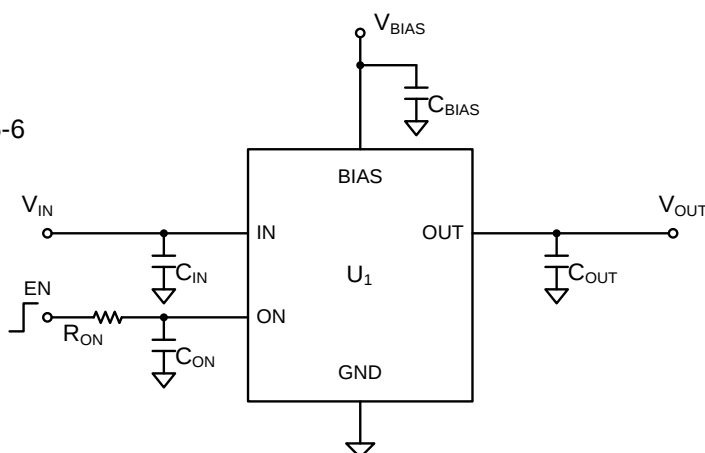
Applications

- Smartphones
- Storage, DSLR, and Portable Devices
- Battery operated devices

SY6821/A - Single 3A/4A, Ultra Low Loss Load Switch

Features

- Input Voltage Range: 0.6V to 3.6V
- Bias Range: 2.5V to 5.5V
- Low $R_{DS(ON)}$ for Internal Pass Switch: 45m Ω (SY6821)/ 16m Ω (SY6821A)
- Maximum Output Current: 3A (SY6821)/ 4A (SY6821A)
- Accurate Turn On Threshold to Allow Programmable Turn On Delay to Enable Power Sequencing
- Programmable Turn On Slew Rate
- Quiescent Bias Current: 100 μ A
- Automatic shutdown Discharge: 100 Ω
- RoHS Compliant and Halogen Free
- Compact Package: SY6821: SOT23-5/
SY6821A: DFN1.5 $\times$ 1.5-6



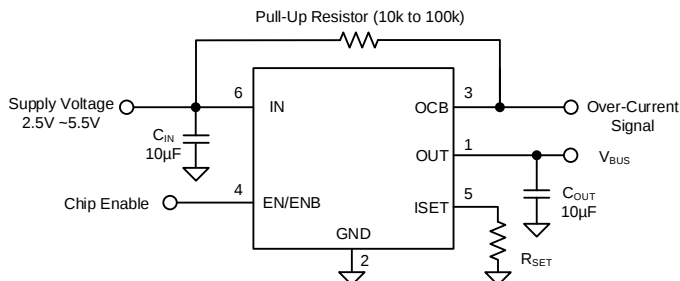
Applications

- Notebook PC
- Desktop PC
- Server
- SetTop Box
- E-Book
- LCD-TV
- Portable Device

SY6863B2/B3/B4 - 5.5V, 3A Low Loss Power Distribution Switch with Reverse Block Rating Up to 28V

Features

- Input Voltage: 2.5V to 5.5V
- Output Voltage Withstanding 28V
- Extremely Low Power Path Resistance: 45m Ω (typ.)
- 3A Load Current Capability
- Reverse Blocking in Normal Operation or Shutdown
- Fault Flag (OCB) Output for over Current and Fault Conditions
- Fast Role Swap Support
- Enable Polarity
 - SY6863B2/B4: Active Low
 - SY6863B3: Active High
- Compact Package: SOT23-6
- RoHS Compliant and Halogen Free



Note: If 1uF input cap will lead to large Vin voltage spike, it is strongly recommended to add additional 10uF ceramic cap.

Applications

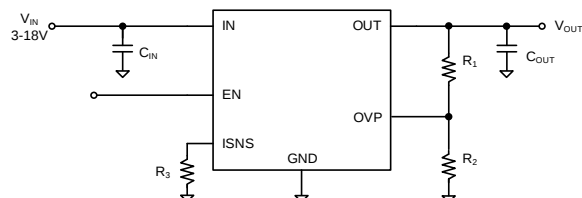
- USB 3.1 Application
- USB 3G Datacard
- USB Dongle
- MiniPCI Accessories
- USB Charger
- Public Place Multi-USB Charger

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SY6886/B - Over Voltage Protection Switch with Current Monitor

Features

- Wide Input Voltage Range from 3V to 18V
- Up to 25V Voltage Rating for OUT Pin (SY6886)
- Up to 28V Voltage Rating for OUT Pin (SY6886B)
- Extremely Low ON Resistance $R_{DS(ON)}$
 - $R_{DS(ON)}=45m\Omega$ (typ.) at 12V V_{IN} condition
- Reverse Blocking Function (SY6886)
- 3A Output Current Capability
- Programmable Current Limit
- Short-circuit Protection
- Thermal Shutdown Protection & Auto Recovery
- RoHS Compliant and Halogen Free
- Compact Package: CSP1.50mm×1.64mm -12



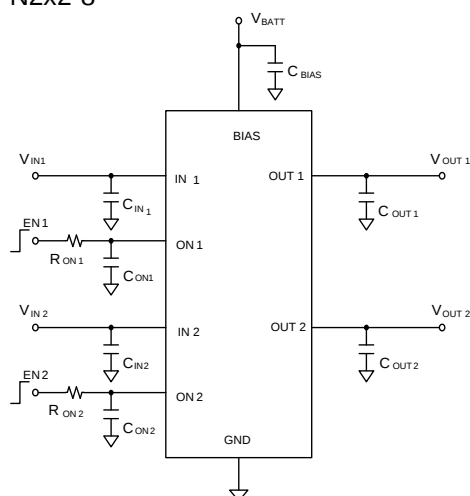
Applications

- Wireless Charger
- USB PD

SY6823 - Dual Channel 4A, Ultra Low Loss Load Switch

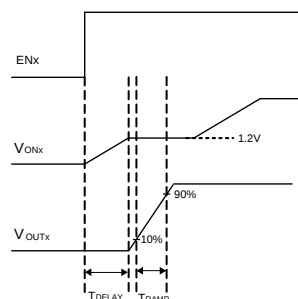
Features

- Low $R_{DS(ON)}$ for internal MOSFETs: 28m Ω
- Maximum output current per channel: 4A
- Distribution voltages: 0.6V-BIAS
- Accurate turn-on threshold to allow programmable turn-on delay to enable power sequencing
- Programmable ramp-up time
- Latch mode overtemperature protection
- Latch mode short circuit protection
- Automatic shutdown discharge: 210 Ω
- Compact: DFN2x2-8



Applications

- Notebook, Tablet, Desktop, and Net PCs
- Servers
- Set Top Boxes
- E-Book or MID's
- Smart TVs
- Routers
- Industrial PCs


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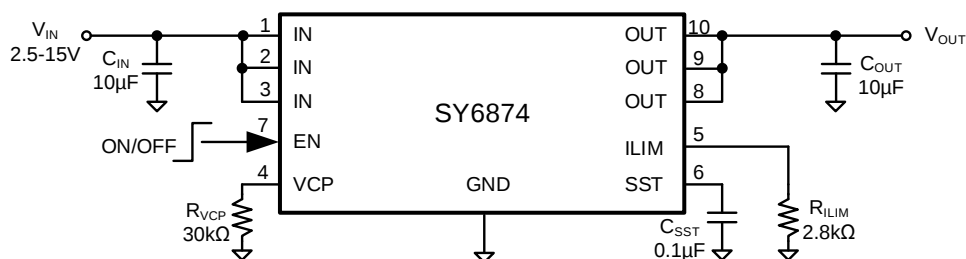
SY6874 - Programmable Current Limit Switch

Features

- Wide Input Voltage Range: 2.5V to 15V with Surge up to 30V
- Extremely Low $R_{DS(ON)}$ for the Integrated Protection Switch: 50 m Ω
- Programmable Soft-Start Time
- Programmable Current Limit up to 4A
- Short-circuit Protection
- Selectable Input Range and Clamping Output Voltage Threshold.
- Enable Interface Pin
- Thermal Shutdown Protection & Auto Recovery
- RoHS Compliant and Halogen Free
- Compact package: DFN3X3-10

Applications

- Notebook PCs
- I-pad Mini
- Servers
- Service PCs



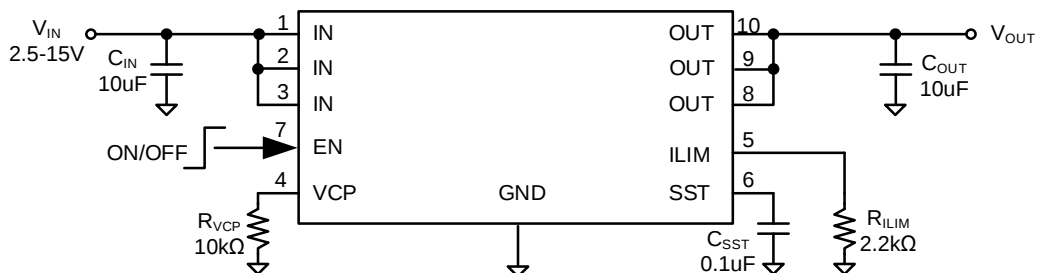
SY6875A/C/D/F- 15V Programmable Current Limit Switch with OVP Clamp

Features

- Input Voltage Range: 2.5V to 15V with Surge Up to 30V
- Programmable Current Limit
- Low $R_{DS(ON)}$ for the Integrated Protection Switch:
 - SY6875A/D: 40 m Ω
 - SY6875C/F: 50m Ω
- Programmable Soft-Start Time
- Short Circuit Protection
- Selectable Input Range and Clamping Output Voltage Threshold
- Enable Interface Pin
- Thermal Shutdown Protection & Auto Recovery
- RoHS Compliant and Halogen Free
- Compact Package: DFN3×3-10

Applications

- Notebook PCs
- Servers
- Service PCs


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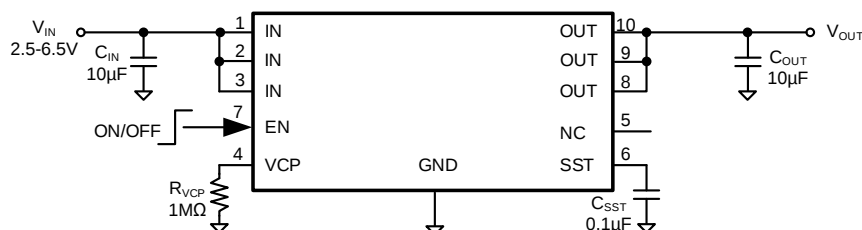
SY6895A/C - 6.5V 5A Current Limit Switch with OVP Clamp

Features

- Input Voltage Range: 2.5V to 6.5V with Surge Up to 12V
- 5A Fixed Current Limit
- Ultra Low Bias Current: 50 μ A (typ.)
- Extremely Low $R_{DS(ON)}$ for the Integrated Protection Switch: 40 m Ω
- Programmable Soft-Start Time
- Short-Circuit Protection
- Selectable Input Range and Output Clamping Voltage
- Enable Interface Pin
- Thermal Shutdown Protection & Auto Recovery
- RoHS Compliant and Halogen Free
- Compact package: DFN3x3-10

Applications

- Notebook PCs
- Servers
- Service PCs



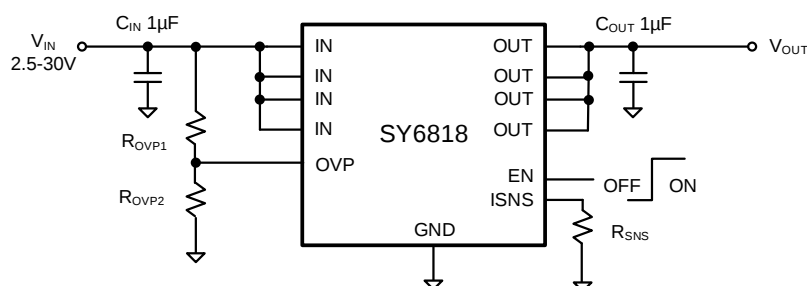
SY6818 - High-Current Overvoltage Protection Switch With Integrated Reverse Blocking MOSFETs

Features

- Input Voltage Range: 2.5V to 30V
- 20V Integrated Reverse Blocking FET Rating
- Extremely Low Power Path Resistance R_{PWPT}
 - $R_{PWPT}=53m\Omega$ (Typical)
- Programmable OVP Through External Resistor Divider, $\pm 3\%$ Accuracy (max)
- Internal Soft-Start to Prevent In-Rush Current
- Thermal Shutdown Protection and Auto-Recovery
- Current Indicator with $\pm 5\%$ Accuracy
- RoHS Compliant and Halogen Free
- Compact Package: CSP-12 (1.73mm $\times$ 1.73mm)

Applications

- Smartphones
- Tablet PCs
- Mobile Devices



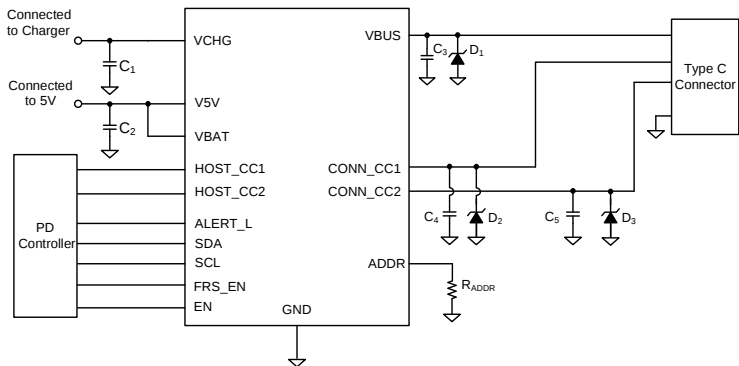
SY6862C/D - 2 to 1 Power MUX for USB PD Application

Features

- 2 to 1 Power MUX:
 - High Voltage Channel: 4.5V to 23V Range for VCHG
 - V5V Channel: 4V to 5.5V Range for 5V Input
- Smooth Ramp Control during Channel Transitions
- Reverse Blocking Capability
- Bi-directional Control for High Voltage Channel
- Fast Role Swap
- I²C Interface
- CC Bypass and Isolation Control
- Dead Battery Wake-Up Function
- VCONN Path for E-Mark Cable
- Protection:
 - Output Current Limit Setting
 - OCP/OVP/TSD/UVF
- RoHS Compliant and Halogen Free
- Compact Package QFN3×4-16

Applications

- USB PD
- Desktop PC
- Laptops
- Smartphones



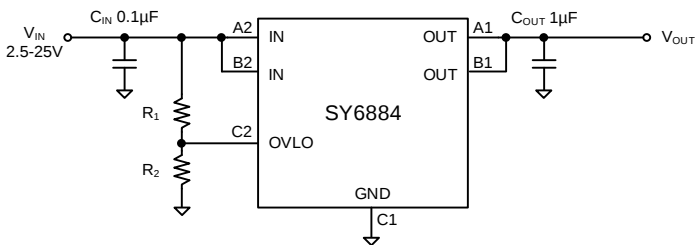
SY6884- Programmable High Current Overvoltage Protection Switch

Features

- V_{IN} =2.5V to 25V, Absolute Maximum V_{IN} =28V
- Extremely Low Power Path on Resistance R_{PWPT} : 30mΩ Typ.
- Fast OVP Response Time: 100 ns.
- Auto-enabled Switch with 15ms De bounce Time
- Programmable Over Voltage Threshold from +4V to +20V
- Internal Soft-start to Prevent Inrush Current
- Thermal Shutdown Protection & Auto Recovery
- Short Circuit Protection
- Compact Package: CSP 0.89×1.43-6

Applications

- Smart Phone
- Tablet PCs
- Mobile Device

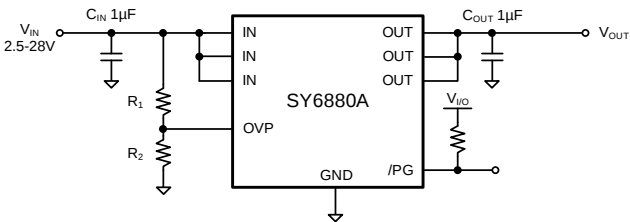


SY6880A/C - Programmable High Current Overvoltage Protection Switch

With Integrated Reverse Blocking FET

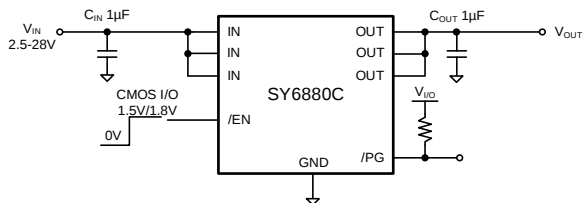
Features

- V_{IN} =2.5V to 28V. Absolute Maximum V_{IN} =29V
- Extremely Low Power Path Resistance R_{PWPT}
 - R_{PWPT} =38m Ω typ.
- Internal 6.8V Default OVP Threshold
- Open-drain Indicator Pin for Operation Status
- Surge Protection up to +80V
- Internal Soft-start to Prevent In-rush Current
- Thermal Shutdown Protection & Auto Recovery
- Enable Control (SY6880C)
- Programmable Over Voltage Threshold from +4V to +7V (SY6880A)
- RoHS Compliant and Halogen Free
- Compact Package: CSP 2.0mm×1.8mm-12



Applications

- Smart Phone
- Tablet PCs
- Mobile Device



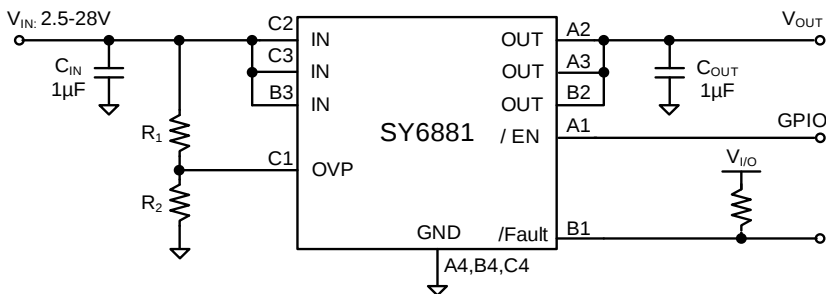
SY6881 - Programmable 5A Overvoltage Protection Switch

Features

- Surge Protection IEC 61000-4-5 to +100V
- Extremely Low Power Path Resistance R_{PWPT}
 - R_{PWPT} =32m Ω typ.
- Programmable Over Voltage Threshold from +4V to +22V
- Default Over Voltage Threshold 6.8V
- Open Drain Indicator Pin for Operation Status
- Internal Soft Start to Prevent In-rush Current
- Thermal Shutdown Protection & Auto Recovery
- IEC61000-4-2 Air Discharge > 15KV
- IEC61000-4-2 Contact Discharge > 8KV
- RoHS Compliant and Halogen Free
- Compact Package: CSP 1.32mmx1.86mm-12

Applications

- Smart Phone
- Tablet PCs
- Mobile Device



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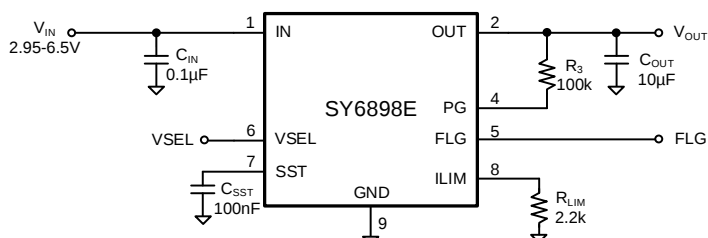
SY6898E- Programmable High Current Protection Switch with -6V Reverse Voltage Protection

Features

- Input Voltage Range: 2.95V to 6.5V with Surge Up to 18V
- 5A Output Current Capability
- Withstands -6V Input Voltage and Blocks the Power Path
- Extremely Low $R_{DS(ON)}$: 30m Ω at 3V V_{IN}
- Programmable Soft-Start Time
- Short Circuit Protection
- Selectable Clamping Output Voltage Threshold
- Power Good Indicator Pin for Operation Status
- FLG Indicator Pin for IN Status
- Thermal Shutdown Protection and Auto Recovery
- RoHS Compliant and Halogen Free
- Compact Package: QFN2 $\times$ 2-9

Applications

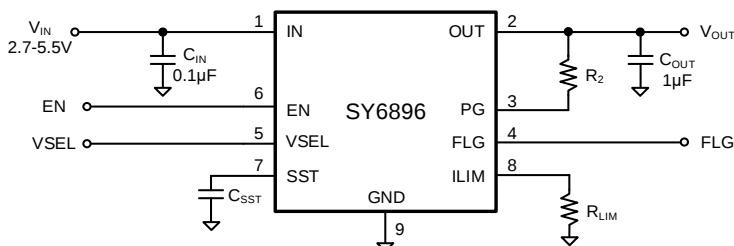
- SSD M.2 Form Factor
- SSD Dual Input Power Applications
- SSD Load Switch



SY6896 - Programmable High Current Protection Switch with Integrated Reverse Blocking FET

Features

- Input Voltage Range: 2.7V to 5.5V with Surge Up to 15V
- 5A Output Current Capability
- Extremely Low Power Path Resistance R_{PWPT} =30m Ω (typ) at 3V V_{in} Conditions
- Reverse Blocking Function
- Programmable Current Limit
- Programmable Soft-Start Time
- Selectable Clamping Output Voltage Threshold
- Power Good Indicator Pin for Operation Status
- FLG Indicator Pin for Input Voltage Status
- RoHS Compliant and Halogen Free
- Compact package: QFN2 $\times$ 2-9



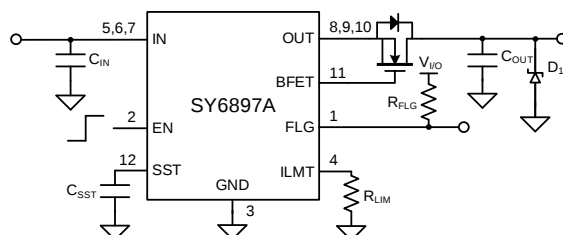
Applications

- SSD M.2 from Factor
- SSD Dual Input Power Applications
- SSD Load Switch

SY6897A- 2.5V to 16V Protection Switch with Blocking FET Control

Features

- Input Voltage Range: 2.5V to 16V
- Extremely Low Power Path Resistance $R_{DS(ON)}=30m\Omega$ (Typical)
- 1A to 5A Programmable Current Limit
- Open Drain Indicator Pin for Operation Status
- $\pm 10\%$ I_{LIMIT} Accuracy at 3A
- Programmable OUT Slew Rate
- Auto Output Discharge during shutdown
- Built-in Thermal Shutdown
- Compact Package: QFN2x2-12



Applications

- Power Banks
- LCD Panels
- HDD and SSD Drives
- Set Top Boxes
- Servers / AUX Supplies
- Fan Controls
- PCI/PCIe Cards
- Adapter Powered Devices

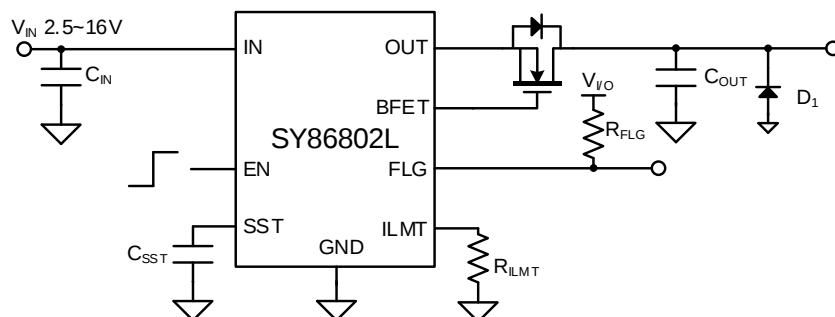
SY86802L - 2.5V to 16V Protection Switch with Blocking FET Control

Features

- 2.5V to 16V Input Voltage Range
- Extremely Low Power Path Resistance $R_{DS(ON)}$
 $R_{DS(ON)}=30m\Omega$ (typ.)
- Open-drain Indicator Pin for Operation Status
- 1A to 5A Adjustable IILMT
- $\pm 10\%$ IILMT Accuracy at 3A
- Reverse Blocking Support when EN OFF
- Programmable OUT Slew Rate
- Built-in Thermal Shutdown and Latch-off
- RoHS Compliant and Halogen Free
- Small Footprint –QFN (2mmx 2mm)

Applications

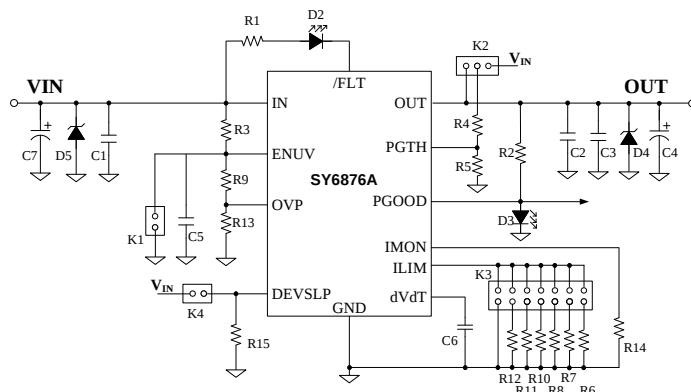
- Power Bank
- LCD Panel
- HDD and SSD Drives
- Set Top Boxes
- Servers / AUX Supplies
- Fan Control
- PCI/PCIe Cards
- Adapter Powered Devices


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SY6876A- 2.7V-18V Switch With True Reverse Blocking and DevSleep Support for SSDs

Features

- 2.7V to 18V Operating Voltage, 30V (Max)
- Ultra Low RDS(ON): 42 mΩ RON (Typical)
- 0.6A to 5.3A Adjustable Current Limit ($\pm 8\%$)
- IMON Current Indicator Output ($\pm 8\%$)
- Operating IQ: 115μA (VIN = 12 V, typ.)
- Shutdown Current: 15 μA (VIN = 12 V, typ.)
- Reverse Current Blocking
- Programmable dV/dt Control
- Power Good and Fault Outputs
- -40° C to 125° C Junction Temperature Range
- QFN3x4-20 Package
- UL Certificate Number: E491480



Applications

- PCIe/SATA/SAS HDD and SSD Drives
- Enterprise and Micro Servers
- Set-Top-Box (STB), DTVs and Game Consoles
- RAID Cards - Holdup Power Management
- Telecom Switches and Routers
- Adapter Powered Devices

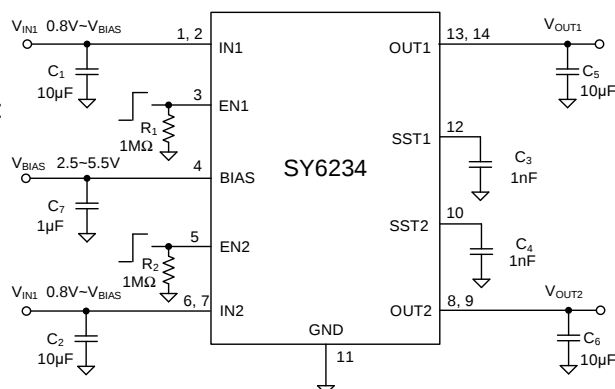
SY6234 - 5.5V/6A, Low $R_{DS(ON)}$ Dual-Channel Load Switch

Features

- Dual-Channel 6A Load Switch
- Wide Input Voltage Range: 0.8V to 5.5V
- Low Bias Current:
 - 20μA Typical (Both Channels)
 - 18μA Typical (Single Channel)
- Extremely Low $R_{DS(ON)}$ for the Integrated MOSFET: 18mΩ ($V_{BIAS}=5V$)
- Programmable Soft-Start Time
- Compact Package: DFN3×2-14

Applications

- Notebook Tablet, or Net PCs
- Desktop PCs
- Servers
- Set Top Boxes
- E-Book or MIDs
- Smart TVs
- Routers
- Industrial PCs
- Solid-state Drives (SSD)


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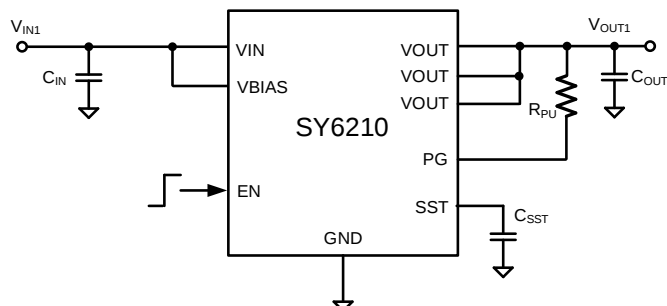
SY6210- 5.5V 10A Load Switch with Ultra Low RDS(ON)

Features

- V_{BIAS} Voltage Range: 2.5V to 5.5V
- V_{IN} Voltage Range: 0.6V to V_{BIAS}
- ON-Resistance
 - $R_{ON} = 2.8\text{ m}\Omega$ (typical) at $V_{IN} = 5\text{ V}$, $V_{BIAS} = 5\text{ V}$
 - $R_{ON} = 2.8\text{ m}\Omega$ (typical) at $V_{IN} = 3.3\text{ V}$, $V_{BIAS} = 3.3\text{ V}$
- 10-A Maximum Continuous Switch Current
- Quiescent Current
 - $I_{Q_VBias} = 63\mu\text{A}$ at $V_{BIAS} = 5\text{ V}$
- Shutdown Current
 - $I_{SD_VBias} = 5.5\mu\text{A}$ at $V_{BIAS} = 5\text{ V}$
 - $I_{SD_VIN} = 4\text{ nA}$ at $V_{BIAS} = 5\text{ V}$, $V_{IN} = 5\text{ V}$
- Controlled and Adjustable Slew Rate through C_{SST}
- Integrated Single Channel Load Switch
- Power Good (PG) Indicator
- Compact DFN2x3-10 Package

Applications

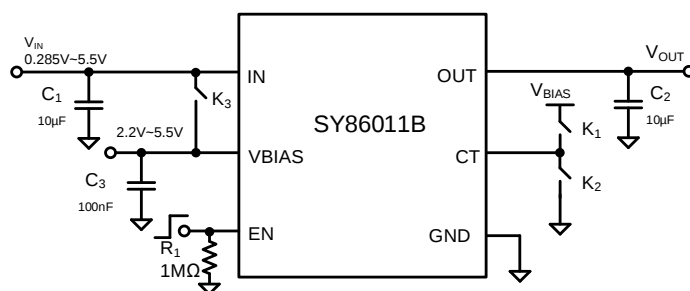
- Notebooks
- Desktop PC
- SSDs
- Servers
- Telecom systems



SY86011B - 5.5V 10A Load Switch with Ultra Low $R_{DS(ON)}$

Features

- Integrated Single Channel Load Switch
- V_{BIAS} Voltage Range: 2.2V to 5.5V
- V_{IN} Voltage Range: 0.285V to V_{BIAS}
- ON-Resistance
 - $R_{ON} = 5.3\text{ m}\Omega$ (typical) at $V_{IN}=5\text{ V}$ ($V_{BIAS}=5\text{ V}$)
 - $R_{ON} = 5.3\text{ m}\Omega$ (typical) at $V_{IN}=3.3\text{ V}$ ($V_{BIAS}=3.3\text{ V}$)
- 10A Maximum Continuous Switch Current
- Auto Output Discharge: 50 Ω
- RoHS Compliant and Halogen Free
- Compact Package: QFN1.5 $\times$ 2-10



Applications

- Notebooks
- Desktop PC
- SSDs
- Servers
- Telecom Systems

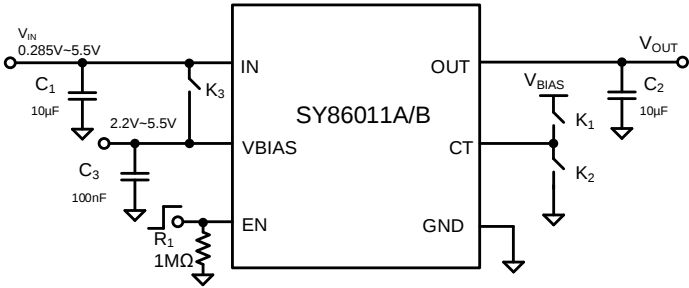
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Features

- Integrated Single Channel Load Switch
- V_{BIAS} Voltage Range: 2.2V to 5.5V
- V_{IN} Voltage Range: 0.285V to V_{BIAS}
- On-Resistance
 - $R_{ON} = 5.3m\Omega$ (typical) at $V_{IN}=5V$ ($V_{BIAS}=5V$)
 - $R_{ON} = 5.3m\Omega$ (typical) at $V_{IN}=3.3V$ ($V_{BIAS}=3.3V$)
- 10A Maximum Continuous Switch Current
- Auto Output Discharge: 50 Ω
- RoHS Compliant and Halogen Free
- Compact Package: QFN1.5 $\times$ 2-10

Applications

- Notebooks
- Desktop PC
- SSDs
- Servers
- Telecom Systems



Part Number	Package	Number of Supplies Monitored	Output Driver/ Reset Output	Threshold Voltage (V)	Delay Time (ms)	Reset Threshold Accuracy	Quiescent Current (μA)	Features
SY6370ADTD	DFN1.45 $\times$ 1-6	1	Active high, Push-pull	Adjustable	Programmable	$\pm 1\%$	9	EN ON delay time programmable
SY6370EDTD	DFN1.45 $\times$ 1-6	1	Active high, open drain	Adjustable	Programmable	$\pm 1\%$	9	EN ON delay time programmable
SY6370FDTC	DFN1.45 $\times$ 1-6	1	Active high, open drain	Adjustable	Programmable	$\pm 1\%$	9	200ns EN ON delay time

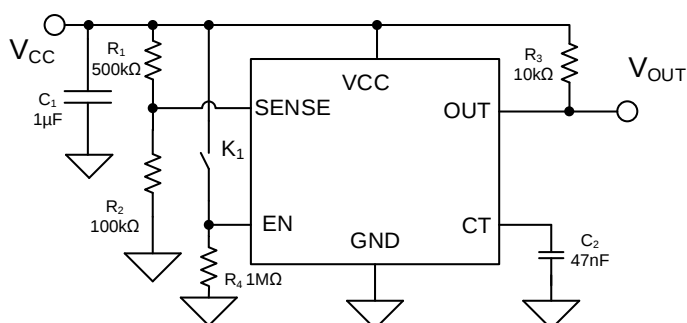
SY6370A/E/F - Single-channel, Adjustable Voltage Monitor in Ultra-small Package

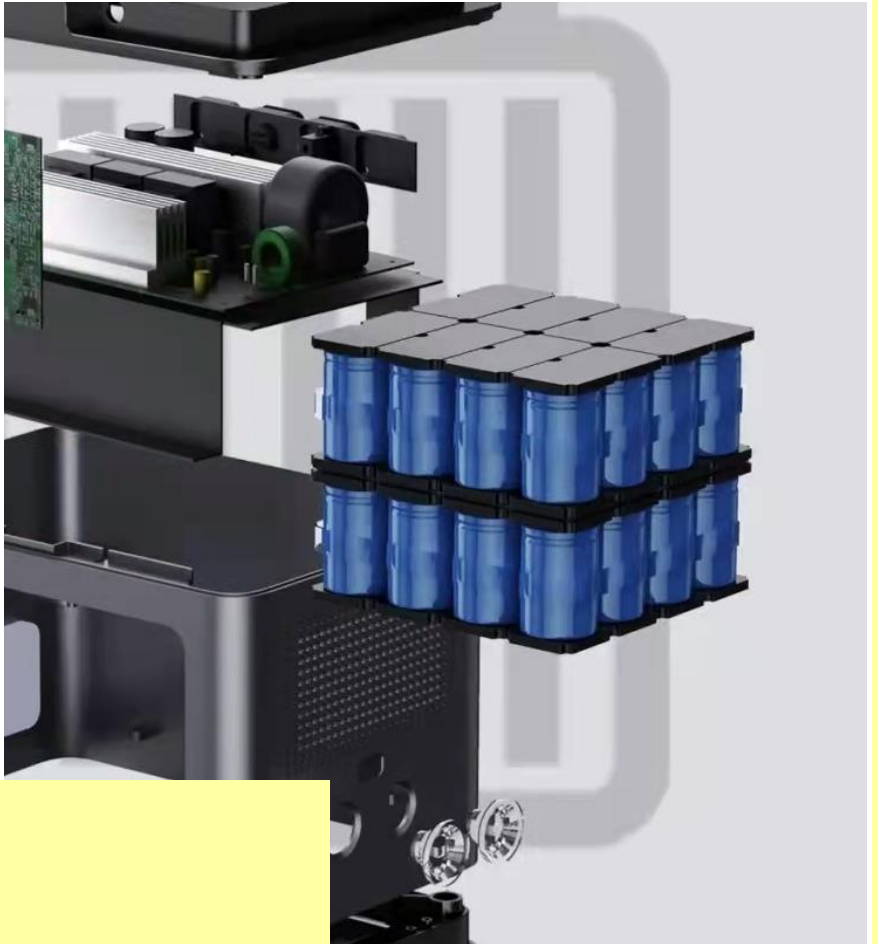
Features

- Adjustable Threshold Down to 500mV
- Operating voltage: 1.7V to 6.5V
- Threshold Accuracy: 1% Over Temperature
- Capacitor-Adjustable Delay Time
- Active-High Enable Input
- Low Quiescent Current: 9 μA (Typical)
- External Enable Input
- Temperature Range: -40 $^{\circ}\text{C}$ to 125 $^{\circ}\text{C}$
- Compact Package: DFN1.45 $\times$ 1.0-6

Applications

- DSPs, Microcontrollers and Microprocessors
- Notebook and Desktop Computers
- PDAs and Handheld Products
- Portable and Battery-Powered Products
- FPGAs and ASICs





Battery Management

Switching Charger

Part Number	Function	Package	V _{IN} (V)	Max. Charge Current (A)	F _{SW} (MHz)	Series Cells	Cell Voltage	Special Function
SY6927FAC	Single-Cell High Efficiency Switching Charger	SO8	4~16	1.2	0.8	Single Cell	4.1V	Adaptive Input Current Limit
SY6927BFAC	Single-Cell High Efficiency Switching Charger	SO8	4~16	1.5	0.8	Single Cell	4.2V	Adaptive Input Current Limit
SY6923D1PPC	Single-Cell with USB-OTG	CSP1.93x2.05-20	4~6	1.25/1.55	3	Single Cell	3.5~4.44V	Compliance with USB and USB OTG
SY6952AQIC	Single-cell Charger Step Down Reg.	QFN4x4-16	4~23	2	0.8	Single Cell	4.2V, 4.35V	Power Path Management and Adaptive Input Current Limit
SY6952CDCC	Single-cell Charger Step Down Reg.	DFN3x3-12	4~23	2	0.8	Single Cell	4.2V, 4.35V	Power Path Management and Adaptive Input Current Limit
SY6952BFCC	Single-cell Charger Step Down Reg.	SO8E	4~23	2	0.8	Single Cell	4.2V, 4.35V	Adaptive Input Current Limit
SY6952B1FCC	Single-cell Charger Step Down Reg.	SO8E	4~23	2	0.8	Single Cell	4.1V, 4.4V	Adaptive Input Current Limit
SY6918EQDC	Single-cell Battery Power Bank Charger	QFN3x3-16	4.7~5.5	2	0.5	Single Cell	4.25V, 4.4V	Prog. Current Limit, 2.5A Boost
SY6918CQDC	Single-Cell Bi-directional Power Bank	QFN3x3-16	4.5~5.35	2.5	0.5	Single Cell	4.2V, 4.35V	Prog. Current Limit, 2.5A Boost
SY6918GQDC	Single-cell Battery Power Bank Charger	QFN3x3-16	4.5~5.35	2.5	0.5	Single Cell	4.2V, 4.35V	Prog. Current Limit, 4.75V Boost
SY6907QCC	Single Cell NVDC Switching Charger	QFN4x4-24	3.9~6	2.5	1.5	Single Cell	3.5~4.4V	I ² C Control, USB OTG, Power Path Management
SY6924QDC	Multi-cell Charger Step Down Reg.	QFN3x3-16	4~14	2.5	0.5	1-2 Cells	4.2V, 4.35V	Adaptive input current limit, Blocking FET integrated
SY6924BQDC	Multi-cell Charger Step Down Reg.	QFN3x3-16	4~14	2.5	0.5	1-2 Cells	4.1V, 4.25V	Adaptive input current limit, Blocking FET integrated
SY6924CQDC	Multi-Cell Li-Ion Battery Charger	QFN3x3-16	4~13	2.5	0.5	1-2 Cells	4.1V, 4.2V	Adaptive Input Power Limit, Blocking FET integrated
SY6928TYC	Single Cell Li-Ion DC/DC Switching Charger	QFN4x4-26	4.5~5.7	3	0.35	Single Cell	4.2V/4.35V/4.4V	dual output data port, adjustable battery level indication
SY6928BTYC	Single Cell Li-Ion DC/DC Switching Charger	QFN4x4-26	4.5~5.7	3	0.35	Single Cell	4.2V, 4.35V, 4.4V	dual output data port, adjustable battery level indication, 5% low power alarm
SY6974QCC	Single Cell Li-Ion DC/DC Switching Charger	QFN4x4-24	3.9~13.5	3	1.5	Single Cell	3.856~4.624V, step 32mV	NVDC power path management, OTG
SY6974BQCC	Single Cell Li-Ion DC/DC Switching Charger	QFN4x4-24	3.9~13.5	3	1.5	Single Cell	3.856~4.624V, step 32mV	NVDC power path management, OTG, BC1.2 compliance
SY6974CQCC	Single Cell Li-Ion DC/DC Switching Charger	QFN4x4-24	3.9~13.5	3	1.5	Single Cell	3.856~4.624V, step 32mV	NVDC power path management, OTG, Default Input OVP 14V
SY6970BQCC	Single Cell Li-Ion DC/DC Switching Charger	QFN4x4-24	3.9~14	5	1.5	Single Cell	3.84~4.608V, step 32mV	NVDC power path management, OTG, BC1.2 compliance, Default HVTYPE=12V

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Switching Charger

Part Number	Function	Package	V _{IN} (V)	Max. Charge Current (A)	F _{SW} (MHz)	Series Cells	Cell Voltage	Special Function
SY6970DQCQ	Single Cell Li-Ion DC/DC Switching Charger	QFN4x4-24	3.9~14	5	1.5	Single Cell	3.84~4.608V, step 32mV	NVDC power path management, OTG, BC1.2 compliance, Default HVTYPE=9V
SY6971VKS	Single Cell Li-Ion/ Li-polymer DC/DC Switching Charger	CSP 2.2×2.565 -30	3.8~14	2	1.5	Single Cell	4.0-4.5V, step 10mV	Extremley low Iq, NVDC power path management, OTG, dual-channel LDO
SY6935QDC	High Current Step-down Charger	QFN3x3-16	4~14	3.5	0.5	1-2 Cells	4.2V, 4.35V	Adaptive input current limit, Blocking FET integrated
SY6935BQDC	High Current Step-down Charger	QFN3x3-16	4~14	3.5	0.5	1-2 Cells	4.25V, 4.4V	Adaptive input current limit, Blocking FET integrated
SY6991QYC	Single-Cell Bi-directional Power Bank	QFN4x4-20	4~13.5	5	0.3, 0.5	Single Cell	4.1V, 4.2V, 4.35V, 4.4V	I ² C controlled, USB and Protocol IC Compliance, 20W Boost
SY6995QE	2 ports Single-Cell Bi-directional Power Bank	QFN5x5-32	4~13.5	8	0.26, 0.34, 0.42, 0.5	Single Cell	4.1V, 4.2V, 4.35V, 4.4V	Dual ports, Bi-direction for USB-C, I ² C, ADC, BC1.2, 28W Boost
SY6998QE	22.5W PD3.0 3IN1 Single Cell Power Bank	QFN5x5-32	4.6~13	5	Programmable	Single Cell	4.2V, 4.35V	USB Type-C DRP support, PD3.0, QC3.0/SCP compliance, Battery Fuel Gauge Indicator, 22.5W output power
SY6996VCC	3IN1 Single-Cell Bi-directional Power Bank	QFN5x5-34	4.6~13.2	5	Programmable	Single Cell	4.2V, 4.35V, 4.4V	QC3.0, AFC/FCP compliance, Battery Fuel Gauge Indicator
SY6990QCC	Single-Cell Bi-directional Power Bank	QFN4x4-24	4~13.5	5	0.5	Single Cell	4.1V, 4.2V, 4.35V, 4.4V	I ² C controlled, USB Compliance, 5V/3A&12V/1.2A Boost
SY6983QDC	3-cell Synchronous Boost Li-Ion Battery Charger	QFN3x3-16	3.6~12.8	1	0.5	3 Cells	4.2V, 4.35V	Prog. Charge Current & Timer, Adaptive Input Current Limit
SY6981QDC	2-cell Synchronous Boost Li-Ion Battery Charger	QFN3x3-16	3.6~5.5	1.2	1	2 Cells	4.1V, 4.2V, 4.35V, 4.4V	Prog. Charge Current & Timer, Adaptive Input Current Limit
SY6982NQDC	Two-Cell Boost Li-Ion Battery Charger With System Power Path Management	QFN3x3-16	3.6~5.5	1.5	1	2 Cells	8.4V	System Power Path Management; External Separated Control for Boost and BATFET
SY6982EQDC	2 cell Boost Li-Ion Battery Charger	QFN3x3-16	3.6~5.5	2	1	2 Cells	4.2V, 4.35V	Prog. Charge Current & Timer, Adaptive Input Current Limit
SY6982E1QDC	2 cell Boost Li-Ion Battery Charger	QFN3x3-16	3.6~5.5	2	1	2 Cells	4.25V, 4.4V	Prog. Charge Current & Timer, Adaptive Input Current Limit
SY6982FQDC	2 cell Boost Li-Ion Battery Charger	QFN3x3-16	3~5.5	2	1	2 Cells	4.2V	Prog. Charge Current & Timer, Adaptive Input Current Limit
SY6984QDC	2-cell Boost Li-Ion Battery Charger	QFN3x3-16	3.6~5.5	2	1	2 Cells	4.2V, 4.35V	Prog. Charge Current&Timer, Cell Balance Control
SY6969CQFQ	Multi-Cell Synchronous Buck-Boost Battery Charger Controller	QFN4x4-32	3.5~25	8.128	0.8/1.2	1-4 Cells	1.024~19.2V	NVDC Power Path Management, DPM, OTG. Support 2.2uH inductor@800kHz
SY6961DQFQ	Multi-Cell Synchronous Buck-Boost Battery Charger Controller	QFN4x4-32	3.5~25	8.128	0.8/1.2	1-4 Cells	1.024~19.2V	NVDC Power Path Management, DPM, OTG

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Switching Charger

Part Number	Function	Package	V _{IN} (V)	Max. Charge Current (A)	F _{SW} (MHz)	Series Cells	Cell Voltage	Special Function
SY6981BQDC	2-cell Boost Li-Ion Battery Charger	QFN3x3-16	3.6~5.5	2	1	2 Cells	4.1V,4.2V,4.25V,4.35V	Prog. Charge Current&Timer, Adaptive Input Current Limit
SY6986RAC	2-cell Boost Li-Ion Battery Charger	QFN3x3-20	3.6~5.5	1.6	0.5	2 Cells	4.1V,4.2V, 4.35V	Prog.Charge Current&Timer, Cell Balance&Limit Control, NTC JEITA Compliance
SY7994QYC	Synchronous Boost converter with QC3.0	QFN4x4-20	2.7~4.5	/	0.3, 0.5	Single Cell	/	QC3.0 Compliance
SY6953QIC	2-4 cells Li-Ion synchronous Buck charger	QFN3x3-18	4~28	2	0.5	2-4 Cells	4.1V,4.2V,4.35V	Prog. Input Current Limit, Thermal Regulation, NTC JEITA Compliance
SY69410VWS	USB Type-C Port PD Controller	CSP1.29×1.25-9	3~5.5	/	/	/	/	Support TCPC, Support DFP/UFP/DRP, Support VCONN, Support PD3.0,Support VBUS Detect
SY6974GQQC	Single Cell Li-Ion DC/DC Switching Charger	QFN4x4-24	3.9~13.5	3	1.5	Single Cell	3.8~4.61V, step 25mV	NVDC power path management, OTG, BC1.2 compliance
SY6971BVKs	Single Cell Li-Ion/ Li-polymer DC/DC Switching Charger	CSP 2.2×2.565 -30	3.8~14	2	1.5	Single Cell	4.0-4.5V, step 10mV	Extremley low Iq, NVDC power path management, OTG, dual-channel LDO
SY6973BQQC	Single Cell Li-Ion DC-DC Switching Charger	QFN4*4-24(WB)	3.9~13.5	3	1.5	Single Cell	3.856V~4.624V, step 32mV	NVDC Power Path Management, OTG, BC1.2 Compliance, USB Source Detection
SY6975QQC	Single Cell Li-Ion DC-DC Switching Charger	QFN4*4-24(RDL+WB)	3.9~14	5	1.5	Single Cell	3.84V~4.624V, step 16mV	NVDC Power Path Management, OTG, BC1.2 Compliance, USB Source Detection
SY6976WFS	Single Cell Li-Ion DC-DC Switching Charger with LED driver	CSP3.2*2.8-42	3.9~14	4	0.5, 1, 1.5, 2	Single Cell	3.84V~4.856V, step 8mV	NVDC Power Path Management,OTG,USB Source Detection, Charging Protocol, 2-channel 1.5A LED driver
SY6974GQQC	Single Cell Li-Ion DC-DC Switching Charger	QFN4*4-24(RDL+WB)	3.9~13.5	3	1.5	Single Cell	3.8V~4.1V, step 25mV; 4.1V~4.61V, step 10mV;	th Management, OTG, BC1.2 Compliance, USB Source Detection
SY6916AQAQ	SMBus Controlled 1-4 Cell Battery Charger Controller	QFN4*4-28(WB)(P0.40)	4.5~24	16.256	0.6, 0.8, 1	1~4	1.024V-19.2V, step 16mV	High Accuracy for Voltage/Current Regulation, Accurate Power/Current Monitor,PROCHOT for CPU Throttling,Energy Star Low Iq
SY6969FQFQ	Multi-Cell Synchronous Buck-Boost Battery Charger Controller	QFN4x4-32	3.5~25	8.128	0.8/1.2	1-4 Cells	1.024~19.2V	NVDC Power Path Management, DPM, OTG. Support 2.2uH & 1.5uH inductor@800kHz

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Fast Charge

Part Number	Function	Package	ADC	V _{IN} (V)	Typical Output Current(A)	F _{SW} (kHz)	MOSFET Peak Current(A)	Support Protocol	Protection
SY6510UIC	High Efficiency Single Phase 2:1 Switched Capacitor Converter	CSP2.57x3.71-34	NO	4.5~20	2	125~1000	14.5	No	OCP, OTP, OVP
SY6537CVLS	8A dual phase switched capacitor battery charger with ADC	CSP3.03x3.34-56	Yes	3.5~12	8	250~1000	16	No	OCP, OVP, OTP, UCP, VDR

BMS

Part Number	Description	Package	V _{IN} (V)	Series Cells	Protection Mode
SY68920QEQ	3 to 6 Series Cell Battery Monitor, Balance, Protection for Li-ion and Phosphate Application	QFN5×5-32	30	3-6 Cells	OCD、SCD、OV、UV
SY68930QHQ	6 to 12 Series Cell Battery Monitor, Balance, Protection for Li-ion and Phosphate Application	QFN6×6-40	60	6-12Cells	OCD、SCD、OV、UV
SY68940RJQ	9 to 18 Series Cell Battery Monitor, Balance, Protection for Li-ion and Phosphate Application	QFN8×8-64	90	9-18Cells	OCD、SCD、OV、UV

Gauge IC

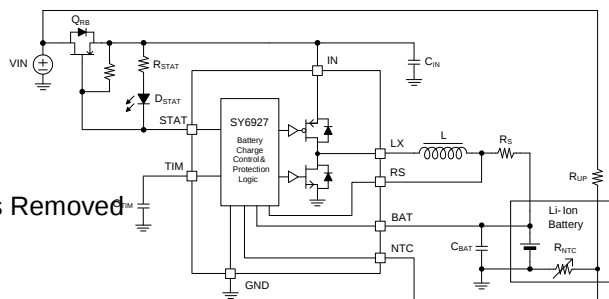
Part Number	Functions	Cell Chemistry	Package	Series Cells	Communication Interface	Operating Temperature Range (°C)	Special Functions
SY6410DFC	Cost-save Single Cell Li+ Battery Gauge IC	li-ion	DFN2×2-8	Single Cell	I ² C	-20 to 60	Eliminate Current Sense Resistor
SY62510SZD	Fully Integrated Single Cell Li+ Battery Gauge IC	Li-ion	DFN2.5×4-12	Single Cell	I2C	-40 to 85	1. Patented Gauge Algorithm 2. high accurate coulomb counter ADC 3. high accurate VADC
SY62520SZD	Fully Integrated 2 series Lithium-Ion/Li-Pol battery gauge with authentication.	Li-ion	DFN2.5×4-12	2	I2C	-40 to 85	1. Patented Gauge Algorithm 2. Accurate Low-Side Current Sense 3. high accurate VADC 4. Hardware protections SCD, SCC and OCD 5. High-Side N-CH FET Drivers 6. Integrated Cell Balancing MOSFETs

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SY6927FAC - 1.2A Single Cell High Efficiency Switching Charger

Features

- Wide Input Voltage Range: 4.0V to 16V
- High Efficiency Synchronous Buck Regulator with Fixed 800kHz Switching Frequency
- Trickle Current/Constant Voltage Charge Mode
- Adaptive Input Current Limit
- Programmable Charging Timeout
- Programmable (1.2A MAX) Constant Charge Current
- Input Voltage UVLO and Battery OVP
- Over Temperature Protection
- Output Short Circuit Protection
- Charge Status Indication
- Normal Synchronous Buck Operation when Battery is Removed
- Compact Package SO8



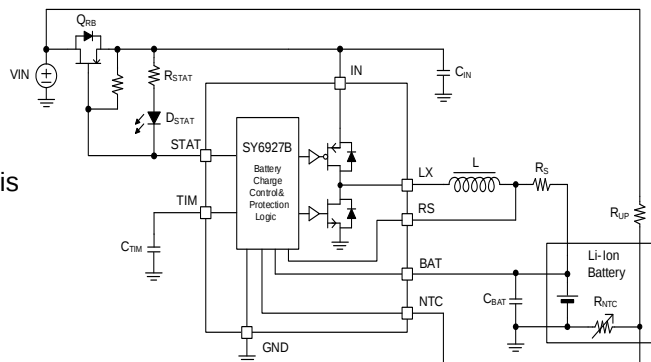
Applications

- Cellular Telephones
- PDA, MP3 Players, MP4 Players
- Digital Cameras
- Bluetooth Applications
- PSP Game Players, NDS Game Players

SY6927BFAC - 1.5A Single Cell High Efficiency Switching Charger

Features

- Wide Input Voltage Range: 4.0V to 16V
- High Efficiency Synchronous Buck Regulator with Fixed 800kHz Switching Frequency
- Trickle Current/Constant Voltage Charge Mode
- Adaptive Input Current Limit
- Programmable Charging Timeout
- Programmable (1.5A MAX) Constant Charge Current
- Input Voltage UVLO and Battery OVP
- Over Temperature Protection
- Output Short Circuit Protection
- Charge Status Indication
- Normal Synchronous Buck Operation when Battery is Removed
- Compact Package SO8



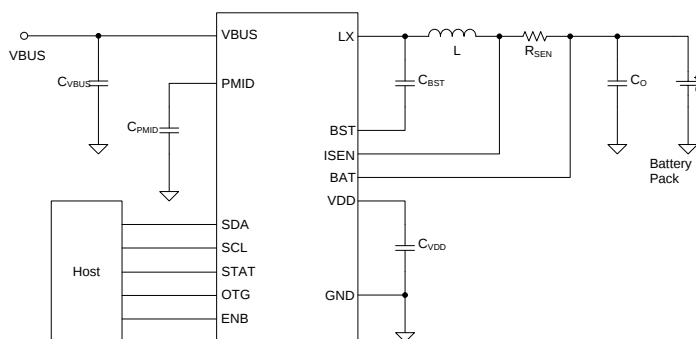
Applications

- Cellular Telephones
- PDA, MP3 Players, MP4 Players
- Digital Cameras
- Bluetooth Applications
- PSP Game Players, NDS Game Players

SY6923D1PPC - High Integrated 1-Cell Switching Charger with USB Compliance and USB-OTG Function

Features

- High Integrated and High Efficiency
- Up to 1.25A Charge Current (68mΩ RSENSE)
- Up to 1.55A Charge Current (55mΩ RSENSE)
- Up to 18V Absolute Maximum Input Voltage
- 6V Maximum Operating Input Voltage
- Adaptive Input Current Limit
- $\pm 5\%$ Input Current Limit Accuracy@500mA
- $\pm 0.5\%$ Charge Voltage Accuracy
- $\pm 3.5\%$ Charge Current Accuracy when ICHG Higher than 550mA
- I2C Controls(up to 3.4Mbps)
- Battery Charge Voltage (3.5V – 4.44V)
- Battery Charge Current (550mA – 1.25A)
- Termination Current (50mA – 400mA)
- Battery Weak Voltage (3.4V – 3.7V)
- Input Current Limit
- VBUS Threshold for Adaptive Input Current
- Low Charge Current Mode Enable and Disable
- Termination Enable and Disable
- Integrated Loop Compensation
- Internal Soft-start
- Bad adapter Detection and Rejection
- 3MHz Frequency PWM
- Automatic High Impedance Mode for Low Power Consumption
- 5V, Boost Mode for USB OTG
- CSP1.93×2.05-20 Package
- Spread Spectrum Frequency Control for Improved EMI Performance
- Factory Test-Mode for GSM Calibration Without a Battery



Applications

- PADS
- Smart Phones
- Portable Equipment with Rechargeable Batteries
- Battery Back-up Systems

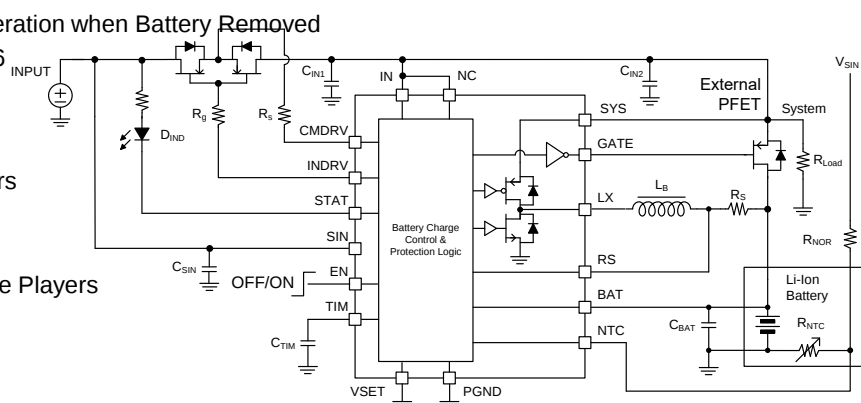
SY6952AQIC - 2A Single-Cell High Efficiency Switching Charger with Adaptive Input Current Limit

Features

- Wide Input Voltage Range: 4.0V to 23V
- High Efficiency Int. Synchronous Buck Regulator with Fixed 800kHz Switching Frequency
- Trickle Current / Constant Current / Constant Voltage Charge Mode
- Adaptive input current limit
- Programmable Charging Timeout
- 4.35 and 4.2V selectable cell voltage
- Programmable (2A MAX) Constant Charge Current
- External Shutdown Function
- Input Voltage UVLO and Battery OVP
- Over Temperature Protection
- Output Short Circuit Protection
- Charge Status Indication
- Normal Synchronous Buck Operation when Battery Removed
- Compact package QFN4 × 4-16

Applications

- Cellular Telephones,
- PDA, MP3 Players, MP4 Players
- Digital Cameras
- Bluetooth Applications
- PSP Game Players, NDS Game Players
- Notebook



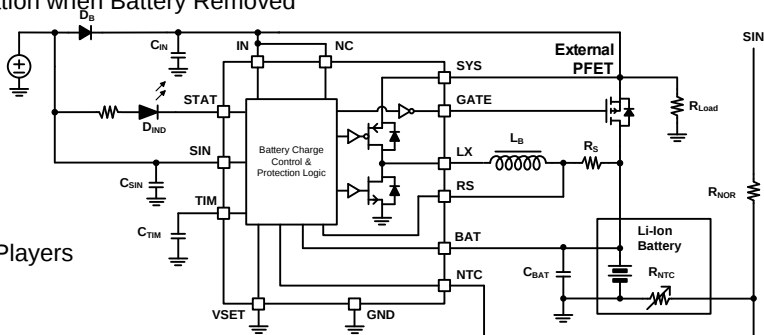
SY6952CDCC - 2A Single-Cell High Efficiency Switching Charger with Adaptive Input Current Limit

Features

- Wide Input Voltage Range: 4.0V to 23V
- High Efficiency Int. Synchronous Buck Regulator with Fixed 800kHz Switching Frequency
- Trickle Current / Constant Current / Constant Voltage Charge Mode
- Adaptive input current limit
- Programmable Charging Timeout
- 4.35 and 4.2V selectable cell voltage
- Programmable (2A MAX) Constant Charge Current
- Input Voltage UVLO and Battery OVP
- Over Temperature Protection
- Output Short Circuit Protection
- Charge Status Indication
- Normal Synchronous Buck Operation when Battery Removed
- Compact package DFN3*3-12

Applications

- Cellular Telephones,
- PDA, MP3 Players, MP4 Players
- Digital Cameras
- Bluetooth Applications
- PSP Game Players, NDS Game Players
- Notebook


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SY6952BFCC - 2A Single-Cell High Efficiency Switching Charger with Adaptive Input

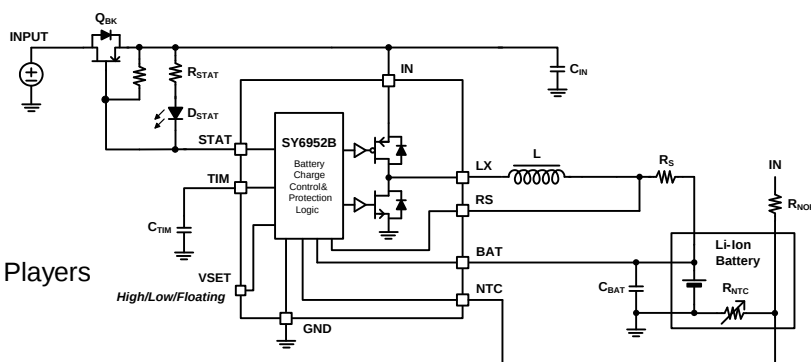
Current Limit

Features

- Wide Input Voltage Range: 4.0V to 23V
- High Efficiency Int. Synchronous Buck Regulator with Fixed 800kHz Switching Frequency
- Trickle Current / Constant Current / Constant Voltage Charge Mode
- Adaptive input current limit
- Programmable Charging Timeout
- 4.35 and 4.2V selectable cell voltage
- Programmable (2A MAX) Constant Charge Current
- Input Voltage UVLO and Battery OVP
- Over Temperature Protection
- Output Short Circuit Protection
- Charge Status Indication
- Normal Synchronous Buck Operation when Battery Removed
- Compact package SO8E

Applications

- Cellular Telephones,
- PDA, MP3 Players, MP4 Players
- Digital Cameras
- Bluetooth Applications
- PSP Game Players, NDS Game Players
- Notebook

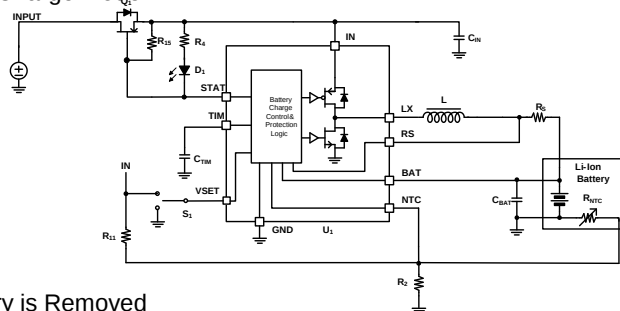


SY6952B1FCC - 2A Single-Cell High Efficiency Switching Charger with Adaptive Input

Current Limit

Features

- Wide Input Voltage Range: 4.0V to 23V
- High Efficiency Synchronous Buck Regulator with Fixed 800kHz Switching Frequency
- Trickle Current / Constant Current / Constant Voltage Charge Mode
- Adaptive Input Current Limit
- Programmable Charging Timeout
- 4.4V and 4.1V Selectable Cell Voltage
- Programmable (2A Max) Constant Charge Current
- Input Voltage UVLO and Battery OVP
- Over Temperature Protection
- Output Short Circuit Protection
- Charge Status Indication
- Normal Synchronous Buck Operation When the Battery is Removed
- Compact Package SO8E



Applications

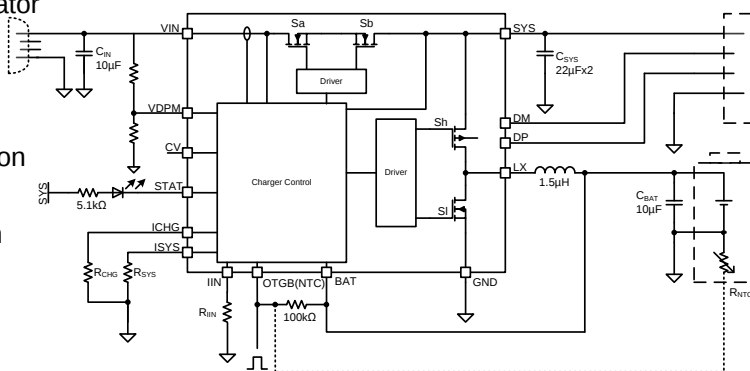
- Cellular Telephones
- PDA, MP3 Players, MP4 Players
- Digital Cameras
- Bluetooth Applications
- PSP Game Players, NDS Game Players
- Notebook

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SY6918EQDC - High Efficiency Bi-direction Power Bank Regulator for Single-cell Battery Power Bank

Features

- Maximum 18V Input Voltage Surge
- Bad Adapter Detection
- Build in Power Path NFETs and Power Switches
- 500kHz Switching Frequency Operation
- Trickle Current / Constant Current / Constant Voltage Charge Mode with Internal Compensation
- Maximum 2A Constant Charge Current
- Maximum 2.5A Boost Output Current
- 4.25V/4.4V Selectable Battery Cell Voltage
- +/-0.5% Cell Voltage Accuracy
- Charge/Discharge/Fault Status Indicator
- Discharging Control Logic
- Programmable Input Current Limit
- Dynamic Power Management
- Cycle-by-cycle Peak Current Limitation
- Input Voltage UVLO and OVP
- Boost Output Short Circuit Protection
- Thermal Shutdown



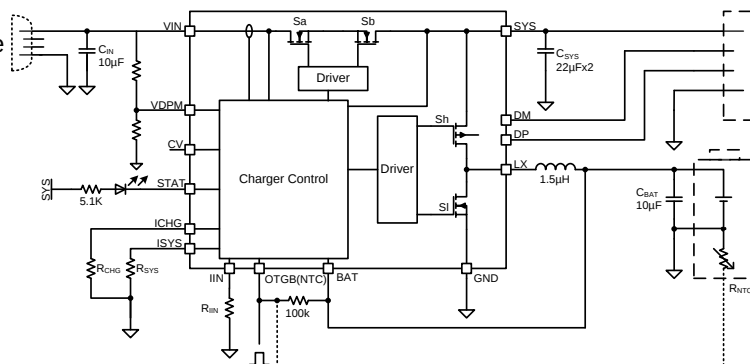
Applications

- Single Cell Power Bank
- Portable Device with Single Cell Battery

SY6918CQDC - High Efficiency Bi-direction Power Bank Regulator for Single-cell Battery Power Bank

Features

- Maximum 18V Input Voltage Surge
- Bad Adapter Detection
- Build in Power Path NFETs and Power Switches
- 500kHz Switching Frequency Operation
- Trickle Current / Constant Current / Constant Voltage Charge Mode with Internal Compensation
- Maximum 2A Constant Charge Current
- Maximum 2.5A Boost Output Current
- 4.2V/4.35V Selectable Battery Cell Voltage
- +/-0.5% Cell Voltage Accuracy
- Charge/Discharge/Fault Status Indicator
- Discharging Control Logic
- Programmable Input Current Limit
- Dynamic Power Management
- Cycle-by-cycle Peak Current Limitation
- Input Voltage UVLO and OVP
- Boost Output Short Circuit Protection
- Thermal Shutdown



Applications

- Single Cell Power Bank
- Portable Device with Single Cell Battery

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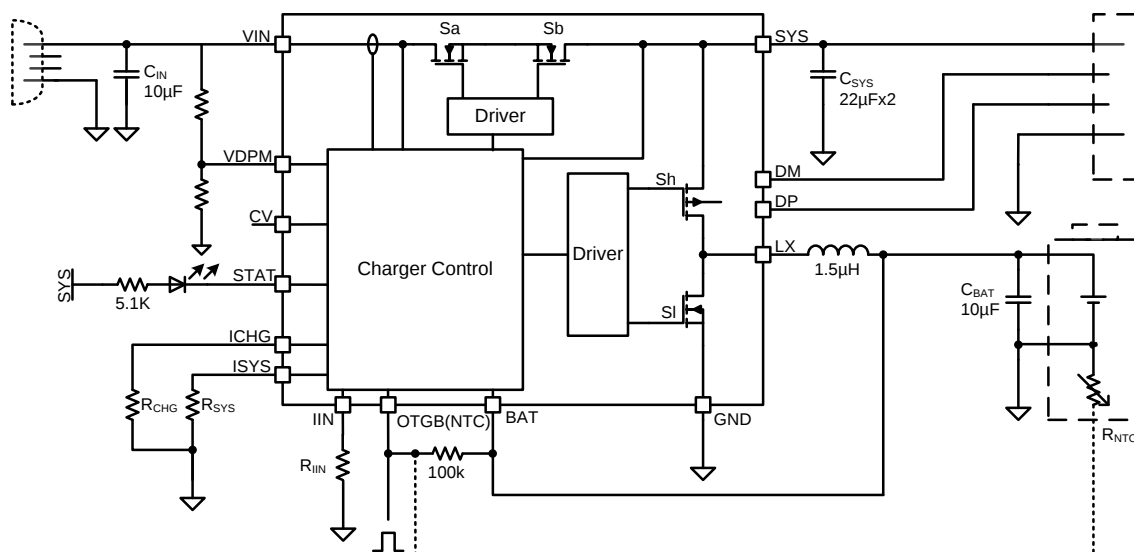
SY6918GQDC - High Efficiency Bi-direction Power Bank Regulator for Single-cell Battery

Features

- Maximum 18V Input Voltage Surge
- Bad Adapter Detection
- Build in Power Path NFETs and Power Switches
- 500kHz Switching Frequency Operation
- Trickle Current / Constant Current / Constant Voltage Charge Mode with Internal Compensation
- Maximum 2A Constant Charge Current
- Maximum 2.5A Boost Output Current
- 4.2V/4.35V Selectable Battery Cell Voltage
- +/-0.5% Cell Voltage Accuracy
- Charge/Discharge/Fault Status Indicator
- Discharging Control Logic
- Programmable Input Current Limit
- Dynamic Power Management
- Cycle-by-cycle Peak Current Limitation
- Input Voltage UVLO and OVP
- Boost Output Short Circuit Protection
- Thermal Shutdown

Applications

- Single Cell Power Bank
- Portable Device with Single Cell Battery



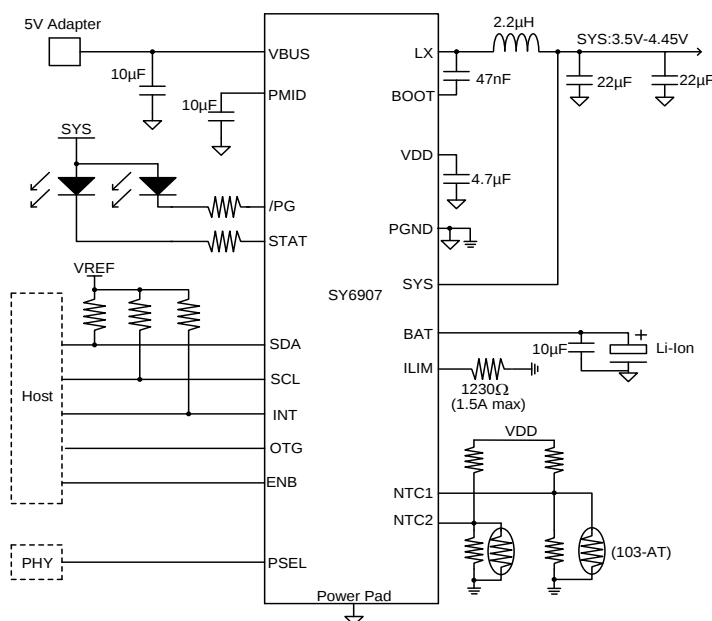
SY6907QCC - 2.5A, Single Cell Li-Ion DC/DC Switching Charger with I2C Control, USB OTG, Power Path Management

Features

- Single Input USB-Compliant/Adapter Charger
 - Input Voltage and Current Limit Supports USB2.0 and USB 3.0
 - Input Current Limit: 100mA, 150mA, 500mA, 900mA, 1A, 1.5A, 2A and 3A
- 3.9V–6 V Input Operating Voltage Range
- USB OTG 5V at about 1A Synchronous Boost Converter Operation
- Narrow VDC (NVDC) Power Path Management
- 1.5MHz Switching Frequency for Low Profile Inductor
- Autonomous Battery Charging with or without Host Management
- High Accuracy
 - $\pm 1\%$ Charge Voltage Regulation
 - $\pm 10\%$ Fast Charge Current Regulation
 - $\pm 2\%$ Output Regulation in Boost Mode
- High Integration
 - Power Path Management
 - Synchronous Switching MOSFETs
 - Integrated Current Sensing
 - Bootstrap Diode
 - Internal Loop Compensation
- Safety
 - Battery Temperature Sensing and Charging Safety Timer
 - Thermal Regulation and Thermal Shutdown
 - Input System Over Voltage Protection
 - MOSFET Over Current Protection
 - Charge Status Outputs for LED or Host Processor
- Low Battery Leakage Current and Support Shipping Mode

