

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

MECHANICAL DATA

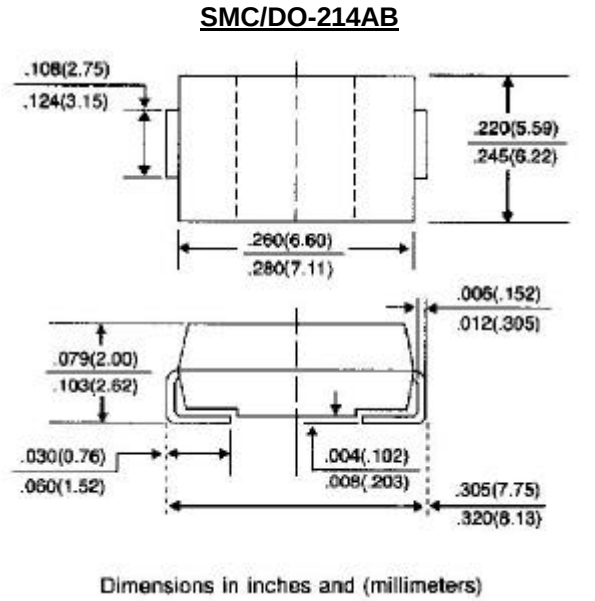
Case: JEDEC DO-214AB molded plastic

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 °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 $T_J=75^\circ\text{C}$	$I_{(AV)}$	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 $T_A=25^\circ\text{C}$ At Rated DC Blocking Voltage $T_A=125^\circ\text{C}$	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: $I_F=0.5A$, $I_R=1.0A$, $I_{rr}=0.25A$
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

FR3A THRU FR3K

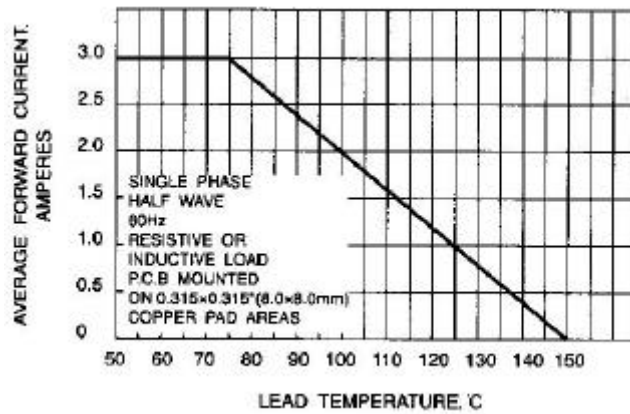


Fig. 1-FORWARD CURRENT DERATING CURVE

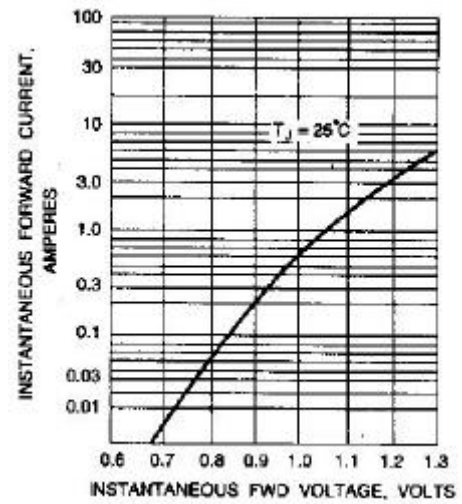


Fig. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

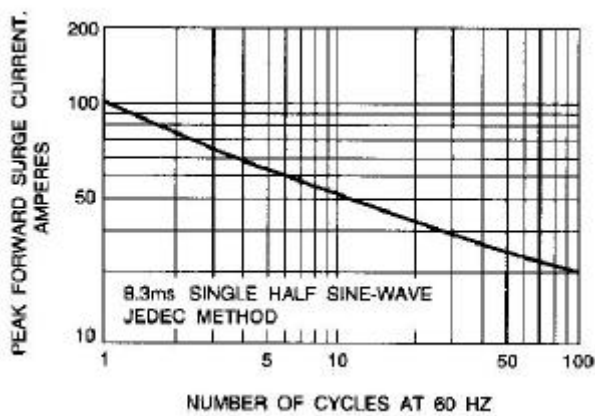


Fig. 3-MAXIMUM NON-REPETITIVE SURGE

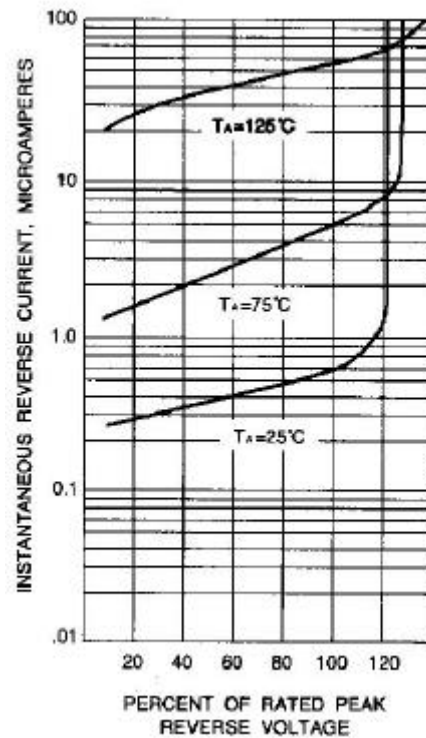


Fig. 4-TYPICAL REVERSE CHARACTERISTICS CURRENT

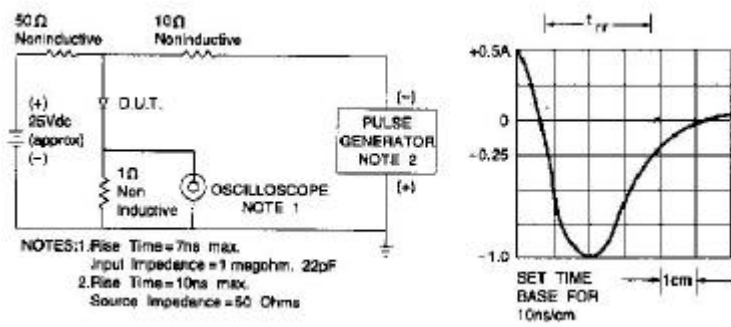


Fig. 5-REVERSE RECOVERY TIME CHARACTERISTIC
AND TEST CIRCUIT DIAGRAM