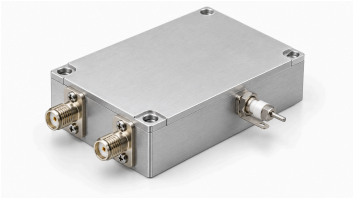
100–500 MHz Two-Input LNA and Combiner



This 100–500 MHz module combines two amplified input paths into one RF output. The source specifies 30 dB typical gain, 2 dB typical noise figure and 7 dBm typical saturated output. Per-path and simultaneous-input test conditions are not defined; no combining gain or linear output capability is inferred.

A 5 V typical supply draws 170 mA typical through a feed-through capacitor with a separate ground sheet. The 50 × 40 × 13 mm body uses SMA-K female ports. The 6 V supply and 12 dBm input limits are absolute maxima; confirm isolation and amplitude/phase balance for the intended input signals.

Electrical specifications

Parameter	Value	Unit
Operating frequency	100–500	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.