

Pb Free Plating Product
HER1001CT thru HER1008CT

10Ampere Heat Sink Dual Common Cathode High Efficiency Rectifiers
Features

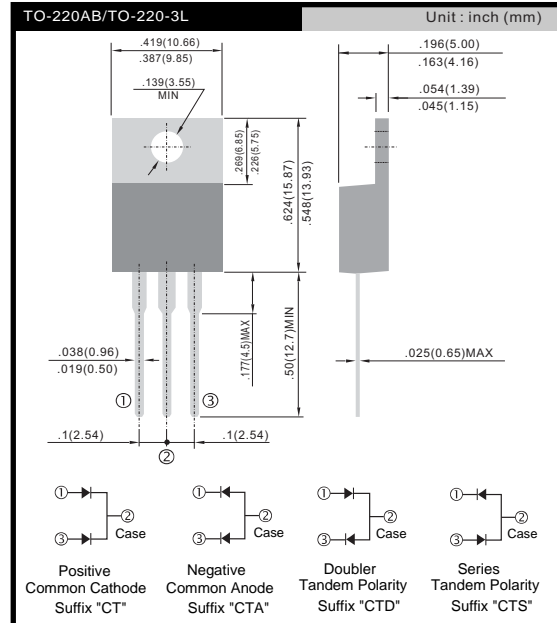
- * Fast switching for high efficiency
- * Low forward voltage drop
- * High current capability
- * Low reverse leakage current
- * High surge current capability

Application

- * Automotive Inverters and Solar Inverters
- * Plating Power Supply, SMPS and UPS
- * Car Audio Amplifiers and Sound Device Systems

Mechanical Data

- * Case: Heatsink TO-220AB open metal package
- * Epoxy: UL 94V-0 rate flame retardant
- * Terminals: Solderable per MIL-STD-202 method 208
- * Polarity: As marked on diode body
- * Mounting position: Any
- * Weight: 2.0 gram approximately


MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

| PARAMETER | SYMBOL | HER 1001CT | HER 1002CT | HER 1003CT | HER 1004CT | HER 1005CT | HER 1006CT | HER 1007CT | HER 1008CT | UNIT | |
|---|--------------------|--------------|------------|------------|------------|------------|------------|------------|------------|------|------|
| Maximum repetitive peak reverse voltage | V _{RRM} | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | V | |
| Maximum RMS voltage | V _{RMS} | 35 | 70 | 140 | 210 | 280 | 420 | 560 | 700 | V | |
| Maximum DC blocking voltage | V _{DC} | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | V | |
| Maximum average forward rectified current | I _{F(AV)} | 10 | | | | | | | | | A |
| Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load | I _{FSM} | 125 | | | | | | | | | A |
| Maximum instantaneous forward voltage @ 5 A (Note 1) | V _F | 1.0 | | | 1.3 | | 1.7 | | | V | |
| Maximum reverse current @ rated V _R T _J =25°C | I _R | 10 | | | | | | | | | μA |
| Maximum reverse current @ rated V _R T _J =125°C | I _R | 400 | | | | | | | | | μA |
| Maximum reverse recovery time (Note 2) | t _{rr} | 50 | | | | | 80 | | | | ns |
| Typical junction capacitance (Note 3) | C _J | 60 | | | | | 40 | | | | pF |
| Typical thermal resistance | R _{θJC} | 1.5 | | | | | | | | | °C/W |
| Operating junction temperature range | T _J | - 55 to +150 | | | | | | | | | °C |
| Storage temperature range | T _{STG} | - 55 to +150 | | | | | | | | | °C |

Note 1: Pulse test with PW=300μs, 1% duty cycle

 Note 2: Test conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A

Note 3: Measured at 1 MHz and applied reverse voltage of 4.0V DC.

RATINGS AND CHARACTERISTICS CURVES

($T_A=25^\circ\text{C}$ unless otherwise noted)

FIG. 1 MAXIMUM FORWARD CURRENT DERATING CURVE

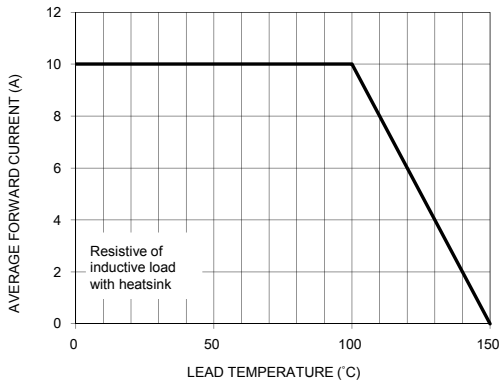


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

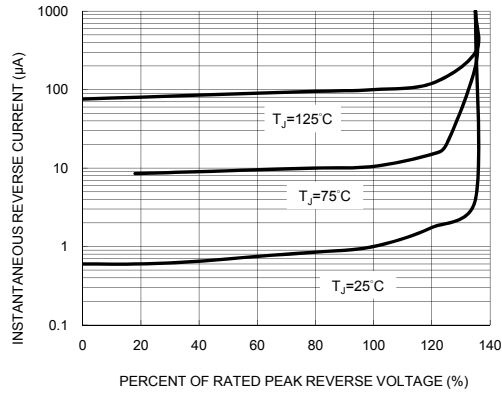


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

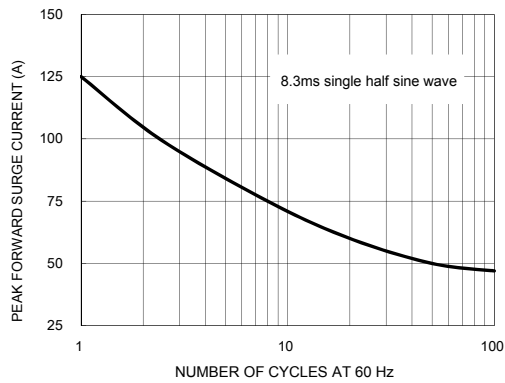


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

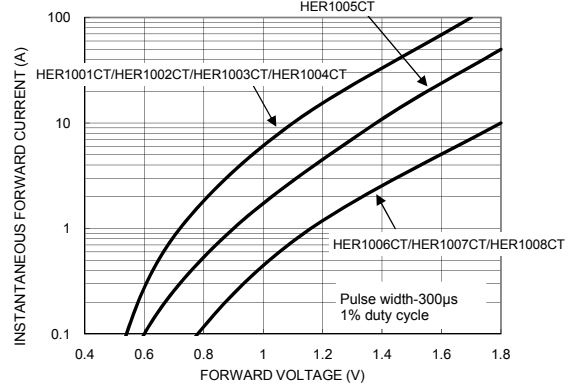


FIG. 5 TYPICAL JUNCTION CAPACITANCE

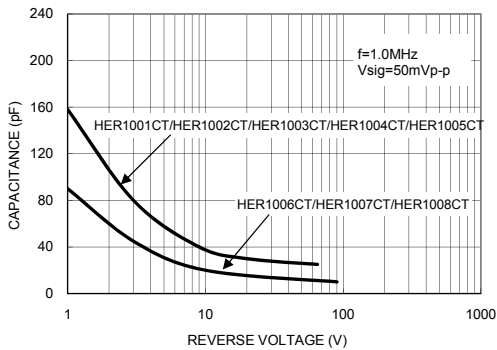


FIG.6 REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

