

**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**

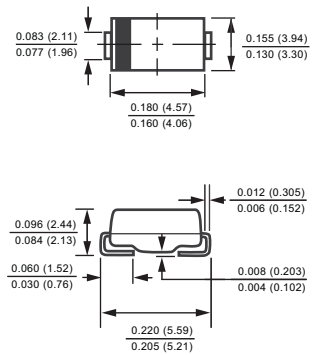
- \* Epoxy: Device has UL flammability classification 94V-O

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

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



**SMB**



Dimensions in inches and (millimeters)

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

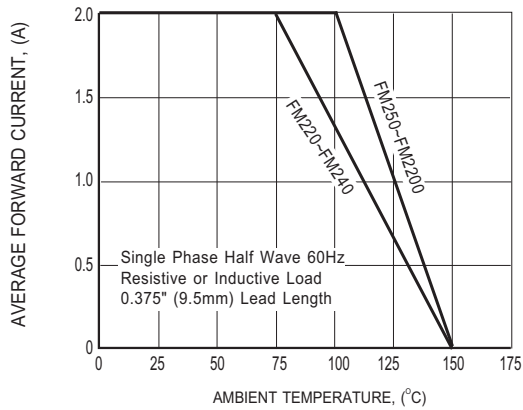
RATINGS	SYMBOL	FM220	FM230	FM240	FM250	FM260	FM280	FM2100	FM2150	FM2200	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	50	60	80	100	150	200	Volts
Maximum RMS Voltage	$V_{RMS}$	14	21	28	35	42	56	70	105	140	Volts
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	50	60	80	100	150	200	Volts
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 <sup>2</sup> 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)**

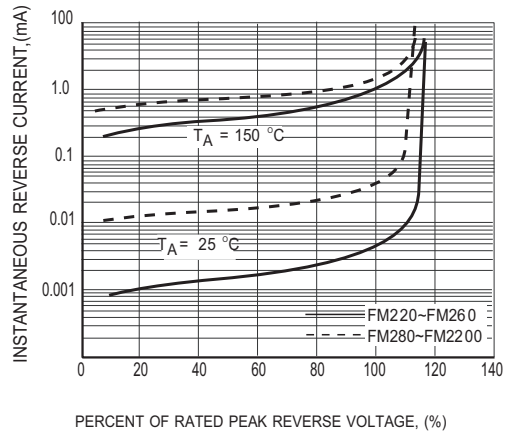
CHARACTERISTICS	SYMBOL	FM220	FM230	FM240	FM250	FM260	FM280	FM2100	FM2150	FM2200	UNITS
Maximum Instantaneous Forward Voltage at 2.0A DC	$V_F$	.55			.70			.85			Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	$I_R$	60						5.0			uA
		10						1.0			mA

- 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.

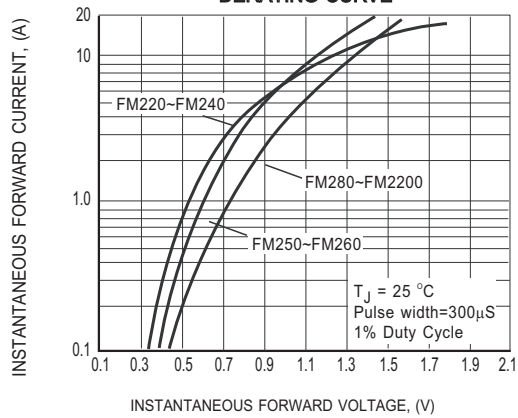
# RATING AND CHARACTERISTICS CURVES ( FM220 THRU FM2200 )



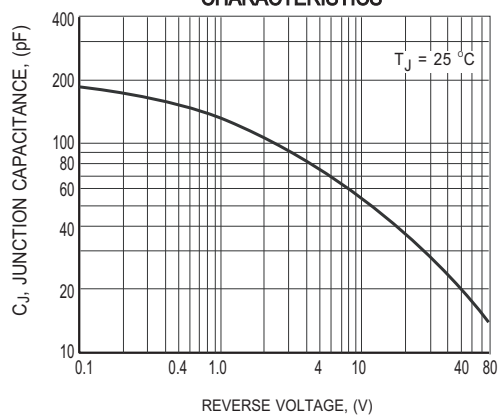
**FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE**



