

**SURFACE MOUNT SILICON RECTIFIER**  
**VOLTAGE RANGE 50 to 1000 Volts CURRENT 1.0 Ampere**

**FEATURES**

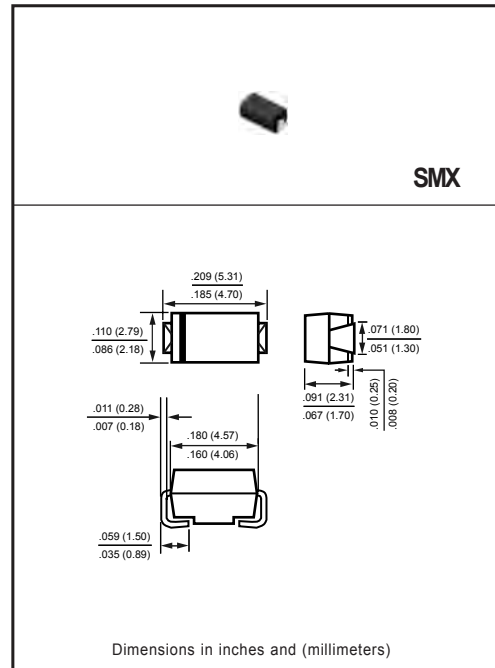
- \* Ideal for surface mounted applications
- \* Low leakage current
- \* Metallurgically bonded construction
- \* Mounting position: Any
- \* Weight: 0.078 gram

**MECHANICAL DATA**

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

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.  
Resistive or inductive load.



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

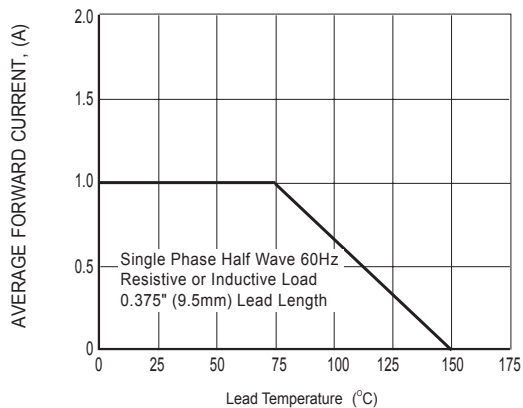
RATINGS	SYMBOL	FM4001W	FM4002W	FM4003W	FM4004W	FM4005W	FM4006W	FM4007W	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at Ambient Temperature	$I_O$	1.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	30							Amps
Typical Current Square Time	$I^2T$	3.7							A <sup>2</sup> S
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	80							°C/W
Typical Thermal Resistance (Note 1)	$R_{\theta JL}$	30							°C/W
Typical Junction Capacitance (Note 2)	$C_J$	15							pF
Operating Temperature Range	$T_J$	150							°C
Storage Temperature Range	$T_{STG}$	-55 to + 150							°C

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

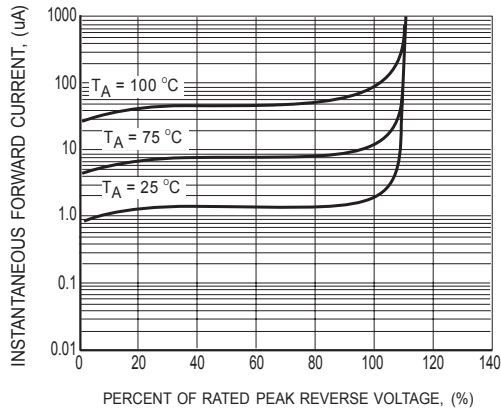
CHARACTERISTICS	SYMBOL	FM4001W	FM4002W	FM4003W	FM4004W	FM4005W	FM4006W	FM4007W	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC	$V_F$	1.1							Volts
Maximum Full Load Reverse Current, Full cycle Average at $T_A=75^\circ\text{C}$	$I_R$	30							uA
Maximum Average Reverse Current at Rated DC Blocking Voltage @ $T_A = 25^\circ\text{C}$		5.0							uA
		@ $T_A = 100^\circ\text{C}$	100						

- NOTES : 1. Thermal Resistance :Mounted on PCB.  
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.  
3. "Fully ROHS compliant", "100% Sn plating (Pb-free)".

