



## 2W Ext. Mini Ku-Band Block Up Converter

### KEY FEATURES

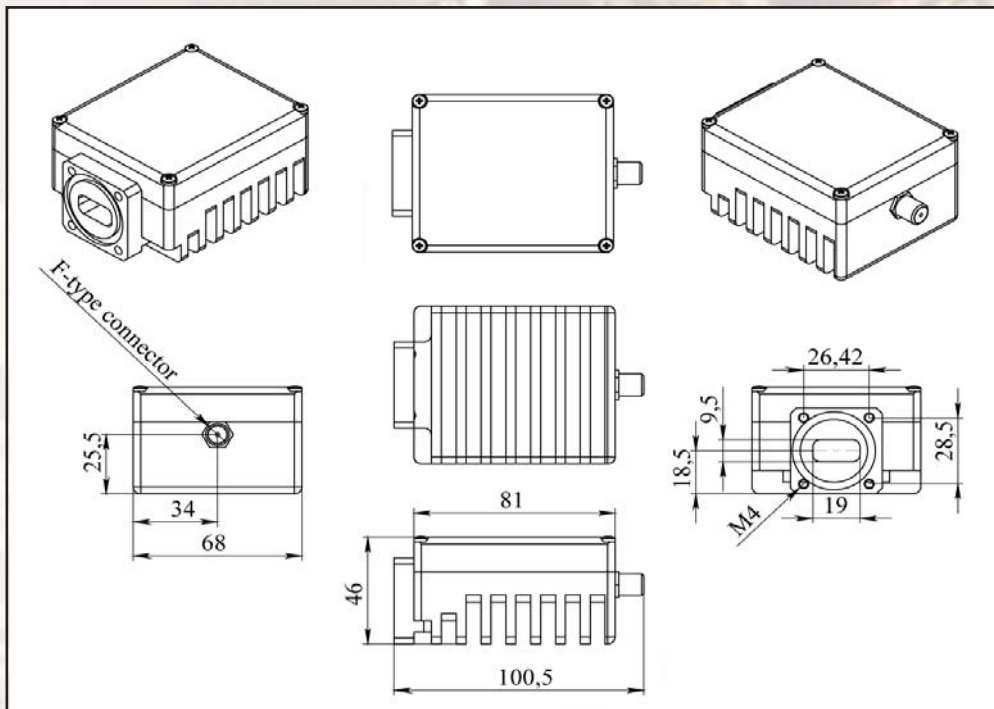
- ◆ Output frequency 13.75-14.50 GHz
- ◆ Based on GaN technology which enables high efficiency, low energy consumption and high reliability
- ◆ Smallest package size and weight
- ◆ Powered through IF cable
- ◆ Low power consumption (<14W)
- ◆ High power efficiency (2W min @P1dB over temperature)
- ◆ RoHS compliant
- ◆ Three-year warranty

### ABA2KX / ABA2KXF



This smallest and lightest 2W L-To Ku-Band Block Up Converter is based on GaN technology and is designed to be mounted directly on the feed horn. High power efficiency resulting in low current (< 1 amps) consumption allows user to pass DC supply voltage via IF cable. The unit is ideal for network and point to point, data distribution, portable and emergency applications.

### Mechanical Drawing



## 2W Ext. Mini Ku-Band Block Up Converter

| <b>TECHNICAL SPECIFICATIONS</b>   |   |
|---|---|
| <b>RF frequency</b>   | 13.75 to 14.5 GHz   |
| <b>Local oscillator</b>   | 12.80 GHz   |
| <b>IF frequency</b>   | 950 to 1,700 MHz  |
| <b>Output power @ P1dB min over temperature</b>   | 2W (+33 dBm min.)   |
| <b>IF connector</b>   | N-type or F-type  |
| <b>Power supply</b>   | +15 VDC~+24 VDC via IF cable 14 W max   |
| <b>Output interface</b>   | WR-75 Grooved   |
| <b>Gain</b>   | 60 dB nominal   |
| <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>   | -50 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 40MHz<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>   | via IF cable  |
| frequency   | 10 MHz (sine-wave)  |
| input power   | -5 to +5 dBm @ input port   |
| <b>Phase noise –</b><br>Exceeds and Intelsat's standard IESS308/309 and NJRC's specification                              | -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 |
| <b>Noise power density</b>  | <b>Transmit</b><br>-60 dBm/Hz (max.)<br><b>Receive</b><br>-155 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<br>in case of L.O. unlocked  |
| <b>Input interface</b>  | <b>ABA2KX</b><br><b>ABA2KXF</b><br>50 Ohm (N-type IF in)<br>75 Ohm (F-type IF in)   |
| <b>Temperature range (ambient)</b>  | operating<br>-40 deg C to +55 deg C<br>storage<br>-55 deg C to +85 deg C  |
| <b>Vibration &amp; shock</b>  | Complies with MIL-STD-810E  |
| <b>Dimensions &amp; housing</b>   | 100.5 (L) x 68 (W) x 46 (H) mm<br>3.96" (L) x 2.68" (W) x 1.81" (H)   |
| <b>Weight</b>   | 0.45 kg (0.99 lbs) max  |