SENSITRON

SEMICONDUCTOR

HER1601PT-G – HER1606PT-G

16A HIGH EFFICIENCY GLASS PASSIVATED RECTIFIER

Data Sheet 4847, Rev. -

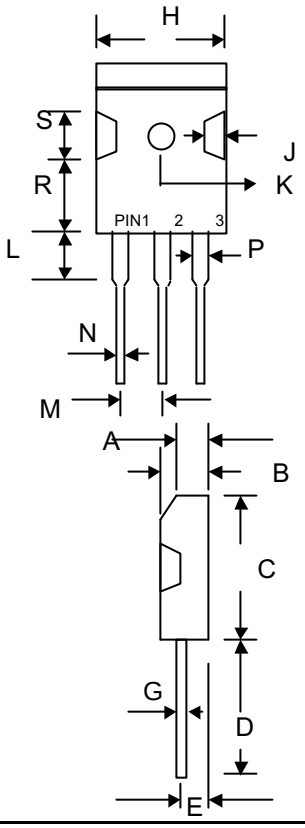
Green Products

Features

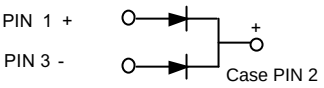
- Glass Passivated Die Construction
- Ultra-Fast Switching
- High Current Capability
- Low Reverse Leakage Current
- High Surge Current Capability
- Plastic Material has UL Flammability Classification 94V-O
- Green Products in Compliance with the RoHS Directive

Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-750, Method 2026
- Polarity: See Diagram
- Weight: 5.6 grams (approx.)
- Mounting Position: Any
- Marking: Type Number



TO-3P				
Dim	**Min**	**Max**	**Min**	**Max**
A	3.20	3.50	0.126	0.138
B	4.59	5.16	0.181	0.203
C	20.80	21.30	0.819	0.839
D	19.70	20.20	0.776	0.795
E	2.10	2.40	0.083	0.094
G	0.51	0.76	0.020	0.030
H	15.90	16.40	0.626	0.646
J	1.70	2.70	0.067	0.106
K	3.10 Ø	3.30	0.12 Ø	0.130
L	3.50	4.51	0.138	0.178
M	5.20	5.70	0.205	0.224
N	1.12	1.22	0.044	0.048
P	2.90	3.30	0.114	0.130
R	11.70	12.80	0.46	0.504
S	4.30 Typical		0.169Typical	
	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 1601PT-G	HER 1602PT-G	HER 1603PT-G	HER 1604PT-G	HER 1605PT-G	HER 1606PT-G	HER 1607PT-G	HER 1608PT-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 = 100 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}	200								A
Forward Voltage @I_F = 8.0A	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}	10 500								A
Reverse Recovery Time (Note 1)	t_{rr}	50					80			nS
Typical Junction Capacitance (Note 2)	C_j	85					60			pF
Operating and Storage Temperature Range	T_j, T_{STG}	-55 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.

