

GNA Series

1000 – 4000MHz Low Noise Amplifier

Features

- Frequency Range: 1000–4000MHz
- Gain: 18dB
- P_{1dB}: +20dBm
- IP3: +41dBm
- Noise Figure: 0.8dB (typ.)
- DC Power: 12V @ 120mA
- Internally Voltage Regulated
- Reverse Voltage Protected
- RF Connector: SMA-Female

Photo



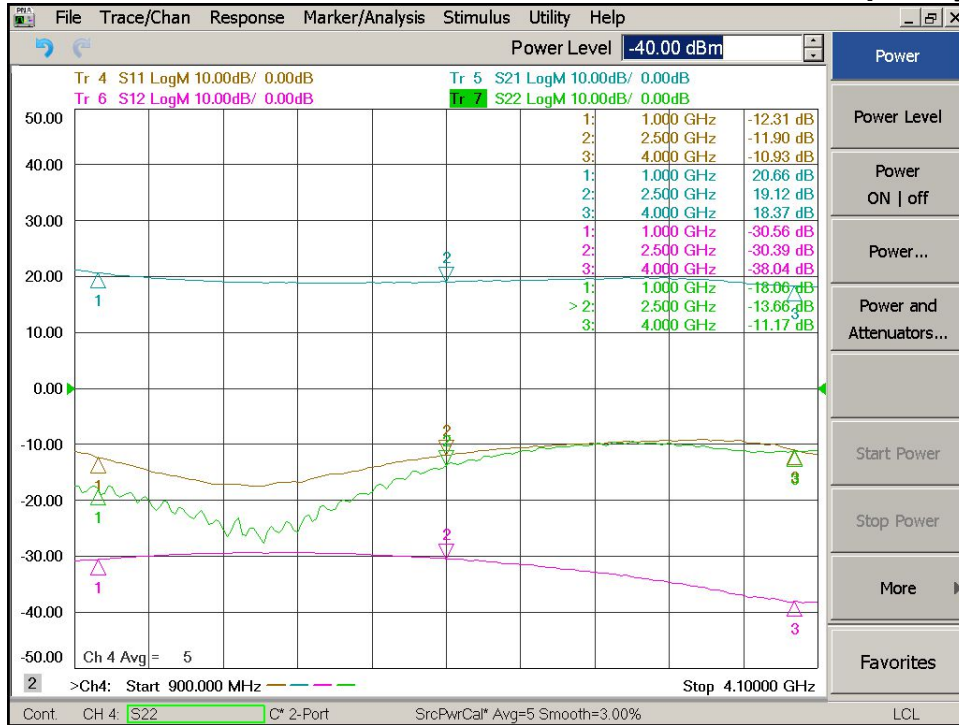
Description

GNA-119T is a high performance Microwave Low Noise (& Driver) Amplifier, with standard frequency range of 1000MHz to 4000MHz.

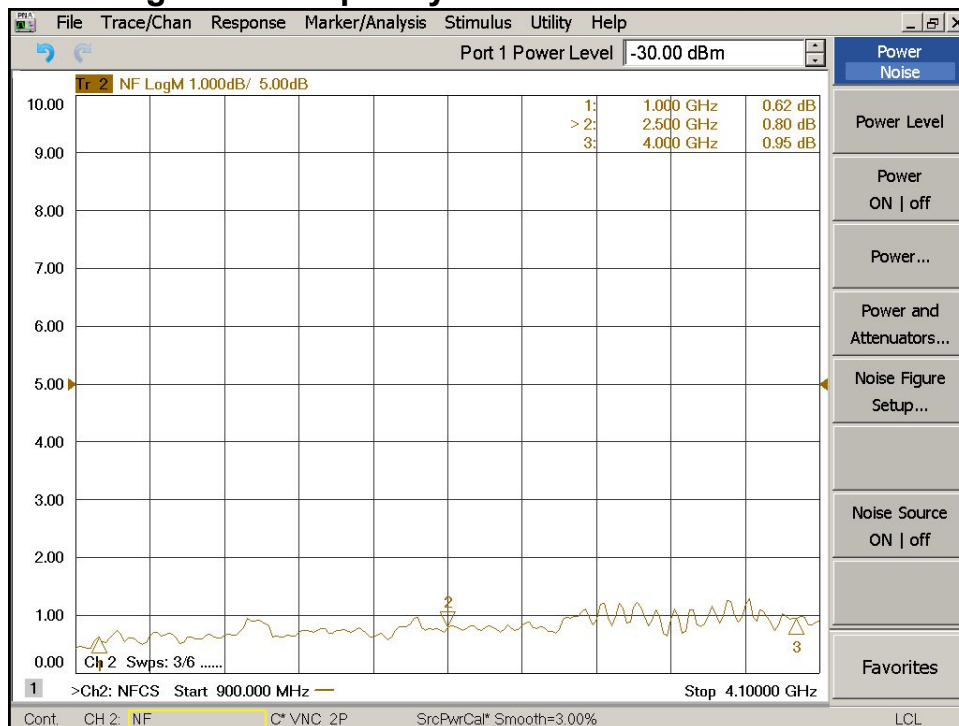
Electrical Specifications @+25 °C, Z_{in}=Z_{out}=50 Ω, DC Voltage = +12V

