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

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitance load, derate current by 20%.

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	60	V
RMS Reverse Voltage	$V_{R(RMS)}$	42	V
Average Forward Current (See also figure 4)	$I_{F(AV)}$	1.0	A
Repetitive Peak Forward Current $t_p \le 1ms; \delta \le 0.25$	I_{FRM}	8	A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	22	A

Thermal Characteristics

Characteristic	Symbol	Typ	Max	Unit
Thermal Resistance Junction to Soldering Point	$R_{\theta JS}$	—	6	°C/W
Thermal Resistance Junction to Ambient Air (Note 5)	$R_{\theta JA}$	173	—	°C/W
Thermal Resistance Junction to Ambient Air (Note 6)	$R_{\theta JA}$	125	—	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150		°C

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 7)	$V_{(BR)R}$	60	—	—	V	I_R = 100μA
Forward Voltage	V_F	— — —	0.40 0.55 —	0.45 0.58 0.64	V	I_F = 0.1A I_F = 0.7A I_F = 1.0A
Leakage Current (Note 4)	I_R	— —	0.3 3	5 50	μA	V_R = 5V, T_A = +25°C V_R = 60V, T_A = +25°C
Total Capacitance (See also figure 3)	C_T	—	38	—	pF	V_R = 10V, f = 1.0MHz

Notes: 5. FR-4 PCB, 2 oz. Copper, minimum recommended pad layout per http://www.diodes.com. T_A = +25°C.
6. Polymide PCB, 2 oz. Copper, minimum recommended pad layout per http://www.diodes.com. T_A = +25°C.
7. Short duration pulse test used to minimize self-heating effect.

