

## **SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER**

**VOLTAGE RANGE 20 to 200 Volts CURRENT 5.0 Ampere**

### **FEATURES**

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

### **MECHANICAL DATA**

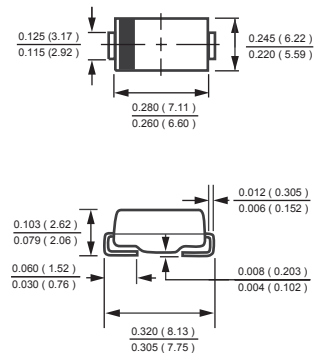
- \* Epoxy: Device has UL flammability classification 94V-O

### **MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.  
Resistive or inductive load.



**DO-214AB**



Dimensions in inches and (millimeters)

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

| RATINGS                                                                                           | SYMBOL           | FM520        | FM530 | FM540 | FM550 | FM560 | FM580 | FM5100 | FM5150 | FM5200 | UNITS            |
|---------------------------------------------------------------------------------------------------|------------------|--------------|-------|-------|-------|-------|-------|--------|--------|--------|------------------|
| Maximum Recurrent Peak Reverse Voltage                                                            | V <sub>RRM</sub> | 20           | 30    | 40    | 50    | 60    | 80    | 100    | 150    | 200    | Volts            |
| Maximum RMS Voltage                                                                               | V <sub>RMS</sub> | 14           | 21    | 28    | 35    | 42    | 56    | 70     | 105    | 140    | Volts            |
| Maximum DC Blocking Voltage                                                                       | V <sub>DC</sub>  | 20           | 30    | 40    | 50    | 60    | 80    | 100    | 150    | 200    | Volts            |
| Maximum Average Forward Rectified Current at Ambient Temperature                                  | I <sub>O</sub>   | 5.0          |       |       |       |       |       |        |        |        | Amps             |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I <sub>FSM</sub> | 150          |       |       |       |       |       |        |        |        | Amps             |
| Typical Current Square Time                                                                       | I <sup>2</sup> T | 93.3         |       |       |       |       |       |        |        |        | A <sup>2</sup> S |
| Typical Thermal Resistance (Note 1)                                                               | R <sub>θJA</sub> | 55           |       |       |       |       |       |        |        |        | °C/W             |
|                                                                                                   | R <sub>θJL</sub> | 17           |       |       |       |       |       |        |        |        |                  |
| Typical Junction Capacitance (Note 2)                                                             | 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         | FM520 | FM530 | FM540 | FM550 | FM560 | FM580 | FM5100 | FM5150 | FM5200 | UNITS |
|-----------------------------------------------------------------|-------------------------|----------------|-------|-------|-------|-------|-------|-------|--------|--------|--------|-------|
| Maximum Instantaneous Forward Voltage at 5.0A DC                |                         | V <sub>F</sub> | .55   |       |       | .75   |       |       | .85    |        |        | Volts |
| Maximum Average Reverse Current<br>at Rated DC Blocking Voltage | @T <sub>A</sub> = 25°C  | I <sub>R</sub> | 0.2   |       |       |       |       |       |        |        |        | mA    |
|                                                                 | @T <sub>A</sub> = 100°C |                | 2     |       |       |       |       |       |        |        |        | mA    |

