

## Maximum Ratings (@T<sub>A</sub> = +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 <sub>RRM</sub>	200	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>RM</sub>		
Average Rectified Output Current (See Figure 1)	I <sub>O</sub>	1.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	40	A

## Thermal Characteristics

Characteristic	Symbol	Value	Unit
Maximum Thermal Resistance Junction to Ambient (Note 5)	R <sub>θJA</sub>	217	°C/W
Maximum Thermal Resistance Junction to Ambient (Note 6)	R <sub>θJA</sub>	138	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +175	°C

## Electrical Characteristics (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage	V <sub>F</sub>	-	0.75 0.60	0.82 0.68	V	I <sub>F</sub> = 1.0A, T <sub>J</sub> = +25°C I <sub>F</sub> = 1.0A, T <sub>J</sub> = +125°C
Reverse Current (Note 7)	I <sub>R</sub>	-	-	50	μA	V <sub>R</sub> = 200V, T <sub>J</sub> = +25°C
Reverse Recovery Time	t <sub>RR</sub>	-	-	25	ns	I <sub>F</sub> = 0.5A, I <sub>R</sub> = 1A, I <sub>RR</sub> = 0.25A

Notes: 5. FR-4 PCB, 2 oz. Copper, minimum recommended pad layout per <http://www.diodes.com/package-outlines.html>.  
6. Polyimide 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.

