



Selection Guide

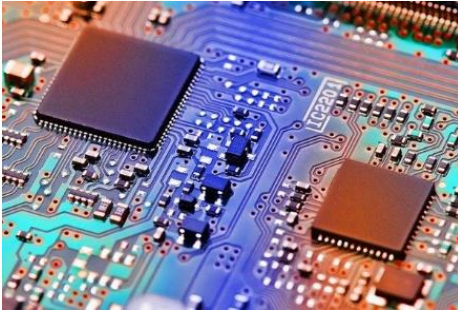
DC/DC

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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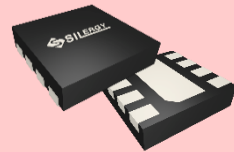
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DC/DC

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)									
SY20208ADFC	2.5	5.5	0.45	/	0.6	±2%	400/200	1.5	DFN2×2-8	Power Good Indicator, Ultra Low Quiescent Current
SY20011DFC	2.2	5.5	0.5	1	1.2	±1.5%	280/120	0.4	DFN2×2-8	Power Good Indicator, Output Auto Discharge
SY20213BDTC	1.85	5.5	0.6	3	0.4	±2%	350/250	40	DFN1.45×1-6	
SY20018IAAC	2.5	5.5	1	1.5	0.6	±1.5%	260/170	50	SOT23-5	Output Auto Discharge
SY20018A1AAC	2.5	5.5	1	1.5	0.6	±1.5%	260/160	50	SOT23-5	
SY20108AAC	2.5	5.5	1	3	0.6	±2%	270/160	40	SOT23-5	
SY20097AAC	2.5	6.5	1	1.5	0.6	±2%	260/170	40	SOT23-5	
SY20019ARC	2.5	5.5	1	1.5	0.6	±1.5%	170/100	55	SOT563	Power Good Indicator, Hic-cup SCP, Auto Discharge
SY20019EARC	2.5	5.5	1	1.5	0.6	±1.5%	170/100	/	SOT563	Power Good Indicator, FCCM, Hic-cup SCP, Auto Discharge
SY20061IDEC	2.5	5.5	1	1.5	0.6	±1.5%	220/130	50	DFN2×2-6	Auto Discharge
SY20111DQC	2.5	5.5	1	2.5	0.6	±2%	230/150	40	DFN1.5×1.5-6	Output Auto Discharge
SY20109BDFC	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
SY20121ARC	2.6	5.5	1.5	2		±1%	180/100	55	SOT563	Output Auto Discharge
SY20123QWC	2.6	5.5	1.5	2	0.6	±1%	180/100	55	QFN1.5×1.5-7	Power Good Indicator, Auto Discharge
SY20149A1AAC	2.7	5.5	2	1.5	0.6	±1.5%	130/85	50	SOT23-5	Output Auto Discharge
SY20149IAAC	2.5	5.5	2	1.5	0.6	±1.5%	130/85	50	SOT23-5	Latch-off Protection
SY20149E1AAC	2.5	5.5	2	1.5	0.6	±1.5%	130/85	/	SOT23-5	Hic-cup SCP, Auto Discharge
SY20122A1ABC	2.5	5.5	2	1.5	0.6	±1.5%	130/85	50	SOT23-6	Power Good Indicator, Hic-cup Protection
SY20122IABC	2.5	5.5	2	1.5	0.6	±1.5%	130/85	50	SOT23-6	Power Good Indicator, Latch-off Protection
SY20122E1ABC	2.5	5.5	2	1.5	0.6	±1.5%	130/85	/	SOT23-6	Power Good Indicator, Hic-cup SCP, Output Auto Discharge
SY20162IABC	2.7	5.5	2	1.5	0.6	±1.5%	130/85	50	SOT23-6	Power Good Indicator
SY20114ARC	2.5	5.5	2	1.5	0.6	±1.5%	125/75	55	SOT563	Power Good Indicator, Hic-cup SCP, Auto-discharge
SY20114EARC	2.5	5.5	2	1.5	0.6	±1.5%	125/75	/	SOT563	Power Good Indicator, Hic-cup SCP, Forced PWM, Auto Discharge
SY20012ART	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
SY20013ART	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
SY20033ABT	2.5	5.5	3	1	0.6	±1.5%	85/60	55	SOT23-6	W/I PG, PFM, 100% Dropout Operation
SY20107ABC	2.5	5.5	3	1	0.6	±1.5%	85/60	55	SOT23-6	Power Good Indicator, Latch off Protection, Auto Discharge
SY20107AABC	2.5	5.5	3	1	0.6	±1.5%	85/60	55	SOT23-6	Power Good Indicator, Hic-cup SCP, Auto Discharge
SY20107EABC	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	$\pm 1.5\%$	85/60	55	DFN2 \times 2-8	Power Good Indicator, Auto-Recovery Protection, Output Auto Discharge
NEW SY80033LDFD	2.5	5.5	3	1	0.6	$\pm 1.5\%$	85/60	55	DFN2 \times 2-8	Power Good Indicator, Latch-off Protection, Output Auto Discharge
SY20117DFC	2.5	5.5	3	1	0.6	$\pm 1.5\%$	85/60	55	DFN2 \times 2-8	Power Good Indicator, Latch off Protection, Auto Discharge
SY20117ADFC	2.5	5.5	3	1	0.6	$\pm 1.5\%$	85/60	55	DFN2 \times 2-8	Power Good Indicator, Hic-cup SCP, Auto Discharge
SY20117EDFC	2.5	5.5	3	1	0.6	$\pm 1.5\%$	85/60	/	DFN2 \times 2-8	Power Good Indicator, Hic-cup SCP, Forced PWM, Auto Discharge
SY20113CDFC	2.7	5.5	3	3	0.6	$\pm 2\%$	100/80	55	DFN2 \times 2-8	Power Good Indicator
SY20112ARC	2.5	5.5	3	1.2	0.6	$\pm 1.5\%$	100/60	50	SOT563	Power Good Indicator, Output Auto Discharge
SY20112LARC	2.5	5.5	3	1.2	0.6	$\pm 1.5\%$	100/60	50	SOT563	Power Good Indicator, Latch-off Protection, Output Auto Discharge
SY20112EARC	2.5	5.5	3	1.2	0.6	$\pm 1.5\%$	100/60	/	SOT563	Power Good Indicator, Hic-cup SCP, Forced PWM, Output Auto Discharge
SY20115DBC	2.5	5.5	3	1	0.6	$\pm 1.5\%$	85/60	55	DFN3 \times 3-10	Power Good Indicator, Latch off Protection, Auto Discharge
NEW SY20033AAT	2.5	5.5	3	1	0.6	$\pm 1.5\%$	85/60	55	SOT23-5	Auto-Recovery Protection, Output Auto Discharge, MSL1
SY20124QWC	2.7	5.5	3	1.5	0.6	$\pm 1\%$	85/50	65	QFN1.5 \times 1.5-7	Power Good Indicator, Auto Discharge
SY20124LQWC	2.7	5.5	3	1.5	0.6	$\pm 1\%$	85/50	65	QFN1.5 \times 1.5-7	Power Good Indicator, Auto Discharge
SY20193QWC	2.7	5.5	3	1	0.6	$\pm 1\%$	85/50	55	QFN1.5 \times 1.5-7	Power Good Indicator, Light Load Mode Selection
SY20193LQWC	2.7	5.5	3	1	0.6	$\pm 1\%$	85/50	55	QFN1.5 \times 1.5-7	Power Good Indicator, Light Load Mode Selection
SY20053DQC	2.4	5.5	3	2.2	0.6	$\pm 1\%$	35/25	16	DFN1.5 \times 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	$\pm 1\%$	35/25	16	DFN1.5 \times 1.5-6	Power Good Indicator, Auto-Recovery Protection, Output Auto-Discharge, Support 0.5V Output for LPDDR5
SY26023DQD	2.5	5.5	3	2.2	0.6	$\pm 1\%$	38/30	21	DFN1.5 \times 1.5-6	Power Good Indicator, Hic-cup SCP/OVP/OTP, Auto Discharge
SY26023EDQD	2.5	5.5	3	2.2	0.6	$\pm 1\%$	38/30	/	DFN1.5 \times 1.5-6	Power Good Indicator, Hic-cup SCP, Auto-recovery OVP/OTP, Forced CCM, Output Auto Discharge
SY20054DQC	2.4	5.5	4	2.2	0.6	$\pm 1\%$	35/25	16	DFN1.5 \times 1.5-6	Power Good Indicator, Hic-cup SCP/OVP/OTP, Auto Discharge, PFM Mode
SY26024DQD	2.5	5.5	4	2.2	0.6	$\pm 1\%$	38/30	21	DFN1.5 \times 1.5-6	Power Good Indicator, Hic-cup SCP/OVP/OTP, Auto Discharge
SY20118ADFC	2.5	5.5	4	1	0.6	$\pm 1.5\%$	85/60	55	DFN2 \times 2-8	Power Good Indicator, Hic-cup SCP, Auto Discharge
SY20212BAIC	2.6	5.5	4	1.8	/	$\pm 1\%$	70/40	80	TSOT23-8	Programmable Output Voltage: 0.7625V to 1.55V in 12.5mV Steps; Default 1.15V Output Voltage
SY20212CAIC	2.6	5.5	4	1.8	/	$\pm 1\%$	70/40	80	TSOT23-8	Programmable Output Voltage: 0.7625V to 1.55V in 12.5mV Steps; Default 1.05V Output Voltage
SY20214QDC	2.5	5.5	4	1.25	0.6	$\pm 1.5\%$	75/55	18	QFN3 \times 3-16	Power Good Indicator
SY20217DQDC	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
SY20217FQDC	2.5	5.5	4	1	/	$\pm 1\%$	70/40	30	QFN3 \times 3-16	Power Good Indicator, VID control, Latch-off OVP/SCP/OTP, 4A Continuous, 7A Peak Load Current
SY20216DFC	2.7	5.5	4	3	0.6	$\pm 1.5\%$	35/15	60	DFN2 \times 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)									
SY20904SYC	2.5	6	4	2.4	0.6	±1.5% (-40~125°C)	25/17	23	DFN2×2-7	Auto Discharge, hic-cup SCP
SY20235QUC	2.5	5.5	5	2	0.6	±1.5%	55/35	18	QFN2×1.5-8	Power Good Indicator
SY20906SYC	2.5	6	6	1	0.6	±1.5% (-40~125°C)	22/12	23	DFN2×2-7	Auto Discharge, hic-cup SCP
SY20218DBC	2.7	5.5	6	1	0.6	±1.5%	50/40	150	DFN3×3-10	Power Good Indicator, EXT SS
SY20228DFC	2.75	6	6	1.2	0.6	±1.5%	35/15	60	DFN2×2-8	Power Good Indicator, OCP/UVLO/OTP Protections
SY20246DFC	2.7	6.5	6	1.2	0.6	±1.5%	38/15	60	DFN2×2-8	Power Good Indicator, OCP/UVLO/OTP
SY20257KPKC	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
SY20277QQC	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
SY20183LDEC*	2.5	5.5	0.6	2.25	0.6	±1.5%	300/200	50	DFN2×2-6	
SY20018AAC*	2.5	5.5	1	1.5	0.6	±2%	260/170	40	SOT23-5	
SY20018LACC*	2.5	5.5	1	1.5	0.6	±2%	260/170	40	TSOT23-5	
SY20041DEC*	2.5	5.5	1	1.5	0.6	±1.5%	200/150	50	DFN2×2-6	
SY20051ADQC*	2.5	5.5	1	1.5	0.6	±2%	230/150	40	DFN1.5×1.5-6	
SY20061ADEC*	2.5	5.5	1	1.5	0.6	±2%	260/170	60	DFN2×2-6	Auto Discharge
SY20075LABC*	2.5	5.5	1	1.5	0.6	±2%	250/200	90	SOT23-6	Power Good Indicator
SY20081AAC*	2.5	5.5	1	2	0.6	±2%	260/170	40	SOT23-5	
SY20122BDQC*	2.5	5.5	1.5	1.5	0.6	±2%	210/130	60	DFN1.5×1.5-6	
SY20183DEC*	2.5	5.5	1.5	2.25	0.6	±1.5%	200/150	50	DFN2×2-6	Ext Mode
SY20122EABC*	2.7	5.5	2	1	0.6	±2%	110/80	/	SOT23-6	Power Good Indicator, Force PWM
SY20133LDFC*	2.7	5.5	2	1	0.6	±2%	120/90	55	DFN2×2-8	Power Good Indicator
SY20159PABC*	2.7	6.5	2	1	0.6	±2%	125/95	55	SOT23-6	Power Good Indicator, Non-latch off OVP
SY20159AAC*	2.7	6.5	2	1	0.6	±2%	125/95	55	SOT23-5	3A Peak Load Current
SY20149AAAC*	2.7	5.5	2	1	0.6	±2%	110/80	55	SOT23-5	Non Latch off Protection
SY20149AAC*	2.7	5.5	2	1	0.6	±2%	110/80	55	SOT23-5	Latch off Protection
SY20162ABC*	2.7	5.5	2.5	1	0.6	±2%	100/80	80	SOT23-6	Power Good Indicator
SY20162EABC*	2.7	5.5	2.5	1	0.6	±2%	100/80	/	SOT23-6	Power Good Indicator, Force CCM
SY20113DFC*	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)								
SY20113EDFC*	2.7	5.5	3	1	0.6	$\pm 2\%$	110/80	-	DFN2 \times 2-8	Power Good Indicator, Force CCM
SY20113FDFC*	2.7	5.5	3	1	0.6	$\pm 1.5\%$	110/80	/	DFN2 \times 2-8	Power Good Indicator
SY20133GDFC*	2.7	5.5	3	1	0.6	$\pm 1.5\%$	110/80	55	DFN2 \times 2-8	Power Good Indicator, Latch SCP/OVP
SY20194AQDC*	2.7	5.5	3	1.25	0.6	$\pm 2\%$	75/55	18	DFN3 \times 3-16	Power Good Indicator
SY20207LQDC*	2.5	5.5	3	1.25	0.6	$\pm 2\%$	75/55	18	QFN3 \times 3-16	Power Good Indicator
SY20153QUC*	2.5	5.5	3.5	2	0.6	$\pm 1.5\%$	55/35	18	QFN2 \times 1.5-8	Power Good Indicator
SY20217QDC*	2.5	5.5	4	1	/	/	70/40	30	QFN3 \times 3-16	Power Good Indicator, VID control, Latch OVP/SCP/OTP
SY20217BQDC*	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)								
SY20313ADBC	2.5	5.5	1A x2	2	0.6	$\pm 2\%$	220/180	35	DFN3 \times 3-10	Individual EN
SY20311AIC	2.5	5.5	1A x2	1.5	0.6	$\pm 2\%$	260/180	45/55	TSOT23-8	Individual EN
SY20321AIC	2.5	5.5	2A x2	2	0.6	$\pm 2\%$	125/100	35/45	TSOT23-8	Individual EN
SY20334DCC	2.7	5.5	3A x2	1.5	0.6	$\pm 2\%$	105/85	80	DFN3 \times 3-12	Individual EN
SY20341SAC	2.5	5.5	1A/1.5A	2	0.6	$\pm 2\%$	125/100	45	DFN2 \times 1.5-8	Individual EN
SY20341BSAC	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)								
SY21081B1ABC	4.5	18	2	1.4	0.6	±1.5%	130/105	/	SOT23-6	Hic-cup SCP, FCCM
SY21081C1ABC	4.2	18	2	1.2	0.6	±1.5%	130/105	250	SOT23-6	Hic-cup SCP
SY21086ABT	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
SY21086EABT	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
<div>NEW</div> 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
SY21107ABT	4.5	18	2	0.5	0.6	±1%	130/105	200	SOT23-6	Hic-cup SCP, Auto-recovery OVP/OTP
<div>NEW</div> SY21107BABT	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
SY21107CABT	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}
SY21107EABT	4.5	18	2	0.5	0.6	±1%	130/105	/	SOT23-6	Hic-cup SCP, Auto-recovery OVP/OTP, Forced CCM
SY21108ABT	4.5	18	3	0.5	0.6	±1.5%	80/40	200	SOT23-6	Hic-cup SCP
SY21108EABT	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
SY21113DAIC	4.5	18	3	0.5	0.6	±1.5%	80/40	100	TSOT23-8	Power Good Indicator, Hic-cup SCP, EXT SS
SY21114EADC	4.2	18	3	0.6	0.6	±1.0%	80/40	/	TSOT23-6	Hic-cup SCP, Output auto discharge
SY21158ABT	4.5	18	3	0.5	0.6	±1.5%	80/40	200	SOT23-6	Hic-cup SCP
<div>NEW</div> SY21158EABT	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
<div>NEW</div> SY21158TABT	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
SY21108BABT	4.5	18	3	1.2	0.6	±1.5%	80/40	/	SOT23-6	Smooth Pre-bias Startup, FCCM, Stable with 10μF C _{OUT}
SY21108CABT	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}
SY21174IADC	4.2	18	4	0.5	0.6	±1.5%	55/36	200	TSOT23-6	Hic-cup SCP
SY21195IADC	4.5	18	5	0.5	0.6	±1.5%	41/27	250	TSOT23-6	
SY21197IADC	4.5	18	6	0.4	0.6	±1.0%	29/19	200	TSOT23-6	Output Auto Discharge, SCP
SY21164RRCC	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
SY21712VDC	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
<div>NEW</div> 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
SY21720VDC	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
SY21072IABC*	4.2	18	2	0.5	0.6	±1.5%	130/105	200	SOT23-6	Hic-cup SCP
SY21082ABC*	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
SY21072E1ABC*	4.5	18	2	0.5	0.6	±1.5%	130/105	/	SOT23-6	FCCM, Hic-cup SCP
SY21072B1ABC*	4.5	18	2	0.5	0.6	±2.0%	130/120	400	SOT23-6	
SY21081ABC*	4.5	18	2	1	0.6	±2.0%	170/160	400	SOT23-6	
SY21081BABC*	4.35	18	2	1.2	0.6	±2.0%	170/160	/	SOT23-6	1.2MHz, FCCM
SY21081CABC*	4.5	18	2	1.2	0.6	±2.0%	130/120	400	SOT23-6	
SY21081DEC*	4.5	18	2	1	0.6	±2.0%	170/160	400	DFN2×2-6	
SY21113BADC*	4.5	18	3	0.5	0.6	±1.5%	80/40	100	TSOT23-6	Hic-cup SCP
SY21113CADC*	4.5	18	3	1	0.6	±1.5%	80/40	100	TSOT23-6	Hic-cup SCP
SY21113GADC*	4.5	18	3	0.5	0.6	±1.5%	80/40	100	TSOT23-6	Hic-cup SCP, FCCM
SY21113IADC*	4.2	18	3	0.5	0.6	±1.5%	80/40	200	TSOT23-6	Hic-cup SCP
SY21114ADC*	4.2	18	3	0.5	0.6	±1.0%	80/40	250	TSOT23-6	Hic-cup SCP, Output auto discharge
SY21174AADC*	4.5	18	4	0.5	0.6	±1.5%	50/30	100	TSOT23-6	Instant PWM architecture
SY21174ADC*	4.5	18	4	0.5	0.6	±1.5%	50/30	100	TSOT23-6	
SY21195AADC*	4.5	18	5	0.5	0.6	±1.5%	40/20	100	TSOT23-6	Instant PWM architecture
SY21195ADC*	4.5	18	5	0.5	0.6	±1.5%	50/30	100	TSOT23-6	
SY21262QCC*	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
SY21087FAC	4.5	23	2	0.5	0.6	±1.5%	150/110	400	SO8	EXT SS, Hic-cup SCP
SY21147FCC	4.5	23	3	0.5	0.6	±1.5%	130/90	400	SO8E	EXT SS
SY21143ADC	4.5	23	3	0.5	0.6	±1.5%	105/50	100	TSOT23-6	Hic-cup SCP
SY21143AIC	4.5	23	3	0.5	0.6	±1.5%	105/50	100	TSOT23-8	Power Good Indicator, EXT SS, Hic-cup SCP
SY21043ABT	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
SY21144RAC	4	23	4	0.6	0.6	±1.0%	85/35	130	QFN3×3-20	Power Good Indicator, Output Discharge, SCP/OVP, UVLO
SY21145RAC	4	23	4	0.5	0.6	±1.0%	85/35	121	QFN3×3-20	Power Good Indicator, Output Discharge, SCP/OVP, UVLO
SY21145BRAC	4	23	4	0.6	Fixed 3.338	±1.0%	85/35	80	QFN3×3-20	Power Good Indicator, Output Discharge, SCP/OVP, UVLO
SY21145CRAC	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
SY21138BRHC	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
SY21138CRHC	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
SY21243ARHC	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
SY21243RHC	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
SY21243BRHC	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
SY21286ARHC	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
SY21243B3RHC	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
SY21243C3RHC	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
SY21288CRHC	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
SY21243D3RHC	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
SY21288ARHC	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
SY21240RAC	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
SY21240DRAC	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
SY21246BTMC	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
SY21249C1TMC	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
SY21249TMC	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
SY21249FTMC	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
SY21092DBC*	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
SY21123ADBC*	4.5	23	3	1	0.6	$\pm 1.5\%$	120/85	400	DFN3 \times 3-10	Power Good Indicator, EXT SS
SY21133DBC*	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
SY21236RAC*	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
SY21236ARAC*	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
SY21236BRAC*	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
SY21236CRAC*	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
SY21138ARHC*	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
SY21138RHC	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
SY21248ARAC*	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
SY21248BRAC*	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
SY21248CRAC*	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
SY21248RAC*	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
SY21247TMC*	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} 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
SY21041ABC	4.5	27	1	0.5	0.6	$\pm 2.0\%$	350/150	400	SOT23-6	
SY21041CABC	4.5	27	1	1.15	0.6	$\pm 2.0\%$	350/150	400	SOT23-6	Force CCM
SY21042ADC	4.5	28	1.7	0.5	0.6	$\pm 2.0\%$	350/150	400	TSOT23-6	Cycle-by-cycle Valley Current Limitation
SY21213ABT	4.5	30	2	0.6	0.6	$\pm 1\%$	150/115	250	SOT23-6	Hic-cup SCP, Auto-recovery OVP/OTP
SY21452ABT	4.5	30	2	0.6	0.6	$\pm 1\%$	150/115	250	SOT23-6	Hic-cup SCP, Auto-recovery OVP/OTP
SY21154AIC	4.5	30	3	0.5~2.5	0.6	$\pm 1.5\%$	110/70	19	TSOT23-8	Hic-cup SCP
SY21211DNC	4.5	30	5	0.5	0.6	$\pm 1.5\%$	70/40	200	DFN3 \times 4-12	Power Good Indicator, EXT SS
SY21211FCC	4.5	30	5	0.5	0.6	$\pm 1.5\%$	70/40	200	SO8E	EXT SS
SY21215QNC	4	28	6	0.8	0.6	$\pm 1.5\%$	40/20	100	QFN3 \times 3-10	Power Good Indicator, Latch-off SCP/OVP, 12A Peak Current Capability, Programmable peak current limit
SY21226AQQC	4	28	6	0.8	0.6	$\pm 1.5\%$	40/20	100	QFN3 \times 3-12	Power Good Indicator, Hic-cup SCP/OVP, 12A Peak current capability, programmable peak current limit
SY21215HQQC	4	28	6	0.8	0.6	$\pm 1.5\%$	40/20	100	QFN3 \times 3-12	Power Good Indicator, Hic-cup SCP, 12A Peak current capability, programmable peak current limit
SY21215KQQC	4	28	6	0.5	0.6	$\pm 1.5\%$	40/20	100	QFN3 \times 3-12	Power Good Indicator, Hic-cup SCP, 12A peak current capability, programmable peak current limit
SY21286RHC	4.5	24	6	0.5	0.6	$\pm 1\%$	28/16	190	QFN2.5 \times 2.5-16	Power Good Indicator, Latch-off SCP/OVP/OTP, Selectable P, Programmable Current Limit
SY21286BRHC	4.5	24	6	0.6	Fixed 3.338	$\pm 1.0\%$	28/16	100	QFN2.5 \times 2.5-16	Fixed 3.338V output, with 100mA 3.3V LDO, PFM/USM, latch off UVP/OVP/OTP
SY21228AQQC	4	28	8	0.8	0.6	$\pm 1.0\%$	20/10	100	QFN3 \times 3-12	Power Good Indicator, Hic-cup SCP, 16A Peak current capability, programmable output current limit
SY21228LQQC	4.5	28	8	0.5	0.6	$\pm 1.0\%$	20/10	100	QFN3 \times 3-12	Power Good Indicator, OVP
SY21288BRHC	4	24	8	0.6	Fixed 3.338	$\pm 1.0\%$	20/10	80	QFN2.5 \times 2.5-16	Fixed 3.338V output, with 100mA 3.3V LDO, PFM/USM, latch off UVP/OVP/OTP
SY21232WYQ	4.5	30	8	0.5	0.6	$\pm 1.5\%$ full temperature	20/10	120	QFN2 \times 3-14	On Time Stretch, Selectable PFM/FCCM, BYP Input, Current Limit Programmable, Output Discharge, Power Good Indicator, Auto-Recovery Protection
SY21288RHC	4	24	8	0.5	0.6	$\pm 1.0\%$	20/10	140	QFN2.5 \times 2.5-16	Selectable PFM/USM, BYP Input, Current Limit Programmable, Output Discharge, Power Good Indicator, Latch-off Protection
SY21152FCC*	4.5	30	3	0.5	0.6	$\pm 1.5\%$	80/50	200	SO8E	Power Good Indicator, EXT SS
SY21241AQVC*	4	28	10	0.6	0.6	$\pm 1.5\%$	25/8	300	QFN4 \times 3-19	Power Good Indicator, Memory power, 10A VDDQ/2A VTT LDO, 16A Peak Current capability, Latch off UVP/OVP, Over temperature alert
SY21241DQVC*	4	28	10	0.6	0.6	$\pm 1.5\%$	25/8	300	QFN4 \times 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 ≤ VIN Max ≤40V

Part Number	VIN		IOUT (Max) (A)	f _{SW} (MHz)	V _{OUT} (Min) (V)	Voltage Accuracy	MOSFET (Ron H/L) (mΩ)	Quiescent Current (μA)	Package	Feature/ Special Function
SY21019ABC	5	40	0.3	2	0.6	±2.0%	2000/-	160	SOT23-6	
SY21036ABC	4.5	40	1	2	0.8	±1.0%	380/180	18	SOT23-6	Hic-cup SCP
SY21061ABC	5	40	1.2	0.8	0.6	±2.0%	180/-	160	SOT23-6	
SY21061FABC	9	36	1.2	0.3	0.81	±2.0%	180/-	160	SOT23-6	
SY21102ABC	5	40	2	0.8	0.6	±2.0%	180/-	160	SOT23-6	
SY21163FCC	5	40	3	0.8	0.6	±2.0%	180/-	160	SO8E	
SY21153AAIC	4.5	40	3	0.5~2.5	0.6	±1.5%	110/70	18	TSOT23-8	
SY21245RBC	4	40	8	0.35/ 0.5	0.6	±1.0%	25/12	60	QFN3.5×3.5-20	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 $\geq 50V$

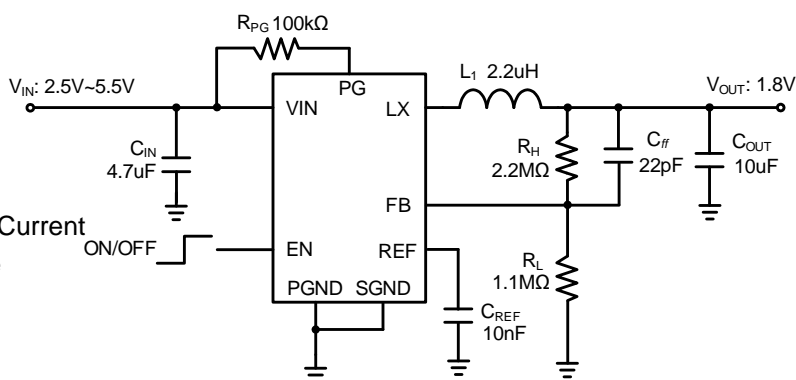
Part Number	V_{IN}		I_{OUT} (Max) (A)	f_{SW} (MHz)	V_{OUT} (Min) (V)	Voltage Accuracy	MOSFET (Ron H/L) (m Ω)	Quiescent Current (μA)	Package	Feature/ Special Function
Min (V)	Max (V)									
SY21031ABC	4.5	50	0.8	1.2	0.6	$\pm 1.0\%$	700/-	150	SOT23-6	
SY21142FCC	4.5	60	2	0.1~1	0.8	$\pm 1.0\%$	175/-	100	SO8E	Power Good Indicator, Hic-cup SCP, Adjustable Switching Frequency
SY21173FCC	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
SY21189FCP	4.5	60	5	0.5	0.8	$\pm 2.0\%$	95/-	152	SO8E	Adjustable Switching Frequency range: 100kHz~2500kHz
SY21052AFCC	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
SY21052FCC	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
SY21034ADC	4.5	100	0.6	0.2	0.6	$\pm 1.0\%$	1000/-	100	TSOT23-6	Hic-cup SCP
SY21035FCC	7	100	0.6	0.2~0.6	1.225	$\pm 2.0\%$	500/285	/	SO8E	Programmable Switching Frequency
SY21051FCC	7	100	1	0.2~1	1.2	$\pm 2.0\%$	500/240	400	SO8E	Programmable Switching Frequency
SY21053FCC	7	100	1	0.2~0.6	1.225	$\pm 2.0\%$	500/240	/	SO8E	Programmable Switching Frequency
SY21034BADC	4.5	100	1.2	0.2	0.6	$\pm 1.0\%$	1000/-	100	TSOT23-6	Hic-cup SCP
SY21252FCC	4.5	100	2	0.1~1	0.8	$\pm 1.0\%$	175/-	100	SO8E	Power Good Indicator, Hic-cup SCP, Adjustable Switching Frequency
SY21253FCC	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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SY20208ADFC - 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



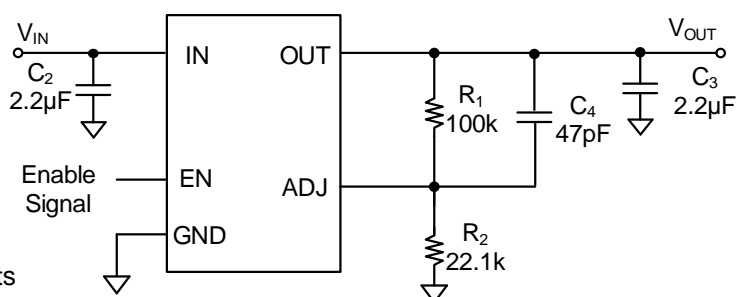
Applications

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

SY20011DFC - 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



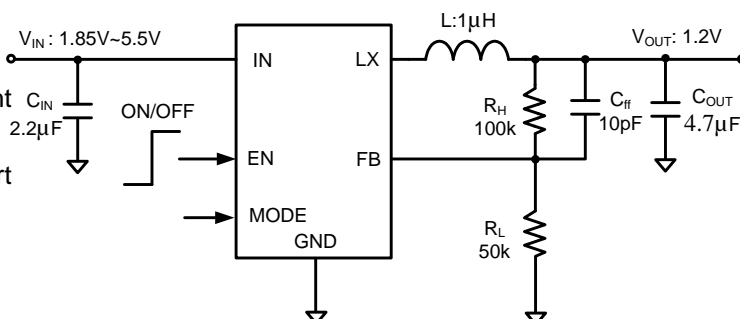
Applications

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

SY20213BDTC - 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



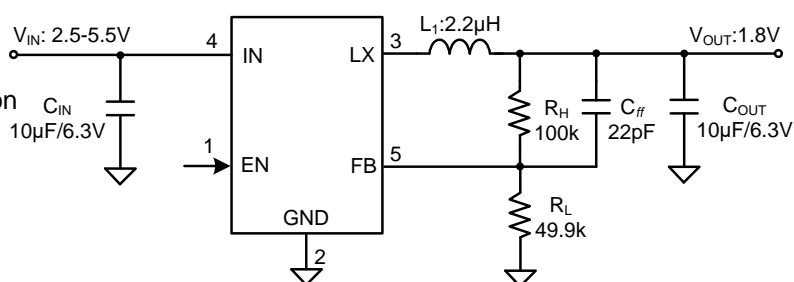
Applications

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

SY20018IAAC - 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

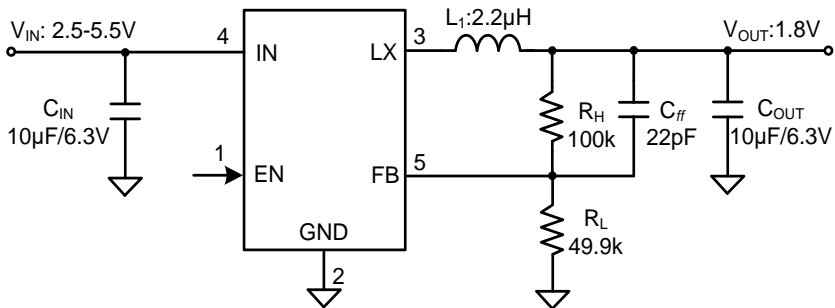
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Features

- 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



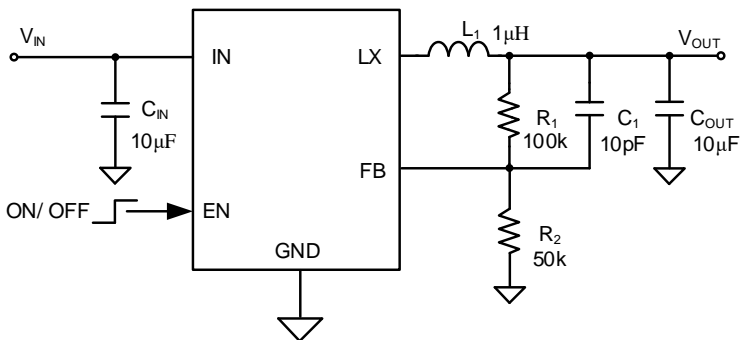
SY20108AAC - High Efficiency 3MHz, 1A Synchronous Step Down Regulator

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

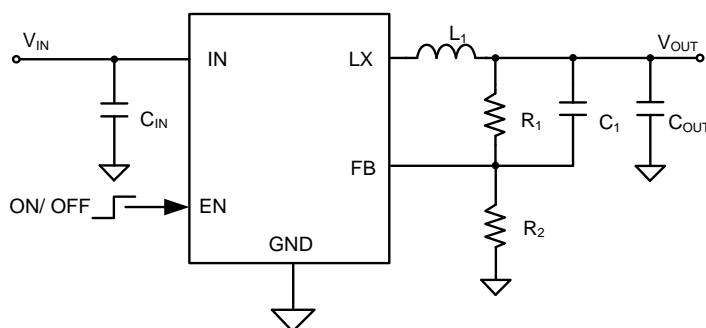
- Portable Navigation Device
- Set Top Box
- USB Dongle
- General DescriptionMedia Player
- Smart phone



SY20097AAC - 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



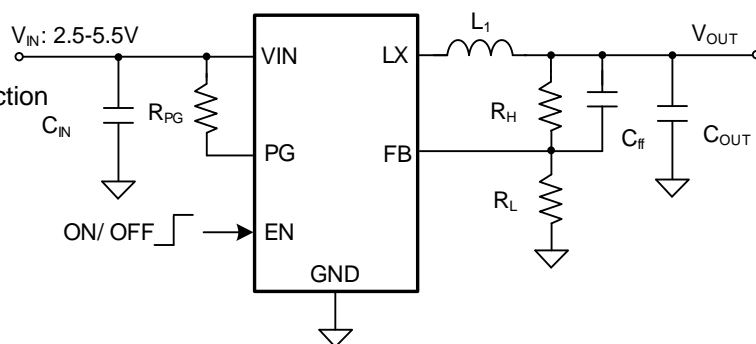
Applications

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

SY20019ARC - 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

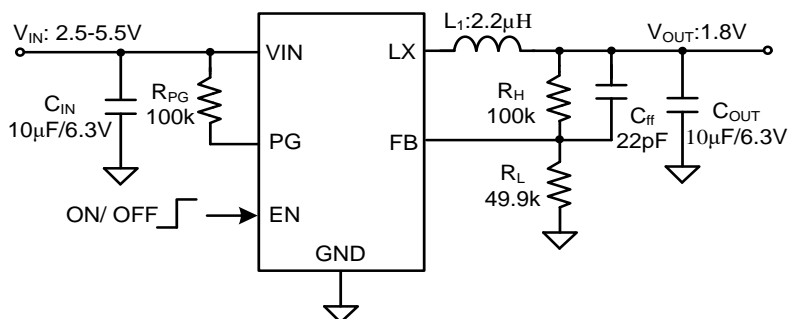
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Features

- 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

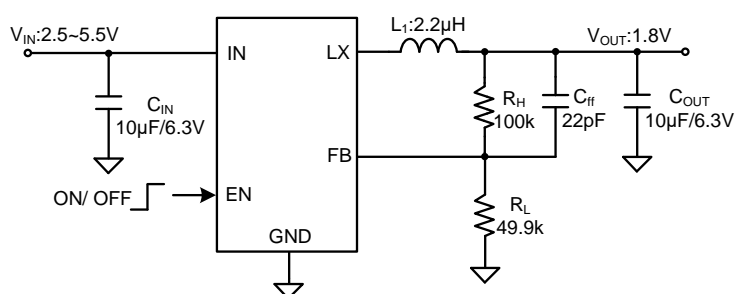
- Set Top Box
- USB Dongle
- Media Player
- Smart Phone



SY20061IDEC - High Efficiency, 1.5MHz, 1A 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) 220mΩ /130mΩ
- 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



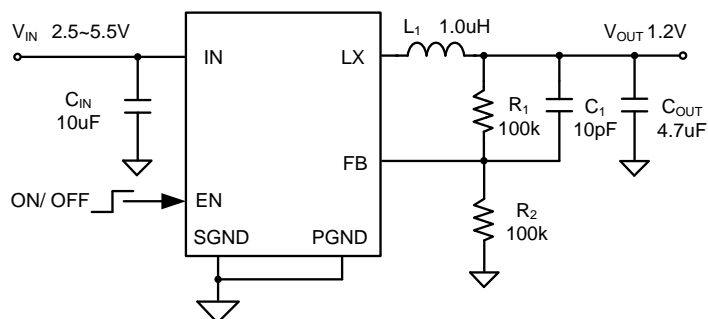
Applications

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

SY20111DQC - High Efficiency 2.5MHz, 1A Synchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for internal switches (top/bottom) 230mΩ/150mΩ
- 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

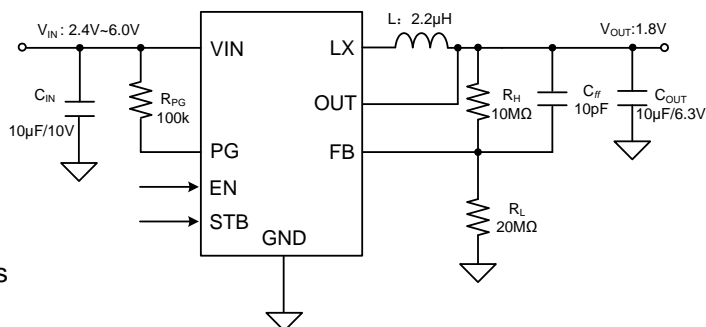
- Portable Navigation Device
- Set Top Box
- USB Dongle
- Media Player
- Smart phone

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SY20109BDFD - 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

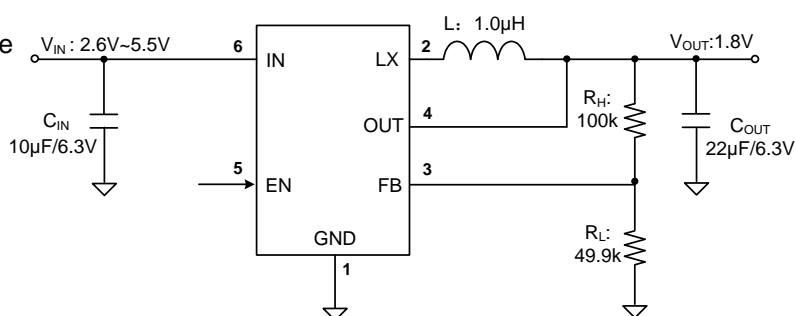
SY20121ARC - High Efficiency 2.0MHz, 1.5A Synchronous Step Down Regulator

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



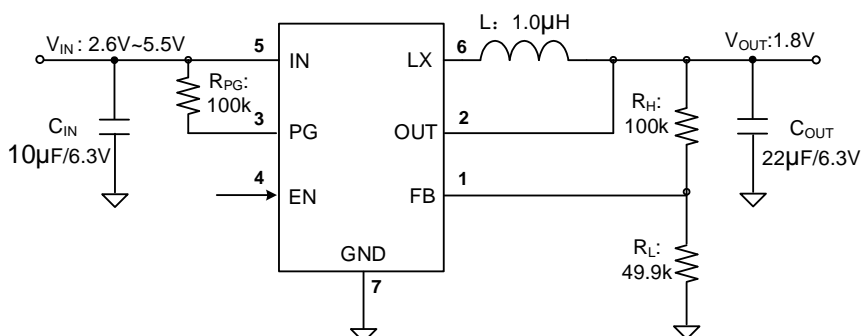
SY20123QWC - High Efficiency 2.0MHz, 1.5A Synchronous Step Down Regulator

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



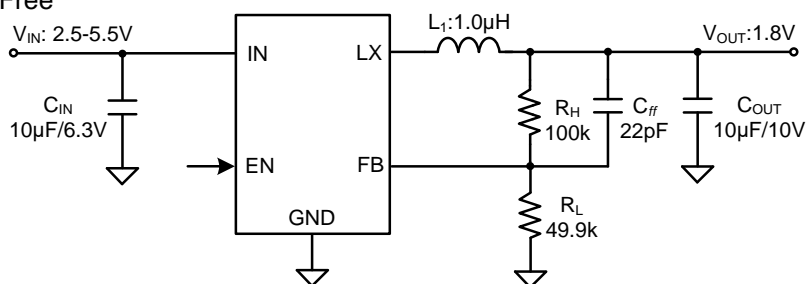
SY20149A1AAC - High Efficiency, 1.5MHz, 2A Synchronous Step Down Regulator

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

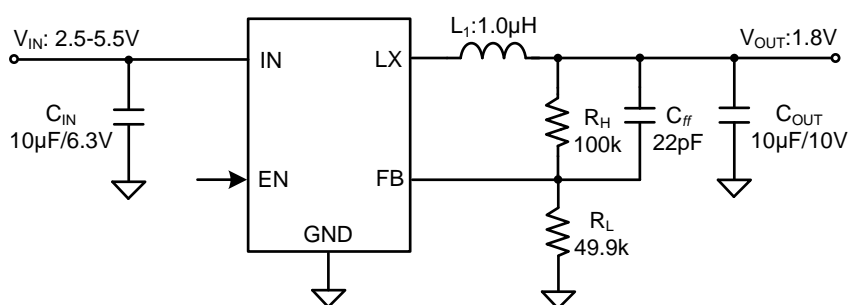
- Set Top Box
- USB Dongle
- Media Player
- Smart Phone


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SY20149IAAC - 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
- 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



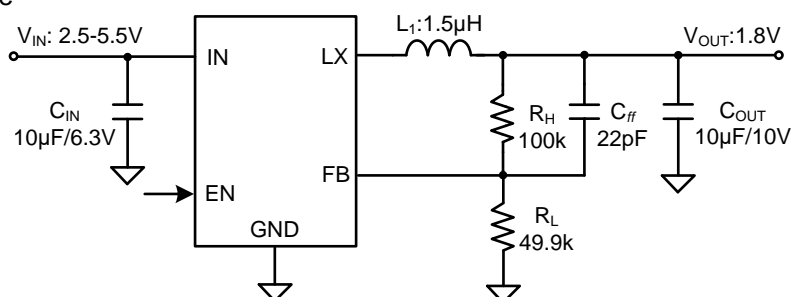
Applications

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

SY20149E1AAC - 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
- Output Auto Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package: SOT23-5



Applications

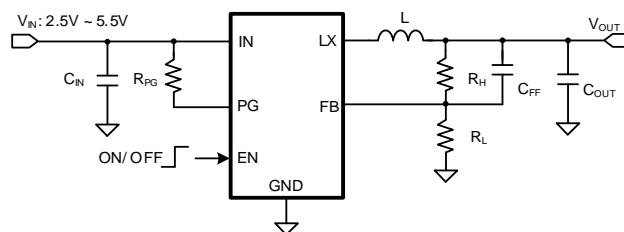
- Set Top Box
- USB Dongle
- Media Player
- Smart phone

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SY20122A1ABC - 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



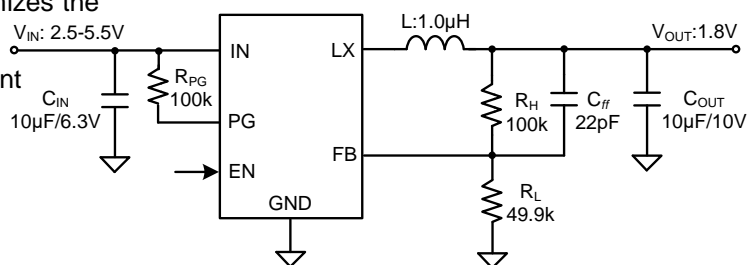
Applications

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

SY20122IABC - 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

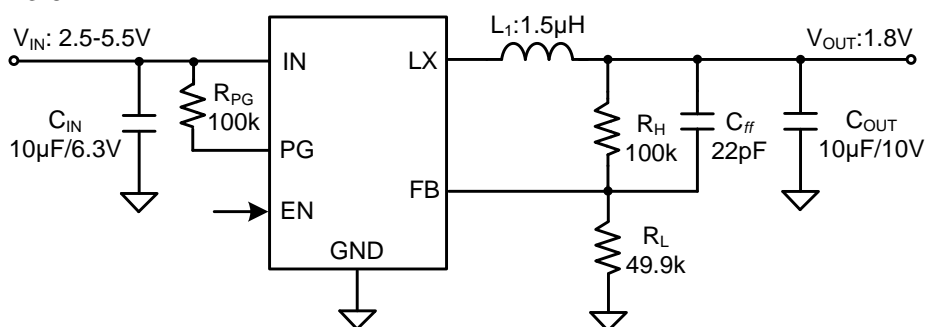
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Features

- 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



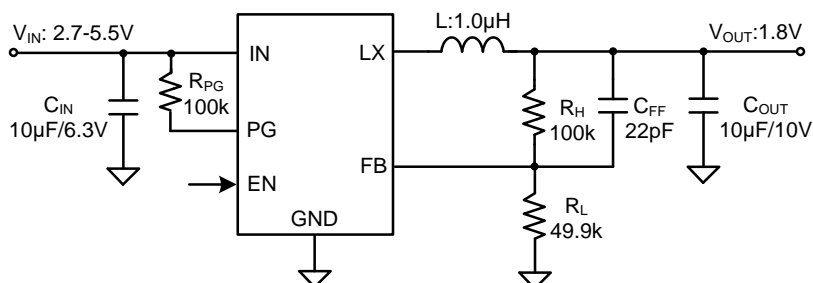
SY20162IABC - High Efficiency, 1.5MHz, 2A Synchronous Step Down Regulator

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

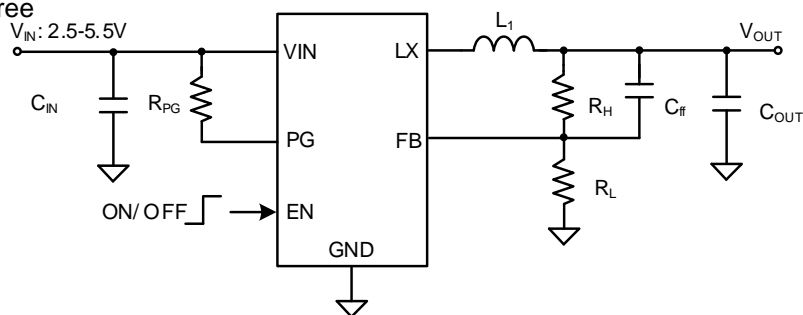


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SY20114ARC - High-Efficiency, 1.5MHz 2A Synchronous Step-Down Regulator

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



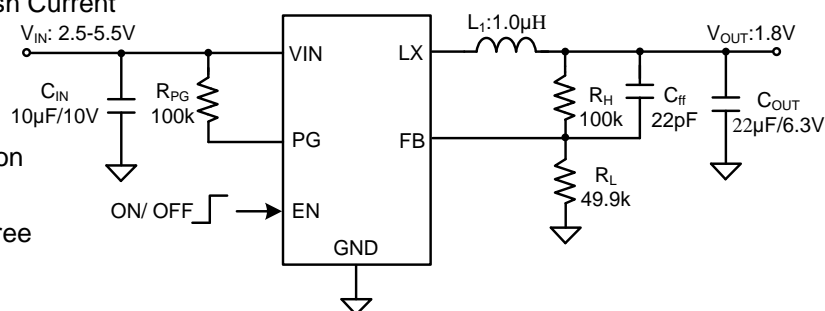
Applications

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

SY20114EARC - 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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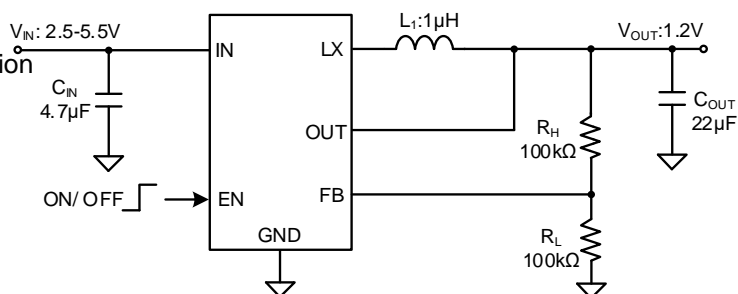
SY20012ART - 21μA Ultra Low IQ, 1.5MHz, 2A Synchronous Step Down Regulator

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



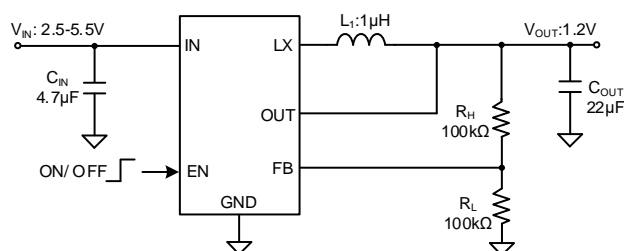
SY20013ART - 21μA Ultra Low IQ, 1.5MHz, 3A Synchronous Step Down Regulator

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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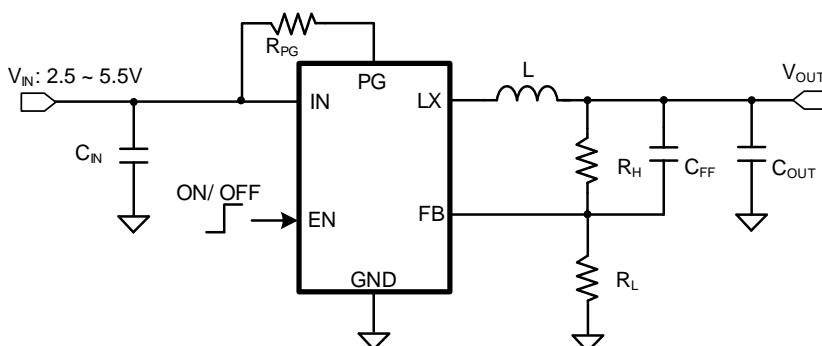
SY20033ABT - High Efficiency, 1MHz, 3A, 5.5V Input Synchronous Buck Converter

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 85m Ω Top, 60m Ω 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 SY20033ABT
- 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



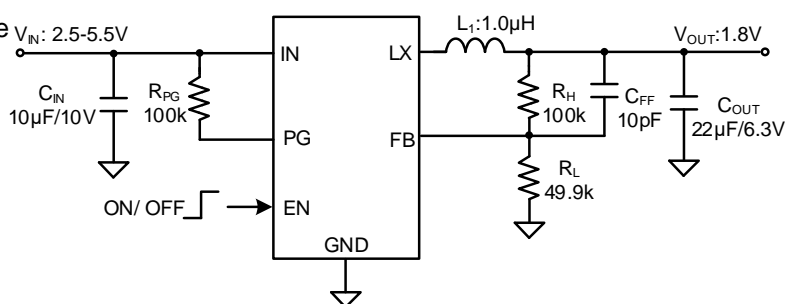
SY20107ABC - High Efficiency, 1MHz, 3A Synchronous Step Down Regulator

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



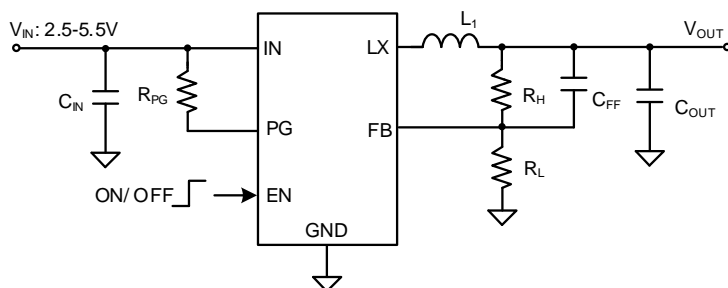
SY20107AABC - High-Efficiency, 1MHz, 3A Synchronous Step-Down Regulator

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

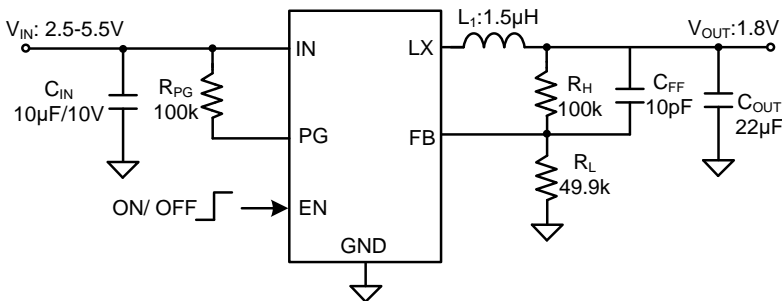

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Features

- 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



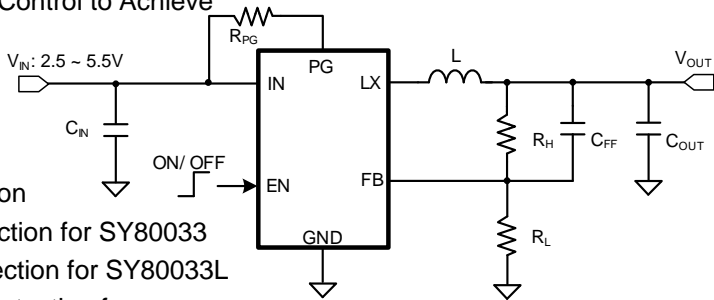
SY80033DFD/SY80033LDFD - High Efficiency, 1MHz, 3A, 5.5V Input Synchronous Buck Converter

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



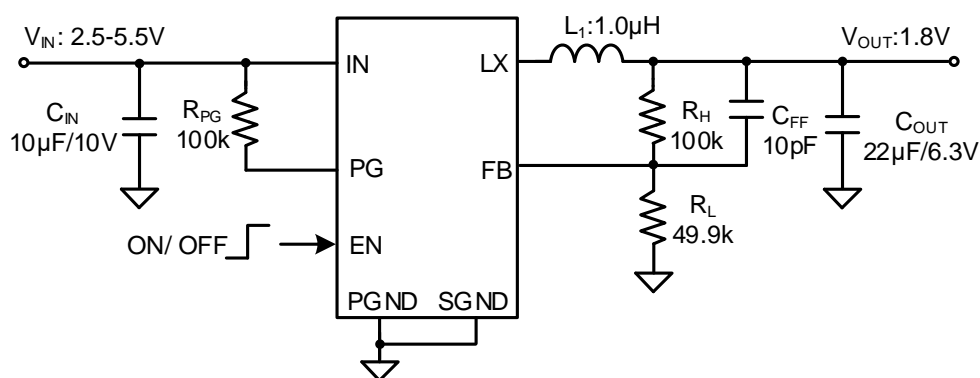
SY20117DFC - High Efficiency, 1MHz, 3A Synchronous Step Down Regulator

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

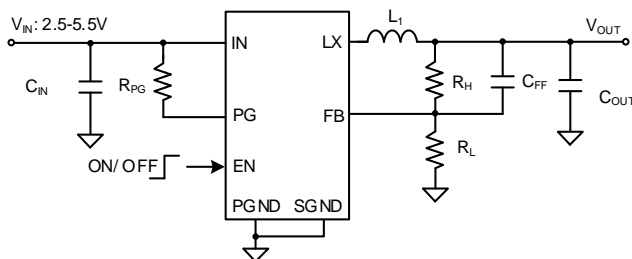
- Set Top Box
- USB Dongle
- Media Player
- Smart Phone



SY20117ADFC - 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

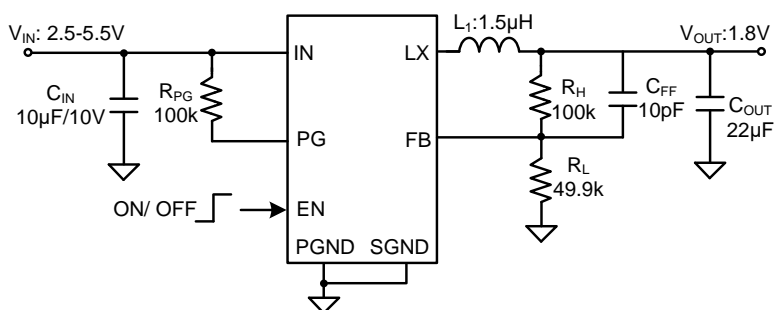
SY20117EDFC - High Efficiency, 1MHz, 3A Synchronous Step Down Regulator

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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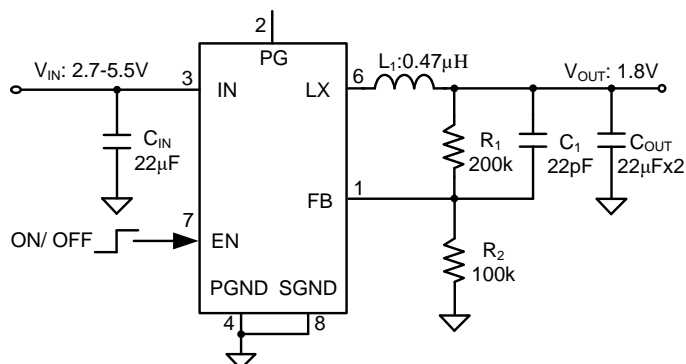
SY20113CDFC - High Efficiency 5.5V, 3A Continuous, 3MHz Synchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal Switches
- (Top/Bottom): 110mΩ/80mΩ
- 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

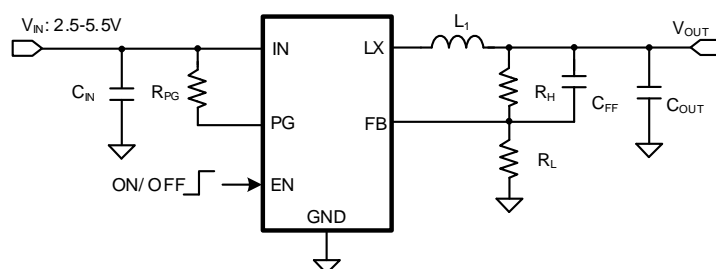
- LCD TV
- Set Top Box
- Net PC
- Mini-Notebook PC
- Access Point Router



SY20112ARC - 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: 100mΩ Top, 60mΩ 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

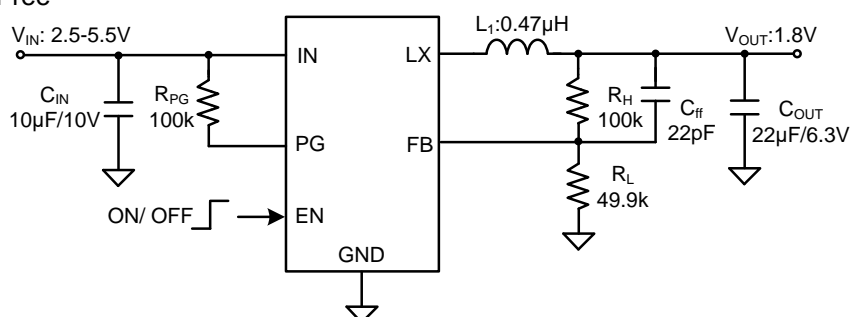
- Set-Top Box
- USB Dongle
- Media Player
- Smartphone

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SY20112LARC - 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



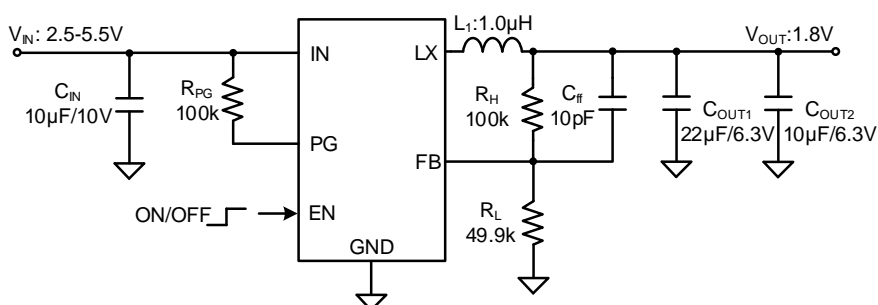
Applications

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

SY20112EARC - 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

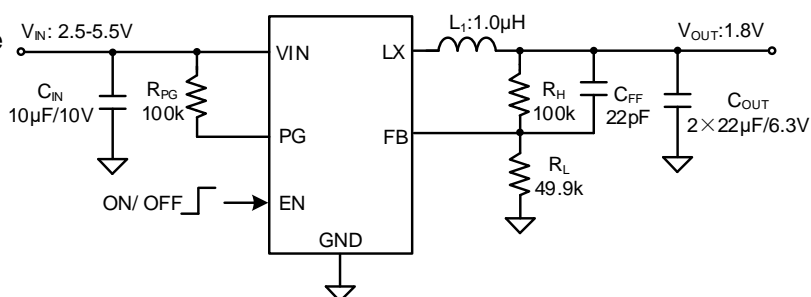
- Set Top Box
- USB Dongle
- Media Player
- Smart phone

