Ku-Band

40 W Solid State BUC

CPI-Built RF Brick Inside

With CPI-Built RF brick inside and plenty of thermal margin, this SSPB is rock-solid and highly efficient.

High Linearity

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

Simple to Operate

User-friendly, microprocessor-controlled serial interface with basic Ethernet interface (advanced Ethernet interface optional). Also contains digitally controlled attenuator. Redundant systems available

Extended Band Operation

Depending on chosen output power option, provides 40 or 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 Directive 2004/108/EC to satisfy worldwide requirements and is CE-marked.

Worldwide Support

Backed by over 35 years of satellite communications experience, and CPI's worldwide 24-hour customer support network that includes more than 20 regional factory service centers.

Model B3UO-2H

40 watt Ku-Band BUC
for **satellite uplink applications**

OPTION

- External multiplexed 10 MHz reference
- External harmonic filter

Communications & Power Industries
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40 W Solid State BUC

Model Number	B3UO-2H	
Power Rating	50 W (47.0 dBm) Psat 40 W (46.0 dBm) P1dB	
RF Output Frequency Range (GHz)	14.00 to 14.50	13.75 to 14.50
Input Frequency Range (MHz)	950 to 1450	950 to 1700
LO Frequency (MHz)	13,050	12,800
Internal 10 MHz reference	Auto or software select	
BUC Stability with internal reference	±1 ppm within operating temperature range	
Small Signal Gain	70 dB min.	
Gain Stability Over temp, constant drive Over 24 hours, fixed temp.	 ±2.0 dB over operating temperature range ±0.25 dB	
Gain Slope	±0.04 dB/MHz max.	
Small Signal Gain Variation Across any 80 MHz band Across the full band	 ±0.85 dB pk-pk max. ±1.25 dB pk-pk max.	
Gain Adjustment Range	20 dB	
Input VSWR	1.5:1 max. (50 Ω)	
Output VSWR	1.3:1 max. (50 Ω) with external waveguide oscillator	
Load VSWR	∞:1 continuous operation, 1.5:1 full spec. compliance	
Residual AM, max.	-80 dBc at > 100 kHz from carrier	
Phase Noise, max.	-63 dBc/Hz at 100 Hz, -73 dBc/Hz at 1 kHz, -83 dBc/Hz at 10 kHz, -93 dBc/Hz at 100 kHz, -103 dBc/Hz at 1 MHz	
AM/PM Conversion	2.5°/dB max. for a single carrier at 2.5 dB backoff from rated P1dB	
Harmonic Output	-40 dBc max. at rated P1dB (-60 dB max. with external filter)	
Spurious Response at P1dB	-60 dBc max. in band	
Noise Power Density	<-150 dBW/4 kHz, receive band with external filter; <-70 dBW/4 kHz, passband	
Intermodulation Distortion	-25 dBc max. with respect to each of two equal carriers and 5 MHz apart at 3.0 dB total backoff from rated P1dB	
Group Delay	0.03 ns/MHz linear max; 0.01 ns/MHz^2 parabolic max; 1.0 ns pk-pk ripple max.	
Primary Power	24 or 48 volts DC ±20%	
Power Consumption	400 W max.	
Remote Status	Transmit ON/OFF, Fault Reset, Attenuator Setting	
Ambient Temperature	-40°C to +55°C operating in direct sunlight (to 60°C 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}, 50 to 500 Hz	
RF Output Connection	WR-75 waveguide flange, grooved, with UNC 2B 6-32 threaded holes	
L-Band Input Connection	Type N Female	
Power In and M&C Connection	Circular 32-pin MS3112E18-32F (power and M&C IP67)	
Dimensions (w x l x h)	5.25” x 13.8” x 4.5” (134 x 351 x 115 mm)	
Weight	10.9 lbs (4.96 kg) typ.	

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CE Quality Management System - ISO 9001:2008

For more detailed information, please refer to the corresponding CPI technical description if one has been published, or contact CPI. Specifications may change without notice as a result of additional data or product refinement. Please contact CPI before using this information for system design.

MKT 321C, ISSUE 9 dated DEC 2015