



### Main Features:

- Frequency Range: 42.5 to 45.5 GHz.
- Typical values: Gain 29 dB, NF 4.5 dB
- RF connectors (I/O): WR22
- 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-4250-4550-30-4.5

The ERZ-LNA-4250-4550-30-4.5 is a Low Noise Amplifier providing a gain of 29 dB with a noise figure of 4.5 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	42.5	-	45.5	GHz
Output Power (P1dB)	16.4	29.3	17.3	dBm
Gain	29	29.3	29.6	dB
Noise Figure	3.2	4	4.5	dB
VSWR input	2.0:1	2.5:1	3.0:1	-
VSWR output	1.1:1	1.2:1	1.3:1	-
DC Voltage	9	12	15	V
Power Consumption	-	2.9	-	W
Connectors	WR22 IN/OUT			-

Specifications at a case temperature of 25°C

### Output Power

Figure 1 shows output power at 1dB compression measurement as a function of frequency at room temperature (25°C).

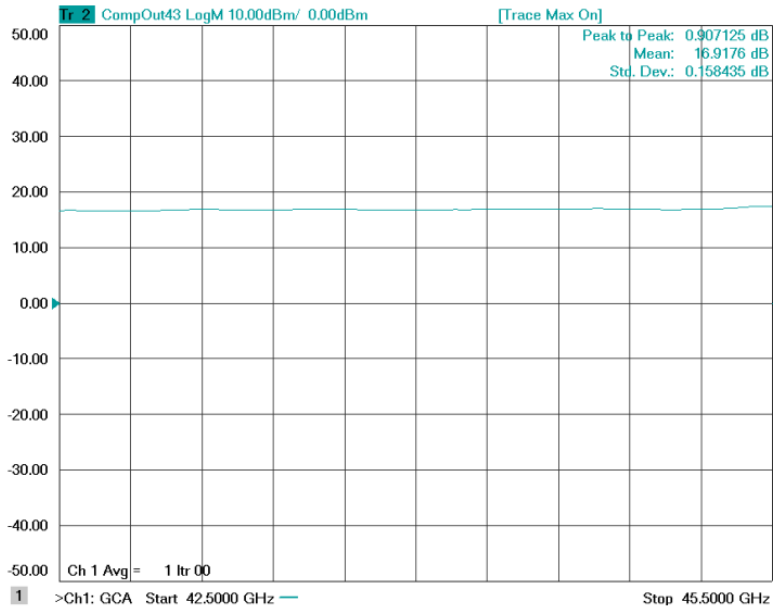


Figure 1: ERZ-LNA-4250-4550-30-4.5 P1dB

Figure 2 shows saturated output power measurement as a function of frequency at room temperature (25°C).

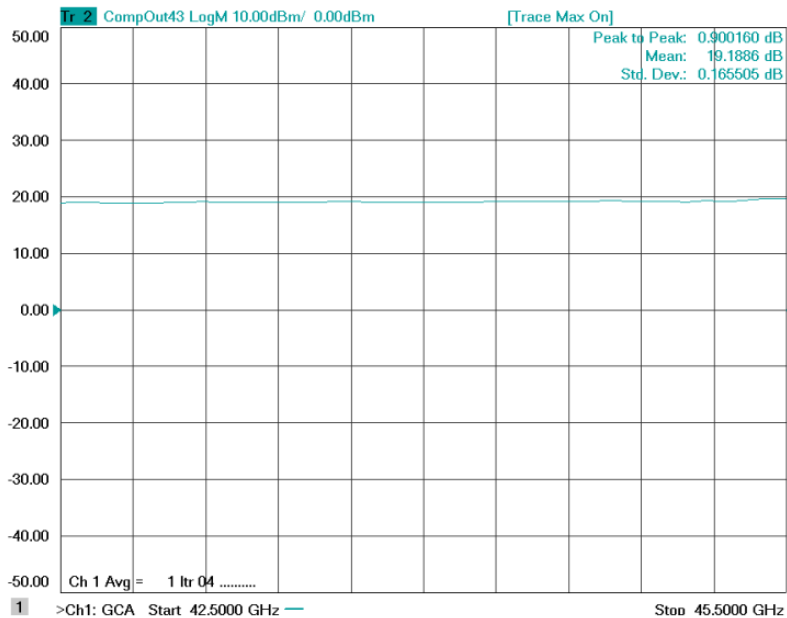


Figure 2: ERZ-LNA-4250-4550-30-4.5 Saturated Output Power

### Small Signal Gain

Figure 3 shows small signal gain measurement as a function of frequency at room temperature (25°C).

