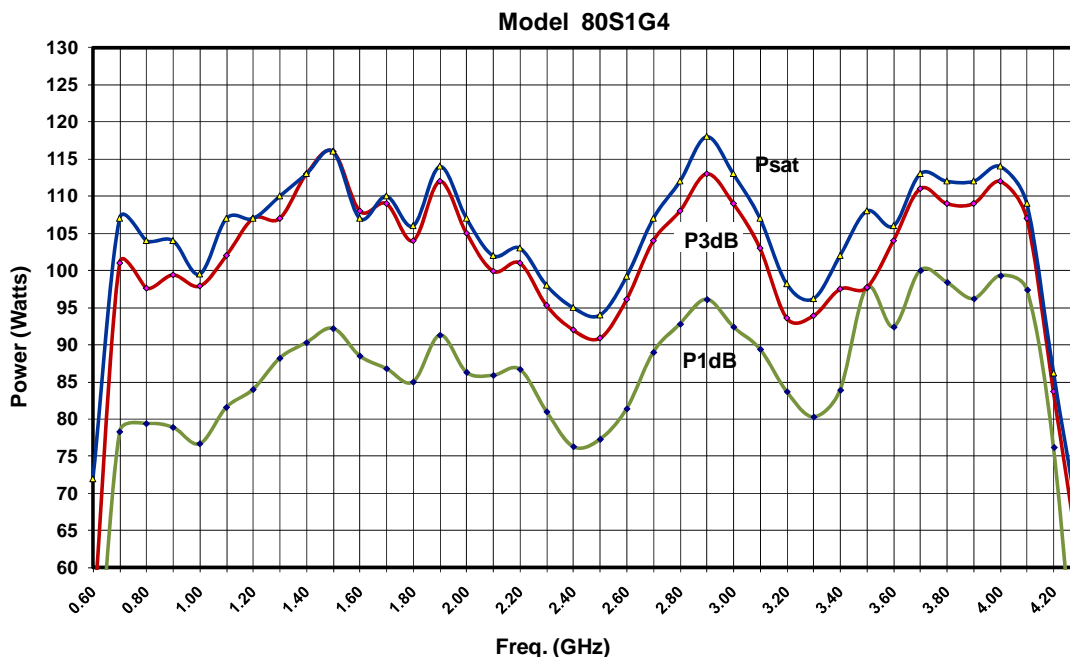


**Model 80S1G4,  
M1 through M4  
80 Watts CW  
0.7–4.2GHz**

The Model 80S1G4 is a solid state, 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 80S1G4, when used with a sweep generator, will provide a minimum of 80 watts of RF power. Included is a front panel gain control which permits the operator to conveniently set the desired output level. The 80S1G4 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 hardwire 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 80S1G4 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.



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**SPECIFICATIONS, MODEL 80S1G4**

RATED POWER OUTPUT.....	80 watts minimum
INPUT FOR RATED OUTPUT .....	1.0 milliwatt maximum
<b>POWER OUTPUT @ 3dB COMPRESSSION</b>	
Nominal .....	95 watts
Minimum .....	80 watts
<b>POWER OUTPUT @ 1dB COMPRESSION</b>	
Nominal .....	85 watts
Minimum .....	70 watts
FLATNESS .....	±1.5 dB typical ±2.0 dB maximum
FREQUENCY RESPONSE .....	0.7–4.2 GHz instantaneously
GAIN (at maximum setting) .....	49 dB minimum
<b>GAIN ADJUSTMENT</b>	
(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 max at 80 watts
SPURIOUS .....	Minus 73 dBc Typ.
PHASE LINEARITY .....	±1.0 deg/100 MHz, Typ
PRIMARY POWER (Selected Automatically) .....	90-132, 180-264 VAC 50/60 Hz, single phase 448 watts maximum
<b>CONNECTORS</b>	
RF.....	Type N female
<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
SAFETY INTERLOCK .....	15 pin Subminiature D
COOLING.....	Forced air (self contained fans)

MODEL	RF INPUT	MODEL CONFIGURATIONS		WEIGHT	SIZE (W x H x D)
		RF OUTPUT			
80S1G4	Type N female, front panel	Type N female, front panel		28.4 kg (62.5 lbs)	50.3 x 20.3 x 54.6 cm 19.8 x 8.0 x 21.5 in
80S1G4M1	Type N female, rear panel	Type N female, rear panel		28.4 kg (62.5 lbs)	50.3 x 20.3 x 54.6 cm 19.8 x 8.0 x 21.5 in
80S1G4M2	Same as 80S1G4 with enclosure removed for rack mounting			20.2 kg (44.5 lbs)	48.3 x 17.8 x 54.6 cm 19.0 x 7.0 x 21.5 in
80S1G4M3	Same as 80S1G4M1 with enclosure removed for rack mounting			20.2 kg (44.5 lbs)	48.3 x 17.8 x 54.6 cm 19.0 x 7.0 x 21.5 in
80S1G4M4	Obsolete July 2011; features incorporated into standard design			28.4 kg (62.5 lbs)	50.3 x 20.3 x 54.6 cm 19.8 x 8.0 x 21.5 in