



Main Features:

- Frequency Range: 17.7 to 22 GHz.
- Typical values: Gain 70 dBm, NF 2 dB
- RF connectors (I/O): WR42 IN / 2.92 mm (F) OUT
- 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-1770-2200-70-2

The ERZ-LNA-1770-2200-70-2 is a High Power Amplifier providing a gain of 70 dB and a noise figure below 2 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	17.7	-	22	GHz
Output Power (P1dB)	11.3	12	13.5	dBm
Gain	71.4	73	74.6	dB
Noise Figure	1.5	2	2.5	dB
VSWR input	1.2:1	1.7:1	2.0:1	-
VSWR output	1.1:1	1.3:1	1.5:1	-
DC Voltage	16	18	20	V
Power Consumption	-	2.7	-	W
Connectors	WR42 IN / 2.92 mm (F) OUT			-

Specifications at case temperature of 25°C

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).

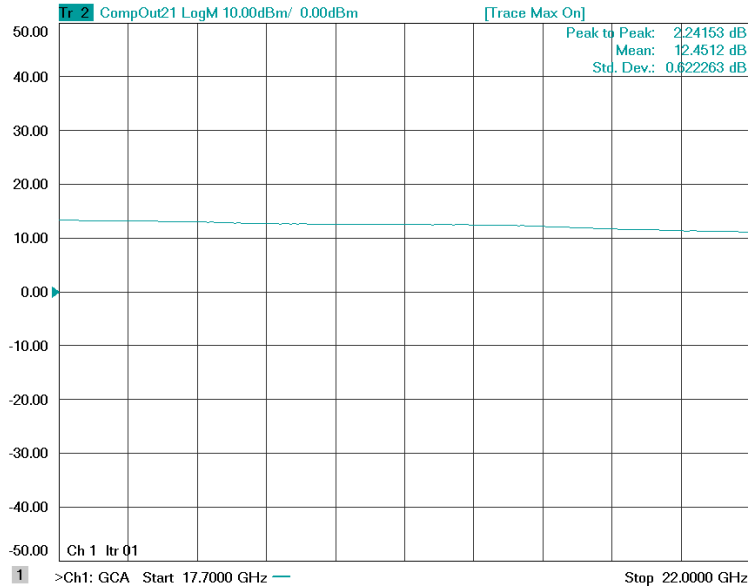


Figure 1: ERZ-LNA-1770-2200-70-2 P1dB

Small Signal Gain

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

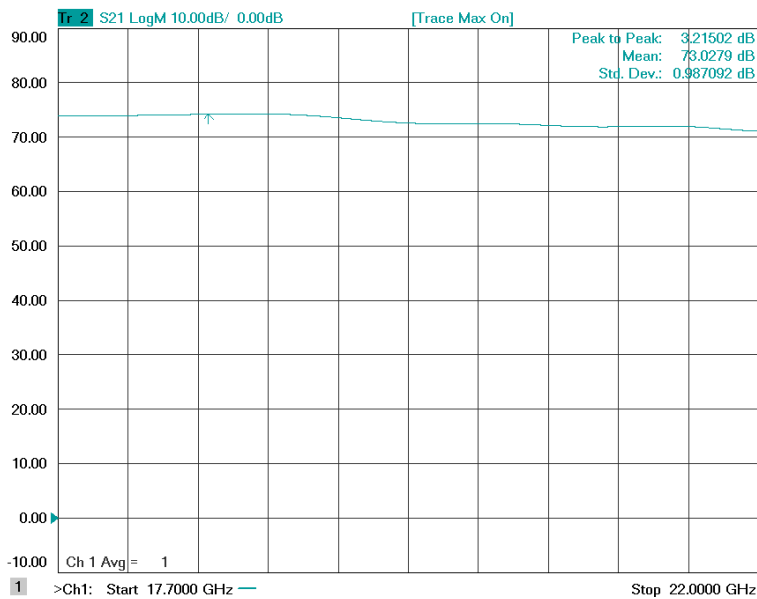


Figure 2: ERZ-LNA-1770-2200-70-2 Small Signal Gain

Noise Figure

Figure 3 shows noise figure measurement as a function of frequency at room temperature (25°C).

