

ENA Series

1 – 750MHz Low Noise Amplifier

Features

- Frequency Range: 1-750MHz
- Gain: 70dB
- P_{1dB} : +21dBm
- OIP3: +34dBm
- Noise Figure: 2.2dB (typ.)
- DC Power: 12V to 15V @ 190mA
- SMA-female

Photo



Description

ENA-250T is a high performance Low Noise (& Driver) Amplifier, with standard frequency range of 1 to 750MHz.

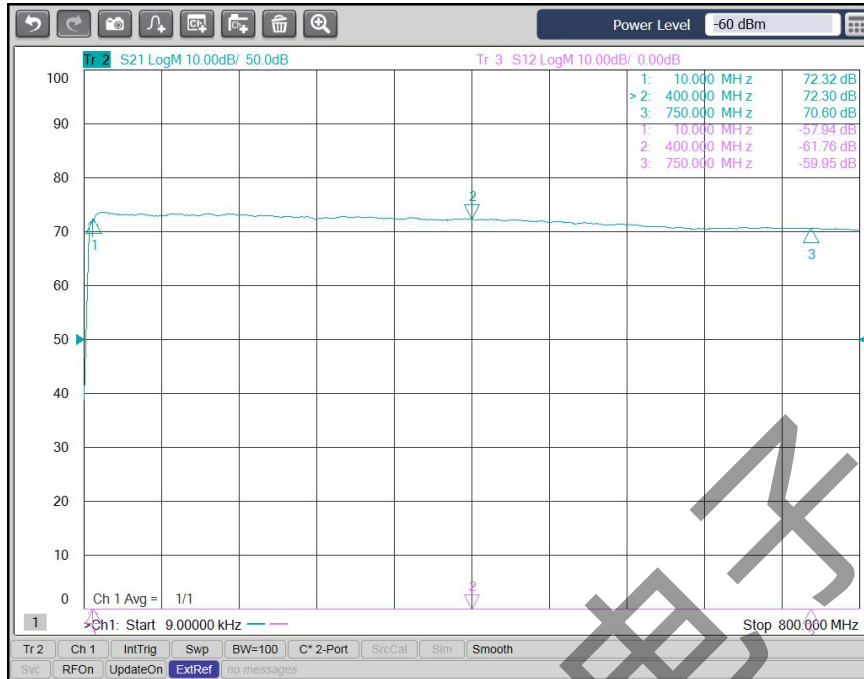
Electrical Specifications @+25 °C, $Z_{in}=Z_{out}=50 \Omega$, DC Supply = +12VDC

| Parameter | Unit | Minimum | Typical | Maximum |
|-----------------------------------|-----------------|--------------------------------|---------|---------|
| Frequency Range | MHz | 1 | | 750 |
| Gain S21 | f = 1MHz | 65 | 67 | |
| | f = 10MHz | 70 | 73 | |
| | f = 400MHz | 70 | 72 | |
| | f = 750MHz | 68 | 70 | |
| Gain Flatness | f = 10 - 750MHz | | ±0.9 | ±1.5 |
| Output Power P_{1dB} | f = 400MHz | +19 | +21 | |
| Output Third Order Intercept IP3 | f = 400MHz | +32 | +34 | |
| Noise Figure | f = 400MHz | | 2.2 | 2.5 |
| Reverse Isolation S12 | f = 400MHz | -55 | -60 | |
| Input VSWR S11 | f = 400MHz | | 1.5:1 | 1.8:1 |
| Output VSWR S22 | f = 400MHz | | 1.7:1 | 2.0:1 |
| DC Power Supply - voltage | V | 11 | 12 | 15 |
| DC Power Supply - current | mA | | 190 | 220 |
| Operating Temperature | °C | -40 | | +85 |
| Size (RF/DC feedthrough excluded) | Inch | 1.79 (L) x 1.10 (W) x 0.45 (H) | | |
| Weight | Oz | 1.4 | | |

