

# HER1601 THRU HER1606

## HIGH EFFICIENCY PLASTIC RECTIFIER

VOLTAGE: 50-600V

CURRENT: 16.0A

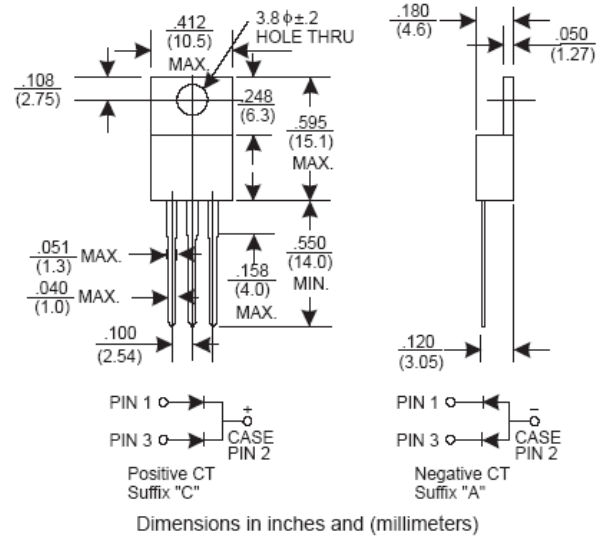
### FEATURES

- 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:** UL94V-0 rate flame retardant
- **Lead:** MIL-STD- 202E, Method 208 guaranteed
- **Polarity:** Color band denotes cathode end
- **Mounting position:** Any
- **Weight:** 2.24 grams

### TO-220



## 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%.

|   | SYMBOL    | HER 1601 | HER 1602 | HER 1603 | HER 1604 | HER 1605 | HER 1606 | units         |
|---|-----------|----------|----------|----------|----------|----------|----------|---------------|
| Maximum Recurrent Peak Reverse Voltage  | $V_{RRM}$ | 50       | 100      | 200      | 300      | 400      | 600      | V             |
| Maximum RMS Voltage   | $V_{RMS}$ | 35       | 70       | 140      | 210      | 280      | 420      | V             |
| Maximum DC Blocking Voltage   | $V_{DC}$  | 50       | 100      | 200      | 300      | 400      | 600      | V             |
| Maximum Average Forward rectified Current at $T_A=50^\circ\text{C}$                                       | $I_o$     | 16.0     |          |          |          |          |          | A             |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rate load (JEDEC method)           | $I_{FSM}$ | 200      |          |          |          |          |          | A             |
| Maximum Instantaneous forward Voltage at 8.0A DC  | $V_F$     | 1.0      |          | 1.3      |          | 1.85     |          | V             |
| Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A=25^\circ\text{C}$                            | $I_R$     | 10       |          |          |          |          |          | $\mu\text{A}$ |
| Maximum Full Load Reverse Current Full Cycle Average, .375" (9.5mm) lead length at $T_L=55^\circ\text{C}$ |           | 150      |          |          |          |          |          |               |
| Maximum Reverse Recovery Time (Note 1)  | $t_{rr}$  | 60       |          |          |          | 100      |          | nS            |
| Typical Junction Capacitance (Note 2)   | $C_J$     | 30       |          |          |          | 20       |          | pF            |

Notes: 1. Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$

2. Measured at 1MHz and applied reverse voltage of 4.0 volts