Quality&**Precise**

MAXWELLON 3674

500Hz~9GHz/14GHz/20GHz/26.5GHz/32GHz/44GHz/50GHz/53GHz/67GHz/90GHz/110GHz

Vector Network Analyzer

2023

Maxwellon

The Maxwellon 3674 series vector network analyzer is the pinnacle of technological innovation, capable of easily addressing the severe challenges brought by semiconductor chip testing, material testing, antenna testing, high-speed cable testing, microwave component testing, and more.

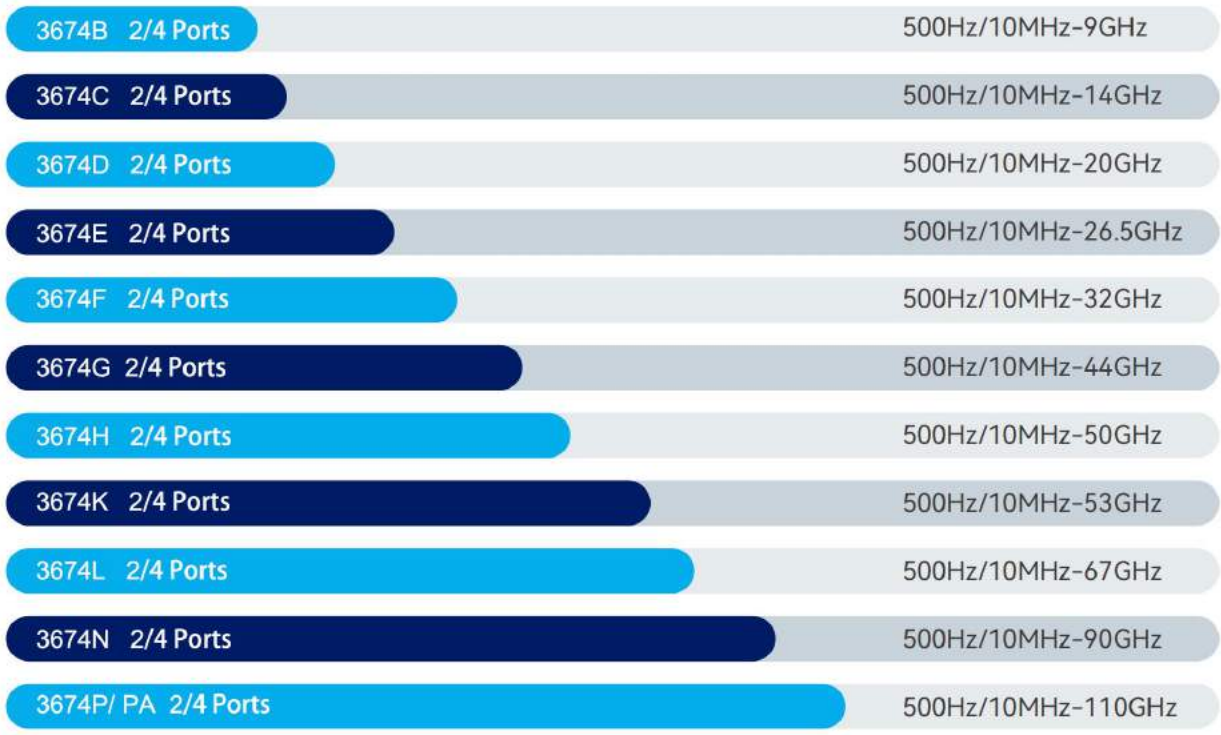
Excellent RF characteristics, flexible hardware configurations, and rich software functions complement each other, enabling multiple measurement tasks to be completed with just one connection. The innovative human-computer Interaction design can help you complete the required measurement settings quickly and conveniently. The large touch screen brings you a flexible and efficient operation experience.

Key Feature

- 500Hz~110GHz Broadband Coaxial Coverage
- 30MHz Intermediate Frequency Bandwidth, Measurement Points 200001
- Ultra Fast Scanning Speed, 140dB Wide Dynamic Range
- 21 Functions, Including Pulse S Parameter Measurement, Frequency Conversion Device Measurement, Gain Compression Measurement, Noise Figure Measurement, Spectrum Measurement, Signal Integrity Measurement, Signal Integrity Measurement, Total Harmonic Distortion Measurement, Active Intermodulation Measurement, Automatic Fixture Removal, etc
- Synchronous recording of SCPI instructions, one click script generation
- 15.6 inch multi parameter display on the same screen, Multi-touch operation

Ultra Wideband

500Hz -110GHz Coaxial Coverage



Excellent Performance

Faster measurement speed, improving production efficiency
Higher measurement accuracy can produce products of higher quality and better specifications
Up to 30MHz intermediate frequency bandwidth, capable of fast testing and narrow pulse testing
A maximum of 200001 measurement points can bring more precise measurement results
Ultra wide band fundamental wave mixing technology and source output power lifting technology are adopted to greatly improve the dynamic range, and the optimal dynamic range can reach 140dB, providing more accurate and reliable measurement results for the testing of large dynamic devices such as filters.

Abundant Functions

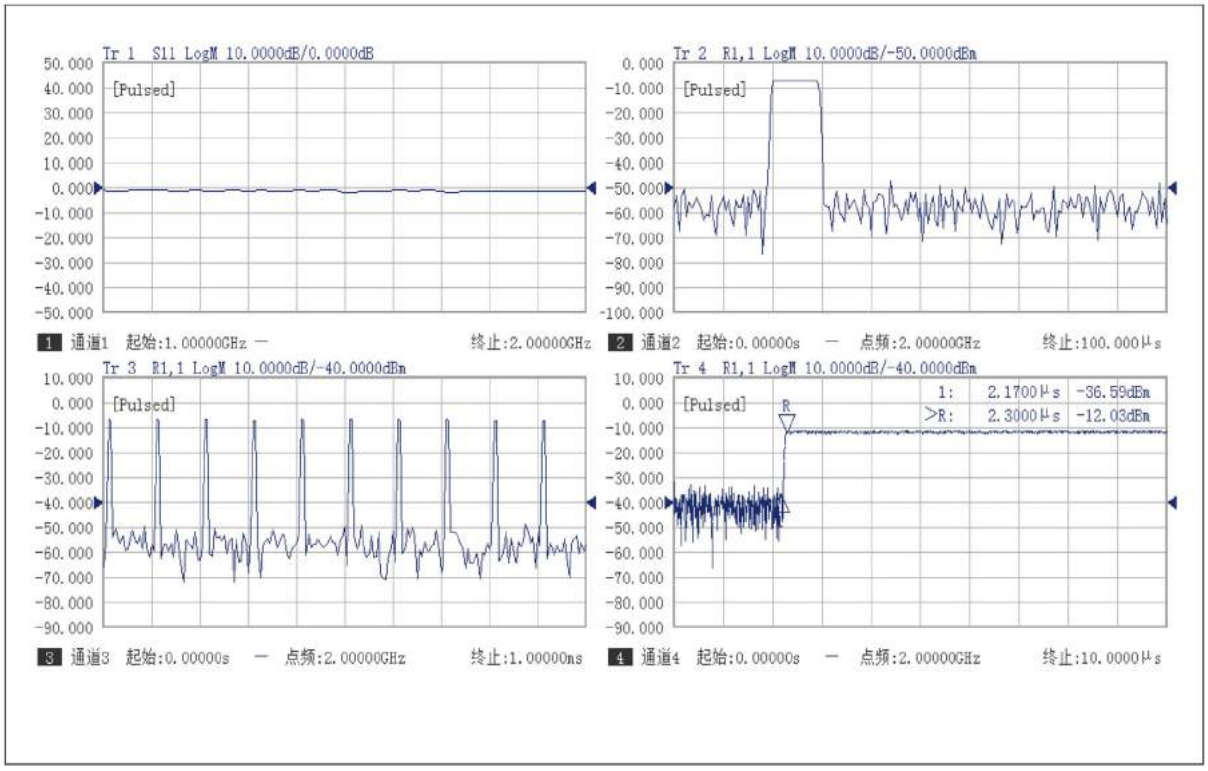
It has 21 functions, including Pulse S Parameter Measurement, Frequency Conversion Device Measurement, Gain Compression Measurement, Noise Figure Measurement, Spectrum Measurement, Signal Integrity Measurement, Total Harmonic Distortion Measurement, Active Intermodulation Measurement, Automatic Fixture Removal, etc. It combines specific applications to form a system level test solution that precisely fits the needs of users in different industries.

Pulse S Parameter Measurement

Built in Pulse Modulation for Fast and Easy Testing

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

The source modulation sources include various states such as rear panel input, internal pulse generator, normally open and normally closed. External pulses can be used to modulate the source of the vector network analyzer; External modulators can also be used to modulate the source of the vector network analyzer and measure it by triggering a synchronous mode. The pulse S parameter measurement function provides strong support for testing radar T/R modules, antenna transceiver modules, etc.



Excellent Pulse Testing Ability

Pulse period up to 70s
Pulse resolution as low as 8.3ns
Broadband synchronous pulse test pulse width < 42ns
Internal pulse synchronization or external pulse synchronization mode
7 source modulation modes including external and internal pulses
4-channel pulse generator with independently adjustable pulse width and delay
Automatic broadband synchronous measurement and narrowband asynchronous measurement function
Adaptive narrowband filter to improve narrow pulse testing capability
3 pairs of trigger input and output modules, providing flexible system collaboration functions
Sweep pulse S parameter testing, pulse envelope testing, and pulse point testing functions

Mixer/Frequency Converter Measurement

Scalar Measurement Analysis

Comprehensive Mixer/Frequency Converter Characteristic Measurement Settings

Provide comprehensive mixer/frequency converter characteristic measurement settings, supporting dual order local oscillator and external local oscillator input; Support multiple scanning types such as linear scanning, power scanning, and segment scanning; By using simple settings, it is possible to automatically calculate the characteristics of complex mixers such as RF, dual LO, and IF frequency doubling and division; Support settings for source port power, local oscillator port power, attenuation, power sweep characteristics, etc.

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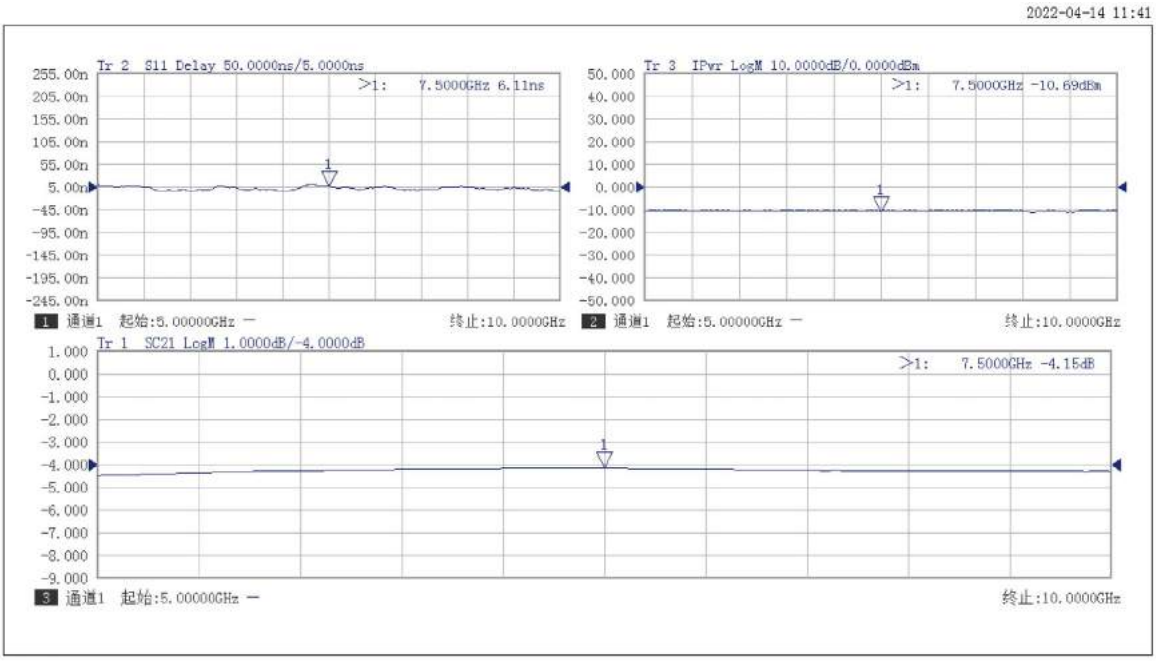
Simple and Efficient Testing of Frequency Conversion Loss Amplitude Response Characteristics

Provide the most direct and accurate mixer/frequency converter frequency conversion loss amplitude response measurement capability. Using a power meter for segmented enhanced power calibration, complete full frequency calibration covering RF and IF.

