

**SURFACE MOUNT GLASS PASSIVATED
FAST RECOVERY SILICON RECTIFIER**
VOLTAGE RANGE 50 to 1000 Volts CURRENT 3.0 Ampere

FEATURES

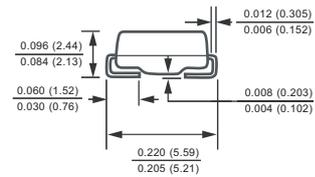
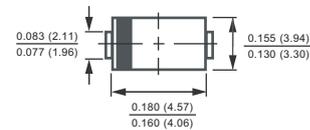
- * Glass passivated device
- * Ideal for surface mounted applications
- * Low leakage current
- * Metallurgically bonded construction
- * Mounting position: Any
- * Weight: 0.098 gram

MECHANICAL DATA

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



DO-214AA



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

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

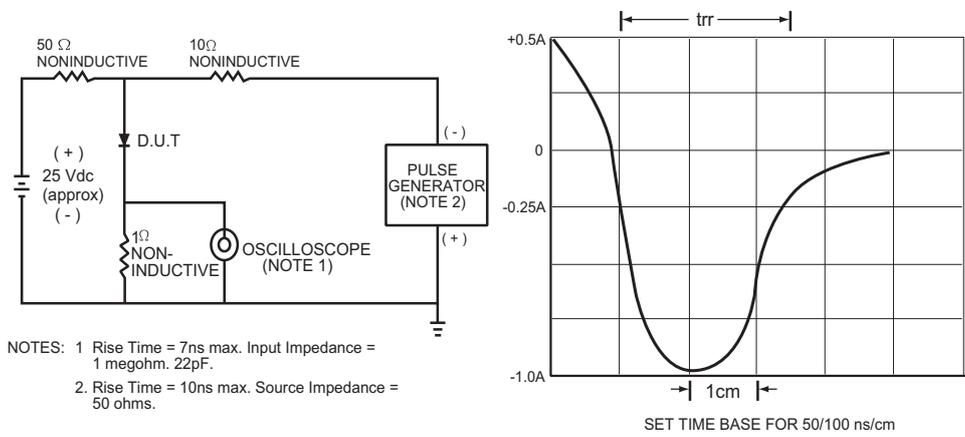
RATINGS	SYMBOL	FFM301B	FFM302B	FFM303B	FFM304B	FFM305B	FFM306B	FFM307B	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at T _A = 55°C	I _O	3.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	200							Amps
Typical Current Squared Time	I ² t	165.9							A ² /S
Typical Thermal Resistance (Note 4)	R _{θJA}	50							°C/W
	R _{θJL}	15							
Typical Junction Capacitance (Note 2)	C _J	15							pF
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to + 150							°C

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

CHARACTERISTICS	SYMBOL	FFM301B	FFM302B	FFM303B	FFM304B	FFM305B	FFM306B	FFM307B	UNITS	
Maximum Instantaneous Forward Voltage at 3.0ADC	V _F	1.30							Volts	
Maximum DC Reverse Current at Rated DC Blocking Voltage	I _R	@T _A = 25°C							2.0	uAmps
		@T _A = 150°C							1.0	mAmps
Maximum Reverse Recovery Time (Note 1)	t _{rr}	150				250	500		nSec	

- NOTES : 1. Reverse Recovery Test Conditions: I_F = 0.5A, I_R = -1.0A, I_{RR} = -0.25A
 2. Measured at 1 MHz and applied reverse voltage of 4.0 volts
 3. " ROHS compliant."
 4. Thermal Resistance : Mounted on PCB.
 5. Available in Halogen-free epoxy by adding suffix -HF after the part nbr.

RATING AND CHARACTERISTICS CURVES (FFFM301B THRU FFM307B)



NOTES: 1 Rise Time = 7ns max. Input Impedance = 1 megohm. 22pF.
 2. Rise Time = 10ns max. Source Impedance = 50 ohms.

FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

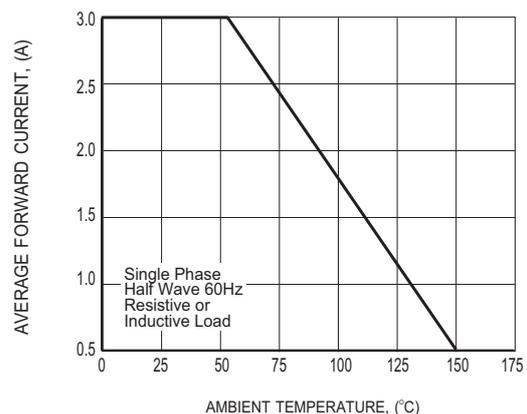


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

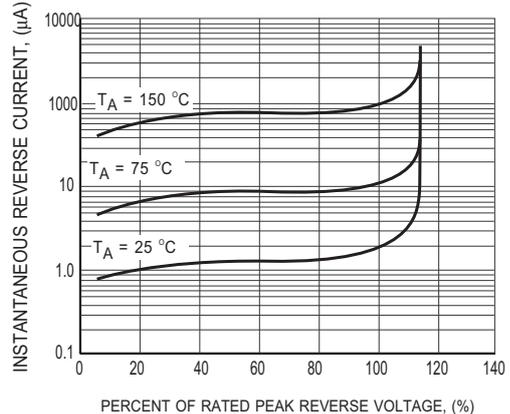


FIG.3 MAXIMUM REVERSE CHARACTERISTICS

RATING AND CHARACTERISTICS CURVES (FFM301B THRU FFM307B)

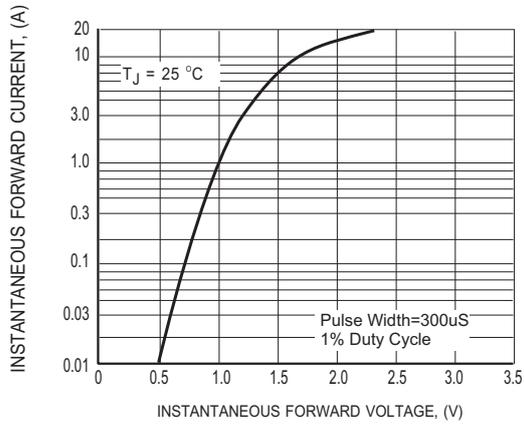


FIG.4 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

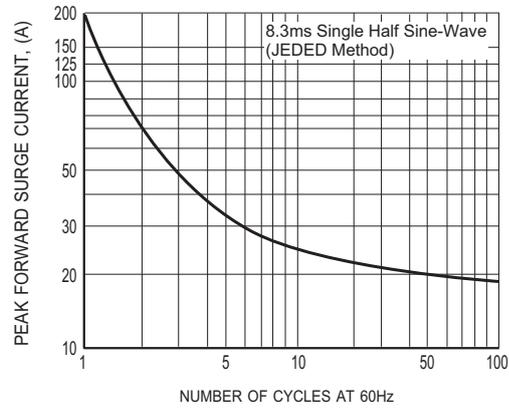


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

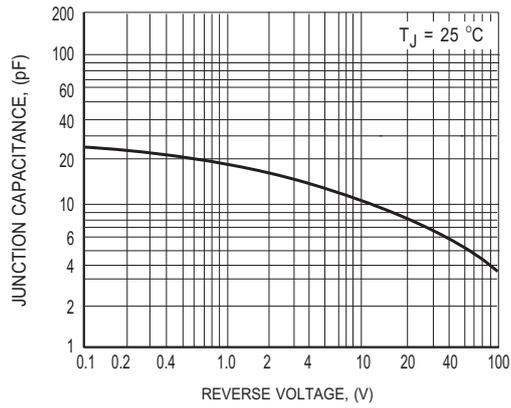
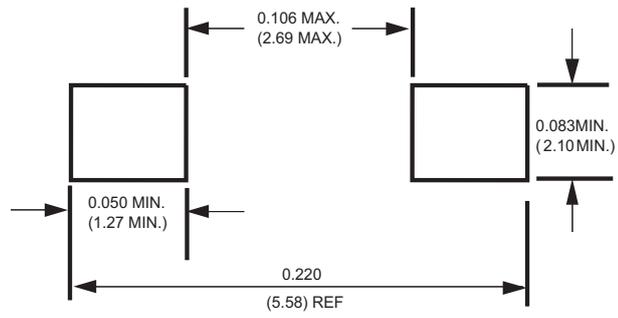


