

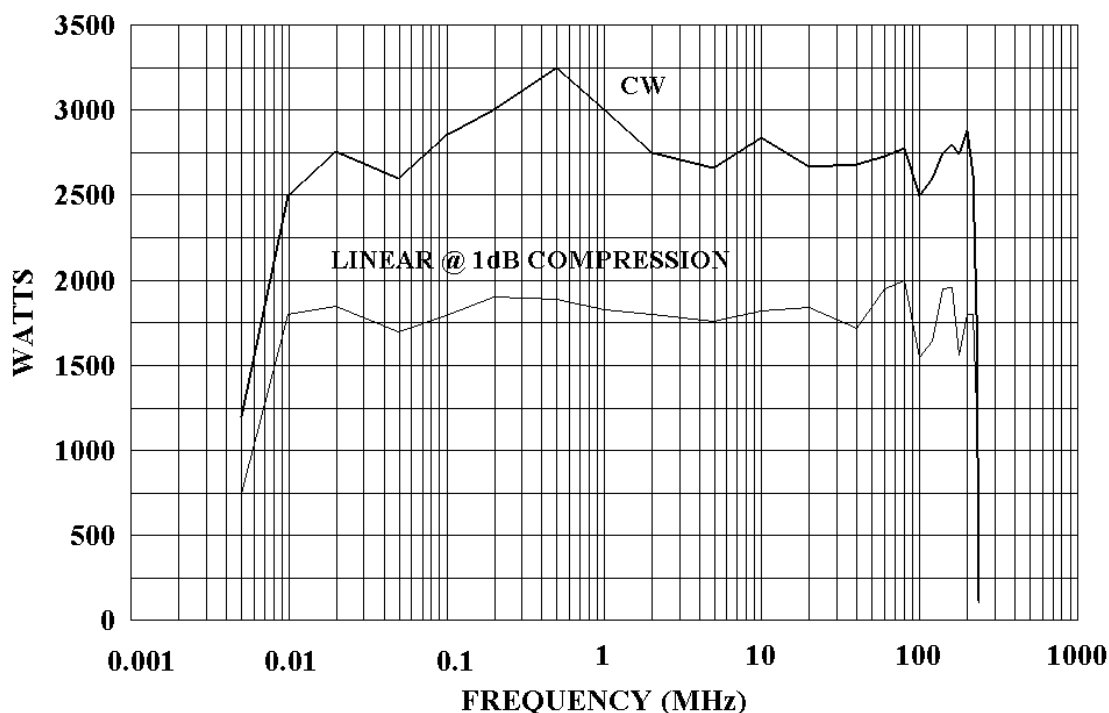


**Model 2500L,
M1 through M23
2500 Watts CW
4000 Watts Pulse
10kHz–220MHz**

The Model 2500L is an economical, self-contained, broadband amplifier designed for laboratory applications that require instantaneous bandwidth, high gain, and high power output. Housed in a stylish contemporary enclosure, the Model 2500L 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 Low Range, a control for setting the output level of the amplifier, and a meter for monitoring critical operating voltages and currents. A highly versatile unit, the Model 2500L 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.

A Remote control interface connector provides control of POWER, STANDBY, OPERATE and PULSE functions. When connected to the Model CP3000A, these functions are controlled by TTL level signals or IEEE-488 bus.

2500L TYPICAL POWER OUTPUT



SPECIFICATIONS, MODEL 2500L

POWER OUTPUT

High Range

Pulse

Minimum 4000 watts to 150MHz
3000 watts to 220MHz

Duty Cycle 15%

Pulse Width.....8 milliseconds

CW

Minimum2500 watts minimum

Linear @ 1dB compression 1750 watts nominal

1250 watts minimum

Low Range..... 100 watts nominal

FLATNESS, high range± 1.5 dB

FREQUENCY RESPONSE 10 kHz - 220 MHz

INPUT FOR RATED OUTPUT 1.0 milliwatt maximum

GAIN

High Range (at maximum setting)64 dB minimum

Low Range (at maximum setting).....50 dB nominal

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

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

OUTPUT IMPEDANCE50 ohms, VSWR 2.0:1

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 response allows faithful reproduction of AM, FM, or Pulse modulation appearing on the input signal.

