



# 2W Ka-Band Block Up Converter

## KEY FEATURES

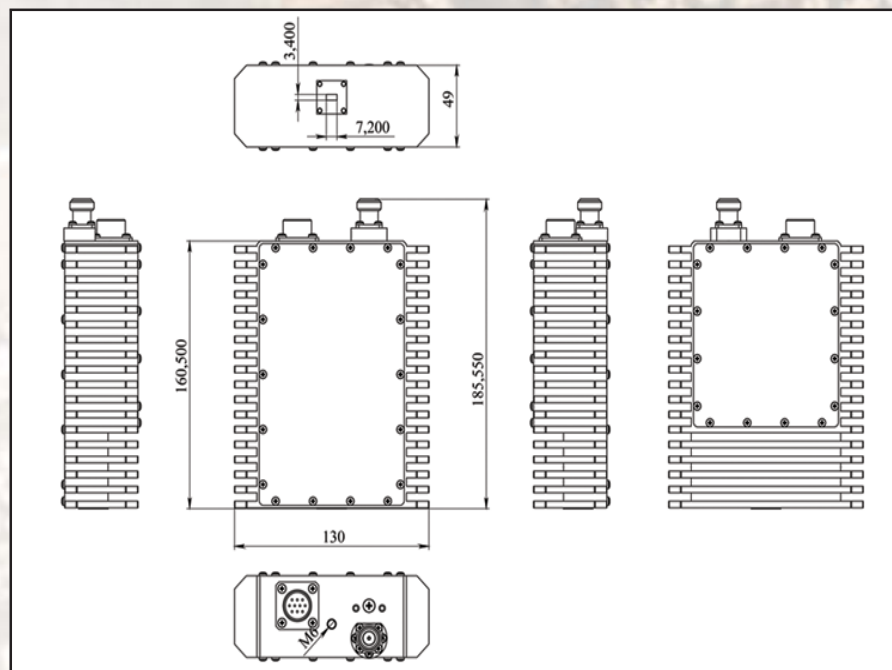
- ◆ Output frequency 29-30GHz / 30-31GHz
- ◆ Low power consumption(<36W)
- ◆ High power efficiency(2W min @P1db over temperature)
- ◆ L.O. lock and amplifier LEDs
- ◆ Field-exchangable (F/N) IF connector
- ◆ Internal 10MHz high stability  $10^{-8}$  reference(optional)
- ◆ M&C - combined RS-232/485 and optional FSK
- ◆ RoHS compliant
- ◆ Three-year warranty

ABA2KA/ABA2KAF  
ABA2KAE/ABA2KAEF



This is the smallest and lightest 2W L-To Ka-Band Block Up Converter (available frequencies 29-31GHz) and it is designed to be mounted on the feed horn. This unit is ideal for portable and mobile applications. High power efficiency resulting in low current (<1.6 amps) consumption allows user to pass DC supply voltage via IF cable.

## Mechanical Drawing





# 2W Ka-Band Block Up Converter

## TECHNICAL SPECIFICATIONS

<b>RF frequency</b>	<b>ABA2KA</b> <b>ABA2KAE</b>	29 to 30 GHz 30 to 31 GHz
<b>Local oscillator</b>	<b>ABA2KA</b> <b>ABA2KAE</b>	28.05 GHz 29.05 GHz
<b>IF frequency</b>		950 to 1,950 MHz
<b>Output power @ P1dB min over temp.</b>		2W (+33 dBm min.)
<b>IF connector</b>		N-type or F-type
<b>Power supply – auto-ranging</b>		+18 VDC~+30 VDC via IF cable 36 W max
<b>Internal 10MHz high stability reference</b>		10 <sup>-8</sup>
<b>Output interface</b>		WR-28 Grooved
<b>Gain</b>		50 dB min., 60 dB max.
<b>Gain variation</b>	<b>over 54 MHz</b> <b>over 500 MHz</b> <b>Over operating temperature</b>	0.8 dB p_p (1.5) 1.4 dB p_p (2.5) 0.75 dB p_p @ fixed frequency (2.5)
<b>IMD3 (P1 – 3dB)</b>		-25 dBc max
<b>Spurious</b>	<b>&lt; - 43dBm</b> <b>&lt; - 37dBm</b> <b>&lt; - 37dBm</b> <b>&lt; - 37dBm</b>	3.4 GHz – 10.7 GHz 10.7 GHz – 21.2 GHz 19.7 GHz – 21.2 GHz 21.2 GHz – 40.0 GHz
<b>Requirement for external reference</b>		via IF cable
frequency		10 MHz (sine-wave)
input power		-5 to +5 dBm @ input port
		-55 dBc/Hz max. @ 100 Hz -65 dBc/Hz max. @ 1 kHz -75 dBc/Hz max. @ 10 kHz -95 dBc/Hz max. @ 100 kHz -110 dBc/Hz max @ 1 MHz
<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>Input interface</b>	<b>ABA2KA/ABA2KAE</b> <b>ABA2KAF/ABA2KAEF</b>	50 Ohm (N-type IF in) 75 Ohm (F-type IF in)
<b>Temperature range (ambient)</b>		
operating		-40 deg C to +55 deg C
storage		-40 deg C to +75 deg C
<b>Dimensions &amp; housing</b>		160.5 (L) x 130 (W) x 49 (H) mm 6.42" (L) x 5.2" (W) x 1.96" (H)
<b>Weight</b>		1.3 kg (2.8 lbs) max