



SEMICONDUCTOR

# RGP10A THRU RGP10M

## GLASS PASSIVATED FAST RECOVERY RECTIFIER

Reverse Voltage: 50 to 1000 Volts

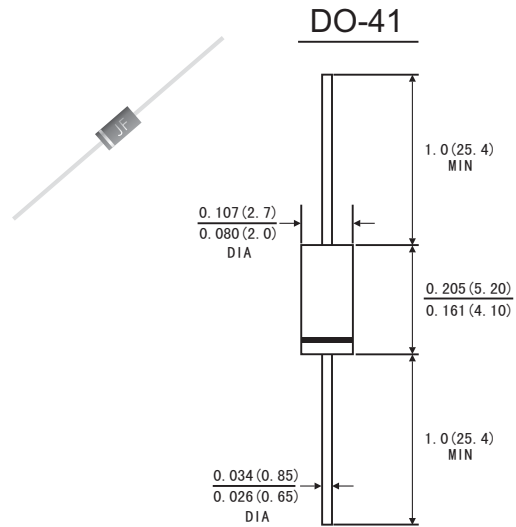
Forward Current: 1.0 Ampere

### FEATURES

- Glass passivated junction
- Plastic package has Underwriters Laboratory Flammability
- Classification 94V-0
- Construction utilizes void-free molded plastic technique
- High temperature soldering guaranteed: 260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU

### 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



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Dimensions in inches and (millimeters)

(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	$V_{RRM}$	50	100	200	400	600	800	1000	Volts	
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts	
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts	
Maximum Average Forward Rectified Current	$I_{(AV)}$	1.0							Amps	
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	30.0							Amps	
Maximum Instantaneous Forward Voltage at 1.0 A	$V_F$	1.3							Volts	
Maximum DC Reverse Current at rated DC blocking voltage	$T_a=25^{\circ}C$	IR							5.0	$\mu A$
	$T_a=125^{\circ}C$								30	
	$T_a=150^{\circ}C$								50	
Maximum reverse recovery time (Note 1)	$t_{rr}$	150				250	500		ns	
Typical junction capacitance (Note 2)	$C_J$	15.0							pF	
Typical thermal resistance (Note 3)	$R_{\theta JA}$	55.0							°C/W	
Operating junction and storage temperature range	$T_J$ $T_{STG}$	-55 to +175							°C	

Note: 1. Test conditions:  $I_F=0.5A, I_R=1.0A, I_{RR}=0.25A$ .

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

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-TYPICAL FORWARD CURRENT DERATING CURVE

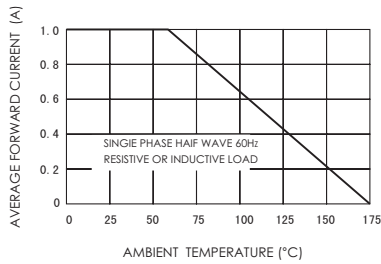


FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

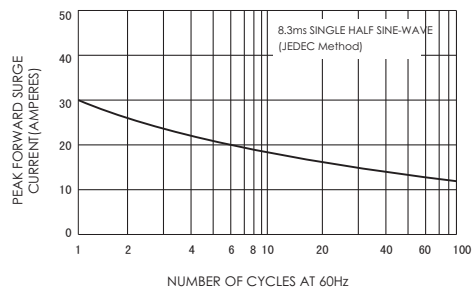


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

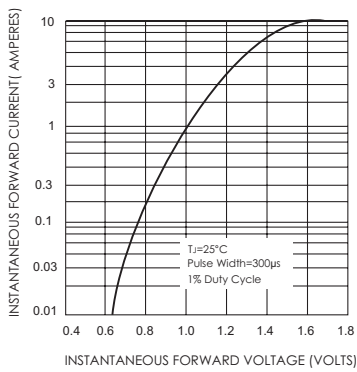


FIG.4-TYPICAL REVERSE CHARACTERISTICS

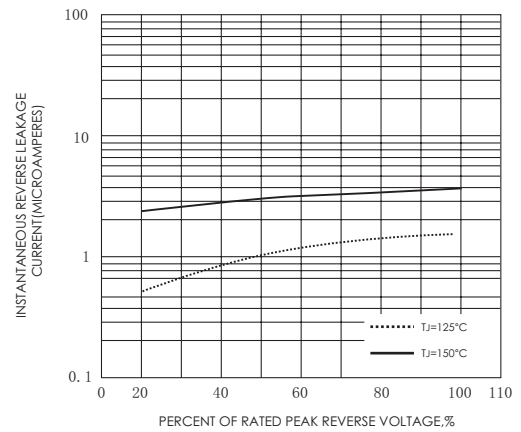


FIG.5-TYPICAL JUNCTION CAPACITANCE

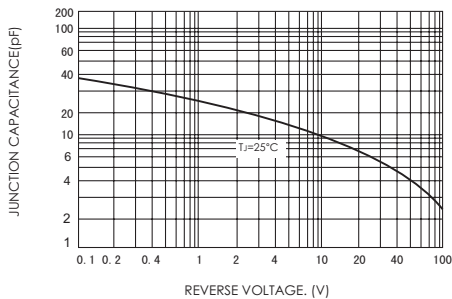


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

