

Multi-band PLL-LNB Switchable 2-, 3- or 4-band



The professional switchable Multiband Ku-Band Q-PLL LNB is available either with internal high LO stability or with external 10 MHz reference.

Options include customized switching (e.g. 13/18/24 V), customized LO, customized gain, separate input connector for DC power and/or external 10 MHz reference.

The Q-PLL LNB is ideal for installation in e.g. maritime VSAT or SNG applications where change of satellite band is common.

The remotely controlled band switching eliminates the need for changing the LNB.

Features

- Frequency range 10.70-12.75 GHz
- Several LO frequencies available
- LO switching by voltage and/or 22kHz
- Internal or External 10 MHz reference
- Low phase noise
- High P1dB and IP3
- Compact size and light weight
- High operating temperature range

TECHNICAL SPECIFICATIONS

MODEL:	Q-PLL Multiband LNB					
Input freq. (GHz)	10.70 – 12.75 GHz					
LO (GHz)	Max. 4 LO frequencies of following: 9.75 / 10.00 / 10.25 / 10.50 / 10.60 / 10.70 / 10.75 / 10.80 / 10.90 / 11.00 / 11.05 / 11.20 / 11.25 / 11.30					
Output freq. (MHz)	950 – 2150 MHz					
Gain	60dB typ. 55dB min. Option customized gain and variation					
Gain flatness	±0.4 dB max. within 30 MHz ±4 dB max. over band					
Noise Figure typ.	0.8 dB					
Phase Noise typ.	-35 dBc @ 10 Hz -62 dBc @ 100 Hz -75 dBc @ 1 kHz -83 dBc @ 10 kHz -93 dBc @ 100 kHz -120 dBc @ >1MHz					
Image rejection	40 dB min.					
Output P1 dB typ.	+15 dBm					
Output IP3 typ.	+25 dBm					
Output VSWR	2.1:1 typ.					
Output connector	F-type 75Ω / N-type 50Ω Option SMA-type 50Ω					
Input	WR75 / R120 Option SMA-connector via transition					
Input VSWR	2.3:1 typ.					
LO leakage	-60 dBm @ waveguide input					
Internal ref. stability	±5 kHz -20 to +70°C (±10 kHz -40 to +80°C) ±10 kHz -20 to +70°C (±15 kHz -40 to +80°C) ±25 kHz -40 to +80°C					
External 10 MHz ref	Level: -15 to +5 dBm. Supplied through output connector Option separate 10 MHz ref. input connector F-, N- or SMA-type					
DC power	+12 to +24 V, 270 mA typ. Supplied through output connector Option separate DC input connector F-, N- or SMA-type					
Temperature range	-40 to +80°C					
Dimensions	122 x 56 x 44 mm (F- & SMA-connector) 127 x 56 x 44 mm (N-connector)					
Weight	329 g (F- & SMA-connector) 345 g (N-connector)					
Options	Customized LO frequency and frequency range. Gain and variation, Separate inputs for DC and 10 MHz ref.					
Miscellaneous	Enclosed O-ring, mounting screws (M4 x 10) 4 pcs					

Specifications are subject to change without notice. General terms Orgalime S 2012. Products from Swedish Microwave AB are made for commercial use.

2 – BAND				
Type	Band	LO	Ku-band (GHz)	L-band (MHz)
A	1	10.00	10.95-11.70	950-1700
	2	11.00	11.95-12.75	950-1750
B	1	10.00	10.95-11.70	950-1700
	2	10.75	11.70-12.75	950-2000
C	1	9.75	10.70-11.70	950-1950
	2	10.75	11.70-12.75	950-2000
D	1	10.00	10.95-11.75	950-1750
	2	10.80	11.75-12.75	950-1950
E	1	9.75	10.70-11.70	950-1950
	2	10.60	11.70-12.75	1100-2150
G	1	10.00	10.95-11.70	950-1700
	2	11.30	12.25-12.75	950-1450
W	1	10.50	11.45-11.95	950-1450
	2	11.30	12.25-12.75	950-1450
Z	1	10.00	10.95-11.85	950-1850
	2	10.90	11.85-12.75	950-1850

