

HIGH EFFICIENCY RECTIFIER

VOLTAGE RANGE 50 to 400 Volts CURRENT 8.0 Amperes

FEATURES

- * Low switching noise
- * Low forward voltage drop
- * Low thermal resistance
- * High current capability
- * High fast switching capability
- * High surge capability

MECHANICAL DATA

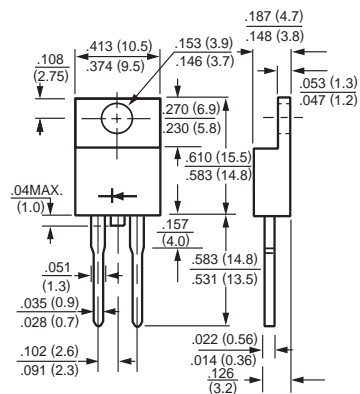
- * Case: TO-220A molded plastic
- * Epoxy: Device has UL flammability classification 94V-O
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 2.24 grams

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 current by 20%.



TO-220A



MAXIMUM RATINGS (At TA = 25°C unless otherwise noted)

| RATINGS | SYMBOL | HER801 | HER802 | HER803 | HER804 | HER805 | UNITS |
|--|-----------------------------------|--------------|--------|--------|--------|--------|-------|
| Maximum Recurrent Peak Reverse Voltage | V _{RRM} | 50 | 100 | 200 | 300 | 400 | Volts |
| Maximum RMS Voltage | V _{RMS} | 35 | 70 | 140 | 210 | 280 | Volts |
| Maximum DC Blocking Voltage | V _{DC} | 50 | 100 | 200 | 300 | 400 | Volts |
| Maximum Average Forward Rectified Current at T _c = 75°C | I _O | 8.0 | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I _{FSM} | 200 | | | | | Amps |
| Typical Thermal Resistance | R _{θJC} | 2.5 | | | | | °C/W |
| Typical Junction Capacitance (Note 2) | C _J | 40 | | | | | pF |
| Operating and Storage Temperature Range | T _J , T _{STG} | -55 to + 150 | | | | | °C |

ELECTRICAL CHARACTERISTICS (At TA = 25°C unless otherwise noted)

| CHARACTERISTICS | SYMBOL | HER801 | HER802 | HER803 | HER804 | HER805 | UNITS |
|--|-----------------|--------|--------|--------|--------|--------|-------|
| Maximum Instantaneous Forward Voltage at 8.0A DC | V _F | 1.0 | | | 1.3 | | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | I _R | 10 | | | 150 | | uAmps |
| Maximum Reverse Recovery Time (Note 1) | t _{rr} | 50 | | | | | nSec |

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.
3. Suffix "R" for Reverse Polarity.

RATING AND CHARACTERISTIC CURVES (HER801 THRU HER805)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

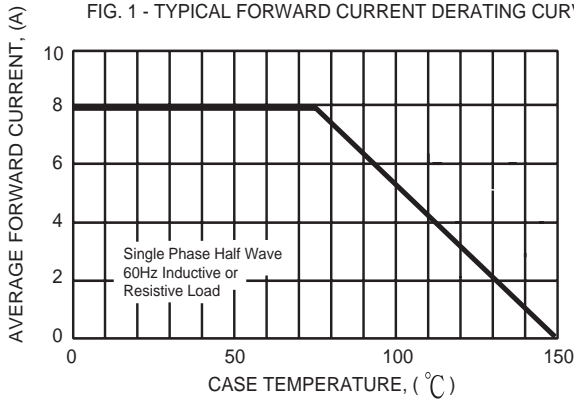


FIG. 2 - TYPICAL REVERSE CHARACTERISTICS

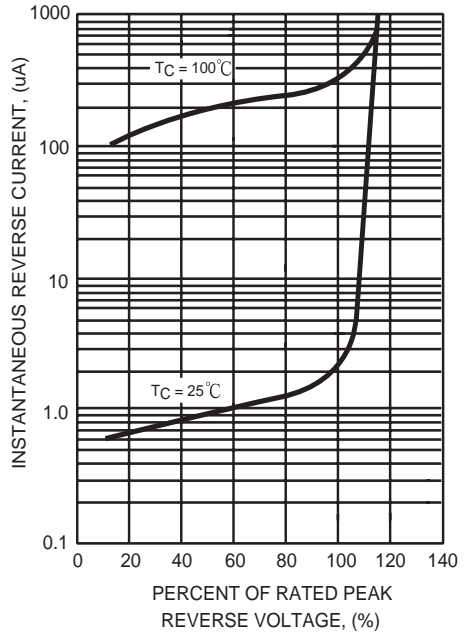


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

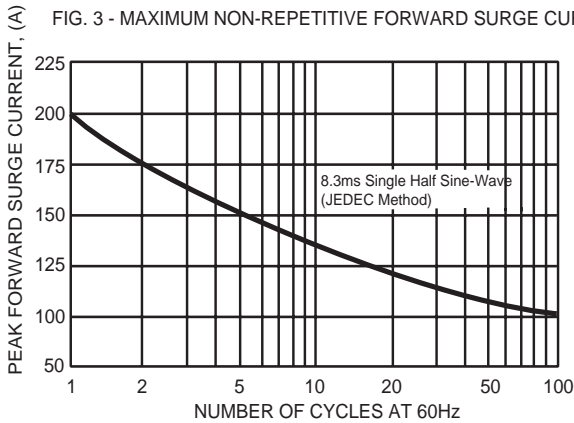


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

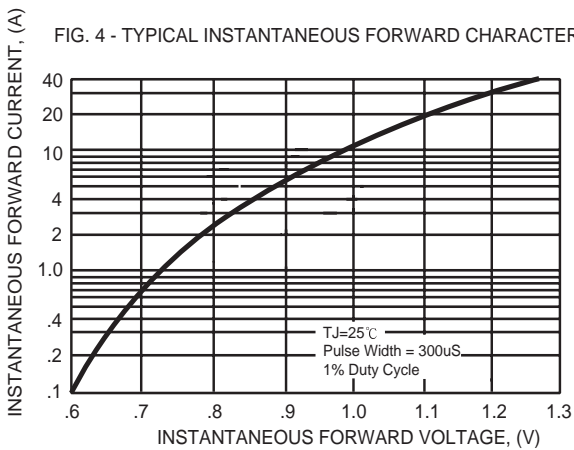


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

