



FR2D ~ FR2M

SURFACE MOUNT FAST RECOVERY RECTIFIER

VOLTAGE 200 to 1000 Volt **CURRENT** 2 Ampere

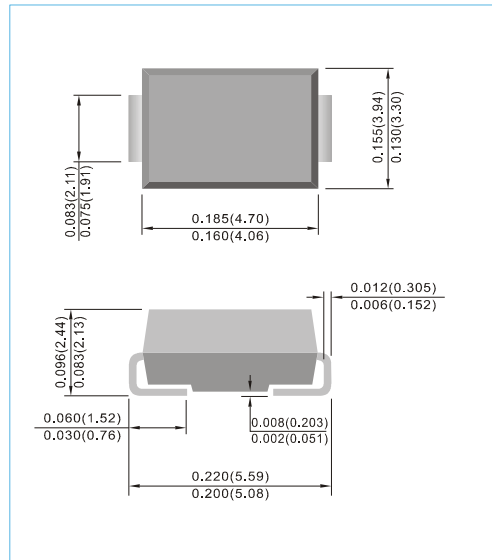
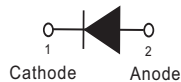
SMB / DO-214AA Unit : inch(mm)

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 2.0
- Green molding compound as per IEC 61249 standard

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)
- Approx. Weight: 0.0032 ounces, 0.092 grams



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	FR2D	FR2G	FR2J	FR2K	FR2M	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	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 $T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$	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) $R_{\theta JL}$ (Notes 4) $R_{\theta JC}$ (Notes 5) $R_{\theta JA}$	20 12.5 125					$^\circ\text{C} / \text{W}$
Operating Junction and Storage Temperature Rating	T_J, T_{STG}	-50 to +150					$^\circ\text{C}$

- NOTES: 1. Reverse Recovery Test Conditions: $I_F = 0.5\text{A}$, $I_R = -1\text{A}$, $I_{rr} = -0.25\text{A}$
 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

