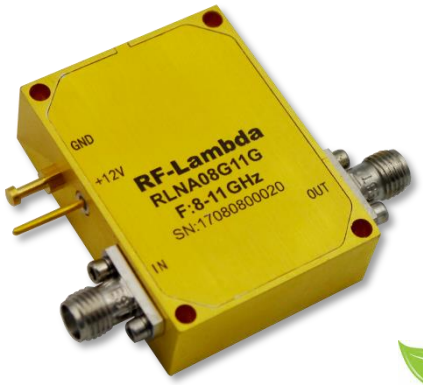
Wide Band Low Noise Amplifier
8GHz~11GHz



RoHS Compliant

Features

- Gain: 45dB Typical
- Functional Bandwidth : 6GHz to 18 GHz
- Noise Figure: 2.5dB Typical
- P1dB Output Power: +29dBm 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.	Min.	Typ.	Max.	Units
Frequency Range		8~11			6~18		GHz
Gain	44	46		39	45		dB
Gain Flatness		±0.5	±1.0		±3.0		dB
Gain Variation Over Temperature (-45°C~+85°C)		±0.8			±1.0		dB
Noise Figure		2.7	3.0		2.5	3.0	dB
Input VSWR		1.5	2.0		2.5		:1
Output VSWR		1.6	2.0		2.5		:1
Output 1dB Compression Point (P1dB)	27	29		24	27		dBm
Saturated Output Power (Psat)		31			30		dBm
Output Third Order Intercept (IP3)		40			36		dBm
Supply Current (Vcc=+12V)		680	1100		680	1100	mA
Isolation S12		-60			-55		dB
Weight	3.01						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	Copper						
Package Sealing	Epoxy Sealing (Standard)						
	Hermetically Sealed (Option with extra charge)						

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Absolute Maximum Ratings

Operating Voltage	+15V
RF Input Power	-3dBm

Biasing Up Procedure

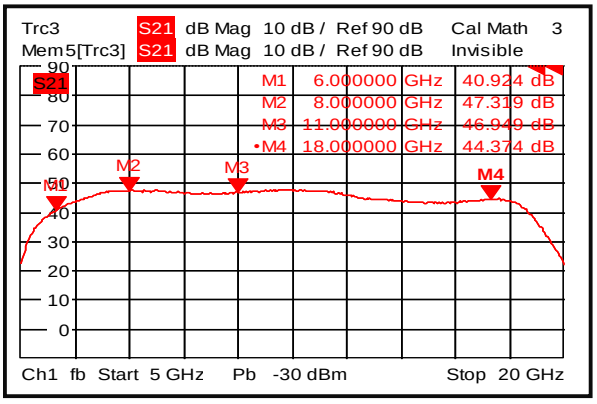
Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +12V biasing
Power OFF Procedure	
Step 1	Turn off +12V biasing
Step 2	Remove RF connection
Step 3	Remove Ground.

Environmental Specifications

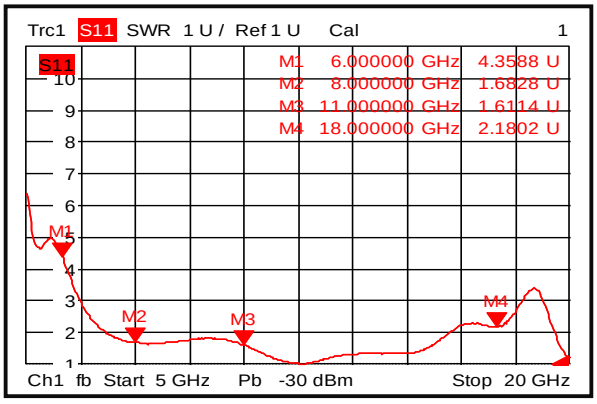
Operational Temperature (° C)	-45 to +85 ° C
Storage Temperature (° C)	-55 to +125 ° C
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100%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

