

**SURFACE MOUNT SCHOTTKY
BARRIER RECTIFIER**
VOLTAGE RANGE 20 to 200 Volts CURRENT 1.0 Ampere

FEATURES

- * Low switching noise
- * Low forward voltage drop
- * High current capability
- * High switching capability
- * High surge capability
- * High reliability

MECHANICAL DATA

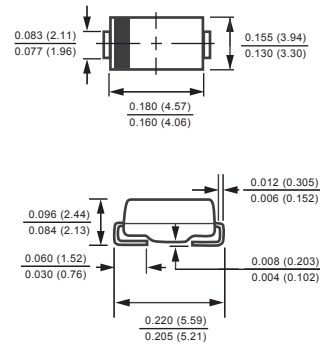
- * Case: Molded plastic
- * Epoxy: Device has UL flammability classification 94V-0
- * Lead: MIL-STD-202E method 208C guaranteed
- * Metallurgically bonded construction
- * Mounting position: Any
- * Weight: 0.057 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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



SMB



Dimensions in inches and (millimeters)

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

| RATINGS | SYMBOL | FM120B | FM130B | FM140B | FM150B | FM160B | FM180B | FM1100B | FM1150B | FM1200B | UNITS |
|---|-----------------|--------------|--------|--------|--------|--------|--------|---------|---------|---------|------------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 200 | Volts |
| Maximum RMS Voltage | V_{RMS} | 14 | 21 | 28 | 35 | 42 | 56 | 70 | 105 | 140 | Volts |
| Maximum DC Blocking Voltage | V_{DC} | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 200 | Volts |
| Maximum Average Forward Rectified Current at Derating Case Temperature | I_O | 1.0 | | | | | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I_{FSM} | 50 | | | | | | | | | Amps |
| Typical Current Square Time | I^2T | 10.37 | | | | | | | | | A ² S |
| Typical Thermal Resistance (Note 1) | $R_{\theta JA}$ | 85 | | | | | | | | | °C/W |
| Typical Thermal Resistance (Note 1) | $R_{\theta JL}$ | 15 | | | | | | | | | °C/W |
| Typical Junction Capacitance (Note 2) | C_J | 110 | | | | | | | | | pF |
| Operating Temperature Range | T_J | 150 | | | | | | | | | °C |
| Storage Temperature Range | T_{STG} | -65 to + 175 | | | | | | | | | °C |

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

| CHARACTERISTICS | SYMBOL | FM120B | FM130B | FM140B | FM150B | FM160B | FM180B | FM1100B | FM1150B | FM1200B | UNITS | |
|--|--------|-----------------------------|--------|--------|--------|--------|--------|---------|---------|---------|-------|----|
| Maximum Instantaneous Forward Voltage at 1.0A DC | V_F | .55 | | | .70 | | .85 | | | | Volts | |
| Maximum Average Reverse Current at Rated DC Blocking Voltage | I_R | @ $T_A = 25^\circ\text{C}$ | | | | | 0.2 | | | | | mA |
| | | @ $T_A = 100^\circ\text{C}$ | | | | | 2 | | | | | mA |

- NOTES : 1. Thermal Resistance : Mounted on PCB.
 2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
 3. Also available in DO-214AA (SMB).
 4. "Fully ROHS compliant", "100% Sn plating (Pb-free)".
 5. Available in Halogen-free epoxy by adding suffix -HF after the part nbr.

2017-08
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RATING AND CHARACTERISTICS CURVES (FM120B THRU FM1200B)

