

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 20 to 60 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-O
- * Lead: MIL-STD-202E method 208C guaranteed
- * Metallurgically bonded construction
- * Mounting position: Any
- * Weight: 0.098 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

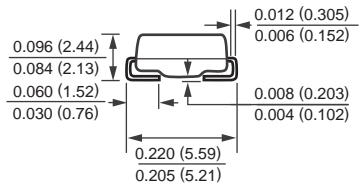
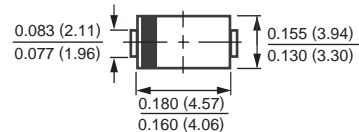
Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.



DO-214AA



Dimensions in inches and (millimeters)

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

| RATINGS | | SYMBOL | FM120B | FM130B | FM140B | FM150B | FM160B | UNITS |
|---------------------------------------------------------------------------------------------------|--|--------|-------------|--------|--------|-------------|--------|-------|
| Maximum Recurrent Peak Reverse Voltage | | VRRM | 20 | 30 | 40 | 50 | 60 | Volts |
| Maximum RMS Voltage | | VRMS | 14 | 21 | 28 | 35 | 42 | Volts |
| Maximum DC Blocking Voltage | | VDC | 20 | 30 | 40 | 50 | 60 | Volts |
| Maximum Average Forward Rectified Current at Derating Lead temperature | | IO | 1.0 | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | | IFSM | 40 | | | | | Amps |
| Typical Thermal Resistance (Note 1) | | RθJA | 50 | | | | | °C/W |
| Typical Junction Capacitance (Note 2) | | CJ | 110 | | | | | pF |
| Operating Temperature Range | | TJ | -65 to +125 | | | -65 to +150 | | °C |
| Storage Temperature Range | | TSTG | -65 to +150 | | | | | °C |

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

| CHARACTERISTICS | | SYMBOL | FM120B | FM130B | FM140B | FM150B | FM160B | UNITS |
|--------------------------------------------------------------|--------------|--------|--------|--------|--------|--------|--------|-------|
| Maximum Instantaneous Forward Voltage at 1.0A DC | | VF | .55 | | | .70 | | Volts |
| Maximum Average Reverse Current at Rated DC Blocking Voltage | @ TA = 25°C | IR | 1.0 | | | | | mAmps |
| | @ TA = 100°C | | 10 | | | | | mAmps |

NOTES : 1. Thermal Resistance (Junction to Ambient): Vertical PC Board Mounting, 0.5" (12.7mm) Lead Length.
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

