

HIGH EFFICIENCY RECTIFIER

VOLTAGE RANGE 50 to 400 Volts CURRENT 16.0 Amperes

FEATURES

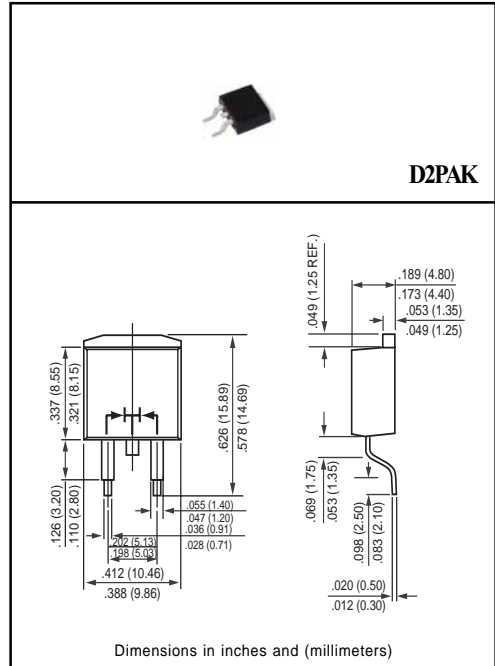
- * Low power loss, high efficiency
- * Low forward voltage drop
- * Low thermal resistance
- * High current capability
- * High speed switching
- * High surge capability
- * High reliability

MECHANICAL DATA

- * Case: D2PAK molded plastic
- * Epoxy: Device has UL flammability classification 94V-O
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 2.2 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%.



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

| RATINGS | | SYMBOL | HER1601CS | HER1602CS | HER1603CS | HER1604CS | HER1605CS | UNITS |
|--|--|----------|--------------|-----------|-----------|-----------|-----------|-------|
| Maximum Recurrent Peak Reverse Voltage | | VRRM | 50 | 100 | 200 | 300 | 400 | Volts |
| Maximum RMS Voltage | | VRMS | 35 | 70 | 140 | 210 | 280 | Volts |
| Maximum DC Blocking Voltage | | VDC | 50 | 100 | 200 | 300 | 400 | Volts |
| Maximum Average Forward Rectified Current at Tc = 75°C | | IO | 16.0 | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | | IFSM | 200 | | | | | Amps |
| Typical Thermal Resistance | | RθJC | 2.5 | | | | | °C/W |
| Typical Junction Capacitance (Note 2) | | CJ | 40 | | | | | pF |
| Operating and Storage Temperature Range | | TJ, TSTG | -55 to + 150 | | | | | °C |

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

| CHARACTERISTICS | | SYMBOL | HER1601CS | HER1602CS | HER1603CS | HER1604CS | HER1605CS | UNITS |
|--|-------------|--------|-----------|-----------|-----------|-----------|-----------|-------|
| Maximum Instantaneous Forward Voltage at 8.0A DC | | VF | 1.0 | | | 1.3 | | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | @Tc = 25°C | IR | 10 | | | | | uAmps |
| | @Tc = 100°C | | 150 | | | | | |
| 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 (HER1601CS THRU HER1605CS)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

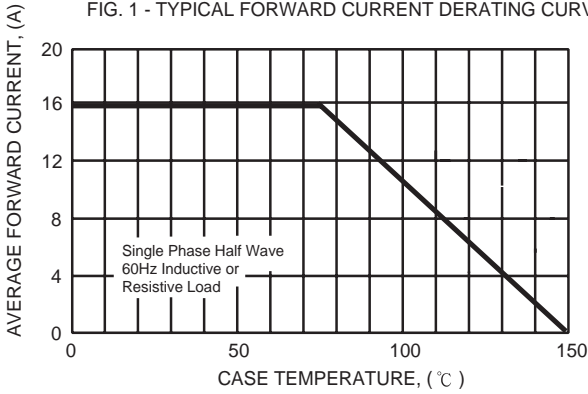


FIG. 2 - TYPICAL REVERSE CHARACTERISTICS

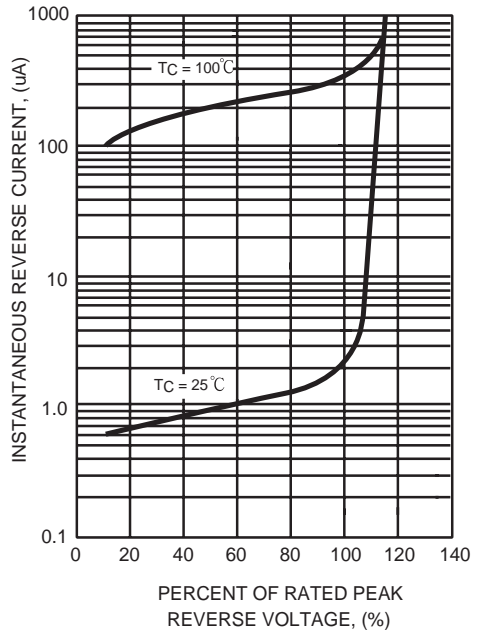


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

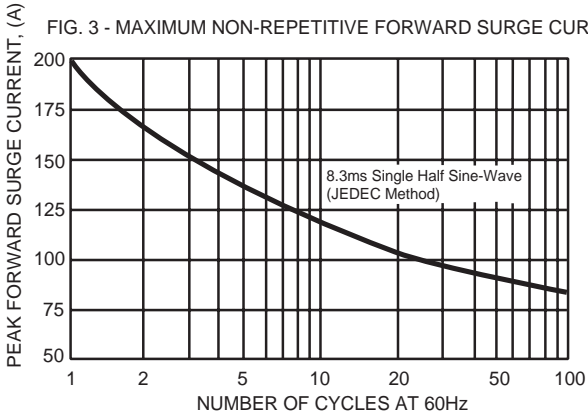


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

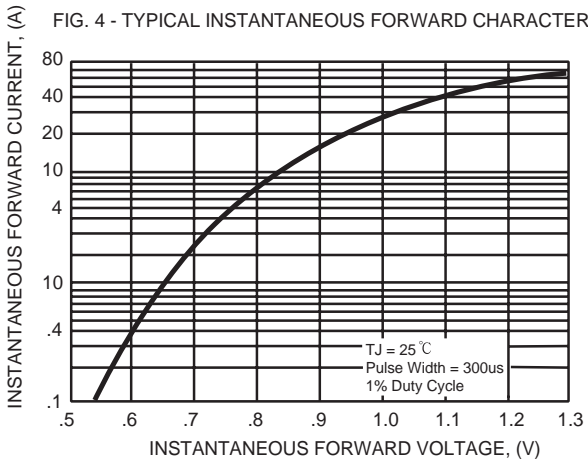


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