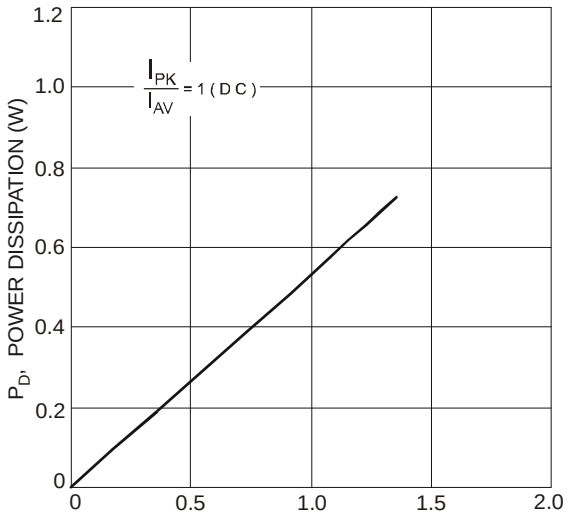


Figure 1 Forward Power Dissipation

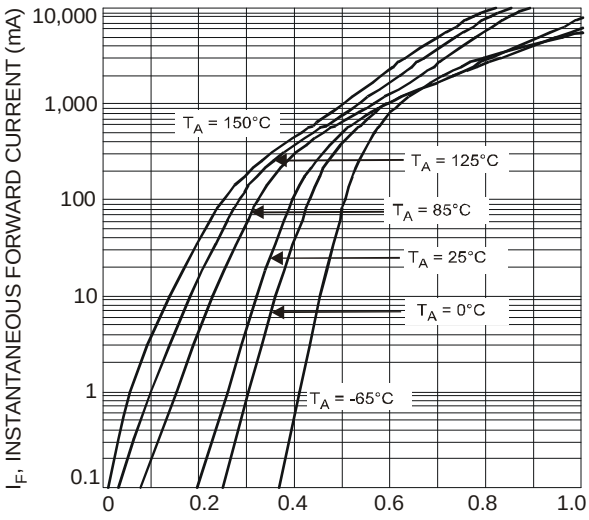


Figure 2 Typical Forward Characteristics

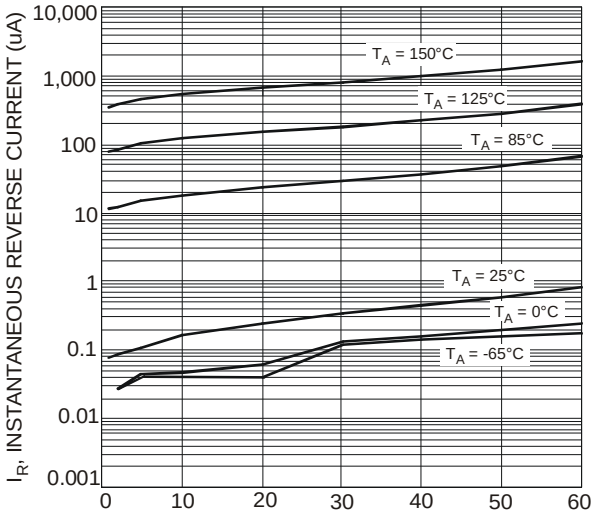


Figure 3 Typical Reverse Characteristics

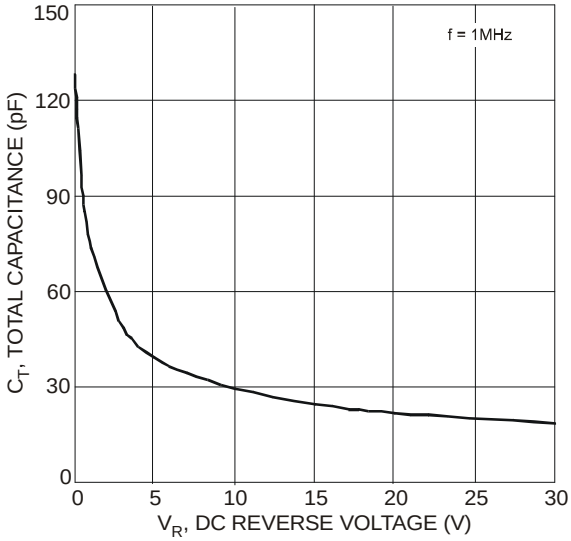


Figure 4 Total Capacitance vs. Reverse Voltage

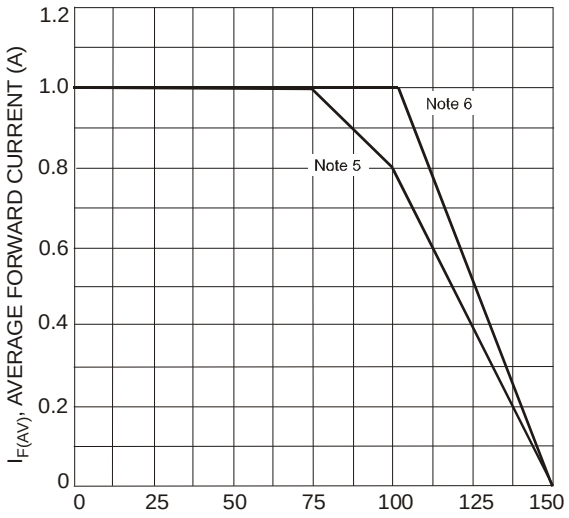


Figure 5 Forward Current Derating Curve

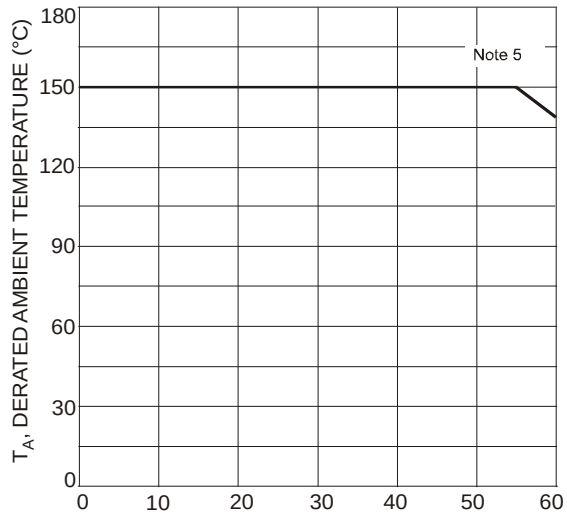
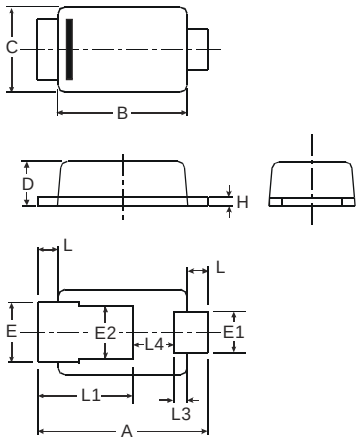


Figure 6 Operating Temperature Derating

Package Outline Dimensions

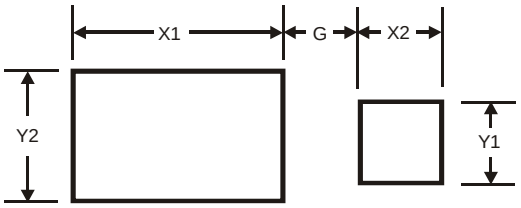
Please see AP02002 at http://www.diodes.com/datasheets/ap02002.pdf for latest version.



POWERDI323			
Dim	**Min**	**Max**	**Typ**
A	2.40	2.60	2.50
B	1.85	1.95	1.90
C	1.20	1.30	1.25
D	0.60	0.70	0.65
E	0.78	0.98	0.88
E1	0.50	0.70	0.60
E2	0.60	1.00	0.80
H	0.08	0.18	0.13
L	0.20	0.40	0.30
L1	—	—	1.40
L3	—	—	0.20
L4	0.40	0.80	0.60
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)
G	0.5
X1	2.0
X2	0.8
Y1	0.8
Y2	1.1

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