



## 5W Ext. C-Band Block Up Converter

### KEY FEATURES

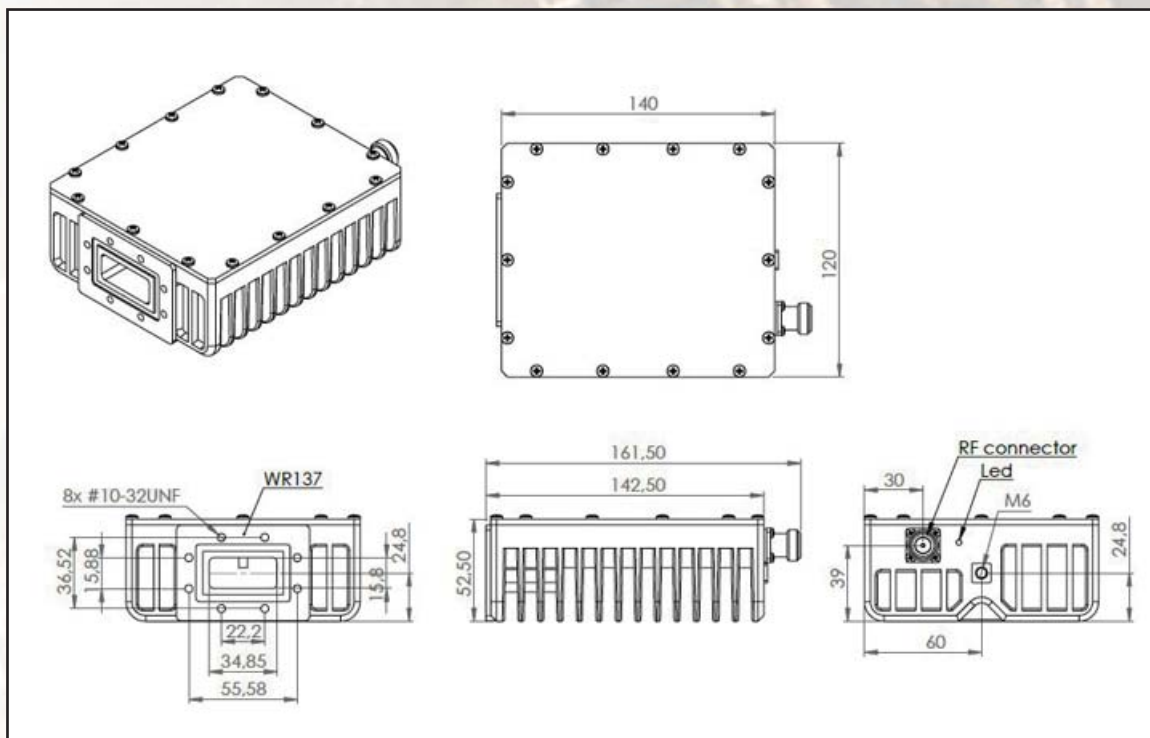
- ◆ Output frequency 5.850-6.725 GHz
- ◆ Incomparable low power consumption (19W at 37dBm)
- ◆ Utilizing GaN technology
- ◆ Incomparable low phase noise
- ◆ Digital temperature compensation
- ◆ Field-exchangeable (F/N) IF connector
- ◆ Internal 10MHz high stability  $10^{-8}$  reference (optional)
- ◆ L.O., alarm, lock LED
- ◆ RoHS compliant
- ◆ Three-year warranty

### ABA5DC / ABA5DCF



This smallest and lightest 5W L-To C-Band Block Up Converter is based on GaN technology. High power efficiency resulting in the lowest power consumption. The unit covers Standard (5.850-6.425 GHz) and Palapa (6.365-6.725 GHz) C-Band frequencies.

### Mechanical Drawing





# 5W Ext. C-Band Block Up Converter

## TECHNICAL SPECIFICATIONS

|   |   |
|---|---|
| <b>RF frequency</b>   | 5.850 to 6.725 GHz  |
| <b>Local oscillator</b>   | 4.90 GHz  |
| <b>IF frequency</b>   | 950 to 1,825 MHz  |
| <b>Output power</b>   | 5W (+37 dBm min.)   |
| <b>IF connector</b>   | N-type or F-type (field-exchangeable)   |
| <b>Power supply : auto-ranging via IF connector</b>   | +15 VDC ~ +28 VDC via IF cable 19W max.   |
| <b>Output interface</b>   | CPR 137 G   |
| <b>Internal 10MHz high stability reference</b>  | 10 <sup>-8</sup>  |
| <b>Gain</b>   | 62 dB nominal   |
| <b>IMD3 (two tones)</b>   | -26 dBc max. 2 signal 5 MHz 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) | -30 dBc   |
| <b>Requirement for external reference:</b><br>frequency<br>input power  | <b>via IF cable</b><br>10 MHz (sine-wave)<br>-5 to +5 dBm @ input port  |
| <b>TX Gain variation</b>  | ± 0.5 dB over 40 MHz  |
| <b>TX Gain stability over temperature range</b>   | ± 1.8 dB over full band<br>± 1.5 dB typ., ± 1.8 dB max.   |
| <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><br><br><b>Transmit</b><br><b>Receive</b>   | -66 dBm/Hz (max)<br>-157 dBm/Hz (max)   |
| <b>Noise figure</b>   | 15 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 HPA if L.O. unlocked   |
| <b>Status LED</b><br><br><b>RED</b><br><b>GREEN</b><br><b>YELLOW</b>  | Summary alarm<br>All OK<br>All OK standard L.O. 4.90 GHz  |
| <b>Temperature range (ambient)</b><br><br>operating<br><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 52.5 (H) mm<br>5.51" (L) x 4.72" (W) x 2.06" (H)   |
| <b>Weight</b>   | 1 kg (2.2 lbs) max  |