Ka-BAND LOW NOISE BLOCK

ACLNBW-Ka-E45-V2

Ultra-Wideband Series

Rev.01
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The **ACLNB-Ka family** of LNBs is designed for the most challenging Ka-band **professional & military** satellite communication systems (ground, SOTP, SOTM, maritime, etc.). Latest technology is applied to obtain the best noise figure, phase noise, gain stability and return losses according to **MIL-STD-188-164C**. The ACLNB-Ka family is a **high reliability** solution designed for **harsh environmental conditions**, with every single production unit **fully tested** in an environmental chamber and delivered with a complete factory acceptance test report.

RECEIVER SPECIFICATIONS

Input frequency	17.7 to 22.2 GHz
Input Ka-Band VSWR (50 Ω)	< 1.5:1
Output frequency	1000 to 2000 MHz
Output L-band VSWR (50 Ω)	< 2.0:1
Spectrum inversion	None
Max. input level without damage	0 dBm
Gain	60 dB min
Gain flatness	±2.0 dB over whole BW
	±0.5 dB over 40 MHz
Gain stability (24 hours)	±0.25 dB @ const. temp.
Gain variation over temperature	±1.5 dB (±2.0 dB option LN2)
Noise figure @ 25 ºC	≤ 1.8 dB
Noise temperature @ 25 ºC	≤ 150 K
Image rejection	> 40 dB
Output P1dB	> +10 dBm
In-band spurious	< -60 dBc @ P_{OUT} = 0 dBm

LOCAL OSCILLATOR

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 reference	10 MHz
External reference level	0 dBm ± 5 dB
Internal reference stability	±1 ppm (option LN3)

POWER SUPPLY

DC input voltage	12-18 V_{DC}
Consumption @ 12 V_{DC}	250 mA typ

MECHANICAL SPECIFICATIONS

Size (LxWxH)	120 x 60 x 40 mm
	4.7 x 2.4 x 1.6 in
Weight	450 g
	1.0 lbs
Finish	RAL 9003 (White)

ENVIRONMENTAL SPECIFICATIONS

Storage temperature	-40 °C to +85 °C
Operating temperature	-20 °C to +60 °C
Relative humidity	up to 100%
Operating altitude	up to 4500 m

INTERFACES

RX input (Ka-Band)	WR42 grooved (PBR 220)
RX output (L-Band+DC+Ext.Ref.)	Type N(F) 50 Ω
M&C (RS485)	62IN12E8-4S-4-622

All mating connectors provided

OPTIONS

Ka-band input	L-band output	LO freq.	Standard freq. option
17.7 to 18.7 GHz	1000 to 2000 MHz	16.700 GHz	
18.7 to 19.7 GHz	1000 to 2000 MHz	17.700 GHz	
19.7 to 20.7 GHz	1000 to 2000 MHz	18.700 GHz	ACLNBW-Ka-E45-V2
20.7 to 21.7 GHz	1000 to 2000 MHz	19.700 GHz	
21.7 to 22.2 GHz	1500 to 2000 MHz	20.200 GHz	

LN1	RX output connector type SMA(F) 50 Ω
LN2	Operating temperature -40 °C to +60 °C
LN3	Internal reference ACLNBWI-Ka-E45-V2

Any other frequency band or custom specification available under request. Please, contact factory. Specifications are subject to change without notice.

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