

Ka-BAND LOW NOISE BLOCK (LNB)

ACLNBS-Ka Standard Series



Ed. 06

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ACLNBS-Ka Standard Series have been designed to meet restrictive specifications for Ka Band communication systems. The equipment has a typical gain of 60 dB with a Noise Figure lower than 1.5 dB typically, with low weight and dimensions.

ACLNBS-Ka Standard Series have been tested between -20°C and +55°C, providing very good gain stability with temperature.

RECEIVER SPECIFICATIONS

Input Ka-band frequency	18.3 - 21.2 GHz (See options)
Input VSWR	< 1.3:1 (max)
Input Stability	Unconditionally stable
Output L-band frequency	1.0 - 2.0 GHz
Output VSWR.....	< 2.0:1 (max)
Spectrum inversion	None
Gain	60 dB min.
Maximum input level without damage	0 dBm
Gain flatness over the whole bandwidth.....	± 2.0 dB
Gain variation over temperature	± 2.0 dB over the whole range
Noise figure @ 25°C	< 1.5 dB
Image Rejection.....	≥ 45 dB
Output power @ P1dB	> +5 dBm
Spurious in Band	< -60 dBc @ Pout = 0 dBm

LOCAL OSCILLATOR

Output phase noise typical (IESS-308/309 – 4 dB):

100 Hz	-64 dBc/Hz
1 kHz.....	-74 dBc/Hz
10 kHz.....	-84 dBc/Hz
100 kHz.....	-94 dBc/Hz
External frequency reference.....	10 MHz (at output L-Band Connector)
Reference input level.....	0 dBm ± 3 dB
Reference stability.....	Slave to external reference
Minimum external reference to compliant typical phase noise (IESS-308/309 – 4 dB):	
100 Hz	-135 dBc/Hz
1 kHz.....	-145 dBc/Hz
10 kHz.....	-155 dBc/Hz

POWER SUPPLY

DC input voltage	+9 to +15 VDC (at output L-Band Connector)
DC input current	350 mA typ (at output L-Band Connector)

ENVIRONMENTAL SPECIFICATIONS

Storage temperature	-40°C to +80°C
Operating temperature	-20°C to +55°C (see options)
Relative humidity	up to 100%
Operating altitude	up to 3500 m

MECHANICAL SPECIFICATIONS

Interfaces

RX input (Ka-Band):	WR42 grooved
RX output (L-Band+DC+Ext. Ref.):	Type N(F) 50 Ω
Dimensions.....	114 x 58 x 36 mm
Weight.....	350 gr
Finish.....	White

OPTIONS

Frequency band	L-band output	LO frequency	Model Number
19.2 to 20.2 GHz	1.0 to 2.0 GHz	18.200 GHz	ACLNBS-Ka-E1-V3-xxx
20.2 to 21.2 GHz	1.0 to 2.0 GHz	19.200 GHz	ACLNBS-Ka-E2-V3-xxx
18.3 to 18.8 GHz	1.0 to 1.5 GHz	17.300 GHz	ACLNBS-Ka-E15-V3-xxx

LN1:	RX output connector type SMA female 50 Ω
LN2:	Operating temperature (-40°C to +55°C)
LNC:	Custom Design