

# Specifications

	1W1000	5W1000
<b>Power output, cw</b> up to ..... minimum .....	2 watts 1 watt	9 watts 5 watts
<b>Power output, cw linear</b> ..... (less than 1 dB compression into 50 ohms)	1 watt minimum	5 watts minimum
<b>Flatness</b> .....	$\pm 1.0$ dB maximum; $\pm 0.5$ dB typical	$\pm 1.5$ dB maximum; $\pm 1.0$ dB typical
<b>Frequency response</b> ..... (instantaneous)	100 kHz to 1000 MHz	500 kHz to 1000 MHz
<b>Input for rated output</b> .....	1.0 milliwatt max.	1.0 milliwatt max.
<b>Power gain</b> .....	30 dB minimum	37 dB minimum
<b>Input impedance</b> .....	50 ohms; VSWR 2.0:1 max.	50 ohms; VSWR 2.0:1 max.
<b>Output impedance</b> .....	50 ohms; VSWR 2.5:1 max.	50 ohms nominal
<b>Mismatch tolerance</b> ..... (ability to operate without damage, foldback, or oscillation with any magnitude and phase of source and load impedance)	100%	100%
<b>Modulation capability</b> ..... (ability to reproduce faithfully AM, FM, or pulse modulation appearing on input signal)	100%	100%
<b>Noise Figure</b> .....	8 dB typical	10 dB typical
<b>Harmonic distortion</b> .....	Minus 20 dBc max. at 1 watt.	Minus 20 dBc max. at 5 watts.
<b>Third-order intercept point</b> .....	42 dBm typical	48 dBm typical
<b>Primary power</b> ..... (select via internal taps)	100/110/120/200/208/220/ 240 Vac $\pm 5\%$ , 50/60 Hz, single-phase, 50 W max.	100/110/120/200/208/220/ 240 Vac $\pm 5\%$ , 50/60 Hz, single-phase, 110 W max.
<b>RF Connectors</b> .....	Type N female	Type N female
<b>Cooling</b> .....	Forced air (self-contained fans)	Forced air (self-contained fans)
<b>Weight</b> .....	4.1 kg (9.0 lb)	9.1 kg (20.0 lb)
<b>Typical Power Curves</b>		
<b>Dimensions</b>		
Models 1W1000 and 5W1000 are available as OEM rf circuit modules without power supply. Contact Amplifier Research for further information.		

# 10W1000

22 watts  
10 watts  
10 watts minimum

± 1.5 dB maximum;  
± 1.0 dB typical

1 to 1000 MHz

1.0 milliwatt max.

40 dB minimum

50 ohms; VSWR 2.0:1 max.

50 ohms nominal

100%

100%

noise floor data on request

Minus 20 dBc max. at 10 watts

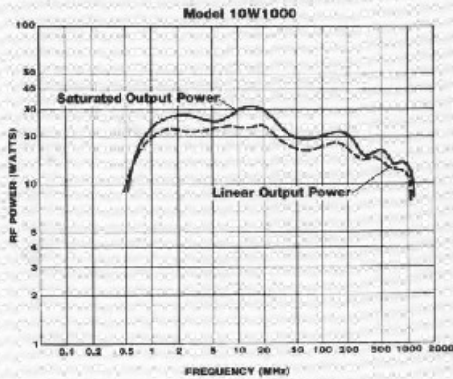
50 dBm typical

100/110/120/200/208/220/  
240 Vac ± 5%, 50/60 Hz,  
single-phase, 400 W max.

Type N female

Forced air (self-contained fans)

28.4 kg (63.0 lb)



# 50W1000

100 watts  
50 watts

40 watts minimum

± 2.0 dB maximum;  
± 1.5 dB typical

1 to 1000 MHz

1.0 milliwatt max.

47 dB minimum

50 ohms; VSWR 2.0:1 max.

50 ohms nominal

100%

100%

noise floor data on request

Minus 20 dBc max. at 40 watts

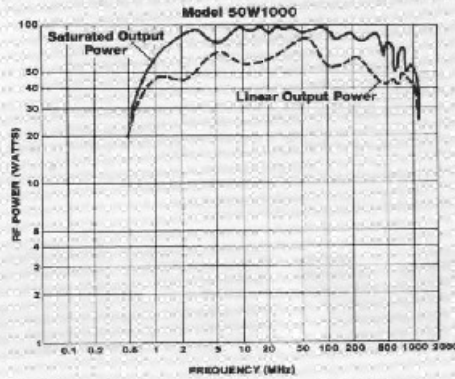
58 dBm typical

100/110/120/200/208/220/  
240 Vac ± 5%, 50/60 Hz,  
single-phase, 1900 W max.

Type N female

Forced air (self-contained fans)

98.0 kg (215.0 lb)



# 10W1000M7

15 watts  
10 watts

8 watts minimum

± 1.5 dB maximum;  
± 1.0 dB typical

100 to 1000 MHz

1.0 milliwatt max.

40 dB minimum

50 ohms; VSWR 2.0:1 max.

