ERZIA
DATASHEET

# Low Noise Amplifier

ERZ-LNA-0700-1400-16-2

## Main Features:

- Frequency Range: 7 to 14 GHz.
- Typical values: Gain 19 dB, NF 2 dB
- RF connectors (I/O): SMA
- Solder filtered pins for DC connection
- Several mounting options
- Gold platted compact aluminum housing
- Hi-reliability and dedicated screening/ environmental tests available under request

## ERZ-LNA-0700-1400-16-2

The ERZ-LNA-0700-1400-16-2 is a Low Noise Amplifier providing a gain of 19 dB with a noise figure of 2 dB. The compact size and modularity makes it ideal for a wide range of applications.

## Typical applications:

- Industrial / Laboratory
- Satcom / Telecom
- Space / Aerospace

## Typical performances

| Parameter | Value | | | Units |
|---|---|---|---|---|
| | Min | Typ | Max | |
| Frequency | 7 | - | 14 | GHz |
| Output Power (P1dB) | 12 | 13 | 15 | dBm |
| Small Signal Gain | 17 | 19 | 22 | dB |
| Gain Flatness | - | ±1 | - | dB |
| Noise Figure | - | 2.0 | 2.3 | dB |
| VSWR input | - | 2.0:1 | 3.0:1 | - |
| VSWR output | - | 1.5:1 | 2.2:1 | - |
| DC Voltage | 5 | 6 | 7 | V |
| Power Consumption | - | 0.4 | - | W |
| RF Connectors | SMA Female IN/OUT | | | - |

Specifications at a case temperature of 25°C at 12V.

## Small Signal Gain

Figure 1 shows the small signal gain measurement as a function of frequency at room temperature (25°C).

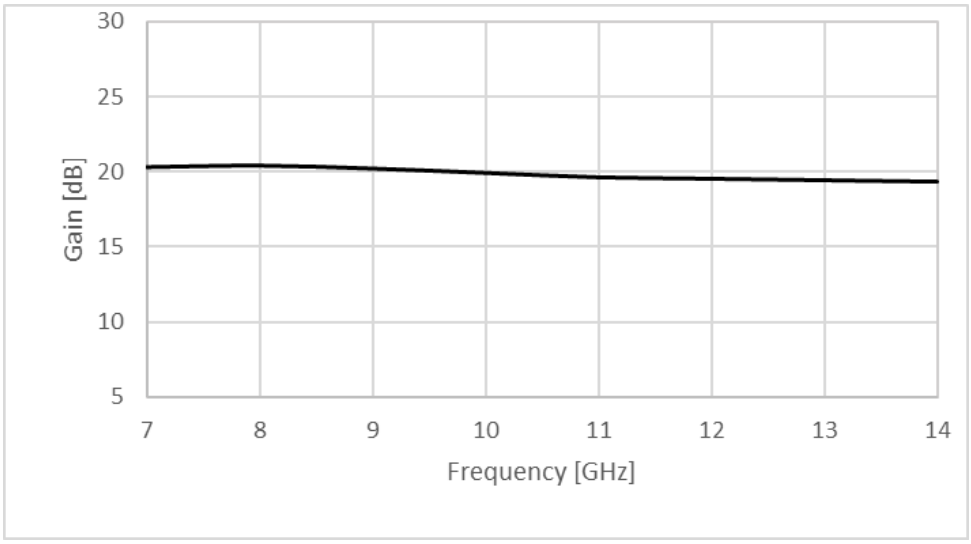


Figure 1: ERZ-LNA-0700-1400-16-2 Small Signal Gain

## Noise Figure

Figure 2 shows the noise figure measurement as a function of frequency at room temperature (25°C).

