

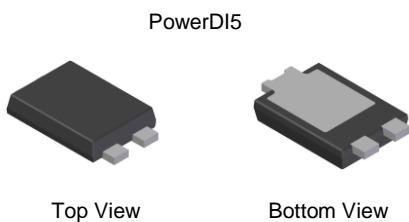
## Product Summary (@ T<sub>A</sub> = +25°C)

V <sub>RRM</sub> (V)	I <sub>o</sub> (A)	V <sub>F</sub> Max (V)	I <sub>R</sub> Max (μA)
100	5	0.66	3.5

## Description and Applications

Packaged in the compact thermally efficient PowerDI5 package, the SDT5H100LP5 provides very low V<sub>F</sub> and excellent reverse leakage stability at high temperatures. It is ideal for use as a rectifier, freewheel diode or blocking diode in:

- DC-DC Converters
- AC-DC Adaptors

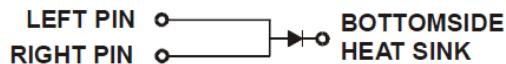


## Features and Benefits

- Low Forward Voltage Drop
- Excellent High Temperature Stability
- Soft, Fast Switching Capability
- Lead-Free Finish; RoHS Compliant (Notes 1 & 2)
- Halogen and Antimony Free. "Green" Device (Note 3)

## Mechanical Data

- Case: PowerDI5
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminal Connections: See Diagram Below
- Weight: 0.093 grams (Approximate)



**Note:** Pins Left & Right must be electrically connected at the printed circuit board.

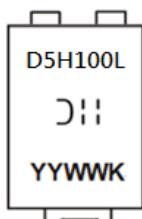
## Ordering Information (Note 4)

Part Number	Case	Packaging
SDT5H100LP5-7	PowerDI5	1,500/Tape & Reel
SDT5H100LP5-7D (Note 5)	PowerDI5	1,500/Tape & Reel
SDT5H100LP5-13	PowerDI5	5,000/Tape & Reel
SDT5H100LP5-13D (Note 5)	PowerDI5	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/quality/lead\\_free.html](http://www.diodes.com/quality/lead_free.html) 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/products/packages.html>.
5. PowerDI5 available in 5K quantity on 13-inch reel & 12mm tape, part number suffix "13D"; Diodes also provides 12mm tape with 7-inch reel, part number suffix "7D".

## Marking Information



DII = Manufacturers' Marking  
D5H100L = Product Type Marking Code  
YYWW = Date Code Marking  
YY = Last Two Digits of Year (ex: 16 = 2016)  
WW = Week Code (01 to 53)  
K = Factory Designator

**Maximum Ratings** (@ $T_A = +25^\circ\text{C}$ , unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage			
Working Peak Reverse Voltage	$V_{RRM}$	100	V
DC Blocking Voltage			
Average Rectified Output Current	$I_O$	5	A
Non-Repetitive Peak Forward Surge Current 8.3ms	$I_{FSM}$	150	A

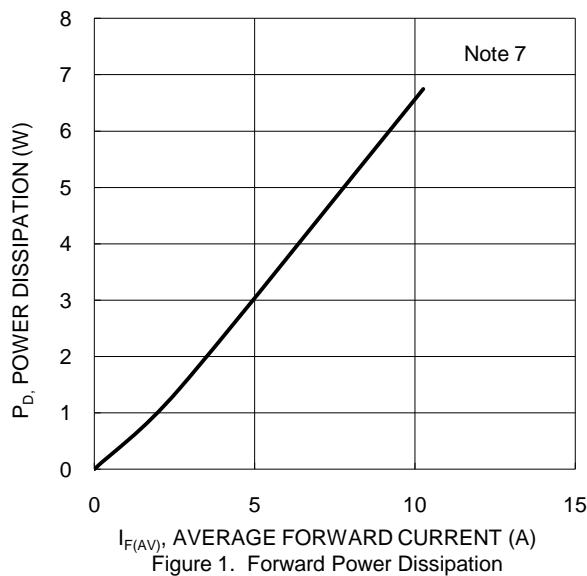
**Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Junction to Ambient (Note 6)	$R_{\theta JA}$	88	$^\circ\text{C/W}$
Typical Thermal Resistance Junction to Ambient (Note 7)	$R_{\theta JA}$	18	$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150	$^\circ\text{C}$

