



## 5000A225A

- 5000 Watts CW
- 10kHz–225MHz
- Class A
- Portable
- Full VSWR-tolerant
- CE & RoHS Compliant

### Features

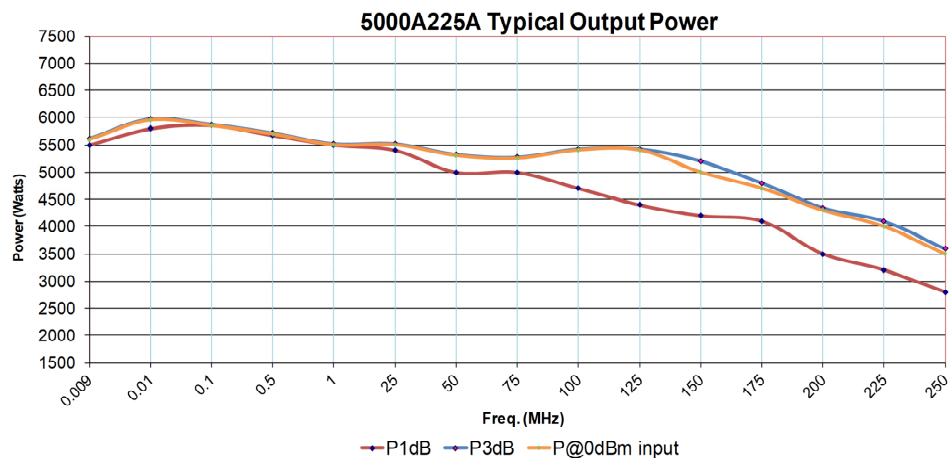
The Model 5000A225A is a solid-state, self-contained, broadband amplifier designed for applications where instantaneous bandwidth, high gain and linearity are required. The amplifier is air-cooled using internal self-contained liquid cooling for high performance and reliability. A stylish, contemporary enclosure allows for easy portability.

The Model 5000A225A, when used with a sweep generator, will provide a minimum of 5000 watts of RF power. Included is a front panel gain control which permits the operator to conveniently set the desired output level. The 5000A225A 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 5000A225A 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 keyswitch 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.



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ISO 9001 Certified



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## Specifications

### RATED OUTPUT POWER:

Typical: 5500 watts, min 5000 watts, .01-100MHz  
 Typical: 4500 watts, min 3500 watts, 100-225MHz

**INPUT FOR RATED OUTPUT:** 1.0 mW Max

### POWER OUTPUT @ 3dB COMPRESSION:

Typical: 5500 watts, min 5000 watts, .01-100MHz  
 Typical: 4500 watts, min 3500 watts, 100-225MHz

### POWER OUTPUT @ 1dB COMPRESSION:

Typical: 5000 watts, min 4000 watts, .01-100MHz  
 Typical: 4000 watts, min 3000 watts, 100-225MHz

**FLATNESS:** ±2.0 dB typical, ±2.5 dB maximum

**FREQUENCY RESPONSE:** 10kHz-225 MHz instantaneously

**GAIN (at maximum setting):** 67 dB minimum

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

**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 2500W reflected power.

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

**THIRD ORDER INTERCEPT:** 74 dBm typical

**NOISE FIGURE:** 8.5 dB typical

**HARMONIC DISTORTION:** Minus 30 dBc typical, minus 20 dBc maximum at 3000 watts

**SPURIOUS:** Minus 70 dBc typical

**PRIMARY POWER (User must specify):** 200-240 VAC or 380-415 VAC, 3-phase, 50/60Hz, 20 kWatts

### CONNECTORS:

RF Input: N female  
 RF Output: EIA 1-5/8 male, rear

### 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, internal self-contained liquid

**WEIGHT:** 250 kg (550 lbs)

**SIZE (W x H x D):** 56.1 x 173 x 88.9 cm (22.1 x 68.15 x 35 in)

### ENVIRONMENTAL:

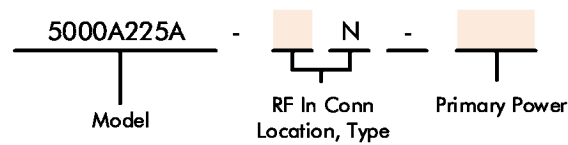
Operating Temperature: 5°C / +40°C  
 Operating Altitude: Up to 2000M  
 Shock and vibration: Normal Truck Transport

