C BDC 5.70-7.25 GHz 1 Band

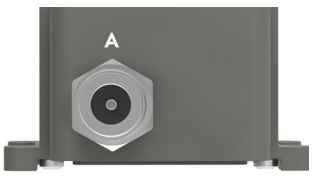
Key features

- Low phase noise to meet DVB-S2X VSAT profile
- High P1dB and IP 3
- Choose between Internal Reference or External 10 MHz reference models
- Wide operating temperature range
- For outdoor use, IP 67 classed
- Low profile to fit 1U (optional)

Description

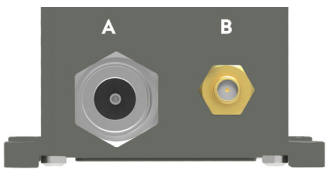
The C-Band PLL block down converter is intended for monitoring C-Band uplink transmissions within the frequency range 5.70 to 7.25 GHz. Fixed gain between 0 dB and 55 dB.
RF input is SMA female. IF output is standard L-Band inverted spectrum via N-, F- or SMA- connector.
Options include customized LO,customized gain, separate DC power input or separate input for the external 10 MHz reference.

BDC connector standard



Connector A (standard)
Type: N-female, (option F-female or SMA-female)
Functions: L-Band out, DC in, External 10 MHz in

BDC connector optional



Connector B (optional)
Type: SMA-female
Functions: External DC or Ext. 10 MHz ref. input.

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Rev. 12-23-6H

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Technical specifications

	MODEL	C-BAND BDC 5.70-7.25 GHz
INPUT	Input frequency	5.70-7.25 GHz. Any 1.20 GHz block within the frequency range.
	LO frequency	By request, 4.75 - 5.40 GHz (Factory programmable)
	Input	SMA female 50 Ω
	Input VSWR	2.3:1 max.
	DC Input	+12 to +18 V, 430 mA typ. Supplied through output connector.
INTERNAL	Gain	By request, 0 dB to 50 dB in 5 dB steps (Factory programmable)
	Flatness	± 0.4 dB max. within 30 MHz, full band ±2 dB max.
	Noise figure	8.0 dB / 1540 K typ. @ 50 dB gain, increasing to 20 dB / 28710 K @ 0 dB gain
	MODELS with Internal reference	±1 ppm -40 to +60°C (±1.5 ppm -40 to +80°C)
	MODELS with External reference	Sine Wave, Level: -15 to +5 dBm. Supplied through output connector. With no ext. 10 MHz ref. present LO shifts -20 ppm.
	Phase Noise	-40dBc/Hz • 10 Hz -62dBc/Hz • 100 Hz -80dBc/Hz • 1 kHz -88dBc/Hz • 10 kHz -95dBc/Hz • 100kHz -112Bc/Hz • ≥1 MHz (typ.)
	Group delay	±1 ns max.
	LO Leakage	-60 dBm max. @ RF input
	Image Rejection	40 dB min.
OUTPUT	Output frequency	950 - 2150 MHz, non-inverted spectrum
	Output P1dB	+15 dBm typ., +5 dBm @ gain 10 dB and below gain configuration typ.
	Output IP3	+25 dBm typ., +15 dBm @ 10 dB and below gain configuration typ.
	Output VSWR	2.1:1 max.
	Output Connector	F-type 75Ω, N-type 50Ω or SMA-type 50Ω
GENERAL	Temperature range	Storage and operating: -40 to +80°C, -40 to +176°F
	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)
	MTBF	MTBF as per MIL-HDBK-217F Notice 2: Environmental Condition GF (Ground Fixed): >489000 hours, Environmental Condition AIC (Airborne, Inhabited, Cargo): >245000 hours, Quality level: Commercial, Temp used for MTBF calculation: +35 C Ambient
OPTIONS		Separate SMA connector for DC input or Ext. 10 MHz ref. Custom LOs, Custom input frequencys, Custom gain and variation Low profile to fit 1U

