ERZIA

DATASHEET

High Power Amplifier

ERZ-HPA-0000-1200-26

Main Features:

- Frequency Range: 100 KHz to 16 GHz.
- Typical values: Pout 27 dBm, Gain 32 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

ERZ-HPA-0000-1200-26

The ERZ-HPA-0010-1200-26 is a High Power Amplifier providing an output power of 27 dBm and a gain of 32 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	0 (*)	-	16	GHz
Output Power (PSat)	25	27	29	dBm
Small Signal Gain (10 Mhz to 16 GHz)	29	32	35	dB
Gain Flatness (10 Mhz to 16 GHz)	-	±1.5	-	dB
Noise Figure	-	-	-	dB
VSWR input (10 Mhz to 16 GHz)	1.1:1	1.3:1	2.2:1	-
VSWR output (10 Mhz to 16 GHz)	1.1:1	1.3:1	1.8:1	-
DC Voltage	9	12	15	V
Power Consumption	-	5.2	-	W
RF Connectors	SMA Female IN/OUT			-

Specifications at a case temperature of 25°C at 12 V
(*) Minimum operating frequency 100 KHz

Output Power

Figures 1 and 2 show output power measurement at saturation as a function of frequency at room temperature (25°C).

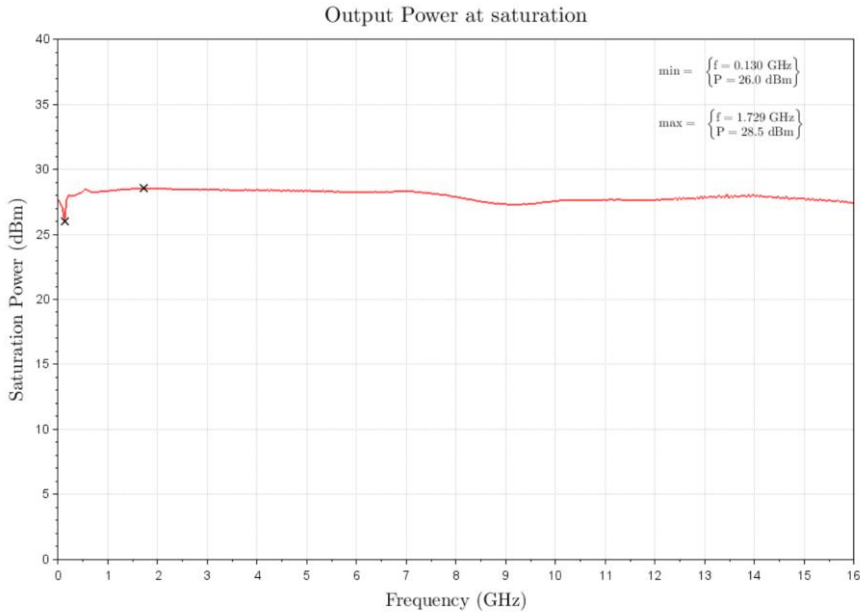


Figure 1: ERZ-HPA-0000-1200-26 Output Power at Psat

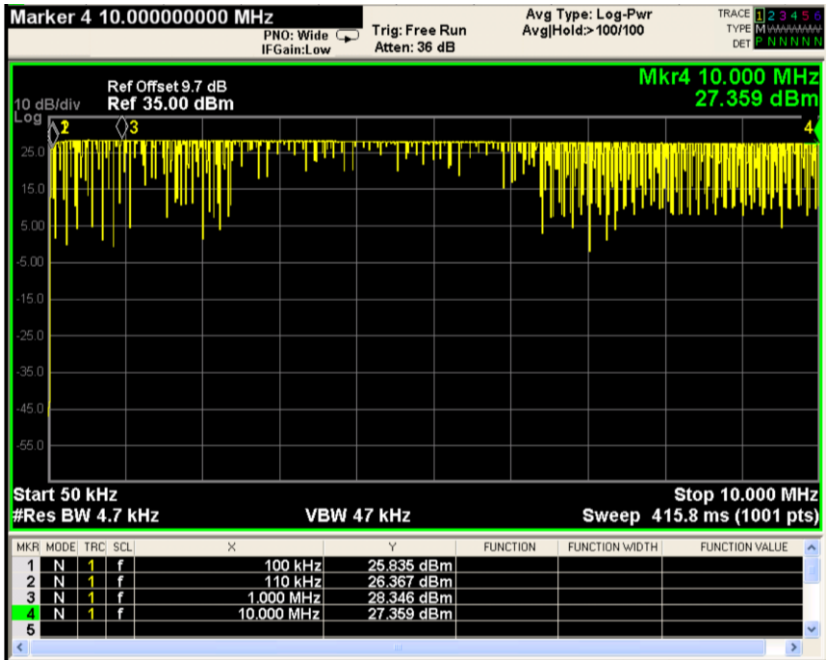


Figure 2: ERZ-HPA-0000-1200-26 Output Power at Psat at low frequency

Small Signal

Figures 3 and 4 show the small signal gain measurement as a function of frequency at room temperature (25°C).

