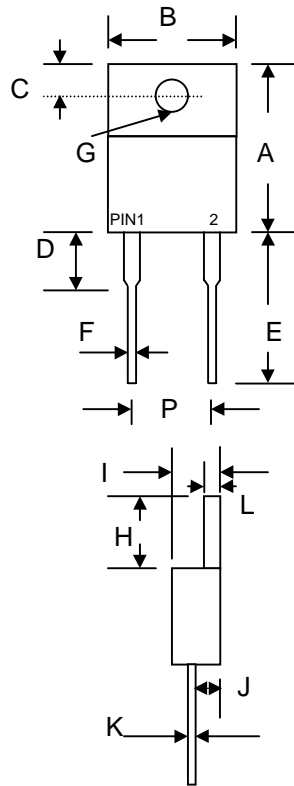


### Features

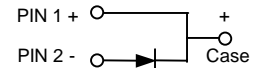
- Glass Passivated Die Construction
- Ultra-Fast Switching
- High Current Capability
- Low Reverse Leakage Current
- High Surge Current Capability
- Plastic Material has UL Flammability Classification 94V-O

### 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
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	4.95	5.20
All Dimensions in mm		



### Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

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

Characteristic	Symbol	HER 1601G	HER 1602G	HER 1603G	HER 1604G	HER 1605G	HER 1606G	HER 1607G	HER 1608G	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	50	100	200	300	400	600	800	1000	V
Working Peak Reverse Voltage	$V_{RWM}$									
DC Blocking Voltage	$V_R$									
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	210	280	420	560	700	V
Average Rectified Output Current @ $T_C = 105^\circ\text{C}$	$I_O$	16								A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	250								A
Forward Voltage @ $I_F = 16\text{A}$	$V_{FM}$	1.0			1.3	1.7			V	
Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 125^\circ\text{C}$	$I_{RM}$	10 400								$\mu\text{A}$
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								$^\circ\text{C}$

Note: 1. Measured with  $I_F = 0.5\text{A}$ ,  $I_R = 1.0\text{A}$ ,  $IRR = 0.25\text{A}$ . See figure 5.  
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

