ESD9D3V3

1-Line Uni-directional TVS Diode

Features

- Ultra low leakage: nA level
- Operating voltage: 3.3V
- Low clamping voltage
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
    - Air discharge: ±25kV
    - Contact discharge: ±25kV
  - IEC61000-4-5 (Lightning) 8A (8/20μs)
- RoHS Compliant

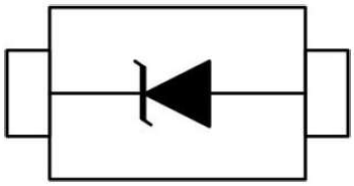
Dimensions SOD-923



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

Pin Configuration



Mechanical Characteristics

- Package: SOD-923
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel:8,000pcs
- Reel Size:7 inch
- Device Marking: E1

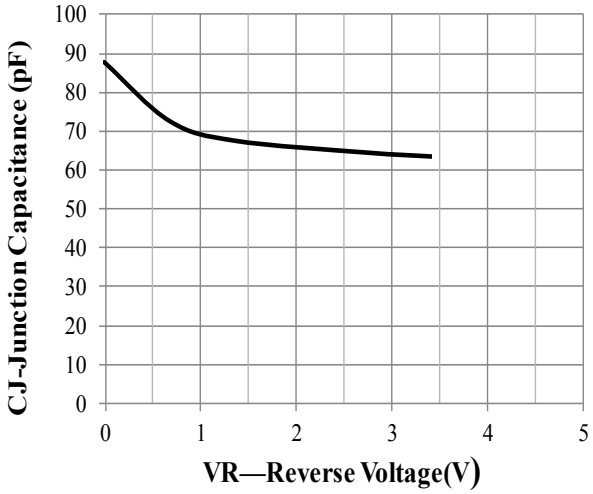
Absolute Maximum Ratings(Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppp	120	W
ESD per IEC 61000−4−2 (Air)	V_{ESD}	± 25	kV
ESD per IEC 61000−4−2 (Contact)		± 25	
Operating Temperature Range	T_J	-55 to +150	℃
Storage Temperature Range	T_{STJ}	-55 to +150	℃

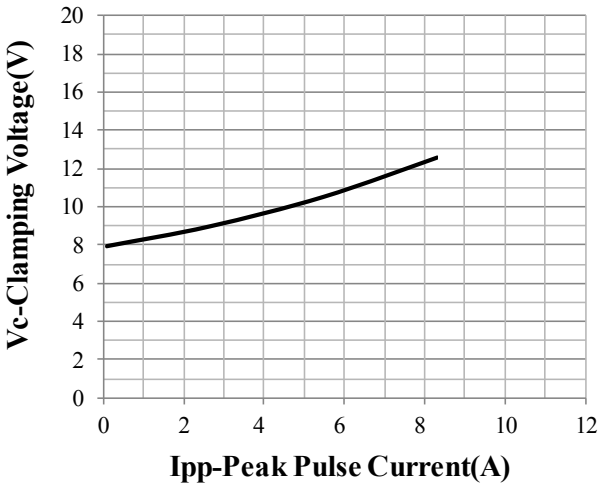
Electrical Characteristics(TA=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				3.3	V
Breakdown Voltage	V_{BR}	I_T = 1mA	5	5.6	6	V
Reverse Leakage Current	I_R	V_{RWM} = 3.3V			0.5	μA
Clamping Voltage	V_C	I_{PP} = 1A (8 x 20 μs pulse)			9	V
Clamping Voltage	V_C	I_{PP} = 8A (8 x 20 μs pulse)		12	15	V
Junction Capacitance	C_J	V_R = 0V, f = 1MHz		68	100	pF

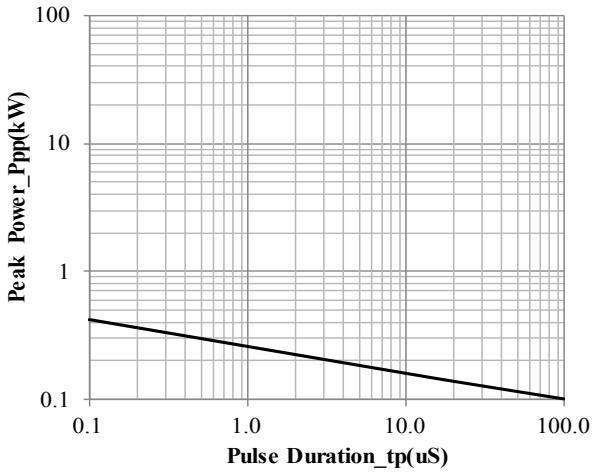
Typical Performance Characteristics(TA=25°C unless otherwise specified)



