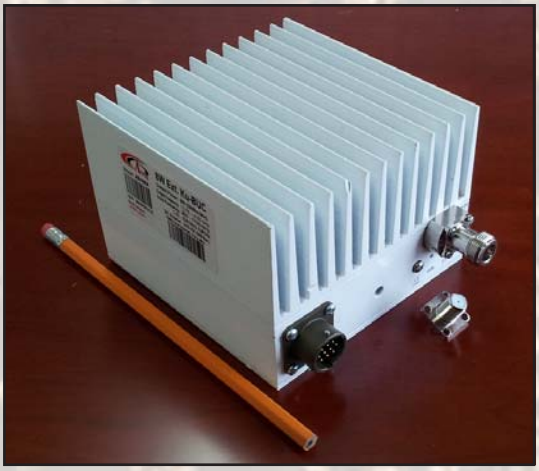
7W Ku-Band Block Up Converter

KEY FEATURES

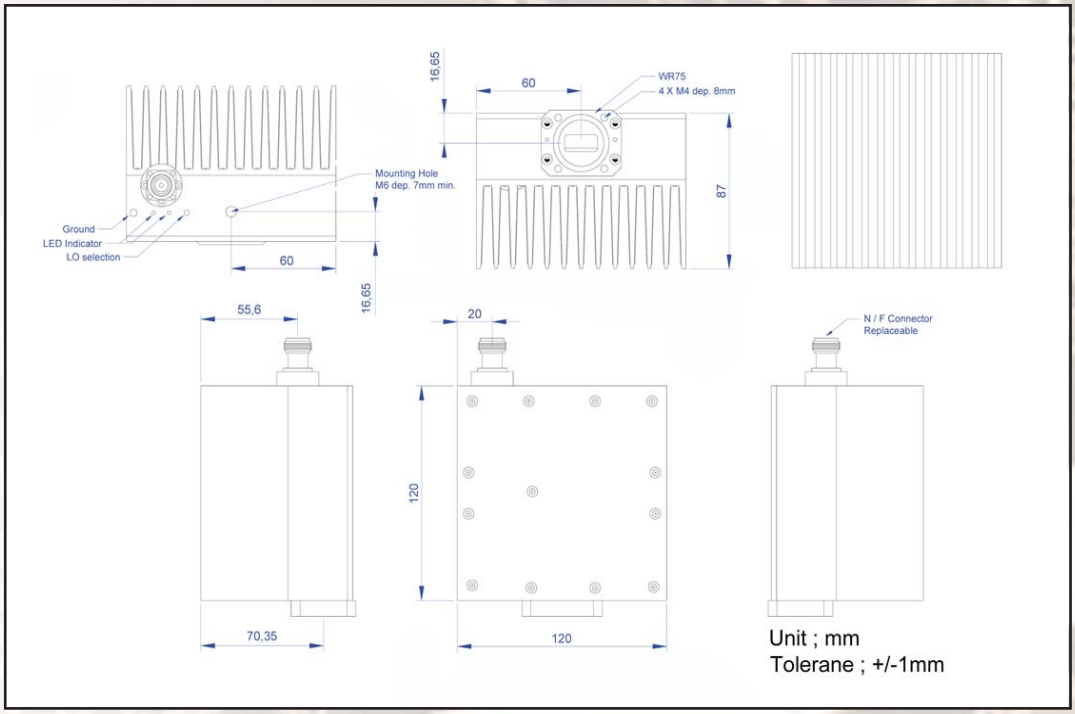
- Output frequency 13.75-14.50 GHz, 12.75-13.5GHz
- Based on GaN technology which enables high efficiency, low energy consumption and high reliability
- Double - L.O. (electronically and manually switchable 12.80 and 13.05 GHz)
- Extreme P-Out GaN linearity
- Auto-ranging power 15-60 VDC
- Incomparable low power consumption (42W max)
- Digital temperature compensation
- L.O. lock and amplifier LEDs
- Field-exchangeable (F/N) IF connector
- M&C - combined RS-232/485, FSK, digital gain attenuation (optional)
- Internal 10MHz high stability 10^{-8} reference (optional)
- Three-year warranty
- RoHS compliant

ABA7KX / ABA7KXF



This unique smallest and lightest 7W L-To Ku-Band Block Up Converter is based on GaN technology. Incomparable low power consumption, double L.O. and Field-Exchangeable connector features make unit universal for any Ku-Band application. M&C (FSK) capability enables trouble shooting, monitoring and controlling the BUC. User can choose internal 10MHz high stability reference if the corresponding modulator does not provide it.

Mechanical Drawing



7W Ku-Band Block Up Converter

TECHNICAL SPECIFICATIONS	
RF frequency	14.00 – 14.5GHz 13.75 – 14.5GHz 12.75 – 13.5GHz
Local Oscillator **ABE7KX** **ABE7KXL**	 12.8GHz and 13.05GHz (std. and ext.) 11.8GHz (special)
IF frequency	950 to 1,700 MHz
Output power	7W (+38.5 dBm min)
IF connector	N-type or F-type (field-exchangeable)
Power supply - auto-ranging	+15~+60 VDC via IF cable, 42 W max
Internal 10MHz high stability reference	10^{-8}
Output interface	WR-75 G
Gain	62 dB typ.
IMD3 (two tones)	-26 dBc max. 2 signal 5MHz apart at P-LINEAR
L.O. leakage	-45 dBm max
Spurious	-53 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
TX Gain variation **TX Gain stability over temperature range**	± 0.5 dB over 40MHz ± 1.8 dB over full band ± 1.5 dB typ., ± 1.8 dB max.
Requirement for external reference frequency input power	via IF cable 10 MHz (sine-wave) -5 to +5 dBm @ input port
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
Noise power density **Transmit** **Receive**	-60 dBm/Hz (max) -150 dBm/Hz (max)
Noise figure	20 dB max
Input V.S.W.R.	2 : 1 max
Output V.S.W.R.	2 : 1 max.
Mute	Shut off the BUC in case of L.O. unlocked
M&C	RS-232 and RS-485, Ethernet
FSK	Multiplexed on TX IFL, compatible with Comtech and Paradise
Status LED **RED** **GREEN** **YELLOW** **YELLOW blinking**	Summary alarm All OK Standard L.O. 13.05 GHz Extended L.O. 12.80 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	120 (L) x 120 (W) x 87 (H) mm 4.72" (L) x 4.72" (W) x 3.46" (H)
Weight	1.8 kg (3.8 lbs) max