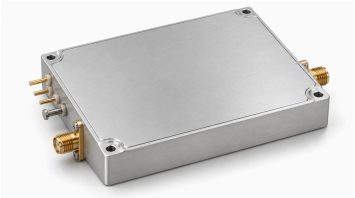
6000–8500 MHz GaN RF Power Amplifier, 25 W Typical



This model specifies 25 W typical and 20 W minimum saturated output across 6000–8500 MHz. Gain is 44 dB typical and 43 dB minimum, with ±0.5 dB typical gain flatness.

Typical weight is 0.5 kg and original outline dimensions are 80 × 60 × 12 mm, with two SMA ports. The source specifies continuous infinite load VSWR at 25 W and maximum thermal shutdown at 85 °C; operating temperature is –20–50 °C. The stated operating temperature is an environmental design target; this source does not establish qualification of that range.

Electrical Specifications

+28.0VDC; 25°C; 50Ω

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating frequency	BW	6000	-	8500	MHz
RF output power @ PSAT	PSAT	20	25	-	W
Power gain @ PSAT	Gp	43	44	-	dB
Power gain flatness @ PSAT	ΔGp	-	±0.5	-	dB
Input return loss	S11	-	-15	-	dB
Harmonics at 20 W	H	-	-40	-	dBc
Spurious signals @ PSAT	Spur	-	-60	-	dBc
Input/output impedance	Impedance	-	50	-	Ω
Operating voltage	VDC	-	28	-	VDC
Quiescent current	IQ	-	1.8	-	A
DC current @ 20W	IDD	-	2.5	-	A
Power-added efficiency @ 20W	Eff	-	30	-	%

Absolute Maximum Ratings

Parameter	Rating
RF input drive without damage	+10 dBm maximum
Load VSWR at Pout = 25 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	%

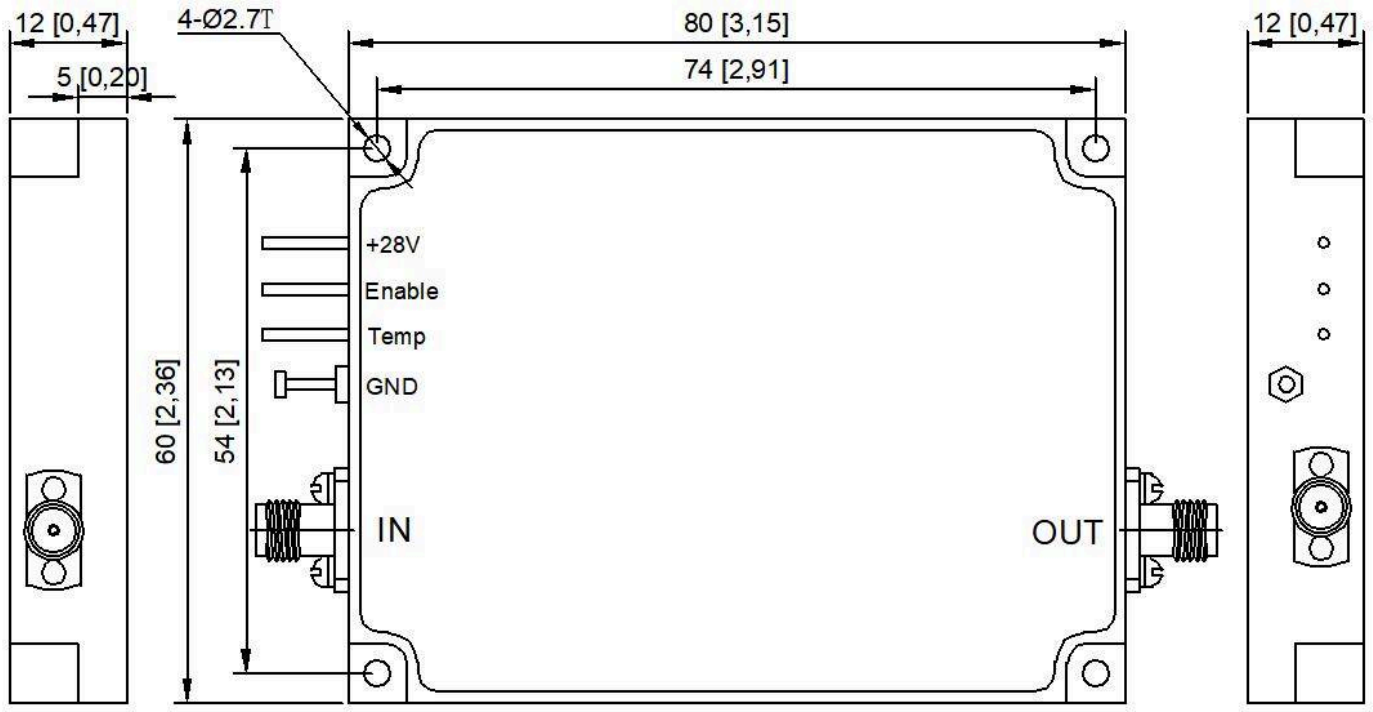
[1] Storage temperature

DC and Control Interface

Pin #	Description	Specification
+28V	+28V — Positive supply	+28 VDC
GND	GND — Ground	Ground
EN	EN — Enable	TTL logic high (3.3 V); internally pulled low
Temp	Temp — Temperature sense output	750 mV @25 °C; 10 mV/°C

Mechanical Specifications

Parameter	Value	Unit
Dimensions	80 × 60 × 12 mm	mm
Weight	0.5[1.1] 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	-



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.