



500S1G2z5A

- 500 watts CW
- 1.0GHz–2.5GHz
- Class A
- Portable
- Full VSWR-tolerant
- CE & RoHS Compliant
- High Efficiency

Features

The Model 500S1G2z5A is a solid-state, self-contained, air-cooled, broadband amplifier designed for applications where instantaneous bandwidth, high gain and linearity are required. Available in a stylish, contemporary cabinet for benchtop use or with cabinet removed for rack mounting.

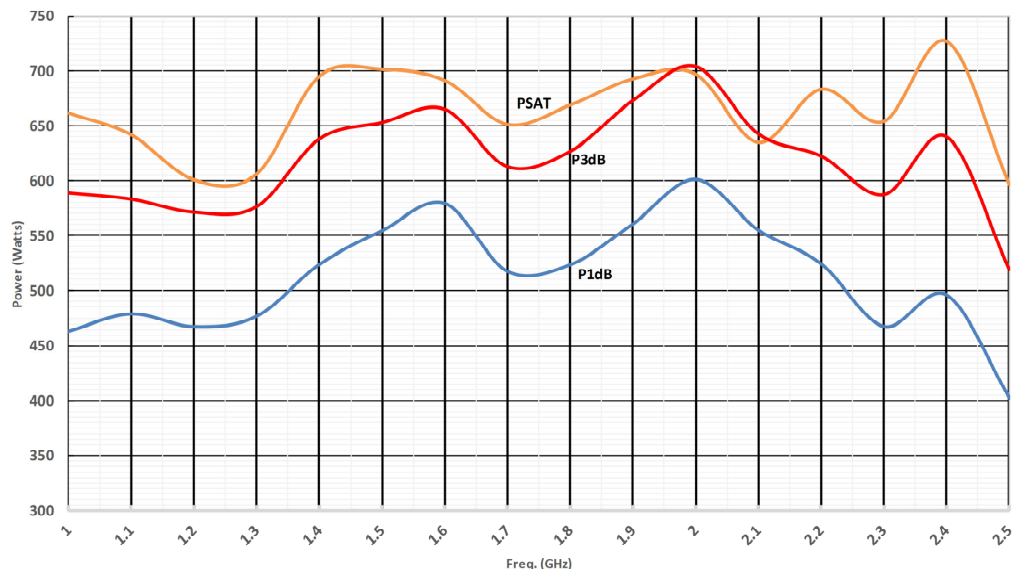
The Model 500S1G2z5A, when used with a sweep generator, will provide a minimum of 500 watts of RF power. Included is a front panel gain control which permits the operator to conveniently set the desired output level and an internal automatic level control (ALC) with local or remote control of the ALC threshold. The 500S1G2z5A 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 0dBm. 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 500S1G2z5A 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 display to indicate the operate status and fault conditions if an over-temperature or power supply fault has occurred. The unit can be returned to operate when the condition has been cleared.

All amplifier control functions and status indications are available remotely through the included Remotes Package. The Remotes Package includes GPIB/IEEE-488 format, RS-232 hardware 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 Local/Remote switch on the front panel of the amplifier. Also included with the Remotes Package is a safety interlock circuit for use with external safety switch interlocks. This circuit prevents the amplifier from going into operate mode unless the external connection is made. A jumper plug is provided for cases where this functionality is not needed.

The export classification for this equipment is EAR99.

500S1G2z5A Typical Output Power



AR RF/Microwave
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ISO 9001 Certified



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Specifications

INPUT FOR RATED OUTPUT (0 dBm): 1.0 mW maximum

RATED OUTPUT POWER:

Nominal: 550 watts, Minimum 500 watts

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;
±0.5 dB typical with internal leveling

FREQUENCY RESPONSE: 1.0 GHz-2.5 GHz instantaneously

GAIN (at maximum setting): 57 dB minimum

GAIN ADJUSTMENT (Continuous Range) Continuous Range 4096 steps remote, 20 dB minimum

INPUT IMPEDANCE: 50 ohms, VSWR 2.0:1 maximum

OUTPUT IMPEDANCE: 50 ohms nominal

MISMATCH TOLERANCE: Will operate without damage or oscillation with any magnitude and phase of source and load impedance.

MODULATION CAPABILITY: Will faithfully reproduce AM, FM, or Pulse modulation appearing on input signal.

