

**Maximum Ratings** (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit	Conditions
Peak Pulse Power Dissipation	P <sub>PP</sub>	230	W	8/20μs, Per in Figure 3
Peak Pulse Current	I <sub>PP</sub>	5	A	8/20μs, Per in Figure 3
ESD Protection – Contact Discharge	V <sub>ESD_Contact</sub>	±30	kV	Standard IEC 61000-4-2
ESD Protection – Air Discharge	V <sub>ESD_Air</sub>	±30	kV	Standard IEC 61000-4-2
ESD Protection – Human Body Model	V <sub>ESD_HBM</sub>	±16	kV	MIL-STD-883
Electrical Fast Transient Current	I <sub>EFT</sub>	80	A	Standard IEC 61000-4-4(EFT)

**Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Package Power Dissipation (Note 5)	P <sub>D</sub>	300	mW
Thermal Resistance, Junction to Ambient (Note 5)	R <sub>θJA</sub>	417	°C/W
Operating Junction Temperature Range	T <sub>J</sub>	-65 to +150	°C
Storage Temperature Range	T <sub>STG</sub>	-65 to +150	°C

**Electrical Characteristics** (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Reverse Working Voltage	V <sub>RWM</sub>	—	—	24	V	—
Breakdown Voltage	V <sub>BR</sub>	26	—	32	V	I <sub>R</sub> = 1.0mA
Reverse Leakage Current (Note 6)	I <sub>R</sub>	—	—	10	nA	V <sub>RWM</sub> = 24V
Clamping Voltage (Note 7)	V <sub>CL</sub>	—	—	34	V	I <sub>PP</sub> = 1A, t <sub>p</sub> = 8/20μs
		—	—	41	V	I <sub>PP</sub> = 5A, t <sub>p</sub> = 8/20μs
Differential Resistance	R <sub>DIF</sub>	—	1	—	Ω	I <sub>R</sub> = 1.0A, t <sub>p</sub> = 8/20μs
Channel Input Capacitance	C <sub>T</sub>	—	42	52	pF	V <sub>IN</sub> = 0V, f = 1MHz, Pin 1 or Pin 2 to Pin 3
		—	21	28	pF	V <sub>IN</sub> = 0V, f = 1MHz, between Pin 1 and Pin 2

- Notes:
- Device mounted on FR-4 PCB pad layout (2oz copper) as shown on Diodes, Inc. suggested pad layout AP02001, which can be found on our website at <http://www.diodes.com>.
  - Short duration pulse test used to minimize self-heating effect.
  - Measured from pin 1 or pin 2 to pin 3; Non-repetitive current pulse per Figure 1.

