

**Model 3500A100A, M1**  
**3500 Watts CW**  
**10 kHz–100MHz**

The Model 3500A100A 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 3500A100A, when used with an RF sweep generator, will provide a minimum of 3500 watts of swept power.

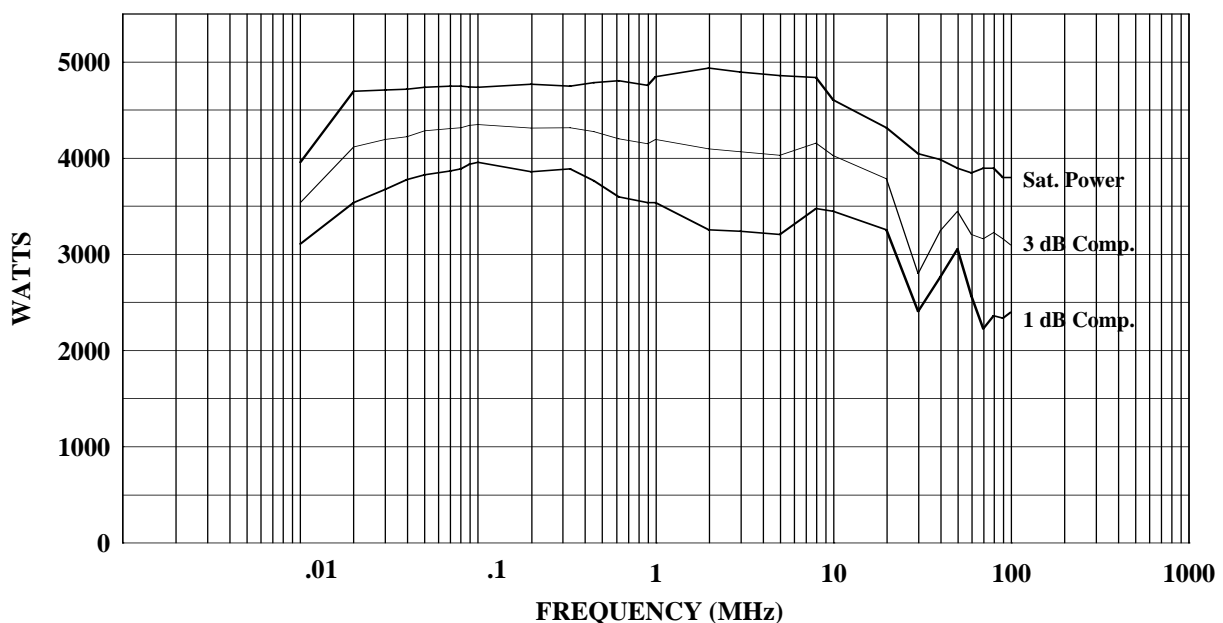
The Model 3500A100A is equipped with a Digital Control Panel (DCP) which provides both local and remote control of the amplifier. The DCP uses a 3<sup>3</sup>/<sub>4</sub>-inch diagonal graphic display, menu assigned softkeys, a single rotary knob, and four dedicated switches (POWER, STANDBY, OPERATE 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 3500A100A 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.

**3500A100A TYPICAL POWER OUTPUT**



## SPECIFICATIONS

RATED OUTPUT POWER .....	3500 watts
INPUT FOR RATED OUTPUT .....	1.0 milliwatt maximum
<b>POWER OUTPUT @ 3 dB COMPRESSION</b>	
Typical .....	3000 watts
Minimum .....	2700 watts
<b>POWER OUTPUT @ 1 dB COMPRESSION</b>	
Typical .....	2500 watts
Minimum .....	2000 watts
FREQUENCY RESPONSE .....	10 kHz - 100 MHz instantaneously
GAIN (at maximum setting) .....	66 dB minimum
FLATNESS .....	± 1.5 dB maximum ± 0.5 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 .....	Will operate without damage, or oscillation with any magnitude and phase of source and load impedance. May limit at 1750 watts reflected power.
MODULATION CAPABILITY .....	Will faithfully reproduce AM, FM or Pulse modulation appearing on the input signal.
HARMONIC DISTORTION .....	Minus 20 dBc maximum at the specified minimum 1dB compressed power.
THIRD ORDER INTERCEPT POINT .....	73 dBm typical
RF POWER DISPLAY .....	0–5000 watts full scale
<b>PULSE MODE GATING CHARACTERISTICS</b>	
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 .....	180-267 VAC Delta (4 wire) 360-435 VAC, Wye (5 wire) (user must specify) 47-63Hz, 3 phase 15,000 watts maximum at .99 P.F. typical
<b>CONNECTORS</b>	
RF Input .....	Type N female on rear panel
RF Output .....	Type 7/16 female 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)
WEIGHT (maximum) .....	317.5 kg (900 lb)
SIZE (W x H x D) .....	56.2 x 152.0 x 100.0 cm (22.1 x 60.0 x 39.4 in)

## MODEL CONFIGURATIONS

Model Number	Description
3500A100	Base Model as described
3500A100M1	Residual Amplitude Modulation <1% (-40 dBc), while operated in ALC mode, within ALC control range. Spurious signals –60 dBc at 3500 watts CW