

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	V _{RRM}	400	V
Working Peak Reverse Voltage	V _{RWM}		
DC Blocking Voltage	V _{RM}		
Average Rectified Output Current (See Figure 1)	I _O	6	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	220	A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Maximum Thermal Resistance Junction to Ambient (Note 3)	R _{θJA}	30	°C/W
Maximum Thermal Resistance Junction to Case (Note 4)	R _{θJC}	2.5	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +175	°C

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop	V _F	-	0.83	-	V	I _F = 5A, T _J = 25°C
		-	0.85	0.91		I _F = 6A, T _J = 25°C
		-	0.72	0.77		I _F = 6A, T _J = 125°C
Leakage Current (Note 5)	I _R	-	0.8	50	μA	V _R = 400V, T _J = 25 °C
		-	-	5	mA	V _R = 400V, T _J = 125 °C
Reverse Recovery Time	t _{rr}	-	120	-	nS	I _F = 0.5A, I _R = 1.0A, I _{RR} = 0.25A
Junction Capacitance	C _J	-	100	-	pF	V _R = 4.0V, f = 1MHz

Notes: 3. FR-4 PCB, 2 oz. Copper, minimum recommended pad layout per <http://www.diodes.com>.
 4. Device mounted on Polyimide substrate PC board, 16*MRP layout <http://www.diodes.com>.
 5. Short duration pulse test used to minimize self-heating effect.

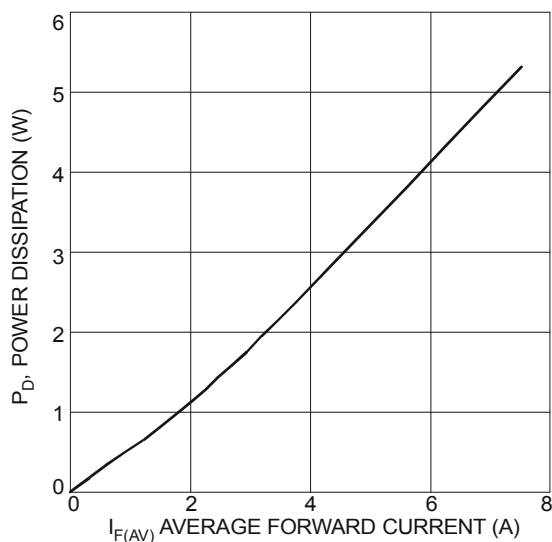


Fig. 1 Forward Power Dissipation

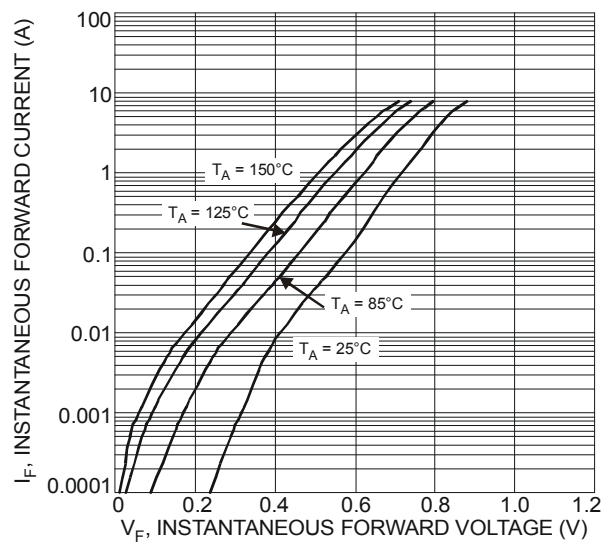


Fig. 2 Typical Forward Characteristics

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Document number: DS35582 Rev. 2 - 2

2 of 4

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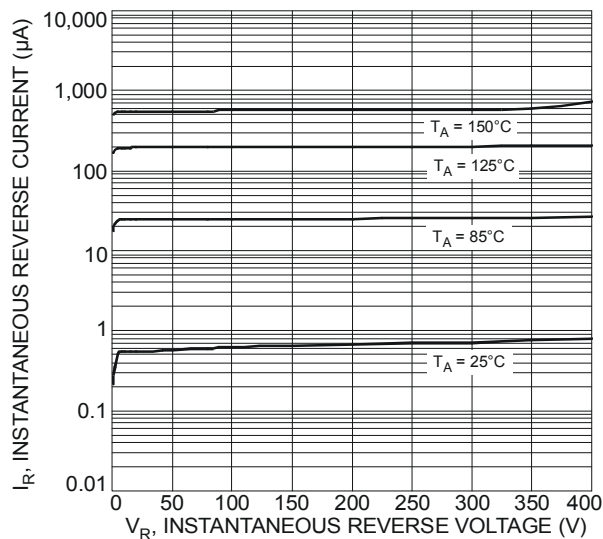


