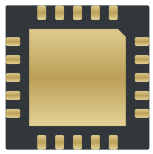
8000–18000 MHz Bidirectional RF Front-End IC — RX / TX P1dB 23 dBm (typical)

LCI-BDA-8000-18000-RXP1DB23T · 8000–18000 MHz · Bidirectional RF Front-End IC.



The RF table specifies: Small-signal gain (Rx) 20 dB (typical); Small-signal gain (Tx) 20 dB (typical); Output 1 dB compression power (Rx) 23 dBm (typical); Output 1 dB compression power (Tx) 23 dBm (typical). RF test conditions: TA = +25 °C; VD = +5 V; Pin = -20 dBm.

QFN20 4 × 4 mm

The RF ports include DC-blocking capacitors.

The supply port requires an external filtering and bias network.

RX: VdRx = +5 V; VdTx = 0 V; Vcc = +5 V; Vee = -5 V

TX: VdRx = 0 V; VdTx = +5 V; Vcc = 0 V; Vee = -5 V

T_peak ≤ 260 °C

Txin / Rxout: 3

Rxin / Txout: 13

VdRx: 8

VdTx: 17

GND: 2, 4, 12, 14

NC: 1, 5, 6, 7, 9, 10, 11, 15, 16, 18

Vee: 19

Vcc: 20

Package outline dimensions: 4 × 4 × 0.75 mm.

RF characteristics

TA = +25 °C; VD = +5 V; Pin = -20 dBm

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating frequency	f	8000	-	18000	MHz
Small-signal gain (Rx) [1]	Gain	-	20	-	dB
Small-signal gain (Tx) [2]	Gain	-	20	-	dB
Output 1 dB compression power (Rx) [1]	P_1	-	23	-	dBm
Output 1 dB compression power (Tx) [2]	P_1	-	23	-	dBm
Noise figure (Rx) [1]	NF	-	8	-	dB
Noise figure (Tx) [2]	NF	-	8	-	dB

[1] RX
[2] TX

DC bias and current

TA = +25 °C; VD = +5 V

Parameter	Symbol	Minimum	Typical	Maximum	Value	Unit
Operating voltage	-	-	-	-	5	V
Quiescent current (Rx)	ID	-	0.22	-	RX	A
Quiescent current (Tx)	ID	-	0.22	-	TX	A
Negative supply voltage	-	-	-	-	-5	V

Absolute limits

Absolute limits; these are not normal operating targets.

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Maximum operating voltage	-	-	-	6	V
Maximum input power	-	-	-	15	dBm
Operating temperature	-	-55	-	85	°C
Storage temperature	-	-65	-	150	°C

Package outline dimensions

Parameter	Value	Unit
Package outline dimensions	4 × 4 × 0.75	mm

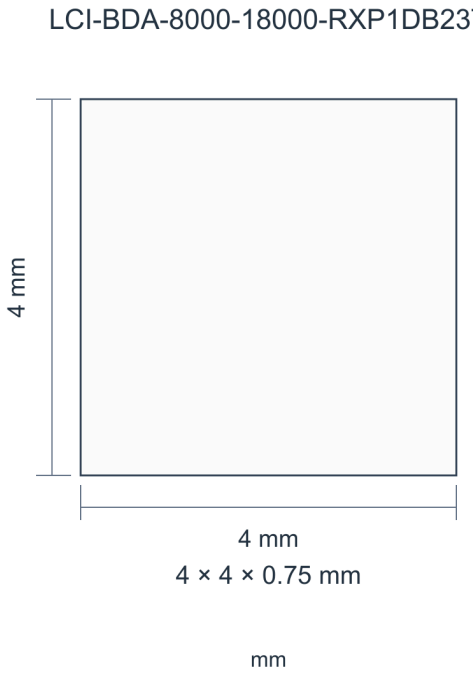
Current publication record · 1.3 · 2026-11-12. Product description or editorial content updated. Replaces revision 1.2.

Integration notes

QFN20 4 × 4 mm The RF ports include DC-blocking capacitors. The supply port requires an external filtering and bias network. RX: VdRx = +5 V; VdTx = 0 V; Vcc = +5 V; Vee = -5 V TX: VdRx = 0 V; VdTx = +5 V; Vcc = 0 V; Vee = -5 V T_peak ≤ 260 °C Txin / Rxout: 3 Rxin / Txout: 13 VdRx: 8 VdTx: 17 GND: 2, 4, 12, 14 NC: 1, 5, 6, 7, 9, 10, 11, 15, 16, 18 Vee: 19 Vcc: 20

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.