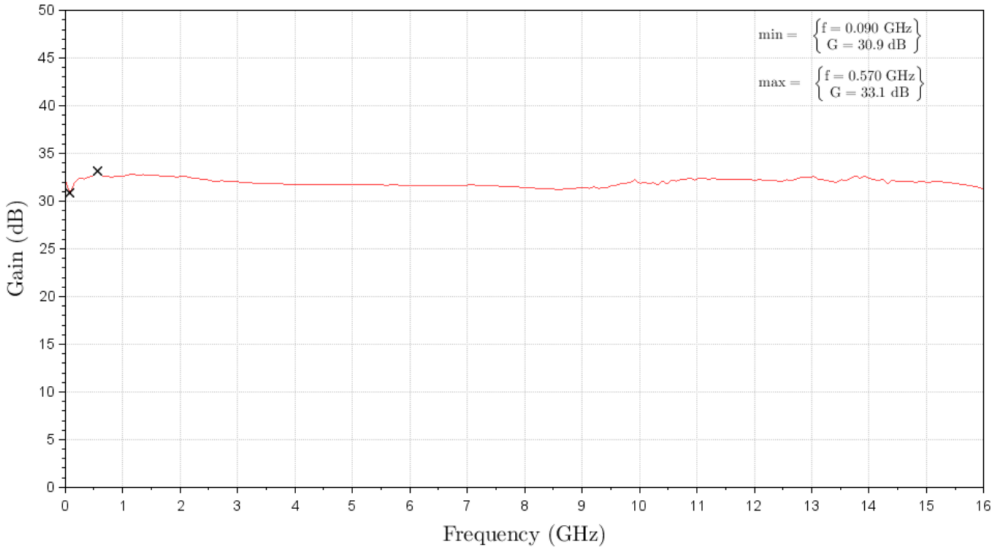


Figure 3: ERZ-HPA-0000-1200-26 Small Signal Gain

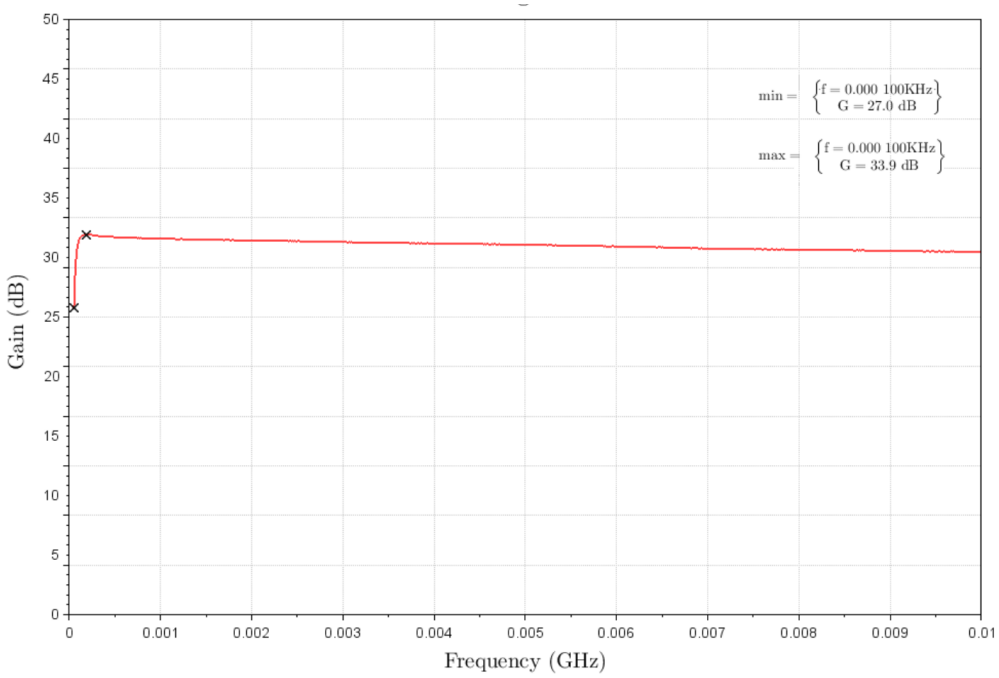


Figure 4: ERZ-HPA-0000-1200-26 Small Signal Gain at low frequency

Input and Output Matching

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

