ERZIA
DATASHEET

High Power Amplifier

ERZ-HPA-1500-2700-29-E

Main Features:

- Frequency Range: 15 to 27 GHz.
- Typical values: P1dB 30 dBm, Gain 33 dB
- RF connectors (I/O): 2.92 mm 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

ERZ-HPA-1500-2700-29-E

The ERZ-HPA-1500-2700-29-E is a K Band Amplifier providing an output power of 30 dBm and a gain of 33 dB. The compact size and modularity makes it ideal for a wide range of applications.

Typical applications:

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

Performance

Parameter	Value			Units
	Min	Typ	Max	
Frequency	15	-	27	GHz
Output Power (P1dB)	26	30	32	dBm
Small Signal Gain	29	33	37	dB
Gain Flatness	-	±3.5	-	dB
Noise Figure	3	4	7	dB
VSWR input	1.1:1	1.5:1	2.0:1	-
VSWR output	1.2:1	1.5:1	2.0:1	-
DC Voltage	8	12	16	V
Power Consumption	-	10	-	W
RF Connectors	2.92 mm Female IN/OUT			-

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

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).

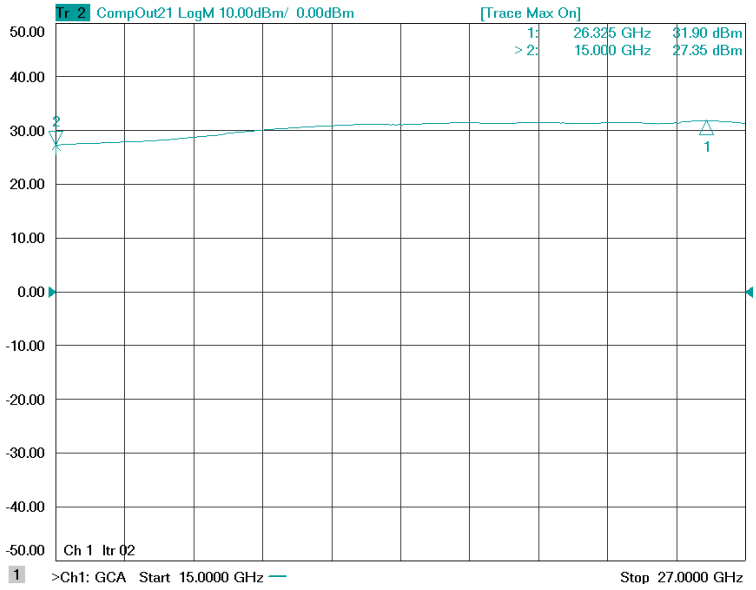


Figure 1: ERZ-HPA-1500-2700-29-E P1dB

Small Signal Gain

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

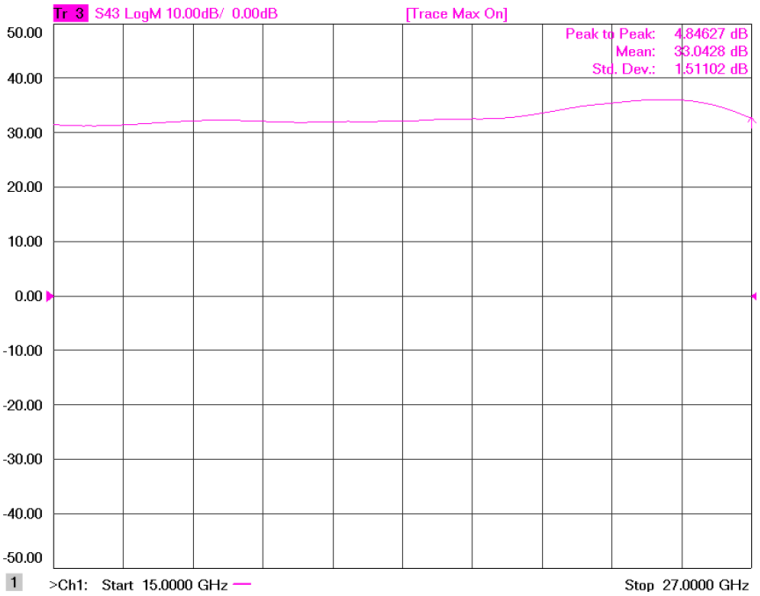


Figure 2: ERZ-HPA-1500-2700-29-E Small Signal Gain

Input and Output Matching

Figure 3 and Figure 4 show input (S11) and output (S22) VSWR as a function of frequency at room temperature (25°C).

