



rf/microwave instrumentation

**Model 175S1G4,
M1 through M4
175 Watts CW
0.8GHz–4.2GHz**

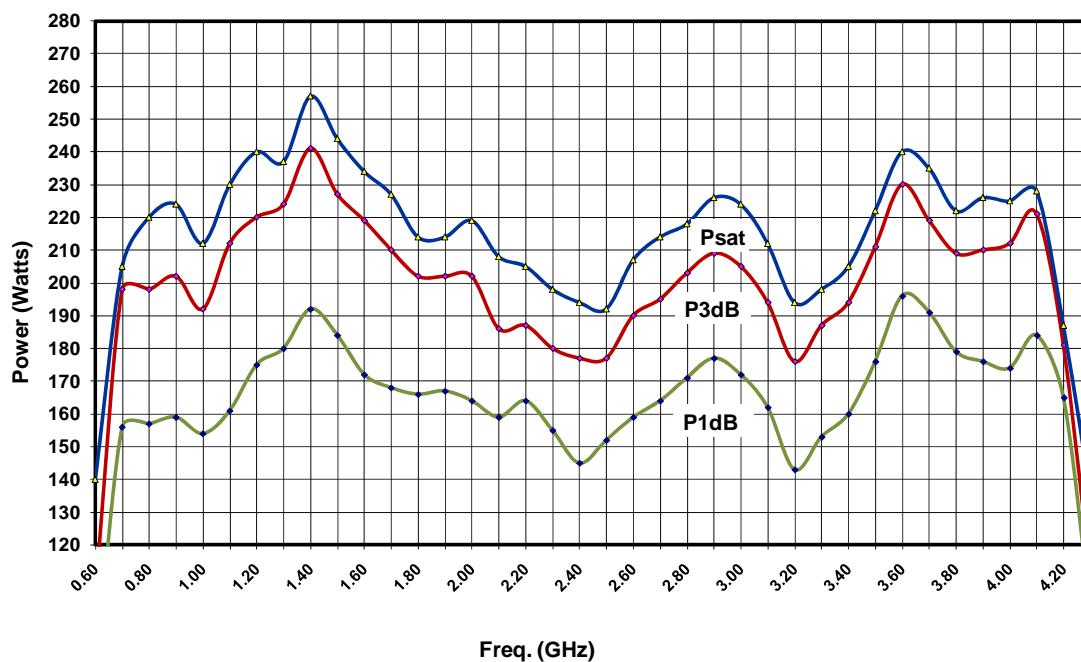
The Model 175S1G4 is a portable, self-contained, air-cooled, broadband, completely solid-state amplifier designed for applications where instantaneous bandwidth, high gain and linearity are required. Push-pull circuitry is utilized in all high power stages in the interest of lowering distortion and improving stability. The Model 175S1G4, when used with a sweep generator, will provide a minimum of 175 watts of RF power.

The Model 175S1G4 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 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 175S1G4 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.

Model 175S1G4



SPECIFICATIONS, 175S1G4

RATED POWER OUTPUT	175 watts minimum
INPUT FOR RATED OUTPUT	1.0 milliwatt maximum
POWER OUTPUT @ 3dB COMPRESSSION	
Nominal	190 watts
Minimum	160 watts
POWER OUTPUT @ 1dB COMPRESSSION	
Nominal	165 watts
Minimum	135 watts
FLATNESS.....	±1.5 dB typical ±2.0 dB maximum
FREQUENCY RESPONSE	0.8 – 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)

MODEL CONFIGURATIONS

MODEL NUMBER	RF INPUT		RF OUTPUT		INSTRUMENT CASE	WEIGHT	SIZE	OTHER
	TYPE	LOCATION	TYPE	LOCATION				
175S1G4	N FEM	FRONT	N FEM	FRONT	YES	45.4kg (100lbs)	50.3 x 30 x 61cm 19.8 x 11.8 x 24in	N/A
175S1G4M1	N FEM	REAR	N FEM	REAR	YES	45.4kg (100lbs)	50.3 x 30 x 61cm 19.8 x 11.8 x 24in	N/A
175S1G4M2	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	N/A
175S1G4M3	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	N/A