

Features

- Ultra low leakage: nA level
- Low clamping voltage
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 23\text{kV}$
 - Contact discharge: $\pm 23\text{kV}$
 - IEC61000-4-4 (EFT) 40A (5/50ns)
 - IEC61000-4-5 (Lightning) 5A (8/20 μs)
- RoHS Compliant
- AEC-Q101 qualified

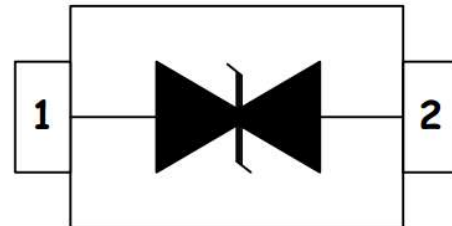
Dimensions SOD-323



Applications

- USB 2.0 power and data line
- Set-top box and digital TV
- Digital video interface (DVI)
- Notebook Computers
- SIM Ports
- 10/100 Ethernet
- LIN BUS

Pin Configuration



Mechanical Characteristics

- Package: SOD-323
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel: 3000pcs
- Reel Size: 7 inch
- Device Marking: AM

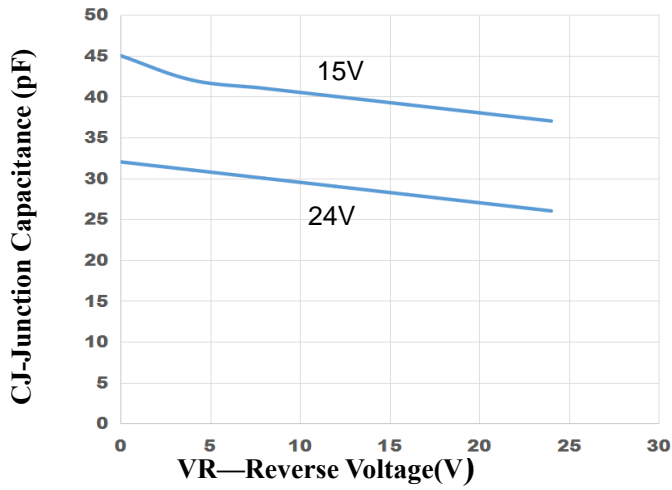
Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	Ppp	250	W
ESD per IEC 61000-4-2 (Air)	V _{ESD}	± 23	Kv
ESD per IEC 61000-4-2 (Contact)		± 23	
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{STJ}	-55 to +150	°C

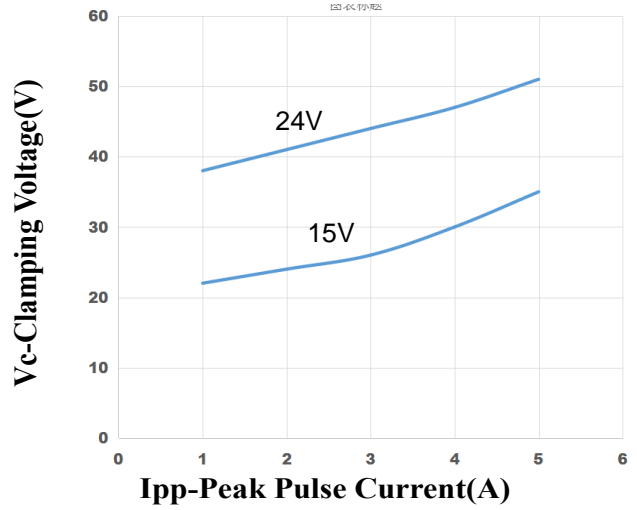
Electrical Characteristics (TA=25°C unless otherwise specified)

Symbol	Parameter	Test Condition	Pin 1 to Pin 2 (15V TVS)			Pin 2 to Pin 1 (24V TVS)			Units
			Min	Typ	Max	Min	Typ	Max	
V_{RWM}	Reverse Working Voltage				15		24		V
V_{BR}	Reverse Breakdown Voltage	$I_T = 1mA$	16		19	26.5		31	V
I_R	Reverse Leakage Current	$V_R = V_{RWM}$			0.2			0.2	μA
V_{C1}	Clamping Voltage 1	$I_{PP} = 1A,$ $t_p = 8/20\mu s$			22			38	V
V_{C2}	Clamping Voltage 2	$I_{PP} = 5A,$ $t_p = 8/20\mu s$			35			51	V
C_J	Junction Capacitance 1	$V_R = 0V,$ $f = 1MHz$		15			15		pF

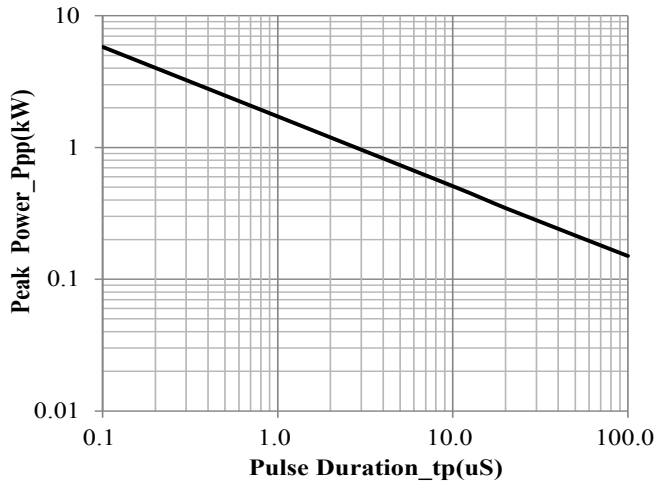
Typical Performance Characteristics (T A =25°C unless otherwise Specified)



