

## 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>R</sub>		
RMS Reverse Voltage	V <sub>R(RMS)</sub>	28	V
Average Forward Current (See Figure 1)	I <sub>F(AV)</sub>	1.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	16	A
Repetitive Peak Reverse Current t <sub>p</sub> = 2μs square wave, f = 1KHz	I <sub>RRM</sub>	0.5	A
Non-Repetitive Peak Reverse Current t <sub>p</sub> = 100μs square wave	I <sub>RSM</sub>	1.0	A

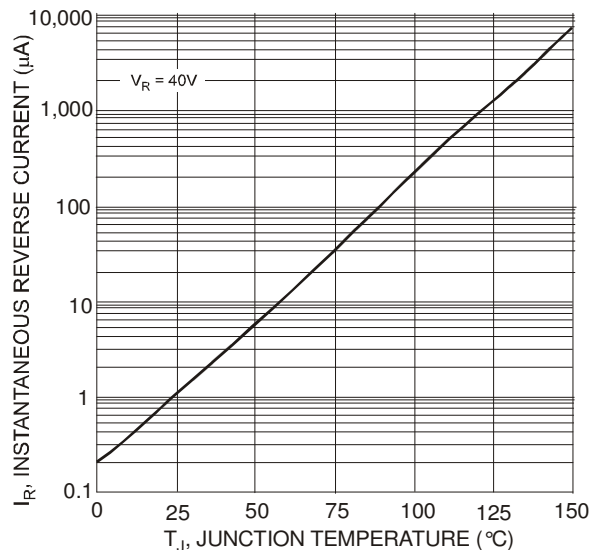
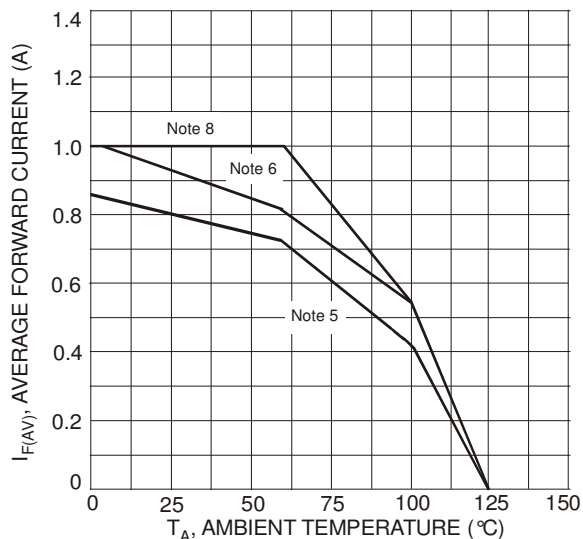
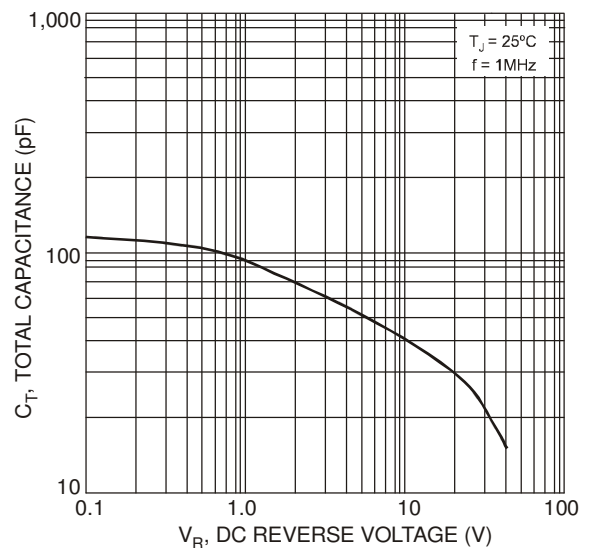
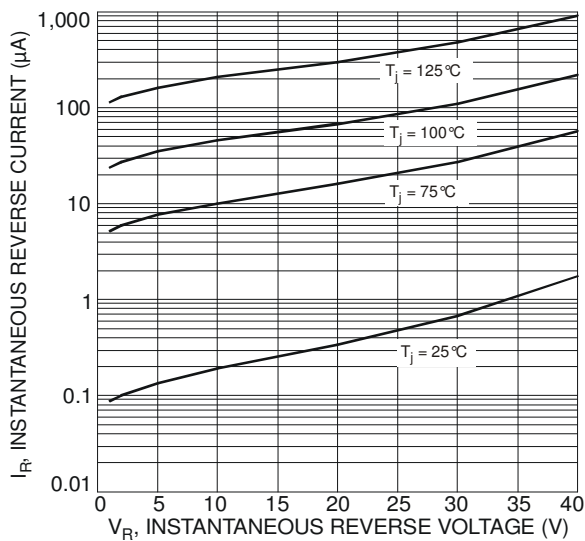
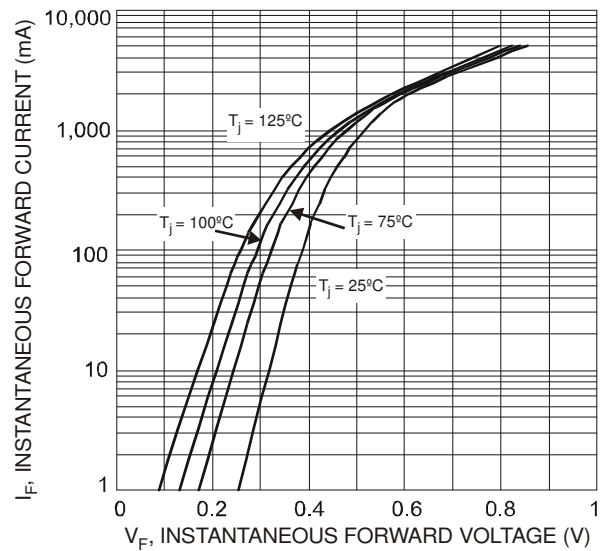
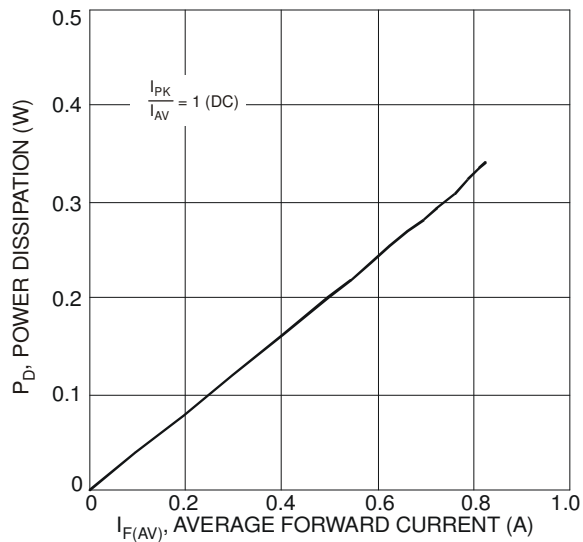
## Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Power Dissipation (Note 5) (Note 6)	P <sub>D</sub>	350 410	mW
Typical Thermal Resistance Junction to Ambient (Note 5) (Note 6)	R <sub>θJA</sub>	304 251	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +125	°C

