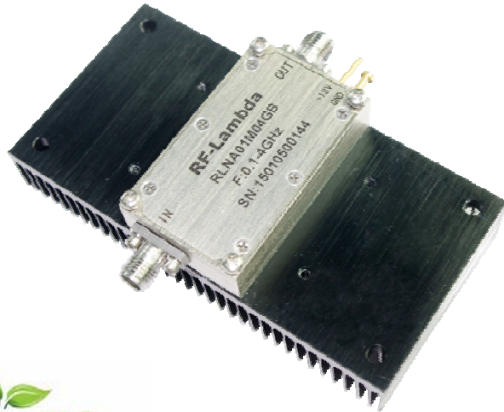




Low Noise Amplifier 0.1GHz~4GHz



Feature

- Gain: 33 dB Typical
- Noise Figure: 2.0dB Typical
- P1dB Output Power: +20dB m full band
- Supply Voltage: +12V @ 270 mA
- 50 Ohm Matched Input / Output
- Size: 3.55" x 1.77" x 0.98"

Typical Applications

- Wireless Infrastructure
- RF Microwave & VSAT
- Military & Aerospace
- Test Instrument
- Fiber Optics

Electrical Specifications, TA = +25 ° C, With Vcc = +12V, 50 Ohm System

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	0.1		2	2		4	GHz
Gain	31	34		31	34.5		dB
Gain Flatness		±1.0			±0.7		dB
Gain Variation Over Temperature(-45 ~ +85)		±1.5			±1.5		dB
Noise Figure		1.5	2		2	2.5	dB
Input Return Loss		9.5			8.5		dB
Output Return Loss		10			9		dB
Output Power for 1 dB Compression (P1dB)	20	22		20	22		dBm
Saturated Output Power (Psat)		23			23		dBm
Output Third Order Intercept (IP3)		35			34		dBm
Supply Current (Idd) (Vcc=+12V)		270	300		270	300	mA
Isolation S12	45	50		45	50		dB
Input Max Power(no damage)			10			10	dBm
Weight	85						g
Impedance	50						Ohms
Input /Output Connector	SMA-Female						
Finishing	Standard: Gold 40 micron; Nickel 220 micron thickness						
	Option: Gold 80 micron; Nickel 180 micron thickness						
Material	Aluminum/copper						
Package Sealing	Epoxy Sealing (Standard)						
	Hermetically Seal (Option with extra charge)						

Low Noise Amplifier 0.1GHz~4GHz



RF-LAMBDA

The power beyond expectations

RLNA01M04GB

Absolute Maximum Ratings

Operating Voltage	+12V
RF Input Power	10dB m
Operating Temperature(C°)	-45 to +85
Storage Temperature(C°)	-50 to +125

Biasing Up Procedure

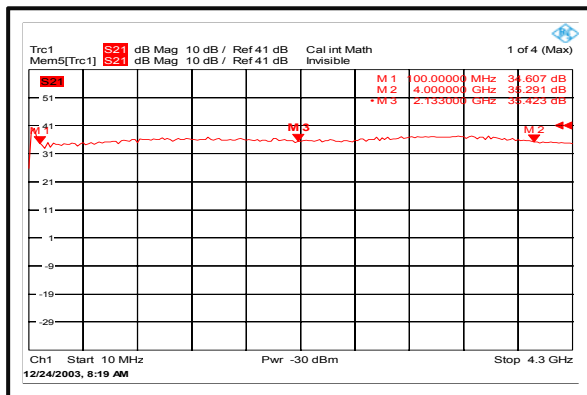
Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +12V biasing
Power OFF Procedure	
Step 1	Turn off +12V biasing
Step 2	Remove RF connection
Step 3	Remove Ground.

Environment specifications

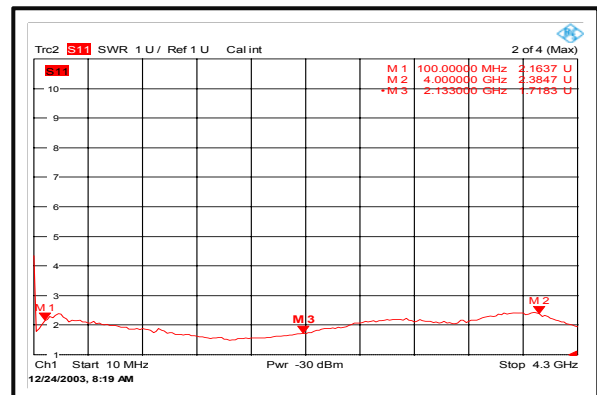
Operational Temperature (C°)	-45 to+85
Storage Temperature (C°)	-50 to +125
Altitude	30,000 ft. (Epoxy Seal Controlled environment) 60,000 ft 1.0psi min (Hermetically Seal Un-controlled environment) (Optional)
Vibration	25g rms (15 degree 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35c, 95%RH at 40°c
Shock	20G for 11msc half sin wave,3 axis both directions

