SENSITRON

SEMICONDUCTOR

HER1601G-G–HER1608G-G

16A HIGH EFFICIENCY GLASS PASSIVATED RECTIFIER

Data Sheet 4846, Rev.-

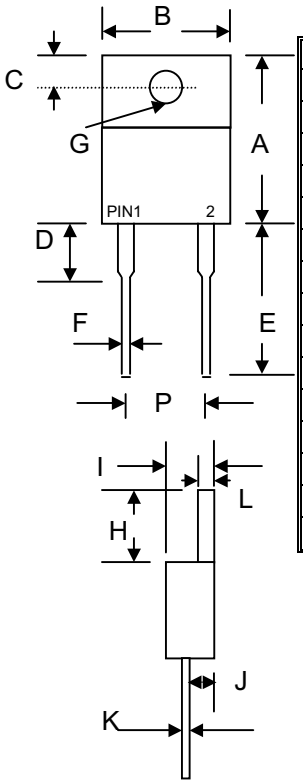
Green Products

Features

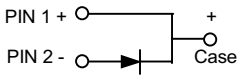
- Glass Passivated Die Construction
- Ultra-Fast Switching
- High Current Capability
- Low Reverse Leakage Current
- High Surge Current Capability
- Plastic Material has UL Flammability Classification 94V-O
- Green Products in Compliance with the RoHS Directive

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-220A				
Dim	**Min**	**Max**	**Min**	**Max**
A	14.9	15.10	0.587	0.595
B	—	10.50	—	0.413
C	2.62	2.87	0.103	0.113
D	3.56	4.06	0.140	0.160
E	13.46	14.22	0.530	0.560
F	0.68	0.94	0.027	0.037
G	3.74Ø	3.91Ø	0.147Ø	0.154Ø
H	5.84	6.86	0.230	0.270
I	4.44	4.70	0.175	0.185
J	2.54	2.79	0.100	0.110
K	0.35	0.64	0.014	0.025
L	1.14	1.40	0.045	0.055
P	4.95	5.20	0.195	0.205
	In mm		**In inch**	



Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

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

Characteristic	Symbol	HER 1601G-G	HER 1602G-G	HER 1603G-G	HER 1604G-G	HER 1605G-G	HER 1606G-G	HER 1607G-G	HER 1608G-G	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	300	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	210	280	420	560	700	V
Average Rectified Output Current @T_C = 105°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}	250								A
Forward Voltage @I_F = 16A	V_{FM}	1.0				1.3	1.7			V
Peak Reverse Current @T_A = 25°C At Rated DC Blocking Voltage @T_A = 125°C	I_{RM}	10 400								µA
Reverse Recovery Time (Note 1)	t_{rr}	50					80			nS
Typical Junction Capacitance (Note 2)	C_j	170					130			pF
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150								°C

Note: 1. Measured with IF = 0.5A, IR = 1.0A, IRR = 0.25A. See figure 1.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

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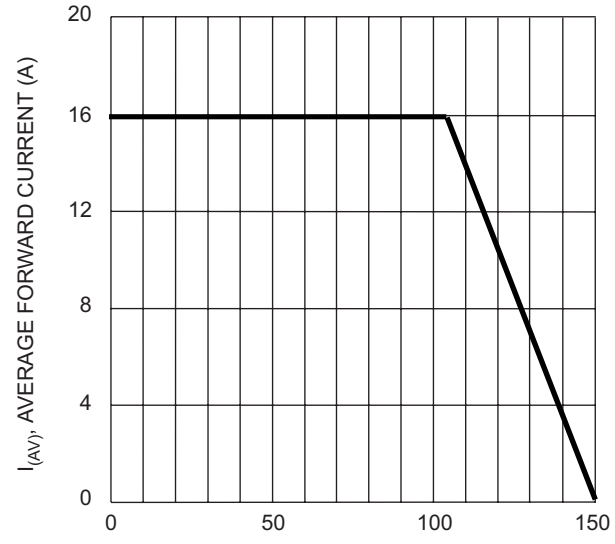


