

Features

- Transient protection for high-speed data lines
IEC 61000-4-2 (ESD) $\pm 30\text{kV}$ (Air)
 $\pm 30\text{kV}$ (Contact)
IEC 61000-4-5 (Surge) 550W (8/20 μs)
- Low leakage current: 0.01 μA @ V_{RWM} (Typ.)
- Working Voltages: 3.3V, 5V, 8V, 12V, 15V, 24V
- Ultra Low Capacitance: 0.6pF (Typ.)
- Low clamping voltage
- Each I/O pin can withstand over 1000 ESD strikes for $\pm 8\text{kV}$ contact discharge

Description

SYS11UxxAMC is an ultra-low capacitance ESD and Surge Protector designed to provide electrostatic discharge (ESD) protection for high-speed data interfaces. SYS11UxxAMC is designed to protect parasitic-sensitive systems against over-voltage and over-current transient events. It complies with IEC 61000-4-2 (ESD), ($\pm 30\text{kV}$ air, $\pm 30\text{kV}$ contact discharge), IEC 61000-4-5 (Surge) (550W, 8/20 μs), etc.

SYS11UxxAMC is in an SOD-323 package. The combined features of ultra-low capacitance and high ESD robustness make SYS11UxxAMC ideal for applications where arrays are not practical. The low clamping voltage of the SYS11UxxAMC guarantees a minimum stress on the protected IC.

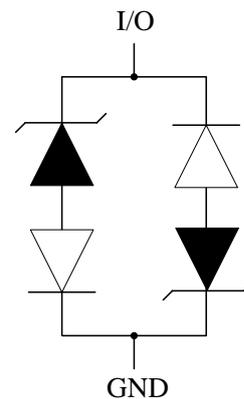
Applications

- Ethernet - 10/100/1000 Base T
- Desktops, Servers and Notebooks
- Cellular Phones
- Portable Instruments
- Analog Inputs
- USB Interface

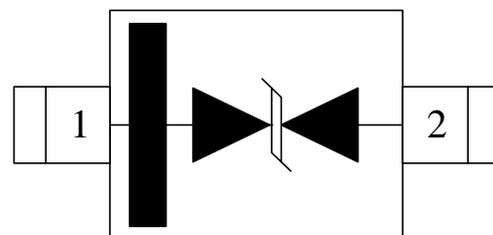
Mechanical Characteristics

- SOD-323 package
- Flammability Rating: UL 94V-0
- Marking: Part number, Date
- Packaging: Tape and Reel

Circuit Diagram



Pin Configuration



SOD-323
(Top View)

Absolute Maximum Rating

Symbol	Parameter	Value	Units
P _{PK}	Peak Pulse Power (8/20μs)	550	Watts
V _{ESD}	ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	±30 ±30	kV
T _{OPT}	Operating Temperature	-45 to +125	°C
T _{STG}	Storage Temperature	-55 to +150	°C

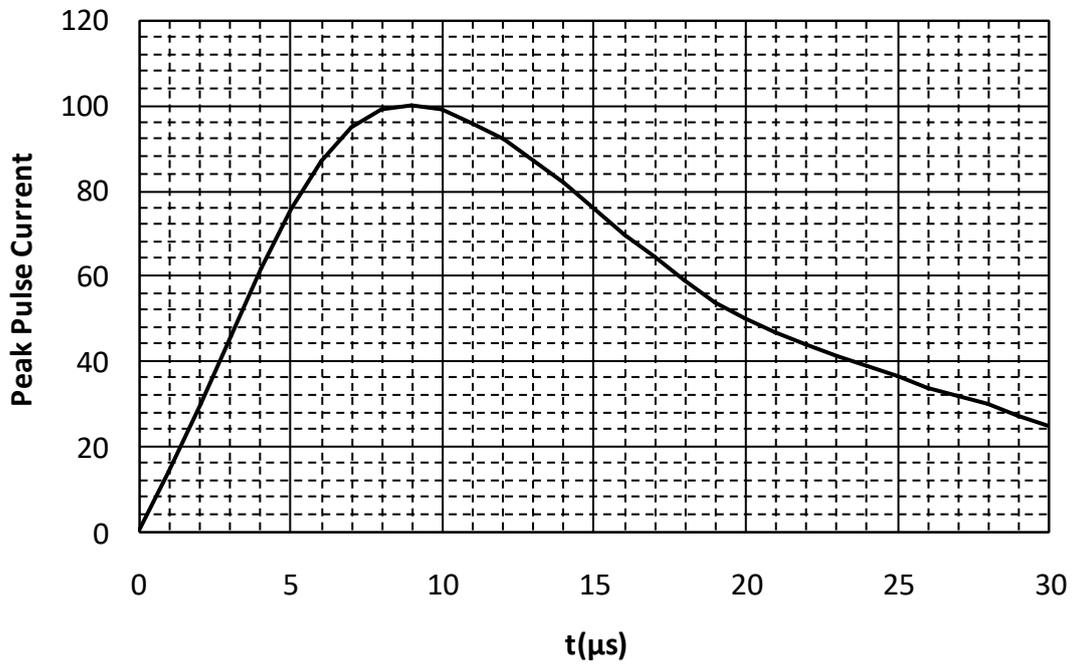
Electrical Characteristics (T = 25°C)