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SY20115DBC - 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

SY20033AAT - High Efficiency, 1MHz, 3A, 5.5V Input Synchronous Buck Converter

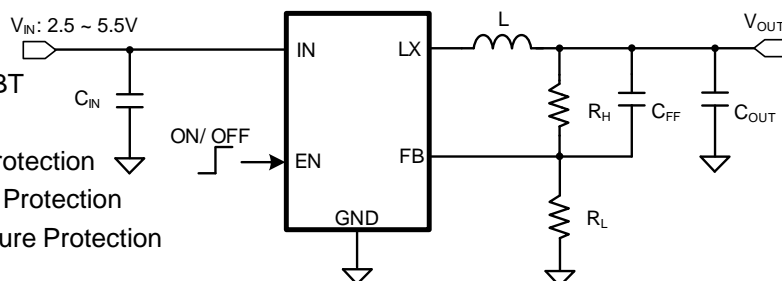
Features

- 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 SY20033ABT
- 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



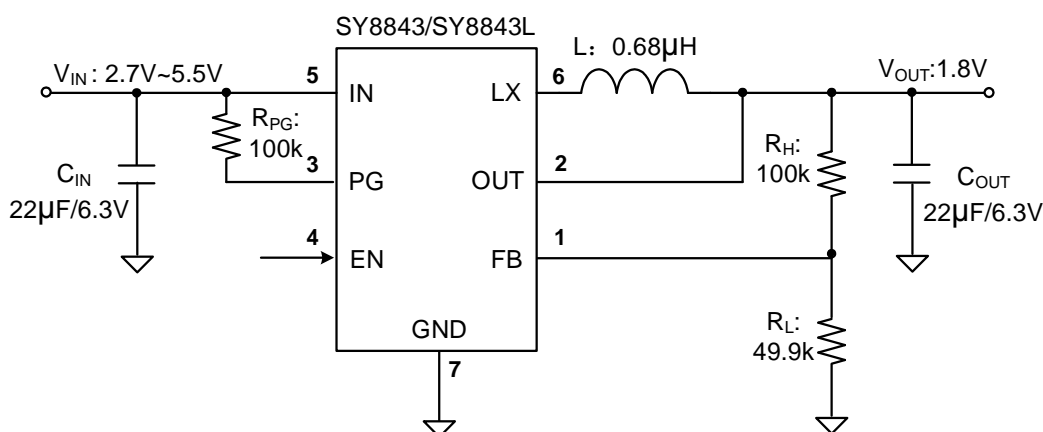
SY20124QWC/SY20124LQWC - High Efficiency 1.5MHz, 3A Ultra Fast Dynamic Response Synchronous Step Down Regulator

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
 - SY20124: Hic-cup Mode Protection
 - SY20124L: Latch Off Protection
- Reliable OVP and OTP Protection
 - SY20124: No Latch Off Protection
 - SY20124L: 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



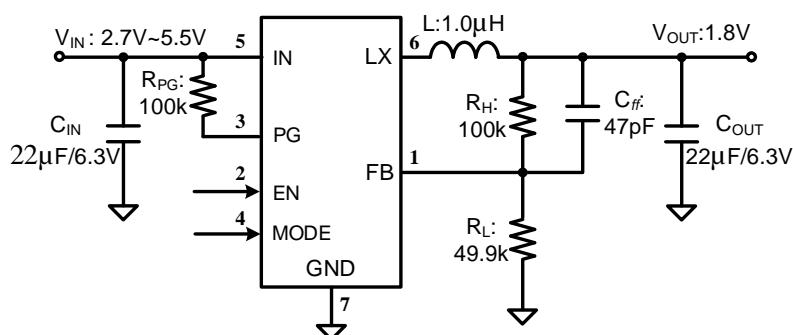
SY20193QWC - High Efficiency 1.0MHz, 3A Synchronous Step Down Regulator

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



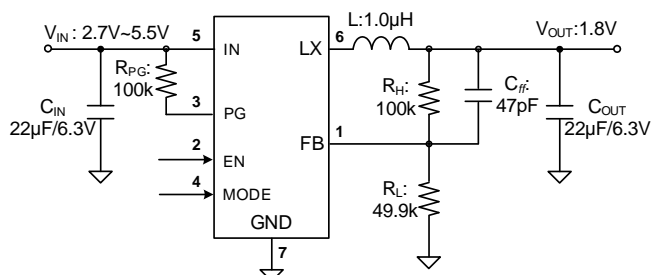
SY20193LQWC - High Efficiency 1.0MHz, 3A Synchronous Step Down Regulator

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

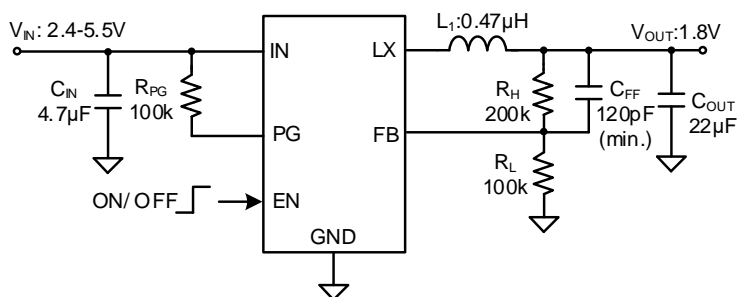
- Smart Phone
- LCD TV
- Set Top Box
- Mini-Notebook PC
- Access Point Router


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SY20053DQC - 16μA 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): 35mΩ / 25mΩ
- 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
- 16μA 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

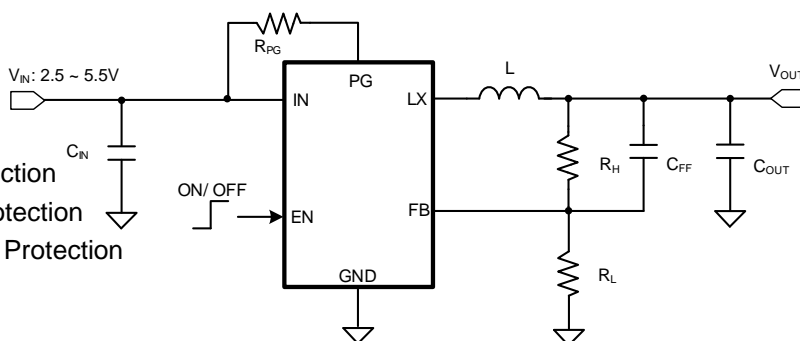
- Portable Electronics
- Industrial PC
- Smart Phone

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

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 35mΩ Top, 25mΩ 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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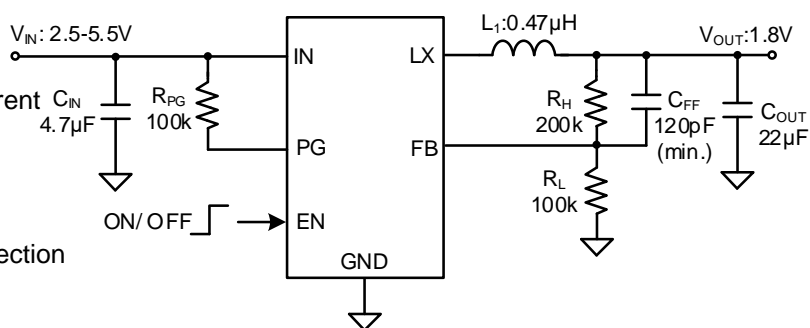
SY26023DQD - 21 μ A Ultra Low IQ, 2.2MHz Synchronous Step Down Regulator

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



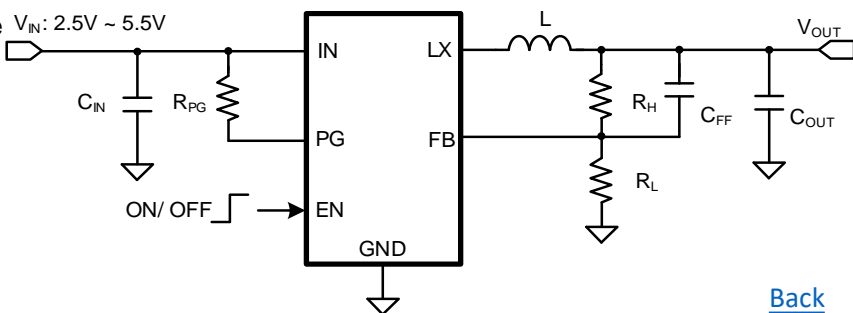
SY26023EDQD - 21 μ A Ultra Low IQ, 2.2MHz Synchronous Step Down Regulator

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

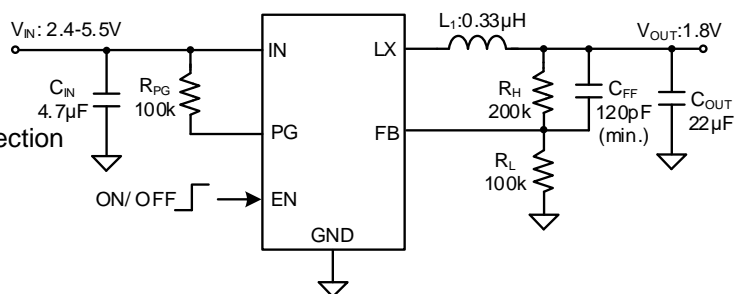
- Portable Electronics
- Industrial PC
- Smart Phone


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SY20054DQC - 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



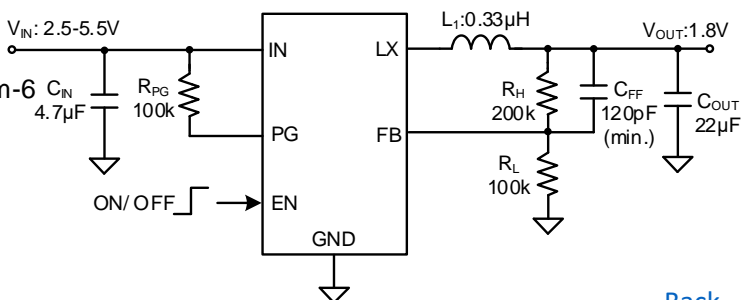
Applications

- Portable Electronics
- Industrial PC
- Smart Phone

SY26024DQD - 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

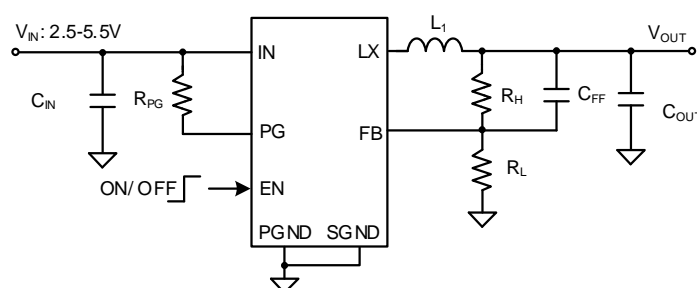
- Portable Electronics
- Industrial PC
- Smart Phone

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SY20118ADFC - 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

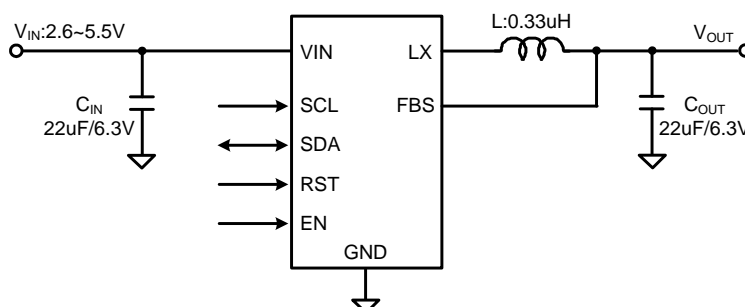
SY2012BAIC - 4A, 1.8MHz, I2C Programmable Synchronous Step Down Regulator

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



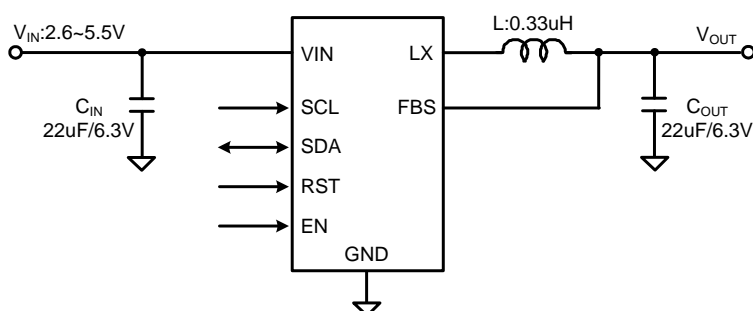
SY20212CAIC - 4A, 1.8MHz, I2C Programmable Synchronous Step Down Regulator

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



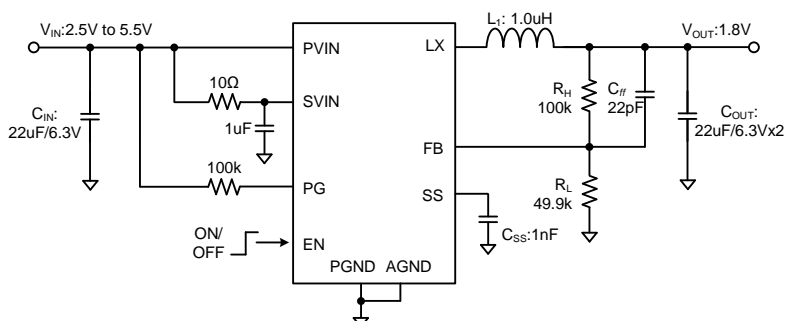
SY20214QDC - Ultra Low Quiescent Current 1.25MHz, 4A Sync Buck

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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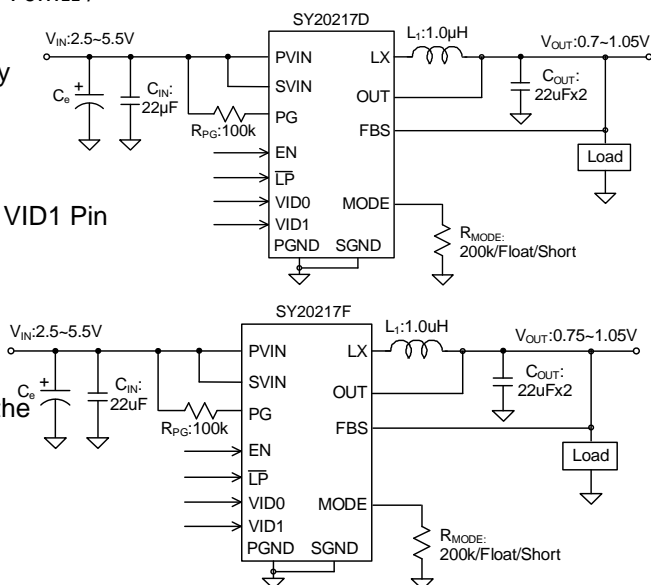
SY20217D/FQDC - High Efficiency Buck with Low Power Mode & Output Voltage Selection

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



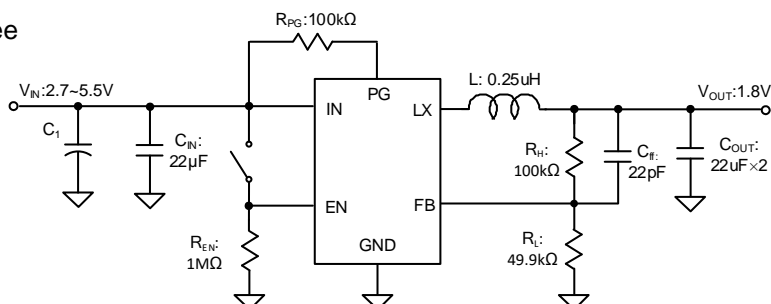
SY20216DFC - 3MHz, 4A Sync Buck

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 $< 0.1\mu A$ 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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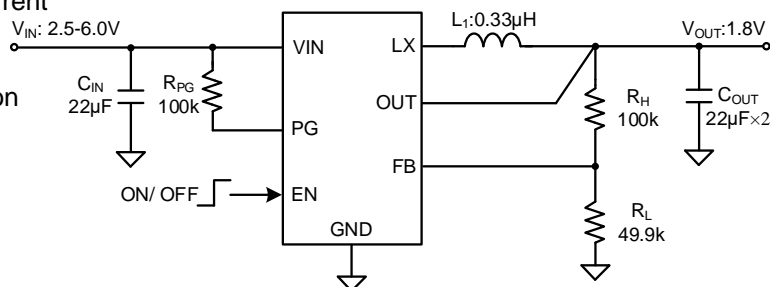
SY20904SYC -2.4MHz, 4A Sync Buck

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



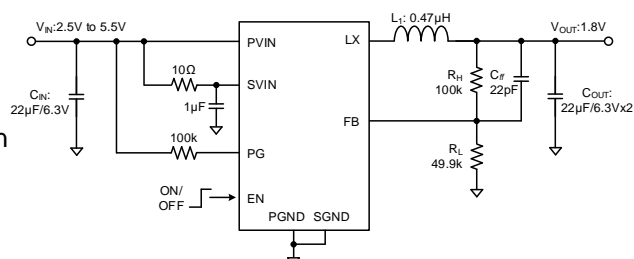
SY20235QUC - Ultra Low Quiescent Current 2.0MHz, 5A Sync Buck

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


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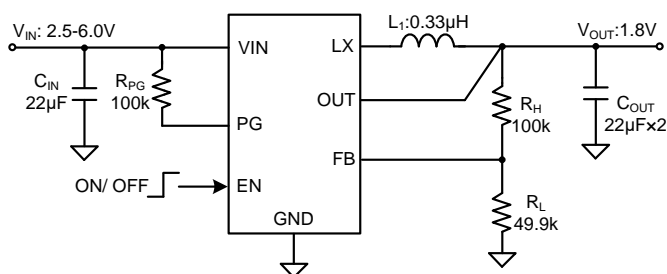
SY20906SYC - 1MHz, 6A Sync Buck

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



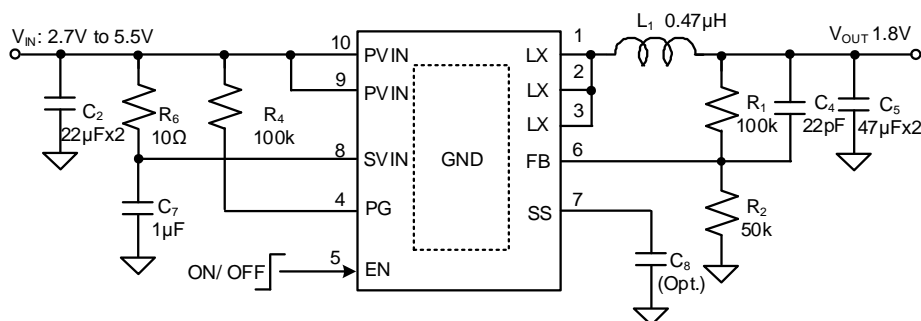
SY20218DBC - 1MHz, 5.5V/6A Sync Buck

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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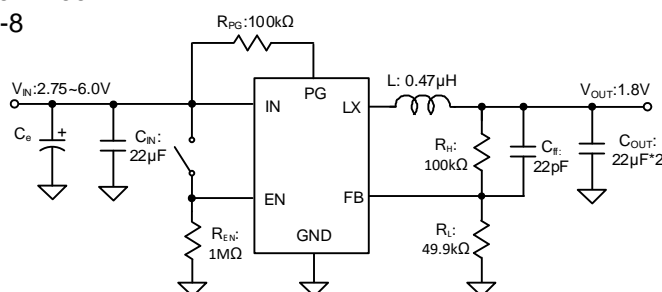
SY20228DFC -1.2MHz, 6A /6.5V Sync Buck

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



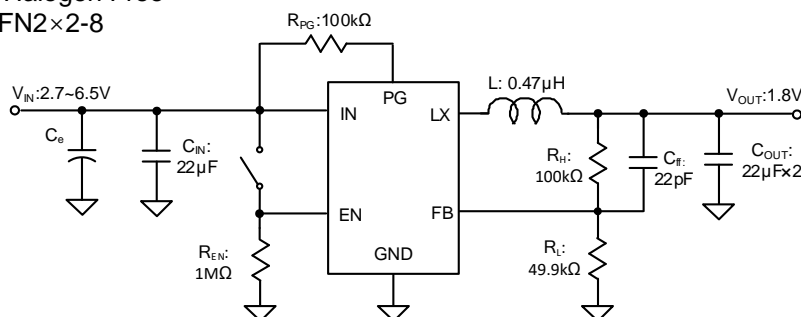
SY20246DFC - 6.5V, 6A, 1.2MHz Synchronous Step Down Regulator

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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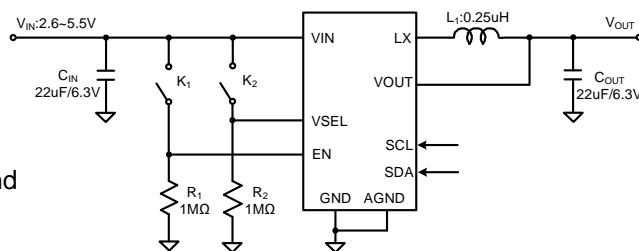
SY20257KPKC -12A, 1.5MHz, I2C Programmable, with VOUT Remote Sense Sync Buck

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



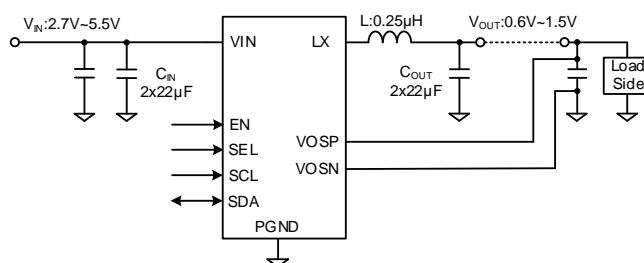
SY20277QQC - 12A, 1.5MHz, I2C Programmable, with VOUT Remote Sense Synchronous Step Down Regulator

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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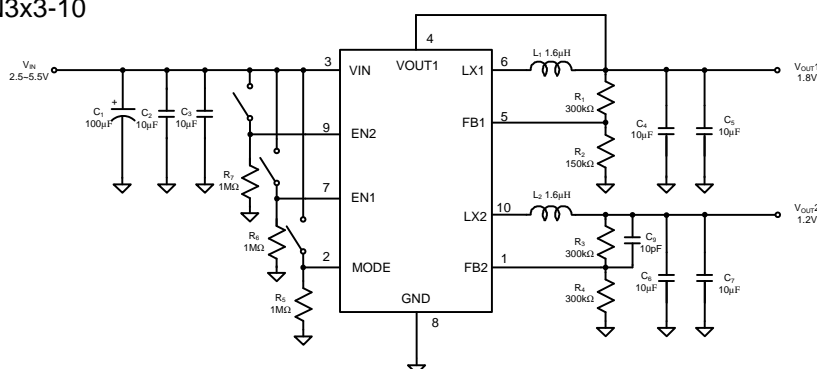
SY20313ADBC - 5.5V, Dual 1A, 2MHz Sync Buck

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



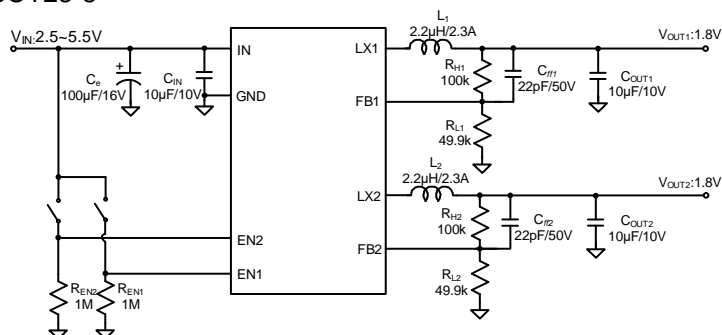
SY20311AIC - Dual 1A, 1.5MHz Sync Buck

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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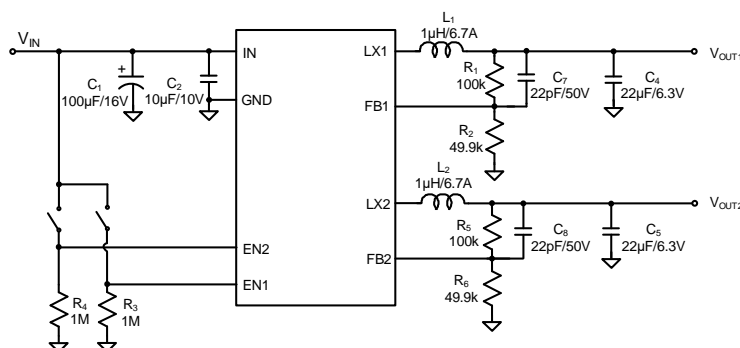
SY20321AIC - Dual 2A, 2MHz Sync Buck

Features

- 2.5V to 5.5V Input Voltage
- 2MHz Switching Frequency
- 180° Out of Phase Operation
- Output Current: 2A per Channel
- Low Quiescent Current: <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: TSOT23-8

Applications

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



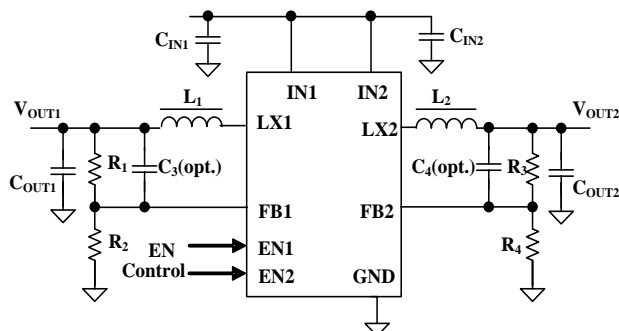
SY20334DCC - Dual 3A, 1.5MHz Sync Buck

Features

- Low $R_{DS(ON)}$ for internal switches (top/bottom): 105/85m Ω
- 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



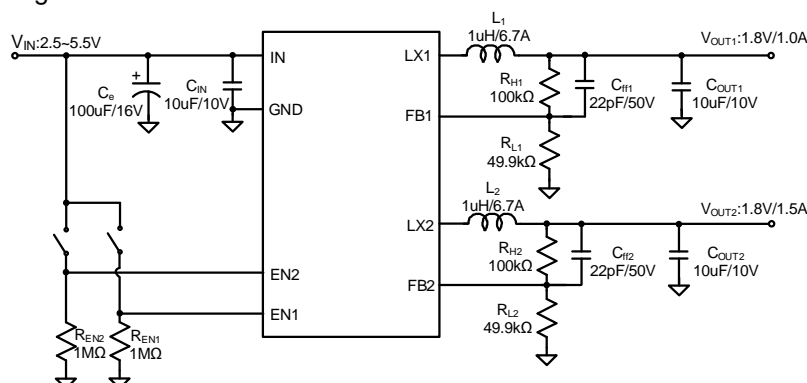
SY20341SAC - Dual 1A/1.5A, 2MHz Sync Buck

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



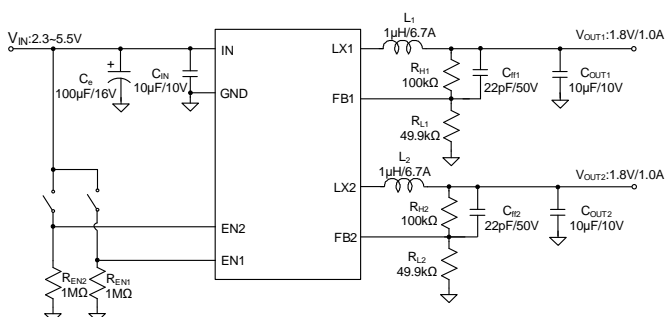
SY20341BSAC - Dual 1A, 2MHz Sync Buck

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

SY21081B1ABC

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

SY21081C1ABC

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.)
- **SY21081C1ABC: 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

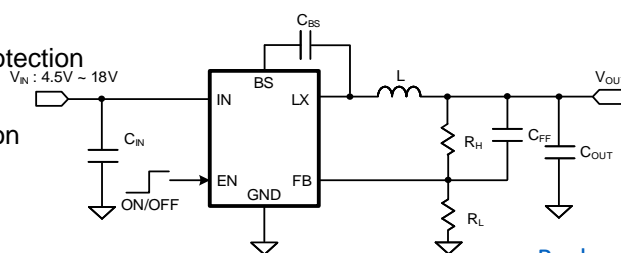
SY21108ABT/SY21108EABT- 3A, 18V Input Sync Buck

Features

- Low RDS(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 SY21108
- Forced Continuous Conduction Mode (FCCM) Operation for SY21108E
- 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

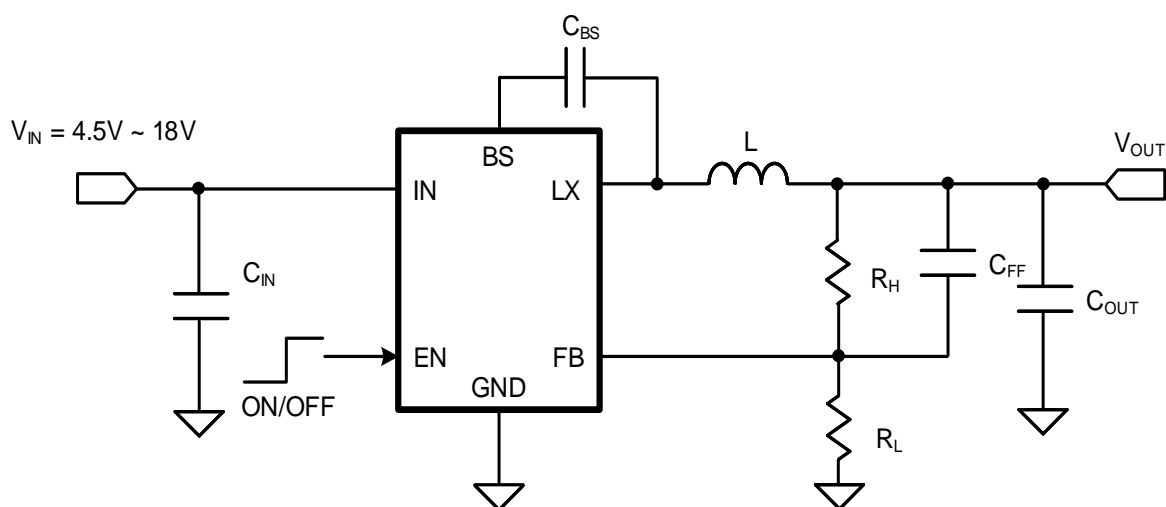
SY21107ABT/SY21107BABT/SY21107CABT/SY21107EABT

Features

- Low $R_{DS(ON)}$ for Internal MOSFETs: 130m Ω Top, 105m Ω 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 SY21107 and SY21107C
- Forced Continuous Conduction Mode (FCCM) Operation for SY21107E and SY21107B
- Internal Soft-Start Limits the Inrush Current
- Support Smooth Startup with Pre-Biased Output
- 500kHz Switching Frequency Minimizes the External Components for SY21107 and SY21107E
- 1200kHz Switching Frequency Minimizes the External Components for SY21107C
- 1400kHz Switching Frequency Minimizes the External Components for SY21107B
- 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



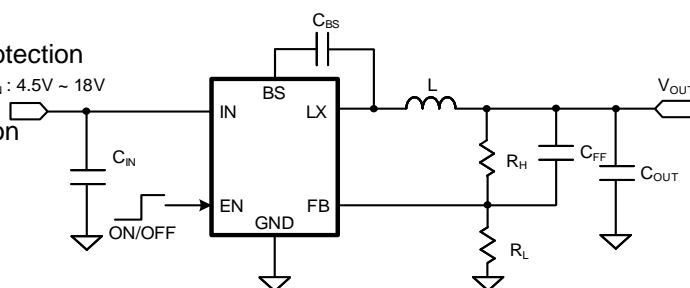
SY21158ABT/SY21158EABT - High Efficiency, 500kHz, 3A, 18V Input Synchronous Buck Converter

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 SY21158
- Forced Continuous Conduction Mode (FCCM) Operation for SY21158E
- 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 C_{OUT}
- 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



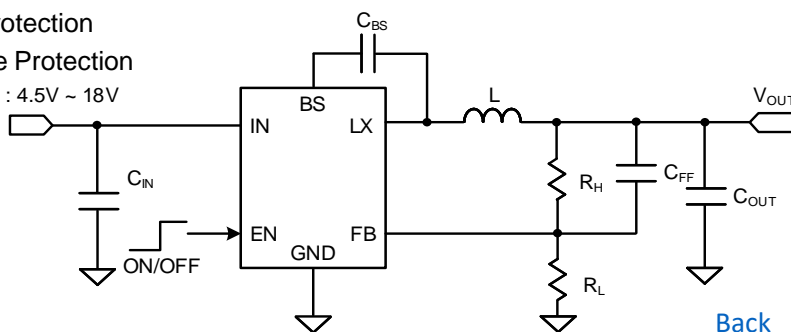
SY21158TABT - High Efficiency, 3A, 18V Input Synchronous Buck Converter

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

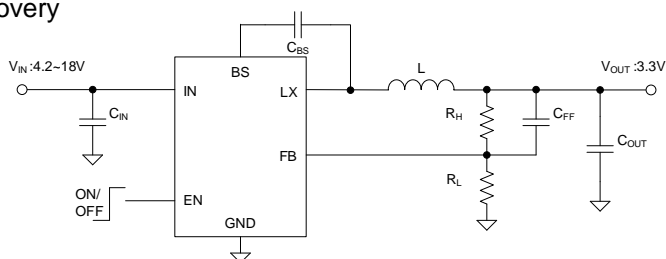

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3A, 18V Input Sync Buck

SY8113B1ADC/SY8113C1ADC/SY8113E1ADC/SY21114EADC-

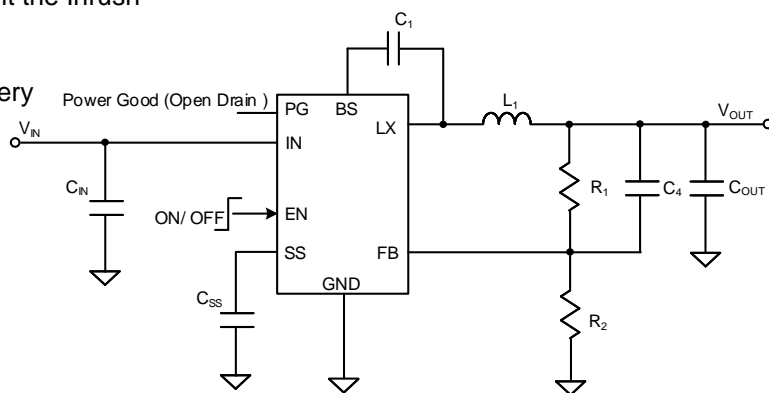
Features

- 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
- **SY21114EADC-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
- **SY21114EADC-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



SY21113DAIC-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
- Hic-cup 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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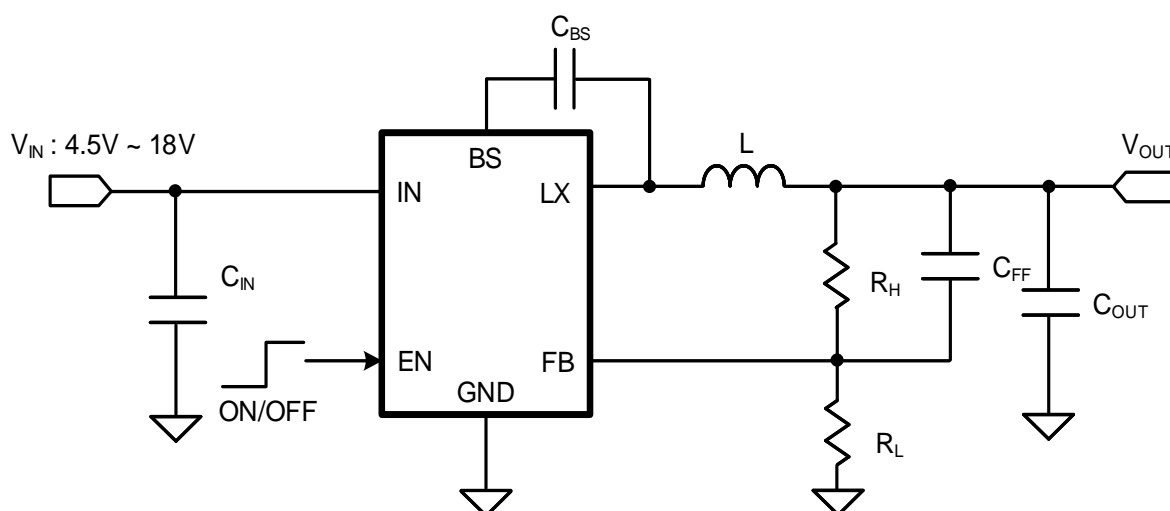
SY21108B/CABT - 3A, 18V Input Sync Buck

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 SY21108 and SY21108C
- Forced Continuous Conduction Mode (FCCM) Operation for SY21108E and SY21108B
- Internal Soft-Start Limits the Inrush Current
- Support Smooth Startup with Pre-Biased Output
- 500kHz Switching Frequency Minimizes the External Components for SY21108 and SY21108E
- 1200kHz Switching Frequency Minimizes the External Components for SY21108C and SY21108B
- 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



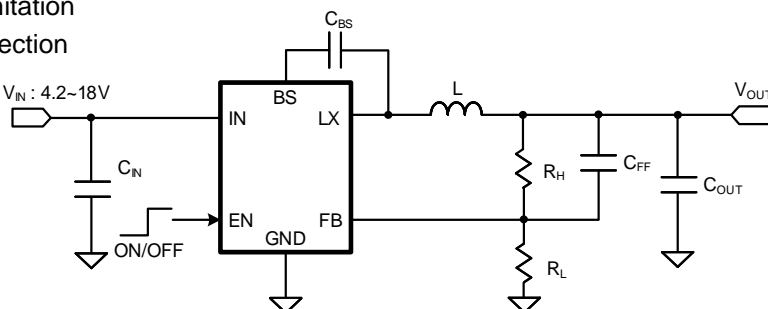
SY21174IADC - 4A, 18V Input Sync Buck

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



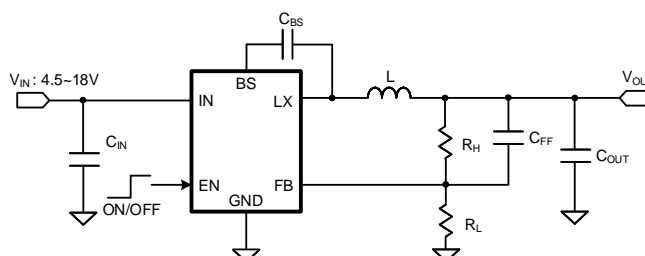
SY21195IADC - 5A, 18V Input Sync Buck

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



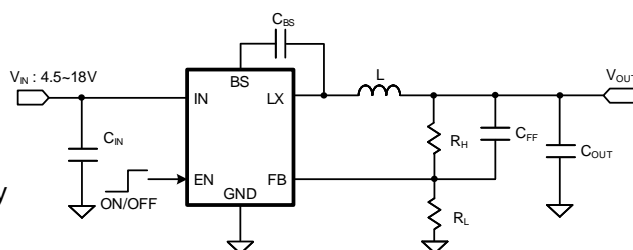
SY21197IADC- 6A, 18V Input, Sync Buck

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

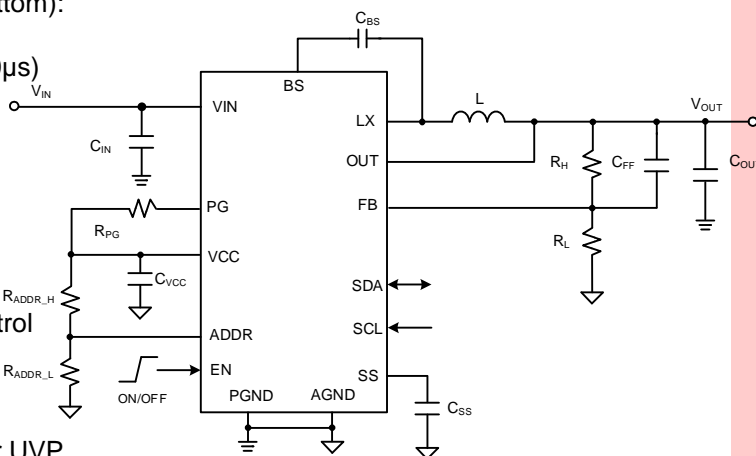
- Set-Top Boxes
- Portable TVs
- DSL Modems
- LCD TVs
- IP Cameras
- Networking



SY21164RRC- 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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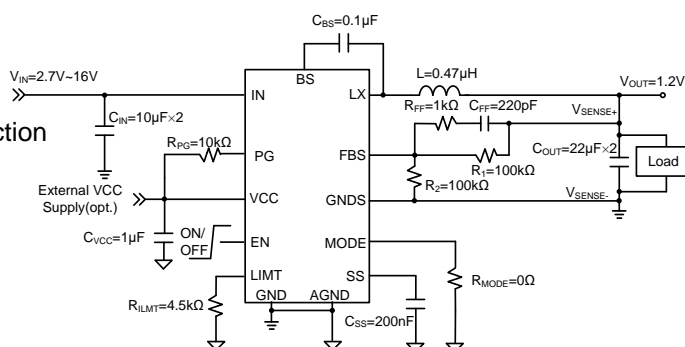
SY21712VDC- 12A, 16V Input, Sync Buck

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
(T_J = -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



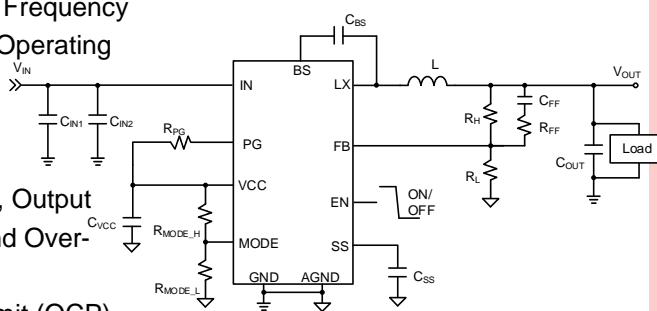
SY81047BWZQ- High Efficiency, 12A, 17V Input Synchronous Step-down Regulator

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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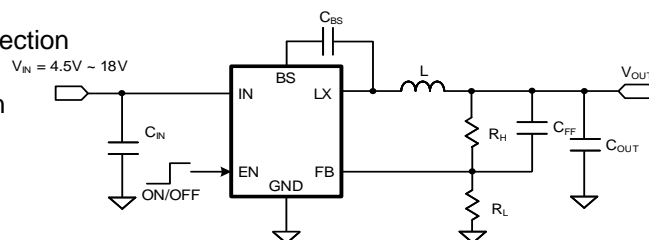
SY21086ABT/ SY21086EABT - High Efficiency, 2A, 18V Input Synchronous Buck Converter

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 SY21086
- Forced Continuous Conduction Mode (FCCM) Operation for SY21086E
- 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



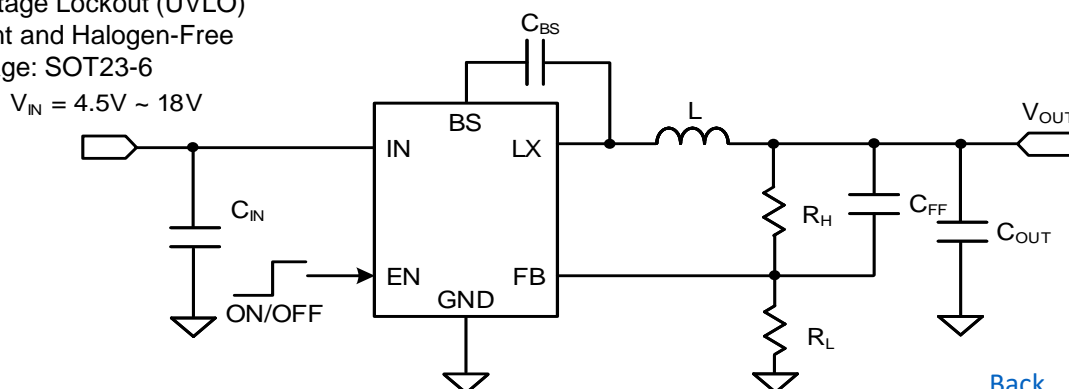
SY81057TABT- High Efficiency, 2A, 18V Input Synchronous Buck Converter

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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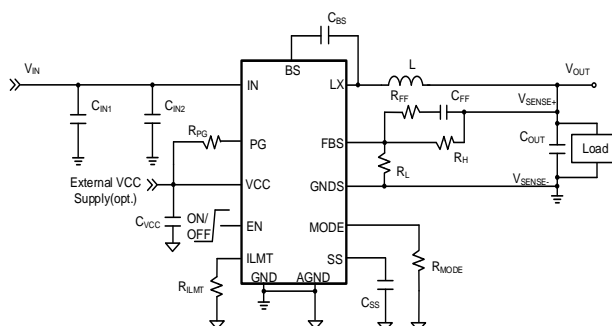
SY21720VDC - 20A, 16V Input, Synchronous Step-Down Regulator

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



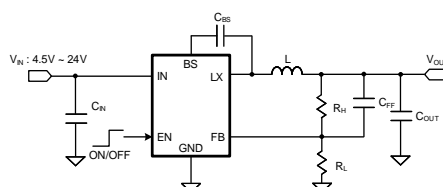
SY21043ABT - 20A, 16V Input, Synchronous Step-Down Regulator

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

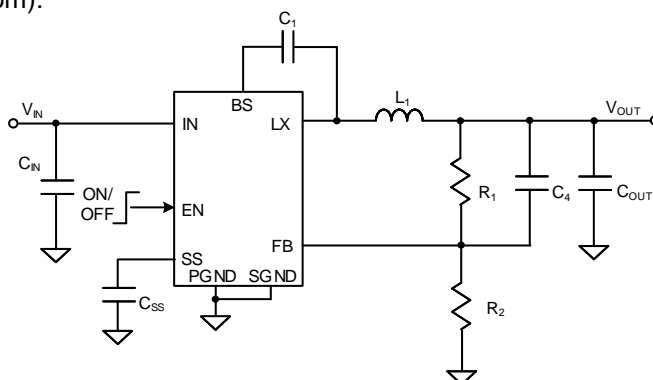
- Set-Top Box
- Portable TV
- DSL Modem
- LCD TV
- IP Camera
- Networking


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SY21087FAC- 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



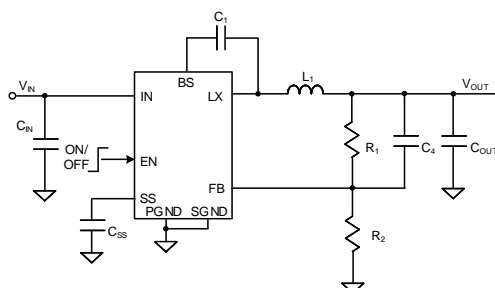
Applications

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

SY21147FCC- 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

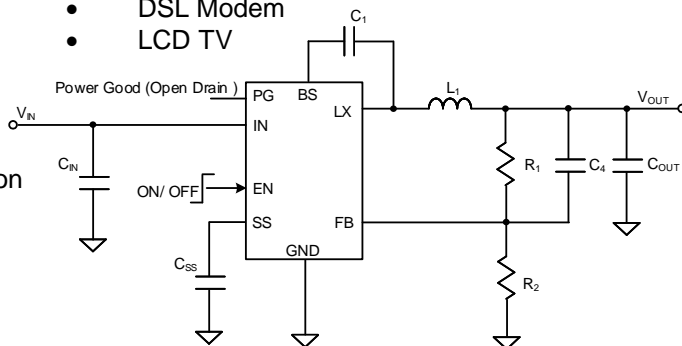
SY21143ADC/SY21143AIC- 3A, 23V Input, Sync Buck

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 (SY21143AIC Only)
- TSOT23-8/ TSOT23-6 Package

Applications

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



SY21144RAC,SY21145RAC/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
- SY21145/B/C-Instant PWM Architecture to Achieve Fast Transient Responses
- SY21144/8284B-Internal 1.2ms Soft-start Limits the Inrush Current
- SY21145-Internal 600 μ s Soft-start Limits the Inrush Current
- SY21145C-Internal 800 μ s Soft-start Limits the Inrush Current
- Pseudo-constant Frequency: 600kHz
- 4A Output Current Capability
- SY21145B/C-100mA LDO Current Capability
- SY21145B-Fixed 3.338V Output Voltage
- SY21145B/C-Fixed 5.1V Output Voltage
- $\pm 1\%$ Internal Reference Voltage
- SY21144-PFM/FCCM Selectable Light Load Operation mode
- Optional Bypass Input
- Power Good Indicator
- Output Discharge Function
- Output Current Limit Protection
- SY21144/SY21145: Hiccup Mode Output Short Circuit Protection
- Output Under Voltage Protection
- Output Over Voltage Protection
- SY21145B/C-Latch-off Mode Output Under Voltage Protection
- SY21145B/C-Latch-off Mode Output Over Voltage Protection
- SY21145B/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

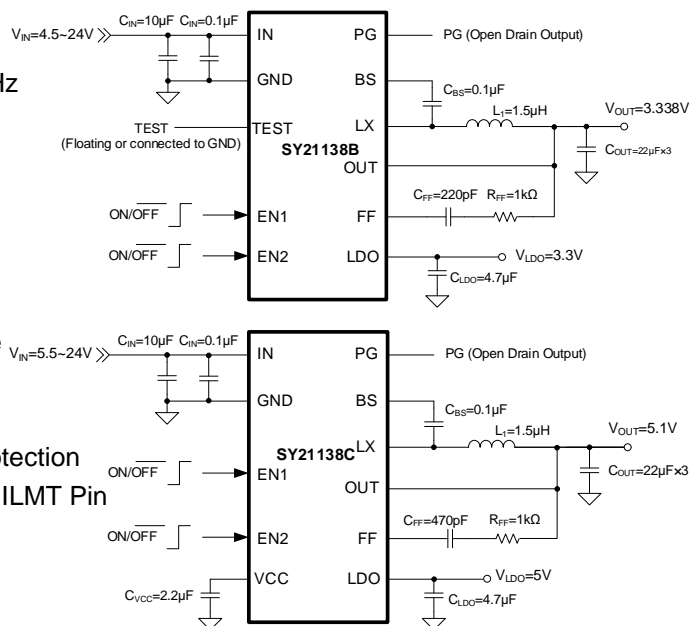
SY21138BRHC/SY21138CRHC-

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
- SY21138B/C-Pseudo-constant Frequency: 600kHz
- SY21138B-Fixed 3.338V Output Voltage
- SY21138C-Fixed 5.1V Output Voltage
- Adjustable Output Voltage Application
- 6A Output Current Capability
- SY21138B/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

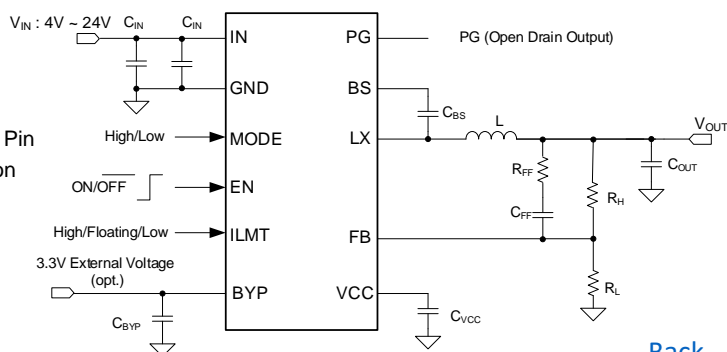
SY21288ARHC

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

SY21243ARHC-

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

SY21243RHC/SY21243BRHC/SY21243B3RHC/SY21243C3RHC/SY21243D3RHC-

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(SY21243) 600kHz(SY21243B/B3/C3/D3)
- SY21243-Adjustable Output Voltage Application
- SY21243B/B3-Fixed 3.338V Output Voltage
- SY21243C3/D3-Fixed 5.1V Output Voltage
- 8A Output Current Capability
- SY21243B/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

SY21240RAC/SY21240DRAC Features

- 4–24V Input Voltage Range
- SY21240: Up to 9A Continuous/14A Peak Output Current
- SY21240D: 9A Continuous/12A Peak Output Current Capability of the VDD2 Regulator
- SY21240D: Compatible for LPDDR4X Application
- Low $R_{DS(ON)}$ for Internal Switches: 27m Ω Top, 9m Ω Bottom
- Integrated 1.2 Ω Bypass Switch
- SY21240: 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
- SY21240: Adjustable Output Voltage
- SY21240D: Fixed 0.61V VDDQ Reference
- SY21240: $\pm 1\%$ 0.6V Internal Reference Voltage
- SY21240D: $\pm 1.0\%$ 0.6V VDD2 Reference
- SY21240: $\pm 1A$ Source/Sink Current Capability
- SY21240D: $\pm 1A$ Source/Sink Current Capability of the VDDQ LDO
- SY21240: 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

SY21286ARHC

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

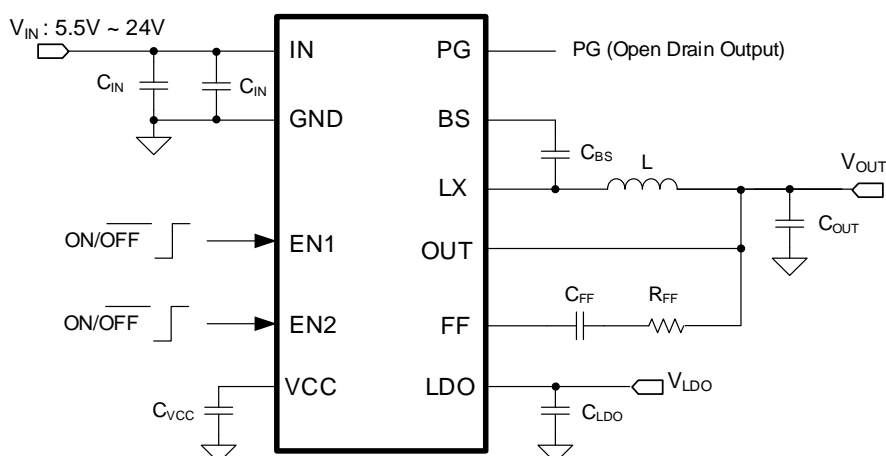
SY21288CRHC

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



SY21246BTMC - 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

SY21249TMC/SY21249C1TMC/SY21249FTMC - 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
- SY21249: Adjustable Output Voltage Application
- SY21249C1: Fixed 5.15V Output Voltage
- SY21249F: 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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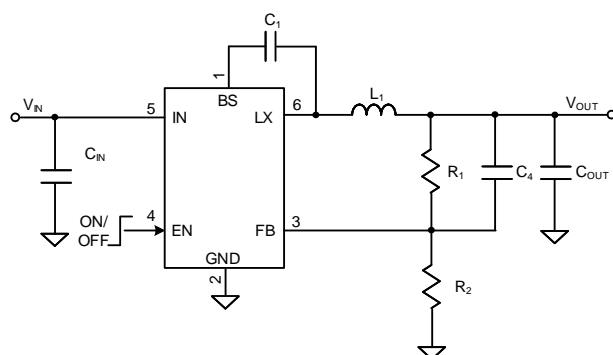
SY21041ABC/SY21041CABC- High Efficiency Fast Response, 1A, 27V Input Sync Buck

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



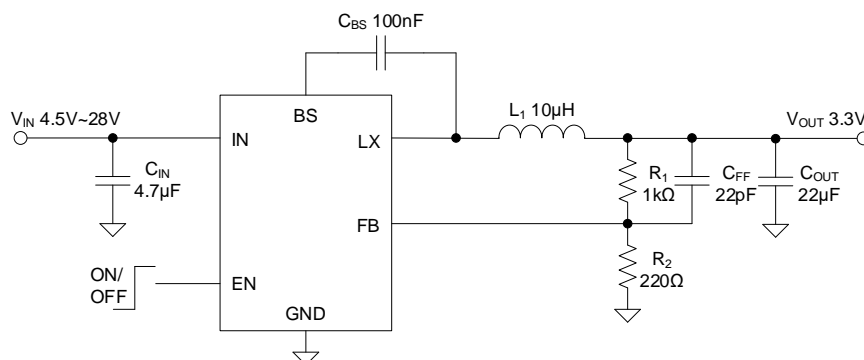
SY21042ADC- 1.7A, 28V Input Sync Buck

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



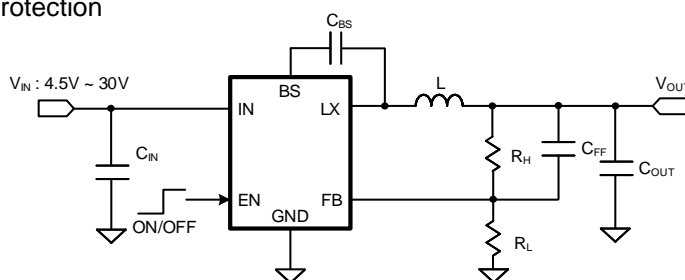
SY21213ABT - High Efficiency, 600kHz, 2A, 30V Input Synchronous Buck Converter

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



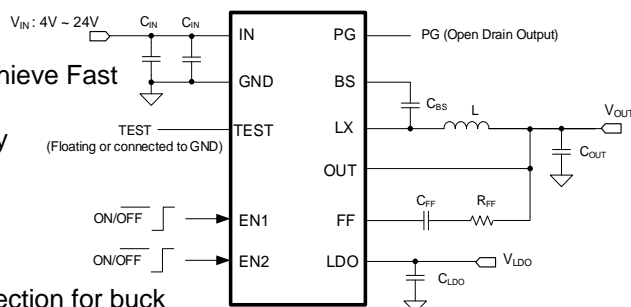
SY21288BRHC - High Efficiency Fast Response, 8A, 28V Input Synchronous Buck Converter with 100mA 3.3V LDO

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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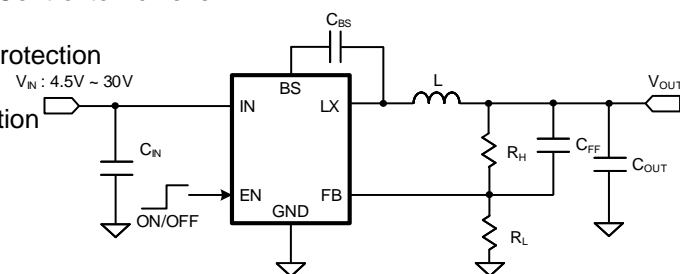
SY21452ABT - High Efficiency, 600kHz, 2A, 30V Input Synchronous Buck Converter

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



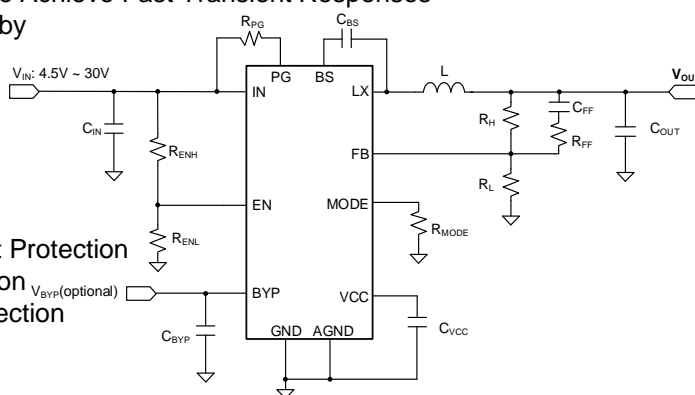
SY21232WYQ - High Efficiency Fast Response, 98% Duty, 8A, 30V Input Synchronous Buck Converter

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



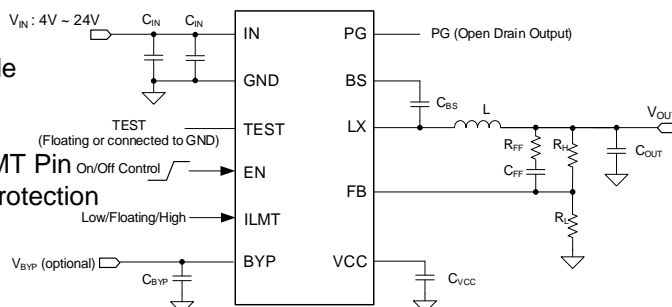
SY21288RHC - High Efficiency, Fast Response, 8A, 28V Input Synchronous Buck Converter

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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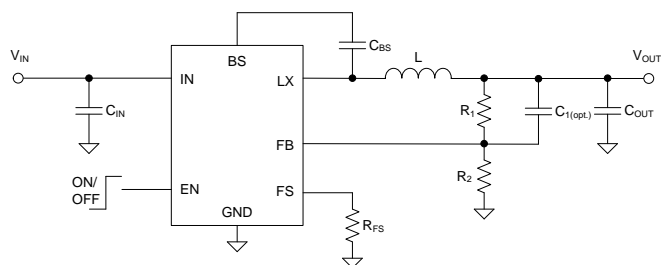
SY21154AIC- 3A, 30V Input, Sync Buck

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



SY21211DNC/SY21211FCC - 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

SY21211FCC(QFN)

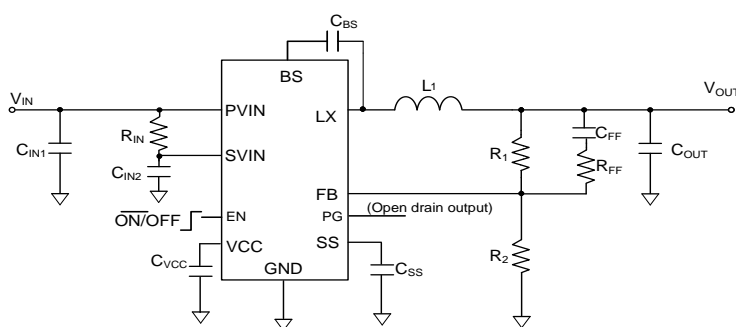
- Internal 400 μ s Soft-start Limits the Inrush Curr
- $\pm 1.0\%$ 0.6V Reference
- Programmable Valley Current Limit
- Power Good Indicator
- Output Discharge Function
- Short Circuit Latch Off Protection
- Over Voltage Latch Off Protection
- Input UVLO

