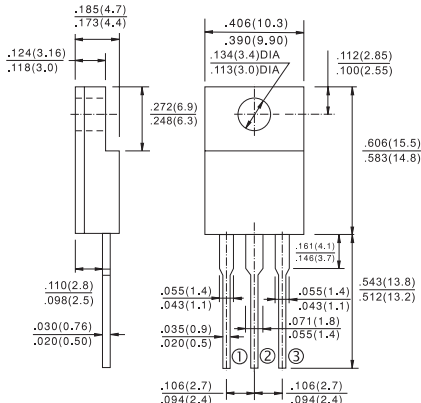


TSC 	FRF501G THRU FRF507G Isolation 5.0 AMPS. Glass Passivated Fast Recovery Rectifiers									
	Voltage Range 50 to 1000 Volts Current 5.0 Amperes									
Features ✧ Low forward voltage drop ✧ High current capability ✧ High reliability ✧ High surge current capability	ITO-220AB  PIN 1 PIN 3 PIN 2 Positive CT PIN 1 PIN 3 PIN 2 Negative CT Suffix "A" PIN 1 PIN 3 PIN 2 Doubler Suffix "D"									
Mechanical Data ✧ Cases: ITO-220AB 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 0.25", (6.35mm) from case. ✧ Mounting position: Any ✧ Weight: 2.24 grams ✧ Mounting torque: 5 in – 1bs. max.	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	FRF 501G	FRF 502G	FRF 503G	FRF 504G	FRF 505G	FRF 506G	FRF 507G	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	$I_{(AV)}$	5.0							A	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	30							A	
Maximum Instantaneous Forward Voltage @2.5A	V_F	1.5							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 uA	
Maximum Reverse Recovery Time (Note 1)	T_{rr}	150				250	500		nS	
Typical Thermal Resistance (Note 2)	$R\theta_{JA}$	4.0							$^{\circ}\text{C/W}$	
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150							$^{\circ}\text{C}$	

Notes: 1. Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

2. Thermal Resistance from Junction to Case Per Leg Mounted on Heatsink.

RATINGS AND CHARACTERISTIC CURVES (FRF501G THRU FRF507G)

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

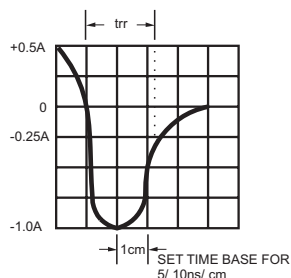
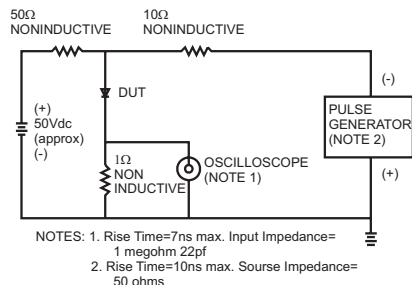


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

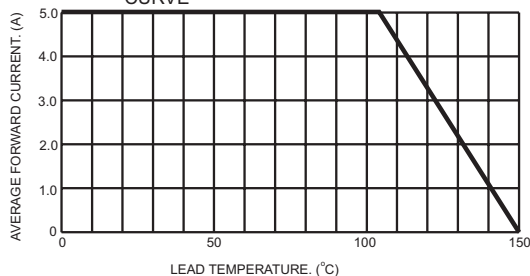


FIG.2- TYPICAL REVERSE CHARACTERISTICS PER LEG

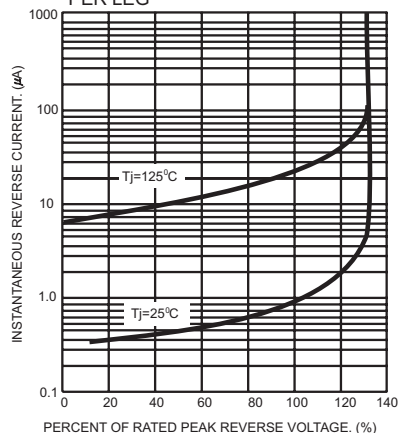


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

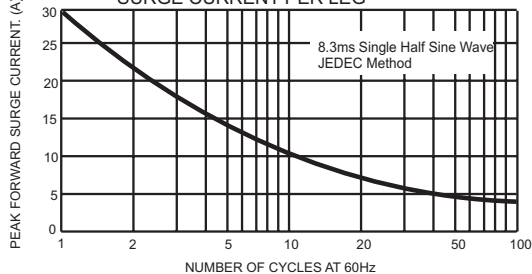


FIG.6- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

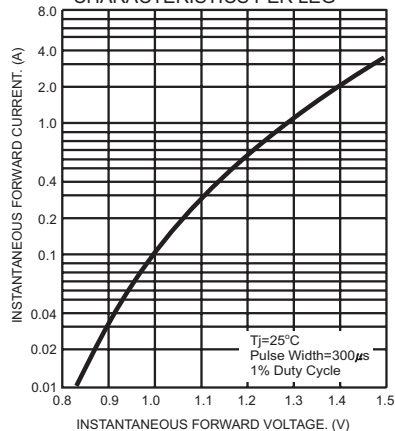


FIG.4- TYPICAL JUNCTION CAPACITANCE PER LEG

