



B5817WS THRU B5819WS

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

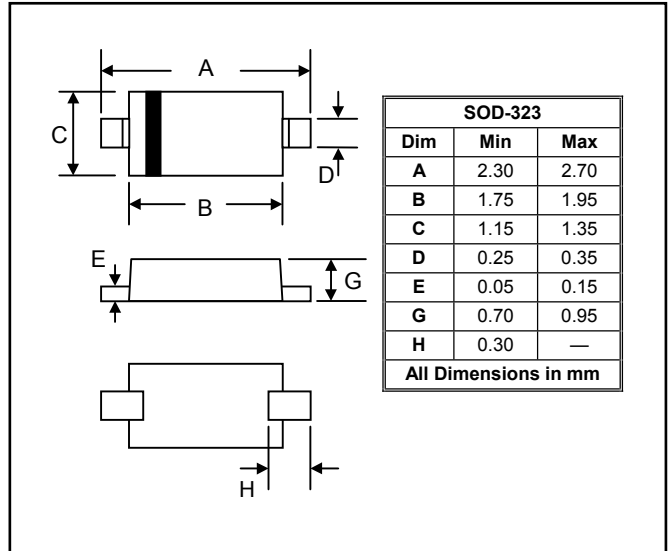
Reverse Voltage - 20 to 40 Volts Forward Current - 1.0 Ampere

FEATURES

- Low Turn-on Voltage
- Fast Switching
- Ultra-small surface mount package.
- PN Junction Guard Ring for Transient and ESD Protection

MECHANICAL DATA

- Case: SOD-323, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.004 grams (approx.)



Maximum Ratings @ $T_A=25^\circ\text{C}$ unless otherwise specified

| Characteristic | Symbol | B5817WS | B5819WS | Unit |
|---|-----------------|-------------|---------|---------------------------|
| Peak Repetitive Reverse Voltage | V_{RRM} | 20 | 40 | V |
| Working Peak Reverse Voltage | V_{RWM} | | | |
| DC Blocking Voltage | V_R | | | |
| Average Rectified Output Current | $I_{R(RMS)}$ | 14 | 28 | V |
| RMS Reverse Voltage | I_{FAV} | 1.0 | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimpose on rated load (JEDEC Method) | I_{FSM} | 4.0 | | A |
| Power Dissipation | P_b | 200 | | mW |
| Typical thermal Resistance junction to Ambient Note ⁽¹⁾ | $R_{\theta JA}$ | 625 | | $^\circ\text{C}/\text{W}$ |
| Operating & Storage Temperature Range | T_J T_{STG} | -55 to +150 | | $^\circ\text{C}$ |

Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

| Characteristic | Symbol | B5817WS | B5819WS | Unit |
|---|-------------|--------------|--------------|------|
| Minimum Reverse Breakdown Voltage ⁽²⁾ ($I_R=1\text{mA}$) | $V_{(BR)R}$ | 20 | 40 | V |
| Forward Voltage Note ⁽²⁾ $I_F=1\text{A}$ $T_j=25^\circ\text{C}$ $I_F=3\text{A}$ $T_j=25^\circ\text{C}$ | V_F | 0.45 0.75 | 0.60 0.90 | V |
| Reverse Current Note ⁽²⁾ $V_R=20\text{V}$, $T_j=25^\circ\text{C}$ $V_R=40\text{V}$, $T_j=25^\circ\text{C}$ | I_R | 1.0 - | - 1.0 | mA |
| Junction Capacitance $f=1\text{MHz}$, $V_R=4\text{VDC}$ | C_j | 120 | | PF |

Note: 1. Valid provided that leads are kept at ambient temperature.

2. Pulse Test : Pulse width = 300 μs , Duty Cycle $\leq 2\%$



B5817WS THRU B5819WS

RATINGS AND CHARACTERISTIC CURVES

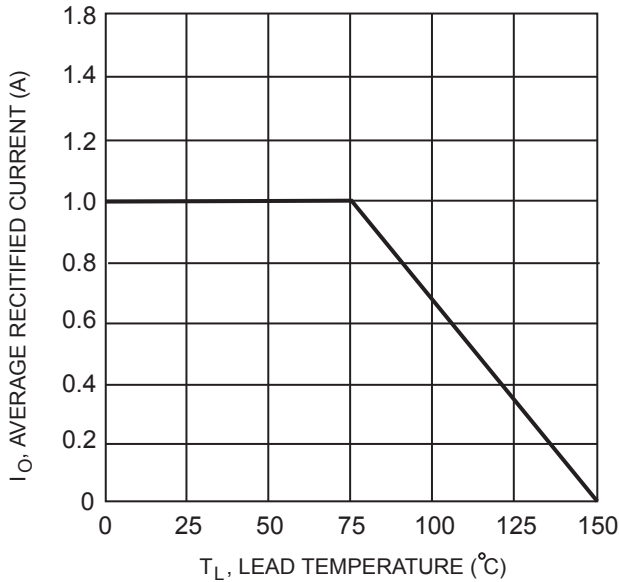


FIG. 1 Forward Current Derating Curve

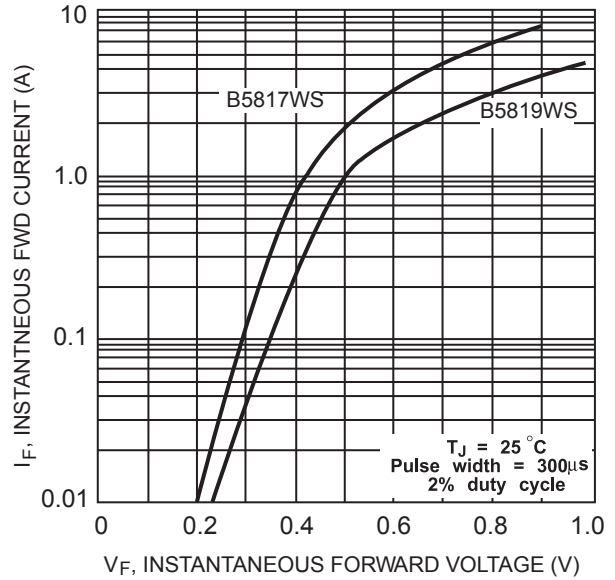


Fig. 2 Typical Forward Characteristics

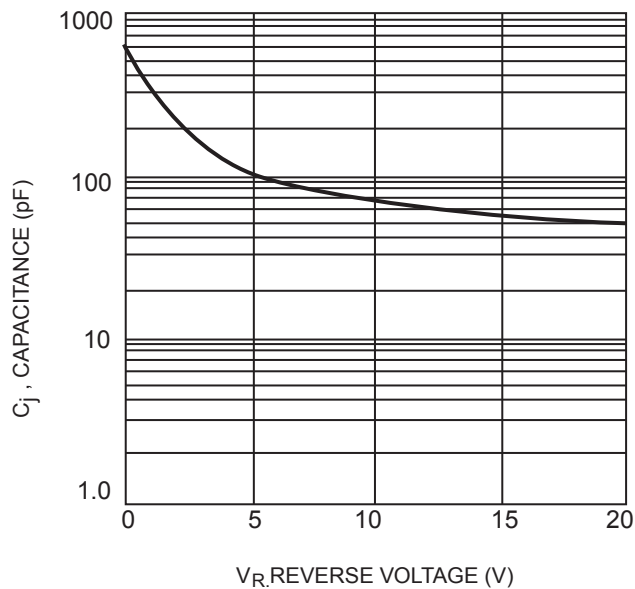


Fig. 3 Typ, Junction Capacitance vs. Reverse Voltage