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}	400	V
Average Rectified Output Current (See Figure 1)	I_O	1.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	40	A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Maximum Thermal Resistance Junction to Ambient (Note 5)	$R_{\theta JA}$	217	°C/W
Maximum Thermal Resistance Junction to Ambient (Note 6)	$R_{\theta JA}$	138	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150	°C

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage	V_F	— —	0.82 —	0.90 0.80	V	I_F = 1.0A, T_J = +25°C I_F = 1.0A, T_J = +125°C
Reverse Current (Note 7)	I_R	—	— 0.013 0.073	0.05 0.36 2	mA	V_R = 400V, T_J = +25°C V_R = 400V, T_J = +85°C V_R = 400V, T_J = +125°C
Reverse Recovery Time	t_{RR}	—	—	85	ns	I_F = 0.5A, I_R = 1A, I_{RR} = 0.25A

Notes: 5. FR-4 PCB, 2 oz. Copper, minimum recommended pad layout per http://www.diodes.com/package-outlines.html.
6. Polymide PCB, 2 oz. Copper, minimum recommended pad layout per http://www.diodes.com/package-outlines.html.
7. Short duration pulse test used to minimize self-heating effect.

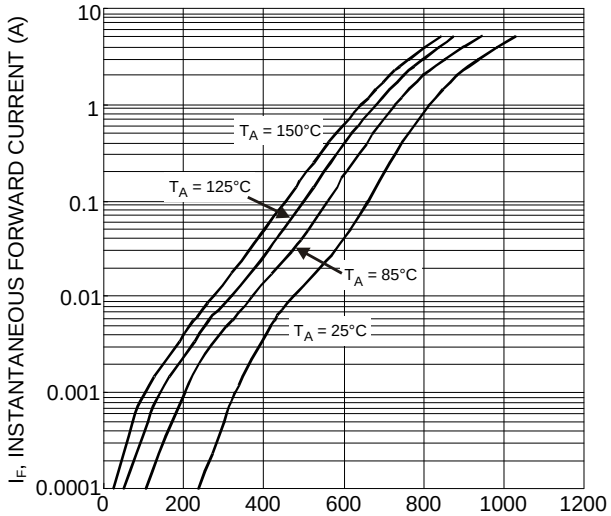


Figure 1 Typical Forward Characteristics

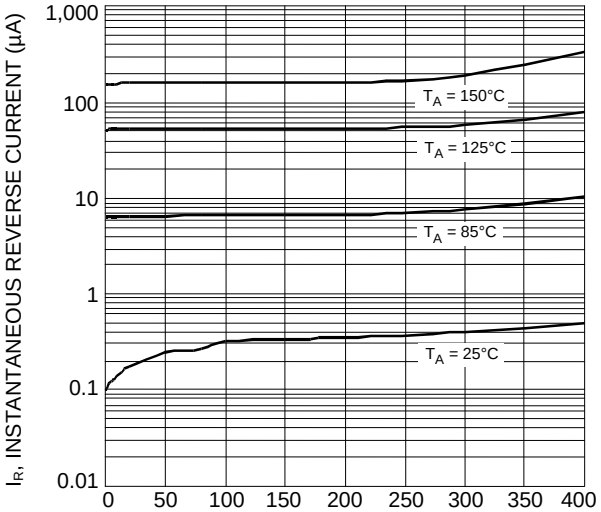


Figure 2 Typical Reverse Characteristics

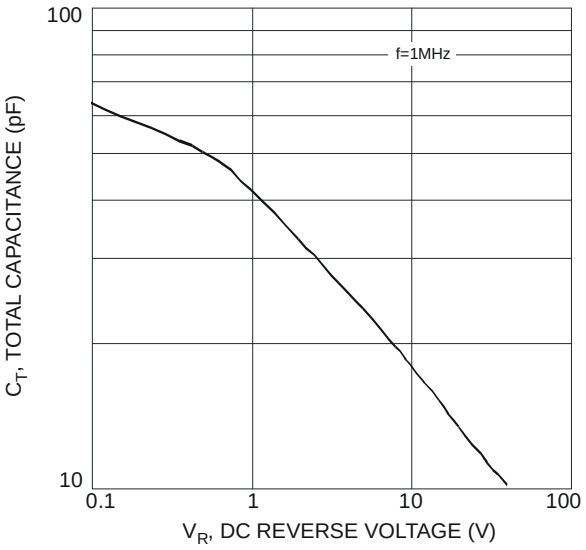


Figure 3 Total Capacitance vs. Reverse Voltage

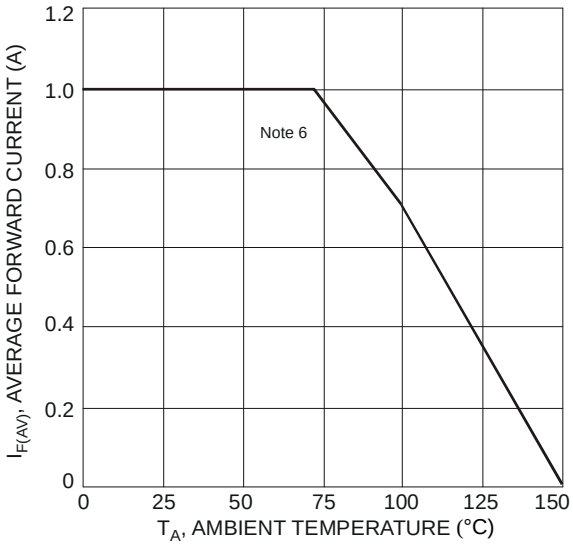


Figure 4 Forward Current Derating Curve

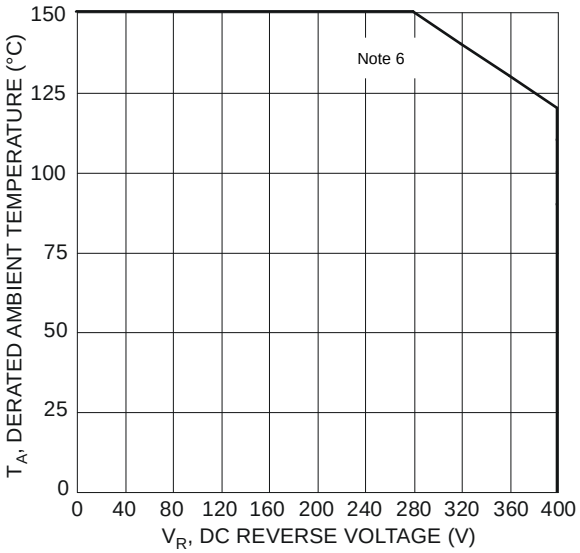
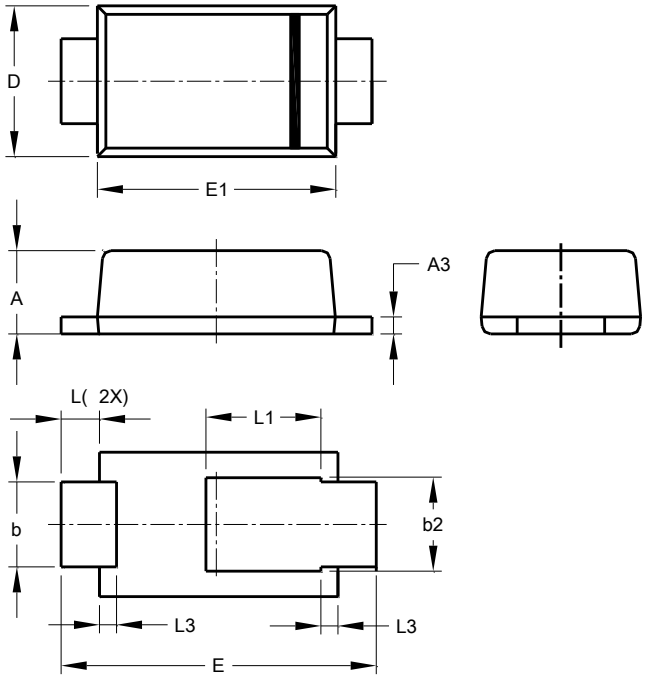


Figure 5 Operating Temperature Derating

Package Outline Dimensions

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

PowerDI123

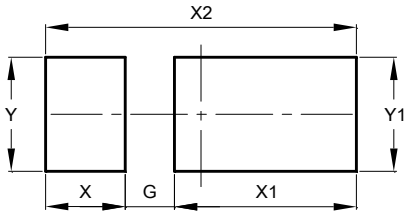


PowerDI123			
Dim	**Min**	**Max**	**Typ**
A	0.93	1.00	0.98
A3	0.15	0.25	0.20
b	0.85	1.25	1.00
b2	1.025	1.125	1.10
D	1.63	1.93	1.78
E	3.50	3.90	3.70
E1	2.60	3.00	2.80
L	0.40	0.50	0.45
L1	1.25	1.40	1.35
L3	0.125	0.275	0.20
All Dimensions in mm			

Suggested Pad Layout

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

PowerDI123



Dimensions	Value (in mm)
G	0.65
X	1.05
X1	2.40
X2	4.10
Y	1.50
Y1	1.50

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