

SBR830 thru SBR8100

Schottky Barrier Rectifiers

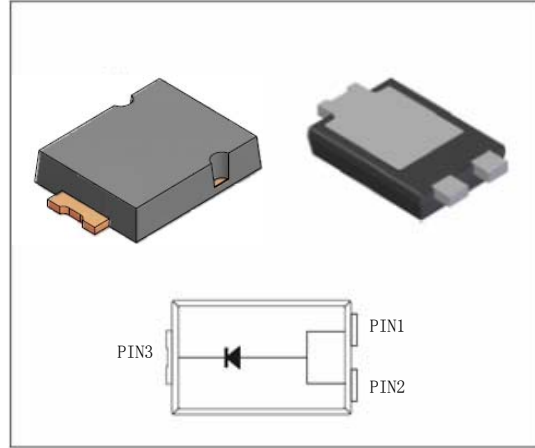
Reverse Voltage 30 to 100V Forward Current 8A

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 | SBR830 | SBR840 | SBR845 | SBR860 | SBR8100 | Unit | |
|--------------------------------------------------------------------------------------------------|-----------------|-------------|------------|------------|------------|-------------|------|------|
| device marking code | | SBR 830 | SBR 840 | SBR 845 | SBR 860 | SBR 8100 | | |
| Maximum repetitive peak reverse voltage | V_{RRM} | 30 | 40 | 45 | 60 | 100 | V | |
| Maximum RMS voltage | V_{RMS} | 21 | 28 | 31.5 | 42 | 70 | V | |
| Maximum DC blocking voltage | V_{DC} | 30 | 40 | 45 | 60 | 100 | V | |
| Maximum average forward rectified current at $T_c = 75^\circ\text{C}$ | $I_{F(AV)}$ | 8.0 | | | | | | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 150 | | | | | | A |
| Typical thermal resistance (Note 1) | $R_{\theta JL}$ | 3 | | | | | | °C/W |
| | $R_{\theta JC}$ | 8 | | | | | | |
| | $R_{\theta JA}$ | 80 | | | | | | |
| Typical thermal resistance (Note 3) | $R_{\theta JA}$ | 135 | | | | | | °C/W |
| Operating junction temperature range | T_J | -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 | SBR830 | SBR840 | SBR845 | SBR860 | SBR8100 | Unit | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------|--------|--------|--------|---------|-------|----|
| Maximum instantaneous forward voltage at 8A at 25°C | V_F | 0.57 | | | 0.70 | 0.87 | V | |
| Maximum DC reverse current $T_j = 25^\circ\text{C}$ at rated DC blocking voltage $T_j = 100^\circ\text{C}$ (note2) at rated DC blocking voltage $T_j = 125^\circ\text{C}$ (note2) | I_R | 0.20 | | | | | 0.070 | mA |
| | | 10.0 | | | | | | |
| | | 20 | | | | | | |
| 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.Short duration pulse test used to minimize self-heating effect .
- 3.FR-4 PCB, 2oz.Copper.

