YNA-720 Series

Vector Network Analyzer

At a Glance

The YNA-720 Series combines configurable vector network analysis and multiple measurement functions through one connection for semiconductor, material, antenna, high-speed cable and microwave component testing.



Product Overview

The YNA-720 Series is a vector network analyzer platform for semiconductor chip, material, antenna, high-speed cable and microwave component testing. The selected configurations are **YNA-720-26G5, YNA-720-44G and YNA-720-67G**.

Flexible hardware configuration and measurement software combine multiple measurement tasks **through one connection**. The platform includes pulse S-parameter, frequency-conversion, gain-compression, noise-figure, spectrum and signal-integrity functions.

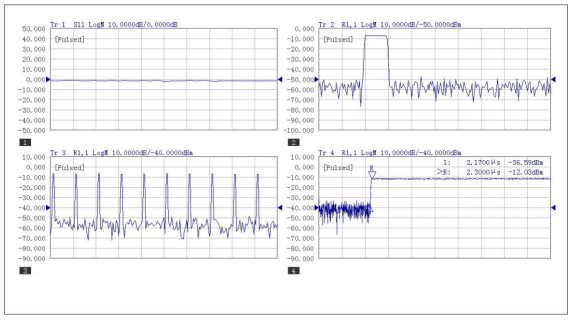
A 15.6-inch multitouch display presents multiple parameters on one screen for measurement setup and operation. **SCPI instruction synchronization recording** supports one-key script generation.

Main Features

30 MHz IF bandwidth, 200001 measurement points and 21 measurement functions. Available functions depend on the **configured hardware and measurement options**.

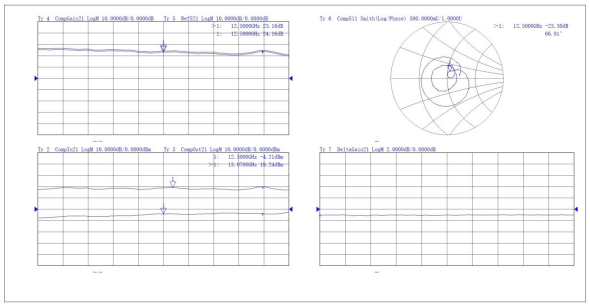
Pulse S-parameter Measurement

Pulse S-parameter measurements support radar T/R components and antenna transceiver modules.



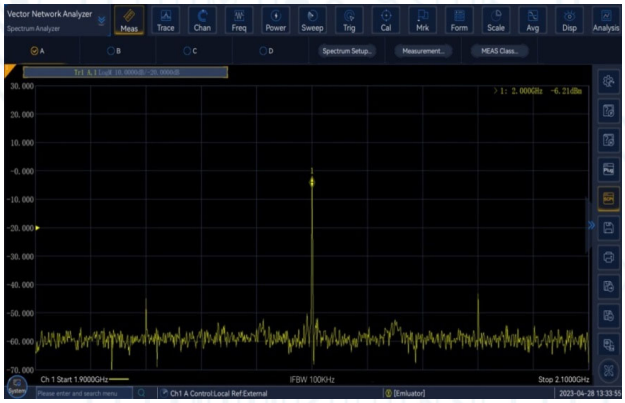
Gain Compression Measurement

One connection and one calibration measure linear gain, compression-point gain, input/output power and linear input matching.



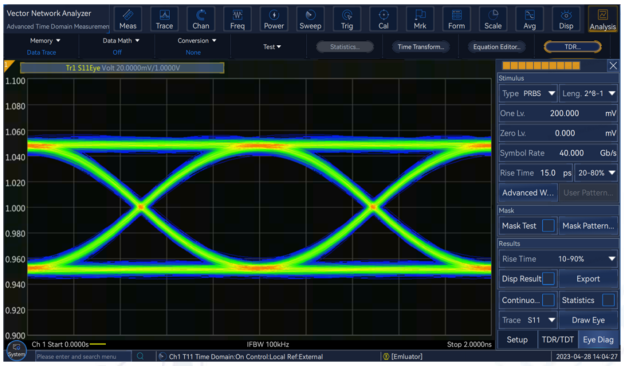
Spectrum Analysis Measurement

FFT spectrum analysis locates spurious signals and harmonics at a small resolution bandwidth.



Eye-diagram Analysis

Network-parameter-based eye diagrams support Pass/Fail tests using predefined templates.



Dynamic range

Using ultra-wide band base wave mixing technology and source output power improvement technology, we greatly improve the dynamic range, and the optimal dynamic range can reach 140dB, providing more accurate and reliable measurement results for the test of large dynamic devices such as filters

Ultra-fast scanning speed, 140dB large dynamic range

Rich Functions

The platform provides **21 measurement functions**, including pulse S-parameter measurement, frequency conversion device measurement, gain compression measurement, noise figure measurement, spectrum measurement, signal integrity measurement, differential I/Q measurement, total harmonic distortion measurement, active intermodulation distortion measurement and automatic fixture removal.

Supports S-parameters, differential (balanced) parameters, and receiver measurements.

Supports limit testing, ripple testing, and filter bandwidth testing.

Supports **calibration methods** such as SOLT, SOLR, SSLT, SSST, TRM, and TRL.

Supports custom calibration components, other calibration components, electronic calibration, and waveguide calibration.

Supports **display formats** such as logarithmic magnitude, phase, group delay, Smith chart, linear magnitude, VSWR, real part, imaginary part, polar coordinates, and impedance.

Differential I/Q Measurements

Wideband testing supports dual-source and receiver operation in various phase, power, and frequency combinations, providing 20 customizable frequency ranges. This allows for measurement and analysis of parameters such as input and output power, gain, harmonic distortion, and local oscillator leakage under true differential excitation, simplifying testing of various devices such as differential amplifiers and I/Q mixers in complex scenarios.

Full-Channel Calibration with Port Matching

A single calibration allows simultaneous error correction for multiple channels, including standard S-parameters and differential I/Q measurements. The source and receiver calibration function with port mismatch ensures the accuracy of dual-source output power and phase, enabling more accurate and efficient measurements.

