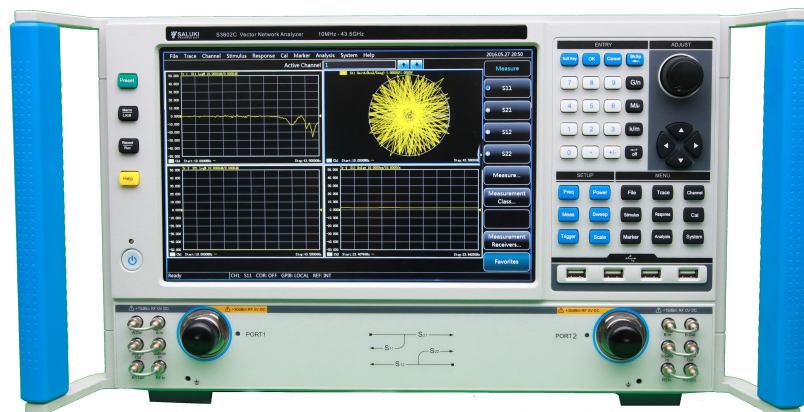


# S3602C / D Vector Network Analyzer

(Frequency Range: 10MHz – 43.5GHz / 50GHz)



## Key Features

- Frequency coverage from 10MHz to 43.5GHz / 50GHz
- Flexible calibration types, compatible with many calibration parts
- Support Multi-window, multi-channel Measurement, instantly execute intricate measurement plan
- Include multiple display formats including logarithmic amplitude, linear range, standing wave, phase, group delay, Smith circle map, polar coordinates
- Support USB, GPIB, LAN, VGA
- 12.1 inch high resolution touch screen
- Record / Run, one button operation to simplify measurement setup procedures and improve the working efficiency
- Provide functions including Pulse S Parameter measurement, time domain measurement, mixer measurement, 2 dimensional measurement of gain compression, millimeter wave spread spectrum, antenna and RCS measurement reception.

## Typical Applications

- Mixer Test
- Filter Test
- Integrated Pulse S Parameter Test

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# S3602C / D Vector Network Analyzer

(Frequency Range: 10MHz – 43.5GHz / 50GHz)

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S3602 Series VNA Products, designed with new hardware architecture, improves impressively many key specifications such as scanning speed, system dynamic range etc. In terms of software, S3602 is equipped with a high-performance embedded computer which runs Windows operation system. It helps S3602 to have a friendly UI and easy to operate.

S3602 Vector Network Analyzer provides many calibration methods including frequency response, single interface, responsive isolation, enhanced response, dual interface and electrical calibration. S3602 has many display formats including logarithmic amplitude, linear range, standing wave, phase, group delay, Smith chart, polar coordinates. S3602 equipped with many standard interfaces including USB, LAN, GPIB, VGA.

Apart from all features of conventional vector analyzer, S3602 is capable of 2D scanning of mixer / inverter and gain compression, and of multi-functional comprehensive parameter test of S Parameter under pulse circumstance, which can precisely measure amplitude-frequency characteristics, phase-frequency characteristics and group-delay characteristics of microwave network.

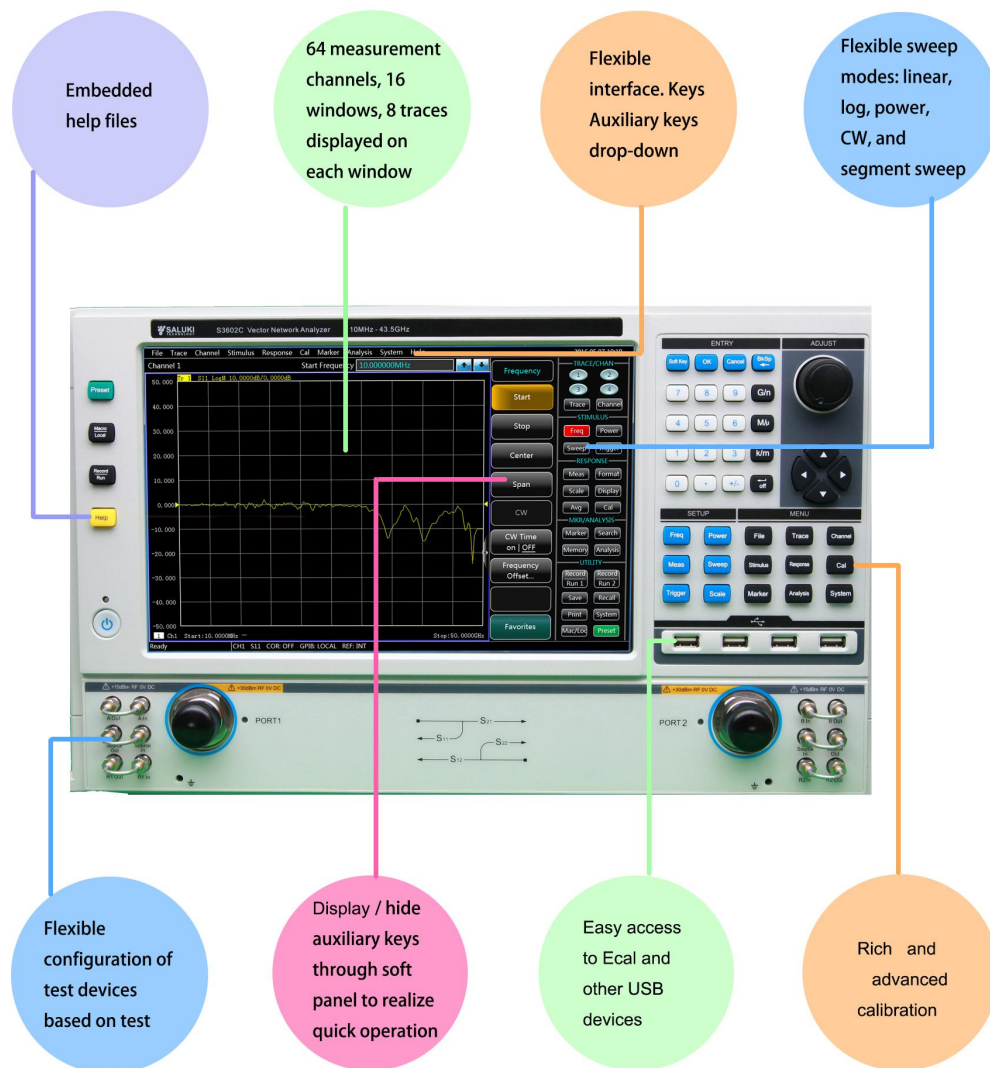
This product can be universally implemented in fields including transmission/reception module measurement, dielectric material property measurement, microwave pulse characteristic measurement and photoelectric property measurement; this analyzer is a necessary tester in the scientific research, production process of systems like radar, communication and navigation.