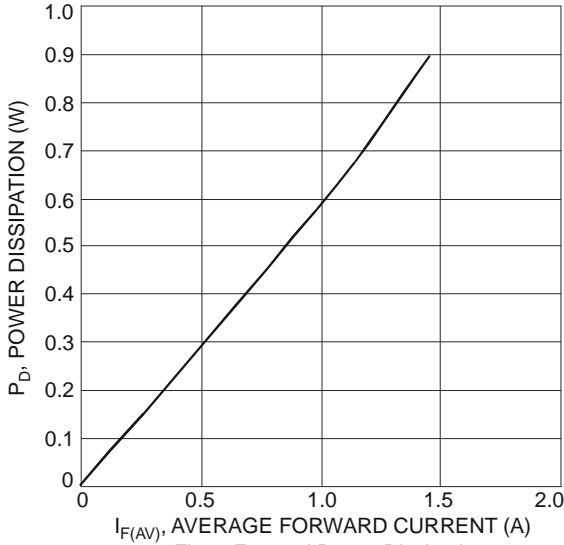


Fig. 1 Forward Power Dissipation

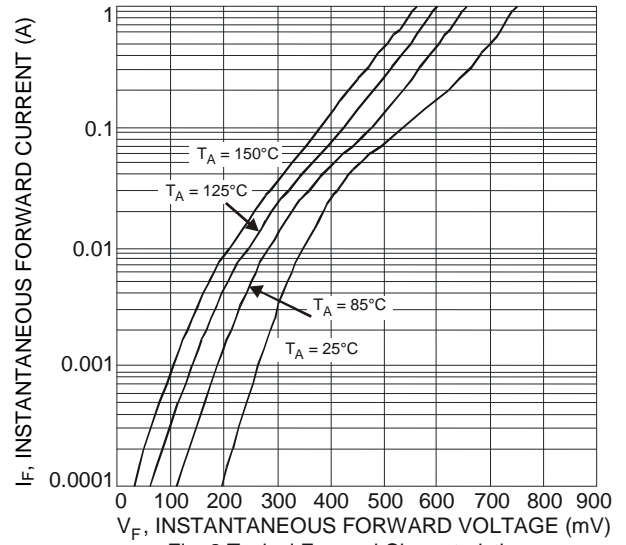


Fig. 2 Typical Forward Characteristics

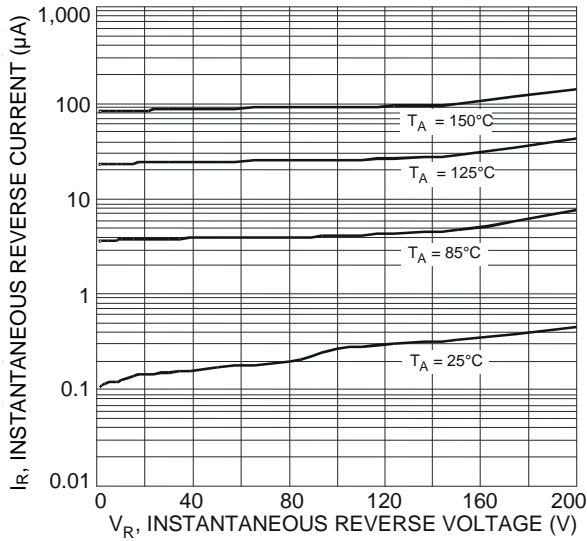


Fig. 3 Typical Reverse Characteristics

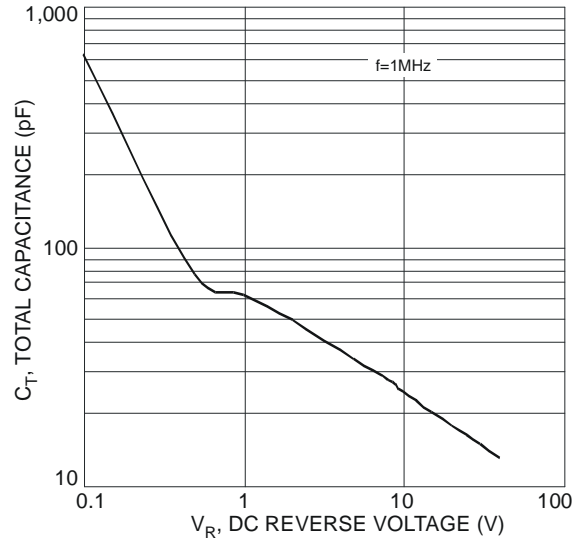


Fig. 4 Total Capacitance vs. Reverse Voltage

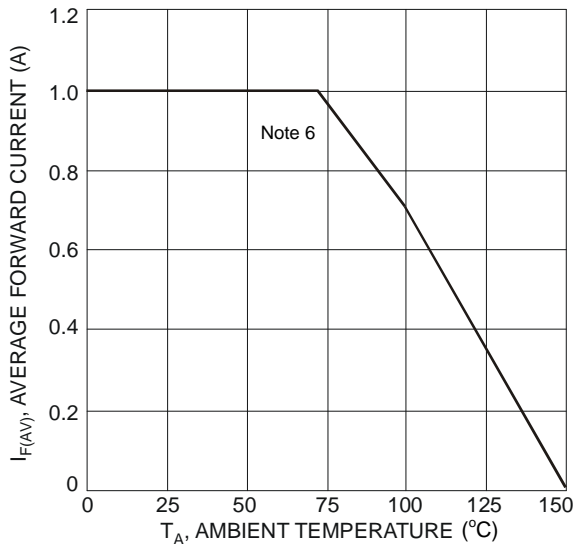


Fig. 5 Forward Current Derating Curve

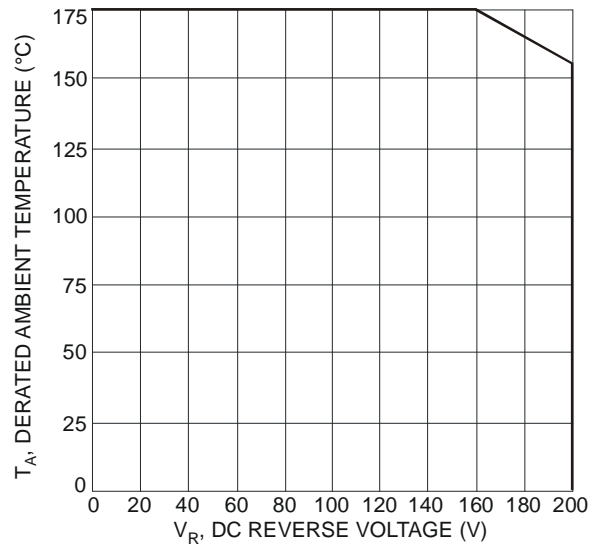
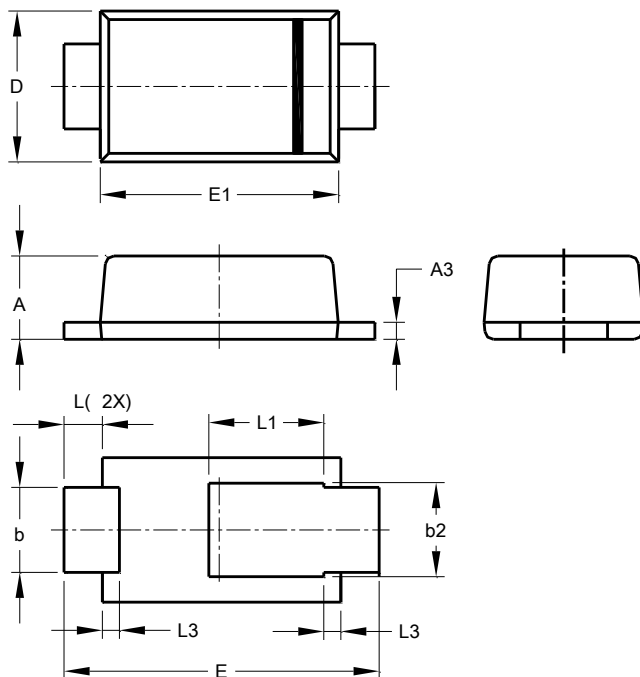


Fig. 6 Operating Temperature Derating

## Package Outline Dimensions

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

### PowerDI123

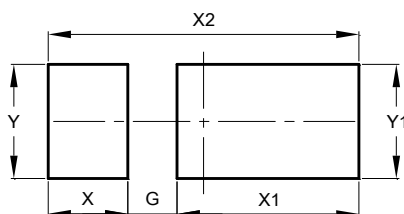


PowerDI123			
Dim	Min	Max	Typ
A	0.93	1.00	0.98
A3	0.15	0.25	0.20
b	0.85	1.25	1.00
b2	1.025	1.125	1.10
D	1.63	1.93	1.78
E	3.50	3.90	3.70
E1	2.60	3.00	2.80
L	0.40	0.50	0.45
L1	1.25	1.40	1.35
L3	0.125	0.275	0.20
All Dimensions in mm			

## 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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