



## 50S1G6AB

- M1-M3
- 50 Watts CW
- 1GHz-6GHz



### Features

The Model 50S1G6AB is a solid-state, Class AB design, self-contained, air-cooled, broadband amplifier designed for applications where instantaneous bandwidth, high gain and linearity are required. Housed in a stylish contemporary cabinet, the unit is designed for benchtop use, but can be removed from the cabinet for immediate equipment rack mounting.

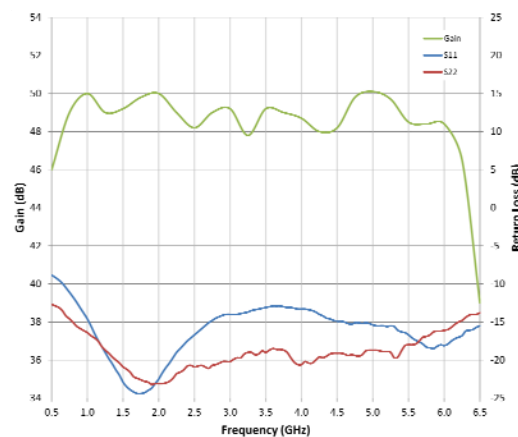
The 50S1G6AB, when used with a sweep generator, will provide 50 watts typical of RF power. Included is a front panel gain control which permits the operator to conveniently set the desired output level. The 50S1G6AB is protected from RF input overdrive by an RF input leveling circuit which controls the RF input level to the RF amplifier first stage when the RF input level is increased above 0 dBm. The RF amplifier stages are protected from over-temperature by removing the DC voltage to them if an over-temperature condition occurs due to cooling blockage or fan failure. There is a digital display on the front panel to indicate the operate status

and fault conditions if an over-temperature or power supply fault has occurred. The unit can be returned to operate when the condition has been cleared. All amplifier control functions and status indications are available remotely in GPIB/IEEE-488 format, RS-232 hardware 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.

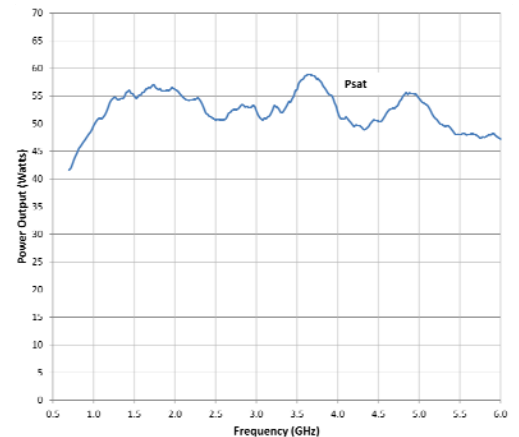
The Model 50S1G6AB can be used as a test instrument covering multiple frequency bands and is suitable for a variety of communication technologies such as CDMA, W-CDMA, TDMA, GSM etc. It is also suitable for EMC Test applications where undistorted modulation envelopes are desired.

The 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.

Typical Gain and Return Loss



50S1G6AB Power Output



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For an applications engineer call: 800.933.8181

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## Specifications

**RATED POWER OUTPUT:** 50 watts typical  
**SMALL SIGNAL GAIN FLATNESS:**  $\pm 1.0$  dB typical;  $\pm 2.0$  dB maximum  
**FREQUENCY RESPONSE:** 1.0-6 GHz instantaneously  
**GAIN (at maximum setting):** 47 dB minimum  
**GAIN ADJUSTMENT:** (Continuous Range) 15 dB typical (4096 steps remote)  
**INPUT IMPEDANCE:** 50 ohms, VSWR 2.0:1 maximum  
**OUTPUT IMPEDANCE:** 50 ohms, nominal  
**MISMATCH TOLERANCE @ RATED  $P_{out}$ :** 3:1 at all load phase  
**MODULATION CAPABILITY:** Will faithfully reproduce AM, FM, or pulse Modulation appearing on the input signal  
**THIRD ORDER INTERCEPT:** 56 dBm typical  
**NOISE FIGURE:** 10 dB typical

**HARMONIC DISTORTION:** Minus 20 dBc typical at 40W

**SPURIOUS:** Minus 73 dBc typical

**PHASE LINEARITY:**  $\pm 1.0$  deg/100 MHz, typical

**PRIMARY POWER (Selected Automatically):** 90-132, 180-250 VAC; 50-400 Hz, single phase; 500 watts maximum

### CONNECTORS:

RF: Type N female, front  
REMOTE INTERFACES:  
IEEE-488 24 pin  
RS-232 9 pin Subminiature D  
RS-232 (fiber optic) Type ST  
USB 2.0 Type B  
Ethernet RJ-45

**SAFETY INTERLOCK:** 15 pin Subminiature D

**COOLING:** Forced air (self contained fans)

**EXPORT CLASSIFICATION:** EAR99

## Model Configurations

MODEL	RF INPUT	RF OUTPUT	WEIGHT	SIZE (W x H x D)
50S1G6AB	Type N female, front	Type N female, front	15.9 kg (35 lbs)	50.3 x 15.5 x 37.6 cm 19.8 x 6.1 x 14.8 in
50S1G6ABM1	Type N female, rear	Type N female, rear	15.9 kg (35 lbs)	50.3 x 15.5 x 37.6 cm 19.8 x 6.1 x 14.8 in
50S1G6ABM2	Same as 50S1G6AB with enclosure removed for rack mounting		10.2 kg (22.5 lbs)	48.3 x 12.7 x 37.6 cm 19.8 x 5.0 x 14.8 in
50S1G6ABM3	Same as 50S1G6ABM1 with enclosure removed for rack mounting		10.2 kg (22.5 lbs)	48.3 x 12.7 x 37.6 cm 19.8 x 5.0 x 14.8 in