Maximum Ratings (@ T_A = +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 Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	200	V
RMS Reverse Voltage	$V_{R(RMS)}$	141	V
Average Rectified Output Current	I_O	4	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load	I_{FSM}	100	A
Electrostatic Discharge	HBM	4	kV
Electrostatic Discharge	CDM	1	kV

Thermal Characteristics (Note 5)

Characteristic	Symbol	Typ	Max	Unit
Thermal Resistance Junction to Soldering Point	$R_{\theta JS}$	—	3.0	°C/W
Thermal Resistance Junction to Ambient Air (Note 6)	$R_{\theta JA}$	80	—	°C/W
Thermal Resistance Junction to Ambient Air (Note 7)	$R_{\theta JA}$	65	—	°C/W
Thermal Resistance Junction to Ambient Air (Note 8)	$R_{\theta JA}$	45	—	°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
Reverse Breakdown Voltage (Note 9)	$V_{(BR)R}$	200	—	—	V	I_R = 5μA
Forward Voltage	V_F	— — — — — —	0.76 — 0.785 0.61 0.84 0.68	0.82 0.59 0.84 0.64 0.89 0.75	V	I_F = 3A, T_S = +25°C I_F = 3A, T_S = +150°C I_F = 4A, T_S = +25°C I_F = 4A, T_S = +150°C I_F = 8A, T_S = +25°C I_F = 8A, T_S = +150°C
Reverse Leakage Current (Note 9)	I_R	— —	0.2 0.8	1 4	μA mA	T_S = +25°C, V_R = 200V T_S = +150°C, V_R = 200V
Reverse Recovery Time	t_{RR}	—	13	25	ns	I_F = 0.5A, I_R = 1.0A I_{RR} = 0.25A (See Figure 9)

Notes:
5. The heat generated must be less than thermal conductivity from junction-to-ambient: dPD/DTJ < 1/RthJA
6. FR-4 PCB, 2 oz. Copper, minimum recommended pad layout per http://www.diodes.com/package-outlines.html.
7. Polymide PCB, 2 oz. Copper, minimum recommended pad layout per http://www.diodes.com/package-outlines.html.
8. Polymide PCB, 2 oz. Copper. Cathode pad dimensions 9.4mm x 7.2mm. Anode pad dimensions 2.7mm x 1.6mm.
9. Short duration test pulse used to minimize self-heating effect.