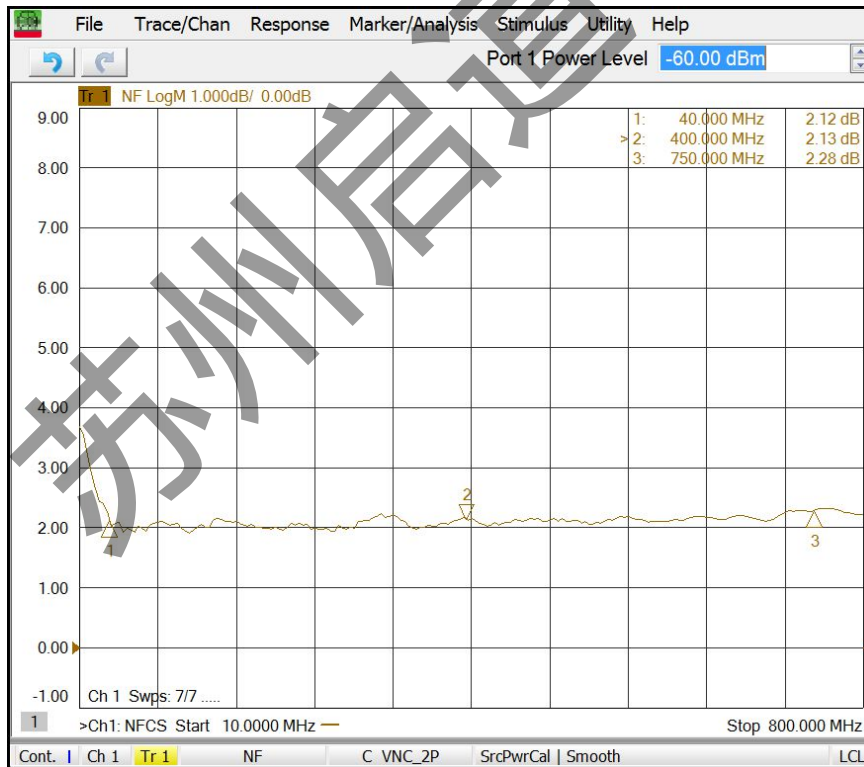
ENA Series

1 – 750MHz Low Noise Amplifier

Gain S21, Isolation S12 vs Frequency



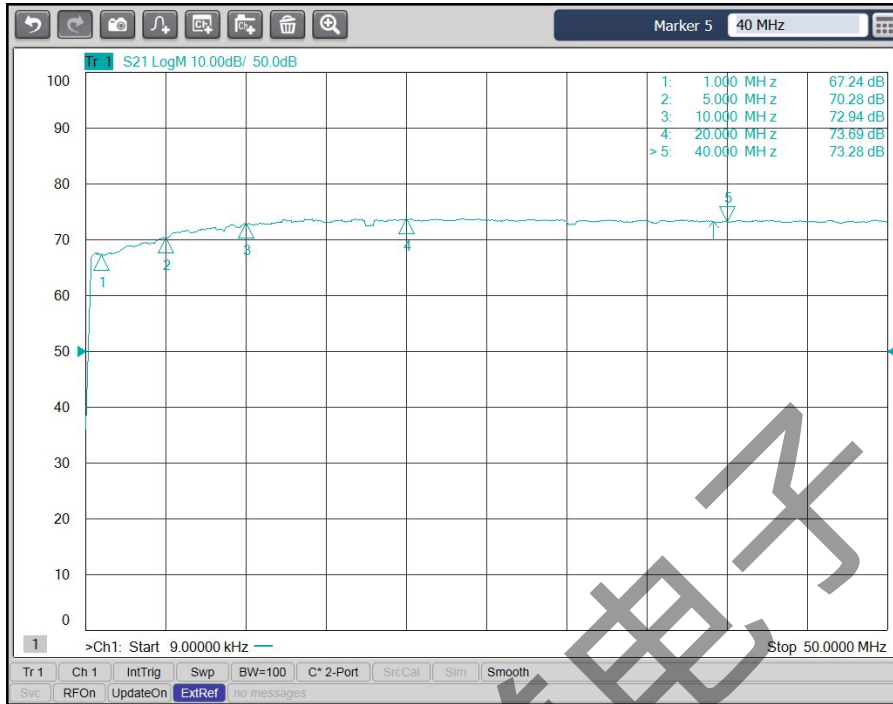
Noise Figure vs Frequency



