

Maximum Ratings (@ $T_A = +25^\circ\text{C}$ 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_{RRM}	40	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
Average Rectified Output Current (Note 5) $T_T = +90^\circ\text{C}$	I_O	3.0	A
Non-Repetitive Peak Forward Surge Current, Single Sine-Wave Superimposed on Rated Load, 60Hz	I_{FSM}	70	A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +125	$^\circ\text{C}$

Electrical Characteristics (@ $T_A = +25^\circ\text{C}$ unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Conditions
Reverse Breakdown Voltage (Note 6)	$V_{(BR)R}$	40	—	—	V	$I_R = 2.0\text{mA}$
Forward Voltage Drop	V_F	—	0.310	0.350 0.450	V	$I_F = 1.0\text{A}$ $I_F = 3.0\text{A}$
Leakage Current (Note 6)	I_R	—	—	150	μA	$V_R = 15\text{V}$
				1.0 2.0	mA	$V_R = 20\text{V}$ $V_R = 40\text{V}$
Total Capacitance	C_T	—	180	—	pF	$f = 1\text{MHz}, V_R = 4.0\text{VDC}$
Thermal Resistance, Junction to Terminal	$R_{\theta JT}$	—	25	—	$^\circ\text{C/W}$	—

Notes: 5. When mounted on alumina substrate, 180° half sine wave.
 6. Short duration pulse test used to minimize self-heating effect.

