



12W Full 5.85-7.05 GHz C-Band BUC

KEY FEATURES

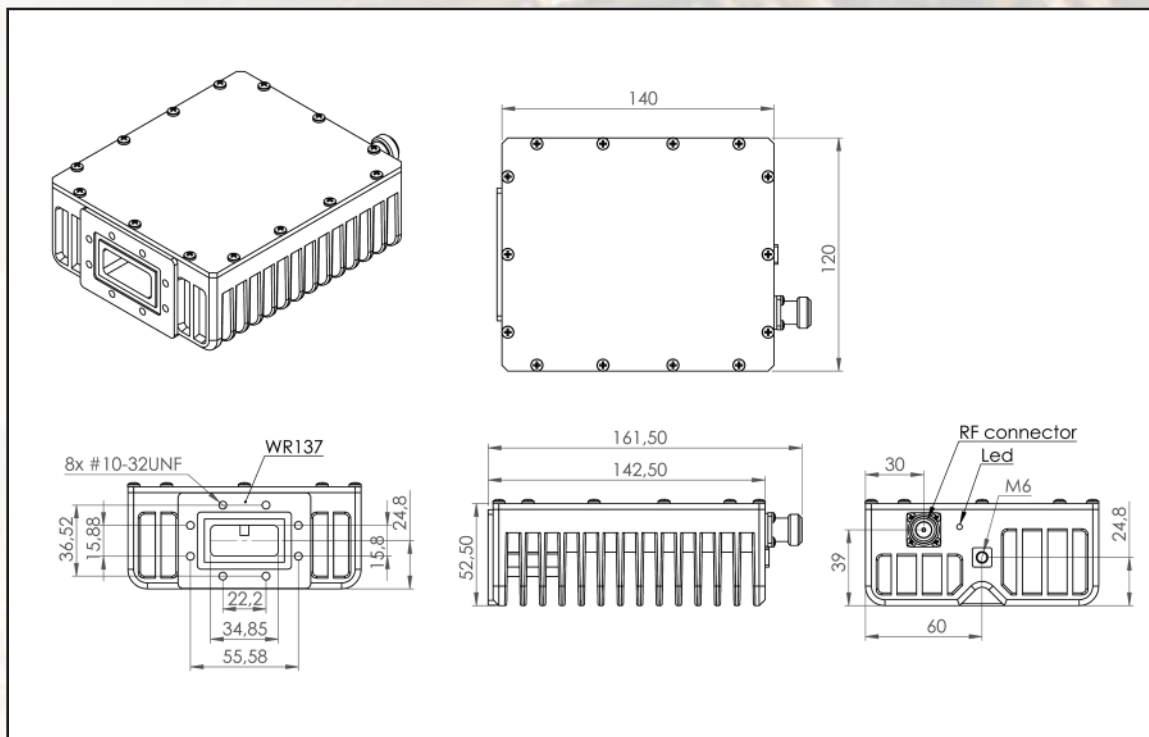
- ◆ Output frequency 5.85-7.05 GHz
- ◆ Double- L.O. (switchable 4.9 & 5.5 GHz)
- ◆ Based on GaN technology which enables high efficiency, low power consumption and high reliability
- ◆ Incomparable low power consumption (35W max.)
- ◆ Auto-ranging powering option 15-60 VDC
- ◆ High power efficiency
- ◆ Digital temperature compensation
- ◆ Field-exchangeable (F/N) IF connector
- ◆ Internal 10MHz high stability 10^{-8} reference (optional)
- ◆ Power and lock status LED
- ◆ RoHS compliant
- ◆ Three-year warranty

ABE12XC / ABE12XCF



This smallest and lightest 12W L-To 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 the low current (<1.5 amps @ 24VDC). The unit covers all three C-Band sub-bands: Standard (5.85-6.425 GHz), Palapa (6.365-6.725 GHz) and Insat (6.725-7.05 GHz).

Mechanical Drawing





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TECHNICAL SPECIFICATIONS

RF frequency		5.850 to 7.05 GHz
Dual local oscillator		4.90 and 5.50 GHz
IF frequency		950 to 1,550 MHz
Output power		12W (+41 dBm min.) 6W (+38 dBm min.) P-Linear
IF connector		N-type or F-type (field-exchangeable)
Power supply : auto-ranging via IF connector		+15 VDC ~ +60 VDC via IF cable 35W max.
Output interface		CPR 137 G
Internal 10MHz high stability reference		10 ⁻⁸
Gain		68 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: frequency input power		via IF cable 10 MHz (sine-wave) -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 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 YELLOW blinking	Summary alarm All OK All OK standard L.O. 4.90 GHz All OK extended L.O. 5.50 GHz
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		142.5 (L) x 120 (W) x 52.5 (H) mm 5.61" (L) x 4.72" (W) x 2.06" (H)
Weight		1 kg (2.2 lbs) max