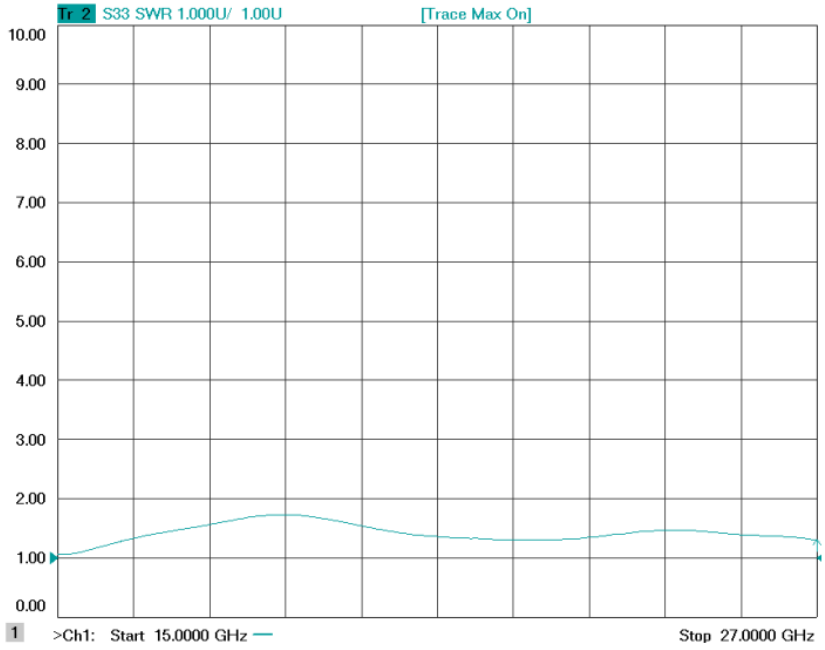


Figure 3: ERZ-HPA-1500-2700-29-E Input Matching

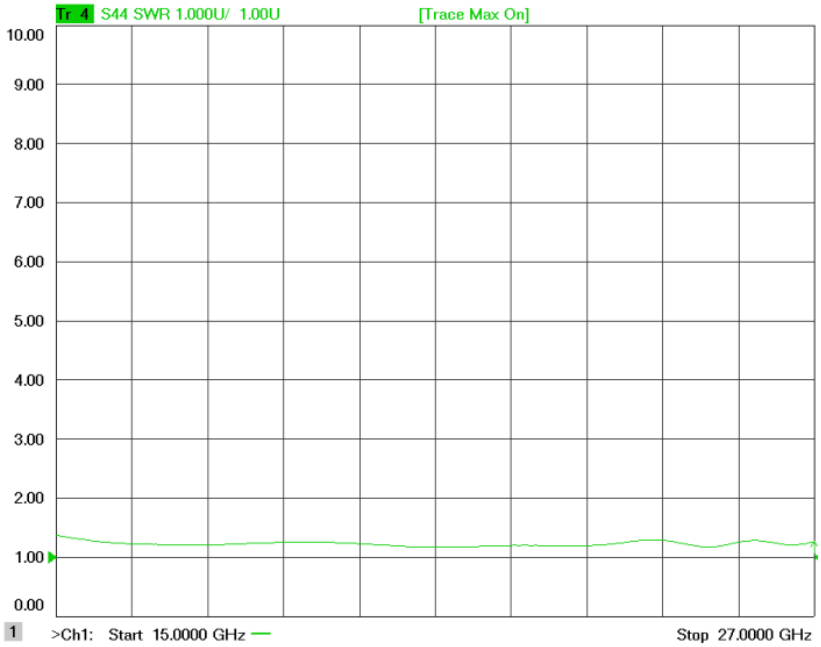


Figure 4: ERZ-HPA-1500-2700-29-E Output Matching

Measurements Conditions

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

Condition	Value
Temperature	25°C ± 2°C
Humidity	50% ± 10%
DUT Warm up time	30 min
Test equipment warm up time	60 min

Absolute Maximum Ratings

Condition	Value
DC Voltage	+16 VDC
Maximum Input Power (CW)	2 dBm
Operation temperatura (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.