Testing and Analysis of Non Insertion Variable Frequency Devices Using Independent Dual Power Calibration Method

Supports dual independent source power and receiver calibration, providing a solution for non insertion connection mode through separate ports, replacing methods such as connector embedding and power meter embedding, providing a more accurate calibration method for non insertion test pieces.



Vector Measurement Analysis

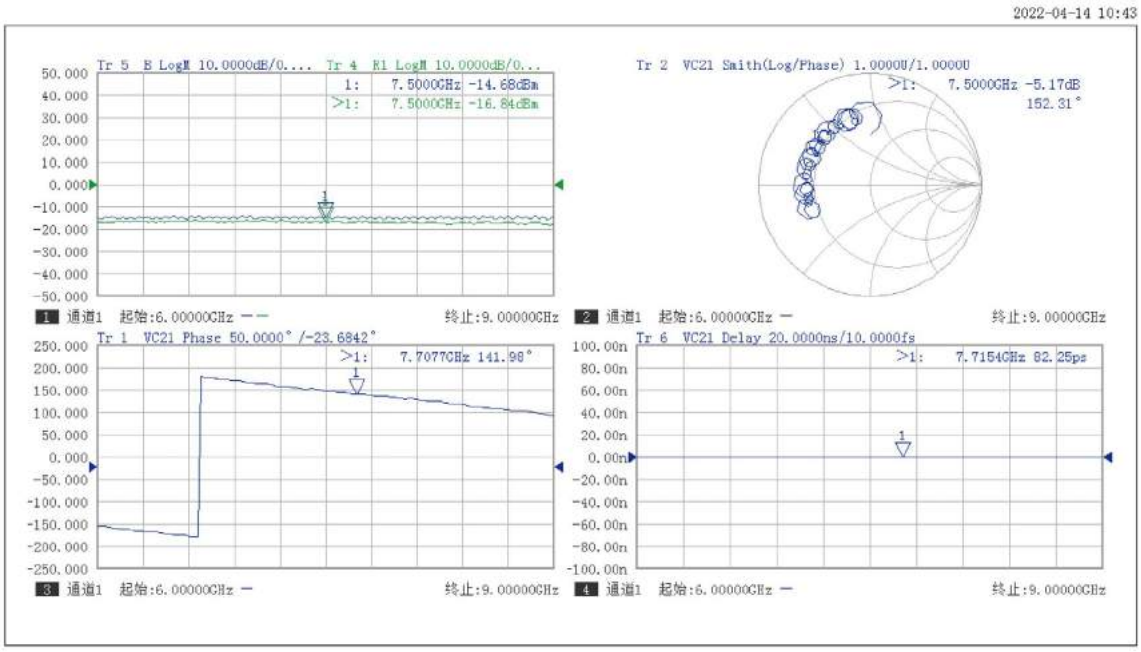
Simultaneous Completion of Amplitude Response, Absolute Phase, and Delay Response Testing and Analysis by A Single Instrument

Provide complete measurement capabilities for mixer/frequency converter amplitude response, absolute phase, and absolute delay response. Single connection can complete the measurement of mixer/frequency converter complex characteristics, with high amplitude and phase measurement accuracy.

Characterization of Mixer/Frequency Converter Characteristics

Mixer/frequency converter vector measurement analysis can be used to characterize the characteristics of calibration mixers, and to determine the reciprocity characteristics of calibration mixers and obtain the reciprocity frequency conversion characteristics.

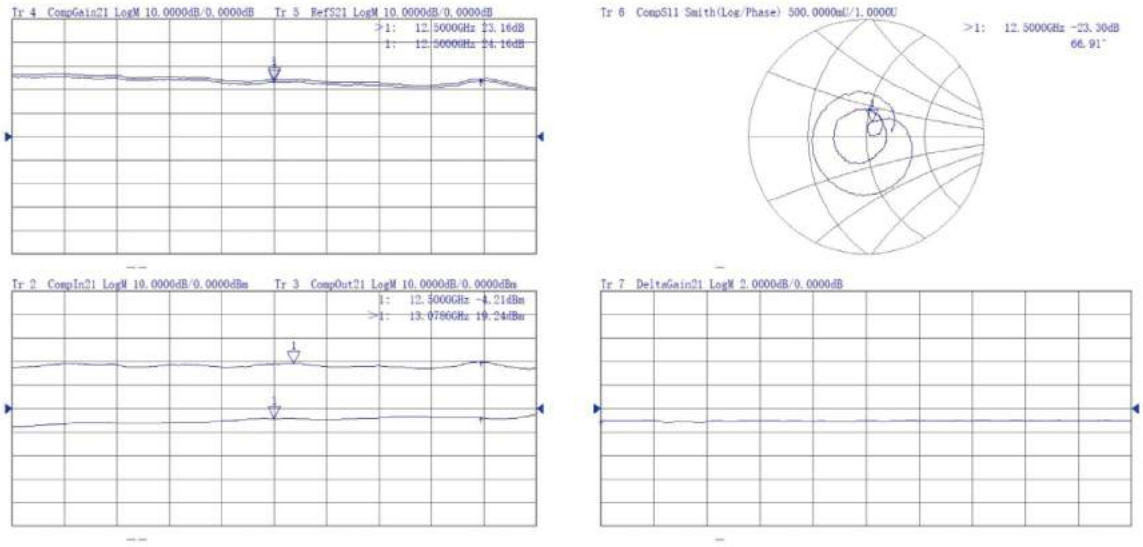
The feature characterization function serves as an independent function, and the generated mixer characterization data file can be automatically called in vector measurement analysis.



Gain Compression Measurement

Single Connection, Fast Completion of Amplifier Gain Compression Parameter Testing

The gain compression measurement function measures the linear gain, compression point gain, compression point input power, compression point output power, linear input matching, and other compression parameters of active devices within the working frequency band through one connection and one calibration.



Power Calibration, Guided Calibration for High-Precision Measurement

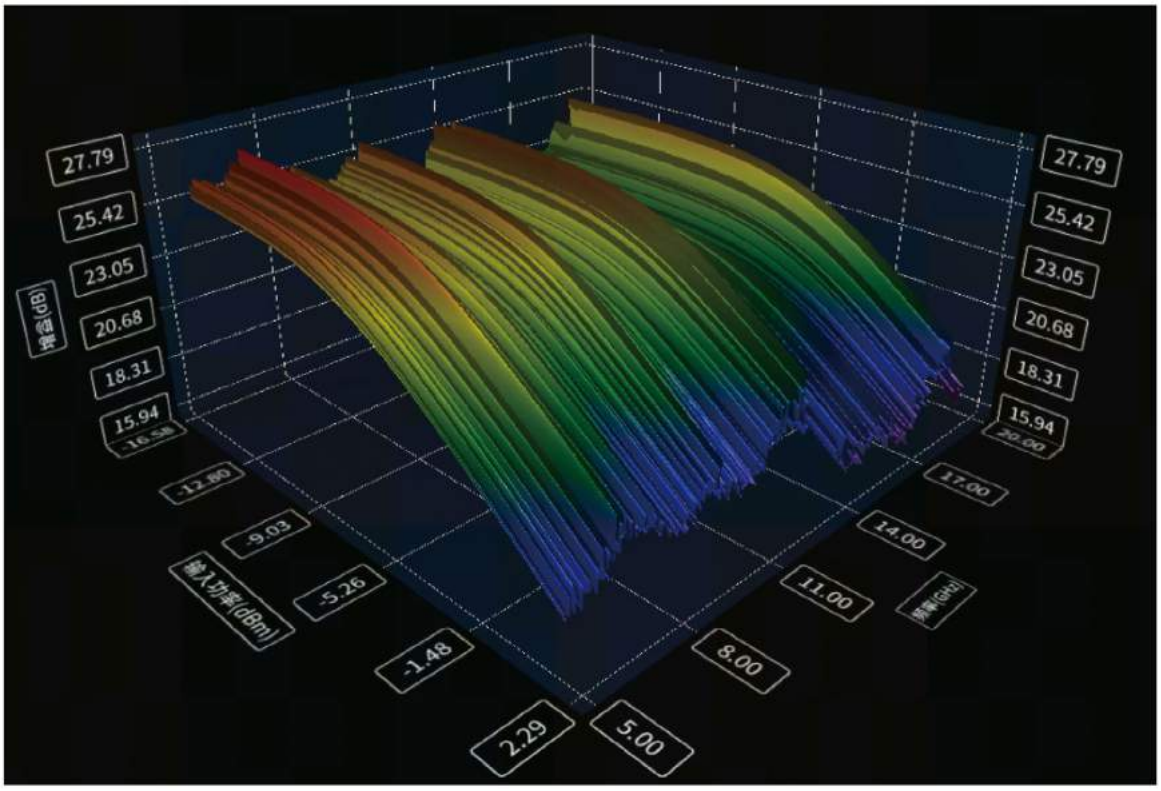
Power calibration and receiver calibration can obtain accurate compression point input power and output power values. By calibrating and correcting the S parameter, accurate gain measurement values and input/output matching values can be obtained.

Multiple Sweep and Compression Methods for Different Measurement Scenarios

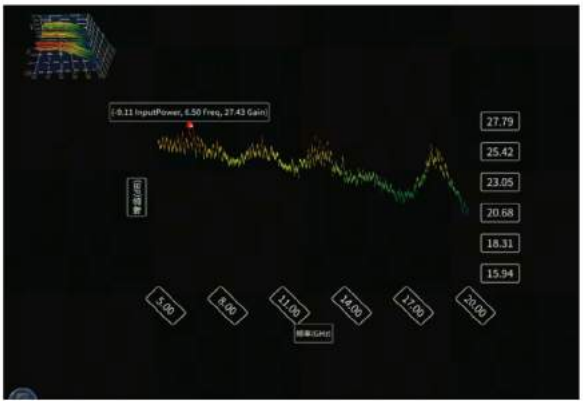
Intelligent scanning can quickly and accurately obtain compression points, providing power scanning for each frequency point and frequency scanning method for each power point, obtaining complete measurement data. It provides compression methods such as linear gain compression, maximum gain compression, backoff point compression, X/Y compression, saturation state compression, etc. Users can choose different compression methods based on the type of tested object and different measurement scenarios.