Applications

- Tablet PC
- Smart Phone
- Portable Audio Speaker
- Portable Media Players
- Internet Device


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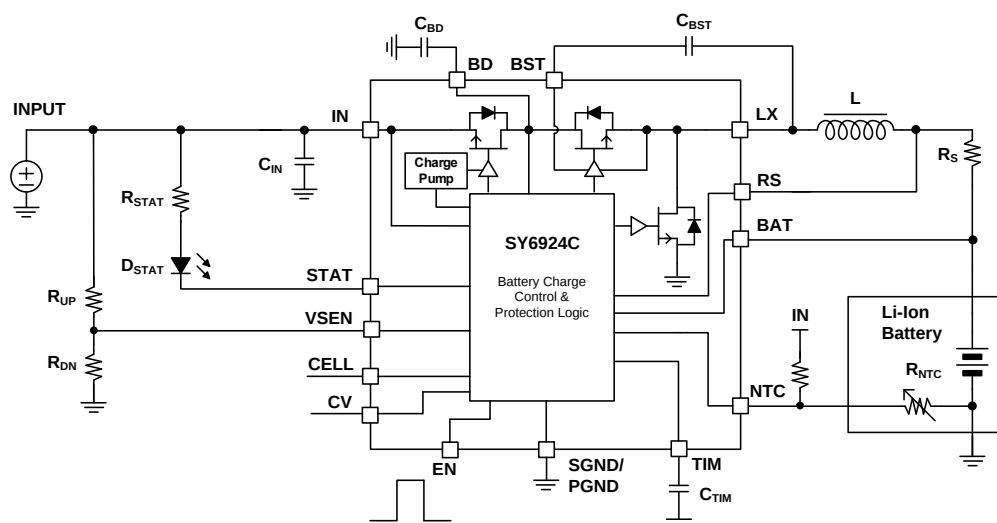
SY6924CQDC - High Efficiency, 2.5A, Multi-Cell Li-Ion Battery Charger

Features

- Integrated Synchronous Buck and Reverse Blocking FET with 16V Rating
- Adaptive Input Power Limit for 4-13V Wide Input Voltage
- Maximum 2.5A Programmable Charge Current
- 4.1V and 4.2V Constant Voltage Selectable
- +/-0.5% Cell Voltage Accuracy
- Support Single-cell or Two-cell Battery Pack
- External Shutdown Function
- Input Voltage UVLO and OVP
- Thermal Fold-back Protection
- Over Temperature Protection
- Battery Short Protection
- Programmable Charge Timeout
- Charge Status Indication
- Low Profile QFN3×3 Package for Portable Applications

Applications

- Power Bank
- Cellular Telephones, PDA, MP3 Players, MP4 Players
- PSP Game Players, NDS Game Players



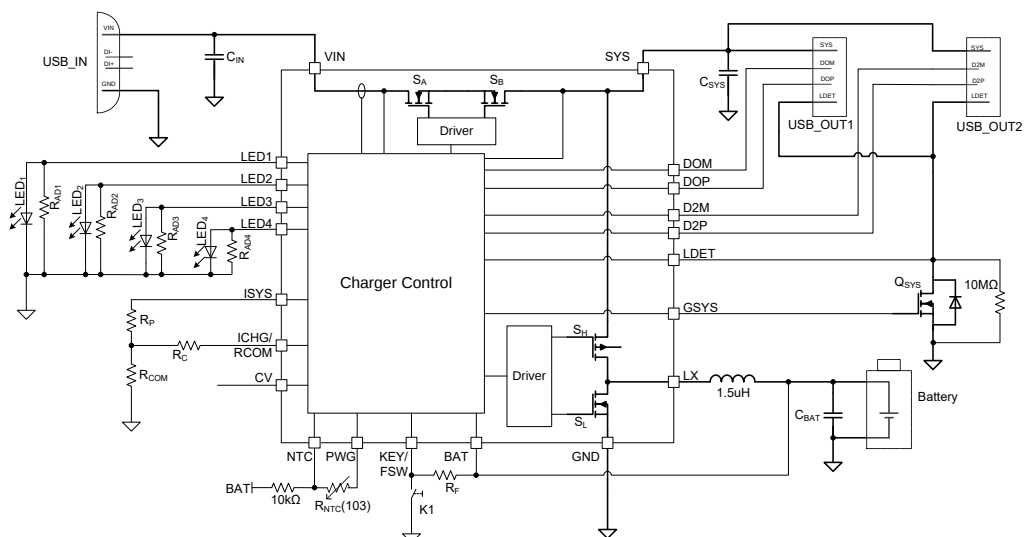
SY6928TYC - High Integrated Bi-Direction Power Regulator For Single-Cell Battery Power Bank Application

Features

- Maximum 18V Input Voltage Rating
- Build in Low $R_{DS(on)}$ Power Path NFETs and Power Switches
- Programmable Boost Switching Frequency
- Maximum 3A Charge Current
- Maximum 3A Boost Output Current
- 4.2V/4.35V/4.4V Selectable Cell Voltage
- $\pm 0.5\%$ Battery Cell Voltage Tolerance
- 4 LEDs Battery Level Indicator
- Trickle Current / Constant Current / Constant Voltage Charge Mode
- Adaptive Input Current Limit
- Input Voltage UVLO and OVP
- Output Divider Mode, DCP Mode Handshaking
- Boost Auto Start When Portable Device Inserts
- Boost Auto Shutdown with Light Load
- Boost Cycle-by-cycle Peak Current Limit
- Boost Programmable Output Current Limit Boost Output Short Circuit Protection
- Thermal Shutdown Protection
- Compact Package: QFN4 $\times$ 4-26

Applications

- Power Bank
- Portable Device with 1-Cell Battery



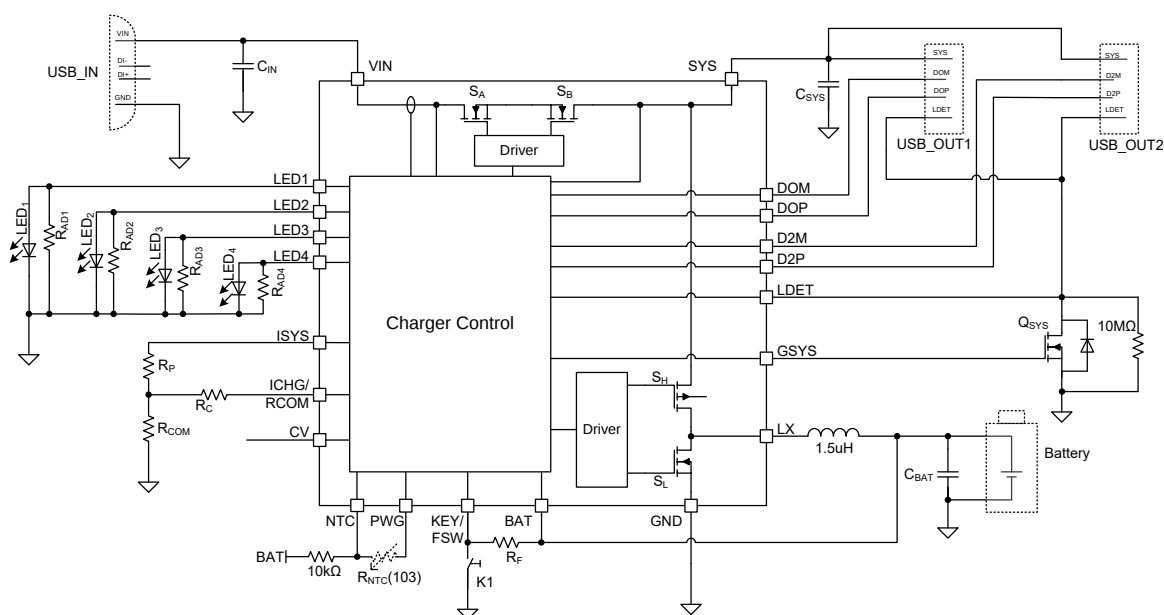
SY6928BTYC - High Integrated Bi-Direction Power Regulator For Single-Cell Battery Power Bank Application

Features

- Maximum 18V Input Voltage Rating
- Build in Low Rdson Power Path NFETs and Power Switches
- Programmable Boost Switching Frequency
- Maximum 3A Charge Current
- Maximum 3A Boost Output Current
- 4.2V/4.35V/4.4V Selectable Cell Voltage
- +/-0.5% Battery Cell Voltage Tolerance
- 4 LEDs Battery Level Indicator
- Trickle Current / Constant Current / Constant Voltage Charge Mode
- Adaptive Input Current Limit
- Input Voltage UVLO and OVP
- Output Divider Mode, DCP Mode Handshaking
- Boost Auto Start When Portable Device Inserts
- Boost Auto Shutdown with Light Load
- Boost Cycle-by-cycle Peak Current Limit
- Boost Programmable Output Current Limit Boost Output Short Circuit Protection
- Thermal Shutdown Protection
- Compact Package: QFN4×4-26

Applications

- Power Bank
- Portable Device with 1-Cell Battery



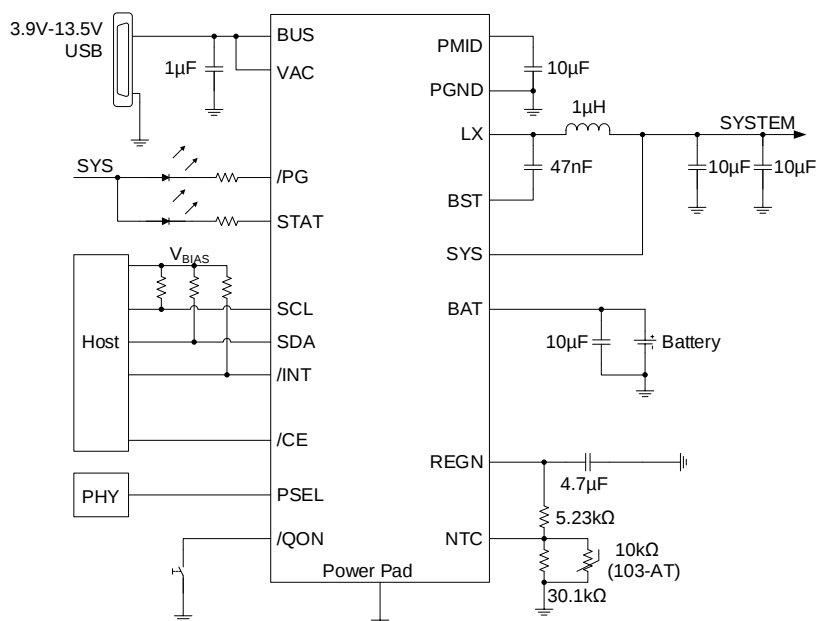
SY6974QCC - 3A, Single Cell Li-Ion DC/DC Switching Charger with I2C Control, USB Detection and OTG JEITA Compliant, Power Path Management

Features

- High Efficiency 3A 1.5MHz Buck Mode Charger
- Support 3.9V-13.5V Input Voltage Range
- Programmable IDPM/VDPM to Support the USB and Adapter
- 3.856V-4.624V Adjustable Charge Voltage
- Support Narrow VDC Power Path Management
- JEITA Compliance
- $\pm 0.5\%$ Charge Voltage Regulation
- Charge Status Outputs for LED or Host Processor
- Maximum 1.2A 1.5MHz Boost OTG Current
- 4.85V-5.3V Adjustable OTG Output Voltage
- Selectable OTG Output Current Limit
- $\pm 1.5\%$ Output Regulation in Boost Mode
- Soft-Start up to 500 μ F Capacitive Load
- Constant Current (CC) Limit
- Full BATFET Control to Support Shipping Mode, Wake up, and System Reset
- Safety
- Battery Temperature Sensing for Charge and Boost Mode
- Battery Charging Safety Timer
- Thermal Regulation and Thermal Shutdown
- Input/System over-Voltage Protection
- MOSFET over-Current Protection
- Low Battery Leakage Current and Support Shipping Mode
- 4mm x 4mm QFN-24 Package

Applications

- Smart Phone
- Tablet PC
- Power Bank
- Portable Internet Devices



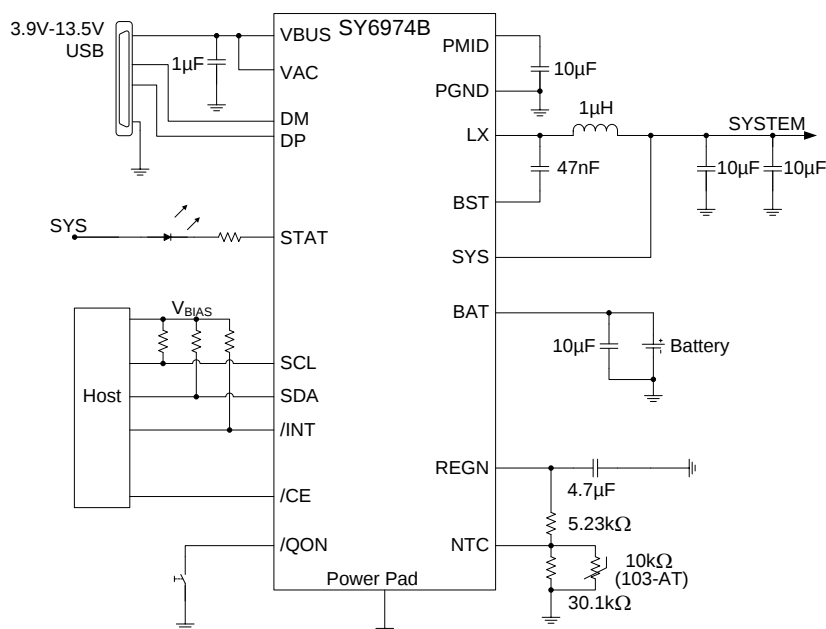
SY6974BQCC - 3A, Single Cell Li-Ion DC/DC Switching Charger with I2C Control, USB Detection and OTG JEITA Compliant, Power Path Management

Features

- High Efficiency 3A 1.5MHz Buck Mode Charger
 - Support 3.9V-13.5V Input Voltage Range
 - Programmable IDPM/VDPM to Support the USB and Adapter
 - 3.856V-4.624V Adjustable Charge Voltage
 - Support Narrow VDC Power Path Management
 - JEITA Compliance
 - $\pm 0.5\%$ Charge Voltage Regulation
 - Charge Status Outputs for LED or Host Processor
- Maximum 1.2A 1.5MHz Boost OTG Current
 - 4.85V-5.3V Adjustable OTG Output Voltage
 - Selectable OTG Output Current Limit
 - $\pm 1.5\%$ Output Regulation in Boost Mode
 - Soft-Start up to 500 μ F Capacitive Load
 - Constant Current (CC) Limit
- Full BATFET Control to Support Shipping Mode, Wake up, and System Reset
- Safety
 - Battery Temperature Sensing for Charge and Boost Mode
 - Battery Charging Safety Timer
 - Thermal Regulation and Thermal Shutdown
 - Input/System over-Voltage Protection
 - MOSFET over-Current Protection
- Low Battery Leakage Current and Support Shipping Mode
- 4mm x 4mm QFN-24 Package

Applications

- Smart Phone
- Tablet PC
- Power Bank
- Portable Internet Devices


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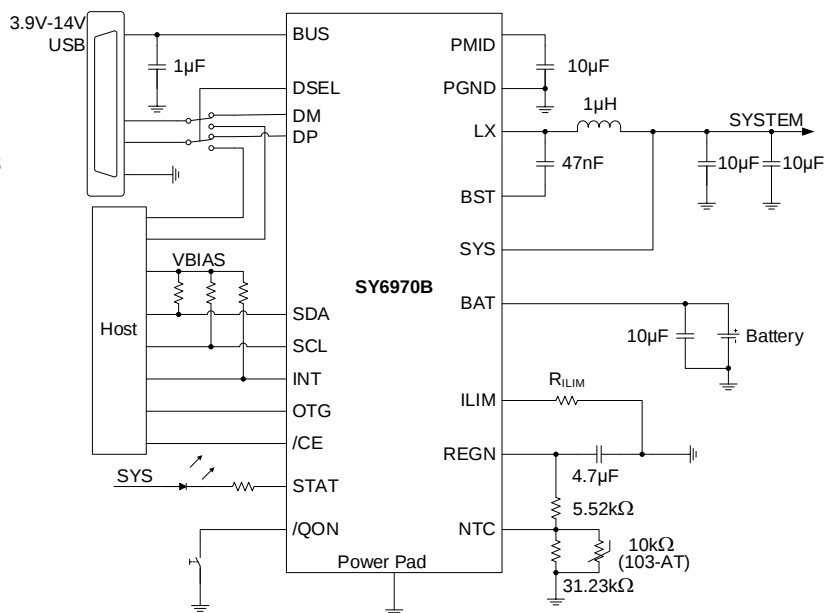
SY6970BQCQ - 5A, Single Cell Li-Ion DC/DC Switching Charger with I2C Control, USB Detection and OTG JEITA Compliant, Power Path Management

Features

- High Efficiency 5A 1.5MHz Buck Mode Charger
 - Support 3.9V-14V Input Voltage Range
 - Programmable IDPM/VDPM to Support the USB and Adapter
 - Support USB SDP/DCP/CDP and Non-Standard Adapter Detection
 - 3.84-4.608V Adjustable Charge Voltage
 - Support Narrow VDC Power Path Management
 - JEITA Compliance
 - $\pm 0.5\%$ Charge Voltage Regulation
 - Accelerate Charge Time by Battery Path Impedance Compensation
 - Charge Status Outputs for LED or Host Processor
- Maximum 2.4A 500KHz/1.5MHz Boost OTG Current
 - 4.55-5.51V Adjustable OTG Output Voltage
 - Selectable OTG Output Current Limit
 - Up to 2.4A OTG Current Limit on BUS
 - $\pm 1.5\%$ Output Regulation in Boost Mode
- Battery Monitor for Voltage, Temperature and Charge Current Measurements
- Full BATFET Control to Support Shipping Mode, Wake Up, and System Reset
- Up to 9A Battery Discharge Current
- Safety
 - Battery Temperature Sensing for Charge and Boost Mode
 - Battery Charging Safety Timer
 - Thermal Regulation and Thermal Shutdown
 - Input/System Over-voltage Protection
 - MOSFET Over-current Protection
- Low Battery Leakage Current and Support Shipping Mode
- 4mm $\times$ 4mm QFN-24 Package

Applications

- Smart Phone
- Tablet PC
- Power Bank
- Portable Internet Devices


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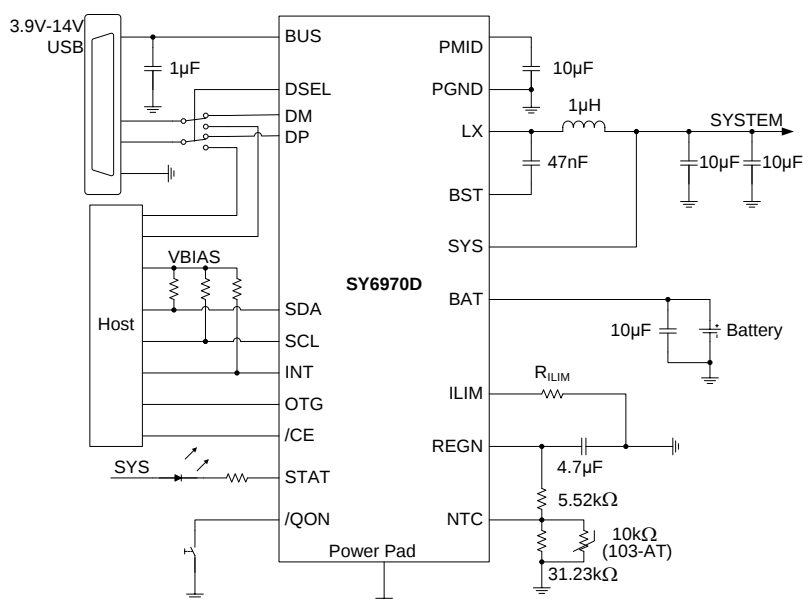
SY6970DQCQ - 5A, Single Cell Li-Ion DC/DC Switching Charger with I2C Control, USB Detection and OTG JEITA Compliant, Power Path Management

Features

- High Efficiency 5A 1.5MHz Buck Mode Charger
- Support 3.9V-14V Input Voltage Range
- Programmable IDPM/VDPM to Support the USB and Adapter
- Support USB SDP/DCP/CDP and Non-Standard Adapter Detection
- 3.84-4.608V Adjustable Charge Voltage
- Support Narrow VDC Power Path Management
- JEITA Compliance
- $\pm 0.5\%$ Charge Voltage Regulation
- Accelerate Charge Time by Battery Path Impedance Compensation
- Charge Status Outputs for LED or Host Processor
- Maximum 2.4A 500KHz/1.5MHz Boost OTG Current
- 4.55-5.51V Adjustable OTG Output Voltage
- Selectable OTG Output Current Limit
- Up to 2.4A OTG Current Limit on BUS
- $\pm 1.5\%$ Output Regulation in Boost Mode
- Battery Monitor for Voltage, Temperature and Charge Current Measurements
- Full BATFET Control to Support Shipping Mode, Wake Up, and System Reset
- Up to 9A Battery Discharge Current
- Safety
- Battery Temperature Sensing for Charge and Boost Mode
- Battery Charging Safety Timer
- Thermal Regulation and Thermal Shutdown
- Input/System Over-voltage Protection
- MOSFET Over-current Protection
- Low Battery Leakage Current and Support Shipping Mode
- 4mm $\times$ 4mm QFN-24 Package

Applications

- Smart Phone
- Tablet PC
- Power Bank
- Portable Internet Devices


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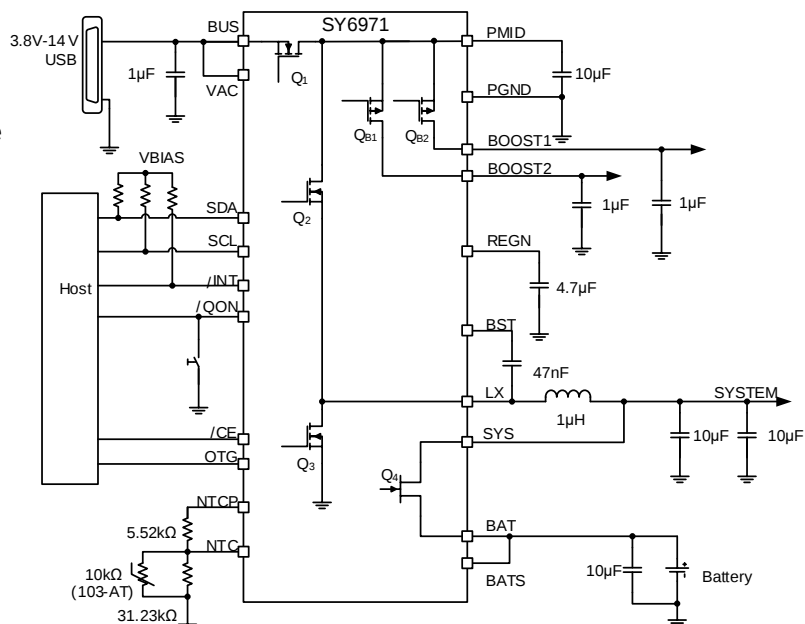
SY6971VKS - 2A Switching Charger with Low Iq Power Path Management, OTG and LDO

Features

- Extremely Low Battery Leakage Current and Support Shipping Mode
- High Efficiency 2A Buck Mode Charger
- Support 3.8V-14V Input Voltage range
- Programmable IDPM/VDPM to support the USB and adapter
- 4.0V-4.5V Adjustable Charge Voltage
- Support NVDC Power Path Management
- JEITA Compliance
- Maximum 1.2A OTG Output Current
- 4.5V-5.5V Adjustable Output Voltage
- Selectable OTG Output Current Limit
- Maximum 350mA on BOOST1 and BOOST2 Channel
- 1.6V-6.0V Adjustable Output Voltage
- Maximum 200mA Current Limit in LDO Mode
- Maximum 350mA Current Limit in Full On Mode
- Full BATFET Control to Support Shipping Mode, Wake Up, and System Reset
- Up to 8A Battery Discharge Current
- Safety
- Battery Temperature Sensing for Charge and Boost Mode
- Battery Charging Safety Timer
- Thermal Regulation and Thermal Shutdown
- Input/System Over-Voltage Protection
- MOSFET Over-Current Protection

Applications

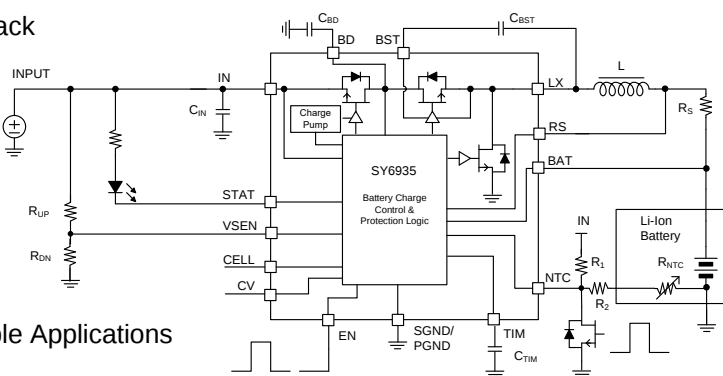
- Earphone Charging Case
- Wearable accessories
- Single Cell Li-Ion Portable Device



SY6935QDC - High Efficiency, 3.5A, Multi-Cell Li-Ion Battery Charger

Features

- Integrated Synchronous Buck and Reverse Blocking FET with 16V Rating
- Adaptive Input Power Limit for 4-14V Wide Input Voltage
- Maximum 3.5A Programmable Charge Current
- 4.2V and 4.35V Constant Voltage Selectable
- $\pm 0.5\%$ Cell Voltage Accuracy
- Support Single-cell or Two-cell Battery Pack
- External Shutdown Function
- Input Voltage UVLO and OVP
- Thermal Fold-back Protection
- Over Temperature Protection
- Battery Short Protection
- Programmable Charge Timeout
- Charge Status Indication
- Low Profile QFN3 $\times$ 3 Package for Portable Applications



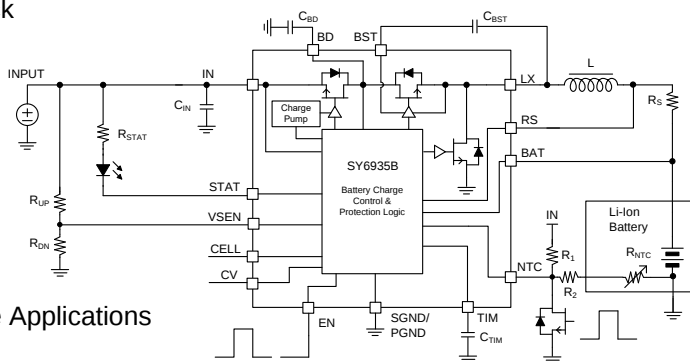
Applications

- Power Bank
- Cellular Telephones, PDA, MP3 Players, MP4 Players
- PSP Game Players, NDS Game Players
- Notebook

SY6935BQDC - High Efficiency, 3.5A, Multi-Cell Li-Ion Battery Charger

Features

- Integrated Synchronous Buck and Reverse Blocking FET with 16V Rating
- Adaptive Input Power Limit for 4-14V Wide Input Voltage
- Maximum 3.5A Programmable Charge Current
- 4.25V and 4.4V Constant Voltage Selectable
- $\pm 0.5\%$ Cell Voltage Accuracy
- Support Single-cell or Two-cell Battery Pack
- External Shutdown Function
- Input Voltage UVLO and OVP
- Thermal Fold-back Protection
- Over Temperature Protection
- Battery Short Protection
- Programmable Charge Timeout
- Charge Status Indication
- Low Profile QFN3 $\times$ 3 Package for Portable Applications



Applications

- Power Bank
- Cellular Telephones, PDA, MP3 Players, MP4 Players
- PSP Game Players, NDS Game Players

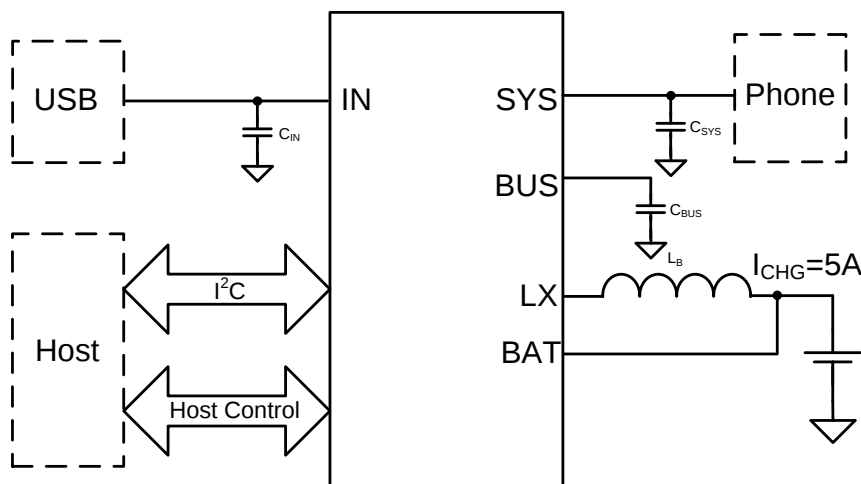
SY6991QYC - Wide Input, High Current, Bi-directional Regulator for Single Cell Li-Ion Battery Power Bank Application

Features

- Integrated N-Channel MOSFETs with 16V Voltage Rating and Extremely Low RDSON
- High Switching Frequency to Minimize Peripheral Circuit Design
- Trickle Current / Constant Current / Constant Voltage Charging Mode
- Maximum 5A Battery Charging Current
- Maximum 4.5A/5V or 2.25A/12V System Current in Battery Power Supply Mode
- USB Port Identifier for Various Input Current Limit
- Automatic Input Power Source Detection
- I2C controls
- Programmable Battery Charge Voltage
- Programmable Constant Current Charging
- Programmable Over Current Limit for SYS load
- Programmable Input Current DPM
- Programmable Input Voltage DPM
- Programmable Battery Charging Timeout
- Charging Shutdown Control
- Charging Mode CV Tolerance +/-0.5%
- DO+/DO- Divider Mode Compliant
- DO+/DO- QC3.0 Compliant
- OUTPUT MTK PE Compliant
- Host Enable Control for Standby Mode in Supply Mode
- Over Temperature Protection
- Battery UTP/OTP in Charging Mode and Supply Mode
- Charge Status Indication
- Light load Status Indication

Applications

- Single Cell Li-Ion Power Bank
- Portable Device with 1-cell Battery Pack


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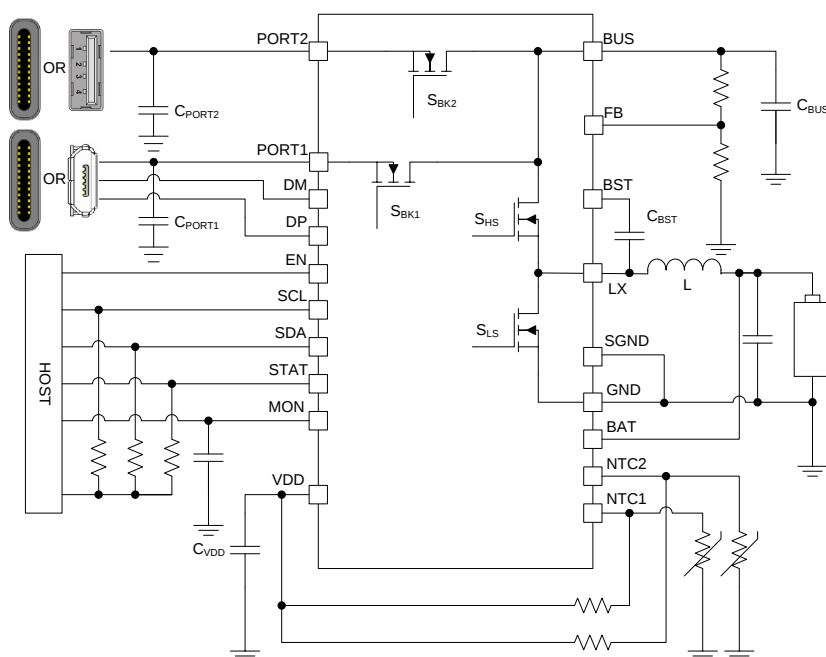
SY6995QEQ - Dual Ports, Wide Input, High Current, Bidirectional Regulator For Single Cell Li-Ion Battery Power Bank Application

Features

- Integrated N-Channel MOSFETs with 16V Voltage Rating and Extremely Low RDS(ON)
- High Switching Frequency to Minimize Peripheral Circuit Design
- Trickle Current / Constant Current / Constant Voltage Charging Mode
- Maximum 8A Battery Charging Current
- Maximum 28W OTG Output Power
- Automatic Input Power Source Detection
- USB Port Identifier for Various Input Current Limit
- I2C Controls
 - Programmable Battery Charge Voltage
 - Programmable Constant Charge Current
 - Programmable Input Voltage DPM
 - Programmable Input Current Limit and Output Current Limit
 - Programmable Bus Voltage for Discharging Mode
 - Programmable Battery Charging Timeout
- Charging Enable Control
- Charging Mode CV Tolerance $\pm 0.5\%$
- Host Enable Control for Standby Mode in Discharging Mode
- Battery UTP/OTP in Charging Mode and Discharging Mode
- Over Temperature Protection
- Light Load Status Indication
- Charge Status Indication
- Low Profile Package QFN5 $\times$ 5 for Portable Applications

Applications

- Single Cell Li-Ion Power Bank
- Portable Device with 1-Cell Battery Pack


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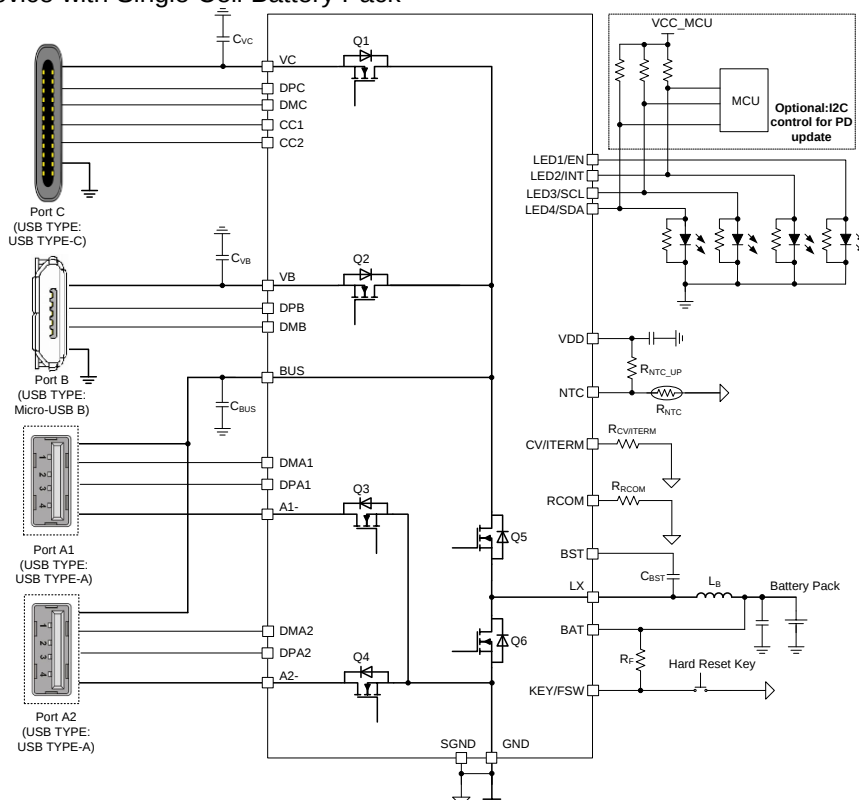
SY6998QEQ - PD3.0, QC3.0/2.0, SCP, FCP, AFC and Apple 2.4A, High Voltage and Current, Bi-directional Regulator for Li-Ion Battery Power Bank Application

Features

- Integrated 6 N-Channel MOSFETs with 18V Voltage Rating and Extremely Low RDS(ON)
- Maximum 5A Battery Charging Current
- Maximum 22.5W Output Power
- Trickle Current / Constant Current / Constant Voltage for Charging
- Programmable Constant Charge Voltage and Termination Current
- USB Port Identifier for Various Input Current Limit
- Programmable Battery Internal Resistor Compensation for Battery Fuel Gauge Indicator
- Up to 4 LEDs Battery Fuel Gauge Indicator with Programmable Threshold
- Support BC1.2 and PD3.0 for Input Ports
- Support Fast Charging Protocols PD3.0, QC3.0/2.0, SCP, FCP, AFC and Apple 2.4A for Output Ports
- Support Type-C DRP with Try.SRC
- Support TCPC Interface for the Update of PD Protocol
- Load Insert Detection
- Light Load Auto-Sleep
- Integrated Input OVP/UVF Protection
- Integrated Output OVP/OCP/SCP Protection
- Battery UTP/OTP/SCP/OVP Protection
- Thermal Shutdown Protection
- Max 100uA Quiescent Current in Sleep Mode

Applications

- Single Cell Li-Ion Power Bank
- Portable Device with Single Cell Battery Pack


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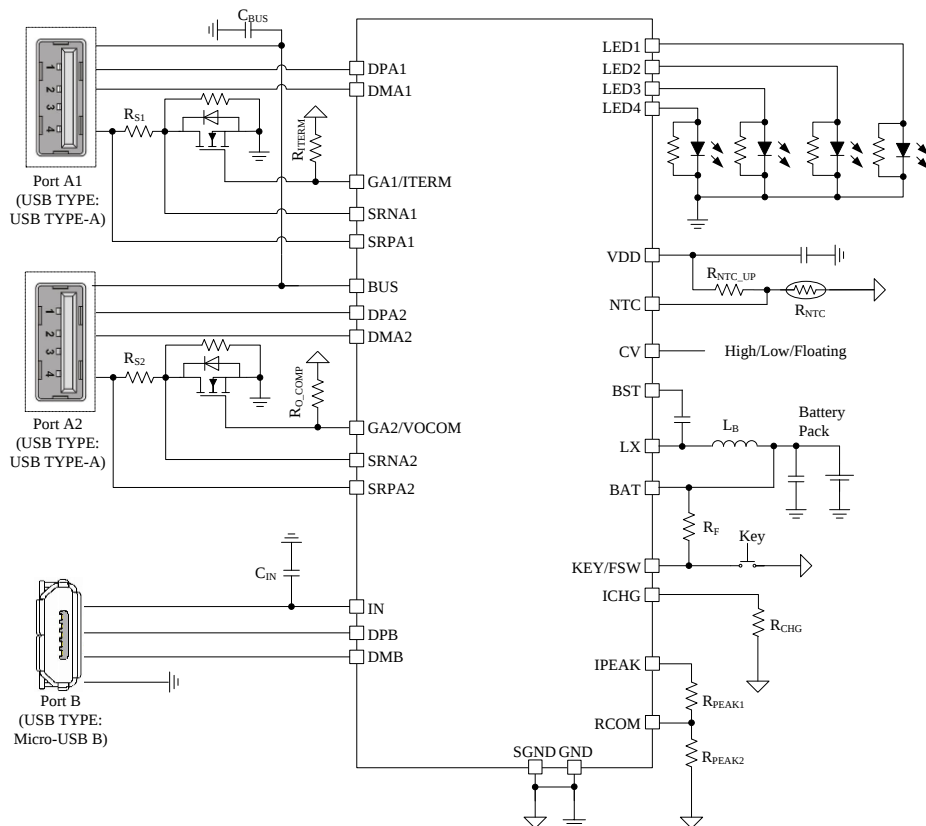
SY6996VCC - QC3.0, FCP, AFC, High Voltage / Current, 3IN1 Bidirectional Regulator for Li-Ion Battery Power Bank Application

Features

- Integrated N-Channel MOSFET with 18V Voltage Rating and Extremely Low RDS(ON)
- Maximum 5A Battery Charging Current
- Support BC1.2
- Adaptive Input Current Limit
- Trickle Current / Constant Current / Constant Voltage Charging Mode.
- Maximum 18W Output Power in Battery Discharging Mode
- Programmable Boost Peak Current Limit
- 200kHz-500kHz Programmable Boost Switching Frequency
- Programmable Battery Internal Resister Compensation
- Up to 4 LEDs Battery Fuel Gauge Indicator with Programmable Threshold
- Support Smart Phone Fast Charge Protocols QC3.0, FCP and AFC
- Load Insert Detection
- Light Load Auto-shutdown
- Battery UTP/OTP Protection
- Output OVP/SCP/OC Protection
- Thermal Shutdown Protection
- Max 50μA Quiescent Current in Sleep Mode

Applications

- Single Cell Li-Ion Power Bank
- Portable Device with Single Cell Battery Pack


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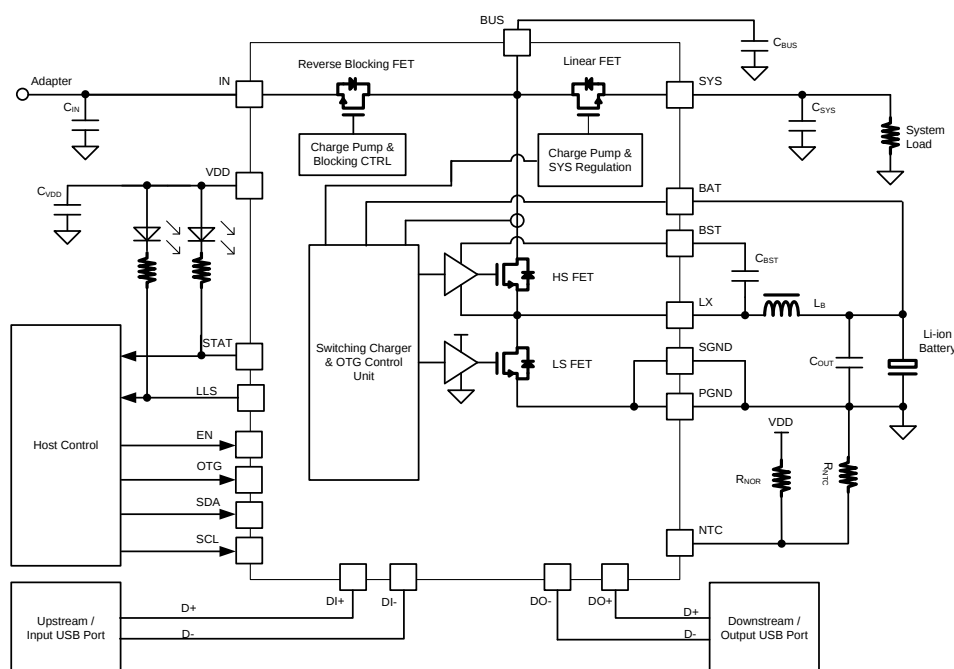
SY6990QCC - Wide Input, High current, Bi-directional Regulator for Single Cell Li-ion Battery Power Bank Application

Features

- Integrated N-channel MOSFETs with 16V Voltage Rating and Extremely Low RDS(ON)
- High Switching Frequency to Minimize Peripheral Circuit Design
- Trickle Current / Constant Current / Constant Voltage Charging Mode
- Maximum 5A Battery Charging Current
- Maximum 3A System Current in Battery Power Supplement Mode
- USB Port Identifier for Various Input Current Limit
- Automatic Input Power Source Detection
- I2C Controls
- Selectable Battery Charge Voltage
- Programmable Constant Charge Current
- Programmable Over Current Limit for SYS load
- Programmable Battery Charging Timeout
- Programmable Input Current DPM
- Programmable Input Voltage DPM
- Charging Shutdown Control
- Charging Mode CV Tolerance $\pm 0.5\%$
- DO+/DO- Divider Mode Compliant
- Host Enable Control for Standby Mode
- Over Temperature Protection
- Charge Status Indication
- Light load Status Indication
- Supply Power to System by Both the Adapter and the Battery in Supplement Mode

Applications

- Single Cell Li-ion Power Bank
- Portable Device with Single Cell Battery Pack


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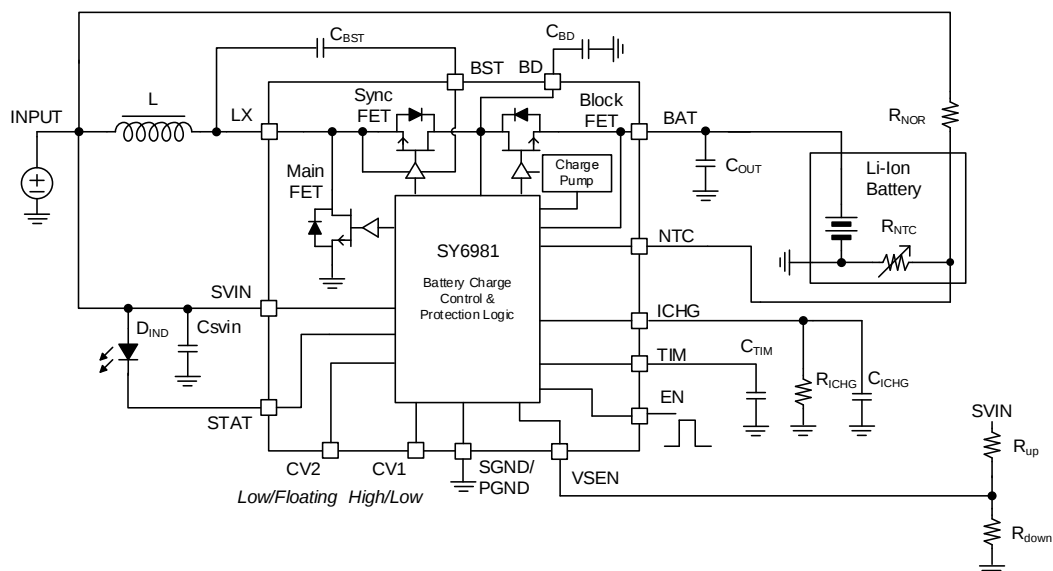
SY6981QDC - High Efficiency, 1.2A Two-cell Boost Li-Ion Battery Charger

Features

- Low Profile QFN3×3 Package
- Integrated Synchronous Boost with 18V Rating Low RDSON FETs for High Charge Efficiency
- Trickle Current / Constant Current / Constant Voltage Charge Mode
- Programmable Input Voltage Threshold for Adaptive Current Limit.
- Maximum 1.2A Constant Charge Current
- Charge Current Information Indication.
- Programmable Charge Timeout
- Programmable Constant Charge Current
- Selectable Constant Voltage
- $\pm 0.5\%$ Battery Voltage Accuracy
- Thermal Regulation Protection
- External Shutdown Function
- Input Voltage UVLO and OVP
- Over Temperature Protection
- Output Short Circuit Protection
- Charge Status Indication
- Normal Synchronous Boost Operation When the Battery is Removed

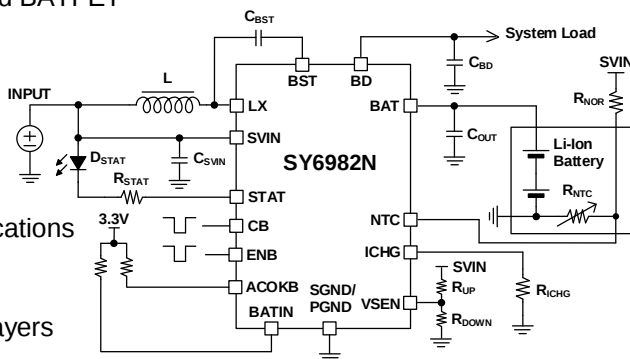
Applications

- Cellular Telephones, PDA, MP3 Players, MP4 Players
- Digital Cameras
- Bluetooth Applications
- PSP Game Players, NDS Game Players
- Notebook



SY6982NQDC - High Efficiency, 1.5A, Two-Cell Boost Li-Ion Battery Charger With System Power Path Management

- Integrated Synchronous Boost with 18V Rating Low RDSON FETs for High Charge Efficiency
- Trickle Current / Constant Current / Constant Voltage Charge Mode
- Maximum 1.5A Constant Charge Current
- Programmable Constant Charge Current
- Programmable Input Voltage Threshold for Adaptive Current Limit
- $\pm 0.5\%$ Battery Voltage Accuracy
- Input Voltage UVLO and OVP
- External Separated Control Function for Boost and BATFET
- System Power Path Management Function
- Input and Battery Inserted Indication
- Charge Status Indication
- Thermal Fold-back Protection
- Over Temperature Protection
- Low Profile QFN3 $\times$ 3 Package for Portable Applications

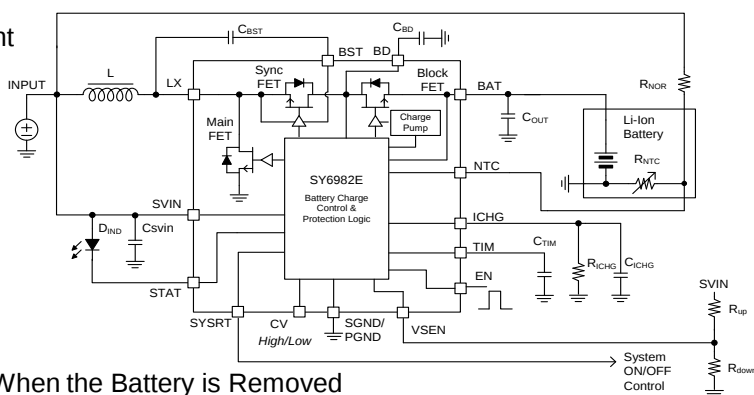


Applications

- Cellular Telephones, PDA, MP3 Players, MP4 Players
- Digital Cameras
- Bluetooth Applications
- PSP Game Players, NDS Game Players

SY6982EQDC - High Efficiency, 2A, Two-cell Boost Li-Ion Battery Charger

- Low Profile QFN3×3 Package
- Integrated Synchronous Boost with 18V Rating Low RDSON FETs for High Charge Efficiency
- Trickle Current / Constant Current / Constant Voltage Charge Mode
- Programmable Input Voltage Threshold for Adaptive Current Limit.
- Maximum 2A Constant Charge Current
- Charge Current Information Indication.
- Programmable Charge Timeout
- Programmable Constant Charge Current
- Selectable Constant Voltage
- $\pm 0.5\%$ Battery Voltage Accuracy
- Thermal Regulation Protection
- External Shutdown Function
- Input Voltage UVLO and OVP
- Over Temperature Protection
- Output Short Circuit Protection
- Charge Status Indication
- Normal Synchronous Boost Operation When the Battery is Removed



Applications

- Cellular Telephones, PDA, MP3 Players, MP4 Players
- Digital Cameras
- Bluetooth Applications
- PSP Game Players, NDS Game Players

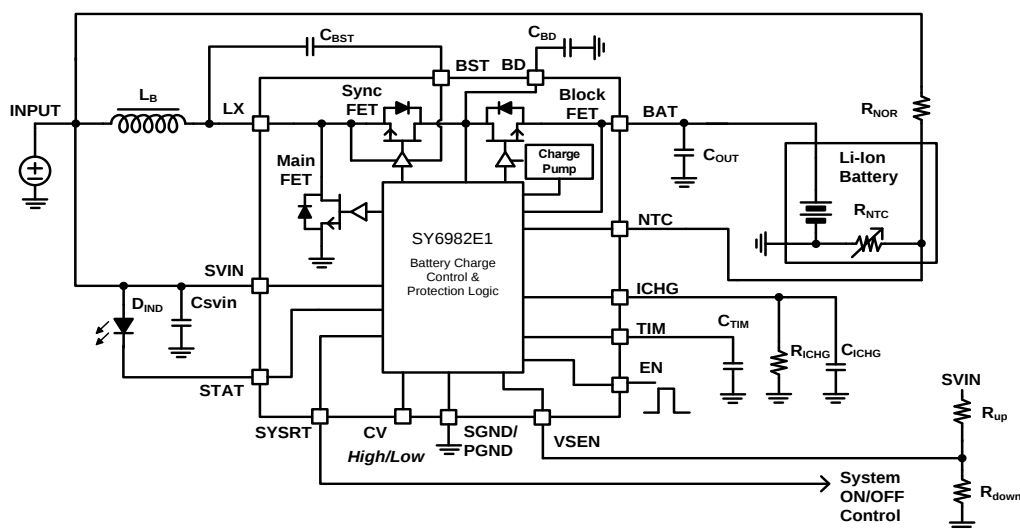
SY6982E1QDC - High Efficiency, 2A, Two-Cell Boost Li-Ion Battery Charger

Features

- Low Profile QFN3x3 Package
- Integrated Synchronous Boost with 18V Rating Low RDSON FETs for High Charge Efficiency
- Trickle Current / Constant Current / Constant Voltage Charge Mode
- Programmable Input Voltage Threshold for Adaptive Current Limit.
- Maximum 2A Constant Charge Current
- Charge Current Information Indication.
- Programmable Charge Timeout
- Programmable Constant Charge Current
- Selectable Constant Voltage
- $\pm 0.5\%$ Battery Voltage Accuracy
- Thermal Regulation Protection
- External Shutdown Function
- Input Voltage UVLO and OVP
- Over Temperature Protection
- Output Short Circuit Protection
- Charge Status Indication
- Normal Synchronous Boost Operation When Battery Removed

Applications

- Cellular Telephones, PDA, MP3 Players, MP4 Players
- Digital Cameras
- Bluetooth Applications
- PSP Game Players, NDS Game Players
- Notebook

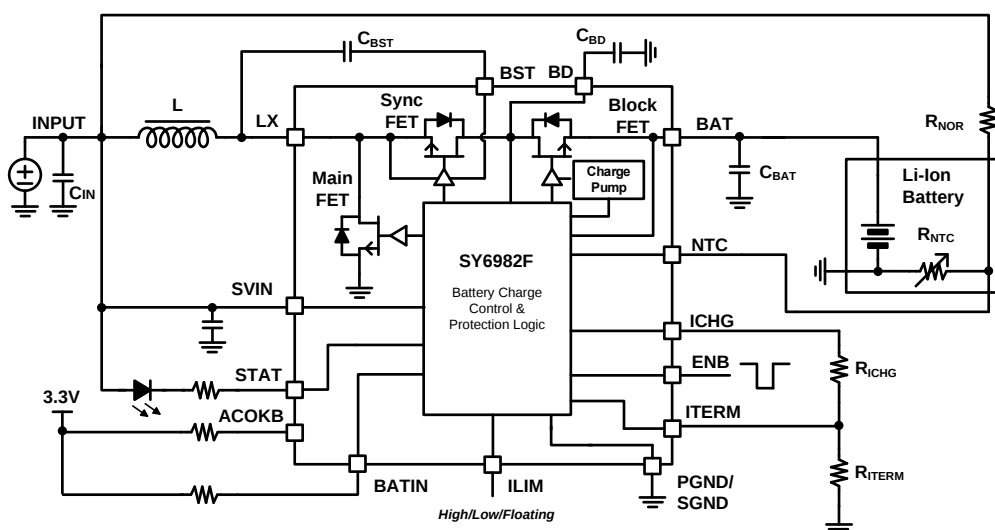


Features

- Low Profile QFN3x3 Package
- Integrated Synchronous Boost with 18V Rating Low RDSON FETs for High Charge Efficiency
- Trickle Current / Constant Current / Constant Voltage Charge Mode
- Adaptive Input Current Limit with selectable threshold
- Maximum 2A Constant Charge Current
- Charge Current Information Indication
- Programmable Constant Charge Current
- Programmable Charge Termination Current
- Thermal Regulation Protection
- External Shutdown Function
- Input Voltage UVLO and OVP
- Output Short Circuit Protection
- Over Temperature Protection
- Input Power Good Indication
- Battery Inserted Indication
- Charge Status Indication
- Normal Synchronous Boost Operation When Battery Removed

Applications

- POS, Cellular Telephones, PDA, MP3 Players, MP4 Players
- Digital Cameras
- Bluetooth Applications
- PSP Game Players, NDS Game Players



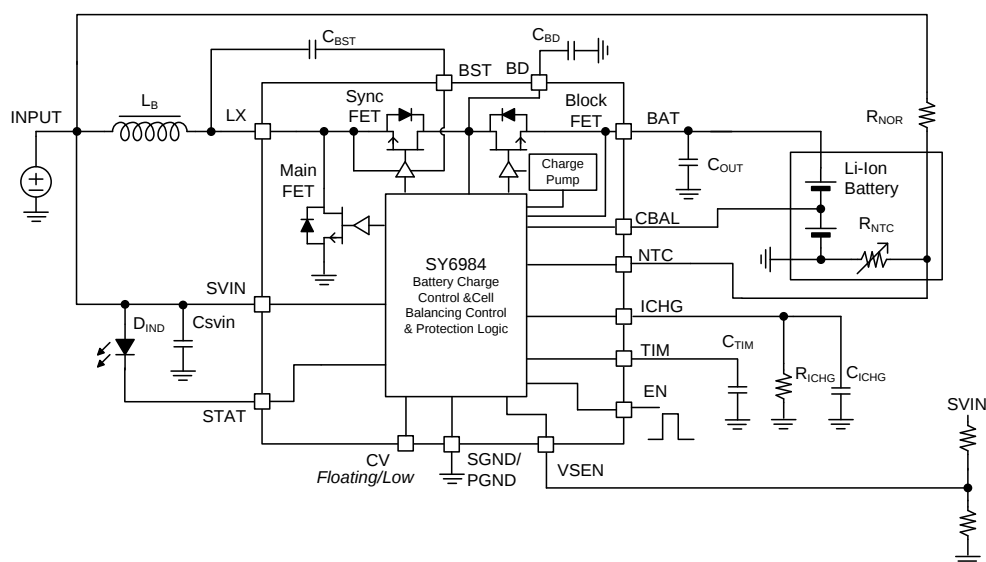
SY6984QDC - High Efficiency, 2A, Two-cell Boost Li-Ion Battery Charger with Cell Balance Control

Features

- Low Profile QFN3×3 Package for Portable Applications
- Integrated Synchronous Boost with 18V Rating Low RDSON FETs for High Charge Efficiency
- Trickle Current / Constant Current / Constant Voltage Charge Mode
- Programmable Input Voltage Threshold for Adaptive Current Limit.
- Maximum 2A Constant Charge Current
- Programmable Charge Timeout
- Programmable Constant Charge Current
- Selectable Constant Voltage
- $\pm 0.5\%$ Battery Voltage Accuracy
- Cell Balance Control
- Thermal Regulation Protection
- External Shutdown Function
- Input Voltage UVLO and OVP
- Over Temperature Protection
- Output Short Circuit Protection
- Charge Status Indication

Applications

- Cellular Telephones, PDA, MP3 Players, MP4 Players
- Digital Cameras
- Bluetooth Applications
- PSP Game Players, NDS Game Players
- Notebook



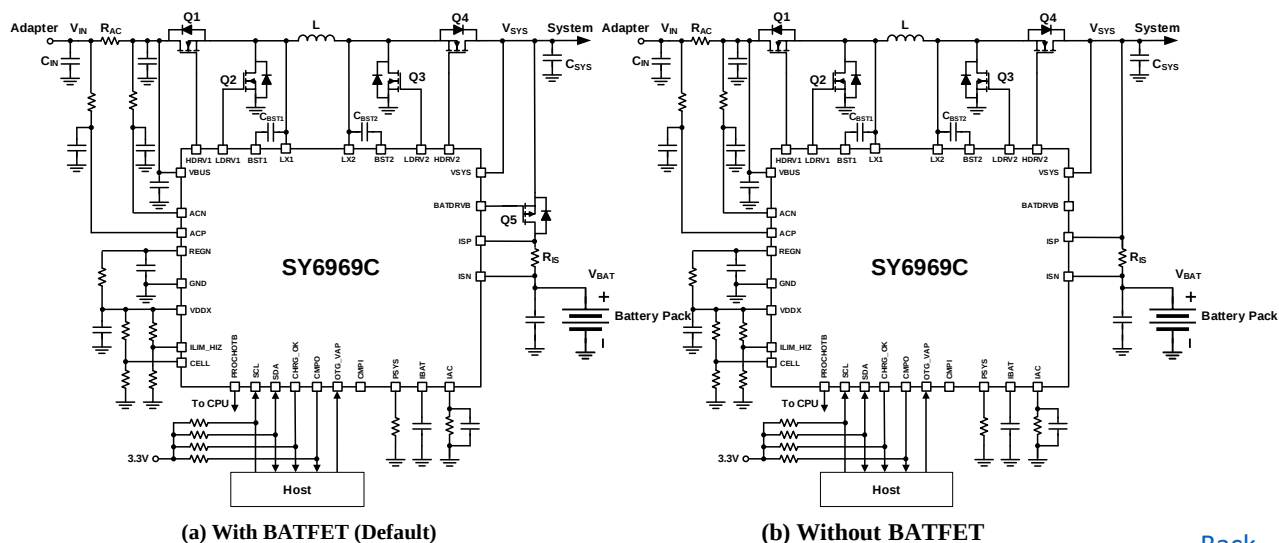
SY6969CQFQ - Multi-Cell Synchronous Buck-Boost Battery Charger Controller with NVDC Power Path Management

Features

- 3.5V to 25V Input Operating Voltage
- Charge 1s to 4s Battery from Wide Range of Input Source
- Drive Bi-Direction 4-switch Buck-Boost with Single Inductor
- 800kHz or 1.2MHz Programmable Switching Frequency
- SMBus Controls
- Battery Charge Voltage (1.024V - 19.2V)
- Minimum System Voltage (1.024V - 16.128V)
- OTG Output Voltage (3V - 20.8V)
- Battery Charge Current (64mA - 8.128A)
- Input Voltage Limit for DPM (3.2V - 19.52V)
- Input Current Limit for DPM (50mA - 6.4A)
- OTG Output Current Limit (50mA - 6.35A)
- High Accuracy for Voltage/Current Regulation
- Accurate Power/Current Monitor and Comprehensive PROCHOT for CPU Throttling
- ILIM_HIZ Pin to Set Input Current Limit
- NVDC Power Path Management
- Battery Supplements System when Adapter is Fully-Loaded
- Battery MOSFET (BATFET) Ideal Diode Operation in Supplement Mode
- Pass Through Mode (PTM) for System Power Efficiency Improvement
- When System is Powered by Battery Only, Vmin Active Protection (VAP) Mode Supplements System from Input Capacitors during System Peak Power Spike
- Support Battery LEARN Function
- Adaptive Input Current Limit (AICL) to Extract Max Input Power
- Host Control Interface for Flexible System Configuration
- Integrated ADC to Monitor Voltage, Current and Power
- Thermal Shutdown Protection
- Input, System, Battery Overvoltage Protection
- Input, MOSFET, Inductor Overcurrent Protection
- Compact Package: QFN4x4-32

Applications

- Notebook, Ultra-Book, Tablet PC
- Industrial and Medical Equipment
- Portable Equipment with Rechargeable Batteries


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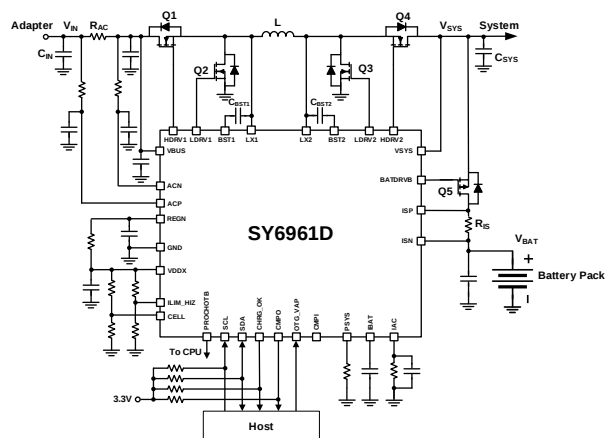
SY6961DQFQ - Multi-Cell Synchronous Buck-Boost Battery Charger Controller with NVDC Power Path Management

Features

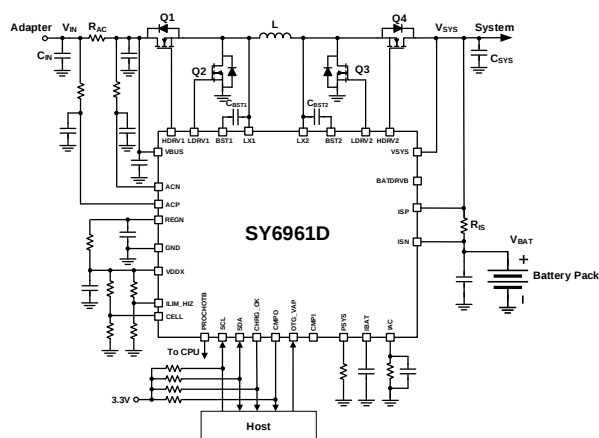
- 3.5V to 25V Input Operating Voltage
- Charge 1s to 4s Battery from Wide Range of Input Source
- Drive Bi-Direction 4-switch Buck-Boost with Single Inductor
- 800kHz or 1.2MHz Programmable Switching Frequency
- I2C Controls
- Battery Charge Voltage (1.024V - 19.2V)
- Minimum System Voltage (1.024V - 16.128V)
- OTG Output Voltage (3V - 20.8V)
- Battery Charge Current (64mA - 8.128A)
- Input Voltage Limit for DPM (3.2V - 19.52V)
- Input Current Limit for DPM (50mA - 6.4A)
- OTG Output Current Limit (50mA - 6.35A)
- High Accuracy for Voltage/Current Regulation
- Accurate Power/Current Monitor and Comprehensive PROCHOT for CPU Throttling
- ILIM_HIZ Pin to Set Input Current Limit
- NVDC Power Path Management
- Battery Supplements System when Adapter is Fully-Loaded
- Battery MOSFET (BATFET) Ideal Diode Operation in Supplement Mode
- Pass Through Mode (PTM) for System Power Efficiency Improvement
- When System is Powered by Battery Only, Vmin Active Protection (VAP) Mode Supplements System from Input Capacitors during System Peak Power Spike
- Support Battery LEARN Function
- Adaptive Input Current Limit (AICL) to Extract Max Input Power
- Host Control Interface for Flexible System Configuration
- Integrated ADC to Monitor Voltage, Current and Power
- Thermal Shutdown Protection
- Input, System, Battery Overvoltage Protection
- Input, MOSFET, Inductor Overcurrent Protection
- Compact Package: QFN4x4-32

Applications

- Notebook, Ultra-Book, Tablet PC
- Industrial and Medical Equipment
- Portable Equipment with Rechargeable Batteries



(a) With BATFET (Default)



(b) Without BATFET

SY7994QYC - Fully Integrated Synchronous Boost Converter with QC3.0 for Li-Ion Battery Power Bank Application

- Integrated N-Channel MOSFETs with 16V Voltage Rating and Extremely Low RDS(ON) for
- Linear Switch
- Half Bridge
- 0.3MHz or 0.5MHz Selectable Switching Frequency to Minimize Peripheral Circuit Design
- Up to 20W Output Power
- I2C Controls
- Programmable Peak Current Limit
- Programmable Over Current Limit for SYS Load
- Integrated SYS Current Sense
- Do+/Do- Divider Mode Compliant
- QC3.0 Class a Output Compliant
- 5V4A
- 9V/2.22A
- 12V/1.67A
- MTK PE+ Compliant
- Host Enable Control for Standby Mode
- Over Temperature Protection
- Battery UTP/OTP
- Light Load Status Indication

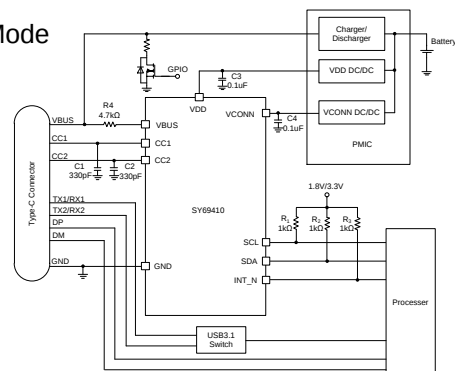
SY69410VWS - USB Type-C Port Controller

Features

- USB PD3.0 PHY with I2C Interface
- Current Capability Advertising and Detection
- CC Attach/Detach Detection as DFP, UFP and DRP
- Active Cable Detection
- Cable Orientation Detection
- BIST Mode Support
- VBUS Detection Support
- VCONN Power Control Support
- VCONN OVP, SCP and Programmable OCP
- Dead Battery Support
- Low Power Consumption: typical 11uA with DRP in Low Power Mode
- VDD range:3-5.5V
- Thermal Shutdown
- CSP1.29×1.25-9 Package

Applications

- Smartphones
- Tablets, Notebooks
- Laptops
- Adapters, Power Banks

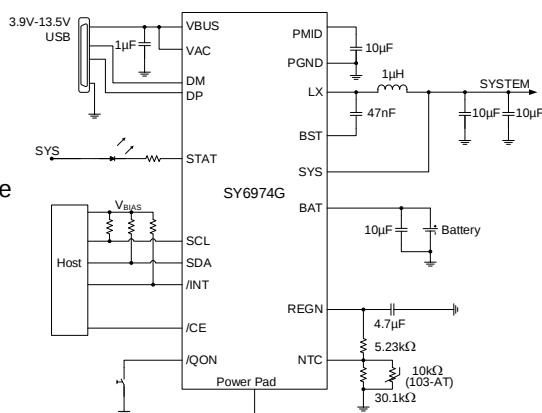


SY6974GQCQ - 3A, Single Cell Li-Ion DC/DC Switching Charger with I2C Control, USB Detection and OTG JEITA Compliant, Power Path Management

- High Efficiency 3A 1.5MHz Buck Mode Charger
 - Support 3.9V-13.5V Input Voltage Range
 - Programmable IDPM/VDPM to Support the USB and Adapter
 - 3.8V-4.61V Adjustable Charge Voltage
 - Support Narrow VDC Power Path Management
 - JEITA Compliance
 - $\pm 0.5\%$ Charge Voltage Regulation
 - Charge Status Outputs for LED or Host Processor
- Maximum 1.2A 1.5MHz Boost OTG Current
 - 4.85V-5.3V Adjustable OTG Output Voltage
 - Selectable OTG Output Current Limit
 - $\pm 1.5\%$ Output Regulation in Boost Mode
 - Soft-Start up to 500 μ F Capacitive Load
 - Constant Current (CC) Limit
- Full BATFET Control to Support Shipping Mode, Wake up, and System Reset
- Safety
 - Battery Temperature Sensing for Charge and Boost Mode
 - Battery Charging Safety Timer
 - Thermal Regulation and Thermal Shutdown
 - Input/System over-Voltage Protection
 - MOSFET over-Current Protection
- Low Battery Leakage Current and Support Shipping Mode
- 4mm x 4mm QFN-24 Package

Applications

- Smart Phone
- Tablet PC
- Power Bank
- Portable Internet Devices

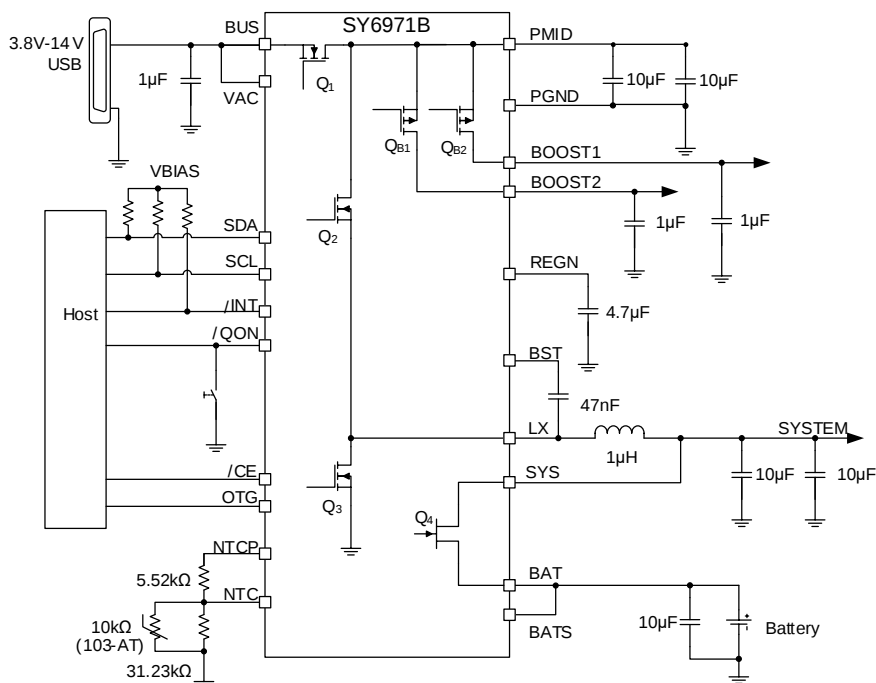

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SY6971BVKS - 2A Switching Charger with Low Iq Power Path Management, OTG and LDO

- Extremely Low Battery Leakage Current and Support Shipping Mode
- High Efficiency 2A Buck Mode Charger
 - Support 3.8V-14V Input Voltage range
 - Programmable IDPM/VDPM to support the USB and adapter
 - 4.0V-4.5V Adjustable Charge Voltage
 - Support NVDC Power Path Management
 - JEITA Compliance
- Maximum 1.2A OTG Output Current
 - 4.5V-5.5V Adjustable Output Voltage
 - Selectable OTG Output Current Limit
- Maximum 550mA on BOOST1 and BOOST2 Channel
 - 1.6V-6.0V Adjustable Output Voltage
 - Maximum 500mA Current Limit in LDO Mode
 - Maximum 550mA Current Limit in Full On Mode
- Full BATFET Control to Support Shipping Mode, Wake Up, and System Reset
- Up to 8A Battery Discharge Current
- Safety
 - Battery Temperature Sensing for Charge and Boost Mode
 - Battery Charging Safety Timer
 - Thermal Regulation and Thermal Shutdown
 - Input/System Over-Voltage Protection
 - MOSFET Over-Current Protection

Applications

- Earphone Charging Case
- Wearable accessories
- Single Cell Li-Ion Portable Device


