



## 15W X-Band Block Up Converter

### KEY FEATURES

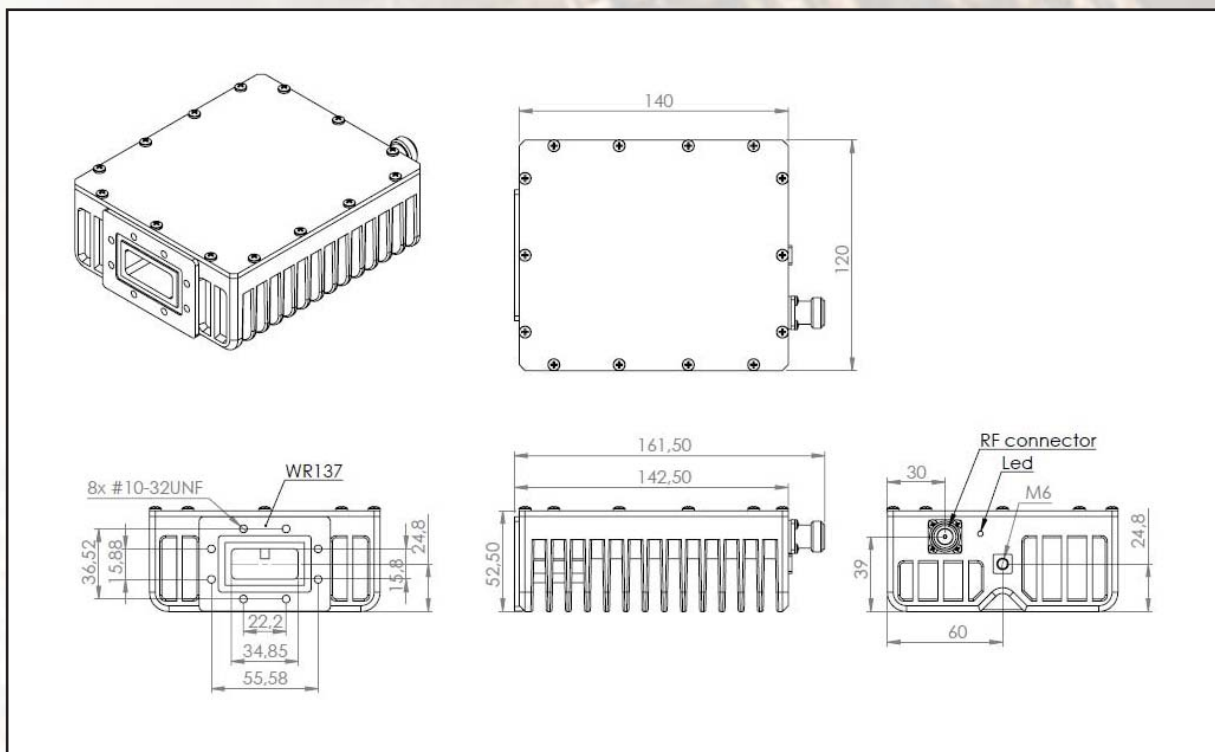
- ◆ Output frequency 7.90 - 8.40 GHz
- ◆ Local oscillator 6.95 GHz
- ◆ Based on GaN technology which enables high efficiency, low power consumption and high reliability
- ◆ Incomparable low power consumption (48W max.)
- ◆ Auto-ranging powering option 15-60 VDC
- ◆ Internal 10MHz high stability reference (optional)
- ◆ Digital temperature compensation
- ◆ Field-exchangeable (F/N) IF connector
- ◆ Power and lock status LED
- ◆ RoHS compliant
- ◆ Three-year warranty

### ABE15X / ABE15XF



This smallest and lightest 15W L-To X-Band Block Up Converter is based on GaN technology. It is designed to be mounted on the feed horn. High power efficiency resulting in the low current (<2 amps @ 24VDC).

### Mechanical Drawing





## 15W X-Band Block Up Converter

### TECHNICAL SPECIFICATIONS

<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>	15W (+41.8 dBm min.)
<b>IF connector</b>	N-type or F-type (field-exchangeable)
<b>Power supply : auto-ranging via IF connector</b>	+15 VDC ~ +60 VDC, 48 W max.
<b>Output interface</b>	CPR-137G, CPR-112G, WR-112G, WR-90G
<b>Gain</b>	65 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	via IF cable 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> -66 dBm/Hz (max.) <b>Receive</b> -157 dBm/Hz (max.)
<b>Noise figure</b>	15 dB max.
<b>Input V.S.W.R.</b>	1.5 : 1 max.
<b>Output V.S.W.R.</b>	1.5 : 1 max.
<b>Mute</b>	Shut off the HPA if L.O. unlocked
<b>Status LED</b> <b>Amplifier</b>  <b>L.O.</b> <b>10MHz</b>	<b>RED</b> <b>GREEN</b> <b>GREEN</b> <b>GREEN</b> <b>GREEN blinking</b> <b>RED</b>  Summary alarm All OK All OK L.O. is set to 6.95 GHz External 10MHz reference Internal 10MHz reference No 10MHz reference detected
<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>IP rating</b>	IP67
<b>Dimensions &amp; housing</b>	140 (L) x 120 (W) x 52.5 (H) mm 5.51" (L) x 4.72" (W) x 2.06" (H)
<b>Weight</b>	1 kg (2.2 lbs) max.