# S3602C / D Vector Network Analyzer

(Frequency Range: 10MHz – 43.5GHz / 50GHz)

## Features To Boost Your Efficiency

Humanized user interface for easy operation, which can improve the efficiency

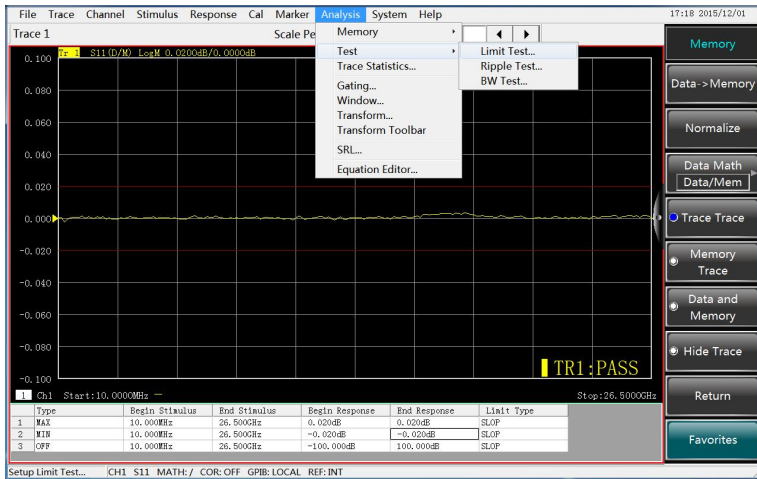


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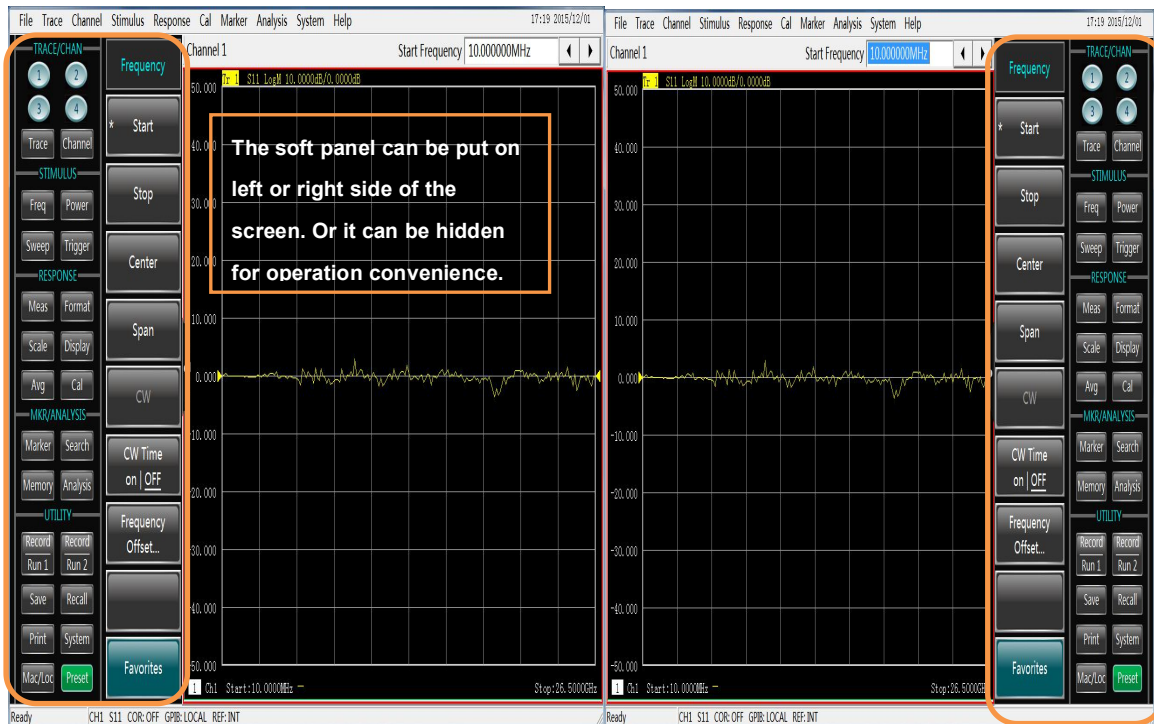
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# S3602C / D Vector Network Analyzer

(Frequency Range: 10MHz – 43.5GHz / 50GHz)



Parameters can be quickly input through activated input toolbar. It can improve the test efficiency to setup the limit line and segment sweep value for production line.

