



## 125S1G2z5

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



### Features

The Model 125S1G2z5 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 125S1G2z5, when used with a sweep generator, will provide 125 watts of RF power. Included is a front panel gain control which permits the operator to conveniently set the desired output level. The 125S1G2z5 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-

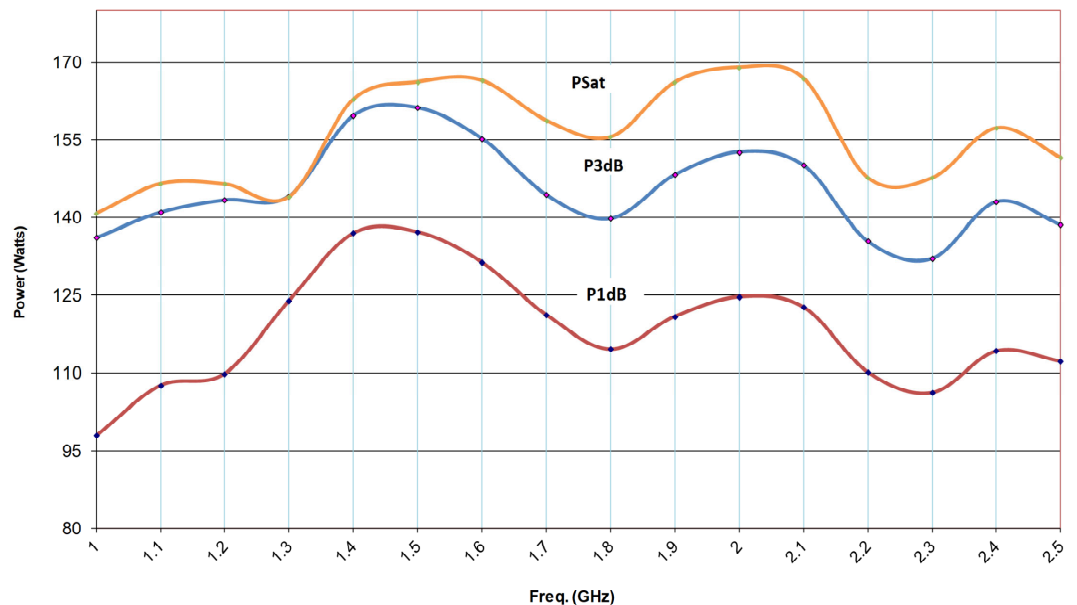
temperature by removing the DC voltage to them if an over-temperature condition occurs due to cooling blockage or fan failure. The Model 125S1G2z5 is equipped with a Digital Control Panel (DCP) which provides both local

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.

125S1G2z5 Typical Output Power



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ISO 9001 Certified



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## Specifications

**INPUT FOR RATED OUTPUT (0dBm):** 1.0 mW max

**RATED OUTPUT POWER:** 140 watts typical, 125 watts minimum

**POWER OUTPUT @ 3dB COMPRESSION:**  
Typical: 130 watts, Minimum: 115 watts

**POWER OUTPUT @ 1dB COMPRESSION:**  
Typical: 110 watts, Minimum: 90 watts

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

**FREQUENCY RESPONSE:** 1.0 GHz-2.5 GHz instantaneously

**GAIN (at maximum setting):** 54 dB minimum

**GAIN ADJUSTMENT (Continuous Range):** 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 input signal.

**THIRD ORDER INTERCEPT:** 60 dBm typical

**NOISE FIGURE:** 12 dB max; 10 dB typical

**HARMONIC DISTORTION:** Minus 20 dBc maximum at 100 watts; minus 30 dBc typical at 100 watts

**SPURIOUS:** Minus 73 dBc typical

**PRIMARY POWER:** 100-240 VAC, 50/60Hz, 650 watts

**CONNECTORS:**  
RF Input: N female  
RF Output: N 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: 60 dBA  
Side: 59 dBA  
Rear: 66 dBA

### WEIGHT:

With Cabinet 36.7 kg (81 lbs)  
Without Cabinet 25.4 kg (56 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:

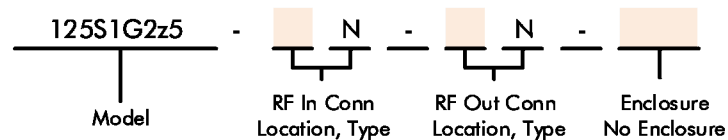
Operating Temperature: 5°C/+40°C  
Storage Temperature: -20°C/+50°C  
Operating Altitude: Up to 2000M  
Shock and vibration: Normal Truck Transport