Typical performance plots

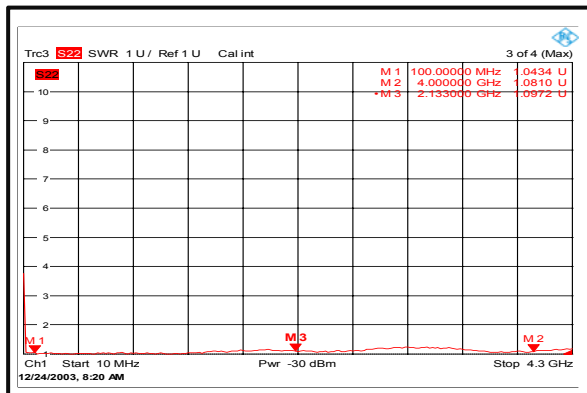
Gain



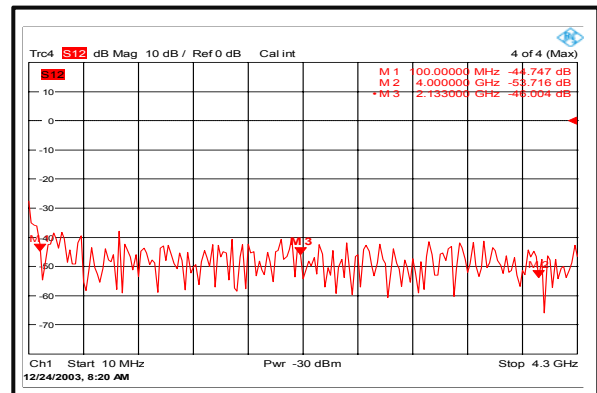
Input VSWR



Output VSWR



Isolation



Low Noise Amplifier 0.1GHz~4GHz

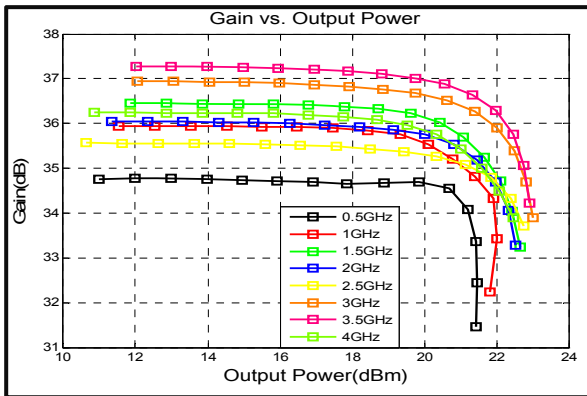


RF-LAMBDA

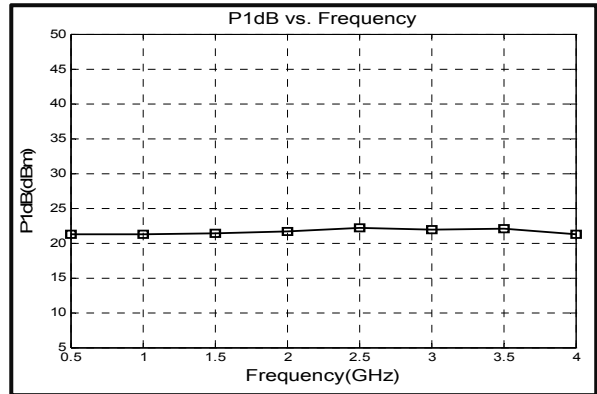
The power beyond expectations

RLNA01M04GB

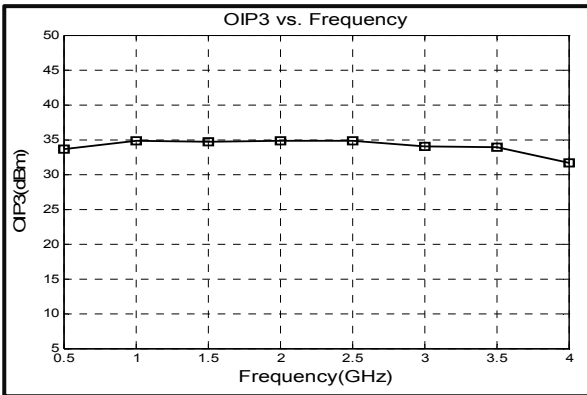
Cain vs. output power



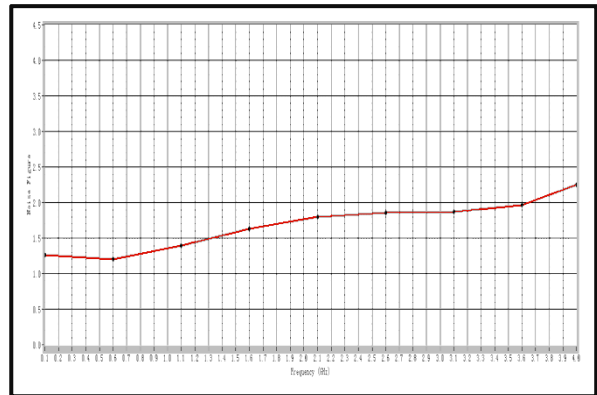
P1dB vs. Frequency



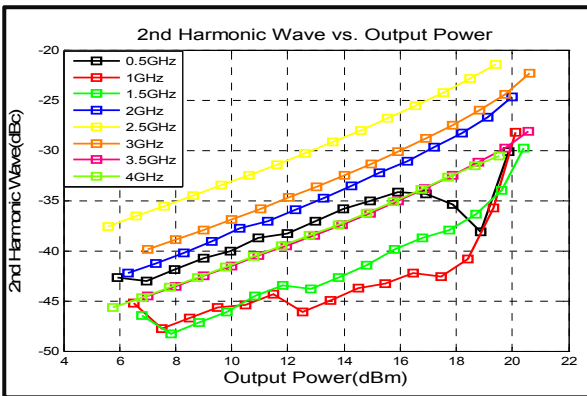
Output Third Order Intercept (IP3)



