



## 8W Ext. Ku-Band Block Up Converter

### KEY FEATURES

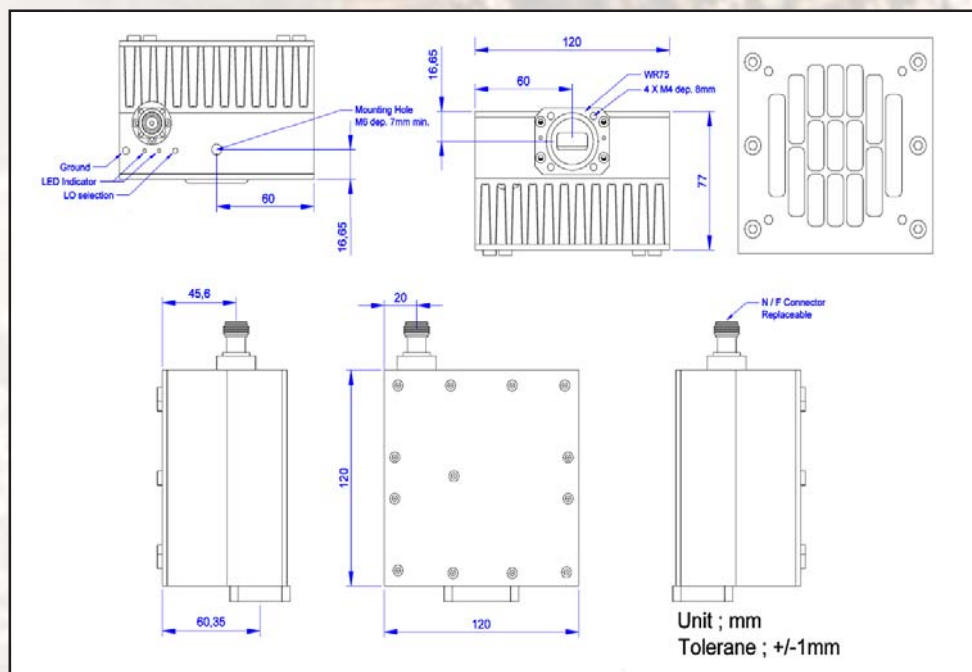
- ◆ Output frequency 13.75-14.50 GHz
- ◆ Based on GaN technology which enables high efficiency, low energy consumption and high reliability
- ◆ Double - L.O. (electronically and manually switchable 12.80 and 13.05 GHz)
- ◆ Extreme P-Out GaN linearity
- ◆ Auto-ranging power 15-60 VDC
- ◆ Incomparable low power consumption (55W 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

### ABE8KFX / ABE8KFXF



This smallest and lightest 8W 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





## 8W Ext. Ku-Band Block Up Converter

### TECHNICAL SPECIFICATIONS

<b>RF frequency</b>	13.75 to 14.50 GHz
<b>Local oscillator-</b> electronically and manually switchable	13.05 GHz and 12.80 GHz
<b>IF frequency</b>	950 to 1,700 MHz
<b>Output power</b>	8W (+39 dBm min)
<b>IF connector</b>	N-type or F-type (field-exchangeable)
<b>Power supply - auto-ranging</b>	+15~+60 VDC via IF cable, 55 W max
<b>Internal 10MHz high stability reference</b>	10 <sup>-8</sup>
<b>Output interface</b>	WR-75 G
<b>Gain</b>	60 dB min., 66 dB max
<b>IMD3</b>	-28 dBc max
<b>L.O. leakage</b>	-45 dBm max
<b>Spurious</b>	-50 dBc max
<b>Spectral regrowth</b> (QPSK at 1.5x and OQPSK at 1.0x symbol rate offset with 2 dB back-off from rated output power)	-30dBc
<b>Gain variation</b> <b>over 40 MHz</b> <b>over 500 MHz</b>	+/-1.5 dB +/-1.4 dB
<b>Over operating temperature</b>	+/-1.3 dB @ fixed frequency
<b>Requirement for external reference</b> frequency input power	via IF cable 10 MHz (sine-wave) -5 to +5 dBm @ input port
<b>Phase noise</b>  (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
<b>Noise power density</b>	<b>Transmit</b> -60 dBm/Hz (max) <b>Receive</b> -151 dBm/Hz (max)
<b>Noise figure</b>	20 dB max
<b>Input V.S.W.R.</b>	2 : 1 max
<b>Output V.S.W.R.</b>	2 : 1 max.
<b>Mute</b>	Shut off the BUC in case of L.O. unlocked
<b>M&amp;C</b>	RS-232 and RS-485, Ethernet
<b>FSK</b>	Multiplexed on TX IFL, compatible with Comtech and Paradigm
<b>Status LED</b>  <b>RED</b> <b>GREEN</b> <b>YELLOW</b> <b>YELLOW blinking</b>	Summary alarm All OK All OK standard L.O. 13.05 GHz All OK extended L.O. 12.80 GHz
<b>Temperature range (ambient)</b>  operating storage	-40 deg C to +55 deg C -55 deg C to +85 deg C
<b>Vibration and shock</b>	Complies with MIL-STD-810E
<b>Dimensions &amp; housing</b>	120 (L) x 120 (W) x 77 (H) mm 4.72" (L) x 4.72" (W) x 3.28" (H)
<b>Weight</b>	1.4 kg (3.0 lbs) max