

Ka-BAND LOW NOISE BLOCK (LNB)

ACLNBD-Ka-E11-V2 Dual Band Series

19.2 – 21.2 GHz



Ed. 04

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ACLNBD-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 current consumption, weight and dimensions.

ACLNBD-Ka Standard Series have been tested between -20°C and +60°C, providing very good gain stability with temperature. Band selection is arranged by simple switching DC input level.

RECEIVER SPECIFICATIONS

Input Ka-band frequency	19.2 - 21.2 GHz
Input VSWR	< 1.3:1 (max)
Input Stability	Unconditionally stable
Output L-band frequency	0.95 - 2.0 GHz (see options)
Output VSWR.....	< 2.0:1 (max)
Spectrum inversion	None
Gain	60 dB min.
Maximum input level without damage	0 dBm
Gain flatness.....	± 0.5 dB over 40 MHz ± 1.5 dB over 1 GHz bandwidth
Gain variation over temperature	± 1.5 dB over the whole range
Gain stability (24 Hours)	< 0.5 dB
Noise figure @ 25°C	≤ 1.6 dB (1.3 dB typ.)
Image Rejection.....	≥ 45 dB
Output power @ P1 dB	> +5 dBm
Spurious in Band	< -60 dBc @ Pout = 0 dBm

LOCAL OSCILLATOR

Oscillator frequency.....	18.200/18.250 GHz (Input 19.2-20.2 GHz @ $V_{DC} < 15V$) 19.200/19.250 GHz (Input 20.2-21.2 GHz @ $V_{DC} > 15V$)
Output phase noise (IESS-308/309 – 5 dB):	
100 Hz	-65 dBc/Hz
1 kHz.....	-75 dBc/Hz
10 kHz.....	-85 dBc/Hz
100 kHz.....	-95 dBc/Hz
External frequency reference.....	10 MHz (at output L-Band Connector)
Reference input level.....	0 dBm \pm 5 dB
Reference stability	Slave to external reference
Minimum external reference to compliant phase noise (IESS-308/309 – 5 dB):	
100 Hz	-135 dBc/Hz
1 kHz.....	-145 dBc/Hz
10 kHz.....	-155 dBc/Hz

POWER SUPPLY

DC input voltage	+12 to +18 V_{DC} (at output L-Band Connector)
DC input current	320 mA typ @ +12Vdc (at output L-Band Connector)

ENVIRONMENTAL SPECIFICATIONS

Storage temperature	-40°C to +80°C
Operating temperature	-20°C to +60°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.....	120 x 60 x 40 mm
Weight.....	500 gr
Finish.....	White

OPTIONS

Frequency band	L-band output	LO frequency	Model Number
19.2 to 20.2 GHz	1000 to 2000 MHz	18.200 GHz @ $V_{DC} < 15V$	ACLNBD-Ka-E11-V2-0A-xxx
20.2 to 21.2 GHz	1000 to 2000 MHz	19.200 GHz @ $V_{DC} > 15V$	
19.2 to 20.2 GHz	950 to 1950 MHz	18.250 GHz @ $V_{DC} < 15V$	ACLNBD-Ka-E11-V2-0B-xxx
20.2 to 21.2 GHz	950 to 1950 MHz	19.250 GHz @ $V_{DC} > 15V$	

LN1:	RX output connector type SMA female 50 Ω
LN2:	Operating temperature (-40°C to +60°C)
LNC:	Custom Design