



S E M I C O N D U C T O R

GPRC

# RGF30A THRU RGF30M

## FAST RECOVERY RECTIFIER

Reverse Voltage: 50 to 1000 Volts

Forward Current:3.0Amperes

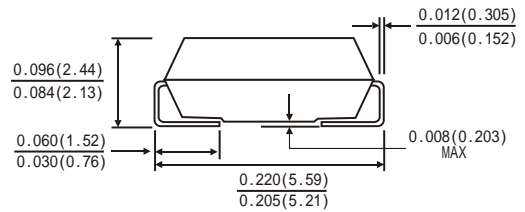
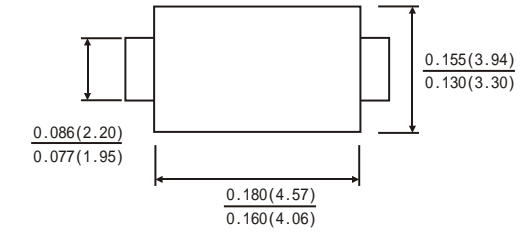
FAST RECOVERY RECTIFIER

### FEATURES

- GPRC (Glass Passivated Rectifier Chip) inside
- Glass passivated cavity-free junction
- For Surface Mount Applications, Easy to pick and place
- Fast switching
- Low leakage, Low forward voltage drop
- High current capability,High current surge
- High reliability



### SMB(DO-214AA)



Dimensions in inches and (millimeters)

### MECHANICAL DATA

- Case: JEDEC SMB(DO-214AA) molded plastic body
- Terminals: solder plated ,solderable per MIL-STD-750,method 2026
- Polarity: color band denotes cathode end
- Weight: 0.003ounce,0.093 gram

### 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	RGF 30A	RGF 30B	RGF 30D	RGF 30G	RGF 30J	RGF 30K	RGF 30M	Units
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	VRMS	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	VDC	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current 0.375"(9.5mm)lead length at TA=75 C	I(AV)	3.0							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	125							Amps
Maximum Instantaneous Forward Voltage at 3.0A	VF	1.3							Volts
Maximum DC Reverse Current at rated DC blocking voltage	TA=25°C	10							µA
	TA=55°C	150							
Maximum reverse recovery time(Note1)	Trr	150			250	500		ns	
Typical junction capacitance(Note2)	CJ	65							pF
Operating junction and storage temperature range	TJ TSTG	-65 to +150							°C

Note: 1. Test conditions: IF=0.5A,IR=1.0A,IRR=0.25A.

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

# RATINGS AND CHARACTERISTIC CURVES RGF30A THRU RGF30M

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

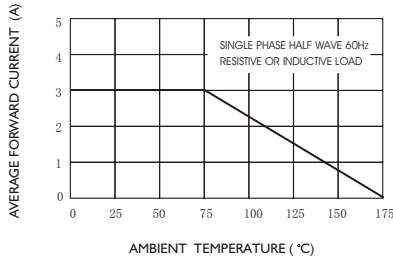


FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

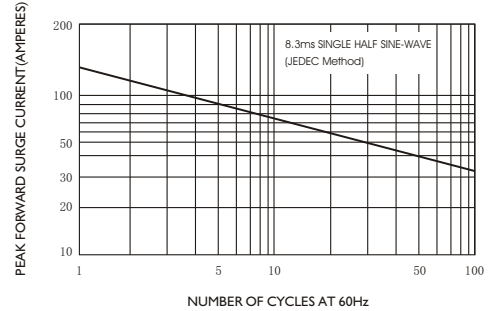


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

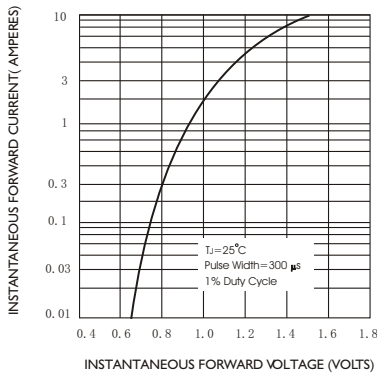


FIG.4-TYPICAL JUNCTION CAPACITANCE

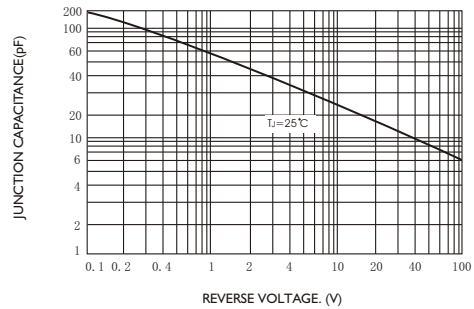
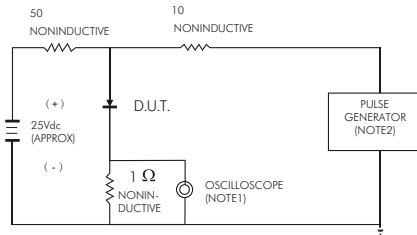


FIG.5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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

