

**SURFACE MOUNT SCHOTTKY
BARRIER RECTIFIER**
VOLTAGE RANGE 20 to 200 Volts CURRENT 2.0 Ampere

FEATURES

- * Ideal for surface mounted applications
- * Low leakage current
- * Metallurgically bonded construction
- * Mounting position: Any
- * Weight: 0.098 gram
- * P/N suffix V means AEC-Q101 qualified
- * P/N suffix V means Halogen-free

MECHANICAL DATA

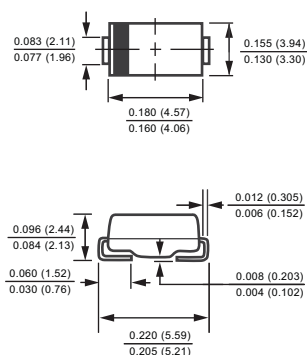
- * Epoxy: Device has UL flammability classification 94V-O

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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



SMB



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

RATINGS	SYMBOL	FM220	FM230	FM240	FM250	FM260	FM280	FM2100	FM2150	FM2200	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	30	40	50	60	80	100	150	200	Volts
Maximum RMS Voltage	V_{RMS}	14	21	28	35	42	56	70	105	140	Volts
Maximum DC Blocking Voltage	V_{DC}	20	30	40	50	60	80	100	150	200	Volts
Maximum Average Forward Rectified Current at Ambient Temperature	I_O	2.0									Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	60									Amps
Typical Current Square Time	I^2T	14.9									A ² S
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	75									°C/W
Typical Thermal Resistance (Note 1)	$R_{\theta JL}$	17									°C/W
Typical Junction Capacitance (Note 2)	C_J	75									pF
Operating Temperature Range	T_J	-55 to + 150									°C
Storage Temperature Range	T_{STG}	-55 to + 150									°C

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

ELECTRICAL CHARACTERISTICS (at $T_A = 25^{\circ}\text{C}$ unless otherwise noted)												
CHARACTERISTICS		SYMBOL	FM220	FM230	FM240	FM250	FM260	FM280	FM2100	FM2150	FM2200	UNITS
Maximum Instantaneous Forward Voltage at 2.0A DC		V_F	.55			.70				.85		Volts
Maximum Average Reverse Current	@ $T_A = 25^{\circ}\text{C}$	I_R	60							5.0		μA
at Rated DC Blocking Voltage	@ $T_A = 150^{\circ}\text{C}$		10							1.0		mA

- 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 (FM220 THRU FM2200)

