



FAST SWITCHING SURFACE MOUNT RECTIFIER
 VOLTAGE- 50 to 1000 Volts CURRENT - 1.0 Amperes



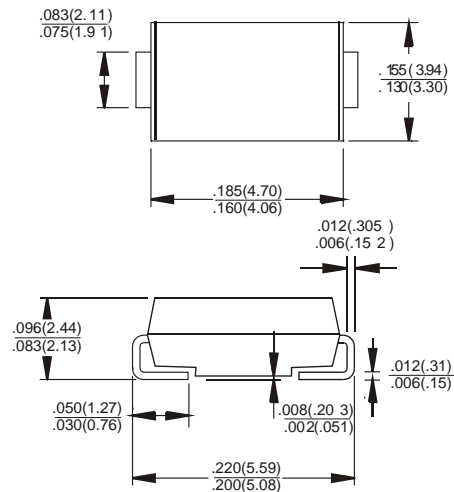
FEATURES

- 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-0
- 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	FR1A	FR1B	FR1D	FR1G	FR1J	FR1K	FR1M	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=55°C	I(AV)	1.0							A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	30.0							A
Maximum Instantaneous Forward Voltage at 1.0A	V _F	1.3							V
Maximum DC Reverse Current TA=25°C at Rated DC Blocking Voltage TA=125°C	I _R	5.0 150							µA
Maximum Reverse Recovery Time (Note 1)	T _{RR}	150				250	500		ns
Typical Junction Capacitance (Note 2)	C _J	15.0							pF
Maximum Thermal Resistance (Note3)	RθJL	30.0							°C / w
Operating and Storage Temperature Range	T _J ,T _{STG}	-55 to +150							°C

- NOTES :**
1. Reverse Recovery Test Conditions: IF=0.5A, IR=1.0A, Irr=0.25A
 2. Measured at 1 MHz and applied Vr = 4.0 volts.
 3. 8.0 mm² (.013mm thick) land areas.

DEVICE CHARACTERISTICS

FR1A THRU FR1M

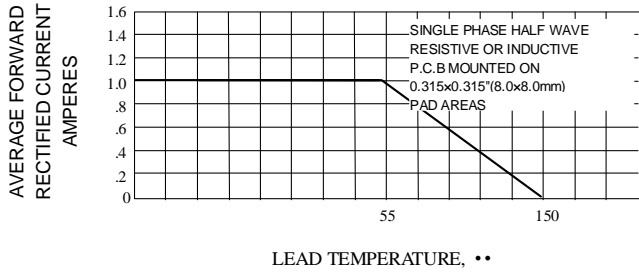


Fig. 1-FORWARD CURRENT DERATING CURVE

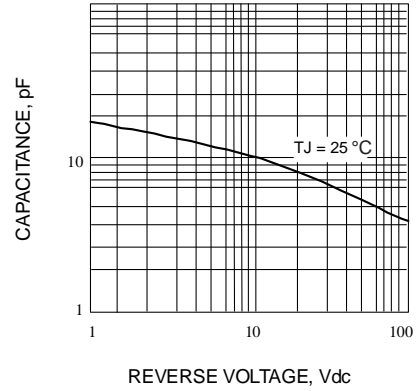


Fig. 2-TYPICAL JUNCTION CAPACITANCE

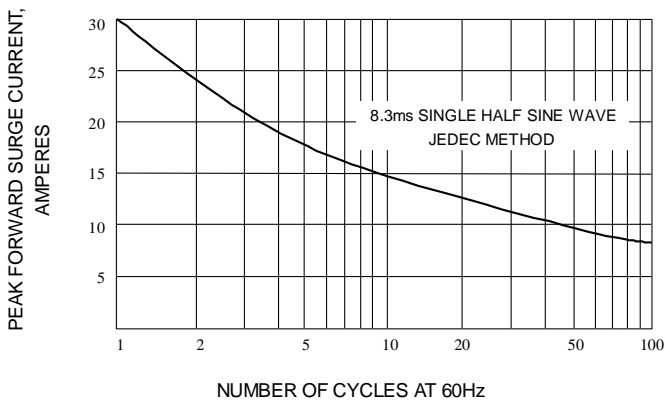


Fig. 3-PEAK FORWARD SURGE CURRENT

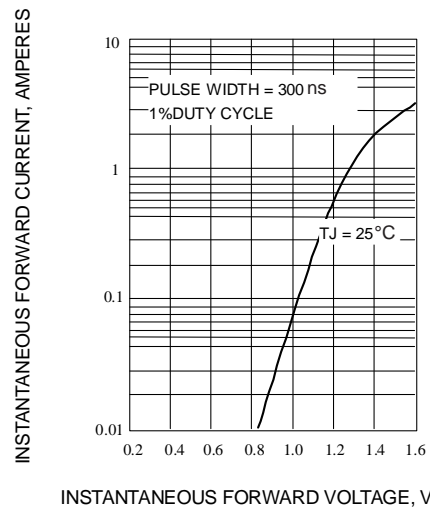


Fig. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

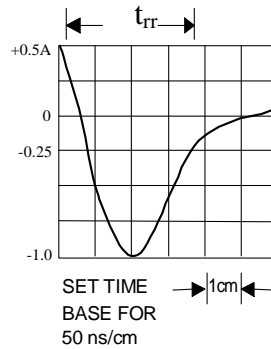
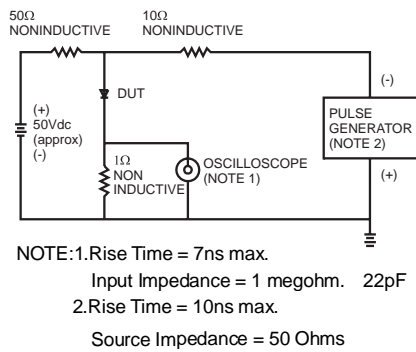


Fig. 5-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM