



1500W1000A

- 1500 Watts CW
- 80MHz–1000MHz

Features

The Model 1500W1000A 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 1500W1000A, when used with an RF sweep generator, will provide a minimum of 1500 watts of RF power.

The Model 1500W1000A is equipped with a Digital Control Panel (DCP) which provides both local and remote control of the amplifier. The DCP uses a color LCD touch screen and a single rotary knob to offer status reporting and control capability. The display provides operational presentation of Forward Power and Reflected Power plus amplifier status. Special features include a gain control, internal automatic level control (ALC) with front panel control of the ALC threshold, forward and reflective RF sample ports for precise power measurements and RF output level protection. Protection is provided by DC current level sensing of all output stages.

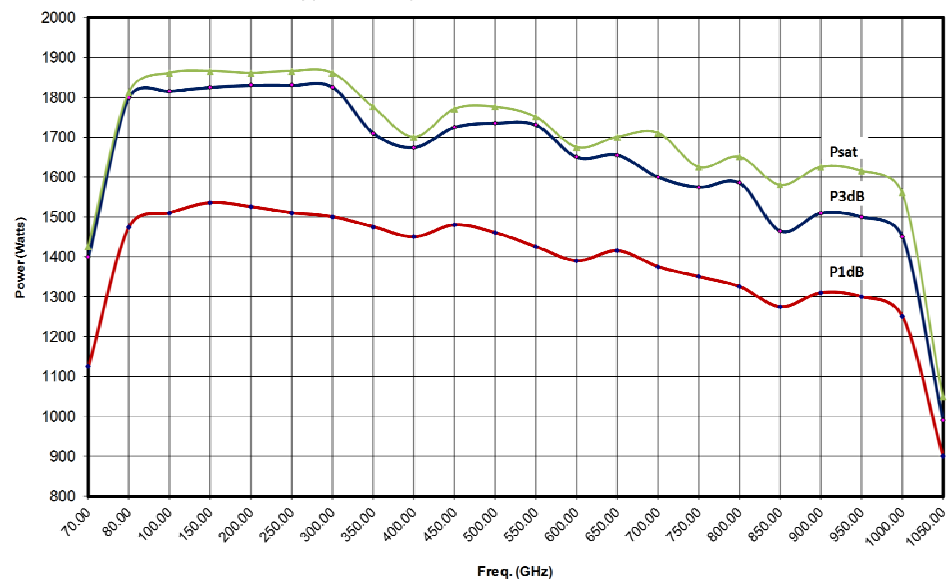
All amplifier control functions and status indications are available remotely in GPIB/IEEE-488 format and RS-232 hardware and fiber optic, USB and Ethernet. The buss interface connector is located on the back panel and positive control of local or remote operation is assured by a keylock on the front panel of the amplifier.

Housed in a single equipment rack, the 1500W1000A provides readily available RF power for typical applications such as RF susceptibility testing, antenna and component testing, watt meter calibration, and as a driver for frequency multipliers and higher power amplifiers. A safety interlock can be implemented via a rear panel connector.

The 1500W1000A has the ability to be upgraded at a later date to the 2000W1000D, 3000W1000B, or 4000W1000B.

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.

Typical Output Power 1500W1000A



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Specifications

RATED OUTPUT POWER: 1600 watts typical; 1500 watts minimum

INPUT FOR RATED OUTPUT: 1.0 milliwatt maximum

POWER OUTPUT @ 3 dB compression:
Nominal 1600 watts, 1500 watts min up to 700 MHz, 1400 watts from 700 to 1000 MHz

POWER OUTPUT @ 1 dB compression:
Nominal 1450 watts, 1400 watts min up to 700 MHz; 1250 watts min from 700 to 1000 MHz

FLATNESS: ±2.0 dB maximum; ±1.5 dB typical

FREQUENCY RESPONSE: 80–1000 MHz instantaneously

GAIN (at maximum setting): 61.8 dB minimum

GAIN ADJUSTMENT (continuous range): 25 dB minimum

INPUT IMPEDANCE: 50 ohms, VSWR 1.5:1 maximum; 1.3:1 typical

OUTPUT IMPEDANCE: 50 ohms nominal

MISMATCH TOLERANCE: 100% of rated power without foldback. 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 1250 watts, -20 dBc typical @ 1500 watts

THIRD ORDER INTERCEPT POINT: 68 dBm typical

NOISE FIGURE: 8 dB maximum, 6 dB typical

PRIMARY POWER (specify voltage):
200-240 VAC Delta connected (4-wire)
360-435 VAC ye connected (5-wire)
50/60 Hz, three phase, 7000 watts

CONNECTORS

RF Input: Type N female, rear panel
RF Output: Type 1-5/8 female, rear panel
Forward sample: Type N female, front (-63 dBc)
Reverse sample: Type N female, front (-63 dBc)
Remote Interfaces:
IEEE-488 24-pin female
RS-232 9-pin Subminiature D, female
Fiber Optic ST Conn Tx and Rx RS-232
USB 2.0 Type B
Ethernet RJ-45
Safety Interlock: 15-pin Subminiature D, rear panel

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

WEIGHT (approximate): 182 kg (400 lb)

SIZE (W x H x D): 56.1 x 175.3 x 97.6 cm (22.1 x 69 x 38.4 in)

ENVIRONMENTAL:

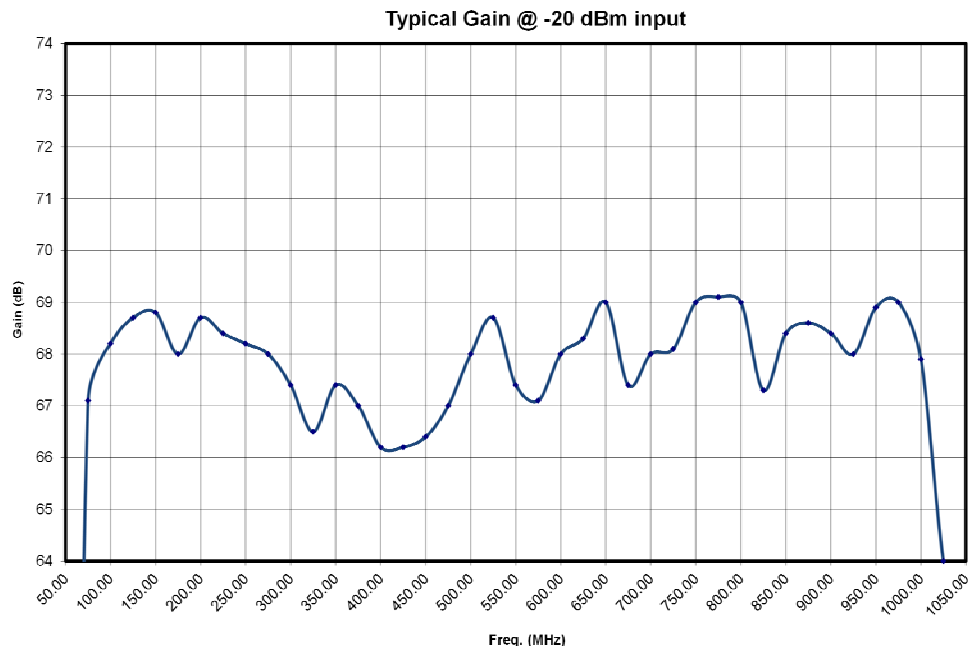
Operating Temperature: 5°C / +40°C
Operating Altitude: Up to 2000M
Shock and vibration: Normal Truck Transport

REGULATORY COMPLIANCE:

EMC EN 61326-1
Safety UL 61010-1
CAN/CSA C22.2 #61010-1
CENELEC EN 61010-1
RoHS DIRECTIVE 2011/65/EU

EXPORT CLASSIFICATION: EAR99

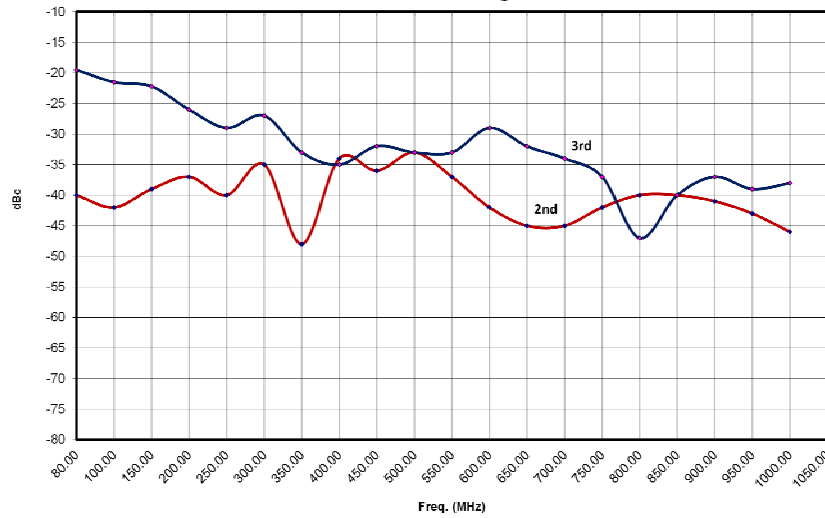
Graphs



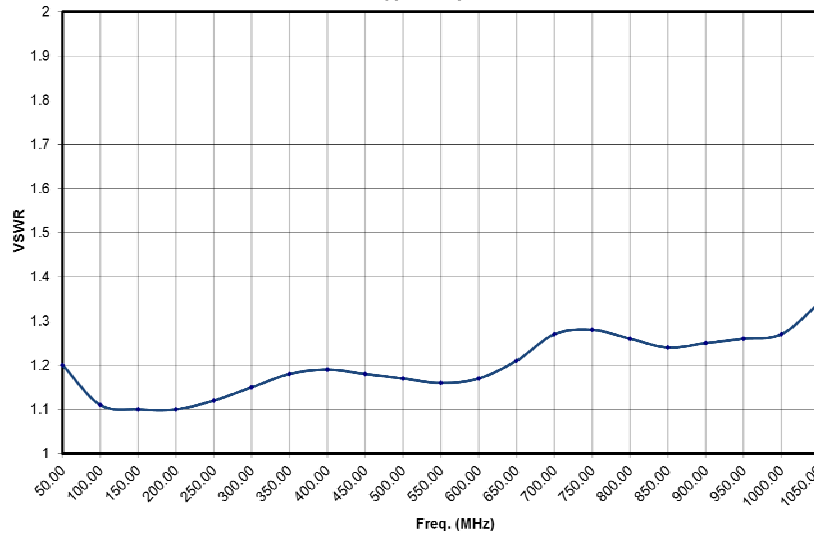
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1500W1000 Harmonics @1500 watts



Typical Input VSWR



Typical Noise Figure vs. Frequency

