



# farran

## Operational Manual

### Low Noise Amplifier





## 7. Technical Specifications

Table 1. Low Noise Amplifier Specifications

| Model        | Parameters                |      |           |     |                   |     |                 |               |               |                        |       |      |                       |                       |
|--------------|---------------------------|------|-----------|-----|-------------------|-----|-----------------|---------------|---------------|------------------------|-------|------|-----------------------|-----------------------|
|              | Operating Frequency (GHz) |      | Gain (dB) |     | Noise Figure (dB) |     | $P_{1dB}$ (dBm) | $S_{11}$ (dB) | $S_{22}$ (dB) | DC Requirements (V/mA) |       |      | In/Out Connector Port | Dimensions LxWxH (mm) |
|              | Min                       | Max  | Min       | Typ | Typ               | Max | Typ             | Typ           | Typ           | Min                    | Typ   | Max  | Typ                   | Typ                   |
| FLNA-42-0001 | 18                        | 26.5 | -         | 33  | 2.8               | 4   | 12              | -10           | -10           | -                      | 6/150 | -    | K (f)                 | 54x30x11              |
| FLNA-28-0001 | 26.5                      | 40   | -         | 25  | 3.5               | 5   | 10              | -10           | -10           | -                      | 6/150 | -    | K (f)                 | 54x30x11              |
| FLNA-15-0003 | 56                        | 67   | 15        | 20  | 4.5               | 6.5 | 8               | -10           | -10           | -                      | 6/80  | -    | WR-15 UG385/U         | 37.5x20x20            |
| FLNA-10-0006 | 75                        | 110  | 15        | 20  | 4                 | 6   | -5              | -6.5          | -6.5          | -                      | 6/50  | -    | WR-10 UG387/U-M       | 32x20x20              |
| FLNA-10-0005 | 75                        | 110  | 15        | 20  | 4                 | 6   | -5              | -6.5          | -6.5          | -                      | 6/50  | -    | WR-10 UG387/U-M       | 32x14x20              |
| FLNA-06-0002 | 110                       | 170  | 14        | 18  | 6                 | 8   | -5              | -8            | -10           | 5/20                   | 6/30  | 9/40 | WR-6 UG-387/U         | 31.5x20x22            |

### Note:

- . Min - Minimum
- . Typ - Typical
- . Max - Maximum

### Specification Definitions

**Nominal value (nom.)** – ensured by design, not tested. **Measured value (min, max)** – expected and warranted product performance obtained from the actual measurements of product sample. **Non-traceable measured value (n. trc. meas.)** – expected product performance obtained from the actual measurements of a product sample by means of using Farran's own equipment and methods. Traceable only to Farran laboratory equipment. **Typical data (typ.)** – value that represents the product specification met over 90% of bandwidth or a mean value. **Specifications without limits** – represent the warranted product performance; with values of no or a negligible deviation from the given value and as such have a secondary impact on the product performance.

