

B5817W-5819W SCHOTTKY BARRIER DIODE

FEATURES

For use in low voltage, high frequency inverters
 Free wheeling, and polarity protection applications.

MARKING: B5817WS: SJ
 B5818WS:SK
 B5819WS: SL


Maximum Ratings and Electrical Characteristics, Single Diode @T_A=25°C

| Parameter | Symbol | B5817WS | B5818WS | B5819WS | Unit |
|--|---------------------|----------|---------|---------|------|
| Non-Repetitive Peak reverse voltage | V _{RM} | 20 | 30 | 40 | V |
| Peak repetitive Peak reverse voltage | V _{RPM} | 20 | 30 | 40 | V |
| Working Peak Reverse Voltage | V _{RWM} | | | | |
| DC Blocking Voltage | V _R | | | | |
| RMS Reverse Voltage | V _{R(RMS)} | 14 | 21 | 28 | V |
| Average Rectified Output Current | I _O | 1 | | | A |
| Peak forward surge current @=8.3ms | I _{FSM} | 9 | | | A |
| Repetitive Peak Forward Current | I _{FRM} | 1.5 | | | A |
| Power Dissipation | P _d | 250 | | | mW |
| Thermal Resistance Junction to Ambient | R _{θJA} | 500 | | | °C/W |
| Storage temperature | T _{STG} | -65~+150 | | | °C |

ELECTRICAL CHARACTERISTICS (T_{amb}=25°C unless otherwise specified)

| Parameter | Symbol | Test conditions | MIN | MAX | UNIT |
|---------------------------------|-------------------|----------------------------|--|-------|------|
| Reverse breakdown voltage | V _(BR) | I _R = 1mA | | | V |
| | | B5817WS | 20 | | |
| | | B5818WS B5819WS | 30 40 | | |
| Reverse voltage leakage current | I _R | V _R =20V | | 1 | mA |
| | | V _R =30V | | | |
| | | V _R =40V | | | |
| Forward voltage | V _F | B5817WS | I _F =1A I _F =3A | 0.45 | V |
| | | | | 0.75 | |
| | | B5818WS | I _F =1A I _F =3A | 0.55 | V |
| | | | | 0.875 | |
| | | B5819WS | I _F =1A I _F =3A | 0.6 | V |
| | | | | 0.9 | |
| Diode capacitance | C _D | V _R =4V, f=1MHz | | 120 | pF |

Typical Characteristics

B5817W-5819W

Fig. 1 - Forward Current Derating Curve

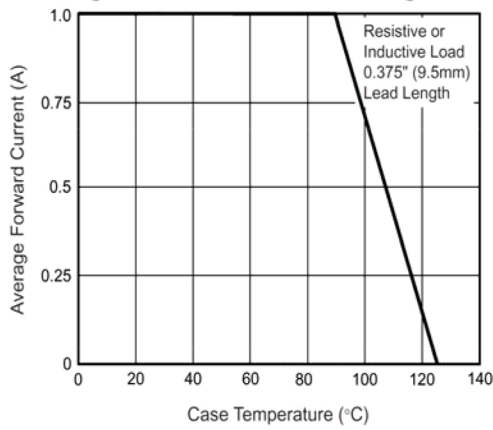


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

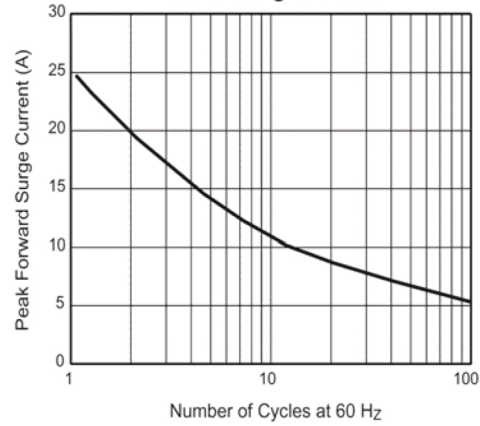


Fig. 3 - Typical Instantaneous Forward Characteristics

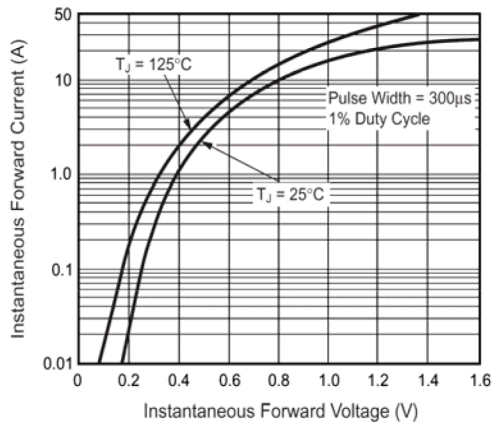


Fig. 4 - Typical Reverse Characteristics

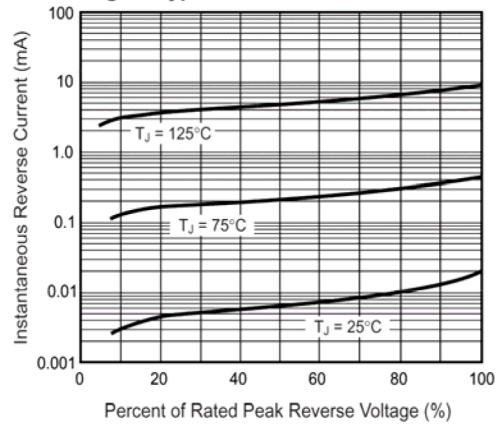


Fig. 5 - Typical Junction Capacitance

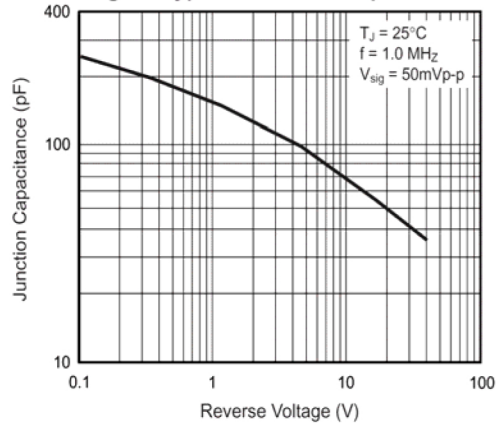
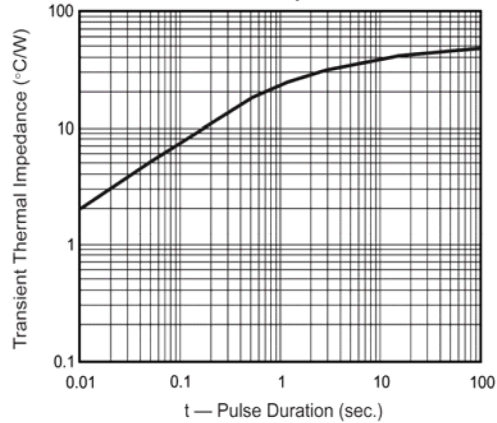


Fig. 6 - Typical Transient Thermal Impedance



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