



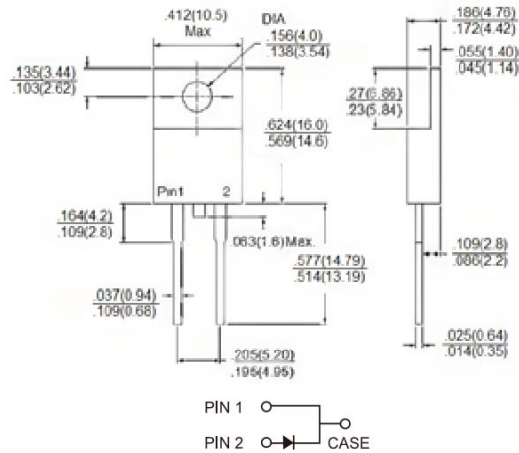
# UG5J

## 5.0AMPS. 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

### Dimensions in inches and (millimeters)



### Marking Diagram

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

### 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	UG5J	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 (JEDEC method)	$I_{FSM}$	65	A
Maximum Instantaneous Forward Voltage (Note 1) @ 5 A / $T_A=25^{\circ}C$ @ 5 A / $T_A=125^{\circ}C$	$V_F$	3.0 2.5	V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A=25^{\circ}C$ $T_A=125^{\circ}C$	$I_R$	30 200	$\mu A$
Maximum Reverse Recovery Time (Note 2)	$T_{rr}$	20	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:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{RR}=0.25A$

## RATINGS AND CHARACTERISTIC CURVES (UG5J)

FIG.1 FORWARD CURRENT DERATING CURVE

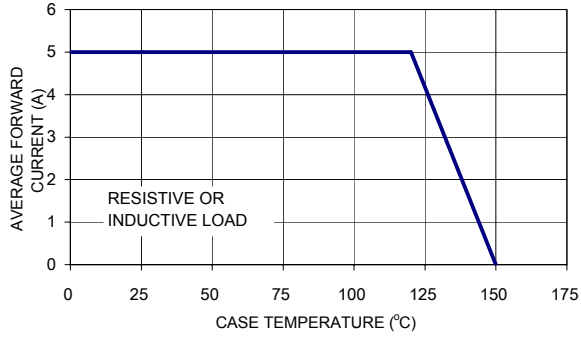


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

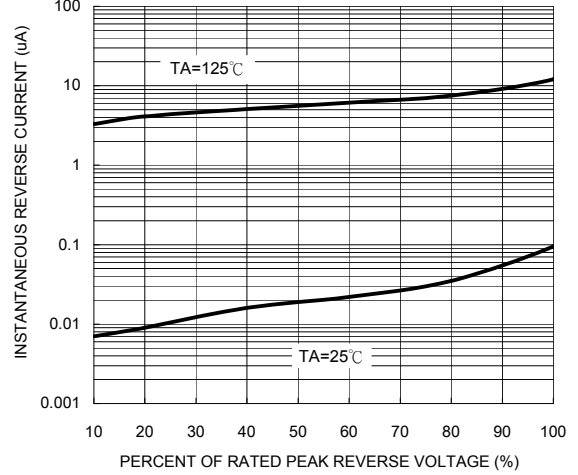


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

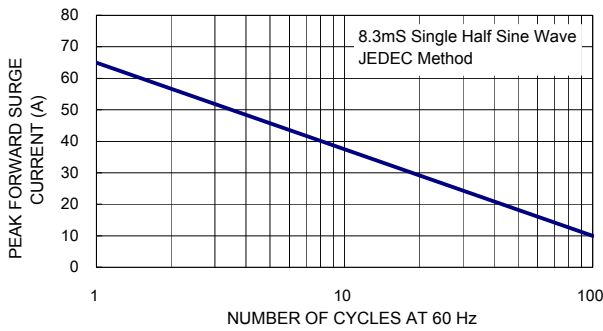


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

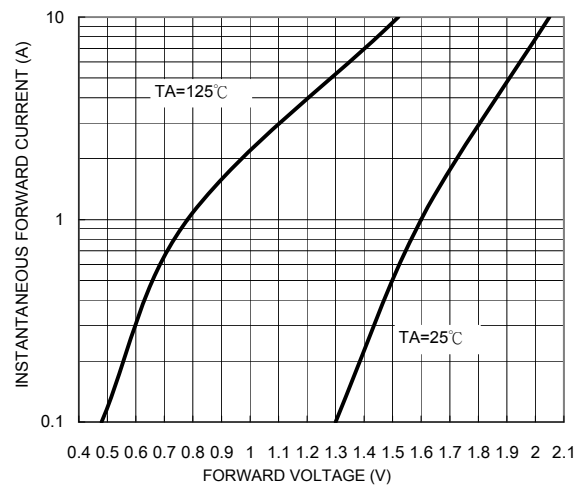


FIG. 5 TYPICAL JUNCTION CAPACITANCE

