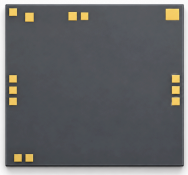
2700–3900 MHz GaAs MMIC Power Amplifier Die

LCI-PA-2700-3900-PS31T is a GaAs MMIC power amplifier supplied as bare die for 2700–3900 MHz. It supports CW and pulsed operation.

pulsed: PSAT: 30.5 dBm (minimum) / 31 dBm (typical); Power gain: 35.5 dB (minimum) / 36 dB (typical); PAE: 45 % (minimum) / 48 % (typical). Plan-view die dimensions: 2.5 × 2.262 mm.



RF characteristics

TA = +25 °C; Vd = +8 V; Vg = -0.8 V; Pin = -5 dBm; τ = 100 µs; D = 10%; pulsed

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating frequency	f	2700	-	3900	MHz
Saturated output power	Psat	30.5	31	-	dBm
Power gain	Gp	35.5	36	-	dB
Power-gain flatness	ΔGp	-	-	1.5	dB
Power-added efficiency	PAE	45	48	-	%
Small-signal gain	S21	39	40	41	dB
Small-signal gain flatness	ΔS21	-	-	±1.5	dB
Input VSWR	VSWR(in)	-	1.8	2	-

DC bias and current

Parameter	Symbol	Minimum	Typical	Maximum	Value	Unit
Drain voltage	Vd	-	8	-	-	V
Gate voltage	Vg	-	-0.8	-	-	V
Quiescent drain current	Id	-	-	-	0.16 (Vd = +8 V; Value stated without a Min/Typ/Max qualification.)	A

Absolute limits

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Storage temperature	TSTG	-65	-	150	°C
Maximum channel temperature	Top	-	-	200	°C

Die dimensions

Parameter	Value	Unit
Plan-view die dimensions	2.5 × 2.262	mm

Current publication record · 1.7 · 2026-11-12. Product description or editorial content updated. Replaces revision 1.6.

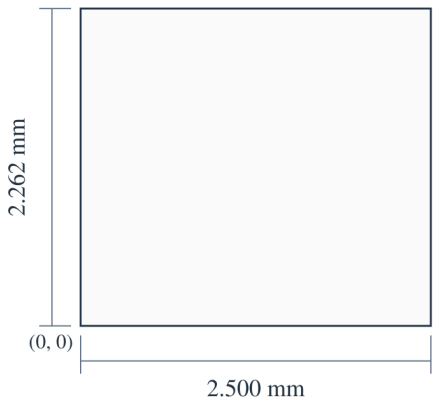
Die integration and bias sequencing

Internally connected gate pads: Vg ↔ Vg. Integrated DC blocking: RFin / RFout. DC path to ground: RFin / RFout → GND. Separate characterization: TA = +25 °C; Vd = +8 V; Vg = -0.8 V; Pin = -5 dBm; CW. 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.

LCI-PA-2700-3900-PS31T



X (mm)
Vg ↑: 0.097
Vd1: 0.330
Vd2: 0.941
Vd3: 2.336
Vg ↓: 0.327

Y (mm)
RFin / RFout: 1.051

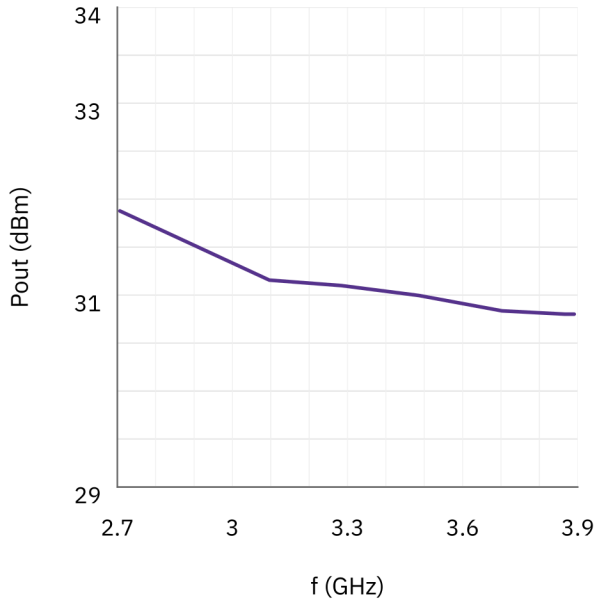
2.500 × 2.262 mm
X, Y: ±0.100 mm
X → · Y ↑ · X, Y: mm

