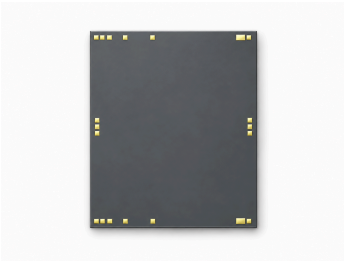


12000–15000 MHz GaN MMIC Power Amplifier Die

pulsed: PSAT: 47 dBm (minimum) / 47.5 dBm (typical); Power gain: 22 dB (minimum) / 22.5 dB (typical); PAE: 30 % (minimum) / 34 % (typical). Die dimensions: 4.1 × 5 × 0.1 mm.



RF characteristics · TA = +25 °C; Vd = +28 V; Vg = -2.8 V; pulsed

Parameter	Symbol	Minimum	Typical	Maximum	Value	Unit
Operating frequency	f	12000	-	15000	12000–15000	MHz
Saturated output power	Psat	47	47.5	-	-	dBm
Power gain	Gp	22	22.5	-	-	dB
Power-gain flatness	ΔGp	-	±0.3	-	-	dB
Power-added efficiency	PAE	30	34	-	-	%
Small-signal gain	S21	-	28	-	-	dB
Input VSWR	VSWR(in)	-	1.8	-	-	-

DC bias and current · TA = +25 °C

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Drain voltage	Vd	24	28	30	V
Gate voltage	Vg	-3	-2.8	-2.6	V
Quiescent drain current	Id	-	2	-	A
Dynamic drain current	Idd	-	6.5	-	A
Dynamic gate current	Igg	-	-	2	mA

Absolute limits

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Maximum drain-source voltage	Vd	-	-	30	V
Minimum gate bias	Vg	-5	-	-	V
Maximum input power	Pin	-	-	28	dBm
Storage temperature	TSTG	-65	-	150	°C
Maximum channel temperature	Top	-	-	225	°C

Die dimensions

Parameter	Value	Unit
Die dimensions	4.1 × 5 × 0.1	mm

Current publication record · 1.3 · 2026-10-26. Product description or editorial content updated. Replaces revision 1.2.

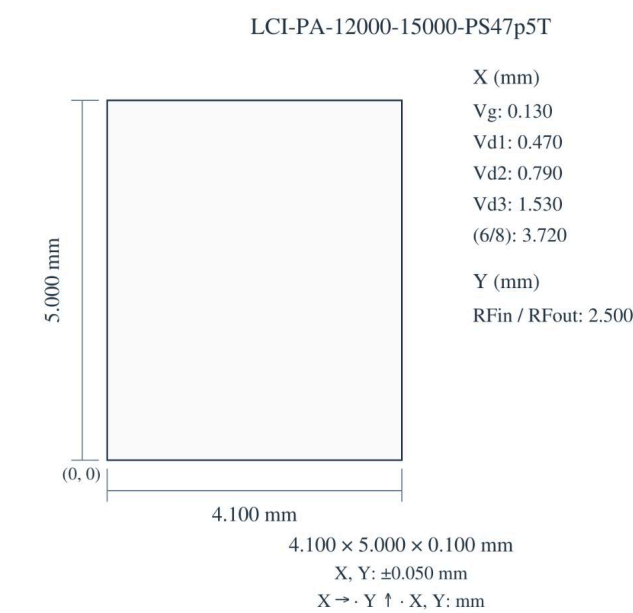
Die integration and bias sequencing

Integrated DC blocking: RFin / RFout. DC path to ground: RFin → GND. Separate characterization: Vd = +28 V; Vg = -2.8 V; τ = 100 μs; D = 10%; Pin = 25 dBm. Apply gate bias before drain bias. Remove drain bias before gate bias. Two-sided bias feed is recommended.

Mechanical reference scope

Source-based outline and explicitly dimensioned coordinate guides in mm. Not a complete fabrication or wire-bonding drawing.

