

Rev: May 2015



### Product features

- RF bandwidth: 15-29 GHz
- Noise: 9.9K typical
- Gain: 28dB
- DC-power:  $V_d=1.10V$  @ 6mA
- One gate and one drain supply only
- RF-connectors: female K (2.92mm)
- DC-connector: 9-pin female Nano-D

### Product description

LNF-LNC15\_29A is an ultra-low noise cryogenic amplifier operating in the 15-29 GHz frequency range. The LNA is packaged in a coaxial module using industry standard K (2.92mm) and Nano-D connectors. The lightweight gold plated aluminum module measures 17.80\*15.15\*6.80 mm excluding the connectors. MMIC technology ensures reliable and repeatable unit-to-unit result.

### Absolute maximum ratings

| Parameter            | Min    | Max    |
|----------------------|--------|--------|
| $V_{ds}$             | -0.5 V | 2 V    |
| $I_{ds}$             |        | 100 mA |
| $V_{gs}$             | -20 V  | +20 V  |
| RF Input drive level |        | 0 dBm  |

### Typical RF Characteristics

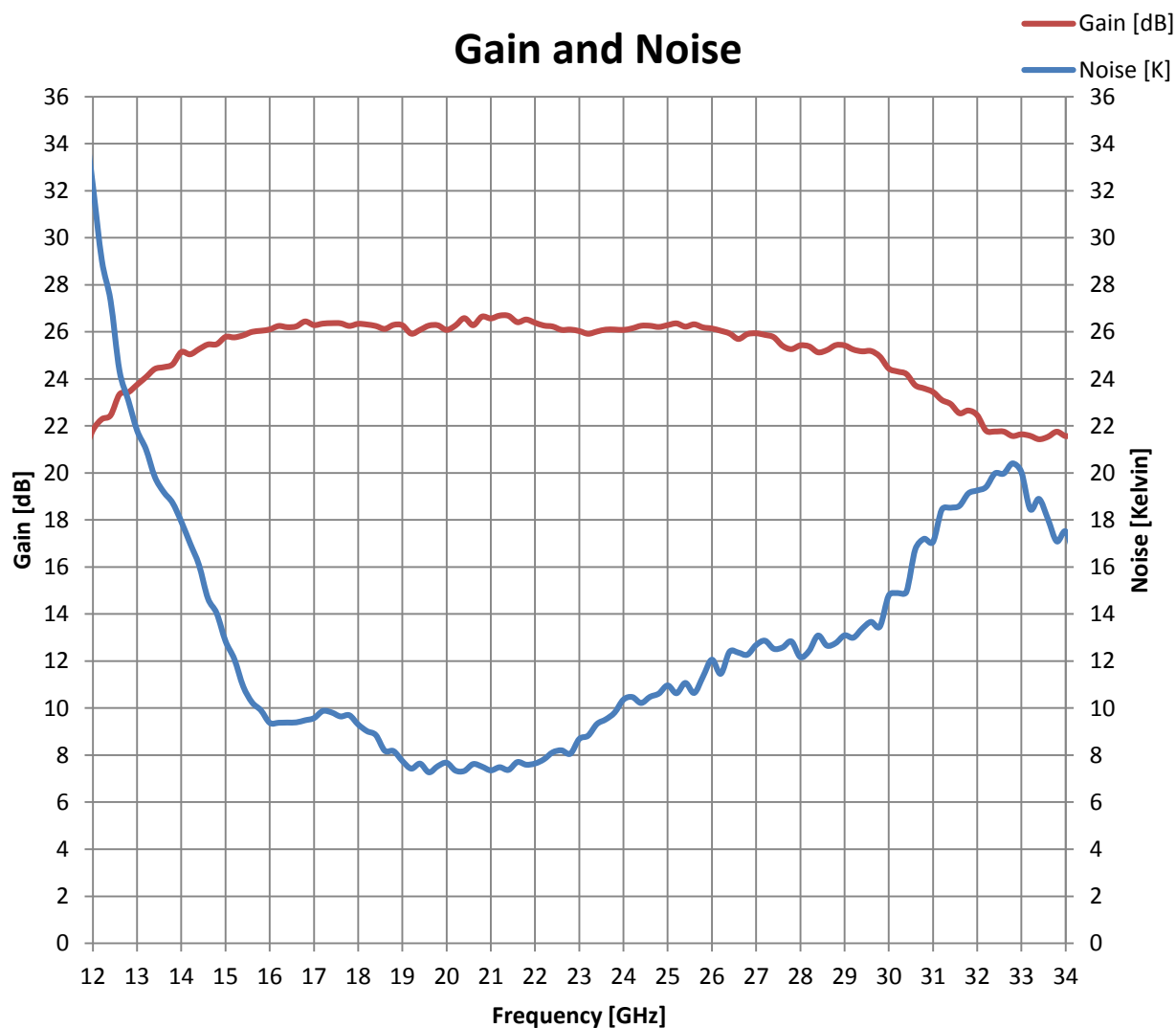
| Parameter | Test Condition | Value | Unit |
|-----------|----------------|-------|------|
| Gain      | 15-29 GHz      | 28    | dB   |
| Noise     | 15-29 GHz      | 9.9   | K    |
| IRL       | 15-29 GHz      | 12    | dB   |
| ORL       | 15-29 GHz      | 17    | dB   |
| $P_{1dB}$ | 15-29 GHz      | -7    | dBm  |
| OIP3      | 15-29 GHz      | 3     | dBm  |

