



**Model 60S1G4A,
M1 through M4
60 Watts CW
0.7–4.2GHz**

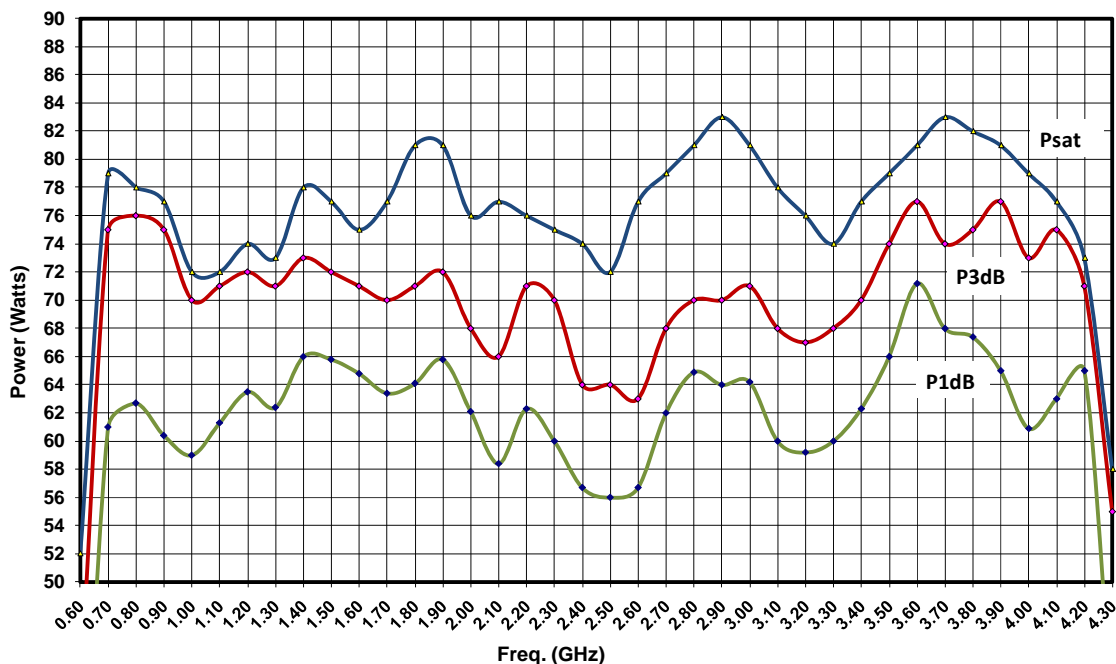
The Model 60S1G4A is a solid state, self-contained, air-cooled, broadband amplifier designed for applications where instantaneous bandwidth, high gain and linearity are required. Housed in a stylish contemporary cabinet, the unit is designed for benchtop use, but can be removed from the cabinet for immediate equipment rack mounting.

The 60S1G4A, when used with a sweep generator, will provide a minimum of 60 watts of RF power. Included is a front panel gain control which permits the operator to conveniently set the desired output level. The 60S1G4A 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 60S1G4A 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 Model 60S1G4A has the ability to be upgraded at a later date to the Model 80S1G4, 80 watt amplifier.

MODEL 60S1G4A TYPICAL POWER OUTPUT



ECCN 3A001 items may not be diverted contrary to US Law. Resale to or delivery, directly or indirectly, to or for use by any nation or specially designated nationals appearing on the US Department of Commerce's Entity List, Denied Persons List, or US Treasury OFAC list is prohibited.

SPECIFICATIONS, MODEL 60S1G4A

RATED POWER OUTPUT.....	60 watts minimum
INPUT FOR RATED OUTPUT	1.0 milliwatt maximum
POWER OUTPUT @ 3dB COMPRESSSION	
Nominal	70 watts
Minimum	60 watts
POWER OUTPUT @ 1dB COMPRESSION	
Nominal	65 watts
Minimum	50 watts
FLATNESS	±1.5 dB typical ±2.0 dB maximum
FREQUENCY RESPONSE	0.7–4.2 GHz instantaneously
GAIN (at maximum setting)	47.8 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	58 dBm typical
NOISE FIGURE.....	10 dB typical
HARMONIC DISTORTION	Minus 20 dBc max at 60 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 415 watts maximum
CONNECTORS	
RF.....	Type N female
REMOTE INTERFACES	
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			
60S1G4A	Type N female, front panel	Type N female, front panel		27.7 kg (61 lbs)	50.3 x 20.3 x 54.6 cm 19.8 x 8.0 x 21.5 in
60S1G4AM1	Type N female, rear panel	Type N female, rear panel		27.7 kg (61 lbs)	50.3 x 20.3 x 54.6 cm 19.8 x 8.0 x 21.5 in
60S1G4AM2	Same as 60S1G4A with enclosure removed for rack mounting			19.5 kg (43 lbs)	48.3 x 17.8 x 54.6 cm 19.0 x 7.0 x 21.5 in
60S1G4AM3	Same as 60S1G4AM1 with enclosure removed for rack mounting			19.5 kg (43 lbs)	48.3 x 17.8 x 54.6 cm 19.0 x 7.0 x 21.5 in
60S1G4AM4	Obsolete July 2011; features incorporated into standard design			27.7 kg (61 lbs)	50.3 x 20.3 x 54.6 cm 19.8 x 8.0 x 21.5 in