

## 30W Solid State BUC

CPI Solid Inside and Out

### B2UO Series

*30W Ku-band  
Solid State Block  
Upconverter —  
Environmentally sealed  
compact design for  
outdoor operation*

#### CPI-Built RF Brick Inside

With CPI-built RF brick inside and plenty of thermal margin, this SSPA is rock-solid and easy to maintain.

#### High Linearity

Excellent AM/PM, phase noise and spectral regrowth performance.

#### Simple to Operate

User-friendly microprocessor-controlled logic with serial interface. Also contains digitally controlled attenuator.

#### Extended Band Operation

Provides 25 watts of P1dB output power at the flange over the entire 13.75 to 14.50 GHz frequency range.

## Ku-Band



#### Global Applications

Perfect for Satcom on the Move, Micro Flyaway Systems, VSATs, and antenna-mount applications. Meets Electromagnetic Compatibility 2004/108/EC to satisfy worldwide requirements.

#### Worldwide Support

Backed by over three decades of satellite communications experience, and CPI's worldwide 24-hour customer support network that includes sixteen regional factory service centers.

Ku-Band

30W Solid State BUC

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## SPECIFICATIONS, 30 W Ku-Band Outdoor Solid State BUC B2UO Series

### Electrical

Frequency	13.75 to 14.50 GHz or 14.0 to 14.5 GHz
L-Band Input	950 to 1700 MHz or 950 to 1450 MHz
Output Power	30 W (44.8 dBm) Psat 25 W (44.0 dBm) P1dB
Local Oscillator Frequency	12,800 MHz or 13,050 MHz (select either)
External 10 MHz Reference	2 dBm $\pm$ 5 dB
Phase Noise, max. (for external reference)	
100 Hz	-140 dBc/Hz
1 kHz	-150 dBc/Hz
10 kHz	-155 dBc/Hz
Internal 10 MHz Reference	Auto or software select
Small Signal Gain	62 dB min.
Gain Stability	
Over temp., constant drive	$\pm$ 2.0 dB over oper. temp. range
Over 24 hours, fixed temp.	$\pm$ 0.25 dB
Gain Slope	$\pm$ 0.04 dB/MHz max.
Small Signal Gain Variation	
Across any 80 MHz band	$\pm$ 0.4 dB pk-pk max.
Across the full band	$\pm$ 1.50 dB pk-pk max.
Gain Adjustment Range	20 dB min. software controlled
Input VSWR	1.5:1 max. (50 ohms)
Output VSWR	1.5:1 max. (1.3:1 max with external harmonic filter)
Load VSWR	1.5:1 full spec. compliance
Residual AM, max.	-80 dBc > 100 kHz from carrier
Phase Noise, max.	
100 Hz	-63 dBc/Hz
1 kHz	-73 dBc/Hz
10 kHz	-83 dBc/Hz
100 kHz	-93 dBc/Hz
1 MHz	-103 dBc/Hz
AM/PM Conversion	2.5°/dB max. for a single-carrier at 2.5 dB backoff from rated P1dB
Harmonic Output	-45 dBc max. at rated P1dB (-60 dBc max with external harmonic filter)
Spurious Response at P1dB	-60 dBc max. in band
Noise Power Density	<-70 dBW/4 kHz, passband
Intermodulation Distortion	-25 dBc max. with two equal carriers and 5 MHz apart at 3.0 dB total backoff from rated P1dB
Group Delay	
(in any 36 MHz band)	0.03 ns/MHz linear max. 0.01 ns/MHz <sup>2</sup> parabolic max. 1.0 ns pk-pk ripple max.
Primary Power	48 V $\pm$ 10%
Power Consumption	260 W max.

### OPTIONS:

- Higher Gain
- Custom Platforms

### Monitor and Control

Remote Control	RF Inhibit ON/OFF Gain Control Fault Reset Reference Select
Computer/Network Interface	Serial RS-232C and 422/485
Remote Status	Transmit ON/OFF, Summary Fault, Temperature, Fault Identification, RF Inhibit (ON/OFF), Lock Detect, Web Interface Option, Forward Power Monitor

### Environmental

Ambient Temperature	-40°C to +55°C operating in direct sunlight; -40°C to +60°C operating out of direct sunlight; -50°C to +85°C non-operating
Relative Humidity	100% condensing
Altitude	12,000 ft. with standard adiabatic derating of 2°C/1000 ft., operating; 50,000 ft., non-operating
Cooling	Integral forced air
Shock and Vibration	20 g peak, 11 msec, 1/2 sine; 2.1 g <sub>rms</sub> , 5 to 500 Hz.

### Mechanical

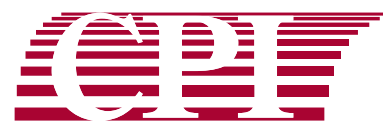
RF Output Connection	Type N Female (optional: WR-75 waveguide flange, with grooved UNC 2B 6-32 threaded holes (M4 available))
L-Band Input Connection	Type N female
Dimensions	5" x 4.1" x 10.7" (127 x 105 x 272 mm)
Weight	9 lbs (4 kg) typ.



For more detailed information, please refer to the corresponding CPI Technical Description.

**Note:** Specifications may change without notice as a result of additional data or product refinement.

Please contact CPI before using this information for system design.



Communications & Power Industries

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