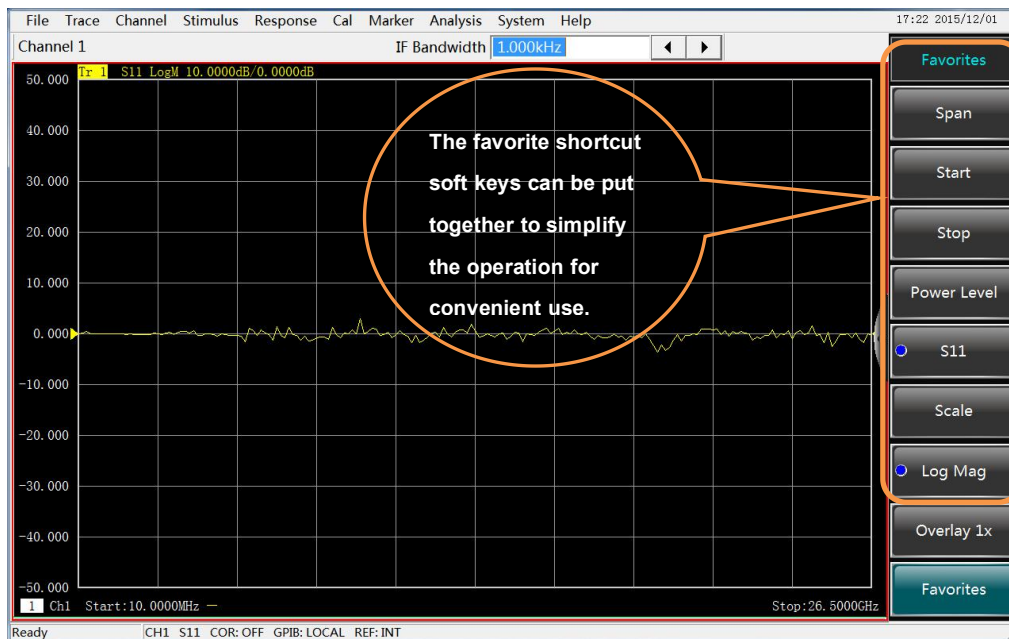


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# S3602C / D Vector Network Analyzer

(Frequency Range: 10MHz – 43.5GHz / 50GHz)

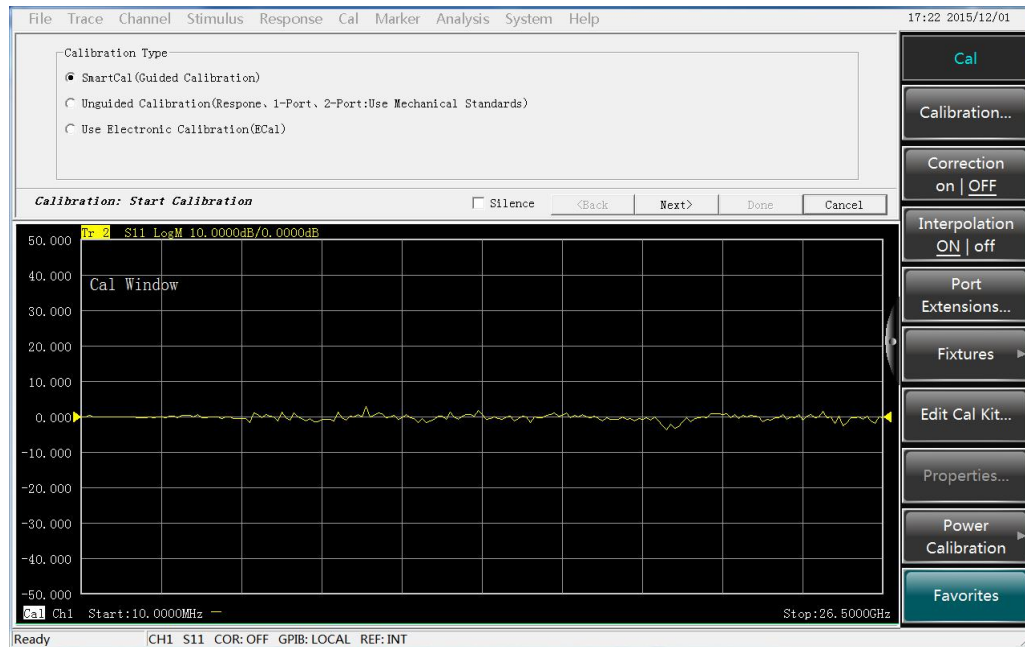


## Flexible and optional calibration types, compatible with multiple calibration kits

S3602 series vector network analyzer provides multiple calibration types, including guided calibration (smart calibration), unguided calibration (using mechanical calibration kit to conduct through response calibration, through response & isolation calibration, single port calibration, enhanced response calibration, full two-port SOLT calibration, TRL calibration) and electronic calibration (ECal) etc. Users can select coaxial mechanical calibration kits or electronic calibration kit based on test requirements.