3 – BAND				
Type	Band	LO	Ku-band (GHz)	L-band (MHz)
F	1	10.00	10.95-11.70	950-1700
	2	10.75	11.70-12.20	950-1450
	3	11.25	12.20-12.75	950-1500
H	1	10.00	10.95-11.70	950-1700
	2	10.75	11.70-12.25	950-1500
	3	11.30	12.25-12.75	950-1450
I	1	9.75	10.70-11.70	950-1950
	2	10.75	11.70-12.20	950-1450
	3	11.25	12.20-12.75	950-1500
J	1	10.00	10.95-11.70	950-1700
	2	10.60	11.55-12.25	950-1650
	3	11.05	12.00-12.75	950-1700
K	1	10.00	10.95-11.70	950-1700
	2	10.60	11.55-12.25	950-1650
	3	11.25	12.20-12.75	950-1500
L	1	9.75	10.70-11.80	950-2050
	2	10.00	10.95-12.10	950-2100
	3	10.60	11.70-12.75	1100-2150
S	1	9.75	10.70-11.70	950-1950
	2	10.60	11.70-12.70	1100-2100
	3	11.30	12.25-12.75	950-1450
U	1	9.75	10.70-11.45	950-1700
	2	10.50	11.45-12.20	950-1700
	3	11.25	12.20-12.75	950-1500
T	1	9.75	10.70-11.70	950-1950
	2	10.75	11.70-12.25	950-1500
	3	11.30	12.25-12.75	950-1450
Y	1	9.75	10.70-11.45	950-1700
	2	10.50	11.45-12.25	950-1750
	3	11.30	12.25-12.75	950-1450

4 – BAND				
Type	Band	LO	Ku-band (GHz)	L-band (MHz)
M	1	9.75	10.70-11.20	950-1450
	2	10.25	11.20-11.70	950-1450
	3	10.75	11.70-12.25	950-1500
	4	11.30	12.25-12.75	950-1450
N	1	9.75	10.70-10.95	950-1200
	2	10.00	10.95-11.70	950-1700
	3	10.75	11.70-12.25	950-1500
	4	11.30	12.25-12.75	950-1450
O	1	9.75	10.70-11.20	950-1450
	2	10.25	11.20-11.70	950-1450
	3	10.75	11.70-12.20	950-1450
	4	11.25	12.20-12.75	950-1500
P	1	10.00	10.95-11.45	950-1450
	2	10.50	11.45-11.95	950-1450
	3	10.75	11.70-12.20	950-1450
	4	11.25	12.20-12.75	950-1500
R	1	10.00	10.95-11.70	950-1700
	2	10.75	11.70-12.25	950-1500
	3	11.30	12.25-12.75	950-1450
	4	9.75	10.70-11.70	950-1950
V	1	9.75	10.70-11.50	950-1750
	2	10.00	10.95-11.75	950-1750
	3	10.50	11.45-12.25	950-1750
	4	11.05	12.00-12.80	950-1750

2 – BAND SWITCHING			
Option	Band	Voltage	Tone
V	1	13 V	
	2	18 V	
T	1	12-20 V	
	2	12-20 V	22 kHz

3 – BAND SWITCHING			
Option	Band	Voltage	Tone
VT	1	13 V	
	2	13 V	22 kHz
	3	18 V	
V	1	13 V	
	2	15 V	
	3	18 V	
V (24V)	1	13 V	
	2	18 V	
	3	24 V	

4 – BAND SWITCHING			
Option	Band	Voltage	Tone
VT	1	13 V	
	2	13 V	22 kHz
	3	18 V	
	4	18 V	22 kHz

Ordering information

Q-PLL type C F ±25 kHz V

Band switching: V / T / VT / V (24V)
 LO stability: ±25 kHz / ±10 kHz / ±5 kHz / ext. 10 MHz
 Output connector: F / N / SMA
 LO frequencies C = LO 9.75 & 10.75 GHz