TAIWAN SEMICONDUCTOR

UGF5J

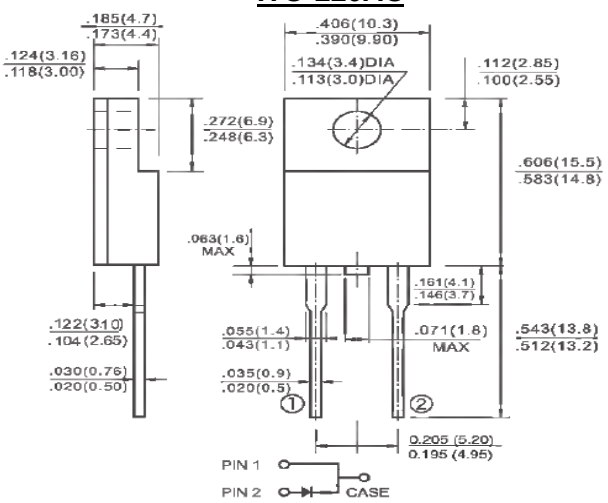
Isolated 5.0 Amps

Glass Passivated Super Fast Rectifier

ITO-220AC

RoHS COMPLIANCE





Dimensions in inches and (millimeters)

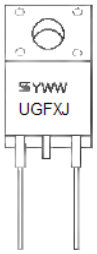
Features

- ✧ High efficiency, low VF
- ✧ High current capability
- ✧ High reliabiity
- ✧ High surge current capability
- ✧ Low power loss
- ✧ For use in low voltage, high frequency inventor, 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℃/10 seconds. 16",(4.06mm) from case.
- ✧ Weight: 2.24 grams

Marking Diagram



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

Maximum Ratings and Electrical Characteristics

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

Parameter	Symbol	UGF5J	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	$I_{F(AV)}$	5	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: tp=300us, δ < 1%) @ 5.0A / Ta=25℃ @ 5.0A / Ta=125℃	V_F	 2.10 1.50	V
Maximum Reverse Current (Pulse test: tp=300us, δ < 1%) Ta=25 ℃ Ta=125 ℃	I_R	 30 200	uA
Max Reverse Recovery Time(Note 1)	Trr	25	nS
Max Reverse Recovery Time(Note 2)	Trr	50	nS
Typical Thermal Resistance (Note 3)	$R_{\theta JC}$	5.5	^{O}C/W
Operating Temperature Range	T_J	-55 to + 150	^{O}C
Storage Temperature Range	T_{STG}	-55 to + 150	^{O}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/us, V_R=30V, I_{RR}=0.1RM

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

RATINGS AND CHARACTERISTIC CURVES (UGF5J)

Fig.1 Maximum Forward Current Derating Curve

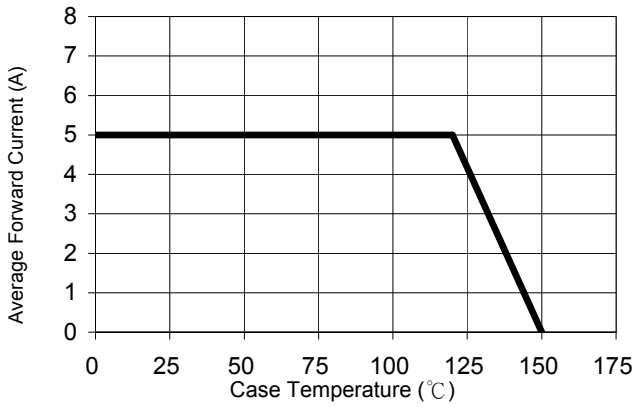


Fig. 2 Maximum Forward Surge Current

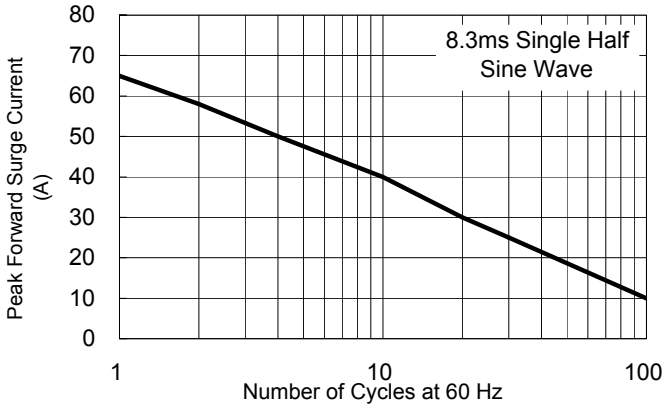


Fig. 3 Typical Forward Characteristics

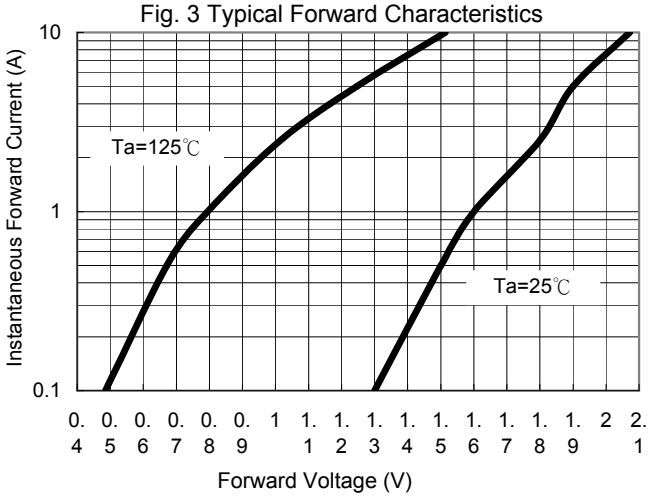


Fig. 4 Typical Reverse Characteristics

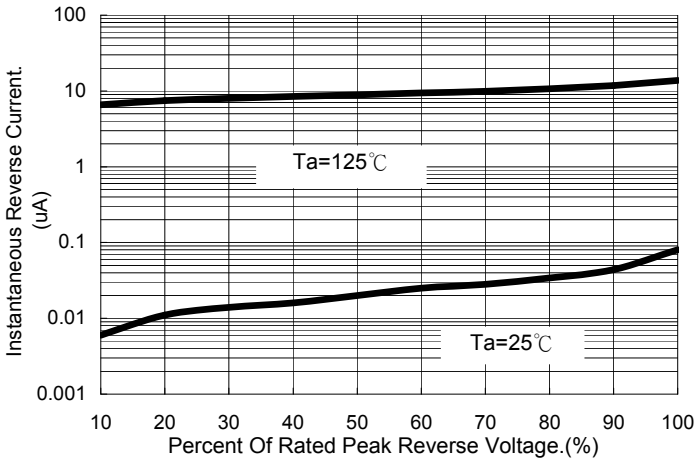


Fig. 5 Typical Junction Capacitance

