



## rf/microwave instrumentation

### Model 250S1G4, M1 through M5 250 Watts CW 0.8-4.2GHz

The Model 250S1G4 is a portable, self-contained, air-cooled, broadband, completely solid-state amplifier designed for applications where instantaneous bandwidth, high gain and linearity are required. Push-pull circuitry is utilized in all high power stages in the interest of lowering distortion and improving stability. The Model 250S1G4, when used with a sweep generator, will provide a minimum of 250 watts of RF power.

The Model 250S1G4 is equipped with a Digital Control Panel (DCP) which provides both local and remote control of the amplifier. The DCP uses a graphic liquid crystal 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 and RF output level protection.

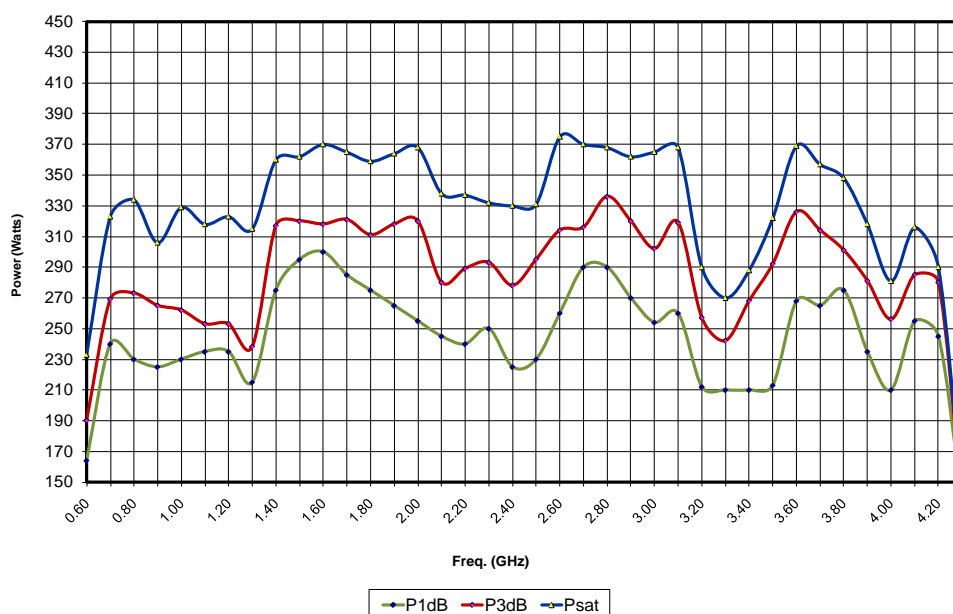
All amplifier control functions and status indications are available remotely in GPIB/IEEE-488 format, RS-232 hardwire and fiber optic, USB, and Ethernet. The bus interface connector is located on the back panel and positive control of local or remote operation is assured by a Local/Remote switch on the front panel of the amplifier.

The low level of spurious signals and linearity of the Model 250S1G4 make it ideal for use as a driver amplifier in testing wireless and communication components and subsystems. It can be used as a test instrument covering multiple frequency bands and is suitable for a variety of communication technologies such as CDMA, W-CDMA, TDMA, GSM etc. It is also suitable for EMC Test applications where undistorted modulation envelopes are desired.

The 250S1G4 has the ability to be upgraded at a later date to the Model 350S1G4, 350 watt amplifier. Upgrading to the Model 350S1G4 allows for future upgrades by utilizing our Expandable Power Technology.

The export classification for this amplifier is 3A001. 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 250S1G4 TYPICAL POWER OUTPUT**



## SPECIFICATIONS, MODEL 250S1G4

RATED OUTPUT POWER .....	250 watts minimum
INPUT FOR RATED OUTPUT.....	1.0 milliwatt maximum
POWER OUTPUT @ 3dB COMPRESSION	
Nominal.....	280 watts
Minimum.....	240 watts
POWER OUTPUT @ 1dB COMPRESSION	
Nominal.....	240 watts
Minimum.....	200 watts
FLATNESS.....	±2.0 dB typical ±2.5 dB maximum
FREQUENCY RESPONSE.....	0.8-4.2GHz instantaneously
GAIN (at maximum setting) .....	54 dB minimum
GAIN ADJUSTMENT .....	15 dB minimum
INPUT IMPEDANCE .....	50 ohms, VSWR 2.0:1 maximum
OUTPUT IMPEDANCE.....	50 ohms nominal
MISMATCH TOLERANCE* .....	100% of rated power without foldback. 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 225 watts
THIRD ORDER INTERCEPT POINT .....	64 dBm typical
RF POWER DISPLAY .....	Digital, forward and reflected
PRIMARY POWER .....	120-240VAC 50/60 Hz, single phase 1450 watts
CONNECTORS	
RF Connectors .....	See Model Configurations
Safety interlock .....	15 pin female subminiature D on rear panel
Remote computer interface .....	IEEE-488 (GPIB)& RS-232 connector on rear panel
Remote Computer Interface (Fiber Optic) .....	ST Conn Tx and Rx RS-232
Operate Interface.....	RJ-11 on rear panel
USB 2.0.....	Type B
Ethernet.....	RJ-45
IEEE-488 (GPIB) INTERFACE & RS-232.....	Allows control and monitoring of all front panel controls except keylock position control
COOLING .....	Forced air (self contained fans)
EXPORT CLASSIFICATION.....	3A001

MODEL #	MODEL CONFIGURATIONS		WEIGHT	SIZE (W x H x D)
	RF INPUT	RF OUTPUT		
250S1G4	Type N female on front panel	Type 7/16 female on front panel	71.8 kg (158 lbs)	50.3 x 55.9 x 61 cm 19.8 x 22 x 24 in
250S1G4M1	Type N female on rear panel	Type 7/16 female on rear panel	71.8 kg (158 lbs)	50.3 x 55.9 x 61 cm 19.8 x 22 x 24 in
250S1G4M2	Same as standard with enclosure removed for rack mounting.		55.9 kg (123 lbs)	48.3 x 53.3 x 61 cm 19 x 21 x 24 in
250S1G4M3	Same as M1 with enclosure removed for rack mounting.		55.9 kg (123 lbs)	48.3 x 53.3 x 61 cm 19 x 21 x 24 in
250S1G4M4*	Type N female on rear panel	Type N female on rear panel	90 kg (198 lbs)	56.1 x 82.6 x 65.9 cm 22.1 x 32.5 x 26 in
250S1G4M5**	Type N female on rear panel	Type 7/16 female on rear panel	103 kg (225 lbs)	50.3 x 149.9 x 61 cm 19.8 x 59 x 24 in

\*Equipment rack with casters

\*\*Model is housed in a 525S1G4/700S1G4 chassis to allow future upgradeability to either a 525 watt or a 700 watt model.