



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

**SF51
THRU
SF58**

TECHNICAL SPECIFICATIONS OF SUPER FAST RECTIFIER

VOLTAGE RANGE - 50 to 600 Volts

CURRENT- 5.0 Amperes

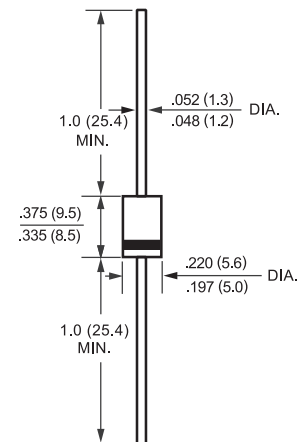
FEATURES

- * High reliability
- * Low leakage
- * Low forward voltage
- * High current capability
- * Super fast switching speed
- * High surge capability
- * Good for switching mode circuit

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: MIL-STD-202E, Method 208 guaranteed
- * Mounting position: Any
- * Weight: 1.18 grams

DO-27



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%.

		SYMBOL	SF51	SF52	SF53	SF54	SF55	SF56	SF58	UNITS
Maximum Recurrent Peak Reverse Voltage		VRRM	50	100	150	200	300	400	600	Volts
Maximum RMS Voltage		VRMS	35	70	105	140	210	280	420	Volts
Maximum DC Blocking Voltage		VDC	50	100	150	200	300	400	600	Volts
Maximum Average Forward Rectified Current at TA = 55°C		IO	5.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)		IFSM	150							Amps
Maximum Instantaneous Forward Voltage at 5.0A DC		VF	0.95				1.25		1.70	Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ TA = 25°C	IR	5.0							μAmps
	@ TA = 125°C		150							μAmps
Maximum Reverse Recovery Time (Note 1)		trr	35							nSec
Typical Junction Capacitance (Note 2)		CJ	50				30			pF
Operating and Storage Temperature Range		TJ , TSTG	-65 to +150							°C

NOTES: 1. Test Conditions: IF = 0.5A, IR = 1.0A, IRR = 0.25A

2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

RATING AND CHARACTERISTIC CURVES (SF51 THRU SF58)

FIG. 1 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

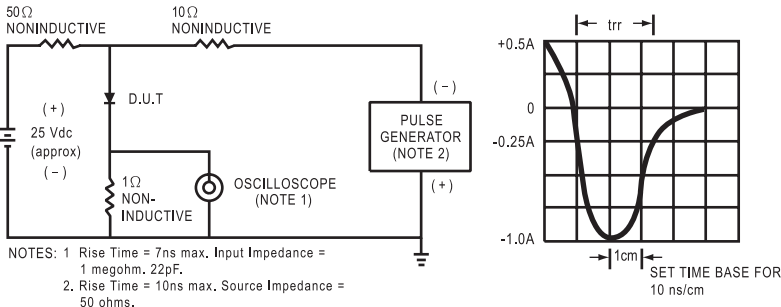


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

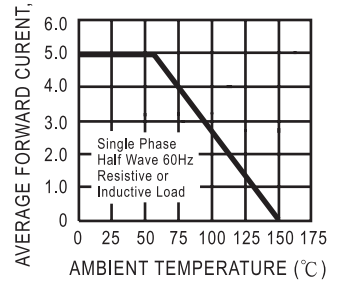


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

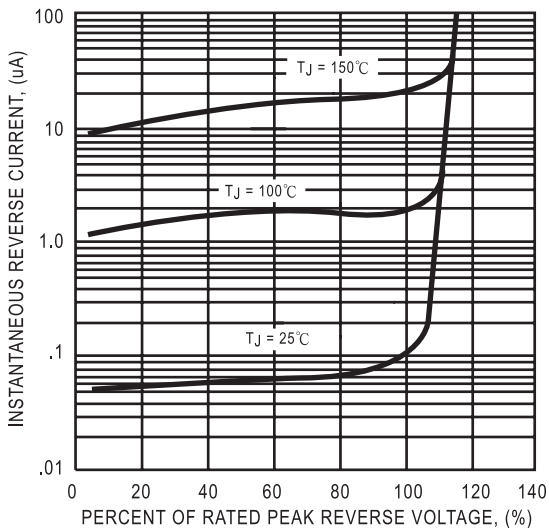


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

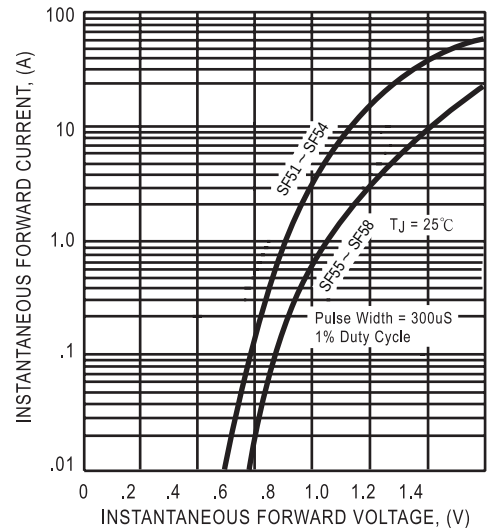


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

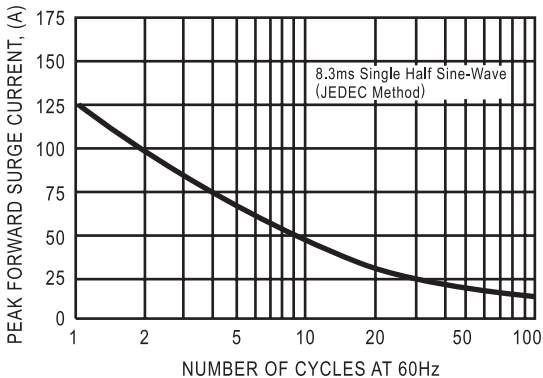
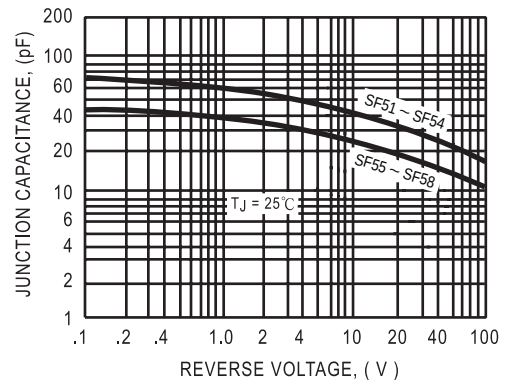


FIG. 6 - TYPICAL JUNCTION CAPACITANCE



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