



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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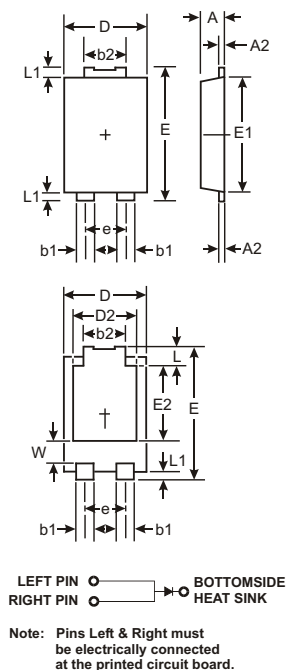


Features

- Glass Passivated Die Construction
- Low Leakage Current
- **Lead Free Finish, RoHS Compliant (Note 1)**
- "Green" Molding Compound (No Br, Sb)
- **Qualified to AEC-Q101 Standards for High Reliability**

Mechanical Data

- Case: PowerDI™5
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Finish – Matte Tin annealed over Copper leadframe. Solderable per MIL-STD-202, Method 208 (E3)
- Polarity: See Diagram
- Marking: See Page 3
- Weight: 0.096 grams (approximate)



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	3.05 NOM	
E	6.40	6.60
e	1.84 NOM	
E1	5.30	5.45
E2	3.55 NOM	
L	0.75	0.95
L1	0.50	0.65
W	1.20	1.50
All Dimensions in mm		

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	400	V
RMS Reverse Voltage	V _{R(RMS)}	283	V
Average Rectified Output Current (See also figure 4)	I _O	5	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Load	I _{FSM}	100	A

