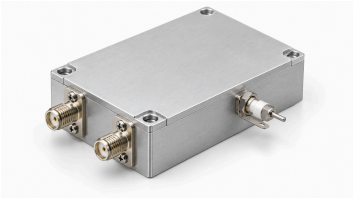
300 MHz–3 GHz Two-Input LNA and Combiner



This 300–3000 MHz LNA combines two amplified input paths into a single output. Typical gain is 30 dB, noise figure 2 dB, Psat 7 dBm and signed input S11 −10 dB. The source does not specify input isolation or amplitude/phase balance, and saturation is not a linear output rating.

Typical DC supply is 5 V at 170 mA through a feed-through capacitor and separate ground sheet. SMA-K female ports serve the 50 × 40 × 13 mm body. Operating temperature is −40 to +70 °C, with −40 to +85 °C storage. Supply 6 V and input 12 dBm remain absolute maxima.

Electrical specifications

Parameter	Value	Unit
Operating frequency	300–3000	MHz
Gain	30 (Typical)	dB
Noise figure	2 (Typical)	dB
Saturated output power (Psat) [1]	7 (Typical)	dBm
Input S11 (signed source value) [2]	−10 (Typical)	dB
Supply voltage	5 (Typical)	VDC
Dynamic current	170 (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
Number of RF inputs	2
Number of combined RF outputs	1

Interfaces and contacts

Interface	Specification
Amplification and combining paths	Two amplified inputs combine into one output (The source does not define per-path versus simultaneous-input test conditions, input isolation or amplitude/phase balance; no guaranteed combining improvement is derived.)
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	50 × 40 × 13	mm
Mounting-hole center spacing	45.6 × 35.6	mm
Mounting holes	4 × Φ2.7 (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.