

# 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

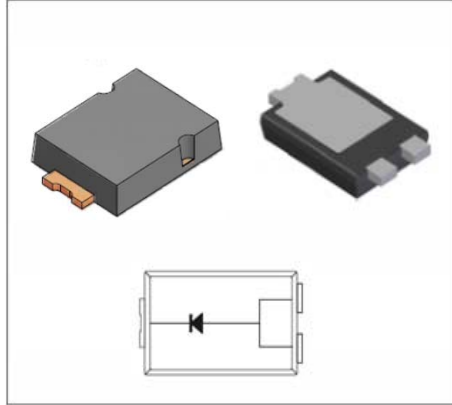
### Mechanical Data

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		SBR1545	SBR1550	SBR1560	SBR15100	SBR15150	SBR15200	
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 $T_c = 75^\circ\text{C}$	$I_{F(AV)}$	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)	$R_{\theta JC}$	8						°C/W
	$R_{\theta JL}$	15						
	$R_{\theta JA}$	31						
Typical thermal resistance (Note 2)	$R_{\theta JA}$	135						°C/W
Operating junction temperature range	$T_J$	-55 to +150						°C
Storage temperature range	$T_{STG}$	-55 to +175						°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 voltage at 25°C at 15A	$V_F$	0.55	0.70		0.88			V
Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_j = 100^\circ\text{C}$	$I_R$	0.3 30.0						mA
Typical junction capacitance at 4.0V, 1MHz	$C_J$	500						PF

#### NOTES:

1. Polyimide 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.

# SBR1545 thru SBR15200

## 2. Ratings and Characteristic Curves (TA = 25°C unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

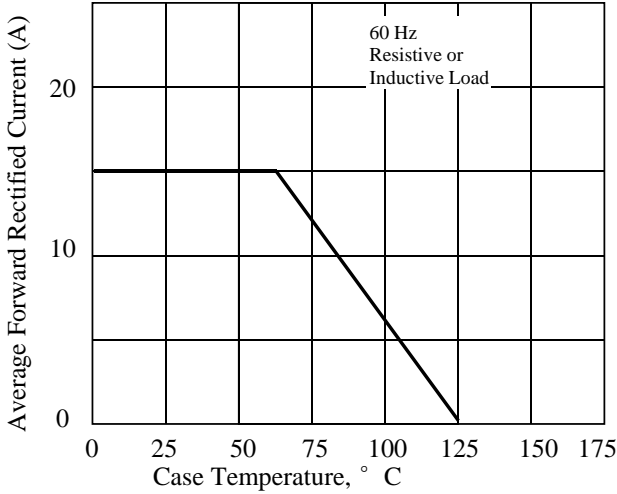


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

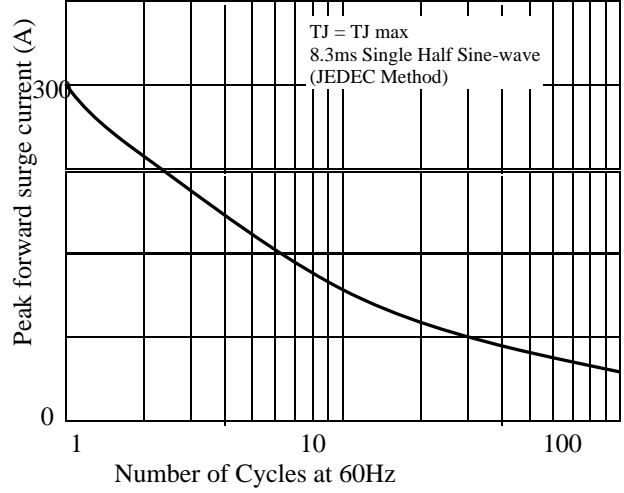


Fig. 3 - Typical Instantaneous Forward Characteristics

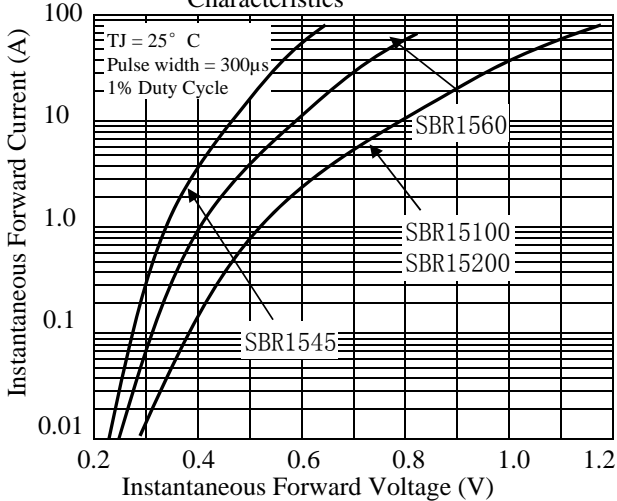


Fig. 4 - Typical Reverse Characteristics

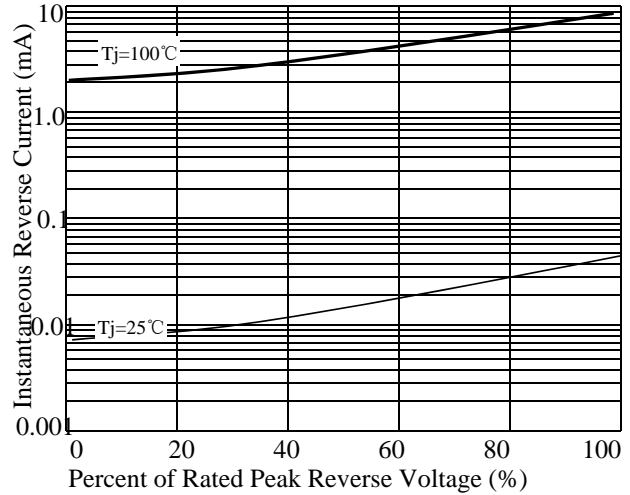


Fig. 5 - typical transient thermal impedance (Note 2)

