RECTRON
SEMICONDUCTOR
TECHNICAL SPECIFICATION

FM120B THRU FM160B

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 capabitity
* 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

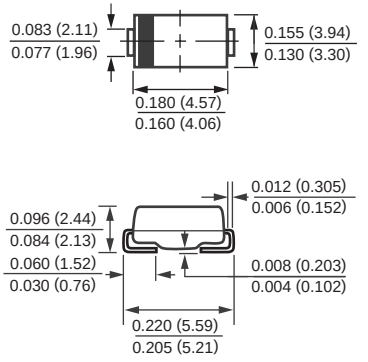
Ratings at 25 °C ambient temperature unless otherwise specified.

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 T_A = 25°C unless otherwise noted)

RATINGS	SYMBOL	FM120B	FM130B	FM140B	FM150B	FM160B	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	30	40	50	60	Volts
Maximum RMS Voltage	V_{RMS}	14	21	28	35	42	Volts
Maximum DC Blocking Voltage	V_{DC}	20	30	40	50	60	Volts
Maximum Average Forward Rectified Current at Derating Lead 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}	40					Amps
Typical Thermal Resistance (Note 1)	$R\theta_{JA}$	50					°C/W
Typical Junction Capacitance (Note 2)	C_J	110					pF
Operating Temperature Range	T_J	-65 to + 125			-65 to + 150		°C
Storage Temperature Range	T_{STG}	-65 to + 150					°C

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

CHARACTERISTICS		SYMBOL	FM120B	FM130B	FM140B	FM150B	FM160B	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC		V_F	.55			.70		Volts
Maximum Average Reverse Current	@T_A = 25°C	I_R	1.0					mAmps
at Rated DC Blocking Voltage	@T_A = 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.

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RATING AND CHARACTERISTIC CURVES (FM120B THRU FM160B)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