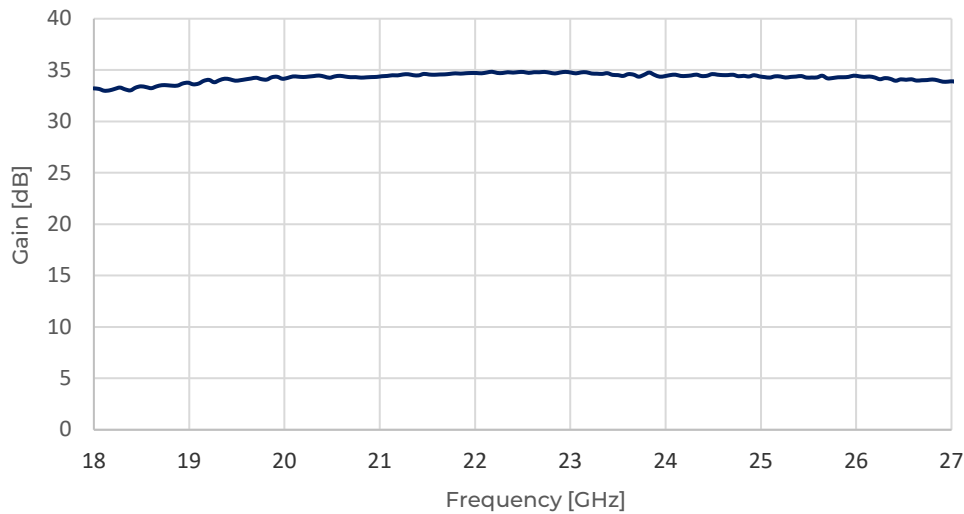


## 8. Typical Performance

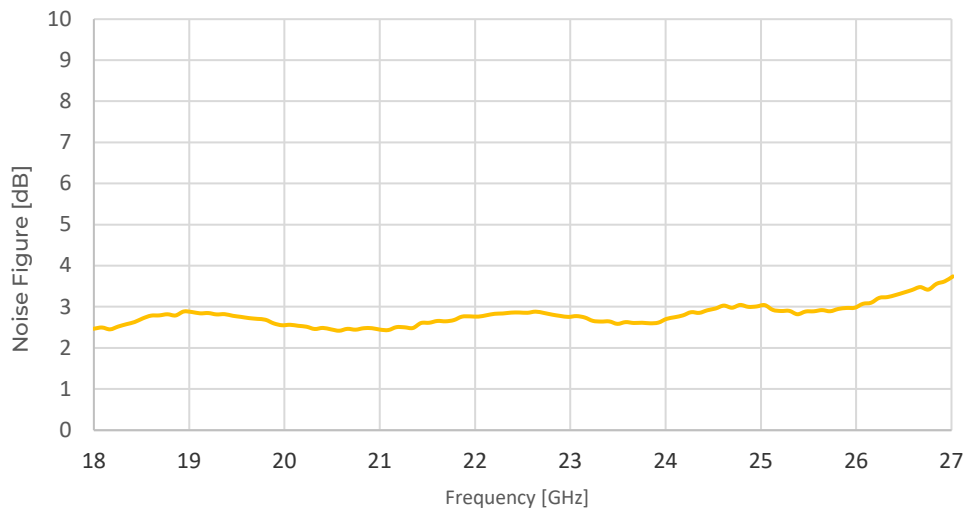
Farran's Low Noise Amplifier performance plots are provided in this section, for all models. Unless otherwise stated, all performance data furnished here has been obtained from in-house measurements, at room temperature.

