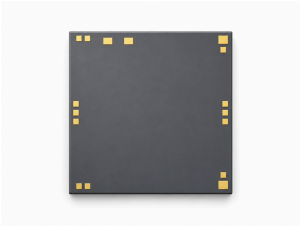
3600–5000 MHz GaN MMIC Power Amplifier Die

LCI-PA-3600-5000-PS44p5T is a GaN MMIC power amplifier supplied as bare die for 3600–5000 MHz. It supports pulsed operation.



The RF table specifies: PSAT 44.5 dBm (typical); Power gain 23.5 dB (typical); PAE 43% (typical). RF test conditions: TA = +25 °C; Vd = +28 V; Vg = -2.8 V; Pin = 21 dBm; τ = 100 µs; D = 10%.

Die dimensions: 3.19 × 3.15 × 0.1 mm.

RF characteristics

TA = +25 °C; Vd = +28 V; Vg = -2.8 V; Pin = 21 dBm; τ = 100 µs; D = 10%

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating frequency	f	3600	-	5000	MHz
Saturated output power	Psat	44	44.5	-	dBm
Power gain	Gp	23	23.5	-	dB
Power-gain flatness	ΔGp	-	-	1	dB
Power-added efficiency	PAE	40	43	-	%
Small-signal gain	S21	32	34	36	dB
Small-signal gain flatness	ΔS21	-	-	±2	dB
Input VSWR	VSWR(in)	-	1.8	2	-

DC bias and current

Parameter	Symbol	Minimum	Typical	Maximum	Value	Unit
Drain voltage	Vd	-	28	-	-	V
Gate voltage	Vg	-	-2.8	-	-	V
Quiescent drain current	Id	-	-	-	0.3 (Vd = +28 V)	A

Absolute limits

Absolute limits; these are not normal operating targets.

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Maximum drain-source voltage	Vd	-	-	32	V
Minimum gate bias	Vg	-5	-	-	V
Maximum input power	Pin	-	-	30	dBm
Storage temperature	TSTG	-65	-	150	°C
Maximum channel temperature	Top	-	-	200	°C

Die dimensions

Parameter	Value	Unit
Die dimensions	3.19 × 3.15 × 0.1	mm
Plan-view outline tolerance	±100 (Plan-view outline only; the source does not specify thickness tolerance.)	µm

Current publication record · 1.8 · 2026-11-12. Product description or editorial content updated. Replaces revision 1.7.

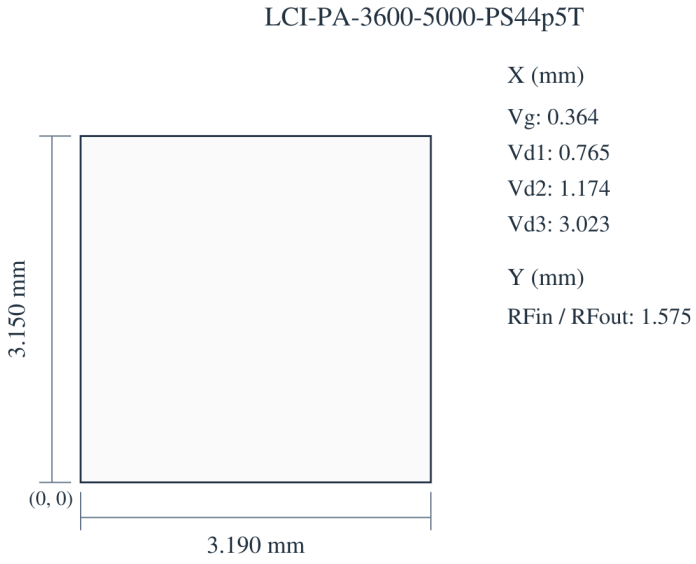
Die integration and bias sequencing

Integrated DC blocking: RFin / RFout. DC path to ground: RFin / RFout → GND. Internally connected gate pads: Vg ↔ Vg. Gate decoupling: 47 µF. Separate characterization: Vd = +28 V; Vg = -3 V; CW. Apply gate bias before drain bias. Remove drain bias before gate bias. Outline and dimensioned coordinates in mm. Use this drawing as a dimensional reference. Fabrication and wire bonding require complete drawings.

Bond-pad dimensions

RFin: 100 × 100 µm. Vg: 100 × 100 µm. Vd1: 170 × 120 µm. Vd2: 170 × 120 µm. Vd3: 180 × 150 µm. RFout: 110 × 120 µm.

