Klystron Power Amplifiers DBS-Band

- Compact 1/2 Cabinet Height
- Large Touch Screen Graphical Display
- Parameter Trend Recording
- Power Save Mode
- Power Supply Redundancy
- RS-232/485 Serial Interfaces
- Ethernet Interface
- Built-In 1:n Controller

Xicom Technology is proud to introduce its latest KPA products, the XTKD-1400DBS and XTKD-2000DBS, compact Klystron Power Amplifiers (KPA) that occupy half the standard rack space and come loaded with practical solutions and cost saving features.

· Xicom designed a color touch-screen display with an easy to use graphical interface that allows users to easily monitor all KPA parameters in both real-time and as a trend plot over short or long periods. Data is also available via an RS-232/485 interface and via an Ethernet port.

· Xicom's RF deck includes a power saver mode and variable speed blower. The XTKD-1400DBS and XTKD-2000DBS conveniently incorporate industry standard tubes, available from multiple suppliers, thus minimizing tube replacement costs. Also, these tubes are available with optional digital fast-tuners that allow <1 second local or remote re-tuning.

· Xicom provides built-in power supply redundancy to optimize reliability. The XTKD-1400DBS and XTKD-2000DBS include three 5kW-power supplies, any two of which will operate the amplifier normally. Xicom power supplies been field-proven over hundreds of units.

· Xicom even included a built-in 1:n redundant controller. Waveguide switch orientation is both graphically displayed and settable on the color digital panel, thereby eliminating the need for a separate controller. Remote switching is also available.

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PERFORMANCE SPECIFICATIONS

Parameter		XTKD-1400DBS	XTKD-2000DBS
FREQUENCY RANGE	standard	17.3 - 18.1 GHz	17.3 - 18.1 GHz
	optional	17.3 - 18.4 GHz	17.3 - 18.4 GHz
OUTPUT POWER			
Klystron		1700W	2400W
Rated Power @ Amplifier Flange		1400W	2000W
PRESET CHANNELS		8, 12	8, 12
BANDWIDTH		50 / 80 MHz	50 / 80 MHz
GAIN			
at rated power		75 dB	
variation, max (at rated power)		0.40 dB Pk-Pk over Fo ± 30 MHz	
slope, maximum (at rated power)		0.04/dB MHz over Fo ± 30 MHz	
Stability, 24 Hr maximum		± .25 dB/24 hrs at constant drive/temperature	
Stability, Temperature		± 2.5 dB at constant drive	
GAIN ADJUSTMENT		0 - 30dB, 0.1 dB Steps	
INTERMODULATION w/2 = signals maximum, at 7 dB total output backoff		-26dBc	-27dBc
HARMONIC OUTPUT, maximum		-70 dBc	
AM TO PM CONVERSION			
maximum, at rated power		3.0º/dB	4.0º/dB
NOISE POWER, maximum			
Transmit Band		-65 dBw/4 KHz	
Receive Band		-150 dBw/4 KHz (10.95 - 12.20 GHz) -110 dBw/4 KHz (16.0 - 40.0 GHz) excludes passband	
GROUP DELAY, maximum			
Bandwidth		Any 80 MHz	
Linear		0.10 nS/MHz	
Parabolic		0.02 nS/MHz squared	
Ripple		2.0 nS/PK-PK	
RESIDUAL AM NOISE, maximum		-50 dBc up to 10 KHz -20 (1.5 + Log f) dBc 10 to 500 KHz -85 dBc above 500 KHz	
PHASE NOISE, maximum		10 dB below IESS-308 phase noise profile	
VSWR			
Input, maximum		1.3:1	
Output, maximum		1.3:1	
Load, continuous		2.0:1	
Load, shutdown		> 2.0:1	

PRIME POWER

190-260 VAC, L-L, Delta
50-60 Hz, Three Phase, Three Wire, Plus Ground
.95 minimum power factor
180% max in rush current
XTK-2000DBS: 11500 VA max
XTK-1400DBS: 11300 VA max

