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	Io	15	A
Non-Repetitive Peak Forward Surge Current 8.3ms	I_{FSM}	256	A
Non-Repetitive Avalanche Energy at I_{AS} = 10A, L = 50mH	E_{AS}	1600	mJ
Non-Repetitive Avalanche Energy at I_{AS} = 40A, L = 1mH	E_{AS}	300	mJ
Electrostatic Discharge	HBM	8000	V
Electrostatic Discharge	MM	400	V
Electrostatic Discharge	CDM	1000	V

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance (Note 5)	$R_{\theta JA}$	90	°C/W
Typical Thermal Resistance (Note 6)	$R_{\theta JA}$	39	°C/W
Typical Thermal Resistance (Note 7)	$R_{\theta JL}$	2.5	°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 Drop (Note 8)	V_F	— — — —	— 0.33 0.44 0.40	0.48 — 0.52 —	V	I_F =10A, T_J = +25°C I_F =10A, T_J = +125°C I_F =15A, T_J = +25°C I_F =15A, T_J = +125°C
Leakage Current (Note 8)	I_R	— —	— 50	0.5 —	mA	V_R = 50V , T_J = +25°C V_R = 50V , T_J = +125°C
Junction Capacitance	C_J	—	400	—	pF	V_R = 25V , T_J = +25°C
Switching Speed t_{RR}	t_{RR}	—	50	—	ns	I_F = 0.5A, I_R = 1A, I_{RR} = 0.25A (RG1)

Notes:
5. FR-4 PCB, 2oz. Copper, minimum recommended pad layout per http://www.diodes.com/package-outlines.html.
6. FR-4 PCB, 2oz. Copper. Cathode pad dimensions 18.8mm x 14.4mm. Anode pad dimensions 5.6mm x 14.4mm.
7. Junction to Lead (Cathode Terminal).
8. Short duration pulse test used to minimize self-heating effect.