3D View Drawing, Visually Displaying The Characteristics of The Tested Object

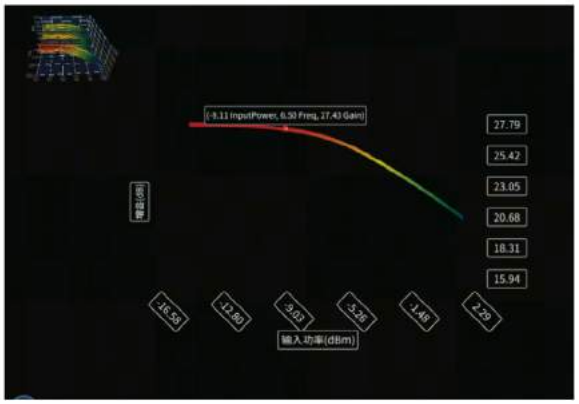
Provide 3D view function to better display the working performance of the tested object under excitation; It can also display frequency and power sections, intuitively displaying the characteristics of the tested object at each frequency point and each power point.



3D View



Power Section



Frequency Section

Noise Figure Measurement

Fast, Accurate, and Large Dynamic Range Noise Coefficient Testing and Analysis

Once connected, multiple parameters such as S parameter, noise figure, noise parameter, gain compression, and variable frequency gain can be tested simultaneously. Based on the cold source noise coefficient testing method, accurate noise coefficient and noise parameter testing can be carried out. By constructing an advanced noise correlation matrix model and combining it with the precise S-parameter calibration of a vector network analyzer, it is suitable for precise testing of small noise coefficient test pieces. The dynamic range of measurement can reach 55dB, which is suitable for testing large gain test pieces.

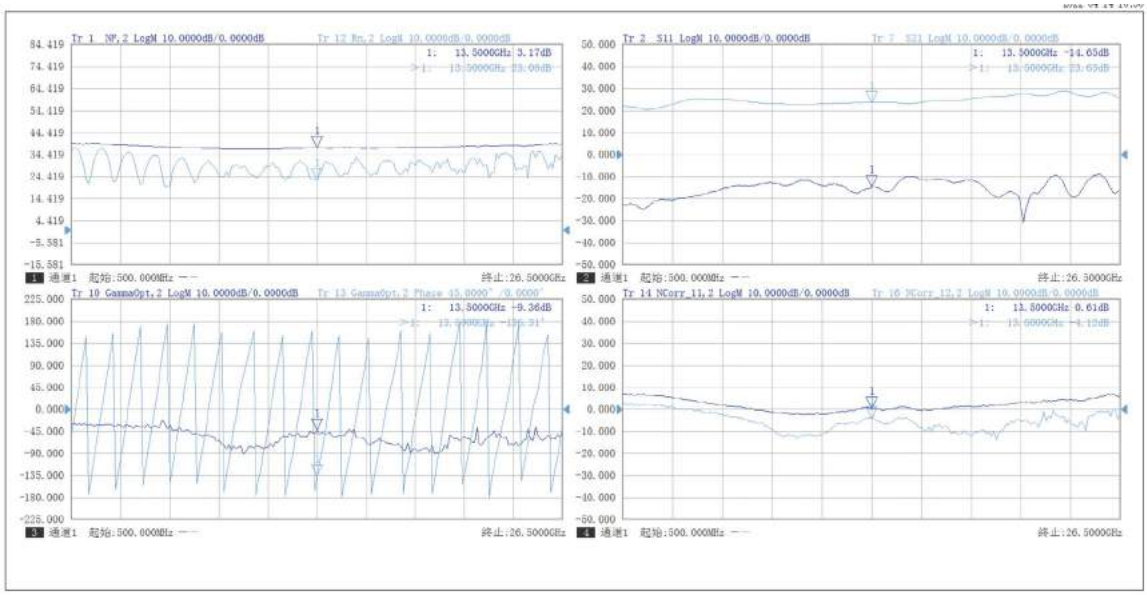
Measurement and Analysis of Noise Figure of Non-Standard Interface Devices Such As Microwave Chips

Based on patented noise embedding technology, achieve noise coefficient testing of non-standard interface devices. Especially, it can solve the problem of microwave chip noise coefficient on chip testing and eliminate the impact of mismatch between the tested object and the testing equipment.

Testing and Analysis of Noise Parameters

Noise coefficient and noise parameter tests can be conducted simultaneously, including the amplitude and phase of the minimum noise coefficient, noise internal resistance, and optimal reflection coefficient.

By using the S-parameter and noise power fusion error correction technology, the influence of noise parameters on noise receivers can be eliminated.



Spectrum Measurement Analysis

Fast Search for Multiport Stray Spectrum and Harmonic Waves

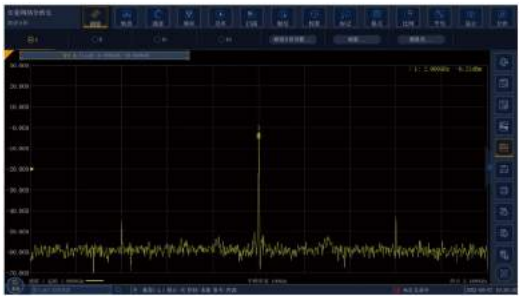
Each port of the vector network analyzer can complete the measurement of the input spectrum and output spectrum of the tested piece. The spectrum measurement technology based on Fast Fourier transform can quickly locate the stray spectrum and harmonic state of the tested piece in a small resolution bandwidth.

Single Instrument, Single Connection, Completion Of Multi-Parameter Evaluation of The Tested Part

For the testing of active devices, the spectrum measurement function can provide more measurement parameters. A single instrument can achieve conventional S-parameter testing, stray and harmonic positioning measurement through a single connection; Complete ratio and absolute measurement error correction techniques can provide more accurate measurement results.

Efficient Marking and Measurement Function

The label of the spectrum measurement function can provide in band power, power Spectral density, occupied bandwidth, adjacent channel power ratio and other indicators for measurement, one click setting and real-time update.



Measurement and Analysis of Signal Integrity

Time Domain Analysis of Ultra Wide Band Coverage to Achieve Micron Resolution

It has strong Signal integrity measurement and analysis capability, and can provide micron level spatial resolution for small chip packaging test to solve the problem of positioning discontinuity.

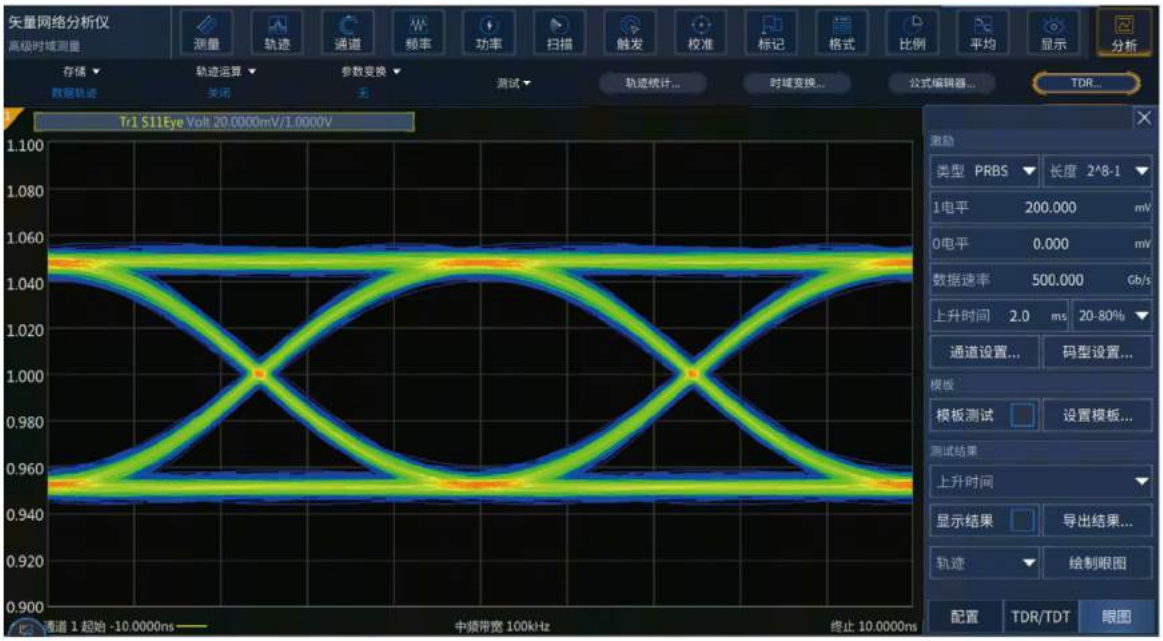
Single View Completes The Test and Analysis of Signal Integrity in Time Domain and Frequency Domain at The Same Time

A single view completes both time-domain and frequency-domain testing analysis, helping users identify the sources of impedance discontinuity, reflection, and crosstalk. Can accurately measure the changes in impedance characteristics of transmission lines; Convenient near end and far end crosstalk testing, used to test the degree of mutual influence between multiple transmission lines.

Rapid Analysis of Signal Integrity by Eye Simulation

Capable of generating and analyzing virtual eye maps based on network parameters. According to different high-speed digital communication standards, pre-defined eye pattern templates can be used for efficient Pass/Fail testing.

Interference such as jitter and noise can be applied to the simulated eye map, and correction algorithms such as pre emphasis and equalization can be added to simulate the simulated eye map at different positions of high-speed links in a real environment.



Measurement and Analysis of Total harmonic distortion (THD)

Testing and Analysis of Multiple Harmonics in Wideband Coverage Differential Amplifiers

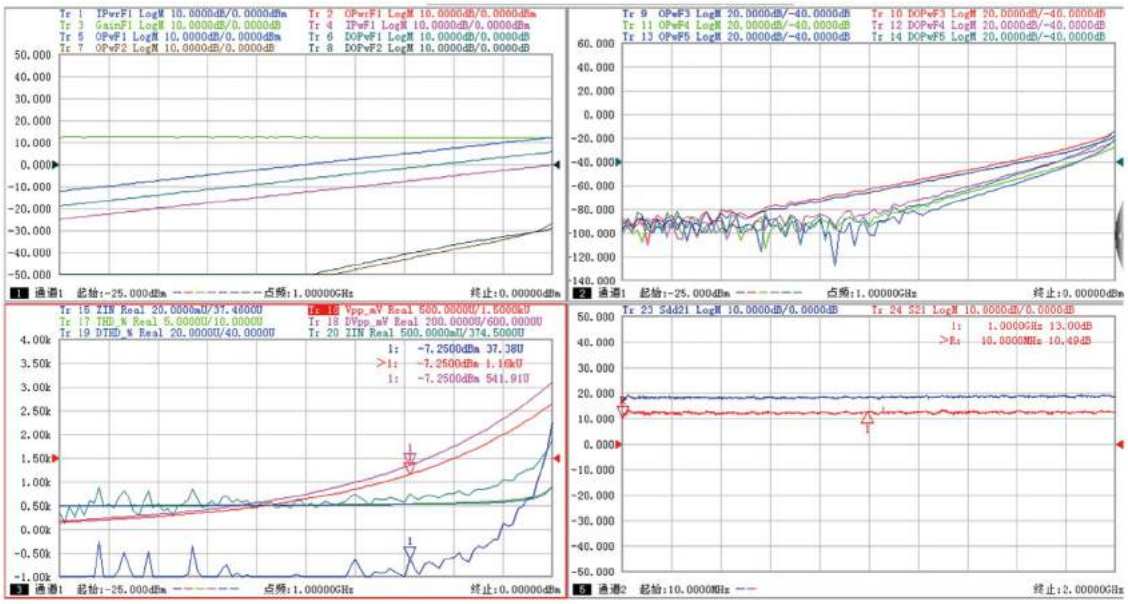
Wideband test can be used for the measurement and analysis of input and output power, gain, total harmonic distortion and other parameters under true differential excitation, simplifying the complexity of harmonic performance test of differential active devices such as transimpedance amplifiers.

Simultaneous Completion of Multi-Channel Error Correction in A Single Calibration

A single calibration can simultaneously complete the error correction of standard S parameters, Total harmonic distortion and other multi-channel errors, including the ratio measurement error, absolute receiver measurement error, and error correction of port excitation power. The transmission and mismatch errors introduced by different mechanical attenuation levels between channels can also be compensated through a single calibration.

