



## BUC

### KU-BAND 100W

### BUC-ATOMKU100



#### NORSAT ATOM SERIES BUCS

Norsat microwave products are renowned for their high quality, excellent reliability, and innovation. The ATOM series of block upconverters (BUC) are the smallest, lightest, and most energy efficient transmitters available today. ATOM series BUCs have been deployed globally for new and replacement applications that demand high performance transmission with a compact footprint. The high efficiency of ATOM reduces power consumption significantly, delivering considerable operational cost savings over the lifetime of the device. Another innovative communication solution from Norsat.

#### AVAILABLE CONFIGURATIONS

##### Transmit Frequency

Standard band	14.0 to 14.5 GHz
Extended band	13.75 to 14.5 GHz

##### Input Frequency

Standard band	950 to 1450 MHz
Extended band	950 to 1700 MHz

#### KEY FEATURES

- Up to 90% smaller than equivalent BUCs
- Up to 85% lighter than competing products
- Ultra efficient, consuming up to 60% less power than similar units: 470W @100W P1dB RF out with cooling fans
- Integrated L-Band to Ku-Band Upconverter plus Power Amplifier
- Forward Power Monitor
- Gain vs. Temp. compensation
- Integrated heat-pipe baseplate
- Fully environmentally sealed
- Excellent performance over entire 13.0-17.5 GHz band (peak performance at 13.75-15.0 GHz)

✓ **Smallest size**

✓ **Lightest weight**

✓ **Highest efficiency**



# KU-BAND 100W BUC-ATOMKU100

## RF SPECIFICATIONS

<b>Power Output (P1dB)</b>	100W
<b>Noise Figure</b>	15 dB
<b>Phase noise</b>	-72 dBc/Hz at 1 KHz -82 dBc/Hz at 10 KHz -92 dBc/Hz at 100 kHz -102 dBc/Hz at 1 MHz
<b>Fwd Monitor (15 dB Range)</b>	± 0.25 dB
<b>Conversion gain</b>	60 dB min
<b>Gain Variation over Frequency band</b>	6 dB max
<b>Gain variation over any 40 MHz</b>	1.5 dB max
<b>Gain variation over temperature</b>	3 dB max
<b>Spurious @ rated power</b>	-50 dBc
<b>AM/PM Conversion @2dB below</b>	2.5°/dB rated power
<b>2nd Harmonic @ 3dB below rated power</b>	-45 dBc

## INTERFACES

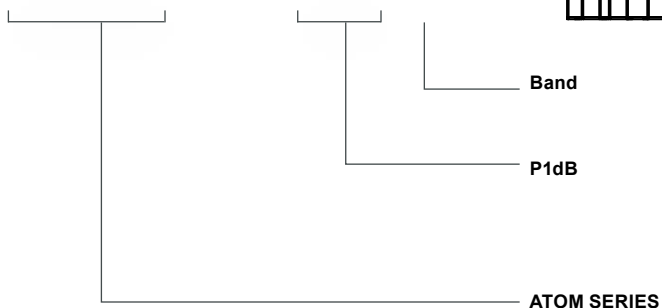
<b>Input VSRW</b>	1.5:1
<b>Output VSRW</b>	2.0:1
<b>RF Input connector</b>	SMA
<b>RF Output connector</b>	WR-75

## MONITOR & CONTROL

<b>Discrete Mute Control Voltage ranges</b>	
Low	0 - 0.8 V
High	3.0 - 5.0 V
Fully programmable	
Mute enable can be high or low	
Mute default can be enabled or disabled	
<b>Thermal shutdown control threshold</b>	+85°C
<b>Temperature Monitor Accuracy</b>	± 3°C
<b>Monitor/Control Connector</b>	MIL-26482 Series 1 receptacle Shell size 12, 10 pins

## HOW TO ORDER

# BUC-ATOMKU100-S



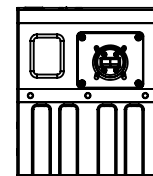
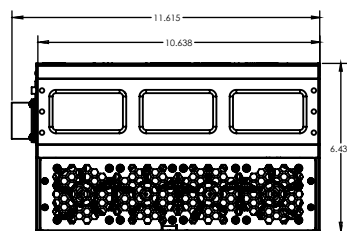
## ENVIRONMENTAL & PHYSICAL

<b>Operating Temperature</b>	baseplate internal temp. in component configuration	-40 to +70°C (-40° to +158° F)
	ambient air in fan-cooled configuration	-40 to +60°C (-40° to +140° F)
<b>Storage Temperature</b>		-54 to +105°C (-65° to +221° F)
<b>Outline dimensions</b>	Component config. with power supply	297.1 L x 134.6 W x 92.7 H mm (11.7" x 5.3" x 3.65")
	With supply & fan cooling	297.1 L x 134.6 W 168.9 H mm (11.7" L x 5.3" W x 6.65" )
<b>Weight</b>	Component configuration with power supply	4.54 kg (10.0 lbs)
	With supply & fan cooling	6.94 kg (15.3 lbs)

## POWER

<b>Input power</b>	with integrated power supply	20 – 56 VDC
<b>Power Consumption with cooling fans</b>		
	• 540W @Psat	
	• 470W @ P1dB	
	• 415W @ 3dB backoff from P1dB	
	• 375W @ Quiescent (no signal input)	
	• 60W muted	
<b>Power Connector</b>		MIL-26482 Series 1 receptacle Shell size 12, 4 pins

## MECHANICAL DIAGRAM



Measurements in inches



**Norsat**  
International Inc.

**North America**  
+1 800 644 4562

**Asia Pacific**  
+1 604 821 2813

**Europe, Middle East & Africa**  
+44 1522 730 800

**South America**  
+1 604 821 2835

**Online**  
sales@norsat.com  
www.norsat.com