

# Amplifiers

## Model 1200A225B

### Features:

- 1200 W CW, .01 - 225 MHz
- Class A design
- 100% mismatch tolerant
- Built-in fault monitoring, logging and protection
- Touch screen display
- Forward and reverse power monitoring
- VSWR monitor with user settable limit
- User settable ALC
- Remote control: Ethernet, USB, GPIB, fiber-optic serial, RS-232
- Modular design for easy maintenance and service
- AC Power Cord Included

### Applications:

- EMC (military, aviation, automotive, commercial)
- Radiated and conducted EMC testing
- General purpose, antenna, and component testing

To view our full amplifier portfolio visit: [www.arworld.us/amplifiers](http://www.arworld.us/amplifiers)

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ISO 9001:2015 Certified

ISO 17025 :2017 Accredited

The Model 1200A225B is a solid-state, Class A design, self-contained, air-cooled, broadband power amplifier designed for applications where instantaneous bandwidth, high gain and linearity are required. It will provide a minimum of 1200 W across its operating bandwidth of .01 - 225 MHz. Protection from input overdrive beyond 0 dBm is provided as well as protection from various failure conditions including over-temperature and power supply faults.



A front panel display indicates the operational status and fault conditions. All amplifier control functions, and status indications are available remotely using GPIB/IEEE-488, RS-232, fiber-optic serial, USB, or Ethernet. Interface connectors are located on the back panel. Local and remote operation is managed by a switch on the front panel.

This is a high-power Class A amplifier. The low level of spurious signals and linearity make it ideal for EMC Test applications where continued operation into high VSWR loads including open and short circuits is required.

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.

Model 1200A225B

- 1200 W
- .01 - 225 MHz

Electrical Specifications					
Parameter	Symbol	Minimum	Typical	Maximum	Unit
Rated Power Output (.01 - 100 MHz)	PSAT	1200	1350	>1400	W
Rated Power Output (100 - 225 MHz)	PSAT	1100	1250	>1300	W
Input for Rated Output	Pin			1.0	mW
				0	dBm
Power Output @ 3 dB Compression (.01 - 100 MHz)	P3dB	1200	1350	>1400	W
Power Output @ 3 dB Compression (100 - 225 MHz)	P3dB	1000	1250	>1300	W
Power Output @ 1 dB Compression (.01 - 100 MHz)	P1dB	1100	1250	>1300	W
Power Output @ 1 dB Compression (100 - 225 MHz)	P1dB	750	900	>1000	W
Operating Frequency	BW	.01		225	MHz
Gain (Small Signal)		62	64	68	dB
Gain Reduction Adjustment (when below compression)		20	25	30	dB
Flatness	$\Delta G$		$\pm 2.0$	$\pm 2.5$	dB
Input Impedance	Z in		50		Ohm
			1.5:1	2.0:1	VSWR
Output Impedance	Z out		50		Ohm
3 <sup>rd</sup> Order Intercept	IP3		72		dBm
Noise Figure	NF		10		dB
Harmonic Distortion @ 1000 W	H2, H3		-30	-20	dBc
Spurious			-73		dBc
Power Consumption	PD			4000	W
Modulation Capability	AM, FM or Pulse				

Absolute Maximum Rating					
Exceeding any of the limits listed here may result in permanent damage to the device.					
Parameter		Minimum	Typical	Maximum	Unit
RF Drive			0	+13	dBm
RF Load			1:1	$\infty$	VSWR
RF Load Reflected				50	%
Will operate without damage or oscillation when connected to any load impedance without the aid of foldback circuitry. Load mismatch above 6:1 may limit output reflected power to 50% of minimum rated power.					
AC Power (single phase)	UL/CSA/CE	200		240	VAC
	UL/CSA/CE	47		63	Hz
Ambient Temperature		+5	+25	+35	°C
Storage Temperature		-20		+50	°C
Altitude				2000	m
Shock/Vibration	Normal Truck Transport				



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Mechanical Specifications		
Parameters		Unit
Dimensions (With Cabinet) (W x H x D)	50.3 x 47 x 65.3	cm
	19.8 x 18.5 x 25.7	in
Dimensions (No Cabinet) - 10U for 19" Rack	48.3 x 44.5 x 65.3	cm
	19.0 x 17.5 x 25.7	in
Weight (With Cabinet)	23.1	kg
	151	lb
Weight (No Cabinet)	54.5	kg
	120	lb
Cooling	Forced air (self-contained fans) Side inlets/rear outlet $\Delta t = +7^{\circ}\text{C}$ (typical)	
Acoustical Noise (Measured @ 1 meter from the front)	64 (typical)	dBA

