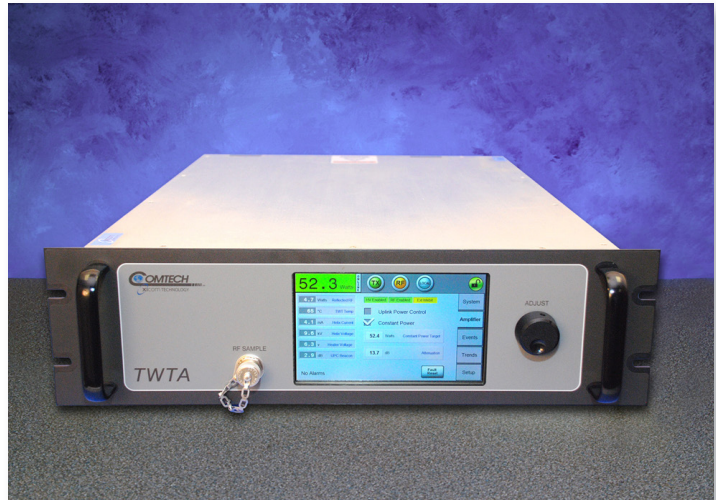


400 Watt Ku-Band Rack Mount High Power Amplifier with Integral Block Upconverter



FEATURES

- *13.75 to 14.5 GHz*
- *Touch Screen Interface*
- *Built-in Redundancy Controller*
- *High Efficiency*
- *Includes Integral Block Upconverter*

The **XTRT-400K-B1** is a highly efficient rack mountable traveling wave tube amplifier (TWTA) designed for fixed and mobile uplink applications.

The unit includes RF gain control, a solid state pre-amplifier, RF filters, cooling, and monitoring and control (M&C) systems. Rack space is conserved because the amplifier occupies only 3 rack units (5¼ inches) of a standard 19-inch rack cabinet. Nominal weight is 56 pounds.

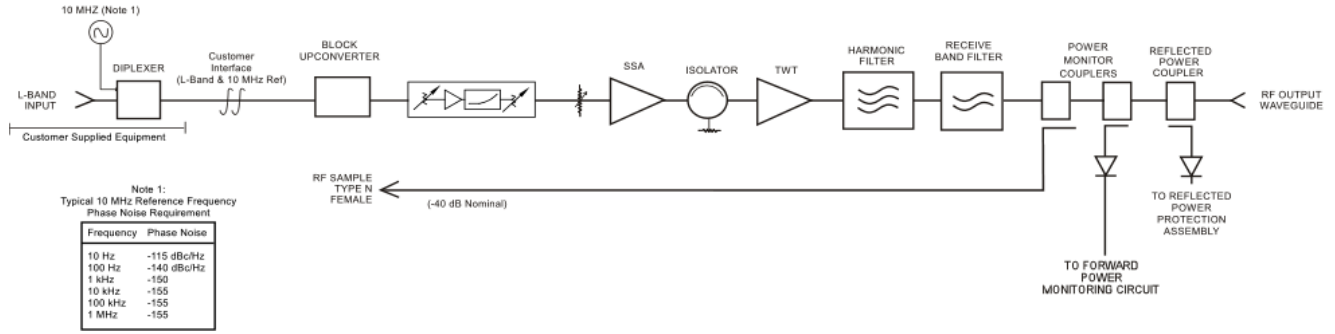
The unit features a menu driven front panel display and RS-232/422/485 serial port interfaces for complete computer control. RF, traveling wave tube, and default parameters are easily monitored on the 4-line front panel display. Gain control is provided via the front panel or through the serial interface.



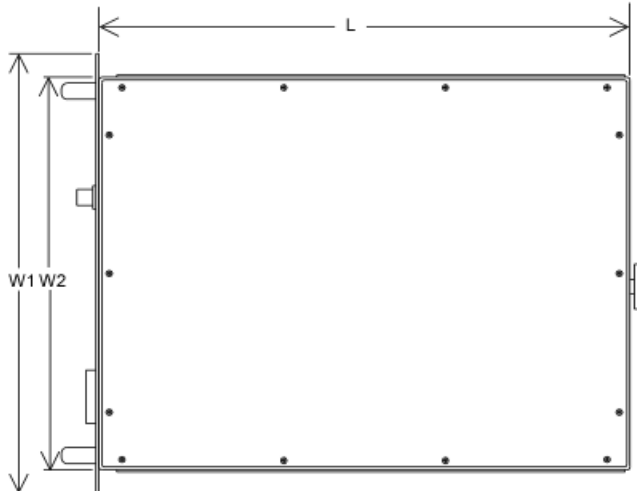
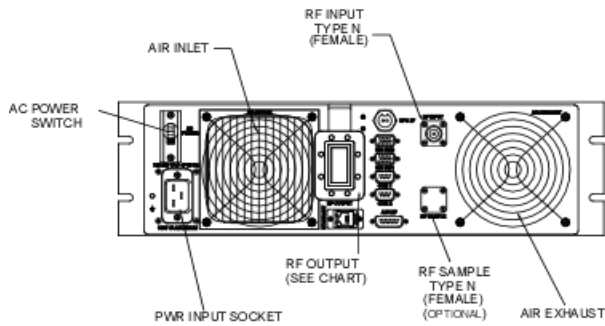
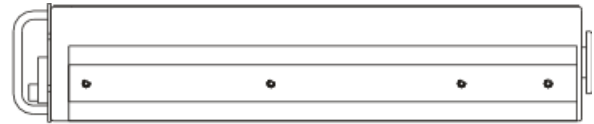
PERFORMANCE SPECIFICATION

