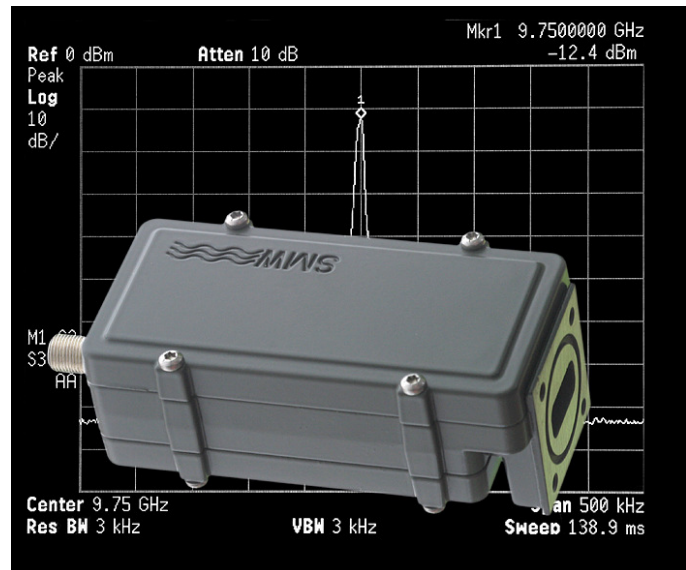


SMW Q-PLL



2-, 3- or 4-band Full Ku-Band PLL-LNB

The Q-PLL is ideal for Marine-, SNG-, VSAT and On-The-Move applications.

Q-PLL comes standard with High IP3, Low Noise Figure and Low Phase Noise, either with internal high LO stability or with external 10 MHz reference. Switching via the Voltage and Tone, or via the Voltage or Tone only.

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 (SMW) was founded 1986 and is today a leading manufacturer of professional LNBS (Low Noise Blockdownconverters). The company is located in Motala Sweden, and to date the products are installed in more than 80 countries.

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

Specification SMW Q-PLL

SMW Q-PLL

Frequency range	10.70-12.75 GHz
Standard LO frequency (max. 4)	9.75, 10.0, 10.25, 10.5, 10.6, 10.75, 11.2, 11.25 and 11.3 GHz
Standard IF Frequency	950-1450 to 2150 MHz (will be specified from the LO's choosen)

Specification

LO stability
LO Phase noise typical

Internal reference

±10 kHz* or ±25 kHz
-75 dBc @ 1 kHz
-78 dBc @ 10 kHz
-100 dBc @ 100 kHz
-120 dBc @ >1 MHz

Specification

LO stability
External reference input frequency
External reference input power
External reference input port

External reference

Depends on the external reference
10 MHz
-5 to 10 dBm
Output IF connector.
Option via sep. connector
(F, N or SMA)
-70 dBc @ 10 Hz
-70 dBc @ 100 Hz
-75 dBc @ 1 kHz
-78 dBc @ 10 kHz
-105 dBc @ 100 kHz
-135 dBc @ 100 Hz
-143 dBc @ 1 kHz
-145 dBc @ 10 kHz

Switching 2-band Voltage (V)

Band 1 11.5 - 14.0 V, No Tone
Band 2 16.0 - 19.0 V, No Tone

LO Phase noise typical

Switching 2-band Tone (T)

Band 1 No Tone, 11.5 - 20.0 V,
Band 2 Tone 22 kHz, 11.5 - 20.0 V

External Reference Phase noise

Switching 3-band Voltage (V)
option 13/18/24 V (see below)

Band 1 11.5 - 13.7 V, No Tone
Band 2 13.9 - 16.8 V, No Tone
Band 3 17.0 - 19.0 V, No Tone

Switching 2-band Voltage (V)

Band 1 11.5 - 14.0 V, No Tone
Band 2 16.0 - 19.0 V, No Tone

Switching 3-band Voltage (V) and Tone (T)

Band 1 11.5 - 14.0 V, No Tone
Band 2 11.5 - 14.0 V, Tone 22 kHz
Band 3 16.0 - 19.0 V, No Tone

Switching 2-band Tone (T)
(ext. 10 MHz ref. via sep. input connector)

Band 1 No Tone, 11.5 - 20.0 V
Band 2 Tone 22 kHz, 11.5 - 20.0 V

Switching 4-band Voltage (V) and Tone (T)

