

## Maximum Ratings (@T<sub>A</sub> = +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	V <sub>RRM</sub>	200	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>RM</sub>		
Average Rectified Output Current	I <sub>O</sub>	10	A
Non-Repetitive Peak Forward Surge Current 8.3ms	I <sub>FSM</sub>	180	A
Single Half Sine-Wave Superimposed on Rated Load			
Repetitive Peak Avalanche Power (1μs, +25°C)	P <sub>ARM</sub>	3,000	W

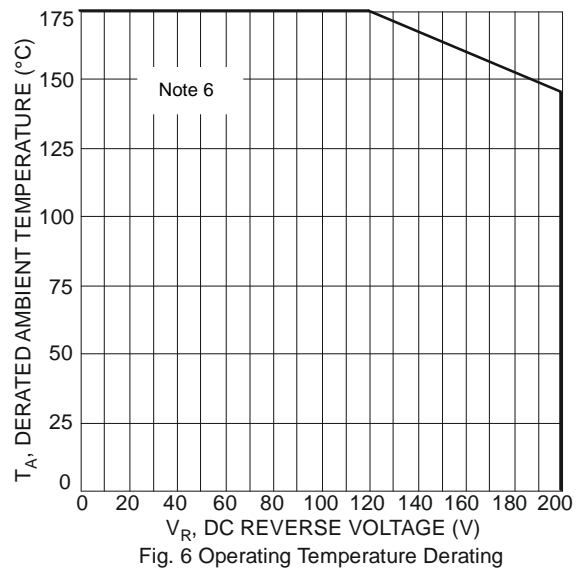
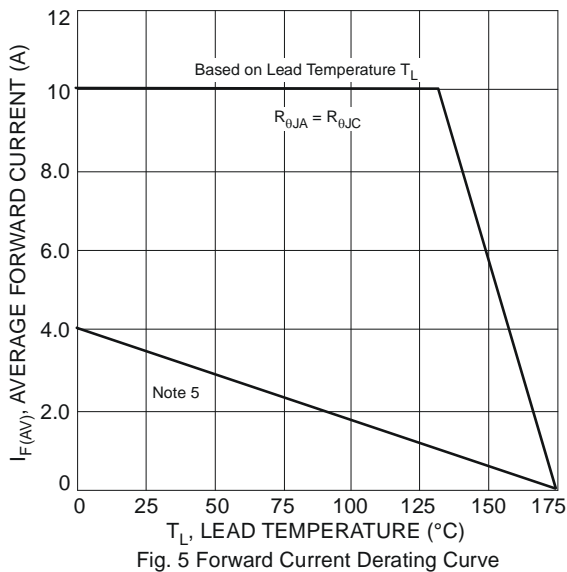
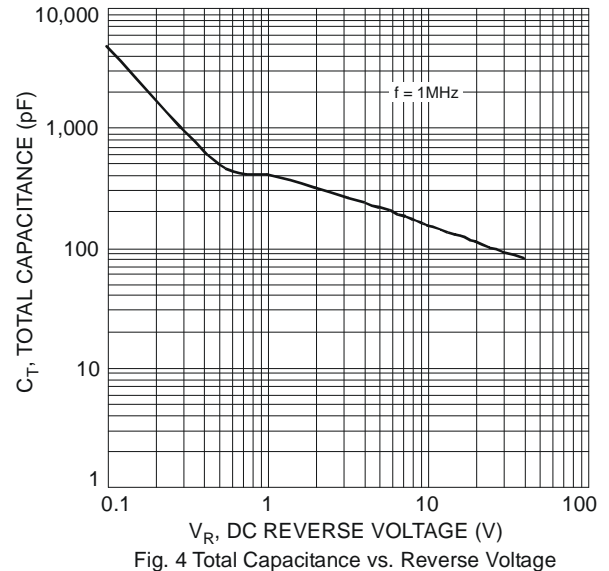
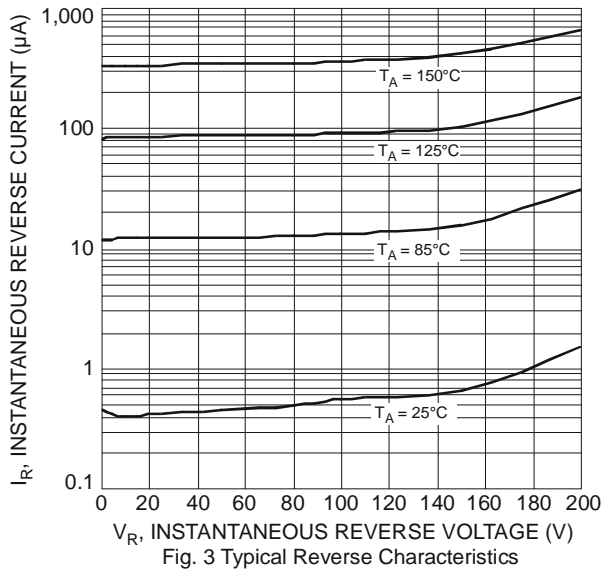
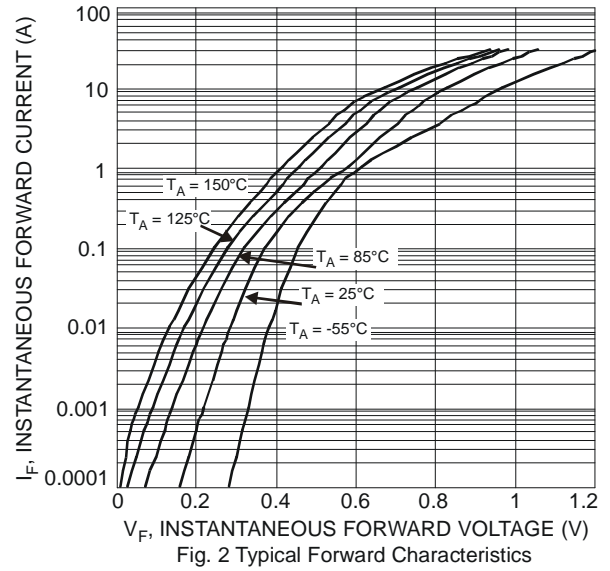
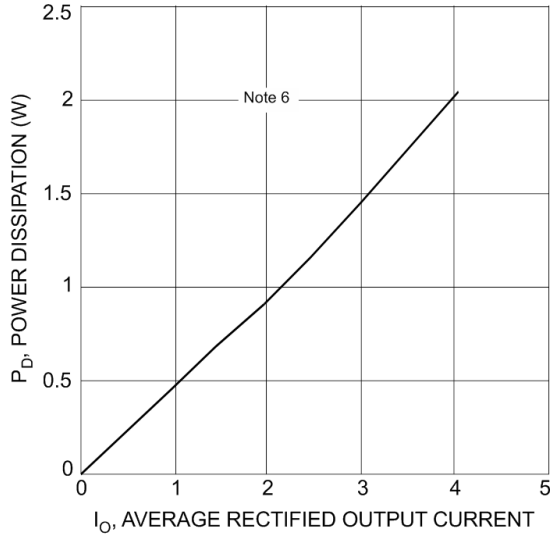
## Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Junction to Ambient (Note 5)	R <sub>θJA</sub>	70	°C/W
Typical Thermal Resistance Junction to Case (Note 5)	R <sub>θJC</sub>	14	°C/W
Typical Thermal Resistance Junction to Ambient (Note 6)	R <sub>θJA</sub>	20	°C/W
Typical Thermal Resistance Junction to Case (Note 6)	R <sub>θJC</sub>	3	°C/W
Operating Temperature Range	T <sub>J</sub>	-65 to +175	°C
Reverse Mode DC Forward Mode (Note 7)		≤200	
Storage Temperature Range	T <sub>STG</sub>	-65 to +175	°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>	—	0.75 0.62 0.83	0.82 0.67 0.88	V	I <sub>F</sub> = 5A, T <sub>J</sub> = +25°C I <sub>F</sub> = 5A, T <sub>J</sub> = +125°C I <sub>F</sub> = 10A, T <sub>J</sub> = +25°C
Leakage Current (Note 8)	I <sub>R</sub>	—	— 0.18	0.1 10	mA	V <sub>R</sub> = 200V, T <sub>J</sub> = +25°C V <sub>R</sub> = 200V, T <sub>J</sub> = +125°C

