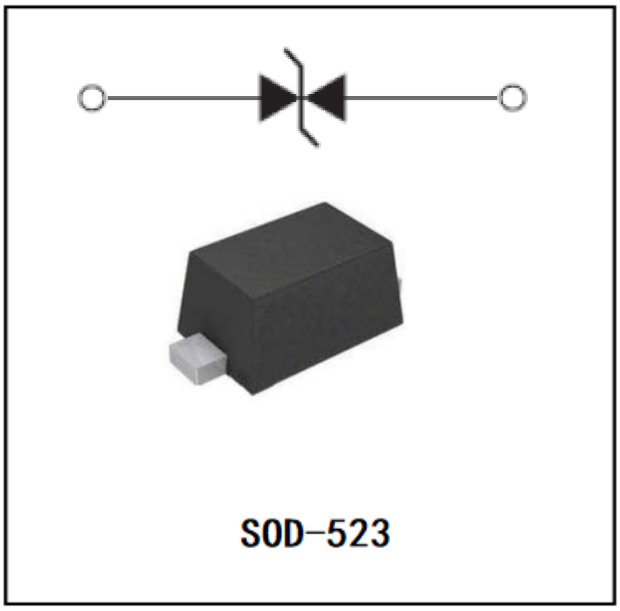
1-Line Ultra Low Capacitance Bi-directional TVS Diode

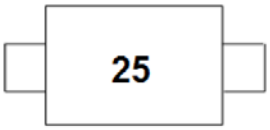


Features

- ●Ultra low capacitance: 0.3pF typical
- ●Ultra low leakage: nA level
- ●Operating voltage:5.0V
- ●Low clamping voltage
- ●Complies with following standards:
  - – IEC 61000-4-2 (ESD) immunity test
  - Air discharge: ±25Kv
  - Contact discharge: ±22kV
  - – IEC61000-4-5 (Lightning) 30A (8/20μs)
- ●RoHS Compliant

Mechanical Characteristics

- ●Package: SOD-523
- ●Case Material: “Green” Molding Compound
- ●Moisture Sensitivity: Level 1 per J-STD-020
- ●Marking Information: See Below



25= Device Marking Code

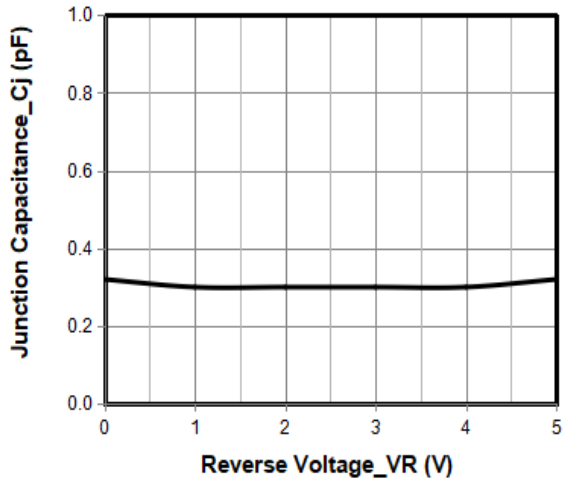
■Maximum Ratings

PARAMETER	SYMBOL	VALUE	UNIT
Peak Pulse Power (8/20μs)	Ppk	100	W
Peak Pulse Current (8/20μs)	I_{PP}	4	A
ESD per IEC 61000−4−2 (Air) ESD per IEC 61000−4−2 (Contact)	V_{ESD}	±25 ±22	KV
Operating Temperature Range	T_J	−55 to +125	℃
Storage Temperature Range	Tstg	−55 to +150	℃

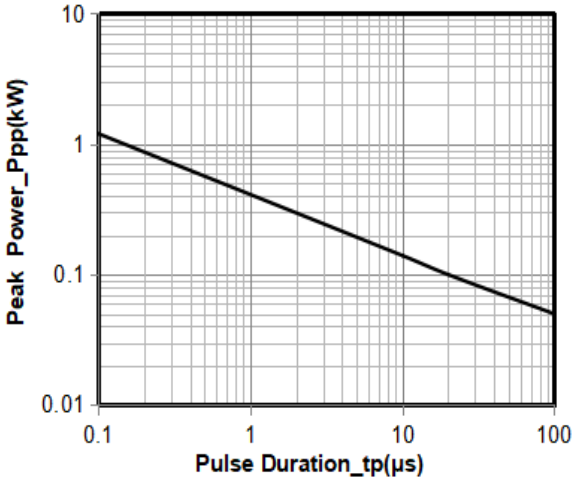
■Electrical Characteristics（T_a=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	CONDITIONS	MIN	TYP	MAX
Reverse Working Voltage	V_{RWM}	V				5
Breakdown Voltage	V_{BR}	V	I_T =1mA	6.5		9.5
Reverse Leakage Current	I_R	μA	V_{RWM} = 5V		0.02	0.2
Clamping Voltage	V_C	V	I_{PP} = 1A (8/20μs pulse)			12
Clamping Voltage	V_C	V	I_{PP} = 4A (8/20μs pulse)			25
Junction Capacitance	C_J	pF	V_R = 0V, f = 1MHz		0.3	0.5

