

## UB61000-050 X-Band 100 W Block Up Converter (BUC)

### General Information

Intended for either indoor or outdoor environments, Locus Microwave, Inc. designed the UB61000 X-Band BUC for use in professional outdoor systems. Superior performance is guaranteed at reasonable cost.

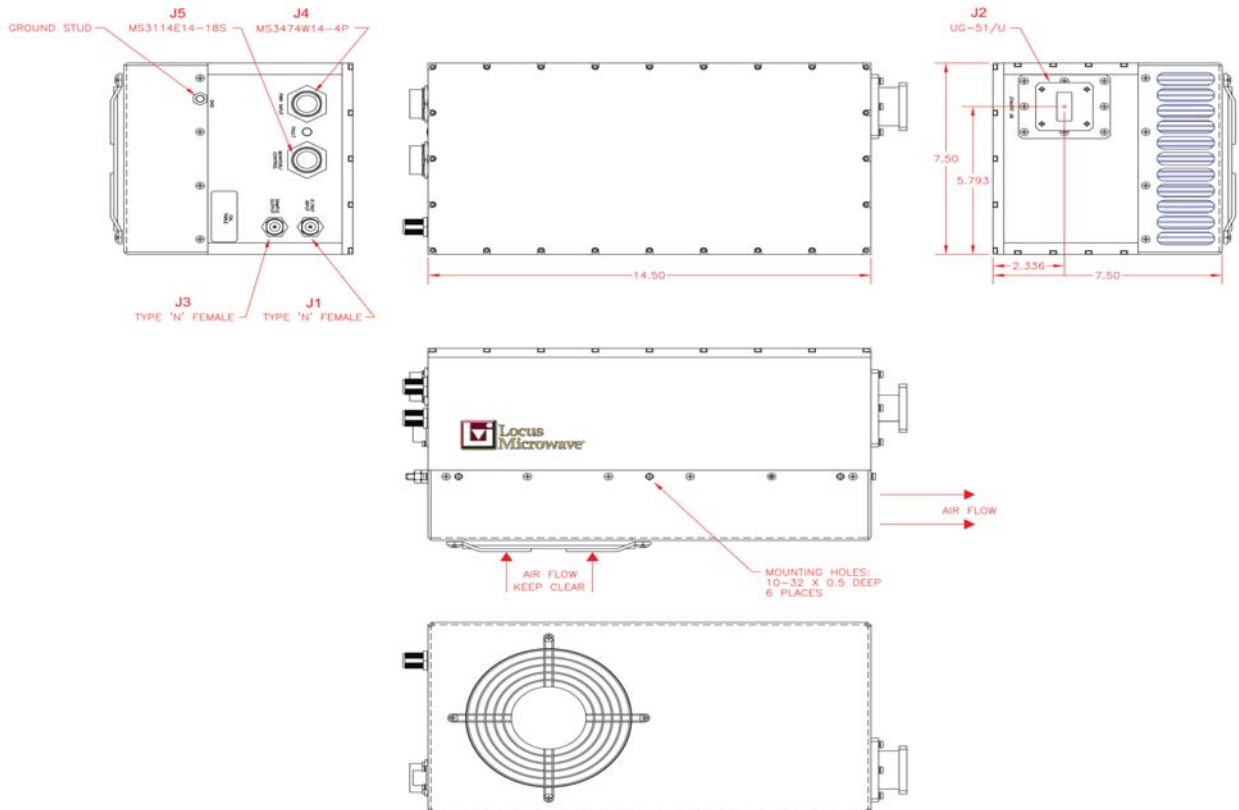
Specifications included are for a standard product. Please contact the factory for your custom or specific performance needs.



### Options:

- Custom Packaging
- Internal Reference

### Outline Drawing



This item is subject to International Traffic in Arms Regulations (ITAR) and is classified as 22 CFR, Part 121, Category XI (a) (5) per United States Munitions List (USML). Compliance with the Department of State ITAR is required for export of this item.

