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_R	60	V
RMS Reverse Voltage	$V_{R(RMS)}$	42	V
Average Forward Current	$I_{F(AV)}$	1.0	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	Typ	Max	Unit
Thermal Resistance Junction to Soldering Point (Note 8)	$R_{\theta JS}$	—	6	°C/W
Thermal Resistance Junction to Ambient (Note 9)	$R_{\theta JA}$	125	—	°C/W
Typical Thermal Resistance (Note 7)	$R_{\theta JC}$	—	18	°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
Reverse Breakdown Voltage (Note 5)	$V_{(BR)R}$	60	—	—	V	I_R = 0.2mA
Forward Voltage	V_F	—	—	0.50	V	I_F = 1.0A
Leakage Current (Note 5)	I_R	—	—	0.1	mA	V_R = 60V, T_A = +25°C
Total Capacitance	C_T	—	67	—	pF	V_R = 10V, f = 1.0MHz

Notes:
5. Short duration pulse test to minimize self-heating effect
6. Part mounted on 50.8mm*50.8mm GETEK board with 25.4mm*25.4mm copper pad,25% anode,75% cathode. T_A = +25°C.
7. Part mounted on FR-4 board with 1.8mm X 2.5mm cathode and 1.8mm X 1.2mm anode, 1 oz. copper pads. T_A = +25°C.
8. Theoretical $R_{\theta JS}$ calculated from the top center of the die straight down to the PCB/cathode tab solder junction.
9. Device mounted on Polymide substrate, 1" x 1" 2oz copper double-sided PC board with minimum recommended pad layout, which can be found on our website at http://www.diodes.com.

