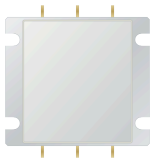
700–6200 MHz GaN Internally Matched Power Transistor — PSAT 49 dBm @ 6000 MHz (typical)

LCT-700-6200-PS49T · 700–6200 MHz · GaN Internally Matched Power Transistor.



The RF table specifies: Saturated output power 49 dBm (typical); Power gain 7 dB (typical); Drain efficiency 35 % (typical) @ 6000 MHz. RF test conditions: TA = +25 °C; VDS = 28 V; IDQ = 1 A; CW; f = 6000 MHz.

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Package outline dimensions: 30.8 × 27.4 × 5.1 mm.

RF characteristics

TA = +25 °C; VDS = 28 V; IDQ = 1 A; CW; f = 6000 MHz

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating frequency	f	700	-	6200	MHz
Saturated output power [1]	Psat	-	49	-	dBm
Power gain [1]	-	-	7	-	dB
Drain efficiency [1]	ηD	-	35	-	%

[1] f = 6000 MHz

DC bias and current

TA = +25 °C

Parameter	Symbol	Minimum	Typical	Maximum	Value	Unit
Drain operating voltage	-	-	-	-	28	V
Quiescent drain current	-	-	-	-	1	A
Gate threshold voltage [1]	-	-4	-2.8	-1	-	V
Quiescent gate bias [2]	-	-	-2.7	-	-	V
Drain-source breakdown voltage [3]	-	120	-	-	-	V
Drain-source leakage current [4]	-	-	-	0.02088	-	A

[1] VDS = 28 V; ID = 20.88 mA

[2] VDS = 28 V; ID = 500 mA

[3] VGS = -10 V; ID = 20.88 mA

[4] VGS = -10 V; VDS = 120 V

Absolute limits

Absolute limits; these are not normal operating targets.

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Maximum drain-source voltage	-	-	-	55	V
Minimum gate bias	-	-10	-	-	V
Storage temperature	-	-65	-	150	°C
Maximum channel temperature	-	-	-	225	°C
Maximum gate bias	-	-	-	2	V
Maximum forward gate current	-	-	-	0.02088	A

Package outline dimensions

Parameter	Value	Unit
Package outline dimensions	30.8 × 27.4 × 5.1	mm

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Integration notes

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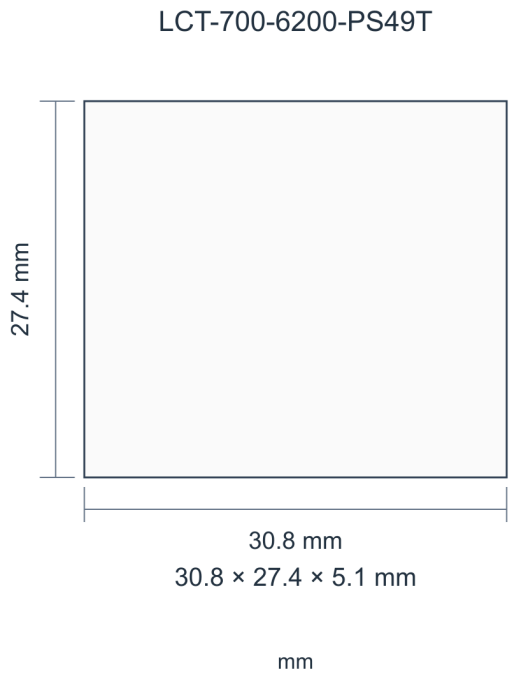
Mechanical Outline

Reference drawing showing selected dimensions in mm. Use the complete installation drawing for mounting.



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.