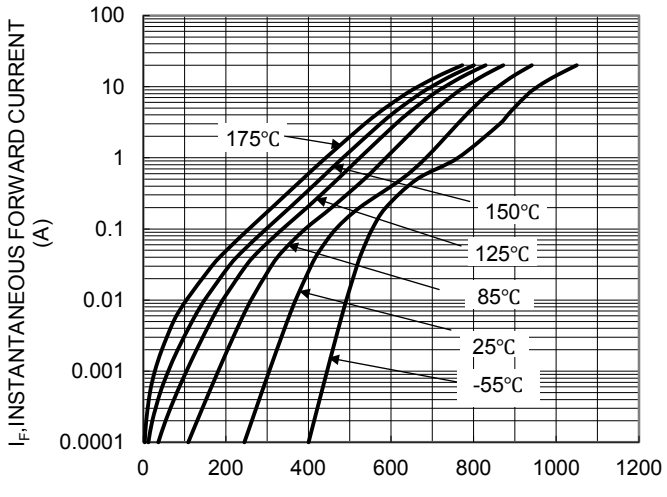


Figure 1. Typical Forward Characteristics

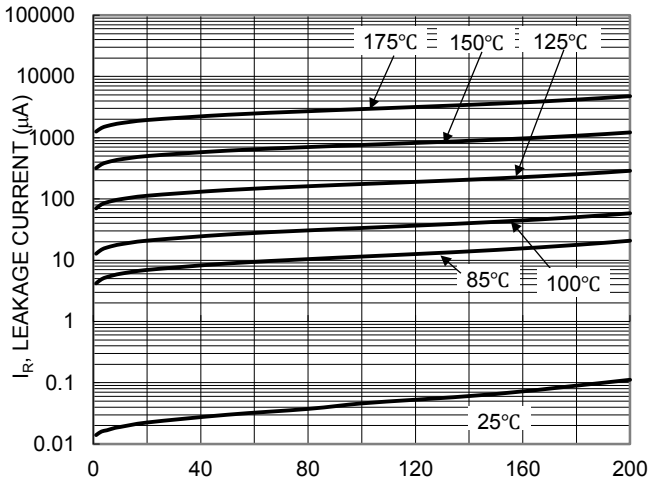


Figure 2. Typical Reverse Characteristics

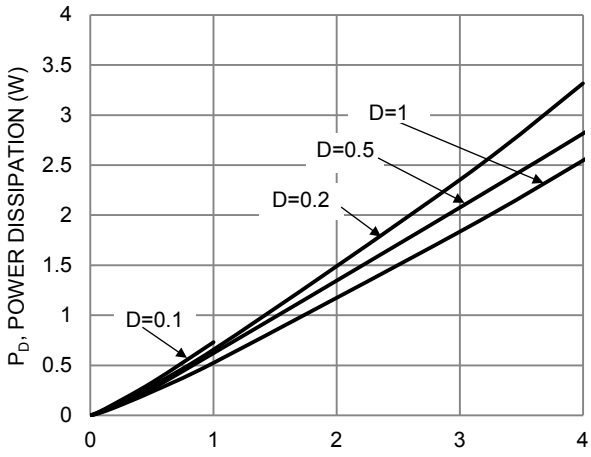


Figure 3. Forward Power Dissipation T_J=125ºC

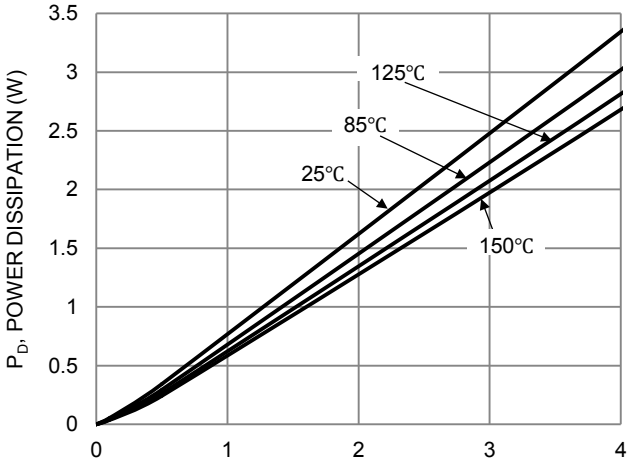


Figure 4. Forward Power Dissipation D=0.5

