



SEMICONDUCTOR

GPRC

RGF20A THRU RGF20M

FAST RECOVERY RECTIFIER

Reverse Voltage: 50 to 1000 Volts

Forward Current: 2.0 Amperes

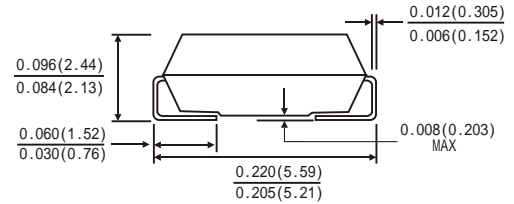
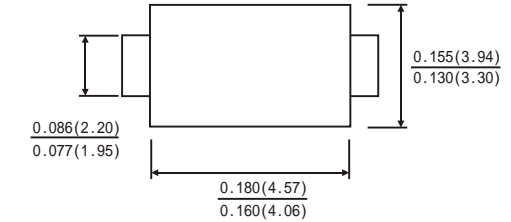
FAST RECOVERY RECTIFIER

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 _{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)	2.0							Amp
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	65.0							Amps
Maximum Instantaneous Forward Voltage at 2.0 A	V _F	1.3							Volts
Maximum DC Reverse Current at rated DC blocking voltage	I _R	5.0							μA
Maximum full load reverse current full cycle average. 0.375"(9.5mm)lead length at T _L =55°C		100							
Maximum reverse recovery time(Note1)	T _{rr}	150			250	500		ns	
Typical junction capacitance(Note2)	C _J	35							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 RGF20A THRU RGF20M

FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

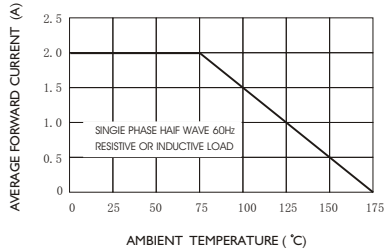


FIG. 2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

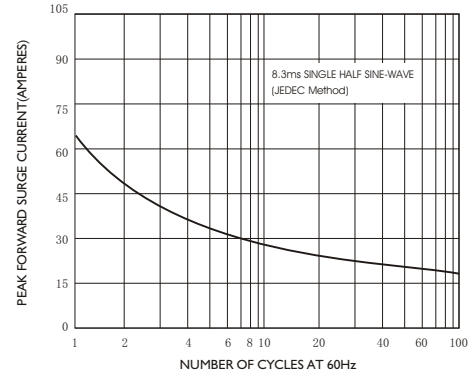


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

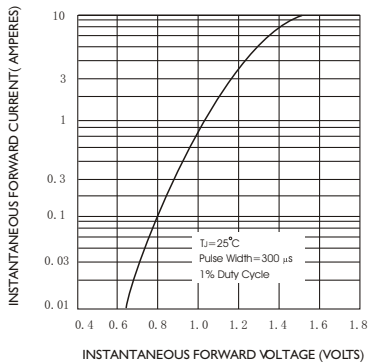


FIG. 4-TYPICAL JUNCTION CAPACITANCE

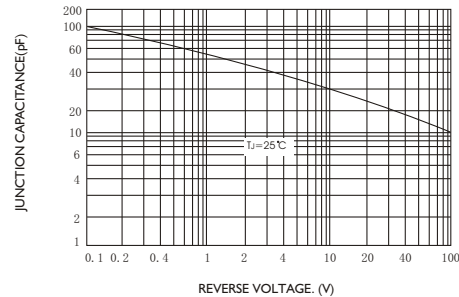
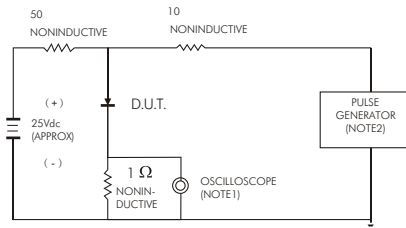
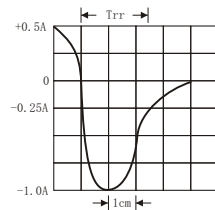


FIG. 5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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