FR3A THRU FR3K

FAST SWITCHING SURFACE MOUNT RECTIFIER
VOLTAGE - 50 to 800 Volts CURRENT - 3.0 Amperes

FEATURES

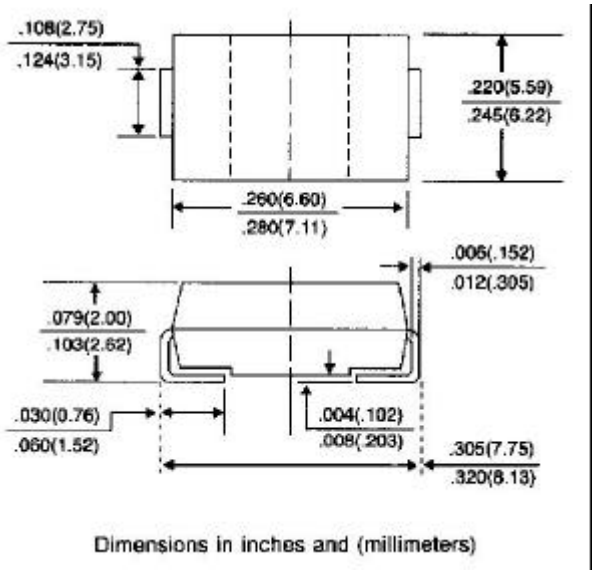
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Plastic package has Underwriters Laboratory

Flammability Classification 94V-O

- Glass passivated junction
- High temperature soldering:

  260 /10 seconds at terminals
- Fast recovery times for high efficiency

SMC/DO-214AB



Dimensions in inches and (millimeters)

MECHANICAL DATA

Case: JEDEC DO-214AB molded plastic

Terminals: Solder plated, solderable per MIL-STD-750,
Method 2026

Polarity: Indicated by cathode band

Standard packaging: 16mm tape (EIA-481)

Weight: 0.007 ounce, 0.21 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

	SYMBOLS	FR3A	FR3B	FR3D	FR3G	FR3J	FR3K	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	Volts
Maximum Average Forward Rectified Current, at T_L=75	$I_{(AV)}$	3.0						Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load(JEDEC method)	I_{FSM}	100						Amps
Maximum Instantaneous Forward Voltage at 3.0A	V_F	1.3						Volts
Maximum DC Reverse Current T_A=25 At Rated DC Blocking Voltage T_A=125	I_R	10.0 300						A
Maximum Reverse Recovery Time (Note 1)	T_{RR}	150				250	500	S
Typical Junction capacitance (Note 2)	C_J	60.0						pF
Maximum Thermal Resistance (Note 3)	R JL R JA	15 50						/W
Operating and Storage Temperature Range	T_J,T_{STG}	-50 to +150						

NOTES:

1. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, Irr=0.25A
2. Measured at 1 MHz and Applied reverse voltage of 4.0 volts
3. 8.0mm^2 (.013mm thick) land areas

RATING AND CHARACTERISTIC CURVES

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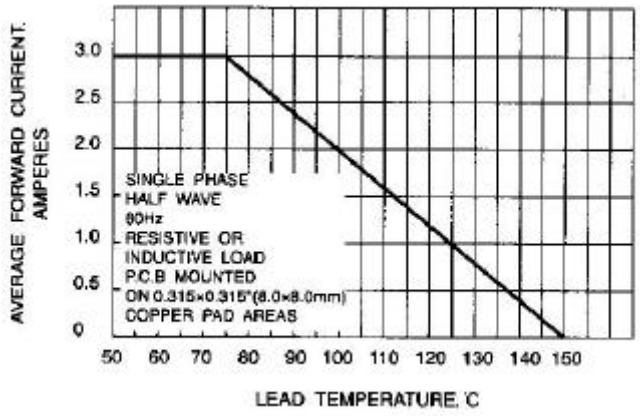


