

High Performance Miniature X-Band BUC

General Information

Intended for either indoor or outdoor environments, Locus Microwave, Inc.'s UB61000 Block Upconverter is designed for use in commercial, military and military Manpack miniature satcom systems. 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.

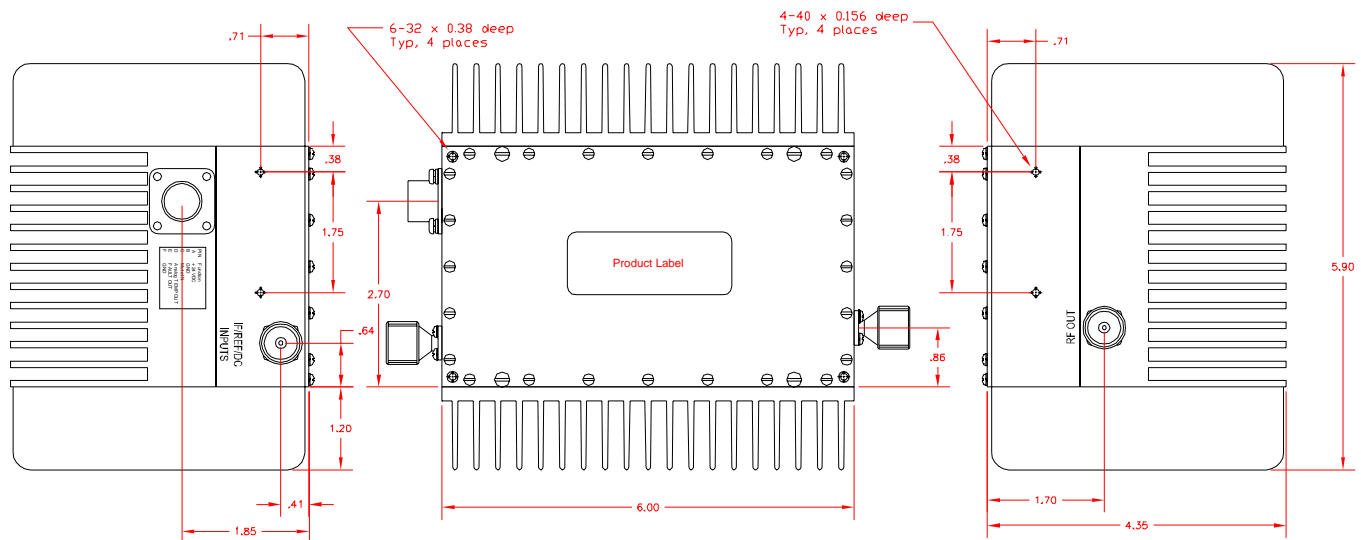
Features:

- Light Weight & Compact Size
- MIL-STD-188-164A Phase Noise
- 5 or 10 watt Output Power
- L Band IF Input
- Outdoor packaging
- Internal image filtering included

Options:

- +48 or +12 VDC Operation
- Integral Monitor/Alarm
- No heatsinks for smaller/lighter unit
- Split Configuration

Outline Drawing



PINOUT MS3112E10-6P	
Pin	Function
A	+VDC
B	Chassis Ground
C	Mute In, TTL High
D	Analog Temp. Sensor Out Temp. Coef.= +6.45 mV/°C Sensor Output= 509 mV @ 0°C Thermal Shutdown @ +85°C
E	Fault Out; Active High Open Collector @ 100 mA max.
F	Chassis Ground



	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} (-037/-040)	+36.5 min./+39.5 min	dBm	
P _{sat} (-037/-040)	38 typ./40.5 typ.	dBm	
Third Order Intermodulation Distortion	-25 max.	dB	@ 3 dB backoff relative to rated P _{1dB}
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 (optional)	Mute, Temp. Monitor, Fault		optional
Power Requirement			
Input Voltage	+18 to +36	vdc	+12 or +48 vdc nominal optional
Power (-037/-040)	46 nom./76 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 x H
Weight	7 nom.	lbs.	
Finish	epoxy paint		specify: white, green or tan
Connectors			
IF Input/Ext. Reference/DC	Type N	Female	
RF Output	Type N	Female	
DC Input/M&C I/O (optional)	MS3112E10-6P		
Environmental			
Operating Temperature	-40 to +50	°C	
Humidity	100	%	with condensation

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

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CODAN SATCOM

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