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MODEL 500A250
500 WATTS CW
100 kHz - 250 MHz

The Model 500A250 is a self-contained, air-cooled, broadband, completely solid state amplifier designed for applications where instantaneous bandwidth and high gain are required. Push-pull MOSFET circuitry is utilized in all high power stages in the interest of lowering distortion and improving stability. The Model 500A250, when used with an RF sweep generator, will provide a minimum of 500 watts of swept power.

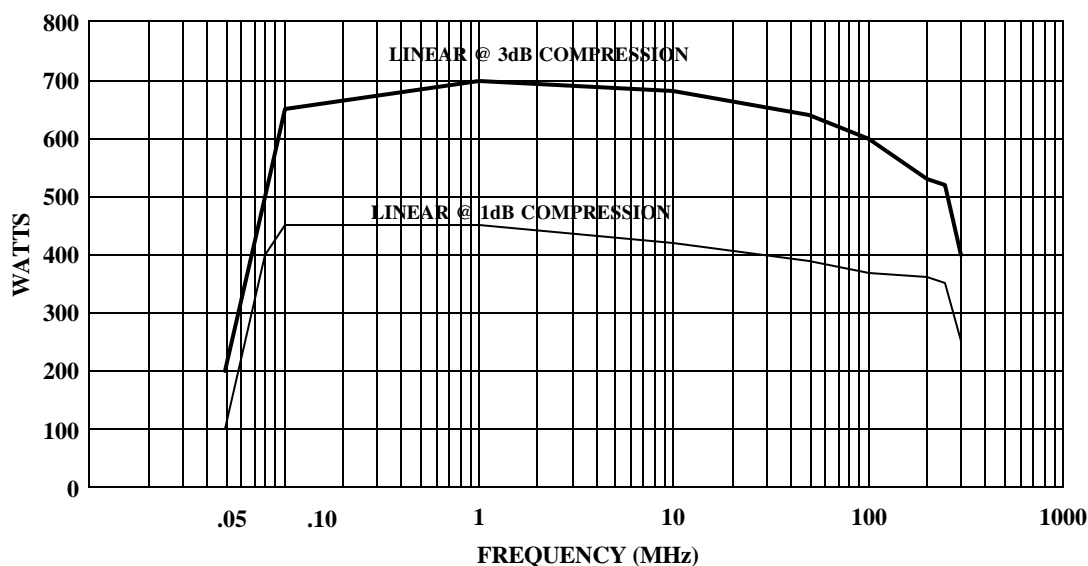
The Model 500A250 is equipped with a Digital Control Panel (DCP) which provides both local and remote control of the amplifier. The DCP uses a 4 line vacuum fluorescent display, menu assigned softkeys, a single rotary knob, and four dedicated switches (POWER, STANDBY, OPERATE and FAULT/RESET) to offer extensive control and status reporting capability. The display provides operational presentation of Forward Power and Reflected Power plus control status and reports of internal amplifier status. Special features include a gain control, internal/external automatic level control (ALC) with front panel control of the ALC threshold, pulse input capability and RF output level protection. Also included is an internal RF detector which provides an output for use in self-testing or operational modes.

All amplifier control functions and status indications are available remotely in GPIB / IEEE-488 and RS-232 format. The buss interface connector is located on the back panel and positive control of local or remote operation is assured by a keylock on the front panel of the amplifier.

High efficiency universal input, power factor corrected switching power supplies provides DC to all internal sub-assemblies.

Housed in a stylish, contemporary enclosure, the Model 500A250 provides readily available RF power for typical applications such as RF susceptibility testing, antenna and component testing, watt meter calibration, particle accelerators, plasma generation, communications and use as a driver for higher power amplifiers

500A250 TYPICAL POWER OUTPUT



REV082802

SPECIFICATIONS

Model 500A250

RATED OUTPUT POWER	500 watts
INPUT FOR RATED OUTPUT	1.0 milliwatt maximum
POWER OUTPUT @ 3dB compression	
Nominal.....	500 watts
Minimum.....	450 watts
Linear @ 1dB compression.....	300 watts minimum
FLATNESS	± 2.0 dB maximum ± 0.5 dB with internal leveling
FREQUENCY RESPONSE	100 kHz - 250 MHz instantaneously
GAIN (at maximum setting)	60 dB minimum
GAIN ADJUSTMENT (continuous range)	25 dB minimum
INPUT IMPEDANCE	50 ohms, VSWR 1.5:1 maximum
OUTPUT IMPEDANCE	50 ohms, VSWR 2.5:1 maximum
MISMATCH TOLERANCE	100% rated power without foldback up to 6.0:1 mismatch, above which may limit to 250 W. Will operate without damage, or oscillation with any magnitude and phase of source and load impedance.
MODULATION CAPABILITY	Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal
HARMONIC DISTORTION	Minus 20 dBc maximum at 300 watts
THIRD ORDER INTERCEPT POINT	61 dBm typical
RF POWER DISPLAY	0-750 watts full scale
PULSE MODE GATING CHARACTERISTICS	
Signal (into 50 ohms).....	+2.0 to 6.0 VDC
Rise Time.....	0.5 microseconds maximum
Fall Time.....	0.5 microseconds maximum
RF Rise/Fall Time.....	10 nanoseconds maximum
PRIMARY POWER	180 - 264 VAC 47 - 63 Hz, 3000 watts maximum @ 0.99 P.F. typ.
CONNECTORS	
RF input.....	See Model Configuration
RF output.....	See Model Configuration
External leveling inputs.....	Type BNC female on front panel
Pulse modulation inputs.....	Type BNC female on front panel
Detected RF output.....	Type BNC female on front panel
Safety Interlock.....	15 pin female Type D on rear panel
REMOTE CONTROL	
IEEE-488.....	24 pin female on rear panel
RS-232.....	9 pin female Type D on rear panel
COOLING	Forced air (self contained fans)
WEIGHT, maximum	79.5 kg (175 lb)
SIZE (WxHxD)	50.3 x 55.9 x 61.0 cm 19.8 x 22.0 x 24.0 in

Model Configuration

Model Number	Connectors	Weight	Size
500A250	front	79.5 kg (175 lb)	50.3 x 55.9 x 61.0 cm 19.8 x 22.0 x 24.0 in
500A250M1	rear	79.5 kg (175 lb)	50.3 x 55.9 x 61.0 cm 19.8 x 22.0 x 24.0 in
500A250M2	no cabinet	61.3 kg (135 lb)	48.3 x 51.3 x 58.0 cm 19.0 x 20.2 x 22.8 in
500A250M3	rear/no cabinet	61.3 kg (135 lb)	48.3 x 51.3 x 58.0 cm 19.0 x 20.2 x 22.8 in