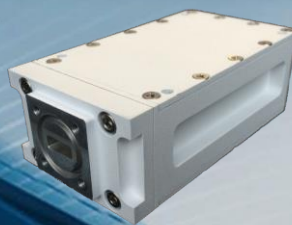


Ka-BAND LOW NOISE AMPLIFIER (LNA)

ACLNA-Ka-E33-V1

Wide Band Series



Ed.08

01/03/17

ACLNA-Ka Wide Band Series low noise amplifier has been designed to meet restrictive specifications for Ka Band communication systems. The equipment has a typical gain of 50 dB with a noise figure lower than 1.6 dB. With a low weight and small dimensions ACLNA-Ka is designed in waterproof housing easy to be integrated as part of Ka band redundancy system or standalone unit.

Monitoring and control is provided through alarm contact closure. ACLNA-Ka Wide Band Series has been tested over the wide temperature range, providing very good gain stability with temperature and very high reliability with low current consumption.

LNA SPECIFICATIONS

| | |
|--|---|
| RF frequency | 17.7 to 21.2 GHz |
| Input VSWR (50 Ω) | < 1.5:1 |
| Output VSWR (50 Ω)..... | < 1.8:1 (< 1.3:1 with output coaxial isolator option) |
| Gain | 50 dB min (60 dB min with high gain option) |
| Gain flatness over the whole bandwidth | ± 1.25 dB (± 1.0 dB typ) |
| Gain flatness over any 500 MHz | ± 0.5 dB |
| Gain flatness over any 40 MHz..... | ± 0.15 dB |
| Gain stability over 24 hours | ± 0.2 dB @ constant temperature |
| Gain variation over temperature..... | ± 2.5 dB over the whole range (± 1.5 dB as option) |
| Noise figure @ 23°C | ≤ 1.6 dB (1.4 dB typ) |
| Noise temperature @ 23°C | ≤ 130 K (110 K typ) |
| Output P1dB | > +10 dBm (+20 dBm with high linearity option) |
| Output third order intercept point OIP3..... | > +20 dBm (+30 dBm with high linearity option) |
| Maximum input level without damage..... | 0 dBm |
| Spurious | < -70 dBc @ P _{OUT} = 0 dBm |
| AM/PM conversion | > 0.1 dB/deg @ P _{OUT} = -10 dBm |
| Group delay over any 40 MHz | |
| Linear | 0.02 ns/MHz |
| Parabolic | 0.001 ns/MHz ² |
| Ripple | 0.1 ns pp |
| DC input voltage | 12-28 V _{DC} |
| DC current consumption | 140 mA typ @ 15 V _{DC} (200 mA with high linearity option) |
| Operating temperature..... | -40 to +60°C |
| Storage temperature | -40 to +85°C |
| Relative humidity | up to 100% |
| Operating altitude..... | up to 3000 m |
| Interfaces | |
| RX input (Ka-Band) | WR42 grooved (PBR 220) |
| RX output (Ka-band) | Type SMA(F) 50 Ω |
| Power supply + Alarm contact closure..... | NORCOMP M8/5 pines (mating connector provided) |
| Dimensions | 95 x 50 x 32 mm / 3.7 x 2.0 x 1.3 inches |
| Weight | 270 g / 0.6 lbs |
| Finish | RAL 9003 (White) |
| Options | |
| LN1: | High gain configuration |
| LN2: | High linearity configuration |
| LN3: | Coaxial output isolator |
| LN4: | Increased gain stability (± 1.5 dB over whole temp. range) |
| LN5: | M&C through serial port RS485 |

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