

FR301 thru FR307

FAST SWITCHING RECTIFIER



**CHENG-YI
ELECTRONIC**



FEATURE

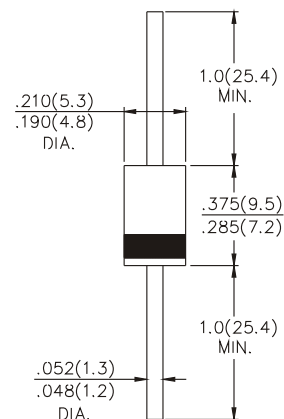
- Low forward voltage
- High current capability
- Low leakage current
- High surge capability
- Low cost

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 3.0 Amperes

DO-201AD



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%.

	FR301	FR302	FR303	FR3104	FR305	FR306	FR307	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	3.0							A
Peak Forward Surge Current 8.3 ms single half sine-wave	150							A
Maximum Forward Voltage at 3.0A Peak	1.3							V
Maximum Full Load Reverse Current, Full Cycle Average, .375", (9.5mm) Lead Length T _A =55°C	50							μ A
Maximum DC Reverse Current, at Rated DC Blocking Voltage	5							μ A
Maximum Reverse Recovery Time (Note 1)	150	150	150	150	250	500	500	nS
Typical Junction Capacitance (Note 2)	65							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 1.0MHz and applied reverse voltage of 4.0 Volts.

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RATING AND CHARACTERISTICS CURVES FR301 THRU FR307

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

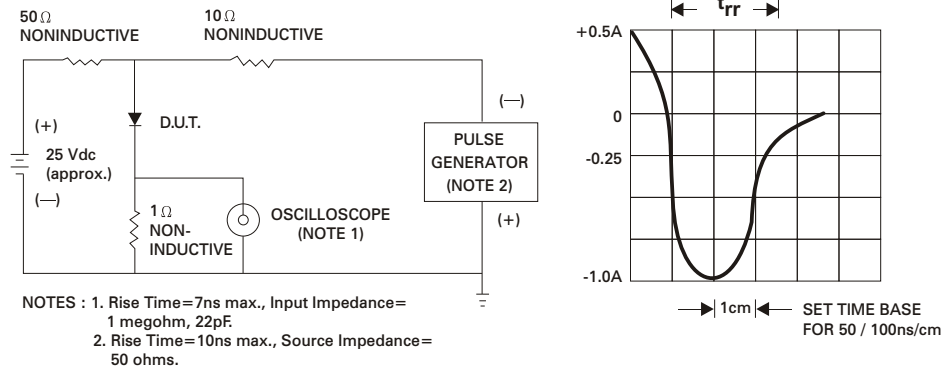


Fig. 2 - FORWARD CURRENT DERATING CURVE

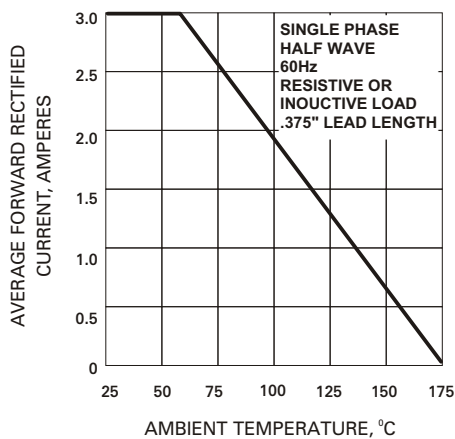


Fig. 3 - TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS

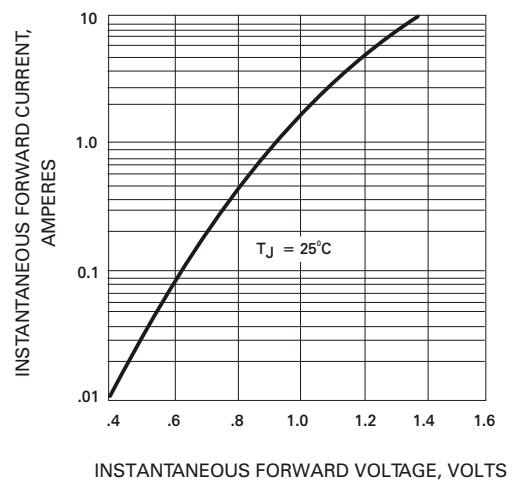


Fig. 4 - TYPICAL JUNCTION CAPACITANCE

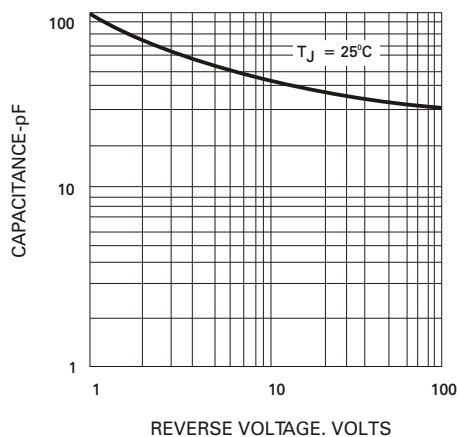


Fig. 5 - PEAK FORWARD SURGE CURRENT

