

## For monitoring Tx.



The PLL-LNB 13/14 GHz has either internal high LO stability or external 10 MHz reference. WR75 waveguide input or SMA input (via transition).

Options include customized LO, customized gain, separate DC power input, and separate input connector for the external 10 MHz reference.

All our LNBS are individually hand tuned to get the very best performance available for each unit. Quality and long term reliability is also essential. Therefore are all LNBS tested according to a very extensive test program, which includes heating, cooling, water-proof testing and rigorous electrical testing.

Swedish Microwave was founded 1986 and is today a leading manufacturer of professional LNBS (Low Noise Block converters). The company is located in Motala Sweden, and to date the products are installed in more than 100 countries.

All work is in-house allowing custom-design products, short delivery times, high flexibility, quick service and support.

## SPECIFICATION SMW PLL13/14 GHz

Frequency range	12.75-13.25 GHz	13.75-14.5 GHz
LO frequency	11.80 GHz	12.80 GHz
Output frequency	950-1450 MHz	950-1700 MHz
Gain	50 dB typ. or 0 dB typ.	
Gain variation within 30 MHz max.	±0.4 dB	
Gain variation max.	±4 dB	
Noise Figure, typical	1.2 dB (2.0 dB with transition).	
LO radiation	-60 dBm	
Image rejection	40 dB min	
P1dB typ.	+10 dBm	
IP 3 typ.	+20 dBm	
Input	WR-75 waveguide (R120) or SMA (transition)	
Output (waterproof)	F-connector 75 ohm, N-connector 50 ohm or SMA-connector 50 ohm	
Input VSWR	2.3:1 max	
Output VSWR	2.1:1 max	
DC power	12 - 24 V 270 mA typ.	
Operating temperature	-40 to +80°C	
Storage temperature	-40 to +80°C	
Dimensions	122 (128 N) x 56 x 44 mm	
Weight	329 g (F- & SMA-connector), 399 g with transition 345 g (N-connector), 415 g with transition	

### Internal reference

LO stability (over temp.)*	±10 kHz (±1 ppm) or ±25 kHz (±2.5 ppm)
LO Phase noise typical	-75 dBc @ 1 kHz -78 dBc @ 10 kHz -90 dBc @ 100 kHz -120 dBc @ >1 MHz

### External reference

LO stability (over temp.)*	Depend on the reference
External reference input power	-5 to +10 dBm
External reference input port	Output IF connector. Option Sep. connector (F, N or SMA)
LO Phase noise typical	-70 dBc @ 10 Hz -70 dBc @ 100 Hz -75 dBc @ 1 kHz -78 dBc @ 10 kHz -90 dBc @ 100 kHz
External Reference Phase noise	-135 dBc @ 100 Hz -143 dBc @ 1 kHz -145 dBc @ 10 kHz

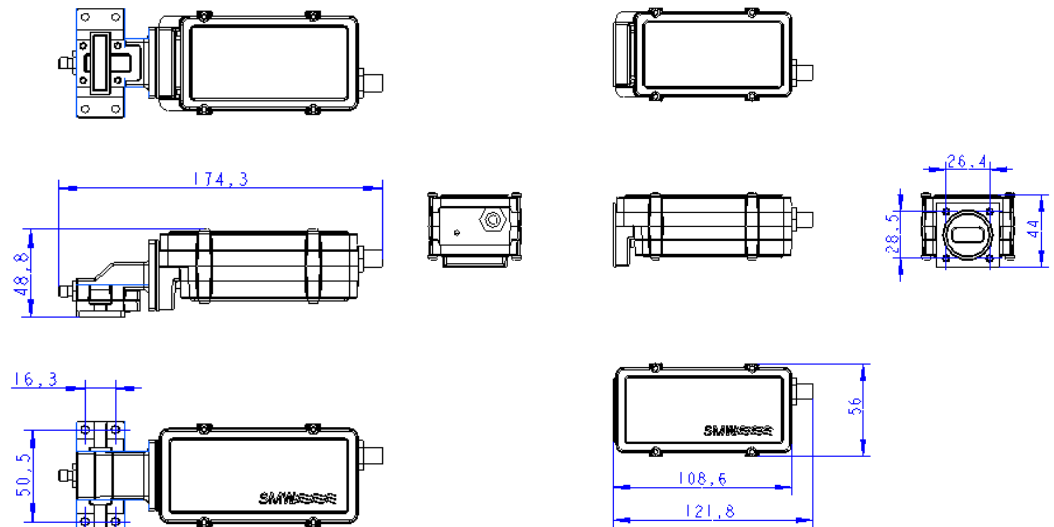
### Options

Separate DC power input (F, N or SMA)  
Separate connector for the ext. 10 MHz ref. (F, N or SMA)  
Customized gain and variation  
Customized LO  
Extended frequency range  
SMA-output connector

### Enclosed accessories

O-ring  
Screw M4 x 8 4 pcs

\* ±10 kHz within -10° to +70°C  
±25 kHz within -40° to +60°C



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2012-09-19