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

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REV: A

## RATING AND CHARACTERISTICS CURVES ( FM520 THRU FM5200 )

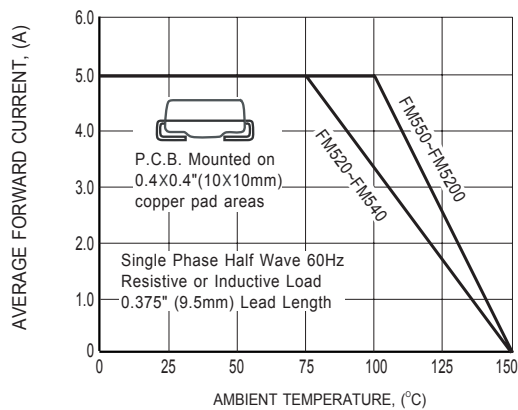


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

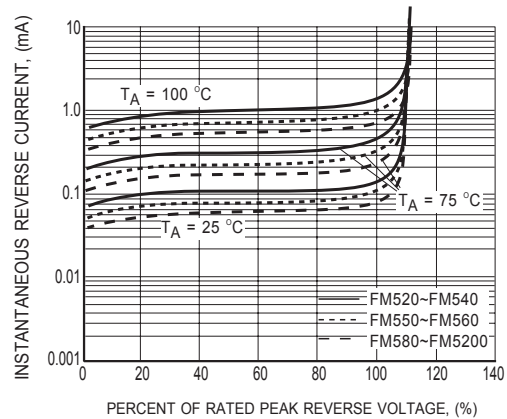


FIG.2 TYPICAL REVERSE CHARACTERISTICS

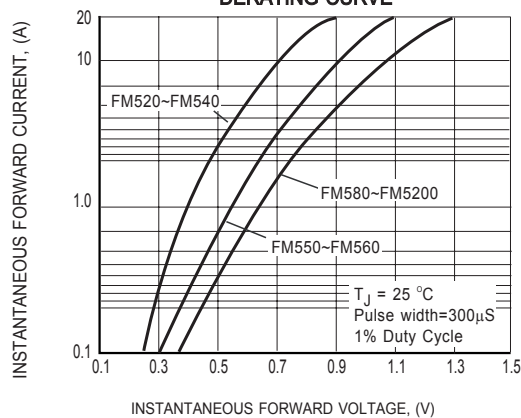


FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

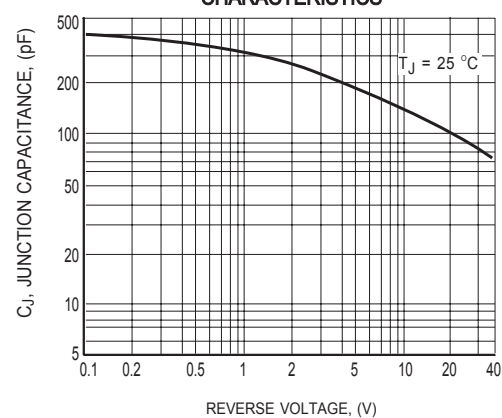


FIG.4 TYPICAL JUNCTION CAPACITANCE

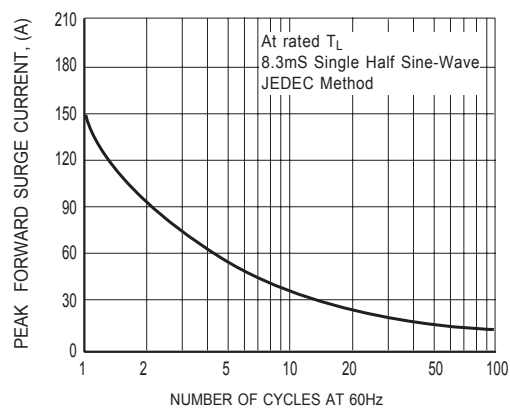
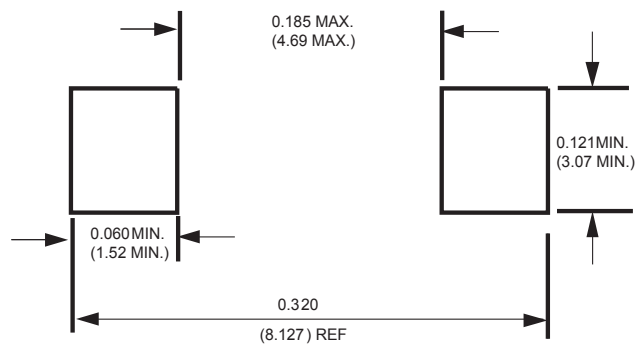


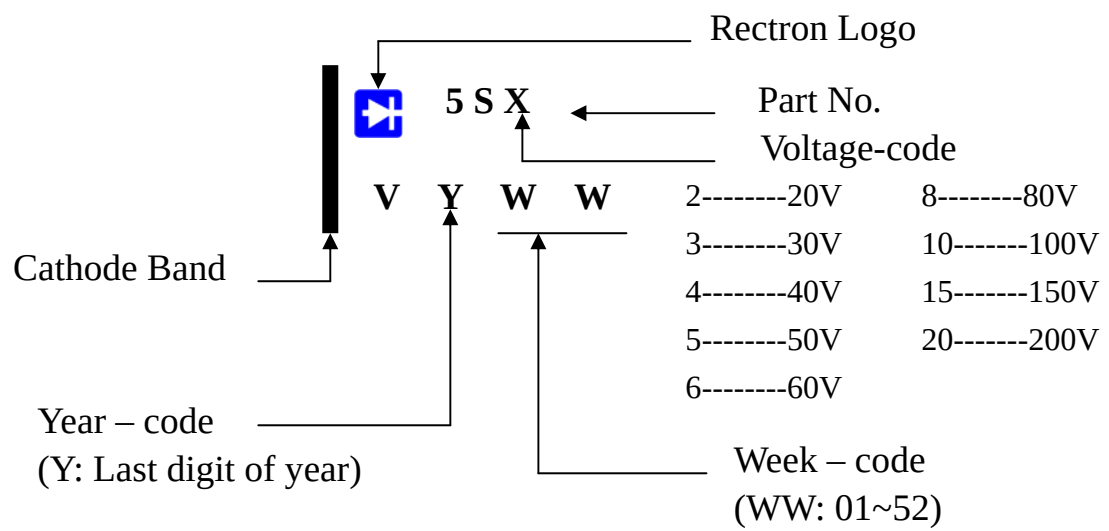
FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

## Mounting Pad Layout



Dimensions in inches and (millimeters)

## Marking Description



## PACKAGING OF DIODE AND BRIDGE RECTIFIERS

### REEL PACK

| PACKAGE | PACKING CODE | EA PER REEL | COMPONENT SPACE(mm) | TAPE SPACE (mm) | REEL DIA (mm) | CARTON SIZE (mm) | EA PER CARTON | GROSS WEIGHT(Kg) |
|---------|--------------|-------------|---------------------|-----------------|---------------|------------------|---------------|------------------|
| SMC     | -T           | 500         | ---                 | ---             | 176           | 390*205*310      | 12,000        | 6.65             |
| SMC     | -W           | 3,000       | ---                 | ---             | 330           | 355*360*350      | 24,000        | 11.50            |

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