

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

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM}	50	V
Average Rectified Output Current	I _O	10	A
Non-Repetitive Peak Forward Surge Current 8.3ms	I _{FSM}	320	A
1st Rating for fusing (t < 8.3ms)	I ² t	425	A ² S

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Junction to Ambient (Note 5)	R _{θJA}	18	°C/W
Typical Thermal Resistance Junction to Case (Note 5)	R _{θJC}	2	°C/W
Typical Thermal Resistance Junction to Lead (Notes 5 & 6)	R _{θJL}	4	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop	V _F	—	—	0.31	V	I _F = 1A, T _J = +25°C
		—	0.29	—		I _F = 5A, T _J = +85°C
		—	—	0.43		I _F = 8A, T _J = +25°C
		—	0.40	0.45		I _F = 10A, T _J = +25°C
		—	0.34	0.39		I _F = 10A, T _J = +125°C
Leakage Current (Note 7)	I _R	—	0.1	0.3	mA	V _R = 50V, T _J = +25°C
		—	4	15		V _R = 50V, T _J = +85°C
		—	29	75		V _R = 50V, T _J = +125°C

Notes: 5. Device mounted on FR4 PCB with 1inch copper pad layout with AL substrate and additional HK1 (37mm x 55mm x15mm)
 6. Junction to Lead (Cathode Terminal)
 7. Short duration pulse test used to minimize self-heating effect.