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

Fig. 1 - Forward Current Derating

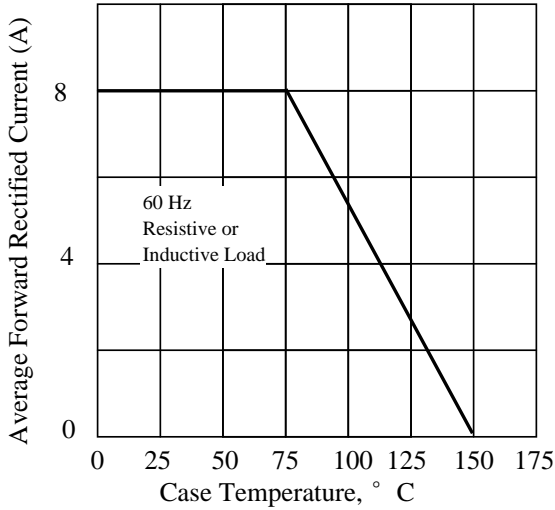


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

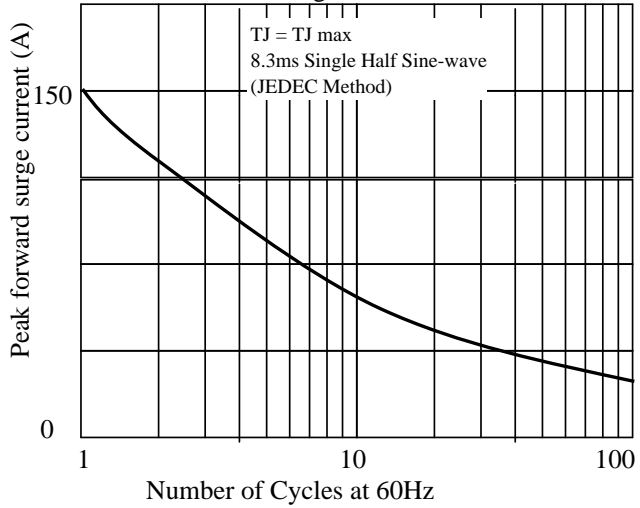


Fig. 3 - Typical Instantaneous Forward Characteristics

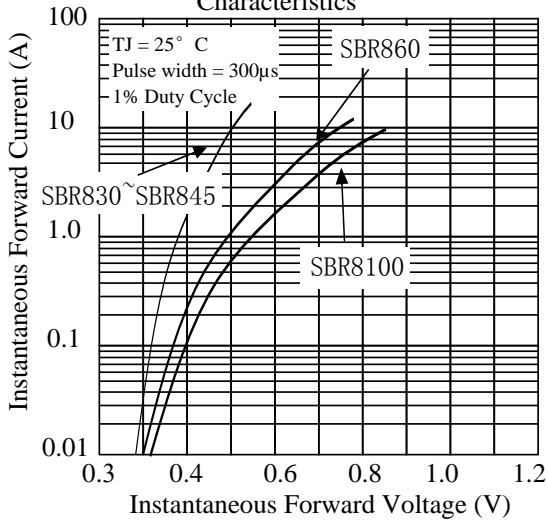


Fig. 4 - Typical Reverse Characteristics

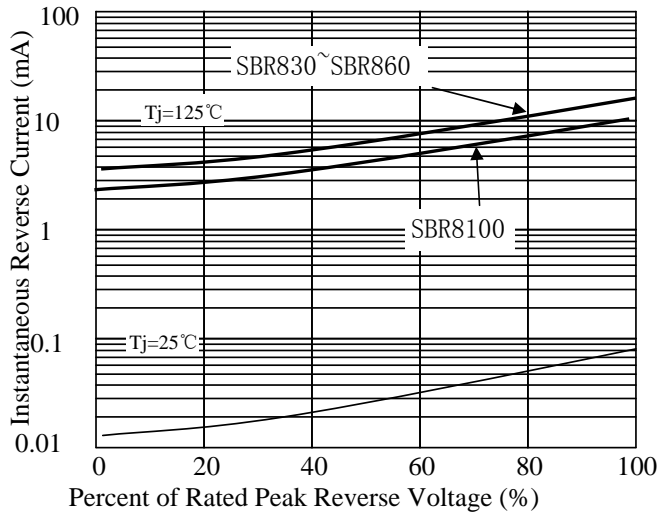


Fig. 5 - typical transient thermal impedance (Note 3)

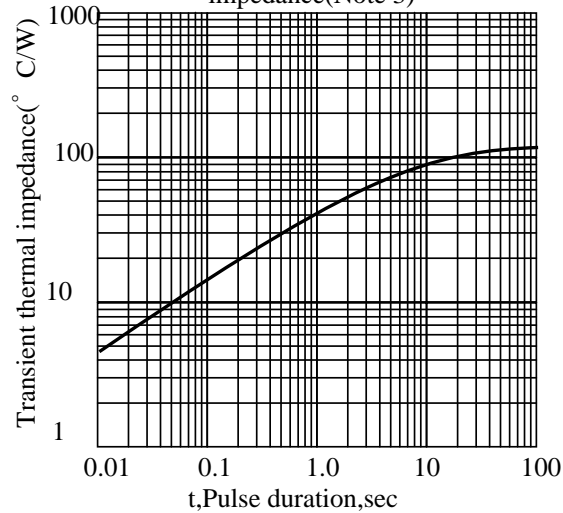
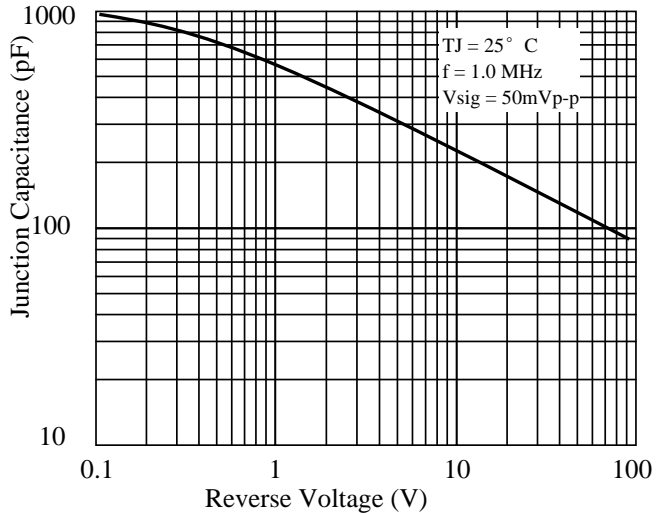


