

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

Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	1,000	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>RM</sub>		
RMS Reverse Voltage	V <sub>R(RMS)</sub>	700	V
Average Rectified Output Current @ T <sub>A</sub> = +75°C	I <sub>O</sub>	1.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	25	A

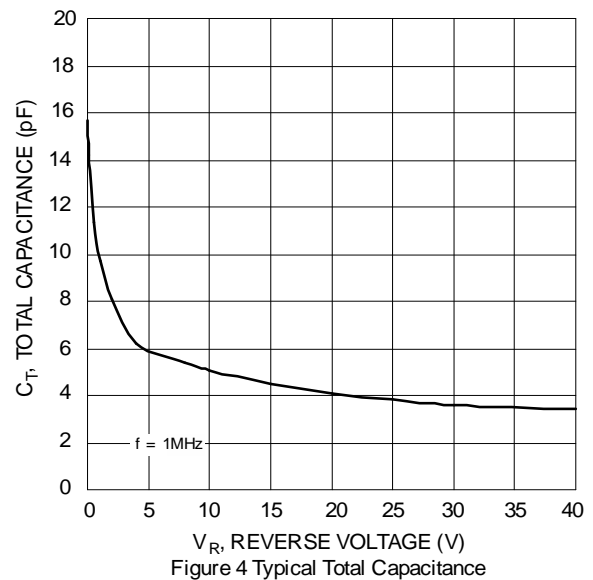
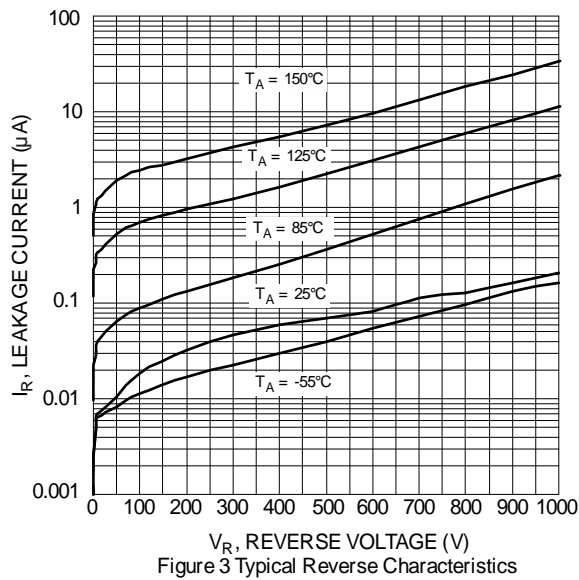
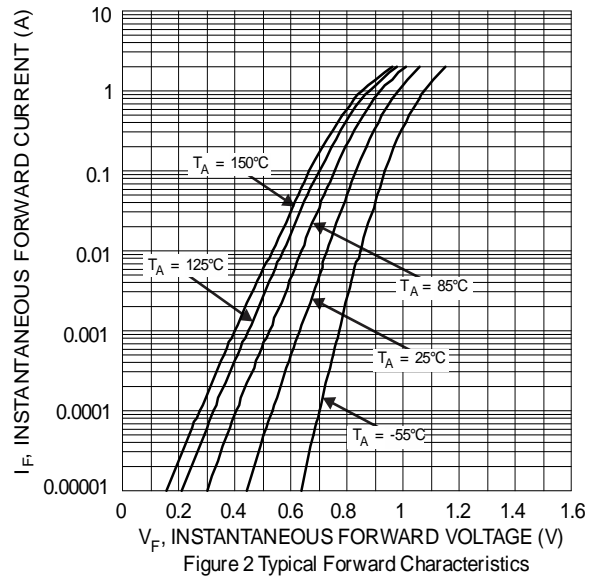
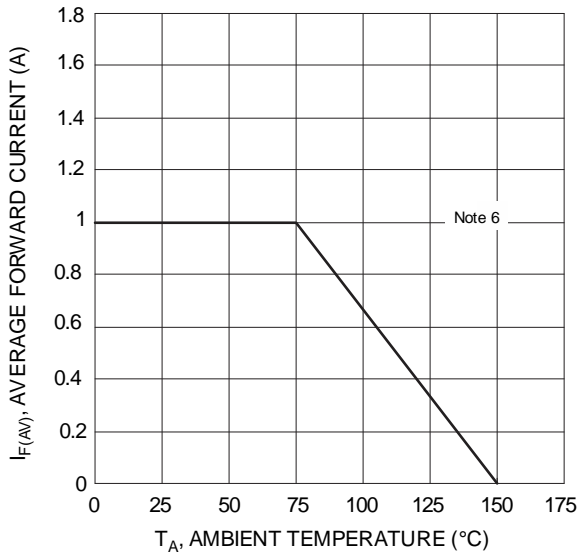
## Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance, Junction to Case (Note 6)	R <sub>θJC</sub>	13	°C/W
Thermal Resistance Junction to Ambient (Note 6)	R <sub>θJA</sub>	78	°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
Reverse Breakdown Voltage (Note 7)	V <sub>(BR)R</sub>	1,000	—	—	V	I <sub>R</sub> = 5μA
Forward Voltage Drop	V <sub>F</sub>	—	0.98 0.88	1.1 —	V	I <sub>F</sub> = 1A, T <sub>J</sub> = +25°C I <sub>F</sub> = 1A, T <sub>J</sub> = +125°C
Leakage Current (Note 7)	I <sub>R</sub>	—	0.2 11	10 100	μA	V <sub>R</sub> = 1,000V, T <sub>J</sub> = +25°C V <sub>R</sub> = 1,000V, T <sub>J</sub> = +125°C
Reverse Recovery Time	t <sub>RR</sub>	—	1.0	—	μs	I <sub>F</sub> = 0.5A, I <sub>R</sub> = 1.0A, I <sub>RR</sub> = 0.25A
Total Capacitance	C <sub>T</sub>	—	6	—	pF	V <sub>R</sub> = 4.0V <sub>DC</sub> , f = 1MHz

