

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

FEATURES

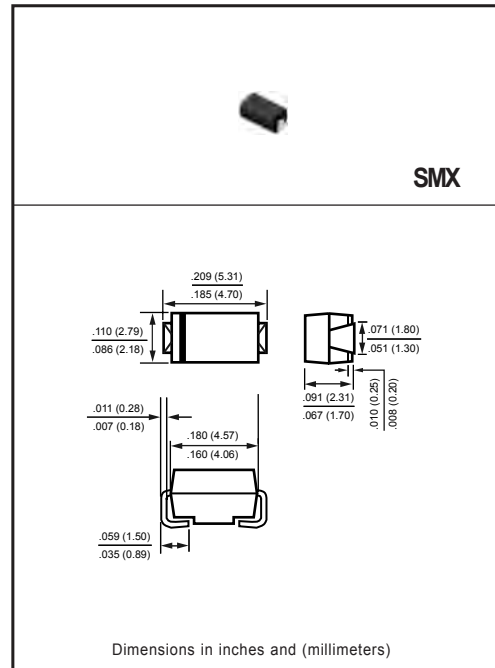
- * Ideal for surface mounted applications
- * Low leakage current
- * Metallurgically bonded construction
- * Mounting position: Any
- * Weight: 0.078 gram

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 ² T | 3.7 | | | | | | | A ² S |
| Typical Thermal Resistance (Note 1) | R _{θJA} | 80 | | | | | | | °C/W |
| Typical Thermal Resistance (Note 1) | R _{θJL} | 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°C | I _R | 30 | | | | | | | uA |
| Maximum Average Reverse Current @T _A = 25°C | | 5.0 | | | | | | | uA |
| at Rated DC Blocking Voltage @T _A = 100°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)".

RATING AND CHARACTERISTICS CURVES (FM4001W THRU FM4007W)

