

X LNB 7.68 - 8.32 GHz 1 Band CF 1500 MHz

Key features



- Very Low Noise Figure
- Excellent Input VSWR
- High P1dB and IP3
- Center IF of 1500 MHz.
- Wide operating temperature range
- Compact size and light weight



Description

The professional X-Band PLL LNB is optimized for Earth Observation (EO) and Remote Sensing (SRS) technical requirements.

It reduces cost and complexity greatly compared to a traditional LNA + Rack BDC system and is ideal for Smallsats or any LEO, MEO and GEO X-Band application.

The X-band PLL LNB model 6.50 have 1500MHz centered IF Industry standard output and cover the input frequency range of 7.68 to 8.32 GHz with fixed gain of 60 dB typ. (55 dB min.).

Available with Internal LO ref. or with External 10 MHz ref. input. Optional you can order this LNB with Fiber-optic output (single mode fiber.)



With optional CPR 112G adapter



With optional direct fiberoptic output



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Technical specifications

	MODEL/LO	6.50
INPUT	Input freq. GHz	7.68 - 8.32 GHz
	Input	WR 112 / R 84. Flange PBR 84
	Pressurizable	0.1 bar max. (option)
	DC Input	+12 to +24 V supplied through output connector
	Current drain	190 mA @ +13 V, 160 mA @ +15 V, 140 mA @ +18 V, 110 mA @ +24 V
	Input VSWR	1.5:1 max.
INTERNAL	LO ref.	Internal or External 10 MHz ref. Note! Different models
	MODELS with External LO ref.	Sine Wave, Level -10 to +10 dBm. Supplied through output connector. With no ext 10 MHz ref. signal present LO shifts -20 ppm.
	MODELS with Internal LO ref.	±0.5 ppm -20 to +70°C (±1 ppm -40 to +80°C), ±1 ppm -20 to +70°C (±1.5 ppm -40 to +80°C)
	LO Leakage	-60 dBm max. @ waveguide input
	Gain	60 dB typ. (55dB min.)
	Flatness	±0.4 dB within 30 MHz, ±2 dB max. over band
	Noise figure	0.69 dB / 50 K max., 0.6 dB / 43 K typ.
	Phase Noise	-35 dBc @ 10 Hz -65 dBc @ 100 Hz -85 dBc @ 1 kHz -90 dBc @ 10 kHz -100 dBc @ 100 kHz -128 dBc @ >1 MHz typ.
	Group delay	± 1ns max.
	Image Rejection	40 dB min.
OUTPUT	IF output	1180-1820 MHz, Center Frequency 1500 MHz ±320 MHz
	Output P1dB	+15 dBm typ.
	Output IP3	+25 dBm typ.
	Output VSWR	1.7:1 max. @ 50 ohm
	Output Connector	N-type 50Ω, SMA-type 50Ω or F-type 75Ω
GENERAL	Dimensions	130 x 56 x 51 mm (F- & SMA-connector), 135 x 56 x 51 mm (N-connector)
	Weight	353 g WR112, 420 g CPR112G (F- & SMA-connector) 369 g WR112, 446 g CPR112G (N-connector)
	MTBF	MTBF as per MIL-HDBK-217F Notice 2: Environmental Condition GF (Ground Fixed): >489000 hours, Environmental Condition AIC (Airborne, Inhabited, Cargo): >245000 hours, Quality level: Commercial, Temp used for MTBF calculation: +35 C Ambient
	Temperature range	Storage and operating: -40 to +80°C, -40 to +176° F
	Miscellaneous	Enclosed conductive O-ring, mounting screws (M4 x 10) 4 pcs
OPTIONS	Options	Separate SMA connector for DC input or Ext. 10 MHz reference Customized gain CPR 112 G flange adaptor Extended IF Fiberoptical output

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Technical Drawing

