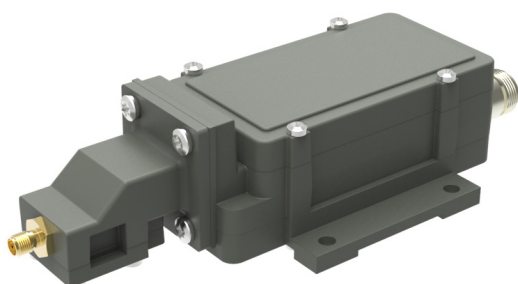


## Multiband PLL BDC

### Multiband PLL-BDC Switchable 2-, 3- or 4-band



The Multiband BDC can be remotely switched across 2-4 bands by voltage and/or 22 kHz tone control. See Multiband Ku-Band PLL BDC tables for full details on available bands.

The BDC is ideal for installation in various professional applications with low symbol rate carriers.

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

### Features

- Frequency range 10.70-12.75 GHz
- Several LO frequencies available
- LO switching by voltage and/or 22kHz
- Choose between Internal Ref. or External Ref. input models
- High P1dB and IP3
- Compact size and light weight
- Wide operating temperature range
- Option Low profile to fit 1U for indoor build-in applications

### TECHNICAL SPECIFICATIONS

MODEL:	Ku-Band Multiband BDC
Input Frequency	10.70 – 12.75 GHz
LO Frequency	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 GHz
Output Frequency	950 – 2150 MHz
Gain	By request, 10 dB to 60dB in 5 dB steps (Factory programmable)
Flatness	±0.4 dB max. within 30 MHz ±3 dB max. over band
Noise Figure / Noise Temperature	2 dB / 170 K @ 60 dB gain configuration typ., increasing to appr. 20dB / 28710 K @ 0 dB gain configuration.
Phase Noise	-35 dBc @ 10 Hz -62 dBc @ 100 Hz -75 dBc @ 1 kHz -83 dBc @ 10 kHz -93 dBc @ 100 kHz -120 dBc @ >1MHz, typ.
Image Rejection	40 dB min.
Output P1dB	+15 dBm typ. (+10 dBm @10-30 dB gain)
Output IP3	+25 dBm typ. (+20 dBm @10-30 dB gain)
Output VSWR	2.1:1 typ.
Output Connector	F-type 75Ω / N-type 50Ω Option SMA-type 50Ω
Input Connector	SMA-type 50Ω
Input VSWR	2.3:1 typ.
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	Level: -15 to +5 dBm. Supplied through output connector (with no ext. 10 MHz ref. present LO shifts -20 ppm)
DC Input	See separate table. Supplied through output connector
Current Drain	270 mA typ.
Temperature Range	-40 to +80°C
Dimensions	175 x 80 x 46 mm (F-connector) 180 x 80 x 46 mm (N-connector) ( for drawing, see <a href="http://www.smw.se">www.smw.se</a> )
Weight	399 g (F- & SMA-connector) 415 g (N-connector)
Options	Customized LO frequency and gain, Separate inputs for DC and 10 MHz ref., Low profile to fit 1U.
<b>See the RF over Fiber and L-Band sections for output options</b>	

Rev.01-20-1E

## cont. Multiband PLL BDC

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

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

DC Voltage tolerances	
DC Power 11.5 to 20.0 (26.0) V	
Nominal Voltage	Tolerance
13 V	11.5 to 14.5 V
18 V	16.0 to 20.0 V

DC Voltage tolerances	
Nominal Voltage	Tolerance
13 V	11.5 to 17.5 V
24 V *)	18.0 to 26.0 V

22 kHz switching	
Tolerance	22 kHz $\pm 4$ kHz
Amplitude Voltage	600 mV $\pm 200$ mV
Duty cycle	40 to 60 %

\*) Optional

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	10.00	10.95-11.85	950-1850
	2	10.90	11.85-12.75	950-1850
	3	11.30	12.25-12.75	950-1450

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	

DC Voltage tolerances	
DC Power 11.5 to 20.0 (26.0) V	
Nominal Voltage	Tolerance
13 V	11.5 to 13.9 V
15 V	14.2 to 16.3 V
18 V	16.6 to 20.0 V
24 V *)	20.3 to 26.0 V

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

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

DC Voltage tolerances	
DC Power 11.5 to 20.0 V	
Nominal Voltage	Tolerance
13 V	11.5 to 14.5 V
18 V	16.0 to 20.0 V

Ordering information:

