

Pb Free Plating Product

UGF1004GS thru UGF1008GS



10 Ampere Insulated Series Connection Ultra Fast Recovery Half Bridge Rectifiers

**Features**

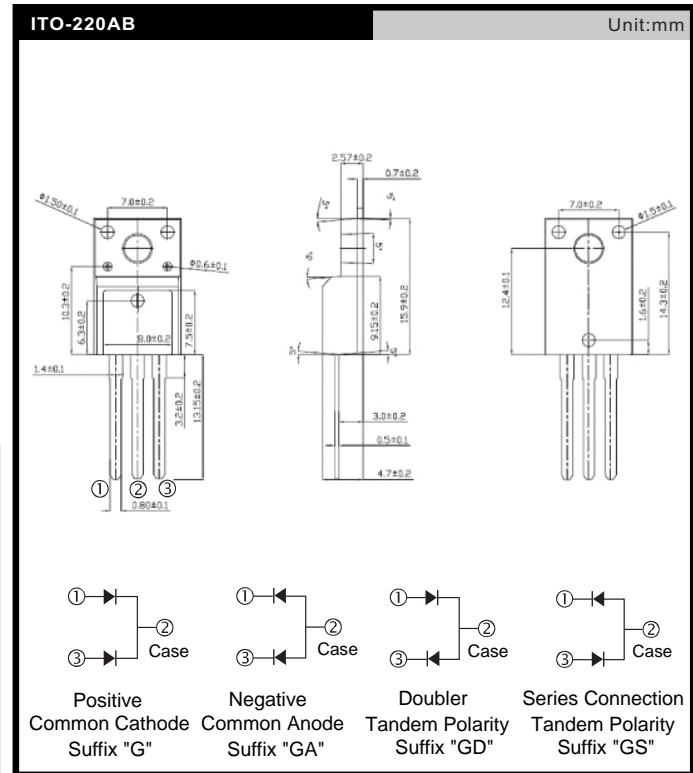
- ★ Latest GPP technology with ultra fast recovery time
- ★ Low forward voltage drop
- ★ High current capability
- ★ Low reverse leakage current
- ★ High surge current capability

**Application**

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

**Mechanical Data**

- ★ Case: Fully Insulated TO-220FP FullPak Plastic
- ★ 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**

Rating at 25°C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)								
PARAMETER	SYMBOL	UGF1004GS	UGF1005GS	UGF1006GS	UGF1007GS	UGF1008GS	UNIT	
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	200	300	400	500	600	V	
Maximum RMS voltage	V <sub>RMS</sub>	140	210	280	350	420	V	
Maximum DC blocking voltage	V <sub>DC</sub>	200	300	400	500	600	V	
Maximum average forward rectified current	I <sub>F(AV)</sub>	10						A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	70						A
Maximum instantaneous forward voltage (Note 2) I <sub>F</sub> = 5 A	V <sub>F</sub>	0.95	1.25		1.70		V	
Maximum reverse current @ rated VR T <sub>J</sub> =25 °C T <sub>J</sub> =125 °C	I <sub>R</sub>	10			100		μA	
Maximum reverse recovery time (Note 2)	T <sub>rr</sub>	20			25		ns	
Typical thermal resistance	R <sub>θJC</sub>	6.0					°C/W	
Operating junction temperature range	T <sub>J</sub>	- 55 to +175			- 55 to +150		°C	
Storage temperature range	T <sub>STG</sub>	- 55 to +175			- 55 to +150		°C	