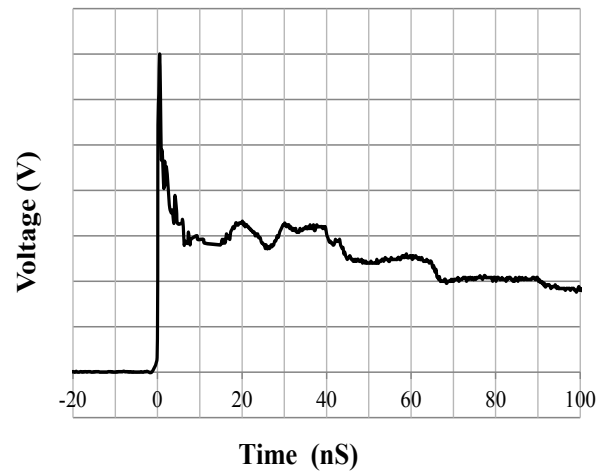
Junction Capacitance vs. Reverse Voltage



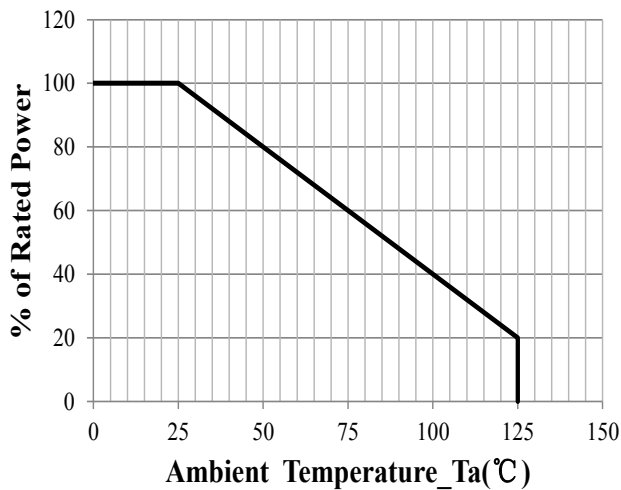
Clamping Voltage vs. Peak Pulse Current



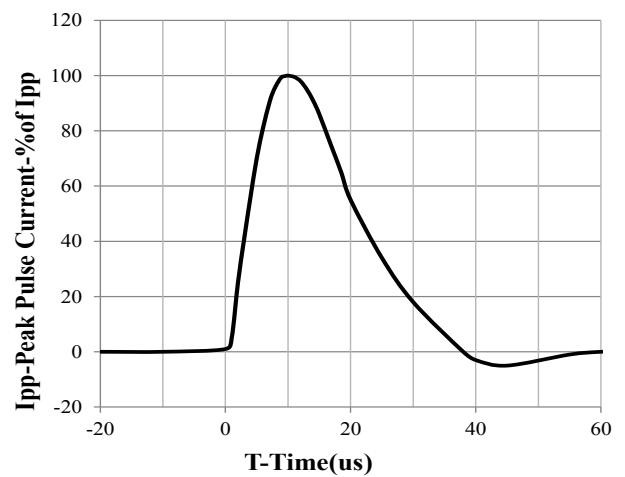
Peak Pulse Power vs. Pulse Time



IEC61000-4-2 Pulse Waveform

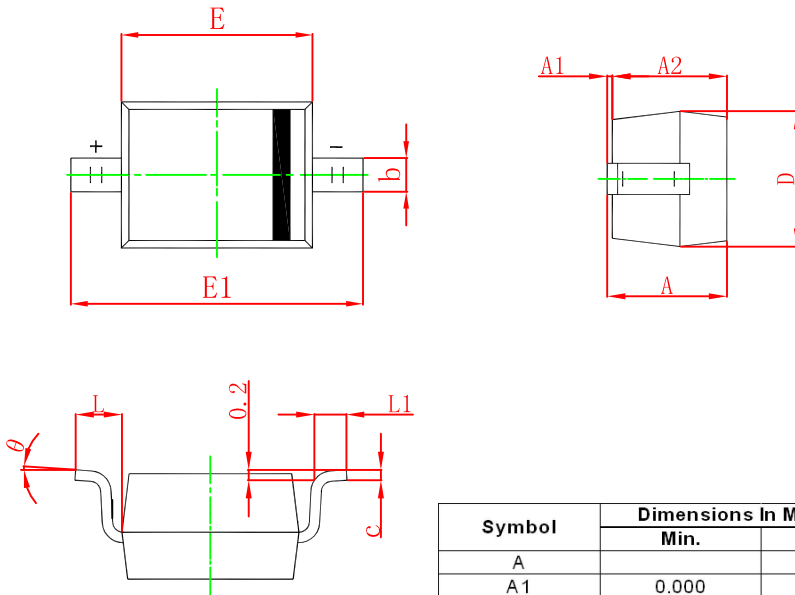


Power Derating Curve



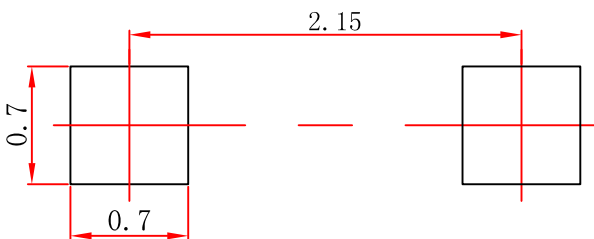
8 X 20us Pulse Waveform

SOD-323 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A		1.000		0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.900	0.031	0.035
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.550	2.750	0.100	0.108
L	0.475 REF.		0.019 REF.	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

SOD-323 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

NOTICE

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