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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	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_{RM}	100	V
Average Rectified Output Current	I_O	1	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	50	A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance, Junction to Ambient (Note 5)	$R_{\theta JA}$	135	°C/W
Typical Thermal Resistance, Junction to Case (Note 5)	$R_{\theta JC}$	20	°C/W
Typical Thermal Resistance, Junction to Ambient (Note 6)	$R_{\theta JA}$	85	°C/W
Typical Thermal Resistance, Junction to Case (Note 6)	$R_{\theta JC}$	12	°C/W
Operating Junction Temperature Range	T_J	-55 to +150	°C
Storage Temperature Range	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)	$V_{(BR)R}$	100	—	—	V	I_R = 1.0mA
Forward Voltage Drop	V_F	— — —	0.75 0.81 0.60	0.82 — —	V	I_F = 1A, T_J = +25°C I_F = 2A, T_J = +25°C I_F = 1A, T_J = +125°C
Leakage Current (Note 7)	I_R	—	0.15	5	μA	V_R = 100V, T_J = +25°C
		—	0.110	5	mA	V_R = 100V, T_J = +125°C
Total Capacitance	C_T	—	28	—	pF	V_R = 4V, f = 1MHz

Notes: 5. Device mounted on 1 x MRP FR-4 PC board, 2oz.
6. Device mounted on 1inch sq. copper pad, 2oz.
7. Short duration pulse test used to minimize self-heating effect.

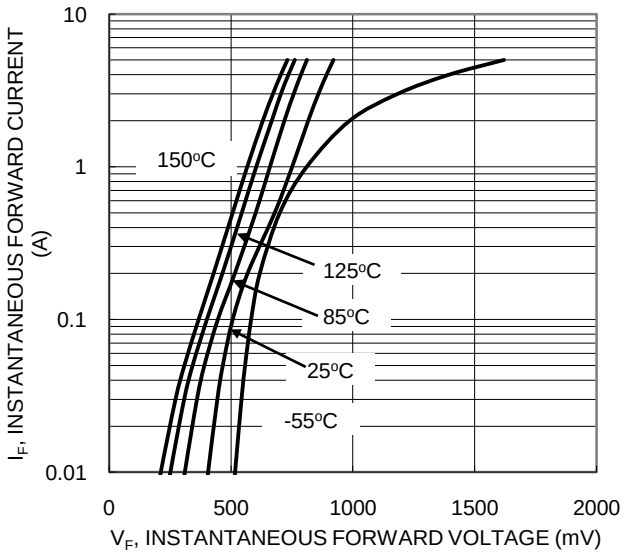

Figure 1. Typical Forward Characteristics

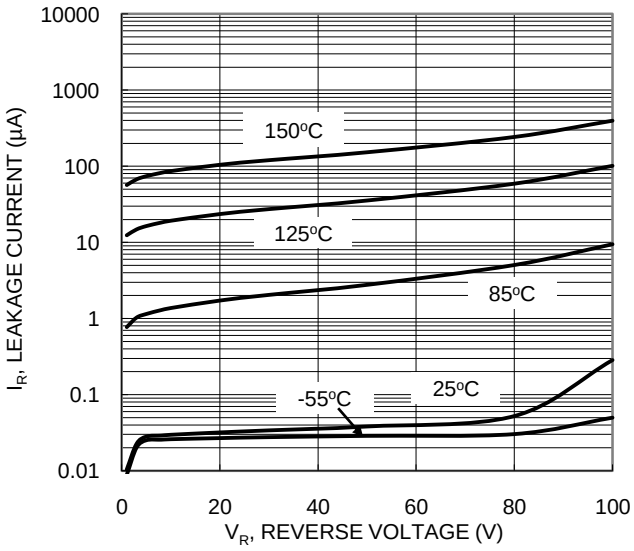

Figure 2. Typical Reverse Characteristics

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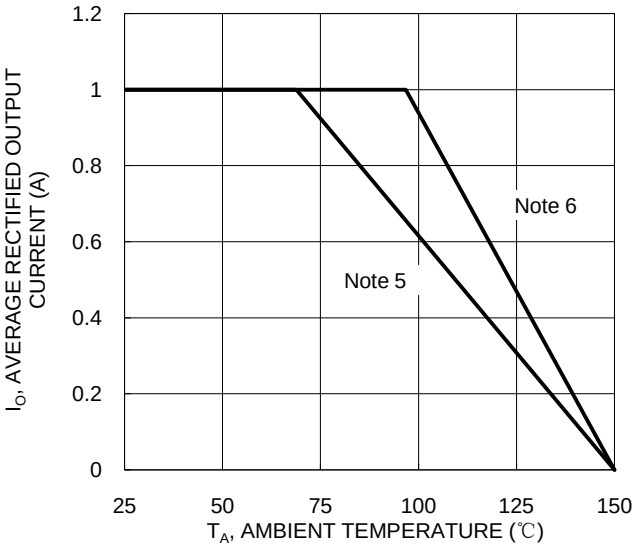


