NEW PRODUCT

SBR8A60P5

8A SBR®
SUPER BARRIER RECTIFIER
POWERDI®5

Product Summary

V_{RRM} (V)	I_O (A)	V_F (V)	I_R (mA)
60	8	0.55	0.092

Features and Benefits

- Low Forward Voltage Drop
- Excellent High Temperature Stability
- Patented Interlocking Clip Design for High Surge Current Capacity
- Patented Super Barrier Rectifier Technology
- Soft, Fast Switching Capability
- 175ºC Operating Junction Temperature
- **Lead Free Finish, RoHS Compliant (Note 1)**
- **"Green" Molding Compound (No Br, Sb)**

Description and Applications

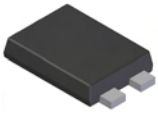
The SBR8A60P5 uses patented SBR technology which offers low VF, excellent high temperature stability and soft switching characteristics for reduced EMI.

Packaged in the compact patented PowerDI-5 package, this product also offers excellent thermal efficiency and high surge current handling capability.

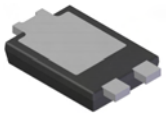
- DC – DC Converters
- DC/AC Inverters
- AC/DC Power Supplies

Mechanical Data

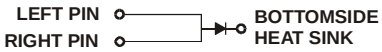
- Case: POWERDI®5
- Case Material: Molded Plastic, "Green" Molding compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish - Matte Tin annealed over Copper leadframe. Solderable per MIL-STD-202, Method 208 e3
- Polarity: See Below
- Weight: 0.093 grams (approximate)



Top View



Bottom View



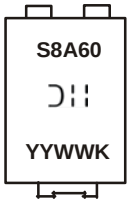
Note: Pins Left & Right must be electrically connected at the printed circuit board.

Ordering Information (Note 2)

Part Number	Case	Packaging
SBR8A60P5-13	POWERDI®5	5000/Tape & Reel

Notes: 1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see *EU Directive 2002/95/EC Annex Notes*
2. For packaging details, go to our website at http://www.diodes.com.

Marking Information



S8A60 = Product Type Marking Code
= Manufacturers' Code Marking
YYWW = Date Code Marking
YY = Last Two Digits of Year (ex: 11 for 2011)
WW = Week Code (01 - 53)
K = Factory Designator

NEW PRODUCT

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_{RM}	60	V
Average Rectified Output Current @T_C = 140ºC	I_O	8	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	160	A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Maximum Thermal Resistance Junction to Ambient (Note 3)	$R_{\theta JC}$	5	ºC/W
Maximum Thermal Resistance Junction to Ambient (Note 3)	$R_{\theta JA}$	37	
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175	ºC

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop	V_F	-	0.46	-	V	I_F = 5A, T_J = 25ºC
		-	0.55	0.62		I_F = 8A, T_J = 25ºC
Leakage Current (Note 4)	I_R	-	0.092	0.5	mA	V_R = 60V, T_J = 25ºC
		-	-	100		V_R = 60V, T_J = 125ºC

Notes: 3. Device mounted on Polymide 10cmX10cm copper PC board,
4. Short duration pulse test used to minimize self-heating effect.