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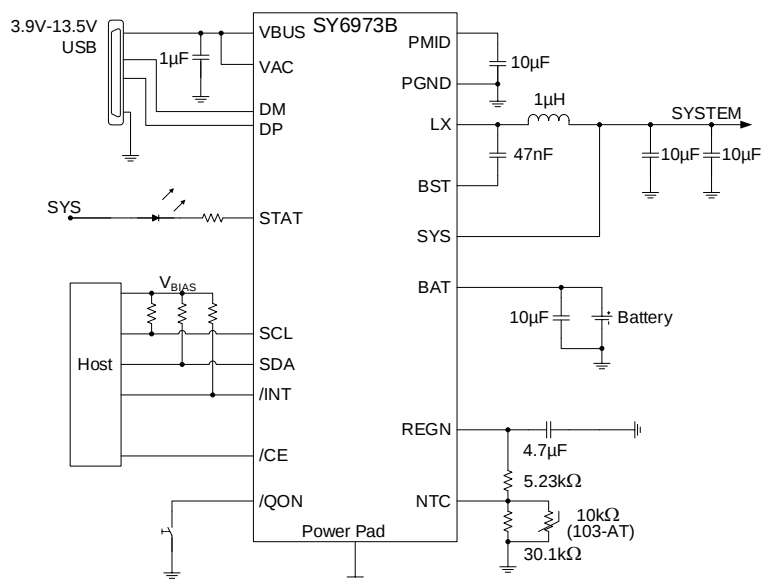
SY6973BQCQ - 3A, Single Cell Li-Ion DC/DC Switching Charger with I2C Control, USB Detection and OTG JEITA Compliant, Power Path Management

Features

- High Efficiency 3A 1.5MHz Buck Mode Charger
 - Support 3.9V-13.5V Input Voltage Range
 - Programmable IDPM/VDPM to Support the USB and Adapter
 - 3.856V-4.624V Adjustable Charge Voltage
 - Support Narrow VDC Power Path Management
 - JEITA Compliance
 - $\pm 0.5\%$ Charge Voltage Regulation
 - Charge Status Outputs for LED or Host Processor
- Maximum 1.2A 1.5MHz Boost OTG Current
 - 4.85V-5.3V Adjustable OTG Output Voltage
 - Selectable OTG Output Current Limit
 - $\pm 1.5\%$ Output Regulation in Boost Mode
 - Soft-Start up to 500 μ F Capacitive Load
 - Constant Current (CC) Limit
- Full BATFET Control to Support Shipping Mode, Wake up, and System Reset
- Safety
 - Battery Temperature Sensing for Charge and Boost Mode
 - Battery Charging Safety Timer
 - Thermal Regulation and Thermal Shutdown
 - Input/System over-Voltage Protection
 - MOSFET over-Current Protection
- Low Battery Leakage Current and Support Shipping Mode
- 4mm x 4mm QFN-24 Package

Applications

- Smart Phone
- Tablet PC
- Power Bank
- Portable Internet Devices

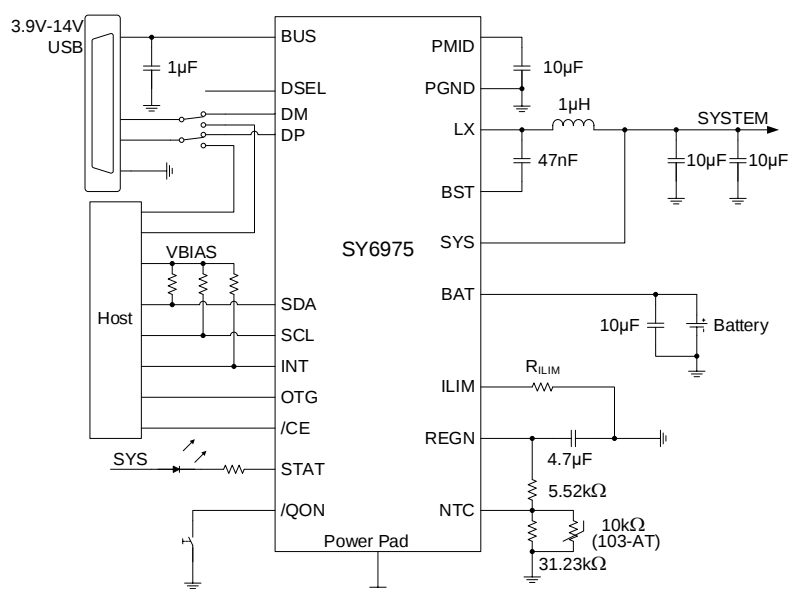

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SY6975QCQ - 5A, Single Cell Li-Ion DC/DC Switching Charger with I2C Control, USB Detection and OTG JEITA Compliant, Power Path Management

- High Efficiency 5A 1.5MHz Buck Mode Charger
 - Support 3.9V-14V Input Voltage Range
 - Programmable IDPM/VDPM to Support the USB and Adapter
 - Support USB SDP/DCP/CDP and Non-Standard Adapter Detection
 - 3.84-4.608V Adjustable Charge Voltage
 - Support Narrow VDC Power Path Management
 - JEITA Compliance
 - $\pm 0.5\%$ Charge Voltage Regulation
 - Accelerate Charge Time by Battery Path Impedance Compensation
 - Charge Status Outputs for LED or Host Processor
- Maximum 2.4A 500KHz/1.5MHz Boost OTG Current
 - 4.55-5.51V Adjustable OTG Output Voltage
 - Selectable OTG Output Current Limit
 - Up to 2.4A OTG Current Limit on BUS
 - $\pm 1.5\%$ Output Regulation in Boost Mode
- Battery Monitor for Voltage, Temperature and Charge Current Measurements
- Full BATFET Control to Support Shipping Mode, Wake Up, and System Reset
- Up to 9A Battery Discharge Current
- Safety
 - Battery Temperature Sensing for Charge and Boost Mode
 - Battery Charging Safety Timer
 - Thermal Regulation and Thermal Shutdown
 - Input/System Over-voltage Protection
 - MOSFET Over-current Protection
- Low Battery Leakage Current and Support Shipping Mode
- 4mm x 4mm QFN-24 Package

Applications

- Smart Phone
- Tablet PC
- Power Bank
- Portable Internet Devices

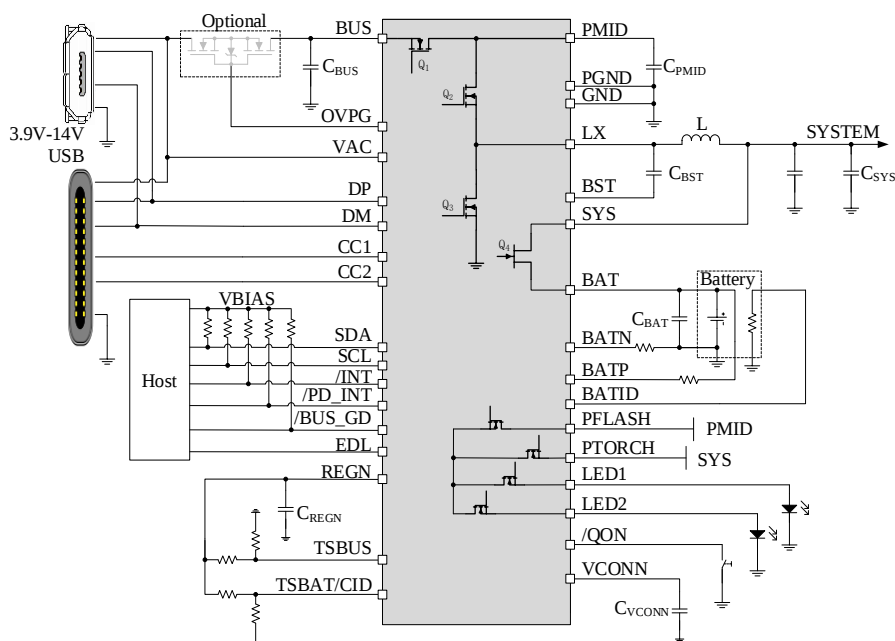


SY6976WFS - High Integrated PMU with 4A Single-Cell Battery Charger, 2A LED Flash Driver, Charging Protocols

- Support 3.9V-14V Input Voltage range
- Programmable IINDPM/VINDPM to support the USB and adapter
- Support USB SDP/DCP/CDP/HVDCP, Non-standard Adapter, PD and UFCS
- 3.84-4.856V Adjustable Charge Voltage
- Support Narrow VDC Power Path Management
- JEITA Compliance
- $\pm 0.5\%$ Charge Voltage Regulation
- $\pm 4\%$ at 1.5A Charge Current Regulation
- Accelerate Charge Time by Battery Path impedance Compensation
- 3.9-5.5V Adjustable OTG Output Voltage
- Selectable OTG Output Current Limit
- Up to 2.5A OTG Current Limit on BUS
- $\pm 2\%$ Output Regulation in Boost Mode
- Soft-Start Up to 500- μ F Capacitive Load
- Maximum 2A Boost LED Flash Driver
- Full BATFET Control to Support Shipping Mode, Wake Up, and System Reset
- Up to 12A Battery Discharge Current
- 11 channels 12-bits ADC for Monitor
 - VBAT, VSYS
 - VBUS, ICHG
 - TSBUS, TSBAT
 - VAC, IBUS, TDIE, BATID, BATSNS
- Package: WLCSP 3.2mm $\times$ 2.8mm -42

Applications

- Smart Phone
- Tablet PC
- Portable Internet Device

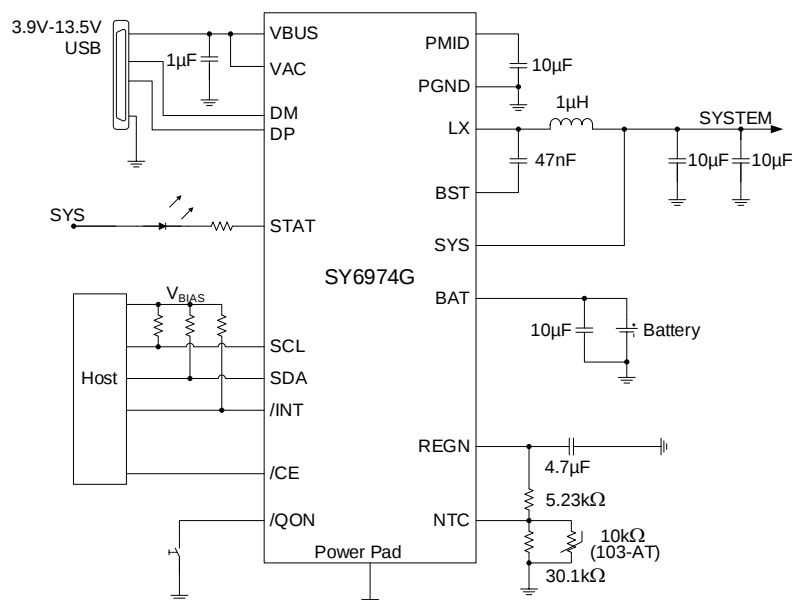

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SY6974GQCQ - 3A, Single Cell Li-Ion DC/DC Switching Charger with I2C Control, USB Detection and OTG JEITA Compliant, Power Path Management

- High Efficiency 3A 1.5MHz Buck Mode Charger
 - Support 3.9V-13.5V Input Voltage Range
 - Programmable IDPM/VDPM to Support the USB and Adapter
 - 3.8V-4.61V Adjustable Charge Voltage
 - Support Narrow VDC Power Path Management
 - JEITA Compliance
 - $\pm 0.5\%$ Charge Voltage Regulation
 - Charge Status Outputs for LED or Host Processor
- Maximum 1.2A 1.5MHz Boost OTG Current
 - 4.85V-5.3V Adjustable OTG Output Voltage
 - Selectable OTG Output Current Limit
 - $\pm 1.5\%$ Output Regulation in Boost Mode
 - Soft-Start up to 500 μ F Capacitive Load
 - Constant Current (CC) Limit
- Full BATFET Control to Support Shipping Mode, Wake up, and System Reset
- Safety
 - Battery Temperature Sensing for Charge and Boost Mode
 - Battery Charging Safety Timer
 - Thermal Regulation and Thermal Shutdown
 - Input/System over-Voltage Protection
 - MOSFET over-Current Protection
- Low Battery Leakage Current and Support Shipping Mode
- 4mm x 4mm QFN-24 Package

Applications

- Smart Phone
- Tablet PC
- Power Bank
- Portable Internet Devices

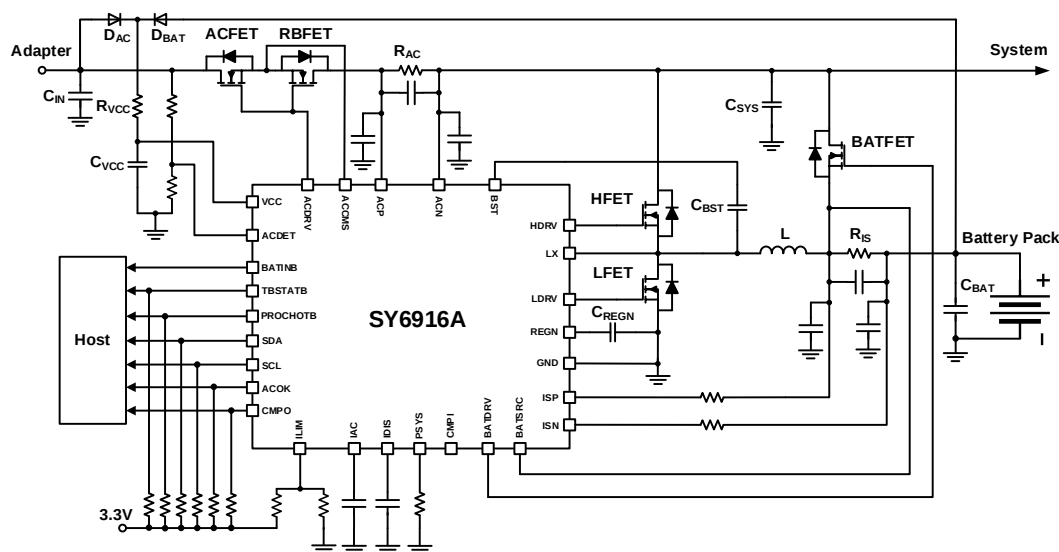

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SY6916AQAQ - SMBus Controlled 1-4 Cell Battery Charger Controller Supporting Boost Mode with Power and Processor Hot Monitoring

- 4.5V to 24V Input Operating Voltage
- Charge 1 cell to 4 cells Battery from Wide Range of Input Source
- 600kHz, 800kHz or 1MHz Programmable Switching Frequency
- SMBus Controls
- Battery Charge Voltage (1.024V - 19.2V)
- Battery Charge Current (up to 16.256A/8.128A based on 5mΩ/10mΩ sensing resistor)
- Battery Discharge Current (up to 32.256A based on 10mΩ sensing resistor)
- Input Current Limit for DPM (up to 16.128A/8.064A based on 5mΩ/10mΩ sensing resistor)
- High Accuracy for Voltage/Current Regulation
- Accurate Power/Current Monitor and Comprehensive PROCHOT for CPU Throttling
- ILIM Pin to Set Charge Current Limit and Discharge Current Limit
- Support Battery LEARN Function and Programmable Battery Depletion Threshold
- Support CPU Turbo Boost Mode
- Adapter and Battery Provide Power to System Together for CPU Turbo Boost Mode
- Ultra-Fast Transient Response of 50μs, 150μs or 250μs to Enter Boost Mode
- Internal Charge Pumps for AC Blocking NFETs (ACFET and RBFET) and BAT NFET (BATFET)
- ACFET Fast Turn on in 100μs
- Internal Charge Current Softstart
- PFM Mode to Improve Light Load Efficiency
- Thermal Shutdown Protection
- Input, Battery Overvoltage Protection
- Input, MOSFET, Inductor Overcurrent Protection
- Energy Star Low Iq
- 0.65mA Adapter Output Current when Adapter Present and Charge Disabled
- Compact Package: QFN4×4-28

Applications

- Notebook, Ultra-Book, Tablet PC
- Industrial and Medical Equipment
- Portable Equipment with Rechargeable Batteries

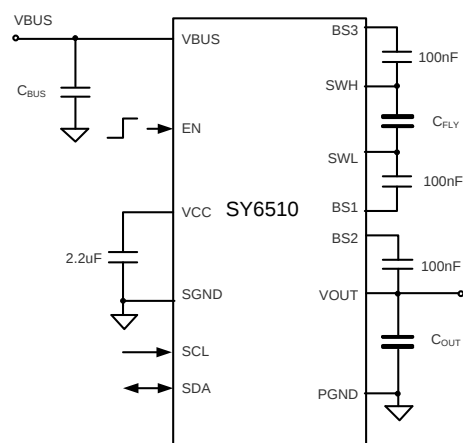


SY6510UIC - High Efficiency Step-down Converter

- Fully Integrated Power MOSFETs with Extremely Low RDS(ON)
- Bypass Mode and Charge Pump Mode Selectable Online
- 50% Duty Cycle in Charge Pump Mode
 - o Voltage Divider: Input Voltage is 2 times of Output Voltage
 - o Current Doubler: Output Current is 2 times of Input Current
- Internal Charge Pump Driver for Bypass Mode
- Soft-start for Inrush Current Limit
- Over Current and Over Temperature Protection
- VOUT Short Protection
- VOUT Over Voltage Protection
- High Conversion Efficiency
- I2C Interface

Applications

- Smart Phones/ Tablets
- Other Handhelds

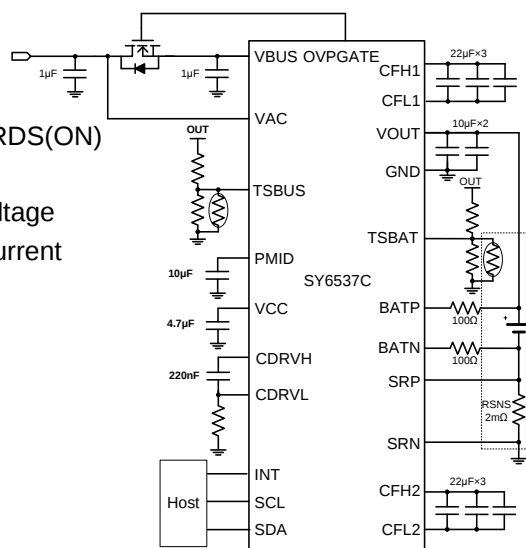


SY6537CVLS - High Efficiency Switched Capacitor Charger

- External OVP Control and Regulation
 - o High Absolute Maximum Rating of 20V (VBUS)
 - o BAT Voltage Regulation (VBAT REG)
 - o BAT Current Regulation (IBAT REG)
- Integrate Input-Side NFET to Block the Reverse Current
- Dual Phase Switched Capacitor Converter Module
 - o 8A Output Current Capability
 - o Efficiency up to 96.8% when VBAT=4V, IBAT=6A
 - o Programmable Frequency
- Fully Integrated Power MOSFETs with Extremely Low RDS(ON)
- 50% Duty Cycle in switched capacitor Mode
 - o Voltage Divider: Input Voltage is 2 times of Output Voltage
 - o Current Doubler: Output Current is 2 times of Input Current
- Soft-start for Inrush Current Limit
- 9-Channel 12-bit ADC
 - o VAC, VBUS, VOUT, VBAT
 - o IBUS, IBAT
 - o TSBUS, TSBAT, TDIE
- I2C Interface

Applications

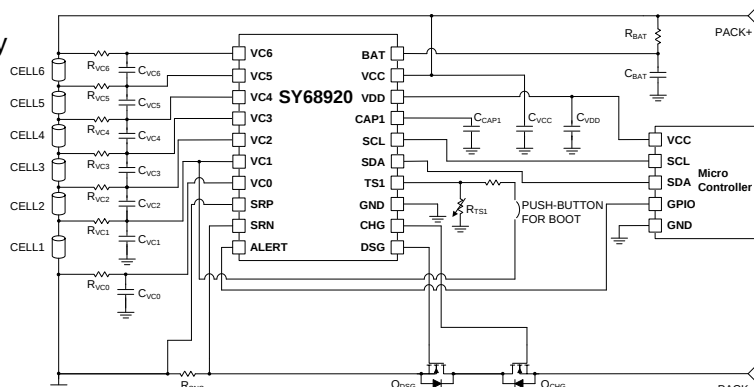
- Smart Phones/ Tablets
- Other Handhelds



SY68920QEQ - 3 to 6 Series Cell Battery Monitor, Balance, Protection For Li-ion and Phosphate Application

Features

- Internal ADC Measures Cell Voltage, Pack or Die Temperature
- A Separate, Internal ADC Measures Pack Current
- Low-Side Charge and Discharge NCH FET Drivers
- Over Current Protection during Discharge (OCD)
- Short-Circuit Protection during Discharge (SCD)
- Cell Over Voltage Protection (OV)
- Cell Under Voltage Protection (UV)
- Secondary Protector Fault Detection
- Integrated Cell Balance FETs
- Integrated Internal Cell Balance Strategy
- Alert Interrupt for Host
- 3.3V External Regulator
- Simple I2C Compatible Interface
- Low Profile QFN5×5 Package



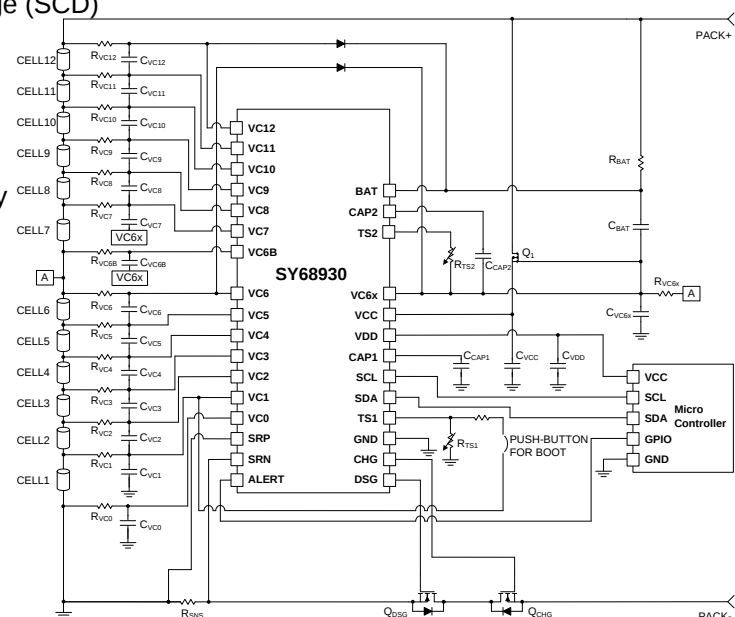
Applications

- Light Electric Vehicles (LEV)
- Power Tools and Garden Tools
- Energy Storage Systems (ESS)

SY68930QHQ - 6 to 12 Series Cell Battery Monitor, Balance, Protection For Li-ion and Phosphate Application

Features

- Internal ADC Measures Cell Voltage, Pack or Die Temperature
- A Separate, Internal ADC Measures Pack Current
- Low-Side Charge and Discharge NCH FET Drivers
- Over Current Protection During Discharge (OCD)
- Short-Circuit Protection During Discharge (SCD)
- Cell Over Voltage Protection (OV)
- Cell Under Voltage Protection (UV)
- Secondary Protector Fault Detection
- Integrated Cell Balance FETs
- Integrated Internal Cell Balance Strategy
- Alert Interrupt for Host
- 3.3V External Regulator
- Simple I2C Compatible Interface
- Low Profile QFN6×6 Package



Applications

- Light Electric Vehicles (LEV)
- Power Tools and Garden Tools
- Energy Storage Systems (ESS)

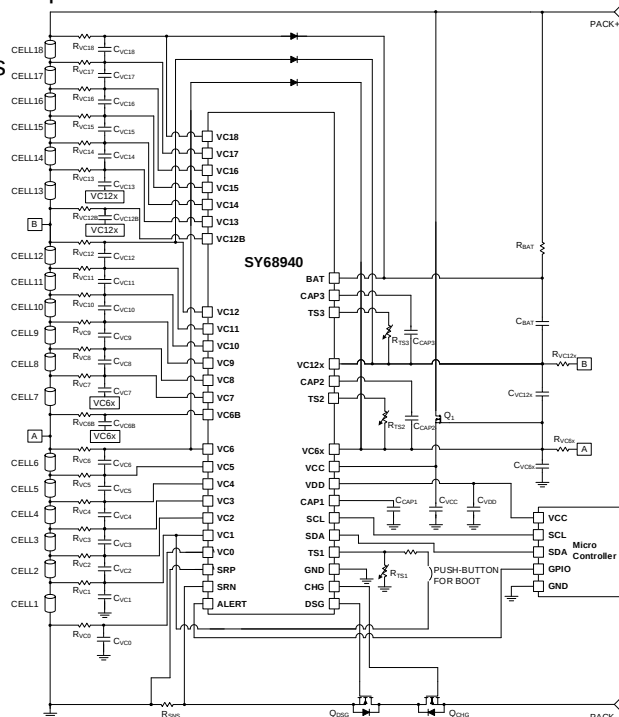
SY68940RJQ - 9 to 18 Series Cell Battery Monitor, Balance, Protection For Li-ion and Phosphate Application

Features

- Internal ADC Measures Cell Voltage, Pack or Die Temperature
- A Separate, Internal ADC Measures Pack Current
- Low-Side Charge and Discharge NCH FET Drivers
- Over Current Protection During Discharge (OCD)
- Short-Circuit Protection During Discharge (SCD)
- Cell Over Voltage Protection (OV)
- Cell Under Voltage Protection (UV)
- Secondary Protector Fault Detection
- Integrated Cell Balance FETs
- Integrated Internal Cell Balance Strategy
- Alert Interrupt for Host
- 3.3V External Regulator
- Simple I2C Compatible Interface
- Low Profile QFN8 × 8 Package

Applications

- Light Electric Vehicles (LEV)
- Power Tools and Garden Tools
- Energy Storage Systems (ESS)



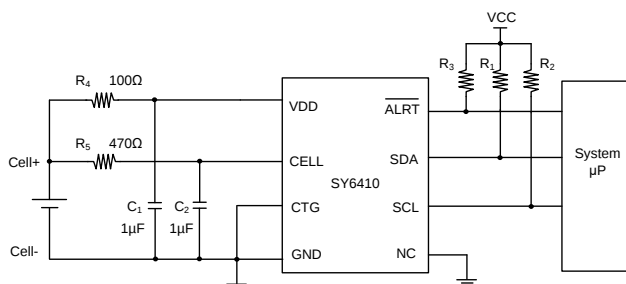
SY6410DFC - Cost-save Single Cell Li+ Battery Gauge IC

Features

- $\pm 7.5\text{mV/Cell}$ Voltage Measurement
- Provide Accurate State of Charge
- Temperature/Load Variation Compensation
- No Accumulated Errors
- Eliminate Current Sense Resistor
- I2C Interface
- Low SOC Alert Indicator
- Compact DFN2 × 2-8 Package

Applications

- Smart Phones/PDAs
- Portable Game Players
- Digital Still and Video Cameras
- Wireless Handsets



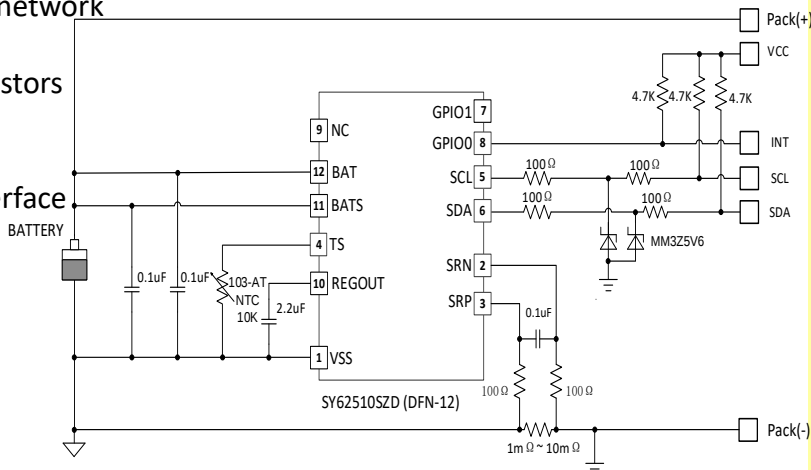
SY62510SZD- Fully Integrated Single Series Lithium-ion/Li-Pol Battery Gauge

Features

- Operating Voltage: 2.2V to 5.5V
- Operating Current: 50 μ A (Typ.)
- Sleep Mode Current: 12 μ A (Typ.)
- Patented gauge algorithm: accurate SOC, SOH
- Automatic compensation for temperature, age, rate and self-discharge
- Dual ADC for Simultaneous Current and Voltage Measurements
- On-chip temperature sensor for monitoring system temperature
- External temperature-measurement network
- Low-side current sense
- Supports min 1m Ω current sense resistors
- SHA-256 and SHA1 authentication
- Diagnostic lifetime data monitor
- 400-kHz I²C bus communications interface
- Package: DFN 2.5mm $\times$ 4mm-12PIN

Applications

- Portable Multimedia Players
- Handheld Terminals
- Portable Medical Device



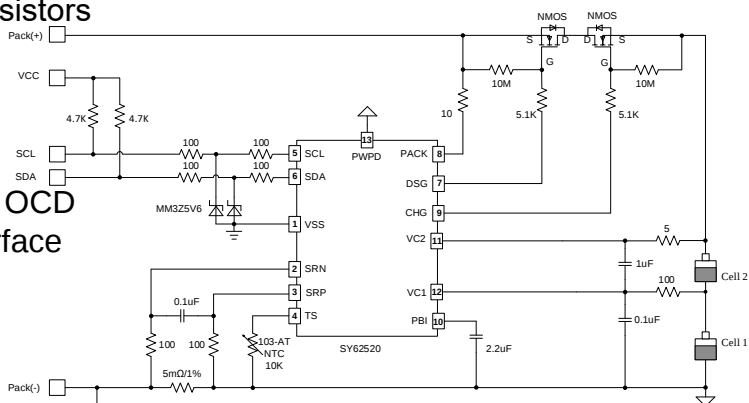
SY62520SZD- 2 Cell Series Lithium-ion/Li-Pol Battery Gauge

Features

- Accurate Patented Gauge Algorithm
- Current Consumption:
 - 100 μ A Normal Operating Mode (typ.)
 - 50 μ A Sleep Mode (typ.)
 - 1 μ A Shutdown Mode (typ.)
- Dual ADC for Simultaneous Current and Voltage Measurements
- Automatic Compensation for Temperature, Age, Charge Rate and Self-Discharge
- On-Chip Temperature Sensor for Monitoring System Temperature
- Remote Temperature Sensor (Thermistor) Input
- Accurate Low-Side Current Sense
- Supports min 1m Ω Current Sense Resistors
- Integrated Cell Balancing MOSFETs
- SHA-256 and SHA1 authentication
- Diagnostic lifetime data monitor
- High-Side N-CH FET Drivers
- Hardware protections SCD, SCC and OCD
- 400kHz I²C bus communications interface
- Package: DFN2.5mm $\times$ 4mm-12PIN

Applications

- Mobile Phones
- Portable and Wearable Health Devices
- Portable Audio Devices


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PMIC

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Number of Channels	Package	Application	Integrated Function
SY8970UBC	2.4	5.5	1 Ch LSW+1 Ch LDO + 3 Chs Buck	CSP3.2×4.2-48	SSD Power System, Microcontrollers	3.4MHz I2C; Auto PFM/FCCM control; Dedicate Sleep Control; Power Good indicator; Protection: OVP/OCP/SCP/OTP.
SY8631BQCC	2.5	5.5	5	QFN4×4-24	Portable Media Players	2-Ch synchronous buck and 3ch LDO, one RESET output and forced PWM mode selection.
SY70300AVCS	2.5	5.5	1	WLCSP 2.66×3.89-54	Smart Phones, Tablets	4 integrated power stages and each phase has the capability to deliver up to 5A totally 20A continuous output current.
SY70300BVCS	2.5	5.5	4	WLCSP 2.66×3.89-54	Smart Phones, Tablets	4 integrated power stages and each output has the capability to deliver up to 5A continuous output current.
NEW SY70300EVCS	2.5	5.5	2	WLCSP 2.66×3.89-54	Optical Module	Integrated 4 power stages and dual outputs with 3 phase + 1 phase , each phase has the capability to deliver up to 5A output current. FPWM operation to reduce output ripple.
NEW SY70300FVCS	2.5	5.5	3	WLCSP 2.66×3.89-54	Optical Module	Integrated 4 power stages and triple outputs with 2 phase + 1 phase + 1 phase , each phase has the capability to deliver up to 5A output current. FPWM operation to reduce output ripple.
SY70300JVCS	2.5	5.5	2	WLCSP 2.66×3.89-54	Optical Module	Integrated 4 power stages and dual outputs with 2 phase + 2 phase , each phase has the capability to deliver up to 5A output current. FPWM operation to reduce output ripple.
SY70301WBQ	2.5	5.5	4	QFN4.5×5-30	Smart Phones, Tablets	Integrate 4-channel high efficiency Buck converters, which provide 6A/4A/6A/4A output current and output voltage covers 0.6V~3.7V, with independent enable pin; support 3.4MHz I ² C communication, DVS, PFM/FCCM control; Protection: OVP/OCP/SCP/OTP etc.
SY70201QPQ	2.6	5.5	4 Buck+ LSW+ Boost	QFN5×5-36	SSD	4-Ch Buck,1-Ch LS, 1-Ch Boost, 3.4MHz I2C, Hardware reset control; DVS, Reset output, Auto PFM/FCCM control; OVP/OCP/SCP/OTP.
SY8600GPZS	2.6	5.5	5 Chs Buck+2 Chs LDO	CSP3.23×3.23-52	SSD	5-Ch Buck(2-Ch can work LSW), 2Ch LDO. 3.4MHz I2C, Hardware sleep control; Reset output; Auto PFM/FCCM control; OVP/OCP/SCP/OTP.
SY8600CPZC	2.8	5.5	5 Chs Buck+2 Chs LDO	CSP3.23×3.23-52	SSD	5-Ch Buck(2-Ch can work LSW), 2Ch LDO. 3.4MHz I2C, Hardware sleep control; Reset output; Auto PFM/FCCM control; OVP/OCP/SCP/OTP. Enable Output Control.
SY8600EPZC	2.8	5.5	5 Chs Buck+2 Chs LDO	CSP3.23×3.23-52	SSD	5-Ch Buck(2-Ch can work LSW), 2Ch LDO. 3.4MHz I2C, Hardware sleep control; Reset output; Auto PFM/FCCM control; OVP/OCP/SCP/OTP. Enable Output Control.
SY8600PZC	2.8	5.5	5 Chs Buck+2 Chs LDO	CSP3.23×3.23-52	SSD	5-Ch Buck(2-Ch can work LSW), 2Ch LDO. 3.4MHz I2C, Hardware sleep control; Reset output; Auto PFM/FCCM control; OVP/OCP/SCP/OTP.
SY8600FPZS	2.8	5.5	5 Chs Buck+2 Chs LDO	CSP3.23×3.23-52	SSD	5-Ch Buck(2-Ch can work LSW), 2Ch LDO. 3.4MHz I2C, Hardware sleep control; Reset output; Auto PFM/FCCM control; OVP/OCP/SCP/OTP.
SY70200PZS	2.8	5.5	5 Chs Buck+2 Chs LDO	CSP3.2×3.2-52	SSD	3.4MHz I2C, Hardware sleep control; Reset output; Auto PFM/FCCM control; OVP/OCP/SCP/OTP. Enable Output Control.
SY70202AVTS	2.8	3.7	4 Chs Buck+2 Chs LDO	CSP2.6×3.6-36	SSD	4-Ch Buck and 2-Ch LDO; 3.4MHz I2C; OVP/SCP/OTP; Auto PWM/PFM or Forced PWM Controlled

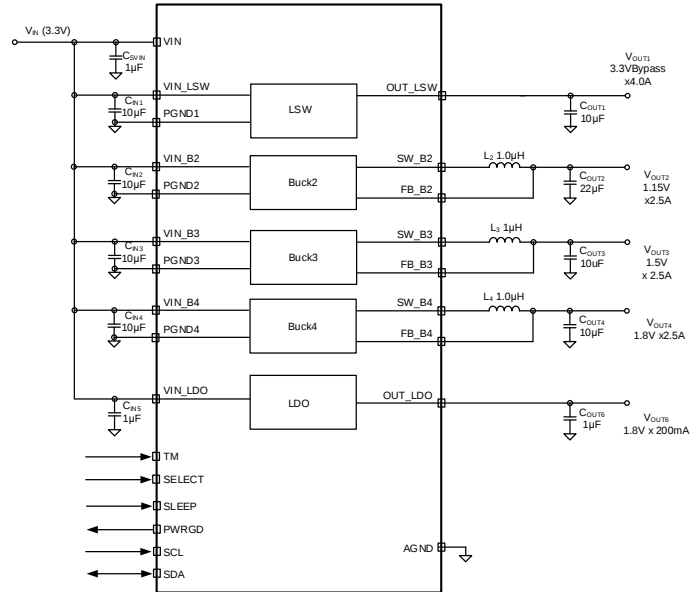
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Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Number of Channels	Package	Application	Integrated Function
SY8686UXC	2.9	3.7	3 Chs Buck+2 Chs LDO	CSP2.42×2.82- 36	SSD	3-Ch Buck and 2-Ch LDO; 1MHz I2C; OVP/SCP/OTP; Auto PWM/PFM or Forced PWM Controlled
SY8686FUXC	2.9	3.7	3 Chs Buck+2 Chs LDO	CSP2.42×2.82- 36	SSD	3-Ch Buck and 2-Ch LDO; 1MHz I2C; OVP/SCP/OTP; Auto PWM/PFM or Forced PWM Controlled
SY8686KUXC	2.9	3.7	3 Chs Buck+2 Chs LDO	CSP2.42×2.82- 36	SSD	3-Ch Buck and 2-Ch LDO; 1MHz I2C; OVP/SCP/OTP; Auto PWM/PFM or Forced PWM Controlled
SY8686RUXS	2.9	3.7	3 Chs Buck+2 Chs LDO	CSP2.42×2.82- 36	SSD	3-Ch Buck and 2-Ch LDO; 1MHz I2C; OVP/SCP/OTP; Auto PWM/PFM or Forced PWM Controlled

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Features

- 2.4V to 5.5V Input Voltage Range
- Channel 1 Load Switch:
 - 4.0A Output Current Capability.
 - 25mohm $R_{DS(ON)}$
 - 0.5ms Soft-start Time
- Channel 2 Synchronous Buck:
 - 2.5A Maximum Output Current Capability.
 - 0.8V to 2V Programmable, 12.5mV Step.
 - 50mohm/35mohm $R_{DS(ON)}$
 - Default output voltage $V_{OUT2}=1.15V$
- Channel 3 Synchronous Buck:
 - 2.5A Maximum Output Current Capability.
 - 0.8V to 2V Programmable, 12.5mV Step.
 - 50mohm/35mohm $R_{DS(ON)}$
 - Default output voltage $V_{OUT3}=1.5V/1.35V$
- Channel 4 Synchronous Buck:
 - 2.5A Maximum Output Current Capability.
 - 0.8V to 2V Programmable, 12.5mV Step
 - 50mohm/35mohm $R_{DS(ON)}$
 - Default Output Voltage $V_{OUT4}=1.8V$
- Channel 6 LDO:
 - 200mA Maximum Output Current Capability.
 - 0.8V to 2V Programmable, 25mV Step.
 - Default Output Voltage $V_{OUT5}=1.8V$
- I²C Interface up to 3.4MHz
- Auto PWM/PFM or Forced PWM Controlled by I²C Interface
- Output Voltage Level of Each Channel Controlled by I²C Interface
- Reliable Protections:
 - Input / Output over Voltage Protection (OVP)
 - Short Circuit Protection (SCP)
 - Over Temperature Protection (OTP)
- Compact Package: Fan-out CSP3.2x4.2-48



Applications

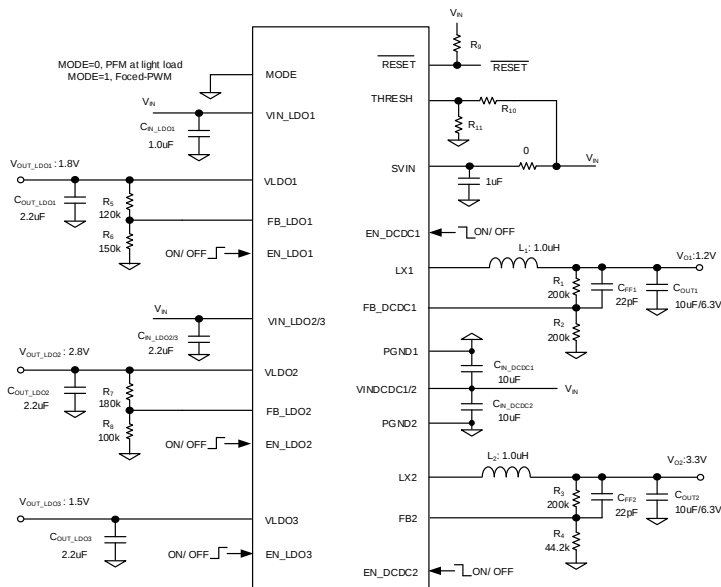
- SSD Power System
- Microcontroller

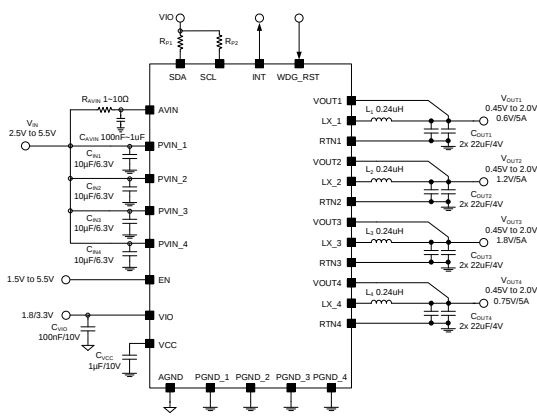
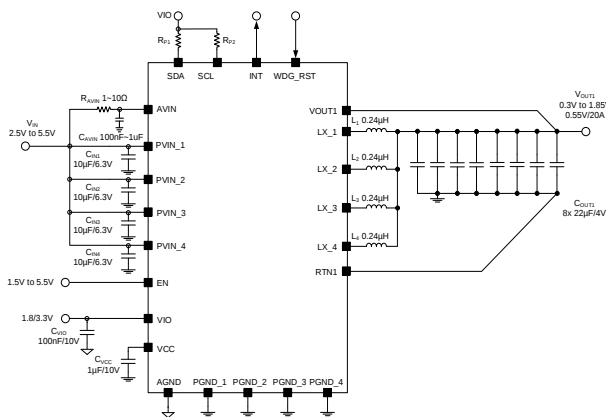
Features

- Input voltage range: 2.5V to 5.5V
- Input voltage range for LDOs : 1.8V to 5.5V
- 2 channels DCDC regulators and 3 channels LDO regulators
- 1A output current capability for each DC/DC regulator
- DC/DC regulators output voltage externally adjustable
- 2.2MHz switching frequency
- Power save mode at light load condition for higher efficiency
- Forced-PWM mode selection by Mode pin
- Total 38uA quiescent current for DC/DC regulators
- 400mA output current capability for LDO1
- 200mA output current capability for LDO2 and LDO3
- LDO1, LDO2 output voltage externally adjustable
- Fixed 1.5V output voltage for LDO3
- Hard short protection, thermal shut down protection
- RoHS Compliant and Halogen Free
- Compact package: QFN4x4-24

Applications

- Cell Phones, Smart-Phones
- WLAN
- PDAs, Pocket PCs, GPS
- Portable Media Players
- Digital Cameras





Features

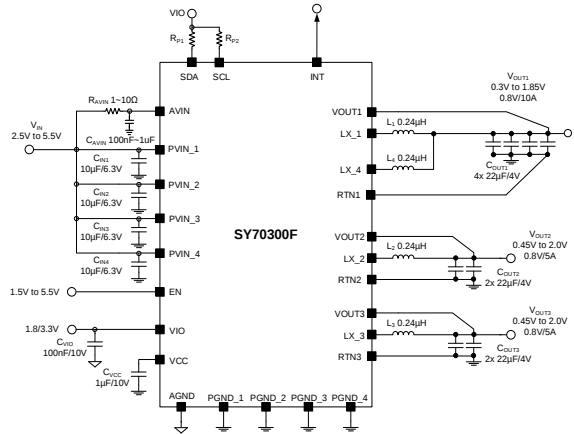
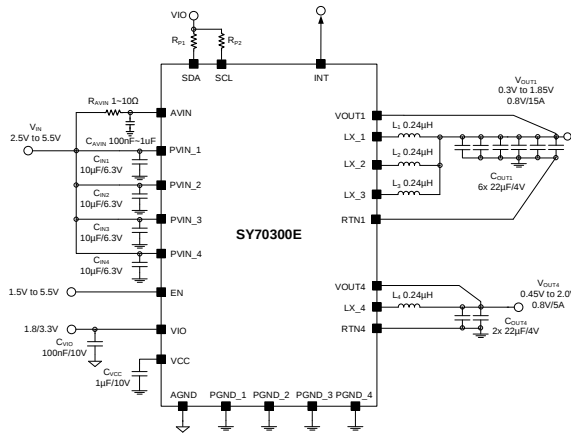
- 2.5V to 5.5V Wide Input Voltage Range
- Five Distinct Phase Configurations:
 - SY70300A (3+1)
 - SY70300B (1+1+1+1)
- 5A per Phase Output Current Capability
- I²C Programmable Output Voltages from 0.3V to 1.85V or 0.45V to 2V
- COT Control Achieves Fast Transient Performance
- ±1.0% Accuracy with Remote Sensing
- Fixed-phase Configuration and Continuous Conduction Mode (FPCCM), OTP Programmable Light Load Mode(DCM/FPCCM)
- Supports Phase Shedding if Configured with DCM Mode by Factory OTP
- Supports Startup with Pre-Biased Output Voltage
- Status Feedback with Interrupt Pin
- Reliable OTP/SCP/UVF/OVP Protection
- Compact Package: WLCSP2.66×3.89-54

Applications

- Smartphones, Tablets
- FPGA and ASIC Power
- Industrial MPU Power

SY70300EVCS/ SY70300FVCS/ SY70300JVCS

- 5.5V, Multi-phase Buck Converter Family

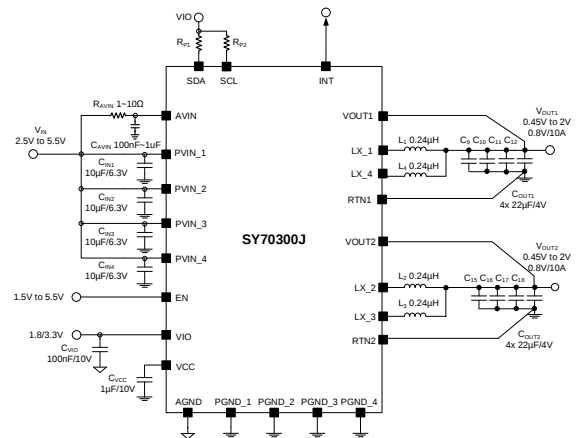


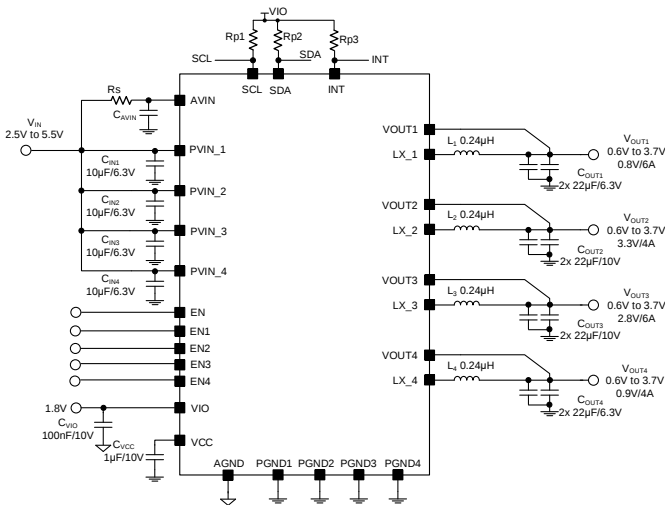
Features

- 2.5V to 5.5V Wide Input Voltage Range
- Three Distinct Phase Configurations:
 - SY70300E (3+1)
 - SY70300F (2+1+1)
 - SY70300J (2+2)
- 5A per Phase Output Current Capability
- I²C Programmable Output Voltages from 0.3V to 1.85V or 0.45V to 2V
- COT Control Achieves Fast Transient Performance
- ±1.0% Accuracy with Remote Sensing
- Fixed-phase Configuration and Continuous Conduction Mode (FPCCM), OTP Programmable Light Load Mode(DCM/FPCCM)
- Supports Phase Shedding if Configured with DCM Mode by Factory OTP
- Supports Startup with Pre-Biased Output Voltage
- Status Feedback with Interrupt Pin
- Reliable OTP/SCP/UVP/OVP Protection
- Compact Package: WLCSP2.66×3.89-54

Applications

- Smartphones, Tablets
- FPGA and ASIC Power
- Industrial MPU Power
- Optical Module





Features

- 2.5V to 5.5V Wide Input Voltage Range
- Four Output Channels: Two with 6A Output Current per Channel; Two with 4A Output Current per Channel
- Low IQ in Low Power Mode
- COT Control Achieves Fast Transient Performance
- I²C Programmable Output Voltages from 0.6V to 3.7V
- $\pm 1.0\%$ Output Accuracy
- Independent Dynamic Voltage Scaling (DVS) for Each Output
- Status Feedback with Interrupt Pin
- Reliable OTP/UVP/OVP Protection
- Compact Package: QFN4.5 $\times$ 5-30

Applications

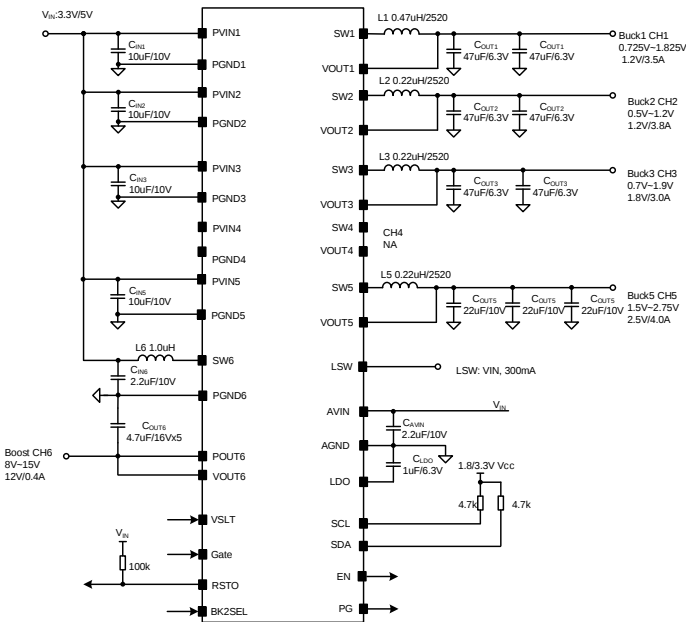
- Smartphones, Tablets
- FPGA and ASIC Power
- Industrial MPU Power

Features

- Input Range: 2.6V to 5.5V
- 5 Independent Synchronous Bucks and 1 Independent 400mA Synchronous Boost, 1 Voltage Detector
- Buck1: Max. Current 3.5A (0.725 V to 1.825V, 6.25mV Step, Default on 1.2V)
- Buck2: Max. Current 3.8A (0.5 V to 1.2V, 6.25mV Step, Default on 1.2V)
- Buck3: Max. Current 3A (0.96V to 1.86 V, 7.5mV Step, Default on 1.8V)
- Buck5: Max. Current 4A (1.5 V to 2.75 V, 12.5mV Step, Default on 2.5 V)
- Boost6: Max. Current 0.4A (8 V to 15 V, 500mV Step, Default on 12 V)
- LSW: Max 300mA. Max. Ron 120mhom, Input Connect to VIN Internally, ON/OFF Controlled by I²C
- I²C Interface up to 3.4MHz
- Independent PMIC Hardware Reset (Make all Channels Return to the Default Voltage)
- DVS (Dynamic Voltage Scaling) Controlled by I²C Interface
- Auto PWM/PFM Mode or Forced PWM Mode Controlled by I²C Interface
- Pull down Mode to Discharge all Channels Forcedly Controlled by I²C Interface
- Support to Adjustable Discharge Resister Controlled by I²C Interface
- Programmable the Various Function by OTP (Each Channel Start up Delay Time, RSTO Delay Time (Power On, RSTO Threshold)
- Enable Output Pin to Synchronous External Device Sequence
- Ultra-Fast Transient Response
- Support to Protection Function (Thermal Shutdown (Typ. 150°C), Over Voltage Protection (External/Output), Over Current Protection, Over Load Protection)
- Input Voltage Monitor Function: Input Monitor bit will be Set from 0 to 1 when Input Exceeds Specific Value.
- Compact 5mm x 5mm QFN Package, 0.45mm pitch
- Green RoHS Package, Pb-Free Lead Finish, Halogen Free Mold Compound

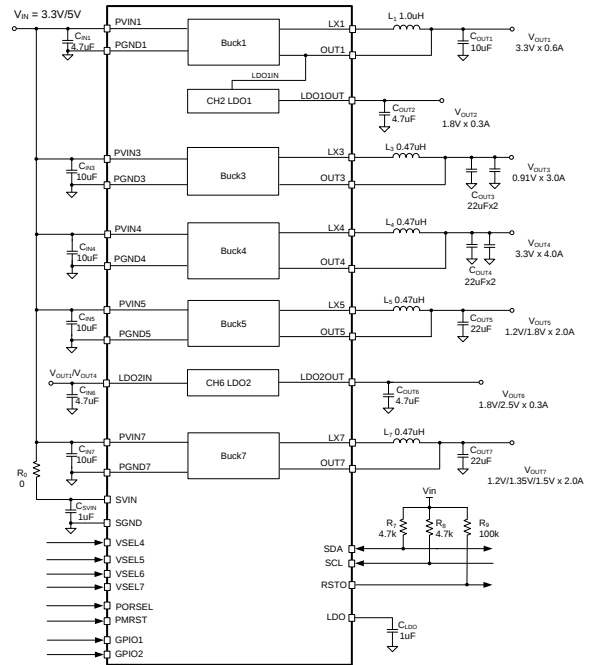
Applications

- SSD Power System



Features

- 2.8V to 5.5V Input Voltage Range
- Channel 1 Synchronous Buck:
 - Low RDS(ON) for Internal Switches (PFET/NFET): 150/150mΩ
 - 0.6A Maximum Output Current Capability
 - Default Output Voltage:
- Channel 2 LDO1:
 - 0.3A Output Current Capability
 - Default Output Voltage VOUT2=1.8V
- Channel 3 Synchronous Buck:
 - Low RDS(ON) for Internal Switches (PFET/NFET): 45/20mΩ
 - 3.0A Maximum Output Current Capability
 - Default Output Voltage VOUT3=0.91V
 - 0.7V to 1.1V Programmable, 10mV Step
- Channel 4 Synchronous Buck:
 - Low RDS(ON) for Internal Switches (PFET/NFET): 35/45mΩ
 - 4.0A Maximum Output Current Capability
 - 2.7V to 3.6V Programmable, 100mV Step
 - Default Output Voltage:
- Channel 5 Synchronous Buck:
 - Low RDS(ON) for Internal Switches (PFET/NFET): 60/40mΩ
 - 2.0A Output Current Capability
 - Default Output Voltage:
- Channel 6 LDO2:
 - 0.3A Output Current Capability
 - Default Output Voltage VOUT6=1.8V/2.5V
- Channel 7 Synchronous Buck:
 - Low RDS(ON) for Internal Switches (PFET/NFET): 60/40mΩ
 - 2.0A Output Current Capability
 - Default Output Voltage VOUT7=1.2V/1.35V/1.5V
- Reset Input/Output Function
- 2.0MHz Switching Frequency for Buck Converters
- Auto PWM/PFM Mode or Forced PWM Mode Controlled by I2C Interface
- I2C Interface Up to 3.4MHz
- Output Voltage Level of CH3/CH4 Controlled by I2C Interface with DVS Function
- 2 Kinds of Power On Reset Detection Voltage Level Selected by PORSEL Pin
- Dedicated Sleep Mode Controlled by GPIO1/GPIO2, PMRST
- Reliable Protections:
 - Over Voltage Protection (OVP)
 - Over Current Protection (OCP)
 - Short Circuit Protection (SCP)
 - Over Temperature Protection (OTP)
- Compact Package: CSP3.23×3.23-52

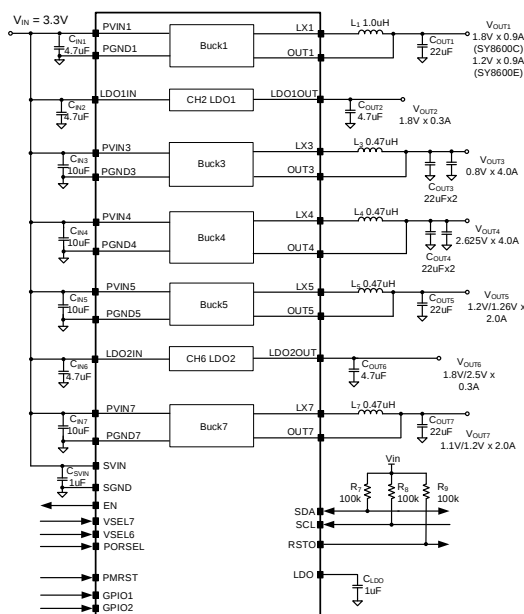


Applications

- SSD Power System

Features

- 2.8V to 5.5V Input Voltage Range
- Channel 1 Synchronous Buck:
 - Low RDS(ON) for Internal Switches (PFET/NFET): 150/150mΩ
 - 0.9A Maximum Output Current Capability
 - Default Output Voltage VOUT1 = 1.8V(SY8600C)
 - Default Output Voltage VOUT1 = 1.2V(SY8600E)
- Channel 2 LDO1:
 - 0.3A Output Current Capability
 - Default Output Voltage VOUT2 = 1.8V
- Channel 3 Synchronous Buck:
 - Low RDS(ON) for Internal Switches (PFET/NFET): 45/20mΩ
 - 4.0A Maximum Output Current Capability
 - Default Output Voltage VOUT3 = 0.8V
 - 0.7V to 1.1V Programmable, 10mV Step
- Channel 4 Synchronous Buck:
 - Low RDS(ON) for Internal Switches (PFET/NFET): 35/45mΩ
 - 4.0A Maximum Output Current Capability
 - Default Output Voltage VOUT4 = 2.625V
 - 2.3625V to 3.15V Programmable, 87.5mV Step
- Channel 5 Synchronous Buck:
 - Low RDS(ON) for Internal Switches (PFET/NFET): 60/40mΩ
 - 2.0A Output Current Capability
 - Default Output Voltage VOUT5 = 1.2V/1.26V, Selected by Pin VSEL6
- Channel 6 LDO2:
 - 0.3A Output Current Capability
 - Default Output Voltage VOUT6 = 1.8V/2.5V, Selected by Pin VSEL7
- Channel 7 Synchronous Buck:
 - Low RDS(ON) for Internal Switches (PFET/NFET): 60/40mΩ
 - 2.0A Output Current Capability
 - Default Output Voltage VOUT7 = 1.1V/1.2V, Selected by Pin VSEL7
- Reset Input/Output Function
- 2.0MHz Switching Frequency for Buck Converters
- Auto PWM/PFM Mode or Forced PWM Mode Controlled by I2C Interface
- I2C Interface up to 3.4MHz
- Output Voltage Level of CH3/CH4 Controlled by I2C Interface with DVS Function
- Two Types of Power-On Reset Detection Voltage Level, Selected by PORSEL Pin
- Dedicated Sleep Mode Controlled by GPIO1/GPIO2, PMRST
- Reliable Protections:
 - Over Voltage Protection (OVP)
 - Over Current Protection (OCP)
 - Short Circuit Protection (SCP)
 - Over Temperature Protection (OTP)
- Compact Package: CSP3.23x3.23-52(0.4mm pitch)

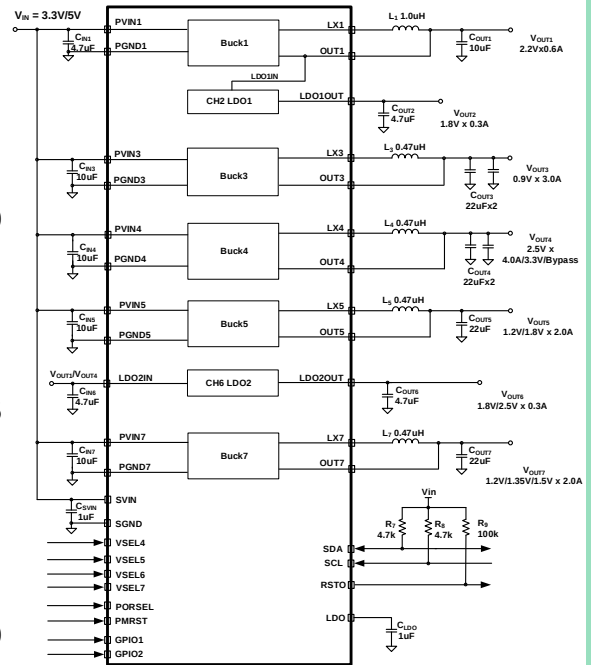


Applications

- SSD Power

Features

- 2.6V to 5.5V Input Voltage Range
- Channel 1 Synchronous Buck:
 - Low RDS(ON) for Internal Switches (PFET/NFET): 150/150 mΩ
 - 0.6A Maximum Output Current Capability.
 - Default Output Voltage VOUT1=2.2V.
- Channel 2 LDO1:
 - 0.3A Output Current Capability.
 - Default Output Voltage VOUT2=1.8V
- Channel 3 Synchronous Buck:
 - Low RDS(ON) for Internal Switches (PFET/NFET): 45/20 mΩ
 - 3.0A Maximum Output Current Capability.
 - Default Output Voltage VOUT3=0.90V.
 - 0.55V to 0.95V Programmable, 10mV step.
- Channel 4 Synchronous Buck:
 - Low RDS(ON) for Internal Switches (PFET/NFET): 35/45 mΩ
 - 4.0A Maximum Output Current Capability.
 - Default Output Voltage VOUT4=2.5V/3.3V/Bypass.
 - 2.4V to 3.3V Programmable, 100mV step.
 - Default Output Voltage:
- Channel 5 Synchronous Buck:
 - Low RDS(ON) for Internal Switches (PFET/NFET): 60/40 mΩ
 - 2.0A Output Current Capability.
 - Default Output Voltage:
- Channel 6 LDO2:
 - 0.3A Output Current Capability.
 - Default Output Voltage VOUT6=1.8V/2.5V
- Channel 7 Synchronous Buck:
 - Low RDS(ON) for Internal Switches (PFET/NFET): 60/40 mΩ
 - 2.0A Output Current Capability.
 - Default Output Voltage VOUT7=1.2V/1.35V/1.5V
- Reset Input/Output Function
- 2.0MHz Switching Frequency for Buck Converters
- Auto PWM/PFM Mode or Forced PWM Mode Controlled by I2C Interface
- I2C Interface up to 3.4MHz
- Output Voltage Level of CH3/CH4 Controlled by I2C Interface with DVS Function
- 2 kinds of Power on Reset Detection Voltage Level Selected by PORSEL Pin
- Dedicated Sleep Mode Controlled by GPIO1/GPIO2, PMRST
- Reliable Protections:
 - Over Voltage Protection (OVP)
 - Over Current Protection (OCP)
 - Short Circuit Protection (SCP)
 - Over Temperature Protection (OTP)
- Compact package: CSP3.23x3.23-52 (0.4mm pitch)

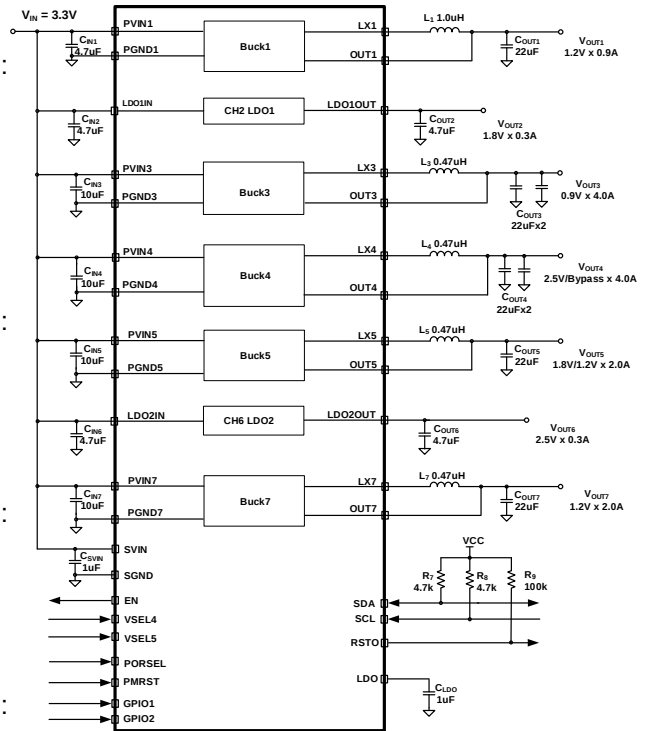


Applications

- SSD Power System

Features

- 2.8V to 5.5V Input Voltage Range
- Channel 1 Synchronous Buck:
 - Low RDS(ON) for Internal Switches (PFET/NFET): 150/150 mΩ
 - 0.9A Maximum Output Current Capability
 - Default Output Voltage: VOUT1=1.2V
- Channel 2 LDO1:
 - 0.3A Output Current Capability
 - Default Output Voltage VOUT2=1.8V
- Channel 3 Synchronous Buck:
 - Low RDS(ON) for Internal Switches (PFET/NFET): 45/20 mΩ
 - 4.0A Maximum Output Current Capability
 - Default Output Voltage VOUT3=0.90V
 - 0.7V to 1.1V Programmable, 10mV Step
- Channel 4 Synchronous Buck:
 - Low RDS(ON) for Internal Switches (PFET/NFET): 35/45 mΩ
 - 4.0A Maximum Output Current Capability
 - 2.1V to 3.0V Programmable, 100mV Step
 - Default Output Voltage:
- Channel 5 Synchronous Buck:
 - Low RDS(ON) for Internal Switches (PFET/NFET): 60/40 mΩ
 - 2.0A Output Current Capability
 - Default Output Voltage:
- Channel 6 LDO2:
 - 0.3A Output Current Capability
 - Default Output Voltage VOUT6=2.5V
- Channel 7 Synchronous Buck:
 - Low RDS(ON) for Internal Switches (PFET/NFET): 60/40 mΩ
 - 2.0A Output Current Capability
 - Default Output Voltage VOUT7=1.2V
- Reset Input/Output Function
- 2.0MHz Switching Frequency for Buck Converters
- Auto PWM/PFM Mode or Forced PWM Mode Controlled by I2C Interface
- I2C Interface up to 3.4MHz
- Output Voltage Level of CH3/CH4 Controlled by I-2C Interface with DVS Function
- 2 Kinds of Power on Reset Detection Voltage Level Selected by PORSEL Pin
- Dedicated Sleep Mode Controlled by GPIO1/GPIO2, PMRST
- Reliable Protections:
 - Over Voltage Protection (OVP)
 - Over Current Protection (OCP)
 - Short Circuit Protection (SCP)
 - Over Temperature Protection (OTP)
- Compact Package: CSP3.23x3.23-52(0.4mm pitch)

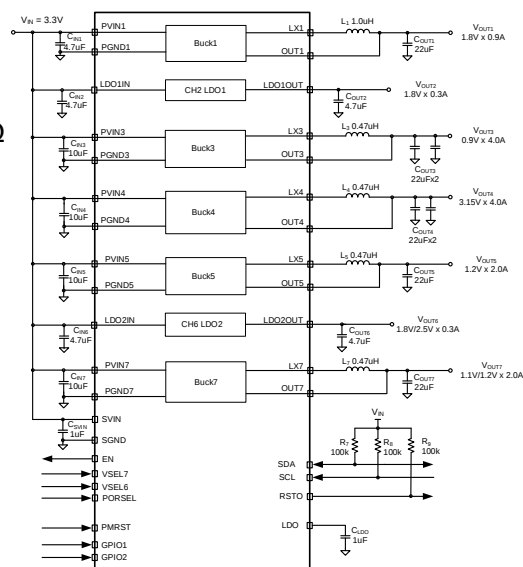


Applications

- SSD Power System

Features

- 2.8V to 5.5V Input Voltage Range
- Channel 1 Synchronous Buck:
 - Low $R_{DS(ON)}$ for Internal Switches (PFET/NFET): 150/150m Ω
 - 0.9A Maximum Output Current Capability
 - Default Output Voltage VOUT1 = 1.8V
- Channel 2 LDO1:
 - 0.3A Output Current Capability
 - Default Output Voltage VOUT2 = 1.8V
- Channel 3 Synchronous Buck:
 - Low $R_{DS(ON)}$ for Internal Switches (PFET/NFET): 45/20m Ω
 - 4.0A Maximum Output Current Capability
 - Default Output Voltage VOUT3 = 0.9V
 - 0.7V to 1.1V Programmable, 10mV Step
- Channel 4 Synchronous Buck:
 - Low $R_{DS(ON)}$ for Internal Switches (PFET/NFET): 35/45m Ω
 - 4.0A Maximum Output Current Capability
 - Default Output Voltage VOUT4 = 3.15V Selected by PORSEL
 - 2.3625V to 3.15V Programmable, 87.5mV Step
- Channel 5 Synchronous Buck:
 - Low $R_{DS(ON)}$ for Internal Switches (PFET/NFET): 60/40m Ω
 - 2.0A Output Current Capability
 - Default Output Voltage VOUT5 = 1.2V
- Channel 6 LDO2:
 - 0.3A Output Current Capability
 - Default Output Voltage VOUT6 = 1.8V/2.5V Selected by VSEL6
- Channel 7 Synchronous Buck:
 - Low $R_{DS(ON)}$ for Internal Switches (PFET/NFET): 60/40m Ω
 - 2.0A Output Current Capability
 - Default Output Voltage VOUT7 = 1.1V/1.2V Selected by VSEL7
- Reset Input/Output Function
- 2.0MHz Switching Frequency for Buck Converters
- Auto PWM/PFM Mode or Forced PWM Mode Controlled by I²C Interface
- I²C Interface up to 3.4MHz
- Output Voltage Level of CH3/CH4 Controlled by I²C Interface with DVS
- Dedicated Sleep Mode Controlled by GPIO1/GPIO2, PMRST
- Reliable Protections:
 - Overvoltage Protection (OVP)
 - Overcurrent Protection (OCP)
 - Short-Circuit Protection (SCP)
 - Overtemperature Protection (OTP)
- Compact Package: CSP3.23×3.23-52 (0.4mm pitch)



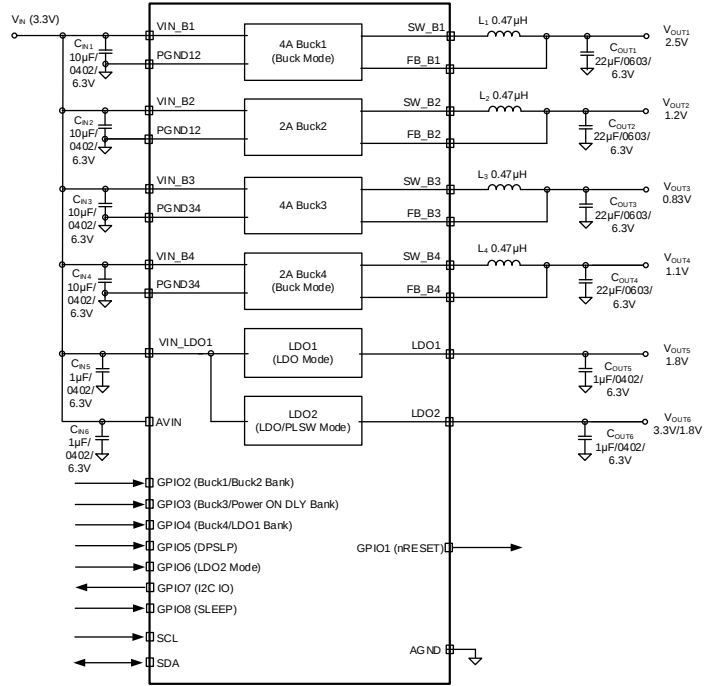
Applications

- SSD Power

[Back](#)

Features

- Wide Input Voltage Range
 - VIN = 2.8V to 3.7V
- Channel 1 Synchronous Buck:
 - 4A Maximum Output Current Capability.
 - 1.6V to 3.0V Programmable, 25mV step.
 - Bypass Mode or Buck Mode Selection.
- Channel 2 Synchronous Buck:
 - 2A Maximum Output Current Capability.
 - 0.9V to 2.0V Programmable, 10mV Step.
- Channel 3 Synchronous Buck:
 - 4A Maximum Output Current Capability.
 - 0.5V to 1.2V Programmable, 10mV Step.
- Channel 4 Synchronous Buck:
 - 2A Maximum Output Current Capability.
 - 0.9V to 2.0V Programmable, 50mV Step.
 - Buck Mode or LDO Mode Selection.
- Channel 5 LDO1:
 - 0.4A Maximum Output Current Capability.
 - 1.0V to 2.7V Programmable, 50mV step.
 - Bypass Mode or LDO Mode Selection.
- Channel 6 LDO2:
 - 0.4A Maximum Output Current Capability.
 - 1.0V to 2.7V Programmable, 50mV Step.
 - Bypass Mode or LDO Mode Selection.
- I2C Interface up to 3.4MHz
- Auto PWM/PFM or Forced PWM Controlled by I2C Interface
- Output Voltage Level of Each Channel Controlled by I2C Interface
- Reliable Protections:
 - Input/Output Over Voltage Protection(OVP)
 - Short Circuit Protection (SCP)
 - Over Temperature Protection (OTP)
- Compact Package: CSP2.6×2.6-36

