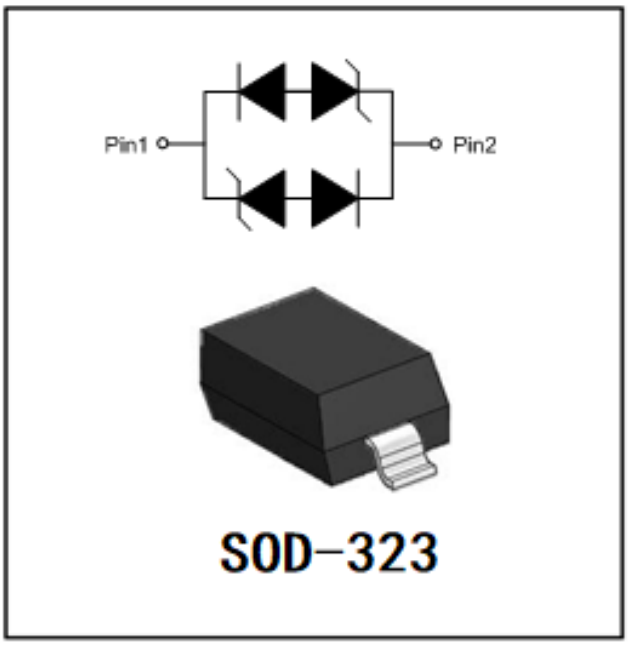
1-Line Low Capacitance Bi-directional TVS Diode



Features

- ●350W peak pulse power (8/20μs)
- ●Ultra low capacitance: 1pF typical
- ●Ultra low leakage: nA level
- ●Operating voltage:18V
- ●Low clamping voltage
- ●Protects one power line or data line
- ●RoHS Compliant

Features

- ●USB Ports
- ●Smart Phones
- ●Wireless Systems
- ●Ethernet 10/100/1000 Base T

Mechanical Characteristics

- ●Package: SOD-323
- ●Case Material: “Green” Molding Compound
- ●Moisture Sensitivity: Level 1 per J-STD-020
- ●Marking Information: See Below



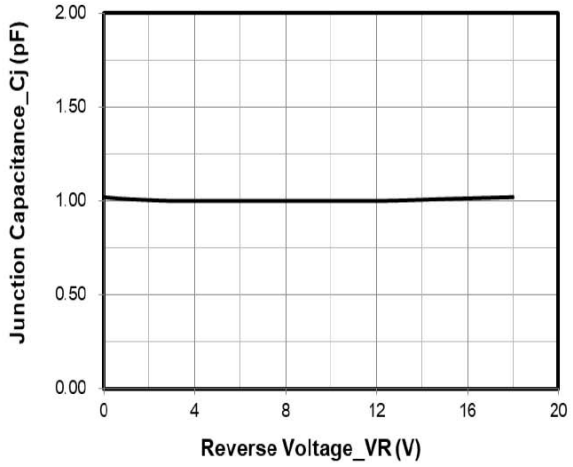
■Maximum Ratings

PARAMETER	SYMBOL	VALUE	UNIT
Peak Pulse Power (8/20μs)	Ppk	350	W
Peak Pulse Current (8/20μs)	I_{PP}	8	A
ESD per IEC 61000−4−2 (Air) ESD per IEC 61000−4−2 (Contact)	V_{ESD}	±30 ±30	KV
Operating Temperature Range	T_J	−55 to +125	℃
Storage Temperature Range	Tstg	−55 to +150	℃