Convenient and Efficient Method for Setting Measurement Parameters

The editing of measurement parameters can be completed through an XML file, with one click parameter import. The imported measurement parameters are updated in real-time to the parameter selection interface.



Automatic Fixture Removal

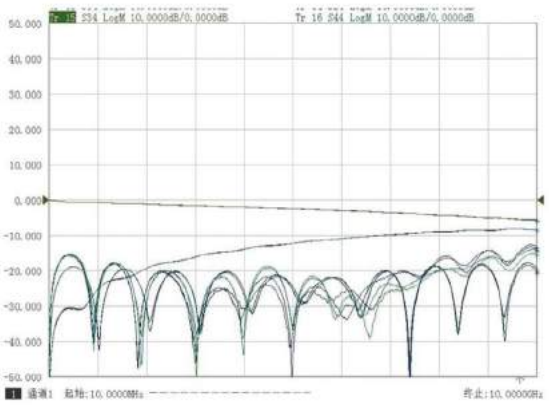
Solving the Testing Difficulties of Non standard Connector Devices

For non-standard joint device testing, such as packaged microwave devices, on chip devices, etc., such devices cannot be directly connected to vector network analyzers. Usually, fixtures are used to connect the measured part to vector network analysis, but fixtures also introduce measurement errors. The automatic fixture removal function can extract, store, and embed fixture parameters, ultimately obtaining the true parameters of the tested part.

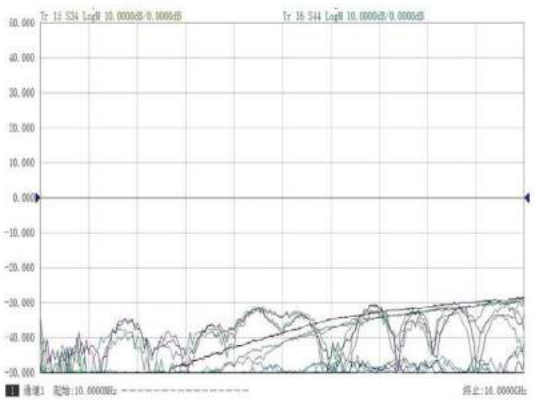
Easy to Operate, High Accuracy in Error Correction

The automatic fixture removal function has the advantages of simple operation and high accuracy. This function does not require customized calibration components, and can eliminate near end and far end crosstalk of differential fixtures, and is suitable for testing scenarios where one end of the fixture is open.

Utilize the automatic fixture removal function to extract balance parameters and embed four ports of the tested object as a whole. It can effectively remove transmission parameters, near end crosstalk, and far end crosstalk.



Before removing the clamp



After removing the clamp

Ultimate User Experience

The Interface is Simple and Intuitive, Easy to Operate, and Improves Testing Efficiency

15.6-inch high-definition large screen
2K resolution, Multi-touch

Personalized display area
Display hundreds of measurement windows

Multiple common functions of the toolbar
Convenient and fast operation

SPCI command recording
Save 30% of workload

Search function
Quick positioning of unfamiliar functions
Enable convenient interaction

Clear and concise interface at a glance
USB 3.0 interface for fast transmission

2/4 port options
Flexible configuration of testing devices

The Interface is Simple and Intuitive, Easy to Operate, and Improves Testing Efficiency

01 500Hz external reference input/output interface

02 110V/220V adaptive power input

03 Removable CPU module, configured with hard drive, LAN, DP, USB, GPIB interfaces

04 Excitation output, local oscillator output, and other interfaces provide flexible measurement configurations

05 External intermediate frequency input interface, pulse input output interface

06 T-bias configuration input interface

07 Automatic testing interface, trigger input/output interface, noise source power interface

Specification

3674B/C/D/E

Frequency Properties			
Frequency Range		500Hz~9/14/20/26.5GHz	
Frequency Resolution		0.1Hz	
Frequency Accuracy		±1×10⁻⁷(23℃ ±3℃)	
Port Harmonic Suppression			
Port 1 and 3 Harmonic Suppression (Typical value)		Nominal: -48dBc(0.01~4GHz) -57dBc(4~14GHz) -57dBc(14~26.5GHz)	Typical: -62dBc(0.01~4GHz) -68dBc(4~14GHz) -70dBc(14~26.5GHz)
Port 2 and 4 Harmonic Suppression (Typical value)		Nominal: -13dBc(0.01~4GHz) -18dBc(4~14GHz) -18dBc(14~26.5GHz)	Typical: -24dBc(0.01~4GHz) -30dBc(4~14GHz) -36dBc(14~26.5GHz)
Port Power Characteristics			
Power Sweep Range (Typical value)		Nominal: 33dB(10~50MHz) 35dB(0.05~4GHz) 38dB(4~16GHz) 35dB(16~20GHz) 32dB(20~24GHz) 27dB(24~26.5GHz)	Typical: 36dB(10~50MHz) 39dB(0.05~4GHz) 41dB(4~16GHz) 40dB(16~20GHz) 39dB(20~24GHz) 38dB(24~26.5GHz)
Max. Output Power (Standard, 400 Options)	Port 1 and 3	Nominal: +8dBm (10~50MHz) (filtering mode) +10dBm (0.05~4GHz) (filtering mode) +13dBm (10~50MHz) (high power mode) +10dBm (0.05~4GHz) (high power mode) +13dBm (4~20GHz) +12dBm (20~24GHz) +8dBm (24~26.5GHz)	Typical: +9dBm (10~50MHz) (filtering mode) +13dBm (0.05~4GHz) (filtering mode) +16dBm (10~50MHz) (high power mode) +15dBm (0.05~4GHz) (high power mode) +16dBm (4~20GHz) +15dBm (20~24GHz) +14dBm (24~26.5GHz)
	Port 2 and 4	Nominal: +13dBm(0.01~16GHz) +10dBm(16~20GHz) +10dBm(20~24GHz) +8dBm(24~26.5GHz)	Typical: +17dBm(0.01~16GHz) +17dBm(16~20GHz) +15dBm(20~24GHz) +14dBm(24~26.5GHz)
Pulse Characteristics			
Pulse Width Setting Range		Nominal:33ns~70s	Typical:20ns~70s
Pulse Switching Ratio		64dB(0.01~4GHz) 80dB(4~26.5GHz)	
Network Parameter Characteristics			
Pulse Width Setting Range		Nominal:33ns~70s	Typical:20ns~70s
System Dynamic Range		Nominal: 96dB(10~50MHz) 110dB(50~100MHz) 115dB(100~500MHz) 132dB(0.5~2GHz) 129dB(2~4GHz) 133dB(4~9GHz) 134dB(9~10GHz) 133dB(10~14GHz) 132dB(14~16GHz) 130dB(16~20GHz)	Typical: 108dB(10~50MHz) 124dB(50~100MHz) 129dB(100~500MHz) 138dB(0.5~2GHz) 141dB(2~4GHz) 139dB(4~9GHz) 140dB(9~10GHz) 140dB(10~14GHz) 139dB(14~16GHz) 133dB(16~20GHz)

System Dynamic Range	Nominal: 128dB(20~24GHz) 122dB(24~26.5GHz)	Typical: 1328dB(20~24GHz) 127dB(24~26.5GHz)
Effective Directionality	Nominal: 48dB(0.01~2GHz) 44dB(2~26.5GHz)	Typical: 65dB(0.01~2GHz) 52dB(2~26.5GHz)
Effective Source Matching	Nominal: 40dB(0.01~2GHz) 31dB(2~26.5GHz)	Typical: 46dB(0.01~2GHz) 36dB(2~26.5GHz)
Payload Matching	Nominal: 47dB(0.01~2GHz) 44dB(2~26.5GHz)	Typical: 61dB(0.01~2GHz) 56dB(2~26.5GHz)
Reflection Tracking	Nominal: ±0.0150dB(0.01~2GHz) ±0.0061dB(2~26.5GHz)	Typical: ±0.0010dB(0.01~2GHz) ±0.0014dB(2~26.5GHz)
Transmission Tracking	Nominal: ±0.044dB(10~50MHz) ±0.055dB(0.05~2GHz) ±0.120dB(2~9GHz) ±0.110dB(9~14GHz) ±0.120dB(14~26.5GHz)	Typical: ±0.001dB(10~50MHz) ±0.002dB(0.05~2GHz) ±0.004dB(2~9GHz) ±0.005dB(9~14GHz) ±0.008dB(14~26.5GHz)
Others		
Amplitude Trace Noise dB rms (1kHz IF bandwidth)	Nominal: 0.0070(10~50MHz) 0.0020(50~100MHz) 0.0020(100~500MHz) 0.0020(0.5~1GHz) 0.0020(1~14GHz) 0.0020(14~22.5GHz) 0.0030(22.5~24GHz) 0.0050(24~26.5GHz)	Typical: 0.0026(10~50MHz) 0.0011(50~100MHz) 0.0005(100~500MHz) 0.0005(0.5~1GHz) 0.0005(1~14GHz) 0.0005(14~22.5GHz) 0.0006(22.5~24GHz) 0.0006(24~26.5GHz)
Phase Trace Noise deg rms (1kHz IF bandwidth)	Nominal: 0.051(10~50MHz) 0.051(50~100MHz) 0.015(100~500MHz) 0.015(0.5~1GHz) 0.015(1~14GHz) 0.042(14~22.5GHz) 0.054(22.5~24GHz) 0.054(24~26.5GHz)	Typical: 0.014(10~50MHz) 0.001(50~100MHz) 0.003(100~500MHz) 0.003(0.5~1GHz) 0.004(1~14GHz) 0.004(14~22.5GHz) 0.004(22.5~24GHz) 0.004(24~26.5GHz)
IF Bandwidth	1Hz~30MHz	
Amplitude Display Resolution	0.001dB/div	
Phase Display Resolution	0.001°/div	
General Characteristics		
Port Connector	3.5mm (male), 50 Ω	
Number of Measurement Ports	3674B/C/D/E standard: 2 ports; 3674B/C/D/E-400 Option: 4 ports	
Interface	GPIB, USB, DP, LAN	
Display	15.6-inch high-resolution touch screen display	
Dimensions (wide × high × Deep, including handles, feet, and pads)	Two ports: 475mm × 279mm × 560mm Four ports: 475mm × 279mm × 660mm	
Max. Power Consumption	500W	
Power	50Hz, 220VAC or 50Hz/60Hz, 110VAC	
Max. Weight	50kg	