THIRD ORDER INTERCEPT: 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

PRIMARY POWER: 100-240 VAC, 50/60Hz, 2250 watts maximum

CONNECTORS:

RF Input: N female

RF Output: 7/16 female

REMOTES PACKAGE:

- IEEE-488: 24-pin female
- RS-232: 9-pin subminiature D (female)
- Fiber optic: ST Conn Tx and Rx RS-232
- USB 2.0: Type B
- Ethernet: RJ-45
- Safety Interlock: 15-pin subminiature D

COOLING: Forced air (self contained fans)

ACOUSTICAL NOISE @ 1 METER

- Front: 56 dBA
- Side: 57 dBA
- Rear: 64 dBA

WEIGHT:

- With Cabinet 64.9 kg (143 lbs)
- Without Cabinet 50.3 kg (111 lbs)

SIZE (W x H x D):

- With cabinet: 50.3 x 20.5 x 74.9 cm (19.8 x 8.1 x 29.5 in)
- Without Cabinet: 48.3 x 17.7 x 74.9 cm (19 x 7.0 x 29.5 in)

ENVIRONMENTAL:

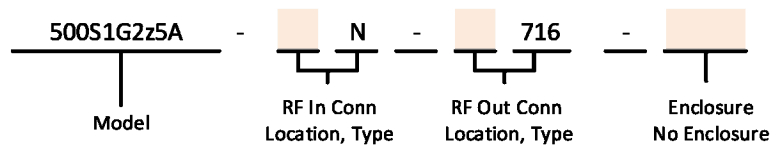
- Operating Temperature: 5°C / +40°C
- Storage Temperature: -20°C/+50°C
- Operating Altitude: Up to 2000M
- Shock and vibration: Normal Truck Transport

REGULATORY COMPLIANCE:

- EMC EN 61326-1
- Safety UL 61010-1
- CAN/CSA C22.2 #61010-1
- CENELEC EN 61010-1
- RoHS DIRECTIVE 2011/65/EU

EXPORT CLASSIFICATION: EAR99

Ordering Options

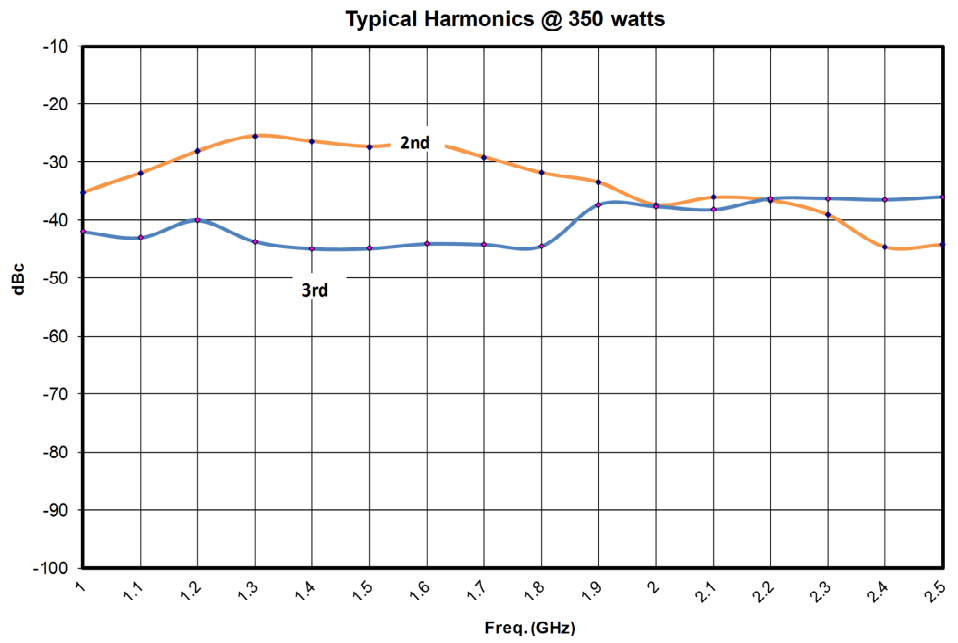
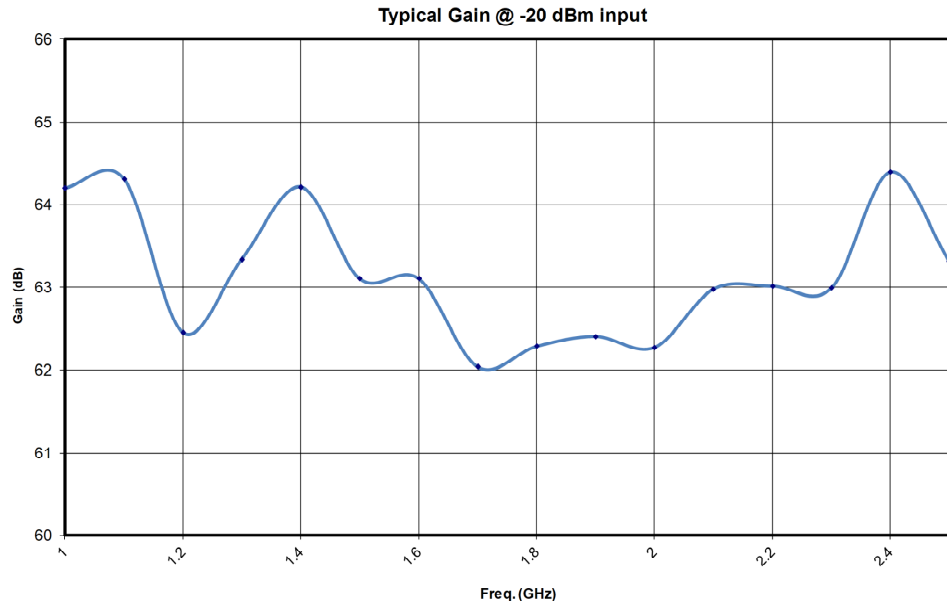


