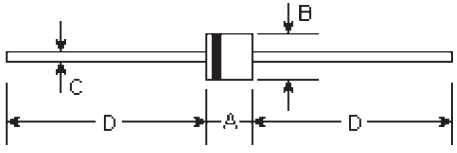
HER601 THRU HER608

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℃ with no thermal runaway
- Ultra fast swithcing for high efficiency

R-6



Mechanical Data

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

DIMENSIONS					
DIM	inches		mm		Note
	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℃ 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_O@T_A=55℃ 3/8" lead length, 60Hz, resistive or inductive load	$I_{(AV)}$	6.0								Amps
Peak forward surge current, I_{FM} (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℃	V_F	1.00				1.10	1.70			Volts
Maximum reverse current. @rated reverse voltage T_j=25℃ / T_j=100℃	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								ρF
Typical thermal resistance (Note 2)	$R_{(\cdot)JA}$	10.0								℃/W
Operating and storage temperature range	T_J, T_{STG}	-55 to +150								℃

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

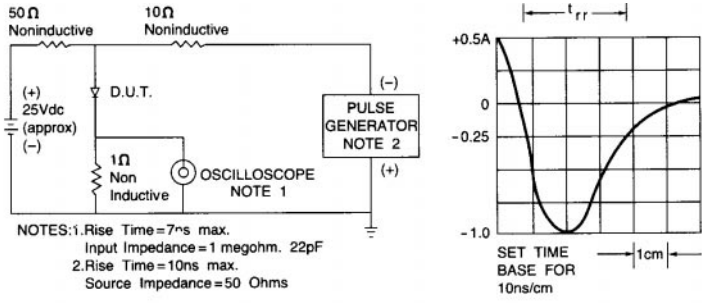


Fig. 1 – REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

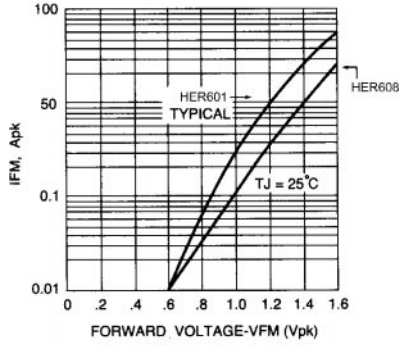


Fig. 2 – FORWARD CHARACTERISTICS

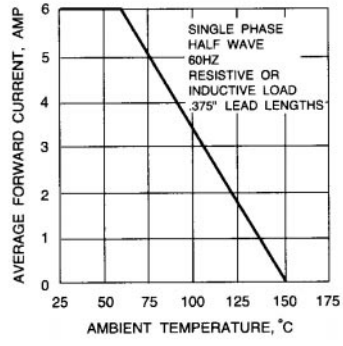


Fig. 3 – FORWARD CURRENT DERATING CURVE

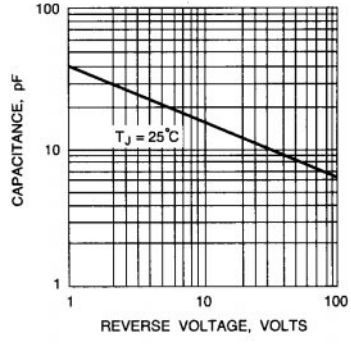


Fig. 4 – TYPICAL JUNCTION CAPACITANCE
vs. REVERSE VOLTAGE

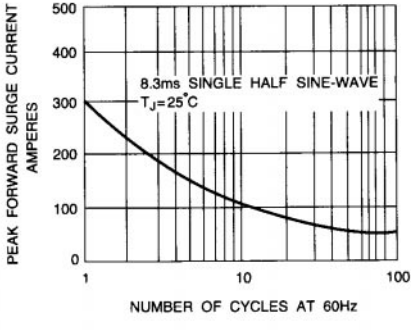


Fig. 5 – PEAK FORWARD SURGE CURRENT