

Ku LNB 10.70-12.75 GHz 1 Band

Key features



- Excellent Phase Noise
- Auto LO ref Ext 10 MHz, fallback to Internal ref
- Wide operating temperature range
- High P1dB and IP3
- Alarm and Monitoring & Control as option



Description

The new professional Singleband PLL LNB from Swedish Microwave offers many options of input frequency ranges with IF range up to 950-2150 MHz.

An preferred option is Alarm and Monitoring & Control via Modbus RS485, for surveillance of the most important parameters and some adjustments. The configurable Alarm output alerts you if something goes wrong with the signal reception or if the external reference fails.

LNB connector (standard)



Connector A (standard)

Type: N-f, (option F-f or SMA-f)
Functions: L-Band out, DC in, External 10 MHz in

LNB connectors (optional)



Connector B (optional)

Type: M8 female, 4 pin, A-coded
Functions: Alarm and M&C

Connector B (optional)



- 1 = Alarm open collector (max. 200 mA) or optionally DC input.
- 2 = A pos+ RS485
- 3 = B neg- RS485
- 4 = Common (GND)
- 5 = Shield

Connector C (optional)

Type: SMA-f only
Functions: Ext. 10 MHz in and/or DC input

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Technical specifications

MODEL/LO		9.75	10.00	10.25	10.50	10.60	10.70	10.75	11.20	11.25	11.30
INPUT	Freq. range (GHz)	10.70-11.80	10.95-12.10	11.20-11.70	11.45-12.20	11.70-12.75	11.65-12.75	11.70-12.75	12.20-12.75	12.20-12.75	12.25-12.75
	IF (MHz)	950-2050	950-2100	950-1450	950-1700	1100-2150	950-2050	950-2000	1000-1550	950-1500	950-1450
	Input	WR75 / R120. PBR120 flange									
	Pressurizable	0.1 bar max.									
	Input max power	0 dBm instantaneous (not continuous)									
	DC Input	nom. +12 to +24 V (11V min., 26V max.) through output connector or separate connector (SMA). 5W max.									
	Input VSWR	1.9:1 typ., 3.0:1 max. w/o isolator									
INTERNAL	LO ref.	Auto switch External 10 MHz ref / Internal ±2.5 ppm -40 to +80°C									
	Ext. 10 MHz ref.	Sinus wave, input level -10 dBm to +10 dBm through output connector or optionally via separate SMA connector.									
	LO Leakage	-60 dBm max. @ waveguide input, -40 dBm max. @ IF output									
	Gain	60 dB typ. (55dB min.)									
	Gain variation over 24h	±0.1 dB @ 23°C									
	Flatness each band	± 1.5 dB max.									
	Noise figure	0.8 dB / 59 K typ., 1.0 dB / 75 K max.									
	Phase Noise	10 Hz -35dBc/Hz • 100 Hz -65dBc/Hz • 1 kHz -82dBc/Hz • 10 kHz -86dBc/Hz • 100kHz -95dBc/Hz • 1MHz -120dBc/Hz (max.)									
	Image Rejection	20 dB min.									
	Out of band rejection	20 dB min.									
	Desensitization	max. -35 dBm, the absolute level out of band that increases NF by 0.1 dB in the band 13.75-14.50 GHz (uplink Ku).									
	Spuriouses in band	W/o signal -75 dBm max. With -10 dBm output signal -65 dBc max. @ fc > ±1 MHz and -60dBc max. @ ≤ ±1 MHz.									
OUTPUT	Group delay	max. +/- 0.25ns @ 50 MHz BW, max. +/- 1ns @ each band									
	IF output range	950-2150 MHz									
	Output P1dB	+15 dBm min.									
	Output IP3	+25 dBm min.									
	Output VSWR	1.7:1 max. (N and SMA connector), 2.3:1 max. (F connector)									
GENERAL	Output Connector	N-female 50Ω , SMA-female 50Ω or F-female 75Ω									
	Alarm functions (option)	Sum alarm, set via M&C to alarm in any combination of: LNA failure, Total current, LO lock (Ext/Int/n/a), signal power high/low, Supply voltage low. Open collector 3.3 to 28 V, max. 200 mA (pullup 10 k Ohm at host side), pin 4 in M8 connector.									
	M & C functions (option)	Via MODBUS RTU RS485 electrical interface, see document Monitoring and Control technical interface for details. NOTE! Mates with M8 male connector/Cable, use only shielded cables									
	Dimensions	128 x 56 x 47 mm (with N-connector)									
	Weight	370 g (with N-connector)									
	Temperature range	Storage and operating: -40 to +80°C, -40 to +176°F									
	MTBF	MTBF as per MIL-HDBK-217F Notice 2: Environmental Condition GF (Ground Fixed): >690000 hours, Environmental Condition AIC (Airborne, Inhabited, Cargo): >360000 hours, Quality level: Commercial, Temp used for MTBF calculation: +35 C Ambient									
OPTIONS	Miscellaneous	Enclosed conductive O-ring, hex head mounting screws (M4 x 10) 4 pcs (for LNB)									
		- Separate SMA connector for DC input or/and Ext. 10 MHz reference - Custom LOs and input frequencies (within 10.70 to 13.00 GHz) - Fixing points - Alarm and M&C									

