

Product Summary (@T_A = +25°C)

V _{RRM} (V)	I _o (A)	V _{F Max} (V)	I _{R Max} (μA)
800	5	0.99	10

Description

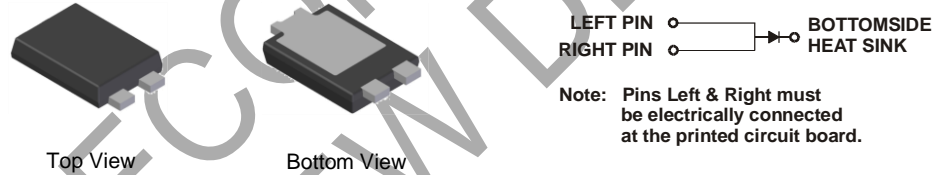
5.0A Glass Passivated Rectifier in PowerDI[®]5 package, offers high surge current capability and low leakage current, lead free finish and RoHS compliant, "Green" device.

Features and Benefits

- Glass Passivated Die Construction
- Low Leakage Current
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**
- For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q100/101/104/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](#) or your local Diodes representative. <https://www.diodes.com/quality/product-definitions/>

Mechanical Data

- Package: PowerDI5
- Package Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish – Matte Tin Annealed over Copper Leadframe. Solderable per MIL-STD-202, Method 208 @3
- Polarity: See Diagram
- Weight: 0.096 grams (Approximate)



Ordering Information (Note 4)

Part Number	Package	Packing	
		Qty.	Carrier
PDR5K-13	PowerDI5	5,000	Tape & Reel

- Notes:
1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
 2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
 3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
 4. For packaging details, go to our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.

Marking Information



- R5K = Product Type Marking Code
-) | | = Manufacturers' Code Marking
- YYWW = Date Code Marking
- YY = Last Two Digits of Year (ex: 22 for 2022)
- WW = Week Code 01 to 52
- K = Factory Designator

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	V _{RRM}	800	V
Working Peak Reverse Voltage	V _{RWM}		
DC Blocking Voltage	V _R		
Average Rectified Output Current	I _O	5	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	200	A