3674F/G/H

Frequency Properties			
Frequency Range		500Hz~32/44/50GHz	
Frequency Resolution		0.1Hz	
Frequency Accuracy		±1×10 (23℃ ±3℃)	
Port Harmonic Suppression			
Port 1 and 3 Harmonic Suppression (Typical value)		Nominal: -48dBc(0.01~4GHz) -57dBc(4~14GHz) -57dBc(14~50GHz)	Typical: -68dBc(0.01~4GHz) -70dBc(4~14GHz) -70dBc(14~50GHz)
Port 2 and 4 Harmonic Suppression (Typical value)		Nominal: -13dBc(0.01~4GHz) -18dBc(4~14GHz) -57dBc(14~50GHz)	Typical: -18dBc(0.01~4GHz) -31dBc(4~14GHz) -70dBc(14~50GHz)
Port Power Characteristics			
Power Sweep Range (Typical value)		Nominal: 37dB(10~50MHz) 38dB(0.05~2GHz) 35dB(2~4GHz) 38dB(4~26.5GHz) 37dB(26.5~30GHz) 36dB(30~32GHz) 37dB(32~35GHz) 34dB(35~44GHz) 30dB(44~47GHz) 20dB(47~50GHz)	Typical: 42dB(10~50MHz) 44dB(0.05~2GHz) 41dB(2~4GHz) 41dB(4~26.5GHz) 42dB(26.5~30GHz) 40dB(30~32GHz) 43dB(32~35GHz) 39dB(35~44GHz) 38dB(44~47GHz) 36dB(47~50GHz)
Max. Output Power (Standard, 400 Options)	Port 1 and 3	Nominal: +4dBm (10~50MHz) (filtering mode) +8dBm (0.05-2GHz) (filtering mode) +8dBm (2-4GHz) (filtering mode) +12dBm (10~50MHz) (high power mode) +13dBm (0.05-2GHz) (high power mode) +10dBm (2-4GHz) (high power mode) +13dBm (4~26.5GHz) +12dBm(26.5~30GHz) +11dBm(30~32GHz) +12dBm(32~35GHz) +9dBm(35~44GHz) +9dBm(44~47GHz) +5dBm(47~50GHz)	Typical: +9dBm (10~50MHz) (filtering mode) +13dBm (0.05-2GHz) (filtering mode) +13dBm (2-4GHz) (filtering mode) +14dBm (10~50MHz) (high power mode) +16dBm (0.05-2GHz) (high power mode) +13dBm (2-4GHz) (high power mode) +14dBm (4~26.5GHz) +16dBm(26.5~30GHz) +15dBm(30~32GHz) +16dBm(32~35GHz) +15dBm(35~44GHz) +13dBm(44~47GHz) +10dBm(47~50GHz)
	Port 2 and 4	Nominal: +12dBm(10~50MHz) +13dBm(0.05~26.5GHz) +12dBm(26.5~30GHz) +11dBm(30~32GHz) +12dBm(32~35GHz) +9dBm(35~44GHz) +9dBm(44~47GHz) +5dBm(47~50GHz)	Typical: +17dBm(10~50MHz) +16dBm(0.05~26.5GHz) +16dBm(26.5~30GHz) +16dBm(30~32GHz) +17dBm(32~35GHz) +15dBm(35~44GHz) +13dBm(44~47GHz) +11dBm(47~50GHz)
Pulse Characteristics			
Pulse Width Setting Range		Nominal:33ns~60s	Typical:20ns~70s
Pulse Switching Ratio		64dB(0.01~4GHz) 80dB(4~50GHz)	

Network Parameter Characteristics		
System Dynamic Range	Nominal: 96dB (10~50MHz) 106dB (50~500MHz) 132dB (0.5~1GHz) 132dB (1~2GHz) 129dB (2~4GHz) 131dB (4~10GHz) 128dB (10~16GHz) 129dB (16~20GHz) 130dB (20~26.5GHz) 125dB (26.5~30GHz) 126dB (30~32GHz) 127dB (32~35GHz) 122dB (35~47GHz) 102dB (47~50GHz)	Typical: 104dB (10~50MHz) 122dB (50~500MHz) 137dB (0.5~1GHz) 138dB (1~2GHz) 140dB (2~4GHz) 139dB (4~10GHz) 139dB (10~16GHz) 138dB (16~20GHz) 138dB (20~26.5GHz) 137dB (26.5~30GHz) 135dB (30~32GHz) 133dB (32~35GHz) 130dB (35~47GHz) 111dB (47~50GHz)
Effective Directionality	Nominal: 41dB(0.01~2GHz) 38dB(2~20GHz) 36dB(20~50GHz)	Typical: 59dB(0.01~2GHz) 54dB(2~20GHz) 47dB(20~50GHz)
Effective Source Matching	Nominal: 31dB(0.01~2GHz) 30dB(2~20GHz) 23dB(20~50GHz)	Typical: 45dB(0.01~2GHz) 36dB(2~20GHz) 31dB(20~50GHz)
Payload Matching	Nominal: 42dB(0.01~2GHz) 37dB(2~20GHz) 35dB(20~50GHz)	Typical: 58dB(0.01~2GHz) 55dB(2~20GHz) 51dB(20~50GHz)
Reflection Tracking	Nominal: ±0.0150dB(0.01~2GHz) ±0.0290dB(2~20GHz) ±0.0300dB(20~40GHz) ±0.0400dB(40~50GHz)	Typical: ±0.0046dB(0.01~2GHz) ±0.0022dB(2~20GHz) ±0.0020dB(20~40GHz) ±0.0065dB(40~50GHz)
Transmission Tracking	Nominal: ±0.051dB(10~50MHz) ±0.030dB(0.05~2GHz) ±0.095dB(2~10GHz) ±0.120dB(10~20GHz) ±0.200dB(20~40GHz) ±0.200dB(40~50GHz)	Typical: ±0.002dB(10~50MHz) ±0.004dB(0.05~2GHz) ±0.002dB(2~10GHz) ±0.002dB(10~20GHz) ±0.005dB(20~40GHz) ±0.002dB(40~50GHz)
Others		
Amplitude Trace Noise dB rms (1kHz IF bandwidth)	Nominal: 0.2000(10~50MHz) 0.0200(50~500MHz) 0.0030(0.5~1GHz) 0.0020(1~26.5GHz) 0.0030(26.5~44GHz) 0.0040(44~50GHz)	Typical: 0.0055(10~50MHz) 0.0018(50~500MHz) 0.0016(0.5~1GHz) 0.0004(1~26.5GHz) 0.0005(26.5~44GHz) 0.0023(44~50GHz)
Phase Trace Noise deg rms (1kHz IF bandwidth)	Nominal: 1.000(10~50MHz) 0.500(50~500MHz) 0.020(0.5~1GHz) 0.020(1~26.5GHz) 0.030(26.5~50GHz)	Typical: 0.026(10~50MHz) 0.003(50~500MHz) 0.004(0.5~1GHz) 0.005(1~26.5GHz) 0.016(26.5~50GHz)
IF Bandwidth	1Hz~30MHz	
Amplitude Display Resolution	0.001dB/div	
Phase Display Resolution	0.001°/div	

General Characteristics	
Port Connector	2.4mm (male), 50 Ω
Number of Measurement Ports	3674F/G/H standard: 2 ports; 3674F/G/H-400 Option: 4 ports
Interface	GPIB, USB, DP, LAN
Display	15.6-inch high-resolution touch screen display
Dimensions (wide × high × Deep, including handles, feet, and pads)	Two ports: 475mm × 279mm × 560mm Four ports: 475mm × 279mm × 660mm
Max. Power Consumption	500W
Power	50Hz, 220VAC or 50Hz/60Hz, 110VAC
Max. Weight	50kg

3674K/L

Frequency Properties		
Frequency Range	500Hz~53/67GHz	
Frequency Resolution	0.1Hz	
Frequency Accuracy	±1×10 (23 C ±3 C)	
Port Harmonic Suppression		
Port 1 and 3 Harmonic Suppression (Typical value)	Nominal: -48dBc(0.01~4GHz) -57dBc(4~14GHz) -57dBc(14~50GHz)	Typical: -57dBc(0.01~4GHz) -70dBc(4~14GHz) -71dBc(14~50GHz)
Port 2 and 4 Harmonic Suppression (Typical value)	Nominal: -13dBc(0.01~4GHz) -18dBc(4~14GHz) -57dBc(14~50GHz)	Typical: -25dBc(0.01~4GHz) -32dBc(4~14GHz) -72dBc(14~50GHz)
Port Power Characteristics		
Power Sweep Range (Typical value)	Nominal: 35dB(10~50MHz) 38dB(0.05~2GHz) 35dB(2~4GHz) 38dB(4~10GHz) 36dB(10~14GHz) 37dB(14~16GHz) 35dB(16~19GHz) 34dB(19~26.5GHz) 33dB(26.5~30GHz) 32dB(30~32GHz) 32dB(32~35GHz) 30dB(35~40GHz) 35dB(40~67GHz)	Typical: 41dB(10~50MHz) 44dB(0.05~2GHz) 40dB(2~4GHz) 42dB(4~10GHz) 43dB(10~14GHz) 42dB(14~16GHz) 40dB(16~19GHz) 37dB(19~26.5GHz) 37dB(26.5~30GHz) 36dB(30~32GHz) 39dB(32~35GHz) 36dB(35~40GHz) 40dB(40~67GHz)

Max. Output Power (Standard, 400 Options)	Port 1 and 3	Nominal: +4dBm (10~50MHz) (filtering mode) +8dBm (0.05~2GHz) (filtering mode) +10dBm (10~50MHz) (high power mode) +13dBm (0.05~2GHz) (high power mode) +10dBm (2~4GHz) +13dBm (4~10GHz) +11dBm (10~14GHz) +12dBm (14~16GHz) +10dBm (16~19GHz) +11dBm (19~26.5GHz) +10dBm (26.5~30GHz) +7dBm (30~32GHz) +9dBm (32~35GHz) +5dBm (35~40GHz) +10dBm (40~67GHz)	Typical: +8dBm (10~50MHz) (filtering mode) +12dBm (0.05~2GHz) (filtering mode) +16dBm (10~50MHz) (high power mode) +16dBm (0.05~2GHz) (high power mode) +12dBm (2~4GHz) +15dBm (4~10GHz) +14dBm (10~14GHz) +16dBm (14~16GHz) +16dBm (16~19GHz) +14dBm (19~26.5GHz) +13dBm (26.5~30GHz) +10dBm (30~32GHz) +12dBm (32~35GHz) +11dBm (35~40GHz) +16dBm (40~67GHz)
	Port 2 and 4	Nominal: +12dBm (10~50MHz) +13dBm (0.05~10GHz) +11dBm (10~14GHz) +12dBm (14~16GHz) +10dBm (16~19GHz) +11dBm (19~26.5GHz) +10dBm (26.5~30GHz) +7dBm (30~32GHz) +9dBm (32~35GHz) +5dBm (35~40GHz) +10dBm (40~67GHz)	Typical: +16dBm (10~50MHz) +16dBm (0.05~10GHz) +15dBm (10~14GHz) +17dBm (14~16GHz) +16dBm (16~19GHz) +14dBm (19~26.5GHz) +14dBm (26.5~30GHz) +11dBm (30~32GHz) +14dBm (32~35GHz) +11dBm (35~40GHz) +15dBm (40~67GHz)
Pulse Characteristics			
Pulse Width Setting Range		Nominal:33ns~60s	Typical:20ns~70s
Pulse Switching Ratio		64dB(0.01~4GHz) 80dB(4~67GHz)	
Network Parameter Characteristics			
System Dynamic Range		Nominal: 87dB (10~50MHz) 110dB (50~500MHz) 128dB (0.5~1GHz) 131dB (1~2GHz) 127dB (2~4GHz) 131dB (4~10GHz) 129dB (10~16GHz) 131dB (16~26.5GHz) 122dB (26.5~30GHz) 120dB (30~32GHz) 112dB (32~40GHz) 116dB (40~50GHz) 114dB (50~60GHz) 113dB (60~64GHz) 114dB (64~67GHz)	Typical: 102dB (10~50MHz) 124dB (50~500MHz) 137dB (0.5~1GHz) 141dB (1~2GHz) 142dB (2~4GHz) 142dB (4~10GHz) 139dB (10~16GHz) 138dB (16~26.5GHz) 137dB (26.5~30GHz) 134dB (30~32GHz) 135dB (32~40GHz) 128dB (40~50GHz) 126dB (50~60GHz) 123dB (60~64GHz) 122dB (64~67GHz)
Effective Directionality		Nominal: 35dB (0.01~2GHz) 41dB (2~10GHz) 38dB (10~20GHz) 37dB (20~35GHz) 37dB (35~50GHz) 34dB (50~67GHz)	Typical: 65dB (0.01~2GHz) 65dB (2~10GHz) 59dB (10~20GHz) 54dB (20~35GHz) 48dB (35~50GHz) 40dB (50~67GHz)

