



500S1G2z5

- 500 Watts CW
- 1.0-2.5GHz

Features

The Model 500S1G2z5 is a self-contained, air-cooled, broadband, completely solid state amplifier designed for applications where instantaneous bandwidth, high gain and linearity are required. Housed in a single equipment rack, the 500S1G2z5 provides readily available RF power for typical applications, such as RF susceptibility testing, antenna and component testing, watt meter calibration, and as a driver for frequency multipliers and higher power amplifiers. A safety interlock can be implemented via a rear panel connector.

The 500S1G2z5, when used with a sweep generator, will provide a minimum of 500 watts of RF power. Included is a front panel gain control which permits the operator to conveniently set the desired output level. The 500S1G2z5 is protected from RF input overdrive by an RF input leveling circuit which controls the RF input level to the RF amplifier first stage when the RF input level is increased above 0 dBm. The RF amplifier stages are protected from over-temperature by removing the DC voltage to them if an over-temperature condition occurs due to cooling blockage or fan failure.

The Model 500S1G2z5 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

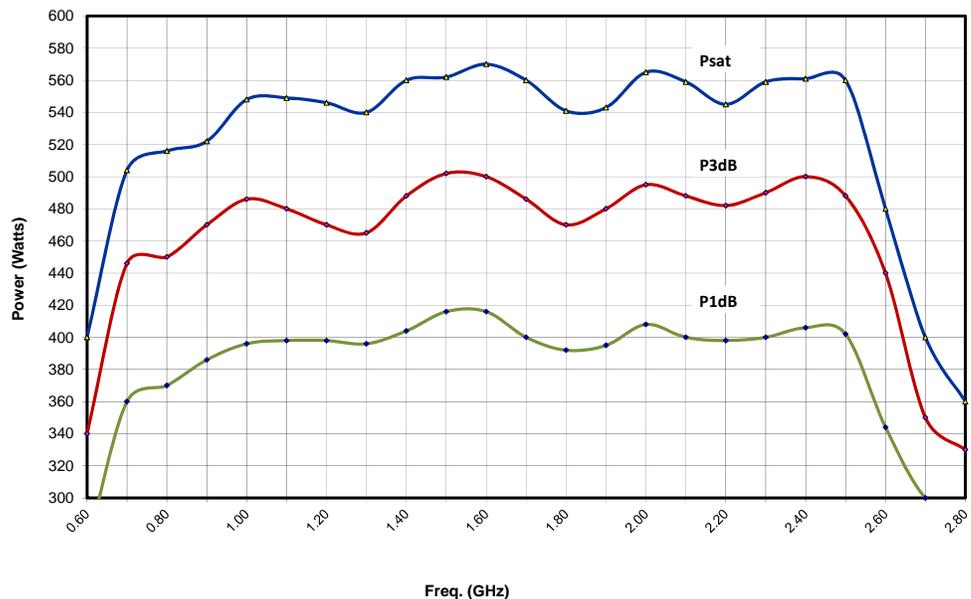
rotary knob to offer status reporting and control capability. The display provides Forward Power and Reflected Power values plus amplifier status. Special features include a gain control and RF output level protection.

All amplifier control functions and status indications are available remotely in GPIB/IEEE-488 format, RS232C hardwire and fiber optic, USB and Ethernet. The BUS interface connector is located on the back panel and positive control of local or remote operation is assured by a key-lock on the front panel of the amplifier.

The low level of spurious signals and linearity of the Model 500S1G2z5 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 EAR99. 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 500S1G2z5 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



500S1G2z5

- 500 Watts CW
- 1.0-2.5GHz

Specifications

RATED OUTPUT POWER: 500 watts minimum
INPUT FOR RATED OUTPUT: 1.0 milliwatt maximum
POWER OUTPUT @ 3dB COMPRESSION: Nominal, 550 watts; Minimum, 450 watts
POWER OUTPUT @ 1dB COMPRESSION: Nominal, 400 watts; Minimum, 350 watts
FLATNESS: ±1.5 dB typical, ±2.0 dB maximum
FREQUENCY RESPONSE: 1.0-2.5GHz instantaneously
GAIN (at maximum setting): 57 dB minimum
GAIN ADJUSTMENT: Continuous Range, 4096 steps remote, 20 dB minimum
INPUT IMPEDANCE: 50 ohms, VSWR 2.0:1 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.
THIRD ORDER INTERCEPT POINT: 66 dBm typical
NOISE FIGURE: 10 dB typical

HARMONIC DISTORTION: Minus 20 dBc maximum at 350 watts, minus 20 dBc typical at 500 watts
SPURIOUS: Minus 73 dBc typical
PHASE LINEARITY: ±1 deg/100 MHz, Typical
PRIMARY POWER: 100-240 VAC, 50/60 Hz, single phase, 2250 watts maximum
CONNECTORS:
 RF Input See Model Configurations
 Safety intlk 15 pin subminiature D
 Remote computer 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
COOLING: Forced air (self-contained fans)
EXPORT CLASSIFICATION: EAR99

MODEL	RF INPUT	RF OUTPUT	WEIGHT	SIZE (W x H x D)
500S1G2z5	N female, front	7/16 female, front	74.8 kg (165 lbs)	50.3 x 47 x 61 cm 19.8 x 18.5 x 24 in
500S1G2z5M1	N female, rear	7/16 female, rear	74.8 kg (165 lbs)	50.3 x 47 x 61 cm 19.8 x 18.5 x 24 in
500S1G2z5M2	Same as 500S1G2z5 with enclosure removed for rack mounting		52.2 kg (115 lbs)	48.3 x 44.5 x 61 cm 19.0 x 17.5 x 24 in
500S1G2z5M3	Same as 500S1G2z5M1 with enclosure removed for rack mounting		52.2 kg (115 lbs)	48.3 x 44.5 x 61 cm 19.0 x 17.5 x 24 in