



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

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub>	50	V
Average Rectified Output Current	I <sub>o</sub>	15	A
Non-Repetitive Peak Forward Surge Current 8.3mS Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	290	A

**Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Junction to Ambient (Note 6)	R <sub>θJA</sub>	101	°C/W
Typical Thermal Resistance Junction to Ambient (Note 7)	R <sub>θJA</sub>	20	°C/W
Typical Thermal Resistance Junction to Lead (Notes 7 & 8)	R <sub>θJL</sub>	4	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , 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 Condition
Forward Voltage Drop	V <sub>F</sub>	—	—	0.44	V	I <sub>F</sub> = 10A, T <sub>J</sub> = +25°C
		—	0.310	—		I <sub>F</sub> = 10A, T <sub>J</sub> = +125°C
		—	0.410	0.47		I <sub>F</sub> = 15A, T <sub>J</sub> = +25°C
		—	0.365	—		I <sub>F</sub> = 15A, T <sub>J</sub> = +125°C
Leakage Current (Note 9)	I <sub>R</sub>	—	0.08	0.3	mA	V <sub>R</sub> = 30V, T <sub>J</sub> = +25°C
		—	0.17	0.5		V <sub>R</sub> = 50V, T <sub>J</sub> = +25°C
		—	3.5	—		V <sub>R</sub> = 30V, T <sub>J</sub> = +85°C
		—	35	105		V <sub>R</sub> = 50V, T <sub>J</sub> = +125°C
Junction Capacitance	C <sub>J</sub>	—	440	—	pF	V <sub>R</sub> = 25V, T <sub>J</sub> = +25°C

- Notes:
6. FR-4 PCB, 2oz. Copper, minimum recommended pad layout per <http://www.diodes.com>.
  7. Aluminum substrate PCB with 30mm x 30mm, full of 2oz. Copper pad and additional heatsink 42mm x 20mm x 12mm.
  8. Junction to Lead (Cathode Terminal)
  9. Short duration pulse test used to minimize self-heating effect.