Part Number	Device Code	Stand-off Voltage V _{RWM} (V)	Breakdown Voltage @ 10mA V _{BR} (V) Min.	Peak Pulse Current ¹ (8/20μs) I _{PP} (A) Max.	Clamping Voltage ¹ @ 1A V _C (V) Max.	Leakage Current @ V _{RWM} I _R (μA) Max.	Capacitance ¹ @ 0V, 1MHz C (pF) Typ.
SYS11U03	G	3.3	3.7	25	7.0	0.1	0.6
SYS11U05	M	5.0	6.0	20	12.0	0.1	0.6
SYS11U08	N	8.0	9.0	15	17.0	0.1	0.6
SYS11U12	P	12.0	13.5	12	20.0	0.1	0.6
SYS11U15	Q	15.0	17.0	10	24.0	0.1	0.6
SYS11U18	R	18.0	20.0	8	30.0	0.1	0.6
SYS11U24	S	24.0	27.0	6	43.0	0.1	0.6

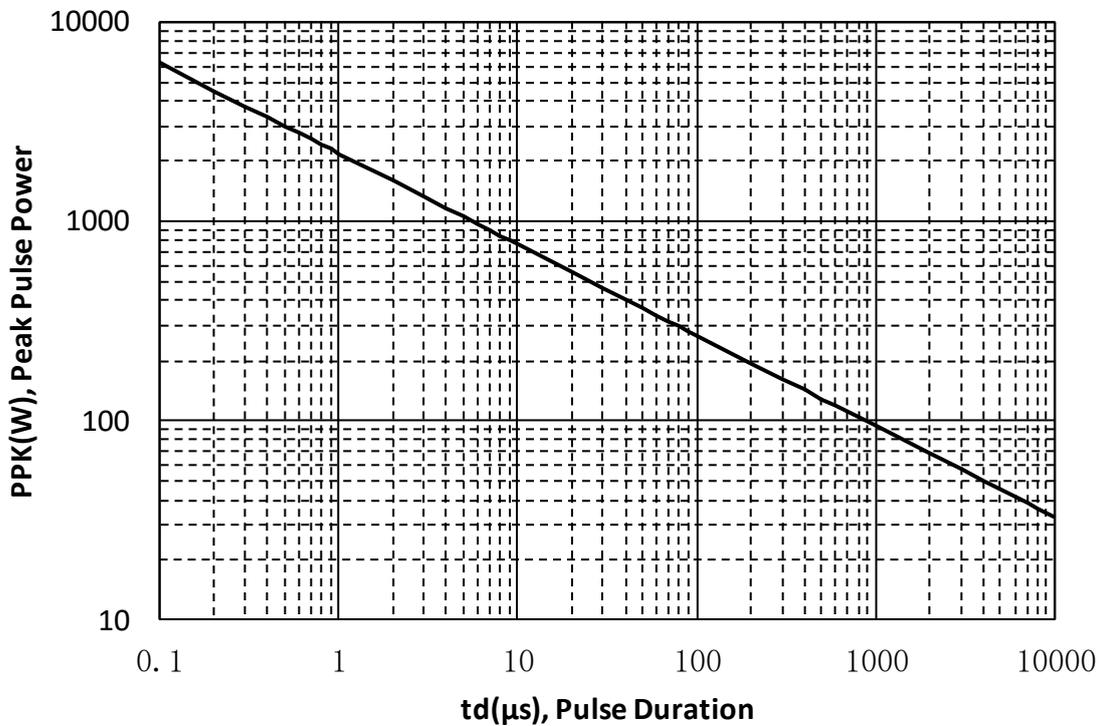
NOTES

¹Guaranteed by design and not subject to production test.

