

**SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER**

**VOLTAGE RANGE 20 to 40 Volts CURRENT 1.0 Ampere**

**FEATURES**

- \* Ideal for surface mounted applications
- \* Low leakage current
- \* Metallurgically bonded construction
- \* Mounting position: Any
- \* Weight: 0.057 gram

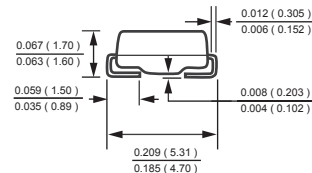
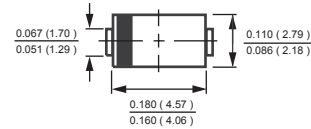
**MECHANICAL DATA**

- \* Epoxy: Device has UL flammability classification 94V-0

NEW RELEASE



**SMAL**



Dimensions in inches and (millimeters)

**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%.

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

| RATINGS   | SYMBOL           | FM5817L      | FM5818L | FM5819L | UNITS |
|---|------------------|--------------|---------|---------|-------|
| Maximum Recurrent Peak Reverse Voltage  | V <sub>RRM</sub> | 20           | 30      | 40      | Volts |
| Maximum RMS Voltage   | V <sub>RMS</sub> | 14           | 21      | 28      | Volts |
| Maximum DC Blocking Voltage   | V <sub>DC</sub>  | 20           | 30      | 40      | Volts |
| Maximum Average Forward Rectified Current at T <sub>A</sub> = 90°C                                | I <sub>O</sub>   | 1.0          |         |         | Amps  |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I <sub>FSM</sub> | 25           |         |         | Amps  |
| Typical Thermal Resistance (Note 3)   | R <sub>θJA</sub> | 88           |         |         | °C/W  |
|   | R <sub>θJL</sub> | 28           |         |         |       |
| Typical Junction Capacitance (Note 1)   | C <sub>J</sub>   | 110          |         |         | pF    |
| Operating Temperature Range   | T <sub>J</sub>   | 150          |         |         | °C    |
| Storage Temperature Range   | T <sub>STG</sub> | -55 to + 150 |         |         | °C    |

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

| CHARACTERISTICS  | SYMBOL                  | FM5817L | FM5818L | FM5819L | UNITS |
|--|-------------------------|---------|---------|---------|-------|
| Maximum Instantaneous Forward Voltage at 1.0A DC             | V <sub>F</sub>          | .45     | .55     | .60     | Volts |
| Maximum Instantaneous Forward Voltage at 3.1A DC             | V <sub>F</sub>          | .75     | .875    | .90     | Volts |
| Maximum Average Reverse Current at Rated DC Blocking Voltage | @T <sub>A</sub> = 25°C  | 0.2     |         |         | mAmps |
|  | @T <sub>A</sub> = 100°C | 10      |         |         | mAmps |

- NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts.  
2. "Fully ROHS compliant", "100% Sn plating (Pb-free)".  
3. Thermal Resistance : Mounted on PCB.  
4. Also available in SMBL.

## RATING AND CHARACTERISTICS CURVES ( FM5817L THRU FM5819L )

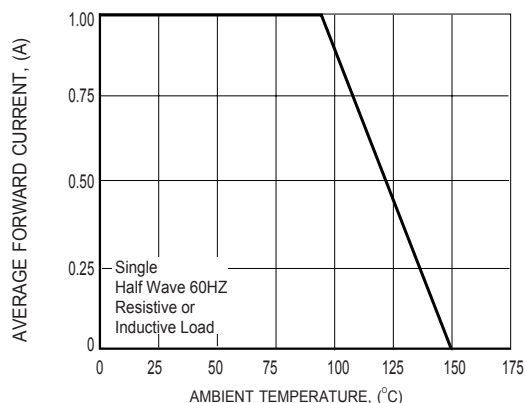


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

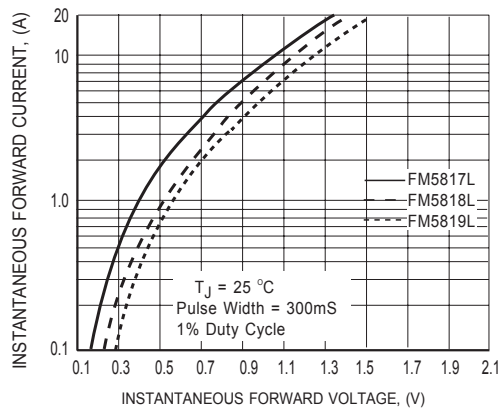


FIG.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

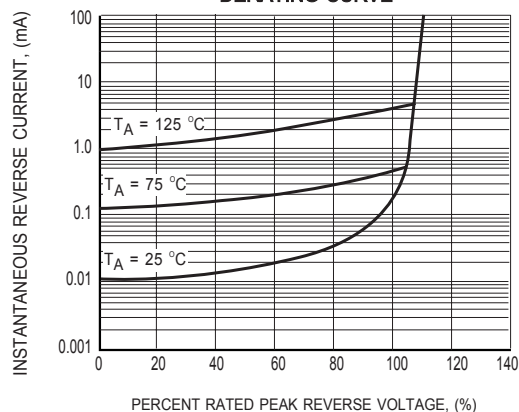


FIG.3 TYPICAL REVERSE CHARACTERISTICS

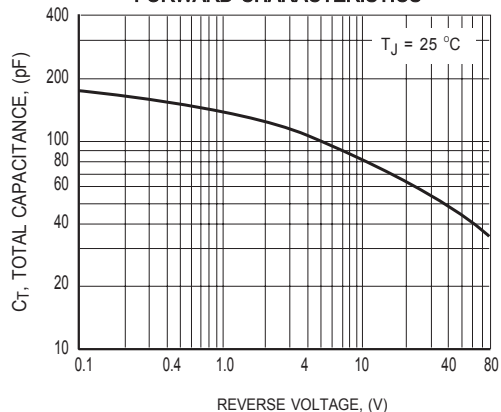


FIG.4 TYPICAL JUNCTION CAPACITANCE

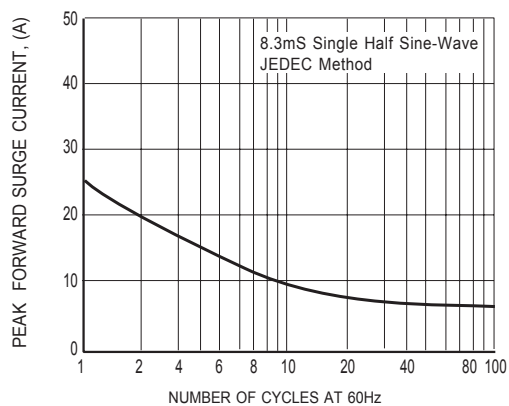
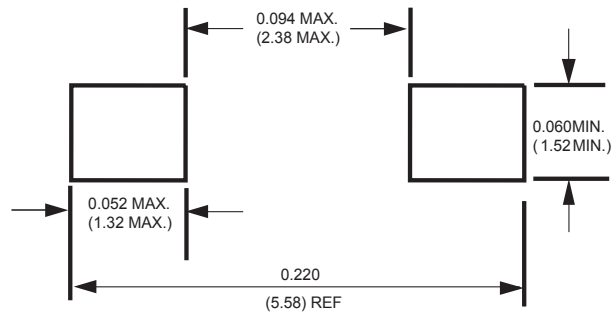


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

## Mounting Pad Layout



Dimensions in inches and (millimeters)

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