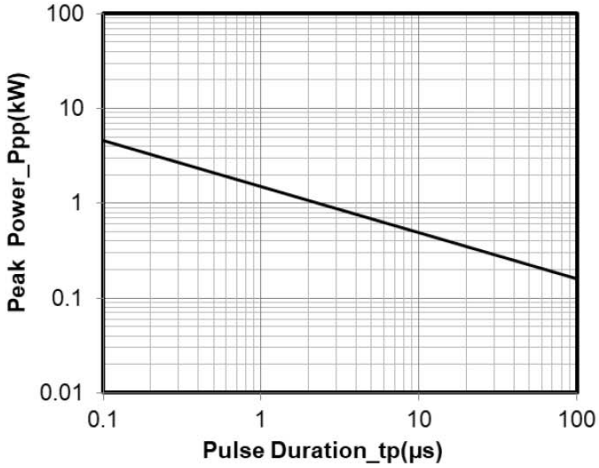
■Electrical Characteristics（T_a=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	CONDITIONS	MIN	TYP	MAX
Reverse Working Voltage	V_{RWM}	V				18
Breakdown Voltage	V_{BR}	V	I_T = 1mA	19.8		
Reverse Leakage Current	I_R	μA	V_{RWM} = 18V			0.2
Clamping Voltage	V_C	V	I_{PP} = 1A (8/20μs pulse)			29
Clamping Voltage	V_C	V	I_{PP} = 8A (8/20μs pulse)			45
Junction Capacitance	C_J	pF	V_R = 0V, f = 1MHz		1	3

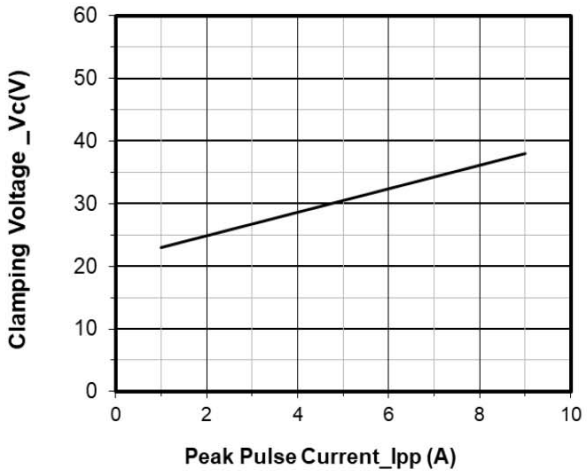
■ Characteristics (Typical)



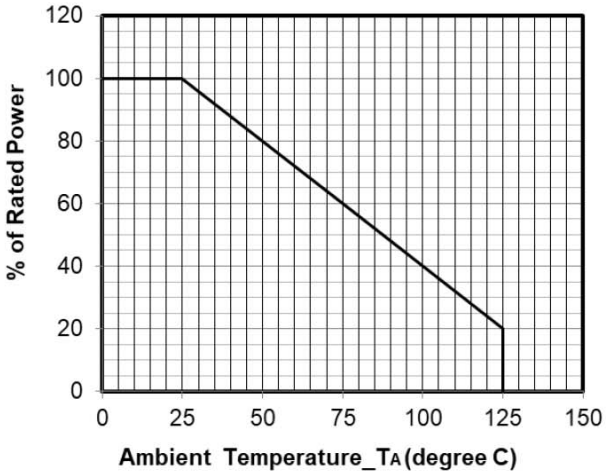
Junction Capacitance vs. Reverse Voltage



