

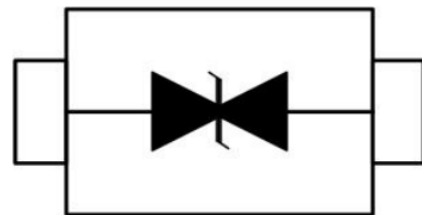
### Features

- 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:  $\pm 30\text{kV}$
    - Contact discharge:  $\pm 30\text{kV}$
  - IEC61000-4-4 (EFT) 40A (5/50ns)
  - IEC61000-4-5 (Lightning) 9A (8/20 $\mu\text{s}$ )
- RoHS Compliant

### Dimensions SOD-523



### Pin Configuration



### Applications

- Computer Interfaces Protection
- Microprocessors Protection
- Serial and Parallel Ports Protection
- Control Signal Lines Protection
- Power lines on PCB Protection
- Latchup Protection

### Mechanical Characteristics

- Package: SOD-523
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel: 3,000 pcs
- Reel Size: 7 inch
- Device Marking: eB

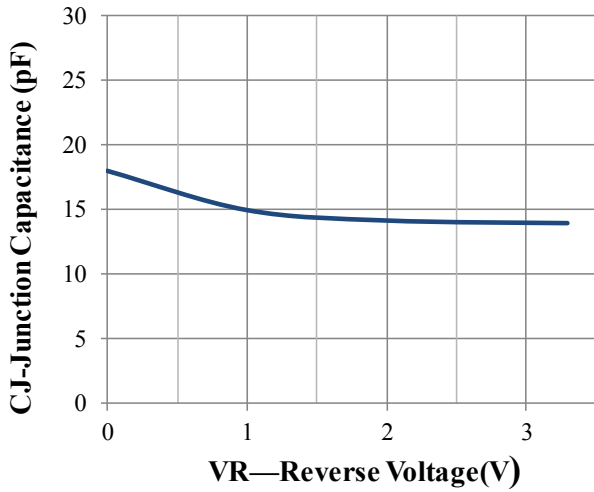
### Absolute Maximum Ratings (T<sub>amb</sub>=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 $\mu\text{s}$ )	P <sub>pp</sub>	90	W
ESD per IEC 61000-4-2 (Air)	V <sub>ESD</sub>	$\pm 30$	Kv
ESD per IEC 61000-4-2 (Contact)		$\pm 30$	
Operating Temperature Range	T <sub>J</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>STJ</sub>	-55 to +150	°C

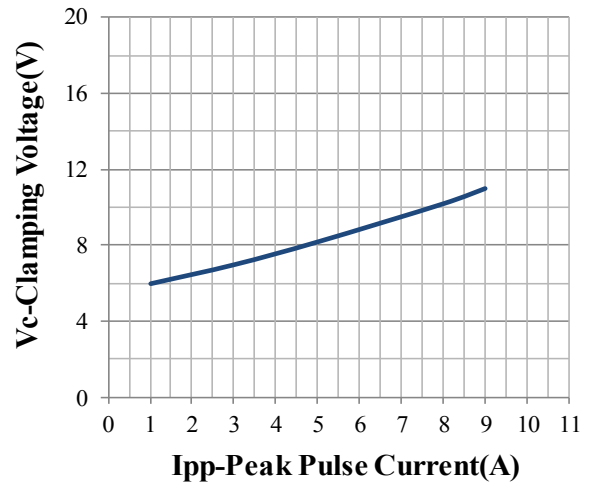
## Electrical Characteristics (TA=25°C unless otherwise specified)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
VRWM	Reverse Working Peak Voltage				3.3	V
VBR	Reverse Breakdown Voltage	IT = 1mA	3.5			V
IR	Reverse Leakage Current	VRWM = 3.3V			0.01	μA
VC	Clamping Voltage	IPP = 1 A (8/20μs)			6	V
VC	Clamping Voltage	IPP = 9 A (8/20μs)			8	V
CJ	Capacitance	VR = 0V, f = 1MHz		10.3		pF

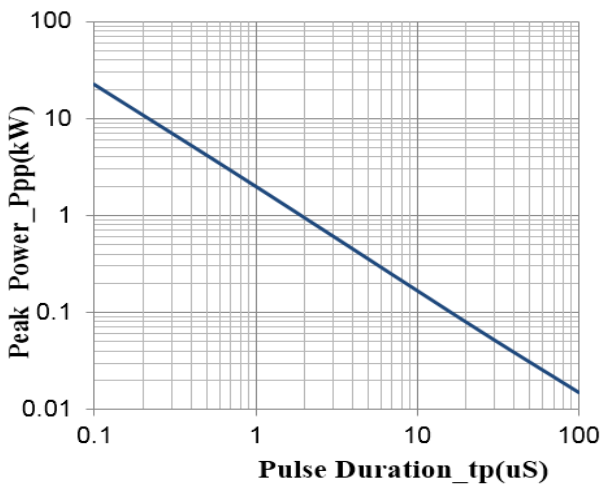
## Typical Performance Characteristics ( $T_A=25^{\circ}\text{C}$ unless otherwise Specified)



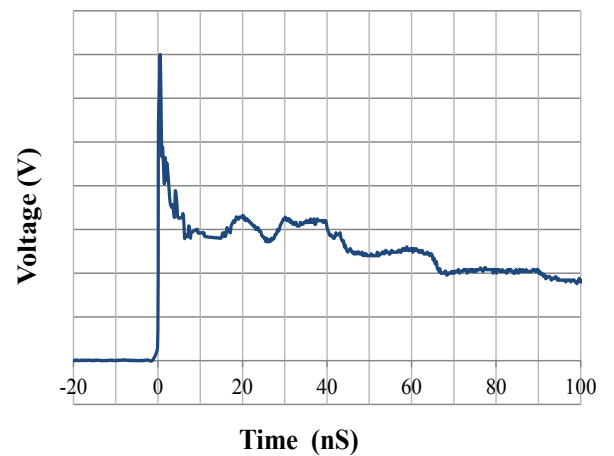
Junction Capacitance vs. Reverse Voltage



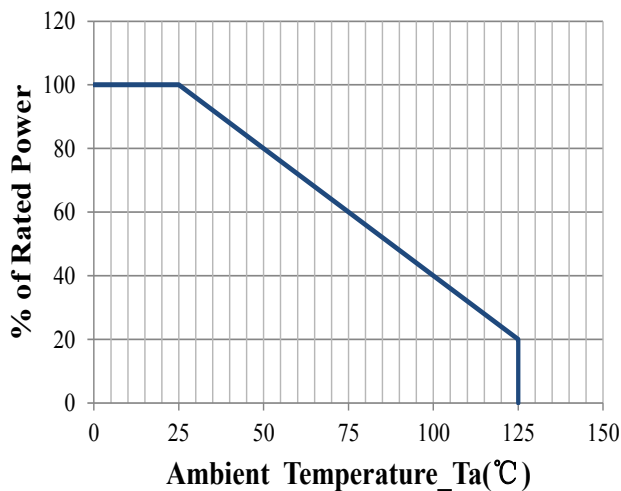
Clamping Voltage vs. Peak Pulse Current



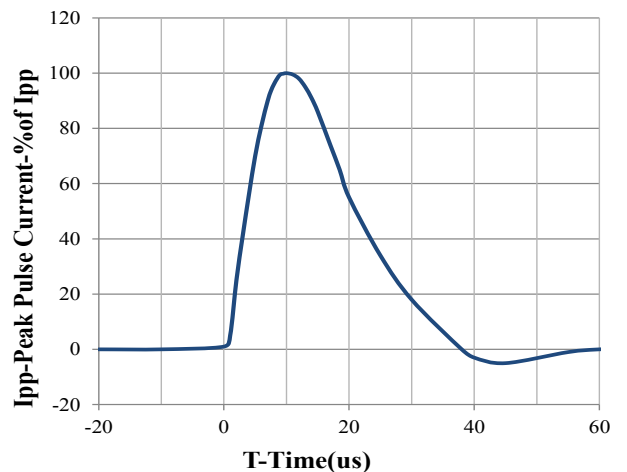
Peak Pulse Power vs. Pulse Time



IEC61000-4-2 Pulse Waveform

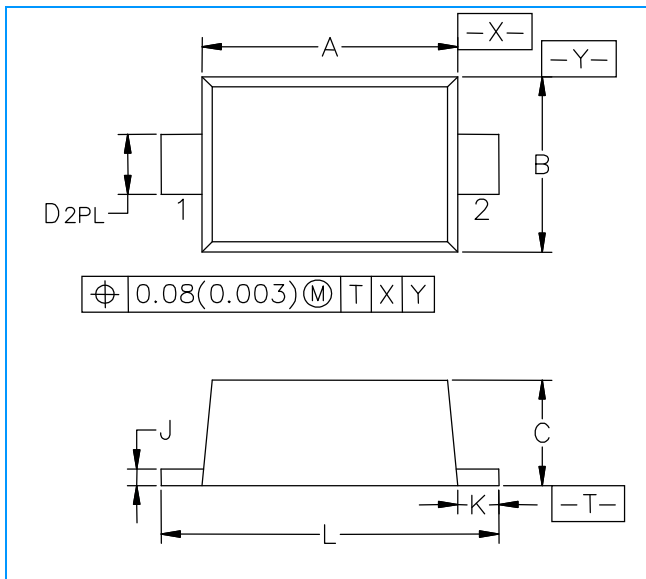


Power Derating Curve

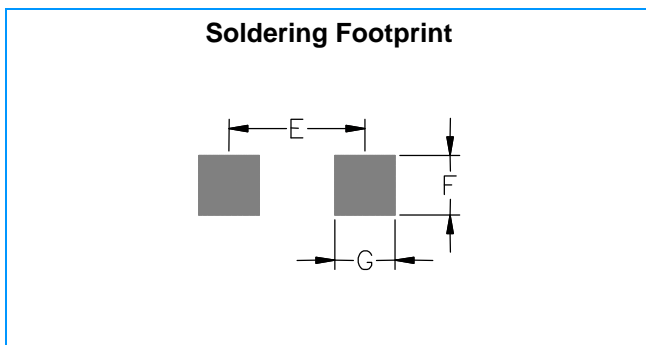


8 X 20us Pulse Waveform

## SOD-523 Package Outline & Dimensions



Symbol	Millimeters			Inches		
	Min.	Nom.	Max.	Min.	Nom.	Max.
<b>A</b>	1.10	1.20	1.30	0.043	0.047	0.051
<b>B</b>	0.70	0.80	0.90	0.028	0.032	0.035
<b>C</b>	0.50	0.60	0.70	0.020	0.024	0.028
<b>D</b>	0.25	0.30	0.35	0.010	0.012	0.014
<b>J</b>	0.07	0.14	0.20	0.0028	0.0055	0.0079
<b>K</b>	0.15	0.20	0.25	0.006	0.008	0.010
<b>L</b>	1.50	1.60	1.70	0.059	0.063	0.067



Symbol	Millimeters	Inches
<b>E</b>	1.40	0.0547
<b>F</b>	0.40	0.0157
<b>G</b>	0.40	0.0157

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