

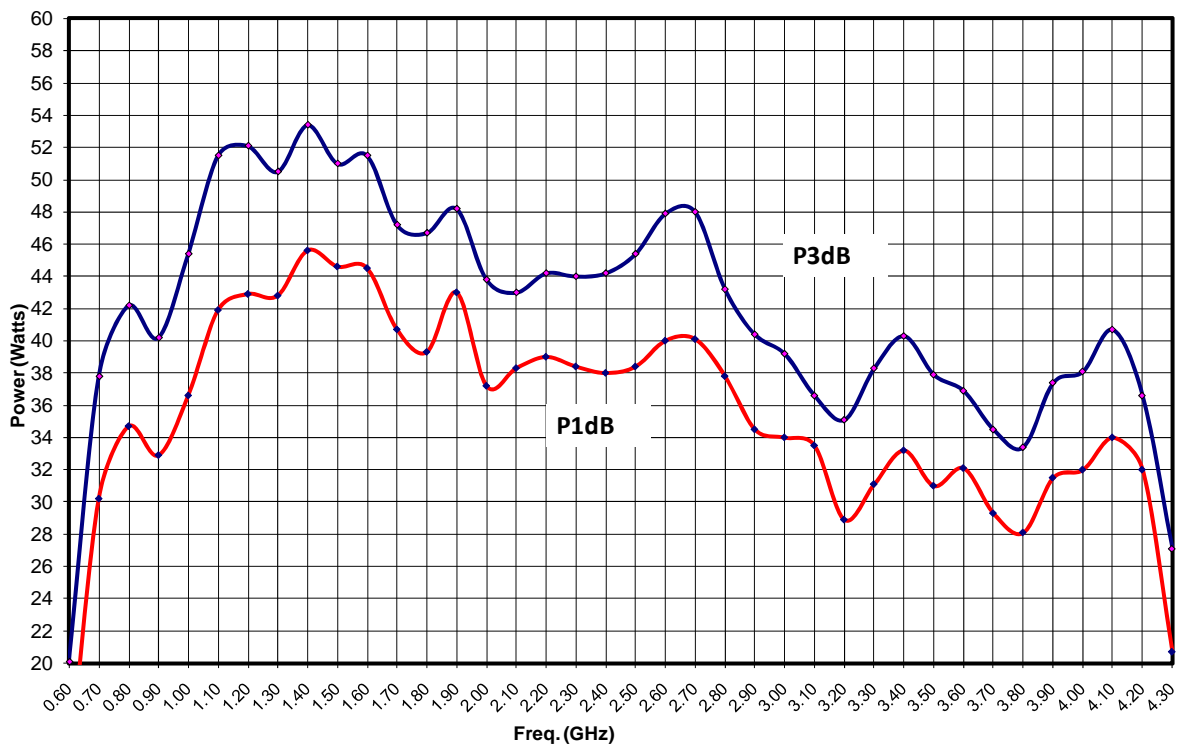
Model 30S1G4
M1 through M4
30 Watts CW
0.8GHz–4.2GHz

The Model 30S1G4 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 30S1G4, when used with a sweep generator, will provide a minimum of 30 watts of RF power. Included is a front panel gain control which permits the operator to conveniently set the desired output level. The 30S1G4 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 30S1G4 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.

30S1G4



SPECIFICATIONS, MODEL 30S1G4

RATED POWER OUTPUT.....	30 watts minimum
INPUT FOR RATED OUTPUT	1.0 milliwatt maximum
POWER OUTPUT @ 3dB COMPRESSSION	
Nominal	35 watts
Minimum	30 watts
POWER OUTPUT @ 1dB COMPRESSION	
Nominal	30 watts
Minimum	24 watts
FLATNESS	±1.5 dB typical ±2.0 dB maximum
FREQUENCY RESPONSE	0.8–4.2 GHz instantaneously
GAIN (at maximum setting)	45 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	55 dBm typical
NOISE FIGURE.....	10 dB typical
HARMONIC DISTORTION	Minus 20 dbc, max at 30 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 280 watts maximum
CONNECTORS	
RF.....	Type N female
REMOTE INTERFACES	
IEEE-488.....	24 pin female
RS-232	9 pin Subminiature D (female)
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 CONFIGURATIONS

MODEL	RF INPUT	RF OUTPUT	WEIGHT	SIZE (W x H x D)
30S1G4	Type N female on front panel	Type N female on front panel	18.2 kg (40.0 lb)	50.3 x 15.5 x 37.6 cm 19.8 x 6.1 x 14.8 in
30S1G4M1	Type N female on rear panel	Type N female on rear panel	18.2 kg (40.0 lb)	50.3 x 15.5 x 37.6 cm 19.8 x 6.1 x 14.8 in
30S1G4M2	Same as 30S1G4 with enclosure removed for rack mounting		12.5 kg (27.5 lb)	48.3 x 12.7 x 37.6 cm 19.0 x 5.25 x 14.8 in
30S1G4M3	Same as 30S1G4M1 with enclosure removed for rack mounting		12.5 kg (27.5 lb)	48.3 x 12.7 x 37.6 cm 19.0 x 5.25 x 14.8 in
30S1G4M4	Same as 30S1G4 with extended bandwidth of 0.7 to 4.2 GHz		18.2 kg (40.0 lb)	50.3 x 15.5 x 37.6 cm 19.8 x 6.1 x 14.8 in