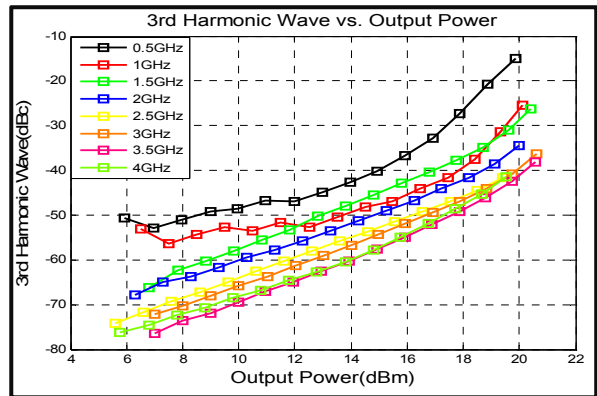
Noise Figure



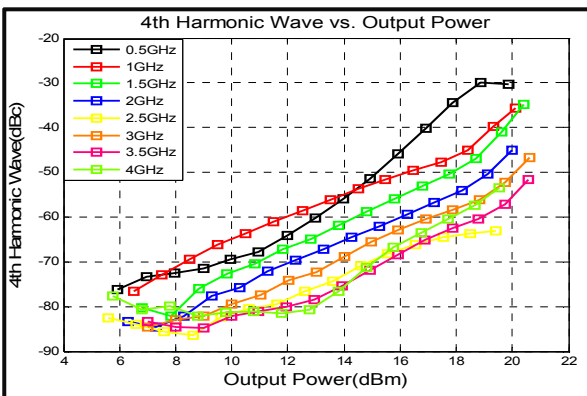
2nd Harmonic Wave output Power



3rd Harmonic Wave output Power



4th Harmonic Wave output Power



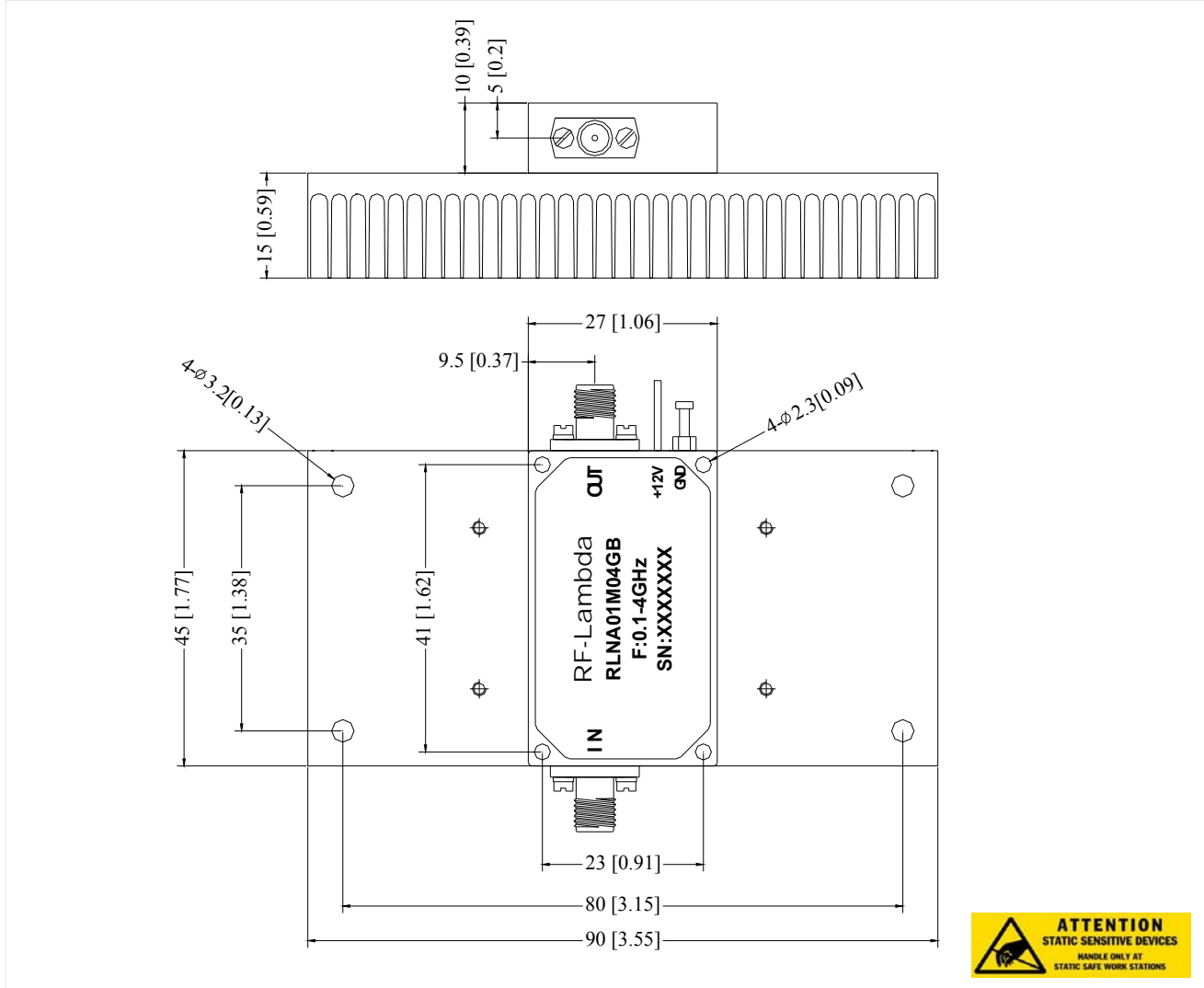
Low Noise Amplifier 0.1GHz~4GHz



Outline Drawing:

All Dimensions in mm (inches)

Heat Sink required during operation



Ordering Information

Part No	ECCN	Description
RLNA01M04GB	EAR99	0.1-4GHz LNA Amplifier

Important Notice

The information contained herein is believed to be reliable. RF-Lambda makes no warranties regarding the information contained herein. RF-Lambda assumes no responsibility or liability whatsoever for any of the information contained herein. RF-Lambda assumes no responsibility or liability whatsoever for the use of the information contained herein. The information contained herein is provided "AS IS, WHERE IS" and with all faults, and the entire risk associated with such information is entirely with the user. All information contained herein is subject to change without notice. Customers should obtain and verify the latest relevant information before placing orders for RF-Lambda products. The information contained herein or any use of such information does not grant, explicitly or implicitly, to any party any patent rights, licenses, or any other intellectual property rights, whether with regard to such information itself or anything described by such information.

RF-Lambda products are not warranted or authorized for use as critical components in medical, life-saving, or life sustaining applications, or other applications where a failure would reasonably be expected to cause severe personal injury or death.

