

HER3001PT THRU HER3008PT

GLASS PASSIVATED HIGH EFFICIENCY RECTIFIER



REVERSE VOLTAGE: 50 to 1000 VOLTS
FORWARD CURRENT: 30.0 AMPERE

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- Dual rectifier construction, positive center-tap
- Low forward voltage, high current capability
- Low thermal resistance
- Ultra fast recovery times, high voltage.
- Low power loss, high efficiency

MECHANICAL DATA

Case: Molded plastic, TO-3P/TO-247AD

Epoxy: UL 94V-O rate flame retardant

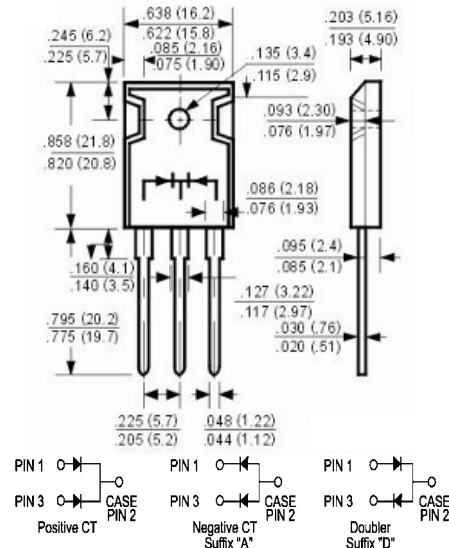
Terminals: Leads solderable per MIL-STD-202 method 208 guaranteed

Polarity: As marked

Mounting position: Any

Weight: 0.2ounce, 5.6gram

TO-3P/TO-247AD



Dimensions in inches and (millimeters)

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%.

| | Symbols | HER3001PT | HER3002PT | HER3003PT | HER3004PT | HER3005PT | HER3006PT | HER3007PT | HER3008PT | 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 $T_C=100^\circ\text{C}$ | $I_{(AV)}$ | 30.0 | | | | | | | | Amp | |
| Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method) | I_{FSM} | 300 | | | | | | | | Amp | |
| Maximum Forward Voltage at 15.0A and $T_A=25^\circ\text{C}$ | V_F | 1.0 | | | 1.3 | | 1.7 | | | Volts | |
| Maximum Reverse Current at $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A=125^\circ\text{C}$ | I_R | 10.0 | | | | 500 | | | | | uAmp |
| Typical Junction Capacitance (Note 1) | C_J | 175 | | | | | | 145 | | | pF |
| Maximum Reverse Recovery Time (Note 2) | T_{RR} | 50 | | | | | | 80 | | | nS |
| Operating and Storage Temperature Range | T_J, T_{stg} | -55 to +150 | | | | | | | | °C | |

NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- Reverse Recovery Test Conditions: $I_F=5A$, $I_R=1A$, $I_{RR}=0.25A$.

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RATINGS AND CHARACTERISTIC CURVES

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

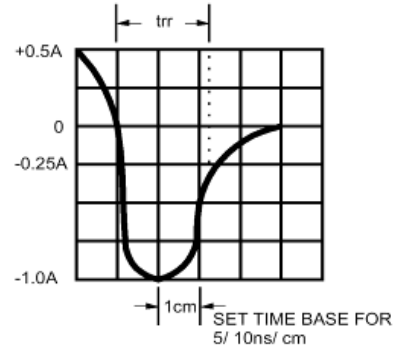
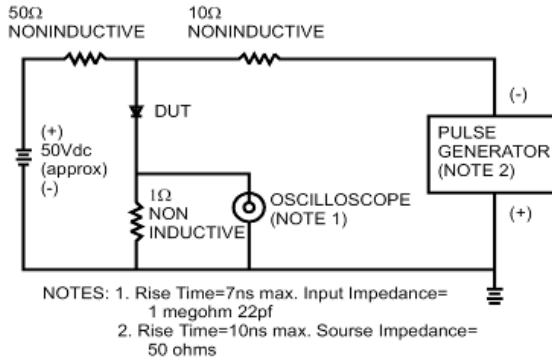


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

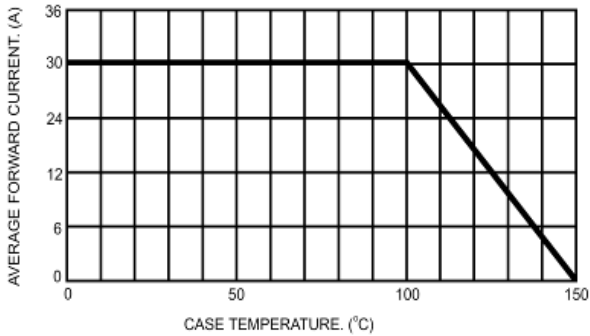


FIG.3- TYPICAL REVERSE CHARACTERISTICS PER LEG

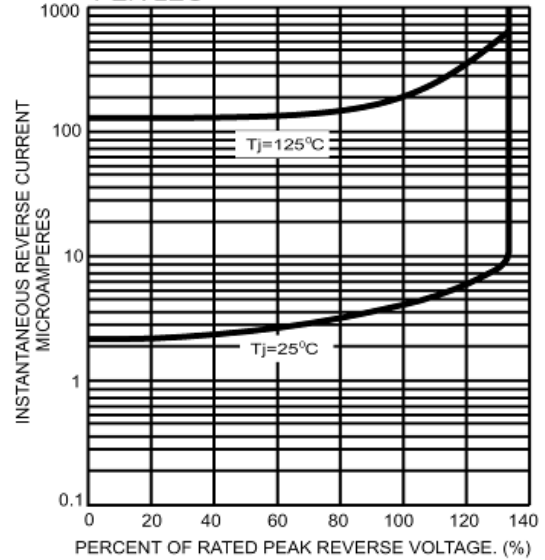


FIG.4- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

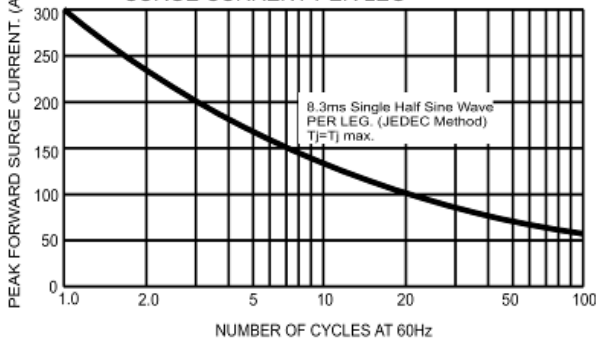


FIG.6- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

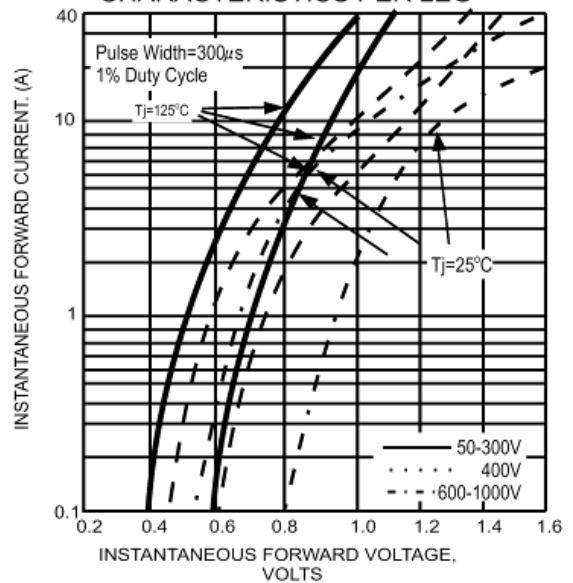


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