Fig. 1-FORWARD CURRENT DERATING CURVE

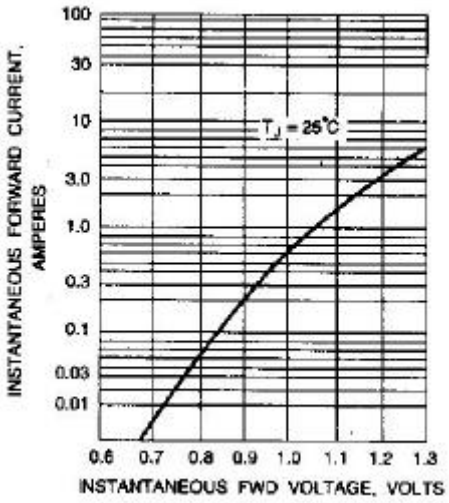


Fig. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

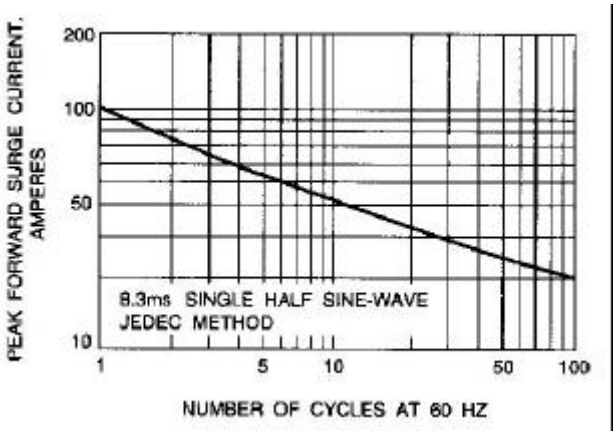


Fig. 3-MAXIMUM NON-REPETITIVE SURGE

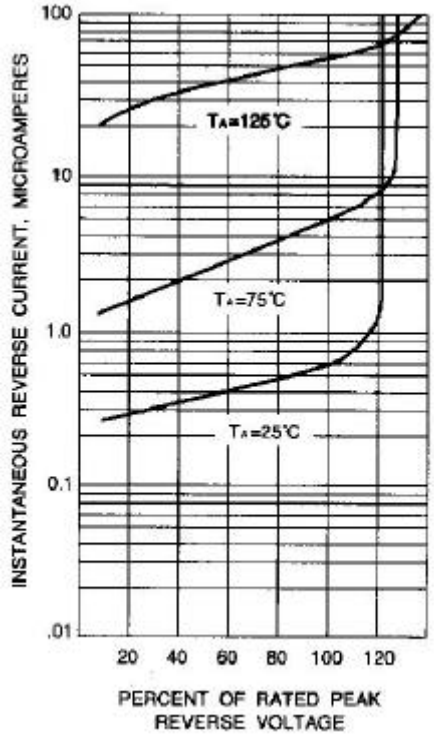


Fig. 4-TYPICAL REVERSE CHARACTERISTICS CURRENT

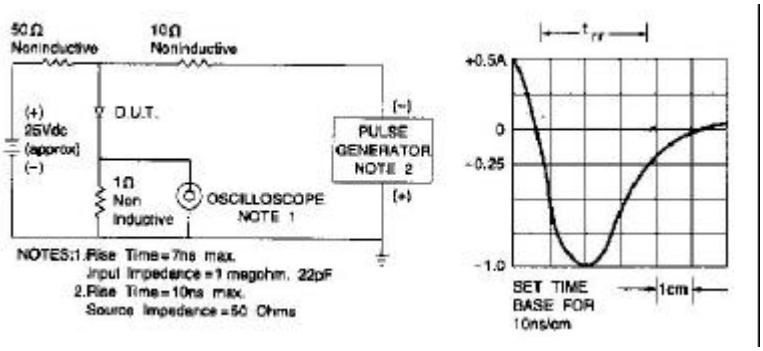


Fig. 5-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM