

Provided by:



**Advanced Test Equipment Corp.**

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## 250U1000A

- 250 watts CW
- 10kHz–1000MHz
- Class A
- Portable
- Full VSWR-tolerant
- CE & RoHS Compliant
- High Efficiency

### Features

The Model 250U1000A is a solid-state, self-contained, air-cooled, broadband amplifier designed for applications where instantaneous bandwidth, high gain and linearity are required. Available in a stylish, contemporary cabinet for benchtop use or with cabinet removed for rack mounting.

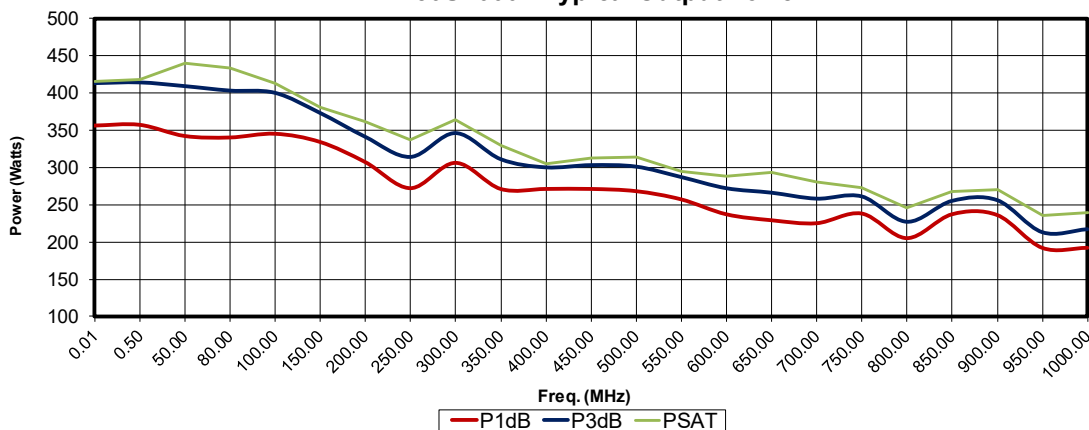
The Model 250U1000A, when used with a sweep generator, will provide a minimum of 250 watts of RF power. Included is a front panel gain control which permits the operator to conveniently set the desired output level. The 250U1000A is protected from RF input overdrive by an RF input leveling circuit which controls the RF input level to the RF amplifier first stage when the RF input level is increased above 0dBm. The RF amplifier stages are protected from over-temperature by removing the DC voltage to them if an over-temperature condition occurs due to cooling blockage or fan failure. The Model 250U1000A 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 display to indicate the operate status and fault conditions if an over-temperature or power supply fault has occurred. The unit can be returned to operate when the condition has been cleared.

All amplifier control functions and status indications are available remotely through the included Remotes Package. The Remotes Package includes GPIB/IEEE-488 format, RS-232 hardware and fiber optic, USB, and Ethernet. The bus interface connector is located on the back panel and positive control of local or remote operation is assured by a Local/Remote switch on the front panel of the amplifier. Also included with the Remotes Package is a safety interlock circuit for use with external safety switch interlocks. This circuit prevents the amplifier from going into operate mode unless the external connection is made. A jumper plug is provided for cases where this functionality is not needed.

The export classification for this equipment is EAR99.

250U1000A Typical Output Power



AR RF/Microwave  
Instrumentation  
160 Schoolhouse Rd  
Souderton, PA 18964  
215-723-8181

For an applications engineer call: 800.933.8181

[www.arworld.us](http://www.arworld.us)

ISO 9001 Certified



# 250U1000A

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## Specifications

**INPUT FOR RATED OUTPUT (0dBm):** 1.0 mW maximum

**RATED OUTPUT POWER:**

0.01-250MHz: 300 watts typical, 280 watts minimum  
 250 -700MHz: 300 watts typical, 250 watts minimum  
 700 -1000MHz: 225 watts typical, 210 watts minimum