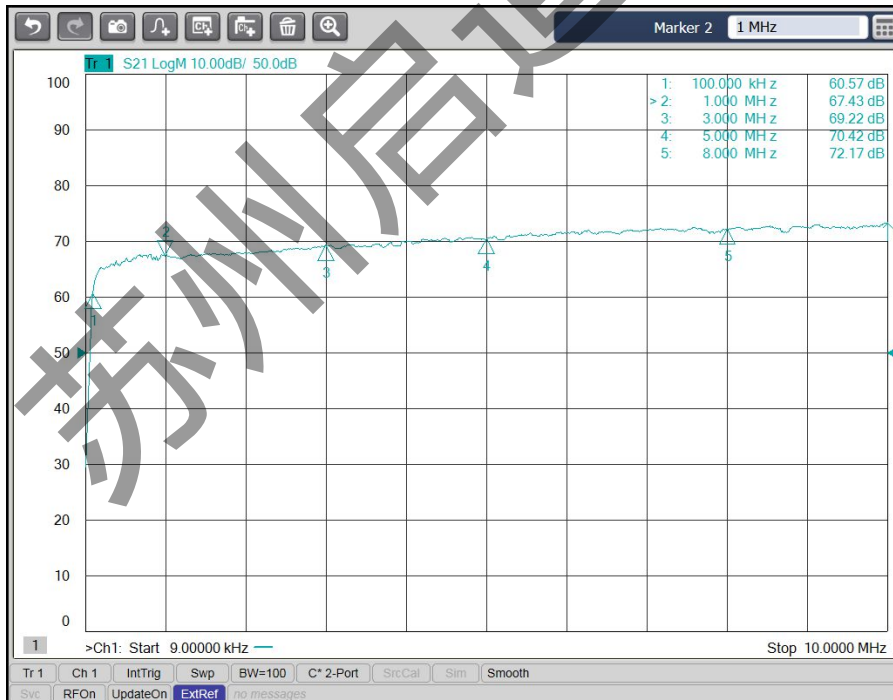
ENA Series

1 – 750MHz Low Noise Amplifier

Gain S21 vs Frequency at Low Frequency



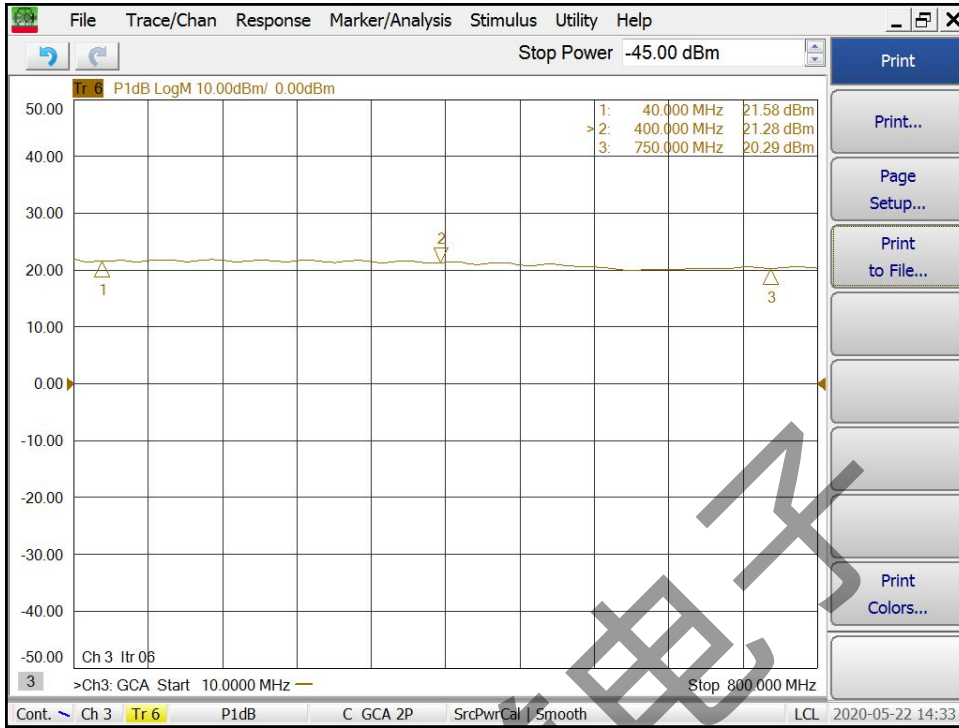
