

## UB61x45 / UB61x47 30/50 Watt X-Band Block Up Converter (BUC)

### General Information

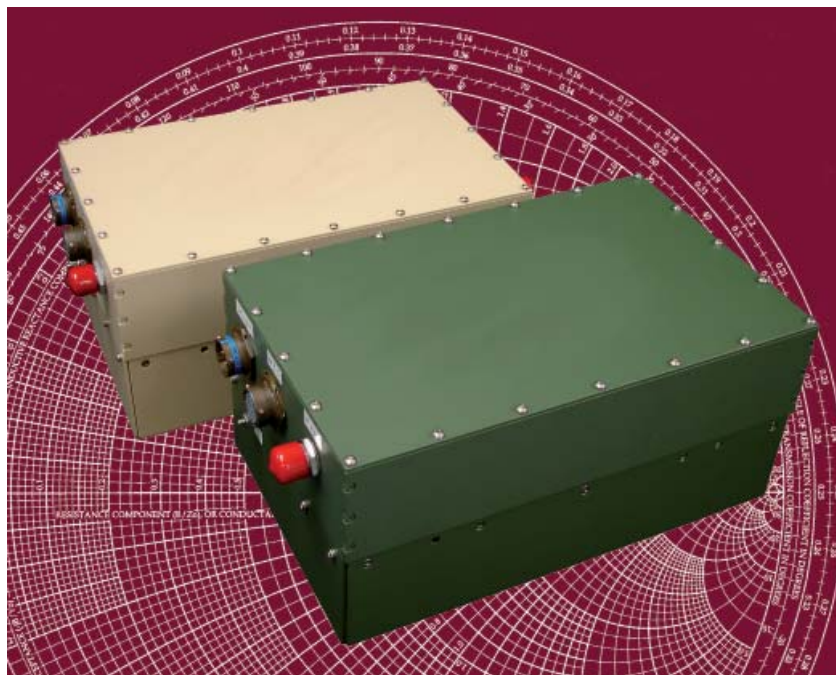
Intended for either indoor or outdoor environments, CPI Locus Microwave, Inc., designed the UB61000 X-Band BUC for use in commercial and military systems. This compact unit can be mounted on the antenna for maximum efficiency of operation.

### Features:

- 30 or 50 Watt Output Power
- L Band IF Input
- Outdoor Packaging
- Serial I/O Package
- Internal Image Filtering included
- Integral Monitor/Alarm
- Sample Port

### Options:

- 48 VDC or AC Power



11816 DS Rev B

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# UB61x45 / UB61x47 30/50 Watt SSPA/BUC



	Range	Units	Notes
<b>Electrical Specifications</b>			
Input Frequency	950-1450	MHz	Phase Locked
Output Frequency	7.90-8.40	GHz	
Local Oscillator Frequency	6.95	GHz	
External Reference			per MIL-STD-188-164B
Frequency	10	MHz	
Level	0 dBm +/-5 dB		
Phase Noise (SSB)			per MIL-STD-188-164B
@ 1 kHz offset	-73 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 or 70 min.	dB	per full band per 40 MHz
Gain Flatness	+/-1.25 max.	dB	
Gain Slope	+/-0.4 max.	dB	
Stability over temperature	+/- 2.0	dB	
P <sub>1dB</sub> (-045/-047)	+44.0 min./46.0 min.	dBm	@ 3 dB backoff relative to rated P <sub>1dB</sub>
P <sub>sat</sub> (-045/-047)	45.5 typ./47.2 typ.	dBm	
Third Order Intermodulation Distortion	-25 max	dB	
Noise Figure	12 nom.	dB	
Input VSWR	1.70 typ., 2.00 max.	:1	Isolator Included non-damaging within rated output band outside of band
Output VSWR	1.25 typ., 1.40 max.	:1	
Overdrive	+0 max.	dBm	
Spurious, Signal Related (@ rated output)	-60 min.	dBc	Serial I/O RS232, RS485
Spurious, Signal Independent (@ rated output)	-60 max.	dBm	
LO Leakage (@ rated output)	-20 max.	dBm	
M&C Function	Mute, Temp. Monitor, Fault		
Power Requirement			AC option
Input Voltage	+48	VDC	
Power (-045/-047)	300 typ./320 typ.	watts	
<b>Mechanical Specifications</b>			
Size (approximate)	11.0 x 6.80 x 5.13	inches	L X W X H
Weight	16 nom.	lbs.	
Finish	epoxy enamel paint	white	green or tan option
Connectors			
IF/Ext. Reference Input	Type N	Female	
RF Output	UG-138/U or CPR112G		
Sample Port	Type N	Female	
Power	MS3474W14-4P		
Control/Alarm	MS3114E14-18S		
Power/Control/Alarm	MS3114E14-12P		Combined Power / M&C
<b>Environmental</b>			
Operating Temperature	-40 to +60	°C	
Humidity	100	%	with condensation

