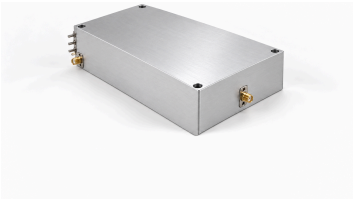
100–18000 MHz GaN RF Power Amplifier, 5 W Minimum



The GaN amplifier covers 100–18000 MHz with 5 W minimum and 7 W typical saturated output. Gain is 37 dB minimum and 38 dB typical, with ±0.5 dB typical flatness.

Dimensions are 170 × 150 × 40 mm, with SMA RF input and output. Typical supply is 28 VDC and current is 2 A at 5 W; TTL enable uses 3.3 V with an internal pull-down.

Electrical Specifications

+28.0VDC; 25°C; 50Ω

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating frequency	BW	100	-	18000	MHz
RF output power @ PSAT	PSAT	5	7	-	W
Power gain @ PSAT	Gp	37	38	-	dB
Power gain flatness @ PSAT	ΔGp	-	±0.5	-	dB
Input return loss	S11	-	-15	-	dB
Harmonics at 5 W	H	-	-40	-	dBc
Spurious signals @ PSAT	Spur	-	-60	-	dBc
Input/output impedance	Impedance	-	50	-	Ω
Operating voltage	VDC	-	28	-	VDC
DC current @ 5W	IDD	-	2	-	A
Power-added efficiency @ 5W	Eff	-	25	-	%

Absolute Maximum Ratings

Parameter	Rating
RF input drive without damage	+5 dBm maximum
Load VSWR at Pout = 5 W	5:1; All load phases and amplitudes; continuous
Thermal overload	85 °C → Shutdown (maximum)

Environmental Specifications

The environmental figures are design targets. Confirm the applicable values for your project.

Parameter	Minimum	Typical	Maximum	Unit
Operating temperature	-20	-	50	°C
Storage temperature [1]	-25	-	65	°C
Relative humidity (non-condensing)	-	-	95	%

[1] Storage temperature

DC and Control Interface

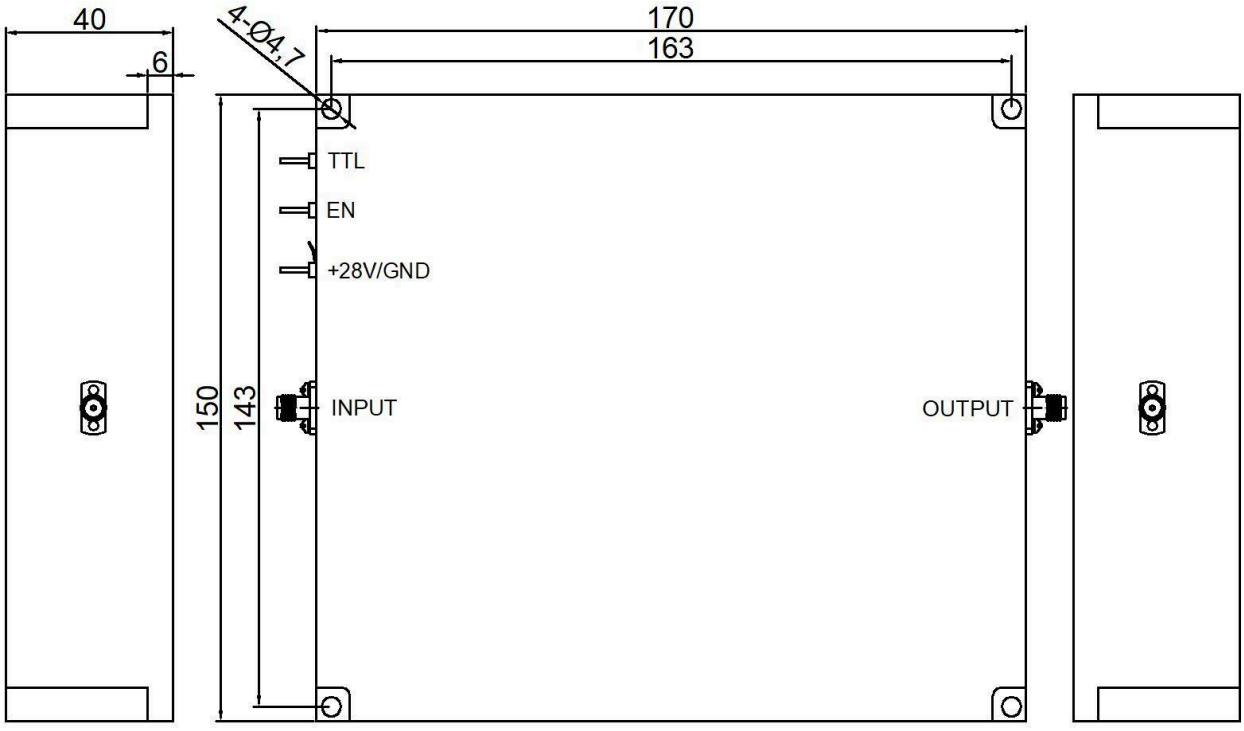
Pin #	Description	Specification
+28V/GND	+28V/GND — Positive supply	+28 VDC
EN	EN — Enable	TTL logic high (3.3 V); internally pulled low

Mechanical Specifications

The source describes the upper channel as 2000–18000 MHz, but its TTL +5 V row says 200–18000 MHz. The exact level-to-band assignment is withheld. Confirm the switching logic before connecting the TTL input.

Parameter	Value	Unit
Dimensions	170 × 150 × 40 mm	mm
Weight	2[4.4] kg [lb] (typical)	kg [lb]
RF input connector	SMA, female	-
RF output connector	SMA, female	-
DC/control interface	Feed-through pin	-
Ground connector	Ground pole pin	-

Mechanical Outline



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Document notice

Specifications are subject to revision. Before design release, confirm the current document revision and product-specific requirements with LCRF. The approved quotation and order documentation define the supplied configuration.