



### Main Features:

- Frequency Range: 75 to 110 GHz.
- Typical values: Gain 20 dB, NF 3 dB
- RF connectors (I/O): WR10
- Solder filtered pins for DC connection
- Several mounting options
- Gold plated compact aluminum housing
- Hi-reliability and dedicated screening/ environmental tests available under request

### ERZ-LNA-7500-11000-20-4

The ERZ-LNA-7500-11000-20-4 is a Low Noise Amplifier providing a gain of 20 dB with a noise figure of 3 dB. The compact size and modularity makes it ideal for a wide range of applications.

### Typical applications:

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

### Performance

Parameter	Value			Units
	Min	Typ	Max	
Frequency	75	-	110	GHz
Output Power (P1dB)	-1	0	5	dBm
Small Signal Gain	17	20	29	dB
Gain Flatness	-	±6	-	dB
Noise Figure	-	3	4.5	dB
VSWR input	1.3:1	2.5:1	5.0:1	-
VSWR output	1.2:1	1.5:1	5.0:1	-
DC Voltage	5	6	7	V
Power Consumption	-	0.5	-	W
RF Connectors	WR10 IN/OUT			-

Specifications at a case temperature of 25°C at 6 V.

### Small Signal Gain

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

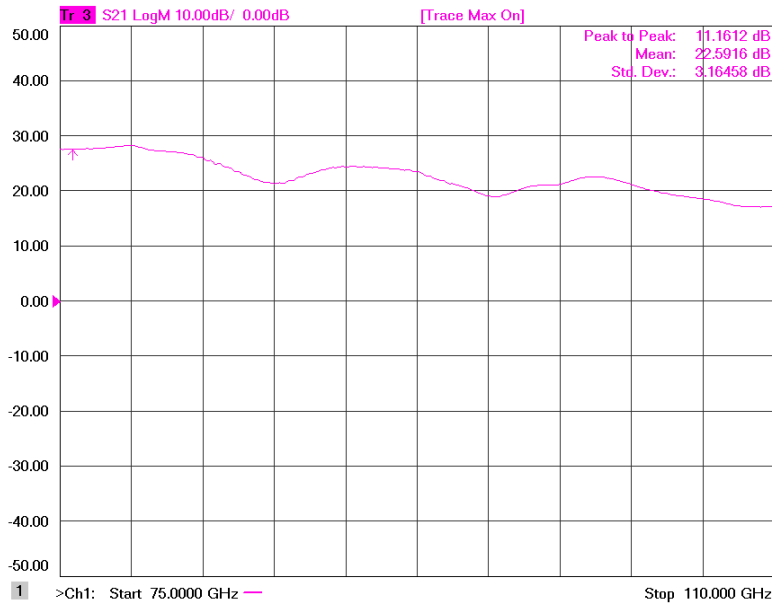


Figure 1: ERZ-LNA-7500-11000-20-4 Small Signal Gain

### Noise Figure

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

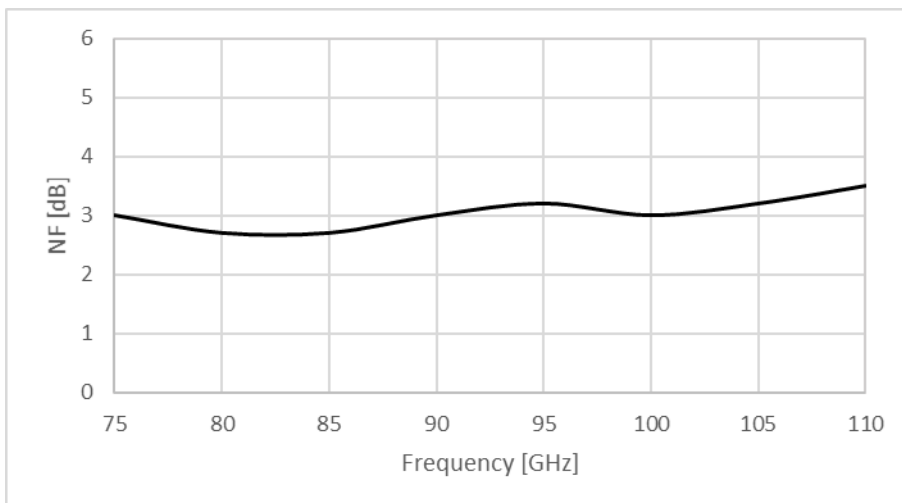


Figure 2: ERZ-LNA-7500-11000-20-4 Noise Figure

### Input and Output Matching

Figure 4 and Figure 5 show input and output reflection coefficients (S11 and S22) as a function of frequency at room temperature (25°C).

