

**SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER**

**VOLTAGE RANGE 20 to 40 Volts CURRENT 3.0 Ampere**

**FEATURES**

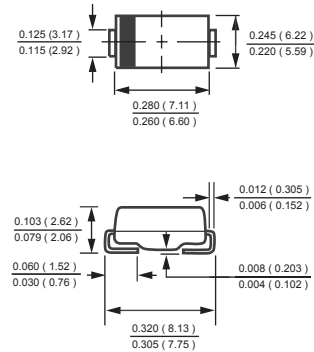
- \* Ideal for surface mounted applications
- \* Low leakage current
- \* Metallurgically bonded construction
- \* Mounting position: Any
- \* Weight: 0.24 gram

**MECHANICAL DATA**

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



**DO-214AB**



**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           | FM5820       | FM5821 | FM5822 | 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 Derating Lead Temperature                            | I <sub>O</sub>   | 3.0          |        |        | Amps  |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I <sub>FSM</sub> | 80           |        |        | Amps  |
| Typical Thermal Resistance (Note 3)                                                               | R <sub>θJA</sub> | 50           |        |        | °C/W  |
|                                                                                                   | R <sub>θJL</sub> | 14           |        |        |       |
| Typical Junction Capacitance (Note 1)                                                             | C <sub>J</sub>   | 200          |        |        | 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 | FM5820 | FM5821 | FM5822 | UNITS |
|--------------------------------------------------|--------|--------|--------|--------|-------|
| Maximum Instantaneous Forward Voltage at 3.0A DC | $V_F$  | .475   | .500   | .525   | Volts |
| Maximum Average Reverse Current                  | $I_R$  | 0.2    |        |        | mAmps |
| at Rated DC Blocking Voltage                     |        | 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.

## RATING AND CHARACTERISTICS CURVES ( FM5820 THRU FM5822 )

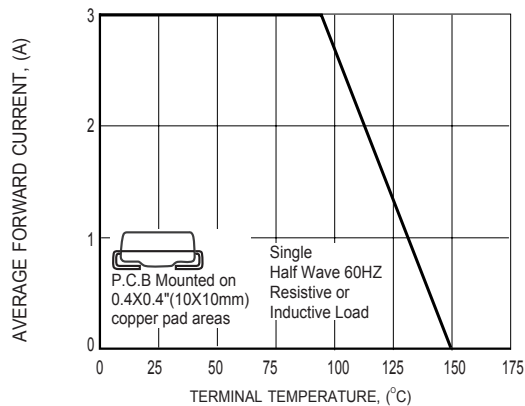


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

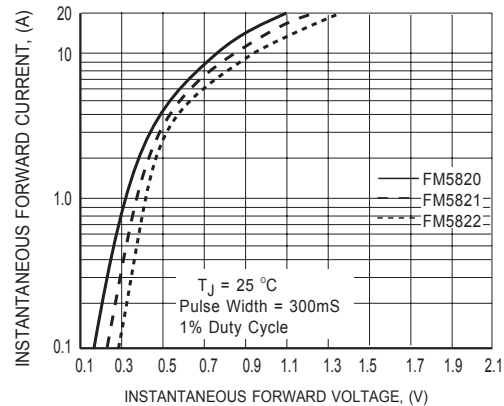


FIG.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

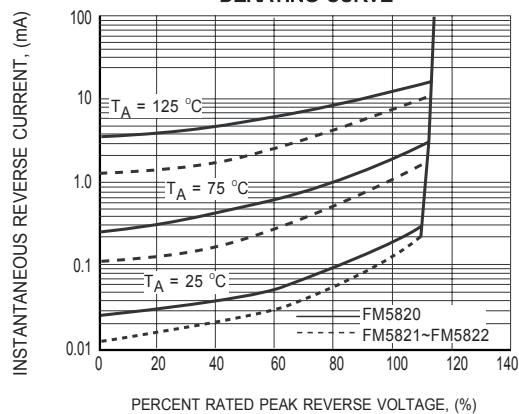


FIG.3 TYPICAL REVERSE CHARACTERISTICS

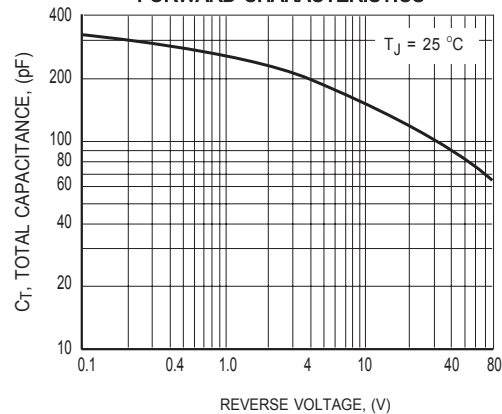


FIG.4 TYPICAL JUNCTION CAPACITANCE

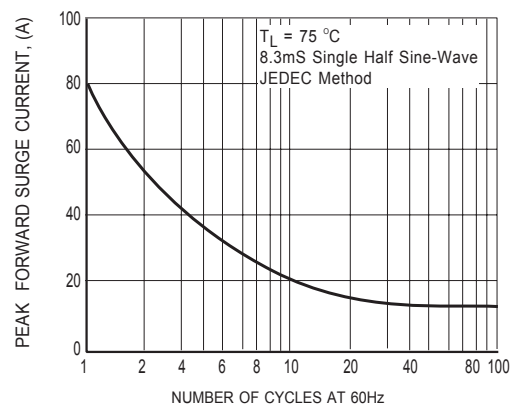
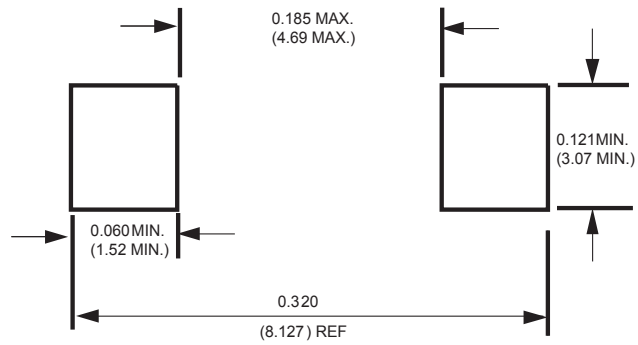


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

## Mounting Pad Layout



Dimensions in inches and (millimeters)

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