

GNA Series

6 – 12GHz Low Noise Amplifier

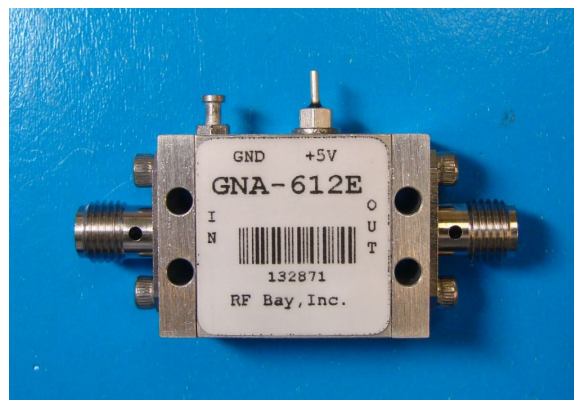
Features

- Frequency Range: 6-12GHz
- Gain: 24dB
- P_{1dB}: +11dBm
- IP3: +25dBm
- Noise Figure: 2.1dB (typ.)
- DC Power: 5V @ 65mA
- RF Connector: SMA-female

Description

GNA-612E is a high performance Microwave Low Noise (& Driver) Amplifier, with standard frequency range of 6GHz to 12GHz.

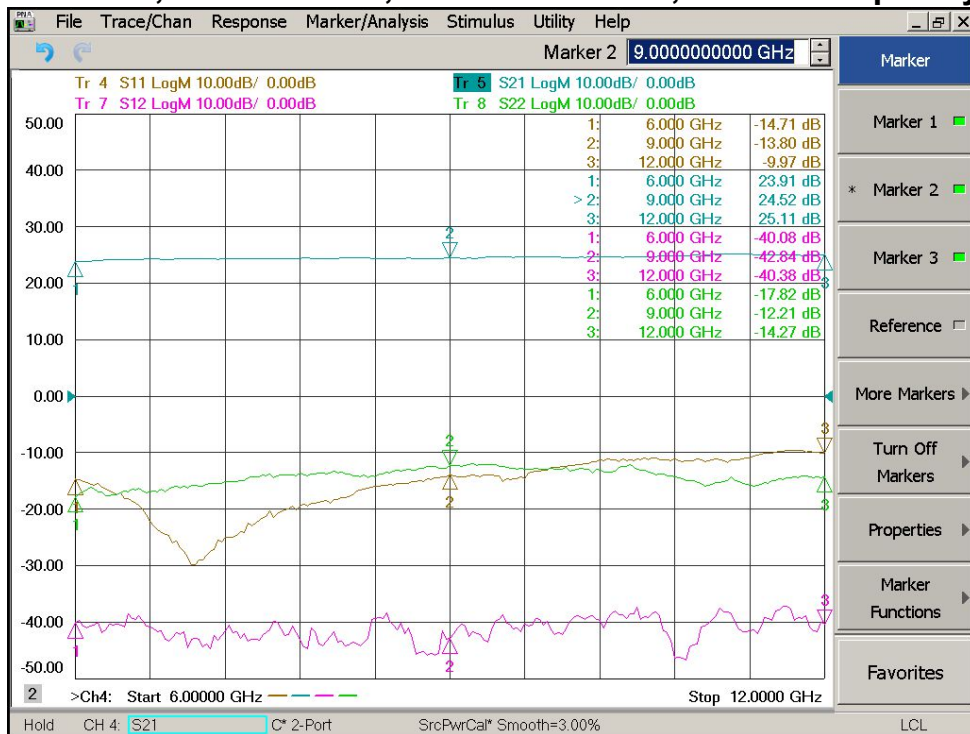
Photo



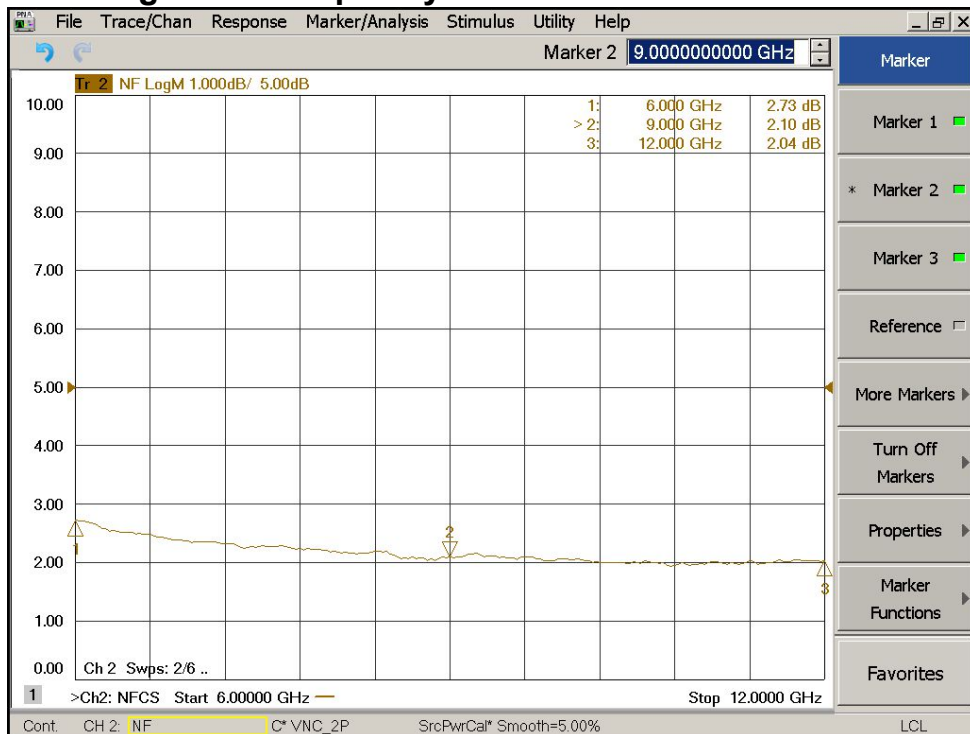
Electrical Specifications @+25 °C, Z_{in}=Z_{out}=50 Ω, DC Voltage = +5VDC

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	GHz	6		12
Gain S ₂₁	f = 6GHz	22.0	24.0	
	f = 9GHz	22.0	24.0	
	f = 12GHz	23.0	25.0	
Gain Flatness	dB		± 0.7	± 1.0
Gain Variation Over Temperature	dB/°C		0.02	0.03
Output Power P _{1dB}	f = 9GHz	+9	+11	
Saturated Output Power P _{Sat}	f = 9GHz	+11	+13	
Output Third Order Intercept IP3	f = 9GHz	+23	+25	
Noise Figure	f = 9GHz		2.1	2.5
Reverse Isolation S ₁₂	f = 9GHz	-35	-40	
Input VSWR S ₁₁	f = 9GHz		1.4:1	2.0:1
Output VSWR S ₂₂	f = 9GHz		1.4:1	2.0:1
DC Power Supply - voltage	V	4.5	5.0	5.5
DC Power Supply - current	mA		65	75