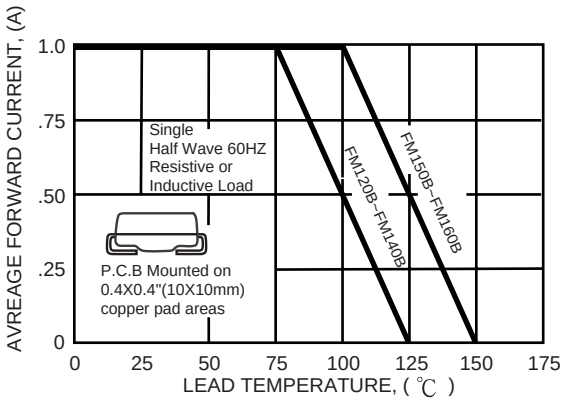


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARCTERISTICS

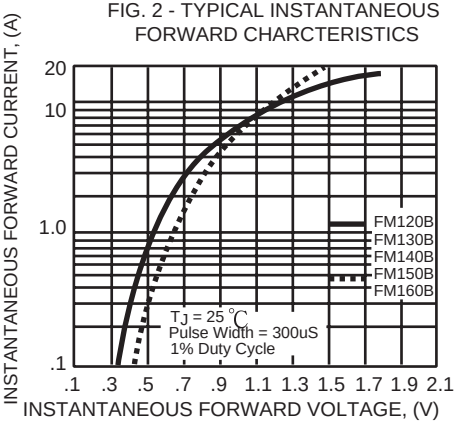


FIG. 3A - TYPICAL REVERSE CHARACTERISTICS

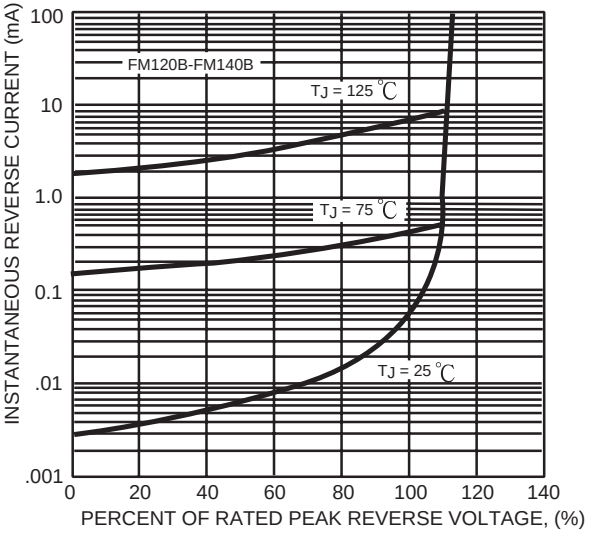


FIG. 3B - TYPICAL REVERSE CHARACTERISTICS

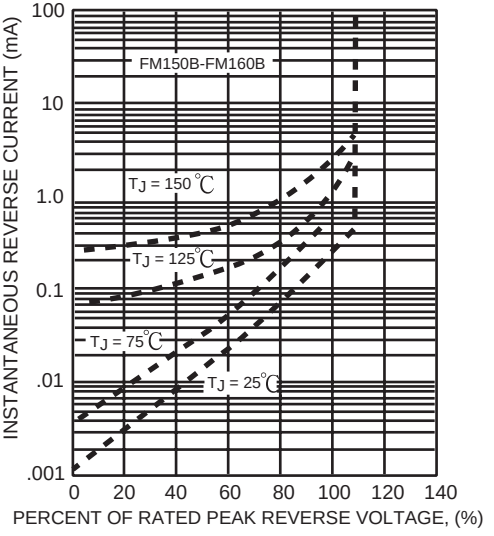


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

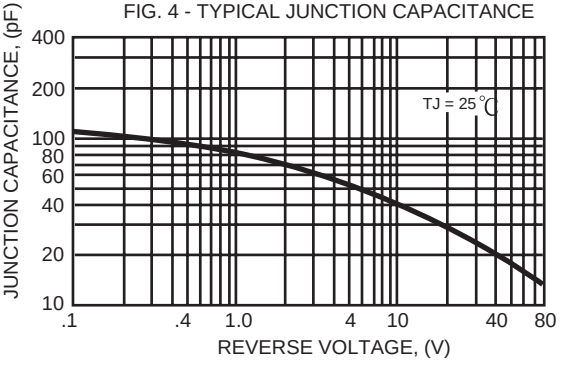
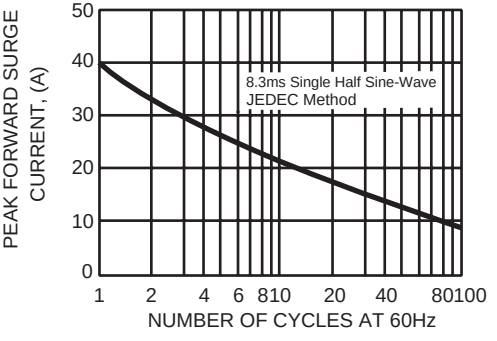
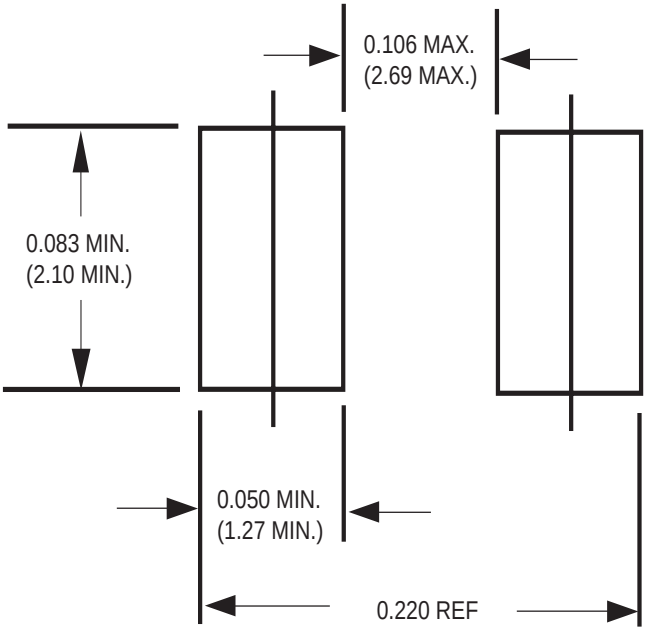


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



Mounting Pad Layout



Dimensions in inches and (millimeters)