50W Ext. Ku-Band Block Up Converter

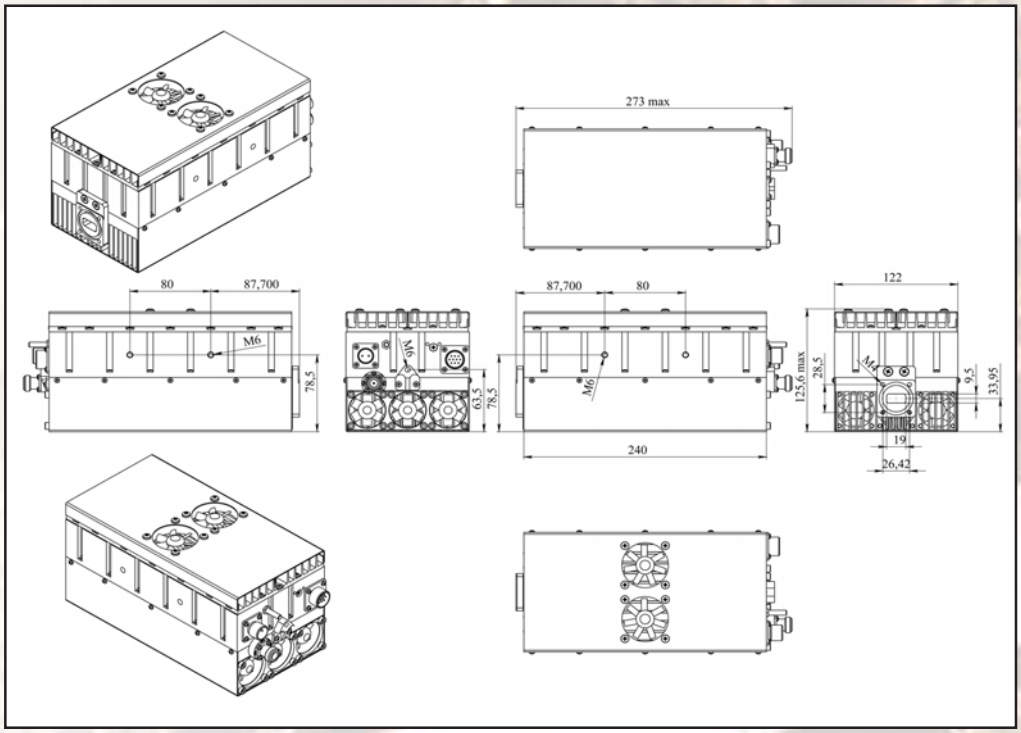
KEY FEATURES

- Output frequency 13.75-14.50 GHz
- 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 36-58 VDC or 80-240 power options
- Incomparable low power consumption (272W max)
- Digital temperature compensation
- L.O. lock and amplifier LEDs
- Field-exchangeable (F/N) IF connector
- M&C - combined RS-232/485, FSK (optional), Ethernet (optional)
- Internal 10MHz high stability 10^{-8} reference (optional)
- Ethernet control (optional)
- Three-year warranty
- RoHS compliant

ABD50KX / ABD50KXF
ABC50KX / ABC50KXF

This smallest and lightest 50W L-To Ku-Band Block Up Converter is based on GaN technology. Incomparable low power consumption, double L.O., Field- Exchangeable connector and auto-ranging 36-58 VDC, or 80-240 VAC powering features make this unit universal for any Ku-Band application. M&C (FSK) capability enables troubleshooting, monitoring and controlling the BUC. User can choose internal 10MHz high stability reference if the corresponding modulator does not provide it.

Mechanical Drawing



50W Ext. Ku-Band Block Up Converter

TECHNICAL SPECIFICATIONS		
RF frequency	**L.O. 13.05 GHz** **L.O. 12.80 GHz**	14.00 to 14.50 GHz 13.75 to 14.50 GHz
Dual local oscillator- electronically and manually switchable		13.05 GHz and 12.80 GHz
IF frequency		950 to 1,700 MHz
Output power	**@ PSAT** **@ PLINEAR**	50W (+47 dBm min.) 25W (+44 dBm typ.)
IF connector		N-type or F-type (field-exchangeable)
Power supply **ABC50KX- auto-ranging** **ABD50KX- auto-ranging**		 +36~+58 VDC via IF cable, 270 W max 80~240 VAC via MS connector, 272W max
Internal 10MHz high stability reference		10^{-8}
Spurious		-50 dBc max
L.O. leakage		-45 dBm
Gain		68 dB min.
IMD3 (two tones)		-26 dBc typ. 2 signal 5MHz apart at P-LINEAR
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 40 MHz ± 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)		-55 dBc/Hz max. @ 10 Hz -65 dBc/Hz max. @ 100 Hz -75 dBc/Hz max. @ 1 KHz -85 dBc/Hz max. @ 10 KHz -95 dBc/Hz max. @ 100 KHz -115 dBc/Hz max @ 1 MHz
Noise power density	**Transmit** **Receive**	-66 dBm/Hz (max) -157 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 Paradigm
Status LED	**RED** **GREEN** **YELLOW** **YELLOW blinking**	Summary alarm All OK All OK standard L.O. 13.05 GHz All OK 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		240 (L) x 122 (W) x 125.6 (H) mm 9.6" (L) x 4.8" (W) x 5" (H)
Weight		3.9 kg (8.6 lbs) max