SY21211(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

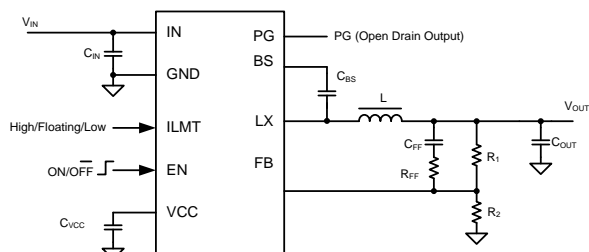
SY21215QNC/SY21226AQQC/SY21215HQQC/SY21215

KQQCFeatures

- 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
- SY21215: Internal 400 μ s Soft-start
- SY21215H/K/SY21226A: Internal 600 μ s Soft-start
- **SY21215/H/K/SY21226A**: Pseudo-constant Frequency: 800kHz
- **SY21215K**: 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
- SY21215H/K/SY21226A: Hic-cup Mode Output Short Circuit Protection
- SY21226A: 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

SY21228AQQC/SY21228LQQC

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
- SY21228A: Pseudo-constant Frequency: 800kHz
- SY212288L: Pseudo-constant Frequency: 500kHz
- 8A Continuous, 16A Peak Output Current Capability
- $\pm 1\%$ 0.6V Reference Voltage
- Hiccup Mode SCP, OVP
- SY21228L: PSM/FCCM Selectable Light Load Operation Mode
- SY21228L: 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

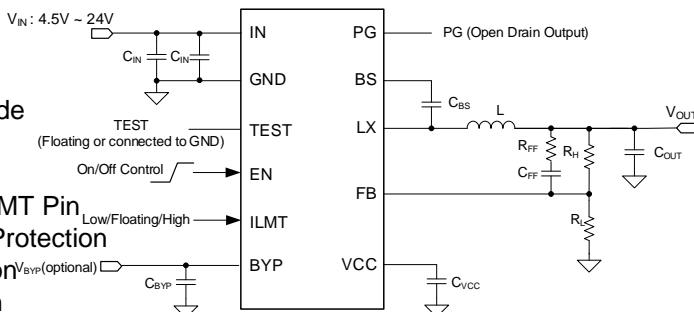
SY21286RHC - High Efficiency, Fast Response, 6A, 28V Input Synchronous Buck Converter

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



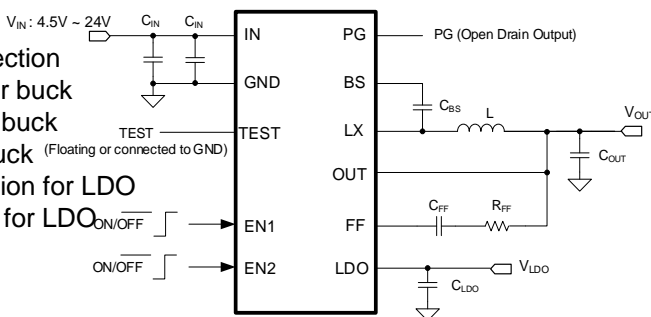
SY21286BRHC - High Efficiency, Fast Response, 6A, 28V Input, Fixed 3.338V Output Synchronous Buck Converter with 100mA 3.3V LDO

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 × 2.5-16

Applications

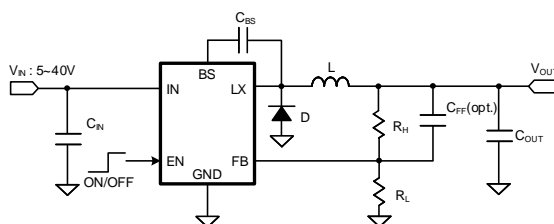
- LCD-TV/Net-TV/3D-TV
- Set Top Box
- Notebook
- High Power AP


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SY21019ABC - 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



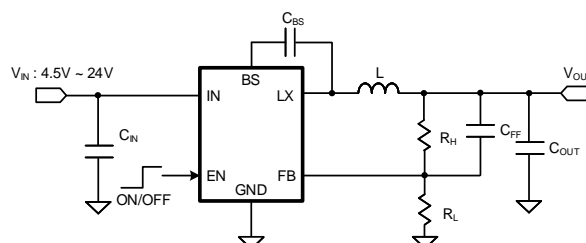
Applications

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

SY21036ABC - 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

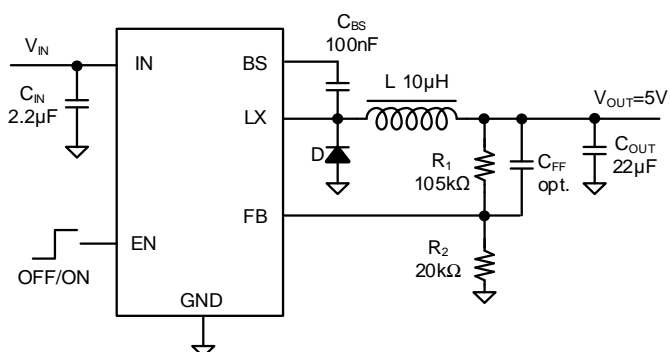
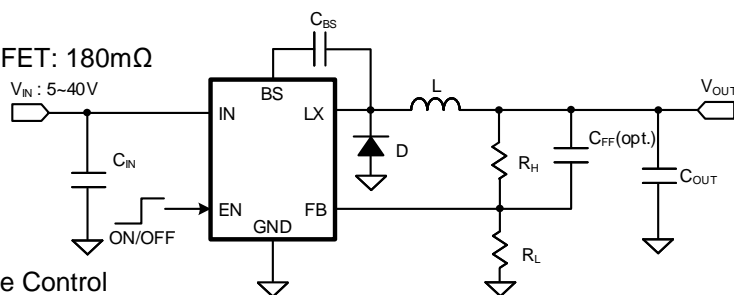
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SY21061ABC/SY21061FABC - High Efficiency, 1.2A, Asynchronous Buck

Converter

Features

- Low $R_{DS(ON)}$ for Internal N-channel Power FET: 180m Ω
- Input Voltage Range:
 - SY21061 : 5V to 40V
 - SY21061F: 9V to 36V
- Up to 1.2A Output Current
- 800kHz (SY21061)/ 300kHz (SY21061F) Switching Frequency
- Constant Off-Time and Peak Current Mode Control
- Internal Soft-Start Limits Inrush Current
- SY21061 : $\pm 2\%$ 0.6V Reference
- SY21061F: $\pm 2\%$ 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

SY21102ABC - High Efficiency, 800kHz, 2A, 40V Input Asynchronous Buck

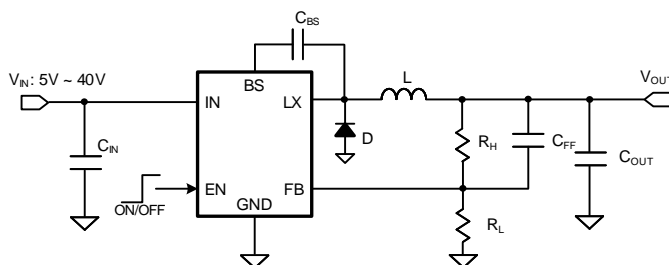
Converter

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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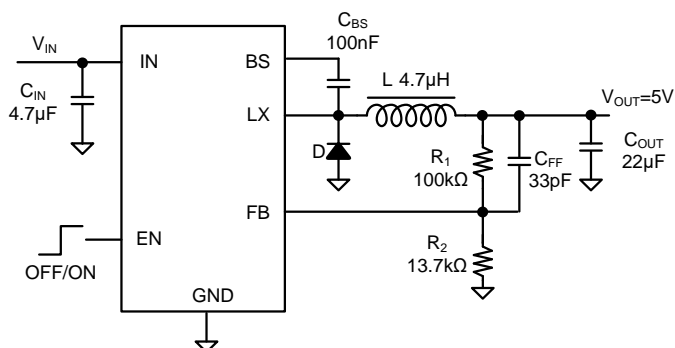
SY21163FCC - High Efficiency, 800kHz, 40V Input, 3A Non-synchronous Step Down Regulator

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



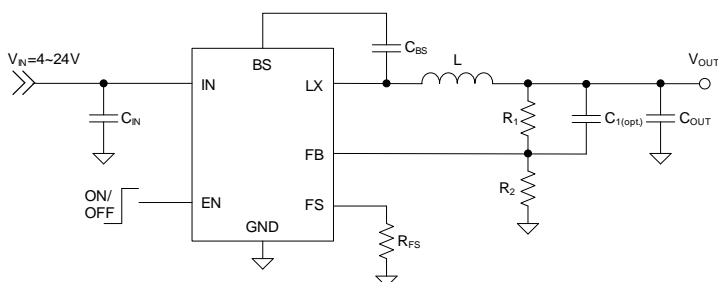
SY21153AAIC - High-Efficiency, Fast-Response, 40V Input, 3A Synchronous Step-Down Regulator

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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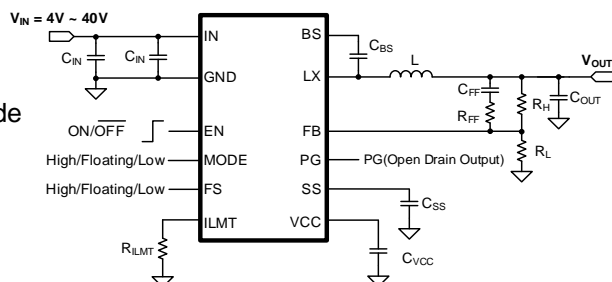
SY21245RBC - High Efficiency, 8A, 40V Input Synchronous Buck Converter

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

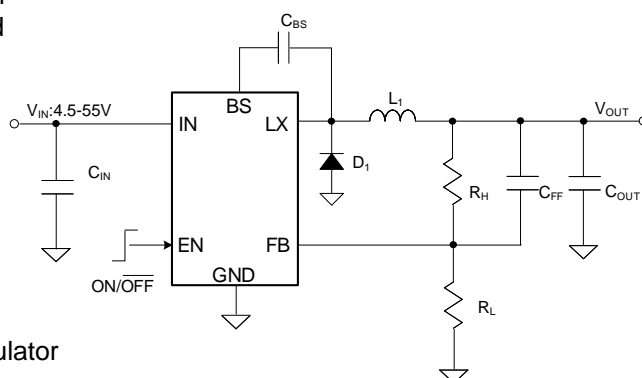
- LCD TV
- Set-Top Box
- Notebook
- High-Power AP Router



SY21031ABC - High Efficiency, 1.2MHz, 55V Input, 0.8A Asynchronous Step-Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal N-channel Power FET: 700mΩ
- 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±1% Reference Voltage
- SOT23-6 Package



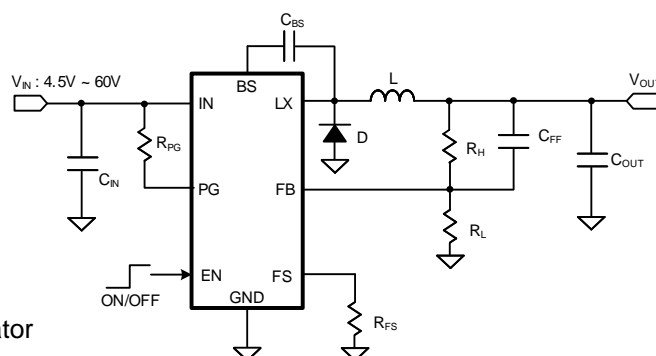
Applications

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

SY21142FCC - High-Efficiency, 2A, 60V Input Asynchronous Buck Converter

Features

- Low $R_{DS(ON)}$ for Internal N-channel Power FET: 175mΩ
- 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
- ±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

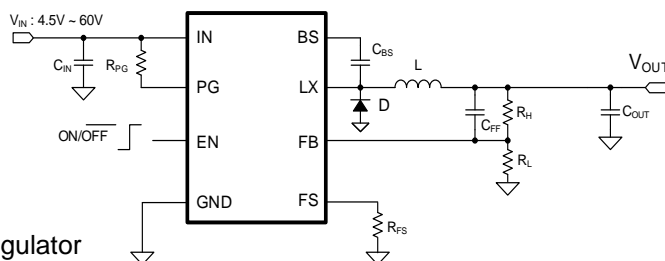
- Non-Isolated Telecommunication Buck Regulator
- Secondary High-Voltage Post Regulator
- Automotive Systems
- Electric Bicycle

[Back](#)

SY21173FCC - 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

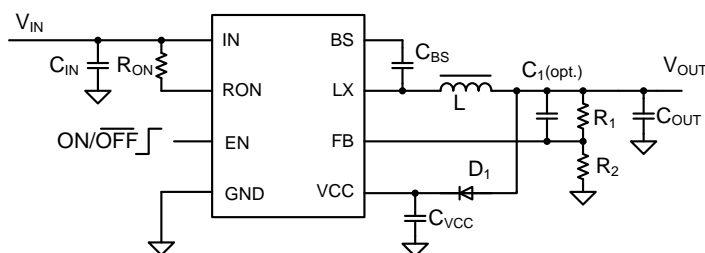
- Non-Isolated Telecommunication Buck Regulator
- Secondary High-Voltage Post Regulator
- Automotive Systems
- Electric Bicycle

SY21052FCC/SY21052AFCC

- 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



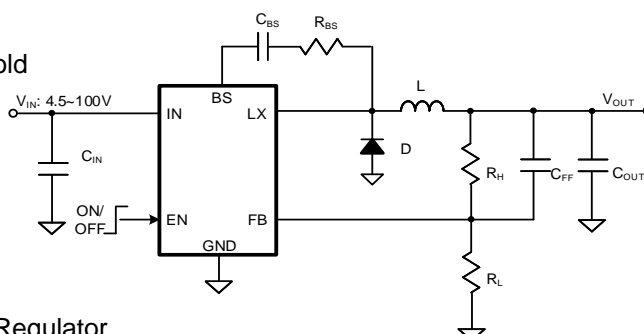
Applications

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

SY21034ADC/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(SY21034)/ 1.2A (SY21034B) Output Current
- Low $R_{DS(ON)}$ for Internal N-Channel power FET: 1 Ω
- 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



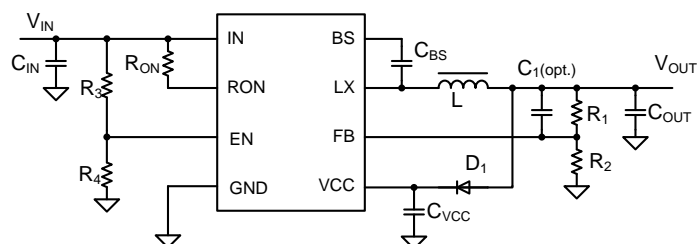
Applications

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

SY21035FCC - High Efficiency, 0.6A, 100V Input Synchronous Step Down Regulator

Features

- Low $R_{DS(ON)}$ for Internal Switches (Top/Bottom): 500m Ω /285m Ω
- 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



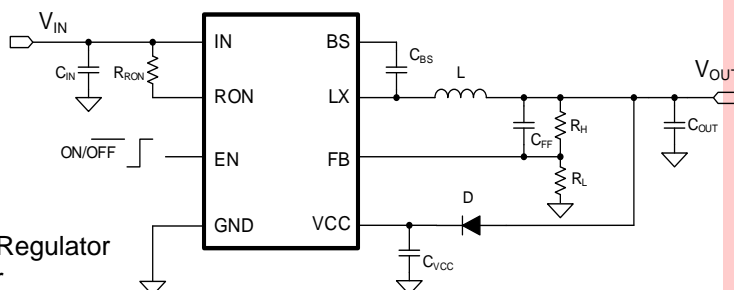
Applications

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

SY21051FCC - 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

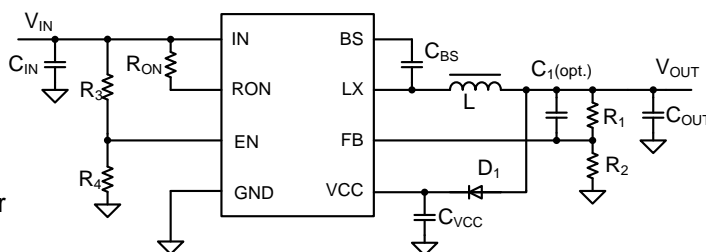
SY21053FCC - High Efficiency, 1A, 100V Input Synchronous Step Down Regulator

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

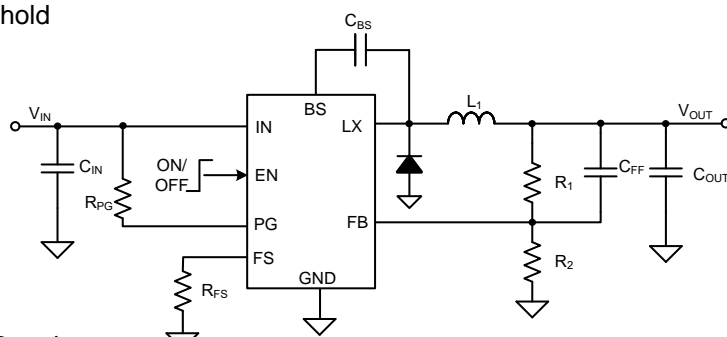
- Isolated Telecom Bias Supply
- Secondary High Voltage Post Regulator
- Automotive Systems



SY21252FCC - 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



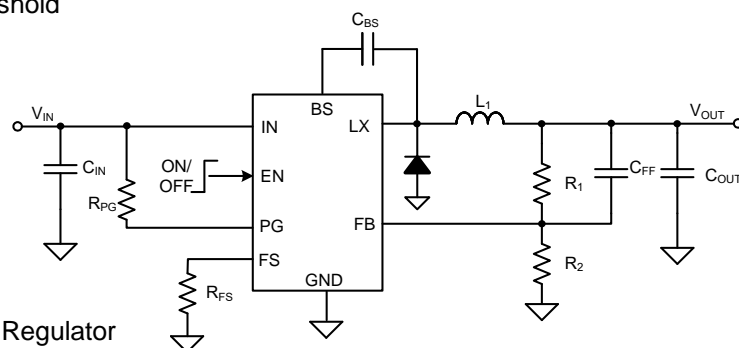
Applications

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

SY21253FCC - 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

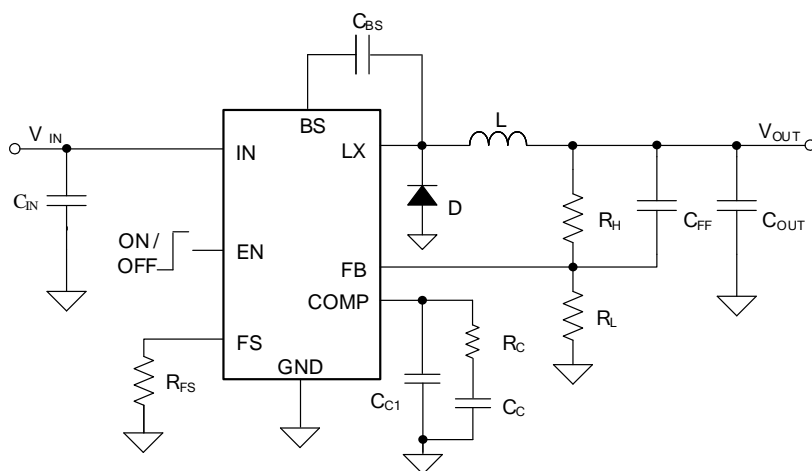
SY21189FCP - High Efficiency, 60V Input, 5A Asynchronous Step Down Regulator

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
	Min (V)	Max (V)											
SY20417AAC	0.7	5	0.35	/	/	✓	3.3	/	0.5	5.5	700/500	Pass-through Function@ Shutdown	SOT23-5
SY20417AAAC	0.7	5	0.35	/	/	✓	3	/	0.5	5.5	700/500		SOT23-5
SY20418AHC	0.7	5	0.35	/	5.25	✓	/	1.0V±3%	0.5	5	700/500	Pass-through Function@ Shutdown	SOT-363
SY20418AAHC	0.7	5	0.35	/	/	✓	5	/	0.5	7	500/400	Pass-through Function@ Shutdown; OVP	SOT-363
SY20492DABC	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
SY20419SUD	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
SY20492AABC	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
SY20492ABC	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
SY20493SUC	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
SY20433QMC	1.8	5.25	3	0.5	5.5	✓	/	1.2V±1.5%	10	27	40/36	Output Disconnect @Shutdown	QFN2×2-10
SY20489ADC	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
SY20489BADC	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
SY20489CUMC	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
SY20445QMC	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
SY20445AQMC	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
SY20496QMC	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
SY20466QMC	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
SY20466AQMC	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
SY20466BQMC	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
SY20411LAHC*	0.7	5	0.2	/	5.25	✓	/	0.5V±3%	0.5	18	800/450	Pass-through Function@ Shutdown; OVP	SOT-363
SY20411AHC*	0.7	5	0.4	/	5.25	✓	/	0.5V±3%	0.5	18	800/450	Pass-through Function@ Shutdown; OVP	SOT-363
SY20428ABC*	0.9	4	1.8	1.2	4	✓	/	1.2V±3%	65	/	200/90	Output Disconnect @Shutdown	SOT23-6
SY20508DGC*	2.3	5.25	3	1	5.5	✓		1.2V±1.5%	2	30	85/70	OVP	DFN2×3-8
SY20508EDGC*	2.3	5.25	3	1	5.5	✓	/	1.2V±1.5%	/	/	85/70	FCCM, OVP	DFN2×3-8

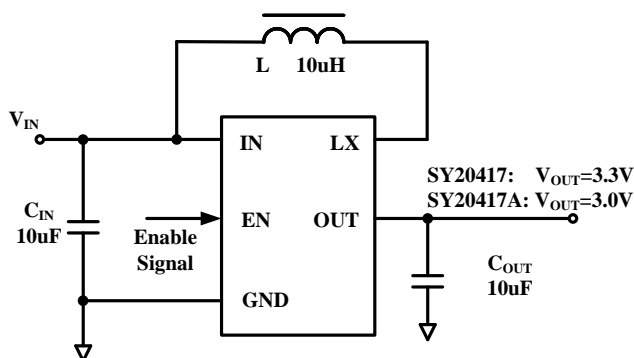
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SY20417/A

- 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
 - SY20417: Fixed 3.3V
 - SY20417A: Fixed 3.0V
- Typical 350mA Peak Current Limit
- Compact SOT23-5 Package.



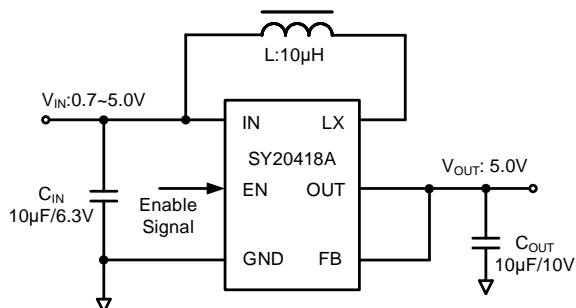
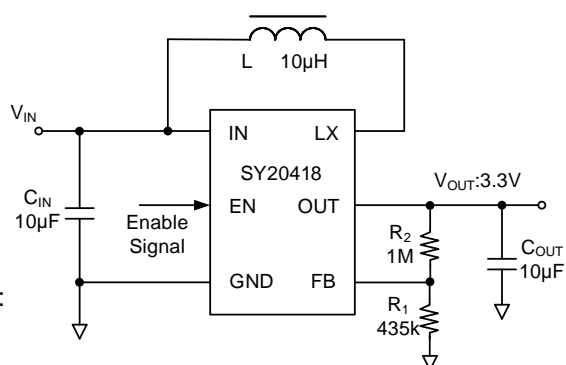
Applications

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

SY20418/A- 0.7V Minimum Input Voltage Synchronous Boost

Features

- 0.7V to 5V Input Voltage Range
- Fixed 5V Output Voltage (SY20418A)
- 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):
 - SY20418: 0.5/0.7 Ω
 - SY20418A: 0.4/0.5 Ω
- Typical 350mA Peak Current Limit
- RoHS Compliant and Halogen Free
- Compact Package: SOT-363



Applications

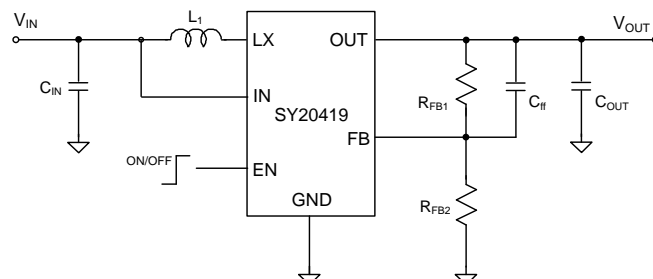
- Battery Powered Applications
- Consumer and Portable Medical Products
- Personal Care Products
- Smartphones
- White or Status LEDs

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SY20419- 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 RDS(ON) (Main Switch/Synchronous Switch) at 3.3V Output: 70/125mΩ
- Output OVP
- RoHS Compliant and Halogen Free
- Auto Bypass Mode When $V_{IN} \geq V_{OUT}$
- Compact Package DFN2×1.5-6



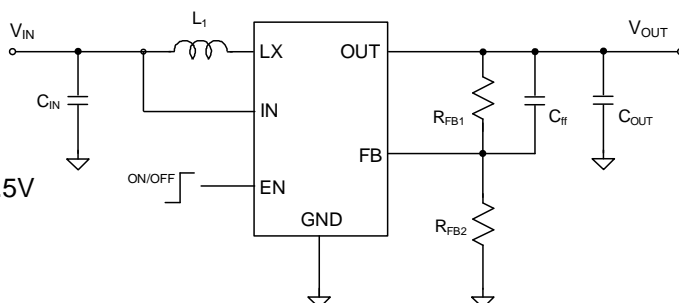
Applications

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

SY20492/A/D- 5.5V Maximum Output High Efficiency Synchronous Boost Converter

Features

- Minimum Input Voltage:
SY20492D: 0.85V
SY20492A: 0.85V
SY20492: 1.8V
- Adjustable Output Voltage from 1.8V to 5.5V
- Min Valley Current Limit
SY20492D: 0.6A
SY20492A: 2A
SY20492: 2A
- 5μA Typical Quiescent Current
- Load Disconnect During Shutdown
- Low RDS(ON) (Main Switch/Synchronous Switch) at 3.3V Output: 100/170mΩ
- Output OVP
- RoHS Compliant and Halogen Free
- Auto Bypass Mode When $V_{IN} \geq V_{OUT}$
- Compact Package SOT23-6



Applications

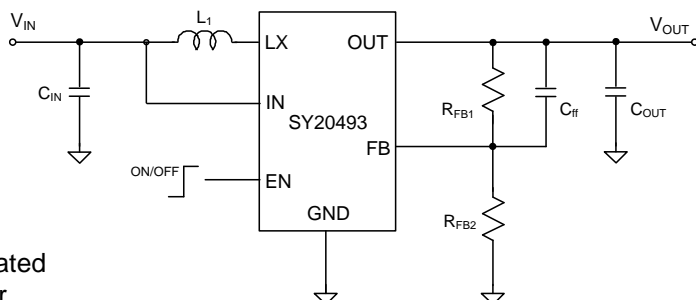
- All Single Cell Li or Dual Cell Battery Operated Products as MP-3 Player, PDAs, and Other Portable Equipment

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SY20493- 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



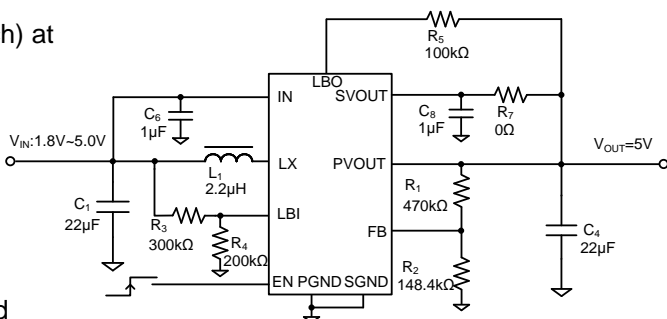
Applications

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

SY20433- 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

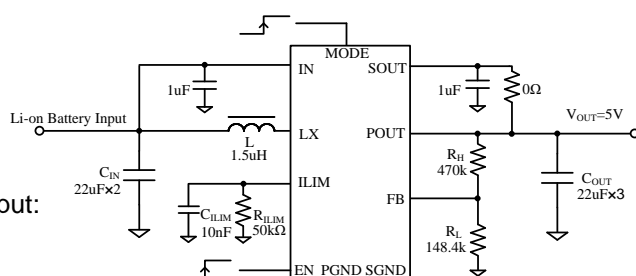
SY20496- 2V Minimum Input, 5.5V Maximum Output, 6A Peak Current Synchronous Boost Converter with Output Current Limit

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.)

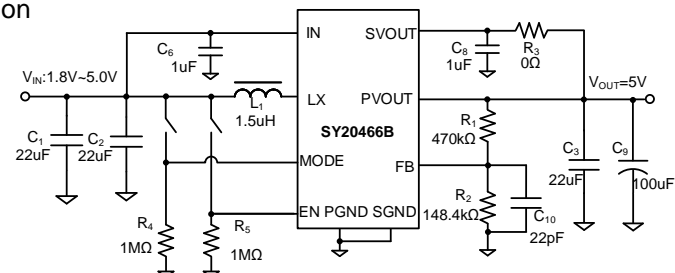
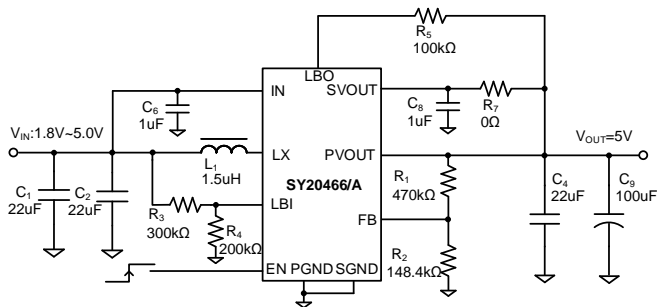


Note: The minimum recommended value for C_{ILIM} is 10nF.

SY20466/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 (SY20466B)
- Input Battery Voltage Monitor (SY20466/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:
 - SY20466: Automatic Output Discharge Function
 - SY20466A/B: No Output Discharge Function
- Compact Package: QFN2mmx2mm-10



Applications

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

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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
SY21199CABC	3	25	0.6	1	25		0.6V±2%	100	-/150	Internal SS/Comp	SOT23-6
SY21212AABC	3	8	2	1	16		0.6V±2%	100	-/130	Internal SS/Comp	SOT23-6
SY21218LABC	3	25	2	1	25		0.6V±2%	100	-/150	Internal SS/Comp	SOT23-6
SY21222ABC	3	33	2	1	33		0.6V±2%	100	-/200	Internal SS/Comp	SOT23-6
SY21238ABC	3.5	30	2	0.85	30		1V±2%	150	-/200	Accurate input current limit	SOT23-6
SY21242ABC	2	6	2.5	1	6		0.6V±2%	200	-/120	Internal SS/Comp	SOT23-6
SY21264ADBC	2	6	4	1	6		0.6V±2%	100	-/90	Internal SS/Comp	DFN3×3-10
SY21275DBC	8.6	15.9	4.5	0.5	16		1.25V±1.5%	120	-/75	Adjustable soft-start time, OVP	DFN3×3-10
SY21282QDC	3	9	6	1	13	✓	1V±2%	600	40/80	Power Good Indicator, Integrated 40mΩ Disconnection FET, True Shutdown	QFN3×3-16
SY21299DBC	3	5.5	9	/	36		1.25V±2%	380	-/65	EXT Comp	DFN3×3-10
SY21305ARDC	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
SY21314DBC	3	33	4	1	33		0.6V±2%	100	-/120		QFN3×3-10
SY21225RDC	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
SY21306RAC	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)

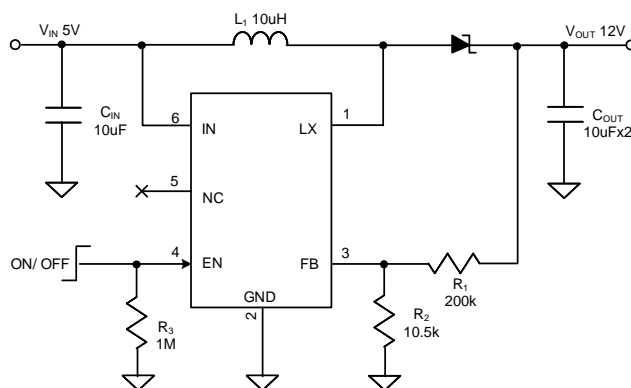
Part Number	V _{IN}		F _{SW} (MHz)	V _{REF} (V)	Function	Package
SY21401DBC	3	25	0.5	1	Current mode DC/DC controller targeted for Boost, SEPIC, Flyback and Forward applications with DC Input Current Limit	DFN3×3-10
SY21412AFHC	3	25	0.3	1	Current mode DC/DC controller targeted for both Boost and SEPIC applications with DC Output Current Limit	SOP10

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SY21199C/SY21218L - High Efficiency 1MHz Step-Up Regulator

Features

- 3V to 25V Bias Input Range, $25V_{OUT,MAX}$
- **SY21199C**: Up to 600mA Output Current
- **SY21218L**: 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



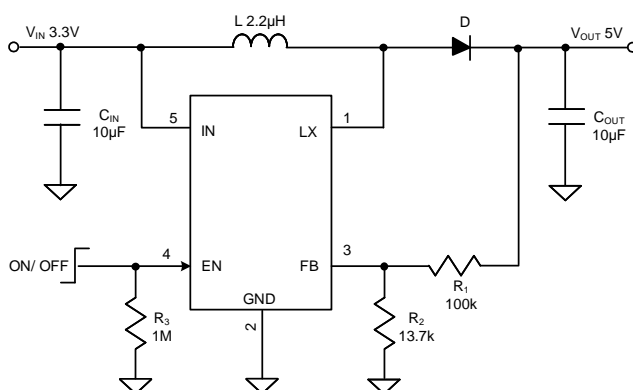
Applications

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

SY21212A - 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

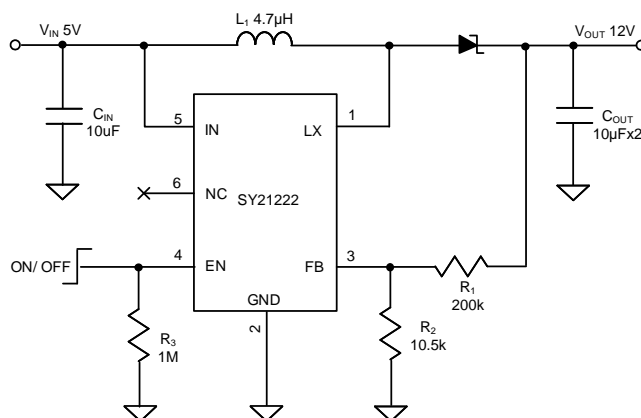
- WLED Drivers
- Networking Cards Powered From PCI Or PCI-Express Slots

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SY21222- 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



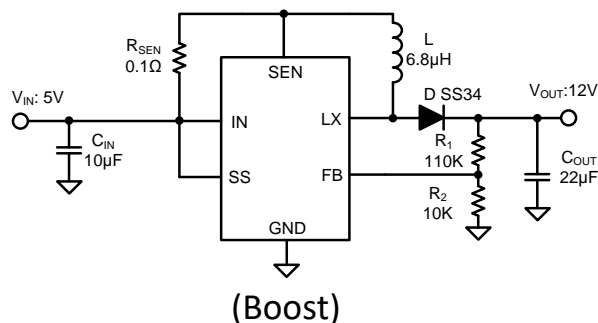
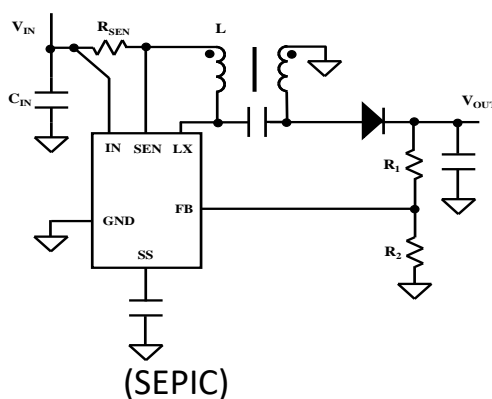
Applications

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

SY21238 - 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

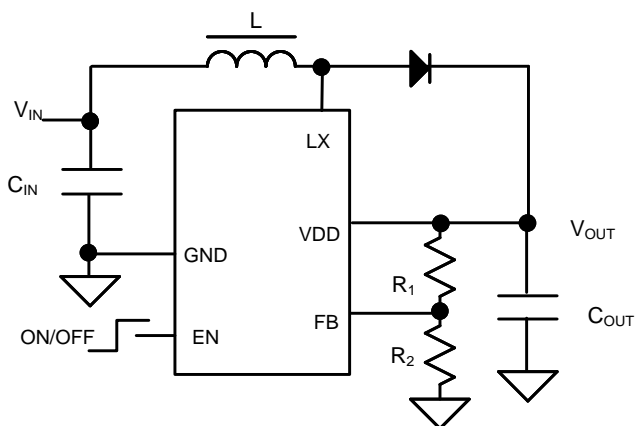
- GPS Navigation Systems
- Handheld Devices
- Portable Media Player

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SY21242- 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



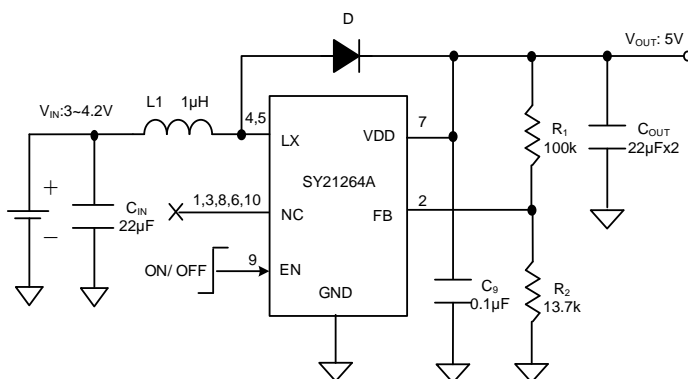
Applications

- Solar Battery Charger
- Backup Battery

SY21264A - 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

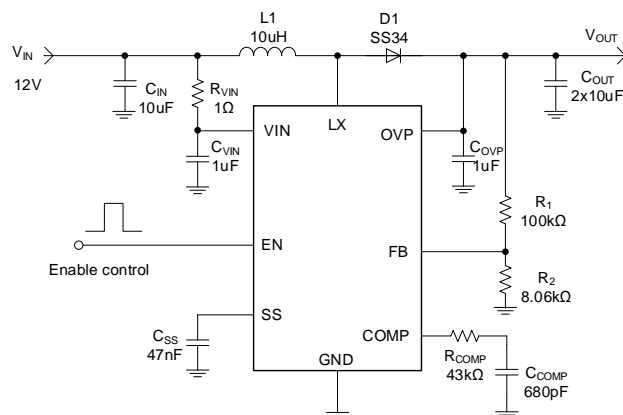
- Single-Cell Li-ion Battery-Powered Applications
- Portable Devices

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SY21275- High-Performance Boost Regulator for UHD TV Display

Features

- Wide 8.6V–15.9V Input Voltage Range
- Low RDS(ON) for N-channel MOSFET: 75mΩ (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 DFN3×3-10 Package



Applications

- TFT LCD Panels AVDD

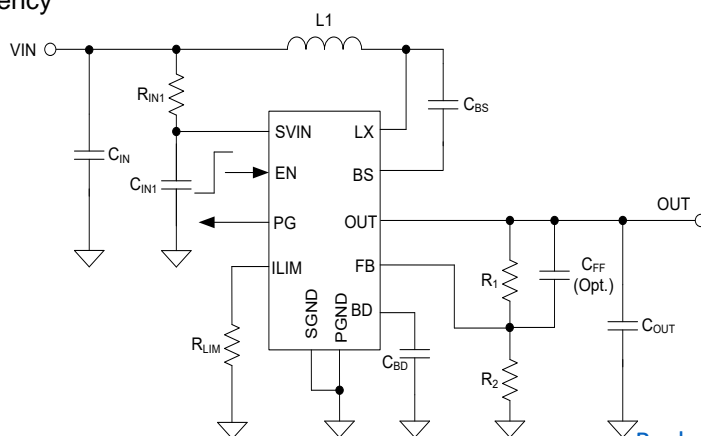
SY21282 - High Efficiency 1MHz, 16V, 6A Synchronous Step-Up Regulator with Accurate Output Current Limit

Features

- 3V to 9V Input Voltage Range
- 6A (Min.) Main MOSFET Current Limit
- 7 μA Shutdown Current (Max.)
- 600 μA Quiescent Current (Typ.)
- Programmable Output Current Limit
- Low RDS(ON) for Internal N-Channel MOSFET: 80mΩ Main, 40mΩ Rectifier, 40mΩ 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×3mm-16 Package

Applications

- Power Bank
- High Power Application
- SSD


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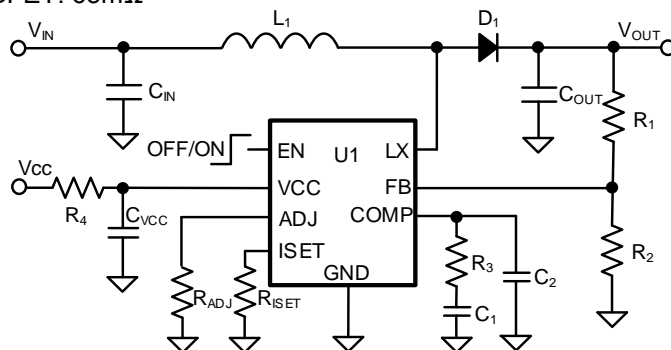
SY21299- 8A Current Limit Step-Up Regulator

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 $R_{DS(ON)}$ 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



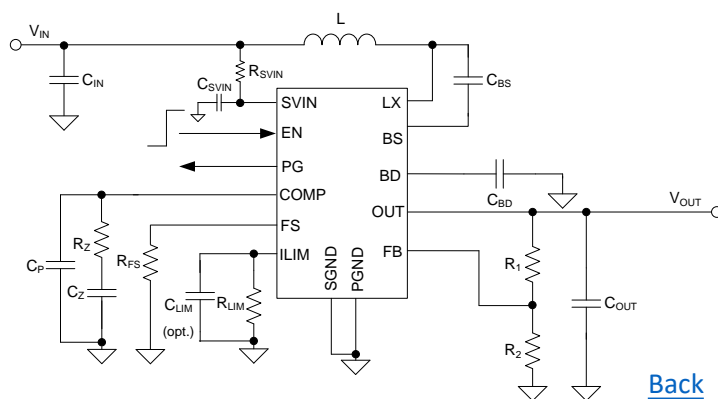
SY21305A/SY21225 - High Efficiency 15A Step-Up Regulator with Accurate Output Current Limit

Features

- Input Voltage Range :
 - SY21305A: 3V to 16V
 - SY21225: 4.5V to 30V
- Up to 15A Output Current
- Programmable Output Current Limit
- Low $R_{DS(ON)}$ for Internal N-Channel MOSFET:
 - SY21305A: 9m Ω Main, 12m Ω Rectifier, 12m Ω Disconnection FET
 - SY21225: 16m Ω Main, 18m Ω Rectifier, 18m Ω Disconnection FET
- Programmable Pseudoconstant Frequency:
 - SY21305A: 250kHz to 1MHz
 - SY21225: 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

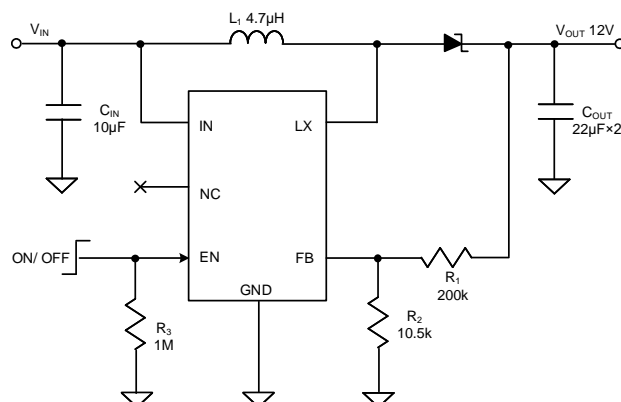
- Power Bank
- High Power Application


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SY21314- 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

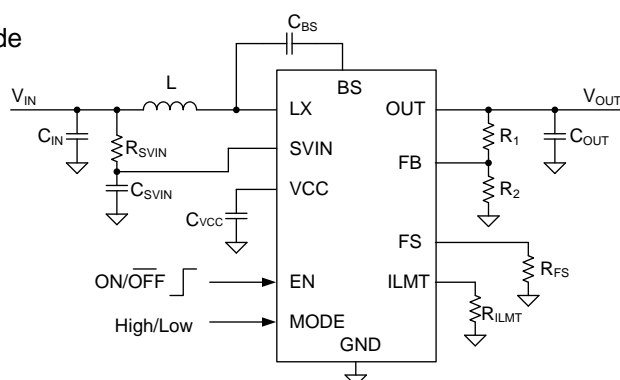
SY21306 - High Efficiency, 16V, 10A Synchronous Step Up Regulator

Features

- Input Voltage Range: 2.8-16V
- Programmable Pseudo-constant Frequency: 300kHz-2MHz
- Low RDS(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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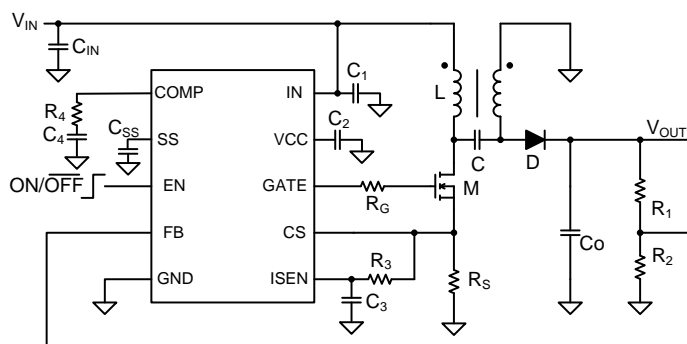
SY21401- High Efficiency 500kHz, 25V PWM Controller with DC Input Current Limit

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 \times 3-10

Applications

- GPS Navigation Systems
- Handheld Devices
- Portable Media Player



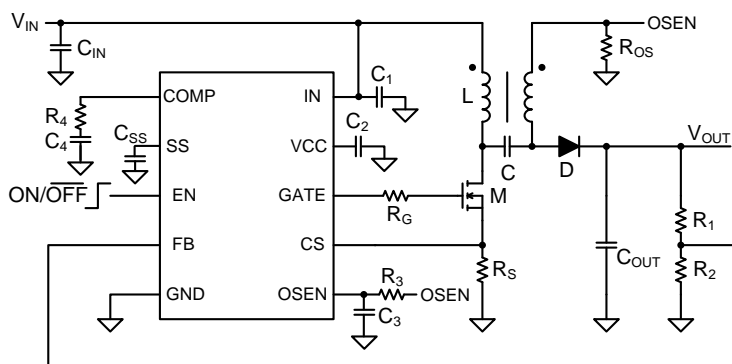
SY21412A - High Efficiency 300kHz, 25V Boost/SEPIC Controller with Output Current Limit

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
SY20518QOC	2.6	5.5	2	1	3.8	0.6V±1.5%	60	50/50		Output Disconnect @Shutdown	QFN2×3-13
SY20516ADPC	2.6	5.5	1.2	1	3.8	0.6V±1.5%	60	100/100		Output Disconnect @Shutdown	DFN3×3-14
SY21612QFC	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
SY21612BQFC	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
SY21612CQFC	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
SY21618QEC	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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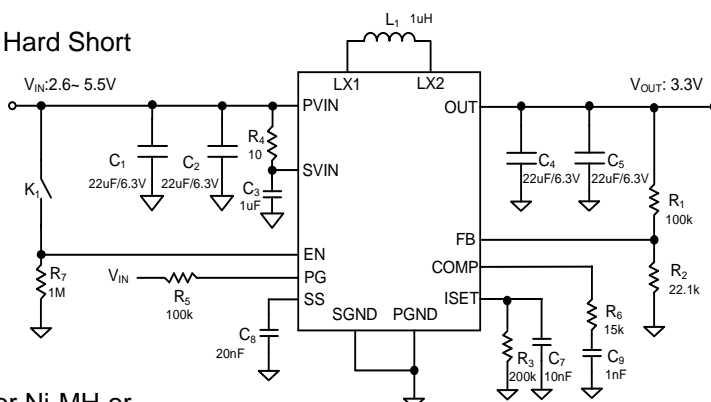
SY20518- High Efficiency, 1MHz, 2A Buck-Boost DC/DC Regulator

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



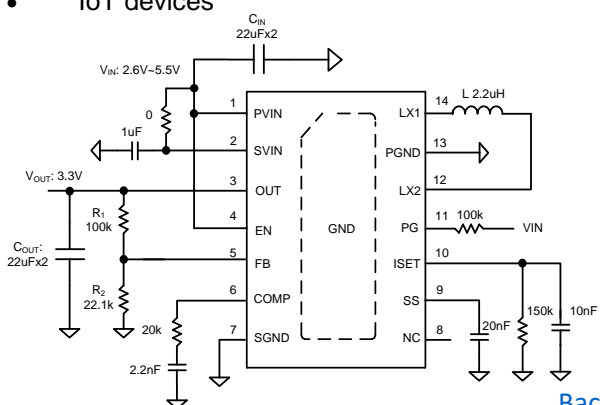
SY20516A - High Efficiency, 1MHz, 1.2A Buck-Boost DC/DC Regulator

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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SY21612/B- High Efficiency, 28V Input

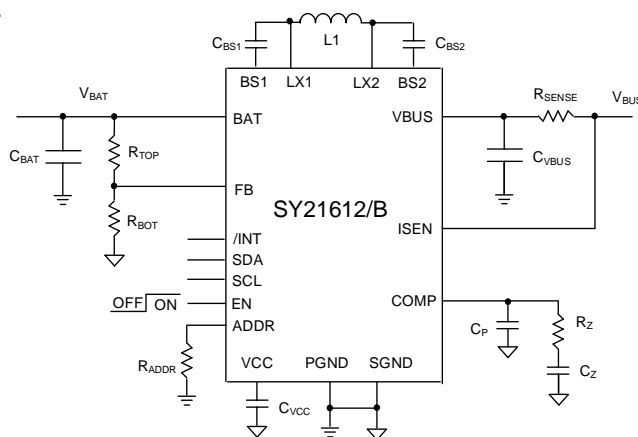
Single Inductor Synchronous Step Up/Down Regulator

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:
 - SY21612: 5V, 7V, 9V, 12V, 15V, 20V
 - SY21612B: 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

**SY21612C** - High-Efficiency, 38V Maximum Input

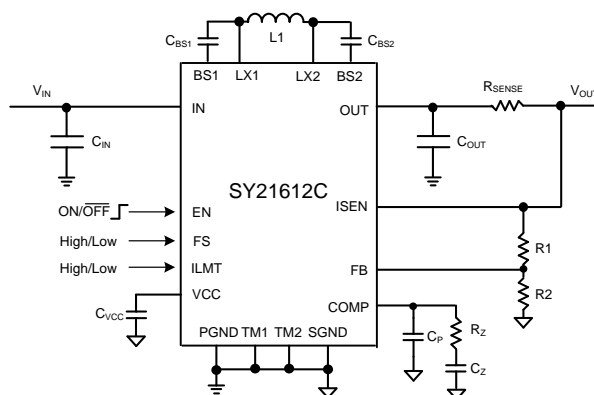
Single-Inductor Synchronous Step-Up/Down Regulator

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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SY21618- High Efficiency, 28V Input

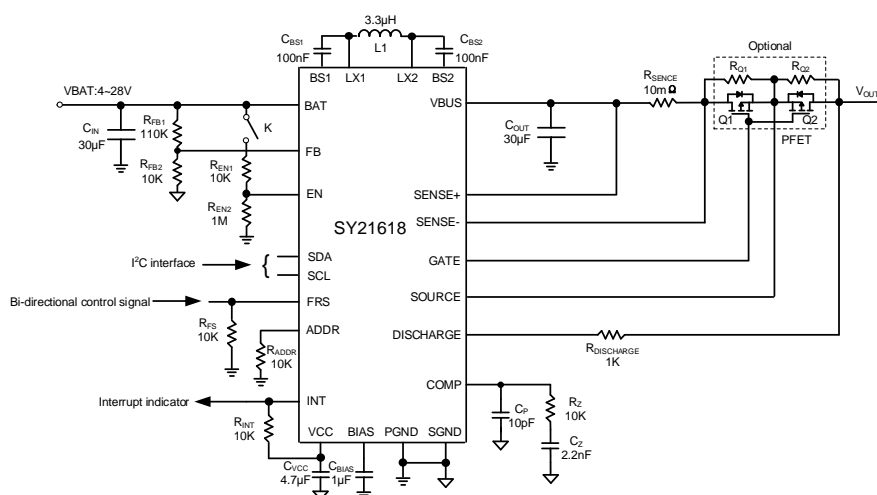
Single Inductor Synchronous Step Up/Down Regulator

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



LDO Regulator

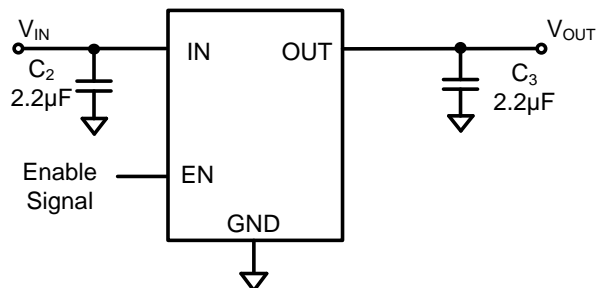
Part Number	V _{IN} (Min)(V)	V _{IN} (Max)(V)	V _{OUT} (V)	I _{OUT} (A)	Dropout Voltage (mV)	Package	Function
SY20714AAC	3.6	30	3.3	0.05	100	SOT23-5	Reverse Blocking Function
SY20704DEC	2.3	30	Adjustable	0.15	300	DFN2×2-6	Reverse Blocking Function
SY20704AAC	2.3	30	Adjustable	0.15	300	SOT23-5	Reverse Blocking Function
SY20704ZDED	2.5	30	Adjustable	0.15	150	DFN2×2-6	LDO Reg.
SY20725AAC	4	40	Adjustable	0.3	300	SOT23-5	LDO Reg.
SY20733BSCC	0.8	5.5	Adjustable	0.5	90	DFN1.2×1.2-6	Current Limiting Protection, Auto-discharge
SY20731DSC	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
SY20731BAJC	1.6	5.5	3.3	1	200	SOT223	Current Limiting Protection
NEW SY6321CSFD	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
SY20732DAC	1.4	6	Adjustable	2	0.45V @ I _{OUT} =2A	DFN3×3-8	Reverse Blocking from Output to Input, OCP & OTP
NEW SY20732FCC	1.4	6	Adjustable	2	0.45V @ I _{OUT} =2A	SO8E	Reverse Blocking from Output to Input, OCP & OTP
NEW SY20732BSED	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
SY20728JBC	3	18	Adjustable	3	0.48V @ I _{OUT} =3A	TO252-5	Zero-current Shutdown Mode; Output Short Circuit Protection
SY20728MAC	3	18	Adjustable	3	0.48V @ I _{OUT} =3A	TO263-5	Zero-current Shutdown Mode; Output Short Circuit Protection
SY20728BMAB	3	18	Adjustable	3	0.48V @ I _{OUT} =3A	TO263-5	Zero-current Shutdown Mode
SY20703MAC	3	55	Adjustable	3	0.45V @ Full Load 3A	TO263-5	Zero-current Shutdown Mode Over Input Voltage Protection
SY20703BMAB	3	55	Adjustable	3	0.45V @ Full Load 3A	TO263-5	Zero-current Shutdown Mode
SY20735DBC	2.375	3.5	Adjustable	3	/	DFN3×3-10	Sink and Source DDR Termination Regulator
SY20735BTDD	2.375	3.5	Adjustable	2	/	DFN2×2-10	Sink and Source DDR Termination Regulator

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SY20714- 3.3V Fixed Output/50mA, 30V Input, LDO

Features

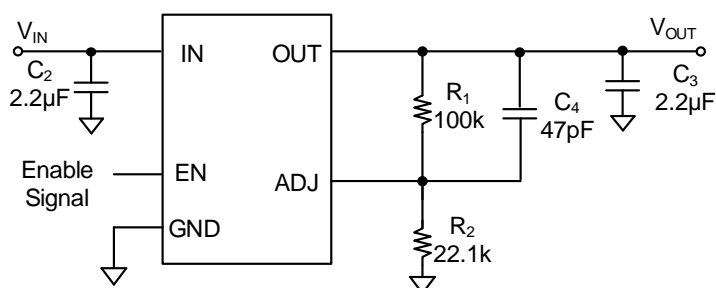
- Wide Input Voltage Range: 3.6V to 30V
- 3.3V Fixed Output Voltage
- Low Dropout Voltage(100mV @ 50mA)
- Low Ground Current
- Ultra Low Shutdown Current
- $\pm 2\%$ Output Voltage Accuracy
- Stable with Small Ceramic Capacitors
- Excellent Load and Line Regulation
- 50mA Output Current Capability
- 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



SY20704/Z - 150mA LDO Regulator

Features

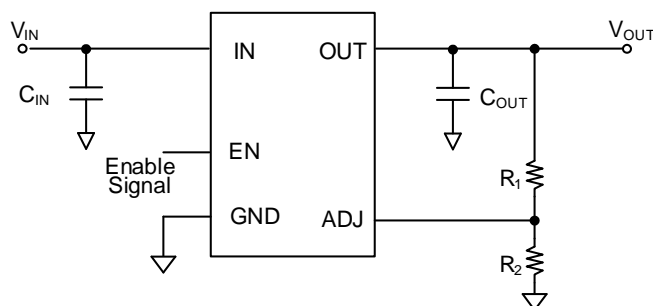
- Input Voltage Range:
 - SY20704: 2.3V to 30V
 - SY20704Z: 2.5V to 30V
- Low Dropout Voltage:
 - SY20704: 300mV @ 150mA
 - SY20704Z: 150mV @ 150mA
- 150mA Output Current Capability
- Low Ground Current
- Ultra-Low Shutdown Current
- High Output Accuracy of $\pm 2\%$ Over Operating Temperature Range
- Stable with Small Ceramic Capacitors
- Excellent Load and Line Regulation
- Reverse Leakage Current Protection (SY20704)
- Reverse Input Voltage Protection (SY20704)
- TTL Logic Enable Input
- Thermal Shutdown
- RoHS Compliant and Halogen Free
- Compact Package:
 - SY20704: SOT23-5/ DFN2 \times 2-6
 - SY20704Z: DFN2 \times 2-6


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SY20725- 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



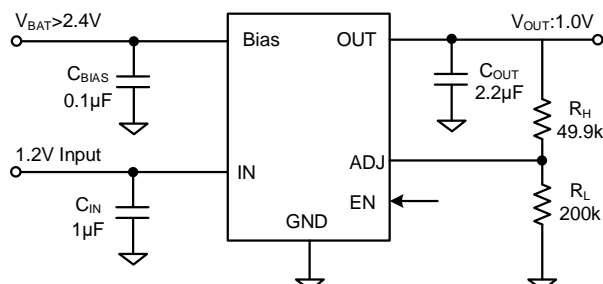
Applications

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

SY20733B - 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

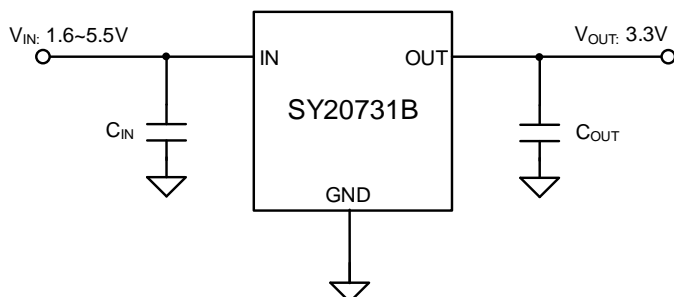
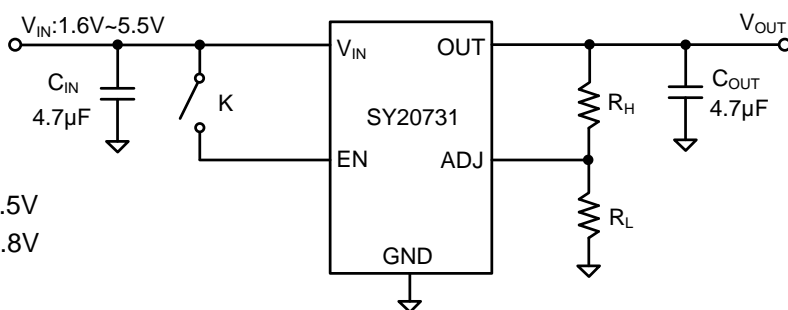
- Battery-Powered Equipment
- Smartphones, Tablets
- Cameras, DVRs, STB and Camcorders

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SY20731/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 (SY20731):
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: SY20731: DFN3 \times 3-6
SY20731B: SOT-223



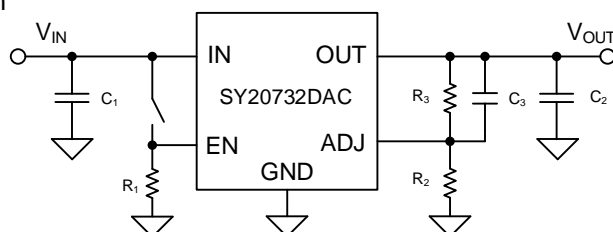
Applications

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

SY20732- Low Input/Low dropout, 2A LDO with Enable

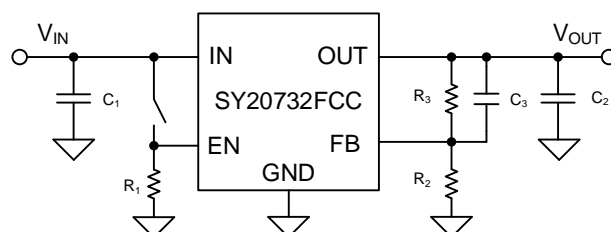
Features

- Input Voltage as Low as 1.4V
- 450mV Dropout @ 2A
- Adjustable Output from 0.5V
- 0.9ms Internal Soft-start Minimizes Inrush Current
- 10μA 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