### 8.1 FLNA-42-0001

Typical Gain vs Frequency



Typical Noise Figure vs Frequency

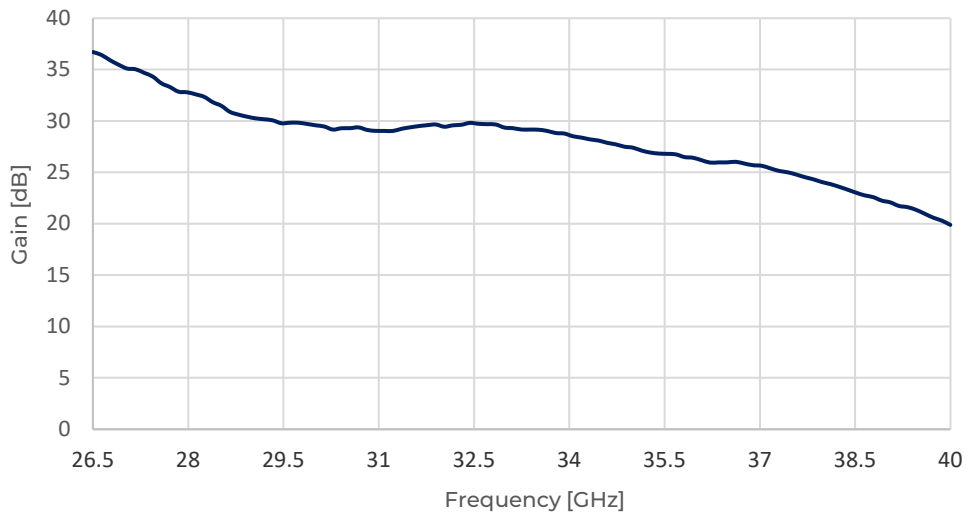




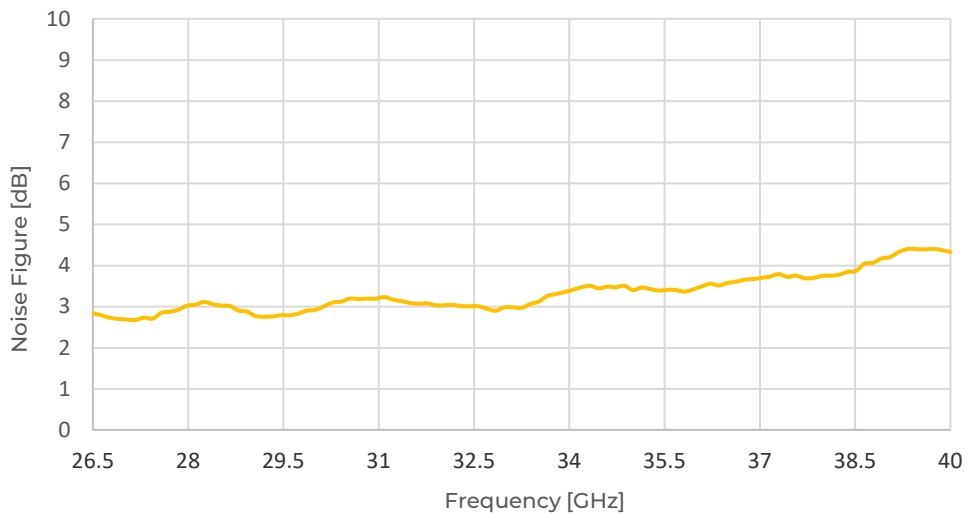
## 8. Typical Performance

### 8.2 FLNA-28-0001

Typical Gain vs Frequency



