Maximum Ratings (@T_A = +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 Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_{RM}	1,000	V
RMS Reverse Voltage	$V_{R(RMS)}$	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 Case (Note 5)	$R_{\theta JC}$	8	°C/W
Typical Thermal Resistance Junction to Ambient (Note 5)	$R_{\theta JA}$	56	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	°C

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 6)	$V_{(BR)R}$	1,000	—	—	V	I_R = 5μA
Forward Voltage Drop	V_F	—	0.95 0.85 1.0 0.9	1.1 1.0 — —	V	I_F = 1A, T_J = +25°C I_F = 1A, T_J = +125°C I_F = 2A, T_J = +25°C I_F = 2A, T_J = +125°C
Leakage Current (Note 6)	I_R	—	0.15 6	5.0 100	μA	V_R = 1,000V, T_J = +25°C V_R = 1,000V, T_J = +125°C
Reverse Recovery Time	t_{RR}	—	1.5	3.0	μs	I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A
Total Capacitance	C_T	—	7	—	pF	V_R = 4.0V_{DC}, f = 1MHz

Notes: 5. Device mounted on FR-4 substrate, 1.0" x 1.0", 2oz, single-sided, PC boards with 0.2" x 0.25" copper pad.
6. Short duration pulse test used to minimize self-heating effect.

