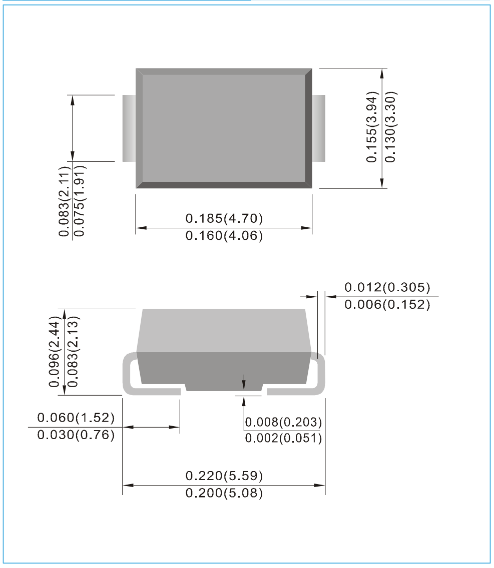
FR2A~FR2M

SURFACE MOUNT FAST RECOVERY RECTIFIER

VOLTAGE 50 to 1000 Volt **CURRENT** 2 Ampere

SMB / DO-214AA Unit : inch(mm)

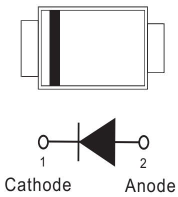


FEATURES

- For surface mounted applications in order to optimize board space
- Easy pick and place
- Fast Recovery times for high efficiency
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Glass passivated junction
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

- Case: JEDEC DO-214AA molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750,Method 2026
- Polarity: Color band denotes cathode end
- Standard packaging: 12mm tape (EIA-481)
- Weight: 0.0032 ounce, 0.092 gram



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%.

PARAMETER	SYMBOL	FR2A	FR2B	FR2D	FR2G	FR2J	FR2K	FR2M	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Rectified Current	$I_{F(AV)}$	2							A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	50							A
Maximum Forward Voltage at 2A	V_F	1.3							V
Maximum DC Reverse Current at Rated DC Blocking Voltage T_J=25°C T_J=125°C	I_R	1 150							µA
Maximum Reverse Recovery Time (Notes 1)	t_{rr}	150				250	500		ns
Maximum Junction Capacitance (Notes 2)	C_J	40							pF
Typical Junction Resistance (Notes 3) (Notes 4) (Notes 5)	$R_{\theta JL}$ $R_{\theta JC}$ $R_{\theta JA}$	20 12.5 125							°C / W
Operating Junction and Storage Temperature Rating	T_J,T_{STG}	-50 to +150							°C

NOTES:1. Reverse Recovery Test Conditions: I_F=0.5A, I_R=-1A, I_{rr}=-0.25A
2. Measured at 1 MHz and applied V_r = 4 volts.
3. 8mm^2 (0.013mm thick) land areas.
4. Mounted on a FR4 PCB with 100cm^2 copper pad area
5. Mounted on a FR4 PCB with min. copper pad area .

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RATING AND CHARACTERISTIC CURVES

