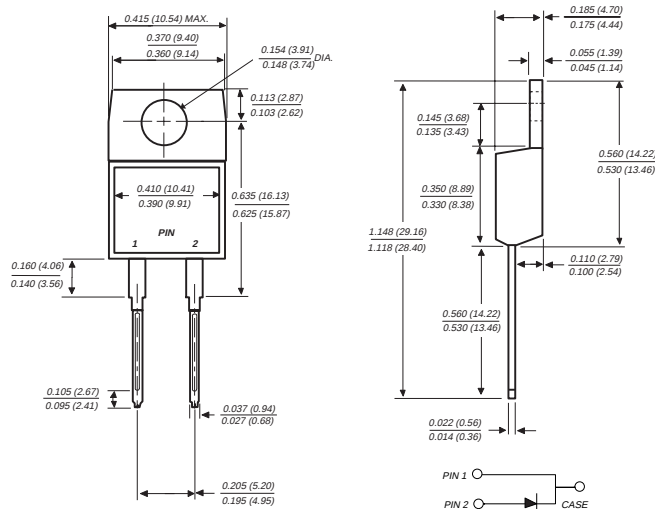


# GI1401 THRU GI1404

## FAST EFFICIENT PLASTIC RECTIFIER

**Reverse Voltage - 50 to 200 Volts      Forward Current - 8.0 Amperes**

### TO-220AC



Dimensions in inches and (millimeters)

### FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Glass passivated chip junction
- ◆ Low power loss
- ◆ Low leakage current
- ◆ High surge capability
- ◆ Superfast recovery time for high efficiency
- ◆ High temperature soldering guaranteed: 250°C, 0.16" (4.06mm) from case for 10 seconds



### MECHANICAL DATA

**Case:** JEDEC TO-220AC molded plastic body over passivated chip

**Terminals:** Lead solderable per MIL-STD-750, Method 2026

**Polarity:** As marked

**Mounting Position:** Any

**Weight:** 0.064 ounce, 1.81 grams

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

|                                                                                                                                                                                                                             | SYMBOLS                              | GI1401                           | GI1402 | GI1403 | GI1404 | UNITS |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|----------------------------------|--------|--------|--------|-------|
| Maximum recurrent peak reverse voltage                                                                                                                                                                                      | V <sub>RRM</sub>                     | 50                               | 100    | 150    | 200    | Volts |
| Maximum RMS voltage                                                                                                                                                                                                         | V <sub>RMS</sub>                     | 35                               | 70     | 105    | 140    | Volts |
| Maximum DC blocking voltage                                                                                                                                                                                                 | V <sub>DC</sub>                      | 50                               | 100    | 150    | 200    | Volts |
| Maximum average forward rectified current at T <sub>C</sub> =125°C                                                                                                                                                          | I <sub>(AV)</sub>                    | 8.0                              |        |        |        | Amps  |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed<br>on rated load (JEDEC Method) at T <sub>C</sub> =125°C                                                                                             | I <sub>FSM</sub>                     | 125.0                            |        |        |        | Amps  |
| Maximum instantaneous forward voltage at:<br>I <sub>F</sub> =4A, T <sub>J</sub> =100°C<br>I <sub>F</sub> =8A, T <sub>J</sub> =100°C<br>I <sub>F</sub> =4A, T <sub>J</sub> =25°C<br>I <sub>F</sub> =8A, T <sub>J</sub> =25°C | V <sub>F</sub>                       | 0.800<br>0.895<br>0.900<br>0.975 |        |        |        | Volts |
| Maximum DC reverse current<br>at rated DC blocking voltage<br>T <sub>C</sub> =25°C<br>T <sub>C</sub> =100°C                                                                                                                 | I <sub>R</sub>                       | 5.0<br>150.0                     |        |        |        | μA    |
| Maximum reverse recovery time (NOTE 1)                                                                                                                                                                                      | t <sub>rr</sub>                      | 35.0                             |        |        |        | ns    |
| Typical junction capacitance (NOTE 2)                                                                                                                                                                                       | C <sub>J</sub>                       | 85.0                             |        |        |        | pF    |
| Typical thermal resistance (NOTE 3)<br>(NOTE 4)                                                                                                                                                                             | R <sub>θJA</sub><br>R <sub>θJC</sub> | 15.0<br>2.2                      |        |        |        | °C/W  |
| Operating and storage temperature range                                                                                                                                                                                     | T <sub>J</sub> , T <sub>STG</sub>    | -65 to +150                      |        |        |        | °C    |

#### NOTES:

- (1) Reverse recovery test conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>rr</sub>=0.25A
- (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
- (3) Thermal resistance from junction to ambient in free air, no heatsink
- (4) Thermal resistance from junction to case mounted on heatsink