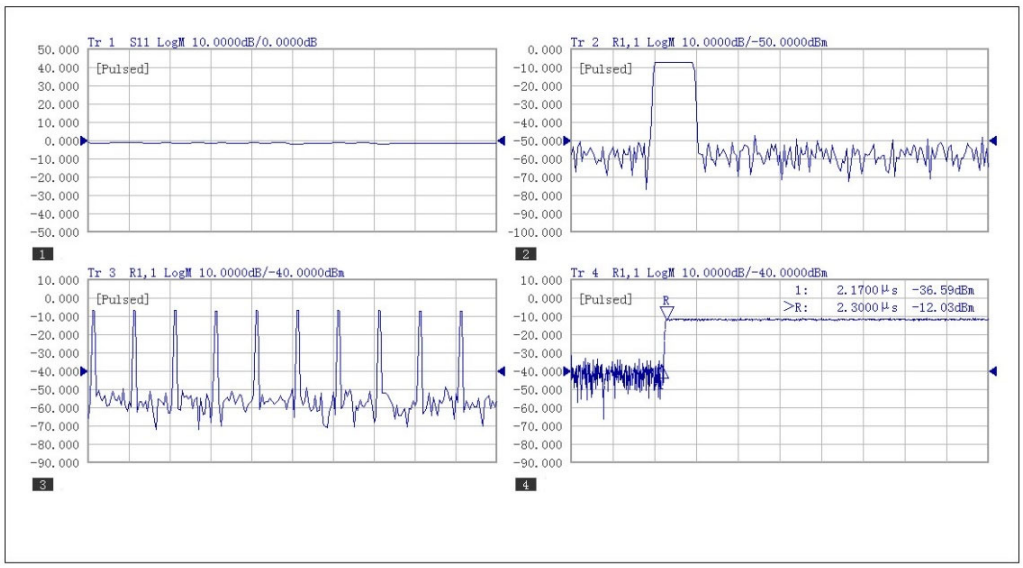
Convenient and efficient custom measurement parameter settings

User can define measurement parameters for up to eight receiver and frequency combinations. Edit measurement parameters via XML files and import them with one click. These imported parameters are updated in real time on the parameter selection screen.

Pulse S-parameter Measurement

Built-in **4-channel pulse generator** for internal source modulation, IF gate control, and output from the rear panel. The pulse width and time delay of each pulse generator can be set independently.

Source modulation sources include multiple states such as rear panel input, internal pulse generator, normally open and normally closed. The source of the vector network analyzer can be modulated by external pulses or modulated by an external modulator and measured by triggering the synchronization mode. The pulse S parameter measurement function provides strong support for the test of radar T / R components and antenna signal and transceiver module.



Pulse period can be up to 70 s

The pulse resolution was as low as 8.3 ns

Broadband synchronous pulse test pulse width < 42 ns

Internal pulse synchronization or external pulse synchronization mode

7 source modulation modes, such as external and internal pulses

4 pulse generators with pulse width and independent delay

Automatic broadband synchronous measurement and narrow-band asynchronous measurement function

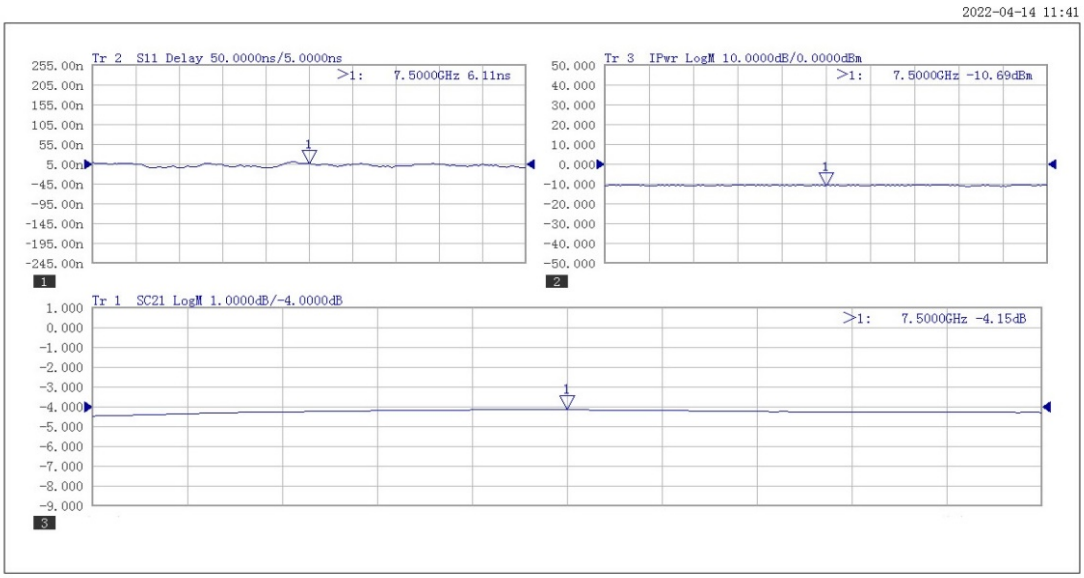
Adaptive narrow-band filter to improve the narrow-pulse test capability

3 for triggering input and output modules to provide flexible system coordination function

Functions of sweeping pulse S parameter test, pulse envelope test and pulse point test

Mixer/Converter Scalar Measurement

Provide comprehensive measurement setting of Mixer/Converter characteristics, support double-order primary vibration and external primary vibration source input; support **multiple scanning types** such as linear sweep, power sweep and segment sweep; simple setting can automatically complete the complex mixer RF, double LO, IF frequency doubling and frequency distribution; support the setting of source port power, local vibration port power, attenuation, and power sweep characteristics.



Provide the most direct and accurate mixer / Converter frequency conversion loss amplitude response measurement function. Enhance power calibration by power meter to complete the **RF and IF full band calibration**.

Support **dual independent source power and receiver calibration**, provides the solution of non-insertion connection mode through port separation mode, instead of connector de- embedding, power meter de-embedding and other ways, to provide a more accurate calibration mode for non-insertion measured parts.

Mixer/Converter Vector Measurement

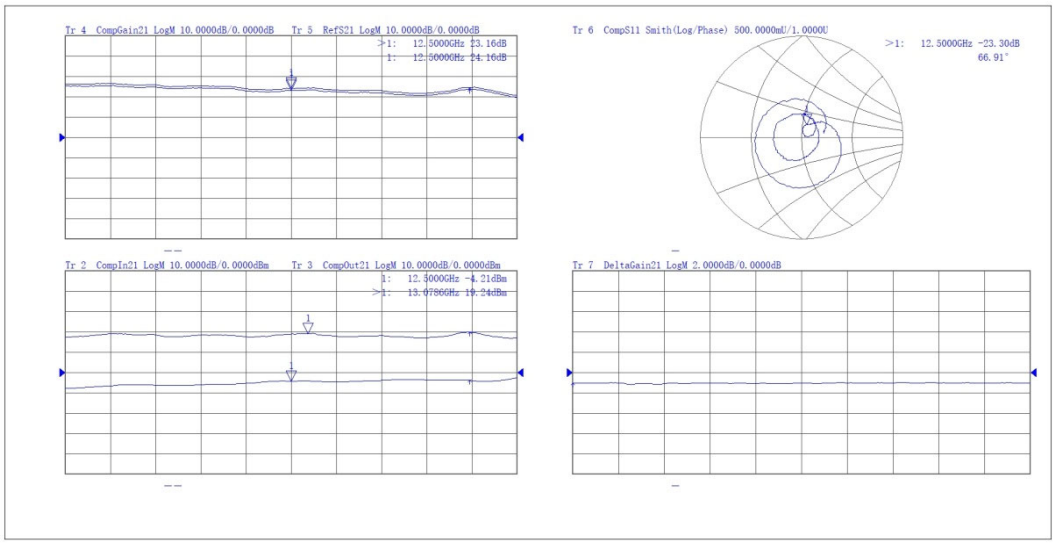
Provide complete mixer / frequency converter **amplitude response, absolute phase and absolute delay** response measurement ability, a single connection can complete the mixer / frequency converter complex characteristic measurement, high amplitude and phase measurement accuracy.

