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	400	V
Average Rectified Output Current	I_O	5	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	150	A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Junction to Case (Note 6)	$R_{\theta JC}$	2.0	°C/W
Typical Thermal Resistance Junction to Ambient (Note 6)	$R_{\theta JA}$	16	°C/W
Typical Thermal Resistance Junction to Case (Note 5)	$R_{\theta JC}$	9.0	°C/W
Typical Thermal Resistance Junction to Ambient (Note 5)	$R_{\theta JA}$	65	°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)	$V_{(BR)R}$	400	—	—	V	I_R = 10μA
Forward Voltage	V_F	— —	0.93 0.74	1.4 1.0	V	I_F = 5A, T_J = +25°C I_F = 5A, T_J = +125°C
Reverse Leakage Current (Note 7)	I_R	— —	0.23 0.008	10 0.2	μA mA	V_R = 400V, T_J = +25°C V_R = 400V, T_J = +125°C
Reverse Recovery Time	t_{rr}	—	35	45	ns	I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A
Junction Capacitance	C_J	—	61	—	pf	V_R = 10V_{DC}, f = 1MHz

Notes: 5. Device mounted on FR4 PCB, 2oz with 1x recommended pad layout.
6. Device mounted on 2-inch Al substrate.
7. Short duration pulse test used to minimize self-heating effect.