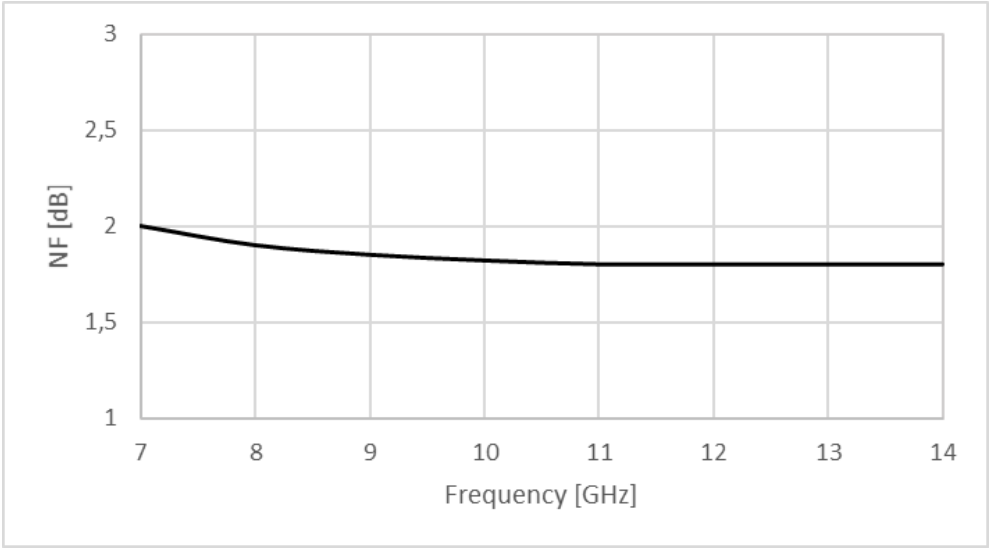


Figure 2: ERZ-LNA-0700-1400-16-2 Noise Figure

## Absolute Maximum Ratings

| Condition | Value |
|---|---|
| DC Voltage | +7 VDC |
| Maximum Input Power (CW) | 10 dBm |
| Operation temperature (at case) | -40 to 85 °C |
| Storage temperature | -55 to 125 °C |

- Stress above these ratings may cause permanent damage to the device.
- It is final user responsibility to maintain the amplifier within the specified ranges.

## Environmental Specifications (By Design)

| | | |
|---|---|---|
| Operating Temperature: | -45 to +85 °C | (MIL-STD-810F, method 520.2) |
| Storage Temperature: | -55 to 125 °C | (MIL-STD-810F, method 520.2) |
| Vibration: | 8g rms | (MIL-STD-810F, method 514.5) |
| Shock: | 20g,11ms,saw-tooth | (MIL-STD-810F, method 516.5) |
| Acceleration: | 15g | (MIL-STD-810F, method 513.5) |

## RoHS & REACH Compliance

This part is compliant with EU 2011/65/UE RoHS (Restrictions on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment) and REACH (Registration, Evaluation, Authorization and restriction of Chemical substances) directives.

