



# FR1601G – FR1607G

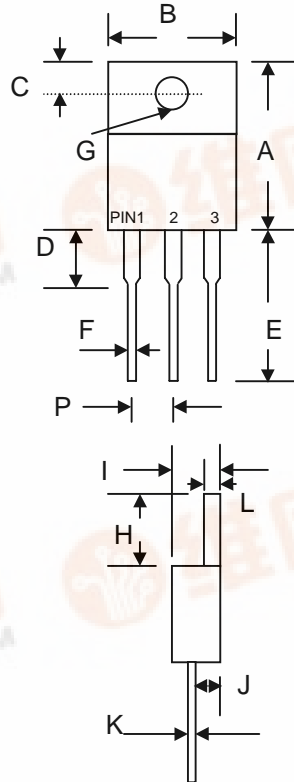
## 16A FAST RECOVERY GLASS PASSIVATED RECTIFIER

### Features

- Glass Passivated Die Construction
- Fast Switching
- High Current Capability
- Low Reverse Leakage Current
- High Surge Current Capability
- Plastic Material has UL Flammability Classification 94V-O

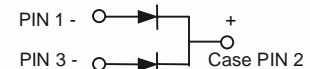
### Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 2.24 grams (approx.)
- Mounting Position: Any
- Marking: Type Number



TO-220		
Dim	Min	Max
A	14.9	15.1
B	—	10.5
C	2.62	2.87
D	3.56	4.06
E	13.46	14.22
F	0.68	0.94
G	3.74 Ø	3.91 Ø
H	5.84	6.86
I	4.44	4.70
J	2.54	2.79
K	0.35	0.64
L	1.14	1.40
P	2.41	2.67

All Dimensions in mm



### Maximum Ratings and Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

Characteristic	Symbol	FR 1601G	FR 1602G	FR 1603G	FR 1604G	FR 1605G	FR 1606G	FR 1607G	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Working Peak Reverse Voltage	V <sub>RWM</sub>								
DC Blocking Voltage	V <sub>R</sub>								
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	140	280	420	560	700	V
Average Rectified Output Current @T <sub>C</sub> = 105°C	I <sub>O</sub>	16							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	150							A
Forward Voltage @I <sub>F</sub> = 8.0A	V <sub>FM</sub>	1.3							V
Peak Reverse Current @T <sub>A</sub> = 25°C At Rated DC Blocking Voltage @T <sub>A</sub> = 125°C	I <sub>RM</sub>	5.0 100							µA
Reverse Recovery Time (Note 1)	t <sub>rr</sub>	150					250	500	nS
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>	-65 to +150							°C

Note: 1. Measured with I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>RR</sub> = 0.25A. See figure 5.



