

SURFACE MOUNT
GLASS PASSIVATED SILICON RECTIFIER
VOLTAGE 600 Volts CURRENT 3.0 Amperes

FEATURES

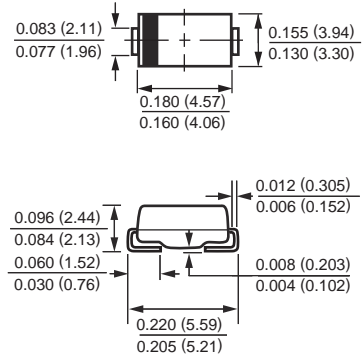
- * Glass passivated device
- * Ideal for surface mounted applications
- * Low leakage current
- * Metallurgically bonded construction
- * Mounting position: Any

MECHANICAL DATA

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

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

DO-214AA



Dimensions in inches and (millimeters)

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

RATINGS	SYMBOL	FM305B	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	600	Volts
Maximum RMS Voltage	V_{RMS}	420	Volts
Maximum DC Blocking Voltage	V_{DC}	600	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}	150	Amps
Typical Current Squared Time	I^2T	93.3	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	FM305B	UNITS
Maximum Instantaneous Forward Voltage at 3.0A 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)".

2017-05
REV:B

RATING AND CHARACTERISTICS CURVES (FM305B)

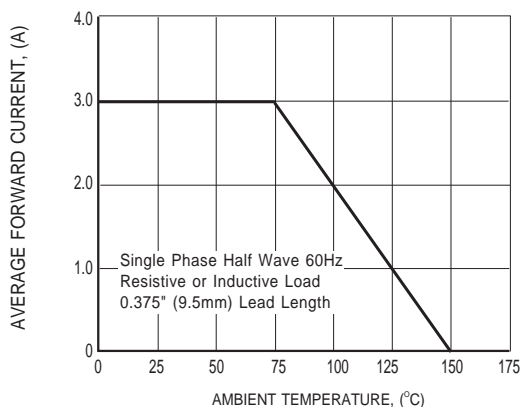


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

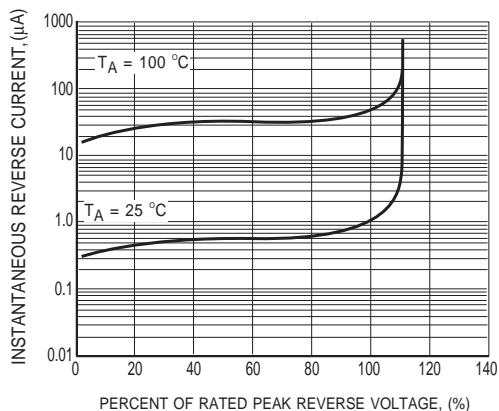


FIG.2 MAXIMUM REVERSE CHARACTERISTICS

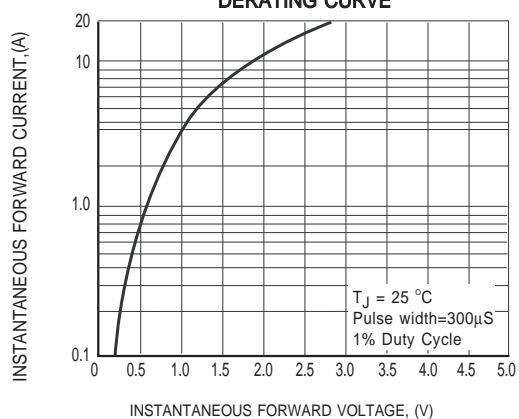


FIG.3 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

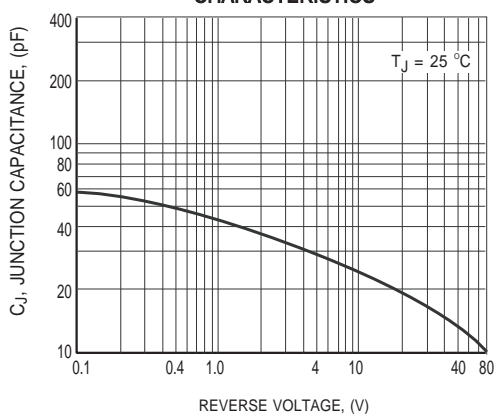


FIG.4 TYPICAL JUNCTION CAPACITANCE

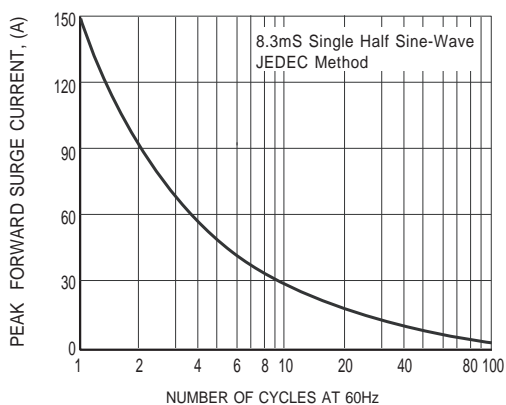
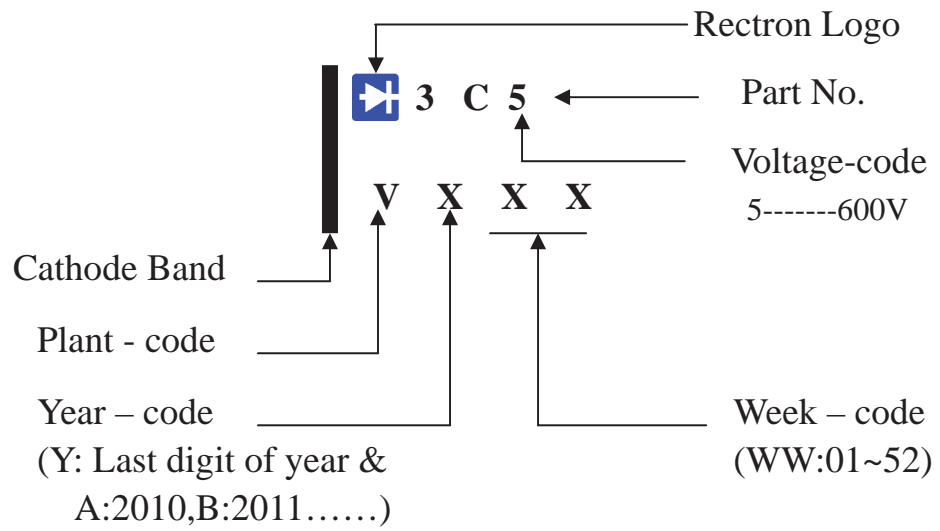