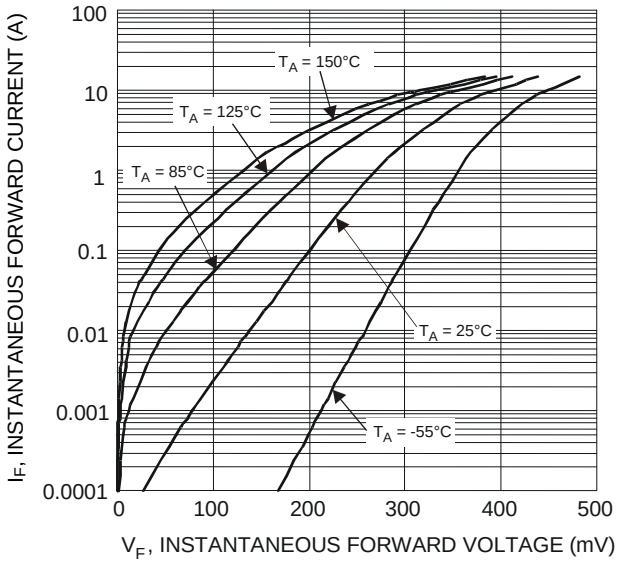


Figure 1 Typical Forward Characteristics

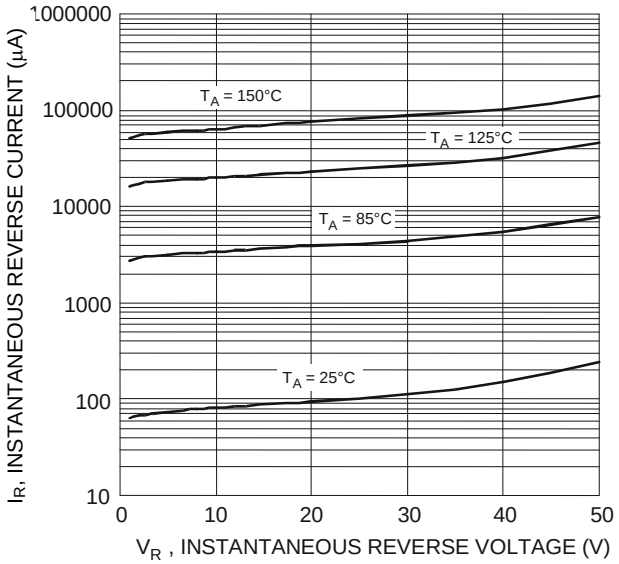


Figure 2 Typical Reverse Characteristics

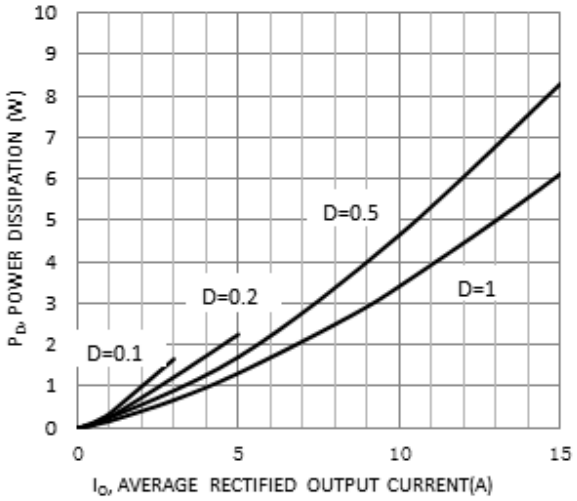


Figure 3. Forward Power Dissipation T_J=125°C

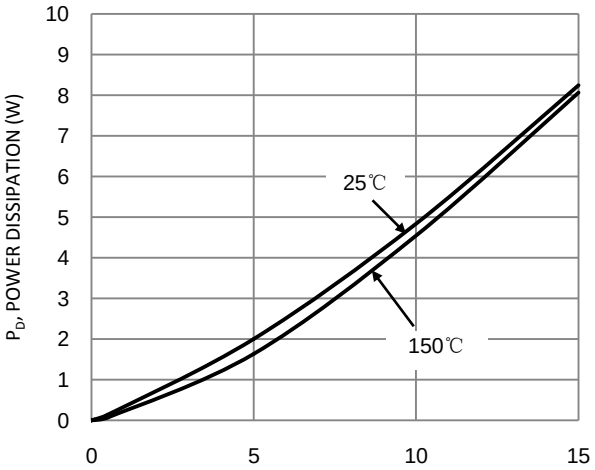


Figure 4 Forward Power Dissipation D=0.5

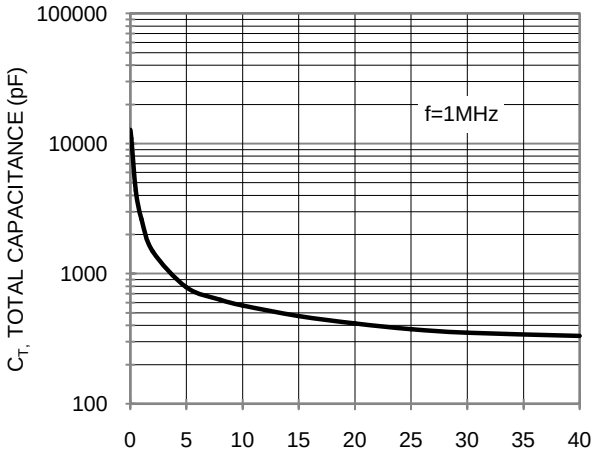


Figure 5 Total Capacitance vs. Reverse Voltage

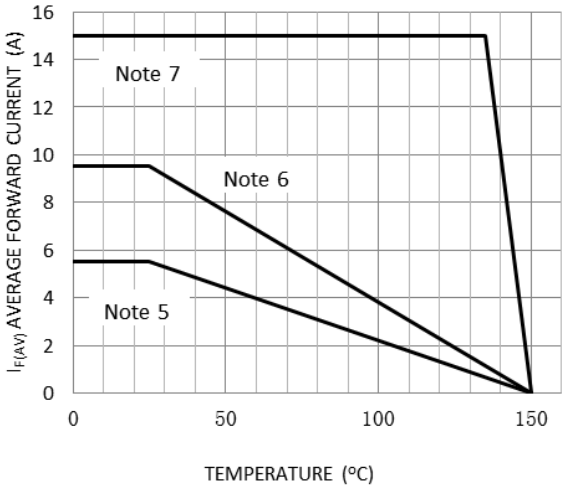


