

8 Watt Ku-Band Outdoor High Power SSPA Block Upconverter



FEATURES

- No Shelter Required
- Low Cost Operation
- Complete Digital M&C Interface
- RS-232
- Compact Lightweight Package (<10 lb.)

The **XTS-8K-B1** High Power Solid State Block Upconverters (BUC) are a series of compact, fully integrated antenna mount units designed for low cost operation and longevity. The L-Band input interfaces to standard modems operating in the 950 - 1700 MHz range.

Intended for outdoor operation, the **XTS-8K-B1** eliminates the need for a separate shelter. The construction and light weight allows for direct mount to the antenna. This eliminates long waveguide runs and associated RF losses.

Forced air cooling is implemented in the package to allow reliable operation over extended temperature ranges. The monitor and control (M&C) interface provides a component system status.

The block upconverter operates off 18-56 VDC, an optional AC-DC supply is available.

The L-Band transmit signal and 10 MHz reference frequency are brought to the unit over a single coaxial line. Both power and M&C can be brought to the unit over a single connector.

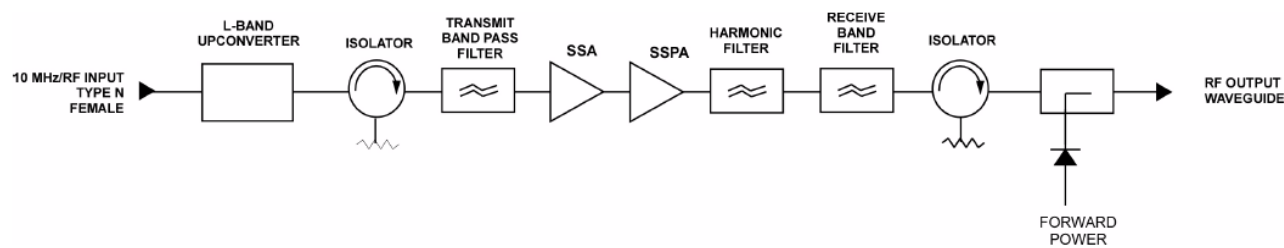


3550 Bassett Street • Santa Clara • CA 95054 • Tel: (408) 213-3000 • Fax: (408) 213-3001
www.xicomtech.com • email sales@xicomtech.com

