ERZIA

DATASHEET

High Power Amplifier

ERZ-HPA-0050-0600-50

Main Features:

- Frequency Range: 500 to 6000 MHz.
- Typical values: Pout 50 dBm, Gain 50 dB
- RF connectors (I/O): SMA Female / N Female
- DSUB type connector for DC & Control
- Several mounting options
- Nickel coating in aluminum housing
- Hi-reliability and dedicated screening/ environmental tests available under request

ERZ-HPA-0050-0600-50

The ERZ-HPA-0050-0600-50 is a High Power Amplifier providing an output power of 50 dBm and a gain of 50 dB. The compact size and modularity makes it ideal for a wide range of applications.

Typical applications:

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

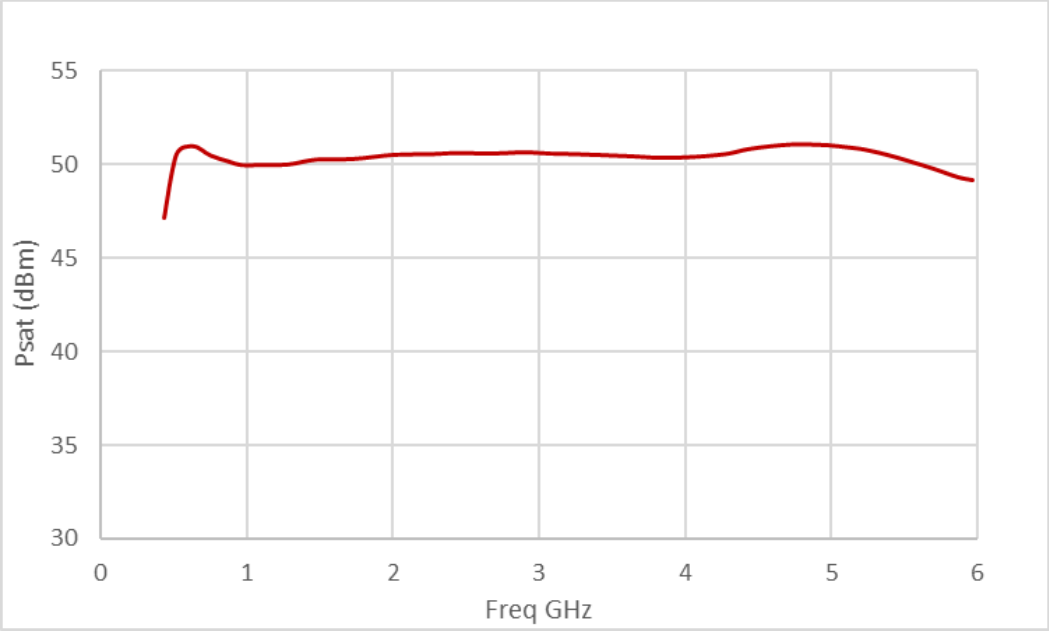
Performance

Parameter	Min	Typ	Max	Unit
Frequency Range	0.5	-	6	GHz
Output Power (Psat)	48	50	-	dBm
Small Signal Gain	50	-	-	dB
Gain Flatness	-	+/-2.5	-	dB
Noise Figure	-	7	-	dB
VSWR input	-	-	2.0:1	-
VSWR output	-	-	3.0:1	-
DC Voltage	-	24	-	V
Power Consumption @ Psat	-	600	700	W
RF Connectors	SMA Female IN N Female OUT			-

Specifications at a case temperature of 25°C

Output Power

Figure below shows typical output power at Psat at 25°C



Absolute Maximum Ratings

Condition	Value
DC Voltage	+ 36 VDC
Maximum Input Power (CW)	+15 dBm
Operation temperature (at case)	-40 to 70 °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:	-40 to +70 °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.

Power Supply & Control Interfaces

Table below shows D-Sub 5W5 connector pinout configuration

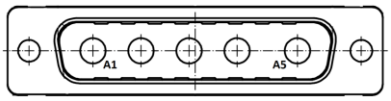


Figure 10: Power Connector. DSUB 5W5 Male Front View

PIN	LABEL	FUNCTION	DESCRIPTION
A1	VDD	VDD	+28V Power Source
A2	VDD	VDD	+28V Power Source
A3	PGND	Power Ground	Power Ground
A4	PGND	Power Ground	Power Ground
A5	PGND	Power Ground	Ground to Chasis

Table below shows D-Sub 9 connector pinout

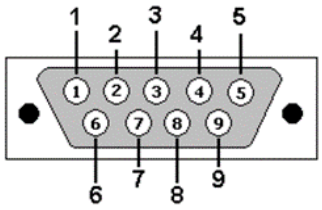
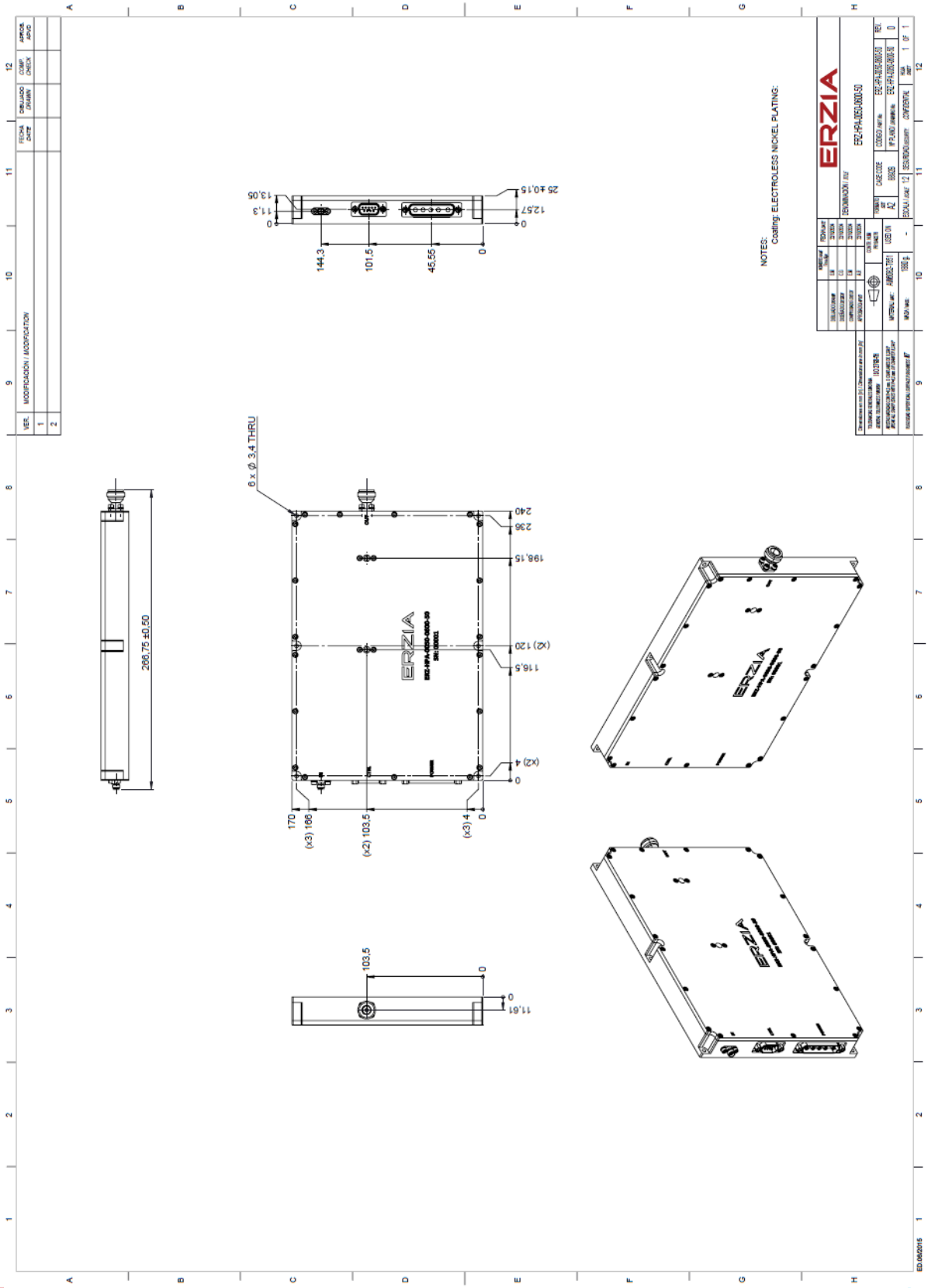


Figure 11: Control Connector. DSUB 9 Male Front View

PIN	LABEL	FUNCTION	DESCRIPTION
1	EN	Enable	TTL Signal OFF (0V to 0.8V); ON (2V to 5.5V)
2	Temp	Temperature Monitor	Vo=-11.69 mV C x T + 1.8663V
3	I_SEN	Current Sensor	Vo=0.1V/A
4	-	-	Not Connected
5	-	-	Not Connected
6, 7, 8, 9	GND	Ground	Ground

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

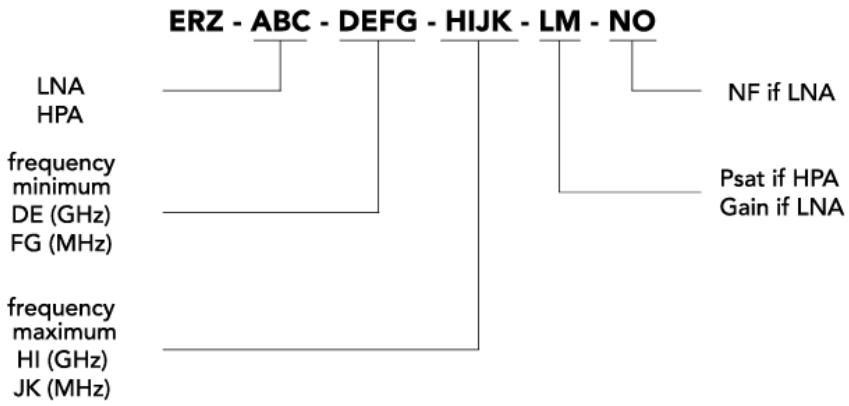
Most of ERZIA´s products are based on rad-hard technologies and can be manufactured and integrated according to MIL / ECSS or specific hi-rel standard-screening for space, aeronautics, or specific hi-reliability usage.

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



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