



### Main Features:

- Frequency Range: 16 to 33 GHz.
- Typical values: Psat 24, Gain 34 dB
- RF connectors (I/O): 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-HPA-1600-3300-24-E

The ERZ-HPA-1600-3300-24-E is a High Power Amplifier providing an output power of 24 dBm and a gain of 34 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	16	-	33	GHz
Output Power (Psat)	22	25	28	dBm
Small Signal Gain	30	34	42	dB
Gain Flatness	-	±5	-	dB
Noise Figure	-	-	-	dB
VSWR input	-	1.5:1	2.0:1	-
VSWR output	-	1.5:1	2.0:1	-
DC Voltage	8	12	16	V
Power Consumption	-	5	-	W
RF Connectors	2.92 mm Female IN/OUT			-

Specifications at a case temperature of 25°C

### Output Power at Saturation

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

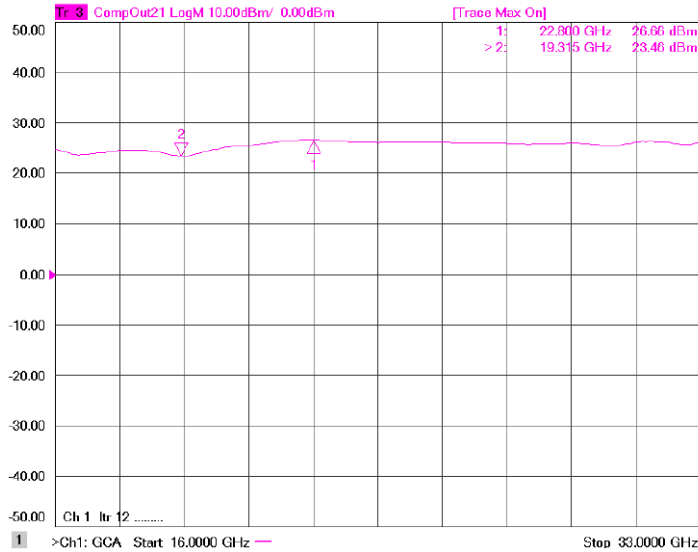


Figure 1: ERZ-HPA-1600-3300-24-E Psat

### Small Signal Gain

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

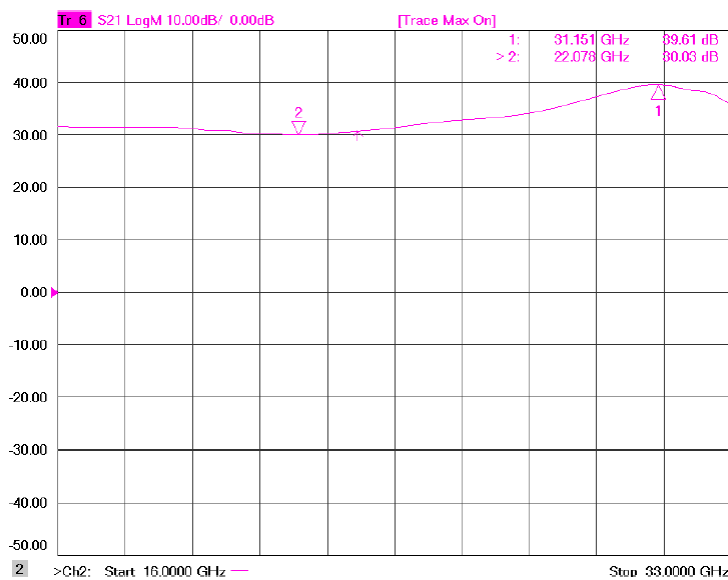


Figure 2: ERZ-HPA-1600-3300-24-E Small Signal Gain

### 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).

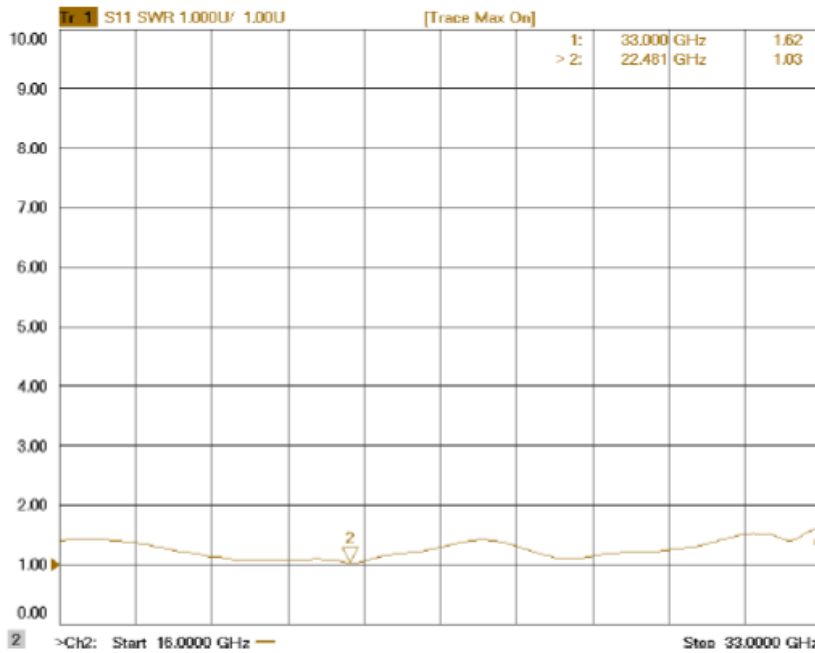


Figure 3: ERZ-HPA-1600-3300-24-E Input Matching

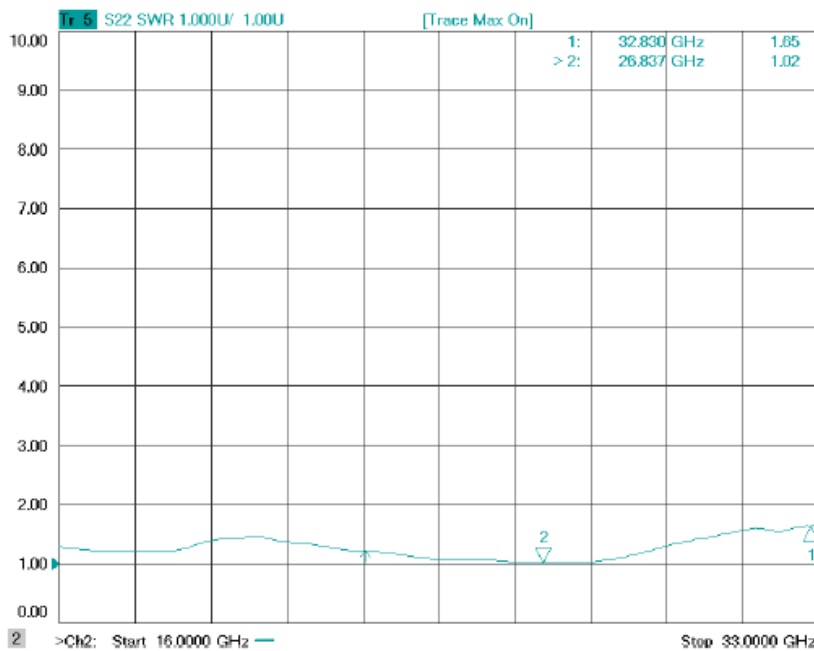


Figure 4: ERZ-HPA-1600-3300-24-E Output Matching

