

40-400 W Ku-BAND GaN BUC

DATASHEET

SATELLITE COMMUNICATIONS

The new generation of ALGA high powered Ku-Band BUC GaN

An ideal solution for both mobile and fixed Satellite Communication terminals. It is designed for high efficiency resulting in an optimal compact form factor with high performance and reliability. With the advanced customer interface and HTTP embedded web page, the operator is able to monitor and control the BUC and the System Redundancy



WEB INTERFACE

BLOCK UP CONVERTERS AND REDUNDANT SYSTEMS

HOME CONFIG LOG HELP

Uplink
Downlink
BUC A
BUC B

BUC A Status	
Output power (dBm)	44.2
Temperature (°C)	52.0
Input voltage (Vdc)	N/A
Gain (dB)	77.0
IF Freq (MHz)	1200
Mute	Unmuted
Summary alarm	OK

Controls

Mute ☐ Mute ☐ Unmute

Gain dB

IF Freq MHz

Alarm Details	
Out of lock	OK
RF over power	OK
Temperature	OK
Input voltage	N/A

KEY FEATURES

- DUAL LO = same unit covers both standard and extended KU-Band
- Extremely compact size
- 1:1 switching logic built into the BUC eliminating expensive external controller
- Built-in Telemetry facilities for critical parameters such as: RF power detection, mute control, over temperature shutdown, summary alarm
- WEB interface and SNMP monitoring
- RS 485, RS232, Ethernet and dry-contacts M&C Interface

COST EFFECTIVE SOLUTION FOR THE FUTURE

SALES@ALGA.CA | WWW.ALGA.CA | 1-514-694-8666



HIGH POWER Ku-BAND GaN BUC Specifications

ELECTRICAL CHARACTERISTICS

	Standard Band			Extended Band	
Output Frequency Range	14.00-14.50 GHz			13.75-14.50 GHz	
Input Frequency Range	950 – 1450 MHz			950 – 1700 MHz	
Local Oscillator Frequency	13.05 GHz			12.80 GHz	
Gain Stability Over Temperature	± 1.5 dB nominal; ± 2.0 dB max			± 1.5 dB nominal; ± 2.25 dB max	
Gain Variation at fixed temperature	± 0.5 dB over max over 36 MHz; ± 2.0 dB over full band			± 0.75 dB over max over 36 MHz; ± 2.25 dB over full band	
Linear Gain	70 dB min.				
User Adjustable Gain	20 dB in 0.5 dB steps				
Intermodulation	-25 dBc, with 2 equal carriers at 3dB total power back off from rated power (PSAT -4dB)				
10MHz Reference	0dBm ± 5.0 dB - External via IF / (Internal 10MHz reference optional)				
	@ 100 Hz	@ 1 KHz	@ 10 KHz	@ 100 KHz	@ 1 MHz
Phase Noise Requirement		-140 dBc/Hz max	-143 dBc/Hz max	143 dBc/Hz max	
Local Oscillator Phase Noise	-60 dBc/Hz max	-70 dBc/Hz max	-80 dBc/Hz max	-90 dBc/Hz max	-100 dBc/Hz max
Output Spurious	-55dBc max @PLinear				
Harmonics	-50 dBc max @PLinear				
VSWR	Input (1:50:1)		Output (1:30:1)		

INTERFACE

Connectors	Power	M&C (RS232/485/Ethernet)	RF Sample	Redundancy
	MS Connector	MS Connector	N-Type Female (optional)	MS Connector
Output Interface	Waveguide, WR75G (Grooved)			
Input Interface	N-Type Female, 50 Ohms, F-Type Female, 75 Ohms (optional)			
Spectral Re-growth	-30dBc @PLinear			
Noise power Density Tx Bd	-70 dBW/4KHz			
Rx Bd	-142 dBW/4KHz			

ENVIRONMENTAL

Temperature Range (ambient)	Humidity	Altitude
-40°C to + 55°C (operating); -40°C to + 75°C (storage)	0 to 100% (condensing)	10,000 ft ASL

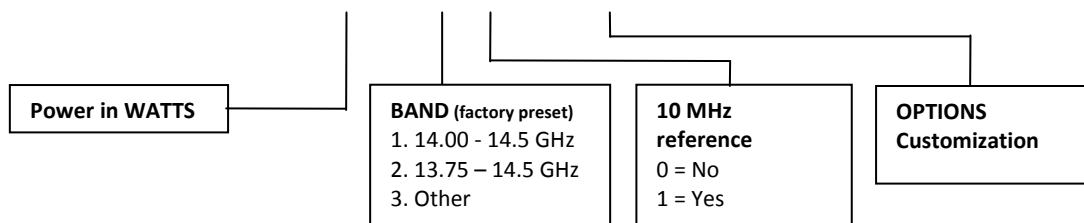
SPECIFICATION BY BUC POWER

BUC POWER PSAT (TYPICAL) WATTS PSAT /dBm	OUTPUT POWER @PLINEAR (PSAT – 4dB) (WATTS/dBm)	POWER REQUIREMENT	POWER CONSUMPTION PSAT/PLINEAR (Watts)	DIMENSIONS (in/cm)	WEIGHT (LBS/KG)
40W / 46	16 / +42	110 -220VAC (*1)	350 / 275	9.3 x 6.0 x 5.8 / 23.6 x 15.2 x 14.7	12.9 / 6.3
50W / 47	20 / +43	110 -220VAC (*1)	350 / 275	9.3 x 6.0 x 5.8 / 23.6 x 15.2 x 14.7	12.9 / 6.3
80W / 49	30 / +45	110 - 220VAC	750 / 600	12.8 x 8.2 x 7.1 / 32.5 x 20.8 x 18.0	27.8 / 12.5
100W / 50	40 / +46	110 - 220VAC	780 / 630	12.8 x 8.2 x 7.1 / 32.5 x 20.8 x 18.0	27.8 / 12.5
150W / 52	60 / +48	220VAC	1600 / 1150	16.0 x 16.9 x 5.2 / 41.0 x 43.0 x 13.2	53.8 / 24.5
200W / 53	80 / +49	220VAC	1650 / 1200	16.0 x 16.9 x 5.2 / 41.0 x 43.0 x 13.2	53.8 / 24.5
300W / 55	125 / +51	220VAC	2400 / 1850	16.9 x 24.5 x 9.2 / 43.0 x 62.2 x 23.4	94.1 / 42.8
400W / 56	150 / +52	220VAC	2500 / 1950	16.9 x 24.5 x 9.2 / 43.0 x 62.2 x 23.4	94.1 / 42.8

(*1) 48 VDC isolated optional on 40 W unit

ORDERING INFORMATION To place an order, build your specific Ku-BAND BUC by specifying the following in your ordering number:

Ordering Number: ALT-X - G – KU - ____ - ____ - ____ - OPTIONS



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