FR1601 THRU FR1607

16 A Glass Passivated Fast Recovery Rectifiers

Voltage Range 50 to 1000 Volts
Current 16.0 Amperes

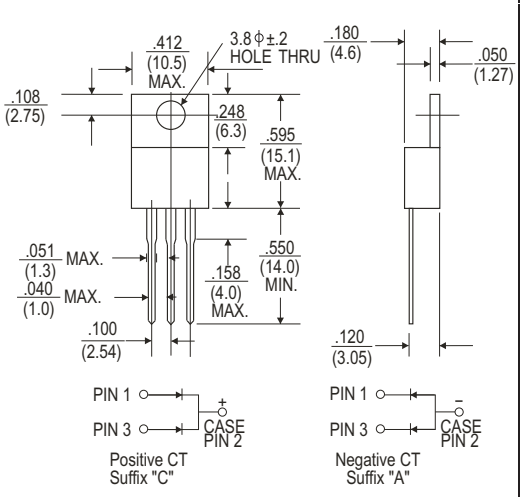
Features

* Low forward voltage drop
* High current capability
* High reliability
* High surge current capability

Mechanical Data

* Case: molded plastic
* Epoxy: UL 94V-O rate flame retardant
* Terminals: Leads, solderable per MIL-STD-202, Method 208 guaranteed
* Polarity: As marked
* High temperature soldering guaranteed: 250°C/10 seconds 16",(4.06mm) from case.
* Mounting position: Any
* Weight: 2.24 grams

TO-220



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	FR1601	FR1602	FR1603	FR1604	FR1605	FR1606	FR1607	Units
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified CurrentSee Fig. 2	16.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	150							A
Maximum Instantaneous Forward Voltage @ 8.0A	1.3							V
Maximum DC Reverse Current @ T_C=25°C	10							uA
At Rated DC Blocking Voltage @ T_C=125°C	100							uA
Maximum Reverse Recovery Time (Note 1)	150				250	500		nS
Typical Thermal Resistance RθJC (Note2)	3.0							°C /W
Operating and Storage Temperature Range T_J T_{STG}	-55 to +150							°C

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 Mounted on Heatsink.

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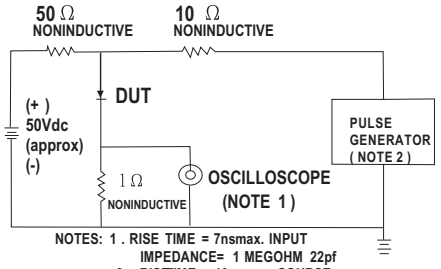
RATINGS AND CHARACTERISTIC CURVES (FR1601 THRU FR1607)

FIG . 1-REVERSE RECOVERY TIMECHARACTERISTIC AND TESTCIRCUIT DIAGRAM



NOTES: 1 . RISE TIME = 7nsmax. INPUT
IMPEDANCE= 1 MEGOHM 22pf
2 . RISETIME = 10ns max.SOURSE
IMPEDANCE = 50ohmsf

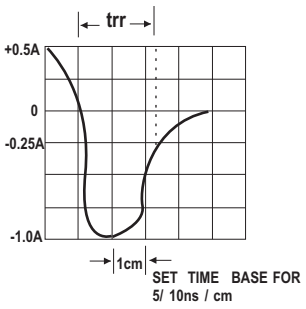


FIG . 2- MAXIMUM FORWARD CURRENT DERATING CURVE

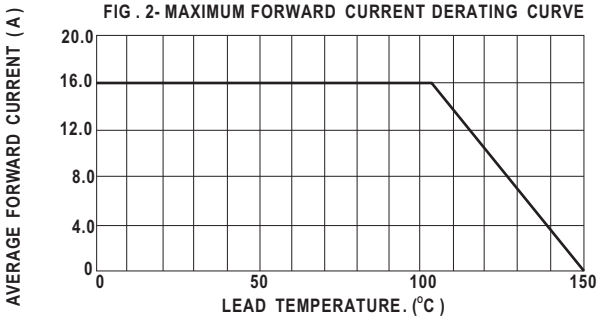


FIG . 3 -TYPICAL REVERSE CHARACTERISTICS

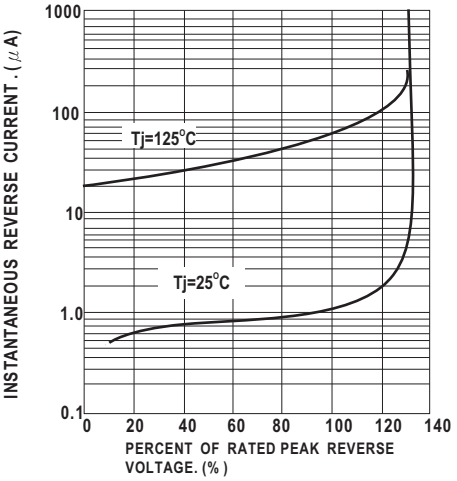


FIG .4 - MAXIMUM NON - REPETITIVE FORWARD SURGE CURRENT

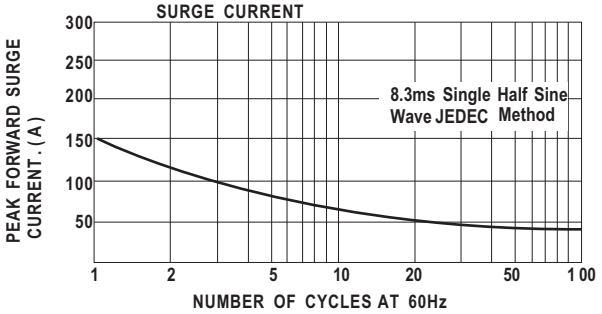


FIG . 6 -TYPICAL INSTANTANEOUS FORWARD CARACTERISTICS

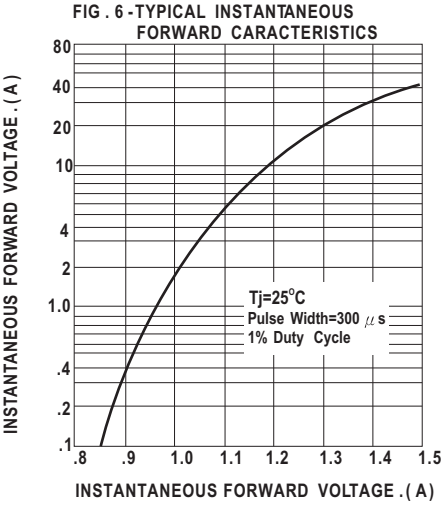
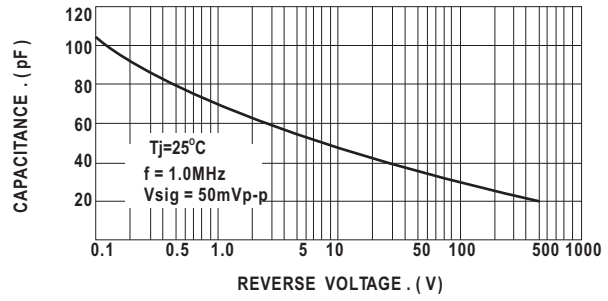


FIG .5 - TYPICAL JUNCTION CAPACITANCE PER LEG



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