

# Broadband Low Noise RF Amplifier (LNA)

1-18GHz, 27dB Gain



DATASHEET

[Return to the Webpage](#)



## Features

- Frequency: **1-18GHz**
- Small signal gain: 27dB
- NF=2.3dB
- Single Power Supply

## Applications

- 5G Communication
- Test Equipment
- ROF (RF Over Fiber)
- Radar System



This is high gain low noise amplifier with 27dB gain in the frequency of 1-18GHz. The DC power requirement is +5V/100mA. The module is with SMA connector. We can provide all kinds of coaxial low noise amplifiers, with frequency from 0.01-67GHz, gain from 20 to 60dB, Pout from +5 to +27dBm, and connectors from SMA to 1.85mm.

## Specifications

| Parameter             | Min | Typical     | Max    | Unit |
|-----------------------|-----|-------------|--------|------|
| Frequency             | 1   |             | 18     | GHz  |
| Gain                  |     | 27          |        | dB   |
| Gain Flatness         |     | +/-1.5      | +/-2.5 | dB   |
| Input Power           |     | -20         | 0      | dB   |
| NF                    |     | 2.0         | 2.5    | dBm  |
| P1dB                  |     | +16         |        | dBm  |
| Psat                  |     | +18         |        | dBm  |
| Drain Supply          |     | +5          | +8     | V    |
| Current               |     | 100         |        | mA   |
| Input Return Loss     |     | -10         |        | dB   |
| Output Return Loss    |     | -10         |        | dB   |
| Spec Temp             |     | 25          |        | °C   |
| Drain Supply          |     | +13         |        | V    |
| RF Input Power        |     | +15         |        | dBm  |
| Operating Temperature | -40 |             | +85    | °C   |
| Storage Temperature   | -55 |             | +125   | °C   |
| Input Port            |     | SMA Female  |        |      |
| Output Port           |     | SMA Female  |        |      |
| Case Material         |     | Copper      |        |      |
| Finish                |     | Gold Plated |        |      |
| Weight                |     | 50          |        | g    |
| Size                  |     | SEE OUTLINE |        |      |

## Notes

- Datasheet may be changed according to update of MMIC, Raw materials, process, and so on.
- This data is only for reference, not for guaranteed specifications.
- Please contact our team to make sure you have the most current data

**Legal notices:** All product information is believed to be accurate and is subject to change without notice. Information contained herein shall legally bind Agiltron only if it is specifically incorporated into the terms and conditions of a sales agreement. Some specific combinations of options may not be available. The user assumes all risks and liability whatsoever in connection with the use of a product or its application.

Rev 10/24/24

© Photonwares Corporation

P +1 781-935-1200

E [sales@photonwares.com](mailto:sales@photonwares.com)

W [www.agiltron.com](http://www.agiltron.com)

Information contained herein is deemed to be reliable and accurate as of the issue date. Photonwares reserves the right to change the design or specifications at any time without notice. Agiltron is a registered trademark of Photonwares Corporation in the U.S. and other countries.

