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 Graph](image)
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 @ 1 dB 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 2:1 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)
<table>
<thead>
<tr>
<th>Model Number</th>
<th>RF Connector Locations &amp; Type</th>
<th>Cooling Air Entry</th>
<th>Casters</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>500W1000A</td>
<td>Type N female, rear panel</td>
<td>Bottom</td>
<td>Standard</td>
<td></td>
</tr>
<tr>
<td>500W1000AM1</td>
<td>Type N female, rear panel</td>
<td>Front Grills</td>
<td>Large 5.0&quot;</td>
<td></td>
</tr>
<tr>
<td>500W1000AM2</td>
<td>Output Type 7/16 female, rear panel</td>
<td>Bottom</td>
<td>Standard</td>
<td></td>
</tr>
<tr>
<td>500W1000AM3</td>
<td>Output Type N female, front panel</td>
<td>Bottom</td>
<td>Standard</td>
<td></td>
</tr>
<tr>
<td>500W1000AM4</td>
<td>Type N female, front panel</td>
<td>Bottom</td>
<td>Standard</td>
<td></td>
</tr>
<tr>
<td>500W1000AM5</td>
<td>Input Type N female, rear panel, Output Type C female, front panel</td>
<td>Bottom</td>
<td>Standard</td>
<td>Variable input lockout</td>
</tr>
<tr>
<td>500W1000AM6</td>
<td>Type N female, rear panel</td>
<td>Bottom</td>
<td>Standard</td>
<td>Forward and reverse sample ports, type N female on front panel (–60dBc)</td>
</tr>
<tr>
<td>500W1000AM7</td>
<td>Type N female, rear panel</td>
<td>Front Grills</td>
<td>Standard</td>
<td>Forward and reverse sample ports, type N female on front panel (–60dBc)</td>
</tr>
<tr>
<td>500W1000AM8</td>
<td>Type N female, front panel</td>
<td>Front Grills</td>
<td>Standard</td>
<td>Forward and reverse sample ports, type N female on front panel (–60dBc)</td>
</tr>
<tr>
<td>500W1000AM9</td>
<td>Type N female, front panel</td>
<td>Bottom</td>
<td>Standard</td>
<td>Forward and reverse sample ports, type N female on front panel (–60dBc)</td>
</tr>
<tr>
<td>500W1000AM10</td>
<td>Input Type N female, front panel. Output Type C female, front panel</td>
<td>Bottom</td>
<td>Large 5.0&quot;</td>
<td></td>
</tr>
<tr>
<td>500W1000AM11</td>
<td>Type N female, rear panel</td>
<td>Bottom</td>
<td>Standard</td>
<td>Forward and reverse sample ports, type N female on front panel (–60dBc)</td>
</tr>
</tbody>
</table>