Gain S21 vs Frequency at Low Frequency



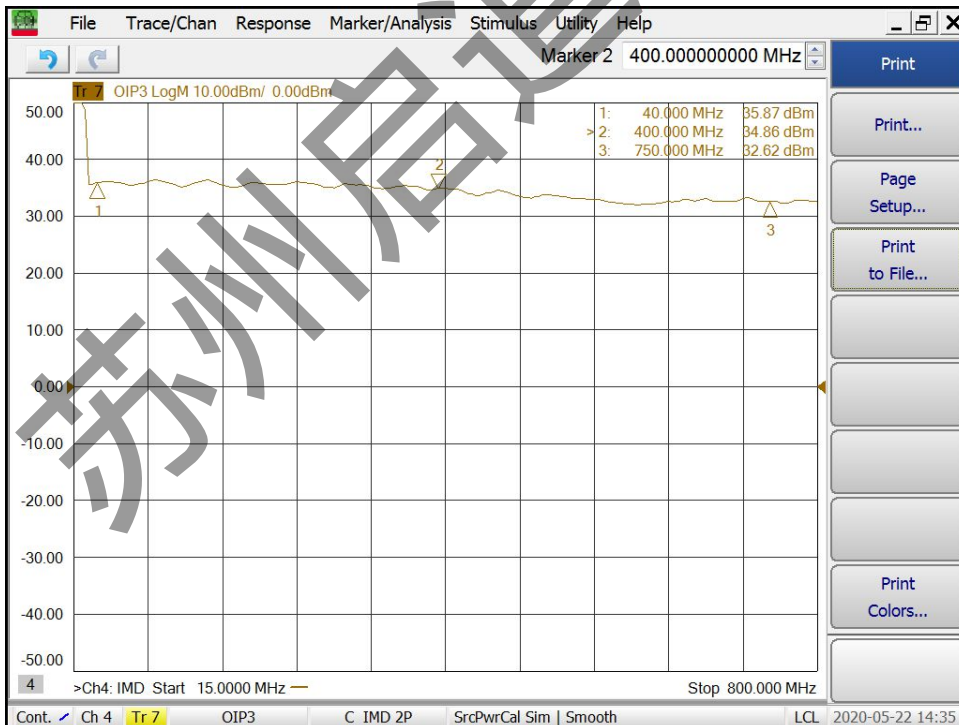
ENA Series

1 – 750MHz Low Noise Amplifier

Output P1dB vs Frequency



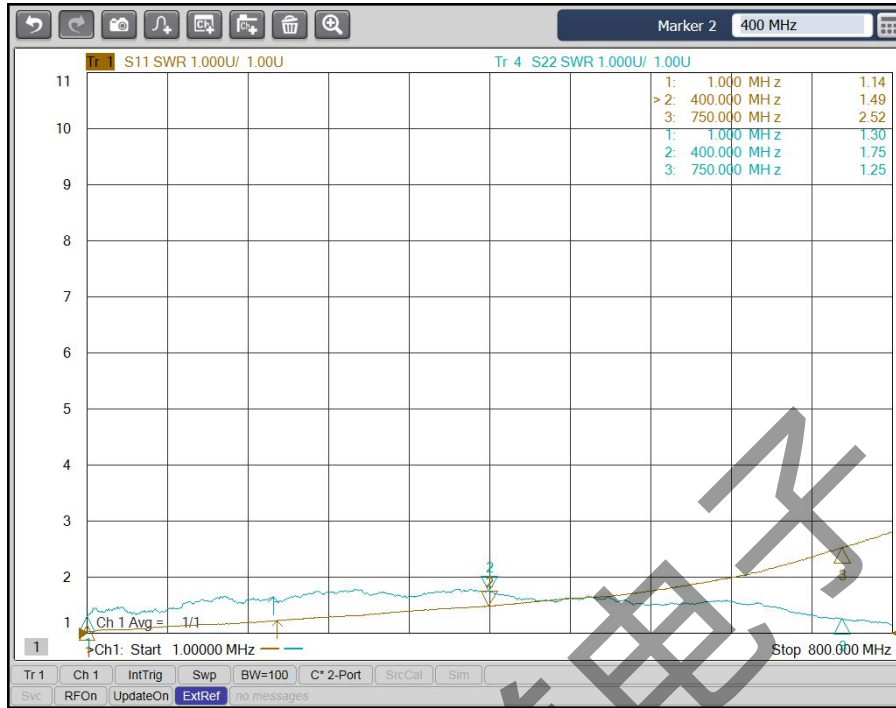
