

**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>	80	V
Average Rectified Output Current	I <sub>O</sub>	20	A
Non-Repetitive Peak Forward Surge Current 8.3ms	I <sub>FSM</sub>	350	A

**Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Junction to Ambient (Note 6)	R <sub>θJA</sub>	41	°C/W
Typical Thermal Resistance Junction to Lead (Note 6)	R <sub>θJL</sub>	9	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 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>	—	—	0.53	V	I <sub>F</sub> = 5A, T <sub>J</sub> = +25°C
		—	—	0.60		I <sub>F</sub> = 10A, T <sub>J</sub> = +25°C
		—	—	0.66		I <sub>F</sub> = 20A, T <sub>J</sub> = +25°C
		—	—	0.62		I <sub>F</sub> = 20A, T <sub>J</sub> = +125°C
Leakage Current (Note 7)	I <sub>R</sub>	—	—	200	μA	V <sub>R</sub> = 80V, T <sub>J</sub> = +25°C
		—	—	60	mA	V <sub>R</sub> = 80V, T <sub>J</sub> = +125°C

Notes: 6. Device mounted on FR-4 substrate, single-sided, PC boards, with 1inch square pad size.  
 7. Short duration pulse test used to minimize self-heating effect.

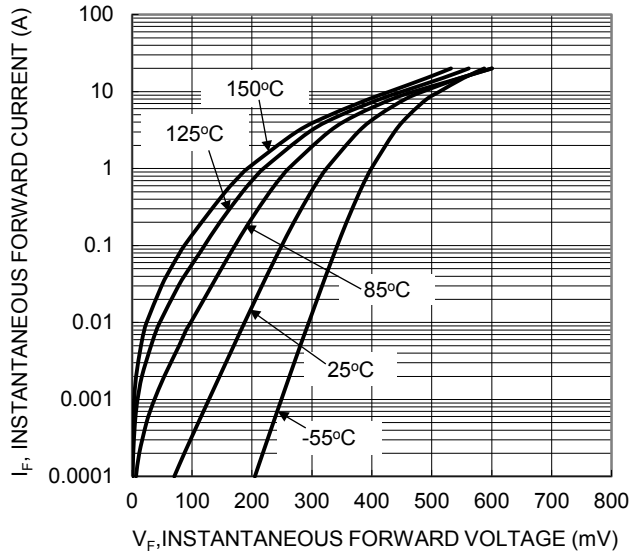


Figure 1. Typical Forward Characteristics

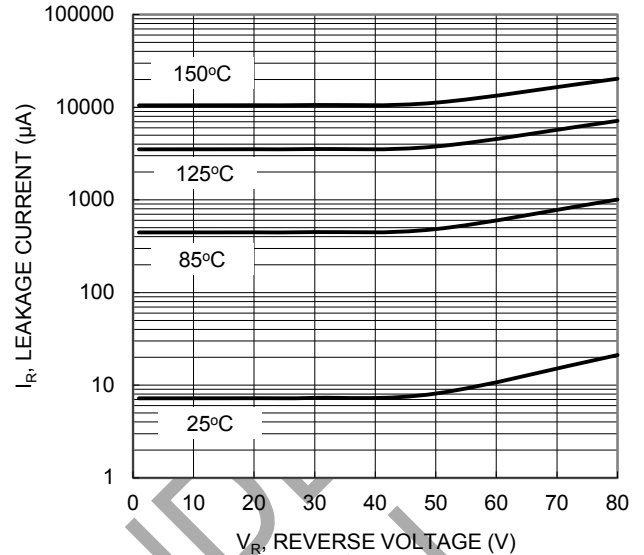


