



**Model 600S1G3**  
**625 Watts CW**  
**0.8GHz–3.0GHz**

The Model 600S1G3 is a self-contained, air-cooled, broadband, completely solid-state amplifier designed for applications where instantaneous bandwidth, high gain and linearity are required. Quadrature coupled circuitry is utilized in all high power stages in the interest of lowering distortion and improving stability. The Model 600S1G3, when used with a sweep generator, will provide a minimum of 625 watts of RF power.

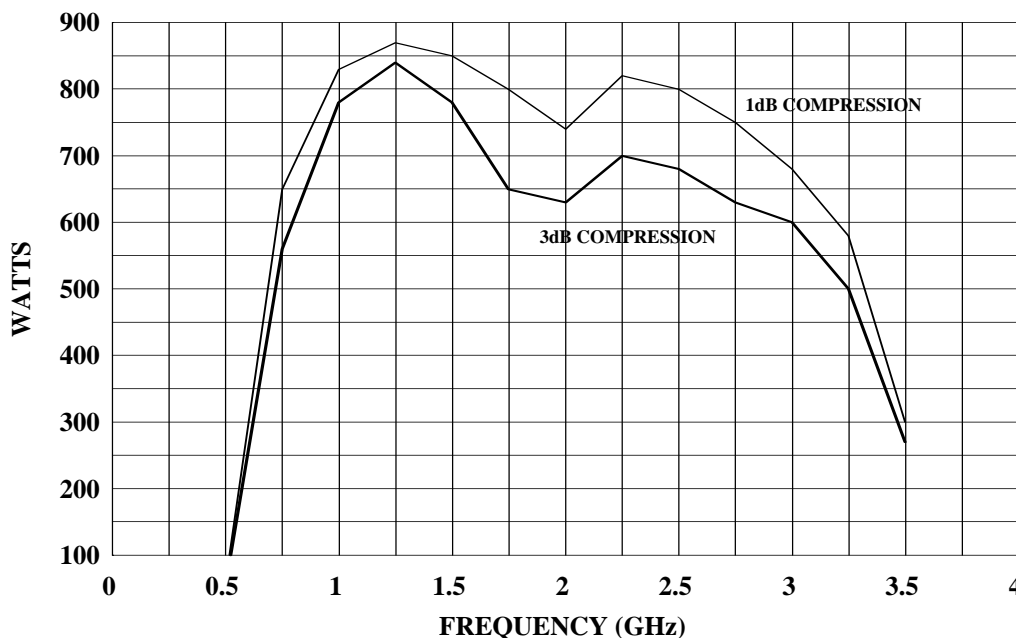
The Model 600S1G3, is equipped with a Digital Control Panel (DCP) which provides both local and remote control of the amplifier. The DCP uses a digital display, menu assigned soft keys, a single rotary knob, and four dedicated switches (POWER, STANDBY, OPERATE and FAULT/RESET) to offer extensive control 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, internal/external automatic level control (ALC) with front panel control of the ALC threshold, pulse input capability and RF output level protection. Also included is an internal RF detector that provides an output for use in self-testing or operational modes.

All amplifier control functions and status indications are available remotely in GPIB/IEEE-488 format and RS-232 hardware and fiber optic. 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 low level of spurious signals and linearity of the Model 600S1G3, 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 controller and the Sub Amplifiers can each be used as individual 240 watt amplifiers when the 600S1G3 power output is not required. By simply adding one 240S1G3 amplifier and the appropriate combiner, along with minor tuning, the 600S1G3 is upgraded to the 800S1G3 amplifier system.

**600S1G3 TYPICAL POWER OUTPUT**



## SPECIFICATIONS, MODEL 600S1G3

RATED OUTPUT POWER .....	0.8–3 GHz: 625 watts minimum
INPUT FOR RATED OUTPUT .....	1.0 milliwatt maximum
POWER OUTPUT @ 3 dB COMPRESSION	
Nominal .....	625 watts
Minimum .....	500 watts
POWER OUTPUT @ 1 dB COMPRESSION	
Nominal .....	565 watts
Minimum .....	460 watts
FLATNESS .....	±3.5 dB maximum
.....	±1.0 dB with internal leveling
FREQUENCY RESPONSE .....	0.8 – 3.0 GHz instantaneously
GAIN (at maximum setting) .....	57.8 dB minimum
GAIN ADJUSTMENT .....	15 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 500 watts
THIRD ORDER INTERCEPT POINT .....	67 dBm typical
RF POWER DISPLAY .....	Digital, forward and reflected
PRIMARY POWER .....	200-240 VAC 50/60 Hz, single phase 6850 watts
CONNECTORS	
RF input .....	Type N female on front panel
RF output .....	Type 7/8 EIA on rear panel
External leveling inputs .....	Type BNC female on front panel
Pulse modulation input .....	Type BNC female on front panel
Detected RF output .....	Type BNC female on front panel
Safety Interlock .....	15 pin female subminiature D on rear panel
Remote computer interface .....	24 pin female IEEE-488.2 (GPIB) connector on rear panel
Remote computer interface (fiber optic) .....	ST Conn Tx and Rx RS-232
IEEE-488 (GPIB) INTERFACE & RS-232 .....	Allows control and monitoring of all front panel controls except keylock position control
COOLING .....	Forced air (self contained fans) enters front and bottom
WEIGHT (approximate) .....	600 kg (1320 lbs)
SIZE (W x H x D) (3 cabinets)	
Cabinet 1 (2 cabinets) .....	56.1 x 109 x 67.1 cm (22.1 x 43.0 x 26.4 in)
Cabinet 2 (1 cabinet) .....	56.1 x 152.4 x 67.1 cm (22.1 x 60.0 x 26.4 in)

NOTE: Allow approximately 61 cm, 24 in depth behind cabinet for interconnect cable