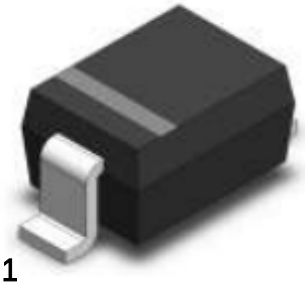
Ultra Low Capacitance Bi-Directional TVS Diode Array

Features

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

Dimensions SOD-323



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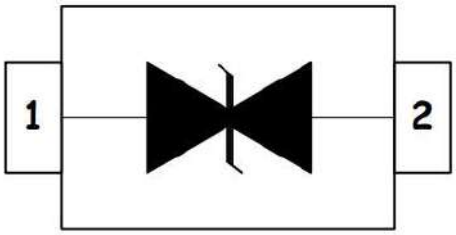
Pin Configuration



Applications

- Cell Phone Handsets andAccessories
- Microprocessor based equipment
- Personal DigitalAssistants(PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Networking and Telecom
- Serial and Parallel Ports
- Peripherals

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

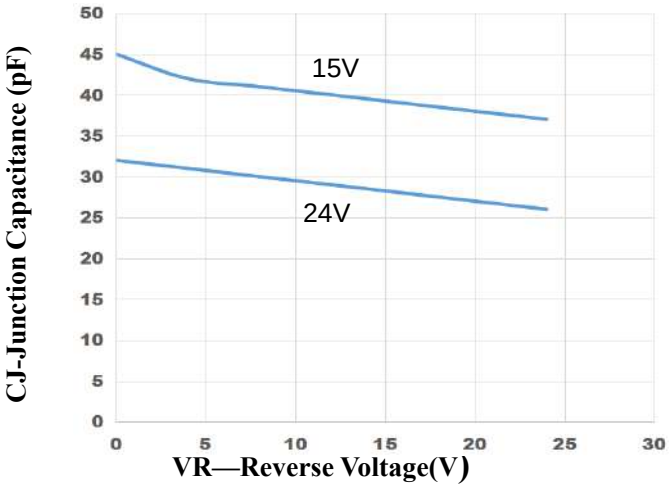
Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	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	℃
Storage Temperature Range	T_{STJ}	-55 to +150	℃

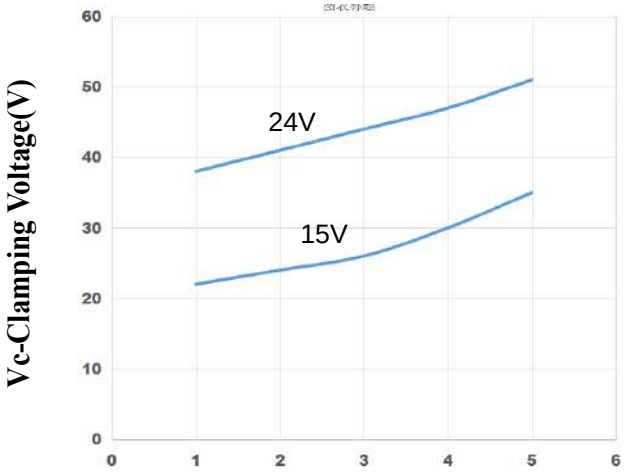
Electrical Characteristics(TA=25°C unless otherwise specified)

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 = 8/20μs			22			38	V
V_{C2}	Clamping Voltage 2	I_{PP} =5A, t_p = 8/20μs			35			51	V
C_J	Junction Capacitance 1	V_R = 0V, f = 1MHz		15			15		pF

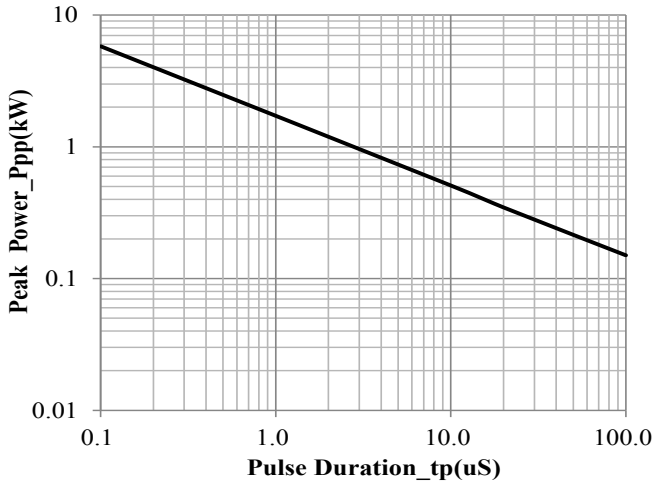
Typical Performance Characteristics (T A =25°C unless otherwise Specified)



