Amplifiers

Model 1200A225D

Features:

- 1200 W CW, 10 kHz – 225 MHz
- Class A design
- 100% mismatch tolerant
- Built-in fault monitoring and protection
- Remote control: Ethernet, USB, GPIB, fiber-optic serial, RS-232
- Modular design for easy maintenance and service
- Low acoustical noise

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.ar.ametek-cts.com

AR RF/Microwave Instrumentation
160 Schoolhouse Rd
Souderton, PA 18964
215.723.8181
ISO 9001: 2015 Certified
ISO 17025 :2017 Accredited

The updated 1200A225D is a solid-state, Class A design, self-contained, air-cooled, broadband power amplifier. It is designed for applications that require instantaneous bandwidth, high gain, and linearity. This amplifier provides a minimum of 1200 W across its operating bandwidth of 0.01 - 225 MHz. It is equipped with protection from input overdrive beyond 0 dBm, as well as protection from various failure conditions, including over-temperature and power supply faults.

An easy-to-read 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. The interface connectors are located on the back panel. Also, local and remote operation can be managed by a switch on the front panel.

This high-power Class A amplifier is ideal for EMC Test applications due to its low level of spurious signals and linearity, allowing for continued operation into high VSWR loads.

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 1200A225D

- **1200 W**
- **10 kHz – 225 MHz**

Electrical Specifications

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Rated Power Output (0.01 – 100MHz)	PSAT	1200	1350	>1400	W
Rated Power Output (100 – 225MHz)	PSAT	1100	1250	>1300	W
Input for Rated Output	Pin			1	mW
				0	dBm
Power Output @ 3 dB Compression (0.01 – 100MHz)	P3dB	1200	1350	>1400	W
Power Output @ 3 dB Compression (100 – 225MHz)	P3dB	1000	1250	>1300	W
Power Output @ 1 dB Compression (0.01 – 100MHz)	P1dB	1100	1250	>1300	W
Power Output @ 1 dB Compression (100 – 225MHz)	P1dB	750	900	>1000	W
Operating Frequency	BW	0.01		225	MHz
Gain (Small Signal)		62	64	68	dB
Gain Reduction Adjustment (when below gain compression)		20	25	30	dB
Flatness @ small signal (-20 dBm input)	ΔG		±2.0	±2.5	dB
Input Impedance	Z in		50		Ohm
			1.5:1	2.0:1	VSWR
Output Impedance	Z out		50		Ohm
3rd 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

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	dBm
RF Load		1:1	∞	VSWR
RF Load Reflected 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.			50	%
AC Power (single phase)	200		240	VAC
AC Power (Three Phase)				
AC Power	47	60	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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- **1200 W**
- **10 kHz – 225 MHz**

Mechanical Specifications		
Parameters	**Typical**	**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)	
Acoustic Noise Measured @ 1 Meter	64	dBA

Connector Interfaces	
Function	**Type**
RF Input	N, female, rear (50 Ω) (option front)
RF Output	7-16 DIN female, rear (50 Ω)
RF Sample	N, female, rear (50 Ω) (60dB typical) (option front)
IEEE-488	24-pin
RS-232	9 pin subminiature D
Ethernet	RJ-45
RS-232 (fiber optic)	ST
USB 2.0	Type B
Interlock	15-pin subminiature D

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

Ordering Options

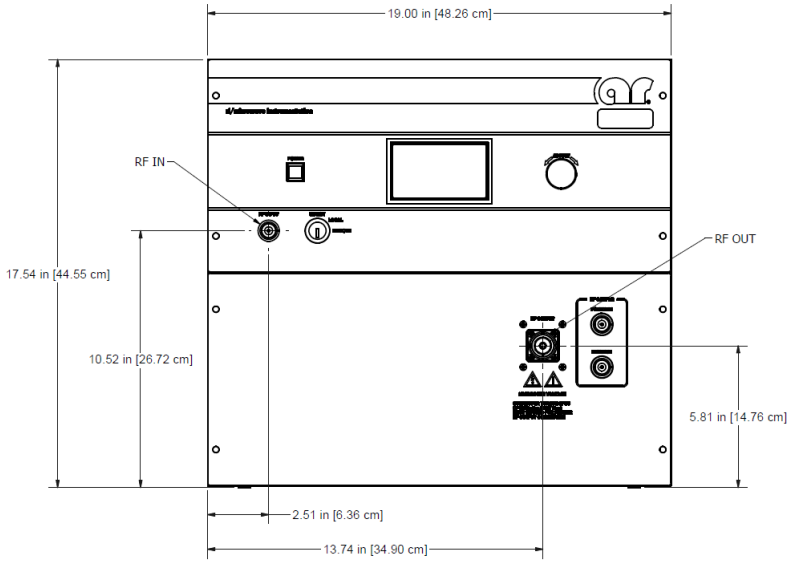
1200A225D	-		-	**N**	-		-	**716**	-		-	
Model		**RF IN Conn Location, Type**				**RF OUT Conn Location, Type**				**Enclosure No Enclosure**		**RF Sample Ports**

