

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.

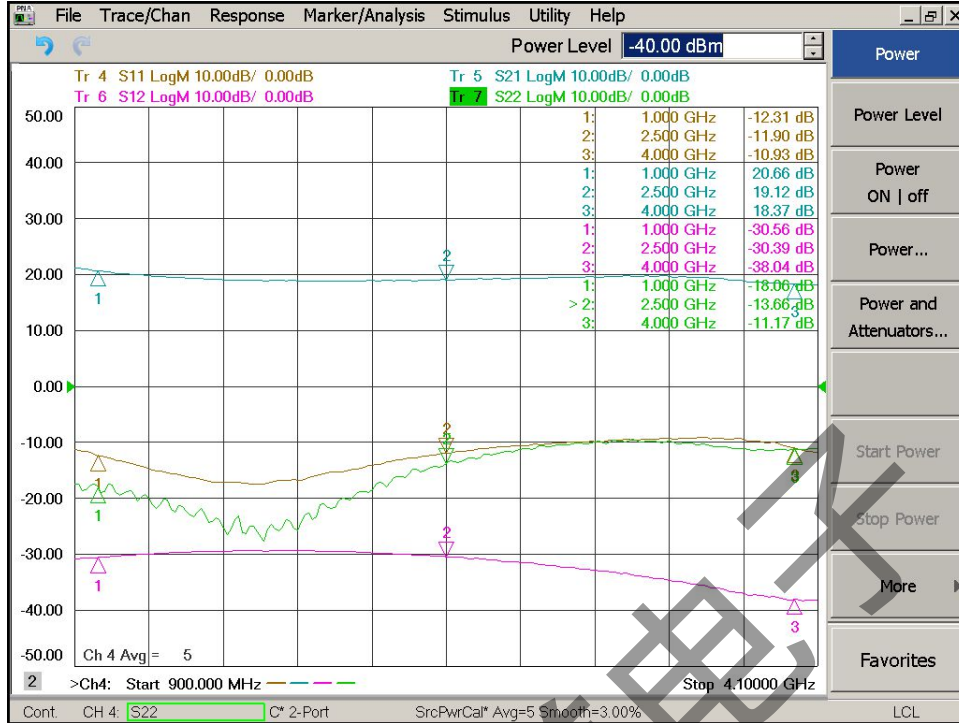
Electrical Specifications @+25 °C, $Z_{in}=Z_{out}=50 \Omega$, DC Voltage = +12V

| 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 |

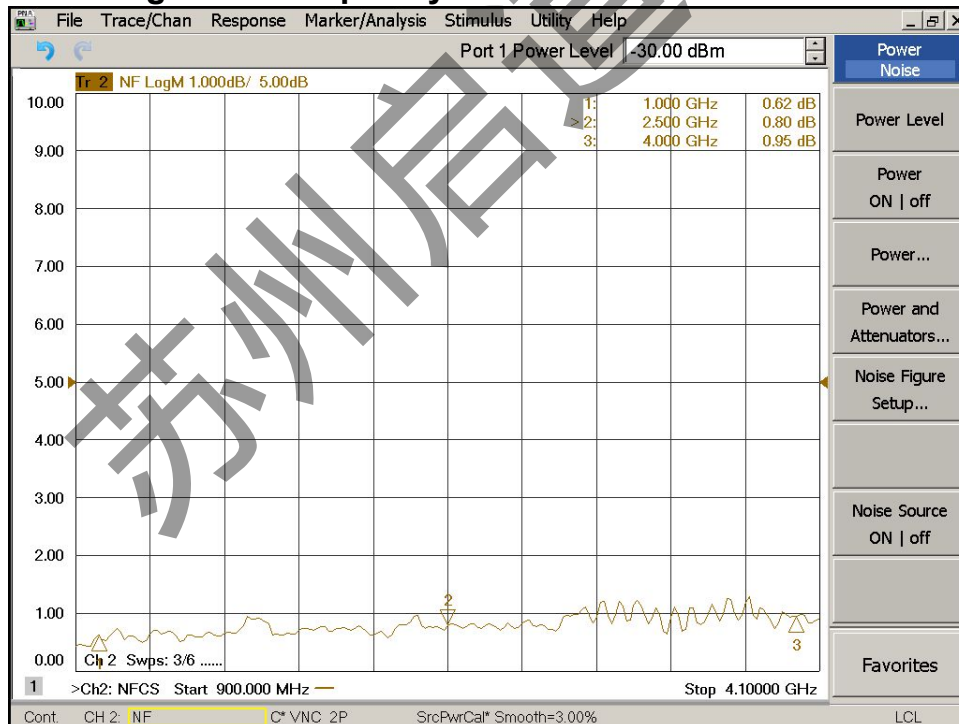
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Gain S21, Isolation S12, Return Loss S11, S22 vs Frequency



