High Performance UB61000-042 Mini X-Band 16 Watt Block Up Converter (BUC)

General Information

Locus Microwave, Inc., designed the UB61000 BUC for use in commercial, military, and military Manpack miniature SATCOM systems. Intended for either indoor or outdoor environments, this compact unit can be mounted on the antenna for maximum efficiency of operation, or it can also be supplied without heatsinks for ease of system integration.

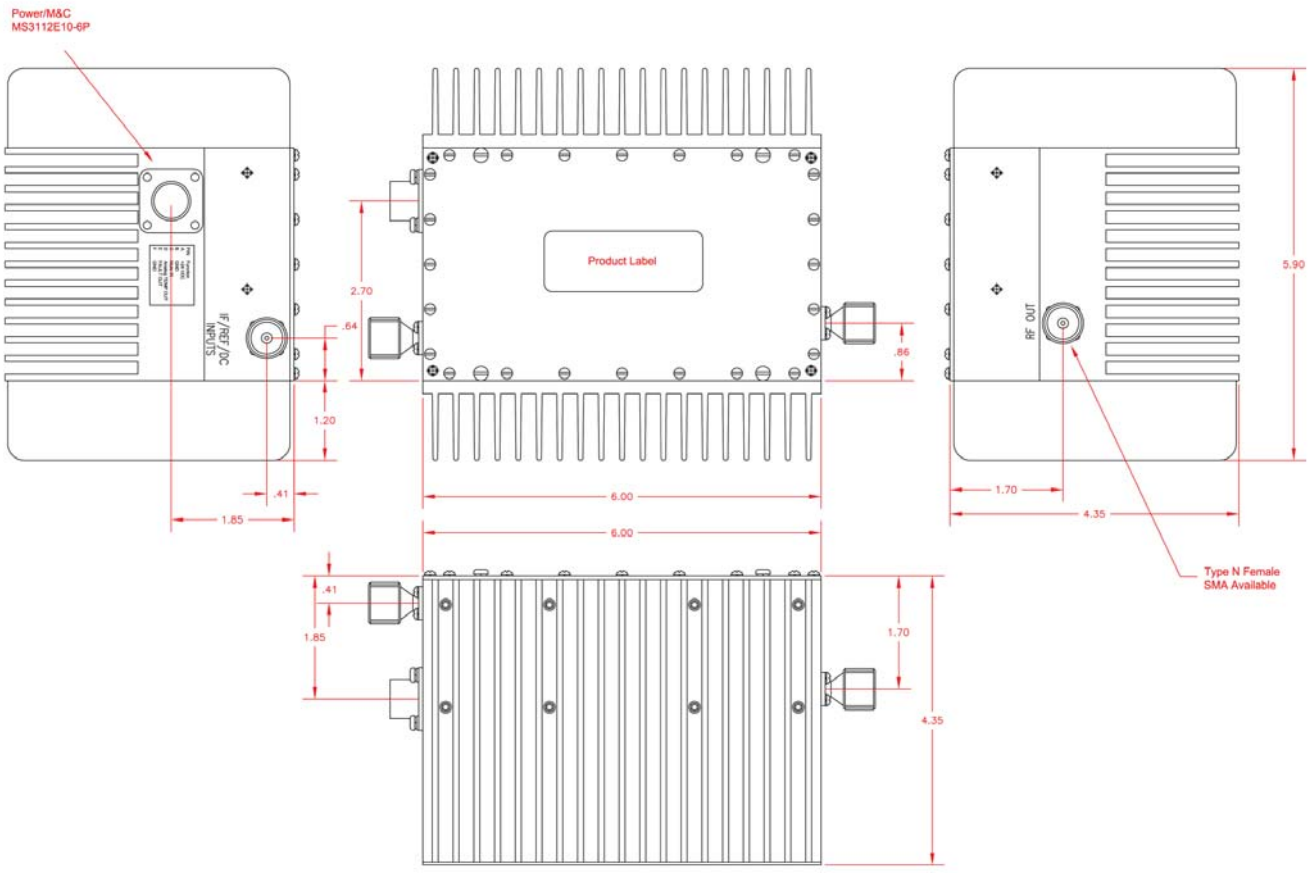
Features:

- Light Weight & Compact Size
- MIL-STD-188-164A Phase Noise
- 16 Watt Output Power
- L Band IF Input
- Outdoor packaging
- Internal image filtering included
- Integral Monitor/Alarm

Options:

- +48 VDC
- No heatsinks for smaller/lighter unit
- Split configuration

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.

UB61000-042 Mini X-Band 16 Watt Outdoor BUC

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	Range	Units	Notes
Electrical Specifications			
Input Frequency	950-1450	MHz	
Output Frequency	7.90-8.40	GHz	
Local Oscillator Frequency	6.95	GHz	Phase Locked
External Reference			
Frequency	10	MHz	
Level	0 dBm +/-5 dB		
Phase Noise (SSB)			per Mil-Std-188-164A
@ 1 kHz offset	-73 max.	dBc	
@ 10 kHz offset	-83 max.	dBc	
@ 100 kHz offset	-95 max.	dBc	
Gain	50 min., 53 typ.	dB	consult factory for other gain levels
Gain Flatness	+/-1.25 max.	dB	per full band
Gain Slope	+/-0.4 max.	dB	per 40 MHz
Stability over temperature	+/- 2.0	dB	
P_{1dB}	+41.0/+41.5 min.	dBm	
P_{sat}	+42.0 typ.	dBm	
P_{Linear}	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	0.05 max.	°/dB	measured @ rated P_{Linear}
Noise Figure	12 nom.	dB	
Input VSWR	1.70 typ., 2.00 max.	:1	
Output VSWR	1.25 typ., 1.40 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. Monitor, Fault		optional
Power Requirement			
Input Voltage	+18 to +36	vdc	+48 vdc nominal otion
Power	90 nom.	watts	
Power (small signal conditions)	460 nom.	watts	
Mechanical Specifications			
Size, with heatsinks	6.00 x 5.88 x 4.30	inches	L x W x H
Size, without heatsinks	6.00 x 3.50 x 2.35	inches	L x W xH
Weight	7 nom.	lbs.	
Finish	white epoxy paint		green or tan option
Connectors			
IF/External Reference/DC Input	Type N	Female	J1
RF Output	Type N	Female	J2
DC Input,/M&C I/O (option)	MS3112E10-6P		J3 (J4 option)
Environmental			
Operating Temperature	-40 to +50	°C	Cooled with integral fan
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.