

35 Watt C-Band Outdoor High Power SSPA Block Upconverter



FEATURES

- No Shelter Required
- Low Cost Operation
- Complete Digital M&C Interface
- RS-232, RS-422, RS-485
- Optional Ethernet Interface

The **XTS-35C-B1** High Power Solid State Block Upconverter (BUC) is a compact fully integrated antenna mount unit designed for low cost operation and longevity. The L-Band input interfaces to standard modems operating in the 950 - 1525 MHz range.

Intended for outdoor operation, the **XTS-35C-B1** eliminates the need for a separate shelter. The rugged 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 from an external, weatherized power supply which provides the system DC sources. The L-Band transmit signal and 10 MHz reference frequency are brought to the unit over a single coaxial line.



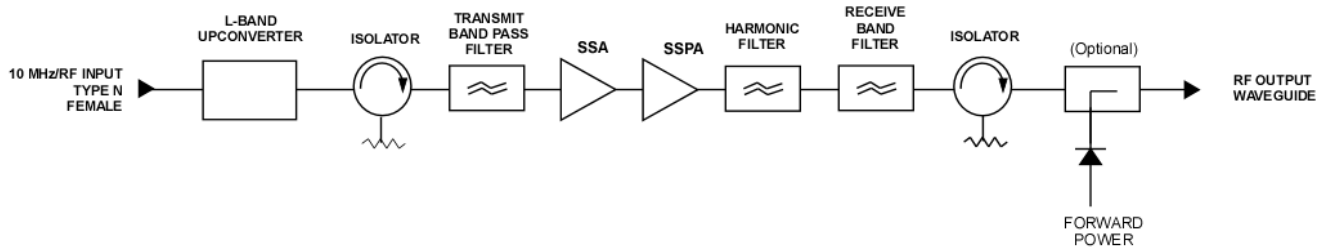
PERFORMANCE SPECIFICATION

Parameters

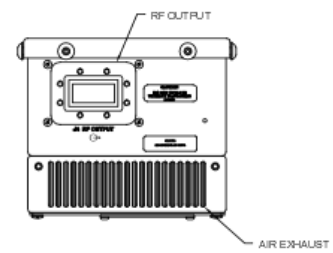
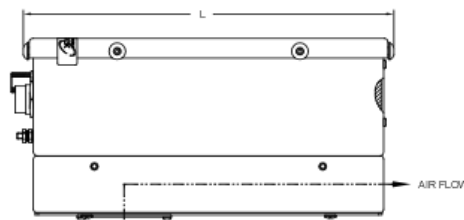
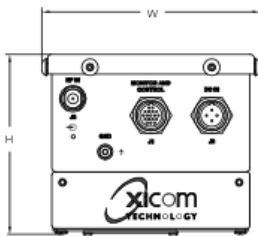
XTS-35C-B1

FREQUENCY RANGE extended, other frequency coverage available		
Output	5.85 to 6.425 GHz	
Input	950 to 1525 MHz	
LO Frequency	4900 MHz	
Input Level, w/o damage (maximum)	10 dBm	
Reference Signal Frequency	external 10 MHz	
10 MHz Power Level	2 dBm \pm 5 dB	
Reference Input Impedance	50 Ohms	
OUTPUT POWER		
Saturated Power (typical)	46.5 dBm	
Rated Power (P1dB) @ Amplifier Flange (minimum)	45.5 dBm	
GAIN		
Small Signal, min.	50 dB	
Maximum SSG Variation Over		
Any Narrow Band	\pm 0.65 dB per 40 MHz	
Full Band	\pm 1.25 dB	
Slope (maximum)	\pm 0.04 dB/MHz	
Stability, 24 hr. (maximum)	\pm 0.25 dB	
Stability, Temperature (maximum)	\pm 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 at 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 40 MHz	
Linear	\pm 0.01 nS/MHz	
Parabolic	\pm 0.005 nS/MHz ²	
Ripple	0.5 nS/Pk-Pk	
RESIDUAL AM NOISE (maximum) In band discrete spurious	-60 dBc > 100 kHz from carrier AC fundamental -50 dBc Sum of all spurs -47 dBc	
OUTPUT SPURIOUS @ RATED POWER (P1dB)	-60 dBc	
PHASE NOISE (maximum)		
	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
10 MHz REFERENCE PHASE NOISE (maximum)		
	1 kHz	-150 dBc/Hz
	10 kHz	-160 dBc/Hz
	100 kHz	-160 dBc/Hz
VSWR		
Input (maximum)	2.0:1	
Output (maximum)	1.3:1	

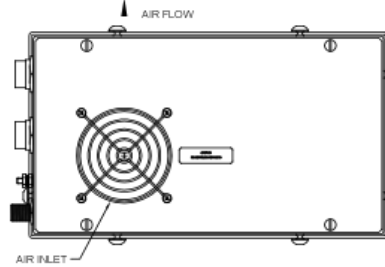
BLOCK DIAGRAM



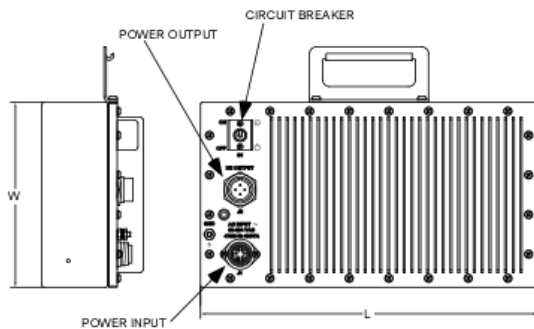
OUTLINE DRAWING



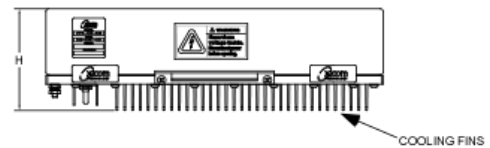
DIMENSIONS (MAX)		
	INCHES	CENTIMETERS
L	12.17	30.91
H	5.91	15.01
W	7.17	18.21
WEIGHT (Typical)		
	15 lb	6.8 kg
OUTPUT = CPR-137G		



AMPLIFIER



POWER SUPPLY (Optional)



DIMENSIONS		
	INCHES	CENTIMETERS
H	3.9	9.91
L	12.8	35.5
W	7.05	17.91

Nominal Weight = 8.2 lbs (3.72 kg)

PRIME POWER

22 to 56 VDC
 90 to 264 VAC, 47 to 63 Hz with External Supply
 325 VA Typical



ENVIRONMENT

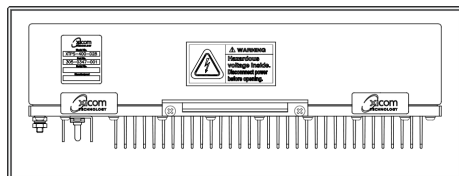
NONOPERATING TEMPERATURE RANGE	-50°C to +70°C
OPERATING TEMPERATURE RANGE	-40°C to +50°C (2°C/1000 Feet Derating)
HUMIDITY	Up to 100% Condensing
ALTITUDE	12,000 Feet MSL Max.
SHOCK AND VIBRATION	Normal Transportation
COOLING	Forced Air

INTERFACE

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

OPTIONS

- External Input Diplexer (combining IF and 10 MHz reference)
- Detected RF Transmit Power
- External AC Power Supply, 90 to 264 VAC, 47 to 63 Hz
- Ethernet Interface



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