The vector measurement analysis of mixer / Converter can complete the **characterization of the mixer**, which is used to determine the characteristics of the mixer and obtain the characteristics of the Converter.

The feature characterization function serves as an independent function, and the generated mixer characterization data files can be **automatically called in the vector measurement analysis**.

Gain Compression Measurement

The gain compression measurement function completes the measurement of the linear gain, compression point gain, input power, output power, and linear input matching in the active device through **one connection and one calibration**.



Power calibration and receiver calibration can obtain accurate compression point input power and output power values. The exact gain measurement and input / output matching values can be obtained.

Intelligent scanning can quickly and accurately get compression points, provide the power scanning of each frequency point and the frequency scanning mode of each power point, obtain complete measurement data, provide from linear gain compression, from the maximum gain compression, from the fallback point compression, X/Y compression, saturated state compression, users can choose **different compression methods** according to the type of test and different measurement scenarios.

Provide **3D view function** to better show the performance of the tested device under the excitation state; it can also show the frequency profile and power profile to visually show the characteristics of the measured device at each frequency point and each power point.

Noise Figure Measurement

Primary connection can simultaneously test S parameters, noise coefficient, noise parameters, gain compression and frequency conversion gain.

Based on the cold source noise coefficient test method, the accurate noise coefficient and noise parameter test can be conducted.

By constructing the advanced noise correlation matrix model and combining with the precise S parameter calibration of the vector network analyzer, it is suitable for the accurate test of the measured parts with the lower noise coefficient.

The measurement dynamic range can reach 55dB, which is suitable for testing of subjects with large gain.

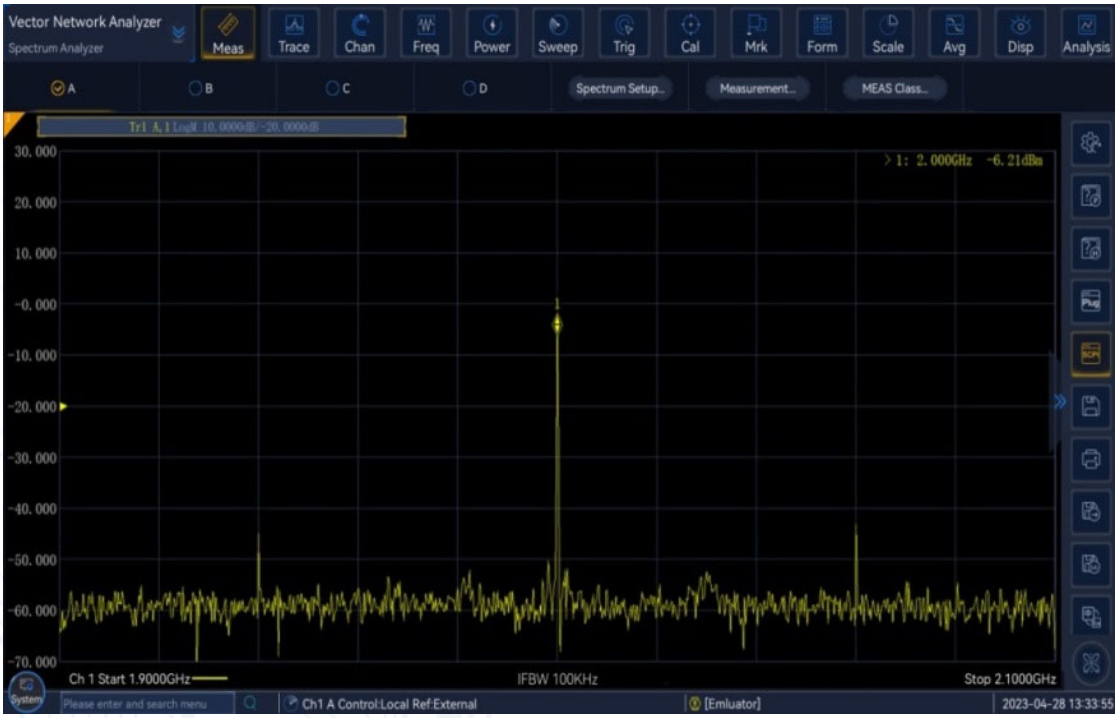
Based on the patented noise embedding / deembedding technology, the noise coefficient test of non-standard interface devices is realized. In particular, it can solve the problem of microwave chip noise coefficient in the chip test, and eliminate the impact of the mismatch between the tested parts and the test equipment.

The noise coefficient and the noise parameters can be tested simultaneously, including the amplitude and phase of the minimum noise coefficient, the noise internal resistance and the optimal reflection coefficient.

The influence of noise parameters can be eliminated by the modification of noise power receiver.

Spectrum Analysis Measurement

Each port of the vector network analyzer can complete the measurement of the input and output spectrum of the measured spectrum, and the spectrum measurement technology based on **fast Fourier transform** can quickly locate the state of the stray spectrum and harmonic of the measured spectrum at a small resolution bandwidth.

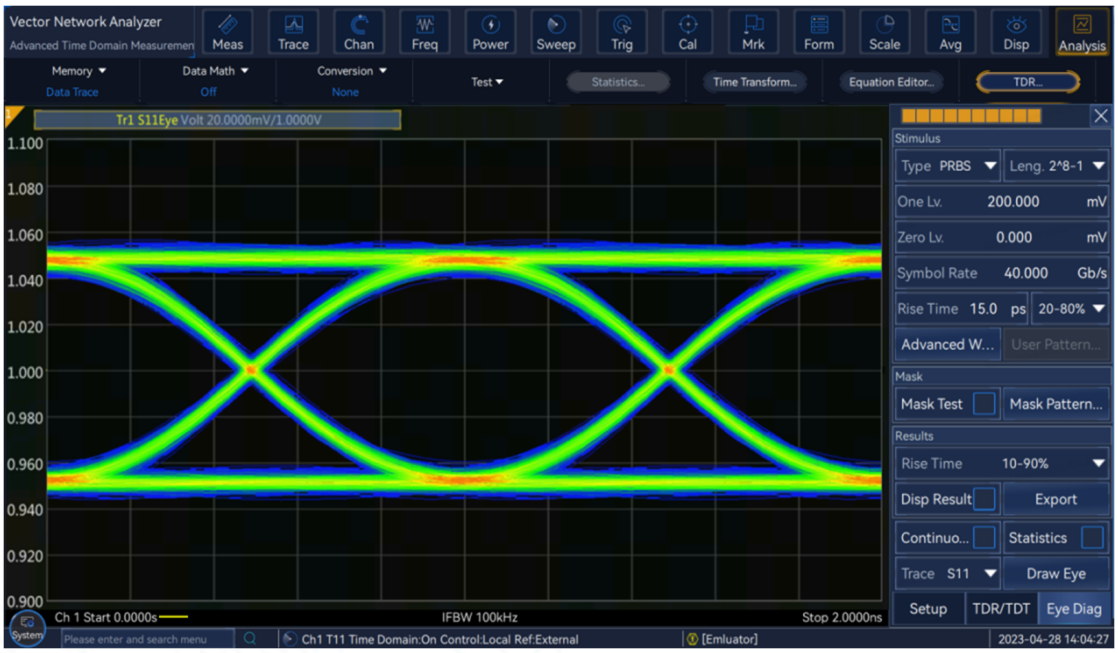


For the test of active devices, the spectrum measurement function can provide more measurement parameters, a single instrument can realize the conventional S parameter test, stray and harmonic positioning measurement; complete **ratio and absolute measurement error correction** technology can provide more accurate measurement results.

The marker of spectrum measurement function can provide **in-band power, power spectral density**, occupied bandwidth, adjacent power ratio and other indicators, and one- click setting and real-time update.

Analysis and measurements of the signal integrity

Powerful signal integrity measurement and analysis ability, can provide **micron level spatial resolution**, for small size chip packaging test, to solve the problem of positioning discontinuity.



A single view completes both **time domain and frequency domain** test analysis, helping the user to find the source of impedance discontinuity, reflection and crosstalk. It can accurately measure the impedance characteristics of transmission lines; convenient proximal and remote crosstalk tests to test the degree of interaction between multiple transmission lines.

YNA-720 series VNA has the function of virtual eye map generation and analysis based on network parameters. Depending on the different high-speed digital communication standards, high-efficiency **Pass / Fail tests** can be performed using pre-defined eye-map templates.

Jitter, noise and other interference can be applied to the simulated eye map, and the simulated eye map of different positions in the high-speed link can be simulated through the addition of correction algorithms such as pre-aggravation and equilibrium.

Analysis of the total harmonic distortion (THD) measurement

Broadband test can be used for the measurement and analysis of input and output power, gain, harmonic total distortion and other parameters under true differential excitation, and simplify the harmonic performance test complexity of differential active devices with as amplifier.

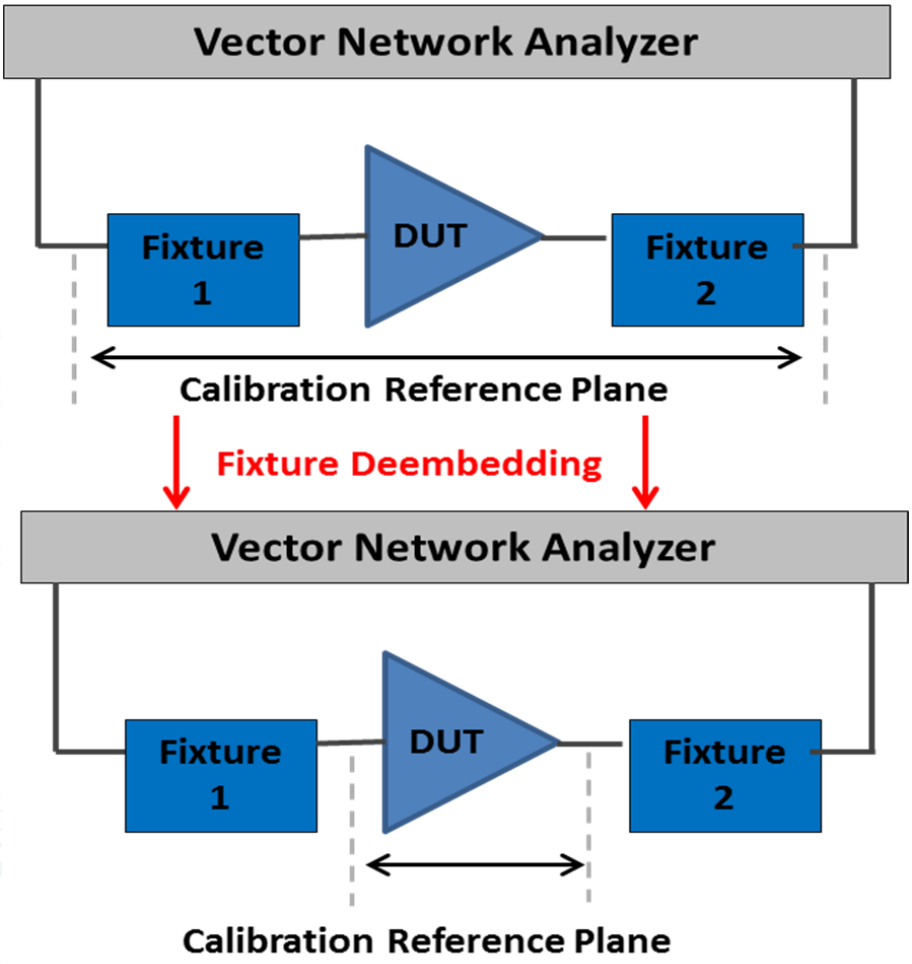
A single calibration can simultaneously complete the multi-channel error correction of the standard S parameter and the total harmonic distortion, that is, the ratio measurement error, the absolute receiver measurement error, and the error correction of the port excitation power.

The transmission and mismatch errors introduced by different mechanical attenuation files between the channels can also be compensated by a single calibration.

The editing of setting the measurement parameters can be completed by XML file. The parameters can be imported with one key, and the imported measurement parameters can be updated to the parameter selection interface in real time.

Automatic Fixture Removal

For non-standard connector devices testing, such as packaging microwave devices, in- chip devices, such devices cannot be directly connected to the vector network analyzer. The fixture is usually used to connect the measured piece to a vector network analyzer, but the fixture also introduces measurement error. The automatic fixture removal function can **extract, store the fixture parameters** and embed the fixture, and finally obtain the real parameters of the measured parts.