Figure 6 Forward Current Derating Curve D=1

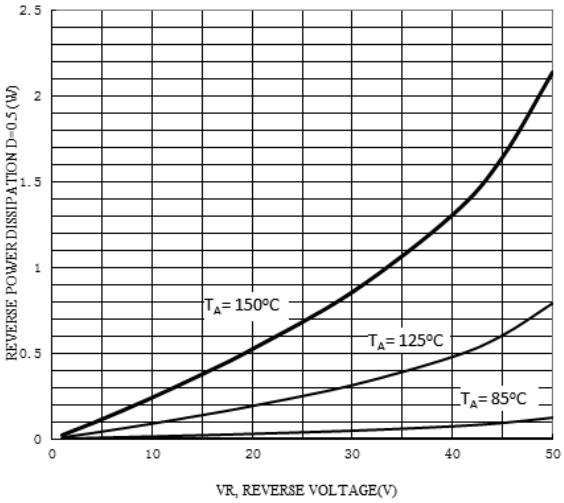


Figure7 Reverse power dissipation D=0.5

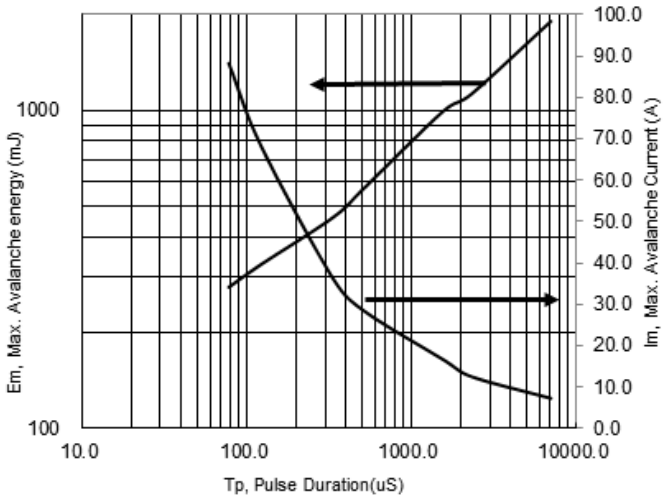


Figure 8: Single pulse Max. Avalanche Energy and Current

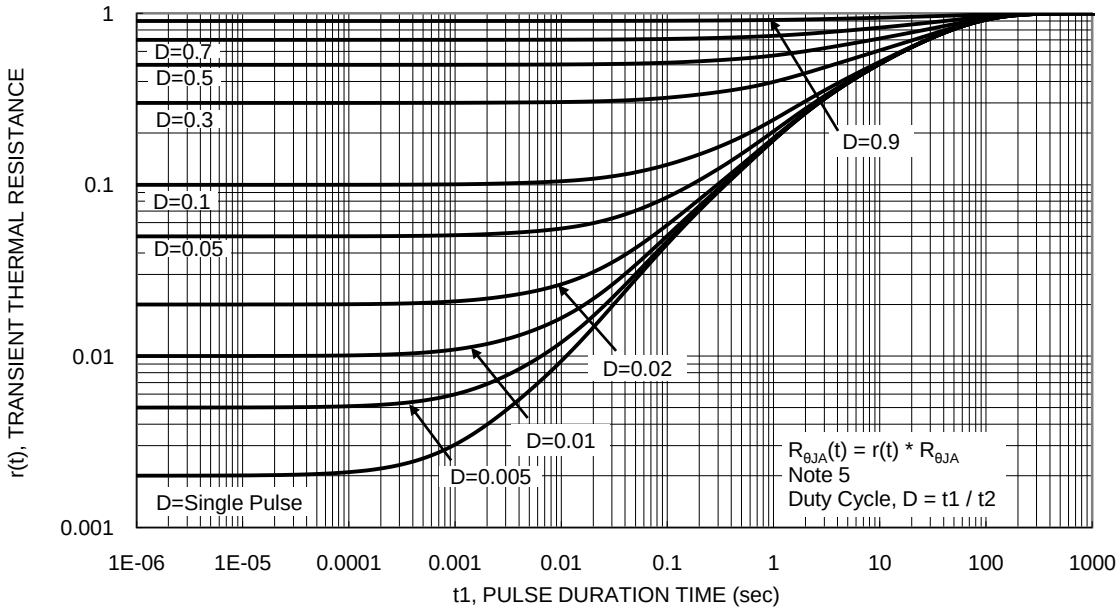
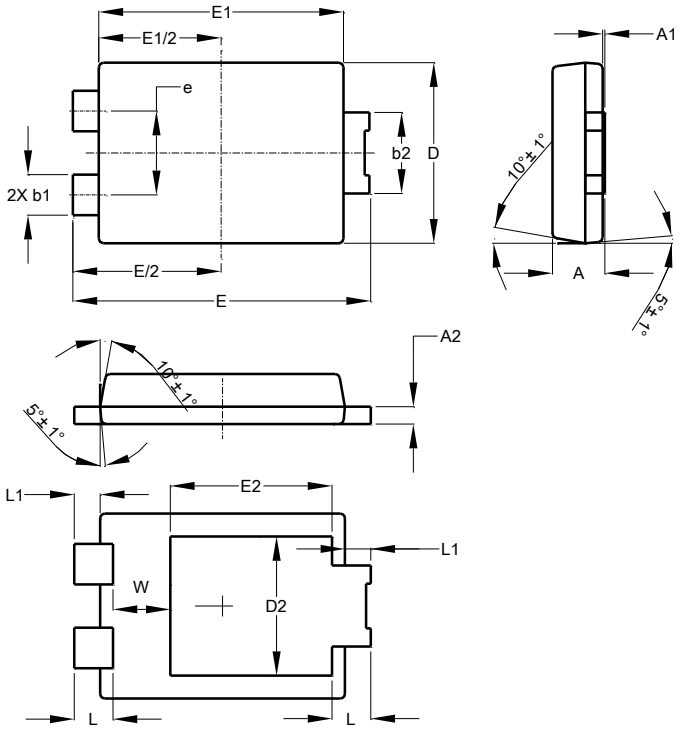


Figure 9. Transient Thermal Resistance

Package Outline Dimensions

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

PowerDI5

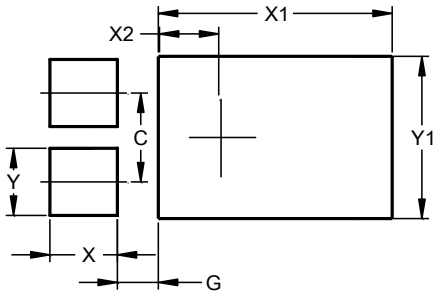


PowerDI5			
Dim	**Min**	**Max**	**Typ**
A	1.05	1.15	1.10
A1	0.00	0.05	--
A2	0.33	0.43	0.381
b1	0.80	0.99	0.89
b2	1.70	1.88	1.78
D	3.90	4.05	3.966
D2	--	--	3.054
E	6.40	6.60	6.51
e	--	--	1.84
E1	5.30	5.45	5.37
E2	--	--	3.549
L	0.75	0.95	0.85
L1	0.50	0.65	0.57
W	1.10	1.41	1.255
All Dimensions in mm			

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	1.400
X1	4.860
X2	1.310
Y	1.390
Y1	3.360

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