Note 1: Pulse Test with PW=300μs, 1% Duty Cycle

Note 2: Reverse Recovery Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

FIG. 1 FORWARD CURRENT DERATING CURVE

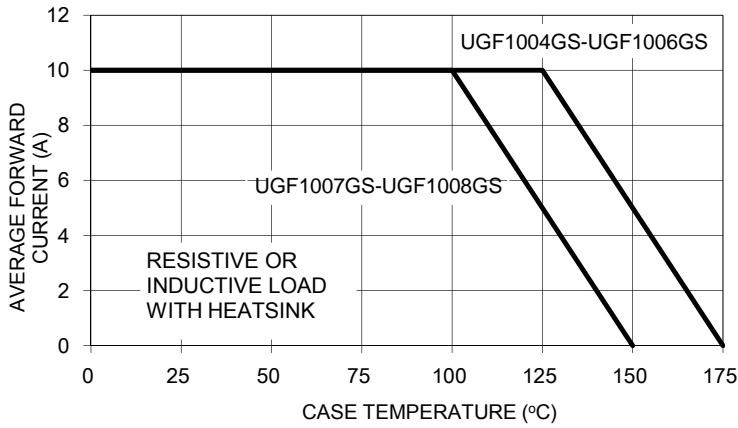


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

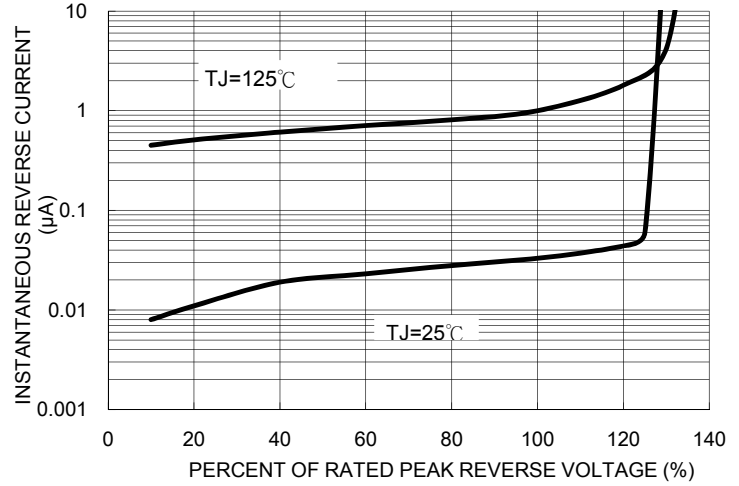


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

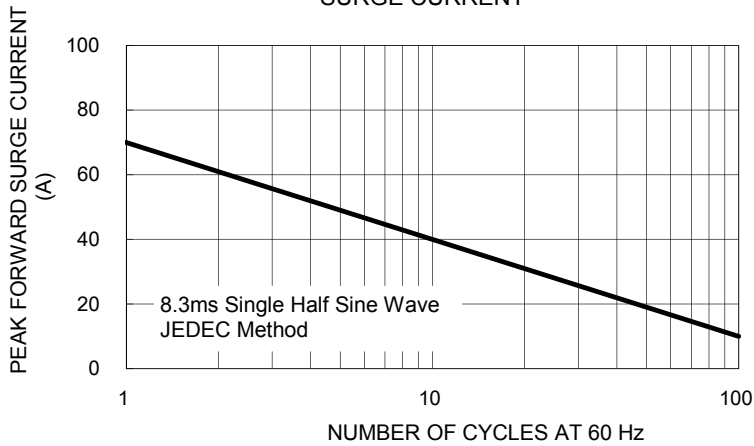


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

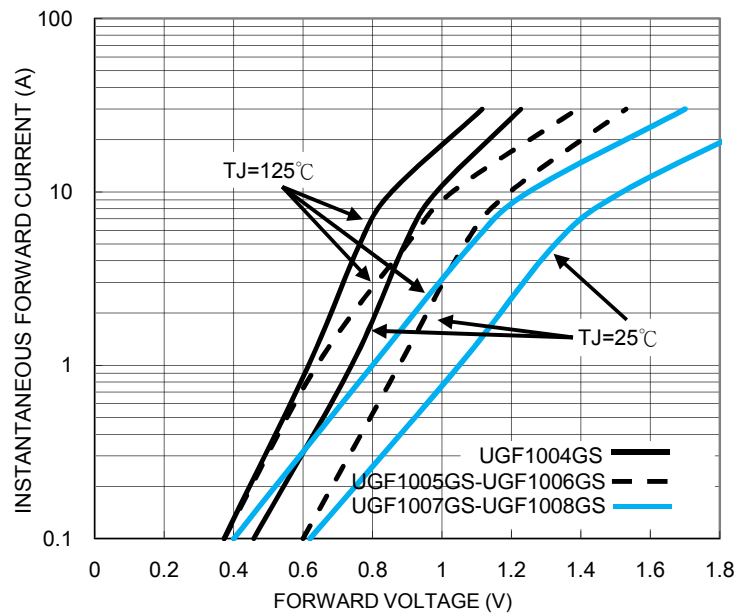


FIG. 5 TYPICAL JUNCTION CAPACITANCE