Figure 3. DC Forward Current Derating

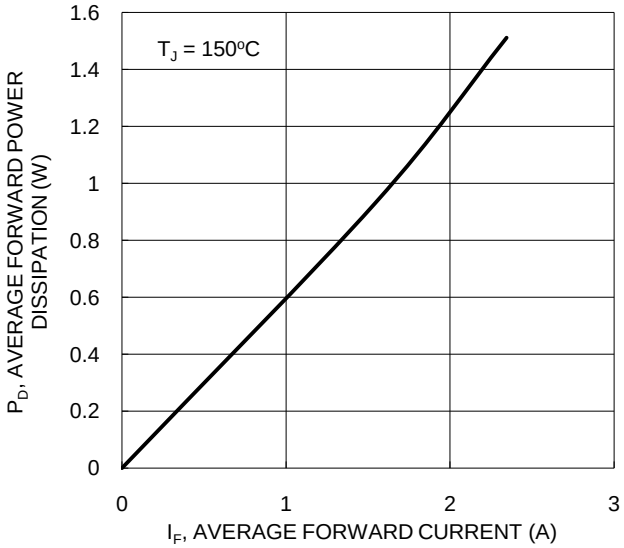


Figure 4. Forward Power Dissipation

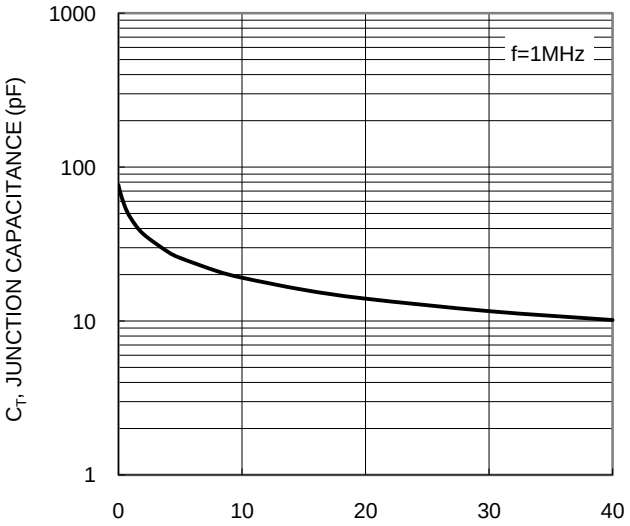
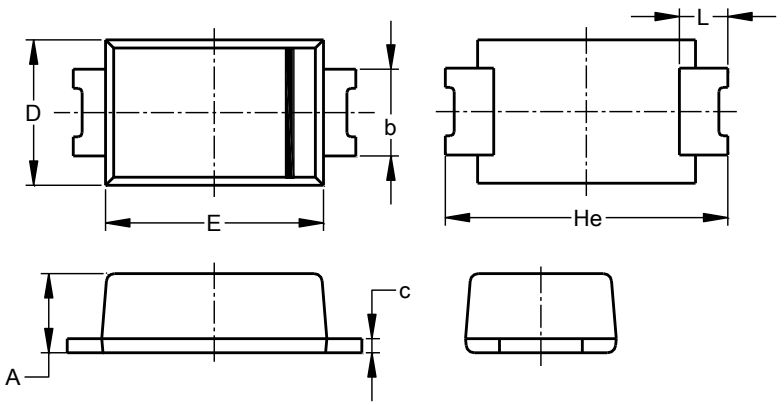


Figure 5. Typical Junction Capacitance

Package Outline Dimensions

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

SOD123F (Type B)



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			

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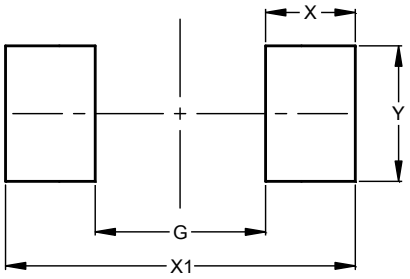
Suggested Pad Layout

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

SOD123F (Type B)



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