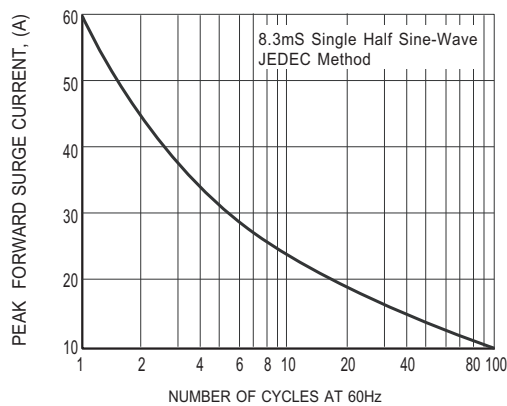
**FIG.2 MAXIMUM REVERSE CHARACTERISTICS**



**FIG.3 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS**

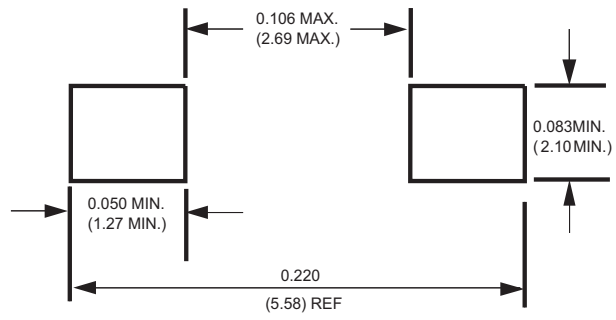


**FIG.4 TYPICAL JUNCTION CAPACITANCE**



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

## Mounting Pad Layout



Dimensions in inches and (millimeters)

