

SF51 thru SF56

SUPER FAST RECTIFIER



**CHENG-YI
ELECTRONIC**



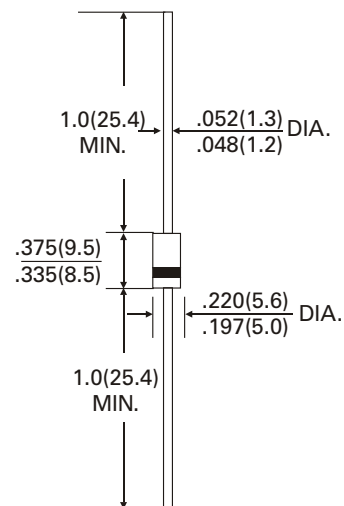
FEATURES

- 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: UL94V-0 rate flame retardant
- Lead: MIL-STD-202E method 208C guaranteed
- Mounting position: Any
- Weigh: 1.18 grams

SUPER FAST RECTIFIER
VOLTAGE RANGE-50 to 400 Volts
CURRENT-5.0 Amperese



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

MAXIMUM RATINGS (At T_A=25°C unless otherwise noted)

RATINGS	SYMBOL	SF51	SF52	SF53	SF54	SF55	SF56	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	150	200	300	400	Volts
Maximum RMS Voltage	V _{RMS}	35	70	105	140	210	280	Volts
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	Volts
Maximum Average Forward Rectified Current .375" (9.5mm) lead length @T _A =55°C	I _O	5.0						Amps
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	150						Amps
Typical Junction Capacitance (Note 2)	C _J	50				30		pF
Operating and Storage Temperature Range	T _J T _{STG}	-65 to +150						°C

ELECTRICAL CHARACTERISTICS (At T_A=25°C unless otherwise noted)

CHARACTERISTICS		SYMBOL	SF51	SF52	SF53	SF54	SF55	SF56	UNITS
Maximum Instantaneous Forward Voltage at 5.0A DC		V _F	0.95				1.25		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@T _A =25°C	I _r	5.0						uAmps
	@T _A =150°C		150						uAmps
Maximum Reverse Recovery Time (Note1)		t _{rr}	35						nSec

Notes : 1. Test Condition: 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

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RATING AND CHARACTERISTICS CURVES SF51 THRU SF56

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

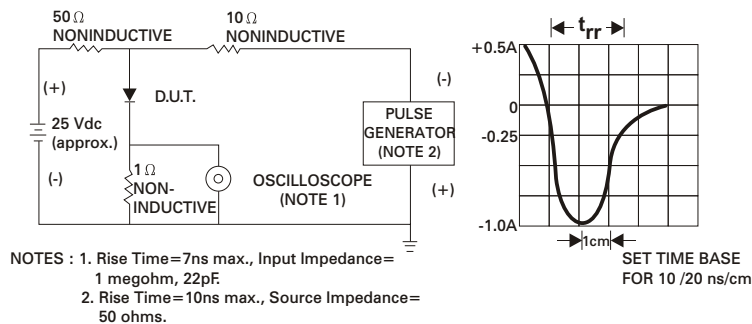


Fig. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

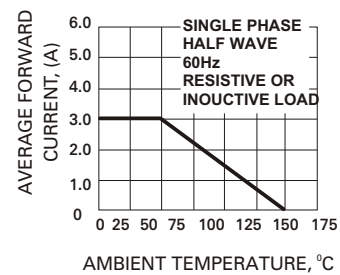


Fig.3 - TYPICAL REVERSE CHARACTERISTICS

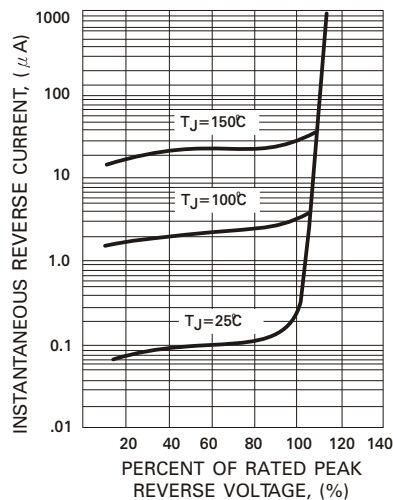


Fig. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

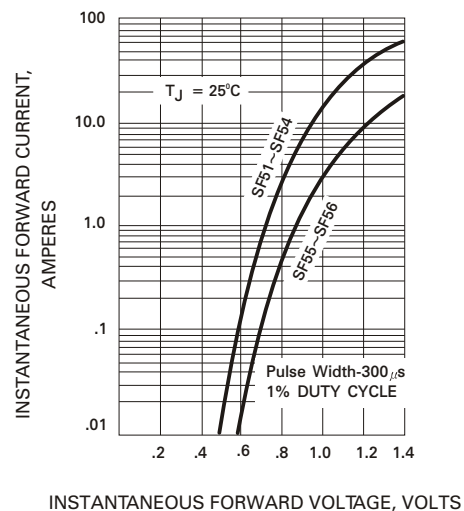


Fig.5 -MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

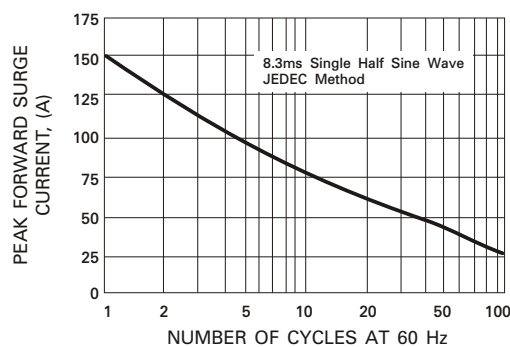


Fig.6 - TYPICAL JUNCTION CAPACITANCE

