



XTS-60K

Ku-Band Outdoor Solid State Power Amplifiers



- 60 Watt
- No Shelter Required
- Short Waveguide Run
- Low Cost Installation
- Removable Power Supply
- Complete Digital M&C Interface
- RS-232, RS-422, RS-485
- Built-in Redundancy Control
 - 1:1
 - 1:1 with load switching
 - 1+1 Soft Fail
- 3 Year Warranty

The XTS-60K high power solid state power amplifier is a compact, fully integrated antenna-mount unit designed for low cost operation and longevity.

Intended for outdoor operation, the XTS-60K eliminates the need for a separate amplifier shelter. In addition, the distance between the amplifier and the antenna feed can be shorter, thus eliminating long waveguide runs and associated RF losses.

RF Filters, cooling, and monitor and control (M&C) systems are all self-contained within the package.

A high frequency resonant conversion power supply is used that accepts a wide range of prime power (90 to 264 VAC).

A remote external controller is available to operate the SSPA from a user-selected location.

Depending upon user requirements, these high power amplifiers can be configured for

single thread, redundant, or phase combined configurations.

Mounting brackets are supplied to mount the high power amplifier to most popular antennas.



Field Replaceable Power Supply

PERFORMANCE SPECIFICATIONS

Parameter	XTS-60K
FREQUENCY RANGE standard other frequency coverage available	14.0 - 14.5 GHz
OUTPUT POWER	
Saturated Power (Typical)	47.8 dBm
Rated Power(P1dB) @ Amplifier Flange	46.8 dBm
GAIN	
Small Signal, minimum	60 dB, gain control set for maximum gain
Small Signal, maximum	70 dB, gain control set for maximum gain
Gain Flatness, maximum	2.0 dB
Maximum SSG Variation Over:	0.6 dB per 80 MHz
Slope, maximum	± 0.04 dB/MHz
Stability, 24 Hr maximum	± 0.25 dB
Stability, Temperature	± 2.0 dB maximum over temperature range at any frequency
GAIN CONTROL	20 dB
INTERMODULATION with two equal signals	- 25 dBc maximum with two equal carriers at 3 dB total power backoff from rated output
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 10.95 to 12.75 GHz
GROUP DELAY, maximum	
Bandwidth	Any 80 MHz
Linear	± 0.03 nS/MHz
Parabolic	± 0.003 nS/MHz ²
Ripple	1 nS/Pk-Pk
RESIDUAL AM NOISE, maximum	- 50 dBc to 10 kHz - 20 (1.5 + logf) dBc 10 to 500 kHz - 85 dBc above 500 kHz
PHASE NOISE, maximum	10 dB below IESS phase noise profile
VSWR	
Input, maximum	1.2:1
Output, maximum	1.3:1

PRIME

Working Range 90 MIN. - 264 MAX., VAC
47 to 63 Hz, single phase
600 VA Typical
0.95 Minimum Prime Power Factor



OPTIONS

- Built-in L-Band Block Upconverter
Frequencies Available:
14.0 - 14.5 GHz
- Option B1

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 maximum
SHOCK AND VIBRATION	Normal Transportation
COOLING	Forced Air

