RECTRON
SEMICONDUCTOR
TECHNICAL SPECIFICATION

FM390B THRU FM3100B

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 90 to 100 Volts CURRENT 3.0 Amperes

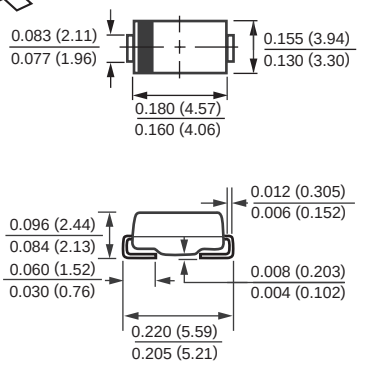
FEATURES

* 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 hasUL flammability classification 94V-0
* Lead: MIL-STD-202E method 208C guaranteed
* Metallurgically bonded construction
* Mounting position: Any
* Weight: 0.098 gram

DO-214AA



Dimensions in inches and (millimeters)

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%.

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

RATINGS	SYMBOL	FM390B	FM3100B	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	90	100	Volts
Maximum RMS Voltage	V_{RMS}	63	70	Volts
Maximum DC Blocking Voltage	V_{DC}	90	100	Volts
Maximum Average Forward Rectified Current at Derating Lead Temperature	I_O	3.0		Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	100		Amps
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	30		°C/W
Typical Junction Capacitance (Note 2)	C_J	300		pF
Operating Temperature Range	T_J	150		°C
Storage Temperature Range	T_{STG}	-55 to + 150		°C

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

CHARACTERISTICS		SYMBOL	FM390B	FM3100B	UNITS
Maximum Instantaneous Forward Voltage at 3.0A DC		V_F	.80		Volts
Maximum Average Reverse Current	@T_A = 25°C	I_R	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

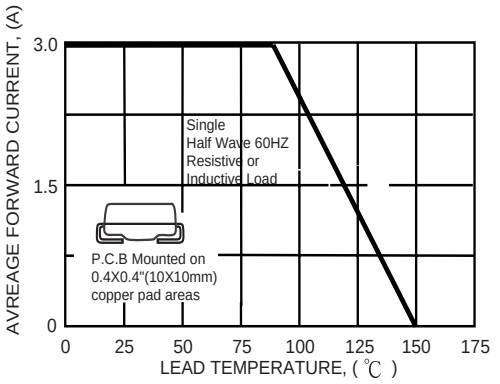


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARCTERISTICS

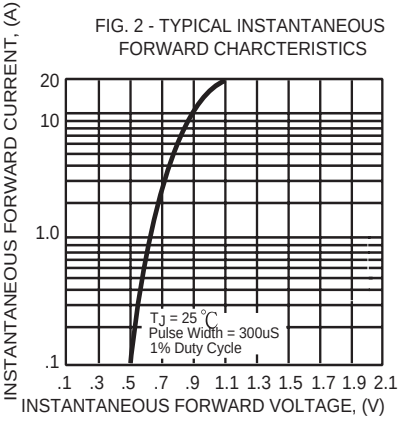


FIG. 3A - TYPICAL REVERSE CHARACTERISTICS

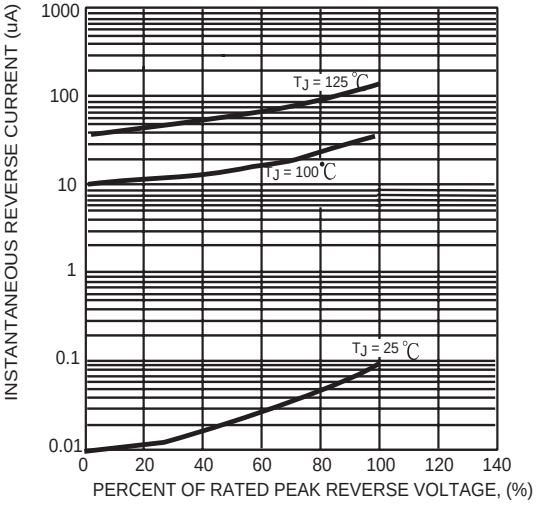


FIG. 4 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

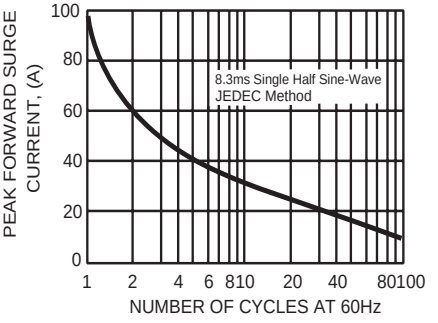


FIG. 5 - TYPICAL JUNCTION CAPACITANCE