

FR2AF SERIES

SURFACE MOUNT FAST RECOVERY RECTIFIER

VOLTAGE 50 to 600 Volt **CURRENT** 2 Ampere

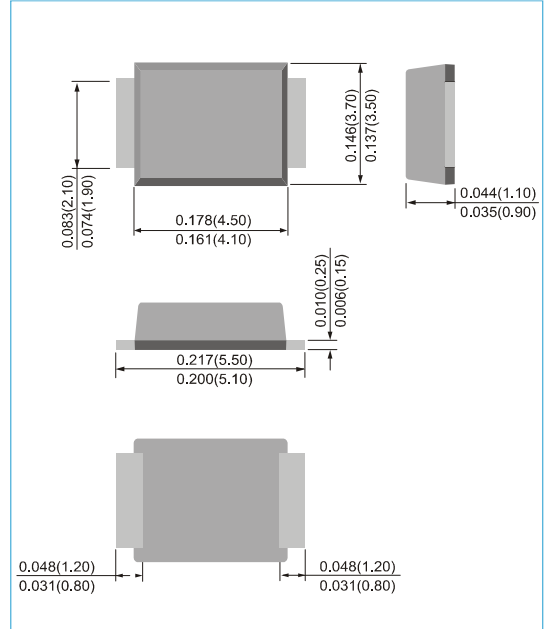
SMBF Unit : inch(mm)

FEATURES

- For surface mounted applications
- Low profile package
- 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

MECHANICAL DATA

- Case: SMBF molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0018 ounce, 0.05 grams
- Polarity: Color band denotes cathode end



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	FR2AF	FR2BF	FR2DF	FR2GF	FR2JF	UNITS	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	V	
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	V	
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	V	
Maximum Average Forward Rectified Current	$I_{F(AV)}$	2.0						A
Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load(per diode)	I_{FSM}	50						A
Maximum Forward Voltage at 2A	V_F	1.3						V
Maximum DC Reverse Current $T_j=25^\circ\text{C}$	I_R	1.0						μA
Typical Junction Capacitance (VR=4V f=1MHZ)	C_J	24				14		pF
Typical Thermal Resistance (Note 1) (Note 2)	$R_{\theta JL}$ $R_{\theta JA}$	20 135						$^\circ\text{C} / \text{W}$
Maximum Reverse Recovery Time	T_{rr}	150				250		nS
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150						$^\circ\text{C}$

NOTES : 1. Mounted on an FR4 PCB, single-sided copper, with 48cm² copper pad area.
2. Mounted on an FR4 PCB, single-sided copper, mini pad.

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RATING AND CHARACTERISTIC CURVES

