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Wideband Power Amplifiers

Model 7500

75 Watts - DC to 1MHz

Ü CE *Compliant*

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OUTPUT (Specifications apply using a 200 ohm resistive load)
Frequency Range: dc to 1MHz.
Power: 75 watts, dc to 100kHz; 40 watts at 500kHz; 10 watts at 1MHz.
Voltage: 125V rms, dc to 100kHz; 90V rms at 500kHz; 45V rms at 1MHz.
Current: 625mA rms, dc to 100kHz; 450mA rms at 500kHz; 225mA rms at 1MHz.
Frequency Response: Flat to within ±0.1dB, dc to 10kHz; ±1.5dB to 500kHz; –3dB at approximately 1MHz.
Harmonic Distortion (at 75 watts into 200 ohms): <0.1% to 10kHz, approximately 1.5% at 100kHz.
Voltage Gain: Fixed, 20dB ±0.2dB (X10) or 40dB ±0.2dB (X100), or continuously variable 0dB to 40dB.
Gain Stability: <±0.001dB change for a 10% change in line voltage.
Dynamic Range: >85dB.
Phase Shift: 0° ±1° from dc to 10kHz. Phase shift increases linearly to 100° (lagging) at 1MHz.
Squarewave Response (at 100Vp-p into 200 ohms):
Rise Time: <600ns.
Overshoot: <5%. Zero droop in dc coupled mode.
Regulation: No load to 200 ohms, <0.5%, dc to 10kHz.
Hum and Noise (1MHz bandwidth): <4mV rms with input shorted; <10mV rms with input open and shielded.
Coupling: Direct.
DC Level: Nominal zero volts.
DC Offset (no load): Variable, 0V to ±200V. Combined ac plus dc offset limited to ±200V.
DC Level Stability (After 30 minute warm-up):
Vs. Line (short term): <1mV for 10% line voltage change.

Vs. Time: <2mV/8hrs.
Vs. Temperature: < 5mV/° C.
Internal Impedance: <1 ohm, dc to 10kHz; <10 ohms at 100kHz; <75 ohms at 1MHz.

INPUT

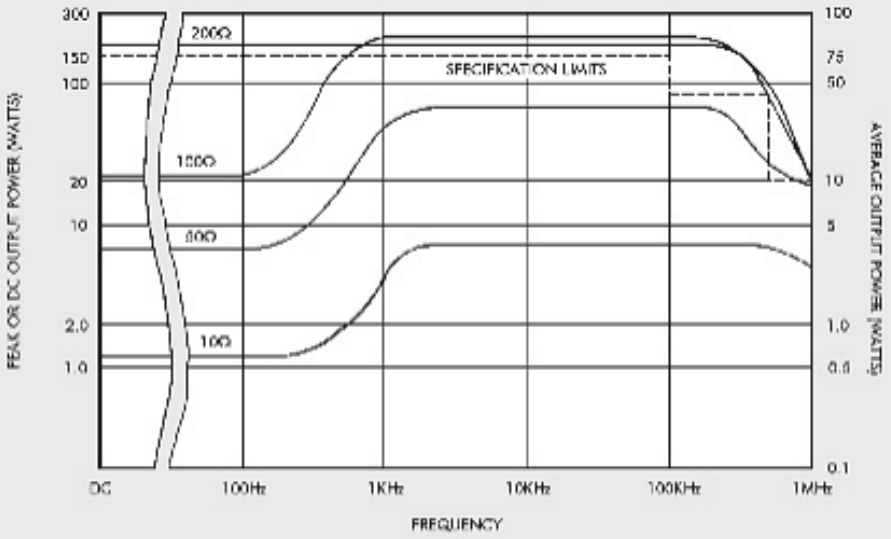
Maximum Voltage: ±20V peak in the variable and the X100 GAIN positions; ±200V peak in the X10 GAIN position.
Maximum DC Component: ±200V (except VARIABLE GAIN position) in the ac position of the INPUT COUPLING switch.
Sensitivity: 1.5V rms at maximum gain setting.
Coupling: Either direct (dc), or capacitive (ac) with low frequency cutoff at approximately 1Hz.
Impedance:
Fixed Gain Modes: 1M ohm in parallel with 85pF.
Variable Gain Mode: 5k ohms.

