



**EUROSATCOM**  
VSATECH ASSOCIÉ

# Ka-BAND LOW NOISE BLOCK

## ACLNBS-Ka-Ex-V3

### Standard Series

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                 | 19.2 to 22.2 GHz              |
| Input Ka-Band VSWR (50 Ω)       | < 1.3:1                       |
| Output frequency                | 950 to 2000 MHz (see options) |
| 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         |
| Gain stability (24 hours)       | ±0.25 dB @ const. temp.       |
| Gain variation over temperature | ±2.0 dB                       |
| Noise figure @ 25 °C            | ≤ 1.5 dB                      |
| Noise temperature @ 25 °C       | ≤ 120 K                       |
| Image rejection                 | > 45 dB                       |
| Output P1dB                     | > +10 dBm                     |
| In-band spurious                | < -60 dBc @ Pout = 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 | 9-15 VDC   |
| Consumption      | 370 mA typ |

### MECHANICAL SPECIFICATIONS

|              |  |
|--------------|--|
| Size (LxWxH) | 114 x 58 x 36 mm<br>4.5 x 2.3 x 1.4 in |
| Weight       | 350 g<br>0.8 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         |

### OPTIONS

| Ka-band input    | L-band output    |
|------------------|------------------|
| 19.2 to 20.2 GHz | 1000 to 2000 MHz |
| 20.2 to 21.2 GHz | 1000 to 2000 MHz |
| 20.2 to 21.2 GHz | 950 to 1950 MHz  |
| 21.2 to 22.2 GHz | 1000 to 2000 MHz |

| LO freq.   | Standard freq. option |
|------------|-----------------------|
| 18.200 GHz | ACLNBS-Ka-E1-V3       |
| 19.200 GHz | ACLNBS-Ka-E2-V3       |
| 19.250 GHz | ACLNBS-Ka-E22-V3      |
| 20.200 GHz | ACLNBS-Ka-E60-V3      |

|     |  |
|-----|--|
| LN1 | RX output connector type SMA(F) 50 Ω   |
| LN2 | Operating temperature -40 °C to +60 °C |
| LN3 | Internal reference ACLNBSI-Ka-Ex-V3    |



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