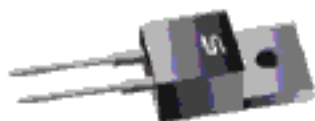




FRA1001G THRU FRA1007G

10 AMPS. Glass Passivated Fast Recovery Rectifiers



Voltage Range
50 to 1000 Volts
Current
10 Amperes

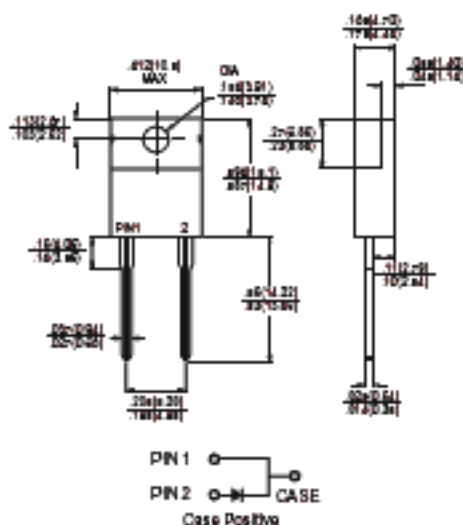
TO-220A

Features

- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ High reliability
- ◇ High surge current capability

Mechanical Data

- ◇ Cases: ITO-220AC molded plastic
- ◇ Epoxy: UL 94V-0 rate flame retardant
- ◇ Terminals: Leads solderable per MIL-STD-202, Method 208 guaranteed
- ◇ Polarity: As marked
- ◇ High temperature soldering guaranteed: 260°C/10 seconds .16", (4.06mm) from case.
- ◇ Mounting position: Any
- ◇ Weight: 2.24 grams



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	Symbol	FRA 1001G	FRA 1002G	FRA 1003G	FRA 1004G	FRA 1005G	FRA 1006G	FRA 1007G	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @ $T_C = 100^\circ\text{C}$	$I_{(AV)}$	10							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	150							A
Maximum Instantaneous Forward Voltage @ 10A	V_F	1.3							V
Maximum DC Reverse Current @ $T_C = 25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_C = 125^\circ\text{C}$	I_R	5.0 100							 uA
Maximum Reverse Recovery Time (Note 2)	T_{rr}	150			250	500		nS	
Typical Junction Capacitance (Note 1) $T_J = 25^\circ\text{C}$	C_j	100							pF
Typical Thermal Resistance (Note 3)	$R\theta_{JC}$	3.0							$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T_J, T_{stg}	-65 to +150							$^\circ\text{C}$

Notes: 1. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C.

2. Reverse Recovery Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$

3. Thermal Resistance from Junction to Case, Mount on Heatsink size 2" x 3" x 0.25" Al-Plate

RATINGS AND CHARACTERISTIC CURVES (FRA1001G THRU FRA1007G)

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

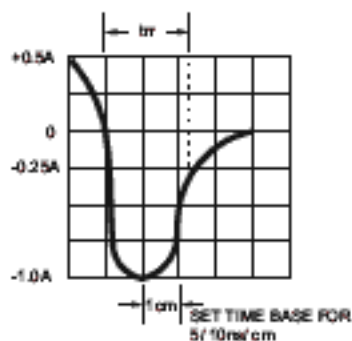
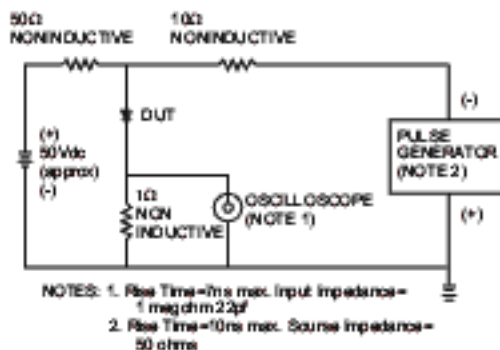


FIG. 2- MAXIMUM FORWARD CURRENT DERATING CURVE

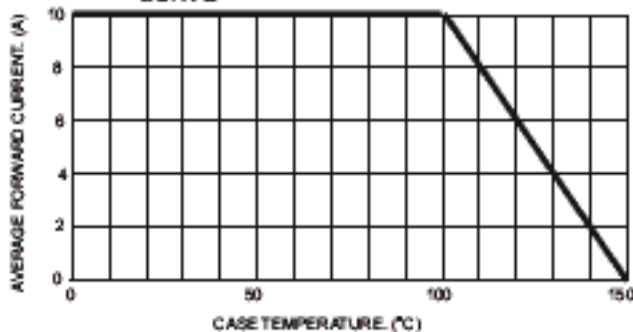


FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



FIG. 4- TYPICAL JUNCTION CAPACITANCE

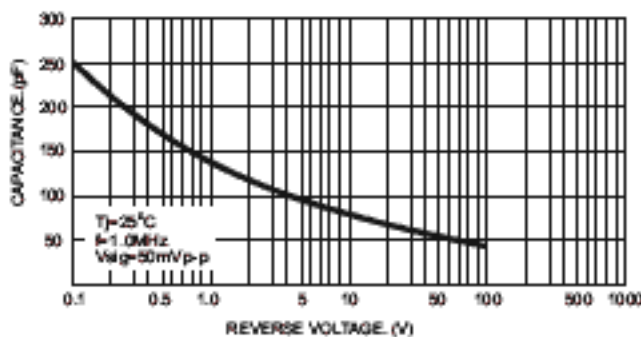


FIG. 5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

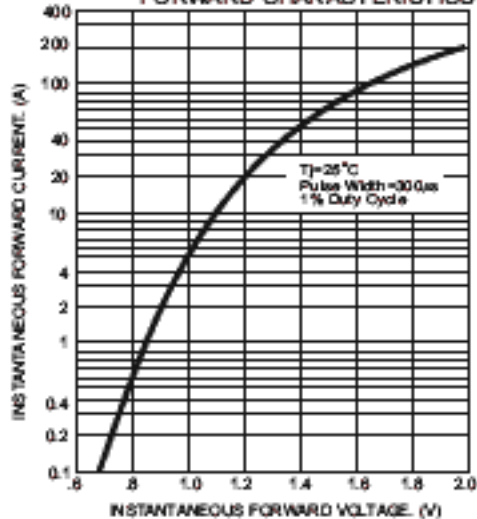


FIG. 6- TYPICAL REVERSE CHARACTERISTICS

