

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

**FEATURES**

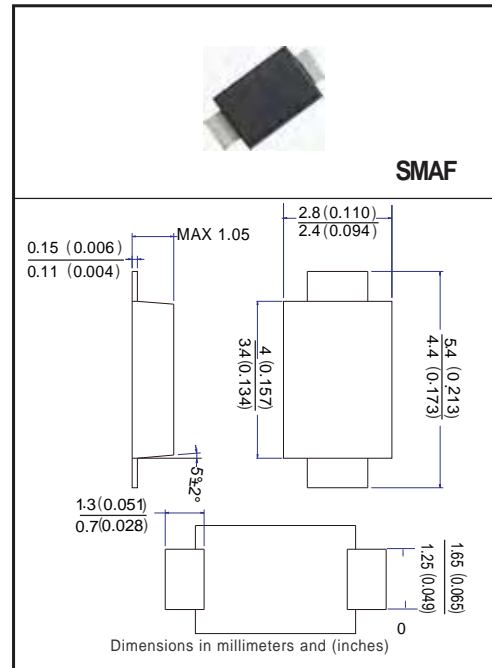
- \* Glass passivated device
- \* Ideal for surface mounted applications
- \* Low leakage current
- \* Metallurgically bonded construction
- \* Mounting position: Any

**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)

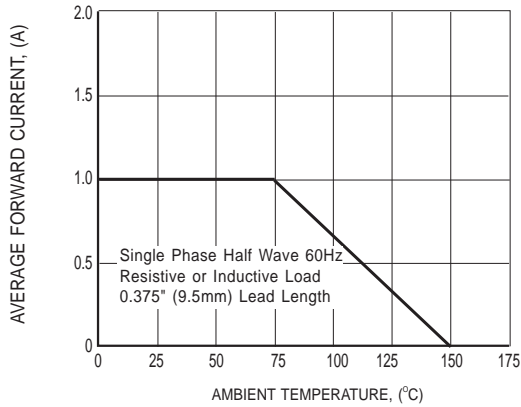
RATINGS	SYMBOL	FM4001F	FM4002F	FM4003F	FM4004F	FM4005F	FM4006F	FM4007F	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum 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
Current Squared 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)	$R_{\theta JL}$	27			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)

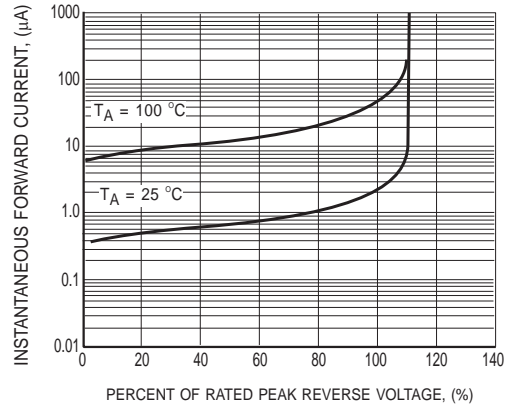
CHARACTERISTICS	SYMBOL	FM4001F	FM4002F	FM4003F	FM4004F	FM4005F	FM4006F	FM4007F	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC	$V_F$	1.0							Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	@ $T_A = 25^\circ\text{C}$	1.0							uA
	@ $T_A = 100^\circ\text{C}$	50							uA

- 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)".

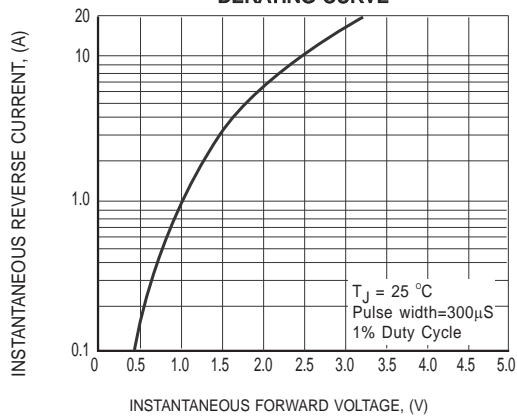
# RATING AND CHARACTERISTICS CURVES ( FM4001F THRU FM4007F )