# S3602C / D Vector Network Analyzer

(Frequency Range: 10MHz – 43.5GHz / 50GHz)



The "Edit Cal Kit" dialog box shows a list of installed calibration kits. The table below contains the data from the screenshot:

| ID | Name      | Description       |
|----|-----------|-------------------|
| 6  | AV31121   | 3.5mm Cal Kit     |
| 7  | AV31123   | 2.4mm Cal Kit     |
| 8  | AV31128   | 1.85mm Cal Kit    |
| 9  | 85032B/E  | N-50 Cal Kit      |
| 10 | 85032F    | N-50 Cal Kit      |
| 11 | 85033E    | 3.5mm Cal Kit     |
| 12 | 85056A    | 2.4mm Cal Kit     |
| 13 | 85056D    | 2.4mm Cal Kit     |
| 14 | 85058B/E  | 1.85mm Cal Kit    |
| 15 | 85036     | N-75 Cal Kit      |
| 16 | 85052B    | 3.5mm Cal Kit     |
| 17 | 85052D    | 3.5mm Cal Kit     |
| 18 | 85054D    | N-50 Cal Kit      |
| 19 | 85054E    | N-50 Cal Kit      |
| 20 | 85036B/E  | N-75 Cal Kit      |
| 21 | 85052C    | 3.5mm Cal Kit     |
| 22 | APC 7 TRL | APC 7 TRL Cal Kit |
| 23 | N-75      | N-75 Cal Kit      |
| 24 | BJ-14     | BJ-14 Cal Kit     |
| 25 | BJ-22     | BJ-22 Cal Kit     |
| 26 | BT-22     | BT-22 Cal Kit     |

The "Edit Cal Kit" dialog box shows a list of installed calibration kits. The table below contains the data from the screenshot:

| ID | Name      | Description       |
|----|-----------|-------------------|
| 13 | 85056D    | 2.4mm Cal Kit     |
| 14 | 85058B/E  | 1.85mm Cal Kit    |
| 15 | 85036     | N-75 Cal Kit      |
| 16 | 85052B    | 3.5mm Cal Kit     |
| 17 | 85052D    | 3.5mm Cal Kit     |
| 18 | 85054D    | N-50 Cal Kit      |
| 19 | 85054E    | N-50 Cal Kit      |
| 20 | 85036B/E  | N-75 Cal Kit      |
| 21 | 85052C    | 3.5mm Cal Kit     |
| 22 | APC 7 TRL | APC 7 TRL Cal Kit |
| 23 | N-75      | N-75 Cal Kit      |
| 24 | BJ-14     | BJ-14 Cal Kit     |
| 25 | BJ-22     | BJ-22 Cal Kit     |
| 26 | BT-22     | BT-22 Cal Kit     |

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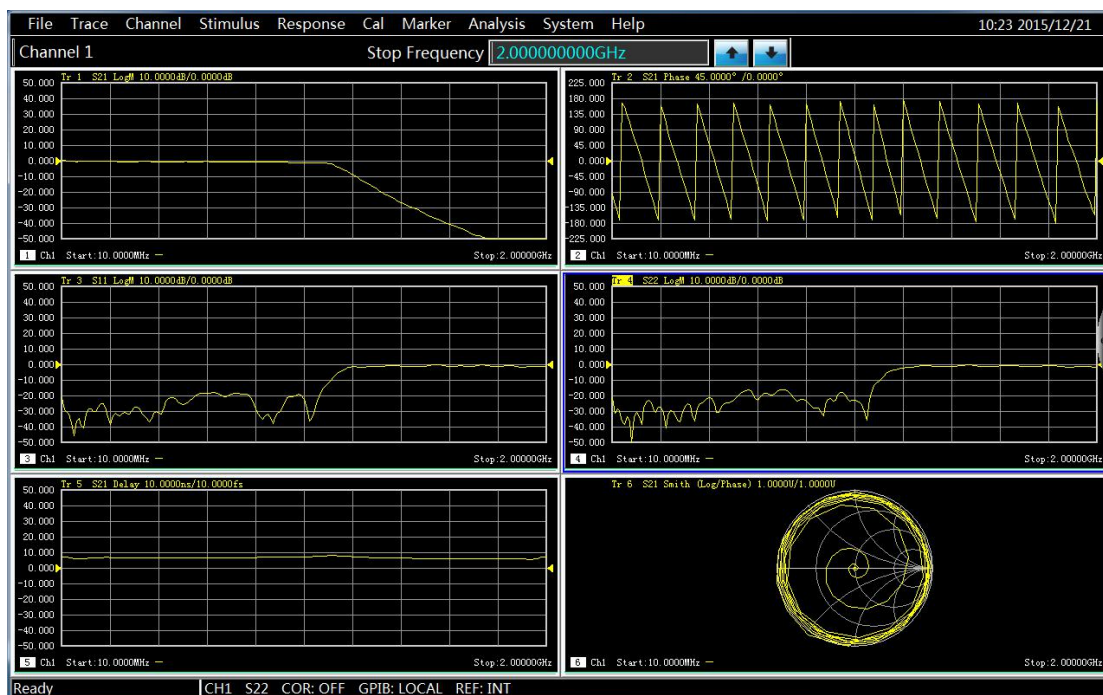


# S3602C / D Vector Network Analyzer

(Frequency Range: 10MHz – 43.5GHz / 50GHz)

## Multiple windows to display all measuring channels

The analyzer has function of multi-channel and multi-window display. It supports up to 64 channels. Maximum 16 measuring windows can be simultaneously displayed, and each window can simultaneously display up to 8 testing traces, which makes the observation results more visible and the operation more convenient.