50 ohms nominal

100%

100%

noise floor data on request

Minus 20 dBc max. at 8 watts

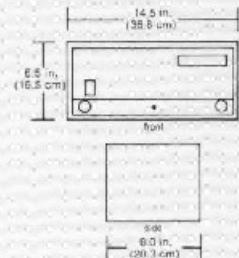
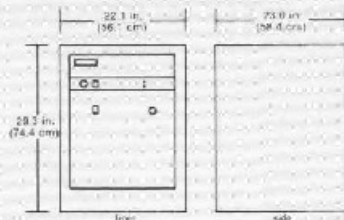
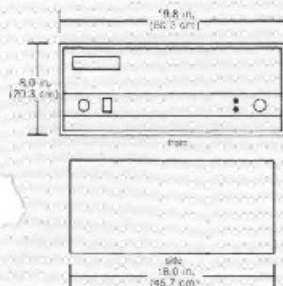
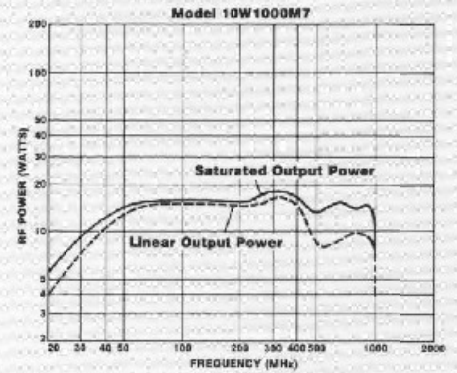
49 dBm typical

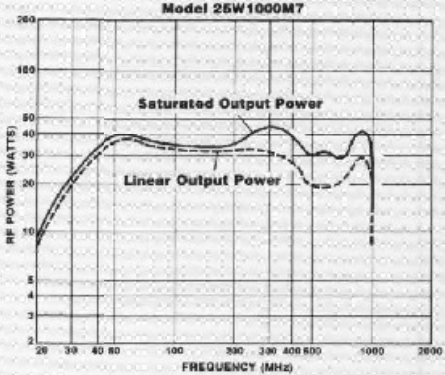
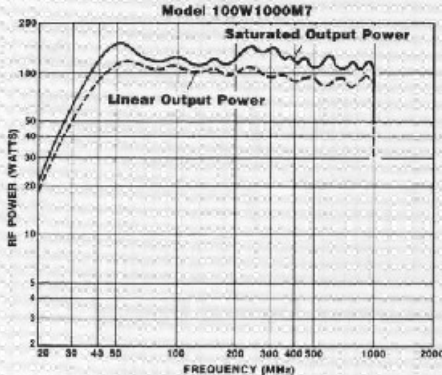
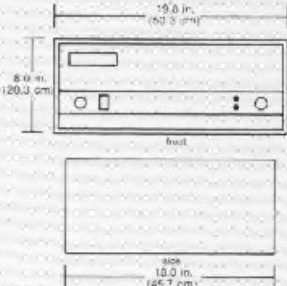
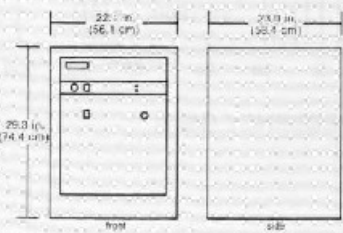
100/110/120/200/208/220/  
240 Vac ± 5%, 50/60 Hz,  
single-phase, 150 W max.

Type N female

Forced air (self-contained fans)

9.1 kg (20 lb)



25W1000M7	100W1000M7	
40 watts 25 watts	180 watts 100 watts	<b>Power output, cw</b> up to minimum
20 watts minimum	70 watts minimum	<b>Power output, cw, linear</b> (less than 1 dB compression into 50 ohms)
± 1.5 dB maximum; ± 1.0 dB typical	± 2.0 dB maximum; ± 1.5 dB typical	<b>Flatness</b>
100 to 1000 MHz	100 to 1000 MHz	<b>Frequency response</b> (instantaneous)
1.0 milliwatt max.	1.0 milliwatt max.	<b>Input for rated output</b>
45 dB minimum	50 dB minimum	<b>Power gain</b>
50 ohms; VSWR 2.0:1 max.	50 ohms; VSWR 2.0:1 max.	<b>Input impedance</b>
50 ohms nominal	50 ohms nominal	<b>Output impedance</b>
100%	100%	<b>Mismatch tolerance</b> (ability to operate without damage, foldback, or oscillation with any magnitude and phase of source and load impedance)
100%	100%	<b>Modulation capability</b> (ability to reproduce faithfully AM, FM, or pulse modulation appearing on input signal)
noise floor data on request	noise floor data on request	<b>Noise Figure</b>
Minus 20 dBc max. at 20 watts	Minus 20 dBc max. at 70 watts	<b>Harmonic distortion</b>
52 dBm typical	60 dBm typical	<b>Third-order intercept point</b>
100/110/120/200/208/220/ 240 Vac ± 5%, 50/60 Hz, single-phase, 750 W max.	100/110/120/200/208/220/ 240 Vac ± 5%, 50/60 Hz, single-phase, 3000 W max.	<b>Primary power</b> (select via internal taps)
Type N female	Type N female	<b>RF Connectors</b>
Forced air (self-contained fans)	Forced air (self-contained fans)	<b>Cooling</b>
28.4 kg (63.0 lb)	98.0 kg (215.0 lb)	<b>Weight</b>
		<b>Typical Power Curves</b>
		<b>Dimensions</b>  Models 1W1000 and 5W1000 are available as OEM rf circuit modules without power supply. Contact Amplifier Research for further information.

# 1 watt to 100 watts. 100 kHz to 1 GHz.

The Amplifier Research "W" Series constitutes a complete family of self-contained ultra-broadband solid-state amplifiers providing linear operation over the spectrum from 100 kHz to 1000 MHz. The amplifiers are conservatively rated at 1, 5, 10, 25, 50, and 100 watts, and feature instantaneous bandwidth, flat output, and immunity to even worstcase load mismatch including shorted or open cable without damage or system shutdown.

## Applications

- Sweep, cw, and pulse rf and emi susceptibility testing without bandswitching or tuning
- Antenna and component testing, and equipment calibration
- General laboratory instrumentation

