AMPLIFIER RESEARCH
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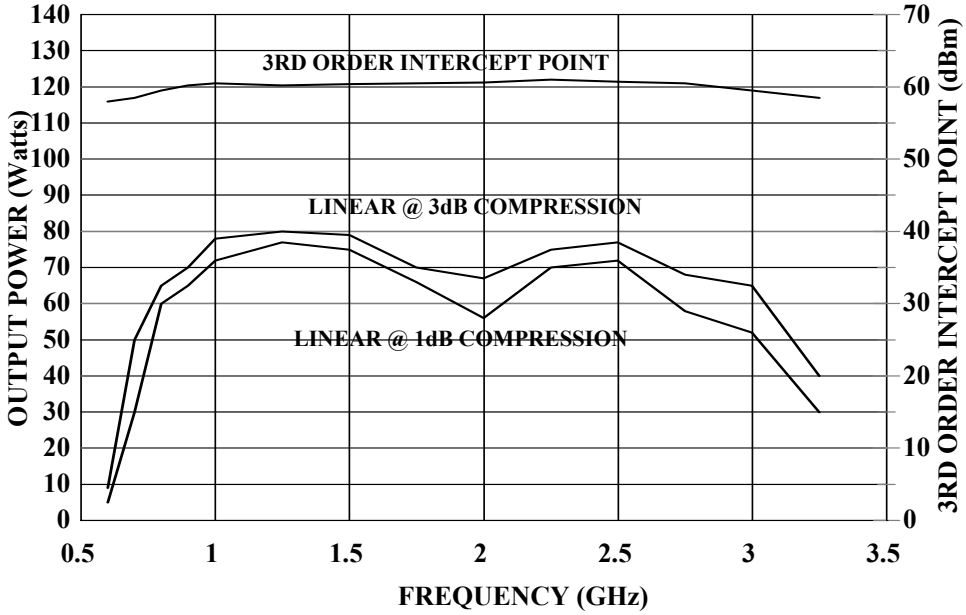
MODEL 60S1G3
M1, M2, M3, M4, M5
60 WATTS CW
0.8 - 3.0 GHz

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



REV051704

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 ..... ***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 CONFIGURATIONS

MODEL NUMBER	*RF INPUT*	*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*

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