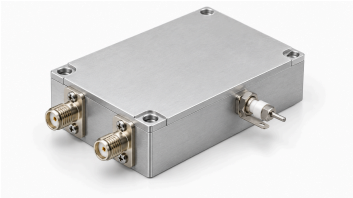
100–500 MHz Two-Input Combining LNA



Each of the two input paths passes through an amplifier before reaching the output combiner. The 100–500 MHz module has 30 dB typical gain and 2 dB typical noise figure. Psat is 5 dBm maximum.

The 50 × 40 × 13 mm body uses SMA-K female ports, feed-through DC and a ground sheet. Supply and current are 5 V and 170 mA typical. Phase balance and combining loss are not specified.

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	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
RF input connector	SMA-K female
RF output connector	SMA-K female
DC supply interface	Feed-through capacitor

Interfaces and contacts

Interface	Specification
Ground interface	Grounding metal sheet
RF input port count	2
RF output port count	1
Signal routing	Two amplified inputs combined to one output

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.