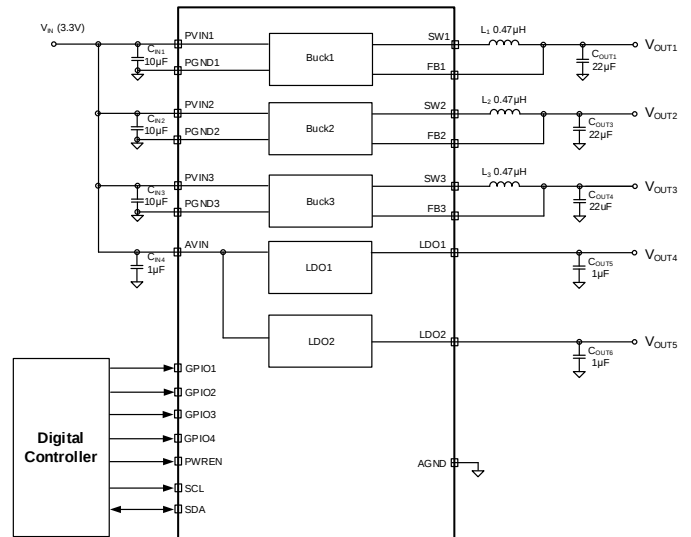


Applications

- Solid State Drives
- Microcontroller

Features

- Wide Input Voltage Range
 - $V_{IN} = 2.9V$ to $3.7V$
- Channel 1 Synchronous Buck:
 - 4A Maximum Output Current Capability
 - 2.1V to 3.3V Programmable, 12.5mV Step
 - 40mohm/25mohm R_{DS_ON}
- Channel 2 Synchronous Buck:
 - 3A Maximum Output Current Capability
 - 0.6V to 1.5V Programmable, 9.375mV Step
 - 80mohm/35mohm R_{DS_ON}
- Channel 3 Synchronous Buck:
 - 3A Maximum Output Current Capability
 - 1.0V to 3.3V Programmable, 12.5mV Step
 - 50mohm/50mohm R_{DS_ON}
- Channel 4 LDO1:
 - 0.3A Maximum Output Current Capability
 - 1.0V to 2.5V Programmable, 12.5mV Step
- Channel 5 LDO2:
 - 0.3A Maximum Output Current Capability
 - 1.6V to 3.3V Programmable, 12.5mV Step
- I²C Interface up to 1MHz
- Auto PWM/PFM or Forced PWM Controlled by I²C Interface
- Output Voltage Level of Each Channel Controlled by I²C Interface
- Reliable Protections:
 - Input/output Over Voltage Protection (OVP)
 - Short Circuit Protection (SCP)
 - Over Temperature Protection (OTP)
- Compact Package: CSP2.42×2.82-36

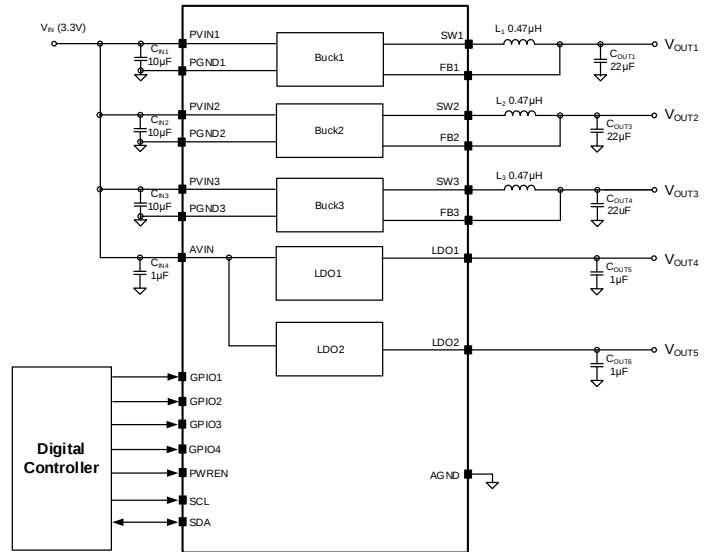


Applications

- Solid State Drives
- Microcontroller

Features

- Wide Input Voltage Range
 - $V_{IN} = 2.9V$ to $3.7V$
- Channel 1 Synchronous Buck:
 - 4A Maximum Output Current Capability
 - 2.1V to 3.3V Programmable, 12.5mV Step
 - Bypass Mode or Buck Mode Selection
 - 40mohm/25mohm R_{DS_ON}
- Channel 2 Synchronous Buck:
 - 3A Maximum Output Current Capability
 - 0.6V to 1.5V Programmable, 9.375mV Step
 - 80mohm/35mohm R_{DS_ON}
- Channel 3 Synchronous Buck:
 - 3A Maximum Output Current Capability
 - 1.0V to 3.3V Programmable, 12.5mV Step
 - 50mohm/50mohm R_{DS_ON}
- Channel 4 LDO1:
 - 0.3A Maximum Output Current Capability
 - 1.0V to 2.5V Programmable, 12.5mV Step
- Channel 5 LDO2:
 - 0.3A Maximum Output Current Capability
 - 1.6V to 3.3V Programmable, 12.5mV Step
- I2C Interface up to 1MHz
- Auto PWM/PFM or Forced PWM Controlled by I2C Interface
- Output Voltage Level of Each Channel Controlled by I2C Interface
- Reliable Protections:
 - Input/output Over Voltage Protection (OVP)
 - Short Circuit Protection (SCP)
 - Over Temperature Protection (OTP)
- Compact Package: CSP2.42×2.82-36

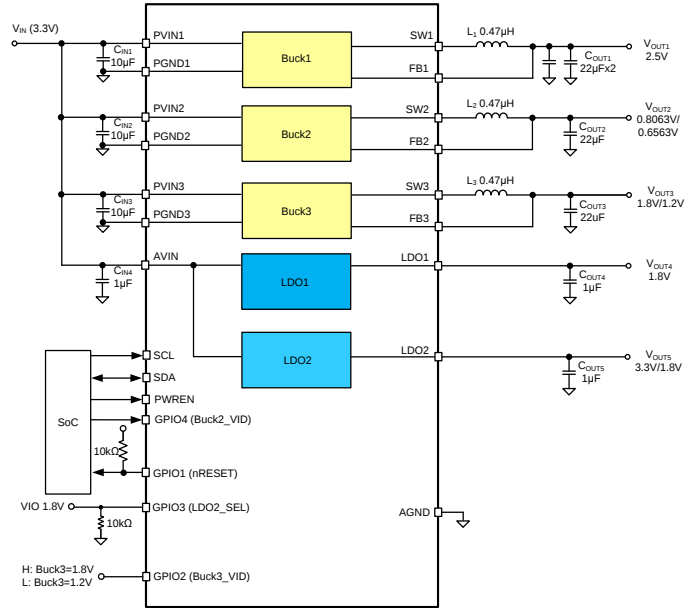


Applications

- Solid State Drives
- Microcontroller

Features

- Wide Input Voltage Range
 - $V_{IN} = 2.9V$ to $3.7V$
- Channel 1 Synchronous Buck:
 - 4A Maximum Output Current Capability.
 - 2.1V to 3.0V Programmable, 12.5mV step.
 - 40mohm/25mohm R_{DS_ON}
- Channel 2 Synchronous Buck:
 - 3A Maximum Output Current Capability.
 - 0.6V to 1.5V Programmable, 9.375mV Step.
 - 80mohm/35mohm R_{DS_ON}
- Channel 3 Synchronous Buck:
 - 3A Maximum Output Current Capability.
 - 1.0V to 3.0V Programmable, 12.5mV Step.
 - 50mohm/50mohm R_{DS_ON}
- Channel 4 LDO1:
 - 0.3A Maximum Output Current Capability.
 - 1.0V to 2.5V Programmable, 12.5mV Step.
- Channel 5 LDO2:
 - 0.3A Maximum Output Current Capability.
 - 1.6V to 3.0V Programmable, 12.5mV step.
 - Bypass Mode or LDO Mode Selection.
- I2C Interface up to 1MHz
- Auto PWM/PFM or Forced PWM Controlled by I2C Interface
- Output Voltage Level of Each Channel Controlled by I2C Interface
- Reliable Protections:
 - Input/output Over Voltage Protection (OVP)
 - Short Circuit Protection (SCP)
 - Over Temperature Protection (OTP)
- Compact Package: CSP2.42×2.82-36

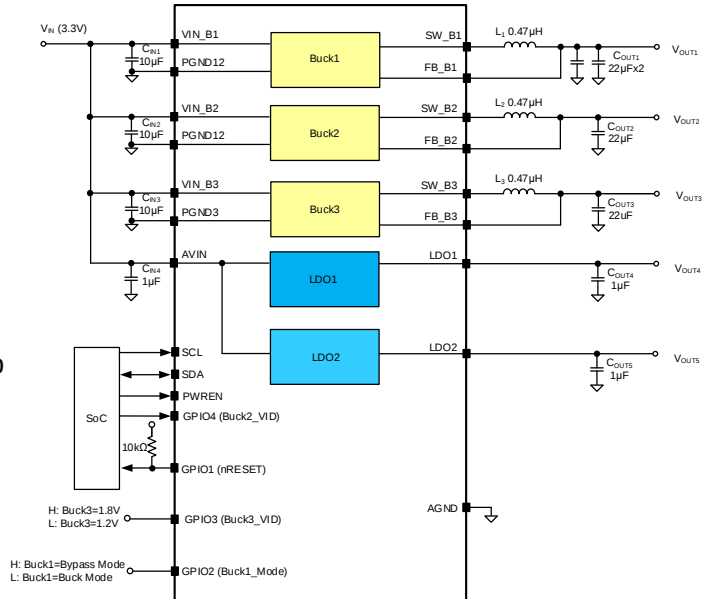


Applications

- Solid State Drives
- Microcontroller

Features

- Wide Input Voltage Range
 - $V_{IN} = 2.9V$ to $3.7V$
- Channel 1 Synchronous Buck:
 - 4A Maximum Output Current Capability
 - 2.1V to 3.3V Programmable, 12.5mV Step
 - Bypass Mode or Buck Mode Selection
 - 40mohm/25mohm R_{DS_ON}
- Channel 2 Synchronous Buck:
 - 3A Maximum Output Current Capability
 - 0.6V to 1.5V Programmable, 9.375mV Step
 - 80mohm/35mohm R_{DS_ON}
- Channel 3 Synchronous Buck:
 - 3A Maximum Output Current Capability
 - 1.0V to 3.3V Programmable, 12.5mV Step
 - 50mohm/50mohm R_{DS_ON}
- Channel 4 LDO1:
 - 0.3A Maximum Output Current Capability
 - 1.0V to 2.5V Programmable, 12.5mV Step
- Channel 5 LDO2:
 - 0.3A Maximum Output Current Capability
 - 1.6V to 3.3V Programmable, 12.5mV Step
- I2C Interface up to 1MHz
- Auto PWM/PFM or Forced PWM Controlled by I2C Interface
- Output Voltage Level of Each Channel Controlled by I2C Interface
- Reliable Protections:
 - Input/output Over Voltage Protection (OVP)
 - Short Circuit Protection (SCP)
 - Over Temperature Protection (OTP)
- Compact Package: CSP2.42×2.82-36



Applications

- Solid State Drives
- Microcontroller

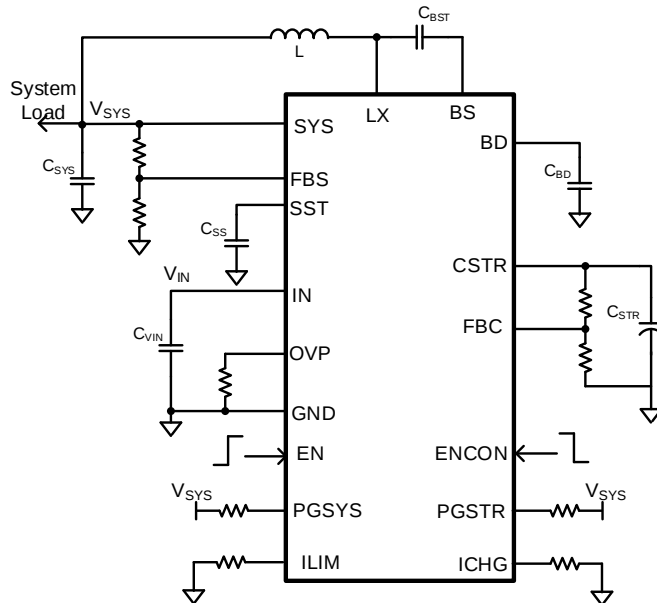
Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Number of Channels	Package	Application	Integrated Function
SY6402QVC	2.7	16	1	QFN3×4-19	SSD	Input-side current limit switch Bi-directional DC-DC Regulator with disconnect switch: Boost Charging Mode and Buck Discharging Mode .
SYT664RGC	2.6	16	1	QFN4×4-25	SSD	Input-side reverse blocking switch Bi-directional DC/DC regulator, I2C interface.
SY8665TTC	4.5	28	2	QFN3×3-19	Notebook/Monitor/ Desktop	Wide input voltage range, high efficiency PMIC for USB power delivery applications. The device integrates a 5A buck regulator, a external PMOS driver and a external NMOS driver to realize power path control.
SY8665DTTQ	4.5	28	2	QFN3×3-19	Notebook/Monitor/ Desktop	Wide input voltage range, high efficiency PMIC for USB power delivery applications. The device integrates a 5A buck regulator, external PMOS driver and a external NMOS driver to realize power path control.
SY8688DPUC	2.6	28	3	CSP3.33×3.5 3-36	Mobile/POS	High integration power management unit with single-cell switching charger, I2C interface, OTG operation power path management, and 2-Channel flash LED driver for smart phone.
SY72001RGQ	2.6	16	1	QFN4×4-25	SSD	Input-side reverse blocking switch Bi-directional DC/DC regulator, I2C interface.
SY72025RGQ	2.6	16	1	QFN4×4-25	SSD	Input-side reverse blocking switch, Bi-directional DC/DC regulator, I2C interface.
SY72025ARGQ	2.6	16	1	QFN4×4-25	SSD	Input-side reverse blocking switch, Bi-directional DC/DC regulator, I2C interface.
SY72025BRGQ	2.6	16	1	QFN4×4-25	SSD	Input-side reverse blocking switch, Bi-directional DC/DC regulator, I2C interface.
SY72025CRGQ	2.6	16	1	QFN4×4-25	SSD	Input-side reverse blocking switch, Bi-directional DC/DC regulator, I2C interface.
SY72025DRGQ	2.6	16	1	QFN4×4-25	SSD	Input-side reverse blocking switch, Bi-directional DC/DC regulator, I2C interface.

Features

- Low RDS(ON) for internal switches
 - Input Reverse Blocking Switch: 50 mΩ
 - High-side and Low-side Switches of Bi-directional Dc-Dc Regulator: 60 mΩ /60 mΩ
 - Disconnect Switch: 30 mΩ
- 2.7V-16V Input Voltage Range
- 36V Storage Voltage Rating
- Programmable Input Current Limit from 1A to 5A
- Selectable Over Voltage Protection: 3.3V, 5.0V, and 12V
- Reverse Blocking at Input Side
- Programmable Soft-start Time
- Integrated High-efficiency Bi-directional Dc-Dc Regulator: Boost Charging Mode and Buck Discharging Mode Auto-alternating with Programmable System Voltage
- Quasi-Fixed Frequency Constant OFF Time Control for Stable Operation: 500kHz
- Programmable Boost Charging Current
- Programmable Storage Voltage
- Power Path Management
- Short-circuit Protection at Energy Storage Side
- Enable Control
- RoHS Compliant and Halogen Free
- Compact package: QFN3X4-19

Applications

- Solid-State Drivers
- Backup Power Supply

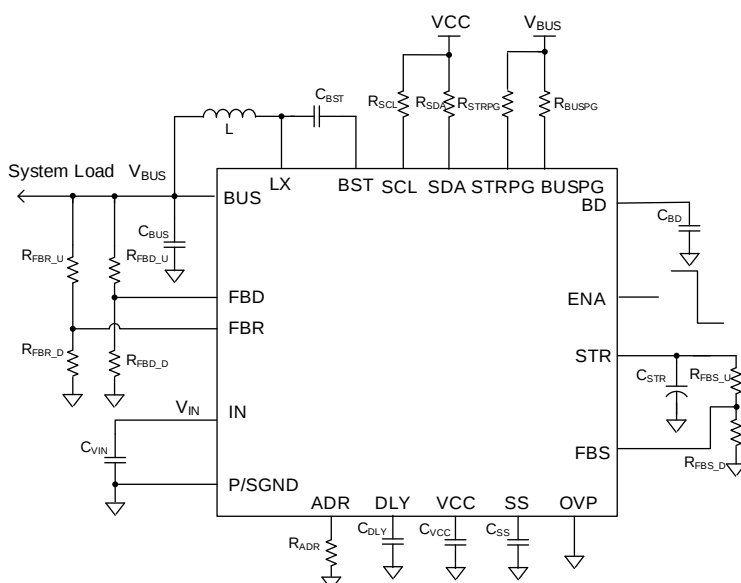


Features

- Low RDS(ON) for Internal Switches
- Input Reverse Blocking Switch: 24mΩ (Typical)
- High-side and Low-side Switches of Bi-directional DC/DC Regulator: 70mΩ /70mΩ (Typical)
- - Disconnect Switch: 40mΩ (Typical)
- 2.6V-16V Input Voltage Range
- Storage Voltage Rating Up to 36V
- Programmable Input Current Limit from 1.2A to 6.2A
- Selectable Over Voltage Protection: 3.8V, 5.7V, and 13.3V
- Reverse Blocking at Input Side to Prevent From Leakage Current
- Programmable Reverse Blocking Switch Turn On Delay Time
- Programmable Reverse Blocking Switch Soft-start Time
- Integrated High-efficiency Bi-directional DC/DC Regulator: Boost Charging Mode and Buck Discharging Mode Auto-alternating According to the Programmed BUS Voltage Detection and Regulation Level
- Programmable Quasi-Fixed Frequency Constant OFF Time Control for Steady-State Operation
- Programmable Boost Charging Peak Current and Adaptive Charging Current Fold-back
- Programmable Storage Voltage
- MTP(Multi-Times Programming) Available for Control Parameters Programming by I2C
- Short-circuit Protection at Energy Storage Side
- Storage Capacitance Measurement and Abnormal ESR Detection
- Enable Control
- RoHS Compliant and Halogen Free
- Compact Package: OFN4×4-25

Applications

- Solid-state Drivers
- Backup Power Supply

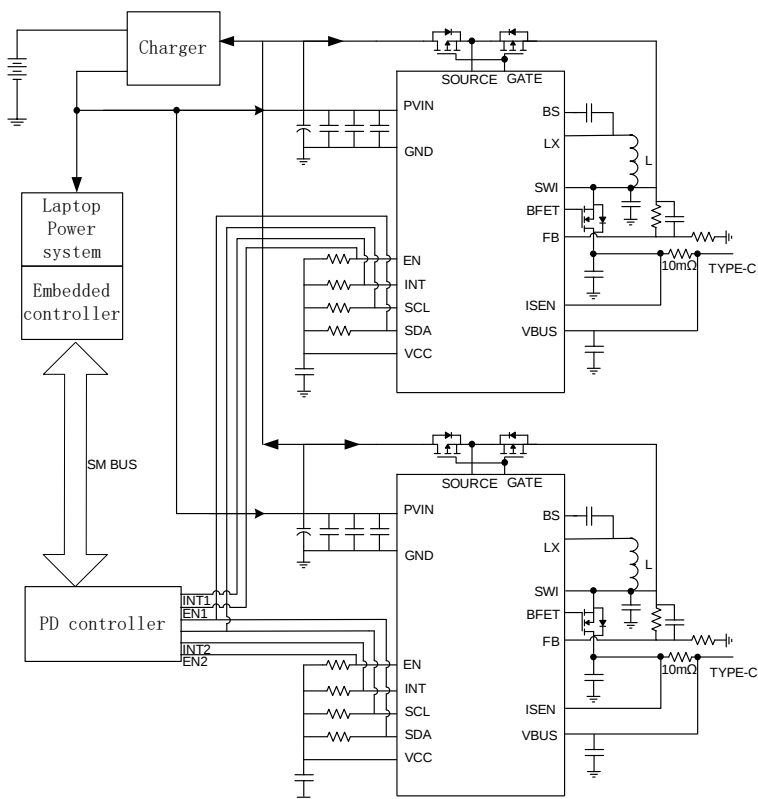


Features

- 4.5-28V wide input voltage range
- Bidirectional power path control
- 5A buck regulator
 - Low RDS(ON) internal switch: HSFET: 33mΩ, LSFET: 23 mΩ
 - I2C programmable output range from 3.0V to 21V in 200mV per step
 - Cable impedance compensation
 - Selectable switching frequency: 250kHz/500kHz/750kHz/1MHz
 - Internal soft-start limits the input inrush current
 - Output OCP, SCP, OVP
- External NFET driver for reverse blocking
- External PFET driver for power bypass
- I2C compatible interface
- Support interrupt for status feedback
- Programmable discharge
- Inductor peak current limit setting:
 - SY8665: 5A/7A
 - SY8665D: 9A/12.5A
- Thermal shutdown protection
- Compact package QFN3x3-19
- UL Certificate Number: E491480
- UL 2367 Certified
- IEC/ EN 62368-1 Certified

Applications

- Notebook
- Monitor
- Desktop

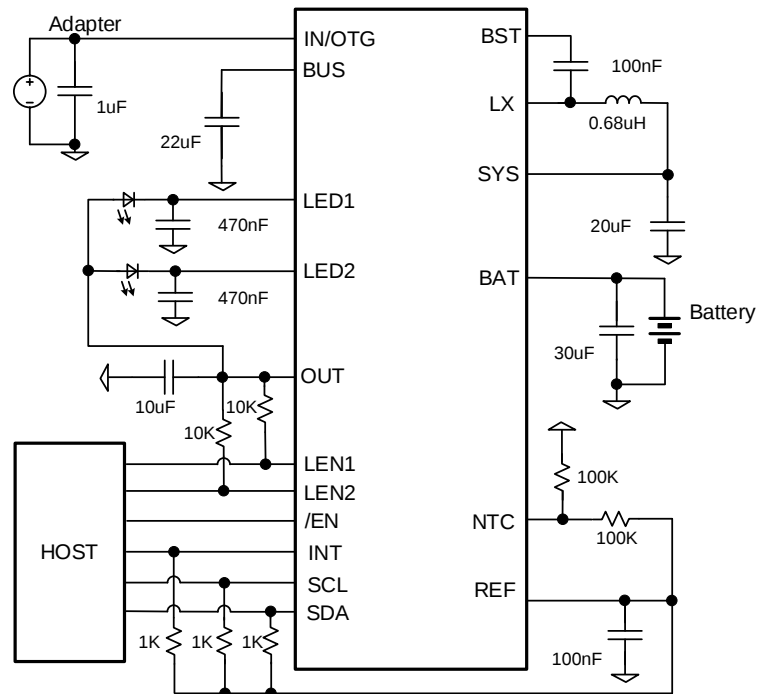

[Back](#)

Features

- Synchronous Step-down Switching Charger for Single Cell Li-Ion Battery up to 3.0A Charging Current
 - Peak Current Constant OFF Time Control with Quasi-Fixed Switching Frequency
 - I2C Programmable from 1MHz-2MHz
 - Extremely Low RDS(ON) for Integrated Power MOSFET
 - Input Surge Protection Up to 110V
 - Power Path Management with Battery FET
 - Fully Battery Charging Protection Function Programmed by I2C Interface
- OTG Operation Mode with 5V/1.6A Capability Controlled by I2C Interface
- Compliant with JEITA spec for 4.2V Li-Ion battery
- 2-Channel Flash LED Driver Controlled by I2C Interface
- Low-side Current Sink Structure LED Power Path Management
- Extremely Low RDS(ON) for Integrated Power MOSFET
- Internal Current Source with High Accuracy up to +/-4%
- Programmable Current from 25mA to 1000mA for Each Channel
- LED Short Circuit Protection
- 400kHz I2C Interface
- Compact CSP3.53x3.33-36 package

Applications

- Smart Phone
- Wearable Device

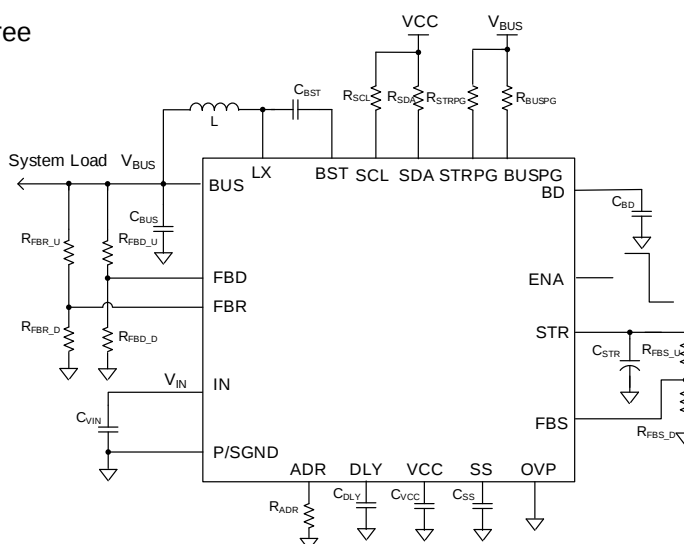


Features

- Low RDS(ON) for Internal Switches
- Input Reverse Blocking Switch: 24mΩ (Typical)
- High-side and Low-side Switches of Bi-directional DC/DC Regulator: 70mΩ/70mΩ (Typical)
- Disconnect Switch: 40mΩ (Typical)
- 2.6V-16V Input Voltage Range
- Storage Voltage Rating Up to 36V
- Programmable Input Current Limit from 1.2A to 6.2A
- Selectable Over Voltage Protection: 3.8V 6.1V and 14.3V
- Reverse Blocking at Input Side to Prevent From Leakage Current
- Programmable Reverse Blocking Switch Turn On Delay Time
- Programmable Reverse Blocking Switch Soft-start Time
- Integrated High-efficiency Bi-directional Dc-Dc Regulator: Boost Charging Mode and Buck Discharging Mode Auto-alternating According to the Programmed BUS Voltage Detection and Regulation Level
- Programmable Quasi-Fixed Frequency Constant OFF Time Control for Steady-State Operation
- Programmable Boost Charging Peak Current
- Programmable Storage Voltage
- MTP(Multi-Times Programming) Available for Control Parameters Programming by I2C
- Short-circuit Protection at Energy Storage Side
- Storage Capacitance Measurement and Abnormal ESR Detection
- Enable Control
- RoHS Compliant and Halogen Free
- Compact Package: OFN4×4-25

Applications

- Solid-State Drivers
- Backup Power Supply



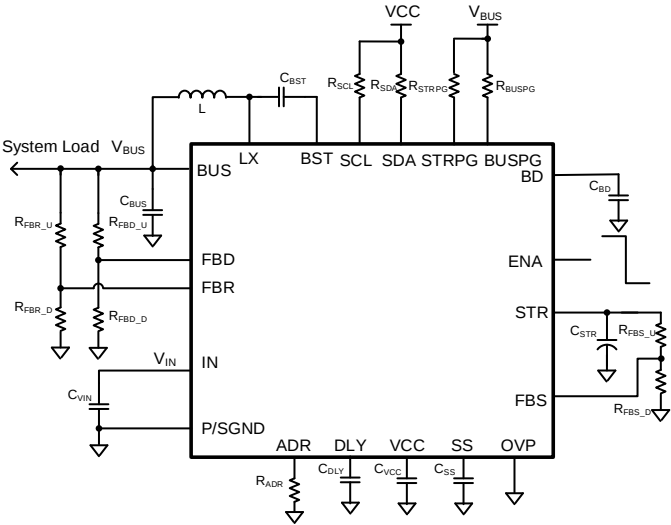
Features

- Low RDS(ON) for internal switches
 - Input Reverse Blocking Switch: 24 mΩ (Typical)
 - Bi-directional Dc-Dc Regulator: 70 mΩ /70 mΩ/40 mΩ (Typical)
- IN/BUS/STR Voltage ADC and Input Current ADC
- BUS Auto-discharge Function
- Selectable Boost CV Mode and Burst Mode
- Programmable Boost Soft Start Time
- Selectable Pulse Pre-charge Current for Supercapacitor Application
- High accuracy storage Capacitance Measurement: ±5%
- Pre-Bias function in capacitance measurement
- Support quick POR function
- Compact package: QFN4X4-25

PN	Quick POR	Boost soft start step
SY72025	Yes	250us
SY72025A	No	250us
SY72025B	Yes	31.25us
SY72025C	No	31.25us

Applications

- Solid-State Drivers
- Backup Power Supply

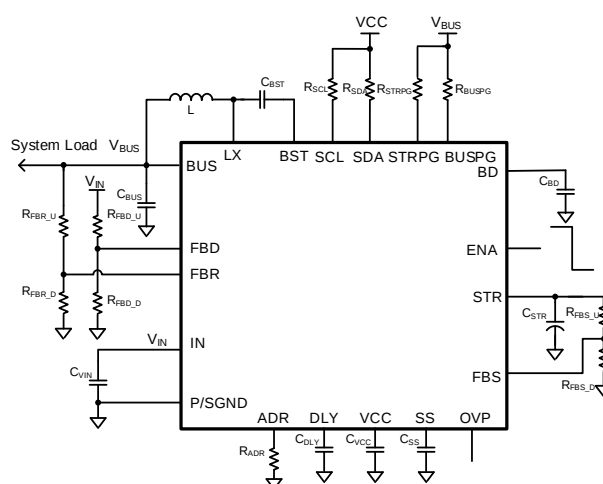


Features

- Low $R_{DS(ON)}$ for Internal Switches
- Input Reverse Blocking Switch: 24 m Ω (Typical)
- High-side and Low-side Switches for Bi-directional Dc-Dc Regulator: 70 m Ω /70 m Ω (Typical)
- Disconnect Switch: 40 m Ω (Typical)
- 2.6V-16V Input Voltage Range with Maximum 36V Storage Voltage Range
- IN/BUS/STR Voltage and Input Current ADC
- Programmable Input Current Limit from 1.2A to 6.2A
- Selectable Input Over Voltage Protection: 3.8V, 5.7V, and 15V
- Input Power Source Detection to Guarantee Boost Stable Operation
- Reverse Blocking at the Input Side to Prevent Leakage Current
- BUS Auto-discharge Function
- Programmable Reverse Blocking Switch Turn-On Delay Time and Soft-start Time
- Integrated High-efficiency Bi-directional DC-DC Regulator:
 - Programmable Peak Current for Boost Charging
 - Programmable Quasi-Fixed Frequency Constant Off Time Control for Steady-State Operation
 - Selectable Boost CV Mode and Burst Mode
 - STR Pin Open Detection in Burst Mode
 - Programmable Boost Soft Start Time
 - Programmable Storage Voltage with flexible OVP Threshold
 - Selectable Pulse Pre-charge Current for Super Capacitor Applications
- MTP(Multi-Times Programming) Memory for Control Parameters Programming using I²C
- Short-circuit Protection for Energy Storage Side
- Storage Capacitance Measurement
- Independent Load Switch Enable Control Pin
- RoHS Compliant and Halogen Free
- Compact Package: QFN4×4-25

Applications

- Solid State Drives
- Backup Power Supplies



Panel PMIC

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Number of Channels	Package	Application	Integrated Function
SY7510TQC	VGH=5V VGL=-18V	VGH=40V VGL=0V	14	QFN4×5-28	TV LCD Panel	14-Channel level shifter.
SY7511QFC	VGH=17V VGL=-18V	VGH=42V VGL=-3V	10	QFN4×4-32	TFT LCD Panel/MNT Panel	6 channel + 4 channel level shifter.
SY7512QAC	VGH=16V VGL=-20V	VGH=40V VGL=-3V	10	QFN4×4-28	TFT LCD Panel	6 channel level shifter with gate shaping function and 4 channel level shifter without gate shaping function.
SY7565QCC	8.6	15.9	3	QFN4×4-24	TV LCD Panel	a synchronous Boost regulator and 2 channel high speed operation amplifiers for TV LCD panel.
SY7561UYC	2.5	4.8	3	CSP2.4×2.4-36	Smart Phone OLED panel	a synchronous boost regulator for ELVDD, a dual-phase buck-boost regulator for ELVSS, and a synchronous boost regulator for AVDD.
SY7561BUYS	2.5	4.8	3	CSP2.4×2.4-36	Smart Phone OLED panel	a synchronous boost regulator for ELVDD, a dual-phase buck-boost regulator for ELVSS, and a synchronous boost regulator for AVDD.
SY7566VFC	2.6	6	5	QFN3×3-22	NB TFT LCD Panel	an AVDD synchronous boost converter for source driver, a VGH asynchronous boost converter for gate driver, a VGL negative charge pump for gate driver, two high performance OPAMPs for HAVDD and VCOM rails, and a voltage detector RESET.
SY7570RMC	3.5	6	6	QFN6×6-48	TFT LCD Panel MNT Panel	AVDD Boost converter, VGH boost converter, VOFF2 & VSS negative charge pumps, two buck converters, one operational amplifier, 4ch gamma outputs, 4ch outputs level shifter.
SY7571RKC	8	18	22	QFN6×6-52	FHD TV LCD Panel	a synchronous Buck regulators, an AVDD Boost regulator, an HAVDD OPAMP, a positive and a negative charge pump controller for VGH and VGL, a gate pulse modulator VGHM, 14 channel gamma and 2 channel VCOM OPAMP.
SY7576QPC	8.6	14.7	4	QFN5×5-36	TFT LCD TV Panel	4 Phase AVDD Boost Controller.
SY7578TOQ	9.5	14.7	14	QFN8×8-72	TV LCD Panel	AVDD Boost, VGH/VGL charge pump, VCOM OPAMP, Gamma reference LDO.
SY77502XKQ	9.5	14.7	19	QFN12×8-88	TFT LCD Panel	4 channels Buck regulator for system power, an AVDD Boost regulator for source driver, a VGH Boost controller and a VGL Buck-Boost controller, 3 channels high speed operation amplifier for VCOM buffer, 14 channels programmable gamma reference and 19 channels level shifters for gate driver
SY7627RMC	VDD: 2.6V VGH: 7V VGL: -20V VSS1/2: VGL+0.3V	VDD: 5.5V VGH: 40V VGL: 0V VSS1/2: 0V	19	QFN6×6-48	TV LCD Panel	19-Channel level shifter.
SY7627DRMQ	VDD: 2.6V VGH: 7V VGL: -20V VSS1/2: VGL+0.3V	VDD: 5.5V VGH: 40V VGL: 0V VSS1/2: 0V	19	QFN6×6-48	TV LCD Panel	19-Channel level shifter.

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Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Number of Channels	Package	Application	Integrated Function
SY7630CQCC	2.3	5.5	3	QFN4×4-24	Monitor/NB LCD Panel Power	AVDD Boost, VGH/VGL charge pump, VCOM OPAMP, GPM.
SY7634RPC	9.5	14	7	QFN5×5-40	UD TV LCD Panel	2 channel Buck regulators , an AVDD Boost regulator , a VGH Boost or charge pump controller, a VGL Buck-Boost or charge pump controller, and an OPAMP with temperature compensation.
SY7636ARMC	2.9	5.5	4	QFN6×6-48	E-Book/ E-Writer/ E-ink EPD	+/-15V LDOs for EPD source driver, adjustable pos. & neg. charge pumps for EPD gate driver, a VCOM OPAMP, temperature measurement function.
SY7686DCC	2.5	5.5	2	DFN3×3-12	PAD Panels/Active Matrix OLED	a synchronous boost regulator and a synchronous Buck-boost regulator.
SY7687QEC	AVDD:6.5V DVDD:2.5V	AVDD:18V DVDD:3.6V	15	QFN5×5-32	TFT-LCD TVs/ Monitors/ PC	14 channel voltage references for gamma correction and one voltage reference for VCOM in TFT LCD panels.
SY7696BQEC	2.9	5.5	5	QFN5×5-32	Electronic Paper Display	a single-chip power management IC designed for electronic paper display.
SY71500QFQ	2.6	3.6	13	QFN4×4-32	TV LCD Panel	13 channel level shifters; OCP level 100mA.
SY71503QFQ	2.6	3.6	13	QFN4×4-32	TV LCD Panel	13 channel level shifters; OCP level 60mA
SY71600RPC	AVDD:11V	AVDD:20V DVDD:3.3V	8	QFN5×5-40	OLED TV Panel	8-channel gamma solution for OLED display.
SY71100TOQ	9.5	14.7	36	QFN8×8-72	UD TV LCD Panel	4ch Buck regulator, an AVDD Boost regulator, a VGH positive charge pump, a VGL negative charge pump, 3 channel operation amplifier, 14 channel gamma reference and 12 channel level shifters.

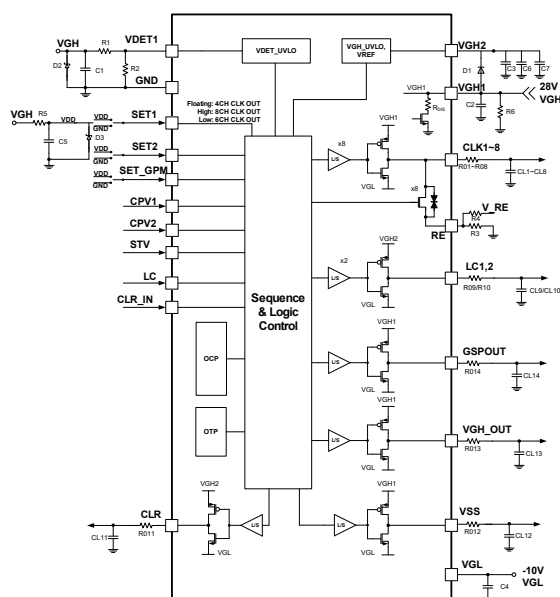
SY7510TQC - 14-Channel Level Shift IC for LCD TV Panel Application

Features

- Input Supply Voltage Range:
 - VGH: 5V to 40V
 - VGL: -18V to 0V
- 14 Channel Level Shifter
- 55V Maximum Input for VGH-VGL
- Phase Option with 4-Phase, 6-Phase or 8-Phase
- Over Current Protection
- VGH Input Under Voltage Lockout
- Over Temperature Protection
- RoHS Compliant and Halogen Free
- Compact Package: QFN4×5-28

Applications

- TFT-LCD Panel



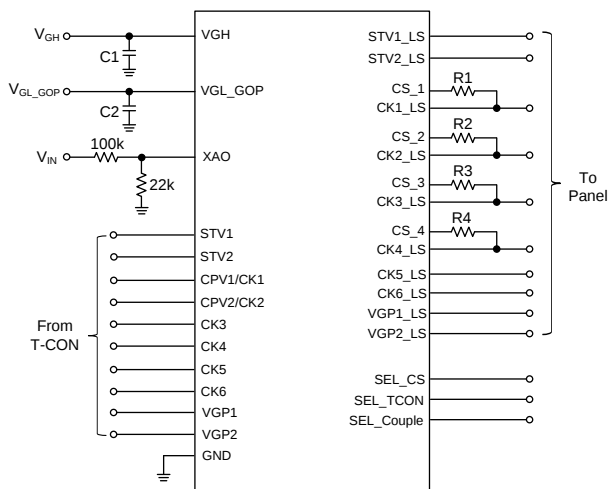
SY7511QFC - 10-Channel Level Shift IC for TFT-LCD Panel

Features

- High Voltage Scan Driver
 - Output levels of -18V to 42V
 - 10 channel scan drivers with OCP protection
 - High output slew rate to drive up to 5nF load
 - Power off discharge function
- Input UVLO
- Over temperature protection
- RoHS Compliant and Halogen Free
- Compact package: QFN4x4-32

Applications

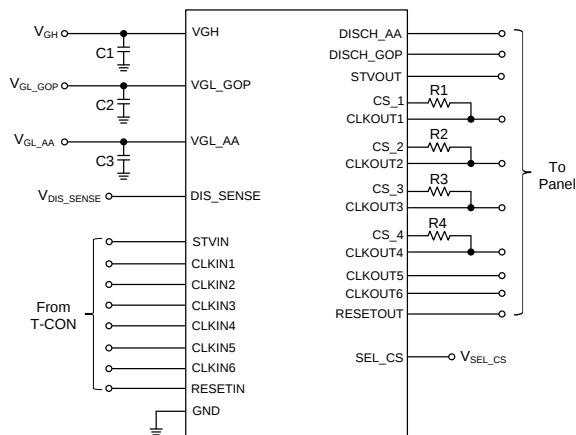
- TFT-LCD Panel



SY7512QAC - 10-Channel Level Shift IC for TFT-LCD Panel

Features

- High Voltage Scan Driver
 - Output Levels of -20V to 40V
 - 10 Channel Scan Drivers with OCP Protection
 - High Output Slew Rate to Drive Up to 5nF Load
 - Power Off Discharge Function
- Input UVLO
- Over Temperature Protection
- RoHS Compliant and Halogen Free
- Compact Package: QFN4x4-28



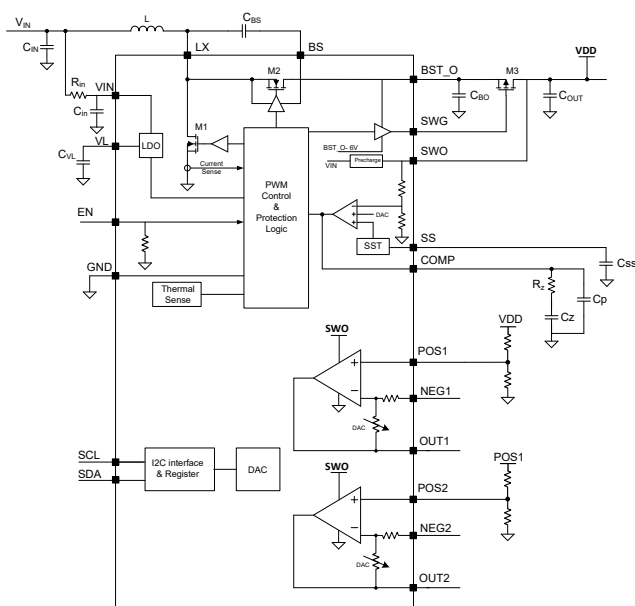
Applications

- TET-LCD Panel

SY7565QCC - SUB PMIC for TV LCD Panel

Features

- Wide Input Range: 8.6V to 15.9V
- 500kHz Switching Frequency
- Low RDS(ON) Internal Switch
 - Main FET: 75mΩ
 - Rectifier FET: 45mΩ
- External Loop Compensation
- External Soft-start Time Limit the Inrush Current
- Input Voltage UVLO
- Over Temperature Protection
- Output Over Voltage Protection
- 2 Channel High Speed Operation Amplifier
- I2C Compatible Interface
- RoHS Compliant and Halogen Free
- Compact Package: QFN4×4-24



Applications

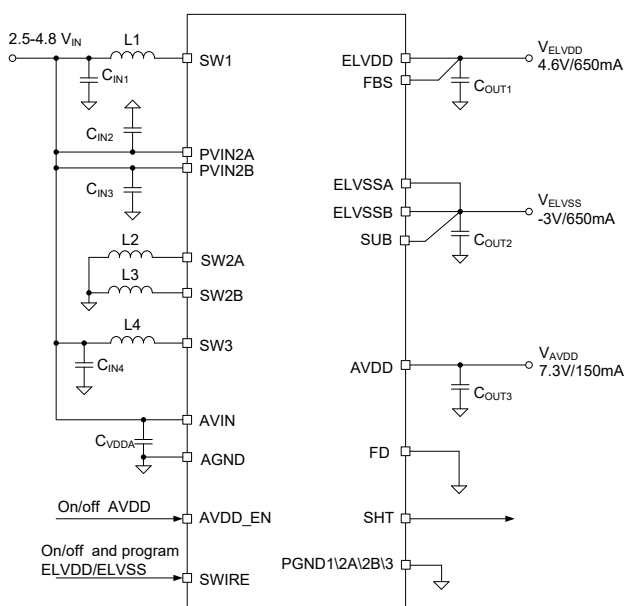
- TET-LCD Panel

Features

- 2.5V to 4.8V Input Voltage Range
- ELVDD Boost Converter:
 - 4.6V to 5V Output Voltage Programmable, 4.6V Default Voltage
 - 0.5% Output Voltage Accuracy
 - 800mA Output Current Capability
 - Output Voltage Sensing
 - Output True Shutdown
- ELVSS Dual-phase Buck-Boost Converter:
 - -5.6V to -0.8V Output Voltage Programmable, -3V Default Voltage
 - $\pm 50\text{mV}$ Output Voltage Accuracy at 25°C
 - 800mA Output Current Capability
 - Output True Shutdown
- AVDD Boost Converter:
 - 5.5V to 7.9V Output Voltage Programmable, 7.3V Default Voltage
 - 1% Output Voltage Accuracy
 - 150mA Output Current Capability
 - EN Control On/Off
 - Output True Shutdown
- Single Wire Digital Interface for Programming
- Short Circuit Protection (SCP)
- Thermal Shutdown (OTP)
- Compact Package: CSP 2.4x2.4-36

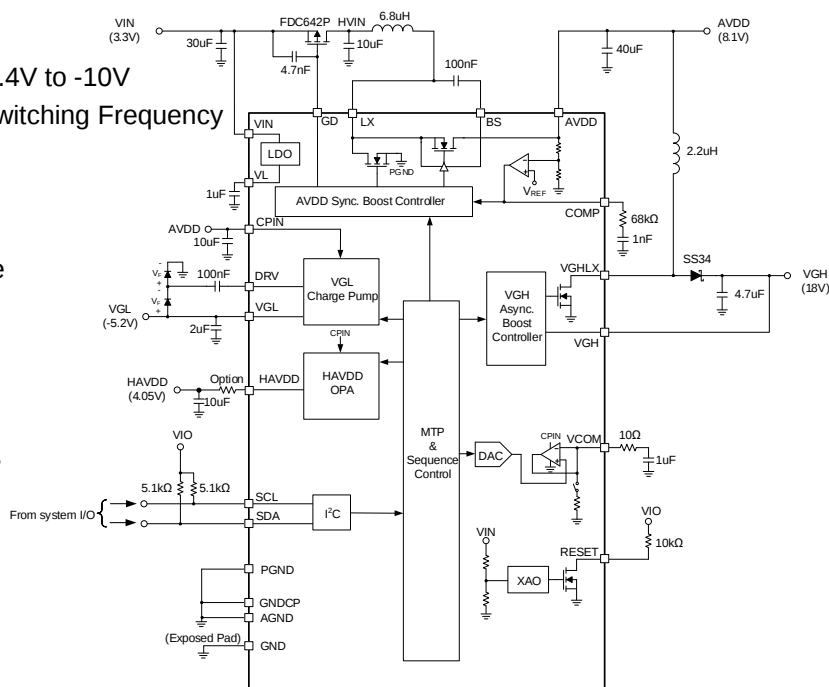
Applications

- Mobile AMOLED Display



Features

- 2.6V to 6V Input Supply Voltage
 - AVDD Sync. Boost Converter
 - Integrated 150mΩ/300mΩ Low Ron Switch
 - Peak Current Control with Fast Transient Response
 - 600-1200kHz Selectable Fixed Switching Frequency
 - 5/10ms Selectable Soft-start Time
 - Programmable Output Voltage 6V to 14V
 - $\pm 1\%$ Output Voltage Setting Accuracy
 - Output Over Voltage Protection
 - Output Under Voltage Protection
 - Output Short Circuit Protection
 - VGH Async. Boost Converter
 - Integrated 1Ω Low Ron Switch with Minimum 1.2A Current Limit
 - Peak current Control with fast Transient Response
 - 600-1200kHz Selectable Fixed Switching Frequency
 - Programmable Output Voltage 16V to 31V
 - Output Under Voltage Protection
 - Output Short Circuit Protection
 - Operational Amplifier for HAVDD Rail
 - Programmable Output Voltage $0.4 \times AVDD$ to $0.6 \times AVDD$
 - $\pm 250\text{mA}$ Short Circuit Current
 - Operational Amplifier for VCOM Rail
 - Programmable 7-Bit VCOM Calibrator
 - $\pm 150\text{mA}$ Short Circuit Current
 - VGL Negative Charge pump
 - Programmable Output Voltage -4.4V to -10V
 - 600-1200kHz Selectable Fixed Switching Frequency
 - Output Under Voltage Protection
 - Output Short Circuit Protection
 - Programmable Voltage Detector
 - Programmable Power on Sequence
 - MTP Memory
 - I2C Compatible Interface
 - Input UVLO
 - Over Temperature Protection
 - RoHS Compliant and Halogen Free
 - Compact Package: OFN3x3-22
-
- The schematic diagram illustrates the internal circuitry of the FDC642P, a programmable power management IC. Key components and connections include:
- Input Supply:** VIN (3.3V) is connected to the top of the circuit, with a 30μF capacitor to ground.
 - AVDD Sync. Boost Converter:** This section includes an LDO (Low Dropout Regulator) and a boost converter. It features a 4.7nF capacitor connected to VIN and a 1μF capacitor connected to the output of the boost converter, which is labeled AVDD.
 - VGL Negative Charge Pump:** This section includes a charge pump circuit. It features a 100nF capacitor connected to the output of the charge pump, which is labeled VGL. The output of the charge pump is also connected to the VGL pin of the HAVDD OPA.
 - Operational Amplifiers:** The HAVDD OPA (Operational Amplifier) is shown, with its output connected to the HAVDD pin. The VCOM OPA (Operational Amplifier) is also shown, with its output connected to the VCOM pin.
 - Control Signals:** The VIO (Voltage Input Output) pin is connected to the VIO pin of the HAVDD OPA. The SCL (Serial Clock Line) pin is connected to the SCL pin of the HAVDD OPA.
 - Other Components:** A 2μF capacitor is connected to the VGL pin. A 5.1kΩ resistor is connected to the VIO pin. A 10μF capacitor is connected to the HAVDD pin.



Applications

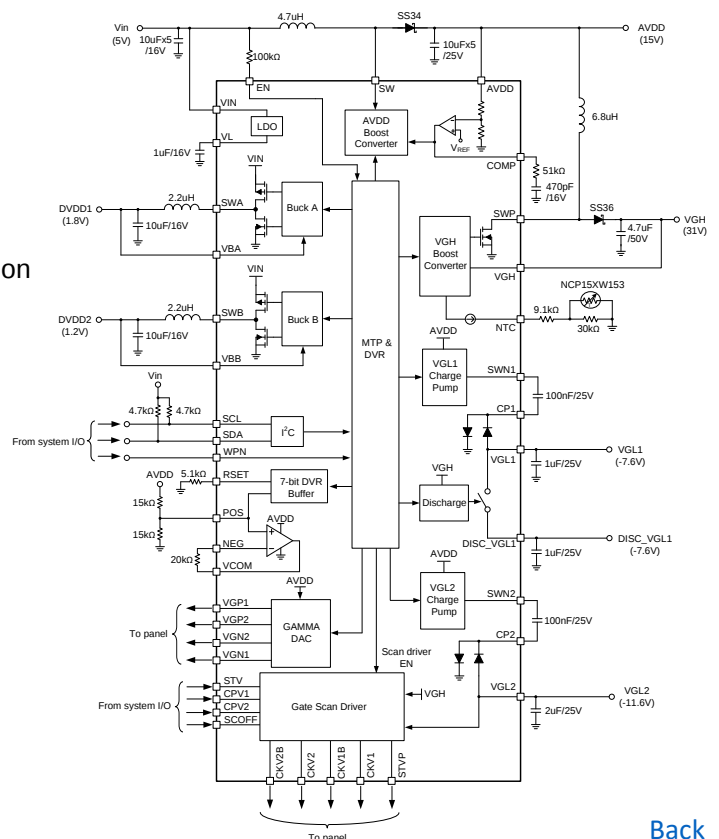
- Tablet Panel
- Notebook Panel

Features

- 3.5V-6V input voltage range
- AVDD Boost regulator
 - Integrated 120mΩ low Ron switch with minimum 3.5A current limit
 - 600-1200KHz selectable fixed switching frequency
 - Peak current control with fast transient response
 - 2/4ms selectable soft-start time
 - Up to 15.8V output voltage
 - $\pm 1\%$ output voltage setting accuracy
- VGH Boost regulator
 - Integrated 1.25Ω low Ron switch with minimum 2A current limit
 - 600-1200KHz selectable fixed switching frequency
 - Peak current control with fast transient response
 - 2/4ms selectable soft-start time
 - Up to 40V output voltage
 - Output voltage temperature compensation
- DVDD1 Buck switching regulator
 - Integrated 600mΩ/400mΩ low Ron switch with 0.8A current limit
 - 600-2400KHz selectable fixed switching frequency
 - Peak current control with fast transient response
 - Internal loop compensation
 - 2/4ms selectable soft-start time
 - $\pm 1.5\%$ output voltage setting accuracy
- DVDD2 Buck switching regulator
 - Integrated 600mΩ/400mΩ low Ron switch with 0.8A current limit
 - 600-2400KHz selectable fixed switching frequency
 - Peak current control with fast transient response
 - Internal loop compensation
 - 2/4ms selectable soft-start time
 - $\pm 1.5\%$ output voltage setting accuracy
- Operation amplifier
 - $\pm 300\text{mA}$ short circuit current
 - 40V/us slew rate
 - 15MHz -3dB bandwidth
- Double staged negative charge pump
- Digitally controlled variable register for common voltage of panel
- 4 channel programmable gamma reference
- 9-bit DAC resolution
- 2 channel scan drivers
- 10-Bytes MTP memory
- I2C compatible interface
- Input UVLO
- Over temperature protection
- RoHS Compliant and Halogen Free
- Compact package: QFN6X6-48

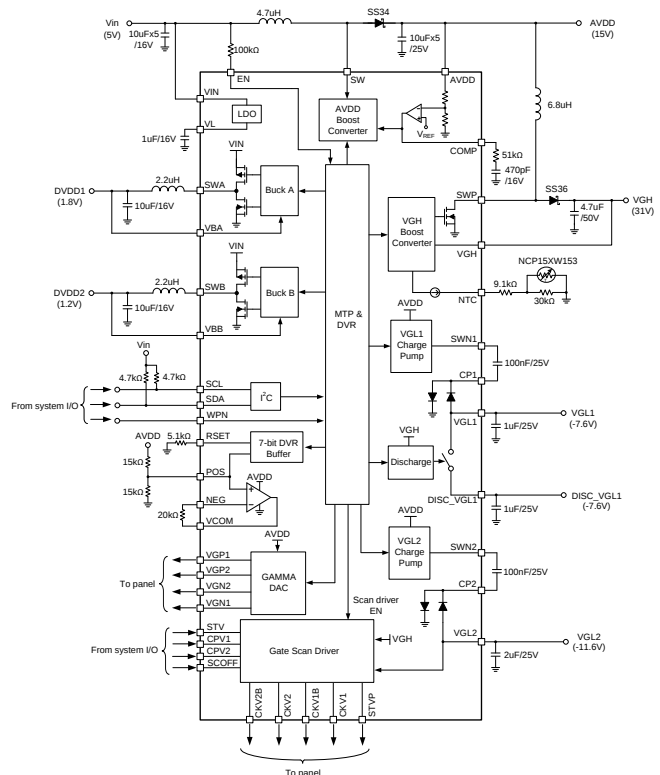
Applications

- TFT LCD Panel


[Back](#)

Features

- 8V-18V input voltage range
- 500kHz/750kHz fixed switching frequency for AVDD/DVDD
- 500kHz/750kHz/ 1000kHz selectable switching frequency for VGH/VGL charge pumps
- AVDD Boost regulator
 - Integrated 100mΩ low Ron switch with 5A current limit
 - Peak current control with fast transient response
 - Adjustable soft-start
 - Adjustable current limit
 - Up to 19.2V output voltage
 - 2% output voltage setting accuracy
 - Low duty cycle operation
- HAVDD operation amplifier
 - $\pm 300\text{mA}$ short circuit current
 - 45V/ μs slew rate
 - 20MHz -3dB bandwidth
- DVDD Buck switching regulator
 - Integrated 200mΩ/80mΩ low Ron switch with 3.2A current limit
 - Peak current control with fast transient response
 - Internal loop compensation
 - Internal soft-start
- Positive charge pump regulator (VGH)
- Negative charge pump regulator (VGL)
- Integrated high voltage gate pulse modulator
 - 16-step programmable discharge current
 - 32-step programmable clamping voltage
 - Selectable start up delay
- Dual high speed operation amplifier (VCOM)
 - $\pm 400\text{mA}$ short circuit current
 - Rail to rail output
 - 20MHz -3dB bandwidth
 - 10-bit DAC resolution
- 14 channel programmable gamma reference
 - 10-bit DAC resolution
 - 2 selectable gamma curve
- External p-channel MOSFET gate control for AVDD sequencing
- Input voltage detector (XAO)
- Buck1, VGH and VGL are 180° out of phase operation from AVDD to lower the input ripple
- Input UVLO
- Over temperature protection
- Over Voltage Protection(OVP)
- Over Current Protection (OCP)
- Under voltage Protection(UVP)
- RoHS Compliant and Halogen Free
- Compact package: QFN6x6-52



Applications

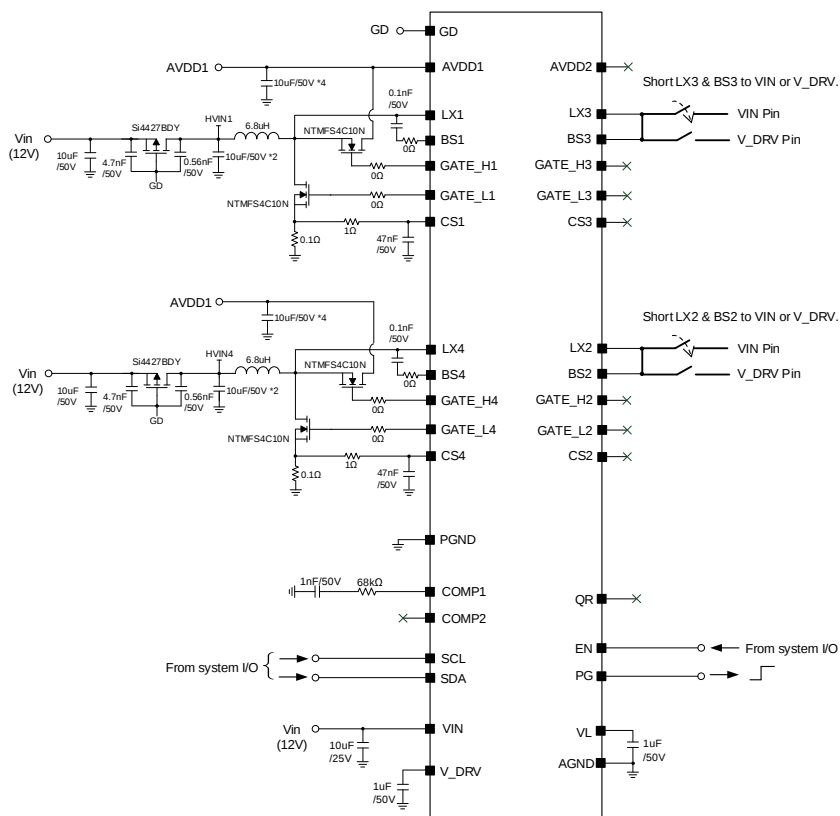
- TFT LCD Panel

Features

- 8.6V-14.7V input voltage range
- Multi Phase AVDD Boost Regulator
 - Phase mode selectable
 - Two phase mode with 2/1 CH output
 - Three phase mode with 1 CH output
 - Four phase mode with 1 CH output
 - $\pm 1\%$ output voltage setting accuracy
 - Phase shedding control for efficiency optimization
 - Fast phase up mechanism for improve transient response
 - Peak current control with fast transient response
 - Sync/Async mode selectable
 - 300-750kHz selectable fixed switching frequency
 - 13.5V to 19.8V programmable output
 - Programmable OCP level
 - Output over current protection
 - Output under voltage protection
 - Output over voltage protection
 - Output short circuit protection
- MTP Memory
- I2C compatible interface
- Input UVLO
- Over temperature protection
- RoHS Compliant and Halogen Free
- Compact package: QFN5x5-36L

Applications

- TFT-LCD TV Panel

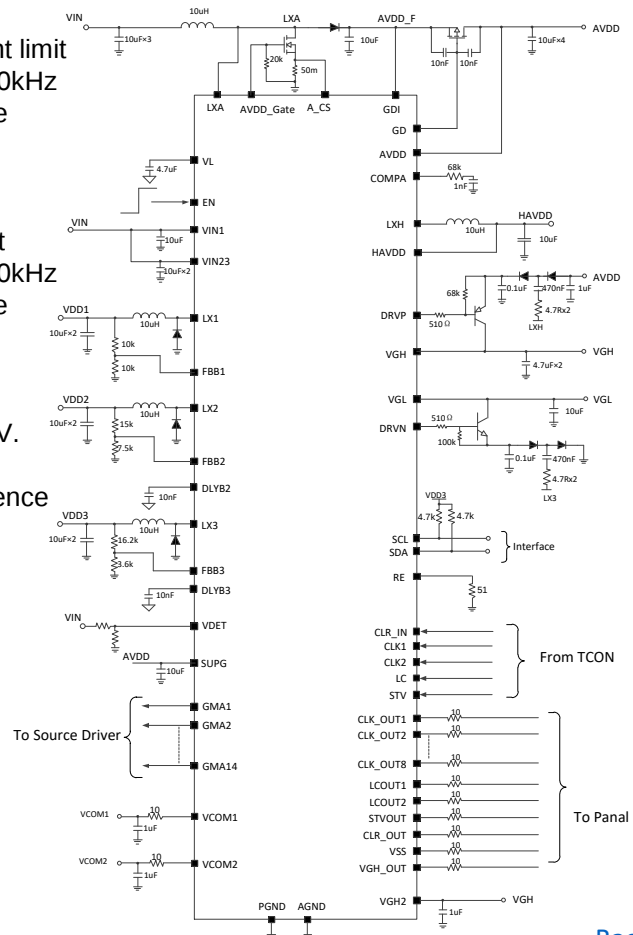


Features

- Input range: 9.5V to 14.7V
- Boost regulator for AVDD:
 - Provide internal low side MOSFET mode and external low side MOSFET mode
 - Programmable switching frequency: 500kHz/750kHz
 - Programmable output voltage from 13V to 19.2V.
 - Peak current control with fast transient response
 - Force CCM at light load
 - Output SCP, OVP and UVP.
- Positive charge pump control for VGH:
 - Programmable output voltage from 20V to 40V.
 - Output SCP and UVP.
- Sync./Async. Buck regulator for VDD1:
 - Integrated low Ron switch with 1.6A/3.2A current limit
 - Programmable switching frequency: 500kHz/750kHz
 - Peak current control with fast transient response
 - Force CCM at light load (Sync mode)
 - Output SCP, OVP and UVP.
- Sync./Async. Buck regulator for VDD2:
 - Integrated low Ron switch with 1.6A/3.2A current limit
 - Programmable switching frequency: 500kHz/750kHz
 - Peak current control with fast transient response
 - Force CCM at light load (Sync mode)
 - Output SCP, OVP and UVP.
- Sync./Async. Buck regulator for VDD3:
 - Integrated low Ron switch with 1.6A/3.2A current limit
 - Programmable switching frequency: 500kHz/750kHz
 - Peak current control with fast transient response
 - Force CCM at light load (Sync mode)
 - Output SCP, OVP and UVP.
- Sync. Buck regulator for HAVDD:
 - Integrated low Ron switch with 2.5A current limit
 - Programmable switching frequency: 500kHz/750kHz
 - Peak current control with fast transient response
 - Force CCM at light load
 - Output SCP, OVP and UVP.
- Negative charge pump for VGL:
 - Programmable output voltage from -20V to -4.5V.
 - Output SCP and UVP.
- +/-30mA 14 channel programmable gamma reference amplifier for VCOM
- 14 Channel Level Shifter:
 - 1 Channel STV_OUT;
 - 1 Channel CLR_OUT;
 - 1 Channel VSS;
 - 1 Channel VGH_OUT;
 - 2 Channels LC_OUT;
 - 8 Channels CLK_OUT.
- I2C compatible interface
- Over temperature protection OTP.
- RoHS Compliant and Halogen Free
- Compact package: QFN8x8-72

Applications

- TFT-LCD TV Panel

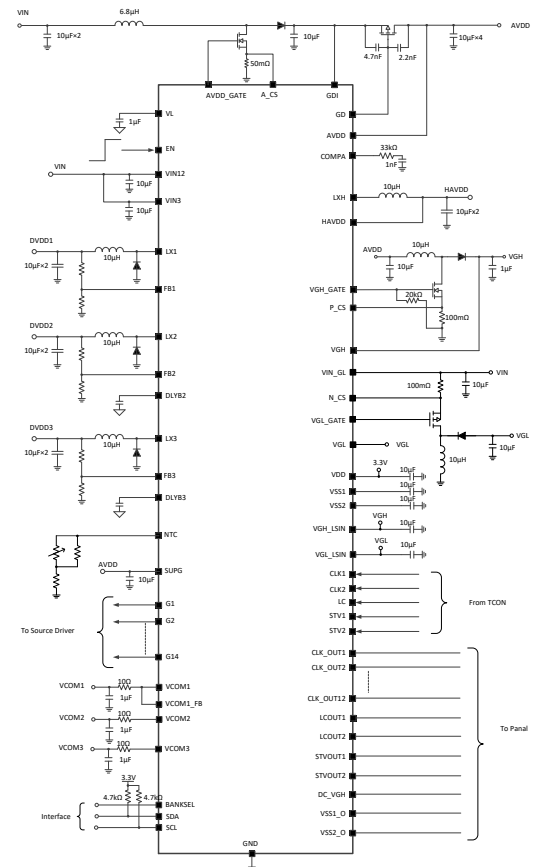

[Back](#)

Features

- Input Range: 9.5V to 14.7V
- Async Boost Controller for AVDD:
 - Programmable Switching Frequency: 500kHz/750kHz
 - Programmable Output Voltage from 13V to 19.2V.
 - Peak Current Control with Fast Transient Response.
 - External GD Isolation Switch (P-MOSFET) for AVDD
 - Slew Rate Controller.
 - Output SCP, OVP and UVP.
- Async Buck Regulator for DVDD1~3:
 - Integrated low Ron Switch with 1.6A/3.2A Current Limit
 - Programmable Switching Frequency: 500kHz/750kHz
 - Peak Current Control with Fast Transient Response
 - FCCM in Light Load
 - Output SCP, OVP and UVP.
- Sync. Buck Regulator for HAVDD:(Gamma7+Gamma8)/2
 - Integrated Low Ron Switch with $\pm 2.5A$ Current Limit
 - Programmable Switching Frequency: 500kHz/750kHz
 - Peak Current Control with Fast Transient Response
 - Output SCP, OVP and UVP.
- Async Boost Controller for VGH:
 - Programmable Output Voltage from 20V to 40V.
 - Temperature Compensation Selection.
 - Switching Current Limit Selection
 - Output SCP, OVP and UVP.
- Async Buck-Boost Controller for VGL:
 - Programmable Output Voltage from -4.5V ~ -22V.
 - Temperature Compensation Selection.
 - Switching Current Limit Selection
 - Output SCP, OVP and UVP.
- Negative Regulator for VSS1/2 with -4.5V ~ -18V
- 14 Channel Programmable Gamma Reference
 - $\pm 75mA$ Short Circuit Current.
 - 15V/ μs Slew Rate.
 - -10bits DAC Resolution.
 - 2Selectable Gamma Curves
- 3 Channel High Speed Operation Amplifier for VCOM1~3.
 - $\pm 400mA$ Short Circuit Current.
 - 15V/ μs Slew Rate.
 - -10bits DAC Resolution.
- 19 Channel Level Shifter:
 - 12Channels CLKOUT
 - 2Channels STV_OUT
 - 2Channels VSS_OUT
 - 2Channels LC_OUT
 - 1Channel DC_VGH
- I²C Compatible Interface
- Over Temperature Protection OTP.
- RoHS Compliant and Halogen Free
- Compact Package: QFN12 $\times$ 8-88

Applications

- TFT-LCD TV Panel

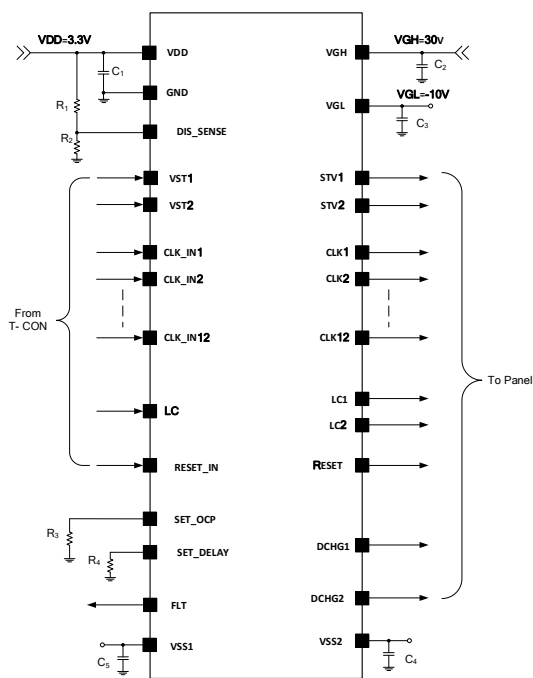


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Features

- Input Supply Voltage Range:
 - VDD: 2.6V to 5.5V
 - VGH: 7V to 40V
 - VGL: -20V to 0V
 - VSS1/2: VGL+0.3V to 0V
- 19 Channel Level Shifter
- 60V Maximum Input for VGH-VGL
- 750mA Peak Current
- 20mA Continuous Current
- 20-200mA Over Current Protection Programming
- Input Under Voltage lockout
- Over Temperature Protection.
- RoHS Compliant and Halogen Free
- Compact Package: QFN6×6-48

Applications



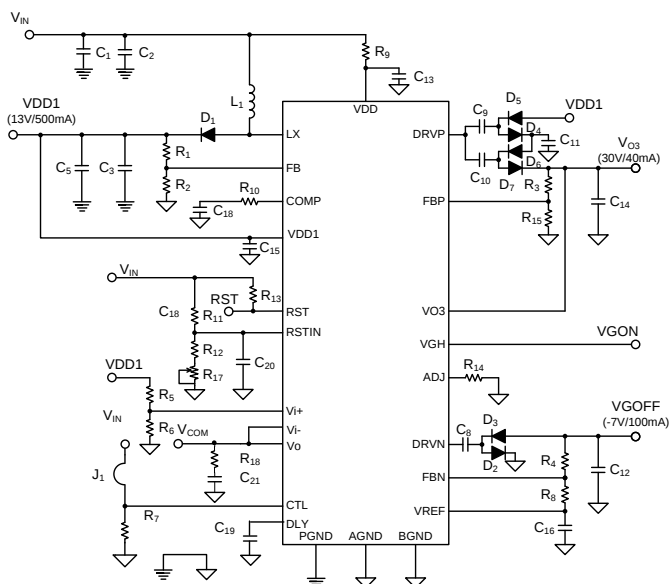
SY7630CQCC - High Efficiency Power Management IC for TFT LCD

Features

- 2.3-5.5V input voltage range
- Current mode boost regulator:
 - Low RDS(ON) for Boost internal switches:
- 140mΩ / 3.5A
- 1.2MHz switching frequency
- Positive charge pump for VGH
- Negative charge pump for VGL
- Integrated gate pulse modulator with adjustable delay.
- Integrated operational amplifier
- Open drain reset output
- Compact package: QFN4x4-24

Applications

- TFT LCD Panels

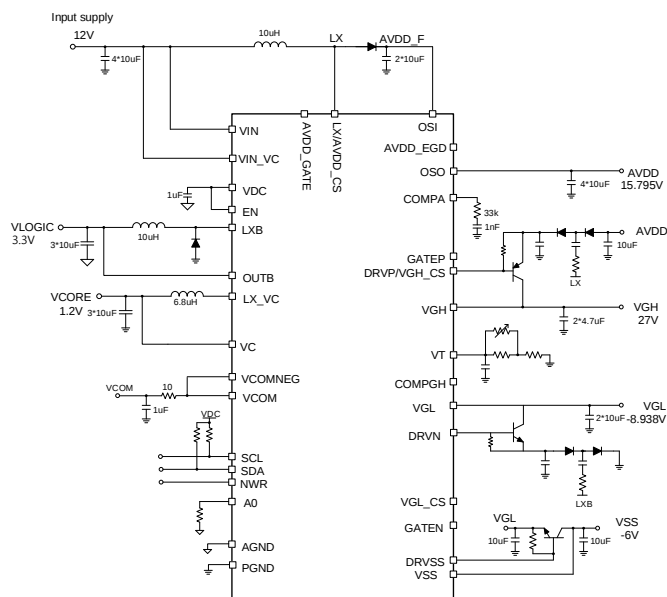


Features

- Input Range: 9.5V to 14V
- Output SCP, OVP and UVP
- Channel 1, Boost or Sepic Regulator for AVDD:
 - Provide Internal MOSFET Mode and External MOSFET Mode
 - Selectable Switching Frequency
 - Programmable Output Voltage
 - Peak Current Control with Fast Transient Response
- Channel 2, External MOSFET Boost or Positive Charge Pump Control for VGH:
 - Programmable Output Voltage
 - 750kHz Switching Frequency
 - Output Voltage Temperature Compensation
- Channel 3, Buck Regulator for VLOGIC:
 - Selectable Switching Frequency
 - Programmable Output Voltage
 - Peak Current Control with Fast Transient Response
 - Force CCM at Light Load
- Channel 4, Buck Regulator for VCORE:
 - Selectable Switching Frequency
 - Peak Current Control with Fast Transient Response
 - Programmable Output Voltage
 - Force CCM at Light Load
- Channel 5, Negative Charge Pump or Buck-Boost Control for VGL:
 - Programmable Output Voltage
 - Fixed 750kHz Switching Frequency
- Channel 6 Negative Regulator for VSS
- Channel 7 DVCOM Control with Temperature Compensation
- MTP Memory
- I2C Compatible Interface
- Input UVLO
- Over Temperature Protection
- RoHS Compliant and Halogen Free
- Compact Package: OFN5×5-40