### Absolute Maximum Ratings

Condition	Value
DC Voltage	+16 VDC
Maximum Input Power (CW)	6 dBm
Operation temperatura (at case)	-45°C to 75°C
Storage temperature	-55°C 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)	-35°C, 25°C, 70°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

<b>ERZIA</b> ERZ-HPA-1600-3300-24-E			M I R 1 ERZ-HPA ERZ-HPA_00
DISEÑO: XL DISEÑO: XL DISEÑO: XL DISEÑO: XL	FECHA DE: XL XL XL XL	FORMATO: A CATEGORÍA: 8833 CATEGORÍA: 8833 CATEGORÍA: 8833	REVISIÓN: 0 CÓDIGO DE PRODUCTO: ERZ-HPA_00 NOMBRE DEL PRODUCTO: ERZ-HPA-1600-3300-24-E TIPO DE PRODUCTO: CONECTOR
DIMENSIONES EN MM (1) : Dimensiones en milímetros TOLERANCIAS GENERALES EN MM: 0,1 - 0,3: ±0,05 0,4 - 0,7: ±0,08 0,8 - 1,5: ±0,10 1,6 - 3,0: ±0,15 3,0 - 6,0: ±0,20 6,0 - 30,0: ±0,30	MATERIAL: NA MESH: NA	PROTECT: NA	PLAN: 1 OF 1

### 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

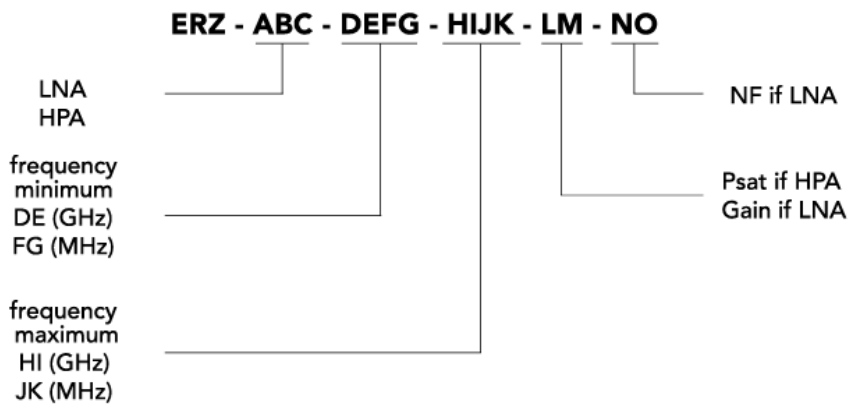
Most of ERZIA's products are based on rad-hard technologies and can be manufactured and integrated according to MIL / ECSS or specific hi-rel standard-screening for space, aeronautics, military or specific hi-reliability usage.

### 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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