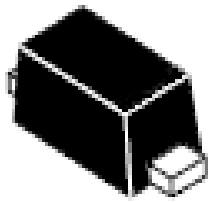
ESD9D3V3CQ

1-Line Bi-directional TVS Diode

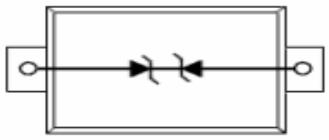
Features

- 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: ±30kV
    - Contact discharge: ±30kV
  - – IEC61000-4-4 (EFT) 40A (5/50ns)
  - – IEC61000-4-5 (Lightning) 8A (8/20μs)
- RoHS Compliant
- AEC-Q101 qualified

Dimensions SOD-923



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

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

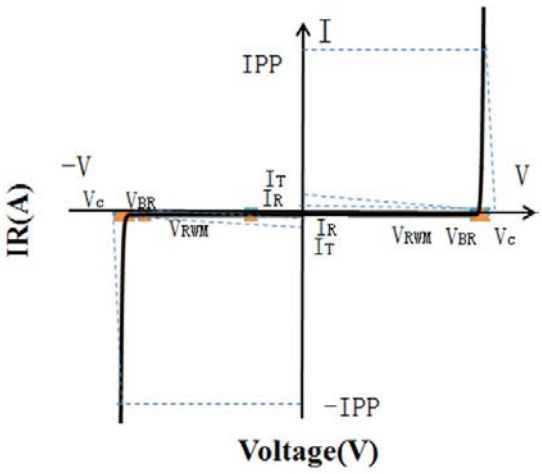
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppp	100	W
ESD per IEC 61000−4−2 (Air)	V_{ESD}	± 30	kV
ESD per IEC 61000−4−2 (Contact)		± 30	
Operating Temperature Range	T_J	-55 to +150	℃
Storage Temperature Range	T_{STJ}	-55 to +150	℃

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

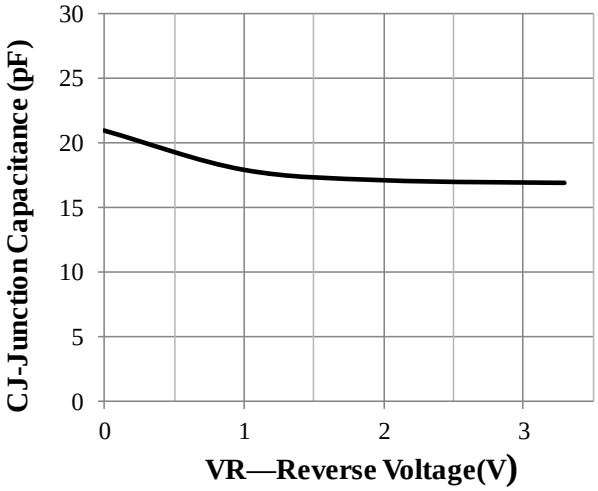
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				3.3	V
Breakdown Voltage	V_{BR}	I_T = 1mA	3.7	4.3	6.2	V
Reverse Leakage Current	I_R	V_{RWM} = 3.3V			0.5	μA
Clamping Voltage	V_C	I_{PP} = 1A (8 x 20 μs pulse)		4.5	6.5	V
Clamping Voltage	V_C	I_{PP} = 8A (8 x 20 μs pulse)		7	12.5	V
Junction Capacitance	C_J	V_R = 0V, f = 1MHz		15	25	pF

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

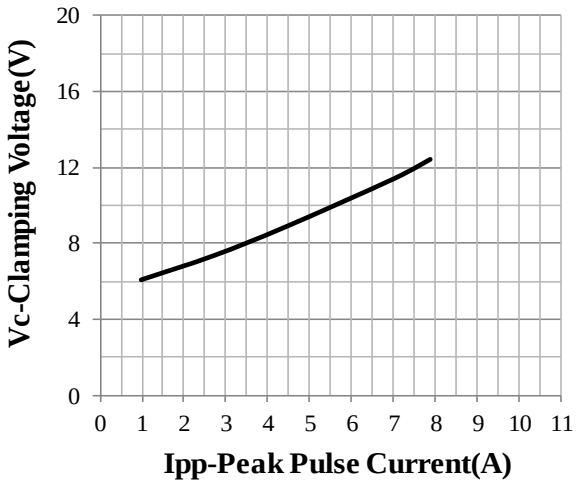
Symbol	Parameter
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
Vc	Clamping Voltage @Ic



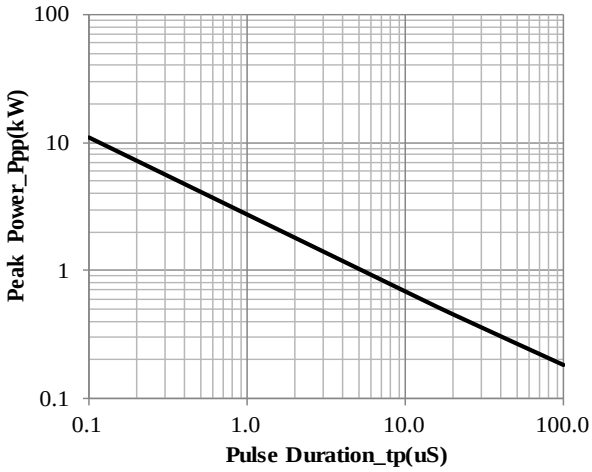
Typical Performance Characteristics(TA=25°C unless otherwise specified)



