



### Main Features:

- Frequency Range: 25.5 to 27 GHz.
- Typical values: Gain 45 dB, NF 1.8 dB
- RF connectors (I/O): WR-34 / 2.92 mm (F)
- 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-2550-2700-45-1.8

The ERZ-LNA-2550-2700-45-1.8 is a Low Noise Amplifier providing a gain of 45 dB with a noise figure of 1.8 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	25.5	-	27	GHz
Output Power (P1dB)	11	12	14	dBm
Small Signal Gain	44	45	48	dB
Gain Flatness	-	±0.5	-	dB
Noise Figure	1.3	1.8	2.5	dB
VSWR input	1.8:1	2.5:1	3.0:1	-
VSWR output	1.3:1	1.5:1	2.0:1	-
DC Voltage	12	15	18	V
Power Consumption	-	1	-	W
RF Connectors	WR-34(UG-1530/U) (IN) 2.92 mm Female (OUT)			-

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

### Output Power at 1 dB Compression

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

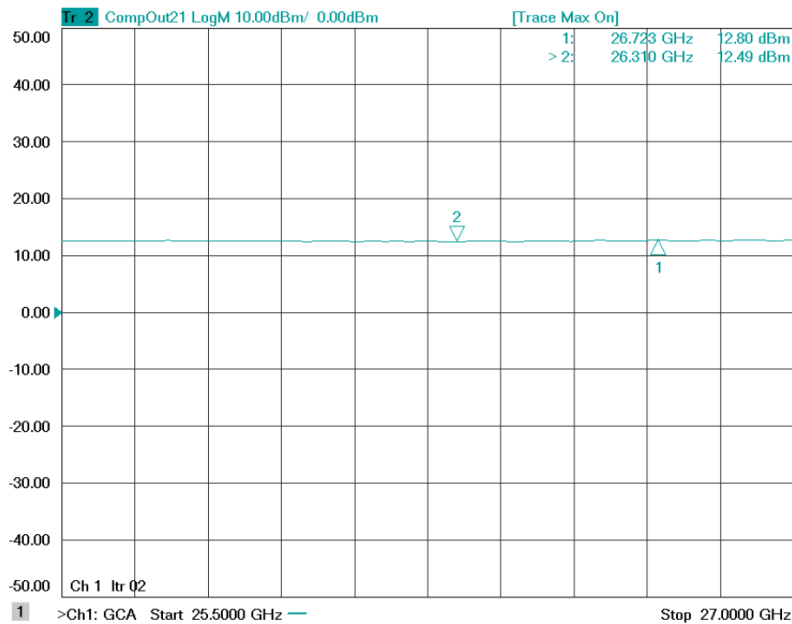


Figure 1: ERZ-LNA-2550-2700-45-1.8 P1dB

### Small Signal Gain

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

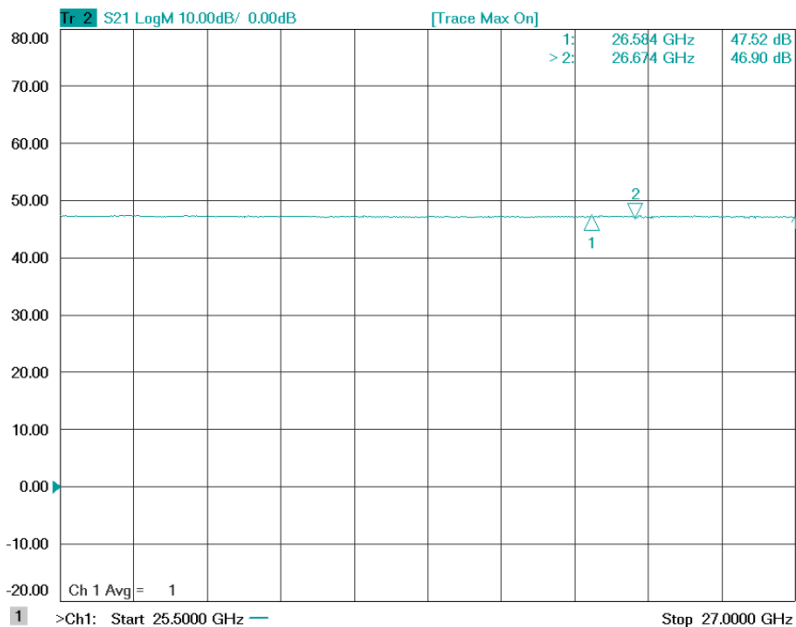


Figure 2: ERZ-LNA-2550-2700-45-1.8 Small Signal Gain

### Noise Figure

Figure 3 shows the noise figure measurement as a function of frequency from 25.5 to 26.5 GHz at room temperature (25°C).

