

HER301 – HER308

3.0A HIGH EFFICIENCY RECTIFIER

Features

- Diffused Junction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability

Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 1.2 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
- Epoxy: UL 94V-O rate flame retardant



DO-201AD		
Dim	Min	Max
A	25.4	—
B	8.50	9.50
C	1.20	1.30
D	5.0	5.60
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 301	HER 302	HER 303	HER 304	HER 305	HER 306	HER 307	HER 308	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 (Note 1) @ $T_A = 55^\circ\text{C}$	I_o	3.0								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 @ $I_F = 3.0\text{A}$	V_{FM}	1.0			1.3		1.7			V
Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$	I_{RM}	10.0				100				μA
Reverse Recovery Time (Note 2)	t_{rr}	50				75				nS
Typical Junction Capacitance (Note 3)	C_j	80				50				pF
Operating Temperature Range	T_j	-65 to +125								$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to +150								$^\circ\text{C}$

*Glass passivated forms are available upon request

Note: 1. Leads maintained at ambient temperature at a distance of 9.5mm from the case

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

3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

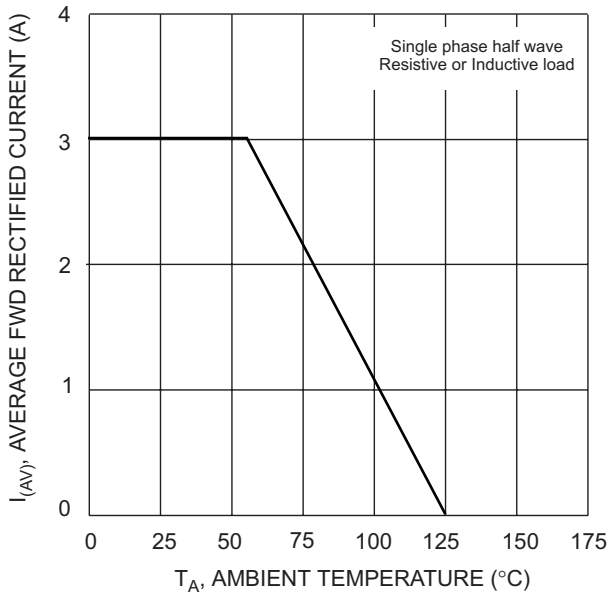


Fig. 1 Forward Current Derating Curve

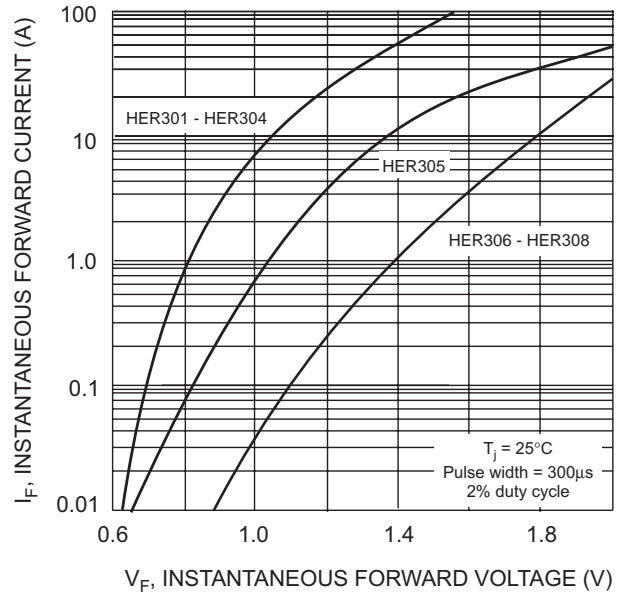


Fig. 2 Typical Forward Characteristics

