



**Model 60S4G8,
M2, M3
60 Watts CW
4.0 GHz–8.0 GHz**

The Model 60S4G8 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 60S4G8, when used with a sweep generator, will provide a minimum of 60 watts of RF power instantaneously from 4 to 8 GHz.

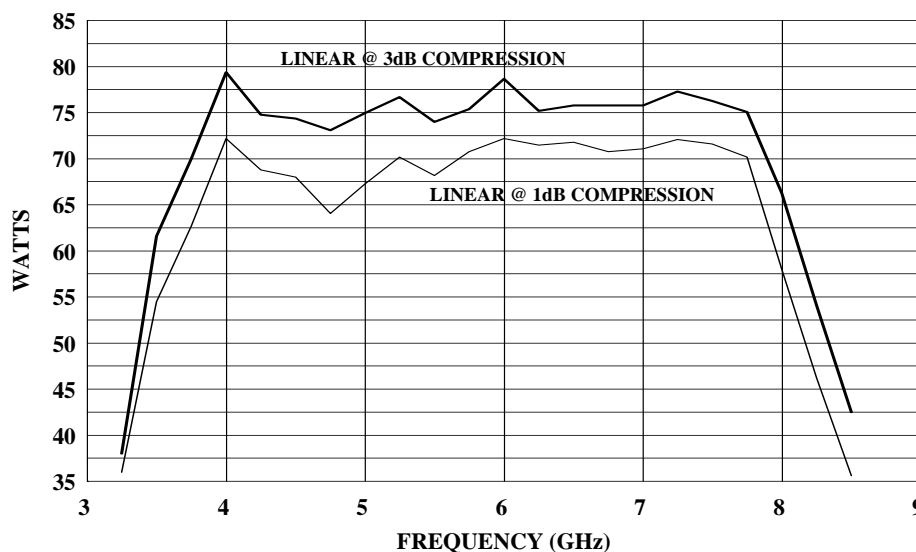
The Model 60S4G8 is equipped with a Digital Control Panel (DCP) which provides both local and remote control of the amplifier. The DCP uses a graphic Liquid Crystal Display, menu assigned softkeys, a single rotary knob, and a dedicated power on/off switch to offer extensive control and status reporting 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 hardware 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 60S4G8 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 60S4G8 is part of AR's *Expandable Power* concept, which gives the amplifier much more versatility. The 60S4G8 consists of two 35S4G8A sub-amplifiers housed in a single equipment rack with a controller. The 60S4G8 can function as one amplifier or be separated and operate as two separate 35S4G8A amplifiers which can be easily removed and used independently. The 60S4G8 can be upgraded in the future to a 90S4G8 and a 120S4G8 by simply adding more 35S4G8 sub-amplifiers, upgrading the controller and performing minor tuning.

60S4G8 TYPICAL POWER OUTPUT



SPECIFICATIONS, MODEL 60S4G8

RATED POWER OUTPUT	60 watts minimum
POWER OUTPUT @ 3dB COMPRESSION	
Nominal	70 watts
Minimum	60 watts
POWER OUTPUT @ 1dB COMPRESSION	
Nominal	60 watts
Minimum	55 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)	47.8 dB minimum
GAIN ADJUSTMENT (Continuous Range)	10 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 60 watts
THIRD ORDER INTERCEPT POINT	56 dBm typical
RF POWER DISPLAY	Digital, forward, and reflected
PRIMARY POWER (selected automatically).....	90-132, 180-264 VAC 50/60 Hz, single phase <1300 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	113.4 kg (250 lbs)
SIZE (W x H x D).....	56.1 x 90.2 x 67.1 cm (22.1 x 35.5 x 26.4 in)

MODEL CONFIGURATIONS

Model	RF Input	RF Output	Forward/Reverse Sample Ports (–40dBc)
60S4G8	N female on front panel	N female on rear panel	N/A
60S4G8M1	Obsolete. Same as 60S4G8M2		
60S4G8M2	N female on rear panel	N female on rear panel	N/A
60S4G8M3	N female on front panel	N female on rear panel	N female on front panel
The 60S4G8M3 has an internal 40 dB directional coupler for forward and reflected sample ports. Output power is reduced due to additional directional coupler loss			
	Rated power	55 watts	
	Power output @ 3dB compression	55 watts	
	Power output @ 1dB compression	50 watts	