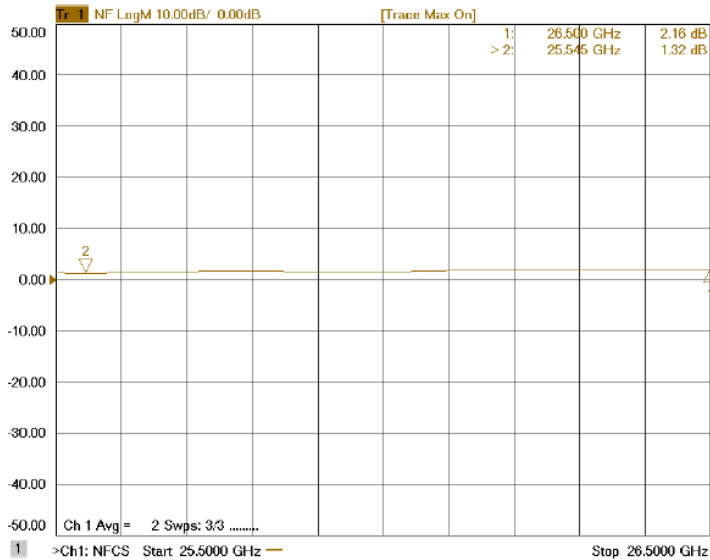


Figure 3: ERZ-LNA-2550-2700-45-1.8 Noise Figure

### Noise Figure

Figure 4 shows the noise figure measurement as a function of frequency from 26.5 to 27 GHz at room temperature (25°C).

