



FUKUCOM COMPANY LTD.

福 靈 有 限 公 司

FLAT P, 3/F, EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,
KWUN TONG, KOWLOON, HONG KONG.
TEL: 2790-0314 FAX: 2790-0206



FAST RECOVERY RECTIFIER

FR301 THRU FR307

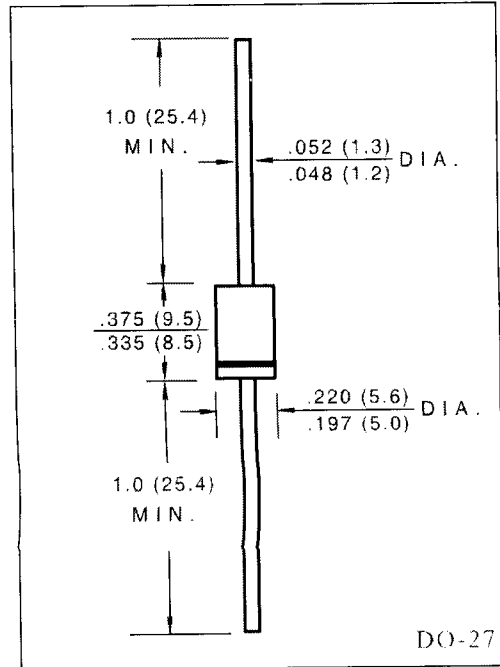
VOLTAGE RANGE 50 to 1000 Volts
CURRENT 3.0 Ampere

FEATURES

- Low cost construction.
- Fast switching for high efficiency.
- Low reverse leakage
- High forward surge current capability.
- High temperature soldering guaranteed:
260°C/10 seconds, 0.375" (9.5mm)lead length
at 5 lbs (2.3kg) tension.

MECHANICAL DATA

- Case: transfer molded plastic
- Epoxy: UL94V - 0 rate flame retardant.
- Polarity: Color band denotes cathode end.
- Lead: Plated axial lead, solderable per MIL - STD - 202E
method 208C
- Mounting position: Any
- Weight: 0.042 ounce,1.19grams



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%

	SYMBOLS	FR301	FR302	FR303	FR304	FR305	FR306	FR307	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current, 0.375" (9.5mm) lead length at $T_A=75^\circ C$	$I_{(AV)}$	3.0							Amps
Peak Forward Surge Current 8.3ms single half sine - wave superimposed on rated load (JEDEC method)	I_{FSM}	200							Amps
Maximum Instantaneous Forward Voltage at 3.0A	V_F	1.3							Volts
Maximum DC Reverse Current at rated DC blocking voltage	I_R	$T_A = 25^\circ C$ 10							μA
		$T_A = 100^\circ C$ 500							
Maximum Reverse Recovery Time (Note 3) $T_j = 25^\circ C$	t_{rr}	150				250	500		nS
Typical Junction Capacitance (Note 1)	C_j	60							pF
Typical Thermal Resistance (Note2)	$R_{\theta JA}$	20							$^\circ C/W$
Operating and Storage Temperature Range	T_j	(-65 to +150)							$^\circ C$
Storage Temperature Range	T_{STG}	(-65 to +150)							$^\circ C$

NOTES:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts.
2. Thermal Resistance from Junction to Ambient at 0.375" (9.5mm) lead length, P.C. board mounted.
3. Reverse Recovery Test Condition: $I_F = 0.5A$, $I_R = 1.0A$, $I_{RR} = 0.25A$