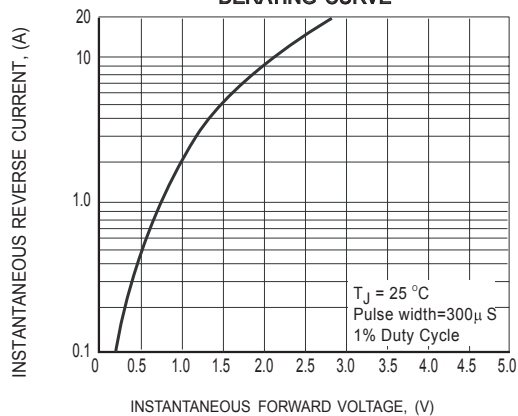
## RATING AND CHARACTERISTICS CURVES ( FM4001W THRU FM4007W )



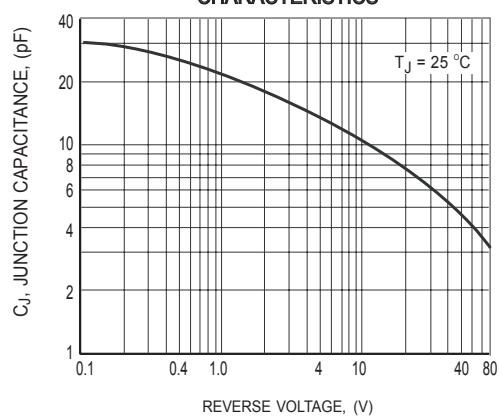
**FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE**



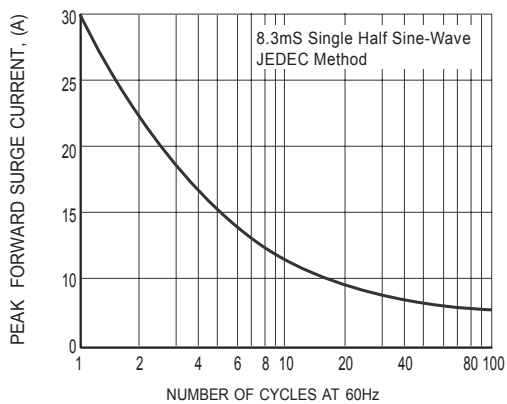
**FIG.2 TYPICAL REVERSE CHARACTERISTICS**



**FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**

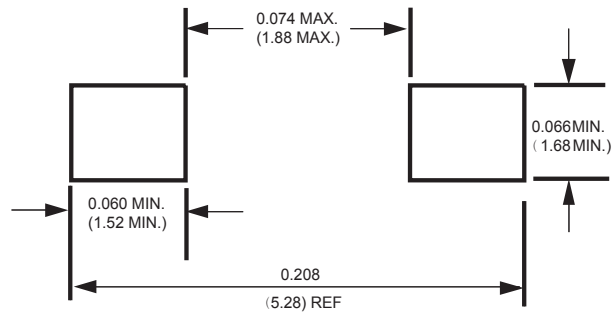


**FIG.4 TYPICAL JUNCTION CAPACITANCE**



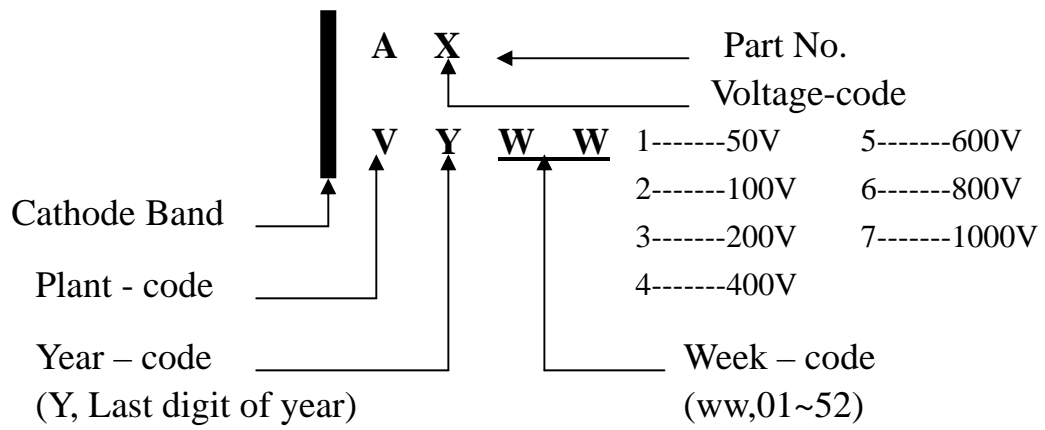
**FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**

## Mounting Pad Layout



Dimensions in inches and (millimeters)

## Marking Description



# PACKAGING OF DIODE AND BRIDGE RECTIFIERS

## REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	COMPONENT SPACE(mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
SMX	-T	1,500	---	---	180	390*205*310	48,000	---
SMX	-W	5,000	---	---	330	355*360*350	80,000	15.20

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Rectron:

FM4001W-W FM4001-W FM4004-W FM4002-W FM4005-W FM4006W-W-S-R01-W FM4007-W-S-NT-W  
FM4002-W-S-NT-W FM4004-W-S-NT-W FM4006-W-S-NT-W FM4006-W FM4007-W FM4004W-W-S-R01-W  
FM4003-W FM4002W-W FM4004W-W FM4007W-W FM4001L-W FM4006W-W-S-R01 FM4007-W-S-NT FM4004-  
W-S-NT FM4004W-W-S-R01 FM4006-W-S-NT FM4002-W-S-NT