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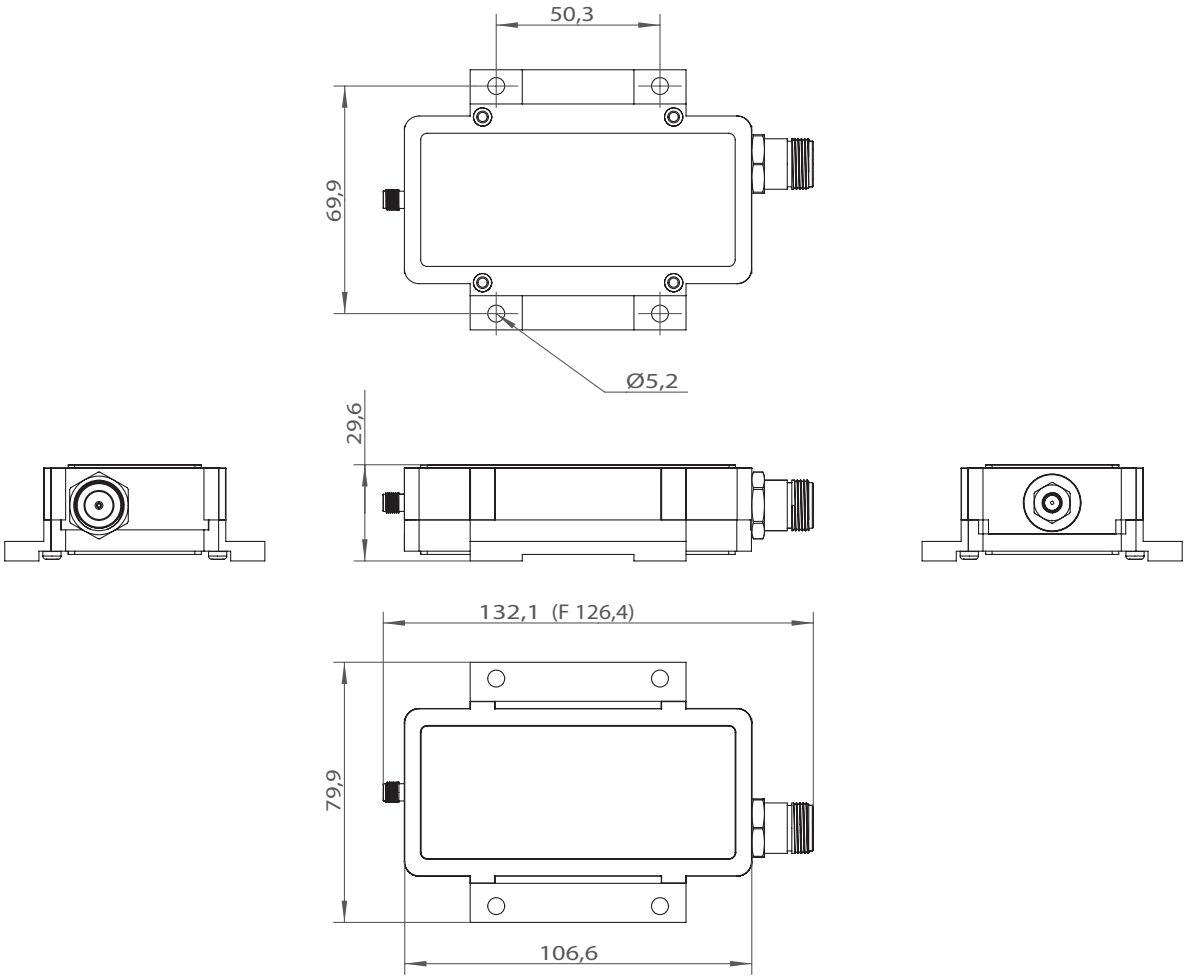
Technical Drawing



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