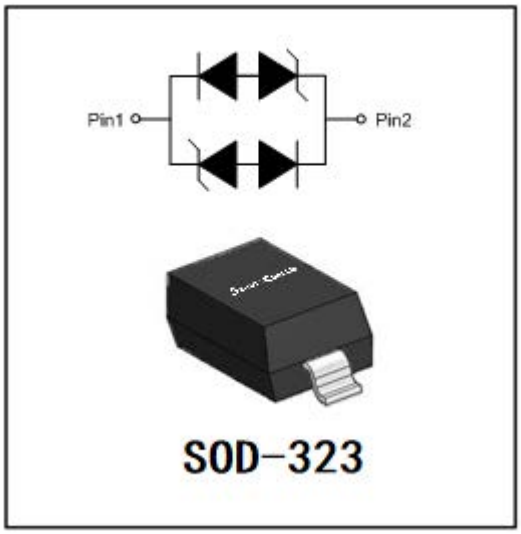
1-Line Low Capacitance Bi-directional TVS Diode



Features

- ●350W peak pulse power (8/20μs)
- ●Ultra low capacitance: 1pF typical
- ●Ultra low leakage: nA level
- ●Operating voltage:12V
- ●Low clamping voltage
- ●Protects one power line or data line
- ● Compliant

Mechanical Characteristics

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

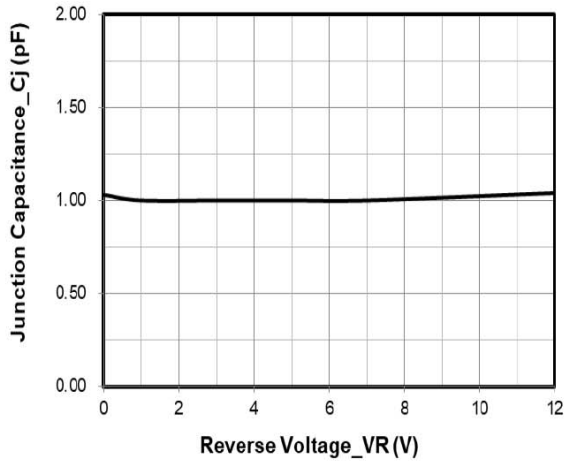
■Maximum Ratings

PARAMETER	SYMBOL	VALUE	UNIT
Peak Pulse Power (8/20μs)	Ppk	350	W
Peak Pulse Current (8/20μs)	I_{PP}	14	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	℃

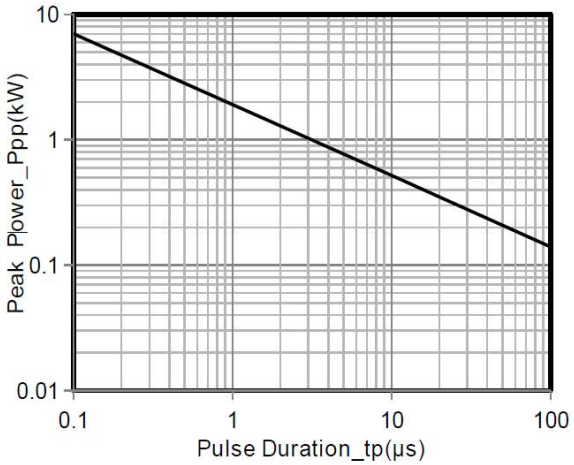
■Electrical Characteristics（T_a=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	CONDITIONS	MIN	TYP	MAX
Reverse Working Voltage	V_{RWM}	V				12
Breakdown Voltage	V_{BR}	V	I_T = 1mA	13.3		
Reverse Leakage Current	I_R	μA	V_{RWM} = 12V			0.2
Clamping Voltage	V_C	V	I_{PP} = 1A (8/20μs pulse)			18
Clamping Voltage	V_C	V	I_{PP} = 14A (8/20μs pulse)			25
Junction Capacitance	C_J	pF	V_R = 0V, f = 1MHz		1	1.5

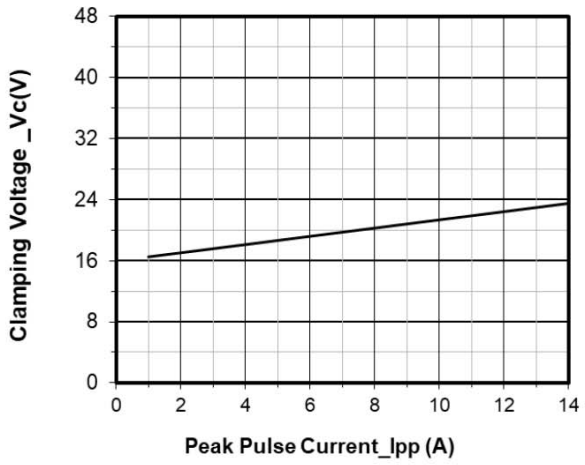
■ Characteristics (Typical)