Applications

- TV LCD Panel

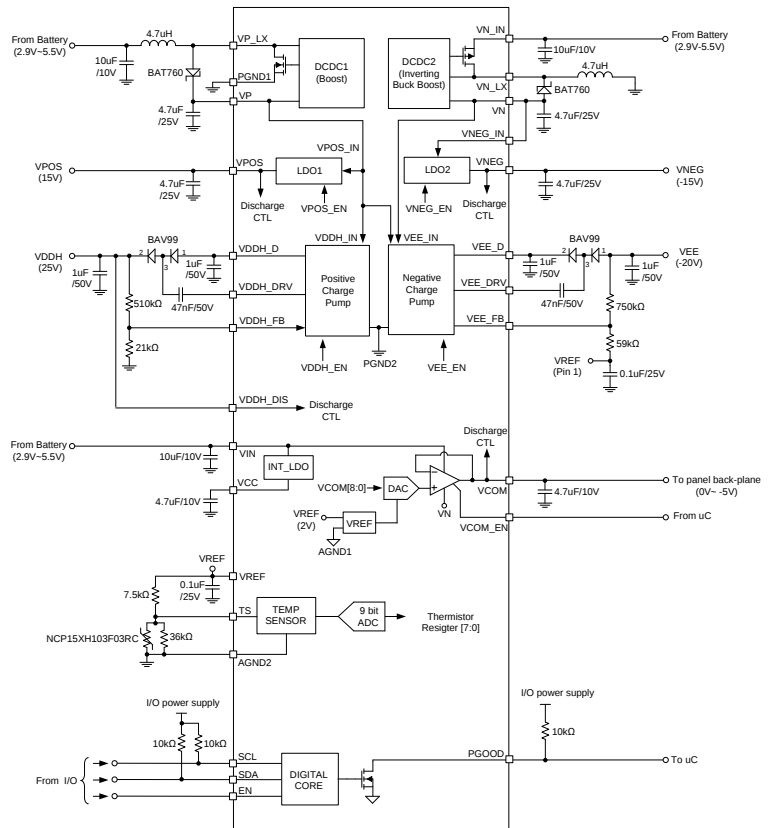


Features

- 2.9V to 5.5V Input Voltage Range
- Boost Converter VP for the Power Input of Positive Rails
- Inverting Buck-Boost converter VN for the Power Input of Negative Rails
- Two Adjustable LDOs for Source Driver Supply
 - VPOS: 15 V, 200mA
 - VNEG: -15 V, 200mA
- Accurate Output Voltage Tracking: $VPOS+VNEG = \pm 50$ mV
- Two Charge Pumps for Gate Driver Supply
 - VDDH: 25 V, 10mA (Up to 29V)
 - VEE: -20 V, 15mA (Down to -25V)
- Adjustable VCOM Driver for Accurate Panel-Backplane Biasing
 - 0 V to -5V
 - $\pm 1.5\%$ Accuracy (± 10 mV)
 - 9-Bit Control (10-mV Nominal Step Size)
- Internal Active Discharge for VPOS, VNEG, VDDH, and VCOM
- Differential Temperature Sense Input and Digital Temperature Reporting
- I2C Compatible Interface
- Protection: UVLO, OTP, OCP, SCP, UVP
- RoHS Compliant and Halogen Free
- Compact package: QFN6×6-48

Applications

- Power Supply for Active Matrix Panels
- EPD Power Supplies
- E-Book Readers

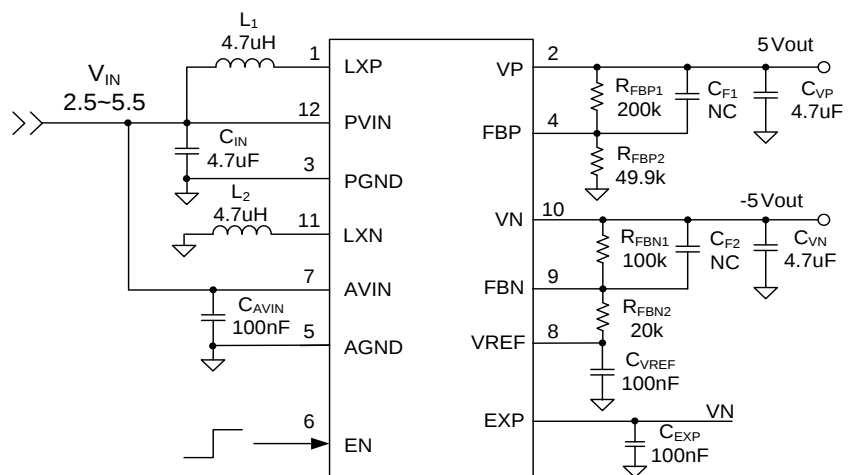


Features

- 2.5V to 5.5V Input Voltage Range
- Synchronous Boost converter:
 - Low RDS(ON) for Internal Switches (P-Channel FET/N-Channel FET): 660/400mΩ
 - 150mA Output Current Capability
 - True Shutdown Output
 - 4.6V-7V Adjustable Output
 - Cycle-by-cycle Current Limiting Protection
- Synchronous Inverter Converter:
 - Low RDS(ON) for Internal Switches (P-Channel FET/N-Channel FET): 500/340mΩ
 - 150mA Output Current Capability
 - -6V to -1.5V Adjustable Inverting Output
 - Cycle-by-cycle Current Limiting Protection
- Internal Loop Compensation
- 1.5MHz Switch Frequency
- Low Shutdown Current <1uA
- xBuilt-in Softstart
- EN Control On/Off
- PSM Mode at Light Load for High Efficiency
- RoHS Compliant and Halogen Free
- Compact Package: DFN3x3-12

Applications

- PAD panels power driver
- Active Matrix OLED
- Mobile device

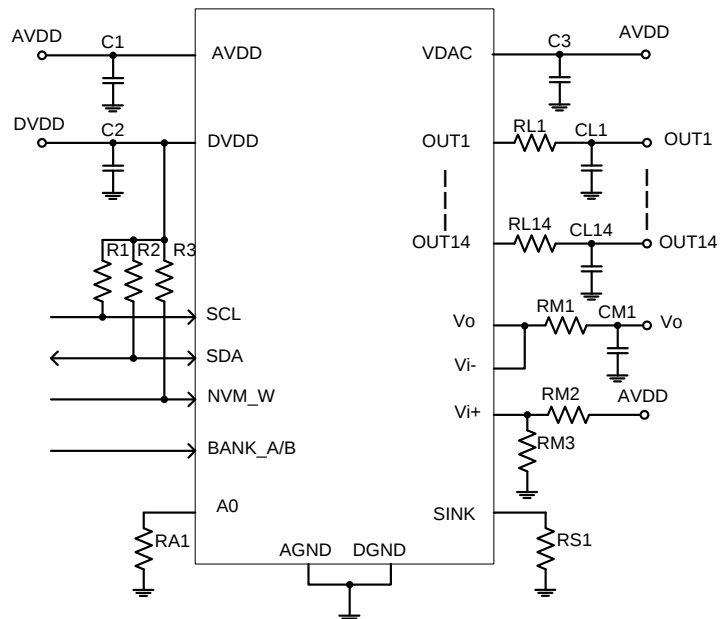


Features

- Analog Supply Voltage Range(AVDD): 6.5 to 18V
- Digital Supply Voltage Range(DVDD): 2.6 to 3.6V
 - NVM Read: Minimum DVDD 2.6V
 - NVM Write: Minimum DVDD 3.0V
- 14 Channel Gamma Reference Voltage Outputs with 10- bit DAC Resolution
- 128-step Programmable Sink-current Output for DVR Output
- Integrated High Current, Wide Bandwidth OPAMP for VCOM Buffer
- DAC Reference Voltage Input
- Integrated NVM
- Switchable Gamma Curve
- I2C Compatible Interface:
 - Supports 100kHz Standard Mode and 400kHz Fast Mode
 - Selectable Device Address
- Over Temperature Protection
- RoHS Compliant and Halogen Free
- Compact Package: QFN5×5-32

Applications

- TFT-LCD TVs
- TFT-LCD Monitors
- TFT-LCD Notebook PC

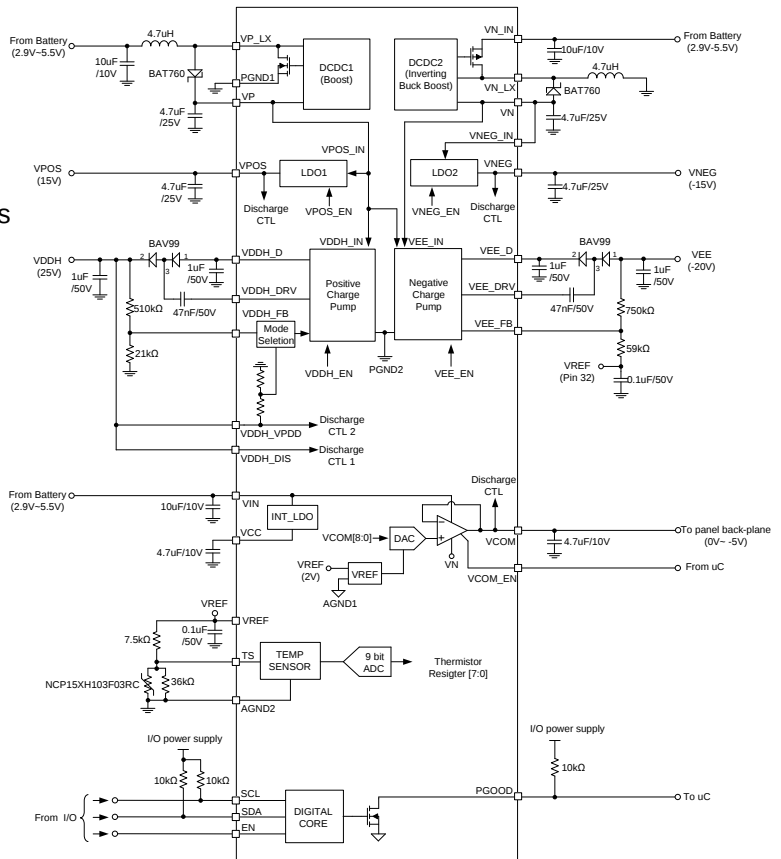


Features

- 2.9V to 5.5V Input Voltage Range
- Boost Converter VP for the Power Input of Positive Rail
- Inverting Buck-Boost Converter VN for the Power Input of Negative Rail
- Two Adjustable LDOs for Source Driver Supply
 - VPOS: 15 V, 200mA.
 - VNEG: -15 V, 200mA.
- Accurate Output Voltage Tracking: $VPOS + VNEG = \pm 50 \text{ mV}$
- Two Charge Pumps for Gate Driver Supply
 - VDDH: 25 V, 10mA (up to 29V)
 - VEE: -20 V, 15mA (down to -25V)
- Adjustable VCOM Driver for Accurate Panel-Backplane Biasing
 - 0 V to -5V
 - $\pm 1.5\%$ Accuracy ($\pm 10 \text{ mV}$)
 - 9-Bit Control (10-mV Nominal Step Size)
- Internal Active Discharge for VPOS, VNEG, VDDH, and VCOM
- Differential Temperature Sense Input and Digital Temperature Reporting
- I2C Compatible Interface
- Protection: UVLO, OTP, OCP, SCP, UVP
- RoHS Compliant and Halogen Free
- Compact Package: QFN5x5-32

Applications

- Power Supply for Active Matrix Panels
- EPD Power Supplies
- E-Book Readers


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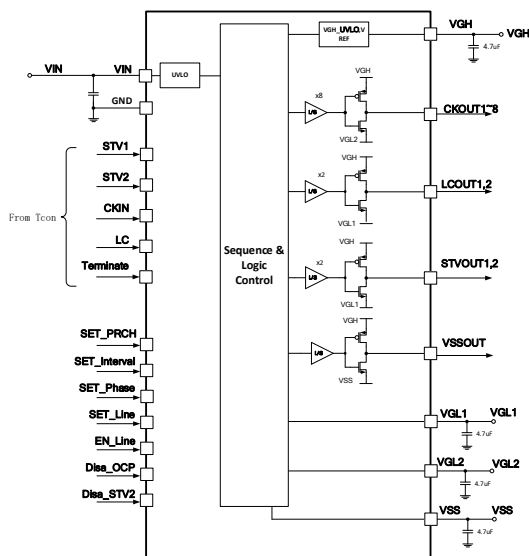
SY71500QFQ - 13-Channel Level Shifter IC for LCD TV Panel Application

Features

- Input Range:
 - VIN: 2.6V to 3.6V
 - VGH: 7V to 40V
 - VGL1: -18V to 0V
 - VGL2: VGL1 to 0V
 - VSS: VGL1 to 0V
- 13 channel level shifters
 - 8Channel CK
 - 2Channel LC
 - 2Channel STV
 - 1Channel VSSOUT
- Over current protection
- Input under voltage lockout
- Over temperature protection
- RoHS Compliant and Halogen Free
- Compact package: QFN4x4-32

Applications

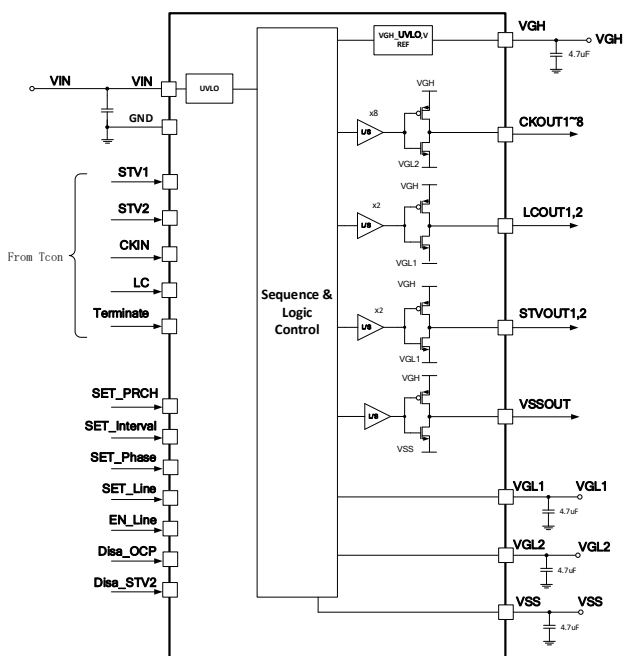
- TV LCD Panel



SY71503QFQ - 13-Channel Level Shifter IC for LCD TV Panel Application

Features

- Input Range:
 - VIN: 2.6V to 3.6V
 - VGH: 7V to 40V
 - VGL1: -18V to 0V
 - VGL2: VGL1 to 0V
 - VSS: VGL1 to 0V
- 13 channel level shifters
 - 8Channel CK
 - 2Channel LC
 - 2Channel STV
 - 1Channel VSSOUT
- Over current protection
- Input under voltage lockout
- Over temperature protection
- RoHS Compliant and Halogen Free
- Compact package: QFN4x4-32



Applications

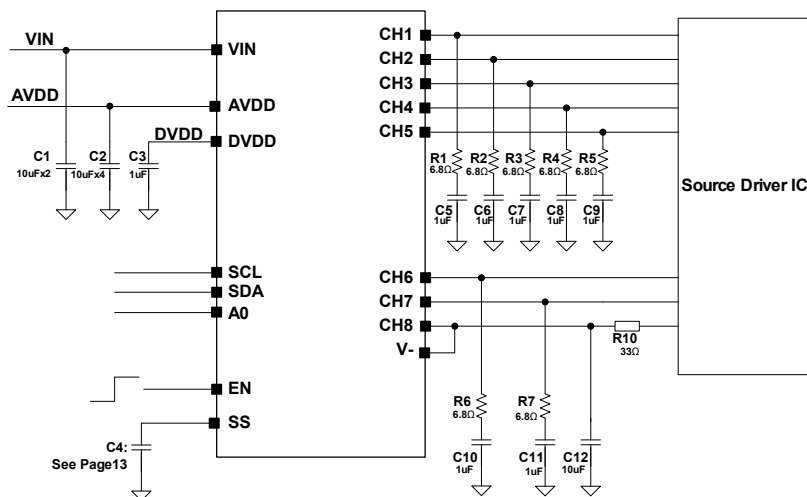
- TV LCD Panel

Features

- Analog Supply Voltage Range(AVDD): 11 to 20V
- Digital Supply Voltage (DVDD) with internal LDO: 3.3V
- Output Voltage Range for CH1~CH5: 0(REFL) to AVDD(REFH)
- Output Voltage Range for CH6~CH8: 0 to AVDD/2
- CH1, CH5, CH8 Analog Output for Gamma Reference Voltages with 10-bit DAC Resolution
- Sub DAC with Fixed R-string Ratio for CH1~CH5
- CH6,CH7 Analog Output for Gamma Reference Voltages with 9-bit DAC Resolution
- Programmable Non Volatile Memory
- Over Temperature Protection
- I2C Compatible Interface:
 - Supports 100kHz ~ 3.4MHz
 - Device Address select by A0 Pin
- RoHS Compliant and Halogen Free
- Compact Package: QFN5×5-40

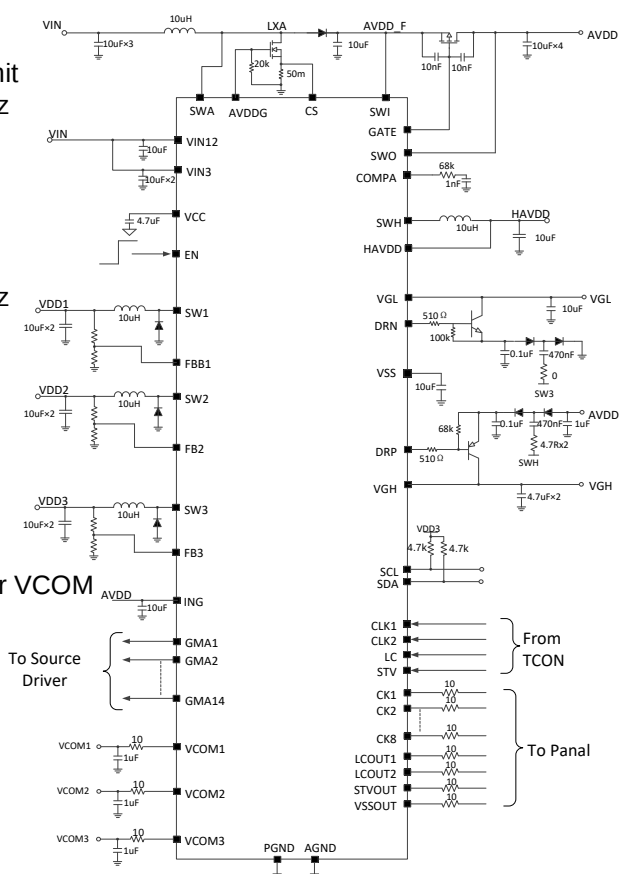
Applications

- OLED TV Panel



Applications

- TFT LCD Panel



Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{OUT} (V)	I _{OUT} (A)	F _{SW} (MHz)	Package	Application	Integrated Function
SY72220QLQ	PVIN: 1.8 AVIN: 2.8	PVIN:5.5 AVIN:5.5	0.4~1.5	20	10/5/3.3	QFN3×4-16	Optical Module, Smartphone and Portable Devices, DCDC Modules.	3.4MHz I2C; DVS; Auto PFM or forced PWM mode; Remote sense; Fast transient response; UVP/SCP/OTP/OCF.

SY72220QLQ

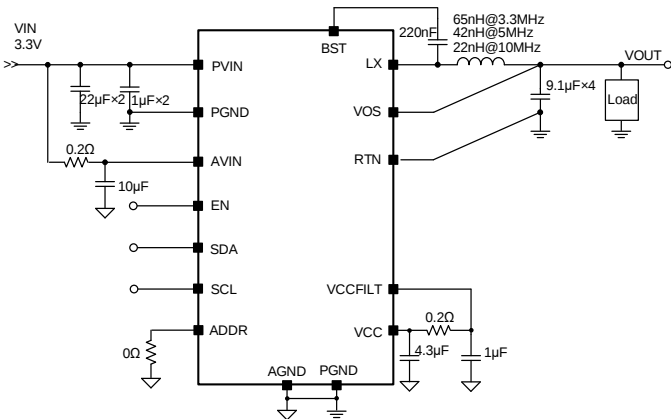
- 1.8V-5.5V Input, 20A, 10MHz High Frequency, Synchronous Step Down Regulator with I²C Interface

Features

- Wide Input Range from 1.8V to 5.5V
- Up to 20A Output Current
- Accuracy ±1% of output voltage from -40°C to 125°C
- Low RDS(ON) for Internal High-side FET and Synchronous FET
- Forced PWM Mode & Auto PFM Mode
- Differential Remote Sense
- Fast Transient Response
- Programmable Via I2C
 - Output Voltage from 0.4V to 1.5V
 - Switching Frequency of 3.3MHz/5MHz/10MHz
 - Dynamic Voltage Scaling (DVS) Slew Rate
- MTP Memory
- Internal Soft-start &Smooth Pre-Biased Startup
- Reliable Build-in Protections:
 - Automatic Recovery for:
- Input Under-voltage (UVLO)
- Output Under-voltage (UVP)
- Output Short-Circuit (SCP)
- Over Temperature (OTP)
 - Cycle-by-cycle Valley and Peak Current Limit (OCP)
 - Cycle-by-cycle Reverse Current Limit
- Compact Package: QFN3mm×4mm-16

Applications

- Optical Modules
- Smartphone and Portable Devices
- DC-DC Modules



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AC/DC



Backlighting

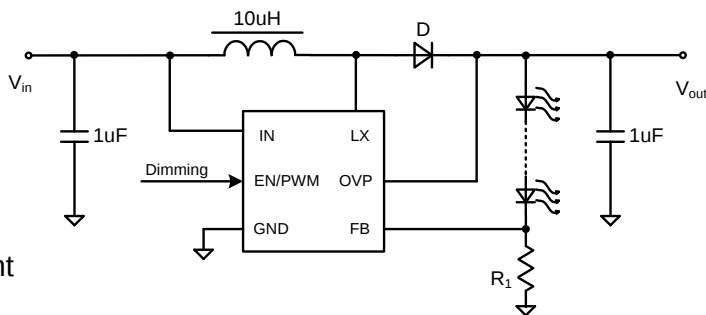
Part Number	App.Type	LED Channels	Input Voltage	LED Voltage	LED Current	Control Method	Switching Frequency	Package	Int.MOS
SY7301AADC/ SY7301ADBC	Handheld devices Backlight	1	2.8 to 40V	<40V	<300mA	Boost	1MHz	TSOT23-6 /DFN3x3-10	40V/2A
SY7203DBC	Handheld devices Backlight	1	2.8 to 30V	<30V	<300mA	Boost	1MHz	DFN3x3-10	30V/4A
SY7201ABC/ SY7201ADC/ SY7201AABC	Handheld devices Backlight	1	2.8 to 30V	<30V	<300mA	Boost	1MHz	TSOT23-6 /SOT23-6	30V/2A
SY7726POC	Phone/PAD Backlight	2	2.7 to 28V	<40V	<30mA	Boost+LDO	1MHz	CSP 1.31x1.31-9	40V/1A
SY7711BABC	TV Power Backlight	1	9-28vdc	<200V	<1.5A	Boost	120KHz	SOT23-6	NA
SY7728LFEC/ SY7728LFFC	Monitor Backlight	4	4.5-30V	<30V	<240mA	Boost + current sink	100KHz-1MHz	SOP16E/ SOP16	60V/3Ω
SY7759RBQ	Notebook or tablet Backlight	6	3V-24V	<40V	6-25mA	Boostt+ current sink	100KHz-1.5MHz	QFN3.5x3.5	40V/200mΩ
SY7758QCQ	Notebook or tablet Backlight	6	2.7V-20V	<46V	<50mA	Boost+ current sink	320KHz-1.3MHz	QFN4.0x4.0	48V/200mΩ
SY7758VGS	Notebook or tablet Backlight	6	2.7V-20V	<46V	<50mA	Boost+ current sink	320KHz-1.3MHz	WLCSP2.43x1.77	48V/200mΩ
SY8717ABT	IR LED Backlight	1	4.5V-28V	27V	<0.8A	Syn Buck	1.8MHz	SOT23-6	28V/220mΩ
SY8719TQD	IR LED Backlight	1	4.5V-28V	27V	<1A	Syn Buck	1.8MHz	DFN1.8x1.4-6	28V/210mΩ
SY7792XVQ	TV mini LED Backlight	6	3.05V-3.6V	<30V	<70mA	current sink	<30KHz	QFN2.5x2.5-14	YES
NEW SY7790DFD	TV mini LED Backlight	4	3.05V-3.6V	<30V	<70mA	current sink	<30KHz	DFN2x2-8	YES
NEW SY77963XVQ	TV mini LED Backlight	6	3.05V-3.6V	<30V	<70mA	current sink	<30KHz	QFN2.5x2.5-14	YES

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SY7301AADC/SY7301ADBC - 40V High Current Boost LED Driver

Features

- Input voltage range: 2.8 to 40V
- Switch current limit: 2A
- Drives LED strings up to 40V
- 1MHz fixed frequency minimizes the external components
- 200Hz~1MHz dimming frequency for EN/PWM pin
- Internal softstart limits the inrush current
- Open LED over voltage protection
- RoHS Compliant and Halogen Free
- Compact package: TSOT23-6/DFN3X3-10



Applications

- GPS Navigation Systems
- Handheld Devices
- Portable Media Players

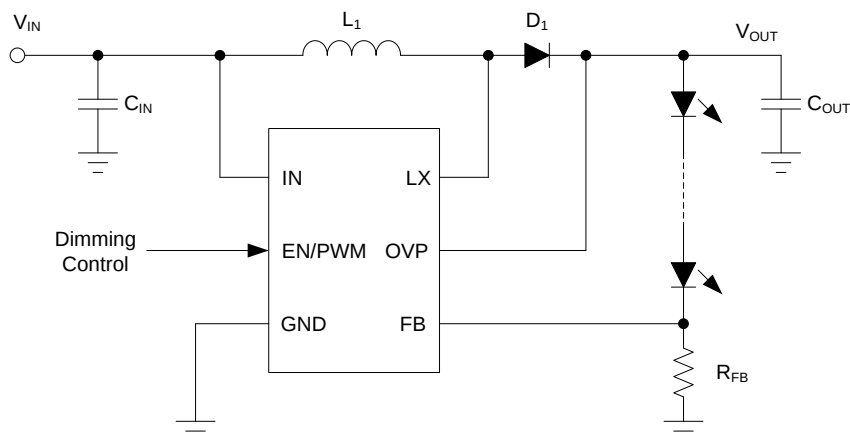
SY7203DBC - 30V High Current Boost LED Driver

Features

- Input voltage range: 2.8 to 30V
- Switch current limit: 4A
- Drives LED strings up to 30V
- 1MHz fixed frequency minimizes the external components
- 20kHz~1MHz wide dimming frequency range for EN/PWM pin
- Internal softstart limits the inrush current
- Open LED over voltage protection
- RoHS Compliant and Halogen Free
- Compact package: DFN3X3-10

Applications

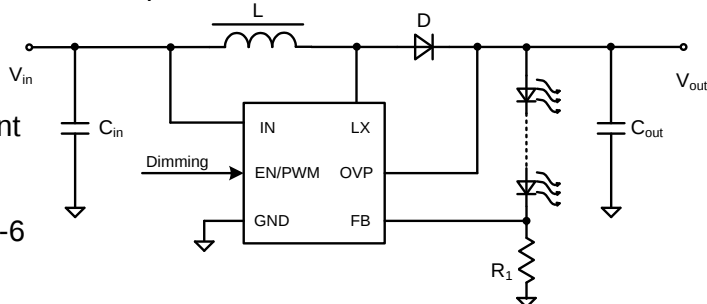
- GPS Navigation Systems
- Handheld Devices
- Portable Media Players



SY7201ABC/ADC/AABC - 30V High Current Boost LED Driver

Features

- Input voltage range: 2.8 to 30V
- Switch current limit 2A
- Drives LED strings up to 30V
- 1MHz fixed frequency minimizes the external components
- Dimming frequency for EN/PWM pin:
- SY7201: 20kHz~1MHz
- SY7201A: 100Hz~10kHz
- Internal softstart limits the inrush current
- Open LED over voltage protection
- RoHS Compliant and Halogen Free
- Compact package: SOT23-6/ TSOT23-6



Applications

- GPS Navigation Systems
- Handheld Devices
- Portable Media Players

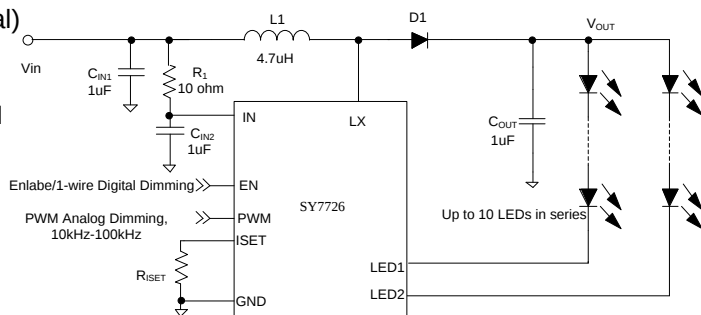
SY7726POC - High Efficiency 2-string LED Driver For Smart Phone

Features

- Wide Input Range: 2.7V~28V
- Drive Up to 10 LEDs per String
- Integrated 40V Power MOSFET
- Integrated 2 Channel Current Source of Up to 30mA Each
- 1% Typical Current Matching Accuracy
- Low LED Regulated Voltage (150mV typical)
- High Frequency Boost Converter (1MHz)
- Internal Compensation and Soft-start
- Analog PWM Dimming with 500ns min. ON Time
- Enable and 1-wire Digital Dimming
- Up to 100:1 PWM Dimming Ratio (20kHz Dimming Frequency)
- Cycle-by-cycle Inductor Current Limit
- LED Open/Short Protection, Output Over-voltage Protection
- Thermal Shutdown Protection
- Low Quiescent Current and Low Shutdown Current
- Pb-free Package: CSP 1.31×1.31 -9

Applications

- Smart Phone
- PAD
- 1-cell Lithium-ion Battery LED Applications
- Monitor Panel Backlight



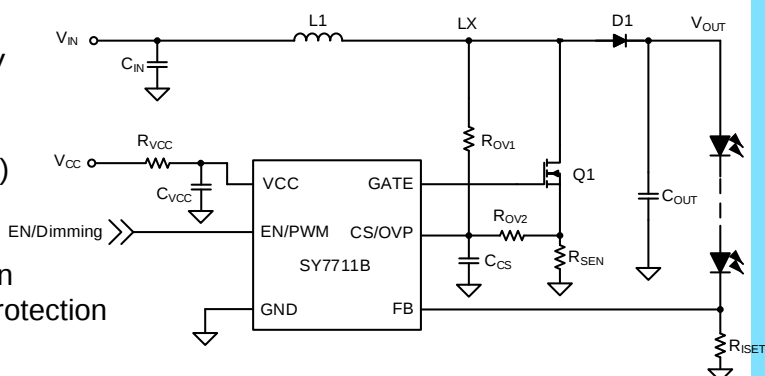
SY7711BABC - 1 Channel Boost LED Controller

Features

- V_{CC} Supply Voltage Range: 9V to 28V
- 120kHz Switching Frequency
- PWM Analog Dimming: 20kHz~1MHz
- Output Over Voltage Protection (OVP)
- Over Current Protection (OCP)
- LED Open & Short Protection
- LED Cathode Short to GND Protection
- Inductor Short & Diode Open/Short Protection
- Thermal Shutdown Protection (OTP)
- -40 to +85 °C Temperature Range
- RoHS Compliant and Halogen Free
- Pb-free Package: SOT23-6

Applications

- LCD TV Backlight
- LCD Monitor Backlight



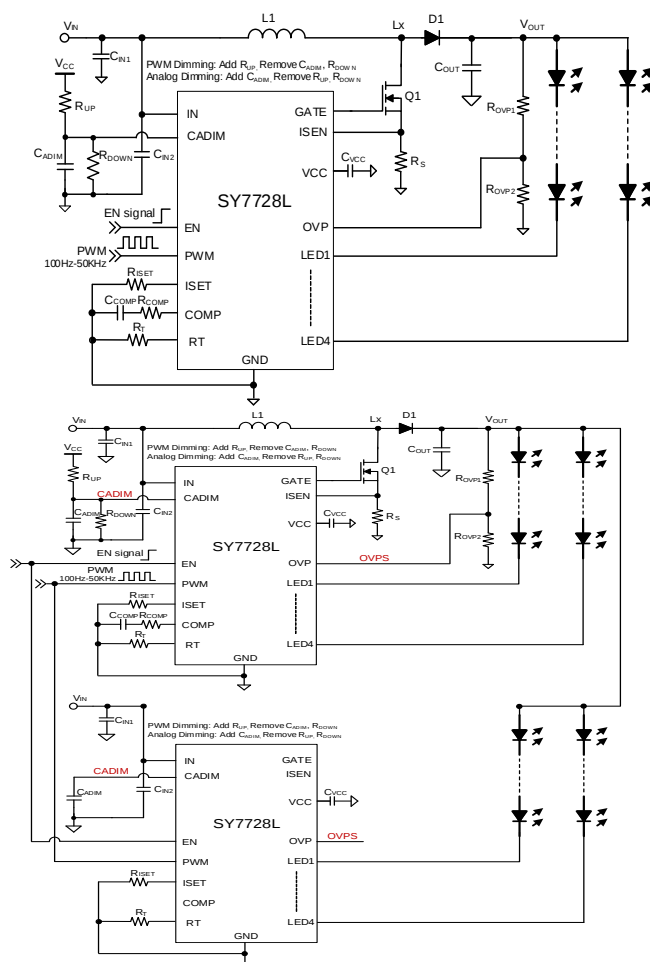
SY7728LFEC/FFC - 60V High Efficiency Four-String Boost LED Driver

Features

- 4.5-30V Wide Input Voltage Range
- Programmable 5mA~240mA LED Current Per String
- LED Current with +/-6% Accuracy at 5mA per String
- +/-2% Current Matching Among Strings at 5mA per String
- PWM and Analog Mode Dimming Frequency: 100Hz~50 kHz
- Programmable Boost Switching Frequency: 100kHz-1MHz
- Open and Short LED Protection
- Output Over Voltage Protection
- Boost Inductor/Diode Short Protection
- LEDN short to GND Protection
- RoHS Compliant and Halogen Free
- Compact Package: SOP16/SOP16E

Applications

- Monitor Panel Backlight


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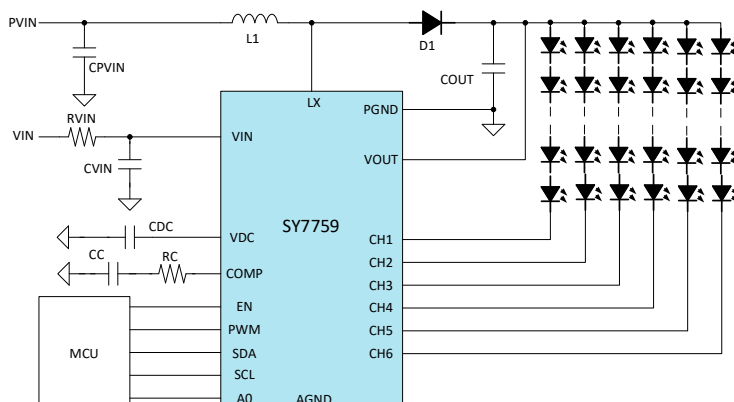
SY7759RBQ - 37V High Efficiency Boost Converter with I²C Controlled 6-CH LED Driver

Features

- Wide input voltage ranges from 3V to 24V
- VOUT OVP up to 40V to cover 12-13 WLEDs application
- Low head room(400mV) for high system efficiency
- Channel current set in register:6-25mA
- Adjustable switching frequency 100KHz-1.5MHz
- Embedded Memory with MTP
- 4 dimming mode: PWM/DC/MIX/MIX-26KHz
- Direct PWM up to 25kHz with Minimum 1.2% Duty
- DC mode up to 2KHz with 12bit resolution (Max 12 bits DAC integrated)
- PWM to mixed up to 2kHz with 12-bit resolution
- PWM to mixed-26kHz up to 2kHz with 12-bit resolution
- Protection: OVP/SLP/OLP/OTP
- Package: WQFN-20L 3.5*3.5

Applications

- Notebook or tablet LED backlight



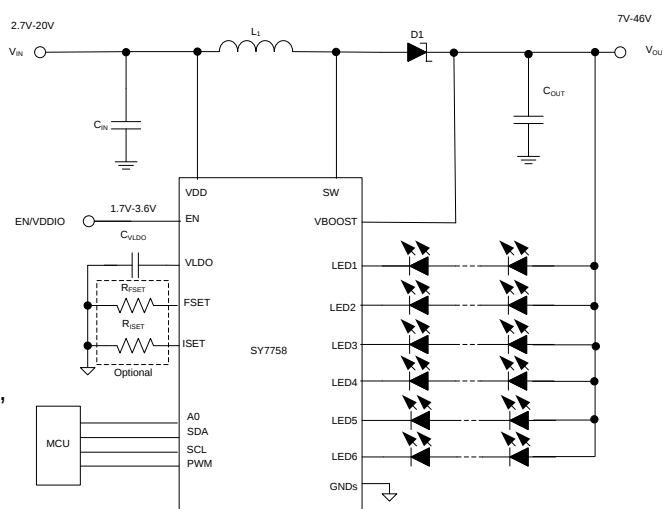
SY7758QCQ/VGS - 6-channel High Efficiency LED Driver for LCD Panel Backlighting

Features

- High Efficiency DC/DC Boost Converter and OTP Program Three Switching Frequency Options: 320 kHz, 635 kHz, and 1200 kHz
- 2.7V to 20V VDD Input Voltage Range Supports Multi-Cell Li-Ion Batteries
- 7V to 46V Boost Switch Output Voltage Range Supports as few as 3 WLEDs in Series per Channel and as Many as 13 pcs
- Configurable Channel Count (1 to 6)
- Up to 50 mA per Channel
- PWM and I2C Brightness Control
- Phase-shift PWM Mode Reduces Audible Noise
- Adaptive Dimming for Higher LED Drive Optical Efficiency
- Programmable Slew-rate Control and Frequency Jitter Scheme Minimize Switching noise and improve EMI performance
- LED Fault (Short and Open) Detection, UVLO, TSD, OCP, and OVP (Up to 6 Threshold options)
- Available in tiny 20-pin, 0.4-mm pitch CSP Package(CSP2.43 1.77-20) and 24-pin, 0.5-mm Pitch QFN package(QFN4 4-24)

Applications

- LED Backlights for Smart Phone LCDs
- LED Backlights for PAD LCDs
- LED Backlights for Notebook LCDs
- LED Backlights for VR LCDs


[Back](#)

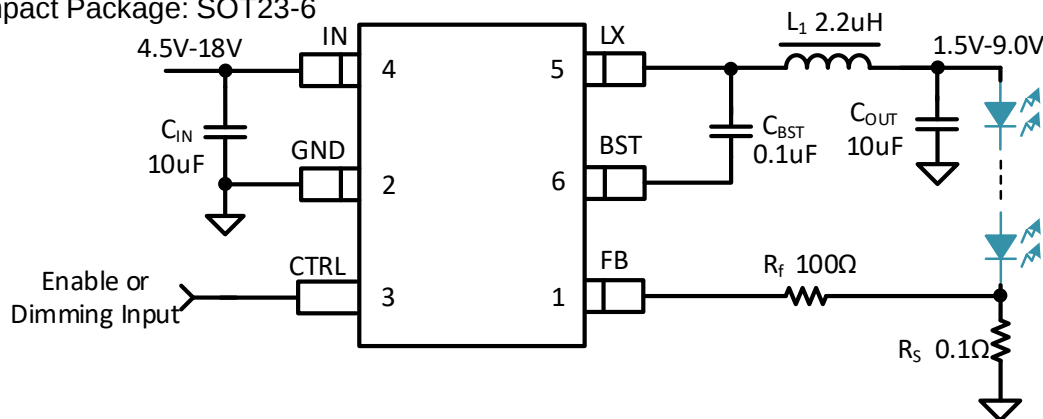
SY8717ABT - 1A, 1.8MHz, 0.2% Dimming Synchronous Step-Down Regulator for Dimmable LED Driver

Features

- Wide Input Range: 4.5V-28V
- Up to 1A Output Current Capability
- Low $R_{DS(ON)}$ for Internal Switches
- High Side/Low Side: 220m Ω /220m Ω
- Up to 1.8MHz Switching Frequency
- Auto Frequency Reduction to Apply Small or Large Conversion Ratio Application
- Cycle by Cycle Peak Current Limit for High Side and Valley Current Limit for Low Side
- High Accuracy for Down to 0.2% Dimming Scale
- Output Voltage Discharging
- Open LED and Short LED Protection
- Over Temperature Protection
- Compact Package: SOT23-6

Applications

- DVR Or NVR (IP Camera) System Application
- 12VDC Lighting



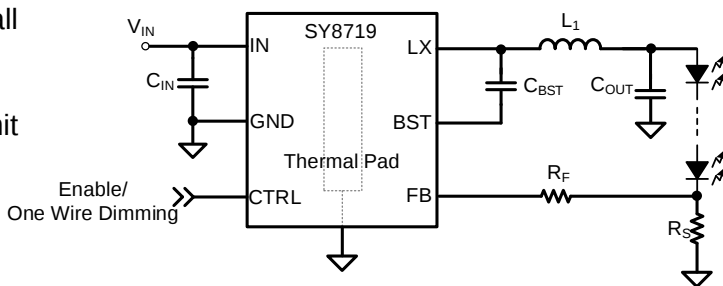
SY8719TQD - 28V, 1A, 1.8MHz, 0.1% Dimming Sync Buck For Dimmable LED Driver

Features

- 4.5V to 28V Input Voltage Range
- Up to 1A Output Current Capability
- Low $R_{DS(ON)}$ for Internal Switches:
- High/Low Side: 200m Ω /200m Ω
- Up to 1.8MHz Switching Frequency
- Auto Frequency Reduction to Apply Small or Large Conversion Ratio Application
- Cycle by Cycle Peak Current Limit for High Side Switch and Valley Current Limit for Low Side Switch
- One-Wire Dimming on the CTRL Pin
- Down to 0.1% Dimming Scale
- Output Voltage Discharging
- Open/Short LED Protection
- Over Temperature Protection
- Compact Package: DFN 1.8mm×1.4mm-6

Applications

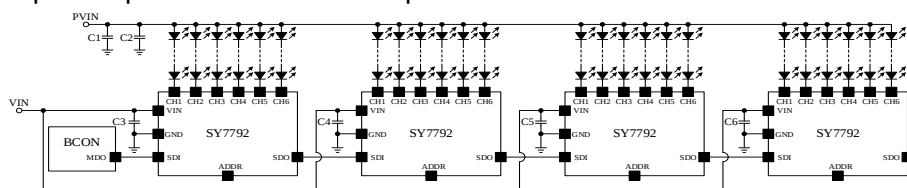
- DVR or NVR(IP Camera) System Application
- 12V DC Lighting



SY7792XVQ - 6CH Current Sink with One Wire Interface Mini LED Driver

Features

- VIN voltage range: 3.05 to 3.6V
- LED channel pin voltage range: 0 to 30V
- 7 to 70mA current accuracy $\pm 3\%$
- 0.4V headroom voltage for current sink
- 10-bit to 13-bit local PWM dimming
- Max 3.91kHz if 13-bit resolution applies
- 8-bit global analog dimming
- 1-bit LED current rising slew rate selection
- 8-bit global phase-shift configuration for synchronization control
- 1-bit channel turn on delay selection
- 10-bit PWM pulse configuration for PWM mask
- 32MHz Internal clock
- PWM dimming frequencies ranging from 2.6kHz to 31.25kHz
- Internal LED short protection, LED open protection and over temperature protection.
- Headroom voltage feedback by SDI pin
- Support 0.5Mbps/1Mbps/1.5Mbps/2Mbps one wire interface speed
- Package: QFN2.5 $\times$ 2.5-14



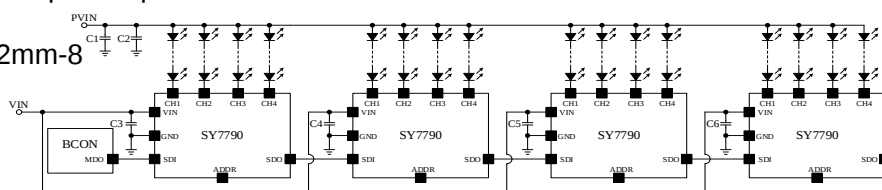
SY7790DFD - 4CH Current Sink with One Wire Interface Mini LED Driver

Features

- 3.05V to 3.6V Input Voltage Range
- 0V to 30V LED Channel Pin Voltage Range
- Current Accuracy $\pm 3\%$ (10mA to 100mA)
- 0.6V Headroom Voltage for Current Sink
- 10-bit to 13-bit Local PWM Dimming
- Support for 3.91kHz or 2.6kHz PWM Frequency (at Max 13-Bit Resolution)
- 8-Bit Global Analog Dimming
- 1-Bit LED Current Rising Slew Rate Selection
- 8-Bit Global Phase-Shift Configuration for Synchronization Control
- 1-Bit Channel Turn-On Delay Selection
- 10-Bit PWM Pulse Configuration for PWM Mask
- 32MHz Internal Clock
- 2.6kHz to 31.25kHz PWM Dimming Frequencies
- Internal LED Short, LED Open, and Overtemperature (OTP) Protections
- Headroom Voltage Feedback using SDI Pin
- Support for 0.5Mbps/1Mbps/1.5Mbps/2Mbps 1-Wire Interface Speed
- Compact Package: DFN2mmx2mm-8

Applications

- Monitor LCD Backlight
- LCD TV Backlight


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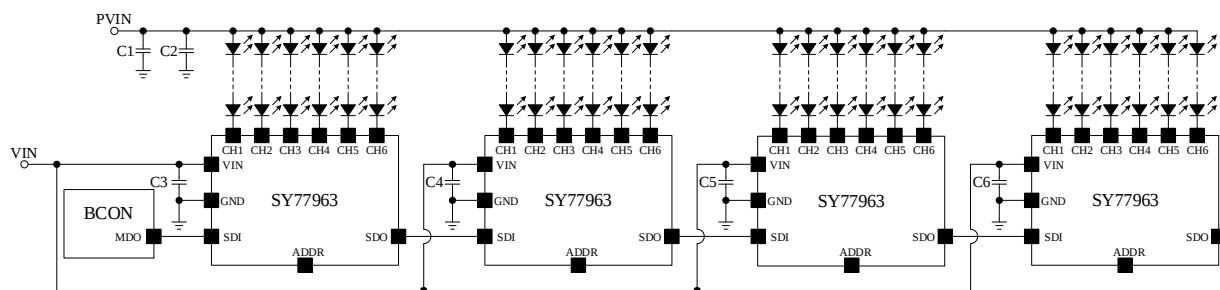
SY77963XVQ - 6CH Current Sink with One Wire Interface Mini LED Driver

Features

- VIN voltage range: 3.05 to 3.6V
- 3.05V to 3.6V Input Voltage Range
- 0V to 30V LED Channel Pin Voltage Range
- Current Accuracy $\pm 3\%$ (10mA to 100mA)
- 0.6V Headroom Voltage for Current Sink
- 10-bit to 13-bit Local PWM Dimming
- Support for 3.91kHz or 2.6kHz PWM Frequency (at Max 13-Bit Resolution)
- 8-Bit Global Analog Dimming
- 1-Bit LED Current Rising Slew Rate Selection
- 8-Bit Global Phase-Shift Configuration for Synchronization Control
- 1-Bit Channel Turn-On Delay Selection
- 10-Bit PWM Pulse Configuration for PWM Mask
- 32MHz Internal Clock
- 2.6kHz to 31.25kHz PWM Dimming Frequencies
- Internal LED Short, LED Open, and Overtemperature (OTP) Protections
- Headroom Voltage Feedback using SDI Pin
- Support for 0.5Mbps/1Mbps/1.5Mbps/2Mbps 1-Wire Interface Speed
- Compact Package: QFN2.5mmx2.5mm-14

Applications

- Monitor LCD Backlight
- LCD TV Backlight



LED Lighting(AC-DC)

Part Number	App.Type	PF	Description	Input V _{AC}	Output Power	Output Current	Package
SY58978UFAC	AC Buck non-dimming	>0.9	QR,Buck,4 Drain, no aux winding, Int. MOS 600V/2Ω	120/230V _{AC}	<20W	<300mA	SO8
SY58213FAC	AC Flyback non-dimming	>0.9	Self-Bias, QR, Buck, 4-Drain SO8, Int. comp. accurate OVP,650V/10Ω	230V _{AC}	<10W	NA	SO8
SY58215FAC	AC Flyback non-dimming	>0.9	Self-Bias, QR, Buck, 4-Drain SO8, Int. comp. accurate OVP, 650V/4.4Ω	230V _{AC}	<20W	NA	SO8
SY5839ABC	AC Buck non-dimming	>0.9	PSR, QR, CC, Buck controller	120/230V _{AC}	<100W	NA	SOT23-6
SY5830BABC	AC Flyback non-dimming	>0.9	PSR, QR, CC, Buck-Boost/Flyback controller	120/230V _{AC}	<100W	NA	SOT23-6
SY5842FAC	AC Flyback non-dimming	>0.9	PSR, QR, CC, Buck-Boost/Flyback controller, OTP, Line OVP & Brown-out	120/230V _{AC}	<80W		SO8
SY5861BFAC	Ripple-Remover	NA	Ripple-Remover, Low BOM cost, Thermal Protection	NA	NA	<250mA	SO8
SY5862FAC	Ripple-Remover	NA	Ripple-Remover, Low BOM cost, Thermal Protection	NA	NA	250~600mA	SO8
SY5863AJAC	Ripple-Remover	NA	Ripple-Remover, Low BOM cost, Thermal Protection	NA	NA	0,25~1.2A	TO252-3
SY5864KAC	Ripple-Remover	NA	Ripple-Remover, Low BOM cost, Thermal Protection	NA	NA	0.5~1.5A	TO220-3
SY5867FAC	Dim-Interface	NA	3-in-1 Dimming Interface	NA	NA	NA	SO8
SY5867SFAC	Dim-Interface	NA	3-in-1 Dimming Interface	NA	NA	NA	SO8
SY58873UFAC	PFC_Boost_CV	>0.9	QR, CV, Boost, Int. MOS 500V/4.9Ω single winding	230V _{AC}	<50W		SO8
SY58874UFAC	PFC_Boost_CV	>0.9	QR, CV, Boost, Int. MOS 520V/3.4Ω single winding	230V _{AC}	<60W		SO8
SY58237AGC	AC Flyback non-dimming	>0.5	Self-Bias, QR, Buck-Boost/Flyback,4 Drain, no aux winding, Int. MOS 650V/2.7Ω	400V _{DC}	<50W	NA	DIP8
SY58237CAGC	AC Flyback non-dimming	>0.5	Self-Bias, QR, Buck-Boost/Flyback,4 Drain, no aux winding, Jitter, Int. MOS 650V/2.7Ω	400V _{DC}	<50W	NA	DIP8
SY5951AFAC	Charge pump LLC non-dimming	>0.9	PSR, CC, ZVS, Charge Pump, LLC controller	230V _{AC}	<100W	NA	SO8
SY59515FAC	Charge pump LLC non-dimming	>0.9	PSR, CC, ZVS, Charge Pump, LLC, 4 Drain, Low side, Int. MOS 500V/1.1Ω	230V _{AC}	<45W	NA	SO8

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LED Lighting(AC-DC)

Part Number	App.Type	PF	Description	Input V _{AC}	Output Power	Output Current	Package
SY59516FAC	Charge pump LLC non-dimming	>0.9	PSR, CC, ZVS, Charge Pump, LLC, 4 Drain, High side, ,Int. MOS 500V/1.1Ω	230V _{AC}	<45W	NA	SO8
SY59525FAP	Charge pump LLC non-dimming	>0.9	PSR, CC, ZVS, Charge Pump, LLC, 4 Drain, Low side, ,Int. MOS 650V/1.1Ω	230V _{AC}	<45W	NA	SO8
NEW SY59526FAP	Charge pump LLC non-dimming	>0.9	PSR, CC, ZVS, Charge Pump, LLC, 4 Drain, High side, ,Int. MOS 650V/1.1Ω	230V _{AC}	<45W	NA	SO8
SY5072AABCT	PFC_Boost_CV	>0.9	QR, CV, Boost	120/230V _{AC}	<300W		SOT23-6
SY5072BABC	PFC_Boost_CV	>0.9	QR, CV, Boost, Burst @light load	120/230V _{AC}	<300W		SOT23-6
SY5018BFAC	PFC_Flyback_CV	>0.9	PSR, QR, CV, Controller	120/230V _{AC}	<80W		SO8
SY5018CFAP	PFC_Flyback_CV	>0.9	PSR, QR, CV, Controller, Low THD	120/230V _{AC}	<80W		SO8
SY5018SFAP	PFC_Flyback_CC_CV	>0.9	SSR, QR, CC, CV, Controller	120/230V _{AC}	<80W		SO8
SY5028ABC	PFC_Flyback_CV	>0.9	PSR, QR, CV, Controller	120/230V _{AC}	<60W		SOT23-6
SY50183FAC	PFC_Buck_CV	>0.9	PSR, QR, Buck CV, Int. MOS 500V/4.5Ω	120/230V _{AC}	<10W	<250mA	SO8
SY50186FAC	PFC_Buck_CV	>0.9	PSR, QR, Buck CV, Int. MOS 600V/2.2Ω	120/230V _{AC}	<16W	<400mA	SO8
SY5881FAC	AC Buck PWM Dimming	>0.9	PFC, CC, Buck Controller, PWM/Analog Dimming	120/230V _{AC}	<80W		SO8
SY5881SFAP	DC Buck	>0.5	CC, Buck Controller, Analog Dimming	40~400V _{DC}	<80W		SO8
NEW SY5881DFACP	DC Buck PWM Dimming	>0.5	CC, Buck controller, PWM/Analog dim	40~400V _{DC}	<80W		SO8
SY5881ZFAC	DC Buck PWM Dimming	>0.5	CC, Buck controller, PWM/Analog dim	40~400V _{DC}	<80W		SO8
SY5983FAC	AC Flyback PWM Dimming	>0.9	PFC, CC, Flyback controller, 0-10V dim	120/227V _{ac}	<80W		SO8
SY5989FAP	AC Flyback 0-10V Dimming	>0.9	PFC, CC, Flyback controller, TRIAC and 0-10V Dimming	120/277V _{AC}	<80W		SO8
SY5987FAP	AC Boost 0-10V Dimming	>0.9	PFC, CC, Boost controller, 0-10V Dimming	120/277V _{AC}	<400W		SO8
SY5882NFAC	AC Flyback PWM Dimming	>0.9	PFC, CC, Flyback controller, PWM/Analog dim	120/230V _{AC}	<80W		SO8
SY5882ZFAC	DC Flyback PWM Dimming	>0.5	CC, Flyback controller, PWM/Analog dim	400V _{DC}	<150W		SO8
SY5882SFAP	DC Flyback PWM Dimming	>0.5	CC, Flyback Controller, PWM/Analog Dim, 25%~100% V _{OUT}	400V _{DC}	<150W		SO8
NEW SY5955AFFP	Boost+LLC Combo IC	PF>0.95 THD<5%	SSR, CC/CV Controller	120/277V _{ac}	<400W		SOP16
SY5886FAC	AC Flyback, Resistance Dimming	>0.9	PFC, CC, Flyback Controller, Multistage Dim	120/230V _{AC}	<80W		SO8

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LED Lighting(AC-DC)

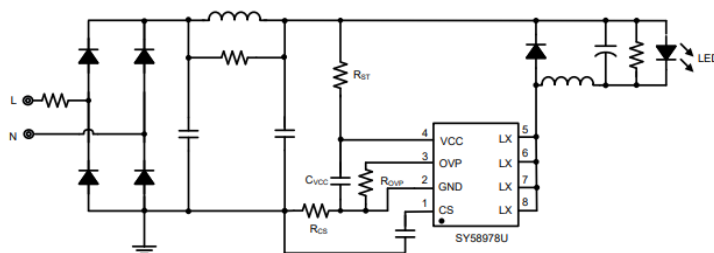
Part Number	App. Type	PF	Description	Input V _{AC}	Output Power	Output Current	Package
SY58561AAC	AC Buck Triac Dimming	>0.9	QR, CC, Buck, Triac Dimming, Low BOM cost, Int. MOS 350V/4.5Ω	120V _{AC}	<10W	<320mA	SOT23-5
SY58563FAC	AC Buck Triac Dimming	>0.9	QR, CC, Buck, Triac Dimming, Low BOM cost, 4 Drain, Int. MOS 350V/2.5Ω	120V _{AC}	<18W	<320mA	SO8
SY5852FAC	AC Flyback Triac Dimming	>0.9	PSR, QR, CC, Buck-Boost/Flyback controller, Triac Dimming, single winding	120/230V _{AC}	<40W	NA	SO8
SY58363AFAC	AC Buck-Boost Triac Dimming	>0.9	PSR, QR, CC, Buck-Boost/Flyback, Int. MOS 350V/2Ω, Triac Dimming, single winding	120V _{AC}	<15W	<200mA	SO8
SY58763AFAC	AC Boost Triac Dimming	>0.9	PSR, QR, CC, Boost, Int. MOS 350V/2Ω, Triac Dimming, single winding	120V _{AC}	<25W	<100mA	SO8
SY59101NFCP	AC Linear Triac Dimming	>0.7	Linear Triac Dimming, Int. MOS 350V/20Ω, TFB148°C	120V _{AC}	<12W	<70mA	SO8E
SY59101AFCP	AC Linear Triac Dimming	>0.7	Linear Triac Dimming, Int. MOS 350V/20Ω, TFB110°C	120V _{AC}	<12W	<70mA	SO8E
SY59101BFCP	AC Linear Triac Dimming	>0.7	Linear Triac Dimming, Int. MOS 350V/20Ω, TFB122°C	120V _{AC}	<12W	<70mA	SO8E
SY59101CFCP	AC Linear Triac Dimming	>0.7	Linear Triac Dimming, Int. MOS 350V/20Ω, TFB128°C	120V _{AC}	<12W	<70mA	SO8E
SY59101PFCP	AC Linear Triac Dimming	>0.9	Linear Triac Dimming, Int. MOS 350V/20Ω, TFB148°C	120V _{AC}	<12W	<70mA	SO8E
SY59101QFCP	AC Linear Triac Dimming	>0.9	Linear Triac Dimming, Int. MOS 350V/20Ω, TFB122°C	120V _{AC}	<12W	<70mA	SO8E
SY59102N2FCP	AC Linear Triac Dimming	>0.9	Linear Triac Dimming, Int. MOS 350V/20Ω, TFB148°C, Low Current Ripple	120V _{AC}	<8W	<50mA	SO8E
SY59119A1FCC	AC Linear Triac Dimming	>0.7	Linear Triac Dimming, Int. MOS 500V	230V _{AC}	<12W	<45mA	SO8E
SY59119B1FCC	AC Linear Triac Dimming	>0.7	Linear Triac Dimming, Int. MOS 500V	230V _{AC}	<12W	<45mA	SO8E
SY59119C1FCC	AC Linear Triac Dimming	>0.7	Linear Triac Dimming, Int. MOS 500V	230V _{AC}	<12W	5~12mA	SO8E
SY59112A2FCP	AC Linear Triac Dimming	>0.7	Linear Triac Dimming, Int. Main MOS 500V and Bleeder MOS 700V, Low current ripple	230V _{AC}	<12W	16~30mA	SO8E
SY59112B4FCP	AC Linear Triac Dimming	>0.7	Linear Triac Dimming, Int. Main MOS 500V and Bleeder MOS 700V, Low current ripple	230V _{AC}	<12W	12~20mA	SO8E

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SY58978U- Single Stage Buck PFC Regulator For LED Lighting

Features

- Power Factor >0.9
- 600V MOSFET Integrated
- Quasi-Resonant Operation
- Thermal Fold Back
- Low BOM Cost
- RoHS Compliant and Halogen Free
- Compact Package: SO8



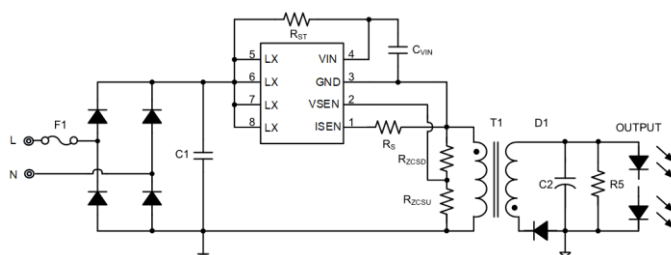
Applications

- LED Lighting

SY58213/215- Flyback Regulator For LED Lighting

Features

- Integrated 650V MOSFET
- Quasi-Resonant (QR) Mode to Achieve Low Switching Losses
- No Opto-coupler or Auxiliary Winding for Feedback in the Proprietary Floating Switch Configuration
- Reliable Short LED and Open LED Protection Thermal Foldback Function
- Power Factor >0.9 with Internal Loop Compensation
- SY58213: Maximum Output Power : 10W
- SY58215: Maximum Output Power : 20W
- RoHS Compliant and Halogen Free
- Compact Package: SO8



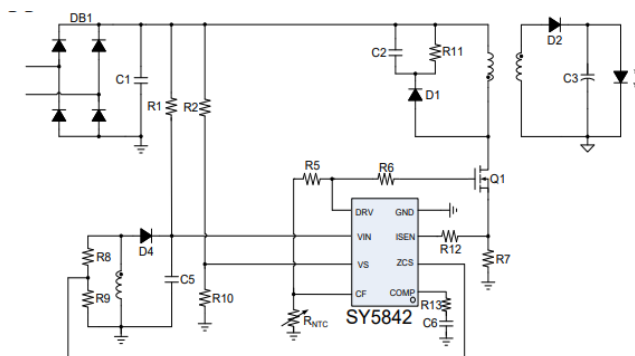
Applications

- LED Lighting

SY5842- Single Stage Flyback and PFC Controller With Primary Side Control for LED Lighting

Features

- High PF>0.9, Low THD<10%
- Primary Side Control Eliminates the Opto-coupler
- Valley Turn-on of the Primary MOSFET to Achieve Low Switching Losses
- Input Over/Under Voltage Protection
- Programmable Thermal Fold-back Function
- Reliable Short LED and Open LED Protection
- Quick Start up <500ms
- Low Start up Current:34 μ A Typical
- Package: SO8



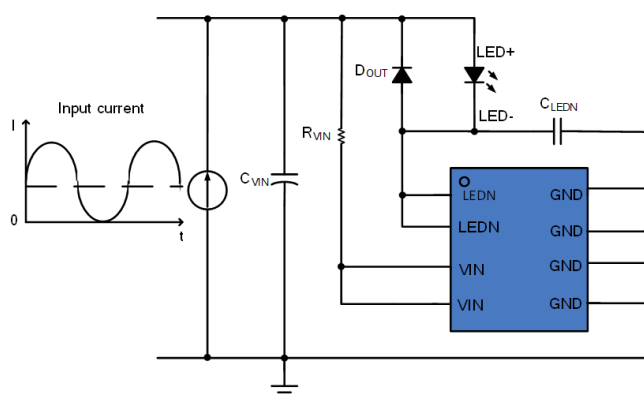
Applications

- LED lighting

SY5861B/62- Adaptive LED Current Filter for LED Lighting

Features

- Current filter for single stage LED driver to eliminate current ripple
- Proprietary scheme for low power loss $\leq 2.5\%$
- Adaptive for wide output speculation:
 - SY5861B: Output voltage range from 20V to 100V Output current ≤ 250 mA
 - SY5862: Output voltage range from 20V to 60V Output current range from 0.2A to 0.6A
- Open LED Protection and Short LED protection
- Reliable short LED and Open LED protection
- RoHS Compliant and Halogen Free
- Compact package: SO8



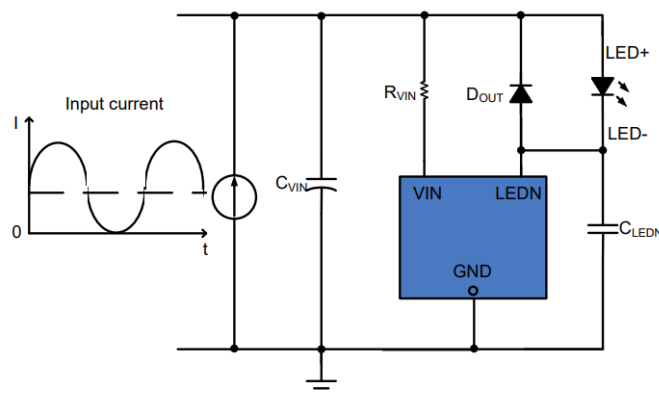
Applications

- LED Lighting

SY5863A/64- Adaptive LED Current Filter for LED Lighting

Features

- Current filter for single stage LED driver to eliminate current ripple
- Proprietary scheme for low power loss $\leq 2.5\%$ Adaptive for wide output speculation:
 - SY5863A: Output voltage range from 20V to 65V Output Current Range from 0.25A to 1.2A
 - SY5864: Output voltage range from 20V to 60V Output current range from 0.5A to 1.5A
- Open LED Protection and Short LED protection Reliable short LED and Open LED protection
- RoHS Compliant and Halogen Free
- Compact package: SY5863A: TO252-3
SY5864: TO220-3



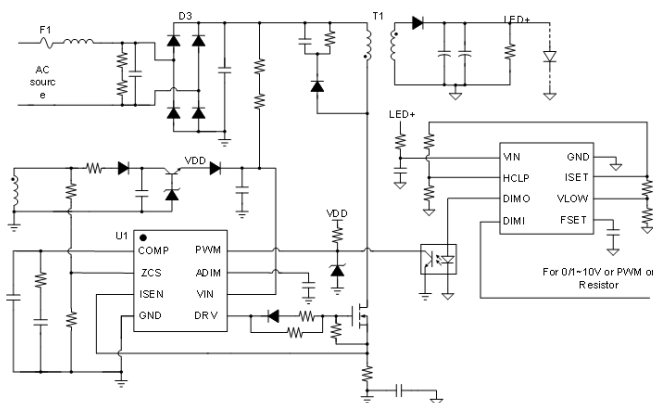
Applications

- LED lighting

SY5867/S- Dimming Interface Converter Compatible With 0/1~10V Dimming Resistor Dimming And PWM Dimming

Features

- Compatible with 0/1~10V Dimming, Resistor Dimming and PWM Dimming
- Recognize Different Dimming Signal Automatically Integrate 60V LDO Module to Simplify External Circuit
- The Source Current for Passive 0~10V Dimmer Can Be Set
- The Frequency of Output Can Be Set
- RoHS Compliant and Halogen Free
- Compact package: SO8



Applications

- LED Lighting

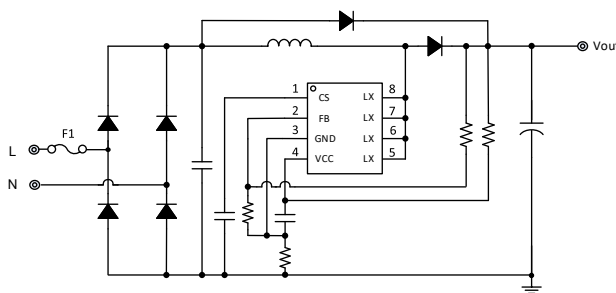
SY58873U/4U- Boost PFC Regulator

Features

- SY58873U: Integrated 520V MOSFET
- SY58874U: Integrated 540V MOSFET
- Quasi-Resonant (QR) Mode to Achieve Low Switching Losses
- $PF > 0.95$, $THD < 10\%$
- Output Over Voltage Protection
- Low BOM Cost
- RoHS Compliant and Halogen Free
- Compact Package: SO8

Applications

- Adaptors
- Pre-stage for Two-stage AC/DC Converter
- LED Lighting



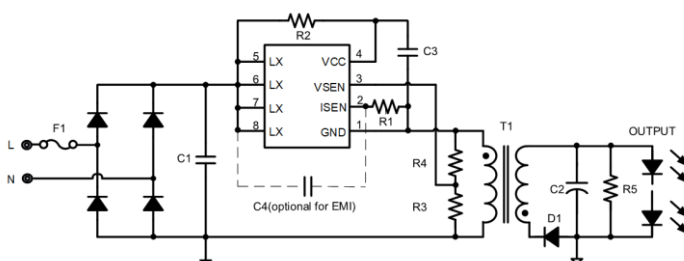
SY58237/C- Flyback Regulator for LED Lighting

Features

- Integrated 650V MOSFET
- Quasi-Resonant (QR) Mode to Achieve Low Switching Losses
- No Opto-coupler or Auxiliary Winding for Feedback in the Proprietary Floating Switch Configuration
- Reliable Short LED and Open LED Protection
- Thermal Foldback Function
- Jitter Function for Reduced EMI(SY58237C)
- RoHS Compliant and Halogen Free
- Compact Package: DIP8

Applications

- AC/DC Adaptors
- Battery Charges
- LED Lighting



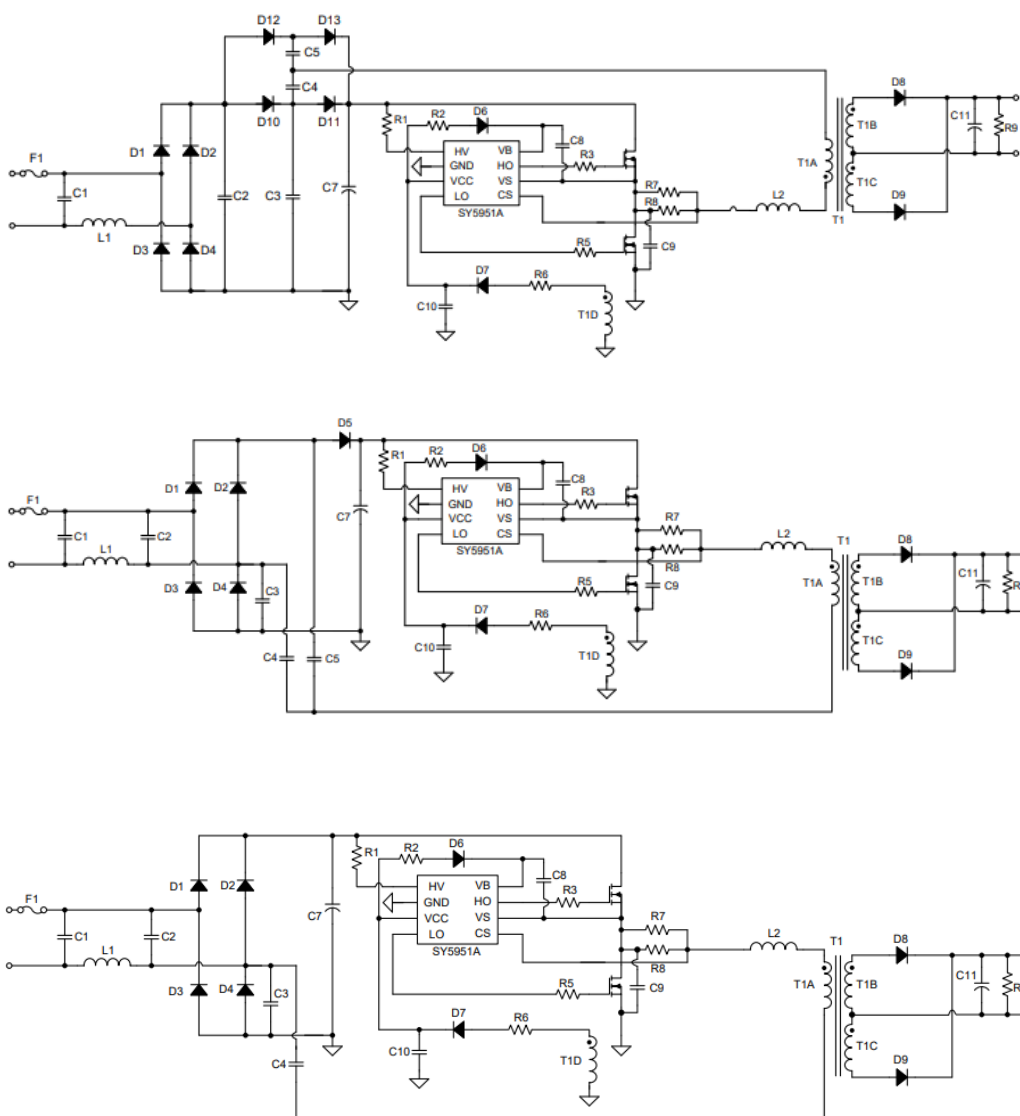
SY5951A- Charge Pump PFC LLC Controller, High PF, Low THD

Features

- Charge Pump PFC LLC Topology with Low BOM Cost
- $PF > 0.95$, $THD < 20\%$
- Primary Side ILED Regulation and Less than 5% ILED Ripple
- Short LED Protection (SLP)
- Open LED Protection (OLP)
- E-cap over Voltage Protection (OVP)
- Adaptive Prevent Capacitive Mode
- Compact Package: SO8

