PANJIT SEMI CONDUCTOR

FR1A~FR1M

SURFACE MOUNT FAST RECOVERY RECTIFIER

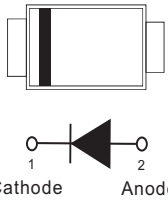
VOLTAGE 50 to 1000 Volt **CURRENT** 1 Ampere

FEATURES

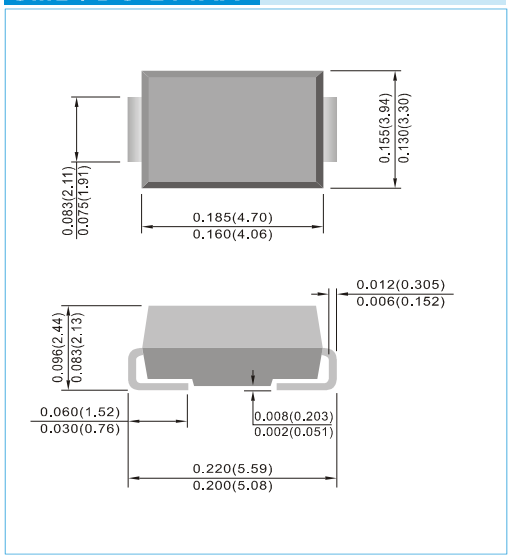
- For surface mounted applications in order to optimize board space
- Easy pick and place
- Fast Recovery times for high efficiency
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Glass passivated junction
- Lead free in compliance with EU RoHS 2.0
- Green molding compound 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



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



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	FR1K	FR1M	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_O	1							A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	30							A
Maximum Forward Voltage at 1A	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 (Note 1)	T_{RR}	150				250	500		ns
Maximum Junction Capacitance (Note 2)	C_J	12							pF
Typical Junction Resistance (Note 3)	$R_{\theta JA}$ $R_{\theta JL}$	100 32							°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.

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RATING AND CHARACTERISTIC CURVES

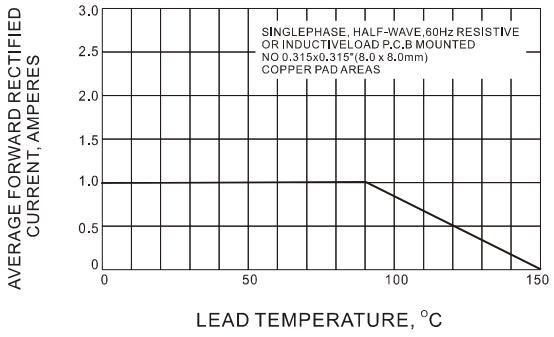

Fig.1 FORWARD CURRENT DERATING CURVE

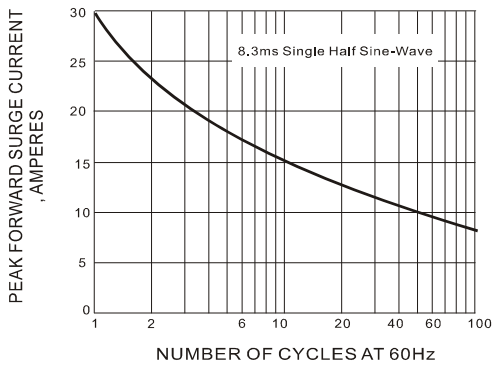

Fig.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

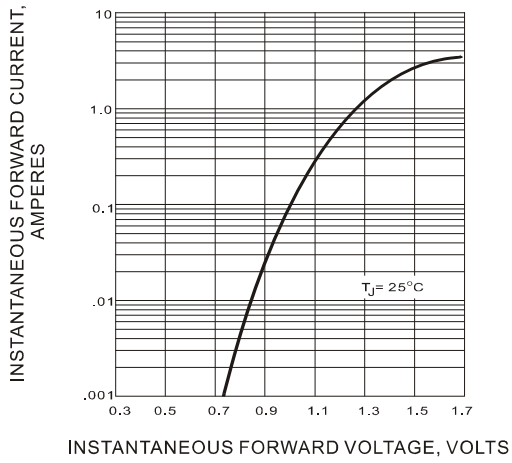

Fig.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

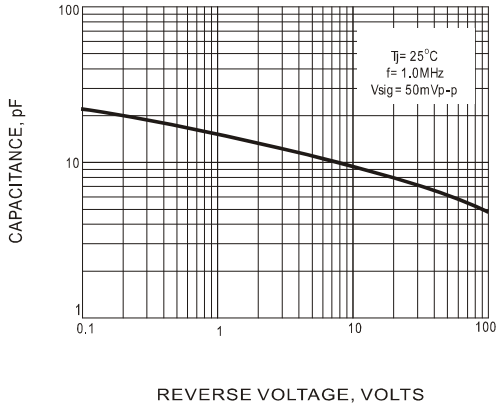

Fig.4 TYPICAL JUNCTION CAPACITANCE

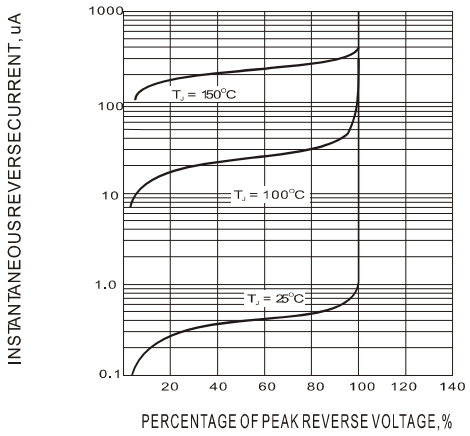

Fig.5-TYPICAL REVERSE CHARACTERISTIC

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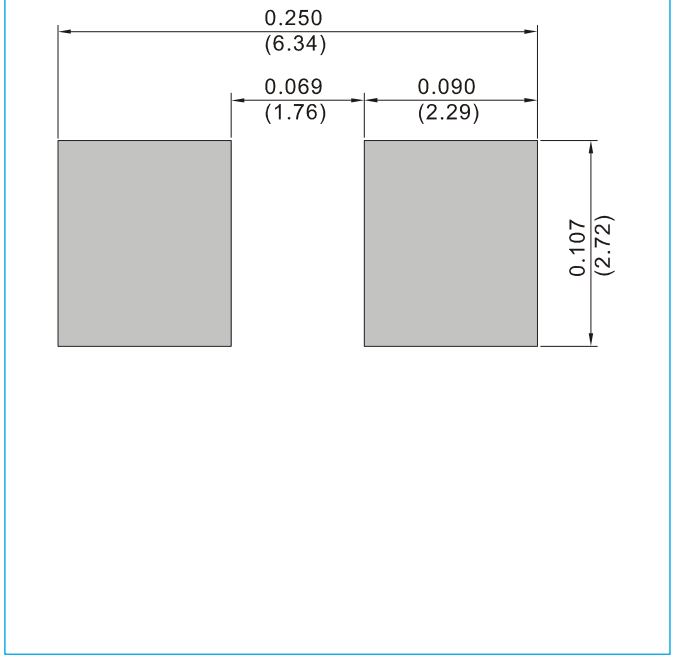
MOUNTING PAD LAYOUT

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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