



Features

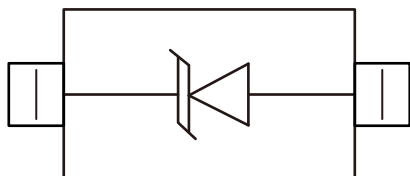
- 900W peak pulse power (8/20 μ s)
- Ultra low leakage: nA level
- Low operating voltage: 5V
- Ultra low clamping voltage
- Protects one data or power line
- IEC61000-4-2 (ESD) \pm 30kV (air), \pm 30kV (contact)
- IEC61000-4-5 (Lightning) 60A (8/20 μ s)
- IEC61000-4-4 (EFT) 80A (5/50ns)
- RoHS Compliant



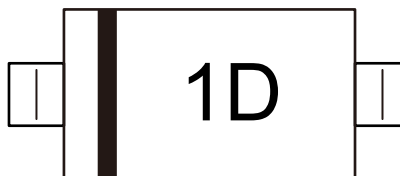
Mechanical Characteristics

- Case: Molded plastic, SOD-123
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound
- Moisture Sensitivity: Level 3 per J-STD-020

Pin Configuration



Marking Code



Device Marking Code = 1D
Bar indicates cathode

Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (tp=8/20 μ s waveform)	P _{PPM}	900	W
Peak Pulse Current (tp=8/20 μ s waveform)	I _{PP}	60	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V _{ESD}	\pm 30 \pm 30	kV
Operating Temperature Range	T _J	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	T _{STG}	-55 to +150	$^\circ\text{C}$

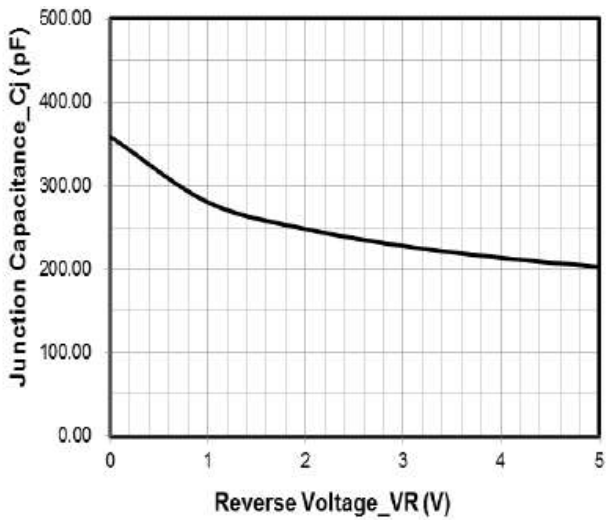


Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

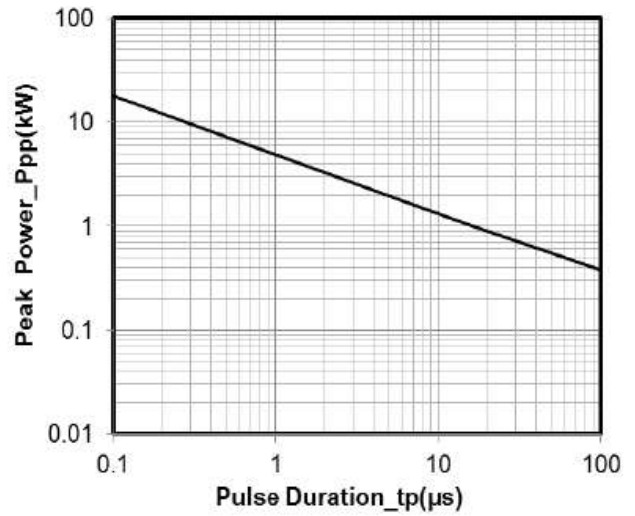
Parameter	Test Condition	Symbol	Min	Typ	Max	Unit
Reverse Working Voltage		V_{RWM}			5	V
Breakdown Voltage	$I_T = 1\text{mA}$	V_{BR}	6			V
Reverse Leakage Current	$V_{RWM} = 5\text{V}$	I_R			0.5	μA
Forward Voltage	$I_F = 10\text{mA}$	V_F			1.2	V
Clamping Voltage	$I_{PP} = 1\text{A}$ (8 x 20 μs pulse)	V_C			8.5	V
Clamping Voltage	$I_{PP} = 60\text{A}$ (8 x 20 μs pulse)	V_C			15	V
Junction Capacitance	$V_R = 0\text{V}$, $f = 1\text{MHz}$	C_J			500	pF



