



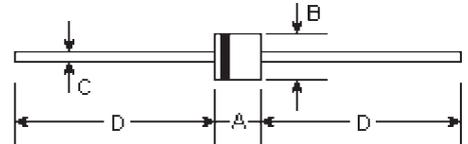
# HER601 THRU HER608

**HIGH EFFICIENCY RECTIFIER**  
**Reverse Voltage - 50 to 1000 Volts**  
**Forward Current - 6.0 Amperes**

## Features

- Plastic package has Underwriters Laboratory Flammability classification 94V-0 utilizing Flame retardant epoxy molding compound
- Void-free plastic in R-6 package
- 6.0 ampere operation at  $T_A=55^\circ\text{C}$  with no thermal runaway
- Ultra fast switching for high efficiency

## R-6



## Mechanical Data

- **Case:** Molded plastic, R-6
- **Terminals:** Axial leads, solderable per MIL-STD-202, method 208
- **Polarity:** Band denotes cathode
- **Mounting Position:** Any
- **Weight:** 0.074 ounce, 2.1 grams

DIM	DIMENSIONS				Note
	inches		mm		
	Min.	Max.	Min.	Max.	
A	0.339	0.358	8.6	9.1	
B	0.339	0.358	8.6	9.1	ϕ
C	0.047	0.052	1.2	1.3	ϕ
D	1.000	-	25.40	-	

## Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60Hz, resistive or inductive load.

	Symbols	HER 601	HER 602	HER 603	HER 604	HER 605	HER 606	HER 607	HER 608	Units	
Peak reverse voltage, Repetitive;	$V_{RRM}$	50	100	200	300	400	600	800	1000	Volts	
Maximum RMS voltage	$V_{RMS}$	35	70	140	210	280	420	560	700	Volts	
DC reverse voltage	$V_{DC}$	50	100	200	300	400	600	800	1000	Volts	
Average forward current, $I_{AV}$ @ $T_A=55^\circ\text{C}$ 3/8" lead length, 60Hz, resistive or inductive load	$I_{AV}$	6.0								Amps	
Peak forward surge current, $I_{FSM}$ (surge) 8.3mS single half sine-wave superimposed on rated load (MIL-STD-750D 4066 method)	$I_{FSM}$	300.0								Amps	
Maximum forward voltage @6.0A, 25°C	$V_F$	1.00			1.10		1.70			Volts	
Maximum reverse current, @rated reverse voltage $T_J=25^\circ\text{C}$ $T_J=100^\circ\text{C}$	$I_R$	10.0				500.0				μA	
Reverse recovery time $I_F=0.5A, I_R=1A, I_{RR}=0.25A$	$T_{rr}$	50					75				nS
Typical junction capacitance (Note 1)	$C_J$	300								pF	
Typical thermal resistance (Note 2)	$R_{\theta JA}$	10.0								°C/W	
Operating and storage temperature range	$T_J, T_{STG}$	-55 to +150								°C	

### Notes:

- (1) Measured at 1.0MHz and applied reverse voltage of 4.0 VDC
- (2) Thermal resistance from junction to ambient and from junction to lead length 0.375" (9.5mm) P.C.B. mounted

# RATINGS AND CHARACTERISTIC CURVES

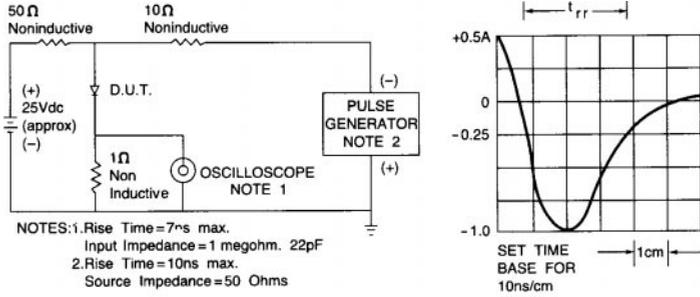


Fig. 1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

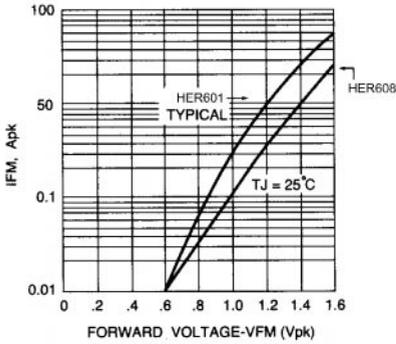


Fig. 2 - FORWARD CHARACTERISTICS

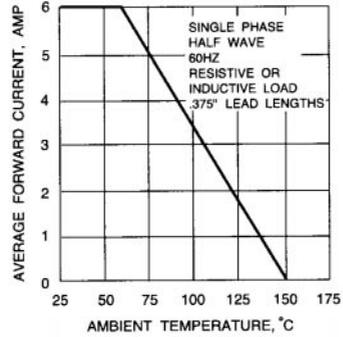


Fig. 3 - FORWARD CURRENT DERATING CURVE

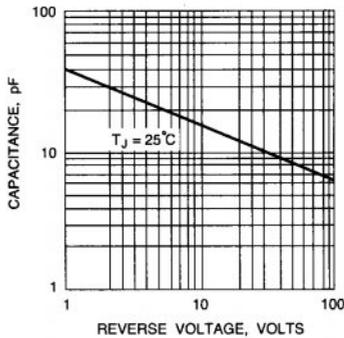


Fig. 4 - TYPICAL JUNCTION CAPACITANCE vs. REVERSE VOLTAGE

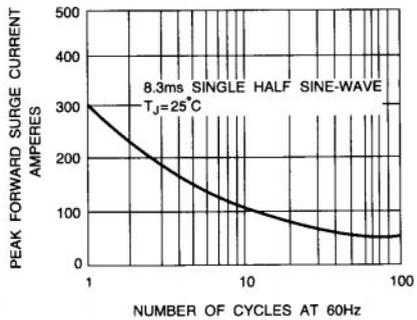


Fig. 5 - PEAK FORWARD SURGE CURRENT