- Notes:
- Device mounted on FR4 PCB with minimum recommended pad layout per <http://www.diodes.com>.
  - Device mounted on FR4 PCB with 1-inch pad layout and additional HK2(45mm x 20mm x 12mm).
  - Max junction temperature guaranteed for 2 hours.
  - Short duration pulse test used to minimize self heat effect.



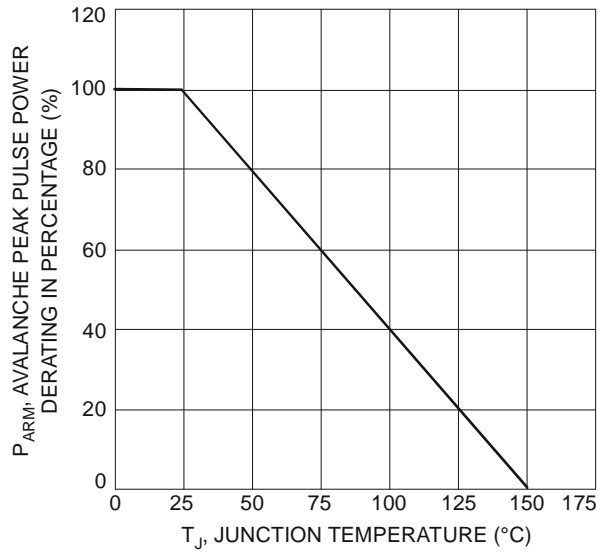


Fig. 7 Pulse Derating Curve

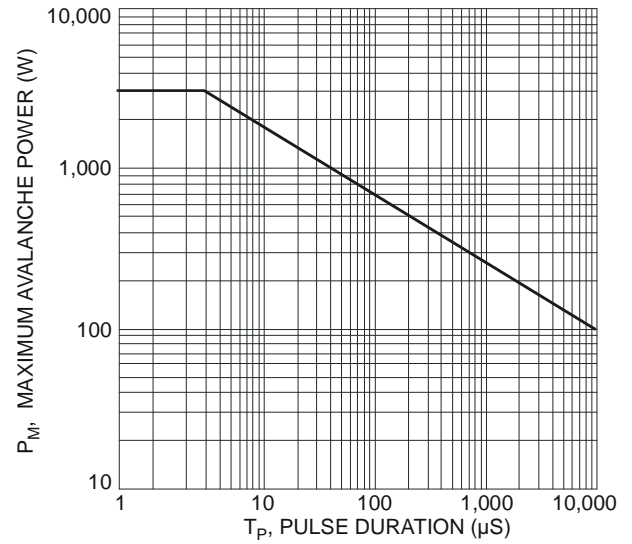
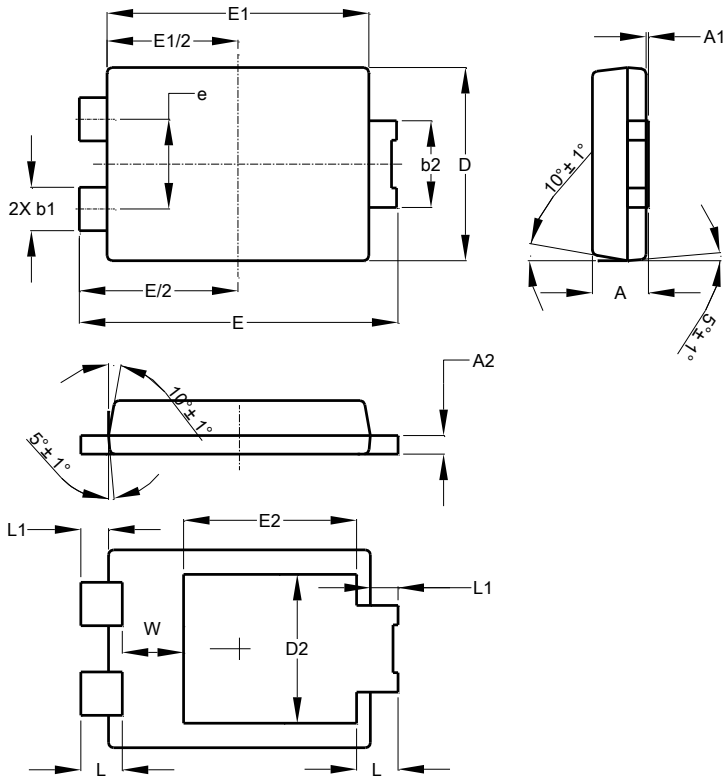


Fig. 8 Maximum Avalanche Power vs. Pulse Duration

## Package Outline Dimensions

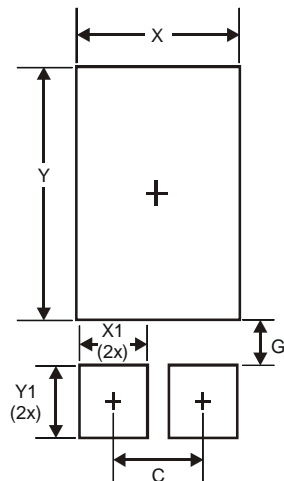
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for the latest version.



POWERDI <sup>®</sup> 5			
Dim	Min	Max	Typ
A	1.05	1.15	1.10
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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