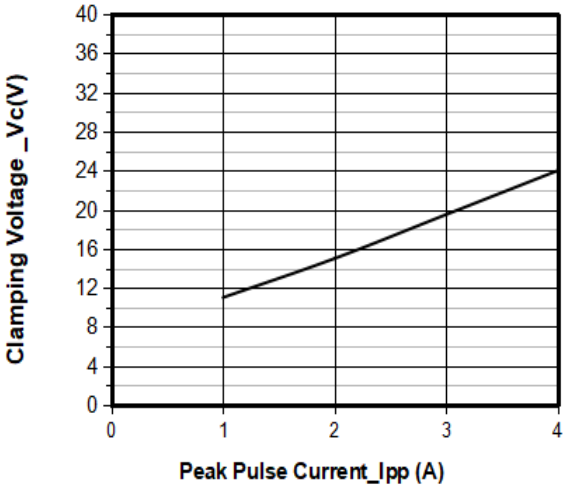
■ Characteristics (Typical)



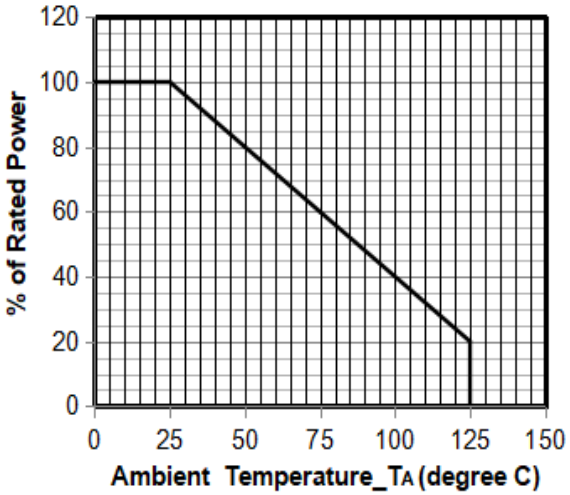
Junction Capacitance vs. Reverse Voltage



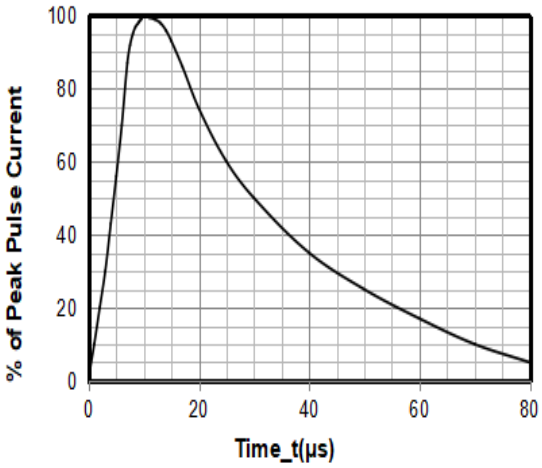
Peak Pulse Power vs. Pulse Time



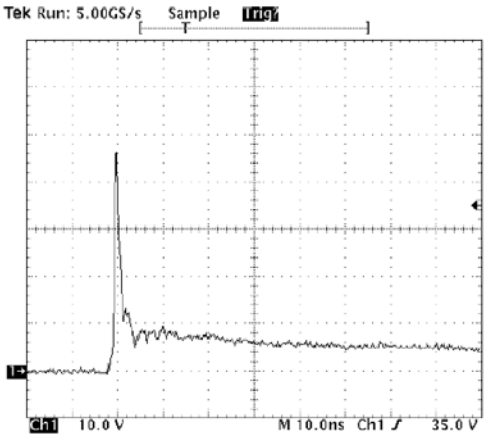
Clamping Voltage vs. Peak Pulse Current



Power Derating Curve

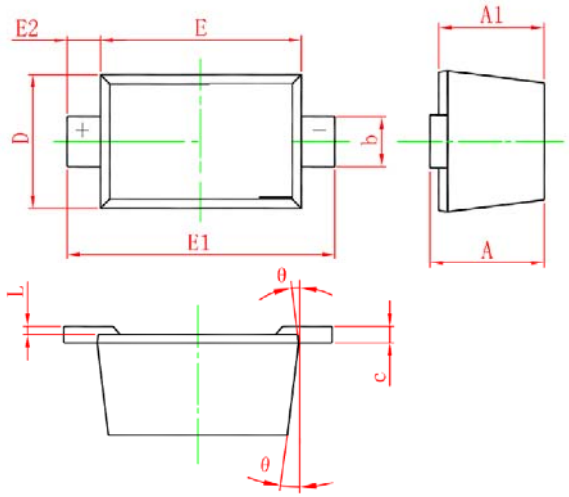


8/20μs Pulse Waveform



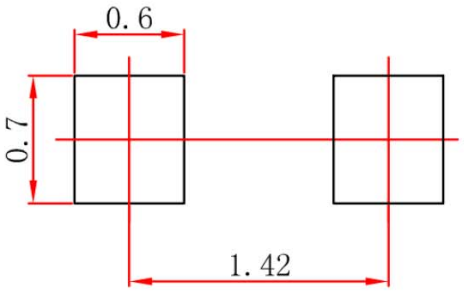
Note: Data is taken with a 10x attenuator
ESD Clamping Voltage
+8 kV Contact per IEC61000−4−2

■ Outline Dimensions



SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.51	- -	0.77	0.020	- -	0.031
A1	0.50	- -	0.70	0.020	- -	0.028
b	0.25	- -	0.35	0.010	- -	0.014
c	0.08	- -	0.15	0.003	- -	0.006
D	0.75	- -	0.85	0.030	- -	0.033
E	1.10	- -	1.30	0.043	- -	0.051
E1	1.50	- -	1.70	0.059		0.067
E2	0.20REF			0.008REF		
L	0.01	- -	0.07	0.001	- -	0.003
Θ	7° REF			7° REF		

■ Soldering Footprint



Unit: mm

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