



175S1G4A M1 through M4

- 175 Watts CW
- 0.7GHz–4.2GHz



Features

The Model 175S1G4A 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 175S1G4A, when used with a sweep generator, will provide a minimum of 175 watts of RF power.

The Model 175S1G4A is equipped with a Digital Control Panel (DCP) which provides both local and remote control of the amplifier. The

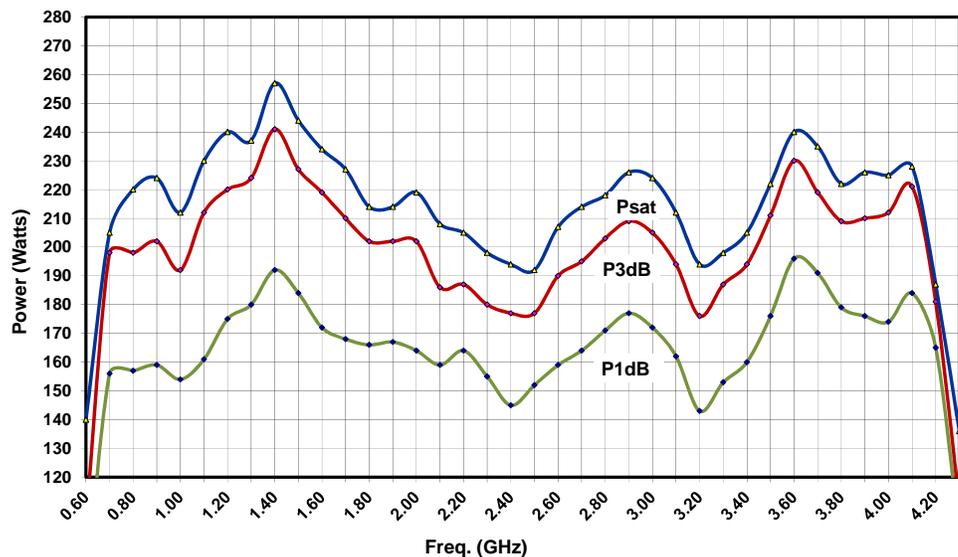
DCP uses a color LCD touch screen and a single rotary knob to offer status reporting and control capability. The display provides Forward Power and Reflected Power values plus amplifier status. Special features include a gain control, internal automatic level control (ALC) with front panel control at 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. 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 175S1G4A 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 175S1G4A



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- 175 Watts CW
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Specifications

RATED POWER OUTPUT: 175 watts minimum

INPUT FOR RATED OUTPUT: 1.0 milliwatt maximum

POWER OUTPUT @ 3dB COMPRESSION:

Nominal: 190 watts; Minimum: 160 watts

POWER OUTPUT @ 1dB COMPRESSION:

Nominal: 165 watts; Minimum: 135 watts

FLATNESS: ± 1.5 dB typical; ± 2.0 dB maximum

FREQUENCY RESPONSE: 0.7–4.2 GHz instantaneously

GAIN (at maximum setting): 52.5 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: 61 dBm typical

HARMONIC DISTORTION: Minus 20 dBc, maximum at 160 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, 1050 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.			
175S1G4A	N FEM	FRONT	N FEM	FRONT	YES	45.4kg (100lbs)	50.3 x 30 x 61cm 19.8 x 11.8 x 24in
175S1G4AM1	N FEM	REAR	N FEM	REAR	YES	45.4kg (100lbs)	50.3 x 30 x 61cm 19.8 x 11.8 x 24in
175S1G4AM2	N FEM	FRONT	N FEM	FRONT	NO, (Rack Mount)	34.5kg (76lbs)	48.3 x 26.7 x 61cm 19.0 x 10.5 x 24in
175S1G4AM3	N FEM	REAR	N FEM	REAR	NO, (Rack Mount)	34.5kg (76lbs)	48.3 x 26.7 x 61cm 19.0 x 10.5 x 24in
175S1G4AM4*	N FEM	REAR	N FEM	REAR	NO, (Rack Mount)	34.5kg (76lbs)	48.3 x 26.7 x 61cm 19.0 x 10.5 x 24in

*Power Output @ 1dB compression minimum of 150 Watts (0.8 – 2.0 GHz)