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

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

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_{RM}	40	V
Average Rectified Output Current T_C = +65°C	I_O	1	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	20	A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Thermal Resistance Junction to Ambient (Note 5) Thermal Resistance Junction to Ambient (Note 6) Thermal Resistance Junction to Case (Note 5) Thermal Resistance Junction to Case (Note 6)	$R_{\theta JA}$ $R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JC}$	473 407 90 80	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150	°C
Power Dissipation (Note 6)	P_D	320	mW

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop	V_F	—	—	0.52	V	I_F = 1A, T_J = +25°C
		—	0.44	0.50		I_F = 1A, T_J = +125°C
Leakage Current (Note 7)	I_R	—	18	200	µA	V_R = 40V, T_J = +25°C
		—	4	—	mA	V_R = 40V, T_J = +100°C

Notes: 5. FR-4 PCB, 2 oz. copper, minimum recommended pad layout per http://www.diodes.com/package-outlines.html.
6. Device mounted on FR-4 substrate, 1" x 1", 2oz, copper, single-sided, PC boards.
7. Short duration pulse test used to minimize self-heating effect.

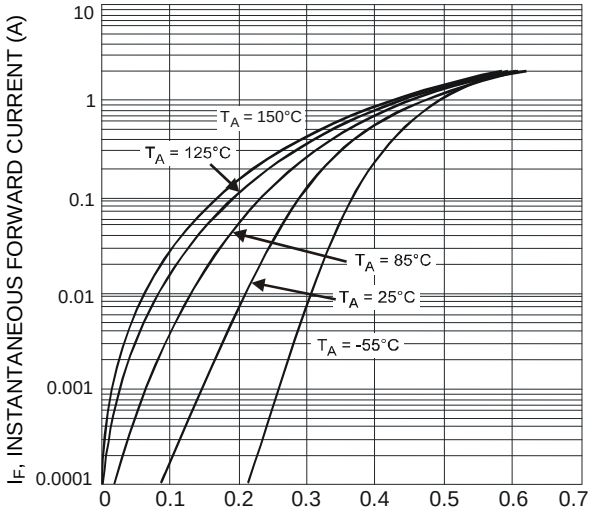

Fig.1 Typical Forward Characteristics

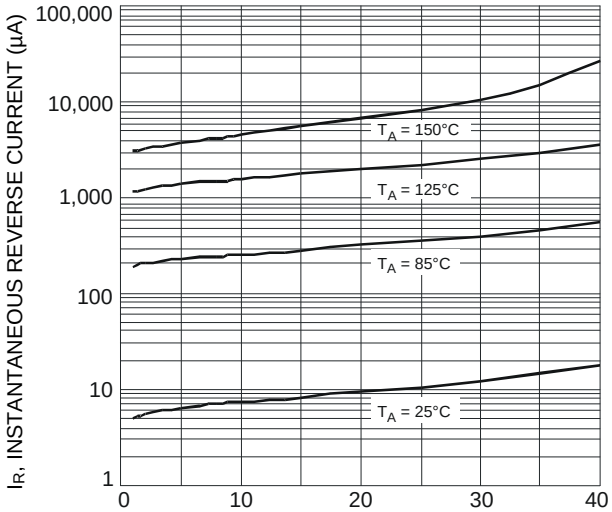

Fig. 2 Typical Reverse Characteristics

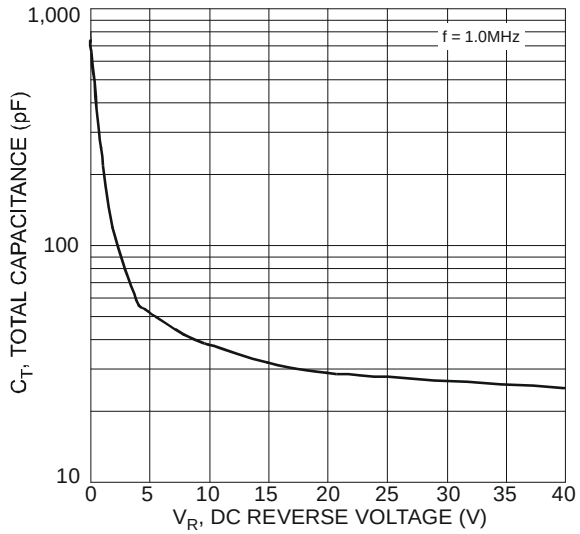

Fig. 3 Total Capacitance vs. Reverse Voltage

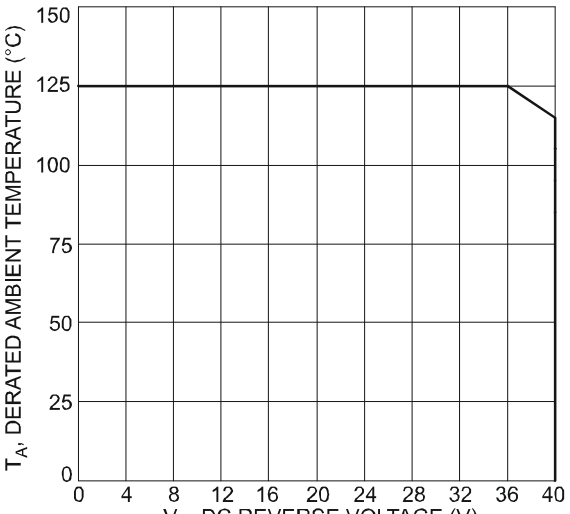

Fig. 4 Operating Temperature Derating

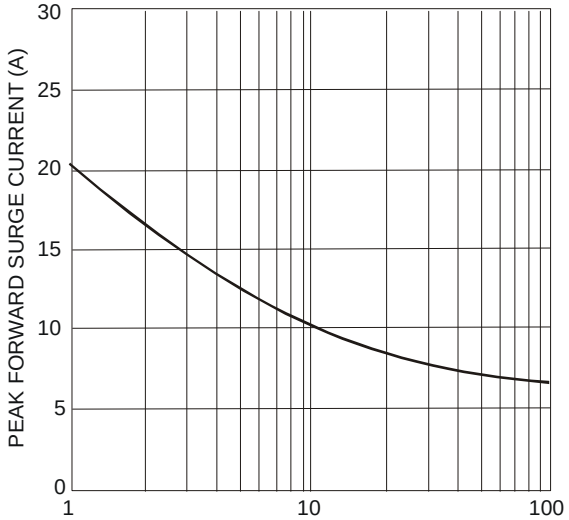

Fig. 5 Forward Surge Current & Number of Cycle

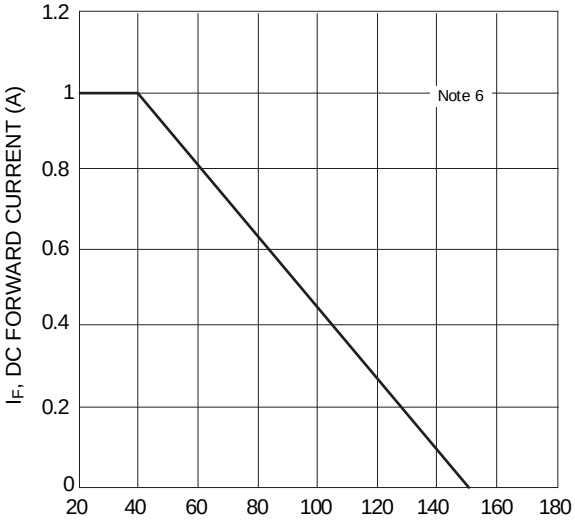

Fig. 6 DC Forward Current Derating

Package Outline Dimensions

Please see http://www.diodes.com/package-outlines.html for the latest version.

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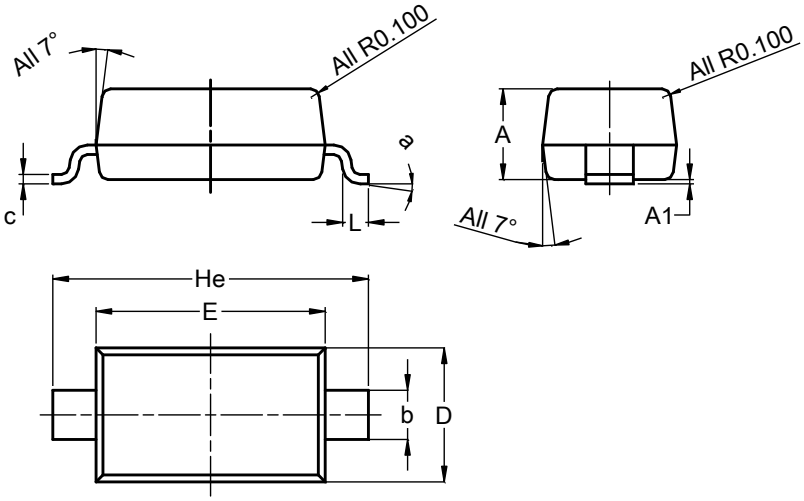
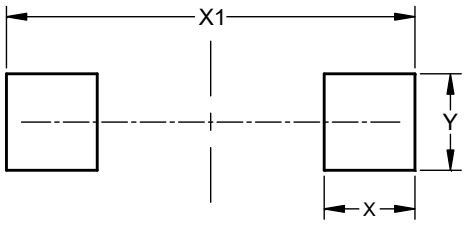


SOD123			
Dim	**Min**	**Max**	**Typ**
A	1.00	1.35	1.05
A1	0.00	0.10	0.05
b	0.52	0.62	0.57
c	0.10	0.15	0.11
D	1.40	1.70	1.55
E	2.55	2.85	2.65
He	3.55	3.85	3.65
L	0.25	0.40	0.30
a	0º	8º	--
All Dimensions in mm			

Suggested Pad Layout

Please see http://www.diodes.com/package-outlines.html for the latest version.

SOD123



Dimensions	Value (in mm)
X	0.900
X1	4.050
Y	0.950

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