### Typical DC Characteristics

| Parameter | Value | Unit    |
|-----------|-------|---------|
| $V_{ds}$  | 1.10  | V       |
| $I_{ds}$  | 6     | mA      |
| $V_{gs}$  | 0.0 V | V       |
| $I_{gs}$  | 1     | $\mu A$ |
| $P_{dc}$  | 6.6   | mW      |

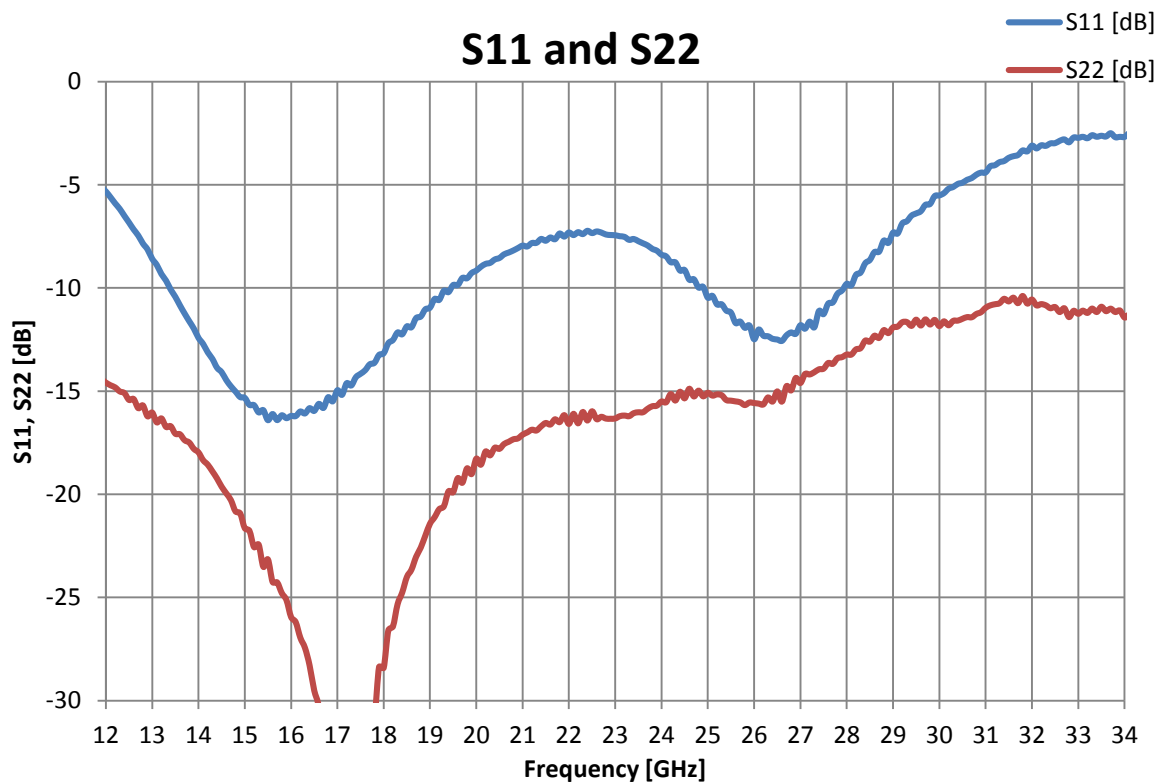
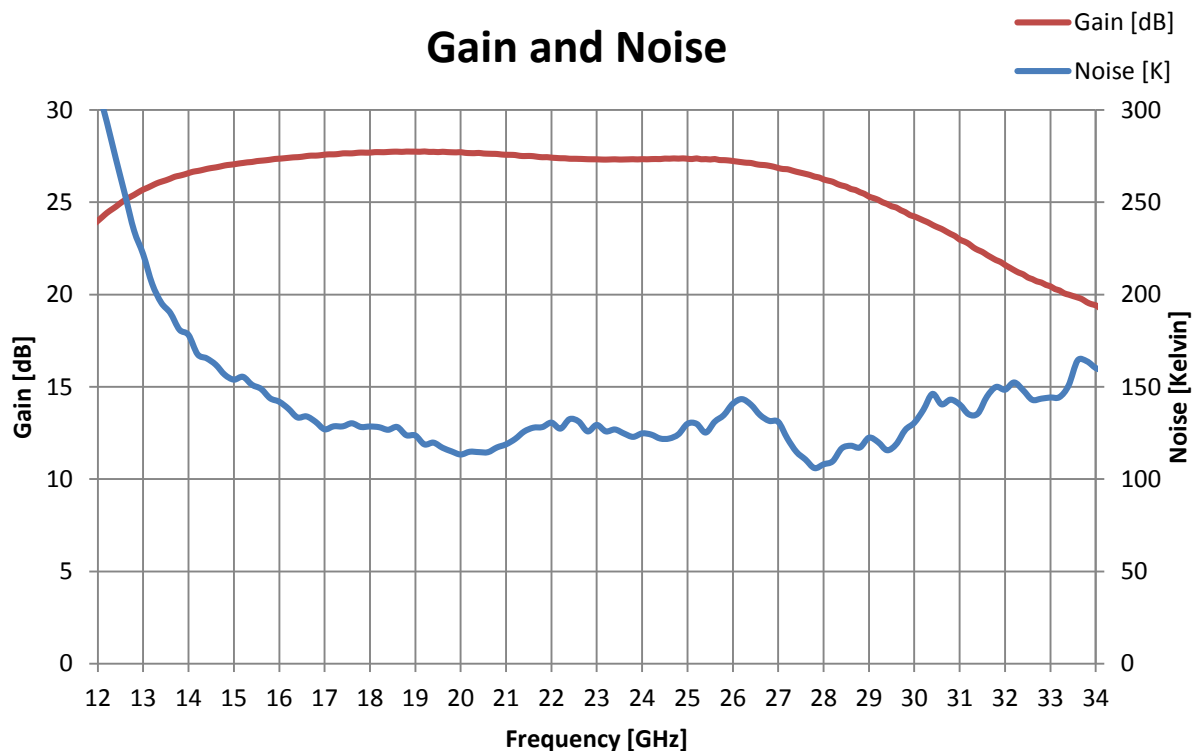
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Measured typical data  $T_{amb}=5\text{ K}$