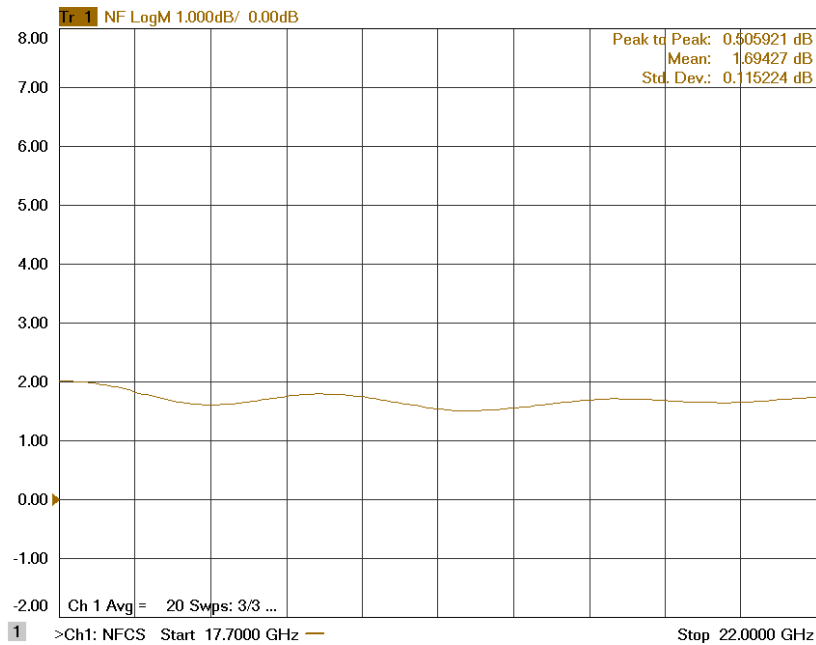


Figure 3: ERZ-LNA-1770-2200-70-2 Noise Figure

Input and Output Matching

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

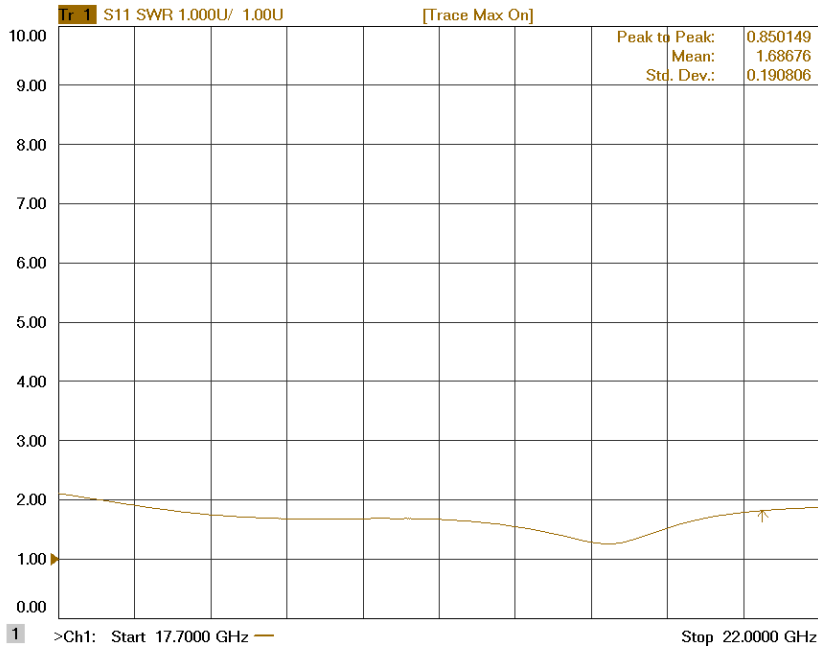


Figure 4: ERZ-LNA-1770-2200-70-2 Input Matching

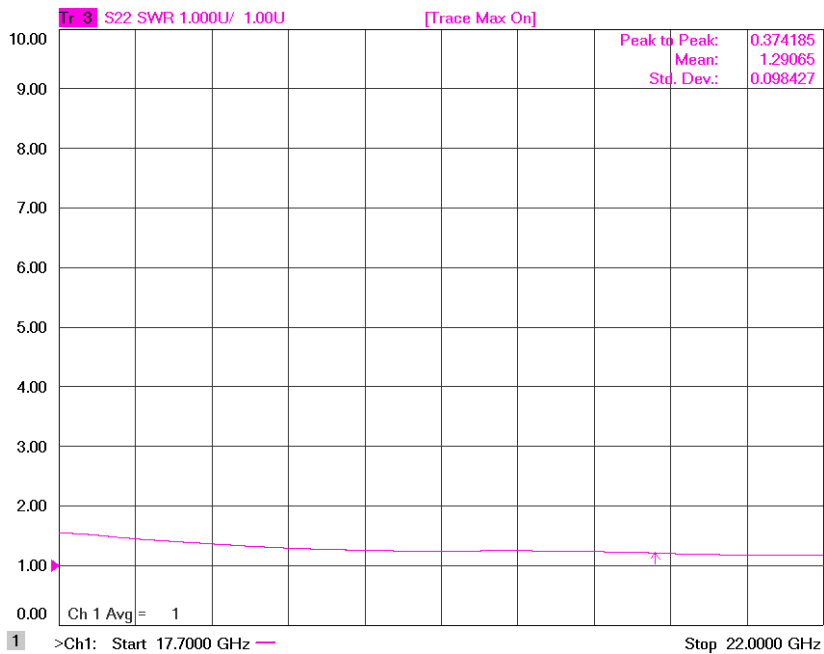


Figure 5: ERZ-LNA-1770-2200-70-2 Output Matching

Measurements Conditions

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

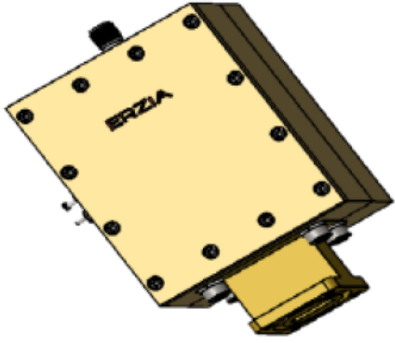
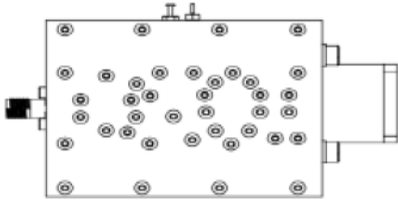
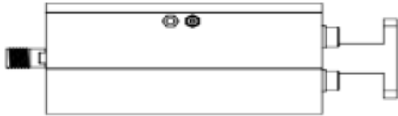
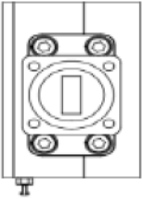
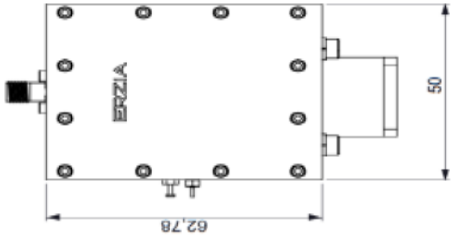
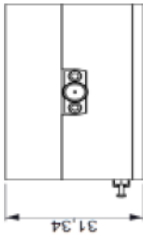
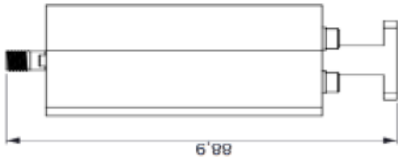
Condition	Value
Temperature	25°C ± 1°C
Humidity	70% ± 10%
DUT Warm up time	30 min
Test equipment warm up time	1 hour

Absolute Maximum Ratings

Condition	Value