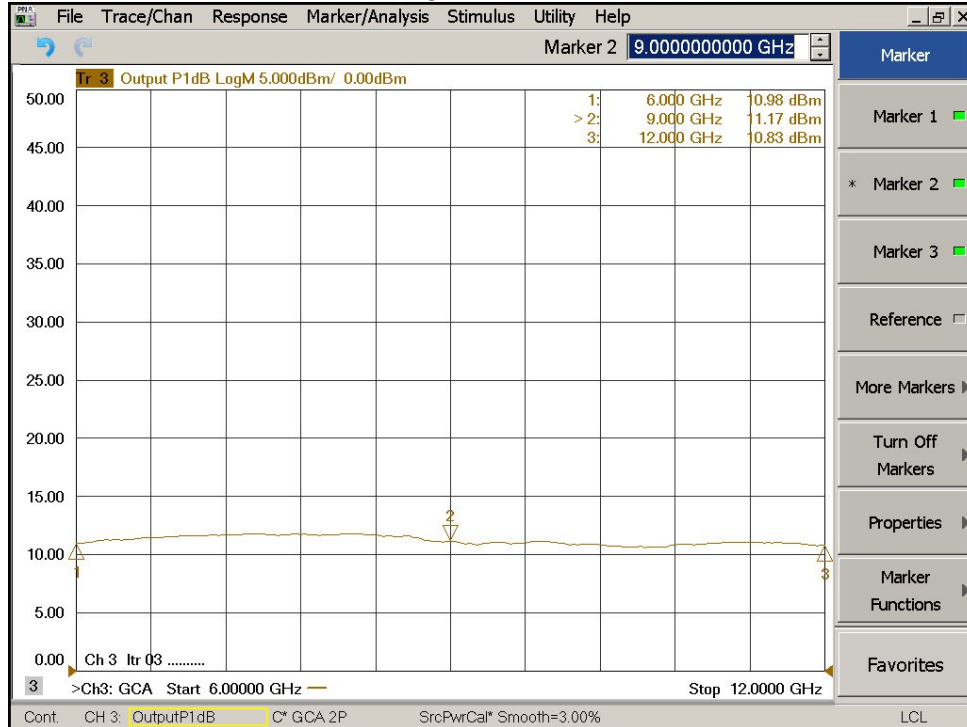
Gain S21, Isolation S12, Return Loss S11, S22 vs Frequency



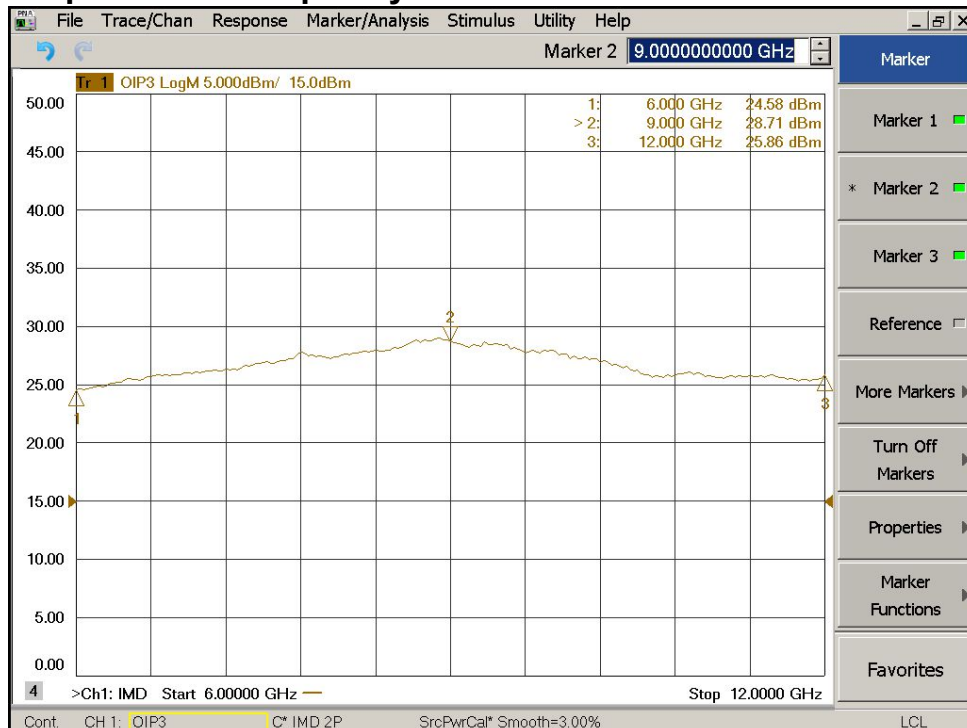
Noise Figure vs Frequency



Output P1dB vs Frequency



Output IP3 vs Frequency



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6 – 12GHz Low Noise Amplifier

Absolute Maximum Ratings

Parameter	Absolute Maximum
Supply Voltage	+16V
RF Input Power	+20dBm
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +125 °C

ESD Sensitive Material



Outline

