

SB1220 thru SB12100

Schottky Barrier Rectifiers

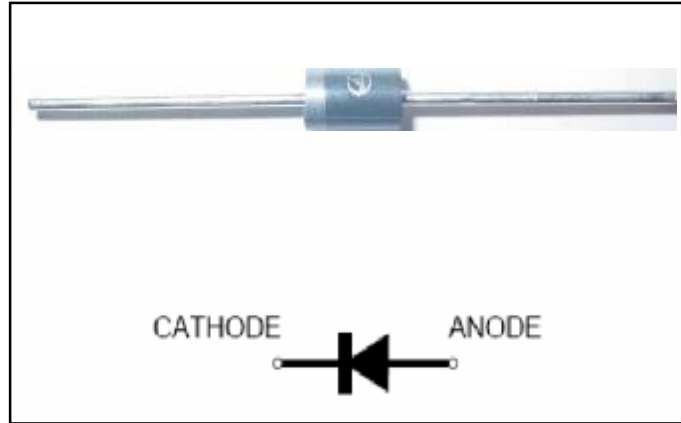
Reverse Voltage 35 to 100V Forward Current 12A

Feature & Dimensions

- * 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
- * Guarding for over voltage protection
- * High temperature soldering guaranteed:
260°C/10 seconds at terminals

Mechanical Data

- Case : JEDEC R-6, molded plastic over sky die
- Terminals : Plated axial leads, solderable per MIL-STD-750, Method 2026
- Polarity : Color band denotes cathode end
- Weight : 0.042oz., 1.19 g
- Mounting position : Any
- Handling precaution : None



We declare that the material of product compliance with ROHS requirements

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

| Parameter symbol | Symbol | SB1235 | SB1245 | SB1250 | SB1260 | SB1280 | SB12100 | Unit |
|--|-----------------|-------------|--------|--------|--------|--------|---------|------|
| Device marking code | | SB1235 | SB1245 | SB1250 | SB1260 | SB1280 | SB12100 | |
| Maximum repetitive peak reverse voltage | V_{RRM} | 35 | 45 | 50 | 60 | 80 | 100 | V |
| Maximum RMS voltage | V_{RMS} | 35 | 45 | 50 | 60 | 80 | 100 | V |
| Maximum DC blocking voltage | V_{DC} | 35 | 45 | 50 | 60 | 80 | 100 | V |
| Maximum average forward rectified current 0.375" (9.5mm) lead length (See fig. 1) | $I_{F(AV)}$ | 12.0 | | | | | | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM1} | 175 | | | | | | A |
| Thermal resistance, junction to ambient | $R_{\theta JA}$ | 40 | | | | | | °C/W |
| Operating junction and storage temperature range | T_J, T_{STG} | -40 to +150 | | | | | | °C |

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

| Parameter symbol | Symbol | SB1235 | SB1245 | SB1250 | SB1260 | SB1280 | SB12100 | Unit |
|--|--------|--------|--------|--------|--------|--------|---------|------|
| Maximum instantaneous forward voltage at 12.0A | VF | 0.55 | | 0.60 | 0.70 | | 0.90 | V |
| Maximum DC reverse current TC = 25°C | I_r | 200 | | | | | | uA |
| Maximum DC reverse current TC = 100°C | I_r | 1000 | | | | | | uA |
| Typical junction capacitance at 4.0V, 1MHz | CJ | 500 | | | 380 | | | PF |

Notes:

1. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

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

Fig. 1 - Forward Current Derating Curve

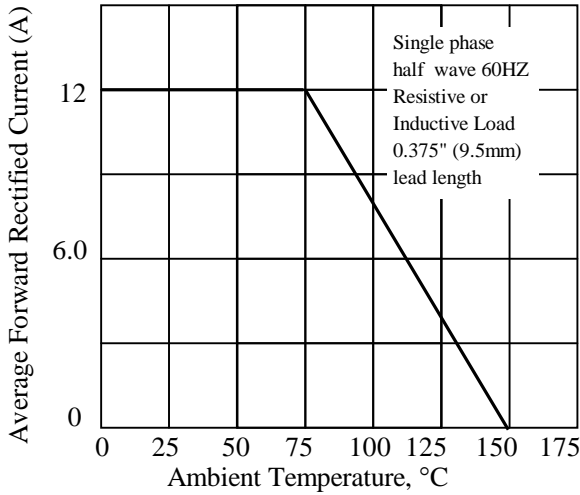


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

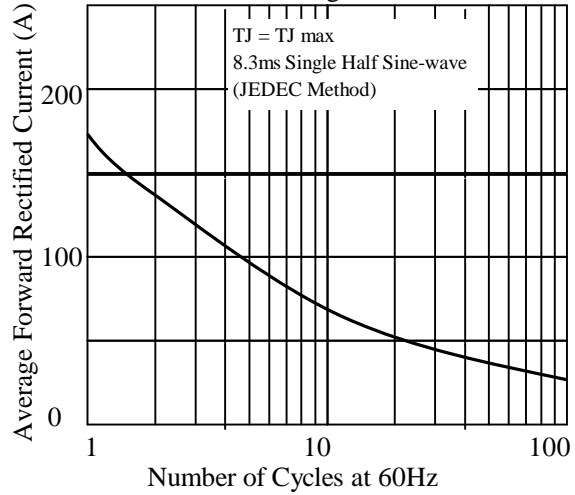


Fig 3. - Typical Instantaneous Forward Characteristics

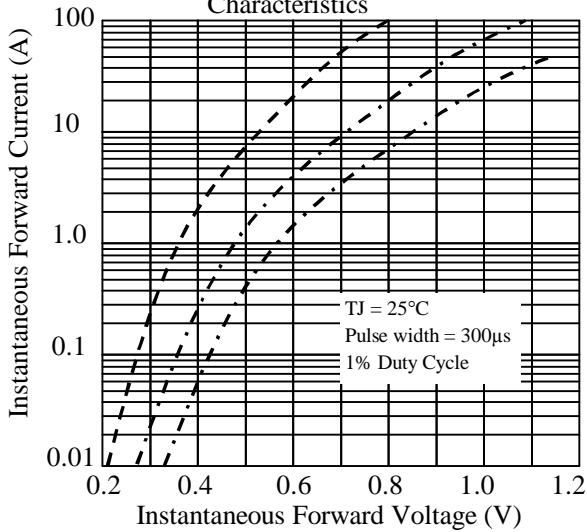


Fig 4. - Typical Reverse Characteristics