Typical Noise Figure vs Frequency

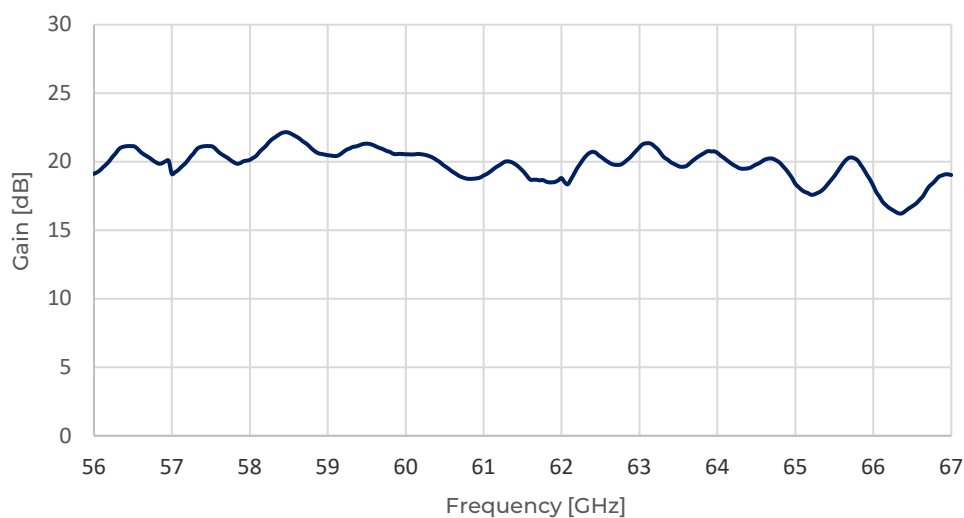




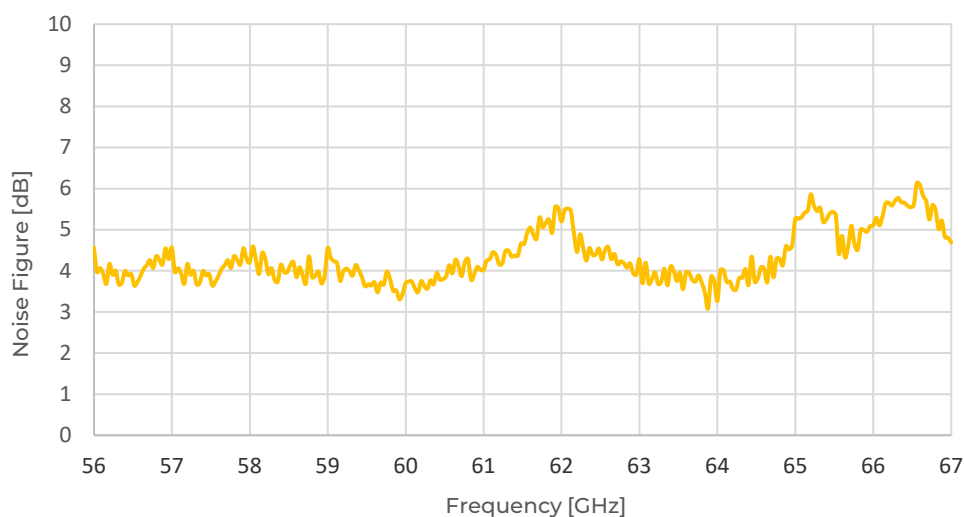
## 8. Typical Performance

### 8.3 FLNA-15-0003

Typical Gain vs Frequency



Typical Noise Figure vs Frequency

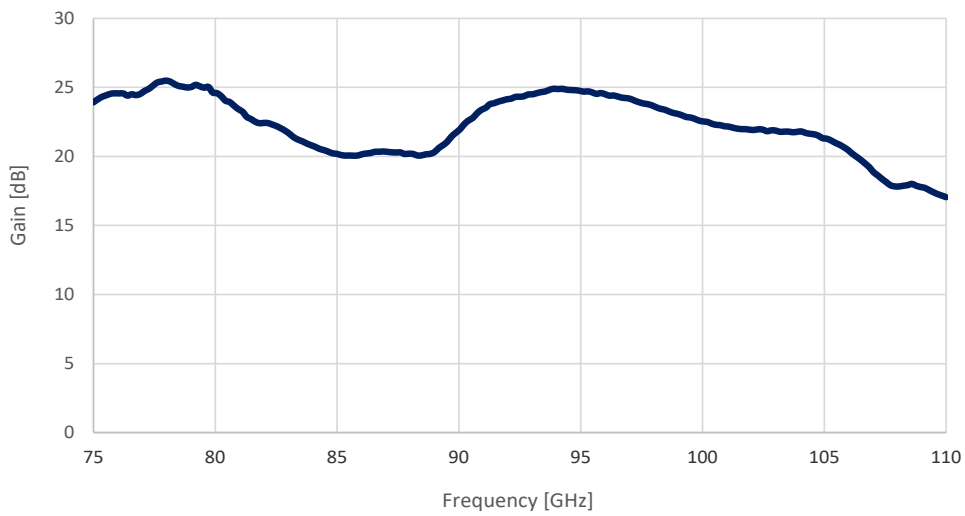




