



Image as a reference

### ERZ-HPA-0200-0400-40

The ERZ-HPA-0200-0400-40 is an S band High Power Amplifier based on GaN technology that provides 10 W.

#### Main Features:

- Frequency Range: 2.0 to 4.0 GHz
- Typical values: Pout: 10 W, PAE 20%
- RF connectors (I/O): SMA (F)
- DC & Control connectors: D-Sub type
- Several mounting options
- Compact aluminum and hermetic 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	2.0	-	4.0	GHz
Output Power (Psat)	39.7 @85°C (base plate)	41	41.5	dBm
Small Signal Gain (mean value)	29	-	32	dB
Gain Flatness	-	+/-2	-	dB
NF (*)	-	13	-	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	-	65	70	W
DC consumption (No RF) @25°C	-	42	45	W
Maximum Power consumption (Temperature range)	65 @85°C	70 @25°C	95 @-40°C	W
PAE (@Psat)	20	-	-	%
Coupling value	28	30	32	dB
Coupling Flatness	-	+/-0.5	-	dB
Harmonics level (H2 @Psat)	>40			dBc
Spurious level	>60			dBc

(\*) Gain + NF = 40-44 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

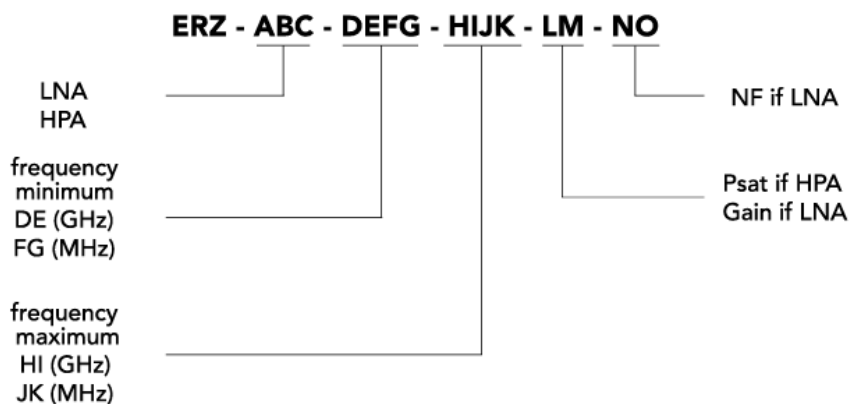
Most of ERZIA's products are based on rad-hard technologies and can be manufactured and integrated according to MIL / ECSS or specific hi-rel standard-screening for space, aeronautics, military or specific hi-reliability usage.

### 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

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