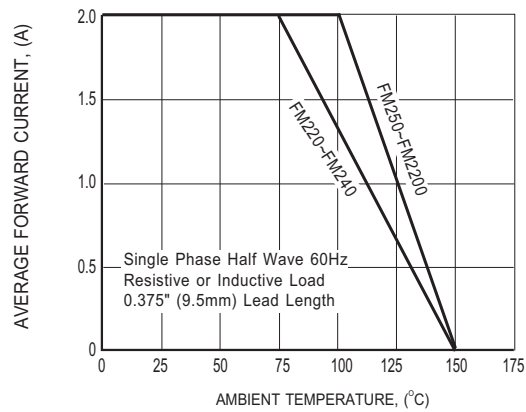


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

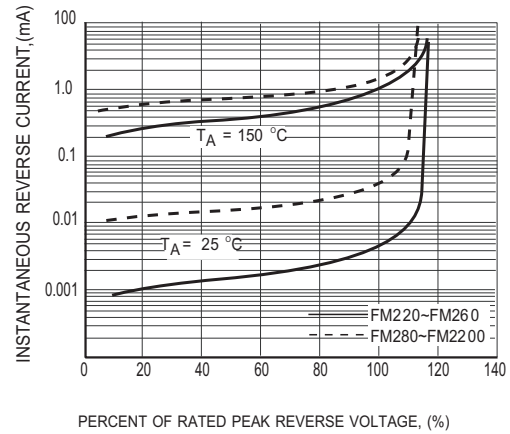


FIG.2 MAXIMUM REVERSE CHARACTERISTICS

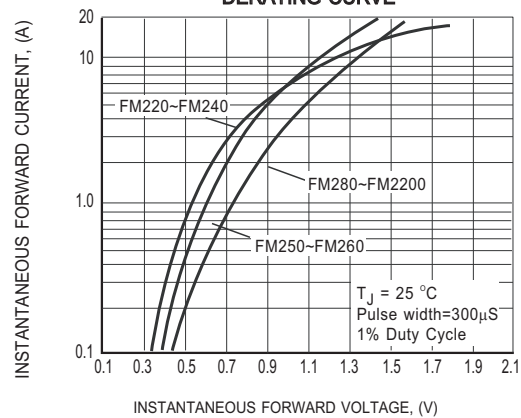


FIG.3 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

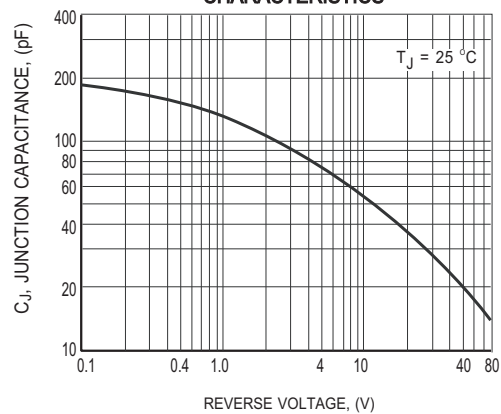


FIG.4 TYPICAL JUNCTION CAPACITANCE

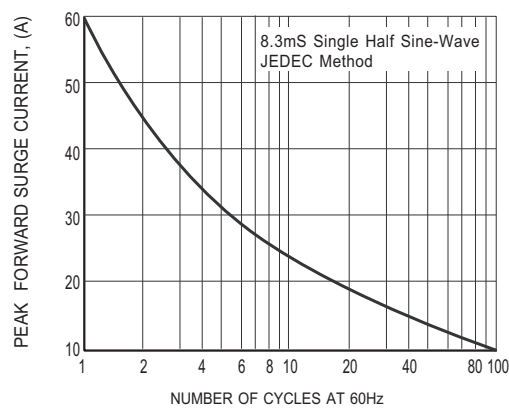
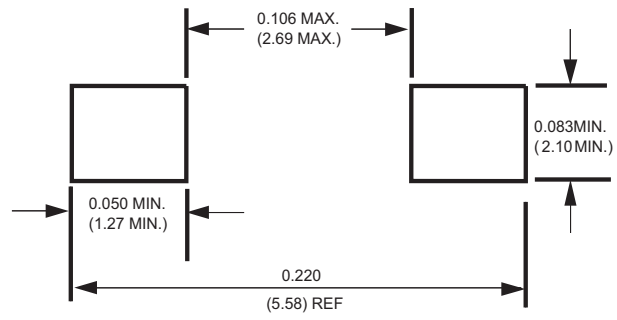


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

Mounting Pad Layout

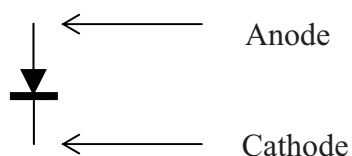


Dimensions in inches and (millimeters)

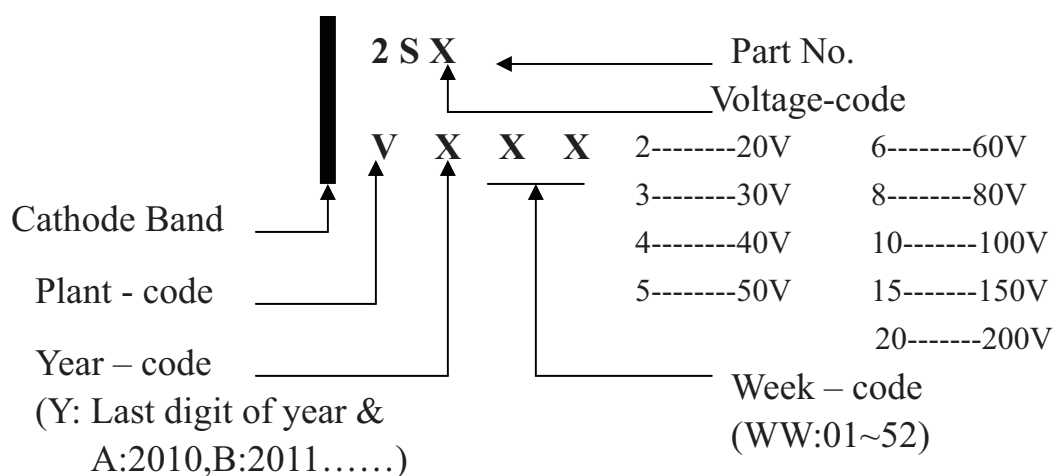


Attachment information about FM2XX

1. Internal Circuit



2. Marking on the body





Attachment information about FM2XX

3. Items marked on the reel box and carton

3.1 On the reel (for -T & -W)

CUSTOMER

TYPE

QUANTITY

LOT NO.

Q.A.

