



50W Ext. Ku-Band Block Up Converter

KEY FEATURES

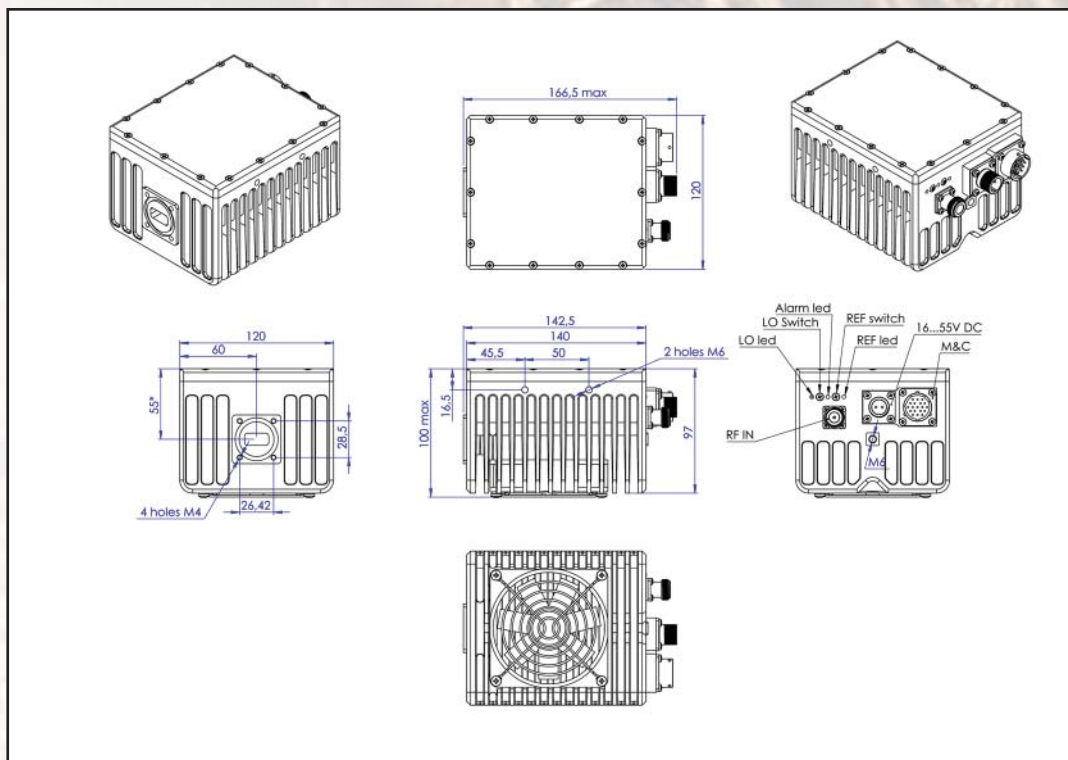
- ◆ Output frequency 13.75-14.50 GHz
- ◆ Double- L.O. (switchable 12.80 & 13.05 GHz)
- ◆ Based on GaN technology which enables high efficiency, low power consumption and high reliability
- ◆ Incomparable low power consumption (252W max.)
- ◆ Auto-ranging powering option 16 - 55 VDC
- ◆ Digital temperature compensation
- ◆ Field-exchangeable (F/N) IF connector
- ◆ Amplifier, L.O. and 10 MHz Reference Status LEDs
- ◆ M&C - combined RS-232/485/Ethernet (HTTP and SNMP) and optional FSK
- ◆ RoHS compliant

ABE50NKX / ABE50NKXF



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, auto-sensing and controllable internal 10 MHz reference make this unit universal for any Ku-Band application. DC Built-in powered through the MS Connector and consumes less than 252W.

Mechanical Drawing





50W Ext. Ku-Band Block Up Converter

TECHNICAL SPECIFICATIONS		
RF frequency		14.0 to 14.50 GHz 13.75 to 14.50 GHz
Dual local oscillator		13.05 GHz and 12.80 GHz
IF frequency		950 to 1,700 MHz
Output power		50W (+47 dBm min.) 24.2W (+43.8 dBm min.) P-Linear
IF connector		N-type or F-type (field-exchangeable)
Power supply auto-ranging		16 ~ 55 VDC via MS connector, 252W max.
Output interface		WR-75 G
Gain		72 dB typ.
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)		-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	-80 dBm/Hz (max) -125 dBm/Hz (max)
Noise figure		20 dB max
Input V.S.W.R.		1.5 : 1 max
Output V.S.W.R.		1.5 : 1 max.
M&C		RS-232 and RS-485, Ethernet (HTTP and SNMP), FSK
Mute		Shut off the HPA if L.O. unlocked
Status LED Amplifier L.O. 10MHz	RED GREEN YELLOW YELLOW blinking GREEN GREEN blinking RED	Summary alarm All OK All OK standard L.O. 13.05 GHz All OK extended L.O. 12.80 GHz External 10MHz reference Internal 10MHz reference No 10MHz reference detected
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		140 (L) x 120 (W) x 97 (H) mm 5.51" (L) x 4.72" (W) x 3.81" (H)
Weight		2.2 kg (lbs) max