Features

The Model 250W1000B is a portable, self-contained, air-cooled, broadband, completely solid-state amplifier designed for applications where instantaneous bandwidth, high gain and linearity are required. Push-pull circuitry is utilized in all high power stages in the interest of lowering distortion and improving stability. 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 and RS-232 hardwire 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 stylish, contemporary bench top enclosure, the Model 250W1000B 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 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.
Specifications

250W1000B

- 250 Watts CW
- 80MHz–1000MHz

RATED OUTPUT POWER: 250 watts minimum
INPUT FOR RATED OUTPUT: 1.0 mW Max
POWER OUTPUT @ 3dB COMPRESSION:
Nominal: 300 watts, Minimum: 250 watts
POWER OUTPUT @ 1dB COMPRESSION:
Nominal: 250 watts, Minimum: 200 watts
FLATNESS: ±1.5 dB maximum, ±1.0 dB typical
FREQUENCY RESPONSE: 80-1000 MHz instantaneously

GAIN (at maximum setting): 54 dB minimum
GAIN ADJUSTMENT (Continuous Range): 25 dB minimum (4096 steps remote)
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.

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

HARMONIC DISTORTION: Minus 20 dBc maximum at 200 watts, -20dBc typical @ 250 watts
THIRD ORDER INTERCEPT POINT: 62 dBm typical
NOISE FIGURE: 8 dB maximum, 6 dB typical
PRIMARY POWER (user must specify):
120-240 VAC, 50/60Hz, single phase, 1000 watts maximum
CONNECTORS:
RF See Model Configurations
Forward Sample: BNC female, front (-46 dBc)
Reverse sample: BNC female, front (-46 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
COOLING: Forced air (self contained fans)
EXPORT CLASSIFICATION: EAR99

Model Configurations

<table>
<thead>
<tr>
<th>MODEL NUMBER</th>
<th>RF INPUT</th>
<th>RF OUTPUT</th>
<th>WEIGHT</th>
<th>SIZE (W x H x D)</th>
</tr>
</thead>
<tbody>
<tr>
<td>250W1000B</td>
<td>N female, front</td>
<td>N female, front</td>
<td>40kg</td>
<td>50.3 x 24.9 x 61cm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(88 lb)</td>
<td>19.8 x 9.8 x 24in</td>
</tr>
<tr>
<td>250W1000BM1</td>
<td>N female, rear</td>
<td>N female, rear</td>
<td>40kg</td>
<td>50.3 x 24.9 x 61cm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(88 lb)</td>
<td>19.8 x 9.8 x 24in</td>
</tr>
<tr>
<td>250W1000BM2</td>
<td>Same as 250W1000B</td>
<td>Same as 250W1000B</td>
<td>30kg</td>
<td>48.3 x 22.2 x 61cm</td>
</tr>
<tr>
<td></td>
<td>with enclosure removed for rack mounting</td>
<td></td>
<td>(66 lb)</td>
<td>19 x 8.75 x 24in</td>
</tr>
<tr>
<td>250W1000BM3</td>
<td>Same as 250W1000BM1</td>
<td>Same as 250W1000BM1</td>
<td>30kg</td>
<td>48.3 x 22.2 x 61cm</td>
</tr>
<tr>
<td></td>
<td>with enclosure removed for rack mounting</td>
<td></td>
<td>(66 lb)</td>
<td>19 x 8.75 x 24in</td>
</tr>
</tbody>
</table>

Graphs

Typical Harmonics @ 250 watts

![Typical Harmonics Graph](image-url)
250W1000B
- 250 Watts CW
- 80MHz–1000MHz

To order AR Products, call 215.723.8181. For an applications engineer call: 800.933.8181. Direct to Service call: 215.723.0275 or email: service@arworld.us. For Faxing Orders: 866.859.0582 (Orders Only Please). info@arworld.us

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