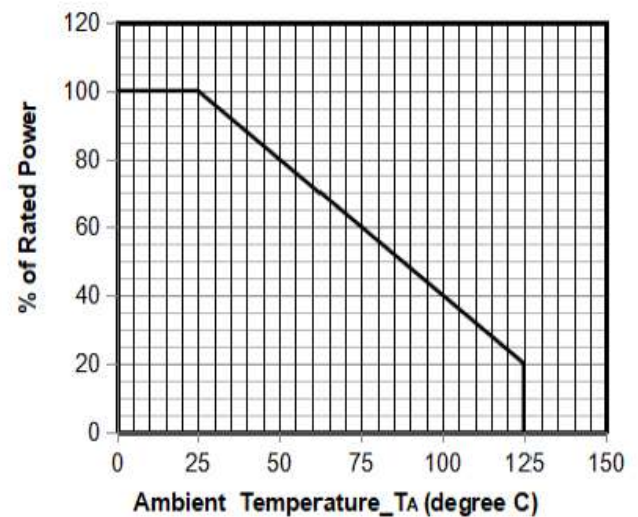
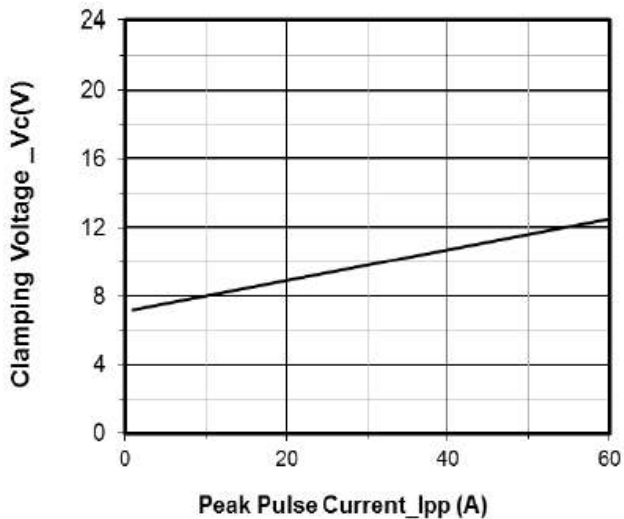
Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise specified)



