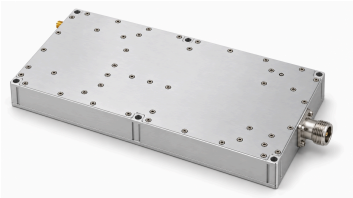
20–520 MHz LDMOS RF Power Amplifier, 350 W Typical Saturated Output



The LDMOS amplifier covers 20–520 MHz with 350 W typical saturated output and 150 W typical output at 1 dB compression. Typical gain is 56 dB, with 29 A typical current at 350 W and 48 VDC typical supply.

Maximum dimensions are 245 × 150 × 30 mm and maximum weight is 3.5 kg, with an SMA input and N-K output. Operating temperature is 0–50 °C; the source specifies TTL enable at 3.3 V with internal pull-down and 3:1 load VSWR at 350 W. The stated operating temperature is an environmental design target; this source does not establish qualification of that range.

Electrical Specifications

+48.0VDC; 25°C; 50Ω

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating frequency	BW	20	-	520	MHz
Output power at 1 dB compression	P-1dB	-	150	-	W
RF output power @ PSAT	PSAT	-	350	-	W
Power gain @ PSAT	Gp	-	56	-	dB
Power gain flatness @ PSAT	ΔGp	-	±2	-	dB
Input return loss	S11	-	-	-15	dB
Harmonics at 350 W	H	-	-12	-	dBc
Spurious signals @ PSAT	Spur	-	-60	-	dBc
Input/output impedance	Impedance	-	50	-	Ω
Operating voltage	VDC	-	48	-	VDC
Power-added efficiency @ 350W	Eff	-	25	-	%
DC current @ 350W	IDD	-	29	-	A

Absolute Maximum Ratings

Parameter	Rating
RF input drive without damage	+5 dBm maximum
Load VSWR at Pout = 350 W	3:1; 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	0	-	50	°C
Storage temperature [1]	-45	-	80	°C
Relative humidity (non-condensing)	-	-	95	%

[1] Storage temperature

DC and Control Interface

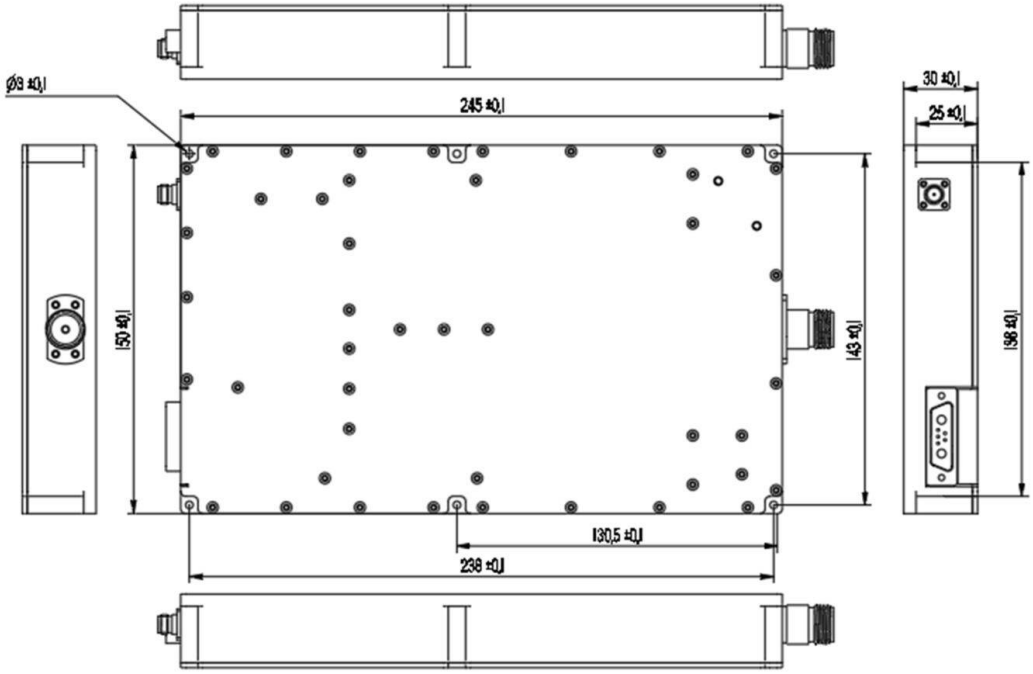
Pin #	Description	Specification
1	1 — Enable	TTL logic high (3.3 V); internally pulled low
2	2 — Ground	Ground
3	3 — Not connected	Not connected
4	4 — Not connected	Not connected
5	5 — Not connected	Not connected

Mechanical Specifications

The source labels A1 GND but assigns +48 V, and labels A2 VDD but assigns ground. These supply-pin assignments are withheld. Obtain confirmed power and ground wiring before applying supply voltage; do not infer swapped pins.

Parameter	Value	Unit
Dimensions	245 × 150 × 30 mm (maximum)	mm
Weight	3.5 kg (maximum)	kg
RF input connector	SMA, female	-
RF output connector	N-K	-
DC/control interface	Hybrid, D-Sub 7, male	-

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.