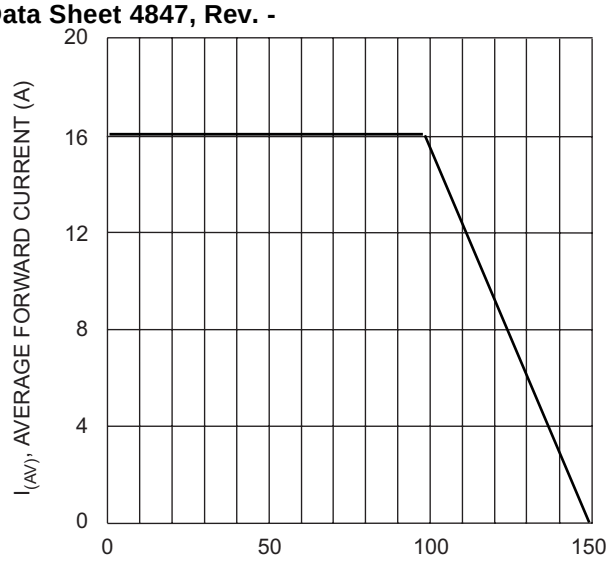


Fig. 1 Forward Current Derating Curve

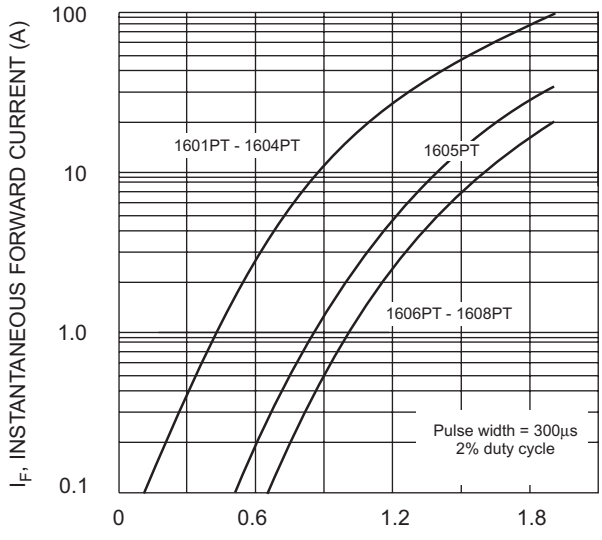


Fig. 2 Typical Forward Characteristics

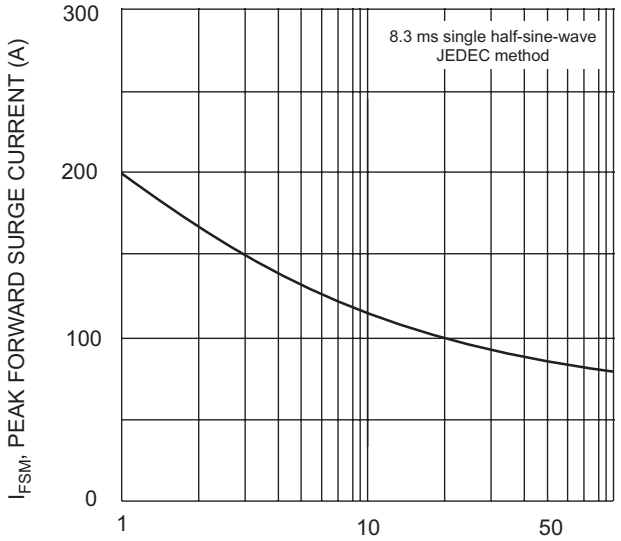


Fig. 3 Maximum Non-Repetitive Surge Current

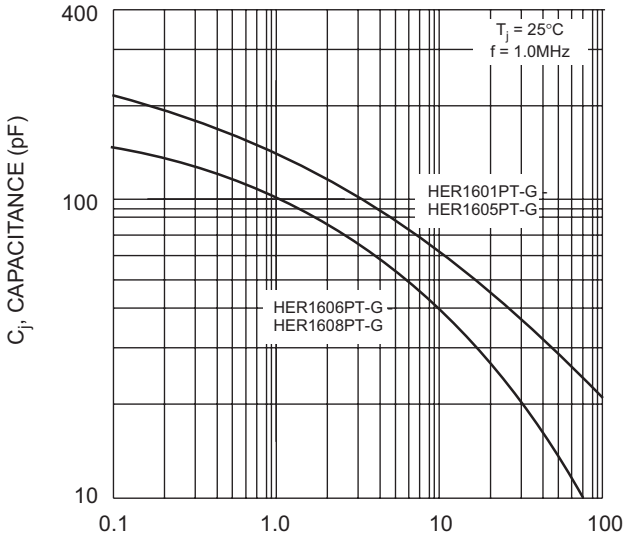
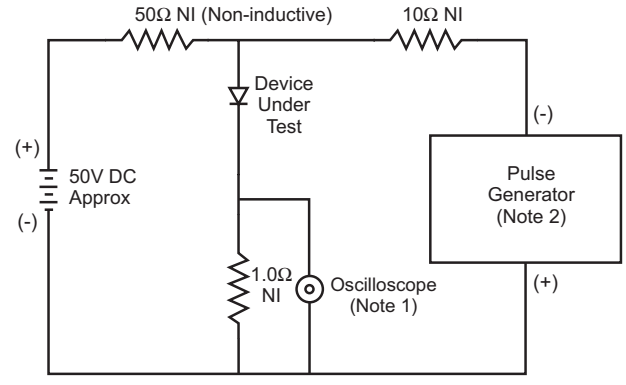


Fig. 4 Typical Junction Capacitance



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

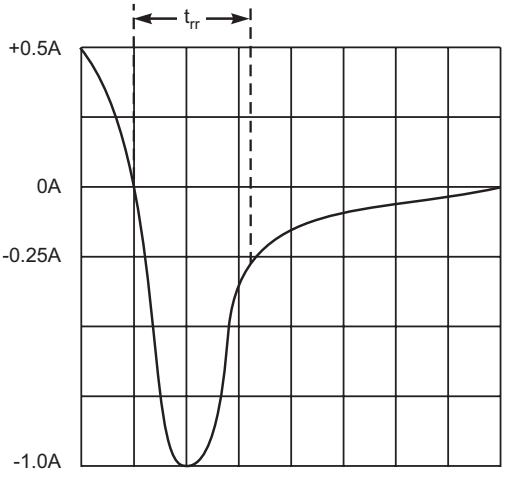


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit