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](image-url)
SPECIFICATIONS
Model 1S1G4A

RATED POWER OUTPUT ................................................................. 1 watt minimum

INPUT FOR RATED OUTPUT .......................................................... 1.0 milliwatt maximum

POWER OUTPUT @ 3dB COMPRESSION
Nominal .......................................................................................... 1.3 watts
Minimum ........................................................................................ 1 watt

POWER OUTPUT @ 1dB COMPRESSION
Nominal .......................................................................................... 1 watt
Minimum ........................................................................................ 0.7 watts

FLATNESS ....................................................................................... ±1.0 dB typical
±1.5 dB maximum

FREQUENCY RESPONSE ............................................................... 0.8 -4.2 GHz instantaneously

GAIN (at maximum setting) ........................................................... 30 dB minimum

GAIN ADJUSTMENT (Continuous Range) ...................................... 10 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.

MODULATION CAPABILITY .......................................................... Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal

HARMONIC DISTORTION .............................................................. Minus 20 dBc maximum at 0.8 watts

THIRD ORDER INTERCEPT POINT ................................................. 41 dBm typical

PRIMARY POWER (Selected Automatically) ................................. 90-132, 180-264 VAC
50/60 Hz, single phase
50 watts maximum

CONNECTORS ................................................................................ Type N female (see Model Configuration)

COOLING ....................................................................................... Forced air (self contained fans)
* See Application Note #27

<table>
<thead>
<tr>
<th>Model Number</th>
<th>RF Connectors</th>
<th>Instrument Case</th>
<th>Weight</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1S1G4A</td>
<td>Front</td>
<td>Yes</td>
<td>6.4 Kg (14.0 lb)</td>
<td>26 x 10.9 x 28.2 cm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10.3 x 4.3 x 11.1 in</td>
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<tr>
<td>1S1G4AMI</td>
<td>Rear</td>
<td>Yes</td>
<td>6.4 Kg (14.0 lb)</td>
<td>26 x 10.9 x 28.2 cm</td>
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<tr>
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<td></td>
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<td>10.3 x 4.3 x 11.1 in</td>
</tr>
<tr>
<td>1S1G4AM2</td>
<td>Front</td>
<td>No</td>
<td>2.9 Kg (6.5 lb)</td>
<td>24.1 x 9.4 x 27.9 cm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9.5 x 3.7 x 11 in</td>
</tr>
<tr>
<td>1S1G4AM3</td>
<td>Rear</td>
<td>No</td>
<td>2.9 Kg (6.5 lb)</td>
<td>24.1 x 9.4 x 27.9 cm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9.5 x 3.7 x 11 in</td>
</tr>
</tbody>
</table>
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