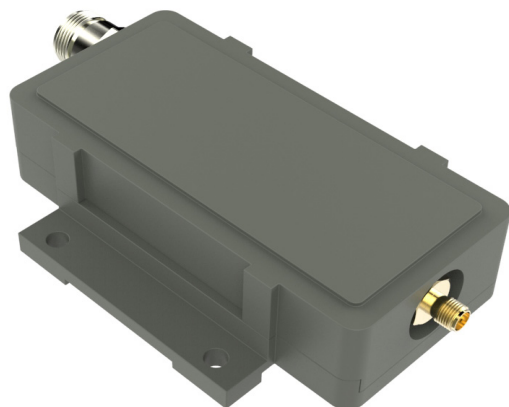


PLL BDC 7.25 - 7.75 GHz

7.25-7.75 GHz GHz to L-Band Block Down Converter



The X-Band PLL block down converter covers X-band within the frequency range 7.25 to 7.75 GHz. Fixed gain between 0 dB and 55 dB.

The BDC has some built in filtering for improved TX and IF margin, high IP3 and Low power consumption.

RF input is SMA female. IF output is standard L-band non inverted spectrum via N-,F- or SMA-connector. Options include customized LO, customized gain, separate DC power input and separate input for the external 10 MHz reference.

Features

- **Built-in filtering**
- **Low phase noise**
- **Choose between Internal Ref. or External Ref. input models**
- **Compact size and light weight**
- **Wide operating temperature range**
- **For outdoor use**
- **Low profile to fit 1U for build-in applications**

TECHNICAL SPECIFICATIONS

| MODEL: | X-Band BDC |
|---|--|
| Input Frequency | 7.25 - 7.75 GHz |
| LO Frequency | 6.30 GHz or by request (Factory programmable) |
| Output Frequency | Within 950 - 1450 MHz |
| Gain | By request, 0 dB to 55 dB in 5dB steps (Factory programmable) |
| Flatness | ±0.4 dB max. within 30 MHz ±2 dB max. over band |
| Noise Figure / Noise Temperature | 1.0 dB / 75 K @ 50dB gain configuration max., increasing to appr. 20 dB / 28710 K @ 0 dB gain configuration |
| Phase Noise | -40 dBc @ 10 Hz -62 dBc @ 100 Hz -80 dBc @ 1 kHz -88 dBc @ 10 kHz -95 dBc @ 100 kHz -120 dBc @ ≥1MHz, typ. |
| Image Rejection | 40 dB min. |
| Output P1dB | +15 dBm, +5 dBm <10 dB gain |
| Output IP3 | +25 dBm, +15 dBm <10 dB gain |
| Output VSWR | 2.1:1 max. |
| Output Connector | F-type 75Ω / N-type 50Ω / SMA-type 50Ω |
| Input Connector | SMA-type |
| Input VSWR | 1.7:1 max. |
| LO Leakage | -60 dBm @ RF input |
| MODELS with Internal Reference | ±0.5 ppm -20 to +70°C (±1 ppm -40 to +80°C), ±1 ppm -20 to +70°C (±1.5 ppm -40 to +80°C) |
| MODELS with External 10 MHz Reference | Sine Wave, Level: -15 to + 5 dBm. Supplied through output connector (with no ext. 10 MHz ref. present LO shifts -20 ppm) |
| DC Input | +12 to +18 V, 300-400 mA typ. Supplied through output connector |
| Temperature Range | Storage and operating: -40 to +80°C |
| Dimensions | 127 x 80 x 30 mm (F- & SMA-connector), 133 x 80 x 30 mm (N-connector), for drawing, see www.smw.se |
| Weight | 330 g (F- & SMA-connector) 344 g (N-connector) |
| Options | Customized gain & variation, Separate DC input connector F-, N- or SMA-type, Separate 10 MHz ref. input. |
| See the RF over Fiber and L-Band sections for output options | |

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

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