10W Ext. Low Ku-Band Block Up Converter

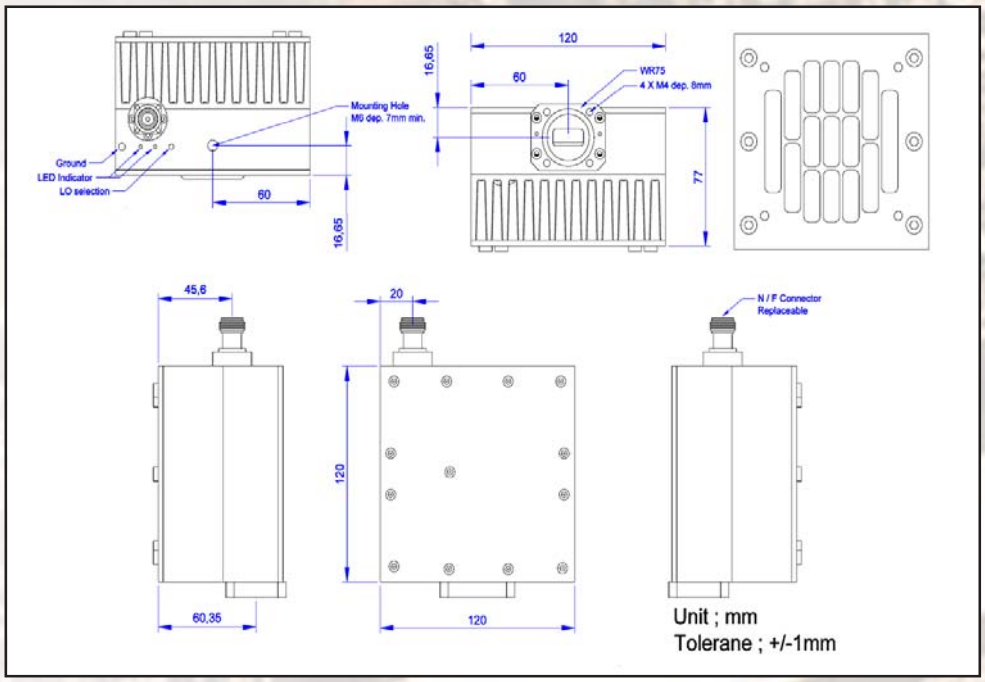
KEY FEATURES

- Output frequency 12.75-13.50 GHz
- Based on GaN technology which enables high efficiency, low energy consumption and high reliability
- Double - L.O. (electronically and manually switchable 11.80 and 12.05 GHz)
- Extreme P-Out GaN linearity
- Auto-ranging power 15-60 VDC
- Incomparable low power consumption (58W max) - can be powered by some iDirect or similar modems
- Digital temperature compensation
- L.O. lock and amplifier LEDs
- Field-exchangeable (F/N) IF connector
- M&C - combined RS-232/485, FSK, Ethernet (optional)
- Internal 10MHz high stability 10^{-8} reference (optional)
- RoHS Compliant
- Three-year warranty

ABE10KFXL / ABE10KFXLF

This smallest and lightest 10W 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 (24 or 48 VDC) powering features make 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



GaN Based Product

10W Ext. Low Ku-Band Block Up Converter

TECHNICAL SPECIFICATIONS	
RF frequency **L.O. 12.05 GHz** **L.O. 11.80 GHz**	13.00 to 13.50 GHz 12.75 to 13.50 GHz
Local oscillator- electronically and manually switchable	12.05 GHz and 11.80 GHz
IF frequency	950 to 1,700 MHz
Output power	10W (+40 dBm min)
IF connector	N-type or F-type (field-exchangeable)
Power supply - auto-ranging	+15~+60 VDC via IF cable, 58 W max
Internal 10MHz high stability reference	10^{-8}
Output interface	WR-75 G
Gain	60 dB min., 66 dB max
IMD3	-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)	-30dBc
Gain variation **over 40 MHz** **over 500 MHz** **Over operating temperature**	+/-1.5 dB +/-1.4 dB +/-1.3 dB @ fixed frequency
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 -113 dBc/Hz max @ 1 MHz
Noise power density **Transmit** **Receive**	-60 dBm/Hz (max) -151 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. 12.05 GHz All OK extended L.O. 11.80 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 77 (H) mm 4.72" (L) x 4.72" (W) x 3.28" (H)
Weight	1.4 kg (3.0 lbs) max