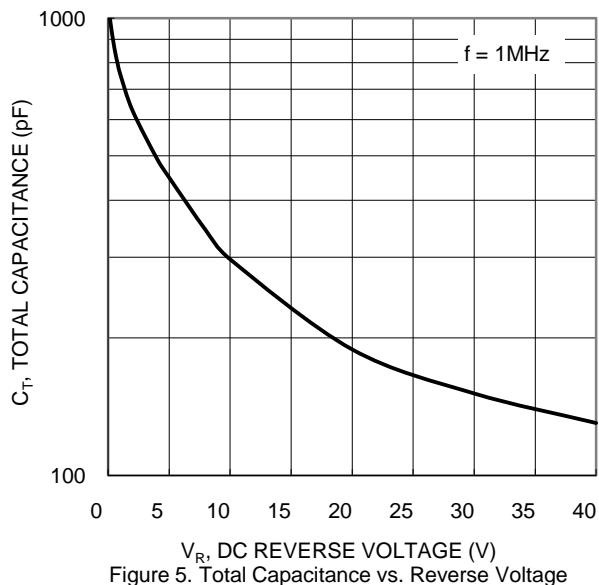
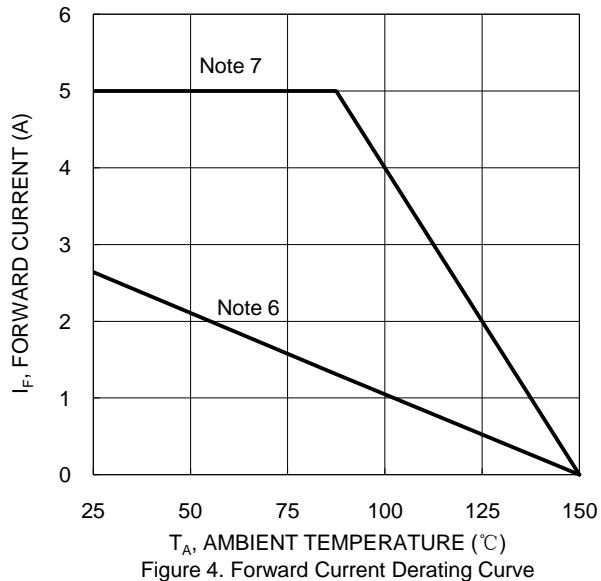
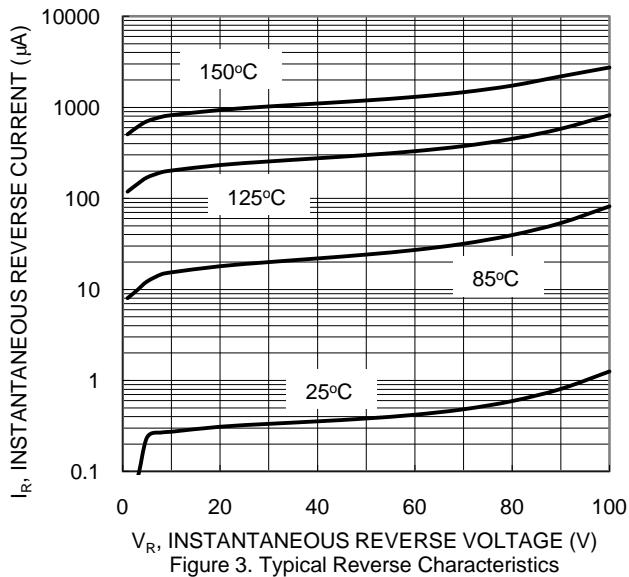
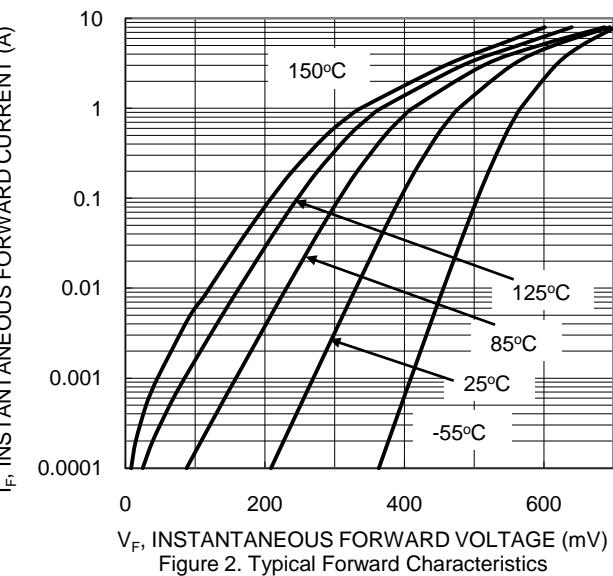
**Electrical Characteristics** (@ $T_A = +25^\circ\text{C}$ , unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop	$V_F$	—	0.55	—	V	$I_F = 3\text{A}, T_J = +25^\circ\text{C}$
		—	0.48	—		$I_F = 3\text{A}, T_J = +125^\circ\text{C}$
		—	—	0.66		$I_F = 5\text{A}, T_J = +25^\circ\text{C}$
		—	—	0.61		$I_F = 5\text{A}, T_J = +125^\circ\text{C}$
Leakage Current (Note 8)	$I_R$	—	—	3.5	$\mu\text{A}$	$V_R = 100\text{V}, T_J = +25^\circ\text{C}$
		—	—	4.5	$\text{mA}$	$V_R = 100\text{V}, T_J = +125^\circ\text{C}$

