

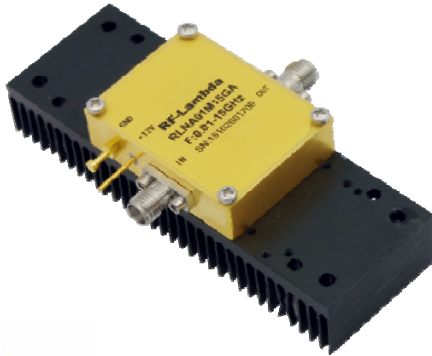


RF-LAMBDA

LEADER OF BROADBAND SOLUTIONS

RLNA01M15GA

Ultra Wide Band Low Noise Amplifier 0.01GHz~15GHz



Feature

- Gain: 32 dB Typical
- Noise Figure: 2.5dB Typical
- P1dB Output Power: +23dB m full band
- Supply Voltage: +12V @ 320 mA
- 50 Ohm Matched Input / Output
- Size: 1.58x 1.18" x 0.39"

Typical Applications

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

Ultra Wide Band Low Noise Amplifier 0.01GHz~15GHz

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

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	0.01		8	8		15	GHz
Gain	30	33		30	32		dB
Gain Flatness		±1.0	±1.5		±0.5	±1.0	dB
Gain Variation Over Temperature(-45 ~ +85)		±1.0			±1.5		dB
Noise Figure		2.5	4.5		3.0	4.0	dB
Input VSWR		1.4			1.4		
Output VSWR		1.6			1.6		
Output Power for 1 dB Compression (P1dB)	24	26		22	24		dBm
Saturated Output Power (Psat)		28			26		dBm
Output Third Order Intercept (IP3)		36			34		dBm
Isolation S12		-70			-60		dB
Supply Current (Idd) (Vcc=+12V)		320	360		320	360	mA
Input Max Power(no damage)			+1			+1	dBm
Weight	4						ounces
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)						



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Absolute Maximum Ratings

Operating Voltage	+12.5V
RF Input Power	+3dB m
Operating Temperature(C°)	-45 to +85
Storage Temperature(C°)	-50 to +125

Biasing Up Procedure

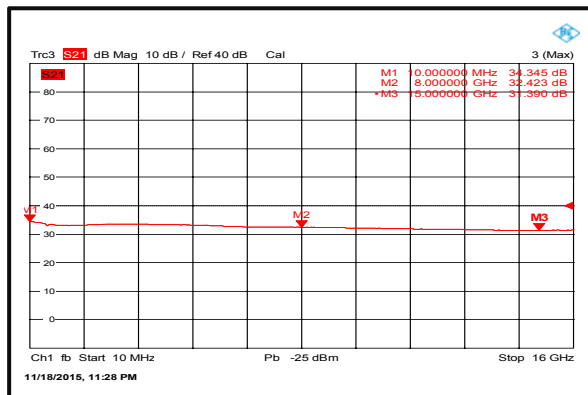
Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +12V biasing
Power OFF Procedure	
Step 1	Turn off +12V biasing
Step 2	Remove RF connection
Step 3	Remove Ground.

Environment specifications

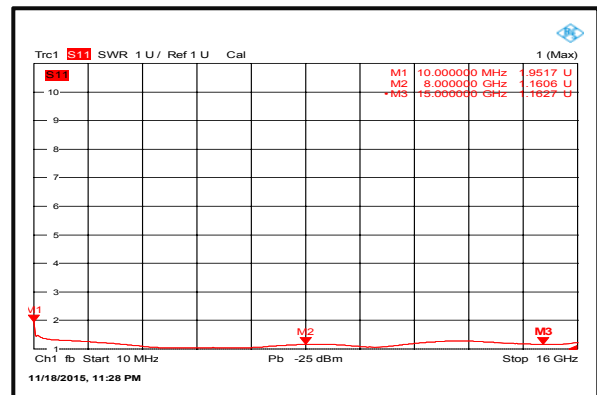
Operational Temperature (C°)	-45 to +85
Storage Temperature (C°)	-50 to +125
Altitude	30,000 ft. (Epoxy Seal Controlled environment) 60,000 ft 1.0psi min (Hermetically Seal Un-controlled environment) (Optional)
Vibration	25g rms (15 degree 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35c, 95%RH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