REMARK

3.2 On the box (for -T & -W)

TYPE

QUANTITY

LOT NO.

Q.A.

3.3 On the carton

CUSTOMER

TYPE

QUANTITY

LOT NO.

REMARK

REEL TAPING SPECIFICATIONS FOR SURFACE MOUNT DEVICES-FLAT MELF (SMA/SMB/SMC)

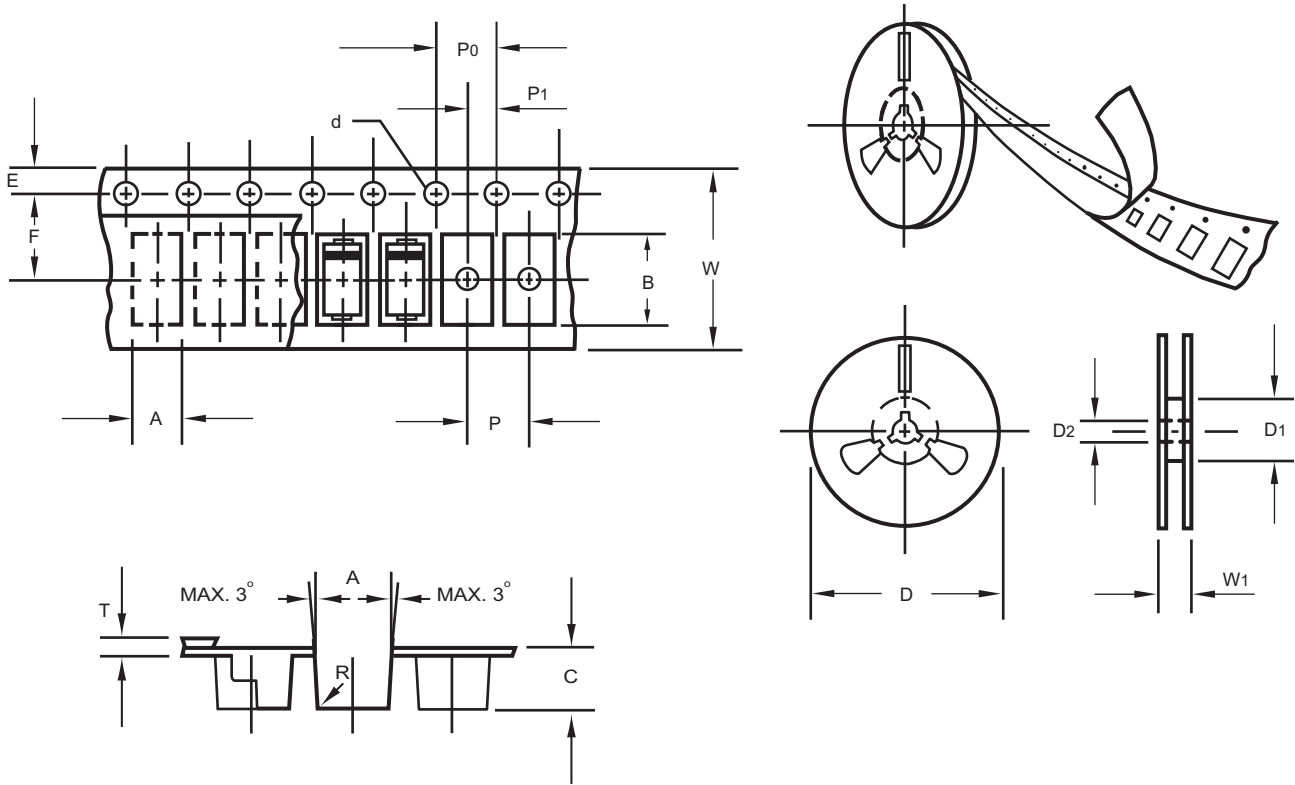


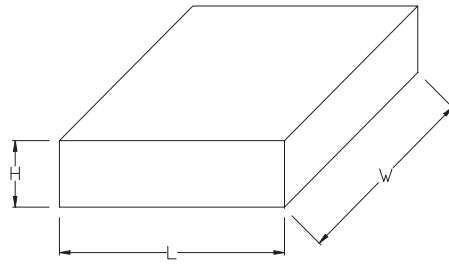
Fig.: Configuration of FLAT MELF TAPING
(SMA/SMB/SMC)

