

PRELIMINARY

High Performance UB71 Series Ku-Band Block Up Converter (BUC)

General Information

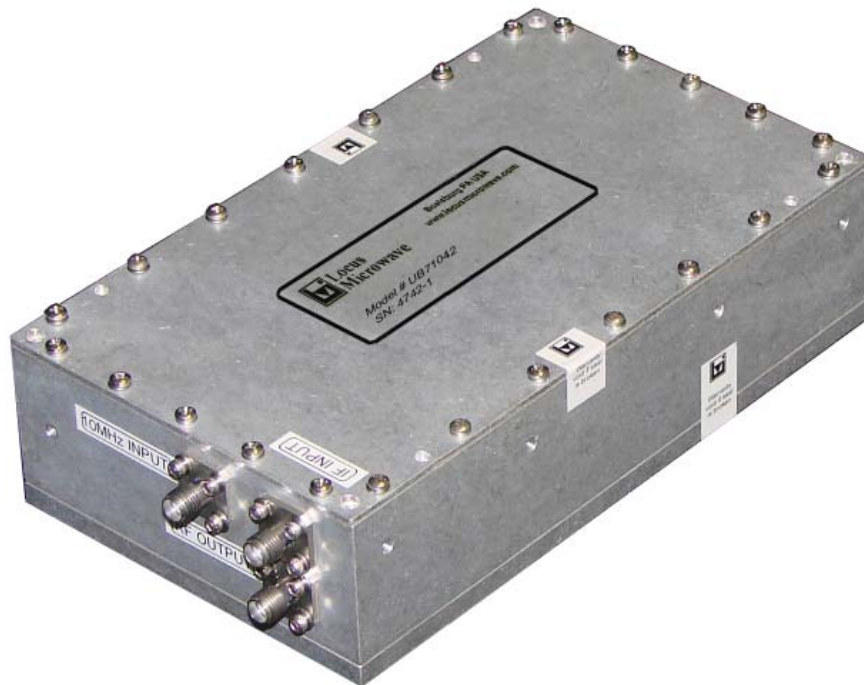
Locus Microwave, Inc., designed the UB71 BUC for use in commercial, military and military miniature SATCOM systems. Intended for convenient system integration, this compact unit can be mounted for maximum efficiency of operation in a customer supplied package.

Features:

- 14.0-14.5 or 13.75-14.5 GHz Coverage
- Light Weight (~1.5 pounds)
- Planar Package
- MIL-STD-188-164A Phase Noise
- Internal Image Filtering included
- Integral Monitor/Alarm

Options:

- Extended Band LO
- Monitor & Control I/O





	Range	Units	Notes
Electrical Specifications			
Input Frequency	950-1450	MHz	950-1700, Extended Option
Output Frequency	14.00-14.50	GHz	13.75-14.50, Extended Option
Local Oscillator Frequency	13.05	GHz	12.8 GHz, Extended Option
External Reference			
Frequency	10	MHz	
Level	0 dBm +/-5 dB		
Phase Noise (SSB)			per Mil-Std-188-164A
@ 100 Hz offset	-62 max., -64 typ.	dBc/Hz	
@ 1 kHz offset	-72 max., -74 typ.	dBc/Hz	
@ 10 kHz offset	-82 max., -86 typ.	dBc/Hz	
@ 100 kHz offset	-92 max., -99 typ.	dBc/Hz	
Gain	12 min.	dB	consult factory for other gain levels
Gain Flatness	+/-0.75 max.	dB	per full band
Gain Slope	+/-0.4 max.	dB	per 40 MHz
Stability over temperature	+/- 1.5 max.	dB	
P_{1dB}	+10.0 min.	dBm	derate 0.5 dB for 13.75-14.50 GHz
Third Order Intermodulation Distortion	-25 max.	dB	Two equal in-band signals -6 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
Input Overdrive	+0 max.	dBm	non-damaging
Spurious, Signal Related			
(@ rated P_{1dB} output)	-60 max.	dBc	within specified output band
Spurious, Signal Independent			
(@ rated P_{1dB} output)	-60 max.	dBc	outside of specified band
M&C Function	Mute, Fault		
Power Requirement			
Input Voltage	+12.0, +/- 5%	VDC	
Input Current	.75 max.	amps	
Mechanical Specifications			
Size, BUC Module	6.00 x 3.50 x 1.55	inches	L x W x H
Weight	1.5 nom.	lbs.	
Finish	passivated aluminum		
Connectors			
IF Input/RF Output	Type SMA	Female	J1/J2
+12 VDC Input, M&C I/O	DB 9-F		J3
External Reference Input	Type SMA	Female	J4 (option)
Environmental			
Operating Temperature	-40 to +60	°C	Heatsink required
Humidity	100	%	with condensation

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