Regulatory Compliance	
Type	Standard
EMC	EN 61326-1
Safety	UL 61010-1
	CAN/CSA C22.2 #61010-1
	CENELEC EN 61010-1
RoHS	Directive 2011/65/EU
Export	EAR99

Connector interfaces	
Function	Type
RF input	N female (50 $\Omega$ )
RF output	7-16 DIN female (50 $\Omega$ )
RF Sample	N female (50 $\Omega$ ) (60dB typical)
IEEE-488	24-pin female
RS-232	9-pin subminiature D female
RS-232 (fiber optic)	ST
USB 2.0	Type B
Ethernet	RJ-45
Interlock	15-pin subminiature D female
AC	L6-30P



Model 1200A225B

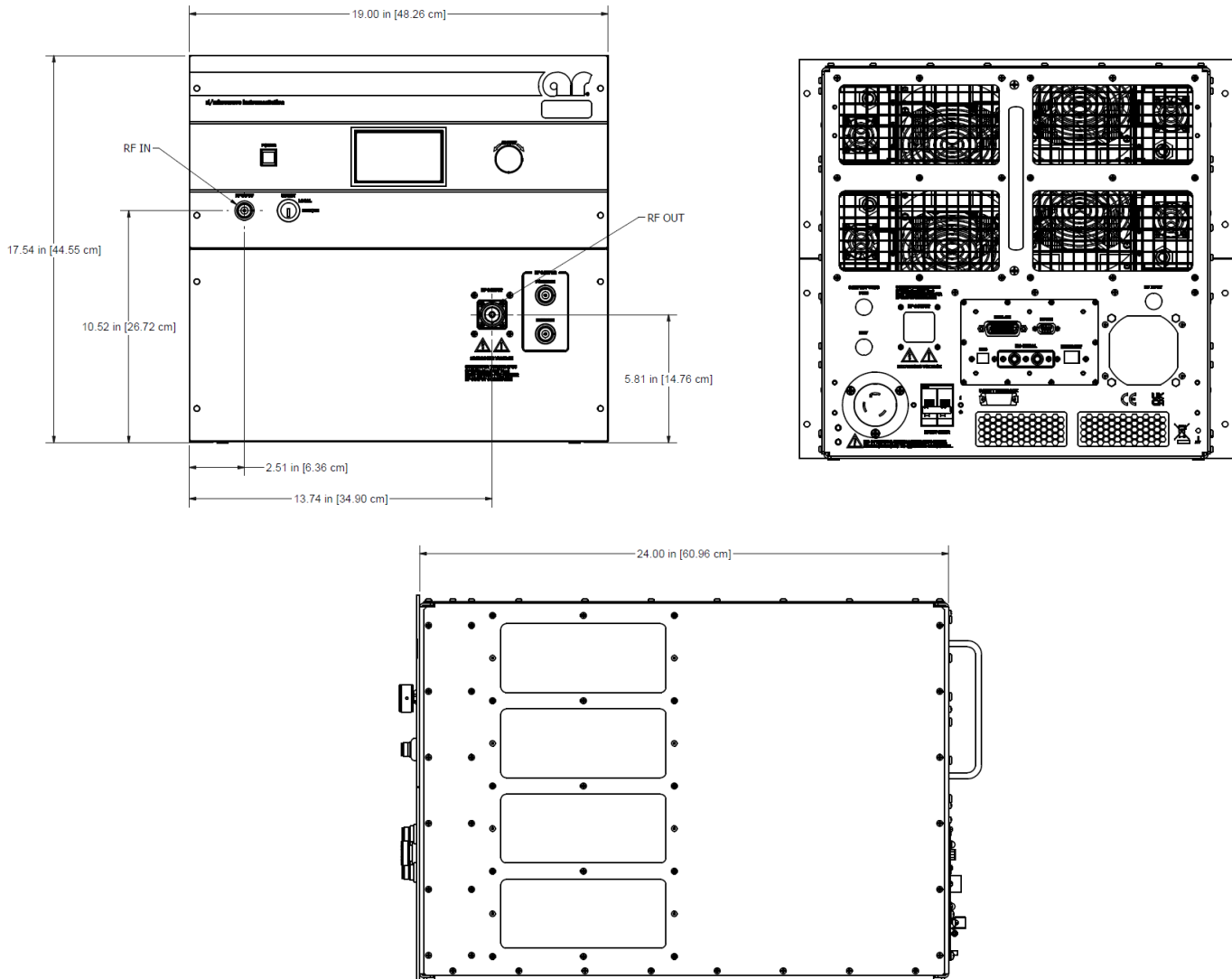
- 1200 W
- .01 - 225 MHz

Ordering Options

