



**DC COMPONENTS CO., LTD.**

RECTIFIER SPECIALISTS

**SM5817S  
THRU  
SM5819S**

**TECHNICAL SPECIFICATIONS OF SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER**

**VOLTAGE RANGE - 20 to 40 Volts**

**CURRENT - 1.0 Ampere**

**FEATURES**

- \* High current capability
- \* Ideal for surface mounted applications
- \* Low leakage current for high efficiency

**MECHANICAL DATA**

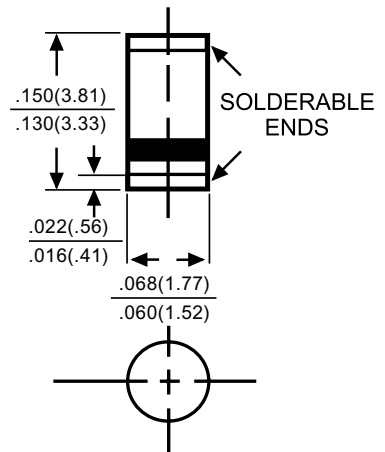
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solder plated solderable per MIL-STD-202E, Method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 0.036 gram

**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%.



**SM-2(DO-213AA)**



Dimensions in inches and (millimeters)

|                                                                                                      |              | SYMBOL   | SM5817S      | SM5818S | SM5819S | UNITS |
|------------------------------------------------------------------------------------------------------|--------------|----------|--------------|---------|---------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                               |              | VRRM     | 20           | 30      | 40      | Volts |
| Maximum RMS Voltage                                                                                  |              | VRMS     | 14           | 21      | 28      | Volts |
| Maximum DC Blocking Voltage                                                                          |              | VDC      | 20           | 30      | 40      | Volts |
| Maximum Average Forward Rectified Current<br>at TA=90°C                                              |              | IO       | 1.0          |         |         | Amps  |
| Peak Forward Surge Current 8.3 ms single half sine-wave<br>superimposed on rated load (JEDEC Method) |              | IFSM     | 25           |         |         | Amps  |
| Maximum Instantaneous Forward Voltage at 1.0A DC                                                     |              | VF       | .50          | .55     | .60     | Volts |
| Maximum DC Reverse Current at<br>Rated DC Blocking Voltage                                           | @ TA = 25°C  | IR       | 1.0          |         |         | mAmps |
|                                                                                                      | @ TA = 100°C |          | 10           |         |         |       |
| Typical Thermal Resistance (Note1)                                                                   |              | RθJA     | 75           |         |         | °C/W  |
| Typical Junction Capacitance (Note 2)                                                                |              | CJ       | 110          |         |         | pF    |
| Storage Operating Temperature Range                                                                  |              | TJ, TSTG | -65 to + 125 |         |         | °C    |

NOTES : 1. Thermal Resistance (Junction to Ambient), .24in<sup>2</sup> (6.0mm<sup>2</sup>) copper pads to each terminal.  
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

## RATING AND CHARACTERISTIC CURVES ( SM5817S THRU SM5819S )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

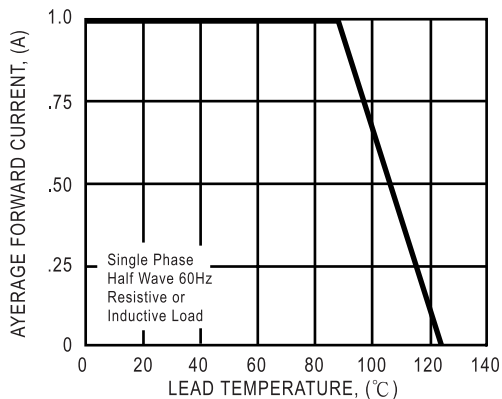


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

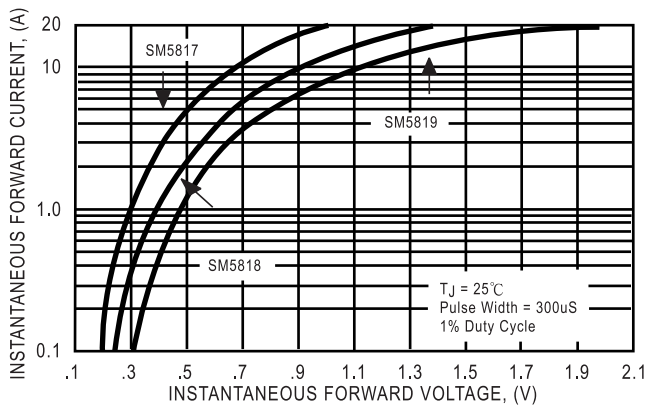


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

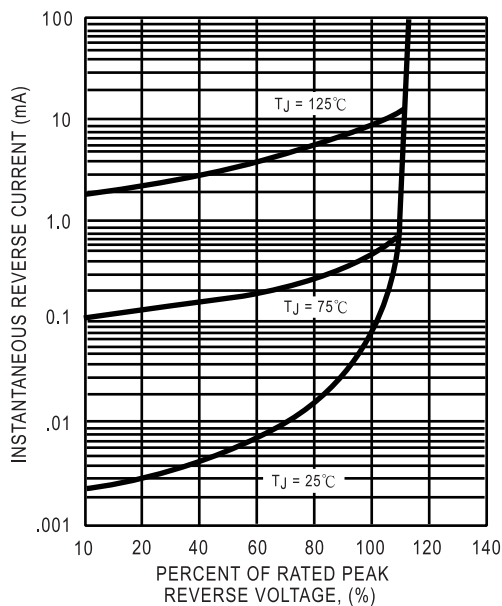


FIG. 4 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

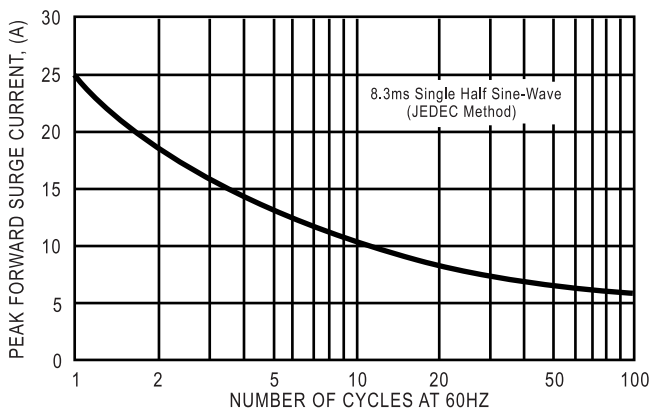
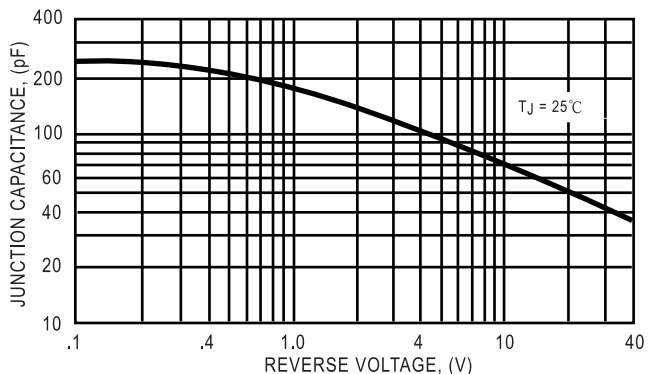


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



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