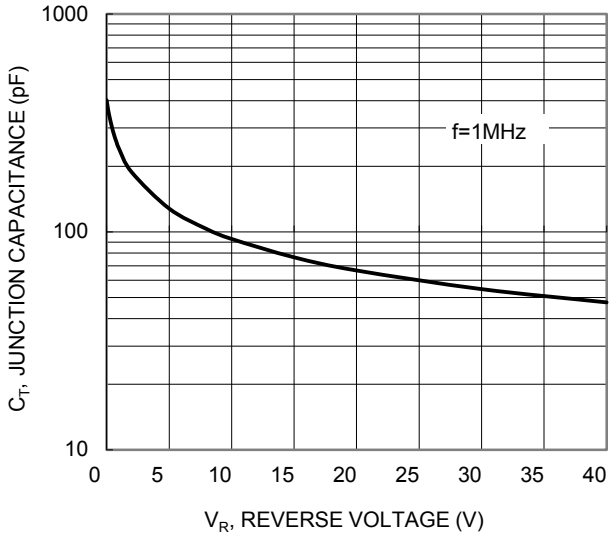


Figure 5. Typical Junction Capacitance

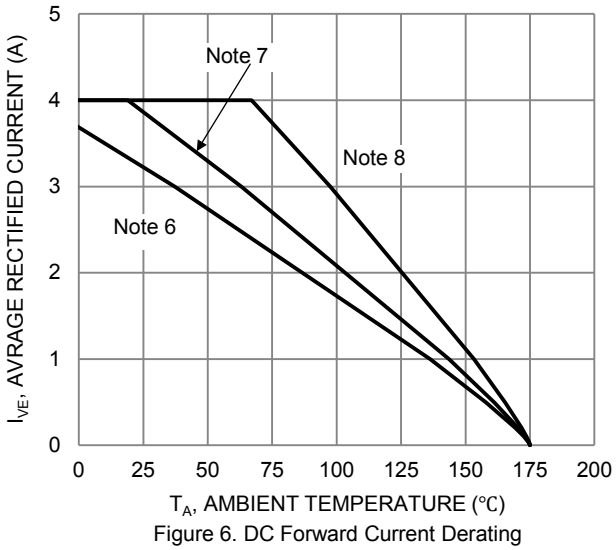


Figure 6. DC Forward Current Derating

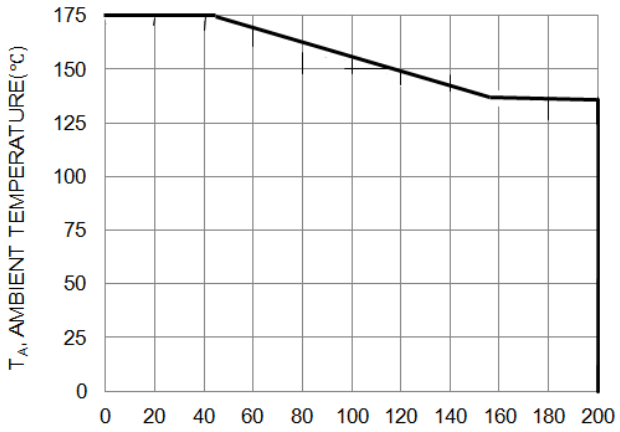


Figure 7. Operating Temperature Derating

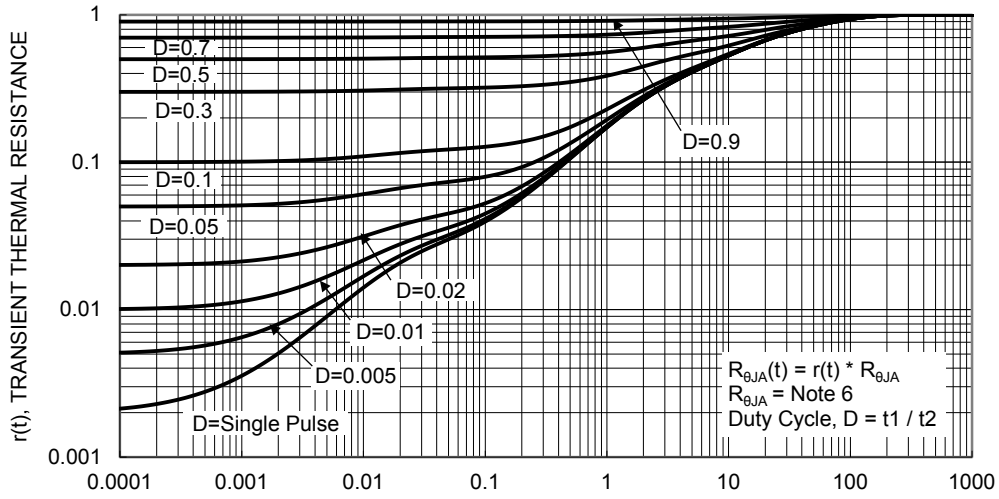
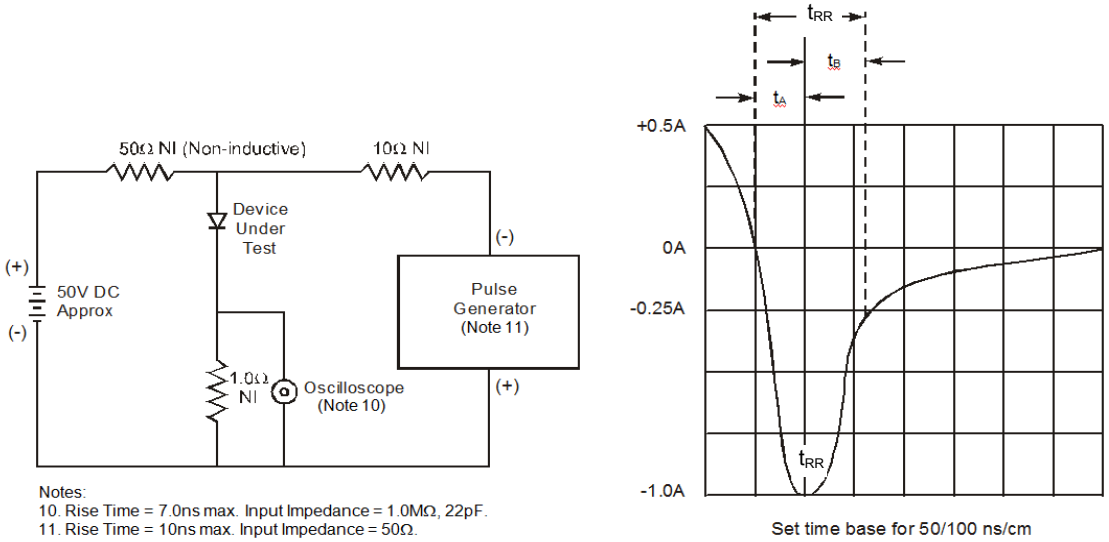