Automatic fixture removal function has the advantages of easy operation and high precision. This feature **does not require custom calibration**, eliminates proximal and distal crosstalk of the differential fixture, and is suitable for test scenarios with open circuit at one end of the fixture.

Using the automatic fixture removal function, the measured parts, balance parameter extraction and four-port embedding. It can effectively remove the **transmission parameters, proximal crosstalk, and remote crosstalk**.

Rich peripheral interfaces, flexible and practical

1-10 MHz **external reference input / output interface**

2-110V / 220V **AC power supply input**

3-**Detachable CPU module**, configured with hard disk, LAN, DP, USB, and GPIB interfaces

4-excitation output and local vibration output provide **flexible measurement configuration**

5-External and intermediate frequency input interface, **pulse input and output interface**

6-**Bias Tees configuration input interface**

7-**Automatic test interface**, trigger input / output interface, noise source power interface

Configurations

Standard / four-port
Max. Output Power: Standard Configuration or Four-Port Measurement Configuration
System Dynamic Range: Standard or Four-Port Measurement Configuration

Measurement options
Four-Port Measurement, Four-Port Programmable Step Attenuator, Active Intermodulation Distortion Measurement, Configurable Test Set, and Noise Figure Measurement Options

YNA-720-26G5

Characteristic	Items	Specifications	Typical
Frequency Characteristic	**Frequency resolution**	0.1 Hz	
	Frequency Accuracy	±1 x 10^-7 (23 deg C ±3 deg C)	
Port Harmonic Suppression	**Ports 1 and 3 harmonic suppression**	-48 dBc (0.01-4 GHz) -57 dBc (4-14 GHz) -57 dBc (14-26.5 GHz)	-62 dBc (0.01-4 GHz) -68 dBc (4-14 GHz) -70 dBc (14-26.5 GHz)
	Ports 2 and 4 harmonic suppression	-13 dBc (0.01-4 GHz) -18 dBc (4-14 GHz) -18 dBc (14-26.5 GHz)	-24 dBc (0.01-4 GHz) -30 dBc (4-14 GHz) -36 dBc (14-26.5 GHz)
Port Power Characteristics	**Power sweep range**	33 dB (10-50 MHz) 35 dB (0.05-4 GHz) 38 dB (4-16 GHz) 35 dB (16-20 GHz) 32 dB (20-24 GHz) 27 dB (24-26.5 GHz)	36 dB (10-50 MHz) 39 dB (0.05-4 GHz) 41 dB (4-16 GHz) 40 dB (16-20 GHz) 39 dB (20-24 GHz) 38 dB (24-26.5 GHz)
	Max. Output Power Standard / four-port	+13 dBm (10 MHz-50 MHz) +13 dBm (0.05 GHz-14 GHz) +13 dBm (14 GHz-20 GHz) +10 dBm (24 GHz-26.5 GHz)	+16 dBm (10 MHz-50 MHz) +15 dBm (0.05 GHz-14 GHz) +15 dBm (14 GHz-20 GHz) +14 dBm (24 GHz-26.5 GHz)
	Max. Output Power Measurement options	+10 dBm (10-50 MHz) +7 dBm (0.05-14 GHz) +5 dBm (14-20 GHz) +3 dBm (24-26.5 GHz)	+12 dBm (10-50 MHz) +10 dBm (0.05-14 GHz) +10 dBm (14-20 GHz) +7 dBm (24-26.5 GHz)
Pulse Characteristic	**Pulse width setting range**	33ns~70s	20ns~70s

Characteristic	YNA-720-26G5 / Items	Specifications	Typical
Pulse Characteristic	**Pulse on/off ratio**	64 dB (0.01-4 GHz) 80 dB (4-26.5 GHz)	
Network Parameter Characteristic	**System Dynamic Range** Standard / four-port	96 dB (10 MHz-50 MHz) 110 dB (50 MHz-500 MHz) 130 dB (0.5 GHz-4 GHz) 133 dB (4 GHz-14 GHz) 131 dB (14 GHz-20 GHz) 125 dB (20 GHz-26.5 GHz)	108 dB (10 MHz-50 MHz) 124 dB (50 MHz-500 MHz) 140 dB (0.5 GHz-4 GHz) 140 dB (4 GHz-14 GHz) 133 dB (14 GHz-20 GHz) 128 dB (20 GHz-26.5 GHz)
	System Dynamic Range Measurement options	96 dB (10 MHz-50 MHz) 110 dB (50 MHz-500 MHz) 120 dB (0.5 GHz-4 GHz) 120 dB (4 GHz-14 GHz) 115 dB (14 GHz-20 GHz) 115 dB (20 GHz-26.5 GHz)	105 dB (10 MHz-50 MHz) 120 dB (50 MHz-500 MHz) 134 dB (0.5 GHz-4 GHz) 134 dB (4 GHz-14 GHz) 128 dB (14 GHz-20 GHz) 122 dB (20 GHz-26.5 GHz)
	Effective Directivity	48 dB (0.01-2 GHz) 44 dB (2-26.5 GHz)	65 dB (0.01-2 GHz) 52 dB (2-26.5 GHz)
	Effective Source Match	40 dB (0.01-2 GHz) 31 dB (2-26.5 GHz)	46 dB (0.01-2 GHz) 36 dB (2-26.5 GHz)
	Effective load match	47 dB (0.01-2 GHz) 44 dB (2-26.5 GHz)	61 dB (0.01-2 GHz) 56 dB (2-26.5 GHz)
	Reflection Tracking	±0.0150 dB (0.01-2 GHz) ±0.0161 dB (2-26.5 GHz)	±0.0060 dB (0.01-2 GHz) ±0.0030 dB (2-26.5 GHz)
	Transmission tracking	±0.044 dB (10-50 MHz) ±0.055 dB (0.05-2 GHz) ±0.120 dB (2-9 GHz) ±0.110 dB (9-14 GHz) ±0.120 dB (14-26.5 GHz)	±0.001 dB (10-50 MHz) ±0.002 dB (0.05-2 GHz) ±0.004 dB (2-9 GHz) ±0.005 dB (9-14 GHz) ±0.008 dB (14-26.5 GHz)
Others	**Amplitude Trace Noise dB rms (1 kHz IF bandwidth)**	0.0070 (10-100 MHz) 0.0020 (100-500 MHz) 0.0020 (0.5-1 GHz) 0.0020 (1-14 GHz) 0.0020 (14-22.5 GHz) 0.0030 (22.5-24 GHz) 0.0050 (24-26.5 GHz)	0.0040 (10-100 MHz) 0.0017 (100-500 MHz) 0.0006 (0.5-1 GHz) 0.0006 (1-14 GHz) 0.0007 (14-22.5 GHz) 0.0008 (22.5-24 GHz) 0.0007 (24-26.5 GHz)
	Phase Trace Noise Deg rms (1 kHz IF bandwidth)	0.051 (10-100 MHz) 0.015 (100-500 MHz) 0.015 (0.5-1 GHz) 0.015 (1-14 GHz) 0.042 (14-22.5 GHz) 0.054 (22.5-24 GHz) 0.054 (24-26.5 GHz)	0.030 (10-100 MHz) 0.012 (100-500 MHz) 0.004 (0.5-1 GHz) 0.004 (1-14 GHz) 0.005 (14-22.5 GHz) 0.005 (22.5-24 GHz) 0.005 (24-26.5 GHz)
	IF bandwidth	1 Hz-30 MHz	
	Amplitude display resolution	0.001 dB/div	
	Phase display resolution	0.001 deg/div	