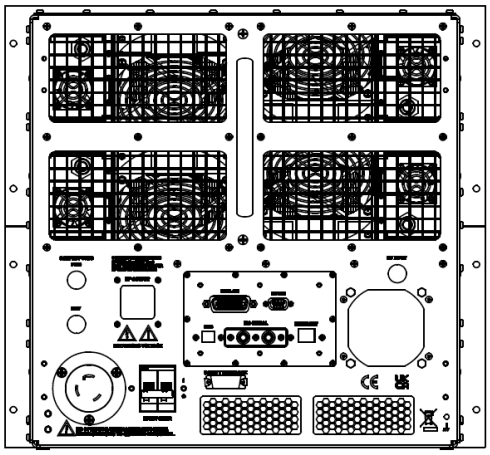
Connector	
Front	F
Rear	R

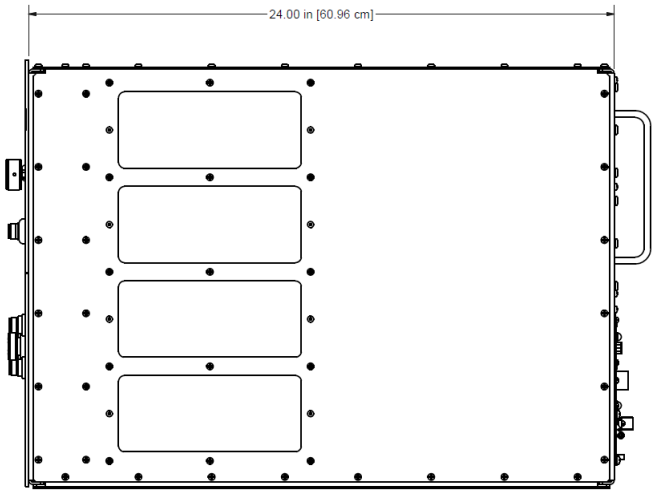
Enclosure	
Enclosure	E
No Enclosure	NE

RF Sample Ports	
Front	SPF
Rear	SPR

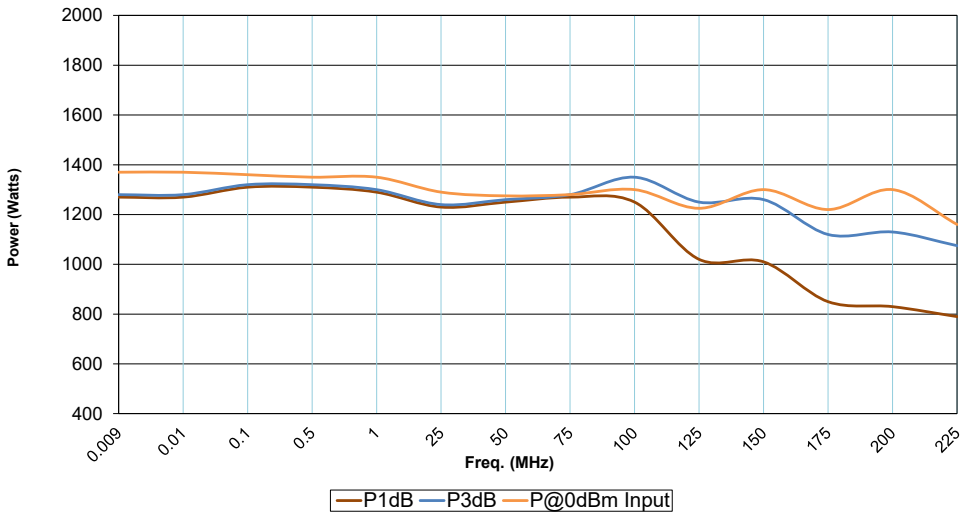
Envelope Drawing



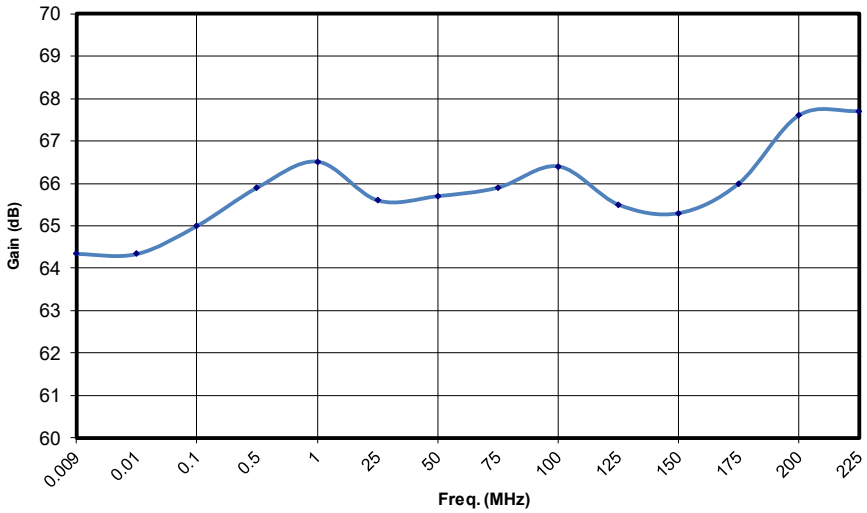