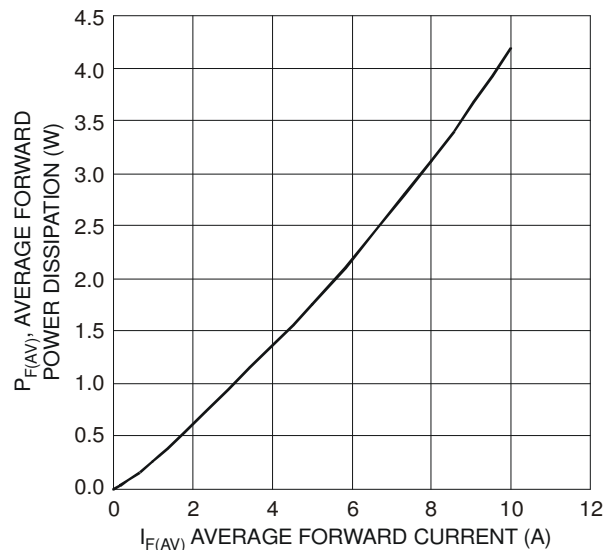


Figure 1 Forward Power Dissipation

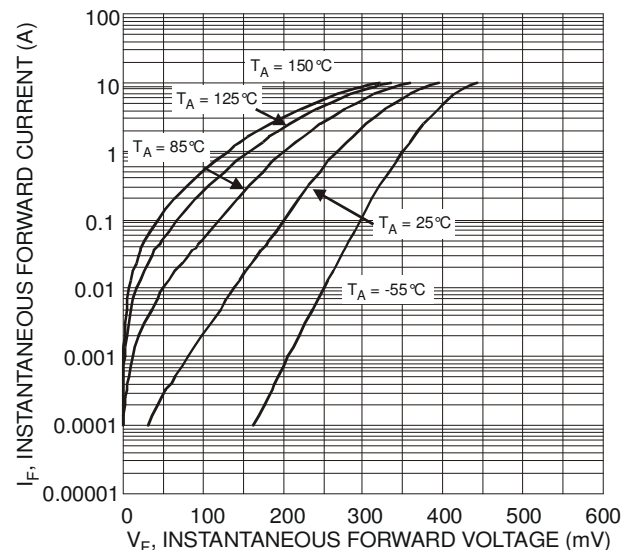
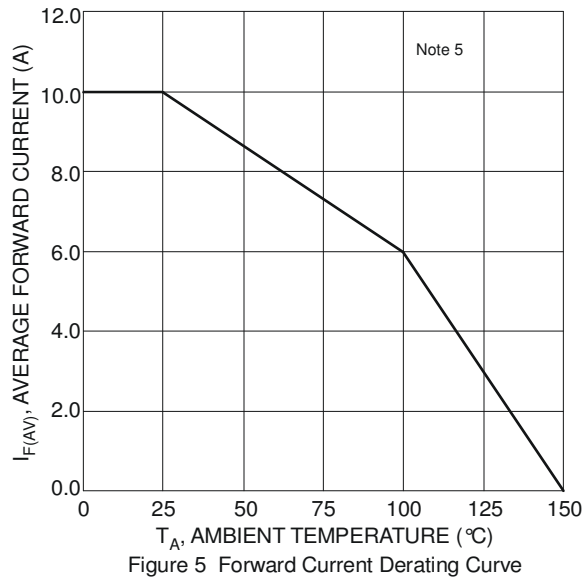
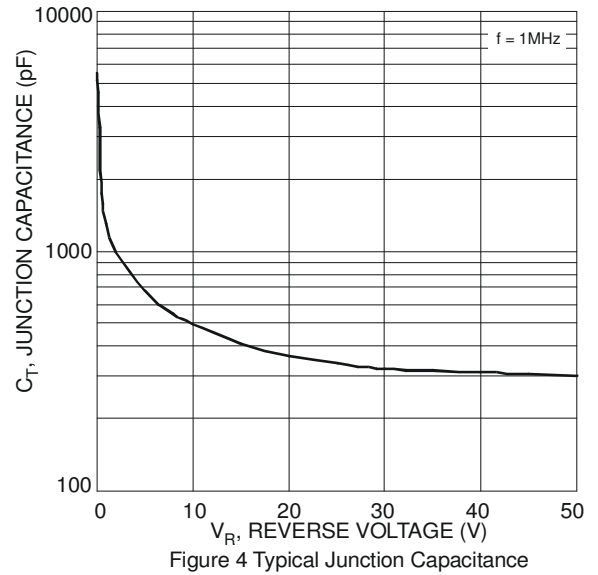
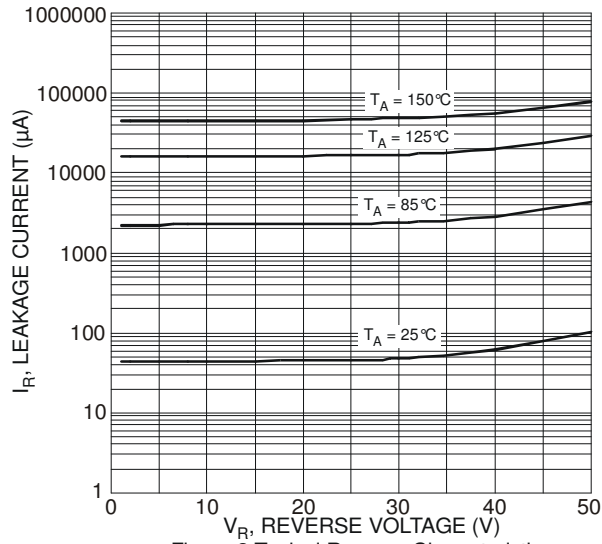
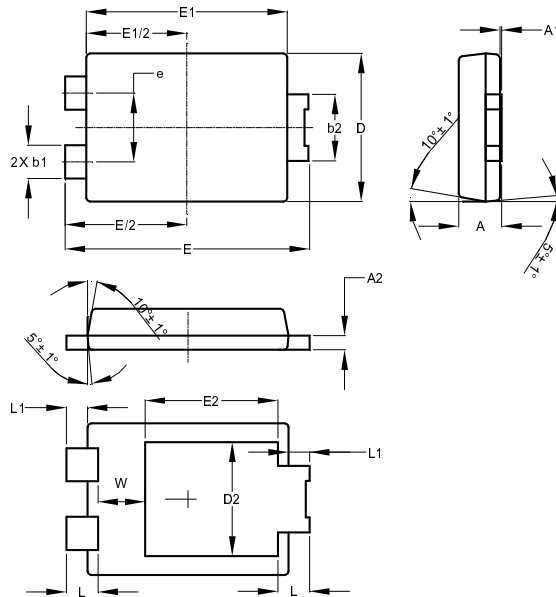


Figure 2 Typical Forward Characteristics



Package Outline Dimensions

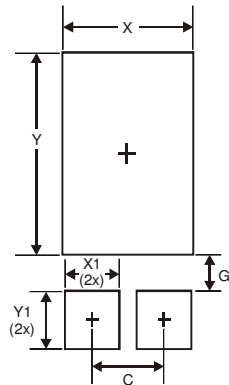
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for the latest version.



POWERDI [®] 5			
Dim	Min	Max	Typ
A	1.05	1.15	1.10
A2	0.33	0.43	0.381
b1	0.80	0.99	0.89
b2	1.70	1.88	1.78
D	3.90	4.05	3.966
D2	-	-	3.054
E	6.40	6.60	6.504
e	-	-	1.84
E1	5.30	5.45	5.37
E2	-	-	3.549
L	0.75	0.95	0.85
L1	0.50	0.65	0.57
W	1.10	1.41	1.255
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	1.840
G	0.852
X	3.360
X1	1.390
Y	4.860
Y1	1.400

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