Applications

- LED Lighting



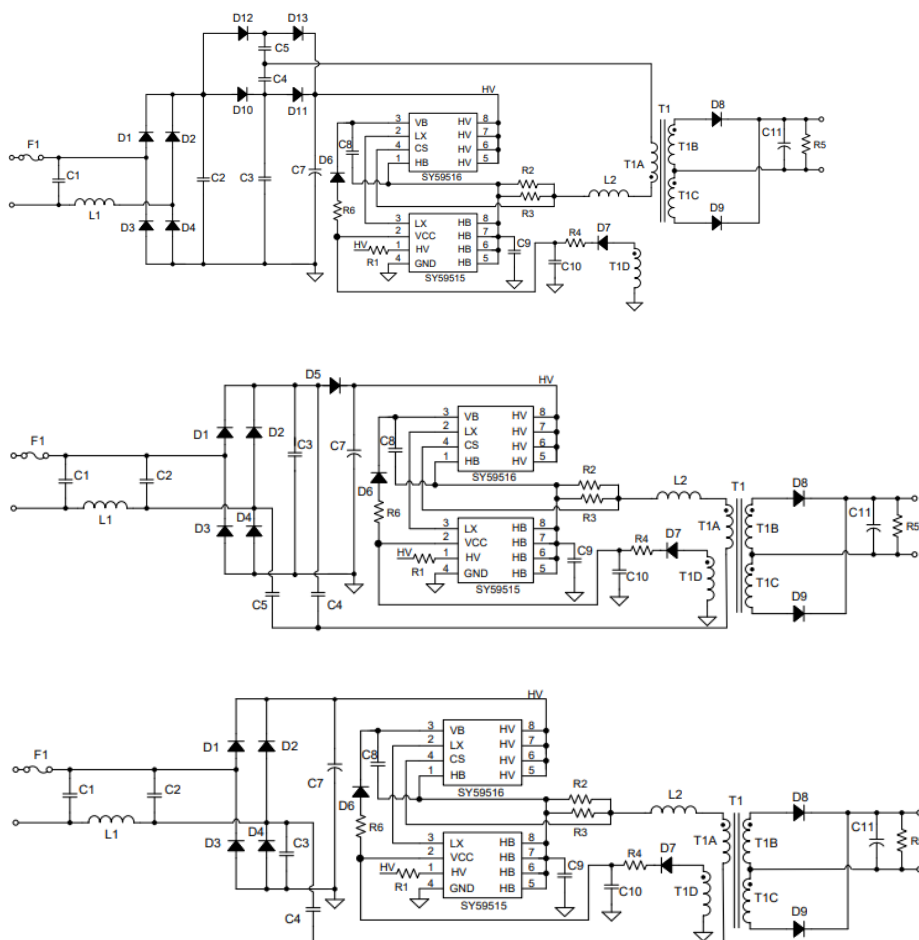
SY59515/6- Charge Pump PFC LLC Low Side Controller, High PF, Low THD

Features

- Integrated 500V MOSFET
- Charge Pump PFC LLC Topology with Low BOM Cost
- $PF > 0.95$, $THD < 20\%$
- Primary Side ILED Regulation and Less than 2% ILED Ripple
- SY59515: Short LED Protection (SLP), Open LED Protection (OLP), E-cap over Voltage Protection (HV OVP)
- SY59516: Over Current Protection (OCP), Over Temperature Protection (OTP), Thermal Fold Back (TFB), Adaptive Prevent Capacitive Mode Function
- Zero Voltage Overshoot on Resonant Capacitor at Startup
- Compact Package: SO8

Applications

- LED Lighting



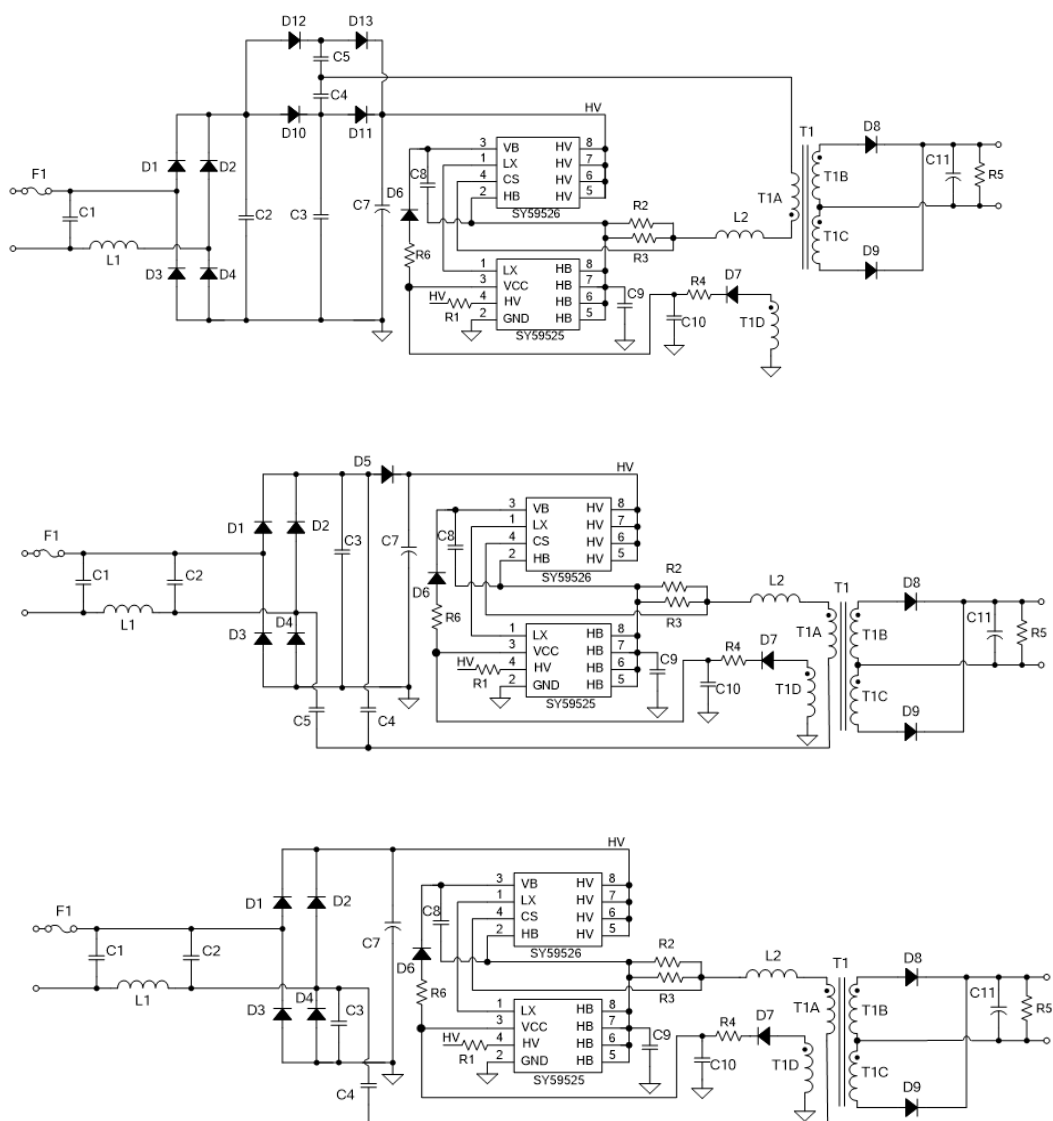
SY59525/SY59526- Charge Pump PFC LLC Low /HighSide Controller, High PF, Low THD

Features

- Integrated 650V MOSFET
- Charge Pump PFC LLC Topology with Low BOM Cost
- $PF > 0.95$, $THD < 20\%$
- Primary Side ILED Regulation and Less than 2% ILED Ripple
- Short LED Protection (SLP), Open LED Protection (OLP), E-cap over Voltage Protection (HV OVP)
- Zero Voltage Overshoot on Resonant Capacitor at Startup
- Compact Package: SO8

Applications

- LED Lighting


[Back](#)

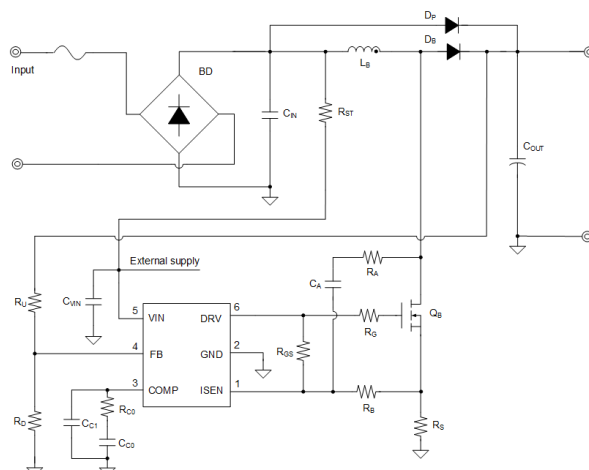
SY5072A/B- Single-Phase Transition-Mode PFC Controller

Features

- Valley Turn-on to Achieve Low Switching Losses
- Frequency Reduce in Light Load
- Internal High Current MOSFET Driver:
 - SY5072A: 75mA Sourcing and 400mA Sinking
 - SY5072B: 70mA Sourcing and 400mA Sinking
- MOSFET Over-Current Protection (OCP)
- Internal THD Optimization to Achieve Low THD
- Internal Transition Optimization
- Compact Package: SOT23-6

Applications

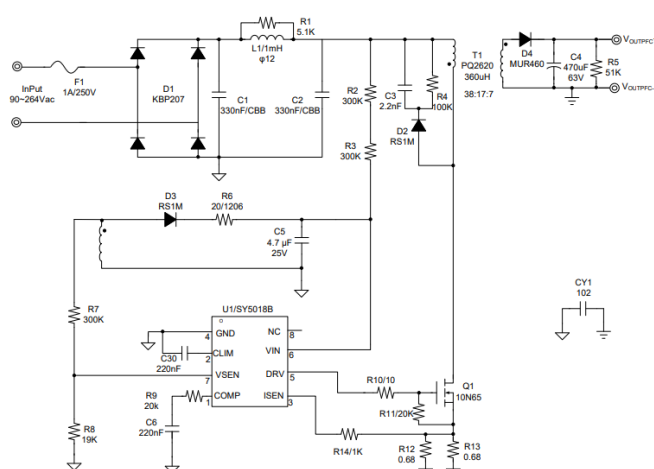
- AC Adapter Front End
- LED Drivers and Luminaries



SY5018B- Single Stage Flyback and PFC Controller with CV Control

Features

- Primary Side CV Control Eliminates the Opto-coupler.
- Valley Turn-on of the Primary MOSFET to Achieve Low Switching Losses
- Internal High Current MOSFET Driver: 0.1A Sourcing and 0.5A Sinking
- Power Factor >0.90 with Single-stage Conversion
- Maximum Switching Frequency Limitation 100kHz
- Output Current Limit, about 1.2 Times the Rated Current
- RoHS Compliant and Halogen Free
- Compact Package: SO8



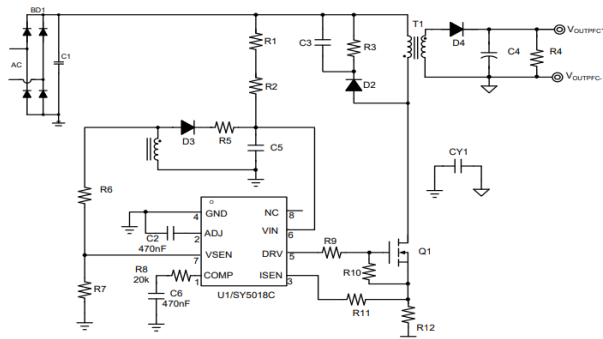
Applications

- AC/DC Adaptors
- Battery Charges
- LED Lighting

SY5018C- Single Stage Flyback and PFC Controller with CV Control

Features

- Primary Side CV Control Eliminates the Opto-coupler
- Valley Turn-on of the Primary MOSFET to Achieve Low Switching Losses
- Integrate THD Compensation, $PF > 0.9$, $THD < 20\%$ during 40% Load to 100% Load
- Fast Load Regulation
- Internal High Current MOSFET Driver: 0.1A Sourcing and 0.5A Sinking
- Maximum Switching Frequency Limitation 100kHz
- Compact Package: SO8



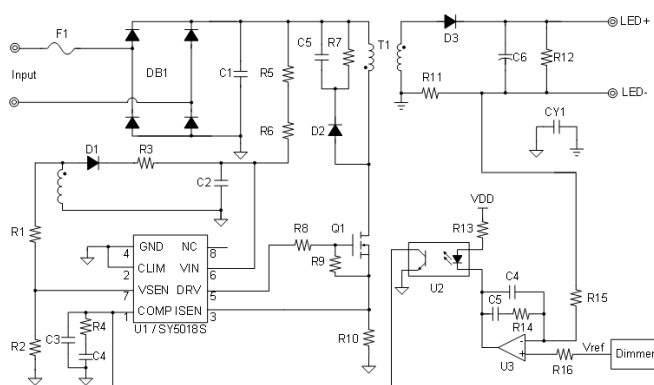
Applications

- AC/DC Adapters
- Battery Chargers
- LED Lighting

SY5018S- Single Stage Flyback and PFC Controller

Features

- Secondary Side CC Control Improves Output Current Accuracy
- Primary Side CV Control for Output Overvoltage Protection when Opt-coupler Fails
- Valley Turn-on of the Primary MOSFET to Achieve Low Switching Losses
- Internal High Current MOSFET Driver: 75mA Sourcing and 400mA Sinking
- Power Factor > 0.90 with Single-stage Conversion
- Maximum Switching Frequency Limitation 100kHz Compact Package: SO8



Applications

- AC/DC Adaptors
- Battery Charges
- LED Lighting

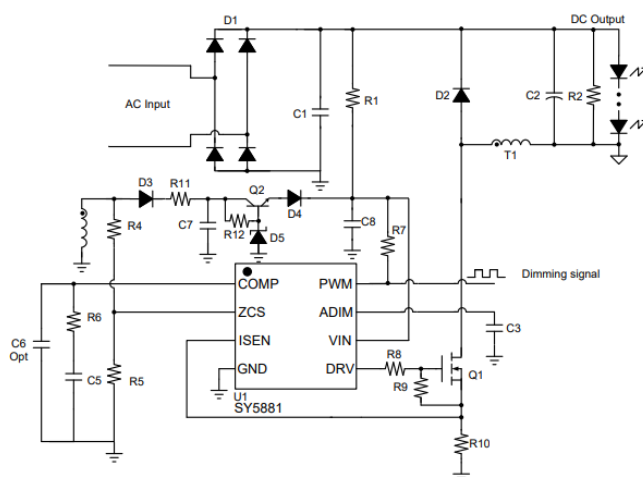
SY5881- Single Stage Buck PFC Controller For LED Dimming Lighting

Features

- High Dimming Accuracy
- Dimming Range from 5.5% to 100%
- CV Mode for Bias Supply at 0.90
- RoHS Compliant and Halogen Free
- Compact Package: SO8

Applications

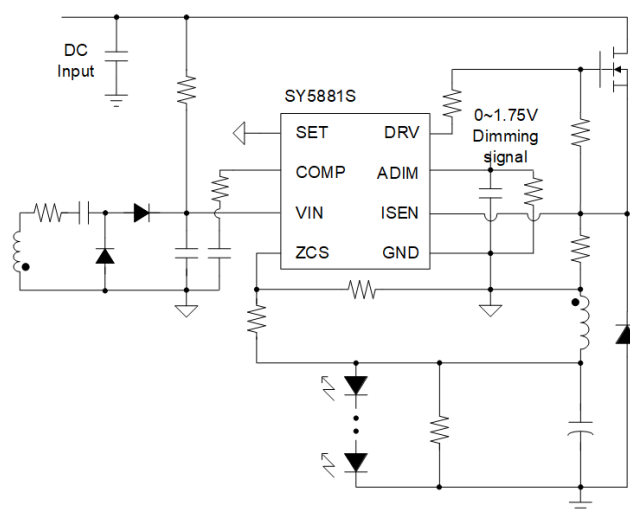
- LED Lighting



SY5881S- DC/DC Buck Controller for LED Dimming Lighting

Features

- Linear Dimming Curve
- Wide Range Voltage Output
- Optional Over Voltage Protection Mode
- CV Mode for Bias Supply when VADIM=0V
- Valley Turn-on to Achieve Low Switching Losses
- Single Winding Inductor with Floating Topology
- 200mA Sourcing Current and 600mA Sinking Current Drive Capability
- Low Start up Current: 34 μ A Typical
- Reliable Short LED and Open LED Protection Reliable Short ISEN Resistor Protection Compact Package: SO8



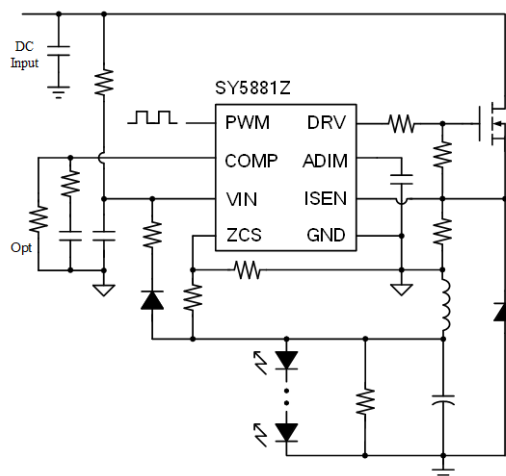
Applications

- LED Lighting

SY5881Z- DC/DC Buck Controller for LED Dimming Lighting

Features

- Linear Dimming Curve
- Dimming Range from 2.5% to 100.0%.
- CV Mode for Bias Supply when PWM=0%
- Valley Turn-on to Achieve Low Switching Losses
- Single Winding Inductor with Floating Topology
- 200mA Sourcing Current and 600mA Sinking Current Drive Capability
- Low Start up Current: 34 μ A typical
- Reliable Short LED and Open LED Protection
- Reliable Short ISEN Resistor Protection
- Compact Package: SO8



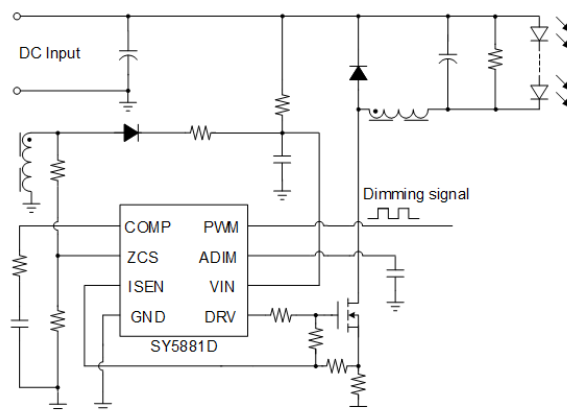
Applications

- LED Lighting

SY5881D- DC/DC Buck Controller for LED Dimming Lighting

Features

- Linear Dimming Curve.
- Dimming Depth Lower than 1%.
- Valley Turn-on to Achieve Low Switching Losses
- 250mA Sourcing Current and 600mA Sinking Current Drive Capability
- Low Start up Current: 40 μ A Typical
- Reliable Short LED and Open LED Protection
- Reliable Short ISEN Resistor Protection
- Compact Package: SO8



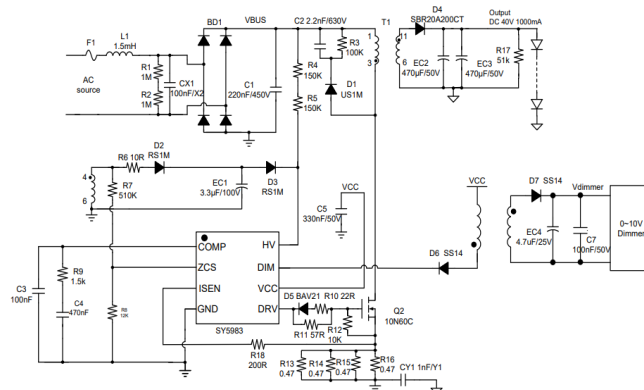
Applications

- LED Lighting

SY5983- Single Stage Flyback and PFC Controller with Primary Side Control for LED Lighting and Integrates 0~10V Transformer Driver

Features

- Primary side control eliminates the Opto-coupler
- Dimming Range from 5% to100%
- Integrated Dimming Transformer Driver Enables Isolation between the LED Driver and the Dimming Controller.
- Primary MOSFET Valley Turn-on Reduces Switching Losses
- Integrated High Voltage Start-up Function
- Start-up Time<300ms
- Low Standby Power<500mW
- Reliable Short LED and Open LED Protections
- Power Factor >0.90
- Internal High Current MOSFET Driver:
 - 0.19A Sourcing and 0.6A Sinking
- Compact Package: SO8



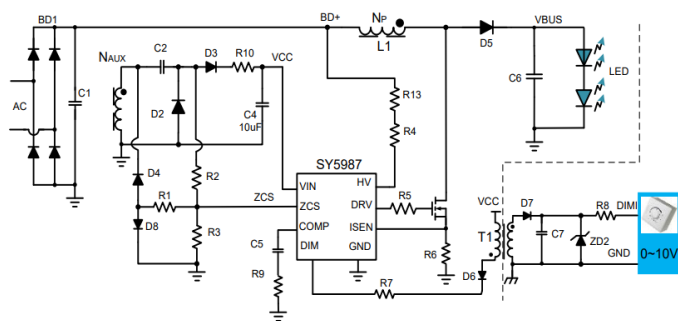
Applications

- LED Lighting

SY5987- Boost PFC Controller Integrates 0~10V Transformer Driver for LED Lighting

Features

- Dimming Range from 5% to 100%
- Integrated Dimming Transformer Driver Enables Isolation between the LED Driver and the Dimming Controller
- MOSFET Valley Turn-ON Reduces Switching Losses Integrated High Voltage Start-up Function Start-up Time 0.90
- Internal High Current MOSFET Driver: 0.19A Sourcing and 0.6A Sinking
- Compact Package: SO8



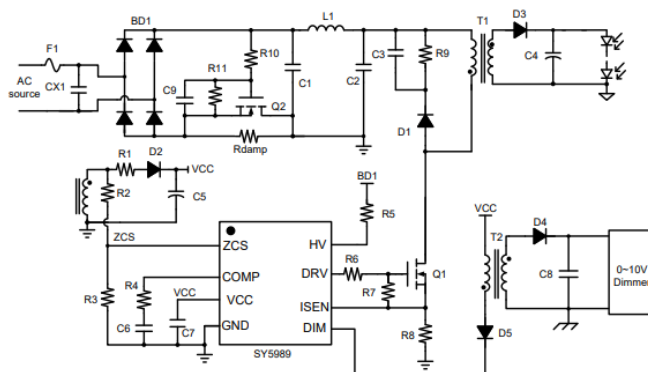
Applications

- LED Lighting

SY5989- Single Stage Flyback and PFC Controller with Primary Side Control for LED Lighting and Multiple Dimming Mode Option

Features

- Primary side control eliminates the Opto-coupler
- 0~10V Dimming Range from 5% to 100% Integrated Dimming Transformer Driver enables isolation between the LED driver and the dimming controller
- Compatible with Leading/Trailing Edge Dimmer Primary MOSFET Valley Turn-on reduces switching losses
- Integrated High Voltage Start-up Function Start-up Time 0.90
- Internal High Current MOSFET Driver: 0.19A Sourcing and 0.6A Sinking
- Compact Package: SO8



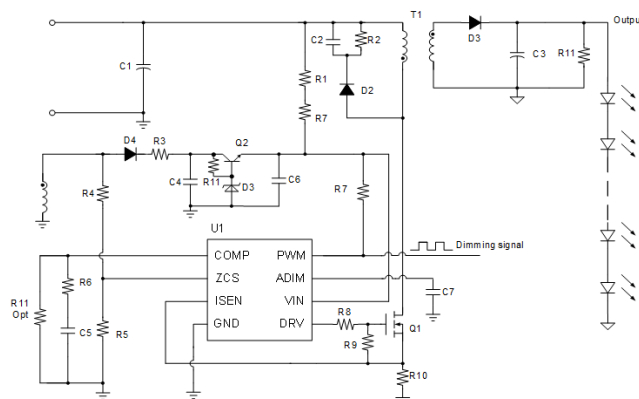
Applications

- LED Lighting

SY5882Z/S- DC/DC Flyback Controller with Primary Side Control for LED Lighting and Analog Dimming Mode

Features

- 2.5%~100.0% Dimming Range
- CV Mode for Bias Supply when PWM=0.0%.
- Primary Side Control Eliminates the Opto-coupler
- Valley Turn-on of the Primary MOSFET to Achieve Low Switching Losses
- 200mA Sourcing Current and 600mA Sinking Current Drive Capability
- Low Start up Current: 34 μ A Typical
- Reliable Short LED and Open LED Protection
- Low Power Frequency Ripple
- Compact Package: SO8



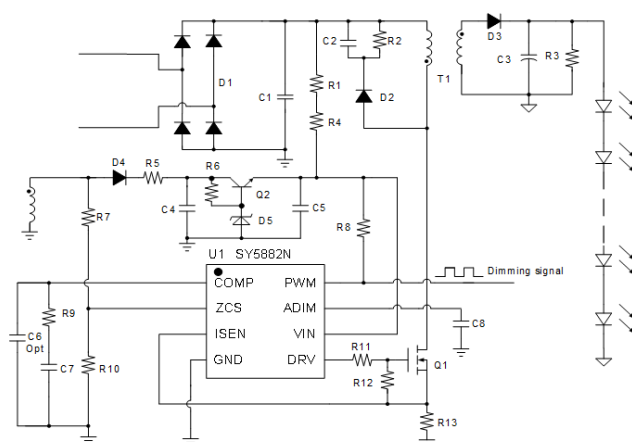
Applications

- LED Lighting

SY5882N- Single Stage Flyback and PFC Controller with Primary Side Control for LED Lighting and Multiple Dimming Mode Option

Features

- 2.0%~100.0% Dimming Range
- CV Mode for Bias Supply when PWM=0.0%
- Primary Side Control Eliminates the Opto-coupler
- Valley Turn-on of the Primary MOSFET to Achieve Low Switching Losses
- 0.3V Primary Current Sense Reference Voltage Leads to A Lower Sense Resistance thus A Lower Conduction Loss
- 200mA Sourcing Current and 650mA Sinking Current Drive Capability
- Low Start up Current: 34 μ A Typical
- Reliable Short LED and Open LED Protection
- Power Factor >0.90 with Single-stage Conversion.(Analog Dimming Only)
- RoHS Compliant and Halogen Free
- Compact Package: SO8



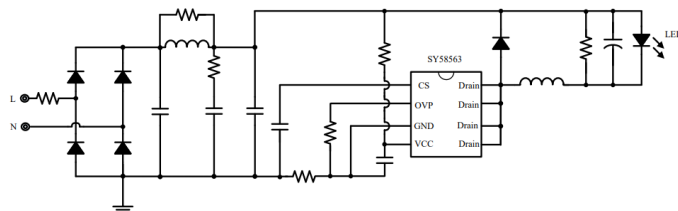
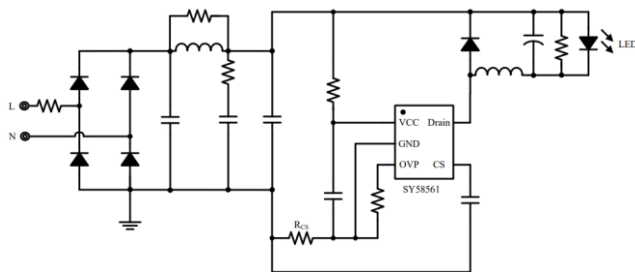
Applications

- LED Lighting

SY58561/3- Single Stage Buck PFC LED Driver Dimmable, High PF and Low BOM Cost

Features

- Compatible with Leading Edge/Trailing Edge Dimmer
- High PF without Any Dimmer
- 350V MOSFET Integrated
- Quasi-Resonant Operation
- Reliable Open/Short LED Protection
- Thermal Fold Back
- Low BOM Cost
- Maximum Output Power:
 - SY58561: 10W
 - SY58563: 18W
- RoHS Compliant and Halogen Free
- Compact Package:
 - SY58561: SOT23-5
 - SY58563: SO8



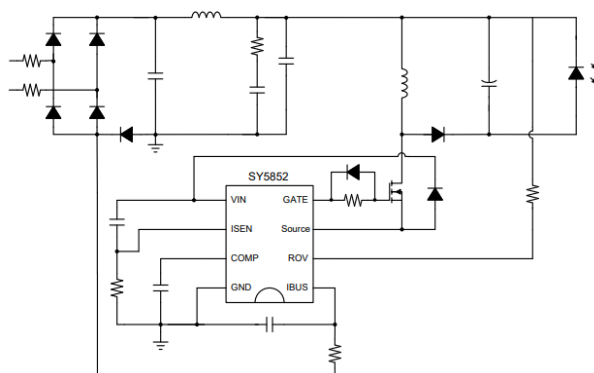
Applications

- LED Lighting
- Leading Edge Dimming
- Trailing Edge Dimming

SY5852- Single Stage LED driver Dimmable, High PF and Low BOM Cost

Features

- Compatible with Leading Edge/Trailing Edge Dimmer
- High PF without any Dimmer, $PF > 0.9$ Internal Dimming Curve 5%~100%
- Quasi-Resonant Operation
- Reliable Open/Short LED Protection Thermal Fold Back
- Low BOM Cost
- RoHS Compliant and Halogen Free
- Compact Package: SO8



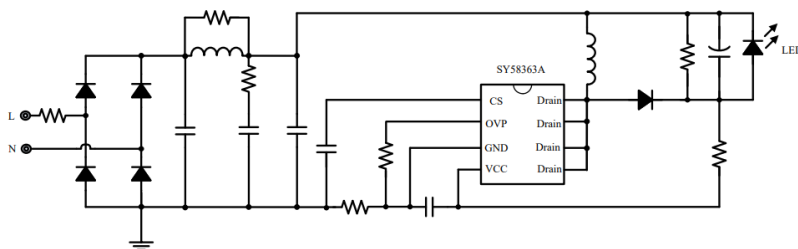
Applications

- LED Lighting

SY58363A- Single Stage Buck-Boost PFC LED Driver Dimmable, High PF and Low BOM Cost

Features

- Compatible with Leading Edge/Trailing Edge Dimmer
- High PF without Any Dimmer
- 350V MOSFET Integrated
- Quasi-Resonant Operation
- Reliable Open/Short LED Protection
- Thermal Fold Back
- Low BOM Cost
- Maximum Output Power:18W
- Compact Package: SO8



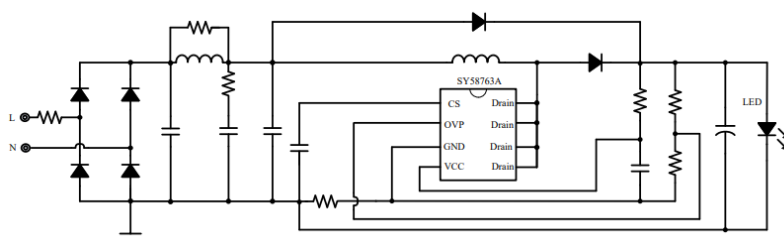
Applications

- LED Lighting
- Leading Edge Dimming
- Trailing Edge Dimming

SY58763A- Single Stage Boost PFC LED Driver Dimmable, High PF and Low BOM Cost

Features

- Compatible with Leading Edge/Trailing Edge Dimmer
- High PF without Any Dimmer
- 350V MOSFET Integrated
- Quasi-Resonant Operation
- Reliable Open/Short LED Protection
- Thermal Fold Back
- Low BOM Cost
- Maximum Output Power:18W
- Compact Package: SO8



Applications

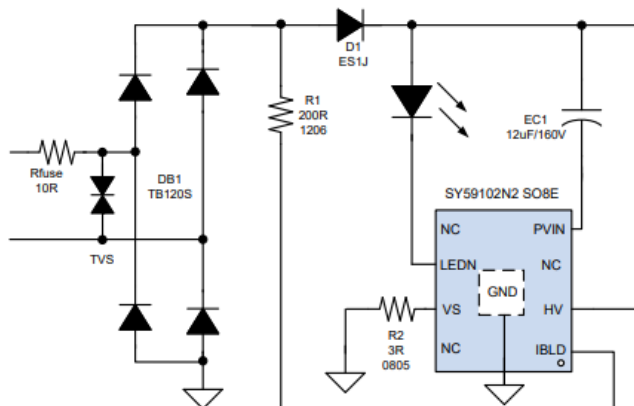
- LED Lighting
- Leading Edge Dimming
- Trailing Edge Dimming

[Back](#)

SY59102N2 - Dimmable, high Efficiency Linear Driver With Integrated Current Ripple Remover

Features

- Compatible with Leading/Trailing Edge Dimmer
- Integrated 350V MOSFET
- Regulator for adaptive 100/120Hz current ripple remove
- Power Factor >0.7
- Good regulation(<±3%)
- SMT Assembly
- Eliminate Magnetic Components
- Compact Package: SO8E



Applications

- LED Lighting

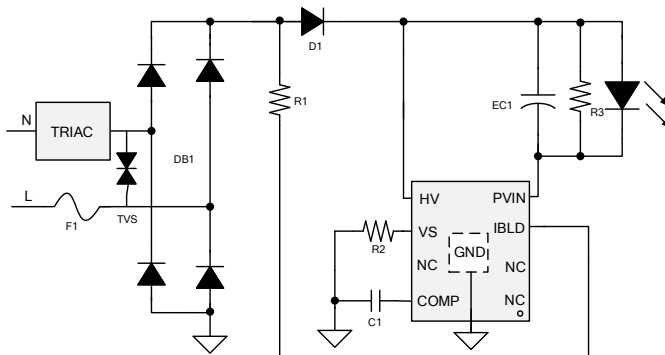
SY59101A/B/C/N/P/Q - Dimmable, high Efficiency Linear Driver with Integrated 350V MOSFET

Features

- Compatible with Leading/Trailing Edge Dimmer
- Integrated 350V MOSFET
- Power Factor >0.7
- Good regulation(<±3%)
- Up to 85% High Efficiency
- SMT Assembly
- Eliminate Magnetic Components
- Compact Package: SO8E

Applications

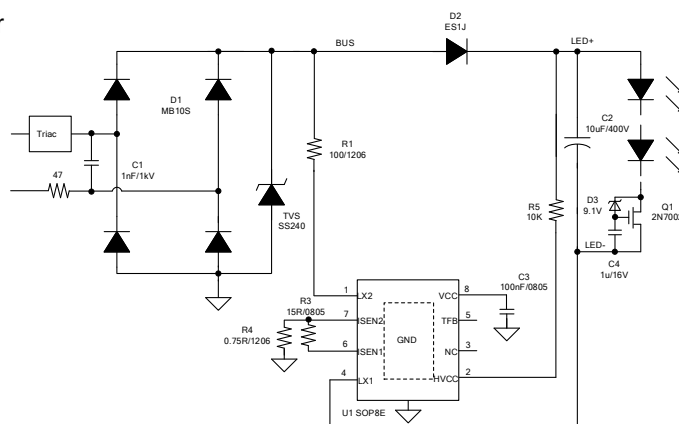
- LED Lighting



SY59119A1/B1/C1- HV TRIAC Linear Dimming Controller, High Efficiency, PF>0.7

Features

- Compatible with HV TRIAC Dimmer
- Integrated: 500V Main MOS and 700V Bleeder MOS
- Latching Current is Adjustable
- Special Low Power Loss Control
- High PF: PF>0.7
- No Magnetic Components and Support All Components Surface Mounted
- Compatible with Brazil 60Hz
- RoHS Compliant and Halogen Free
- Compact Package: SO8E



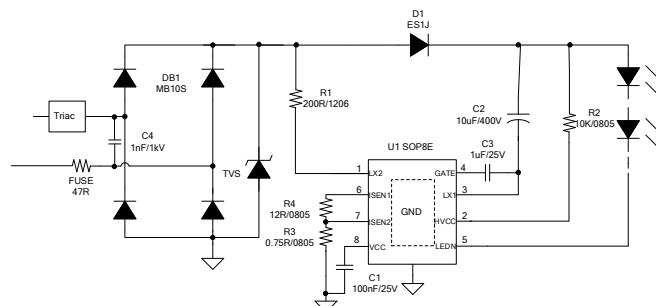
Applications

- LED Lighting

SY59112A2/B4- Dimmable, high Efficiency Linear Driver with Integrated Current Ripple Remover

Features

- Compatible with HV TRIAC Dimmer
- Integrated: 500V Main MOS and 700V Bleeder MOS
- Latching Current is Adjustable
- Regulator for Adaptive 100/120Hz Current Ripple Remove
- Special Low Power Loss Control
- High PF: PF>0.7
- No Magnetic Components and Support All Components Surface Mounted
- Compact Package: SO8E



Applications

- LED Lighting

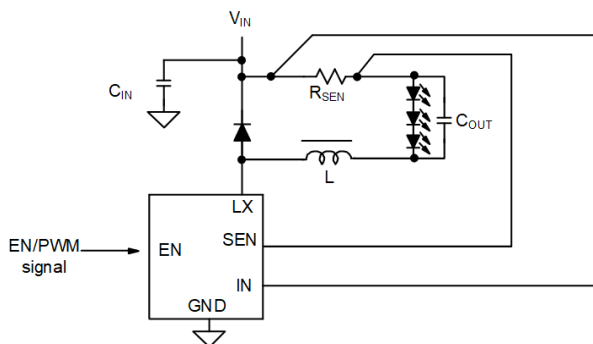
LED Lighting(DC-DC)

Part Number	App.Type	Input Range(V)	Description	Max. LED Current	F(Hz)	Topology	Package
SY8702AABC	DCDC Buck	2.8V-30V	Buck, Int. 30V/200mΩ MOS, PWM dimming	500mA	300kHz	Buck	SOT23-6
SY8745AFCC	DCDC Buck	10V-60V	Buck, Int. 60V/160mΩ MOS, Analog/PWM dimming	1500mA	500kHz	Buck	SO8E
SY8746BFCC	DCDC Buck	12V-60V	Buck, Int. 60V/660mΩ MOS, ON/OFF dimming	800mA	350kHz	Buck	SO8E
SY8750FCC	DCDC Buck	5V-80V	Buck, Int. 80V/200mΩ MOS, Analog/PWM dimming	2000mA	500kHz	Buck	SO8E
SY8756AHHC	DCDC Buck	11V-55V	Buck Controller, RGBW 4 channel, PWM dimming	5A	Adjustable frequency	Buck	TSSOP24E
SY8759FFP	DCDC Buck	33V-92V	Buck Controller, Precision Analog Dimming	5A	Adjustable frequency	Buck	SOP16
SY87596FFP	DCDC Buck	33V-92V	Buck Controller, Precision Analog Dimming 100V/150mΩ MOS	1.5A	Adjustable frequency	Buck	SOP16
SY8703ABC	IR LED	2.8V-30	Buck, Int. 30V/200mΩ MOS,PWM dimming	1.0A	1M	Buck	SOT23-6
SY8705FCC	IR LED	2.8V-30	Buck, Int. 30V/100mΩ MOS,PWM dimming,	3.0A	1M	Buck	SO8E
SY8705BFCC	IR LED	2.8V-30	Buck. int.30V/100mΩ MOS,PWM dimming, Small dimming scale accuracy	3.0A	1M	Buck	SO8E
SY8707ABC	IR LED	2.8V-30	Buck. int.30V/100mΩ MOS, Analog dimming,	1.5A	1M	Buck	SOT23-6
SY8708ABC	IR LED	2.8V-25	Buck. Int. 25V/200mΩ MOS, Analog dimming,	0.8A	1M	Buck	SOT23-6
SY8718A1ADC	IR LED	4.0V-23	Sync Buck, Int. 23V/125mΩ&23V/75mΩ MOS,PWM dimming, Small dimming scale accuracy	2.0A	1M	Buck	TSOT23-6
SY8718B1ADC	IR LED	4.0V-23	SYN Buck, Int. 23V/125mΩ&23V/75mΩ MOS,PWM dimming, Small dimming scale accuracy	1.5A	1M	Buck	TSOT23-6
SY8718H1ADC	IR LED	4.0V-23	SYN Buck, Int. 23V/125mΩ&23V/75mΩ MOS, Analog dimming, Small dimming scale accuracy down to 1% dimming scale	1.5A	1M	Buck	TSOT23-6
SY8719TQD	IR LED	4.5V-28V	SYN Buck, Int. 28V/200mΩ&28V/200mΩ MOS, Analog dimming, Small dimming scale accuracy down to 0.1% dimming scale	1A	1.8M	Buck	DFN1.8*1.4-6
SY7200AABC	IR LED	2.8V-30	Boost, Int.30V/220mΩ MOS,PWM dimming	2.0A	1M	Boost	SOT23-6
SY7310AADC	IR LED	2.7V-5.5	Boost, Int.40V/400mΩ MOS,PWM dimming, Small dimming scale accuracy	1.0A	1M	Boost	SOT23-6
SY7807DEC	Flash LED Driver	2.7V-5.5V	Syn Boost,PWM dimming	IFLASH<1.5A,IT ORCH<300mA	2M	Boost	DFN2*2_6
SY7803BDUC	Flash LED Driver	2.7V-5.5V	Syn Boost+ Current Source,PWM dimming	Each channel IFLASH<1.0A,IT ORCH<200mA	2M	Boost	DFN3*2-14
SY7806EPSC	Flash LED Driver,I2C	2.7V-5.5V	Syn Boost+ Current Source	Each channel IFLASH<1.5A,IT ORCH<358mA	2M/4M	Boost	CSP1.79*1.46-12 Back

SY8702A- High Efficiency Low EMI 300KHz,0.5A,30V, Step-down White LED Driver

Features

- Wide input range: 2.5-30 V
- 300kHz switching frequency
- Very low $R_{DS(ON)}$: 200m Ω
- Enable and dimming control available
- Compatible with PWM dimming power supply
- Compact 6 pin SOT23 package
- RoHS Compliant and Halogen Free



Applications

- Flash light
- Display cabinet lamp
- LED module
- LED sign

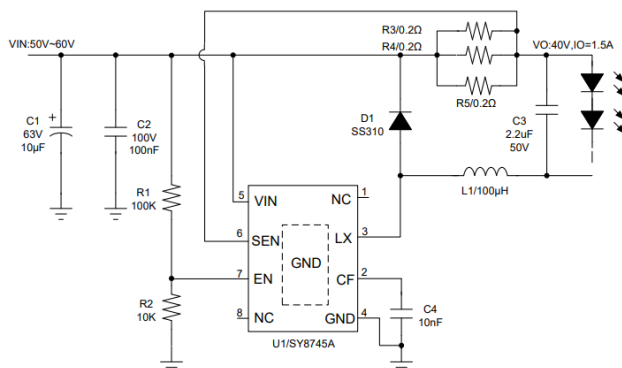
SY8745A- High Efficiency 60V, 2.0A, 500KHz Constant Current Step-down Regulator

Features

- Low $R_{DS(ON)}$ for internal switches :160m Ω
- Input range: 12V-60V
- 500kHz switching frequency
- PWM/Analog dimming available
- 2.0A LED current output
- Compact package: SO8E
- RoHS Compliant and Halogen Free
- $\pm 2\%$ 100mV reference

Applications

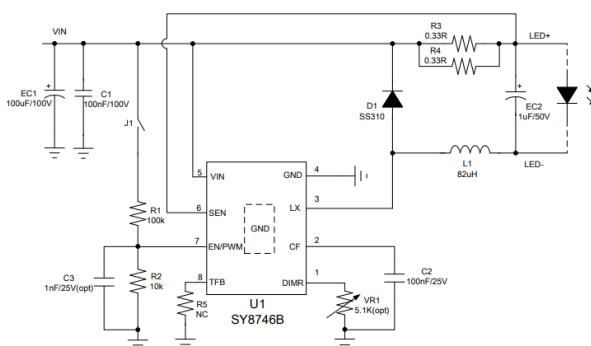
- PAR Lamp
- Tube Lamp
- Bulb



SY8746B- High Efficiency 60V, 0.8A, 350KHz Constant Current Step-down Regulator

Features

- Low RDS(ON) for Internal Switches :680mΩ
- Input Range: 12V-60V
- 350kHz Switching Frequency
- 1.2A MOSFET Peak Current Limitation
- Analog/PWM Dimming Available
- Lower than 0.5% Deep Dimming Level
- Adjustable Thermal Foldback Temperature
- Dimming Resistor to Adjust Output Full Load
- Compact Package: SO8E



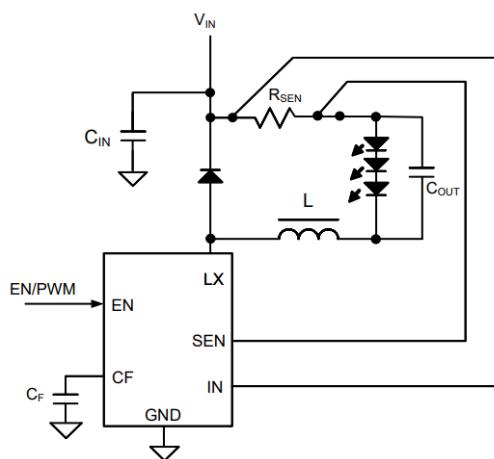
Applications

- PAR Lamp
- Tube Lamp
- Bulb

SY8750- High Efficiency, 5-80V Input, 500kHz White LED Driver

Features

- Wide input range: 5-80 V 500kHz switching frequency
- Integrated low RDS(ON) FET: 200mΩ
- Analog dimming with PWM signal/Analog signal Maximum output LED current 2A
- Compact package: SO8E



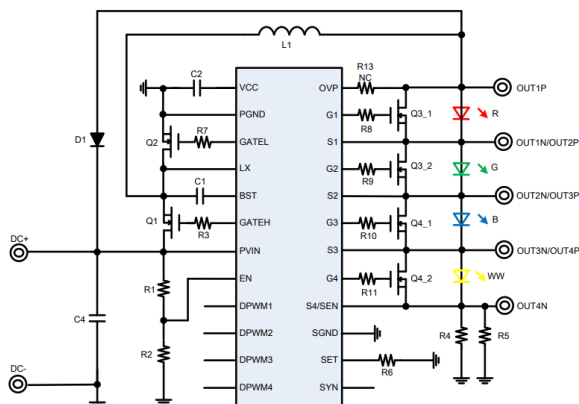
Applications

- LED Lighting

SY8756A- High Efficiency 55V, 5A, Step-down Controller For RGBW LED Lighting

Features

- Input Range: 11V-55V
- 4-channel Shunt Dimming MOSFET Driver
- Excellent PWM Dimming: 0~100% PWM Dimming Frequency: 500Hz~20 KHz
- MOSFET Gate Driver: Source1 1A and Sink 2A
- Programmable Current Ripple Hysteresis Control
- Simple External Components
- Reliable Input UVLO and Open LED Protection
- Thermal Shut down Protection
- RoHS Compliant and Halogen Free
- Compact Package: TSSOP24E



Applications

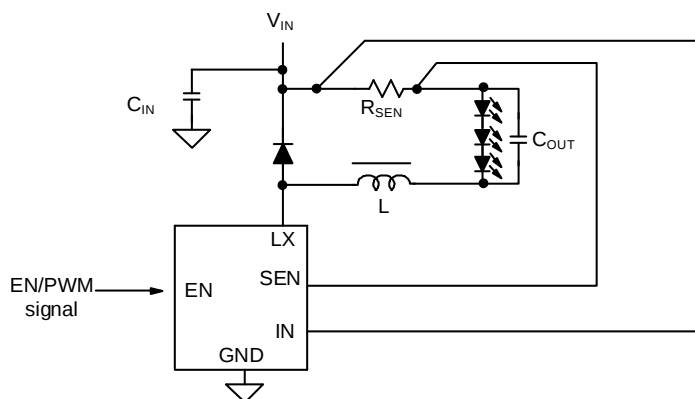
- RGBW Color Mixing and Dimming

[Back](#)

SY8703- High Efficiency, 1MHz, 1A,30V,Step-down White LED Driver

Features

- Wide input range: 2.5-30 V
- 1 MHz switching frequency
- Very low R_{ON} : 200m Ω
- Enable and dimming control available
- 20kHz~1MHz wide dimming frequency range
- Compact 6 pin SOT23 package
- RoHS Compliant and Halogen Free



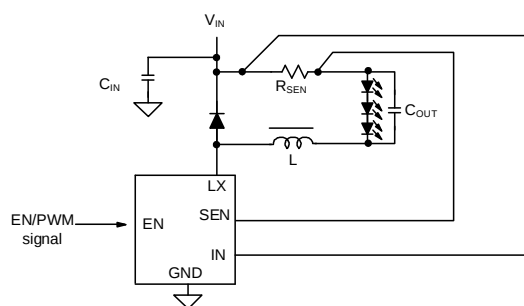
Applications

- Flash light
- Display cabinet lamp
- LED sign

SY8705/B- High Efficiency, 1MHz, 3A, 30V Step Down White LED Driver

Features

- Wide input range: 2.5-30 V
- 1 MHz switching frequency
- Very low R_{ON} : 100m Ω
- Enable and dimming control available
- 20kHz~1MHz wide dimming frequency range
- Compact package: SO8E
- RoHS Compliant and Halogen Free



Applications

- Flash Light
- Display Cabinet Lamp
- LED Sign

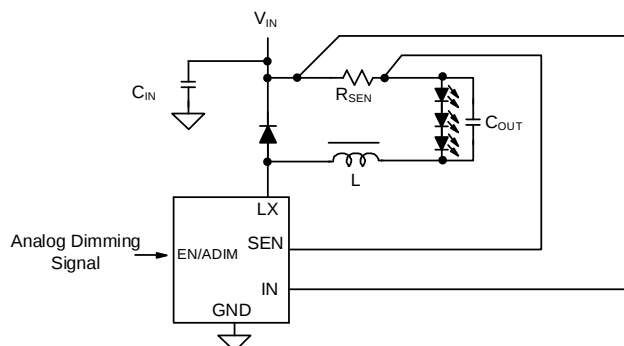
SY8708- High Efficiency, 1MHz, 0.8A, 25V, Step Down White LED Driver

Features

- Wide input range: 2.8-25 V
- 1 MHz switching frequency
- Very low R_{ON} : 200m Ω
- 0.65-1.2V analog dimming
- Compact package: SOT23-6
- RoHS Compliant and Halogen Free

Applications

- IP Camera and CCD Camera
- Flash Light
- Display Cabinet Lamp
- LED Sign

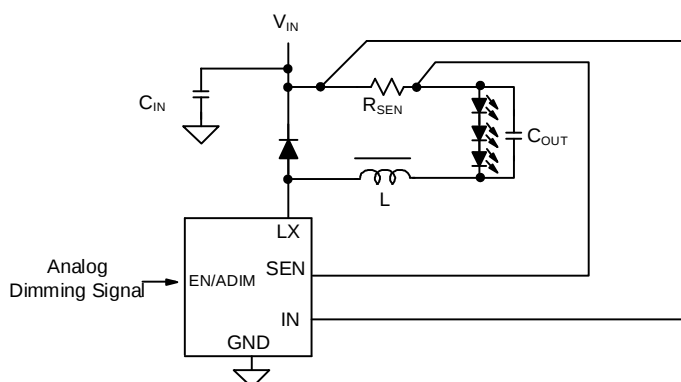
**SY8707**- High Efficiency, 1MHz, 1.5A,30V,Step-down White LED Driver

Features

- Wide input range: 2.8-30 V
- 1 MHz switching frequency
- Very low R_{ON} : 100m Ω
- 0.65-1.2V analog dimming
- Compact package: SOT23-6
- RoHS Compliant and Halogen Free

Applications

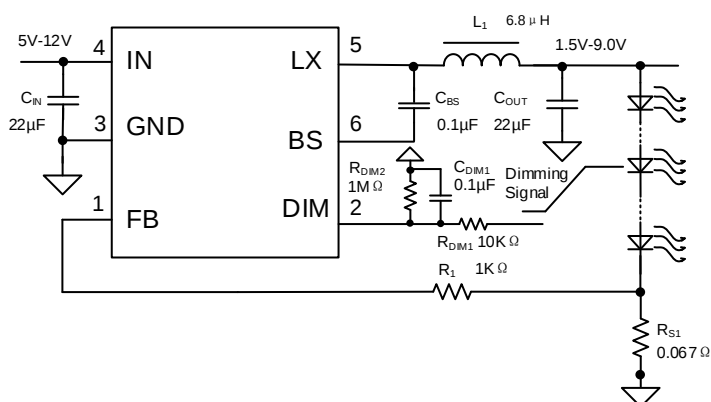
- IP Camera and CCD Camera
- Flash Light
- Display Cabinet Lamp
- LED Sign



SY8718A1/B1- High Efficiency, 23V,2.0A Synchronous Step Down Regulator For Dimmable LED Driver

Features

- Wide Input Range: 4V-23V
- Up to 2.0A Output Current Capability
- Low $R_{DS(ON)}$ for Internal Switches
- High Side/Low Side:125m Ω /75m Ω
- Fixed 1MHz Switching Frequency
- Cycle by Cycle 3.5A Peak Current Limit for High Side and 2.5A Valley Current Limit for Low Side
- High Accuracy for Low Dimming Scale
- Output Voltage Discharging
- Over Temperature Protection
- RoHS Compliant and Halogen Free
- Compact Package: TSOT23-6



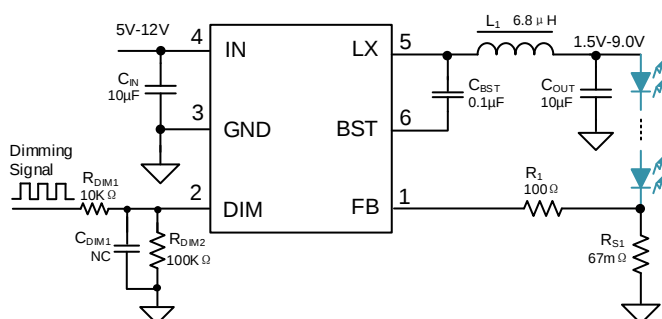
Applications

- DVR Or NVR(IP Camera) System Application
- 12VDC Lighting

SY8718H1- High Efficiency, 23V,2.0A Synchronous Step Down Regulator For Dimmable LED Driver

Features

- Wide input voltage range: 4V-23V
- Up to 2.0A Output Current Capability
- Low $R_{DS(ON)}$ for Internal Switches
- High Side/Low Side:125m Ω /75m Ω
- Fixed 1MHz Switching Frequency
- Cycle by Cycle 3.5A Peak Current Limit for High Side and 2.5A Valley Current Limit for Low Side
- High Accuracy at low duty cycle operation
- Enables dimming down to 1% of the maximum LED programmed current
- Over Temperature Protection
- RoHS Compliant and Halogen Free
- Compact package: TSOT23-6



Applications

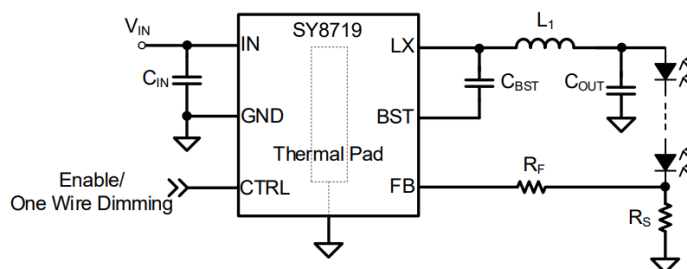
- IR LED Driving for DVR /NVR Camera Systems
- 12VDC Lighting

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SY8719- High 28V, 1A, 1.8MHz, 0.1% Dimming Synchronous Buck Regulator For Dimmable LED Driver

Features

- 4.5V to 28V Input Voltage Range
- Up to 1A Output Current Capability
- Low RDSON for Internal Switches: High/Low Side: 200mΩ/200mΩ
- Up to 1.8MHz Switching Frequency
- Auto Frequency Reduction to Apply Small or Large Conversion Ratio Application
- Cycle by Cycle Peak Current Limit for High Side Switch and Valley Current Limit for Low Side Switch
- One-Wire Dimming on the CTRL Pin
- Down to 0.1% Dimming Scale
- Output Voltage Discharging
- Open/Short LED Protection
- Over Temperature Protection
- Compact Package: DFN 1.8mm×1.4mm-6



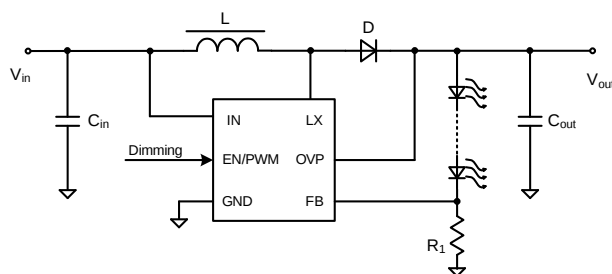
Applications

- DVR or NVR(IP Camera) System Application
- 12V DC Lighting

SY7200A/7310A- 30V/40V High Current Boost LED Driver

Features

- Input Voltage Range:
 - SY7200A: 2.8 to 30V
 - SY7310A: 2.5 to 5.5V
- Switch Current Limit:
 - SY7200A: 2A
 - SY7310A: 1A
- Drives LED Strings up to 30V/40V
- 1MHz Fixed Frequency Minimizes the External Components
- Dimming Frequency for EN/PWM Pin: 20kHz~1MHz
- PWM Dimming Frequency: 10kHz~1MHz
- Internal soft-start limits the inrush current
- Open LED Over Voltage Protection
- RoHS Compliant and Halogen Free



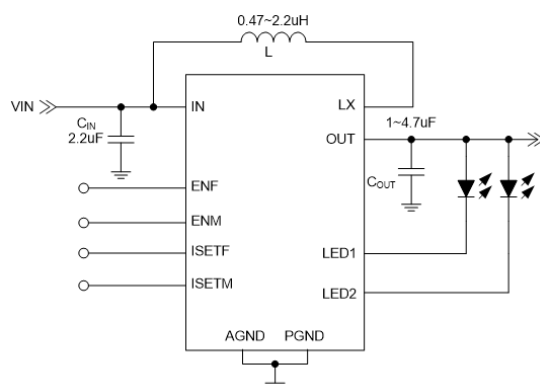
Applications

- GPS Navigation Systems
- Handheld Devices
- Portable Media Players

SY7803B- 2A Flash LED Boost Driver for Smart Phone Application

Features

- Input voltage range: 2.7V to 5.5V.
- 2MHz switching frequency to achieve small total solution size.
- Drive up to total 2A or 1A per channel in flash mode
- Timeout function in flash mode
- Independent flash-mode enable and movie/torch-mode enable pins
- Movie/torch-mode dimming via PWM control
- One resistor sets flash-mode LED current
- One resistor sets movie/torch-mode LED current
- Low Rdson of internal FET: 100m ohm for PFET and 200m ohm for NFET
- LED open/short protection
- Over-voltage protection
- 0.1 μ A shutdown current
- Thermal shut down.
- 40 to +85 C° Temperature Range
- Pb-free Package: DFN3x2-14



Applications

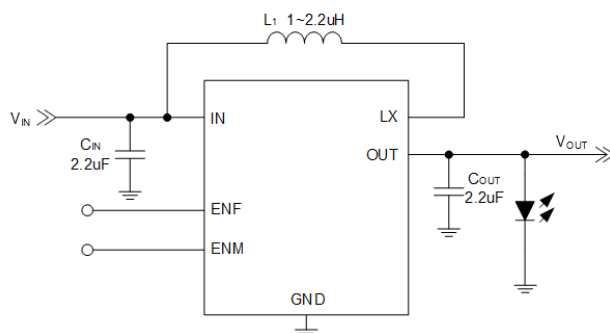
- Smart phone/digital camera LED flash
- White LED driver

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SY7807- 1.5A Flash LED Boost Driver for Smart

Features

- Input voltage range: 2.7V to 5.5V
- 2MHz switching frequency to achieve small total solution size
- Drive up to 1.5A LED flash current
- Drive up to 300mA LED torch current
- Dimming frequency: 20kHz~200kHz
- Timeout function in flash mode
- Independent flash mode enable and torch mode enable pins
- Low $R_{DS(ON)}$ of internal FET: 180m Ω for PFET and 150m Ω for NFET
- LED open/short protection
- Over-voltage protection
- 0.1 μ A shutdown current
- Thermal shutdown
- -40 to +85 C° temperature range
- Pb-free package: DFN2 $\times$ 2-6



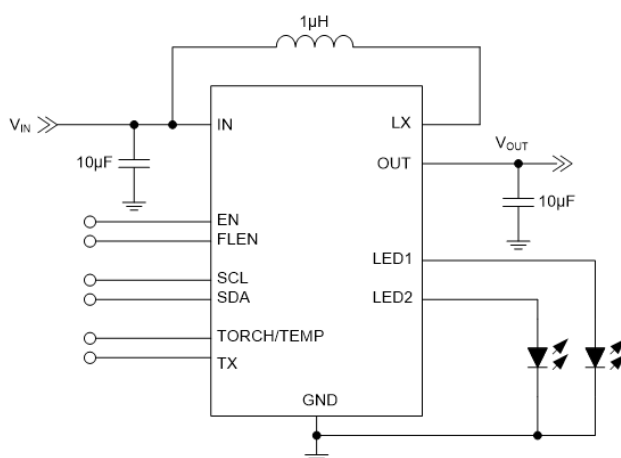
Applications

- Smart phone/digital camera LED flash
- White LED driver

SY7806E- Dual 1.5A Current Source Camera Flash LED Driver

Features

- Dual Independent 1.5A LED High Side Current Sources Programmability, 2 A Total Allowed LED Current during Operation ($I_{LED1} + I_{LED2} = 2A$)
- Accurate and Programmable LED Current Range from 1.8 mA to 1.5 A
- Low $R_{DS(on)}$ of internal FET: 55mohm for NFET and 85mohm for PFET.
- Up to 85% Efficiency with small inductor
- Hardware Flash Mode Enable (FLEN)
- Synchronization Input for RF Power Amplifier Pulse Events (TX)
- Hardware Torch Mode Enable (TORCH/TEMP)
- Optimized Flash LED Current During Low Battery Conditions (IVFM)
- Remote NTC Monitoring (TORCH/TEMP)
- 400kHz I2C Compatible Interface
- Package: CSP1.79mm $\times$ 1.46mm -12



Applications

- Camera Phone White LED Flash

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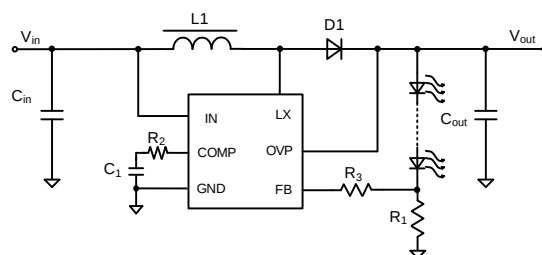
Part Number	App.Type	PF	Description	Input V _{AC}	Output Power	Output Current	Package
SY7305ABC	MR16 non-dimming	>0.9	Boost, Int.40V/220mΩ MOS	12V _{AC}	<5W	<300mA	SOT23-6
SY7306FCC	MR16 non-dimming	>0.9	Boost, Int.40V/220mΩ MOS	12V _{AC}	<8W	>18Vout	SO8E
SY7308FPC	MR16 non-dimming	>0.9	Boost, Int.40V/120mΩ MOS	12V _{AC}	<5W	>18Vout	CPC8
SY8727FCC	MR16 dimmable	>0.9	Boost+LDO, Int.40V/120mΩ MOS, Best compatibility	12V _{AC}	<8W	>18Vout	SO8E
SY7400FCC	MR16 dimmable		Boost, Int.60V/650mΩ MOS		<20W	>18Vout	SO8E
SY7400LABC	MR16 dimmable		Boost, Int.60V/650mΩ MOS		<15W	8~24Vout	SOT23-6

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SY7305/6- High Efficiency Low EMI 350KHz, Step Up White LED Driver

Features

- Wide Input Voltage Range: 2.9 to 36V
- Switch Current Limit: 2.5A
- Low $R_{DS(ON)}$: 220m Ω
- 350KHz Switching Frequency
- Internal Soft-start Limits the Inrush Current
- Open LED Over Voltage Protection
- RoHS Compliant and Halogen Free
- Compact Package:
- SY7305: SOT23-6
- SY7306: SO8E



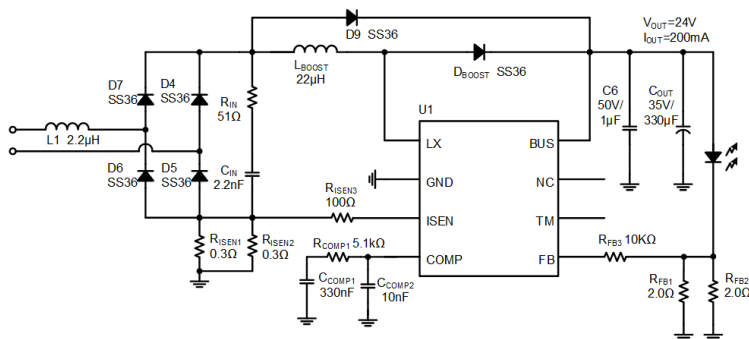
Applications

- MR16 LED Lighting

SY7308- 2A Boost Regulator for MR16 LED Driver

Features

- Wide Input Range: 4V-36V
- Current Hysteresis Control for Boost Stage
- Integrated Low $R_{DS(ON)}$ FET for Boost Stage
- Compatible with Electronic Transformer and Magnetic Transformer
- Overvoltage Protection for Boost Output Voltage
- Over Temperature Protection for Boost Stage
- Compact Package: CPC8



Applications

- MR16 Lighting
- 12VAC/12VDC Lighting

Part Number	Function	Operation Mode	HV Startup	OC Protection	OVP Protection	UVP Protection	No Load Loss	Package
SY5007ABC	PSR Flyback Controller without UVP	QR	NO	YES	YES	NO	<75mW	SOT23-6
SY5007AABC	PSR Flyback Controller with UVP	QR	NO	YES	YES	YES	<75mW	SOT23-6

Part Number	Function	Max Power	Integrated FETs	Typical R _{ds(on)}	Operation Mode	HV Startup	OC Protection	OVP Protection	UVP Protection	No Load Loss	Package
NEW SY50133Z1FAP	PSR Flyback with UVP	12W	650V	4.4Ω	QR	NO	YES	YES	NO	<75mW	SO8
SY50213NFAP	PSR Flyback with UVP	12W	650V	4.4Ω	QR	NO	YES	YES	YES	<75mW	SO8
SY50136ZFAC	PSR Flyback	18W	650V	2.2Ω	QR	NO	YES	YES	NO	<75mW	SO8
SY50216NFAP	PSR Flyback with UVP	18W	650V	2.2Ω	QR	NO	YES	YES	YES	<75mW	SO8
SY50218VFAC	PSR Flyback	24W	650V	1.2Ω	QR	NO	YES	YES	NO	<75mW	SO8
SY50323FQC	PSR Flyback with HV Start Up	12W	700V	4Ω	QR	YES	YES	YES	YES	<20mW	SO7

Part Number	Function	Max Power	Integrated FETs	Operation Mode	HV Startup	OC Protection	OVP Protection	UVP Protection	No Load Loss	Package
SY50131CFAC	PSR Flyback with UVP	3.5W	980V	QR	NO	YES	YES	YES	<75mW	SO8
SY50211WAZC	PSR Flyback without UVP	6W	800V	QR	NO	YES	YES	NO	<75mW	SOT335
SY50213WFAC	PSR Flyback without UVP	12W	800V	QR	NO	YES	YES	NO	<75mW	SO8

Part Number	Function	Operation Mode	Max Frequency	HV Startup	OC Protection	OVP Protection	UVP Protection	BO/BI	Input OVP Protection	No Load Loss	Package
SY5019FAC	QR SSR Flyback Controller with HV Start Up	QR	125kHz	YES	YES	YES	NO	NO	NO	<50mW	SO8
NEW SY5040ABC	CCM+QR SSR Flyback Controller	CCM/QR	65kHz	NO	NO	YES	NO	YES	NO	<75mW	SOT23-6
SY5040AABT	CCM+QR SSR Flyback Controller	CCM/QR	85kHz	NO	NO	YES	YES	YES	NO	<75mW	SOT23-6
NEW SY5033AFAP	CCM+QR SSR Flyback Controller with Input OVP	CCM/QR	90kHz	YES	NO	YES	YES	YES	NO	<50mW	SO8
SY5033CFAP	CCM+QR SSR Flyback Controller with Input OVP	CCM/QR	90kHz	YES	NO	YES	YES	YES	YES	<50mW	SO8
SY5022BFVP	QR SSR Flyback Controller with GaN Driver	QR	300kHz	YES	NO	YES	YES	YES	NO	<50mW	SSOP9
SY5022CFVP	QR SSR Flyback Controller with GaN Driver	QR	300kHz	YES	NO	YES	YES	YES	YES	<50mW	SSOP9

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Part Number	Function	Integrated FETs	Typical Rdson	Operation Mode	Max Frequency	HV Startup	Lock Ring	OVP Protection	UVP Protection	BO/BI	No Load Loss	Package
NEW SY50294HZP	QR SSR Flyback for Max 45W	700V	365mΩ	QR	500kHz	YES	YES	YES	YES	YES	<50mW	SSOP9E
SY50296XDQ	QR SSR Flyback for Max 100W	700V	165mΩ	QR	500kHz	YES	YES	YES	YES	YES	<50mW	QFN 5×7-18
SY50298XDQ	QR SSR Flyback for Max 180W	700V	104mΩ	QR	500kHz	YES	YES	YES	YES	YES	<50mW	QFN 5×7-18
NEW SY50354HZP	CCM + QR Flyback Converter	700V	270mΩ	QR	500kHz	YES	YES	YES	YES	YES	<50mW	SSOP9E

Part Number	Function	Operation Mode	Max DSEN	SR Position	Dual Supply Channel	ZVS Function	Package
NEW SY5231ABC	CCM+QR SR Controller	CCM/QR/DCM	200V	High Side / Low Side	YES	NO	SOT23-6
SY5231AABT	CCM+QR SR Controller	CCM/QR/DCM	200V	High Side / Low Side	YES	NO	SOT23-6
NEW SY5236ABT	ZVS SR Controller	CCM/QR/DCM	200V	High Side / Low Side	YES	YES	SOT23-6
SY5239FPP	ZVS SR Controller	QR/DCM	130V	High Side / Low Side	YES	YES	CPC8

Part Number	Function	Integrated FETs	Typical Rdson	Operation Mode	SR Position	Dual Supply Channel	Package
SY52157AZC	SR Switcher for QR Mode	40V	16mΩ	QR/DCM	High Side / Low Side	NO	SOT335
SY52151FAP	SR Switcher for QR Mode	40V	12mΩ	QR/DCM	High Side / Low Side	NO	SO8
SY52257AAZC	SR Switcher for QR Mode	60V	19mΩ	QR/DCM	High Side / Low Side	NO	SOT335
SY52251FAC	SR Switcher for QR Mode	60V	10mΩ	QR/DCM	High Side / Low Side	NO	SO8
SY52341FAP	SR Switcher for CCM+QR Mode	65V	8.7mΩ	CCM/QR/DCM	High Side / Low Side	YES	SO8
SY52441FAP	SR Switcher for CCM+QR Mode	100V	8mΩ	CCM/QR/DCM	High Side / Low Side	YES	SO8

Part Number	Function	Max Power	Integrated FETs	Typical Rdson	Operation Mode	Max Frequency	HV Startup	OC Protection	OVP Protection	No Load Loss	Package
SY50433BFHC	PSR Flyback	7W	900V	13.4Ω	QR	125kHz	YES	YES	YES	<75mW	SSOP10

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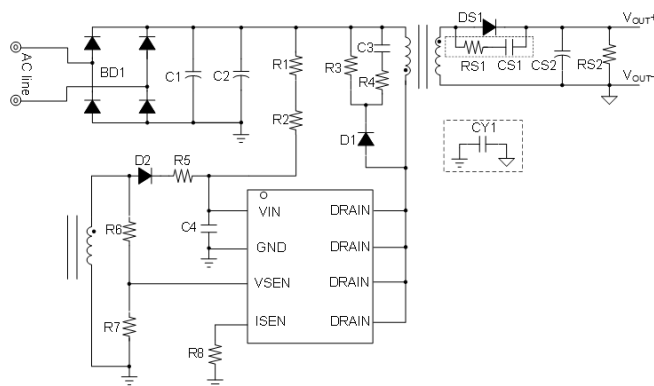
Part Number	Function	Max Power	Integrated FETs	Typical Rds(on)	Output Voltage	Operation Mode	Max Frequency	HV Startup	OCP Protection	OVP Protection	Package
SY50281AAC	Buck Converter	2.4W	500V	12Ω	Adjustable	QR	45kHz	NO	YES	YES	SOT23-5
SY50583FAC	Buck Converter	4.2W	700V	7.5Ω	Adjustable	QR	45kHz	NO	YES	YES	SO8
SY50271BFAC	Buck Converter for 12V Output	4.3W	650V	9Ω	12V	CCM/DCM	40kHz	YES	NO	YES	SO8
SY50272AGC	Buck Converter for 18V Output	6.5W	650V	9.2Ω	18V	CCM/DCM	40kHz	YES	NO	YES	DIP8
SY50272BAGC	Buck Converter for 12V Output	4.3W	650V	11.5Ω	12V	CCM/DCM	40kHz	YES	NO	YES	DIP8
Part Number	Function	Operation Mode		Control Mode		Protection		Support DC Input		Package	
SY5055AHXP	PFC+LLC Combo Controller	PFC: CrM/DCM/Burst LLC: CCM/DCM/Burst		PFC: Average current mode LLC: Current mode		AC Brown in/out, OCP, OVP, OTP, PFC OPP		NO		SOP14	
SY5055BHXP	PFC+LLC Combo Controller	PFC: CrM/DCM/Burst LLC: CCM/Burst		PFC: Average current mode LLC: Current mode		AC Brown in/out, OCP, OVP, OTP, PFC OPP		YES		SOP14	
SY5055DHXP	PFC+LLC Combo Controller	PFC: CrM/DCM/Burst LLC: CCM/DCM/Burst		PFC: Average current mode LLC: Current mode		AC Brown in/out, OCP, OVP, OTP, PFC OPP		YES		SOP14	
Part Number	Function	Max Power	Integrated FETs	Max Rds(on)	Operation Mode	Max Frequency	HV Startup	BO/BI	Input OVP Protection	Package	
SY50329FIB	SSR Flyback Converter	30W	700V	2Ω	CCM/DCM	100kHz	YES	YES	YES	DIP7	

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SY50213N/216N- Flyback Regulator with Primary Side Control for Adapters and Chargers CV/CC

Features

- Tight PSR CC/CV Regulation Over Entire Operating Range
- QR-mode Operation for High Efficiency
- PWM/PFM Control for High Average Efficiency
- Fast Dynamic Load Transient Response
- Cable Compensation for Better Load Regulation
- Low Start Up Current: 5 μ A Max
- Minimum Frequency Limitation 500Hz
- No-load Power is Less than 50mW
- Reliable Protections for OVP, UVP, SCP, OTP, OCP
- Reliable Protections for Safety Requirement
- Maximum Switching Frequency Limitation 125kHz
- SY50213N: Integrated 650V/2.2 Ω MOSFET
- SY50216N: Integrated 650V/4.4 Ω MOSFET
- RoHS Compliant and Halogen Free
- Compact Package: SO8



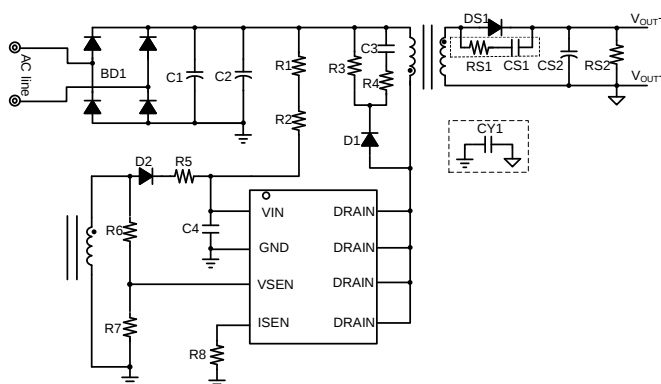
Applications

- AC/DC Adapters
- Battery Chargers

SY50136Z/133Z1/218V- Flyback Regulator with Primary Side Control for Adapters and Chargers CV/CC

Features

- Tight PSR CC/CV Regulation Over Entire Operating Range
- QR-mode Operation for High Efficiency
- PWM/PFM Control for High Average Efficiency
- Fast Dynamic Load Transient Response
- Cable Compensation for Better Load Regulation
- Low Start Up Current: 5 μ A Max
- Minimum Frequency Limitation 500Hz
- No-load Power is Less than 50mW
- Reliable Protections for OVP, SCP, OTP, OCP
- Reliable Protections for Safety Requirement
- Maximum Switching Frequency Limitation 125kHz
- SY50136Z: Integrated 650V/2.2 Ω MOSFET
- SY50133Z1: Integrated 650V/4.4 Ω MOSFET
- SY50218V: Integrated 650V/1.2 Ω MOSFET
- RoHS Compliant and Halogen Free
- Compact Package: SO8



Applications

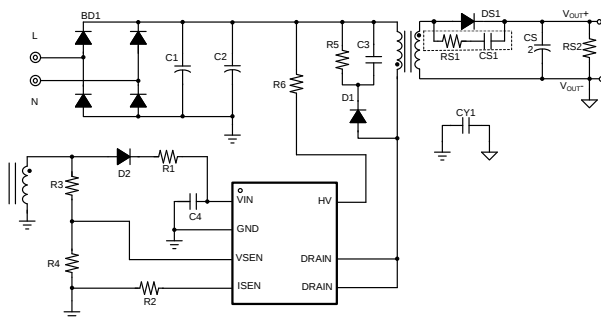
- AC/DC Adapters
- Battery Chargers

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SY50323- Flyback Regulator with Primary Side CC/CV Control

Features

- Tight PSR CC/CV Regulation Over Entire Operating Range
- QR-mode Operation for High Efficiency
- PWM/PFM Control for High Average Efficiency
- Fast Dynamic Load Transient Response
- Cable Compensation for Better Load Regulation
- No-load Power is Less than 20mW
- Integrated HV Start up Circuit
- Brown-in and Brown-out Function
- Reliable Protections for OVP, UVP, SCP, OTP
- Reliable Protections for Safety Requirement
- Minimum Switching Frequency Limitation 250Hz
- Maximum Switching Frequency Limitation 90kHz
- Integrated 700V MOSFET
- RoHS Compliant and Halogen Free
- Compact Package: SO7



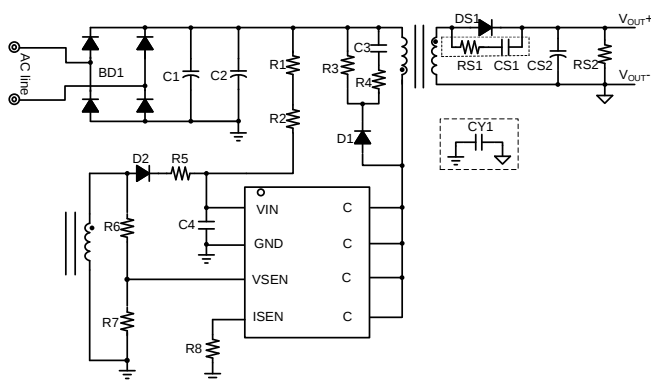
Applications

- AC/DC Adapters
- Battery Chargers
- Home Appliances

SY50131C- Flyback Regulator with Primary Side CV/CC Control for Adapters and Chargers

Features

- Tight PSR CC/CV Regulation Over Entire Operating Range
- QR-mode Operation for High Efficiency
- PWM/PFM Control for High Average Efficiency
- Fast Dynamic Load Transient Response
- Cable Compensation for Better Load Regulation
- Low Start Up Current: 5 μ A Max
- Minimum Frequency Limitation 2kHz
- No-load Power is Less than 100mW
- Reliable Protections for OVP, UVP, SCP, OTP, OCP
- Reliable Protections for Safety Requirement
- Maximum Switching Frequency Limitation 90kHz
- Integrated 980V Bipolar NPN Transistor
- RoHS Compliant and Halogen Free
- Compact Package: SO8



Applications

- AC/DC Adapters
- Battery Chargers

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SY50211/3W- Flyback Regulator with Primary Side CV/CC Control

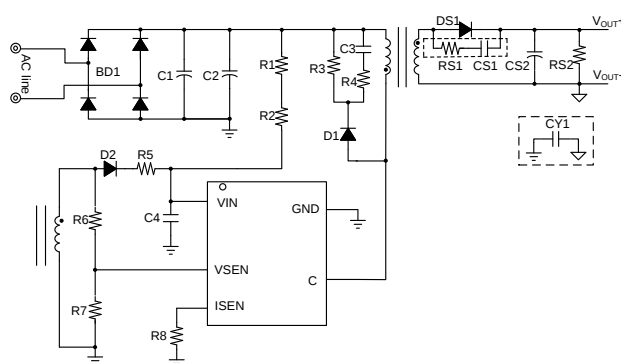
Features

- Tight PSR CC/CV Regulation Over Entire Operating Range
- QR-mode Operation for High Efficiency
- PWM/PFM Control for High Average Efficiency
- Fast dynamic load transient response
- Cable Compensation for Better Load Regulation
- Low Start Up Current: 5 μ A Max
- Minimum Frequency Limitation 500Hz
- No-load Power is Less than 75mW
- Reliable Protections for OVP, SCP, OTP, OCP
- Reliable Protections for Safety Requirement
- Maximum switching frequency limitation: SY50211W: 72kHz
SY50213W: 125kHz
- Integrated 800V Bipolar NPN Transistor
- RoHS Compliant and Halogen Free
- Compact Package: SY50211W: SOT335
SY50213W: SO8

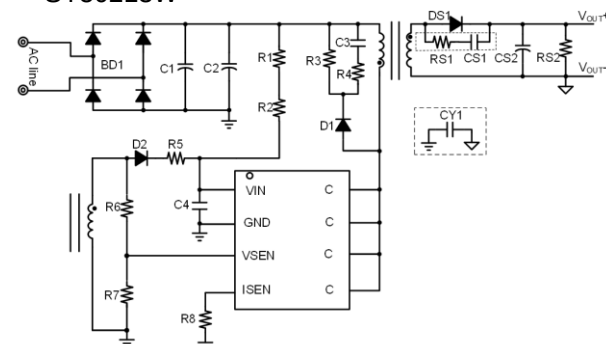
Applications

- AC/DC Adapters
- Battery Chargers

SY50211W



SY50213W



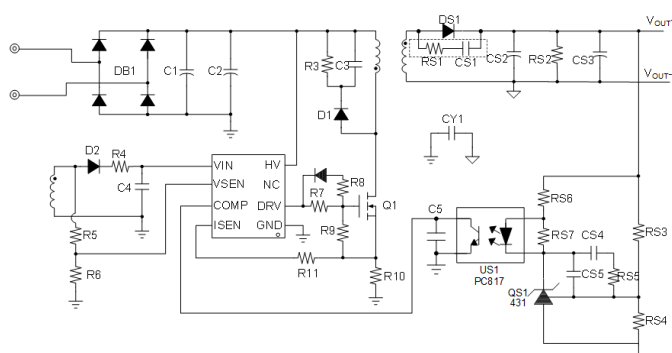
SY5019- Flyback Controller for Adapters and Chargers

Features

- Quasi-Resonant (QR) mode operation: Valley turn-on of the primary MOSFET to achieve low switching losses
- Output current is monitored by primary detection for reliable Over Current Protection and Short Circuit Protection
- PWM/PFM control for higher average efficiency
- Burst mode control for low no load loss and efficiency
- HV start up circuit is used to reduce no-load.
- Internal high current MOSFET driver: 120mA
- Auto-Recovery for OVP/OCP/SCP/OTP
- Maximum frequency limitation 125kHz
- Compact package: SO8

Applications

- AC/DC Adapters
- Battery Chargers
- Consumer Electronics
- Auxiliary power supplies

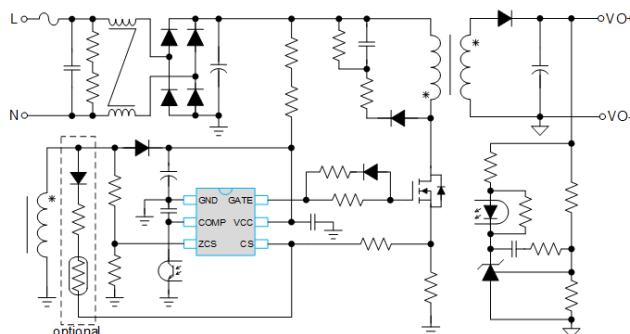


Note: Ground node of current sample resistor must be connected to the ground of BUS line capacitor.

