Product catalog

Solid State Power Amplifiers

Solid state power amplifiers use semiconductor RF power devices to generate transmit-chain output power without vacuum-tube stages. They are used in communication transmitters, radar channels, RF test platforms and custom microwave subsystems.



Products: 21

Revision: 14 · Revision date: 2026-11-12



LCPAM-2000-6000-100-485

2–6 GHz 100 W GaN Broadband RF Power Amplifier Module

The LCPAM-2000-6000-100-485 is a 2–6 GHz broadband high-power RF amplifier module using GaN technology, with 100 W typical saturated output and 50 dB typical gain. It operates from 24–32 VDC and includes an RS-485 interface, status monitoring and protective shutdown. The module can be evaluated as a power stage in 50 Ω RF systems.

Operating frequency: Symbol: BW; Minimum: 2000; Maximum: 6000; Unit: MHz

Saturated RF output power: Symbol: Pout; Typical: 100; Unit: W

Power gain: Symbol: Gp; Typical: 50; Unit: dB

Operating voltage: Symbol: VDC; Minimum: 24; Typical: 28; Maximum: 32; Unit: VDC

+28.0 VDC, 25 °C, 50 Ω system unless otherwise stated

Product details Product datasheet



LCPAM-100-18000-5

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.

Operating frequency: Symbol: BW; Minimum: 100; Maximum: 18000; Unit: MHz

RF output power @ PSAT: Symbol: PSAT; Minimum: 5; Typical: 7; Unit: W

Power gain @ PSAT: Symbol: Gp; Minimum: 37; Typical: 38; Unit: dB

Power gain flatness @ PSAT: Symbol: ΔGp; Typical: ±0.5; Unit: dB

+28.0VDC; 25°C; 50Ω

Product details Product datasheet



LCPAM-10700-12700-100

10700–12700 MHz GaN RF Power Amplifier, 100 W Typical

The GaN amplifier covers 10700–12700 MHz with 100 W typical saturated output and 50 dB typical gain. Typical flatness is ±1 dB, with −50 dBc typical harmonics at 100 W output.

Operating frequency: Symbol: BW; Minimum: 10700; Maximum: 12700; Unit: MHz

RF output power @ PSAT: Symbol: PSAT; Typical: 100; Unit: W

Power gain @ PSAT: Symbol: Gp; Typical: 50; Unit: dB

Power gain flatness @ PSAT: Symbol: ΔGp; Typical: ±1; Unit: dB

+28.0VDC; 25°C; 50Ω. Confirm operating current and current-protection behavior with LCRF before sizing the power supply.

Product details Product datasheet



LCPAM-10700-12700-50

10700–12700 MHz GaN RF Power Amplifier, 50 W Typical

The GaN amplifier delivers 50 W typical saturated output across 10700–12700 MHz and 47 dB typical gain. Typical dynamic current is 10 A at 50 W, with 1.6 A typical quiescent current.

Operating frequency: Symbol: BW; Minimum: 10700; Maximum: 12700; Unit: MHz

RF output power @ PSAT: Symbol: PSAT; Typical: 50; Unit: W

Power gain @ PSAT: Symbol: Gp; Typical: 47; Unit: dB

Power gain flatness @ PSAT: Symbol: ΔGp; Typical: ±1; Unit: dB

+28.0VDC; 25°C; 50Ω

Product details Product datasheet



LCPAM-10700-12750-100

10700–12750 MHz GaN RF Power Amplifier, 100 W Typical, WR75 Adapter

The GaN amplifier covers 10700–12750 MHz with 100 W typical saturated output and 50 dB minimum gain. Typical output at 1 dB compression is 40 W; typical current is 21 A at 100 W.

