



Agilent N5531S Measuring Receiver System

Automation and System Integration Services Data

Features and Benefits

- Automated testing of RF and Microwave Signal Generators
- Automated testing of RF and Microwave Attenuators
- Comprehensive set of tests
- Support for both manually controlled, GPIB and LAN test devices
- Flexible testing through use of text based Test Plans and Sequences
- Simple Parameter definition and management through spreadsheets
- Meets or exceeds the performance of the Agilent 8902A



The Agilent N5531S comprises an Agilent PSA series Spectrum Analyser, an EPM series PowerMeter, N5532A sensor module and N5531A software.

The Agilent N5531S provides the easiest migration from 8902A to modern test equipment for attenuator calibration and signal generator performance testing.

The RF Performance Test Suite has been designed as an extremely flexible solution for the automated testing of RF Signal Sources and Attenuators. The RF Performance Test Suite's PC based software applications make extensive use of the Agilent N5531S Measuring Receiver.



Agilent Technologies

Additional instrumentation allows fully automated testing and expands the capabilities of the N5531S. The use of the Agilent 3499A switch control unit adds the capability to automatically route modulation signals from the optional Agilent 33250A function generator to the modulation inputs of the signal generator being tested. Once connected, the complete testing of most devices is able to proceed without further operator intervention.

Signal Generator Tests

The RF Performance Test Suite's Signal Generator testing application includes the following tests:

Modulation:

- AM Accuracy, AM Distortion
- AM Flatness, Residual AM
- FM Accuracy, FM Distortion
- FM Flatness, Residual FM
- ØM Accuracy, ØM Distortion
- ØM Flatness
- Incidental AM, Incidental FM
- Incidental ØM
- Wideband AM Accuracy
- Pulse Rise/Fall time (requires an Infiniium Oscilloscope)

Spectrum:

- Adjacent Channel Power
- Harmonics, Spurious
- Pulse On/Off Ratio
- Single Sideband Noise

Power:

- Maximum Output Power
- Output Level Flatness
- Tuned RF Level

Direct Audio:

- ModOsc Distortion
- ModOsc Level
- ModOsc Output Impedance

Frequency:

- Frequency Error
- DC FM Centre Frequency Error
- Modulation Source Frequency

Attenuator Tests

Available as an optional addition to the RF Performance Test Suite, the attenuator testing application provides support for both fixed and step attenuators. This application requires the addition of a signal generator from the Agilent ESG or PSG families.

Adding an Agilent 11713A attenuator driver to the system allows control of programmable attenuators.

The attenuator application includes the following tests:

- Insertion Loss, with support for manual and remotely switched devices.
- Attenuation with support for manual and remotely switched devices.
- Measurement of Return Loss is also possible through the addition of appropriate directional bridges.

Parameter Management

A powerful set of tools simplifies the development and management of parameter files for the testing of new types of signal generator or attenuator. Test data points, specifications and the GPIB commands for a test device can be added and updated through the use of external spreadsheet files.

Customisation and Consulting Integration

Agilent can integrate the N5531S into a rack, incorporating any of the optional instruments e.g. oscilloscope, switch controller. This includes the rack and all signal and control cables. This service is available on request.

Migration

For customers who use the discontinued Agilent 8902A systems Agilent offers a parameter file conversion service. Agilent can assist with training for the customers' own personnel and can help convert old parameter files. A core set of spreadsheet based parameter files are provided with the new RF Performance Test Suite. Additional files can be generated on request.

Installation and Training

Included in the services package is a day of on site installation and startup assistance. Additional days can be purchased if required.

Additional Capabilities

Agilent can offer additional capabilities to the core test suite. For example, support for scalar network analysers would allow the user to perform fast return loss measurements on attenuators. TOI measurements on signal sources are another example of additional testing that could also be added.

Ordering Information

PS-X10-100

Small System Integration

Sales, Service and Support

For more information on the services offered in this datasheet please contact Agilent Technologies at the address below:

Europe:

Agilent Technologies
710 Wharfedale Road,
Winnersh Triangle,
Wokingham, Berkshire,
RG41 5TP United Kingdom
Tel: + 44 (0)700 244 5368

contactcenter_uk@agilent.com

Ireland:

Agilent Technologies
Bracken Court
Bracken Road
Sandyford Business Park
Dublin 18, Ireland
Tel: +353 1 605 8320

contactcenter_ireland@agilent.com



Agilent Email Updates

www.agilent.com/find/emailupdates

Get the latest information on the products and applications you select.



Agilent Direct

www.agilent.com/find/agilentdirect

Quickly choose and use your test equipment solutions with confidence.



www.agilent.com/find/open

Agilent Open simplifies the process of connecting and programming test systems to help engineers design, validate and manufacture electronic products. Agilent offers open connectivity for a broad range of system-ready instruments, open industry software, PC-standard I/O and global support, which are combined to more easily integrate test system development.



www.lxistandard.org

LXI is the LAN-based successor to GPIB, providing faster, more efficient connectivity. Agilent is a founding member of the LXI consortium.

Windows® is a U.S. registered trademark of Microsoft Corporation.

Remove all doubt

Our repair and calibration services will get your equipment back to you, performing like new, when promised. You will get full value out of your Agilent equipment throughout its lifetime. Your equipment will be serviced by Agilent-trained technicians using the latest factory calibration procedures, automated repair diagnostics and genuine parts. You will always have the utmost confidence in your measurements.

Agilent offers a wide range of additional expert test and measurement services for your equipment, including initial start-up assistance onsite education and training, as well as design, system integration, and project management.

For more information on repair and calibration services, go to

www.agilent.com/find/removealldoubt

www.agilent.com

For more information on Agilent Technologies' products, applications or services, please contact your local Agilent office. The complete list is available at:

www.agilent.com/find/contactus

Phone

Americas

Canada	(877) 894-4414
Latin America	305 269 7500
United States	(800) 829-4444

Asia Pacific

Australia	1 800 629 485
China	800 810 0189
Hong Kong	800 938 693
India	1 800 112 929
Japan	81 426 56 7832
Korea	080 769 0800
Malaysia	1 800 888 848
Singapore	1 800 375 8100
Taiwan	0800 047 866
Thailand	1 800 226 008

Europe

Austria	0820 87 44 11
Belgium	32 (0) 2 404 93 40
Denmark	45 70 13 15 15
Finland	358 (0) 10 855 2100
France	0825 010 700
Germany	01805 24 6333* *0.14€/minute
Ireland	1890 924 204
Italy	39 02 92 60 8484
Netherlands	31 (0) 20 547 2111
Spain	34 (91) 631 3300
Sweden	0200-88 22 55
Switzerland	(French) 44 (21) 8113811 (Opt 2)
Switzerland	(German) 0800 80 53 53 (Opt 1)
United Kingdom	44 (0) 7004 666666

Other European countries:
www.agilent.com/find/contactus

Revised: March 23, 2007

Product specifications and descriptions in this document subject to change without notice.

© Agilent Technologies, Inc. 2007
Printed in USA, December 03, 2007
5989-1404EN



Agilent Technologies