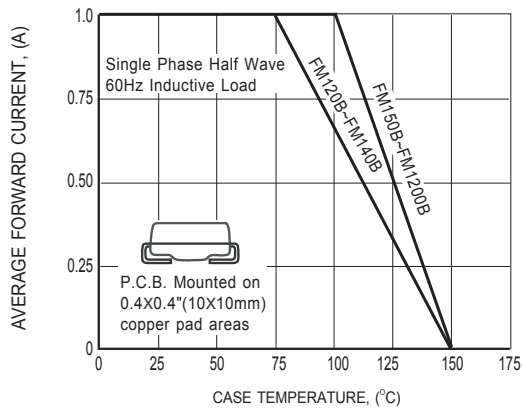


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

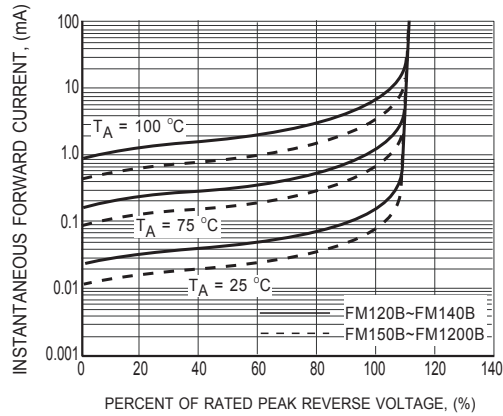


FIG.2 TYPICAL REVERSE CHARACTERISTICS

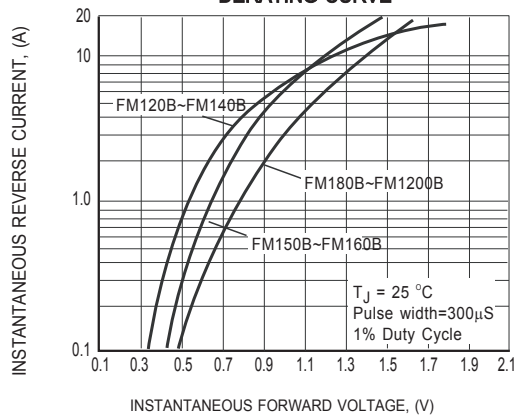


FIG.3 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

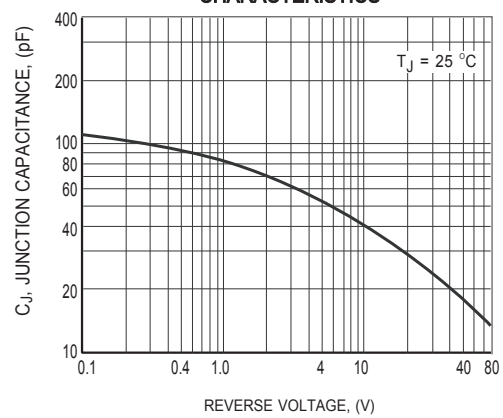


FIG.4 TYPICAL JUNCTION CAPACITANCE

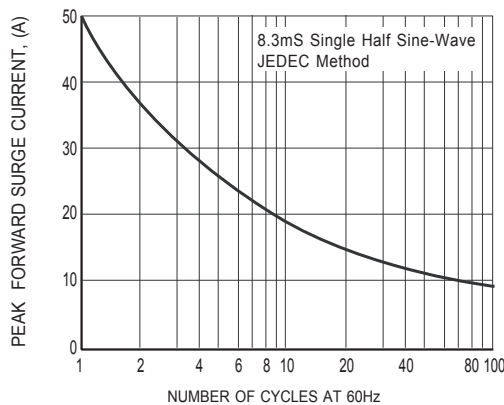
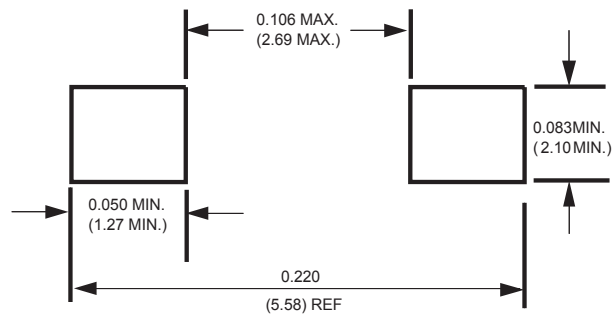


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



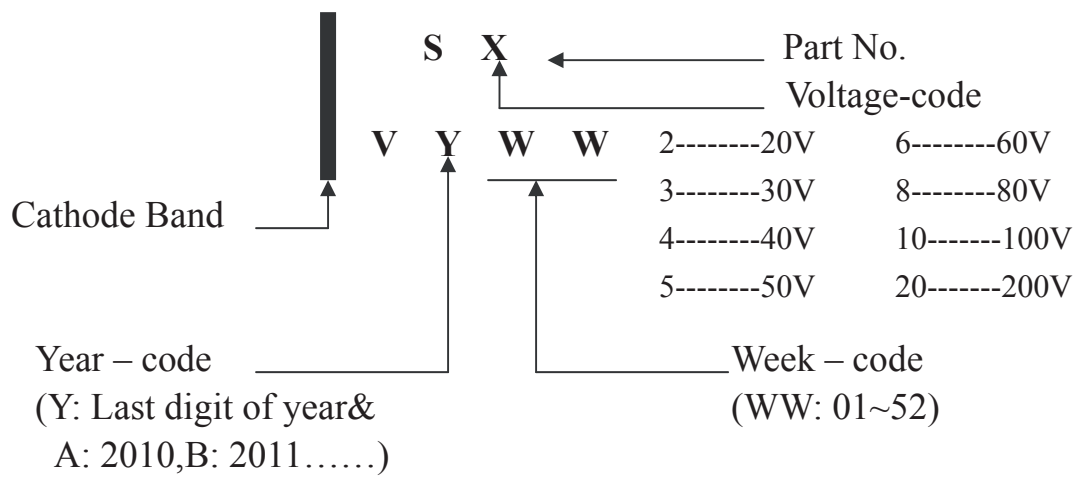
Mounting Pad Layout



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) |
|---------|--------------|-------------|---------------------|-----------------|---------------|------------------|---------------|------------------|
| SMB | -T | 500 | --- | --- | 178 | 390*205*310 | 16,000 | --- |
| SMB | -W | 3,000 | --- | --- | 330 | 355*360*350 | 48,000 | 13.90 |



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