

# “TREKKER”

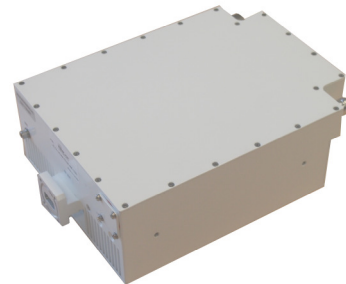
DATASHEET

## 16-25 W GaAs, 40W GaN Ku-BAND BUC

SATELLITE COMMUNICATIONS

### Super Low Profile Tiny TREKKER Package

- Ideal for use in portable and mobile VSAT terminals.
- Best in class power efficiency and power density.
- Available as 16 to 25W GaAs or 40W GaN units.



### 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
- Internal 10 MHz ref built in with Auto-sensing of External 10 MHz ref
- Extremely compact size and low profile
- 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 -3dB) |  |                 |                |                 |
| 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) | Redundancy   |
|---------------------------|----------------------------|--------------------------|--------------|
|                           | MS Connector               | MS Connector             | MS Connector |
| Output Interface          | Waveguide, WR75G (Grooved) |                          |              |
| Input Interface           | N-Type Female, 50 Ohms     |                          |              |
| 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);<br>-40°C to + 75°C (storage) | 0 to 100% (condensing) | 10,000 ft ASL |

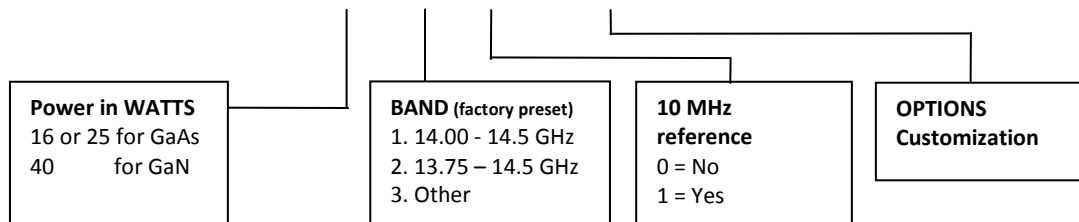
## SPECIFICATION BY BUC POWER

| BUC POWER WATTS/dBm | OUTPUT POWER @PLINEAR (PSAT – 3dB) (WATTS/dBm) | POWER REQUIREMENT | POWER CONSUMPTION PSAT/PLINEAR (Watts) | DIMENSIONS (in/mm)                | WEIGHT (LBS/KGS) |
|---------------------|--|-------------------|--|-----------------------------------|------------------|
| 16W / +42 (1)       | 10W / +40                                      | 48 VDC            | 250 / 225                              | 10.7 X 7.4 X 3.5 / 273 X 188 X 89 | 11 / 5           |
| 25W / +44 (1)       | 16W / +42                                      | 48 VDC            | 300 / 275                              | 10.7 X 7.4 X 3.5 / 273 X 188 X 89 | 11 / 5           |
| 40W / +46 (2)       | 25W / +44                                      | 48 VDC            | 350 / 300                              | 10.7 X 7.4 X 3.5 / 273 X 188 X 89 | 11 / 5           |

(1) GaAs (P1dB) (2) GaN (Psat)

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

Ordering Number: ALTX - TR - KU - \_\_\_ - \_\_\_ - \_\_\_ - OPTIONS (GaAs model)  
ALTX - TR-G-KU - 40 - \_\_\_ - \_\_\_ - OPTIONS (GaN model)



COST EFFECTIVE SOLUTION FOR THE FUTURE

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