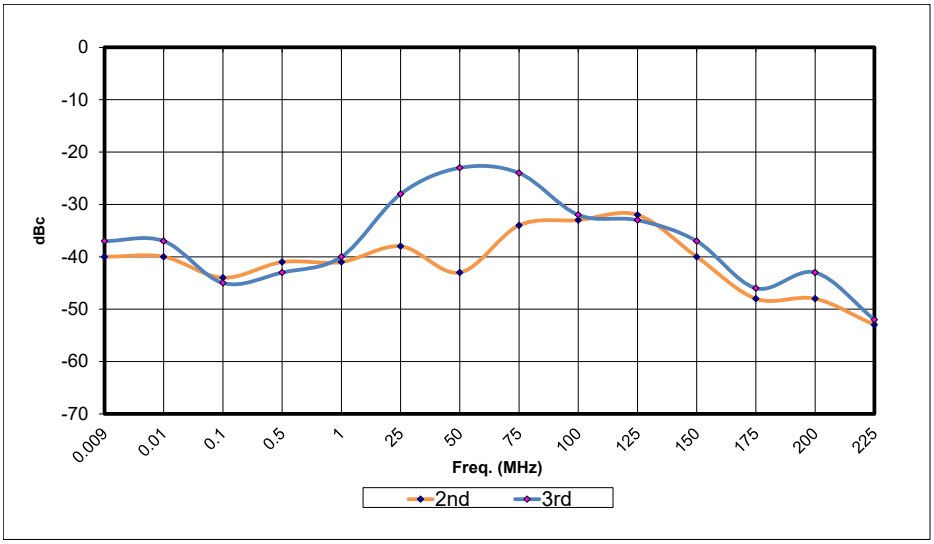
TYPICAL PSAT POWER @ 0dBm INPUT, 1 dBm, 3dBm



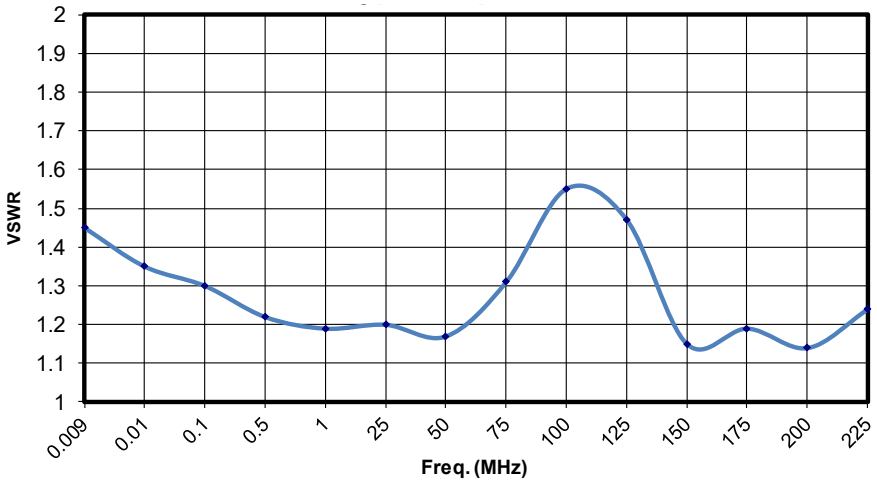
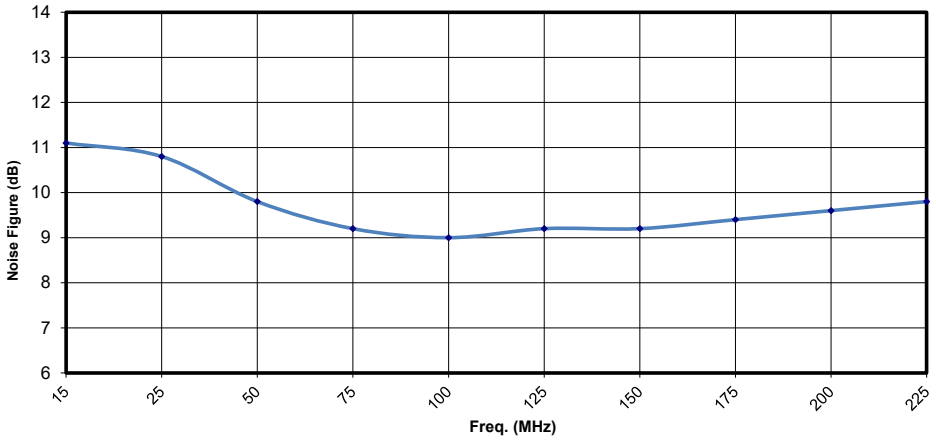
TYPICAL SMALL SIGNAL GAIN @ -20dBm INPUT



TYPICAL 2nd, 3rd HARMONICS @ 1000 W



TYPICAL INPUT VSWR



TYPICAL NOISE FIGURE