



**SURFACE MOUNT
GLASS PASSIVATED SILICON RECTIFIER
VOLTAGE 1200 Volts CURRENT 3.0 Amperes**

FEATURES

- * Glass passivated device
- * Ideal for surface mounted applications
- * Low leakage current
- * Metallurgically bonded construction
- * Mounting position: Any
- * Weight: 0.24 gram

MECHANICAL DATA

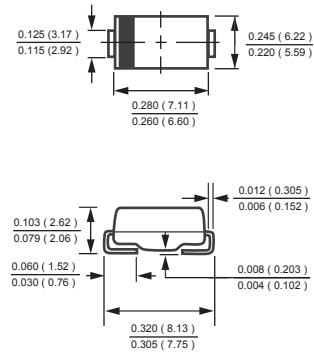
- * Epoxy : Device has UL flammability classification 94V-0
- * MSL: 1 Level

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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



SMC



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

RATINGS	SYMBOL	FM3012-W-A01	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	1200	Volts
Maximum RMS Voltage	V_{RMS}	840	Volts
Maximum DC Blocking Voltage	V_{DC}	1200	Volts
Maximum Average Forward Rectified Current at Ambient 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 Current Squared Time	I^2T	41.5	A ² S
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	47	°C/W
Typical Thermal Resistance (Note 1)	$R_{\theta JL}$	13	°C/W
Typical Junction Capacitance (Note 2)	C_J	30	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	FM3012-W-A01	UNITS
Maximum Instantaneous Forward Voltage at 3.0A DC	V_F	1.1	Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	@ $T_A = 25^\circ\text{C}$	2.0	μA
	@ $T_A = 100^\circ\text{C}$	125	μA

- 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)".
 4. Available in Halogen-free epoxy by adding suffix -HF after the part nbr.

RATING AND CHARACTERISTICS CURVES (FM3012-W-A01)

