The Ka-Band PLL LNB is a single-band LNB that covers the wide frequency range 17.3-22.2 GHz with several sub bands and LO frequencies.

The LNB features Low Phase Noise to meet the DVB-S2X Professional services profile.

The LNB has a compact size and light weight. It is designed for reliable operation over a high temperature range for installation in various outdoor environments or build-in applications. Options include customized LO, customized gain, separate DC power input and separate input for the external 10 MHz reference.

Features

- Frequency range 17.3-22.2 GHz
- Several LO frequencies available
- Choose between Internal Ref. or External Ref. input models
- Ultra Low Phase Noise
- High P1dB and IP3
- Compact size and light weight
- Wide operating temperature range

Ka-Band PLL LNB

Professional Ka-Band PLL LNB with Low Phase Noise

TECHNICAL SPECIFICATIONS

|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|

Gain
- 60 dB typ. (55 dB min.)

Flatness
- ±0.4 dB typ. within 30 MHz
- ±2 dB max.

Noise Figure / Noise Temperature
- 1.3 dB / 101 K typ.
- 1.5 dB / 120 K typ.

Phase Noise
- -40 dBc @ 10 Hz
- -65 dBc @ 100 Hz
- -85 dBc @ 1 kHz
- -90 dBc @ 10 kHz
- -95 dBc @ 100 kHz
- -112 dBc @ 1 MHz typ.

Image Rejection
- 30 dB min.

Output P1dB
- +15 dBm typ.

Output IP3
- +25 dBm typ.

Output VSWR
- 2.1:1 typ.

Input Waveguide
- WR 42 / N-type 50Ω
- Option SMA-type 50Ω

Input VSWR
- 2.3:1 typ.

LO Leakage
- -60 dBm @ waveguide input

Internal Ref. Stability
- ±1 ppm -40 to +60°C (±1.5 ppm -40 to +80°C) / ±2.5 ppm -40 to +60°C (±3.5 ppm -40 to +80°C)

External 10 MHz ref.
- Level: -15 to +5 dBm. Supplied through output connector (with no ext. 10 MHz ref. present LO shifts -20 ppm)

DC Input
- +12 to +24 V, Supplied through output connector
- +13 to +24 V, Supplied through output connector

Power Consumption
- 5 W typ.

Temperature Range
- -40 to +80°C

Dimensions
- 121 x 56 x 44 mm (F- & SMA-connector) / 127 x 56 x 44 mm (N-connector) (for drawing, see www.smw.se)

Weight
- 326 g (F- & SMA-connector)
- 345 g (N-connector)

Miscellaneous
- Enclosed O-ring, mounting screws (M3 x 8) 4pcs.

Options
- Customized LO, gain & variation, Separate DC input, Separate 10 MHz ref. input, Waveguide Isolator (input VSWR 1.4:1 max), Separate DC input connector F-, N- or SMA-type. Fiber output (Q-ODC)