

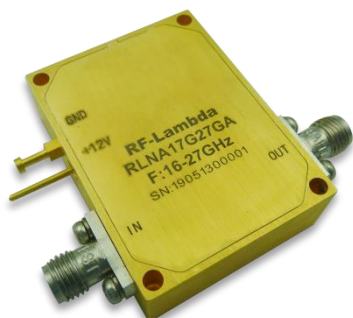


RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RLNA17G27GA

Wide Band Low Noise Amplifier 16GHz~27GHz



Features

- Gain: 31dB typical
- Noise Figure: 2.0dB typical
- High P1dB: +21dBm typical
- Supply Voltage: +12V

Typical Applications

- Wireless Infrastructure
- Military & Aerospace
- Test and Measurement

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

Parameter	Min	Typ	Max	Min	Typ	Max	Units
Frequency Range	16		22	22		27	GHz
Gain	29	32		28	30		dB
Gain Flatness		±0.5	±1.0		±1.0	±1.5	dB
Gain Variation Over Temperature (-45 ~ +85)		±1.0			±1.5		dB
Noise Figure		2.2	3.0		2.2	3.0	dB
Input VSWR		1.4	2.0		1.4	2.0	: 1
Output VSWR		1.7	2.2		1.4	2.0	: 1
Output 1dB Compression Point (P1dB)	17	21		18	21		dBm
Saturated Output Power (Psat)		23			23		dBm
Output Third Order Intercept (OIP3)		25			25		dBm
Supply Current (Vcc=+12V)		160	200		160	200	mA
Isolation S12		-70			-65		dB
Weight	1.41						ounces
Impedance	50						Ohms
Input / Output Connectors	2.92mm-Female						
Finish	Gold Plated						
Material	Aluminum						
Package Sealing	Epoxy Sealed (Standard)						
	Hermetically Sealed (Optional)						

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Absolute Maximum Ratings

Operating Voltage	+15V
RF Input Power	-2dBm

Biasing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect bias voltage
Power OFF Procedure	
Step 1	Turn off bias voltage
Step 2	Remove RF connection
Step 3	Remove Ground.

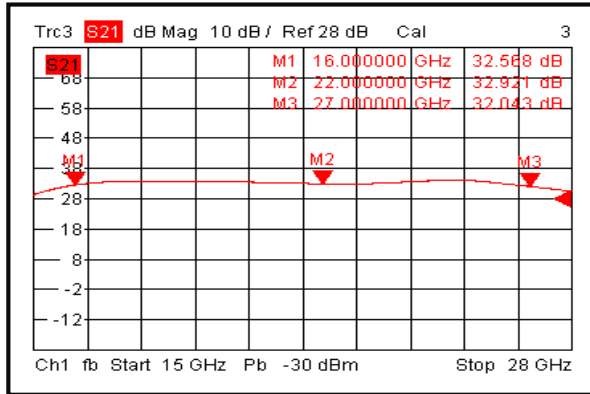
Environmental Specifications and Test Standards

Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-45°C~+85°C
Storage Temperature		-50°C~+125°C
Thermal Shock		1 Hour@ -45°C → 1 Hour @ +85°C (5 Cycles)
Random Vibration		Acceleration Spectral Density 6 (m/s) Total 92.6 RMS
Electrical & Temperature Burn In		Temperature +85°C for 72 Hours
Shock		1. Weight >20g, 50g half sine wave for 11ms, Speed variation 3.44m/s 2. Weight <=20g, 100g Half sine wave for 6ms, Speed variation 3.75m/s 3. Total 18 times (6 directions, 3 repetitions per direction).
Altitude	MIL-STD-883	Standard: 30,000 Ft (Epoxy Sealed Controlled Environment) Optional: Hermetically Sealed (60,000 ft. 1.0 PSI min)
Hermetically Sealed (Optional)		MIL-STD-883 (For Hermetically Sealed Units)

