

SF31 thru SF36

SUPER FAST RECTIFIER



**CHENG-YI
ELECTRONIC**



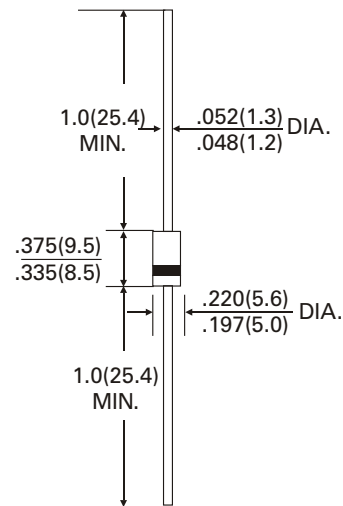
FEATURES

- 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 quaranted
- Mounting position: Any
- Weigh: 1.18 grams

SUPER FAST RECTIFIER
VOLTAGE RANGE-50 to 400 Volts
CURRENT-3.0 Amperese



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%.

MAXIMUM RATINGS (At $T_A=25^\circ\text{C}$ unless otherwise noted)

RATINGS	SYMBOL	SF31	SF32	SF33	SF34	SF35	SF36	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 @ $T_A=55^\circ\text{C}$	I_o	3.0						Amps
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	125						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 $T_A=25^\circ\text{C}$ unless otherwise noted)

CHARACTERISTICS	SYMBOL	SF31	SF32	SF33	SF34	SF35	SF36	UNITS
Maximum Instantaneous Forward Voltage at 3.0A DC	V_F	0.95				1.25		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ $T_A=25^\circ\text{C}$	5.0						uAmps
	@ $T_A=150^\circ\text{C}$	50						uAmps
Maximum Reverse Recovery Time (Note 1)	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 SF31 THRU SF36

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

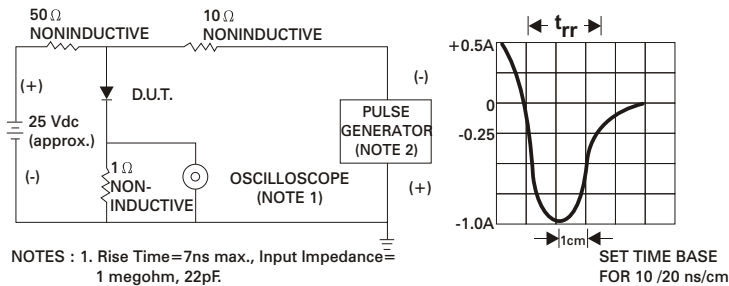


Fig. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

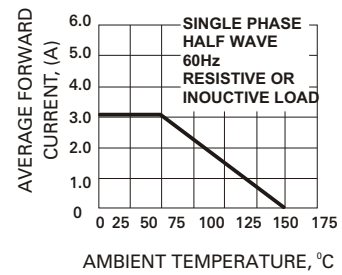


Fig. 3 - TYPICAL REVERSE CHARACTERISTICS

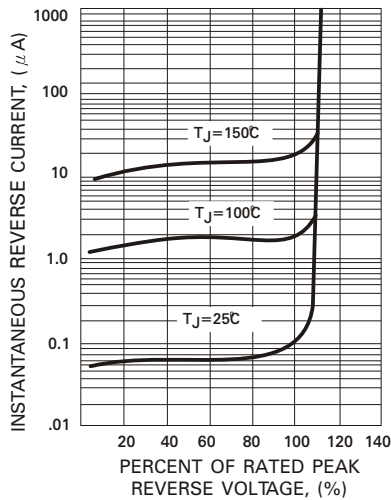


Fig. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

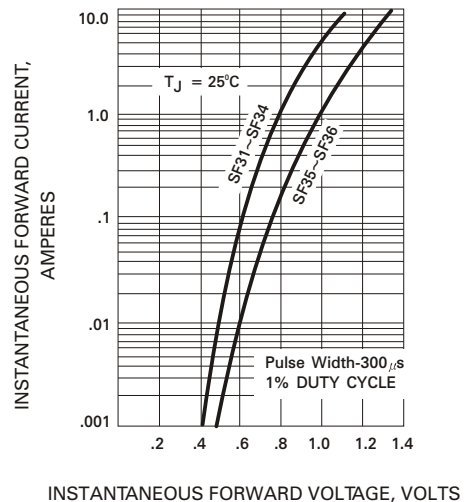


Fig. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

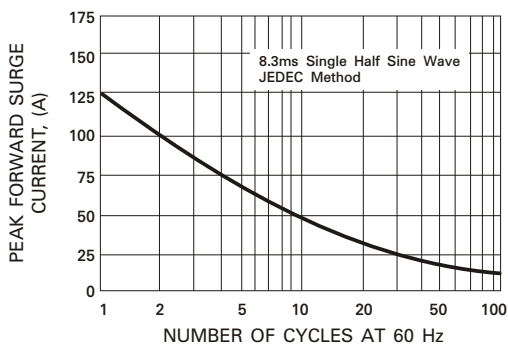


Fig. 6 - TYPICAL JUNCTION CAPACITANCE