ITEM	SYMBOL	DO214AC (SMA) mm(inch)	DO214AA (SMB) mm(inch)	DO214AB (SMC) mm(inch)
Carrier width	A	2.6 ± 0.15 (0.102 $\pm$ 0.006)	3.65 ± 0.1 (0.144 $\pm$ 0.004)	6.0 ± 0.1 (0.236 $\pm$ 0.004)
Carrier length	B	5.15 ± 0.15 (0.203 $\pm$ 0.006)	5.69 ± 0.1 (0.224 $\pm$ 0.004)	8.30 ± 0.1 (0.327 $\pm$ 0.004)
Carrier depth	C	2.3 ± 0.15 (0.091 $\pm$ 0.006)	2.67 ± 0.1 (0.105 $\pm$ 0.004)	2.5 ± 0.1 (0.098 $\pm$ 0.004)
Sprocket hole	d	1.5 ± 0.1 (0.059 $\pm$ 0.004)	1.5 ± 0.1 (0.059 $\pm$ 0.004)	1.5 ± 0.1 (0.059 $\pm$ 0.004)
Reel outside diameter	D	178 ± 2.0 (7.0 $\pm$ 0.079)	178 ± 2.0 (7.0 $\pm$ 0.079)	178 ± 2.0 (7.0 $\pm$ 0.079)
Reel inner diameter	D1	50 Min.	50 Min.	50 Min.
Feed hole diameter	D2	13 ± 0.5 (0.512 $\pm$ 0.020)	13 ± 0.5 (0.512 $\pm$ 0.020)	13 ± 0.5 (0.512 $\pm$ 0.020)
Strocket hole position	E	1.5 ± 0.1 (0.059 $\pm$ 0.004)	1.5 ± 0.1 (0.059 $\pm$ 0.004)	1.5 ± 0.1 (0.059 $\pm$ 0.004)
Punch hole position	F	5.65 ± 0.05 (0.222 $\pm$ 0.002)	5.65 ± 0.05 (0.222 $\pm$ 0.002)	7.65 ± 0.05 (0.301 $\pm$ 0.002)
Punch hole pitch	P	4.0 ± 0.1 (0.157 $\pm$ 0.004)	8.0 ± 0.1 (0.315 $\pm$ 0.004)	8.0 ± 0.1 (0.315 $\pm$ 0.004)
Sprocket hole pitch	P0	4.0 ± 0.1 (0.157 $\pm$ 0.004)	4.0 ± 0.1 (0.157 $\pm$ 0.004)	4.0 ± 0.1 (0.157 $\pm$ 0.004)
Embossment center	P1	2.0 ± 0.1 (0.079 $\pm$ 0.004)	2.0 ± 0.1 (0.079 $\pm$ 0.004)	4.0 ± 0.1 (0.157 $\pm$ 0.004)
Totall tape thickness	T	0.30 ± 0.05 (0.012 $\pm$ 0.002)	0.6 Max.	0.6 Max.
Tape width	W	12.0 ± 0.2 (0.472 $\pm$ 0.008)	12.0 ± 0.2 (0.472 $\pm$ 0.008)	16.0 ± 0.2 (0.630 $\pm$ 0.008)
Reel width	W1	16.8 ± 2.0 (0.661 $\pm$ 0.079)	16.8 ± 2.0 (0.661 $\pm$ 0.079)	24.0 ± 2.0 (0.945 $\pm$ 0.079)

Note: 1.Devices are packed in accordance with EIA standard RS-481-D and specification given above.

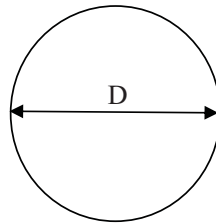
2.Available on 7 inch (1500 ct.) or 13 inch (5000 ct.) diameter reels.

1. BOX



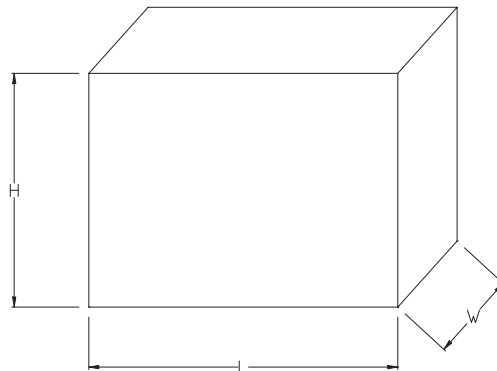
Packing Code	L (mm)	W (mm)	H (mm)
-T	182	182	68
-W	338	338	40

2. REEL



Packing Code	D (mm)
-T	178
-W	330

3. CARTON



Packing Code	L (mm)	W (mm)	H (mm)
-T	390	205	310
-W	360	355	360

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)
SMB	-T	500	2,000	---	---	178	390*205*310	16,000	----
SMB	-W	3,000	6,000	---	---	330	360*355*360	48,000	13.90

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[FM250](#) [FM260](#) [FM280](#)