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	V_{RRM}	1,000	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_{RM}		
RMS Reverse Voltage	$V_{R(RMS)}$	700	V
Average Rectified Output Current (@ T_T = +88°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)	$R_{\theta JC}$	10	°C/W
Typical Thermal Resistance Junction to Ambient (Note 5)	$R_{\theta JA}$	65	°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	—	1.0	1.3	V	I_F = 1A, T_J = +25°C
			0.9	1.2		I_F = 1A, T_J = +125°C
			1.1	—		I_F = 2A, T_J = +25°C
			1.0	—		I_F = 2A, T_J = +125°C
Leakage Current (Note 6)	I_R	—	0.2	5.0	μA	V_R = 1,000V, T_J = +25°C
			24	200		V_R = 1,000V, T_J = +125°C
Reverse Recovery Time	t_{RR}	—	240	500	ns	I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A
Total Capacitance	C_T	—	8	—	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.

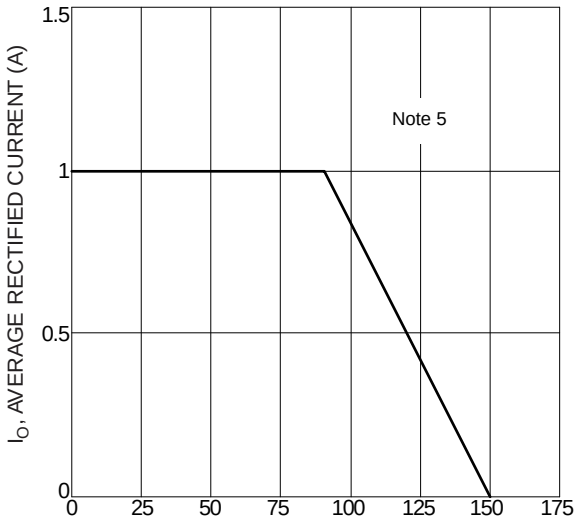


Figure 1 Forward Current Derating Curve

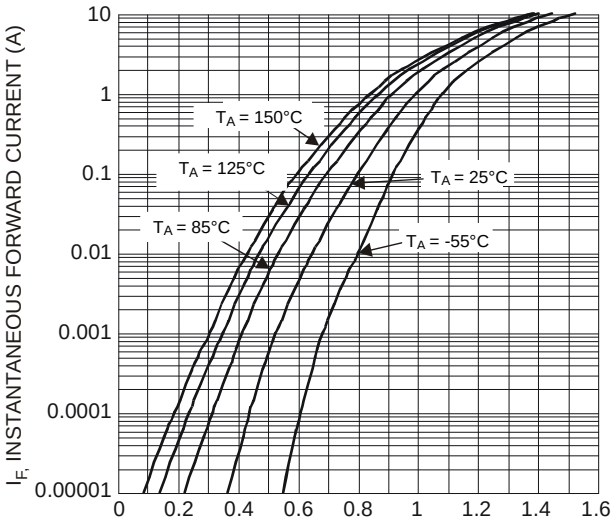


