rf/microwave instrumentation

Model 25S1G6AB
25 Watts CW
1GHz–6GHz

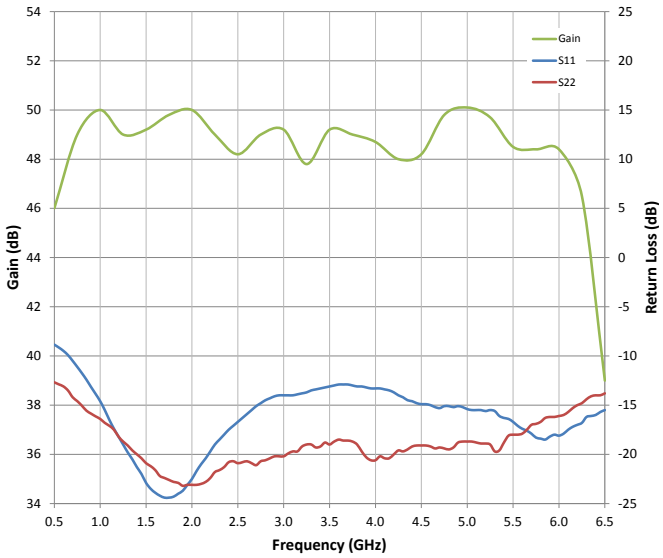
The Model 25S1G6AB is a solid-state, Class AB design, self-contained, air-cooled, broadband amplifier designed for applications where instantaneous bandwidth, high gain and linearity are required. Housed in a stylish contemporary cabinet, the unit is designed for benchtop use, but can be removed from the cabinet for immediate equipment rack mounting.

The 25S1G6AB, when used with a sweep generator, will provide 25 watts typical of RF power. Included is a front panel gain control which permits the operator to conveniently set the desired output level. The 25S1G6AB 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.

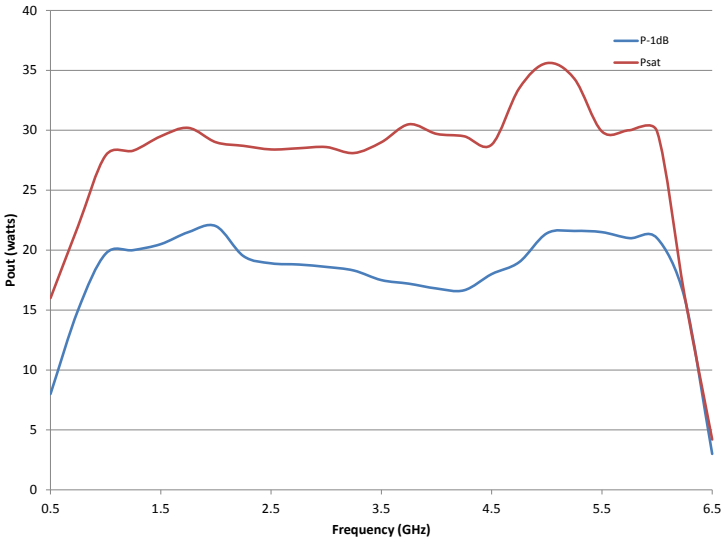
The Model 25S1G6AB can be used as a test instrument covering multiple frequency bands and is suitable for a variety of communication technologies such as CDMA, W-CDMA, TDMA, GSM etc. It is also suitable for EMC Test applications where undistorted modulation envelopes are desired.

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



25S1G6AB Power Output



SPECIFICATIONS, MODEL 25S1G6AB

RATED POWER OUTPUT ..... 25 watts typical

POWER OUTPUT @ 3dB COMPRESSSION
- Nominal ..... 25 watts
- Minimum ..... 20 watts

POWER OUTPUT @ 1dB COMPRESSION
- Nominal ..... 18 watts
- Minimum ..... 14 watts

SMALL SIGNAL GAIN FLATNESS ..... ±1.0 dB typical
±2.0 dB maximum

FREQUENCY RESPONSE ..... 1.0–6 GHz instantaneously

GAIN (at maximum setting) ..... 44 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 ..... 48 dBm typical

NOISE FIGURE ..... 8.5 dB typical

HARMONIC DISTORTION ..... Minus 20 dBc typical at 20W

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 CONFIGURATIONS

MODEL	RF INPUT	RF OUTPUT	WEIGHT	SIZE (W x H x D)
25S1G6AB	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
25S1G6ABM1	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
25S1G6ABM2	Same as 25S1G6AB 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
25S1G6ABM3	Same as 25S1G6ABM1 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