30W Solid State BUC

CPI Solid Inside and Out

Ku-Band

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.

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

satcom division

811 Hansen Way
P.O. Box 51625, Palo Alto, CA 94303

tel: +1 (650) 846-3803
fax: +1 (650) 424-1744

e-mail: satcommarketing@cpii.com
www.cpii.com/satcom

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 ±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	±2.0 dB over oper. temp. range
Over 24 hours, fixed temp.	±0.25 dB
Gain Slope	±0.04 dB/MHz max.
Small Signal Gain Variation	
Across any 80 MHz band	±0.4 dB pk-pk max.
Across the full band	±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^2 parabolic max. 1.0 ns pk-pk ripple max.
Primary Power	48 V ±10%
Power Consumption	260 W max.

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_{rms}, 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.

OPTIONS:

- *Higher Gain*
- *Custom Platforms*

ISO 9001 Certificate Number: 30515

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

satcom division