# RATINGS AND CHARACTERISTIC CURVES GI1401 THRU GI1404

FIG. 1 - FORWARD CURRENT DERATING CURVES

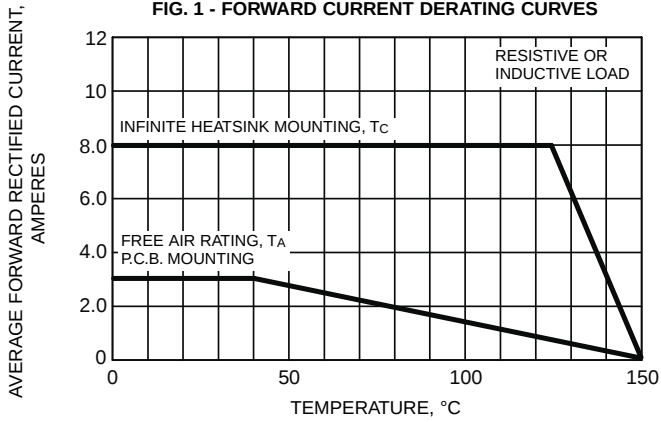


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

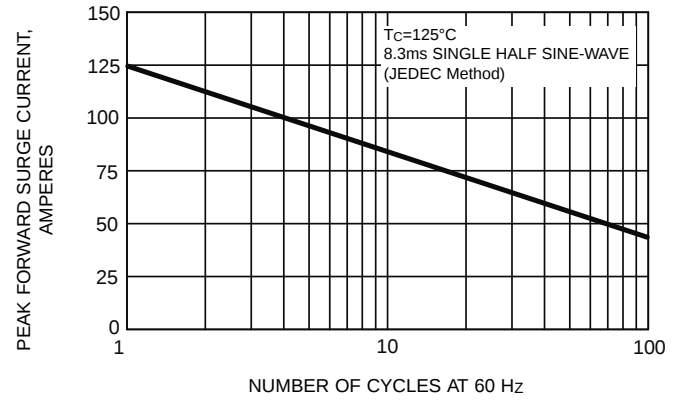


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

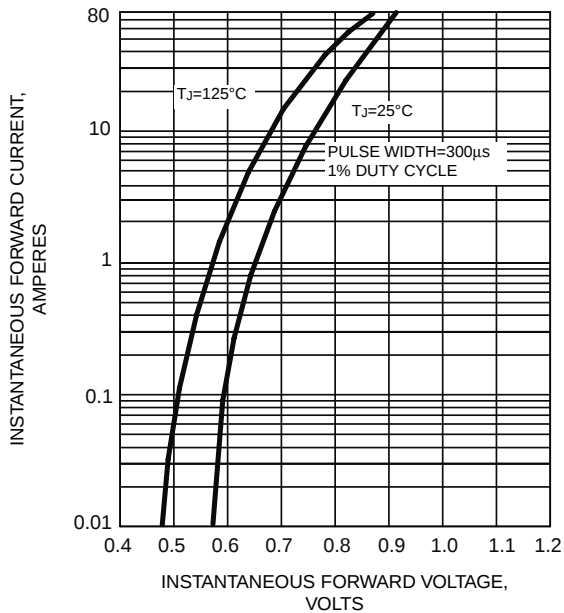


FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

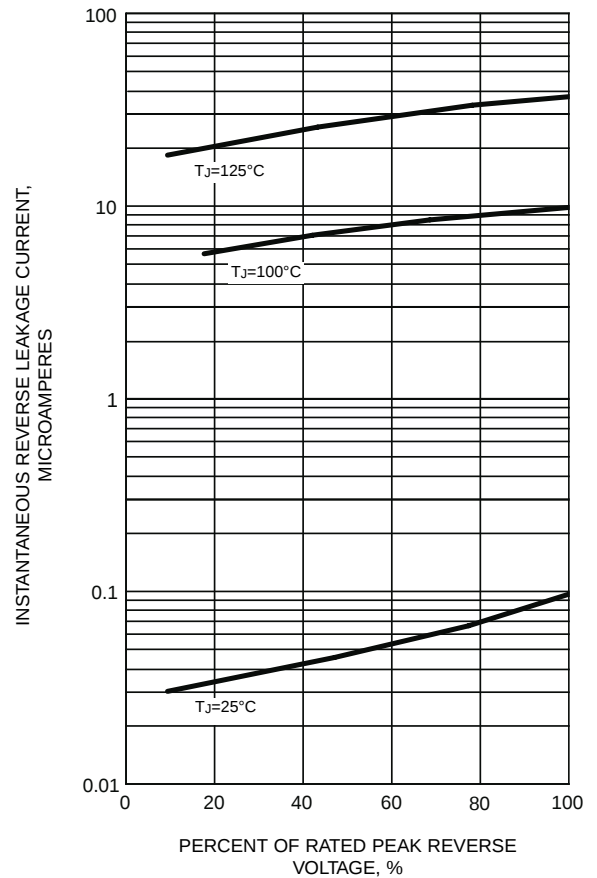


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

