RGP30A THRU RGP30M

3.0 AMPS. Glass Passivated Junction Fast Recovery Rectifiers

Voltage Range
50 to 1000 Volts
Current
3.0 Amperes

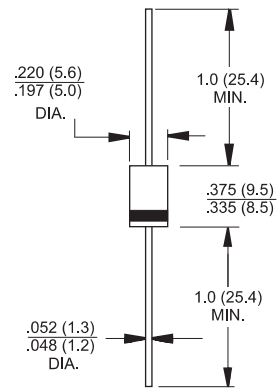
Features

- ✧ 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
- ✧ 3.0 ampere operation at T_A=55°C with no thermal runaway
- ✧ Typical I_R less than 0.2 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-201AD 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: 0.048 ounce, 1.28 grams

DO-201AD



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%

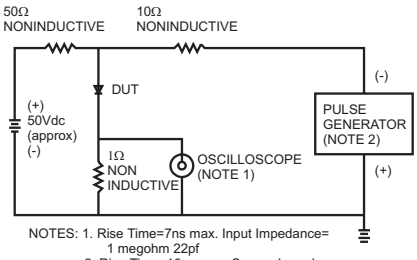
Type Number	Symbol	RGP 30A	RGP 30B	RGP 30D	RGP 30G	RGP 30J	RGP 30K	RGP 30M	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375" (9.5mm) Lead Length @ T_A = 55℃	$I_{(AV)}$	3.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	125							A
Maximum Instantaneous Forward Voltage @ 3.0A	V_F	1.3							V
Maximum DC Reverse Current@ T_A=25℃ at Rated DC Blocking Voltage @T_A=125℃	I_R	5.0 100							uA uA
Maximum Reverse Recovery Time (Note 1) T_J=25℃	Trr	150				250	500		nS
Typical Junction Capacitance (Note 2)	Cj	60							pF
Typical Thermal Resistance (Note 3)	R θ JA R θ JL	25 6.5							℃/W
Operating & Storage Temperature Range	T_J /TSTG	-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. Thermal Resistance from Junction to Ambient and from Junction to Lead at 0.375"(9.5mm) Lead Length P.C.B. Mounted.

REV.1 Oct.-2003

RATINGS AND CHARACTERISTIC CURVES (RGP30A THRU RGP30M)

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

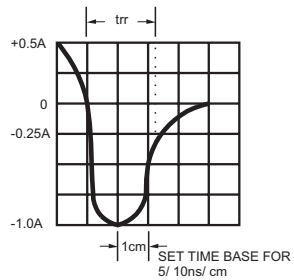


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

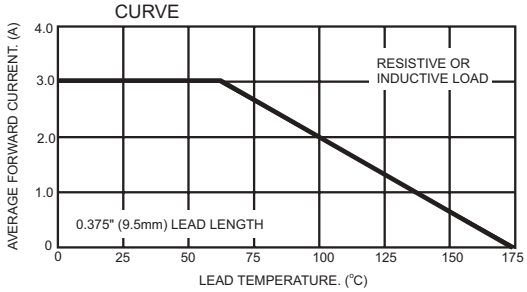


FIG.3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

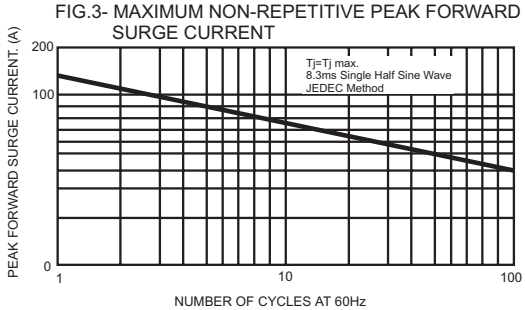


FIG.4- TYPICAL JUNCTION CAPACITANCE

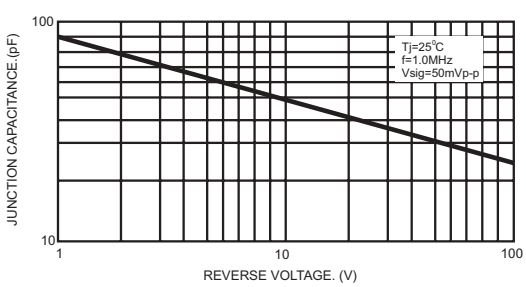


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

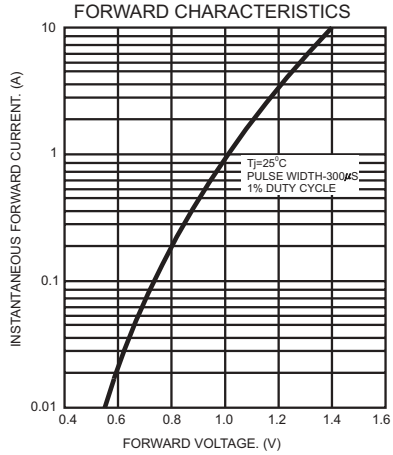


FIG.6- TYPICAL REVERSE CHARACTERISTICS