

Shenzhen Sunrise Electronic Technology Co., Ltd.

SB1545L 15A SBR SUPER BARRIER RECTIFIER

Features

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- Designed as Bypass Diodes for Solar Panels
- Selectively Rated for 200°C Maximum Junction Temperature for High Thermal Reliability
- Patented Super Barrier Rectifier Technology
- High Forward Surge Capability
- Ultra Low Forward Voltage Drop
- **Excellent High Temperature Stability**

Mechanical Data

- Case: TO-277
- Case Material: Molded Plasti c, "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
- Weight: 0.093 grams (approximate)



Top View

Bottom View

LEFT PIN	0	BOTTOMSIDE
RIGHT PIN	0	HEAT SINK

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

Maximum Ratings @TA = 25°C unless otherwise specified

Single phase, half wave, 60Hz, re sistive or inductive load. alterna land derete current by 200

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V RRM		
Working Peak Reverse Voltage	V RWM	45	V
DC Blocking Voltage	V rm		
RMS Reverse Voltage	V R(RMS)	32	V
Average Rectified Output Current	lo	15	А
Non-Repetitive Peak Forward Surge Current 8.3ms	IFSM	280	А
Single Half Sine-Wave Superimposed on Rated Load			

Thermal Characteristics

Characteristic		Symbol	Value	Unit
Maximum Thermal Resistance		RθJA	26	°C/W
Thermal Resistance Junction to Am	ibient (Note 1)			
	V R ≤ 80% VRRM		-65 to +150	
Operating Temperature Range	V R ≤ 50% VRRM	TJ	≤180	℃
	DC Forward Mode		≤200	
Storage Temperature Range		TSTG	-65 to +175	°C



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Electrical Characteristics @TA = 25°C unless otherwise specified

Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Forward Voltage Drop (Per Leg)	VF	-	-	0.49	V	IF = 15A, TJ = 25°C
				0.42		IF = 15A, TJ = 125°C
Leakage Current (Note 2)	IR	-	-	0.5	mA	V R = 40V, TJ = 25°C
				100		V R = 40V, TJ = 125°C

Notes: 1. Polymide, 2oz. Copper 16x minimum recommended pad layout 2. Short duration pulse test used to minimize self-heating effect.





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Package Outline Dimensions



Dim	Min	Max	
Α	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		
Е	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 D	mensions	in mm	

Suggested Pad Layout



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

L1