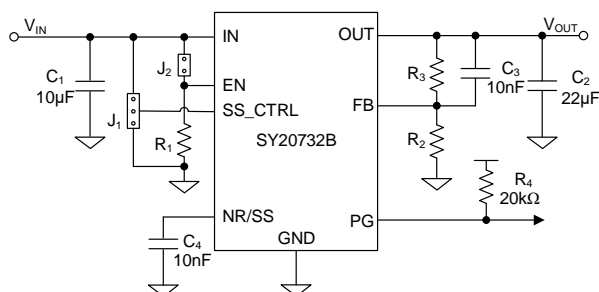
- Telecom/Networking Cards
- Motherboards/Peripheral Cards
- Industrial Applications
- Wireless Infrastructure
- Set Top Box
- Medical Equipment
- Notebook Computers
- Battery Powered Systems


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SY20732B- 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

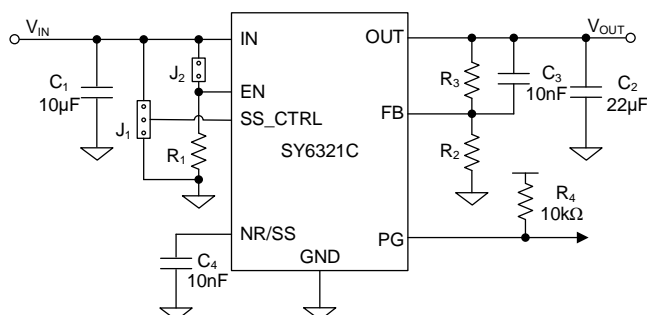
SY6321C- 1A, High Accuracy, LDO Regulator

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

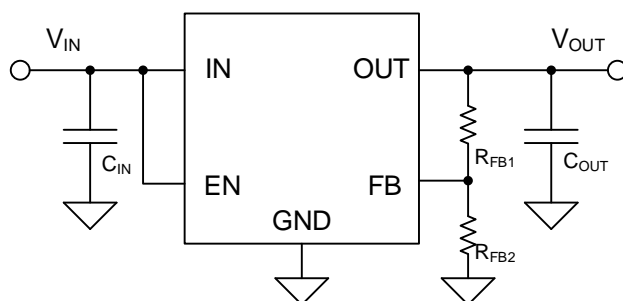
- High Speed Analog Circuits: VCO, ADC, DAC, LVDS
- Imaging: CMOS Sensors, Video ASICs
- Test and Measurement
- Instrumentation, Medical, and Audio
- Digital Loads: SerDes, FPGA, DSP



SY20728/B- 18V Input, 3A Fast-Response LDO Regulator

Features

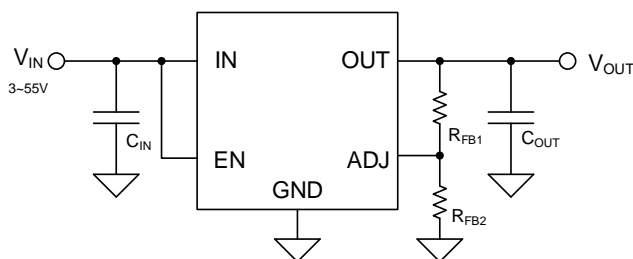
- 3V to 18V Input Voltage Range
- Low Dropout Voltage: 480mV at Full Load 3A
- High Current Capability: 3A Over Full Temperature Range
- Fast Transient Response
- Zero-Current Shutdown Mode
- Adjustable Output Voltage
- Low Ground Current
- Over Current Limit
- Output Short Circuit Protection (SY20728)
- Over Temperature Protection
- Package: TO263-5/TO252-5
- RoHS Compliant and Halogen Free



SY20703/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

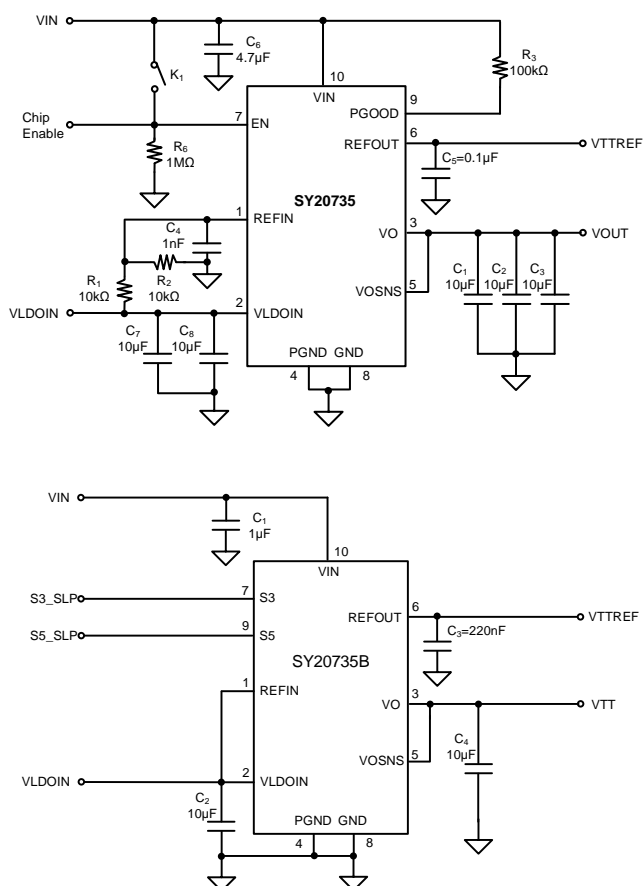
SY20735/B- Sink and Source DDR Termination Regulator

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:
 - SY20735: DFN3 \times 3-10 with Thermal Pad
 - SY20735B: 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
SY20808AAAC	SOT23-5	H	✓		1	2.5~5.5	0.6	80	Output discharge at shutdown Reverse Blocking, OCB indicator
SY20808BAAC	SOT23-5	L	✓		1	2.5~5.5	0.6	80	Output discharge at shutdown Reverse Blocking, OCB indicator
SY20814PDC	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
SY20815PRC	CSP0.79×0.79-4	H		✓	1	2.5~6	1	96	Precise clamping output voltage
SY20804AFAC	SO8	H	✓		1	4.5~18	1.2	110@V _{IN} =12V	Programmable blanking time for DFF control, Default Off when EN ON
SY20804FAC	SO8	H	✓	✓	1	4.5~18	1.2	110@V _{IN} =12V	Programmable blanking time for DFF control, Default On when EN ON
NEW SY20831FAAT	SOT23-5	H	✓		1	2.5~5.5	1.4	65	1.57A±9% Current Limit Accuracy, , Fast Reverse Recovery, OCB Indicator
SY20815BPRC	CSP0.79×0.79-4	H			1	1.8~5.5	1.5	80	Independent ON/OFF Control Input
SY20812DAAT	SOT23-5	H	✓		1	2.5~5.5	0.1~2	65	Programmable current limit, reverse blocking
SY20812AAAC	SOT23-5	H	✓		1	2.4~5.5	0.4~2	63	Programmable current limit, reverse blocking
SY20801AAAC	SOT23-5	L	✓		1	2.4~5.5	0.4~2	63	Programmable current limit, reverse blocking
SY20808C20AAC	SOT23-5	H	✓		1	2.5~5.5	2	65	Output discharge at shutdown Reverse Blocking, OCB indicator
SY20808D20AAC	SOT23-5	L	✓		1	2.5~5.5	2	65	Output discharge at shutdown Reverse Blocking, OCB indicator
SY20829ADFC	DFN2×2-8	H		✓	1	3~23	2	100	Fixed internal OVP@7.1V, Thermal Shutdown Protection & Auto Recovery
SY20829BDFC	DFN2×2-8	H		✓	1	3~23	2	100	Programmable OVP Threshold Thermal Shutdown Protection & Auto Recovery
SY20828ABC	SOT23-6	H		✓	1	3~23	2	100	Programmable OVP Threshold Thermal Shutdown Protection & Auto Recovery
SY20807CABC	SOT23-6	H	✓		1	2.5~5.5	2	65	TUV/CB, UL Certificate
SY20807BDEC	DFN2×2-6	L	✓		1	2.5~5.5	0~2	65	High accurate programmable current limit, reverse blocking
SY20807CDEC	DFN2×2-6	H	✓		1	2.5~5.5	0~2	65	High accurate programmable current limit and reverse blocking, TUV/CB, UL Certificate
SY20807ZDEC	DFN2×2-6	H	✓		1	2.5~5.5	2	65	Output discharge at shutdown Reverse Blocking, OCB indicator
SY20807LABC	SOT23-6	H	✓		1	2.5~5.5	2	65	Adjustable Current Limit up to 2.0A, OCP/OTP with Latch Off Function
SY20806APAC	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
SY20806GPAC	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
SY20815APRC	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
SY20808C7AAC	SOT23-5	H	✓		1	2.5~5.5	2.5	70	Output discharge at shutdown Reverse Blocking, OCB indicator
SY20808D7AAC	SOT23-5	L	✓		1	2.5~5.5	2.5	70	Output discharge at shutdown Reverse Blocking, OCB indicator
SY20808C5CAC	MSOP8	H	✓		1	2.5~5.5	2.5	70	Output discharge at shutdown Reverse Blocking, OCB indicator
SY20808D5CAC	MSOP8	L	✓		1	2.5~5.5	2.5	70	Output discharge at shutdown Reverse Blocking, OCB indicator
SY20809LACC	TSOT23-5	H	✓		1	2.4~6	2.5	80	Programmable Current limit
SY20812CAAT	SOT23-5	H	✓		1	2.5~5.5	0.1~2.5	65	Programmable current limit, reverse blocking
SY20808F3ABC	SOT23-6	H	✓		1	2.5~5.5	0~3	45	programmable current limit and reverse blocking
SY20808E1AAC	SOT23-5	H	✓		1	2.5~5.5	3	45	Output discharge at shutdown Reverse Blocking, OCB indicator
SY20808E2AAC	SOT23-5	L	✓		1	2.5~5.5	3	45	Output discharge at shutdown Reverse Blocking, OCB indicator
SY20808F2ABC	SOT23-6	L	✓		1	2.5~5.5	3	45	Output discharge at shutdown Reverse Blocking, OCB indicator
SY20809ACC	TSOT23-5	H	✓		1	2.4~6	3	50	Output discharge at shutdown Reverse Blocking, OCB indicator
SY20803ADRC	DFN1.2×1.6-4	H	✓		1	2.5~5.5	3	60	Output discharge at shutdown Reverse Blocking
SY20803DRC	DFN1.2×1.6-4	H	✓		1	2.5~5.5	3	60	Reverse blocking output, ultra low input voltage
SY20813PEC	6 ball CSP	H			1	1.2~5.5	3	22	Auto output cap discharge function
SY20813APEC	6 ball CSP	H			1	1.2~5.5	3	22	No output cap discharge function
SY20822AAC	SOT23-5	H			1	0.6~3.6	3	45	Programmable turn-on delay, Automatic shutdown discharge
SY20821B2ABC	SOT23-6	L	✓	✓	1	2.5~5.5	3	45	Support Fast Role Swap, OCB, Reverse Block up to 28V, TUV/CB, UL Certificate
SY20821B3ABC	SOT23-6	H	✓	✓	1	2.5~5.5	3	45	Support Fast Role Swap, OCB, Reverse Block up to 28V, TUV/CB, UL Certificate
SY20821B4ABC	SOT23-6	L	✓	✓	1	2.5~5.5	3	45	Support Fast Role Swap, OCB, Reverse Block up to 28V, TUV/CB, UL Certificate
SY20802UGC	CSP1.50×1.64-12	H	✓	✓	1	3~18	3	45	OCP/TSO/OVP Protection; Auto-recovery; Programmable current limit, Reverse blocking
SY20802BUGC	CSP1.50×1.64-12	H	✓	✓	1	3~18	3	45	OCP/TSO/OVP Protection; Auto-recovery; Programmable current limit
SY20822ADQC	DFN1.5×1.5-6	H			1	0.6~3.6	4	16	Programmable turn-on delay & Automatic shutdown discharge
SY20823DFC	DFN2×2-8	H			2	0.6~5.5	4	28	Programmable turn-on delay & ramp-up time, integrated OTP SCP
SY20834DBC	DFN3×3-10	H	✓	✓	1	2.5~30	4	50	Programmable soft-start & current limit, 3.3V/5V/12V selectable clamping output
SY20805PLC	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

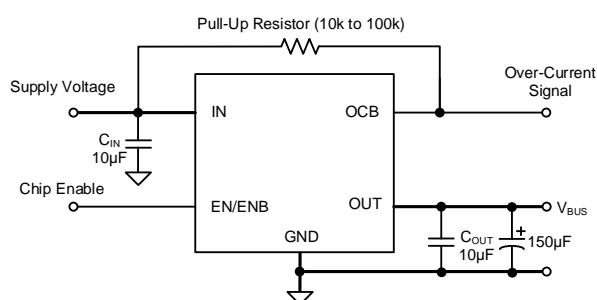
Part Number	Package	Enable Logic	OCP	OVP	No. of Channels	V _{IN} (V)	I _{OUT} (A)	R _{DS(ON)} (mΩ)	Special Function
SY20845ADBC	DFN3×3-10	H	✓	✓	1	2.5~30	5	40	Programmable soft-start & current limit, 3.3V/5V/12V selectable clamping output
SY20845CDBC	DFN3×3-10	H	✓	✓	1	2.5~30	5	50	Programmable soft-start & current limit, 3.3V/5V/12V selectable clamping output
SY20845DDBC	DFN3×3-10	H	✓	✓	1	2.5~30	5	40	Programmable soft-start & current limit, 3.3V/5V/9V selectable clamping output
SY20845FDBC	DFN3×3-10	H	✓	✓	1	2.5~30	5	50	Programmable soft-start & current limit, 3.3V/5V/12V selectable clamping output
SY20855ADBC	DFN3×3-10	H	✓	✓	1	2.5~12	5	40	Fixed Current Limit, Prog. SS
SY20855CDBC	DFN3×3-10	H	✓	✓	1	2.5~12	5	40	Fixed Current Limit, Prog. SS
SY20827PYC	CSP0.89×1.43-6	H		✓	2	2.5~25	5	30	Programmable Over Voltage Threshold
SY20816CQLC	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
SY20816DQLC	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
SY20820CPGC	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
SY20820APGC	CSP1.8×2-12	H		✓	1	2.5~28	5A continuous, 8A peak	38	Programmable Over Voltage Threshold from +4V to +7V
SY20825PTC	CSP1.32×1.86-12	H		✓	1	2.5~28	Programmable 5A	R _{PWPT} =32mΩ (typ.)	Programmable Over Voltage Threshold from +4V to +22V
SY20819ERYC	QFN2×2-9	H	✓		1	2.95~6.5	5	30	Selectable Clamping Output Voltage
SY20818RYC	QFN2×2-9	H	✓		1	2.7~5.5	5	30	Programmable high current limit, reverse blocking, VIN state indicate, Selectable Clamping Output
SY20817ATLC	QFN2×2-12	H	✓		1	2.5~16	1~5	30	Programmable OUT Slew Rate
SY28876AQSC	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
SY20826DUC	DFN3×2-14	H	✓		2	0.8~5.5	6	18	Dual-channel, Programmable soft-start time
SY20810DHC	DFN2×3-10	H			1	0.6~5.5	10	2.8	Controlled and Adjustable Slew Rate through C _{SST} , PG Indicator
SY20877BWPQ	QFN1.5×2-10	H			1	0.285~5.5	10	5.3	Auto Output Discharge

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SY20808- 5.5V Low Loss Power Distribution Switch

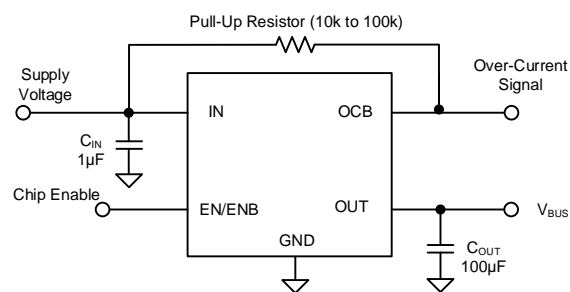
Features

- 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 (SY20808A/B/C7/D7)
- 1.6ms Rise Time at 3.3V_{IN} Conditions (SY20808C20/D20)
- RoHS Compliant and Halogen Free
- Compact Packages : SOT23-5, MSOP8



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

(SY20808A/B/C5/D5/C7/D7)



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

(SY20808C20/D20/E1/E2)

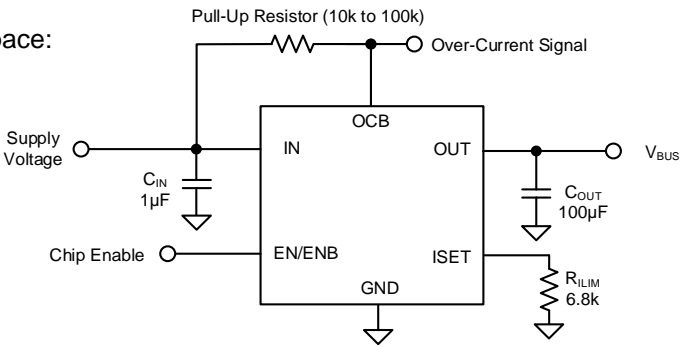
Ordering Number	Package Type	Enable Logic	Output Current
SY20808AAAC	SOT23-5	Active High	0.6A
SY20808BAAC	SOT23-5	Active Low	0.6A
SY20808C5CAC	MSOP8	Active High	2.5A
SY20808D5CAC	MSOP8	Active Low	2.5A
SY20808C7AAC	SOT23-5	Active High	2.5A
SY20808D7AAC	SOT23-5	Active Low	2.5A
SY20808C20AAC	SOT23-5	Active High	2A
SY20808D20AAC	SOT23-5	Active Low	2A
SY20808E1AAC	SOT23-5	Active High	3A
SY20808E2AAC	SOT23-5	Active Low	3A

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



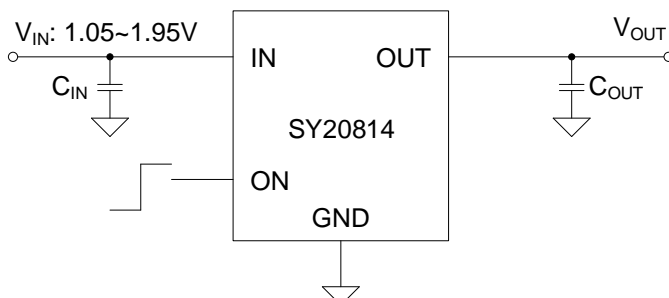
Note: If 1uF input cap will lead to large Vin voltage spike, it is strongly recommended to add additional 10uF ceramic cap.

Ordering Number	Package Type	Enable Logic	Output Current	Note
SY20808F2ABC	SOT23-6	Active Low	3A	Output Discharge Function
SY20808F3ABC	SOT23-6	Active High	3A	No Output Discharge

SY20814 - 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



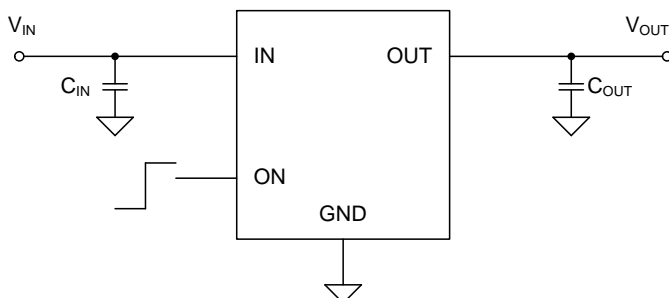
Applications

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

SY20815/A/B - Low ON-Resistance Load Switch

Features

- Input Voltage Range:
 - SY20815: 2.5V to 6V
 - SY20815A/B: 1.8V to 5.5V
- Low $R_{DS(ON)}$:
 - SY20815: 96m Ω
 - SY20815A/B: 80m Ω
- Continuous Load Current Capability:
 - SY20815: 1A
 - SY20815A/B: 1.5A
- 100nA Shutdown Current (SY20815A/B)
- Independent ON/OFF Control Input
- Ultra Compact CSP0.79 \times 0.79-4 0.3mm Package
- RoHS Compliant and Halogen Free



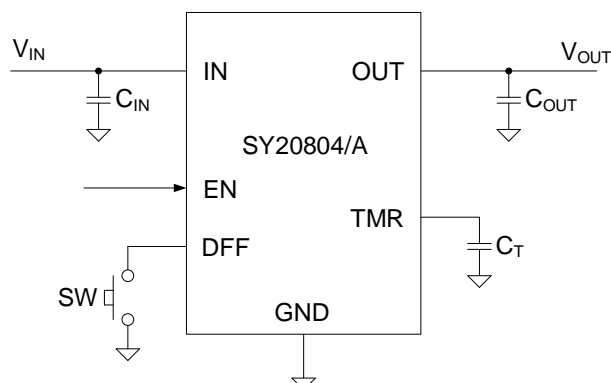
Applications

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

SY20804/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:
 - SY20804: Default ON when EN high
 - SY20804A: 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

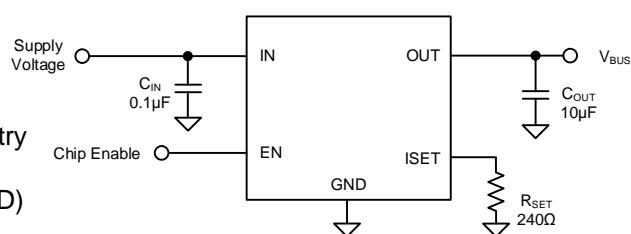
SY20812A/C/D - Low Loss Power Distribution Switch with Programmable Current Limit

Features

- Input Voltage:
 - SY20812A: 2.4V to 5.5V
 - SY20812C/D: 2.5V to 5.5V
- Low Power Path Resistance:
 - SY20812A: 63m Ω (typ.)
 - SY20812C/D: 65m Ω (typ.)
- Low Quiescent Current I_Q
- Low Shutdown Current I_{SHDN}
- Adjustable Current Limit :
 - SY20812A: from 400mA to 2A
 - SY20812C: from 100mA to 2.5A
 - SY20812D: from 100mA to 2A
- Overtemperature Shutdown and Automatic Retry
- Reverse Blocking (No Body Diode)
- Output Capacitor Auto-Discharge (SY20812C/D)
- Built-in Soft-Start
- RoHS Compliant and Halogen Free
- Compact Package: SOT23-5

Applications

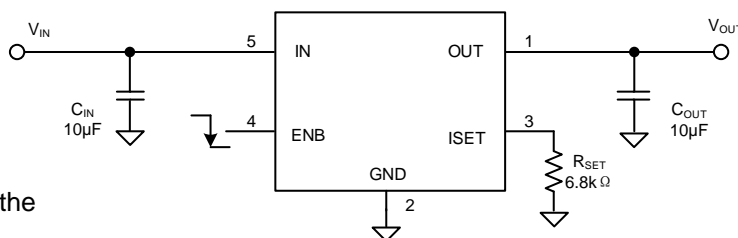
- USB 3.1 Applications
- USB Dongles
- PC Accessories
- USB Chargers
- Public Place Multi-USB Chargers
- PC Card Hotswap Applications



SY20801A - 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

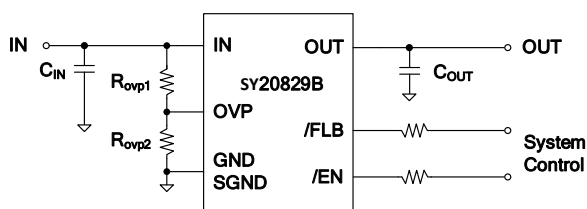
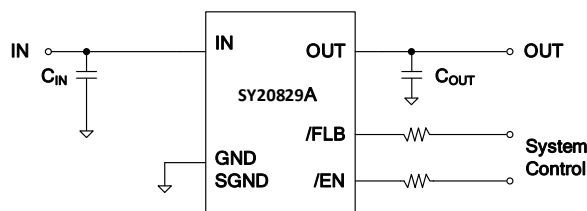
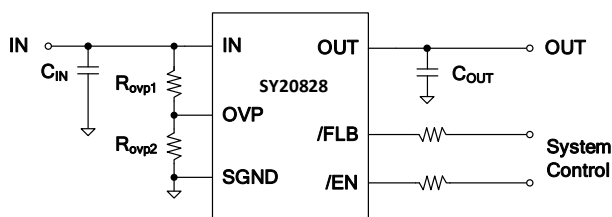
SY20828/SY20829A/SY20829B - Over Voltage Protection Switch

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
 - **SY20829A** — Internal Fixed Over-Voltage Protection Threshold at 7.1V
 - **SY20828/ SY20829B** — 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:
 - SY20828: SOT23-6
 - SY20829A/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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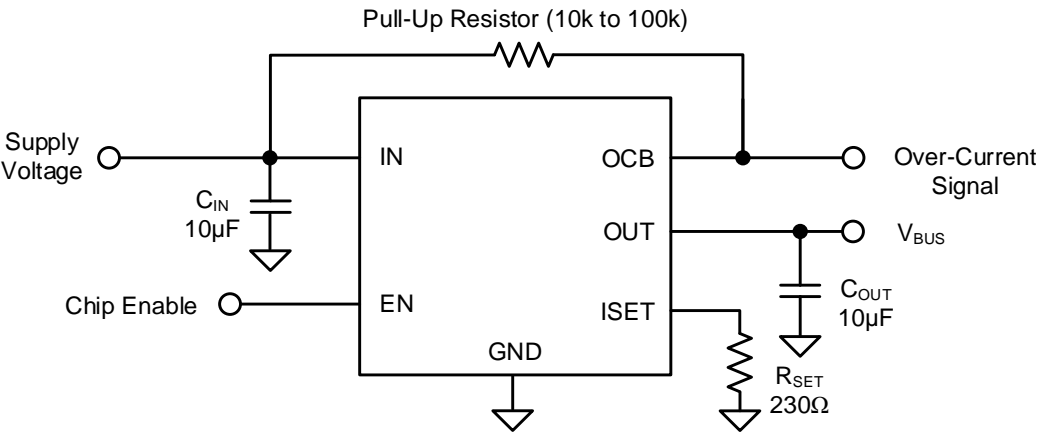
Features

- 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
 - SY20807B/C/Z: Automatic Retry
 - SY20807L: Latch Off After Current Limit 2ms
- Automatic Output Discharge at Shutdown
 - SY20807L/Z: Auto Output Voltage Discharge
 - SY20807B/C: No Output Voltage Discharge
- Fast Trip Protection Logic During V_{OUT} Hard Short
 - SY20807Z: 2μs short circuit response time
 - SY20807B/C/L: 25μs current limit response time
- Enable Polarity
 - SY20807C/L/Z: Active High
 - SY20807B: 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
SY20807BDEC	DFN2×2-6
SY20807CDEC	DFN2×2-6
SY20807CABC	SOT23-6
SY20807LABC	SOT23-6
SY20807ZDEC	DFN2×2-6



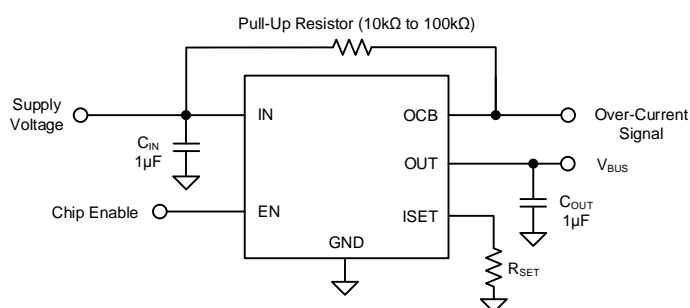
SY86201E - Low Loss Power Distribution Switch with Programmable Current limit

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



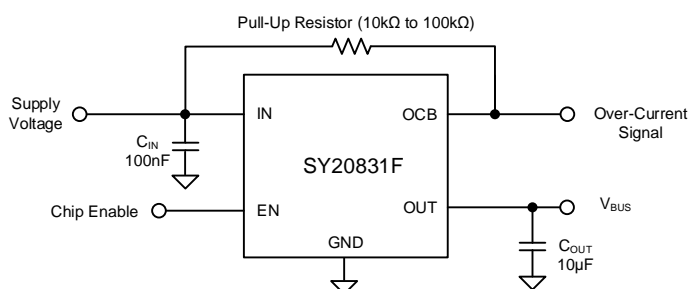
SY20831F - Low Loss Power Distribution Switch with 1.57A Fixed Current Limit

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

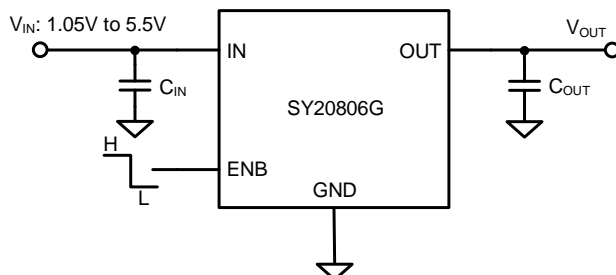
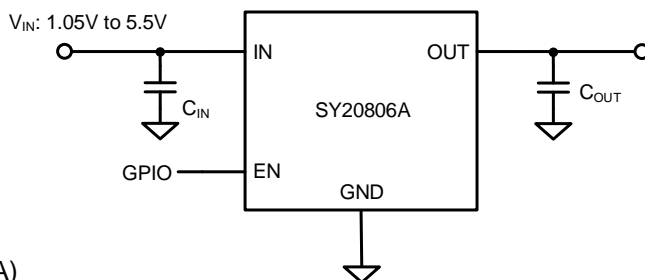
- USB 3.1 Applications
- USB 3G Data Cards
- USB Dongles
- USB Chargers
- Public Place Multi-USB Charger
- PC Card Hot-Swap Applications



SY20806A/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 $V_{IN}=3.3V$ (SY20806A)
 - 1200 μs rise time at $V_{IN}=3.3V$ (SY20806G)
- Compact Package: CSP 0.78mm \times 0.78mm-4



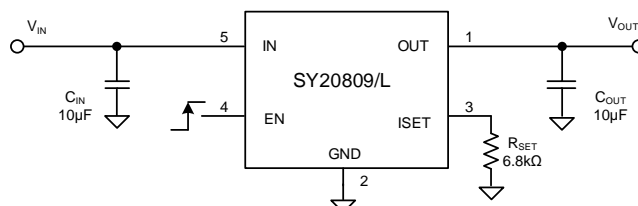
Applications

- Notebook
- Cell Phone
- Digital Cameras
- IoT devices

SY20809/L - 6V, 3A/2.5A Low Loss Power Distribution Switch

Features

- Input Voltage: 2.4V to 6V
- 3A(SY20809)/ 2.5A (SY20809L) 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

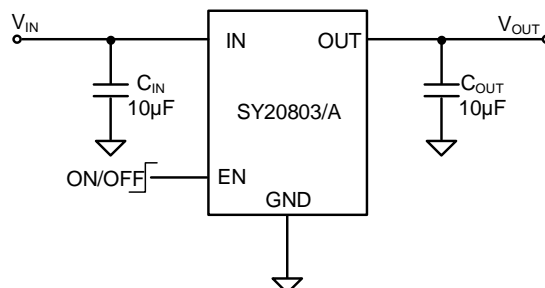
- Battery Operated Products
- USB Dongles
- Mini PCI Accessories
- USB Chargers
- Public Place Multi-USB Chargers

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SY20803/A - 3A Continuous, 4A Peak Current, Low Loss Power Distribution Load Switch

Features

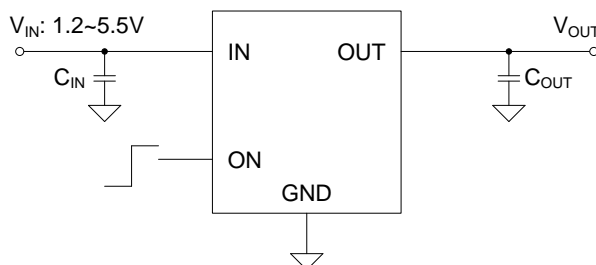
- Distribution Voltages: 2.5V to 5.5V
- Over Temperature Shutdown and Automatic Retry
- Reverse Blocking (No Body Diode)
- At shutdown, OUT Can Be Forced Higher than IN
- Built-in Soft-start
- Output Discharge Function
- ✧ SY20803: No Output Discharge Function
- ✧ SY20803A: Auto Output Discharge Function
- RoHS Compliant and Halogen Free
- Compact Package Minimize Board Space: DFN1.2×1.6-4



SY20813/A - 5V 3A Ultra-Low Loss Reverse Blocking Load 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:
 - SY20813: Auto Output Capacitor Discharge Function
 - SY20813A: No Output Capacitor Discharge Function
- RoHS Compliant and Halogen Free
- Compact CSP-6 Package: 1.0mm × 1.5mm, 0.5mm Pitch, 0.5mm Height



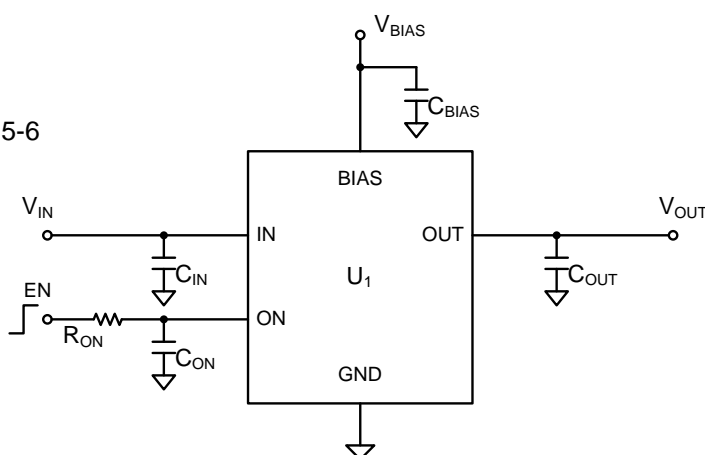
Applications

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

SY20822/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 (SY20822)/ 16m Ω (SY20822A)
- Maximum Output Current: 3A (SY20822)/ 4A (SY20822A)
- 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: SY20822: SOT23-5/
SY20822A: DFN1.5 \times 1.5-6



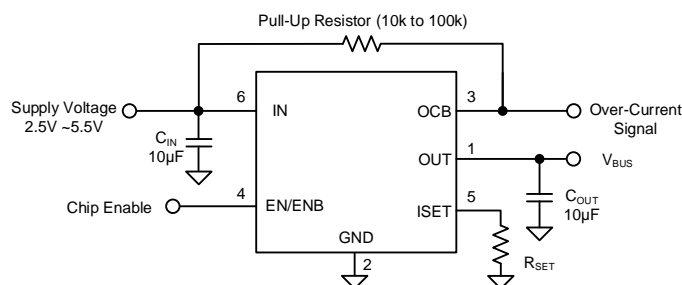
Applications

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

SY20821B2/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
 - SY20821B2/B4: Active Low
 - SY20821B3: Active High
- Compact Package: SOT23-6
- RoHS Compliant and Halogen Free



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

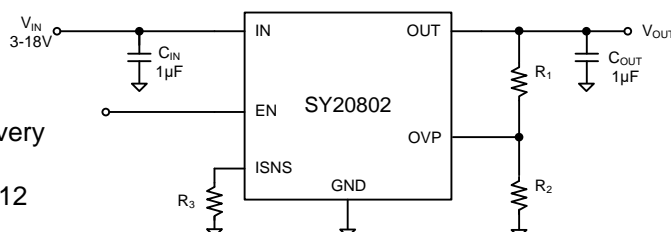
Applications

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

SY20802/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 (SY20802)
- Up to 28V Voltage Rating for OUT Pin (SY20802B)
- Extremely Low ON Resistance $R_{DS(ON)}$
 - $R_{DS(ON)} = 45m\Omega$ (typ.) at 12V V_{IN} condition
- Reverse Blocking Function (SY20802)
- 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



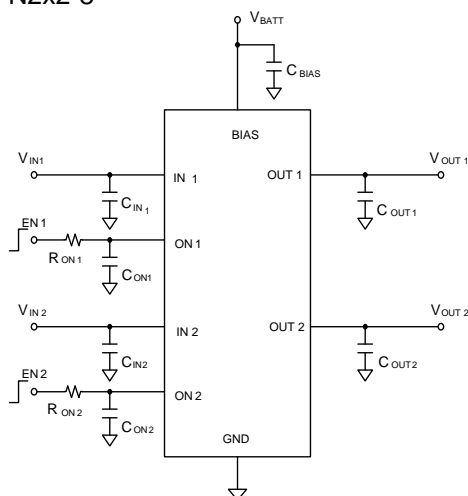
Applications

- Wireless Charger
- USB PD

SY20823 - Dual Channel 4A, Ultra Low Loss Load Switch

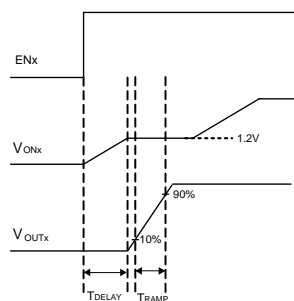
Features

- Low $R_{DS(ON)}$ for internal MOSFETs: 28mΩ
- 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: 210Ω
- Compact: DFN2x2-8



Applications

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


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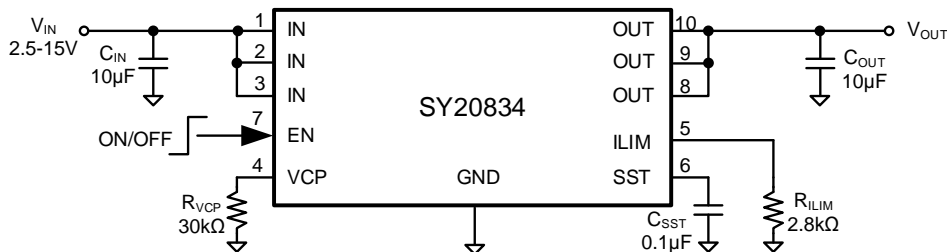
SY20834 - Programmable Current Limit Switch

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



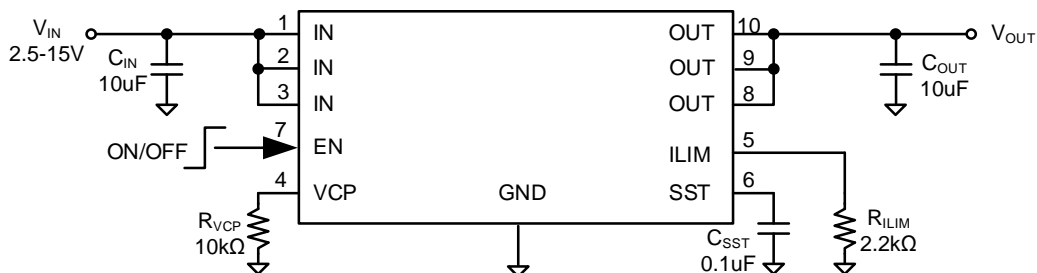
SY20845A/C/D/F- 15V Programmable Current Limit Switch with OVP Clamp

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:
 - SY20845A/D: 40 m Ω
 - SY20845C/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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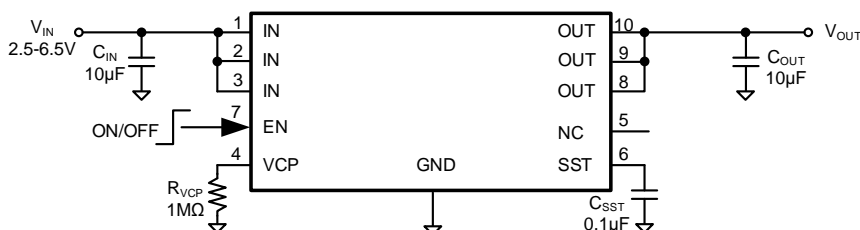
SY20855A/C - 6.5V 5A Current Limit Switch with OVP Clamp

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



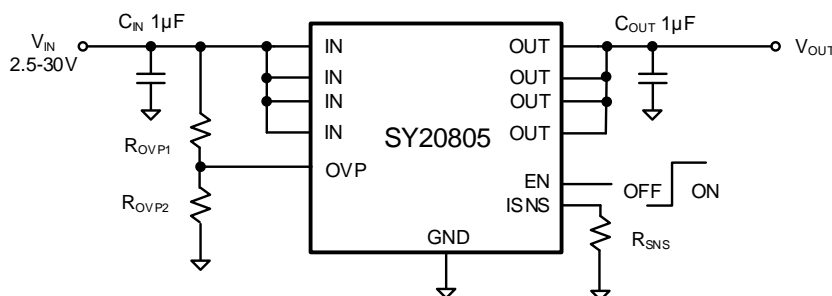
SY20805 - High-Current Overvoltage Protection Switch With Integrated Reverse Blocking MOSFETs

Features

- Input Voltage Range: 2.5V to 30V
- 20V Integrated Reverse Blocking FET Rating
- Extremely Low Power Path Resistance R_{PWPT}
 - $R_{PWPT}=53\text{m}\Omega$ (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


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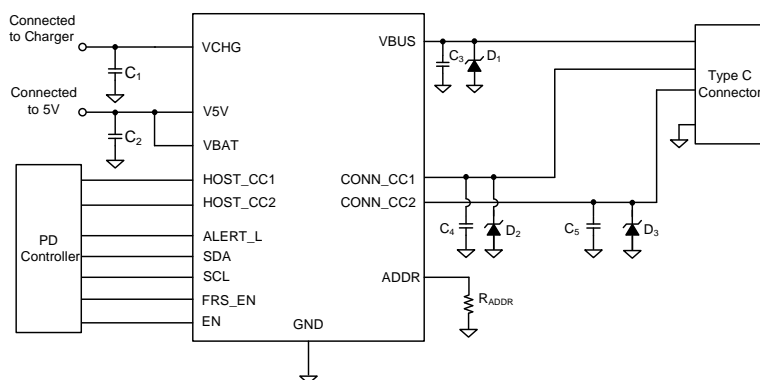
SY20816C/D - 2 to 1 Power MUX for USB PD Application

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 QFN3x4-16

Applications

- USB PD
- Desktop PC
- Laptops
- Smartphones



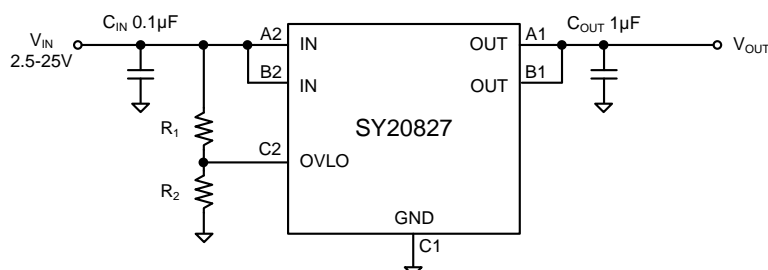
SY20827- Programmable High Current Overvoltage Protection Switch

Features

- $V_{IN}=2.5V$ to $25V$, Absolute Maximum $V_{IN}=28V$
- Extremely Low Power Path on Resistance R_{PWPT} : $30m\Omega$ 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 $0.89 \times 1.43 \times 0.6$

Applications

- Smart Phone
- Tablet PCs
- Mobile Device

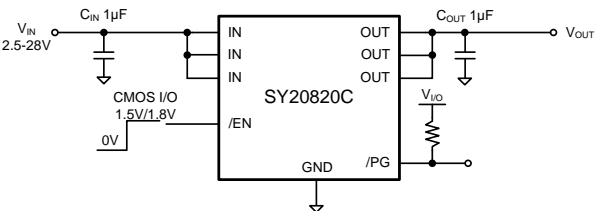
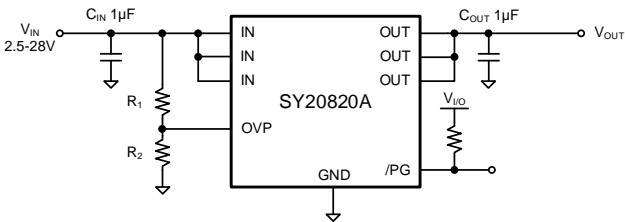

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SY20820A/C - Programmable High Current Overvoltage Protection Switch

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 (SY20820C)
- Programmable Over Voltage Threshold from +4V to +7V (SY20820A)
- RoHS Compliant and Halogen Free
- Compact Package: CSP 2.0mmx1.8mm-12



Applications

- Smart Phone
- Tablet PCs
- Mobile Device

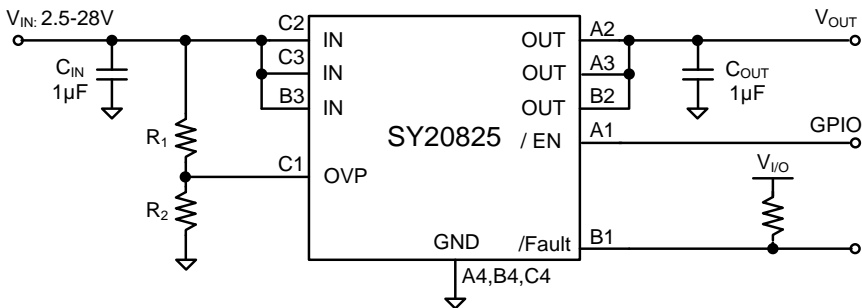
SY20825 - Programmable 5A Overvoltage Protection Switch

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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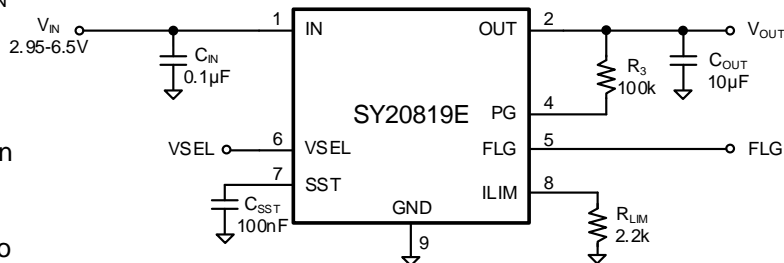
SY20819E- Programmable High Current Protection Switch with -6V Reverse Voltage Protection

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

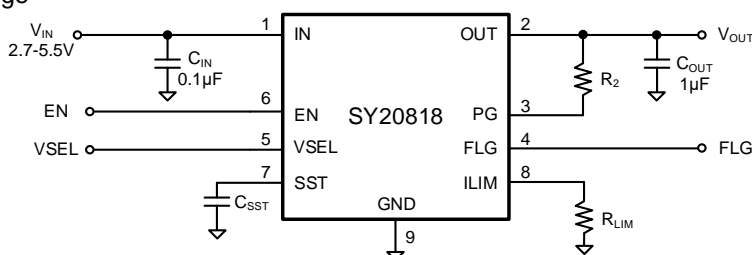
- SSD M.2 Form Factor
- SSD Dual Input Power Applications
- SSD Load Switch



SY20818 - 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 $R_{PWP} = 30\text{m}\Omega$ (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

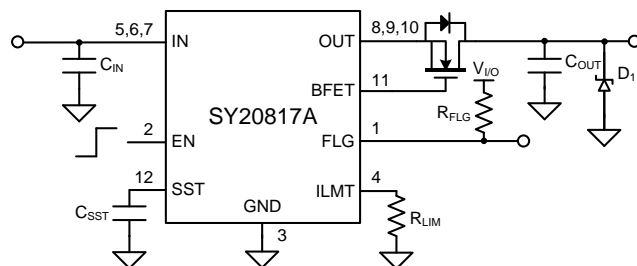
SY20817A- 2.5V to 16V Protection Switch with Blocking FET Control

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



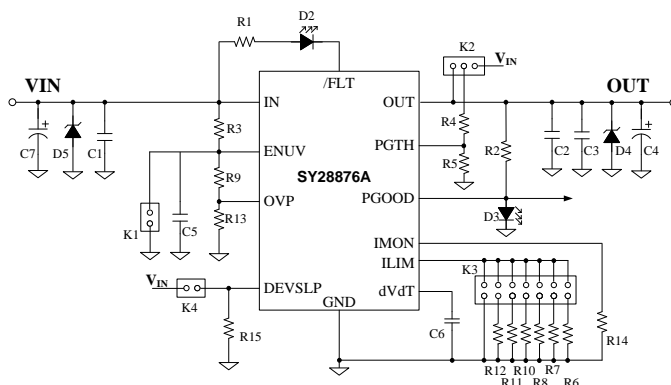
SY28876A- 2.7V-18V Switch With True Reverse Blocking and DevSleep Support for SSDs

Features

- 2.7V to 18V Operating Voltage, 30V (Max)
- Ultra Low RDS(ON): 42 m Ω RON (Typical)
- 0.6A to 5.3A Adjustable Current Limit ($\pm 8\%$)
- IMON Current Indicator Output ($\pm 8\%$)
- Operating IQ: 115 μ A ($V_{IN} = 12$ V, typ.)
- Shutdown Current: 15 μ A ($V_{IN} = 12$ 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


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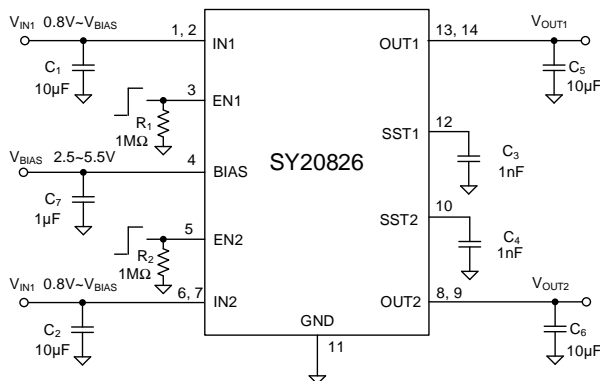
SY20826 - 5.5V/6A, Low R_{DS(ON)} Dual-Channel Load Switch

Features

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

Applications

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



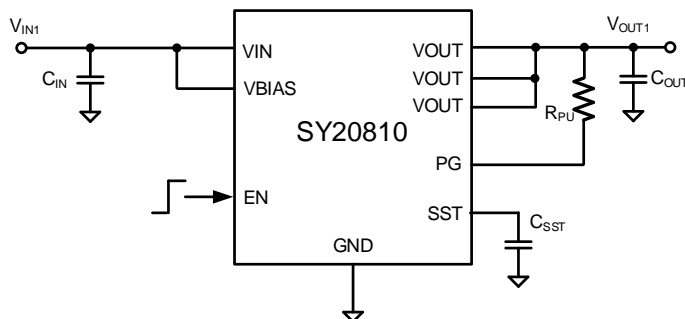
SY20810 - 5.5V 10A Load Switch with Ultra Low R_{DS(ON)}

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 m Ω (typical) at V_{IN} = 5 V, V_{BIAS} = 5V
 - R_{ON} = 2.8 m Ω (typical) at V_{IN} = 3.3 V, V_{BIAS} = 3.3V
- 10-A Maximum Continuous Switch Current
- Quiescent Current
 - I_{Q-VBIAS} = 63 μ A at V_{BIAS} = 5V
- Shutdown Current
 - I_{SD-VBIAS} = 5.5 μ A at V_{BIAS} = 5V
 - I_{SD-VIN} = 4nA at V_{BIAS} = 5V, V_{IN} = 5V
- 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



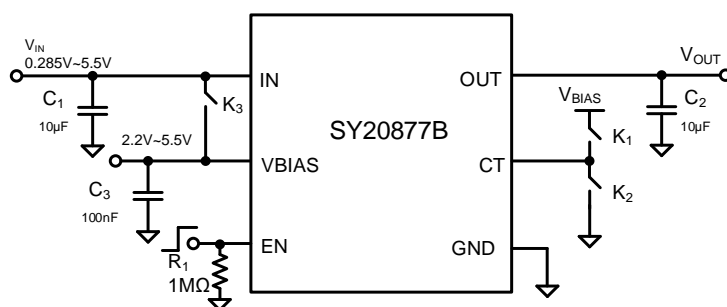
SY20877B -5.5V 10A Load Switch with Ultra Low $R_{DS(ON)}$

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
 - $R_{ON} = 5.3m\Omega$ (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: 50Ω
- RoHS Compliant and Halogen Free
- Compact Package: QFN1.5×2-10

Applications

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



Supervisor & Reset ICs

Part Number	Package	Number of Supplies Monitored	Output Driver/ Reset Output	Threshold Voltage (V)	Delay Time (ms)	Reset Threshold Accuracy	Quiescent Current (μA)	Features
SY20867ADTD	DFN1.45 \times 1-6	1	Active high, Push-pull	Adjustable	Programmable	$\pm 1\%$	9	EN ON delay time programmable
SY20867EDTD	DFN1.45 \times 1-6	1	Active high, open drain	Adjustable	Programmable	$\pm 1\%$	9	EN ON delay time programmable
SY20867FDTC	DFN1.45 \times 1-6	1	Active high, open drain	Adjustable	Programmable	$\pm 1\%$	9	200ns EN ON delay time

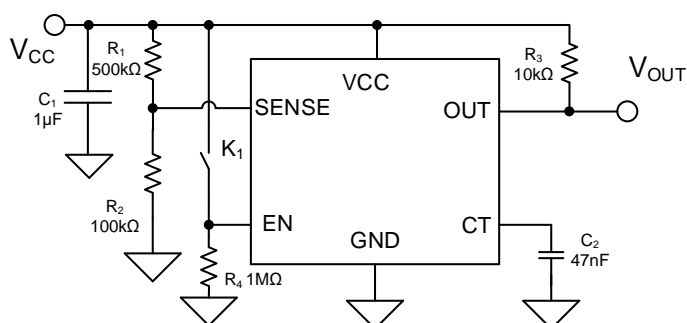
SY20867A/E/F - Single-channel, Adjustable Voltage Monitor in Ultra-small Package

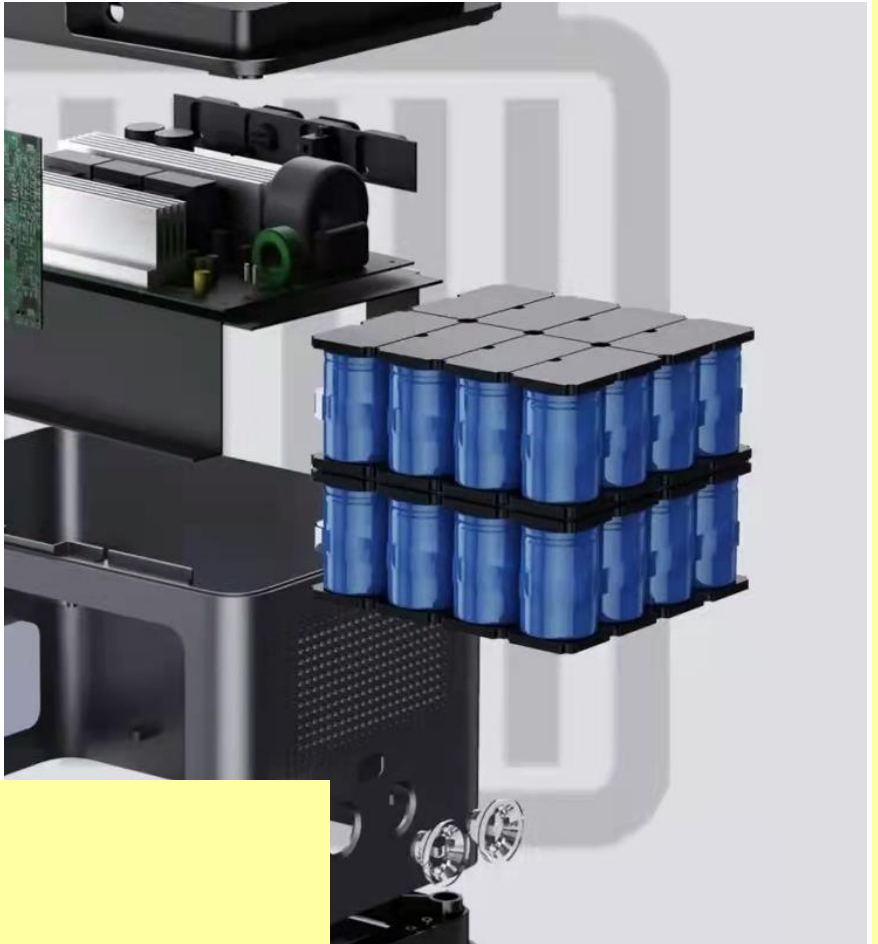
Features

- 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: DFN1.45x1.0-6

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
SY20717FAC	Single-Cell High Efficiency Switching Charger	SO8	4~16	1.2	0.8	Single Cell	4.1V	Adaptive Input Current Limit
SY20717BFAC	Single-Cell High Efficiency Switching Charger	SO8	4~16	1.5	0.8	Single Cell	4.2V	Adaptive Input Current Limit
SY20716D1PPC	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
SY20752AQIC	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
SY20752CDCC	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
SY20752BFCC	Single-cell Charger Step Down Reg.	SO8E	4~23	2	0.8	Single Cell	4.2V, 4.35V	Adaptive Input Current Limit
SY20752B1FCC	Single-cell Charger Step Down Reg.	SO8E	4~23	2	0.8	Single Cell	4.1V, 4.4V	Adaptive Input Current Limit
SY20718EQDC	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
SY20718CQDC	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
SY20718GQDC	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
SY20719QCC	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
SY20741QDC	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
SY20741BQDC	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
SY20741CQDC	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
SY20751TYC	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
SY20751BTYC	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
SY20743QCC	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
SY20743BQCC	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
SY20743CQCQ	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
SY20743GQCQ	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

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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
SY20774DQCQ	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 HVTTYPE=9V
SY20744VKS	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
SY20764QDC	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
SY20764BQDC	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
SY20753QYC	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
SY20759QEQ	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
SY20798QEQ	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
SY20757VCC	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
SY20754QCC	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
SY20763QDC	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
SY20762NQDC	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
SY20762EQDC	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
SY20762E1QDC	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
SY20762FQDC	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
SY20765QDC	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
SY20779CQFQ	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
SY20776DQFQ	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
SY20774BQCQ	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 HVTTYPE=12V
SY20744BVKS	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

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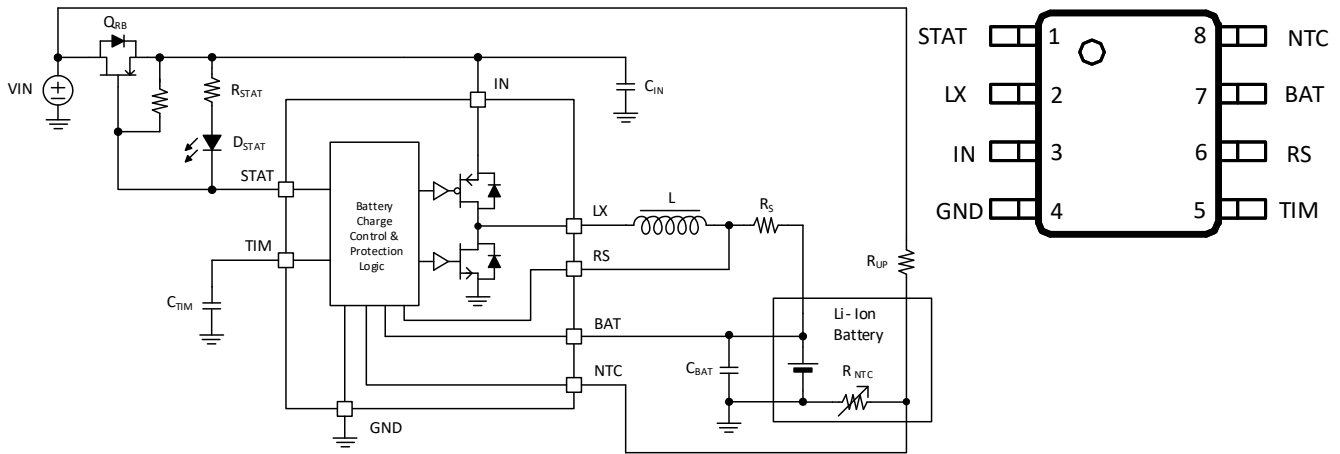
Switching Charger

Part Number	Function	Package	V _{IN} (V)	Max. Charge Current (A)	F _{SW} (MHz)	Series Cells	Cell Voltage	Special Function
SY20761BQDC	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
SY20766RAC	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
SY20778QYC	Synchronous Boost converter with QC3.0	QFN4x4-20	2.7~4.5	/	0.3, 0.5	Single Cell	/	QC3.0 Compliance
SY20783QIC	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
SY20794VWS	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
SY20748BQCQ	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
SY20777QCQ	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
SY20767WFS	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
SY20747AQAQ	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
SY20761QDC	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

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SY20717/BFAC

1.2A/1.5A Single Cell High Efficiency Switching Charger



Features

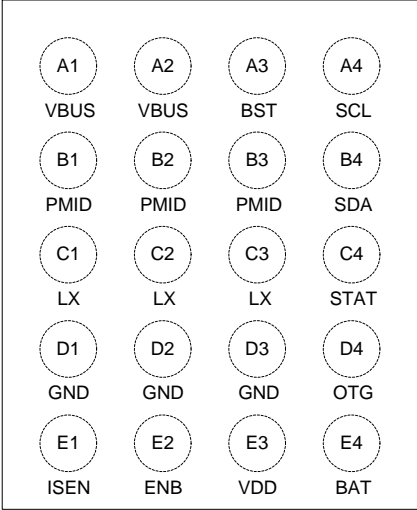
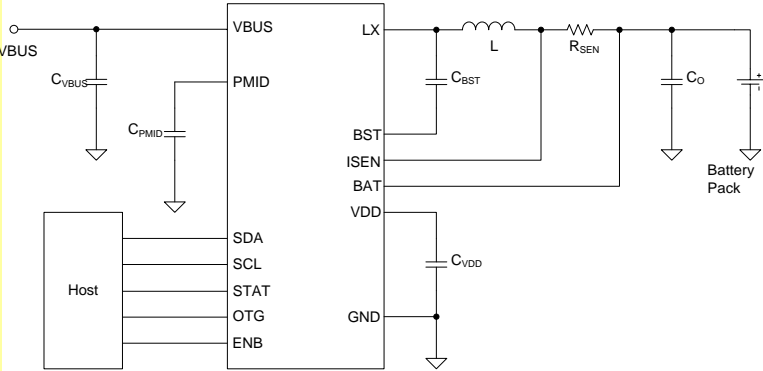
- Wide Input Voltage Range: 4.0V to 16V
- High Efficiency Synchronous Buck Regulator with Fixed 800kHz Switching Frequency
- Trickle Current/Constant Voltage Charge Mode
- Adaptive Input Current Limit
- Programmable Charging Timeout
- Programmable (1.2A/1.5A MAX) Constant Charge Current
- Input Voltage 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

