

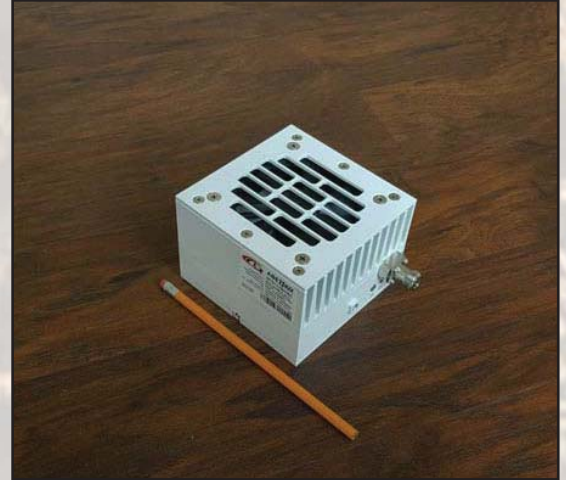


12W Ext. Ku-Band Block Up Converter

KEY FEATURES

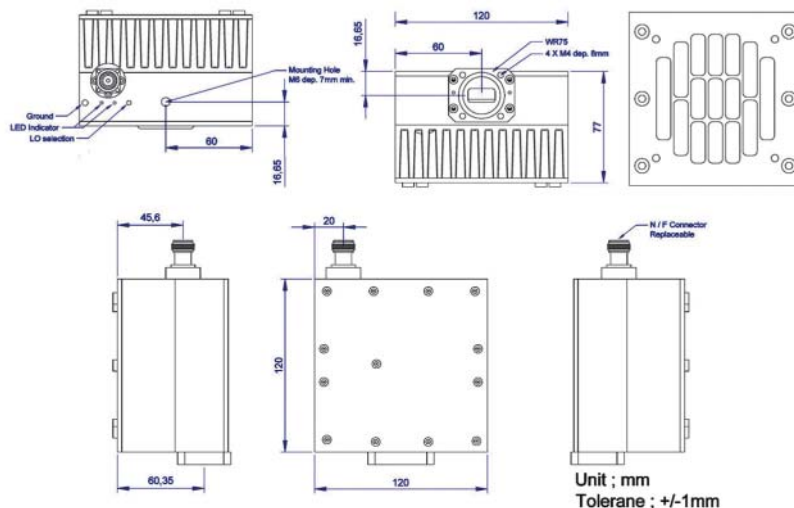
- ◆ Output frequency 13.75-14.50 GHz
- ◆ Double L.O. (switchable 12.80 & 13.05 GHz)
- ◆ Based on GaN technology which enables high efficiency, low power consumption and high reliability
- ◆ Incomparable low power consumption (64W max.) - can be powered by some iDirect or similar modems
- ◆ Extreme P-Out GaN linearity
- ◆ Auto-ranging powering option 15 - 60 VDC
- ◆ Internal auto-sensing and controllable high stability 10MHz reference (optional)
- ◆ Digital temperature compensation
- ◆ Field-exchangeable (F/N) IF connector
- ◆ M&C - combined RS-232/485,FSK,Ethernet (optional)
- ◆ RoHS compliant

ABE12KFX / ABE12KFXF



This smallest and lightest 12W 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 64W. The unit is ideal for portable and mobile applications.

Mechanical Drawing





12W 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		12W (+41 dBm min)
IF connector		N-type or F-type (field-exchangeable)
Power supply auto-ranging		+15 ~ +60 VDC via IF cable, 64W max.
Output interface		WR-75 G
Gain		60 dB min., 66 dB max.
IMD3 (two tones)		-28 dBc max.
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:		via IF cable
frequency		10 MHz (sine-wave)
input power		-5 to +5 dBm @ input port
Gain variation	over 40 MHz	+/-1.5 dB
	over 500 MHz	+/-1.4 dB
Over operating temperature		+/-1.3 dB @ fixed frequency
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	-60 dBm/Hz (max.)
	Receive	-151 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, FSK (optional)
Mute		Shut off the BUC in case of L.O. unlocked
FSK		Multiplexed on TX IFL, compatible with Comtech and Paradigm
Status LED		
Amplifier	RED	Summary alarm
	GREEN	All OK
L.O.	GREEN	All OK standard L.O. 13.05 GHz
	GREEN blinking	All OK extended L.O. 12.80 GHz
10MHz	GREEN	External 10MHz reference
	GREEN blinking	Internal 10MHz reference
	RED	No 10MHz reference detected
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
IP rating		IP67
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.