



## rf/microwave instrumentation

### Model 500A250B, M1 through M10 500 Watts CW 10kHz–250MHz

The Model 500A250B is a self-contained, air-cooled, broadband, completely solid state amplifier designed for applications where instantaneous bandwidth and high gain are required. Push-pull LDMOS circuitry is utilized in all high power stages in the interest of lowering distortion and improving stability. The Model 500A250B, when used with an RF sweep generator, will provide a minimum of 500 watts of swept power.

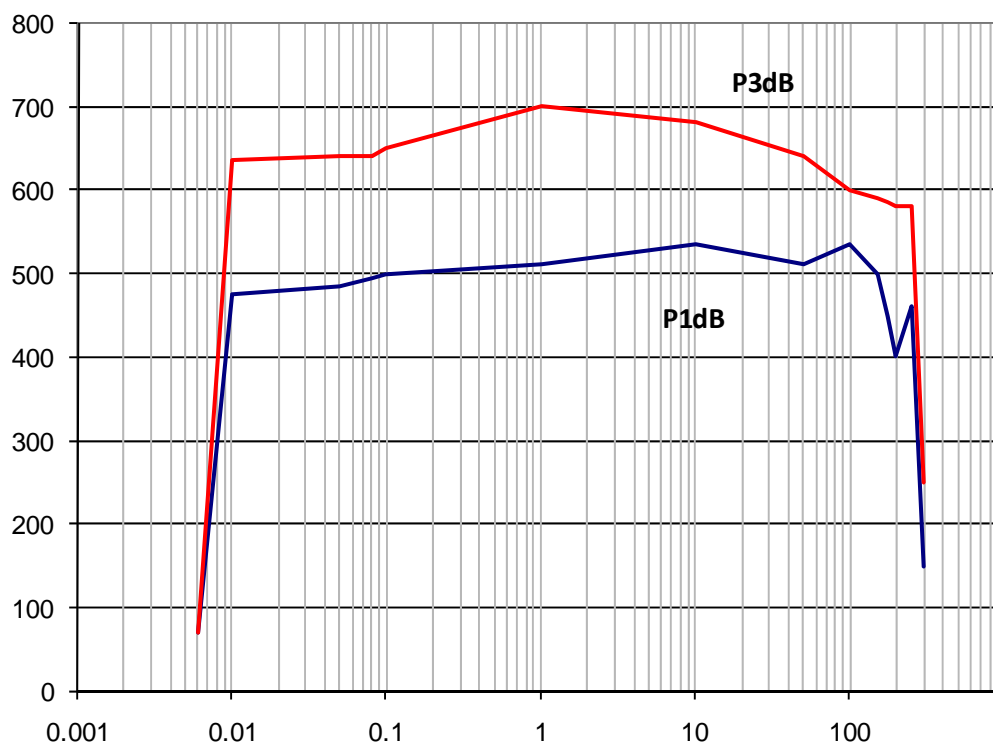
The Model 500A250B is equipped with a Digital Control Panel (DCP) which provides both local and remote control of the amplifier. The DCP uses a 3.75 inch diagonal graphic display, menu assigned softkeys, a single rotary knob, and four dedicated switches to offer extensive control and status reporting 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, forward RF sample port, and a reflective RF sample port for precise power measurements.

All amplifier control functions and status indications are available remotely in GPIB/IEEE-488, RS-232 and USB format. The buss interface connectors are 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 500A250B 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.

500A250B Typical Power Output



## SPECIFICATIONS, MODEL 500A250B

RATED OUTPUT POWER .....	500 watts
INPUT FOR RATED OUTPUT .....	1.0 milliwatt maximum
POWER OUTPUT @ 3 dB compression	
Nominal .....	600 watts
Minimum .....	500 watts
POWER OUTPUT @ 1 dB compression	
Nominal .....	500 watts
Minimum .....	350 watts
FLATNESS.....	± 3.0 dB maximum
FREQUENCY RESPONSE .....	10 kHz–250 MHz instantaneously
GAIN (at maximum setting) .....	57 dB minimum
GAIN ADJUSTMENT (continuous range).....	10 dB minimum
INPUT IMPEDANCE.....	50 ohms, VSWR 1.5:1 maximum
OUTPUT IMPEDANCE .....	50 ohms, nominal
MISMATCH TOLERANCE.....	100% rated power without foldback up to 6.0:1 mismatch, above which may limit to 250W reflected power. 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 350 watts
THIRD ORDER INTERCEPT POINT .....	65 dBm typical
RF POWER DISPLAY .....	0–750 watts full scale
PRIMARY POWER .....	180 - 264 VAC 47–63 Hz, 2500 watts maximum @ 0.99 P.F. typical
CONNECTORS	
RF input .....	See Model Configuration
RF output .....	See Model Configuration
Forward Sample.....	BNC female on front panel (coupling factor 60 dB typical; data supplied)
Reverse Sample.....	BNC female on front panel (coupling factor 60 dB typical)
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
USB.....	Type B female
COOLING.....	Forced air (self contained fans)
WEIGHT, maximum .....	See Model Configurations
SIZE (W x H x D).....	See Model Configurations
EXPORT CLASSIFICATION .....	EAR99. The export classification for this equipment is EAR99. These commodities, technology or software are controlled for export in accordance with the U.S. Export Administration Regulations. Diversion contrary to U.S. law is prohibited.

**MODEL CONFIGURATIONS**

<b>Model Number</b>	<b>RF Input</b>	<b>RF Output</b>	<b>Weight</b>	<b>Size</b>
500A250B	Type N female, front	Type N female, front	45.8 kg (101 lb)	50.3 x 34 x 56.9 cm 19.8 x 13.4 x 22.0 in
500A250BM1	Type N female, rear	Type N female, rear	45.8 kg (101 lb)	50.3 x 34 x 56.9 cm 19.8 x 13.4 x 22.0 in
500A250BM2	BNC female, rear	7-16 DIN female, rear	45.8 kg (101 lb)	50.3 x 34 x 56.9 cm 19.8 x 13.4 x 22.0 in
500A250BM3	See separate specification sheet.			
500A250BM4	Same as 500A250BM2 with enclosure removed for rack mounting.		35.4 kg (78 lb)	48.3 x 30.5 x 54.4 cm 19.0 x 12.0 x 21.4 in
500A250BM5	Type N female, front	7-16 DIN female, rear	45.8 kg (101 lb)	50.3 x 34 x 56.9 cm 19.8 x 13.4 x 22.0 in
500A250BM6	Same as 500A250BM1 with enclosure removed for rack mounting.		35.4 kg (78 lb)	48.3 x 30.5 x 54.4 cm 19.0 x 12.0 x 21.4 in
500A250BM7	Type N female, front	Type N female, rear	45.8 kg (101 lb)	50.3 x 34 x 56.9 cm 19.8 x 13.4 x 22.0 in
500A250BM8	BNC female, rear	Type N female, rear	35.4 kg (78 lb)	48.3 x 30.5 x 54.4 cm 19.0 x 12.0 x 21.4 in
500A250BM9	Same as 500A250B with enclosure removed for rack mounting.		35.4 kg (78 lb)	48.3 x 30.5 x 54.4 cm 19.0 x 12.0 x 21.4 in
500A250BM10	See separate specification sheet.			