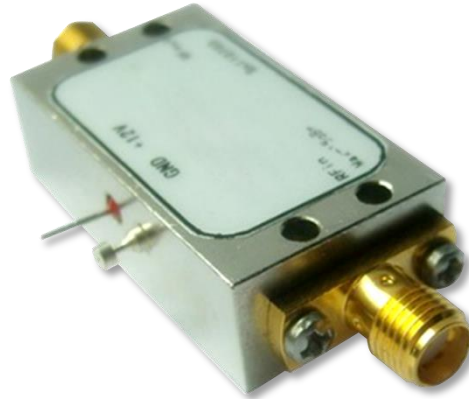




Ultra Wide Band Low Noise Amplifier 0.5GHz~12GHz



Features

- Gain: 30 dB Typical
- Noise Figure: 2.5dB Typical
- P1dB Output Power: +15dBm Typical
- 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.	Units
Frequency Range	0.5		12	GHz
Gain	27	30		dB
Gain Flatness		±3.0		dB
Gain Variation Over Temperature (-25 ~ +70)		±0.8	±1.0	dB
Noise Figure		2.5	4.0	dB
Input Return loss		7		dB
Output Return loss		12		dB
Output 1dB Compression Point (P1dB)	12	15		dBm
Saturated Output Power (Psat)		17		dBm
Output Third Order Intercept (IP3)		23		dBm
Isolation S12		-60		dB
Supply Current (Vcc=+12V)		200	260	mA
Weight		/		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 / Copper			
Package Sealing	Epoxy Sealing (Standard)			
	Hermetically Sealed (Option with extra charge)			

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Absolute Maximum Ratings

Operating Voltage	+13V
RF Input Power	-17dBm

Environmental Specifications

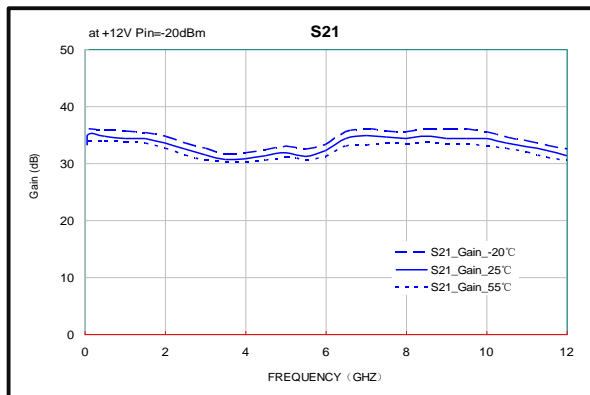
Operational Temperature (°C)	-25 to +70
Storage Temperature (°C)	-55 to +100
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000. ft 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35c, 95%RH at 40°C
Shock	20G for 11msec half sine wave, 3 axis both directions

Biasing Up Procedure

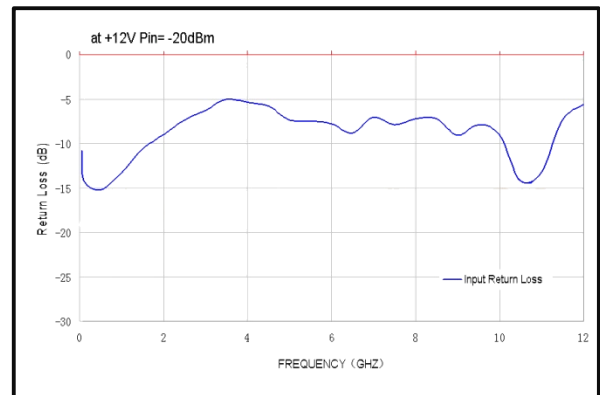
Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +12V biasing
Power OFF Procedure	
Step 1	Turn off +12V biasing
Step 2	Remove RF connection
Step 3	Remove Ground.