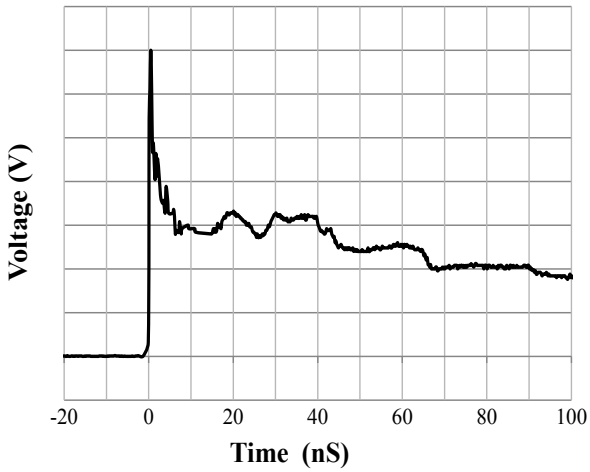
Junction Capacitance vs. Reverse Voltage



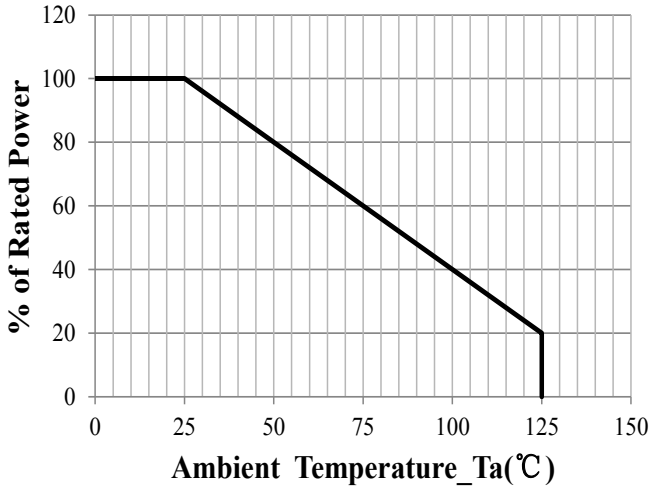
Clamping Voltage vs. Peak Pulse Current



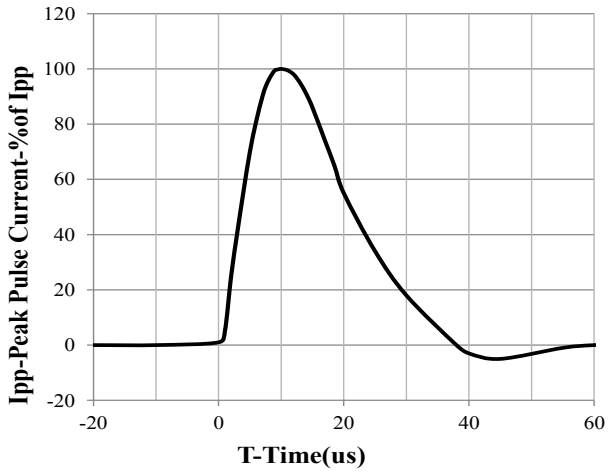
Peak Pulse Power vs. Pulse Time



IEC61000−4−2 Pulse Waveform

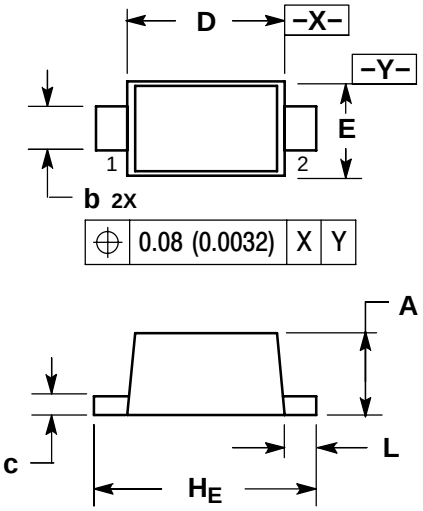


Power Derating Curve



8 X 20us Pulse Waveform

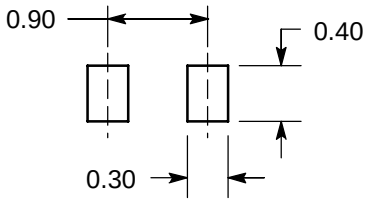
SOD-923 Package Outline Drawing



NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.

	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
A	0.34	0.37	0.40	0.013	0.015	0.016
b	0.15	0.20	0.25	0.006	0.008	0.010
c	0.07	0.12	0.17	0.003	0.005	0.007
D	0.75	0.80	0.85	0.030	0.031	0.033
E	0.55	0.60	0.65	0.022	0.024	0.026
H_E	0.95	1.00	1.05	0.037	0.039	0.041
L	0.05	0.10	0.15	0.002	0.004	0.006

Suggested Land Pattern



DIMENSIONS: MILLIMETERS

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