



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

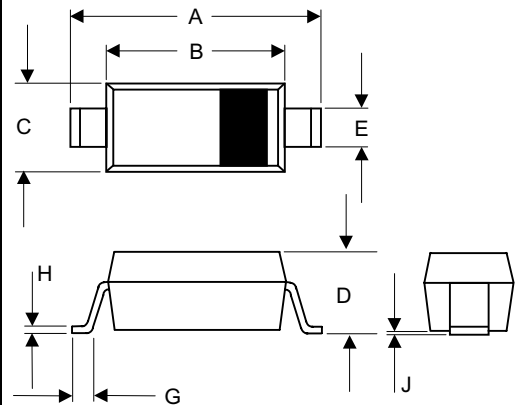
| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| B5817WS | SJ | 20V | 14V | 20V |
| B5818WS | SK | 30V | 21V | 30V |
| B5819WS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

Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|-------------|-------------------------|--|
| Average Forward Current | $I_{F(AV)}$ | 1.0A | $T_c = 90^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 10A | 8.3ms, half sine |
| Maximum Instantaneous Forward Voltage | V_F | 0.45V 0.55V 0.60V | $I_{FM} = 1.0A$; $T_J = 25^\circ\text{C}$ (Note 1) |
| B5817WS | | 0.75V | $I_{FM} = 3A$; $T_J = 25^\circ\text{C}$ (Note 1) |
| B5818WS | | 0.875V | |
| B5819WS | | 0.90V | |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | I_R | 1mA | $T_A = 25^\circ\text{C}$ |
| Typical junction capacitance | C_J | 120pF | Measured at 1.0MHz, $V_R=4.0V$ |

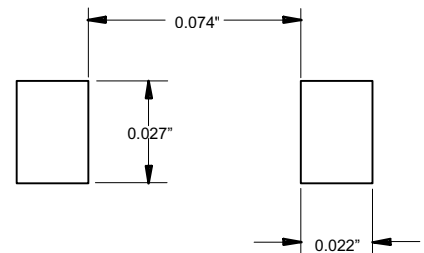
Notes: 1. Pulse Test: Pulse Width 300usec, Duty Cycle 2%

SOD-323



| 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

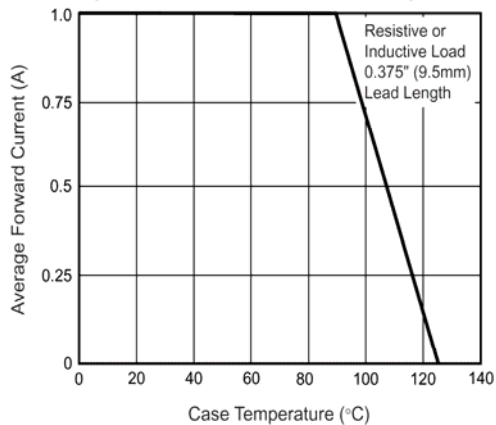


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

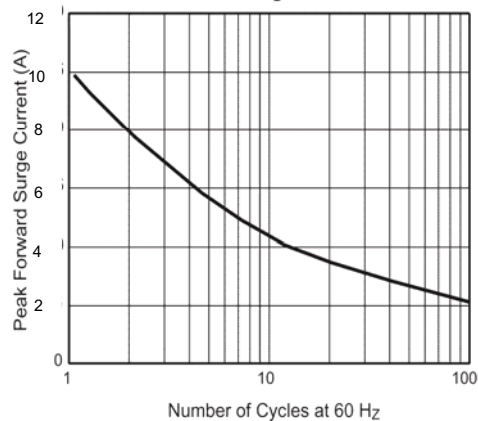


Fig. 3 - Typical Instantaneous Forward Characteristics

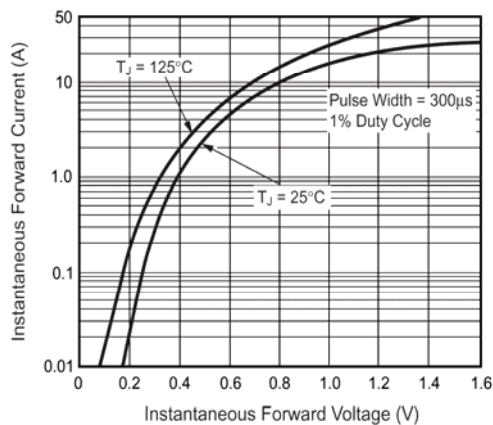


Fig. 4 - Typical Reverse Characteristics

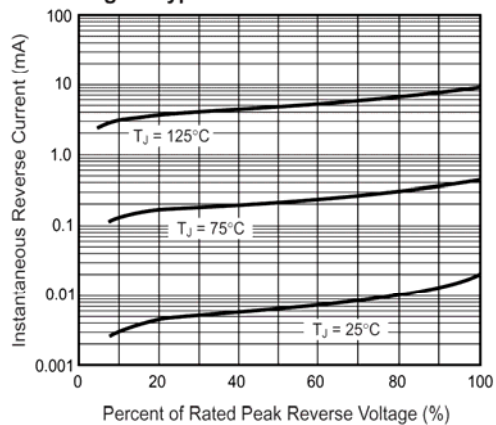


Fig. 5 - Typical Junction Capacitance

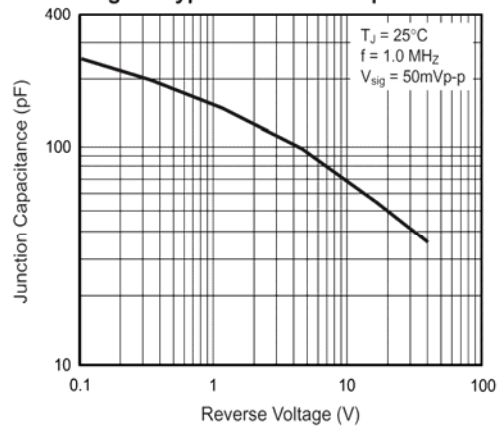
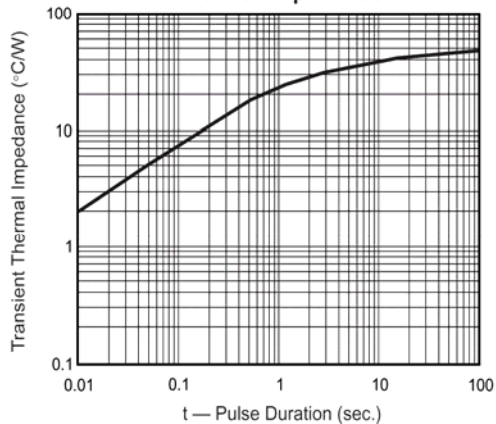


Fig. 6 - Typical Transient Thermal Impedance



Ordering Information :

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

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