The Model 1000W1000D 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 1000W1000D, when used with an RF sweep generator, will provide a minimum of 1000 watts of swept power.

The Model 1000W1000D 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 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 format and RS-232 hardware, and fiber optic. 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.

The 1000W1000D is housed in a single equipment rack and is designed to provide complete stand-alone performance for RF testing. It is also configured to be used as a sub-amplifier in a 2000-watt, 3000-watt or 4000-watt higher power amplifier. It can be added to in an incremental fashion to become a part of these higher power units yet still be used as a stand-alone 1000 watt amplifier.
SPECIFICATIONS, 1000W1000D

RATED OUTPUT POWER .................................................. 1000 watts minimum
INPUT FOR RATED OUTPUT ............................................ 1.0 milliwatt maximum

POWER OUTPUT @ 3 dB compression
- Nominal .................................................. 1200 watts
- Minimum .................................................. 950 watts

POWER OUTPUT @ 1 dB compression
- Nominal .................................................. 950 watts
- Minimum .................................................. 700 watts

FLATNESS ........................................................................
- ± 2.0 dB
- ± 0.8 dB with internal leveling

FREQUENCY RESPONSE ............................................. 80 - 1000 MHz instantaneously

GAIN (at maximum setting) ........................................... 60 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 600 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 ........................................... Faithfully reproduces AM, FM, or Pulse modulation appearing on input signal.

HARMONIC DISTORTION ............................................ Minus 20 dBc maximum at 800 watts

THIRD ORDER INTERCEPT POINT .................................. 66 dBm typical

RF POWER METER .................................................. 0 - 1200 watts full scale

PRIMARY POWER (specify voltage) .............................. 200 - 240 VAC, Delta Connected (4 wire)
- 360-435 VAC, Wye Connected (5 wire)
- 50/60 Hz, 3 phase
- 12kVA Maximum

CONNECTORS
- RF Input .................................................. See Model Configurations
- RF Output .................................................. See Model Configurations
- 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
- 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
- Safety Interlock ............................................. 15 pin Subminiature D on rear panel
- Operate Interface ........................................... 27 pin Subminiature D on rear panel

COOLING ................................................................. Forced air (self contained fans), enters front and bottom

WEIGHT (approximate) .................................................. 340 kg (750 lb)
SIZE (W x H x D) .......................................................... 68.8 x 152.5 x 82.5 cm (27.1 x 60.0 x 32.5 in)

MODEL CONFIGURATIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>RF input Connector</th>
<th>RF Output Connectors</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000W1000D</td>
<td>Type N female rear panel</td>
<td>Type 7/16 female on rear panel</td>
<td></td>
</tr>
<tr>
<td>1000W1000DM1</td>
<td>Type N female front panel</td>
<td>Type 7/16 female on front panel</td>
<td></td>
</tr>
<tr>
<td>1000W1000DM2</td>
<td>Type N female rear panel</td>
<td>Type 7/16 female on rear panel</td>
<td>Forward and reverse sample ports, Type N female on front panel (-63 dBc)</td>
</tr>
</tbody>
</table>