



# RGP10A THRU RGP10M

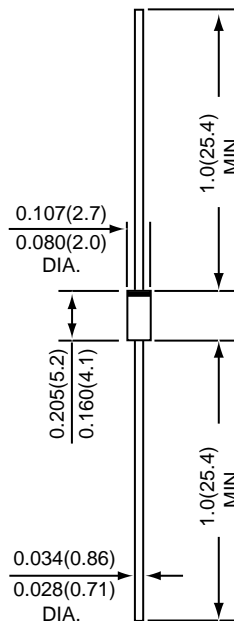
## SINTERED GLASS PASSIVATED JUNCTION FAST RECOVERY RECTIFIER

Reverse Voltage - 50 to 1000 Volts

Forward Current - 1.0 Ampere

**PATENTED**

DO-204AL



\*Dimensions in inches and (millimeters)

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



### 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 frequency rectifier circuits
- \* Fast switching for high efficiency
- \* 1.0 Ampere operation at  $T_A=55^{\circ}\text{C}$  with no thermal runaway
- \* Typical IR less than 0.1  $\mu\text{A}$
- \* 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 :** Plated axial leads , solderable per MIL-STD-750, Method 2026  
**Polarity :** Color band denotes cathode end  
**Mounting Position :** Any  
**Weight :** 0.012 ounces , 0.3 gram

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.	SYMBOLS	RGP10										UNITS	
		A	B	D	G	J	JA	K	KA	M	MA		
Maximum repetitive peak reverse voltage	VRRM	50	100	200	400	600	600	800	800	1000	1000	Volts	
Maximum RMS voltage	VRMS	35	70	140	280	420	420	560	560	700	700	Volts	
Maximum DC blocking voltage	VDC	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)	1.0										Amps	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	30										Amps	
Maximum instantaneous forward voltage at 1.0 A	VF	1.3										Volts	
Maximum DC reverse current at rated DC blocking voltage	IR	5 30 50										$\mu\text{A}$	
Maximum reverse recovery time (NOTE 1)	trr	150			250	150	500	300	500	300			nS
Typical junction capacitance (NOTE 2)	CJ	15										pF	
Typical thermal resistance (NOTE 3)	R $\theta$ JA	55										$^{\circ}\text{C} / \text{W}$	
Operating junction and storage temperature range	TJ,TSTG	-65 to +175										$^{\circ}\text{C}$	

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 RGP10A THRU RGP10M

FIG.1 - FORWARD CURRENT DERATING CURVE

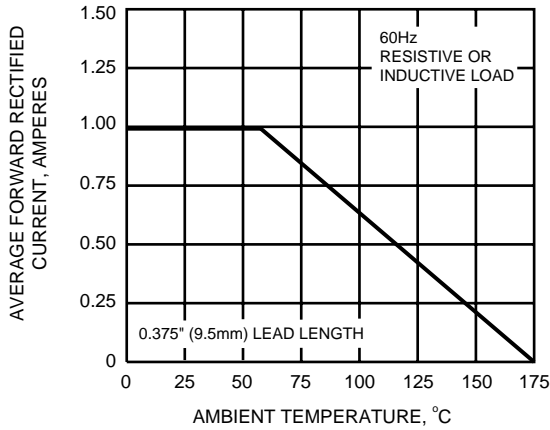


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

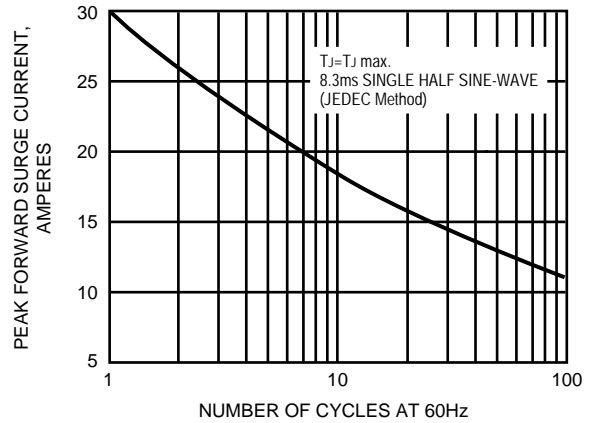


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

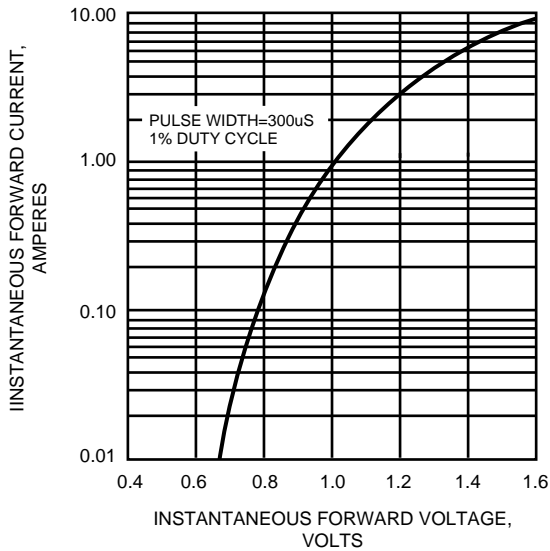


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

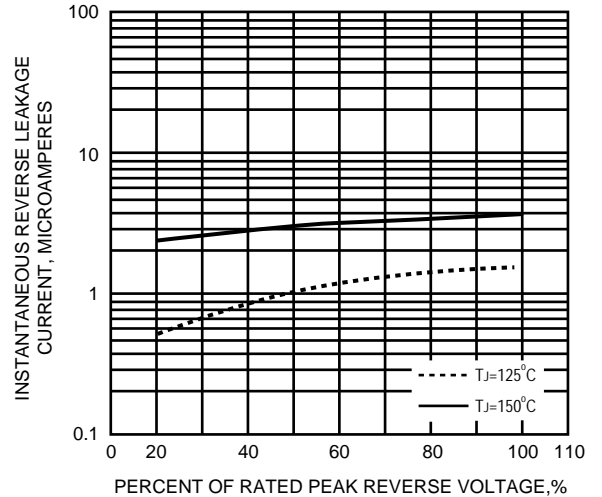


FIG.5 - TYPICAL JUNCTION CAPACITANCE

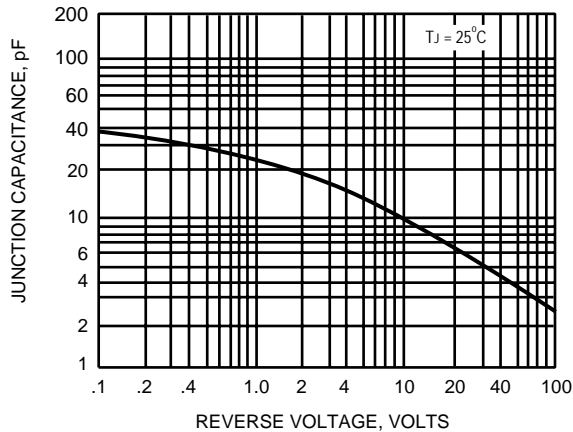


FIG.6 - TYPICAL TRANSIENT THERMAL IMPEDANCE

