



## 15W Ext. C-Band 5.85-6.725 GHz Block Up Converter

### KEY FEATURES

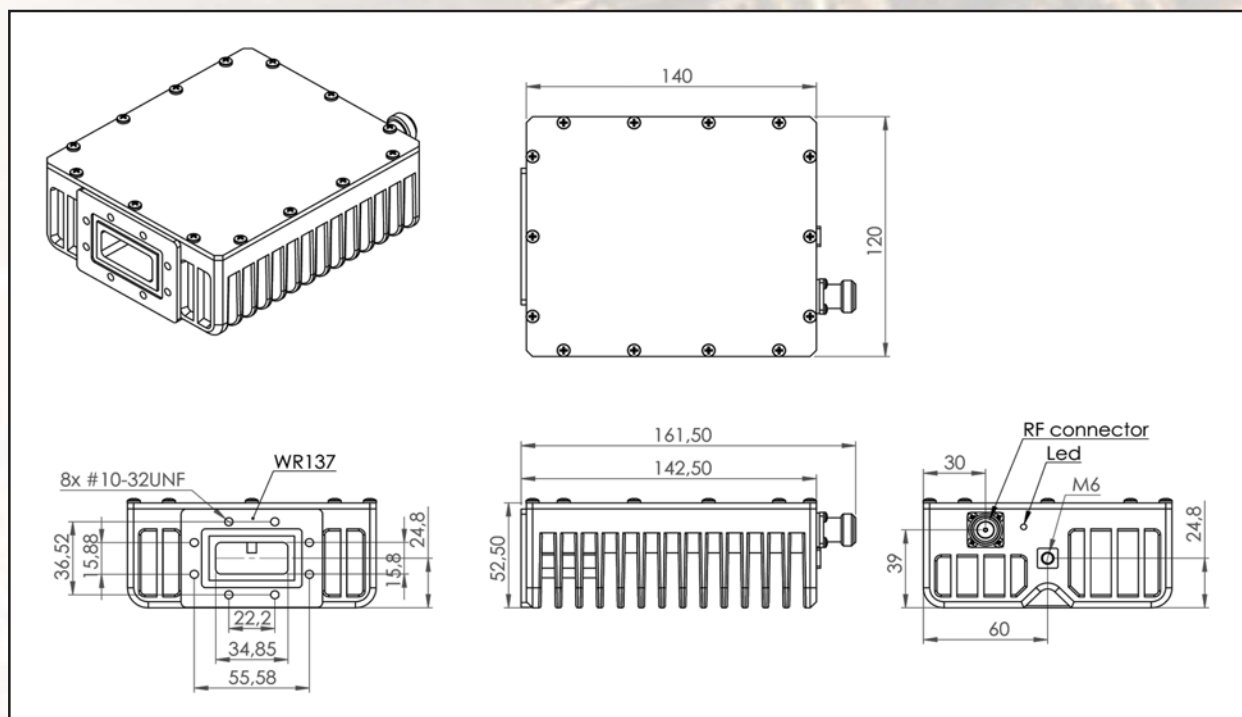
- ◆ 5.85 GHz - 6.725 GHz output frequency
- ◆ Based on GaN technology which enables high efficiency, low power consumption and high reliability
- ◆ Local oscillator 4.9 GHz
- ◆ Incomparable low power consumption (56W max)
- ◆ Auto-ranging powering option 15-60 VDC
- ◆ High power efficiency
- ◆ Digital temperature compensation
- ◆ Field-exchangeable (F/N) IF connector
- ◆ Power and lock status LED
- ◆ Internal 10MHz high stability 10<sup>8</sup> reference (optional)
- ◆ RoHS compliant
- ◆ Three-year warranty

### ABE15DC / ABE15DCF



This smallest and lightest 15W(P1dB) L-T o C-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 (< 2.4 amps @ 24VDC). The unit covers C-Band sub-bands: Standard (5.85-6.425 GHz) and Palapa (6.365-6.725 GHz).

### Mechanical Drawing





## 15W Ext. C-Band 5.85-6.725 GHz Block Up Converter

TECHNICAL SPECIFICATIONS		
RF frequency		5.850 to 6.725 GHz
Local oscillator		4.90 GHz
IF frequency		950 to 1,825 MHz
Output power		15W (+41.8 dBm min.) 7.5W P-Linear (+38.8 dBm min.)
IF connector		N-type or F-type (field-exchangeable)
Power supply : auto-ranging via IF connector		15-60 VDC, 56 W max
Output interface		CPR 137 G
Internal 10MHz high stability reference		10 <sup>-8</sup>
Gain		68 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:		<b>via IF cable</b>
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		-53 dBc/Hz max. @ 10 Hz
(Exceeds Intelsat's standard IESS308/309)		-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 Receive	-66 dBm/Hz (max) -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 GREEN YELLOW	Summary alarm All OK All OK standard L.O. 4.90 GHz
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		142.5 (L) x 120 (W) x 52.5 (H) mm 5.61" (L) x 4.72" (W) x 2.06" (H)
Weight		1.0 kg (2.2 lbs) max