



## 125S1G4 M1 through M3

- 125 Watts CW
- 0.7GHz–4.2GHz



### Features

The Model 125S1G4 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 125S1G4, when used with a sweep generator, will provide a minimum of 125 watts of RF power.

The Model 125S1G4 is equipped with a Digital Control Panel (DCP) which provides both local and remote control of the amplifier. The

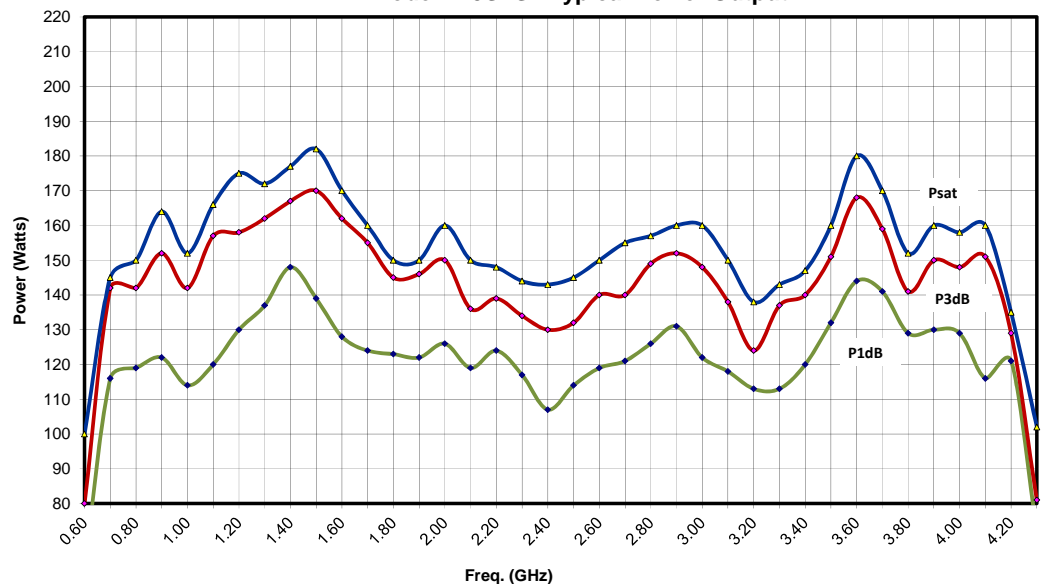
DCP uses a color LCD touch screen and a single rotary knob to offer status reporting and control capability. The display provides Forward Power and Reflected Power values plus amplifier status. Special features include a gain control, internal automatic level control (ALC) with front panel control at the ALC threshold, and RF output level protection.

All amplifier control functions and status indications are available remotely in GPIB/IEEE-488 format, RS232 hardwire and fiber optic, USB and Ethernet. Remote interface connectors are located on the back panel and local or remote operation is determined by a keylock switch on the front panel of the amplifier.

The low level of spurious signals and linearity of the Model 125S1G4 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 export classification for this equipment is 3A001. These commodities, technology or software are controlled for export in accordance with the U.S. Export Administration Regulations. Diversion contrary to U.S. law is prohibited.

Model 125S1G4 Typical Power Output



AR RF/Microwave  
Instrumentation  
160 School House Rd  
Souderton, PA 18964  
215-723-8181

For an applications engineer call: 800.933.8181

www.arworld.us



# 125S1G4

- 125 Watts CW
- 0.7GHz–4.2GHz

## Specifications

**RATED POWER OUTPUT:** 125 watts minimum

**INPUT FOR RATED OUTPUT:** 1.0 milliwatt maximum

**POWER OUTPUT @ 3dB COMPRESSION:**  
Nominal: 140 watts; Minimum: 120 watts

**POWER OUTPUT @ 1dB COMPRESSION:**  
Nominal: 120 watts; Minimum: 100 watts

**FLATNESS:** ±1.5 dB typical; ±2.0 dB maximum

**FREQUENCY RESPONSE:** 0.7–4.2 GHz instantaneously

**GAIN (at maximum setting):** 51.0 dB minimum

**GAIN ADJUSTMENT:** (Continuous Range), 15 dB minimum, (4096 steps remote)

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

**RF POWER DISPLAY:** 0–200 Watts

**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

**THIRD ORDER INTERCEPT:** 60 dBm typical

**HARMONIC DISTORTION:** Minus 20 dBc, maximum at 115 watts

**SPURIOUS:** Minus 73 dBc typical.

**PHASE LINEARITY:** ± 1.0 deg/100 MHz, Typ

**PRIMARY POWER (Selected Automatically):** 90-132, 180-264 VAC, 50/60 Hz, single phase, 900 watts maximum

**CONNECTORS:**  
RF See Model Configurations

**REMOTE INTERFACES**  
IEEE-488: 24 pin  
RS-232: 9 pin Subminiature D  
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)

**EXPORT CLASSIFICATION:** 3A001

## Model Configurations

MODEL NUMBER	RF INPUT		RF OUTPUT		INSTRUMENT CASE	WEIGHT	SIZE
	TYPE	LOC.	TYPE	LOC.			
125S1G4	N FEM	FRONT	N FEM	FRONT	YES	44kg (97lbs)	50.3 x 30 x 61cm 19.8 x 11.8 x 24in
125S1G4M1	N FEM	REAR	N FEM	REAR	YES	44kg (97lbs)	50.3 x 30 x 61cm 19.8 x 11.8 x 24in
125S1G4M2	N FEM	FRONT	N FEM	FRONT	NO, (Rack Mount)	33.1kg (73lbs)	48.3 x 26.7 x 61cm 19.0 x 10.5 x 24in
125S1G4M3	N FEM	REAR	N FEM	REAR	NO, (Rack Mount)	33.1kg (73lbs)	48.3 x 26.7 x 61cm 19.0 x 10.5 x 24in