Switching Charger

SY20716D1PPC Highly Integrated USB Compliant Single Li-Ion Cell Switching Charger with USB-OTG Function



Features

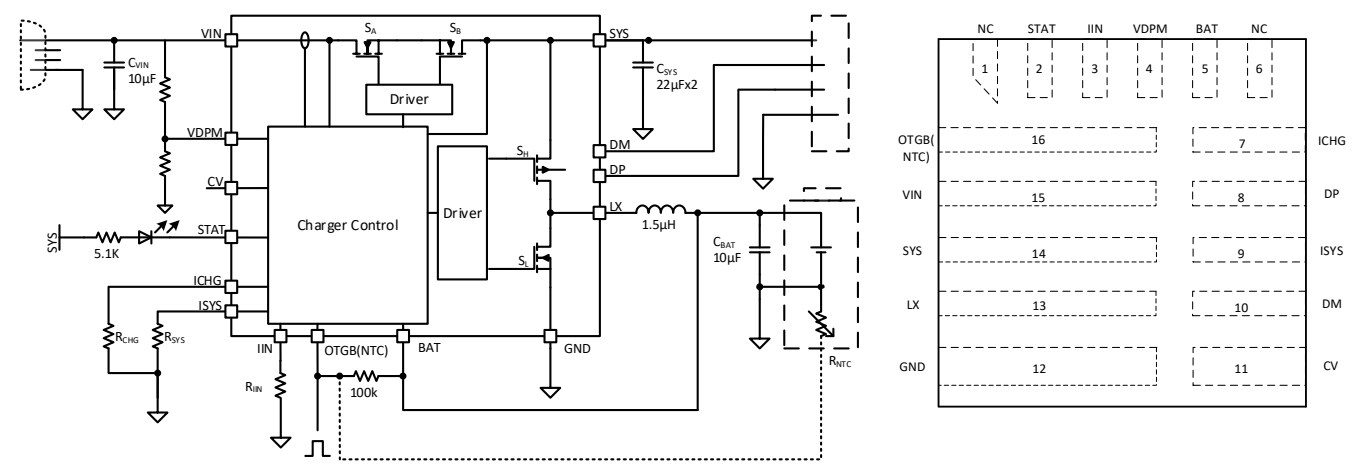
- Up to 18V Absolute Maximum Input Voltage
- 6V Maximum Operating Input Voltage
- Up to 1.25A Charge Current (68mΩ RSEN)
- Up to 1.55A Charge Current (55mΩ RSEN)
- Adaptive Input Current Limit
- ±5% Input Current Limit Accuracy at 500mA
- ±0.5% Charge Voltage Accuracy
- I2C Controls (Up to 3.4Mbps):
- 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 Switching Frequency
- Automatic High Impedance Mode for Reduced Power Consumption
- 5V,1A Boost Mode for USB OTG
- Spread Spectrum Control for Improved EMI Performance
- Factory Test Mode for GSM Calibration Without a Battery
- CSP1.93x2.05-20 Package

Applications

- PADs
- Smartphones
- Portable Equipment with Rechargeable Batteries
- Battery Back-Up Systems

Switching Charger

SY20718C/E/GQDC High Efficiency Bi-Directional Power Bank Regulator for Single-Cell Battery Power Banks



Features

- Maximum 18V Input Voltage Surge
- Input Voltage UVLO and OVP
- SY20718C/G: 4.2V/4.35V Selectable Battery Cell Voltage
- SY20718E: 4.25V/4.4V Selectable Battery Cell Voltage
- +/-0.5% Cell Voltage Accuracy
- 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
- Charge / Discharge / Fault Status Indicator
- Discharging Control Logic
- Programmable Input Current Limit
- Bad Adapter Detection
- Built-In Power Path NFETs and Power Switches
- Dynamic Power Management
- Cycle-by-Cycle Peak Current Limit
- Boost Output Short Circuit Protection
- Thermal Shutdown

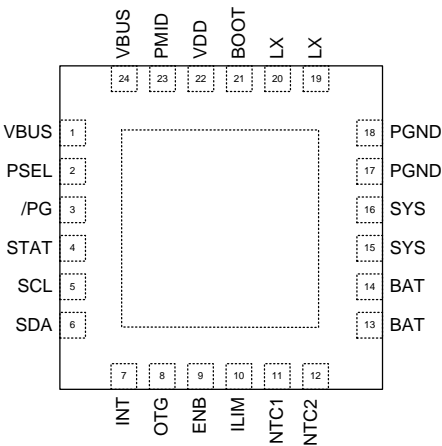
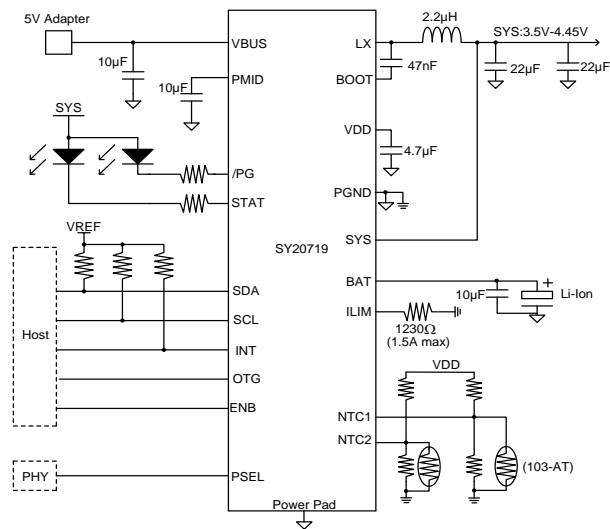
Applications

- Single-Cell Power Banks
- Portable Devices with Single Cell Batteries

Switching Charger

SY20719QCC

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



Features

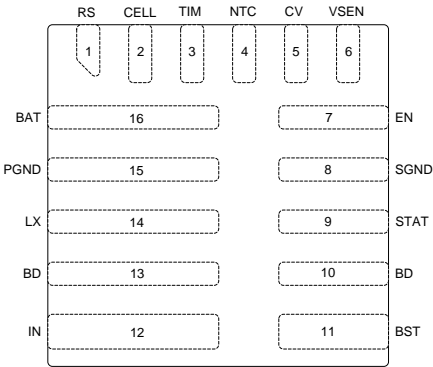
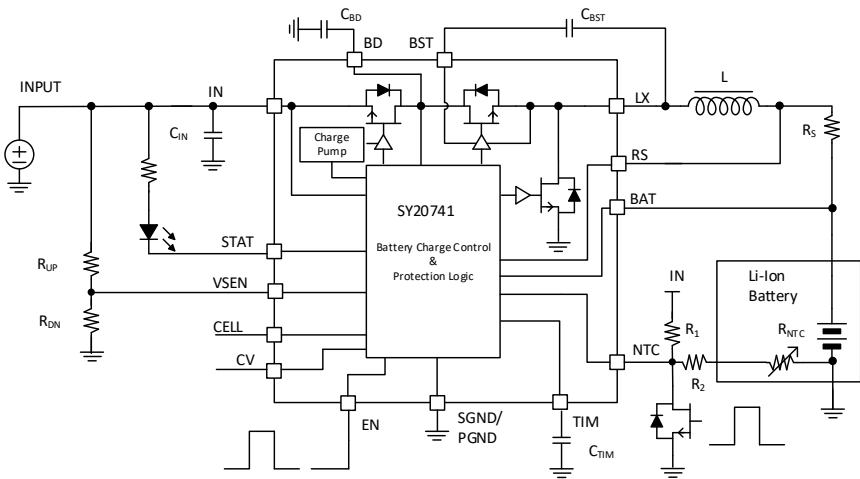
- Single Input USB-Compliant/Adapter Charger
- Input Voltage and Current Limit Supports USB2.0 and USB 3.0
- Input Current Limit: 100mA, 150mA, 500mA, 900mA, 1A, 1.5A, 2A and 3A
- 3.9V–6 V Input Operating Voltage Range
- USB OTG 5V at about 1A Synchronous Boost Converter Operation
- Narrow VDC (NVDC) Power Path Management
- 1.5MHz Switching Frequency for Low Profile Inductor
- Autonomous Battery Charging with or without Host Management
- High Accuracy
- ±1% Charge Voltage Regulation
- ±10% Fast Charge Current Regulation
- ± 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

SY20741QCC

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



Features

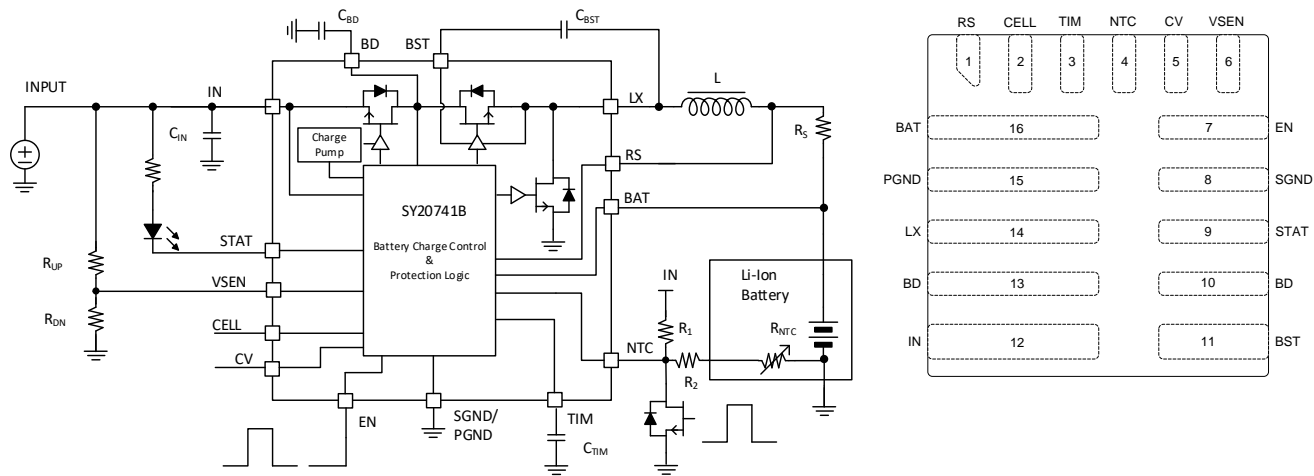
- Adaptive Input Power Limit for 4-14V Input Voltage Range
- 4.2V and 4.35V Selectable Cell Termination Voltage
- Integrated Synchronous Buck and Reverse Blocking MOSFET with 16V Rating
- Maximum 2.5A Programmable Charge Current
- +/-0.5% Cell Voltage Accuracy
- Supports Single-Cell or Two-Cell Battery Packs
- External Shutdown Function
- Input Voltage UVLO and OVP
- Thermal Fold-Back Protection
- Over Temperature Protection
- Battery Short-Circuit Protection
- Programmable Charge Timeout
- Charge Status Indication
- Low Profile QFN3x3 Package for Portable Applications

Applications

- Power Banks
- Mobile phones, PDAs, MP3 Players, MP4 Players
- PSP Game Players, NDS Game Players
- Notebooks

SY20741BQCC

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



Features

- Adaptive Input Power Limit for 4-14V Input Voltage Range
- 4.2V and 4.35V Selectable Cell Termination Voltage
- Integrated Synchronous Buck and Reverse Blocking MOSFET with 16V Rating
- Maximum 2.5A Programmable Charging Current
- Supports Single-Cell or Two-Cell Battery Packs
- External Shutdown Function
- Input Voltage UVLO and OVP
- Thermal Fold-Back Protection
- Over Temperature Protection
- Battery Short-Circuit Protection
- Programmable Charge Timeout
- Charge Status Indication
- Low Profile QFN3×3 Package for Portable Applications

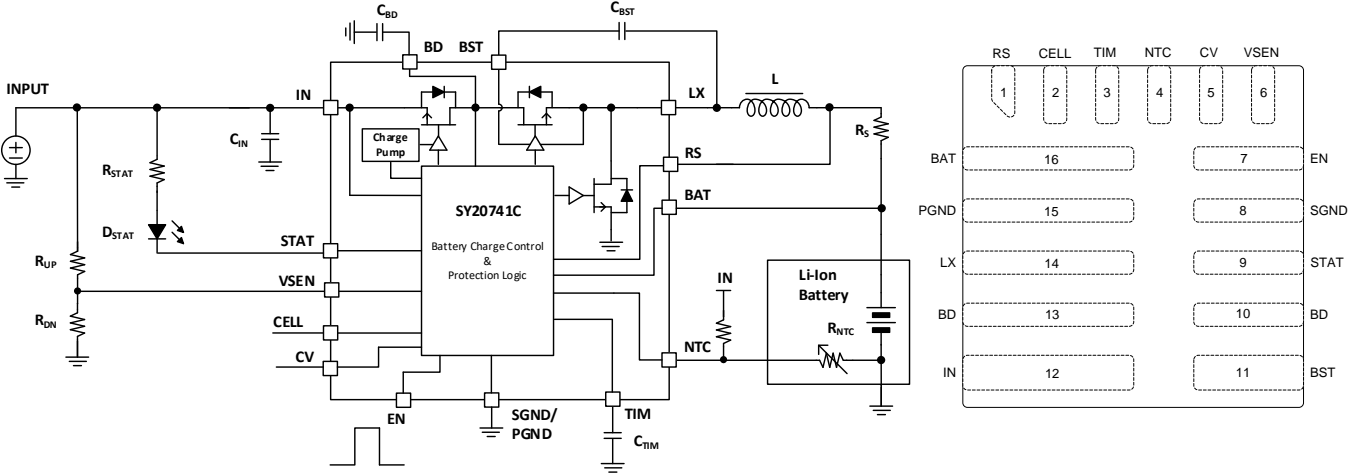
Applications

- Power Banks
- Mobile phones, Tablets
- Li-Ion Battery powered IoT devices
- Game Players
- Notebooks

Switching Charger

SY20741CQCC

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



Features

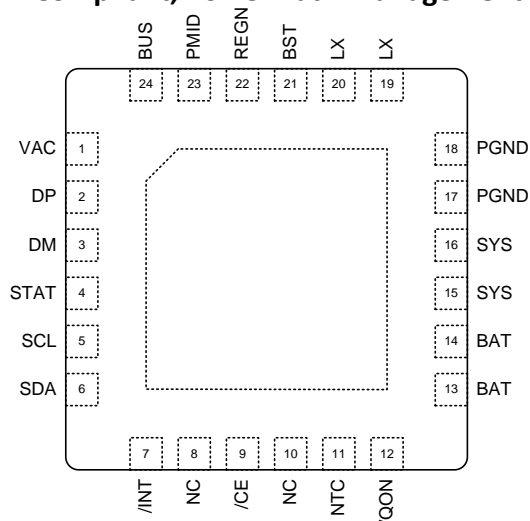
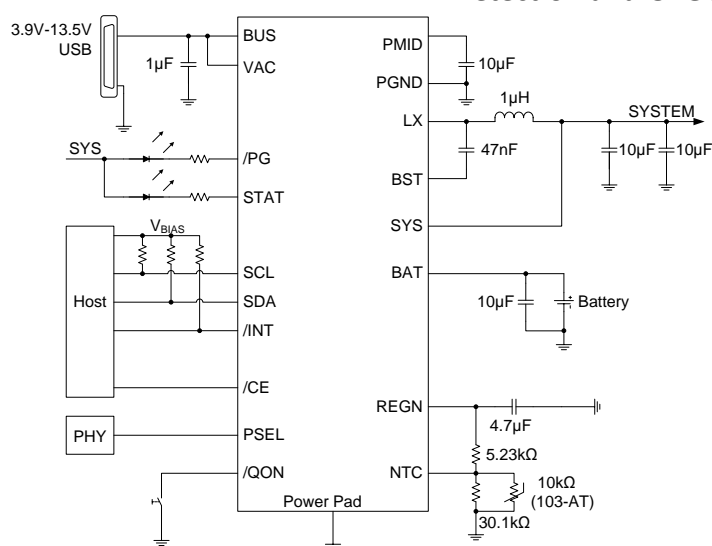
- Integrated Synchronous Buck and Reverse Blocking FET with 16V Rating
- Adaptive Input Power Limit for 4-13V Wide Input Voltage
- Maximum 2.5A Programmable Charge Current
- 4.1V and 4.2V Constant Voltage Selectable
- +/-0.5% Cell Voltage Accuracy
- Support Single-cell or Two-cell Battery Pack
- External 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 QFN3x3 Package for Portable Applications

Applications

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

SY20743/B/C/GQCC

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

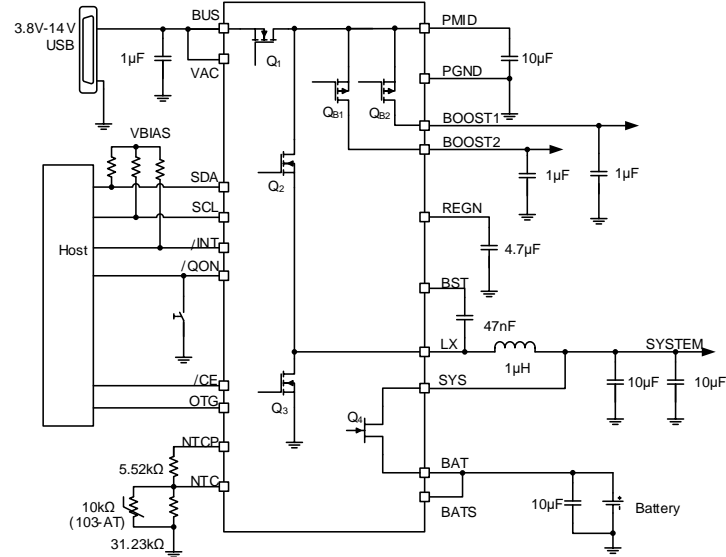
Applications

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

Switching Charger

SY20744/BVKS

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



A1	A2	A3	A4	A5
PGND	LX	PMID	BUS	VAC
B1	B2	B3	B4	B5
PGND	LX	PMID	BUS	BOOST1
C1	C2	C3	C4	C5
BAT	SYS	BST	REGN	NTCP
D1	D2	D3	D4	D5
BAT	SYS	NTC	/QON	BOOST2
E1	E2	E3	E4	E5
BAT	SYS	/CE	SDA	OTG
F1	F2	F3	F4	F5
BAT	SYS	BATS	/INT	SCL

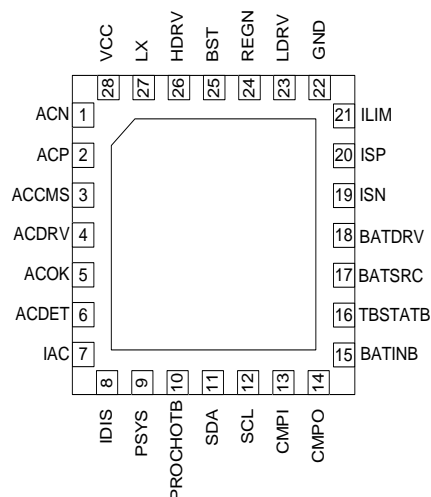
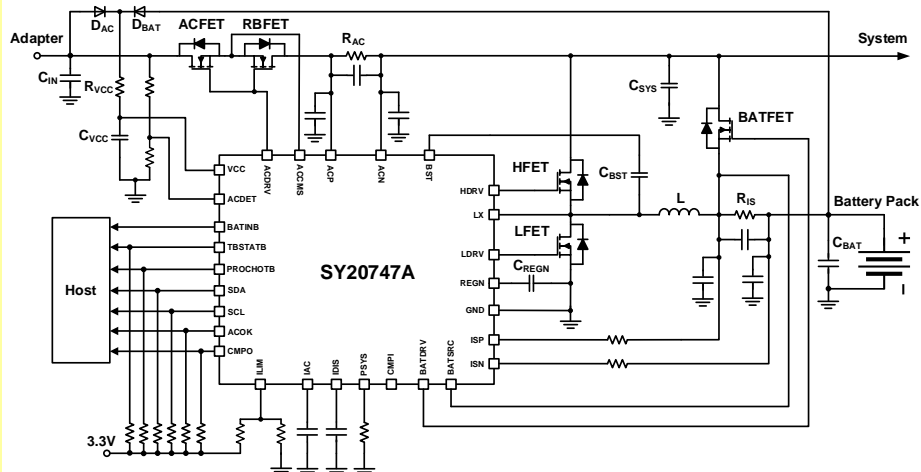
Features

- 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/550mA on BOOST1 and BOOST2 Channel
- 1.6V-6.0V Adjustable Output Voltage
- Maximum 200mA/500mA Current Limit in LDO Mode
- Maximum 350mA/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

Switching Charger

SY20747AQAQ**SMBus Controlled 1-4 Cell Battery Charger Controller Supporting Boost Mode with Power and Processor Hot Monitoring****Features**

- 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

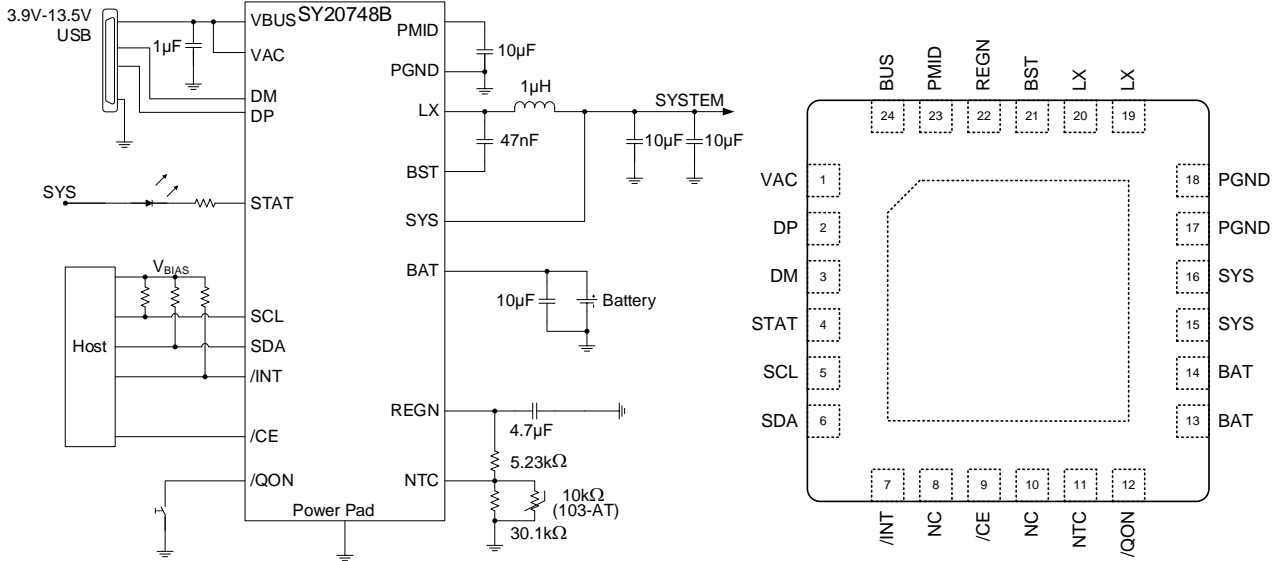
Applications

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

[Back](#)

Switching Charger

SY20748BQCQ 3A, Single Cell Li-Ion DC/DC Switching Charger with I²C Control, USB Detection and OTG JEITA Compliant, Power Path Management



Features

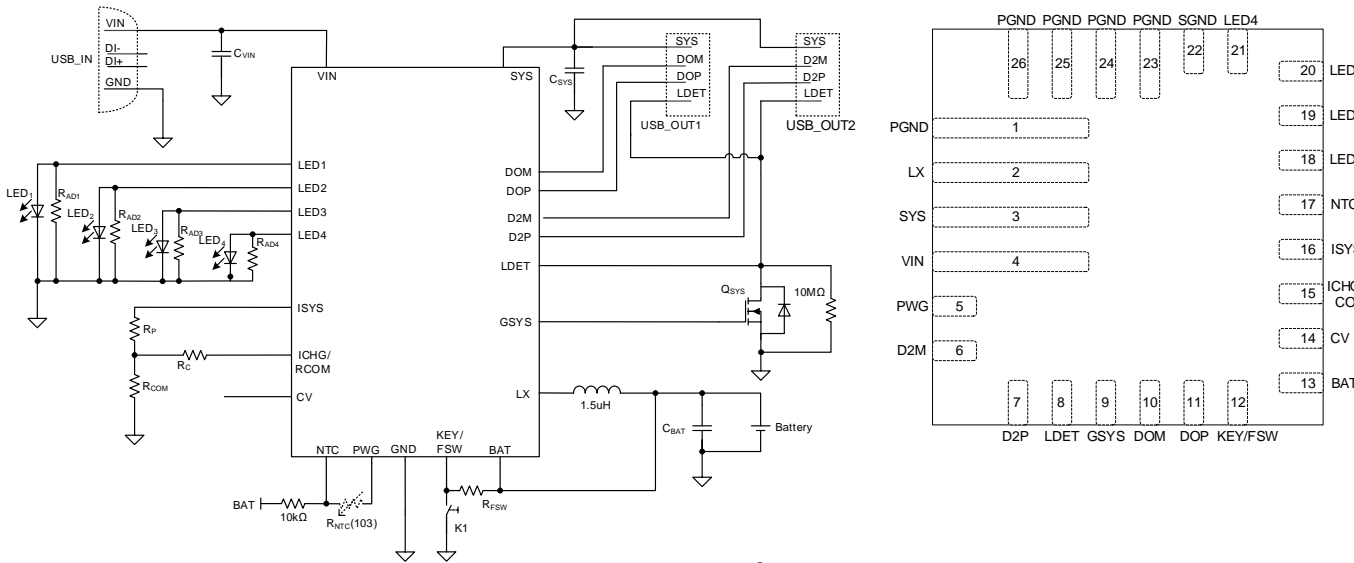
- High Efficiency 3A 1.5MHz Buck Mode Charger
- Support 3.9V-13.5V Input Voltage Range
- Programmable IDPM/VDPM to Support the USB and Adapter
- 3.856V-4.624V Adjustable Charge Voltage
- Support Narrow VDC Power Path Management
- JEITA Compliance
- ±0.5% Charge Voltage Regulation
- Charge Status Outputs 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
- ± 1.5% Output Regulation in Boost Mode
- Soft-Start up to 500μF 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

SY20751/BTYC

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



Features

- Maximum 18V Input Voltage Rating
- Built-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 Termination Voltage
- +/-0.5% Battery Cell Voltage Tolerance
- 4 LED Battery Level Indicators
- 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

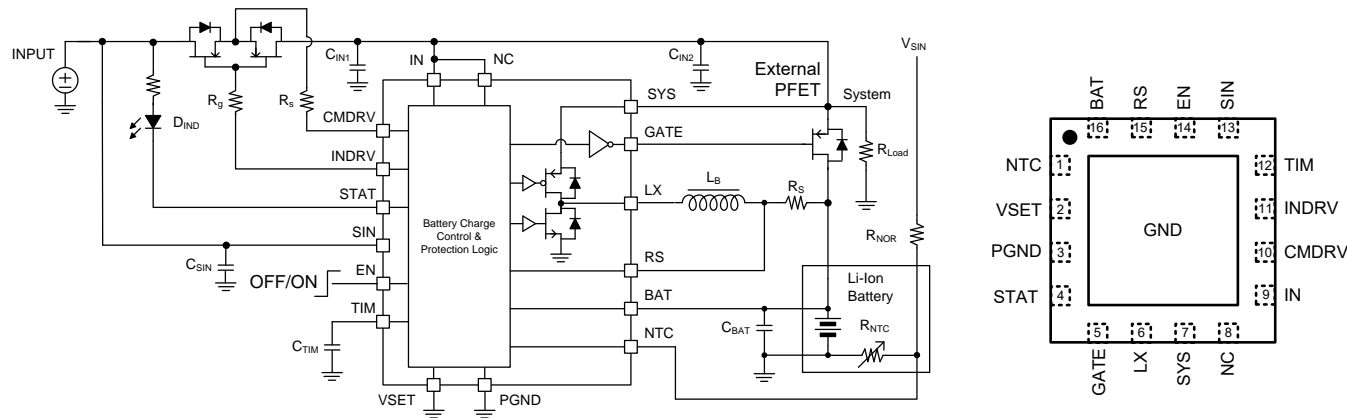
Applications

- Power Banks
- Portable Devices with Single-Cell Batteries

Switching Charger

SY20752AQIC

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



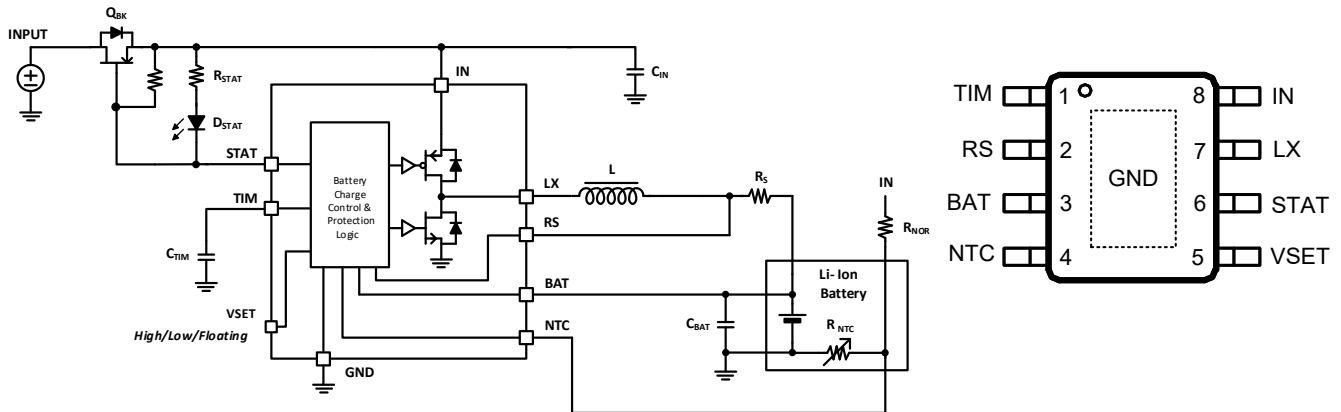
Features

- 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 QFN4x4-16

Applications

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

Switching Charger

SY20752B/B1FCC**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 / 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 Battery Removed
- Compact package SO8E

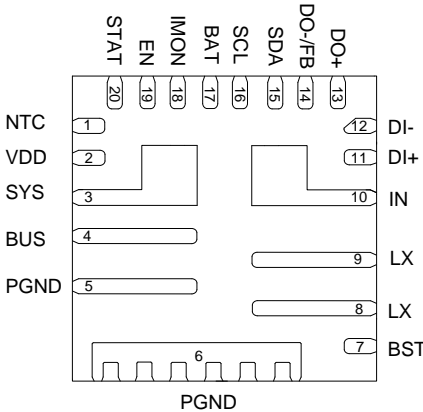
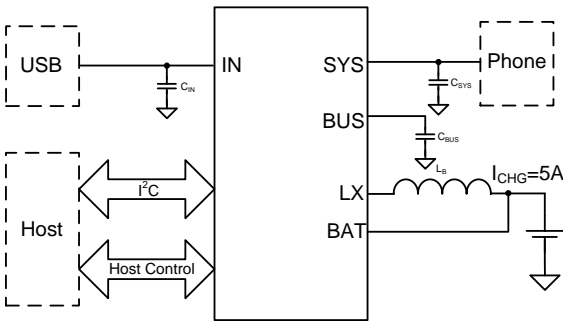
Applications

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

Switching Charger

SY20753QYC

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



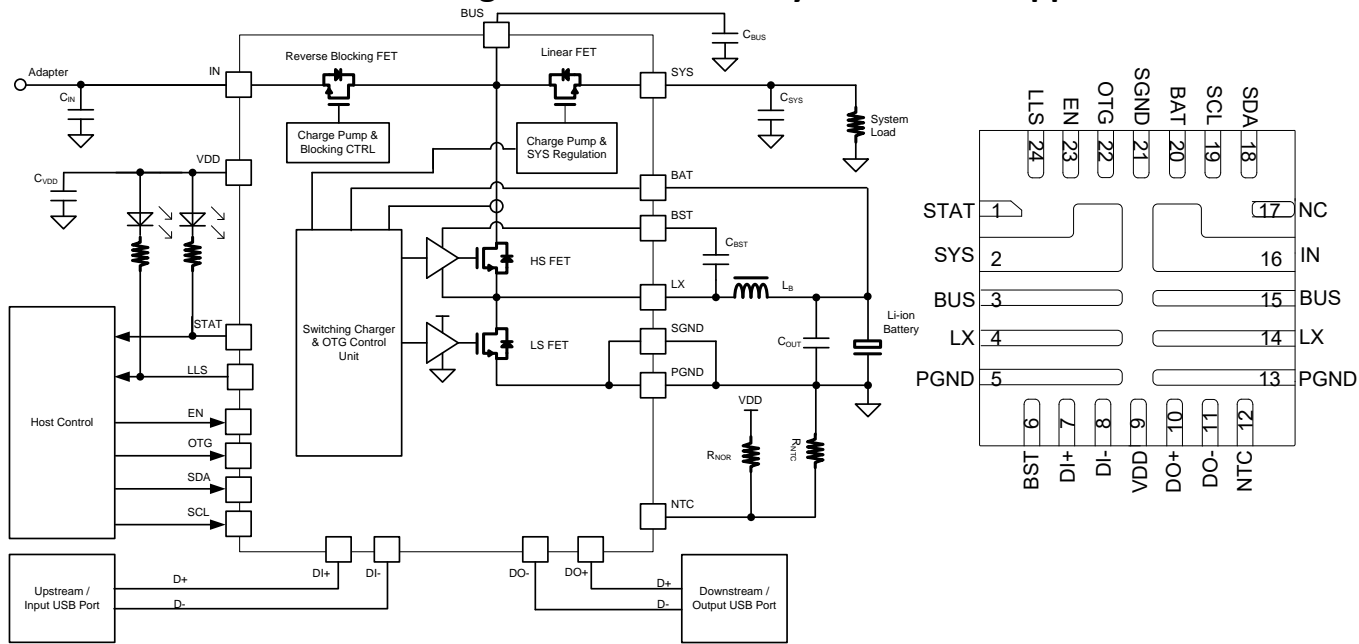
Features

- 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 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

Switching Charger

SY20754QCC**Wide Input, High Current, Bi-Directional Regulator for Single Cell Li-ion Battery Power Bank Applications****Features**

- Integrated N-channel MOSFETs with 16V Voltage Rating and Extremely Low RDS(ON)
- 500 KHz Switching Frequency
- Constant Current / Constant Voltage /Trickle Current Charging Modes
- Maximum 5A Battery Charging Current
- Maximum 3A System Current in Battery Power Supplement Mode
- USB Port Identifier for Various Input Current Limits
- Automatic Input Power Source Detection
- I2C Controls
- Selectable Battery Charge Voltage
- Programmable Constant Charge Current
- Programmable Overcurrent Limit for SYS Load
- Programmable Battery Charging Timeout
- Programmable Input Current DPM
- Programmable Input Voltage DPM
- Charging Shutdown Control
- Charging Mode CV Tolerance +/-0.5%
- DO+/DO- Divider Mode Compliant
- Host Enable Control for Standby Mode
- Over Temperature Protection
- Charge Status Indication
- Light Load Status Indication

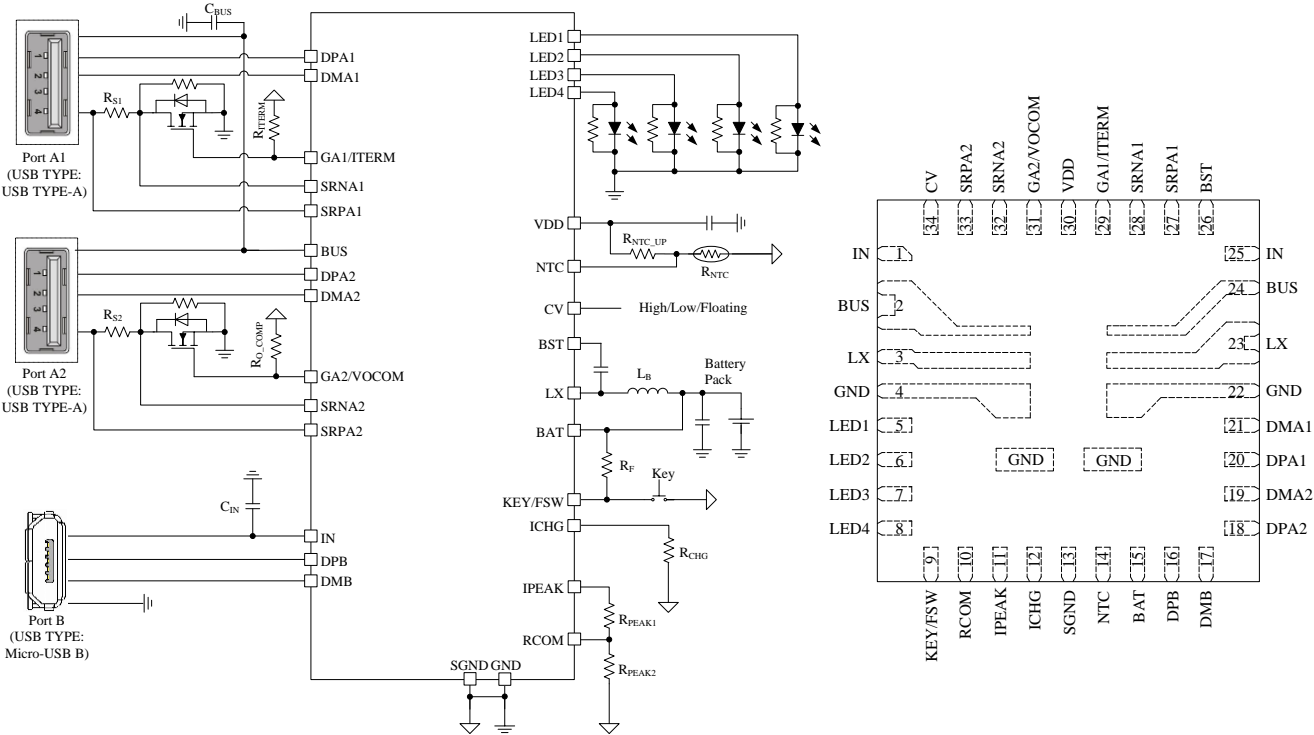
Applications

- Single-Cell Li-Ion Power Banks
- Portable Devices with Single Cell Battery Packs

Switching Charger

SY20757VCC

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



Features

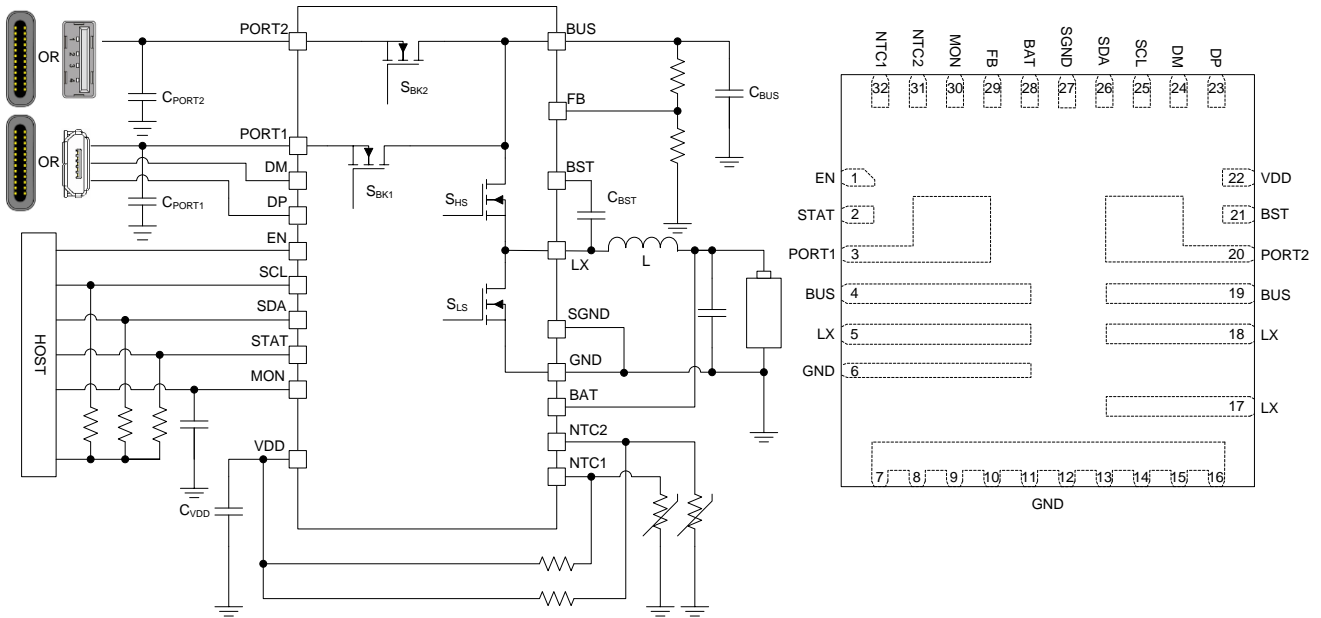
- Integrated N-Channel MOSFET with 18V Voltage Rating and Extremely Low RDS(ON)
- Maximum 5A Battery Charging Current
- Support BC1.2
- Adaptive Input Current Limit
- Trickle Current / Constant Current / Constant Voltage Charging Mode.
- Maximum 18W Output Power in Battery Discharging Mode
- Programmable 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/OCF 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

Switching Charger

SY20759QEQ

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

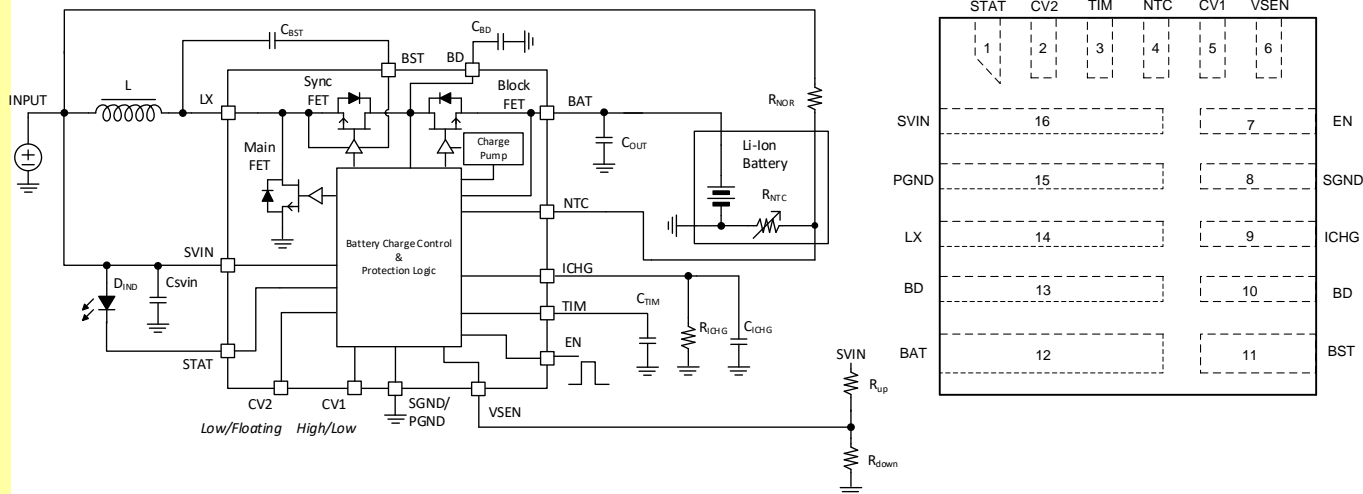
- Single Cell Li-Ion Power Bank
- Portable Device with Single Cell Battery Pack

[Back](#)

Switching Charger

SY20761/BQDC

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
- ±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

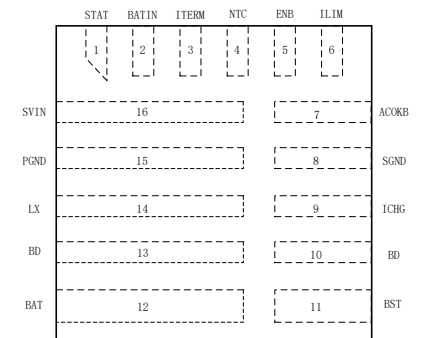
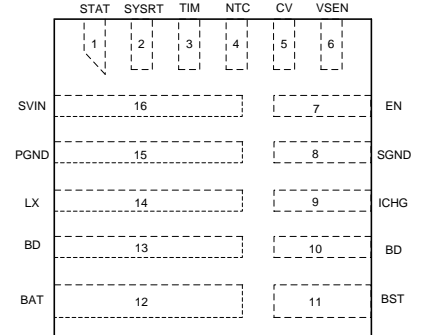
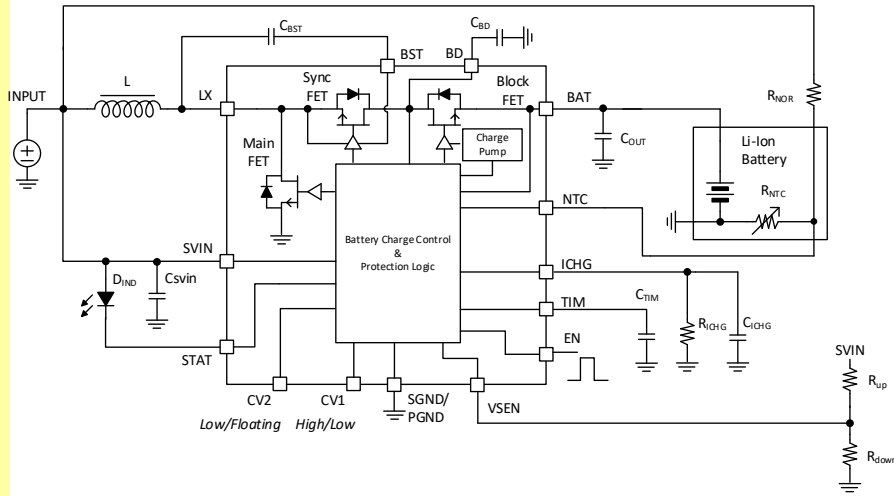
Applications

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

Switching Charger

SY20762E/E1/FQDC

High Efficiency, 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 2A Constant Charge Current
- Charge Current Information Indication.
- Programmable Charge Timeout
- Programmable Constant Charge Current
- Selectable Constant Voltage
- ±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

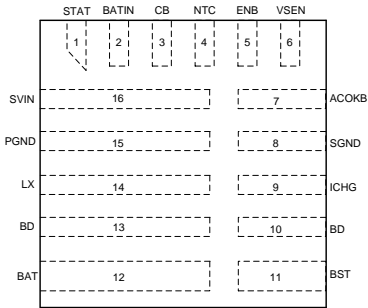
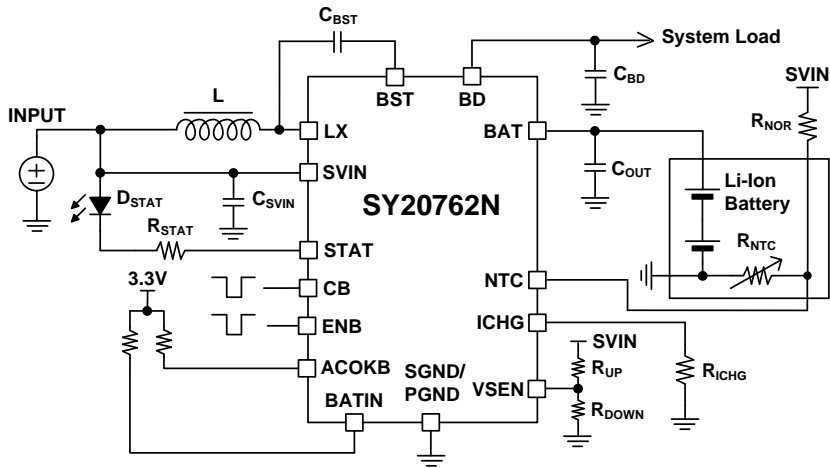
- Cellular Telephones, PDA, MP3 Players, MP4 Players
- Digital Cameras
- Bluetooth Applications
- PSP Game Players, NDS Game Players
- Notebook

[Back](#)

Switching Charger

SY20762NQDC

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



Features

- 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

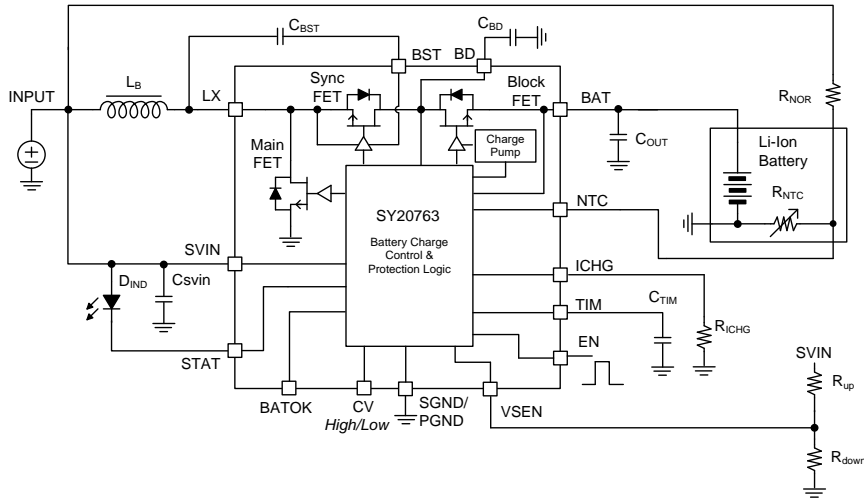
Applications

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

Switching Charger

SY20763QDC

High Efficiency, 1A, Three-Cell Boost Li-Ion Battery Charger



	STAT	BATOK	TIM	NTC	CV	VSEN	
	1	2	3	4	5	6	
SVIN	16				7		EN
PGND	15				8		SGND
LX	14				9		ICHG
BD	13				10		BD
BAT	12				11		BST

Features

- Adaptive Input Power Limit for 3.6-12.8V Range
- Integrated Synchronous Boost with 18V Rating Low RDSON MOSFETs for High Efficiency
- Maximum 1A Constant Charge Current
- Constant Current / Constant Voltage / Trickle Current Charging Modes
- Programmable Charge Timeout
- Programmable Constant Charge Current
- Selectable Constant Voltage
- $\pm 0.5\%$ Battery Voltage Accuracy
- Thermal Regulation Protection
- Input Voltage UVLO and OVP
- Over Temperature Protection
- Output Short-Circuit Protection
- Normal Synchronous Boost Operation when the Battery is Removed
- Low Profile QFN3 \times 3-16 Package for Portable Applications

Applications

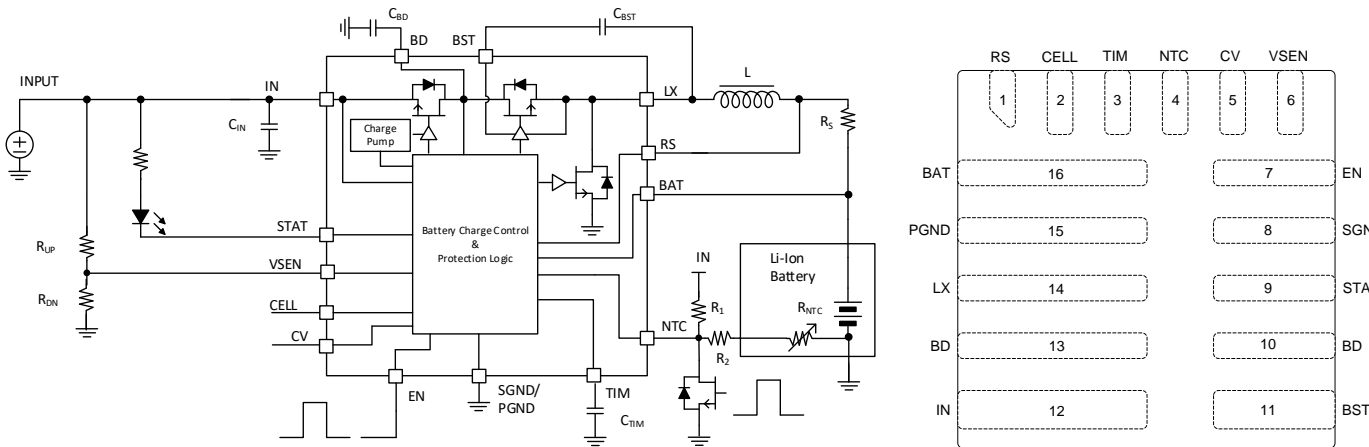
- Mobile Phones and Tablets
- Digital Cameras
- Battery Operated IoT devices
- Game Players
- Notebooks

[Back](#)

Switching Charger

SY20764/BQDC

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



Features

- Adaptive Input Power Limit for 4-14V Input Voltage Range
- 4.2V and 4.35V/4.25V and 4.4V Selectable Cell Termination Voltage
- Integrated Synchronous Buck and Reverse Blocking FET with 16V Rating
- Maximum 3.5A Programmable Charge Current
- +/-0.5% Cell Voltage Accuracy
- Support Single-Cell or Two-Cell Battery Packs
- External Shutdown Function
- Input Voltage UVLO and OVP
- Thermal Fold-Back Protection
- Over Temperature Protection
- Battery Short-Circuit Protection
- Programmable Charge Timeout
- Charge Status Indication
- Low Profile QFN3×3 Package for Portable Applications

Applications

- Power Banks
- Mobile phones, Tablets
- Game Players
- Notebooks

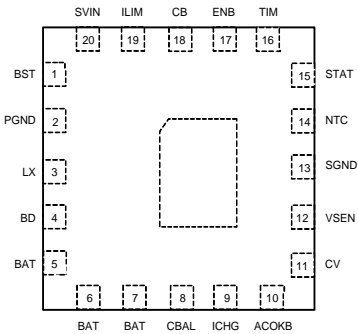
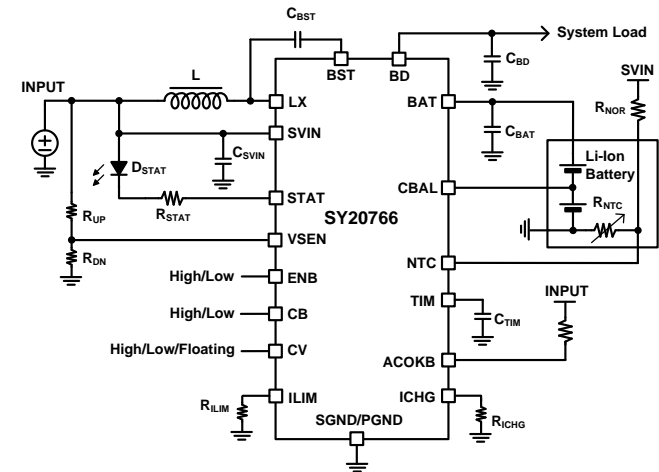
Applications

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

Switching Charger

SY20766RAC

High Efficiency, 1.6A, Two-Cell Boost Li-Ion Battery Charger with Power Path Management and Cell Balance



Features

- Integrated Synchronous Boost with 18V Rating Low RDSON FETs for High Charge Efficiency
- Trickle Current / Constant Current / Constant Voltage Charge Mode
- Programmable Threshold for Input Voltage DPM Function
- Programmable Threshold for Input Current DPM Function
- Maximum 1.6A Constant Charge Current
- Programmable Constant Charge Current
- Selectable Constant Voltage
- Programmable Charge Timeout
- System Power Path Management Function
- External Separated Control Function for Boost and BATFET
- Up to 200mA Cell Balance Current
- Cell Voltage Limit Protection during Balance
- Battery Pack Temperature Monitor Complying with JEITA Standard
- Input and Charge Status Indication
- Input Voltage UVLO and OVP
- BAT OVP and Short Protection
- Over Temperature Protection
- Low Profile QFN3×3 Package

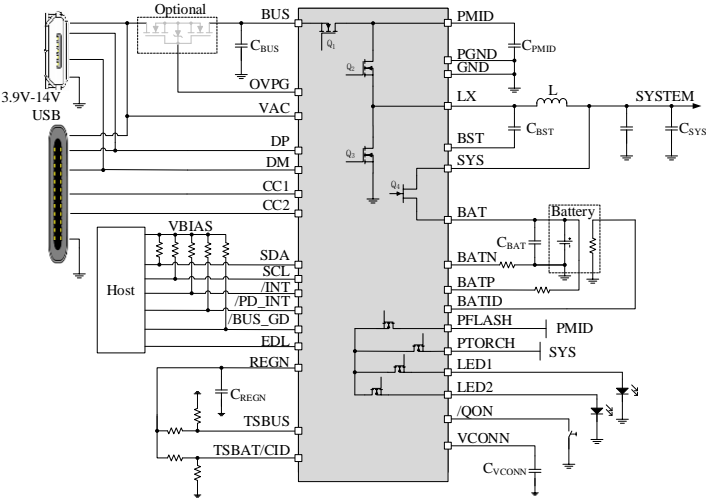
Applications

- Bluetooth Speaker
- Digital Cameras
- POS
- PSP Game Players, NDS Game Players

Switching Charger

SY20767WFS

High Integrated PMU with 4A Single-Cell Battery Charger, 1.5A LED Flash Driver, Charging Protocol



A1 BUS	A2 BUS	A3 /QON	A4 LED1	A5 VAC	A6 OVPG	A7 TSBUS
B1 PMID	B2 PMID	B3 PFLASH	B4 LED2	B5 PTORCH	B6 /INT	B7 /PD_INT
C1 LX	C2 LX	C3 BST	C4 EDL	C5 GND	C6 BATN	C7 BATP
D1 PGND	D2 PGND	D3 REGN	D4 /BUS_GD	D5 CC2	D6 TSBAT/ CID	D7 BATID
E1 BAT	E2 BAT	E3 BAT	E4 BAT	E5 CC1	E6 DP	E7 SDA
F1 SYS	F2 SYS	F3 SYS	F4 SYS	F5 VCONN	F6 DM	F7 SCL

Features

- 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 1.5A 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

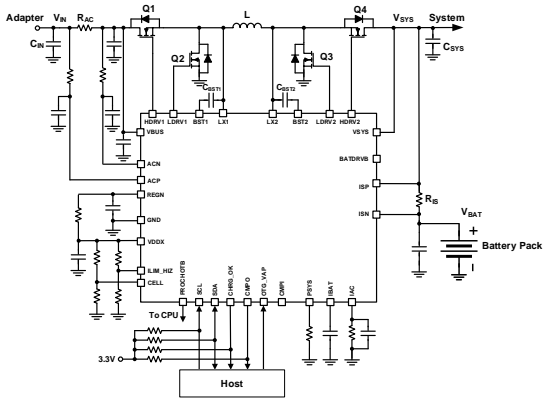
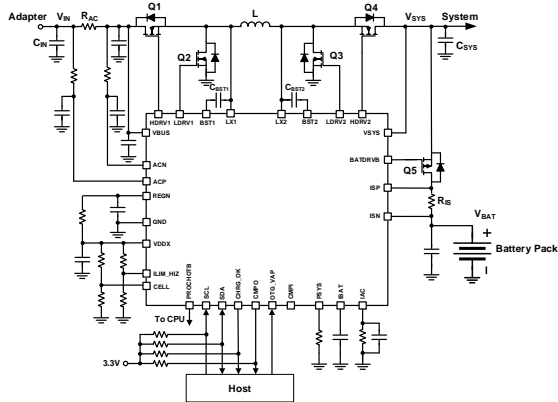
- Smart Phone
- Tablet PC
- Portable Internet Device

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Switching Charger

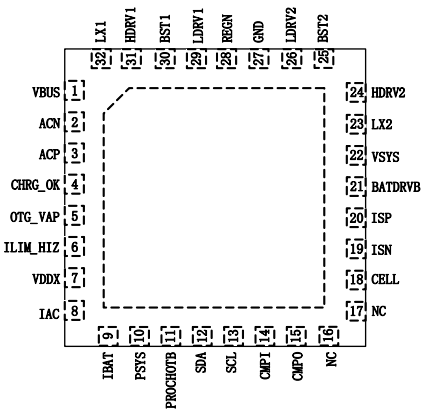
SY20776DQFQ SY20779CQFQ

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



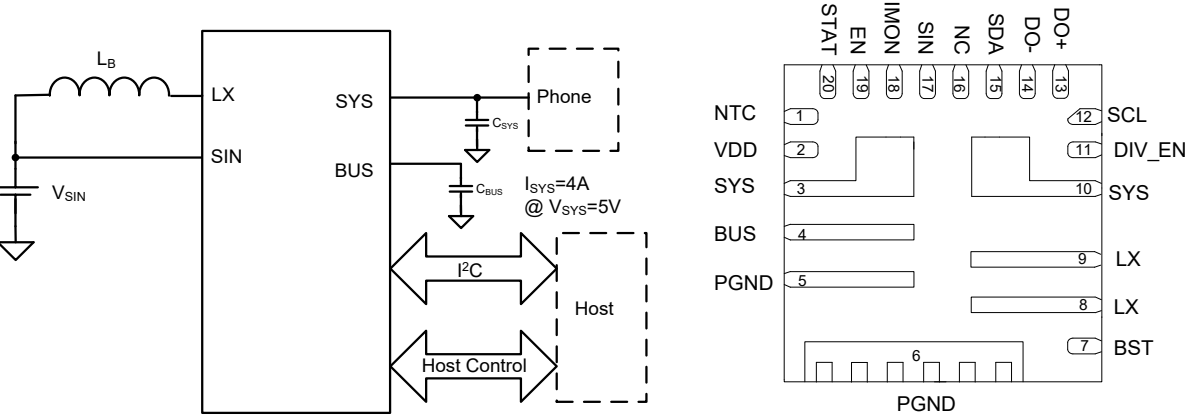
- When System is Powered by Battery Only, Vmin Active Protection (VAP) Mode Supplements System from Input Capacitors during System Peak Power Spike
- Support Battery LEARN Function
- Adaptive Input Current Limit (AICL) to Extract Max Input Power
- Host Control Interface for Flexible System Configuration
- 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

