



RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RLNA01M06GB

Ultra Wide Band Low Noise Amplifier 0.1GHz~6GHz



Features

- Gain: 30dB Typical
- Noise Figure: 3.0dB Typical
- Output P1dB : +24dBm
- Supply Voltage: +12V
- 50 Ohm Matched

Typical Applications

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

Electrical Specifications, TA = +25°C, Vcc=+12V

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	0.1		3	3		6	GHz
Gain	27	30		29	31		dB
Gain Flatness		±2			±1.5		dB
Gain Variation Over Temperature (-45 ~ +85)		±0.8			±0.8		dB
Noise Figure		3.5			3.0	4.5	dB
Input Return Loss		2			1.8		:1
Output Return Loss		2			2		:1
Output 1dB Compression Point (P1dB)	24	25		24	25		dBm
Saturated Output Power (Psat)		27			26		dBm
Output Third Order Intercept (IP3)		34			33		dBm
Supply Current (Vcc=+12V)		290	350		290	350	mA
Isolation S12		-50			-55		dB
Weight	2.47						Ounces
Impedance	50						Ohms
Input / Output Connectors	SMA-Female						
Finish	Standard: Gold 40 micron; Nickel 220 micron thickness						
	Option: Gold 80 micron; Nickel 180 micron thickness						
Material	Aluminum						
Package Sealing	Epoxy Sealing (Standard)						
	Hermetically Sealed (Optional)						

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Absolute Maximum Ratings

Operating Voltage	+15V
RF Input Power	+2dBm

Biasing Up Procedure

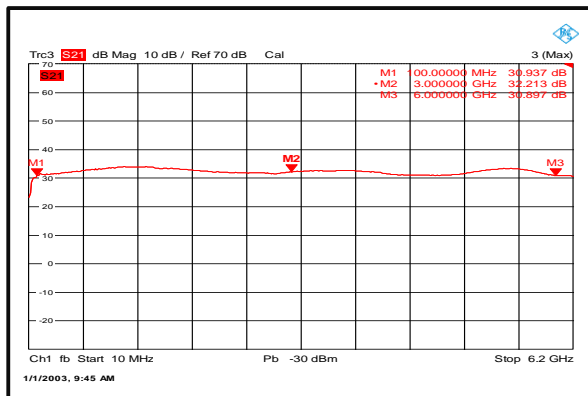
Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +12V biasing
Power OFF Procedure	
Step 1	Turn off +12V biasing
Step 2	Remove RF connection
Step 3	Remove Ground.

Environmental Specifications

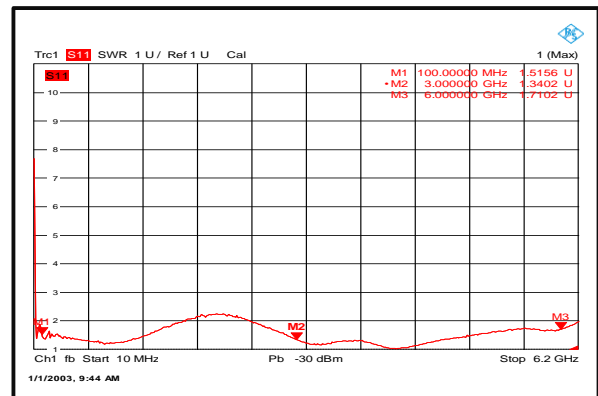
Operational Temperature (°C)	-45 to +85
Storage Temperature (°C)	-55 to +125
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35c, 95%RH at 40°c
Shock	20G for 11msec half sine wave, 3 axis both directions

