TAYCHIPST SINTERED GLASS PASSIVATED JUNCTION FAST RECOVERY RECTIFIER

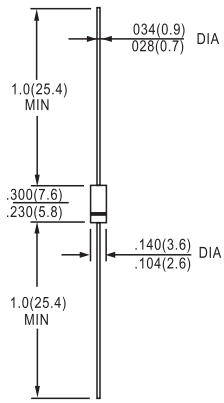
**RGP20A THRU RGP20MA**

50V-1000V 2.0A

## FEATURES

* GPRC (Glass Passivated Rectifier Chip) inside
* Glass passivated cavity-free junction
* Capable of meeting environmental standards of MIL-S-19500
* For use in high frequence rectifier circuits
* Fast switching for high efficiency
* 2.0 Amperes operation at $T_A$=55°C with no thermal runaway
* Typical IR less than 0.1uA
* High temperature soldering guaranteed: 260°C/10 seconds, 0.375" (9.5mm) lead length, 5lbs. (2.3 kg) tension
* Plastic package has Underwriters Laboratory Flammability Classification 94V-0

DO-15




Dimensions in inches and (millimeters)

## MECHANICAL DATA

**Case :** JEDEC DO-204AC molded plastic over glass body
**Terminals :** Plated axial leads , solderable per MIL-STD-750, Method 2026
**Polarity :** Color band denotes cathode end
**Mounting Position :** Any
**Weight :** 0.015 ounes , 0.4 gram

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

| *Ratings at 25 °C ambient temperature unless otherwise specified.* | SYMBOLS | RGP20 A | B | D | G | J | JA | K | KA | M | MA | UNITS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Maximum repetitive peak reverse voltage | $V_{RRM}$ | 50 | 100 | 200 | 400 | 600 | 600 | 800 | 800 | 1000 | 1000 | Volts |
| Maximum RMS voltage | $V_{RMS}$ | 35 | 70 | 140 | 280 | 420 | 420 | 560 | 560 | 700 | 700 | Volts |
| Maximum DC blocking voltage | $V_{DC}$ | 50 | 100 | 200 | 400 | 600 | 600 | 800 | 800 | 1000 | 1000 | Volts |
| Maximum average forward rectified current 0.375" (9.5mm) lead length (SEE FIG.1) | I (AV) | 2.0 | | | | | | | | | | Amps |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 65 | | | | | | | | | | Amps |
| Maximum instantaneous forward voltage at 2.0 A | $V_F$ | 1.3 | | | | | | | | | | Volts |
| Maximum DC reverse current at rated DC blocking voltage $T_A$=25°C<br>$T_A$=125°C<br>$T_A$=150°C | $I_R$ | 5<br>30<br>80 | | | | | | | | | | uA |
| Maximum reverse recovery time (NOTE 1) | trr | 150 | | | | 250 | 150 | 500 | 300 | 500 | 300 | nS |
| Typical junction capacitance (NOTE 2) | $C_J$ | 35 | | | | | | | | | | pF |
| Typical thermal resistance (NOTE 3) | $R_{\theta JA}$ | 22 | | | | | | | | | | °C / W |
| Operating junction and storage temperature range | $T_J$,$T_{STG}$ | -65 to +175 | | | | | | | | | | °C |

NOTES : (1) Reverse recovery test condition : IF 0.5A, IR=1.0A, Irr=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.

