

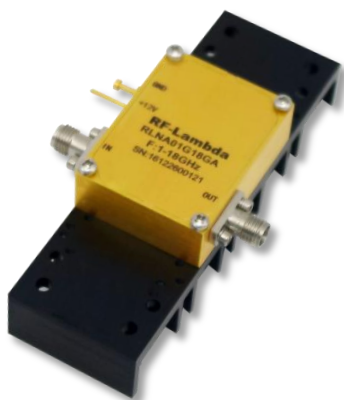


RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RLNA01G18GA

Ultra Wide Band Low Noise Amplifier 1GHz~18GHz



Features

- Gain: 29dB Typical
- Noise Figure: 2.5dB Typical
- P1dB Output Power: +15dBm Typical
- Supply Voltage: +12V @ 130mA
- 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	1		10	10		18	GHz
Gain	26	29		25	27		dB
Gain Flatness		±0.5	±0.8		±1.0	±1.5	dB
Gain Variation Over Temperature (-45°C~+85°C)			±0.8			±1.0	dB
Noise Figure		2.5	3.0		2.5	3.0	dB
Input VSWR		1.6	2.0		1.6	2.0	: 1
Output VSWR		1.8	2.0		1.8	2.0	: 1
Output 1dB Compression Point (P1dB)	15	18		14	17		dBm
Saturated Output Power (Psat)		19			18		dBm
Output Third Order Intercept (IP3)		28			27		dBm
Supply Current (Vcc=+12V)		130	150		130	150	mA
Isolation S12		-60			-50		dB
Weight	3.17						Ounces
Impedance	50						Ohms
Input / Output Connectors	SMA-Female						
Finishing	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 (Option with extra charge)						

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Absolute Maximum Ratings

Operating Voltage	+12V $\pm$ 10%
RF Input Power	-3dB m

Biasing Up Procedure

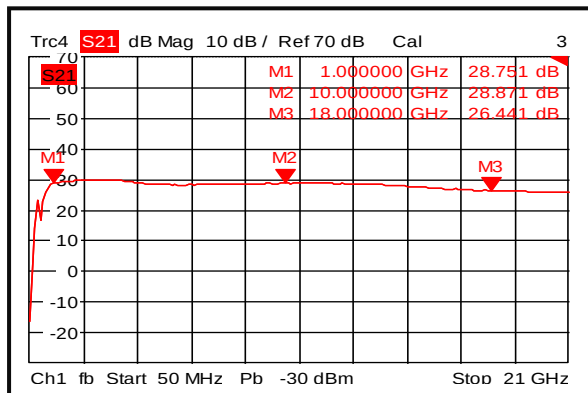
Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +12V biasing
Power OFF Procedure	
Step 1	Turn off +12V biasing
Step 2	Remove RF connection
Step 3	Remove Ground.

Environmental Specifications

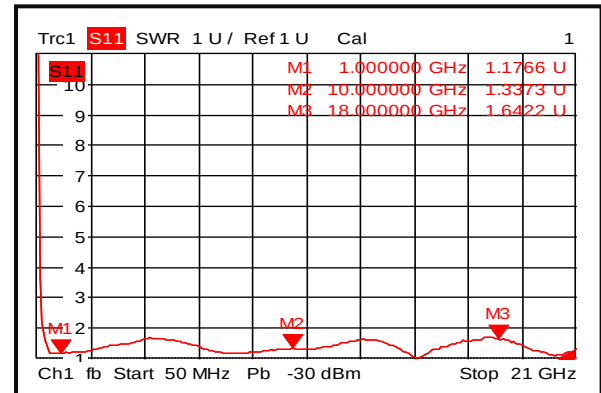
Operational Temperature (° C)	-45 to +85 ° C
Storage Temperature (° C)	-55 to +125 ° C
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100%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

