

FR2A~FR2M

SURFACE MOUNT FAST RECOVERY RECTIFIER

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

SMB / DO-214AA

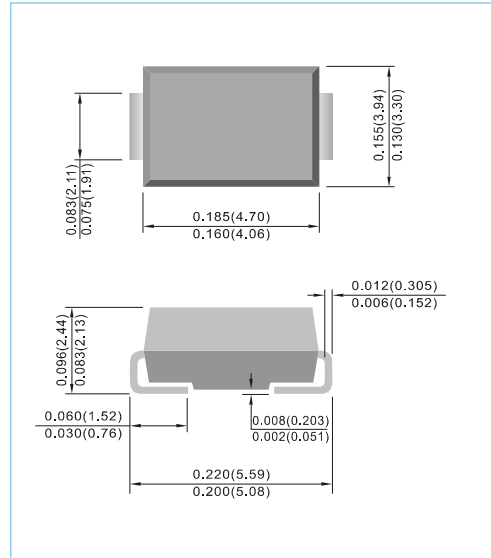
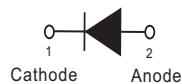
Unit : inch(mm)

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 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)
- 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	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 $T_J=25^{\circ}C$ $T_J=125^{\circ}C$	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							$^{\circ}C / W$
Operating Junction and Storage Temperature Rating	T_J, T_{STG}	-50 to +150							$^{\circ}C$

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. 8mm² (0.013mm thick) land areas.
 4. Mounted on a FR4 PCB with 100cm² copper pad area
 5. Mounted on a FR4 PCB with min. copper pad area .

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RATING AND CHARACTERISTIC CURVES