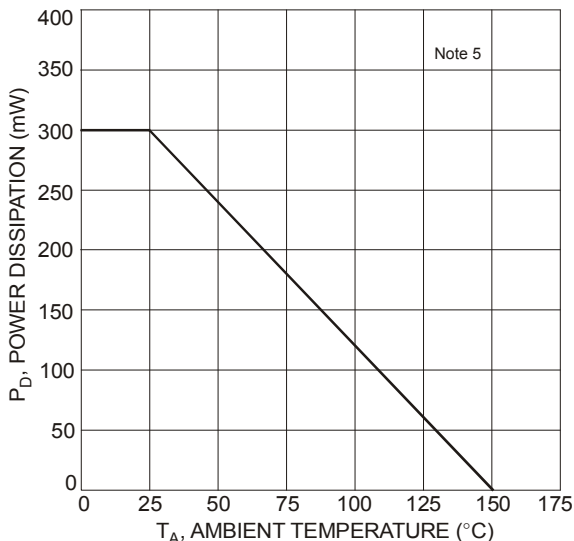


Figure 1 Power Derating Curve

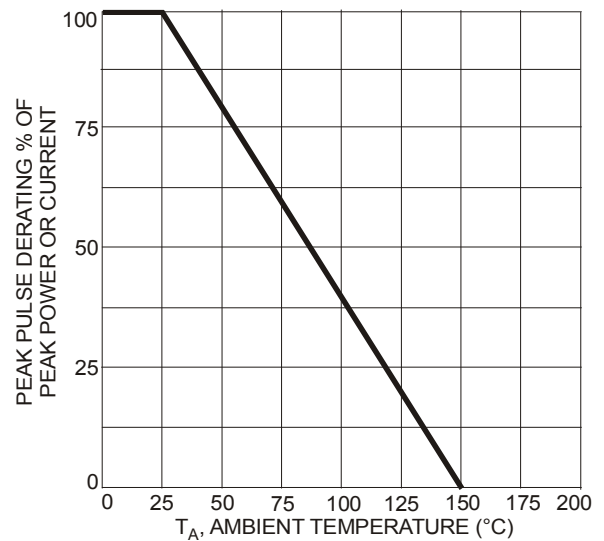


Figure 2 Pulse Derating Curve

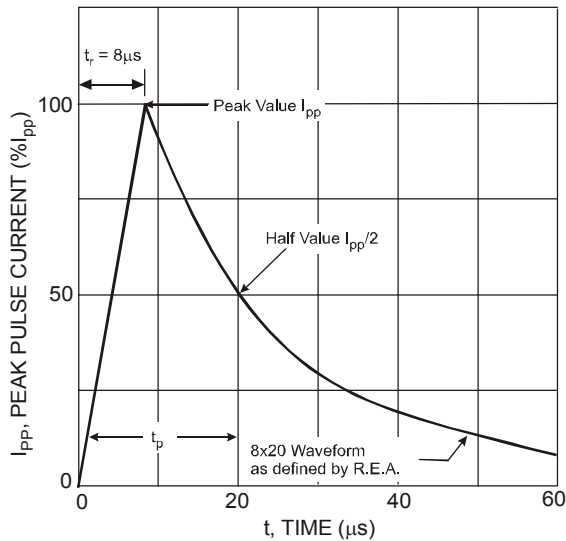


Figure 3 Typical 8 x 20µs Pulse Waveform

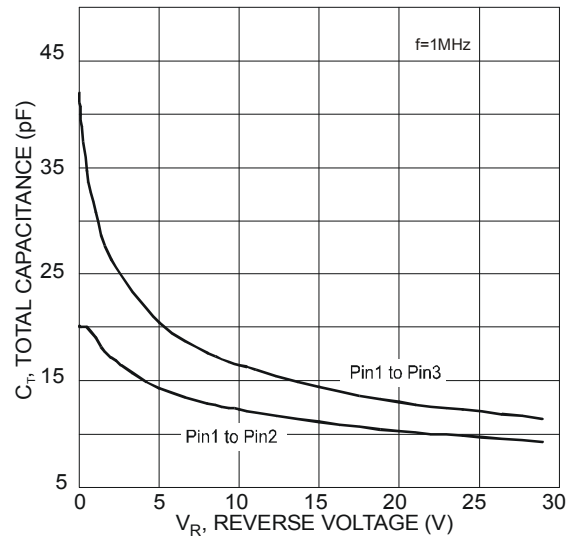


Figure 4 Typical Total Capacitance vs. Reverse Voltage

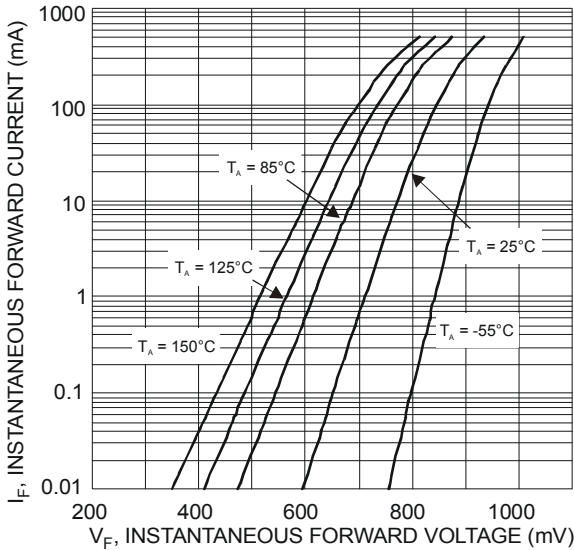


Figure 5 Typical Forward Characteristics

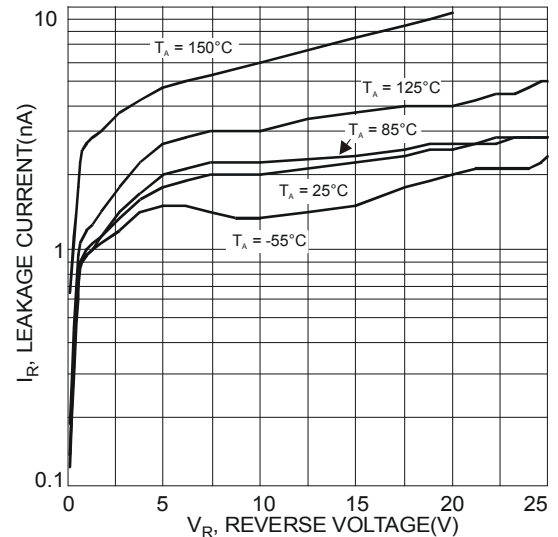
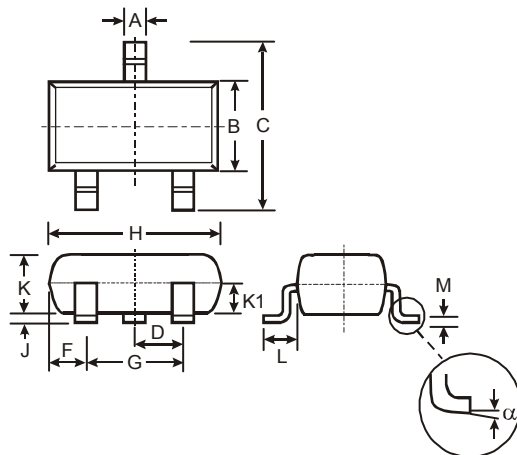


Figure 6 Typical Reverse Characteristics

## Package Outline Dimensions

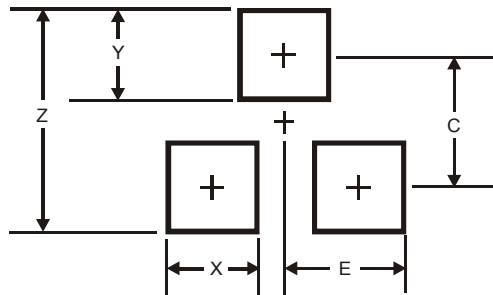
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for latest version.



SOT23			
Dim	Min	Max	Typ
A	0.37	0.51	0.40
B	1.20	1.40	1.30
C	2.30	2.50	2.40
D	0.89	1.03	0.915
F	0.45	0.60	0.535
G	1.78	2.05	1.83
H	2.80	3.00	2.90
J	0.013	0.10	0.05
K	0.903	1.10	1.00
K1	-	-	0.400
L	0.45	0.61	0.55
M	0.085	0.18	0.11
α	0°	8°	-
All Dimensions in mm			

## Suggested Pad Layout

Please see AP02001 at <http://www.diodes.com/datasheets/ap02001.pdf> for the latest version.



Dimensions	Value (in mm)
Z	2.9
X	0.8
Y	0.9
C	2.0
E	1.35

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