



FR1601G – FR1607G

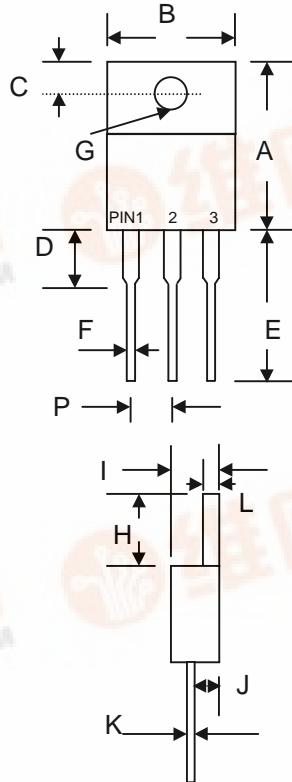
16A FAST RECOVERY GLASS PASSIVATED RECTIFIER

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 $\text{@T}_A=25^\circ\text{C}$ 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_{RRM}								
Working Peak Reverse Voltage	V_{RWM}	50	100	200	400	600	800	1000	V
DC Blocking Voltage	V_R								
RMS Reverse Voltage	$V_{R(\text{RMS})}$	35	70	140	280	420	560	700	V
Average Rectified Output Current $\text{@T}_C = 105^\circ\text{C}$	I_o				16				A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}					150			A
Forward Voltage $\text{@I}_F = 8.0\text{A}$	V_{FM}					1.3			V
Peak Reverse Current $\text{@T}_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage $\text{@T}_A = 125^\circ\text{C}$	I_{RM}				5.0	100			μA
Reverse Recovery Time (Note 1)	t_{rr}			150		250	500		nS
Operating and Storage Temperature Range	T_j, T_{STG}				-65 to +150				$^\circ\text{C}$

Note: 1. Measured with $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$. See figure 5.