8/20 μ s Pulse Waveform

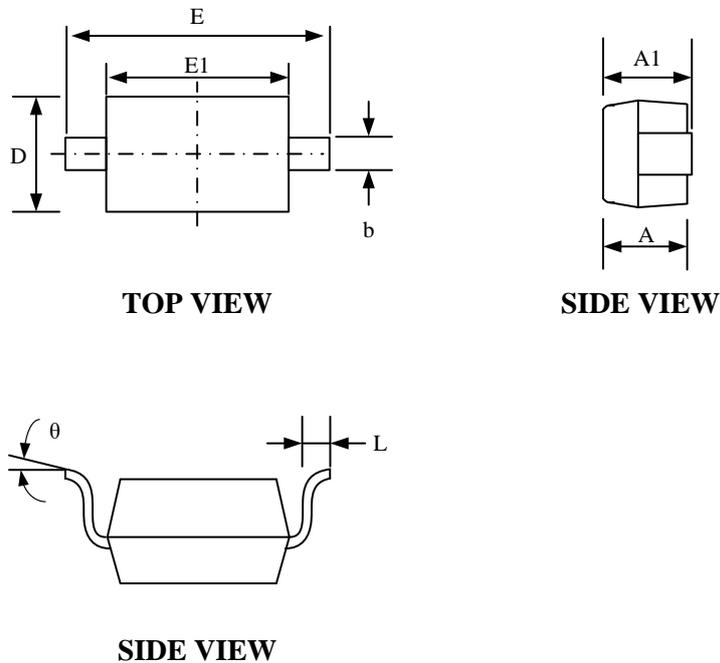


Peak Pulse Power vs. Pulse Duration



Package Outline

- SOD-323 package

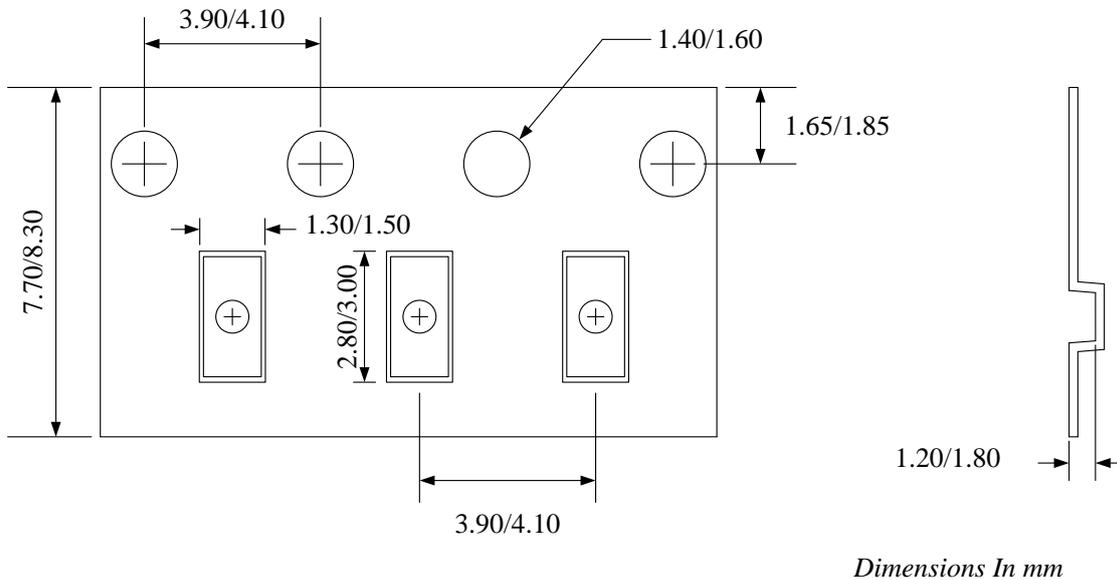


Package Dimensions

Symbol	Dimensions (mm)	
	Minimum	Maximum
A	0.80	0.90
A1	0.90	1.00
b	0.25	0.35
D	1.20	1.40
E	2.50	2.70
E1	1.60	1.80
L	0.25	0.40
θ	0°	8°

Notes: All dimension in mm and exclude mold flash & metal burr.

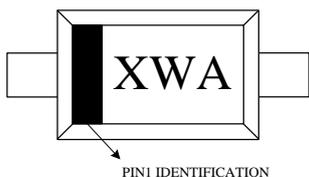
Tape and Reel Specification



Feeding direction →

Package types	Tape width (mm)	Pocket pitch(mm)	Reel size (Inch)	Trailer * length(mm)	Leader * length (mm)	Qty per reel (pcs)
SOD-323	8	4	7"	400	200	3000

Marking Codes



Note:

- (1) "X" is the device code, please refer to "Device Code" in the ordering information table for details.
- (2) "W" is date code, from 1 to 0, A to Z.
- (3) "A" is the production lot number, from A to Z.

Ordering Information

Part Number	Device Code	Working Voltage
SYS11U03AMC	G	3.3V
SYS11U05AMC	M	5.0V
SYS11U08AMC	N	8.0V
SYS11U12AMC	P	12.0V
SYS11U15AMC	Q	15.0V
SYS11U18AMC	R	18.0V
SYS11U24AMC	S	24.0V

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