Operating frequency: Symbol: BW; Minimum: 10700; Maximum: 12750; Unit: MHz

Output power at 1 dB compression: Symbol: P-1dB; Typical: 40; Unit: W

RF output power @ PSAT: Symbol: PSAT; Typical: 100; Unit: W

Power gain @ PSAT: Symbol: Gp; Minimum: 50; Unit: dB

+28.0VDC; 25°C; 50Ω

Product details Product datasheet



LCPAM-2000-6000-20

2000–6000 MHz GaN RF Power Amplifier, 25 W Typical Saturated Output

This model's sheet specifies 25 W typical saturated output across 2000–6000 MHz and 44 dB typical gain. Typical current of 2.5 A and power-added efficiency of 30% are both specified at 20 W output.

Operating frequency: Symbol: BW; Minimum: 2000; Maximum: 6000; Unit: MHz

RF output power @ PSAT: Symbol: PSAT; Typical: 25; Unit: W

Power gain @ PSAT: Symbol: Gp; Typical: 44; Unit: dB

Power gain flatness @ PSAT: Symbol: ΔGp; Typical: ±1; Unit: dB

+28.0VDC; 25°C; 50Ω

Product details Product datasheet



LCPAM-20-520-200A

20–520 MHz 200 W Saturated LDMOS RF Power Amplifier Module

This LDMOS final-stage module covers 20–520 MHz with 200 W typical saturated output. Its 1 dB compression output is separately specified at 50 W typical, with 53 dB typical small-signal gain.

Operating frequency: Symbol: BW; Minimum: 20; Maximum: 520; Unit: MHz

Saturated RF output power: Symbol: Psat; Typical: 200; Unit: W

Output power at 1 dB compression: Symbol: P1dB; Typical: 50; Unit: W

Small-signal gain: Symbol: G; Typical: 53; Unit: dB

25 °C; 50 Ω

Product details Product datasheet



LCPAM-20-520-350

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.

Operating frequency: Symbol: BW; Minimum: 20; Maximum: 520; Unit: MHz

Output power at 1 dB compression: Symbol: P-1dB; Typical: 150; Unit: W

RF output power @ PSAT: Symbol: PSAT; Typical: 350; Unit: W

Power gain @ PSAT: Symbol: Gp; Typical: 56; Unit: dB

+48.0VDC; 25°C; 50Ω

Product details Product datasheet



LCPAM-3000-8000-100-485

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.

Operating frequency: Symbol: BW; Minimum: 3000; Maximum: 8000; Unit: MHz

RF output power @ PSAT: Symbol: PSAT; Minimum: 80; Typical: 100; Unit: W

Power gain @ PSAT: Symbol: Gp; Minimum: 49; Typical: 50; Unit: dB

Power gain flatness @ PSAT: Symbol: ΔGp; Typical: ±2; Unit: dB

+28.0VDC; 25°C; 50Ω

Product details Product datasheet



LCPAM-30-1000-10

30–1000 MHz GaN RF Power Amplifier, 10 W Typical

The GaN amplifier covers 30–1000 MHz with 9 W minimum and 10 W typical saturated output. Typical gain is 40 dB with ±1 dB flatness; typical current is 0.6 A at 10 W output.

Operating frequency: Symbol: BW; Minimum: 30; Maximum: 1000; Unit: MHz

RF output power @ PSAT: Symbol: PSAT; Minimum: 9; Typical: 10; Unit: W

Power gain @ PSAT: Symbol: Gp; Typical: 40; Unit: dB

Power gain flatness @ PSAT: Symbol: ΔGp; Typical: ±1; Unit: dB

+28.0VDC; 25°C; 50Ω

Product details Product datasheet



LCPAM-30-1500-1

30–1500 MHz GaN RF Power Amplifier, 1 W Minimum

This module specifies 1 W minimum saturated output and 30 dB minimum gain across 30–1500 MHz. Typical current is 0.15 A at 1 W, with ±1 dB typical gain flatness.

Operating frequency: Symbol: BW; Minimum: 30; Maximum: 1500; Unit: MHz

RF output power @ PSAT: Symbol: PSAT; Minimum: 1; Unit: W

Power gain @ PSAT: Symbol: Gp; Minimum: 30; Unit: dB

Power gain flatness @ PSAT: Symbol: ΔGp; Typical: ±1; Unit: dB

+28.0VDC; 25°C; 50Ω

Product details Product datasheet



LCPAM-30-2000-1

30–2000 MHz GaN RF Power Amplifier, 1 W Minimum

This model covers 30–2000 MHz as specified in the electrical table, with 1 W minimum saturated output and 30 dB minimum gain. Typical harmonics are −12 dBc at 1 W, with −60 dBc typical spurious signals at saturation.

