6–9 GHz Downconverter with 5 GHz IF



LCMIXD-6000-9000 converts 6–9 GHz RF to a 5±0.75 GHz IF. Pin 5 selects the 6–7.5 GHz path at 0 V or the 7.5–9 GHz path at +3.3 or +5 V. Conversion gain is 30 dB typical and noise figure is 2.5 dB maximum.

The 110±0.05 × 63±0.05 × 16±0.05 mm body operates from a stated +5 V supply, 6 V maximum, at 400 mA typical. Source SMA port descriptions and outline labels disagree; confirm the physical RF/IF mapping before connection. The 33 dBm no-damage input value is typical, rather than a guaranteed limit.

Electrical specifications

Parameter	Value	Unit
RF input frequency	6–9	GHz
IF output frequency	5±0.75	GHz
Downconversion gain	30 (Typical)	dB
Downconversion noise figure [1]	2.5	dB
Saturated output power (Psat)	12 (Typical)	dBm
Leakage level / source rejection value [2]	−40 (Typical)	dBc
Supply voltage [3]	+5	VDC
Supply current	400 (Typical)	mA
Internal LO frequency	11.75 / 13.25	GHz
Input power without damage [4]	33 (Typical)	dBm

[1] Maximum: 2.5 dB.

[2] Retain the negative source value; its rejection convention is unconfirmed.

[3] Stated +5 V supply; 6 V maximum. No typical qualifier is inferred. Maximum: 6 VDC.

[4] Typical source value; not a guaranteed no-damage limit.

Environmental limits

Parameter	Value	Unit
Operating temperature	−40–+70	°C
Storage temperature	−40–+85	°C

Interfaces and contacts

Interface	Specification
Signal connectors	SMA (Source labels disagree; confirm physical RF/IF mapping before connection.)
Power and control connector	PHD-2×5AWD
Supply contacts	1, 2: +5 V
Ground contacts	3, 4: GND

Control and filter selection

Parameter	Value
Filter selection, pin 5 low	0 V → 6–7.5 GHz
Filter selection, pin 5 high	+3.3 / +5 V → 7.5–9 GHz

Mechanical specifications

Parameter	Value	Unit
Body dimensions	110±0.05 × 63±0.05 × 16±0.05	mm
Mounting-hole center spacing	105.6±0.1 × 58.6±0.1	mm
Mounting holes	4 × Φ2.2	mm

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.