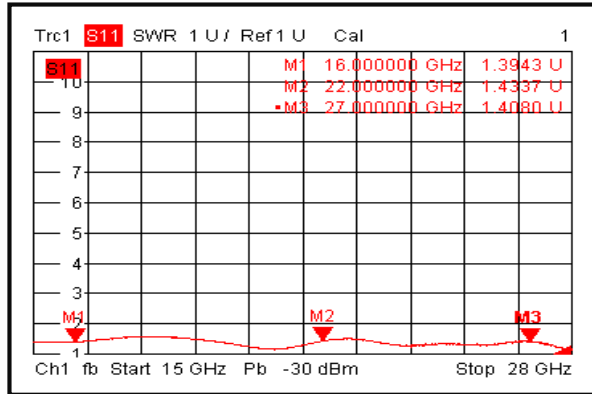


Typical Performance Plots

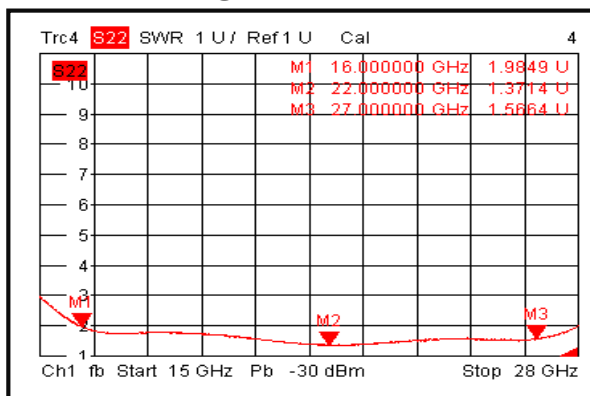
Gain @+25°C



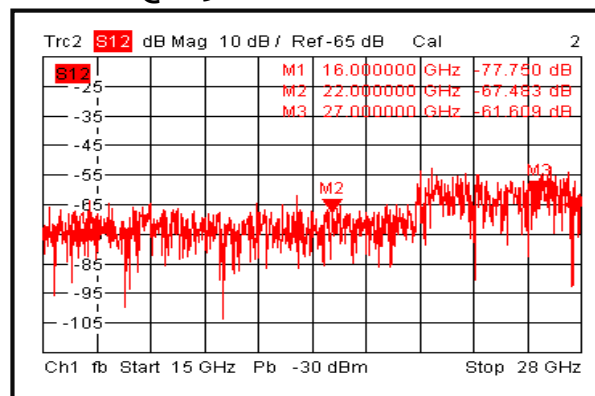
Input VSWR @+25°C



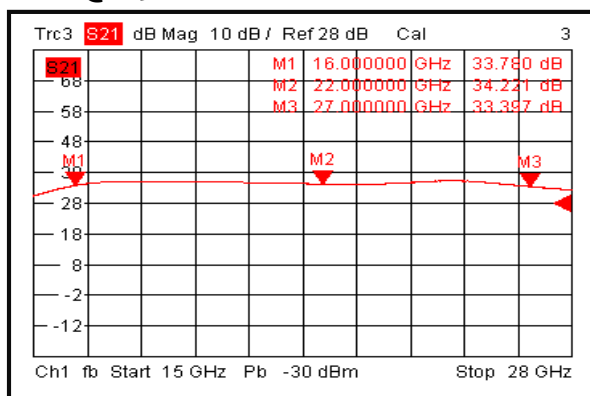
Output VSWR @+25°C



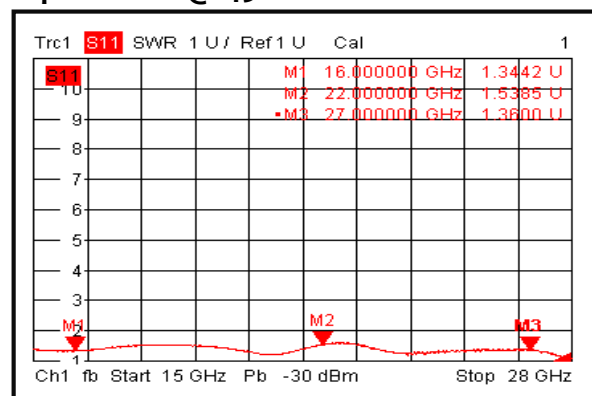