SY5040- CCM+QR Mode SSR Flyback Controller

Features

- Rated Switching Frequency: 65kHz
- CCM+QR Combined Operating Mode
- Frequency Fold Back and Burst Mode Control
- Minimum Switching Frequency Limited to 25kHz
- F_{SW} Modulation to Reduce EMI Noise
- Programmable Brownout Protection by ZCS Pin
- Programmable Output OVP by ZCS Pin
- Programmable External OTP by CS Pin
- OLP, VCC OVP, Internal OTP
- Secondary Diode Short Circuit Protection
- OCP Compensation over Universal Input Range
- Low Start up Current: $<4\mu A$
- Gate Drive Capability: 210mA/420mA(source/sink)
- Internal Soft Start Process
- RoHS Compliant and Halogen Free
- Compact Package: SOT23-6



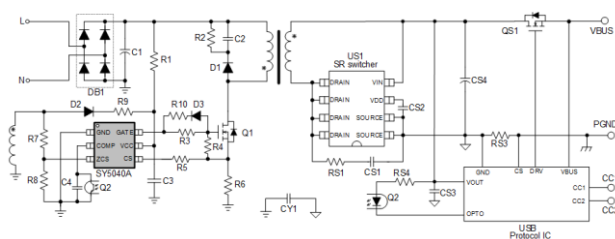
Applications

- AC/DC Power Supply
- Note Book Adapter
- LCD TV
- Auxiliary Power Supply

SY5040A- CCM and QR SSR Flyback Controller for Adapters and Fast Chargers

Features

- Wide VCC Operating Range: 9V to 54V
- Low Startup Current: $<5\mu A$
- Mixed CCM+QR Control Architecture
- Forced QR Operating under High Line Voltage Conditions
- Quasi-Fixed Frequency Control to Eliminate Slope Compensation in CCM
- 85kHz Switching Frequency Limit under CCM
- 85kHz Switching Frequency Limit under QR Mode
- Minimum Switching Frequency Limited to 25.5kHz
- Frequency Foldback for High Average Efficiency
- Burst Control for High Light Load Efficiency
- Comprehensive Protections Including VCC OVP, Output OVP/UVP, OLP, OTP, and BO
- Secondary SR MOSFET Short-Circuit Protection
- Internal Soft-Start Process
- Gate Drive Capability: +120mA/-520mA
- Compact Package: SOT23-6



Applications

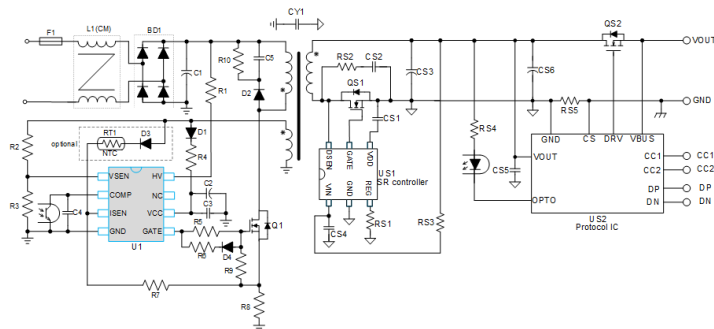
- AC/DC Adapters
- AC/DC Fast Chargers

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SY5033A/C- CCM+QR SSR Flyback Controller

Features

- SSR Flyback controller with HV start up
- Wide VCC range: 10V~90V
- CCM+QR mixed mode for small volume & high efficiency
- 65kHz CCM frequency, 90kHz QR frequency limit
- Force QR at high line input
- Pseudo fixed frequency control for CCM
- Frequency fold back and burst mode control
- New COMP pin design to achieve better load transient response
- BO, input OVP (SY5033C), output OVP/UVP, VCC OVP, OLP, SCP, external OTP, OTP, etc
- 2s auto-recovery timer under OLP/SCP protection to minimize power loss
- Compact Package: SO8



Applications

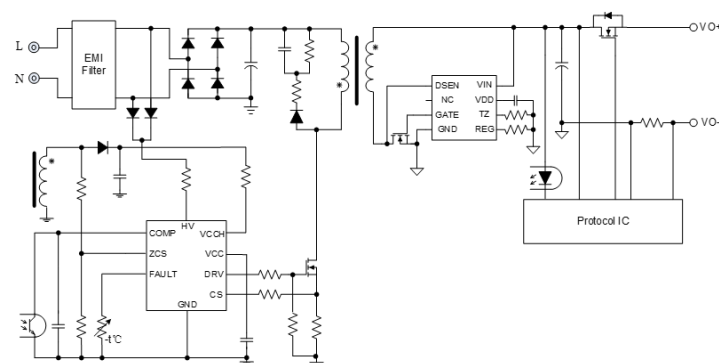
- Fast Chargers
- AC/DC Adapters

Part Number	OLP Timer	BO	BI	Max Toff	ISEN Short	Input OVP
SY5033AFAP	208ms	85uA, 200ms	120uA	64us	6.2us	NO
SY5033CFAP	64ms	100uA, 64ms	110uA	245us	3.9us	YES

SY5022B- High Frequency QR Flyback Controller with Valley Lockout and E-mode GaN FET Driver

Features

- DCM+QR Combined Operating Mode
- Direct Enhancement-Mode (E-mode) GaN FET Driver
- Programmable Gate Driver Current
- 140V Internal LDO on VCCH input pin
- Switching Frequency Range: 25kHz–300kHz
- Automatic Valley Lockout from 1 to 6 cycles
- Low Frequency Burst (1kHz)
- Frequency Modulation to Reduce EMI Noise (Configurable using ZCS Resistor)
- Internal Soft-Start
- Integrated 700V HV Startup
- Brown-In/Out Protections
- X Capacitor Discharge Protection
- Programmable Output OVP and UVP
- Current Sense Resistor Short Protection
- Internal and External OTP
- Compact Package: SSOP9



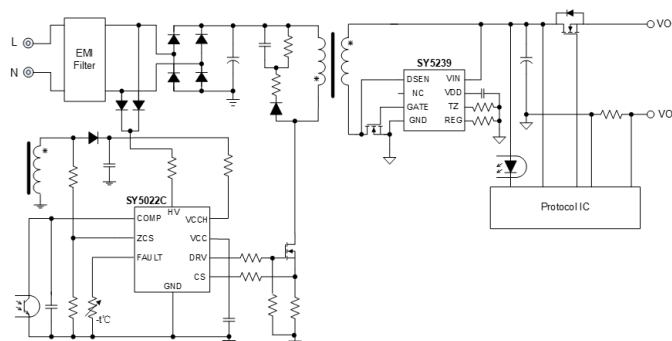
Applications

- AC/DC Adapters
- PD Adapters
- Quick Chargers

SY5022C- High Frequency QR Flyback Controller with Valley Lockout and E-mode GaN FET Driver and Input OVP

Features

- DCM+QR Combined Operating Mode
- Direct Enhancement-Mode (E-mode) GaN FET Driver
- Programmable Gate Driver Current
- 140V Internal LDO on VCCH input pin
- Switching Frequency Range: 25kHz–300kHz
- Automatic Valley Lockout from 1 to 6 cycles
- Low Frequency Burst (1kHz)
- Frequency Modulation to Reduce EMI Noise (Configurable using ZCS Resistor)
- Internal Soft-Start
- Integrated 700V HV Startup
- Brown-In/Out Protections
- X Capacitor Discharge Protection
- AC Input OVP
- Programmable Output OVP and UVP
- Current Sense Resistor Short Protection
- Internal and External OTP
- Compact Package: SSOP9



Applications

- AC/DC Adapters
- PD Adapters
- Quick Chargers

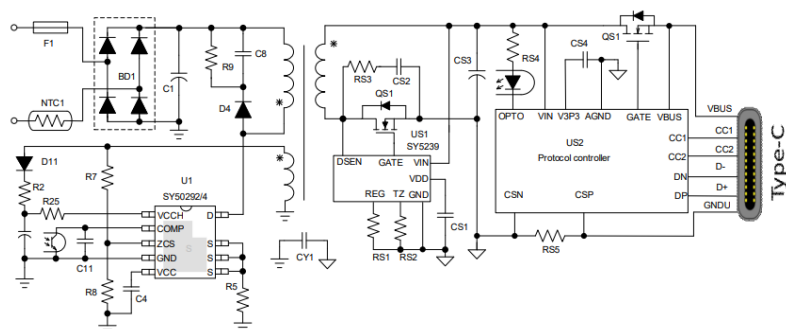
[Back](#)

SY50294- High Frequency QR Flyback Converter

with Valley Lockout, Accuracy Output OCP and E-mode GaN

Features

- Integrated 700V E-mode GaN FET
- DCM+QR Combined Operating Mode
- Switching Frequency Range: 25kHz–500kHz
- VCCH up to 140V Power Supply
- Automatic Valley Lockout from 1 to 6 Cycles
- Accuracy Output OCP Protection
- Adaptive OCP (LPS, Limited Power Source)
- Low Frequency Burst (1kHz)
- Frequency Modulation to Reduce EMI Noise (Configurable using ZCS Resistor)
- Internal Soft-Start
- Integrated 700V HV Startup
- Brown-In/Out Protections
- Programmable Output OVP and UVP
- Current Sense Resistor Short Protection
- Internal OTP
- Compact Package: SSOP9E



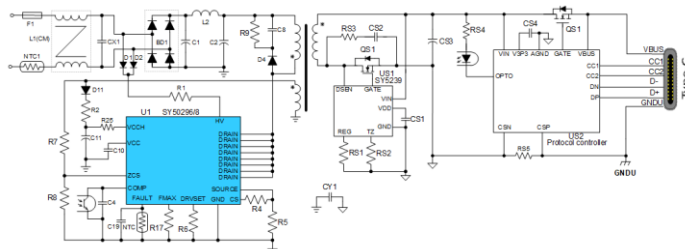
Applications

- AC/DC Adapters
- PD Adapters
- Quick Chargers

SY50296/8- High Frequency QR Flyback Converter with Valley Lockout and E-mode GaN Integrated

Features

- DCM+QR Combined Operating Mode
- Adaptive OCP (LPS, Limited Power Source)
 - SY50296: Integrated GaN (700V 0.165Ohm_typ)
 - SY50298: Integrated GaN (700V 0.104Ohm_typ)
- New Package for Excellent Heat Sink.
- Programmable Gate Driver Current
- 140V LDO in VCCH Pin
- Switching Frequency Range: 25kHz~500kHz
- Valley Lockout from 1 to 6th
- Low Frequency Burst (1kHz)
- Frequency Modulation to Reduce EMI Noise
- Internal Soft Start
- Integrated 700V HV Start up
- Brown In/Out Protection
- X-cap Discharge Protection
- Programmable Output OVP&UVP
- Current Sense Resistor Short Protection
- Internal & External OTP
- Compact Package: QFN 5×7-18



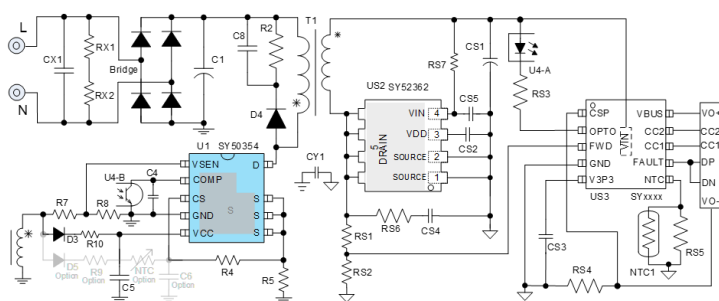
Applications

- Fast Chargers
- AC/DC Adapters

SY50354- CCM + QR Flyback Converter with E-Mode GaN Integrated

Features

- Integrated 700V E-Mode GaN FET (270mΩ)
- Combined CCM+QR Operating Modes
- Soft GaN Gate Drive for Optimized EMI Performance
- Wide VCC Operating Range: 7-85V
- Switching Frequency Range: 25kHz~500kHz
- Frequency Modulation to Reduce EMI Noise
- Integrated 700V HV Startup Circuitry
- Programmable Output OVP and UVP
- Brown-In/Out Protection
- Current Sense Resistor Short-Circuit Protection
- Winding or SR Short-Circuit Protection
- Internal and External OTP
- MSL3
- Compact Package: SSOP9E



Applications

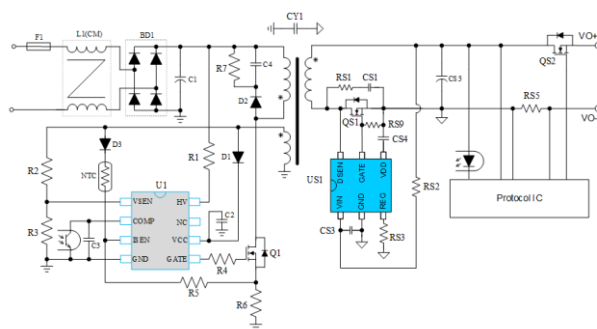
- AC/DC Adapters
- PD Adapters
- Quick Chargers

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SY5231/A- Secondary Side Synchronous Rectification

Features

- Suitable for CCM, DCM and QR Mode Flyback Converters
- DSEN Pin Sensing up to 200V
- DSEN Falling Slope Rate Detection to Avoid False Turn on of SR MOSFET by Parasitic Ring
- Uses DSEN High Voltage Blanking Time to Enhance System ESD Performance
- GATE Pin Clamped Before VDD on
- Dual Supply Channel for 3.3V to 21V Output Systems
- Up to 500kHz Switching Frequency
- 10 ns Typical Turn off Propagation Delay
- 2A Sink, 0.5A Source Gate Driver Capability
- Minimum Ton:
 - SY5231ABC:1150ns
 - SY5231AABT:650ns
- Compact Package: SOT23-6



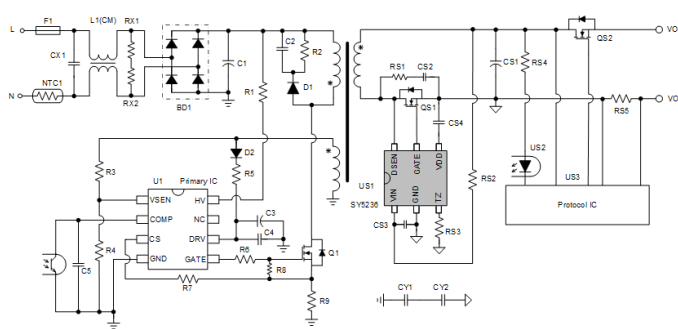
Applications

- AC/DC Adapters
- USB Type-C and Power Delivery AC Adapters
- Server and Telecom Power Supplies
- Auxiliary Power Supplies

SY5236- ZVS Flyback SR Controller

Features

- Suitable for CCM, DCM and QR Mode Flyback Converter
- Proprietary Operation Mode for Flyback ZVS
- DSEN Pin Sensing up to 200V
- DSEN Falling Slope Rate Detection to Avoid False Turn on of SR MOSFET by Parasitic Ring
- DSEN High Voltage Blanking Time Detecting to Enhance System ESD Performance
- Dual Power Supply Channels for 3V to 30V Output Systems
- Power Saving Mode to Improve Light Load Efficiency
- Up to 500kHz Switching Frequency
- 10ns Typical Turn off Propagation Delay
- 2A Sink, 0.5A Source Gate Driver Capability
- Compact Package: SOT23-6



Applications

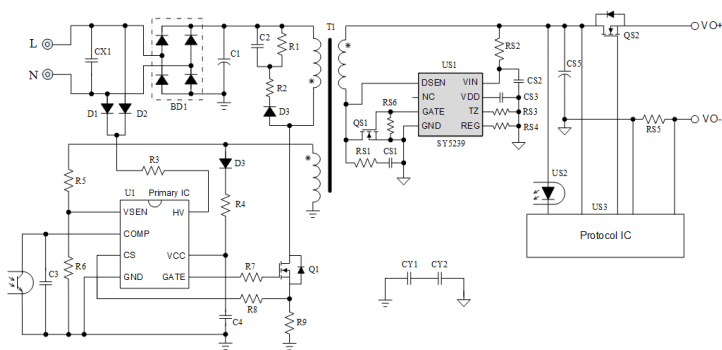
- Smart Phone Fast Chargers
- AC/DC Adapters and Auxiliary Power Supplies

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SY5239- ZVS Flyback SR Controller

Features

- Proprietary Operation Mode for Flyback ZVS
- Adaptive Gate Voltage Control
- DSEN Falling Slope Rate Detecting to Prevent SR False Trigger
- 130V DSEN Pin to Directly Sense DRAIN Voltage of SR MOS
- Power Saving Mode to Improve Light Load Efficiency
- Dual Power Supply Channel for 3.3V to 21V Output Systems
- Compact Package: CPC8



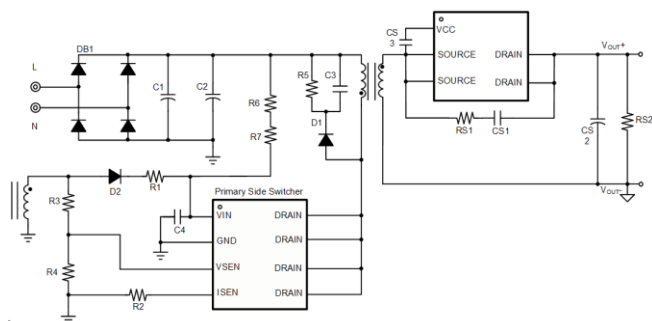
Applications

- USB PD, Fast Charger
- AC/DC Adaptor

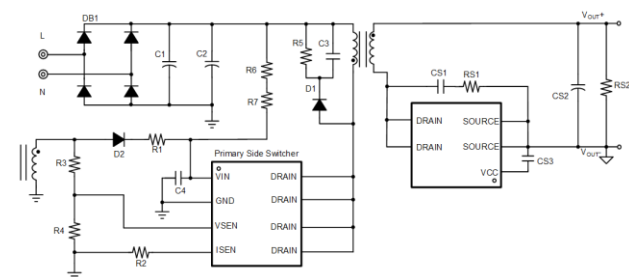
SY52157/257A- Secondary Side Synchronous Rectification Converter

Features

- Smart Turn off Technology
- Secondary-side Synchronous Rectifier for 5V Systems(SY52157)
- Secondary-side Synchronous Rectifier for 5V~12V Systems(SY52257A)
- Suitable for Discontinuous Mode (DCM), Critical Conduction Mode (CRM)
- Suitable for Primary Side Regulation (PSR), Secondary Side Regulation (SSR)
- RoHS Compliant and Halogen Free
- Compact Package: SOT335



Typical Application Circuit in High Side



Typical Application Circuit in Low Side

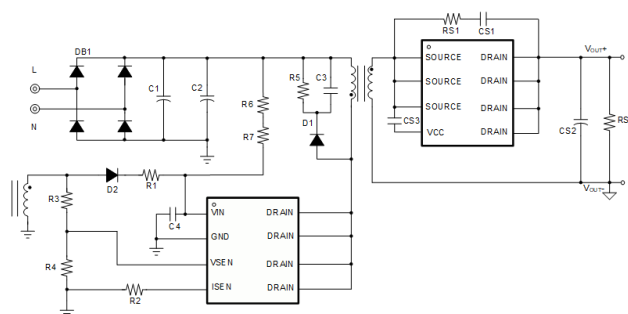
Applications

- AC/DC Adapters
- Battery Chargers
- Consumer Electronics
- Auxiliary Power Supplies

SY52151/251- Secondary Side Synchronous Rectification Converter

Features

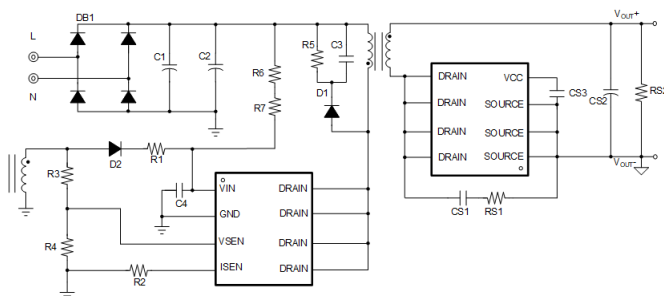
- Smart Turn off Technology
- Secondary-side Synchronous Rectifier for 5V~12V Systems
- Suitable for Discontinuous Mode (DCM), Critical Conduction Mode (CRM)
- Suitable for Primary Side Regulation (PSR), Secondary Side Regulation (SSR)
- Compact Package: SO8



Typical Application Circuit in High Side

Applications

- AC/DC Adapters
- Battery Chargers
- Consumer Electronics
- Auxiliary Power Supplies

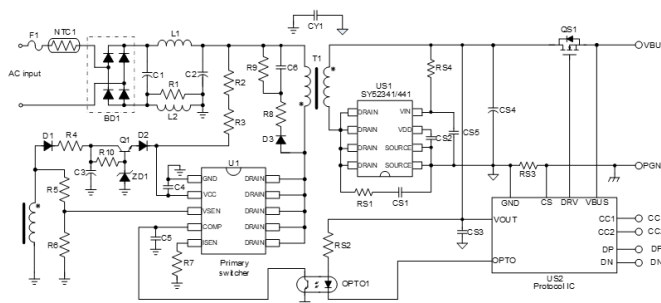


Typical Application Circuit in Low Side

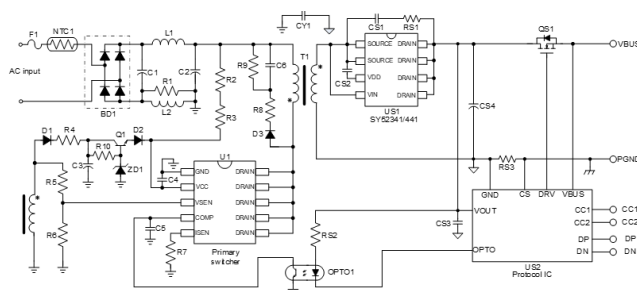
SY52341/441- Secondary Side Synchronous Rectification

Features

- Suitable for CCM, DCM and QR Mode Flyback Converter
- DRAIN Falling Slope Rate Detecting to Avoid False Turn On of SR MOSFET by Parasitic Ring
- DRAIN High Voltage Blanking Time detecting to enhance system ESD performance
- Dual Power Supply Channel for 3.3V to 12V Output Systems (SY52341)
- Dual Power Supply Channel for 3.3V to 21V Output Systems (SY52441)
- Compact Package: SO8



SR MOSFET Location: Low Side



SR MOSFET Location: High Side

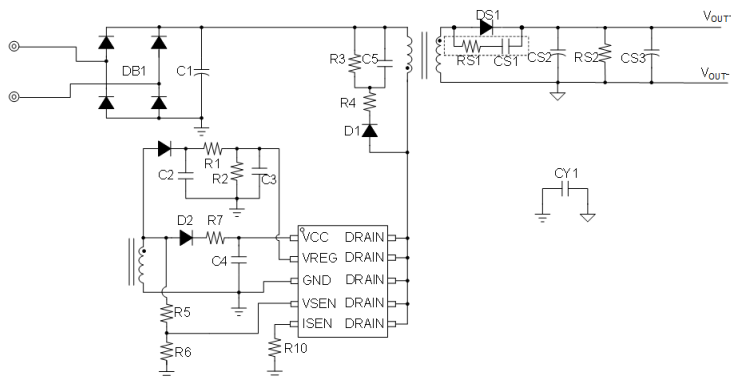
Applications

- AC/DC Adapters
- USB Type-C and Power Delivery AC Adapters
- Server and Telecom Power Supply
- Auxiliary Power Supplies

SY50433B- Flyback Regulator with Primary Side CV/CC Control for High Input Voltage Application

Features

- Integrated 900V MOSFET
- Very Tight Primary Side CV/CC Regulation
- Quasi-resonant Mode and PWM/PFM Control for Higher Average Efficiency
- Internal CC/CV Loop Compensation
- Low Start Up Current: 5 μ A Max
- HV Start Up Circuit to Reduce No-load Loss
- Maximum Switching Frequency Limitation 125kHz
- VREG OVP Function for Strong Magnetic Field Test
- Reliable Protections for OCP,SCP,VCCOVP,VSEN SCP, OTP
- Compact Package: SSOP10



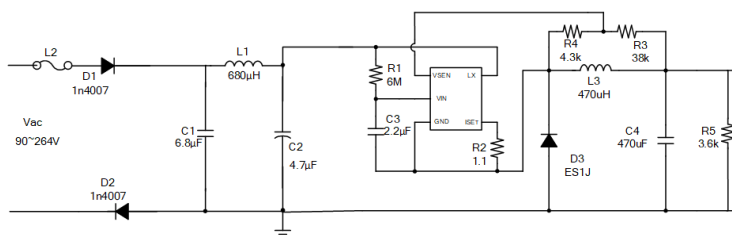
Applications

- Power Supply for STB Home Appliances, Smart Power Meter and Other Appliances with High AC Input Voltage

SY50281/583- Buck Regulator with CC/CV Control

Features

- SY50281: Integrated 500V MOSFET
- SY50583: Integrated 700V MOSFET
- CC/CV control eliminates Aux-winding
- Quasi-Resonant (QR) mode to achieve low switching losses
- Fast Startup (<500ms)
- Low start up current: 15 μ A typical
- Maximum frequency limit: 45kHz
- Compact package: SOT23-5



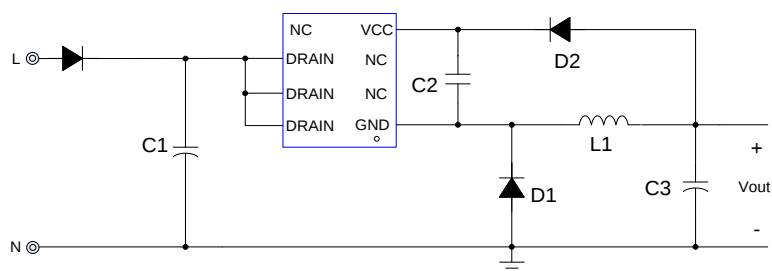
Applications

- Power supply for small appliance

SY50272/B- AC Input Buck Regulator

Features

- 650V MOSFET Integrated
- High Voltage Start up Circuit Integrated
- 50mW No Load Power Consumption
- Multi-off Time Control
- Minimum External Components
- Over Temperature Protection(OTP)
- Output Over Voltage Protection(OVP)
- Compact Package: DIP8



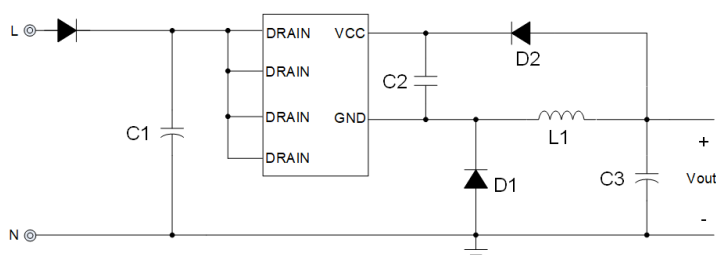
Applications

- Home Appliances and White Goods
- Auxiliary Power Supplies

SY5271B- AC Input Buck Regulator

Features

- Integrated 650V MOSFET
- High Voltage Startup Circuit
- 50mW No-Load Power Consumption
- Multi-Off-Time Control
- Minimal External Components
- Overtemperature Protection (OTP)
- Output Overvoltage Protection (OVP)
- Compact Package: SO8

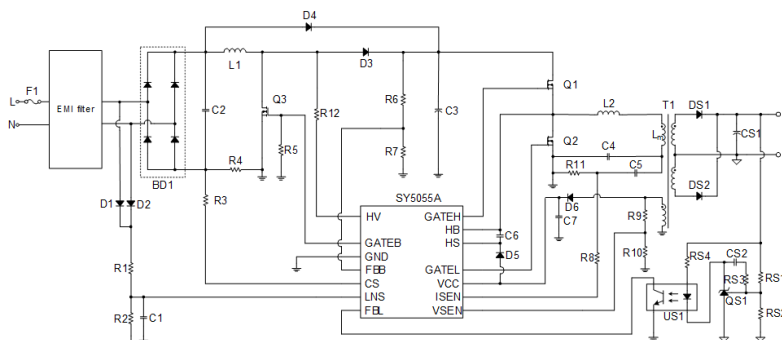


Applications

- Home Appliances and White Goods
- Auxiliary Power Supplies

SY5055A- PFC+LLC Combo Controller**Features**

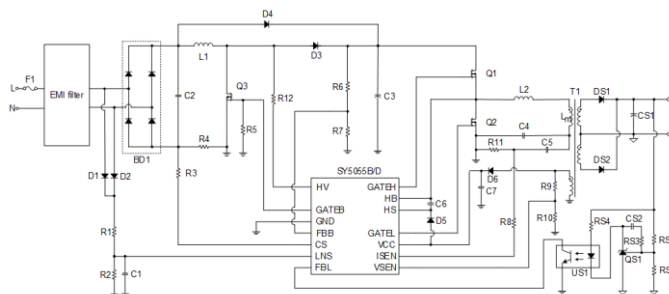
- $PF > 0.95$, $THD < 5\%$
- Boost Quasi Resonant (QR) Operation
- Boost Burst Operation at Light Load
- LLC Fast Dynamic Response
- LLC Integrated Half-bridge Driver
- Input BO/BI Protection
- Boost Output, LLC Output OVP
- Cycle by Cycle Peak Current Protection
- Over Temperature Protection
- LLC Capacitive Mode Protection

**Applications**

- LCD Television
- Desktop, All in One PC
- Adapter, Charger
- Printer

SY5055B/D- PFC+LLC Combo Controller**Features**

- $PF > 0.95$, $THD < 5\%$
- Support DC/AC input
- Boost Quasi-Resonant (QR) Operation
- Boost Burst Operation at Light Load
- LLC Fast Dynamic Response
- LLC Integrated Half-Bridge Driver
- Input Brown-In (BI) and Brown-Out (BO) Protection
- Boost FBB, LLC Output Overvoltage Protection (OVP)
- Cycle-by-Cycle Peak Current Protection
- Overtemperature Protection
- LLC Capacitive Mode Protection
- SOP14 package

**Applications**

- LCD TVs
- Chargers
- Printers

IEEE 802.3 af/at PoE PD Interface Controller

Part Number	Function	Package	Integrated FET	Max Power	VIN Range	AMPS Function	OCP	OVP
SY5601AFCP	af/at Interface	SO8E	YES	<25W	POE	YES	YES	NO

Isolated DC-DC Flyback Controller

Part Number	Function	Package	Integrated FET	Max Power	VIN Range	Max Frequency	OCP	OVP
SY5609QYQ	PSR/SSR Flyback	QFN4X4-20L	NO	<60W	100V	500kHz	YES	YES

IEEE 802.3 af PoE PD Interface with High Frequency Flyback Converter

Part Number	Function	FSW_MAX	Package	Integrated FETs	Max Power	VIN Range	Isolation	Opto-Coupler	OCP	OVP	AMPS Function
SY56815ATQQ	POE PD+PSR Flyback converter	600kHz	QFN4x5-28	YES	<13W	POE	YES	NO	YES	YES	YES
NEW SY56816XTQ	AT POE PD+PSR/SSR Flyback converter	500kHz	QFN4X6-38	YES	<25W	POE	YES	NO	YES	YES	YES

Isolated DC-DC Flyback Converter

Part Number	Function	FSW_MAX	Package	Integrated FETs	Max Power	VIN Range	Isolation	Opto-Coupler	OCP Protection	OVP Protection	Soft Start	No load loss
SY6174FAC	PSR Flyback	120kHz	SO8	200V	8W	36-72VDC or POE	YES	NO	YES	YES	NO	<75mW
SY6177FAC	PSR Flyback	120kHz	SO8	200V	12W	36-72VDC or POE	YES	NO	YES	YES	NO	<75mW
SY50833AFAC	PSR Flyback	300kHz	SO8	200V	12W	36-72VDC or POE	YES	NO	YES	YES	NO	<75mW

[Back](#)

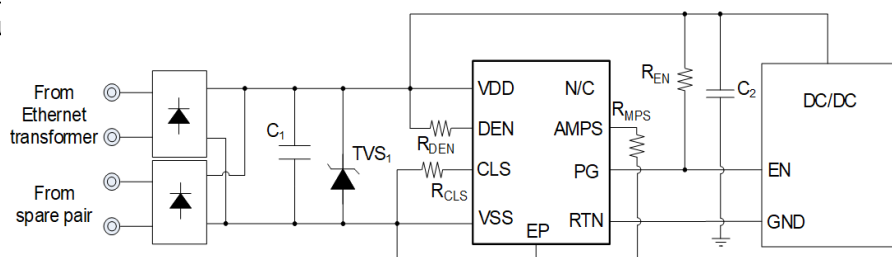
SY5601A - IEEE 802.3 af/at PoE-Compliant Powered Device (PD) Controller

Features

- Fully Compatible with 802.3af/at Specifications
- 100V, 0.45Ω Integrated PASS Switch
- 900mA Normal Operation Current Limit
- 100mA Inrush Current Limit
- Auto-Maintain Power Signature
- Open Drain Power Good Output
- SO8E Package

Applications

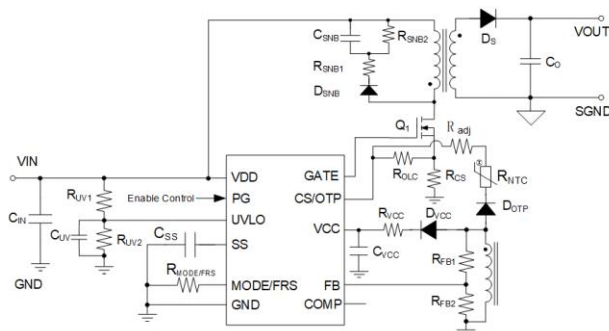
- VoIP Telephones
- Network Cards
- Security Camera Systems
- Safety Backup Power
- Remote Internet Power



SY5609- 100V High Efficiency PSR/SSR Flyback Controller

Features

- Integrated 100V HV Start-up circuit
- Flexible Topology:
 - Primary-Side Regulated (PSR) Flyback (250kHz/400kHz Selectable)
 - Secondary-Side Regulated (SSR) Flyback (Programmable Frequency)
- Precision Voltage Reference
- Output Diode Compensation in PSR Mode
- Source/Sink=0.5A/0.9A GATE Drivers
- Programmable Soft-start
- Programmable Line Under Voltage Lockout (UVLO) with Adjustable Hysteresis
- External Programmable Thermal Shutdown
- OLP compensation for wide-input range
- Cycle-by-Cycle Current Sense Limit
- Frequency Modulation for EMI reduction
- Hiccup Protection for OLP, SCP, OVP and Thermal Shutdown



Applications

- Telecom Systems Isolated Power Supplies
- Industrial Isolated Power Supplies
- PoE (Power over Ethernet)/PD(Powered Device)

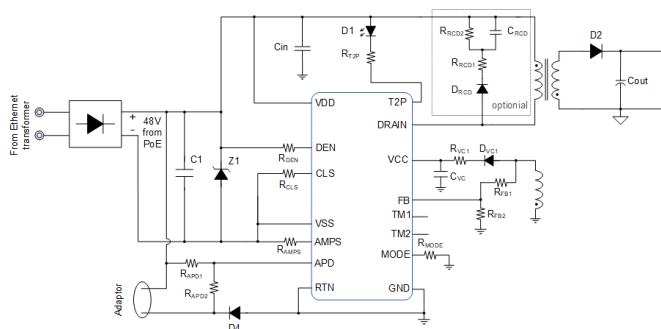
SY56815A- IEEE 802.3 af/at-Compatible PoE Power Device Interface with 13W High-frequency PSR Flyback Converter

Features

- Supports the IEEE 802.3 af/at Standard
- 100V, 0.45Ω Hot-swap Switch
- Adaptor ORing Support
- Power up to 13W(Input) PDs
- Primary Side Control and Internal Current Sense to Minimize Components Number
- QR-mode Operation and PWM/PFM Control for High Efficiency
- Integrate 180V,0.65Ω MOSFET for Converter
- RoHS Compliant and Halogen Free
- Compact Package: QFN4×5-28

Applications

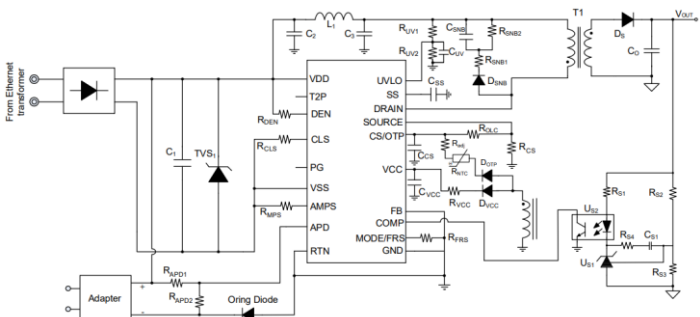
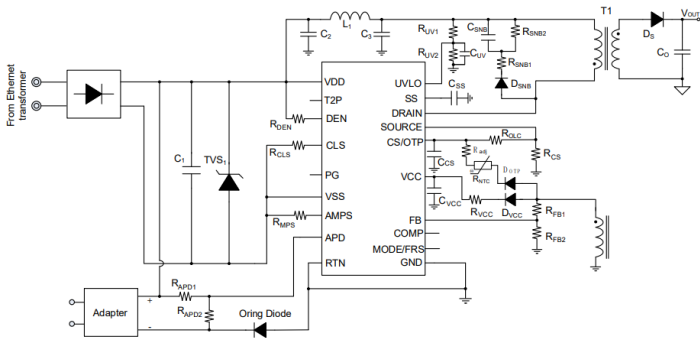
- IEEE 802.3af/at Complaint Devices
- Video and VoIP Telephones
- RFID Readers
- Multi-band Access Points
- Security Cameras



SY56816- IEEE 802.3af/at Compliant PoE PD Interface with High Efficiency PSR/SSR Flyback Converter

Features

- Fully Compatible with 802.3af/at Specifications
- 100V 0.45Ω PD Integrated Pass Switch
- 30W maximum power
- 100mA PD Inrush Current Limit
- 900mA PD Normal Operation Current Limit
- Auxiliary Adaptor ORing Support
- Flexible Topology:
 - Primary-Side Regulated (PSR) Flyback (250kHz/400kHz Selectable)
 - Secondary-Side Regulated (SSR) Flyback (Programmable Frequency)
- Integrated with 150V 70mΩ Power MOSFET
- Output Diode Compensation in PSR Mode
- Cycle-by-Cycle Current Sense Limit
- Precision Voltage Reference
- Frequency Modulation for EMI reduction
- Programmable Soft-start
- OLP Compensation for Wide-input Range
- Externally Programmable Thermal Shutdown
- Programmable Line Under Voltage Lockout (UVLO) with Adjustable Hysteresis
- Hiccup Protection for OLP, SCP, OVP and Thermal Shutdown



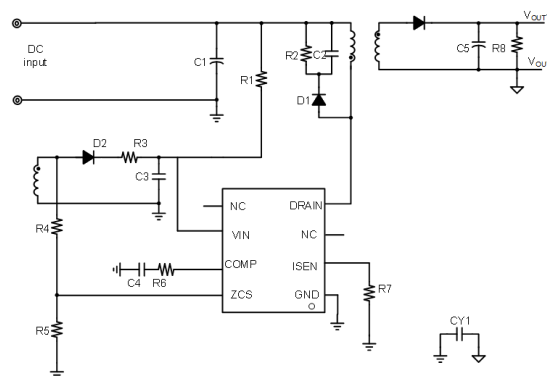
Applications

- IEEE 802.3af/at-Compliant Devices
- Security Cameras
- Video Telephones
- WLAN Access Points
- IoT Devices

SY6174/77- Flyback Regulator With Primary Side CV/CC Control For Adapters and Chargers

Features

- Integrated 200V MOSFET
- Primary side CV/CC control eliminates the opto-coupler
- Valley turn-on of the primary MOSFET to achieve low switching losses
- Low start up current: 15 μ A typical
- Maximum switching frequency limitation 120kHz
- Compact package: SO8



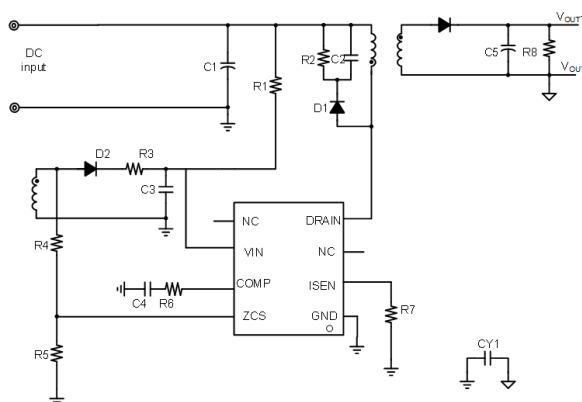
Applications

- Telecom Adapters
- Battery Chargers

SY50833A - Flyback Converter With Primary Side CV/CC Control For Telecom Application

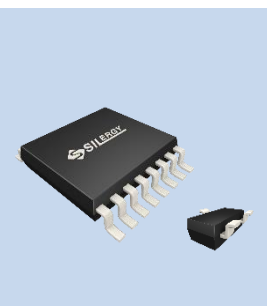
Features

- Tight PSR CC/CV Regulation Over Entire Operating Range
- Integrated 200V MOSFET
- QR Mode and PWM/PFM Control for Higher Average Efficiency
- Maximum Switching Frequency Limitation 300kHz
- Low Start Up Current: 4 μ A Max
- Internal CC/CV Loop Compensation
- Reliable Protections for OVP, SCP, OTP
- Compact Package: SO8

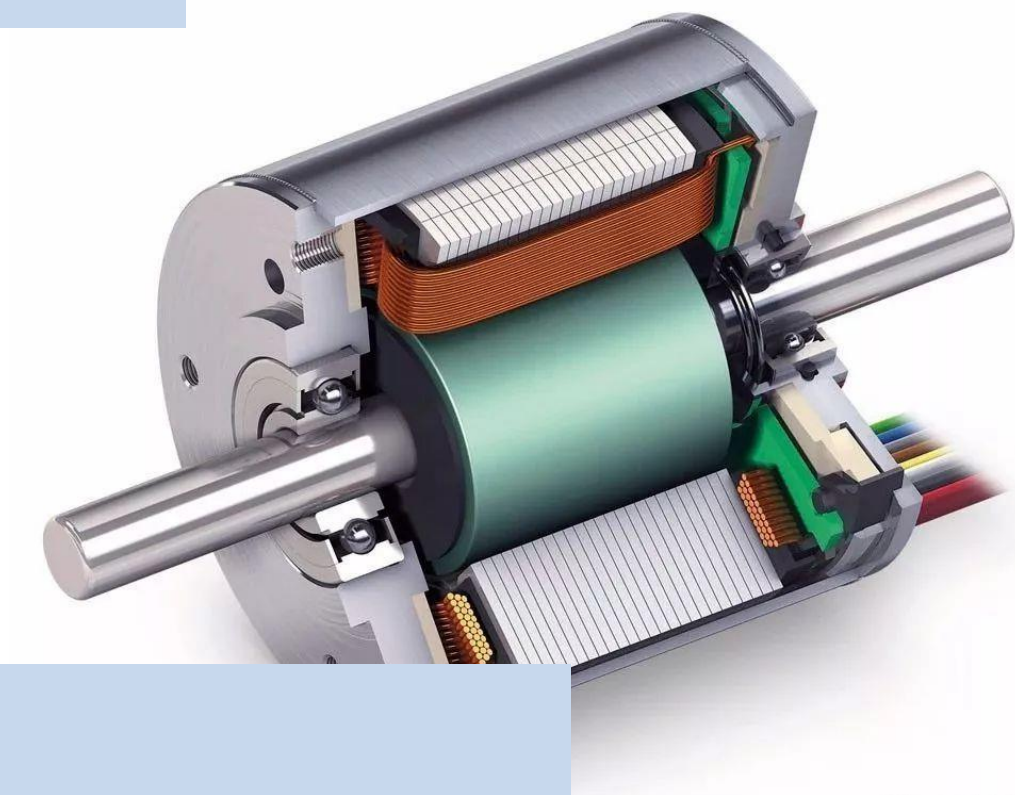


Applications

- Telecom Adapters
- POE Power Devices
- Security Cameras



Motor Driver



Motor Driver

Part Number	Recommended Operating Voltage		Drive Current Max (A)	MOSFET Ron HS+LS (mΩ)	Low power Sleep Mode	Package	Typical Applications
	Min (V)	Max (V)					
SY6702DFC	2.5	12	1.8	<450mΩ	√	DFN2×2-8	Cameras, DSLR Lenses, Consumer Products, Robotics, Toys
SY6712ABC	2.5	12	1.8	< 450mΩ		SOT23-6	Cameras, DSLR Lenses, Consumer Products, Robotics, Toys
SY6703HFC	2.5	12	1.5	<480	√	TSSOP-16E	POS Printers, Consumer Products, Robotics, Game Machines, Toys
SY6703QIC	2.5	12	1.5	<480	√	QFN4×4-16	POS Printers, Consumer Products, Robotics, Game Machines, Toys
SY67211FHC	2.5	16	0.8	<700	√	SSOP10	Refrigerators, Stepper Motors
SY67134FCC	5	32	3.6	<500	√	SO8E	Consumer Products, Robotics, DC Brush Motor
SY67333HHC	5	32	3	< 250	√	TSSOP24E	Appliance Fan, 3-phase BLDC Fan, HVAC
SY67221HKP	2.7	18	1.5	<670	√	TSSOP16	Refrigerators, DC Brush Motors, Solenoid Valve Load
SY67626RPQ	5	26	6.5	<140	√	QFN5×5-40	3-Phase BLDC Motor Driver
SY67343HHP	5	32	3	<240	√	TSSOP24E	Fan, Pump, HVAC

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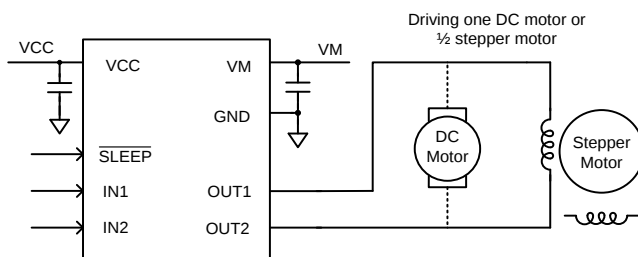
SY6702DFC - Low Voltage H-Bridge IC

Features

- H-bridge motor driver
 - Drives a brush DC motor or one winding of a stepper motor or other loads
 - Low MOSFET on-resistance: $HS + LS < 380m\Omega$
- 1.8A maximum drive current
- Power supply voltage range from 2.5V to 16V
- PWM (IN/IN) interface
- Low power sleep mode with 120nA maximum Combined supply current
- Low power with less than 120μA supply current
- Internal over current protection, short circuit protection, under voltage lockout and thermal shutdown
- Compact package: DFN2x2-8

Applications

- Cameras
- DSLR Lenses
- Consumer Products
- Toys
- Robotics
- Medical Devices



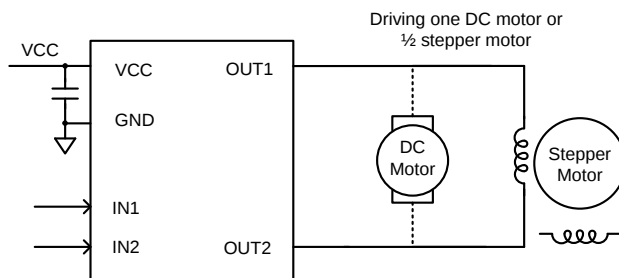
SY6712ABC - Low Voltage H-Bridge IC

Features

- H-bridge motor driver
 - Drives a brush DC motor or one winding of a stepper motor or other loads
 - Low MOSFET on-resistance: $HS + LS < 380m\Omega$
- 1.8A maximum drive current
- Power supply voltage range from 2.5V to 16V
- PWM (IN/IN) interface
- Low power with less than 160μA supply current
- Internal over current protection, short circuit protection, under voltage lockout and over temperature protection
- Internal charge pump with capacitor inside
- Compact package: SOT23-6

Applications

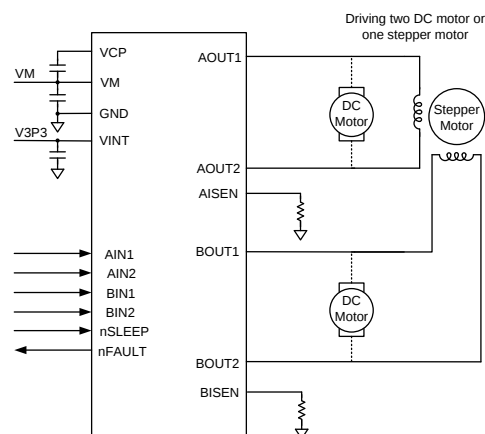
- Cameras
- DSLR Lenses
- Consumer Products
- Toys
- Robotics
- Medical Devices



SY6703HFC/SY6703QIC - High Efficiency H-Bridge Motor Driver IC

Features

- Dual H-bridge Motor Driver
- Maximum Drive Current of 1.5A RMS Current for Each H-bridge
- Power Supply Voltage Range from 2.5V to 16V
- PWM (IN/IN) Interface
- PWM Winding Current Regulation/Limit
- Internal OCP/SCP/UVL and thermal shutdown
- Multiple Packages Choice: TSSOP-16E/QFN4×4-16



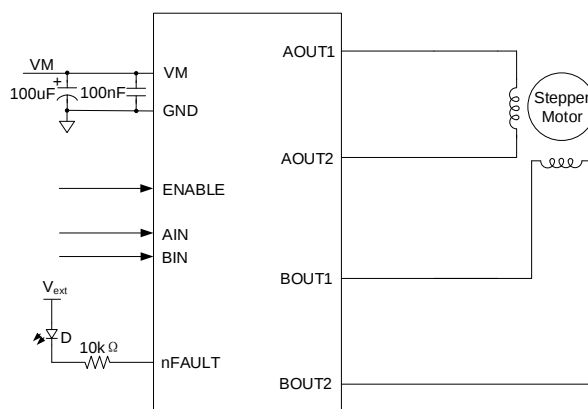
Applications

- POS Printers
- DSLR Lenses
- Video Security Cameras
- Toys
- Robotics
- Game Machines
- Office Automation Machines

SY67211 - Dual H-Bridge Stepper Motor Driver

Features

- Power Supply Voltage Range: 2.5V to 16V
- Maximum Drive Current: 800mA RMS Current for Each H-Bridge
- H-Bridge Motor Driver
- Internal Logic Control
- Low-Power Standby Mode
- Reliable Built-In Protections:
 - Thermal Shutdown
 - Over-Current Protection
 - Under-Voltage Lockout
- SSOP10 Package



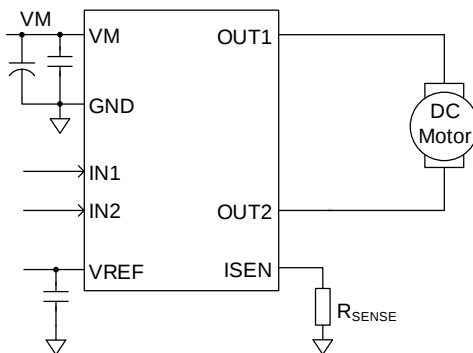
Applications

- Automation
- Stepper Motor Controllers

SY67134 - Medium Voltage H-Bridge Motor Driver

Features

- Power Supply Voltage Range: 5V to 40V
- Maximum Drive Current: 3.6A
- H-Bridge Motor Driver
- PWM Interface
- Low Power Standby Mode with Less than 15μA Supply Current
- Automatic Fault Recovery
- Synchronous Rectification
- Reliable Built-in Protections:
 - Thermal Shutdown
 - Over-Current Protection
 - Under-Voltage Lockout
- SO8E Package



Applications

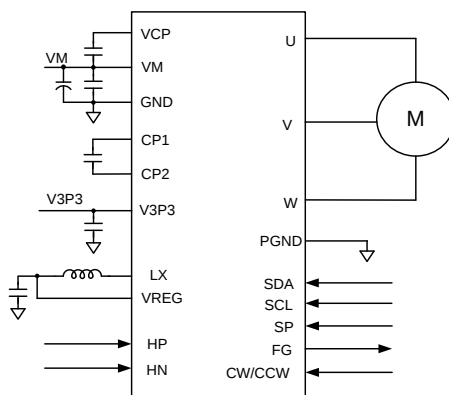
- Consumer Products
- Robotics

SY67333

- Three Phase Sensorless Sine Wave Motor Driver with Integrated Power MOSFETs

Features

- Power Supply Voltage Range from 5V to 40V
- Integrated Three Half-H-Bridge Motor Driver
 - Low MOSFET on-Resistance: HS + LS < 250mΩ
- Maximum Drive Current of 2A RMS, 3A Peak Current
- Sensorless or Single Hall Sensor/Element Control
- Sine Wave Driver
- Integrated 5V or 3.3V Buck Regulator
- I²C Interface
- Speed Setting: PWM/ Analog/I²C
- Forward/Reverse Control
- Sleep Mode
- Over Current Protection
- Motor Lock Protection
- Under Voltage Protection
- Thermal Shutdown
- TSSOP24E Package



Applications

- Appliance Fan
- HVAC

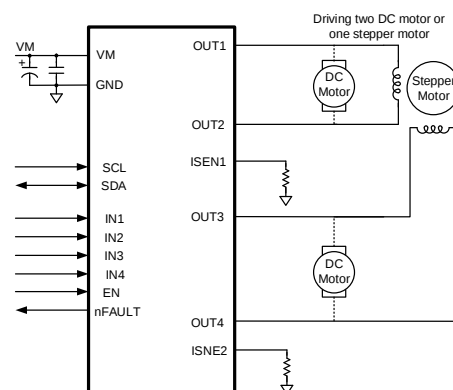
SY67221 - Dual H-bridge Stepper Motor Driver IC with I²C Integrated

Features

- Power Supply Voltage Range from 2.7V to 18V
- Different Operation Mode
 - Two H-bridge Operation with Four INx Input
 - Two H-bridge Operation with Two INx Input
 - One H-bridge Operation with Two INx Input, Parallel Operation
 - Four Half-H-bridge Operation with Four INx Input
- Maximum Drive Current of 1.5A RMS Current for Each H-bridge@T_A=25°C
- Internal Integrated Open Circuit Detection, Over Current Protection, Short Circuit Protection, Under Voltage Lockout and Thermal Shutdown
- Low-power Sleep Mode
- Fault Indication
- TSSOP16 Package

Applications

- Refrigerators
- DC Brush Motors
- Solenoid Valve Load



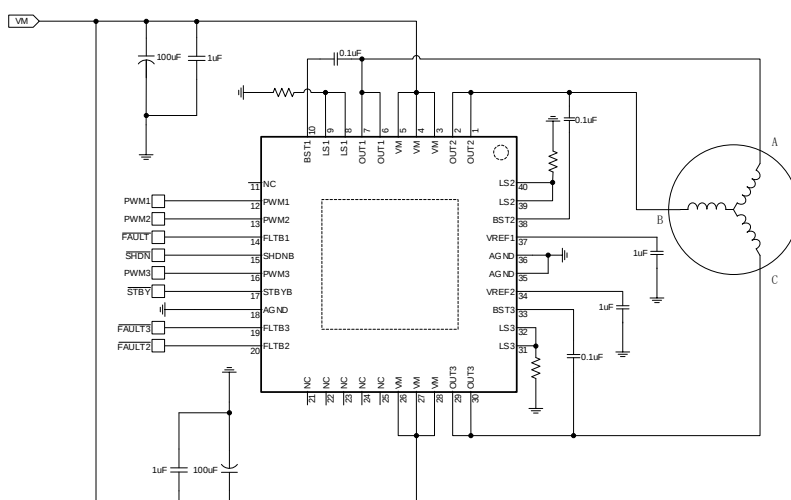
SY67626 - 26V 6.5A Three-phase BLDC Motor Driver

Features

- Power Supply Voltage Range from 5V to 26V
- Integrated Three Half-Bridges Motor Driver
- Maximum 6.5A Peak Current
- Shutdown Mode
- Standby Mode
- Over Current Protection
- Under Voltage Protection
- Short Circuit Protection
- Thermal Shutdown
- Fault Output

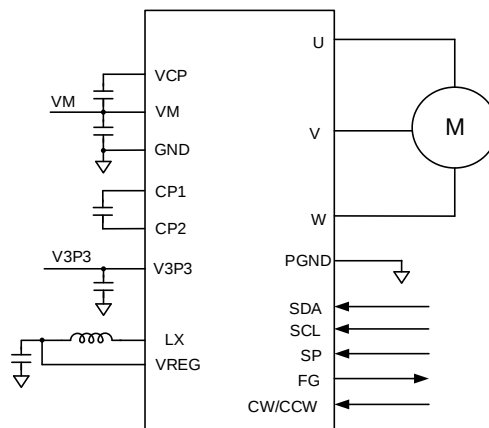
Applications

- 3-Phase BLDC Motor Driver



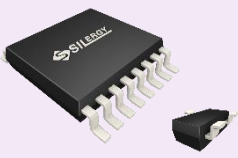
Features

- Power Supply Voltage Range from 5V to 40V
- Maximum Drive Current of 2A RMS, 3A Peak Current
- Sine Wave Driver
- Integrated 5V or 3.3V Buck Regulator
- I²C Interface
- Speed Setting: PWM/ Analog/I²C
- Forward/Reverse Control
- Sleep Mode
- Over Current Protection
- Motor Lock Protection
- Under Voltage Protection
- Thermal Shutdown
- TSSOP24E Package



Applications

- Appliance Fan
- HVAC



Signal Chain

Class-D Amplifier

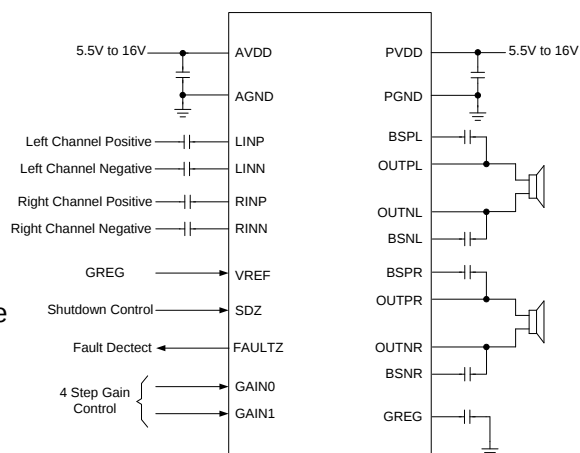
Part Number	Input	Ch(#)	Vs_min(V)	Vs_max(V)	Load_min(Ω)	Po(W/Ch)	THD+N(%)@ 1W	SNR(dB)	Features	Package
SY6014QCC	Analog	2	5.5	16	6	7	0.05	100.5	Filter-less	QFN4×4-24
SY6014AQCC	Analog	2	5.5	12	6	4	0.05	100.5	Filter-less	QFN4×4-24
SY6018QEC	Analog	2	6	26	3.2	30	0.03	105.5	AM Avoidance	QFN5×5-32
SY6018BQEC	Analog	1	5.6	26	2.5	60	0.028	106	AM Avoidance	QFN5×5-32
SY6028QEC	Analog	2	5.6	16	3.2	20	0.026	104.1	AM Avoidance	QFN5×5-32
SY6045AQEC	Digital	2	4.5	28	4	20	0.025	101	3.3V/1.8V I/F, 3 Band+ Post Band DRC, 12 PEQs + 6 SPEQs, SDOUT	QFN5×5-32
SY6045BQHC	Digital	2	4.5	28	4	20	0.041	101	3 Band + Post Band DRC, 12 PEQs + 6 SPEQs, SDOUT	QFN6×6-40
SY6045SGAC	Digital	2	4.5	28	4	30	0.026	101.3	3 Band + Post Band DRC, 12 PEQs + 6 SPEQs, SDOUT	TQFP7×7-48
SY6045SQHC	Digital	2	4.5	28	4	30	0.026	101.3	3 Band+ Post Band DRC, 12 PEQs + 6 SPEQs, SDOUT	QFN6×6-40
SY6065SGAC	Digital	2	4.5	28	4	30	0.026	101.3	3 Band + Post Band DRC, 12 PEQs + 6 SPEQs, SDOUT, Capless Headphone Driver	TQFP7×7-48
SY6075DGAC	Digital	2	4.5	28	4	20	0.055	100.7	3 Band + Post Band DRC, 12 PEQs + 6 SPEQs, SDOUT	TQFP7×7-48
SY60050GAF	Digital	2	4.5	28	4	20	0.055	100.7	3 Band + Post band DRC, 12 PEQs + 6 SPEQs, SDOUT	TQFP7×7-48
SY60020QHQ	Digital	2	4.5	28	4	20	0.041	101	3 Band + Post Band DRC, 12 PEQs + 6 SPEQs, SDOUT, 4 I2C Address	QFN6×6-40

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SY6014QCC - Analog Class-D Audio IC with EMI Suppression

Features

- 2×7W into 8Ω BTL Loads @1% THD+N from a 12V Supply
- 2×4W into 8Ω BTL Loads @10% THD+N from an 8V Supply
- 2×2.3W into 8Ω BTL Loads @10% THD+N from a 6V Supply
- Operates from 5.5V to 16V
- Filterless/Filter Operation
- Spread-Spectrum Modulation for Good EMI Performance
- High PSRR
- High Efficiency Class-D Operation Eliminates Need for Heat Sinks
- Four Fixed-gain Controlled: 20dB, 26dB, 32dB and 36dB
- Internal Oscillator (No External Components Required)
- Thermal and Short-Circuit Protection with Auto Recovery
- Comprehensive Click and Pop Suppression
- Space-saving Surface Mount QFN4×4-24 Package



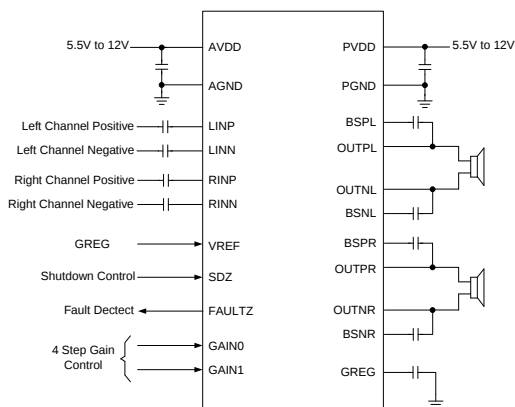
Applications

- Flat Panel Display TVs, DLP○RTVs, CRT TVs
- Powered Speakers
- Music Instruments
- Boom Box
- DVD Players, Game Machines

SY6014AQCC - Analog Class-D Audio IC with EMI Suppression

Features

- 2×3.8W into 4Ω BTL Loads @1% THD+N from a 7V Supply
- 2×4.7W into 4Ω BTL Loads @10% THD+N from a 7V Supply
- 2×5.8W into 4Ω BTL Loads @1% THD+N from a 9V Supply
- 2×6W into 8Ω BTL Loads @1% THD+N from a 12V Supply
- 2×4W into 8Ω BTL Loads @10% THD+N from an 8V Supply
- 2×2.3W into 8Ω BTL Loads @10% THD+N from a 6V Supply
- Operates from 5.5V to 12V
- Filterless/Filter Operation
- Spread-Spectrum Modulation for Good EMI Performance
- High PSRR
- High Efficiency Class-D Operation Eliminates Need for Heat Sinks
- Four Fixed-gain Controlled: 20dB, 26dB, 32dB and 36dB
- Internal Oscillator (No External Components Required)
- Thermal and Short-Circuit Protection with Auto Recovery
- Comprehensive Click and Pop Suppression
- Space-saving Surface Mount QFN4×4-24 Package



