

RECTRON
SEMICONDUCTOR
TECHNICAL SPECIFICATION

FM390B
THRU
FM3100B

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 90 to 100 Volts CURRENT 3.0 Amperes

FEATURES

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

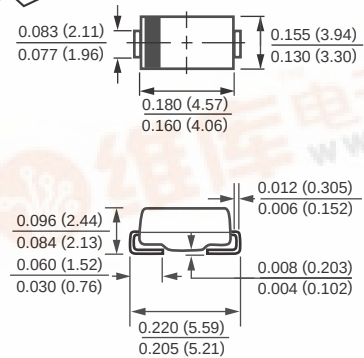
MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: Device has UL flammability classification
- * 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	FM390B	FM3100B	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	90	100	Volts
Maximum RMS Voltage	VRMS	63	70	Volts
Maximum DC Blocking Voltage	VDC	90	100	Volts
Maximum Average Forward Rectified Current at Derating Lead Temperature	IO	3.0		Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	100		Amps
Typical Thermal Resistance (Note 1)	RθJA	30		°C/W
Typical Junction Capacitance (Note 2)	CJ	300		pF
Operating Temperature Range	TJ	150		°C
Storage Temperature Range	TSTG	-55 to + 150		°C

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

CHARACTERISTICS	SYMBOL	FM390B	FM3100B	UNITS
Maximum Instantaneous Forward Voltage at 3.0A DC	VF	.80		Volts
Maximum Average Reverse Current @TA = 25°C	IR	20		uA
at Rated DC Blocking Voltage @TJ = 125°C		4.0		mA

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 (FM390B THRU FM3100B)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

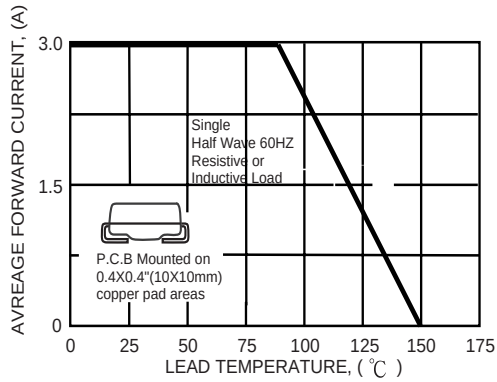


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

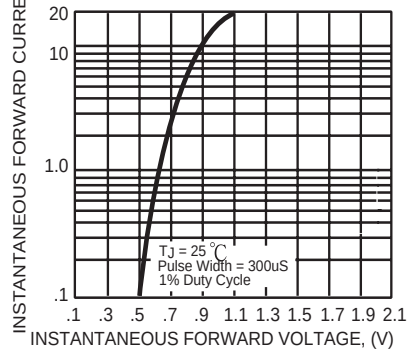


FIG. 3A - TYPICAL REVERSE CHARACTERISTICS

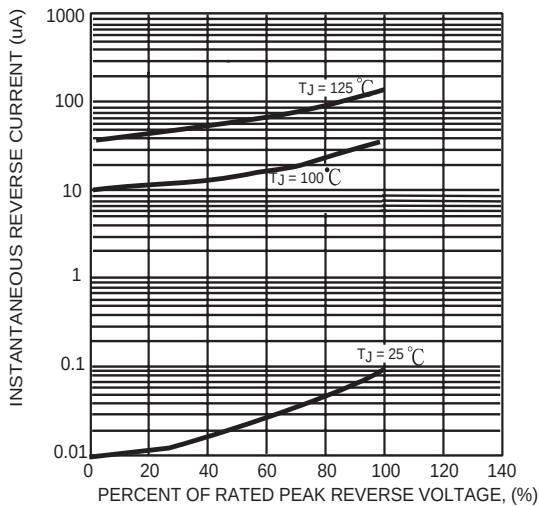


FIG. 4 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

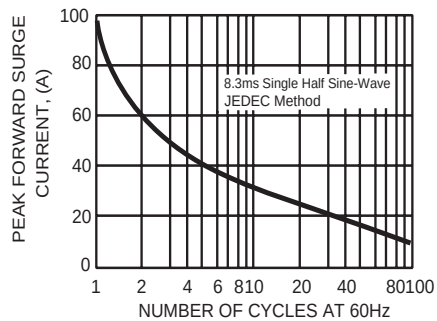
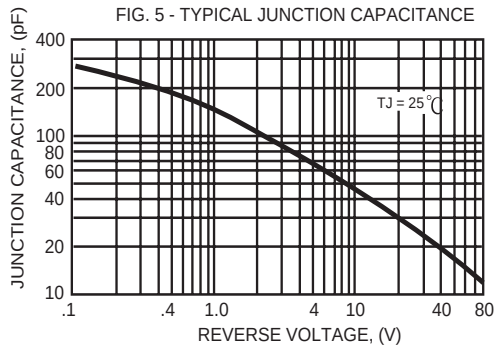
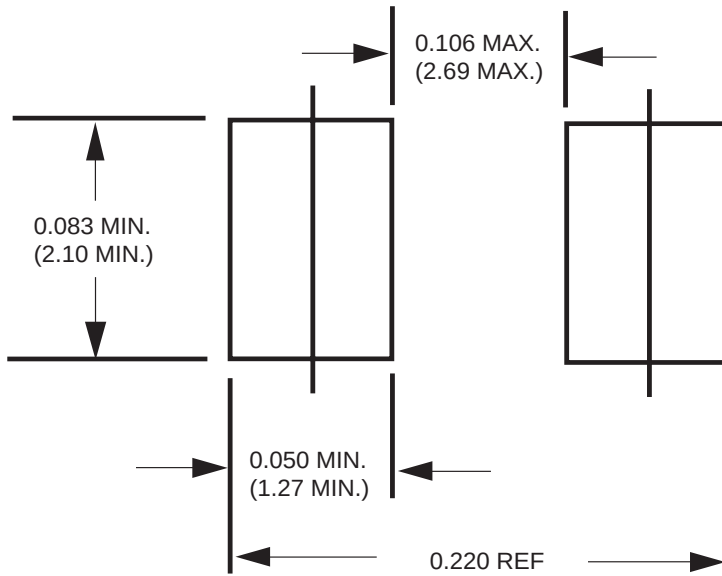


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



Mounting Pad Layout



Dimensions in inches and (millimeters)