Effective Source Matching	Nominal: 34dB (0.01~2GHz) 36dB (2~10GHz) 40dB (10~20GHz) 34dB (20~35GHz) 28dB (35~50GHz) 28dB (50~67GHz)	Typical: 43dB (0.01~2GHz) 40dB (2~10GHz) 42dB (10~20GHz) 38dB (20~35GHz) 31dB (35~50GHz) 31dB (50~67GHz)
Payload Matching	Nominal: 34dB (0.01~2GHz) 40dB (2~10GHz) 36dB (10~20GHz) 35dB (20~35GHz) 36dB (35~50GHz) 33dB (50~67GHz)	Typical: 59dB (0.01~2GHz) 66dB (2~10GHz) 66dB (10~20GHz) 57dB (20~35GHz) 59dB (35~50GHz) 55dB (50~67GHz)
Reflection Tracking	Nominal: ± 0.0200dB (0.01~2GHz) ± 0.0110dB (2~10GHz) ± 0.0330dB (10~35GHz) ± 0.0200dB (35~50GHz) ± 0.0310dB (50~67GHz)	Typical: ± 0.0014dB (0.01~2GHz) ± 0.0025dB (2~10GHz) ± 0.0052dB (10~35GHz) ± 0.0038dB (35~50GHz) ± 0.0094dB (50~67GHz)
Transmission Tracking	Nominal: ± 0.100dB (0.01~2GHz) ± 0.065dB (2~10GHz) ± 0.100dB (10~20GHz) ± 0.110dB (20~35GHz) ± 0.094dB (35~50GHz) ± 0.140dB (50~60GHz) ± 0.150dB (60~67GHz)	Typical: ± 0.002dB (0.01~2GHz) ± 0.002dB (2~10GHz) ± 0.002dB (10~20GHz) ± 0.003dB (20~35GHz) ± 0.004dB (35~50GHz) ± 0.006dB (50~60GHz) ± 0.009dB (60~67GHz)
Others		
Amplitude Trace Noise dB rms (1kHz IF bandwidth)	Nominal: 0.0500 (10~50MHz) 0.0040 (50~100MHz) 0.0020 (100~500MHz) 0.0030 (0.5~1GHz) 0.0020 (1~26.5GHz) 0.0030 (26.5~50GHz) 0.0300 (50~67GHz)	Typical: 0.0030 (10~50MHz) 0.0016 (50~100MHz) 0.0012 (100~500MHz) 0.0009 (0.5~1GHz) 0.0003 (1~26.5GHz) 0.0014 (26.5~50GHz) 0.0021 (50~67GHz)
Phase Trace Noise deg rms (1kHz IF bandwidth)	Nominal: 0.400 (10~50MHz) 0.020 (0.05~26.5GHz) 0.030 (26.5~50GHz) 0.200 (50~67GHz)	Typical: 0.019 (10~50MHz) 0.008 (0.05~26.5GHz) 0.008 (26.5~50GHz) 0.014 (50~67GHz)
IF Bandwidth	1Hz~30MHz	
Amplitude Display Resolution	0.001dB/div	
Phase Display Resolution	0.001°/div	

General Characteristics			
Port Connector		1.85mm (male), 50 Ω	
Number of Measurement Ports		3674K/L standard: 2 ports; 3674K/L-400 Option: 4 ports	
Interface		GPIB, USB, DP, LAN	
Display		15.6-inch high-resolution touch screen display	
Dimensions (wide × high × Deep, including handles, feet, and pads)		Two ports: 475mm × 279mm × 560mm Four ports: 475mm × 279mm × 660mm	
Max. Power Consumption		500W	
Power		50Hz, 220VAC or 50Hz/60Hz, 110VAC	
Max. Weight		50kg	

3674N/P

Frequency Properties			
Frequency Range		500Hz~90/110GHz	
Frequency Resolution		0.1Hz	
Frequency Accuracy		±1×10 (23℃ ±3℃)	
Port Harmonic Suppression			
Port Harmonic Suppression		3674N: ~13dBc (0.01~4GHz) ~18dBc (4~14GHz) ~57dBc (14~70GHz)	3674P: ~13dBc (0.01~4GHz) ~18dBc (4~14GHz) ~57dBc (14~70GHz)
Port Power Characteristics			
Max. Output Power (Standard, 400 Options)	Port 1 and 3	3674N: +4dBm (10~50MHz) +8dBm (0.05~2GHz) +10dBm (2~30GHz) +5dBm (30~45GHz) +3dBm (45~67GHz) +1dBm (67~90GHz)	3674P: +4dBm (10~50MHz) +8dBm (0.05~2GHz) +10dBm (2~30GHz) +5dBm (30~40GHz) +2dBm (40~60GHz) +1dBm (60~80GHz) 0dBm (80~110GHz)
	Port 2 and 4	3674N: +4dBm (10~50MHz) +8dBm (0.05~2GHz) +10dBm (2~30GHz) +5dBm (30~45GHz) +3dBm (45~67GHz) +1dBm (67~90GHz)	3674P: +4dBm (10~50MHz) +8dBm (0.05~2GHz) +10dBm (2~30GHz) +5dBm (30~40GHz) +2dBm (40~60GHz) +1dBm (60~80GHz) 0dBm (80~110GHz)
Pulse Characteristics			
Pulse Width Setting Range		3674N: 33ns~60s	3674P: /
Pulse Switching Ratio		3674N: 64dB(0.01~4GHz) 70dB(4~90GHz)	3674P: /

Network Parameter Characteristics		
System Dynamic Range	3674N: 67dB (10~50MHz) 90dB (50~100MHz) 99dB (100~500MHz) 113dB (0.5~1GHz) 120dB (1~2GHz) 115dB (2~4GHz) 123dB (4~16GHz) 115dB (16~26.5GHz) 112dB (26.5~40GHz) 105dB (40~60GHz) 90dB (60~75GHz) 105dB (75~90GHz)	3674P: 67dB (10~50MHz) 90dB (50~100MHz) 99dB (100~500MHz) 113dB (0.5~1GHz) 120dB (1~2GHz) 115dB (2~4GHz) 123dB (4~16GHz) 115dB (16~26.5GHz) 112dB (26.5~40GHz) 105dB (40~60GHz) 90dB (60~75GHz) 103dB (75~90GHz) 100dB (90~110GHz)
Effective Directionality	3674N: 29dB (0.01~4GHz) 30dB (4~10GHz) 31dB (10~26.5GHz) 33dB (26.5~40GHz) 30dB (40~60GHz) 25dB (60~75GHz) 23dB (75~90GHz)	3674P: 29dB (0.01~4GHz) 30dB (4~10GHz) 31dB (10~26.5GHz) 33dB (26.5~40GHz) 30dB (40~60GHz) 25dB (60~75GHz) 23dB (75~110GHz)
Payload Matching	3674N: 29dB (0.01~4GHz) 30dB (4~10GHz) 31dB (10~26.5GHz) 33dB (26.5~40GHz) 30dB (40~60GHz) 25dB (60~75GHz) 22dB (75~90GHz)	3674P: 29dB (0.01~4GHz) 30dB (4~10GHz) 31dB (10~26.5GHz) 33dB (26.5~40GHz) 30dB (40~60GHz) 25dB (60~75GHz) 22dB (75~110GHz)
Reflection Tracking	3674N: ± 0.020dB (0.01~4GHz) ± 0.060dB (4~10GHz) ± 0.090dB (10~26.5GHz) ± 0.080dB (26.5~50GHz) ± 0.150dB (50~75GHz) ± 0.130dB (75~90GHz)	3674P: ± 0.020dB (0.01~4GHz) ± 0.060dB (4~10GHz) ± 0.090dB (10~26.5GHz) ± 0.080dB (26.5~50GHz) ± 0.150dB (50~75GHz) ± 0.130dB (75~110GHz)
Transmission Tracking	3674N: ± 0.260dB (0.01~2GHz) ± 0.190dB (2~10GHz) ± 0.155dB (10~20GHz) ± 0.189dB (20~40GHz) ± 0.281dB (40~50GHz) ± 0.343dB (50~60GHz) ± 0.355dB (60~67GHz) ± 0.483dB (67~90GHz)	3674P: ± 0.260dB (0.01~2GHz) ± 0.190dB (2~10GHz) ± 0.155dB (10~20GHz) ± 0.189dB (20~40GHz) ± 0.281dB (40~50GHz) ± 0.343dB (50~60GHz) ± 0.355dB (60~67GHz) ± 0.483dB (67~90GHz) ± 0.560dB (90~110GHz)

Others		
Amplitude Trace Noise dB rms (1kHz IF bandwidth)	3674N: 0.200 (10~50MHz) 0.020 (50~100MHz) 0.009 (100~500MHz) 0.007 (0.5~1GHz) 0.005 (1~26.5GHz) 0.007 (26.5~75GHz) 0.010 (75~90GHz)	3674P: 0.200 (10~50MHz) 0.020 (50~100MHz) 0.009 (100~500MHz) 0.007 (0.5~1GHz) 0.005 (1~26.5GHz) 0.007 (26.5~75GHz) 0.010 (75~110GHz)
IF Bandwidth	1Hz~30MHz	
Amplitude Display Resolution	0.001dB/div	
Phase Display Resolution	0.001°/div	
General Characteristics		
Port Connector	1.0mm (male), 50 Ω	
Number of Measurement Ports	3674N/P standard: 2 ports; 3674N/P-400 Option: 4 ports	
Interface	GPIB, USB, DP, LAN	
Display	5.6-inch high-resolution touch screen display	
Dimensions (wide × high × Deep, including handles, feet, and pads)	Two ports: 475mm × 279mm × 560mm Four ports: 475mm × 279mm × 660mm	
Max. Power Consumption	500W	
Power	50Hz, 220VAC or 50Hz/60Hz, 110VAC	
Max. Weight	50kg	

Ordering Information

Model

Model	Name	Description
3674B	Vector Network Analyzer	500Hz~9GHz
3674C	Vector Network Analyzer	500Hz~14GHz
3674D	Vector Network Analyzer	500Hz~20GHz
3674E	Vector Network Analyzer	500Hz~26.5GHz
3674F	Vector Network Analyzer	500Hz~32GHz
3674G	Vector Network Analyzer	500Hz~44GHz
3674H	Vector Network Analyzer	500Hz~50GHz
3674K	Vector Network Analyzer	500Hz~53GHz
3674L	Vector Network Analyzer	500Hz~67GHz
3674N	Vector Network Analyzer	500Hz~90GHz
3674P	Vector Network Analyzer	500Hz~110GHz

Composition of 3674PA Vector Network Analyzer (500Hz~110GHz)

No.	Name	Configuration	
		Two Port Model	Four Port Model
1	Vector Network Analyzer and Options	3674E/F/G/H/K/L+S20	3674E/F/G/H/K/L+400+S20
2	Spread Spectrum Control Machine	3674-009	3674-010
3	Coaxial Expansion Module	3674-011 (quantity 2)	3674-011 (quantity 4)

Standard

No.	Name	Description
1	Power Cord	Standard three core power cord
2	Qualification Certificate	/
3	USB Mouse	/
4	Quick Operation Guide	/
5	Aluminum Alloy Box	/