CE COMPLIANT

OPTIONS

330-450 VAC, L-L, Wye
50-60 Hz, Three Phase, Four Wire + Ground
Redundant 1:1 Configuration in One Cabinet
Phase Combined & 1:N Configurations
Fast Tuner (< 1 second)

ENVIRONMENT

NON-OPERATING TEMPERATURE RANGE	-50° C to +70° C
OPERATING TEMPERATURE RANGE	-10° C to +50° C
ALTITUDE	10,000 feet MSL maximum
SHOCK AND VIBRATION	Normal Transportation
RELATIVE HUMIDITY	95% Non-Condensing

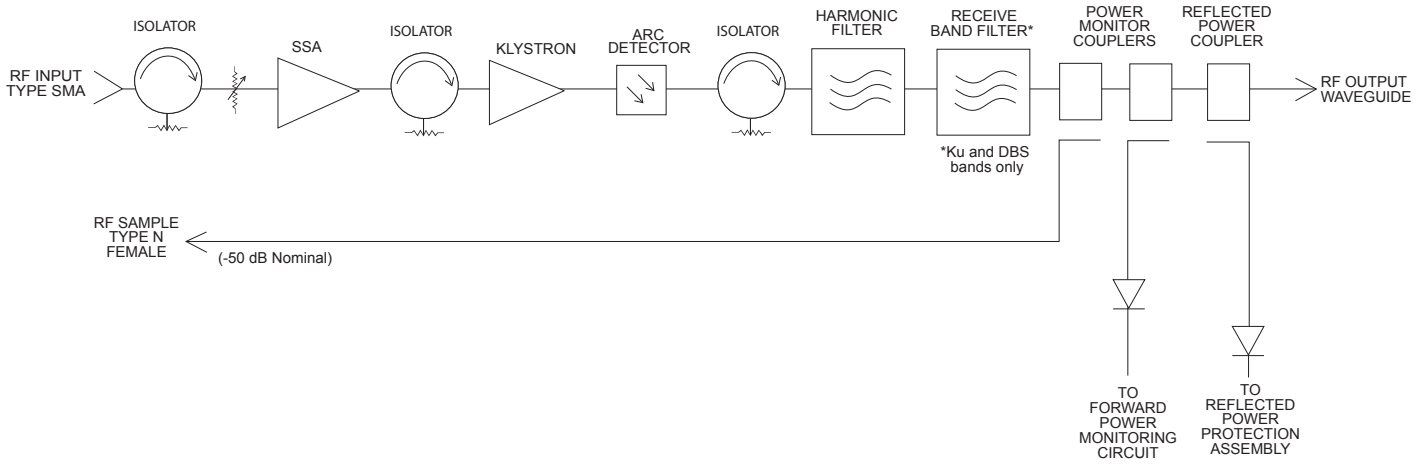
INTERFACE

TYPE AND MODE		FUNCTION	
CONTROLS	Local	Local/Remote	Emergency Stop
AC Power ON		Channel Selector	
	Local and Remote	Heater Standby ON/OFF	Channel Selection (Optional)
		Fault Simulation Test	Beam Voltage Adjust
		Audio Alarm ON/OFF	HV ON/OFF
		Fault Reset	Units (Watts, dBm, dBw)
		Attenuator Setting	RF Inhibit
		Switch Setting*	Auto Power Save
			Min/Max Power
STATUS		HV ON	Heater Time Out (FTD)
		Standby	Local/Remote
		Heater Standby	Min/Max Power
		Power Out	Beam Voltage
		Attenuator Setting	Channel Selected
		Body Current	Faults:
		Beam Current	Summary
		Heater Voltage	High VSWR
		Heater Current	Body Current
		Heater Hours	High/Low Voltage
		Beam Hours	Klystron Temperature
		Blower Pressure	P.S. Temperature
		Fan Speed	Blower
		Reflected Power	Low Line
		Klystron Temperature	Waveguide Arc
		Power Supply Temp	Interlock
		Switch Setting*	Power Supply A/B/C
	Dry Form-C Relay Contacts (Two)	Summary Fault	
COMPUTER	Hardware Interface	RS-232, RS-422/RS-485, Ethernet	
SERIAL PORT	Xicom Command Set	ASCII Commands	
RF SAMPLE PORT	COUPLING	-50 dB Nominal	