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	MHz	1000		4000
Gain S ₂₁	f = 1000MHz	dB	18.5	20.0
	f = 2500MHz	dB	17.0	18.5
	f = 4000MHz	dB	16.5	18.0
Gain Flatness	dB		±1.2	±1.5
Gain Variation Over Temperature	dB/°C		0.02	0.03
Output Power P _{1dB}	f = 2500MHz	dBm	+18	+20
Saturated Output Power P _{Sat}	f = 2500MHz	dBm	+20	+22
Output Third Order Intercept IP3	f = 2500MHz	dBm	+39	+41
Noise Figure	f = 2500MHz	dB	0.8	1.0
Reverse Isolation S ₁₂	f = 2500MHz	dB	-25	-30
Input VSWR S ₁₁	f = 2500MHz		1.6:1	2.0:1
Output VSWR S ₂₂	f = 2500MHz		1.5:1	2.0:1
DC Power Supply - voltage	V	9	12	15
DC Power Supply - current	mA		120	140

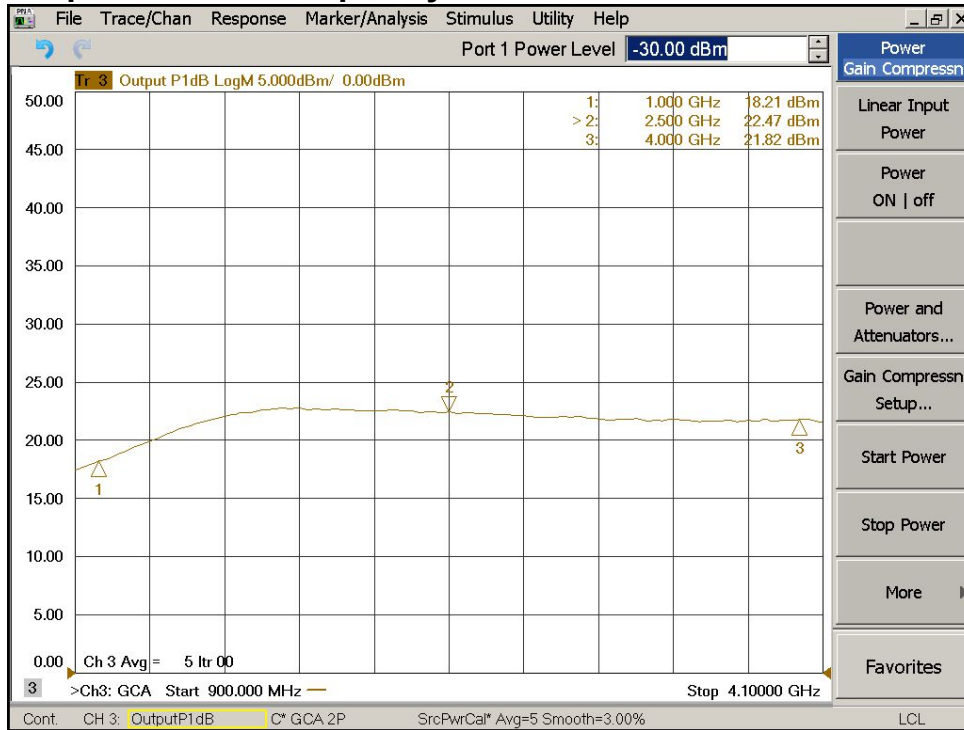
Gain S21, Isolation S12, Return Loss S11, S22 vs Frequency



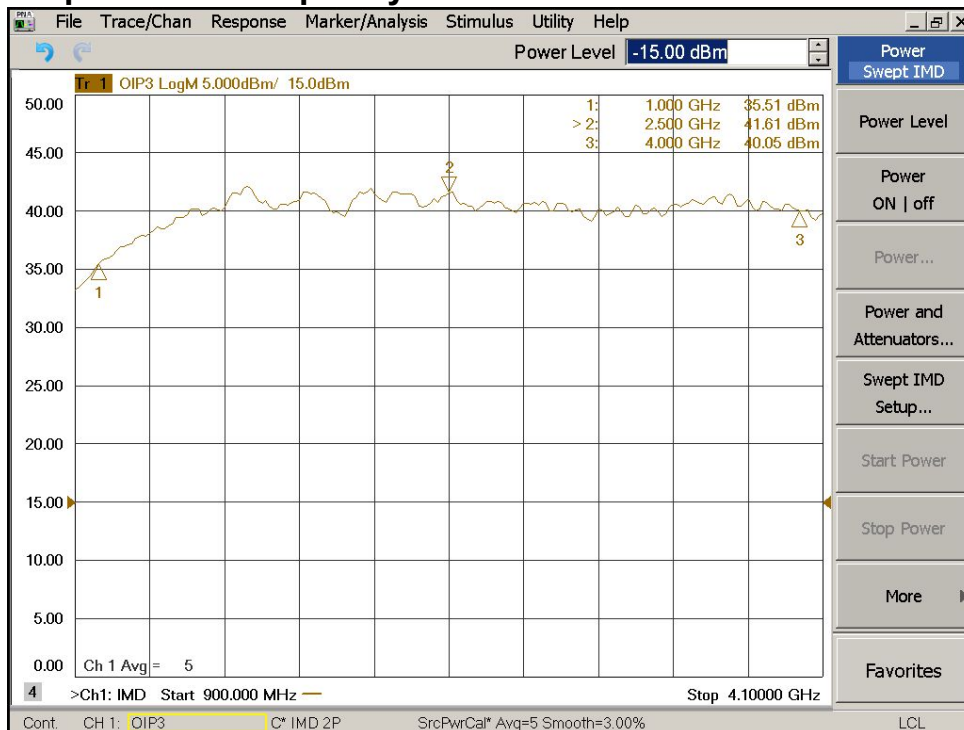
Noise Figure vs Frequency



Output P1dB vs Frequency



Output IP3 vs Frequency



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Absolute Maximum Ratings

Parameter	Absolute Maximum
Supply Voltage	+18V
RF Input Power	+20dBm
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +125 °C

ESD Sensitive Material



Outline