Mechanical Outline



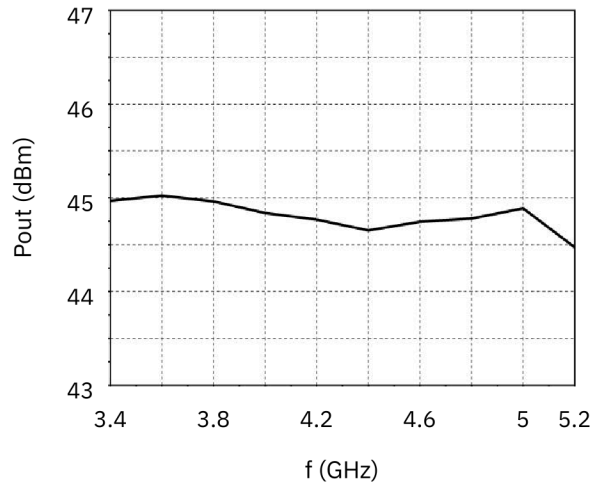
3.190 × 3.150 × 0.100 mm
X, Y: ±0.100 mm
X → · Y ↑ · X, Y: mm

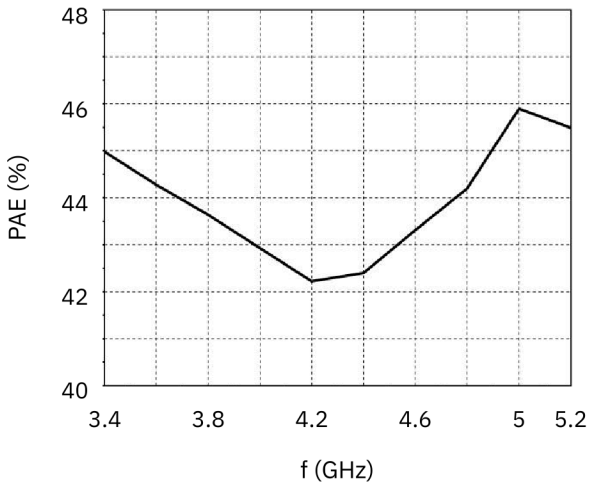
Performance curves

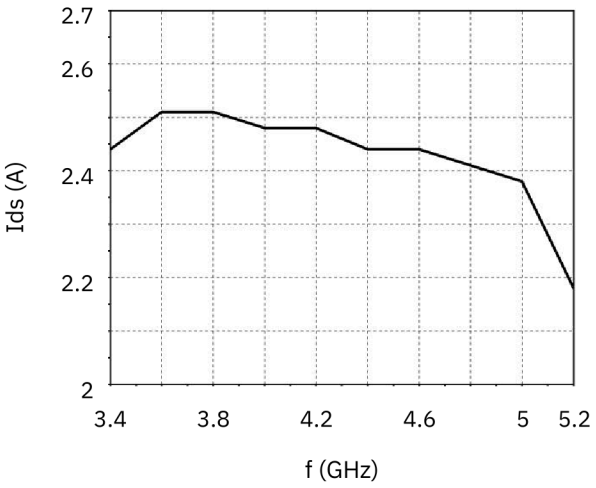
Read each figure with its stated operating conditions.

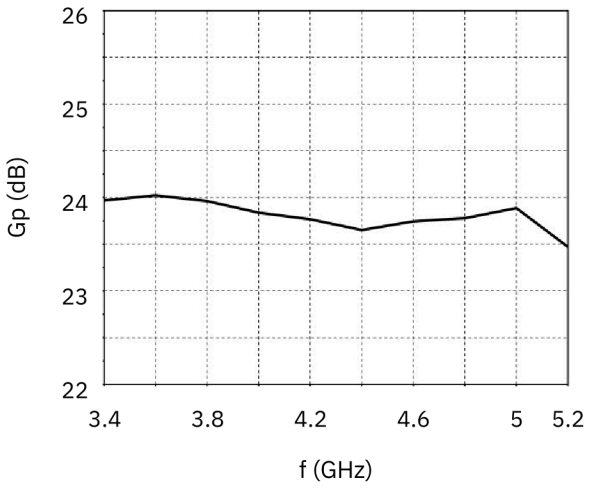
Pulsed — Saturated output power; Power-added efficiency; Dynamic drain current; Power gain.

