Model 10,000A250A, M1
10,000 Watts CW
100kHz-250MHz

The Model 10,000A250A 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.

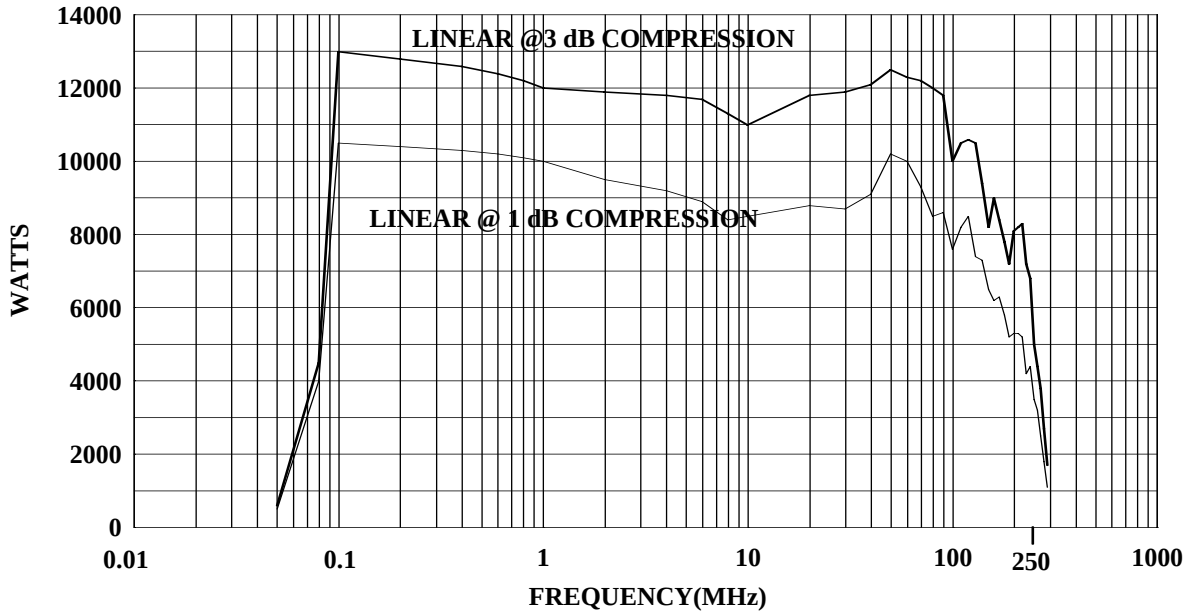
The Model 10,000A250A is equipped with a Digital Control Panel (DCP) which provides both local and remote control of the amplifier. The DCP uses a 3¾-inch diagonal graphic display, menu assigned softkeys, a single rotary knob, and four dedicated switches (POWER, STANDBY, OPERATE and FAULT/RESET) to offer 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 that 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 hardware, and fiber optic. The buss interface connector is 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 10,000A250A 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.

10,000A250 TYPICAL POWER OUTPUT



SPECIFICATIONS

RATED OUTPUT POWER	10,000 watts, 100 kHz – 100 MHz 10,000 – 6,000 watts, 100 MHz – 250 MHz (derating slope of 26.66 watts / MHz)
INPUT FOR RATED OUTPUT	1.0 milliwatt maximum
POWER OUTPUT @ 3 dB COMPRESSION	9000 watts, 100 kHz–100MHz 9000–5000 watts, 100MHz–250MHz (derating slope of 26.6 watts/MHz)
POWER OUTPUT @ 1 dB COMPRESSION	7,000 watts, 100 kHz - 100 MHz 7,000 - 3,000 watts, 100 MHz – 250 MHz (derating slope of 26.66 watts / MHz)
FREQUENCY RESPONSE	100 kHz - 250 MHz instantaneously
GAIN (at maximum setting)	70 dB minimum
FLATNESS	±1.5 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 5,000 watts reflected power, from 100 kHz to 100 MHz. Limited to 2,000 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 6000 watts
THIRD ORDER INTERCEPT POINT	77 dBm typical
RF POWER DISPLAY	0 - 15,000 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 Delta (4 wire), Wye compatible 47-63 Hz, 3 phase (User must specify) Note that in Wye configurations neutral may be used only for low-power circuits 40,000 watts maximum at .95 P.F. typical
CONNECTORS	
RF Input	Type N female on rear panel
RF Output	Type EIA 1 5/8 male on rear panel
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 Power Sample Port (-70 dBc)	Type N female on rear panel
Reverse Power Sample Port (-70 dBc)	Type N female on rear panel
IEEE-488 (GPIB) and RS-232 INTERFACES	Allow control of all amplifier functions and monitoring of all status indications via standard GPIB / IEEE-488 commands or RS-232 commands
COOLING	Forced air (self contained fans)
WEIGHT (maximum)	816 kg (1800 lb)
SIZE (W x H x D)	142.3 x 182.9 x 88.9 cm (56 x 72 x 35 in)

MODEL CONFIGURATION

10,000A250A	As specified above
10,000A250AM1	Same as 10,000A250A except Gain is set to MAX and Gain control is removed.