Typical Performance Plots

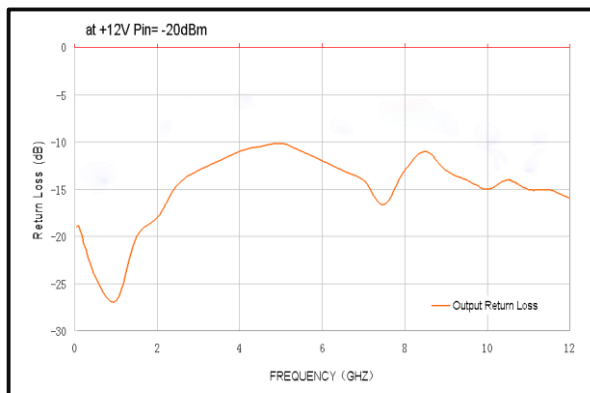
Gain



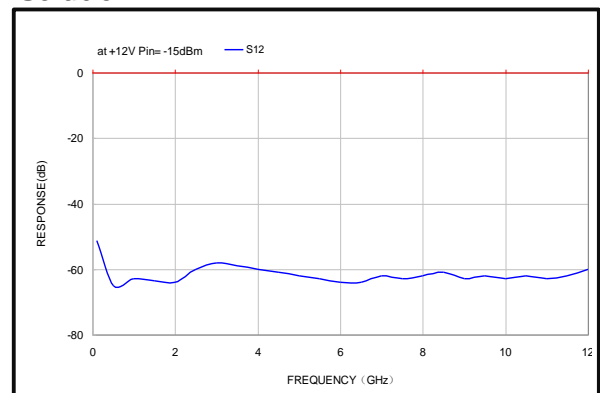
Input Return Loss



Output Return Loss



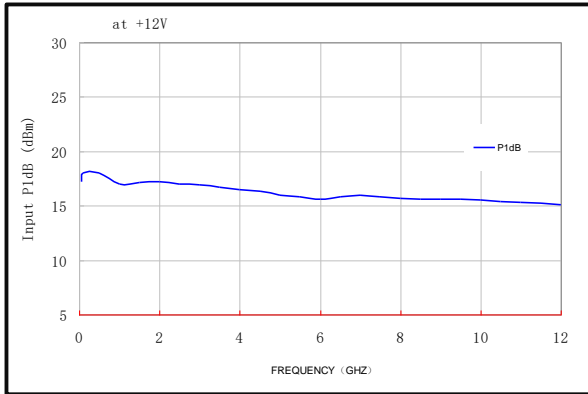
Isolation



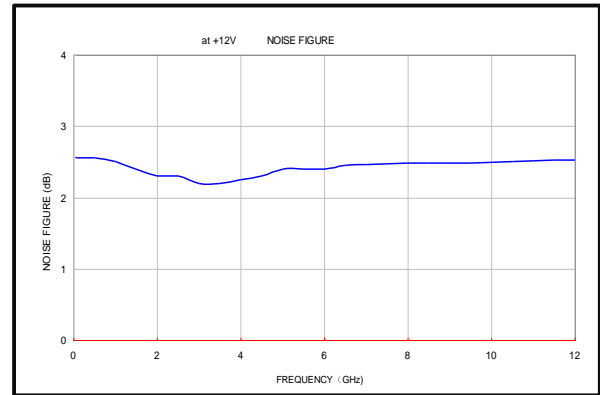
Ultra Wide Band Low Noise Amplifier 0.5GHz~12GHz



P1dB vs. Frequency

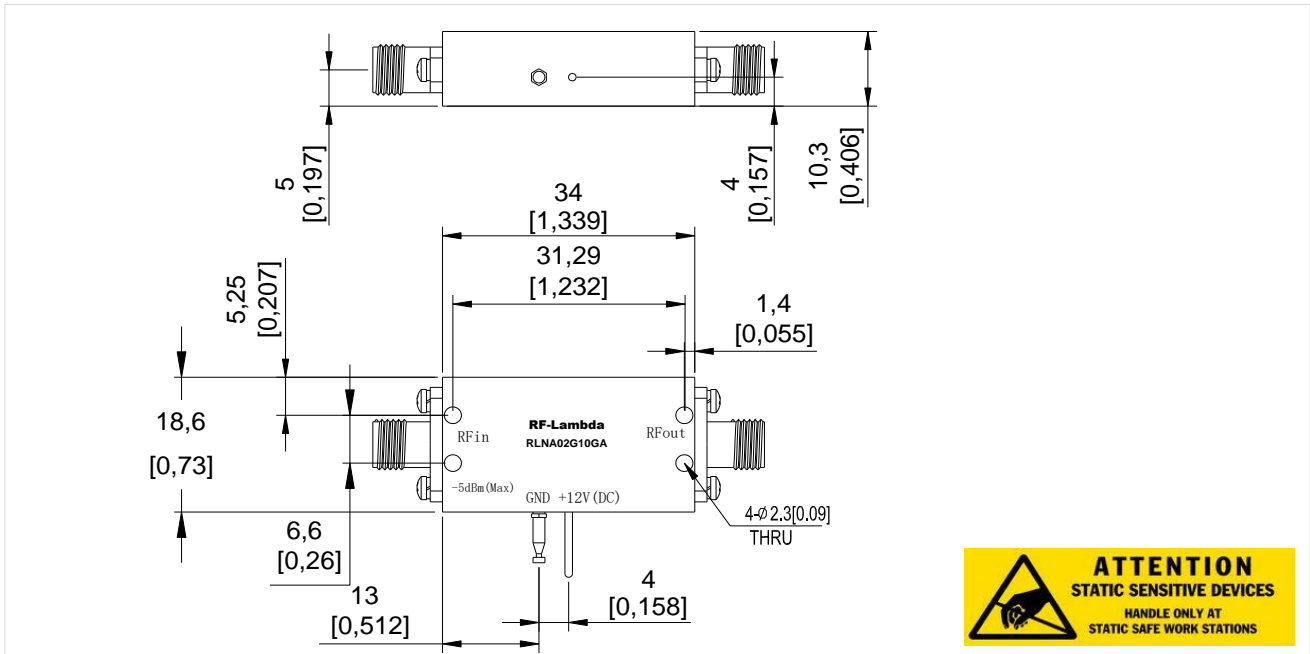


Noise Figure



Outline Drawing:

All Dimensions in mm [inches]
Heat Sink required during operation



Ordering Information

Part No.	ECCN	Description
RLNA02G10GA	EAR99	0.5-12GHz Low Noise Amplifier

Important Notice

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