Isolation @+25°C



Gain @-45°C



Input VSWR @-45°C



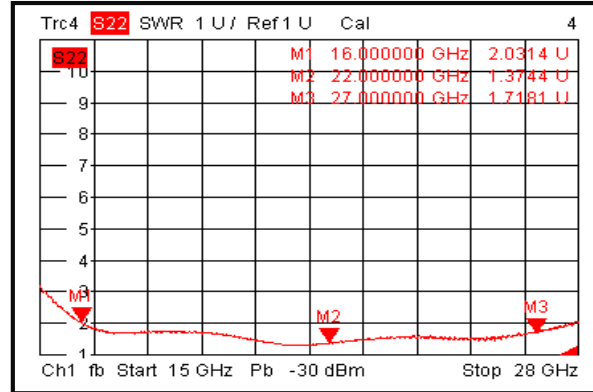


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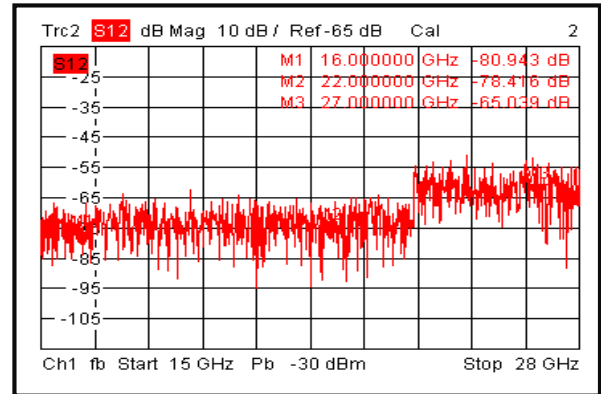
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RLNA17G27GA

