

## 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>	30	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>RM</sub>		
RMS Reverse Voltage	V <sub>R(RMS)</sub>	21	V
Average Rectified Output Current	I <sub>O</sub>	2.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	30	A

## Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Junction to Case (Note 5)	R <sub>θJC</sub>	50	°C/W
Typical Thermal Resistance Junction to Ambient (Note 5)	R <sub>θJA</sub>	120	
Total Power Dissipation (Note 5)	P <sub>TOT</sub>	0.84	W
Operating Temperature Range	T <sub>J</sub>	-55 to +125	°C
Storage Temperature Range	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
Reverse Breakdown Voltage (Note 6)	V <sub>(BR)</sub>	30	—	—	V	I <sub>R</sub> = 1.0 mA
Forward Voltage Drop	V <sub>F</sub>	—	0.31	—	V	I <sub>F</sub> = 1A, T <sub>A</sub> = +25°C
			0.37	0.42		I <sub>F</sub> = 2A, T <sub>A</sub> = +25°C
			0.32	—		I <sub>F</sub> = 2A, T <sub>A</sub> = +100°C
Leakage Current (Note 6)	I <sub>R</sub>	—	0.3	1.0	mA	VR = 30V, T <sub>A</sub> = +25°C
			30	—		VR = 30V, T <sub>A</sub> = +100°C
Total Capacitance	C <sub>T</sub>	—	75	—	pF	VR = 10V, f = 1.0MHz

Notes:

- Device mounted on FR-4 substrate, 1" x 1", 2 oz, single-sided, PC boards with 0.1" x 0.15" copper pad.
- Short duration pulse test used to minimize self-heating effect.
- Device mounted on FR-4 substrate, 1" x 1", 2 oz, single-sided, PC boards with minimum recommended pad per <http://www.diodes.com/datasheets/ap02001>.