Thermal Characteristics

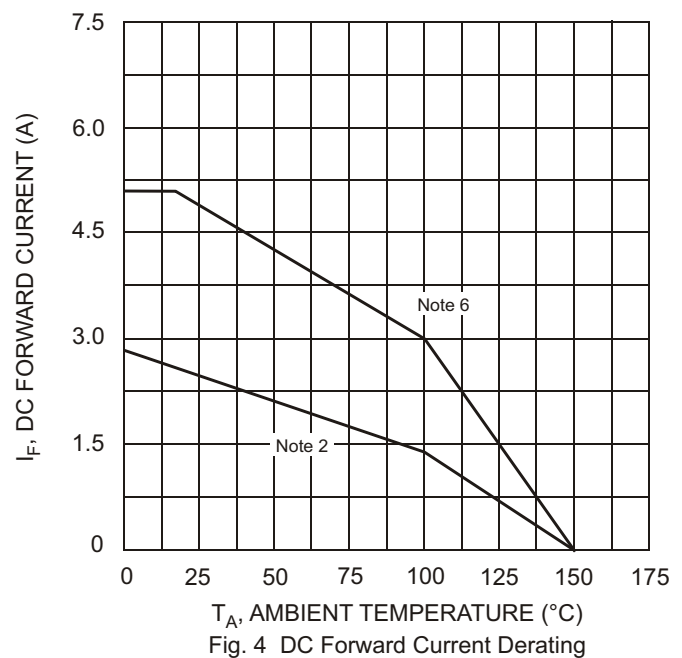
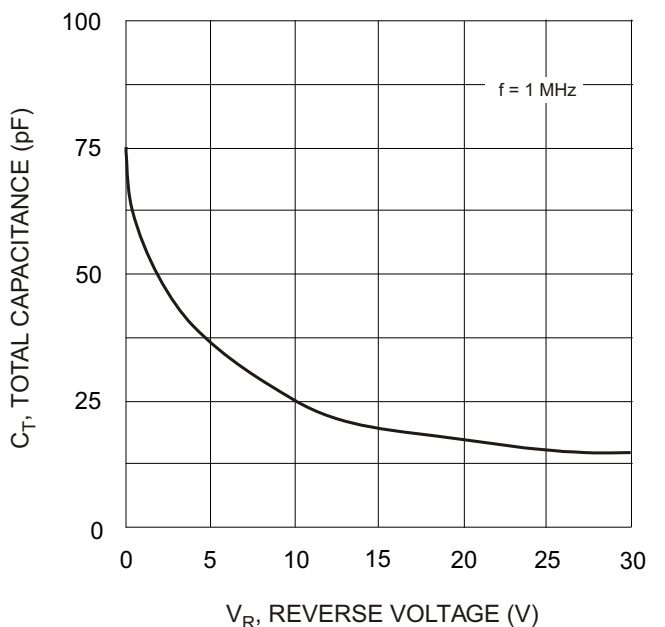
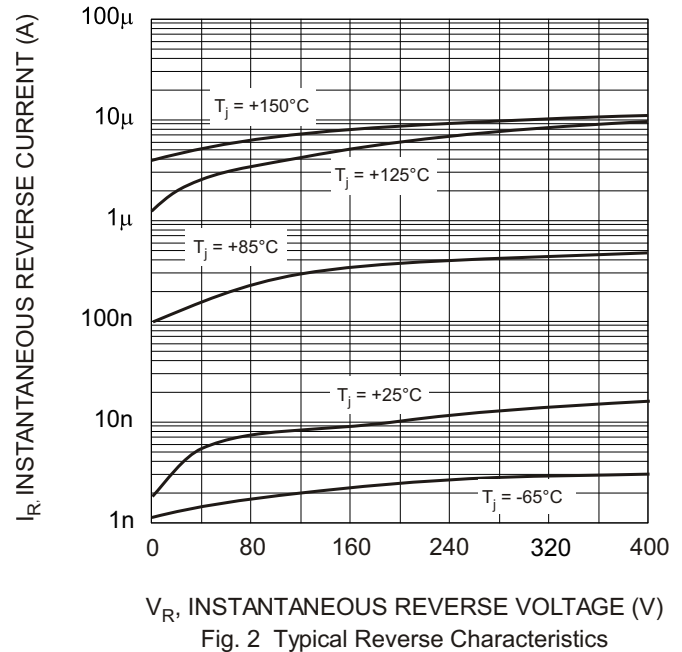
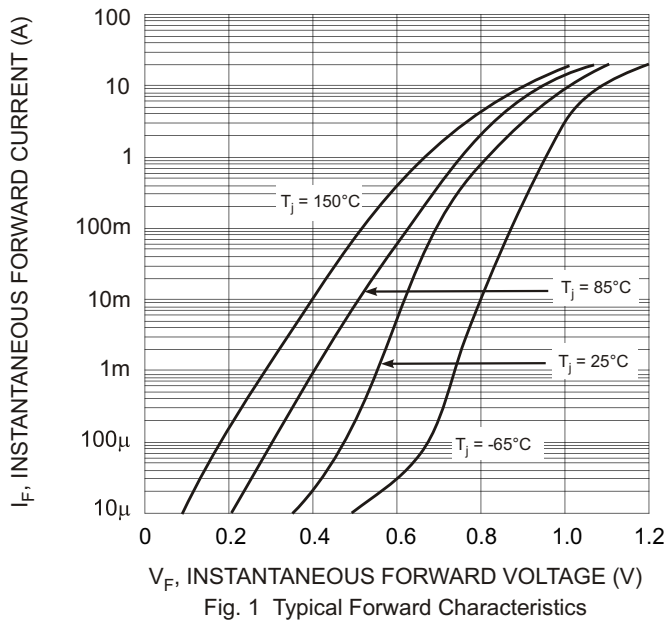
Characteristic	Symbol	Typ	Max	Unit
Thermal Resistance Junction to Soldering Point	R _{θJS}	—	1.5	°C/W
Thermal Resistance Junction to Ambient Air (Note 2)	R _{θJA}	75	—	°C/W
Thermal Resistance Junction to Ambient Air (Note 3)	R _{θJA}	65	—	°C/W
Thermal Resistance Junction to Ambient Air (Note 4)	R _{θJA}	45	—	°C/W
Operating Temperature Range	T _J	—	-65 to +150	°C
Storage Temperature Range	T _{STG}	—	-65 to +150	°C