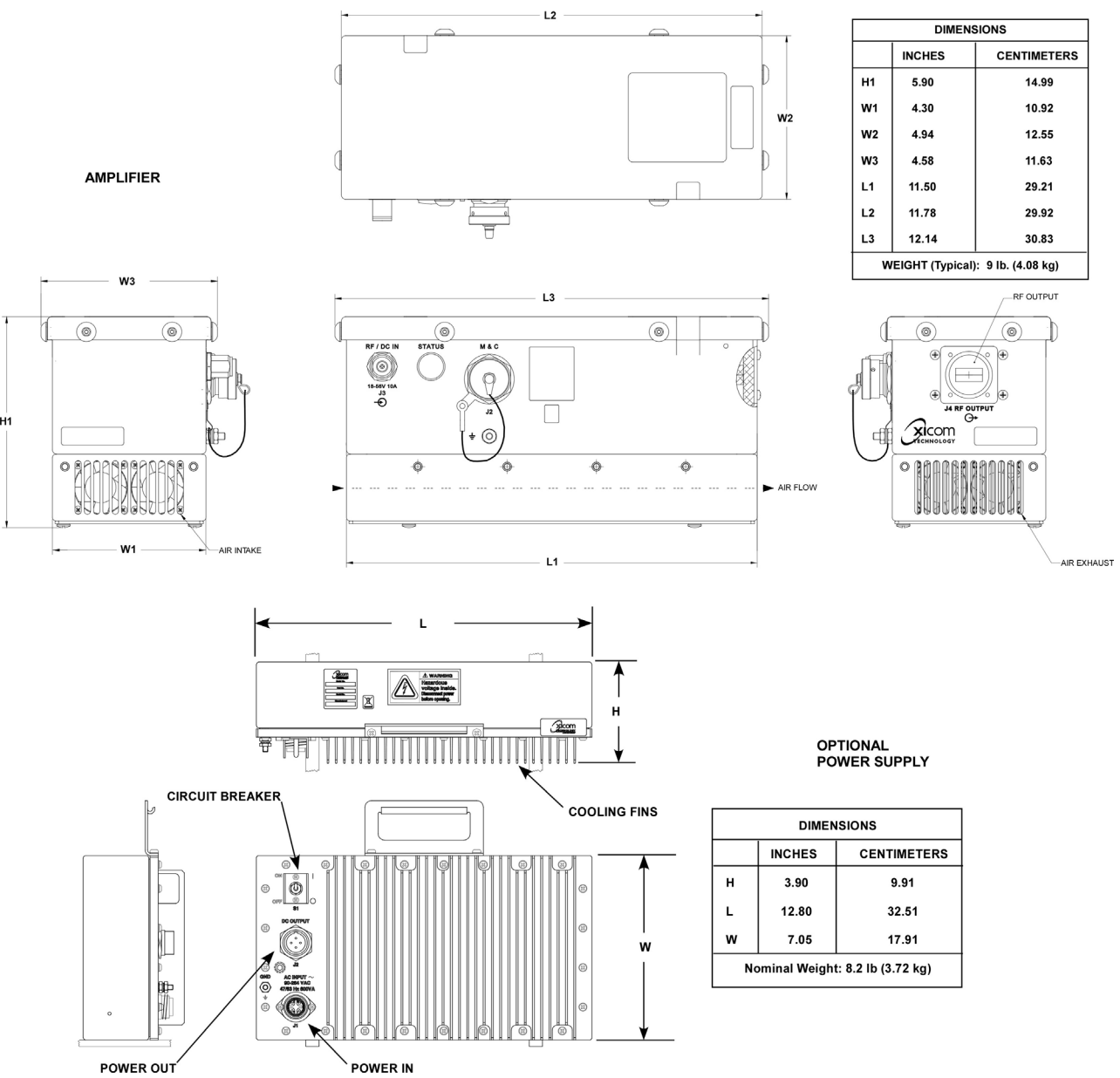
PERFORMANCE SPECIFICATION

Parameters	XTS-8K-B1	XTS-8K1-B1	XTS-8K2-B1	
FREQUENCY RANGE, extended frequency coverage available				
Output	14.0 - 14.5 GHz	13.75 - 14.5 GHz	13.75 - 14.5 GHz	
Input	950 - 1450 MHz	950 - 1700 MHz	950 - 1700 MHz	
LO Frequency	13050 MHz	12800 MHz	12800 MHz	
Input Level, w/o damage (maximum)		10 dBm		
Reference Signal Frequency		external 10 MHz		
10 MHz Power Level		2 dBm ± 5 dB		
OUTPUT POWER				
Saturated Power (typical)	40 dBm	39 dBm	13.75-14 GHz 39 dBm	14-14.5 GHz 40 dBm
Rated Power (P1dB) @ Amplifier Flange (minimum)	39 dBm	38 dBm	38 dBm	39 dBm
GAIN				
Small Signal (minimum)		55 dB		
Maximum SSG Variation Over				
Any Narrow Band		± 0.65 dB per 80 MHz		
Full Band	± 1.25 dB	± 1.5 dB	± 1.5 dB	
Slope (maximum)		± 0.04 dB/MHz		
Stability, 24 hr. (maximum)		± 0.25 dB		
Stability, Temperature (maximum)	± 2.0 dB over temperature range at any frequency			
INTERMODULATION (maximum) with two equal carriers	-25 dBc @ 3 dB total output power backoff from rated power			
HARMONIC OUTPUT (maximum)	-60 dBc			
AM/PM Conversion (maximum)	2.5 deg/dB @ 3 dB below rated output power			
NOISE POWER (maximum)				
Transmit Band		-80 dBW/4 kHz		
Receive Band		-150 dBW/4 kHz		
GROUP DELAY (maximum)				
Bandwidth		Any 80 MHz		
Linear		± 0.01 nS/MHz		
Parabolic		± 0.005 nS/MHz ²		
Ripple		0.5 nS/Pk-Pk		
RESIDUAL AM NOISE (maximum)	-60 dBc > 100 kHz from carrier			
In band discrete spurious	AC fundamental -50 dBc, sum of all spurs -47 dBc			
SPURIOUS (In band) @ Rated Power (P1db)	-60 dBc			
PHASE NOISE (maximum)	100 Hz 1 kHz 10 kHz 100 kHz 1 MHz	-63 dBc/Hz -73 dBc/Hz -83 dBc/Hz -93 dBc/Hz -103 dBc/Hz		
10 MHz Reference Phase Noise (maximum)	1 kHz 10 kHz 100 kHz	-150 dBc/Hz -160 dBc/Hz -160 dBc/Hz		
VSWR				
Input (maximum)		2.0:1		
Output (maximum)		1.3:1		

BLOCK DIAGRAM



OUTLINE DRAWING



XTS-8K-B1

PRIME POWER

18-56 VDC
100 VA Typical



ENVIRONMENT

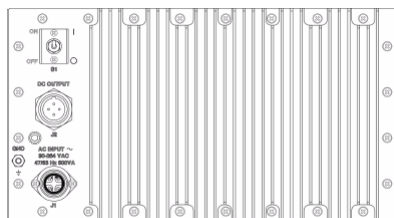
NONOPERATING TEMPERATURE RANGE	-50°C to +70°C
OPERATING TEMPERATURE RANGE	-40°C to +50°C (60°C optional) (2°C/1000 Feet Derating)
HUMIDITY	Up to 100% Condensing
ALTITUDE	12,000 Feet MSL Maximum
SHOCK AND VIBRATION	Normal Transporting
COOLING	Forced Air

INTERFACE

Type	Function	
REMOTE CONTROL	Transmit ON/OFF	Fault Reset
	Gain Controls	
REMOTE STATUS	Transmit ON/OFF	Summary Fault
	Temperature (°C)	Fault Identification
	Forward Power	Lock Detect
		Over Temperature
XICOM COMMAND SET	ASCII Commands	

OPTIONS

- Input Diplexer (combining IF and 10 MHz reference)
- External AC Power Supply, 90-264 VAC, 47-63 Hz
- Direct Feed Mounting Side/Rear



Optional External Power Supply

Headquarters

Comtech Xicom Technology, Inc.
3550 Bassett Street
Santa Clara, CA 95054
USA

Phone: +1-408-213-3000

Fax: +1-408-213-3001

email: sales@xicomtech.com

Web: www.xicomtech.com

Europe Sales Office

Comtech Xicom Technology Europe, LTD
4 Portland Business Center
Manor House Lane
Datchet
Berkshire SL3 9EG
United Kingdom

Phone: +011 44 (0) 1753 549 999

Fax: +011 44 (0) 1753 549 997

email: sales@xicomeurope.com

Web: www.xicomtech.com

Asia Sales Office

Comtech Xicom Technology
150 Cecil Street
#08-02
Singapore 069543

Phone: +011 65 6325 1953

Fax: +011 65 6325 1950

email: asiasales@xicomtech.com

Web: www.xicomtech.com