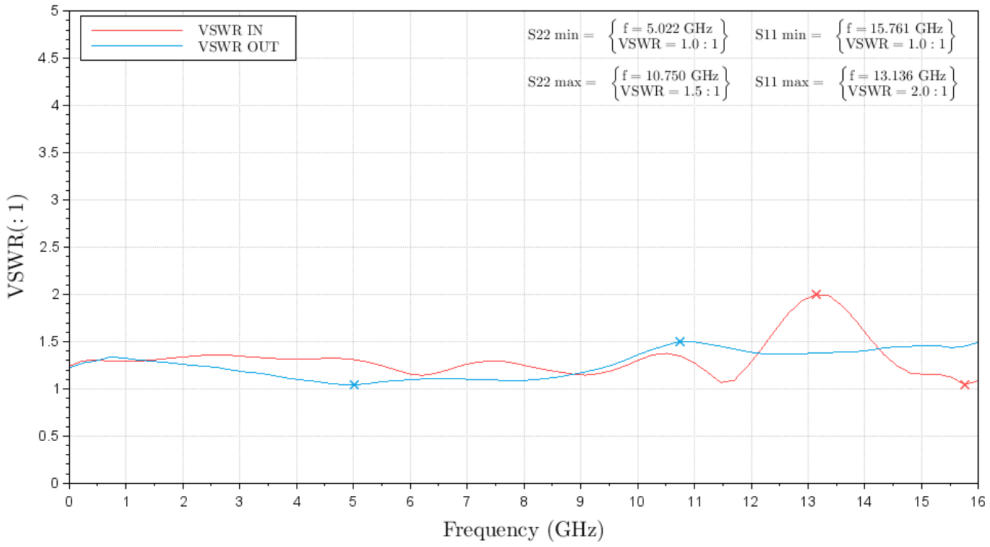


Figure 5: ERZ-HPA-0000-1200-26 Input & Output Matching

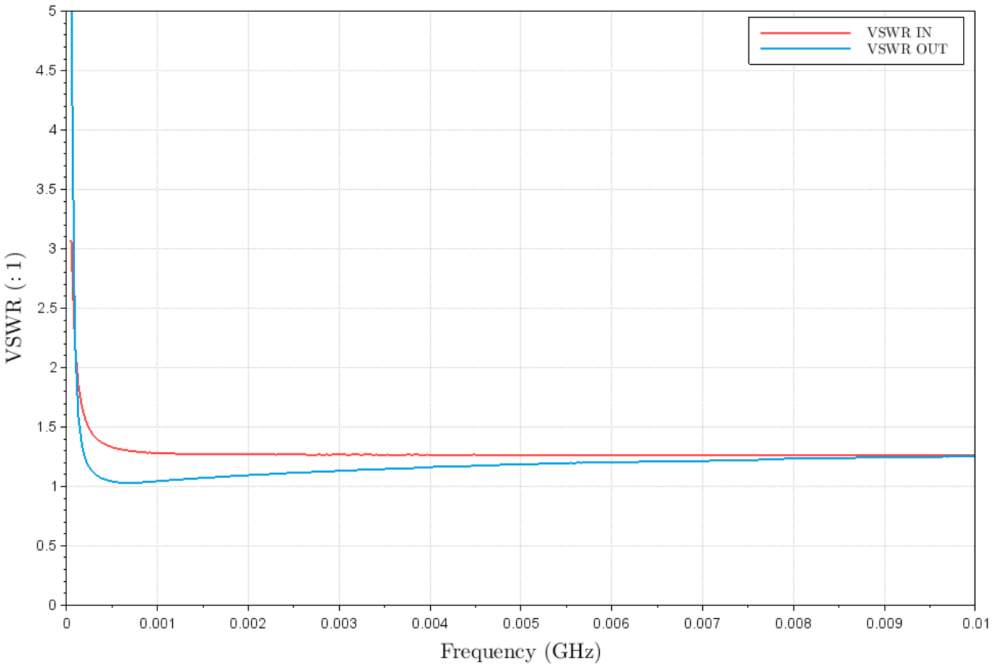


Figure 5: ERZ-HPA-0000-1200-26 Input & Output Matching at low frequency

Absolute Maximum Ratings

Condition	Value
DC Voltage	+15 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