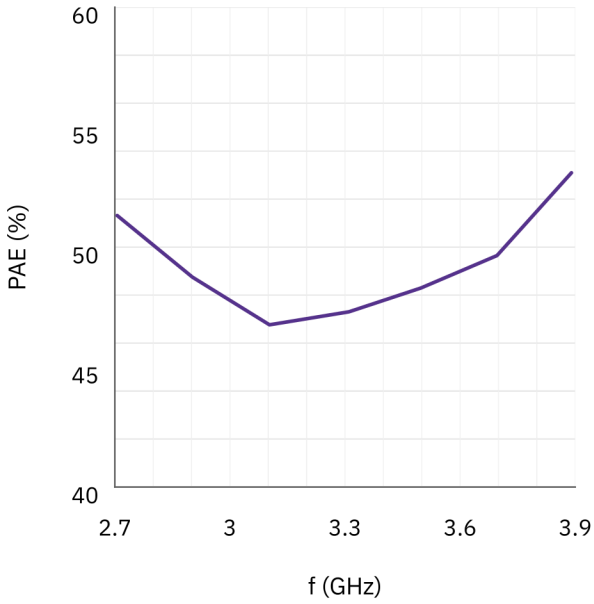
Performance curves

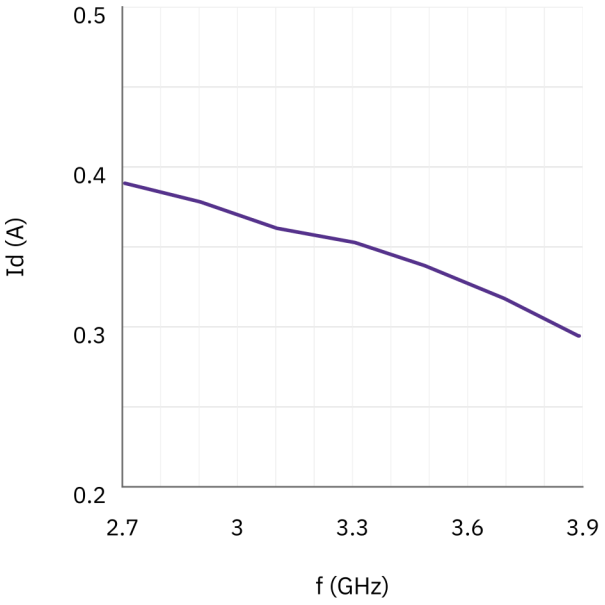
Each performance plot applies to its stated operating conditions.

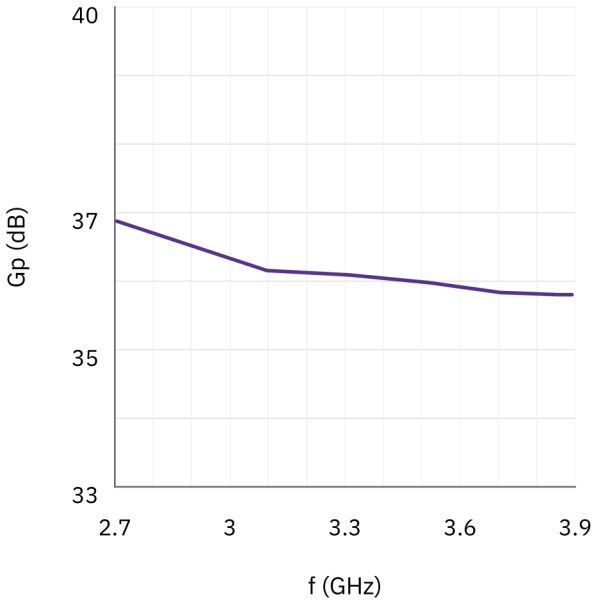
Pulsed — Saturated output power; Power-added efficiency; Dynamic drain current; Power gain.

Figure notes: TA=+25°C; Vd=+8V; Vg=-0.8V; Pin=-5dBm. Readings are approximate. Pulse width = 100 µs; duty cycle = 10%.