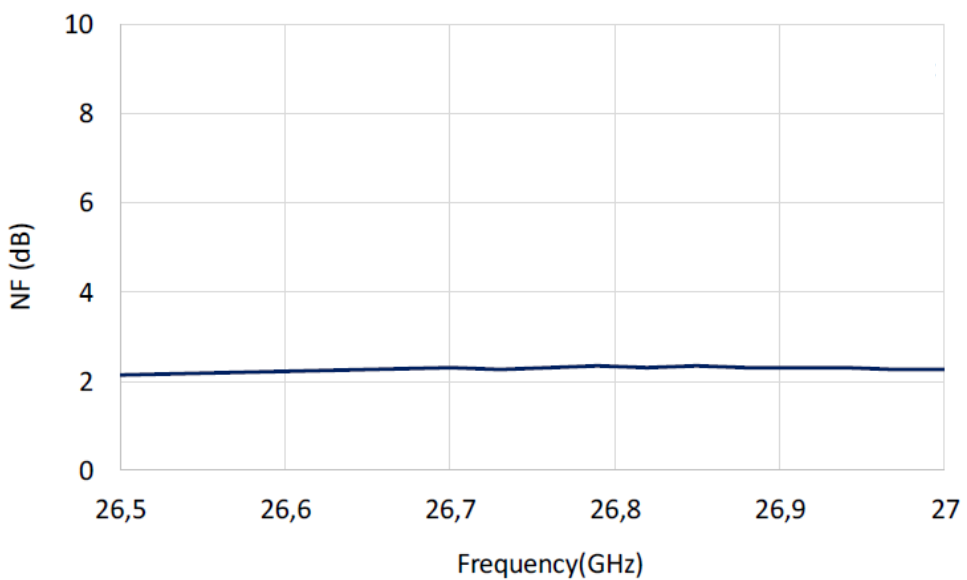


Figure 4: ERZ-LNA-2550-2700-45-1.8 Noise Figure

### 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).

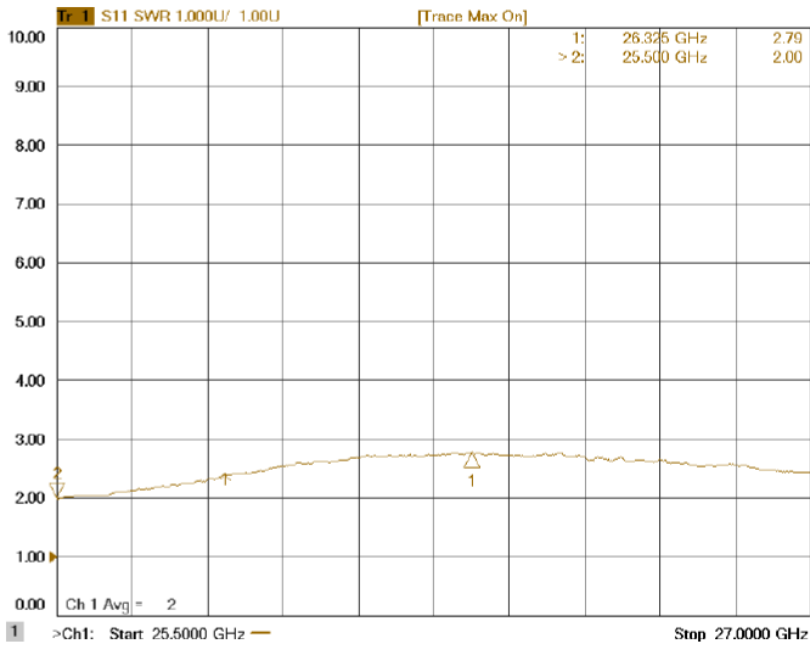


Figure 5: ERZ-LNA-2550-2700-45-1.8 Input Matching

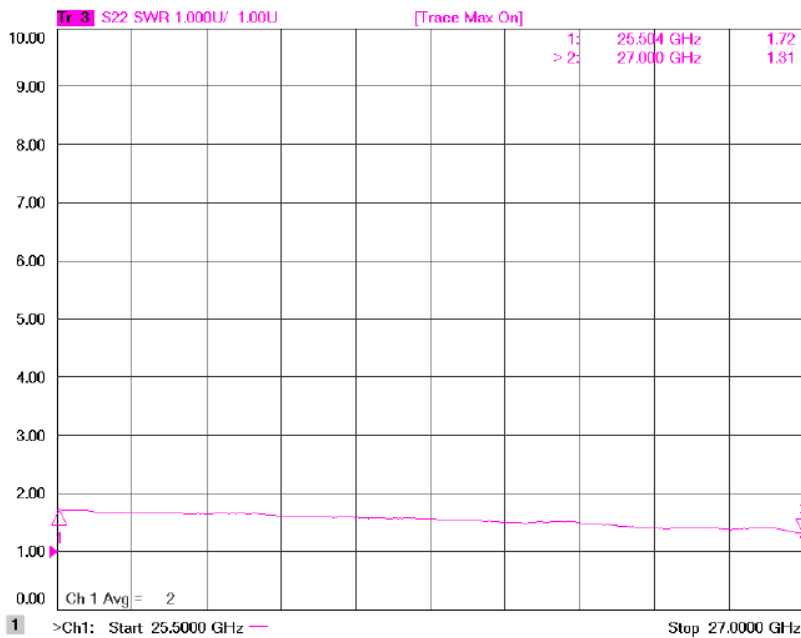


Figure 6: ERZ-LNA-2550-2700-45-1.8 Output Matching

### Absolute Maximum Ratings

Condition	Value
DC Voltage	+18 VDC
Maximum Input Power (CW)	-18 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.

### 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)

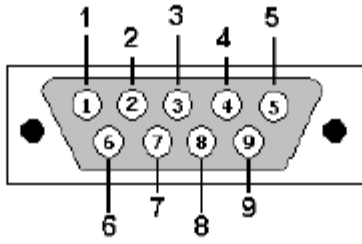
### RoHS & REACH Compliance

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.