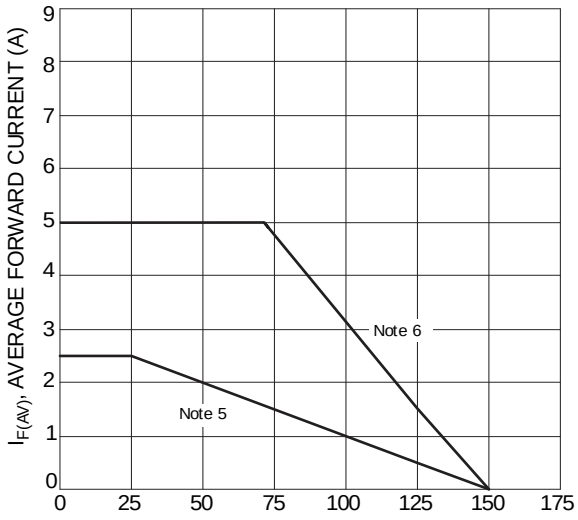


Figure 1 Forward Current Derating

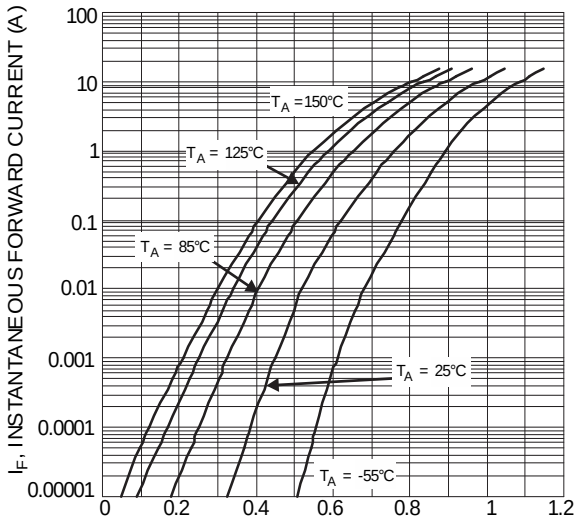


Figure 2 Typical Forward Characteristics

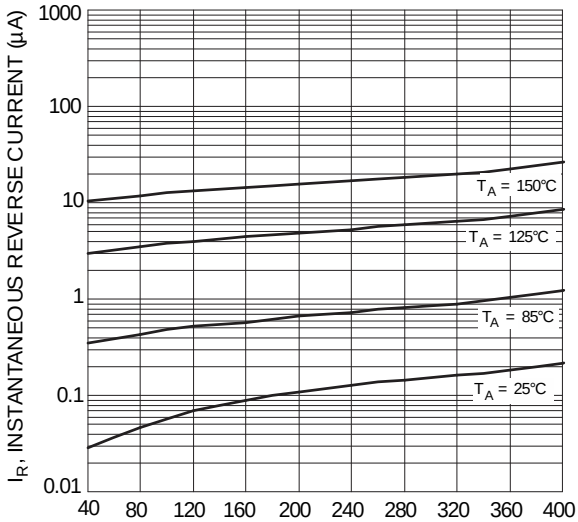


Figure 3 Typical Reverse Characteristics

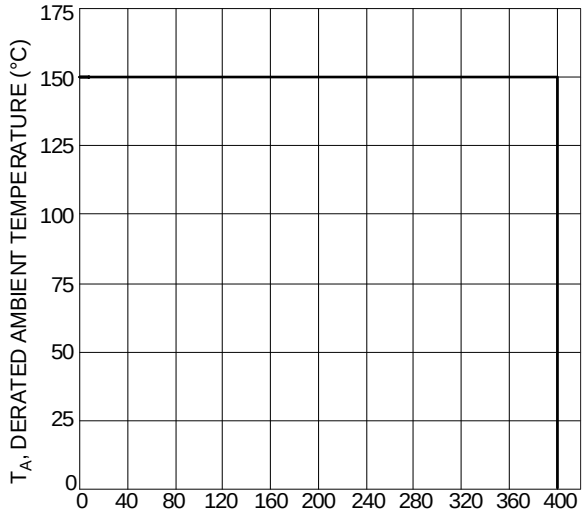


Figure 4 Operating Temperature Derating

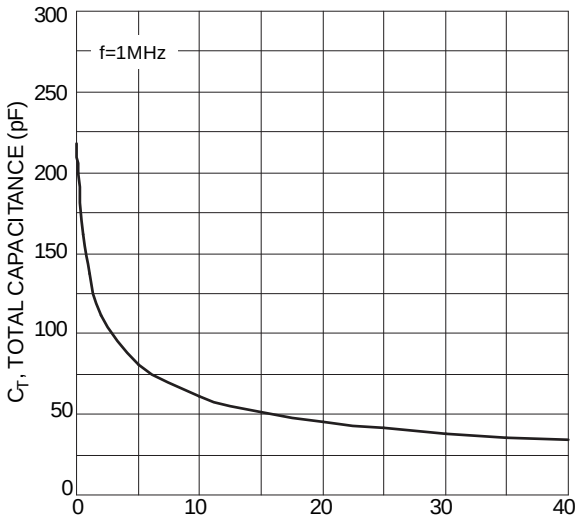


Figure 5 Typical Total Capacitance

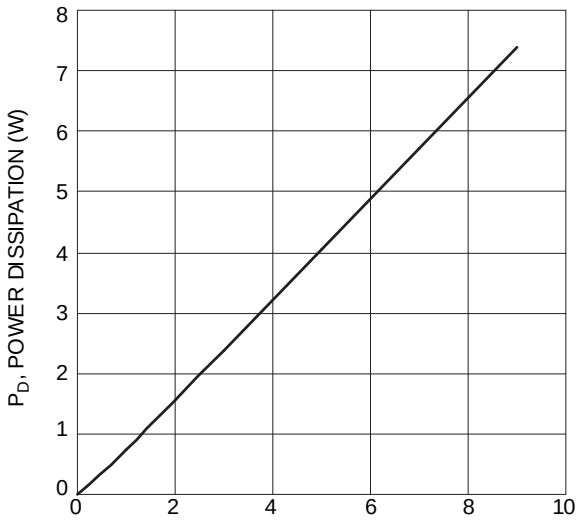
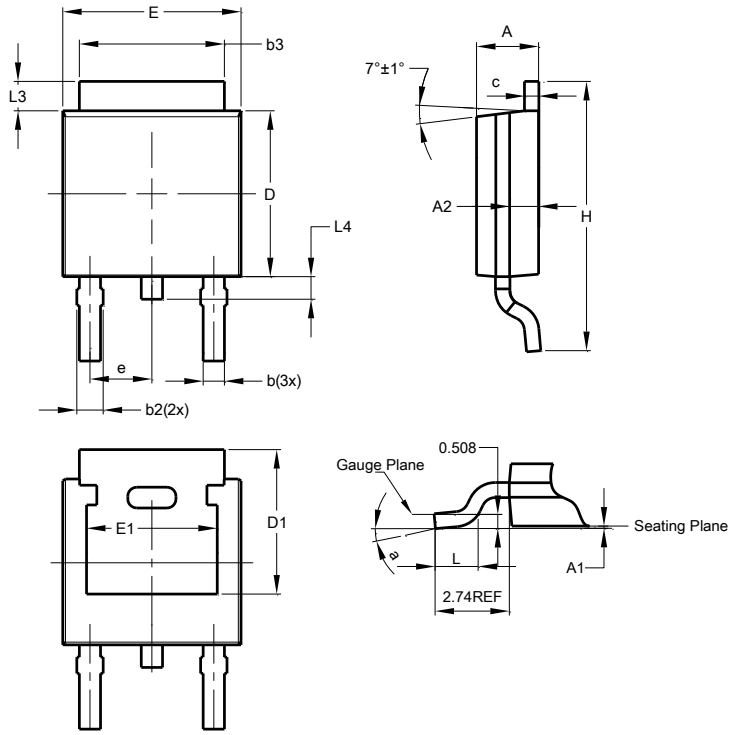


Figure 6 Forward Power Dissipation

Package Outline Dimensions

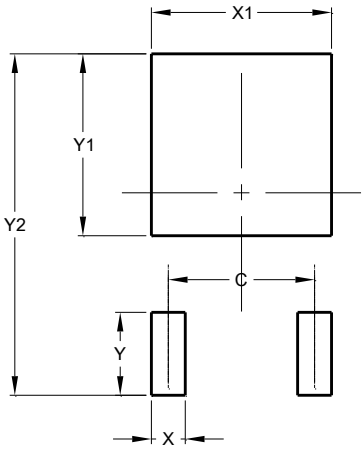
Please see AP02002 at http://www.diodes.com/datasheets/ap02002.pdf for the latest version.



TO252 (DPAK)			
Dim	**Min**	**Max**	**Typ**
A	2.19	2.39	2.29
A1	0.00	0.13	0.08
A2	0.97	1.17	1.07
b	0.64	0.88	0.783
b2	0.76	1.14	0.95
b3	5.21	5.46	5.33
c	0.45	0.58	0.531
D	6.00	6.20	6.10
D1	5.21	-	-
e	-	-	2.286
E	6.45	6.70	6.58
E1	4.32	-	-
H	9.40	10.41	9.91
L	1.40	1.78	1.59
L3	0.88	1.27	1.08
L4	0.64	1.02	0.83
a	0°	10°	-
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)
C	4.572
X	1.060
X1	5.632
Y	2.600
Y1	5.700
Y2	10.700

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