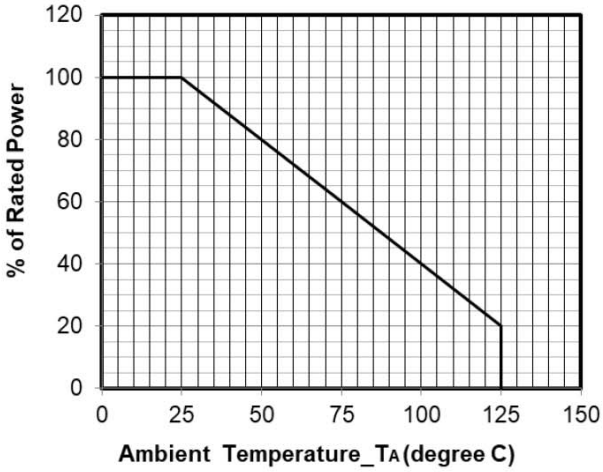
Junction Capacitance vs. Reverse Voltage



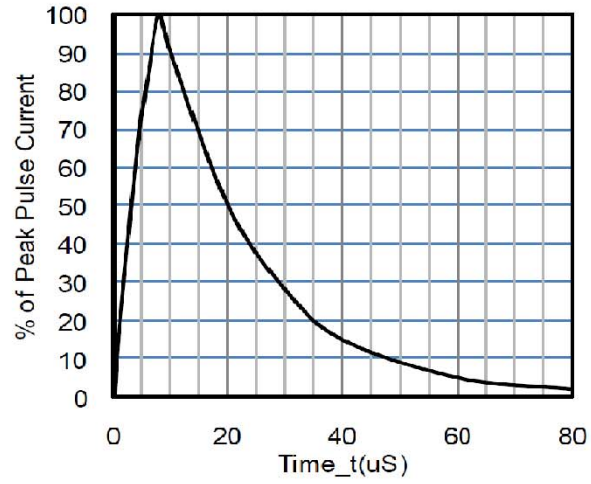
Peak Pulse Power vs. Pulse Time



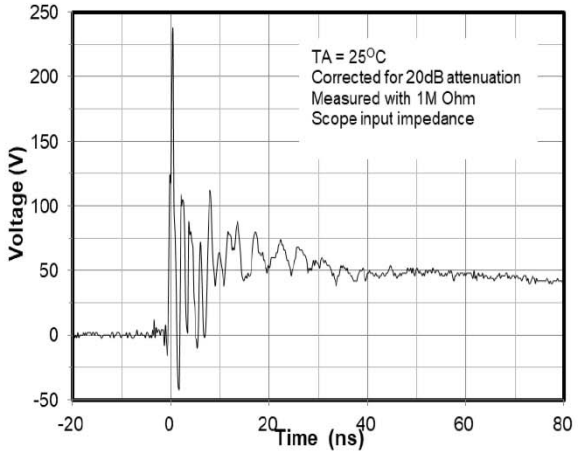
Clamping Voltage vs. Peak Pulse Current



Power Derating Curve



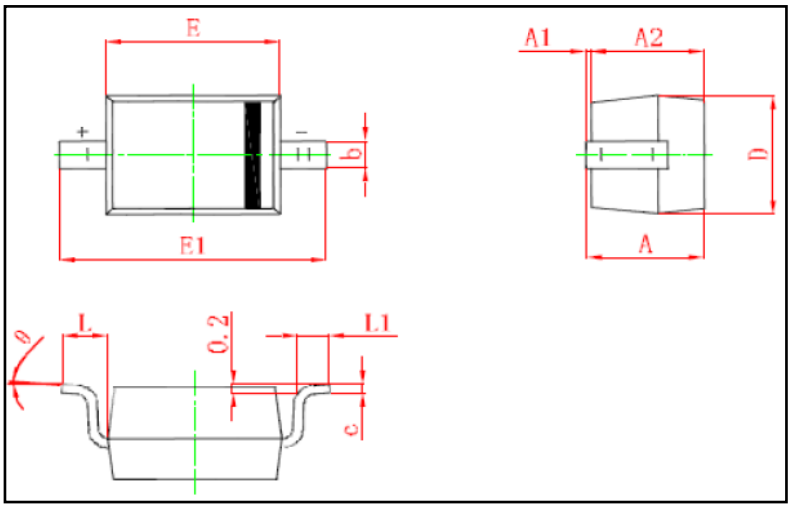
8 / 20μs Pulse Waveform



ESD Clamping Voltage

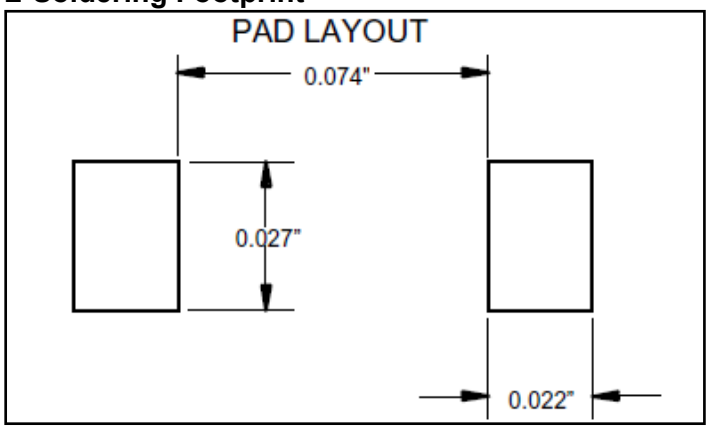
8 kV Contact per IEC61000−4−2

■ 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



Disclaimer

The information presented in this document is for reference only. Shanghai Sunco Electronics Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of with would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Russiansunco or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website http:// www.russiansunco.com , or consult your nearest Russiansunco's sales office for further assistance.