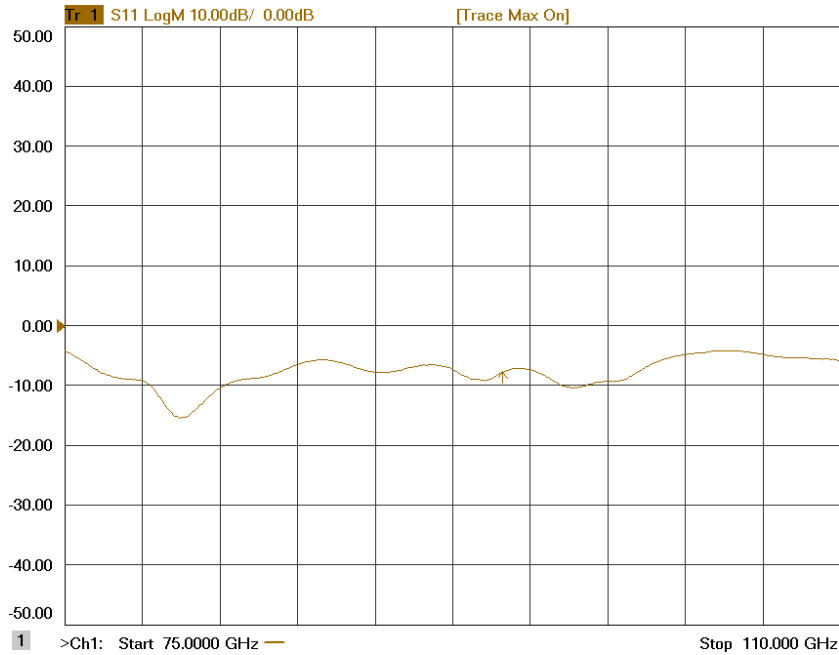


Figure 4: ERZ-LNA-7500-11000-20-4 S11

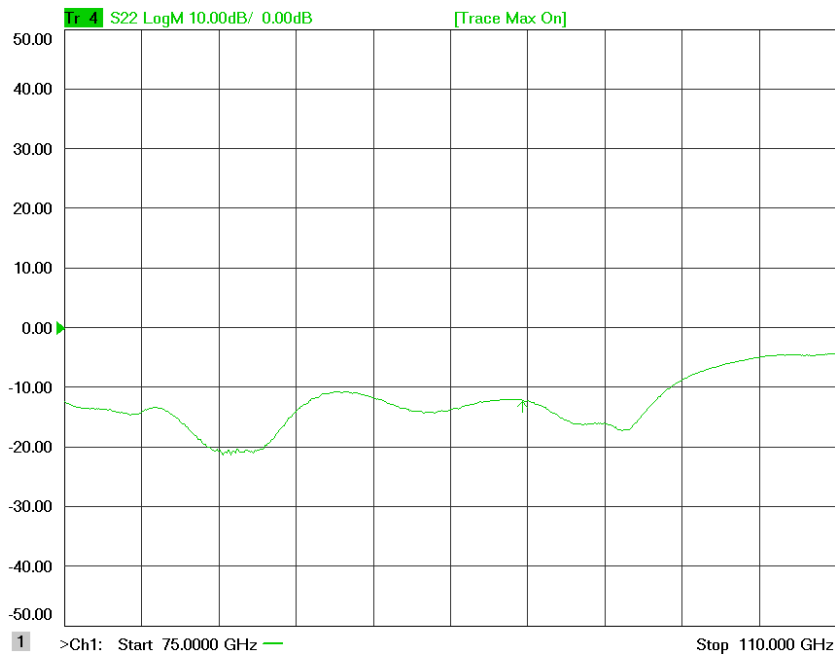


Figure 5: ERZ-LNA-7500-11000-20-4 S22

### Measurements Conditions

All measurements provided in this report were performed at the following conditions:

Condition	Value
Temperature	25°C ± 1°C
Humidity	44% ± 10%
DUT Warm up time	30 min
Test equipment warm up time	60 min
ESS: DUT Thermal cycles in climatic chamber	-40°C to 85°C (ON/OFF)

### Absolute Maximum Ratings

Condition	Value
DC Voltage	+7 VDC
Maximum Input Power (CW)	16 dBm
Operation temperatura (at case)	-40° to 85°C
Storage temperature	-55° to 85°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)

