



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

FR3A
THRU
FR3M

TECHNICAL SPECIFICATIONS OF FAST RECOVERY RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts

CURRENT - 3.0 Amperes

FEATURES

- * Ideal for surface mounted applications
- * Low leakage current
- * Glass passivated junction

MECHANICAL DATA

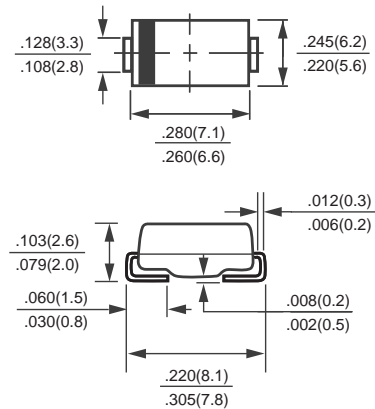
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- * Polarity: As marked
- * Mounting position: Any
- * Weight: 0.24 gram

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%.



SMC(DO-214AB)



Dimensions in inches and (millimeters)

		SYMBOL	FR3A	FR3B	FR3D	FR3G	FR3J	FR3K	FR3M	UNITS
Maximum Recurrent Peak Reverse Voltage		VRRM	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage		VRMS	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage		Vdc	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at TA = 75°C		IO	3.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)		IFSM	100							Amps
Maximum Instantaneous Forward Voltage at 3.0A DC		VF	1.3							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ TA = 25°C	IR	5.0							uAmps
	@ TA = 100°C		300							
Maximum Reverse Recovery Time (Note 3)		trr	150				250	500	nSec	
Typical Thermal Resistance (Note 2)		RθJL	10							°C/W
Typical Junction Capacitance (Note 1)		CJ	60							pF
Operating and Storage Temperature Range		TJ,TSTG	-55 to + 150							°C

- NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
2. Thermal Resistance (Junction to Ambient), 0.2x0.2in² (5X5mm²) copper pads to each terminal.
3. Test Conditions: IF=0.5A, IR=1.0A, IRR=0.25A.

RATING AND CHARACTERISTIC CURVES (FR3A THRU FR3M)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

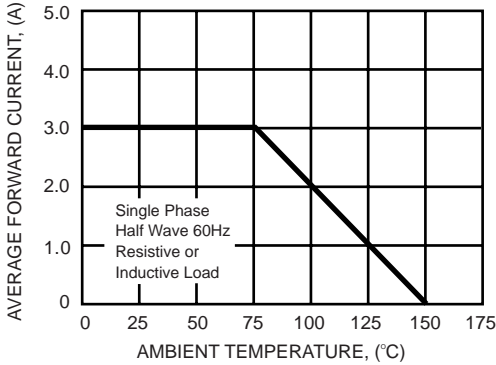


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

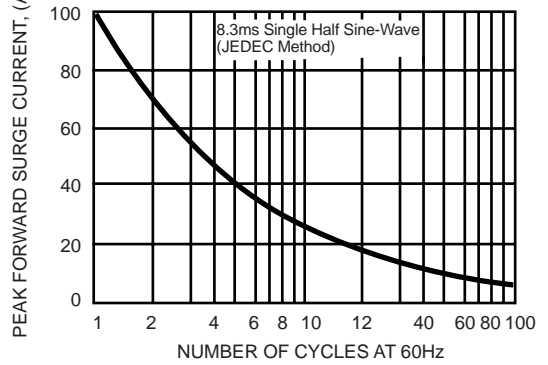


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

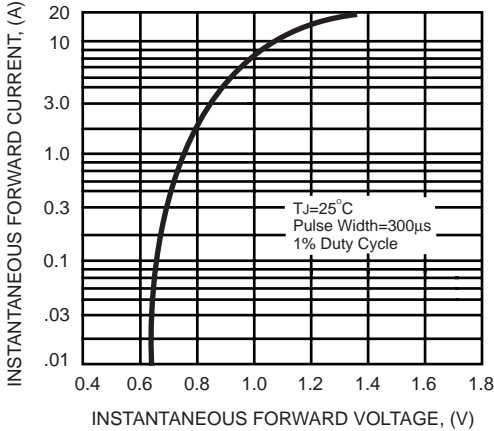


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

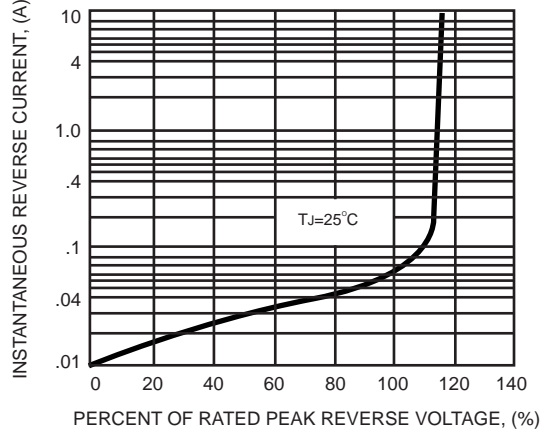


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

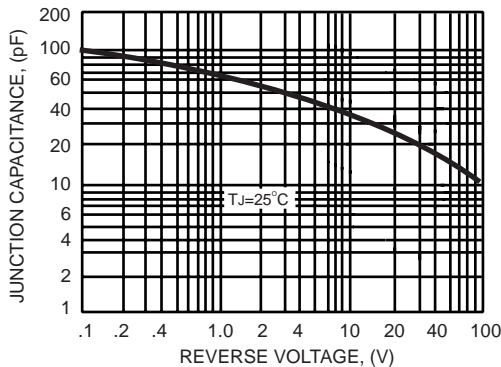
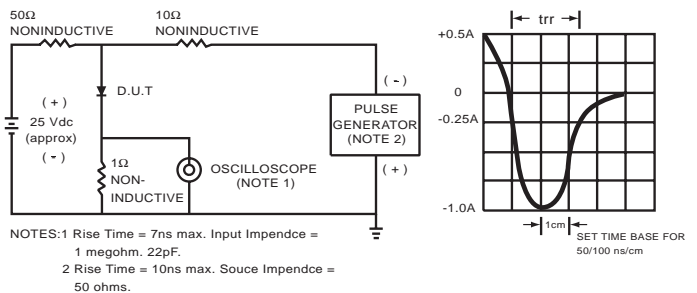


FIG. 6 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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