



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

### KEY FEATURES

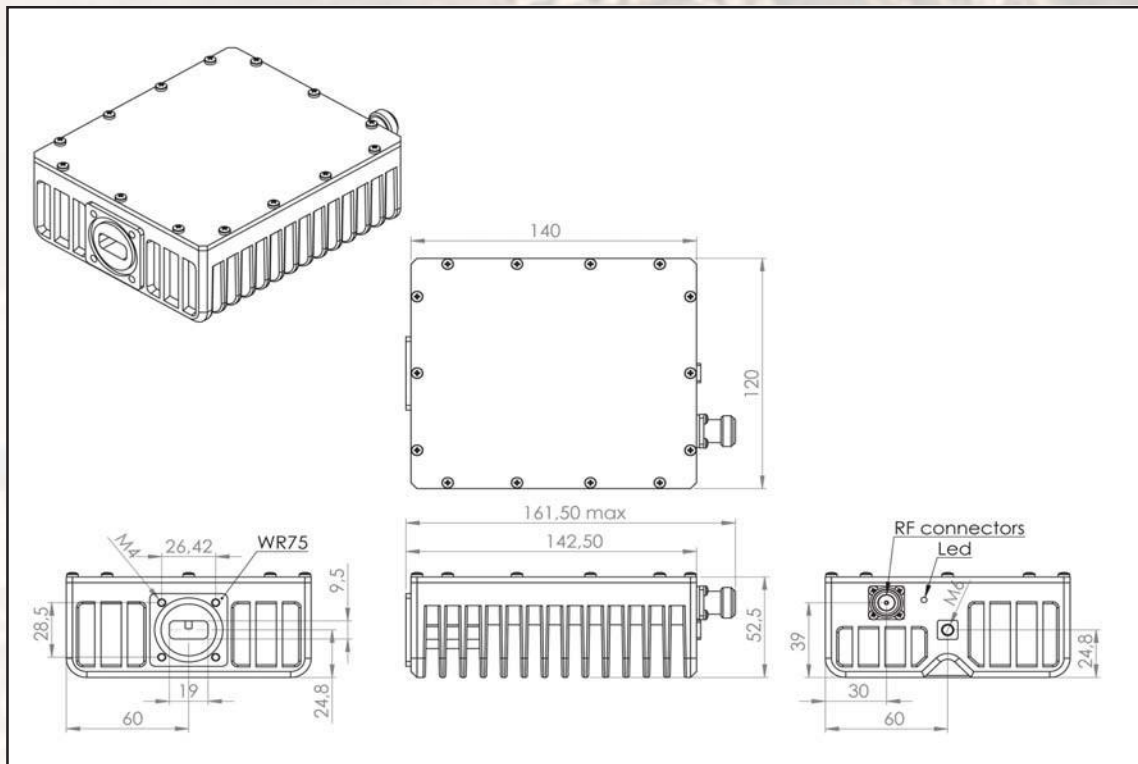
- ◆ Output frequency 12.75-13.50 GHz
- ◆ Based on GaN technology which enables high efficiency, low energy consumption and high reliability
- ◆ Double - L.O. (switchable 11.80 and 12.05 GHz)
- ◆ Incomparable low power consumption (39W max)- can be powered by iDirect or similar modems
- ◆ Extreme P-Out GaN linearity
- ◆ Digital temperature compensation
- ◆ L.O. lock and amplifier LEDs
- ◆ Field-exchangeable (F/N) IF connector
- ◆ Internal 10MHz high stability  $10^{-8}$  reference (optional)
- ◆ RoHS compliant
- ◆ Three-year warranty

### ABE8KXHL / ABE8KXHLF



This smallest and lightest 8W L-To Low Ku-Band Block Up Converter is based on GaN technology. Double L.O. and field- Exchangeable connector make unit universal for any Ku-Band application. Incomparable low power consumption allows the BUC to be powered by iDirect and similar modems. Internal 10MHz reference option enables using the BUC with the modems without 10MHz reference.

### Mechanical Drawing





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

### TECHNICAL SPECIFICATIONS

|   |   |
|---|---|
| <b>RF frequency</b>   | 12.75 – 13.50 GHz   |
| <b>Local Oscillator</b>   | 11.80 GHz and 12.05 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, 39 W max  |
| <b>Internal 10MHz high stability reference</b>  | 10 <sup>-8</sup>  |
| <b>Output interface</b>   | WR-75 G   |
| <b>Gain</b>   | 62 dB typ   |
| <b>IMD3 (two tones)</b>   | -26 dBc max 2 signal 5MHz apart at P-LINEAR   |
| <b>L.O. leakage</b>   | -45 dBm max   |
| <b>Spurious</b>   | -53 dBc max   |
| <b>Spectral regrowth</b><br>(QPSK at 1.5x and OQPSK at 1.0x symbol rate offset with 2dB back-off from rated output power) | -30dBc  |
| <b>TX Gain variation</b>  | ± 0.5 dB over 40 MHz<br>± 1.8 dB over full band   |
| <b>TX Gain stability over temperature range</b>   | ± 1.5 dB typ., ± 1.8 dB max   |
| <b>Requirement for external reference</b><br>frequency<br>input power   | via IF cable<br>10 MHz (sine-wave)<br>-5 to +5 dBm @ input port   |
| <b>Phase noise</b><br><br>(Exceeds Intelsat's standard IESS308/309)   | -53 dBc/Hz max. @ 10 Hz<br>-63 dBc/Hz max. @ 100 Hz<br>-73 dBc/Hz max. @ 1 KHz<br>-83 dBc/Hz max. @ 10 KHz<br>-93 dBc/Hz max. @ 100 KHz<br>-113 dBc/Hz max. @ 1 MHz |
| <b>Noise power density</b>  | <b>Transmit</b><br>-60 dBm/Hz (max)<br><b>Receive</b><br>-150 dBm/Hz (max)  |
| <b>Noise figure</b>   | 20 dB max   |
| <b>Input V.S.W.R.</b>   | 1.5 : 1 max   |
| <b>Output V.S.W.R.</b>  | 1.5 : 1 max.  |
| <b>Mute</b>   | Shut off the BUC in case of L.O. unlocked   |
| <b>Status LED</b>   | <b>RED</b> Summary alarm<br><b>GREEN</b> All OK<br><b>YELLOW</b> All OK standard L.O. 12.05 GHz<br><b>YELLOW blinking</b> All OK extended L.O. 11.80 GHz            |
| <b>Temperature range (ambient)</b><br><br>operating<br>storage  | -40 deg C to +55 deg C<br>-55 deg C to +85 deg C  |
| <b>Vibration and shock</b>  | Complies with MIL-STD-810E  |
| <b>Dimensions &amp; housing</b>   | 140 (L) x 120 (W) x 52 (H) mm<br>5.6" (L) x 4.8" (W) x 2.08" (H)  |
| <b>Weight</b>   | 1.3 kg (2.9 lbs.) max   |