Operating frequency: Symbol: BW; Minimum: 30; Maximum: 2000; Unit: MHz

RF output power @ PSAT: Symbol: PSAT; Minimum: 1; Unit: W

Power gain @ PSAT: Symbol: Gp; Minimum: 30; Unit: dB

Power gain flatness @ PSAT: Symbol: ΔGp; Typical: ±1; Unit: dB

+28.0VDC; 25°C; 50Ω

Product details Product datasheet



LCPAM-5000-6000-100

5–6 GHz ≥100 W GaN RF Power Amplifier Module

LCPAM-5000-6000-100 is rated for 100 W minimum saturated output and 50 dB minimum gain at PSAT over 5–6 GHz, at 28 VDC, 25 °C and 50 Ω.

Operating frequency: Symbol: BW; Minimum: 5000; Maximum: 6000; Unit: MHz

Saturated RF output power: Symbol: PSAT; Minimum: 100; Unit: W; PSAT

Power gain (PSAT): Symbol: Gp; Minimum: 50; Unit: dB; PSAT

Power gain flatness (PSAT): Symbol: ΔGp; Typical: ±1; Unit: dB; PSAT

28 VDC; 25 °C; 50 Ω

Product details Product datasheet



LCPAM-5000-8500-25

5000–8500 MHz GaN RF Power Amplifier, 25 W Typical

The GaN amplifier covers 5000–8500 MHz with 20 W minimum and 25 W typical saturated output. Gain is 43 dB minimum and 44 dB typical; typical harmonics are −40 dBc at 20 W output.

Operating frequency: Symbol: BW; Minimum: 5000; Maximum: 8500; Unit: MHz

RF output power @ PSAT: Symbol: PSAT; Minimum: 20; Typical: 25; Unit: W

Power gain @ PSAT: Symbol: Gp; Minimum: 43; Typical: 44; Unit: dB

Power gain flatness @ PSAT: Symbol: ΔGp; Typical: ±0.5; Unit: dB

+28.0VDC; 25°C; 50Ω

Product details Product datasheet



LCPAM-500-2500-100A

500–2500 MHz GaN RF Power Amplifier, 100 W Typical, Variant A

GaN variant A covers 500–2500 MHz with 100 W typical saturated output and 50 dB typical gain. Typical current is 12 A at 100 W, while the harmonic measurement remains tied to 70 W output.

Operating frequency: Symbol: BW; Minimum: 500; Maximum: 2500; Unit: MHz

RF output power @ PSAT: Symbol: PSAT; Typical: 100; Unit: W

Power gain @ PSAT: Symbol: Gp; Typical: 50; Unit: dB

Power gain flatness @ PSAT: Symbol: ΔGp; Typical: ±2; Unit: dB

+28.0VDC; 25°C; 50Ω The electrical table specifies 26 VDC minimum, 28 VDC typical and 30 VDC maximum, while the A1 VDD row states 28–32 VDC. The A1 supply-range claim is withheld. Confirm the permitted supply range and A1 wiring before applying power; 32 VDC is not an accepted operating maximum here.

Product details Product datasheet



LCPAM-6000-18000-50

6–18 GHz Solid-State RF Power Amplifier, 50 W Typical

The solid-state amplifier covers 6–18 GHz with 45 W minimum and 50 W typical saturated output at 0 dBm input. Typical gain is 47 dB; gain flatness is ±1.5 dB typical and ±2.5 dB maximum under the same input condition.