Typical Performance Plots

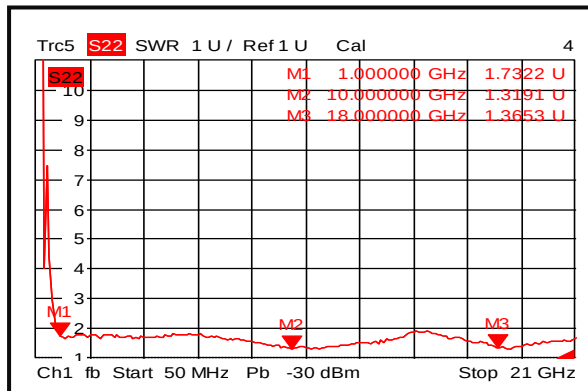
Gain



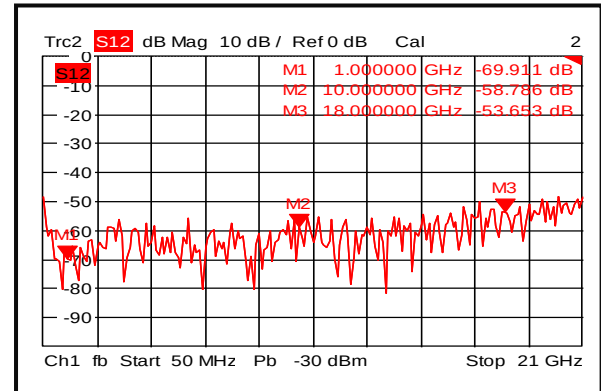
Input VSWR



Output VSWR



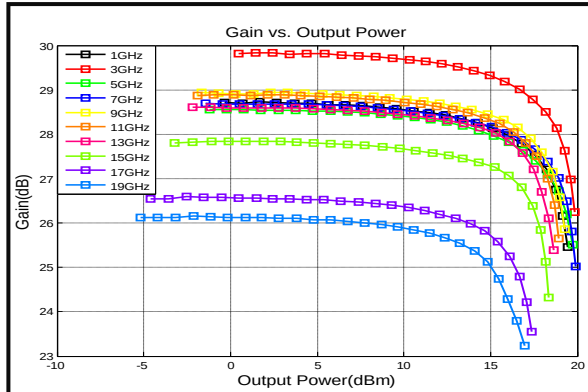
Isolation



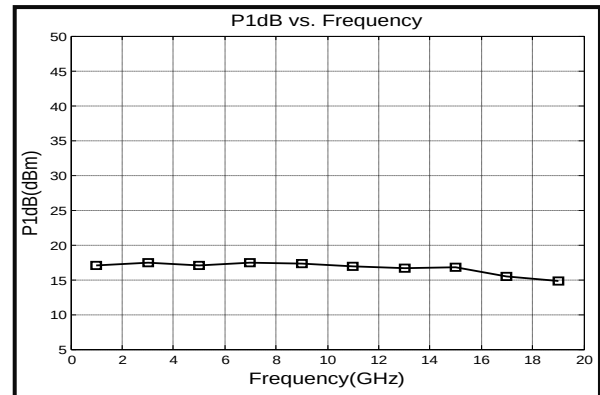
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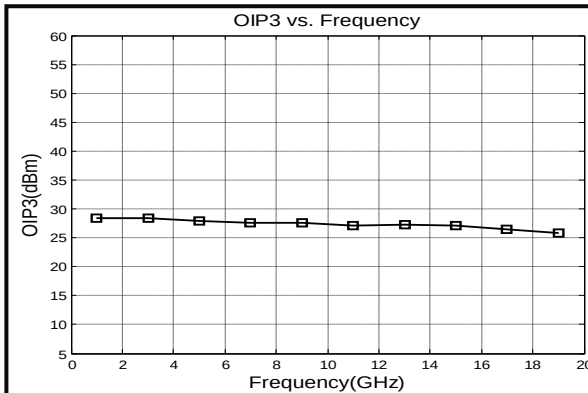
Gain vs. Output Power



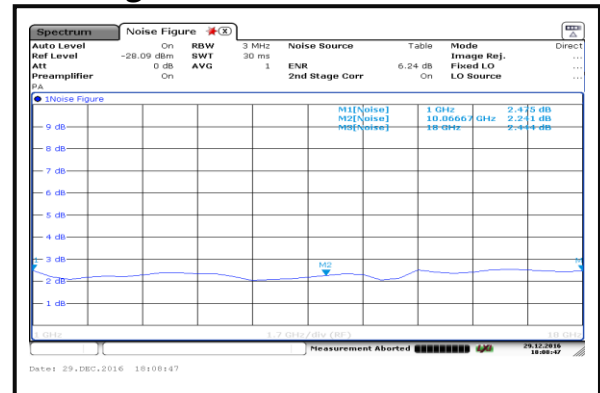
P1dB vs. Frequency



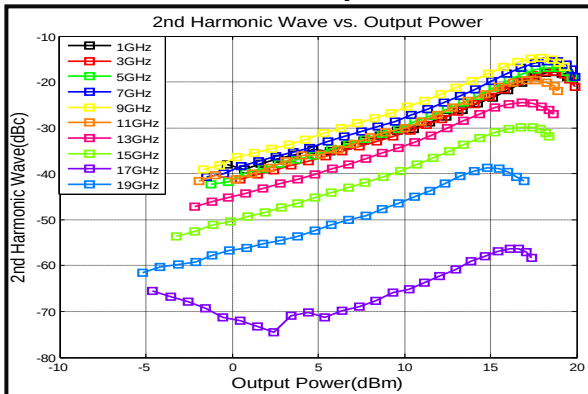
Output Third Order Intercept (IP3)



