

## 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>	40	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>RM</sub>		
Average Rectified Output Current	I <sub>O</sub>	3	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	70	A

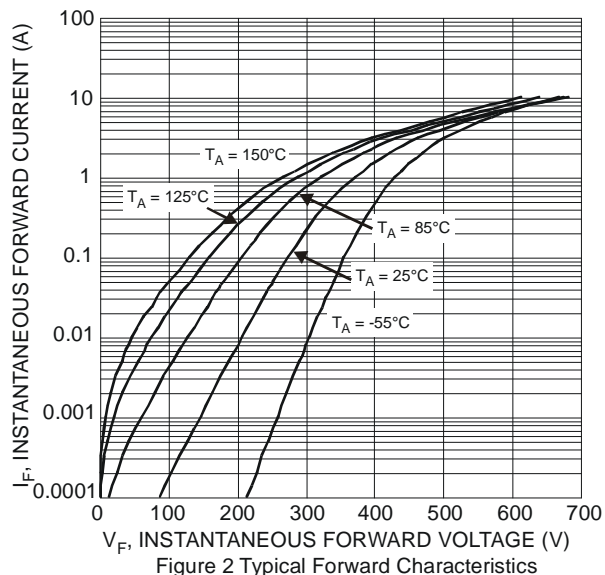
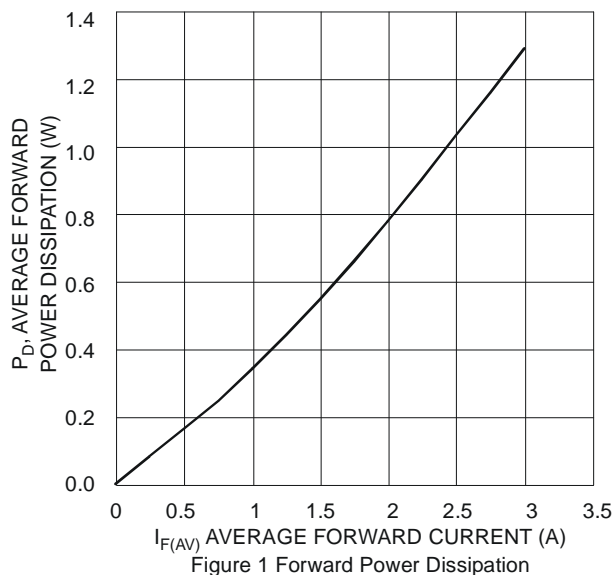
## Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Junction to Ambient (Note 5)	R <sub>θJA</sub>	78	°C/W
Typical Thermal Resistance Junction to Case (Note 5)	R <sub>θJC</sub>	16	°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 (Note 6)	V <sub>F</sub>	—	0.37	0.42	V	I <sub>F</sub> = 1A, T <sub>J</sub> = +25°C
		—	0.29	—		I <sub>F</sub> = 1A, T <sub>J</sub> = +125°C
		—	0.46	0.53		I <sub>F</sub> = 3A, T <sub>J</sub> = +25°C
		—	0.41	—		I <sub>F</sub> = 3A, T <sub>J</sub> = +125°C
Leakage Current (Note 6)	I <sub>R</sub>	—	8	30	μA	V <sub>R</sub> = 40V, T <sub>J</sub> = +25°C
		—	2.2	15	mA	V <sub>R</sub> = 40V, T <sub>J</sub> = +125°C

Notes: 5. Device mounted on 1 inch FR4.  
 6. Short duration pulse test used to minimize self-heating effect.