Switching Charger

SY20778QYC Fully Integrated Synchronous Boost Converter with QC3.0 for Li-Ion Battery Power Bank Application



Features

- 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

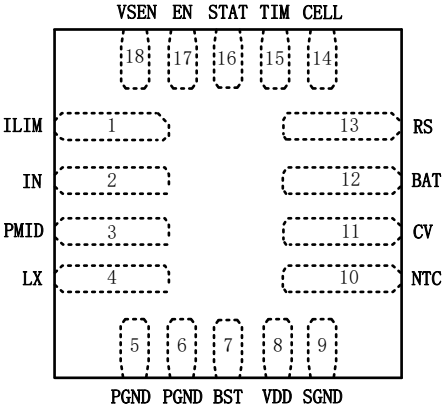
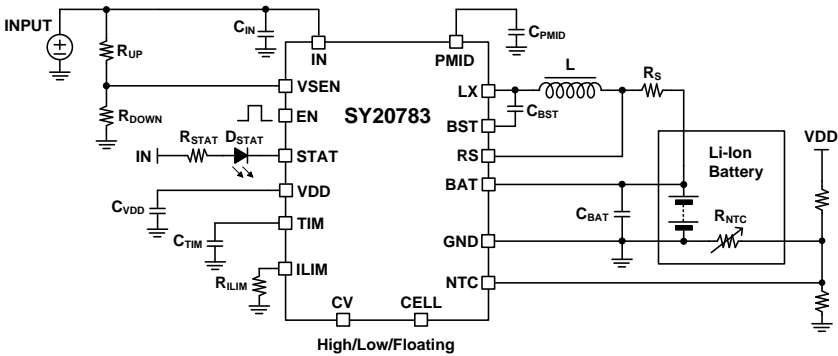
Applications

- Single Cell Li-Ion Power Bank
- Multiple Output Ports Charger

Switching Charger

SY20783QIC

High Efficiency, 2-4 cells Buck Li-Ion Battery Charger



Features

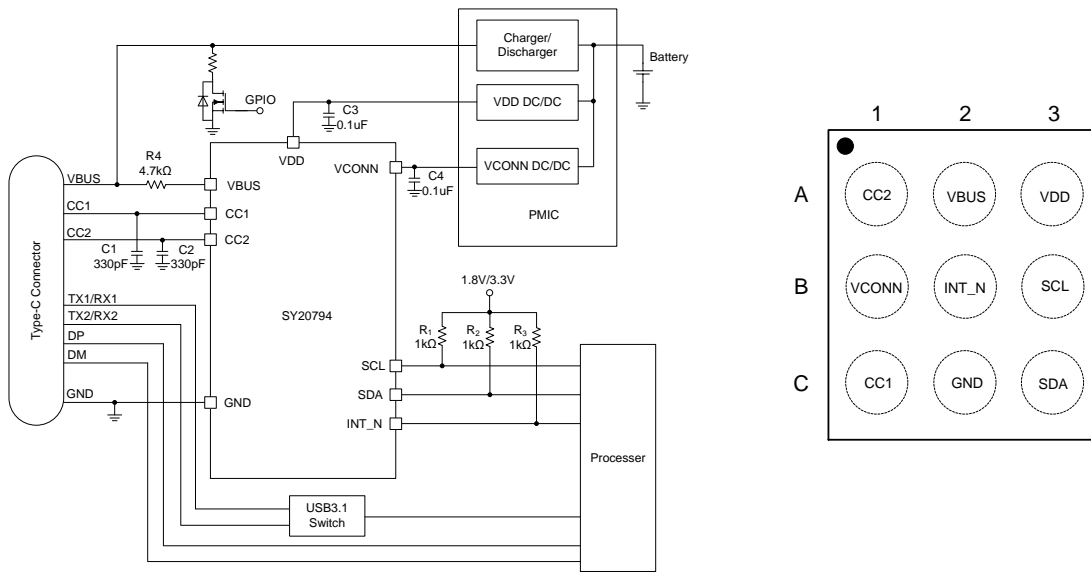
- Wide Input Voltage Range: 4V to 28V
- Constant Voltage Selectable: 4.1V/4.2V/4.35V per Cell
- Charge Current up to 2A for 2 Cells Battery
- Charge Current up to 1.6A for 3 Cells Battery
- Charge Current up to 1.5A for 4 Cells Battery
- Programmable VDPM
- Programmable Input Current Limit
- Programmable Charge Timer
- Trickle Current / Constant Current / Constant Voltage Charge Mode
- Thermal Regulation
- Input Voltage UVLO and OVP Protection
- BAT OVP and Short Protection
- Over Temperature Protection
- Charge Status Indication
- NTC JEITA Compliance
- Package QFN3x3-18

Applications

- Floor Cleaning Robot
- Window & Door Automation
- Smart Speaker
- Electrical Tools

SY20794VWS

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

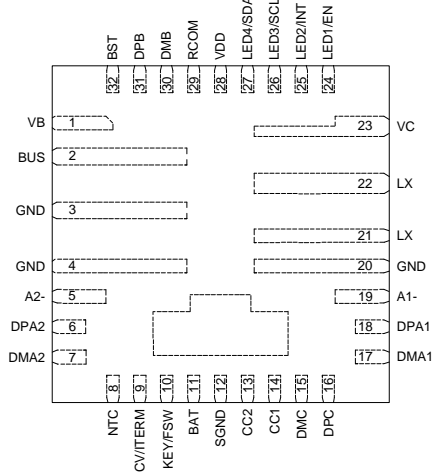
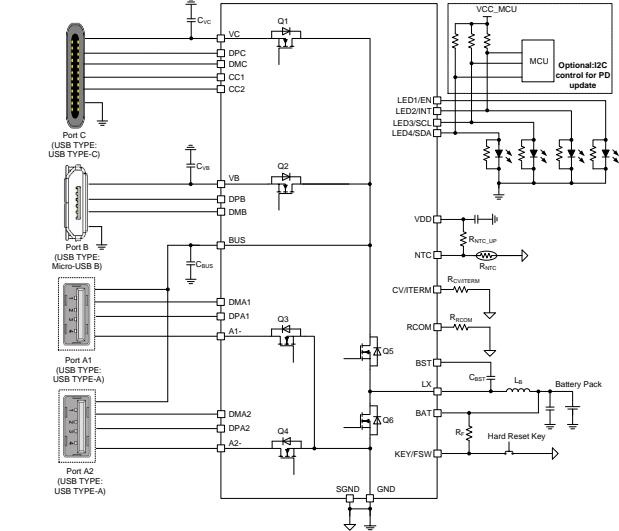
Applications

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

Switching Charger

SY20798QEQ

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/OCF/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

Fast Charge

Part Number	Function	Package	ADC	V _{IN} (V)	Typical Output Current(A)	F _{SW} (kHz)	MOSFET Peak Current(A)	Support Protocol	Protection
SY24510UIC	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
SY20797CVLS	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

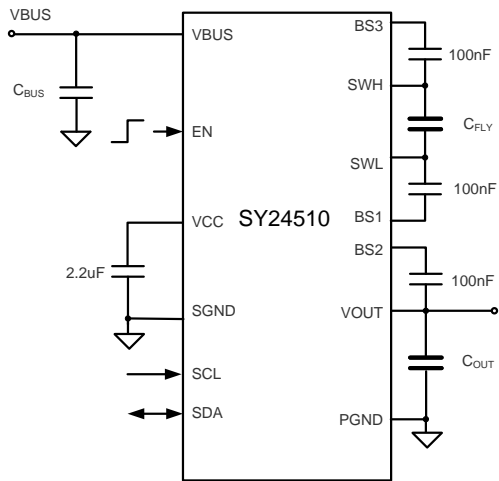
Part Number	Description	Package	V _{IN} (V)	Series Cells	Protection Mode
SY20789QEIQ	3 to 6 Series Cell Battery Monitor, Balance, Protection for Li-ion and Phosphate Application	QFN5×5-32	30	3-6 Cells	OCD、SCD、OV、UV
SY20785QHQQ	6 to 12 Series Cell Battery Monitor, Balance, Protection for Li-ion and Phosphate Application	QFN6×6-40	60	6-12Cells	OCD、SCD、OV、UV
SY20784RJQQ	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

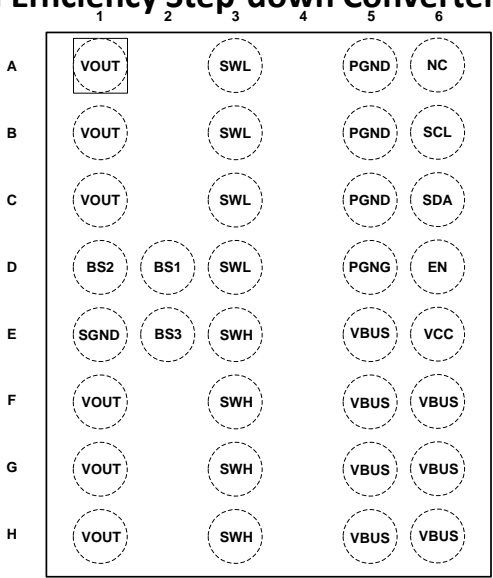
Part Number	Functions	Cell Chemistry	Package	Series Cells	Communication Interface	Operating Temperature Range (°C)	Special Functions
SY24561DFC	Cost-save Single Cell Li+ Battery Gauge IC	li-ion	DFN2×2-8	Single Cell	I ² C	-20 to 60	Eliminate Current Sense Resistor

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SY24510UIC



High Efficiency Step-down Converter



Features

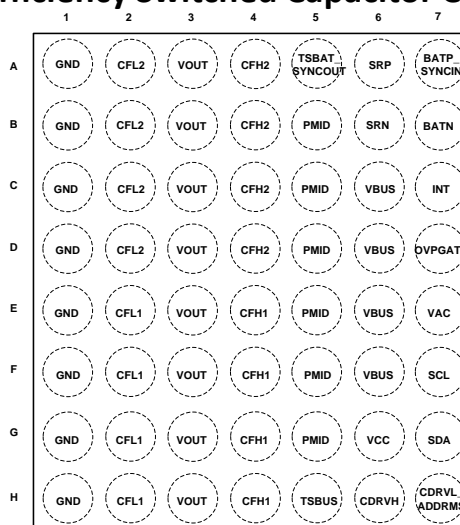
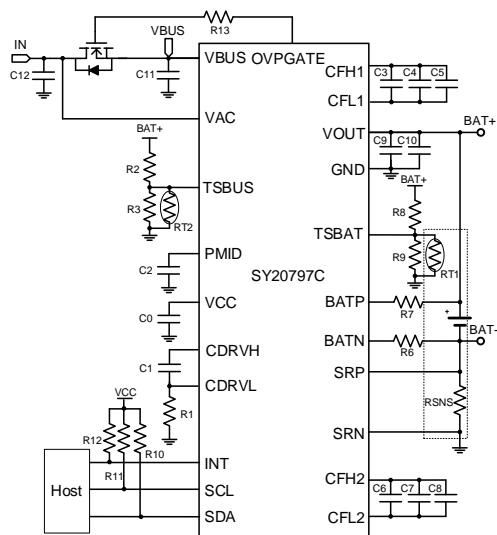
- Fully Integrated Power MOSFETs with Extremely Low RDS(ON)
- Bypass Mode and Charge Pump Mode Selectable Online
- 50% Duty Cycle in Charge Pump Mode
- Voltage Divider: Input Voltage is 2 times of Output Voltage
- Current Doubler: Output Current is 2 times of Input Current
- Internal Charge Pump Driver 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

SY20797CVLS

High Efficiency Switched Capacitor Charger



Features

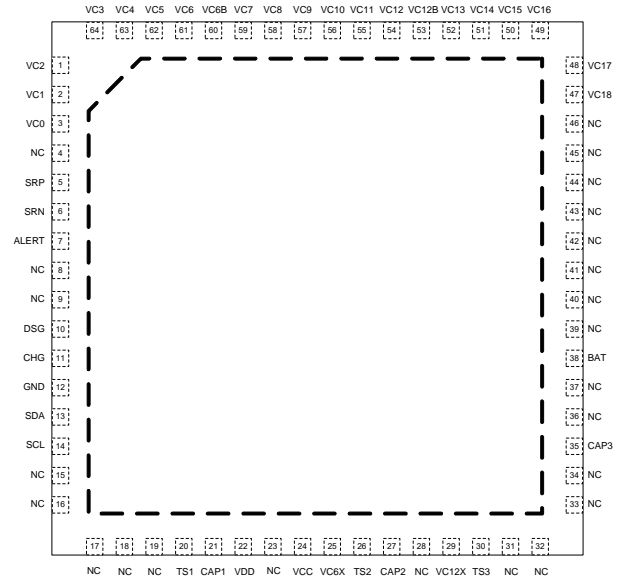
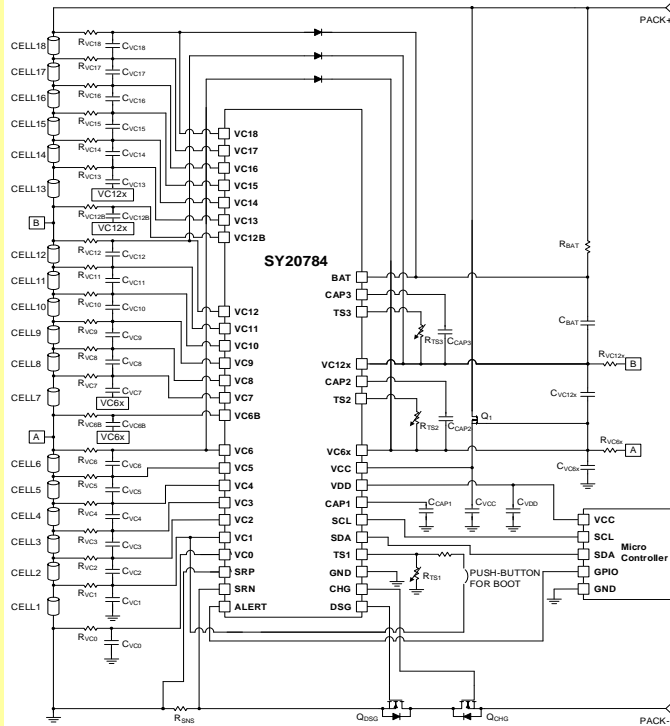
- External OVP Control and Regulation
- High Absolute Maximum Rating of 20V (VBUS)
- Battery Voltage Regulation (VBAT REG)
- Battery Current Regulation (IBAT REG)
- Integrated Input-Side NFET to Block Reverse Current
- Dual-Phase Switched Capacitor Converter
- 8A Output Current Capability
- Efficiency up to 96.8% when VBAT = 4V, IBAT = 6A
- Programmable Frequency
- Spread spectrum for improved EMI
- 2:1 Charge-pump Mode and 1:1 Bypass Mode
- Fully Integrated Power MOSFETs with Extremely Low RDS(ON)
- 50% Duty Cycle in 2:1 Charge-pump Mode
- Voltage Divider: Input Voltage = Output Voltage × 2
- Current Doubler: Output Current = Input Current × 2
- Soft-Start for Inrush Current Limit
- 9-Channel 12-Bit ADC
- VAC, VBUS, VOUT, VBAT
- IBUS, IBAT
- TSBUS, TSBAT, TDIE
- I2C Interface

Applications

- Smart Phones/ Tablets
- Other Handhelds

SY20784RJQ

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



Features

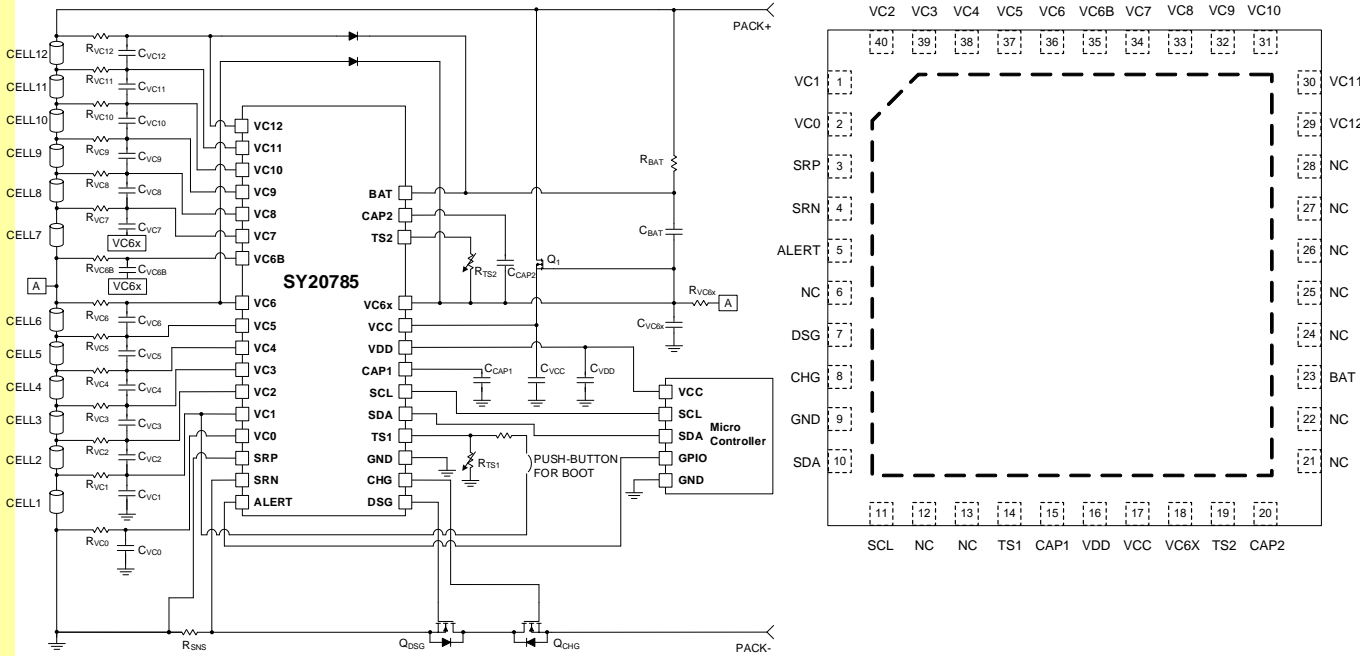
- Internal ADC Measures Cell Voltage, Pack or Die Temperature
- A Separate, Internal ADC Measures Pack Current
- Low-Side Charge and Discharge NCH FET Drivers
- Over Current Protection During Discharge (OCD)
- Short-Circuit Protection During Discharge (SCD)
- Cell Over Voltage Protection (OV)
- Cell 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)

SY20785QH

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



Features

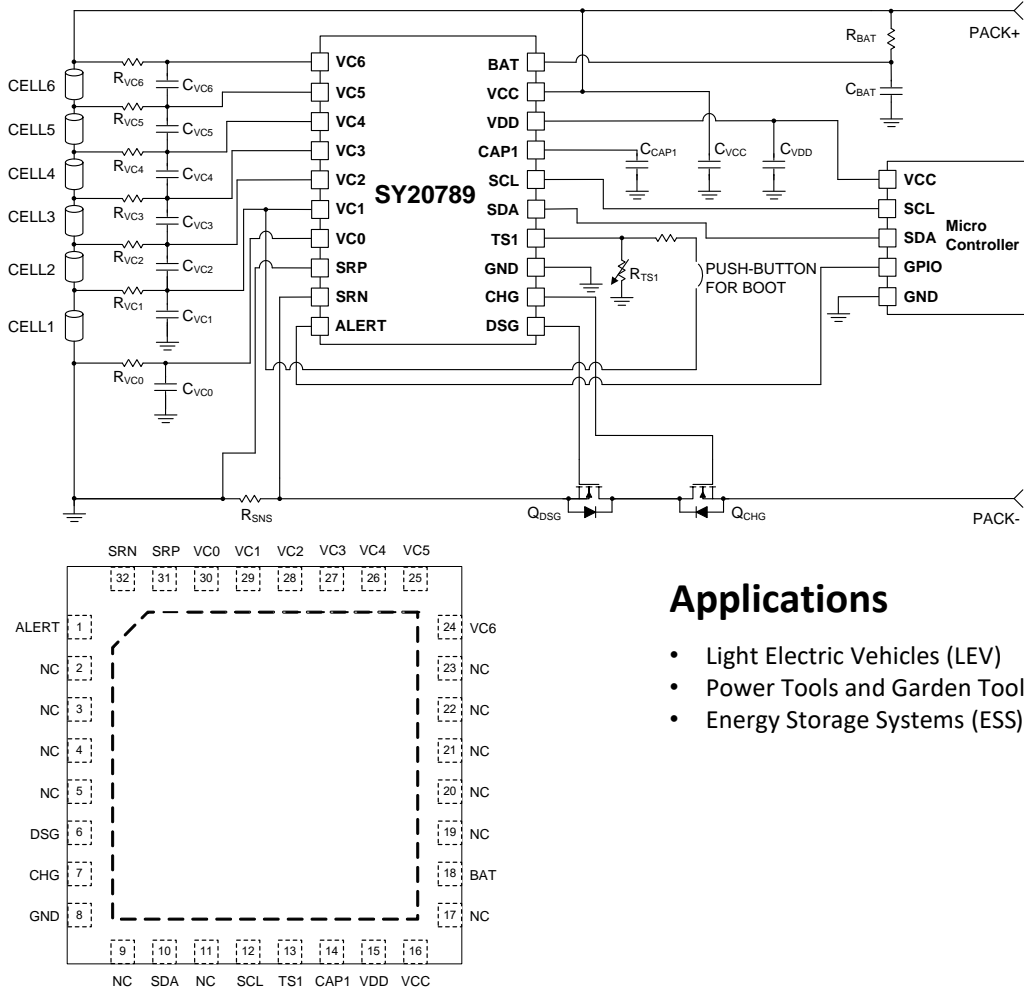
- Internal ADC Measures Cell Voltage, Pack or Die Temperature
- A Separate, Internal ADC Measures Pack Current
- Low-Side Charge and Discharge NCH FET Drivers
- Over Current Protection During Discharge (OCD)
- Short-Circuit Protection During Discharge (SCD)
- Cell Over Voltage Protection (OV)
- Cell 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)

SY20789QEQ

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



Applications

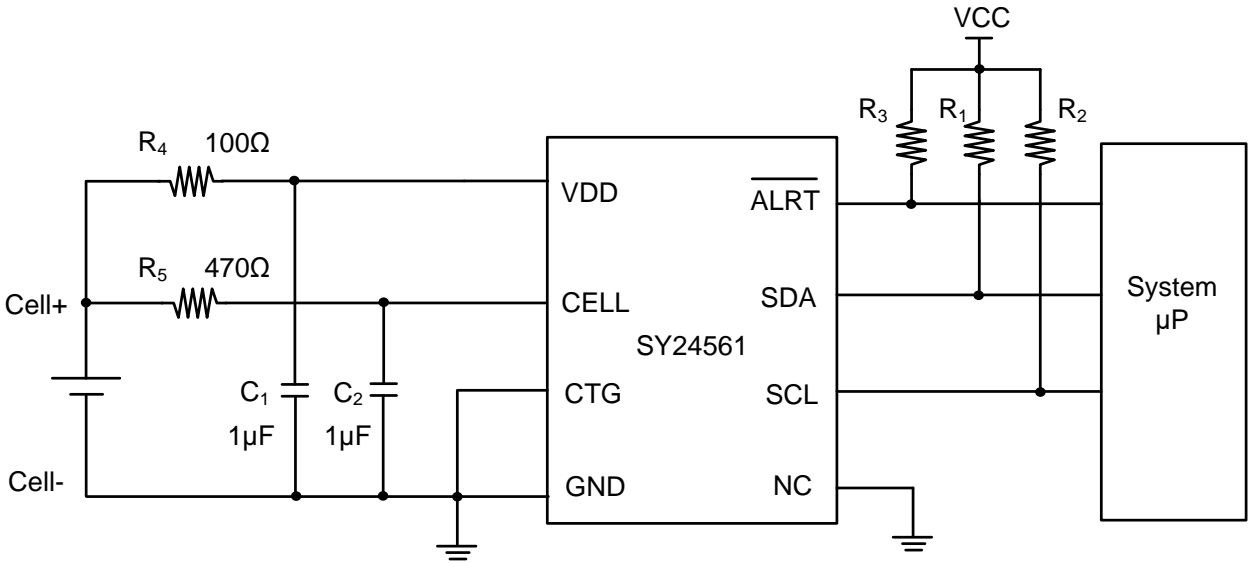
- Light Electric Vehicles (LEV)
- Power Tools and Garden Tools
- Energy Storage Systems (ESS)

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

SY24561DFC

Cost saving single Li-Ion Battery Gauge

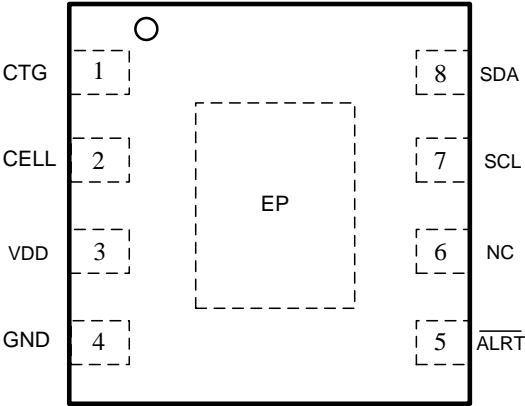


Features

- ±7.5mV/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





PMIC

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Number of Channels	Package	Application	Integrated Function
SY21525AVCS	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.
SY21525BVCS	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 SY21525EVCS	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 SY21525FVCS	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.
SY21525JVCS	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.
SY21523CPZC	2.8	5.5	5 Chs Buck+2 Chs LDO	CSP3.23×3.23-52	SSD	5 Chs Buck(2Ch can work LSW), 2Ch LDO. 3.4MHz I2C, Hardware sleep control; Reset output; Auto PFM/FCCM control; OVP/OCP/SCP/OTP. Enable Output Control.
SY21523EPZC	2.8	5.5	5 Chs Buck+2 Chs LDO	CSP3.23×3.23-52	SSD	5 Chs Buck(2Ch can work LSW), 2Ch LDO. 3.4MHz I2C, Hardware sleep control; Reset output; Auto PFM/FCCM control; OVP/OCP/SCP/OTP. Enable Output Control.
SY21572PZS	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.
SY21576AVTS	2.8	3.7	4 Chs Buck+2 Chs LDO	CSP2.6×3.6-36	SSD	4 Chs Buck and 2 Chs LDO; 3.4MHz I2C; OVP/SCP/OTP; Auto PWM/PFM or Forced PWM Controlled

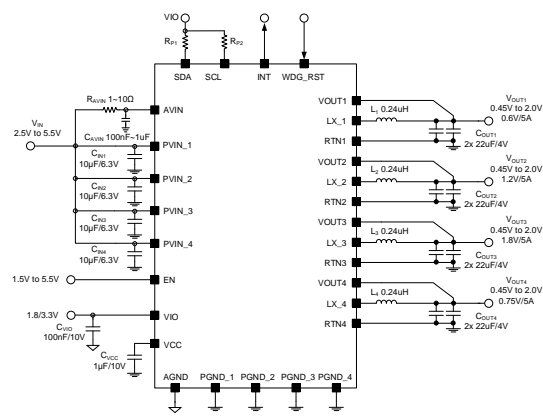
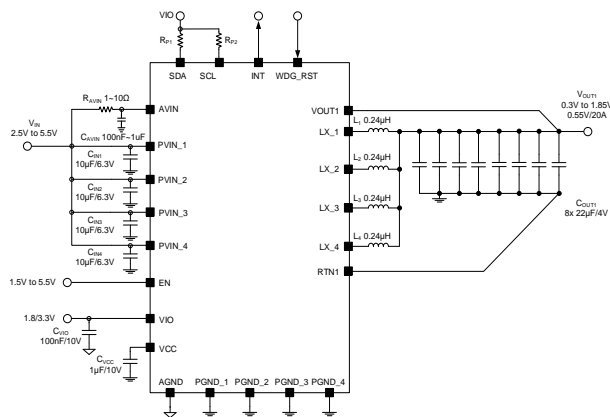
HV PMIC

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	Number of Channels	Package	Application	Integrated Function
SY21524DRGQ	2.6	16	1	QFN4×4-25	SSD	Input-side reverse blocking switch, Bi-directional DC/DC regulator, I2C interface.
SY21565TTC	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.

High Frequency PMIC

Part Number	V _{IN} (Min) (V)	V _{IN} (Max) (V)	V _{OUT} (V)	I _{OUT} (A)	F _{SW} (MHz)	Package	Application	Integrated Function
SY20372QLQ	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.

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Features

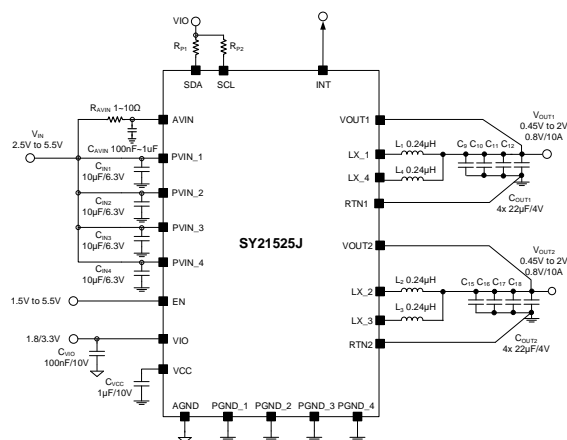
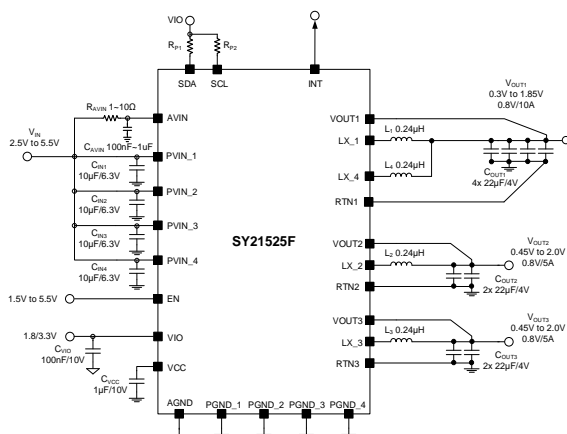
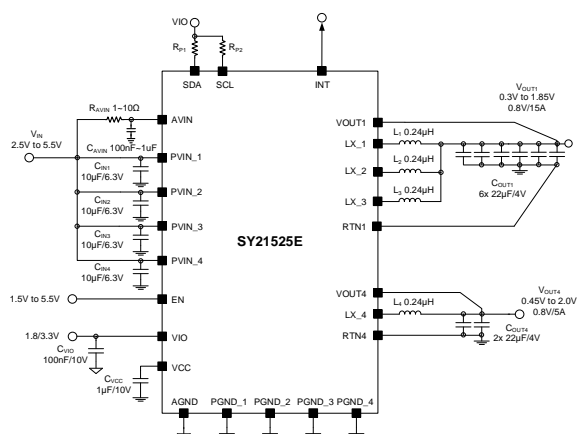
- 2.5V to 5.5V Wide Input Voltage Range
- Five Distinct Phase Configurations:
 - SY21525A (3+1)
 - SY21525B (1+1+1+1)
- 5A per Phase Output Current Capability
- I²C Programmable Output Voltages from 0.3V to 1.85V or 0.45V to 2V
- COT Control Achieves Fast Transient Performance
- ±1.0% Accuracy with Remote 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

SY21525EVCS/ SY21525FVCS/ SY21525JVCS

- 5.5V, Multi-phase Buck Converter Family



Features

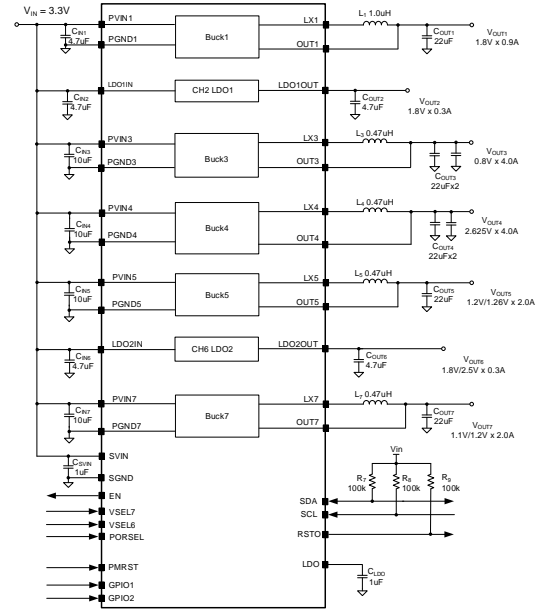
- 2.5V to 5.5V Wide Input Voltage Range
- Three Distinct Phase Configurations:
 - SY21525E (3+1)
 - SY21525F (2+1+1)
 - SY21525J (2+2)
- 5A per Phase Output Current Capability
- I²C Programmable Output Voltages from 0.3V to 1.85V or 0.45V to 2V
- COT Control Achieves Fast Transient Performance
- ±1.0% 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

- 2.8V 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 $V_{OUT1} = 1.8V$
- Channel 2 LDO1:
 - 0.3A Output Current Capability
 - Default Output Voltage $V_{OUT2} = 1.8V$
- 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 $V_{OUT3} = 0.8V$
 - 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 $V_{OUT4} = 2.625V$
 - 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 $V_{OUT5} = 1.2V/1.26V$, Selected by Pin VSEL6
- Channel 6 LDO2:
 - 0.3A Output Current Capability
 - Default Output Voltage $V_{OUT6} = 1.8V/2.5V$, Selected by Pin VSEL7
- Channel 7 Synchronous Buck:
 - Low $R_{DS(ON)}$ for Internal Switches (PFET/NFET): 60/40m Ω
 - 2.0A Output Current Capability
 - Default Output Voltage $V_{OUT7} = 1.1V/1.2V$, 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)

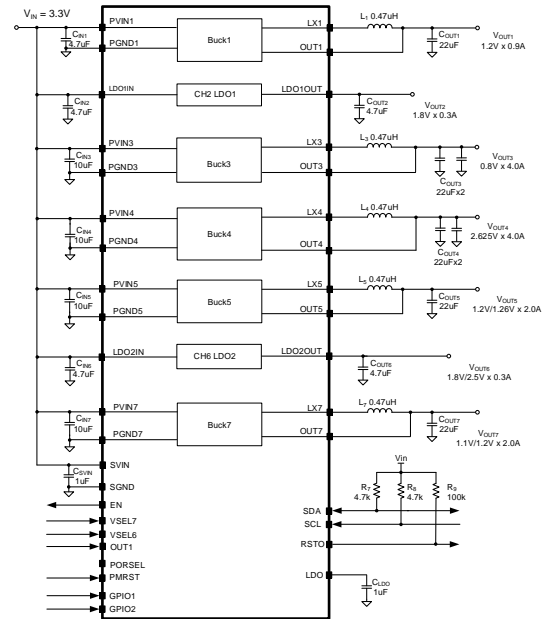


Applications

- SSD Power 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 $V_{OUT1}=1.2V$
- Channel 2 LDO1:
 - 0.3A Output Current Capability
 - Default Output Voltage $V_{OUT2}=1.8V$
- 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 $V_{OUT3}=0.8V$
 - 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 $V_{OUT4}=2.625V$
 - 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 $V_{OUT5}=1.2V/1.26V$
- Channel 6 LDO2:
 - 0.3A Output Current Capability
 - Default Output Voltage $V_{OUT6}=1.8V/2.5V$
- Channel 7 Synchronous Buck:
 - Low $R_{DS(ON)}$ for Internal Switches (PFET/NFET): 60/40m Ω
 - 2.0A Output Current Capability
 - Default Output Voltage $V_{OUT7}=1.1V/1.2V$
- 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 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)

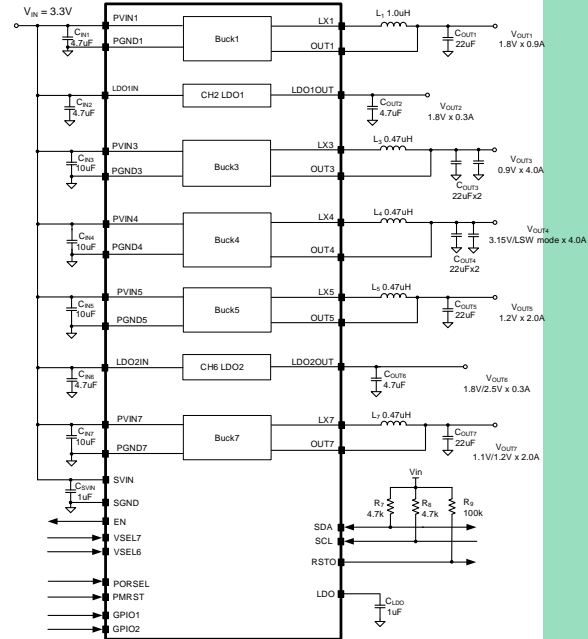


Applications

- SSD Power System

Features

- 2.8V to 5.5V Input Voltage Range
- Channel 1 Synchronous Buck:
 - Low $R_{DS(ON)}$ for Internal Switches (PFET/NFET): 150/150m Ω
 - 0.9A Maximum Output Current Capability
 - Default Output Voltage $V_{OUT1}=1.8V$
- Channel 2 LDO1:
 - 0.3A Output Current Capability
 - Default Output Voltage $V_{OUT2}=1.8V$
- 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 $V_{OUT3}=0.9V$
 - 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 $V_{OUT4}=3.15V$
 - 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 $V_{OUT5}=1.2V$
- Channel 6 LDO2:
 - 0.3A Output Current Capability
 - Default Output Voltage $V_{OUT6}=1.8V/2.5V$
- Channel 7 Synchronous Buck:
 - Low $R_{DS(ON)}$ for Internal Switches (PFET/NFET): 60/40m Ω
 - 2.0A Output Current Capability
 - Default Output Voltage $V_{OUT7}=1.1V/1.2V$
- 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 I²C Interface with DVS Function
- 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: CSP3.2x3.2-52(0.4mm pitch)

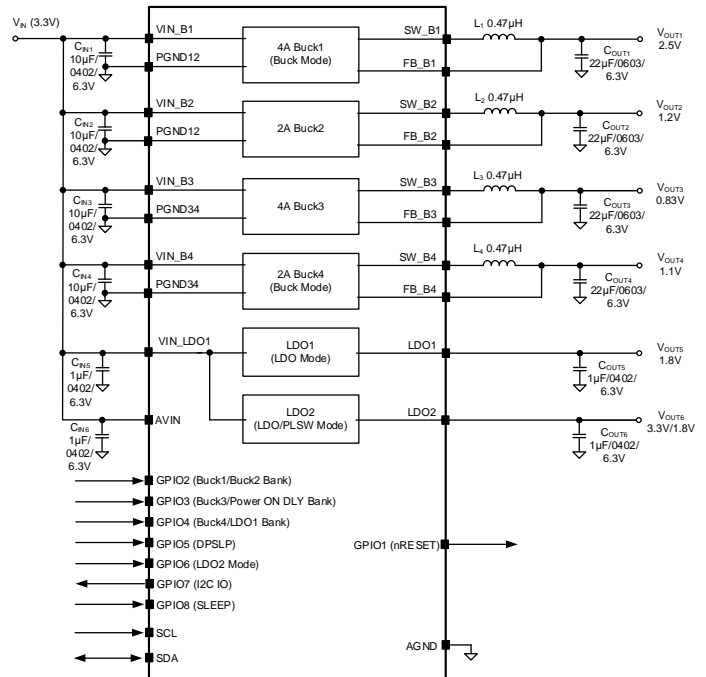


Applications

- SSD Power System

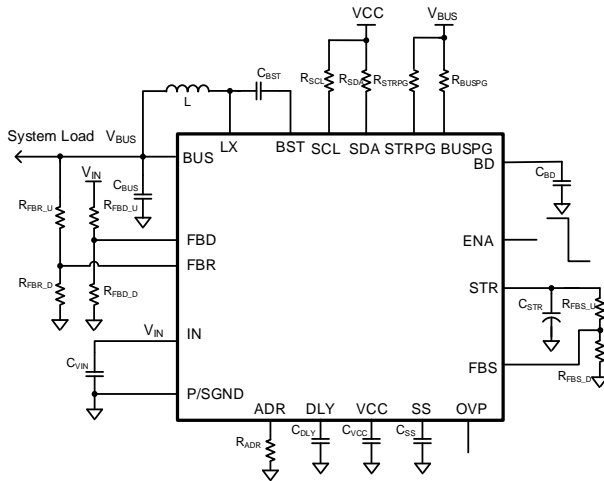
Features

- 2.8V to 5.5V Input Voltage Range
- 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: CSP2.6mm×2.6mm-36



Applications

- Solid State Drives
- Microcontroller

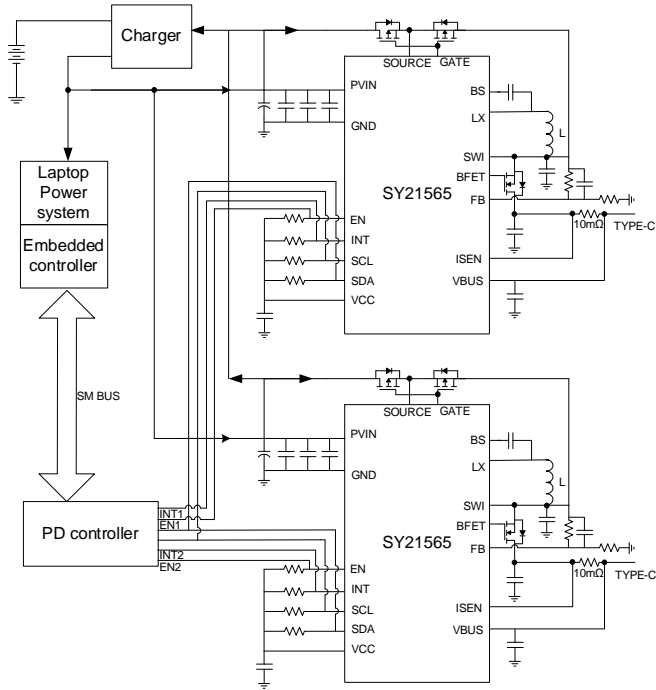


Features

- Low $R_{DS(ON)}$ for Internal Switches
 - Input Reverse Blocking Switch: 24 mΩ (Typical)
 - High-side and Low-side Switches for Bi-directional Dc-Dc Regulator: 70 mΩ /70 mΩ (Typical)
 - Disconnect Switch: 40 mΩ (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



Features

- 4.5-28V Wide Input Voltage Range
- Bidirectional Power Path Control
- 5A Buck Regulator
 - Low $R_{DS(ON)}$ Internal Switch: HSFET: 33mΩ, LSFET: 23mΩ
 - 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
- Programmable Current Limit
- Thermal Shutdown Protection
- Compact Package QFN3x3-19
- UL Certificate Number: E491480
- UL 2367 Certified
- IEC/ EN 62368-1 Certified

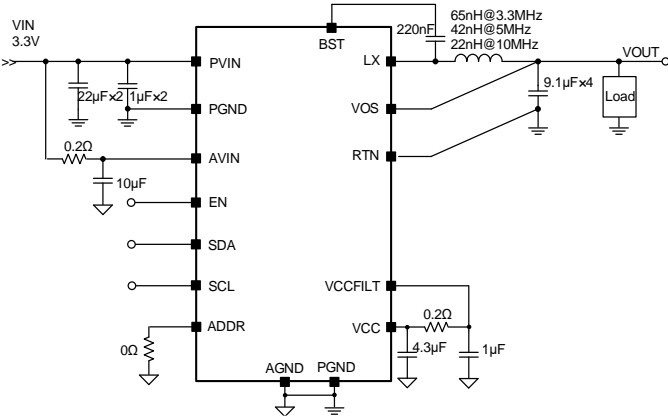
Applications

- Notebook
- Monitor
- Desktop

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SY20372QLQ

1.8V-5.5V, 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 $\pm 1\%$ 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: QFN3×4-16

Applications

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

AC/DC



Backlighting

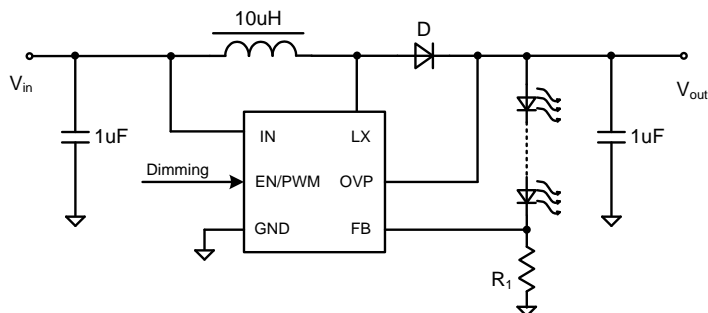
Part Number	App.Type	LED Channels	Input Voltage	LED Voltage	LED Current	Control Method	Switching Frequency	Package	Int.MOS
SY22103AADC/ SY22103ADBC	Handheld devices Backlight	1	2.8 to 40V	<40V	<300mA	Boost	1MHz	TSOT23-6 /DFN3x3-10	40V/2A
SY22104DBC	Handheld devices Backlight	1	2.8 to 30V	<30V	<300mA	Boost	1MHz	DFN3x3-10	30V/4A
SY22102ABC/ SY22102ADC/ SY22102AABC	Handheld devices Backlight	1	2.8 to 30V	<30V	<300mA	Boost	1MHz	TSOT23-6 /SOT23-6	30V/2A
SY22121POC	Phone/PAD Backlight	2	2.7 to 28V	<40V	<30mA	Boost+LDO	1MHz	CSP 1.31x1.31-9	40V/1A
SY22142BABC	TV Power Backlight	1	9-28vdc	<200V	<1.5A	Boost	120KHz	SOT23-6	NA
SY22122LFEC/ SY22122LFFC	Monitor Backlight	4	4.5-30V	<30V	<240mA	Boost + current sink	100KHz-1MHz	SOP16E/ SOP16	60V/3Ω
SY22159RBO	Notebook or tablet Backlight	6	3V-24V	<40V	6-25mA	Boost+ current sink	100KHz-1.5MHz	QFN3.5x3.5	40V/200mΩ
SY22166QCQ	Notebook or tablet Backlight	6	2.7V-20V	<46V	<50mA	Boost+ current sink	320KHz-1.3MHz	QFN4.0x4.0	48V/200mΩ
SY22166VGS	Notebook or tablet Backlight	6	2.7V-20V	<46V	<50mA	Boost+ current sink	320KHz-1.3MHz	WLCSP2.43x1.7 7	48V/200mΩ
SY22727ABT	IR LED Backlight	1	4.5V-28V	27V	<0.8A	Syn Buck	1.8MHz	SOT23-6	28V/220mΩ
SY22729TQD	IR LED Backlight	1	4.5V-28V	27V	<1A	Syn Buck	1.8MHz	DFN1.8x1.4-6	28V/210mΩ
SY22172XVQ	TV mini LED Backlight	6	3.05V-3.6V	<30V	<70mA	current sink	<30KHz	QFN2.5x2.5-14	YES
<div>NEW</div> SY22170DFD	TV mini LED Backlight	4	3.05V-3.6V	<30V	<70mA	current sink	<30KHz	DFN2x2-8	YES
<div>NEW</div> SY22178XVQ	TV mini LED Backlight	6	3.05V-3.6V	<30V	<70mA	current sink	<30KHz	QFN2.5x2.5-14	YES

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SY22103AADC/SY22103ADBC - 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

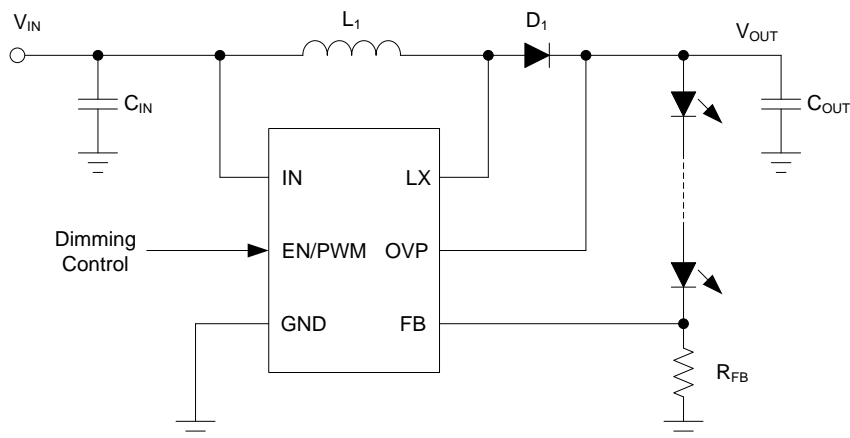
SY22104DBC - 30V High Current Boost LED Driver

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

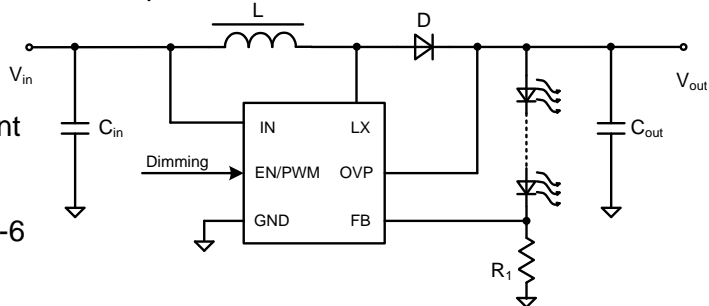
- GPS Navigation Systems
- Handheld Devices
- Portable Media Players


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SY22102ABC/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

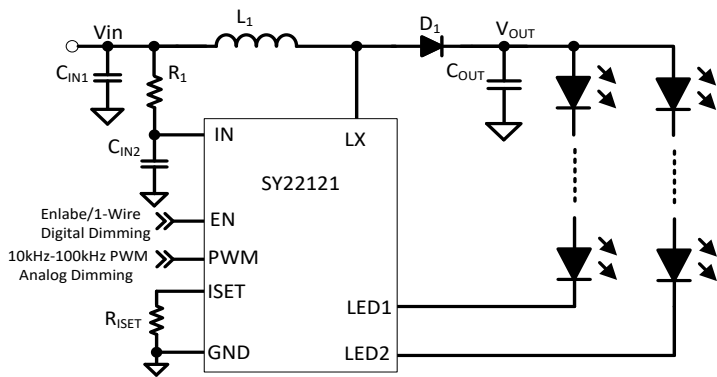
SY22121POC - High Efficiency 2-string LED Driver For Smart Phone

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



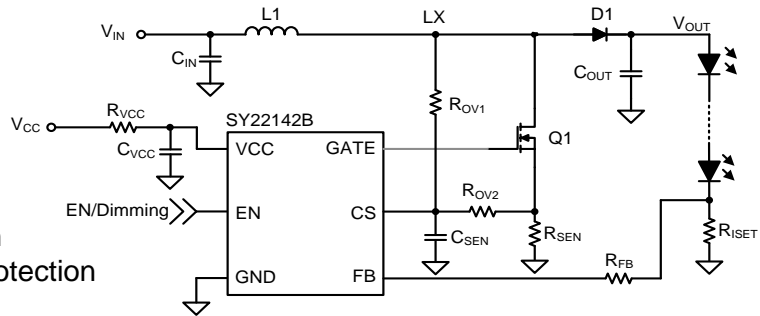
SY22142BABC - 1 Channel Boost LED Controller

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



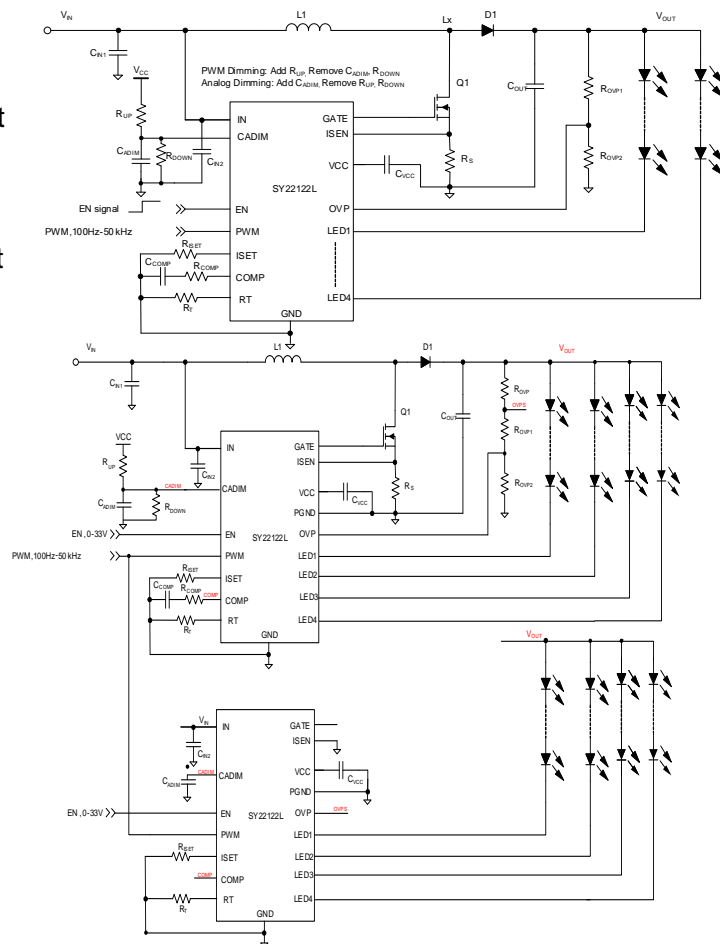
SY22122LFEC/FFC - 60V High Efficiency Four-String Boost LED Driver

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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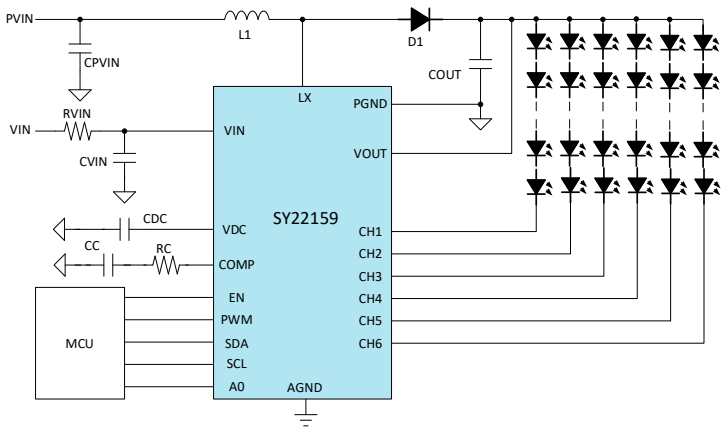
SY22159RBQ - 37V High Efficiency Boost Converter with I²C Controlled 6-CH LED Driver

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

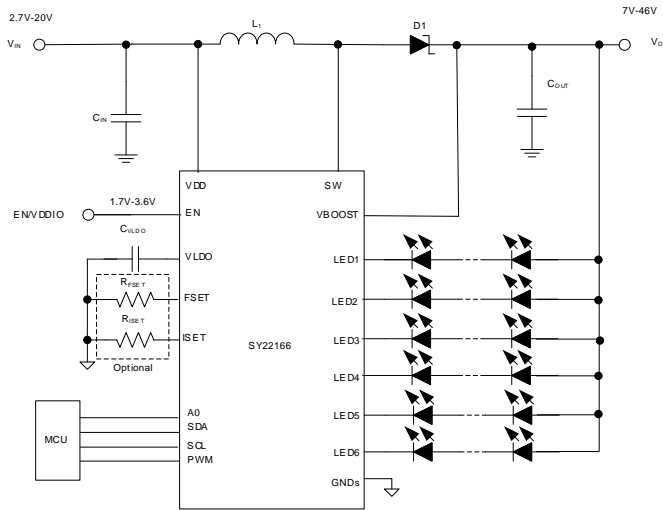


SY22166QCQ/VGS-6-channel High Efficiency LED Driver for LCD Panel Backlighting

- ## 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



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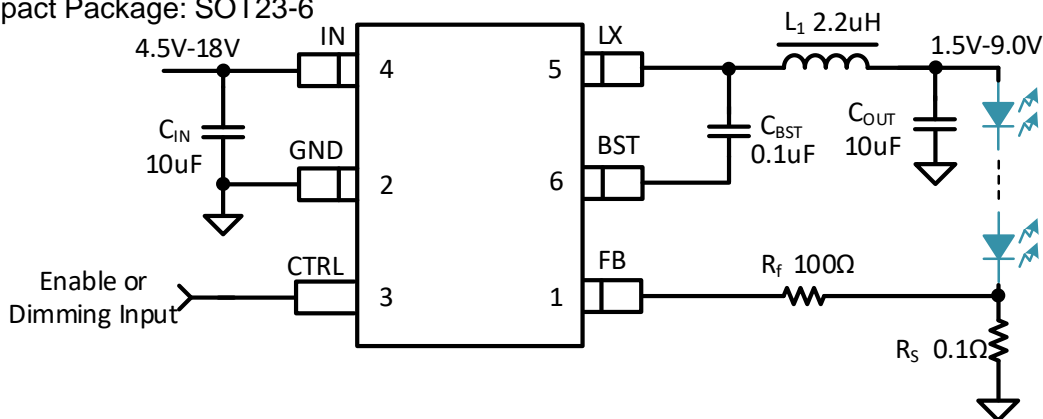
SY22727ABT - 1A, 1.8MHz, 0.2% Dimming Synchronous Step-Down Regulator for Dimmable LED Driver

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



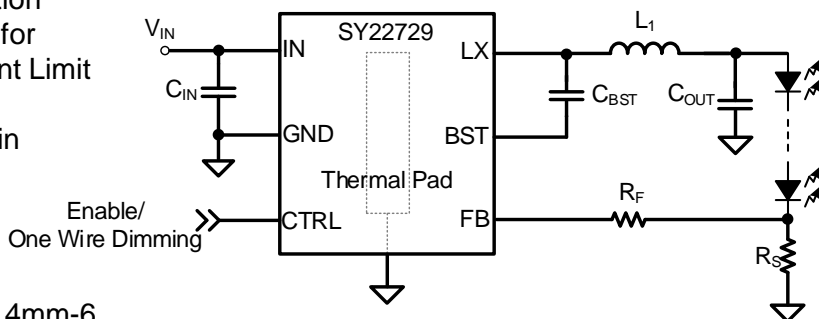
SY22729TQD - 6-channel High Efficiency LED Driver for LCD Panel Backlighting

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 \times 1.4mm-6

Applications

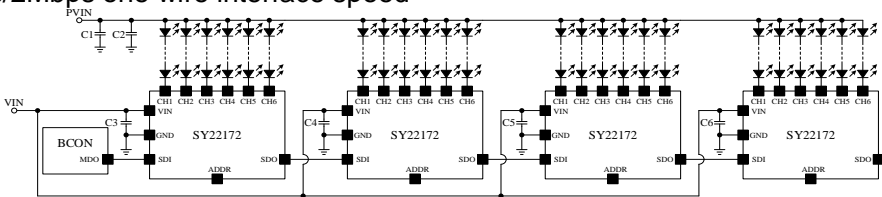
- DVR or NVR(IP Camera) System Application
- 12V DC Lighting



SY22172XVQ - 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: QFN2.5×2.5-14



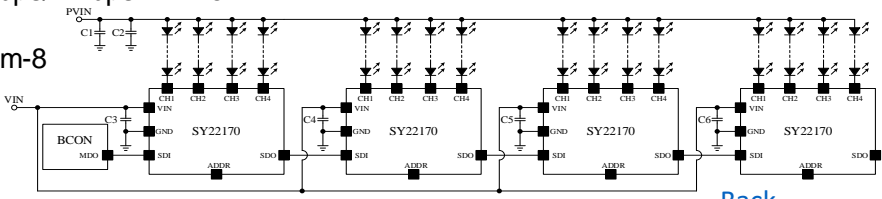
SY22170DFD - 4CH Current Sink with One Wire Interface Mini LED Driver

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



[Back](#)

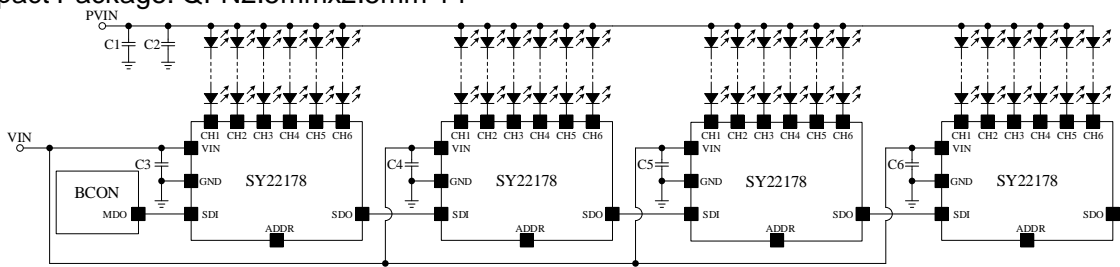
SY22178XVQ - 6CH Current Sink with One Wire Interface Mini LED Driver