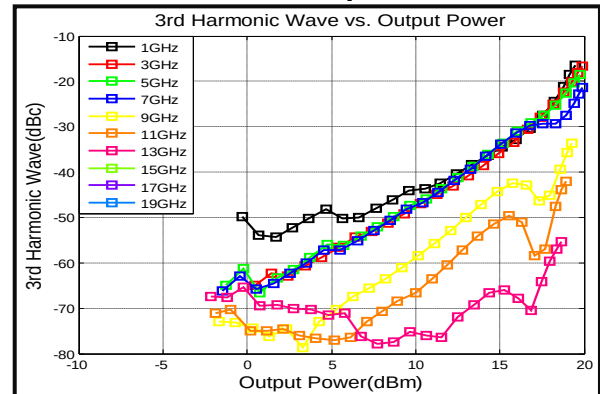
Noise Figure



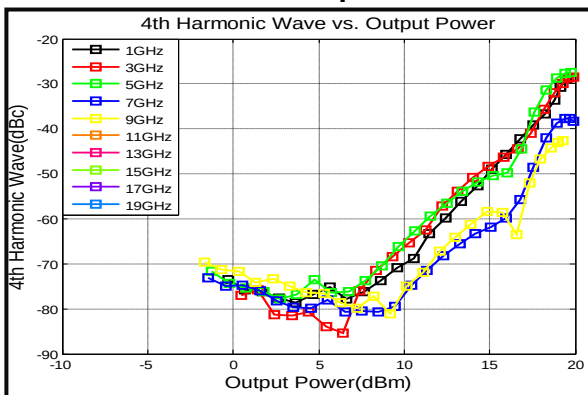
2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power





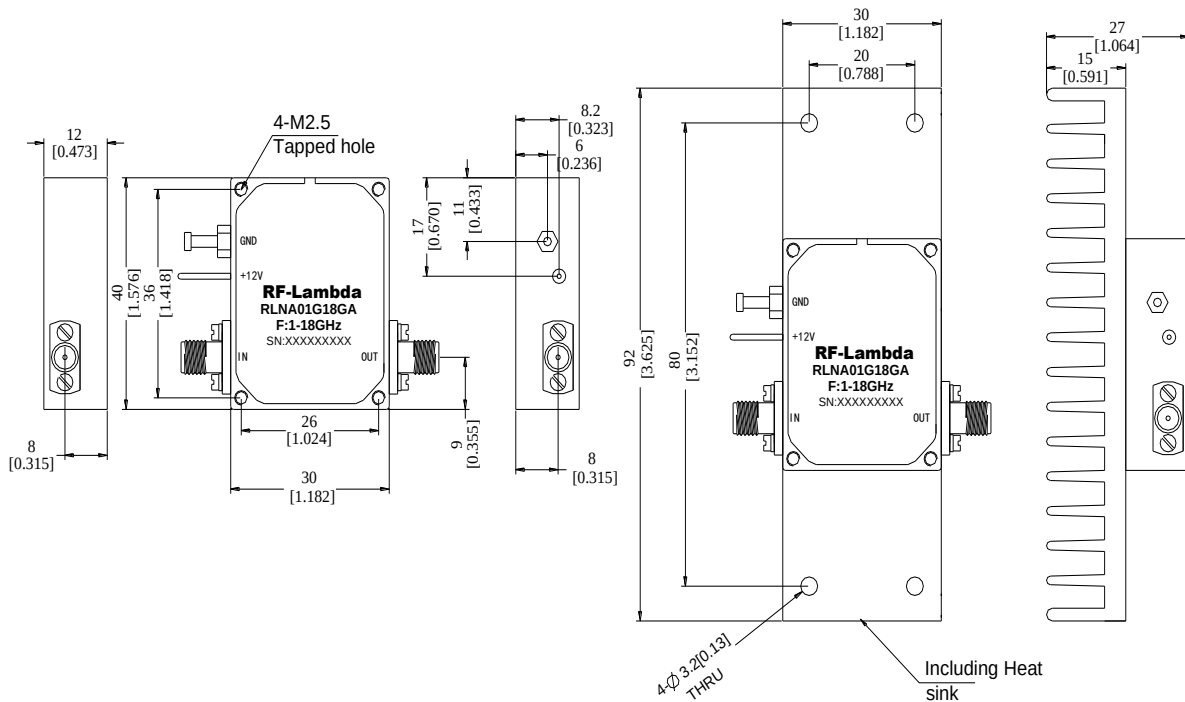
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Outline Drawing:

All Dimensions in mm [inches]



Heat Sink required during operation (Sold Separately)



Ordering Information

Part No.	ECCN	Description
RLNA01G18GA	EAR99	1-18GHz Low Noise Amplifier

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