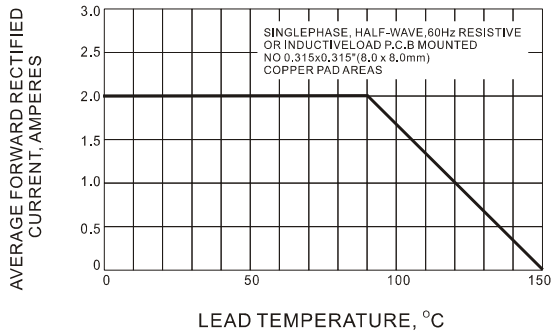


Fig.1 FORWARD CURRENT DERATING CURVE

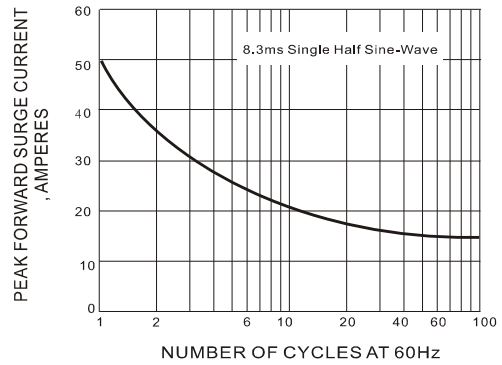


Fig.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

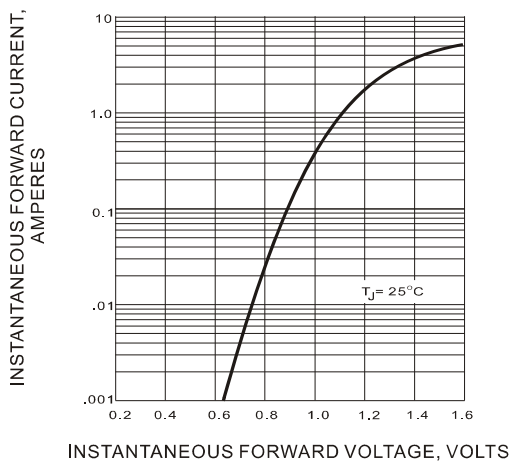


Fig.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

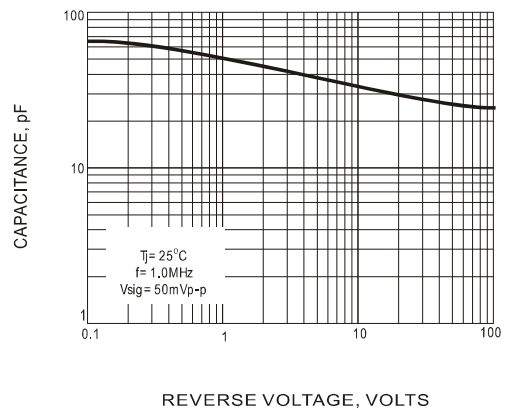


Fig.4 TYPICAL JUNCTION CAPACITANCE

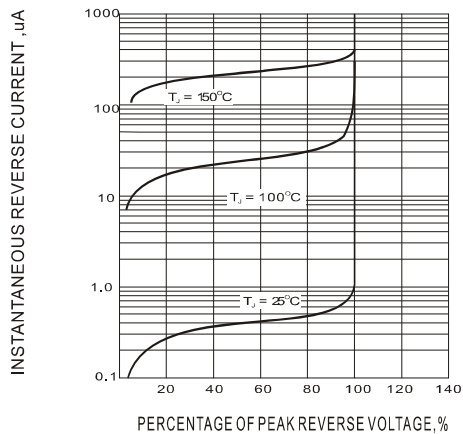


Fig.5-TYPICAL REVERSE CHARACTERISTIC

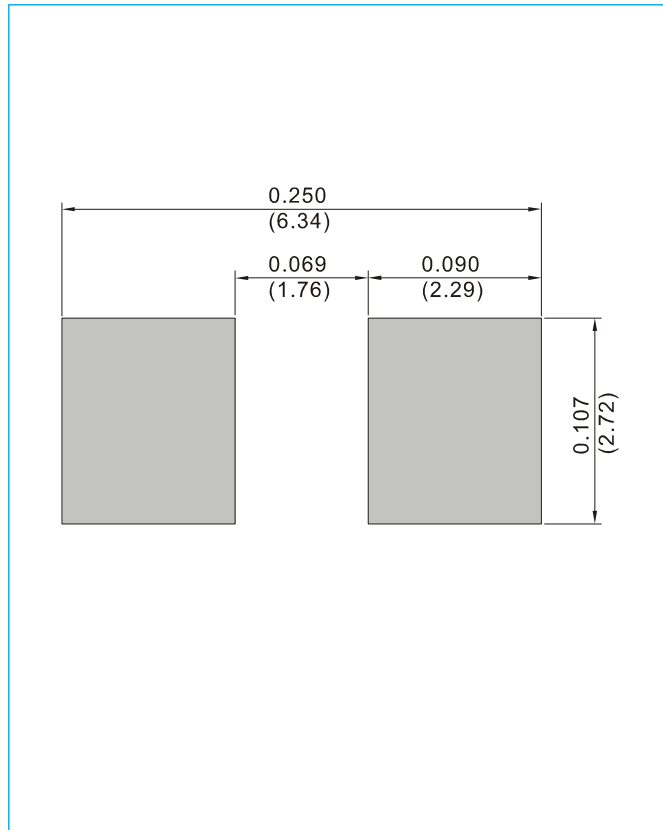


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MOUNTING PAD LAYOUT

SMB / DO-214AA

Unit : inch(mm)



ORDER INFORMATION

- Packing information
T/R - 3K per 13" plastic Reel
T/R - 0.8K per 7" plastic Reel



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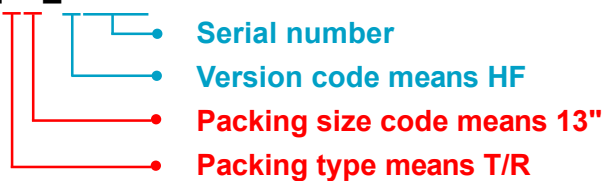
Part No._packing code_Version

FR2D_R1_00101
FR2D_R2_00101
FR2G_R1_00101
FR2G_R2_00101
FR2J_R1_00101
FR2J_R2_00101
FR2K_R1_00101
FR2K_R2_00101
FR2M_R1_00101
FR2M_R2_00101

For example :

RB500V-40_R2_00001

Part No.



Packing Code XX				Version Code XXXXX		
Packing type	1 st Code	Packing size code	2 nd Code	HF or RoHS	1 st Code	2 nd ~5 th 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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