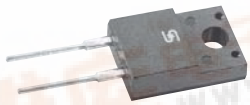
FRAF1601G THRU FRAF1607G

Isolation 16.0 AMPS. Glass Passivated Fast Recovery Rectifiers



Voltage Range
50 to 1000 Volts
Current
16.0 Amperes

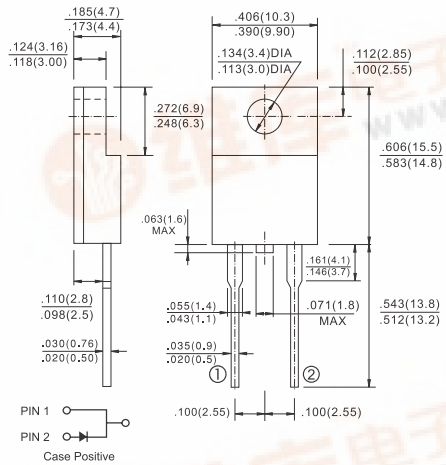
Features

- ✧ 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℃/10 seconds 0.25",(6.35mm) from case.
- ✧ Mounting position: Any
- ✧ Weight: 2.24 grams
- ✧ Mounting torque: 5 in – 1bs. max.

ITO-220AC



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

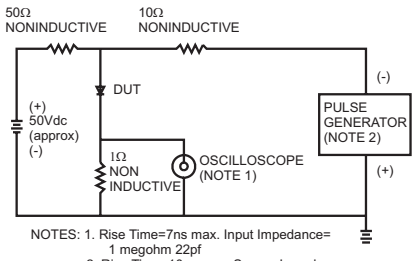
Rating at 25℃ ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%

Type Number	Symbol	FRAF 1601G	FRAF 1602G	FRAF 1603G	FRAF 1604G	FRAF 1605G	FRAF 1606G	FRAF 1607G	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 See Fig. 1	$I_{(AV)}$	16.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	250							A
Maximum Instantaneous Forward Voltage @ 16.0A	V_F	1.3							V
Maximum DC Reverse Current @ T_C=25℃ at Rated DC Blocking Voltage @ T_C=125℃	I_R	5.0 100							uA uA
Maximum Reverse Recovery Time (Note 1)	Trr	150				250	500		nS
Typical Thermal Resistance (Note 2)	$R\theta_{JC}$	4.5							℃/W
Operating and Storage Temperature Range	T_J ,T_{STG}	-65 to +150							℃

Notes: 1. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A
2. Thermal Resistance from Junction to Case Per Leg Mounted on Heatsink size 2" x 3" x 0.25" Al-Plate

RATINGS AND CHARACTERISTIC CURVES (FRAF1601G THRU FRAF1607G)

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



NOTES: 1. Rise Time=7ns max. Input Impedance= 1 megohm 22pf
2. Rise Time=10ns max. Sourse Impedance= 50 ohms

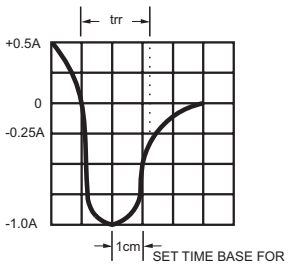


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

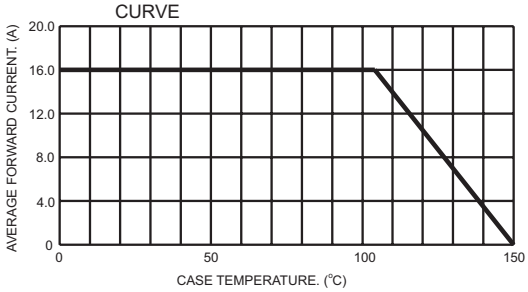


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

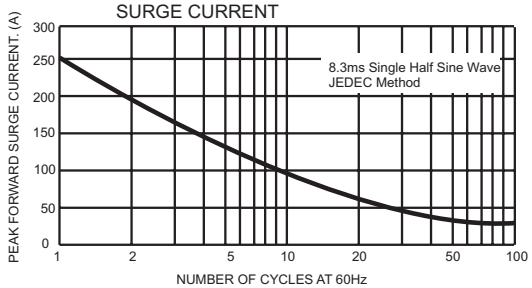


FIG.4- TYPICAL JUNCTION CAPACITANCE

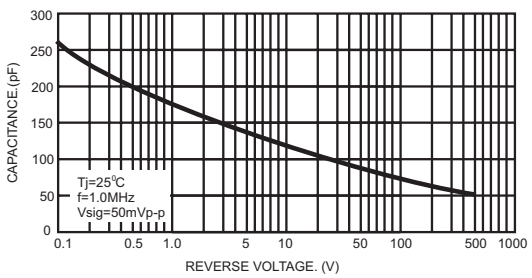


FIG.5- TYPICAL REVERSE CHARACTERISTICS

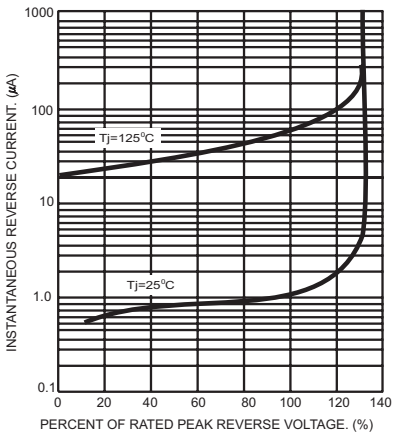


FIG.6- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS