


RoHS COMPLIANCE


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

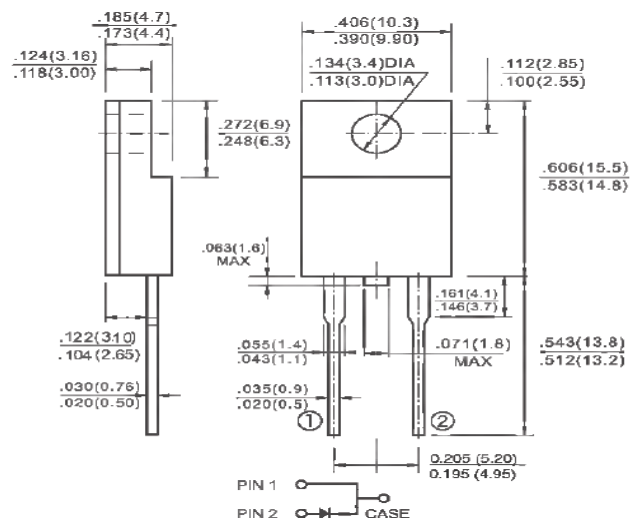
- ◇ Case : ITO-220AC
- ◇ Epoxy :UL 94V-0 rate flame retardant
- ◇ Terminals: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ◇ Polarity: As marked
- ◇ High temperature soldering guaranteed: 260°C/10 seconds. 16",(4.06mm) from case.
- ◇ Weight: 2.24 grams

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

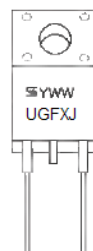
Single phase, half wave, 60 Hz, resistive or inductive load.

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	μA
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

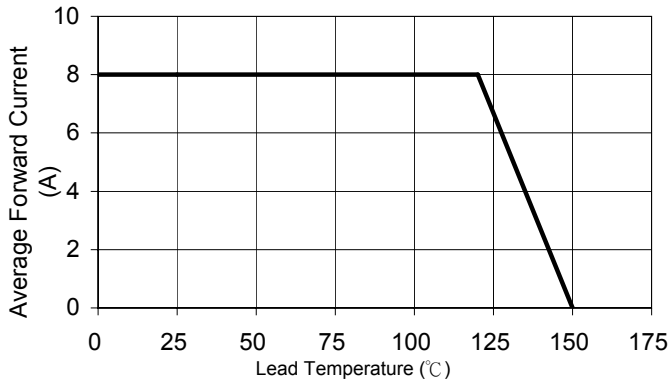


Fig. 2 Maximum Forward Surge Current

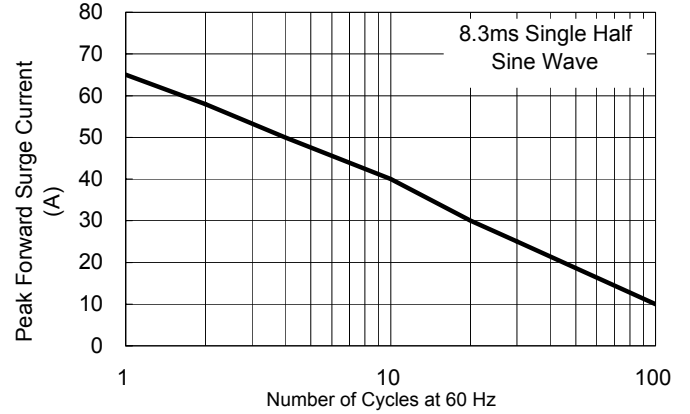


Fig. 3 Typical Forward Characteristics

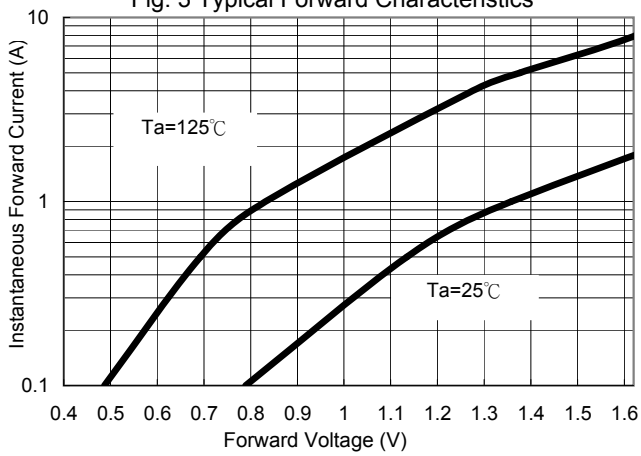


Fig. 4 Typical Reverse Characteristics

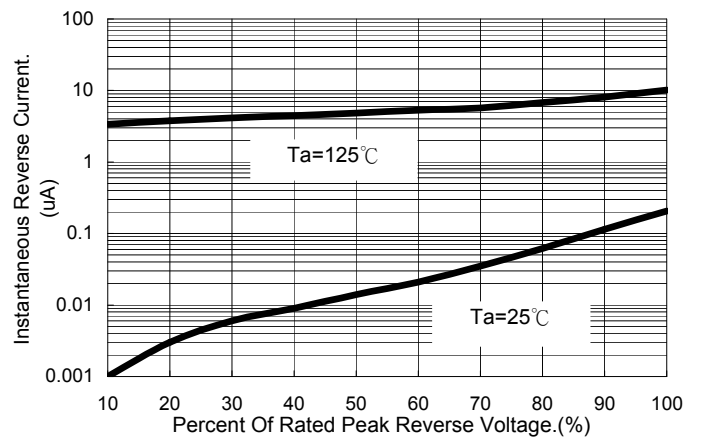


Fig. 5 Typical Junction Capacitance

