

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 20 to 40 Volts CURRENT 1.0 Ampere

FEATURES

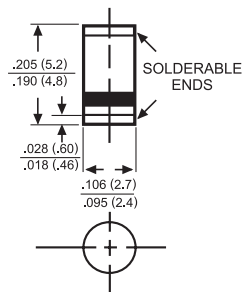
- * Fast switching
- * Glass passivated device
- * Ideal for surface mounted applications
- * Low leakage current
- * Metallurgically bonded construction
- * Mounting position: Any
- * Weight: 0.015 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
 Single phase, half wave, 60 Hz, resistive or inductive load.
 For capacitive load, derate current by 20%.



MELF



Dimensions in inches and (millimeters)

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

| RATINGS | SYMBOL | SM5817 | SM5818 | SM5819 | UNITS |
|---|----------|--------------|--------|--------|-------|
| Maximum Recurrent Peak Reverse Voltage | VRRM | 20 | 30 | 40 | Volts |
| Maximum RMS Voltage | VRMS | 14 | 21 | 28 | Volts |
| Maximum DC Blocking Voltage | Vbc | 20 | 30 | 40 | Volts |
| Maximum Average Forward Rectified Current at TA=90°C | IO | 1.0 | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | IFSM | 25 | | | Amps |
| Typical Thermal Resistance (Note) 1 | RθJA | 80 | | | °C/W |
| Typical Junction Capacitance (Note 2) | CJ | 110 | | | pF |
| Storage Operating Temperature Range | TJ, TSTG | -65 to + 125 | | | °C |

ELECTRICAL CHARACTERISTICS (At TA = 25°C unless otherwise noted)

| CHARACTERISTICS | SYMBOL | SM5817 | SM5818 | SM5819 | UNITS |
|--|--------|--------------|--------|--------|-------|
| Maximum Instantaneous Forward Voltage at 1.0A DC | VF | .45 | .55 | .60 | Volts |
| Maximum Forward Voltage at 3.1A DC | VF | .75 | .875 | .90 | Volts |
| Maximum Average Reverse Current at Rated DC Blocking Voltage | IR | @ TA = 25°C | | | mAmps |
| | | @ TA = 100°C | | | |
| | | 1.0 | | | |
| | | 10 | | | |

NOTES : 1. Thermal Resistance (Junction to Ambient): Vertical PC Board Mounting, 0.5" (12.7mm) Lead Length.
 2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

RATING AND CHARACTERISTIC CURVES (SM5817 THRU SM5819)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

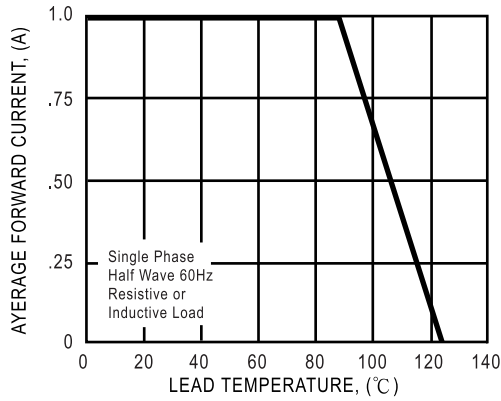


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

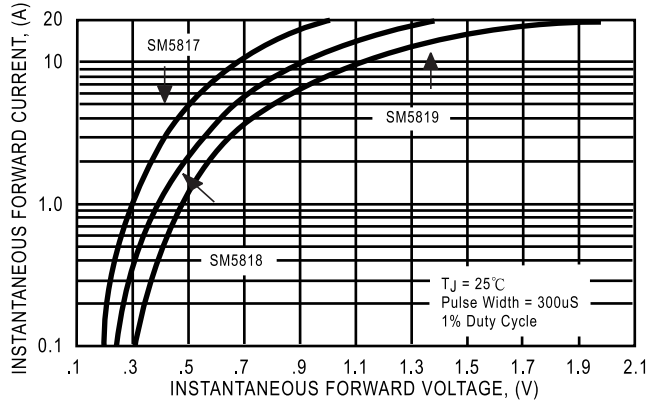


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

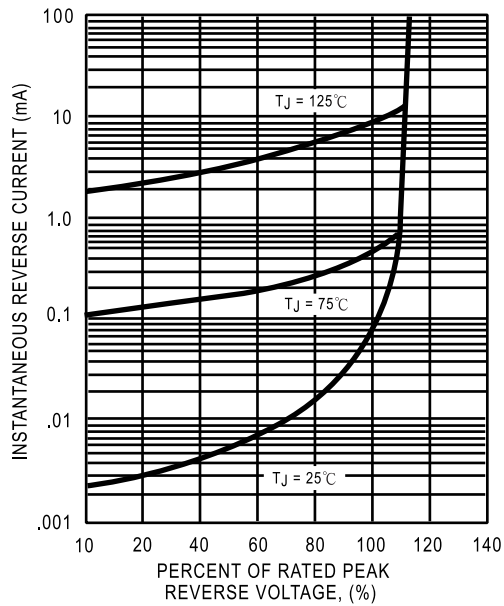


FIG. 4 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

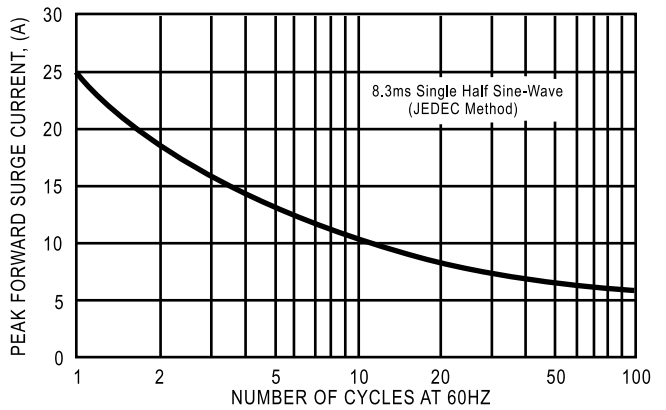


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

