



# M.C.C.

Micro Commercial Components™

Micro Commercial Components  
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## B5817WS Thru B5819WS

### 1 Amp Schottky Barrier Rectifier 20 - 40 Volts

### Features

- Halogen free available upon request by adding suffix "-HF"
- Guard Ring Protection
- Low Forward Voltage Drop
- For Use in Low Voltage, High Frequency Inverters
- High Surge Current Capability
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant("P" Suffix designates RoHS Compliant. See ordering information)

### Maximum Ratings

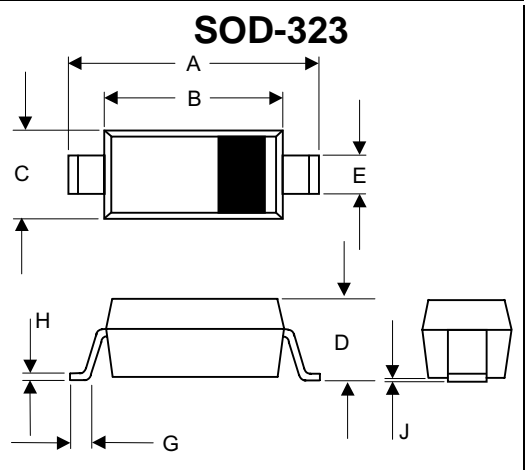
- Operating Temperature: -65°C to +125°C
- Storage Temperature: -65°C to +150°C
- Maximum Thermal Resistance; 500°C/W Junction To Ambient

| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| B5817WS         | SJ             | 20V                                    | 14V                 | 20V                         |
| B5818WS         | SK             | 30V                                    | 21V                 | 30V                         |
| B5819WS         | SL             | 40V                                    | 28V                 | 40V                         |

### Electrical Characteristics @ 25°C Unless Otherwise Specified

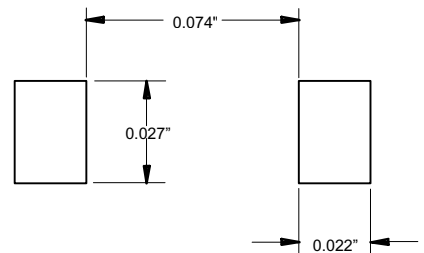
|   |             |       |   |
|---|-------------|-------|---|
| Average Forward Current                                 | $I_{F(AV)}$ | 1.0A  | $T_c = 90^\circ C$                              |
| Peak Forward Surge Current                              | $I_{FSM}$   | 10A   | 8.3ms, half sine                                |
| Maximum Instantaneous Forward Voltage                   | $V_F$       | 0.45V | $I_{FM} = 1.0A;$<br>$T_J = 25^\circ C$ (Note 1) |
| B5817WS   |             | 0.55V |   |
| B5818WS   |             | 0.60V | $I_{FM} = 3A;$<br>$T_J = 25^\circ C$ (Note 1)   |
| B5819WS   |             | 0.75V |   |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$       | 1mA   | $T_A = 25^\circ C$                              |
| Typical junction capacitance                            | $C_J$       | 120pF | Measured at 1.0MHz, $V_R=4.0V$                  |

Notes: 1. Pulse Test: Pulse Width 300usec, Duty Cycle 2%



| DIM | INCHES |      | MM    |      | NOTE |
|-----|--------|------|-------|------|------|
|     | MIN    | MAX  | MIN   | MAX  |      |
| A   | .090   | .107 | 2.30  | 2.70 |      |
| B   | .063   | .071 | 1.60  | 1.80 |      |
| C   | .045   | .053 | 1.15  | 1.35 |      |
| D   | .031   | .045 | 0.80  | 1.15 |      |
| E   | .010   | .016 | 0.25  | 0.40 |      |
| G   | .004   | .018 | 0.10  | 0.45 |      |
| H   | .004   | .010 | 0.10  | 0.25 |      |
| J   | -----  | .006 | ----- | 0.15 |      |