# Broadband Low Noise RF Amplifier (LNA)

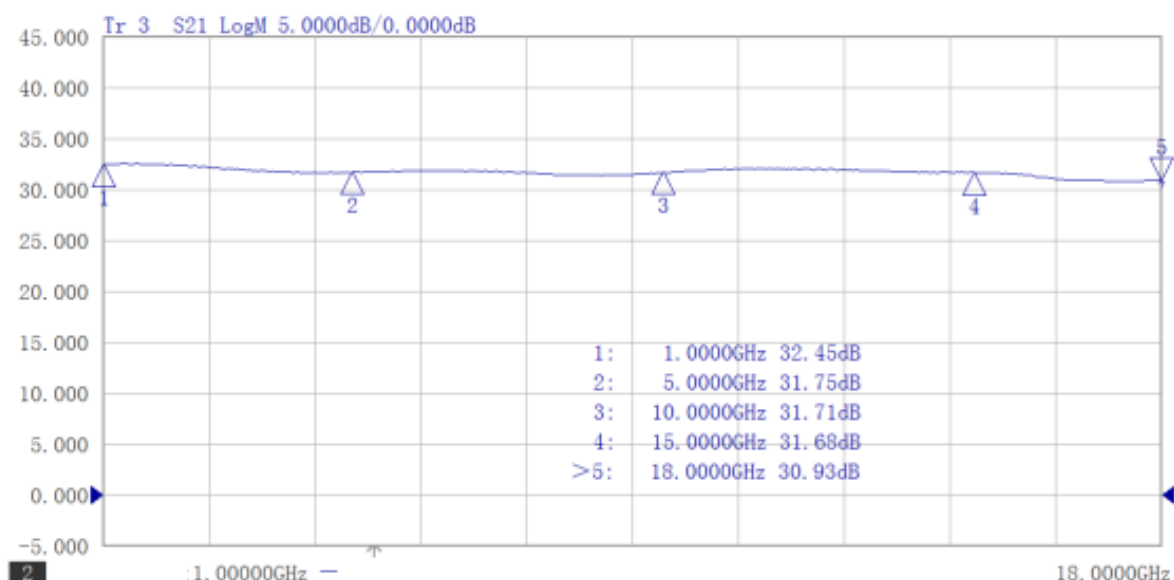
1-18GHz, 27dB Gain



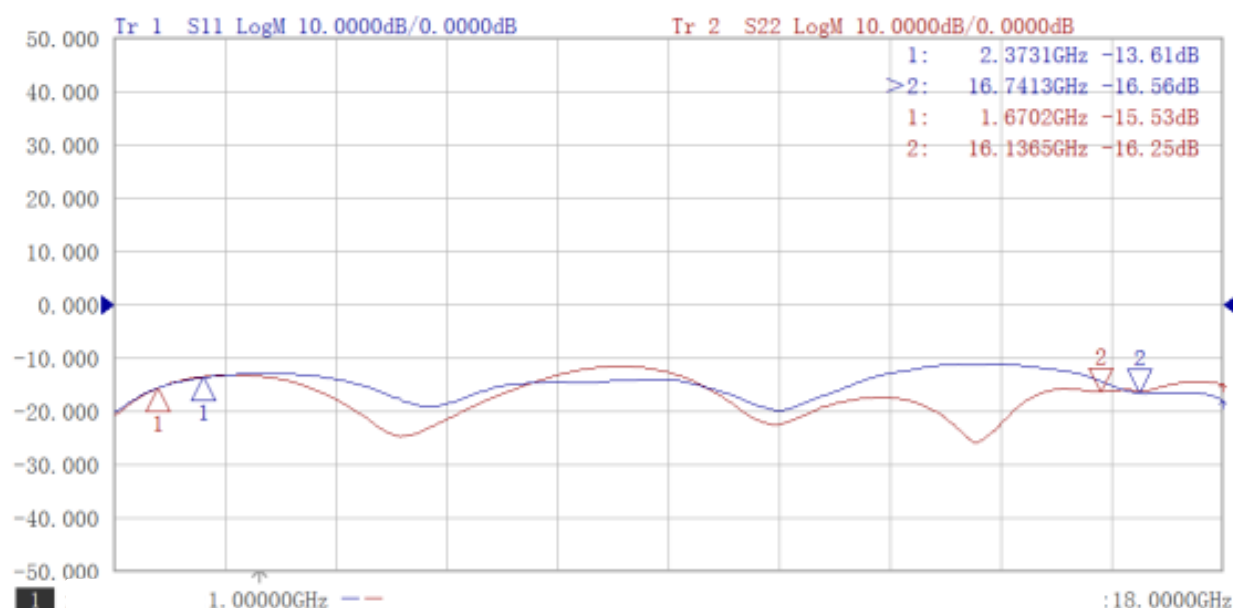
## DATASHEET

Test Data (25°C) Please note that test curves will vary slightly from unit to unit