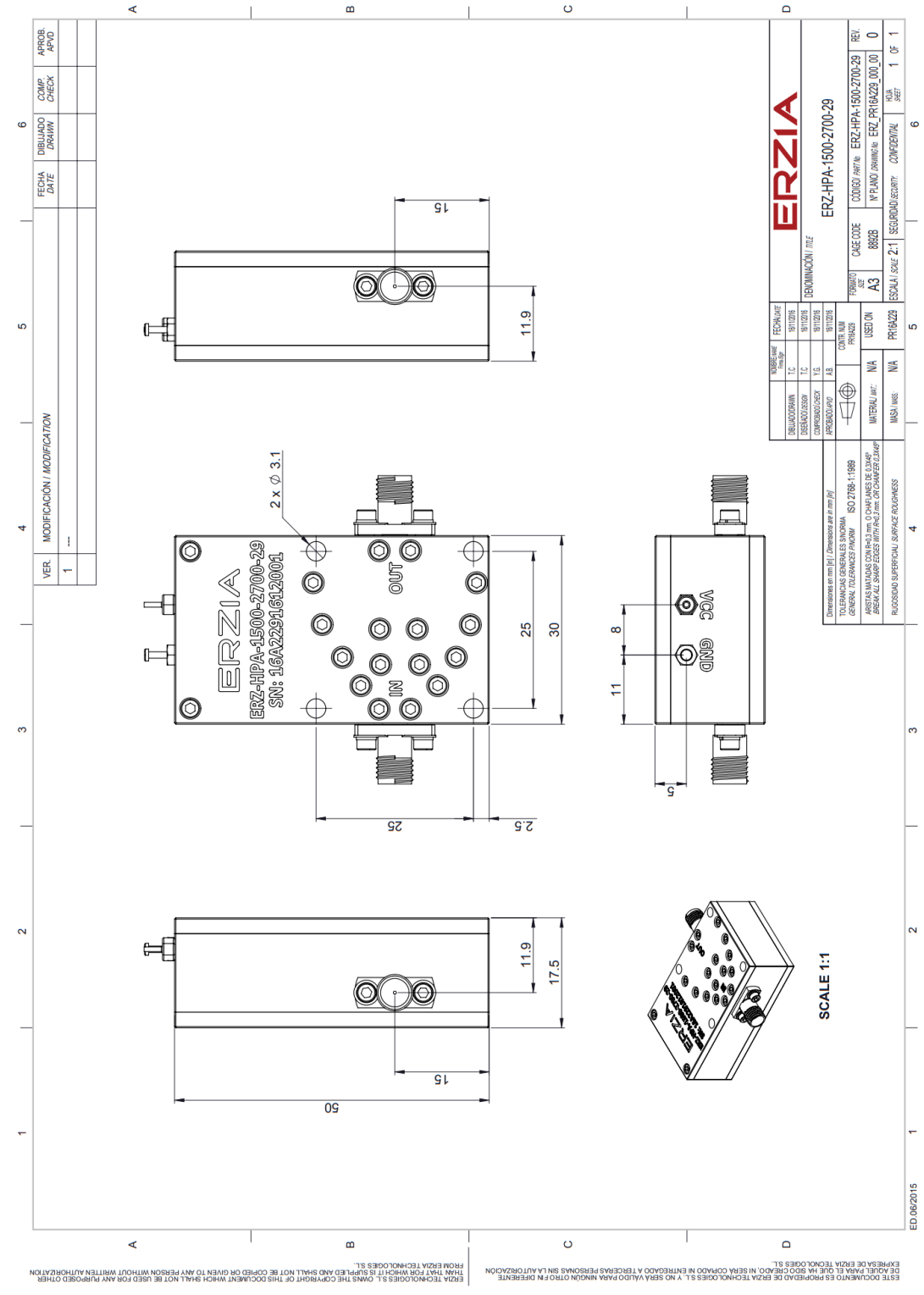
Environmental Specifications (By Design)

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)

High Power Amplifier

ERZ-HPA-1500-2700-29-E

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 / Hi-Rel Usage

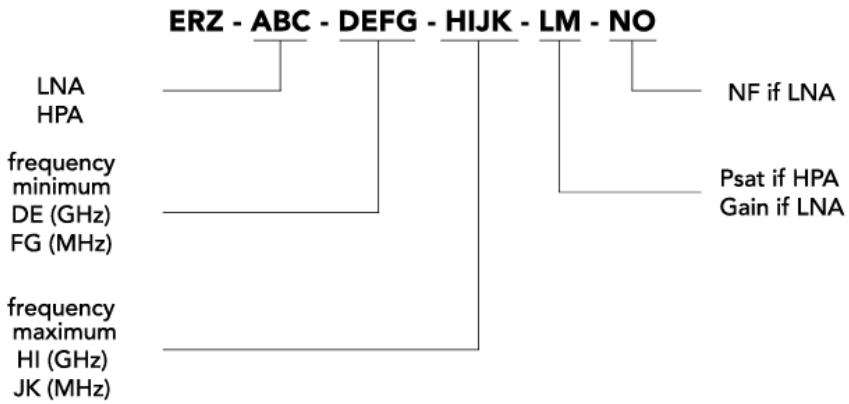
Most of ERZIA´s products are based on rad-hard technologies and can be manufactured and integrated according to MIL / ECSS or specific hi-rel standard-screening for space, aeronautics, or specific hi-reliability usage.

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

20260818_rev1.4

Tel: +34 942 29 13 42 sales.rf@erzia.com www.erzia.com