Fig. 1 Forward Current Derating Curve

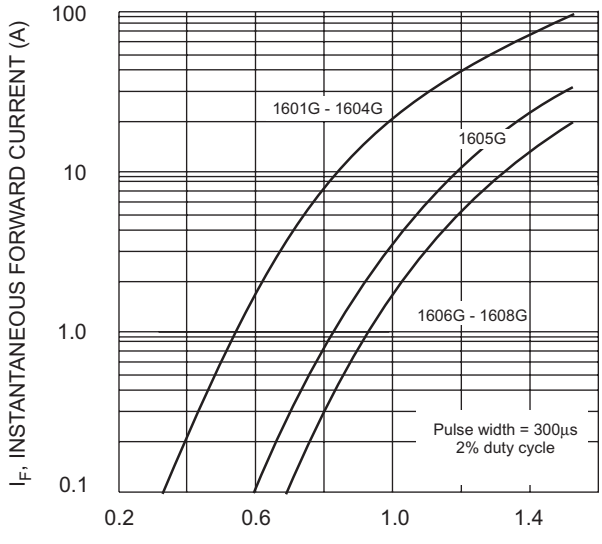


Fig. 2 Typical Forward Characteristics

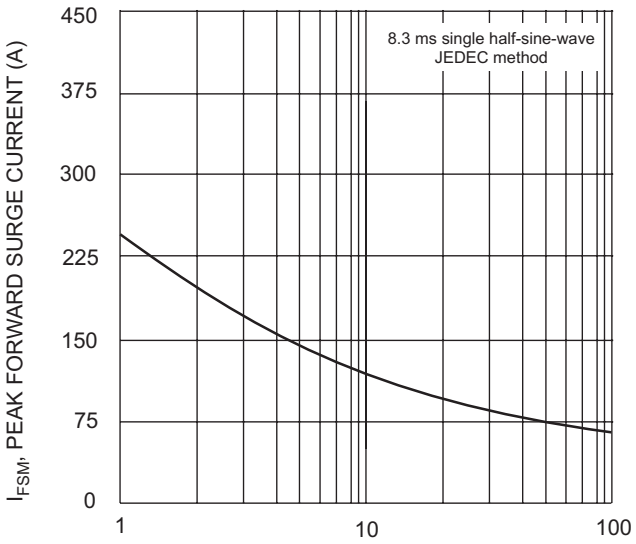


Fig. 3 Maximum Non-Repetitive Surge Current

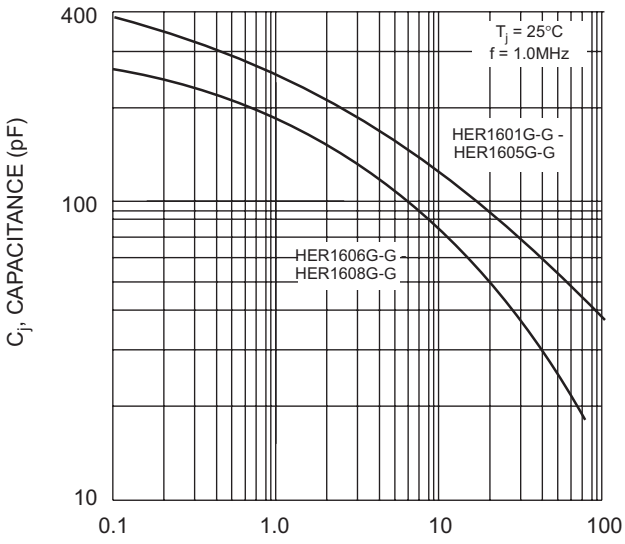
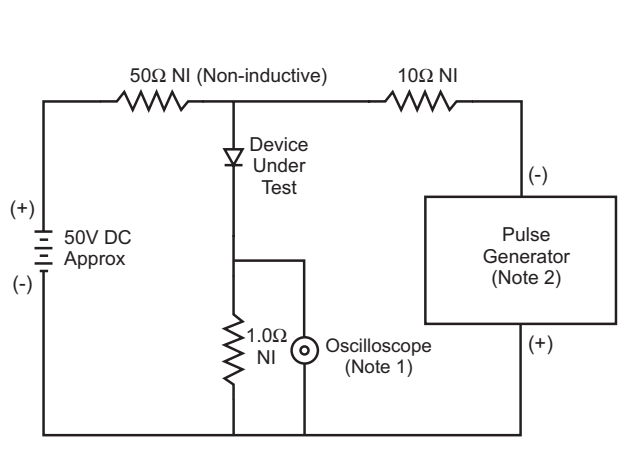
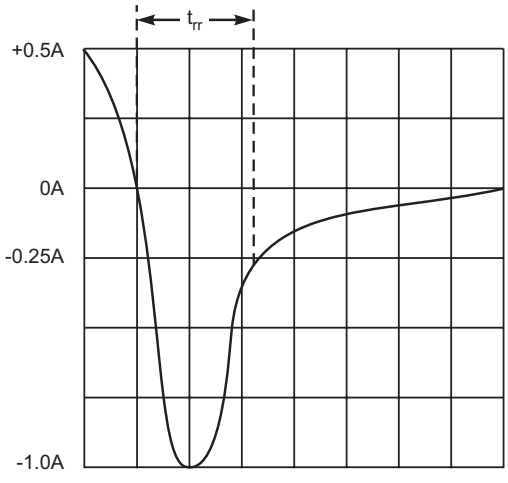


Fig. 4 Typical Junction Capacitance



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



Set time base for 5/10ns/cm

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit