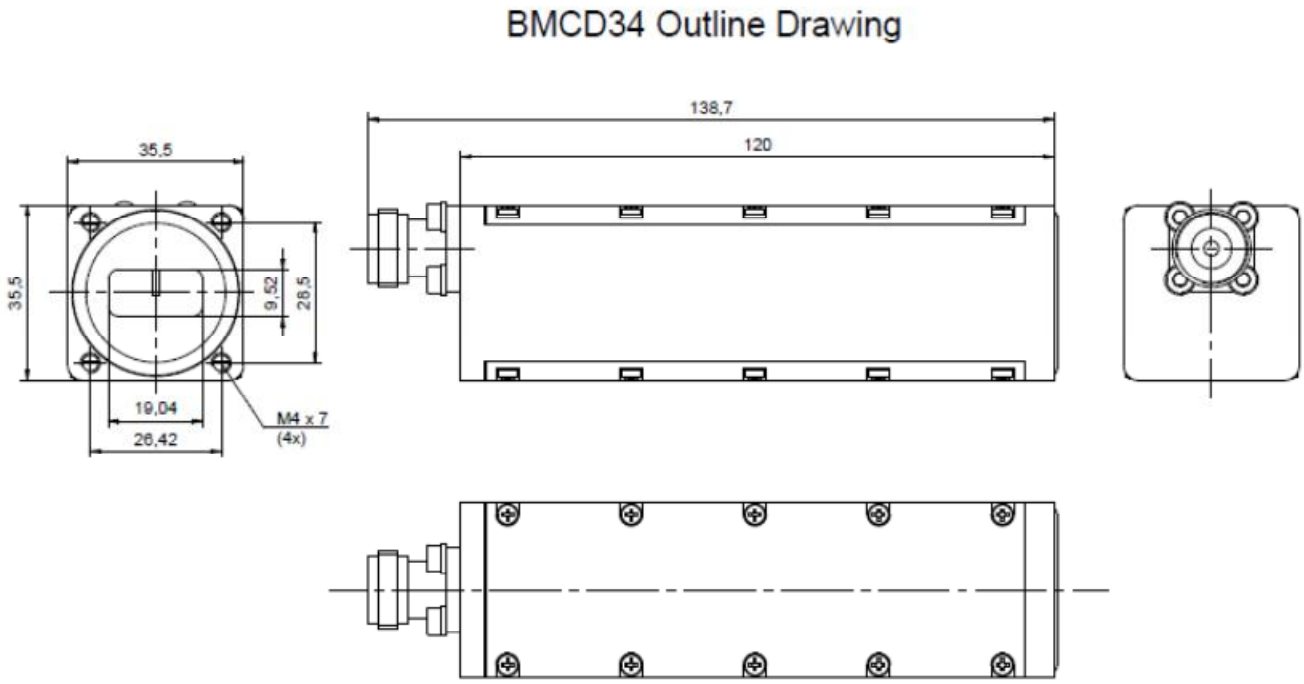
BMCD34

Ku-BAND LOW NOISE DOWN-CONVERTER

- **LOW NOISE FIGURE**
- **LOW PHASE NOISE INTERNAL LOCAL SOURCE**
- **GOOD MIRROR REJECTION**
- **LOW LOCAL LEAKAGE**
- **TWO SWITCHED FILTERS FOR BAND SELECTION**
- **SMALL SIZE**
- **IP67 OUTDOOR CONSTRUCTION**
- **HIGH RELIABILITY**

This low noise down-converter is intended for use in professional applications in Ku-band such as satellite earth stations. The BMCD34 includes a low noise amplifier after which two switched filters are used for band selection. The following stage is the mixer, that has a PLL-based internal low phase noise local source. The IF signal is amplified and filtered to get the desired output level. The 10MHz reference signal for the PLL and the DC is feed via the IF output connector. The band selection and the local frequency selection is done by the DC voltage: below 15V the lower band is activated, above 15V the higher. The BMCD34 ha an IP67 outdoor construction.

Outline drawing:



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Electrical characteristics:

Input characteristics	
Input frequency range	10.7 – 12.75 GHz
Local Frequency	9.75 /10.75 GHz
Impedance	50 ohm
VSWR	2.3 : 1
Local Leakage	-70 dBm typ. (-60 dBm max.)
Input connector	WR-75
Output characteristics	
Frequency	950 –2000 MHz
Impedance	50 ohm
VSWR	2.1 : 1
Output connector	N female
Local leakage	-30 dBm typ. (-25 dBm max.)
Transfer characteristics	
Conversion gain	≥ 60 dB full band, and over operating range
Gain flatness	± 1 dB (in any 40 MHz band)
Noise figure	0.8dB typical, 1.2dB max.
Image rejection	> 40 dB
Spurious, signal related	-40 dBc, max.
Spurious, signal independent	-60 dBm @ Gmax.
Intermodulation distortion (IP3)	25dBm, typical
Typical phase noise	-70 dBc @100 Hz, max
	-75 dBc @ 1 kHz, max.
	-80 dBc @ 10 kHz, max.
	-105 dBc @ 100 kHz, max.
External Reference	
Reference frequency	10MHz
Input connector	via L band output
Input power	-5 to +10 dBm
Control	
Local frequency change	13 / 18 V
Input Power (via L band output)	+11/24 V DC / 300 mA typical
Operating Temperature	-30 to 70 °C
Dimensions	120x35.5x35.5mm (excluding IF output connector)

Specifications are subject to change without notice.

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