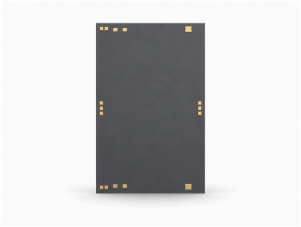
14200–16800 MHz GaN MMIC Power Amplifier Die

LCI-PA-14200-16800-PS48T is a GaN MMIC power amplifier supplied as bare die for 14200–16800 MHz. It supports CW and pulsed operation.

pulsed: PSAT: 48 dBm (typical); Power gain: 20 dB (typical); PAE: 35 % (typical). Die dimensions: 3.6 × 5.9 × 0.08 mm.



RF characteristics

TA = +25 °C; Vd = +28 V; Vg = -2.6 V; Pin = 28 dBm; τ = 100 µs; D = 5%; pulsed

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating frequency	f	14200	-	16800	MHz
Saturated output power	Psat	-	48	-	dBm
Power gain	Gp	-	20	-	dB
Power-gain flatness	ΔGp	-	-	±0.35	dB
Power-added efficiency	PAE	-	35	-	%

DC bias and current

TA = +25 °C; pulsed

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Drain voltage	Vd	-	28	-	V
Gate voltage	Vg	-3.2	-2.6	-2.4	V
Quiescent drain current	Id	-	1.2	-	A
Dynamic drain current	Idd	-	7	-	A
Dynamic gate current	Igg	-	-	10	mA

RF characteristics (CW)

TA = +25 °C; Vd = +28 V; Vg = -3.0 V; CW

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating frequency	f	14500	-	16000	MHz
Saturated output power	Psat	45.5	46	-	dBm
Power gain	Gp	16.5	17	-	dB
Power-added efficiency	PAE	33	35	-	%
Quiescent drain current	Id	0.12	0.5	1	A
Gate voltage	Vg	-3.2	-3	-2.8	V

Absolute limits

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Maximum drain-source voltage	Vd	-	-	32	V
Minimum gate bias	Vg	-5	-	-	V
Maximum input power	Pin	-	-	32	dBm
Storage temperature	TSTG	-65	-	150	°C
Maximum channel temperature	Top	-	-	200	°C

Die dimensions

Parameter	Value	Unit
Die dimensions	3.6 × 5.9 × 0.08	mm

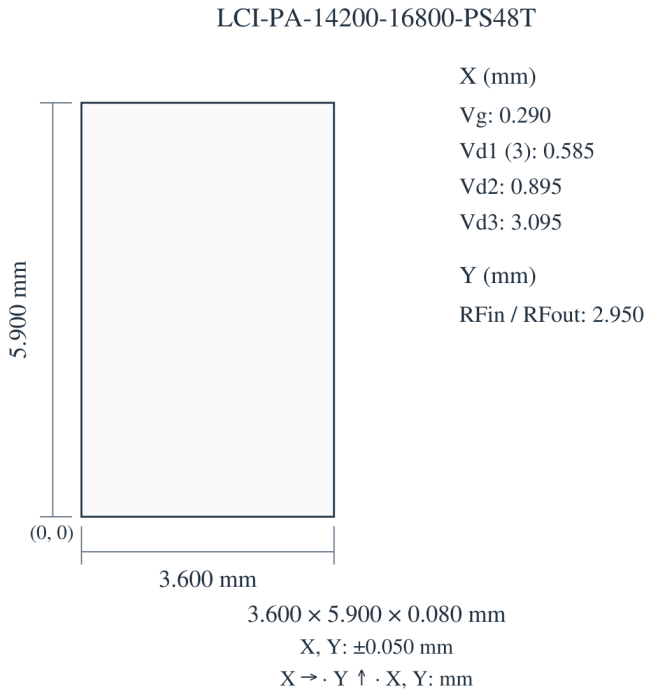
Current publication record · 1.9 · 2026-11-12. Product description or editorial content updated. Replaces revision 1.8.

Die integration and bias sequencing

Integrated DC blocking: RFin / RFout. DC path to ground: RFin → GND. 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.