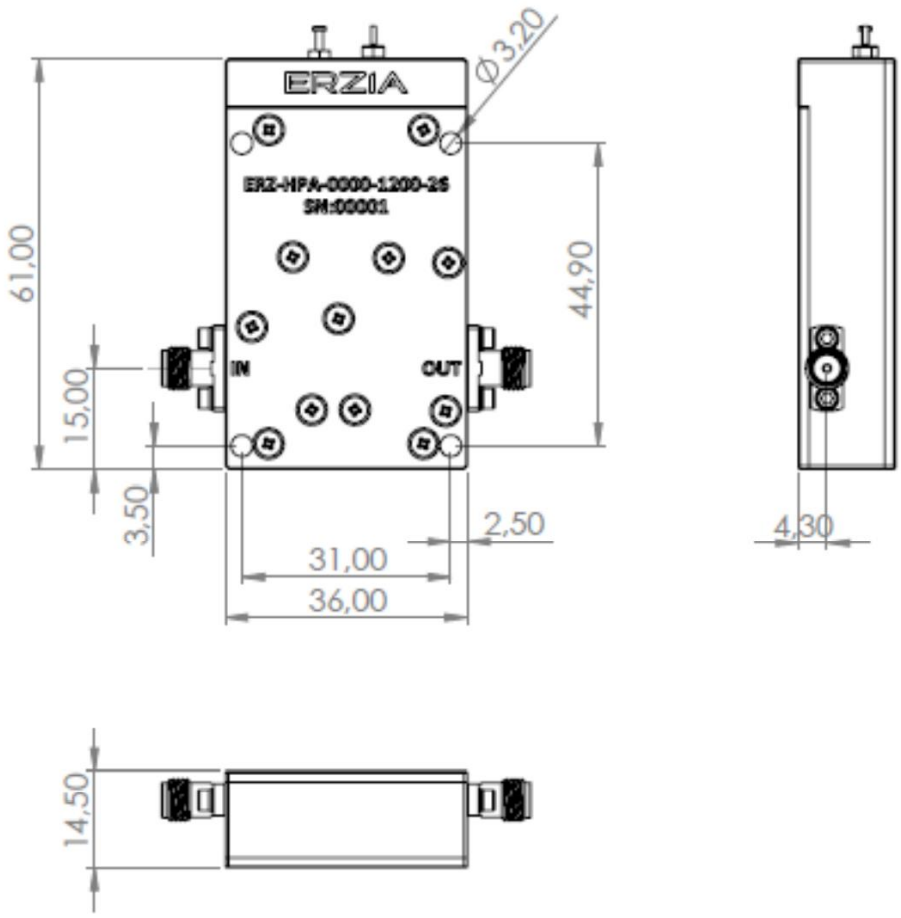
Environmental Specifications (By Design)

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.

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

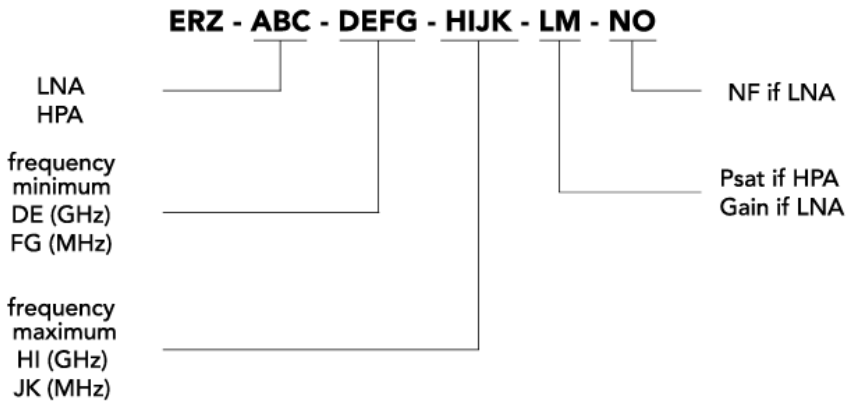
Most of ERZIA´s products are based on rad-hard technologies and can be manufactured and integrated according to MIL / ECSS or specific hi-rel standard-screening for space, aeronautics, military or specific hi-reliability usage.

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



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