Characteristic	YNA-720-26G5 / Items	Specifications	Typical
General Characteristic	Port Connectors Type	3.5 mm (male), system impedance 50 ohms	
	Measured ports	Standard: 2 ports YNA-720-26G5-400 option: 4 ports	
	Peripheral interfaces	GPIB, USB, DP, and LAN	
	Display	15.6-inch high-resolution touch display	
	Dimensions	Overall dimensions (W*H*D, including handles, feet and pads): 2-port: 475 mm * 279 mm * 560 mm 4-port: 475 mm * 279 mm * 660 mm	
	Max. Power Consumption	500 W	
	Power Supply	50 Hz 220 V or 50 Hz/60 Hz 110 V AC	
	Max. Weight	50 kg	

YNA-720-44G

Characteristic	Items	Specifications	Typical
Frequency Characteristic	Frequency resolution	0.1 Hz	
	Frequency Accuracy	±1 x 10^-7 (23 deg C ±3 deg C)	
Port Harmonic Suppression	Ports 1 and 3 harmonic suppression	-48 dBc (0.01-4 GHz) -57 dBc (4-14 GHz) -57 dBc (14-44 GHz)	-68 dBc (0.01-4 GHz) -70 dBc (4-14 GHz) -70 dBc (14-44 GHz)
	Ports 2 and 4 harmonic suppression	-13 dBc (0.01-4 GHz) -18 dBc (4-14 GHz) -57 dBc (14-44 GHz)	-18 dBc (0.01-4 GHz) -31 dBc (4-14 GHz) -70 dBc (14-44 GHz)
Port Power Characteristics	Power sweep range	37 dB (10-50 MHz) 38 dB (0.05-2 GHz) 35 dB (2-4 GHz) 38 dB (4-26.5 GHz) 37 dB (26.5-30 GHz) 36 dB (30-32 GHz) 37 dB (32-35 GHz) 34 dB (35-44 GHz)	42 dB (10-50 MHz) 44 dB (0.05-2 GHz) 41 dB (2-4 GHz) 41 dB (4-26.5 GHz) 42 dB (26.5-30 GHz) 40 dB (30-32 GHz) 43 dB (32-35 GHz) 39 dB (35-44 GHz)
	Max. Output Power Standard / four-port	+12 dBm (10-50 MHz) +12 dBm (0.05-4 GHz) +12 dBm (4-14 GHz) +13 dBm (14-20 GHz) +13 dBm (20-26.5 GHz) +12 dBm (26.5-40 GHz) +9 dBm (40-44 GHz)	+14 dBm (10-50 MHz) +13 dBm (0.05-4 GHz) +14 dBm (4-14 GHz) +14 dBm (14-20 GHz) +14 dBm (20-26.5 GHz) +15 dBm (26.5-40 GHz) +13 dBm (40-44 GHz)
	Max. Output Power Measurement options	+9 dBm (10-50 MHz) +4 dBm (0.05-4 GHz) +4 dBm (4-14 GHz) +8 dBm (14-20 GHz) +6 dBm (20-26.5 GHz) +4 dBm (26.5-40 GHz) -1 dBm (40-44 GHz)	+10 dBm (10-50 MHz) +7 dBm (0.05-4 GHz) +7 dBm (4-14 GHz) +9 dBm (14-20 GHz) +9 dBm (20-26.5 GHz) +7 dBm (26.5-40 GHz) +1 dBm (40-44 GHz)

Characteristic	YNA-720-44G / Items	Specifications	Typical
Pulse Characteristic	**Pulse width setting range**	33ns~70s	20ns~70s
	Pulse on/off ratio	64 dB (0.01-4 GHz) 80 dB (4-44 GHz)	
Network Parameter Characteristic	**System Dynamic Range** Standard / four-port	89 dB (10-50 MHz) 106 dB (50-500 MHz) 130 dB (0.5-4 GHz) 130 dB (4-14 GHz) 128 dB (14-20 GHz) 130 dB (20-26.5 GHz) 125 dB (26.5-40 GHz) 122 dB (40-44 GHz)	104 dB (10-50 MHz) 122 dB (50-500 MHz) 137 dB (0.5-4 GHz) 139 dB (4-14 GHz) 138 dB (14-20 GHz) 138 dB (20-26.5 GHz) 133 dB (26.5-40 GHz) 130 dB (40-44 GHz)
	System Dynamic Range Measurement options	83 dB (10-50 MHz) 100 dB (50-500 MHz) 114 dB (0.5-4 GHz) 112 dB (4-14 GHz) 116 dB (14-20 GHz) 114 dB (20-26.5 GHz) 112 dB (26.5-40 GHz) 106 dB (40-44 GHz)	97 dB (10-50 MHz) 108 dB (50-500 MHz) 125 dB (0.5-4 GHz) 132 dB (4-14 GHz) 128 dB (14-20 GHz) 127 dB (20-26.5 GHz) 125 dB (26.5-40 GHz) 119 dB (40-44 GHz)
	Effective directivity	41 dB (0.01-2 GHz) 38 dB (2-20 GHz) 36 dB (20-44 GHz)	59 dB (0.01-2 GHz) 54 dB (2-20 GHz) 47 dB (20-44 GHz)
	Effective source match	31 dB (0.01-2 GHz) 30 dB (2-20 GHz) 23 dB (20-44 GHz)	45 dB (0.01-2 GHz) 36 dB (2-20 GHz) 31 dB (20-44 GHz)
	Effective load match	42 dB (0.01-2 GHz) 37 dB (2-20 GHz) 35 dB (20-44 GHz)	58 dB (0.01-2 GHz) 55 dB (2-20 GHz) 51 dB (20-44 GHz)
	Reflection tracking	±0.0150 dB (0.01-2 GHz) ±0.0290 dB (2-20 GHz) ±0.0300 dB (20-40 GHz) ±0.0400 dB (40-44 GHz)	±0.0046 dB (0.01-2 GHz) ±0.0022 dB (2-20 GHz) ±0.0020 dB (20-40 GHz) ±0.0065 dB (40-44 GHz)
	Transmission tracking	±0.051 dB (10-50 MHz) ±0.030 dB (0.05-2 GHz) ±0.095 dB (2-10 GHz) ±0.120 dB (10-20 GHz) ±0.200 dB (20-40 GHz) ±0.200 dB (40-44 GHz)	±0.002 dB (10-50 MHz) ±0.004 dB (0.05-2 GHz) ±0.002 dB (2-10 GHz) ±0.002 dB (10-20 GHz) ±0.005 dB (20-40 GHz) ±0.002 dB (40-44 GHz)
Others	**Amplitude Trace Noise dB rms (1 kHz IF bandwidth)**	0.2000 (10-50 MHz) 0.0200 (50-500 MHz) 0.0030 (0.5-1 GHz) 0.0020 (1-26.5 GHz) 0.0030 (26.5-44 GHz)	0.0039 (10-50 MHz) 0.0006 (50-500 MHz) 0.0005 (0.5-1 GHz) 0.0006 (1-26.5 GHz) 0.0007 (26.5-44 GHz)

