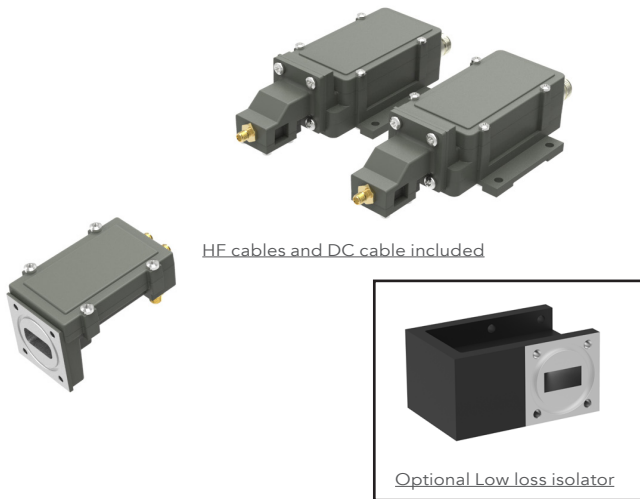


Dual PLL System

LNA / PLL BDC system for simultaneous reception of Low & High Ku-Band

The Dual PLL is the Professional Solution to receive the two bands simultaneously with high LO Stability and Low Phase Noise. Any LO frequencies can be combined without spurious e.g. Low band 10.00 GHz & High band 11.30 GHz.

The standard solution consists of one LNA and two Block Down Converters including HF and DC cables 3-6 meter. All parts are optimized, adjusted and tested as a complete matched unit.



Features

- **Wide frequency range**
- **Choose between Internal Ref. or External Ref. input models**
- **Several LO frequencies**
- **Low phase noise**
- **High P1dB and IP3**
- **Wide operating temperature range**
- **For outdoor use**
- **Option Low profile to fit 1U for indoor build-in applications**

TECHNICAL SPECIFICATIONS

BDC LO Low Band	9.75	10.00	10.25	10.50	10.60	10.75					
BDC LO High Band							10.60	10.75	11.20	11.25	11.30
NOTE	For LO 9.75/10.60 GHz we recommend our WDL PLL LNB type E. For LO 10.00/10.75 GHz we recommend our WDL PLL LNB type B.										
Input Frequency	10.70–11.80 GHz	10.95–11.80 GHz	11.20–11.70 GHz	11.45–12.20 GHz	11.70–12.75 GHz	11.70–12.75 GHz	11.70–12.75 GHz	11.70–12.75 GHz	12.20–12.75 GHz	12.20–12.75 GHz	12.25–12.75 GHz
LO Frequency	9.75 GHz	10.00 GHz	10.25 GHz	10.50 GHz	10.60 GHz	10.75 GHz	10.60 GHz	10.75 GHz	11.20 GHz	11.25 GHz	11.30 GHz
Output Frequency	950–2050 MHz	950–1800 MHz	950–1450 MHz	950–1700 MHz	1100–2150 MHz	950–2000 MHz	1100–2150 MHz	950–2000 MHz	1000–1550 MHz	950–1500 MHz	950–1450 MHz
Gain	60 dB typ.										
Flatness	±0.4 dB max. within 30 MHz, ±2 dB max. over each band										
Noise Figure / Noise Temperature	1.0 dB / 75 K typ.										
Phase Noise	-35 dBc @ 10 Hz	-62 dBc @ 100 Hz	-75 dBc @ 1 kHz	-83 dBc @ 10 kHz	-93 dBc @ 100 kHz	-120 dBc @ ≥1 MHz typ.					
Spurious Signals	-60 dBm typ. at the first spurious (e.g. 1000 MHz with LO 9.75 & 10.75 GHz)										
Image Rejection	40 dB min.										
Output P1dB	+15 dBm typ.										
Output IP3	+25 dBm typ.										
Output VSWR	2.0:1 typ.										
Output Conn.	LNA	SMA-connectors 50Ω									
Output Conn.	BDC	F-type 75Ω / N-type 50Ω / SMA-type 50Ω									
Input Waveguide	LNA	WR 75 / R 120. Flange 120.									
Input Conn.	BDC	SMA-connector 50Ω									
Input VSWR	LNA	2.0:1 max., 1.25:1 max with optional waveguide isolator									
LO Leakage	-60 dBm @ waveguide input										
MODELS with Internal Reference	±5 kHz -20 to +70°C (±10 kHz -40 to +80°C), ±10 kHz -20 to +70°C (±15 kHz -40 to +80°C)										
MODELS with External 10 MHz Reference	Sine Wave, Level: -15 to +5 dBm. Input via output connector (with no ext. 10 MHz ref. present LO shifts -20 ppm)										
DC Input	LNA	+12 to +24 V, 70 mA typ. Input through separate SMA connector. DC feed from low band BDC									
DC Input	BDC	+12 to +24 V, 270 mA typ. Supplied through output connector									
Temperature Range	-40 to +80 °C										
Dimensions	LNA: 78 x 46 x 44 mm, BDC: 175 x 80 x 46 mm (F-connector), 180 x 80 x 46 mm (N-connector), for drawing, see www.smw.se										
Weight	LNA: 124 g BDC: 329 g (F-connector), 345 g (N-connector)										
Miscellaneous	Enclosed O-ring, mounting screws (M4 x 10) 4 pcs. DC cable and HF cables										
Options	Customized LO freq., Gain, Variation, Input and Output frequency ranges, Separate DC input connector F-, N- or SMA-type, Cable lengths, Different HF cables, Low Loss Waveguide isolator VSWR 1.25:1 max., Low profile to fit 1U., Pressurizable(LNA)										

See the RF over Fiber and L-Band sections for output options

Rev.06-20-3H

Above parameters are generic product family values. For part number specific min./max. values, please consult us.

Specifications are subject to change without notice. Products from Swedish Microwave AB are made for commercial use.