**POWER OUTPUT @ 3dB COMPRESSION:**

0.01-250MHz: 300 watts typical, 270 watts minimum  
 250 -700MHz: 300 watts typical, 240 watts minimum  
 700 -1000MHz: 225 watts typical, 190 watts minimum

**POWER OUTPUT @ 1dB COMPRESSION:**

0.01-250MHz: 250 watts typical, 240 watts minimum  
 250 -700MHz: 250 watts typical, 200 watts minimum  
 700 - 1000MHz: 225 watts typical, 175 watts minimum

**FLATNESS:** ±1.5 dB typical, ±2.0 dB maximum

**FREQUENCY RESPONSE:** 10kHz-1000MHz instantaneously

**GAIN (at maximum setting):** 54 dB minimum

**GAIN ADJUSTMENT (Continuous Range):** 20 dB minimum

**INPUT IMPEDANCE:** 50 ohms, VSWR 2.0:1 maximum

**OUTPUT IMPEDANCE:** 50 ohms nominal

**MISMATCH TOLERANCE:** Will operate without damage or oscillation when connected to any load impedance without the aid of foldback circuitry.

**MODULATION CAPABILITY:** Will faithfully reproduce AM, FM, or Pulse modulation appearing on input signal.

**THIRD ORDER INTERCEPT:** 62 dBm typical

**NOISE FIGURE:** 8.5 dB typical

**HARMONIC DISTORTION:** Minus 20 dBc maximum at 200 watts; minus 20 dBc typical at 250 watts

**SPURIOUS:** Minus 73 dBc typical

**PRIMARY POWER:** 100-240 VAC, 50/60Hz, 1150 watts

**CONNECTORS:**

RF Input: N female  
 RF Output: N female

**REMOTES PACKAGE:**

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)

**ACCOUSTICAL NOISE @ 1 METER**

Front: 42 dBA  
 Side: 46 dBA  
 Rear: 57 dBA

**WEIGHT:**

With Cabinet 58.9 kg (130 lbs)  
 Without Cabinet 46.2 kg (102 lbs)

**SIZE (W x H x D):** 19" 6U Rack:

With cabinet: 50.3 x 28.0 x 74.9 cm (19.8 x 11.2 x 29.5 in)  
 Without Cabinet: 48.3 x 27.9 x 74.9 cm (19 x 11.0 x 29.5 in)

**ENVIRONMENTAL:**

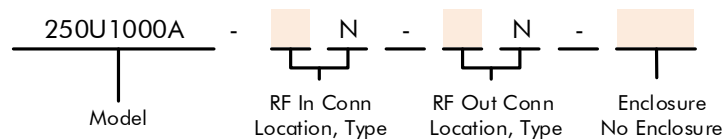
Operating Temperature: 5°C / +40°C  
 Storage Temperature: -20°C/ +50°C  
 Operating Altitude: Up to 2000M  
 Shock and vibration: Normal Truck Transport