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
SY22678ABC	AC Buck non-dimming	>0.9	PSR, QR, CC, Buck controller	120/230V _{AC}	<100W	NA	SOT23-6
SY22679BABC	AC Flyback non-dimming	>0.9	PSR, QR, CC, Buck-Boost/Flyback controller	120/230V _{AC}	<100W	NA	SOT23-6
SY22603AJAC	Ripple-Remover	NA	Ripple-Remover, Low BOM cost, Thermal Protection	NA	NA	0,25~1.2A	TO252-3
SY28611SFAC	Dim-Interface	NA	3-in-1 Dimming Interface	NA	NA	NA	SO8
SY22743UFAC	PFC_Boost_CV	>0.9	QR, CV, Boost, Int. MOS 500V/4.9Ω single winding	230V _{AC}	<50W		SO8
SY22650BFAC	PFC_Flyback_CV	>0.9	PSR, QR, CV, Controller	120/230V _{AC}	<80W		SO8
SY22651ZFAC	DC Buck PWM Dimming	>0.5	CC, Buck controller, PWM/Analog dim	40~400V _{DC}	<80W		SO8
SY22661FAC	AC Flyback PWM Dimming	>0.9	PFC,CC, Flyback controller, 0-10V dim	120/227Vac	<80W		SO8
SY22652NFAC	AC Flyback PWM Dimming	>0.9	PFC, CC, Flyback controller, PWM/Analog dim	120/230V _{AC}	<80W		SO8
SY22652ZFAC	DC Flyback PWM Dimming	>0.5	CC, Flyback controller, PWM/Analog dim	400V _{DC}	<150W		SO8
SY22745FFP	Boost+LLC Combo IC	PF>0.95 THD<5%	SSR,CC/CV Controller	120/277Vac	<400W		SOP16
SY22643NFCP	AC Linear Triac Dimming	>0.7	Linear Triac Dimming, Int. MOS 350V/20Ω, TFB148°C	120V _{AC}	<12W	<70mA	SO8E
SY22643AFCP	AC Linear Triac Dimming	>0.7	Linear Triac Dimming, Int. MOS 350V/20Ω, TFB110°C	120V _{AC}	<12W	<70mA	SO8E
SY22643BFCP	AC Linear Triac Dimming	>0.7	Linear Triac Dimming, Int. MOS 350V/20Ω, TFB122°C	120V _{AC}	<12W	<70mA	SO8E
SY22643CFCP	AC Linear Triac Dimming	>0.7	Linear Triac Dimming, Int. MOS 350V/20Ω, TFB128°C	120V _{AC}	<12W	<70mA	SO8E
SY22643PFCP	AC Linear Triac Dimming	>0.9	Linear Triac Dimming, Int. MOS 350V/20Ω, TFB148°C	120V _{AC}	<12W	<70mA	SO8E
SY22643QFCP	AC Linear Triac Dimming	>0.9	Linear Triac Dimming, Int. MOS 350V/20Ω, TFB122°C	120V _{AC}	<12W	<70mA	SO8E
SY22642A1FCC	AC Linear Triac Dimming	>0.7	Linear Triac Dimming, Int. MOS 500V	230V _{AC}	<12W	<45mA	SO8E

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LED Lighting(AC-DC)

Part Number	App. Type	PF	Description	Input V_{AC}	Output Power	Output Current	Package
SY22642B1FCC	AC Linear Triac Dimming	>0.7	Linear Triac Dimming, Int. MOS 500V	230V _{AC}	<12W	<45mA	SO8E
SY22642C1FCC	AC Linear Triac Dimming	>0.7	Linear Triac Dimming, Int. MOS 500V	230V _{AC}	<12W	5~12mA	SO8E
SY22638A2FCP	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
SY22638B4FCP	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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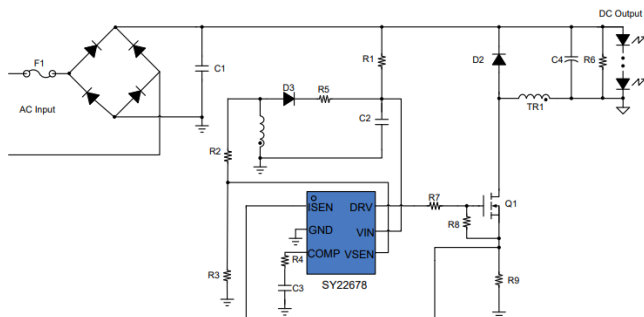
SY22678- Single Stage Buck PFC Controller for LED Lighting

Features

- Valley Turn-on of the MOSFET to Achieve Low Switching Loss
- Power Factor >0.90 with Single-stage Conversion
- Low Start up Current: 15μA Typical
- Quick Start up 0.90 with Single-stage Conversion
- RoHS Compliant and Halogen Free
- Compact Package: SOT23-6

Applications

- LED Lighting
- Down Light
- Tube Lamp
- PAR Lamp
- Bulb Lamp



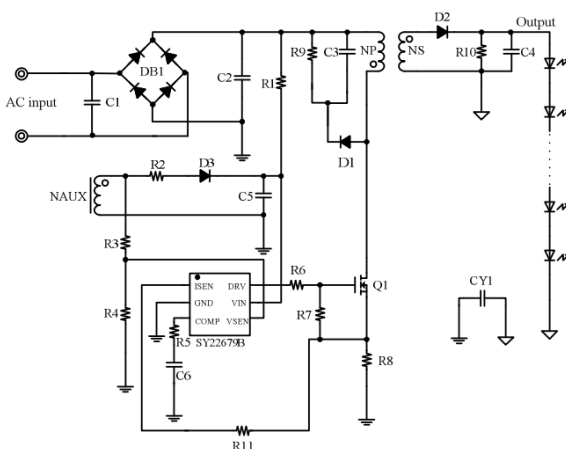
SY22679B- Single Stage Flyback And PFC Controller With Primary Side Control for LED Lighting

Features

- Primary side control eliminates the opto-coupler
- Valley turn-on of the primary MOSFET to achieve low switching loss
- Power factor >0.90 with single-stage conversion
- Reliable short LED and Open LED protection
- Quick start up

Applications

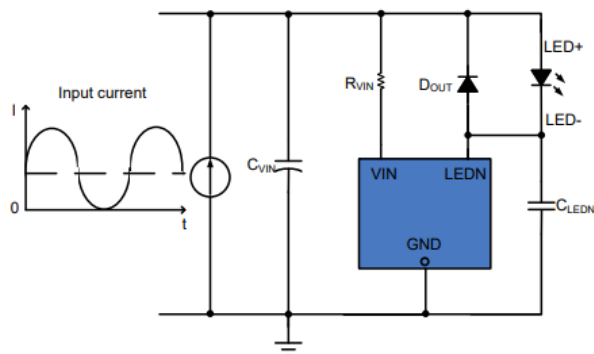
- LED Lighting



SY22603A- Adaptive LED Current Filter for LED Lighting

Features

- Current Filter for Single-Stage LED Driver to Eliminate Current Ripple
- 20V to 65V Output Voltage Range
- Operating Current: 91 μ A (typ.)
- 0.25A to 1.2A Output Current Range
- Proprietary Scheme for Low Power Loss (2.5% or less)
- Open-LED and Short-LED Protections
- Over temperature Protection
- RoHS-Compliant and Halogen-Free
- Compact Package: TO252-3



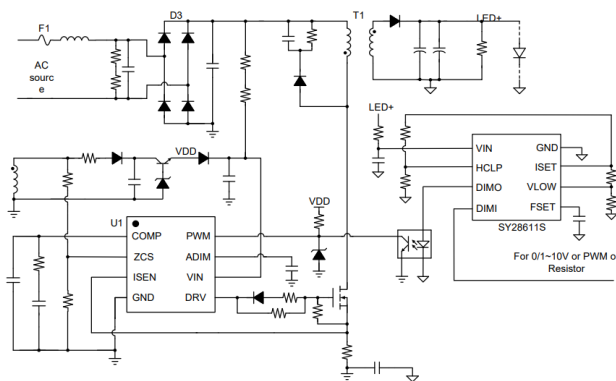
Applications

- LED Lighting

SY28611S- 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



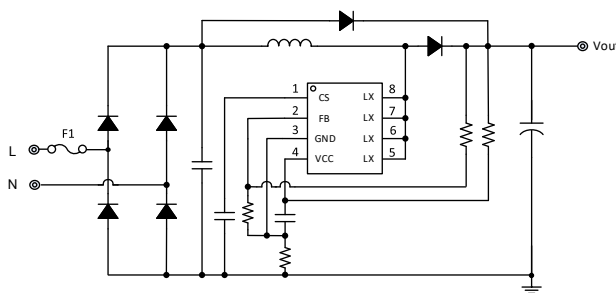
Applications

- LED Lighting

SY22743U- Boost PFC Regulator

Features

- Integrated 520V 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



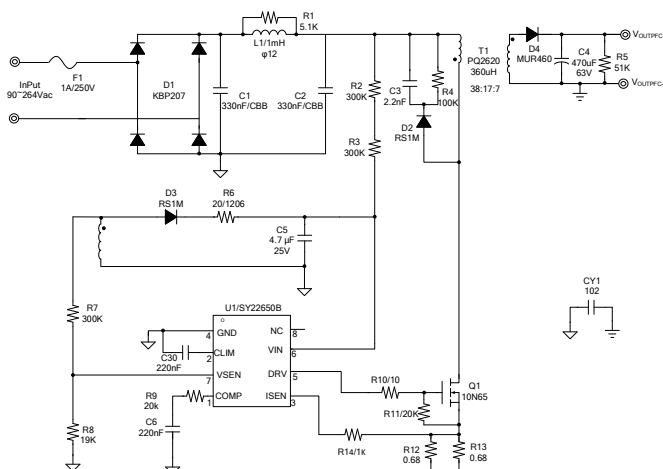
Applications

- Adaptors
- Pre-stage for Two-stage AC/DC Converter
- LED Lighting

SY22650B- 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



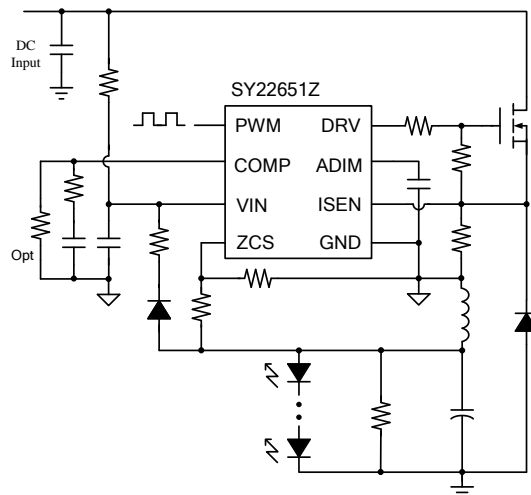
Applications

- AC/DC Adaptors
- Battery Charges
- LED Lighting

SY22651Z- 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



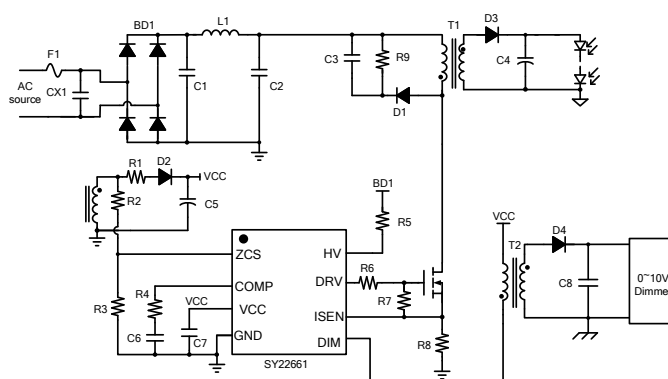
Applications

- LED Lighting

SY22661- 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% to 100%
- 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



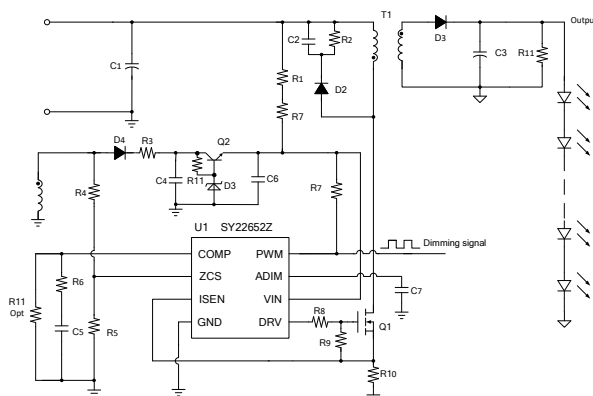
Applications

- LED Lighting

SY22652Z- 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



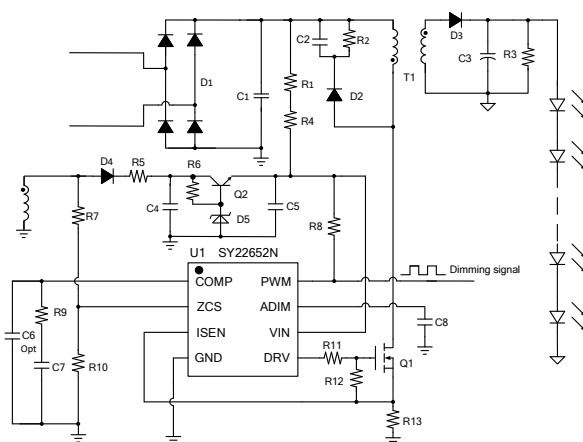
Applications

- LED Lighting

SY22652NFAC- 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



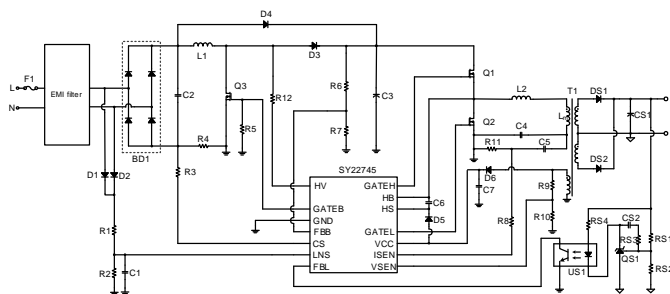
Applications

- LED Lighting

SY22745- 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 Protection
- Cycle by Cycle Peak Current Protection
- Over Temperature Protection
- LLC Capacitive Mode Protection



Applications

- LED Driver
- Desktop, all in one PC
- Adapter, Charger
- Printer

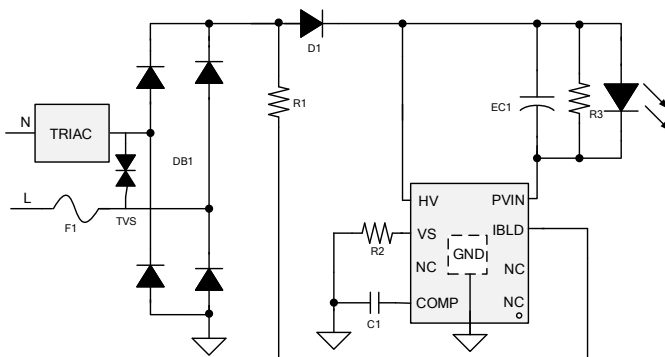
SY22643A/B/C/N/P/Q- Dimmable, high Efficiency Linear Driver with Integrated 350V MOSFET

Features

- Compatible with Leading/Trailing Edge Dimmer
- Integrated 350V MOSFET
- Power Factor > 0.7
- Good regulation ($< \pm 3\%$)
- Up to 85% High Efficiency
- SMT Assembly
- Eliminate Magnetic Components
- Compact Package: SO8E

Applications

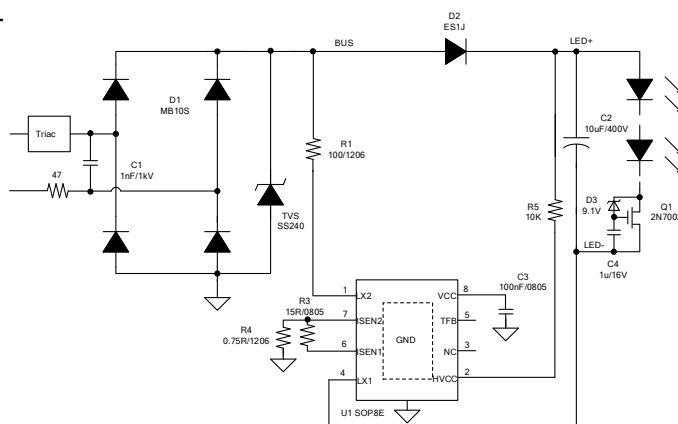
- LED Lighting



SY22642A1/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



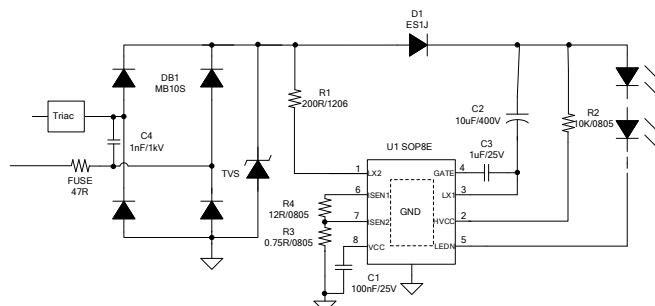
Applications

- LED Lighting

SY22638A2/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)

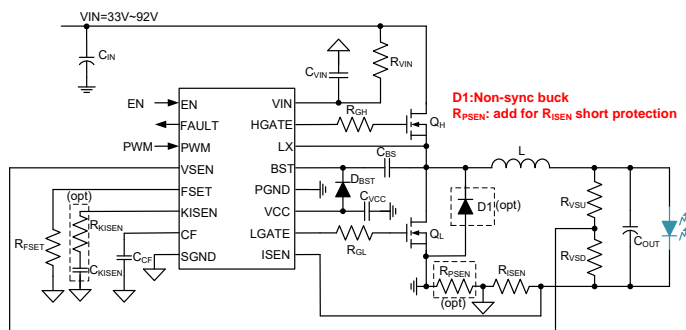
Part Number	App.Type	Input Range(V)	Description	Max. LED Current	F(Hz)	Topology	Package
SY22671FFP	DCDC Buck	33V-92V	Buck Controller, Precision Analog Dimming	5A	Adjustable frequency	Buck	SOP16
SY22173ABC	IR LED	2.8V-30	Buck, Int. 30V/200mΩ MOS,PWM dimming	1.0A	1M	Buck	SOT23-6
SY22175FCC	IR LED	2.8V-30	Buck, Int. 30V/100mΩ MOS,PWM dimming,	3.0A	1M	Buck	SO8E
SY22175BFCC	IR LED	2.8V-30	Buck. int.30V/100mΩ MOS,PWM dimming, Small dimming scale accuracy	3.0A	1M	Buck	SO8E
SY22151ABC	IR LED	2.8V-30	Buck. int.30V/100mΩ MOS, Analog dimming,	1.5A	1M	Buck	SOT23-6
SY22177ABC	IR LED	2.8V-25	Buck. Int. 25V/200mΩ MOS, Analog dimming,	0.8A	1M	Buck	SOT23-6
SY22728A1ADC	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
SY22728B1ADC	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
SY22728H1ADC	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
SY22146AABC	IR LED	2.8V-30	Boost, Int.30V/220mΩ MOS,PWM dimming	2.0A	1M	Boost	SOT23-6
SY22101AADC	IR LED	2.7V-5.5	Boost, Int.40V/400mΩ MOS,PWM dimming, Small dimming scale accuracy	1.0A	1M	Boost	SOT23-6

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SY22671- High Efficiency, 33~92V, Step-down Controller for Precision Dimming LED Driver

Features

- Input Range: 33V-92V
- Wide Analog Dimming Range: 400:1
- Excellent Dimming Accuracy:
 $\pm 5\%$ @ 25~100%
 $\pm 25\%$ @ 0.25%
- Gate Driver: Source 8.8Ω and Sink 3.7Ω
- Programmable Switching frequency: 20kHz~500kHz
- Support Synchronous and Non-synchronous Buck
- CC/CV Operation for Open LED and Short LED
- Reliable Single-fault Protection
- Compact Package: SOP16



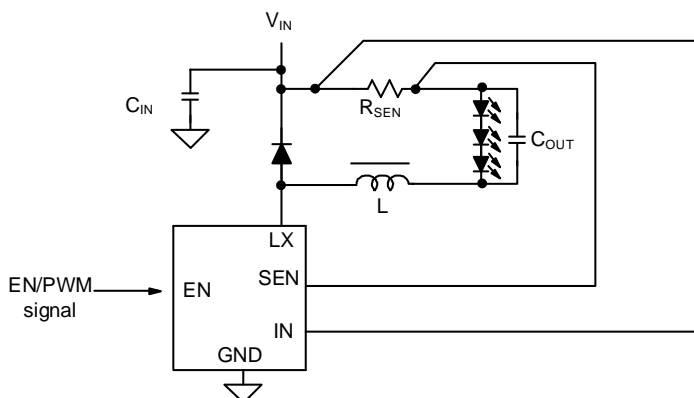
Applications

- High Precision Dimming LED Driver

SY22173- 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



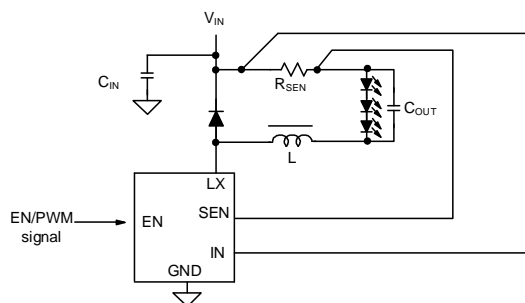
Applications

- Flash light
- Display cabinet lamp
- LED sign

SY22175/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

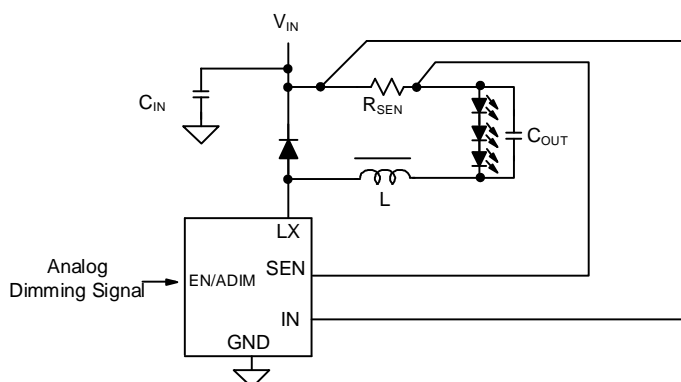
SY22151- High Efficiency, 1MHz, 1.5A,30V,Step-down White LED Driver

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



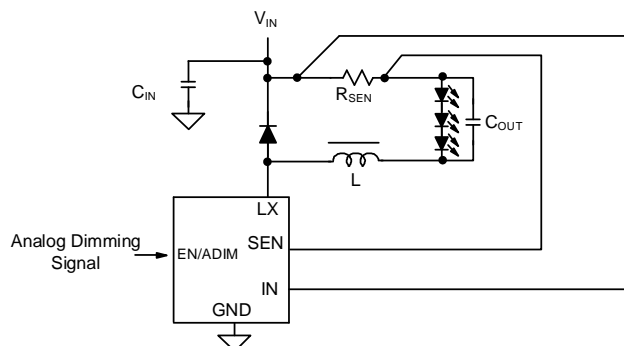
SY22177- High Efficiency, 1MHz, 0.8A, 25V, Step Down White LED Driver

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

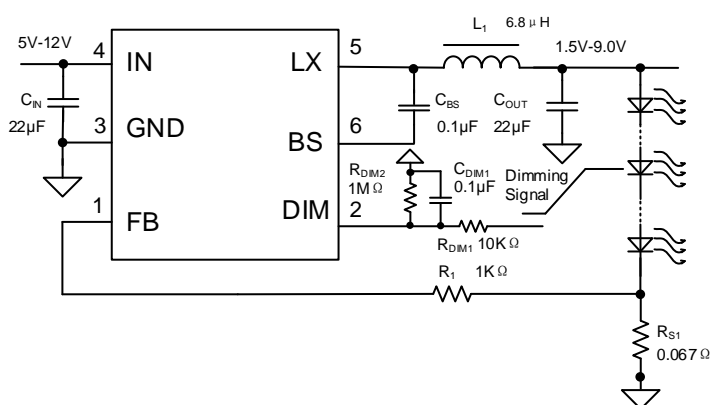
- IP Camera and CCD Camera
- Flash Light
- Display Cabinet Lamp
- LED Sign



SY22728A1/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



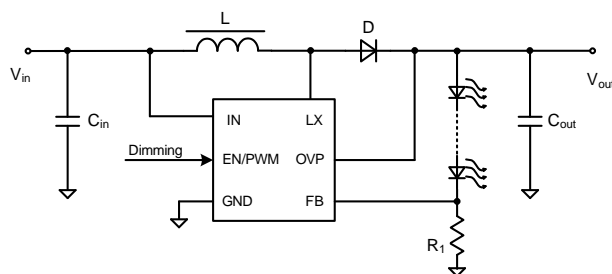
Applications

- DVR Or NVR(IP Camera) System Application
- 12VDC Lighting

SY22146A/22101A- 30V/40V High Current Boost LED Driver

Features

- Input Voltage Range:
 - SY22146A: 2.8 to 30V
 - SY22101A: 2.5 to 5.5V
- Switch Current Limit:
 - SY22146A: 2A
 - SY22101A: 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



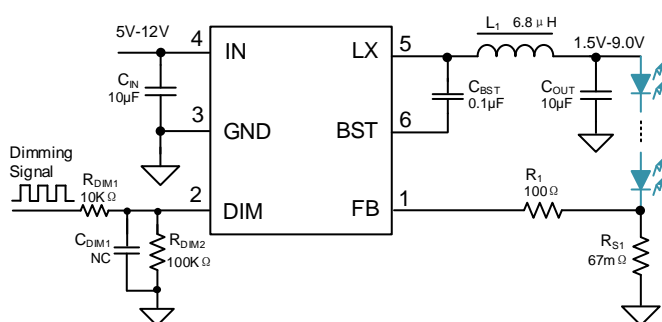
Applications

- GPS Navigation Systems
- Handheld Devices
- Portable Media Players

SY22728H1- 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: 125mΩ/75mΩ
- 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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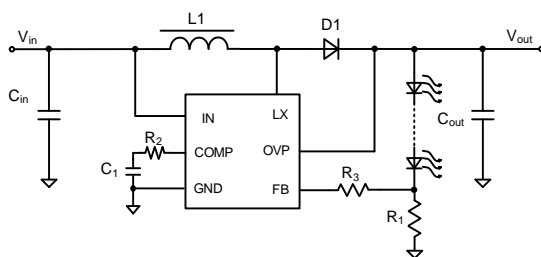
Part Number	App.Type	PF	Description	Input V _{AC}	Output Power	Output Current	Package
SY22605ABC	MR16 non-dimming	>0.9	Boost, Int.40V/220mΩ MOS	12V _{AC}	<5W	<300mA	SOT23-6
SY22606FCC	MR16 non-dimming	>0.9	Boost, Int.40V/220mΩ MOS	12V _{AC}	<8W	>18Vout	SO8E
SY22608FPC	MR16 non-dimming	>0.9	Boost, Int.40V/120mΩ MOS	12V _{AC}	<5W	>18Vout	CPC8
SY22627FCC	MR16 dimmable	>0.9	Boost+LDO, Int.40V/120mΩ MOS, Best compatibility	12V _{AC}	<8W	>18Vout	SO8E
SY22628FCC	MR16 dimmable		Boost, Int.60V/650mΩ MOS		<20W	>18Vout	SO8E
SY22629ABC	MR16 dimmable		Boost, Int.60V/650mΩ MOS		<15W	8~24Vout	SOT23-6

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SY22605/6- 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:
- SY22605: SOT23-6
- SY22606: SO8E



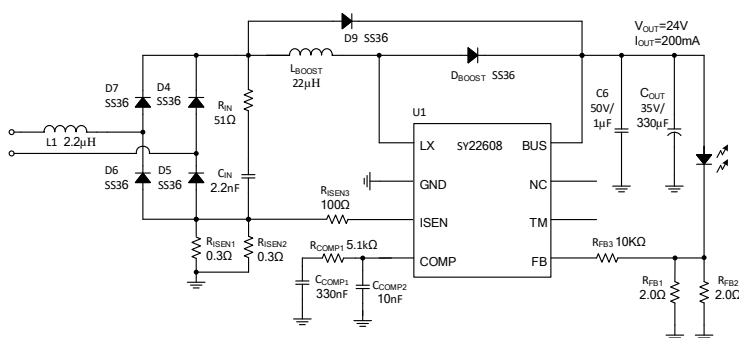
Applications

- MR16 LED Lighting

SY22608- 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



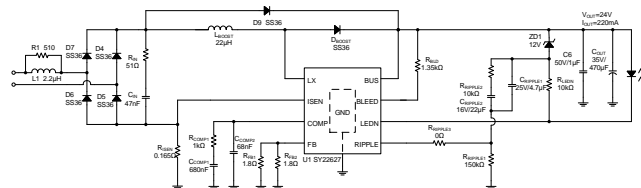
Applications

- MR16 Lighting
- 12VAC/12VDC Lighting

SY22627- 40V/2A Boost Regulator for Dimmable MR16 LED Driver

Features

- Wide Input Range: 4V-36V
- Current Hysteresis Control for Boost Stage
- Integrated Low $R_{DS(ON)}$ FET for Boost Stage
- Integrated Current Ripple Remover FET
- Compatible with Electronic Transformer and Magnetic Transformer
- Compatible with Leading-edge (TRIAC) Dimmer and Trailing-edge Dimmer
- Flicker-free Dimming
- Active Bleeding Support
- Overvoltage Protection for Boost Output Voltage
- Over Temperature Protection for Boost Stage and Current Ripple Remover
- Compact Package: SO8E



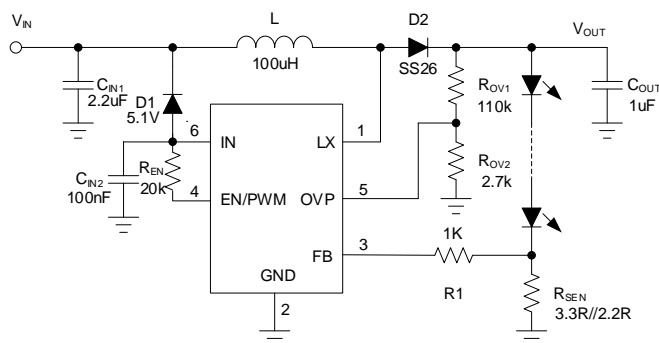
Applications

- 12VAC/12VDC Lighting
- Dimmable MR16 Lighting

SY22628/9- 60V High Current Boost LED Driver

Features

- Input Voltage Range 5 to 60V
- Switch Current Limit 1.2A/0.8A
- Drives LED Strings up to 60V
- 400kHz Fixed Frequency Minimizes the External Components
- Internal Soft start Limits the Inrush Current
- Open LED Over Voltage Protection
- RoHS Compliant and Halogen Free
- Compact Package:
 - SY22628: SO8E
 - SY22629: SOT23-6



Applications

- Handheld Devices
- Portable Lighting

Part Number	Function	Operation Mode	HV Startup	OCP Protection	OVP Protection	UVP Protection	No Load Loss	Package
SY22817AABC	PSR Flyback Controller with UVP	QR	NO	YES	YES	YES	<75mW	SOT23-6

Part Number	Function	Max Power	Integrated FETs	Typical Rdson	Operation Mode	HV Startup	OCP Protection	OVP Protection	UVP Protection	No Load Loss	Package
NEW SY23403Z1FAP	PSR Flyback	12W	650V	4.4Ω	QR	NO	YES	YES	NO	<75mW	SO8
SY23406ZFAC	PSR Flyback	18W	620V	2.2Ω	QR	NO	YES	YES	NO	<75mW	SO8
SY23418VFAC	PSR Flyback	24W	650V	1.2Ω	QR	NO	YES	YES	NO	<75mW	SO8
SY23407FQC	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	OCP Protection	OVP Protection	UVP Protection	No Load Loss	Package
SY23401CFAC	PSR Flyback with UVP	3.5W	980V	QR	NO	YES	YES	YES	<75mW	SO8
SY23411WAZC	PSR Flyback without UVP	6W	800V	QR	NO	YES	YES	NO	<75mW	SOT335

Part Number	Function	Operation Mode	Max Frequency	HV Startup	OCP Protection	OVP Protection	UVP Protection	BO/BI	Input OVP Protection	No Load Loss	Package
SY22815FAC	QR SSR Flyback Controller with HV Start Up	QR	125kHz	YES	YES	YES	NO	NO	NO	<50mW	SO8
NEW SY23510ABC	CCM+QR SSR Flyback Controller	CCM/QR	65kHz	NO	NO	YES	NO	YES	NO	<75mW	SOT23-6
SY23510AABT	CCM+QR SSR Flyback Controller	CCM/QR	85kHz	NO	NO	YES	YES	YES	NO	<75mW	SOT23-6
NEW SY22818AFAP	CCM+QR SSR Flyback Controller with Input OVP	CCM/QR	90kHz	YES	NO	YES	YES	YES	NO	<50mW	SO8
SY22818CFAP	CCM+QR SSR Flyback Controller with Input OVP	CCM/QR	90kHz	YES	NO	YES	YES	YES	YES	<50mW	SO8
SY22812BFVP	QR SSR Flyback Controller with GaN Driver	QR	300kHz	YES	NO	YES	YES	YES	NO	<50mW	SSOP9
SY22812CFVP	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 SY23494HZP	QR SSR Flyback for Max 45W	700V	365mΩ	QR	500kHz	YES	YES	YES	YES	YES	<50mW	SSOP9E
SY23496XDQ	QR SSR Flyback for Max 100W	700V	165mΩ	QR	500kHz	YES	YES	YES	YES	YES	<50mW	QFN 5×7-18
SY23498XDQ	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 SY23425ABC	CCM+QR SR Controller	CCM/QR/DCM	200V	High Side / Low Side	YES	NO	SOT23-6
SY23425AABT	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
SY23434FPP	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
SY23429AAZC	SR Switcher for QR Mode	60V	19mΩ	QR/DCM	High Side / Low Side	NO	SOT335
SY23451FAC	SR Switcher for QR Mode	60V	10mΩ	QR/DCM	High Side / Low Side	NO	SO8
SY23421FAP	SR Switcher for CCM+QR Mode	65V	8.7mΩ	CCM/QR/DCM	High Side / Low Side	YES	SO8

Part Number	Function	Max Power	Integrated FETs	Typical Rdson	Operation Mode	Max Frequency	HV Startup	OCP Protection	OVP Protection	No Load Loss	Package
SY23433BFHC	PSR Flyback	7W	900V	13.4Ω	QR	125kHz	YES	YES	YES	<75mW	SSOP10

Part Number	Function	Max Power	Integrated FETs	Typical Rdson	Output Voltage	Operation Mode	Max Frequency	HV Startup	OCP Protection	OVP Protection	Package
SY22841AAC	Buck Converter	2.4W	500V	12Ω	Adjustable	QR	45kHz	NO	YES	YES	SOT23-5
SY22845FAC	Buck Converter	4.2W	700V	7.5Ω	Adjustable	QR	45kHz	NO	YES	YES	SO8
SY22847BFAC	Buck Converter for 12V Output	4.3W	650V	9Ω	12V	CCM/DCM	40kHz	YES	NO	YES	SO8
SY22848AGC	Buck Converter for 18V Output	6.5W	650V	9.2Ω	18V	CCM/DCM	40kHz	YES	NO	YES	DIP8
SY22848BAGC	Buck Converter for 12V Output	4.3W	650V	11.5Ω	12V	CCM/DCM	40kHz	YES	NO	YES	DIP8

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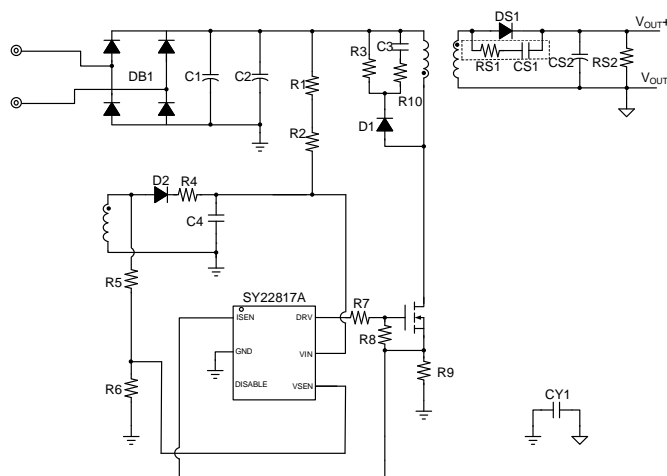
Part Number	Function	Operation Mode		Control Mode		Protection		Support DC Input	Package	
SY23505AHXP	PFC+LLC Combo Controller	PFC: CrM/DCM/Burst LLC: CCM/DCM/Burst		PFC: Average current mode LLC: Current mode		AC Brown in/out, OCP, OVP, OTP, PFC OPP		NO	SOP14	
SY23505BHXP	PFC+LLC Combo Controller	PFC: CrM/DCM/Burst LLC: CCM/Burst		PFC: Average current mode LLC: Current mode		AC Brown in/out, OCP, OVP, OTP, PFC OPP		YES	SOP14	
SY23505DHXP	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 Rdson	Operation Mode	Max Frequency	HV Startup	BO/BI	Input OVP Protection	Package
SY23329FIB	SSR Flyback Converter	30W	700V	2Ω	CCM/DCM	100kHz	YES	YES	YES	DIP7

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SY22817A- Flyback Controller 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
- Low Start Up Current: 5 μ A Max
- Minimum Frequency Limitation 500Hz
- Reliable Protections for OVP, UVP, SCP, OTP, OCP
- Reliable Protections for Safety Requirement
- Maximum Switching Frequency Limitation 125kHz
- RoHS Compliant and Halogen Free
- Compact Package: SOT23-6



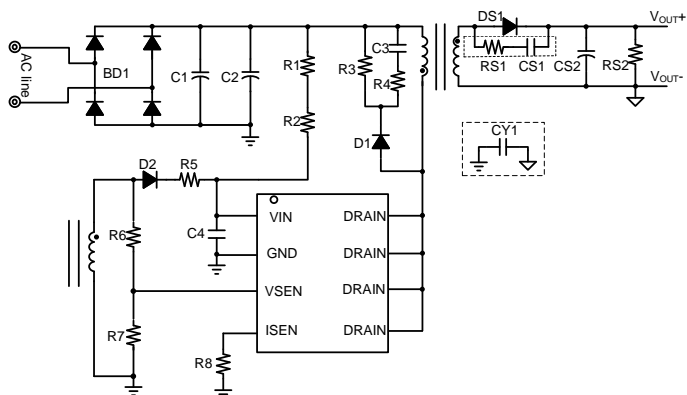
Applications

- AC/DC Adapters
- Battery Chargers

SY23406Z/23403Z1/23418V- 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 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
- SY23406Z: Integrated 650V/2.2 Ω MOSFET
- SY23403Z1: Integrated 650V/4.4 Ω MOSFET
- SY23418V: Integrated 650V/1.2 Ω MOSFET
- RoHS Compliant and Halogen Free
- Compact Package: SO8



Applications

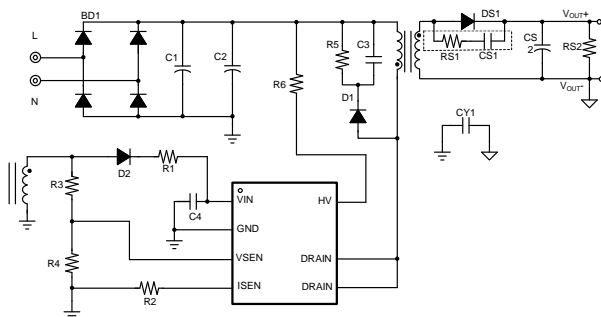
- AC/DC Adapters
- Battery Chargers

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SY23407- 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



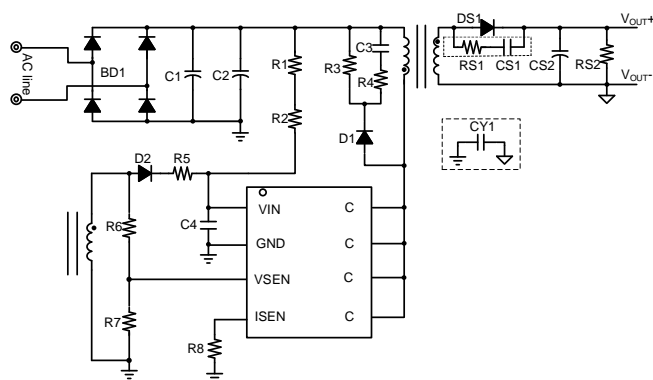
Applications

- AC/DC Adapters
- Battery Chargers
- Home Appliances

SY23401C- 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

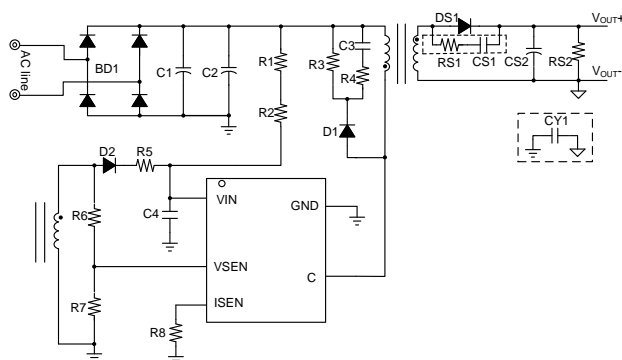
- AC/DC Adapters
- Battery Chargers

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SY23411W- 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 72kHz
- Integrated 800V Bipolar NPN Transistor
- RoHS Compliant and Halogen Free
- Compact Package: SOT335



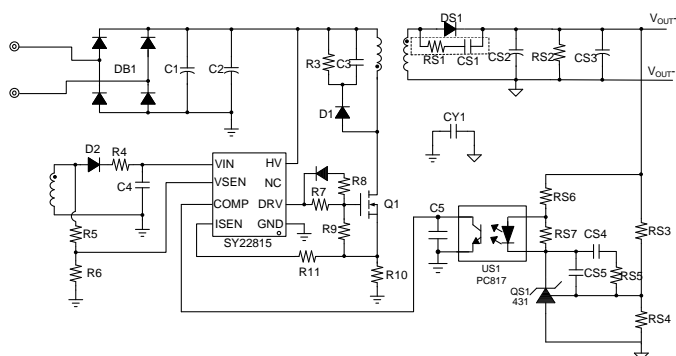
Applications

- AC/DC Adapters
- Battery Chargers

SY22815- 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



Note: Ground node of current sample resistor must be connected to the ground of BUS line capacitor.

Applications

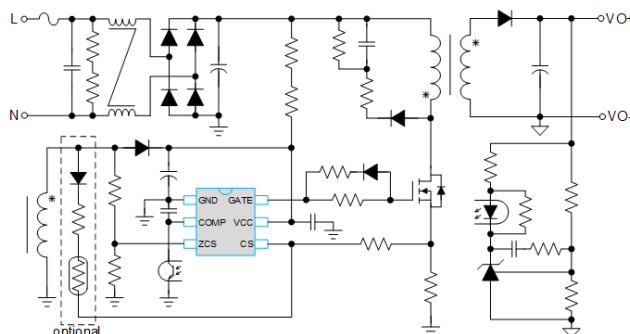
- AC/DC Adapters
- Battery Chargers
- Consumer Electronics
- Auxiliary power supplies

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SY23510- 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



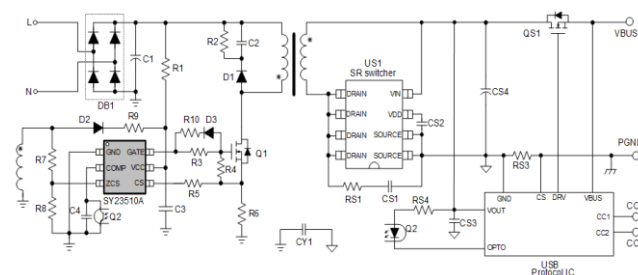
Applications

- AC/DC Power Supply
- Note Book Adapter
- LCD TV
- Auxiliary Power Supply

SY23510A- 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

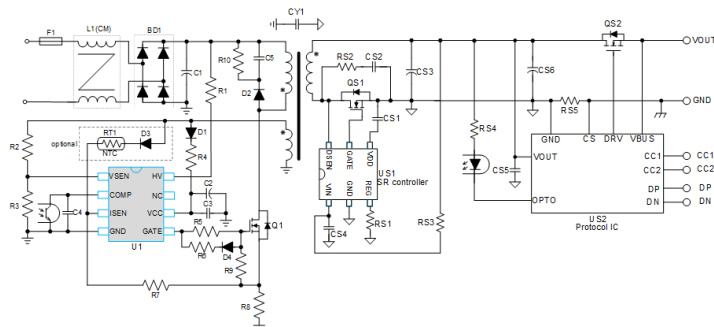
- AC/DC Adapters
- AC/DC Fast Chargers

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SY22818A/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 (SY22818C), 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

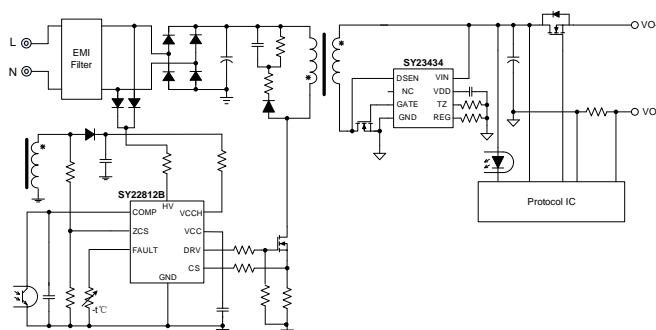
- Fast Chargers
- AC/DC Adapters

Part Number	OLP Timer	BO	BI	Max Toff	ISEN Short	Input OVP
SY22818AFAP	208ms	85uA, 200ms	120uA	64us	6.2us	NO
SY22818CFAP	64ms	100uA, 64ms	110uA	245us	3.9us	YES

SY22812B- High Frequency QR Flyback Controller with Valley Lockout

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



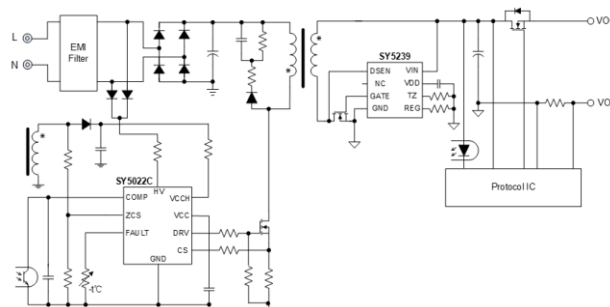
Applications

- AC/DC Adapters
- PD Adapters
- Quick Chargers

SY22812C- 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

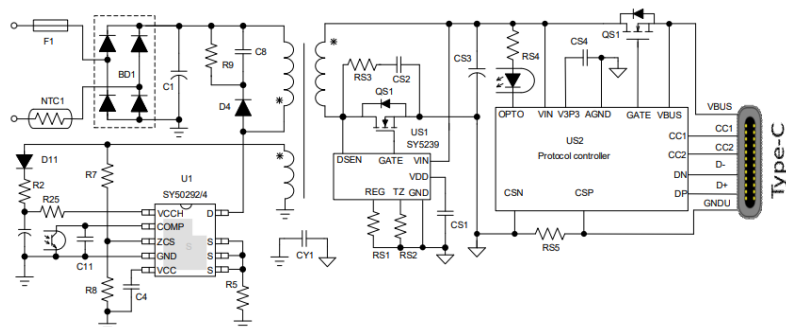
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SY23494- High Frequency QR Flyback Converter

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



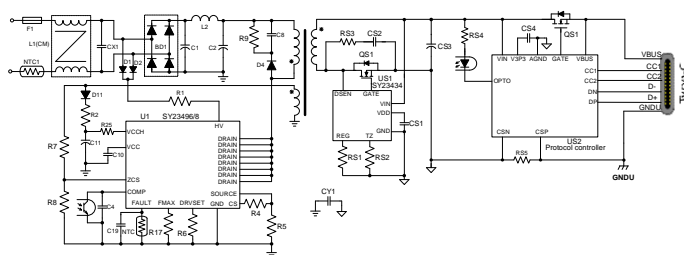
Applications

- AC/DC Adapters
- PD Adapters
- Quick Chargers

SY23496/8- 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



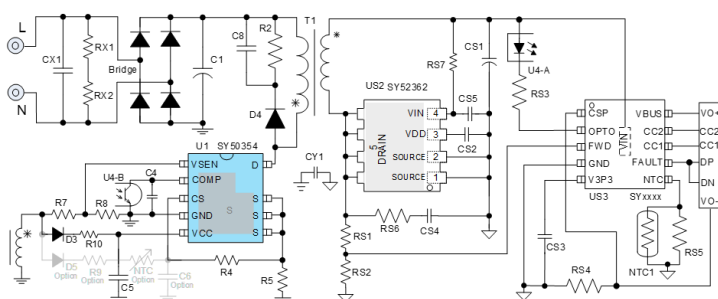
Applications

- 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

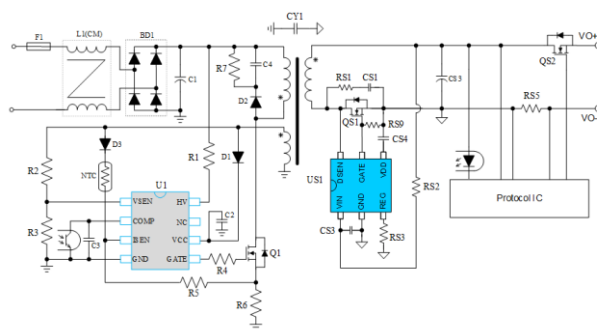
- AC/DC Adapters
- PD Adapters
- Quick Chargers

[Back](#)

SY23425/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:
 - SY23425ABC:1150ns
 - SY23425ABT:650ns
- Compact Package: SOT23-6



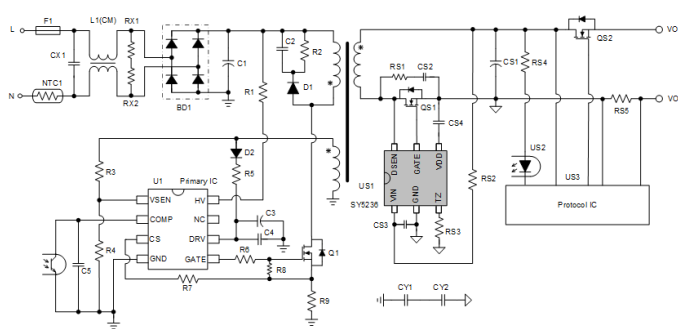
Applications

- 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

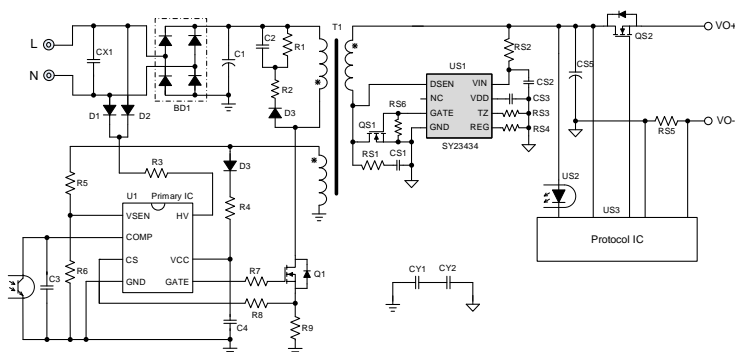
- Smart Phone Fast Chargers
- AC/DC Adapters and Auxiliary Power Supplies

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SY23434- 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

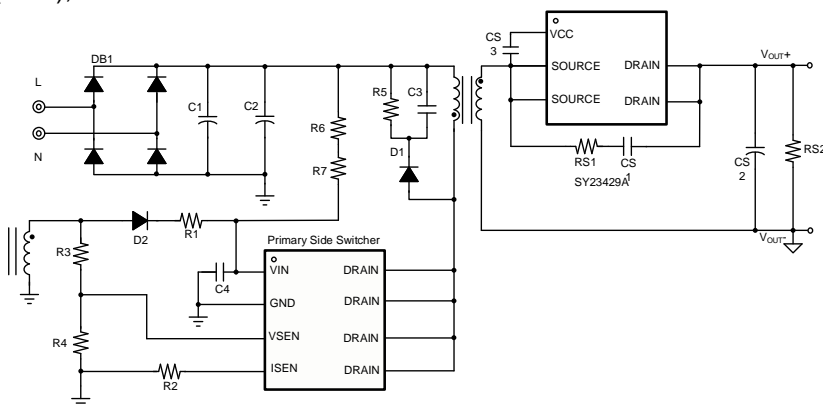
SY23429A- Secondary Side Synchronous Rectification Converter

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)
- RoHS Compliant and Halogen Free
- Compact Package: SOT335

Applications

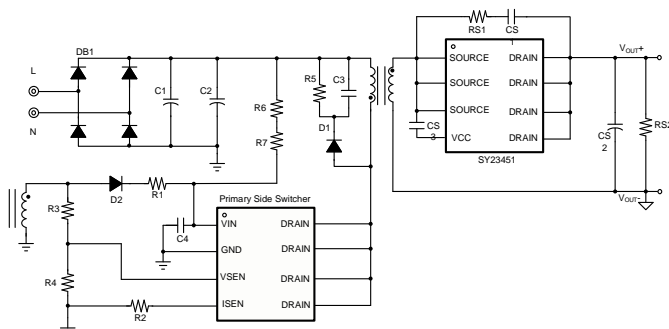
- AC/DC Adapters
- Battery Chargers
- Consumer Electronics
- Auxiliary Power Supplies



SY23451- 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



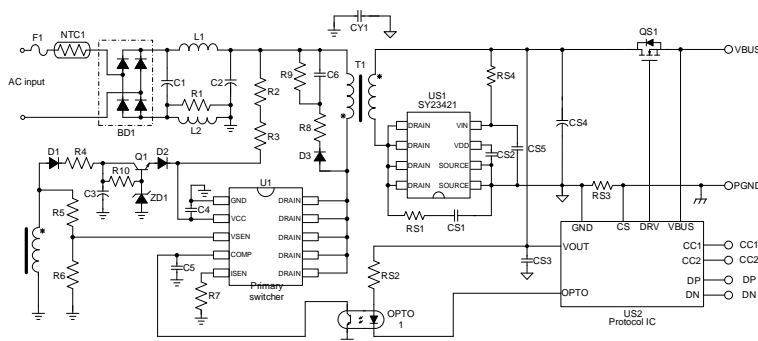
Applications

- AC/DC Adapters
- Battery Chargers
- Consumer Electronics
- Auxiliary Power Supplies

SY23421- 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
- Compact Package: SO8



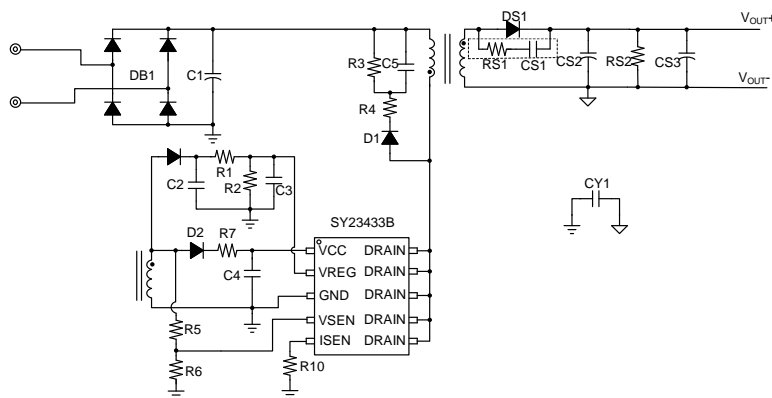
Applications

- AC/DC Adapters
- USB Type-C and Power Delivery AC Adapters
- Server and Telecom Power Supply
- Auxiliary Power Supplies

SY23433B- 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



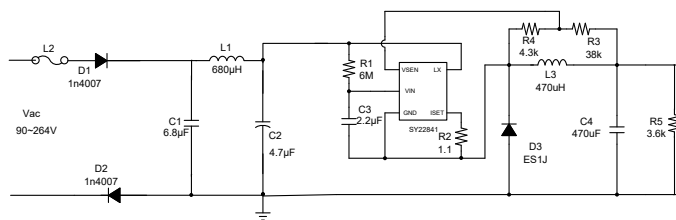
Applications

- Power Supply for STB Home Appliances, Smart Power Meter and Other Appliances with High AC Input Voltage

SY22841 - Buck Regulator with CC/CV Control

Features

- Integrated 500V 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

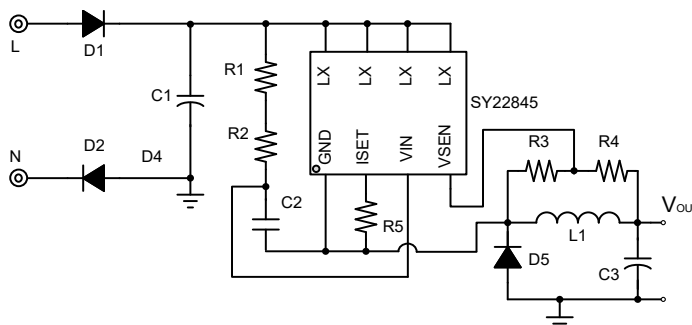
SY22845 - Buck Regulator With CV/CC Control

Features

- Integrated 700V MOSFET
- CC/CV Control Eliminates Aux-winding
- Quasi-Resonant (QR) mode to Achieve Low Switching Losses
- Low Start Up Current: 15 μ A Typical
- Maximum Frequency Limit: 45kHz
- Compact Package: SO8

Applications

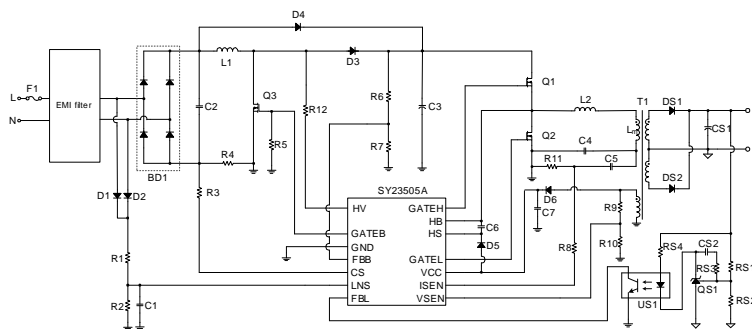
- AC/DC Adapters
- Battery Chargers



SY23505A - 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



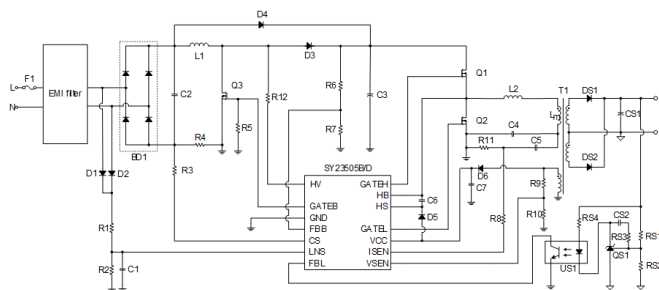
Applications

- LCD Television
- Desktop, All in One PC
- Adapter, Charger
- Printer

SY23505B/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
SY23213AFCP	af/at Interface	SO8E	YES	<25W	POE	YES	YES	NO

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
SY23212ATQQ	POE PD+PSR Flyback converter	600kHz	QFN4x5-28	YES	<13W	POE	YES	NO	YES	YES	YES
NEW SY23218XTQ	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
SY22852FAC	PSR Flyback	120kHz	SO8	200V	8W	36-72VDC or POE	YES	NO	YES	YES	NO	<75mW
SY22851FAC	PSR Flyback	120kHz	SO8	200V	12W	36-72VDC or POE	YES	NO	YES	YES	NO	<75mW
SY22856AFAC	PSR Flyback	300kHz	SO8	200V	12W	36-72VDC or POE	YES	NO	YES	YES	NO	<75mW

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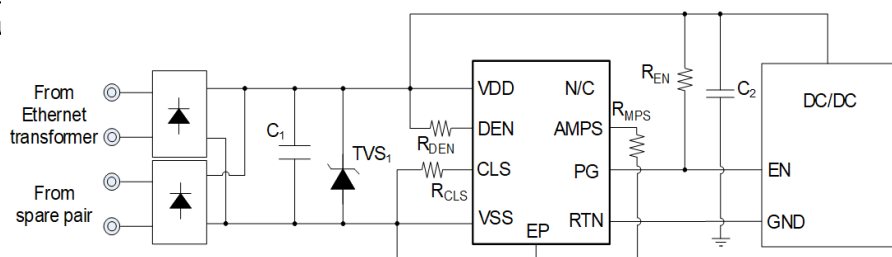
SY23213A - IEEE 802.3 af/at PoE-Compliant Powered Device (PD) Controller

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 Outpt
- SO8E Package

Applications

- VoIP Telephones
- Network Cards
- Security Camera Systems
- Safety Backup Power
- Remote Internet Power



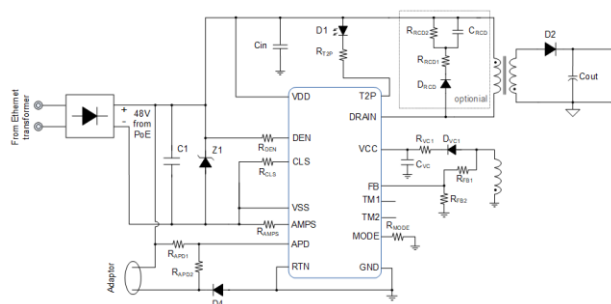
SY23212A- IEEE 802.3 af/at-Compatible PoE Power Device Interface with 13W High-frequency PSR Flyback Converter

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



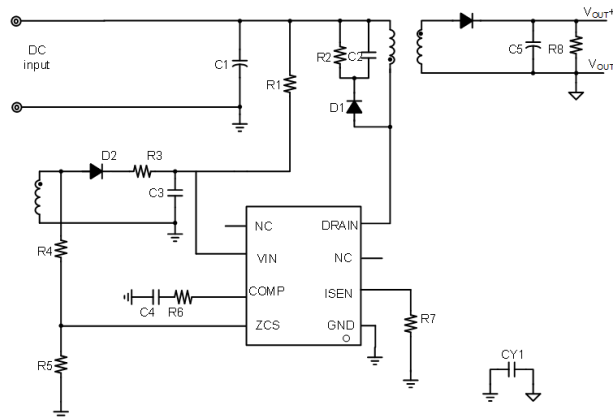
SY22851/2- Flyback Regulator With Primary Side CV/CC Control For Adapters and Chargers

