The Model 25S1G6 is a solid-state, Class A design, 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 25S1G6, when used with a sweep generator, will provide a minimum of 25 watts of RF power. Included is a front panel gain control which permits the operator to conveniently set the desired output level. The 25S1G6 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 digital display on the front panel to indicate the operate status and fault conditions when an over-temperature or power supply fault has occurred. The unit can be returned to operate when the condition has been cleared. The 25S1G6 includes digital control for both local and remote control of the amplifier. All amplifier control functions and status indications are available remotely in GPIB/IEEE-488 format, RS-232 hardwire 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.

The export classification for this equipment is EAR99. These commodities, technology or software are controlled for export in accordance with the U.S. Export Administration Regulations. Diversion contrary to U.S. law is prohibited.
SPECIFICATIONS, MODEL 25S1G6

RATED POWER OUTPUT ........................................... 25 watts minimum (0.7-6GHz)

POWER OUTPUT @ 3dB COMPRESSION
   Nominal ........................................... 35 watts
   Minimum ........................................... 25 watts

POWER OUTPUT @ 1dB COMPRESSION
   Nominal ........................................... 30 watts
   Minimum ........................................... 20 watts

SMALL SIGNAL GAIN FLATNESS .................................. ±1.5 dB typical
                                                      ±2.0 dB maximum

FREQUENCY RESPONSE ........................................ 0.7–6GHz instantaneously

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

GAIN (at maximum setting) .................................. 0.44 dB minimum

GAIN ADJUSTMENT (Continuous Range) .................. 10 dB minimum (4096 steps remote)

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 the input
                                                      signal

HARMONIC DISTORTION ....................................... Minus 20 dBc maximum at 25 watts (1-6GHz)
                                                      Minus 15 dBc typical at 25 watts (0.7-1GHz)

SPURIOUS ........................................................... Minus 73 dBc typical

THIRD ORDER INTERCEPT POINT ................................ 50 dBm typical

NOISE FIGURE .................................................. 10 dB typical

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

CONNECTORS
RF ................................................................. Type N female
REMOTE INTERFACES
IEEE-488 ......................................................... 24 pin female
RS-232 ............................................................. 9 pin Subminiature D (female)
RS-232 (fiber optic) .......................................... Type ST
USB 2.0 ............................................................. Type B
Ethernet .......................................................... RJ-45

SAFETY INTERLOCK ............................................ 15 Pin Subminiature D

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

EXPORT CLASSIFICATION .................................... EAR99

<table>
<thead>
<tr>
<th>MODEL</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>25S1G6</td>
<td>Type N female on</td>
<td>Type N female on</td>
<td>18.2 kg (40</td>
<td>50.3 x 15.5 x 37.6 cm</td>
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<tr>
<td></td>
<td>front panel</td>
<td>front panel</td>
<td>lbs)</td>
<td>19.8 x 6.1 x 14.8 in</td>
</tr>
<tr>
<td>25S1G6M1</td>
<td>Type N female on</td>
<td>Type N female on</td>
<td>18.2 kg (40</td>
<td>50.3 x 15.5 x 37.6 cm</td>
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<tr>
<td></td>
<td>rear panel</td>
<td>rear panel</td>
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<td>19.8 x 6.1 x 14.8 in</td>
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<tr>
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<td></td>
<td>12.5 kg (27.5</td>
<td>48.3 x 12.7 x 37.6 cm</td>
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<tr>
<td></td>
<td>with enclosure</td>
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<td>lbs)</td>
<td>19.0 x 5.0 x 14.8 in</td>
</tr>
<tr>
<td></td>
<td>removed for rack</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25S1G6M3</td>
<td>Same as 25S1G6M1</td>
<td></td>
<td>12.5 kg (27.5</td>
<td>48.3 x 12.7 x 37.6 cm</td>
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<td></td>
<td>with enclosure</td>
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<td>lbs)</td>
<td>19.0 x 5.0 x 14.8 in</td>
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<td>removed for rack</td>
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</table>

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The Model 200S1G6 is a solid-state, Class A design, self-contained, air-cooled, broadband amplifier designed for applications where instantaneous bandwidth, high gain and linearity are required. House 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 200S1G6, when used with a sweep generator, will provide a minimum of 200 watts of RF power. Included is a front panel gain control which permits the operator to conveniently set the desired output level. The 200S1G6 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 digital display on the front panel 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 in GPIB/IEEE-488 format, RS-232 hardwire 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.

The low level of spurious signals and linearity of the Model 200S1G6 make it ideal for use as a driver amplifier in testing wireless and communication components and subsystems. It can be used as a test instrument covering multiple frequency bands and is suitable for a variety of communication technologies such as CDMA, W-CDMA, TDMA, GSM etc. It is also suitable for EMC Test applications where undistorted modulation envelopes are desired.

The export classification for this equipment is 3A001. These commodities, technology or software are controlled for export in accordance with the U.S. Export Administration Regulations. Diversion contrary to U.S. law is prohibited.
SPECIFICATIONS, MODEL 200S1G6

RATED POWER OUTPUT ........................................... 200 watts minimum (0.7–6.0 GHz)
INPUT FOR RATED OUTPUT ........................................ 1.0 milliwatt maximum

POWER OUTPUT @ 3dB COMPRESSION
Nominal ................................................. 220 watts
Minimum ............................................. 180 watts

POWER OUTPUT @ 1 dB COMPRESSION
Nominal ............................................. 180 watts
Minimum ............................................. 160 watts

SMALL SIGNAL GAIN FLATNESS ....................... ±1.5 dB typical
....................................................... ±2.5 dB maximum

FREQUENCY RESPONSE ................................. 0.7–6 GHz instantaneously

GAIN (at maximum setting) ......................... 54 dB minimum

GAIN ADJUSTMENT
(Continuous Range) ........................................ 10 dB minimum
....................................................... (4096 steps remote)

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 the input signal

THIRD ORDER INTERCEPT ......................... 60 dBm typical

NOISE FIGURE .................................................. 10 dB typical

HARMONIC DISTORTION .......................... Minus 20 dBc maximum at 180 watts, (1.0-6.0 GHz)
....................................................... Minus 15 dBc typical at 180 watts, (0.7-1.0 GHz)

SPURIOUS .................................................. Minus 73 dBc Typ.

PHASE LINEARITY ........................................ ±1.0 deg/100 MHz, Typ

PRIMARY POWER (Selected Automatically) ............... 90-132, 180-264 VAC
50/60 Hz, single phase
1900 watts maximum

CONNECTORS
RF .............................................................. Type N female
REMOTE INTERFACES
IEEE-488 .................................................. 9 pin Subminiature D
RS-232 ...................................................... Type ST
RS-232 (fiber optic) ....................................... Type ST
USB 2.0 ...................................................... Type B
Ethernet .................................................... RJ-45

SAFETY INTERLOCK ........................................ 15 pin Subminiature D

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

EXPORT CLASSIFICATION ..................................... 3A001

<table>
<thead>
<tr>
<th>MODEL CONFIGURATIONS</th>
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<tbody>
<tr>
<td>MODEL</td>
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<tr>
<td>-------</td>
</tr>
<tr>
<td>200S1G6</td>
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<tr>
<td></td>
</tr>
<tr>
<td>200S1G6M1</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>200S1G6M2</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>200S1G6M3</td>
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<td></td>
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