Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit	Conditions
Peak Pulse Power Dissipation	P_{PP}	230	W	8/20µs, Per in Figure 3
Peak Pulse Current	I_{PP}	5	A	8/20µs, Per in Figure 3
ESD Protection – Contact Discharge	$V_{ESD\_Contact}$	±30	kV	Standard IEC 61000-4-2
ESD Protection – Air Discharge	V_{ESD_Air}	±30	kV	Standard IEC 61000-4-2
ESD Protection – Human Body Model	V_{ESD_HBM}	±16	kV	MIL-STD-883
Electrical Fast Transient Current	I_{EFT}	80	A	Standard IEC 61000-4-4(EFT)

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Package Power Dissipation (Note 5)	P_D	300	mW
Thermal Resistance, Junction to Ambient (Note 5)	$R_{\theta JA}$	417	°C/W
Operating Junction Temperature Range	T_J	-65 to +150	°C
Storage Temperature Range	T_{STG}	-65 to +150	°C

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Reverse Working Voltage	V_{RWM}	—	—	24	V	—
Breakdown Voltage	V_{BR}	26	—	32	V	I_R = 1.0mA
Reverse Leakage Current (Note 6)	I_R	—	—	10	nA	V_{RWM} = 24V
Clamping Voltage (Note 7)	V_{CL}	—	—	34	V	I_{PP} = 1A, t_p = 8/20µs
		—	—	41	V	I_{PP} = 5A, t_p = 8/20µs
Differential Resistance	R_{DIF}	—	1	—	Ω	I_R = 1.0A, t_p = 8/20µs
Channel Input Capacitance	C_T	—	42	52	pF	V_{IN} = 0V, f = 1MHz, Pin 1 or Pin 2 to Pin 3
		—	21	28	pF	V_{IN} = 0V, f = 1MHz, between Pin 1 and Pin 2

Notes:
5. 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.
6. Short duration pulse test used to minimize self-heating effect.
7. Measured from pin 1 or pin 2 to pin 3; Non-repetitive current pulse per Figure 1.

