



60S1G4A M1 through M5

- 60 Watts CW
- 0.7GHz–4.2GHz



Features

The Model 60S1G4A is a self-contained, air-cooled, broadband, completely solid-state 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 60S1G4A, when used with a sweep generator, will provide a minimum of 60 watts of RF power. Included is a front panel gain control which permits the operator to conveniently set the desired output level.

The 60S1G4A 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

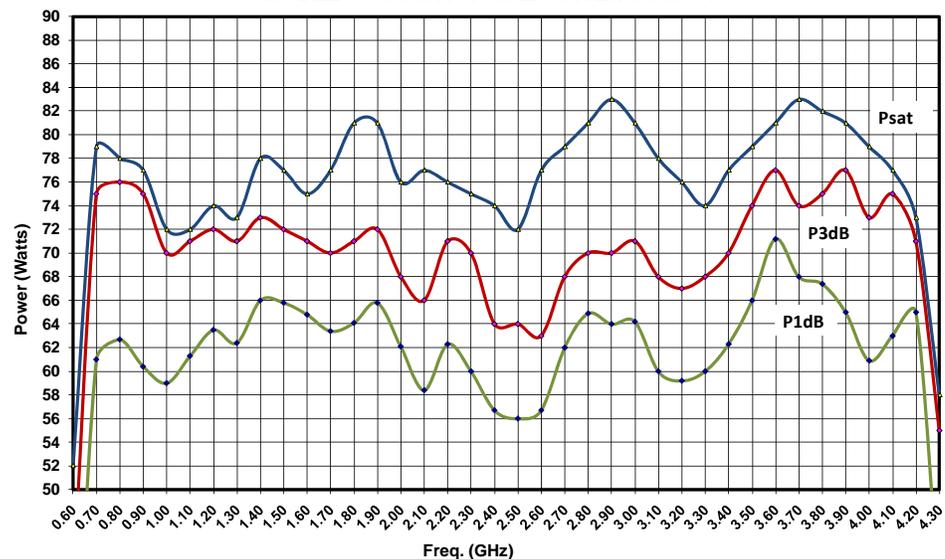
to operate when the condition has been cleared. All amplifier control functions and status indications are available remotely in GPIB/IEEE-488 format, RS-232 hardware and fiber optic, USB, and Ethernet. The bus interface connector is located on the back panel and positive control of local or remote operation 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 60S1G4A 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 Model 60S1G4A has the ability to be upgraded at a later date to the Model 80S1G4, 80 watt amplifier.

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.

MODEL 60S1G4A TYPICAL POWER OUTPUT



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Specifications

RATED POWER OUTPUT: 60 watts minimum

INPUT FOR RATED OUTPUT: 1.0 milliwatt maximum

POWER OUTPUT @ 3dB COMPRESSION:
Nominal: 70 watts; Minimum: 60 watts

POWER OUTPUT @ 1dB COMPRESSION:
Nominal: 65 watts; Minimum: 50 watts

FLATNESS: ±1.5 dB typical; ±2.0 dB maximum

FREQUENCY RESPONSE: 0.7–4.2 GHz instantaneously

GAIN (at maximum setting): 47.8 dB minimum

GAIN ADJUSTMENT: (Continuous Range), 10 dB minimum, (4096 steps remote)

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

THIRD ORDER INTERCEPT: 58 dBm typical

NOISE FIGURE: 10 dB typical

HARMONIC DISTORTION: Minus 20 dBc, maximum at 60 watts

SPURIOUS: Minus 73 dBc typical.

PHASE LINEARITY: ± 1.0 deg/100 MHz, Typ

PRIMARY POWER (Selected Automatically): 90-132, 180-264 VAC, 50/60 Hz, single phase, 415 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: EAR99

Model Configurations

| MODEL NUMBER | RF INPUT | | RF OUTPUT | | WEIGHT | SIZE | |
|-------------------------------------|--|-------|-----------|-------|----------------|---|--|
| | TYPE | LOC. | TYPE | LOC. | | | |
| 60S1G4A | N FEM | FRONT | N FEM | FRONT | 27.7kg (61lbs) | 50.3 x 20.3 x 54.6cm 19.8 x 8.0 x 21.5in | |
| 60S1G4AM1 | N FEM | REAR | N FEM | REAR | 27.7kg (61lbs) | 50.3 x 20.3 x 54.6cm 19.8 x 8.0 x 21.5in | |
| 60S1G4AM2 | Same as 60S1G4A with enclosure removed for rack mounting | | | | 19.5kg (43lbs) | 48.3 x 17.8 x 54.6cm 19.8 x 7.0 x 21.5in | |
| 60S1G4AM3 | Same as 60S1G4AM1 with enclosure removed for rack mounting | | | | 19.5kg (43lbs) | 48.3 x 17.8 x 54.6cm 19.8 x 7.0 x 21.5in | |
| 60S1G4AM4 | Obsolete July 2011; features incorporated into standard design | | | | | | |
| 60S1G4AM5 | N FEM | FRONT | N FEM | REAR | 19.5kg (43lbs) | 48.3 x 17.8 x 54.6cm 19.8 x 7.0 x 21.5in | |
| Enclosure removed for rack mounting | | | | | | | |