Typical performance plots

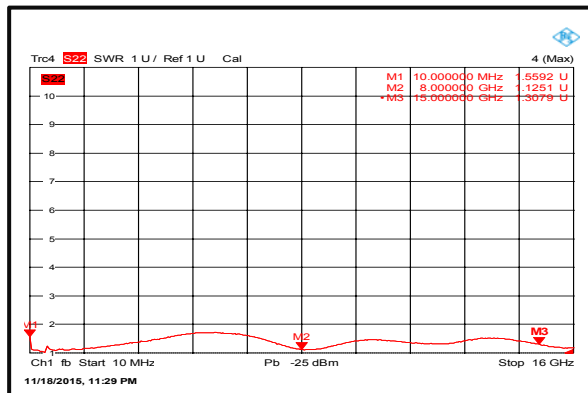
Gain



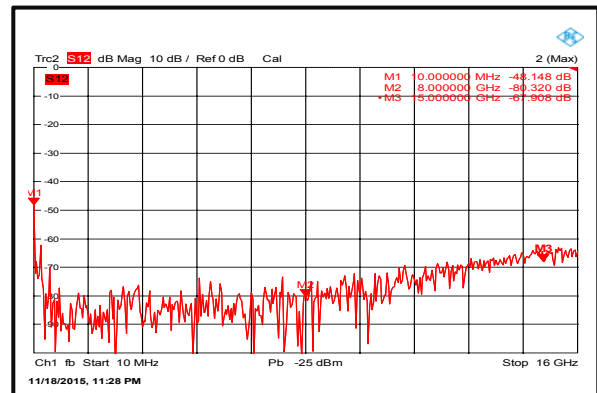
Input VSWR



Output VSWR



Isolation



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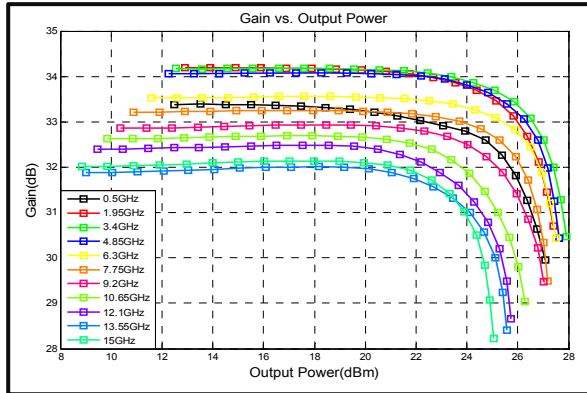


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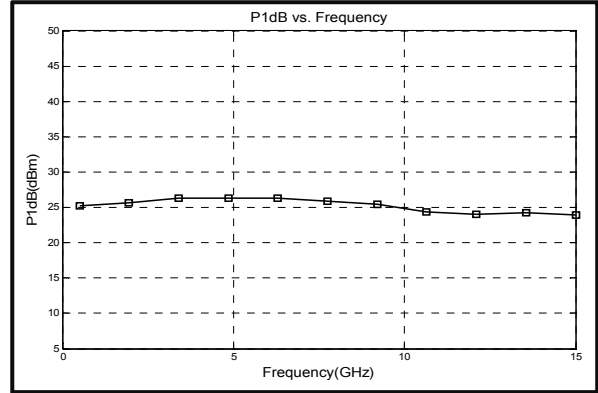
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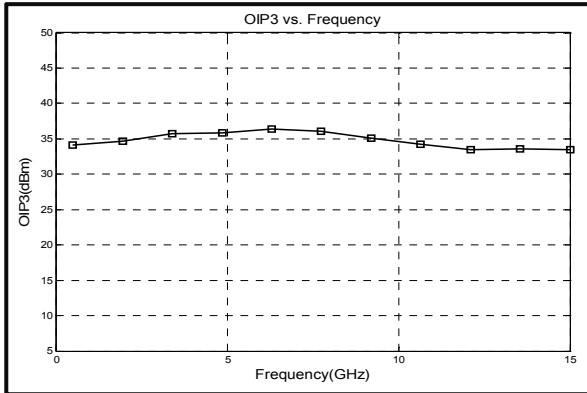
Cain vs. output power



