

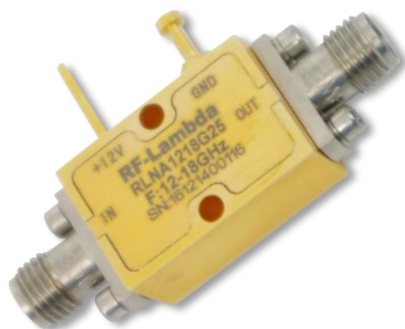


RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RLNA1218G25

Wide Band Low Noise Amplifier 12GHz~18GHz



Features

- Gain: 31dB typical
- Noise Figure: 1.8dB typical
- High P1dB: +19.5dBm typical
- Supply Voltage: +12V @ 200mA
- 50 Ohm Matched Input / Output
- Size: 0.79" x 0.51" x 0.39"

Typical Applications

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

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

Parameter	Min	Typ	Max	Units
Frequency Range	12		18	GHz
Gain	28	31		dB
Gain Flatness		±0.6	±1.0	dB
Gain Variation Over Temperature (-45 ~ +85 °C)		±0.8	±1.0	dB
Noise Figure		1.8	2.3	dB
Input VSWR		1.7	2.0	: 1
Output VSWR		1.5	1.8	: 1
Output 1dB Compression Point (P1dB)	17.5	19.5		dBm
Saturated Output Power (Psat)		20.5		dBm
Output Third Order Intercept (IP3)		26		dBm
Supply Current (Vcc=+12V)		200	230	mA
Isolation S12		-60		dB
Weight	0.71			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	+8~13V
RF Input Power	-10dBm

Biasing Up Procedure

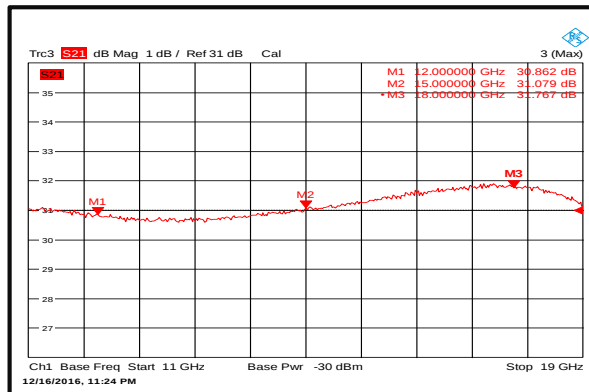
Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +12V biasing
Power OFF Procedure	
Step 1	Turn off +12V biasing
Step 2	Remove RF connection
Step 3	Remove Ground.

Environmental Specifications

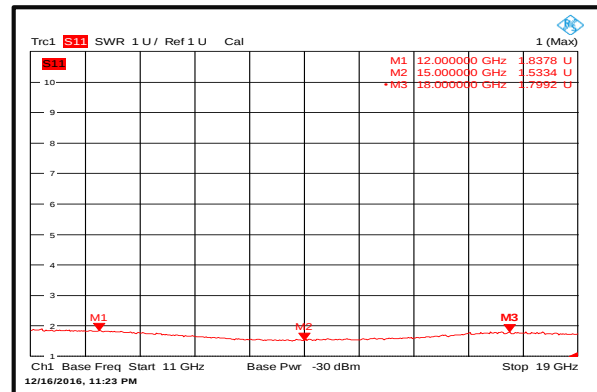
Operational Temperature (°C)	-45 to +85
Storage Temperature (°C)	-50 to +125
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35c,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