Typical Performance Plots

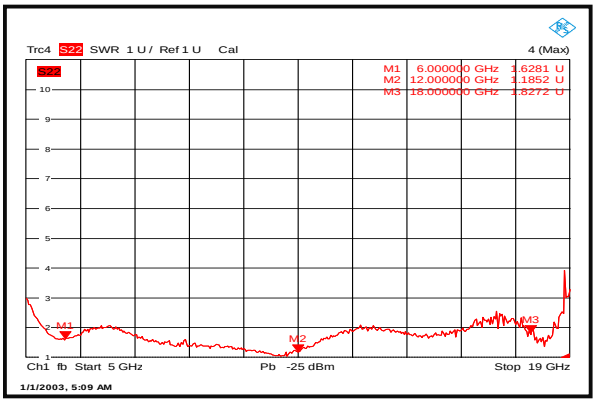
Gain @+25°C



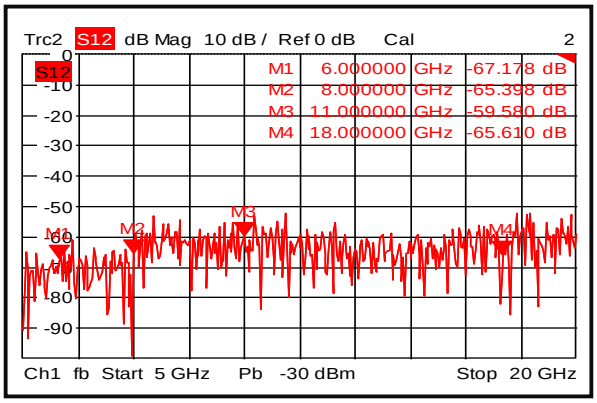
Input VSWR @+25°C



Output VSWR @+25°C



Isolation @+25°C



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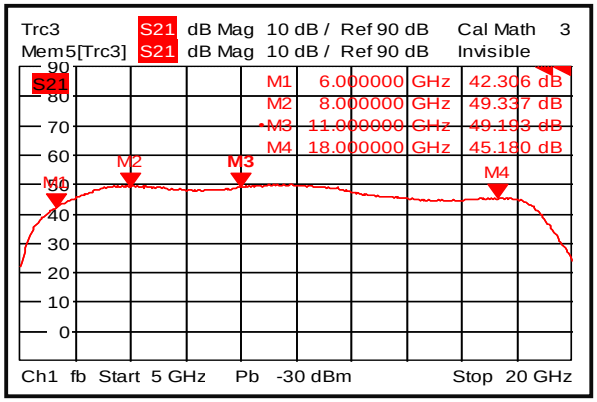
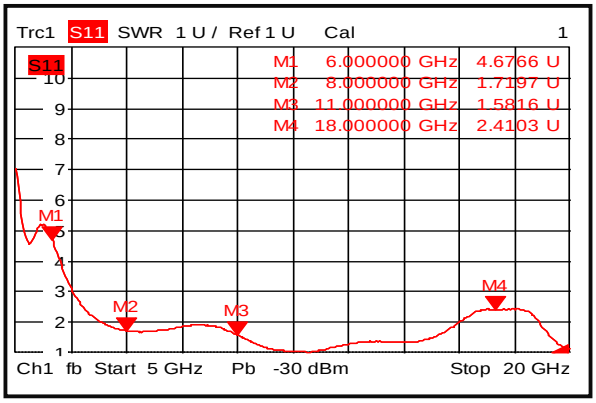
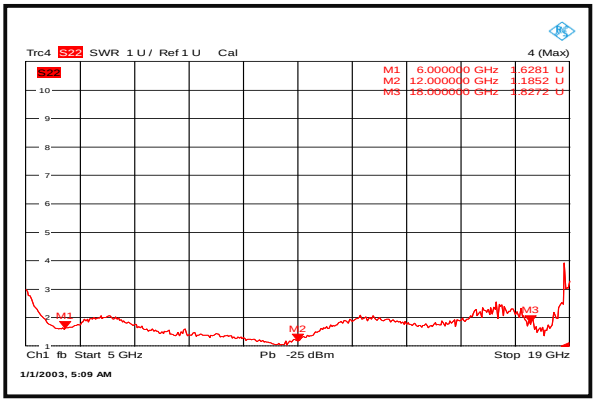
Gain @-45℃



