



FR1A~FR1J

SURFACE MOUNT FAST RECOVERY RECTIFIER

VOLTAGE 50 to 600 Volts CURRENT 1.0 Ampere

SMB / DO-214AA

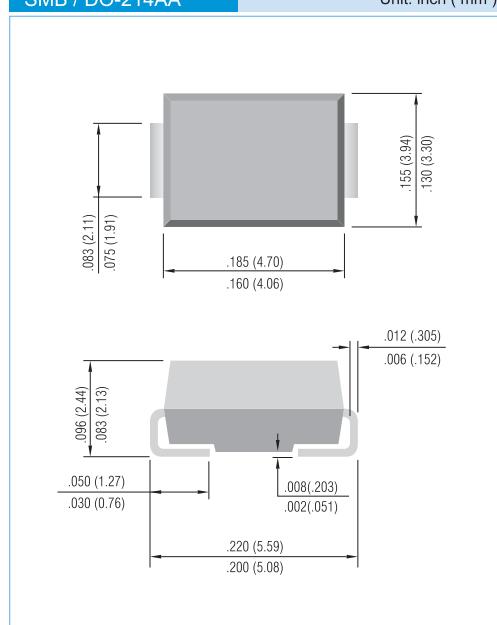
Unit: inch (mm)

FEATURES

- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Fast Recovery times for high efficiency
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Glass passivated junction
- In compliance with EU RoHS 2002/95/EC directives

MECHANICAL DATA

- Case: JEDEC DO-214AA molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Indicated by cathode band
- 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	FR1A	FR1B	FR1D	FR1G	FR1J	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 Rectified Current at $T_L=90^{\circ}\text{C}$	$I_{F(AV)}$			1.0			A
Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load(JEDEC method)	I_{FSM}			30			A
Maximum Forward Voltage at 1.0A	V_F			1.3			V
Maximum DC Reverse Current $T_J=25^{\circ}\text{C}$ at Rated DC Blocking Voltage $T_J=125^{\circ}\text{C}$	I_R			1.0 150			μA
Maximum Reverse Recovery Time (Note 1)	t_{rr}			150		250	ns
Maximum Junction capacitance (Note 2)	C_J			12			pF
Typical Junction Resistance (Note 3)	R_{JJA} R_{JAL}			100 32			$^{\circ}\text{C} / \text{W}$
Operating Junction and Storage Temperature Rating	T_J, T_{STG}			-50 to +150			$^{\circ}\text{C}$

NOTES:1. Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$
2. Measured at 1 MHz and applied $V_F = 4.0$ volts.
3. 8.0 mm^2 (.013mm thick) land areas.