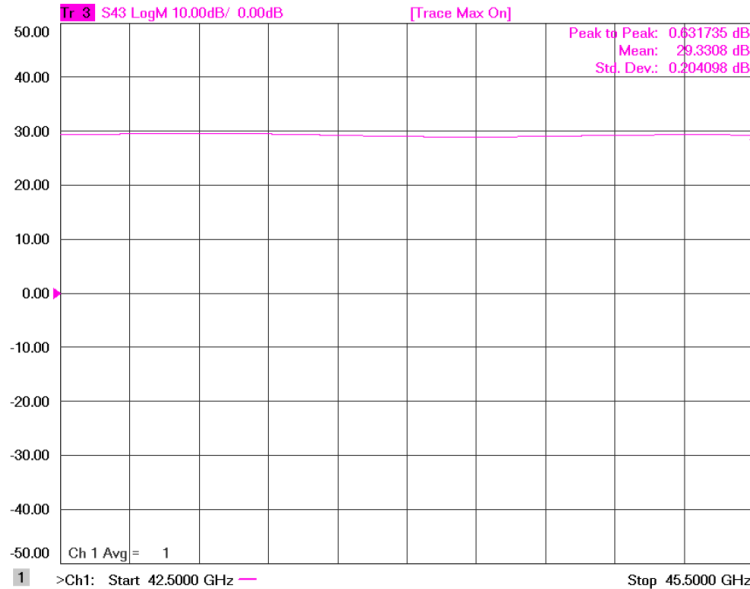


Figure 3: ERZ-LNA-4250-4550-30-4.5 Small Signal Gain

### Noise Figure

Figure 4 shows the noise figure measurement as a function of frequency at room temperature (25°C).

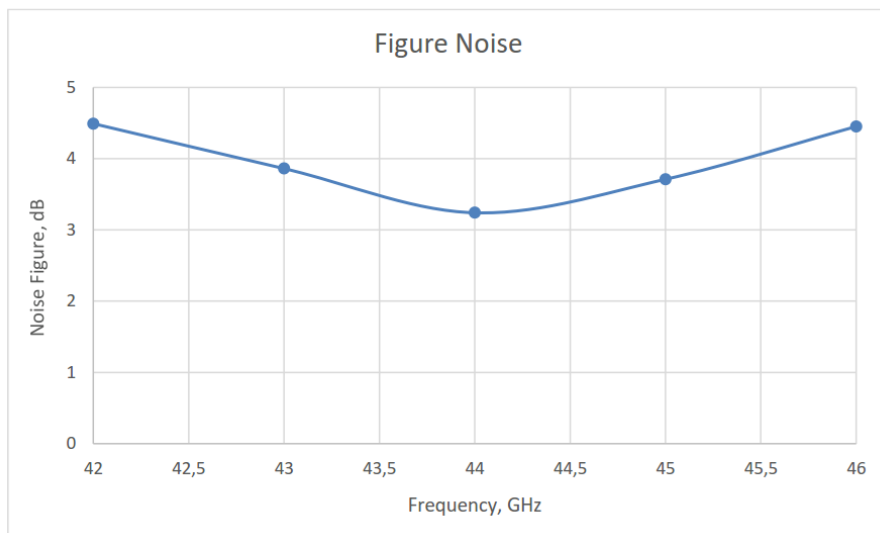


Figure 4: ERZ-LNA-4250-4550-30-4.5 Noise Figure

### Input and Output Matching

Figure 5 and Figure 6 show input (S11) and output (S22) VSWR as a function of frequency at room temperature (25°C).

