



PDS835L

POWERDI

Features

- Guard Ring Die Construction for Transient Protection
- Low Forward Voltage Drop
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
- High Forward Surge Current Capability
- Lead-Free Finish; RoHS Compliant (Notes 1 & 2)
- Halogen and Antimony Free. "Green" Device (Note 3)
- Qualified to AEC-Q101 Standards for High Reliability

Mechanical Data

- Case: POWERDI5
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0

8A LOW VF SCHOTTKY BARRIER RECTIFIER

- 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: 0.094 grams (approximate)

POWERDI5

Top View



Bottom View



be electrically connected at the printed circuit board.

Ordering Information (Note 4)

Part Number	Case	Packaging
PDS835L-13	POWERDI5	5000/Tape & Reel
PDS835L-7	POWERDI5	1500/Tape & Reel

1. EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant. All applicable RoHS exemptions applied.

2. See http://www.diodes.com 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 http://www.diodes.com.

Marking Information

Notes:



S835L = Product type marking code) | | = Manufacturers' code marking YYWW = Date code marking YY = Last two digits of year (ex: 04 for 2004) WW = Week code (01 - 53)K = Factory Designator



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} V _{RWM} V _R	35	V
RMS Reverse Voltage	V _{R(RMS)}	25	V
Average Rectified Output Current (See also figure 5)	lo	8	А
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	120	А

Thermal Characteristics

Characteristic	Symbol	Тур	Max	Unit
Thermal Resistance Junction to Soldering Point	$R_{\theta JS}$	—	3.0	°C/W
Thermal Resistance Junction to Ambient Air (Note 5) $T_A = +25^{\circ}C$	$R_{ hetaJA}$	100	—	°C/W
Thermal Resistance Junction to Ambient Air (Note 6) $T_A = +25^{\circ}C$	$R_{ heta JA}$	65	—	°C/W
Thermal Resistance Junction to Ambient Air (Note 7) $T_A = +25^{\circ}C$	$R_{ heta JA}$	45	—	°C/W
Operating Temperature Range	TJ	-65 to +125		°C
Storage Temperature Range	T _{STG}	-65 to	°C	

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

Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 8)	V _{(BR)R}	35	_		V	$I_R = 1 m A$
Forward Voltage	V _F	_	0.46	0.51	V	I _F = 8A, T _S = +25°C I _F = 8A, T _S = +125°C
		_	—	0.41		I _F = 8A, T _S = +125°C
Reverse Leakage Current (Note 8)	I _R	—	0.05	1.4	ma	$T_{S} = +25^{\circ}C, V_{R} = 35V$
		_	7	35		$T_S = +100^{\circ}C, V_R = 35V$

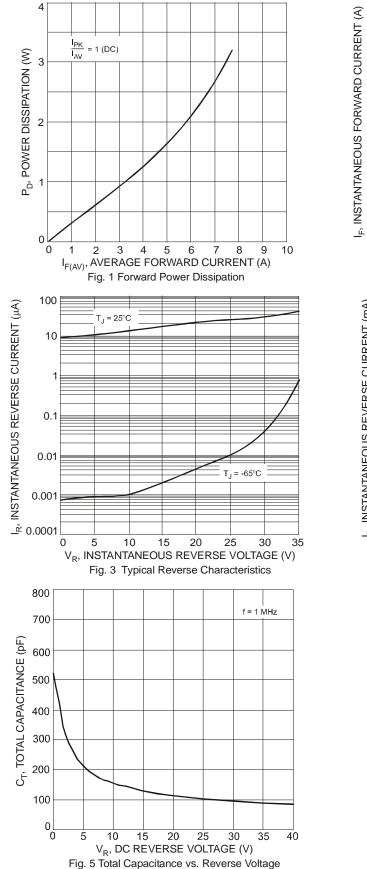
Notes:

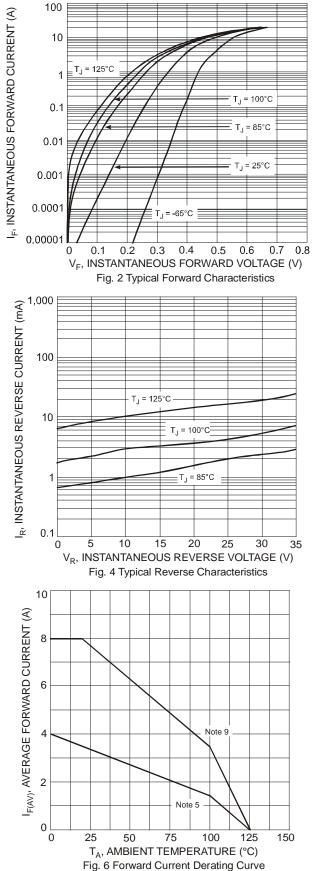
FR-4 PCB, 2 oz. Copper, minimum recommended pad layout per http://www.diodes.com
Polymide PCB, 2 oz. Copper, minimum recommended pad layout per http://www.diodes.com.
Polymide PCB, 2 oz. Copper. Cathode pad dimensions 9.4mm x 7.2mm. Anode pad dimensions 2.7mm x 1.6mm.

8. Short duration pulse test used to minimize self-heating effect.







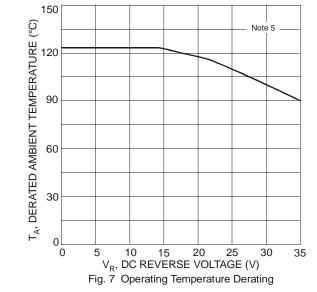


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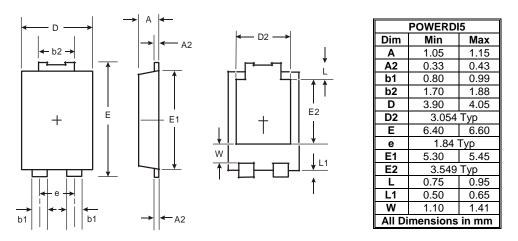
PDS835L



Notes: 9. Polymide PCB, 2 oz. Copper. Cathode pad dimensions 18.8mm x 14.4mm. Anode pad dimensions 5.6mm x 3.0mm.

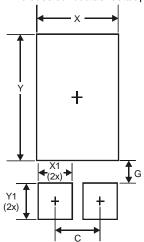
Package Outline Dimensions

Please see AP02002 at http://www.diodes.com/datasheets/ap02002.pdf for latest version.



Suggested Pad Layout

Please see AP02001 at http://www.diodes.com/datasheets/ap02001.pdf for the latest version.



Dimensions	Value (in mm)
С	1.840
G	0.852
Х	3.360
X1	1.390
Y	4.860
Y1	1.400

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