

Pb Free Plating Product

HER1001GA thru HER1008GA



10.0 Ampere Heatsink Dual Common Anode High Efficiency Rectifiers

Features

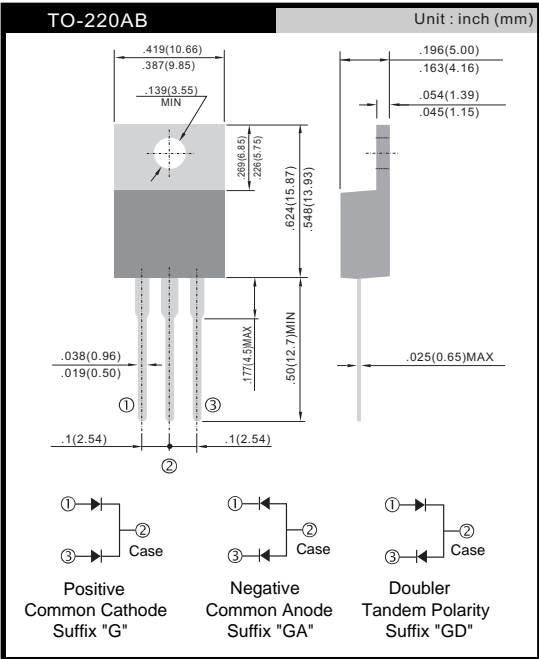
- * Fast switching for high efficiency
- * Low forward voltage drop
- * High current capability
- * Low reverse leakage current
- * High surge current capability

Application

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

Mechanical Data

- * Case: Heatsink TO-220AB
- * 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: 2.1 gram approxiamtely



Maximum Ratings and Electrical Characteristics

Rating 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%

| Type Number | Symbol | HER | HER | HER | HER | HER | HER | HER | HER | Units |
|--|-----------------|---------------|--------|--------|--------|--------|--------|--------|--------|--------------|
| | | 1001GA | 1002GA | 1003GA | 1004GA | 1005GA | 1006GA | 1007GA | 1008GA | |
| Maximum Recurrent 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 (JEDEC method) | I_{FSM} | 125 | | | | | | | | A |
| Maximum Instantaneous Forward Voltage (Note 1) @ 5 A | V_F | 1.0 | | 1.3 | | 1.7 | | | V | |
| Maximum DC Reverse Current @ $T_A=25^\circ C$ at Rated DC Blocking Voltage @ $T_A=125^\circ C$ | I_R | 10 | | | | | | | | μA |
| | | 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 | $R_{\theta JC}$ | 1.5 | | | | | | | | $^\circ C/W$ |
| Operating Temperature Range | T_J | - 65 to + 150 | | | | | | | | $^\circ C$ |
| Storage Temperature Range | T_{STG} | - 65 to + 150 | | | | | | | | $^\circ C$ |

Note 1: Pulse Test with PW=300 usec, 1% Duty Cycle
 Note 2: Reverse Recovery Test Conditions: IF=0.5A, IR=1.0A, IRR=0.25A
 Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

RATINGS AND CHARACTERISTIC CURVES (HER1001GA thru HER1008GA)

FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

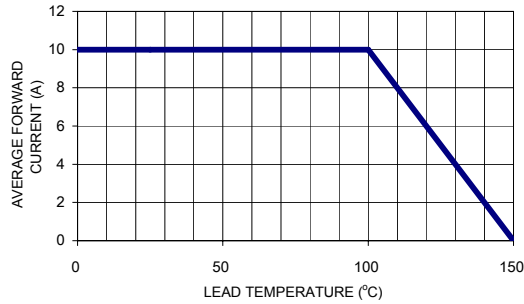


FIG. 2- TYPICAL REVERSE CHARACTERISTICS

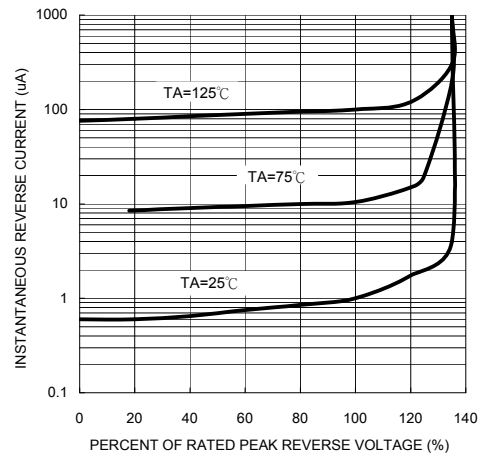


FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

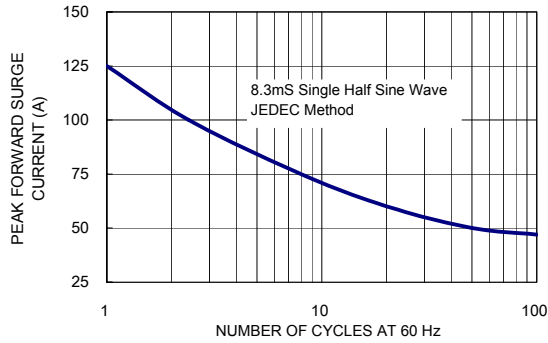


FIG. 5- TYPICAL FORWARD CHARACTERISTICS

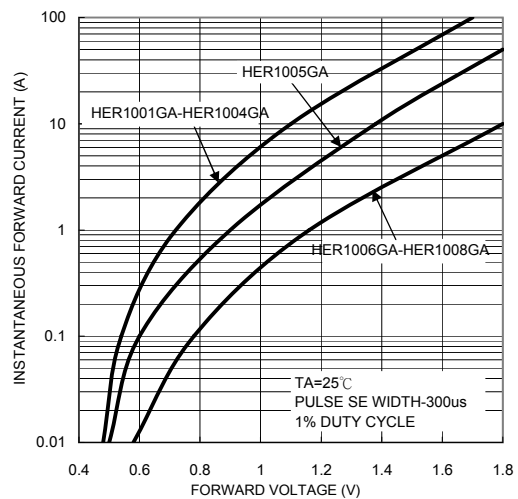


FIG. 4- TYPICAL JUNCTION CAPACITANCE

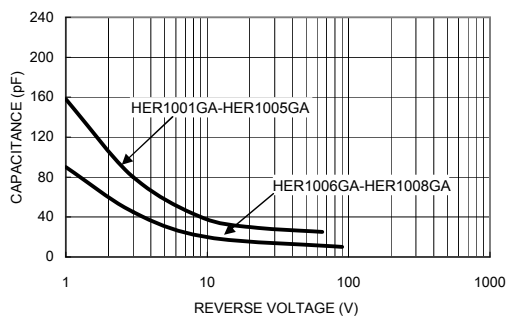


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

