



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

HER101
THRU
HER108

TECHNICAL SPECIFICATIONS OF HIGH EFFICIENCY RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts

CURRENT - 1.0 Ampere

FEATURES

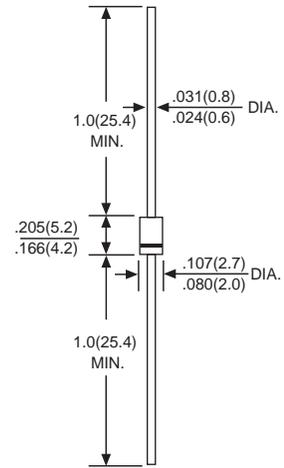
- * Low power loss, high efficiency
- * Low leakage
- * Low forward voltage
- * High current capability
- * High speed switching
- * High surge capability
- * High reliability

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: MIL-STD-202E, Method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Mounting position: Any
- * Weight: 0.4 gram



DO-41



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

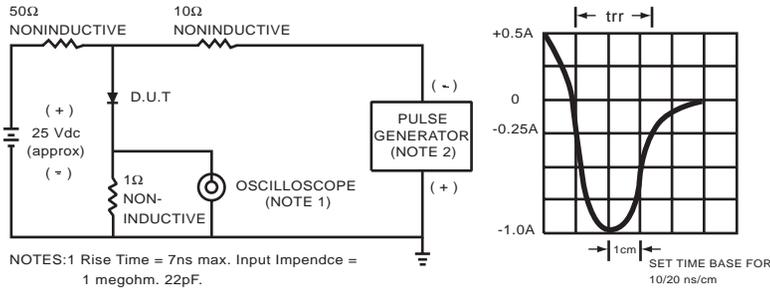
Rating at 25°C ambient temperature unless otherwise specified
Single phase, half wave 60 HZ, resistive or inductive load.
For capacitive load, derate current by 20%.

| | SYMBOL | HER101 | HER102 | HER103 | HER104 | HER105 | HER106 | HER107 | HER108 | UNITS | |
|---|-----------------------------------|--------------|--------|--------|--------|--------|--------|--------|--------|-------|----|
| Maximum Recurrent 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 | 700 | Volts | |
| Maximum DC Blocking Voltage | V _{DC} | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | Volts | |
| Maximum Average Forward Rectified Current at T _A = 50°C | I _O | 1.0 | | | | | | | | Amps | |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 30 | | | | | | | | Amps | |
| Maximum Instantaneous Forward Voltage at 1.0A DC | V _F | 1.0 | | | 1.3 | | 1.7 | | | Volts | |
| Maximum DC Reverse Current at Rated DC Blocking Voltage T _A = 25°C | I _R | 5.0 | | | | | | | | uAmps | |
| Maximum Full Load Reverse Current Average, Full Cycle .375*(9.5mm) lead length at T _L = 55°C | | 100 | | | | | | | | uAmps | |
| Maximum Reverse Recovery Time (Note 1) | t _{rr} | 50 | | | 75 | | 100 | | | nSec | |
| Typical Junction Capacitance (Note 2) | C _J | 15 | | | | | 12 | | | | pF |
| Operating and Storage Temperature Range | T _J , T _{STG} | -55 to + 150 | | | | | | | | | °C |

NOTES : 1. Test Conditions: I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts

RATING AND CHARACTERISTIC CURVES (HER101 THRU HER108)

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



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

FIG.2- TYPICAL FORWARD CURRENT DERATING CURVE

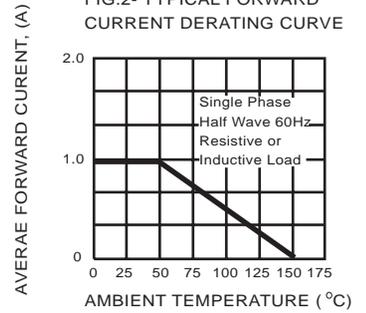


FIG.3- TYPICAL REVERSE CHARACTERISTICS

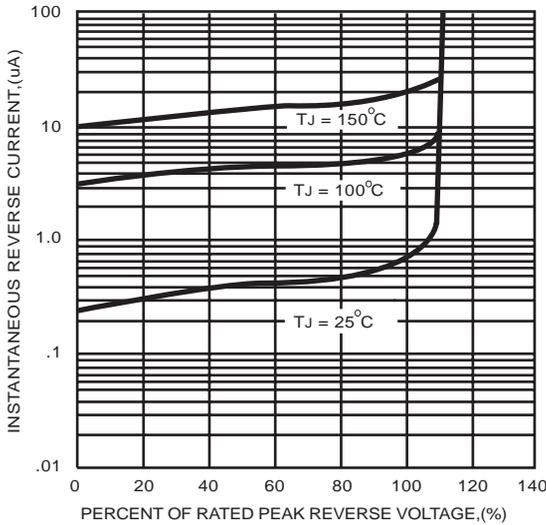


FIG.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

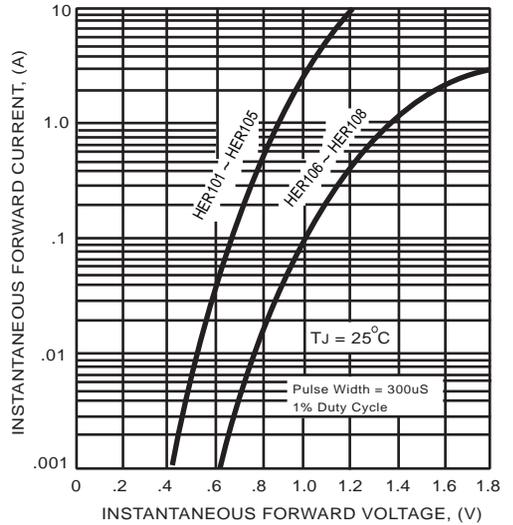


FIG.5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

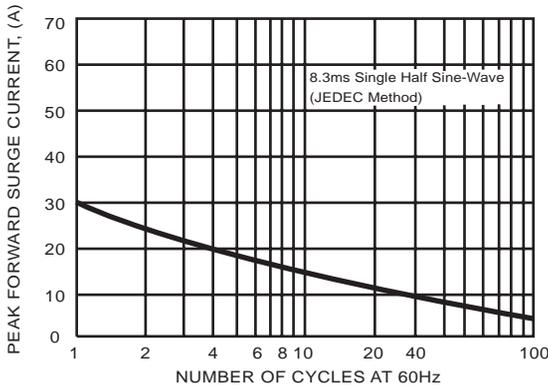
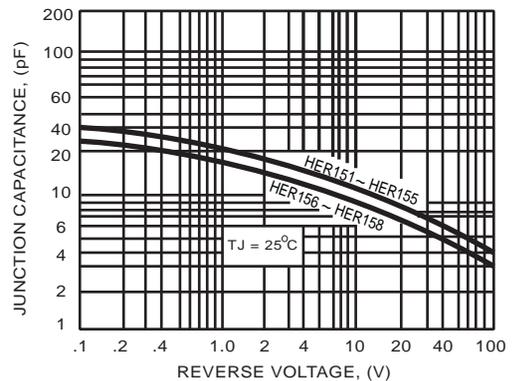


FIG.6- TYPICAL JUNCTION CAPACITANCE



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