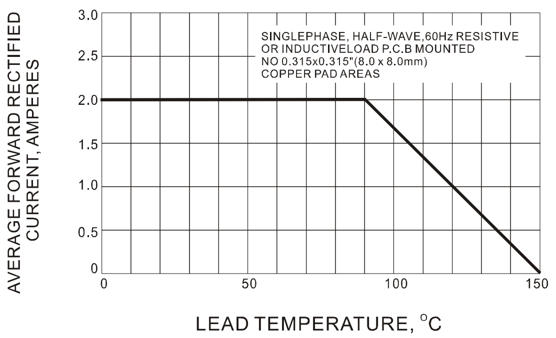

Fig.1 FORWARD CURRENT DERATING CURVE

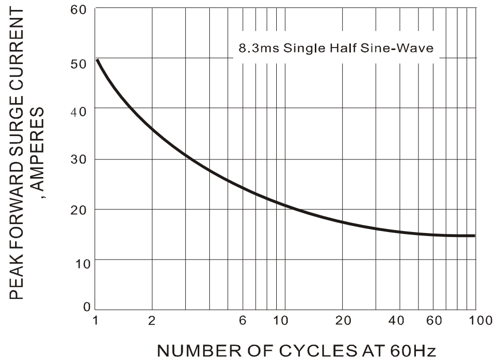

Fig.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

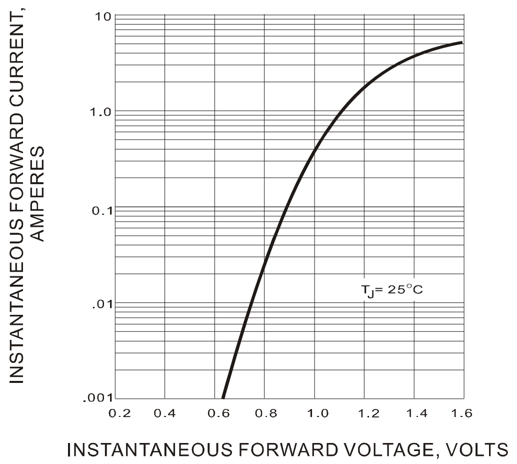

Fig.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

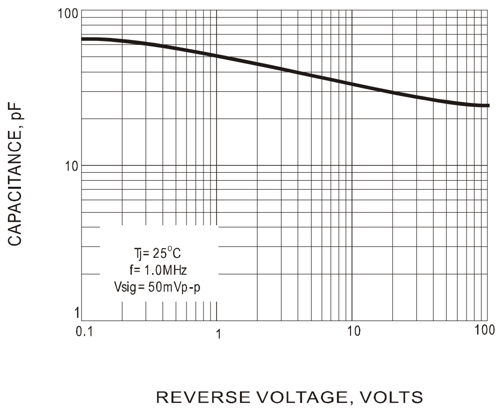

Fig.4 TYPICAL JUNCTION CAPACITANCE

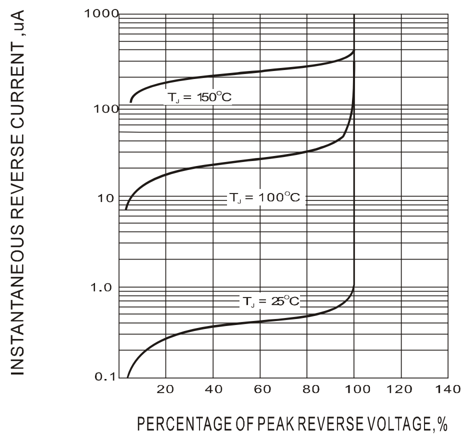

Fig.5-TYPICAL REVERSE CHARACTERISTIC

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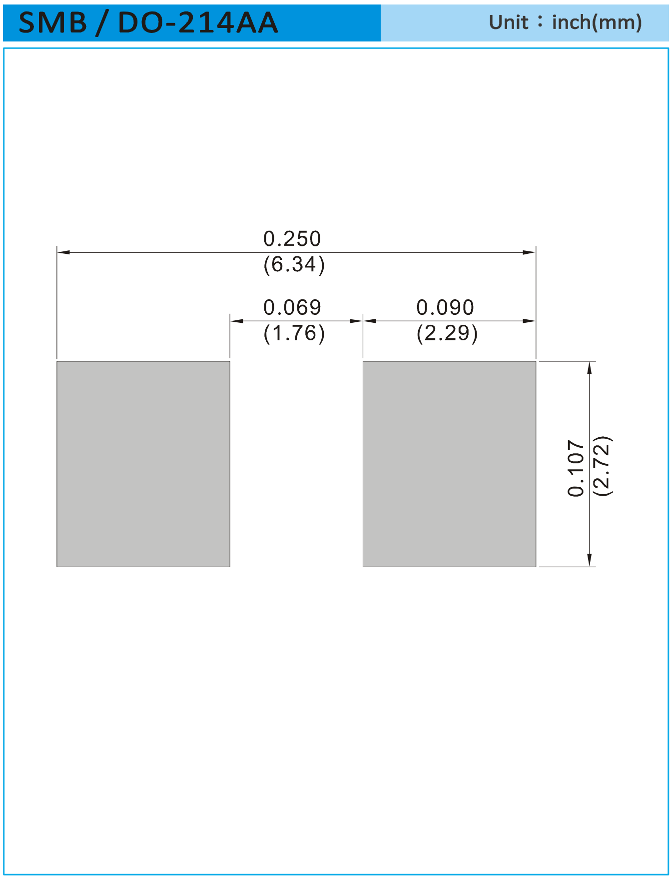
MOUNTING PAD LAYOUT



ORDER INFORMATION

- Packing information

  T/R - 3K per 13" plastic Reel

  T/R - 0.5K per 7" plastic Reel

FR2A~FR2M

Part No_packing code_Version

FR2A_R1_00001

FR2A_R2_00001

For example :

RB500V-40_R2_00001

Part No.

Serial number

Version code means HF

Packing size code means 13"

Packing type means T/R

Packing Code XX				Version Code XXXXX		
Packing type	1st Code	Packing size code	2nd Code	HF or RoHS	1st Code	2nd~5th Code
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			

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