## 12.1-inch high resolution touch screen

The 12.1-inch touch screen with 1280\*800 resolution has bright and comfortable color, which can make the operation very convenient.

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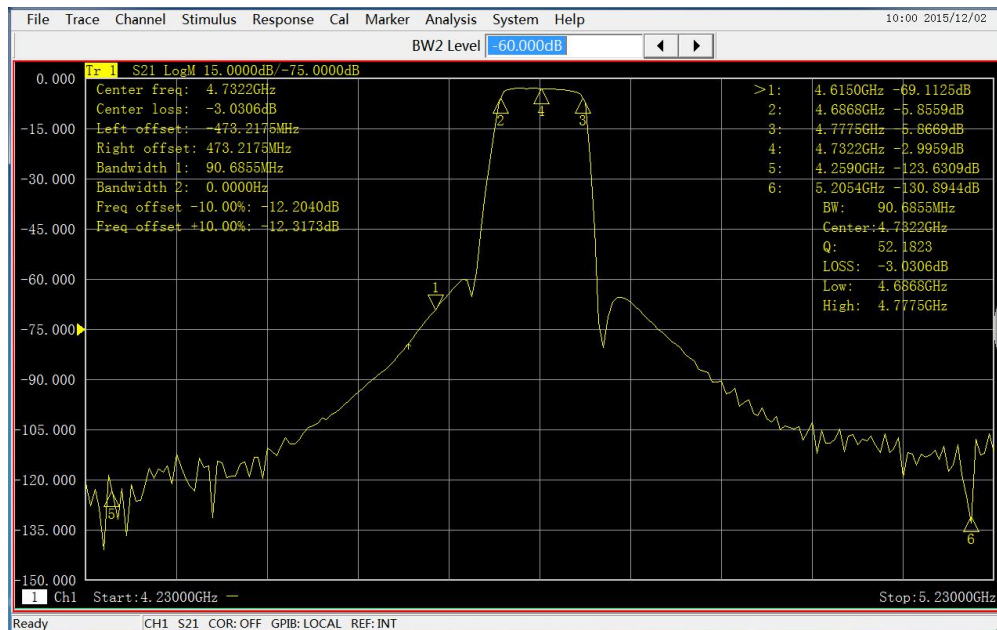


# S3602C / D Vector Network Analyzer

(Frequency Range: 10MHz – 43.5GHz / 50GHz)

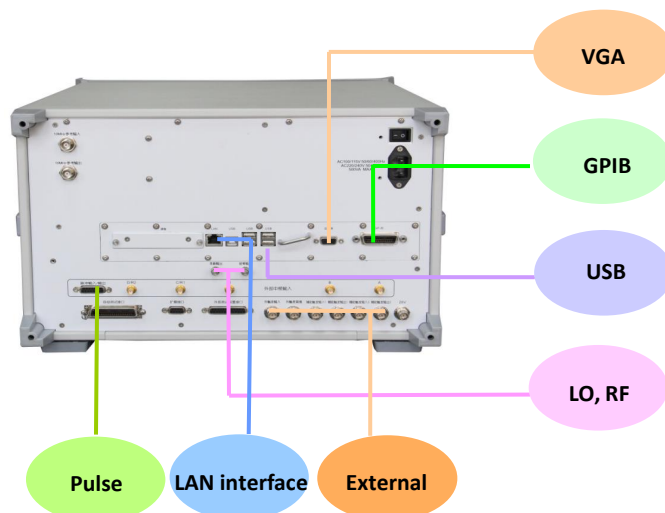
## Large dynamic range

S3602 series vector network analyzer is designed with the concept of mixer receiving, which effectively extends the dynamic range of the complete machine and meets the test demand for large dynamic range.



## Rich peripheral interfaces, flexible and practical

With new embedded computer module and Windows operation system, S3602 series vector network analyzer realizes the perfect combination of the instrument and PC. Rich I/O interfaces (including GPIB, USB, and LAN etc.) are provided for different data transmission requirements.



