



UG8J

8.0AMPS. Glass Passivated Super Fast Rectifiers

TO-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
- Green compound with suffix "G" on packing code & prefix "G" on datecode

Mechanical Data

- Case: TO-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:
260 °C/10 seconds/ 0.16", (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.

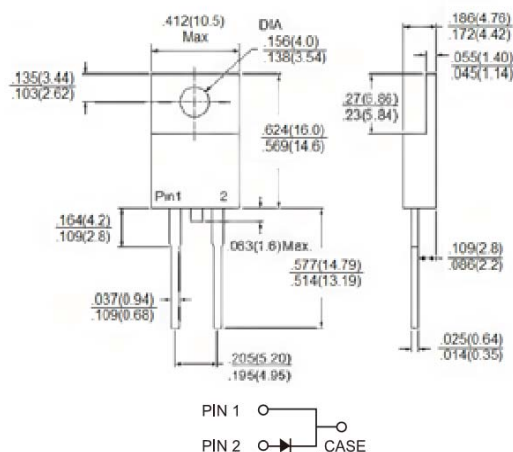
For capacitive load, derate current by 20%

Type Number	Symbol	UG8J	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 (JEDEC method)	I_{FSM}	65	A
Maximum Instantaneous Forward Voltage (Note 1) @ 8 A / $T_A=25^{\circ}C$ @ 8 A / $T_A=125^{\circ}C$	V_F	2.9 2.0	V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A=25^{\circ}C$ $T_A=125^{\circ}C$	I_R	30 200	μA
Maximum Reverse Recovery Time (Note 2)	T_{rr}	25	nS
Maximum Reverse Recovery Time (Note 3)	T_{rr}	50	nS
Typical Thermal Resistance	$R_{\theta JC}$	3	$^{\circ}C/W$
Operating Temperature Range	T_J	- 55 to + 150	$^{\circ}C$
Storage Temperature Range	T_{STG}	- 55 to + 150	$^{\circ}C$

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

Note 2: Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$

Note 3: Reverse Recovery Test Conditions: $I_F=1.0A$, $di/dt=50A/us$, $V_R=30V$, $I_{RR}=0.1RM$



Dimensions in inches and (millimeters)



Marking Diagram

- UGXJ = Specific Device Code
- G = Green Compound
- Y = Year
- WW = Work Week

RATINGS AND CHARACTERISTIC CURVES (UG8J)

FIG.1 FORWARD CURRENT DERATING CURVE

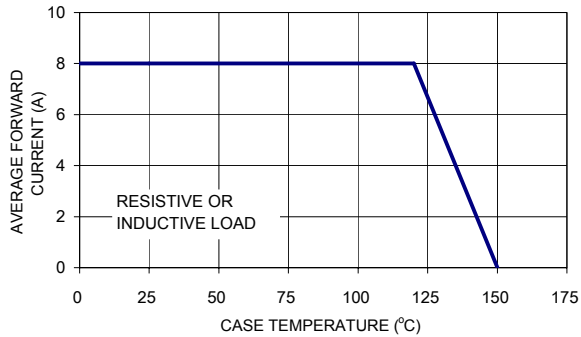


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

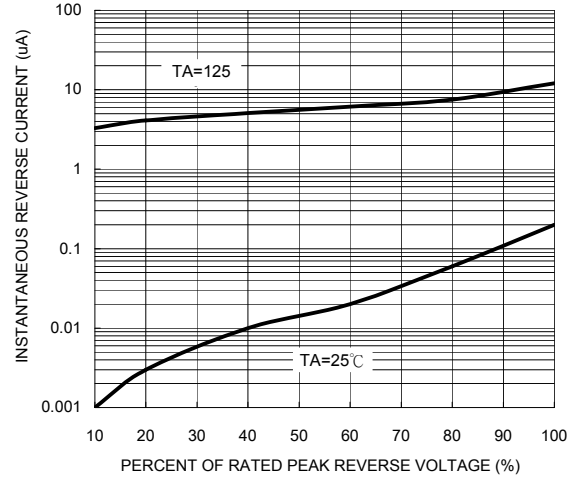


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

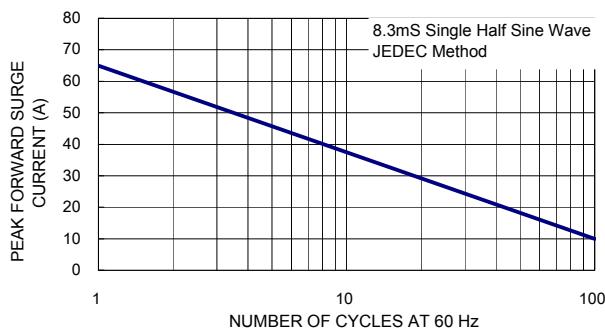


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

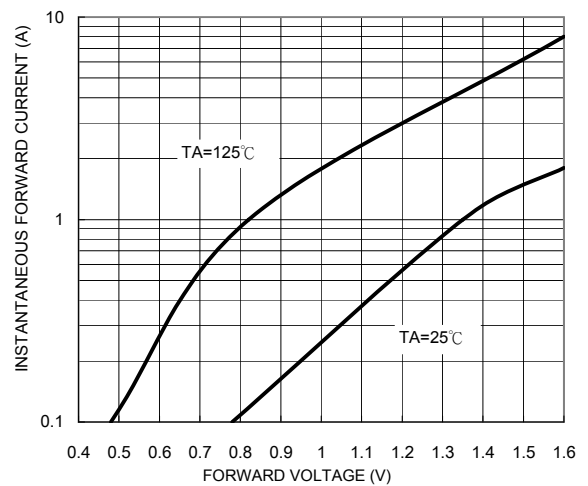


FIG. 5 TYPICAL JUNCTION CAPACITANCE

