



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

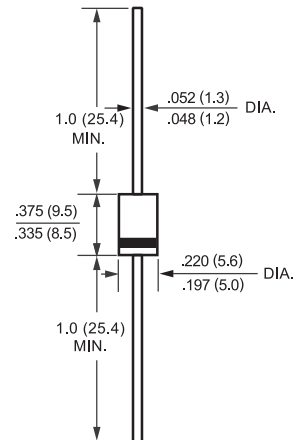
- * High reliability
- * Low leakage
- * Low forward voltage
- * High current capability
- * Super fast switching speed
- * High surge capability
- * Good for switching mode circuit

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	IR	@TA = 25 °C	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

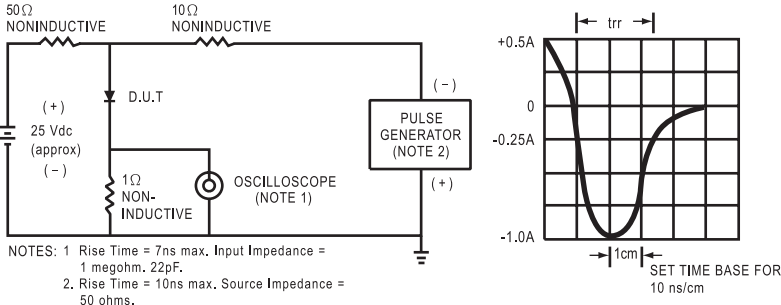


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

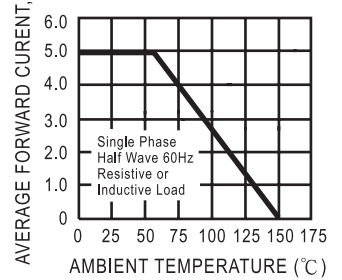


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

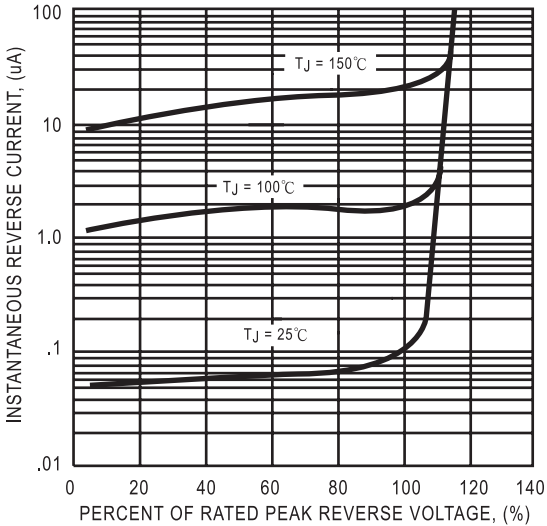


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

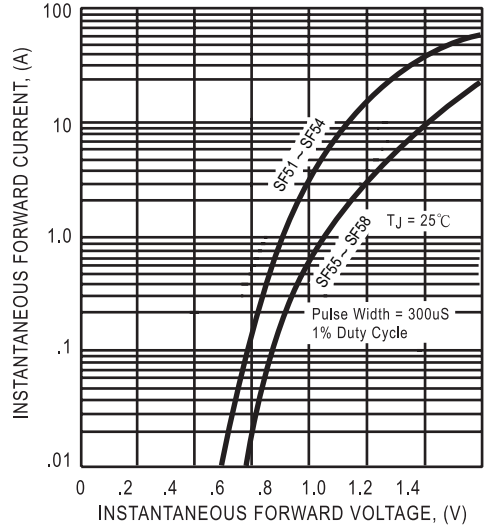


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

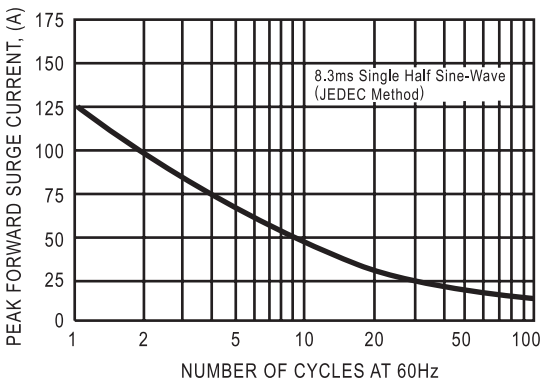


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

