NEW PRODUCT

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_R	1200	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}	30	A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Junction to Case (Note 6)	$R_{\theta JC}$	33	°C/W
Typical Thermal Resistance Junction to Ambient (Note 5)	$R_{\theta JA}$	100	°C/W
Typical Thermal Resistance Junction to Ambient (Note 6)	$R_{\theta JA}$	82	°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 7)	$V_{(BR)R}$	1200	—	—	V	I_R = 10μA
Forward Voltage	V_F	—	1.3 1.4 1.5	1.7 1.9 2.0	V	I_F = 0.5A, T_J = +25°C I_F = 0.8A, T_J = +25°C I_F = 1A, T_J = +25°C
Reverse Leakage Current (Note 7)	I_R	—	0.5 10	5 100	μA	V_R = 1200V, T_J = +25°C V_R = 1200V, T_J = +125°C
Reverse Recovery Time	t_{RR}	—	70	80	ns	I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A
Total Capacitance	C_T	—	5	—	pF	V_R = 4V, f=1MHz

Notes:
5. Device mounted on FR-4 substrate, 25.4*25.4mm, 2oz, single-sided, PC boards with 2.1*2.1mm copper.
6. Device mounted on FR-4 substrate, 0.4"*0.5", 2oz, single-sided, PC boards with 0.2"*0.25" copper pad.
7. Short duration pulse test used to minimize self-heating effect.

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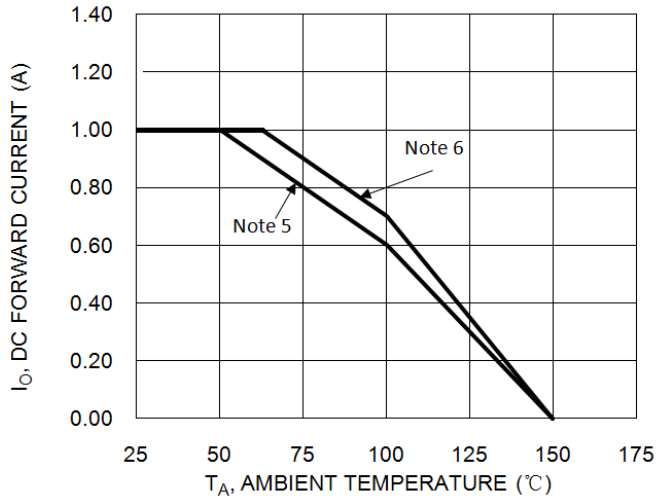

