Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM}	50	V
Average Rectified Output Current	I_O	15	A
Non-Repetitive Peak Forward Surge Current 8.3mS Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	290	A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Junction to Ambient (Note 6)	$R_{\theta JA}$	18	°C/W
Typical Thermal Resistance Junction to Case (Note 6)	$R_{\theta JC}$	2	°C/W
Typical Thermal Resistance Junction to Lead (Notes 6, 7)	$R_{\theta JL}$	4	°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
Forward Voltage Drop	V_F	—	0.42	0.50	V	I_F =10A, T_J = +25°C
		—	0.37	0.44		I_F =10A, T_J = +125°C
		—	0.47	0.54		I_F =15A, T_J = +25°C
		—	0.43	0.50		I_F =15A, T_J = +125°C
Leakage Current (Note 8)	I_R	—	0.1	0.15	mA	V_R = 50V , T_J = +25°C
		—	16	45		V_R = 50V , T_J = +125°C
Junction Capacitance	C_J	—	440	—	pF	V_R = 25V , T_J = +25°C

Notes: 6. Device mounted on FR4 PCB with 1inch copper pad layout with AL substrate and additional HK1(37mm x 55mm x15mm).
7. Junction to Lead (Cathode Terminal)
8. Short duration pulse test used to minimize self-heating effect.

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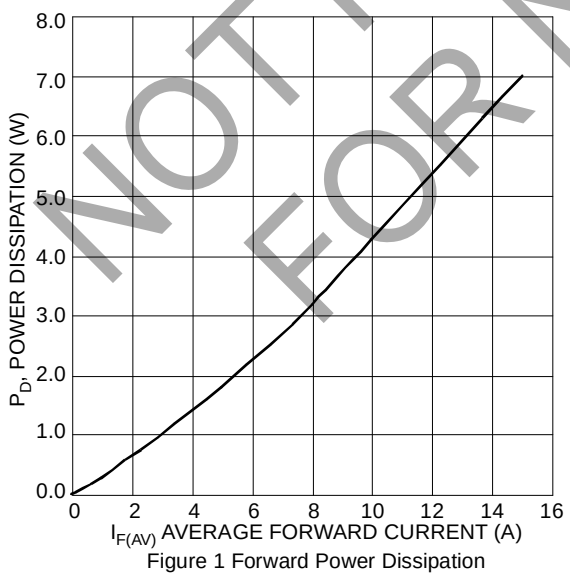

Figure 1 Forward Power Dissipation

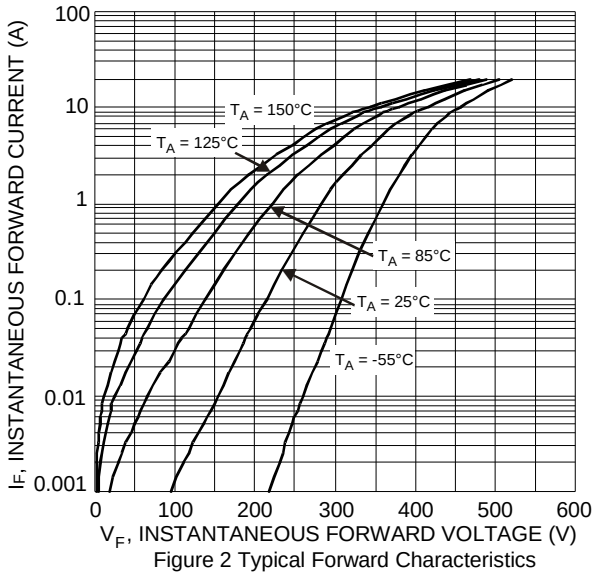

Figure 2 Typical Forward Characteristics

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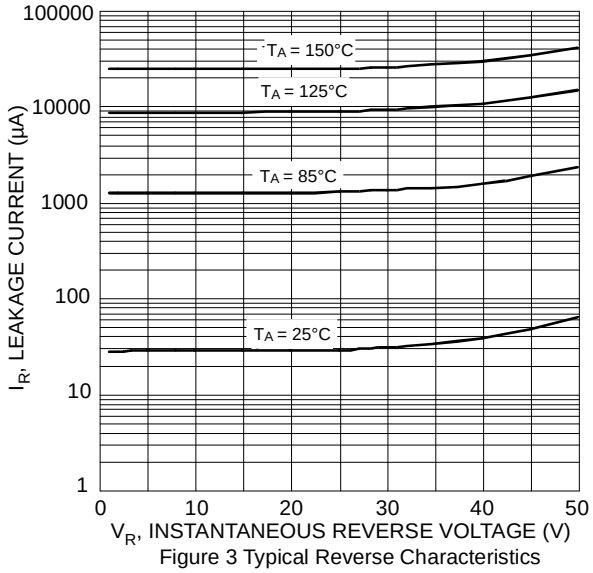