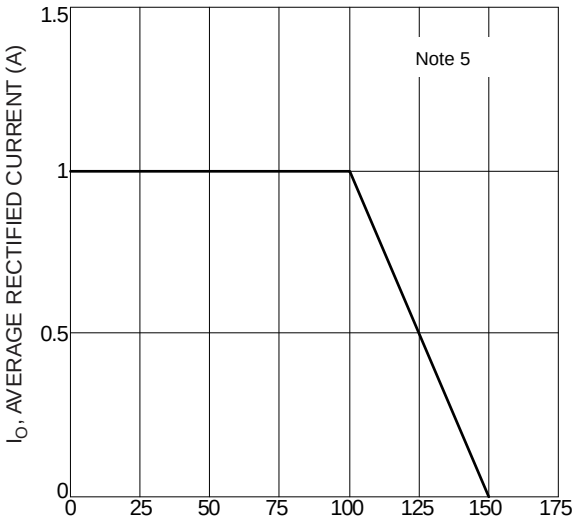


Figure 1 Forward Current Derating Curve

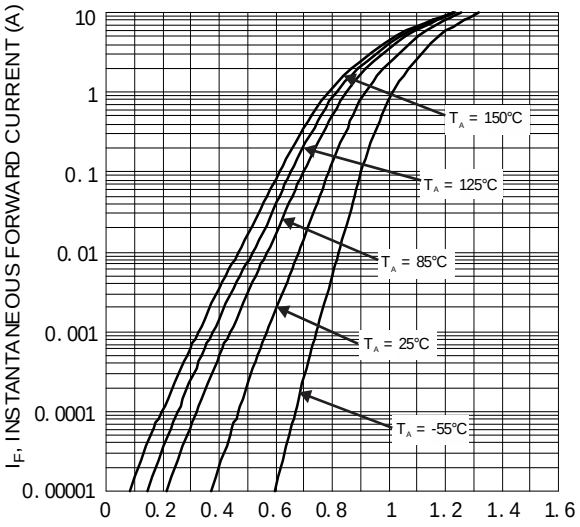


Figure 2 Typical Forward Characteristics

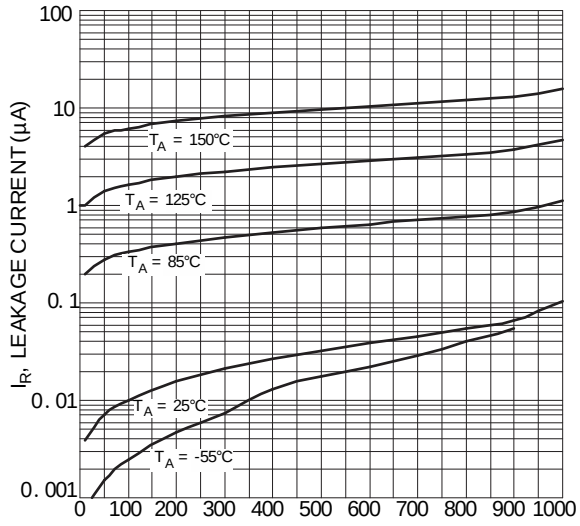


Figure 3 Typical Reverse Characteristics

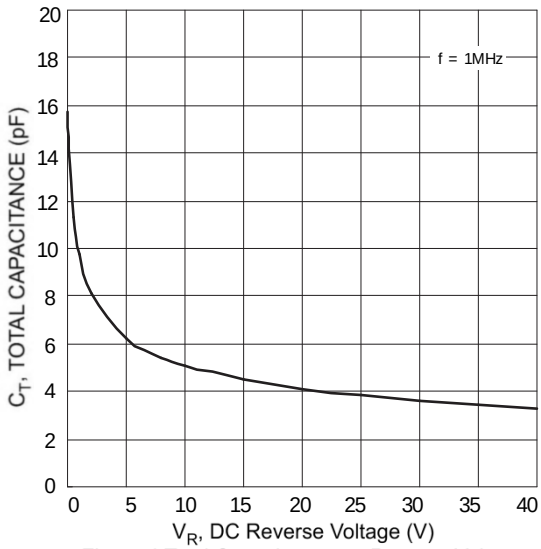
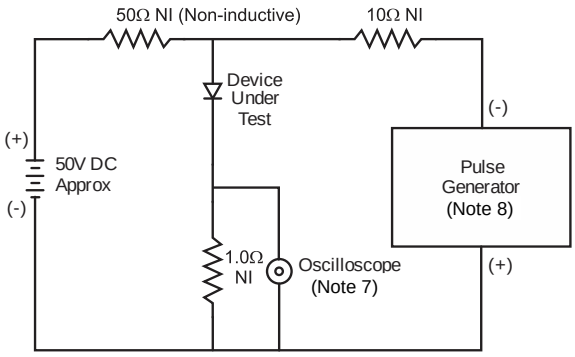


Figure 4 Total Capacitance vs. Reverse Voltage



Notes:
7. Rise Time=7.0ns max. Input Impedance=1.0MΩ. 22pF.
8. Rise Time=10ns max. Input Impedance=50Ω.

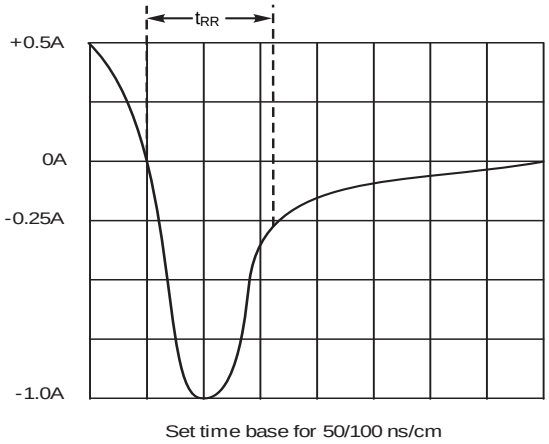
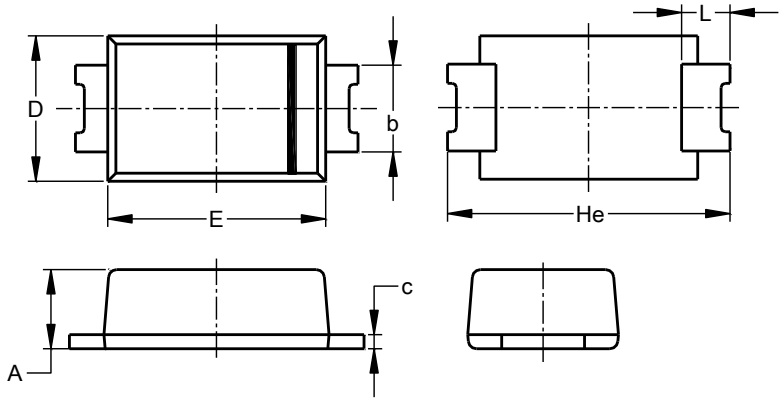


Figure 5 Reverse Recovery Time Characteristic and Test Circuit

Package Outline Dimensions

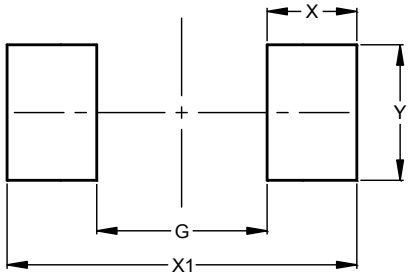
Please see http://www.diodes.com/package-outlines.html for the latest version.



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



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

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