ACORDE TECHNOLOGIES

X-BAND Low Noise Block (LNB)

Ed.03

ACLNB-X Series

14/05/09

DESCRIPTION

ACLNB-X series have been designed to meet the more restrictive specifications for X Band communication systems. The equipment has a typical gain of 60 dB with a Noise Figure less than 0.8 dB with low weight and dimensions.

ACLNB-X series have been tested and calibrated between -20ºC and +55ºC, so they assure very good gain stability with temperature.

The more common applications for this systems are Broadband Internet access or similar.

RECEPTOR SPECIFICATIONS

Input RF frequency	7.25-7.75 GHz
Input X-Band VSWR	< 1.3:1
Output IF frequency	950-1450 MHz
Output L-Band VSWR	< 1.5:1
Maximum input level without damage	+10 dBm
Gain	60 dB min
Gain flatness over the whole bandwidth	± 1.5 dB BW=500 MHz
Gain flatness over 40 MHz	± 0.75 dB
Gain stability (24 Hours)	≤ 0.5 dB
Gain variation over temperature	± 1.5 dB over the whole range (-20 to +55ºC) ± 2 dB over the whole range (-40 to +55ºC)
Noise temperature @ 25ºC	≤ 60 ºK (see options)
Output power @ P1dB	> +5 dBm
OIP3	> +15 dBm
Spurious in Band	< -60 dBc at 0 dBm output

LOCAL OSCILLATOR

Output phase noise (IESS-308/309 – 5 dB):

100 Hz	-65 dBc/Hz
1 KHz	-75dBc/Hz
10 KHz	-85dBc/Hz
100 KHz	-95dBc/Hz
1 MHz	-105dBc/Hz

External frequency reference	10 MHz (at output L-Band Connector)
Reference frequency level	0 dBm ± 3 dB
Frequency stability	Slave to external reference

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Minimum external reference to compliant typical phase noise (IESS-308/309 – 5 dB):

- 100 Hz .... -125 dBc/Hz
- 1 KHz .... -135 dBc/Hz
- 10 KHz .... -145 dBc/Hz

POWER SUPPLY

DC input voltage .... +9 to +13 VDC (at output L-Band Connector)
DC input current .... 500 mA typ (at output L-Band Connector)

ENVIRONMENTAL SPECIFICATIONS

Storage temperature .... -40 to +80°C
Operating temperature .... -20 to +55°C (-40°C to 55°C could be selected as option)
Relative humidity .... up to 100%
Operating altitude .... up to 3500 m

MECHANICAL SPECIFICATIONS

Interfaces .... RX input (X-Band): WR112 grooved
RX output (L-Band+DC+Ext. Ref): Type N(F) 50 Ω
Dimensions .... 190 x 100 x 65 mm
Weight .... 750 gr TBC
Cooling system .... None
Finish .... White

OPTIONS

Input Frequency band	Output L-band	Noise Temperature	Model Number
7.25 to 7.75 GHz	950 to 1450 MHz	90°K	ACLNB-X90K-xxx
7.25 to 7.75 GHz	950 to 1450 MHz	60°K	ACLNB-X60K-xxx

LN1: .... RX output connector type SMA female 50 Ω
LN2: .... Operating temperature (-40 to +55°C)
LN3: .... Internal reference 10 MHz
LNC: .... Custom Design