



# GP1601 THRU GP1607

16.0 AMPS. Glass Passivated Rectifiers



Voltage Range  
50 to 1000 Volts  
Current  
16.0 Amperes

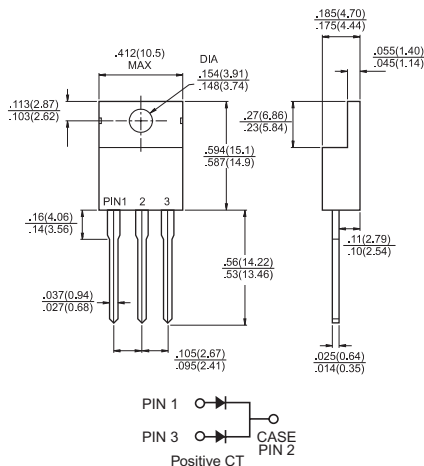
## Features

- ✧ Low forward voltage drop
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability

## Mechanical Data

- ✧ Cases: TO-220 molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Terminals: Leads solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: As marked
- ✧ High temperature soldering guaranteed: 250°C/10 seconds .16", (4.06mm) from case.
- ✧ Weight: 2.24 grams

## TO-220



Dimensions in inches and (millimeters)

## 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                                                                                               | GP 1601       | GP 1602 | GP 1603 | GP 1604 | GP 1605 | GP 1606 | GP 1607 | Units    |
|-----------------------------------------------------------------------------------------------------------|---------------|---------|---------|---------|---------|---------|---------|----------|
| Maximum Recurrent Peak Reverse Voltage                                                                    | 50            | 100     | 200     | 400     | 600     | 800     | 1000    | V        |
| Maximum RMS Voltage                                                                                       | 35            | 70      | 140     | 280     | 420     | 560     | 700     | V        |
| Maximum DC Blocking Voltage                                                                               | 50            | 100     | 200     | 400     | 600     | 800     | 1000    | V        |
| Maximum Average Forward Rectified Current<br>.375"(9.5mm) Lead Length @ T <sub>C</sub> = 100°C            | 16.0          |         |         |         |         |         |         | A        |
| Peak Forward Surge Current, 8.3 ms Single<br>Half Sine-wave Superimposed on Rated Load<br>(JEDEC method)  | 150           |         |         |         |         |         |         | A        |
| Maximum Instantaneous Forward Voltage<br>@8.0A                                                            | 1.1           |         |         |         |         |         |         | V        |
| Maximum DC Reverse Current @ T <sub>C</sub> =25°C<br>at Rated DC Blocking Voltage @ T <sub>C</sub> =125°C | 10<br>250     |         |         |         |         |         |         | uA<br>uA |
| Typical Junction Capacitance (Note 1)                                                                     | 50            |         |         |         |         |         |         | pF       |
| Typical Thermal Resistance R <sub>θJC</sub> (Note 2)                                                      | 3.0           |         |         |         |         |         |         | °C/W     |
| Operating and Storage Temperature Range<br>T <sub>J</sub> , T <sub>STG</sub>                              | - 65 to + 150 |         |         |         |         |         |         | °C       |

Notes: 1. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C.

2. Thermal Resistance from Junction to Case per Leg Mounted on Heatsink.

## RATINGS AND CHARACTERISTIC CURVES (GP1601 THRU GP1607)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

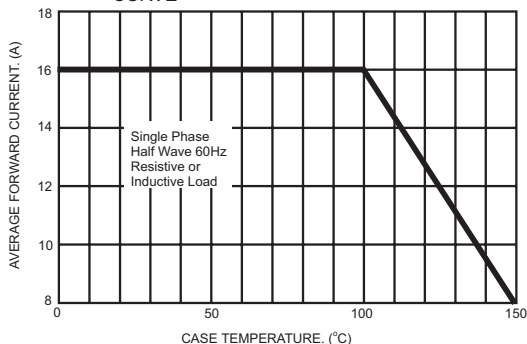


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

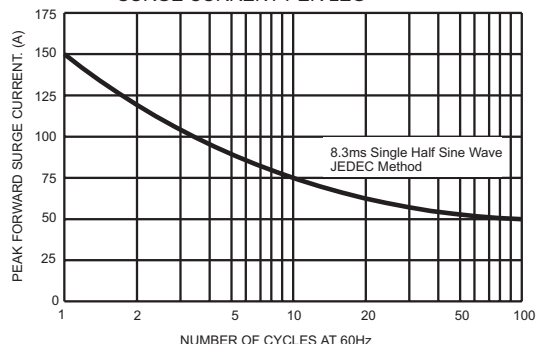


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

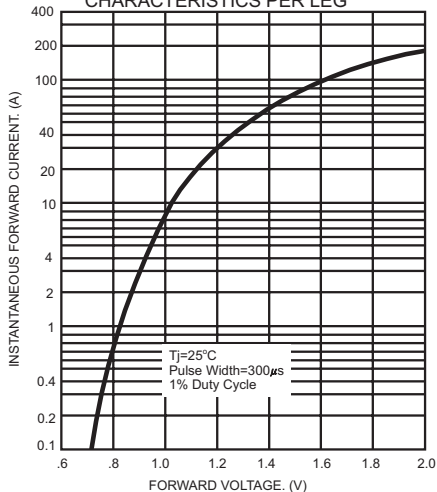


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

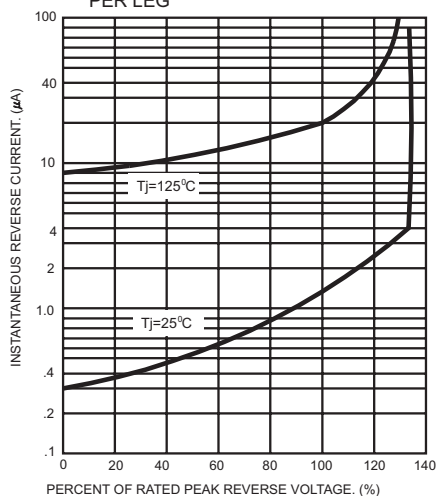


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

