



Model 500W1000A
M1 through M11
500 Watts CW
80MHz–1000MHz

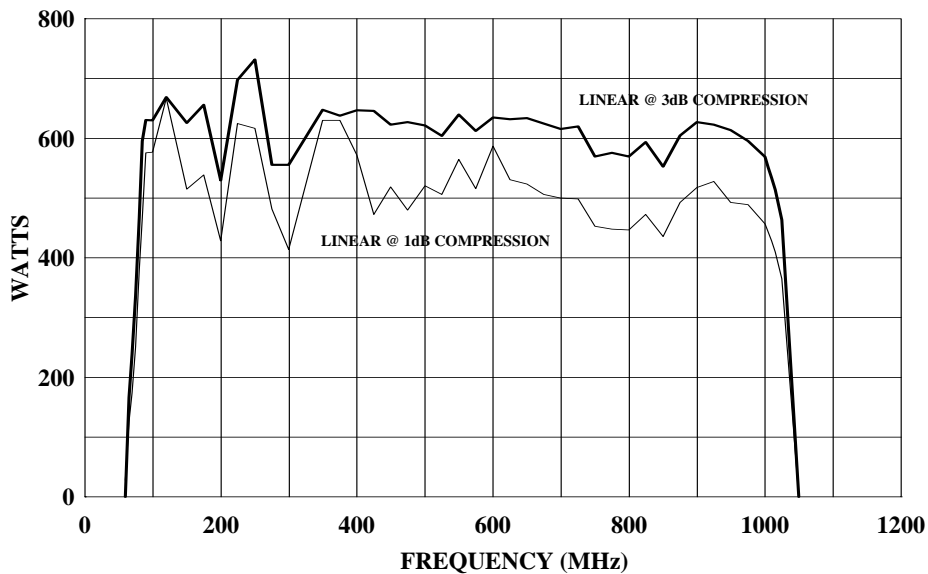
The Model 500W1000A is a self-contained, air-cooled, broadband, completely solid-state amplifier designed for applications where instantaneous bandwidth and high gain are required. Push-pull circuitry is utilized in all high power stages in the interest of lowering distortion and improving stability. The Model 500W1000A, when used with an RF sweep generator, will provide a minimum of 500 watts of swept power.

The Model 500W1000A is equipped with a Digital Control Panel (DCP) which provides both local and remote control of the amplifier. The DCP uses a digital 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 format and RS-232 hardware and fiber optic. The bus 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.

Housed in a stylish contemporary equipment rack the Model 500W1000A provides readily available RF power for typical applications such as RF susceptibility testing, antenna and component testing, watt meter calibration, and use as a driver for higher power amplifiers.

500W1000A TYPICAL POWER OUTPUT



SPECIFICATIONS, MODEL 500W1000A

| | |
|---|---|
| RATED POWER OUTPUT | 525 watts minimum |
| INPUT FOR RATED OUTPUT | 1.0 milliwatt maximum |
| POWER OUTPUT @ 3dB COMPRESSION | |
| Nominal | 612 watts |
| Minimum | 450 watts |
| POWER OUTPUT @ 1dB COMPRESSION | |
| Nominal | 515 watts |
| Minimum | 350 watts |
| FLATNESS..... | ± 2.0 dB maximum ± 0.8 dB with internal leveling |
| FREQUENCY RESPONSE | 80–1000 MHz instantaneously |
| GAIN (at maximum setting) | 57 dB minimum |
| GAIN ADJUSTMENT (continuous range)..... | 18 dB minimum |
| INPUT IMPEDANCE..... | 50 ohms, VSWR 2.0:1 maximum |
| OUTPUT IMPEDANCE | 50 ohms nominal |
| MISMATCH TOLERANCE* | 100% of rated power without foldback up to 6.0:1 mismatch above which may limit to 250 watts reflected power. Will operate without damage or oscillation with any magnitude and phase of source and load impedance *See Application Note #27 |
| MODULATION CAPABILITY..... | Will faithfully reproduce AM, FM, or Pulse modulation appearing on the input signal. |
| HARMONIC DISTORTION..... | Minus 20 dBc maximum at 400 watts |
| THIRD ORDER INTERCEPT POINT | 63 dBm typical |
| RF POWER METER..... | 600 watts full scale |
| PRIMARY POWER (specify) | 200 - 250 VAC, 50/60 Hz, single phase 6500 VA maximum |
| CONNECTORS | |
| RF Input | See Model Configuration |
| RF Output | See Model Configuration |
| External Leveling Inputs | Type BNC female on front panel |
| Pulse Modulation Input | Type BNC female on front panel |
| Detected RF Output | Type BNC female on front panel |
| Safety Interlock..... | 15 pin subminiature D on rear panel |
| Remote Computer Interface | 24 Pin female IEEE-488 (GPIB) and RS-232 connector on rear panel |
| Remote Computer Interface (fiber-optic) | ST Conn Tx and Rx RS-232 |
| COOLING..... | Forced air (self contained fans) See Model Configuration |
| WEIGHT (approximate) | 174 kg (383 lb) |
| SIZE (W x H x D)..... | 56.1 x 149.9 x 58.4 cm (22.1 x 59.0 x 23.0 in) |

MODEL CONFIGURATION, MODEL 500W1000A

| Model Number | RF Connector Locations & Type | Cooling Air Entry | Casters | Remarks |
|---------------------|---|--------------------------|----------------|--|
| 500W1000A | Type N female, rear panel | Bottom | Standard | |
| 500W1000AM1 | Type N female, rear panel | Front Grills | Large 5.0" | |
| 500W1000AM2 | Output Type 7/16 female, rear panel Input Type N, rear panel | Bottom | Standard | |
| 500W1000AM3 | Output Type N female, front panel Input Type N female, rear panel | Bottom | Standard | |
| 500W1000AM4 | Type N female, front panel | Bottom | Standard | |
| 500W1000AM5 | Input Type N female, front panel. Output Type C female, front panel. | Bottom | Standard | |
| 500W1000AM6 | Type N female, rear panel | Bottom | Standard | Variable input lockout |
| 500W1000AM7 | Type N female, rear panel | Front Grills | Standard | |
| 500W1000AM8 | Type N female, front panel | Front Grills | Standard | |
| 500W1000AM9 | Type N female, front panel | Bottom | Standard | Forward and reverse sample ports, type N female on front panel (-60dBc) |
| 500W1000AM10 | Input Type N female, front panel. Output Type C female, front panel. | Bottom | Large 5.0" | |
| 500W1000AM11 | Type N female, rear panel | Bottom | Standard | Forward and reverse sample ports, type N female on front panel (-60dBc) |