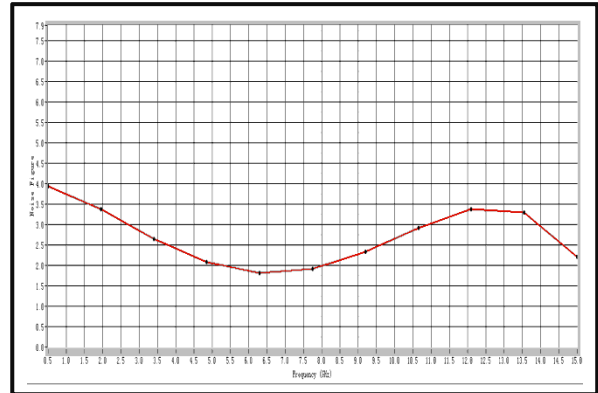
P1dB vs. Frequency



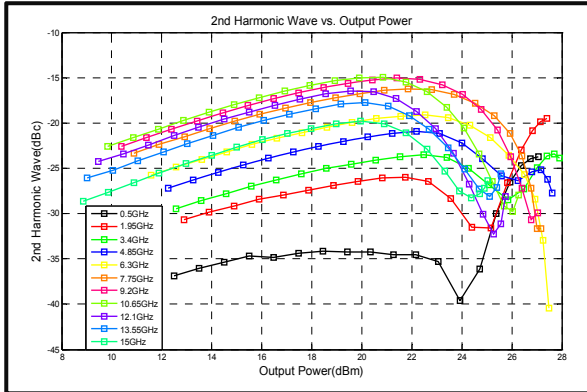
Output Third Order Intercept (IP3)