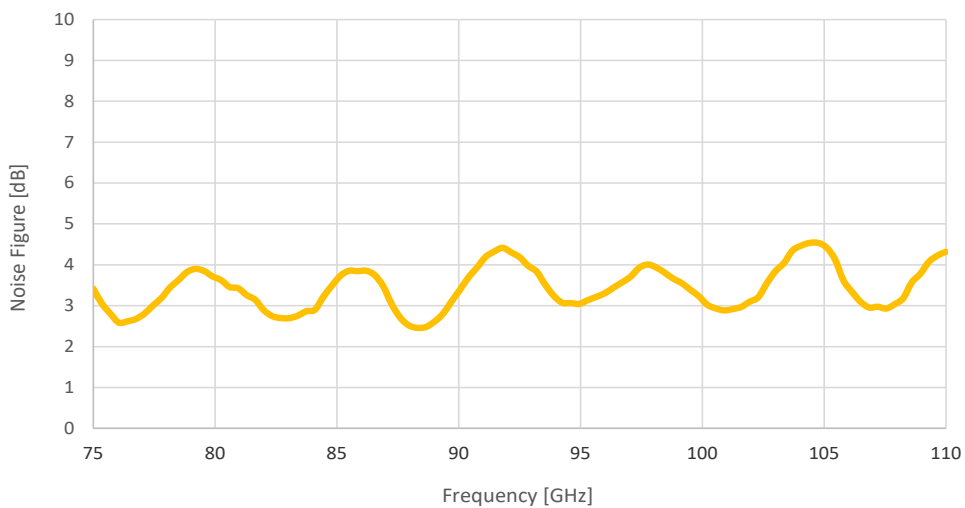
## 8. Typical Performance

### 8.4 FLNA-10-0006

Typical Gain vs Frequency



Typical Noise Figure vs Frequency

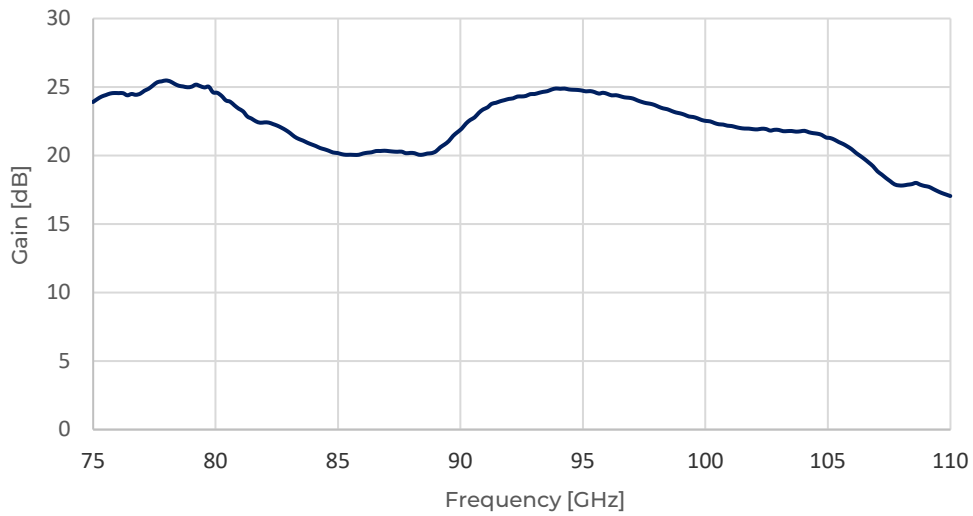




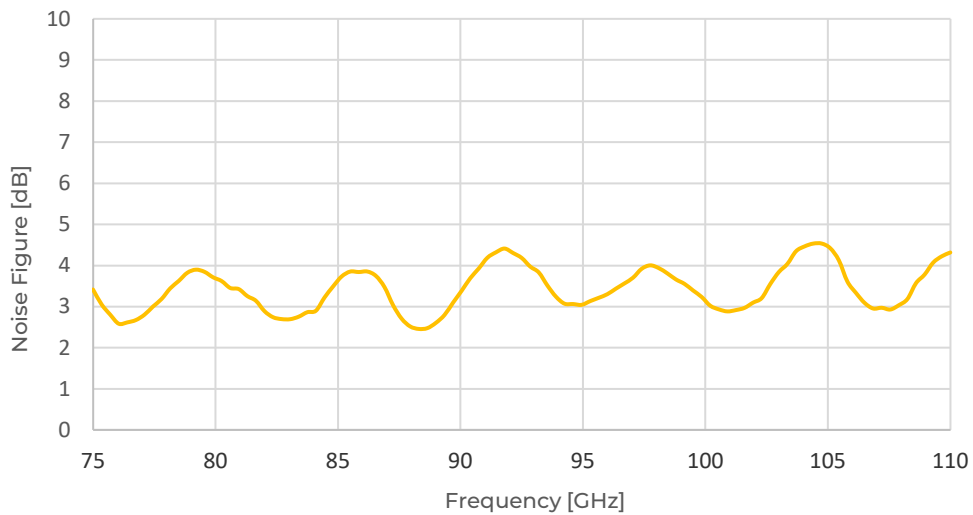
