



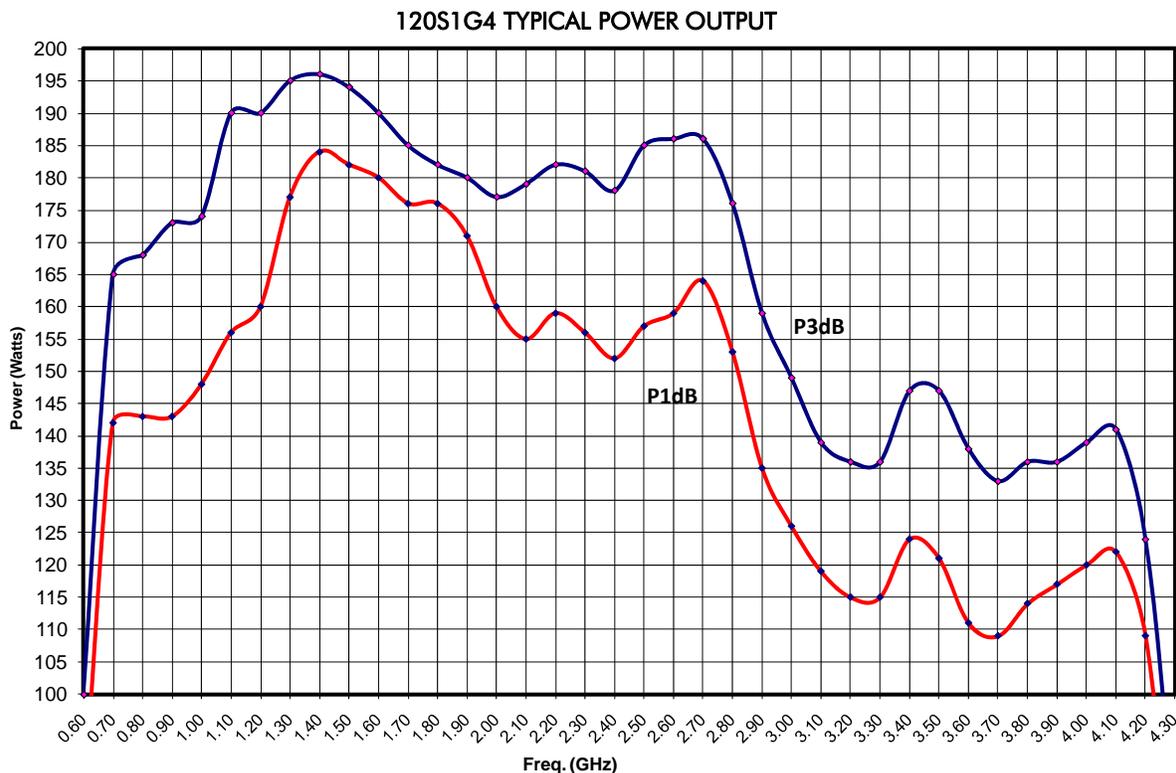
**Model 120S1G4,  
M1 through M3  
120 Watts CW  
0.8GHz–4.2GHz**

The Model 120S1G4 is a portable, self-contained, air-cooled, broadband, completely solid-state amplifier designed for applications where instantaneous bandwidth, high gain and linearity are required. Push-pull circuitry is utilized in all high power stages in the interest of lowering distortion and improving stability. The Model 120S1G4, when used with a sweep generator, will provide a minimum of 120 watts of RF power.

The Model 120S1G4 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 softkeys, 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 automatic level control (ALC) with front panel control of the ALC threshold, and RF output level protection.

All amplifier control functions and status indications are available remotely in GPIB/IEEE-488 format, RS232 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 low level of spurious signals and linearity of the Model 120S1G4 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.



## SPECIFICATIONS, 120S1G4

RATED POWER OUTPUT .....	120 watts minimum
INPUT FOR RATED OUTPUT .....	1.0 milliwatt maximum
<b>POWER OUTPUT @ 3dB COMPRESSION</b>	
Nominal .....	140 watts
Minimum .....	115 watts
<b>POWER OUTPUT @ 1dB COMPRESSION</b>	
Nominal .....	120 watts
Minimum .....	100 watts
FLATNESS.....	±1.5 dB typical ±2.0 dB maximum ± 1dB with Internal Leveling
FREQUENCY RESPONSE .....	0.8 – 4.2 GHz instantaneously
GAIN (at maximum setting) .....	51 dB minimum
GAIN ADJUSTMENT.....	(Continuous Range), 15 dB minimum, (4096 steps remote)
INPUT IMPEDANCE.....	50 ohms, VSWR 2.0:1 maximum
RF POWER DISPLAY .....	0–200 Watts
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 .....	61 dBm typical
HARMONIC DISTORTION.....	Minus 20 dBc, maximum at 100 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, 900 watts maximum
<b>CONNECTORS</b>	
RF.....	See Model Configurations on page 3.
<b>REMOTE INTERFACES</b>	
IEEE-488.....	24 pin
RS-232 .....	9 pin Subminiature D
RS-232 (fiber optic).....	Type ST
USB 2.0 .....	Type B
Ethernet .....	RJ-45
ALC & Pulse .....	Type BNC on front panel
SAFETY INTERLOCK.....	15 pin Subminiature D
COOLING.....	Forced air (self contained fans)

## MODEL CONFIGURATIONS

MODEL NUMBER	RF INPUT		RF OUTPUT		INSTRUMENT CASE	WEIGHT	SIZE	OTHER
	TYPE	LOCATION	TYPE	LOCATION				
120S1G4	N FEM	FRONT	N FEM	FRONT	YES	40.3kg (89lbs)	50.3 x 30 x 61cm 19.8 x 11.8 x 24in	N/A
120S1G4M1	N FEM	REAR	N FEM	REAR	YES	40.3kg (89lbs)	50.3 x 30 x 61cm 19.8 x 11.8 x 24in	N/A
120S1G4M2	N FEM	FRONT	N FEM	FRONT	NO, (Rack Mount)	27.2kg (60lbs)	48.3 x 26.7 x 61cm 19.0 x 10.5 x 24in	N/A
120S1G4M3	N FEM	REAR	N FEM	REAR	NO, (Rack Mount)	27.2kg (60lbs)	48.3 x 26.7 x 61cm 19.0 x 10.5 x 24in	N/A