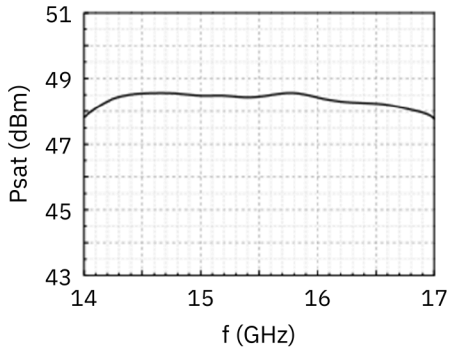


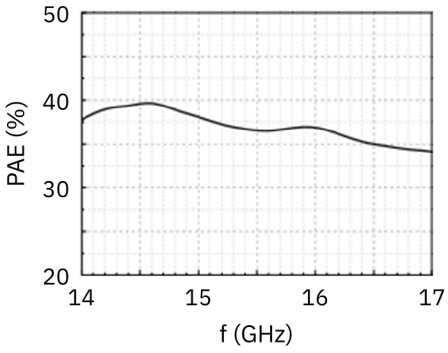
Performance curves

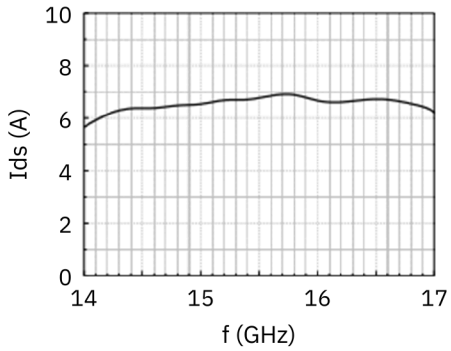
Each performance plot applies to its stated operating conditions.

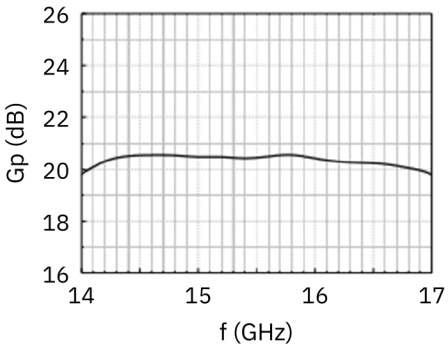
Pulsed — Small-signal gain; Saturated output power; Input matching; Power gain; Power-added efficiency; Dynamic drain current.

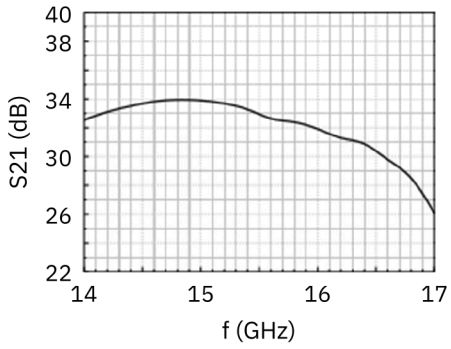
Figure notes: TA=+25°C; Vd=+28V; Vg=-2.6V; Pin=28dBm.

