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

MECHANICAL DATA

Case: JEDEC DO-214AB molded plastic

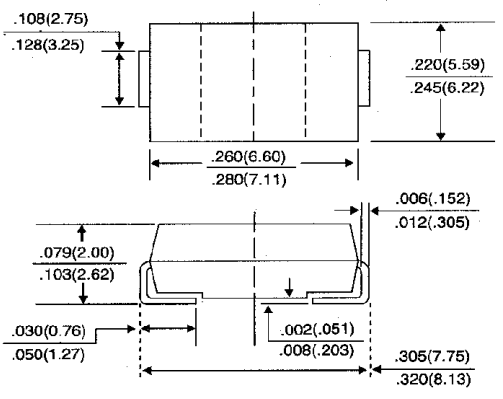
Terminals: Solder plated solderable per MIL-STD-750, Method 2026

Polarity: Indicated by cathode band

Standard Packaging: 16mm tape (EIA-481)

Weight: 0.007 ounces, 0.21 gram

SMC/DO-214AB



Dimensions in inches and (millimeters)

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	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°C	$I_{(AV)}$	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°C at Rated DC Blocking Voltage T_A = 125°C	I_R	10.0 300						μA
Maximum Reverse Recovery Time (NOTE 1)	T_{RR}	150				250	500	nS
Typical Junction Capacitance (NOTE 2)	C_J	60.0						pf
Maximum Thermal Resistance (NOTE 3)	RΘJL RΘJA	15 50						°C/W
Operating and Storage Temperature Range	T_J,T_{STG}	-50 to +150						°C

NOTES:
1. Reverse Recovery Test conditions: I_F = 0.5A, I_R = 1.0A, Irr = 0.25A.
2. Measured at 1.0 MHz and applied V_r = 4.0 volts.
3. 8.0mm² (.013mm thick) land areas.

SURGE COMPONENTS, INC. 1016 GRAND BLVD., DEER PARK, NY 11729
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RATING AND CHARACTERISTIC CURVES
FR3A THRU FR3K

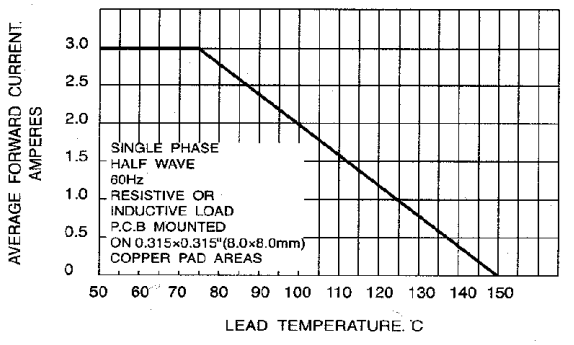


FIG. 1 – FORWARD CURRENT DERATING CURVE

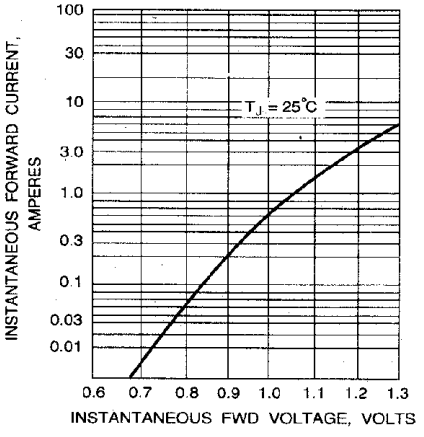


Fig. 2 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

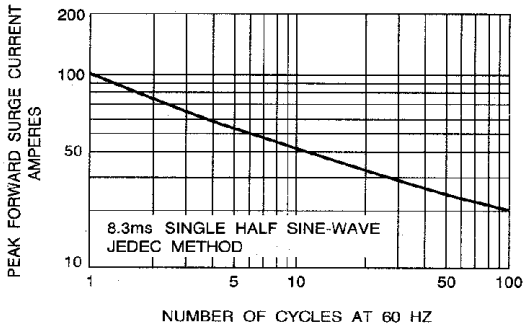


FIG 3. – MAXIMUM NON-REPETITIVE SURGE CURRENT

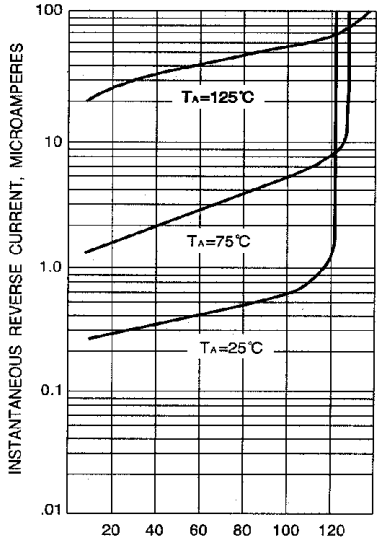


FIG. 4 – TYPICAL REVERSE CHARACTERISTICS

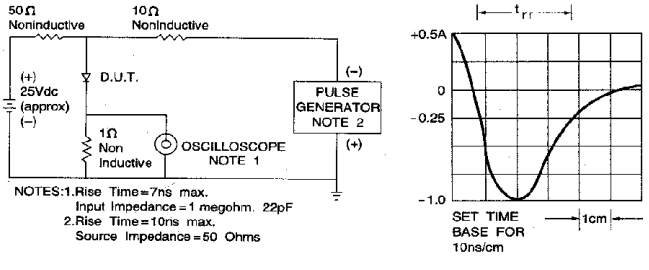


FIG. 5 – REVERSE RECOVERY TIME CHARACTERISTIC AND TEST DIAGRAM

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