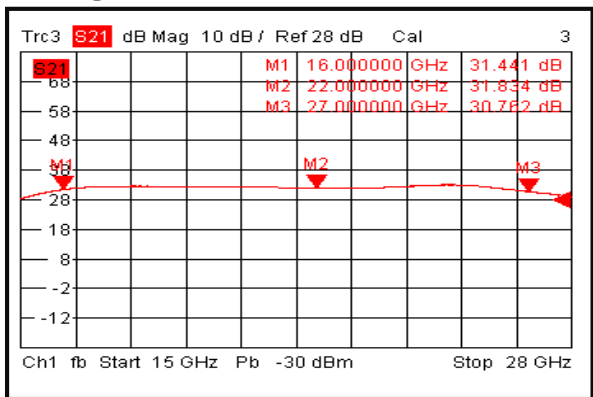
Output VSWR @-45°C



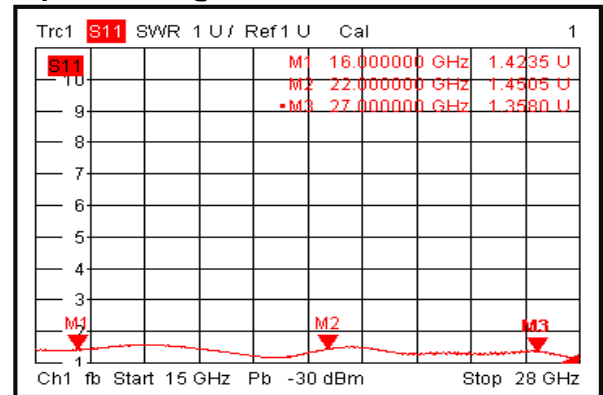
Isolation @-45°C



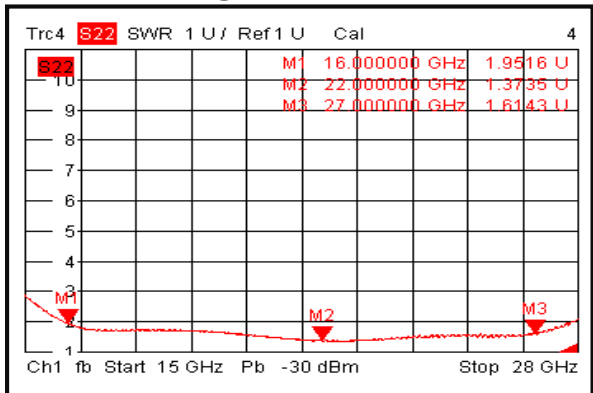
Gain @+85°C



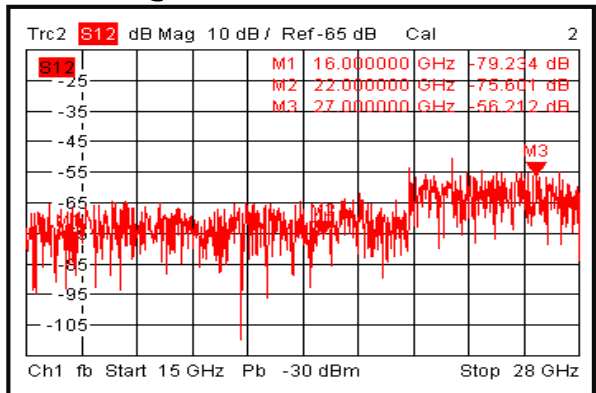
Input VSWR @+85°C



Output VSWR @+85°C



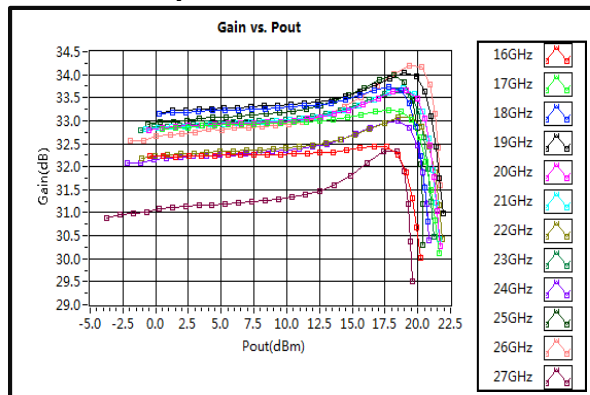
Isolation @+85°C



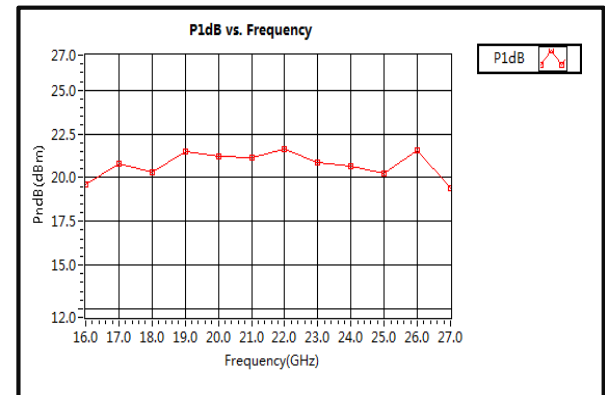
Wide Band Low Noise Amplifier 16GHz~27GHz