Typical Performance Plots

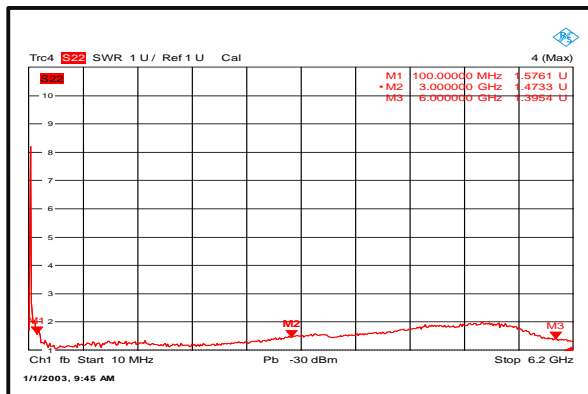
Gain



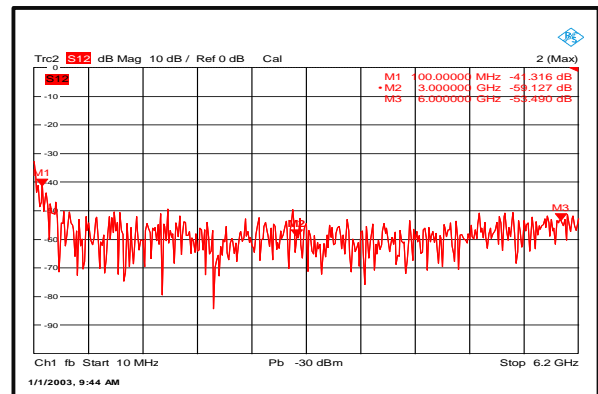
Input VSWR



Output VSWR



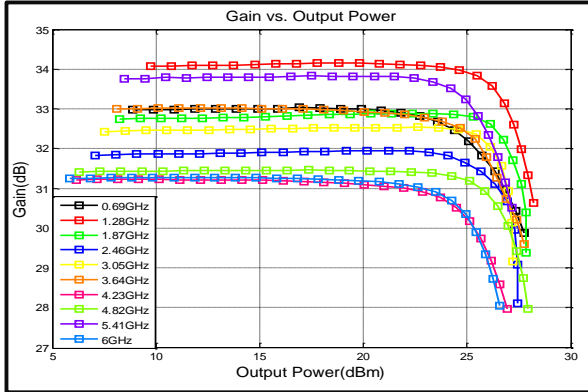
Isolation



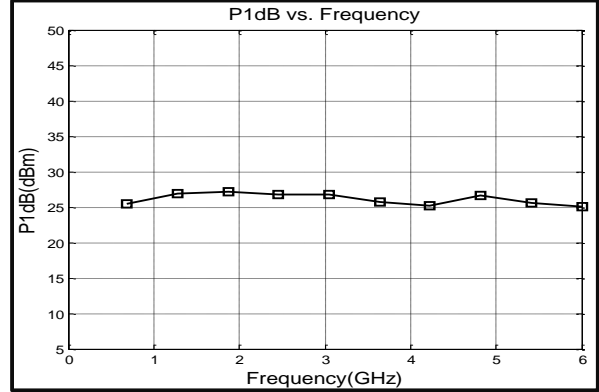
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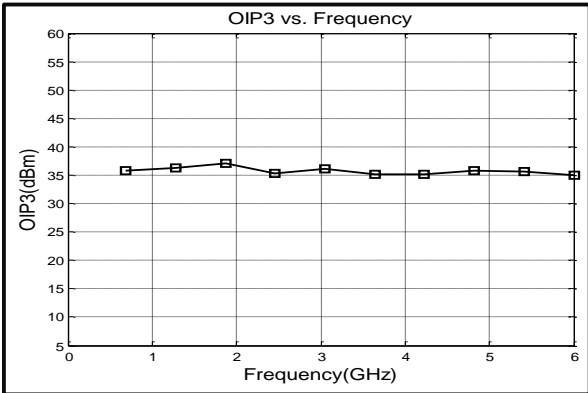
Gain vs. Output Power



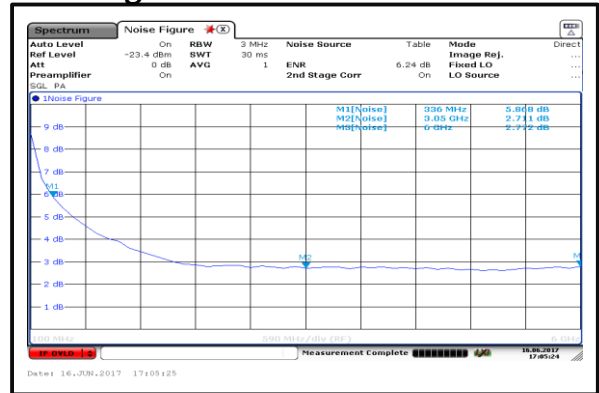
P1dB vs. Frequency



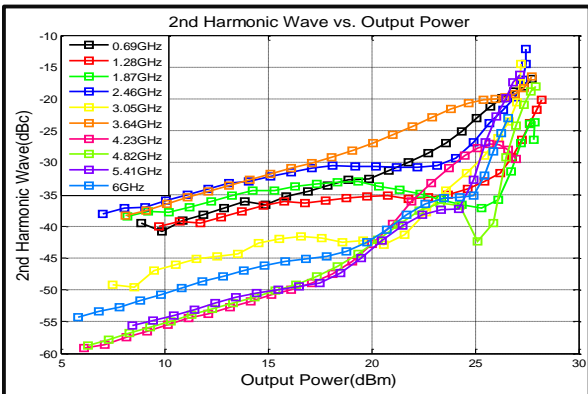
Output Third Order Intercept (IP3)