3674 Series Universal Options

Option Model	Name	Description
3674-006	English options	Configure English front and rear panels and English operating system.
3674 009	Two port spread spectrum control machine	Used for frequency expansion of vector network analyzer, achieving the expansion function of two-port vector network analyzer. S20 is required.
3674-010	Four port spread spectrum control machine	Used for frequency expansion of vector network analyzer, achieving the expansion function of four port vector network analyzer. S20 is required.
3674-011	110GHz coaxial expansion module	Used for frequency expansion of vector network analyzer to achieve coaxial S parameter measurement from 500Hz to 110GHz. Two modules need to be configured for two ports, and four modules need to be configured for four ports. Two ports must select 009+S20. Four ports must select 400+010+S20.
3674-060	External operation panel	Used to expand the front panel, achieve remote control, and increase the number of buttons.
3674-061	Extension workbench	Desktop extension for testing, long × Width=500mm × 350mm.
3674-062	Cabinet installation kit	A dedicated kit installed in the cabinet.
3674-063	User manual (paper version)	Provide a detailed user manual in hard copy.
3674-S05	S parameter Signal integrity analysis function	It is used to analyze the Signal integrity characteristics of the system such as frequency domain, time domain TDR and crosstalk, and can automatically convert the graph curve into a test report. Suitable for the entire series.
3674-S07	Automatic fixture removal function	Used for automatic testing and removal of measuring fixtures for single ended and balanced devices. Suitable for the entire series.
3674-S10	Time domain measurement function	Used for time-domain measurement to determine and analyze the location of discontinuities in devices, fixtures, or cables. Suitable for the entire series.
3674-S11	Advanced time-domain analysis function	Used for TDR time-domain impedance testing, eye pattern analysis, etc. Suitable for the entire series.
3674-S16	True differential measurement function	Used for measuring the balance parameters of real differential mode and common mode excitation. Suitable for 3674B/C/D/E/F/G/H/K/L.Required options include 400+404+S28.
3674-S18	Fast continuous wave scanning function	Use FIFO buffering method to read data in real-time. Suitable for the entire series.
3674-S20	Frequency offset measurement function	Used for frequency offset measurement. Suitable for the entire series.
3674-S22	Mixer/frequency converter scalar measurement function	Used for measuring scalar parameters of mixers. Suitable for 3674B/C/D/E/F/G/H/K/L. S20 is required.
3674-S24	Measurement function of embedded local oscillator frequency converter	Used for measuring embedded local oscillator frequency converters. Suitable for 3674B/C/D/E/F/G/H/K/L. Two ports must select 204+S20. Four ports must select 404+S20. S22 or 023 is required.
3674-S26	Gain compression measurement function	Used for gain compression measurement of active devices such as amplifiers. Suitable for 3674B/C/D/E/F/G/H/K/L.
3674-S28	Phase scanning measurement function	Used for phase scanning measurement. Suitable for 3674B/C/D/E/F/G/H/K/L. 400 is required.
3674-S31	THD measurement function	Used for differential amplifier Total harmonic distortion test function. Suitable for 3674B/C/D/E/F/G/H/K/L. 400+S28 are required.

3674B Options

Option Model	Name	Description
3674B-003	Noise coefficient measurement	Used for precise measurement of S parameters, noise figure, and noise parameters. Two ports must select 201+204. Four ports must select 401+404. (Note: Two port electronic calibration components and ordinary noise sources need to be purchased separately.)
3674B-008	Pulse measurement	Used for measuring S parameters in pulse state, ports 1 and 3 output pulse modulated signals.
3674B-023	Mixer/frequency converter vector measurement	Used for measuring mixer vector parameters. Two ports must select 204+S20. Four ports must select 404+S20.
3674B-201	Two port programmable stepper attenuator	Configure two 70dB programmable step attenuators for the source channel and two 35dB programmable step attenuators for the receiver channel. 204 is required.
3674B-203	Two port 500Hz low-frequency expansion	The lower limit of the frequency range can be extended to 500Hz. Compulsory option 204, cannot be paired with 205 at the same time.
3674B-204	Configurable testing device	Expand the testing device of the two-port model by adding panel jumpers, which can independently use A, B, R1, and R2 receivers.
3674B-205	Two port T-shaped biaser	Internally equipped with 2 T-shaped biases for outputting DC bias voltage at the port. Must choose 201+204, and cannot be paired with 203 at the same time.
3674B-400	Four port measurement	Dual source excitation four port vector network analyzer configuration, with a frequency range of 500Hz to 9GHz.
3674B-401	Four port programmable stepper attenuator	Configure four 70dB programmable step attenuators for the source channel and four 35dB programmable step attenuators for the receiver channel. 400+404 is required.
3674B-402	Active Intermodulation measurement	Used for active Intermodulation signal measurement. Required options include 400+404+S20.
3674B-403	Four port 500Hz low-frequency expansion	The lower limit of the frequency range can be extended to 500Hz. Must choose 400+404, and cannot be paired with 405 at the same time.
3674B-404	Configurable testing device	Expand the testing device of the four port model by adding panel jumpers, which can independently use A, B, C, D, R1, R2, R3, and R4 receivers. 400 is required.
3674B-405	Four port T-shaped biasing device	Internally equipped with 4 T-shaped biases for outputting DC bias voltage at the port. Must choose 400+401+404, and cannot be paired with 403 at the same time.
3674B-S30	Spectrum analysis function	Used to provide multi-channel spectrum testing function.

3674C Options

Option Model	Name	Description
3674C-003	Noise coefficient measurement	Used for precise measurement of S parameters, noise figure, and noise parameters. Two ports must select 201+204.Four ports must select 401+404. (Note: Two port electronic calibration components and ordinary noise sources need to be purchased separately.)
3674C-008	Pulse measurement	Used for measuring S parameters in pulse state, ports 1 and 3 output pulse modulated signals.
3674C-023	Mixer/frequency converter vector measurement	Used for measuring mixer vector parameters. Two ports must select 204+S20. Four ports must select 404+S20.
3674C-201	Two port programmable stepper attenuator	Configure two 70dB programmable step attenuators for the source channel and two 35dB programmable step attenuators for the receiver channel. 204 is required.
3674C-203	Two port 500Hz low-frequency expansion	The lower limit of the frequency range can be extended to 500Hz. Compulsory option 204, cannot be paired with 205 at the same time.
3674C-204	Configurable testing device	Expand the testing device of the two-port model by adding panel jumpers, which can independently use A, B, R1, and R2 receivers.
3674C-205	Two port T-shaped biaser	Internally equipped with 2 T-shaped biases for outputting DC bias voltage at the port. Must choose 201+204, and cannot be paired with 203 at the same time.
3674C-400	Four port measurement	Dual source excitation four port vector network analyzer configuration, frequency range 500Hz~14GHz.
3674C-401	Four port programmable stepper attenuator	Configure four 70dB programmable step attenuators for the source channel and four 35dB programmable step attenuators for the receiver channel. 400+404 is required.
3674C-402	Active Intermodulation measurement	Used for active Intermodulation signal measurement. Required options include 400+404+S20.
3674C-403	Four port 500Hz low-frequency expansion	The lower limit of the frequency range can be extended to 500Hz. Must choose 400+404, and cannot be paired with 405 at the same time.
3674C-404	Configurable testing device	Expand the testing device of the four port model by adding panel jumpers, which can independently use A, B, C, D, R1, R2, R3, and R4 receivers. 400 is required.
3674C-405	Four port T-shaped biasing device	Internally equipped with 4 T-shaped biases for outputting DC bias voltage at the port. Must choose 400+401+404, and cannot be paired with 403 at the same time.
3674C-S30	Spectrum analysis function	Used to provide multi-channel spectrum testing function.

3674D Options

Option Model	Name	Description
3674D-003	Noise coefficient measurement	Used for precise measurement of S parameters, noise figure, and noise parameters. Note: Two port electronic calibration components and noise sources need to be purchased separately. Two ports must select 201+204. Four ports must select 401+404.
3674D-008	Pulse measurement	Used for measuring S parameters in pulse state, ports 1 and 3 output pulse modulated signals.
3674D-023	Mixer/frequency converter vector measurement	Used for measuring mixer vector parameters. Two ports must select 204+S20. Four ports must select 404+S20.
3674D-201	Two port programmable stepper attenuator	Configure two 70dB programmable step attenuators for the source channel and two 35dB programmable step attenuators for the receiver channel. 204 is required.
3674D-203	Two port 500Hz low-frequency expansion	The lower limit of the frequency range can be extended to 500Hz. Compulsory option 204, cannot be paired with 205 at the same time.
3674D-204	Configurable testing device	Expand the testing device of the two-port model by adding panel jumpers, which can independently use A, B, R1, and R2 receivers.
3674D-205	Two port T-shaped biaser	Internally equipped with 2 T-shaped biases for outputting DC bias voltage at the port. Must choose 201+204, and cannot be paired with 203 at the same time.
3674D-400	Four port measurement	Dual source excitation four port vector network analyzer configuration, with a frequency range of 500Hz to 20GHz.
3674D-401	Four port programmable stepper attenuator	Configure four 70dB programmable step attenuators for the source channel and four 35dB programmable step attenuators for the receiver channel. 400+404 is required.
3674D-402	Active Intermodulation measurement	Used for active Intermodulation signal measurement. Required options include 400+404+S20.
3674D-403	Four port 500Hz low-frequency expansion	The lower limit of the frequency range can be extended to 500Hz. Must choose 400+404, and cannot be paired with 405 at the same time.
3674D-404	Configurable testing device	Expand the testing device of the four port model by adding panel jumpers, which can independently use A, B, C, D, R1, R2, R3, and R4 receivers. 400 is required.
3674D-405	Four port T-shaped biasing device	Internally equipped with 4 T-shaped biases for outputting DC bias voltage at the port. Must choose 400+401+404, and cannot be paired with 403 at the same time.
3674D-S30	Spectrum analysis function	Used to provide multi-channel spectrum testing function.

3674E Options

Option Model	Name	Description
3674E-003	Noise coefficient measurement	Used for precise measurement of S parameters, noise figure, and noise parameters. Two ports must select 201+204. Four ports must select 401+404. (Note: Two port electronic calibration components and ordinary noise sources need to be purchased separately.)
3674E-008	Pulse measurement	Used for measuring S parameters in pulse state, ports 1 and 3 output pulse modulated signals.
3674E-018	Multiport expansion device	Used to extend the vector network analyzer to 16 ports. 400+404 is required.
3674E-023	Mixer/frequency converter vector measurement	Used for measuring mixer vector parameters. Two ports must select 204+S20. Four ports must select 404+S20.
3674E-201	Two port programmable stepper attenuator	Configure two 70dB programmable step attenuators for the source channel and two 35dB programmable step attenuators for the receiver channel. 204 is required.
3674E-203	Two port 500Hz low-frequency expansion	The lower limit of the frequency range can be extended to 500Hz. Compulsory option 204, cannot be paired with 205 at the same time.
3674E-204	Configurable testing device	Expand the testing device of the two-port model by adding panel jumpers, which can independently use A, B, R1, and R2 receivers.
3674E-205	Two port T-shaped biaser	Internally equipped with 2 T-shaped biases for outputting DC bias voltage at the port. Must choose 201+204, and cannot be paired with 203 at the same time.
3674E-400	Four port measurement	Dual source excitation four port vector network analyzer configuration, with a frequency range of 500Hz to 26.5GHz.
3674E-401	Four port programmable stepper attenuator	Configure four 70dB programmable step attenuators for the source channel and four 35dB programmable step attenuators for the receiver channel. 400+404 is required.
3674E-402	Active Intermodulation measurement	Used for active Intermodulation signal measurement. Required options include 400+404+S20.
3674E-403	Four port 500Hz low-frequency expansion	The lower limit of the frequency range can be extended to 500Hz. Must choose 400+404, and cannot be paired with 405 at the same time.
3674E-404	Configurable testing device	Expand the testing device of the four port model by adding panel jumpers, which can independently use A, B, C, D, R1, R2, R3, and R4 receivers. 400 is required.
3674E-405	Four port T-shaped biasing device	Internally equipped with 4 T-shaped biases for outputting DC bias voltage at the port. Must choose 400+401+404, and cannot be paired with 403 at the same time.
3674E-S30	Spectrum analysis function	Used to provide multi-channel spectrum testing function.

