13800–18200 MHz GaN MMIC Power Amplifier Die

LCI-PA-13800-18200-PS47p5T is a GaN MMIC power amplifier supplied as bare die for 13800–18200 MHz. It supports pulsed operation.

PSAT: 47 dBm (minimum) / 47.5 dBm (typical); Power gain: 21 dB (minimum) / 21.5 dB (typical); PAE: 33 % (typical). Die dimensions: 3.6 × 5.9 × 0.1 mm.



RF characteristics

TA = +25 °C; Vd = +28 V; Vg = -2.8 V

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating frequency	f	13800	-	18200	MHz
Saturated output power	Psat	47	47.5	-	dBm
Power gain	Gp	21	21.5	-	dB
Power-gain flatness	ΔGp	-	-	±0.5	dB
Power-added efficiency	PAE	-	33	-	%
Small-signal gain	S21	-	33	35	dB
Small-signal gain flatness	ΔS21	-	-	±2	dB
Input VSWR	VSWR(in)	-	1.6	3	-

DC bias and current

TA = +25 °C

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Drain voltage	Vd	-	28	36	V
Gate voltage	Vg	-3.4	-2.8	-2.4	V
Quiescent drain current	Id	-	1.8	-	A
Dynamic drain current	Idd	-	6	6.5	A
Dynamic gate current	Igg	-	0.2	0.5	mA

Absolute limits

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Maximum drain-source voltage	Vd	-	-	36	V
Minimum gate bias	Vg	-5	-	-	V
Maximum input power	Pin	-	-	33	dBm
Storage temperature	TSTG	-65	-	150	°C
Maximum channel temperature	Top	-	-	225	°C

Die dimensions

Parameter	Value	Unit
Die dimensions	3.6 × 5.9 × 0.1	mm

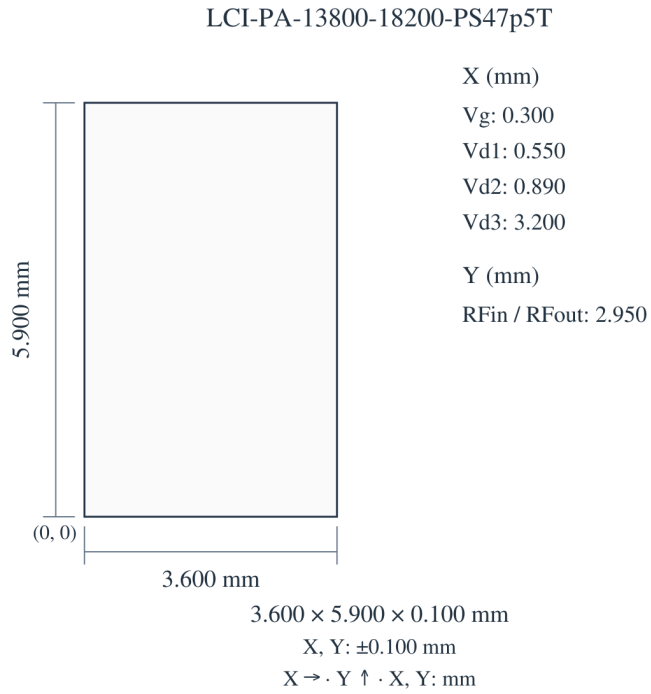
Current publication record · 1.6 · 2026-11-12. Product description or editorial content updated. Replaces revision 1.5.

Die integration and bias sequencing

Integrated DC blocking: RFin / RFout. Separate characterization: Vd = +28 V; Vg = -2.8 V. Apply gate bias before drain bias. Remove drain bias before gate bias.

Mechanical Outline

Outline and dimensioned coordinates in mm. Use this drawing as a dimensional reference. Fabrication and wire bonding require complete drawings.

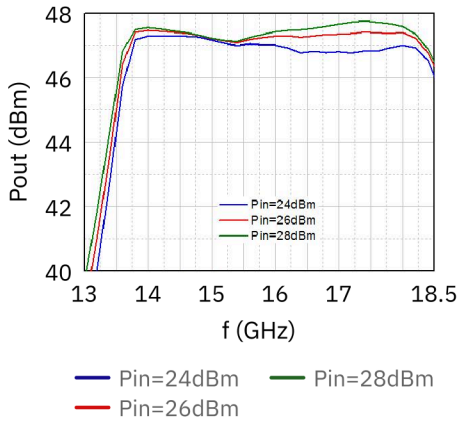


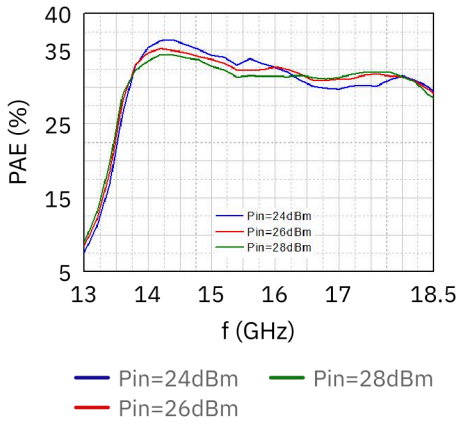
Performance curves

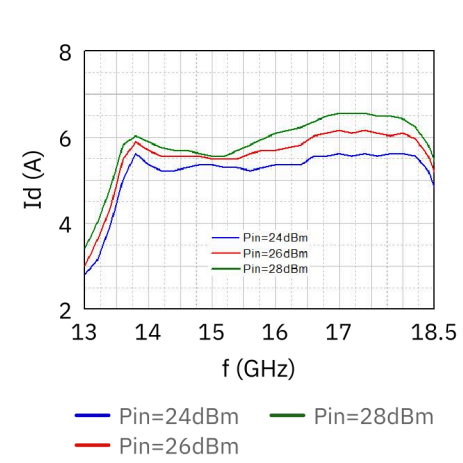
Each performance plot applies to its stated operating conditions.

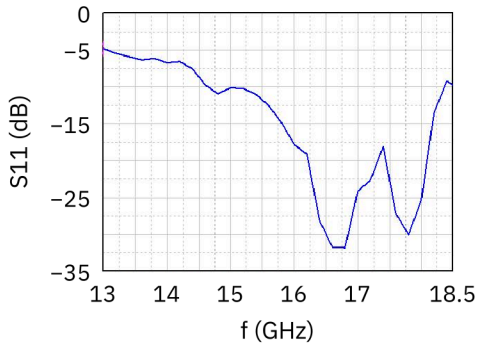
Output power; Power-added efficiency; Drain current; Small-signal gain; Input matching.

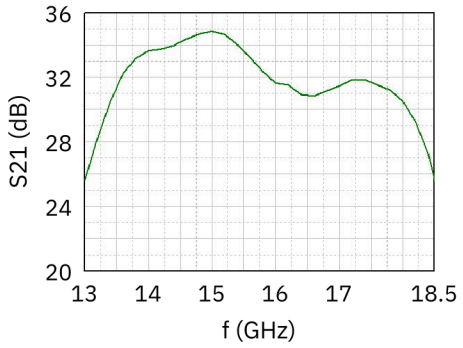
Figure notes: Vd=+28V; Vg=-2.8V. (1–3): Pin = 24 / 26 / 28 dBm. Conditions apply to the indicated plots and their own legends.











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.