

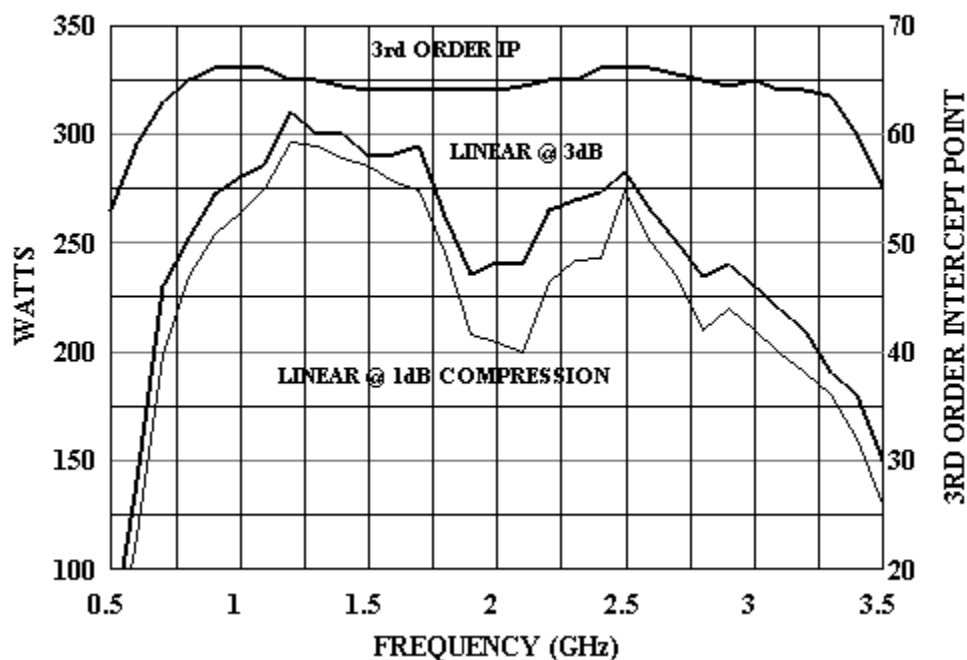
The Model 240S1G3 is a portable, self-contained, air-cooled, broadband, completely solid-state amplifier designed for applications where instantaneous bandwidth, high gain and linearity are required. Push-pull circuitry is utilized in all high power stages in the interest of lowering distortion and improving stability. The Model 240S1G3, when used with a sweep generator, will provide a minimum of 240 watts of RF power.

The Model 240S1G3 is equipped with a Digital Control Panel (DCP) which provides both local and remote control of the amplifier. The DCP uses a digital display, menu assigned softkeys, a single rotary knob, and four dedicated switches (POWER, STANDBY, OPERATE and FAULT/RESET) to offer extensive control and status reporting capability. The display provides operational presentation of Forward Power and Reflected Power plus control status and reports of internal amplifier status. Special features include a gain control, internal/external automatic level control (ALC) with front panel control of the ALC threshold, pulse input capability and RF output level protection. Also included is an internal RF detector that provides an output for use in self-testing or operational modes.

All amplifier control functions and status indications are available remotely in GPIB/IEEE-488 format and RS-232 hardware and fiber optic. The buss interface connector is located on the back panel and positive control of local or remote operation is assured by a keylock on the front panel of the amplifier.

The low level of spurious signals and linearity of the Model 240S1G3 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 240S1G3 is housed in a single equipment rack and is designed to provide complete stand-alone performance for RF testing. It is also configured to be used as a sub-amplifier in the 450S1G3, 600S1G3, or 800S1G3 high power amplifier systems. It can be added in an incremental fashion to become part of these higher power units, yet still be used as a stand-alone 240S1G3 amplifier.

240S1G3 TYPICAL POWER OUTPUT

SPECIFICATIONS

Model 240S1G3

<i>RATED OUTPUT POWER</i>	0.8 – 1 GHz: 230 watts minimum 1 – 3.0 GHz: 240 watts minimum
<i>INPUT FOR RATED OUTPUT</i>	1.0 milliwatt maximum
<i>POWER OUTPUT @ 3 dB COMPRESSION</i>	
<i>Nominal</i>	250 watts
<i>Minimum</i>	200 watts
<i>POWER OUTPUT @ 1 dB COMPRESSION</i>	
<i>Nominal</i>	230 watts
<i>Minimum</i>	180 watts
<i>FLATNESS</i>	±2.5 dB maximum ±1.0 dB with internal leveling
<i>FREQUENCY RESPONSE</i>	0.8-3.0 GHz instantaneously
<i>GAIN (at maximum setting)</i>	54 dB minimum
<i>GAIN ADJUSTMENT</i>	15 dB minimum
<i>INPUT IMPEDANCE</i>	50 ohms, VSWR 2.0:1 maximum
<i>OUTPUT IMPEDANCE</i>	50 ohms, VSWR 2.5:1 maximum
<i>MISMATCH TOLERANCE</i> *.....	100% of rated power without foldback. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.
<i>MODULATION CAPABILITY</i>	Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal
<i>HARMONIC DISTORTION</i>	Minus 20 dBc maximum at 200 watts
<i>THIRD ORDER INTERCEPT POINT</i>	65 dBm typical
<i>RF POWER DISPLAY</i>	Digital, forward and reflected
<i>PRIMARY POWER</i>	120-240VAC 50/60 Hz, single phase 2150 watts
<i>CONNECTORS</i>	
<i>RF connectors</i>	See Model Configurations
<i>Detected RF output</i>	Front Panel
<i>Safety interlock</i>	15 pin female subminiature D on rear panel
<i>Remote computer interface</i>	IEEE-488 (GPIB)& RS-232 connector on rear panel
<i>Remote computer interface (fiber optic)</i>	ST Conn Tx and Rx RS-232
<i>Others</i>	Front Panel
<i>IEEE-488 (GPIB) INTERFACE & RS-232</i>	Allows control and monitoring of all front panel controls except keylock position control
<i>COOLING</i>	Forced air (self contained fans)

***See Application Note #27**

MODEL CONFIGURATIONS

MODEL NUMBER	RF INPUT	RF OUTPUT	WEIGHT	SIZE (W x H x D)
240S1G3	Type N female on front panel	Type N female on front panel	172.4 kg (380 lbs)	56.1 x 109 x 67.1 cm (22.1 x 43.0 x 26.4 in)
240S1G3M1	Type N female on rear panel	Type N female on rear panel	172.4 kg (380 lbs)	56.1 x 109 x 67.1 cm (22.1 x 43.0 x 26.4 in)
240S1G3M2	Type N female on rear panel	Type N female on rear panel	184 kg (405 lbs)	56.1 x 152.4 x 67.1 cm (22.1 x 60.0 x 26.4 in)
	Mounted in a taller cabinet to allow space for customer supplied equipment to be mounted			
240S1G3M3	Same as 240S1G3M1 except frequency range is 0.8 to 3.1 GHz.		172.4 kg (380 lbs)	56.1 x 109 x 67.1 cm (22.1 x 43.0 x 26.4 in)
240S1G3M4	Same as 240S1G3M3 except higher rack for additional amplifier.		184 kg (405 lbs)	56.1 x 152.4 x 67.1 cm (22.1 x 60.0 x 26.4 in)