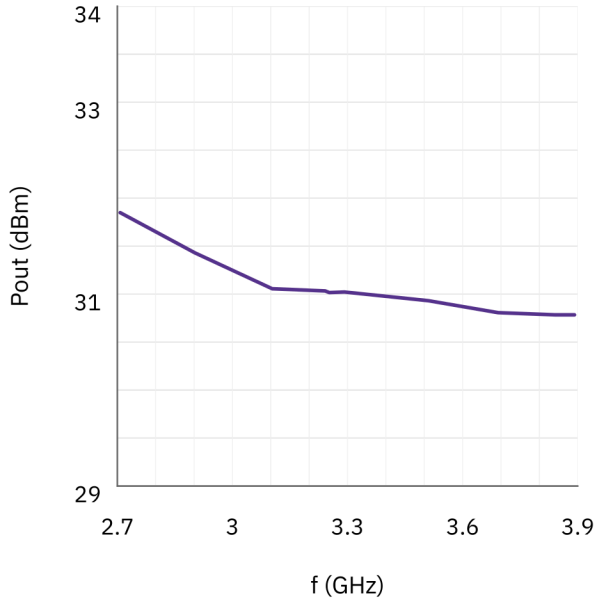


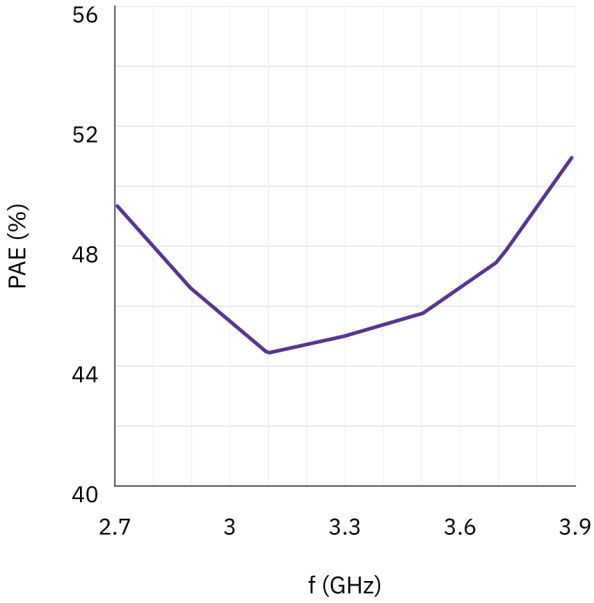


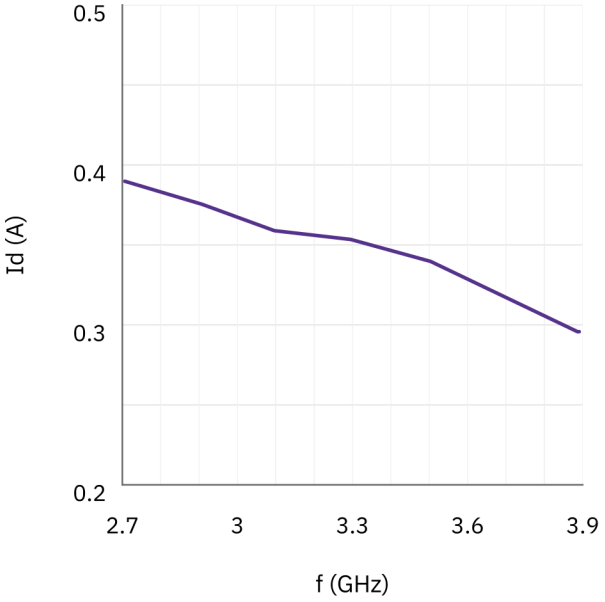


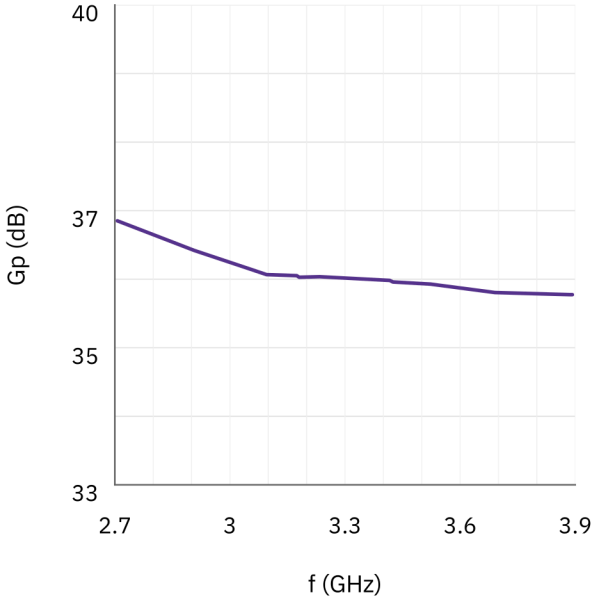
Continuous wave (CW) — Saturated output power; Power-added efficiency; Dynamic drain current; Power gain.

Figure notes: TA=+25°C; Vd=+8V; Vg=-0.8V; Pin=-5dBm. Readings are approximate.









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.