**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

## Ordering Options

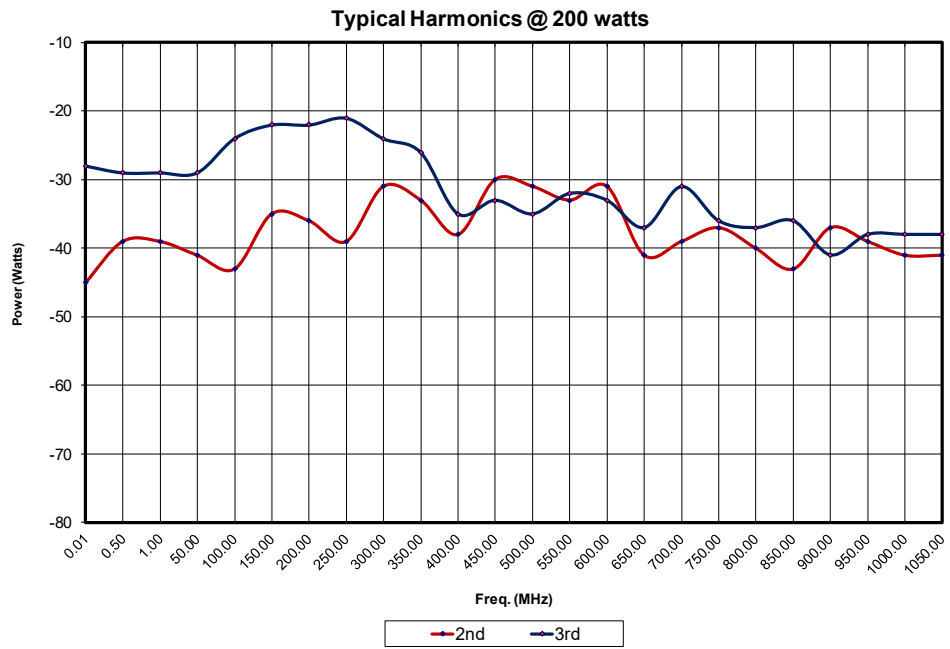
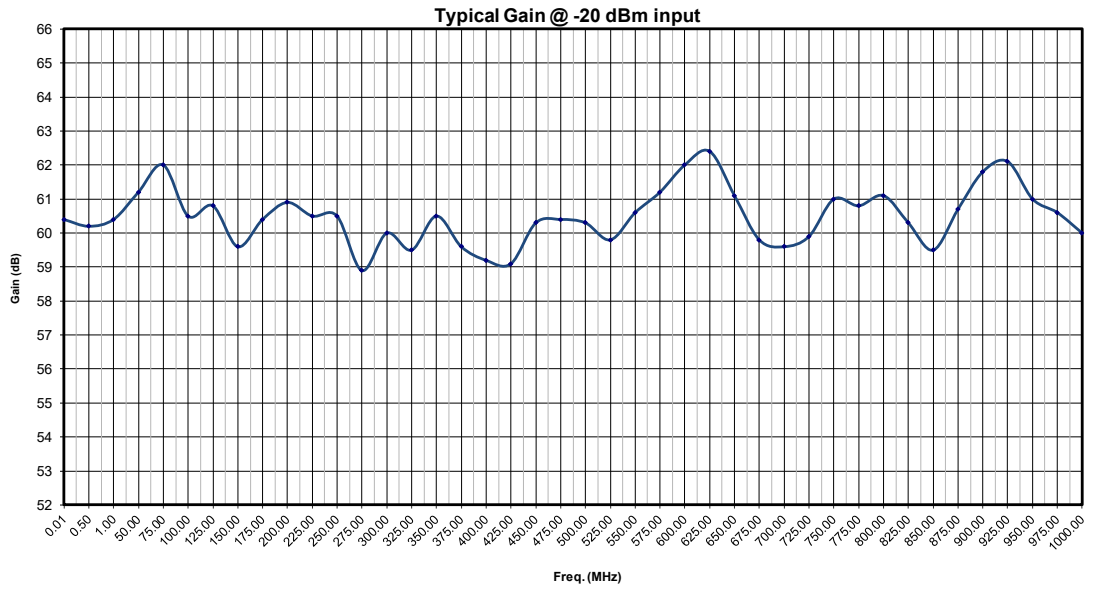


CONNECTOR LOCATION		ENCLOSURE	
Front	F	Enclosure	E
Rear	R	No Enclosure	NE

Contact your AR RF/Microwave Instrumentation Sales Associate for specific model configuration pricing.

