



# Amplifiers

## Model 150W1000B

### Features:

- 150 W CW, 80 – 1000 MHz
- Class A design
- Portable
- 100% mismatch tolerant
- CE & RoHS Compliant
- High Efficiency

### Applications:

- Wireless, communication components, subsystems
- CDMA, W-CDMA, TDMA, GSM
- EMC Test applications

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 150W1000B 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 130 W across its operating bandwidth. 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.

Due to the Class A design it is ideally suited 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 150W1000B

- 150 W
- 80 – 1000 MHz

Electrical Specifications					
Parameter	Symbol	Minimum	Typical	Maximum	Unit
Rated Power Output (80 - 1000 MHz)	PSAT	130	160	>190	W
Input for Rated Output	Pin			1	mW
				0	dBm
Power Output @ 1 dB Compression	P1dB	100	125	>180	W
Power Output @ 3 dB Compression	P3dB	125	150	>200	W
Operating Frequency	BW	80		1000	MHz
Gain (Small Signal)		53	55	57	dB
Gain Reduction Adjustment (when below compression)		20	22	25	dB
Flatness	$\Delta G$		$\pm 1.5$	$\pm 2.0$	dB
Input Impedance	Z in		50		Ohm
			1.3:1	1.5:1	VSWR
Output Impedance	Z out		50		Ohm
			2.0:1	2.5:1	VSWR
3 <sup>rd</sup> Order Intercept	IP3		58		dBm
Noise Figure	NF		6	8	dB
Harmonic Distortion @ 100 W	H2, H3		-30	-20	dBc
Spurious			-73		dBc
Power Consumption	PD			650	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			+13	dBm
RF Load		1:1	$\infty$	VSWR
RF Load Reflected Will operate without damage or oscillation when connected to any load impedance without the aid of foldback circuitry.			100	%
AC Power	100		240	VAC
AC Power	47		63	Hz
Ambient Temperature	+5	+25	+40	°C
Storage Temperature	-20		+50	°C
Altitude			2000	m
Shock/Vibration	Normal Truck Transport			



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Mechanical Specifications		
Parameters	Typical	Unit
Dimensions (With Cabinet) (W x H x D)	50.3 x 20.5 x 74.9	cm
	19.8 x 8.1 x 29.5	in
Dimensions (No Cabinet) – 4U for 19" Rack	48.3 x 17.7 x 74.9	cm
	19.0 x 7.0 x 29.5	in
Weight (With Cabinet)	36.7	kg
	81	lb
Weight (No Cabinet)	25.4	kg
	56	lb
Cooling	Forced air (self-contained fans)	
Acoustical Noise (Measured @ 1 m from the front)	57	dBA

Connector interfaces	
Function	Type
RF input	N female (50 Ω)
RF output	N female (50 Ω)
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

