



# RGP02-12H THRU RGP02-20H

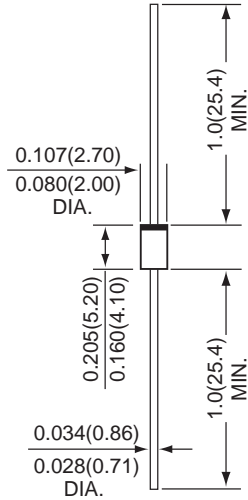
## SINTERED GLASS PASSIVATED JUNCTION FAST RECOVERY RECTIFIER

Reverse Voltage - 1200 to 2000 Volts

Forward Current 1.0 Ampere

**PATENTED**

DO-204AL



\*Dimensions in inches and (millimeters)

**SUPEREX II**<sup>TM</sup>



### FEATURES

- \* Halogen-free type
- \* GPRC (Glass Passivated Rectifier Chip) inside
- \* Glass passivated cavity-free junction
- \* Capable of meeting environmental standards of MIL-S-19500
- \* 1.0 Ampere operation at  $T_A = 55^\circ\text{C}$  with no thermal runaway
- \* High temperature soldering guaranteed:  $260^\circ\text{C}/10$  seconds, 0.375" (9.5mm) lead length, 5lbs. (2.3 kg) tension
- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0

### MECHANICAL DATA

**Case :** JEDEC DO-204AL molded plastic over glass body

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

**Polarity :** Color band denotes cathode end

**Weight :** 0.012 ounces , 0.3 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

| Ratings at 25 °C ambient temperature unless otherwise specified.                                 | SYMBOLS                              | RGP02-12H   | RGP02-15H | RGP02-18H | RGP02-20H | UNITS  |
|--|--------------------------------------|-------------|-----------|-----------|-----------|--------|
| Maximum repetitive peak reverse voltage  | V <sub>RRM</sub>                     | 1200        | 1500      | 1800      | 2000      | Volts  |
| Maximum RMS voltage  | V <sub>RMS</sub>                     | 840         | 1050      | 1260      | 1400      | Volts  |
| Maximum DC blocking voltage  | V <sub>DC</sub>                      | 1200        | 1500      | 1800      | 2000      | Volts  |
| Maximum average forward rectified current<br>0.375" (9.5mm) lead length (SEE FIG.1)              | I (AV)                               | 1.0         |           |           |           | Amps   |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I <sub>FSM</sub>                     | 20          |           |           |           | Amps   |
| Maximum instantaneous forward voltage at 1.0 A   | V <sub>F</sub>                       | 1.8         |           |           |           | Volts  |
| Maximum DC reverse current<br>at rated DC blocking voltage                                       | I <sub>R</sub>                       | 5<br>50     |           |           |           | uA     |
| Typical reverse recovery time (NOTE 1)   | T <sub>rr</sub>                      | 300         |           |           |           | ns     |
| Typical junction capacitance (NOTE 2)  | C <sub>J</sub>                       | 5.0         |           |           |           | pF     |
| Typical thermal resistance (NOTE 3)  | R <sub>θJA</sub><br>R <sub>θJL</sub> | 65<br>30    |           |           |           | °C / W |
| Operating junction and storage temperature range   | T <sub>J</sub> ,T <sub>STG</sub>     | -65 to +175 |           |           |           | °C     |

NOTES : (1) Revers 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 at 0.375" (9.5mm) lead lengths, P.C.B. mounted.

REV. 0

# RATINGS AND CHARACTERISTIC CURVES RGP02-12H THRU RGP02-20H

FIG.1 - FORWARD CURRENT DERATING CURVE

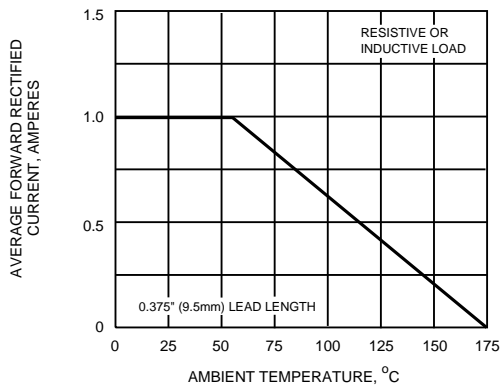


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

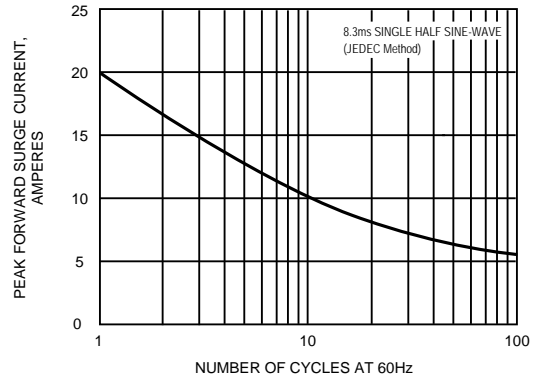


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

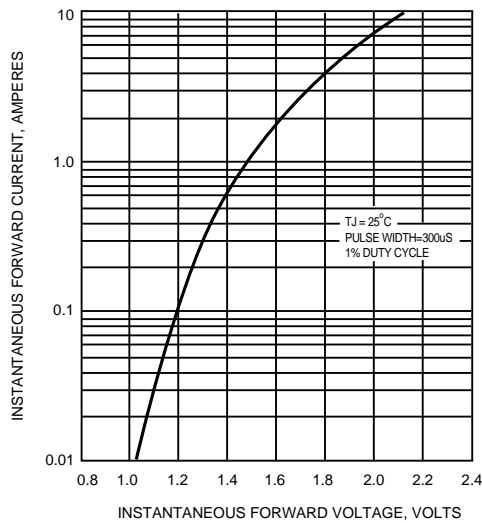


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

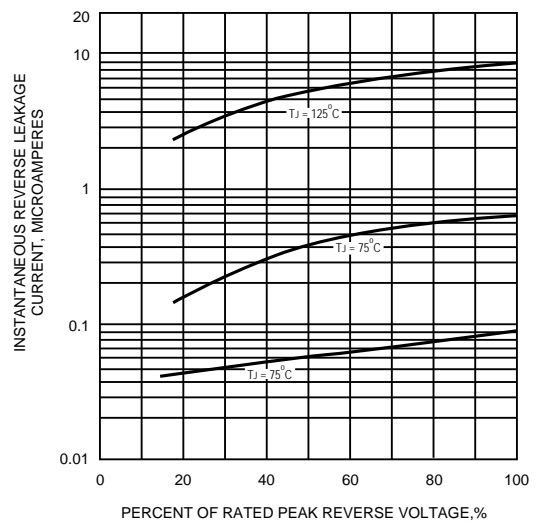


FIG.5 - TYPICAL JUNCTION CAPACITANCE