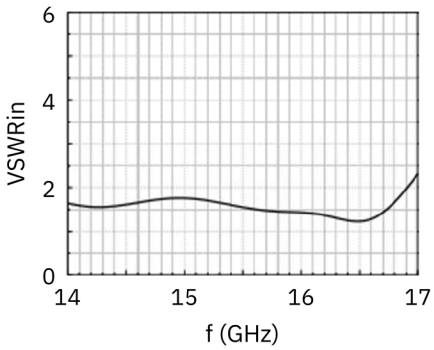






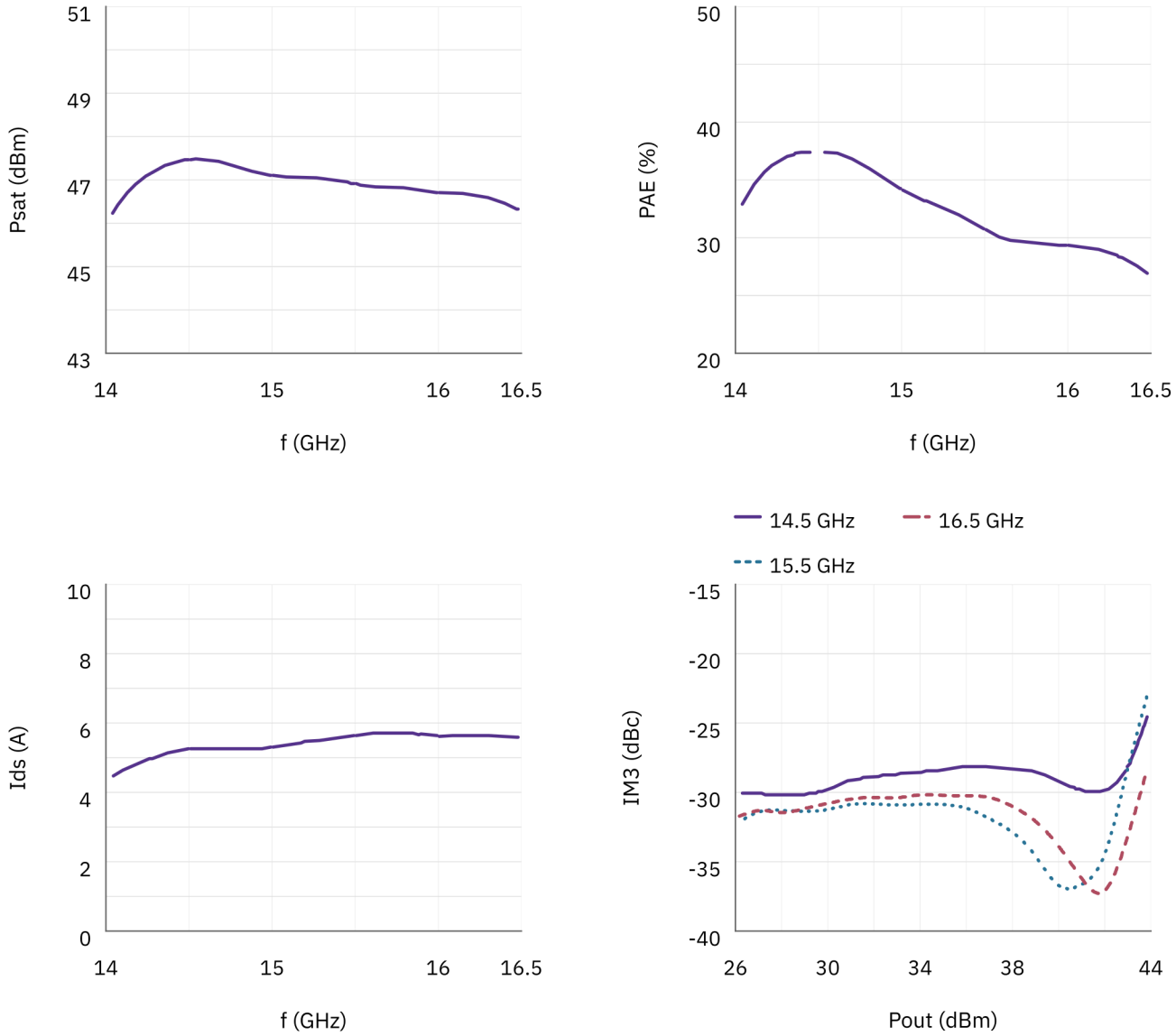






Continuous wave (CW) — Dynamic drain current; IMD3; Saturated output power; Power-added efficiency.

Figure notes: TA=25°C. Readings are approximate. Vd = 28 V; Vg = −3.0 V; Psat / PAE / Ids: Pin = 29 dBm. The IMD3 traces use their own 14.5/15.5/16.5 GHz legend. The page Pin annotation is not a fixed drive for this output-power sweep; a per-tone or summed-power convention is not specified.



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.