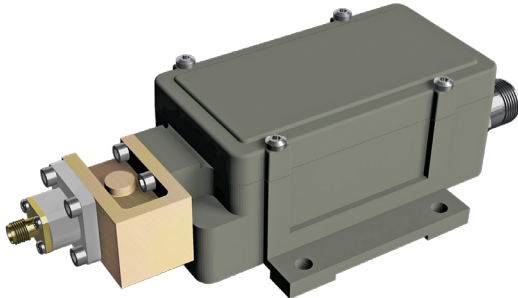


Ka BDC 17.30-22.30 GHz 2 Band

Key features



- Auto Switch between External or Internal reference
- High P1dB and IP3
- Excellent Phase noise meets all profiles of DVB-S2X.
- Customized LO as option
- Wide operating temperature range
- Alarm and Monitoring & Control as option



Description

The Ka-Band 2-Band BDC is the choice when you need to receive two sub-bands within the frequency range of 17.30 to 22.30 GHz and want to combine with a LNA or already have a LNA. As an option the SMW M&C give you the possibility to cascade several units in a Modbus RTU RS485 network for Alarm and Monitoring & Control functionality.

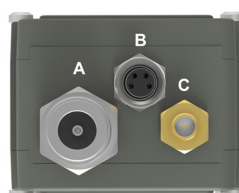
LNB connector (standard)



Connector A (standard)

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

LNB connectors (optional)



Connector B (optional)

Type: M8 female, 4 pin, A-coded
Functions: Alarm and M&C

Connector B (optional)



1 = Alarm open collector (max. 200 mA)
or optionally DC input.
2 = A pos+ RS485
3 = B neg- RS485
4 = Common (GND)
5 = Shield

Connector C (optional)