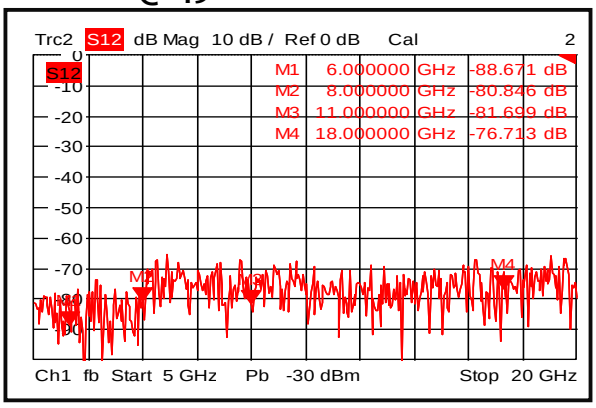
Input VSWR @-45℃



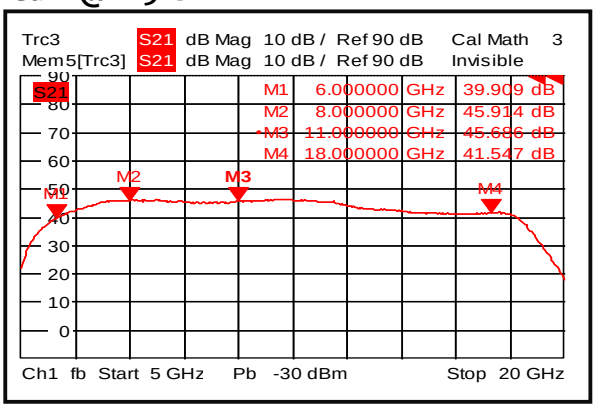
Output VSWR @-45℃



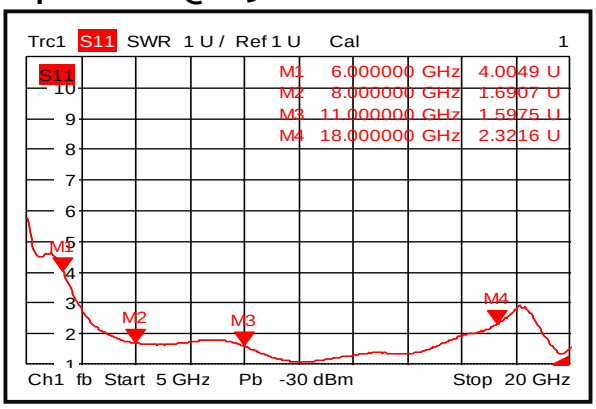
Isolation @-45℃



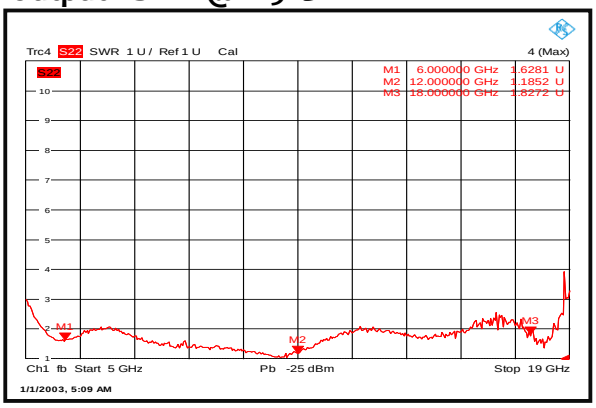
Gain @+85℃



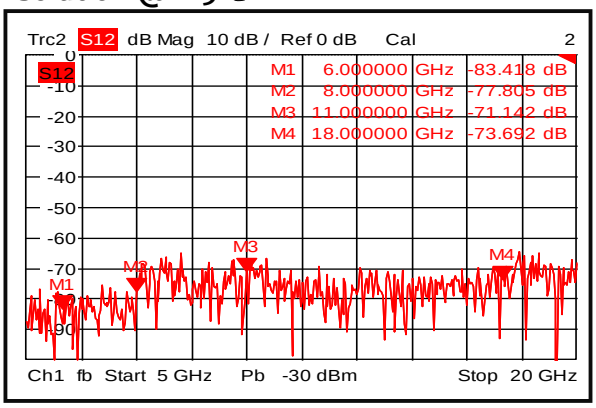
Input VSWR @+85℃



Output VSWR @+85℃



Isolation @+85℃