Mechanical Outline



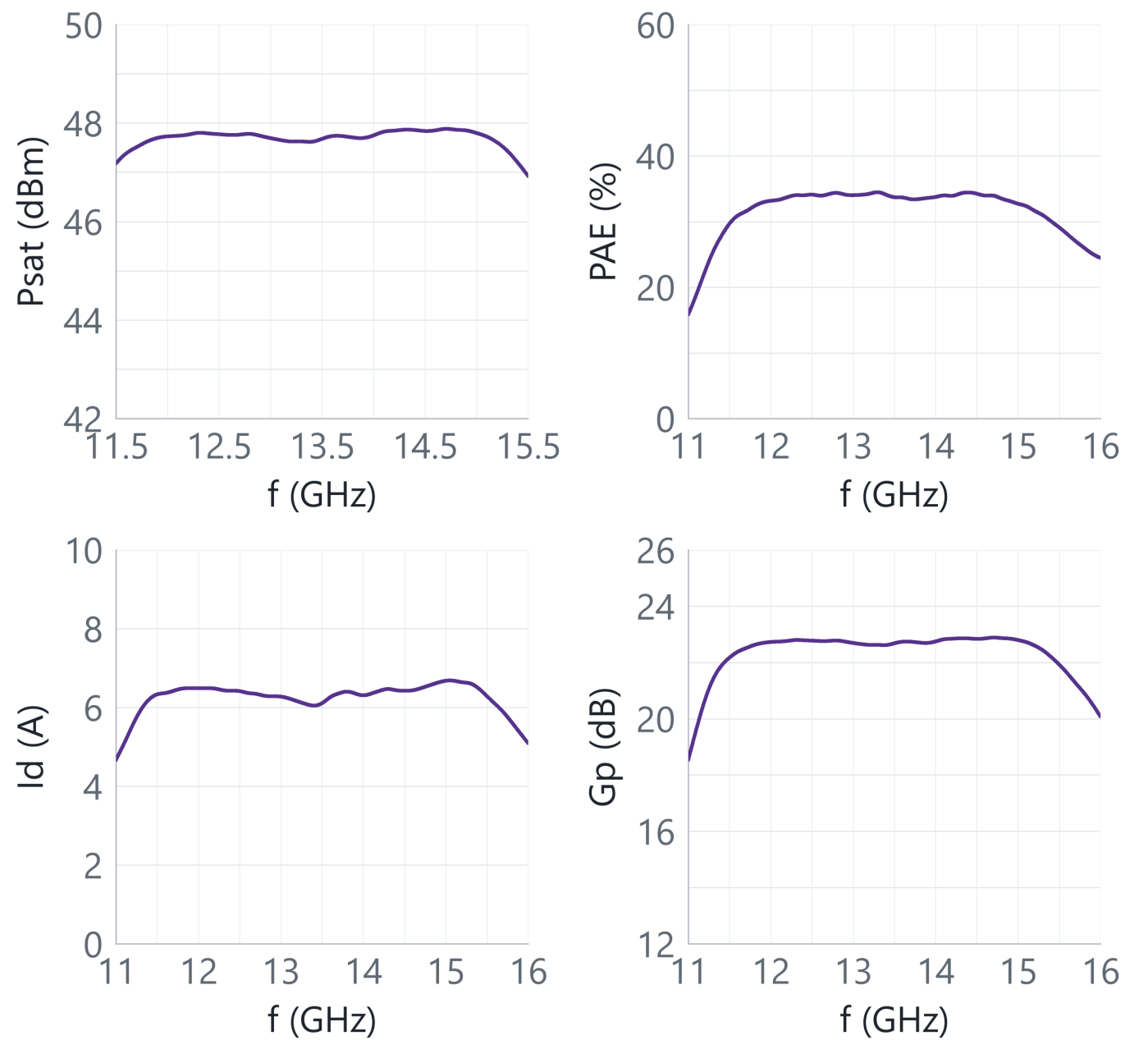
All dimensions are in mm [in].

Performance curves

Plots from the source datasheet. Read each figure with its stated operating conditions.

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

Source-page annotation: $V_d=+28V$; $V_g=-2.8V$. $P_{in} = 25\text{ dBm}$. Redrawn from the source figure; readings are approximate.



[Source](#)

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.