### Gain vs Frequency



### Return Loss vs Frequency



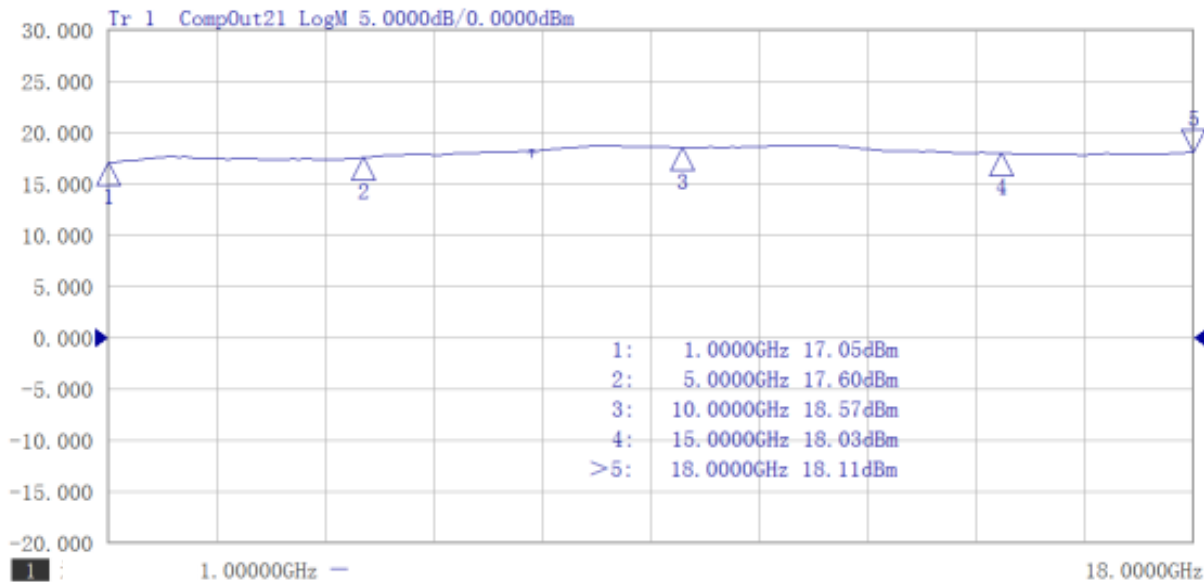
# Broadband Low Noise RF Amplifier (LNA)