## RATINGS AND CHARACTERISTIC CURVES RGP20A THRU RGP20MA

FIG.1 - FORWARD CURRENT DERATING CURVE

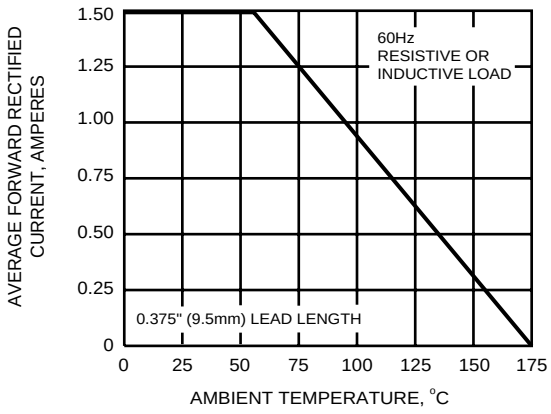



FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

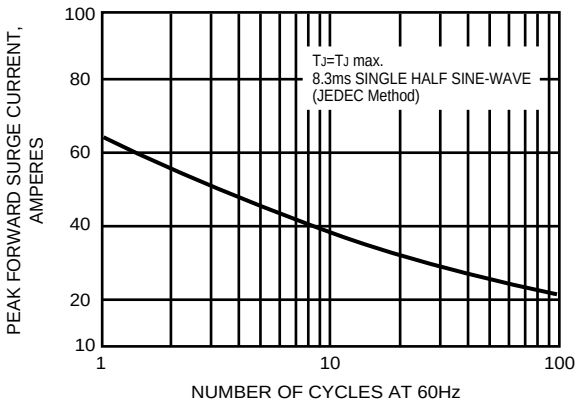



FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

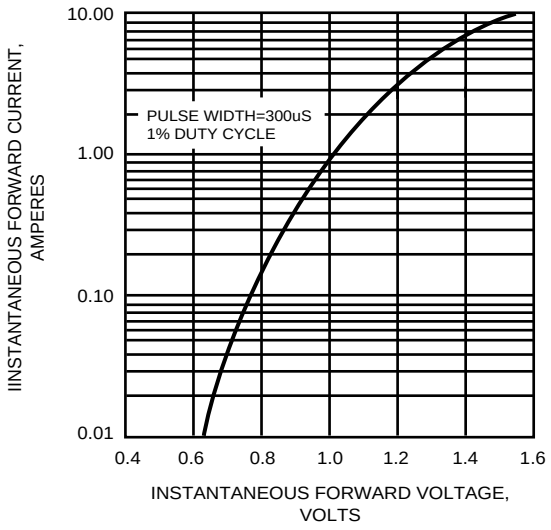



FIG.4 - TYPICAL REVERSE CHARACTERISTICS

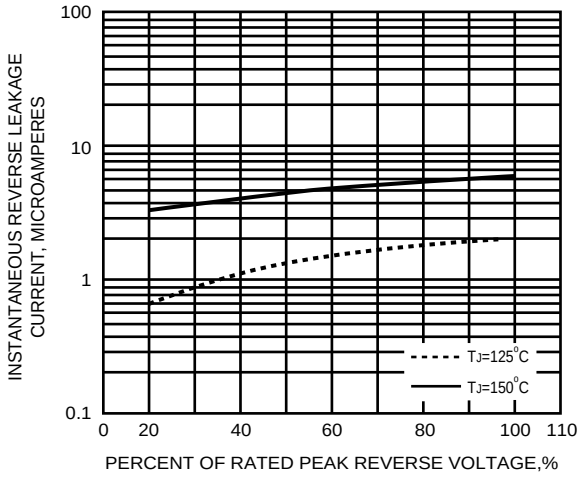



FIG.5 - TYPICAL JUNCTION CAPACITANCE

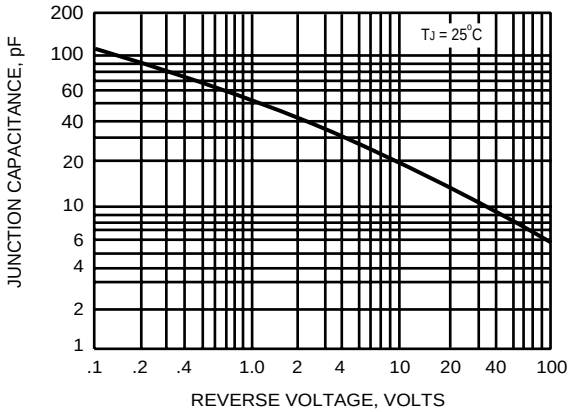



FIG.6 - TYPICAL TRANSIENT THERMAL IMPEDANCE