



PDS360

3A SCHOTTKY BARRIER RECTIFIER POWERDI

Features

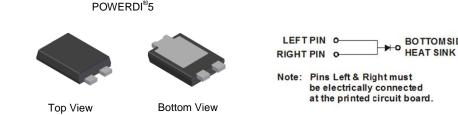
- Guard-Ring Die Construction for Transient Protection .
- Low Power Loss, High Efficiency
- Low Reverse Leakage Current
- For Use in High-Frequency Inverters, Free Wheeling, and **Polarity Protection Applications**
- High, Forward-Surge Current Capability
- Lead-Free Finish; RoHS Compliant (Notes 1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

Mechanical Data

- Case: $POWERDI^{(R)}5$ •
- Case 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)

BOTTOMSIDE

- Polarity: See Diagram
- Weight: 0.093 grams (Approximate)



Ordering Information (Note 4)

Part Number	Case	Packaging
PDS360-13	POWERDI [®] 5	5,000/Tape & Reel

Notes: 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



S360 = Product Type Marking Code) || = Manufacturers' Code Marking YYWW = Date Code Marking YY = Last two Digits of Year (ex: 15 for 2015) WW = Week Code (01 - 53) K = Factory Designator



Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitance 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	60	V
RMS Reverse Voltage	V _{R(RMS)}	42	V
Average Rectified Output Current	lo	3	А
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load	IFSM	100	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) $T_A = +25^{\circ}C$	$R_{\theta JA}$	95		°C/W
Thermal Resistance Junction to Ambient Air (Note 6) $T_A = +25^{\circ}C$	$R_{ extsf{ heta}JA}$	70	—	°C/W
Thermal Resistance Junction to Ambient Air (Note 7) $T_A = +25^{\circ}C$	$R_{\theta JA}$	50		°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to	o +150	°C

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

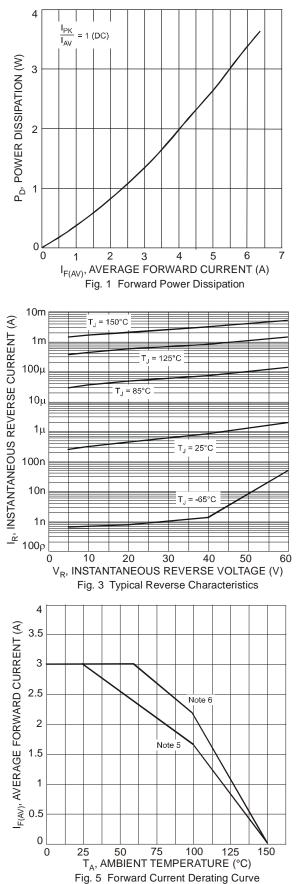
Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 8)	V _{(BR)R}	60	—	_	V	$I_R = 0.2 \text{mA}$
			0.57	0.62		I _F = 3A, T _J = +25°C
			0.53	0.60		$I_F = 3A, T_J = +100^{\circ}C$
Forward Voltage	V		0.51	0.57		I _F = 3A, T _J = +125°C
Forward voltage	V _F	_	0.70	0.76		I _F = 6A, T _J = +25°C
		_	0.62	0.70		I _F = 6A, T _J = +100°C
			0.60	0.66		I _F = 6A, T _J = +125°C
			3	150	μA	$T_J = +25^{\circ}C, V_R = 60V$
Reverse Leakage Current (Note 8)	I _R	_	_	10	mA	$T_{J} = +100^{\circ}C, V_{R} = 60V$
		_	1.5	15	mA	$T_J = +125^{\circ}C, V_R = 60V$

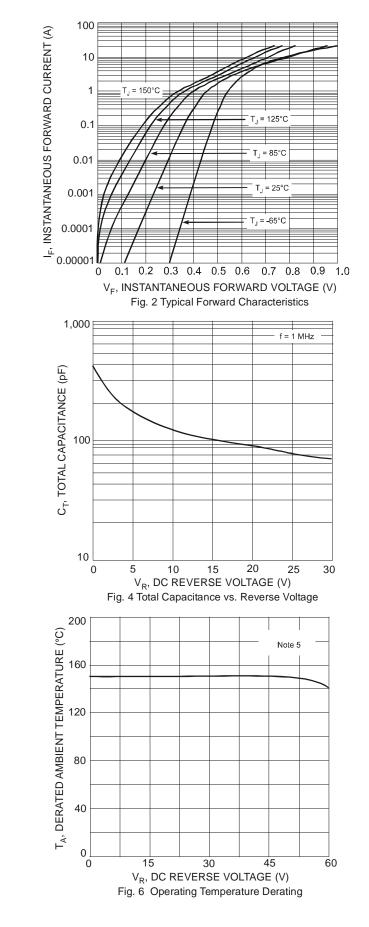
Notes: 5. FR-4 PCB, 2 oz. Copper, minimum recommended pad layout per http://www.diodes.com.

6. Polymide PCB, 2 oz. Copper, minimum recommended pad layout per http://www.diodes.com.

Polymide PCB, 2 oz. Copper. Cathode pad dimensions 9.4 mm x 7.4 mm. Anode pad dimensions 2.7 mm x 1.6 mm.
Short duration pulse test used to minimize self-heating effect.



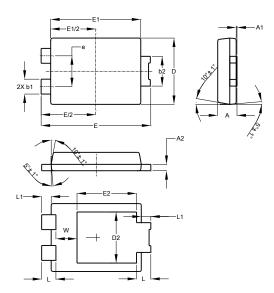






Package Outline Dimensions

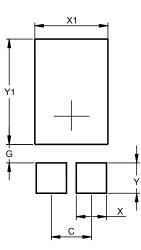
Please see AP02002 at http://www.diodes.com/datasheets/ap02002.pdf for the latest version.



POWERDI [®] 5					
Dim	Min	Max	Тур		
Α	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		
Е	6.40	6.60	6.504		
е	-	-	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 AP02001 at http://www.diodes.com/datasheets/ap02001.pdf for the latest version.



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



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