rf/microwave instrumentation

Model 10,000A225, M5, M6, M7
10,000 Watts CW
10kHz–225MHz

The Model 10,000A225 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.

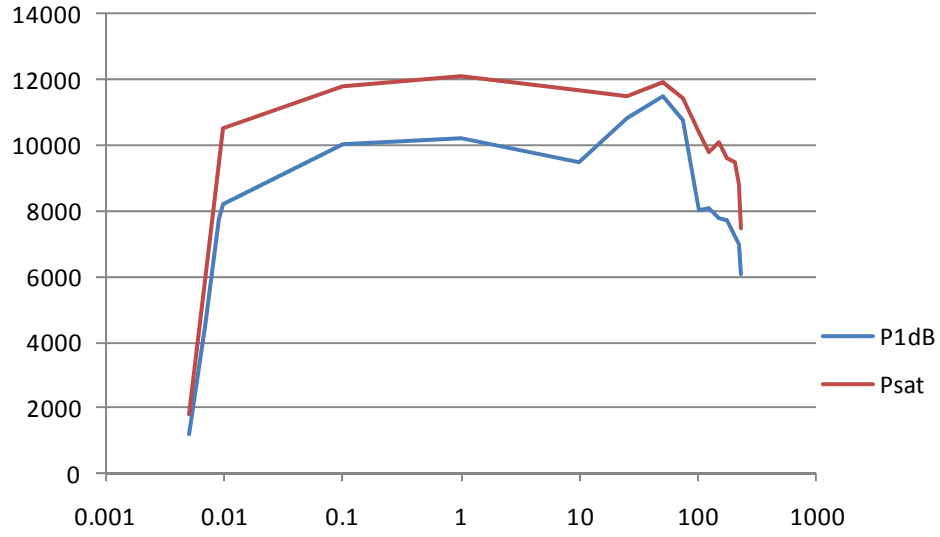
The Model 10,000A225 is equipped with a Digital Control Panel (DCP) which provides both local and remote control of the amplifier. The DCP uses a 3¾-inch diagonal graphic display, menu assigned softkeys and a single rotary knob to offer extensive control and status reporting capability. The display provides operational presentation of Forward Power and Reflected Power plus control status and reports of internal amplifier status. Special features include a gain control, internal automatic level control (ALC) with front panel control of the ALC threshold and RF output level protection.

All amplifier control functions and status indications are available remotely in GPIB/IEEE-488 format, RS-232 hard wire and fiber optic and USB. The bus 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 10,000A225 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. The Model 10,000A225M6 enclosure includes four 6-inch casters for ease of mobility.

The export classification for this equipment is EAR99. The export classification for this equipment is EAR99. These commodities, technology or software are controlled for export in accordance with the U.S. Export Administration Regulations. Diversion contrary to U.S. law is prohibited.

MODEL 10,000A225 TYPICAL POWER OUTPUT



SPECIFICATIONS, MODEL 10,000A225

RATED OUTPUT POWER ..... 10,000 watts minimum, 10 kHz–100 MHz
10,000–6000 watts minimum, 100 MHz–225 MHz
(derating slope of 32 watts/MHz)

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

POWER OUTPUT @ 1 dB COMPRESSION ..... 7000 watts, 10 kHz–100 MHz
7000–4000 watts, 100 MHz–225 MHz
(derating slope of 24 watts/MHz)

FREQUENCY RESPONSE ..... 10 kHz–225 MHz instantaneously

GAIN (at maximum setting) ..... 70 dB minimum

FLATNESS ..... ± 3.0 dB maximum
± 1.0 dB with internal leveling

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

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

OUTPUT IMPEDANCE ..... 50 ohms, nominal

MISMATCH TOLERANCE ..... 100% rated power without foldback up to 6.0:1 mismatch above which may limit to 5000 watts reflected power, from 10 kHz to 100 MHz. Limited to 3000 watts reflected power from 100 MHz to 225 MHz.

MODULATION CAPABILITY ..... Faithfully reproduces AM, FM or Pulse modulation appearing on input signal.

HARMONIC DISTORTION ..... Minus 20 dBc maximum at 6000 watts power output.

THIRD ORDER INTERCEPT POINT ..... 77 dBm typical

RF POWER DISPLAY ..... 0–15,000 watts full scale

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

PRIMARY POWER (User must specify) ..... 187-264 VAC Delta (4 wire), Wye compatible
365-460 VAC, Wye (5 wire)
47-63 Hz, 3-phase
40,000 watts maximum at .95 P.F. typical

CONNECTORS
- RF Input ..... See Model Configurations
- RF Output ..... EIA 1-5/8 male, rear
- Forward RF Sample ..... Type BNC female on front panel
- Reverse RF Sample ..... Type BNC female on front panel
- Remote Control ..... 24 pin female GPIB/IEEE-488, 9-pin RS-232, and USB 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

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

COOLING ..... Forced air (self contained fans with internal liquid cooling)

WEIGHT (maximum) ..... 500 kg (1100 lbs)

EXPORT CLASSIFICATION EAR99

MODEL CONFIGURATIONS

Model	RF Input	Features	Size (W x D x H)
10,000A225	N female, rear	Standard	112.2 x 88.9 x 167.6 cm (44.2 x 35 x 66 in)
10,000A225M5	BNC female, rear		112.2 x 88.9 x 167.6 cm (44.2 x 35 x 66 in)
10,000A225M6	N female, rear	Includes four 6" casters	147.8 x 88.9 x 167.6 cm (58.2 x 35 x 66 in)
10,000A225M7	See separate specification sheet.		