

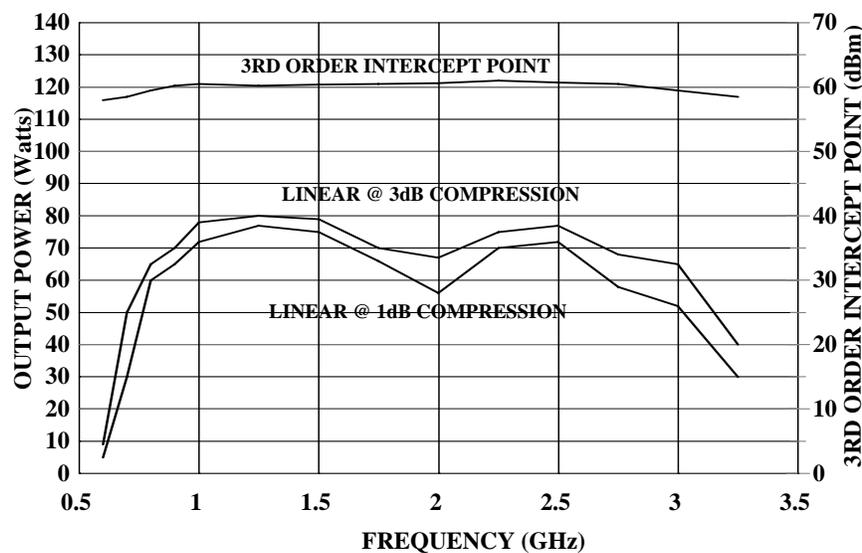
**Model 60S1G3,  
M1 through M6  
60 Watts CW  
0.8–3.0GHz**

The Model 60S1G3 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 60S1G3, 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 60S1G3 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. The 60S1G3 digital panel provides control of all amplifier functions both locally and remotely via IEEE-488 (GPIB) or RS-232 interfaces.

The low level of spurious signals and linearity of the Model 60S1G3 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.

**60S1G3  
Typical Performance**



## SPECIFICATIONS

RATED POWER OUTPUT .....	60 watts minimum
INPUT FOR RATED OUTPUT .....	1.0 milliwatt maximum
POWER OUTPUT @ 3dB COMPRESSION	
Nominal .....	70 watts
Minimum .....	60 watts
POWER OUTPUT @ 1dB COMPRESSION	
Nominal .....	60 watts
Minimum .....	50 watts
FLATNESS .....	±1.5 dB typical ±2.0 dB maximum
FREQUENCY RESPONSE .....	0.8 - 3.0 GHz instantaneously
GAIN (at maximum setting) .....	48 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 .....	See chart. The third order intercept points for this chart have been determined using two tones spaced 1 MHz apart. This is typical for W-CDMA systems. Closer tone spacing such as 60 kHz generally provides about a 1db to 3db improvement in the IP.
HARMONIC DISTORTION .....	Minus 20 dbc, max at 50 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 600 watts maximum
CONNECTORS	
RF .....	Type N female
REMOTE INTERFACES	
IEEE-488 .....	24 pin
RS-232 .....	9 pin Subminiature D
SAFETY INTERLOCK .....	15 pin Subminiature D
COOLING .....	Forced air (self contained fans)

MODEL NUMBER	RF INPUT	MODEL CONFIGURATIONS RF OUTPUT	WEIGHT	SIZE(WxHxD)
60S1G3	Type N female on front panel	Type N female on front panel	45 kg (100 lbs)	50.3 x 24.9 x 54.6 cm 19.8 x 9.8 x 21.5 in
60S1G3M1	Type N female on rear panel	Type N female on rear panel	45 kg (100 lbs)	50.3 x 24.9 x 54.6 cm 19.8 x 9.8 x 21.5 in
60S1G3M2	Same as 60S1G3 with enclosure removed for rack mounting		32 kg (71 lbs)	48.3 x 22.2 x 54.6 cm 19.0 x 8.75 x 21.5 in
60S1G3M3	Same as 60S1G3M1 with enclosure removed for rack mounting		32 kg (71 lbs)	48.3 x 22.2 x 54.6 cm 19.0 x 8.75 x 21.5 in
60S1G3M4	Same as 60S1G3M2 except the gain control knob is removed and a lock is installed		32 kg (71 lbs)	48.3 x 22.2 x 54.6 cm 19.0 x 8.75 x 21.5 in
*60S1G3M5	Type N female on front panel	Type N female on front panel	45 kg (100 lbs)	50.3 x 24.9 x 54.6 cm 19.8 x 9.8 x 21.5 in
60S1G3M6	Same as 60S1G3 with higher operating temperature range of 50°C		45 kg (100 lbs)	50.3 x 24.9 x 54.6 cm 19.8 x 9.8 x 21.5 in

\* The Gain Control can be used to optimize ACP performance.