

40-500 W Ku-BAND GaN BUC

DATASHEET



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

An ideal solution for both mobile and fixed 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

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

	Low Ku Band	Standard Band	Extended Band	
Output Frequency Range	12.75-13.25 GHz	14.00-14.50 GHz	13.75-14.50 GHz	
Input Frequency Range	950 – 1450 MHz	950 – 1450 MHz	950 – 1700 MHz	
Local Oscillator Frequency	11.80 GHz	13.05 GHz	12.80 GHz	
Gain Stability Over Temperature	± 1.5 dB nominal; ± 2.25 dB max	± 1.5 dB nominal; ± 2.0 dB max	± 1.5 dB nominal; ± 2.25 dB max	
Gain Variation at fixed temperature	± 0.75 dB over max over 36 MHz; ± 2.25 dB over full band	± 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 -3dB)			
Spectral Re-growth	-30dBc @PLinear			
Noise power Density	Tx Bd (-70 dBw/4KHz) Rx Bd (-142 dBw/4KHz)			
10MHz Reference	0dBm ± 5.0 dB - External via IF / (Internal 10MHz reference optional)			
	@ 100 Hz	@ 1 KHz	@ 10 KHz	@ 100 KHz
Ref Phase Noise Req		-140 dBc/Hz max	-150 dBc/Hz max	-155 dBc/Hz max
Local Oscillator Phase Noise	-63 dBc/Hz max	-73 dBc/Hz max	-83 dBc/Hz max	-93 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)	

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

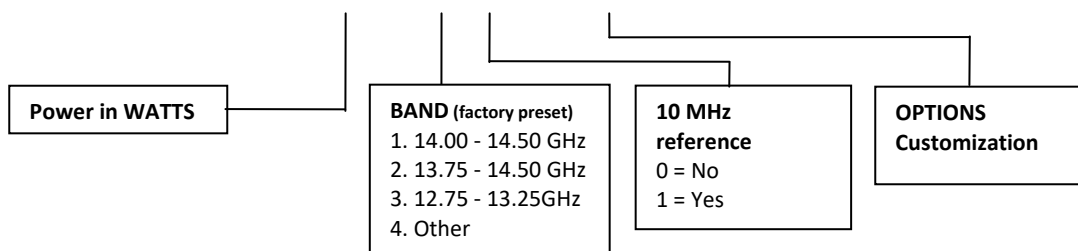
SPECIFICATION BY BUC POWER

BUC POWER PSAT (TYPICAL) WATTS PSAT /dBm	OUTPUT POWER @PLINEAR (PSAT – 3dB) (WATTS/dBm)	POWER REQUIREMENT	POWER CONSUMPTION (Watts)	DIMENSIONS (in/cm)	WEIGHT (LBS/KG)
40W / 46	20 / +43.0	110 -220VAC (*1)	350	9.3 x 6.0 x 5.8 / 23.6 x 15.2 x 14.7	12.9 / 6.3
50W / 47	25 / +44.0	110 -220VAC (*1)	400	9.3 x 6.0 x 5.8 / 23.6 x 15.2 x 14.7	12.9 / 6.3
80W / 49	40 / +46.0	110 -220VAC	750	12.8 x 8.2 x 7.1 / 32.5 x 20.8 x 18.0	27.8 / 12.5
100W / 50	50 / +47.0	110 -220VAC	780	12.8 x 8.2 x 7.1 / 32.5 x 20.8 x 18.0	27.8 / 12.5
125W / 51	60 / +48.0	110 -220VAC	780	12.8 x 8.2 x 7.1 / 32.5 x 20.8 x 18.0	27.8 / 12.5
150W / 52	80 / +49.0	220VAC	1600	16.0 x 16.9 x 5.2 / 41.0 x 43.0 x 13.2	47.5 / 21.6
200W / 53	100 / +50.0	220VAC	1650	16.0 x 16.9 x 5.2 / 41.0 x 43.0 x 13.2	47.5 / 21.6
250W / 54	112 / +50.5	220VAC	1650	16.0 x 16.9 x 5.2 / 41.0 x 43.0 x 13.2	47.5 / 21.6
300W / 55	150 / +52.0	220VAC	2400	16.9 x 24.5 x 9.2 / 43.0 x 62.2 x 23.4	94.1 / 42.8
400W / 56	200 / +53.0	220VAC	2500	16.9 x 24.5 x 9.2 / 43.0 x 62.2 x 23.4	94.1 / 42.8
500W / 57	225 / +53.5	220VAC	2500	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: ALTX - G – KU - ____ - ____ - ____ - OPTIONS



COST EFFECTIVE SOLUTION FOR THE FUTURE

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