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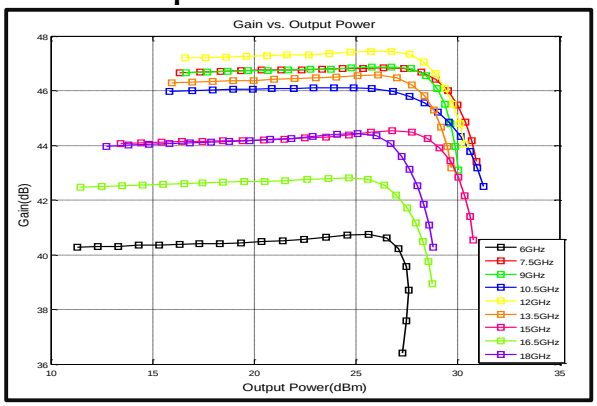
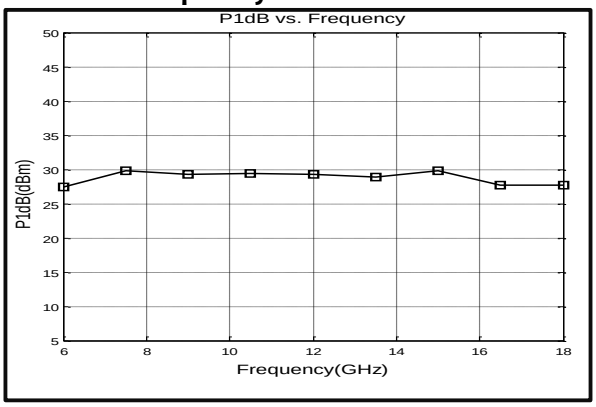
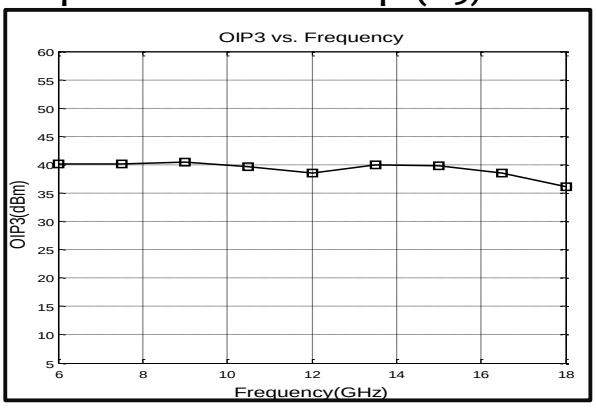
Gain vs. Output Power



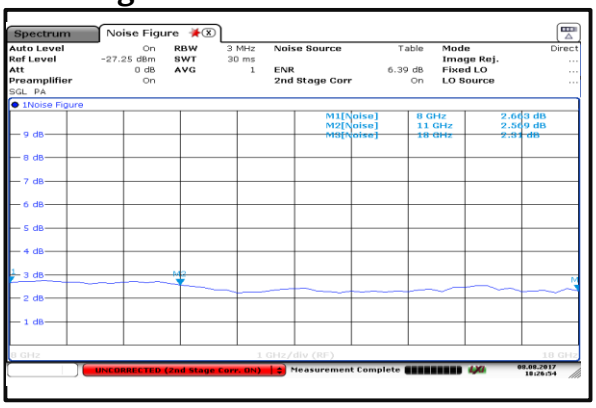
P1dB vs. Frequency



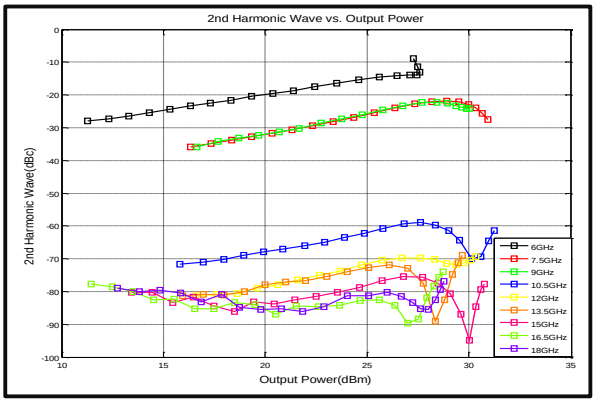
Output Third Order Intercept (IP3)



