



15W X-Band Block Up Converter

KEY FEATURES

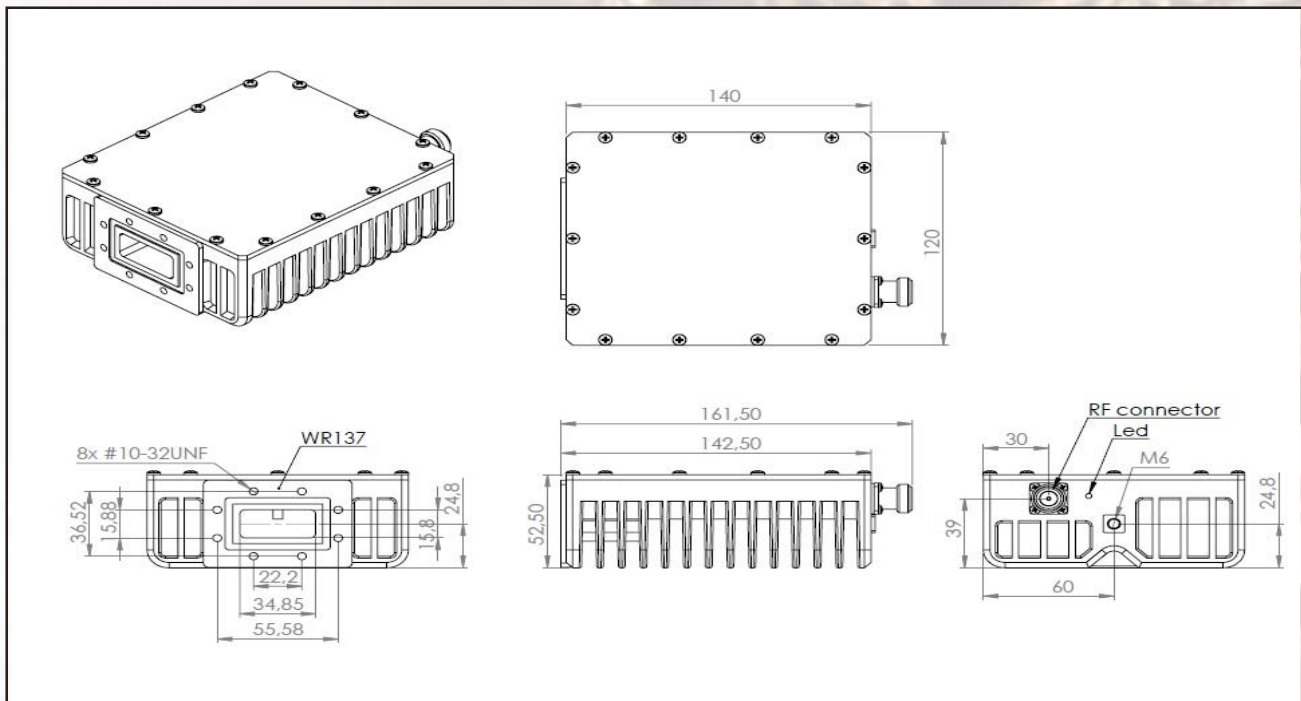
- ◆ 7.90 GHz - 8.40 GHz output frequency
- ◆ Based on GaN technology which enables high efficiency, low power consumption and high reliability.
- ◆ Local oscillator 6.95 GHz
- ◆ Incomparable low power consumption (48 W max)
- ◆ Auto-ranging 15-60 VDC powering option
- ◆ Digital temperature compensation
- ◆ Field-exchangeable (F/N) IF connector
- ◆ Power and lock status LED
- ◆ Internal 10MHz high stability 10^{-8} reference (optional)
- ◆ 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 low current (<2A @ 24VDC).

Mechanical Drawing





15W X-Band Block Up Converter

TECHNICAL SPECIFICATIONS	
RF frequency	7.90 to 8.40 GHz
Local oscillator	6.95 GHz
IF frequency	950 to 1,450 MHz
Output power	15W (+41.8 dBm min.)
IF connector	N-type or F-type (field-exchangeable)
Power supply : auto-ranging via IF connector	15-60 VDC, 48 W max
Output interface	CPR 137G, CPR-112G, WR-112G, WR-90G
Internal 10MHz high stability reference	10 ⁻⁸
Gain	65 dB nominal
IMD3 (two tones)	-26 dBc max. 2 signal 5MHz apart at P-LINEAR
L.O. leakage	-45 dBm max
Spurious	-50 dBc max
Spectral regrowth (QPSK at 1.5x and OQPSK at 1.0x symbol rate offset with 2dB back-off from rated output power)	-30dBc
Requirement for external reference: frequency input power	via IF cable 10 MHz (sine-wave) -5 to +5 dBm @ input port
TX Gain variation	± 0.5 dB over 40MHz ± 1.8 dB over full band
TX Gain stability over temperature range	± 1.5 dB typ., ± 1.8 dB max.
Phase noise (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
Noise power density	Transmit -66 dBm/Hz (max) Receive -157 dBm/Hz (max)
Noise figure	15 dB max
Input V.S.W.R.	1.5 : 1 max
Output V.S.W.R.	1.5 : 1 max.
Mute	Shut off the HPA if L.O. unlocked
Status LED	RED Summary alarm GREEN All OK
Temperature range (ambient) operating storage	-40 deg C to +55 deg C -55 deg C to +85 deg C
Vibration and shock	Complies with MIL-STD-810E
Dimensions & housing	140 (L) x 120 (W) x 52.5 (H) mm 5.51" (L) x 4.72" (W) x 2.06" (H)
Weight	1 kg (2.2 lbs) max