

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

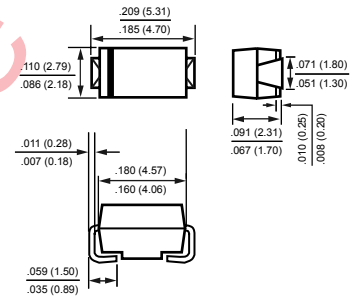
MECHANICAL DATA

- * 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.

SMX



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 ² 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 $T_A=75^{\circ}C$	I_R	30							uA
Maximum Average Reverse Current @ $T_A = 25^{\circ}C$		5.0							uA
at Rated DC Blocking Voltage @ $T_A = 100^{\circ}C$		100							uA

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)".

2009-08
REV: B

RATING AND CHARACTERISTICS CURVES (FM4001W THRU FM4007W)

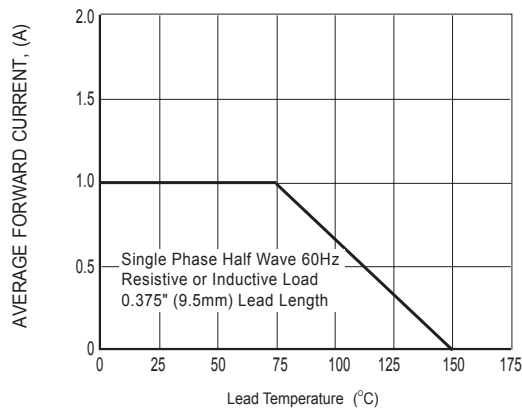


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

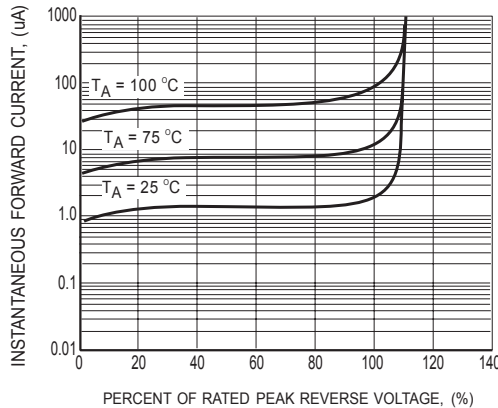


FIG.2 TYPICAL REVERSE CHARACTERISTICS

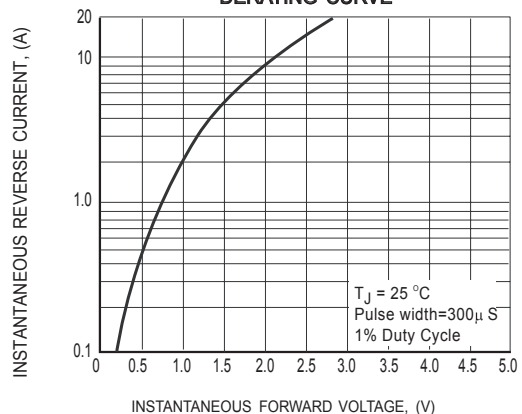


FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

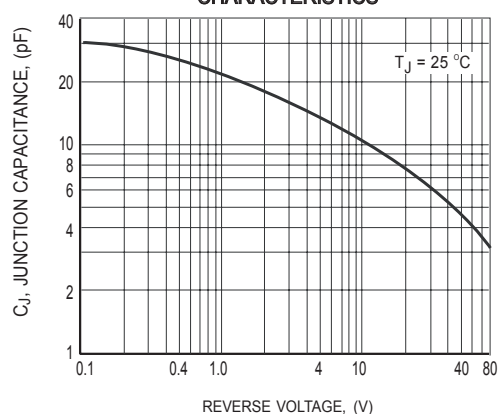


FIG.4 TYPICAL JUNCTION CAPACITANCE

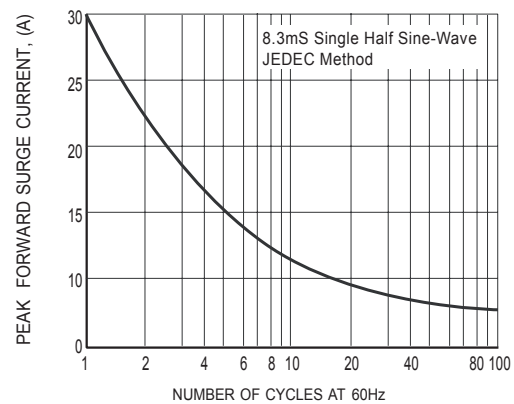
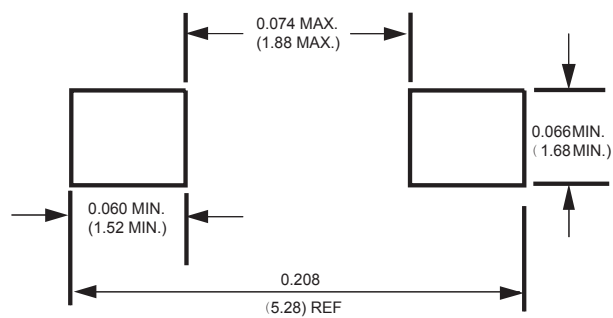


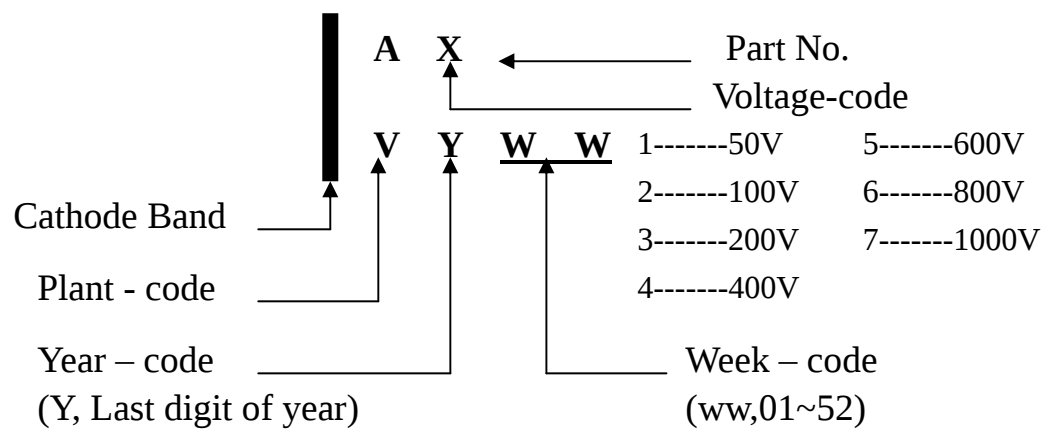
FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

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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