

FR151 thru FR157

FAST SWITCHING PLASTIC RECTIFIER



**CHENG-YI
ELECTRONIC**



VOLTAGE-50 TO 1000 Volts
CURRENT -1.5 Ampere

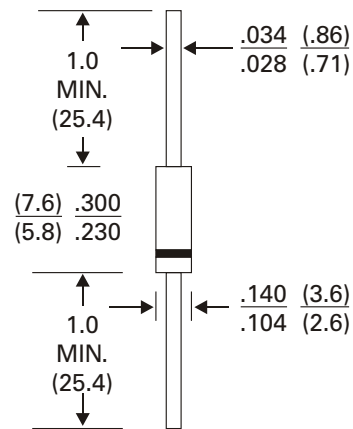
FEATURES

- High current capability
- Plastic package has underwriters laboratory Flame retardant epoxy Molding Compound 1.5 ampere operation at TA=55°C with no thermal runaway.
- Exceeds environmental standard of MIL-STD-19500/228.
- Fast switching for high efficiency
- Low leakage.

MECHANICAL DATA

- Case: Molded plastic, DO-15
- Terminals: Plated axial leads, solderable per MIL-STD-202, Method 208
- Polarity: Color Band denotes cathode
- Mounting position: Any
- Weight: 0.015 ounce, 0.4 gram

DO-15



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

	FR151	FR152	FR153	FR154	FR155	FR156	FR157	UNITS
Peak Reverse Voltage, Repetitive ; V_{RM} :	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 $T_A = 55^\circ\text{C}$	1.5							A
Peak Forward Surge Current, I_{FM} (surge) 8.3 msec. single half sine-wave superimposed on rated load (JEDEC method)	50							A
Maximum Forward Voltage at 1.5A DC	1.3							V
Maximum Reverse Current, $T_J = 25^\circ\text{C}$ at Rated DC Blocking Voltage $T_J = 100^\circ\text{C}$	5.0							μA
	500							μA
Typical Junction Capacitance (Note 1) CJ	25							pF
Typical Thermal Resistance (Note 3) R θ JA	45							°C / W
Maximum Reverse Recovery Time (Note 2)	150	150	150	150	250	500	500	nS
Operating and Storage Temperature Range T_J, T_{STG}	-55 to +150							°C

- Notes : 1. Measured at 1MHz and applied reverse voltage of 4.0 VDC.
2. Reverse Recovery Test Conditions : $I_F = .5A, I_R = 1A, I_{RR} = .25A$.
3. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length P.C.B. mounted.

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RATING AND CHARACTERISTICS CURVES FR151 THRU FR157

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

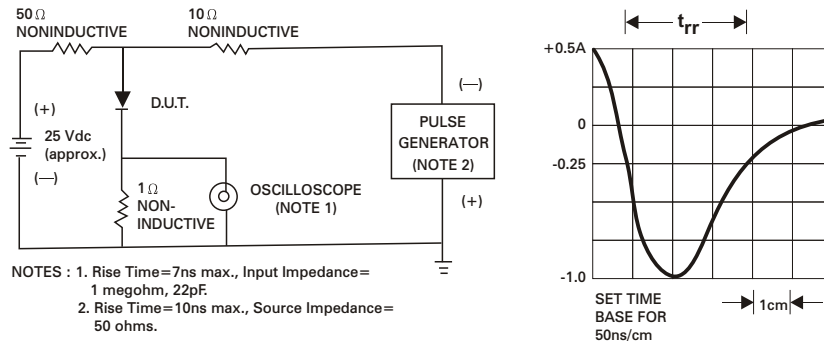


Fig. 2 - FORWARD CHARACTERISTICS

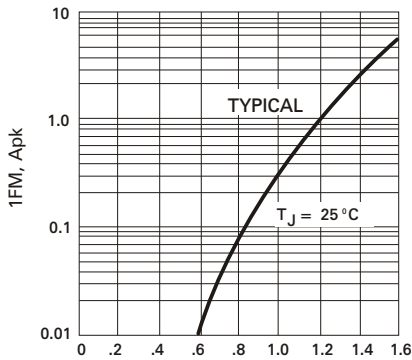


Fig. 3 - FORWARD CURRENT DERATING CURVE

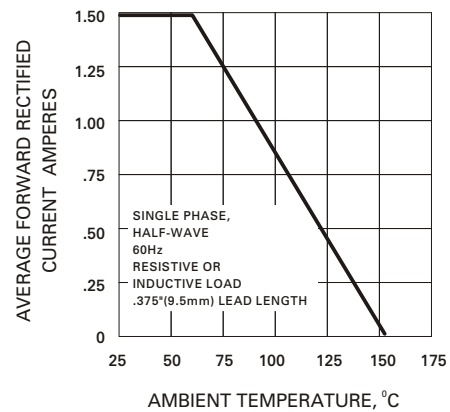


Fig. 4 - TYPICAL JUNCTION CAPACITANCE

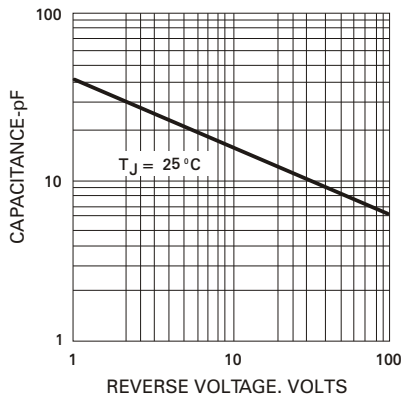


Fig. 5 - PEAK FORWARD SURGE CURRENT

