Model 240S1G3A,
M1 through M5
240 Watts CW
0.8-3.0GHz

The Model 240S1G3A 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 240S1G3A, when used with a sweep generator, will provide a minimum of 240 watts of RF power.

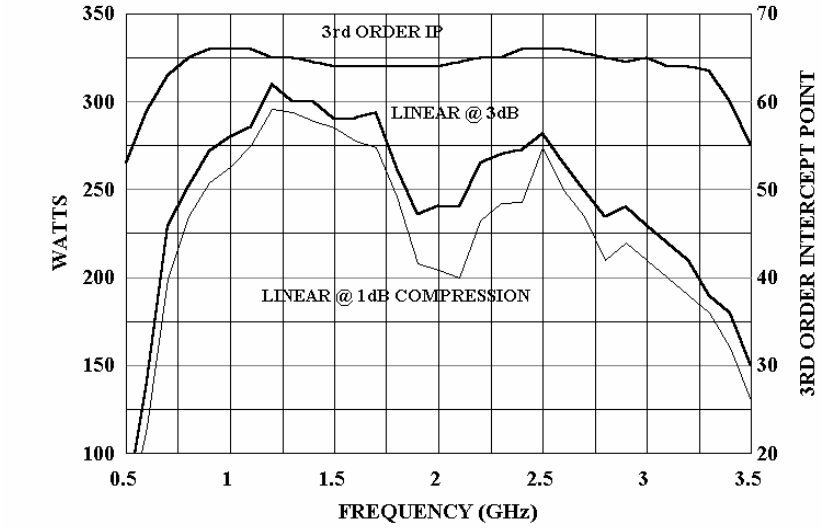
The Model 240S1G3A is equipped with a Digital Control Panel (DCP) which provides both local and remote control of the amplifier. The DCP uses a digital display, menu assigned softkeys, a single rotary knob, and four dedicated switches (POWER, STANDBY, OPERATE and FAULT/RESET) to offer extensive control 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 which 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 hardwire 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 240S1G3A 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 240S1G3A is housed in a single equipment rack and is designed to provide complete standalone performance for RF testing. It is also configured to be used as a sub-amplifier in a 450-watt, 600-watt, or 800-watt higher power amplifier. It can be added to in an incremental fashion to become a part of these higher power units, yet still be used as a standalone 240 watt amplifier.

240S1G3A TYPICAL POWER OUTPUT



SPECIFICATIONS
Model 240S1G3A

RATED OUTPUT POWER ..... 240 watts minimum

INPUT FOR RATED OUTPUT ..... 1.0 milliwatt maximum

POWER OUTPUT @ 3dB COMPRESSION
- Nominal ..... 250 watts
- Minimum ..... 200 watts

POWER OUTPUT @ 1dB COMPRESSION
- Nominal ..... 230 watts
- Minimum ..... 180 watts

FLATNESS ..... ±2.5 dB maximum
±1.0 dB with internal leveling

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

GAIN (at maximum setting) ..... 54 dB minimum

GAIN ADJUSTMENT ..... 15 dB minimum

INPUT IMPEDANCE ..... 50 ohms, VSWR 2.0:1 maximum

OUTPUT IMPEDANCE ..... 50 ohms, VSWR 2.5:1 maximum

MISMATCH TOLERANCE * ..... 100% of rated power without foldback. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.

MODULATION CAPABILITY ..... Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal.

HARMONIC DISTORTION ..... Minus 20 dBc maximum at 200 watts

THIRD ORDER INTERCEPT POINT ..... 65 dBm typical

RF POWER DISPLAY ..... Digital, forward and reflected

PRIMARY POWER 120-240VAC
50/60 Hz, single phase
2150 watts

CONNECTORS
- RF Connectors ..... See Model Configurations
- External Leveling Inputs ..... Type BNC female on front panel
- Pulse Modulation Input ..... Type BNC female on front panel
- Detected RF output ..... Type BNC female on front panel
- Safety interlock ..... 15 pin female subminiature D on rear panel
- Remote computer interface ..... IEEE-488 (GPIB)& RS-232 connector on rear panel
- Remote Computer Interface (Fiber Optic) ..... ST Conn Tx and Rx RS-232
- Operate Interface ..... 25-pin subminiature D on rear panel

IEEE-488 (GPIB) INTERFACE & RS-232 ..... Allows control and monitoring of all front panel controls except keylock position control.

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

See Application Note #27

MODEL CONFIGURATIONS

MODEL NUMBER	RF INPUT	RF OUTPUT	WEIGHT	SIZE (W x H x D)
240S1G3A	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
240S1G3AM1	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
240S1G3AM2	Same as 240S1G3A 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
240S1G3AM3	Same as 240S1G3A, mounted in a taller cabinet to allow space for customer-supplied equipment to be installed.		184 kg (405 lbs)	56.1 x 152.4 x 67.1 cm 22.1 x 60.0 x 26.4 in
240S1G3AM4	Same as 240S1G3A with higher operating temperature range of 50°C.		172.4 kg (380 lbs)	56.1 x 109 x 67.1 cm 22.1 x 43.0 x 26.4 in
240S1G3AM5	Same as 240S1G3A, mounted in a taller, deeper cabinet to allow for customer-supplied equipment or TWTA to be installed.		193 kg (425 lbs)	56.1 x 152.4 x 97.5 cm 22.1 x 60.0 x 38.4 in