

FR101 thru FR107

FAST SWITCHING RECTIFIER



**CHENG-YI
ELECTRONIC**



FEATURE

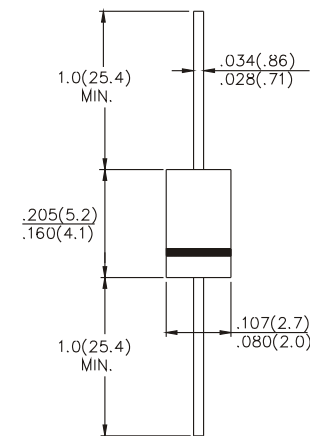
- Low forward voltage
- High current capability
- Low leakage current
- High surge capability
- Low cost

MECHANICAL DATA

- Case: Mold plastic use UL 94V-0 recognized flame retardant epoxy
- Terminals: Axial leads, solderable per MIL-STD-202, method 208
- Polarity: Color band denotes cathode
- Mounting Position: Any

VOLTAGE RANGE 50 TO 1000 Volts
CURRENT 1.0 Amperes

DO-41



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%.

	FR101	FR102	FR103	FR104	FR105	FR106	FR107	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current, .375", (9.5mm) Lead Length at T _A = 55°C	1.0							A
Peak Forward Surge Current 8.3 ms single half sine-wave	50							A
Maximum Forward Voltage at 1.0A Peak	1.3							V
Maximum Full Load Reverse Current, Full Cycle Average, .375", (9.5mm) Lead Length at T _A = 55°C	30							μA
Maximum DC Reverse Current, at Rated DC Blocking Voltage	5.0							μA
Maximum Reverse Recovery Time (Note 1)	150	150	150	150	250	500	500	nS
Typical Junction Capacitance (Note 2)	20							pF
Operating and Storage Temperature Range	-65 to +175							°C

Notes : 1. Reverse Recovery Test Conditions : I_F = .5A, I_R = 1.0A, I_{rr} = .25A
2. Measured at 1MHz and applied reverse voltage of 4.0 Volts.

FR101 thru FR107

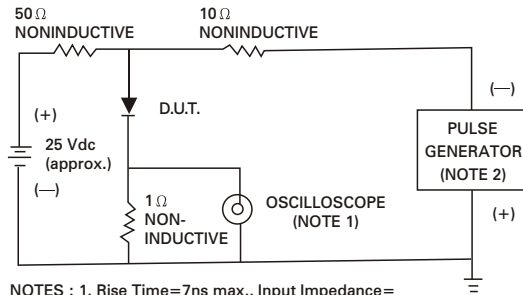
FAST SWITCHING RECTIFIER



**CHENG-YI
ELECTRONIC**

RATING AND CHARACTERISTICS CURVES FR101 THRU FR107

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.

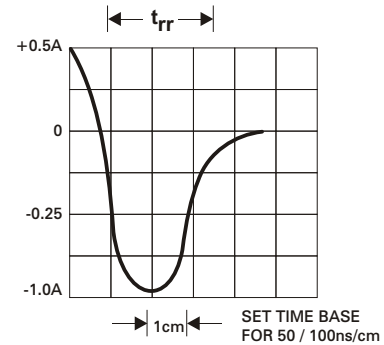


Fig. 2 - FORWARD CURRENT DERATING CURVE

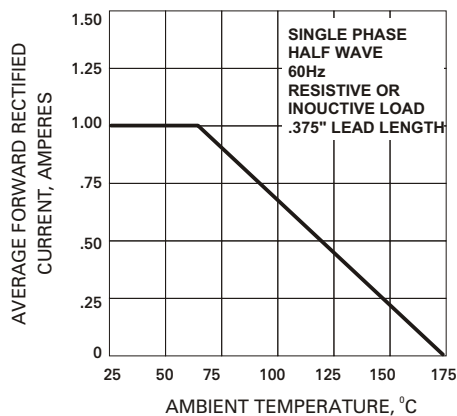


Fig. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

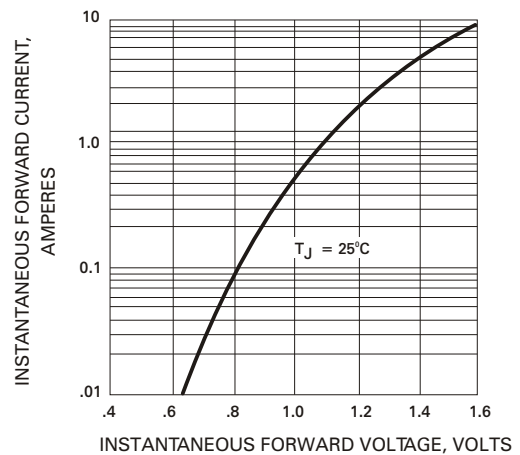


Fig. 4 - TYPICAL JUNCTION CAPACITANCE

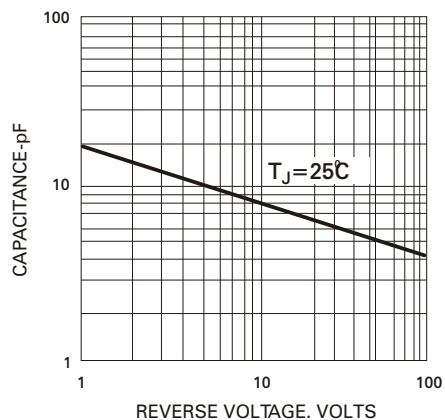


Fig. 5 - PEAK FORWARD SURGE CURRENT

