27000–31000 MHz Power Amplifier Die

LCI-PA-27000-31000-PS43T is a power amplifier supplied as bare die for 27000–31000 MHz.

PSAT: 43 dBm (typical); PAE: 28 % (typical); Small-signal gain: 23 dB (typical). Die dimensions: 3.26 × 4.8 × 0.08 mm.



RF characteristics

TA = +25 °C; Vd = +22 V; Id = 0.9 A

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating frequency	f	27000	-	31000	MHz
Small-signal gain	S21	-	23	-	dB
Small-signal gain flatness	ΔS21	-	±0.5	-	dB
Saturated output power	Psat	-	43	-	dBm
Power-added efficiency	PAE	-	28	-	%
Input VSWR	VSWR(in)	-	1.5	-	-
Output VSWR	-	-	1.9	-	-
Saturation current	-	-	4	-	A

DC bias and current

Parameter	Symbol	Minimum	Typical	Maximum	Value	Unit
Drain voltage [1]	Vd	-	-	-	22	V
Gate voltage [1]	Vg	-	-	-	-2.1	V
Bias current [2]	-	-	-	-	0.9	A

[1] Value stated without a Min/Typ/Max qualification.

[2] Vd = +22 V; Vg = -2.1 V; Value stated without a Min/Typ/Max qualification.

Absolute limits

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Maximum drain-source voltage	Vd	-	-	26	V
Minimum gate bias	Vg	-5	-	-	V
Maximum input power	Pin	-	-	34	dBm
Storage temperature	TSTG	-65	-	150	°C

Environmental specifications

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating temperature	-	-55	-	85	°C

Die dimensions

Parameter	Value	Unit
Die dimensions	3.26 × 4.8 × 0.08	mm

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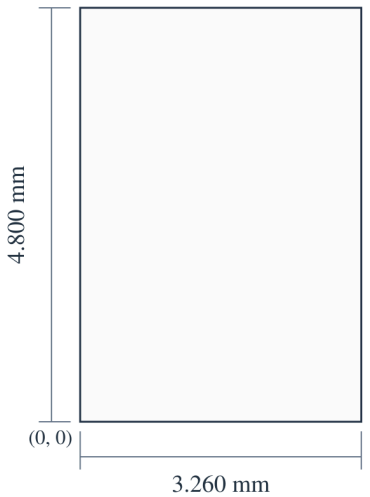
Die integration and bias sequencing

Separate characterization: TA = +25 °C; Vd = +22 V; Id = 0.9 A. 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-27000-31000-PS43T



X (mm)
(3/4): 0.400
(5/6): 1.050
(7/8): 2.930

Y (mm)
RFin / RFout: 2.400

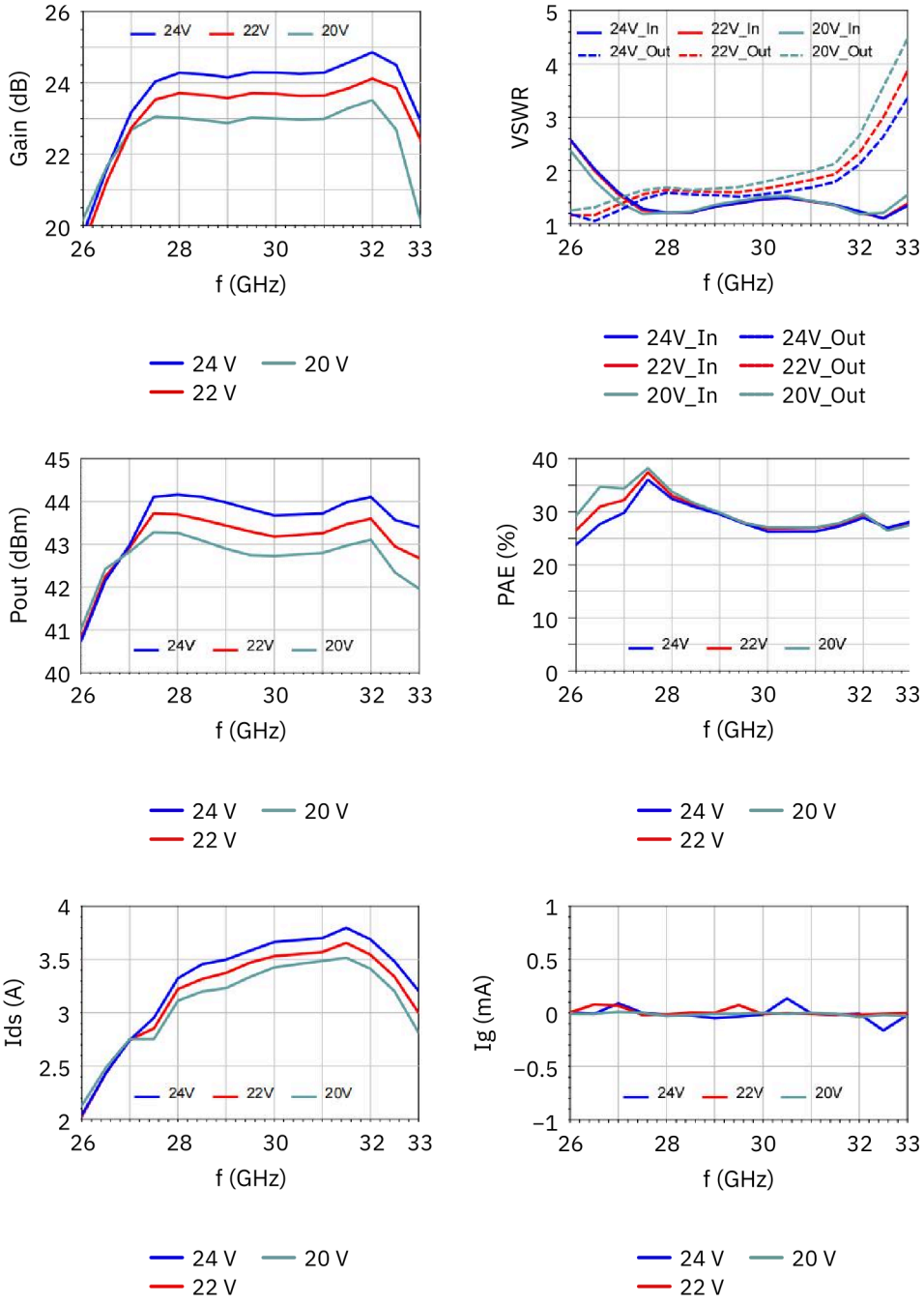
3.260 × 4.800 × 0.080 mm
X, Y: ±0.050 mm
X → · Y ↑ · X, Y: mm

Performance curves

Each performance plot applies to its stated operating conditions.

Small-signal gain; Input matching; Output matching; Output power; Power-added efficiency; Drain current; Gate current.

Figure notes: TA = +25°C; Vd=22V; Id=900mA. Pout / PAE / Ids / Ig: Pin = 24 dBm; Vd = 24 / 22 / 20 V. Conditions apply to the indicated plots and their own legends.



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.