

12200–16000 MHz GaN MMIC Power Amplifier Die

PSAT: 46 dBm (minimum) / 46.5 dBm (typical); Power gain: 19 dB (minimum) / 19.5 dB (typical); PAE: 33 % (typical). Die dimensions: 4.2 × 6.02 × 0.1 mm.



RF characteristics · TA = +25 °C; Vd = +28 V; Vg = -3.0 V

Parameter	Symbol	Minimum	Typical	Maximum	Value	Unit
Operating frequency	f	12200	-	16000	12200–16000	MHz
Saturated output power	Psat	46	46.5	-	-	dBm
Power gain	Gp	19	19.5	-	-	dB
Power-gain flatness	ΔGp	-	-	±0.5	-	dB
Power-added efficiency	PAE	-	33	-	-	%
Input VSWR	VSWR(in)	-	1.6	2	-	-

DC bias and current · TA = +25 °C

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Drain voltage	Vd	-	28	32	V
Gate voltage	Vg	-3.2	-3	-2.8	V
Quiescent drain current	Id	-	0.3	-	A
Dynamic drain current	Idd	-	5	5.5	A
Dynamic gate current	Igg	-	3	10	mA

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	-	-	30	dBm
Storage temperature	TSTG	-65	-	150	°C
Maximum channel temperature	Top	-	-	225	°C

Die dimensions

Parameter	Value	Unit
Die dimensions	4.2 × 6.02 × 0.1	mm

Current publication record · 1.3 · 2026-10-27. Product description or editorial content updated. Replaces revision 1.2.

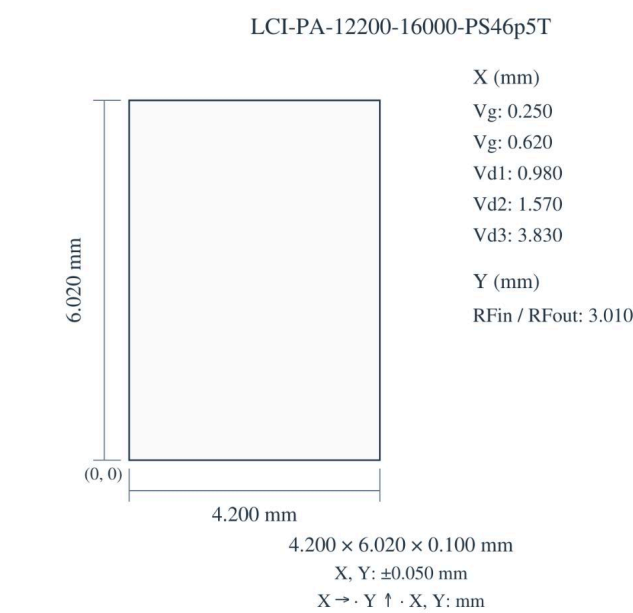
Die integration and bias sequencing

Integrated DC blocking: RFin / RFout. DC path to ground: RFin → GND. Separate characterization: Vd = +28 V; Vg = -3.0 V; Pin = 27 dBm. Apply gate bias before drain bias. Remove drain bias before gate bias.

Mechanical reference scope

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

Mechanical Outline



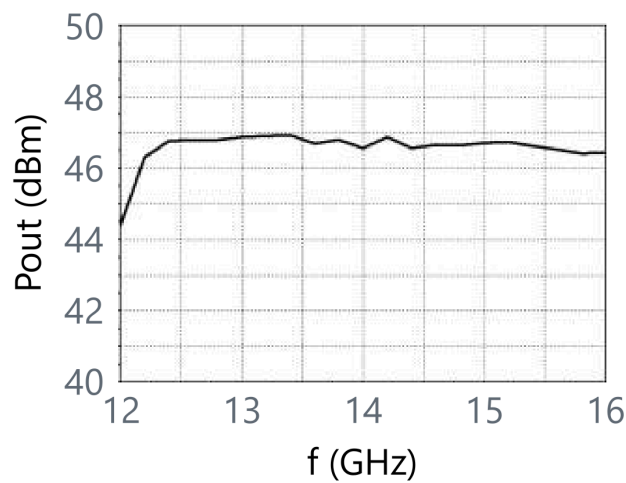
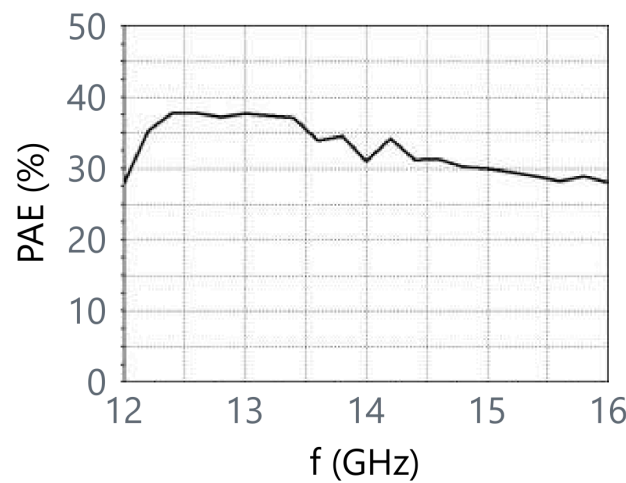
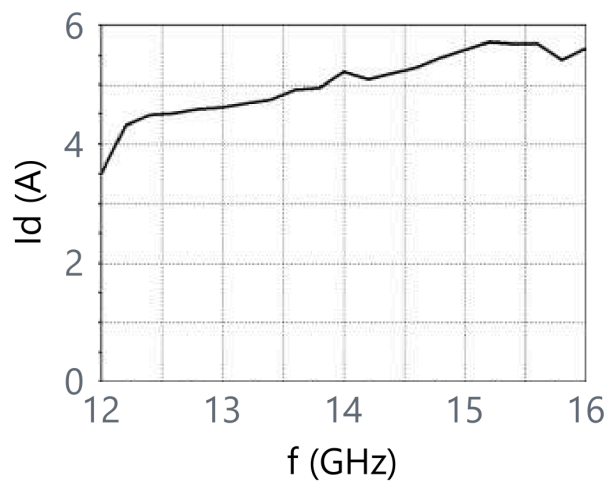
All dimensions are in mm [in].

Performance curves

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

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

Source-page annotation: $V_d=+28V$; $V_g=-3.0V$. The displayed source plot bodies, including curves and grid, are retained; only exterior axes and layout are reformatted. No measurement arrays or hidden states are reconstructed. Pin = 27 dBm. Conditions apply to the indicated plots and their own legends.



[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.