

SBR1545 thru SBR15200

Schottky Barrier Rectifiers

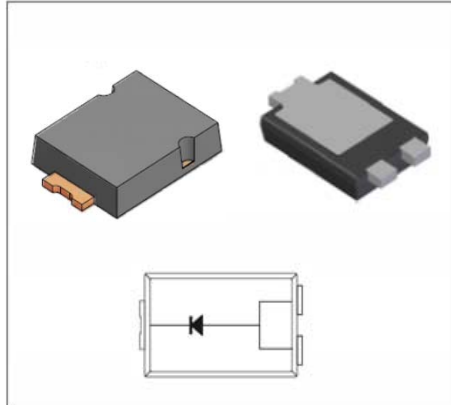
Reverse Voltage 45 to 200V Forward Current 15A

FEATURES

- * Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- * Low power loss, high efficiency
- * For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- * Guardring for over voltage protection
- * High temperature soldering guaranteed: 260°C/10 seconds at terminals

Mechanical Data

Case: JEDEC TO-277A,
molded plastic over SKY body
Terminals: Plated leads, solderable per MIL-STD-750, Method 2026
Mounting Position: Any
Weight: 0.108 g
Handling precaution: None



We declare that the material of product is Halogen free (green epoxy compound)

1. Electrical Characteristic

Maximum & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter Symbol	symbol	SBR1545	SBR1550	SBR1560	SBR15100	SBR15150	SBR15200	Unit
device marking code		S1545	S155	S156	S1510	S1515	S1520	
Maximum repetitive peak reverse voltage	V _{RRM}	45	50	60	100	150	200	V
Maximum RMS voltage	V _{RMS}	31.5	35	42	70	105	140	V
Maximum DC blocking voltage	V _{DC}	45	50	60	100	150	200	V
Maximum average forward rectified current at Tc = 75°C	IF(AV)	15.0						A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	300						A
Typical thermal resistance (Note 1)	RθJC	3						°C/W
	RθJL	8						
	RθJA	80						
Typical thermal resistance (Note 2)	RθJA	135						°C/W
Operating junction temperature range	TJ	-55 to +150						°C
Storage temperature range	T _{STG}	-55 to +150						°C

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter Symbol	symbol	SBR1545	SBR1550	SBR1560	SBR15100	SBR15150	SBR15200	Unit
Maximum instantaneous forward voltageat 25°C at 15A	V _F	0.55	0.70		0.88			V
Maximum DC reverse current TA = 25°C at rated DC blocking voltage Tj = 100°C	IR	0.3 30.0						mA
Typical junction capacitance at 4.0V, 1MHz	CJ	500						PF

NOTES:

1. Polymide PCB, 2oz. Copper. Cathode pad dimensions 18.8mm x 14.4mm. Anode pad dimensions 5.6mm x 14.4mm.
2. FR-4 PCB, 2oz. Copper.

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2. Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