Characteristic	YNA-720-44G / Items	Specifications	Typical
Others	Phase Trace Noise Deg rms (1 kHz IF bandwidth)	1.000 (10-50 MHz) 0.500 (50-500 MHz) 0.020 (0.5-1 GHz) 0.020 (1-26.5 GHz) 0.030 (26.5-44 GHz)	0.024 (10-50 MHz) 0.004 (50-500 MHz) 0.003 (0.5-1 GHz) 0.004 (1-26.5 GHz) 0.005 (26.5-44 GHz)
	IF bandwidth	1 Hz-30 MHz	
	Amplitude display resolution	0.001 dB/div	
	Phase display resolution	0.001 deg/div	
General Characteristic	Port Connectors	2.4 mm (head), system impedance 50 ohms	
	Measured ports	Standard: 2 ports YNA-720-44G-400 option: 4 ports	
	Peripheral Interface	GPIB interface, USB interface, DP interface, LAN interface	
	Display	15.6-inch high-resolution touch display	
	Dimensions	Overall dimensions (W*H*D, including handles, feet and pads): 2-port: 475 mm * 279 mm * 560 mm 4-port: 475 mm * 279 mm * 660 mm	
	Max. Power Consumption	500 W	
	Power Supply	50 Hz single-phase 220 V or 50 Hz / 60 Hz single-phase 110 V AC	
	Max. Weight	50 kg	

YNA-720-67G

Characteristic	Items	Specifications	Typical
Frequency Characteristic	Frequency resolution	0.1 Hz	
	Frequency Accuracy	±1 x 10^-7 (23 deg C ±3 deg C)	
Port Harmonic Suppression	Ports 1 and 3 harmonic suppression	-48 dBc (0.01-4 GHz) -57 dBc (4-14 GHz) -57 dBc (14-67 GHz)	-57 dBc (0.01-4 GHz) -70 dBc (4-14 GHz) -71 dBc (14-67 GHz)
	Ports 2 and 4 harmonic suppression	-13 dBc (0.01-4 GHz) -18 dBc (4-14 GHz) -57 dBc (14-67 GHz)	-25 dBc (0.01-4 GHz) -32 dBc (4-14 GHz) -72 dBc (14-67 GHz)
Port Power Characteristics	Power Sweep Range	35 dB (10-50 MHz) 38 dB (0.05-2 GHz) 35 dB (2-4 GHz) 38 dB (4-10 GHz) 36 dB (10-14 GHz) 37 dB (14-16 GHz) 35 dB (16-19 GHz) 34 dB (19-26.5 GHz) 33 dB (26.5-30 GHz) 32 dB (30-32 GHz) 32 dB (32-35 GHz) 30 dB (35-40 GHz) 35 dB (40-67 GHz)	41 dB (10-50 MHz) 44 dB (0.05-2 GHz) 40 dB (2-4 GHz) 42 dB (4-10 GHz) 43 dB (10-14 GHz) 42 dB (14-16 GHz) 40 dB (16-19 GHz) 37 dB (19-26.5 GHz) 37 dB (26.5-30 GHz) 36 dB (30-32 GHz) 39 dB (32-35 GHz) 36 dB (35-40 GHz) 40 dB (40-67 GHz)

Characteristic	YNA-720-67G / Items	Specifications	Typical
Port Power Characteristics	**Max. Output Power** Standard / four-port	+10 dBm (10-50 MHz) +10 dBm (0.05-14 GHz) +12 dBm (14-20 GHz) +11 dBm (20-26.5 GHz) +10 dBm (26.5-30 GHz) +7 dBm (30-32 GHz) +9 dBm (32-35 GHz) +5 dBm (35-40 GHz) +10 dBm (40-67 GHz)	+16 dBm (10-50 MHz) +14 dBm (0.05-14 GHz) +16 dBm (14-20 GHz) +14 dBm (20-26.5 GHz) +13 dBm (26.5-30 GHz) +10 dBm (30-32 GHz) +12 dBm (32-35 GHz) +11 dBm (35-40 GHz) +16 dBm (40-67 GHz)
	Max. Output Power Measurement options	+6 dBm (10-50 MHz) +4 dBm (0.05-14 GHz) +4 dBm (14-20 GHz) +4 dBm (20-26.5 GHz) -2 dBm (26.5-30 GHz) -2 dBm (30-32 GHz) -2 dBm (32-35 GHz) -2 dBm (35-40 GHz) -2 dBm (40-67 GHz)	+10 dBm (10-50 MHz) +9 dBm (0.05-14 GHz) +11 dBm (14-20 GHz) +7 dBm (20-26.5 GHz) +6 dBm (26.5-30 GHz) +4 dBm (30-32 GHz) +5 dBm (32-35 GHz) +3 dBm (35-40 GHz) +4 dBm (40-67 GHz)
Pulse Characteristic	**Pulse width setting range**	33ns~70s	20ns~70s
	Pulse on/off ratio	64 dB (0.01-4 GHz) 80 dB (4-67 GHz)	
Network Parameter Characteristic	**System Dynamic Range** Standard / four-port	87 dB (10-50 MHz) 110 dB (50-500 MHz) 127 dB (0.5-4 GHz) 130 dB (4-14 GHz) 129 dB (14-26.5 GHz) 120 dB (26.5-40 GHz) 116 dB (40-50 GHz) 107 dB (50-60 GHz) 106 dB (60-67 GHz)	102 dB (10-50 MHz) 124 dB (50-500 MHz) 137 dB (0.5-4 GHz) 142 dB (4-14 GHz) 138 dB (14-26.5 GHz) 134 dB (26.5-40 GHz) 128 dB (40-50 GHz) 118 dB (50-60 GHz) 116 dB (60-67 GHz)
	System Dynamic Range Measurement options	84 dB (10-50 MHz) 101 dB (50-500 MHz) 114 dB (0.5-4 GHz) 113 dB (4-14 GHz) 113 dB (14-26.5 GHz) 105 dB (26.5-40 GHz) 106 dB (40-50 GHz) 101 dB (50-60 GHz) 100 dB (60-67 GHz)	100 dB (10-50 MHz) 120 dB (50-500 MHz) 129 dB (0.5-4 GHz) 130 dB (4-14 GHz) 128 dB (14-26.5 GHz) 118 dB (26.5-40 GHz) 115 dB (40-50 GHz) 112 dB (50-60 GHz) 106 dB (60-67 GHz)
	Effective directivity	35 dB (0.01-2 GHz) 41 dB (2-10 GHz) 38 dB (10-20 GHz) 37 dB (20-35 GHz) 37 dB (35-50 GHz) 34 dB (50-67 GHz)	65 dB (0.01-2 GHz) 65 dB (2-10 GHz) 59 dB (10-20 GHz) 54 dB (20-35 GHz) 48 dB (35-50 GHz) 40 dB (50-67 GHz)