Figure 3 Typical Reverse Characteristics

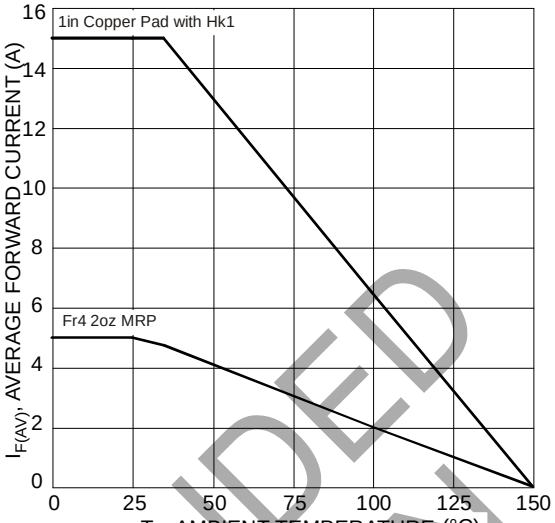

Figure 4 Forward Current Derating Curve

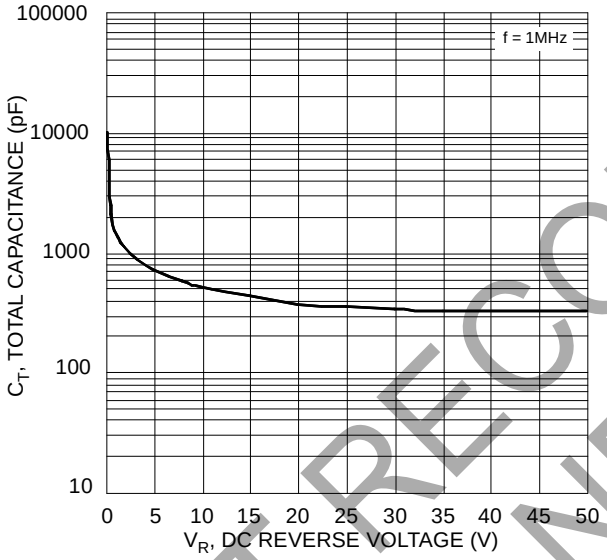

Figure 5 Total Capacitance vs. Reverse Voltage

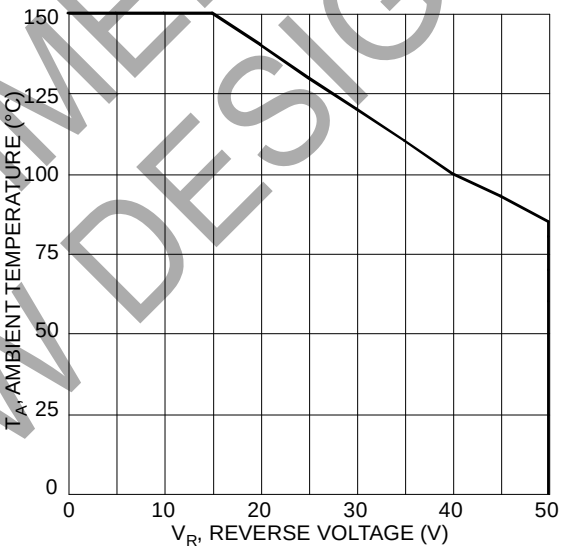

Figure 6 Operating Temperature Derating

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Package Outline Dimensions

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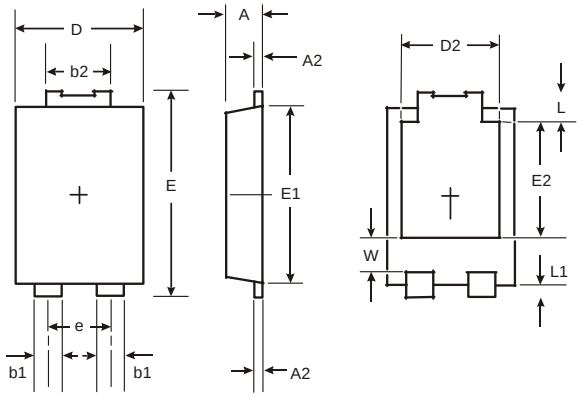
PowerDI5

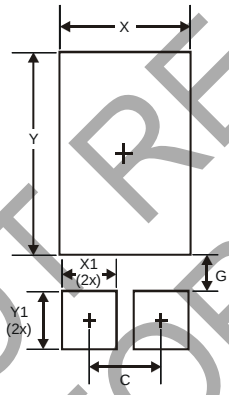


PowerDI5		
Dim	**Min**	**Max**
A	1.05	1.15
A2	0.33	0.43
b1	0.80	0.99
b2	1.70	1.88
D	3.90	4.05
D2	3.054 Typ	
E	6.40	6.60
e	1.84 Typ	
E1	5.30	5.45
E2	3.549 Typ	
L	0.75	0.95
L1	0.50	0.65
W	1.10	1.41
All Dimensions in mm		

Suggested Pad Layout

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

PowerDI5



Dimensions	Value (in mm)
C	1.840
G	0.852
X	3.360
X1	1.390
Y	4.860
Y1	1.400

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