



Model 600S1G4A, M1
600 Watts CW
0.8GHz–4.2GHz

The Model 600S1G4A is a portable, self-contained, air-cooled, broadband, completely solid-state amplifier designed for applications where instantaneous bandwidth, high gain and linearity are required. The Model 600S1G4A, when used with a sweep generator, will provide a minimum of 600 watts of RF power instantaneously from 0.8 to 4.2 GHz.

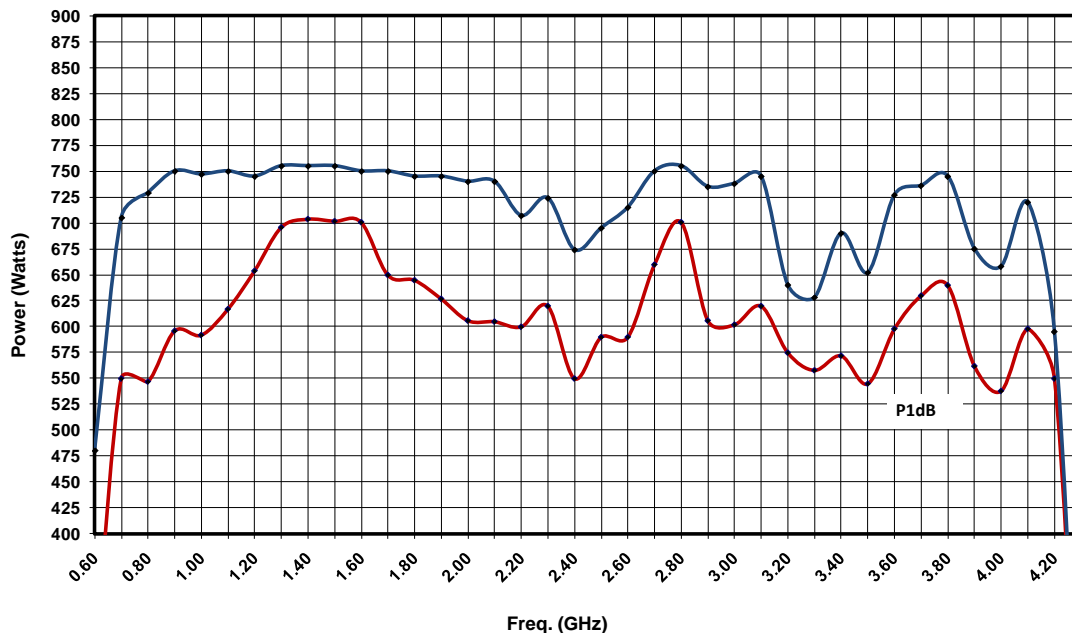
The Model 600S1G4A is equipped with a Digital Control Panel (DCP) which provides both local and remote control of the amplifier. The DCP uses a graphic Liquid Crystal Display, menu assigned softkeys, a single rotary knob, and a dedicated power on/off switch to offer extensive control and status reporting capability. The display provides operational presentation of Forward Power and Reflected Power plus control status and reports of internal amplifier status. Special features include a gain control and RF output level protection.

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 buss interface connector is located on the back panel and positive control of local or remote operation is assured by a keylock on the front panel of the amplifier.

The Model 600S1G4A is designed to have low spurious signals, linearity and is extremely load tolerant which enables it to be used in many RF applications such as: RF susceptibility testing, antenna/component testing, and communication technology testing. 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, UWB, WiMAX etc.

The 600S1G4A is part of AR's *Expandable Power* concept, which gives the amplifier much more versatility. The 600S1G4A consists of two 350S1G4 sub-amplifiers housed in a single equipment rack with a controller. The 600S1G4A can function as one amplifier or be separated and operate as two separate 350S1G4 amplifiers which can be easily removed and used independently. The 600S1G4A can be upgraded in the future to a 900S1G4 and a 1200S1G4 by simply adding more 350S1G4 sub-amplifiers, upgrading the controller and performing minor tuning.

600S1G4A Typical Power Output



SPECIFICATIONS, MODEL 600S1G4A

| | |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RATED OUTPUT POWER..... | 0.8–4.2GHz, 600 watts minimum |
| INPUT FOR RATED OUTPUT..... | 1.0 milliwatt maximum |
| POWER OUTPUT @ 3dB COMPRESSION | |
| Nominal..... | 675 watts |
| Minimum..... | 575 watts |
| POWER OUTPUT @ 1dB COMPRESSION | |
| Nominal..... | 575 watts |
| Minimum..... | 475 watts |
| FLATNESS..... | ±2.5 dB maximum |
| FREQUENCY RESPONSE..... | 0.8–4.2GHz instantaneously |
| GAIN (at maximum setting)..... | 57.8 dB minimum |
| GAIN ADJUSTMENT | 20 dB minimum |
| 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 |
| HARMONIC DISTORTION..... | Minus 20 dBc maximum at 600 watts |
| THIRD ORDER INTERCEPT POINT..... | 67 dBm typical |
| RF POWER DISPLAY | Digital, forward and reflected |
| PRIMARY POWER | See Model Configurations |
| CONNECTORS | |
| RF input..... | Type N female on front panel |
| RF output..... | Type 7-16 on rear |
| Remote Interfaces | |
| IEEE-488 | 24 pin |
| RS-232 | 9-pin sub-D |
| RS-232 (fiber-optic)..... | Type ST |
| USB 2.0..... | Type B |
| Ethernet..... | RJ-45 |
| Safety Interlock | 15 pin female subminiature D on rear panel |
| COOLING | Forced air (self contained fans) enters front and bottom |
| WEIGHT (approximate) | 218 kg (480 lbs) |
| SIZE (WxHxD) | 56.1 x 173 x 82.3 cm (22.1 x 68.0 x 32.4 in) |
| EXPORT CLASSIFICATION..... | 3A001. 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. |

MODEL CONFIGURATIONS

| Model | Primary Power Input |
|------------|------------------------------------------------|
| 600S1G4A | 200-240VAC, 50/60 Hz, single phase, 4000 watts |
| 600S1G4AM1 | 120/208VAC, 50/60 Hz, 3-phase, 30A, 4000 watts |