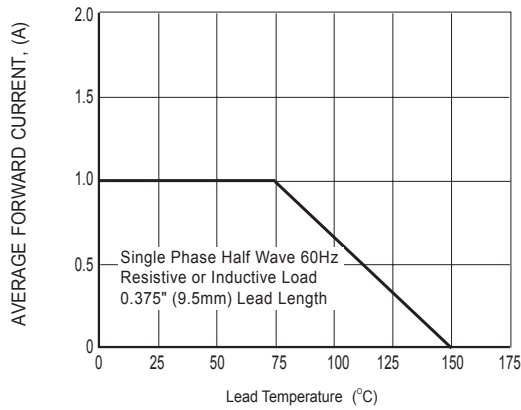


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

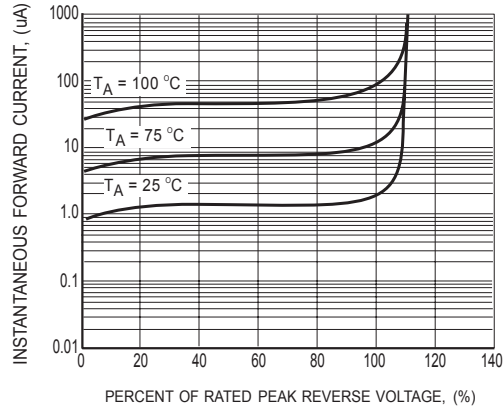


FIG.2 TYPICAL REVERSE CHARACTERISTICS

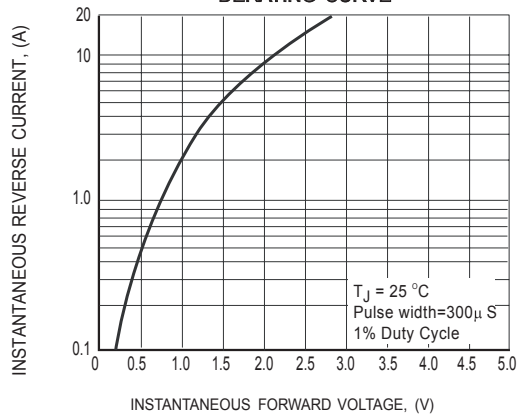


FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

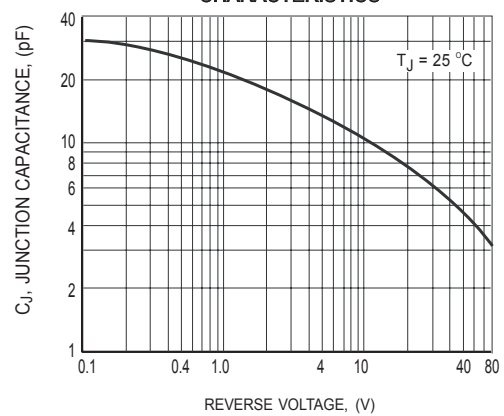


FIG.4 TYPICAL JUNCTION CAPACITANCE

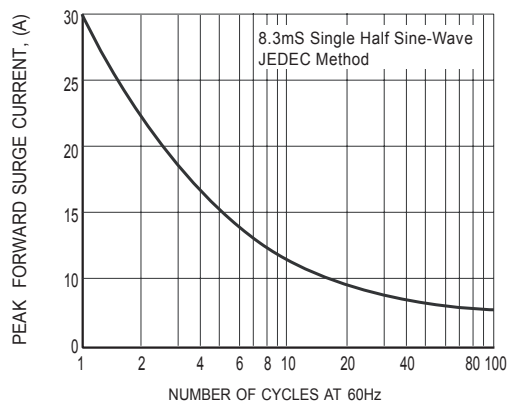
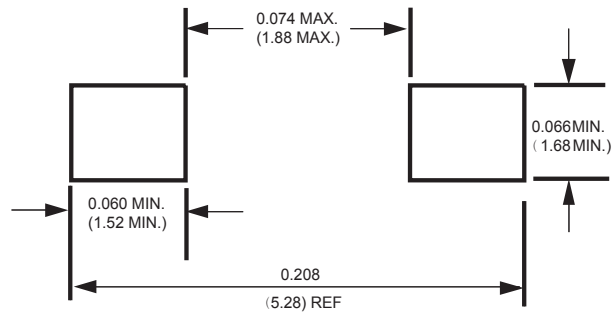


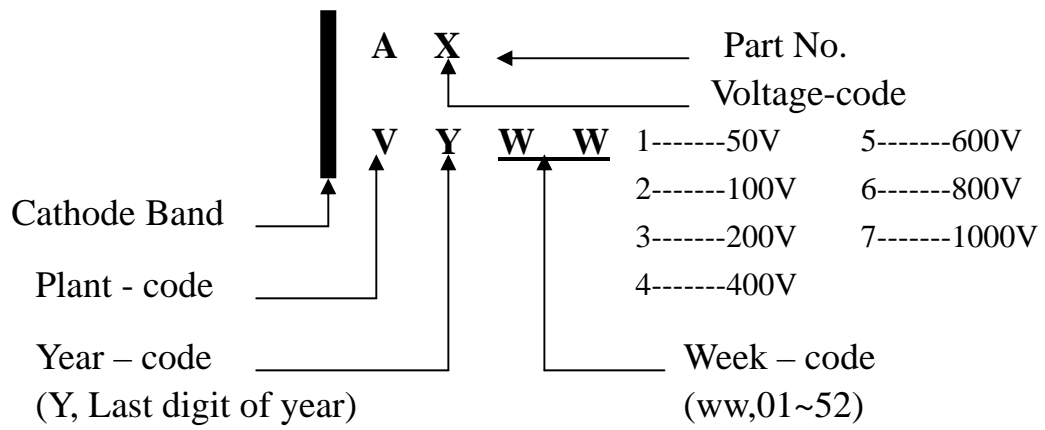
FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

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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