

## 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>	60	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>RM</sub>		
Average Rectified Output Current @T <sub>C</sub> = +140°C	I <sub>O</sub>	8	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	280	A
Repetitive Peak Avalanche Power (1μs, +25°C)	P <sub>ARM</sub>	6000	W
Non-Repetitive Avalanche Energy (T <sub>J</sub> = +25°C, I <sub>AS</sub> = 12A, L = 10mH)	E <sub>AS</sub>	620	mJ

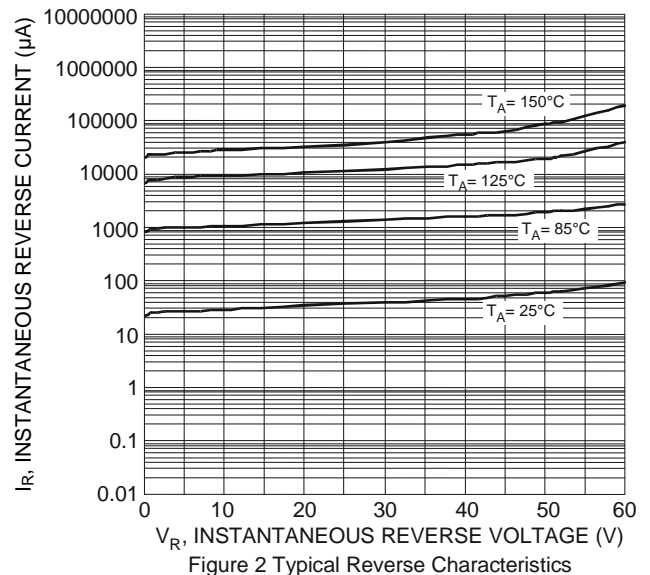
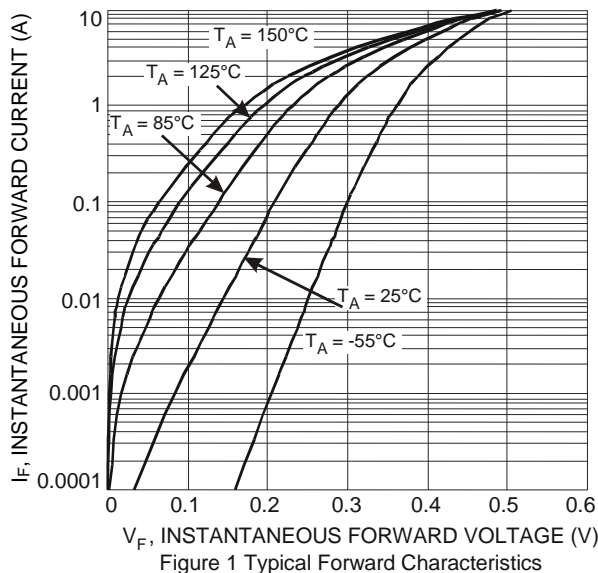
## Thermal Characteristics

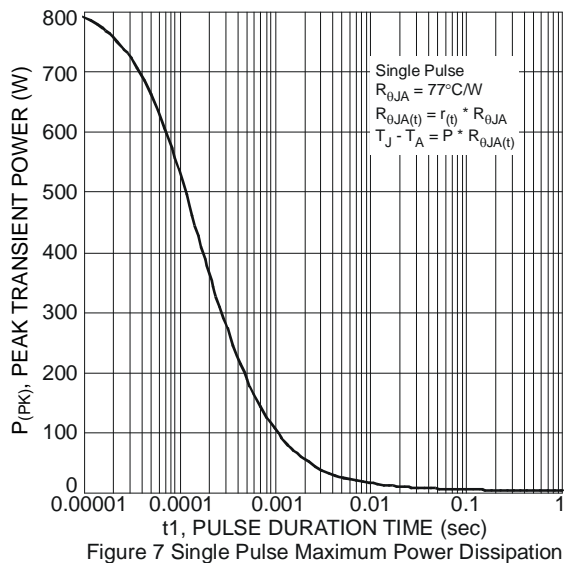
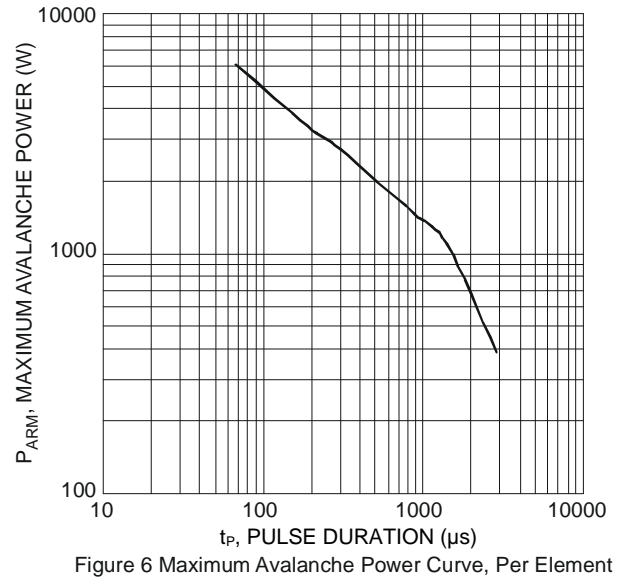
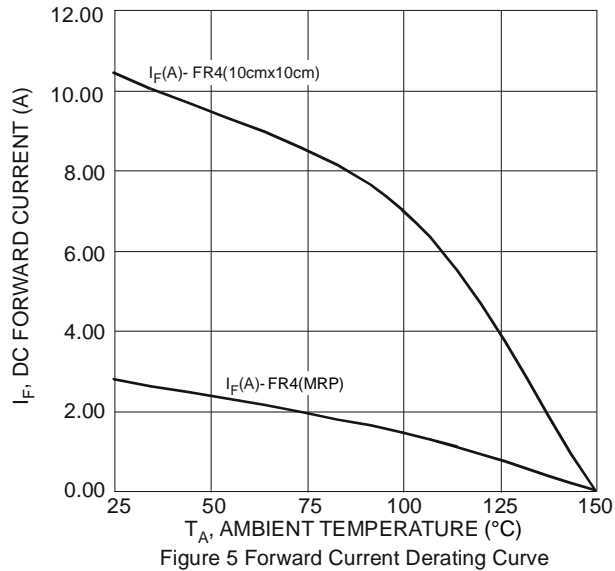
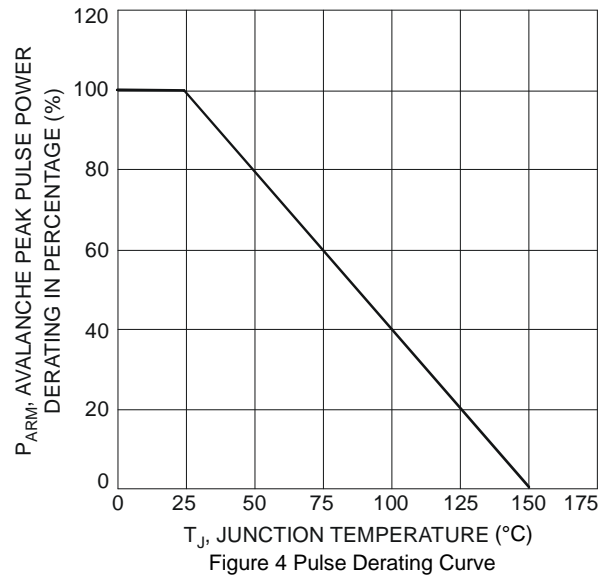
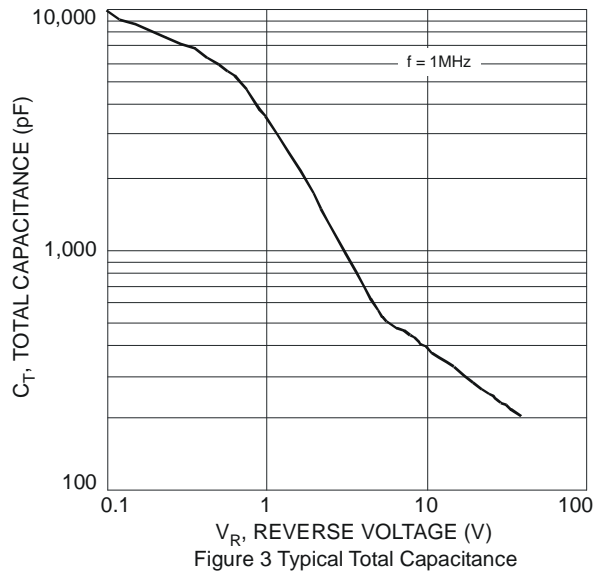
Characteristic	Symbol	Value	Unit
Maximum Thermal Resistance	R <sub>θJS</sub> R <sub>θJA</sub>	3	°C/W
Thermal Resistance Junction to Soldering (Note 7)		60	
Thermal Resistance Junction to Ambient (Note 8)			
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