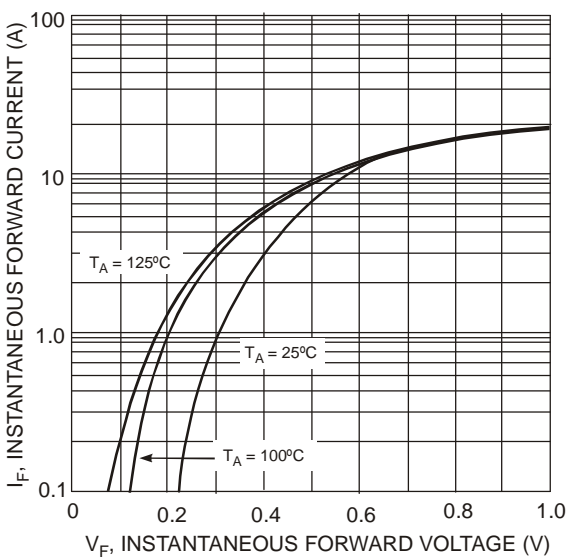


Fig. 1 Typical Forward Characteristics

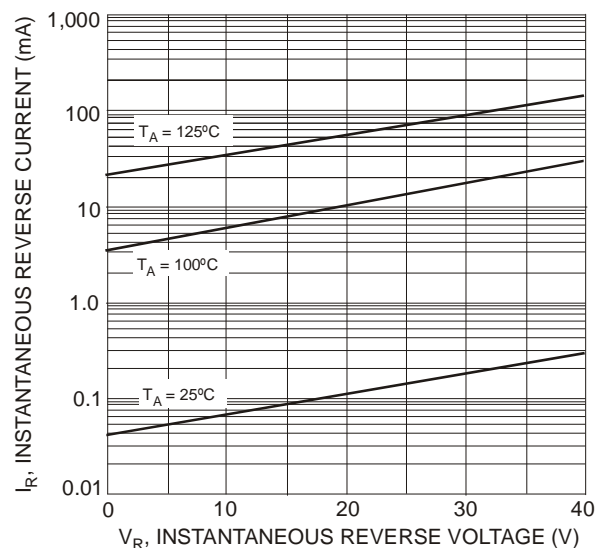
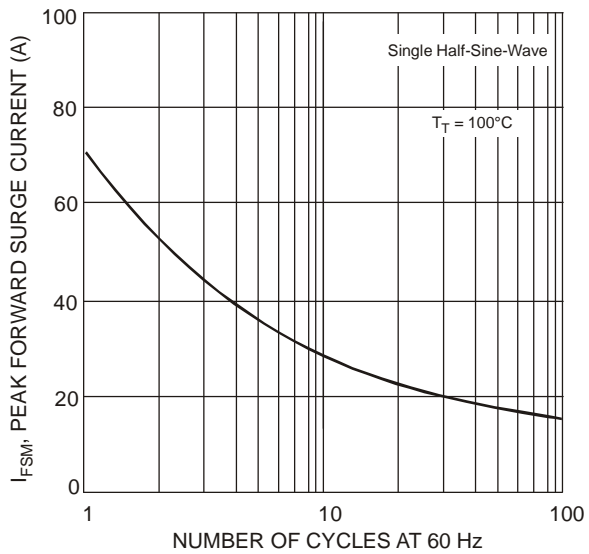
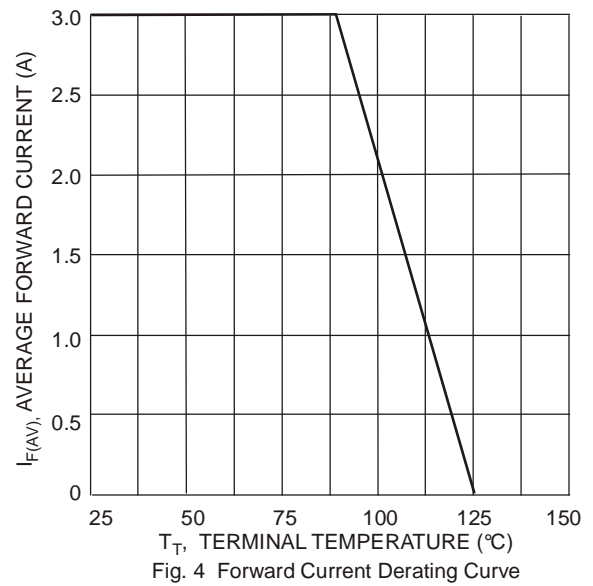
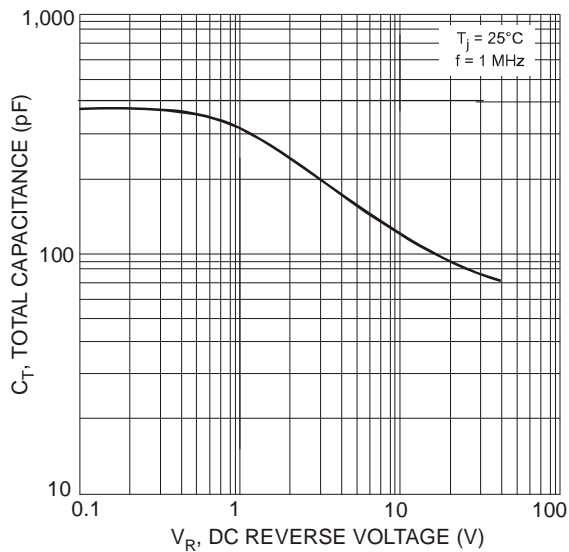
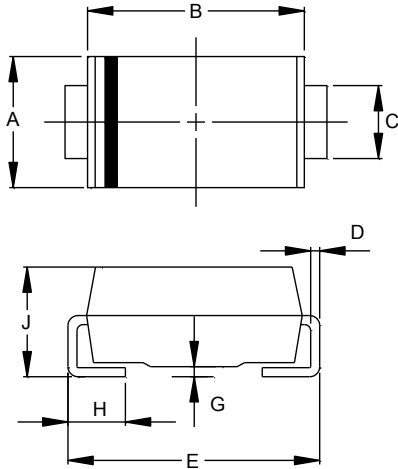


Fig. 2 Typical Reverse Characteristics



Package Outline Dimensions

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

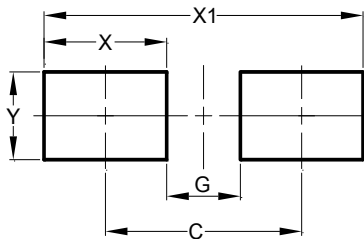


SMA		
Dim	Min	Max
A	2.29	2.92
B	4.00	4.60
C	1.27	1.63
D	0.15	0.31
E	4.80	5.59
G	0.05	0.20
H	0.76	1.52
J	1.96	2.40
All Dimensions in mm		

SMB		
Dim	Min	Max
A	3.30	3.94
B	4.06	4.57
C	1.96	2.21
D	0.15	0.31
E	5.00	5.59
G	0.05	0.20
H	0.76	1.52
J	2.00	2.50
All Dimensions in mm		

Suggested Pad Layout

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



SMA	
Dimensions	Value (in mm)
C	4.00
G	1.50
X	2.50
X1	6.50
Y	1.70

SMB	
Dimensions	Value (in mm)
C	4.30
G	1.80
X	2.50
X1	6.80
Y	2.30

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