



SEMICONDUCTOR

GPRC

# RGF20A THRU RGF20M

## FAST RECOVERY RECTIFIER

Reverse Voltage: 50 to 1000 Volts

Forward Current: 2.0 Amperes

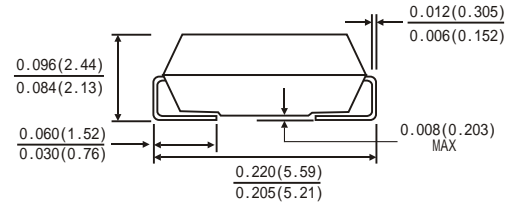
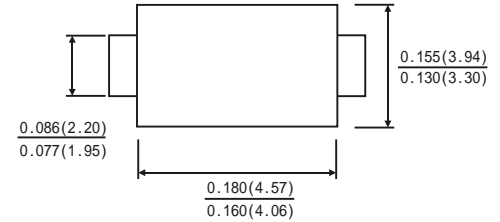
FAST RECOVERY RECTIFIER

### 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 20A	RGF 20B	RGF 20D	RGF 20G	RGF 20J	RGF 20K	RGF 20M	Units
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current 0.375"(9.5mm)lead length at T <sub>a</sub> =75 C	I <sub>(AV)</sub>	2.0							Amp
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	65.0							Amps
Maximum Instantaneous Forward Voltage at 2.0 A	V <sub>F</sub>	1.3							Volts
Maximum DC Reverse Current at rated DC blocking voltage	I <sub>R</sub>	5.0							μA
Maximum full load reverse current full cycle average. 0.375"(9.5mm)lead length at T <sub>L</sub> =55°C		100							
Maximum reverse recovery time(Note1)	T <sub>rr</sub>	150			250	500		ns	
Typical junction capacitance(Note2)	C <sub>J</sub>	35							PF
Operating junction and storage temperature range	T <sub>J</sub> T <sub>STG</sub>	-65 to +150							°C

Note: 1. Test conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A.

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

# RATINGS AND CHARACTERISTIC CURVES RGF20A THRU RGF20M

FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

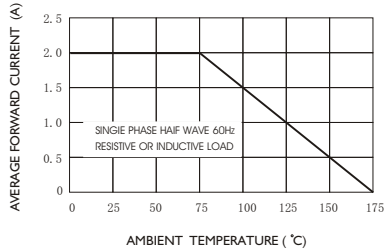


FIG. 2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

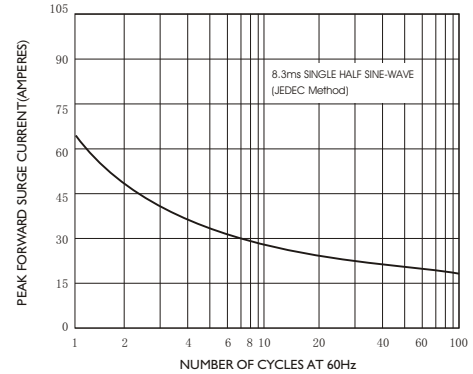


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

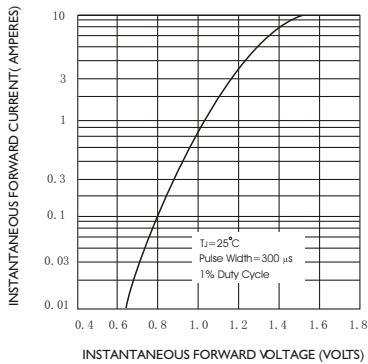


FIG. 4-TYPICAL JUNCTION CAPACITANCE

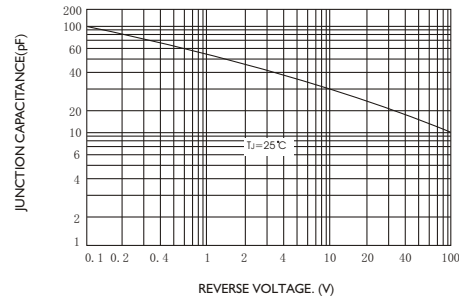
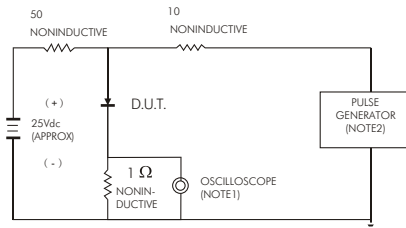
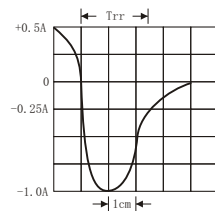


FIG. 5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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



SET TIME BASE FOR 50/100 ns/cm