Output IP3 vs Frequency



ENA Series

1 – 750MHz Low Noise Amplifier

VSWR S11 and S22 vs Frequency



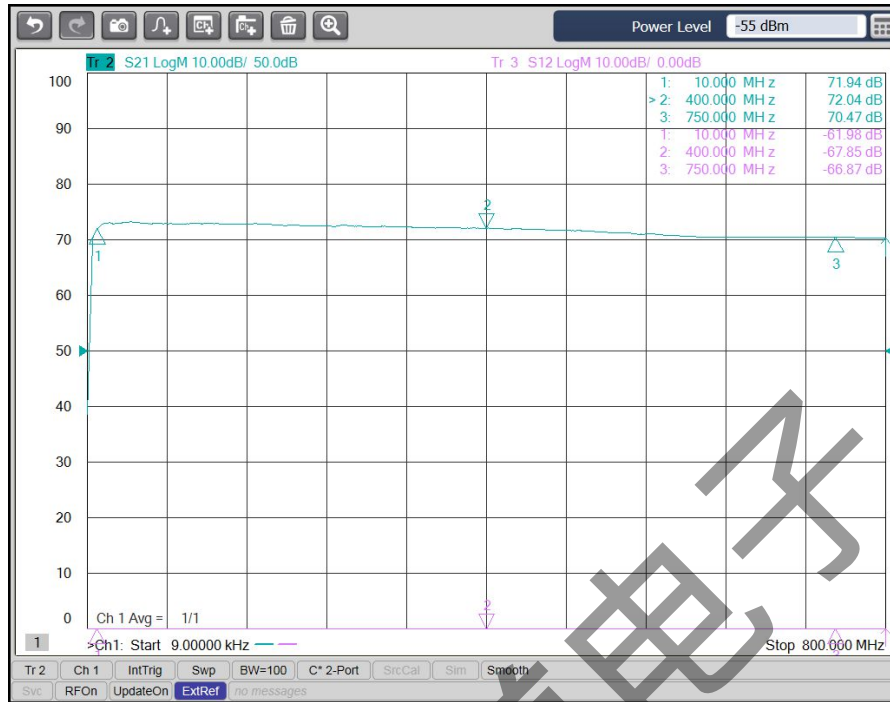
Input and Output Return Loss vs Frequency



