

# SIGLENT advance the frequency range of SNA5000A series vector network analyzer to the next level

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With the continuous growth of radio and cellular networks, the increase in data traffic and increasing data rates, the need for high-performance measurement technology is growing. Vector network analyzers are a key measuring device in the field of high frequency technology. Measurement of passive or active components, verification of 2-port networks or adaptation of antennas are just a few examples of where VNAs are required. The intuitive operating concept of the SNA5000A makes work easier and faster, and the large screen enables the results to be displayed clearly. The powerful hardware ensures accurate and reliable results.



SIGLENT add new models and options to the SNA5000A series vector network analyzer. SIGLENT extended the highest frequency of SNA5000A to 26.5GHz. This is a brand-new and powerful general platform for measuring active and passive devices. The SNA5000A network analyzer is offered as a 2- or 4-port device with frequency ranges from 9 kHz to 4.5 GHz or to 8.5 GHz and from 100 kHz to 13.5 GHz or to 26.5 GHz. The SIGLENT SNA5000A series vector network analyzer has three outstanding advantages: the solid RF performance; versatile abilities; the advanced user interface.

## The solid RF performance

### High dynamic range

The dynamic range spans 125 dB and enables, for example, a precise analysis of the stopband of a filter without losing sight of the passband.

### Low trace noise and noise floor

The magnitude trace noise (@1kHz IFBW) is 0.003 dB rms. The phase trace noise is 0.03 deg rms. The noise floor (@1kHz IFBW) is -125 dBm/Hz.

### Stable measurement results

Environment temperature has little influence on the measurement results as low as 0.005 dB/°C. It can help engineers to obtain accurate and reliable test results in harsh test scenarios.

### **Versatile abilities**

The analyzers support 2/4 port S-parameters and differential S-parameter measurements. And has a variety of display formats, such as Smith, SWR, Polar, etc. It can conveniently and quickly analyze the transmission coefficient, reflection coefficient, standing wave ratio, impedance matching and other parameters of the measured object. Time domain analysis can be performed with the options SNA5000-TDA (Time Domain Analysis) or SNA5000-TDR (Enhanced Time Domain Analysis).

The accuracy of a network analyzer is very much linked to the accuracy of the calibration. Different calibration techniques are required for different applications. With the SNA5000A, the user can choose between 1-port, extended 1-port, full 2-port correction, full 3-port correction, full 4-port correction and the different techniques SOLT, SOLR, TRL in order to obtain the best accuracy for the respective application. An adjustable reference plane, port matching and the embedding / de-embedding of test sockets enable the elimination of external sources of error. The VNAs of the SNA5000A series offer five types of sweeps: linear and logarithmic frequency sweeps, output power sweeps, time domain sweeps and segmented sweeps. The formula editor and the mask test support the developer in the analysis of his test object and accelerate the evaluation and verification.

SIGLENT has added SNA5000-SMM scalar mixer measurement function to the latest FW version of SNA5000A vector network analyzer. Mixer is an important part of microwave and millimeter wave system, and its characteristics directly affect the performance of equipment or instrument. At every stage of mixer development and production, it is necessary to measure its performance index, including conversion loss, phase and group delay, the 1 dB compensation point, isolation between ports and port VSWR. For two port models, an external signal generator is used as LO signals. For four port models, there is no need of external sources, the full test can be made with built-in sources. SIGLENT SNA5000A vector network analyzer with Scalar Mixer Measurement function can easily perform measurements of these parameters.

### **The advanced user interface**

SIGLENT SNA5000A Vector network analyzer delivers a wide complement of RF measurements: S parameters, Balanced tests, Time domain analysis, TDR/Eye diagrams, and more. For complex measurements, an easy-to-operate user interface is critical. The large 12-inch touchscreen can be flexibly configured so that several windows with different measurements can be clearly displayed. The short-cut menu helps with configuration and offers quick access to the most important functions. The device supports an external mouse and keyboard, external monitor via HDMI, and can be controlled via the web interface from the PC. Bias tee inputs are also included for easy DC-biasing of external devices.



The advanced user interface and versatile abilities are not the only reasons to choose the SNA5000A. Its solid RF performance, ease-of-use, and convenient size make it great for everyday RF testing.

Further device details can be found under [SNA5000A Series](#)

About:

SIGLENT TECHNOLOGIES started in 2002 with the development of their first oscilloscope. Now, the portfolio has rapidly expanded to cover many areas of general purpose test instrumentation, including oscilloscopes, signal and function generators, digital multimeters, lab power supplies, electronic DC-Loads, spectrum analyzers, VNAs and RF-signal generators.

With the A-Line introduced in 2021, Siglent is advancing further into the field of professional applications. Today SIGLENT TECHNOLOGIES is a global leader producing electronic test and measurement equipment that combines innovative features and functionality with a strong commitment to quality and performance. SIGLENT is ISO 9001:2000 and ISO 14001:2004 certified for its product quality and environmental management programs.



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