



SEMICONDUCTOR

GPRC

# RGP10A THRU RGP10M

## FAST RECOVERY RECTIFIER

Reverse Voltage: 50 to 1000 Volts

Forward Current: 1.0Ampere

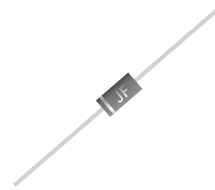
FAST RECOVERY RECTIFIER

### FEATURES

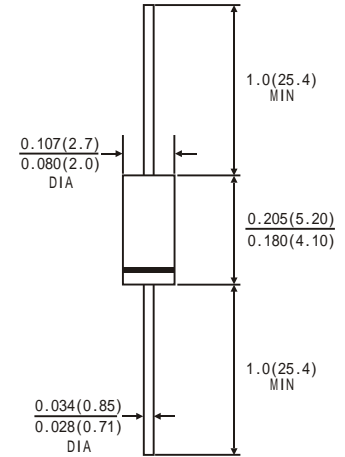
- GPRC( Glass Passivated Rectifier Chip) inside
- Glass passivated cavity-free junction
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Fast switching speed
- Construction utilizes void-free molded plastic technique
- 1.0A operation at  $T_A=75\text{ C}$  with to terminal runaway
- High temperature soldering guaranteed:250 C/10 seconds, 0.375"(9.5mm) lead length,5 lbs.(2.3kg)tension.

### MECHANICAL DATA

- Case: JEDEC DO-41 molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750,method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.012ounce, 0.33 gram



### DO-41



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating at 25°C ambient temperature unless otherwise specified.Single phase ,half wave ,60Hz,resistive or inductive load. For capacitive load,derate current by 20%.)

	Symbols	RGP 10A	RGP 10B	RGP 10D	RGP 10G	RGP 10J	RGP 10K	RGP 10M	Units
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current 0.375"(9.5mm)lead length at T <sub>A</sub> =75 C	I <sub>(AV)</sub>	1.0							Amp
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) at T <sub>A</sub> =25°C	I <sub>FSM</sub>	30.0							Amps
Maximum Instantaneous Forward Voltage at 1.0 A	V <sub>F</sub>	1.3							Volts
Maximum DC Reverse Current at rated DC blocking voltage	I <sub>R</sub>	5.0							μA
Maximum full load reverse current full cycle average. 0.375"(9.5mm)lead length at T <sub>L</sub> =55°C		100							
Maximum reverse recovery time(Note1)	T <sub>rr</sub>	150			250	500		ns	
Typical junction capacitance(Note2)	C <sub>J</sub>	15.0							PF
Operating junction and storage temperature range	T <sub>J</sub> T <sub>STG</sub>	-65 to +150							°C

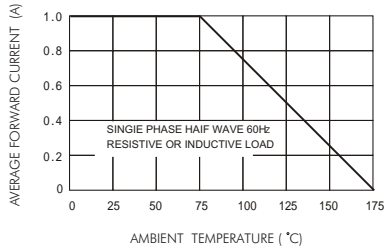
Note: 1.Test conditions: I<sub>F</sub>=0.5A,I<sub>R</sub>=1.0A,I<sub>RR</sub>=0.25A.

2.Measured at 1MHz and applied reverse voltage of 4.0 Volts.

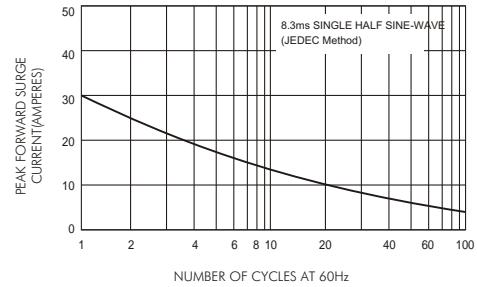
# RATINGS AND CHARACTERISTIC CURVES RGP10A THRU RGP10M

FAST RECOVERY RECTIFIER

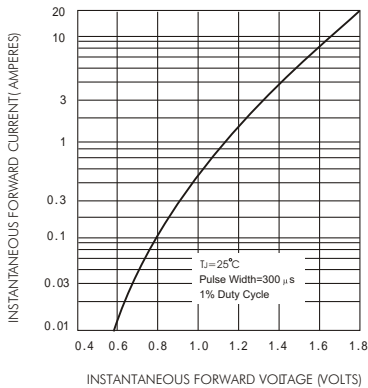
**FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE**



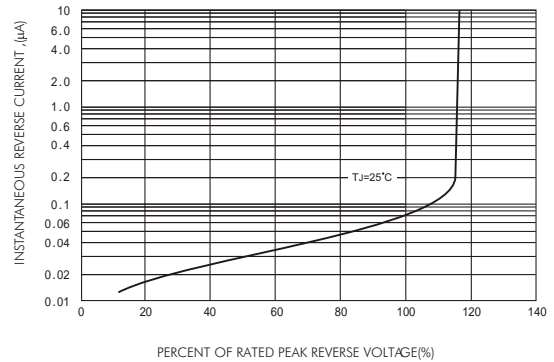
**FIG. 2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



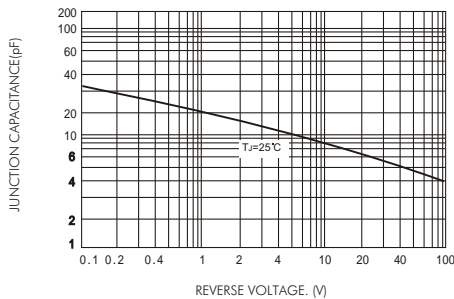
**FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



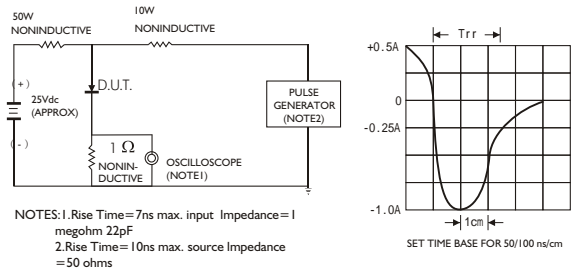
**FIG. 4-TYPICAL REVERSE CHARACTERISTICS**



**FIG. 5-TYPICAL JUNCTION CAPACITANCE**



**FIG. 6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC**



NOTES: 1. Rise Time = 7ns max. input Impedance = 1 megohm 22pF  
2. Rise Time = 10ns max. source Impedance = 50 ohms