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MODEL 5000A250A
M1, M2, M3
5000 WATTS CW
100 kHz – 250 MHz

The Model 5000A250A 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 5000A250A, when used with an RF sweep generator, will provide a minimum of 5000 watts of swept power.

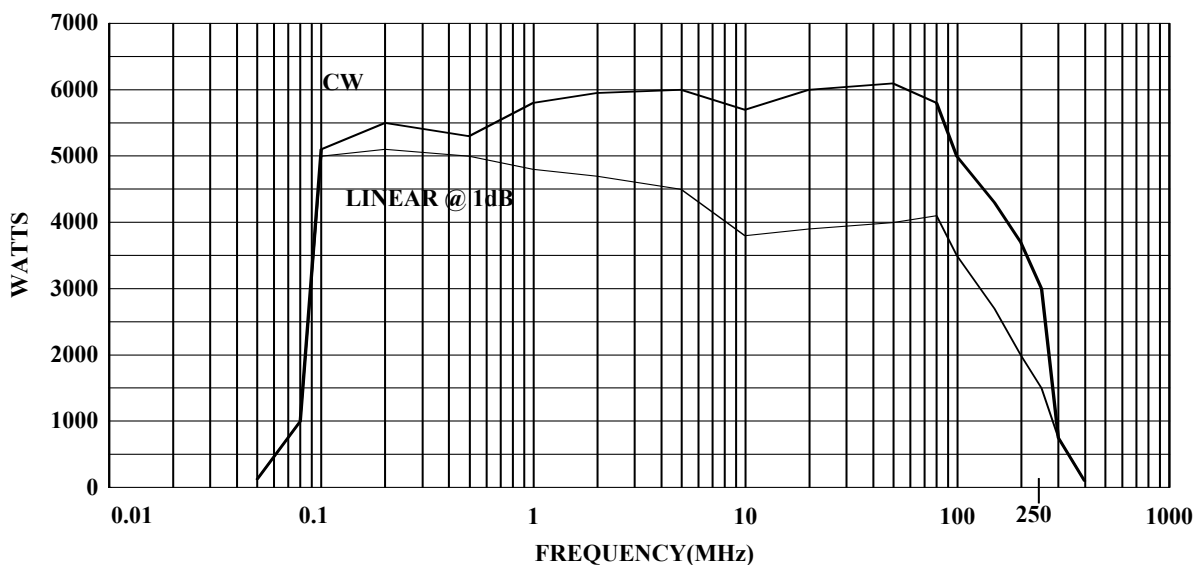
The Model 5000A250A is equipped with a Digital Control Panel (DCP) which provides both local and remote control of the amplifier. The DCP uses a 3¾-inch diagonal graphic display, menu assigned softkeys, a single rotary knob, and four dedicated switches (POWER, STANDBY, OPERATE and FAULT/RESET) to offer 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. 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 5000A250A 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.

5000A250 TYPICAL POWER OUTPUT



SPECIFICATIONS
Model 5000A250A

RATED OUTPUT POWER.....	5000 watts, 100 kHz – 100 MHz 5000 – 3000 watts, 100 MHz – 250 MHz (derating slope of 13.33 watts/MHz)
INPUT FOR RATED OUTPUT.....	1.0 milliwatt maximum
POWER OUTPUT @ 1 dB COMPRESSION.....	3500 watts, 100 kHz – 100 MHz 3500 – 1500 watts, 100 MHz – 250 MHz (derating slope of 13.33 watts/MHz)
FREQUENCY RESPONSE.....	100 kHz - 250 MHz instantaneously
GAIN (at maximum setting).....	67 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 2500 watts reflected power, from 100 kHz to 100 MHz. Limited to 1000 watts reflected power from 100 MHz to 250 MHz.
MODULATION CAPABILITY.....	Faithfully reproduces AM, FM or Pulse modulation appearing on input signal.
HARMONIC DISTORTION.....	Minus 20 dBc maximum at 3000 watts power output.
THIRD ORDER INTERCEPT POINT.....	74 dBm typical
RF POWER DISPLAY.....	0 - 7500 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) 20,000 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 connector on rear panel
Safety Interlock.....	15 pin female Type D on rear panel
IEEE-488 (GPIB) INTERFACE.....	Allows control of all amplifier functions and monitoring of all status indications via standard GPIB / IEEE-488 commands
COOLING.....	Forced air (self contained fans)

Model Configurations

Model Number	Description	Weight	Size (W x H x D)
5000A250A	Standard Configuration	408 kg (900 lb)	68.8 x 182.9 x 106.7 cm 27.1 x 72 x 35 in
5000A250AM1	Includes mounting base with over-sized casters and forklift compatible Maximum frequency = 220 MHz Operating Altitude Maximum = 6000 ft Maximum Operating Temperature = 100 F (40 C)	408 kg (900 lb)	68.8 x 182.9 x 106.7 cm 27.1 x 72 x 35 in Actual dimensions will vary with modified base
5000A250AM2	Standard Configuration also including: Spurious Rejection: 60 dBc Power Supply Hum: 60 dBc Residual AM: <1.0%	408 kg (900 lb)	68.8 x 182.9 x 106.7 cm 27.1 x 72 x 35 in
5000A250AM3	Includes testing to UTAC Specification	408 kg (900 lb)	68.8 x 182.9 x 106.7 cm 27.1 x 72 x 35 in