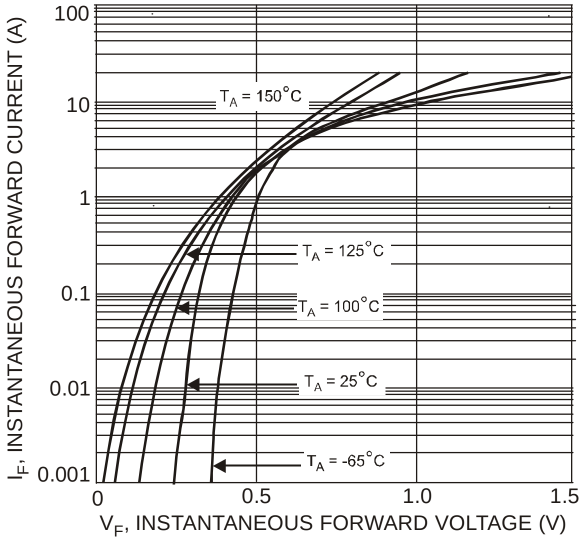


Fig. 1 Typical Forward Characteristics

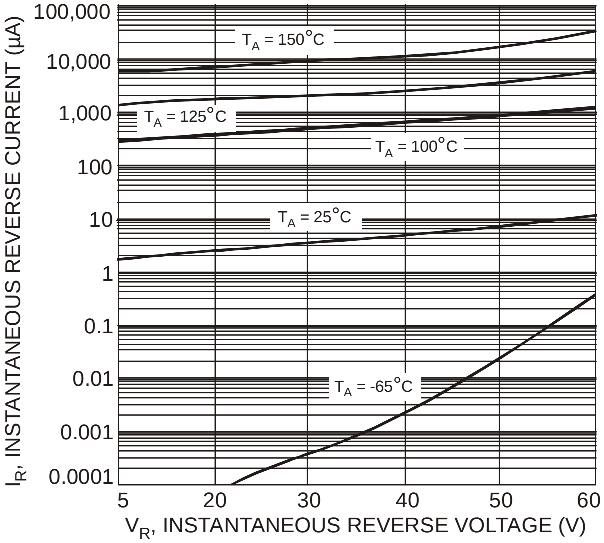


Fig. 2 Typical Reverse Characteristics

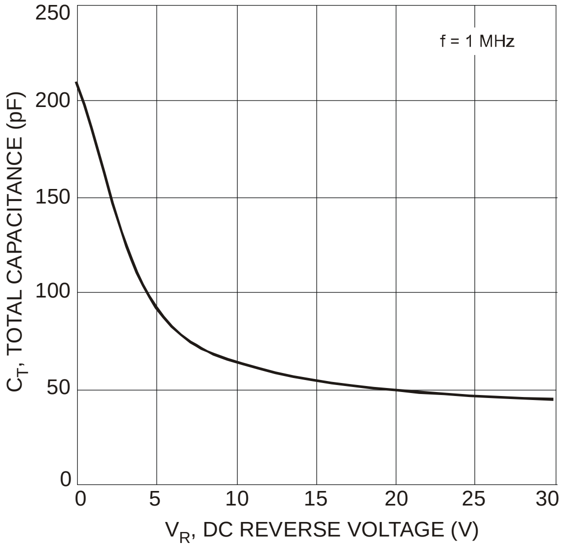


Fig. 3 Total Capacitance vs. Reverse Voltage

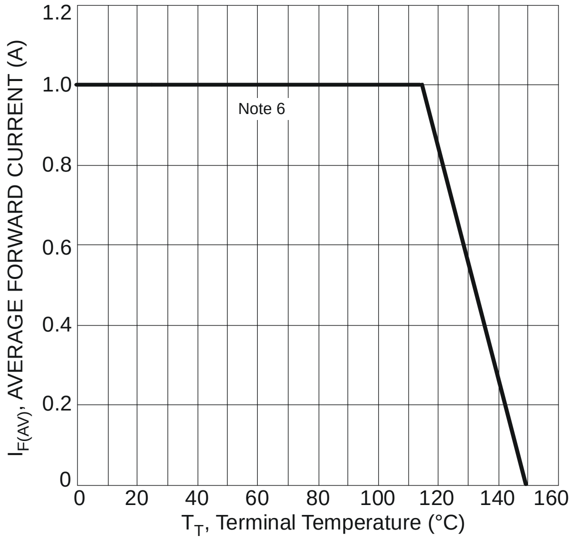
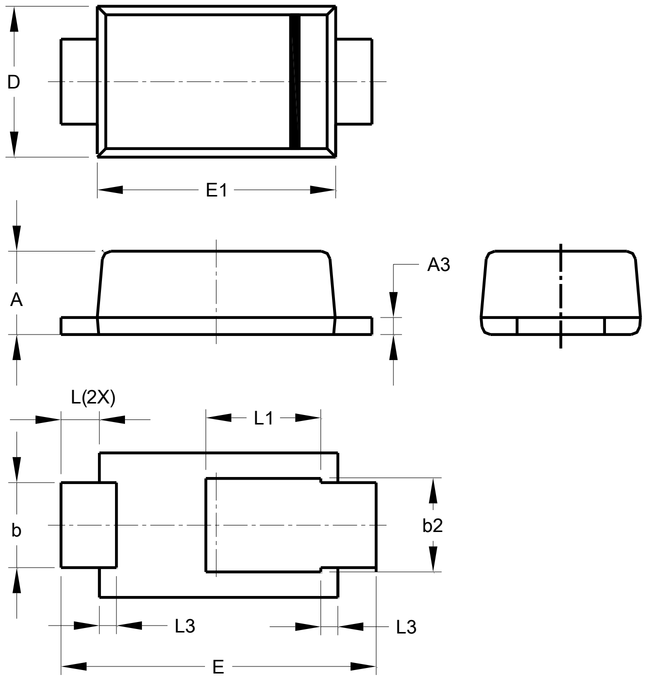


Fig.4 Forward Current Derating (Note 4)

Package Outline Dimensions

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

PowerDI123

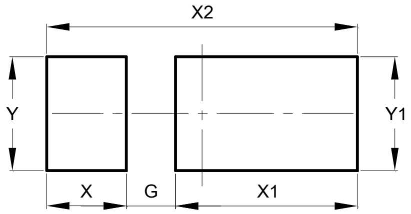


PowerDI123			
Dim	**Min**	**Max**	**Typ**
A	0.93	1.00	0.98
A3	0.15	0.25	0.20
b	0.85	1.25	1.00
b2	1.025	1.125	1.10
D	1.63	1.93	1.78
E	3.50	3.90	3.70
E1	2.60	3.00	2.80
L	0.40	0.50	0.45
L1	1.25	1.40	1.35
L3	0.125	0.275	0.20
All Dimensions in mm			

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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