

# B5817WS Thru B5819WS

## 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                         |

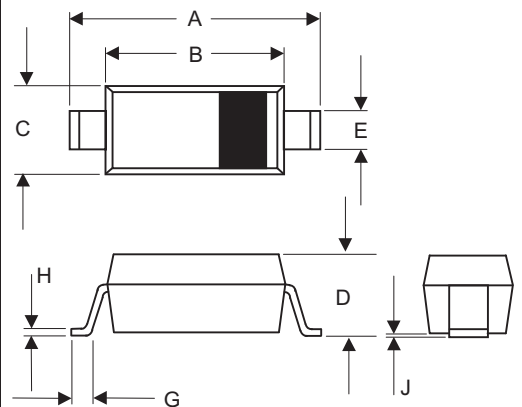
## Electrical Characteristics @ 25°C Unless Otherwise Specified

|                                       |             |                          |   |
|---------------------------------------|-------------|--------------------------|---|
| 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                                      |
| Power Dissipation                     | $P_d$       | 250mW                    |   |
| Maximum Instantaneous Forward Voltage | $V_F$       | 0.45V                    | $I_{FM} = 1.0A;$<br>$T_J = 25^\circ\text{C}$ (Note 1) |
|                                       |             | 0.55V                    |   |
|                                       |             | 0.60V                    |   |
| Reverse leakage current               | $I_R$       | 0.75V                    | $I_{FM} = 3A;$<br>$T_J = 25^\circ\text{C}$ (Note 1)   |
|                                       |             | 0.875V                   |   |
|                                       |             | 0.90V                    |   |
| Typical junction capacitance          | $C_J$       | 200µA(Max)<br>30µA(Typ.) | $V_R=20V, T_a=25^\circ\text{C}$                       |
|                                       |             | 40µA(Max)<br>4µA(Typ.)   | $V_R=30V, T_a=25^\circ\text{C}$                       |
|                                       |             | 40µA(Max)<br>7µA(Typ.)   | $V_R=40V, T_a=25^\circ\text{C}$                       |

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

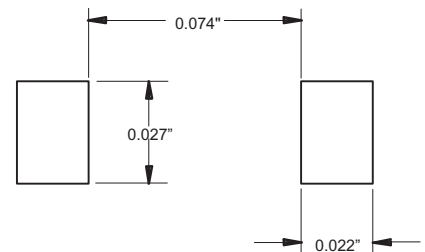
## 1 Amp Schottky Barrier Rectifier 20 - 40 Volts

### 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 |      |

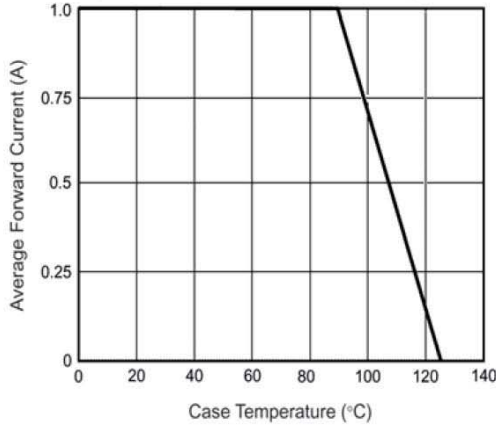
### SUGGESTED SOLDER PAD LAYOUT



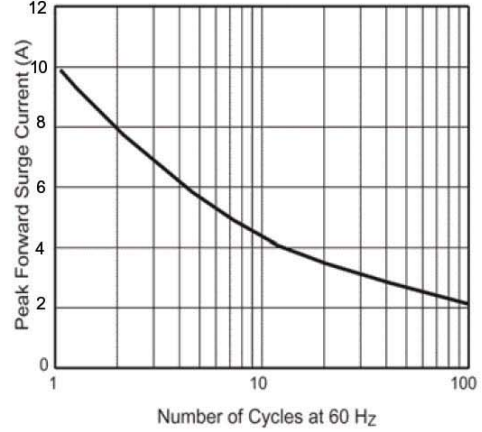
# B5817WS-B5819WS

## Typical Characteristics

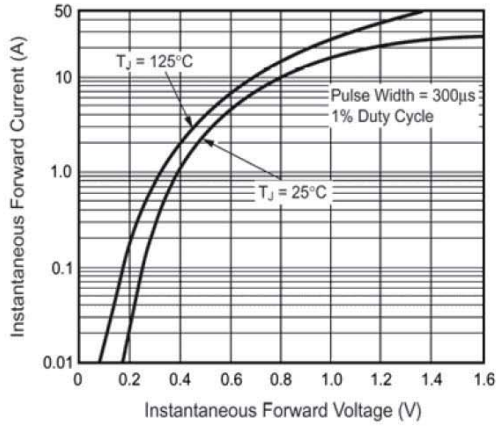
**Fig. 1 - Forward Current Derating Curve**