GENERAL

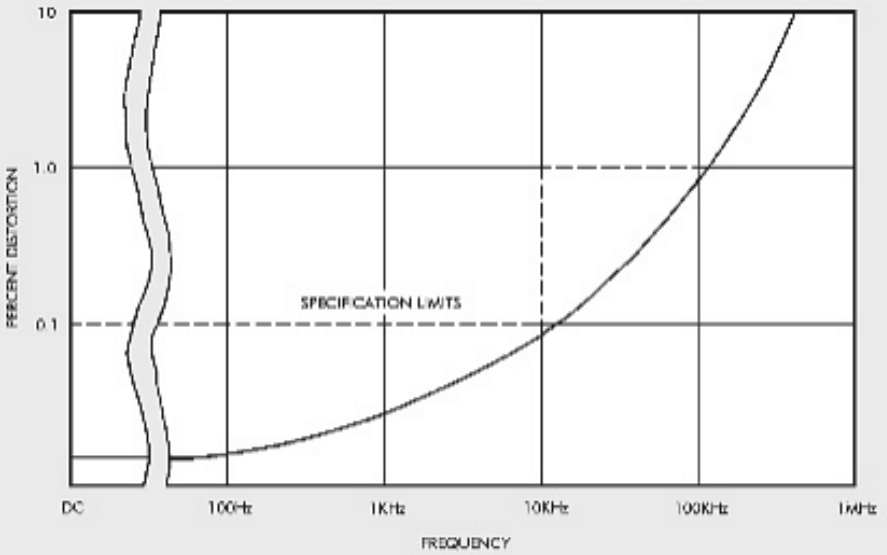
Load Impedance: Capable of driving any load within the current and voltage limitations of the amplifier.
Load Power Factor: 1.0 to zero, leading or lagging.
Temperature Range: 0° C to 45° C.
Controls:
Front Panel: POWER switch, 3-position push-button GAIN selector, variable GAIN control, 3-position push-button DC OFFSET selector, variable OFFSET control, screwdriver control for DC output level.
Rear Panel: CHASSIS/FLOATING ground switch.
Front Panel Indicators: Power ON, Output OVERLOAD.
Terminals:
Front Panel: BNC for INPUT, binding posts for OUTPUT.
Rear Panel: BNC for INPUT, binding posts for OUTPUT, ac power receptacle, chassis ground post.
Power Requirements: 105-125 or 210-250 volts, single phase, 50-400Hz, 85 watts quiescent, 400 watts.
Fuse Protection: ac line, 5A slow-blow (115V), 2.5A slow-blow (230V); output stage unregulated supplies, 1A fast-blow (each supply).
Dimensions and Weights: 5.25" (13.3cm) high, 16.63" (42.2cm) wide, 17" (43.2cm) deep; 35 lbs. (15.8kg) net, 40 lbs. (18.1kg) shipping.
Accessories: 3 terminal line cord; operating manual.

OPTIONS

Rack Mounting Kit: Part No. RK-519 permits the installation of the Model 7500 into a standard 19" rack spacing.
Extended 1 Year Warranty: Part No. EW7500.
Specifications subject to change without notice.



TYPICAL OUTPUT POWER vs FREQUENCY
FOR VARIOUS RESISTIVE LOADS



TYPICAL HARMONIC DISTORTION vs FREQUENCY
AT 75 WATTS OUTPUT, 200 OHM RESISTIVE LOAD

TYPICAL PERFORMANCE

RESISTIVE LOAD (OHMS)	DC	500Hz	1KHz	2KHz	100KHz	200KHz	500KHz	1MHz
Open Circuit	200V		140V					80V
200	175V 875ma		125V, 625ma			90V, 450ma		45V 225ma
100	45V 450ma	30V 300ma	75V, 750ma		90V 900ma	60V, 600ma		30V 300ma
50	18V 360ma	12.5V 250ma	20V 400ma	30V 600ma	40V, 800ma		25V 500ma	20V 400ma
10	3.3V 330ma	2.3V 230ma	2.8V 280ma	4.5V 450ma	5.7V, 570ma			4.5V 450ma
	PEAK	RMS						

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