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RATINGS AND CHARACTERISTIC CURVES FR301 THRU FR307

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

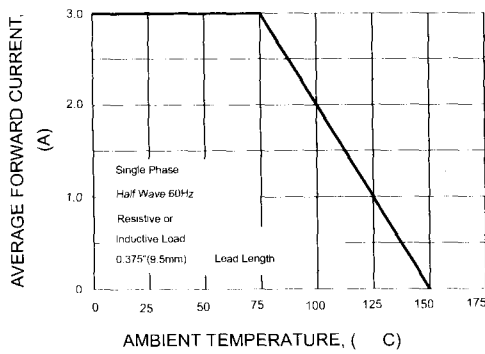


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

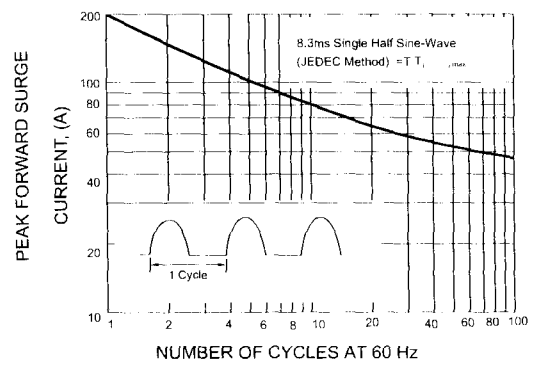


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

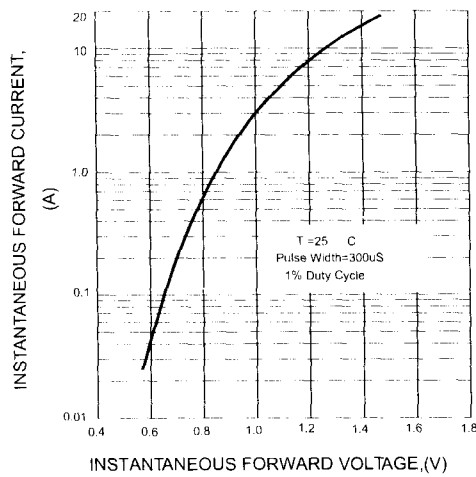


FIG.4-TYPICAL REVERSE CHARACTERISTICS

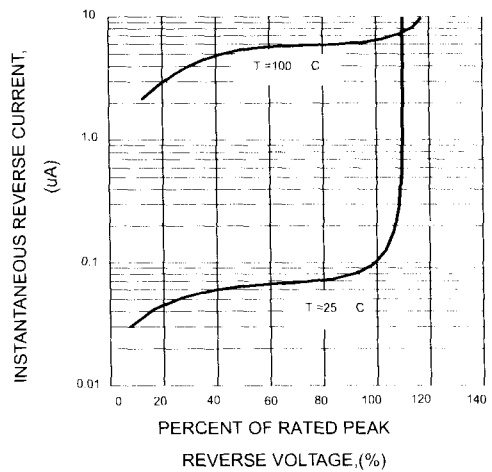
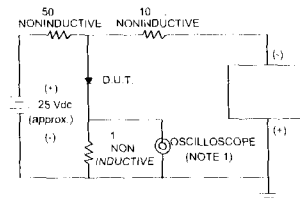
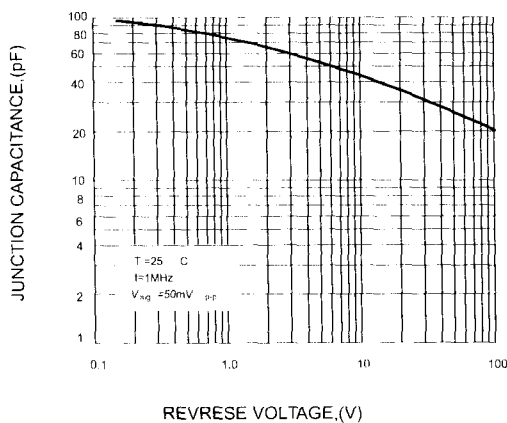
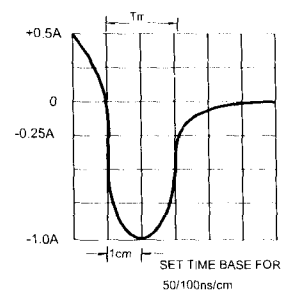


FIG.5-TYPICAL JUNCTION CAPACITANCE



1 megohm, 22pF
 50 ohms



SET TIME BASE FOR 50/100ns/cm