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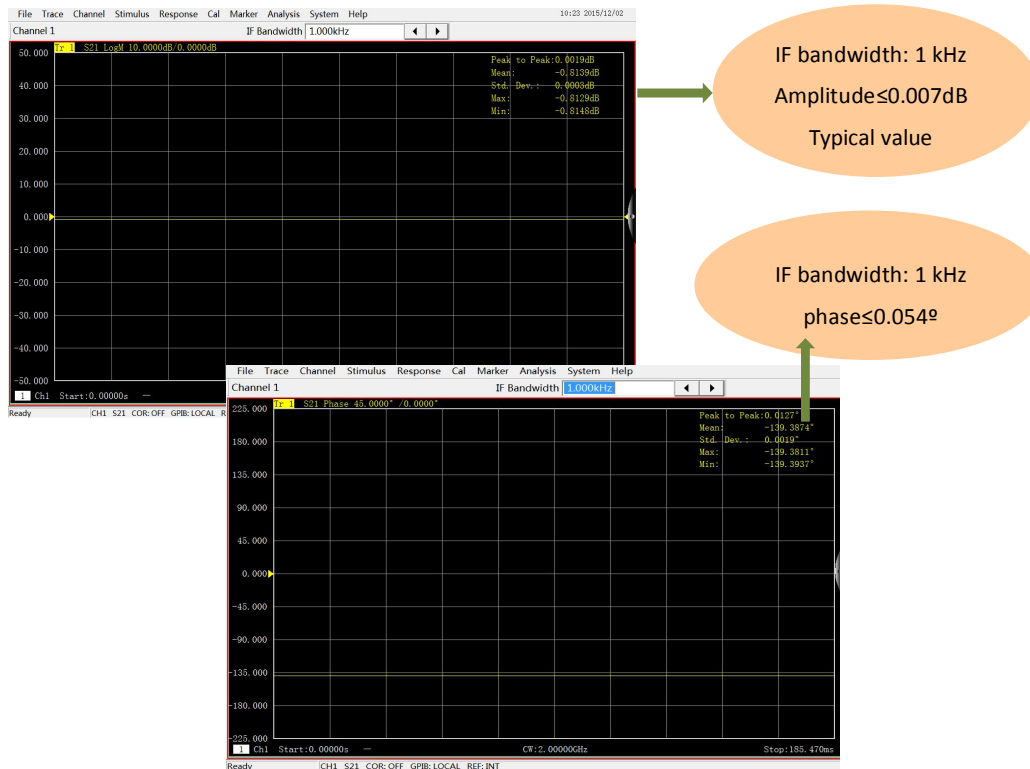


# S3602C / D Vector Network Analyzer

(Frequency Range: 10MHz – 43.5GHz / 50GHz)

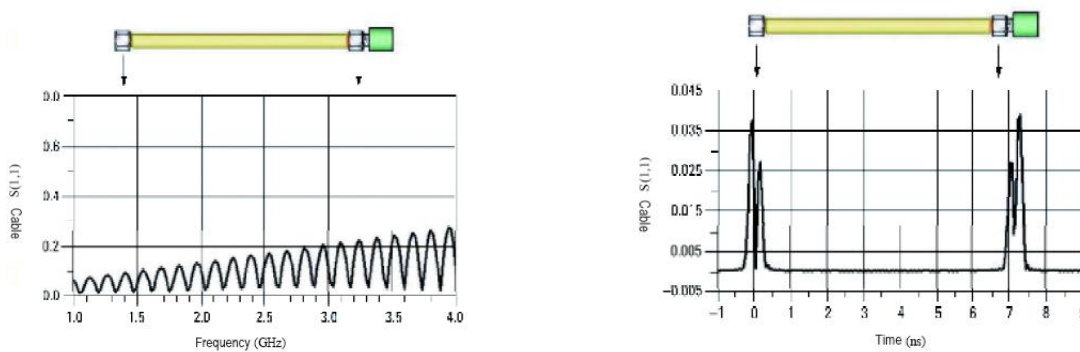
## Low trace noise, high test accuracy

The excellent performance of S3602 series vector network analyzer in trace noise highly improves its test accuracy so as to meet user's demand for accurate measurement, and it is especially helpful for the accurate measurement of devices with low insertion loss.



## Time-domain analysis can comprehensively characterize the design

With time-domain options, S3602 series vector network analyzer can realize the switching of measurement results between frequency-domain and time-domain, which can be used to identify the discontinuous points of devices, fixtures or cables to realize accurate fault location.

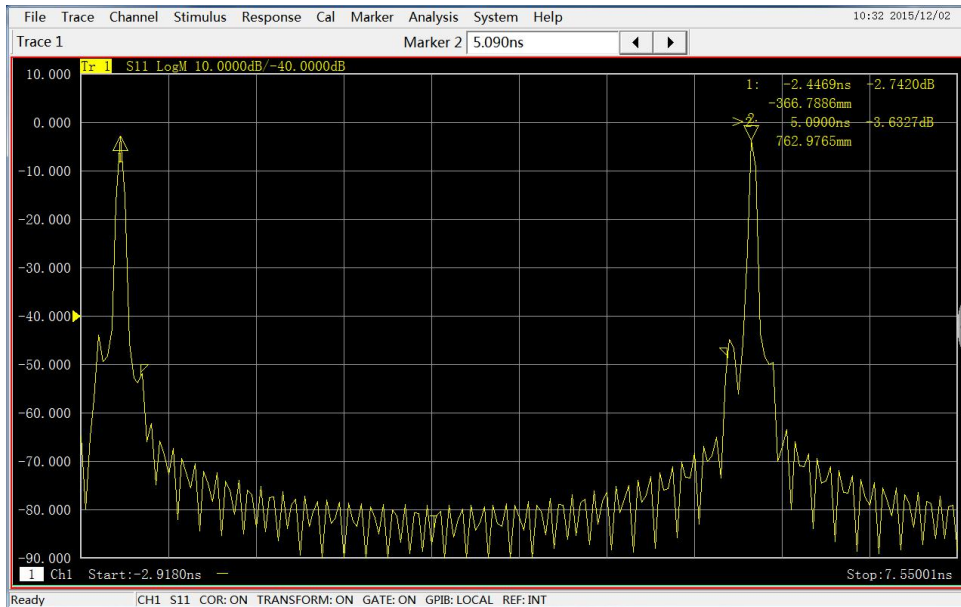


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# S3602C / D Vector Network Analyzer