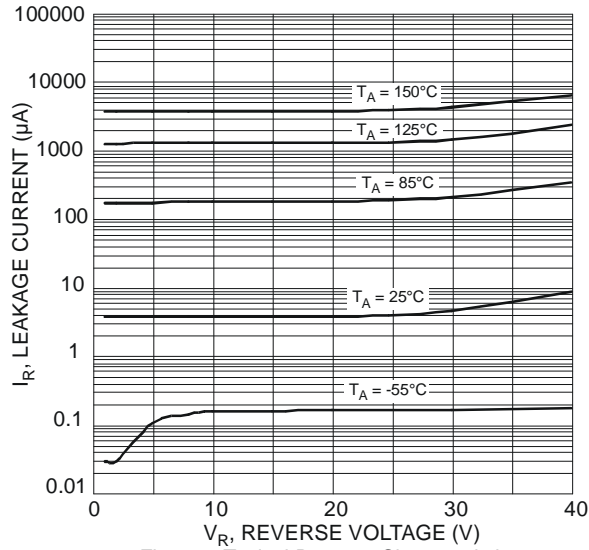


Figure 3 Typical Reverse Characteristics

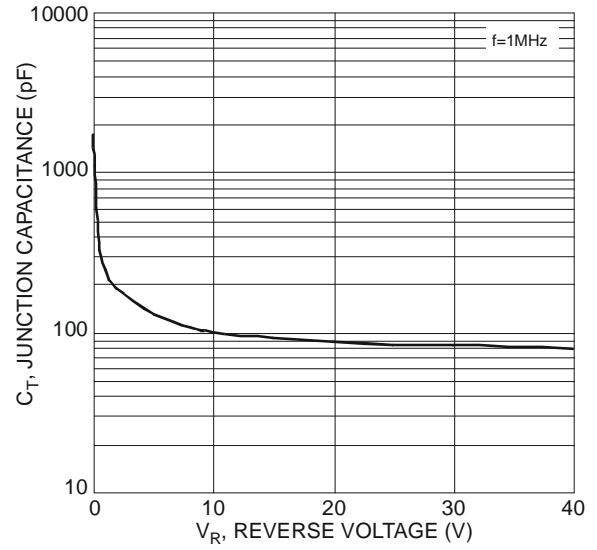


Figure 4 Typical Junction Capacitance

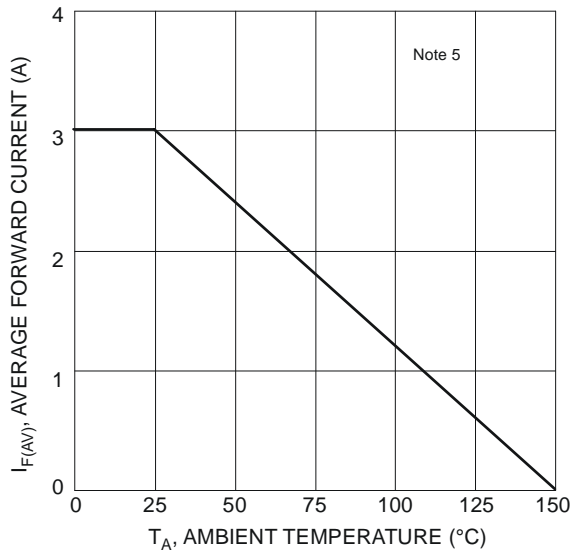


Figure 5 Forward Current Derating Curve

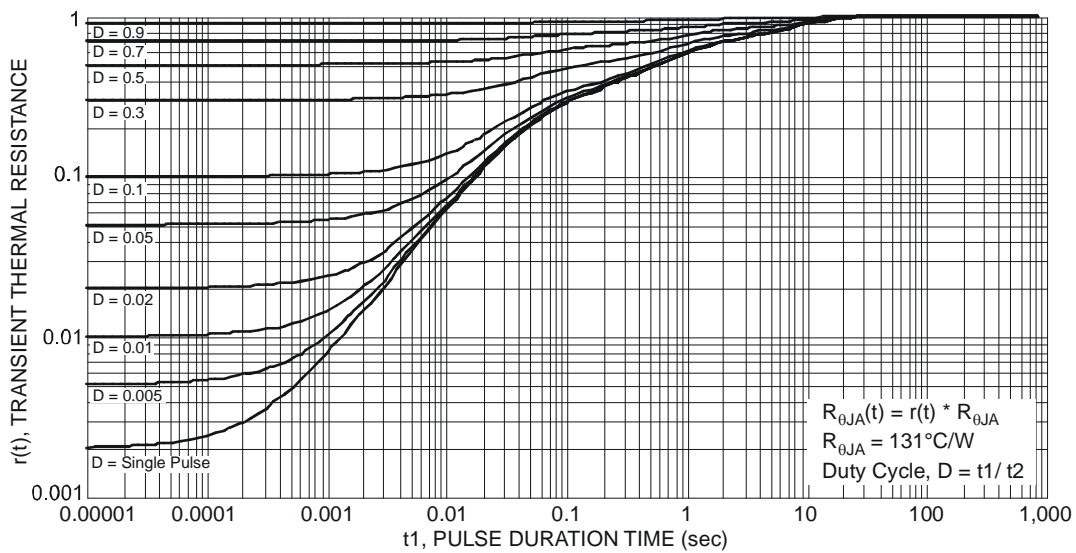
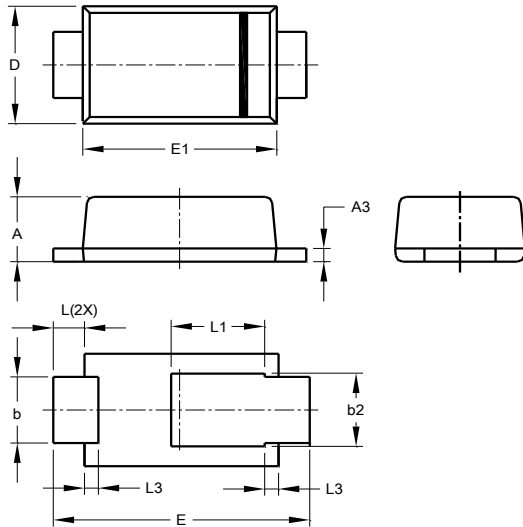


Figure 6 Transient Thermal Resistance

## Package Outline Dimensions

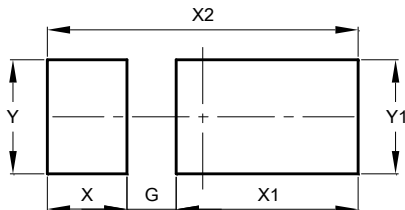
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for the latest version.



POWERDI <sup>®</sup> 123			
Dim	Min	Max	Typ
A	0.93	1.00	0.98
A3	0.15	0.25	0.20
b	0.85	1.25	1.00
b2	1.025	1.125	1.10
D	1.63	1.93	1.78
E	3.50	3.90	3.70
E1	2.60	3.00	2.80
L	0.40	0.50	0.45
L1	1.25	1.40	1.35
L3	0.125	0.275	0.20
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)
G	0.65
X	1.05
X1	2.40
X2	4.10
Y	1.50
Y1	1.50

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