Figure 8. Transient Thermal Resistance



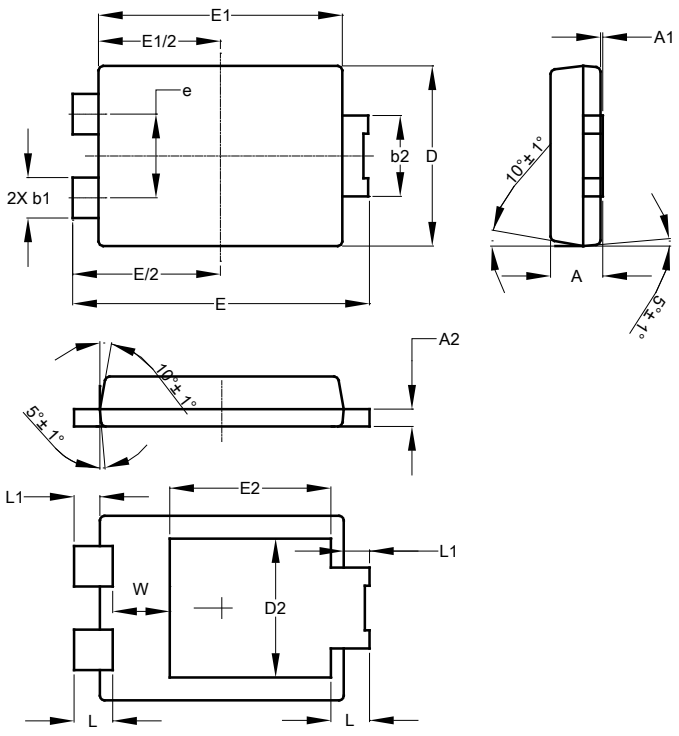
Notes:
10. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.
11. Rise Time = 10ns max. Input Impedance = 50Ω.

Figure 9. Reverse Recovery Time Characteristic and Test Circuit

Package Outline Dimensions

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

PowerDI5

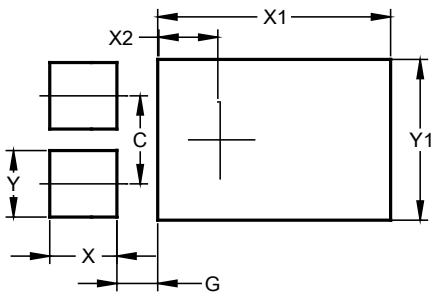


PowerDI5			
Dim	**Min**	**Max**	**Typ**
A	1.05	1.15	1.10
A1	0.00	0.05	--
A2	0.33	0.43	0.381
b1	0.80	0.99	0.89
b2	1.70	1.88	1.78
D	3.90	4.05	3.966
D2	--	--	3.054
E	6.40	6.60	6.51
e	--	--	1.84
E1	5.30	5.45	5.37
E2	--	--	3.549
L	0.75	0.95	0.85
L1	0.50	0.65	0.57
W	1.10	1.41	1.255
All Dimensions in mm			

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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