# 250U1000A

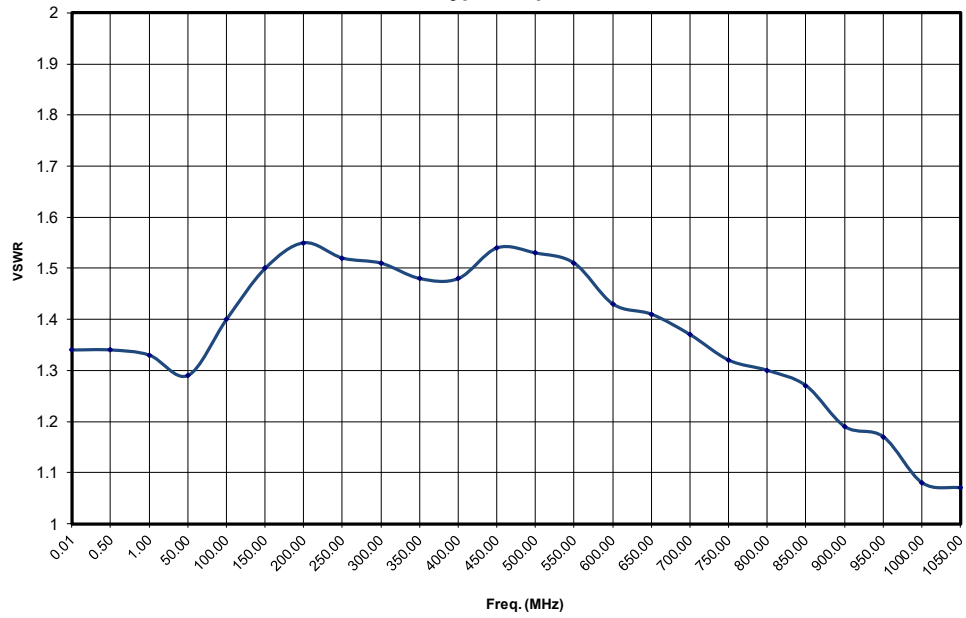
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- 10kHz-1000MHz



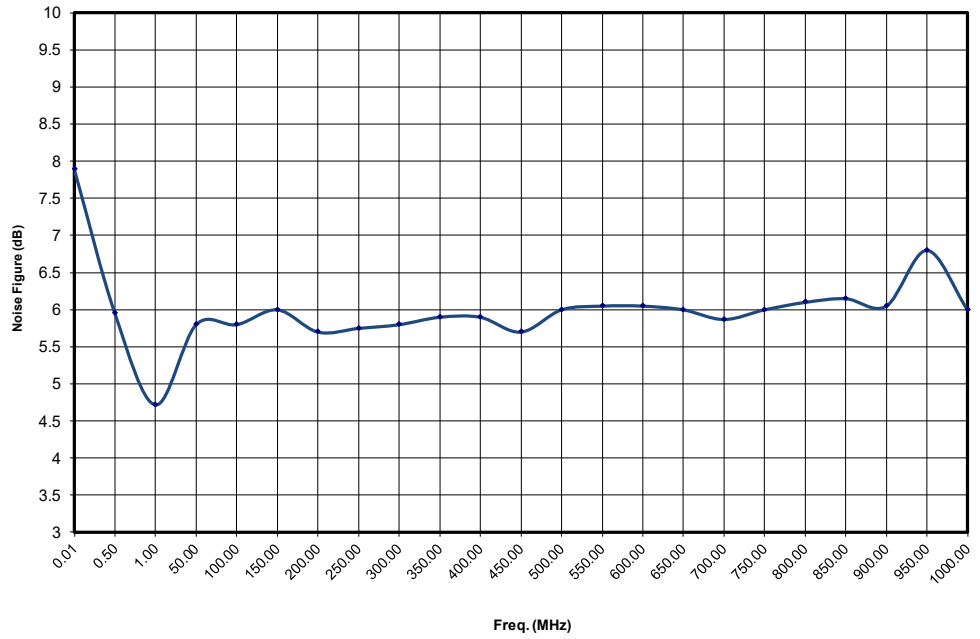
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### Typical Input VSWR



### Typical Noise Figure vs. Frequency



# Envelope Drawing

## 250U1000A

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- 10kHz-1000MHz