#### SUGGESTED SOLDER PAD LAYOUT



Typical Characteristics

Fig. 1 - Forward Current Derating Curve

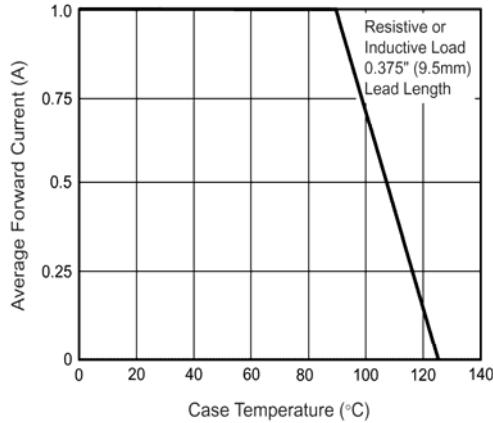


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

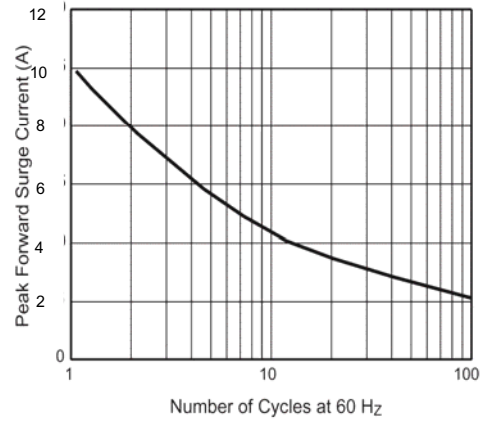


Fig. 3 - Typical Instantaneous Forward Characteristics

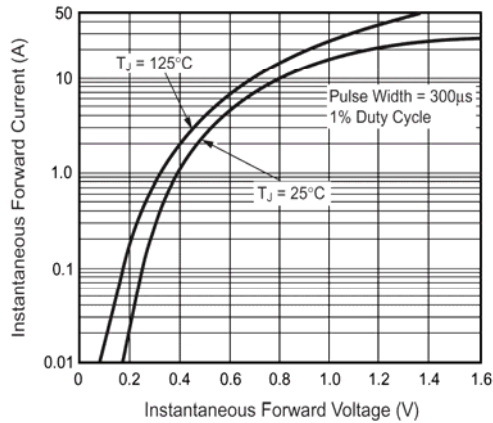


Fig. 4 - Typical Reverse Characteristics

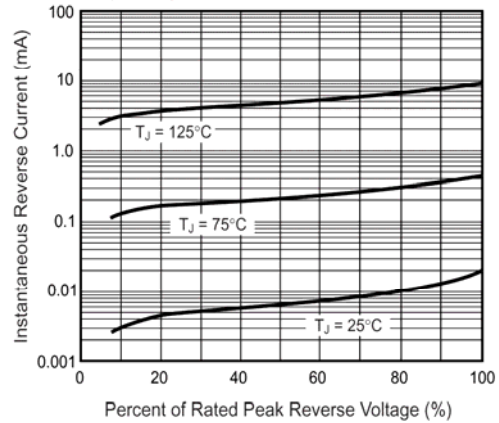


Fig. 5 - Typical Junction Capacitance

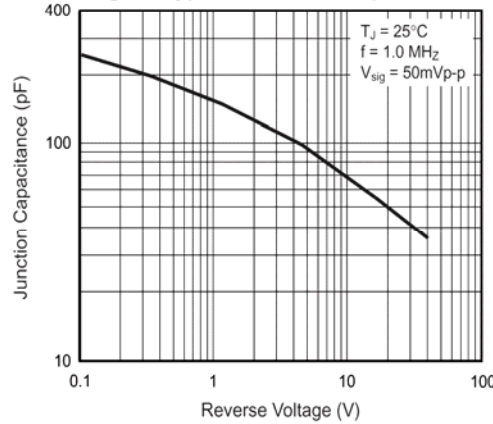
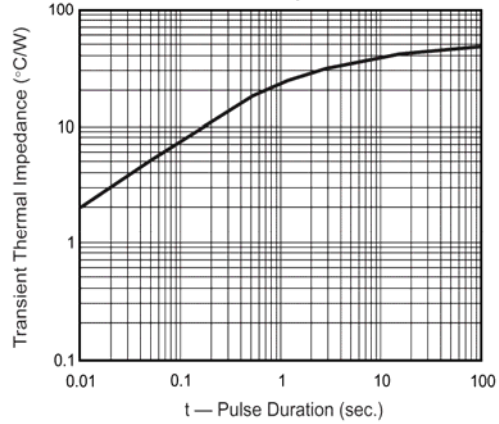


Fig. 6 - Typical Transient Thermal Impedance





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Ordering Information :

| Device         | Packing               |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel: 3Kpcs/Reel |

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