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

# Outline Drawing 11626

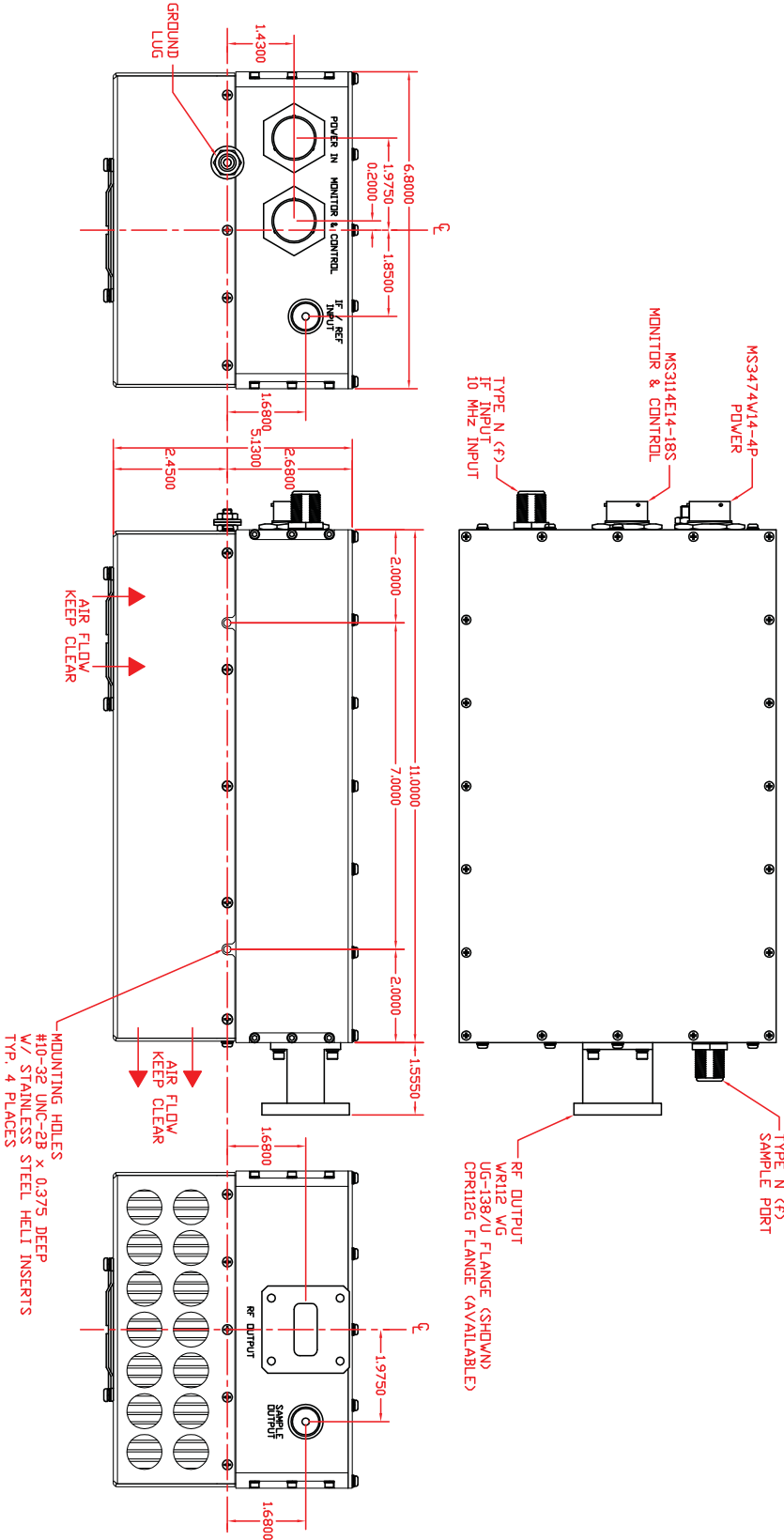
(Split Power / M&C)

## Pin Assignment

PIN	FUNCTION	DESCRIPTION
A	+24/48 VDC	DC MAINS IN
B	+24/48 VDC	DC MAINS IN
C	+24/48 VDC RTN	DC MAINS RTN
D	+24/48 VDC RTN	DC MAINS RTN

PIN	FUNCTION	DESCRIPTION
A	90-264 VAC	LINE
B	GND	GND
C	90-264 VAC	NEUTRAL
D	UNUSED	

PIN	FUNCTION	DESCRIPTION
A	TX-RS485A (-)	SERIAL TRANSMIT
B	TX-RS232/RS485B (+)	SERIAL TRANSMIT
C	GND	SIGNAL GROUND
D	UNUSED	
E	SUMMARY FAULT	ACTIVE HIGH, +5VDC (CMOS)
F	MUTE IN	MUTE INPUT (CMOS) +5V = MUTE
G	RX-RS232/RS485A (-)	SERIAL RECEIVE
H	RX-RS485B (+)	SERIAL RECEIVE
ALL OTHERS	UNUSED	



# Outline Drawing 11758/11820

(Combined Power / M&C)

Pin Assignment 11758

PIN ASSIGNMENT J3	
PIN	FUNCTION
A	GND
B	RS-485 GND
C	RX- RS-485 / RS-232
D	RX+ RS-485
E	TX- RS-485
F	TX+ RS-485 / RS-232
G	SUM_FAULT OUTPUT
H	TX_ENABLE
J	+48VDC
K	48 RTN
L	+48VDC
M	48 RTN

Pin Assignment 11820 (Swapped Rx & Tx)

PIN ASSIGNMENT J3	
PIN	FUNCTION
A	GND
B	RS-485 GND
C	TX- RS-485
D	TX+ RS-485 / RS-232
E	RX- RS-485 / RS-232
F	RX+ RS-485
G	SUM_FAULT OUTPUT
H	TX_ENABLE
J	+48VDC
K	48 RTN
L	+48VDC
M	48 RTN