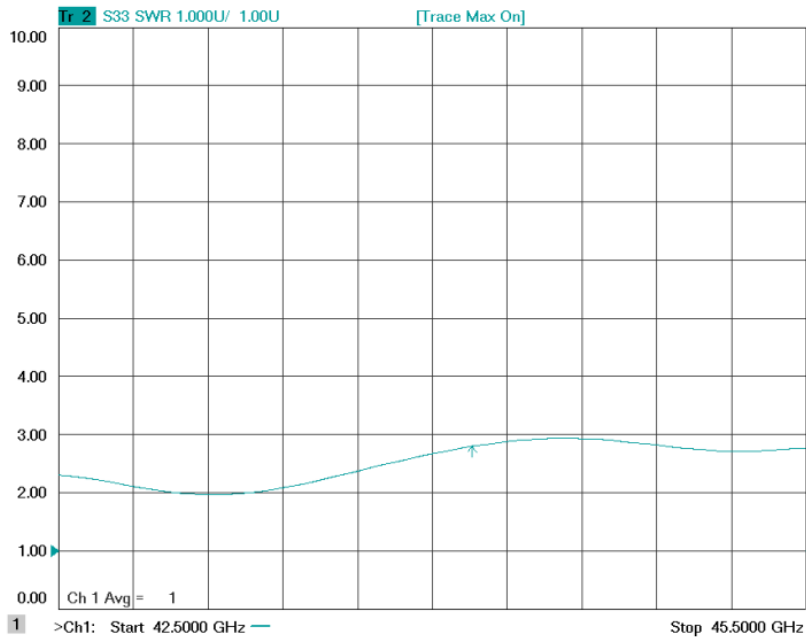


Figure 5: ERZ-LNA-4250-4550-30-4.5 Input Matching



Figure 6: ERZ-LNA-4250-4550-30-4.5 Output Matching

### OIP3

Figure 7 shows OIP3 measurement as a function of frequency at room temperature (25°C).

