RECTRON
SEMICONDUCTOR
TECHNICAL SPECIFICATION

FM4001W THRU FM4007W

SURFACE MOUNT SILICON RECTIFIER

VOLTAGE RANGE 50 to 1000 Volts CURRENT 1.0 Ampere

FEATURES

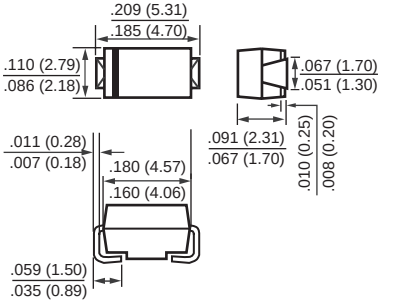
* Ideal for surface mounted applications
* Low leakage current
* Metallurgically bonded construction
* Mounting position: Any
* Weight: 0.057 gram

MECHANICAL DATA

* Epoxy : Device has UL flammability classification 94V-0



SMX



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	FM4001W	FM4002W	FM4003W	FM4004W	FM4005W	FM4006W	FM4007W	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at T_A = 75°C	I_O	1.0							Amps
Peak Forward Surge Current I_{FM}(surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30							Amps
Maximum Thermal Resistance	(Note 2) $R\theta_{JL}$	60							°C/W
	(Note 3) $R\theta_{JA}$	100							°C/W
Typical Junction Capacitance (Note 1)	C_J	15							pF
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to + 175							°C

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

CHARACTERISTICS		SYMBOL	FM4001W	FM4002W	FM4003W	FM4004W	FM4005W	FM4006W	FM4007W	UNITS
Maximum Forward Voltage at 1.0A DC		V_F	1.1							Volts
Maximum Full Load Reverse Current, Full cycle Average at T_A=75°C		I_R	30							uAmps
Maximum DC Average Reverse Current at Rated DC Blocking Voltage	@T_A = 25°C		5.0							uAmps
	@T_A = 125°C		50							uAmps

NOTES : 1. Measured at 1.0 MHz and applied average voltage of 4.0VDC
2. Thermal resistance junction to terminal 6.0mm² coppeer pads to each terminal.
3. Thermal resistance junction to ambient, 6.0mm² coppeer pads to each terminal.

RATING AND CHARACTERISTIC CURVES (FM4001W THRU FM4007W)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

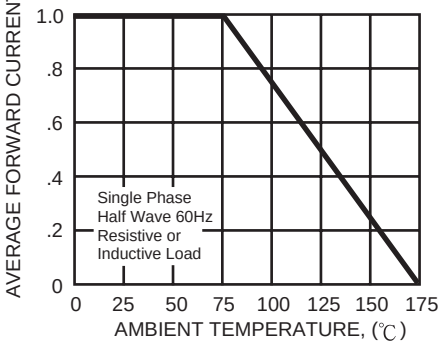


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

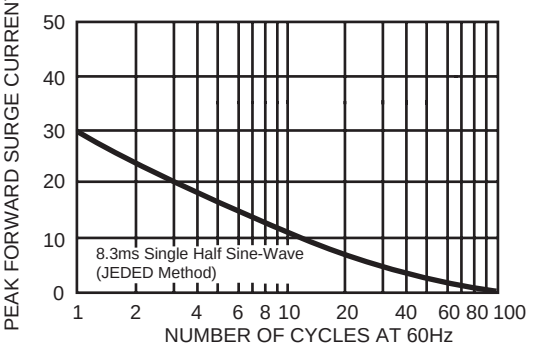


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

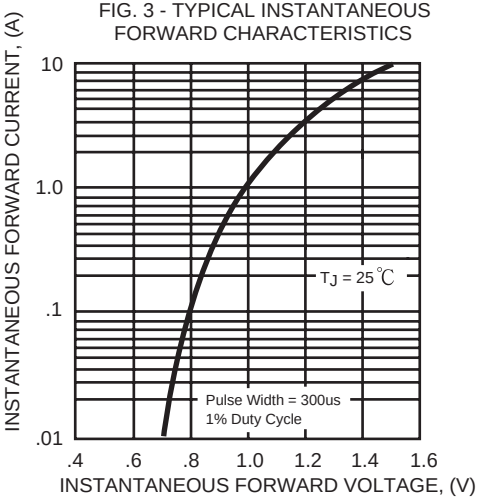


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

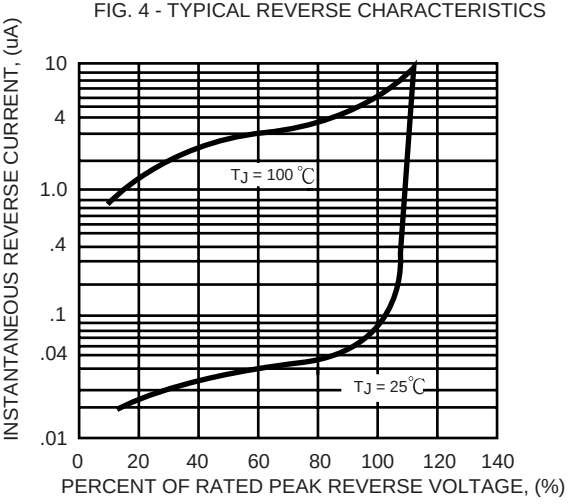


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