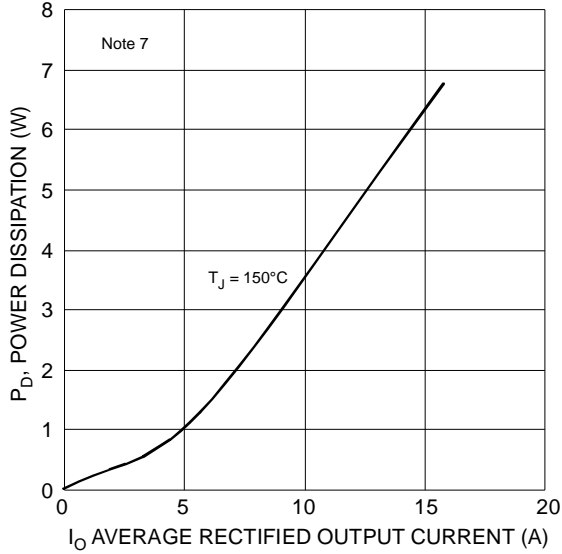


Figure 1 Forward Power Dissipation

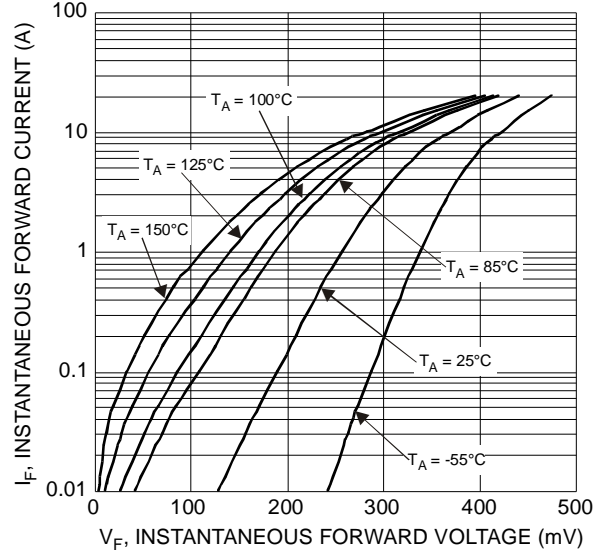


Figure 2 Typical Forward Characteristics

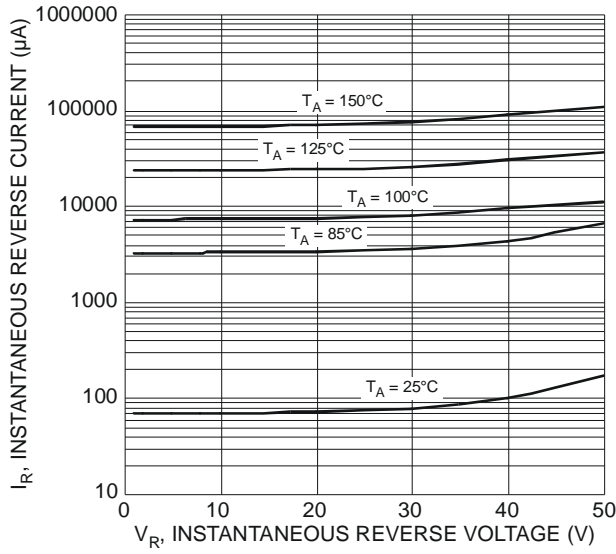


Figure 3 Typical Reverse Characteristics

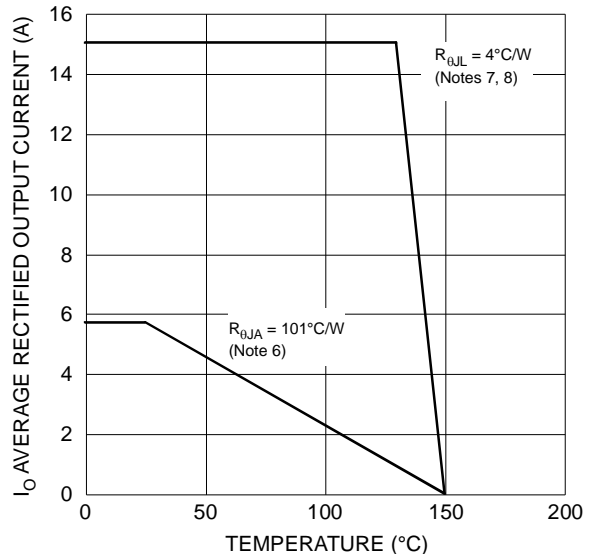


Figure 4 Forward Current Derating Curve

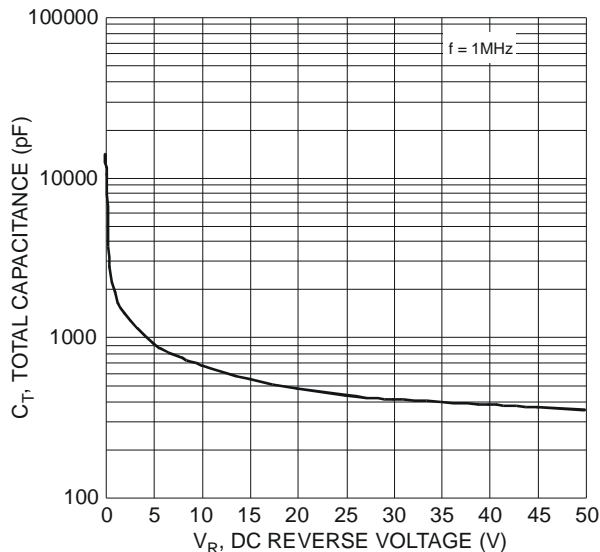
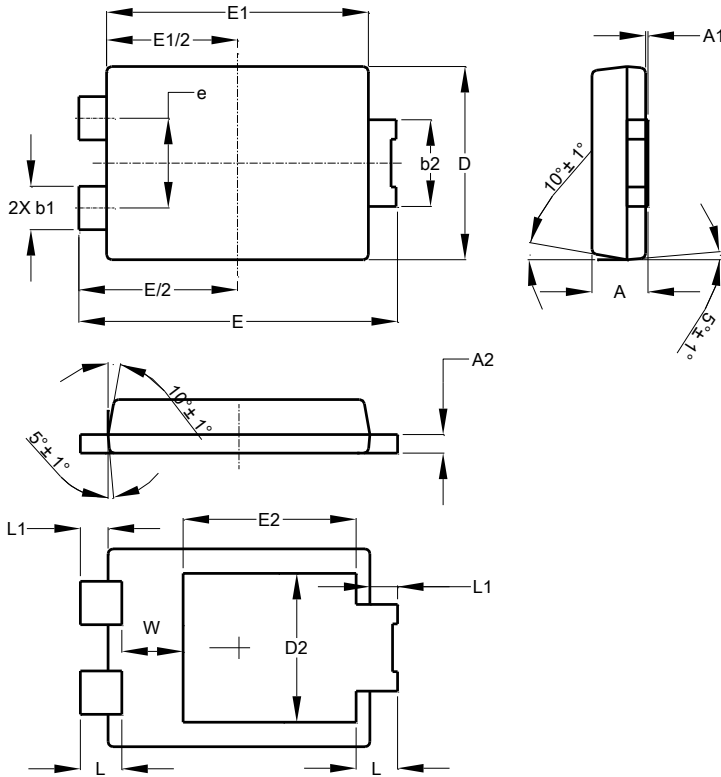


Figure 5 Total Capacitance vs. Reverse Voltage

## Package Outline Dimensions

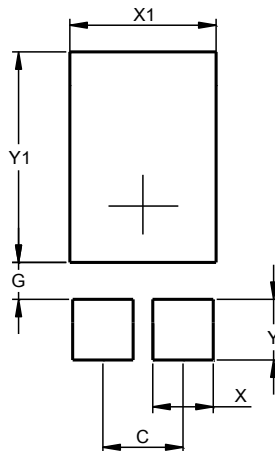
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for the latest version.



POWERDI <sup>®</sup> 5			
Dim	Min	Max	Typ
A	1.05	1.15	1.10
A1	0.00	0.05	--
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	1.390
X1	3.360
Y	1.400
Y1	4.860

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