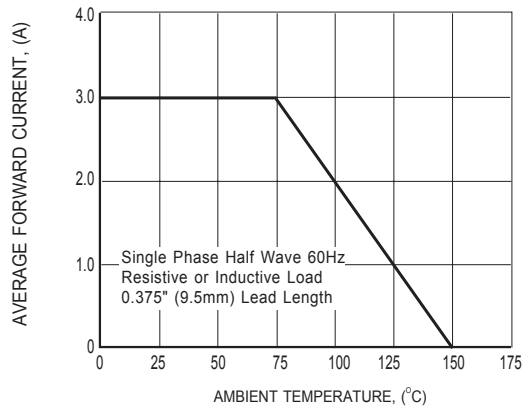


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

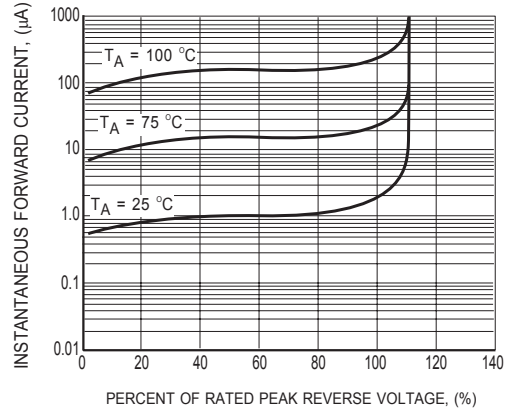


FIG.2 TYPICAL REVERSE CHARACTERISTICS

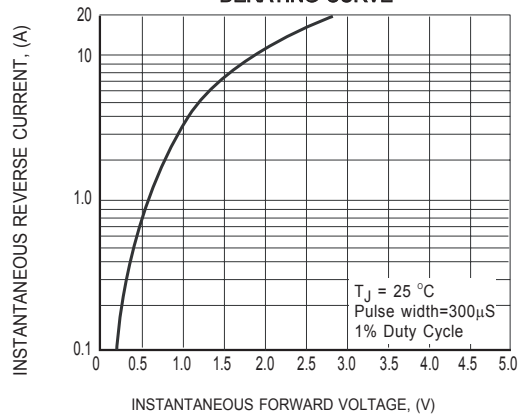


FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

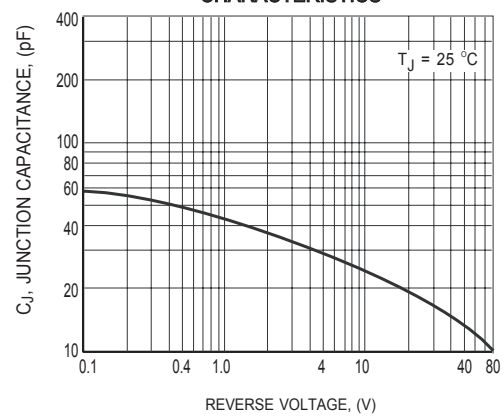


FIG.4 TYPICAL JUNCTION CAPACITANCE

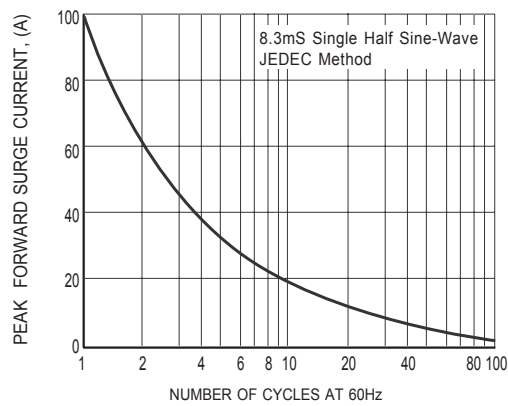
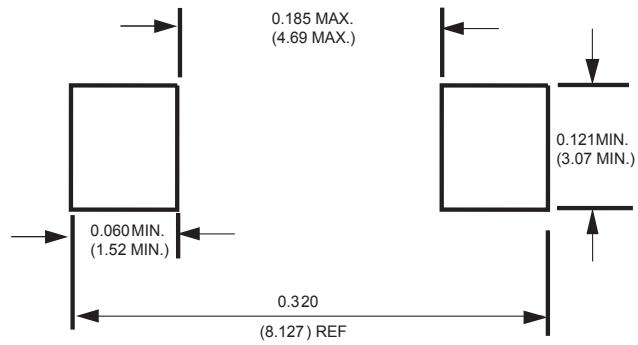


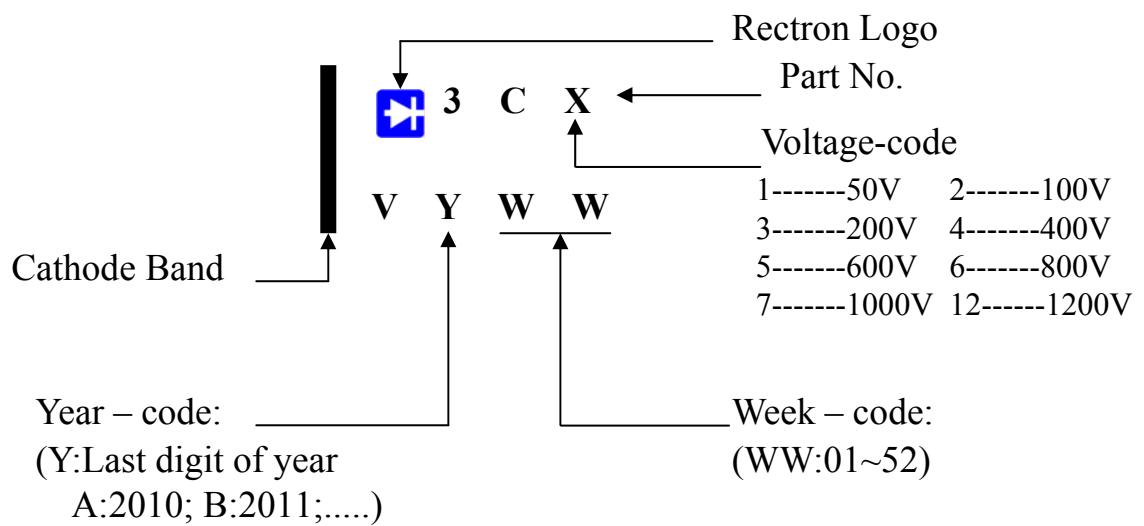
FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

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)
SMC	-T	500	---	---	176	390*205*310	12,000	6.65
SMC	-W	3,000	---	---	330	355*360*350	24,000	11.50

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