



SEMICONDUCTOR

GPRC

RGP30A THRU RGP30M

FAST RECOVERY RECTIFIER

Reverse Voltage: 50 to 1000 Volts

Forward Current: 3.0 Amperes

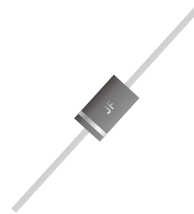
FAST RECOVERY RECTIFIER

FEATURES

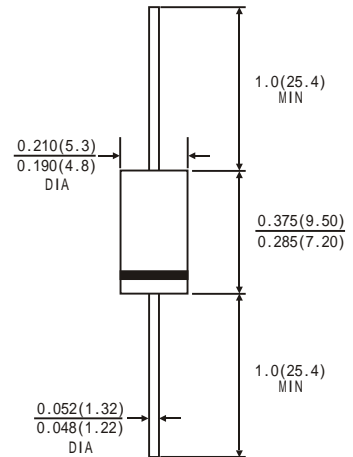
- GPRC(Glass Passivated Rectifier Chip) inside
- Glass passivated cavity-free junction
- Fast switching
- Low leakage, Low forward voltage drop
- High current capability, High current surge
- High reliability

MECHANICAL DATA

- Case: JEDEC DO-201AD molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.041 OUNCE, 1.18 grams



DO-201AD



Dimensions in inches and (millimeters)

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 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	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 0.375"(9.5mm) lead length at T _A =75 C	I _(AV)	3.0							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	125							Amps
Maximum Instantaneous Forward Voltage at 3.0A	V _F	1.3							Volts
Maximum DC Reverse Current at rated DC blocking voltage	T _A =25°C	10							μA
	T _A =55°C	150							
Maximum reverse recovery time(Note1)	T _{rr}	150			250	500	ns		
Typical junction capacitance(Note2)	C _J	65							PF
Operating junction and storage temperature range	T _J T _{STG}	-65 to +150							°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.

RATINGS AND CHARACTERISTIC CURVES RGP30A THRU RGP30M

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

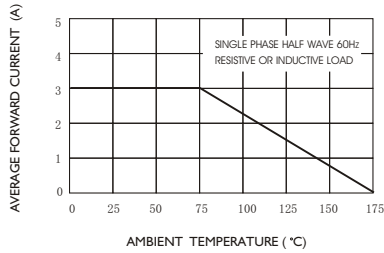


FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

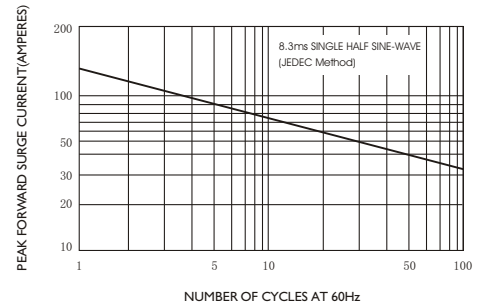


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

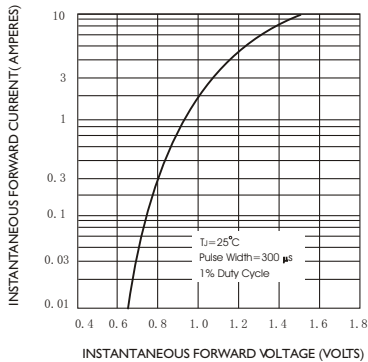


FIG.4-TYPICAL JUNCTION CAPACITANCE

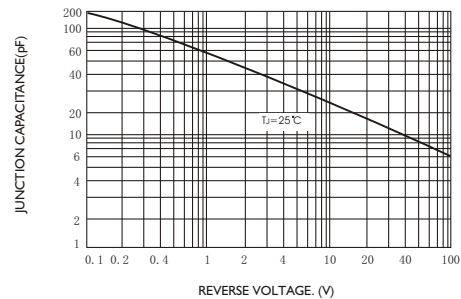
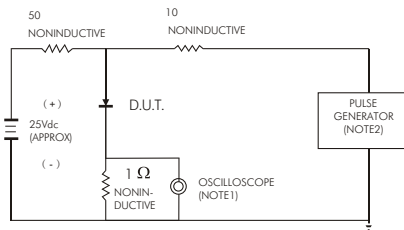


FIG.5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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