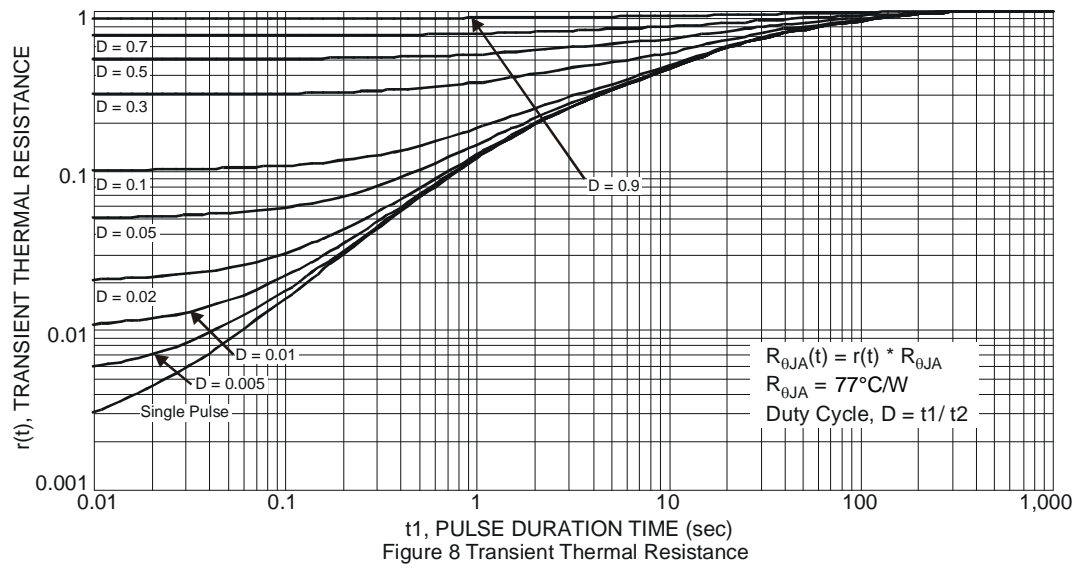
## Electrical Characteristics (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop	V <sub>F</sub>	—	0.30	0.35	V	I <sub>F</sub> = 1.0A, T <sub>J</sub> = +25°C
		—	0.46	0.53		I <sub>F</sub> = 8A, T <sub>J</sub> = +25°C
		—	0.43	—		I <sub>F</sub> = 8A, T <sub>J</sub> = +125°C
Leakage Current (Note 9)	I <sub>R</sub>	—	0.1	0.33	mA	V <sub>R</sub> = 60V, T <sub>J</sub> = +25°C
		—	40	—		V <sub>R</sub> = 60V, T <sub>J</sub> = +125°C

- Notes:
- Theoretical R<sub>θJS</sub> calculated from the top center of the die straight down to the PCB cathode tab solder junction.
  - Polymide PCB, 2 oz. Copper, minimum recommended pad layout per <http://www.diodes.com/package-outlines.html>.
  - Short duration pulse test used to minimize self-heating effect.



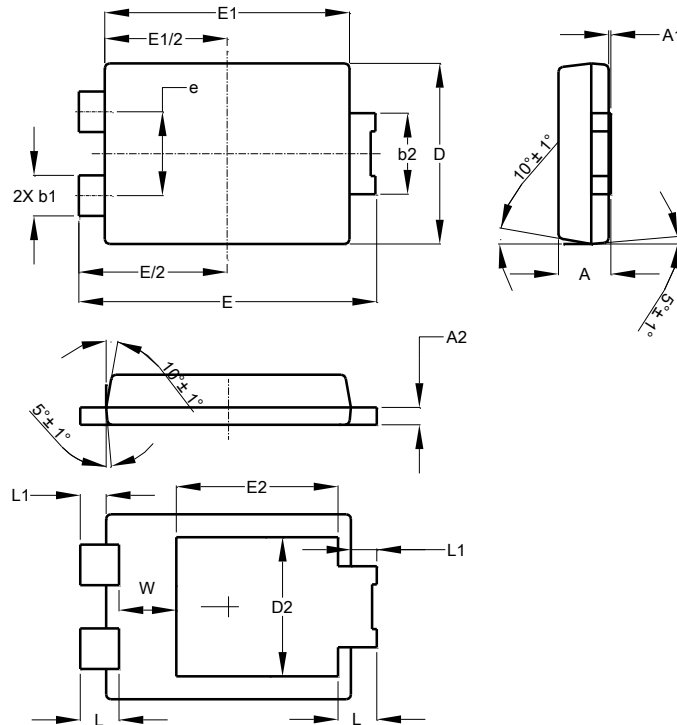




## Package Outline Dimensions

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

### PowerDI5

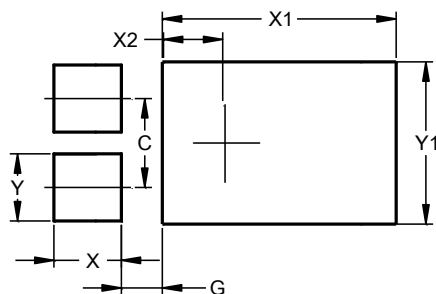


PowerDI5			
Dim	Min	Max	Typ
A	1.05	1.15	1.10
A1	0.00	0.05	--
A2	0.33	0.43	0.381
b1	0.80	0.99	0.89
b2	1.70	1.88	1.78
D	3.90	4.05	3.966
D2	--	--	3.054
E	6.40	6.60	6.51
e	--	--	1.84
E1	5.30	5.45	5.37
E2	--	--	3.549
L	0.75	0.95	0.85
L1	0.50	0.65	0.57
W	1.10	1.41	1.255
All Dimensions in mm			

## 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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