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



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Ordering Options

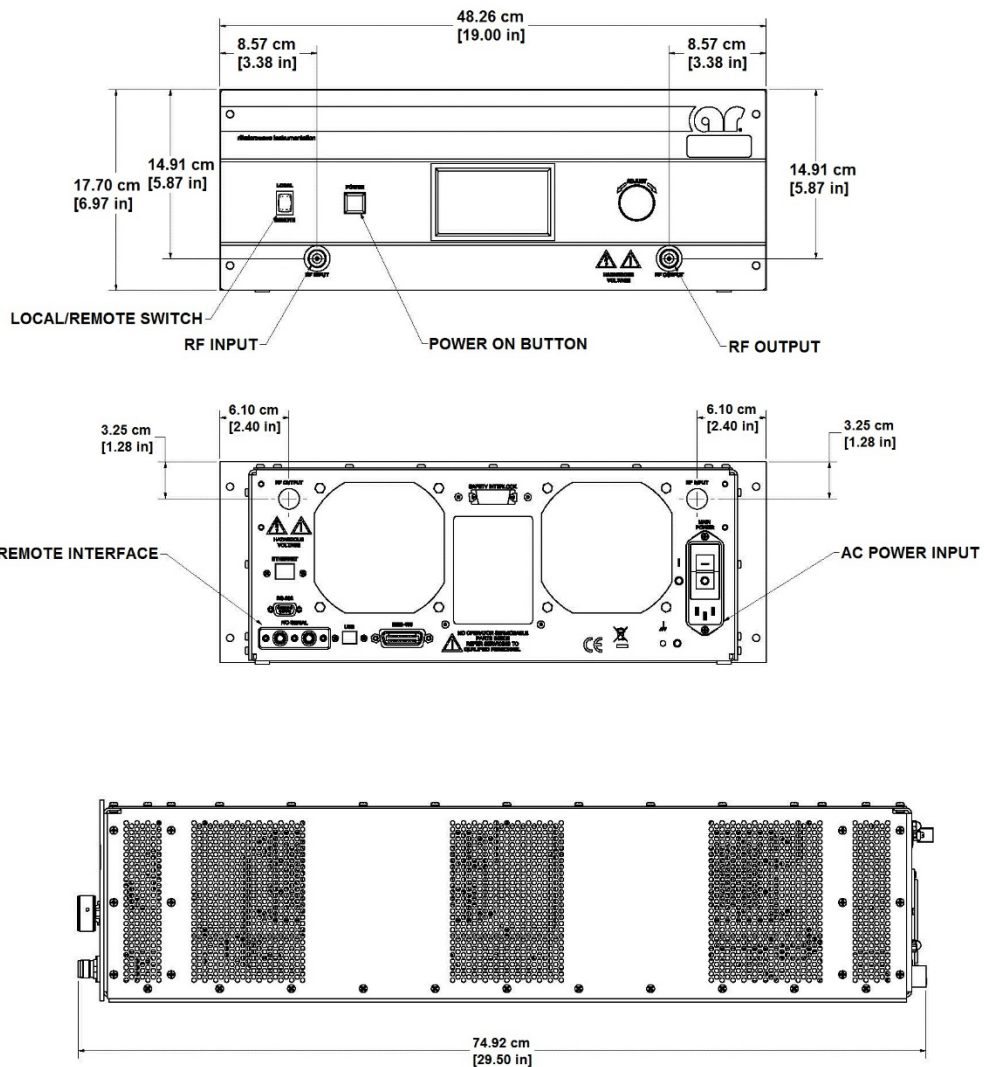
150W1000B	-	-	N	-	-	N	-	Enclosure
Model			RF IN Conn Location, Type			RF OUT Conn Location, Type		Enclosure No Enclosure

