Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

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

Characteristic	Symbol	S1 A/AB	S1 B/BB	S1 D/DB	S1 G/GB	S1 J/JB	S1 K/KB	S1 M/MB	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current @ T_T = +100°C	I_O	1.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	30							A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance, Junction to Terminal (Note 5)	$R_{\theta JT}$	30	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150	°C

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic		Symbol	Min	Typ	Max	Unit
Forward Voltage	@ I_F = 1.0A	V_{FM}	—	—	1.1	V
Peak Reverse Leakage Current at Rated DC Blocking Voltage	@ T_A = +25°C @ T_A = +125°C	I_{RM}	— —	— —	5.0 100	µA
Reverse Recovery Time (Note 6)		t_{rr}	—	1.8	3.0	µs
Typical Total Capacitance (Note 7)		C_T	—	10	—	pF

Notes: 5. Thermal resistance junction to terminal, unit mounted on PC board with 5.0 mm^2 (0.013 mm thick) copper pads as heat sink.
6. Measured with I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A.
7. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

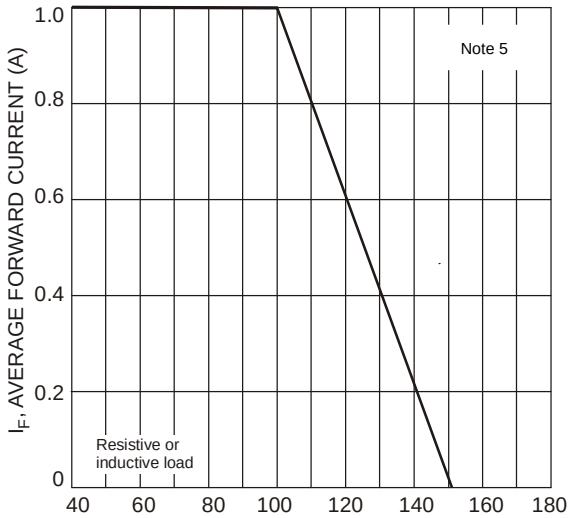


Fig. 1 Forward Current Derating Curve

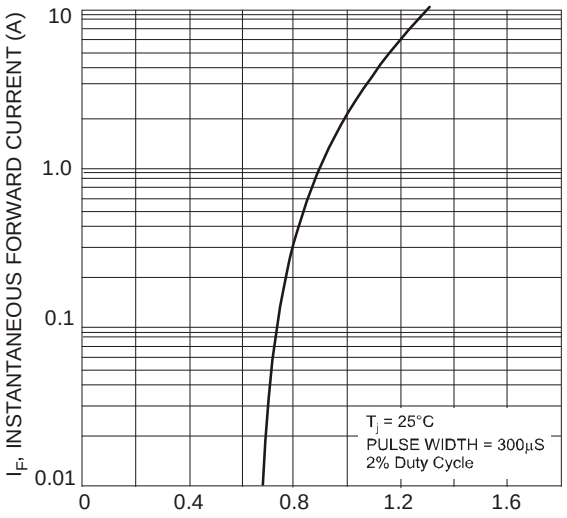


Fig. 2 Typical Forward Characteristics

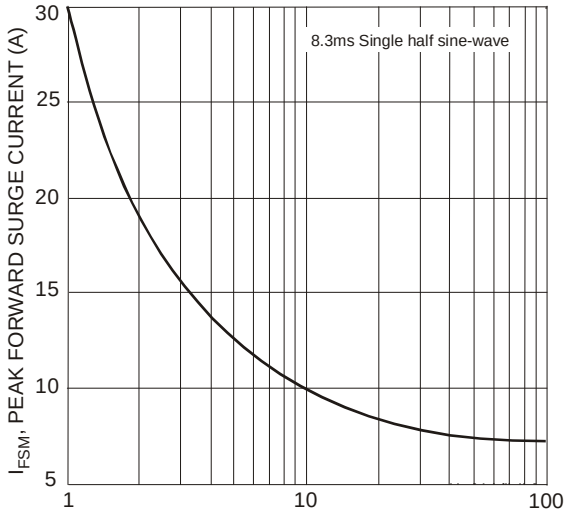


Fig. 3 Typical Forward Characteristics

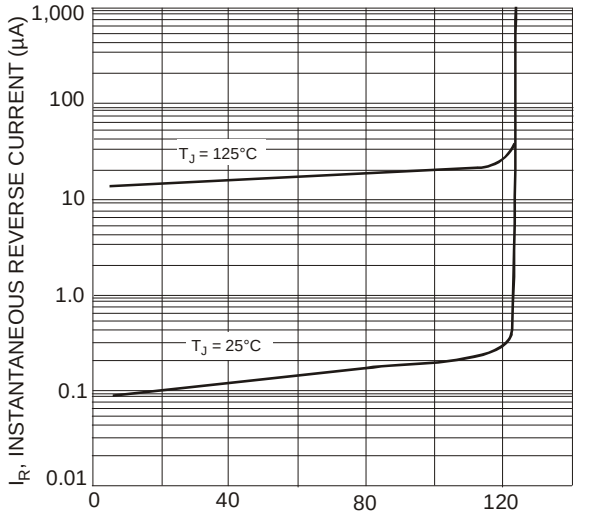
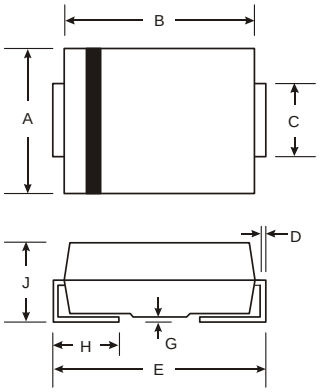


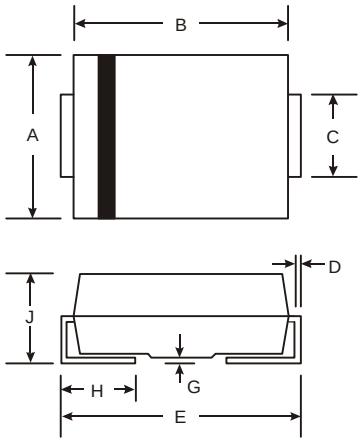
Fig. 4 Typical Reverse Characteristics

Package Outline Dimensions

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



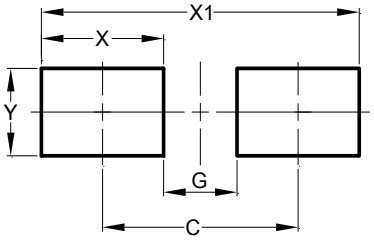
SMA		
Dim	**Min**	**Max**
A	2.29	2.92
B	4.00	4.60
C	1.27	1.63
D	0.15	0.31
E	4.80	5.59
G	0.05	0.20
H	0.76	1.52
J	1.96	2.40
All Dimensions in mm		



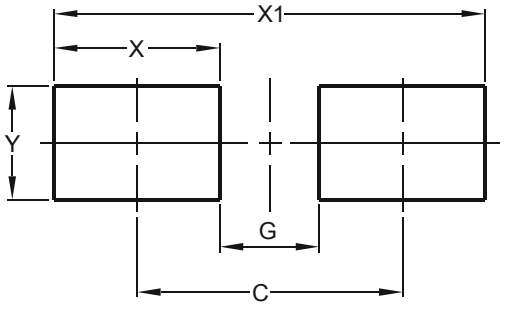
SMB		
Dim	**Min**	**Max**
A	3.30	3.94
B	4.06	4.57
C	1.96	2.21
D	0.15	0.31
E	5.00	5.59
G	0.05	0.20
H	0.76	1.52
J	2.00	2.50
All Dimensions in mm		

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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