



RGP10A THRU RGP10M

1.0 AMP. Glass Passivated Junction Fast Recovery Rectifiers



Voltage Range
50 to 1000 Volts
Current
1.0 Ampere

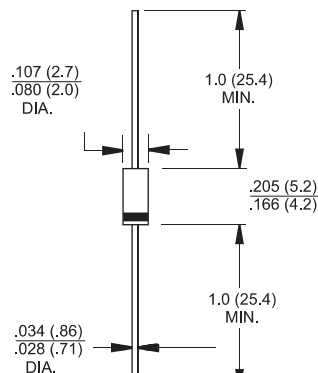
Features

- ✧ High temperature metallurgically bonded constructed
- ✧ Plastic material used carries Underwriters Laboratory Classification 94V-0
- ✧ 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
- ✧ Typical I_R less than 0.1 μA
- ✧ High temperature soldering guaranteed:
350°C / 10 seconds, 0.375" (9.5mm) lead length, 5 lbs., (2.3kg) tension
- ✧ Fast switching for high efficiency

Mechanical Data

- ✧ Case: JEDEC DO-41 molded plastic over glass body
- ✧ Lead: Plated Axial leads, solderable per MIL-STD-750, Method 2026
- ✧ Polarity: Color band denotes cathode end
- ✧ Mounting position: Any
- ✧ Weight: 0.012 ounce, 0.3 gram

DO-41



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	Symbol	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	V
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375" (9.5mm) Lead Length @ T _A = 55°C	I _(AV)	1.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	30.0							A
Maximum Instantaneous Forward Voltage @ 1.0A	V _F	1.3							V
Maximum DC Reverse Current @ T _A =25°C at Rated DC Blocking Voltage @ T _A =150°C	I _R	5.0 200							uA uA
Maximum Reverse Recovery Time (Note 1) T _J =25°C	T _{rr}	150				250	500		nS
Typical Junction Capacitance (Note 2)	C _j	15							pF
Typical Thermal resistance (Note 3)	R θ JA	55							°C/W
Operating Temperature Range	T _J	-65 to + 175							°C
Storage Temperature Range	T _{STG}	-65 to + 175							°C

Notes: 1. Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$ Recover to 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 Length, P.C.B. Mounted.

RATINGS AND CHARACTERISTIC CURVES (RGP10A THRU RGP10M)

FIG. 1- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

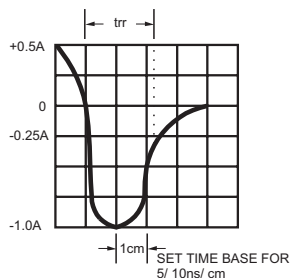
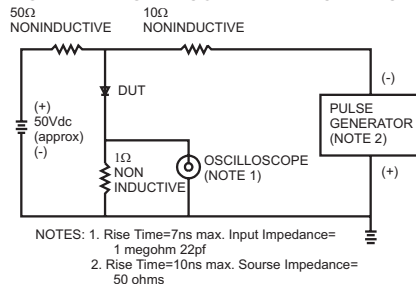


FIG. 2- MAXIMUM FORWARD CURRENT DERATING CURVE

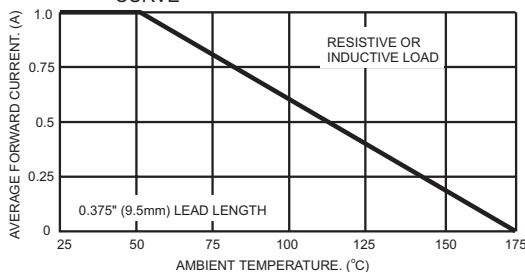


FIG. 3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

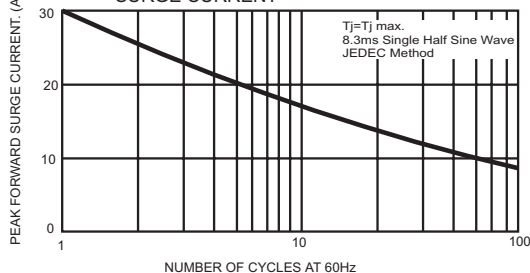


FIG. 4- TYPICAL JUNCTION CAPACITANCE

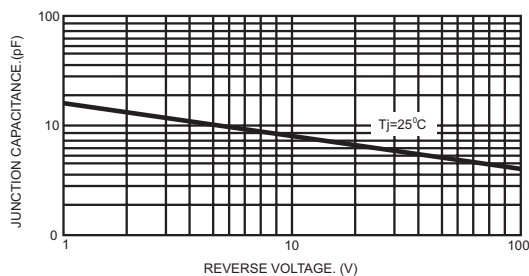


FIG. 5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

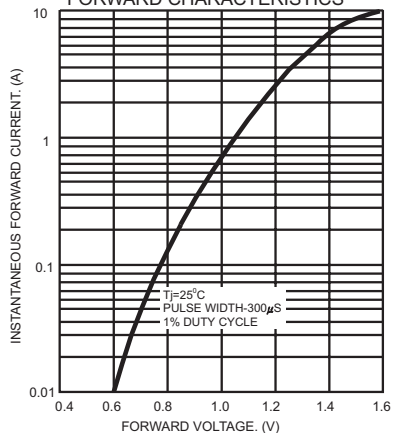


FIG. 6- TYPICAL REVERSE CHARACTERISTICS

