

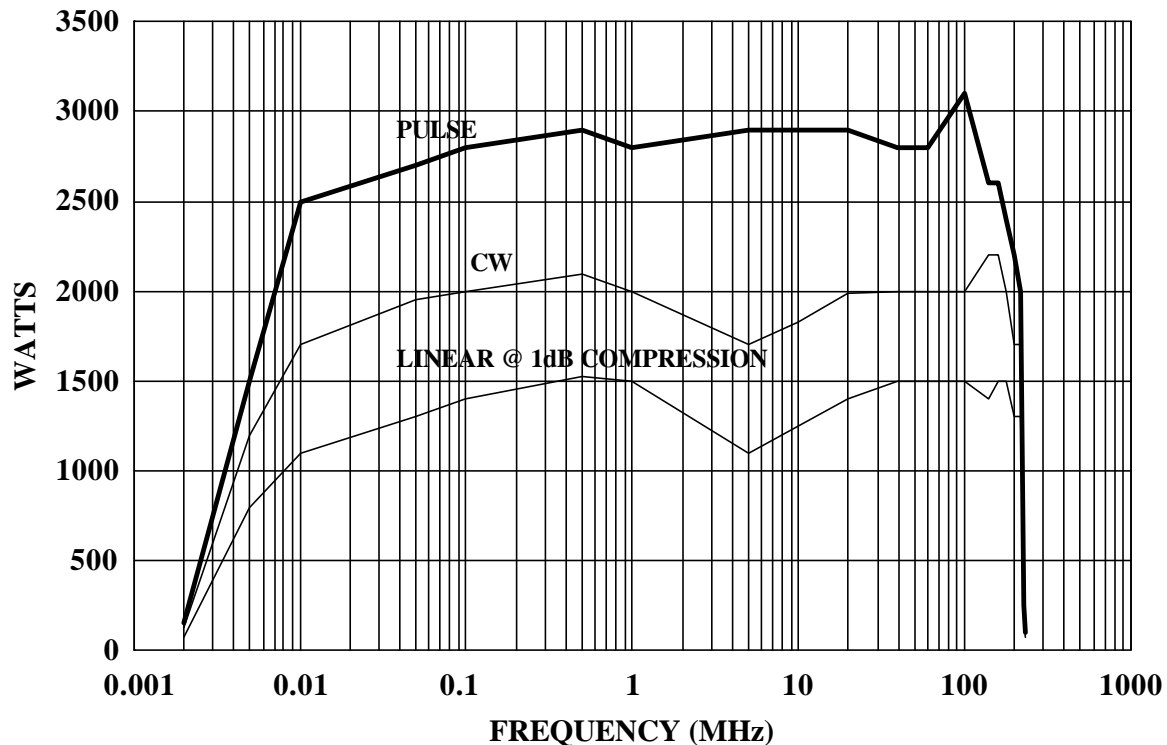


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MODEL 1000L
1200 WATTS CW
2500 WATTS PULSE
10kHz-220 MHz

The Model 1000L is an economical, self-contained, air-cooled broadband amplifier designed for laboratory applications that require instantaneous bandwidth, high gain and high power output. Housed in a stylish contemporary enclosure, the Model 1000L is smaller than competitive units with similar power levels. All operating controls are functionally grouped on the front panel for simplicity of operation. These include modern, lighted push-button switches for the command functions, POWER, STANDBY, OPERATE and PULSE, a control for setting the output level of the amplifier, and a meter for monitoring critical operating voltages and currents. Remote control is provided through a rear panel mounted connector. Isolated TTL level remote control can be accomplished using our CP2001 interface. Isolated IEEE-488 compatible control can be provided with our CP3000. A highly versatile unit, the Model 1000L features rugged circuitry and a quick-acting, solid state crowbar circuit to protect the final amplifier tubes from damage due to internal arcing. An electronic circuit is provided to enable rapid gating or blanking of the amplifier.

1000L TYPICAL POWER OUTPUT



SPECIFICATIONS

Model 1000L

POWER OUTPUT

High Range

Pulse

Minimum 2500 watts to 150MHz
1750 watts to 220MHz

Duty Cycle 15%

Pulse Width..... 8 milliseconds

CW

Minimum 1200 watts

Low Range 100 watts nominal

FLATNESS, high range ± 1.5 dB

FREQUENCY RESPONSE..... 10 kHz - 220 MHz instantaneously

INPUT FOR RATED OUTPUT 1.0 milliwatt maximum

GAIN (at maximum setting)

High Range..... 61 dB minimum

Low Range..... 47 dB minimum

GAIN ADJUSTMENT (continuous range)..... 18 dB minimum

INPUT IMPEDANCE..... 50 ohms, VSWR 1.5:1 maximum

OUTPUT IMPEDANCE..... 50 ohms, nominal

MISMATCH TOLERANCE* 100% of rated power without foldback. Will operate without damage, or oscillation with any magnitude and phase of source and load impedance.