<b>1200A225B</b>	<b>-</b>	<b>N</b>	<b>-</b>	<b>716</b>	<b>-</b>		
Model		RF IN Conn Location, Type		RF OUT Conn Location, Type		Enclosure No Enclosure	
						RF Sample Ports	
<b>Connector</b>				<b>Enclosure</b>		<b>RF Sample Ports</b>	
Front	F	Enclosure	E	Front	SPF		
Rear	R	No Enclosure	NE	Rear	SPR		

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

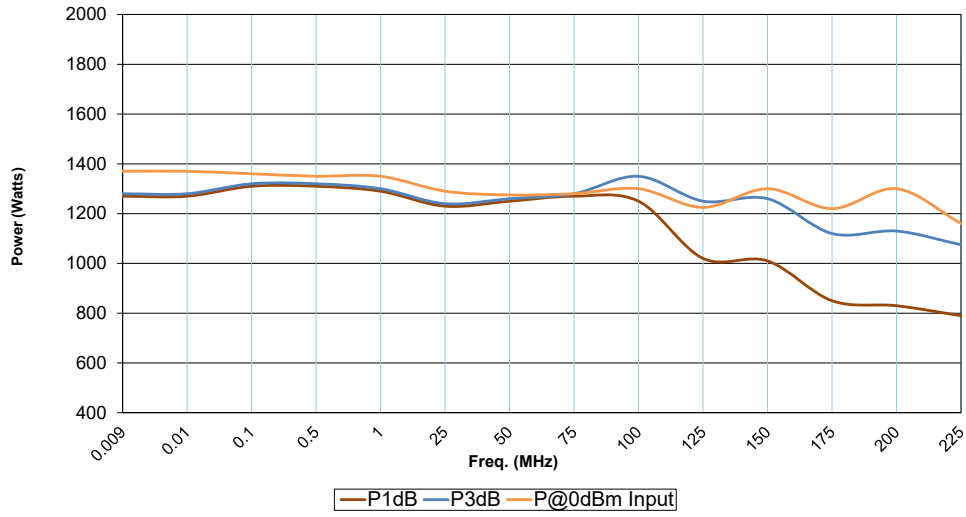
Envelope Drawing



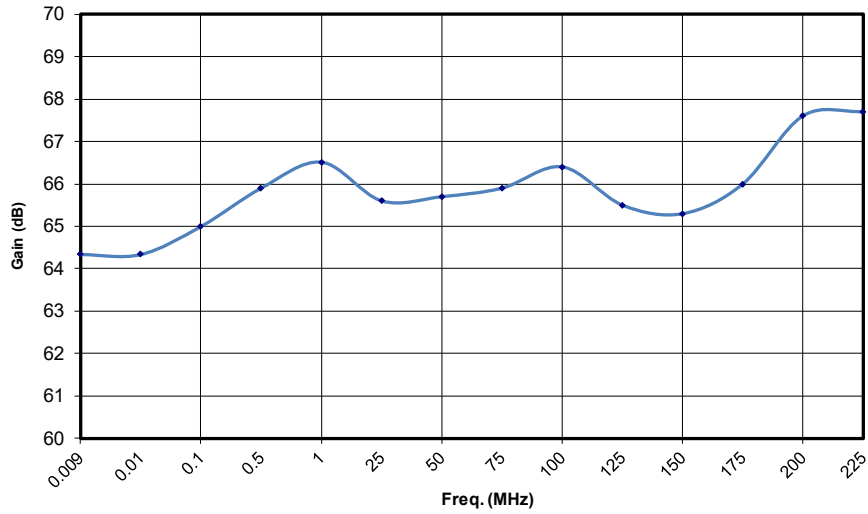
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TYPICAL PSAT POWER @ 0dBm INPUT, 1 dBm, 3dBm