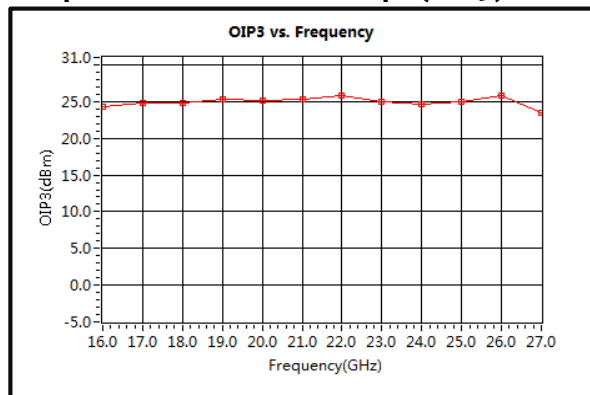
Gain vs. Output Power



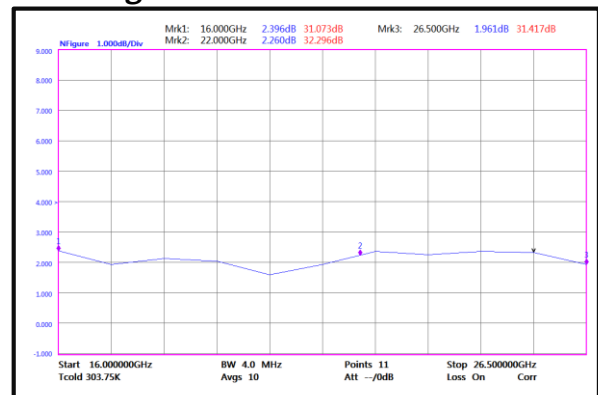
P1dB vs. Frequency



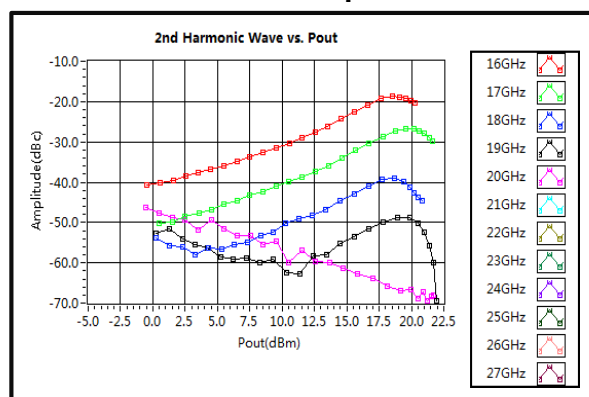
Output Third Order Intercept (OIP3)



Noise Figure



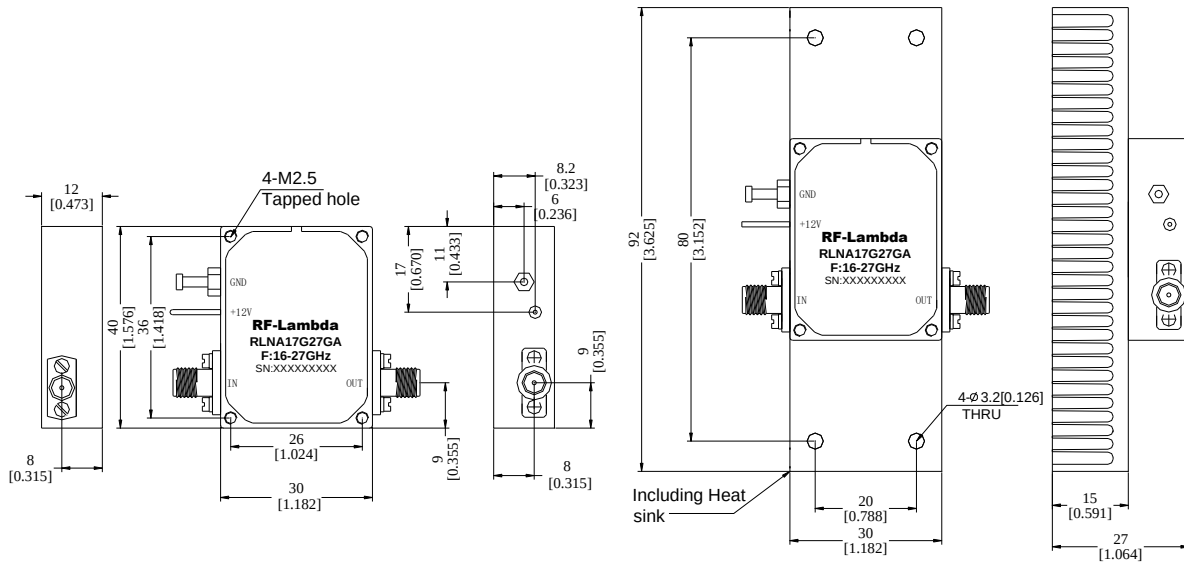
2nd Harmonic Wave Output Power





Outline Drawing:

All Dimensions in mm [inches]



Heat Sink required during operation (Sold Separately)



Ordering Information

Part No.	ECCN	Description
RLNA17G27GA	EAR99	16-27GHz Low Noise Amplifier

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