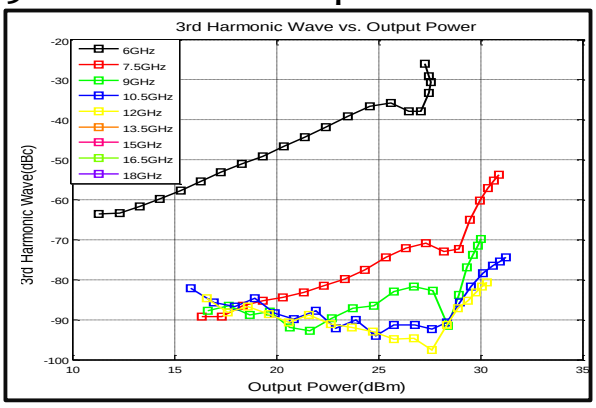
Noise Figure



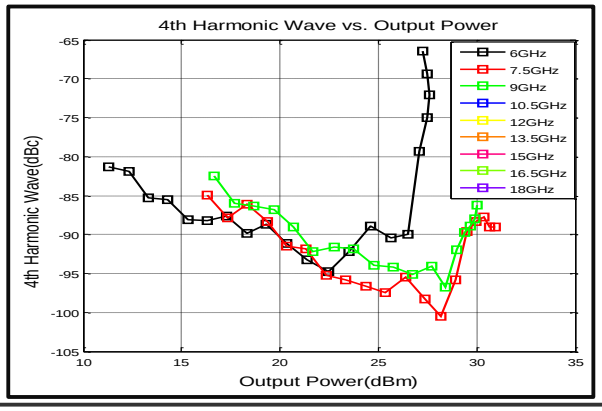
2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power



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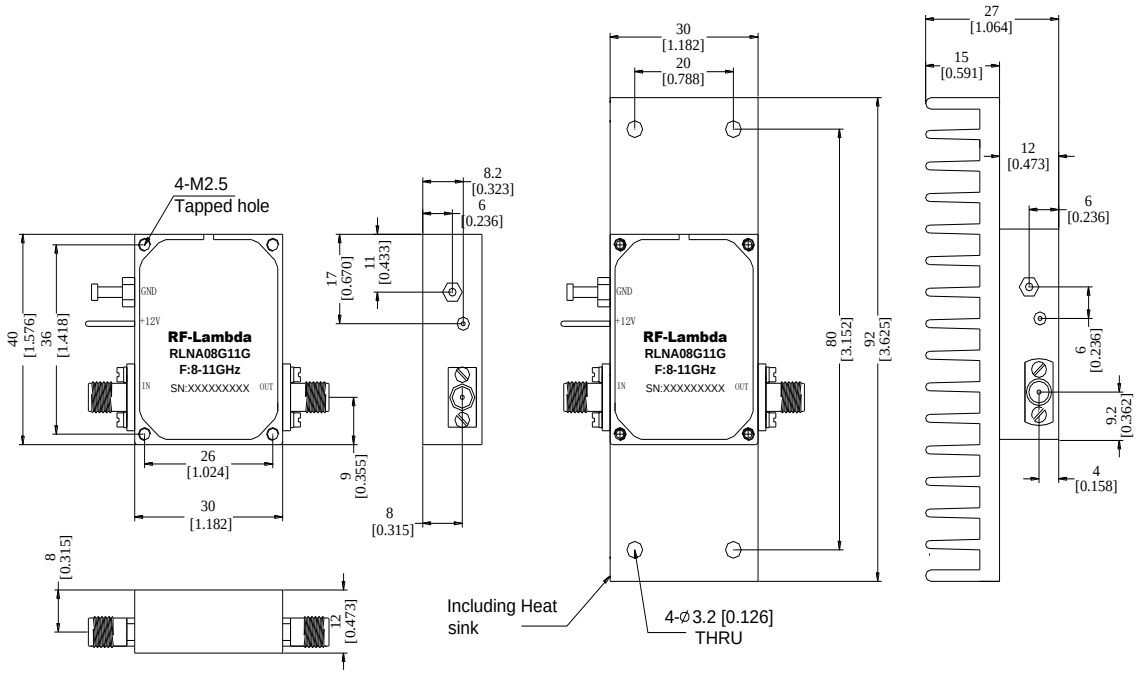
Outline Drawing:

All Dimensions in mm [inches]



Heat Sink required during operation (Sold Separately)

ATTENTION
STATIC SENSITIVE DEVICES
HANDLE ONLY AT
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Ordering Information

Part No.	ECCN	Description
RLNA08G11G	EAR99	8-11GHz Low Noise Amplifier

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