1-18GHz, 27dB Gain

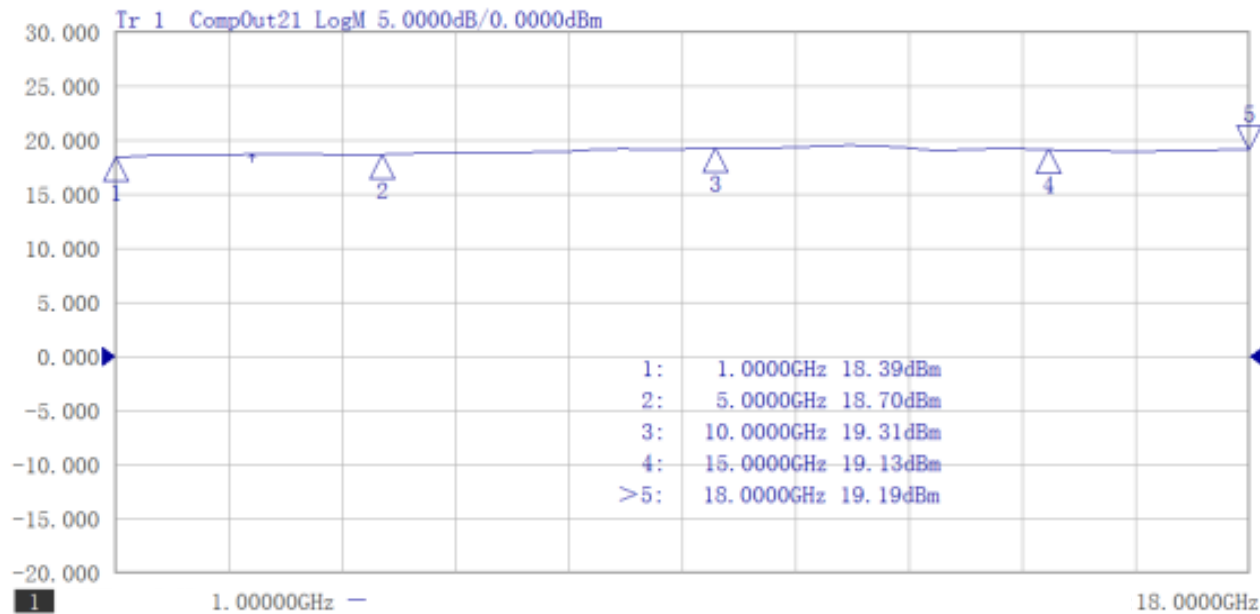


DATASHEET

P1 vs Frequency



P3 vs Frequency



# Broadband Low Noise RF Amplifier (LNA)

1-18GHz, 27dB Gain



DATASHEET

NF vs Frequency



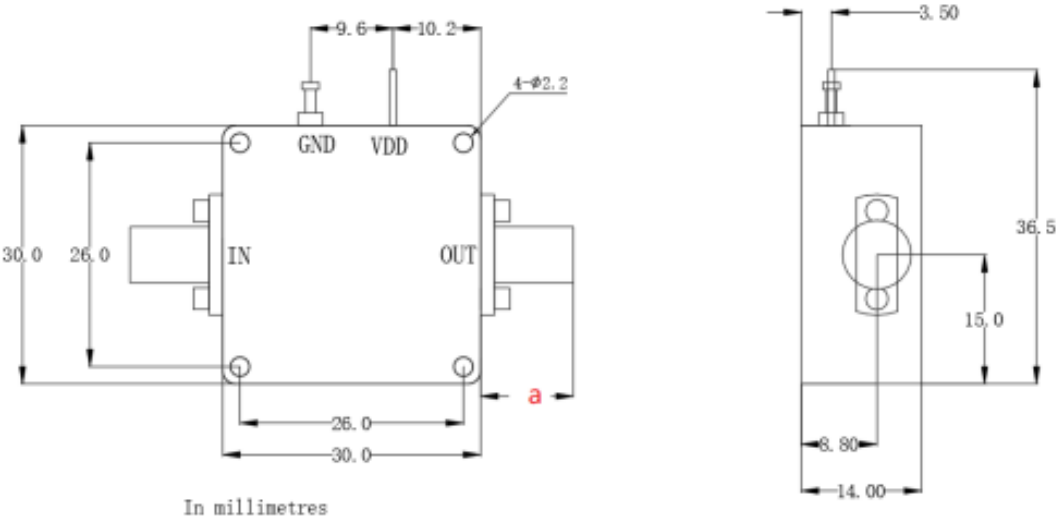
# Broadband Low Noise RF Amplifier (LNA)

1-18GHz, 27dB Gain



 DATASHEET

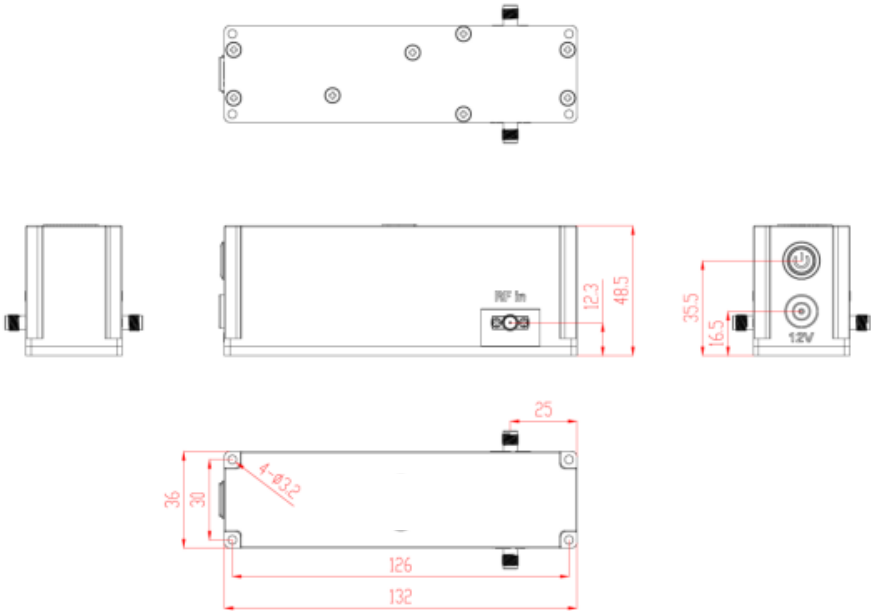
## Dimensions (mm)



|            | <26.5GHz | <40GHz | <50GHz | <67GHz |
|------------|----------|--------|--------|--------|
| Connector  | SMA      | 2.92mm | 2.4mm  | 1.85mm |
| Lenth of a | 9.4mm    | 9.5mm  | 10.8mm | 11.3mm |

Note: Female Default. Contact with us for other types.

## LCBT Option Dimension: (unit in mm)



# Broadband Low Noise RF Amplifier (LNA)

1-18GHz, 27dB Gain



 DATASHEET

Ordering Information (Part Number) \*

|        |               |                |          |           |            |                          |
|--------|---------------|----------------|----------|-----------|------------|--------------------------|
|        | 0100          | 18             | 27       | 2         | 16         | <input type="checkbox"/> |
| Prefix | Low Frequency | High Frequency | Gain     | NF        | P1dB       | Module*                  |
| LNAM-  | 1GHz = 0100   | 18GHz = 18     | 27dB =27 | 2.3dB = 2 | 16dBm = 16 | No = 0<br>Yes = 1        |