Model 2500A250A, M1, M2
2500 Watts CW
100kHz – 250 MHz

The Model 2500A250A is a self-contained, air-cooled, broadband, completely solid-state amplifier designed for applications where instantaneous bandwidth and high gain are required. Push-pull MOSFET circuitry is utilized in all high power stages in the interest of lowering distortion and improving stability.

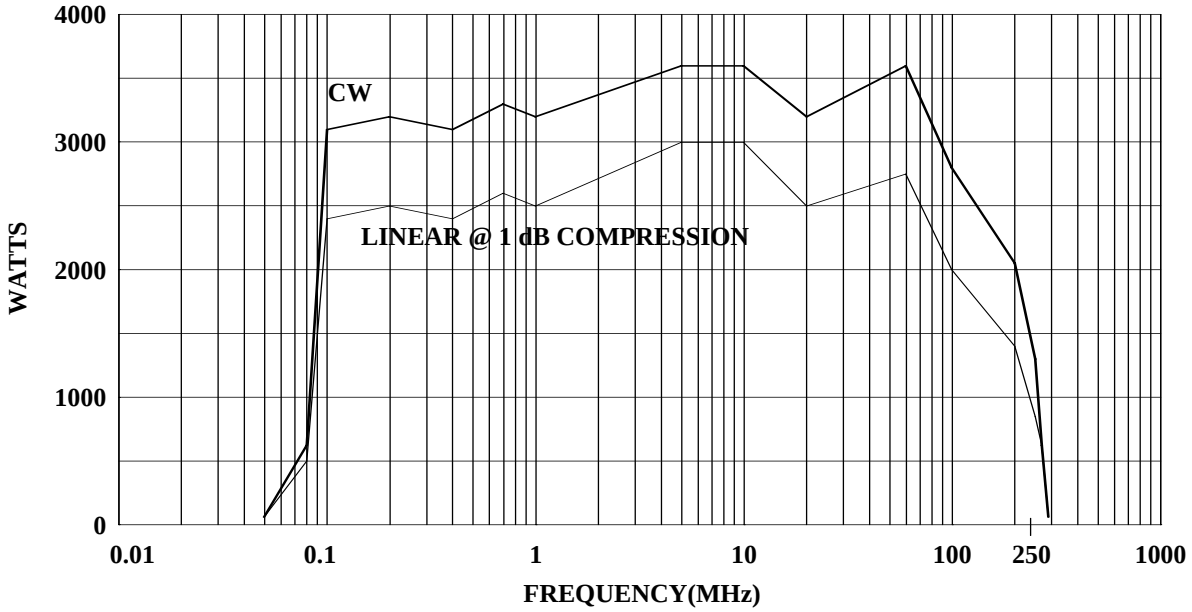
The Model 2500A250A is equipped with a Digital Control Panel (DCP) which provides both local and remote control of the amplifier. The DCP uses a 3¾-inch diagonal graphic display, menu assigned softkeys, a single rotary knob, and four dedicated switches (POWER, STANDBY, OPERATE and FAULT/RESET) to offer extensive control and status reporting capability. The display provides operational presentation of Forward Power and Reflected Power plus control status and reports of internal amplifier status. Special features include a gain control, internal/external automatic level control (ALC) with front panel control of the ALC threshold, pulse input capability and RF output level protection. Also included is an internal RF detector which provides an output for use in self-testing or operational modes.

All amplifier control functions and status indications are available remotely in GPIB/IEEE-488 format, and RS-232 hard wire and fiber optic. The buss interface connectors are located on the back panel and positive control of local or remote operation is assured by a keylock on the front panel of the amplifier.

High efficiency universal input, power factor corrected switching power supplies provides DC to all internal sub-assemblies.

Housed in a stylish, contemporary enclosure, the Model 2500A250A provides readily available RF power for typical applications such as RF susceptibility testing, antenna and component testing, watt meter calibration, particle accelerators, plasma generation, communications and use as a driver for higher power amplifiers.

2500A250A TYPICAL POWER OUTPUT



SPECIFICATIONS, Model 2500A250A

RATED OUTPUT POWER ..... 2500 watts, 100 kHz – 100 MHz
2500 – 1500 watts, 100 MHz – 250 MHz
(derating slope of 6.67 watts/MHz)

INPUT FOR RATED OUTPUT ..... 1.0 milliwatt maximum

POWER OUTPUT @ 1 dB COMPRESSION ..... 1800 watts, 100 kHz – 100 MHz
1800 – 800 watts, 100 MHz – 250 MHz
(derating slop of 6.67 watts/MHz)

FREQUENCY RESPONSE ..... 100 kHz - 250 MHz instantaneously

GAIN (at maximum setting) ..... 64 dB minimum

FLATNESS ..... ± 3.5 dB maximum
± 0.8 dB with internal leveling

GAIN ADJUSTMENT (continuous range) ..... 20 dB minimum

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

OUTPUT IMPEDANCE ..... 50 ohms, VSWR 2.5:1 maximum

MISMATCH TOLERANCE ..... 100% rated power without foldback up to 6.0:1 mismatch above which may limit to 1250 watts reflected power, from 100 kHz to 100 MHz. Limited to 500 watts reflected power from 100 MHz to 250 MHz.

MODULATION CAPABILITY ..... Will faithfully reproduce AM, FM or Pulse modulation appearing on the input signal.

HARMONIC DISTORTION ..... Minus 20 dBc maximum at 1500 watts

THIRD ORDER INTERCEPT POINT ..... 71 dBm typical

RF POWER DISPLAY ..... 0 - 4000 watts full scale

PULSE MODE GATING CHARACTERISTICS
- Signal (into 50 ohms) ..... + 2.0 to 6.0 VDC
- Rise Time ..... 0.5 microseconds maximum
- Fall Time ..... 0.5 microseconds

RF RISE/FALL TIME ..... 10 nanoseconds maximum

PRIMARY POWER ..... 200-240 VAC Delta (4 wire) Wye compatible
346-416 VAC, Wye (5 wire)
400-480 VAC (4-wire), Wye compatible
47-63 Hz, 3 phase
(user must specify)
10,000 watts maximum at .95 P.F. typical

CONNECTORS
- RF Input ..... See Model Configurations
- RF Output ..... See Model Configurations
- External Leveling Inputs ..... Type BNC female on front panel
- Pulse Modulation Inputs ..... Type BNC female on front panel
- Detected RF Output ..... Type BNC female on front panel
- Remote Control ..... 24 pin female GPIB/IEEE-488 and 9-pin RS-232 connectors on rear panel
- Remote Control (Fiber Optic) ..... ST connector. Tx and Rx RS-232.
- Safety Interlock ..... 15 pin female Type D on rear panel

FORWARD SAMPLE PORT ..... Type N female on rear panel

REVERSE SAMPLE PORT ..... Type N female on rear panel

IEEE-488 (GPIB) INTERFACE & RS-232 ..... Allows control of all amplifier functions and monitoring of all status indications.

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

WEIGHT (maximum) ..... 227 kg (500 lb)

SIZE (W x H x D) ..... 68.6 x 132.0 x 88.9 cm (27.0 x 52.0 x 35.0 in)

MODEL CONFIGURATIONS

Model Number	RF Input	RF Output
2500A250A	N female, rear panel	7-16 DIN female rear panel
2500A250AM1	N female, front panel	7-16 DIN female front panel
2500A250AM2	See separate specification sheet.	