

HIGH EFFICIENCY RECTIFIER

VOLTAGE RANGE 50 to 200 Volts CURRENT 30 Amperes

FEATURES

- * Low power loss, high efficiency
- * Low forward voltage drop
- * Low thermal resistance
- * High current capability
- * High reliability
- * High surge capability

MECHANICAL DATA

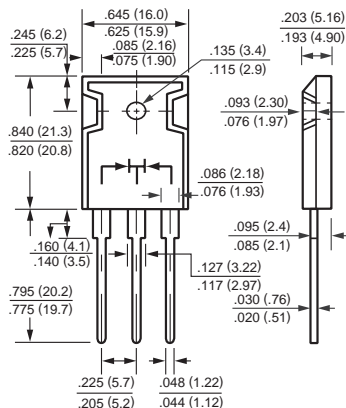
- * Case: TO-247 molded plastic
- * Epoxy: Device has UL flammability classification 94V-0
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 5.60 grams
- * Polarity: As marked

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-247



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

| RATINGS | SYMBOL | HER3001C | HER3002C | HER3003C | UNITS |
|------------------------------------------------------------------------------------------------------|----------|--------------|----------|----------|-------|
| Maximum Recurrent Peak Reverse Voltage | VRRM | 50 | 100 | 200 | Volts |
| Maximum RMS Voltage | VRMS | 35 | 70 | 140 | Volts |
| Maximum DC Blocking Voltage | Vbc | 50 | 100 | 200 | Volts |
| Maximum Average Forward Rectified Current at Tc = 75°C | IO | 30 | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | IFSM | 300 | | | Amps |
| Typical Thermal Resistance | RθJC | 1.0 | | | °C/W |
| Typical Junction Capacitance (Note 2) | CJ | 125 | | | pF |
| Operating and Storage Temperature Range | TJ, TSTG | -65 to + 150 | | | °C |

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

| CHARACTERISTICS | SYMBOL | HER3001C | HER3002C | HER3003C | UNITS |
|------------------------------------------------------------|--------|-----------|----------|----------|-------|
| Maximum Instantaneous Forward Voltage at 15.0A DC | VF | 1.0 | | | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | IR | 10 150 | | | uAmps |
| Maximum Reverse Recovery Time (Note 1) | trr | 50 | | | nSec |

NOTES : 1. Test Conditions: IF = 0.5A, IR = -1.0A, IRR = -0.25A
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
3. Suffix "A" = Common Anode.

RATING AND CHARACTERISTIC CURVES (HER3001C THRU HER3003C)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

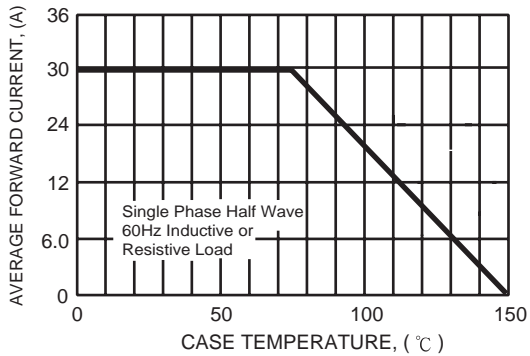


FIG. 2 - TYPICAL REVERSE CHARACTERISTICS

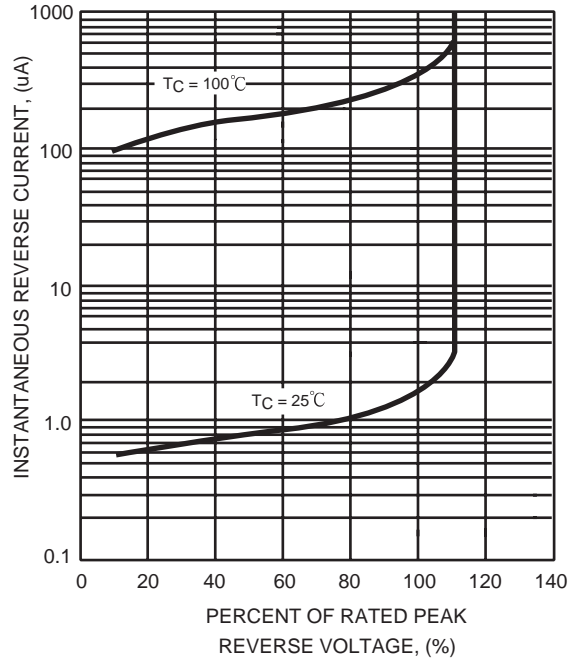


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

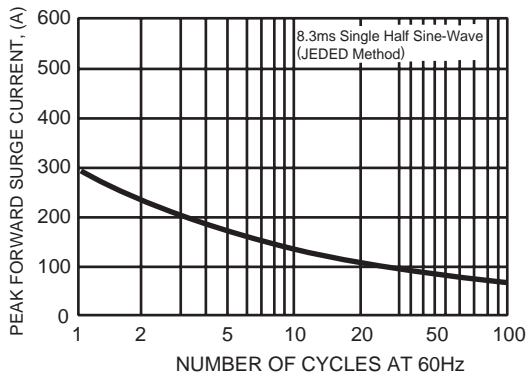


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

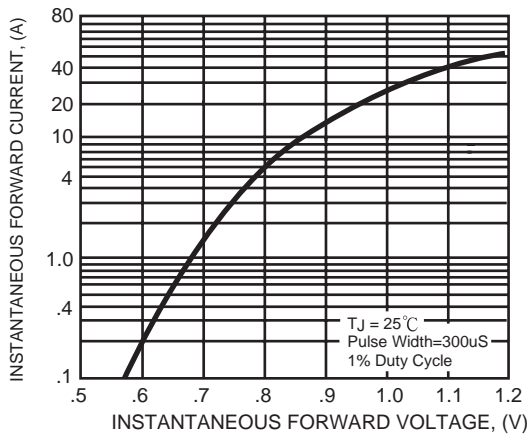


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

