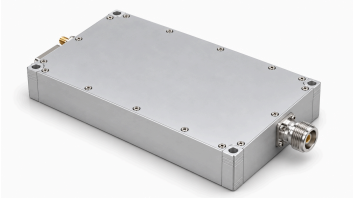
700–4000 MHz Broadband RF Power Amplifier Module, 50 W Typical Saturated Output

LCPAM-700-4000-50-485 is a broadband power amplifier module for 700–4000 MHz signal amplification. Its source describes wideband jamming, electronic countermeasure, counter-UAV and tactical communication applications. Typical saturated output is 50 W and typical power gain is 47 dB.



The operating-voltage range is 24–32 V DC, with 28 V typical. Current at Pout = 50 W is typically 7 A. The module has SMA female input, N female output and a hybrid 7-contact D-Sub power/control connector, including RS-485 A/B. The outline drawing gives a 160×100×25 mm housing, excluding connector projections.

Environmental limits are stated as design-to-meet values, separately from absolute-maximum ratings.

Electrical specifications

+28.0 V DC; 25°C; 50Ω

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating frequency	BW	700	-	4000	MHz
Saturated RF output power	Pout	-	50	-	W
Power gain	Gp	-	47	-	dB
Operating voltage	VDC	24	28	32	V
Current consumption @Pout = 50 W	IDD	-	7	-	A
Power-gain flatness	Gp	-	±2	-	dB
Harmonics @50 W	H	-	-12	-	dBc
Spurious signals	Spur	-	-60	-	dBc
Input/output impedance	Impedance	-	50	-	Ω
Power-added efficiency	Eff	-	20	-	%

Absolute maximum ratings

Parameter	Value	Unit
RF input drive without damage [1]	+10	dBm
Load VSWR tolerance @Pout = 50 W [2]	3:1	-
Thermal-overload shutdown [3]	85	°C

[1] Max

[2] All load phases; the source specifies continuous amplitude.

[3] Amplifier shutdown.

Environmental specifications — design to meet

Parameter	Minimum	Typical	Maximum	Unit
Operating temperature	-20	-	50	°C
Storage temperature	-25	-	65	°C

RF and power/control connectors

Interface	Specification
RF input connector	SMA, female
RF output connector	N, female
DC interface connector	Hybrid D-Sub, 7-contact, male

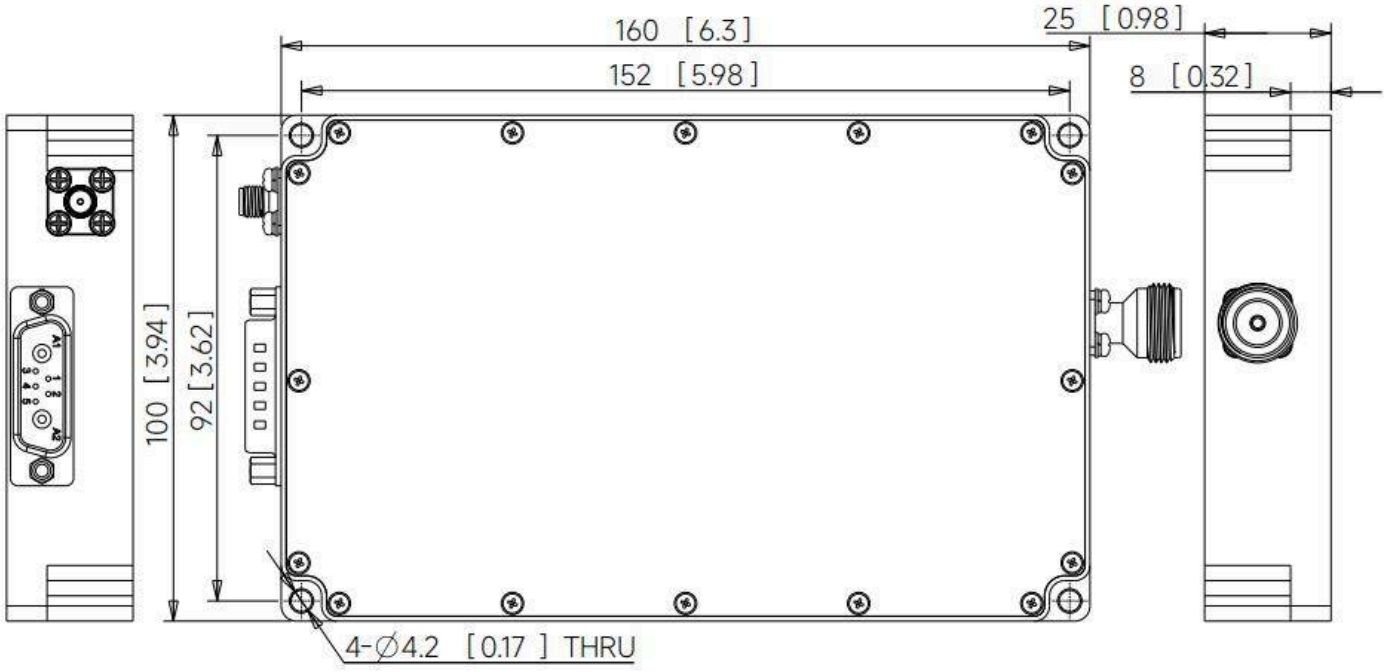
DC interface pinout

Pin #	Description	Specification
A1	GND	Ground
A2	VDD	+28 V
1	ENABLE	Amplifier enable: TTL high (3.3 V), internally pulled low.
2	GND	Ground
3	485A	RS-485 serial communication
4	485B	RS-485 serial communication
5	NC	Not connected

Mechanical specifications

Parameter	Value	Unit
Body dimensions	160 × 100 × 25 (Housing dimensions from the outline drawing, excluding connector projections. The source mechanical table marks the dimensions as Max.)	mm
Weight	1 (Maximum; the source also gives 2.2 lb.)	kg
Mounting-hole centre spacing	152 × 92	mm
Mounting holes	4 × Ø4.2	mm

Mechanical Outline



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.