



# UGF8J

Glass Passivated Super Fast Rectifier  
Isolated 8.0 Amps  
**ITO-220AC**

## Features

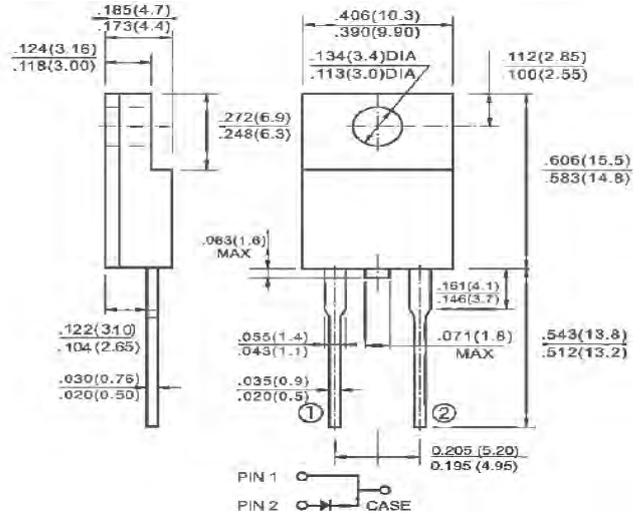
- ◇ High efficiency, low VF
- ◇ High current capability
- ◇ High reliability
- ◇ High surge current capability
- ◇ Low power loss
- ◇ For use in low voltage, high frequency inverter, free wheeling, and polarity protection application

## Mechanical Data

- ◇ Case : ITO-220AC
- ◇ Epoxy :UL 94V-0 rate flame retardant
- ◇ Terminals: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ◇ Polarity: As marked
- ◇ High temperature soldering guaranteed:  
260°C/10 seconds. 16",(4.06mm) from case.
- ◇ Weight: 2.24 grams

## 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%



**Dimensions in inches and (millimeters)**

## Marking Diagram



UGFXJ = Specific Device Code  
Y = Year  
WW = Work Week

Parameter	Symbol	UGF8J	Unit
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	600	V
Maximum RMS Voltage	$V_{RMS}$	420	V
Maximum DC blocking voltage	$V_{DC}$	600	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	8	A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load	$I_{FSM}$	65	A
Maximum Instantaneous Forward Voltage (Pulse test: $t_p=300\mu s$ , $\delta < 1\%$ ) @ 8.0A / $T_a=25^\circ C$ @ 8.0A / $T_a=125^\circ C$	$V_F$	2.90 2.00	V
Maximum Reverse Current (Pulse test: $t_p=300\mu s$ , $\delta < 1\%$ ) $T_a=25^\circ C$ $T_a=125^\circ C$	$I_R$	30.0 200	$\mu A$
Max Reverse Recovery Time(Note 1)	$T_{rr}$	25	nS
Max Reverse Recovery Time(Note 2)	$T_{rr}$	50	nS
Typical Thermal Resistance (Note 3)	$R_{\theta JC}$	5.5	$^\circ C/W$
Operating Temperature Range	$T_J$	-55 to + 150	$^\circ C$
Storage Temperature Range	$T_{STG}$	-55 to + 150	$^\circ C$

Note1: Reverse Recovery Time Test Conditions:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{RR}=0.25A$

Note2: Reverse Recovery Time Test Conditions:  $I_F=1.0A$ ,  $dI/dt=50A/\mu s$ ,  $V_R=30V$ ,  $I_{RR}=0.1RM$

Note3: Mount on Heatsink size 2" X 3" X 0.25" Al-Plate

## RATINGS AND CHARACTERISTIC CURVES (UGF8J)

Fig.1 Maximum Forward Current Derating Curve

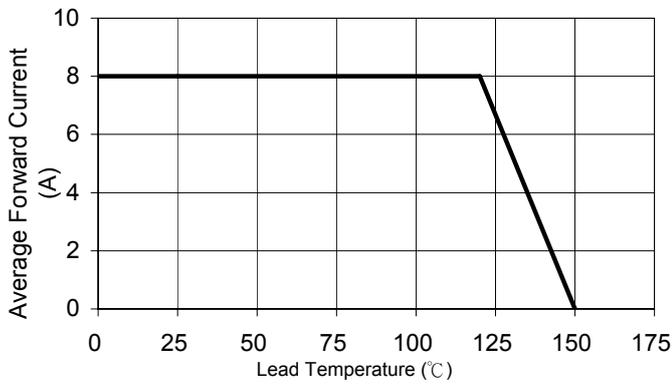


Fig. 2 Maximum Forward Surge Current

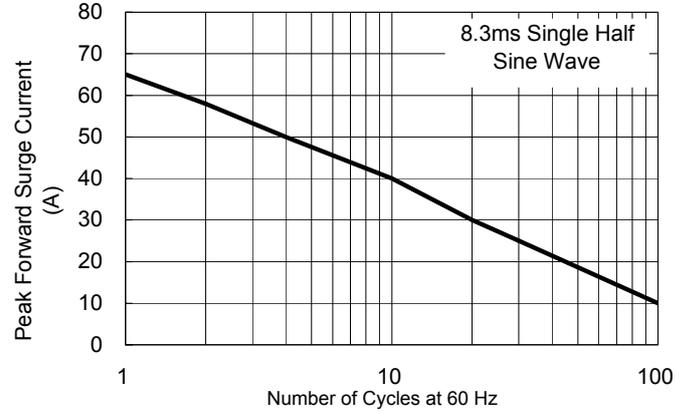


Fig. 3 Typical Forward Characteristics

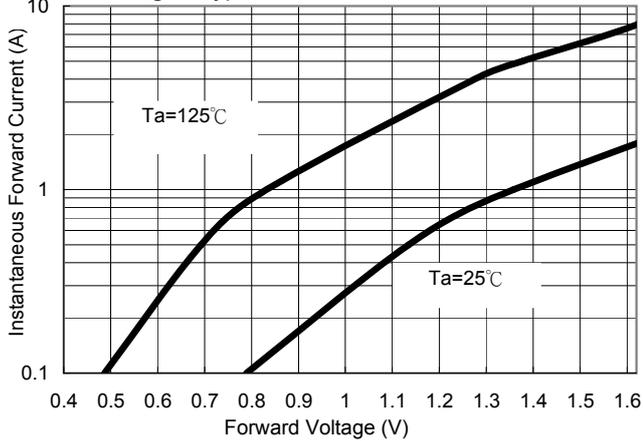


Fig. 4 Typical Reverse Characteristics

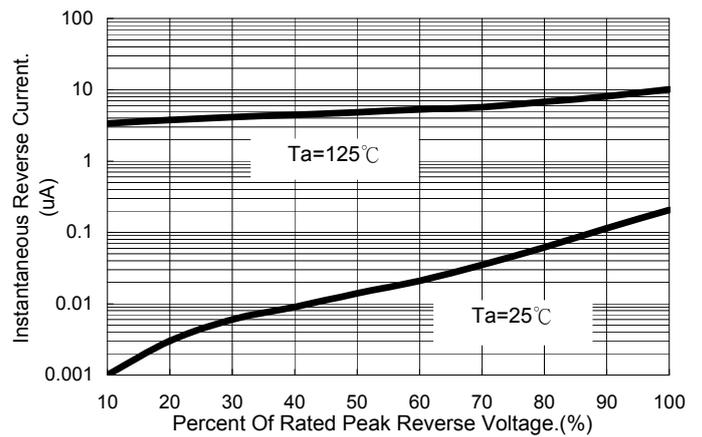


Fig. 5 Typical Junction Capacitance