Thermal Characteristics

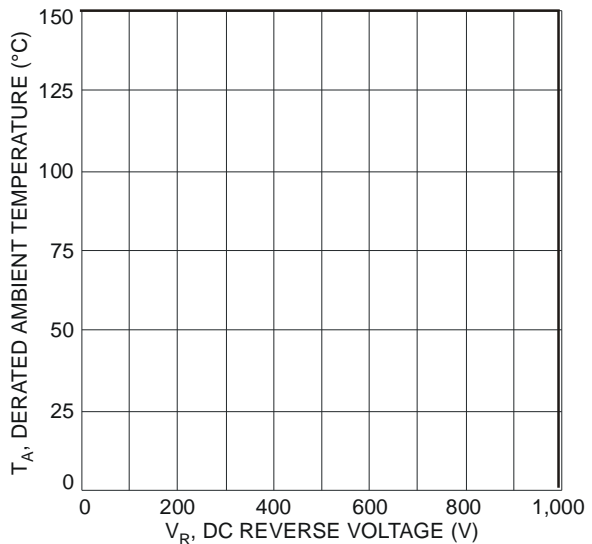
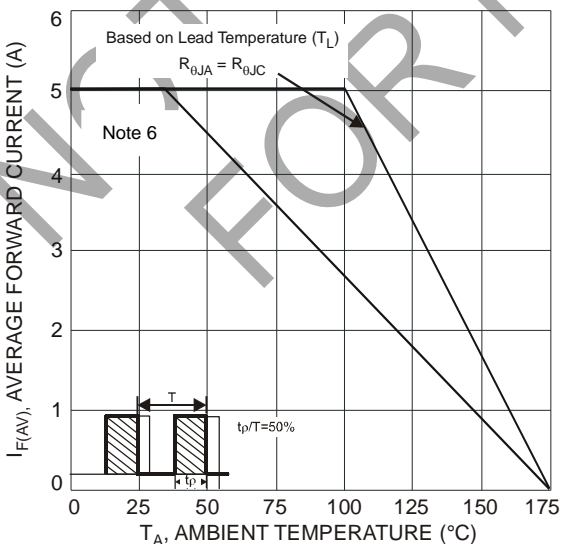
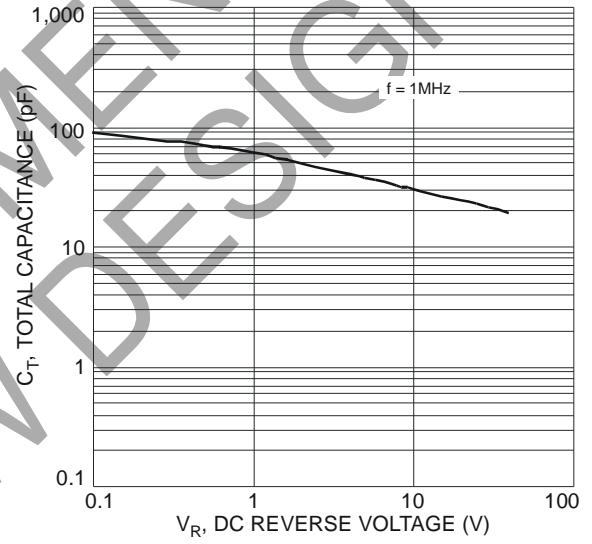
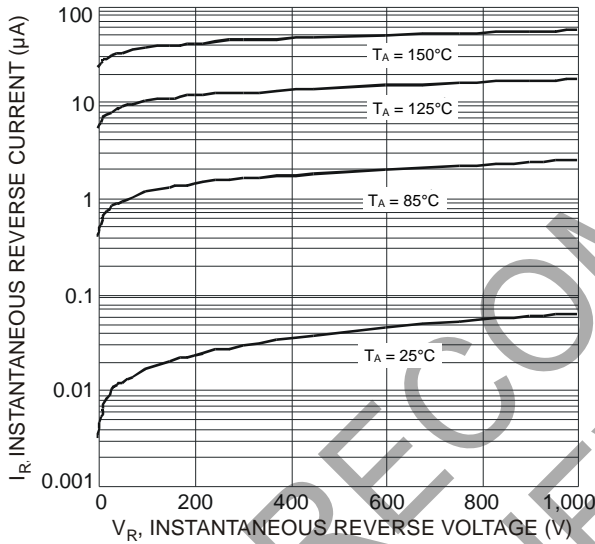
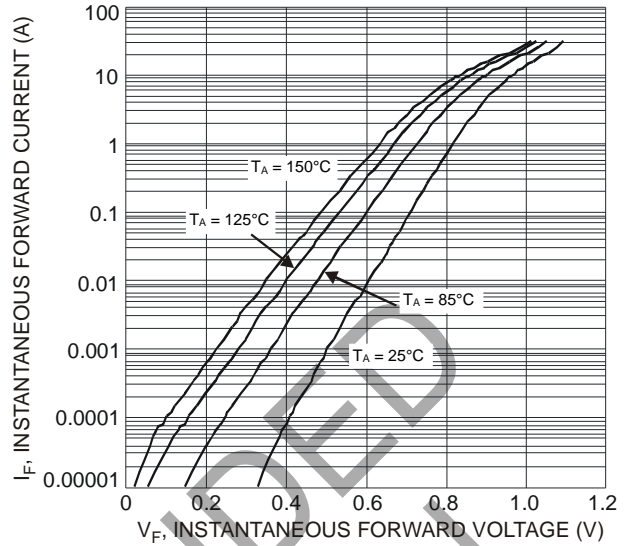
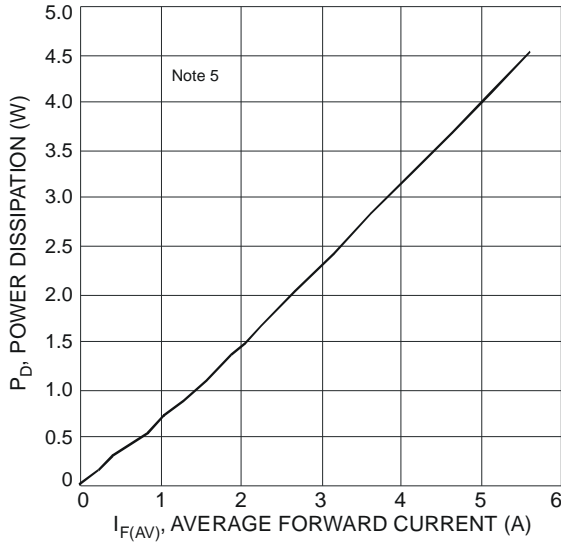
Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Junction to Lead	R _{θJL}	3	°C/W
Typical Thermal Resistance Junction to Ambient (Note 5)	R _{θJA}	28	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +155	°C

