



20W Ext. Ku-Band Block Up Converter

KEY FEATURES

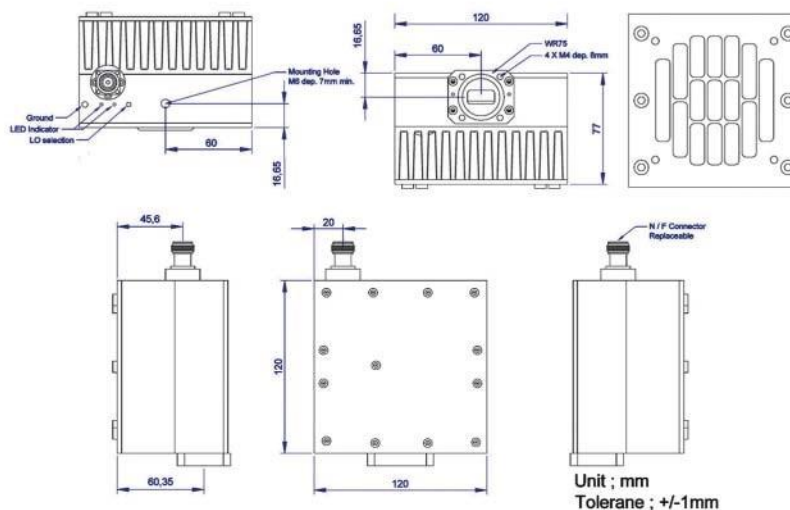
- ◆ Output frequency 13.75-14.50 GHz
- ◆ Double- L.O. (switchable 12.80 & 13.05 GHz)
- ◆ Based on GaN technology which enables high efficiency, low power consumption and high reliability
- ◆ Incomparable low power consumption (135W max.)
- ◆ Auto-ranging powering option 15 - 60 VDC
- ◆ Internal 10MHz high stability reference (optional)
- ◆ Digital temperature compensation
- ◆ Field-exchangeable (F/N) IF connector
- ◆ M&C - combined RS-232/485 and optional FSK
- ◆ Ethernet control (optional)
- ◆ RoHS compliant

ABE20KX / ABE20KXF



This smallest and lightest 20W L-To Ku-Band Block Up Converter is based on GaN technology. Incomparable low power consumption, double L.O., field-exchangeable connector, internal 10 MHz reference, and it is powered either with 24 or 48 VDC and consumes less than 135W. The unit is ideal for portable and mobile applications.

Mechanical Drawing





20W Ext. Ku-Band Block Up Converter

TECHNICAL SPECIFICATIONS		
RF frequency	14.00 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	20W (+43 dBm min.), P-Linear 10.7W (+40.3 dBm min)	
IF connector	N-type or F-type (field-exchangeable)	
Power supply auto-ranging	+15 ~ +60 VDC via IF cable, 135W typ.	
Output interface	WR-75 G	
Gain	65 dB min., 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)	-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	-80 dBm/Hz (max)
	Receive	-125 dBm/Hz (max)
Noise figure	15 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, FSK (optional)	
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. 13.05 GHz All OK extended L.O. 12.80 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 77 (H) mm	
	4.72" (L) x 4.72" (W) x 3.03" (H)	
Weight	1.8 kg (4.0 lbs) max	