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

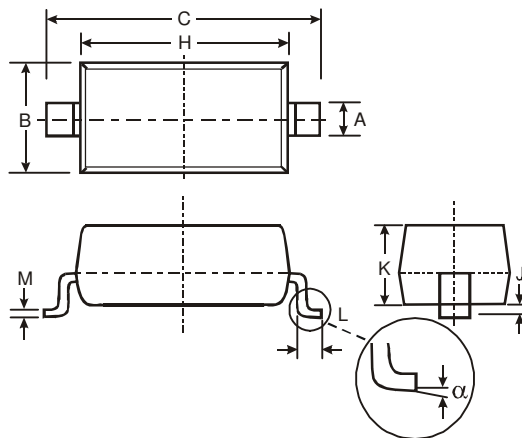
Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 7)	V <sub>(BR)R</sub>	40	—	—	V	I <sub>R</sub> = 40μA
Forward Voltage	V <sub>F</sub>	—	0.52 0.48	0.55 0.51	V	I <sub>F</sub> = 1A, T <sub>J</sub> = +25 °C I <sub>F</sub> = 1A, T <sub>J</sub> = +100 °C
Leakage Current (Note 7)	I <sub>R</sub>	—	—	10 40 5	μA μA mA	V <sub>R</sub> = 5V, T <sub>J</sub> = +25 °C V <sub>R</sub> = 40V, T <sub>J</sub> = +25 °C V <sub>R</sub> = 40V, T <sub>A</sub> = +100 °C

- Notes:
- Part mounted on FR-4 board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
  - Part mounted on 1 inch sq. 2oz copper pad.
  - Short duration pulse test used to minimize self-heating effect.
  - Part mounting such that R<sub>θJA</sub> = 175 °C/W.



## Package Outline Dimensions

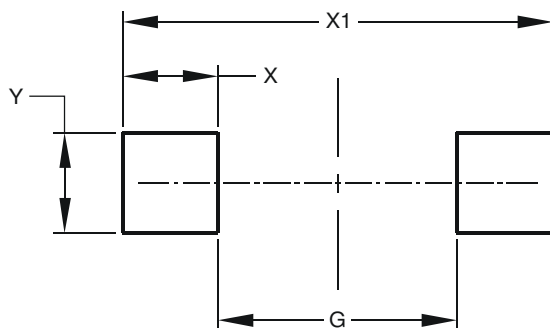
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for the latest version.



SOD123		
Dim	Min	Max
A	0.55 Typ	
B	1.40	1.70
C	3.55	3.85
H	2.55	2.85
J	0.00	0.10
K	1.00	1.35
L	0.25	0.40
M	0.10	0.15
$\alpha$	0	8°
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	2.250
X	0.900
X1	4.050
Y	0.950

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