C-BAND

X-BAND

KU-BAND

KA-BAND

Q/V-BAND

RFo FIBER

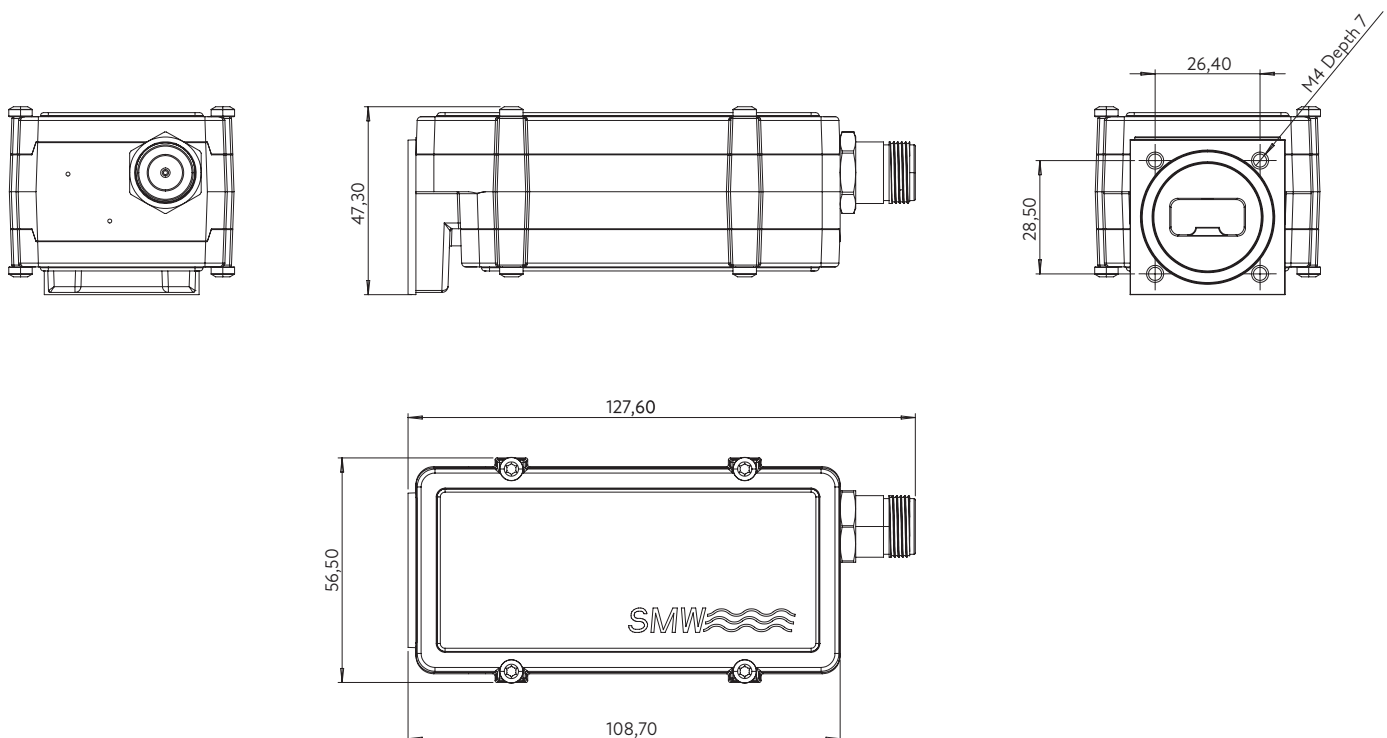
L-BAND

EXT REF

OTHER

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Technical drawing



Designed and
Manufactured



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