RGP10A THRU RGP10M

1.0 AMP. Glass Passivated Junction Fast Recovery Rectifiers

Voltage Range
50 to 1000 Volts
Current
1.0 Ampere

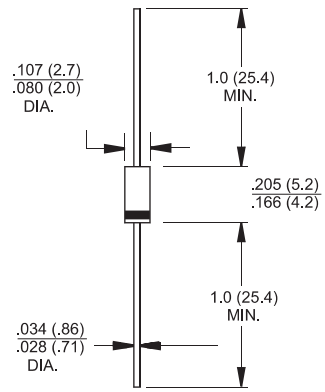
Features

- ✧ 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°C with no thermal runaway
- ✧ Typical I_R less than 0.1 uA
- ✧ 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

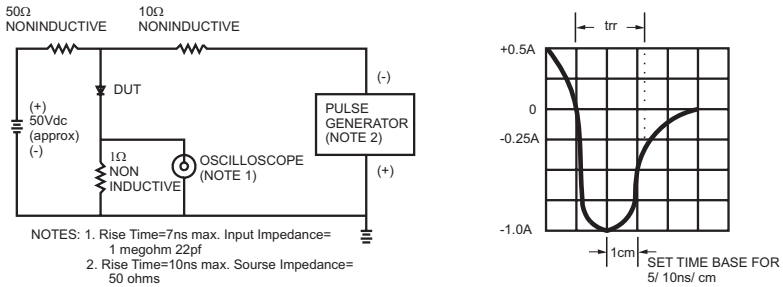
Rating at 25℃ ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%

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℃	$I_{(AV)}$	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℃ at Rated DC Blocking Voltage @ T_A=150℃	I_R	5.0 200							uA uA
Maximum Reverse Recovery Time (Note 1) T_J=25℃	Trr	150				250	500		nS
Typical Junction Capacitance (Note 2)	Cj	15							pF
Typical Thermal Resistance (Note 3)	$R\theta_{JA}$	65							℃/W
Operating Temperature Range	T_J	-65 to + 175							℃
Storage Temperature Range	T_{STG}	-65 to + 175							℃

Notes: 1. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A Recover to 0.25A.
2. Measured at 1.0 MHz and Applied Reverse Voltage of 4.0 Volts.
3. Mount on Cu-Pad Size 5mm x 5mm on P.C.B.

RATINGS AND CHARACTERISTIC CURVES (RGP10A THRU RGP10M)

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



NOTES: 1. Rise Time=7ns max. Input Impedance= 1 megohm 22pf
2. Rise Time=10ns max. Sourse Impedance= 50 ohms

FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

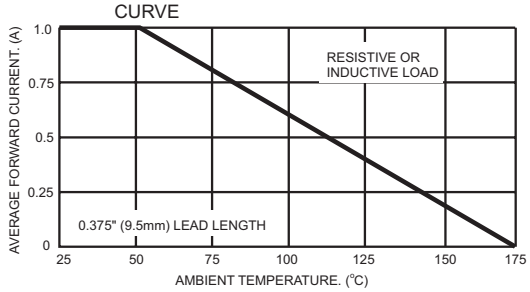


FIG.3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

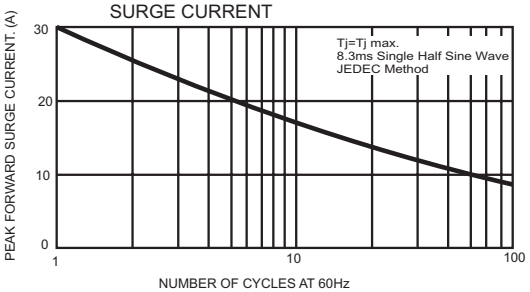


FIG.4- TYPICAL JUNCTION CAPACITANCE

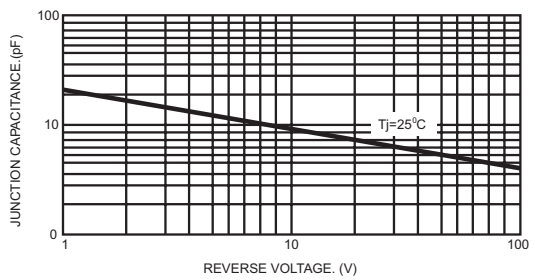


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

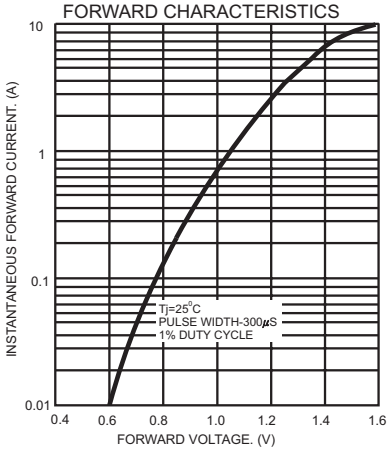


FIG.6- TYPICAL REVERSE CHARACTERISTICS