Figure notes: TA=+25°C; Vd=+28V; Vg=-2.8V; Pin=21dBm. τ = 100 µs; D = 10%. Conditions apply to the indicated plots and their own legends.



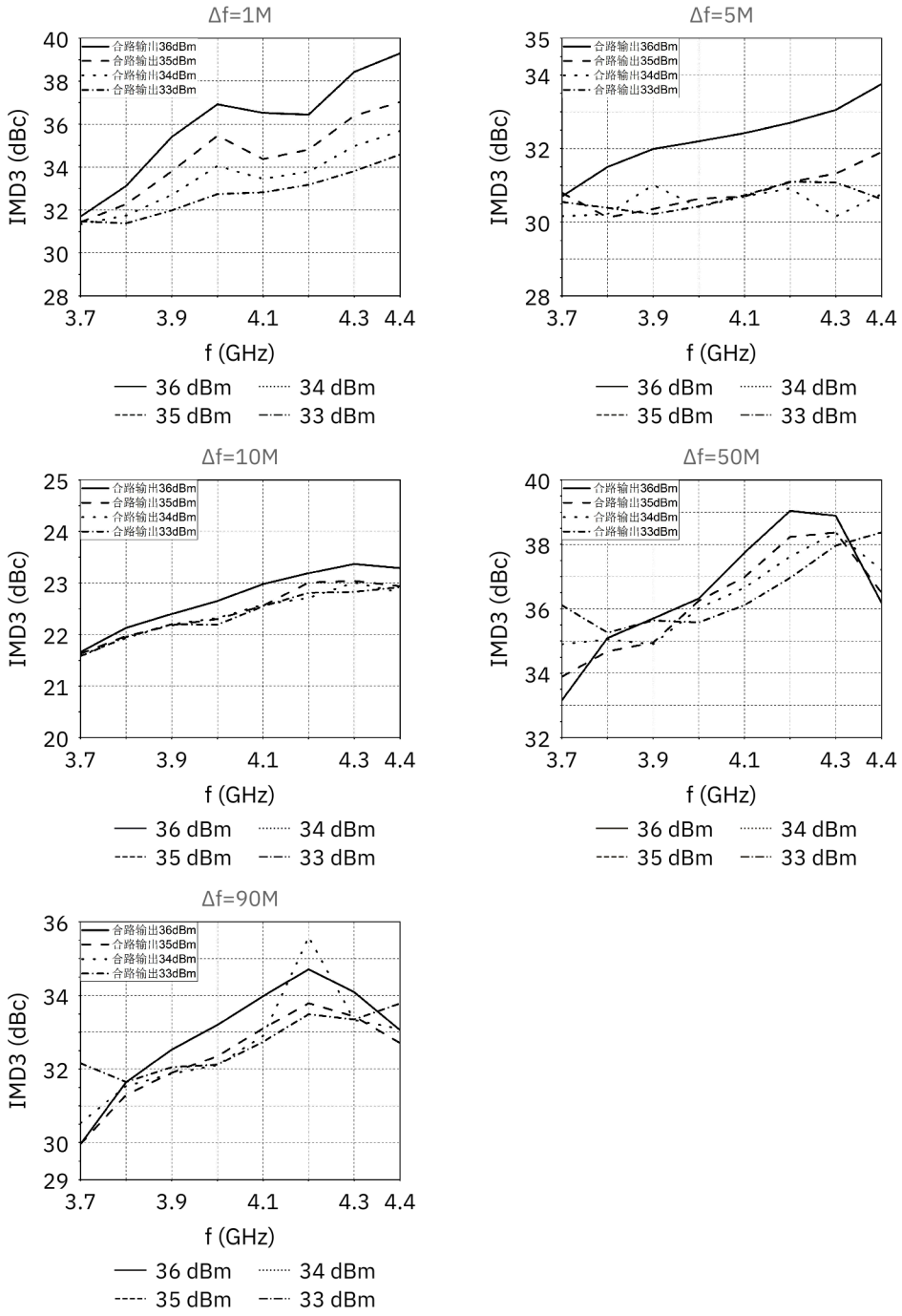






Continuous wave (CW) — IMD3.

Figure notes: TA=+25°C; Vd=+28V; Vg=-3V. IMD3: Pout = 36 / 35 / 34 / 33 dBm; 1M / 5M / 10M / 50M / 90M. Conditions apply to the indicated plots and their own legends. Read symbols and units as labeled on the axes. IMD3 keys refer to combined output, not output per tone.



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.