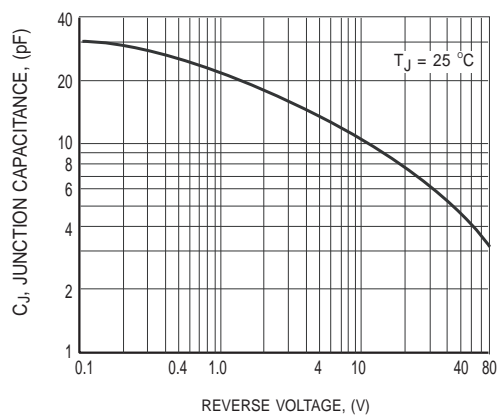
**FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE**



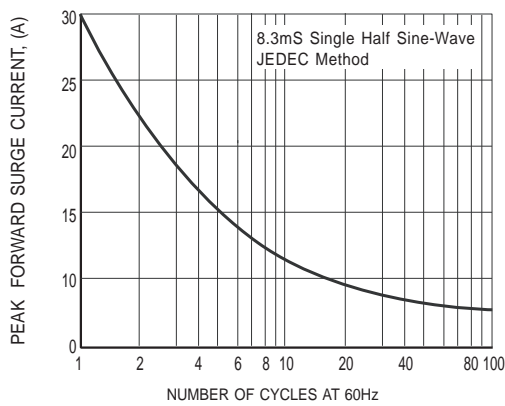
**FIG.2 MAXIMUM REVERSE CHARACTERISTICS**