Fig. 3 Typical Reverse Characteristics

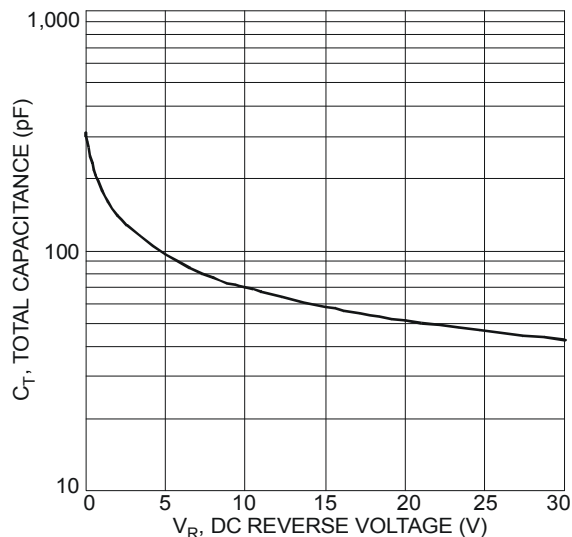


Fig. 4 Total Capacitance vs. Reverse Voltage

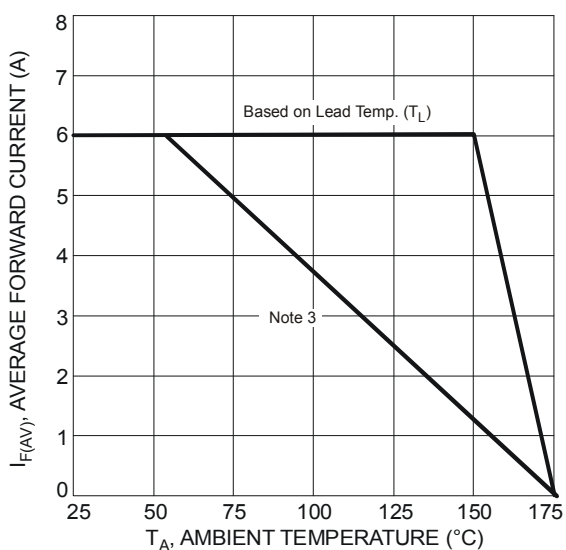
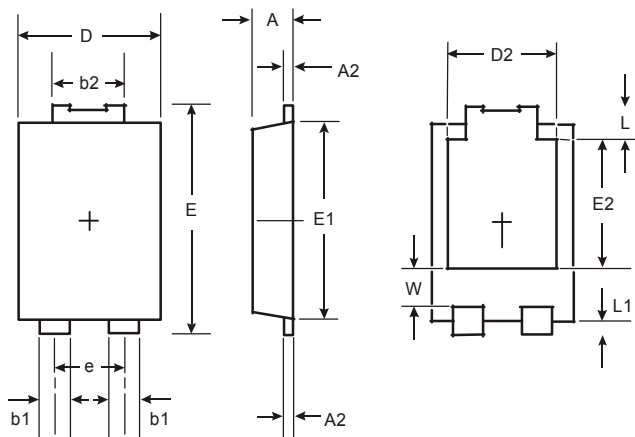


Fig. 5 Forward Current Derating Curve

Package Outline Dimensions



POWERDI [®] 5		
Dim	Min	Max
A	1.05	1.15
A2	0.33	0.43
b1	0.80	0.99
b2	1.70	1.88
D	3.90	4.05
D2	3.054 Typ	
E	6.40	6.60
e	1.84 Typ	
E1	5.30	5.45
E2	3.549 Typ	
L	0.75	0.95
L1	0.50	0.65
W	1.10	1.41
All Dimensions in mm		

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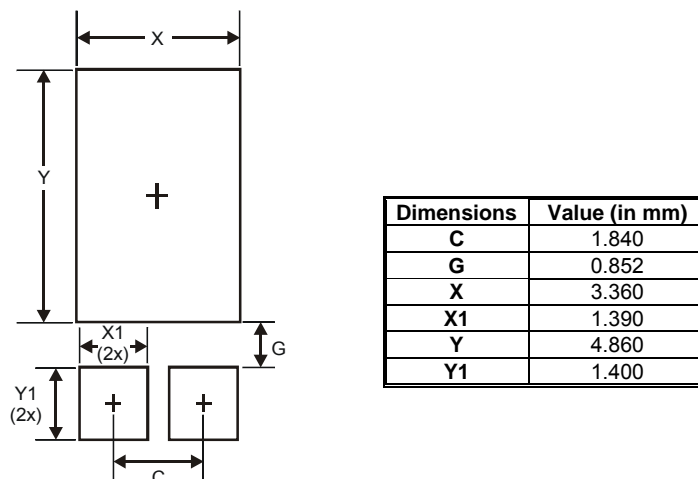
Document number: DS35582 Rev. 2 - 2

3 of 4

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Suggested Pad Layout



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Document number: DS35582 Rev. 2 - 2

4 of 4

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