Characteristic	YNA-720-67G / Items	Specifications	Typical
Network Parameter Characteristic	Effective source match	34 dB (0.01-2 GHz) 36 dB (2-10 GHz) 40 dB (10-20 GHz) 34 dB (20-35 GHz) 28 dB (35-50 GHz) 28 dB (50-67 GHz)	43 dB (0.01-2 GHz) 40 dB (2-10 GHz) 42 dB (10-20 GHz) 38 dB (20-35 GHz) 31 dB (35-50 GHz) 31 dB (50-67 GHz)
	Effective load match	34 dB (0.01-2 GHz) 40 dB (2-10 GHz) 36 dB (10-20 GHz) 35 dB (20-35 GHz) 36 dB (35-50 GHz) 33 dB (50-67 GHz)	59 dB (0.01-2 GHz) 66 dB (2-10 GHz) 66 dB (10-20 GHz) 57 dB (20-35 GHz) 59 dB (35-50 GHz) 55 dB (50-67 GHz)
	Reflection tracking	±0.0200 dB (0.01-2 GHz) ±0.0110 dB (2-10 GHz) ±0.0330 dB (10-35 GHz) ±0.0200 dB (35-50 GHz) ±0.0310 dB (50-67 GHz)	±0.0050 dB (0.01-2 GHz) ±0.0016 dB (2-10 GHz) ±0.0037 dB (10-35 GHz) ±0.0045 dB (35-50 GHz) ±0.0180 dB (50-67 GHz)
	Transmission tracking	±0.100 dB (0.01-2 GHz) ±0.065 dB (2-10 GHz) ±0.100 dB (10-20 GHz) ±0.110 dB (20-35 GHz) ±0.094 dB (35-50 GHz) ±0.140 dB (50-60 GHz) ±0.150 dB (60-67 GHz)	±0.002 dB (0.01-2 GHz) ±0.002 dB (2-10 GHz) ±0.002 dB (10-20 GHz) ±0.003 dB (20-35 GHz) ±0.004 dB (35-50 GHz) ±0.006 dB (50-60 GHz) ±0.009 dB (60-67 GHz)
Others	Amplitude Trace Noise dB rms (1 kHz IF bandwidth)	0.0500 (10-50 MHz) 0.0040 (50-100 MHz) 0.0020 (100-500 MHz) 0.0030 (0.5-1 GHz) 0.0020 (1-26.5 GHz) 0.0030 (26.5-50 GHz) 0.0300 (50-67 GHz)	0.0042 (10-50 MHz) 0.0030 (50-100 MHz) 0.0006 (100-500 MHz) 0.0004 (0.5-1 GHz) 0.0003 (1-26.5 GHz) 0.0009 (26.5-50 GHz) 0.0077 (50-67 GHz)
	Phase Trace Noise Deg rms (1 kHz IF bandwidth)	0.400 (10-50 MHz) 0.020 (0.05-26.5 GHz) 0.030 (26.5-50 GHz) 0.200 (50-67 GHz)	0.029 (10-50 MHz) 0.008 (0.05-26.5 GHz) 0.008 (26.5-50 GHz) 0.051 (50-67 GHz)
	IF bandwidth	1 Hz-30 MHz	
	Amplitude display resolution	0.001 dB/div	
	Phase display resolution	0.001 deg/div	
General Characteristic	Port Connectors	1.85 mm (head), system impedance 50 ohms	
	Measured ports	Standard: 2 ports YNA-720-67G-400 option: 4 ports	
	Peripheral Interface	GPIB interface, USB interface, DP interface, LAN interface	
	Display	15.6-inch high-resolution touch display	

Characteristic	YNA-720-67G / Items	Specifications	Typical
General Characteristic	Dimensions	Overall dimensions (W*H*D, including handles, feet and pads): 2-port: 475 mm * 279 mm * 560 mm 4-port: 475 mm * 279 mm * 660 mm	
	Max. Power Consumption	500 W	
	Power Supply	50 Hz single-phase 220 V or 50 Hz / 60 Hz single-phase 110 V AC	
	Max. Weight	50 kg	

Model selection

Model	Frequency Range	Measured ports
YNA-720-26G5	10MHz ~26.5GHz	Standard: 2 ports YNA-720-26G5-400 option: 4 ports
YNA-720-44G	10 MHz ~ 44 GHz	Standard: 2 ports YNA-720-44G-400 option: 4 ports
YNA-720-67G	10 MHz ~ 67 GHz	Standard: 2 ports YNA-720-67G-400 option: 4 ports

Optional accessories

Category	Model / Option	Description
USB CW Power Sensor	GPM40-U	50 MHz to 40 GHz, -70 dBm to +20 dBm.
USB Noise Source	XNF40-U	10 MHz to 40 GHz, ENR 12 dB to 19 dB.
Noise Figure Measurement	YNA-720-26G5-003	2-Port Requires: Option YNA-720-26G5-201 + YNA-720-26G5-204. 4-Port Requires: Option YNA-720-26G5-401 +YNA-720-26G5-404.
	YNA-720-44G-003	2-Port Requires: Option YNA-720-44G-201 + YNA-720-44G-204; 4-Port Requires: Option YNA-720-44G-401 + YNA-720-44G-404.
	YNA-720-67G-003	2-Port Requires: Option YNA-720-67G-201 + YNA-720-67G-204 4-Port Requires: Option YNA-720-67G-401 +YNA-720-67G-404.

Noise figure measurement. For accurate measurement of S parameters, noise coefficient, and noise parameters.
Two-port electronic calibrators and ordinary noise sources need to be purchased separately.

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