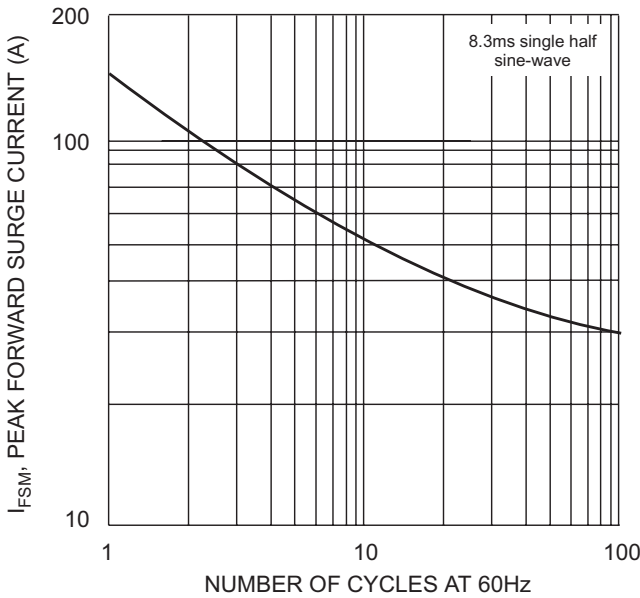


Fig. 3 Peak Forward Surge Current

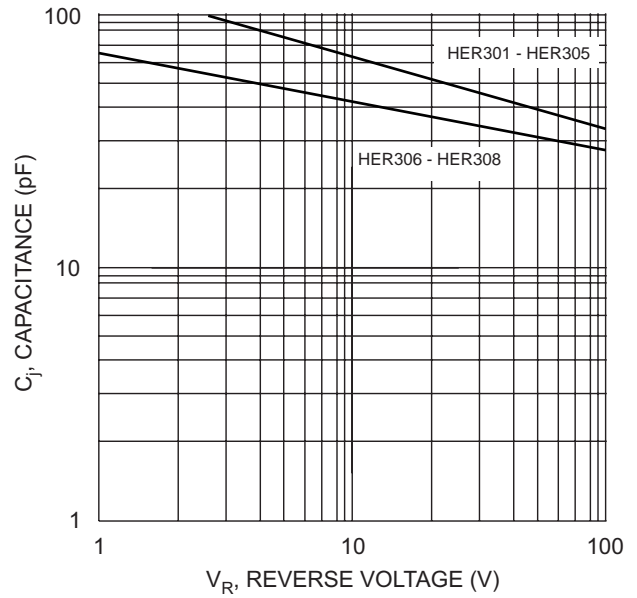
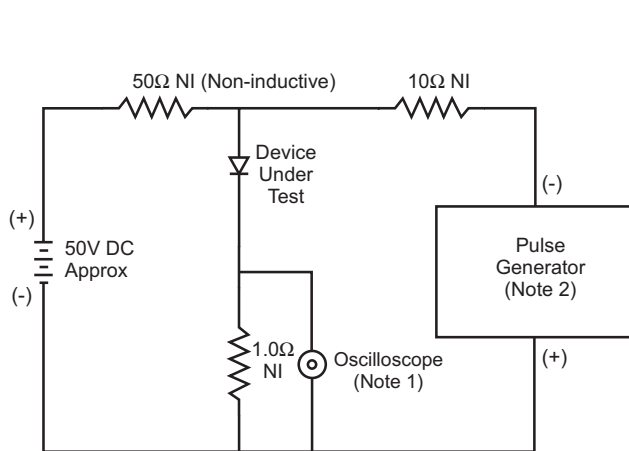
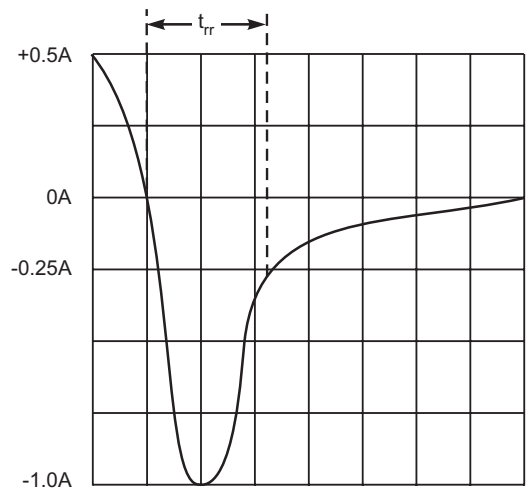


Fig. 4 Typical Junction Capacitance



- 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
HER301-T3	DO-201AD	1200/Tape & Reel
HER301-TB	DO-201AD	1200/Tape & Box
HER301	DO-201AD	500 Units/Box
HER302-T3	DO-201AD	1200/Tape & Reel
HER302-TB	DO-201AD	1200/Tape & Box
HER302	DO-201AD	500 Units/Box
HER303-T3	DO-201AD	1200/Tape & Reel
HER303-TB	DO-201AD	1200/Tape & Box
HER303	DO-201AD	500 Units/Box
HER304-T3	DO-201AD	1200/Tape & Reel
HER304-TB	DO-201AD	1200/Tape & Box
HER304	DO-201AD	500 Units/Box
HER305-T3	DO-201AD	1200/Tape & Reel
HER305-TB	DO-201AD	1200/Tape & Box
HER305	DO-201AD	500 Units/Box
HER306-T3	DO-201AD	1200/Tape & Reel
HER306-TB	DO-201AD	1200/Tape & Box
HER306	DO-201AD	500 Units/Box
HER307-T3	DO-201AD	1200/Tape & Reel
HER307-TB	DO-201AD	1200/Tape & Box
HER307	DO-201AD	500 Units/Box
HER308-T3	DO-201AD	1200/Tape & Reel
HER308-TB	DO-201AD	1200/Tape & Box
HER308	DO-201AD	500 Units/Box

Products listed in **bold** are WTE **Preferred** devices.

♦T3 suffix refers to a 13" reel. TB suffix refers to Ammo Pack.

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.

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

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