3000–8000 MHz GaN RF Power Amplifier, 100 W Typical, RS-485

The GaN amplifier covers 3000–8000 MHz with 80 W minimum and 100 W typical saturated output. Gain is 49 dB minimum and 50 dB typical; typical current is 18 A at 100 W output.



Dimensions are 150 × 150 × 25 mm, with an SMA input, N-K output and hybrid D-Sub 7W2. Pins 3 and 4 carry RS-485; typical supply is 28 VDC and enable is TTL high at 3.3 V with an internal pull-down.

Electrical Specifications

+28.0VDC; 25°C; 50Ω

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating frequency	BW	3000	-	8000	MHz
RF output power @ PSAT	PSAT	80	100	-	W
Power gain @ PSAT	Gp	49	50	-	dB
Power gain flatness @ PSAT	ΔGp	-	±2	-	dB
Input return loss	S11	-	-15	-	dB
Harmonics at 100 W	H	-	-15	-	dBc
Spurious signals @ PSAT	Spur	-	-60	-	dBc
Input/output impedance	Impedance	-	50	-	Ω
Operating voltage	VDC	-	28	-	VDC
Power-added efficiency @ 100W	Eff	-	20	-	%
DC current @ 100W	IDD	-	18	-	A

Absolute Maximum Ratings

Parameter	Rating
RF input drive without damage	+10 dBm maximum
Load VSWR at Pout = 100 W	∞; 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	%

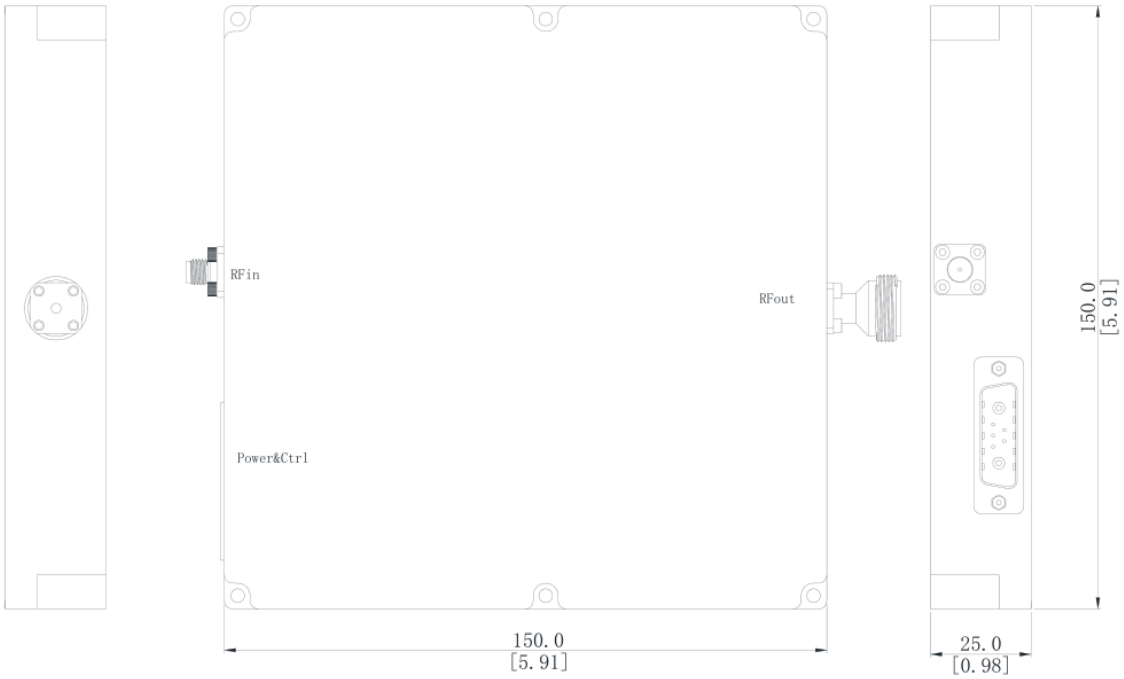
[1] Storage temperature

DC and Control Interface

Pin #	Description	Specification
A1	A1 — Ground	Ground
A2	A2 — Positive supply	+28V
1	1 — Enable	TTL logic high (3.3 V); internally pulled low
2	2 — Ground	Ground
3	3 — 485A	RS-485 serial communication
4	4 — 485B	RS-485 serial communication
5	5 — Not connected	Not connected

Mechanical Specifications

Parameter	Value	Unit
Dimensions	150 × 150 × 25 mm (maximum)	mm
Weight	2 kg (maximum)	kg
RF input connector	SMA, female	-
RF output connector	N-K	-
DC/control interface	Hybrid, D-Sub 7W2, male	-



Current publication record · 1.3 · 2026-11-11. Specification tables updated. Replaces revision 1.2.

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.