Band 1 11.5 - 14.0 V, No Tone
Band 2 11.5 - 14.0 V, Tone 22 kHz
Band 3 16.0 - 19.0 V, No Tone
Band 4 16.0 - 19.0 V, Tone 22 kHz

Switching 3-band Voltage (V)
Option 13/18/24 V (see Options)

Band 1 11.5 - 13.7 V, No Tone
Band 2 13.9 - 16.8 V, No Tone
Band 3 17.0 - 19.0 V, No Tone

General

Gain typ.
Gain variation within 30 MHz max.
Gain variation max.
Noise Figure, typical
LO radiation
Image rejection
1 dB gain compression point typical
IP 3 typical
Input
Output (waterproof)

58 dB typ. (53 dB min.)
±0.4 dB
±4 dB
0.8 dB
-60 dBm
40 dB min
+15 dBm
+25 dBm
WR-75 waveguide (R120)
F-connector 75 ohm,
N-connector 50 ohm or
SMA-connector 50 ohm
2.3:1 max
2.1:1 max
270 mA typ.
-30 to +60°C
-40 to +80°C
122 (127 N) x 56 x 44 mm
329 g (F- & SMA-connector)
345 g (N-connector)

Switching 3-band Voltage (V) and Tone (T)
(ext. 10 MHz ref. via sep. input connector)

Band 1 11.5 - 14.0 V, No Tone
Band 2 11.5 - 14.0 V, Tone 22 kHz
Band 3 16.0 - 19.0 V, No Tone

Switching 4-band Voltage (V) and Tone (T)
(ext. 10 MHz ref. via sep. input connector)

Band 1 11.5 - 14.0 V, No Tone
Band 2 11.5 - 14.0 V, Tone 22 kHz
Band 3 16.0 - 19.0 V, No Tone
Band 4 16.0 - 19.0 V, Tone 22 kHz

Input VSWR
Output VSWR
Current
Operating temperature
Storage temperature
Dimensions
Weight

Specification Tone Switching

Switching
Amplitude voltage
Duty cycle

No tone/22 kHz ±4 kHz
0.6 ±0.2 V
40-60%

Options

Voltage switching 13/18/24 V (240/190/150 mA typ.)
Separate DC power input (F, N or SMA)
Customized gain and variation
Customized LOs
Extended frequency range
Separate input connector for the ext. 10 MHz ref.
SMA-input (via transition)

Enclosed accessories

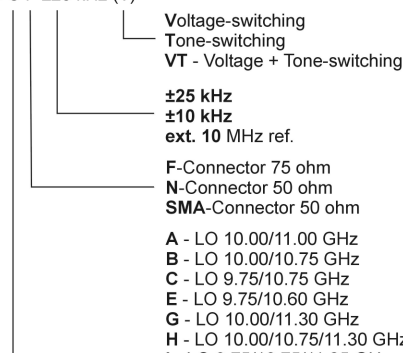
O-ring
Screw M4 x 8 4 pcs

* ±10 kHz within -10° to +70°C



How to order Q-PLL Ku-band (if you can't find your model please ask for a type)

Q-PLL type C F ±25 kHz (V)



- Voltage-switching
- Tone-switching
- VT - Voltage + Tone-switching
- ±25 kHz
- ±10 kHz
- ext. 10 MHz ref.
- F-Connector 75 ohm
- N-Connector 50 ohm
- SMA-Connector 50 ohm
- A - LO 10.00/11.00 GHz
- B - LO 10.00/10.75 GHz
- C - LO 9.75/10.75 GHz
- E - LO 9.75/10.60 GHz
- G - LO 10.00/11.30 GHz
- H - LO 10.00/10.75/11.30 GHz
- I - LO 9.75/10.75/11.25 GHz
- J - LO 10.00/10.60/11.05 GHz
- K - LO 10.00/10.60/11.25 GHz
- L - LO 9.75/10.00/10.60 GHz
- M - LO 9.75/10.25/10.75/11.30 GHz
- N - LO 9.75/10.00/10.75/11.30 GHz
- O - LO 9.75/10.25/10.75/11.25 GHz
- P - LO 10.00/10.50/10.75/11.25 GHz
- R - LO 10.00/10.75/11.30/9.75 GHz
- S - LO 9.75/10.60/11.30 GHz
- T - LO 9.75/10.75/11.30 GHz
- U - LO 9.75/10.50/11.25 GHz
- V - LO 9.75/10.50/11.05/10.00 GHz
- Y - LO 9.75/10.50/11.30 GHz

