



HIGH EFFICIENCY RECTIFIER

HER101 THRU HER108

**VOLTAGE RANGE
CURRENT**

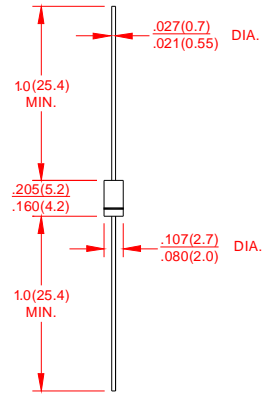
**50 to 1000 Volts
1.0Ampere**

FEATURES

- Low coat construction
- Fast switching for high efficiency.
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed:
260°C/10 secods/.375”(9.5mm)lead length at 5 lbs(2.3kg) tension

MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-O rate flame retardant
- Polarity: Color band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- Mounting position: Any
- Weight: 0.012ounce, 0.33 grams



DO-41

Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

	SYMBOLS	HER 101	HER 102	HER 103	HER 104	HER 105	HER 106	HER 107	HER 108	UNITS	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	300	400	600	800	1000	Volts	
Maximum RMS Voltage	V_{RMS}	35	70	140	210	280	420	560	800	Volts	
Maximum DC Blocking Voltage	V_{DC}	50	100	200	300	400	600	800	1000	Volts	
Maximum Average Forward Rectified Current 0.375”(9.5mm) lead length at $T_A=50^\circ\text{C}$	$I_{(AV)}$	1.0								Amp	
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	I_{FSM}	30								Amps	
Maximum Instantaneous Forward Voltage @ 1.0A	V_F	1.0		1.3		1.5		1.7		Volts	
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	$T_A=25^\circ\text{C}$								μA	
		$T_A=125^\circ\text{C}$									
Maximum Full Load Recovery Current,full cycle average 0.375”(9.5mm)lead length at $T_L=55^\circ\text{C}$	$I_{R(AV)}$	100								μA	
Maximum Reverse Recovery Time (NOTE1)	t_{rr}	50					75				ns
Typical Thermal Resistance (NOTE 2)	C_J	15					12				PF
Typical Thermal Resistance(NOTE 3)	$R_{\theta JA}$	60								$^\circ\text{C/W}$	
Operating Junction Temperature Range	$T_J T_{STG}$	(-55 to +150)								$^\circ\text{C}$	

Notes:

1. Test Conditions: $I_f=0.5\text{mA}$, $I_r=1.0\text{mA}$, $I_{rr}=0.25\text{A}$
2. Measured at 1 MHz and applied reverse of 4.0 volts.
3. Thermal resistance from junction to ambient with .375”(9.5mm)lead length, P.C.B. mounted.



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RATING AND CHARACTERISTIC CURVES HER101 THRU HER108

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

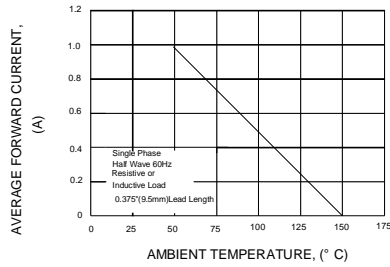


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

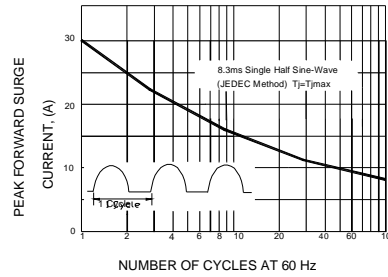


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

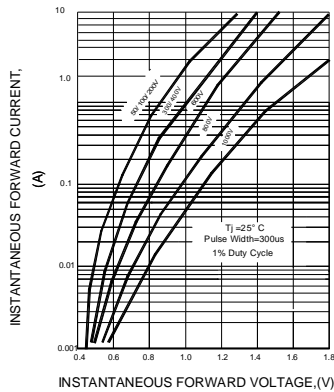


FIG.4-TYPICAL REVERSE CHARACTERISTICS

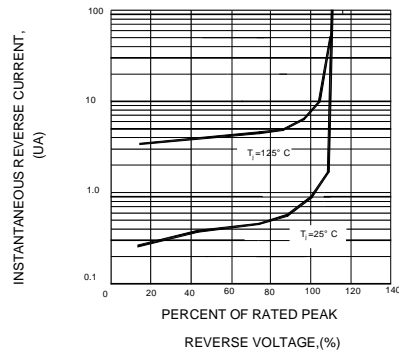


FIG.5-TYPICAL JUNCTION CAPACITANCE

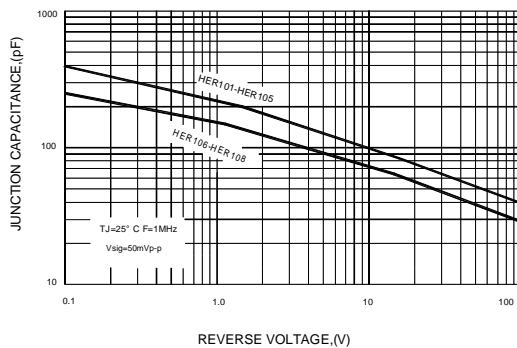
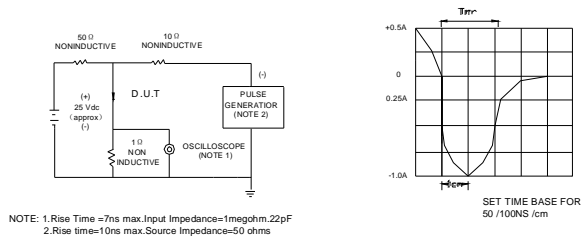


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTE: 1. Rise Time = 7ns max. Input Impedance = 1megohm, 22pF
2. Rise time = 10ns max. Source Impedance = 50 ohms

SET TIME BASE FOR 50 / 100NS / cm