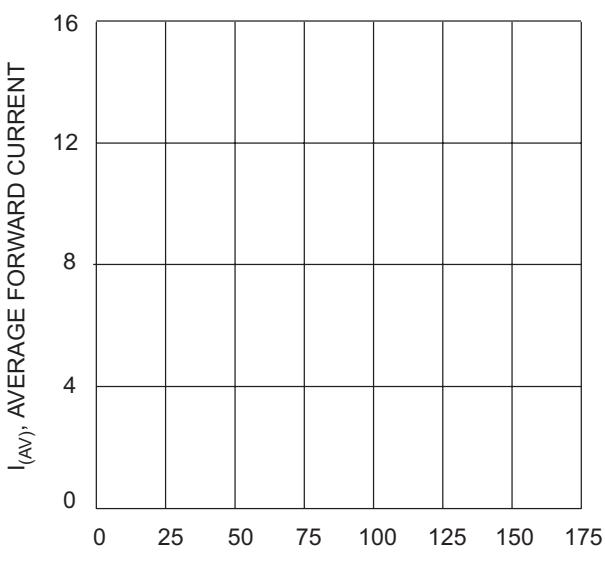


Fig. 1, Typical Forward Current Derating Curve

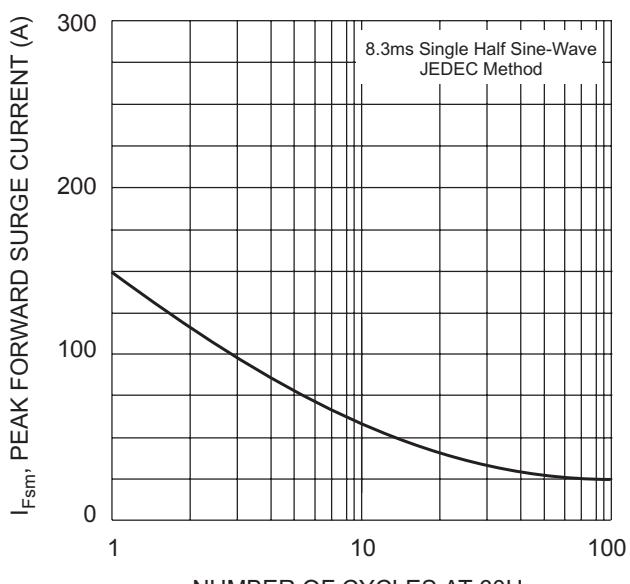


Fig. 2 Max Non-Repetitive Peak Surge Current

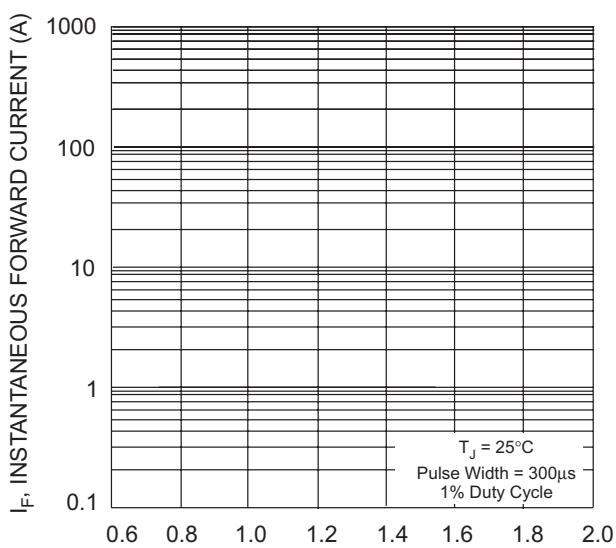


Fig. 3, Typical Instantaneous Forward Characteristics

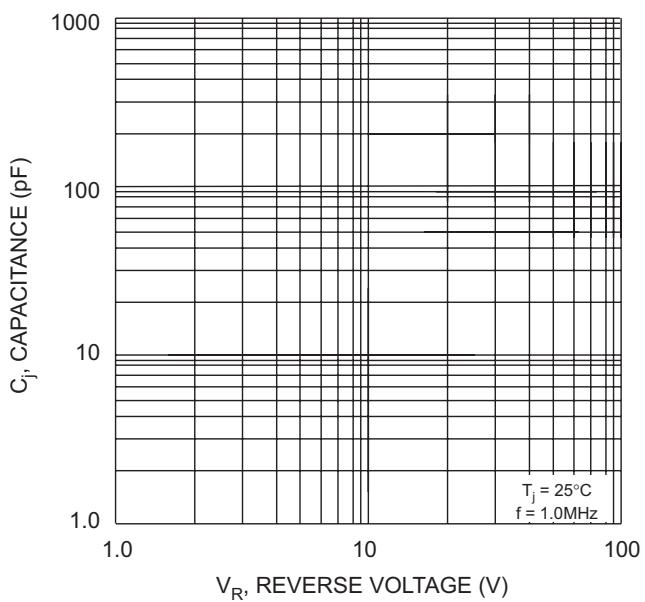
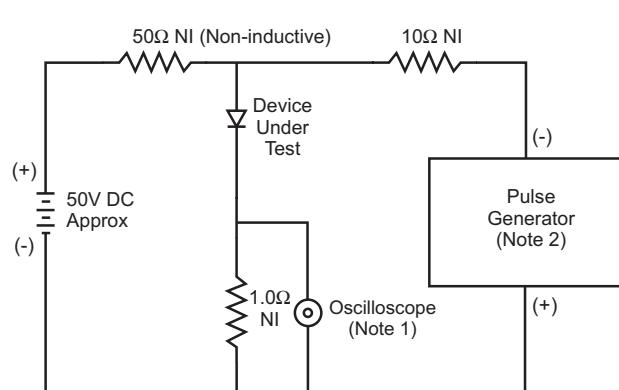


Fig. 4 Typical Junction Capacitance



Notes:

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

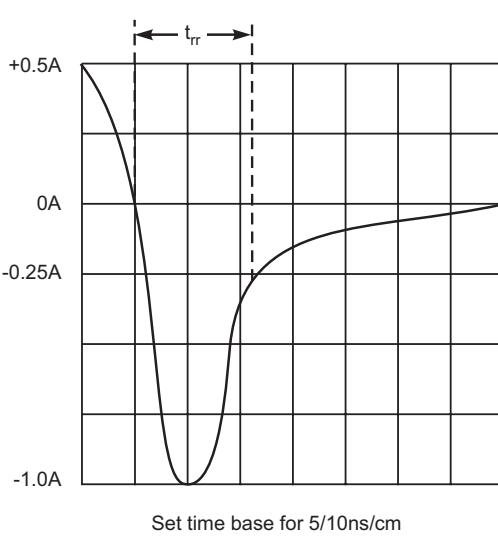


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

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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WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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