

HER601S-HER608S

High Efficiency Rectifiers



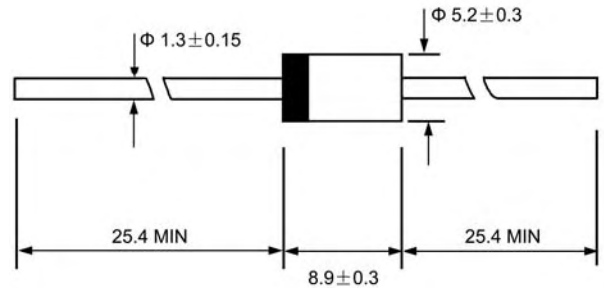
VOLTAGE RANGE: 50 --- 1000 V
CURRENT: 6.0 A

DO-27



Features

- ◇ Low cost
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ Easily cleaned with alcohol, Isopropanol and similar solvents
- ◇ The plastic material carries U/L recognition 94V-0



Dimensions in millimeters

Mechanical Data

- ◇ Case: JEDEC DO-27, molded plastic
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.041 ounces, 1.15 grams
- ◇ Mounting position: Any

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

		HER 601S	HER 602S	HER 603S	HER 604S	HER 605S	HER 606S	HER 607S	HER 608S	UNITS
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 rectified current 9.5mm lead length, @ $T_A=75^\circ C$	$I_{F(AV)}$	6.0								A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ C$	I_{FSM}	200.0								A
Maximum instantaneous forward voltage @ 6.0A	V_F	1.0		1.3		1.7			V	
Maximum reverse current @ $T_A=25^\circ C$ at rated DC blocking voltage @ $T_A=100^\circ C$	I_R	10.0 200.0								μA
Maximum reverse recovery time (Note1)	t_{rr}	50				75				ns
Typical junction capacitance (Note2)	C_J	100				65				pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	12								$^\circ C/W$
Operating junction temperature range	T_J	- 55 ---- + 150								$^\circ C$
Storage temperature range	T_{STG}	- 55 ---- + 150								$^\circ C$

NOTE: 1. Measured with $I_F=0.5A$, $I_R=1A$, $I_{rr}=0.25A$.

2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

3. Thermal resistance junction to ambient.

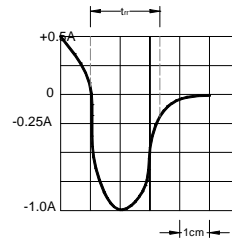
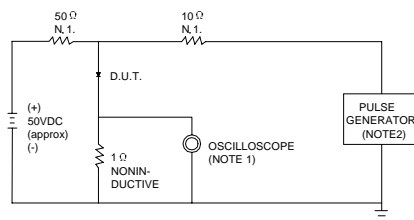
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Ratings AND Characteristic Curves

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

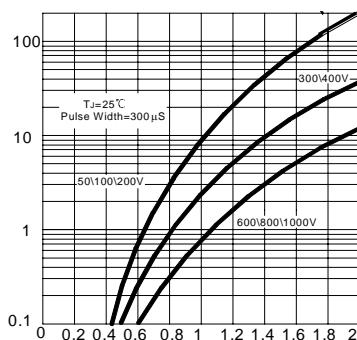


NOTES:1.RISE TIME = 7ns MAX.INPUT IMPEDANCE = $1M\Omega$. 22pF.
2.RISE TIME = 10ns MAX.SOURCE IMPEDANCE = 50Ω .

SET TIME BASE FOR 10/20 ns/cm

FIG.2 -- TYPICAL FORWARD CHARACTERISTIC

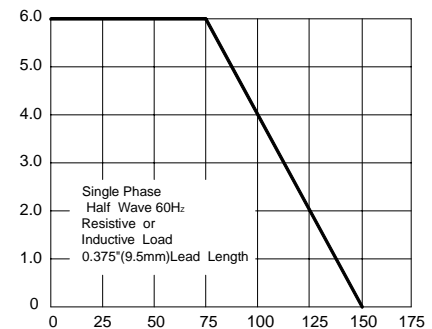
INSTANTANEOUS FORWARD CURRENT AMPERES



INSTANTANEOUS FORWARD VOLTAGE, VOLTS

FIG.3 -- FORWARD DERATING CURVE

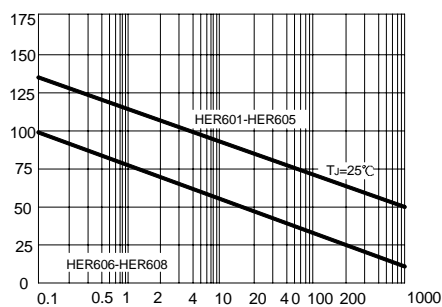
AVERAGE FORWARD CURRENT AMPERES



AMBIENT TEMPERATURE, $^\circ\text{C}$

FIG.4 -- TYPICAL JUNCTION CAPACITANCE

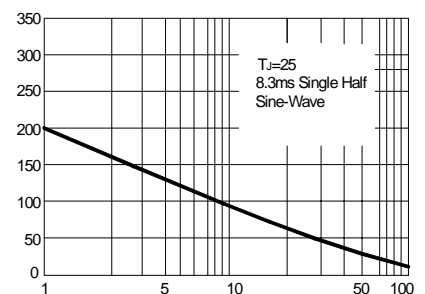
JUNCTION CAPACITANCE, pF



REVERSE VOLTAGE, VOLTS

FIG.5 -- PEAK FORWARD SURGE CURRENT

PEAK FORWARD SURGE CURRENT AMPERES



NUMBER OF CYCLES AT 60Hz

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