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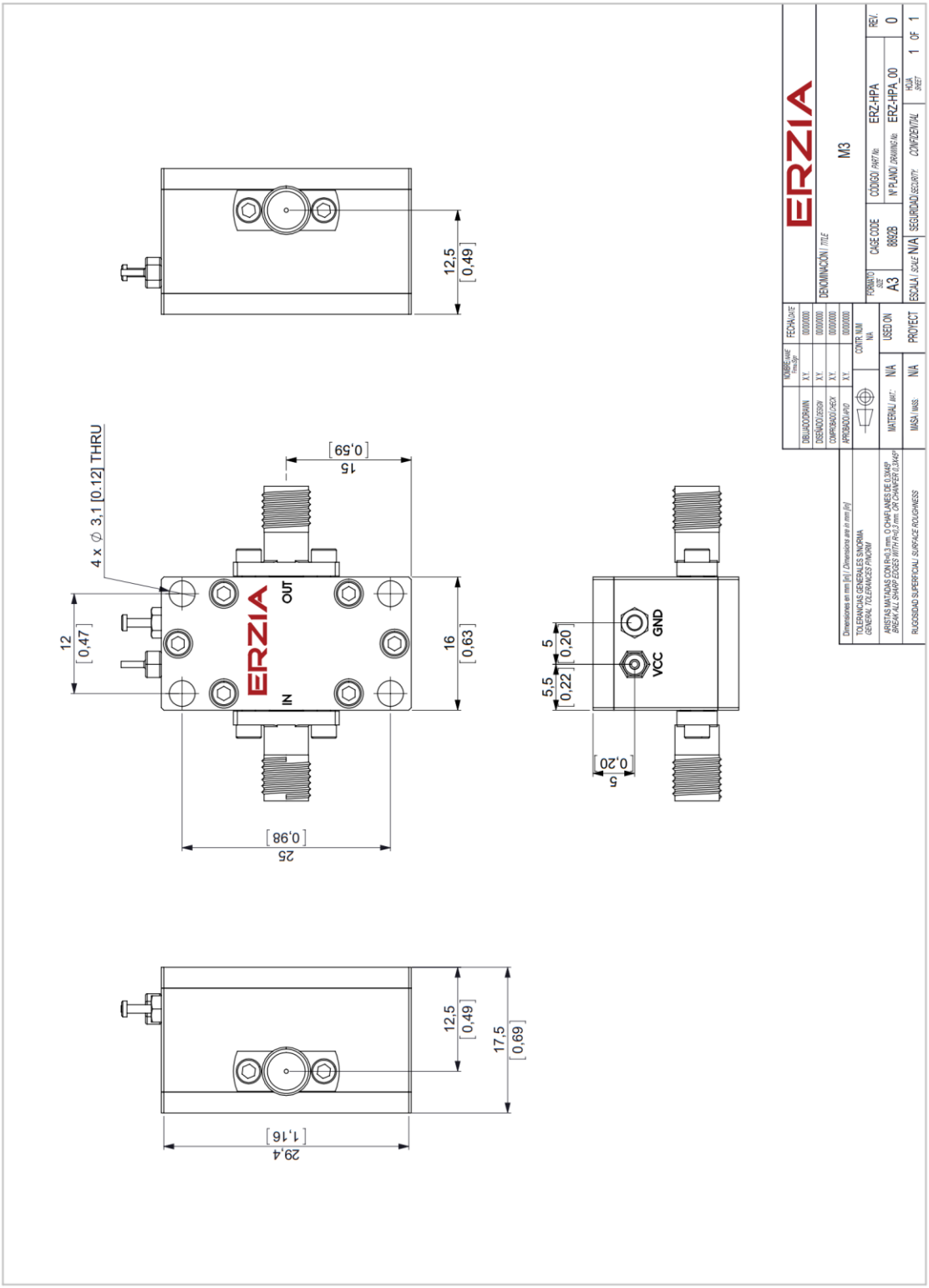
## Mechanics and Housing



## Documentation and Test Reports

All modules are at least delivered with: Electrical Test Report, Certificate of Conformance, Certificate of Acceptance and Origin. Optionally, units can be environmentally tested (temperature, vibration…).

## Option (HS): Heat Sink

A heat sink (HS) can be provided to allow the operation of Power Amplifiers. Please note that most power amplifiers need heat sink or appropriate heat dissipation strategy.

## Space / Hi-Rel Usage

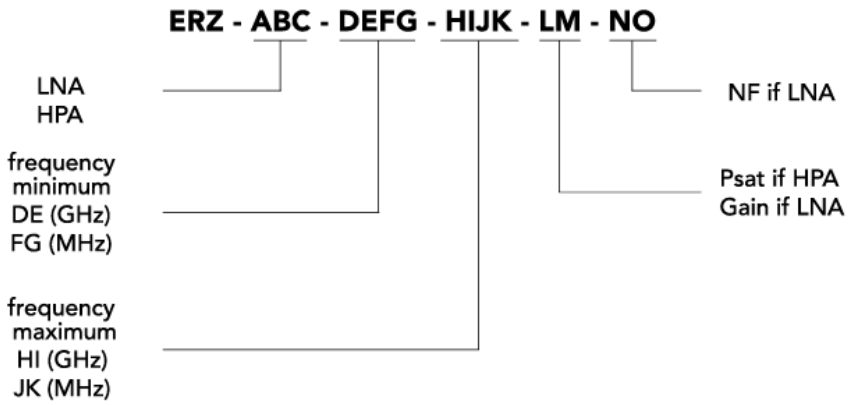
Most of ERZIA´s products are based on rad-hard technologies and can be manufactured and integrated according to MIL / ECSS or specific hi-rel standard-screening for space, aeronautics, or specific hi-reliability usage.

## Customization and Extended Performances

ERZIA can fully design or adapt one of the existing RF amplifiers designs according to your specifications. Please contact us for additional information.

## Model Number Codification

MODEL NUMBER



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