



HIGH EFFICIENCY RECTIFIER

HER101 THRU HER108

VOLTAGE RANGE
CURRENT

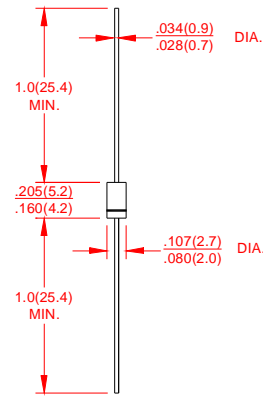
50 to 1000 Volts
1.0Ampere

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 (NOTE 1) | 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

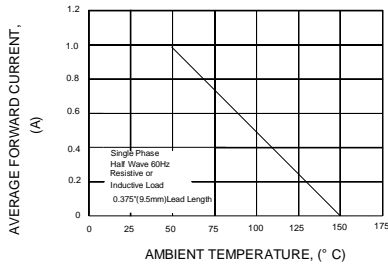


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

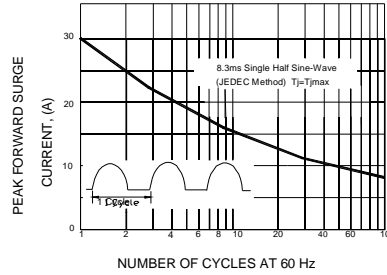


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

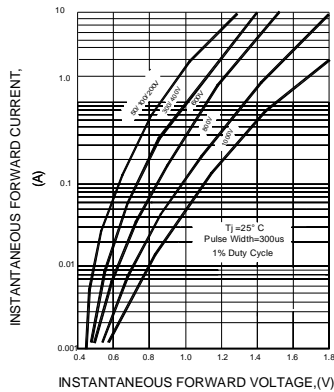


FIG.4-TYPICAL REVERSE CHARACTERISTICS

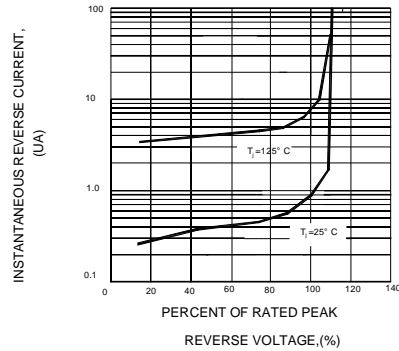


FIG.5-TYPICAL JUNCTION CAPACITANCE

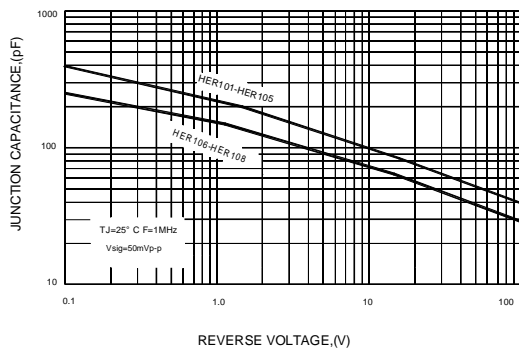
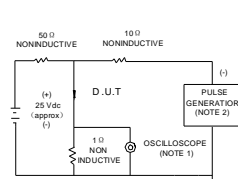
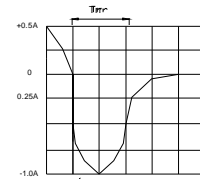


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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