

## **UB71000-041/042 Ku-Band 12/16 Watt Split Block Up Converter (BUC)/SSPA**

### **General Information**

Locus Microwave, Inc., designed the UB71000 BUC for use in commercial, military, and military miniature SATCOM systems. Intended for Manpack applications, this compact split unit can be mounted for maximum efficiency of operation in a customer supplied package with the finned SSPA being cooled by customer supplied moving air.

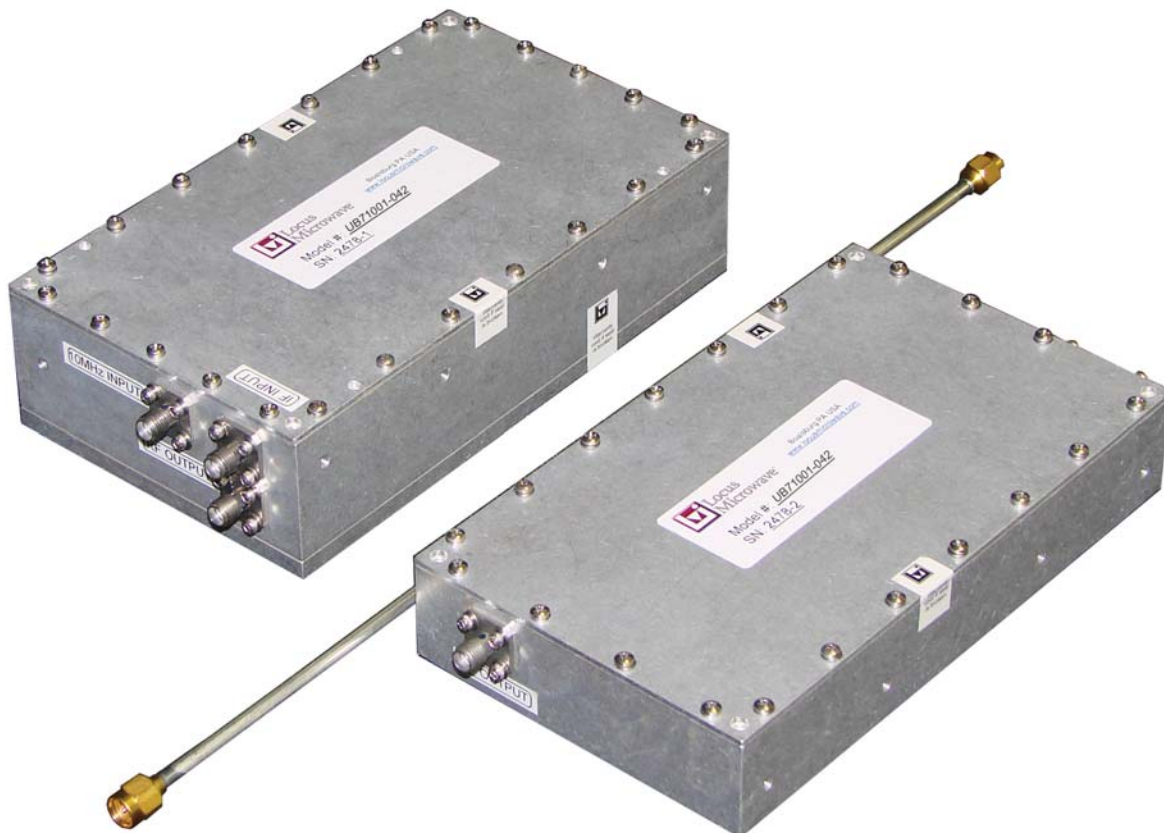
### **Typical Configuration**

### **Features:**

- Split configuration
- 14.0-14.5 or 13.75-14.5 GHz Coverage
- Light Weight (~3.5 pounds)
- Planar SSPA Package
- MIL-STD-188-164A Phase Noise
- 12/16 watt Output Power choices
- Internal image filtering included
- Integral Monitor/Alarm

### **Options:**

- Extended Band LO
- Monitor & Control I/O



	Range	Units	Notes
<b>Electrical Specifications</b>			
Input Frequency	950-1450	MHz	950-1700, Extended Option
Output Frequency (UB71001-041/-042)	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) @ 1 kHz offset	-72 max., -74 typ.	dBc/Hz	per Mil-Std-188-164A
@ 10 kHz offset	-82 max., -86 typ.	dBc/Hz	
@ 100 kHz offset	-92 max., -99 typ.	dBc/Hz	
Gain	53 min., 57 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 <sub>1dB</sub> (-041/-042)	+40.0/+41.0 min.	dBm	derate 0.5 dB for 13.75-14.50 GHz
P <sub>sat</sub> (-041/-042)	+41.0/+42.0 typ.	dBm	
Third Order Intermodulation Distortion	-25 max	dB	@ 3 dB backoff relative to rated P <sub>1dB</sub>
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	+12.0 nom.	vdc	
Input Current (-041/-042)	8.5/9.5 nom.	amps	
<b>Mechanical Specifications</b>			
Size, SSPA Module	6.00 x 3.50 x 1.06	inches	L x W x H
Size, BUC Module	6.00 x 3.50 x 1.55	inches	L x W x H
Weight	3.5 nom.	lbs.	
Finish	passivated aluminum		
Connectors IF Input/ RF Output	Type SMA	Female	SSPA & Converter Modules
+12 VDC Input, M&C I/O	DB 9-F		
External Reference Input	Type SMA	Female	
<b>Environmental</b>			
Operating Temperature	-40 to +60	°C	Heatsink & forced air cooling required
Humidity	100	%	with condensation