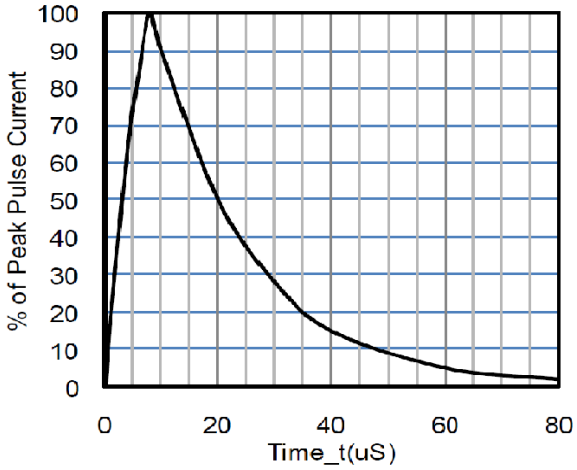
Peak Pulse Power vs. Pulse Time



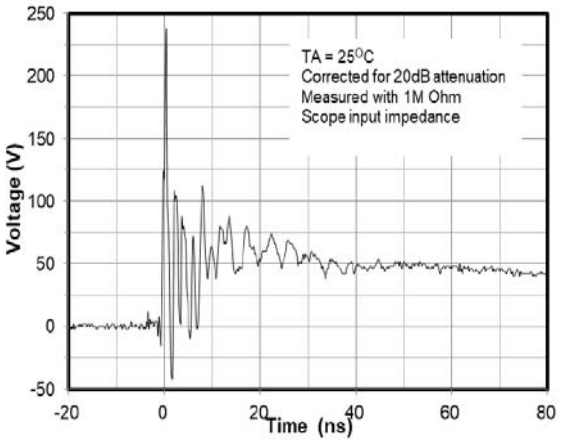
Clamping Voltage vs. Peak Pulse Current



Power Derating Curve



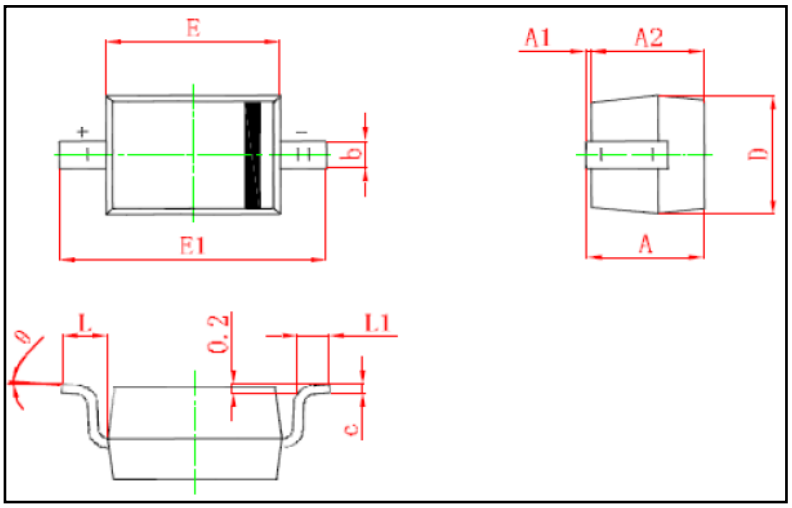
8 / 20μs Pulse Waveform



ESD Clamping Voltage

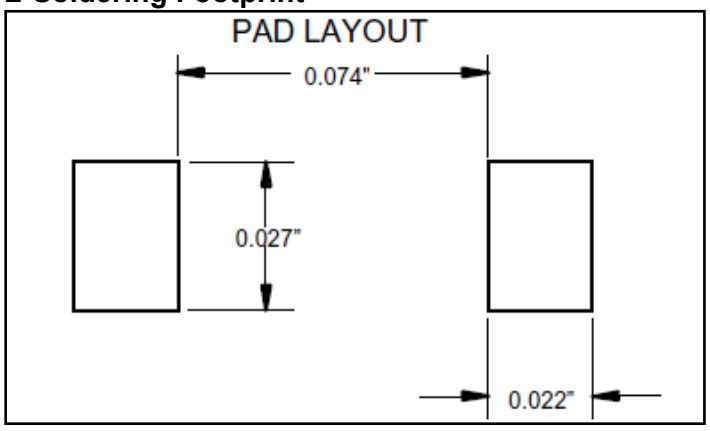
8 kV Contact per IEC61000-4-2

■ Outline Dimensions



Symbol	Min. (mm)	Max. (mm)
A		1.000
A1	0.000	0.100
A2	0.800	0.900
b	0.250	0.400
c	0.080	0.150
D	1.200	1.400
E	1.600	1.800
E1	2.500	2.700
L	0.475REF	
L1	0.250	0.400
θ	0°	8°

■ Soldering Footprint



Notice

All products, product specifications and data are subject to change without notice to improve reliability, function or design or otherwise. Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in STARSEA's terms and conditions of sale for such products, STARSEA assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of STARSEA products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.