Typical Performance Plots

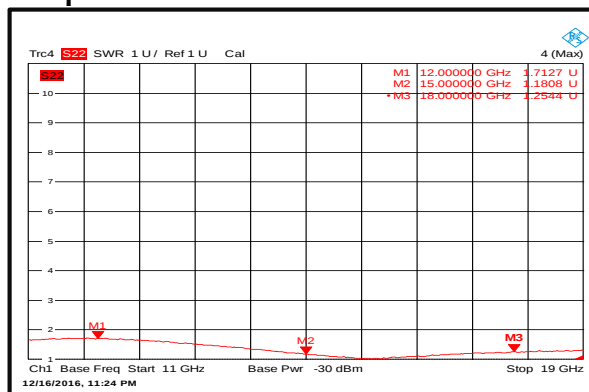
Gain



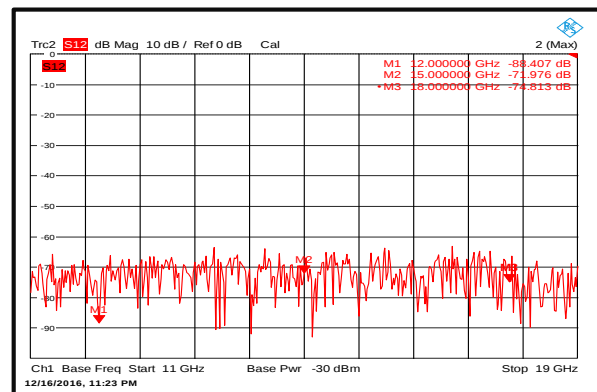
Input VSWR



Output VSWR

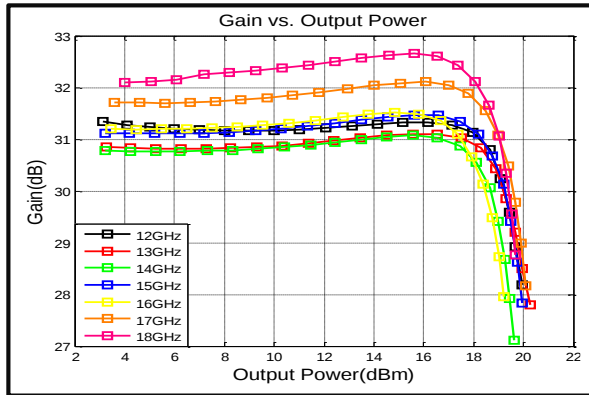


Isolation

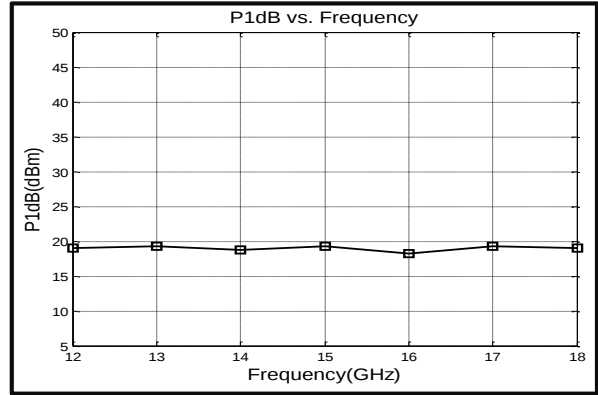




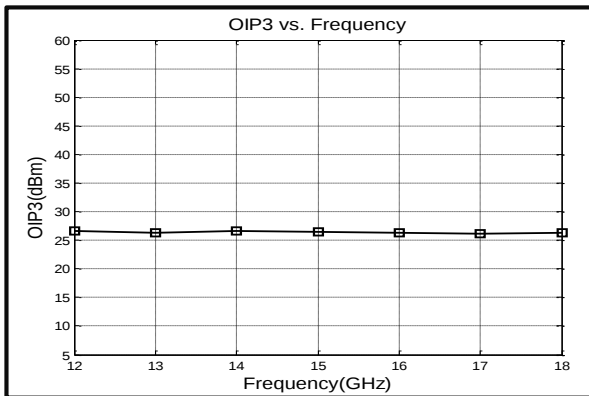
Gain vs. Output Power



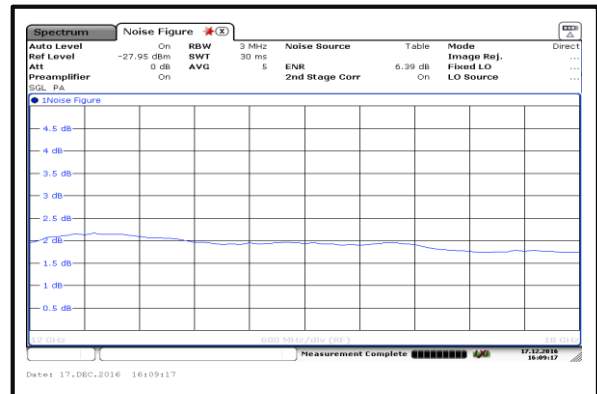
P1dB vs. Frequency



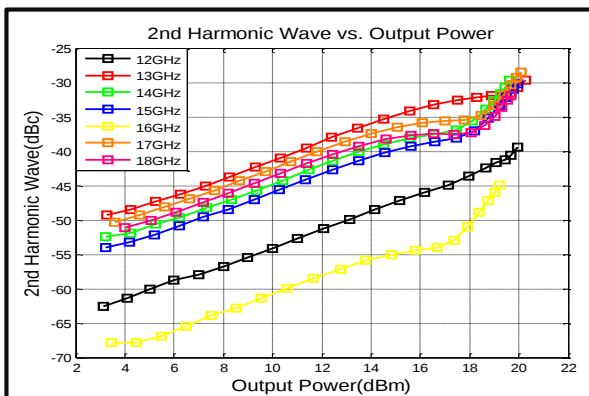
Output Third Order Intercept (IP3)



