

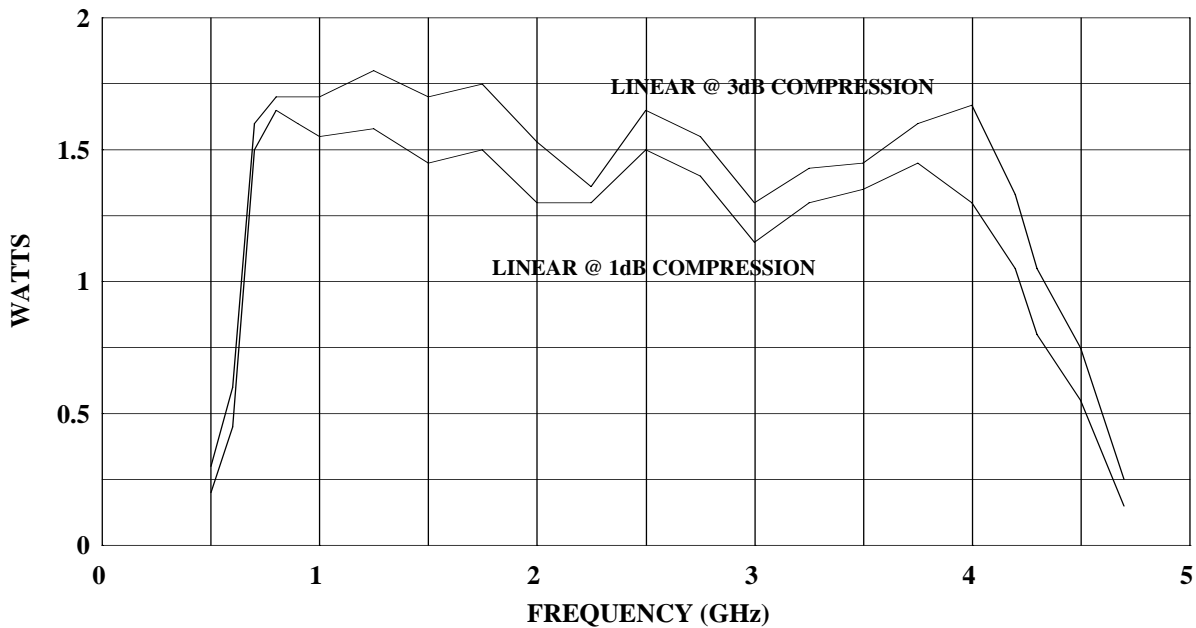


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MODEL 1S1G4A  
M1, M2, M3  
1 WATT CW  
0.8 -4.2 GHz

The Model 1S1G4A is a solid state, self-contained, air-cooled, broadband amplifier designed for applications where instantaneous bandwidth and high gain are required. Housed in a stylish contemporary cabinet, the unit is designed for benchtop use, but can be removed from the cabinet for immediate equipment rack mounting. The 1S1G4A, when used with a sweep generator, will provide a minimum of 1 watt of RF power. Included is a front panel gain control which permits the operator to conveniently set the desired output level. The 1S1G4A 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.

**1S1G4A TYPICAL POWER OUTPUT**



# SPECIFICATIONS

## Model 1S1G4A

<b>RATED POWER OUTPUT</b> .....	<i>1 watt minimum</i>
<b>INPUT FOR RATED OUTPUT</b> .....	<i>1.0 milliwatt maximum</i>
<b>POWER OUTPUT @ 3dB COMPRESSION</b>	
<i>Nominal</i> .....	<i>1.3 watts</i>
<i>Minimum</i> .....	<i>1 watt</i>
<b>POWER OUTPUT @ 1dB COMPRESSION</b>	
<i>Nominal</i> .....	<i>1 watt</i>
<i>Minimum</i> .....	<i>0.7 watts</i>
<b>FLATNESS</b> .....	<i>±1.0 dB typical</i> <i>±1.5 dB maximum</i>
<b>FREQUENCY RESPONSE</b> .....	<i>0.8 -4.2 GHz instantaneously</i>
<b>GAIN (at maximum setting)</b> .....	<i>30 dB minimum</i>
<b>GAIN ADJUSTMENT (Continuous Range)</b> .....	<i>10 dB minimum</i>
<b>INPUT IMPEDANCE</b> .....	<i>50 ohms, VSWR 2.0:1 maximum</i>
<b>OUTPUT IMPEDANCE</b> .....	<i>50 ohms, nominal</i>
<b>MISMATCH TOLERANCE*</b> .....	<i>100% of rated power without foldback. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.</i>
<b>MODULATION CAPABILITY</b> .....	<i>Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal</i>
<b>HARMONIC DISTORTION</b> .....	<i>Minus 20 dBc maximum at 0.8 watts</i>
<b>THIRD ORDER INTERCEPT POINT</b> .....	<i>41 dBm typical</i>
<b>PRIMARY POWER (Selected Automatically)</b> .....	<i>90-132, 180-264 VAC</i> <i>50/60 Hz, single phase</i> <i>50 watts maximum</i>
<b>CONNECTORS</b> .....	<i>Type N female ( see Model Configuration)</i>
<b>COOLING</b> .....	<i>Forced air (self contained fans)</i>

\* See Application Note #27

### Model Configurations

Model Number	RF Connectors	Instrument Case	Weight	Size
<i>1S1G4A</i>	<i>Front</i>	<i>Yes</i>	<i>6.4 Kg (14.0 lb)</i>	<i>26 x 10.9 x 28.2 cm</i> <i>10.3 x 4.3 x 11.1 in</i>
<i>1S1G4AM1</i>	<i>Rear</i>	<i>Yes</i>	<i>6.4 Kg (14.0 lb)</i>	<i>26 x 10.9 x 28.2 cm</i> <i>10.3 x 4.3 x 11.1 in</i>
<i>1S1G4AM2</i>	<i>Front</i>	<i>No</i>	<i>2.9 Kg (6.5 lb)</i>	<i>24.1 x 9.4 x 27.9 cm</i> <i>9.5 x 3.7 x 11 in</i>
<i>1S1G4AM3</i>	<i>Rear</i>	<i>No</i>	<i>2.9 Kg (6.5 lb)</i>	<i>24.1 x 9.4 x 27.9 cm</i> <i>9.5 x 3.7 x 11 in</i>

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