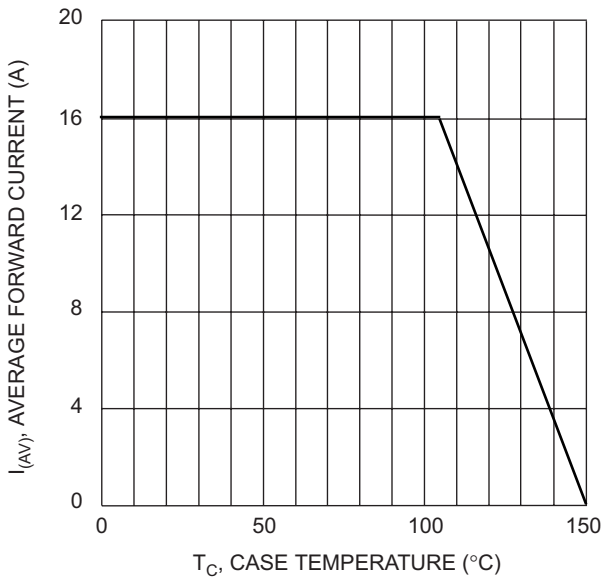


Fig. 1 Forward Current Derating Curve

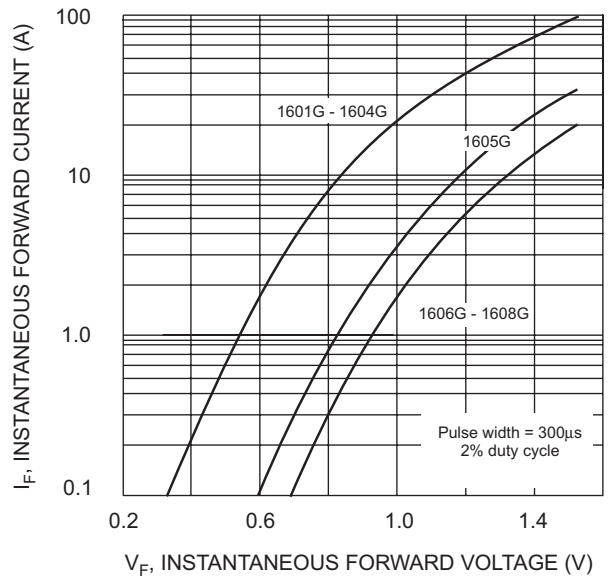


Fig. 2 Typical Forward Characteristics

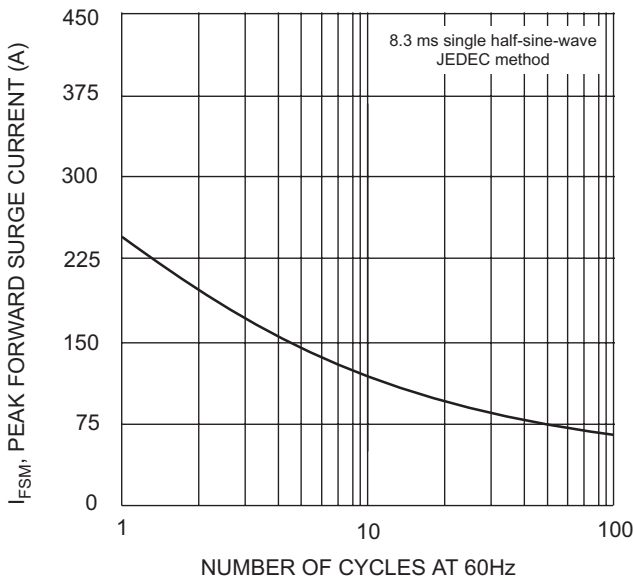


Fig. 3 Maximum Non-Repetitive Surge Current

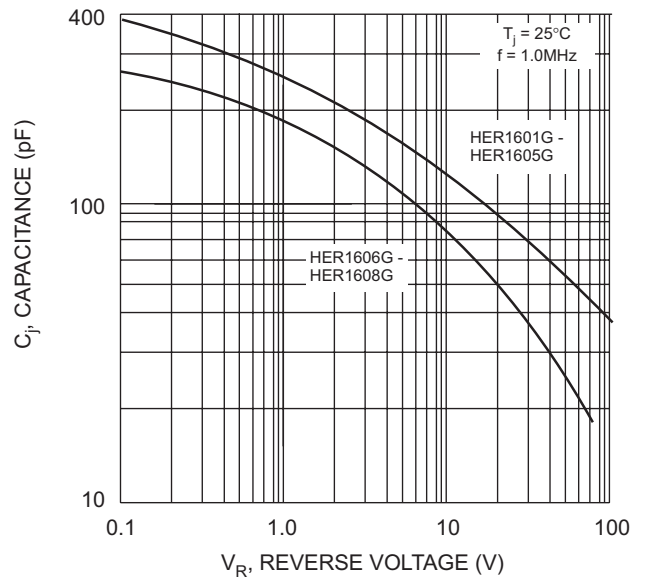
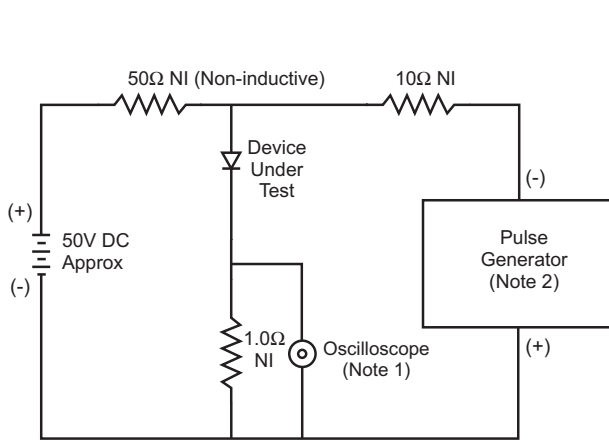


Fig. 4 Typical Junction Capacitance



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

Set time base for 5/10ns/cm

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

## ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
HER1601G	TO-220A	50 Units/Tube
HER1602G	TO-220A	50 Units/Tube
HER1603G	TO-220A	50 Units/Tube
HER1604G	TO-220A	50 Units/Tube
HER1605G	TO-220A	50 Units/Tube
HER1606G	TO-220A	50 Units/Tube
HER1607G	TO-220A	50 Units/Tube
HER1608G	TO-220A	50 Units/Tube

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

Won-Top Electronics Co., Ltd (WTE) has checked all information carefully and believes it to be correct and accurate. However, WTE cannot assume any responsibility for inaccuracies. Furthermore, this information does not give the purchaser of semiconductor devices any license under patent rights to manufacturer. WTE reserves the right to change any or all information herein without further notice.

**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.

**Won-Top Electronics Co., Ltd.**

No. 44 Yu Kang North 3rd Road, Chine Chen Dist., Kaohsiung, Taiwan

**Phone:** 886-7-822-5408 or 886-7-822-5410

**Fax:** 886-7-822-5417

**Email:** sales@wontop.com

**Internet:** <http://www.wontop.com>

*We power your everyday.*