Junction Capacitance vs. Reverse Voltage

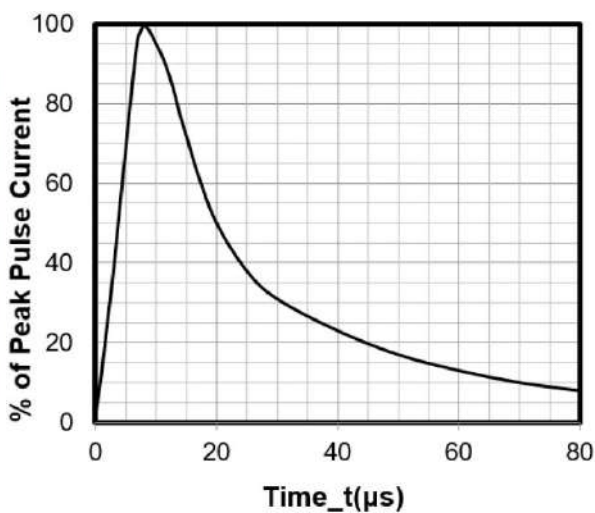


Peak Pulse Power vs. Pulse Time

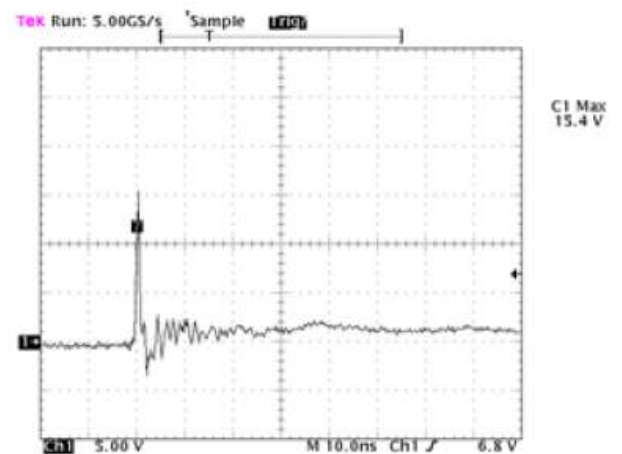


Ambient Temperature vs. % of Rated Power

Clamping Voltage vs. Peak Pulse Current ($t_p = 8/20\mu\text{s}$)



8 X 20 μs Pulse Waveform



Note: Data is taken with a 10x attenuator

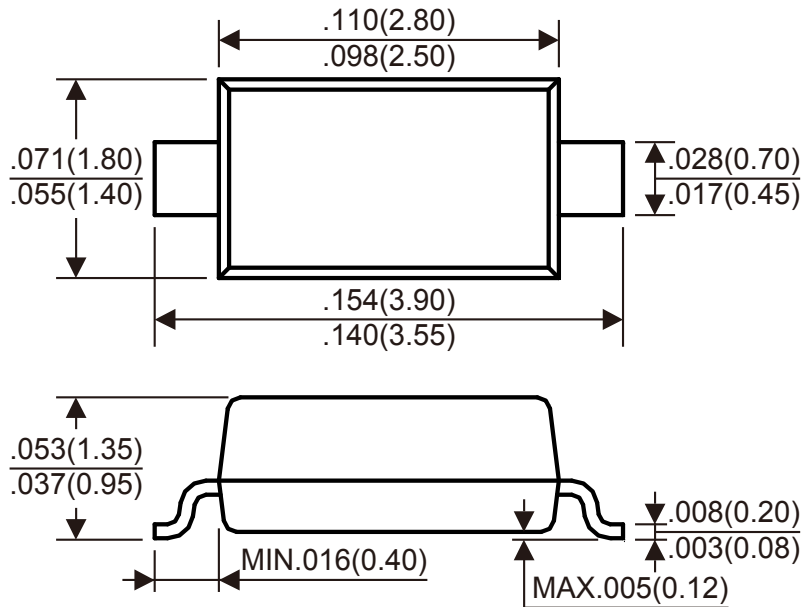
ESD Clamping Voltage

8 kV Contact per IEC61000-4-2



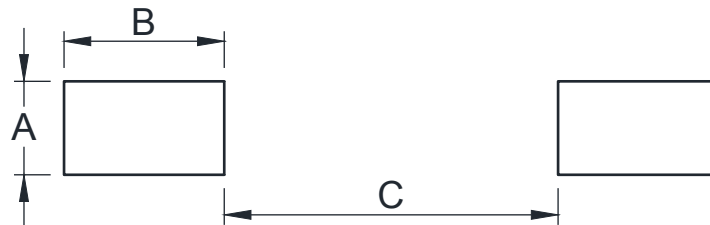
Structures and Dimensions

SOD-123



Dimensions in inches and (millimeters)

Recommended Soldering Pad Dimensions



Package Type	A	B	C
SOD-123	0.70	1.20	2.50

Unit: mm

Quantity

Part Number	Package	Reel Size (inch)	Reel (Kpcs)
YEDSD120560AU	SOD-123	7	3