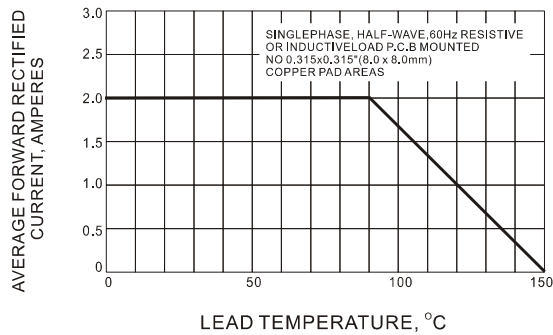


Fig.1 FORWARD CURRENT DERATING CURVE

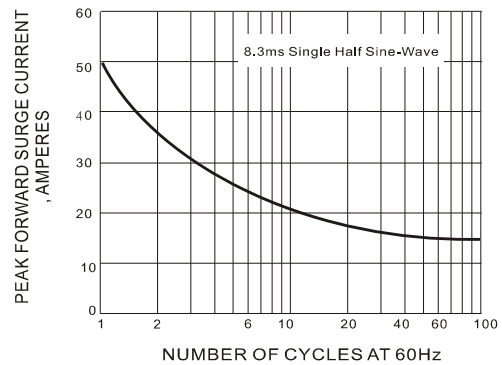


Fig.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

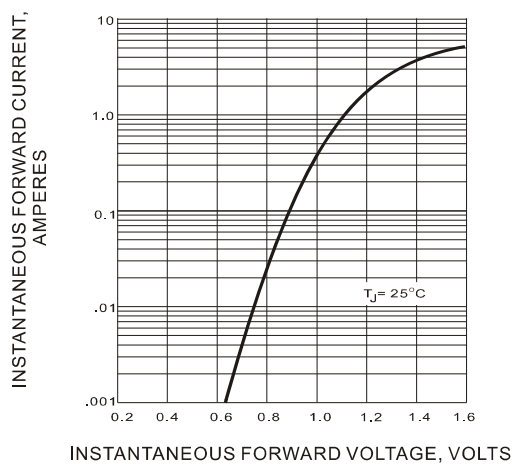


Fig.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

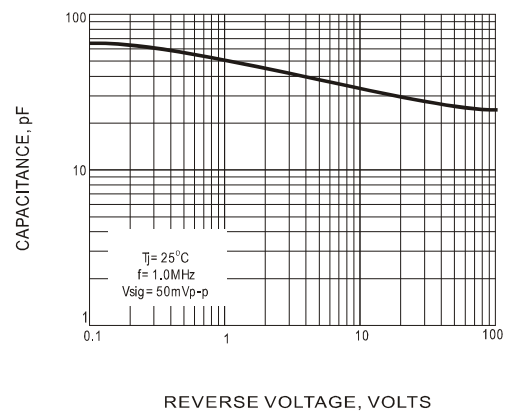


Fig.4 TYPICAL JUNCTION CAPACITANCE

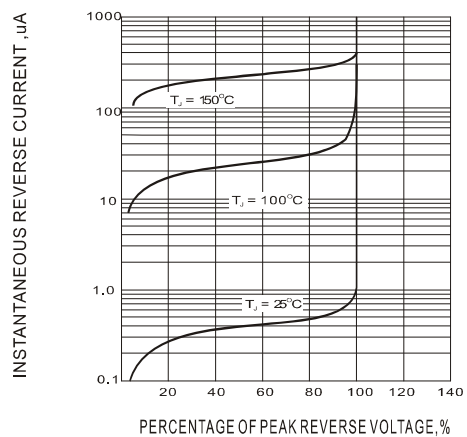


Fig.5-TYPICAL REVERSE CHARACTERISTIC

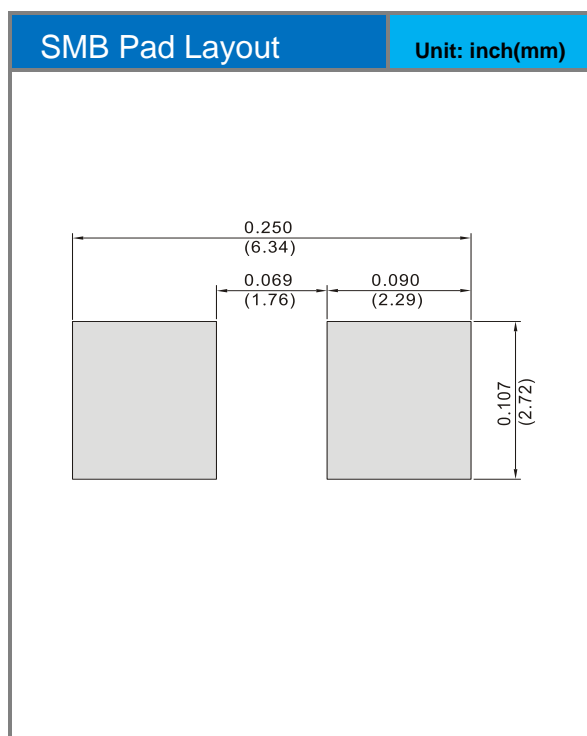
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Product and Packing Information

Part No.	Package Type	Packing Type	Marking
FR2A	SMB	0.8K pcs / 7" reel	FR2A
FR2A	SMB	3K pcs / 13" reel	FR2A
FR2B	SMB	0.8K pcs / 7" reel	FR2B
FR2B	SMB	3K pcs / 13" reel	FR2B
FR2D	SMB	0.8K pcs / 7" reel	FR2D
FR2D	SMB	3K pcs / 13" reel	FR2D
FR2G	SMB	0.8K pcs / 7" reel	FR2G
FR2G	SMB	3K pcs / 13" reel	FR2G
FR2J	SMB	0.8K pcs / 7" reel	FR2J
FR2J	SMB	3K pcs / 13" reel	FR2J
FR2K	SMB	0.8K pcs / 7" reel	FR2K
FR2K	SMB	3K pcs / 13" reel	FR2K
FR2M	SMB	0.8K pcs / 7" reel	FR2M
FR2M	SMB	3K pcs / 13" reel	FR2M

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Mounting Pad Layout



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