



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: 852-2790 0314 FAX: 852-2790 0206



FAST RECOVERY GLASS PASSIVATED RECTIFIER

FR101G THRU FR107G

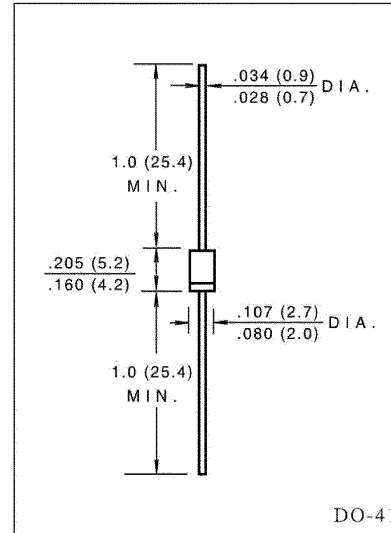
VOLTAGE RANGE 50 to 1000 Volts
CURRENT 1.0 Ampere

FEATURES

- Fast switching for high efficiency
- Glass passivated chip junction
- High current surge capability
- Low leakage.
- 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: 0.012 ounce, 0.33 gram



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	FR101G	FR102G	FR103G	FR104G	FR105G	FR106G	FR107G	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 $T_A = 55^\circ\text{C}$	$I_{(AV)}$	1.0							Amp	
Peak Forward Surge Current 8.3ms single half sine - wave superimposed on rated load (JEDEC method)	I_{FSM}	30							Amps	
Maximum Instantaneous Forward Voltage at 1.0A	V_F	1.3							Volts	
Maximum DC Reverse Current at rated DC blocking voltage	$T_A = 25^\circ\text{C}$	I_R							5.0	μA
	$T_A = 125^\circ\text{C}$								100	
Maximum Reverse Recovery Time (Note 3)	t_{rr}	150				250	500		nS	
Typical Junction Capacitance (Note 1)	C_j	15							pF	
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	50							$^\circ\text{C}/\text{W}$	
Operating Temperature Range	T_J	(-65 to 175)							$^\circ\text{C}$	
Storage Temperature Range	T_{STG}	(-65 to 175)								

NOTES:

1. Measured at 1.0MHz and applied reverse voltage of 4.0 volts
2. Thermal Resistance from Junction to Ambient at .375" (9.5mm) lead length, P.C. board mounted.
3. Test conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$.



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RATINGS AND CHARACTERISTIC CURVES FR101G THRU FR107G

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

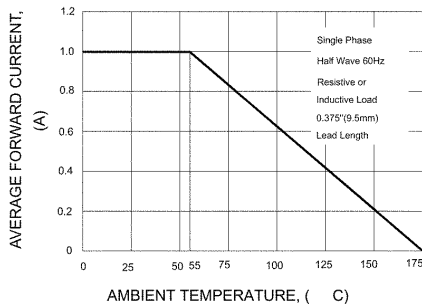


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

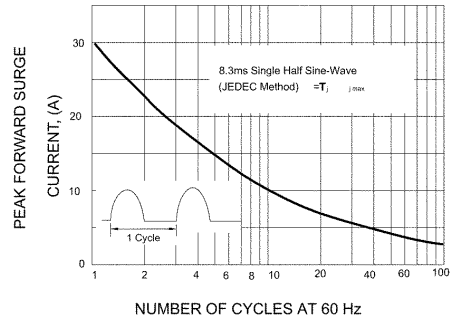


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

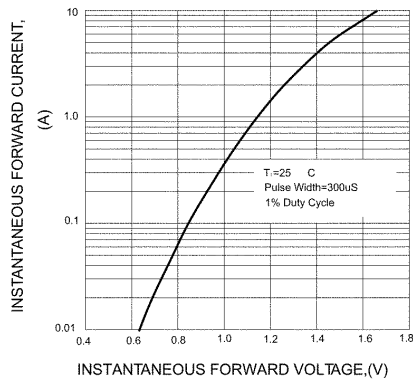


FIG.4-TYPICAL REVERSE CHARACTERISTICS

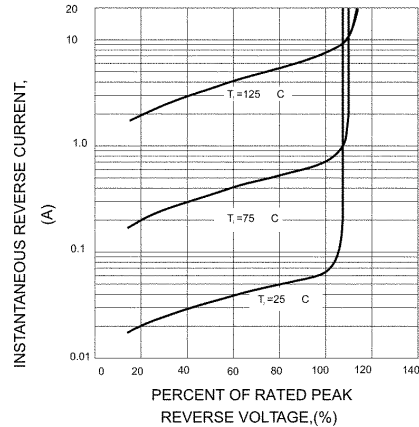


FIG.5-TYPICAL JUNCTION CAPACITANCE

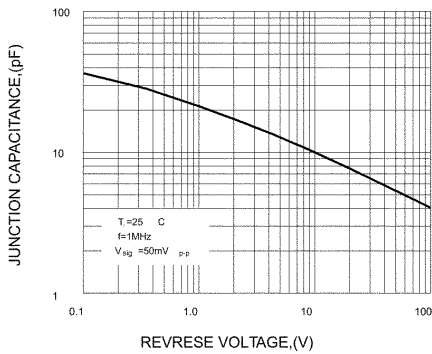
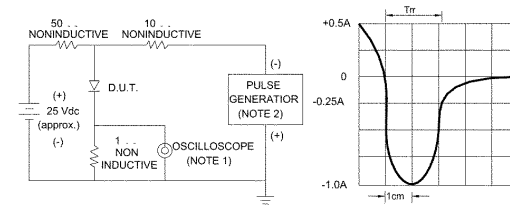


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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

