



10W X-Band Block Up Converter

KEY FEATURES

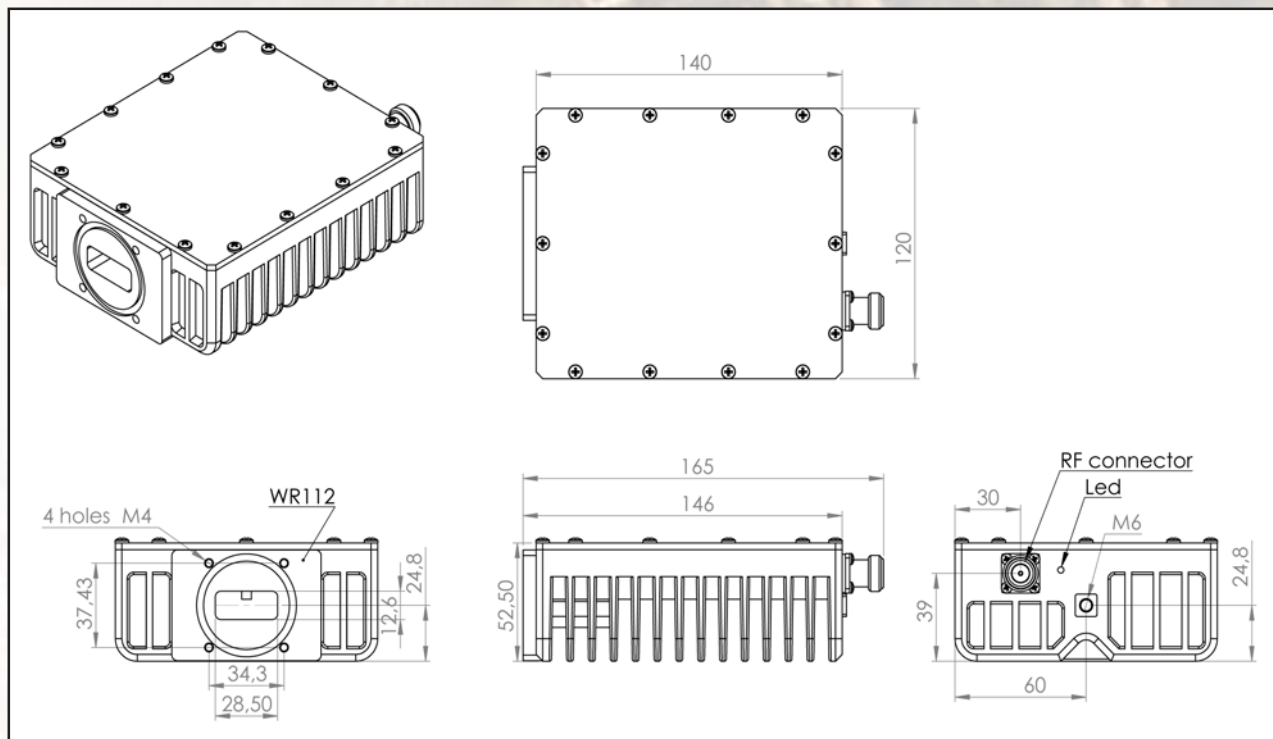
- ◆ Output frequency 7.90 - 8.40 GHz
- ◆ Local oscillator 6.95 GHz
- ◆ Incomparable low power consumption (39W)
- ◆ Utilizing GaN technology
- ◆ Incomparable low phase noise
- ◆ Digital temperature compensation
- ◆ Field-exchangeable (F/N) IF connector
- ◆ Internal 10MHz high stability 10^{-8} reference (optional)
- ◆ L.O., alarm, lock LED
- ◆ RoHS compliant
- ◆ Three-year warranty

ABE10X / ABE10XF



This smallest and lightest 10W 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





10W 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		10W (+40 dBm min.)
IF connector		N-type or F-type (field-exchangeable)
Power supply : auto-ranging via IF connector		+15 VDC ~ +60 VDC via IF cable 39W max.
Output interface		CPR 137 G, 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 5 MHz 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)		-30 dBc
Requirement for external reference:		via IF cable
frequency		10 MHz (sine-wave)
input power		-5 to +5 dBm @ input port
TX Gain variation		± 0.5 dB over 40 MHz ± 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.		2 : 1 max
Output V.S.W.R.		2 : 1 max.
Mute		Shut off the HPA if L.O. unlocked
Status LED	RED	Summary alarm
	GREEN	All OK
Temperature range (ambient)		
operating		-40 deg C to +55 deg C
storage		-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 5.6" (L) x 4.72" (W) x 2.06" (H)
Weight		1 kg (2.2 lbs) max