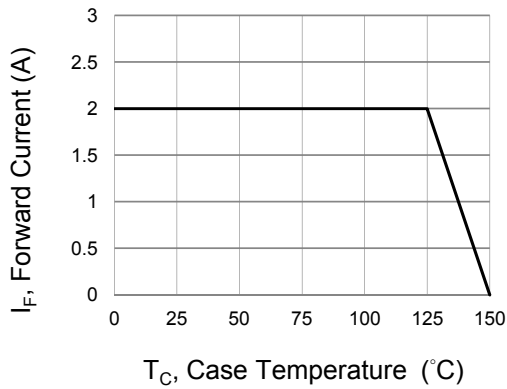


Fig.1 Forward Current Derating Curve

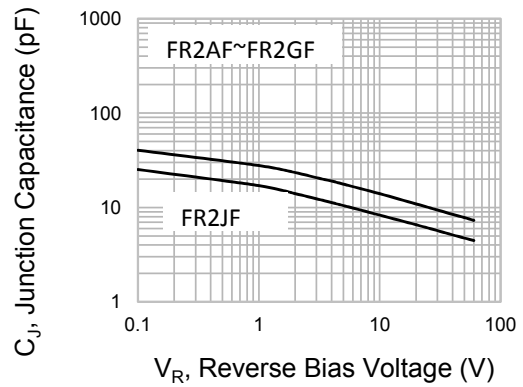


Fig.2 Typical Junction Capacitance

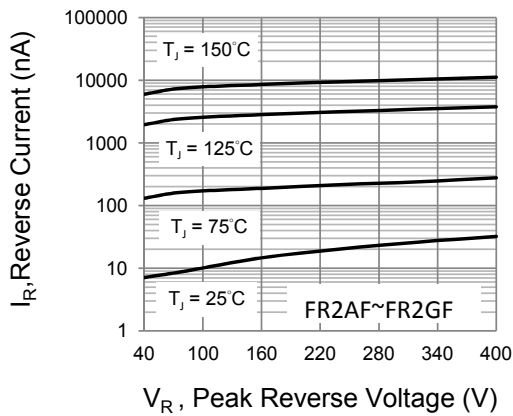


Fig.3 Typical Reverse Characteristics

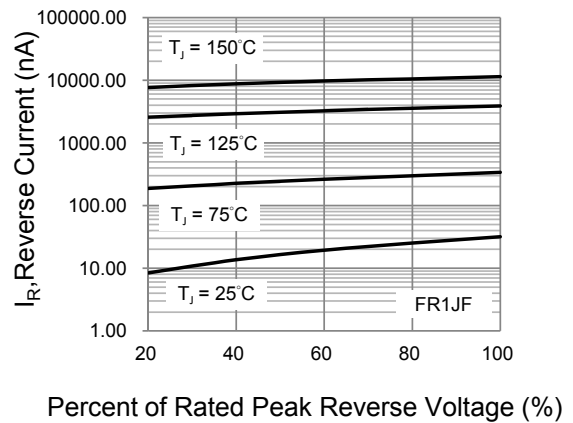


Fig.4 Typical Reverse Characteristics

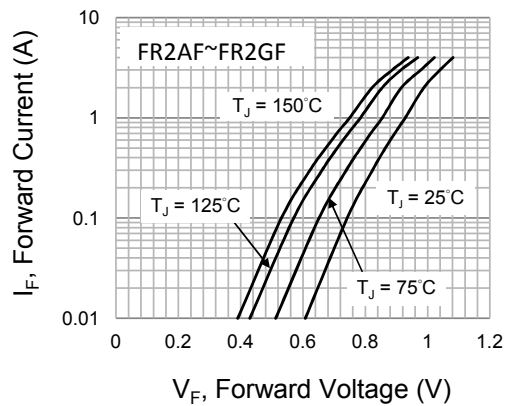


Fig.5 Typical Forward Characteristics

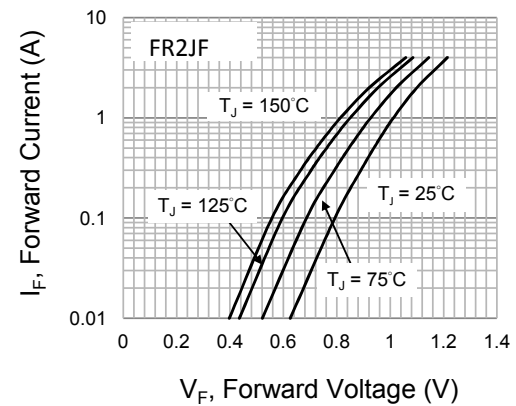


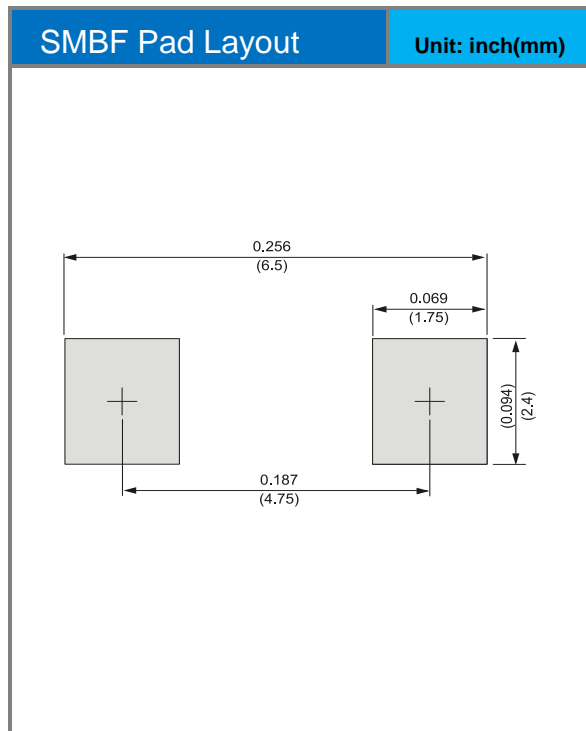
Fig.6 Typical Forward Characteristics

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Product and Packing Information

Part No.	Package Type	Packing Type	Marking
FR2AF	SMBF	1.5K pcs / 7" reel	FR2AF
FR2AF	SMBF	5K pcs / 13" reel	FR2AF
FR2BF	SMBF	1.5K pcs / 7" reel	FR2BF
FR2BF	SMBF	5K pcs / 13" reel	FR2BF
FR2DF	SMBF	1.5K pcs / 7" reel	FR2DF
FR2DF	SMBF	5K pcs / 13" reel	FR2DF
FR2GF	SMBF	1.5K pcs / 7" reel	FR2GF
FR2GF	SMBF	5K pcs / 13" reel	FR2GF
FR2JF	SMBF	1.5K pcs / 7" reel	FR2JF
FR2JF	SMBF	5K pcs / 13" reel	FR2JF

Mounting Pad Layout



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