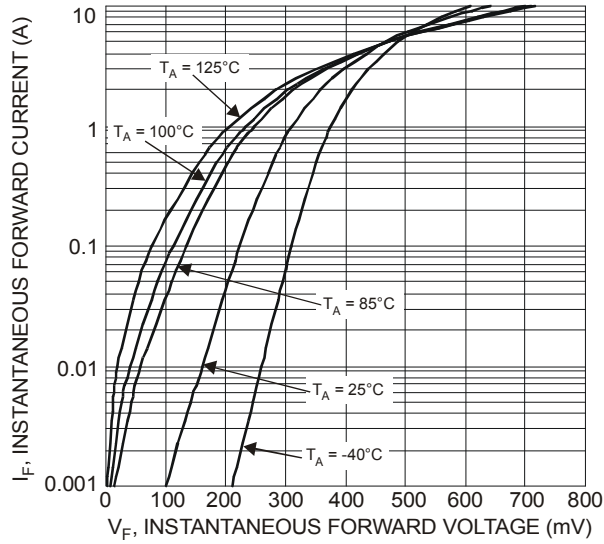


Figure 1 Typical Forward Characteristics

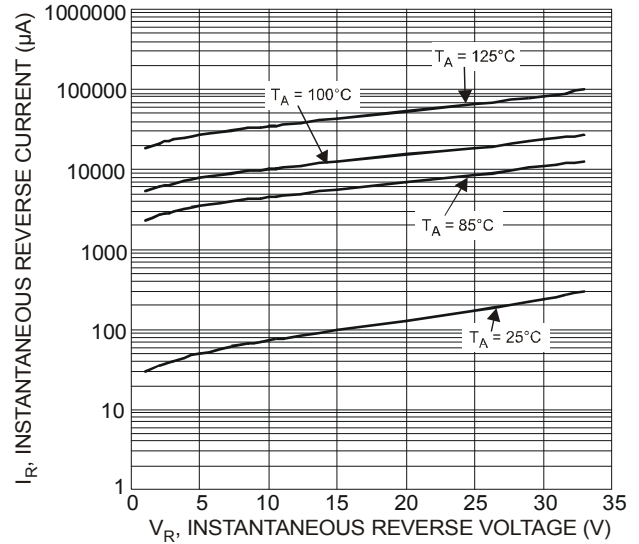


Figure 2 Typical Reverse Characteristics

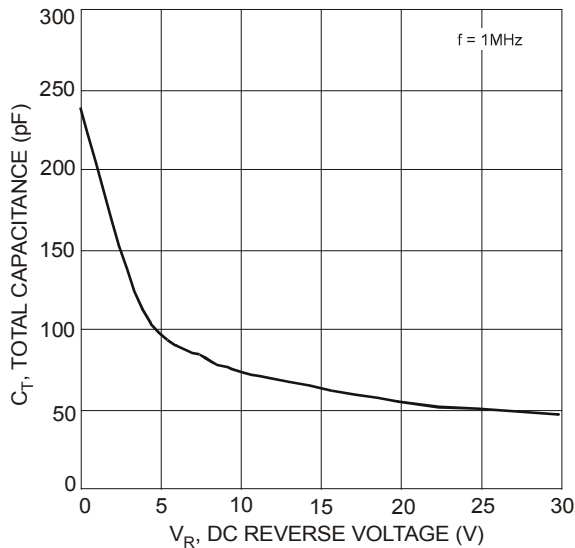


Figure 3 Total Capacitance vs. Reverse Voltage

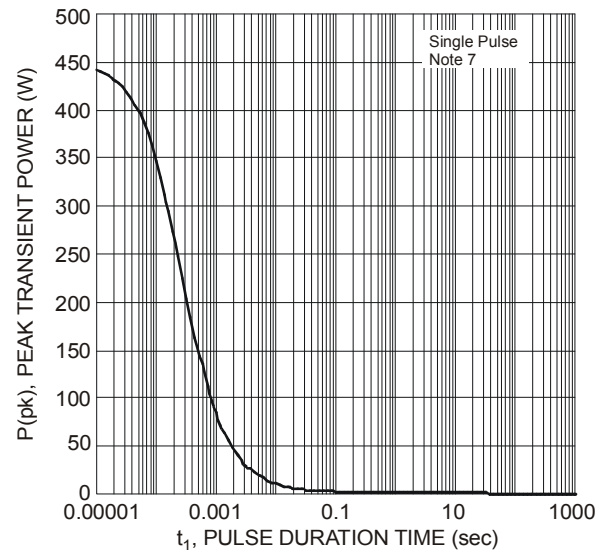


Figure 4 Single Pulse Maximum Power Dissipation

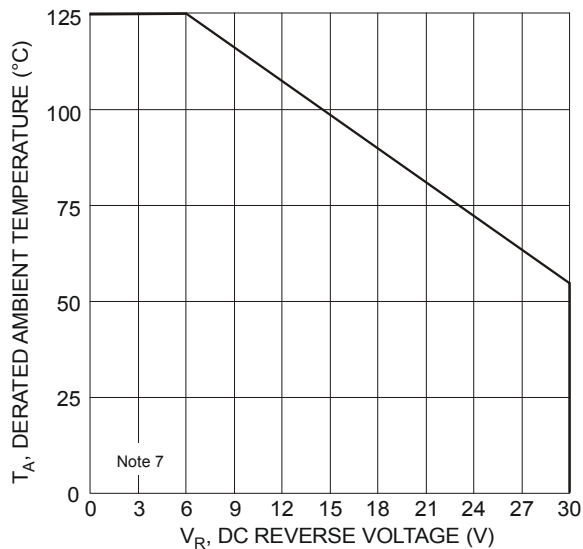
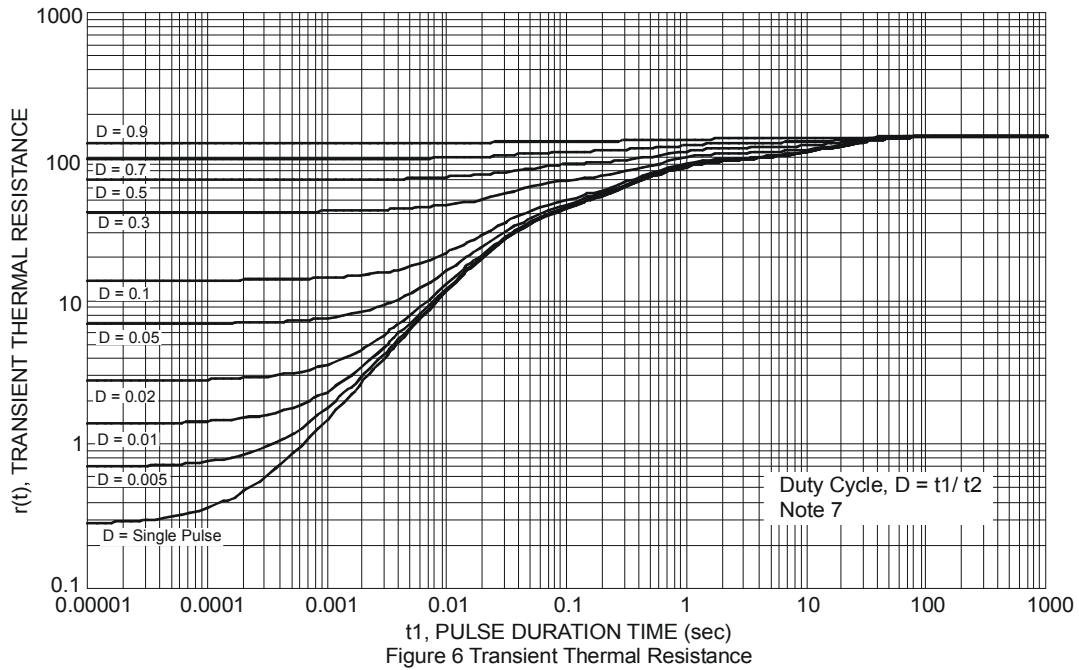
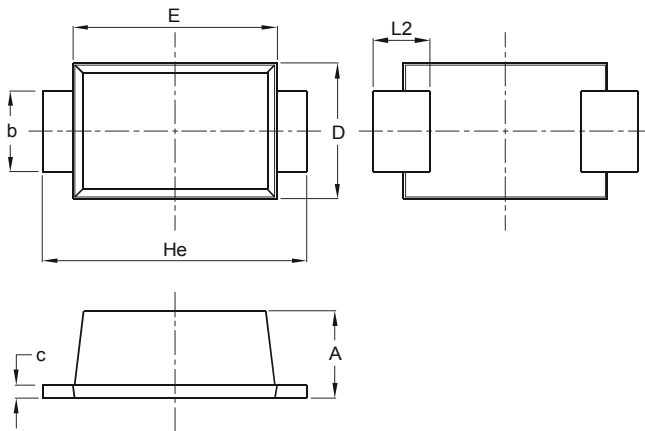


Figure 5 Operating Temperature Derating



## Package Outline Dimensions

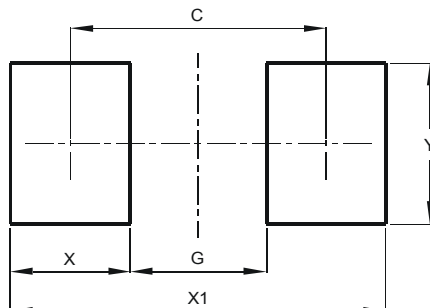
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for latest version.



SOD123F			
Dim	Min	Max	Typ
A	0.81	1.15	-
b	0.80	1.35	-
c	0.05	0.30	-
D	1.70	1.90	1.80
E	2.60	2.80	2.70
He	3.30	3.70	3.50
L2	0.35	0.85	-
All Dimensions in mm			

## Suggested Pad Layout

Please see AP02001 at <http://www.diodes.com/datasheets/ap02001.pdf> for latest version.



Dimensions	Value (in mm)
C	2.86
G	1.52
X	1.34
X1	4.20
Y	1.80

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