

LNA Series

10 – 800MHz Low Noise Amplifier

Features

- Frequency Range: 10-800MHz
- Gain: 40dB
- P_{1dB}: +17dBm
- IP3: +30dBm
- Noise Figure: 2.0dB
- Internally Voltage Regulated
- Reverse Voltage Protected
- DC Power: 12V/100mA
- SMA Connector

Picture



Description

LNA-840 is a 40dB gain wideband high dynamic range Low Noise Amplifier operates with frequency range from 10 to 800MHz.

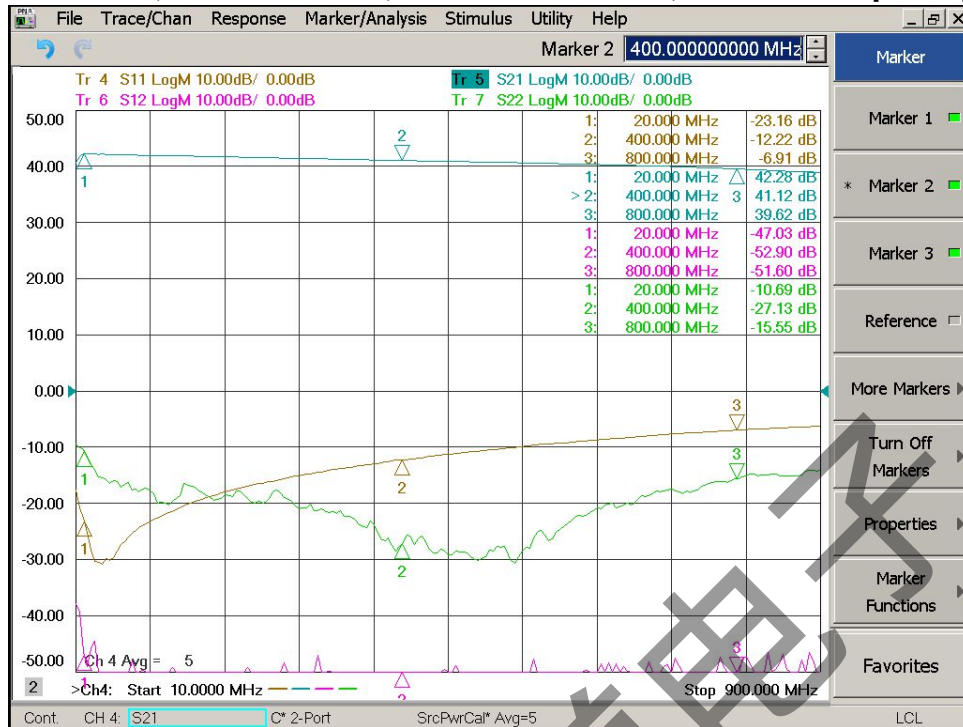
Electrical Specifications @ +25 °C, Z_{in} = Z_{out} = 50 Ω, DC Voltage = +12V

| Parameter | Unit | Minimum | Typical | Maximum |
|-----------------------------------|------------|---------|---------|---------|
| Frequency Range | MHz | 10 | | 800 |
| Gain S ₂₁ | f = 10MHz | 40.0 | 42.0 | |
| | f = 400MHz | 39.0 | 41.0 | |
| | f = 800MHz | 37.5 | 39.5 | |
| Gain Flatness | dB | | ±0.7 | ±1.5 |
| P _{1dB} | f = 400MHz | +15 | +17 | |
| IP3 | f = 400MHz | +28 | +30 | |
| Noise Figure | f = 400MHz | | 2.0 | 2.5 |
| Reverse Isolation S ₁₂ | f = 400MHz | -45 | -50 | |
| Input VSWR S ₁₁ | f = 400MHz | | 1.7:1 | 2.0:1 |
| Output VSWR S ₂₂ | f = 400MHz | | 1.2:1 | 1.5:1 |
| DC Power Supply | V | 10 | 12 | 15 |
| Supply Current | mA | | 100 | 120 |