FR1A~FR1J

RATING AND CHARACTERISTIC CURVES

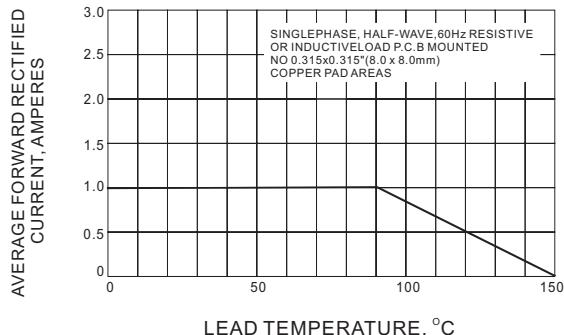


Fig.1 FORWARD CURRENT DERATING CURVE

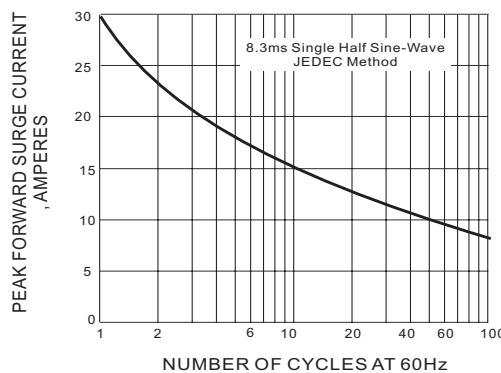


Fig.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

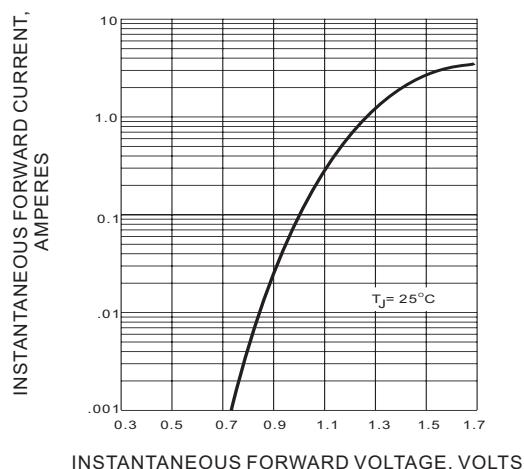


Fig.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

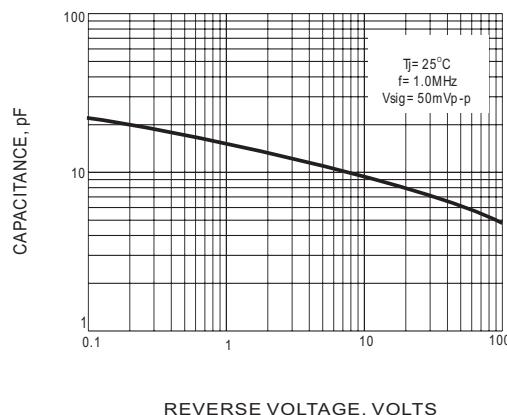


Fig.4 TYPICAL JUNCTION CAPACITANCE

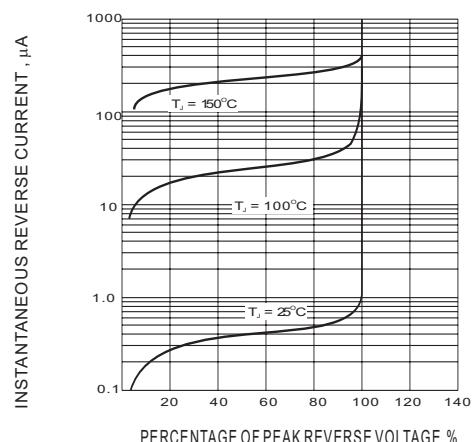
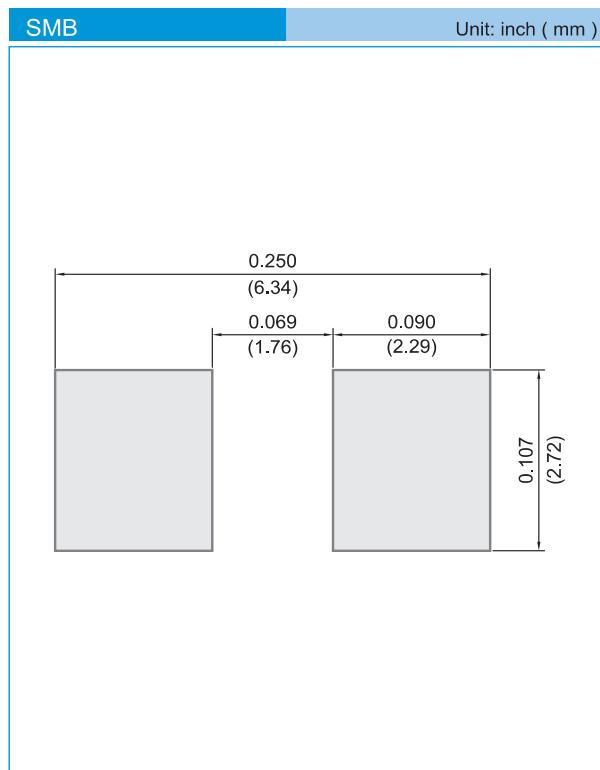


Fig.5-TYPICAL REVERSE CHARACTERISTIC



FR1A~FR1J

MOUNTING PAD LAYOUT



ORDER INFORMATION

- Packing information
 - T/R - 3K per 13" plastic Reel
 - T/R - 0.5K per 7" plastic Reel

LEGAL STATEMENT

Copyright PanJit International, Inc 2009

The information presented in this document is believed to be accurate and reliable. The specifications and information herein are subject to change without notice. Pan Jit makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose. Pan Jit products are not authorized for use in life support devices or systems. Pan Jit does not convey any license under its patent rights or rights of others.