

**Model 50S1G6AB**  
**50 Watts CW**  
**1GHz–6GHz**



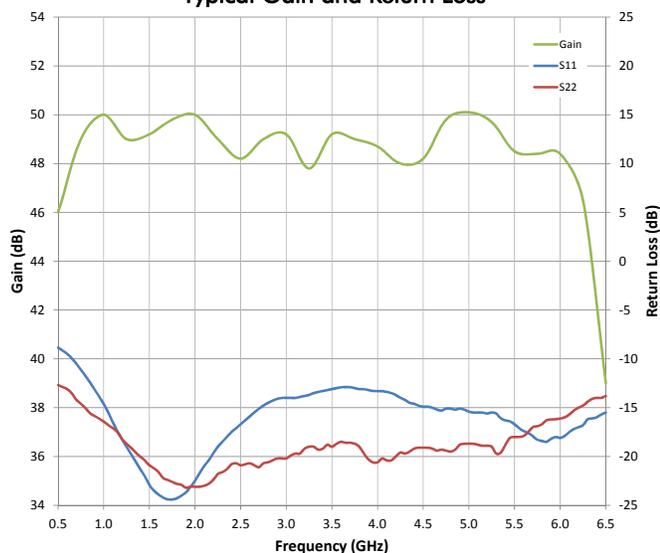
The Model 50S1G6AB is a solid-state, Class AB design, self-contained, air-cooled, broadband amplifier designed for applications where instantaneous bandwidth, high gain and linearity are required. Housed in a stylish contemporary cabinet, the unit is designed for benchtop use, but can be removed from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

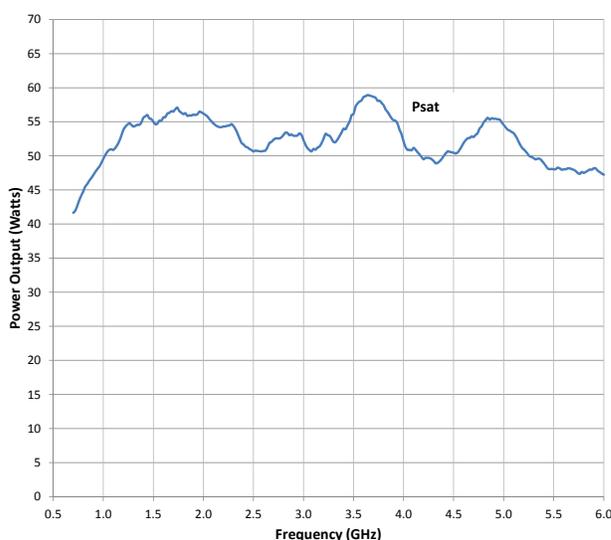
The Model 50S1G6AB can be used as a test instrument covering multiple frequency bands and is suitable for a variety of communication technologies such as CDMA, W-CDMA, TDMA, GSM etc. It is also suitable for EMC Test applications where undistorted modulation envelopes are desired.

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



## SPECIFICATIONS, MODEL 50S1G6AB

RATED POWER OUTPUT .....	50 watts typical
POWER OUTPUT @ 3dB COMPRESSION	
Nominal .....	50 watts
Minimum .....	40 watts
POWER OUTPUT @ 1dB COMPRESSION	
Nominal .....	25 watts
Minimum .....	15 watts
SMALL SIGNAL GAIN FLATNESS.....	±1.0 dB typical ±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 <sub>out</sub> .....	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.....	±1.0 deg/100 MHz, typical
PRIMARY POWER (Selected Automatically) .....	90-132, 180-264 VAC 50-400 Hz, single phase
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	RF INPUT	MODEL CONFIGURATIONS RF OUTPUT	WEIGHT	SIZE (W x H x D)
50S1G6AB	Type N female, front panel	Type N female, front panel	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 panel	Type N female, rear panel	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