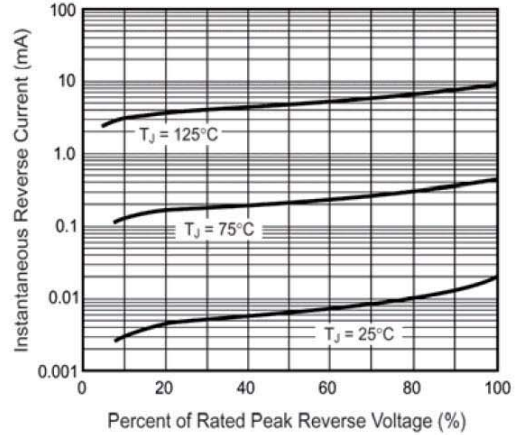
**Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current**



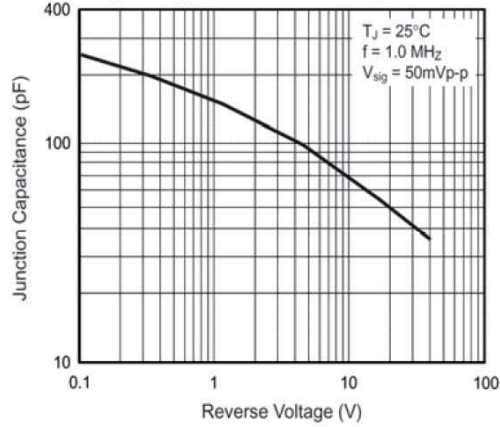
**Fig. 3 - Typical Instantaneous Forward Characteristics**



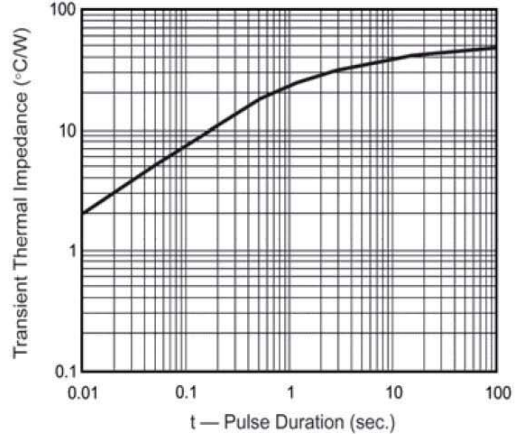
**Fig. 4 - Typical Reverse Characteristics**



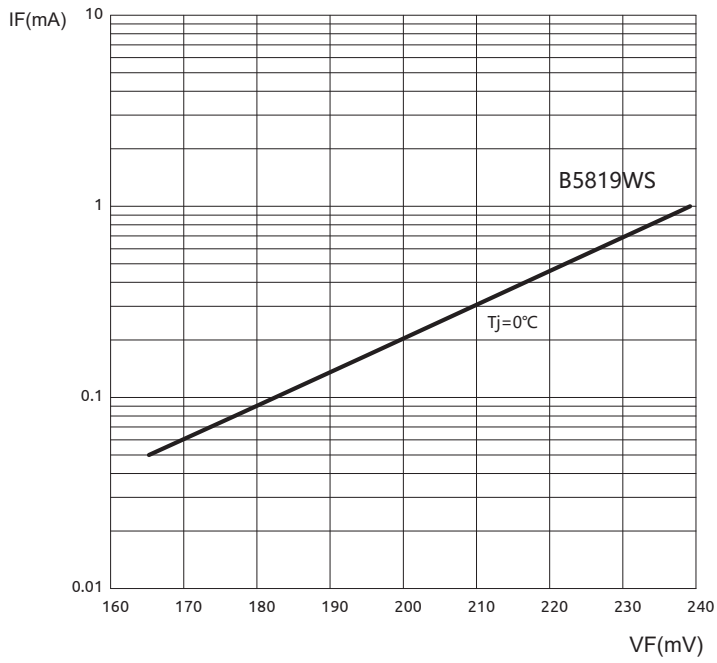
**Fig. 5 - Typical Junction Capacitance**



**Fig. 6 - Typical Transient Thermal Impedance**



**Fig7. Forward Characteristics**





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Ordering Information :

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

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