

## The new generation of ALGA high powered X-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

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	<input type="radio"/> Mute <input type="radio"/> Unmute <input type="button" value="Set"/>
Gain	<input type="button" value="Fixed"/> dB <input type="button" value="N/A"/>
IF Freq	<input type="text"/> MHz <input type="button" value="Set"/>

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

### KEY FEATURES

- Extremely compact size
- 1:1 and 1:N 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 X-BAND GaN BUC Specifications

## ELECTRICAL CHARACTERISTICS

Standard Band																															
Output Frequency Range	7.9 - 8.4 GHz																														
Input Frequency Range	950 – 1450 MHz																														
Local Oscillator Frequency	6.95 GHz																														
Gain Stability Over Temperature	± 1.5 dB nominal																														
Gain Variation at fixed temperature	± 0.5 dB over max over 36 MHz; ± 2.0 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)																														
10MHz Reference	0dBm ± 5.0 dB - External via IF / (Internal 10MHz reference optional)																														
	<table border="1"> <thead> <tr> <th>@ 100 Hz</th> <th>@ 1 KHz</th> <th>@ 10 KHz</th> <th>@ 100 KHz</th> <th>@ 1 MHz</th> </tr> </thead> <tbody> <tr> <td>Ref Phase Noise Requirement</td> <td>-140 dBc/Hz max</td> <td>-150 dBc/Hz max</td> <td>-155 dBc/Hz max</td> <td></td> </tr> <tr> <td>Local Oscillator Phase Noise</td> <td>-63 dBc/Hz max</td> <td>-73 dBc/Hz max</td> <td>-83 dBc/Hz max</td> <td>-103 dBc/Hz max</td> </tr> <tr> <td>Output Spurious</td> <td colspan="4">-55dBc max @PLinear</td> </tr> <tr> <td>Harmonics</td> <td colspan="4">-50 dBc max @PLinear</td> </tr> <tr> <td>VSWR</td> <td colspan="2">Input (1:50:1)</td> <td colspan="2">Output (1.30:1)</td> </tr> </tbody> </table>	@ 100 Hz	@ 1 KHz	@ 10 KHz	@ 100 KHz	@ 1 MHz	Ref Phase Noise Requirement	-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	-103 dBc/Hz max	Output Spurious	-55dBc max @PLinear				Harmonics	-50 dBc max @PLinear				VSWR	Input (1:50:1)		Output (1.30:1)	
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## INTERFACE

Connectors	Power	M&C (RS232/485/Ethernet)	RF Sample	Redundancy
	MS Connector	MS Connector	N-Type Female (optional)	MS Connector
Output Interface	Waveguide, WR112G (Grooved)			
Input Interface	N-Type Female, 50 Ohms			

## 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

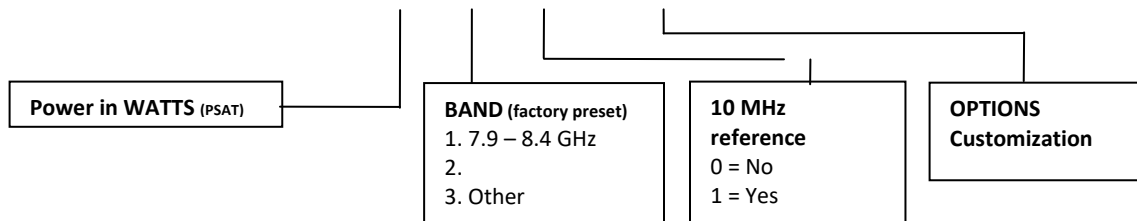
BUC POWER PSAT (TYPICAL) /dBm (WATTS/dBm)	OUTPUT POWER @PLinear(PSAT-3dB) (WATTS/dBm)	POWER REQUIREMENT	POWER CONSUMPTION (Watts)	DIMENSIONS (in)	WEIGHT (LBS/KG)
10W / 40	5W / 37.0	110-220VAC (*1)	145	9.5 x 6 x 6	14.7 / 6.7
20W / 43	10W / 40.0	110-220VAC (*1)	175	9.5 x 6 x 6	14.7 / 6.7
40W / 46	20W / 43.0	110-220VAC (*1)	325	9.5 x 6 x 6	14.7 / 6.7
50W / 47	25W / 43.5	110-220VAC (*1)	375	9.5 x 6 x 6	14.7 / 6.7
80W / 49	40W / 46.0	110-220VAC (*1) (*2)	600	9.5 x 6 x 6	14.7 / 6.7
100W / 50	50W / 47.0	110-220VAC (*1) (*2)	675	9.5 x 6 x 6	14.7 / 6.7
125W / 51	60W / 47.5	110-220VAC (*1) (*2)	725	9.5 x 6 x 6	14.7 / 6.7
200W / 53	100W / 50.0	220VAC	1250	13 x 8.2 x 6.3	27.8 / 12.5
250W / 54	112W / 50.5	220VAC	1400	13 x 8.2 x 6.3	27.8 / 12.5
400W / 56	200W / 53.0	220VAC	3200	15.4 x 16 x 6	48 / 21.8
500W / 57	225W / 53.5	220VAC	3400	15.4 x 16 x 6	48 / 21.8
800W / 59	400W / 56.0	220VAC	6200	18 x 24 x 9.6	99 / 45
1000W / 60	450W / 56.5	220VAC	6400	18 x 24 x 9.6	99 / 45

(\*1) 48 VDC isolated optional on 10W – 125W units

(\*2) External AC supply

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

Ordering Number: ALTX - G - X - \_\_\_ - \_\_\_ - \_\_\_ - OPTIONS



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