

Pb Free Plating Product

UGF1004GD/UGF1005GD/UGF1006GD/UGF1007GD/UGF1008GD



10.0 Amperes Insulated Package Dual Doubler Polarity Ultra Fast Recovery Rectifiers

Features

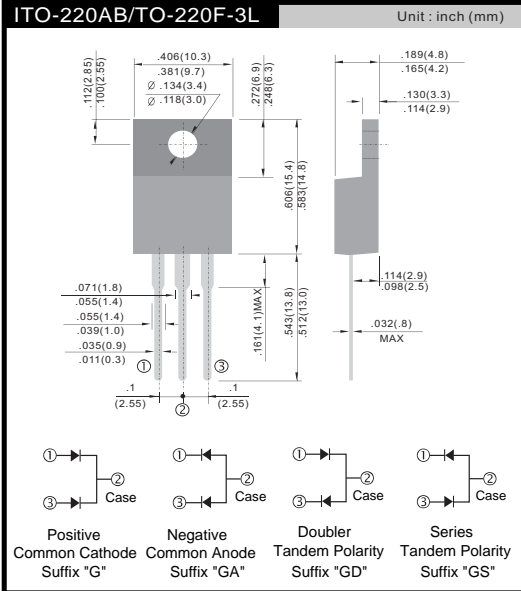
- ★ Ultra fast soft recovery switching for high efficiency
- ★ Low forward voltage drop
- ★ High current capability
- ★ Low reverse leakage current
- ★ High surge current capability

Application

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

Mechanical Data

- ★ Case: ITO-220AB full plastic isolated 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: 1.75 gram approximately



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

| PARAMETER | SYMBOL | UGF1004GD | UGF1005GD | UGF1006GD | UGF1007GD | UGF1008GD | UNIT |
|---|--------------------|--------------|-----------|-----------|--------------|-----------|------|
| Maximum repetitive peak reverse voltage | V _{RRM} | 200 | 300 | 400 | 500 | 600 | V |
| Maximum RMS voltage | V _{RMS} | 140 | 210 | 280 | 350 | 420 | V |
| Maximum DC blocking voltage | V _{DC} | 200 | 300 | 400 | 500 | 600 | 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} | 70 | | | | | A |
| Maximum instantaneous forward voltage (Note 1) I _F = 5 A | V _F | 0.95 | 1.25 | | 1.70 | | V |
| Maximum reverse current @ rated V _R T _J =25°C T _J =125°C | I _R | 10 100 | | | | | μA |
| Maximum reverse recovery time (Note 2) | t _{rr} | 20 | | | 25 | | ns |
| Typical thermal resistance | R _{θJC} | 6.0 | | | | | °C/W |
| Operating junction temperature range | T _J | - 55 to +175 | | | - 55 to +150 | | °C |
| Storage temperature range | T _{STG} | - 55 to +175 | | | | | °C |

Note 1: Pulse Test with PW=300μs, 1% Duty Cycle
 Note 2: Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A

RATINGS AND CHARACTERISTICS CURVES

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

FIG.1 FORWARD CURRENT DERATING CURVE

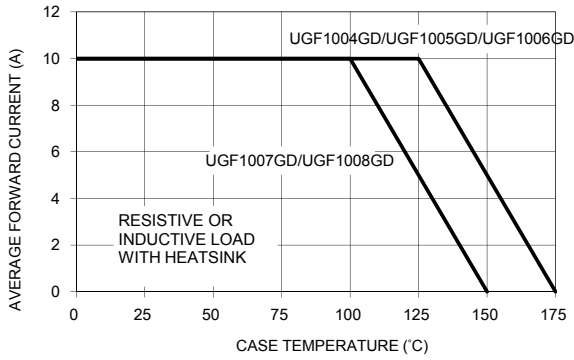


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

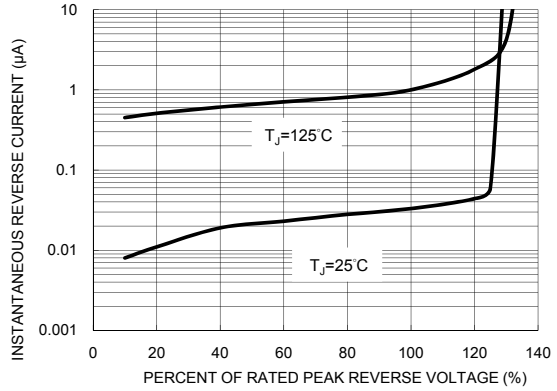


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

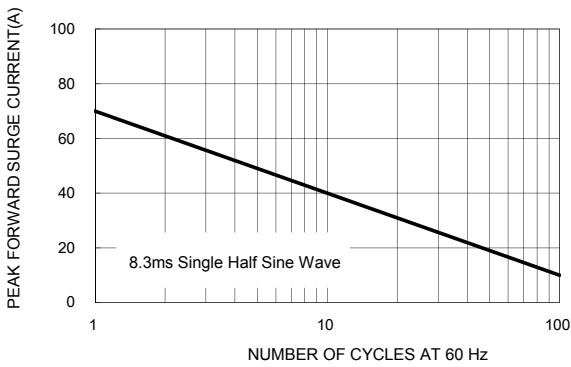


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

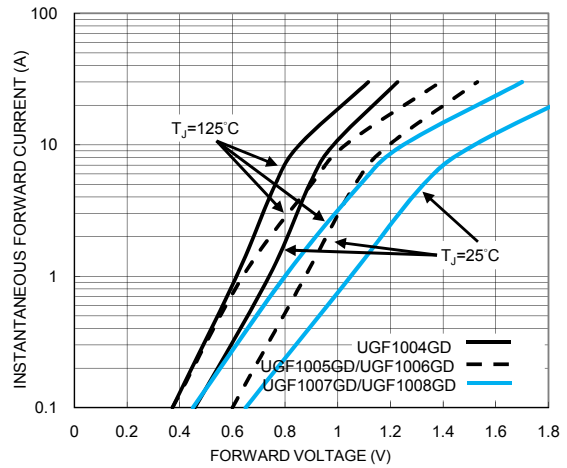


FIG. 5 TYPICAL JUNCTION CAPACITANCE