Applications

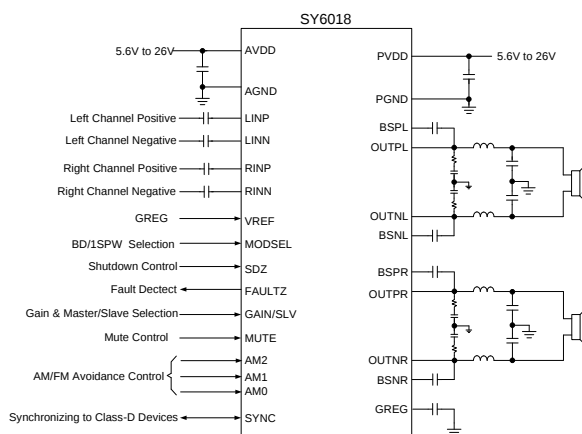
- Flat Panel Display TVs, DLP○RTVs, CRT TVs
- Powered Speakers
- Music Instruments
- Boom Box
- DVD Players, Game Machines

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SY6018QEC - Analog Class-D Audio IC

Features

- 2×30W into 8Ω BTL Loads @ 10% THD+N from a 24V Supply
- 60W into a 4Ω PBTL Load @ 10% THD+N from a 24V Supply
- Wide Voltage Range: 5.6V to 26V
- Filter-free Operation
- Differential and Single-ended Inputs
- Internal Feedback Control with High PSRR
- High Efficiency Class-D Operation Eliminates Need for Heat Sinks
- AM/AF Avoidance
- Master and Slave Synchronization
- Four Fixed-gain Controlled: 20dB, 26dB, 32dB and 36dB
- Selectable BD Mode and 1SPW Mode Modulation
- Integrated Protection Circuits Including Over Voltage, Under Voltage, Over Temperature, DC Error, and Short Circuit
- Comprehensive Click and Pop Suppression
- Space-saving Surface Mount 32Pin QFN 5mm×5mm Package



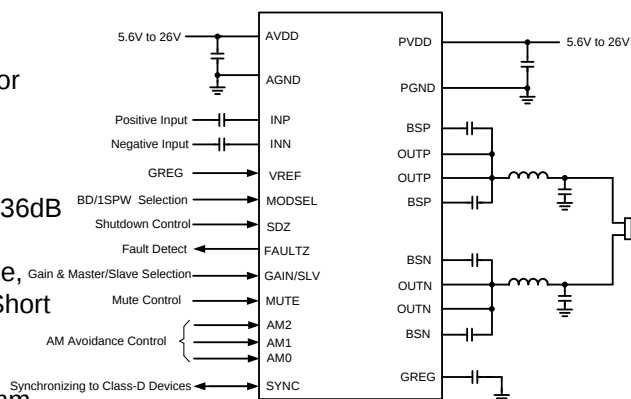
Applications

- Flat Panel Display TVs
- DLP® TVs
- CRT TVs
- Powered Speakers
- Music Instruments
- Boom Box
- Consumer Audio Applications

SY6018BQEC - Analog Class-D Audio IC

Features

- 60W into a 4Ω Load @ 10% THD+N from a 24V Supply
- Wide Supply Voltage Range from 5.6V to 26 V
- Differential and Single-ended Inputs
- Internal Feedback Control with High PSRR
- High Efficient Class-D Operation Eliminates Need for Heat Sinks
- AM Avoidance
- Master/Slave Mode Synchronization
- Four Fixed-gain Controlled: 20dB, 26dB, 32dB and 36dB
- Selectable BD Mode and 1SPW Mode Modulation
- Integrated Protection Circuits Including Over Voltage, Under Voltage, Over Temperature, DC Error, and Short Circuit
- Comprehensive Click and Pop Suppression
- Space-Saving Surface Mount 32-Pin QFN 5mmx5mm Package



Applications

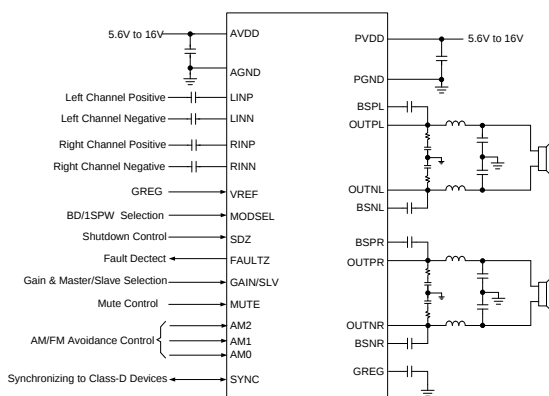
- Powered Speakers
- Music Instruments
- Boom Box
- Consumer Audio Applications

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SY6028QEC - Analog Class-D Audio IC

Features

- 2×14W into 8Ω BTL Loads @ <1% THD+N from a 16V Supply
- 2×20W into 4Ω BTL Loads @ <1% THD+N from a 16V Supply
- Wide Voltage Range: 5.6V to 16V
- Filter-free Operation
- Differential and Single-ended Inputs
- Internal Feedback Control with High PSRR
- High Efficiency Class-D Operation Eliminates Need for Heat Sinks
- AM/AF Avoidance
- Master and Slave Synchronization
- Four Fixed-gain Controlled: 20dB, 26dB, 32dB and 36dB
- Selectable BD Mode and 1SPW Mode Modulation
- Integrated Protection Circuits Including Under Voltage, Over Temperature, DC Error, and Short Circuit
- Comprehensive Click and Pop Suppression
- Space-saving Surface Mount 32Pin QFN 5mm×5mm Package



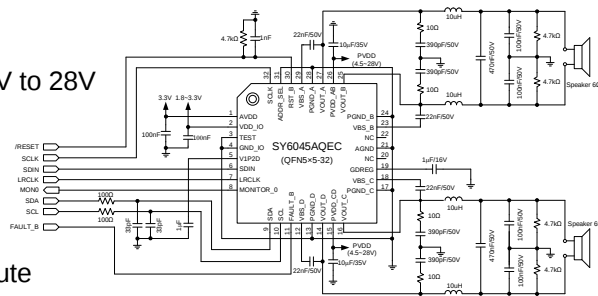
Applications

- Flat Panel Display TVs
- DLP® TVs
- CRT TVs
- Powered Speakers
- Music Instruments
- Boom Box
- Consumer Audio Applications

SY6045AQEC - High Performance, High Fidelity 20W Digital Audio-Power Amplifier

Features

- 2CH Stereo(20W×2BTL)
- 2.0 BTL Mode or Single-Filter PBTL Mode Support 4.5V to 28V PVDD Range
- 1.8V to 3.3V Digital IO Voltage Range
- 32bit Fixed-point DSP
- 32kHz to 96kHz Sample Rate Support (LJ/RJ/I2S)
- I2C Address Selection Pin
- Independent Channel Volume Controls with 48dB to Mute
- SDATA Generator (I2S output)
- Two DC Blocking Filters
- 18 PEQs or 12 PEQs + 6 SPEQs each channel for Speaker Protection and Speaker Compensation
- 3 Bands Dynamic Range Control plus a Post Dynamic Range Control
- Loudness Control
- Hard Clipper
- Power Level Meter
- 3-wire I2S Digital Audio Interface without MCLK
- Thermal, Over-Current, Short-Circuit Protection and BQ/DRC Checksum
- Support Automatic Audio Sample Rate Detection



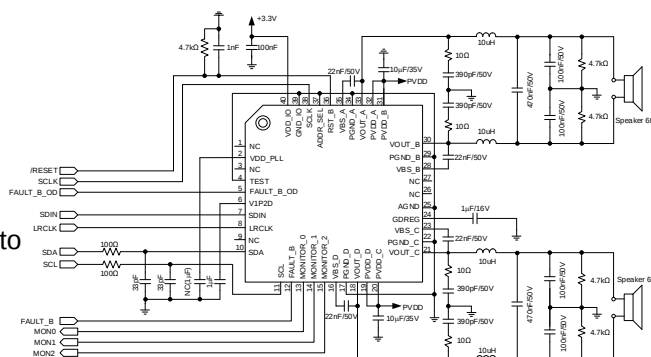
Applications

- LCD TV, LED TV or Monitor
- Digital Speaker, Bluetooth Speaker
- Sound bar

SY6045BQHC - High Performance, High Fidelity 20W Digital Audio-Power Amplifier

Features

- 2CH Stereo(20W×2BTL)
- 2.0 BTL Mode or PBTL Mode
- Support 4.5V to 28V PVDD Range
- 32bit Fixed-point DSP
- 32kHz to 96kHz Sample Rate Support (LJ/RJ/I2S)
- I2C Address Selection Pin
- Independent Channel Volume Controls with 48dB to Mute
- SDATA Generator (I2S output)
- Two DC Blocking Filters
- 18 PEQs or 12 PEQs + 6 SPEQs each channel for Speaker Protection and Speaker Compensation
- 3 Bands Dynamic Range Control plus a Post Dynamic Range Control
- Four Types of Digital Filters with Different Roll-off
- Loudness Control
- Hard Clipper
- Power Level Meter
- 3-wire I2S Digital Audio Interface without MCLK
- Thermal, Over-Current, Short-Circuit Protection and BQ/DRC Checksum
- Support Automatic Audio Sample Rate Detection



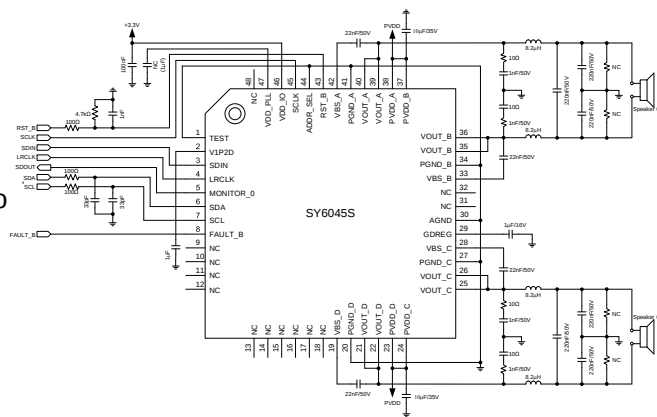
Applications

- LCD TV, LED TV or Monitor
- Digital Speaker, Bluetooth Speaker
- Sound bar

SY6045SGAC - High Performance, High Fidelity 30W Digital Audio-Power Amplifier

Features

- 2CH Stereo(30W×2BTL)
- 2.0 BTL Mode or PBTL Mode Support
- 4.5V to 28V PVDD Range
- 32kHz to 96kHz Sample Rate Support (LJ/RJ/I2S)
- 4 I2C Slave Addresses
- Independent Channel Volume Controls with 48dB to Mute
- SDATA Generator (I2S Output)
- Two DC Blocking Filters
- 18 PEQs or 12 PEQs + 6 SPEQs Each Channel for Speaker Protection and Speaker Compensation
- 3 Bands Dynamic Range Control Plus a Post Dynamic Range Control
- Loudness Control
- Power Level Meter
- 3-wire I2S Digital Audio Interface without MCLK
- Thermal, Over Current, Short Circuit, Short Load, Open Load Protections and EQ/DRC Coefficients Checksum
- Support Automatic Audio Sample Rate Detection
- Surface Mount, TQFP 48-Pin, 7mm×7mm



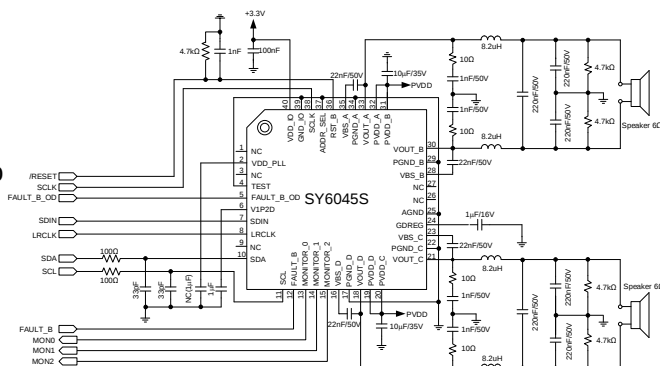
Applications

- LCD TV, LED TV or Monitor
- Digital Speaker, Bluetooth Speaker
- Sound bar

SY6045SQHC - High Performance, High Fidelity 30W Digital Audio-Power Amplifier

Features

- 2CH Stereo(30W×2BTL)
- 2.0 BTL Mode or Single-filter PBTL Mode Support
- 4.5V to 28V PVDD Range
- 32kHz to 96kHz Sample Rate Support (LJ/RJ/I2S)
- I2C Address Selection Pin
- Independent Channel Volume Controls with 48dB to Mute
- SDATA Generator (I2S Output)
- Two DC Blocking Filters
- 18 PEQs or 12 PEQs + 6 SPEQs Each Channel for Speaker Protection and Speaker Compensation
- 3 Bands Plus a Post Dynamic Range Control
- Loudness Control
- Power Level Meter
- 3-wire I2S Digital Audio Interface without MCLK
- Thermal, Over Current, Short Circuit, Short Load, Open Load Protections and EQ/DRC Coefficients Checksum
- Support Automatic Audio Sample Rate Detection
- Surface Mount, QFN 40-Pin, 6mm×6mm



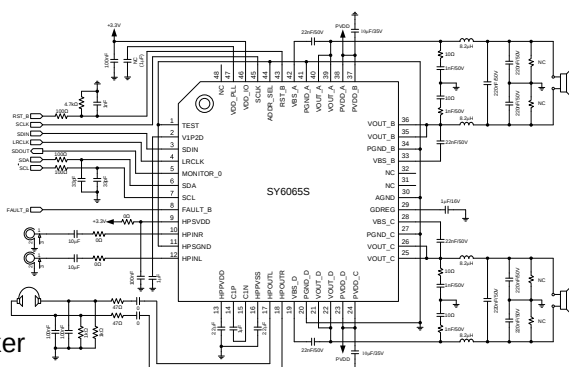
Applications

- LCD TV, LED TV or Monitor
- Digital Speaker, Bluetooth Speaker
- Sound bar

SY6065SGAC - High Performance, High Fidelity 30W Digital Audio-Power Amplifier

Features

- 2CH Stereo(30W×2BTL)
- 2.0 BTL Mode or PBTL Mode Support
- 4.5V to 28V PVDD Range
- 32kHz to 96kHz Sample Rate Support (LJ/RJ/I2S)
- 4 I2C Slave Addresses
- Independent Channel Volume Controls with 48dB to Mute
- SDATA Generator (I2S Output)
- Two DC Blocking Filters
- 18 PEQs or 12 PEQs + 6 SPEQs Each Channel for Speaker Protection and Speaker Compensation
- 3 Bands Dynamic Range Control Plus a Post Dynamic Range Control
- Loudness Control
- Power Level Meter
- 3-wire I2S Digital Audio Interface without MCLK
- Thermal, Over Current, Short Circuit, Short Load, Open Load Protections and EQ/DRC Coefficients Checksum
- Support Automatic Audio Sample Rate Detection
- Headphone Amplifier
 - No Output DC-Blocking Capacitors
 - Wide Power Supply Range: 2.1V-5V
 - 19mW/Ch Output Power into 32Ω at 5V
 - Short-Circuit and Thermal Protection and under Voltage Protection
- Surface Mount, TQFP 48-Pin, 7mm×7mm



Applications

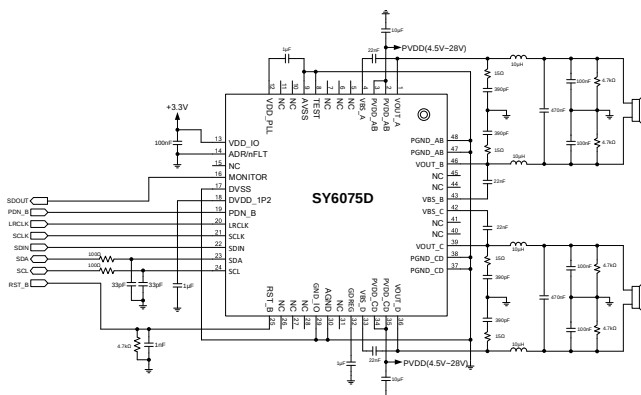
- LCD TV, LED TV or Monitor
- Digital Speaker, Bluetooth Speaker
- Sound bar

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SY6075DGAC - High Performance, High Fidelity 20W Digital Audio-Power Amplifier

Features

- 2CH Stereo(20W×2BTL)
- 2.0 BTL Mode or PBTL Mode
- Support 4.5V to 28V PVDD Range
- 32bit Fixed-Point DSP
- 32kHz to 96kHz Sample Rate Support (LJ/RJ/I2S)
- I2C Slave Address Selection
- Independent Channel Volume Controls with 48dB to Mute
- SDATA Generator (I2S output)
- Two DC Blocking Filters
- 18 PEQs or 12 PEQs + 6 SPEQs Each Channel for Speaker Protection and Speaker Compensation
- 3 Bands Dynamic Range Control Plus A Post Dynamic Range Control
- Loudness Control
- Hard Clipper
- Power Level Meter
- 3-wire I2S Digital Audio Interface without MCLK
- Thermal, Over-Current, Short-Circuit Protection and BQ/DRC Checksum
- Support Automatic Audio Sample Rate Detection
- Space Saving Package: TQFP7×7-48E



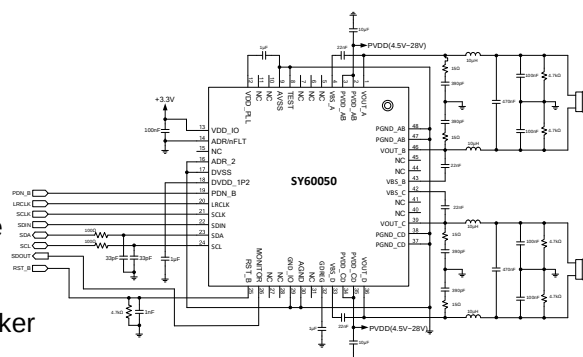
Applications

- LCD TV, LED TV or Monitor
- Digital Speaker, Bluetooth Speaker
- Sound bar

SY60050GAF - High Performance, High Fidelity 20W Digital Audio-Power Amplifier

Features

- 2CH Stereo(20W×2BTL)
- 2.0 BTL Mode or PBTL Mode
- Support 4.5V to 28V PVDD Range
- 32bit Fixed-Point DSP
- 32kHz to 96kHz Sample Rate Support (LJ/RJ/I2S)
- 4 I2C Slave Address Selection
- Independent Channel Volume Controls with 48dB to Mute
- SDATA Generator (I2S output)
- Two DC Blocking Filters
- 18 PEQs or 12 PEQs + 6 SPEQs Each Channel for Speaker Protection and Speaker Compensation
- 3 Bands Dynamic Range Control Plus a Post Dynamic Range Control
- Loudness Control
- Hard Clipper
- Power Level Meter
- 3-wire I2S Digital Audio Interface without MCLK
- Thermal, Over-Current, Short-Circuit Protection and BQ/DRC Checksum
- Support Automatic Audio Sample Rate Detection
- Space Saving Package: TQFP7×7-48E



Applications

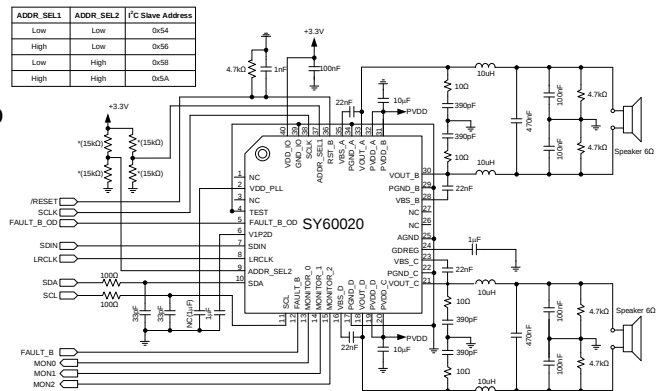
- LCD TV, LED TV or Monitor
- Digital Speaker, Bluetooth Speaker
- Sound bar

Features

- 2CH Stereo(20W×2BTL)
- 2.0 BTL Mode or PBTL Mode
- 4.5V to 28V PVDD Range
- 32kHz to 96kHz Sample Rate Support (LJ/RJ/I2S)
- 4 I2C Slave Addresses
- Independent Channel Volume Controls with 48dB to Mute
- SDATA Generator (I2S output)
- Two DC Blocking Filters
- 18 PEQs or 12 PEQs + 6 SPEQs each channel for Speaker Protection and Speaker Compensation
- 3 Bands Dynamic Range Control plus a Post Dynamic Range Control
- Loudness Control
- Hard Clipper
- Power Level Meter
- 3-wire I2S Digital Audio Interface without MCLK
- Thermal, Over-Current, Short-Circuit Protection and BQ/DRC Checksum
- Support Automatic Audio Sample Rate Detection

Applications

- LCD TV, LED TV or Monitor
- Digital Speaker, Bluetooth Speaker
- Sound bar



Headphone or Line Driver

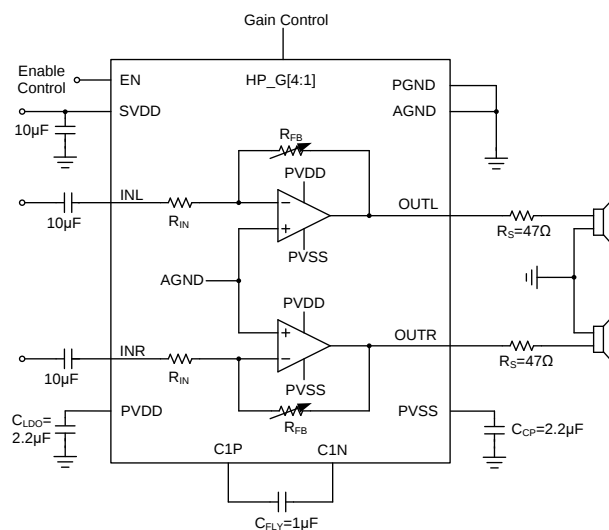
Part Number	Input	Ch(#)	Vs_min(V)	Vs_max(V)	Po(W) @ 1%THD+N	PSRR(dB)	THD+N(%)	SNR (dB)	Features	Package
SY6040QDC	Analog	2	2.2	5.5	21m	83	0.015	106	capacitor-less	QFN3×3-16

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SY6040QDC - Capacitor-less Headphone/Lineout Driver with LDO & Charge Pump

Features

- 21mW/Ch Output Power into 32Ω Load at 3.3V When $R_S=47\Omega$
- 86mW/Ch Output Power into 32Ω Load at 3.3V When $R_S=0\Omega$
- Wide Power Supply Range: 2.2V-5.5V
- Ground Referenced Outputs Eliminate the DC Bias Voltage on the Headphone Ground Pin
- No Output DC Blocking Capacitors
- Reduced Board Area
- Reduced Component Cost
- Improved THD+N Performance
- No Degradation of the Low Frequency Response Due to the Output Capacitors
- Built in the LDO and the Charge Pump
- Short Circuit Protection, Thermal Protection and Under Voltage Protection
- Click and Pop Suppression Circuit
- Surface Mount, QFN, 16 Pin, 3mm×3mm



Applications

- Notebook Computers
- CD/MP3 Player
- Smart Phones
- Cellular Phones
- PDA

Analog Light Sensor

Part Number	Description	IR-Cut Epoxy	V _{CC}		I _{OUT} (μ A) @EV=100lux, V _{CC} =3V	Package
			Min (V)	Max (V)		
SY13103-G1	Ambient Light Sensor	/	2.5	5.5	120	Chip
NEW SY3128AS22-J10	Ambient Light Sensor	/	2	5	101 (FT 10.1uA@10lux)	SMD2015-2L

Digital Light Sensor

Part Number	Description	Bits	V _{CC}		Comm. Method	I _{DD} @ Power Down	I _{OUT} (μ A) @EV=100lux, V _{CC} =3V	Finest Resolution	Gain & Tint Setting	Package
			Min(V)	Max(V)						
SY3061-S1	ALS with side-look package	12	2.3	3.6	I ² C	<1.0uA	110uA	0.029 lux/count	5 gain	SMD3013-4L side-look
SY3079AS22-J01	Ambient Light Sensor	16	2.6	3.6	I ² C	<1.0uA	90uA	0.0079 lux/count	/	SMD2015-8L
SY3099AS22-J00	2-channel Ambient Light Sensor	16	2.3	3.6	I ² C	<1.0uA	180uA	0.05 mlux/count	4 gain+4 IT	SMD2015-8L
SY3099AS23-J00	2-channel Ambient Light Sensor	16	2.3	3.6	I ² C	<1.0uA	180uA	0.05 mlux/count	4 gain+4 IT	SMD2024-6L
SY3135AS21-J01	Ambient Light +Flicker Sensor	16	1.7	2	I ² C	<15uA	220uA	0.06 mlux/count	10 gain+8bits IT	SMD2024-6L
SY3122-H2	Light Sensor with Frequency Output	/	2.7	3.6	/	/	/	2.76kHz/(uW/c m2)	/	DIP4646-3pin
SY3016PS32-G00	PXS	16	2.8	3.6	I ² C	<2.0uA	/	/	/	SMD2515-6L
SY3133CS32-J00	RGB Color Ambient Light Sensor	16	1.7	2	I ² C	<20uA	400uA@Vcc=1.8V	0.6 mlux/count	12 gain+ 9 integration time	SMD2024-12L
SY3132CS42-J10	11-Channel Multi-Spectrum Sensor	16	1.7	2.0	I ² C	<20uA	450uA@Vcc=1.8V	/	12 gain+ 9 integration time	SMD3120-8L

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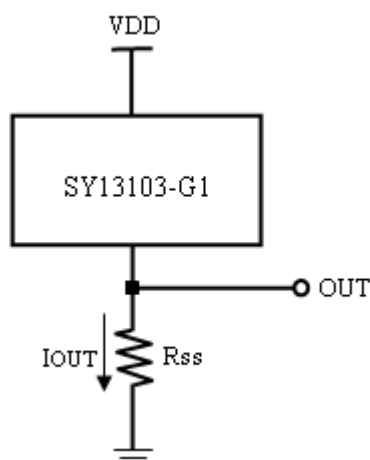
SY13103-G1 - Ambient Light Sensor

Features

- Close to the human eye's response
- Good output linearity
- Guaranteed temperature performance, -40°C to 85°C
- Wide supply voltage range: 2.5V to 5.5V
- ROHS compliant

Applications

- Security lighting control
- Dawn/dusk or brightness/darkness sensing
- Detection of ambient light to control display backlighting
- Automatic residential and commercial lighting management
- Automatic contrast enhancement for electronic signboard
- Ambient light monitoring device for daylight and artificial light



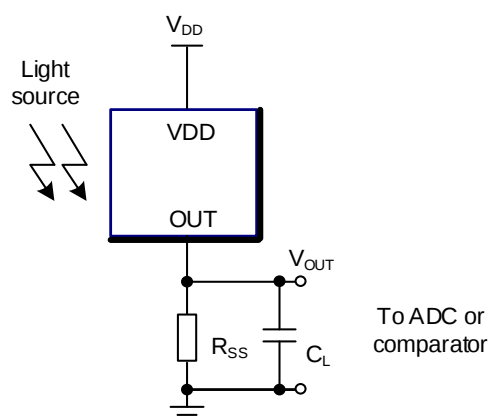
SY3128AS22-J10 - Current Output ALS with Ultra-high IR Immunity

Features

- Wide Supply Voltage Range: 2V to 5V
- Ultra-High Infrared Rejection
- Good Output Linearity
- Guaranteed Temperature Performance: -40°C to 85°C
- ESD Protection: $\pm 2\text{kV}$ (HBM)
- Package Information:
 - Size: $2.0\text{mm} \times 1.5\text{mm} \times 0.6\text{mm}$
 - Type: SMD BT with Transparent Molding Compound

Applications

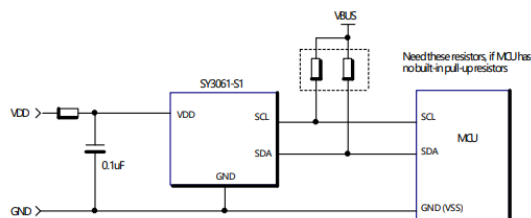
- Infrared Illuminator for Security Cameras
- Dawn/Dusk or Brightness/Darkness Sensing
- Ambient Light Detection for Display Backlight Control
- Automatic Residential and Commercial Lighting Management



SY3061-S1 - 5-range Ambient Light Sensor with Side View Package

Features

- Ambient Light Sensing
 - reading proportional to lux
 - flicker noise and IR rejection
 - spectral response matching human eye's photopic vision
 - selectable 120/240/481/963/1927 lux range
- Green Power
 - low supply current, less than 130 μ A
 - less than 1 μ A supply current when powered down
- Easy to Use
 - I2C (SMBus Compatible) interface
 - temperature compensation
- Side View Package
 - Package size: 2.95mm x 1.25mm x 1.5mm
 - Can be soldered both top view and side view
- Wide Operating Voltage Range
 - 1.7V to 3.6V supply for I2C interface
 - 2.3V to 3.6V sensor power supply
- Works under All Light Sources, Including Sunlight



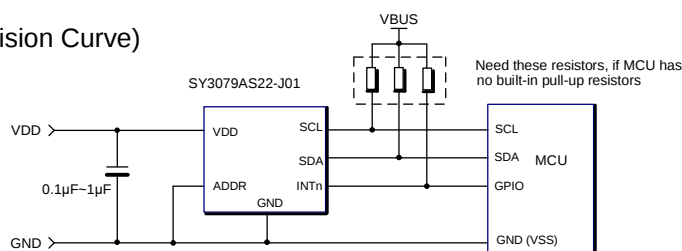
Applications

- TV Panel Control
- Accessories
- Industrial Control
- Lighting Control

SY3079AS22-J01 - 21-bit Dynamic Range True Ambient Light Sensor with Clear channel and high speed I2C interface

Features

- ALS Channel
 - Output Count Proportional to Lux
 - Indoor Light Source Flicker Noise Rejection
 - Matching Human Eye's Response (Photopic Vision Curve)
 - 6 Selectable Measurement Ranges
 - Finest Resolution: Down to 0.0079 Lux/Count
 - Maximum Detection Range 16512 Lux
- Clear Channel
 - Indoor Light Source Flicker Noise Rejection
 - 2 Selectable Measurement Ranges
- Green Power
 - Less than 110 μ A Supply Current
 - Less than 1 μ A Supply Current When Powered Down
- Easy to Use
 - SMBus Compatible I2C Interface
 - Temperature Compensation
- Wide Operating Voltage Range
 - 1.7V to 3.6V Supply for I2C Interface
 - 2.3V to 3.6V Supply for Sensor
- Wide Operating Temperature Range
 - 40°C to +85°C Ambient Temperature
- Package Information
 - Size: 2.0mm x 1.5mm x 0.6mm
 - Type: SMD (Surface Mount Device) BT with Transparent Molding Compound



Applications

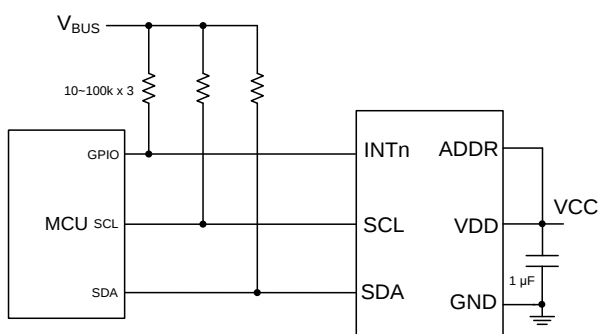
- TV Panel Control
- Smart Phone
- Accessories
- Industrial Control
- Lighting Control

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SY3099AS22-J00 - 16-bit Ambient Light Sensor with Ultra-high Sensitivity and High IR Rejection

Features

- ALS
 - Output Count Proportional to Environmental Lux
 - Ultra-high Sensitivity, Suitable for Applications with Low Transmission
 - Ultra-high IR Rejection Which Makes Light Ratio Close to 1.0 Under Various Light Source
 - Indoor Light Source Flicker Noise Rejection
 - Match Human Eye's Response (Photopic Vision Curve)
- Green Power
 - Less Than 1uA Current Consumption When Shut Down
 - 180uA DC Supply Current When Two Channels Activated
- Wide Operation Range
 - 2.3V to 3.6V Power Supply
 - 1.7V to 3.6V Supply for I²C Interface
- Wide Operation Temperature Range
 - -30°C to +85°C Ambient Temperature
- Package Information
 - Size: 2.0mm×1.5mm×0.6mm
 - Type: SMD BT with Transparent Molding Compound



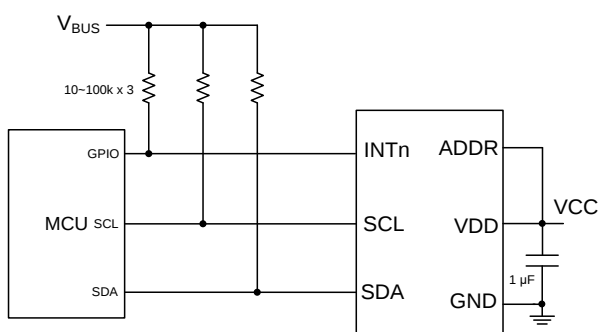
Applications

- Smart Phones With Low Transmission Cover Glass
- Smart Household Devices

SY3099AS23-J00 - 16-bit Ambient Light Sensor with Ultra-high Sensitivity and High IR Rejection

Features

- ALS
 - Output Count Proportional to Environmental Lux
 - Ultra-high Sensitivity, Suitable for Applications with Low Transmission
 - Ultra-high IR Rejection Which Makes Light Ratio Close to 1.0 Under Various Light Source
 - Indoor Light Source Flicker Noise Rejection
 - Match Human Eye's Response (Photopic Vision Curve)
- Green Power
 - Less Than 1uA Current Consumption When Shut Down
 - 180uA DC Supply Current When Two Channels Activated
- Wide Operation Range
 - 2.3V to 3.6V Power Supply
 - 1.7V to 3.6V Supply for I²C Interface
- Wide Operation Temperature Range
 - -30°C to +85°C Ambient Temperature
- Package Information
 - Size: 2.0mm×1.5mm×0.6mm
 - Type: SMD BT with Transparent Molding Compound



Applications

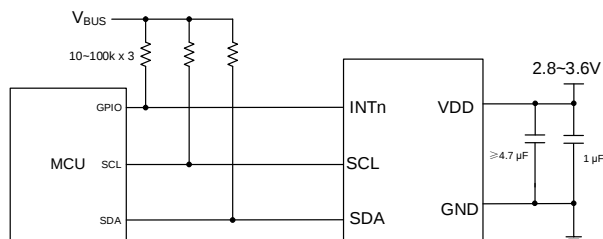
- Smart Phones With Low Transmission Cover Glass
- Smart Household Devices

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SY3016PS32-G00 - 16-bit Proximity Sensor for TWS Application

Features

- Reliable Proximity Detection between 3mm and 15cm
- 16-bit ADC with Programmable Integration Time, Gain and Sleep Time Enables High SNR Measurements and Low Power Operation.
- 940 nm VCSEL Eliminates the “Red Glow”
- Programmable VCSEL Drive Current with Built-in Temperature Compensation.
- Uses Proprietary Design Techniques and Package to Reduce Optical Crosstalk
- Input Voltage Range: 2.8V to 3.6V
- Current Consumption (Max):
 - Inactive -2μA
 - Sleep Mode -13μA
 - ADC Conversion -1.1 mA
- -30°C to +85°C Operating Temperature
- Package Information
 - Size: 2.55mm×1.50mm×0.60mm
 - Type: SMD BT with Transparent Molding Compound



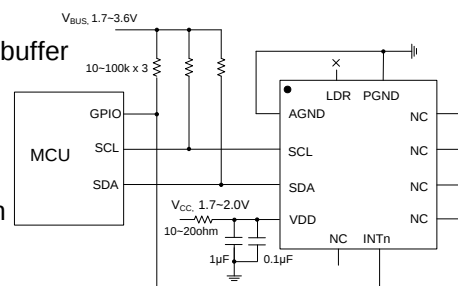
Applications

- Smart Phones
- TWS (true wireless stereo) Headphones
- Home Appliances
- Robotics

SY3133CS32-J00 - ALS/Color sensor with Flicker Detection

Features

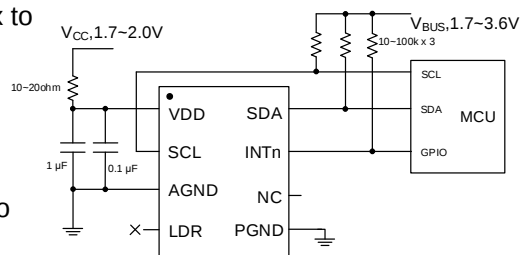
- Ambient light sensing
 - 16-bit resolution for all channels
 - Indoor light source flicker noise rejection (50Hz and 60Hz)
 - Programmable integration time and gain settings (gain ranges from 1x to 1024x)
- CCT (correlated color temperature)
 - Detection CCT range from 2000K to 13000K
- Flicker
 - 16-bit resolution
 - Sensitivity less than 1lux/count, detection range from 1 to 8k lux
 - Sampling rate higher than 2kHz, can detect flicker from 50Hz to 400Hz
 - FIFO depth 512 bytes
- Interrupt source selectable, but only window type is available. FIFO buffer depth can also generate an interrupt
- Operation range
 - 1.7V-2.0V
 - 1.7V-3.6V Supply for I2C interface
 - 360μA (typ.) for color sensing channels working, 5μA (typ.) when shutdown
 - -40°C to 85°C operating temperature
- Package Information:
 - Size: 2.0mm×2.4mm×0.5mm
 - Type: BT substrate with transparent molding compound


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SY3132CS42-J10 - 11-Channel Multi-Spectrum Sensor

Features

- Spectral Sensing
 - 16-bit Resolution for all Channels
 - Wide Detection Range: Larger than 100k lux
 - Indoor Light Source Flicker Noise Rejection (50Hz and 60Hz)
 - Programmable Integration Time and Gain Settings from 1x to 2048x
- CCT (Correlated Color Temperature)
 - Detection CCT Range from 2000k to 13000k
- Flicker
 - 16 Bit Resolution
 - Sensitivity Less than 1lux/count, Detection Range from 1 to 10k lux
 - Sampling Rate Higher than 2kHz, can Detect Flicker from 50Hz to 400Hz
 - FIFO Depth 512 bytes
- Interrupt Source Selectable, FIFO Buffer Depth can also Generate an Interrupt
- Operation Range
 - 1.7V-2.0V
 - 490μA (typ.) for Normal Operation Mode, 5μA (typ.) Shutdown Current
 - -40°C to +85°C Operating Temperature
- Package Information
 - Size: 3.1mm×2.0mm×1.0mm



TVS Protection

Part Number	Application	Channels	Direction	V _{RWM} (V)	C _J (pF)	I _{PP} (A)	P _{PK} (W)	Package
SYT01M12DWC	12V Low Speed Interface	1	Bi	12	4	4	90	DFN1.0×0.6-2
SYT01M12DXC	12V Low Speed Interface	1	Bi	12	4	4	90	DFN0.6×0.3-2
SYT01L03DWC	3.3V High Speed Interface	1	Bi	3.3	1	12	120	DFN1.0×0.6-2
SYT01L03DXC	3.3V High Speed Interface	1	Bi	3.3	1	12	120	DFN0.6×0.3-2
SYT01N03DXC	3.3V Low Speed Interface	1	Bi	3.3	27	15	140	DFN0.6×0.3-2
SYT01A05DXC	5V High Speed Interface, USB-C	1	Bi	5	0.15	4	55	DFN0.6×0.3-2
SYT01N05ANC	Audio/Key	1	Bi	5	30	12	130	SOD523
SYT01N03ANC	Audio/Key	1	Bi	3.3	27	15	140	SOD523
SYT01N03DWC	Audio/Key	1	Bi	3.3	27	15	140	DFN1.0×0.6-2
SYT11N05DWD	Audio/Key	1	Bi	5	23	10	90	DFN1.0×0.6-2
SYT11N05DXD	Audio/Key	1	Bi	5	23	10	90	DFN0.6×0.3-2
SYT21N05DWD	Audio/Key	1	Bi	5	45	20	180	DFN1.0×0.6-2
SYT41N05DWD	Audio/Key	1	Bi	5	90	35	350	DFN1.0×0.6-2
SYT11M05DWD	Audio/Key	1	Bi	5	14	9	75	DFN1.0×0.6-2
SYT11M05DXD	Audio/Key	1	Bi	5	14	9	75	DFN0.6×0.3-2
SYT21M05DWD	Audio/Key	1	Bi	5	15	7	65	DFN1.0×0.6-2
SYT21M05DXD	Audio/Key	1	Bi	5	15	7	65	DFN0.6×0.3-2
SYT11M03DWD	Audio/Key	1	Bi	3.3	17	10	65	DFN1.0×0.6-2
SYT11M03DXD	Audio/Key	1	Bi	3.3	17	10	65	DFN0.6×0.3-2
SYT16S03DVC	HDMI/USB	4	Bi	3.3	0.25	3	50	DFN2.5×1.0-10
SYT46S05DVD	HDMI/USB	4	Bi	5	0.5	4.5	45	DFN2.5×1.0-10
SYT21S05DWC	HDMI/USB	1	Bi	5	0.5	4.5	45	DFN1.0×0.6-2
SYT21S05DXD	HDMI/USB	1	Bi	5	0.5	4.5	45	DFN0.6×0.3-2
SYT26S05DVC	HDMI/USB	4	Uni	5	0.5	6	42	DFN2.5×1.0-10
SYT46S03DVD	HDMI/USB	4	Bi	3.3	0.4	7	56	DFN2.5×1.0-10

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Part Number	Application	Channels	Direction	V _{RWM} (V)	C _J (pF)	I _{PP} (A)	P _{PK} (W)	Package
SYT06U05DVC	HDMI1.4	4	Uni	5	0.6	3	36	DFN2.5×1.0-10
SYT36A03DVD	HDMI2.1	4	Uni	3.3	0.25	7	70	DFN2.5×1.0-10
SYT26AB3DVD	HDMI2.1	4	Bi	3.3	0.18	4.5	30	DFN2.5×1.0-10
SYT13L03AOC	high-speed & general IO ESD protection	2	Bi	3.6	1	12	120	SOT-23
SYT36S03DVC	Low Cap ESD Array for High-speed Interface	4	Uni	3.3	0.6	12	60	DFN2.5×1.0-10
SYT11L05DWC	Normal Cap ESD for General I/O	1	Bi	5	2	10	100	DFN1.0×0.6-2
SYT11L05DXC	Normal Cap ESD for General I/O	1	Bi	5	2	10	100	DFN0.6×0.3-2
SYT21A05DWD	Ultra-low Cap ESD for High-speed Interface	1	Bi	5	0.28	10	65	DFN1.0×0.6-2
SYT01N24DWC	USB Vbus, Smart Phone	1	Bi	24	12	4	180	DFN1.0×0.6-2
SYT01N12DWC	USB Vbus, Smart Phone	1	Bi	12	25	7.5	210	DFN1.0×0.6-2
SYT01N15DWD	USB Vbus, Smart Phone	1	Bi	15	18	6	180	DFN1.0×0.6-2
SYT05S05ABC	USB/VGA/HDMI	4	Uni	5	1.2	8	100	SOT23-6
SYT06U05ABC	USB/VGA/HDMI	4	Uni	5	0.6	3	36	SOT23-6
SYT04L05AWC	USB2.0	2	Uni	5	1.2	7.5	100	SOT-143
SYT13L05AOC	USB2.0	2	Bi	5	3.5	2	24	SOT-23
SYT43L05SMD	USB2.0	2	Bi	5	2	10	100	DFN1.0×0.6-3
SYT02U05DWC	USB2.0	1	Uni	5	0.5	4	50	DFN1.0×0.6-2
SYT32S05DWD	USB2.0	1	Uni	5	0.85	14	70	DFN1.0×0.6-2
SYT13U05AOC	USB2.0	2	Uni	5	0.6	4	50	SOT-23
SYT13S03SMD	USB2.0	2	Uni	3.3	0.42	7	40	DFN1.0×0.6-3
SYT03S05SHC	USB2.0	2	Uni	5	0.6	4	50	DFN1.2×1.0-6
SYT03S05SIC	USB2.0	2	Uni	5	0.6	4	50	DFN1.6×1.0-6
SYT07S05SBC	USB3.x	6	Uni	5	0.3	3	45	DFN4.1×2.0-10

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Part Number	Application	Channels	Direction	V _{RWM} (V)	C _J (pF)	I _{PP} (A)	P _{PK} (W)	Package
SYT18A03SFC	USB3.x	8	Uni	3.3	0.42	6	30	DFN3.8×1.0-9
SYT21A05DXC	USB3.x,USB Type-C	1	Bi	5	0.2	9	55	DFN0.6×0.3-2
SYT26A03DVC	USB3.x,USB Type-C	4	Uni	3.3	0.38	10	55	DFN2.5×1.0-10
SYT26A05DVD	USB3.x,USB Type-C	4	Uni	5	0.38	10	55	DFN2.5×1.0-10
SYT31S05DWD	USB3.x,USB2.0	1	Bi	5	0.45	15	100	DFN1.0×0.6-2
SYT31A01DXD	USB4,TB4,USB TYPE-C	1	Bi	1.5	0.17	6	24	DFN0.6×0.3-2
SYT41A01DXD	USB4,TB4,USB TYPE-C	1	Bi	1	0.14	3	15	DFN0.6×0.3-2
SYT21S24DXC	USB-C/RF Antenna	2	Bi	24.5	0.2	9	50	DFN0.6×0.3-2
SYT06L05ABC	VGA/RJ45	4	Uni	5	3.5	20	350	SOT23-6
SYT26AU3DVD	USB3.x TTPE-C / HDMI2.1	4	Uni	3.3	0.28	4.0	20	DFN2.5×1.0-10
SYT21M05ANO	Audio/Key	1	Bi	5	15	7	65	SOD-523
SYT22U05DXD	HDMI/USB	1	Uni	5	0.5	6	42	DFN0.6×0.3-2
SYT11L03DXD	3.3V High Speed Interface	1	Bi	3.3	1.2	11	80	DFN0.6×0.3-2
SYT32L15DWD	USB2.0 & USB Type-C CC/SBU	1	Uni	15	1.5	30	210	DFN1.0×0.6-2
NEW SYT56S03DVD	HDMI/USB	4	Bi	3.3	0.4	6	50	DFN2.5×1.0-10
NEW SYT21N03DWD	Audio/Key	1	Bi	3.3	45	28	190	DFN1.0×0.6-2

EMI Filter

Part Number	Application	Channels	Direction	V _{RWM} (V)	f _c (GHz)	IL	Atten	Package
SYE40C02SSC	MIPI/HDMI	4	Uni	5	4	-0.33dB@10MHz	-35dB@1.5GHz	DFN2.5×2.0-10
SYE1104TXD	LCD/Camera	4	Uni	5	0.25	-6dB@10MHz	-20dB@0.8GHz	DFN1.6×1.0-8
SYE1106TLD	LCD/Camera	6	Uni	5	0.25	-6dB@10MHz	-20dB@0.8GHz	DFN2.5×1.35-12
NEW SYE1108TKD	LCD/Camera	8	Uni	5	0.25	-6dB@10MHz	-20dB@0.8GHz	DFN3.3×1.35-16

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Part Number	Application	Channels	Direction	V _{RWM} (V)	C _J (pF)	I _{PP} (A)	P _{PK} (W)	Package
SYS02H12AMC	DC IN	1	Uni	12	150	20	500	SOD323
SYS01V05AMC	DC IN	1	Bi	5	200	24	350	SOD323
SYS02V05AMC	DC IN	1	Uni	5	350	40	500	SOD323
SYS03H12AOC	DC IN	2	Uni	12	140	20	500	SOT-23
SYS11U24AMC	RJ45	1	Bi	24	0.6	6	550	SOD323
SYS11U15AMC	RJ45	1	Bi	15	0.8	10	550	SOD323
SYS11U12AMC	RJ45	1	Bi	12	0.6	12	550	SOD323
SYS11U05AMC	RJ45	1	Bi	5	0.6	20	550	SOD323
SYS11U03AMC	RJ45	1	Bi	3.3	0.6	25	550	SOD323
SYS11L03SEC	RJ45	4	Uni	3.3	3.5	25	450	DFN2.5×2.5-10
SYS14L02DHC	RJ45	4	Uni	2.5	3.5	40	1000	DFN3.0×2.0-10
SYS42L02FAC	RJ45	2	Bi	2.8	1.2	50	1000	SOP-8
SYS03N24AOC	RS232	2	Uni	24	120	8	300	SOT-23
SYS04M12THD	RS485	2	Uni	12	6	100	3000	DFN2.0×2.0-5
SYS02V12AMC	VBUS	1	Uni	12	400	42	1000	SOD323
SYS22X24TPD	VBUS	1	Uni	20	900	150	5100	DFN2.0×2.0-3
SYS12V20SLC	VBUS	1	Uni	20	210	25	850	DFN1.6×1.0-2
SYS12V12SLC	VBUS	1	Uni	12.5	400	52	1100	DFN1.6×1.0-2
SYS12V28SLD	VBUS	1	Uni	28	140	22	1000	DFN1.6×1.0-2
SYS12V36SLD	VBUS	1	Uni	36	95	17	900	DFN1.6x1.0-2

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Part Number	Application	Channels	Direction	V _{RWM} (V)	C _J (pF)	I _{pp} (A)	P _{PK} (W)	Package
SYS12V48SLD	VBUS	1	Uni	48	60	12	750	DFN1.6×1.0-2
SYS12V05AMC	Vbus/Vbat	1	Uni	5.5	1100	100	1300	SOD-323
SYS12V05SLC	Vbus/Vbat	1	Uni	5	1100	100	1300	DFN1.6×1.0-2
SYS22V05SLC	Vbus/Vbat	1	Uni	5	2100	200	2100	DFN1.6×1.0-2
SYS22V04SLC	Vbus/Vbat	1	Uni	4.5	1100	240	3100	DFN1.6×1.0-2
SYS32V05SLD	Vbus/Vbat	1	Uni	5	600	100	800	DFN1.6×1.0-2
SYS02H24DWD	Vbus/Vbat	1	Uni	24	85	9	320	DFN1.0×0.6-2
SYS02H20DWC	Vbus/Vbat	1	Uni	20	85	12	450	DFN1.0×0.6-2
SYT02H05DWC	Vbus/Vbat	1	Uni	5	160	22	220	DFN1.0×0.6-2
SYS42V04SLD	Vbus/Vbat	1	Uni	4.8	1000	170	1600	DFN1.6×1.0-2
NEW SYS42X12TPD	Vbus/Vbat	1	Uni	12	1000	135	2600	DFN2.0×2.0-3

SYT31A01DXD - Ultra low capacitance ESD for USB4.0/TB4.0 high speed data lines

Features

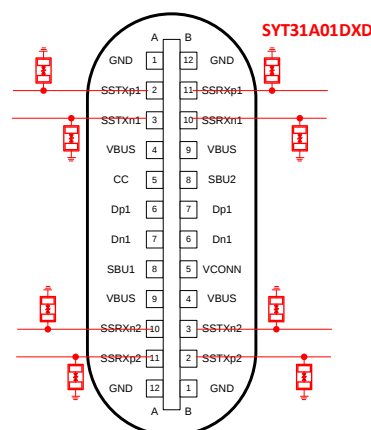
- IEC61000-4-2(ESD): $\pm 15\text{kV}$ (Contact)
- IEC61000-4-5(Surge): 6A (8/20 μs)
- Low clamping voltage: 4.8V @ TLP16A
4V@ 6A(8/20us)
- Small capacitance: 0.17pf
- Small package: DFN0.6*0.3-2
- Pin compatible with: PESD5V0H1BRSF / AZ5B8S

Applications

- USB4.0/TB4.0 Tx/Rx high speed data lines
- PCIE4.0/5.0 Tx/Rx high speed data lines
- Target Customer: NB, SmartPhone, USB-C Hub

Benefits

- Ultra-low capacitance(0.17pF) for high-speed(20Gbps) signal integrity
- Low clamping voltage (4.8V@TLP 16A) for Sub-micro/Nano scale PHY IC



SYT31A01DXD for USB4.0/TB4.0

SYT26AU3DVD - 3.3V, Low capacitance ESD for USB3.x Type-C

Features

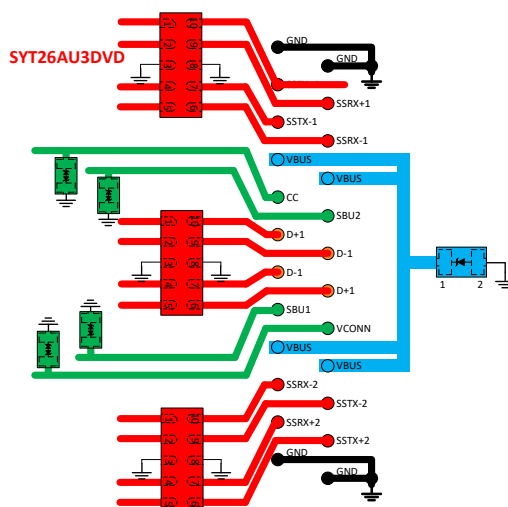
- IEC61000-4-2(ESD): $\pm 15\text{kV}$ (Contact)
- IEC61000-4-5(Surge): 4A (8/20 μs)
- Small capacitance: 0.28pf
- Package: DFN2.5*1.0-10
- Pin: AZ174-xxF/AZ176-xxF

Applications

- HDMI2.1 data lines
- USB3.x data lines
- Target Customer: NB, TV/STB/MNT

Benefits

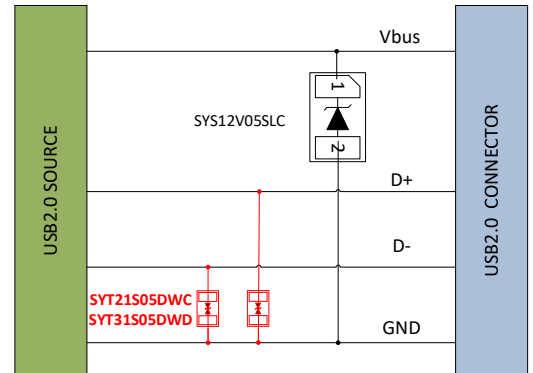
- Low Clamping voltage features good ESD performance



SYT26AU3DVC For USB-C

Features

- IEC61000-4-2(ESD) (Contact): $\pm 30\text{kV}$ (SYT21S05DWC)
 $\pm 25\text{kV}$ (SYT31S05DWD)
- IEC61000-4-5(Surge) (8/20 μs): 4.5A (SYT21S05DWC)
15A (SYT31S05DWD)
- Small capacitance: 0.5pf (SYT21S05DWC)
0.45pf(SYT31S05DWD)
- Small package: DFN1.0*0.6-2
- Pin: PESD5V0F1BL/PESD5V0X1BL/RCLAMP0521PA



SYT21S05DWC/SYT31S05DWD
for USB2.0

Applications

- USB2.0/3.0 data lines
- HDMI1.4&2.0 speed data lines
- Target Customer: SmartPhone/PAD, PC, TV/STB/MNT

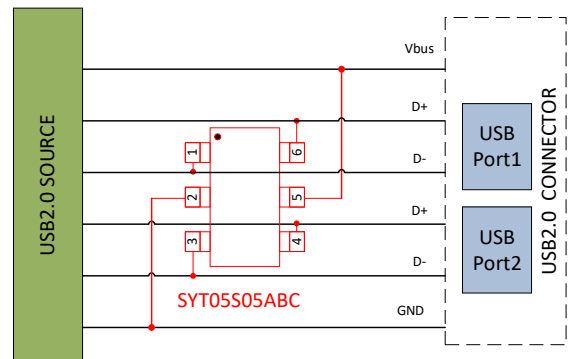
Benefits

- SYT21S05DWC: Worldwide lowest cost
- SYT31S05DWD: High performance with high IPP and low clamping

SYT05S05ABC - 5V, Low Capacitance TVS Protection

Features

- IEC61000-4-2(ESD) (Contact): $\pm 30\text{kV}$
- IEC61000-4-5(Surge) (8/20 μs): 7.5A
- Low clamping voltage: 10.5V @ TLP16A
11V@ 8A(8/20us)
- Small capacitance: 1.2pf
- Small package: SOT23-6
- Pin: AOZ8105CI/USBL6-2SC6Y
/RCLAMP0504PBTCT/SRV05-4HTG-D



SYT05S05ABC for USB2.0

Applications

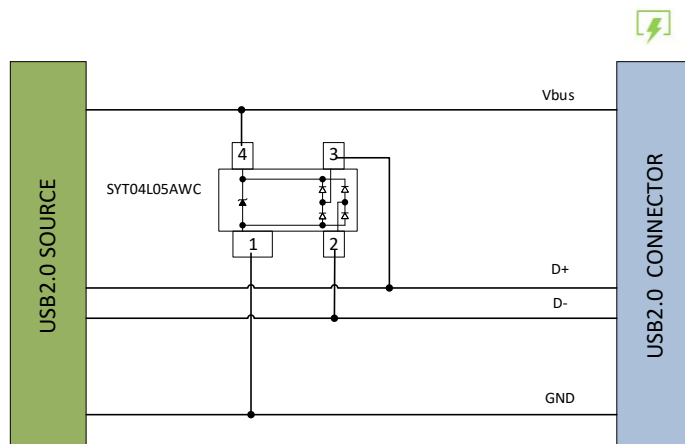
- USB2.0 data lines
- VGA data lines
- Target Customer: PC, TV/STB/MNT

Benefits

- High surge IPP & Low clamping voltage feature good ESD protection performance

Features

- IEC61000-4-2(ESD) (Contact): $\pm 30\text{kV}$
- IEC61000-4-5(Surge) (8/20 μs): 7.5A
- Low clamping voltage: 10.5V @ TLP16A
11V@ 8A(8/20 μs)
- Small capacitance: 1.2pF
- Small package: SOT143
- Pin: AZ1015-02N / PRTR5V0U2X /
TPD2E001DZD / SP0503BAHTG



SYT04L05AWC for USB2.0

Applications

- USB2.0 data lines
- Target Customer: PC, TV/STB/MNT

Benefits

- High surge IPP & Low clamping voltage feature good ESD protection performance

SYT01L03DWC/SYT01N03DWC

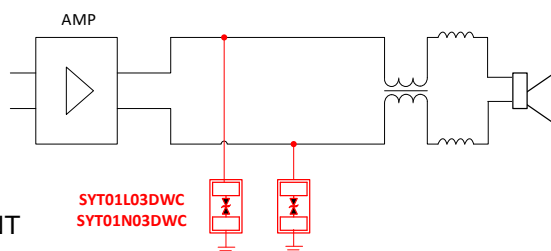
- 3.3V, Low capacitance ESD for general speed lines

Features

- IEC61000-4-2(ESD) (Contact): $\pm 30\text{kV}$
- IEC61000-4-5(Surge) (8/20 μs): 12A (SYT01L03DWC)
15A (SYT01N03DWC)
- Small capacitance: 2pF (SYT01L03DWC)
27pF (SYT01N03DWC)
- Small package: DFN1.0*0.6-2
- Pin: PESD3V3U1UL/ PESD3V3L1UL

Applications

- Audio/Speaker
- Keys, LED, General I/O ESD protection
- Target Customer: SmartPhone, TWS, PC, TV/STB/MNT



SYT01L03DWC/SYT01N03DWC for Audio

Benefits

- Low cost
- Low Clamping voltage features good ESD performance

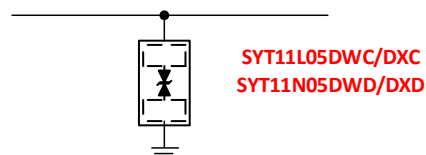
SYT11L05DWC/DXC & SYT11N05DWD/DXD

- 5V, Low capacitance ESD for general speed lines

Features

- IEC61000-4-2(ESD) (Contact): $\pm 30\text{kV}$
- IEC61000-4-5(Surge) (8/20 μs): 10A (SYT11L05DWC)
10A (SYT11N05DWD)
- Small capacitance: 2pf (SYT11L05DWC)
23pf (SYT11N05DWD)
- Small package: DFN1.0*0.6-2/DFN0.6*0.3-2
- Pin: PESD5V0V1BL/ AZ5725-01F

General speed data line



SYT11L05 & SYT11N05
for General speed data line

Applications

- General speed data line
- Audio/Speaker, Keys, LED ESD protection
- Target Customer: SmartPhone, TWS, PC, TV/STB/MNT

Benefits

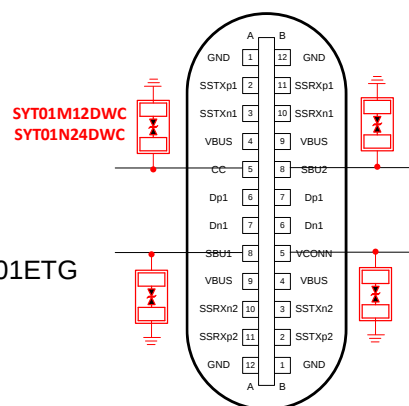
- Low cost
- Low Clamping voltage features good ESD performance

SYT01M12DWC/SYT01N24DWC

- 12V/24V, Low capacitance ESD for general speed lines

Features

- IEC61000-4-2(ESD) (Contact): $\pm 30\text{kV}$
- IEC61000-4-5(Surge) (8/20 μs): 4A (SYT01M12DWC)
4A (SYT01N24DWC)
- Small capacitance: 4pf (SYT01M12DWC)
12pf (SYT01N24DWC)
- Small package: DFN1.0*0.6-2
- Pin: PESDNC2FD12VB/AZ4212-01F, PESD24VS1UL/ SPHV24-01ETG



SYT01M12DWC/SYT01N24DWC
for USB-C

Applications

- CC/SBU datalines
- RS232
- 12V or below VBUS ESD protection (SYT01M12DWC)
- 24V or below VBUS ESD protection (SYT01N24DWC)
- Target Customer: NB, SmartPhone, USB-C Hub

Benefits

- Low cost
- Low Clamping voltage features good ESD performance

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Features

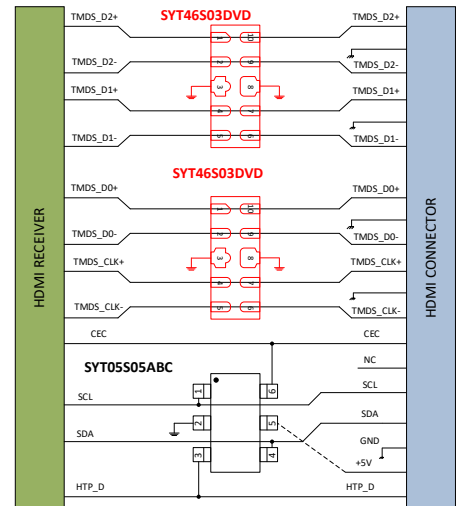
- IEC61000-4-2(ESD): $\pm 30\text{kV}$ (Contact)
- IEC61000-4-5(Surge): 4.5A (SYT46S05DVD)
6A (SYT46S03DVD)
- Small capacitance: 0.5pF (SYT46S05DVD)
0.4pF (SYT46S03DVD)
- Package: DFN2.5*1.0-10
- Pin: PUSH3F96 / AZ1043-04F / AZ1045-04F / Rclamp0524

Applications

- HDMI1.4&2.0 high speed data lines
- Target Customer: NB, TV/STB/MNT

Benefits

- Low cost
- Low Clamping voltage features good ESD performance



SYT46S03DVD For HDMI2.0

SYT26AB3DVD/SYT36A03DVD

- Low capacitance ESD for HDMI2.1

Features

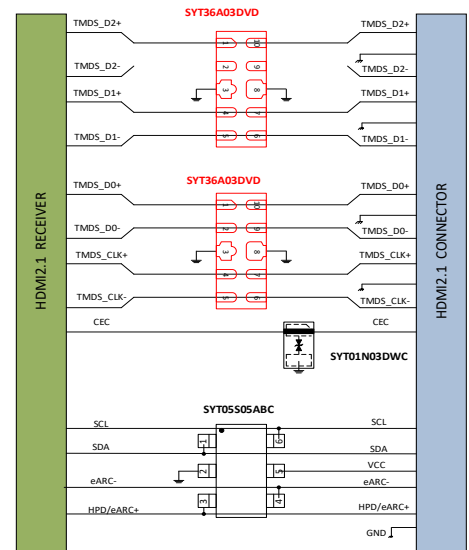
- IEC61000-4-2(ESD): $\pm 15\text{kV}$ (Contact)
- IEC61000-4-5(Surge): 4.5A(SYT26AB3DVD)
7A (SYT36A03DVD)
- Small capacitance: 0.18pF(SYT26AB3DVD)
0.35pF(SYT36A03DVD)
- Package: DFN2.5*1.0-10
- Pin: PHDMI2AB4 / PUSH3AB4 / AZ176S / AZ1143-04F

Applications

- HDMI2.1 high speed data lines
- Target Customer: NB, TV/STB/MNT

Benefits

- Low Clamping voltage features good ESD performance
- Ultra low capacitance features good signal integrity



SYT36A03DVD For HDMI2.1

SYS14L02DHC

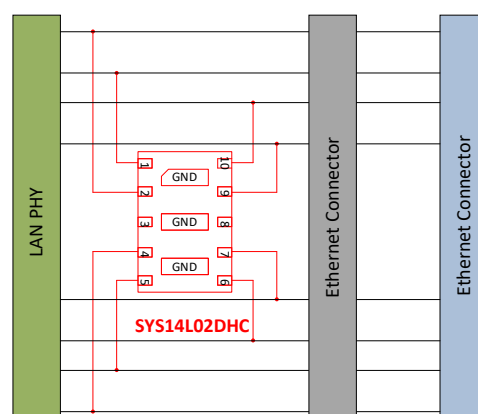
- 2.5V, Low Capacitance ESD/Surge Protection for Gigabit Ethernet Interfaces

Features

- IEC61000-4-2(ESD): $\pm 30\text{kV}$ (Contact)
- IEC61000-4-5(Surge): 40A (8/20 μs)
- Small capacitance: 3pf
- Package: DFN3.0*2.0-10
- Pin: RCLAMP2574N/Rclamp3374N/AZ3125-08AF/Z3133-08F

Applications

- 10M/100M/1000M Ethernet
- Target Customer: PC/NB, Router&Swith,RJ45



SYS14L02DHC for 1000M Ethernet

Benefits

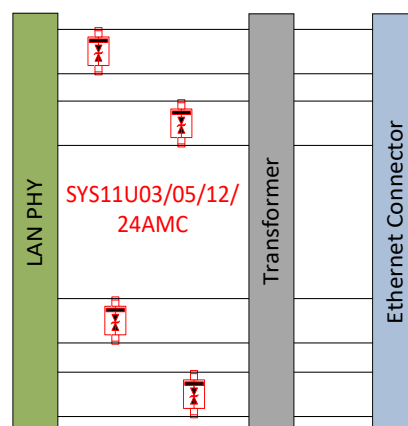
- Low clamping voltage &high Surge IPP features good surge protection

SYS11U03/05/12/24AMC

- 3.3V/5V/12V/24V, Ultra-low Capacitance ESD/Surge Protection

Features

- IEC61000-4-2(ESD): $\pm 30\text{kV}$ (Contact)
- IEC61000-4-5(Surge): 25A (8/20 μs) /SYS11U03AMC
20A (8/20 μs) /SYS11U05AMC
12A (8/20 μs) /SYS11U12AMC
6A (8/20 μs) /SYS11U24AMC
- Full Vrwm series: 3.3V / SYS11U03AMC
5V / SYS11U05AMC
12V / SYS11U12AMC
24V / SYS11U24AMC
- Small capacitance: 0.6pf
- Package: SOD-323
- Pin: SP4021-1FTG/LSBLC12CG/ESD7351HT1G/AZ1613-01L.R7G

SYS11U03/05/12/24AMC
for 1000M Ethernet**Applications**

- 10M/100M/1000M Ethernet
- Target Customer: PC/NB, Router&Swith,RJ45

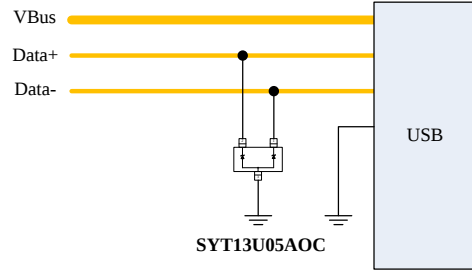
Benefits

- Low capacitance for good signal integrity
- Low clamping voltage &high Surge IPP features good surge protection

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Features

- IEC61000-4-2(ESD): $\pm 25\text{kV}$ (Contact)
- IEC61000-4-5(Surge): 4A (8/20 μs)
- Low clamping voltage: 14V @ TLP16A
- Small capacitance: 0.6pF
- Small package: SOT-23
- Pin: ESD5302F



Applications

- Computers and peripherals
- USB2.0

Benefits

- Low cost product with high ESD protect level & Low clamping voltage.

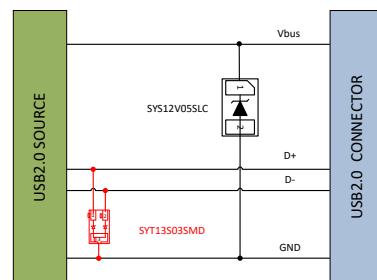
SYT13S03SMD - 3.3V, Ultra-Low capacitance ESD for high speed data lines

Features

- IEC61000-4-2(ESD): $\pm 19\text{kV}$ (Contact)
- IEC61000-4-5(Surge): 7A (8/20 μs)
- Low clamping voltage: 6V @ TLP16A
5V @ 6A(8/20us)
- Small capacitance: 0.42pF
- Small package: DFN1.0*0.6-3
- Pin compatible with: AZ5313-02F

Applications

- USB2.0/3.0 data lines
- Target Customer: NB/PC



Benefits

- Low clamping voltage ,better ESD protection

SYS12V05SLC/SYS12V12SLC/SYS12V20SLC

- 5V/12V/20V,DFN1610 series for VBUS surge protection

Features

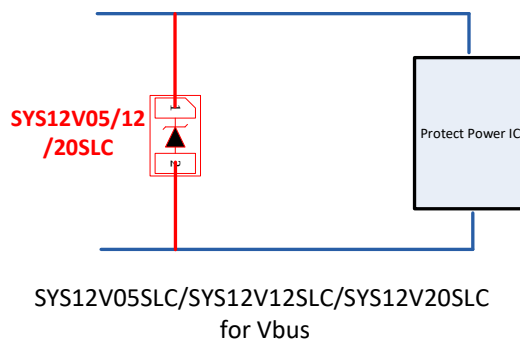
- IEC61000-4-2(ESD): $\pm 30\text{kV}$ (Contact)
- IEC61000-4-5(Surge): 100A (8/20 μs) /SYS12V05SLC
52A (8/20 μs) /SYS12V12SLC
25A (8/20 μs)/SYS12V20SLC
- Full Vrwm series: 5V/SYS12V05SLC
12V/SYS12V12SLC
20V/SYS12V20SLC
- Package: DFN1.6*1.0-2
- Capacitance: 0.2pF
- Pin: AOZ8310DI/UCLAMPxx71P/AZ45xx-01F

Applications

- Type-C VBus
- VBAT Surge
- Target Customer: SmartPhone, TWS, PC, TV/STB/MNT

Benefits

- High surge IPP,Low clamping voltage
- Low cost



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Programmable Logic Device

Part Number	I/O Pins	LUTs	DFF/ Latches	CNT/ Delays	ASM	Interface	RC Oscillators	Analog Glitch Filters	Analog ACMPs	VDD	Special Features	Package
SY33519VYQ	18	18	4	9	Y	I2C/UART	25KHz/2MHz/ 25MHz	2	4	3.3V/5V	/	QFN2×3-20

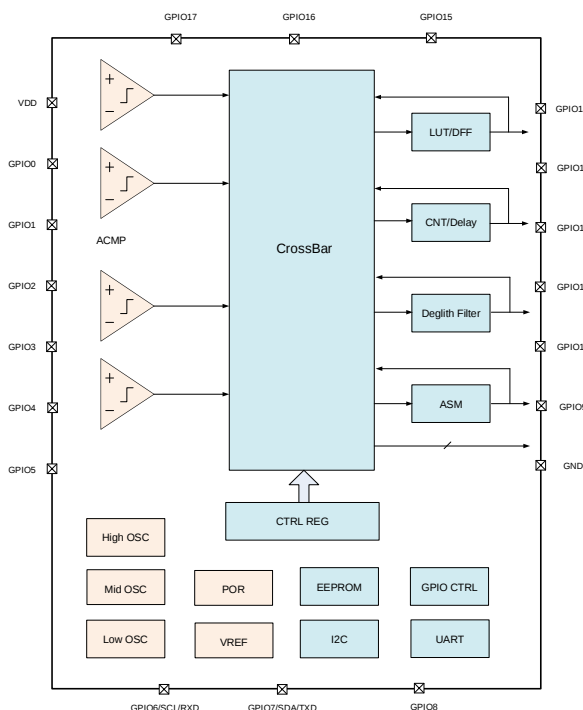
SY33519VYQ - Mixed-signal Programmable Logic Device

Features

- 18 General-Purpose I/O (GPIO) Pins
- Nine 2-bit LUTs
- Nine 3-bit LUTs
- One 4-bit LUT
- Four DFF/Latches
- Nine CNT/Delays: Two for 16-bit CNT/Delays, Seven for 8-bit CNT/Delays
- Two Analog Glitch Filters
- One Asynchronous State Machine (ASM)
- Four Analog Comparators (ACMP)
- Embedded Crossbar for Application Flexibility
- On-Chip Voltage References (Vref)
- On-Chip RC Oscillators: 25kHz, 2MHz, 25MHz
- Serial Communication Interface by I2C or UART
- 20-Pin QFN (2×3×0.55mm) Package
- MSL Rating: MSL1

Applications

- Computers and Servers
- PC Peripherals
- Smart Phone
- Handheld Terminals
- Consumer Electronics





Contact Us

Silergy Corp. was founded by a group of technology innovators and business leaders with an average 30 years' experience. We design innovative mixed-signal and analog ICs that utilize our industry-leading process technologies. Widely used in automotive, industrial, consumer, computing and communication devices, our products are designed to improve efficiency and to conserve or measure energy use.

Silergy Corp is a Cayman Island company with its operations headquarters in Hangzhou, China. The company stock is traded on Taiwan Stock Exchange (TWSE: 6415).

We are committed to providing industry-leading performance at an affordable solution cost.

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