

Features

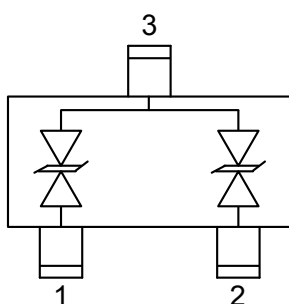
- 280W peak pulse power (8/20 μ s)
- Ultra low leakage: nA level
- Operating voltage: 18V
- Low clamping voltage
- Protects two bi-directional lines
- IEC61000-4-2 (ESD) \pm 30kV (air), \pm 30kV (contact)
- IEC61000-4-5 (Lightning) 8A (8/20 μ s)
- RoHS Compliant



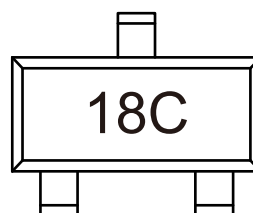
Mechanical Characteristics

- Case: Molded plastic, SOT-23
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound

Pin Configuration



Marking Code



Device Marking Code
= 18C

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}	280	W
Peak Pulse Current (tp=8/20 μ s waveform)	I_{PP}	8	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	$^\circ\text{C}$

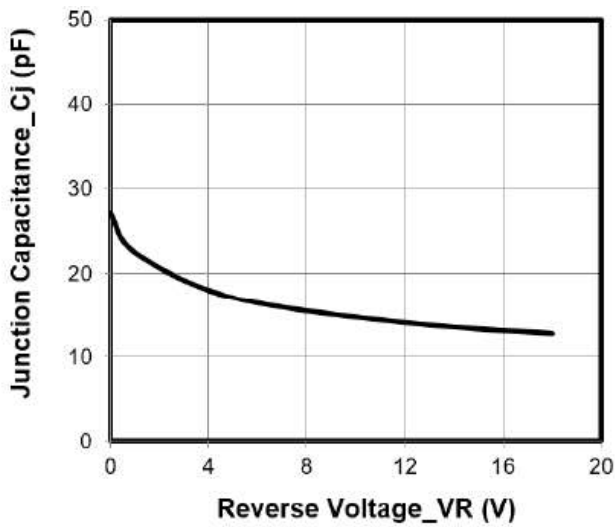


Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

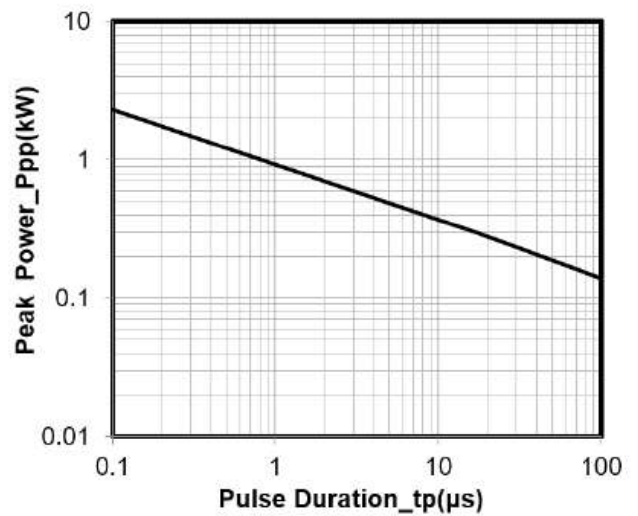
Parameter	Test Condition	Symbol	Min	Typ	Max	Unit
Reverse Working Voltage		V_{RWM}			18	V
Breakdown Voltage	$I_T = 1\text{mA}$	V_{BR}	20			V
Reverse Leakage Current	$V_{RWM} = 18\text{V}$	I_R			0.2	μA
Clamping Voltage	$I_{PP} = 1\text{A}$ (8 x 20 μs pulse)	V_C			26	V
Clamping Voltage	$I_{PP} = 8\text{A}$ (8 x 20 μs pulse)	V_C			35	V
Junction Capacitance	$V_R = 0\text{V}$, $f = 1\text{MHz}$, Pin1 to Pin3 or Pin2 to Pin3	C_J		25		pF
Junction Capacitance	$V_R = 0\text{V}$, $f = 1\text{MHz}$, Pin1 to Pin2	C_J		12		pF



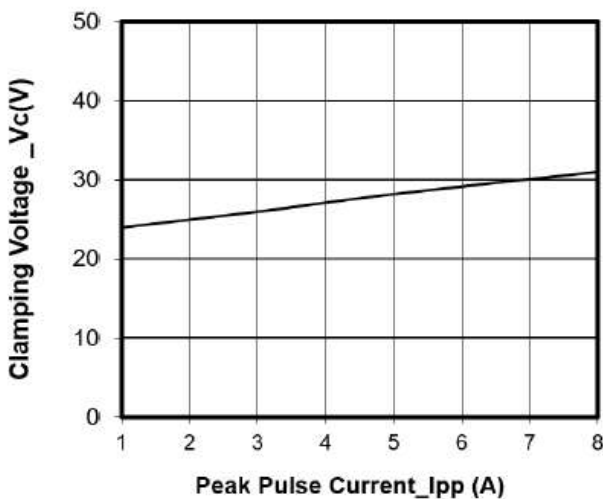
Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise specified)