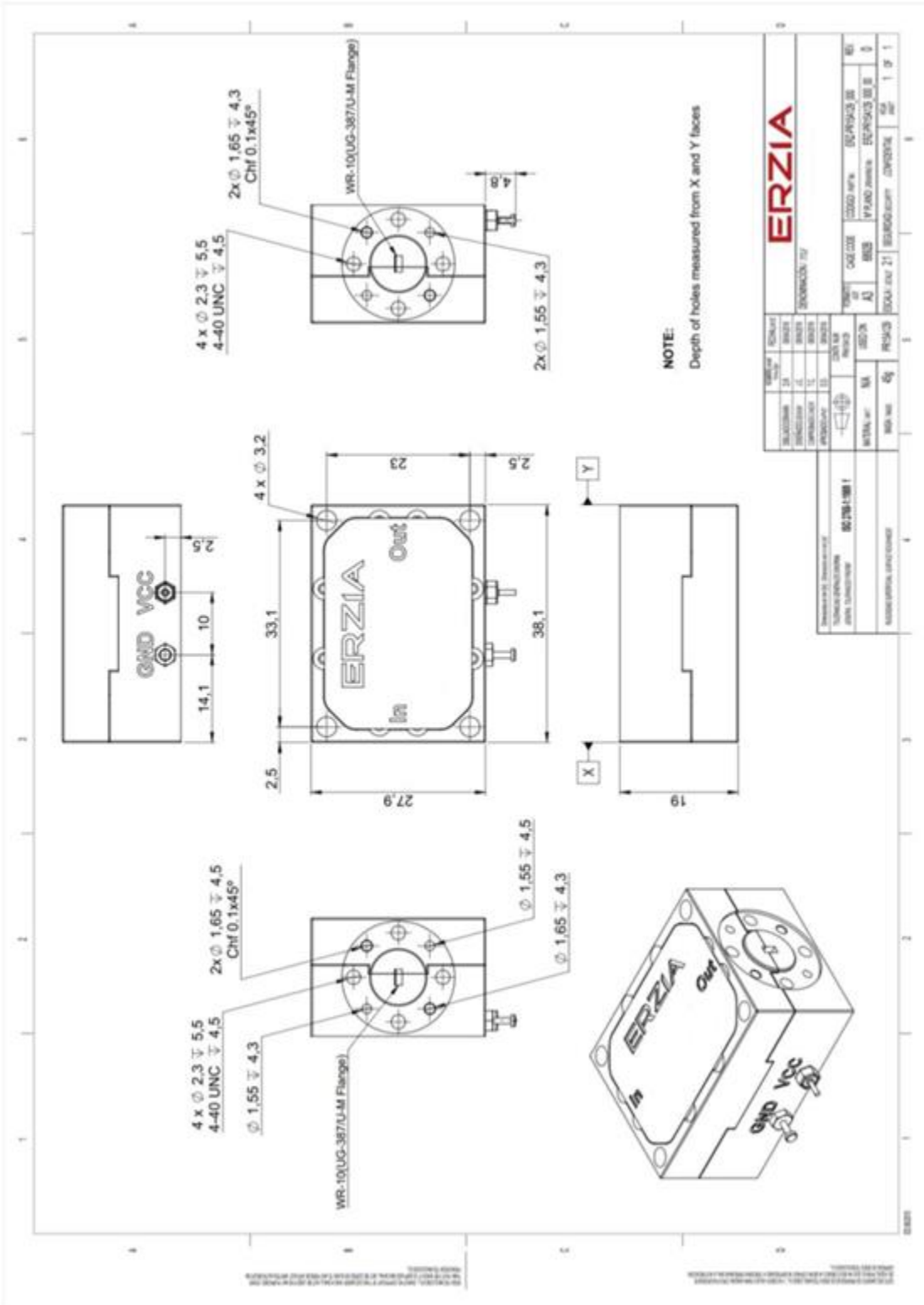
Operating Temperature:	-40 to +85 °C	(MIL-STD-810F, method 520.2)
Storage Temperature:	-55 to 125 °C	(MIL-STD-810F, method 520.2)
Vibration:	8g rms	(MIL-STD-810F, method 514.5)
Shock:	20g,11ms,saw-tooth	(MIL-STD-810F, method 516.5)
Acceleration:	15g	(MIL-STD-810F, method 513.5)

### RoHS Compliance

This part is compliant with EU 2011/65/UE RoHS directive (Restrictions on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment)



### 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 / Military Usage

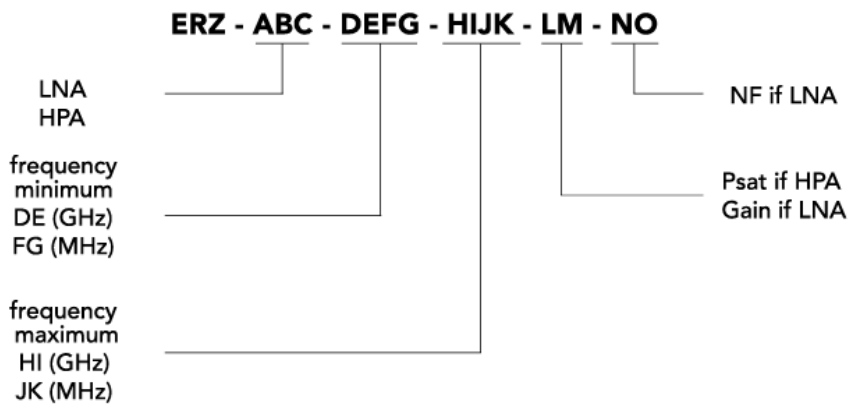
Most of ERZIA's products are based on rad-hard technologies and can be manufactured and integrated according to MIL / ECSS or specific hi-rel standard-screening for space, aeronautics, military or specific hi-reliability usage.

## 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



# ERZIA

20170110\_rev1.2

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