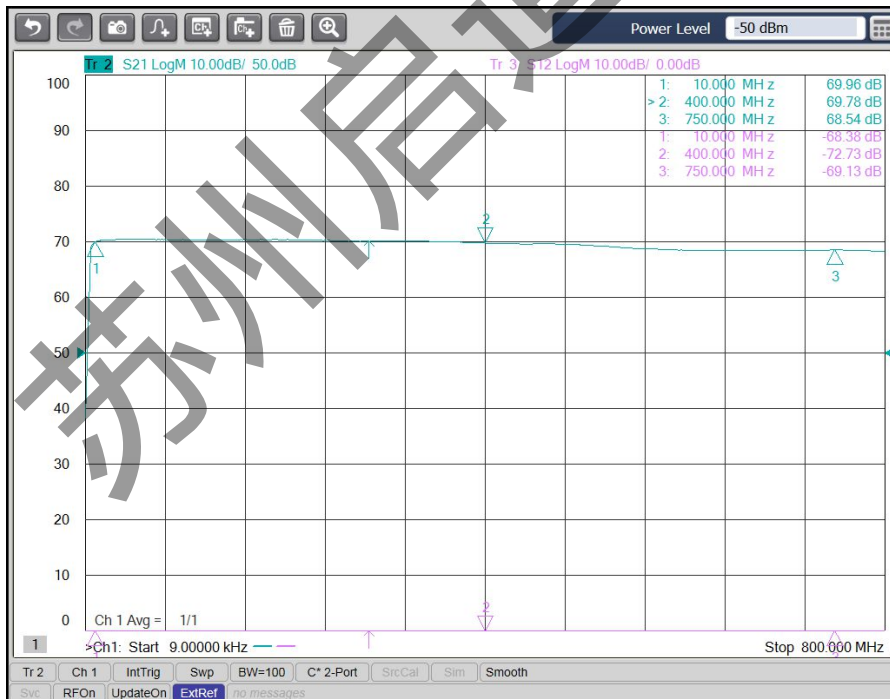
ENA Series

1 – 750MHz Low Noise Amplifier

Gain Compression vs Frequency at Pin=-55dBm



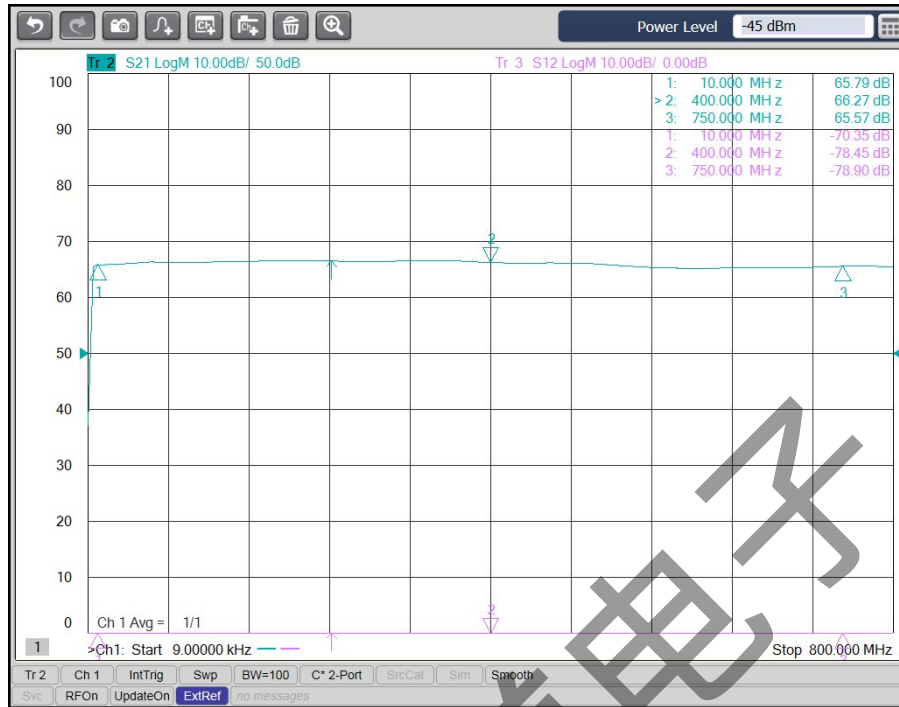
Gain Compression vs Frequency at Pin=-50dBm



