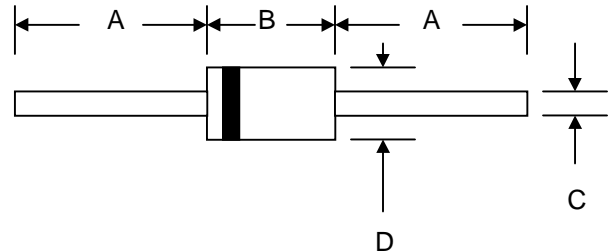


3.0A HIGH EFFICIENCY RECTIFIER

HER301 – HER308 Vishaymas General Semiconductor

Features

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



Mechanica 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-27		
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	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 (Note 1)	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 $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $IRR = 0.25\text{A}$. See figure 5.

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

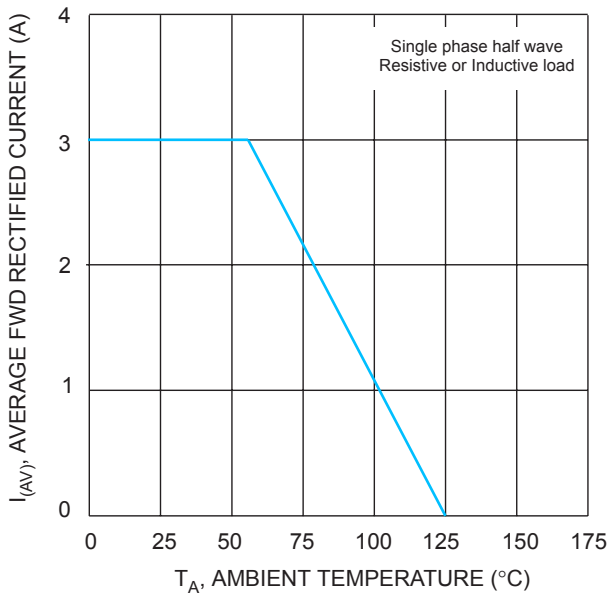


Fig. 1 Forward Current Derating Curve

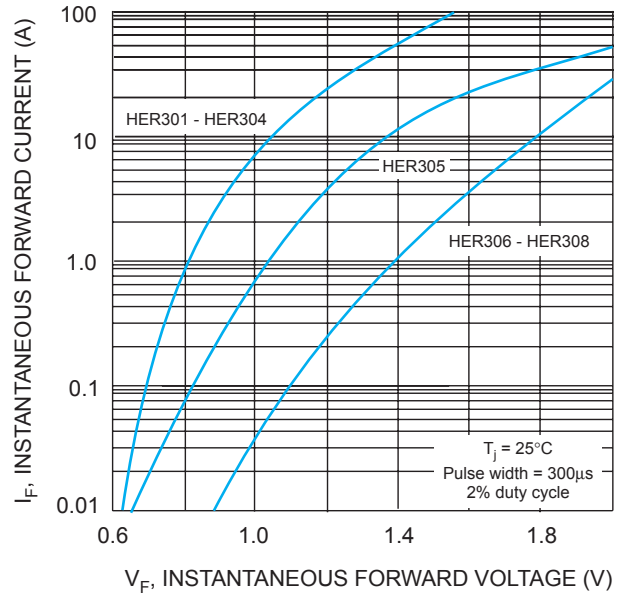


Fig. 2 Typical Forward Characteristics

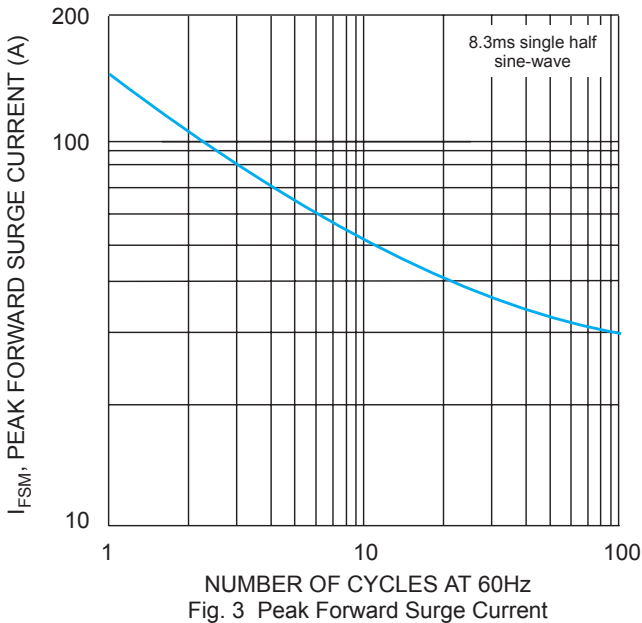


Fig. 3 Peak Forward Surge Current

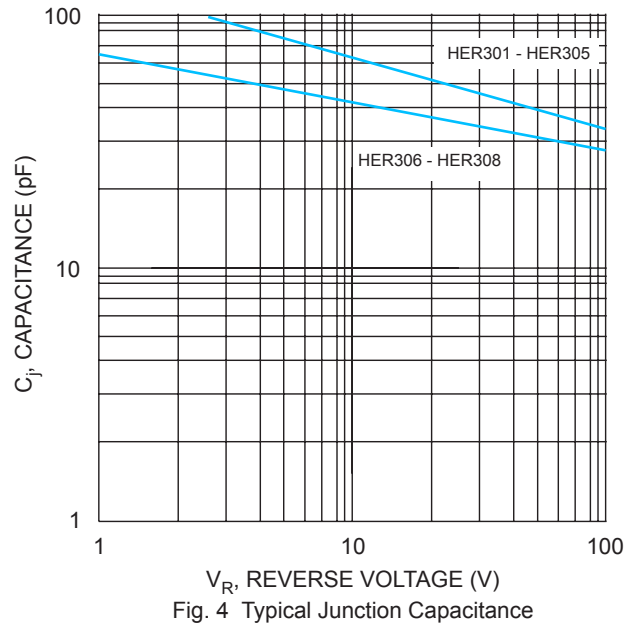


Fig. 4 Typical Junction Capacitance

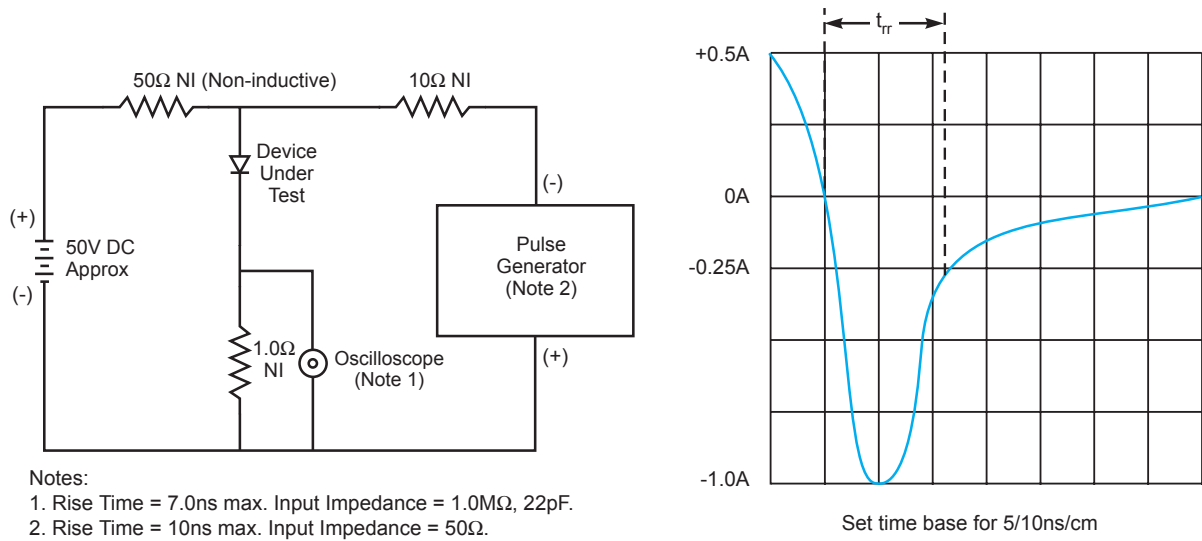


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

