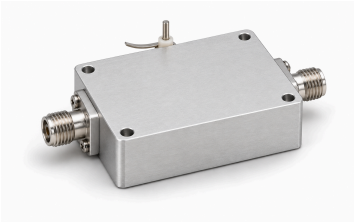
100–500 MHz 30 dB Low-Noise Amplifier

Covering 100–500 MHz, this LNA provides 30 dB typical gain and 2 dB typical noise figure. The source places 5 dBm Psat in its maximum column, giving an upper limit rather than a guaranteed output capability.

Typical current is 85 mA at a 5 V typical supply. SMA-K female ports and a 36.2 × 24 × 10 mm outline support compact integration; the absolute supply limit is 6 V.



Electrical specifications

Parameter	Value	Unit
Operating frequency	100–500	MHz
Gain	30 (Typical)	dB
Noise figure	2 (Typical)	dB
Saturated output power (Psat) [1]	≤5	dBm
Input S11 (signed source value) [2]	−10 (Typical)	dB
Supply voltage	5 (Typical)	VDC
Dynamic current	85 (Typical)	mA

[1] Saturated output (Psat), not P1dB or guaranteed linear output.

[2] Negative S11 convention retained from source; not recast as positive return loss.

Absolute maximum ratings

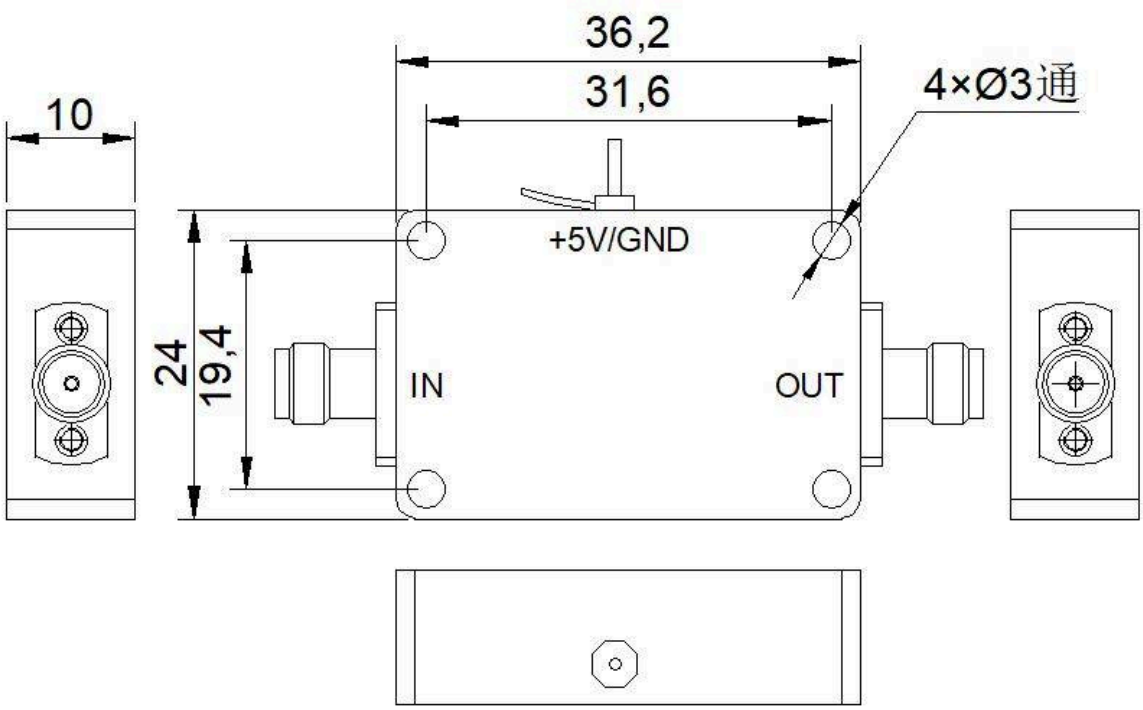
Parameter	Value	Unit
Absolute maximum supply voltage	≤6 (Absolute maximum rating; continuous operation or performance at this limit is not established. Maximum: 6 VDC.)	VDC
Absolute maximum input power	≤12 (Absolute maximum rating; continuous operation or performance at this limit is not established. Maximum: 12 dBm.)	dBm
Operating temperature	−40–+70	°C
Storage temperature	−40–+85	°C

Interfaces and contacts

Interface	Specification
RF input connector	SMA-K female
RF output connector	SMA-K female
DC supply interface	Feed-through capacitor
Ground interface	Grounding metal sheet

Mechanical specifications

Parameter	Value	Unit
Body dimensions	36.2 × 24 × 10	mm
Mounting-hole center spacing	31.6 × 19.4	mm
Mounting holes	4 × Φ3 (Four through holes.)	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.