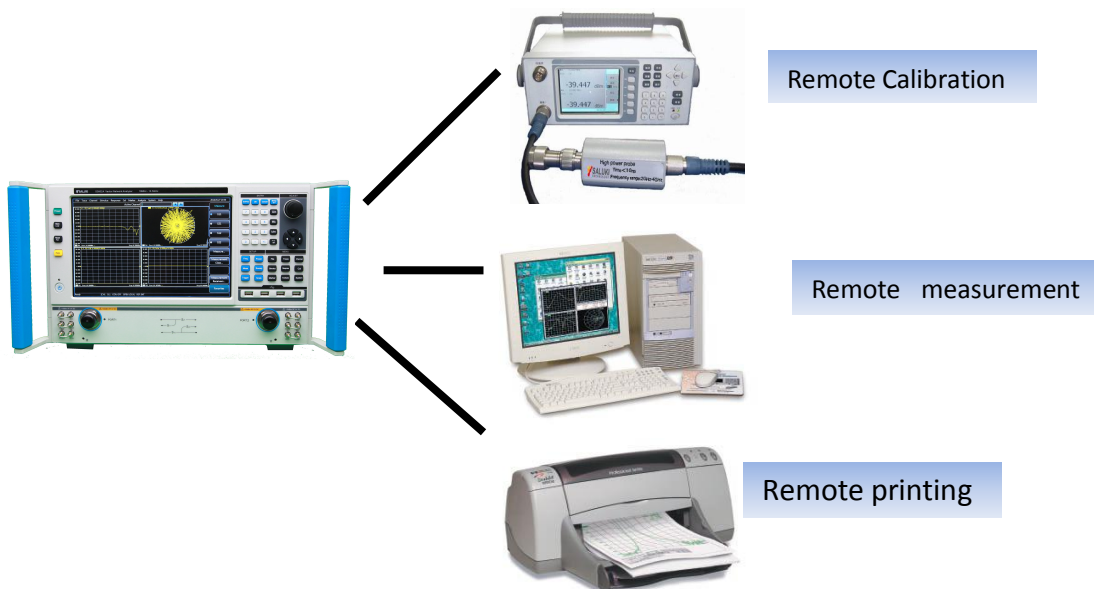
(Frequency Range: 10MHz – 43.5GHz / 50GHz)



## Automatic test

S3602 series vector network analyzer can provide a integrated automatic test solutions including automatic calibration, automatic measurement, automatic reading and automatic printing.

Flexible and multiple control modes are provided through GPIB, LAN, and USB interfaces.



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# S3602C / D Vector Network Analyzer

(Frequency Range: 10MHz – 43.5GHz / 50GHz)

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## Typical Applications

- **Mixer test**

The 4-port measurement option of S3602 series vector network analyzer has two built-in sources. It can be used to measure scalar and vector parameters of mixers.

- **Filter test**

S3602 series vector network analyzer provides a filter test menu, easy to do any filter test.

- **Integrated pulse S parameter test**

S3602 series vector network analyzer can output pulse modulation signal and can measure pulse network S parameters.

- **High-speed sweep magnetron test**

S3602 series vector network analyzer has high sweep speed. It is capable of magnetron test.

# S3602C / D Vector Network Analyzer

(Frequency Range: 10MHz – 43.5GHz / 50GHz)

## Technical Specifications (S3602 C / D)

| Frequency characteristic                  |                                                                                                                                                                                              |                             |                              |           |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|------------------------------|-----------|
| <b>Frequency Range</b>                    | S3602C: 10MHz - 43.5GHz<br>S3602D: 10MHz - 50GHz                                                                                                                                             |                             |                              |           |
| <b>Frequency resolution</b>               | 1Hz                                                                                                                                                                                          |                             |                              |           |
| <b>Frequency Accuracy</b>                 | $\pm 1 \times 10^{-7}$ (23°C $\pm$ 3°C)                                                                                                                                                      |                             |                              |           |
| Port Harmonic Suppression                 |                                                                                                                                                                                              |                             |                              |           |
| <b>Port 1, 3<br/>Harmonic Suppression</b> | -51dBc (0.01-4GHz) , -60dBc (4-40GHz) , -60dBc (40-50GHz)                                                                                                                                    |                             |                              |           |
| <b>Port 2, 4<br/>Harmonic Suppression</b> | -13dBc (0.01-4GHz) , -21dBc (4-13.5GHz)<br>-60dBc (13.5-40GHz) , -60dBc (40-50GHz)                                                                                                           |                             |                              |           |
| Port Power Characteristics                |                                                                                                                                                                                              |                             |                              |           |
| <b>Power Sweep Range</b>                  | 26dB (10-50MHz) , 25dB (0.05-4GHz) , 32dB (4-10GHz)<br>31dB (10-13.5GHz) , 33dB (13.5-26.5GHz) , 31dB (26.5-30GHz)<br>30dB (30-35GHz) , 29dB (35-40GHz) , 26dB (40-47GHz)<br>17dB (47-50GHz) |                             |                              |           |
| Maximum Output Power                      | Frequency range                                                                                                                                                                              | Port 1, 3<br>Filtering mode | Port 1, 3<br>High-power mode | Port 2, 4 |
|                                           | 10 - 50MHz                                                                                                                                                                                   | +1dBm                       | +9dBm                        | +11dBm    |
|                                           | 0.05 - 4GHz                                                                                                                                                                                  | 0dBm                        | +5dBm                        | +10dBm    |
|                                           | 4 - 10GHz                                                                                                                                                                                    | +7dBm                       |                              | +7dBm     |
|                                           | 10 - 13.5GHz                                                                                                                                                                                 | +6dBm                       |                              | +6dBm     |
|                                           | 13.5 - 26.5GHz                                                                                                                                                                               | +8dBm                       |                              | +8dBm     |
|                                           | 26.5 - 30GHz                                                                                                                                                                                 | +6dBm                       |                              | +8dBm     |
|                                           | 30 - 35GHz                                                                                                                                                                                   | +5dBm                       |                              | +7dBm     |
|                                           | 35 - 40GHz                                                                                                                                                                                   | +4dBm                       |                              | +5dBm     |
|                                           | 40 - 47GHz                                                                                                                                                                                   | +1dBm                       |                              | +2dBm     |
|                                           | 47 - 50GHz                                                                                                                                                                                   | -8dBm                       |                              | -6dBm     |
| Pulse characteristics                     |                                                                                                                                                                                              |                             |                              |           |
| <b>Pulse Width Setting Range</b>          | 33ns - 60s                                                                                                                                                                                   |                             |                              |           |
| <b>Pulse Transition Time</b>              | 30ns (10%-90%)                                                                                                                                                                               |                             |                              |           |
| <b>Pulse off Ratio</b>                    | 64dB (0.01-4GHz) , 80dB (4-40GHz) , 80dB (40-50GHz)                                                                                                                                          |                             |                              |           |

