



SEMICONDUCTOR

DATA SHEET

FR3AB THRU FR3MB

FAST SWITCHING SURFACE MOUNT RECTIFIER
VOLTAGE- 50 to 1000 Volts CURRENT - 3.0 Amperes

FEATURES

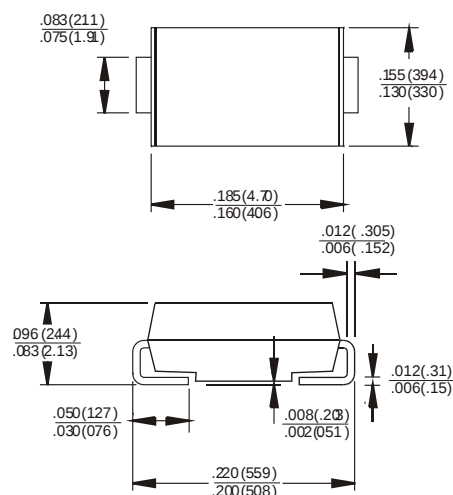
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Fast Recovery times for high efficiency
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Glass passivated junction
- High temperature soldering : 260 °C /10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request.

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)

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%.

	SYMBOLS	FR3AB	FR3BB	FR3DB	FR3GB	FR3JB	FR3KB	FR3MB	Unit
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 Forward Rectified Current at TL=90°C	I(AV)	3.0							A
Peak Forward Surge Current 8.3ms single half sinewave superimposed on rated load (JEDEC method)	I _{FSM}	100							A
Maximum Instantaneous Forward Voltage at 3.0A	V _F	1.3							V
Maximum DC Reverse Current TA=25°C at Rated DC Blocking Voltage TA=125°C	I _R	10.0 300							μA
Maximum Reverse Recovery Time(Note 1) TJ=25°C	T _{RR}	150				250	500		ns
Typical Junction Capacitance (Note 2)	C _J	60.0							pF
Maximum Thermal Resistance(Note 3)	RθJL	15.0							°C / w
Operating and Storage Temperature Range	TJ,TSTG	-55 to +150							°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 $V_r = 4.0$ volts.3. 8.0 mm² (.013mm thick) land areas.

RATING AND CHARACTERISTIC CURVES

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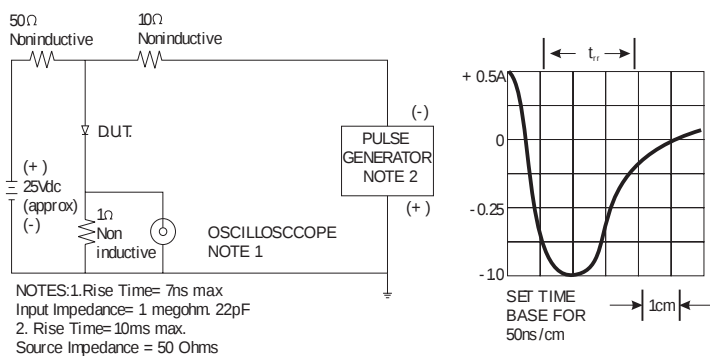


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

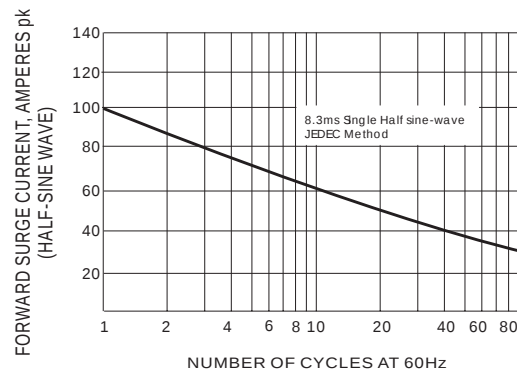


Fig. 2-MAXIMUM NON-REPEITIVE SURGE CURRENT

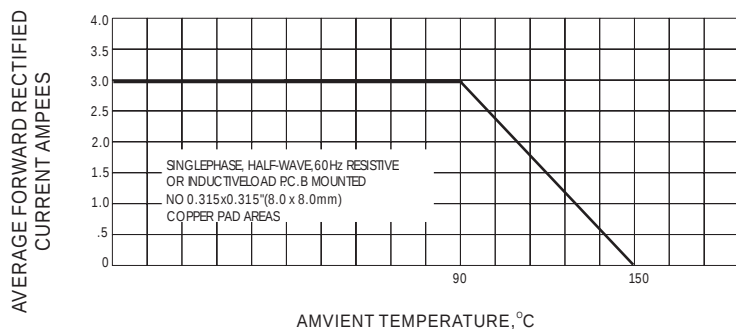


Fig. 3-MAXIMUM AVERAGE FORWARD CURRENT RATING

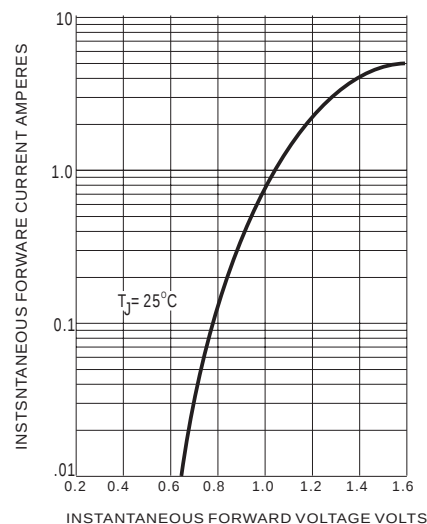


Fig. 4- FORWARD CURRENT DERATING CURRENT

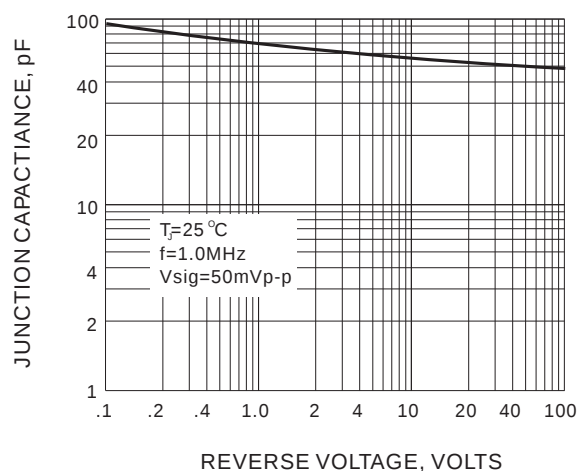
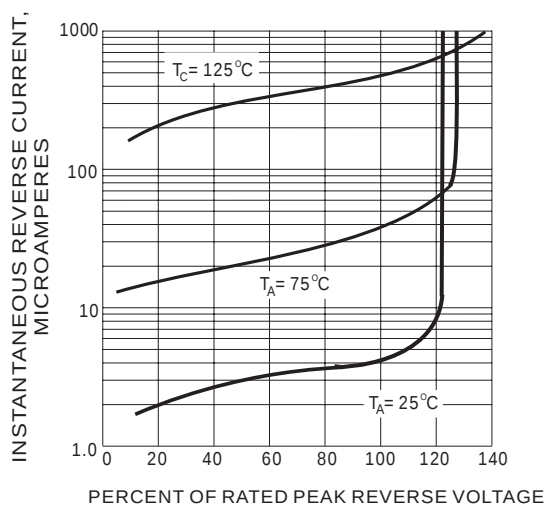


Fig. 6- TYPICAL JUNCTION CAPACITANCE