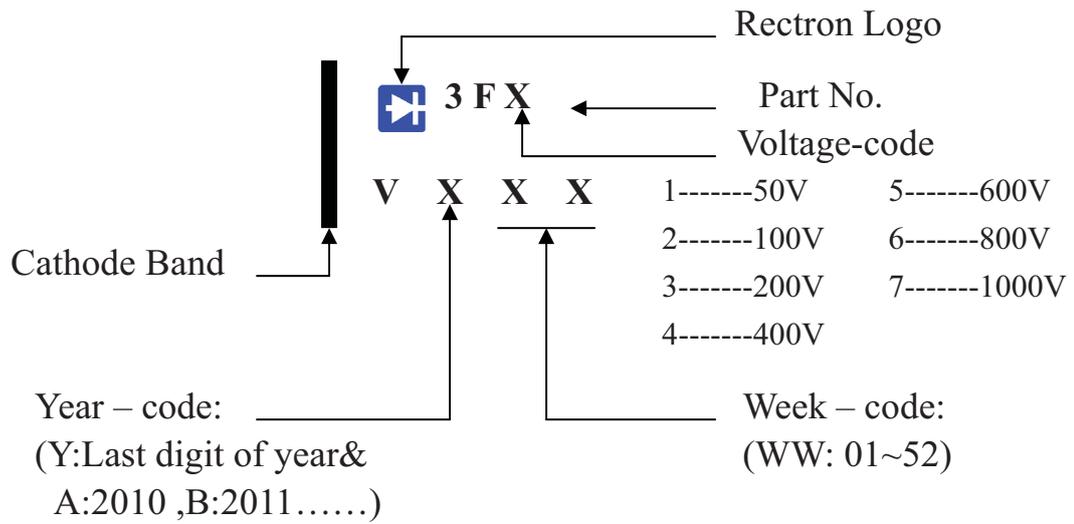
FIG.6 TYPICAL JUNCTION CAPACITANCE

Mounting Pad Layout

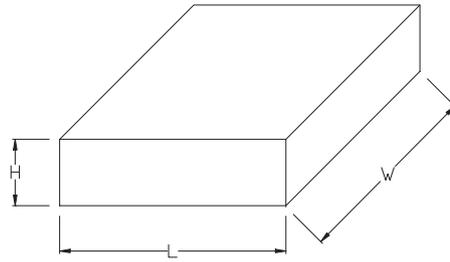


Dimensions in inches and (millimeters)

Marking Description

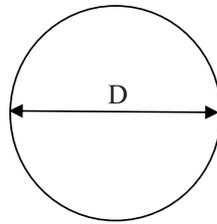


1. BOX



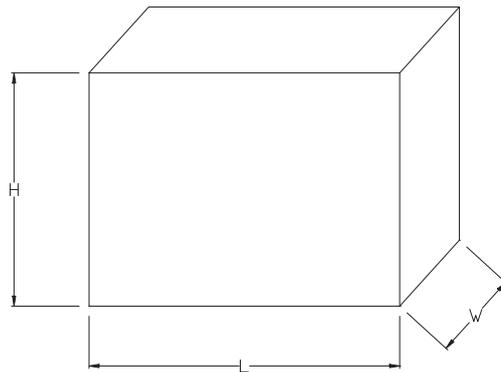
Packing Code	L (mm)	W (mm)	H (mm)
-T	182	182	68
-W	338	338	40