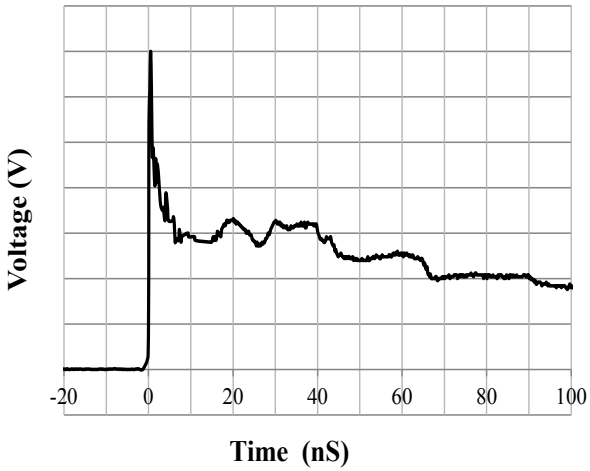
Junction Capacitance vs. Reverse Voltage



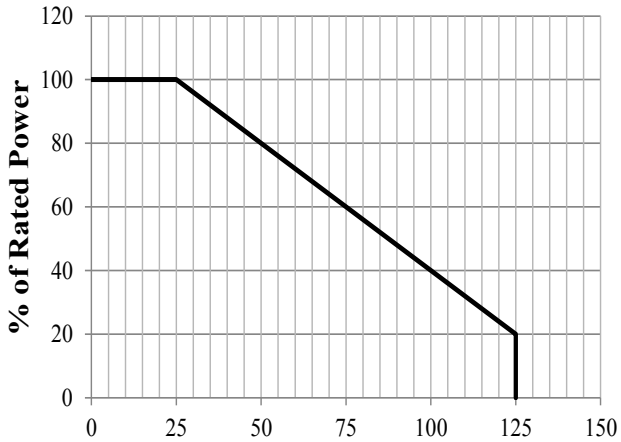
Clamping Voltage vs. Peak Pulse Current



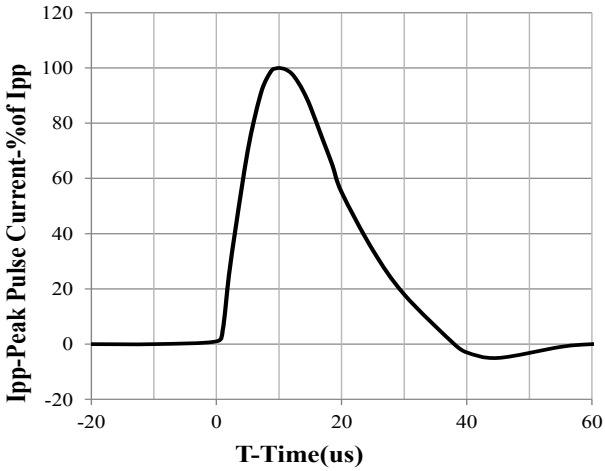
Peak Pulse Power vs. Pulse Time



IEC61000−4−2 Pulse Waveform

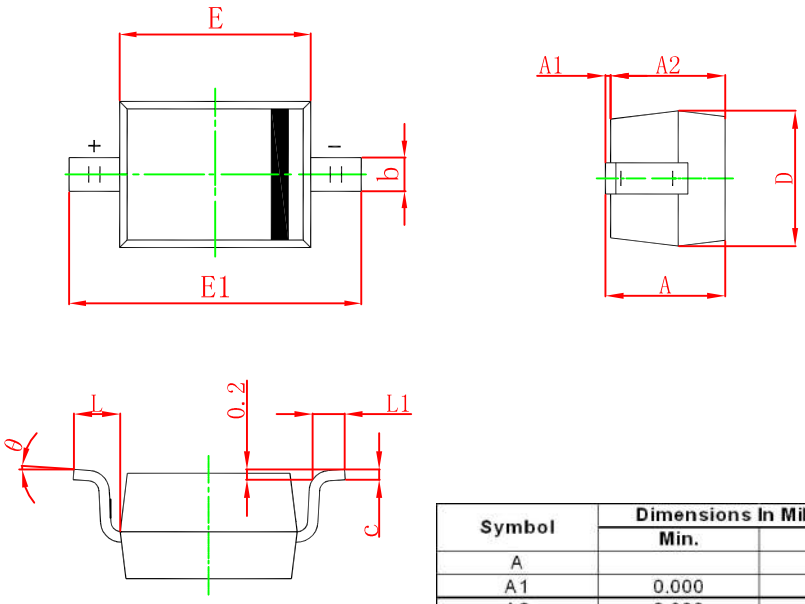


Power Derating Curve



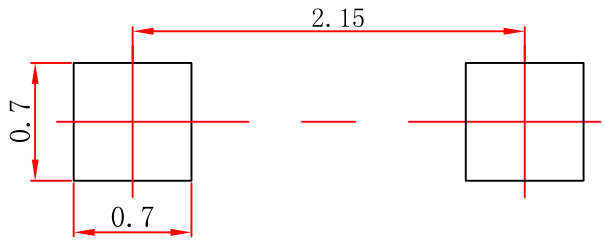
8 X 20us Pulse Waveform

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:± 0.05mm.
3.The pad layout is for reference purposes only.