3674F Options

Option Model	Name	Description
3674F-003	Noise coefficient measurement	Used for precise measurement of S parameters, noise figure, and noise parameters. Two ports must select 201+204. Four ports must select 401+404. (Note: Two port electronic calibration components and ordinary noise sources need to be purchased separately.)
3674F-008	Pulse measurement	Used for measuring S parameters in pulse state, ports 1 and 3 output pulse modulated signals.
3674F-018	Multiport expansion device	Used to extend the vector network analyzer to 16 ports. 400+404 is required.
3674F-023	Mixer/frequency converter vector measurement	Used for measuring mixer vector parameters. 204/404+S20 are required.
3674F-201	Two port programmable stepper attenuator	Configure two 60dB programmable step attenuators for the source channel and two 35dB programmable step attenuators for the receiver channel. 204 is required.
3674F-203	Two port 500Hz low-frequency expansion	The lower limit of the frequency range can be extended to 500Hz. Compulsory option 204, cannot be paired with 205 at the same time.
3674F-204	Configurable testing device	Expand the testing device of the two-port model by adding panel jumpers, which can independently use A, B, R1, and R2 receivers.
3674F-205	Two port T-shaped biaser	Internally equipped with 2 T-shaped biases for outputting DC bias voltage at the port. Must choose 201+204, and cannot be paired with 203 at the same time.
3674F-400	Four port measurement	Dual source excitation four port vector network analyzer configuration, with a frequency range of 500Hz to 32GHz.
3674F-401	Four port programmable stepper attenuator	Configure four 60dB programmable step attenuators for the source channel and four 35dB programmable step attenuators for the receiver channel. 400+404 is required.
3674F-402	Active Intermodulation measurement	Used for active Intermodulation signal measurement. Required options include 400+404+S20.
3674F-403	Four port 500Hz low-frequency expansion	The lower limit of the frequency range can be extended to 500Hz. Must choose 400+404, and cannot be paired with 405 at the same time.
3674F-404	Configurable testing device	Expand the testing device of the four port model by adding panel jumpers, which can independently use A, B, C, D, R1, R2, R3, and R4 receivers. 400 is required.
3674F-405	Four port T-shaped biasing device	Internally equipped with 4 T-shaped biases for outputting DC bias voltage at the port. Must choose 400+401+404, and cannot be paired with 403 at the same time.
3674F-S30	Spectrum analysis function	Used to provide multi-channel spectrum testing function.

3674G Options

Option Model	Name	Description
3674G-003	Noise coefficient measurement	Used for precise measurement of S parameters, noise figure, and noise parameters. Two ports must select 201+204. Four ports must select 401+404. (Note: Two port electronic calibration components and ordinary noise sources need to be purchased separately.)
3674G-008	Pulse measurement	Used for measuring S parameters in pulse state, ports 1 and 3 output pulse modulated signals.
3674G-018	Multiport expansion device	Used to extend the vector network analyzer to 16 ports. 400+404 is required.
3674G-023	Mixer/frequency converter vector measurement	Used for measuring mixer vector parameters. 204/404+S20 are required.
3674G-201	Two port programmable stepper attenuator	Configure two 60dB programmable step attenuators for the source channel and two 35dB programmable step attenuators for the receiver channel. 204 is required.
3674G-203	Two port 500Hz low-frequency expansion	The lower limit of the frequency range can be extended to 500Hz. Compulsory option 204, cannot be paired with 205 at the same time.
3674G-204	Configurable testing device	Expand the testing device of the two-port model by adding panel jumpers, which can independently use A, B, R1, and R2 receivers.
3674G-205	Two port T-shaped biaser	Internally equipped with 2 T-shaped biases for outputting DC bias voltage at the port. Must choose 201+204, and cannot be paired with 203 at the same time.
3674G-400	Four port measurement	Dual source excitation four port vector network analyzer configuration, frequency range 500Hz~44GHz.
3674G-401	Four port programmable stepper attenuator	Configure four 60dB programmable step attenuators for the source channel and four 35dB programmable step attenuators for the receiver channel. 400+404 is required.
3674G-402	Active Intermodulation measurement	Used for active Intermodulation signal measurement. Required options include 400+404+S20.
3674G-403	Four port 500Hz low-frequency expansion	The lower limit of the frequency range can be extended to 500Hz. Must choose 400+404, and cannot be paired with 405 at the same time.
3674G-404	Configurable testing device	Expand the testing device of the four port model by adding panel jumpers, which can independently use A, B, C, D, R1, R2, R3, and R4 receivers. 400 is required.
3674G-405	Four port T-shaped biasing device	Internally equipped with 4 T-shaped biases for outputting DC bias voltage at the port. Must choose 400+401+404, and cannot be paired with 403 at the same time.
3674G-S30	Spectrum analysis function	Used to provide multi-channel spectrum testing function.

3674H Options

Option Model	Name	Description
3674H-003	Noise coefficient measurement	Used for precise measurement of S parameters, noise figure, and noise parameters. Two ports must select 201+204. Four ports must select 401+404. (Note: Two port electronic calibration components and ordinary noise sources need to be purchased separately.)
3674H-008	Pulse measurement	Used for measuring S parameters in pulse state, ports 1 and 3 output pulse modulated signals.
3674H-018	Multiport expansion device	Used to extend the vector network analyzer to 16 ports. 400+404 is required.
3674H-023	Mixer/frequency converter vector measurement	Used for measuring mixer vector parameters. Two ports must select 204+S20. Four ports must select 404+S20.
3674H-201	Two port programmable stepper attenuator	Configure two 60dB programmable step attenuators for the source channel and two 35dB programmable step attenuators for the receiver channel. 204 is required.
3674H-203	Two port 500Hz low-frequency expansion	The lower limit of the frequency range can be extended to 500Hz. Compulsory option 204, cannot be paired with 205 at the same time.
3674H-204	Configurable testing device	Expand the testing device of the two-port model by adding panel jumpers, which can independently use A, B, R1, and R2 receivers.
3674H-205	Two port T-shaped biaser	Internally equipped with 2 T-shaped biases for outputting DC bias voltage at the port. Must choose 201+204, and cannot be paired with 203 at the same time.
3674H-400	Four port measurement	Dual source excitation four port vector network analyzer configuration, with a frequency range of 500Hz to 50GHz.
3674H-401	Four port programmable stepper attenuator	Configure four 60dB programmable step attenuators for the source channel and four 35dB programmable step attenuators for the receiver channel. 400+404 is required.
3674H-402	Active Intermodulation measurement	Used for active Intermodulation signal measurement. Required options include 400+404+S20.
3674H-403	Four port 500Hz low-frequency expansion	The lower limit of the frequency range can be extended to 500Hz. Must choose 400+404, and cannot be paired with 405 at the same time.
3674H-404	Configurable testing device	Expand the testing device of the four port model by adding panel jumpers, which can independently use A, B, C, D, R1, R2, R3, and R4 receivers. 400 is required.
3674H-405	Four port T-shaped biasing device	Internally equipped with 4 T-shaped biases for outputting DC bias voltage at the port. Must choose 400+401+404, and cannot be paired with 403 at the same time.
3674H-S30	Spectrum analysis function	Used to provide multi-channel spectrum testing function.

3674K Options

Option Model	Name	Description
3674K-008	Pulse measurement	Used for measuring S parameters in pulse state, ports 1 and 3 output pulse modulated signals.
3674K-018	Multiport expansion device	Used to extend the vector network analyzer to 16 ports. 400+404 is required.
3674K-023	Mixer/frequency converter vector measurement	Used for measuring mixer vector parameters. Two ports must select 204+S20. Four ports must select 404+S20.
3674K-201	Two port programmable stepper attenuator	Configure two 50dB programmable step attenuators for the source channel and two 50dB programmable step attenuators for the receiver channel. 204 is required.
3674K-203	Two port 500Hz low-frequency expansion	The lower limit of the frequency range can be extended to 500Hz. Compulsory option 204, cannot be paired with 205 at the same time.
3674K-204	Configurable testing device	Expand the testing device of the two-port model by adding panel jumpers, which can independently use A, B, R1, and R2 receivers.
3674K-205	Two port T-shaped biaser	Internally equipped with 2 T-shaped biases for outputting DC bias voltage at the port. Must choose 201+204, and cannot be paired with 203 at the same time.
3674K-400	Four port measurement	Dual source excitation four port vector network analyzer configuration, frequency range 500Hz~53GHz.
3674K-401	Four port programmable stepper attenuator	Configure four 50dB programmable step attenuators for the source channel and four 50dB programmable step attenuators for the receiver channel. 400+404 is required.
3674K-402	Active Intermodulation measurement	Used for active Intermodulation signal measurement. Required options include 400+404+S20.
3674K-403	Four port 500Hz low-frequency expansion	The lower limit of the frequency range can be extended to 500Hz. Must choose 400+404, and cannot be paired with 405 at the same time.
3674K-404	Configurable testing device	Expand the testing device of the four port model by adding panel jumpers, which can independently use A, B, C, D, R1, R2, R3, and R4 receivers. 400 is required.
3674K-405	Four port T-shaped biasing device	Internally equipped with 4 T-shaped biases for outputting DC bias voltage at the port. Must choose 400+401+404, and cannot be paired with 403 at the same time.
3674K-S30	Spectrum analysis function	Used to provide multi-channel spectrum testing function.

3674L Options

Option Model	Name	Description
3674L-008	Pulse measurement	Used for measuring S parameters in pulse state, ports 1 and 3 output pulse modulated signals.
3674L-018	Multiport expansion device	Used to extend the vector network analyzer to 16 ports. 400+404 is required.
3674L-023	Mixer/frequency converter vector measurement	Used for measuring mixer vector parameters. Two ports must select 204+S20. Four ports must select 404+S20.
3674L-201	Two port programmable stepper attenuator	Configure two 50dB programmable step attenuators for the source channel and two 50dB programmable step attenuators for the receiver channel. 204 is required.
3674L-203	Two port 500Hz low-frequency expansion	The lower limit of the frequency range can be extended to 500Hz. Compulsory option 204, cannot be paired with 205 at the same time.
3674L-204	Configurable testing device	Expand the testing device of the two-port model by adding panel jumpers, which can independently use A, B, R1, and R2 receivers.
3674L-205	Two port T-shaped biaser	Internally equipped with 2 T-shaped biases for outputting DC bias voltage at the port. Must choose 201+204, and cannot be paired with 203 at the same time.
3674L-400	Four port measurement	Dual source excitation four port vector network analyzer configuration, with a frequency range of 500Hz to 67GHz.
3674L-401	Four port programmable stepper attenuator	Configure four 50dB programmable step attenuators for the source channel and four 50dB programmable step attenuators for the receiver channel. 400+404 is required.
3674L-402	Active Intermodulation measurement	Used for active Intermodulation signal measurement. Required options include 400+404+S20.
3674L-403	Four port 500Hz low-frequency expansion	The lower limit of the frequency range can be extended to 500Hz. Must choose 400+404, and cannot be paired with 405 at the same time.
3674L-404	Configurable testing device	Expand the testing device of the four port model by adding panel jumpers, which can independently use A, B, C, D, R1, R2, R3, and R4 receivers. 400 is required.
3674L-405	Four port T-shaped biasing device	Internally equipped with 4 T-shaped biases for outputting DC bias voltage at the port. Must choose 400+401+404, and cannot be paired with 403 at the same time.
3674L-S30	Spectrum analysis function	Used to provide multi-channel spectrum testing function.

3674N Options

Option Model	Name	Description
3674N-400	Four port measurement option	Dual source excitation four port vector network analyzer configuration, with a frequency range of 500Hz to 90GHz.

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