rf/microwave instrumentation

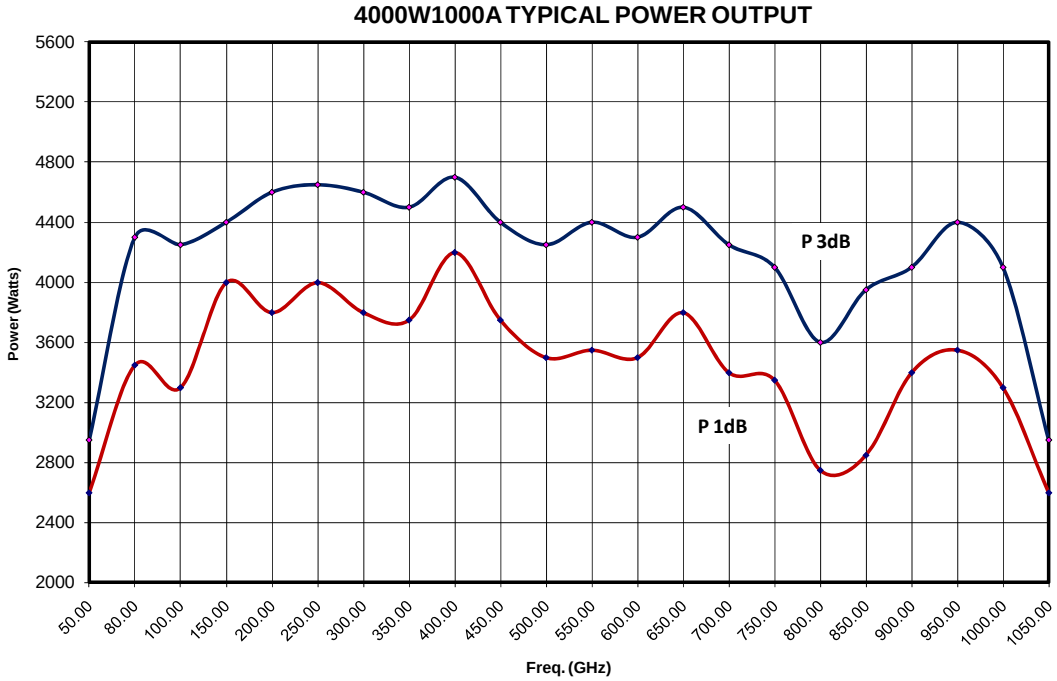
Model 4000W1000A
4000 Watts CW
80MHz–1000MHz

The Model 4000W1000A is a self-contained, air-cooled, broadband, completely solid-state amplifier designed for applications where instantaneous bandwidth and high gain are required. Push-pull circuitry is utilized in all high power stages in the interest of lowering distortion and improving stability. The Model 4000W1000A, when used with a sweep generator, will nominally provide over 4000 watts of RF power.

The Model 4000W1000A is equipped with a Digital Control Panel (DCP) which provides both local and remote control of the amplifier. The DCP uses a 4¾ 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. The bus 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.

Housed in stylish, contemporary equipment racks, the Model 4000W1000A provides readily available RF power for typical applications such as RF susceptibility testing, antenna and component testing, watt meter calibration, and as a driver for frequency multipliers and higher power amplifiers.



SPECIFICATIONS, MODEL 4000W1000A

RATED OUTPUT POWER	3700 watts minimum
INPUT FOR RATED OUTPUT	1.0 milliwatts maximum
POWER OUTPUT @ 3dB compression	
Nominal	4400 watts
Minimum	3400 watts
POWER OUTPUT @ 1dB	
Nominal	3500 watts
Minimum	2500 watts
FLATNESS	±2.5 dB maximum ±0.8 dB with internal leveling
FREQUENCY RESPONSE	80-1000 MHz instantaneously
GAIN (at maximum setting)	66 dB minimum
GAIN ADJUSTMENT (continuous range)	18 dB minimum
INPUT IMPEDANCE	50 ohms, VSWR 2.0:1 maximum
OUTPUT IMPEDANCE	50 ohms nominal
MISMATCH TOLERANCE *	100% of rated power without foldback, up to 6.0:1. Mismatch above which may limit to 2000 watts reflected power. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. *See Application Note #27.
MODULATION CAPABILITY	Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal
HARMONIC DISTORTION	Minus 20 dBc maximum at 3200 watts
THIRD ORDER INTERCEPT POINT	73 dBm typical
RF POWER DISPLAY	0-6000 watts
PRIMARY POWER (specify voltage)	200-250 VAC, Delta Connected (4 wire) 360-435 VAC, Wye Connected (5 wire) 50/60 Hz, 3 phase 48 kVA Maximum
CONNECTORS	
RF input	Type N female on rear panel
RF output	Type 1 5/8 EIA on top panel
External leveling inputs	Type BNC female on front panel
Pulse modulation input	Type BNC female on front panel
Detected RF output	Type BNC female on front panel
Safety interlock	15 pin female subminiature D on rear 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
COOLING	Forced air (self contained fans)
WEIGHT (approximate)	1542 kg (3400 lb)
SIZE (WxHxD) (5 cabinets)	(See outline drawing #10023048) 340 x 158 x 163 cm (134 x 62 x 64 in)