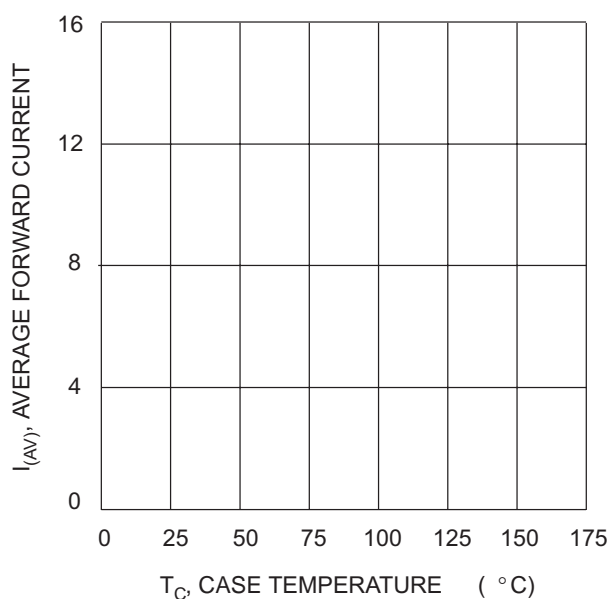


Fig. 1, Typical Forward Current Derating Curve

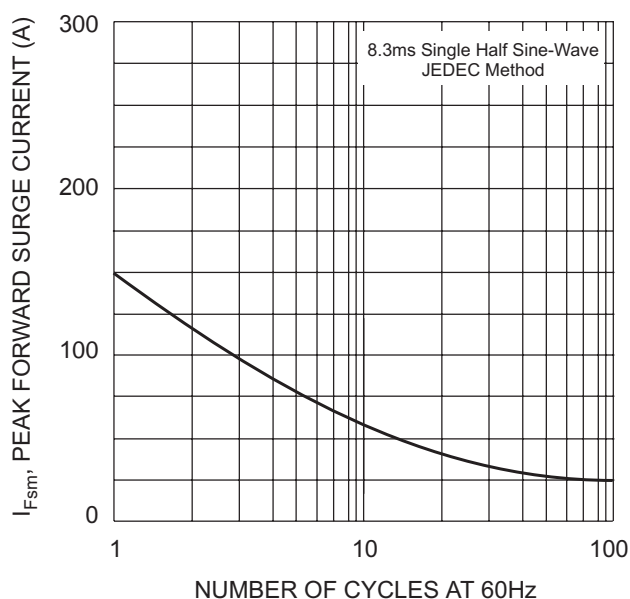


Fig. 2 Max Non-Repetitive Peak Surge Current

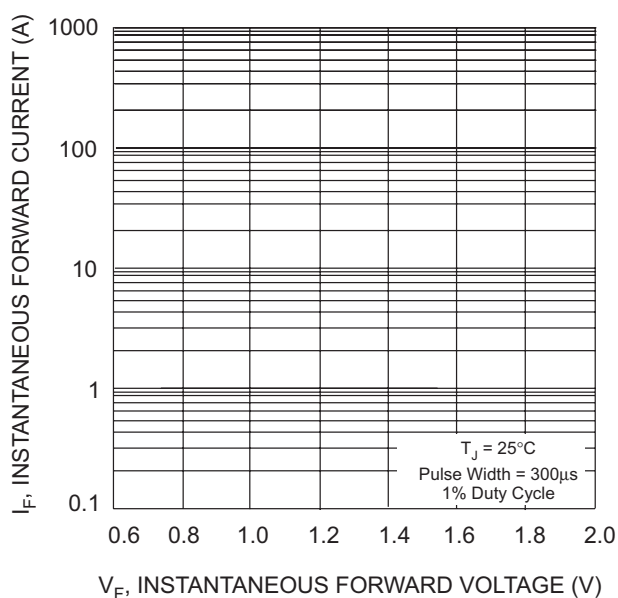


Fig. 3, Typical Instantaneous Forward Characteristics

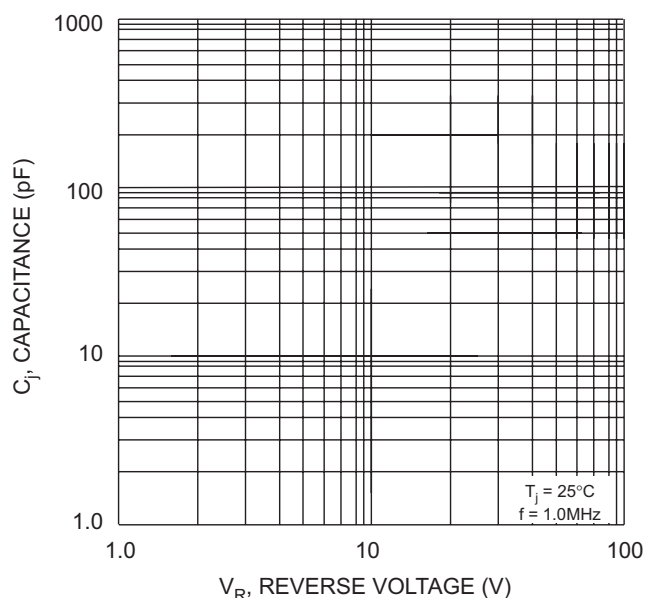
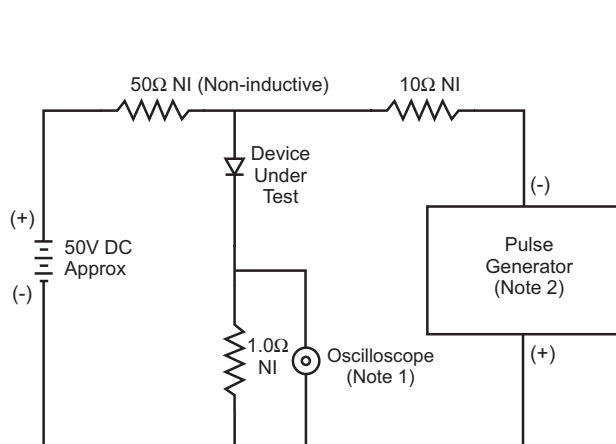


Fig. 4 Typical Junction Capacitance



- Notes:
1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.
  2. Rise Time = 10ns max. Input Impedance = 50Ω.

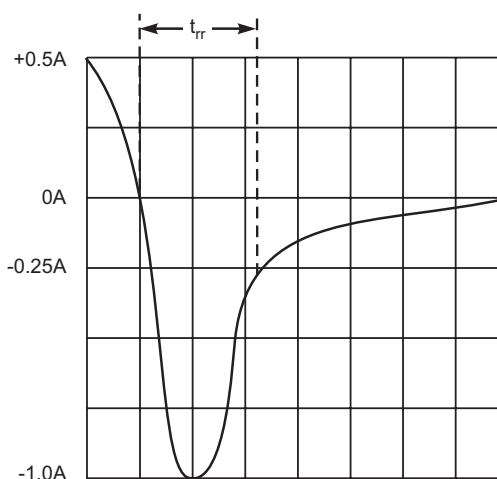


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

## ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
FR1601G	TO-220	50 Units/Tube
FR1602G	TO-220	50 Units/Tube
FR1603G	TO-220	50 Units/Tube
FR1604G	TO-220	50 Units/Tube
FR1605G	TO-220	50 Units/Tube
FR1606G	TO-220	50 Units/Tube
FR1607G	TO-220	50 Units/Tube

Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.

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