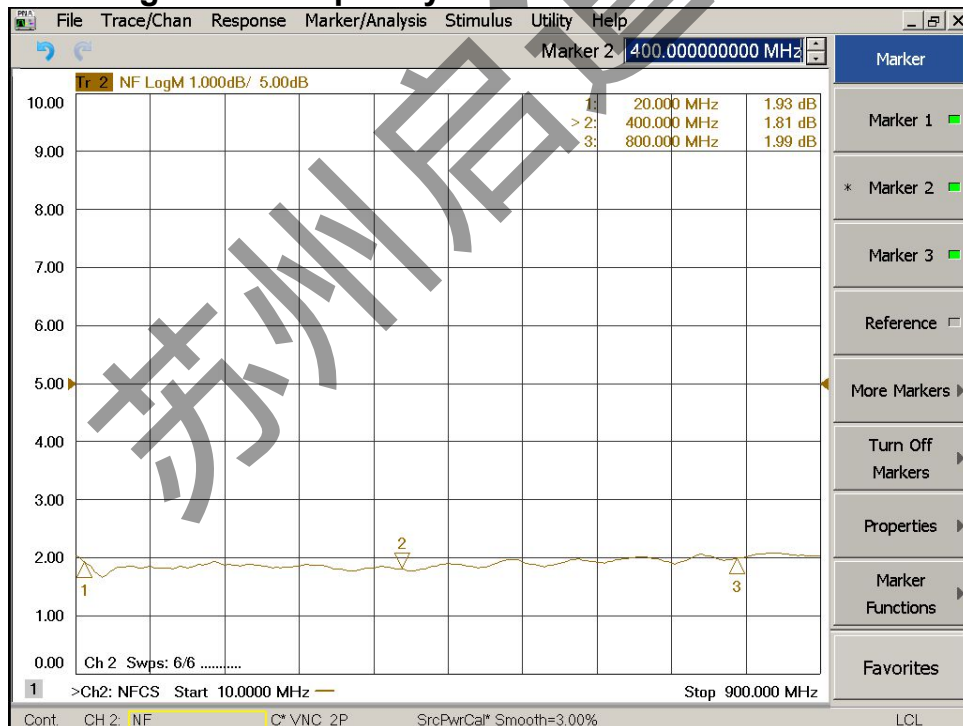
LNA Series

10 – 800MHz Low Noise Amplifier

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



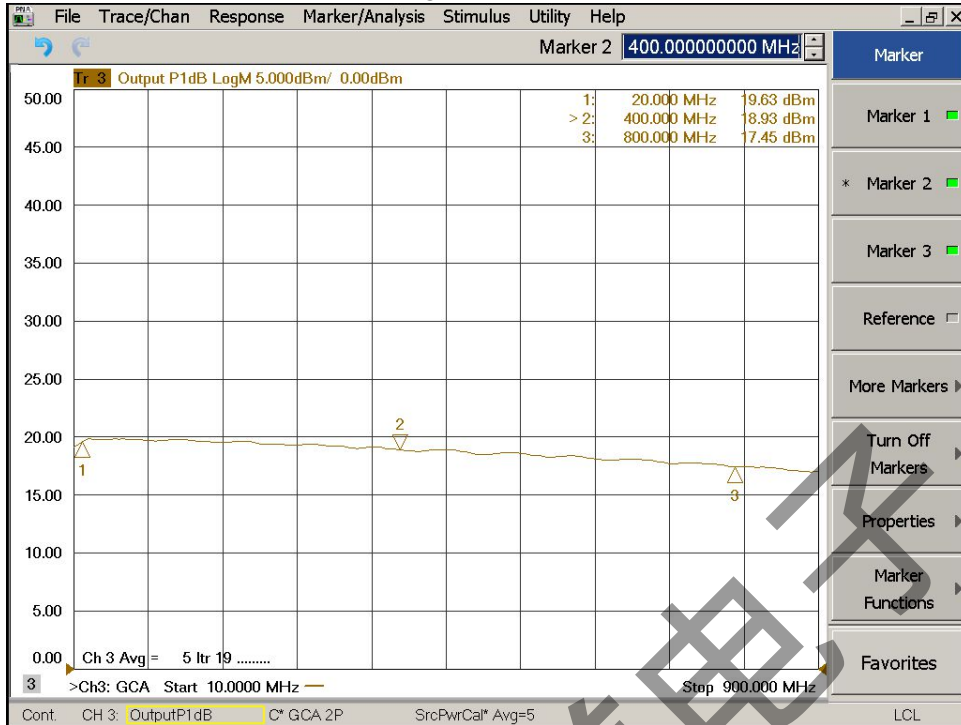
Noise Figure vs Frequency



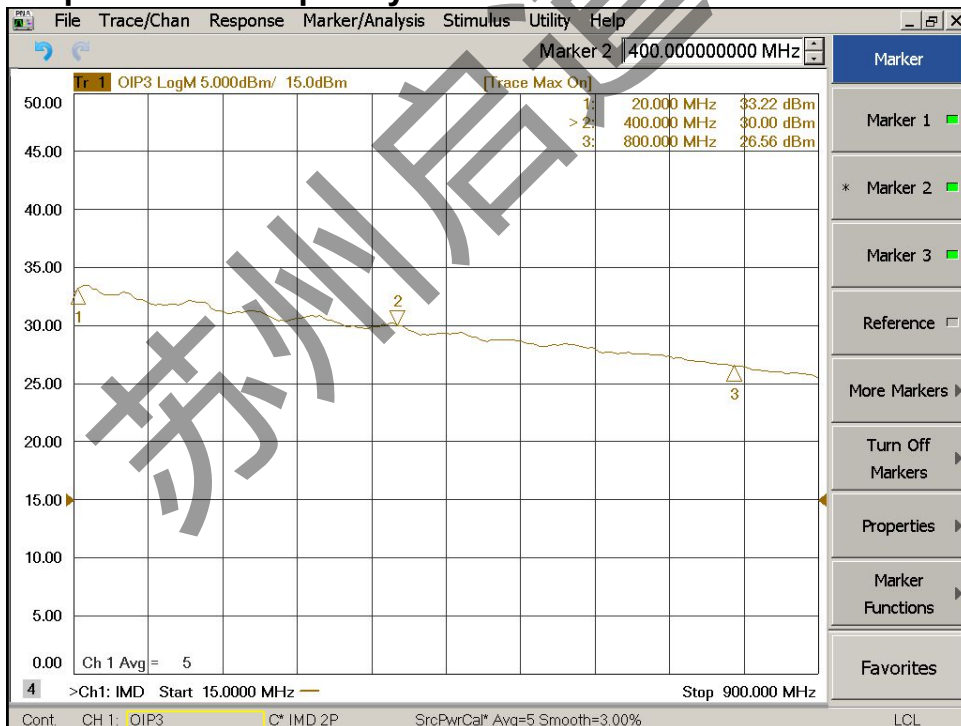
LNA Series

10 – 800MHz Low Noise Amplifier

Output P1dB vs Frequency



Output IP3 vs Frequency



LNA Series

10 – 800MHz Low Noise Amplifier

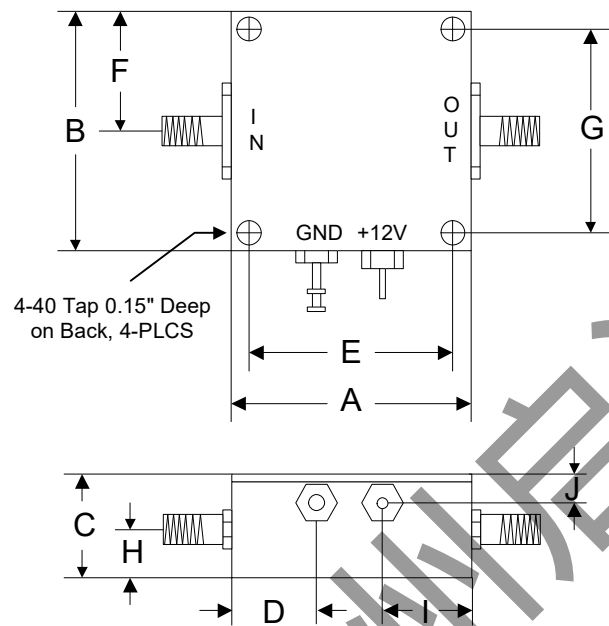
Absolute Maximum Ratings

| Parameter | Absolute Maximum |
|-----------------------|-------------------|
| Supply Voltage | +16V |
| RF Input Power | +13dBm |
| Operating Temperature | -40 °C to +85 °C |
| Storage Temperature | -55 °C to +125 °C |

ESD Sensitive Material



Outline



| | A | B | C | D | E | F | G | H | I | J |
|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Inch | 1.250 | 1.250 | 0.563 | 0.450 | 1.000 | 0.625 | 1.000 | 0.250 | 0.500 | 0.187 |
| mm | 31.75 | 31.75 | 14.29 | 11.43 | 25.40 | 15.88 | 25.40 | 6.35 | 12.70 | 4.76 |