MODULATION CAPABILITY Linear amplitude and phase response to over 80 MHz allows faithful reproduction of AM, FM, Pulse, or phase modulation appearing on the input signal

HARMONIC DISTORTION AT 750 WATTS

Above 120 MHz..... Minus 30 dBc maximum

Below 120 MHz..... Minus 15 dBc maximum

Minus 18 dBc nominal

THIRD ORDER INTERCEPT POINT..... 66dBm Typical

GATING CHARACTERISTICS

Pulse Mode Pedestal/CW Mode Blanking

Signal (into 180 ohms)..... Plus or minus 2.5 to 6.0 VDC

Rise time..... 20 microseconds maximum

Fall time 4 microseconds maximum

RF Rise/Fall Time..... 10 nanoseconds maximum

RF Pulse Droop 1.0% maximum at 8 milliseconds

PRIMARY POWER (specify one)..... 200/208 $\pm 5\%$ VAC, 3 phase, 50/60 Hz
380/415 $\pm 5\%$ VAC, 3 phase, 50/60 Hz
400/415 $\pm 5\%$ VAC, 3 phase, 50/60Hz
15.2 kVA nominal

CONNECTORS

RF Input Type BNC female

RF Output, high range..... Type C female

RF Output, low range..... Type N female

Gating/Blanking Type BNC female

Remote Control 25 pin female subminiature D

COOLING..... Forced air (self contained fans)

WEIGHT..... 239 kg (525 lb)

