



**Model 240S1G3A,
M1 through M6
240 Watts CW
0.8-3.0GHz**

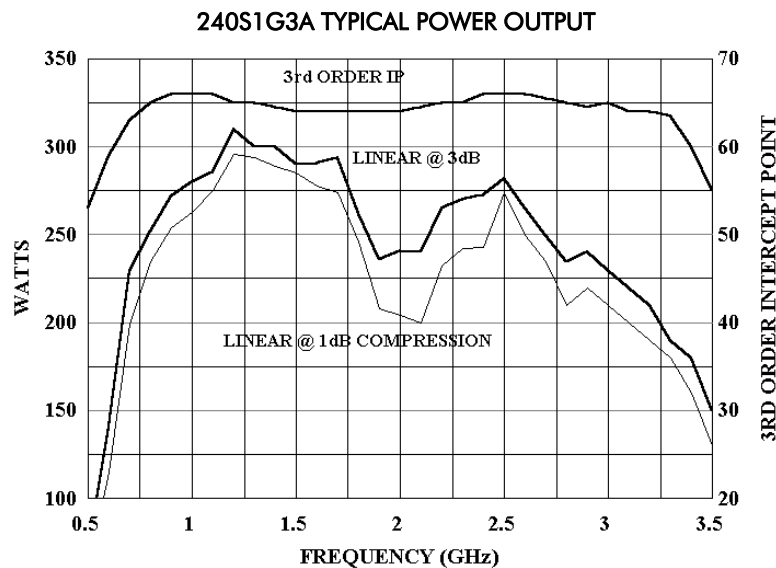
The Model 240S1G3A is a portable, self-contained, air-cooled, broadband, completely solid-state amplifier designed for applications where instantaneous bandwidth, high gain and linearity are required. Push-pull circuitry is utilized in all high power stages in the interest of lowering distortion and 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.



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 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.
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)

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
240S1G3AM6	Same as 240S1G3A except primary power is 115–240 VAC, 400 Hz, Single Phase, 2150 watts		172.4 kg (380 lbs)	56.1 x 109 x 67.1 cm 22.1 x 43.0 x 26.4 in