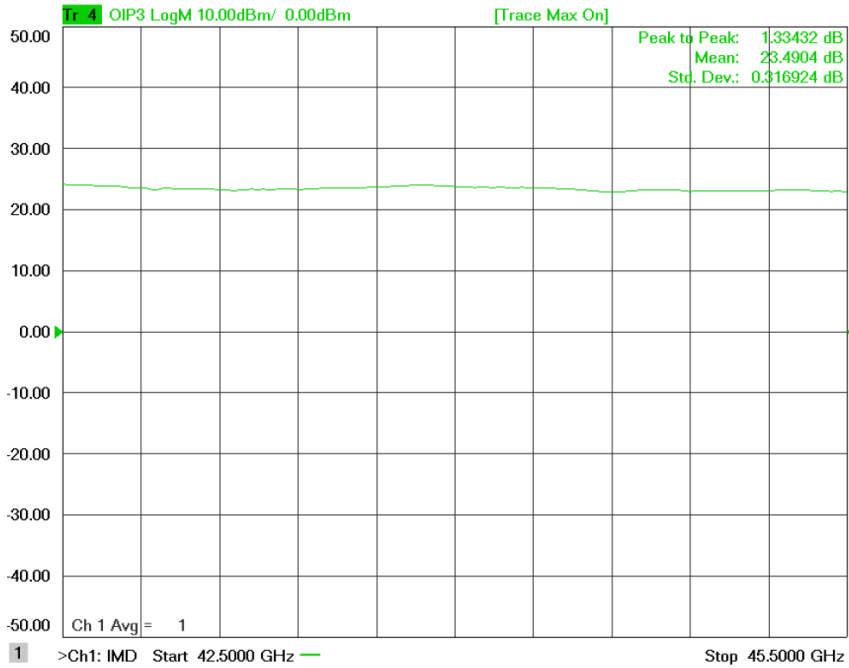


Figure 6: ERZ-LNA-4250-4550-30-4.5 OIP3

### Measurements Conditions

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

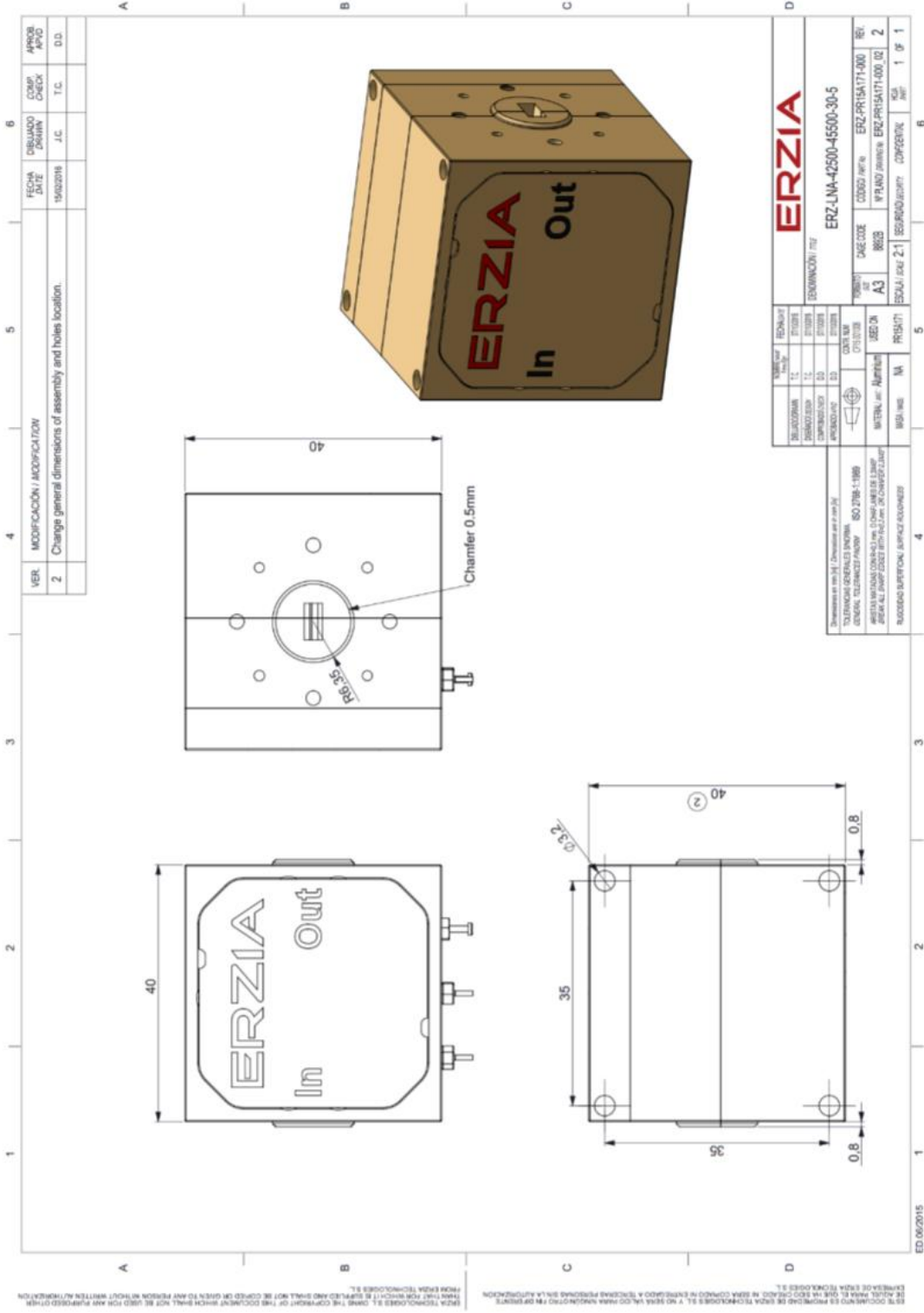
Condition	Value
Temperature	25°C ± 1°C
Humidity	70% ± 10%
DUT Warm up time	30 min
Test equipment warm up time	1 hour

### Absolute Maximum Ratings

Condition	Value
DC Voltage	+15 VDC
Maximum Input Power (CW)	10 dBm
Operation temperatura (at case)	-40°C to 85°C
Storage temperature	-55°C 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.

### 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

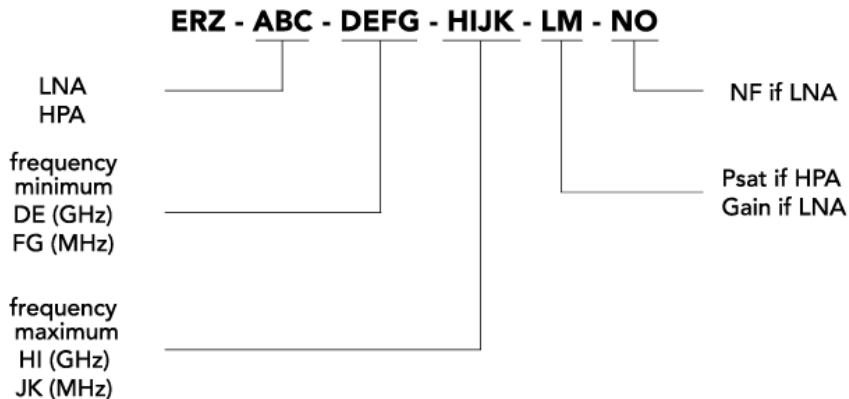
Most of ERZIA's products are based on rad-hard technologies and can be manufactured and integrated according to MIL / ECSS or specific hi-rel standard-screening for space, aeronautics, military or specific hi-reliability usage.

### 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

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