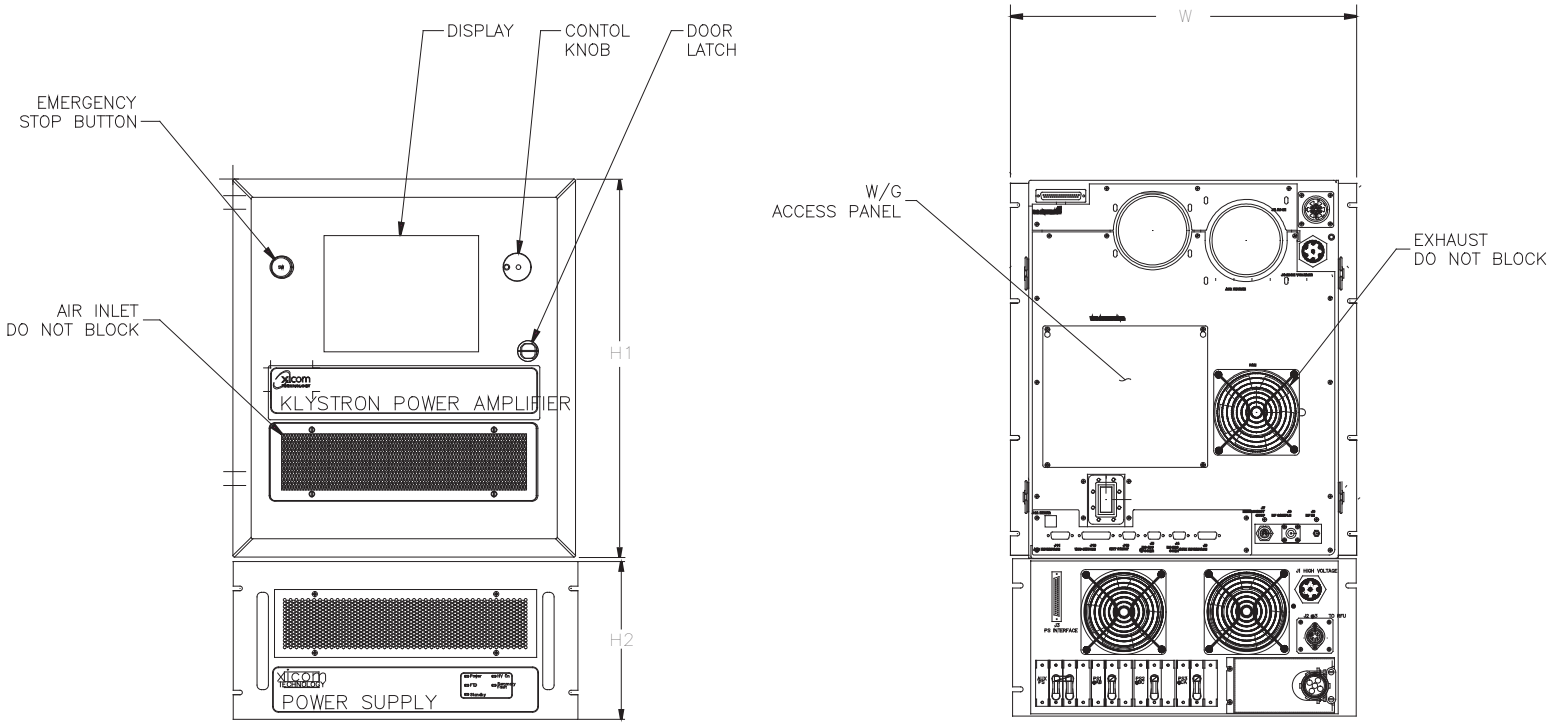
* For 1:n systems

XICOM TECHNOLOGY

Block Diagram



Outline Drawing



DIMENSIONS

	INCHES	CENTIMETERS
W	19.00	48.26
H1	21.00	53.34
H2	8.72	22.15

Nominal Weight = 300 lbs. (136.1 kg)

RF OUTPUT

DBS-band WR-62

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