### External Electrical Interfaces

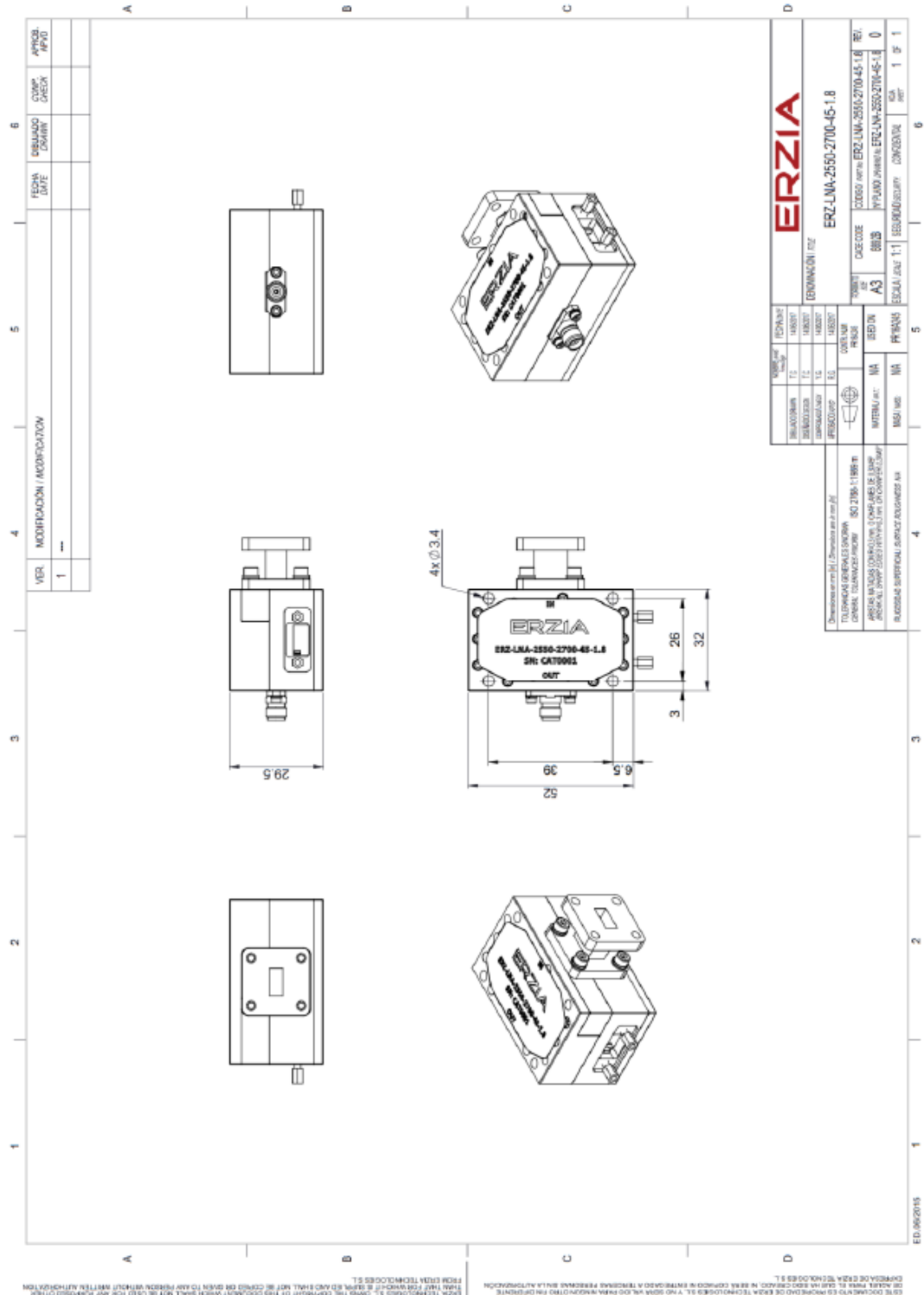
Table below shows power supply and connector pinout



Connector ref.: MWD2L-9P-6E5-18 (Micro D-sub 9 pins)

PIN	FUNCTION	IN/OUT	DESCRIPTION
1	NC	-	Not Connected
2	NC	-	Not Connected
3	NC	-	Not Connected
4	NC	-	Not Connected
5	NC	-	Not Connected
6	GND	IN	GND (Green)
7	GND	IN	GND (Blue)
8	VIN	IN	15±3 VDC (Purple)
9	VIN	IN	15±3 VDC (Grey)

### 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

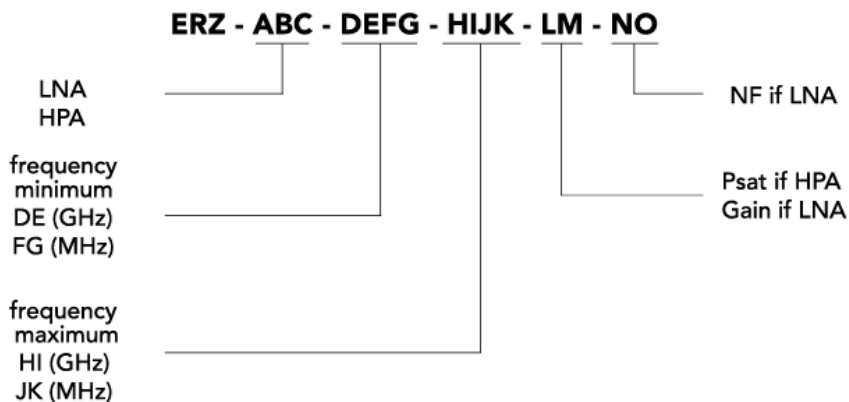
Most of ERZIA's products are based on rad-hard technologies and can be manufactured and integrated according to MIL / ECSS or specific hi-rel standard-screening for space, aeronautics, military or specific hi-reliability usage.

## 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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