



# 20 W Ext. Ku-Band Block Up Converter

## KEY FEATURES

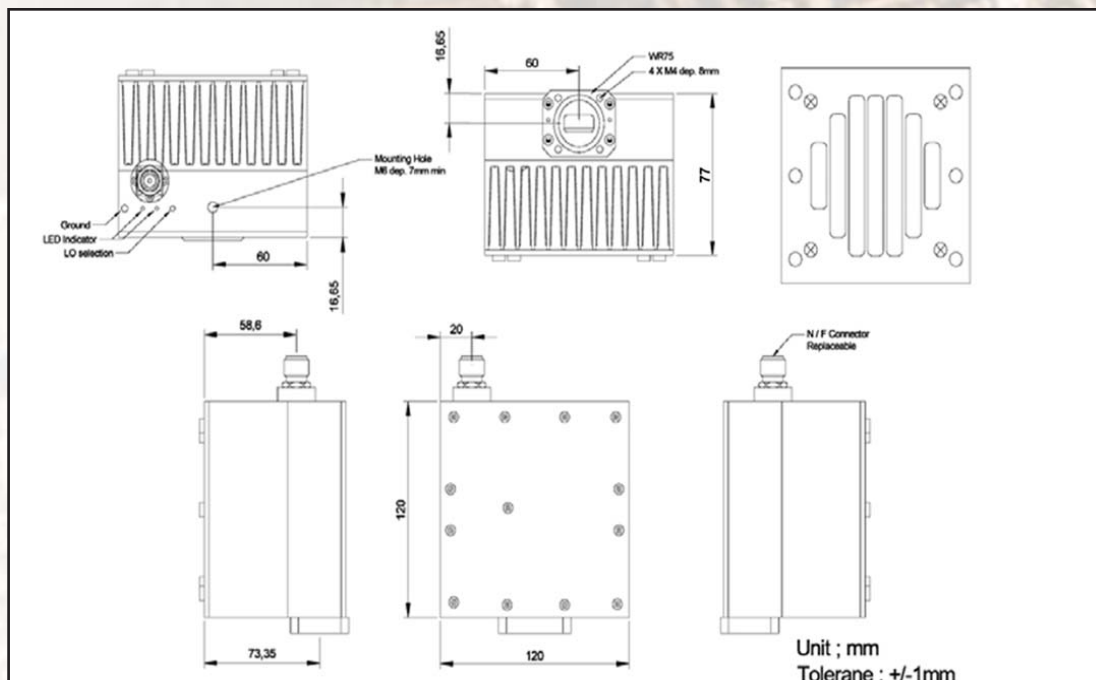
- ◆ Output frequency 13.75-14.50 GHz
- ◆ Smallest and lightest
- ◆ Double - L.O. (electronically and manually switchable 12.80 / 13.05 GHz)
- ◆ Auto-ranging and auto-detected 18-75 VDC or 80-240 VAC power options
- ◆ Low power consumption (114W max)
- ◆ Digital temperature compensation
- ◆ L.O. lock and amplifier LEDs
- ◆ Field-exchangeable (F/N) IF connector
- ◆ M&C - combined RS-232/485/FSK (optional)
- ◆ Internal 10MHz high stability  $10^{-8}$  reference (optional)
- ◆ Three-year warranty
- ◆ RoHS compliant

## ABE20KX / ABE20KXF ABD20KX / ABD20KXF



This smallest and lightest 20W L-To Ku-Band Block Up Converter is designed to be mounted on a feed horn. The unit is ideal for portable and mobile applications. Double – L.O. feature makes unit universal for Ku-Band requirements. It can be powered either with 24/48 VDC or 110/220 VAC and consumes less than 114W.

## Mechanical Drawing





# 20 W Ext. Ku-Band Block Up Converter

<b>TECHNICAL SPECIFICATIONS</b>		
<b>RF frequency</b>	<b>L.O. 13.05 GHz</b> <b>L.O. 12.80 GHz</b>	14.00 to 14.50 GHz 13.75 to 14.50 GHz
<b>Local oscillator</b>		13.05 GHz and 12.80 GHz
<b>IF frequency</b>		950 to 1,700 MHz
<b>Output power @ P1dB min over temp.</b>		20W (+43 dBm min)
<b>IF connector</b>		N-type or F-type (field-exchangeable)
<b>Power supply</b> <b>ABE20KX - auto-ranging and auto-detected</b> <b>ABD20KX - auto-ranging</b>		+18~+75 VDC via MS connector, 114 W max 80~240 VAC via MS connector, 113 W max
<b>Internal 10MHz high stability reference</b>		10 <sup>-8</sup>
<b>Output interface</b>		WR-75 G
<b>Gain variation</b>	<b>over 40 MHz</b> <b>over 500 MHz</b>	0.8 dB p_p 1.4 dB p_p
<b>Over operating temperature</b>		0.75 dB p_p @ fixed frequency
<b>Gain</b>		65 dB min., 68 dB nominal
<b>IMD3</b>		-28 dBc max
<b>L.O. leakage</b>		-33 dBm max
<b>Spurious</b>		-50 dBc 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>		-55 dBc/Hz max. @ 10 Hz -65 dBc/Hz max. @ 100 Hz -75 dBc/Hz max. @ 1 KHz -85 dBc/Hz max. @ 10 KHz -95 dBc/Hz max. @ 100 KHz -120 dBc/Hz max @ 1 MHz
<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>Input interface</b>	<b>ABE20KX/ABD20KX</b> <b>ABE20KXF/ABD20KXF</b>	50 Ohm (N-type IF in) 75 Ohm (F-type IF in)
<b>Status LED</b>	<b>RED</b> <b>GREEN</b> <b>YELLOW</b> <b>YELLOW blinking</b>	Summary alarm All OK Standard L.O. 13.05 GHz Extended L.O. 12.80 GHz
<b>Temperature range (ambient)</b>	<b>operating</b> <b>storage</b>	-40 deg C to +55 deg C -40 deg C to +75 deg C
<b>Dimensions &amp; housing</b>		120 (L) x 120 (W) x 77 (H) mm 4.72" (L) x 4.72" (W) x 3.03" (H)
<b>Weight</b>		1.8 kg (4.0 lbs) max