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage	V _F	—	0.91	0.99	V	I _F = 5A, T _S = +25°C
		—	—	0.87		I _F = 5A, T _S = +125°C
Reverse Leakage Current (Note 6)	I _R	—	—	10	μA	V _R = 800V, T _J = +25°C
		—	—	0.3	mA	V _R = 800V, T _J = +125°C
Typical Reverse Recovery Time	t _{rr}	—	3	—	μs	I _F = 0.5A, I _R = 1.0A, I _{rr} = 0.25A

Notes: 5. Device mounted on Polyimide PCB, with 16X recommended pad layout.
6. Short duration pulse test used to minimize self-heating effect.

NOT RECOMMENDED FOR NEW DESIGN

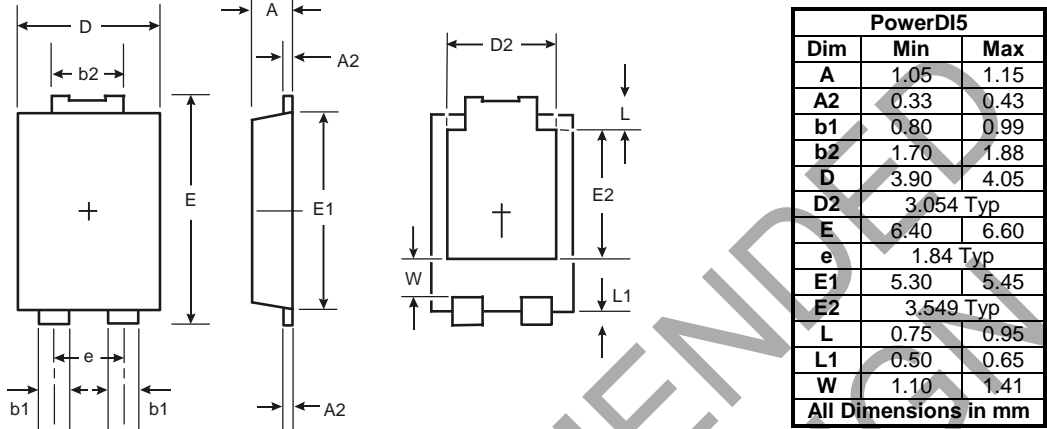


Notes: 5. Device mounted on Polyimide PCB, with 16X recommended pad layout.
6. Short duration pulse test used to minimize self-heating effect.

Package Outline Dimensions

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

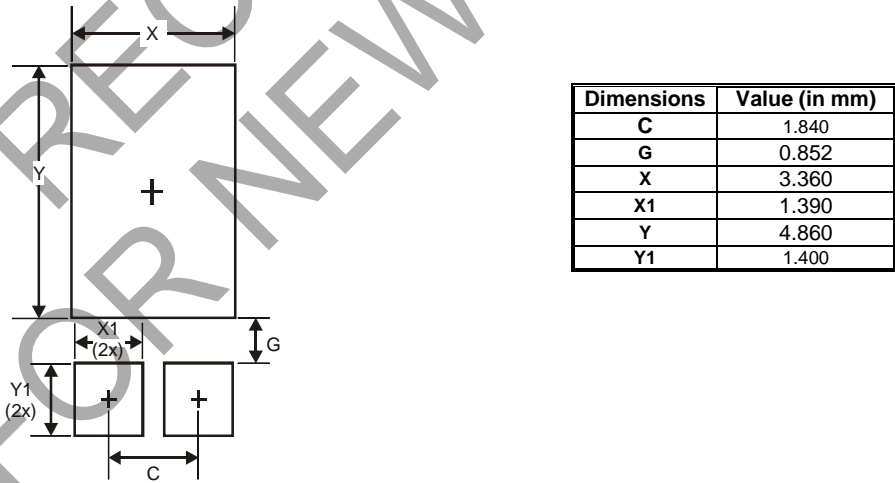
PowerDI5



Suggested Pad Layout

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

PowerDI5



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