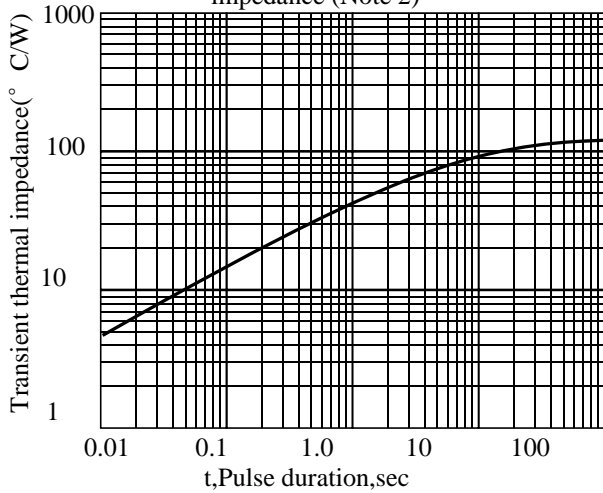
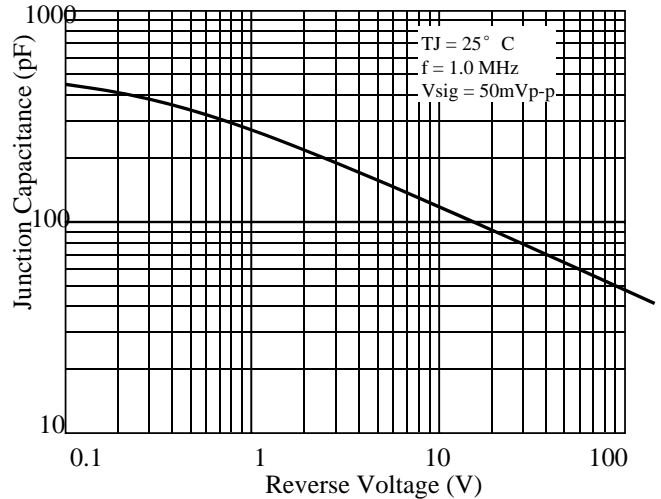


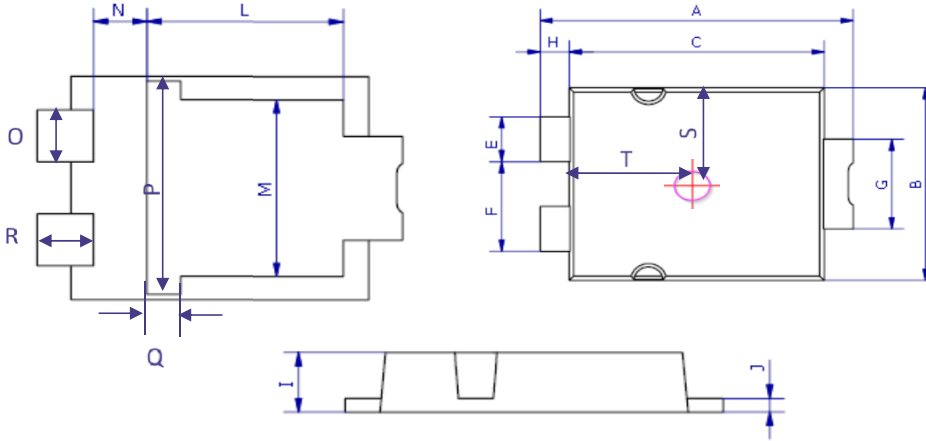
Fig. 6 - Typical Junction Capacitance



## SBR1545 thru SBR15200

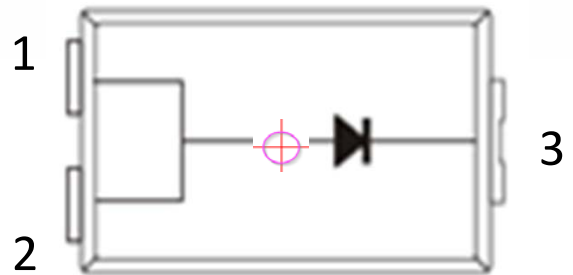
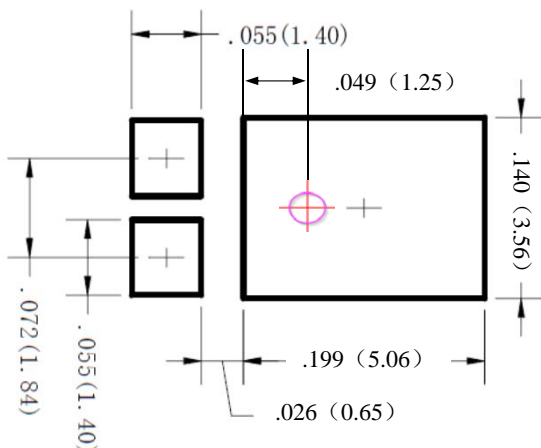
### 3. dimension:

#### TO-277A



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	6.3	6.7	0.248	0.264
B	4.1	4.5	0.161	0.177
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

## SBR1545 thru SBR15200

### 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