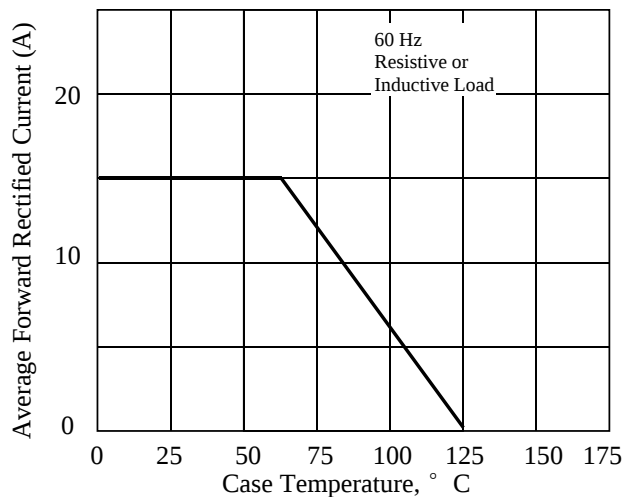


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

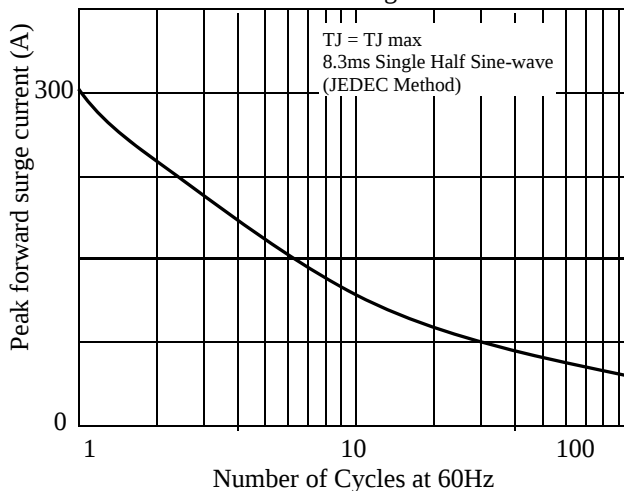


Fig 3. - Typical Instantaneous Forward Characteristics

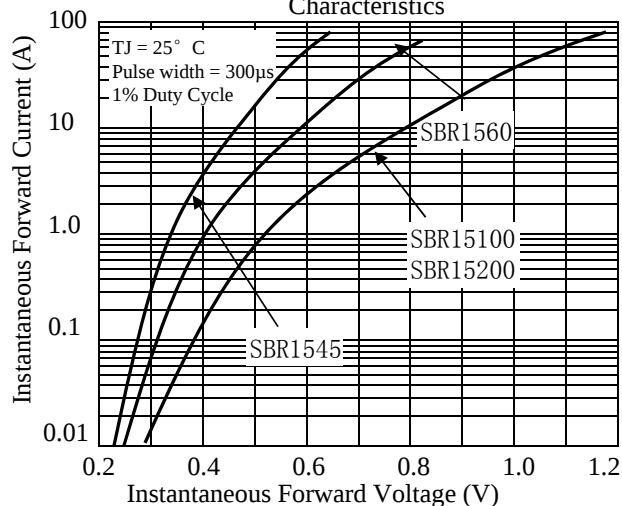


Fig 4. - Typical Reverse Characteristics

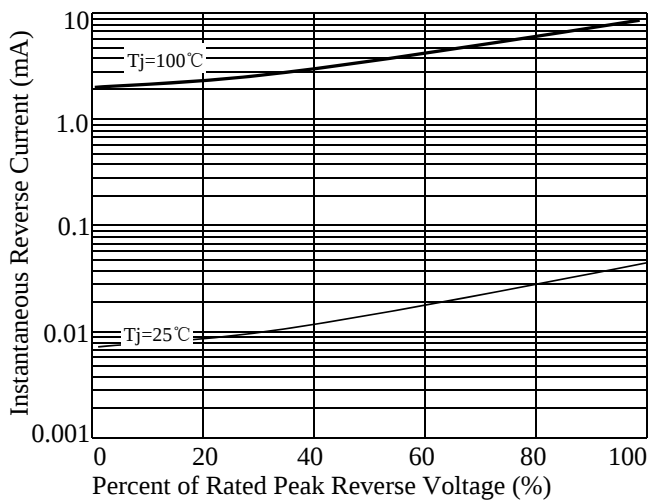


Fig 5. - typical transient thermal impedance (Note 2)

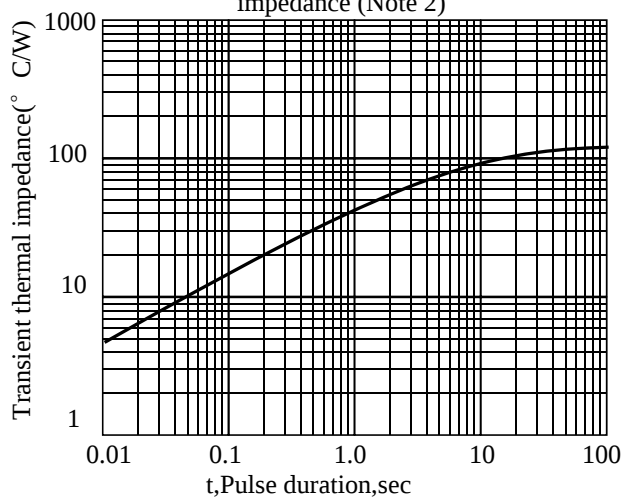
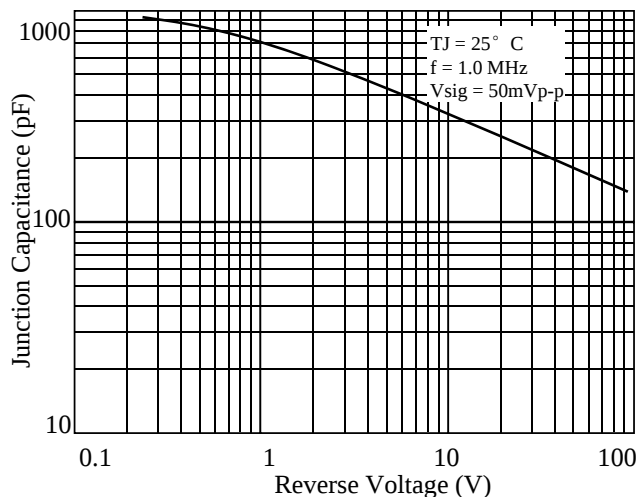


