



**Model 225S4G8A, M1**  
**225 Watts CW**  
**4.0 GHz–8.0 GHz**

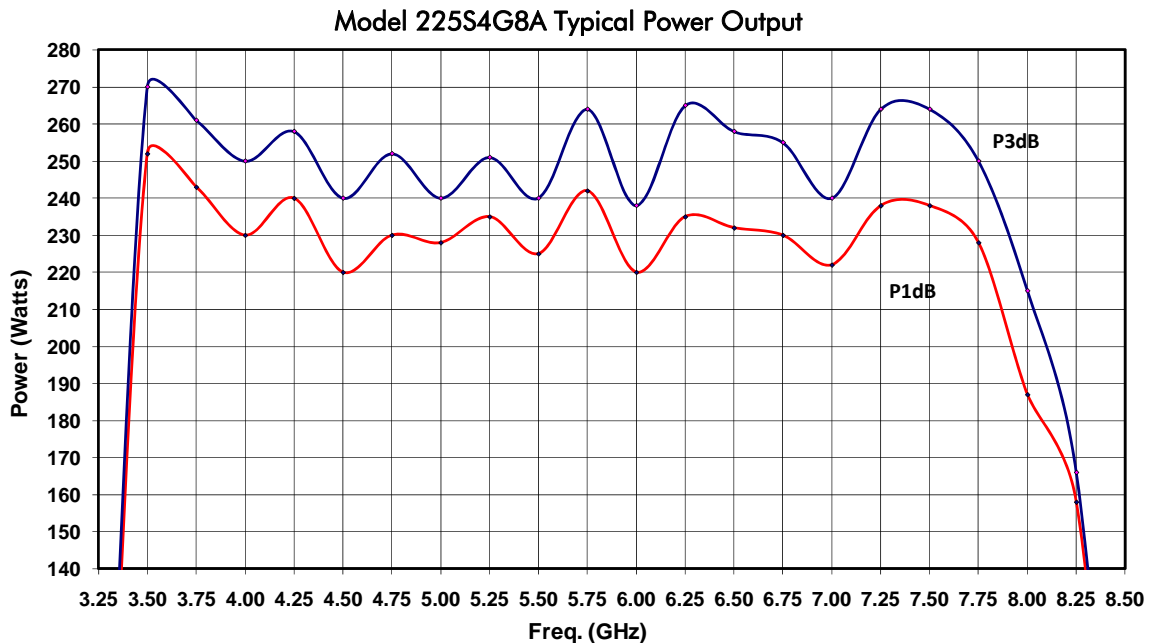
The Model 225S4G8A is a portable, self-contained, air-cooled, broadband, completely solid-state amplifier designed for applications where instantaneous bandwidth, high gain and linearity are required. The Model 225S4G8A, when used with a sweep generator, will provide a minimum of 225 watts of RF power instantaneously from 4 to 8 GHz.

The Model 225S4G8A is equipped with a Digital Control Panel (DCP) which provides both local and remote control of the amplifier. The DCP uses a graphic Liquid Crystal Display, menu assigned soft-keys, a single rotary knob, and a dedicated power on/off switch 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, RS-232 hardwire and fiber optic, USB, and Ethernet. 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 Model 225S4G8A is designed to have low spurious signals, linearity and is extremely load tolerant which enables it to be used in many RF applications such as: RF susceptibility testing, antenna/component testing, and communication technology testing. 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, UWB, WiMAX etc.

The 225S4G8A is part of AR's Expandable Power concept, which gives the amplifier much more versatility. The 225S4G8A consists of a driver amplifier and two 120 watt modules. It can be added to in an incremental fashion using more 120 watt modules to achieve higher power units.



## SPECIFICATIONS, MODEL 225S4G8A

RATED POWER OUTPUT .....	225 watts minimum
POWER OUTPUT @ 3dB COMPRESSION	
Nominal .....	225 watts
Minimum .....	200 watts
POWER OUTPUT @ 1dB COMPRESSION	
Nominal .....	215 watts
Minimum .....	180 watts
FLATNESS.....	±1.5 dB typical ±2.5 dB maximum
FREQUENCY RESPONSE .....	4.0–8.0 GHz instantaneously
INPUT FOR RATE OUTPUT .....	1.0 milliwatt maximum, 0 dBm
GAIN (at maximum setting) .....	53.6 dB minimum
GAIN ADJUSTMENT (Continuous Range) .....	15 dB minimum
INPUT IMPEDANCE.....	50 ohms, VSWR 2.5:1 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 225 watts
THIRD ORDER INTERCEPT POINT .....	62 dBm typical
RF POWER DISPLAY .....	Digital, forward, and reflected
PRIMARY POWER (selected automatically).....	90-132, 180-264 VAC 50/60 Hz, single phase <4500 watts maximum
CONNECTORS	
RF Input .....	See Model Configurations
RF Output .....	Type N female on rear panel
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
REMOTE INTERFACES	
IEEE-488.....	24 pin female
RS-232 .....	9 pin Subminiature D (female)
RS-232 (Fiber-optic) .....	Type ST
USB 2.0 .....	Type B
Ethernet .....	RJ-45
SAFETY INTERLOCK .....	15 Pin Subminiature D
COOLING.....	Forced air (self contained fans)
WEIGHT (approximate) .....	227 kg (500 lbs)
SIZE (W x H x D).....	68.8 x 106.7 x 97.5cm (27.1 x 42.0 x 38.4 in)

MODEL CONFIGURATIONS		
Model	RF Input	RF Output
225S4G8A	N female on front	N female on rear
225S4G8AM1	N female on rear	N female on rear