### 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

## Ordering Options



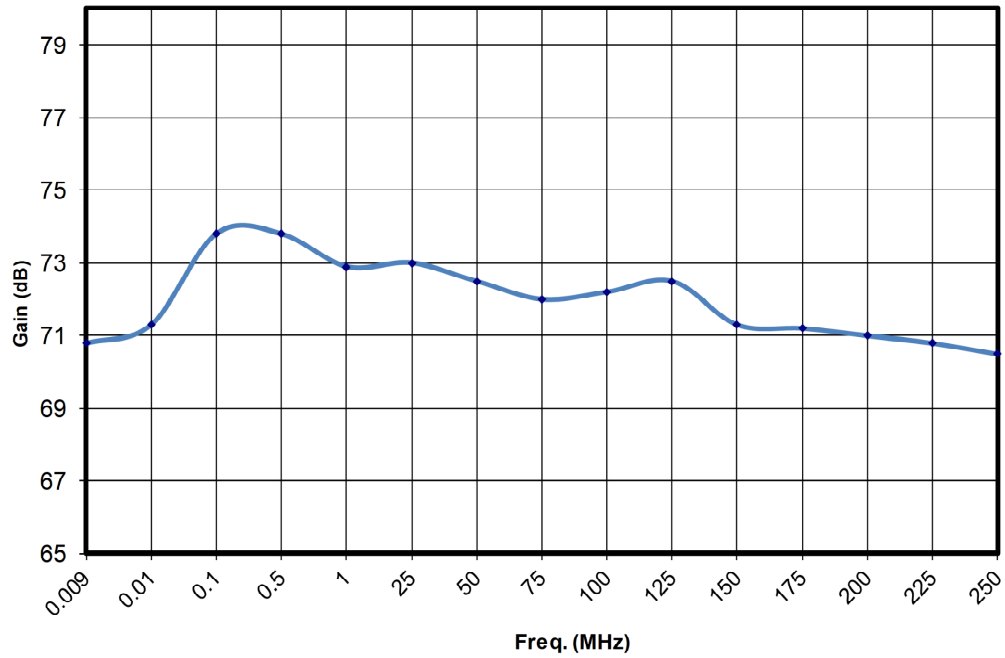
CONNECTOR LOCATION		PRIMARY POWER	
Front	F	200-240 VAC	LV
Rear	R	380-415 VAC	HV

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

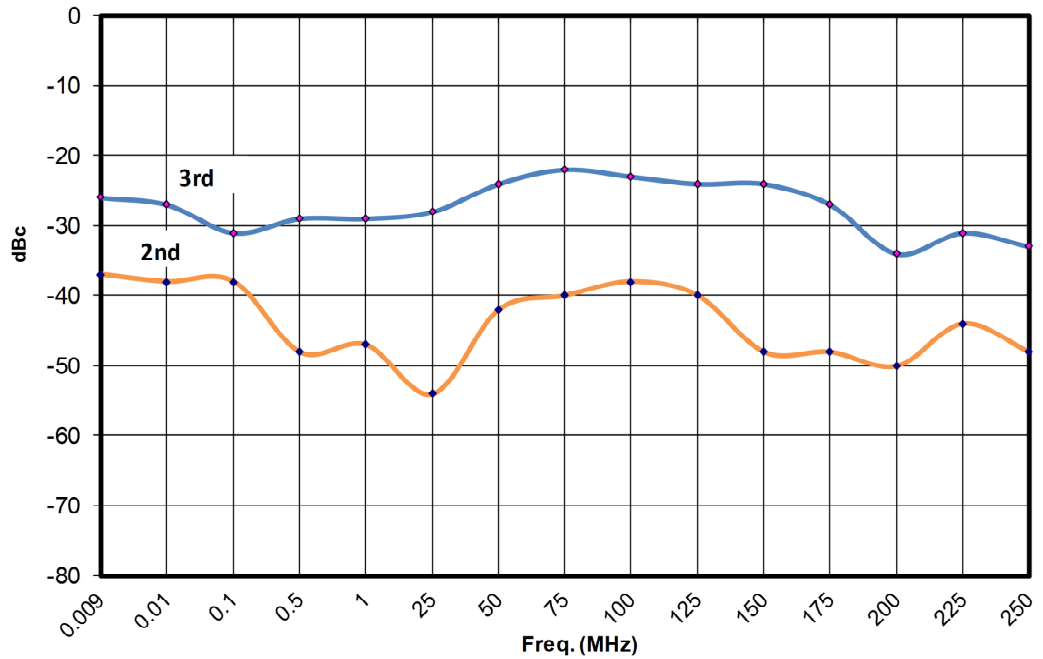
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### Typical Gain @ -20 dBm input



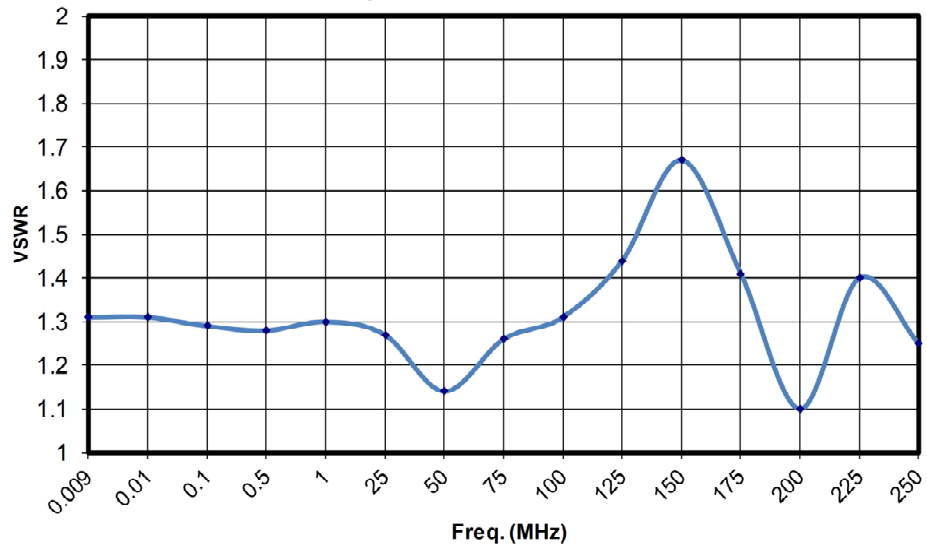
### Typical Harmonics @ 3000 watts



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### Typical Input VSWR



### Typical Noise Figure vs. Frequency

