Leiditech

SD03CW

1-Line Bi-directional TVS Diode

Features

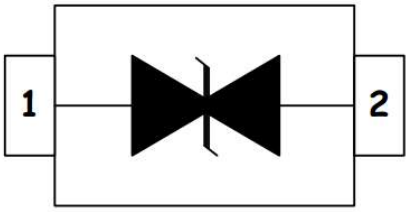
- Ultra low leakage: nA level
- Operating voltage: 3.3V
- Low clamping voltage
- Complies with following standards:
  - – IEC 61000-4-2 (ESD) immunity test
    - Air discharge: ±30kV
    - Contact discharge: ±30kV
  - – IEC61000-4-4 (EFT) 40A (5/50ns)
  - – IEC61000-4-5 (Lightning) 38A (8/20μs)
- RoHS Compliant

Dimensions SOD-323

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-323
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel:3,000pcs
- Reel Size:7 inch
- Device Marking: 3C

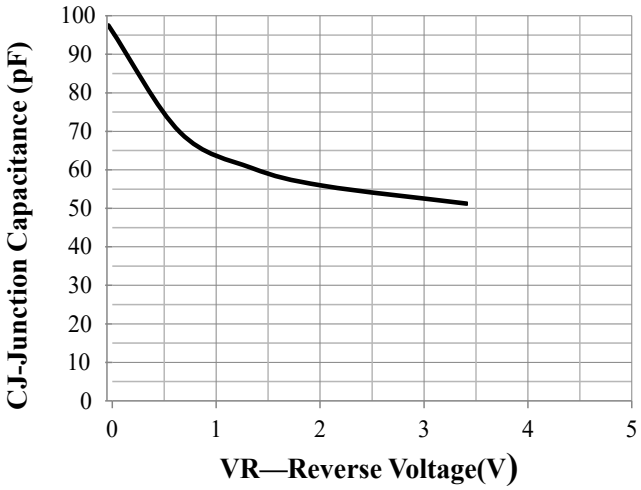
Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppp	450	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	-40 to +125	℃
Storage Temperature Range	T_{STJ}	-55 to +150	℃

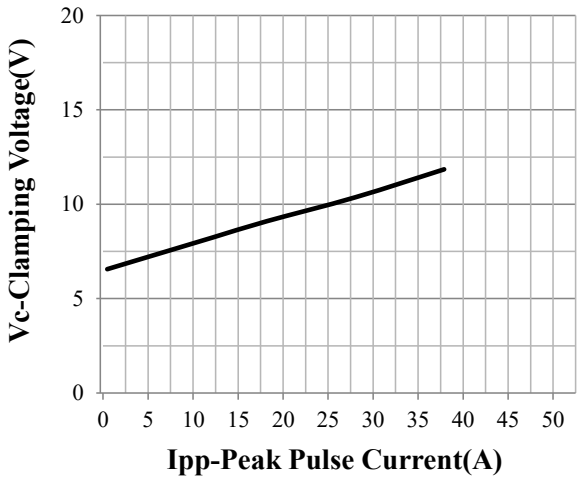
Electrical Characteristics(TA=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				3.3	V
Breakdown Voltage	V_{BR}	I_T = 1mA	4		6	V
Reverse Leakage Current	I_R	V_{RWM} = 3.3V			0.1	μA
Clamping Voltage	V_C	I_{PP} = 1A (8 x 20 μs pulse)			7	V
Clamping Voltage	V_C	I_{PP} =38A (8 x 20 μs pulse)			12	V
Junction Capacitance	C_J	V_R = 0V, f = 1MHz		50	100	pF

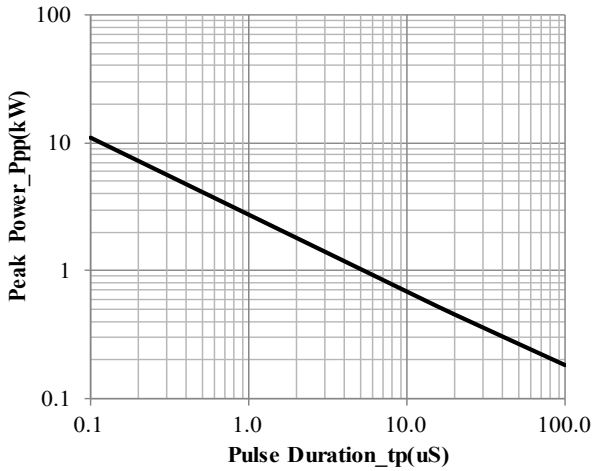
Typical Performance Characteristics(TA=25°C unless otherwise specified)