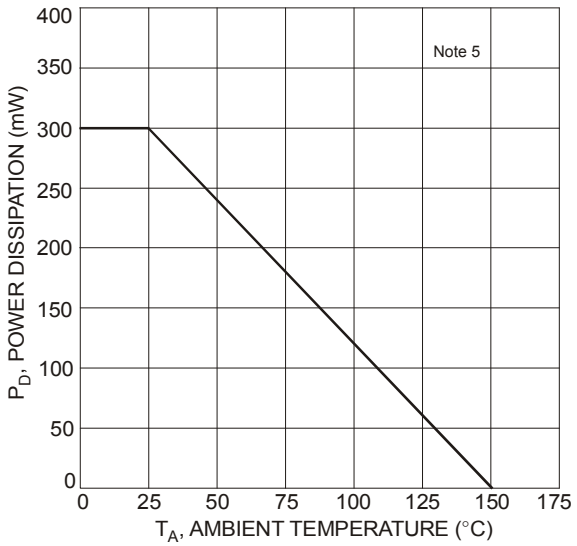


Figure 1 Power Derating Curve

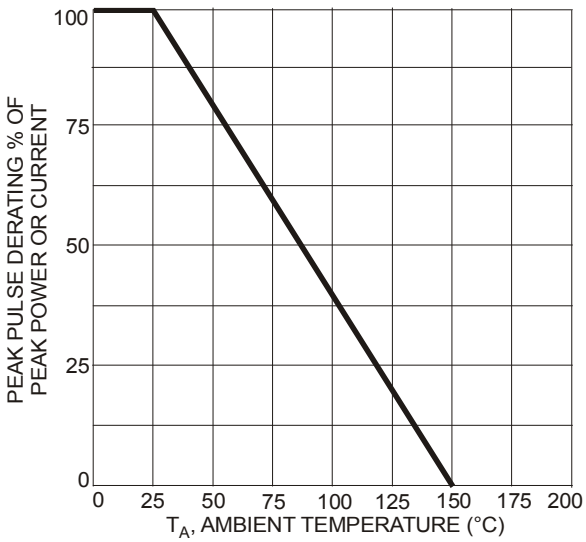


Figure 2 Pulse Derating Curve

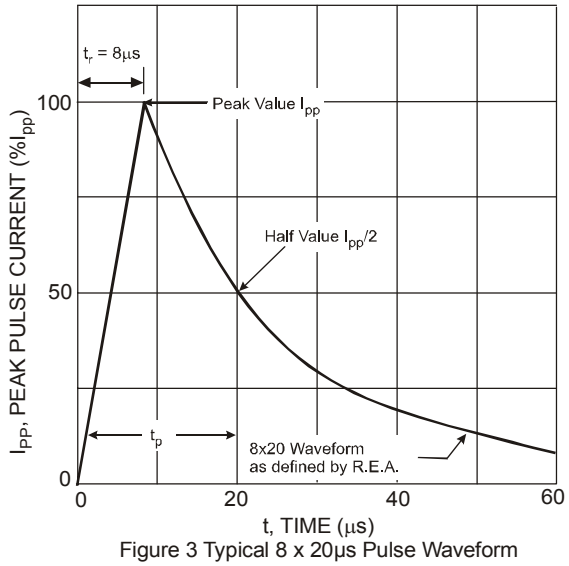


Figure 3 Typical 8 x 20µs Pulse Waveform

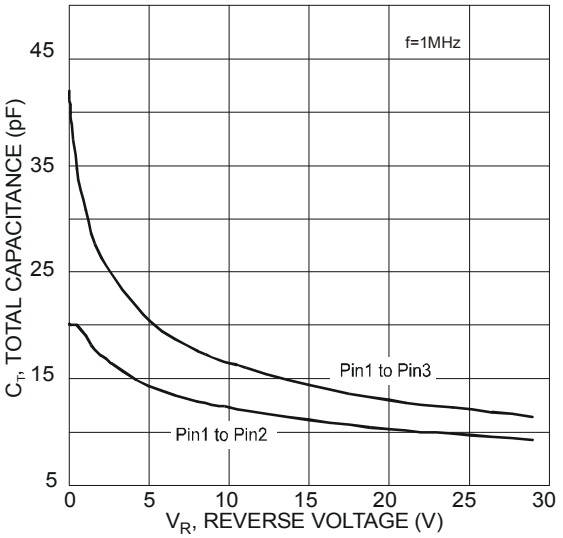


Figure 4 Typical Total Capacitance vs. Reverse Voltage

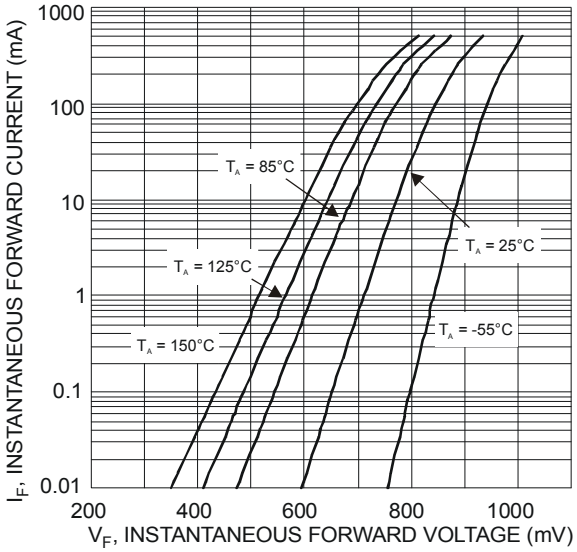


Figure 5 Typical Forward Characteristics

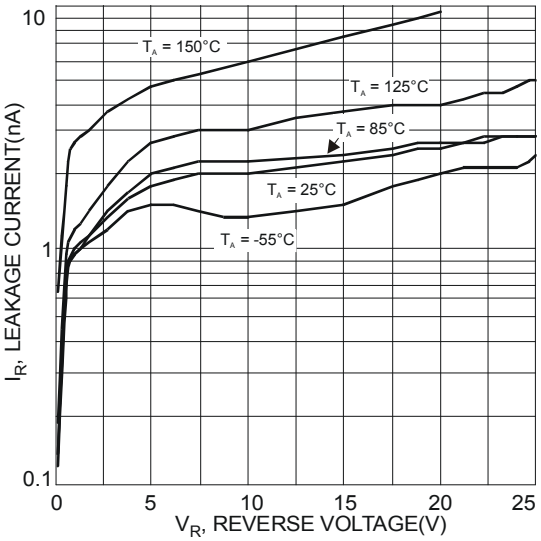
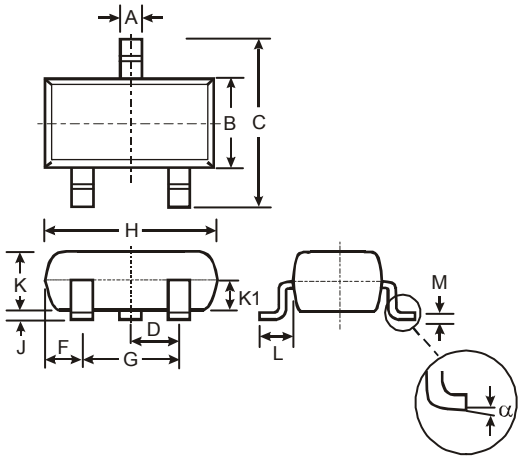


Figure 6 Typical Reverse Characteristics

Package Outline Dimensions

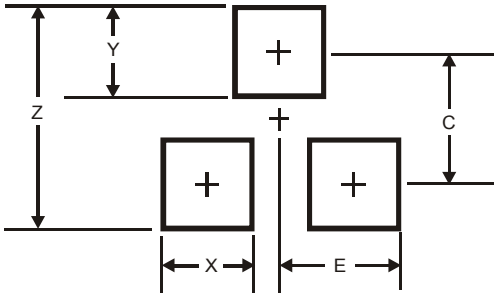
Please see AP02002 at http://www.diodes.com/datasheets/ap02002.pdf for latest version.



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