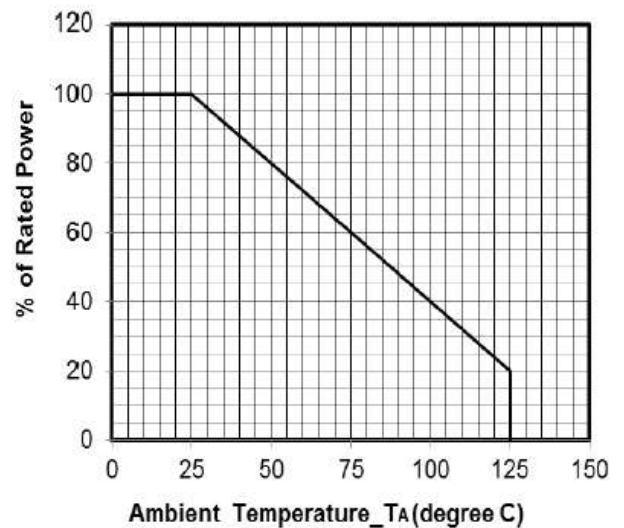
Junction Capacitance vs. Reverse Voltage



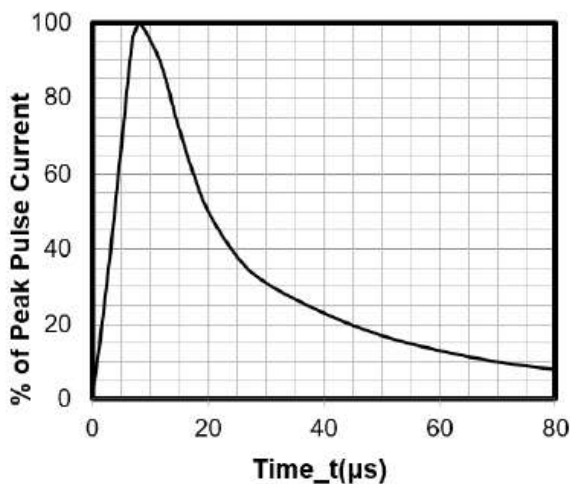
Peak Pulse Power vs. Pulse Time



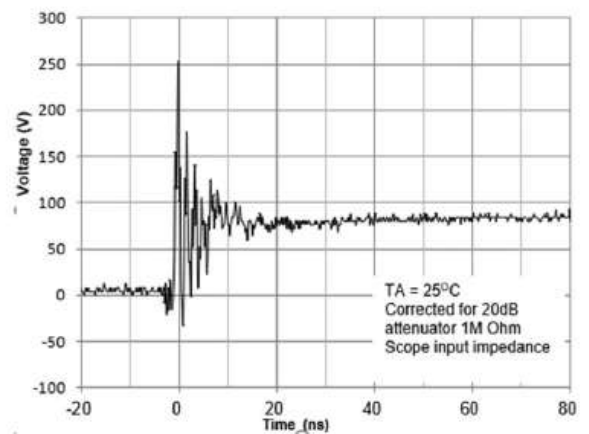
Clamping Voltage vs. Peak Pulse Current



Power Derating Curve



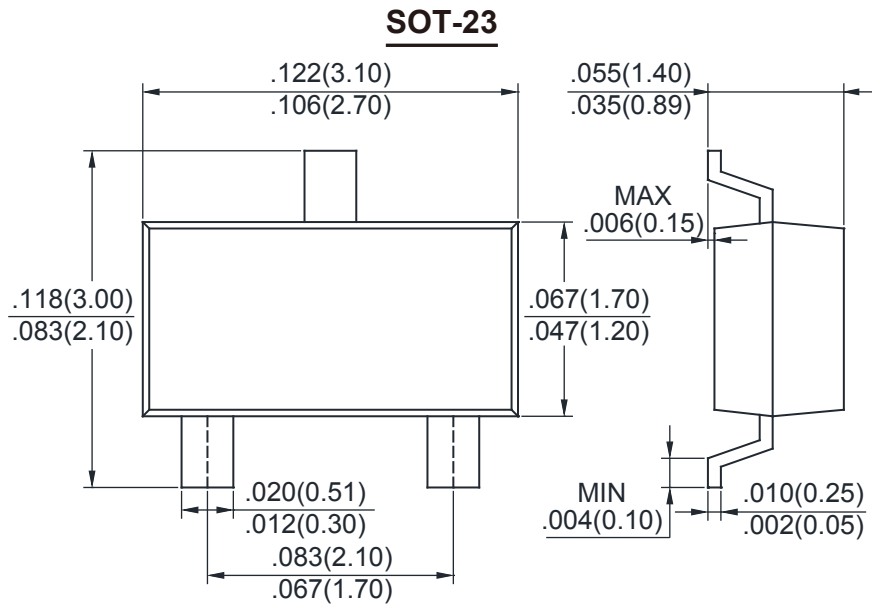
8 X 20 μs Pulse Waveform



ESD Clamping Voltage
8 kV Contact per IEC61000-4-2

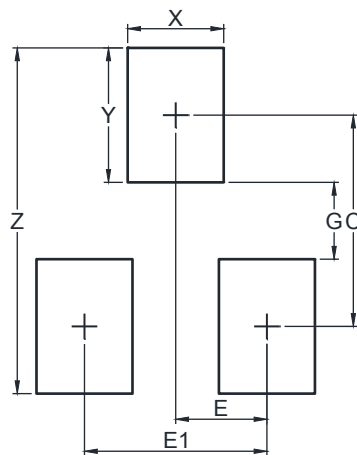


Structures and Dimensions



Dimensions in inches and (millimeters)

Recommended Soldering Pad Dimensions



Package Type	C	E	E1	G	X	Y	Z
SOT-23	2.20	0.95	1.90	0.80	1.00	1.40	3.60

Unit: mm

Quantity

Part Number	Package	Reel Size (inch)	Reel (Kpcs)
YEDST231808AD	SOT-23	7	3