Parameters	XTRT-400K-B1
FREQUENCY RANGE (extended frequency coverage available)	13.75 to 14.5 GHz
OUTPUT POWER	
Traveling Wave Tube	400 W
Rated Power @ Amplifier Flange (minimum)	350 W
Input	950 to 1700 MHz
LO Frequency	12800 MHz
GAIN	
Large Signal (minimum)	67 dB
Small Signal (minimum)	72 dB
Attenuator Range (continuous)	25 dB
Maximum SSG Variation Over:	
Any Narrow Band	1.0 dB per 80 MHz
Full Band	± 2.0 dB
Slope (maximum)	± 0.04 dB/MHz
Stability, 24 hr. (maximum)	± 0.25 dB
Stability, Temperature (maximum)	± 1.0 dB over temperature range at any frequency
INTERMODULATION (maximum) with two equal carriers	-18 dBc @ 4 dB total output power backoff from rated power (-26 dBc with optional linearizer)
HARMONIC OUTPUT (maximum)	-60 dBc
AM/PM CONVERSION (maximum)	2.5 deg/dB at 6 dB below rated power
NOISE POWER (maximum)	
Transmit Band	-70 dBW/4 kHz
Receive Band	-150 dBW/4 kHz
	10.95 to 12.75 GHz
GROUP DELAY (maximum)	
Bandwidth	Any 80 MHz
Linear	0.01 nS/MHz
Parabolic	0.005 nS/MH ²
Ripple	0.5 nS/Pk-Pk
RESIDUAL AM NOISE (maximum)	-60 dBc > 100 kHz from carrier AC fundamental -50 dBc 0.5 ns Pk-Pk
PHASE NOISE (maximum)	Per IESS phase noise profile AC fundamental -50 dBc Sum of all spurs -47 dBc
VSWR	
Input (maximum)	1.5:1
Output (maximum)	1.3:1

BLOCK DIAGRAM



OUTLINE DRAWING



RF OUTPUT (WAVEGUIDE FLANGE)
Ku-BAND-WR-75

	DIMENSIONS	
	inches	centimeters
W1	17.00	43.18
W2	19.00	48.26
L	23.00	58.42
H	5.22	13.26

Nominal Weight = 56 lbs (25.4 kg)

PRIME POWER

90 to 264 VAC
 47 to 63 Hz, Single Phase
 1400 VA Max , 1300 VA typical
 0.95 Minimum Prime Power Factor



ENVIRONMENT

NONOPERATING TEMPERATURE RANGE	-50°C to +70°C
OPERATING TEMPERATURE RANGE	-10°C to +50°C (2°C/1000 Feet Derating)
HUMIDITY	Up to 95% Noncondensing
ALTITUDE	10,000 Feet MSL (maximum)
SHOCK AND VIBRATION	Normal Transportation
COOLING	Forced Air

INTERFACE

	Type	Function	
CONTROLS	LOCAL	Local/Remote	AC Power On/OFF
	LOCAL AND REMOTE	Gain	High Voltage ON/OFF
		Min/Max Power Alarm/Fault	Audio Alarm ON/OFF
		Reflected Power Alarm/Fault	Units (Watts, dBm, dBW)
		Fault Reset	Lamp Test
		Heater Standby ON/OFF	System
STATUS	FRONT PANEL LCD	Standby	Power
		Local	Remote
		Summary Fault	High Voltage ON/OFF
		Heater Time Out (FTD)	Heater Standby
		Power Out	Beam Hours
		Reflected Power	Helix Current
		TWT Temperature	Helix Voltage
		Heater Hours	Faults:
		Uplink Power (option)	High VSWR
		Event Log	High Voltage
	Trend Log	Helix Current	
System Status	TWT Temperature		
		10MHz lock	
	DRY FORM-C RELAY CONTACTS (2)	Summary Fault	
COMPUTER SERIAL PORT	HARDWARE INTERFACE	Two Ports: RS-232 & RS-422/RS-485 Ethernet T10/100	
	XICOM COMMAND SET	ASCII Commands	
	RF SAMPLE PORT COUPLING	-37 dB Nominal	

OPTIONS

- Extended Frequency Coverage
- 1:1, 1:2, 1:N Redundancy
- Integral 10 MHz Reference
- Integrated Linearizers

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