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

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

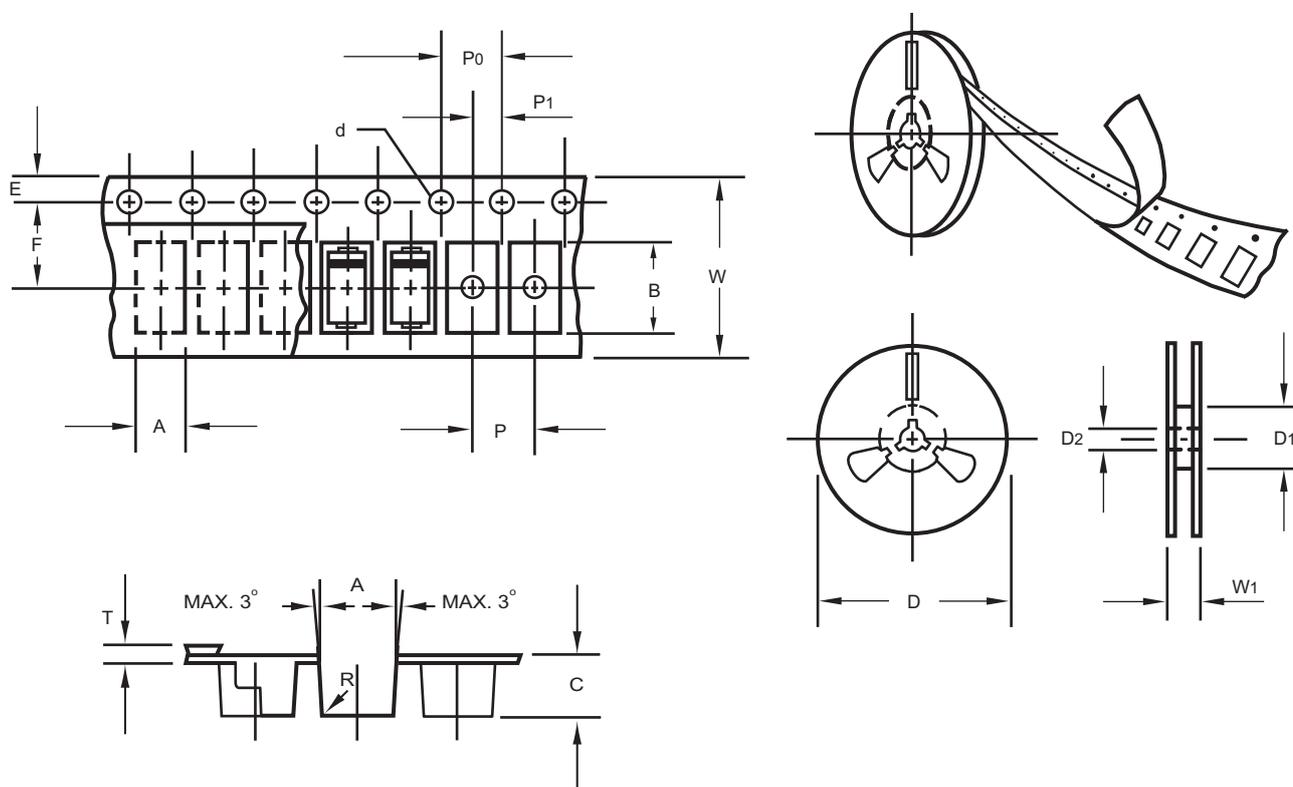


Fig.: Configuration of FLAT MELF TAPING
(SMA/SMB/SMC)

ITEM	SYMBOL	DO214AC (SMA) mm(inch)	DO214AA (SMB) mm(inch)	DO214AB (SMC) mm(inch)
Carrier width	A	2.6 ± 0.15 (.102 ± .006)	3.65 ± 0.1 (.144 ± .004)	6.0 ± 0.1 (.236 ± .004)
Carrier length	B	5.15 ± 0.15 (.203 ± .006)	5.69 ± 0.1 (.224 ± .004)	8.30 ± 0.1 (.327 ± .004)
Carrier depth	C	2.3 ± 0.15 (.091 ± .006)	2.67 ± 0.1 (.105 ± .004)	2.5 ± 0.1 (.098 ± .004)
Sprocket hole	d	1.5 ± 0.1 (.059 ± .004)	1.5 ± 0.1 (.059 ± .004)	1.5 ± 0.1 (.059 ± .004)
Reel outside diameter	D	178 ± 2.0 (7.0 ± .079)	178 ± 2.0 (7.0 ± .079)	178 ± 2.0 (7.0 ± .079)
Reel inner diameter	D1	50 Min.	50 Min.	50 Min.
Feed hole diameter	D2	13 ± 0.5 (.512 ± .020)	13 ± 0.5 (.512 ± .020)	13 ± 0.5 (.512 ± .020)
Sprocket hole position	E	1.5 ± 0.1 (.059 ± .004)	1.5 ± 0.1 (.059 ± .004)	1.5 ± 0.1 (.059 ± .004)
Punch hole position	F	5.65 ± 0.05 (.222 ± .002)	5.65 ± 0.05 (.222 ± .002)	7.65 ± 0.05 (.301 ± .002)
Punch hole pitch	P	4.0 ± 0.1 (.157 ± .004)	8.0 ± 0.1 (.315 ± .004)	8.0 ± 0.1 (.315 ± .004)
Sprocket hole pitch	P0	4.0 ± 0.1 (.157 ± .004)	4.0 ± 0.1 (.157 ± .004)	4.0 ± 0.1 (.157 ± .004)
Embossment center	P1	2.0 ± 0.1 (.079 ± .004)	2.0 ± 0.1 (.079 ± .004)	4.0 ± 0.1 (.157 ± .004)
Total tape thickness	T	0.30 ± .05 (.012 ± .002)	0.6 Max.	0.6 Max.
Tape width	W	12.0 ± 0.2 (.472 ± .008)	12.0 ± 0.2 (.472 ± .008)	16.0 ± 0.2 (.630 ± .008)
Reel width	W1	16.8 ± 2.0 (.661 ± .079)	16.8 ± 2.0 (.661 ± .079)	24.0 ± 2.0 (.945 ± .079)

Notes: 1.Devices are packed in accordance with EIA standard RS-481-A 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)
SMB	-W/-T	3,000	6,000	---	---	330	360*355*360	48,000	13.90

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