

ERZ-LNA-0125-0175-27-2



#### ERZ-LNA-0125-0175-27-2

The ERZ-LNA-0125-0175-27-2 is a Low Noise Amplifier providing a gain of 27 dB with a noise figure below 2 dB. The compact size and modularity makes it ideal for a wide range of applications.

#### Main Features:

- Frequency Range: 1.25 to 1.75 GHz.
- Typical values: Gain 27 dB, NF 2 dB.
- RF connectors (I/O): SMA Female.
- · Solder filtered pins for DC connection.
- Several mounting options.
- Gold platted compact aluminum housing.
- Hi-reliability and dedicated screening/ environmental tests available under request.

### Typical applications:

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

#### **Performance**

Parameter	Value			Units
	Min	Тур	Max	
Frequency	1.25	-	1.75	GHz
Output Power (P1dB)	14	15	17	dBm
Small Signal Gain	25	27	29	dB
Gain Flatness	-	±0.5	-	dB
Noise Figure	1.3	1.8	2	dB
VSWR input	1.1:1	1.5:1	1.8:1	-
VSWR output	1.1:1	1.5:1	1.7:1	-
DC Voltage	9	12	15	V
Power Consumption	-	0.7	-	W
RF Connectors	SMA Female IN/OUT			-

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



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## Output Power at 1 dB Compression

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

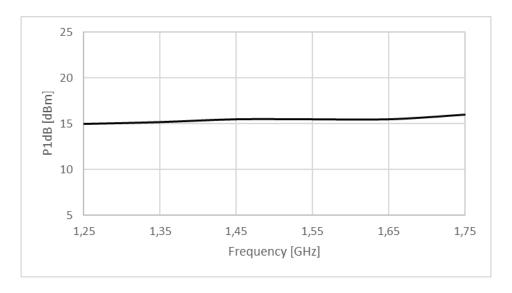


Figure 1: ERZ-LNA-0125-0175-27-2 P1dB

### **Small Signal Gain**

Figure 2 shows the small signal gain measured as a function of frequency at room temperature (25°C).

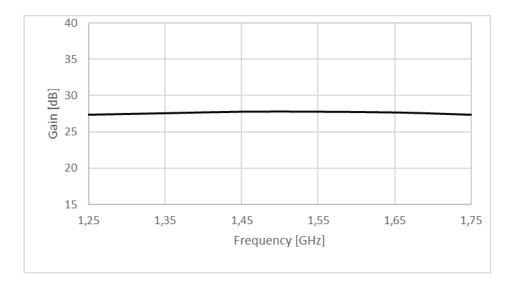


Figure 2: ERZ-LNA-0125-0175-27-2 Small Signal Gain



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### **Noise Figure**

Figure 3 shows noise figure behavior at room temperature (25°C).

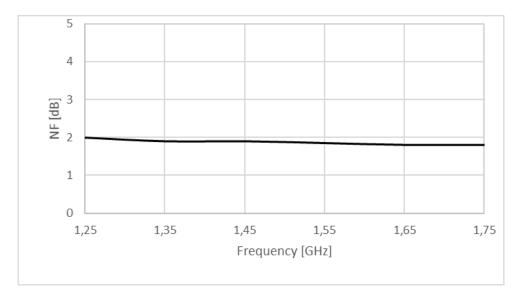


Figure 3: ERZ-LNA-0125-0175-27-2 Noise Figure



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### **Absolute Maximum Ratings**

Condition	Value	
DC Voltage	12 +/-3 VDC	
Maximum Input Power (CW)	+20 dBm	
Operation temperature (at case)	-45 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.

#### Measurements Conditions

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

Condition	Value	
Temperature (DUT ON)	25°C± 1°C	
Humidity	44% ± 10%	
DUT Warm up time	30 min	
DUT minimum operation time	24 hours	
Test equipment warm up time	2 hours	
Additional temperature cycles in climatic chamber (DUT OFF)	-40°C to 85°C	

## 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.

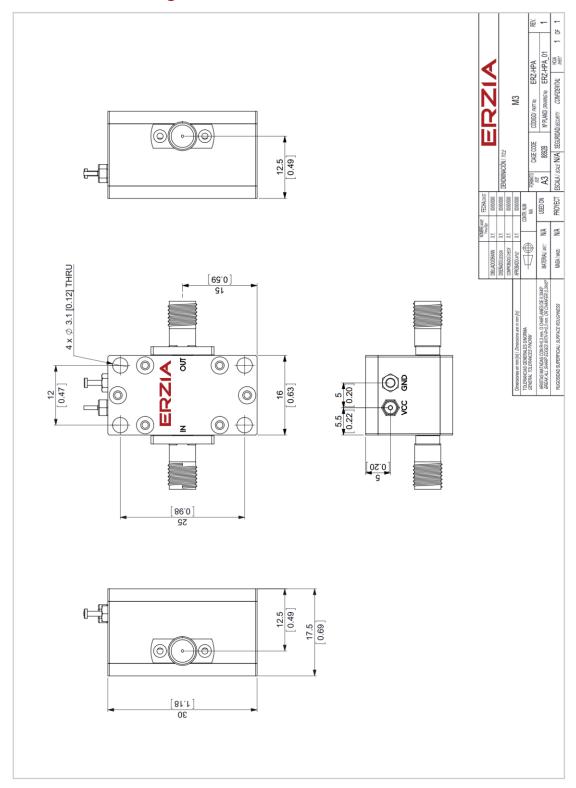






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## Mechanics and Housing





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### **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

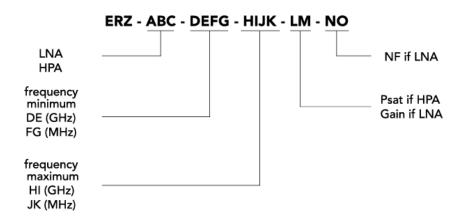
Most of ERZIA's products are based on rad-hard technologies and can be manufactured and integrated according to MIL / ECSS or specific hi-rel standard-screening for space, aeronautics, military or specific hi-reliability usage.

#### **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





20210303\_rev1.0

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