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



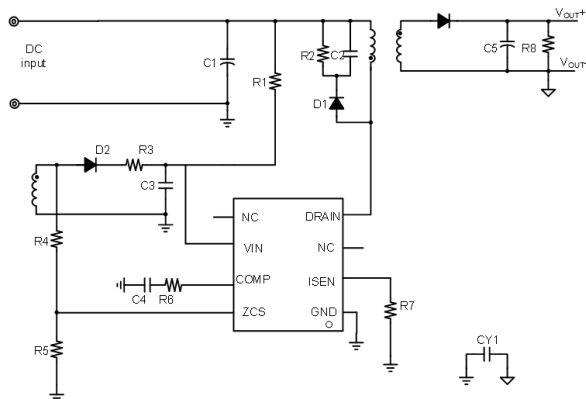
SY22856A - Flyback Converter With Primary Side CV/CC Control For Telecom Application

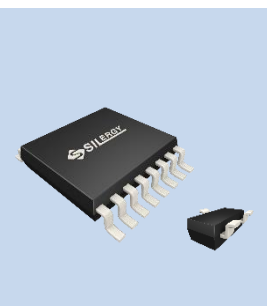
Features

- 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

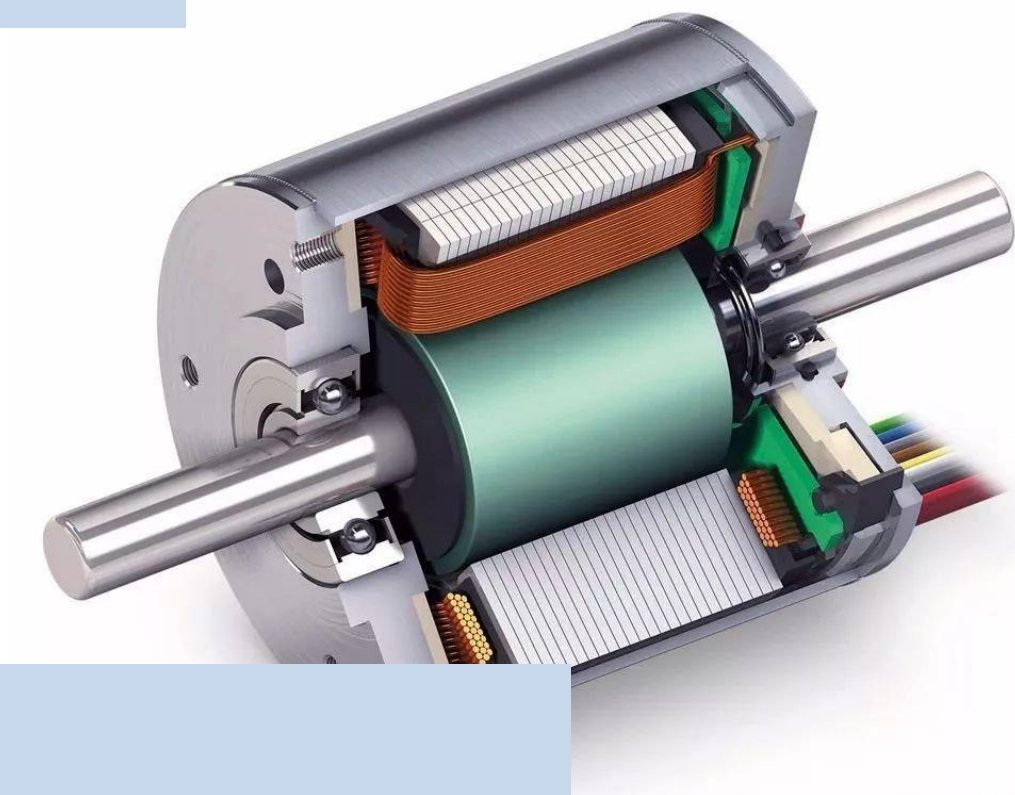
Applications

- 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)					
SY21603HFC	2.5	12	1.5	<480	√	TSSOP-16E	POS Printers, Consumer Products, Robotics, Game Machines, Toys
SY21603QIC	2.5	12	1.5	<480	√	QFN4×4-16	POS Printers, Consumer Products, Robotics, Game Machines, Toys
SY21611FHC	2.5	16	0.8	<700	√	SSOP10	Refrigerators, Stepper Motors
SY21634FCC	5	32	3.6	<500	√	SO8E	Consumer Products, Robotics, DC Brush Motor
SY21621HKP	2.7	18	1.5	<670	√	TSSOP16	Refrigerators, DC Brush Motors, Solenoid Valve Load
SY21626RPQ	5	26	6.5	<140	√	QFN5×5-40	3-Phase BLDC Motor Driver
SY21643HHP	5	32	3	<240	√	TSSOP24E	Fan, Pump, HVAC

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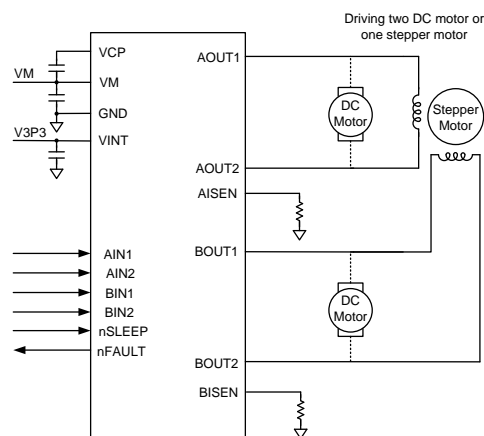
SY21603HFC/SY21603QIC - High Efficiency H-Bridge Motor Driver IC

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



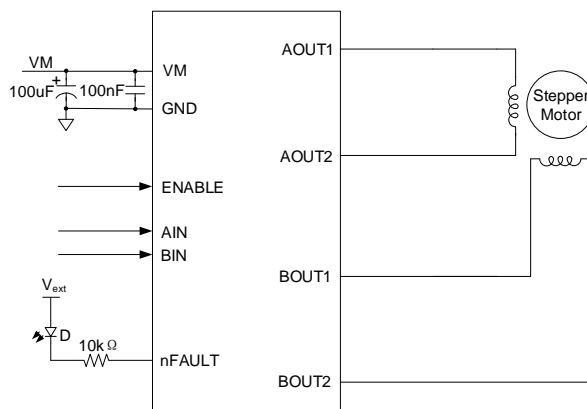
SY21611 - Dual H-Bridge Stepper Motor Driver

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

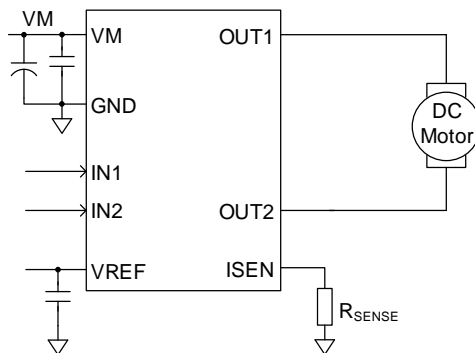
- Automation
- Stepper Motor Controllers



SY21634 - 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

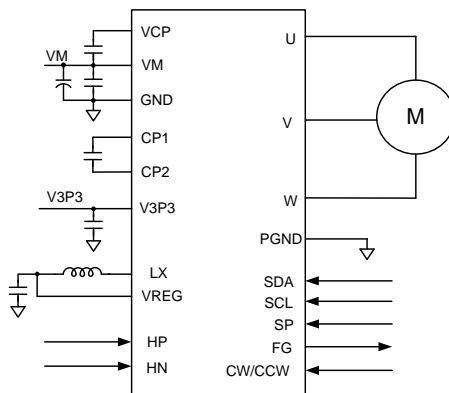
- Consumer Products
- Robotics

SY21604

- 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

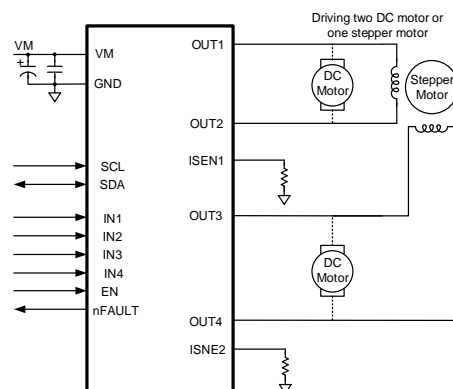
- Appliance Fan
- HVAC

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SY21621 - 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

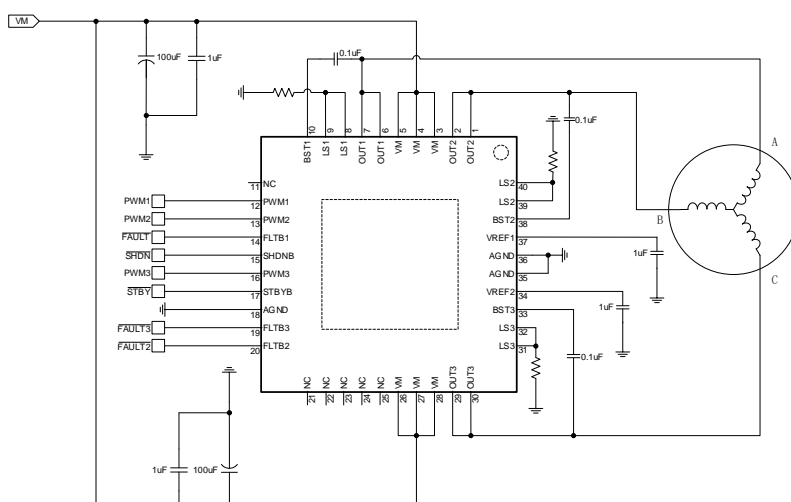
SY21626 - 26V 6.5A Three-phase BLDC Motor Driver

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

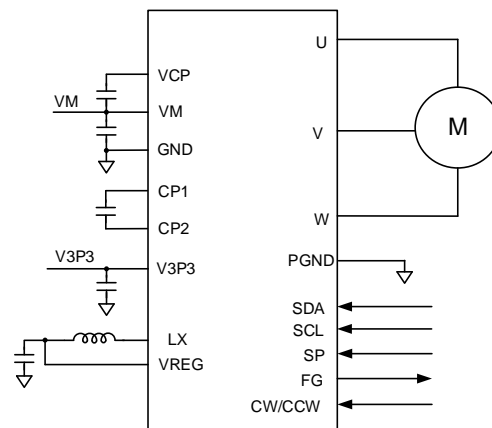
Applications

- 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

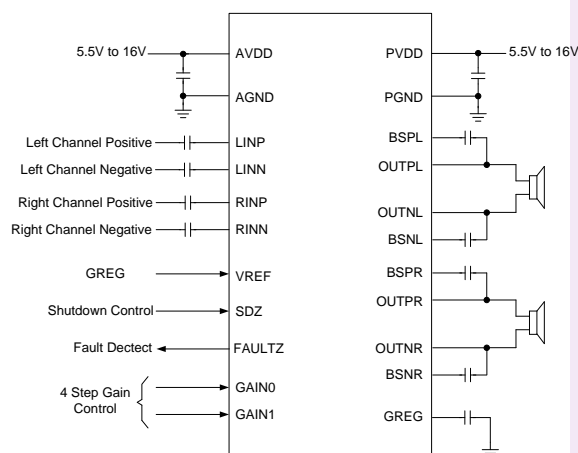
Part Number	Input	Ch(#)	Vs_min(V)	Vs_max(V)	Load_min(Ω)	Po(W/Ch)	THD+N(%) @ 1W	SNR(dB)	Features	Package
SY24104QCC	Analog	2	5.5	16	6	7	0.05	100.5	Filter-less	QFN4×4-24
SY24104AQCC	Analog	2	5.5	12	6	4	0.05	100.5	Filter-less	QFN4×4-24
SY24105QEC	Analog	2	6	26	3.2	30	0.03	105.5	AM Avoidance	QFN5×5-32
SY24105BQEC	Analog	1	5.6	26	2.5	60	0.028	106	AM Avoidance	QFN5×5-32
SY24108QEC	Analog	2	5.6	16	3.2	20	0.026	104.1	AM Avoidance	QFN5×5-32
SY24145AQEC	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
SY24145BQHC	Digital	2	4.5	28	4	20	0.041	101	3 Band + Post Band DRC, 12 PEQs + 6 SPEQs, SDOUT	QFN6×6-40
SY24145SGAC	Digital	2	4.5	28	4	30	0.026	101.3	3 Band + Post Band DRC, 12 PEQs + 6 SPEQs, SDOUT	TQFP7×7-48
SY24145SQHC	Digital	2	4.5	28	4	30	0.026	101.3	3 Band+ Post Band DRC, 12 PEQs + 6 SPEQs, SDOUT	QFN6×6-40
SY24146SGAC	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
SY24175DGAC	Digital	2	4.5	28	4	20	0.055	100.7	3 Band + Post Band DRC, 12 PEQs + 6 SPEQs, SDOUT	TQFP7×7-48
SY24150GAF	Digital	2	4.5	28	4	20	0.055	100.7	3 Band + Post band DRC, 12 PEQs + 6 SPEQs, SDOUT	TQFP7×7-48
SY24120QHQ	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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SY24104QCC - 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



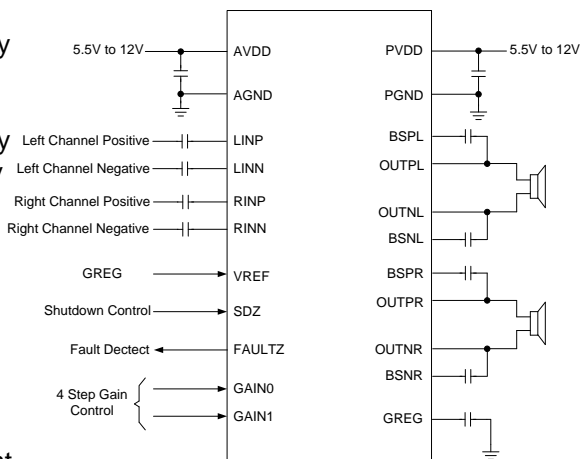
Applications

- Flat Panel Display TVs, DLP○RTVs, CRT TVs
- Powered Speakers
- Music Instruments
- Boom Box
- DVD Players, Game Machines

SY24104AQCC - 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

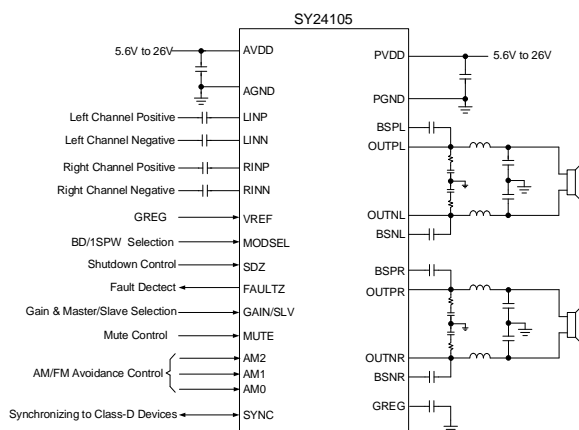
- Flat Panel Display TVs, DLP○RTVs, CRT TVs
- Powered Speakers
- Music Instruments
- Boom Box
- DVD Players, Game Machines

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SY24105QEC - 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



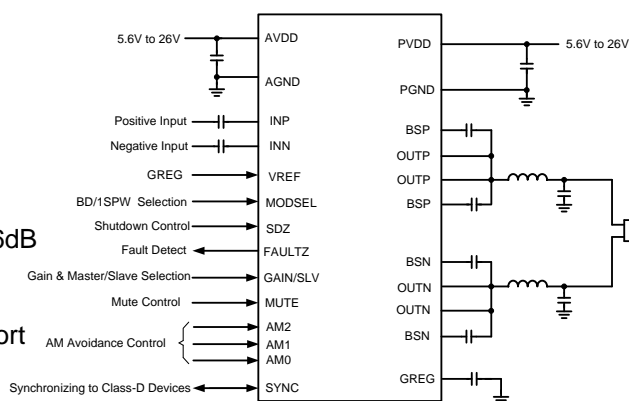
Applications

- Flat Panel Display TVs
- DLP® TVs
- CRT TVs
- Powered Speakers
- Music Instruments
- Boom Box
- Consumer Audio Applications

SY24105BQEC - 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

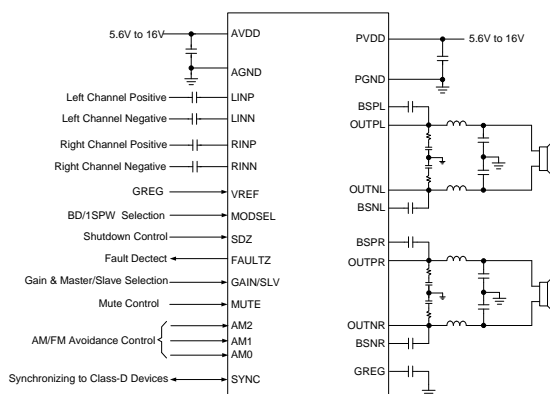
- Powered Speakers
- Music Instruments
- Boom Box
- Consumer Audio Applications

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SY24108QEC - 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



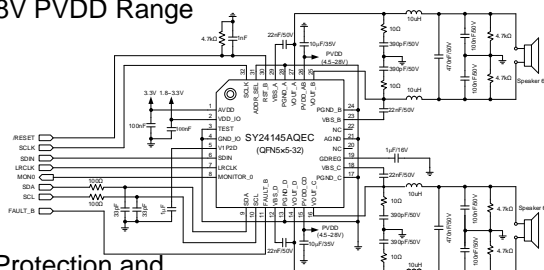
Applications

- Flat Panel Display TVs
- DLP® TVs
- CRT TVs
- Powered Speakers
- Music Instruments
- Boom Box
- Consumer Audio Applications

SY24145AQEC - 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

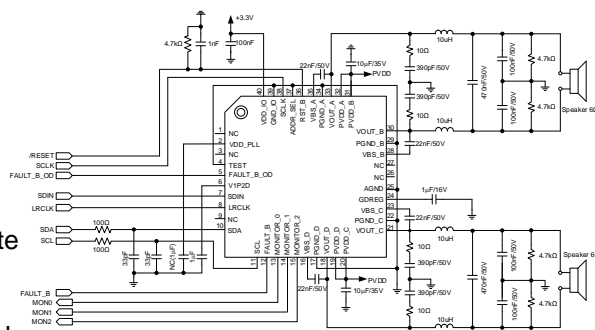
- LCD TV, LED TV or Monitor
- Digital Speaker, Bluetooth Speaker
- Sound bar

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SY24145BQHC - 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



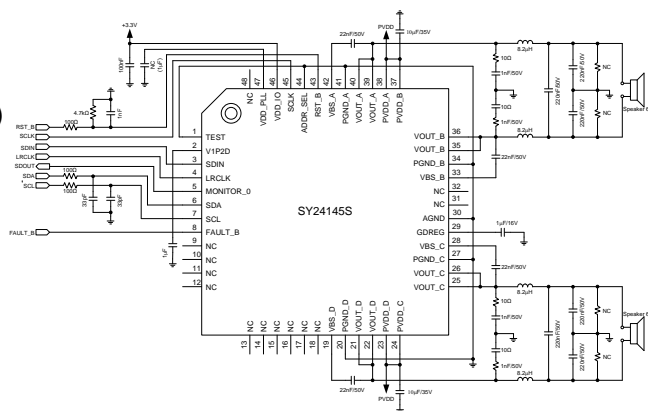
Applications

- LCD TV, LED TV or Monitor
- Digital Speaker, Bluetooth Speaker
- Sound bar

SY24145SGAC - 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



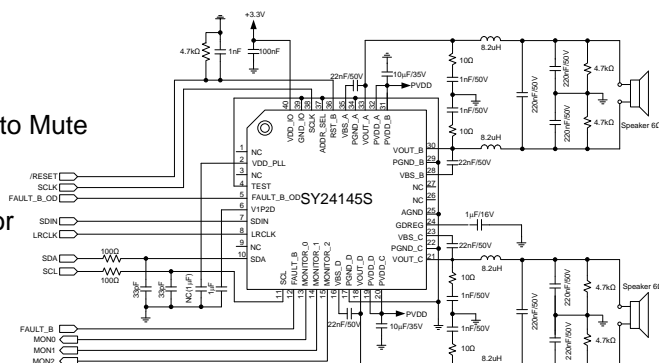
Applications

- LCD TV, LED TV or Monitor
- Digital Speaker, Bluetooth Speaker
- Sound bar

SY24145SQHC - 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



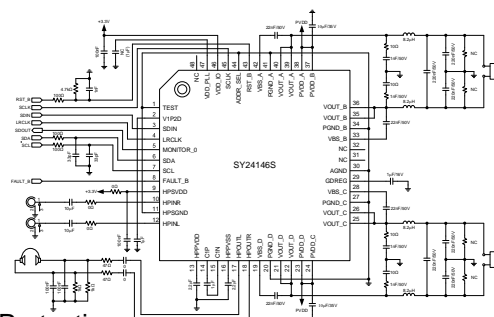
Applications

- LCD TV, LED TV or Monitor
- Digital Speaker, Bluetooth Speaker
- Sound bar

SY24146SGAC - 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



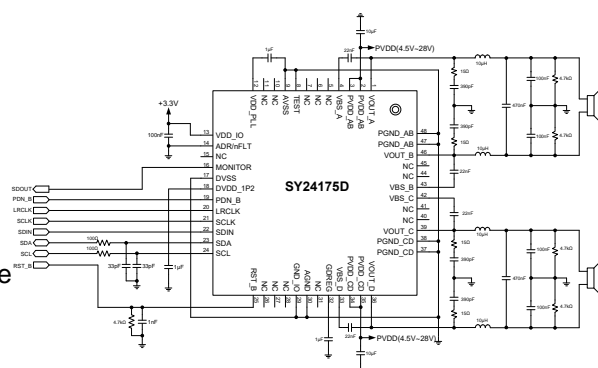
Applications

- LCD TV, LED TV or Monitor
- Digital Speaker, Bluetooth Speaker
- Sound bar

SY24175DGAC - 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



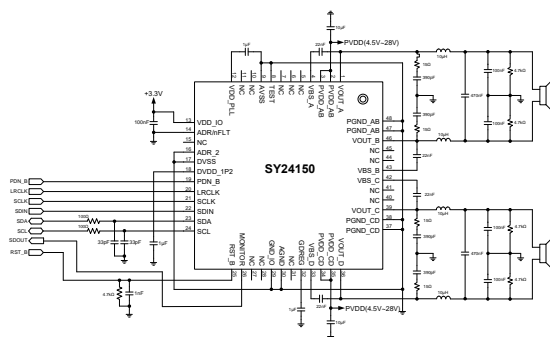
Applications

- LCD TV, LED TV or Monitor
- Digital Speaker, Bluetooth Speaker
- Sound bar

SY24150GAF - 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



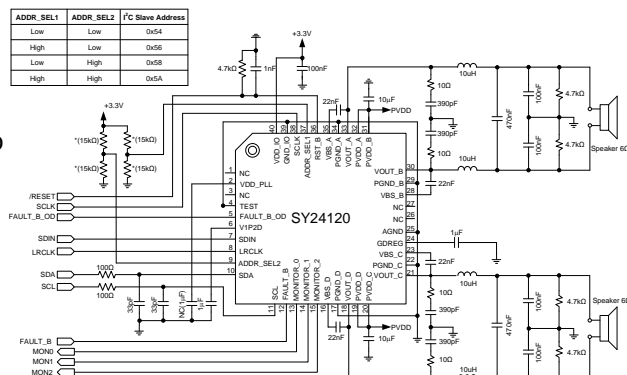
Applications

- LCD TV, LED TV or Monitor
- Digital Speaker, Bluetooth Speaker
- Sound bar

SY24120QHQ - High Performance, High Fidelity 20W Digital Audio-Power Amplifier

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

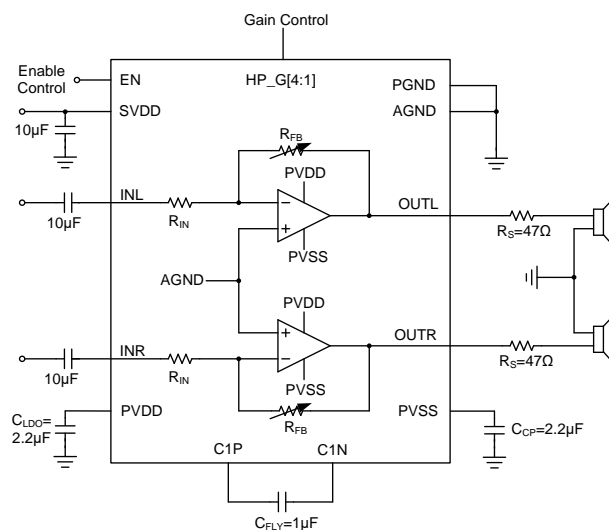
Part Number	Input	Ch(#)	Vs_min(V)	Vs_max(V)	Po(W) @ 1%THD+N	PSRR(dB)	THD+N(%)	SNR (dB)	Features	Package
SY24112QDC	Analog	2	2.2	5.5	21m	83	0.015	106	capacitor-less	QFN3×3-16

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SY24112QDC - 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, $3\text{mm} \times 3\text{mm}$



Applications

- Notebook Computers
- CD/MP3 Player
- Smart Phones
- Cellular Phones
- PDA

Digital Light Sensor

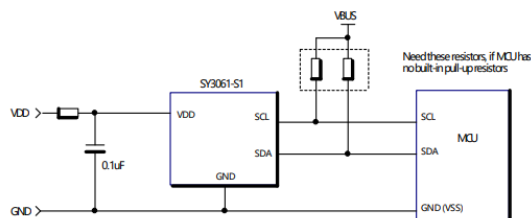
Part Number	Description	Bits	V _{CC}		Comm. Method	I _{DD} @ Power Down	I _{OUT} (μA) @EV=100lux, V _{CC} =3V	Finest Resolution	Gain & Tint Setting	Package
			Min(V)	Max(V)						
SY22306-S1	ALS with side-look package	12	2.3	3.6	I ² C	<1.0uA	110uA	0.029 lux/count	5 gain	SMD3013-4L side-look
SY22309AS22-J01	Ambient Light Sensor	16	2.6	3.6	I ² C	<1.0μA	90μA	0.0079 lux/count	/	SMD2015-8L
SY22316PS32-G00	PXS	16	2.8	3.6	I ² C	<2.0μA	/	/	/	SMD2515-6L
SY22312CS42-J10	11-Channel Multi-Spectrum Sensor	16	1.7	2.0	I ² C	<20μA	450μA@V _{CC} =1.8V	/	12 gain+ 9 integration time	SMD3120-8L

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SY22306-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



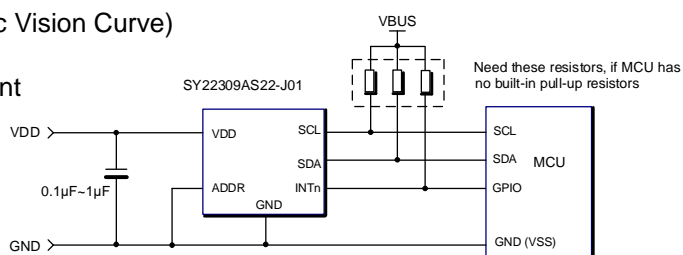
Applications

- TV Panel Control
- Accessories
- Industrial Control
- Lighting Control

SY22309AS22-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

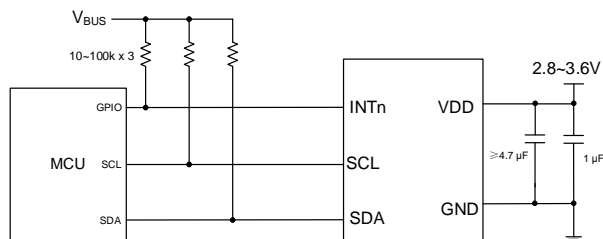
- TV Panel Control
- Smart Phone
- Accessories
- Industrial Control
- Lighting Control

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SY22316PS32-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



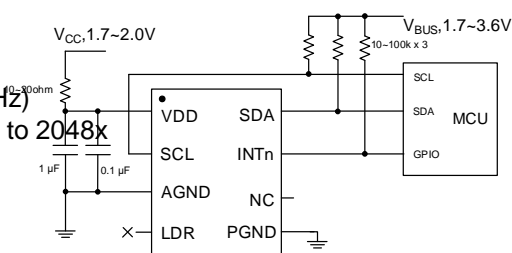
Applications

- Smart Phones
- TWS (true wireless stereo) Headphones
- Home Appliances
- Robotics

SY22312CS42-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



Part Number	Application	Channels	Direction	V _{RWM} (V)	C _J (pF)	I _{PP} (A)	P _{PK} (W)	Package
SY205214ABC	USB/VGA/HDMI	4	Uni	5	0.6	3	36	SOT23-6
SY205215AOC	USB2.0	2	Uni	5	0.6	4	50	SOT-23
SY205216DWC	USB Vbus, Smart Phone	1	Bi	24	12	4	180	DFN1.0×0.6-2
SY205218DWC	12V Low Speed Interface	1	Bi	12	4	4	90	DFN1.0×0.6-2
SY205218DXC	12V Low Speed Interface	1	Bi	12	4	4	90	DFN0.6×0.3-2
SY205219DXC	5V High Speed Interface, USB-C	1	Bi	5	0.15	4	55	DFN0.6×0.3-2
SY205220SFC	USB3.x	8	Uni	3.3	0.42	6	30	DFN3.8×1.0-9
SY205253SMD	USB2.0	2	Uni	3.3	0.42	7	40	DFN1.0×0.6-3
SY205221DWC	USB3.0	1	Uni	5	0.5	4	50	DFN1.0×0.6-2
SY205222DVD	HDMI/USB	4	Bi	5	0.5	4.5	45	DFN2.5×1.0-10
SY205223DWC	HDMI/USB	1	Bi	5	0.5	4.5	45	DFN1.0×0.6-2
<div>NEW</div> SY205223DXD	HDMI/USB	1	Bi	5	0.5	4.5	45	DFN0.6×0.3-2
SY205260DVC	HDMI/USB	4	Uni	5	0.5	6	42	DFN2.5×1.0-10
SY205226DWC	HDMI/USB	1	Bi	3.3	0.4	7	56	DFN1.0×0.6-2
SY205227DVD	HDMI/USB	4	Bi	3.3	0.4	7	56	DFN2.5×1.0-10
SY205228DWC	USB Vbus, Smart Phone	1	Bi	12	25	7.5	210	DFN1.0×0.6-2
SY205229AWC	USB2.0	2	Uni	5	1.2	7.5	100	SOT-143
SY205209ABC	USB/VGA	4	Uni	5	1.2	8	100	SOT23-6
SY205208DXC	USB3.x, USB Type-C	1	Bi	5	0.2	9	55	DFN0.6×0.3-2
SY205207DXC	USB-C/RF Antenna	2	Bi	24.5	0.2	9	50	DFN0.6×0.3-2
SY205206DWC	Normal Cap ESD for General I/O	1	Bi	5	2	10	100	DFN1.0×0.6-2
SY205206DXC	Normal Cap ESD for General I/O	1	Bi	5	2	10	100	DFN0.6×0.3-2
SY205231DWD	Ultra-low Cap ESD for High-speed Interface	1	Bi	5	0.28	10	65	DFN1.0×0.6-2

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Part Number	Application	Channels	Direction	V _{RWM} (V)	C _J (pF)	I _{PP} (A)	P _{PK} (W)	Package
SY205232DWC	3.3V High Speed Interface	1	Bi	3.3	1	12	120	DFN1.0×0.6-2
SY205232DXC	3.3V High Speed Interface	1	Bi	3.3	1	12	120	DFN0.6×0.3-2
SY205205ANC	Audio/Key	1	Bi	3.3	27	15	140	SOD523
SY205205DWC	Audio/Key	1	Bi	3.3	27	15	140	DFN1.0×0.6-2
SY205205DXC	3.3V Low Speed Interface	1	Bi	3.3	27	15	140	DFN0.6×0.3-2
SY205236ABC	VGA/RJ45	4	Uni	5	3.5	20	350	SOT23-6
SY205213DXD	USB4,TB4,USB TYPE-C	1	Bi	1.5	0.17	6	24	DFN0.6x0.3-2
SY205237DVD	HDMI2.1	4	Uni	3.3	0.25	7	70	DFN2.5x1.0-10
SY205238DWD	Audio/Key	1	Bi	5	23	10	90	DFN1.0x0.6-2
SY205238DXD	Audio/Key	1	Bi	5	23	10	90	DFN0.6x0.3-2
SY205239DWD	Audio/Key	1	Bi	5	45	20	180	DFN1.0x0.6-2
SY205256DWD	Audio/Key	1	Bi	5	14	9	75	DFN1.0x0.6-2
SY205256DXD	Audio/Key	1	Bi	5	14	9	75	DFN0.6x0.3-2
SY205257DWD	Audio/Key	1	Bi	3.3	17	10	65	DFN1.0x0.6-2
SY205257DXD	Audio/Key	1	Bi	3.3	17	10	65	DFN0.6x0.3-2
SY205258DWD	USB3.x,USB2.0	1	Bi	5	0.45	15	100	DFN1.0x0.6-2
NEW SY205276DWD	USB2.0	1	Uni	5	0.85	14	70	DFN1.0×0.6-2
NEW SY205277DWD	Audio/Key	1	Bi	5	90	35	350	DFN1.0×0.6-2

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EMI Filter

Part Number	Application	Channels	Direction	V _{RWM} (V)	fc(GHz)	IL	Atten	Package
SY205201SSC	MIPI/HDMI	4	Uni	5	4.0	-0.33dB@10MHz	-35dB@1.5GHz	DFN2.5×2.0-10
SY205203TXD	LCD/Camera	4	Uni	5	0.25	-6dB@10MHz	-20dB@0.8GHz	DFN1.6×1.0-8
SY205255TLD	LCD/Camera	6	Uni	5	0.25	-6dB@10MHz	-20dB@0.8GHz	DFN2.5×1.35-12

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Part Number	Application	Channels	Direction	V _{RWM} (V)	C _J (pF)	I _{PP} (A)	P _{PK} (W)	Package
SY205241AMC	RJ45	1	Bi	24	0.6	6	550	SOD323
SY205242AMC	RJ45	1	Bi	12	0.6	12	550	SOD323
SY205243AMC	RJ45	1	Bi	5	0.6	20	550	SOD323
SY205244AMC	DC IN	1	Bi	5	200	24	350	SOD323
SY205211AMC	RJ45	1	Bi	3.3	0.6	25	550	SOD323
SY205212SLC	Vbus	1	Uni	20	210	25	850	DFN1.6×1.0-2
SY205210DHC	RJ45	4	Uni	2.5	3.5	40	1000	DFN3.0×2.0-10
SY205245SLC	Vbus	1	Uni	12.5	400	52	1100	DFN1.6×1.0-2
SY205246SLC	Vbattery, Smart Phone	1	Uni	5	1100	100	1300	DFN1.6×1.0-2
SY205246AMC	Surge protection TVS for Power line	1	Uni	5.5	1100	100	1300	SOD-323
SY205247SLC	Vbus & Vbat surge protection	1	Uni	5	2100	200	2100	DFN1.6×1.0-2
SY205204SLC	Vbus & Vbat surge protection	1	Uni	4.5	1100	240	3100	DFN1.6×1.0-2
SY205248DWD	Vbus/Vbat	1	Uni	24	85	9	320	DFN1.0×0.6-2
SY205249SLD	VBUS	1	Uni	28	140	22	1000	DFN1.6x1.0-2
SY205250SLD	VBUS	1	Uni	36	95	17	900	DFN1.6x1.0-2
SY205251SLD	VBUS	1	Uni	48	60	12	750	DFN1.6x1.0-2
SY205252THD	RS485	2	Uni	12	6	100	3000	DFN2.0x2.0-5
SY205269SLD	Vbus/Vbat	1	Uni	5	600	100	800	DFN1.6×1.0-2
<div>NEW</div> SY205268TPD	VBUS	1	Uni	20	900	200	6400	DFN2.0×2.0-3

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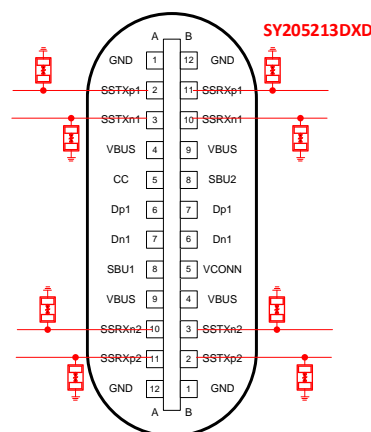
SY205213DXD - Ultra low capacitance ESD for USB4.0/TB4.0 high speed data lines

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: PESD5V0H1BRSE / 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



SY205213DXD for USB4.0/TB4.0

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

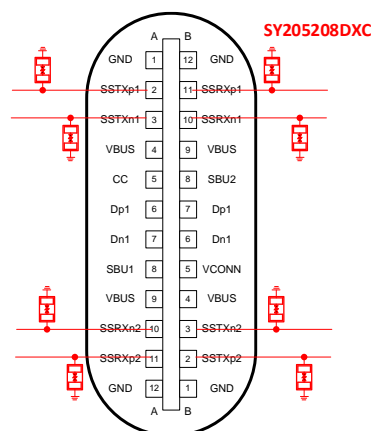
SY205208DXC - Ultra low capacitance ESD for USB3.x high speed data lines

Features

- IEC61000-4-2(ESD): $\pm 20\text{kV}$ (Contact)
- IEC61000-4-5(Surge): 9A (8/20 μs)
- Low clamping voltage: 6V @ TLP16A
6V @ 9A(8/20us)
- Small capacitance: 0.25pf
- Small package: DFN0.6*0.3-2
- Pin compatible with: PESD5V0C1BSF

Applications

- USB3.x Tx/Rx high speed data lines
- Target Customer: NB, SmartPhone, USB-C Hub



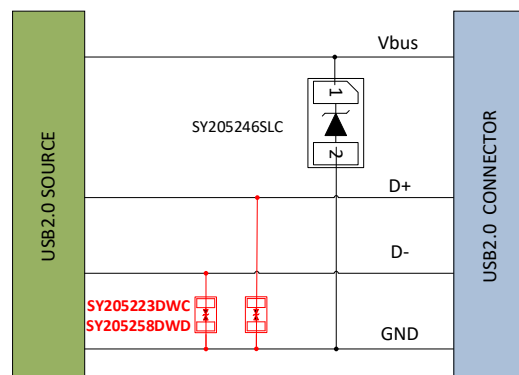
SY205208DXC for USB3.x

Benefits

- Ultra-low capacitance(0.25pF) for high-speed(10Gbps) signal integrity
- Low clamping voltage (6V@TLP 16A) for Sub-micro/Nano scale PHY IC

Features

- IEC61000-4-2(ESD) (Contact): $\pm 30\text{kV}$ (SY205223DWC)
 $\pm 25\text{kV}$ (SY205258DWD)
 $\pm 25\text{kV}$ (SY205224DWC)
- IEC61000-4-5(Surge) (8/20 μs): 4.5A (SY205223DWC)
15A (SY205258DWD)
4.0A (SY205224DWC)
- Small capacitance: 0.5pf (SY205223DWC)
0.45pf(SY205258DWD)
0.6pf (SY205224DWC)
- Small package: DFN1.0*0.6-2nce: 0.2pF
- Pin: PESD5V0F1BL/PESD5V0X1BL/RCLAMP0521PA



SY205223DWC/SY205258DWD
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

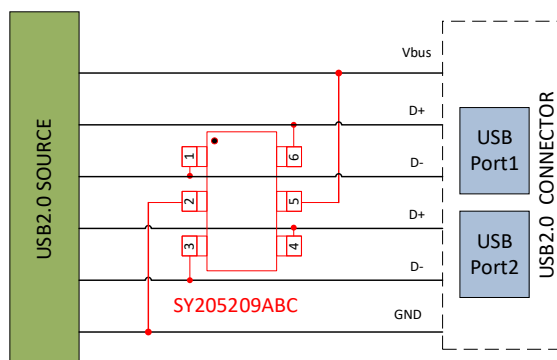
Benefits

- SY205223DWC: Worldwide lowest cost
- SY205258DWD: High performance with high IPP and low clamping

SY205209ABC - 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
- capacitance: 0.2pF
- Pin: AOZ8105CI/USBL6-2SC6Y/RCLAMP0504PBTCT/SRV05-4HTG-D



SY205209ABC
for USB2.0

Applications

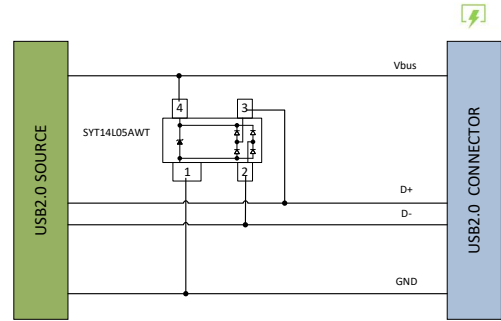
- USB2.0 data lines
- VGA data lines
- Target Customer: PC, TV/STB/MNT

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
- capacitance: 0.2pF
- Pin: AZ1015-02N



SY205229AWC
for USB2.0

Applications

- USB2.0 data lines
- Target Customer: PC, TV/STB/MNT

Benefits

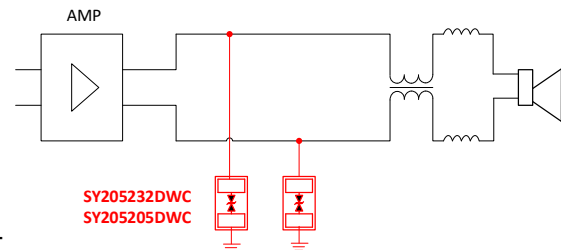
- High surge IPP & Low clamping voltage feature good ESD protection performance

SY205232DWC/SY205205DWC

- 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 (SY205232DWC)
15A (SY205205DWC)
- Small capacitance: 2pF (SY205232DWC)
27pF (SY205205DWC)
- Small package: DFN1.0*0.6-2
- capacitance: 0.2pF
- Pin: PESD3V3U1UL/ PESD3V3L1UL



SY205232DWC/SY205205DWC for Audio

Applications

- Audio/Speaker
- Keys, LED ESD protection
- Target Customer: SmartPhone, TWS, PC, TV/STB/MNT

Benefits

- Low cost
- Low Clamping voltage features good ESD performance

Features

- IEC61000-4-2(ESD) (Contact): $\pm 30\text{kV}$
- IEC61000-4-5(Surge) (8/20 μs): 10A (SY205206DWC)
10A (SY205238DWD)
- Small capacitance: 2pf (SY205206DWC)
23pf (SY205238DWD)
- Small package: DFN1.0*0.6-2/DFN0.6*0.3-2
- Pin: PESD5V0V1BL/ AZ5725-01F

General speed data line



SY205206DWC/DXC
SY205238DWD/DXD

Applications

- General speed data line
- Audio/Speaker, Keys, LED ESD protection
- Target Customer: SmartPhone, TWS, PC, TV/STB/MNT

SY205206DWC/DXC/SY205238DWD/DXD
for General speed data line

Benefits

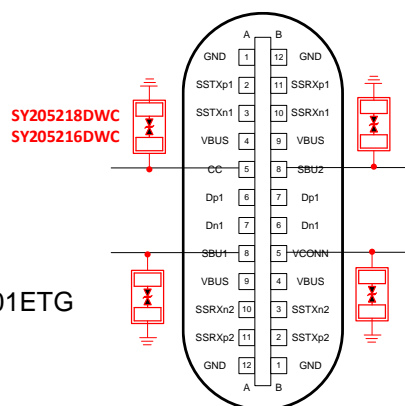
- Low cost
- Low Clamping voltage features good ESD performance

SY205218DWC/SY205216DWC

- 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 (SY205218DWC)
4A (SY205216DWC)
- Small capacitance: 4pf (SY205218DWC)
12pf (SY205216DWC)
- Small package: DFN1.0*0.6-2
- capacitance: 0.2pF
- Pin: PESDNC2FD12VB/AZ4212-01F, PESD24VS1UL/ SPHV24-01ETG



SY205218DWC/SY205216DWC
for USB-C

Applications

- CC/SBU datalines
- RS232
- 12V or below VBUS ESD protection (SY205218DWC)
- 24V or below VBUS ESD protection (SY205216DWC)
- Target Customer: NB, SmartPhone, USB-C Hub

Benefits

- Low cost
- Low Clamping voltage features good ESD performance

SY205222DVD/SY205227DVD

- 3.3V(SY205227) 5V(SY205222), Low capacitance ESD for HDMI2.0 datalines

Features

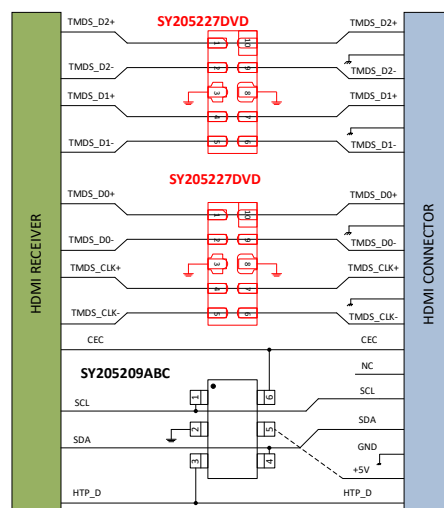
- IEC61000-4-2(ESD): $\pm 30\text{kV}$ (Contact)
- IEC61000-4-5(Surge): 4.5A (SY205222DVD)
6A (SY205227DVD)
- Small capacitance: 0.5pF (SY205222DVD)
0.4pF (SY205227DVD)
- Package: DFN2.5*1.0-10
- capacitance: 0.2pF
- Pin: PUSB3F96/AZ1143-04F

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



SY205227DVD For HDMI2.0

SY205260DVC/SY205263DVC - 3.3V Low capacitance ESD for HDMI datalines

Features

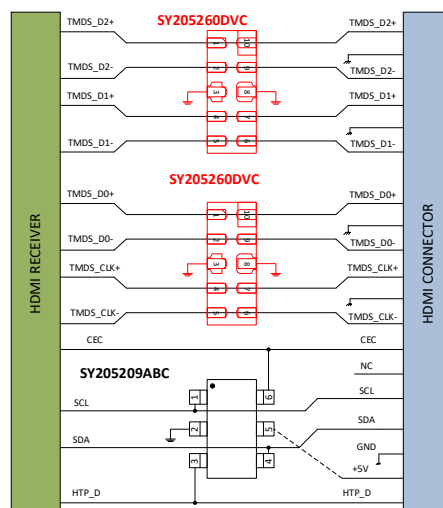
- IEC61000-4-2(ESD): $\pm 30\text{kV}$ (Contact)
- IEC61000-4-5(Surge): 6A(SY205260DVC)
12A(SY205263DVC)
- Small capacitance: 0.5pF(SY205260DVC)
0.6pF(SY205263DVC)
- Package: DFN2.5*1.0-10
- capacitance: 0.2pF
- Pin: PUSB3F96/AZ1143-04F

Applications

- HDMI1.4&2.0 high speed data lines
- Target Customer: NB, TV/STB/MNT

Benefits

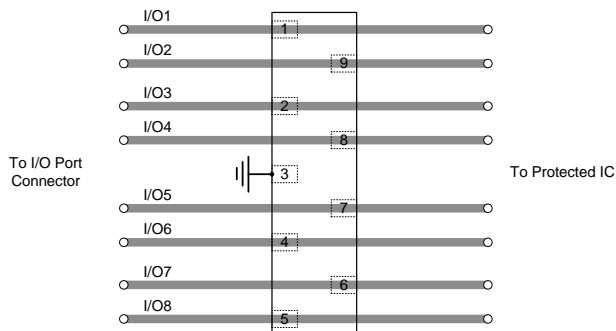
- Low Clamping voltage features good ESD performance



SY205227DVD For HDMI2.0

Features

- IEC61000-4-2(ESD): $\pm 30\text{kV}$ (Contact)
- IEC61000-4-5(Surge): 6A (8/20 μs)
- Small capacitance: 0.3pf
- Package: DFN3.8*1.0-9
- Pin: AZ1043-08F/ESD8008



SY205227DVD For HDMI2.0

Applications

- USB3.1/3.0 Data Line Protection
- USB3.1/3.0 Type-C

Benefits

- Low Clamping voltage features good ESD performance

SY205225DVC - 3.3V, Low capacitance ESD for USB3.x datalines

Features

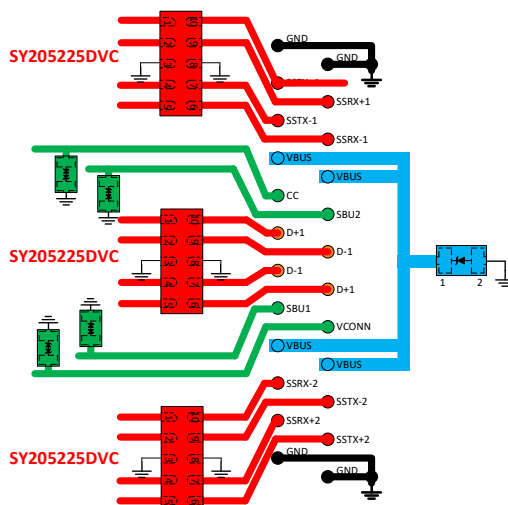
- IEC61000-4-2(ESD): $\pm 15\text{kV}$ (Contact)
- IEC61000-4-5(Surge): 6A (8/20 μs)
- Small capacitance: 0.3pf
- Package: DFN2.5*1.0-10
- Capacitance: 0.2pF
- Pin: AZ174-xxF/AZ176-xxF

Applications

- HDMI2.1 data lines
- USB3.x data lines
- Target Customer: NB, TV/STB/MNT

Benefits

- Low Clamping voltage features good ESD performance



SY205225DVC For USB-C

SY205210DHC

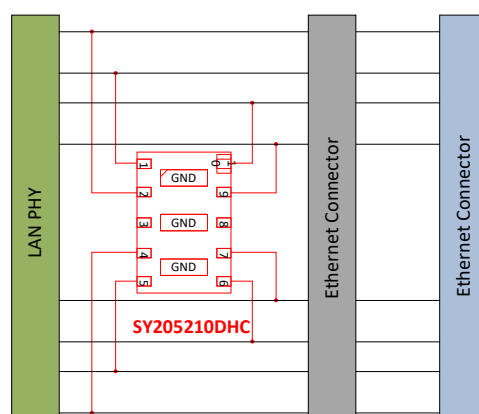
- 2.5V, Low Capacitance ESD/Surge Protection for Gigabit Ethernet Interfaces

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
- capacitance: 0.2pF
- Pin: RCLAMP2574N/Rclamp3374N/AZ3125-08AF/Z3133-08F

Applications

- 10M/100M/1000M Ethernet
- Target Customer: PC/NB, Router&Swith,RJ45



SY205210DHC for 1000M Ethernet

Benefits

- Low clamping voltage & high Surge IPP features good surge protection

SY205211/43/42/41AMC

- 3.3V/5V/12V/24V, Ultra-low Capacitance ESD/Surge Protection

Features

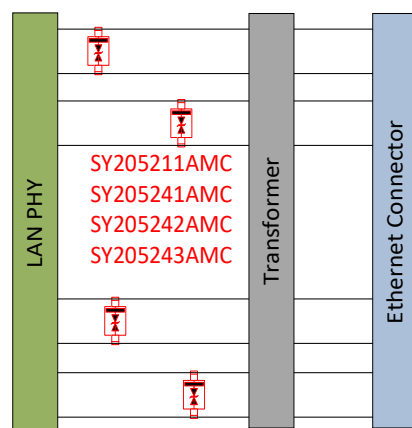
- IEC61000-4-2(ESD): $\pm 30\text{kV}$ (Contact)
- IEC61000-4-5(Surge): 25A (8/20 μs) /SY205211AMC
20A (8/20 μs)/SY205243AMC
12A (8/20 μs)/SY205242AMC
6A (8/20 μs)/SY205241AMC
- Full Vrwm series: 3.3V/SY205211AMC
5V /SY205243AMC
12V/SY205242AMC
24V/SY205241AMC
- Small capacitance: 0.6pf
- Package: SOD-323
- Capacitance: 0.2pF
- Pin: SP4021-01FTG/LSBLC12CG/ESD7351HT1G/AZ1613-01L.R7G

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

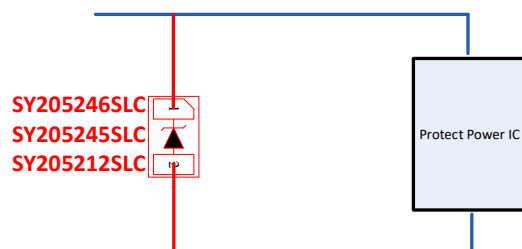
SY205211AMC/SY205241AMC/
SY205242AMC/SY205243AMC
for 1000M Ethernet

SY205246SLC/SY205245SLC/SY205212SLC

- 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) /SY205246SLC
52A (8/20 μs) /SY205245SLC
25A (8/20 μs)/SY205212SLC
- Full Vrwm series: 5V/SY205246SLC
12V/SY205245SLC
20V/SY205212SLC
- Package: DFN1.6*1.0-2
- Capacitance: 0.2pF
- Pin: AOZ8310DI/UCLAMPxx71P/AZ45xx-01F



SY205246SLC/SY205245SLC/SY205212SLC
for Vbus

Applications

- VBUS Surge
- VBAT Surge
- Target Customer: SmartPhone, TWS, PC, TV/STB/MNT

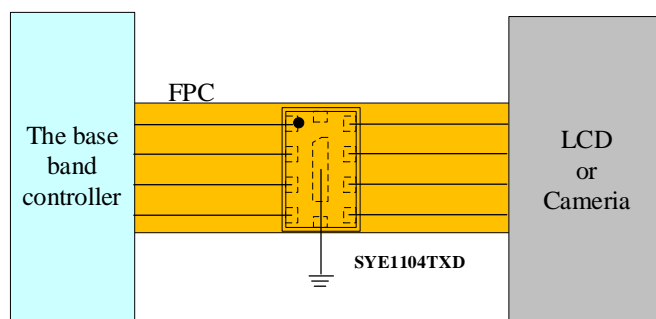
Benefits

- High surge IPP, Low clamping voltage
- Low cost

SY205203TXD/SY205255TLD - EMI Filter Array and ESD Protection

Features

- IEC61000-4-2(ESD): $\pm 15\text{kV}$ (Contact)
- π -type C-R-C EMI filter arrays
- Better than -20dB attenuation (typical) at 0.8GHz~2GHz
- Package: DFN1.6*1.0-8/DFN2.5*1.35-12
- Capacitance: 0.2pF
- Pin: EMI5204MU



Applications

- EMI filtering for LCD and Camera Data lines

SY205203TXD/SY205255TLD for LCD or Camera

Benefits

- High ESD protection
- the specified attenuation

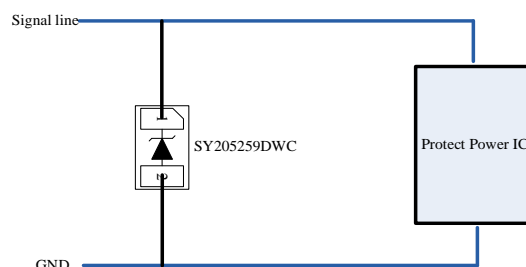
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Features

- IEC61000-4-2(ESD): $\pm 30\text{kV}$ (Contact)
- IEC61000-4-5(Surge): 19A (8/20 μs)
- Low clamping voltage: 8V @ TLP16A
12V @ 18A(8/20 μs)
- Small capacitance: 150pf
- Small package: DFN1.0*0.6-2
- Pin : PESD5V0S1UL-Q

Applications

- Computers and peripherals
- Audio and Vide equipment
- Communication systems



SY205259DWC for signal line

Benefits

- High surge IPP & Low clamping voltage, better surge protection
- Low cost product with high ESD protect level & Low clamping voltage.

SY205205DXC/DWC/ANC - Low Capacitance TVS Protection

Features

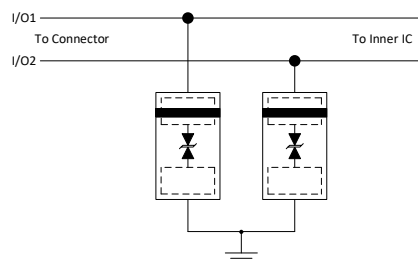
- IEC61000-4-2(ESD): $\pm 30\text{kV}$ (Contact)
- IEC61000-4-5(Surge): 15A (8/20 μs)
- Low clamping voltage: 8V @ TLP16A
- Small capacitance: 23pF
- Small package: DFN1.0*0.6-2 & DFN0.6*0.3-2 & SOD523
- Pin : LESD11D3.3CT5G / PESDNC2FD5VBSLY

Applications

- Computers and peripherals
- Audio and Vide equipment
- HDMI Control line

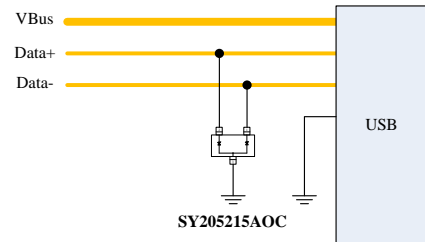
Benefits

- High surge IPP & Low clamping voltage, better surge protection
- Low cost product with high ESD protect level & Low clamping voltage.



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.

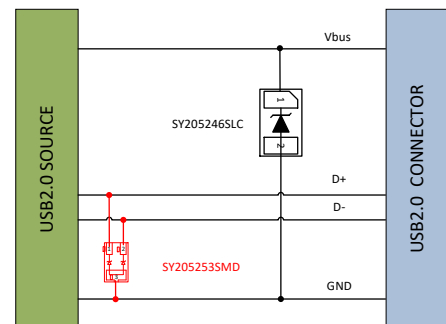
SY205253SMD - 3.3V, Ultra-Low capacitance ESD for high speed data lines

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

DW/DI

- SY205253SMD DW in Quanta for USB2.0 high speed datalines ESD protection

SY205226DWC - 3.3V, Ultra-Low capacitance ESD for high speed data lines

Features

- IEC 61000-4-2 (ESD): $\pm 30\text{kV}$ (Air) $\pm 30\text{kV}$ (Contact)
- IEC 61000-4-5 (Surge): $6\text{A}(8/20\mu\text{s})$
- Ultra-small package: DFN1.0*0.6-2
- Capacitance: 0.45pF

Applications

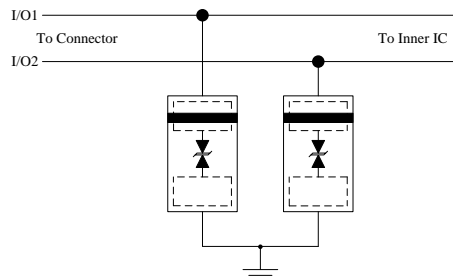
- HDMI 1.4/2.0
- USB2.0/3.0
- High speed signal interface

Benefits

- Low clamping voltage ,better ESD protection

DW/DI

- Low cost product with high ESD protect level &Low clamping voltage.



SY205221DWC - 3.3V, Ultra-Low capacitance ESD for high speed data lines

Features

- IEC 61000-4-2 (ESD): $\pm 20\text{kV}$ (Air) $\pm 20\text{kV}$ (Contact)
- IEC 61000-4-5 (Surge): $4\text{A}(8/20\mu\text{s})$
- Ultra-small package: DFN1.0*0.6-2
- Capacitance: 0.6pF

Applications

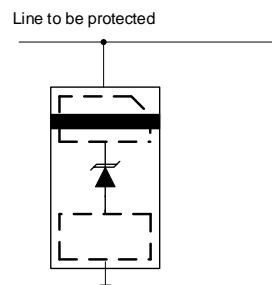
- USB2.0
- High speed signal interface

Benefits

- Low clamping voltage ,better ESD protection

DW/DI

- Low cost product with high ESD protect level &Low clamping voltage.



Features

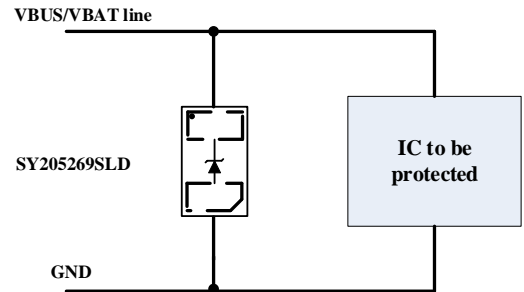
- IEC 61000-4-2 (ESD): $\pm 30\text{kV}$ (Air) $\pm 30\text{kV}$ (Contact)
- IEC 61000-4-5 (Surge): $100\text{A}(8/20\mu\text{s})$
- Small package: DFN1.6*1.0-2
- For 5V and below operating voltage
- Capacitance: 600pF

Applications

- Vbua/Vbat

Benefits

- Low clamping voltage ,better ESD protection



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

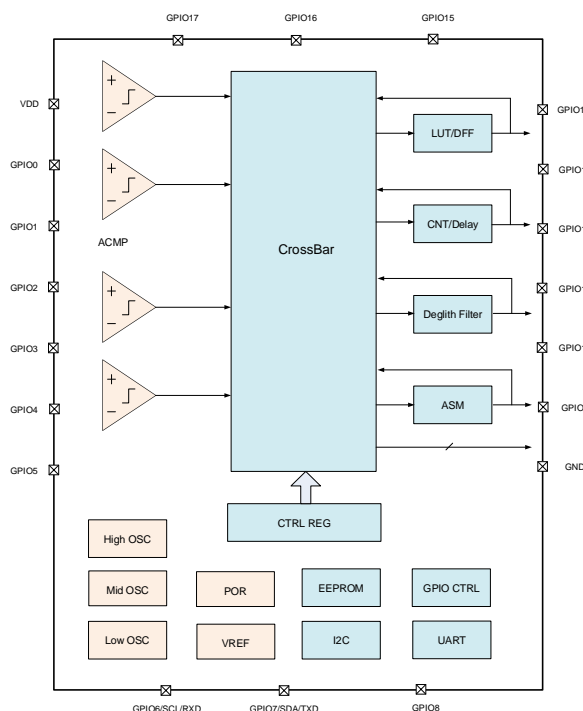
SY33519VYQ - Mixed-signal Programmable Logic Device

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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