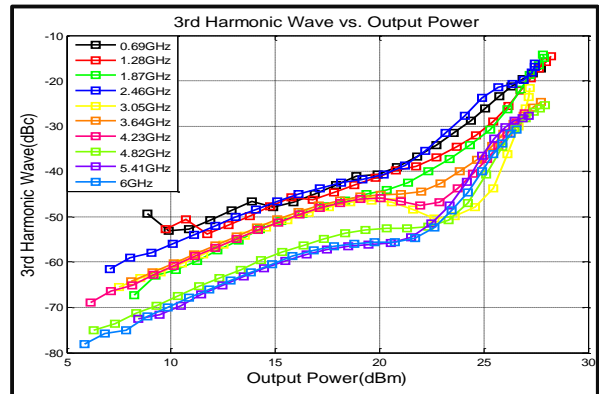
Noise Figure



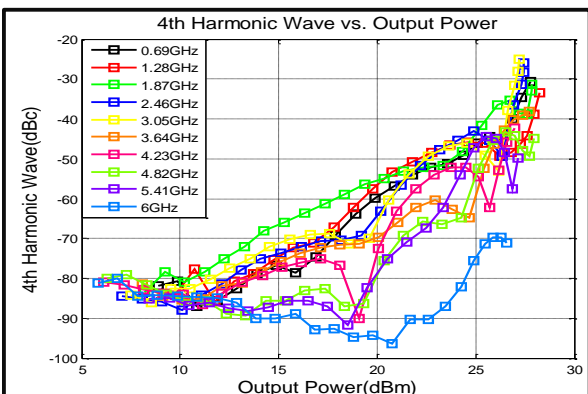
2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power

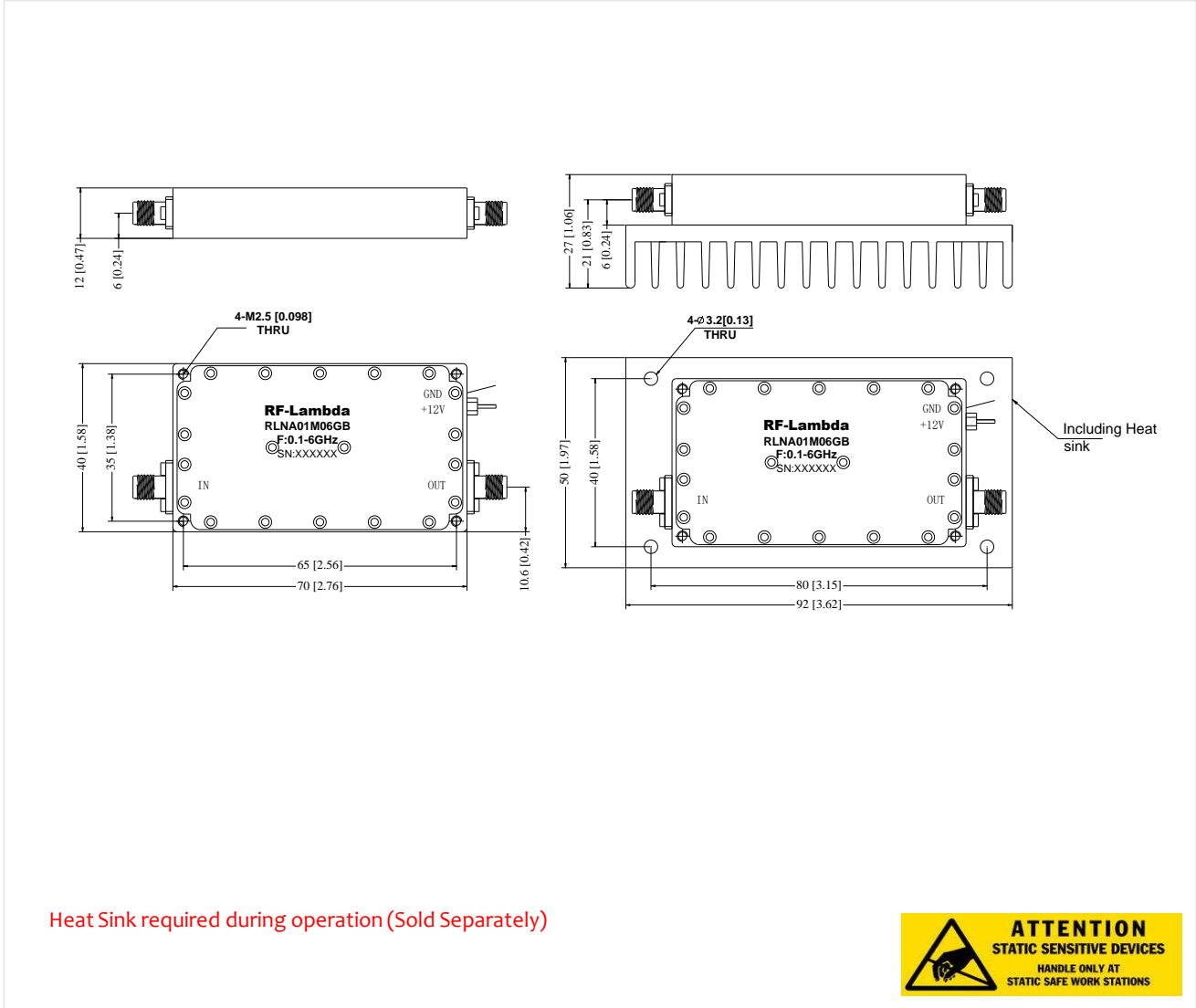


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Outline Drawing:

All Dimensions in mm [inches]



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Ordering Information

Part No.	ECCN	Description
RLNAoMo6GB	EAR99	0.1-6GHz Low Noise Amplifier

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