BMCU15

5W K-BAND UPCONVERTER

- **5W RF OUTPUT POWER**
- **25.75-26.25GHZ OUTPUT FREQUENCY RANGE**
- **950MHZ-1450MHZ INPUT FREQUENCY RANGE**
- **LOW PHASE NOISE**
- **VERY LOW LO LEAKAGE AND SPURIOUS LEVEL**
- **CONVERSION GAIN ADJUSTABLE FROM 0DB TO 55DB IN 0.5DB STEPS**
- **GOOD CONVERSION GAIN STABILITY AND FLATNESS**
- **ROBUST PROTECTION CIRCUIT**
- **REMOTE CONTROL**
- **EXTENSIVE MONITORING FUNCTION**
- **COMPACT DESIGN**

This high performance upconverter is intended for use in professional applications in K band such as satellite earth stations. BMCU15 has a single stage conversion architecture including a 5W RF output stage and an integrated low phase noise fixed frequency local source. Robust protection and extensive monitoring circuit is integrated in order to ensure reliable operation. The conversion gain can be adjusted over a wide range in the IF and the RF chain as well. The upconverter can be controlled and monitored via IP over Ethernet.

Picture:

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Electrical characteristics:

Parameters	Specifications
Input frequency range	950-1450 MHz
Output frequency range	25.75-26.25 GHz
Output P1dB	36dBm min., 37 dBm typ.
Conversion gain	55dB typ.
Gain variation vs. frequency	+/-1.0dB in full band, +/-0.5dB in any 36MHz band
Gain stability over temperature	+/-1.0dB over operating temperature range
Gain control range	55dB in 0.5dB steps
Input return loss	15dB typ.
Internal reference stability	Better than +/-0.5ppm
Phase noise	-68dBc/Hz typ.,-64dBc/Hz max. @ 100Hz -81dBc/Hz typ., -74dBc/Hz max. @ 1kHz -86dBc/Hz typ., -84dBc/Hz max. @ 10kHz -101dBc/Hz typ., -94dBc/Hz max. @ 100kHz -125dBc/Hz typ., -120dBc/Hz max. @ 1MHz.
Spurious	Carrier related <-70dBc Non-carrier related <-80dBc at max. gain
Image rejection	>90dB
Local leakage	<-75dBc at max. gain
External reference	10MHz reference signal fed on IF input connector, automatic switch-over
External reference level	-10…+10dBm
Power supply	24V+/-4V, 1.5A typ. 2.5A max. fed on IF input connector
Input connector	N type (female), 50 Ohm
Output connector	K type (female), 50 Ohm
Temperature	Operating: 0ºC to +40ºC (+55ºC optional) baseplate temperature Storage: -40ºC to +70ºC
Humidity	5% to 85% non- condensing
Mechanical design	indoor equipment
Size	152x112x30mm
Weight	1.1kg approx.
Monitor and control interface	IP over Ethernet, RJ45 connector
Monitored parameters	-Input voltage -Input current -Input IF power -Output RF power -Power amplifier drain voltage -Power amplifier drain current -EXT REF presence -LOCK status -Temperature Other options are available upon request

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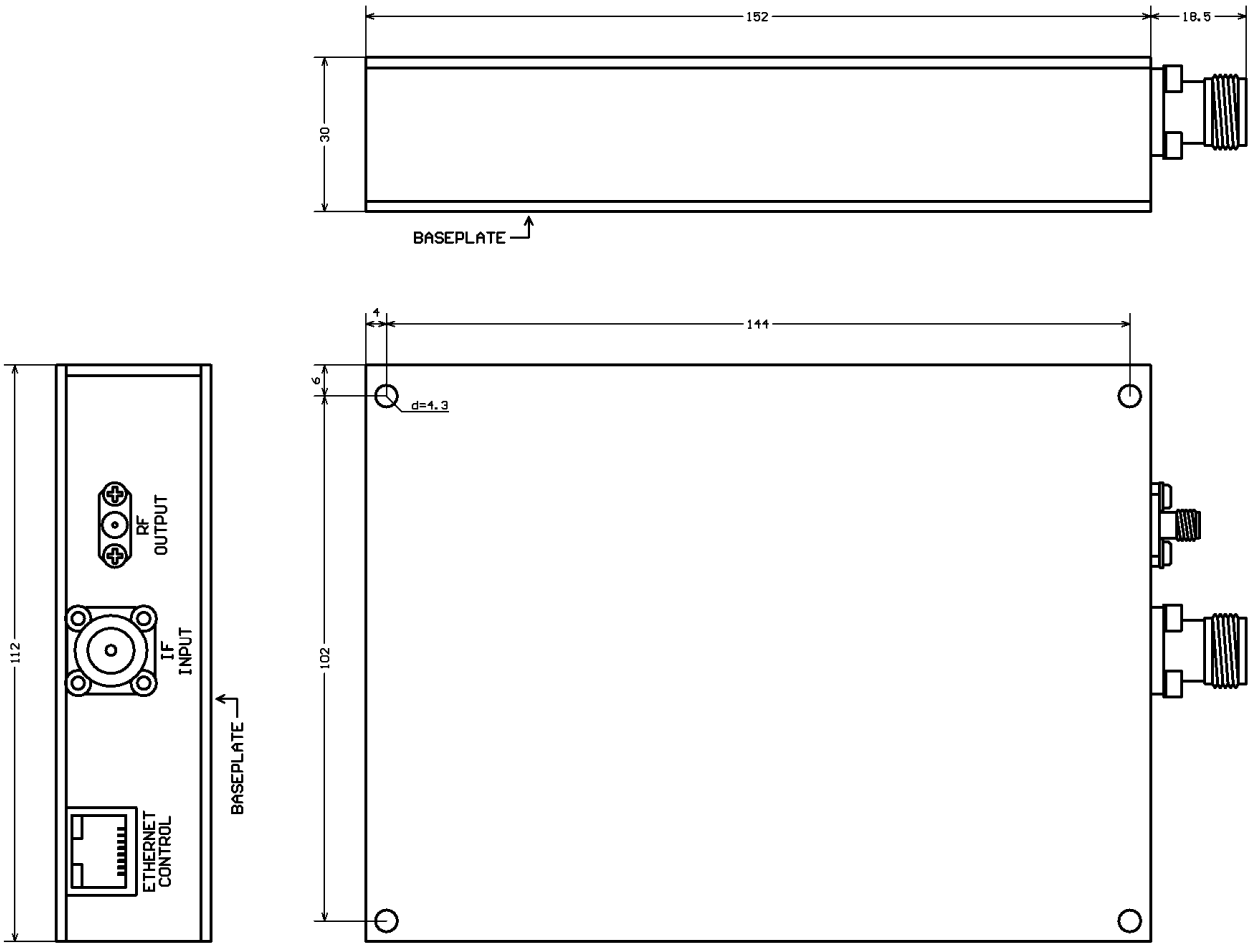
Outline drawing (mm):



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