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

Marking on the body

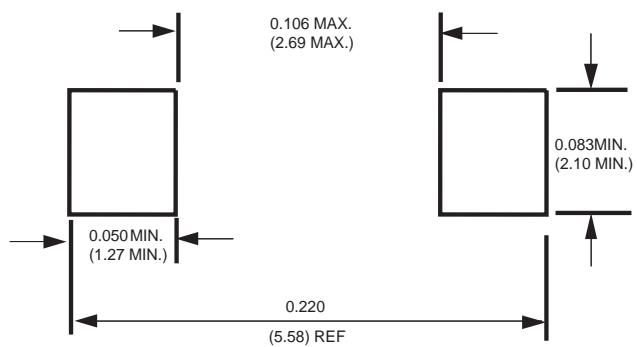


PACKAGING OF DIODE AND BRIDGE RECTIFIERS

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

Mounting Pad Layout



Dimensions in inches and (millimeters)

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

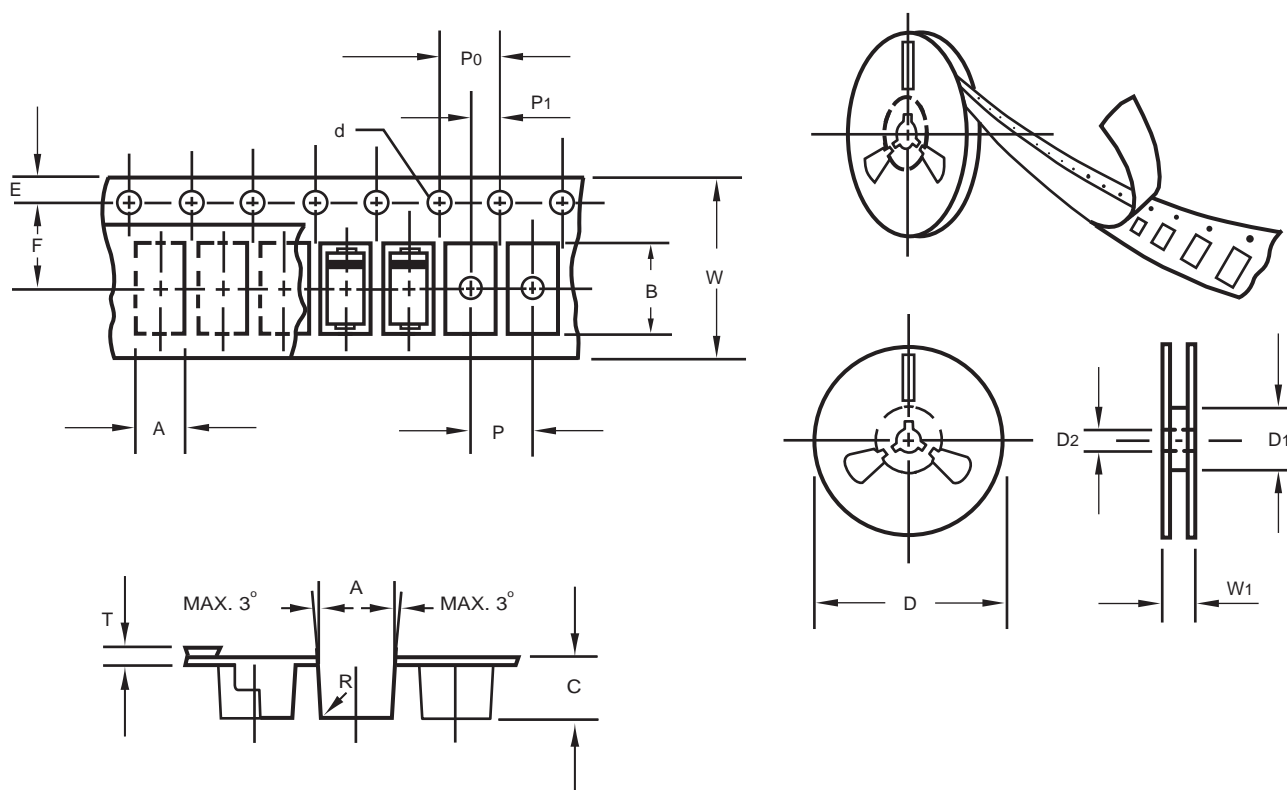


Fig.: Configuration of FLAT MELF TAPING
(SMA/SMB/SMC)

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)
Sprocket 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-A and specification given above.
2.Available on 7 inch (1500 ct.) or 13 inch (5000 ct.) diameter reels.

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