Type: SMA female only
Functions: Ext. 10 MHz in and/or DC input



Explore our full
product range
in this category



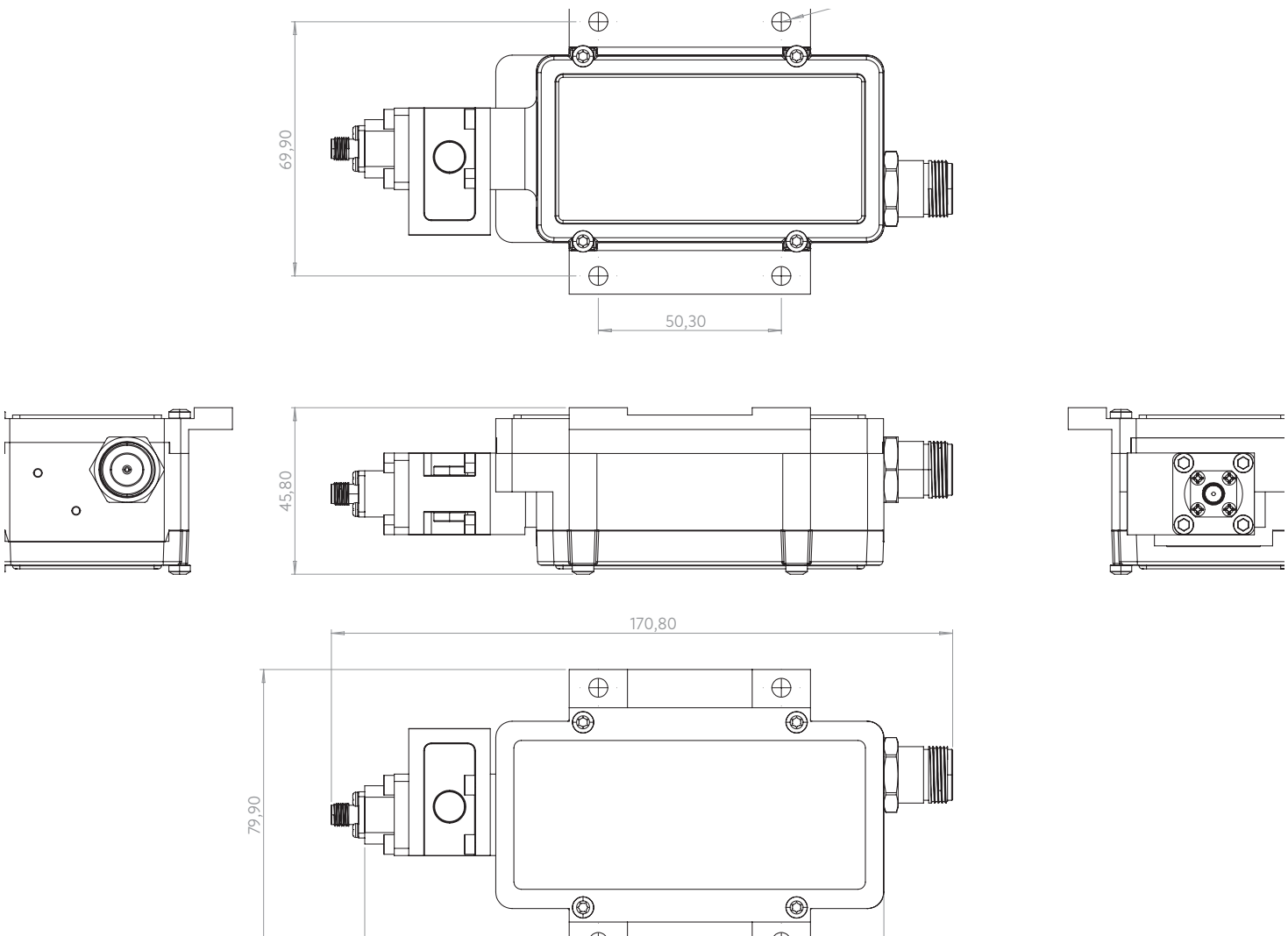
Ka BDC 17.30-22.30 GHz 2 Band

Technical specifications

MODELS/LO		16.80/17.40	17.20/18.20	17.25/18.25	17.45/18.25	18.20/19.20	18.25/19.25	19.20/20.20	19.25/20.25
INPUT	Freq. GHz Band 1	17.75 - 18.75	18.20 - 19.20	18.20 - 19.20	18.40 - 19.20	19.20 - 20.20	19.20 - 20.20	20.20 - 21.20	20.20 - 21.20
	Freq. GHz Band 2	18.35 - 19.35	19.20 - 20.20	19.20 - 20.20	19.20 - 20.20	20.20 - 21.20	20.20 - 21.20	21.20 - 22.20	21.20 - 22.20
	IF MHz Band 1	950 - 1950	1000 - 2000	950 - 1950	950 - 1700	1000 - 2000	950 - 1950	1000 - 2000	950 - 1950
	IF MHz Band 2	950 - 1950	1000 - 2000	950 - 1950	950 - 1950	1000 - 2000	950 - 1950	1000 - 2000	950 - 1950
	Input	SMA female 50Ω							
INTERNAL	DC Input	+12 to +26 V through output connector or separate SMA connector (optional), power consumption 5W max.							
	Input VSWR	1.9:1 max. with Isolator (included)							
	LO ref.	Auto Lo ref. External 10 MHz ref / Internal ±2.5 ppm -40 to +80°C							
	External LO ref.	Sine Wave, Sine wave, Level -10 to +10 dBm. Supplied through output connector.							
	LO Leakage	-60 dBm max. @ RF input, -40 dBm max. @ IF output							
	Gain	30 to 60 dB typ. in 5 dB steps, factory programmable							
	Gain variation over 24h	±0.1 dB @ 23°C							
	Flatness	±0.4 dB within 30 MHz, ±2 dB max. full band							
	Noise figure	2 to 4 dB, depending on gain							
	Phase Noise	-35 dBc @ 10 Hz -65 dBc @ 100 Hz -80 dBc @ 1 kHz -85 dBc @ 10 kHz -95 dBc @ 100 kHz -112 dBc @ >1 MHz typ.							
	Integrated Phase Noise Models incl. 19.20 & 19.25	Single sideband phase noise integrated over the bandwidth from 10 Hz to 16 kHz relative to carrier center frequency: < 3.4° RMS (two-sided value <4.8° RMS).							
	Spurioues in band	W/o signal -75 dBm max. With -10 dBm output signal -65 dBc max.							
	Group delay	±1 ns max.							
	Image Rejection	30 dB min.							
OUTPUT	IF output	950-1950 MHz or 1000-2000 MHz, (950-2250 MHz optional)							
	Output P1dB	+ 5 dBm min. @ 30 to 40 dB gain, +15 dBm min. @ 45 to 60 dB gain							
	Output IP3	+15 dBm min. @ 30 to 40 dB gain, +25 dBm min. @ 45 to 60 dB gain							
	Output VSWR	1.7:1 typ.							
	Output Connector	N-type 50Ω , SMA-type 50Ω or F-type 75Ω							
GENERAL	Alarm (option)	Sum alarm, set via M&C to alarm in any combination of: LNA failure, Total current, LO lock (Ext/Int/n/a), signal power high/low, Supply voltage low. Open collector 3.3 to 28 V, max. 200 mA (pull-up 10 k Ohm at host side), pin 1 in M8 connector.							
	M & C (option)	Via MODBUS RTU RS485 electrical interface, see document Monitoring and Control technical interface for details. NOTE! Mates with M8 male connector/Cable, use only shielded cables							
	Dimensions	171 x 80 x 46 mm (N-connectors), including isolator							
	Weight	418 g (N-connector) including isolator							
	MTBF	MTBF as per MIL-HDBK-217F Notice 2: Environmental Condition GF (Ground Fixed): >690000 hours, Environmental Condition AIC (Airborne, Inhabited, Cargo): >360000 hour, Quality level: Commercial, Temperature used for MTBF calculation: +35°C Ambient							
	Temperature range	Storage and operating: -40 to +80°C, -40 to +176°F							

Ka BDC 17.30-22.30 GHz 2 Band

Technical Drawing



Professional Satcom Frequency Converters & Components. All products are fully CE and RoHS compliant and every device includes full documentation of performance tests and quality control. Please contact sales@smw.se to configure or customize to your needs. Visit smw.se or scan QR code to see our full product range and request a quick quote.