DC Voltage	+20 VDC
Maximum Input Power (CW)	-55 dBm
Operation temperatura (at case)	-35°C to 70°C
Storage temperature	-45°C 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.

Mechanics and Housing

ERZIA			
ERZ-LNA-1770-2200-70-2			
REV	DATE	DESCRIPTION	APPROVED
A3	15	ERZ-LNA-1770-2200-70-2	
ERZIA S.p.A. - Via Salaria 101 - 00198 Roma (RM) - Italy Tel: +39 06 492764645 - Fax: +39 06 492764646 Email: sales.rf@erzia.com - www.erzia.com			

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

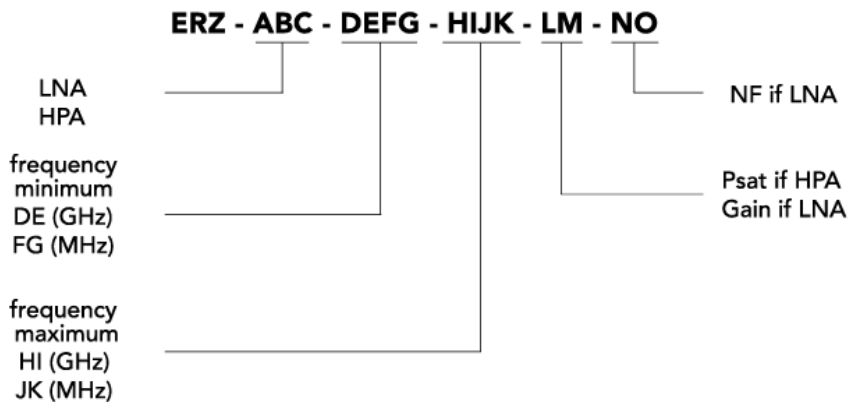
Most of ERZIA's products are based on rad-hard technologies and can be manufactured and integrated according to MIL / ECSS or specific hi-rel standard-screening for space, aeronautics, military or specific hi-reliability usage.

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

20151119_rev1.0

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