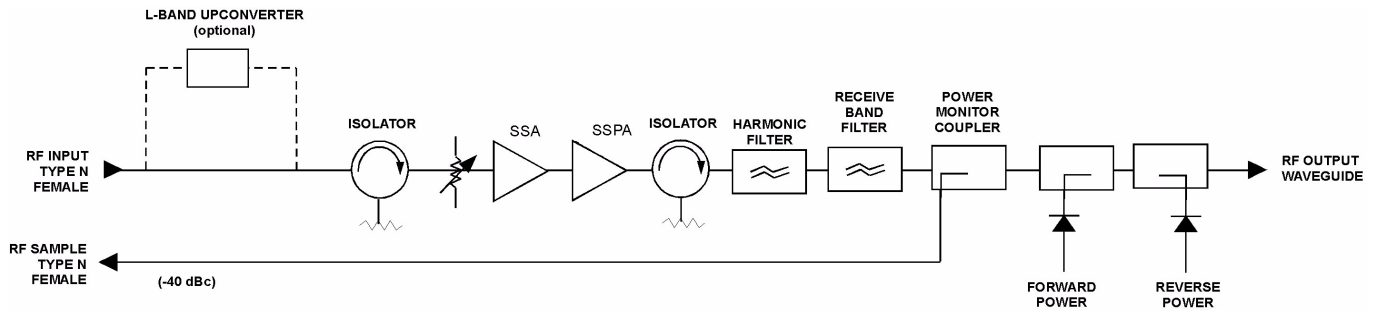
INTERFACE

TYPE	FUNCTION	
LOCAL CONTROL	Prime Power ON/OFF	Local/Remote
	Power Supply ON/OFF	Transmit ON/OFF
LOCAL STATUS	Tri-Color LED:	
	Fault: Red	Standby: Amber
	Transmit ON: Green	
REMOTE CONTROL	Transmit ON/OFF	RF Inhibit
	RF Attenuation	Fault Reset
	Summary Fault	Constant Power
REMOTE STATUS	Transmit ON	Transmit/Standby Hours
	RF Output Power	Fault Identification
	Reflected Power	Temperature
Form C Dry Contact Closure	Summary Fault	
Xicom Command Set	ASCII Commands	
RF MONITOR PORT	-40 dB Coupling Value (Nominal)	

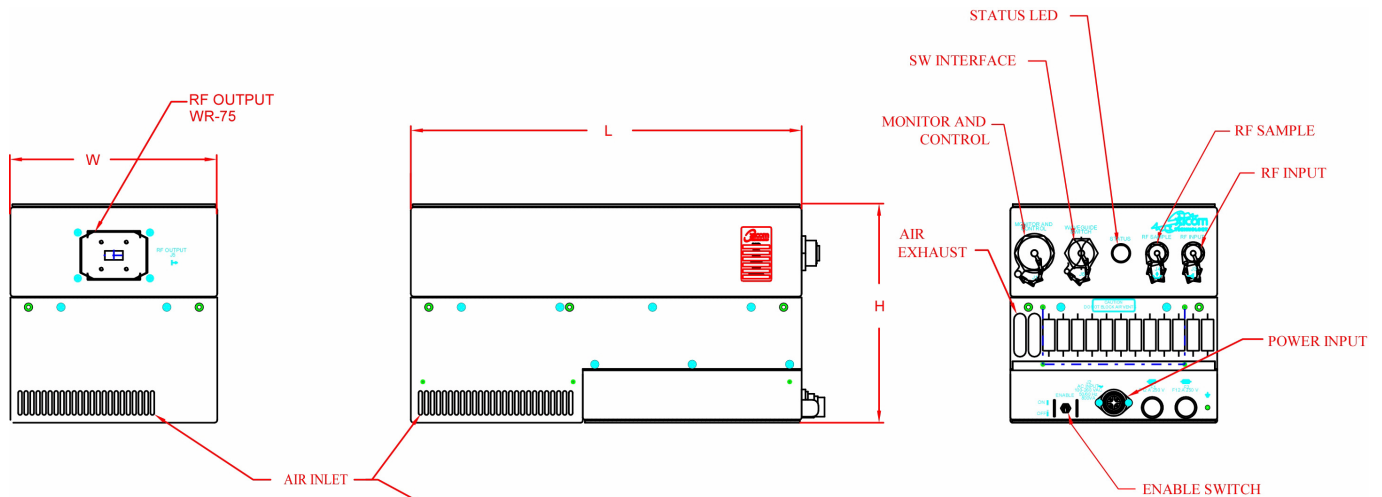
XTS-60K High Power Solid State Amplifiers



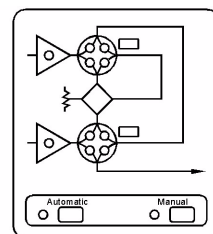
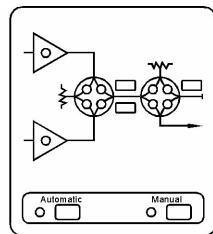
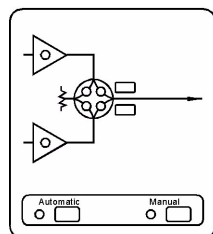
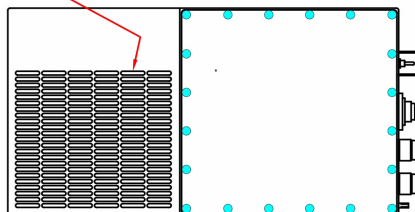
Block Diagram



Outline Drawing



DIMENSIONS (MAX)		
	INCHES	CENTIMETERS
L	16.25	41.3
H	9.10	23.1
W	8.60	21.8
WEIGHT (TYPICAL)		
	40 lbs	18.14 kg



Redundant 1:1

Redundant 1:1 with Load Switching

1+1 Soft Fail