**FIG.3 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS**

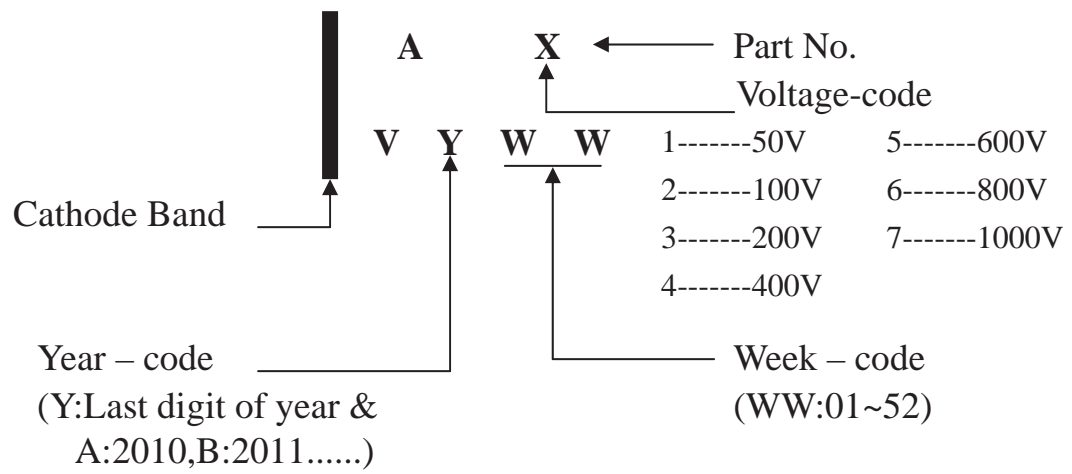


**FIG.4 TYPICAL JUNCTION CAPACITANCE**



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

## Marking Description



# REEL TAPING SPECIFICATIONS FOR SURFACE MOUNT DEVICES-FLAT MELF ( SMAF )

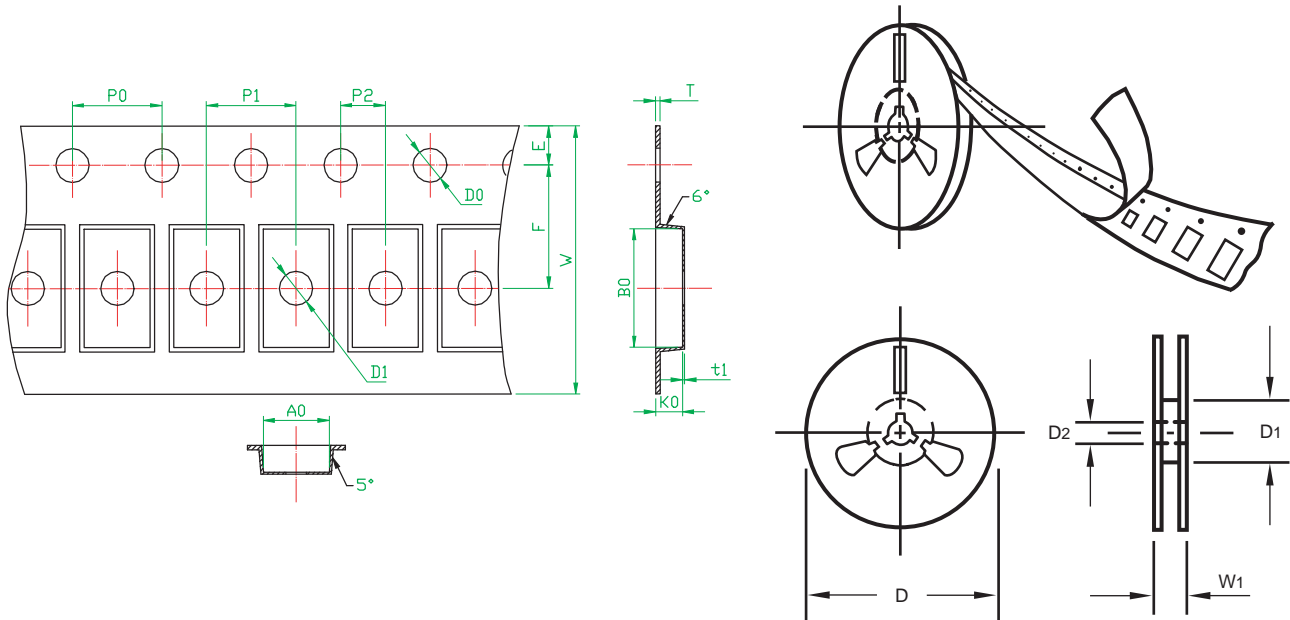


Fig.: Configuration of FLAT MELF TAPING  
( SMAF )

ITEM	SYMBOL	SMAF mm(inch)
Carrier width	A	2.9 ± 0.10 (0.114 ± 0.004)
Carrier length	B	5.35 ± 0.10 (0.211 ± 0.004)
Carrier depth	C	1.15 ± 0.10 (0.045 ± 0.004)
Sprocket hole	D0	1.55 ± 0.05 (0.061 ± 0.002)
Reel outside diameter	D	178 ± 2.0 (7.0 ± 0.079)
Reel inner diameter	D1	50 Min.
Feed hole diameter	D2	13 ± 0.5 (0.512 ± 0.020)
Sprocket hole position	E	1.75 ± 0.1 (0.069 ± 0.004)
Punch hole position	F	5.50 ± 0.05 (0.217 ± 0.002)
Punch hole pitch	P	4.0 ± 0.1 (0.157 ± 0.004)
Sprocket hole pitch	P0	4.0 ± 0.1 (0.157 ± 0.004)
Embossment center	P1	2.0 ± 0.05 (0.079 ± 0.002)
Total tape thickness	T	0.23 ± 0.02 (0.009 ± 0.001)
Tape width	W	12.0 $\begin{smallmatrix} +0.3 \\ -0.1 \end{smallmatrix}$ (0.472 $\begin{smallmatrix} +0.012 \\ -0.004 \end{smallmatrix}$ )
Reel width	W1	16.8 ± 2.0 (0.661 ± 0.079)

Note: 1.Devices are packed in accordance with EIA standard RS-481-D and specification given above.  
2.Available on 7 inch ( 1500 ct. ) or 13 inch ( 5000 ct. ) diameter reels.

## PACKAGING OF DIODE AND BRIDGE RECTIFIERS

### REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
SMAF	-T	3,000	12,000	---	---	178	390*205*310	96,000	---
SMAF	-W	10,000	20,000	---	---	330	360*355*360	160,000	---

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