



15W Full 5.85-7.05 GHz C-Band Block Up Converter

KEY FEATURES

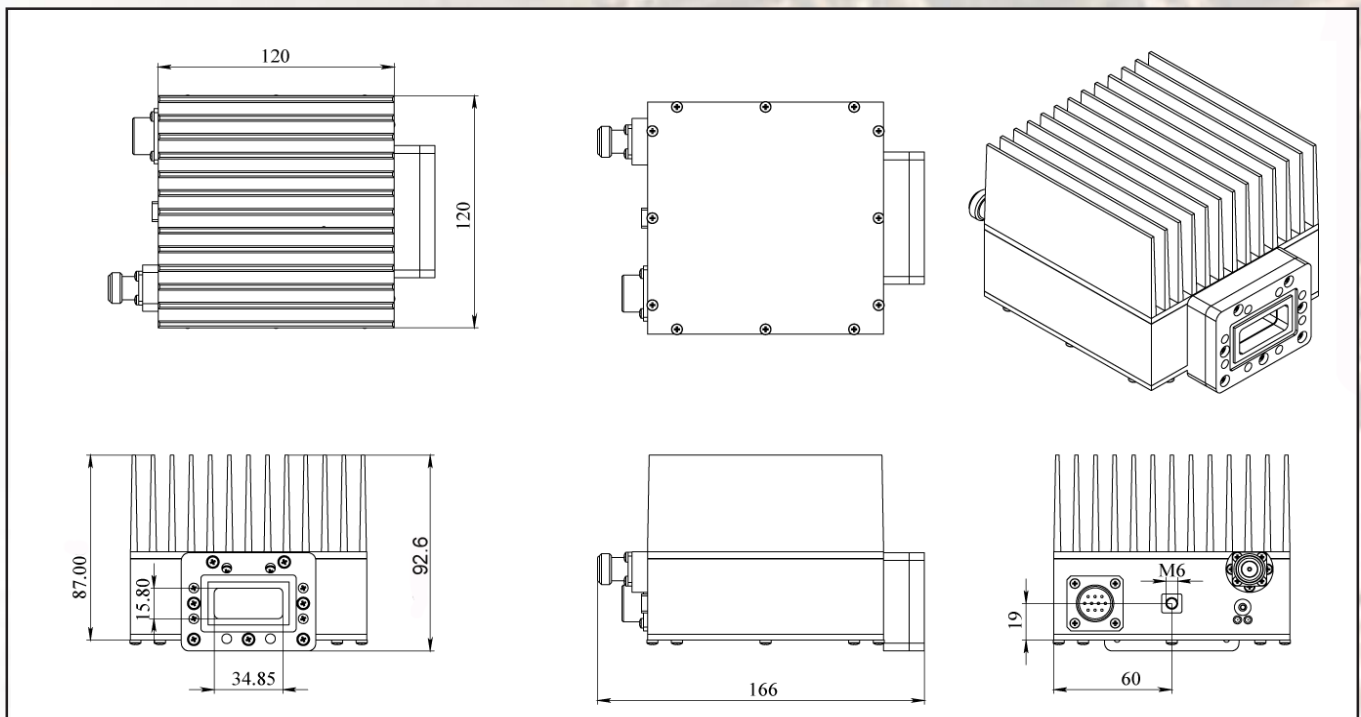
- ◆ 5.85 GHz - 7.05 GHz output frequency
- ◆ Based on GaN technology which enables high efficiency, low power consumption and high reliability.
- ◆ Double L.O. (electronically and manually switchable 4.9 & 5.5 GHz)
- ◆ Incomparable low power consumption (45 W max)
- ◆ Auto-ranging 18-75 VDC powering option
- ◆ Digital temperature compensation
- ◆ Field-exchangeable (F/N) IF connector
- ◆ Power and lock status LED
- ◆ Advanced M&C interface - combined RS-232/485 + optional FSK
- ◆ Internal 10MHz high stability 10^{-8} reference (optional)
- ◆ RoHS compliant
- ◆ Three-year warranty

ABE15XCM / ABE15XCMF



This smallest and lightest 15W 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 low current (<1 amps @ 48VDC). 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). M&C (FSK) capability enables troubleshooting, monitoring and controlling the BUC.

Mechanical Drawing





15W Full 5.85-7.05 GHz C-Band Block Up Converter

TECHNICAL SPECIFICATIONS		
RF frequency		5.850 to 7.05 GHz
Local oscillator		4.90 and 5.50 GHz
IF frequency		950 to 1,550 MHz
Output power		15W (+41.8 dBm min.)
IF connector		N-type or F-type (field-exchangeable)
Power supply : auto-ranging via IF connector		18-75 VDC, 45 W max
Output interface		CPR 137 G
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:		via IF cable
frequency		10 MHz (sine-wave)
input power		-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		-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	-66 dBm/Hz (max)
	Receive	-157 dBm/Hz (max)
M&C Interface		RS-232 and RS-485
FSK		Multiplexed on TX IFL, compatible with Comtech and Paradigm
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
	YELLOW	All OK standard L.O. 4.90 GHz
	YELLOW blinking	All OK extended L.O. 5.50 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		120 (L) x 120 (W) x 87 (H) mm 4.8" (L) x 4.8" (W) x 3.48" (H)
Weight		1.4 kg (3.0 lbs) max