



## 5W X-Band Block Up Converter

### KEY FEATURES

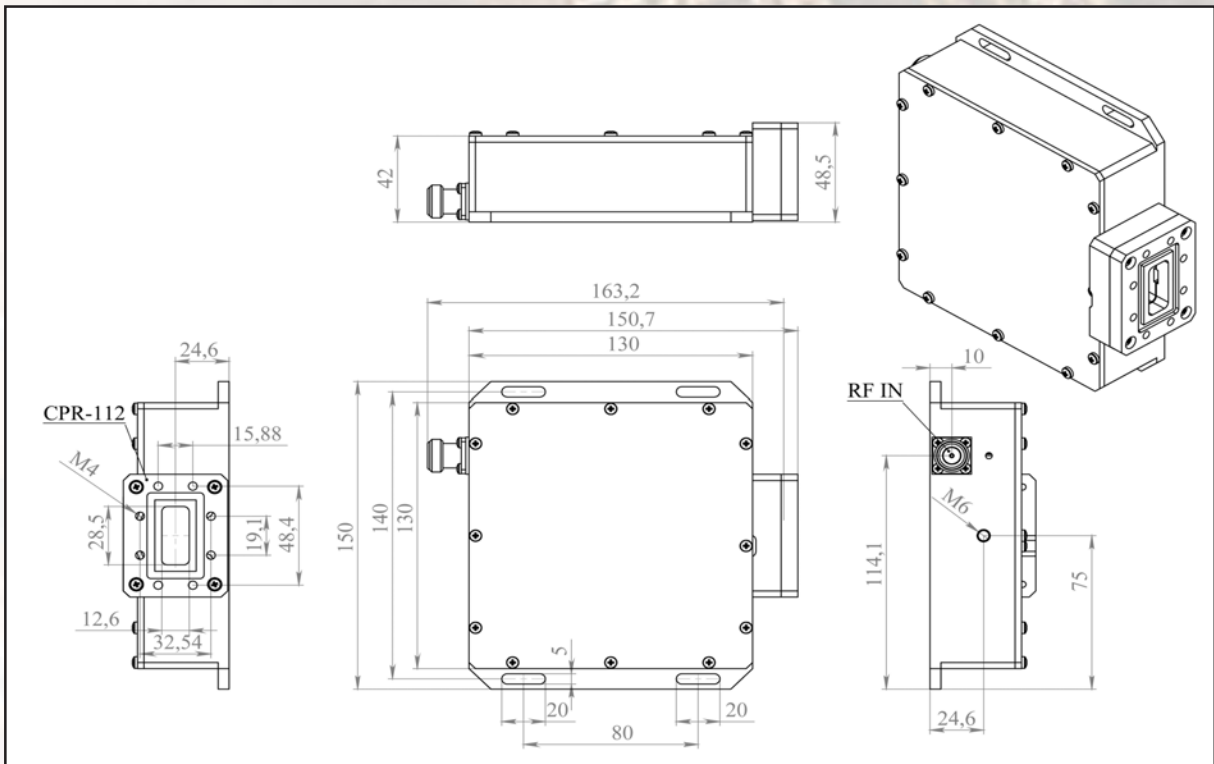
- ◆ Output frequency 7.90 - 8.40 GHz
- ◆ Local oscillator 6.95 GHz
- ◆ Incomparable low power consumption (33W)
- ◆ Utilizing GaN technology
- ◆ Incomparable low phase noise
- ◆ Digital temperature compensation
- ◆ Field-exchangeable (F/N) IF connector
- ◆ Internal 10MHz high stability reference (optional)
- ◆ L.O., alarm, lock LED
- ◆ RoHS compliant
- ◆ Three-year warranty

### ABA5NX / ABA5NXF



This smallest and lightest 5W L-To X-Band Block Up Converter is based on GaN technology. High power efficiency resulting in the lowest power consumption.

### Mechanical Drawing





## 5W X-Band Block Up Converter

<b>TECHNICAL SPECIFICATIONS</b>	
<b>RF frequency</b>	7.90 to 8.40 GHz
<b>Local oscillator</b>	6.95 GHz
<b>IF frequency</b>	950 to 1,450 MHz
<b>Output power</b>	5W (+37 dBm min.)
<b>IF connector</b>	N-type or F-type (field-exchangeable)
<b>Power supply : auto-ranging via IF connector</b>	+15 ~ +28 VDC via IF cable 33W max.
<b>Output interface</b>	CPR 137 G, CPR-112G, WR-112G, WR-90G
<b>Gain</b>	64 dB nominal
<b>IMD3 (two tones)</b>	-26 dBc max. 2 signal 5 MHz apart at P-LINEAR
<b>L.O. leakage</b>	-45 dBm max
<b>Spurious</b>	-50 dBc max
<b>Spectral regrowth</b> (QPSK at 1.5x and OQPSK at 1.0x symbol rate offset with 2dB back-off from rated output power)	-30 dBc
<b>Requirement for external reference:</b> frequency input power	<b>via IF cable</b> 10 MHz (sine-wave) -5 to +5 dBm @ input port
<b>TX Gain variation</b>	± 0.5 dB over 40 MHz ± 1.8 dB over full band
<b>TX Gain stability over temperature range</b>	± 1.5 dB typ., ± 1.8 dB max.
<b>Phase noise</b>  (Exceeds Intelsat's standard IESS308/309)	-53 dBc/Hz max. @ 10 Hz -63 dBc/Hz max. @ 100 Hz -73 dBc/Hz max. @ 1 KHz -83 dBc/Hz max. @ 10 KHz -93 dBc/Hz max @ 100 KHz -113 dBc/Hz max @ 1 MHz
<b>Noise power density</b>	<b>Transmit</b> <b>Receive</b>
	-66 dBm/Hz (max) -157 dBm/Hz (max)
<b>Noise figure</b>	15 dB max
<b>Input V.S.W.R.</b>	2 : 1 max
<b>Output V.S.W.R.</b>	2 : 1 max.
<b>Mute</b>	Shut off the HPA if L.O. unlocked
<b>Status LED</b>	<b>RED</b> <b>GREEN</b>
	Summary alarm All OK
<b>Temperature range (ambient)</b>  operating  storage	-40 deg C to +55 deg C  -55 deg C to +85 deg C
<b>Vibration and shock</b>	Complies with MIL-STD-810E
<b>Dimensions &amp; housing</b>	130 (L) x 130 (W) x 42 (H) mm 5.2" (L) x 5.2" (W) x 1.68" (H)
<b>Weight</b>	1 kg (2.2 lbs) max