

The Model 500A100A 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 500A100A, when used with an RF sweep generator, will provide a minimum of 500 watts of swept power.

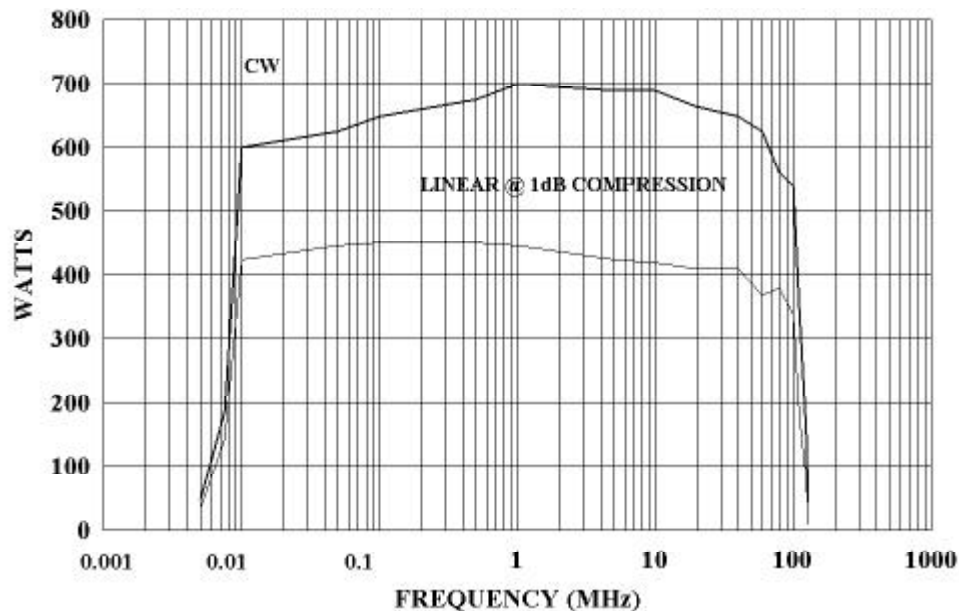
The Model 500A100A is equipped with a Digital Control Panel (DCP) which provides both local and remote control of the amplifier. The DCP uses a 4-line vacuum fluorescent display, menu assigned softkeys, a single rotary knob, and four dedicated switches (POWER, STANDBY, OPERATE and FAULT/RESET) to offer 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 that 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 500A100A 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.

500A100A TYPICAL POWER OUTPUT



SPECIFICATIONS
Model 500A100A

POWER OUTPUT, CW

Nominal 617 watts
 Minimum..... 500 watts
 Linear @ 1 dB compression 300 watts minimum

FLATNESS ± 1.5 dB maximum
 ± 0.5 dB with internal leveling

FREQUENCY RESPONSE..... 10 kHz - 100 MHz instantaneously

INPUT FOR RATED OUTPUT..... 1.0 milliwatt maximum

GAIN (at maximum setting)..... 57 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..... Will operate without damage, or oscillation with any magnitude and phase of source and load impedance. May limit at rated output.

MODULATION CAPABILITY..... Faithfully reproduces AM, FM, or pulse modulation appearing on input signal.

HARMONIC DISTORTION..... Minus 20 dBc maximum at 300 watts

THIRD ORDER INTERCEPT POINT..... 61 dBm typical

RF POWER METER..... 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 - 440 Hz, 2000 watts maximum @ 0.99 P.F. typical

REMOTE INTERFACES IEEE-488, RS-232

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 See Model Configurations

SIZE (W x H x D)..... See Model Configurations

MODEL CONFIGURATIONS

MODEL NUMBER	RF INPUT	RF OUTPUT	WEIGHT	SIZE (W x H x D)
500A100A	Type N female on front panel	Type N female on front panel	68.0 kg (150 lb)	50.3 x 42.7 x 55.1 cm 19.8 x 16.8 x 21.7 in
500A100AM1	Type N female on rear panel	Type N female on rear panel	68.0 kg (150 lb)	50.3 x 42.7 x 55.1 cm 19.8 x 16.8 x 21.7 in
500A100AM2	Same as 500A100A with enclosure removed for rack mounting		54.5 kg (120 lb)	48.3 x 40.0 x 52.1 cm 19.0 x 15.75 x 20.5 in
500A100AM3	Same as 500A100AM1 with enclosure removed for rack mounting		54.5 kg (120 lb)	48.3 x 40.0 x 52.1 cm 19.0 x 15.75 x 20.5 in
500A100AM4	See separate specification sheet			
500A100AM5	Type N female on front panel	Type 7/16 DIN female on rear panel	68.0 kg (150 lb)	50.3 x 42.7 x 55.1 cm 19.8 x 16.8 x 21.7 in