



Image as a reference

ERZ-HPA-0800-1100-43

The ERZ-HPA-0800-1100-43 is an X band High Power Amplifier based on GaN technology that provides 20 W.

Main Features:

- Frequency Range: 8.0 to 11.0 GHz
- Typical values: Pout: 20 W, PAE 22%
- RF connectors (I/O): SMA (F)
- DC & Control connectors: D-Sub type
- Several mounting options
- Compact aluminum housing
- Hi-reliability and dedicated screening/
environmental tests available under request

Typical applications:

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

Electrical Specifications

Parameter	Value			Units
	Min	Typ	Max	
Frequency	8.0	-	11.0	GHz
Output Power (Psat)	42.6 @85°C (base plate)	43.5	44	dBm
Small Signal Gain (mean value)	30	-	34	dB
Gain Flatness	-	+/-2	-	dB
NF (*)	-	9	-	dB
Pulse Width	-	100	-	ns
Duty Cycle	-	50	100	%
Rise Time	-	5	-	ns
Fall Time	-	5	-	ns
Input/Output VSWR	-	-	2.0:1/ 1.5:1	-
Power Consumption (@Psat) @25°C	-	110	120	W
DC consumption (No RF) @25°C	-	66	72	W
Maximum Power consumption (Temperature range)	105 @85°C	120 @25°C	135 @-40°C	W
PAE (@Psat)	-	22	-	%
Coupling value	28	30	32	dB
Coupling Flatness	-	+/-0.5	-	dB
Harmonics level (H2 @Psat)	>40			dBc
Spurious level	>60			dBc

(*) Gain + NF = 40 dB Average

Mechanical Specifications

Parameter	Value	Units
Dimensions	125 x 95 x 22 (maximum size including RF coupler)	(LxWxH) mm
RF Connectors	IN/OUT: SMA (F)	-
DC & Control Connector	D-sub combo (High Power) (*)	-

(*) The control will include:

- Temperature Monitoring (Digital I2C)
- TTL command (ON/OFF function)

Absolute Maximum Ratings

Condition	Value
DC Voltage	+28 VDC
Maximum Input Power (CW)	+33 dBm
Operation temperature (at case)	-40 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:	-40 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)

Environmental Specifications (By Request)

Humidity:	95% RH	(MIL-STD-810F, method 507.4)
Altitude:	15000 m	(MIL-STD-810F, method 500.2)

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.



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

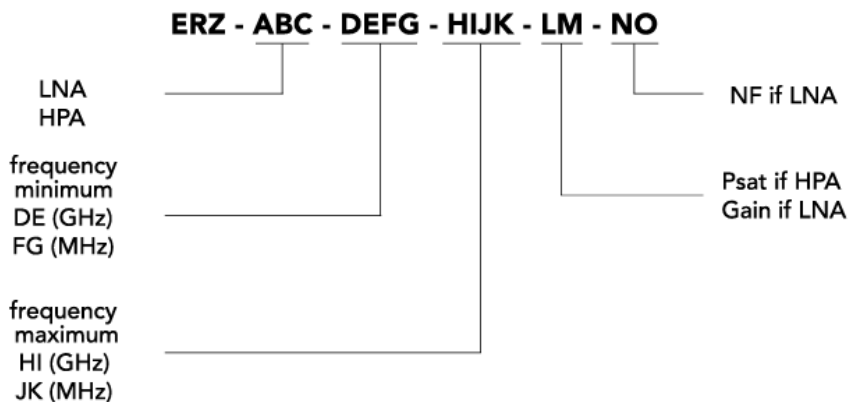
Most of ERZIA's products are based on rad-hard technologies and can be manufactured and integrated according to MIL / ECSS or specific hi-rel standard-screening for space, aeronautics, military or specific hi-reliability usage.

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

20190211_rev1.0

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