

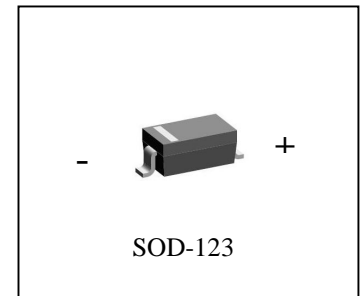
SCHOTTKY BARRIER DIODE

**B5819W**

FEATURES

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

MARKING: SL



MAXIMUM RATINGS (TA=25 °C unless otherwise noted)

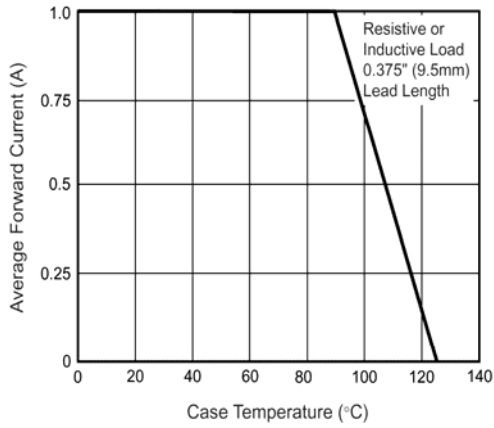
| Parameter                              | Symbol          | Value    | Units |
|--|-----------------|----------|-------|
| Non-Repetitive Peak reverse voltage    | $V_{RM}$        | 40       | V     |
| Peak Repetitive Peak reverse voltage   | $V_{RRM}$       | 40       | V     |
| Working Peak Reverse Voltage           | $V_{RWM}$       | 40       | V     |
| DC Blocking                            | $V_R$           | 40       | V     |
| RMS Reverse Voltage                    | $R(RMS)$        | 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                      | $P_d$           | 500      | mW    |
| Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | 250      | °C/W  |
| Storage temperature                    | $T_{STG}$       | -65~+150 | °C    |

ELECTRICAL CHARACTERISTICS (Tamb=25 °C unless otherwise specified)

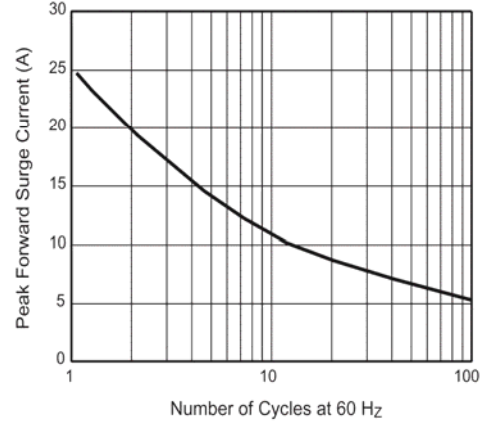
| Parameter                       | Symbol     | Test conditions      | MIN | MAX | UNIT |
|---------------------------------|------------|----------------------|-----|-----|------|
| Reverse breakdown voltage       | $V_{(BR)}$ | $I_R = 1mA$          | 40  |     | V    |
| Reverse voltage leakage current | $I_R$      | $V_R = 40V$          |     | 1   | mA   |
| Forward voltage                 | $V_F$      | $I_F = 1A$           |     | 0.6 | V    |
|                                 |            | $I_F = 3A$           |     | 0.9 | v    |
| Diode capacitance               | $C_D$      | $V_R = 4V, f = 1MHz$ |     | 120 | pF   |

**B5819W** Typical Characteristics

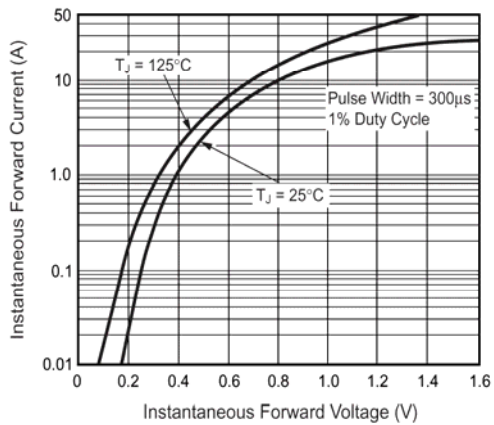
**Fig. 1 - Forward Current Derating Curve**



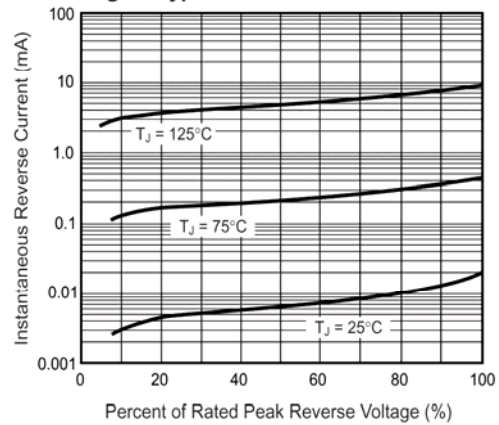
**Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current**



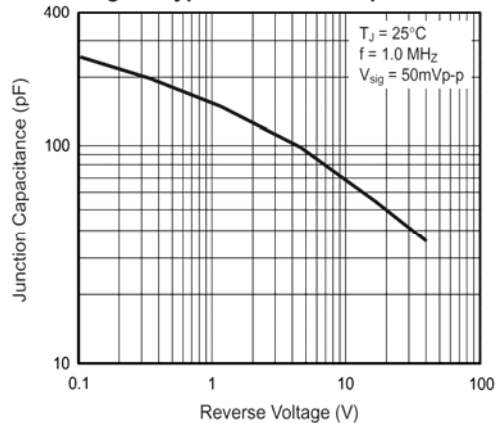
**Fig. 3 - Typical Instantaneous Forward Characteristics**



**Fig. 4 - Typical Reverse Characteristics**



**Fig. 5 - Typical Junction Capacitance**



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