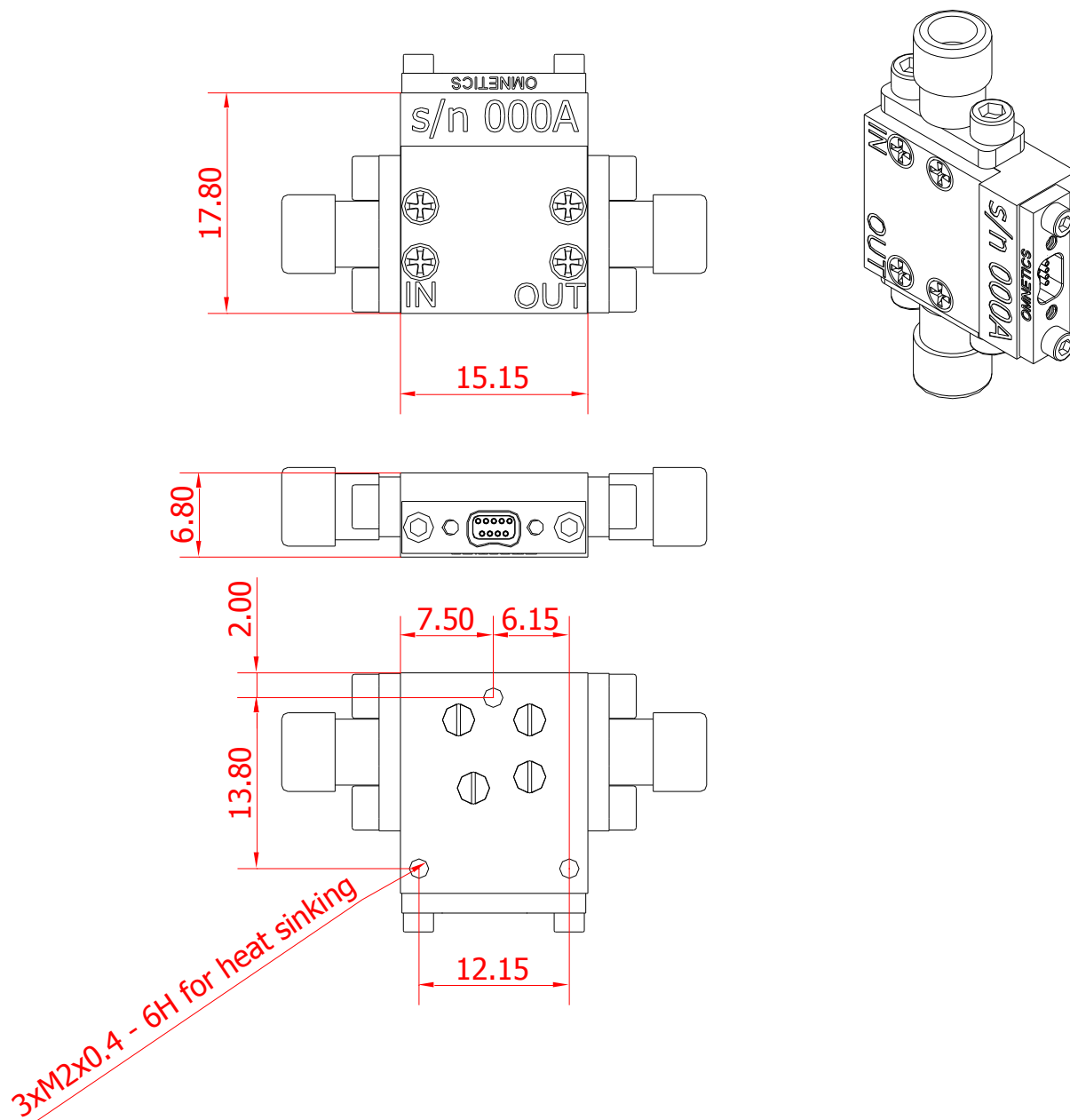


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Measured typical data @  $T_{amb}=296K$



**Drawings**



Dimensions are in millimeters