Operating frequency: Symbol: BW; Minimum: 6; Maximum: 18; Unit: GHz

Saturated RF output power @ Pin = 0 dBm: Symbol: Psat; Minimum: 45; Typical: 50; Unit: W

Power gain @ Pin = 0 dBm: Symbol: Gp; Typical: 47; Unit: dB

Power gain flatness @ Pin = 0 dBm: Symbol: ΔGp; Typical: ±1.5; Maximum: ±2.5; Unit: dB

Product details Product datasheet



LCPAM-6000-8500-20

6000–8500 MHz GaN RF Power Amplifier, 20 W Minimum

This model's sheet specifies 20 W minimum and 25 W typical saturated output across 6000–8500 MHz. Typical current of 2.5 A and power-added efficiency of 30% apply at 20 W; typical quiescent current is 1.8 A.

Operating frequency: Symbol: BW; Minimum: 6000; Maximum: 8500; Unit: MHz

RF output power @ PSAT: Symbol: PSAT; Minimum: 20; Typical: 25; Unit: W

Power gain @ PSAT: Symbol: Gp; Minimum: 43; Typical: 44; Unit: dB

Power gain flatness @ PSAT: Symbol: ΔGp; Typical: ±0.5; Unit: dB

+28.0VDC; 25°C; 50Ω

Product details Product datasheet



LCPAM-6000-8500-25

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.

Operating frequency: Symbol: BW; Minimum: 6000; Maximum: 8500; Unit: MHz

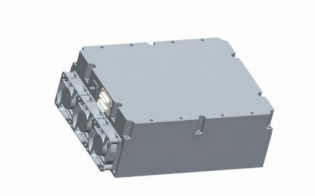
RF output power @ PSAT: Symbol: PSAT; Minimum: 20; Typical: 25; Unit: W

Power gain @ PSAT: Symbol: Gp; Minimum: 43; Typical: 44; Unit: dB

Power gain flatness @ PSAT: Symbol: ΔGp; Typical: ±0.5; Unit: dB

+28.0VDC; 25°C; 50Ω

Product details Product datasheet



LCPAM-8000-12000-100

8000–12000 MHz GaN RF Power Amplifier, 100 W Typical

The GaN amplifier covers 8000–12000 MHz with 100 W typical saturated output and 53 dB minimum gain. Typical output at 1 dB compression is 20 W, with ±1.5 dB typical gain flatness.

Operating frequency: Symbol: BW; Minimum: 8000; Maximum: 12000; Unit: MHz

Output power at 1 dB compression: Symbol: P-1dB; Typical: 20; Unit: W

RF output power @ PSAT: Symbol: PSAT; Typical: 100; Unit: W

Power gain @ PSAT: Symbol: Gp; Minimum: 53; Unit: dB

+28.0VDC; 25°C; 50Ω

Product details Product datasheet



LCPAS-8000-12000-200

8000–12000 MHz GaN RF Power Amplifier System, 200 W Typical

The GaN system covers 8000–12000 MHz with 200 W typical saturated output and 40 W typical output at 1 dB compression. Gain is 53 dB minimum with ±1.5 dB typical gain flatness.

Operating frequency: Symbol: BW; Minimum: 8000; Maximum: 12000; Unit: MHz

Output power at 1 dB compression: Symbol: P-1dB; Typical: 40; Unit: W

RF output power @ PSAT: Symbol: PSAT; Typical: 200; Unit: W

Power gain @ PSAT: Symbol: Gp; Minimum: 53; Unit: dB

+28.0VDC; 25°C; 50Ω

Product details Product datasheet



LCPAS-8000-12000-400

8000–12000 MHz GaN RF Power Amplifier System, 400 W Typical

The GaN system specifies 400 W typical saturated output across 8000–12000 MHz and 120 W typical output at 1 dB compression. Gain is 56 dB minimum with ±1.5 dB typical gain flatness.

Operating frequency: Symbol: BW; Minimum: 8000; Maximum: 12000; Unit: MHz

Output power at 1 dB compression: Symbol: P-1dB; Typical: 120; Unit: W

RF output power @ PSAT: Symbol: PSAT; Typical: 400; Unit: W

Power gain @ PSAT: Symbol: Gp; Minimum: 56; Unit: dB

+28.0VDC; 25°C; 50Ω

Product details Product datasheet

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.