Figure 1. DC Forward Current Derating

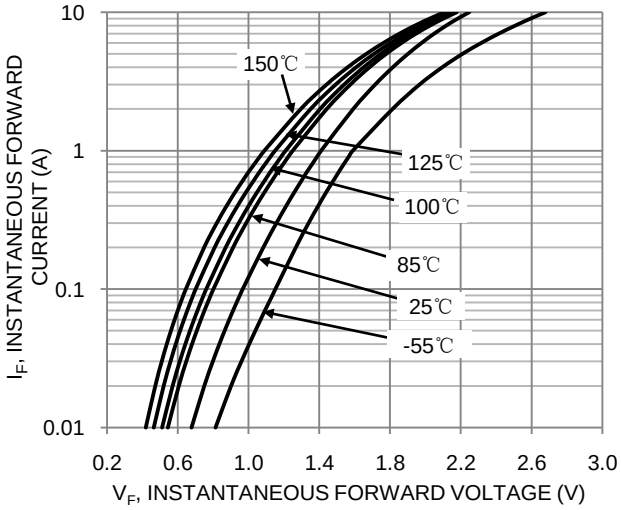

Figure 2. Typical Forward Characteristics

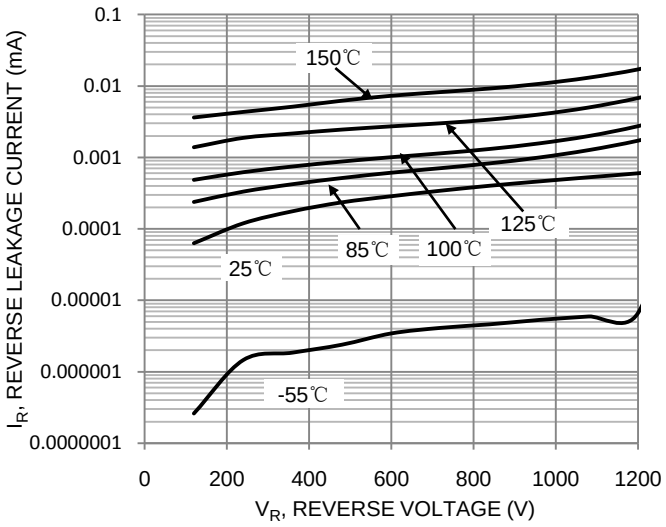

Figure 3. Typical Reverse Characteristics

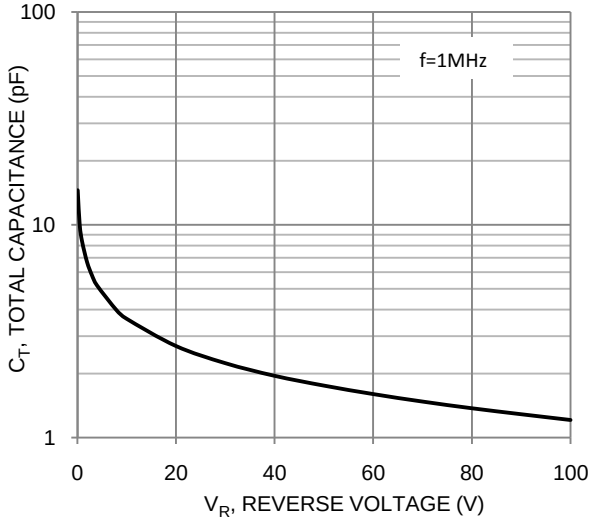

Figure 4. Typical Forward Characteristics

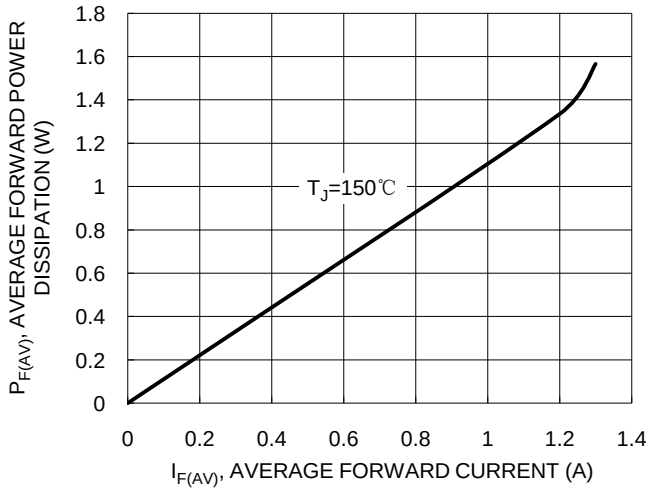

Figure 5. Forward Power Dissipation

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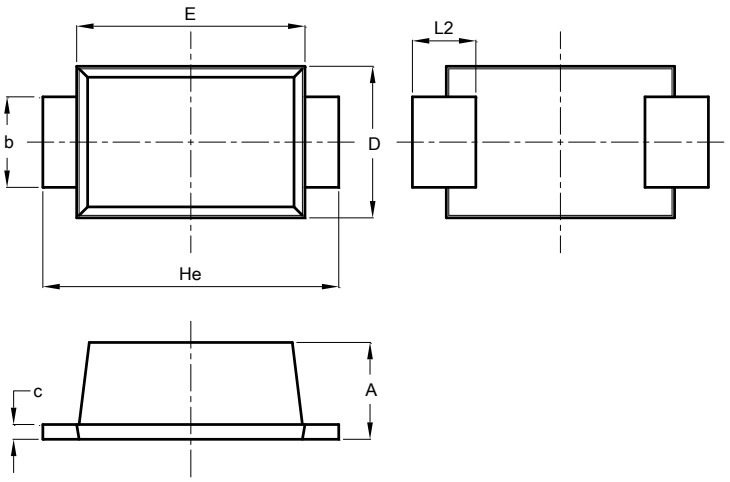
Package Outline Dimensions

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

SOD123F

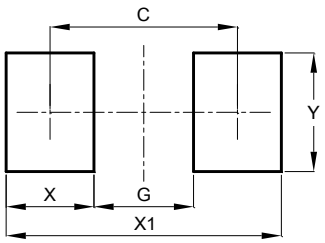


SOD123F			
Dim	**Min**	**Max**	**Typ**
A	0.81	1.15	-
b	0.80	1.05	-
c	0.05	0.30	-
D	1.70	1.90	1.80
E	2.60	2.80	2.70
He	3.30	3.70	3.50
L2	0.35	0.85	-
All Dimensions in mm			

Suggested Pad Layout

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

SOD123F



Dimensions	Value (in mm)
C	2.86
G	1.52
X	1.34
X1	4.20
Y	1.80

NEW PRODUCT

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