## 8. Typical Performance

### 8.5 FLNA-10-0005

Typical Gain vs Frequency



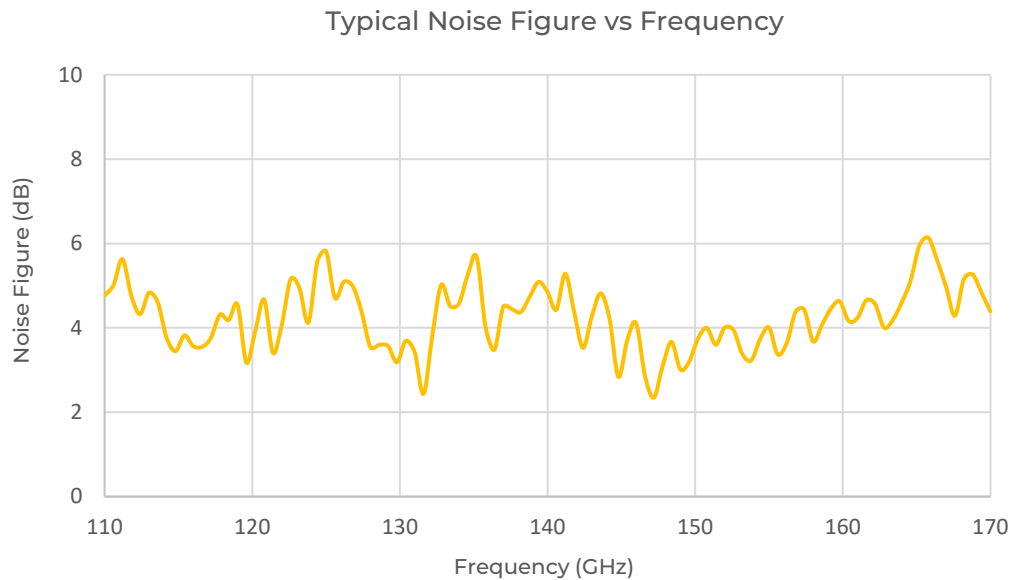
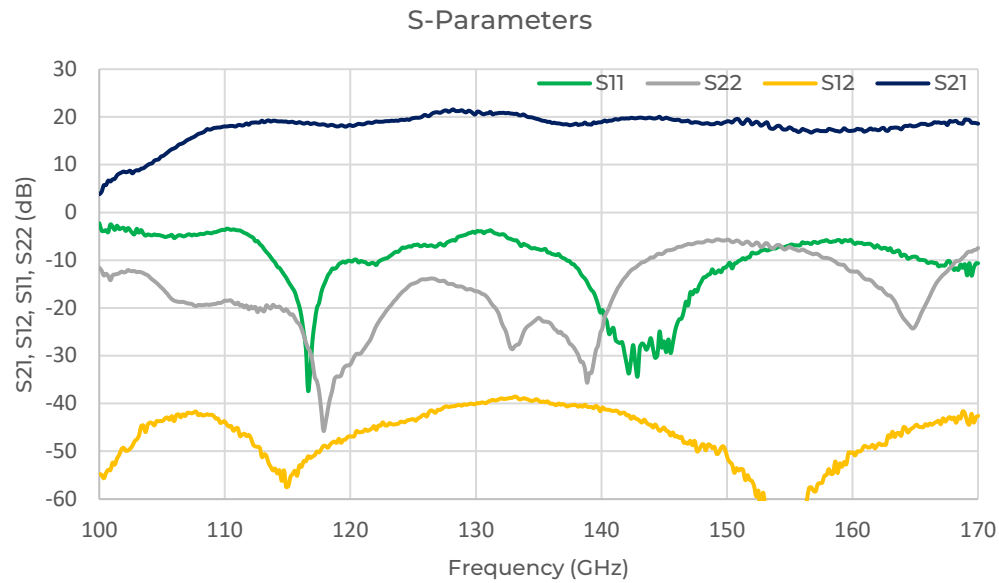
Typical Noise Figure vs Frequency





## 8. Typical Performance

### 8.6 FLNA-06-0002







# 12. Appendices

## 12.1 Drawings