Notes: 6. FR-4 PCB, 2oz. Copper, minimum recommended pad layout per <http://www.diodes.com/package-outlines.html>.  
 7. Aluminum 2inch\*2inch substrate PCB with 50mm x 50mm x 23mm Al heatsink.  
 8. Short duration pulse test used to minimize self-heating effect.



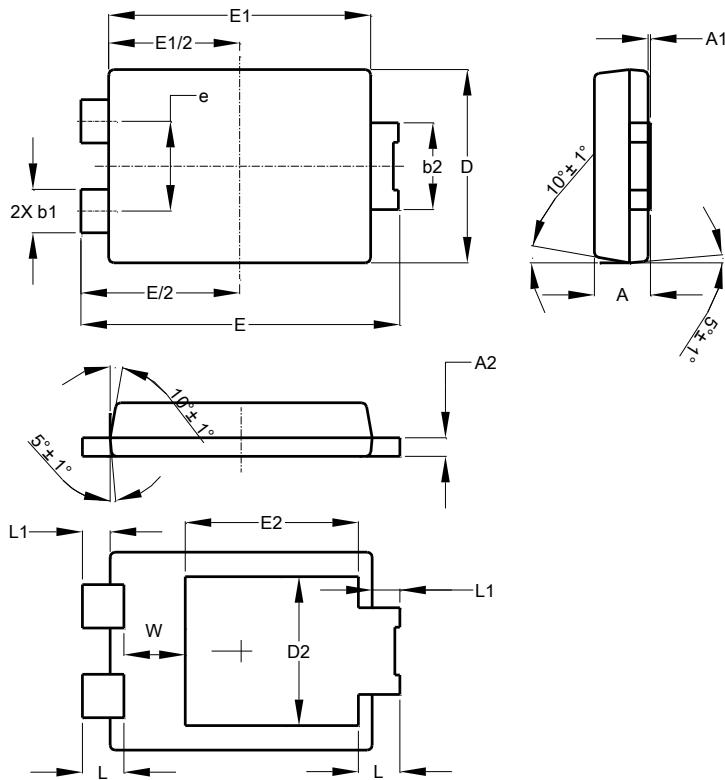
SDT5H100LP5



## Package Outline Dimensions

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

PowerDI5



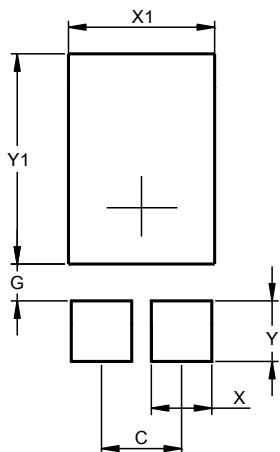
PowerDI5			
Dim	Min	Max	Typ
A	1.05	1.15	1.10
A1	0.00	0.05	--
A2	0.33	0.43	0.381
b1	0.80	0.99	0.89
b2	1.70	1.88	1.78
D	3.90	4.05	3.966
D2	--	--	3.054
E	6.40	6.60	6.504
e	--	--	1.84
E1	5.30	5.45	5.37
E2	--	--	3.549
L	0.75	0.95	0.85
L1	0.50	0.65	0.57
W	1.10	1.41	1.255

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	1.390
X1	3.360
Y	1.400
Y1	4.860

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