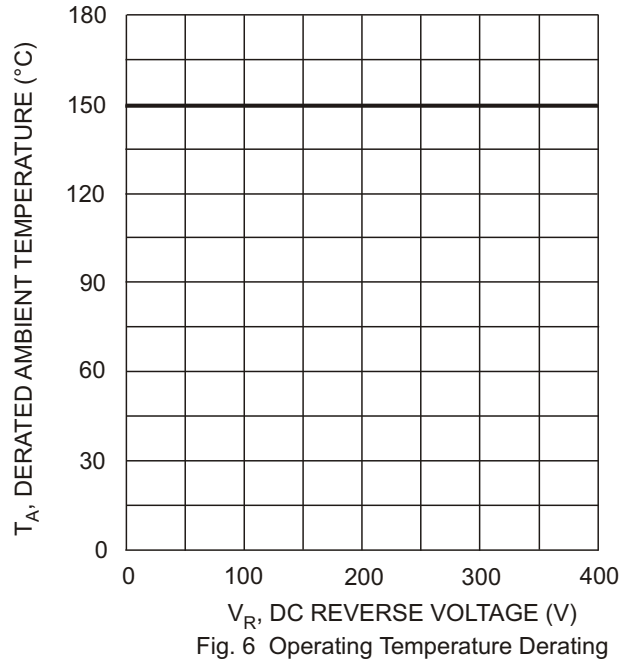
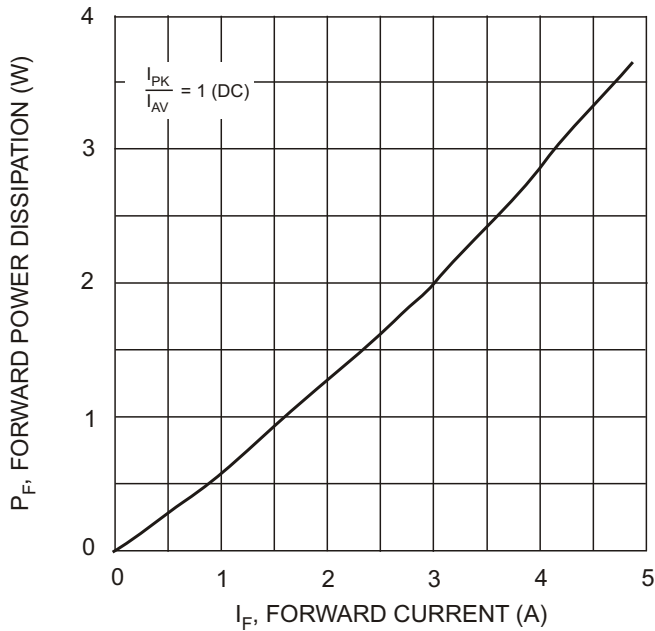
- Notes:
1. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see *EU Directive Annex Notes 5 and 7*.
 2. FR-4 PCB, 2 oz. Copper, minimum recommended pad layout per <http://www.diodes.com/datasheets/ap02001.pdf>. T_A = 25°C
 3. Polyimide PCB, 2 oz. Copper, minimum recommended pad layout per <http://www.diodes.com/datasheets/ap02001.pdf>. T_A = 25°C
 4. Polyimide PCB, 2 oz. Copper. Cathode pad dimensions 9.4 mm x 7.2 mm. Anode pad dimensions 2.7 mm x 1.6 mm. T_A = 25°C

Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 5)	$V_{(BR)R}$	400	—	—	V	$I_R = 10\mu\text{A}$
Forward Voltage	V_F	—	0.92	1.15	V	$I_F = 5\text{A}$, $T_S = 25^\circ\text{C}$
Reverse Leakage Current (Note 5)	I_R	—	0.02 9	10 250	μA	$T_S = 25^\circ\text{C}$, $V_R = 400\text{V}$ $T_S = 125^\circ\text{C}$, $V_R = 400\text{V}$
Reverse Recovery Time	t_{rr}	—	3.3	—	μs	$I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{rr} = 0.25\text{A}$

Notes: 2. FR-4 PCB, 2 oz. Copper, minimum recommended pad layout per <http://www.diodes.com/datasheets/ap02001.pdf>. $T_A = 25^\circ\text{C}$
 3. Polyimide PCB, 2 oz. Copper, minimum recommended pad layout per <http://www.diodes.com/datasheets/ap02001.pdf>. $T_A = 25^\circ\text{C}$
 4. Polyimide PCB, 2 oz. Copper. Cathode pad dimensions 9.4 mm x 7.2 mm. Anode pad dimensions 2.7 mm x 1.6 mm. $T_A = 25^\circ\text{C}$
 5. Short duration test pulse used to minimize self-heating effect.
 6. Polyimide PCB, 2 oz. Copper. Cathode pad dimensions 18.8mm x 14.4mm. Anode pad dimensions 5.6mm x 3.0mm.



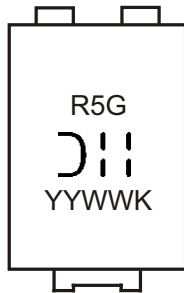


Ordering Information (Note 7)

Device	Packaging	Shipping
PDR5G-13	PowerDI™5	5000/Tape & Reel

Notes: 7. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information



R5G = Product type marking code
 011 = Manufacturers' code marking
 YYWW = Date code marking
 YY = Last two digits of year ex: 05 for 2005
 WW = Week code 01 to 52
 K = Factory Designator

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