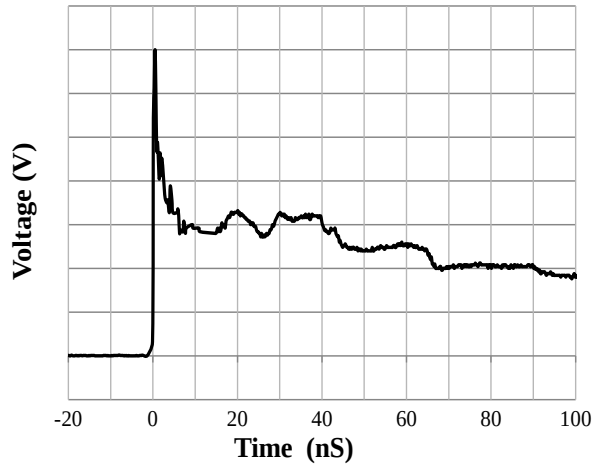
Junction Capacitance vs. Reverse Voltage



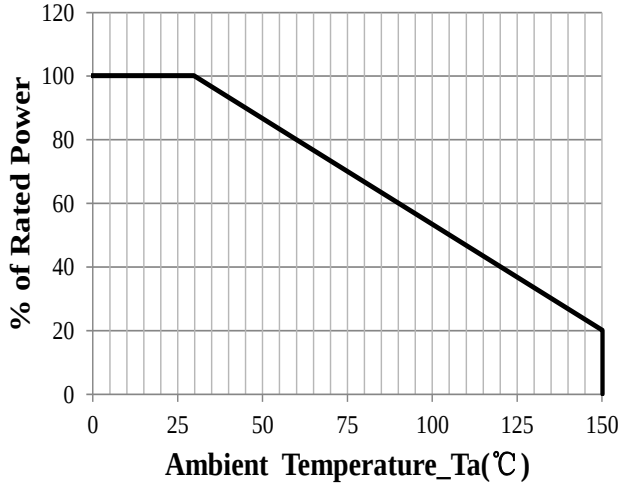
Clamping Voltage vs. Peak Pulse Current



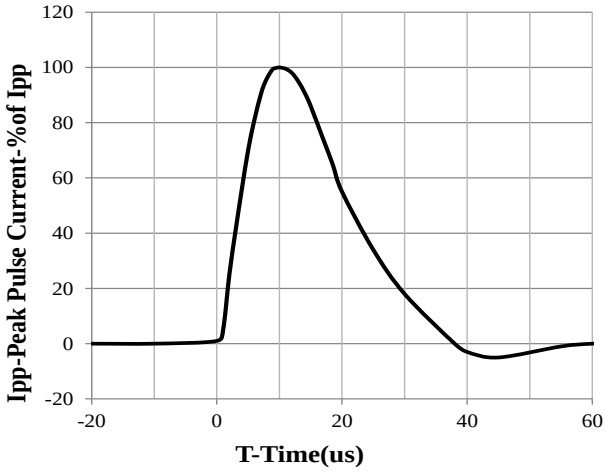
Peak Pulse Power vs. Pulse Time



IEC61000−4−2 Pulse Waveform

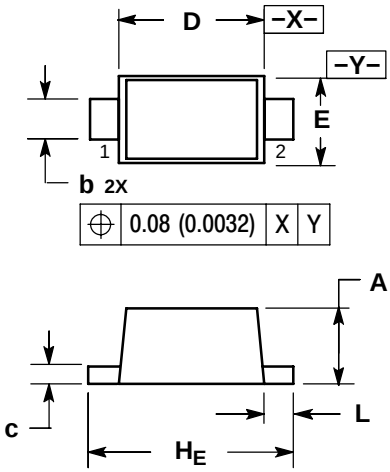


Power Derating Curve



8 X 20us Pulse Waveform

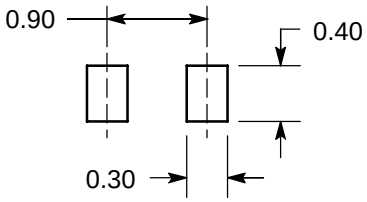
SOD-923 Package Outline Drawing



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

NOTICE
Leiditech reserves the right to make modifications,enhancements,improvements,corrections or other changes without further notice to any product herein. Leiditech does not assume any liability arising out of the application or use of any product described herein.

Shanghai Leiditech Electronic Technology Co., Ltd.
Email: sale1@leiditech.com
Tel : +86- 021 50828806
Fax : +86- 021 50477059