N-Connector	
Front	F
Rear	R

Enclosure	
Enclosure	E
No Enclosure	NE

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

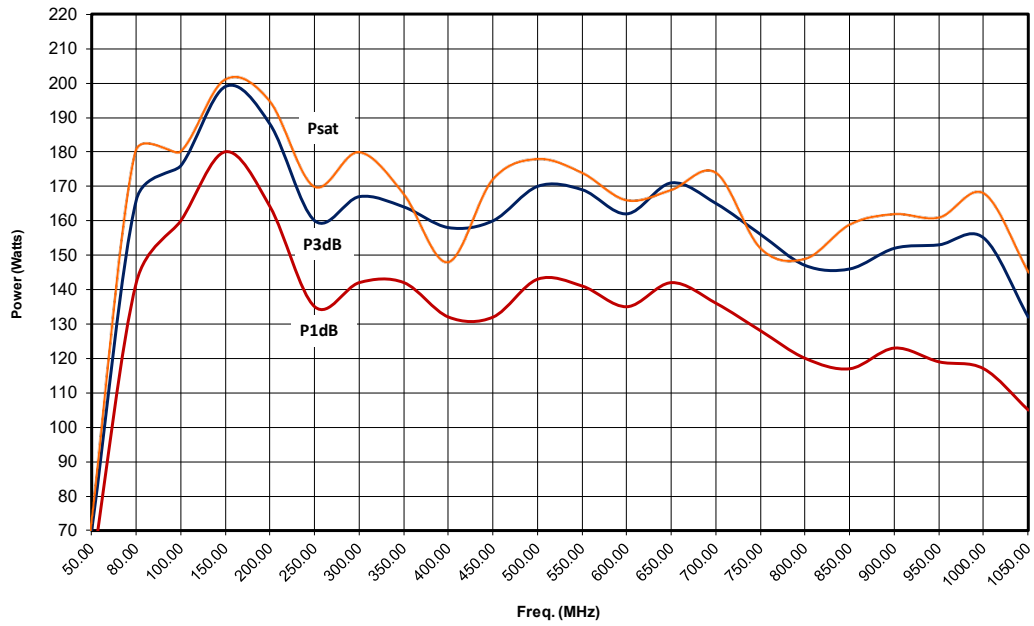
Envelope Drawing



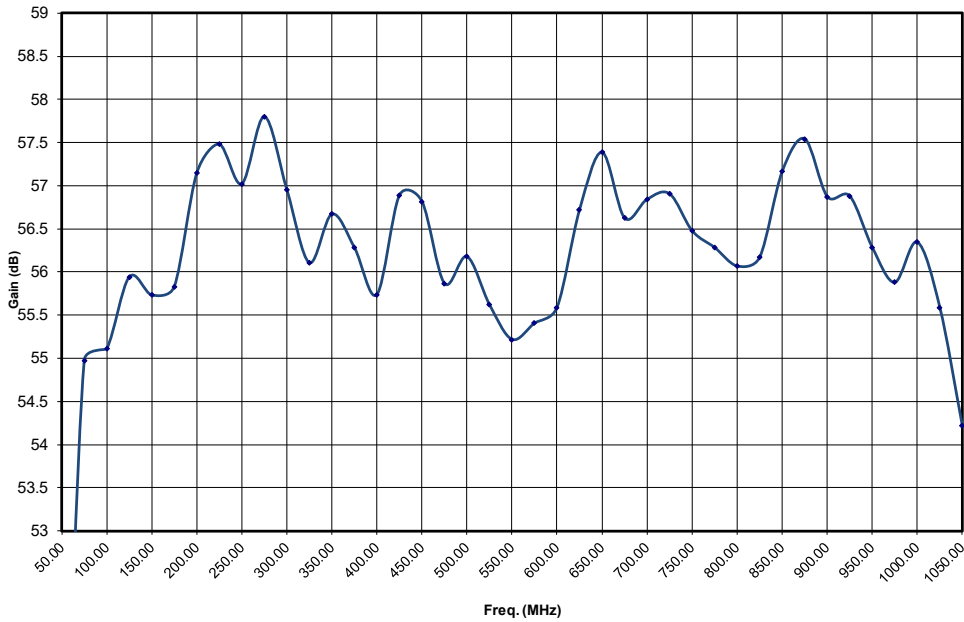
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TYPICAL OUTPUT POWER (P1 dB, P3 dB compression)



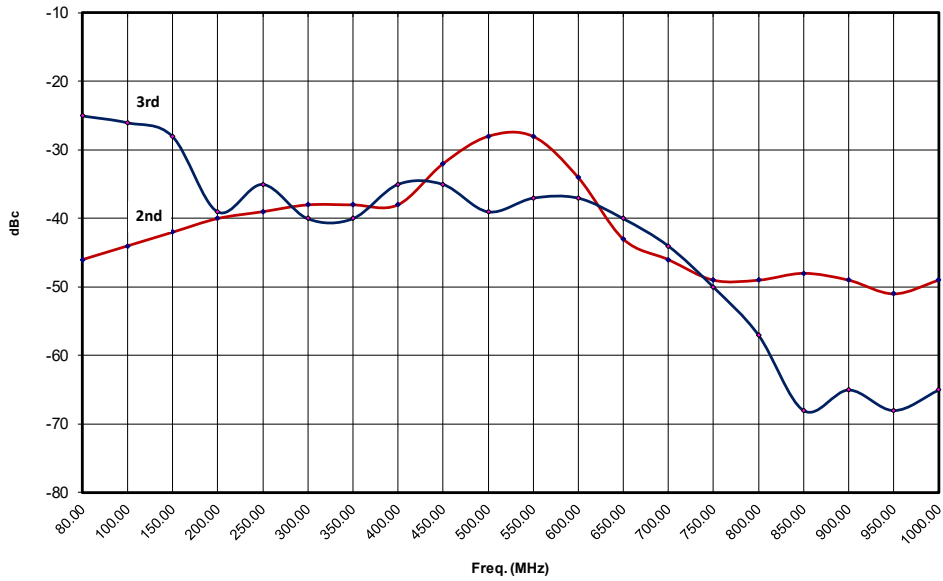
TYPICAL SMALL SIGNAL GAIN @ -20 dBm Input