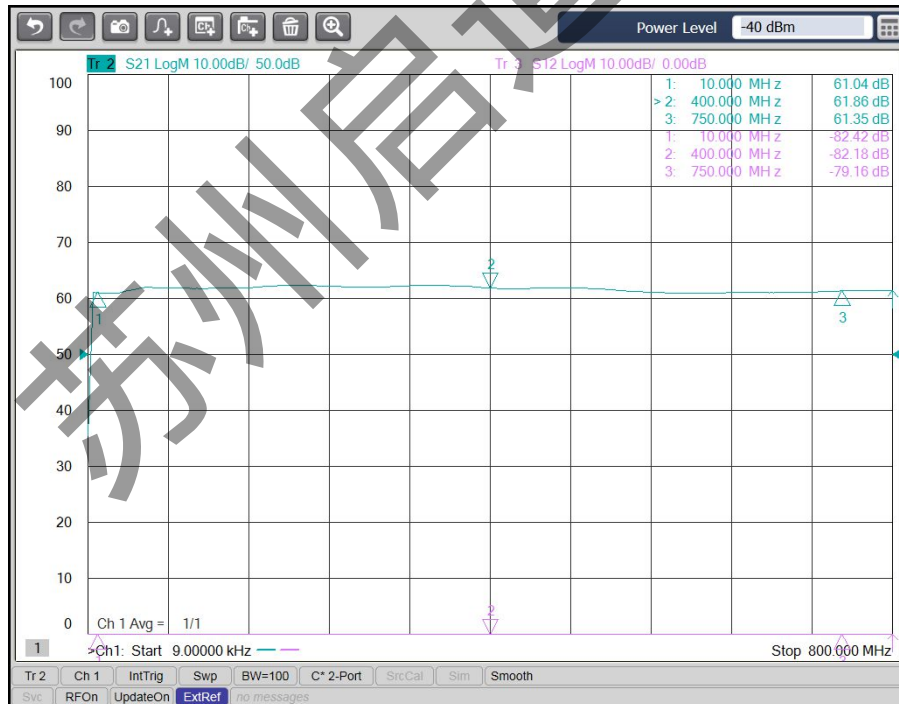
ENA Series

1 – 750MHz Low Noise Amplifier

Gain Compression vs Frequency at Pin=-45dBm



Gain Compression vs Frequency at Pin=-40dBm



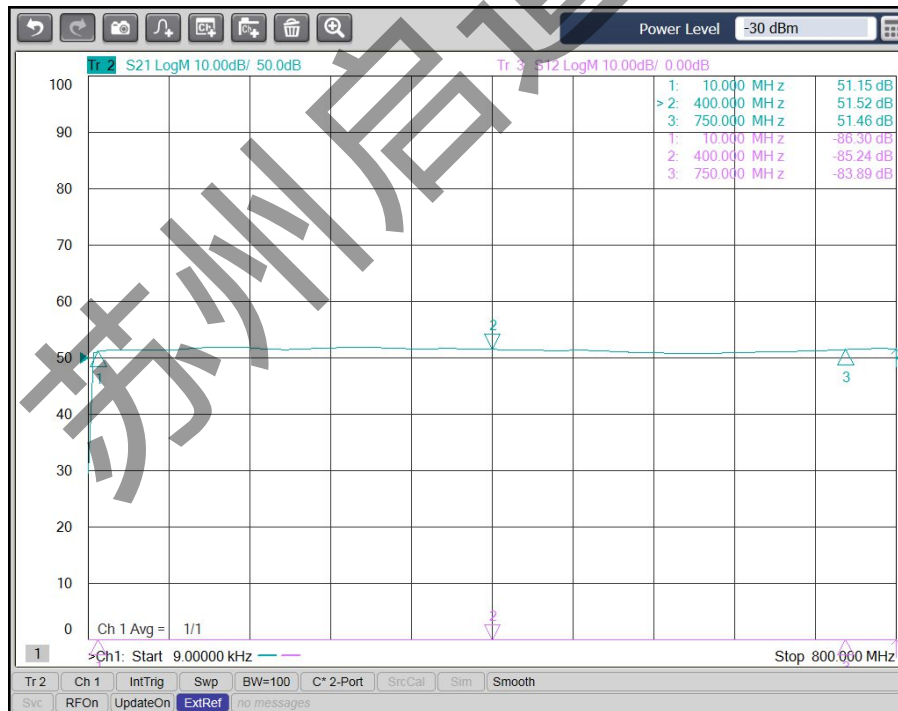
ENA Series

1 – 750MHz Low Noise Amplifier

Gain Compression vs Frequency at Pin=-35dBm



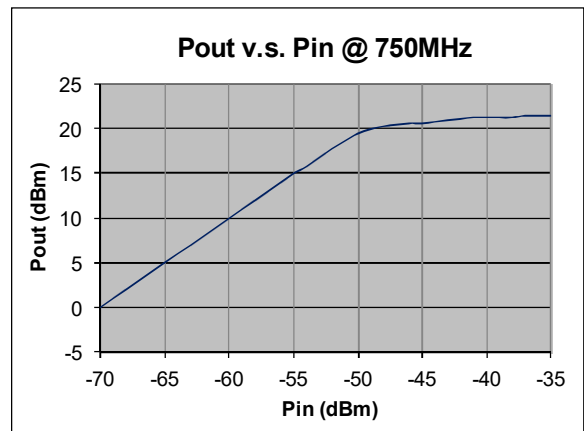
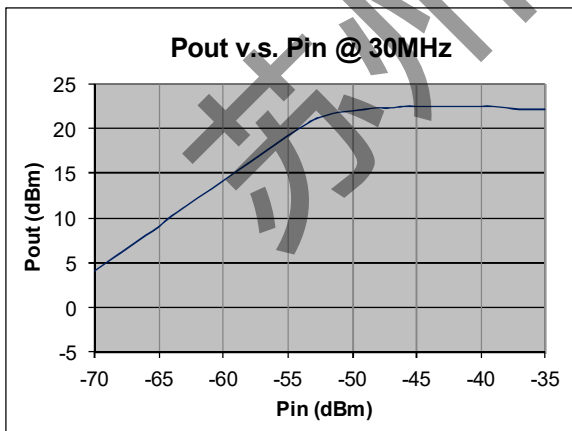
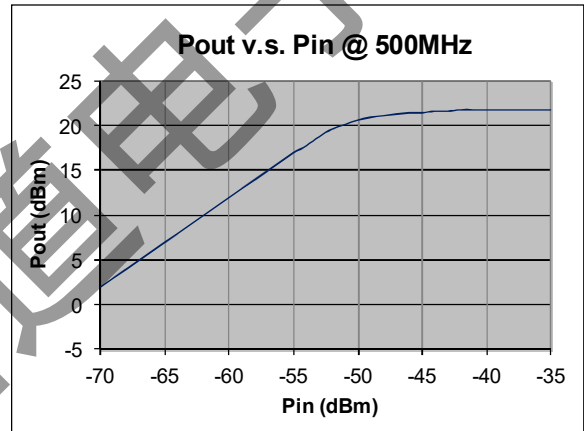
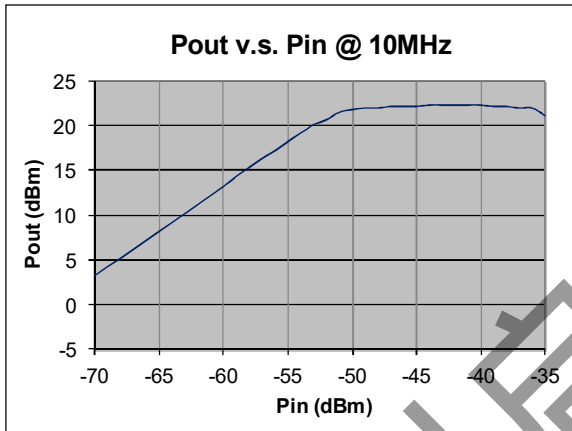
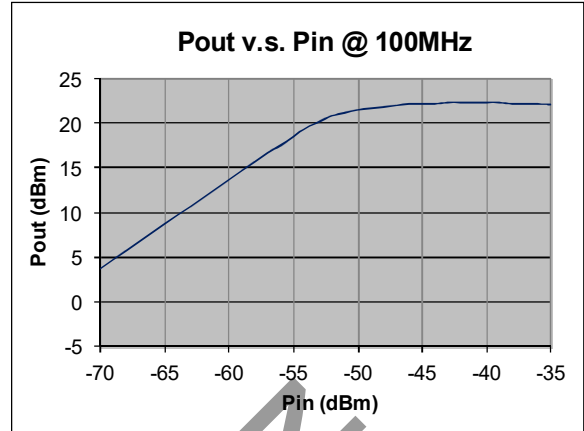
