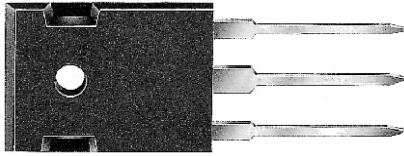


# SSF301 thru SSF304

## SUPER FAST RECOVERY RECTIFIER



**CHENG-YI  
ELECTRONIC**



### FEATURES

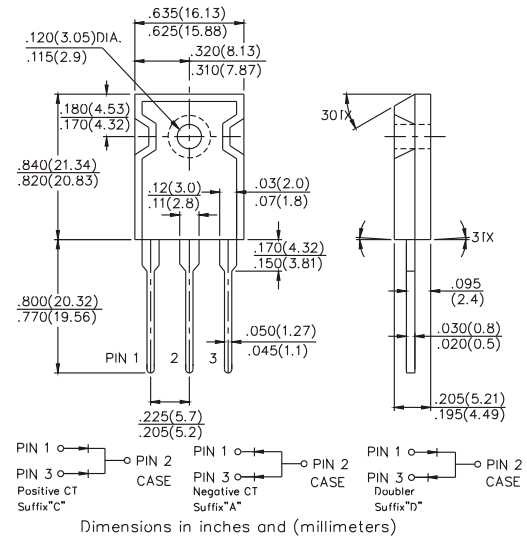
- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High current capability
- Super fast switching speed
- High reliability
- Good for switching mode circuit

### MECHANICAL DATA:

- Case: TO-3P molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: MIL-STD-202 method 208 guaranteed
- Mounting position: any

VOLTAGE RANGE 50 TO 200 Volts  
CURRENT 30.0 Amperes

### TO-3P



### 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%.

	SSF301	SSF302	SSF303	SSF304	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	150	200	V
Maximum RMS Voltage	35	70	105	140	V
Maximum DC Blocking Voltage	50	100	150	200	V
Maximum Average Forward Rectified Current, at $T_C=100^\circ\text{C}$	30.0				A
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	300				A
Maximum Instantaneous Forward Voltage at 30.0A DC	0.95				V
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ $T_C=25^\circ\text{C}$	10			$\mu\text{A}$
	@ $T_C=100^\circ\text{C}$	150			$\mu\text{A}$
Maximum Reverse Recovery Time (Note 1)	35				nS
Typical Junction Capacitance (Note 2)	150				pF
Operating and Storage Temperature Range	-65 to +150				$^\circ\text{C}$

Notes : 1. Test Conditions :  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{rr}=0.25\text{A}$

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

# SSF301 thru SSF304

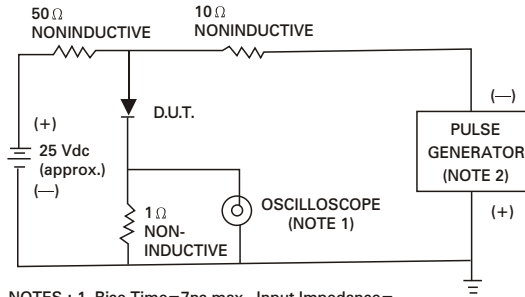
## SUPER FAST RECOVERY RECTIFIER



**CHENG-YI  
ELECTRONIC**

### RATING AND CHARACTERISTICS CURVES SSF301 THRU SSF304

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



- NOTES : 1. Rise Time=7ns max., Input Impedance=1 megohm, 22pF.  
2. Rise Time=10ns max., Source Impedance=50 ohms.

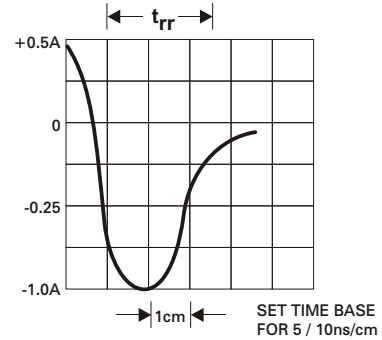


Fig. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

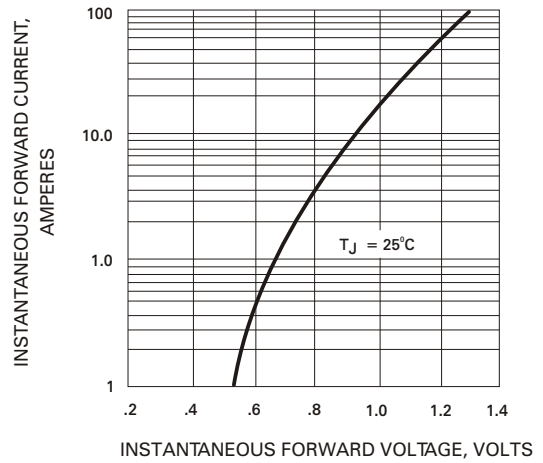


Fig. 2 - FORWARD CURRENT DERATING CURVE

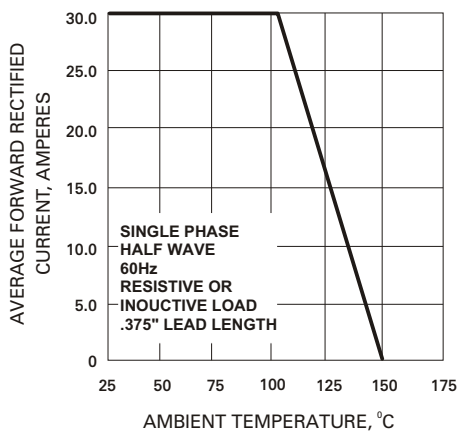


Fig. 4 - TYPICAL JUNCTION CAPACITANCE

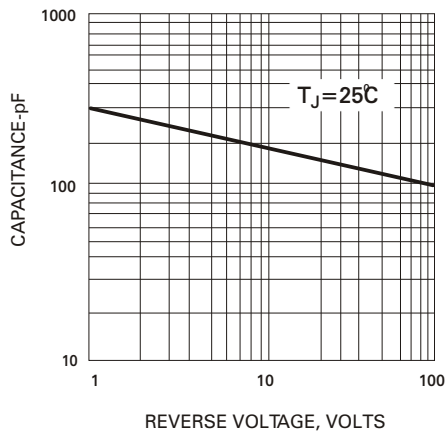


Fig. 5 - PEAK FORWARD SURGE CURRENT