* See Application Note #27

HARMONIC DISTORTION AT 1800 WATTSat < 130 MHz, -15 dBc maximum

at > 130 MHz, -30 dBc maximum

THIRD ORDER INTERCEPT POINT, CW/PULSE.....70/73 dBm typical

GATING CHARACTERISTICS (Pulse mode pedestal/CW mode blanking)

Signal (into 180 ohms) ± 2.5 to 6.0 VDC

Rise Time25 microseconds maximum

Fall Time.....5 microseconds maximum

RF Rise/Fall Time 10 nanoseconds

PRIMARY POWER (specify one).....See Model Configurations

17 KVA nominal

CONNECTORS

RF.....See Model Configurations

Gating/Blanking See Model Configurations

Remote Control 25 pin female subminiature D

COOLING OPTIONS (tap water recommended).....Self contained forced air; tap water, 19 LPM (5 GPM) @ 20° C maximum

WEIGHT363 kg (800 lb)

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

MODEL CONFIGURATIONS

Model	RF Input	RF Output, high range	RF Output, low range	Gating/Blanking Input	Primary Power
All are 3 phase, 50/60 Hz					
2500L	Type BNC(F), front	Type C(F), front	Type N(F), front	Type BNC(F), front	200/208 VAC 380/415 VAC
2500LM1 See NOTE 1	Type BNC(F), rear	Type E/A 7/8in, rear	Type N(F), rear	Type BNC(F), rear	200/208 VAC 380/415 VAC
2500LM2 See NOTE 2	Type BNC(F), front	Type C(F), front	Type N(F), front	Type BNC(F), front	200/208 VAC 380/415 VAC
2500LM3 See NOTE 3	Type BNC(F), front	Type 7/16(F), front	Type N(F), front	Type BNC(F), front	400/415 VAC
2500LM4	Type BNC(F), rear	Type SC(F), rear	Type N(F), rear	Type BNC(F), rear	200/208 VAC 380/415 VAC
2500LM5 See NOTE 4	Type BNC(F), front	Type C(F), front	Type N(F), front	Type BNC(F), front	200/208 VAC 380/415 VAC
2500LM6 See NOTE 5	Type BNC(F), front	Type 7/16(F), front	Type N(F), front	Type BNC(F), front	200/208 VAC 380/415 VAC
2500LM7	Type BNC(F), rear	Type C(F), rear	Type N(F), rear	Type BNC(F), rear	200/208 VAC 380/415 VAC
2500LM8 See NOTE 6	Type BNC(F), front	Type C(F), front	Type N(F), front	Type BNC(F), front	200/208 VAC 380/415 VAC
2500LM9 See NOTE 7	Type BNC(F), front	Type 7/16(F), front	Type N(F), front	Type BNC(F), front	400/415 VAC
2500LM10	Type BNC(F), front	Type C(F), front	Type N(F), front	Type BNC(F), front	208/220 VAC
2500LM11	Type BNC(F), front	Type C(F), front	Type N(F), front	Type BNC(F), front	208/240 VAC
2500LM14	Type BNC(F), rear	Type C(F), rear	Type N(F), rear	Type BNC(F), rear	208/220 VAC
2500LM15	Type BNC(F), front	Type 7/16(F), front	Type N(F), front	Type BNC(F), front	200/208 VAC 380/415 VAC
2500LM16	Type BNC(F), front	Type C(F), front	Type N(F), front	Type BNC(F), front	415/480 VAC
2500LM17	Type BNC(F), rear	Type C(F), rear	Type N(F), rear	Type BNC(F), rear	415/440 VAC
2500LM18 See NOTE 9	Type BNC(F), front	Type C(F), front	Type N(F), front	Type BNC(F), front	200/208 VAC 380/415 VAC
2500LM20	Type BNC(F), rear	Type 7/16(F), rear	Type N(F), rear	Type BNC(F), rear	200/208 VAC 380/415 VAC
2500LM21 See NOTE 9	Type BNC(F), front	Type C(F), rear	Type N(F), front	Type BNC(F), front	200/208 VAC 380/415 VAC
2500LM22	Type BNC(F), front	Type C(F), rear	Type N(F), front	Type BNC(F), front	200/208 VAC 380/415 VAC
2500LM23	Type BNC(F), front	Type 7/16(F), rear	Type N(F), front	Type BNC(F), front	200/208 VAC 380/415 VAC

NOTES:

1. 2500LM1: Self contained forced air cooling only
2. 2500LM2: Includes Model CP3000A for remote control capability via IEEE Bus
3. 2500LM3: Air entry through bottom of rack for forced air cooling option
4. 2500LM5: Includes coupled RF outputs, 50+/-1 dB forward and reverse, BNC(F) connectors
5. 2500LM6: Includes coupled RF outputs, 50+/-1 dB forward and reverse, BNC(F) connectors
6. 2500LM8: Frequency Response 1MHz-220MHz
7. 2500LM9: Air entry through front of rack for forced air cooling option
8. 2500LM12: Obsolete
9. 2500LM18 & 2500LM21: Equipped with a remote air cooled heat exchanger designed to be wall mounted on the exterior of a building up to 20 feet from the amplifier.