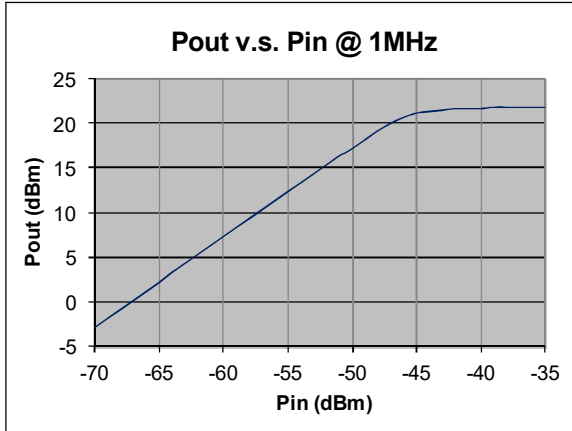
Gain Compression vs Frequency at Pin=-30dBm



ENA Series

1 – 750MHz Low Noise Amplifier

Typical Performance at +25°C



ENA Series

1 – 750MHz Low Noise Amplifier

Absolute Maximum Ratings

| Parameter | Absolute Maximum |
|-----------------------|-------------------|
| Supply Voltage | +20V |
| RF Input Power | +13dBm |
| Operating Temperature | -40 °C to +85 °C |
| Storage Temperature | -55 °C to +125 °C |

ESD Sensitive Material



Outline