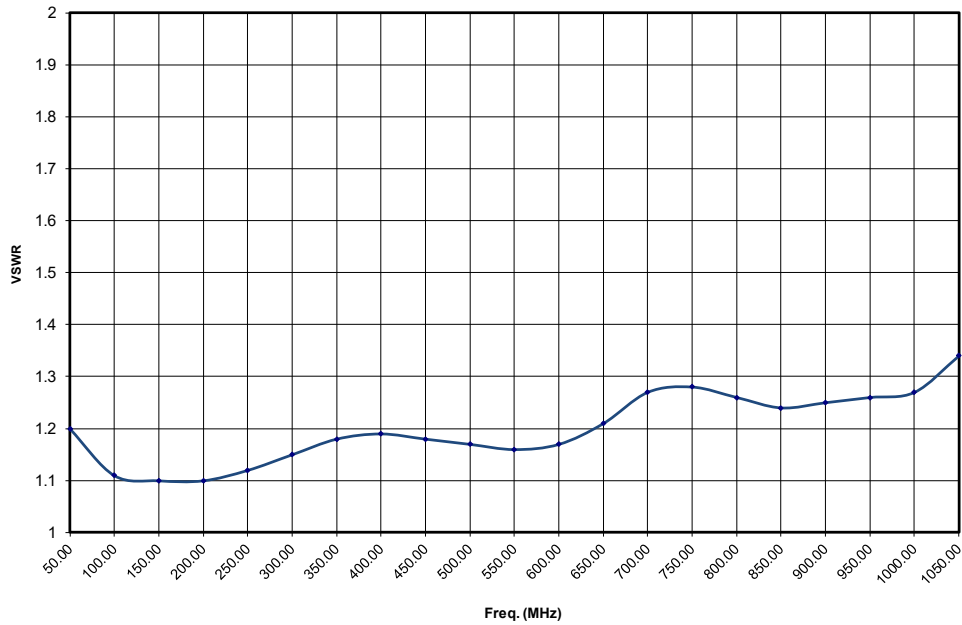
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TYPICAL HARMONICS @ 100 WATTS



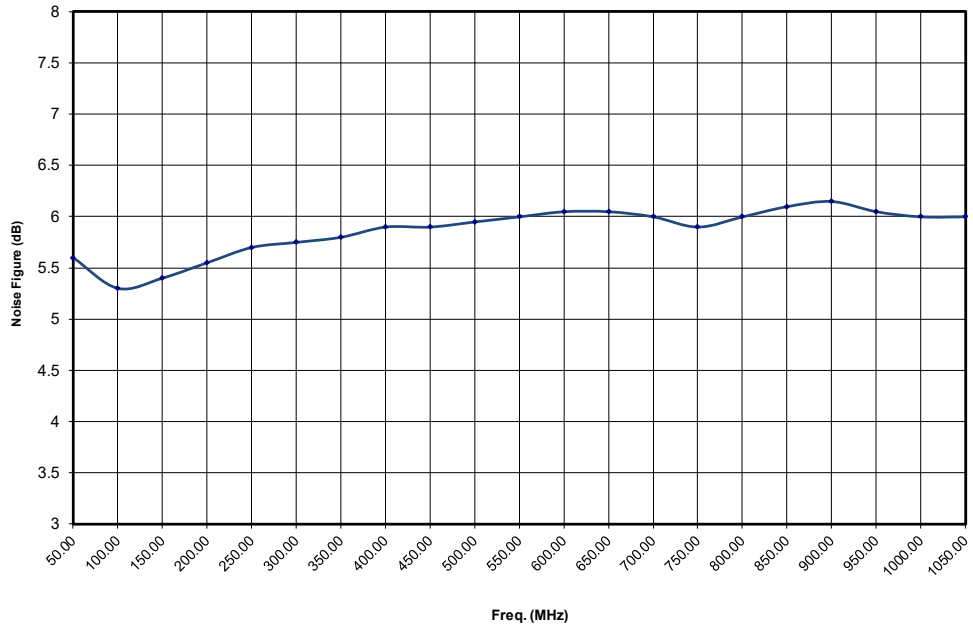
TYPICAL INPUT VSWR



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TYPICAL NOISE FIGURE



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