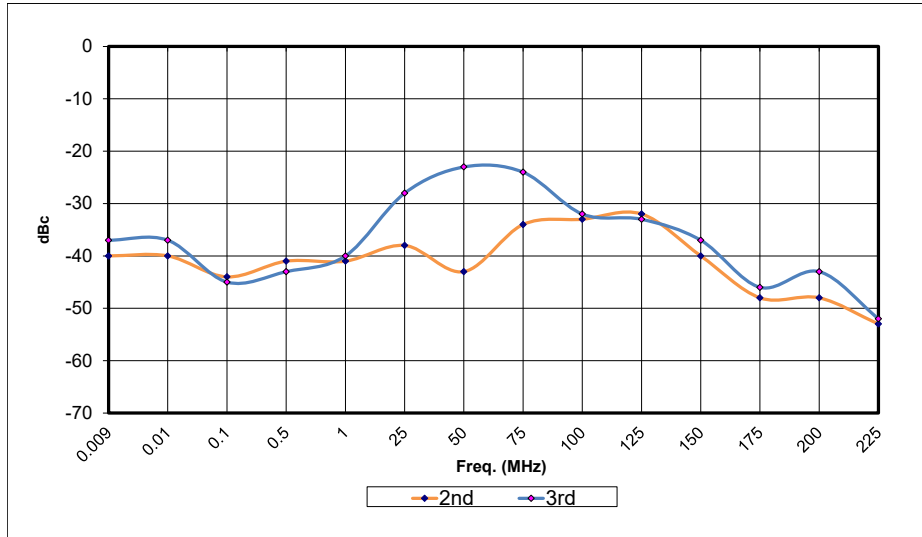
TYPICAL SMALL SIGNAL GAIN @ -20dBm INPUT



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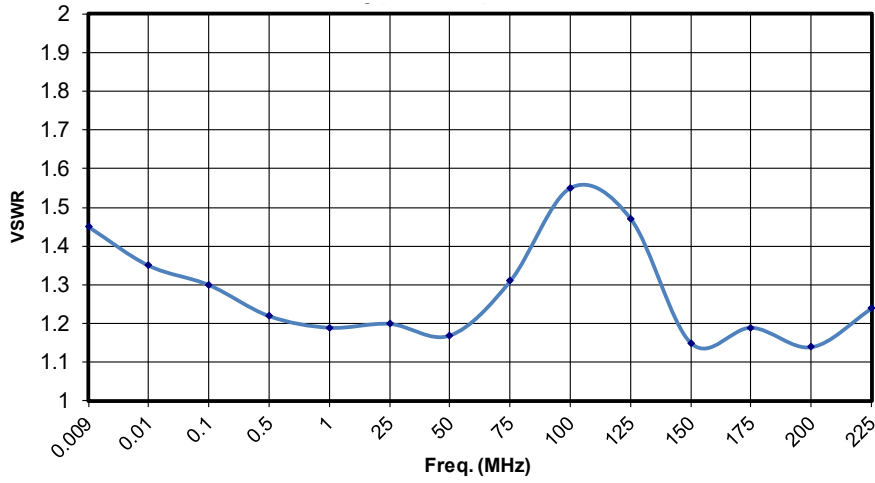
TYPICAL 2<sup>nd</sup>, 3<sup>rd</sup> HARMONICS @ 1000 W



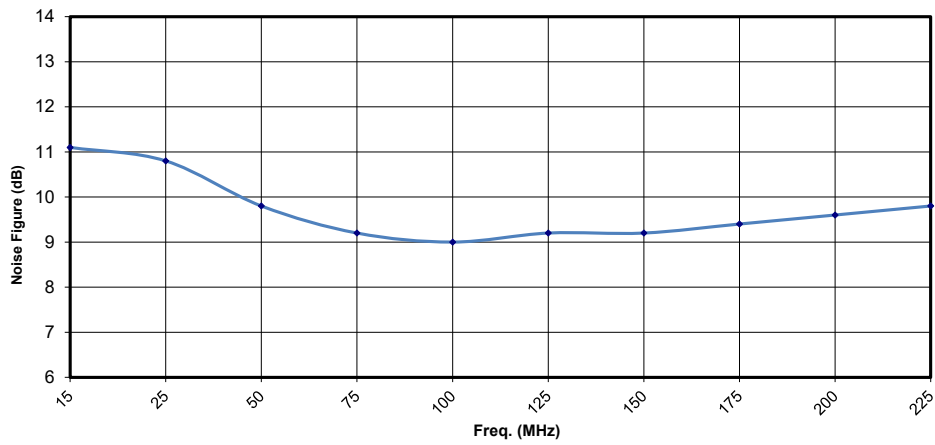
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TYPICAL INPUT VSWR



TYPICAL NOISE FIGURE



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