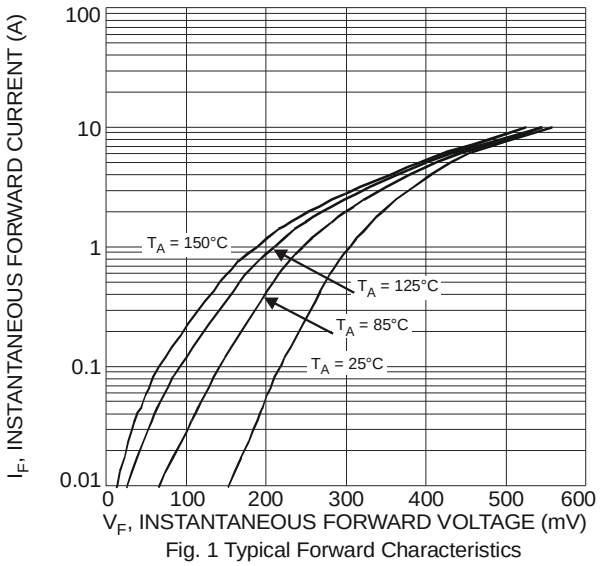


Fig. 1 Typical Forward Characteristics

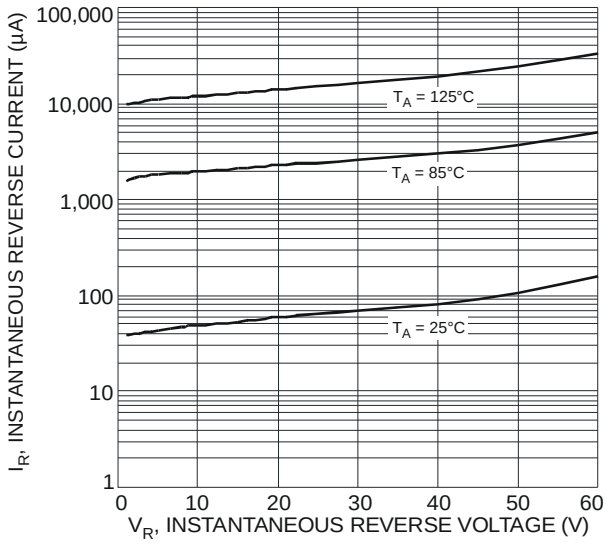


Fig. 2 Typical Reverse Characteristics

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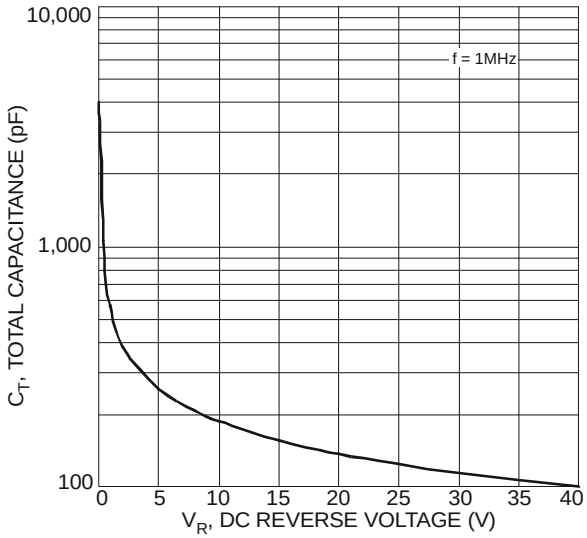


Fig. 3 Total Capacitance vs. Reverse Voltage

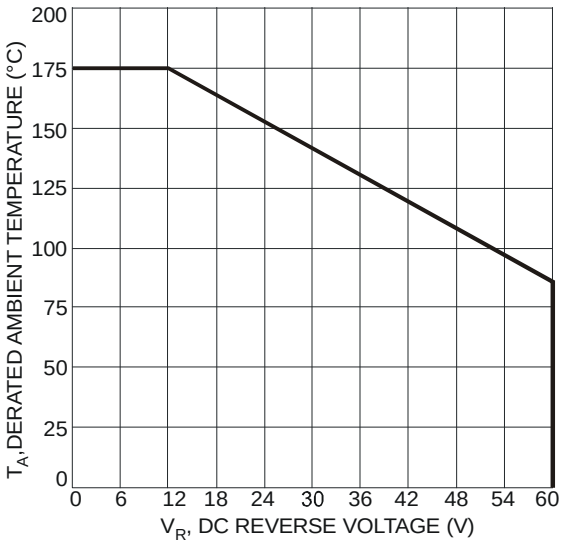


Fig. 4 Operating Temperature Derating

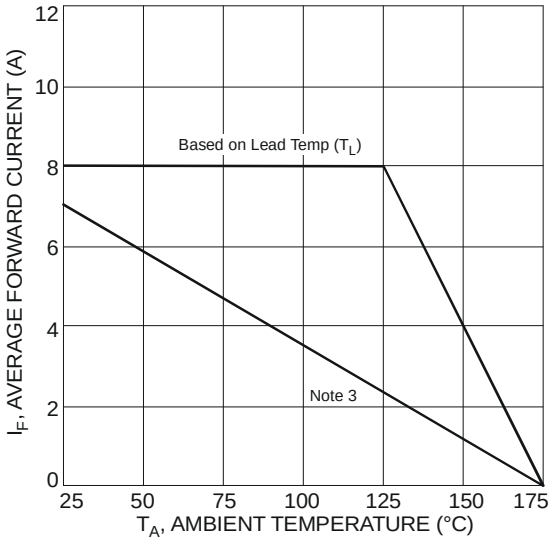
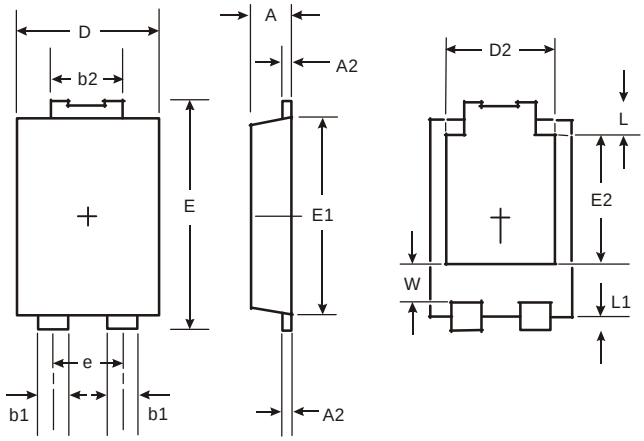


Fig. 5 Forward Current Derating Curve

Package Outline Dimensions



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	3.054 Typ	
E	6.40	6.60
e	1.84 Typ	
E1	5.30	5.45
E2	3.549 Typ	
L	0.75	0.95
L1	0.50	0.65
W	1.10	1.41
All Dimensions in mm		

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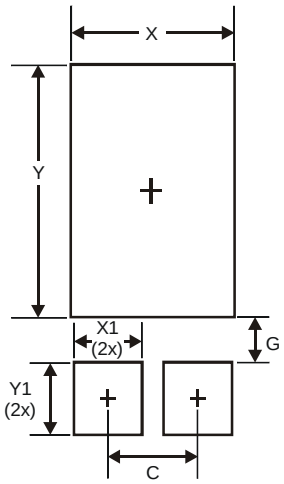
Suggested Pad Layout



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