SIZE (WxHxD) 56.1 x 149.9 x 58.4 cm
22.1 x 59.0 x 23.0 in

* See Application Note #27

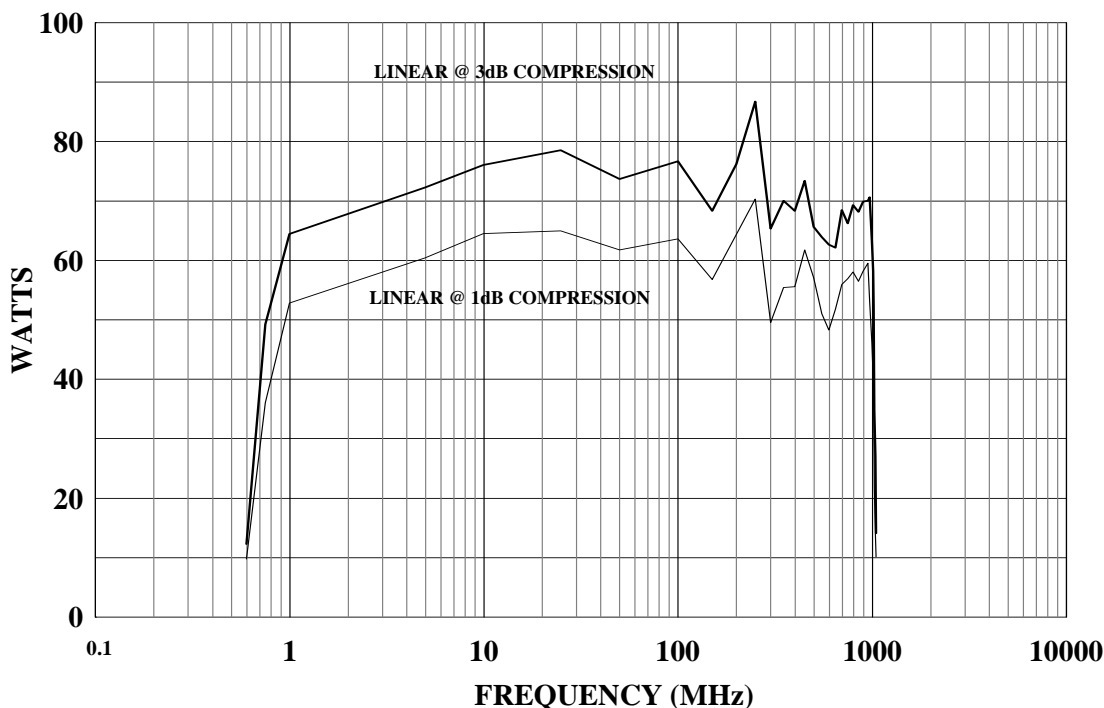


Model 50W1000B
M1 through M5
50 Watts CW
1MHz-1000MHz

The Model 50W1000B is a portable, self-contained, air-cooled, broadband, solid state amplifier designed for applications where instantaneous bandwidth and high gain are required. Push-pull circuitry is utilized in the high power stages to lower distortion and improve stability. The 50W1000B, when used with an RF sweep generator, will provide a minimum of 50 watts of swept power. Included is a front panel gain control which permits the operator to conveniently set the desired output level. The 50W1000B is protected from RF input overdrive by limiting diodes and 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 0 dBm. 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. There is a digital display on the front panel to indicate the operate status and fault conditions when an over temperature, power supply, or amplifier fault has occurred. The unit can be returned to operate when the condition has been cleared. The 50W1000B includes digital control for both local and remote control of the amplifier. This 8-bit RISC microprocessor controlled board provides both IEEE-488 (GPIB) and asynchronous, full duplex RS-232 control of all amplifier functions.

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.

50W1000B TYPICAL POWER OUTPUT



SPECIFICATIONS, MODEL 50W1000B

RATED OUTPUT POWER	50 watts minimum
INPUT FOR RATED OUTPUT	1.0 milliwatt maximum
POWER OUTPUT @ 3dB COMPRESSION	
Nominal	70 watts
Minimum	50 watts
POWER OUTPUT @ 1dB COMPRESSION	
Nominal	55 watts
Minimum	40 watts
FLATNESS.....	± 1.0 dB typical ± 1.5 dB maximum
FREQUENCY RESPONSE	1-1000 MHz instantaneously
GAIN (at maximum setting)	47 dB minimum
GAIN ADJUSTMENT (Continuous Range)	20 dB minimum (4096 steps remote)
INPUT IMPEDANCE.....	50 ohms, VSWR 2.0:1 maximum
OUTPUT IMPEDANCE	50 ohms, nominal
MISMATCH TOLERANCE *	100% of rated power without foldback. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. * See Application Note #27
MODULATION CAPABILITY.....	Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal
HARMONIC DISTORTION.....	Minus 20 dBc maximum at 50 watts
THIRD ORDER INTERCEPT POINT	57 dBm typical
PRIMARY POWER (selected automatically).....	90-132, 180-264 VAC 50/60 Hz, single phase 600 watts maximum
REMOTE INTERFACES	IEEE-488, RS-232
CONNECTORS	
RF.....	Type N female
REMOTE CONTROL	
IEEE-488.....	24 pin female
RS-232	9 pin Subminiature D (female)
REMOTE INTERLOCK	15 Pin Subminiature D
COOLING.....	Forced air (self-contained fans)
WEIGHT	See Model Configurations
SIZE (WxHxD).....	See Model Configurations

MODEL CONFIGURATIONS

MODEL	RF INPUT	RF OUTPUT	WEIGHT	SIZE (W x H x D)
50W1000B	Type N female on front panel	Type N female on front panel	25.9 kg (57.0 lb)	50.3 x 20.3 x 45.7 cm 19.8 x 8.0 x 18.1 in
50W1000BM1	Type N female on rear panel	Type N female on rear panel	25.9 kg (57.0 lb)	50.3 x 20.3 x 45.7 cm 19.8 x 8.0 x 18.1 in
50W1000BM2	Same as 50W1000B with enclosure removed for rack mounting		16.4 kg (36.0 lb)	48.3 x 17.8 x 46.0 cm 19.0 x 7.0 x 18.1 in
50W1000BM3	Same as 50W1000BM1 with enclosure removed for rack mounting		16.4 kg (36.0 lb)	48.3 x 17.8 x 46.0 cm 19.0 x 7.0 x 18.1 in
50W1000BM4	Same as 50W1000BM2 with gain control removed		16.4 kg (36.0 lb)	48.3 x 17.8 x 46.0 cm 19.0 x 7.0 x 18.1 in
50W1000BM5	Type N female on front panel	Type N female on rear panel	16.4 kg (36.0 lb)	48.3 x 17.8 x 46.0 cm 19.0 x 7.0 x 18.1 in
	Enclosure removed for rack mounting			