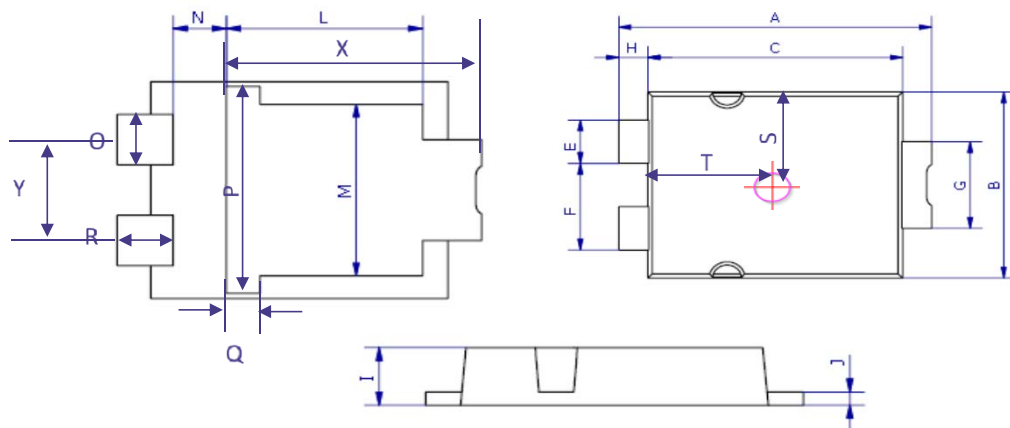
Fig 6. - Typical Junction Capacitance



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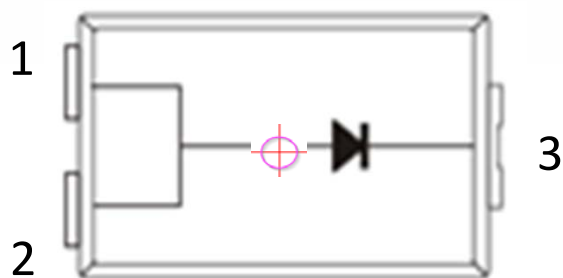
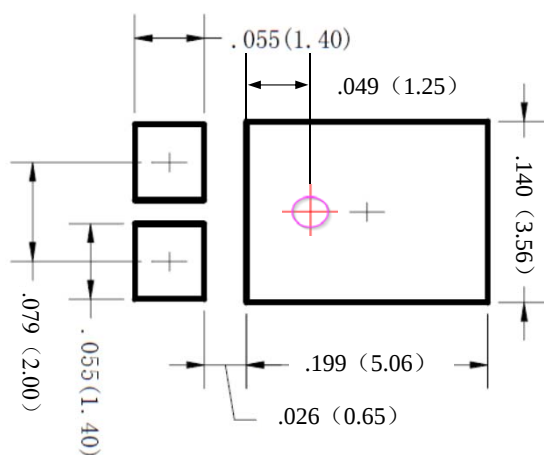
3. dimension:

TO 277A



DIM	MILLIMETERS		INCHES		DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX		MIN	MAX	MIN	MAX
A	6.3	6.7	0.248	0.264	X	4.5	4.7	0.177	0.185
B	4.1	4.5	0.161	0.177	Y	1.9	2.1	0.075	0.083
C	5.1	5.5	0.201	0.217					
E	0.9	1.1	0.035	0.043					
F	1.9	2.1	0.075	0.083					
G	1.9	2.1	0.075	0.083					
H	0.50	0.70	0.020	0.028					
I	1.00	1.20	0.039	0.047					
J	0.15	0.35	0.006	0.014					
L	3.30	3.70	0.130	0.146					
M	3.20	3.60	0.126	0.142					
N	0.80	1.10	0.031	0.043					
O	0.90	1.10	0.035	0.043					
P	3.90	4.30	0.154	0.169					
Q	0.50	0.80	0.020	0.031					
R	0.85	1.15	0.033	0.045					
S	2.00	2.30	0.079	0.091					
T	2.50	2.80	0.098	0.110					

Mounting PAD layout



- 1: Anode
- 2: Anode
- 3: Cathode

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4. Update Record

版次	更新记录	更新作者	更新日期
1	第一版	周杰	2015. 08. 28
2	增加SBR1550	周杰	2016. 10. 31
3	增加尺寸标注	谭志伟	2018-6-1
C	优化印字	谭志伟	2022-11-21