FAST RECOVERY RECTIFIER

FR101 - FR107

VOLTAGE RANGE - 50 to 1000 V
CURRENT - 1 A

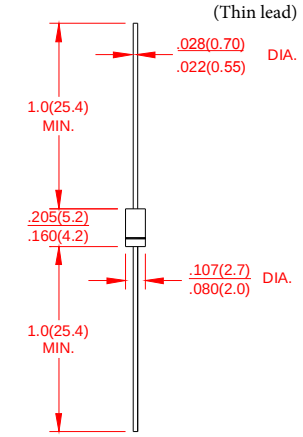
FEATURES

- Low cost construction
- Fast switching for high efficency.
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed:

  260℃/10 secods/.375ò(9.5mm)lead length at 5 lbs(2.3kg) tension

DO-41

(Thin lead)



Dimensions in inches and (millimeters)

MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-O 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 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 ℃ ambient temperature unless otherwise specified Single Phase, half wave, 60Hz, resistive or inductive load for capacitive load derate current by 20%

	SYMBOLS	FR101	FR102	FR103	FR104	FR105	FR106	FR107	UNITS
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℃	$I_{(AV)}$	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 @ 1.0A	V_F	1.3							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage T_A = 25℃	I_R	5.0							μA
Maximum DC Reverse Current at Rated DC Blocking Voltage T_A = 100℃		100							
Maximum Reverse Recovery Time (Note 3) T_J=25℃	trr	150				250	500		ns
Typical Junction Capacitance (Note 1)	C_J	15							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	50							℃/W
Operating Junction Temperature Range	T_J	(-55 to +150)							℃
Storage Temperature Range	T_{STG}	(-55 to +150)							℃

Notes:

1.Measured at 1.0MHz and Applied Reverse Voltage of 4.0Volits.
2 Thermal Resistance from junction to Ambient at .375"(9.5mm)lead length, P.C.board mounted.
3.Reverse Recovery Test Conditions:If=0.5A,Ir=1.0A,Irr=0.25A

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RATING AND CHRACTERISTIC CURVES FR101 - FR107

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

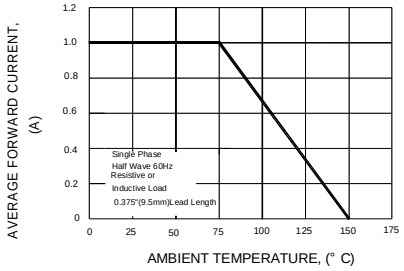


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

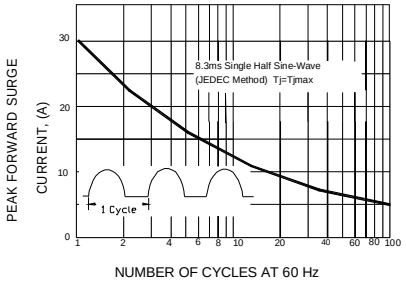


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

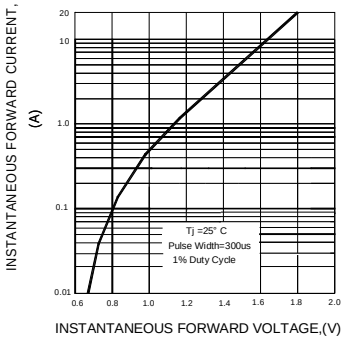


FIG.4-TYPICAL REVERSE CHARACTERISTICS

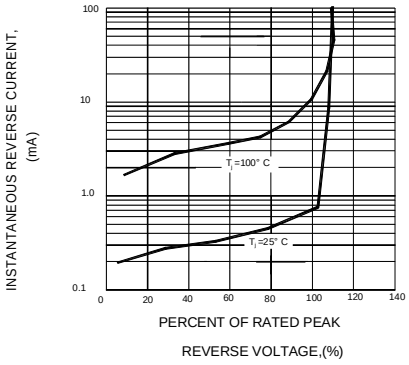


FIG.5-TYPICAL JUNCTION CAPACITANCE

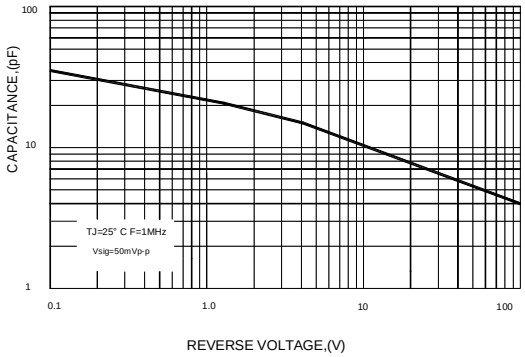
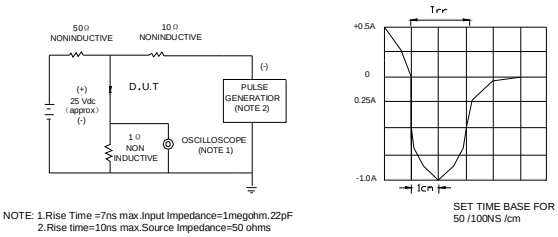


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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

SET TIME BASE FOR
50 /100NS /cm

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