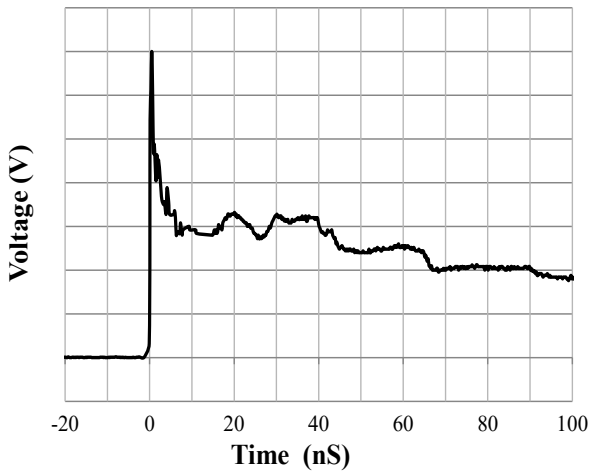
Junction Capacitance vs. Reverse Voltage



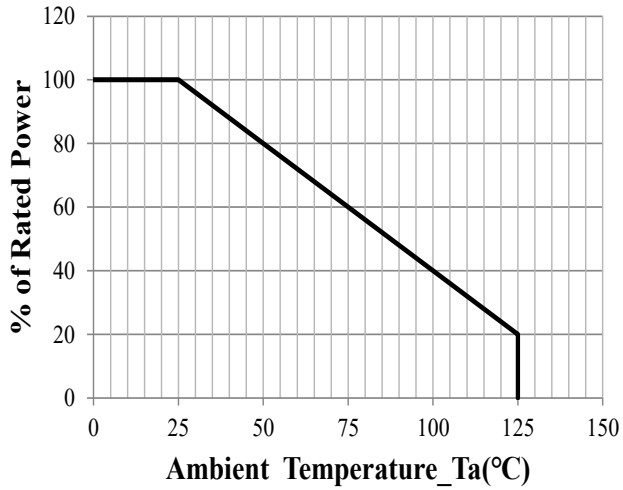
Clamping Voltage vs. Peak Pulse Current



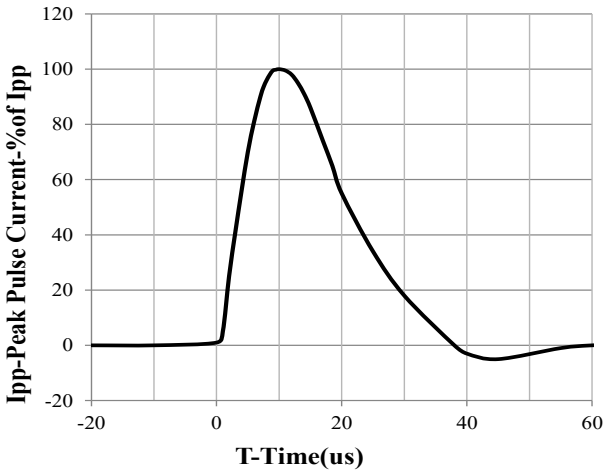
Peak Pulse Power vs. Pulse Time



IEC61000−4−2 Pulse Waveform

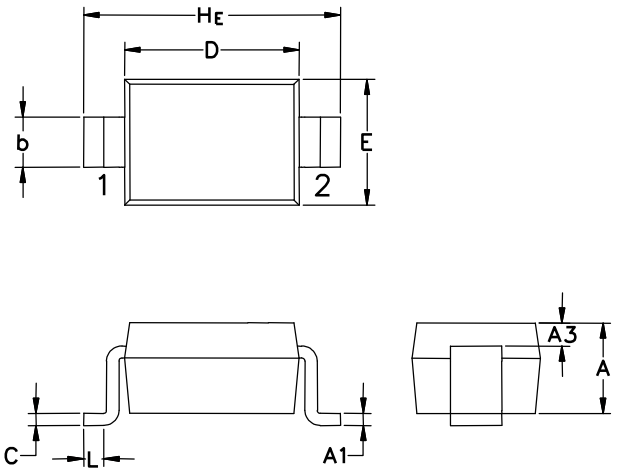


Power Derating Curve



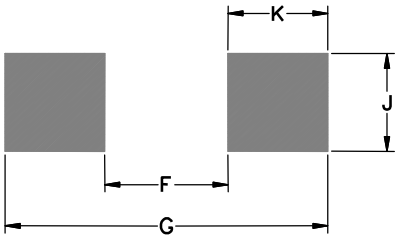
8 X 20us Pulse Waveform

SOD-323 Package Outline Drawing



Symbol	Millimeters			Inches		
	Min.	Nom.	Max.	Min.	Nom.	Max.
A	0.80	0.90	1.00	0.031	0.035	0.040
A1	0.00	0.05	0.10	0.000	0.002	0.004
A3	0.15 REF			0.006 REF		
b	0.25	0.32	0.40	0.010	0.012	0.016
C	0.089	0.12	0.177	0.003	0.005	0.007
D	1.60	1.70	1.80	0.062	0.066	0.070
E	1.15	1.25	1.35	0.045	0.049	0.053
L	0.08			0.003		
H_E	2.30	2.50	2.70	0.090	0.098	0.105

Suggested Land Pattern



Symbol	Millimeters	Inches
F	1.60	0.063
G	2.85	0.112
J	0.83	0.033
K	0.63	0.025

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