RATING AND CHARACTERISTIC CURVES (FM120B THRU FM160B)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

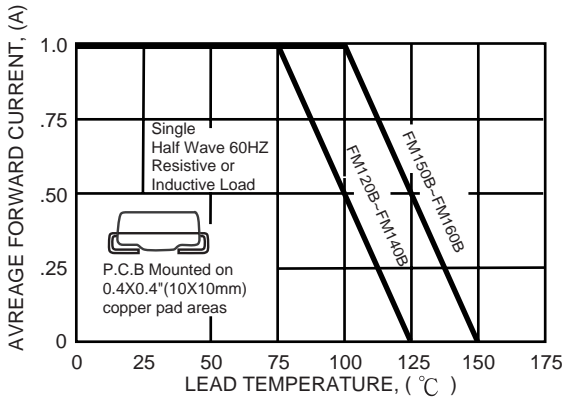


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

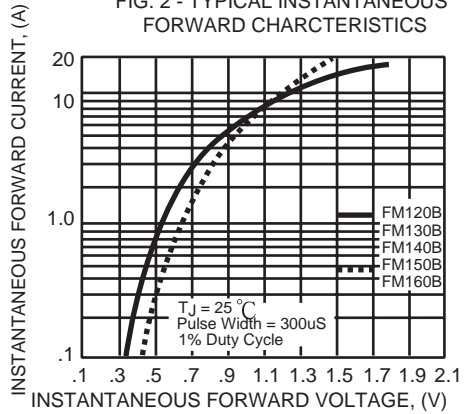


FIG. 3A - TYPICAL REVERSE CHARACTERISTICS

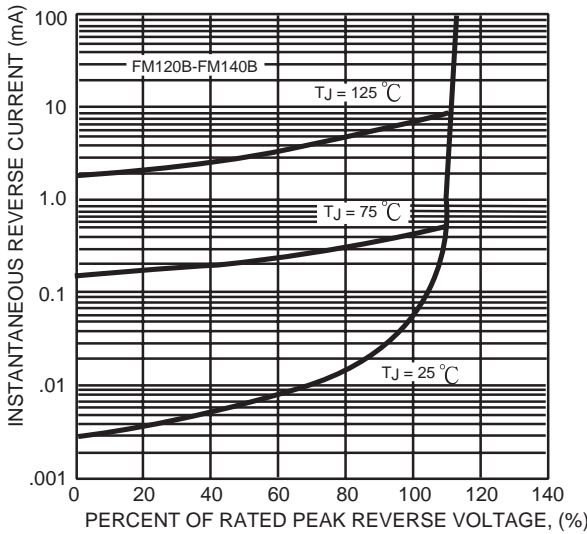


FIG. 3B - TYPICAL REVERSE CHARACTERISTICS

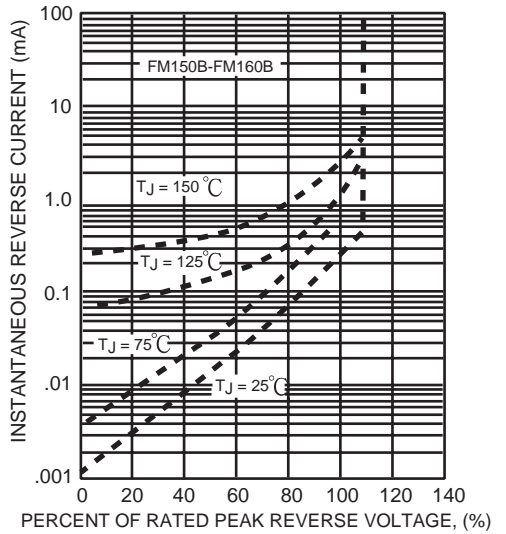


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

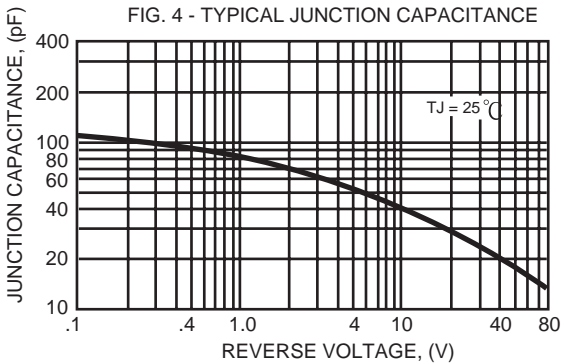
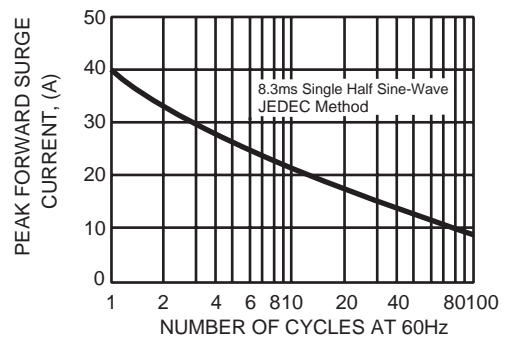
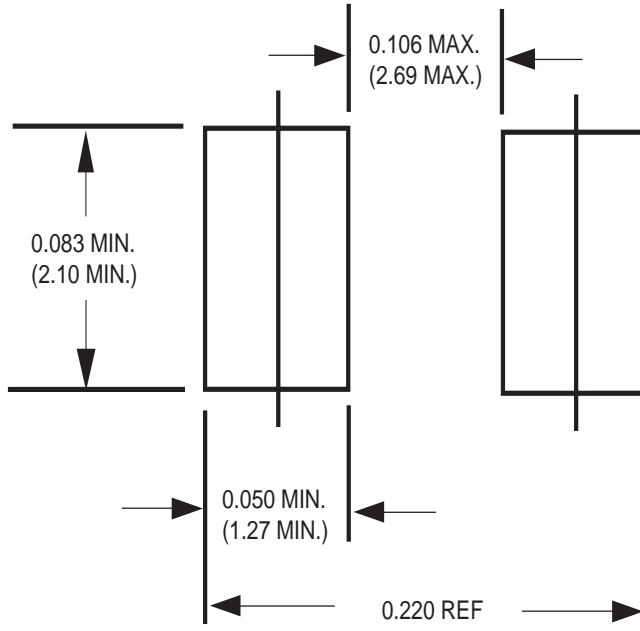


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



Mounting Pad Layout



Dimensions in inches and (millimeters)