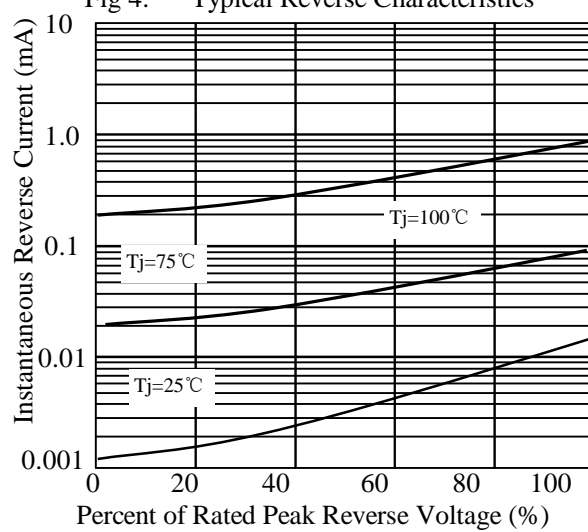


Fig 5. - typical transient thermal impedance

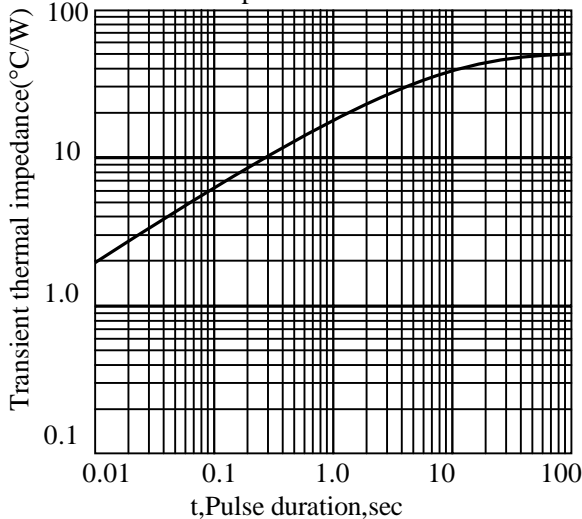
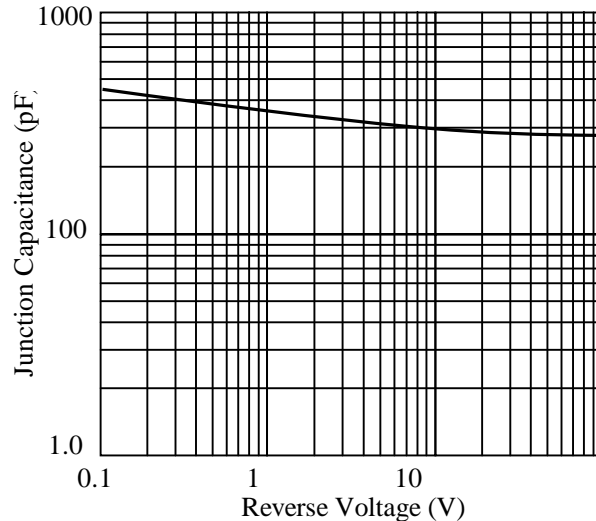
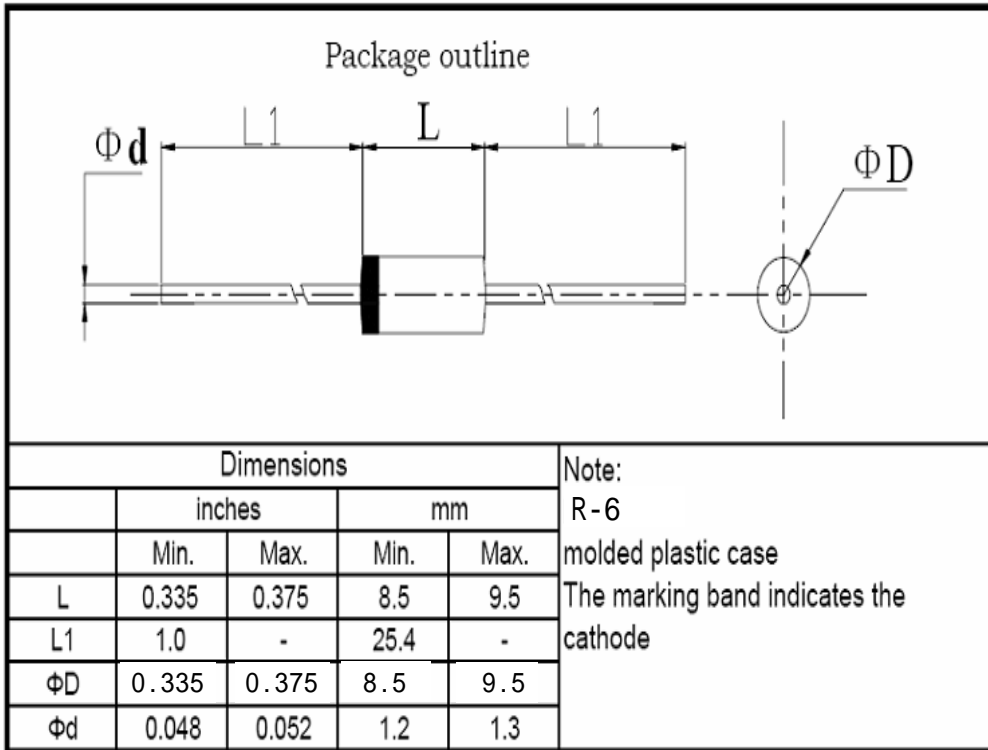


Fig 6. - Typical Junction Capacitance



SB1220 thru SB12100

3. dimension:





SB1220 thru SB12100

4. Update Record

| 版次 | 更新记录 | 更新作者 | 更新日期 |
|----|------|------|-----------|
| 1 | 第一版 | 周杰 | 2010-6-23 |