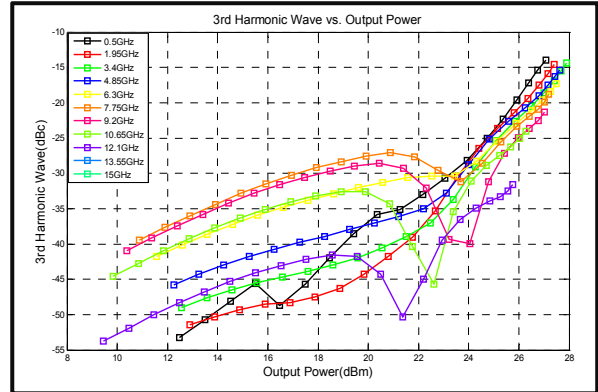
Noise Figure



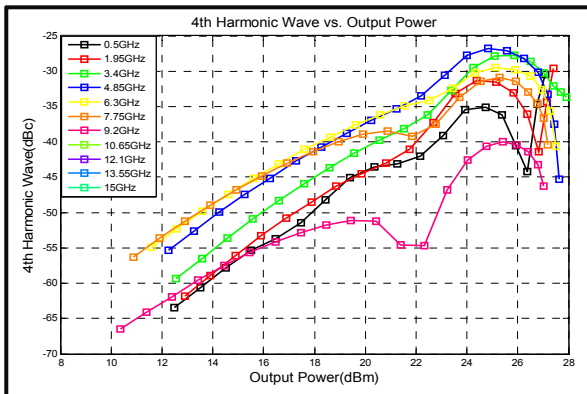
2nd Harmonic Wave output Power



3rd Harmonic Wave output Power



4th Harmonic Wave output Power



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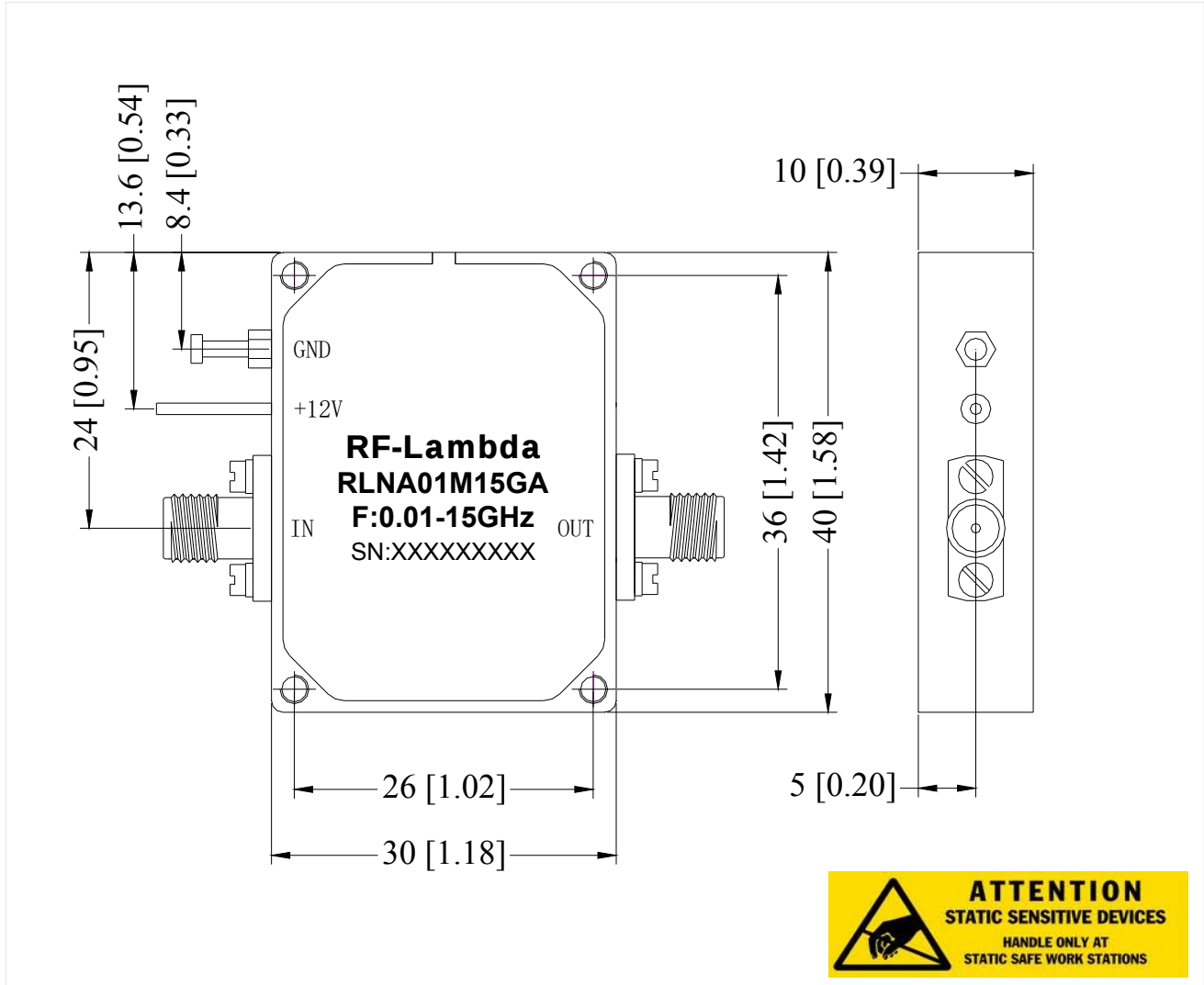
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Outline Drawing:

All Dimensions in mm (inches)

Heat Sink required during operation



Ordering Information

Part No	ECCN	Description
RLNA01M15GA	EAR99	0.01-15GHz LNA Amplifier

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