Figure 2. Typical Reverse Characteristics

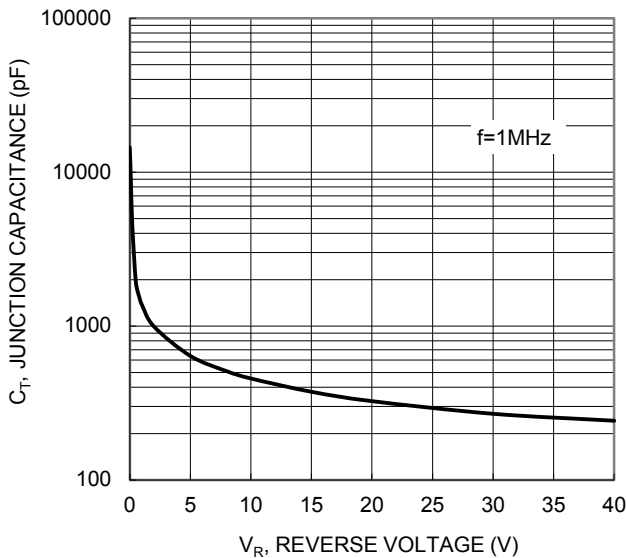


Figure 3. Typical Junction Capacitance

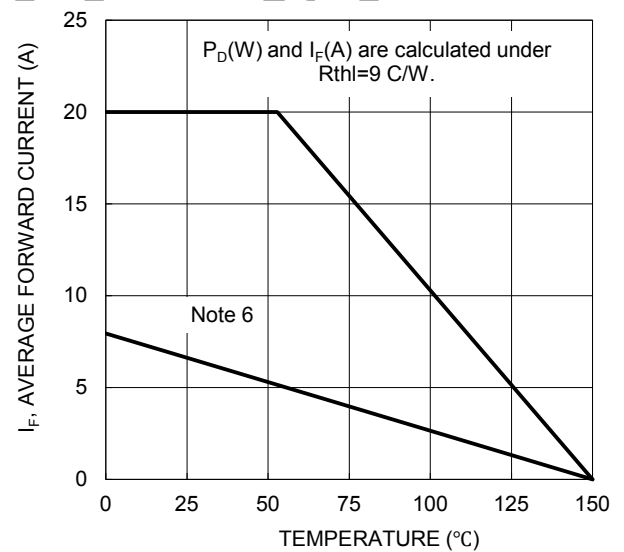


Figure 4. Forward Current Derating

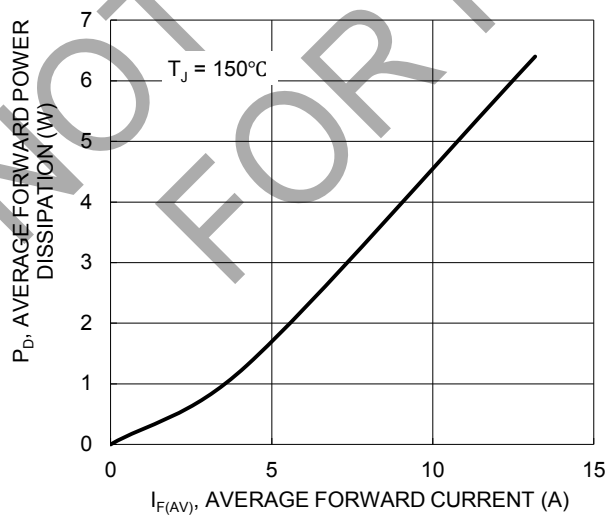
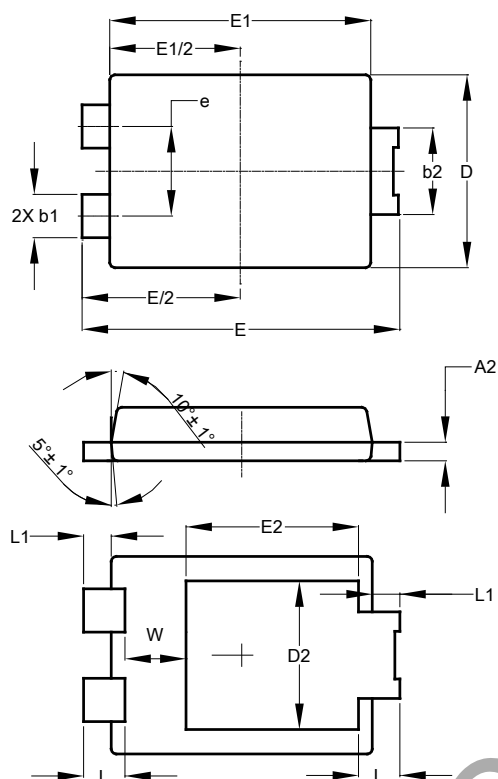


Figure 5. Forward Power Dissipation

## Package Outline Dimensions

Please see AP02001 at [http://www.diodes.com/\\_files/datasheets/ap02001.pdf](http://www.diodes.com/_files/datasheets/ap02001.pdf) for the latest version.

### POWERDI® 5

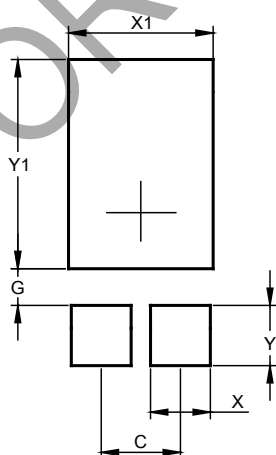


POWERDI® 5			
Dim	Min	Max	Typ
A	1.05	1.15	1.10
A1	0.00	0.05	--
A2	0.33	0.43	0.381
b1	0.80	0.99	0.89
b2	1.70	1.88	1.78
D	3.90	4.05	3.966
D2	--	--	3.054
E	6.40	6.60	6.504
e	--	--	1.84
E1	5.30	5.45	5.37
E2	--	--	3.549
L	0.75	0.95	0.85
L1	0.50	0.65	0.57
W	1.10	1.41	1.255
All Dimensions in mm			

## Suggested Pad Layout

Please see AP02001 at [http://www.diodes.com/\\_files/datasheets/ap02001.pdf](http://www.diodes.com/_files/datasheets/ap02001.pdf) for the latest version.

### POWERDI® 5



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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