

# HER601 - HER608

**PRV : 50 - 1000 Volts**

**Io : 6.0 Amperes**

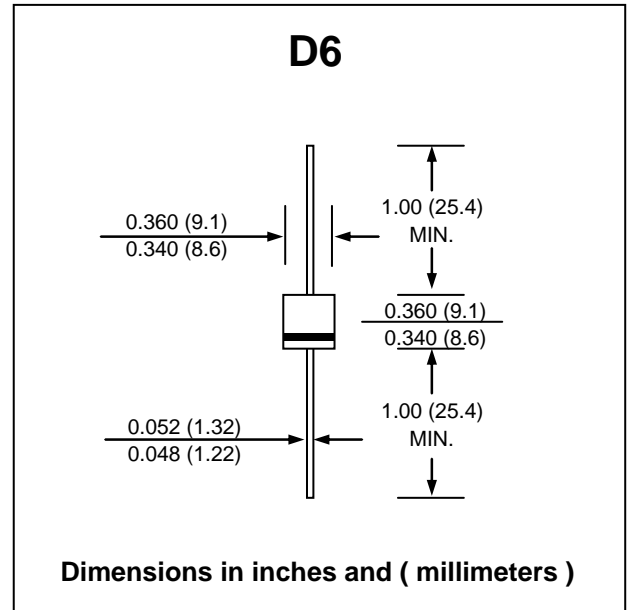
### FEATURES :

- \* High surge current capability
- \* Low leakage current
- \* Forward voltage drop
- \* Low power loss
- \* High efficiency
- \* **Pb / RoHS Free**

### MECHANICAL DATA :

- \* Case : Void-free molded plastic body
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 2.1 grams

## HIGH EFFICIENT RECTIFIER DIODES



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specific.  
 Single phase, half wave, 60 Hz, resistive or inductive load  
 For capacitive load, derate current by 20%

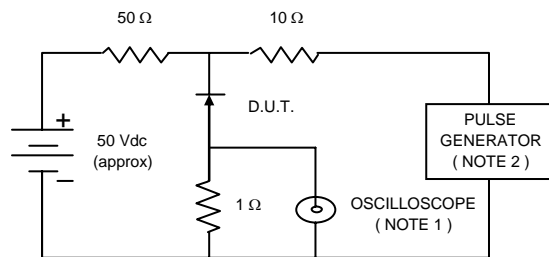
RATING	SYMBOL	HER 601	HER 602	HER 603	HER 604	HER 605	HER 606	HER 607	HER 608	UNIT
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	300	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	210	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	300	400	600	800	1000	V
Maximum Average Forward Current 0.375"(9.5mm) Lead Length $T_a = 55\text{ }^\circ\text{C}$	$I_{F(AV)}$	6.0								A
Maximum Peak Forward Surge Current, 8.3ms Single half sine wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	200								A
Maximum Forward Voltage at $I_F = 6.0\text{ A}$	$V_F$	1.1				1.7				V
Maximum DC Reverse Current $T_a = 25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 100\text{ }^\circ\text{C}$	$I_R$	10								$\mu\text{A}$
	$I_{R(H)}$	50								$\mu\text{A}$
Maximum Reverse Recovery Time ( Note 1 )	$T_{rr}$	50				75				ns
Typical Junction Capacitance ( Note 2 )	$C_J$	50								pf
Junction Temperature Range	$T_J$	- 65 to + 150								$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	- 65 to + 150								$^\circ\text{C}$

#### Notes :

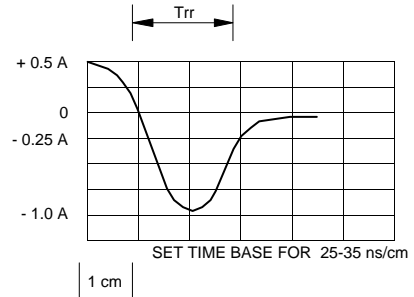
- ( 1 ) Reverse Recovery Test Conditions :  $I_F = 0.5\text{ A}$ ,  $I_R = 1.0\text{ A}$ ,  $I_{rr} = 0.25\text{ A}$ .
- ( 2 ) Measured at 1.0 MHz and applied reverse voltage of 4.0 Vdc

## RATING AND CHARACTERISTIC CURVES ( HER601 - HER608 )

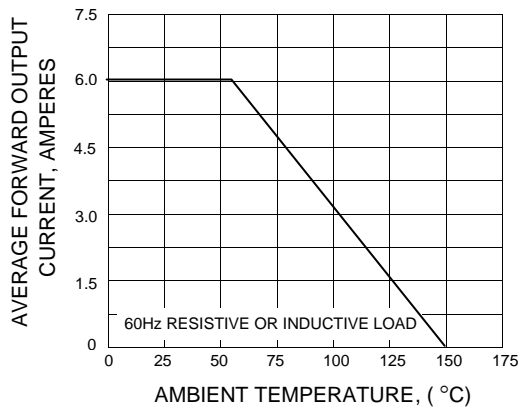
**FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



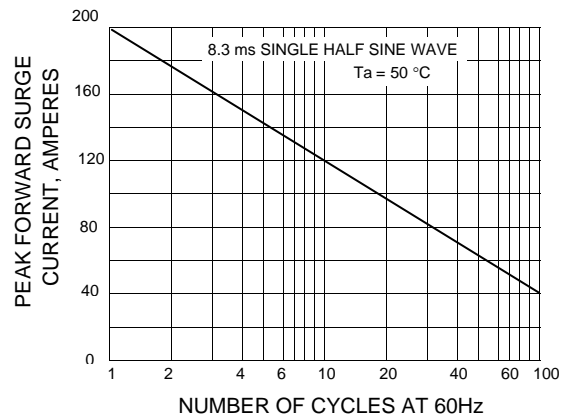
NOTES : 1. Rise Time = 7 ns max., Input Impedance = 1 megaohm, 22 pF.  
 2. Rise time = 10 ns max., Source Impedance = 50 ohms.  
 3. All Resistors = Non-inductive Types.



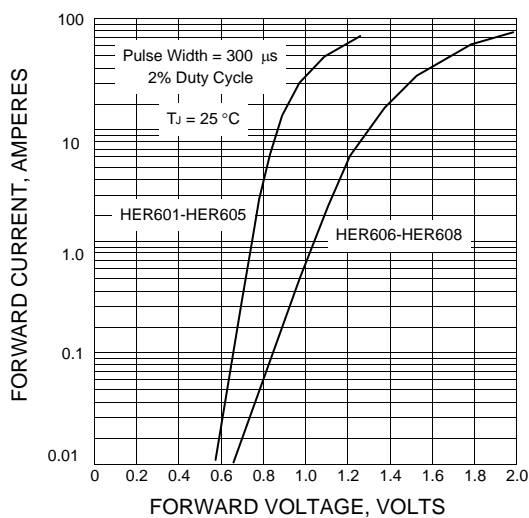
**FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



**FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.4 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.5 - TYPICAL REVERSE CHARACTERISTICS**