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|   | Range                              | Units  | Notes                                      |
|---|------------------------------------|--------|--|
| <b>Electrical Specifications</b>              |                                    |        |  |
| Input Frequency                               | 950-1450                           | MHz    |  |
| Output Frequency                              | 7.90-8.40                          | GHz    | 6.95 GHz LO                                |
| External Reference                            |                                    |        |  |
| Frequency                                     | 10                                 | MHz    |  |
| Level   | 0 dBm +/- 5 dB                     |        |  |
| Phase Noise (SSB)                             |                                    |        |  |
| @ 1 kHz offset                                | -72 max., -76 typ.                 | dBc/Hz |  |
| @ 10 kHz offset                               | -83 max., -95 typ.                 | dBc/Hz |  |
| @ 100 kHz offset                              | -93 max., -110 typ.                | dBc/Hz |  |
| Gain  | 60 min., 64 typ                    | dB     | 70 dB min. option                          |
| Gain Flatness                                 | +/-1.25 max.                       | dB     | per full band                              |
| Gain Slope                                    | +/-0.4 max.                        | dB     | per 40 MHz                                 |
| Stability over temperature                    | +/- 2.0                            | dB     |  |
| Gain Adjust                                   | 31.5 dB, 0.5 dB steps              |        |  |
| $P_{1dB}$                                     | +49.5 min., 50.0 typ.              | dBm    |  |
| $P_{sat}$                                     | 50.5 min                           | dBm    |  |
| $P_{Linear}^1$                                | $P_{1dB}$ min. - 2.0 dB min        | dBm    | See Note 1.                                |
| Third Order Intermodulation Distortion        | -25 max                            | dB     | @ 3 dB backoff relative to rated $P_{1dB}$ |
| AM/PM Conversion                              | 2.0 max.                           | °/dB   | measured @ rated $P_{Linear}$              |
| Output Noise Power (7.9-8.4 GHz)              | -98 typ.                           | dBm/Hz |  |
| Output Noise Power (7.25-7.75 GHz)            | -128 typ.                          | dBm/Hz |  |
| Input VSWR                                    | 1.50 typ., 2.00 max.               | :1     |  |
| Output VSWR                                   | 1.25 typ., 1.30 max.               | :1     | Isolator Included                          |
| Overdrive                                     | +0 max.                            | dBm    | non-damaging                               |
| Spurious, Signal Related (@ rated output)     | -60 max.                           | dBc    | within rated output band                   |
| Spurious, Signal Independent (@ rated output) | -60 max.                           | dBc    | outside of band                            |
| M&C Function                                  | Mute, Temp. Mon., Fault, Gain Adj. |        | Serial I/O RS232, RS485                    |
| Power Requirement                             |                                    |        |  |
| Input Voltage                                 | +40 to +56                         | vdc    | AC-powered unit available                  |
| Power (small signal conditions)               | 460 nom.                           | watts  |  |
| <b>Mechanical Specifications</b>              |                                    |        |  |
| Size (see attached outline)                   | 14.50 x 7.50 x 7.50                | inches | L X W X H                                  |
| Weight  | 26 nom.                            | lbs.   |  |
| Finish  | white epoxy paint                  |        | green or tan option                        |
| Connectors                                    |                                    |        |  |
| IF/Ext. Reference Input                       | N                                  | Female | J1   |
| RF Sample Output                              | N                                  | Female | J3   |
| RF Output                                     | UG-51/U Flange                     |        | J2 (CPR112G option)                        |
| Mains Power                                   | MS3474W14-4P                       |        | J4   |
| M&C   | MS3114E14-18S                      |        | J5   |
| <b>Environmental</b>                          |                                    |        |  |
| Operating Temperature                         | -40 to +60                         | °C     |  |
| Humidity                                      | 100                                | %      | with condensation                          |

Note: 1. Measurement per WGS X- and Ka-Band Terminal Performance Certification Test Procedures, Version 1.01, 09 April 2008, Paragraph 5.6.2.1.

Specifications are subject to change at the discretion of Locus Microwave, Inc.

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