CONNECTOR LOCATION		ENCLOSURE	
Front	F	Enclosure	E
Rear	R	No Enclosure	NE

Contact your AR RF/Microwave Instrumentation Sales Associate for specific model configuration pricing.

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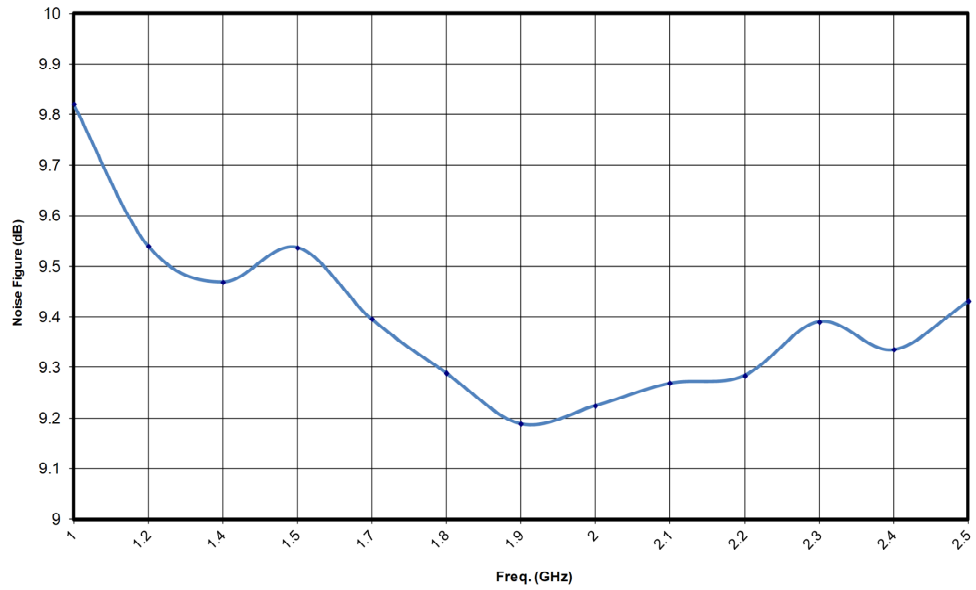
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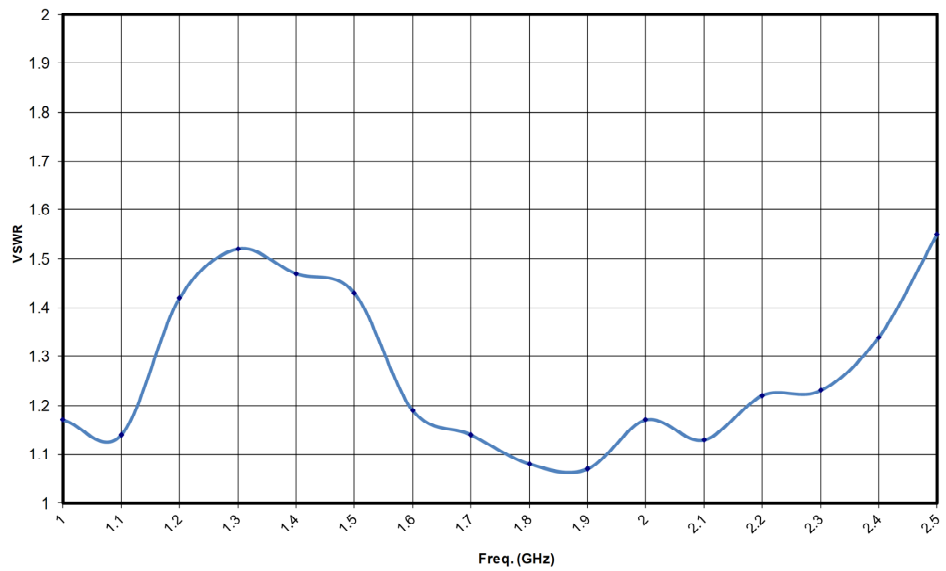
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Typical Noise Figure vs. Frequency



Typical Input VSWR



Envelope Drawing

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