Figure 2 Typical Forward Characteristics

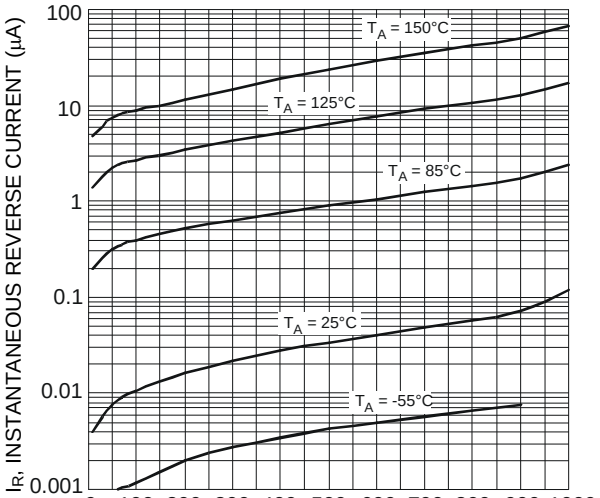


Figure 3 Typical Reverse Characteristics

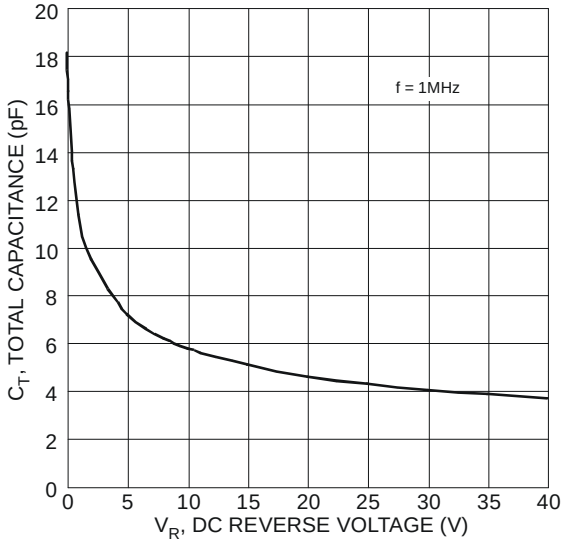
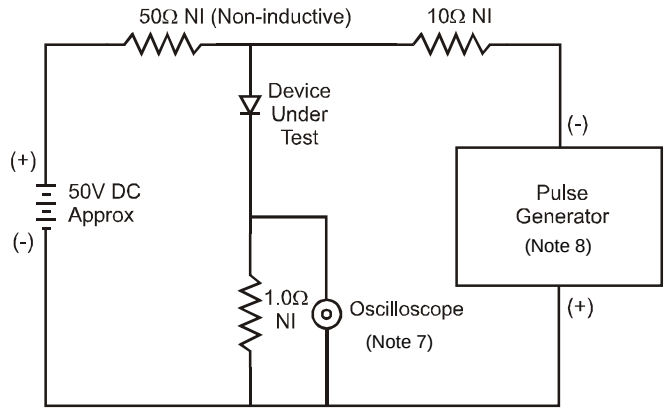
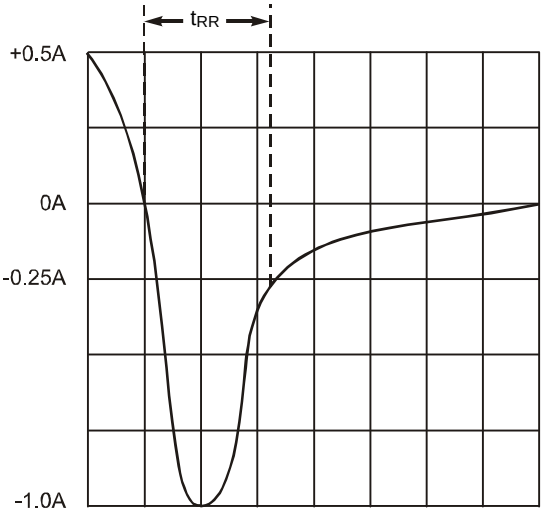


Figure 4 Total Capacitance vs. Reverse Voltage



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



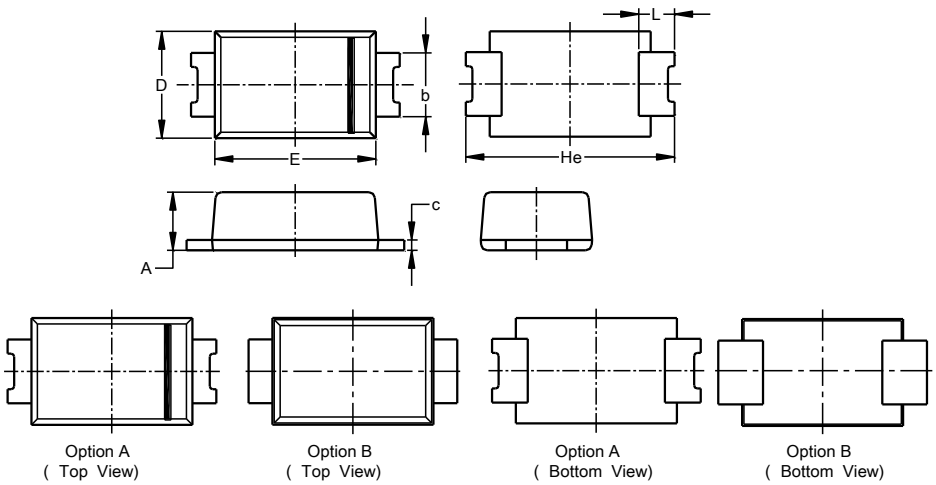
Set Time Base for 50/100ns/cm

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 (Standard)

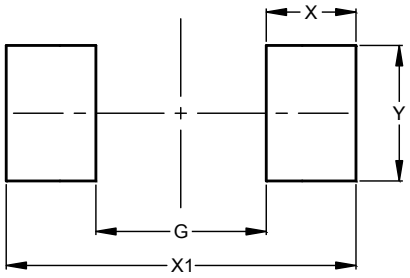


SOD123F (Standard)			
Dim	**Min**	**Max**	**Typ**
A	0.81	1.15	-
b	0.80	1.35	-
c	0.05	0.30	-
D	1.70	1.90	1.80
E	2.60	2.80	2.70
He	3.30	3.70	3.50
L	0.35	0.85	-
All Dimensions in mm			

Suggested Pad Layout

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

SOD123F (Standard)



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

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