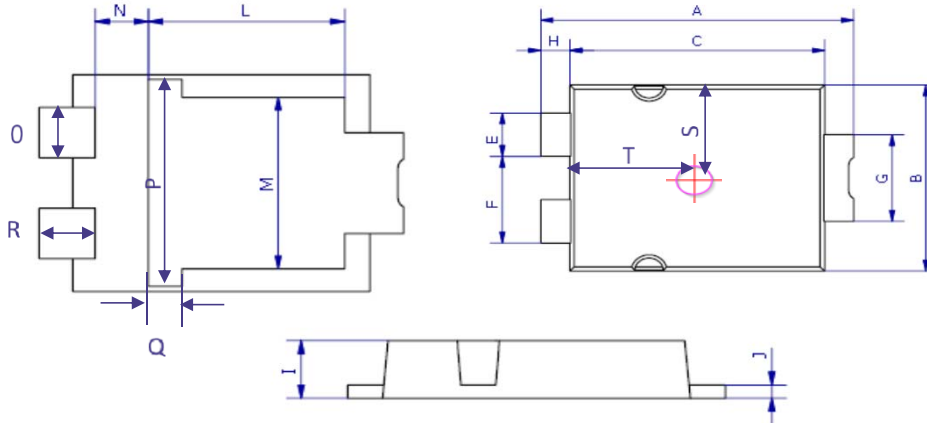
Fig. 6 - Typical Junction Capacitance



SBR830 thru SBR8100

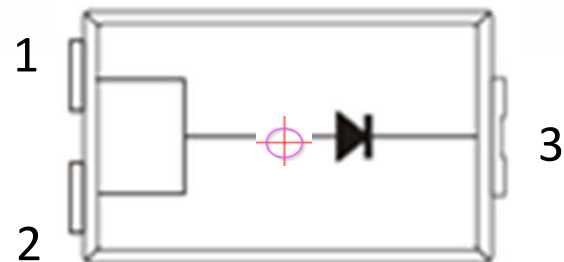
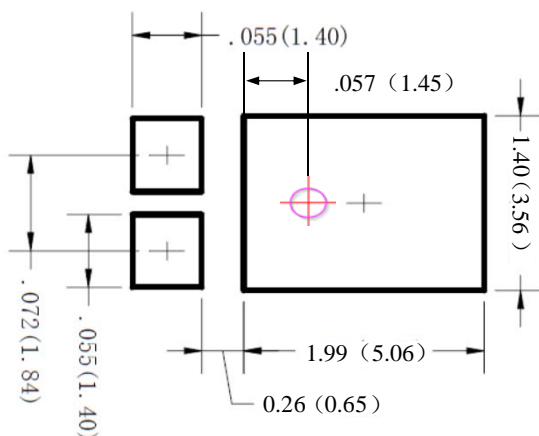
3. dimension:

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 | 0.033 | 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

SBR830 thru SBR8100

4. Update Record

| 版次 | 更新记录 | 更新作者 | 更新日期 |
|----|-----------|------|------------|
| 1 | 第一版 | 周杰 | 2014.06.09 |
| 2 | 增加SBR8100 | 周杰 | 2014.10.25 |
| 3 | 增加印字说明 | 周杰 | 2016.02.23 |
| 4 | VF曲线调整 | 谭志伟 | 2020.12.23 |

单击下面可查看定价，库存，交付和生命周期等信息

[>>LRC\(乐山无线电\)](#)