The Model 5S1G4 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 5S1G4, when used with a sweep generator, will provide a minimum of 5 watts of RF power. Included is a front panel gain control which permits the operator to conveniently set the desired output level. The 5S1G4 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. There is a fault lamp on the rear panel to indicate an over temperature or power supply fault condition. The unit can be returned to operate when the condition has been cleared.

**5S1G4 Typical Power Output**

![Graph showing typical power output of Model 5S1G4](image)
**SPECIFICATIONS, MODEL 5S1G4**

RATED POWER OUTPUT ...............................................6.5 watts minimum

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

POWER OUTPUT @ 3 dB COMPRESSION
   Nominal ..........................................................8 watts
   Minimum ......................................................6.5 watts

POWER OUTPUT @ 1 dB COMPRESSION
   Nominal ..........................................................7 watts
   Minimum ......................................................5 watts

FLATNESS ...................................................................±1.5 dB typical
   ±2.0 dB maximum

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

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

GAIN (at maximum setting) ........................................37 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 5 watts

THIRD ORDER INTERCEPT POINT .................................49 dBm typical

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

COOLING ..................................................................Forced air (self contained fans)

* See Application Note #27

### MODEL CONFIGURATIONS

<table>
<thead>
<tr>
<th>Model Number</th>
<th>RF Input</th>
<th>RF Output</th>
<th>Weight</th>
<th>Size (W x H x D)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5S1G4</td>
<td>Type N female Front Panel</td>
<td>Type N female Front Panel</td>
<td>17.2 Kg (38.0 lb)</td>
<td>50.3 x 15.5 x 30 cm</td>
</tr>
<tr>
<td>5S1G4M1</td>
<td>See Individual Specification Sheet</td>
<td></td>
<td></td>
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<tr>
<td>5S1G4M2</td>
<td>Same as 5S1G4 with enclosure removed for rack mounting</td>
<td>12.2 Kg (27.0 lb)</td>
<td>48.3 x 13.3 x 28.7 cm</td>
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<tr>
<td>5S1G4M3</td>
<td>Same as 5S1G4M4 with enclosure removed for rack mounting</td>
<td>12.2 Kg (27.0 lb)</td>
<td>48.3 x 13.3 x 28.7 cm</td>
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<tr>
<td>5S1G4M4</td>
<td>Type N female Rear Panel</td>
<td>Type N female Rear Panel</td>
<td>17.2 Kg (38.0 lb)</td>
<td>50.3 x 15.5 x 30 cm</td>
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<tr>
<td>5S1G4M5</td>
<td>Obsolete</td>
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<td></td>
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