### 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

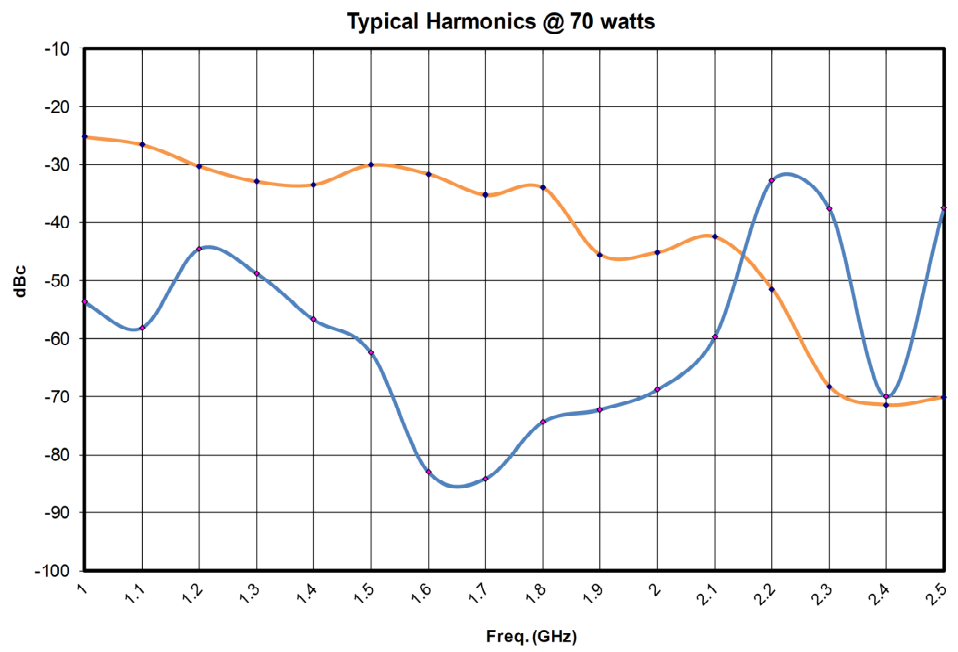
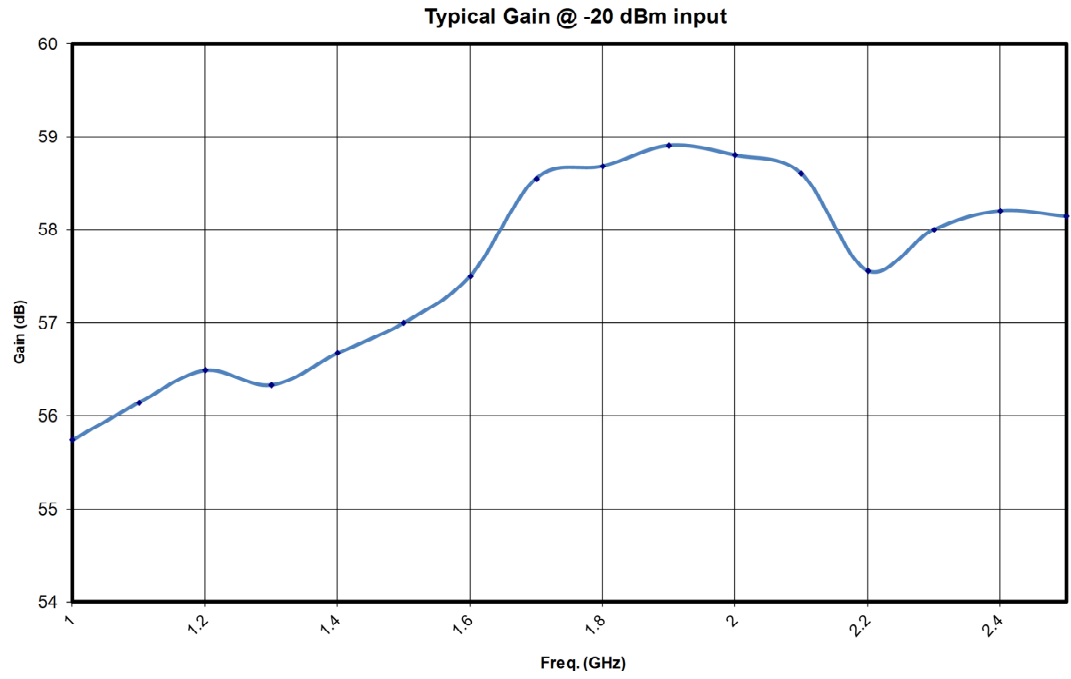


| CONNECTOR LOCATION |   | ENCLOSURE    |    |
|--------------------|---|--------------|----|
| Front              | F | Enclosure    | E  |
| Rear               | R | No Enclosure | NE |

