C BDC 5.70-7.25 GHz 1 Band

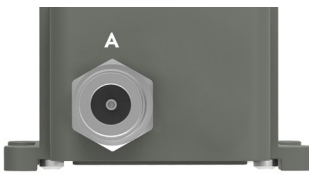
Key features

- 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

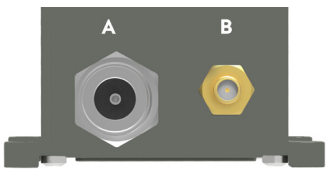
The C-Band PLL block down converter is intended for monitoring C-Band uplink transmissions within the frequency range 5.70 to 7.25 GHz. Fixed gain between 0 dB and 55 dB.
RF input is SMA female. IF output is standard L-Band inverted spectrum via N-, F- or SMA- connector.
Options include customized gain,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

Explore our full product range in this category

Swedish Microwave AB | Dynamovagen 5 | S-591 61 Motala | Sweden | Contact: +46 141 21 61 35 | sales@smw.se | smw.se

C BDC 5.70-7.25 GHz 1 Band

Technical specifications

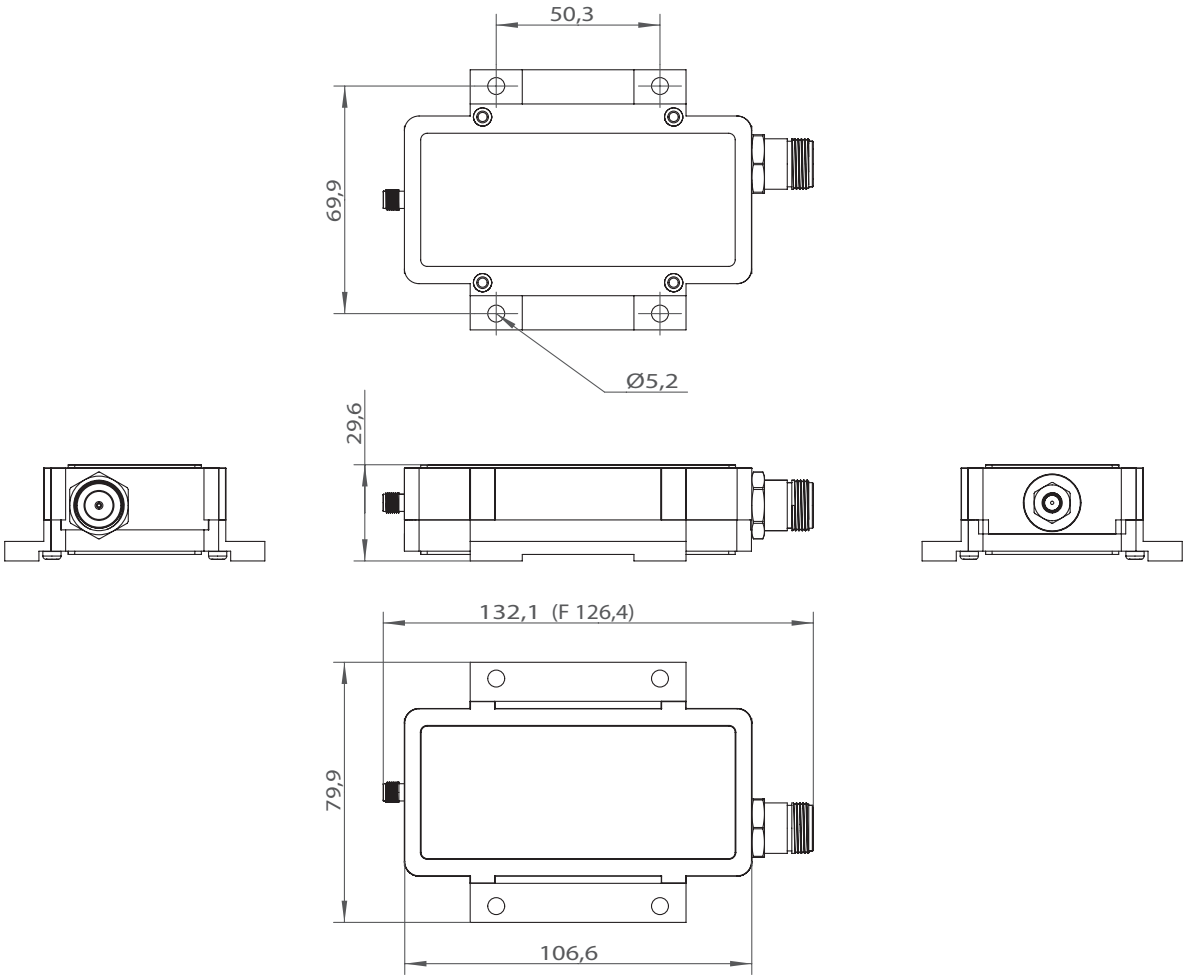
	MODEL	Input Frequency	LO Frequency	Output Frequency
MODELS	4.70	5.650-6.850 GHz	4.70 GHz	950-2150 MHz
	4.75	5.700-6.900 GHz	4.75 GHz	950-2150 MHz
	4.77	5.720-6.920 GHz	4.77 GHz	950-2150 MHz
	4.85	5.800-7.000 GHz	4.85 GHz	950-2150 MHz
	4.90	5.850-6.725 GHz	4.90 GHz	950-1825 MHz
	4.95	5.900-6.400 GHz	4.95 GHz	950-1450 MHz
	5.10	6.050-7.250 GHz	5.10 GHz	950-2150 MHz
	5.15	6.100-7.250 GHz	5.15 GHz	950-2100 MHz
INPUT	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)		
	Gain variation over 24h	±0.1 dB @ 23°C		
	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, -40 dBm max. @ IF output		
	Image Rejection	40 dB min.		
OUTPUT	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		

Swedish Microwave AB | Dynamovagen 5 | S-591 61 Motala | Sweden | Contact: +46 141 21 61 35 | sales@smw.se | smw.se

Rev. 2601

C BDC 5.70-7.25 GHz 1 Band

Technical Drawing



Swedish Microwave AB | Dynamovagen 5 | S-591 61 Motala | Sweden | Contact: +46 141 21 61 35 | sales@smw.se | smw.se