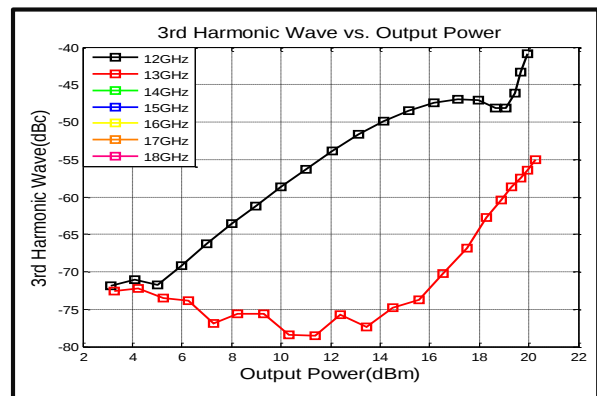
Noise Figure



2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power

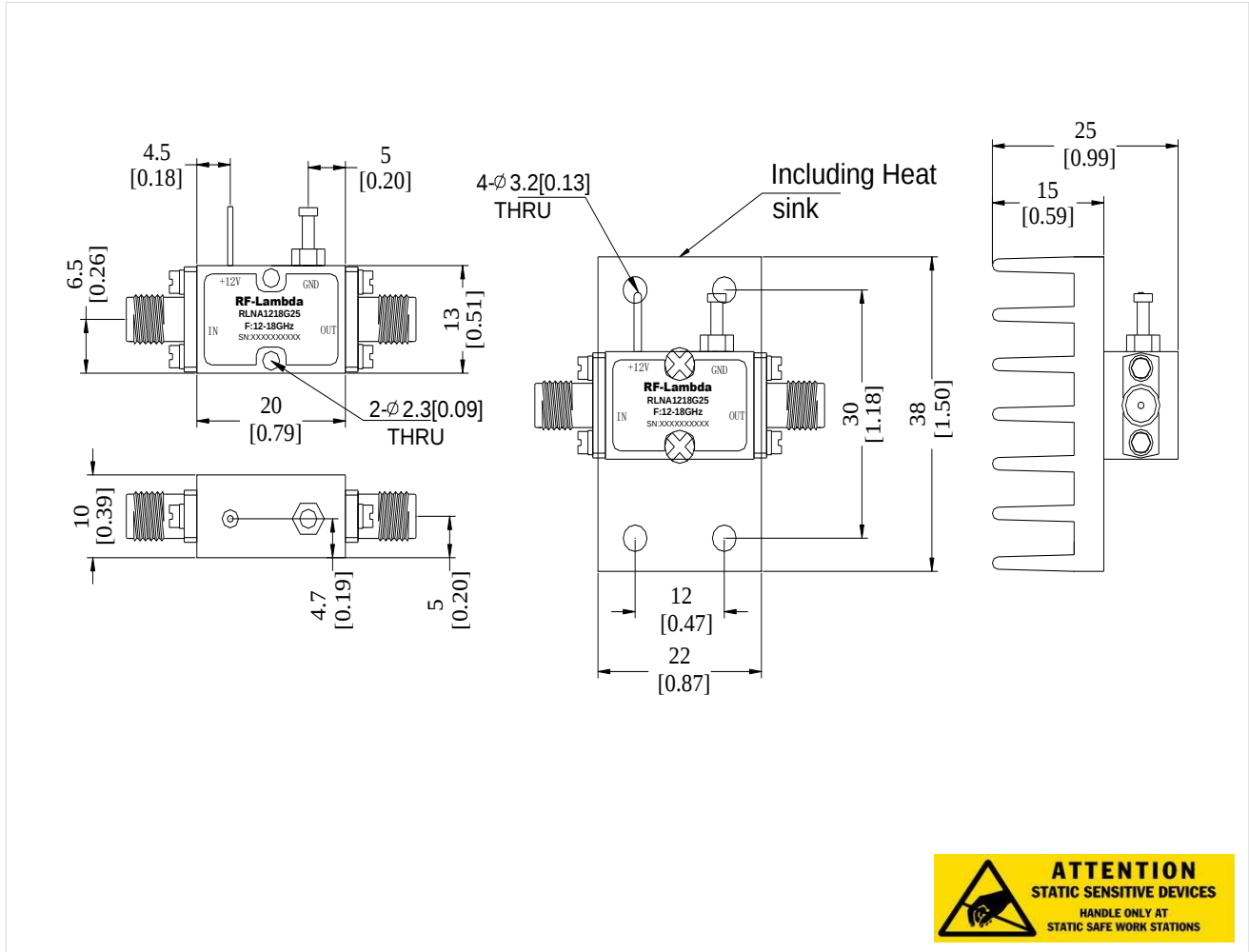




Outline Drawing:

All Dimensions in mm [inches]

Heat Sink required during operation (Sold Separately)



Ordering Information

Part No.	ECCN	Description
RLNA1218G25	EAR99	12-18GHz Low Noise Amplifier

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