



300S1G6AB

- M1-M5
- 300 Watts CW
- 1-6GHz



Features

The Model 300S1G6AB 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 300S1G6AB, when used with a sweep generator, will provide a minimum of 300 watts of RF power. Included is a front panel gain control which permits the operator to conveniently set the desired output level. The 300S1G6AB 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

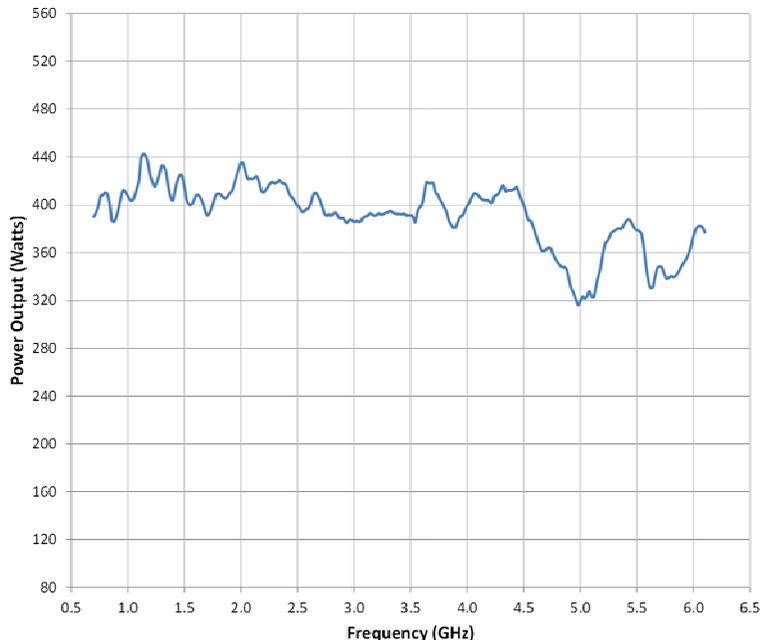
an over-temperature or power supply fault has occurred. The unit can be returned to operate when the condition has been cleared.

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 low level of spurious signals and linearity of the Model 300S1G6AB 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 export classification for this equipment 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.

300S1G6AB Saturated Power @ Pin 0dBm



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Specifications

RATED POWER OUTPUT: 300 watts minimum (1-6.0 GHz)

INPUT FOR RATED OUTPUT: 1.0 milliwatt maximum

SMALL SIGNAL GAIN FLATNESS: ±1.5 dB typical; ±2.5 dB maximum

FREQUENCY RESPONSE: 1-6 GHz instantaneously

GAIN (at maximum setting): 60 dB minimum

GAIN ADJUSTMENT:
(Continuous Range): 15 dB minimum
(4096 steps remote)

INPUT IMPEDANCE: 50 ohms, VSWR 2.0:1 maximum

OUTPUT IMPEDANCE: 50 ohms, nominal

MISMATCH TOLERANCE: @(Rated Pout) 3:1 at all load phase with no gain foldback. Will operate without damage or oscillation with any magnitude and phase of load and source impedance.

MODULATION CAPABILITY: Will faithfully reproduce AM, FM, or pulse Modulation appearing on the input signal.

THIRD ORDER INTERCEPT: 60 dBm typical

NOISE FIGURE: 10 dB typical

HARMONIC DISTORTION: Minus 15 dBc typical at 300 watts, (1-6.0 GHz)

SPURIOUS: Minus 73 dBc Typ.

PHASE LINEARITY: ±1.0 deg/100 MHz, Typ

PRIMARY POWER (Selected Automatically): 200-260 VAC; 50/60 Hz, single phase; 3500 watts maximum

CONNECTORS:

RF: Type N female

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: 3A001

Model Configurations

MODEL	RF INPUT	RF OUTPUT	WEIGHT	SIZE (W x H x D)
300S1G6AB	N female, front	N female, front	68 kg (150 lbs)	50.3 x 47 x 61 cm 19.8 x 18.5 x 24 in
300S1G6ABM1	N female, rear	N female, rear	68 kg (150 lbs)	50.3 x 47 x 61 cm 19.8 x 18.5 x 24 in
300S1G6ABM2	Same as 300S1G6AB	with enclosure removed for rack mounting	55 kg (120 lbs)	48.3 x 44.5 x 61 cm 19.0 x 17.5 x 24 in
300S1G6ABM3	Same as 300S1G6ABM1	with enclosure removed for rack mounting	55 kg (120 lbs)	48.3 x 44.5 x 61 cm 19.0 x 17.5 x 24 in
300S1G6ABM4	N female, front	N female, rear	68 kg (150 lbs)	50.3 x 55.9 x 61 cm 19.8 x 22 x 24 in
300S1G6ABM5	Same as 300S1G6ABM4	with enclosure removed for rack mounting	55 kg (120 lbs)	48.3 x 53.3 x 61 cm 19.0 x 21 x 24 in