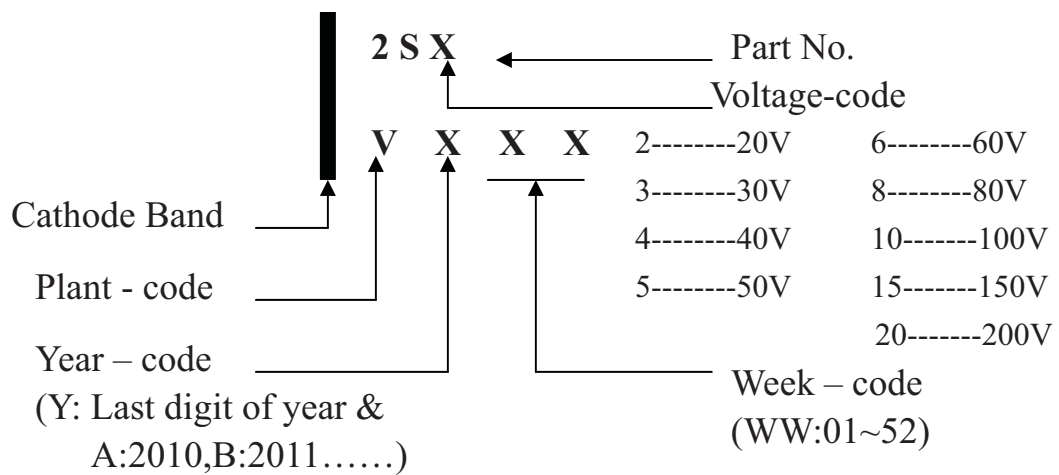


## Attachment information about FM2XX

### 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 )

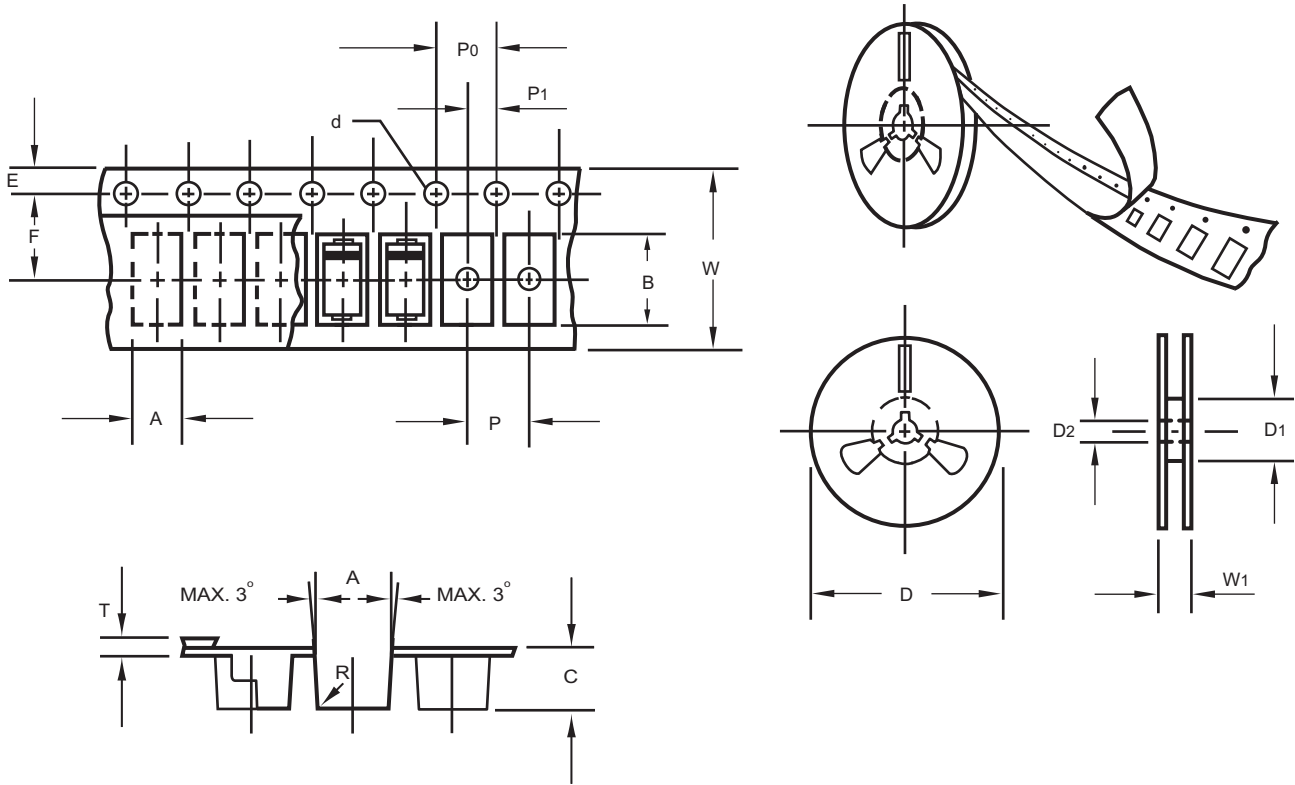
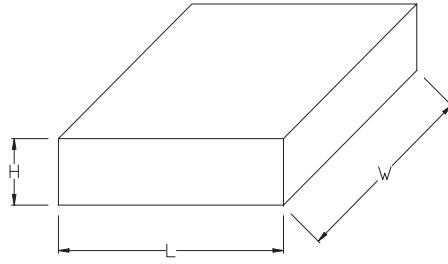


Fig.: Configuration of FLAT MELF TAPING  
( SMA/SMB/SMC )

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

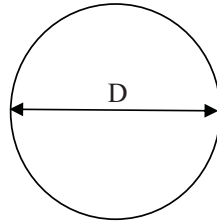
Note: 1.Devices are packed in accordance with EIA standard RS-481-D and specification given above.  
2.Available on 7 inch ( 1500 ct. ) or 13 inch ( 5000 ct. ) diameter reels.

1. BOX



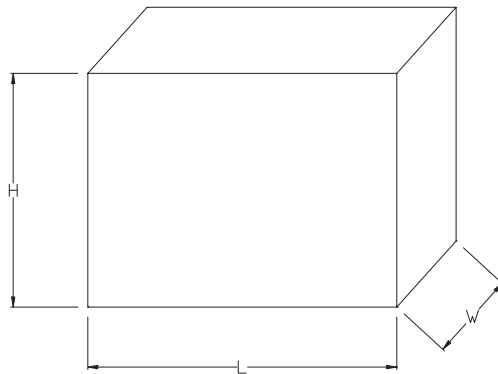
Packing Code	L (mm)	W (mm)	H (mm)
-T	182	182	68
-W	338	338	40

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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