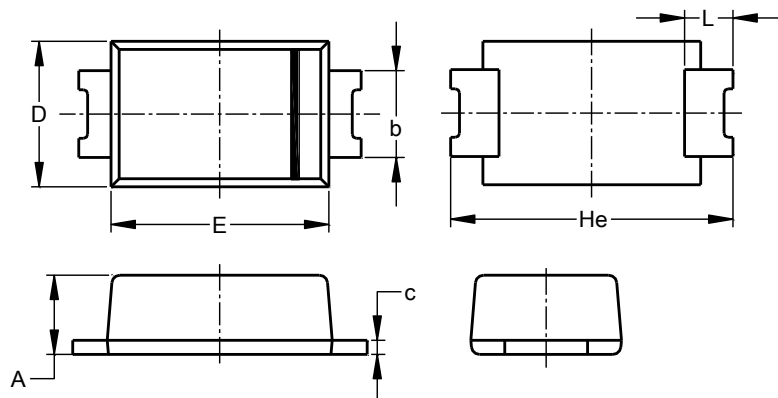
Notes: 6. Device mounted on FR4 PC board, 1 inch x 1 inch, 2oz. copper traces with 1x recommended pad layout, please see AP02001 at <http://www.diodes.com/datasheets/ap02001.pdf> for the latest version.  
7. Short duration pulse test used to minimize self-heating effect.



## Package Outline Dimensions

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

**SOD123F (Type B)**

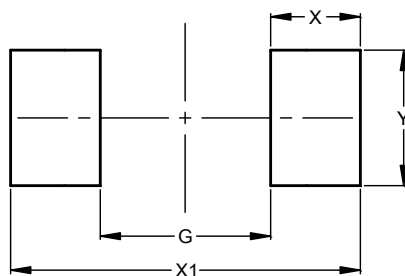


SOD123F (Type B)			
Dim	Min	Max	Typ
A	0.81	1.15	—
b	0.80	1.35	—
c	0.05	0.30	—
D	1.70	1.90	1.80
E	2.60	2.80	2.70
He	3.30	3.70	3.50
L	0.35	0.85	—
All Dimensions in mm			

## Suggested Pad Layout

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

**SOD123F (Type B)**



Dimensions	Value (in mm)
G	1.90
X	1.00
X1	3.90
Y	1.50

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