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

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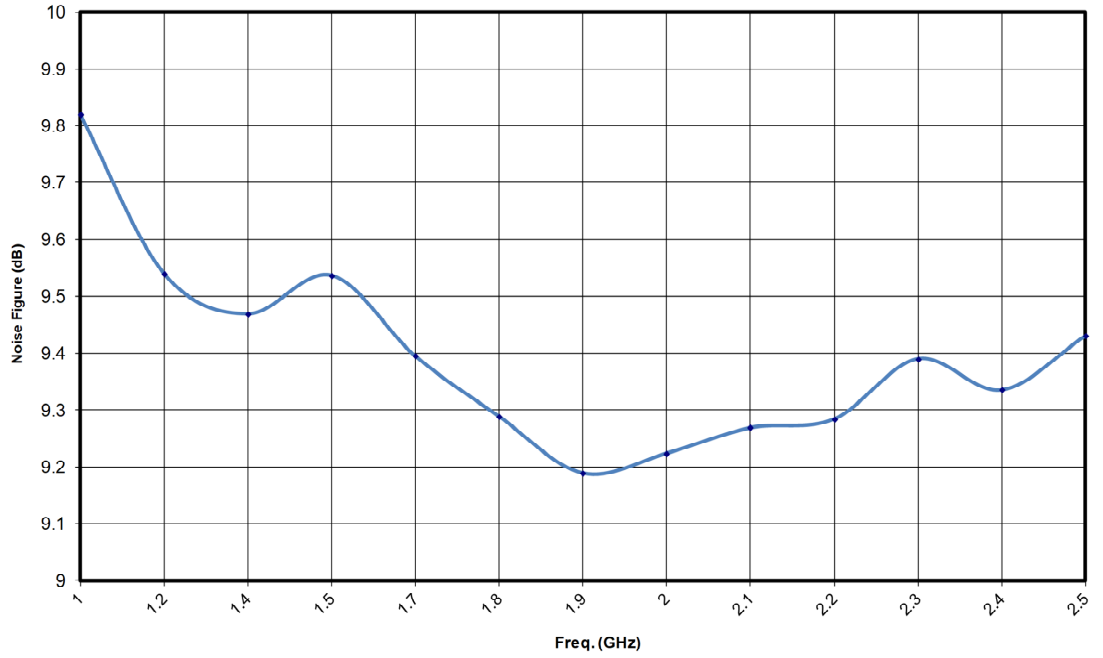
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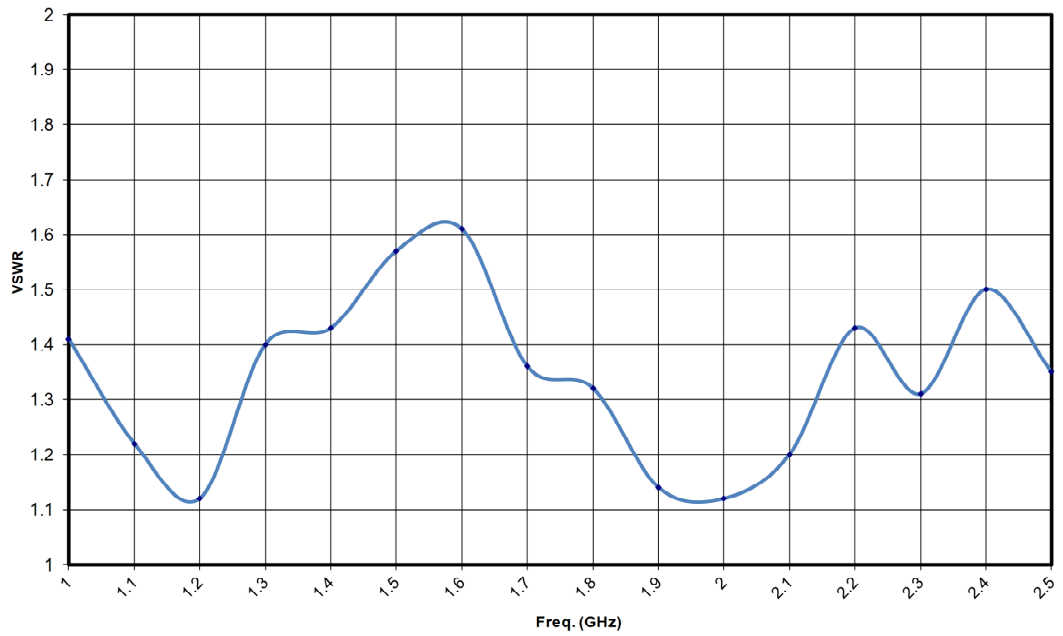
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Typical Noise Figure vs. Frequency



Typical Input VSWR



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