

## 7.25-7.75 GHz to L-Band BDC (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 @ waveguide input					
Internal Ref. Stability	±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)					
External 10 MHz Ref.	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	-40 to +80°C					
Dimensions	127 x 80 x 30 mm (F- & SMA-connector)    133 x 80 x 30 mm (N-connector)					
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.					