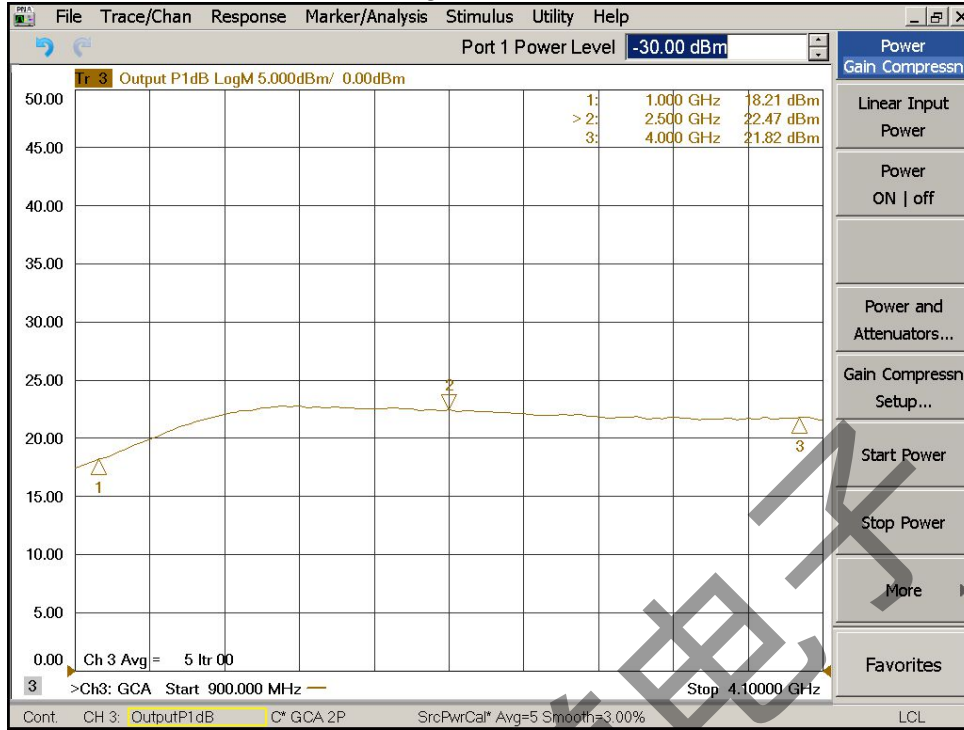
Noise Figure vs Frequency



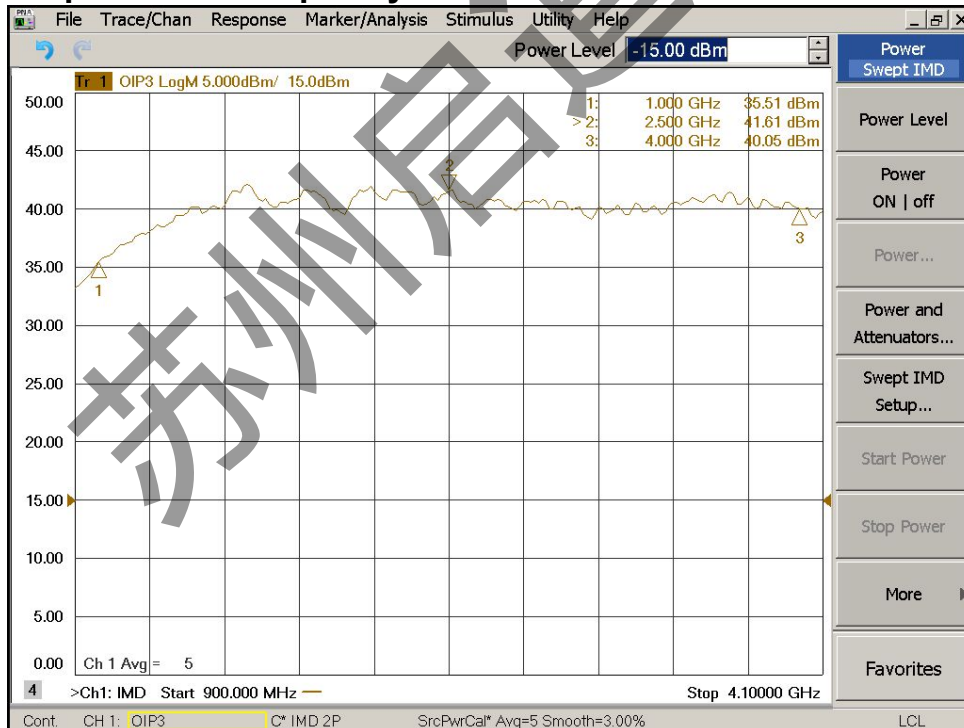
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Output P1dB vs Frequency



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

