500 Watt DBS-Band Antenna Mount Amplifiers with Block Upconverter



FEATURES

- Rugged 70 lb. antenna mount package
- Extended frequency available
- Complete RS-232/422/ 485 interface
- L-band input

The XTD-500DBS-B1 are compact self-contained, antenna mountable power amplifiers. Its design eliminates the need for an amplifier shelter as well as a long waveguide run between the amplifier and the antenna feed horn. RF harmonic filters, cooling, and monitoring & control systems are all self-contained within the HPA. These features provide high reliability, low maintenance costs, and low replacement costs.

The XTD-500DBS-B1 incorporates power factor correction which minimizes line current distortion and reduces the required Volt-Amps. The combination of power factor correction and high efficiency TWTs reduces input Volt-Amps by 45% when compared to equivalent amplifiers. A high frequency resonant conversion power supply that is used accepts a wide range of prime power (180 to 260 VAC). The automatic features of the power supply include quick recovery from prime power outages and multiple helix fault resets (three fault cycles). A complete serial monitoring and control system is built into the unit.

The XTD-500DBS-P1 may be configured for single thread, redundant or phase-combined operation. An optional linearizer is available to allow increased transmit power while meeting spectral regrowth requirements. A remote external controller is available to operate the HPA from user selected location. Mounting brackets can be supplied to mount the HPA to most popular antennas.



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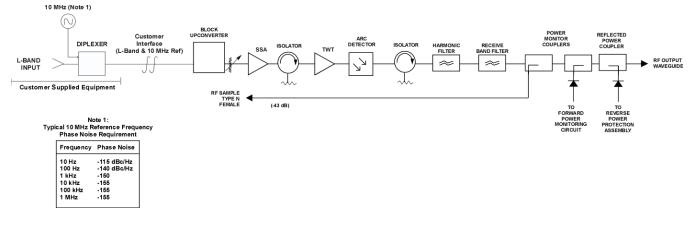
PERFORMANCE SPECIFICATION

FREOUENCY FANCE 17.3 to 18.1 GHz 17.3 to 18.4 GHz Input 950 to 1750 MHz 950 to 2050 MHz Input 950 to 1750 MHz 950 to 2050 MHz Input Level W/o Damage (maximum) 10 dBm 10 Reference Signal external 10 MHz reference 10 QUTPUT POWER 500 W 10 Taveling Wave Tube 500 W 10 Small Signal (minimum) 65 dB 10 GAIN 1.3 dB per 80 MHz 10 Large Signal (minimum) 70 dB 1.3 dB per 80 MHz Artenuator Range (continuous) 25 dB 10 Stability, Z4 hr, (maximum) ± 0.04 dB/MHz 10 Ary Narrow Band 1.3 dB per 80 MHz 12 Stability, Z4 hr, (maximum) ± 0.04 dB/MHz 10 Stability, Z4 hr, (maximum) ± 0.04 dB/MHz 10 Stability, Z4 hr, (maximum) ± 0.04 dB maximum over temperature range at any frequence 10 NUTERMODULATION (maximum) ± 0.04 dB maximum over temperature range at any frequence 10 NUTERMODULATION (maximum) ± 0.04 dB total output power back	Parameters	XTD-500DBS-B1	XTD-500DBS1-B1
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Output (maximum) 1.3:1	Input (maximum)	1.8:1	
	Output (maximum)	1.3:1	

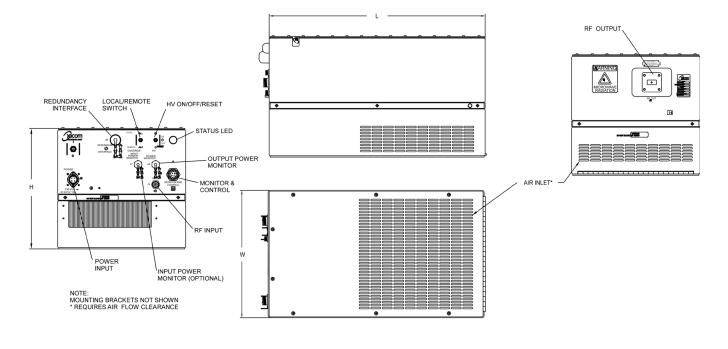


XTD-500DBS-B1





OUTLINE DRAWING



	DIMENSIONS		
	INCHES	CENTIMETERS	
L	21.50	54.61	
н	12.13	30.81	
w	12.75	32.39	

RF OUTPUT = WR-62

Nominal Weight = 75 lbs (34.02 kg)



PRIME POWER

180 to 260 VAC 47 to 63 Hz, Single Phase 2300 VA (maximum) 0.95 Minimum Prime Power Factor

ENVIRONMENT

NONOPERATING TEMPERATURE RANGE OPERATING TEMPERATURE RANGE HUMIDITY ALTITUDE SHOCK AND VIBRATION COOLING

-50°C to +70°C -40°C to +50°C Up to 100% Condensing 10,000 Feet MSL (maximum) Normal Transportation Forced Air

INTERFACE

Туре	Function		
LOCAL CONTROL	Prime Power ON/OFF	Local/Remote	
	Power Supply ON/OFF	HV ON/OFF	
LOCAL STATUS	Tri-Color LED:		
	Fault: Red	Standby: Continuous Amber	
	HV ON: Green	FTD: Flashing Amber	
REMOTE CONTROL	HV ON/OFF	RF Inhibit (HV OFF)	
	RF Attenuation (w/preamp)	Fault Reset	
	Heater Standby		
REMOTE STATUS	HV ON	Heater/Beam Hours	
	RF Output Power	Fault Identification	
	Reflected Power	TWT Temperature	
	Filament Time Delay	Helix Current	
	Helix Voltage		
FORM C DRY CONTACT CLOSURE	Summary Fault		
RF MONITOR PORT	-43 dB Coupling Value (approx.)		

OPTIONS

- Extended Frequency Coverage
- Linearizer
- Parallel (Discrete) Interface
- Remote External Controller
- 1:1, 1:2, 1:N Redundancy

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Note: Technical specifications are subject to change without notice. Please contact Xicom Technology before using this information for system design.