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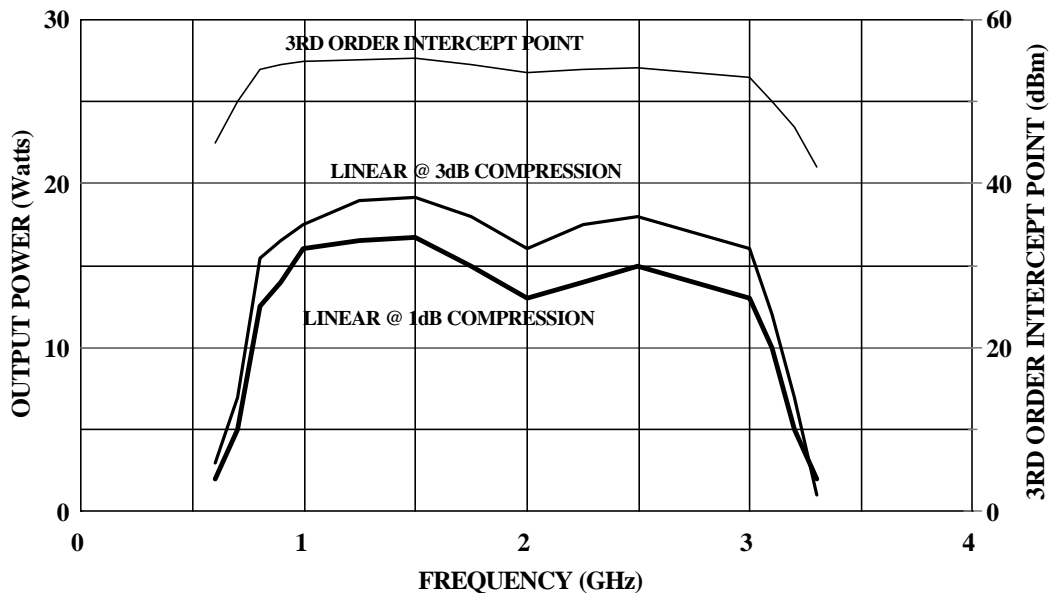
MODEL 15S1G3  
M1, M2, M3  
15 WATTS CW  
0.8 - 3.0 GHz

The Model 15S1G3 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 15S1G3, when used with a sweep generator, will provide a minimum of 15 watts of RF power. Included is a front panel gain control which permits the operator to conveniently set the desired output level. The 15S1G3 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 15S1G3 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 15S1G3 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.

MODEL 15S1G4  
Typical Performance



**SPECIFICATIONS**  
**Model 15S1G3**

**RATED POWER OUTPUT ..... 15 WATTS MINIMUM**

**INPUT FOR RATED OUTPUT ..... 1.0 MILLIWATT  
 MAXIMUM**

**POWER OUTPUT @ 3dB COMPRESSION**

*Nominal* ..... 17 watts  
*Minimum* ..... 15 watts

**POWER OUTPUT @ 1dB COMPRESSION**

*Nominal* ..... 15 watts  
*Minimum* ..... 12 watts

**FLATNESS** .....  $\pm 1.5$  dB typical  
 .....  $\pm 2.0$  dB maximum

**FREQUENCY RESPONSE** ..... 0.8 - 3.0 GHz  
 ..... *instantaneously*

**GAIN (at maximum setting)** ..... 42 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 12 watts*

**SPURIOUS** ..... Minus 73 dbc Typ.

**PHASE LINEARITY** .....  $\pm 1.0$  deg/100 MHz, Typ

**PRIMARY POWER** ..... (Selected Automatically)  
 ..... 90-132, 180-264 VAC  
 ..... 50/60 Hz, single phase  
 ..... 250 watts maximum

**CONNECTORS**

**RF** ..... Type N female

**REMOTE INTERFACES**

**IEEE-488** ..... 24 pin male

**RS-232** ..... 9 pin Subminiature D (male)

**SAFETY INTERLOCK** ..... 15 pin Subminiature D

**COOLING** ..... Forced air (self contained fans)

**MODEL CONFIGURATIONS**

<b>MODEL NUMBER</b>	<b>RF INPUT</b>	<b>RF OUTPUT</b>	<b>WEIGHT</b>	<b>SIZE (W x H x D)</b>
15S1G3	Type N female on front panel	Type N female on front panel	20.5 kg (45.0 lb)	50.3 x 15.5 x 37.6 cm 19.8 x 6.1 x 14.8 in
15S1G3M1	Type N female on rear panel	Type N female on rear panel	20.5 kg (45.0 lb)	50.3 x 15.5 x 37.6 cm 19.8 x 6.1 x 14.8 in
15S1G3M2	Same as 15S1G3 with enclosure removed for rack mounting		15.0 kg (33.0 lb)	48.3 x 12.7 x 37.6 cm 19.0 x 5.0 x 14.8 in
15S1G3M3	Same as 15S1G3M1 with enclosure removed for rack mounting.		15.0 kg (33.0 lb)	48.3 x 12.7 x 37.6 cm 19.0 x 5.0 x 14.8 in