# S3602C / D Vector Network Analyzer

(Frequency Range: 10MHz – 43.5GHz / 50GHz)

| Network Parameter Characteristics                               |                                                                                                                                                                                                                          |
|-----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>System Dynamic Range</b>                                     | 74dB (10-50MHz) , 93dB (0.05-0.5GHz) , 118dB (0.5-4GHz)<br>121dB (4-10GHz) , 120dB (10-13.5GHz) , 118dB (13.5-26.5GHz)<br>115dB (26.5-30GHz) , 113dB (30-35GHz) , 110dB (35-40GHz)<br>105dB (40-47GHz) , 92dB (47-50GHz) |
| <b>Effective Directionality</b>                                 | 42dB (0.01-2GHz) , 42dB (2-13.5GHz)<br>38dB (13.5-40GHz) , 36dB (40-50GHz)                                                                                                                                               |
| <b>Effective Source Match</b>                                   | 36dB (0.01-2GHz) , 31dB (2-13.5GHz)<br>28dB (13.5-40GHz) , 27dB (40-50GHz)                                                                                                                                               |
| <b>Payload Match</b>                                            | 42dB (0.01-2GHz) , 42dB (2-13.5GHz)<br>37dB (13.5-40GHz) , 35dB (40-50GHz)                                                                                                                                               |
| <b>Reflection Tracking</b>                                      | ±0.04dB (0.01-13.5GHz) , ±0.03dB (13.5-40GHz) , ±0.04dB (40-50GHz)                                                                                                                                                       |
| <b>Transmission tracking</b>                                    | ±0.1dB (0.01-13.5GHz) , ±0.16dB (13.5-40GHz) , ±0.20dB (40-50GHz)                                                                                                                                                        |
| Other                                                           |                                                                                                                                                                                                                          |
| <b>Amplitude Trace Noise<br/>dB rms<br/>(1kHz IF bandwidth)</b> | 0.2 (10-50MHz) , 0.02 (50-500MHz) , 0.005 (0.5-1GHz)<br>0.004 (1-26.5GHz) , 0.005 (26.5-40GHz) , 0.008 (40-50GHz)                                                                                                        |
| <b>Phase Noise Trace<br/>deg rms<br/>(1kHz IF bandwidth)</b>    | 1 (10-50MHz) , 0.7 (50-500MHz) , 0.04 (0.5-1GHz)<br>0.05 (1-26.5GHz) , 0.06 (26.5-40GHz) , 0.06 (40-50GHz)                                                                                                               |
| <b>IF Bandwidth</b>                                             | 1Hz-5MHz                                                                                                                                                                                                                 |
| <b>Amplitude Display<br/>Resolution</b>                         | 0.001dB/div                                                                                                                                                                                                              |
| <b>Phase Display Resolution</b>                                 | 0.01°/div                                                                                                                                                                                                                |
| <b>Amplitude Reference<br/>Level Set Required Value</b>         | -500+500dB                                                                                                                                                                                                               |
| <b>Phase Reference Level<br/>Set Required Value</b>             | -500+500°                                                                                                                                                                                                                |
| General characteristic                                          |                                                                                                                                                                                                                          |
| <b>Port Connector Type</b>                                      | 2.4mm (M) , 50Ω system impedance                                                                                                                                                                                         |
| <b>Measurement of Ports</b>                                     | S3602C/D: 2 Port, Standard<br>S3602C/D-400: 4 Port, (Optional)                                                                                                                                                           |
| <b>Peripheral Interface</b>                                     | USB, GPIB, VGA, LAN                                                                                                                                                                                                      |
| <b>operating system</b>                                         | Windows 7                                                                                                                                                                                                                |

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# S3602C / D Vector Network Analyzer

(Frequency Range: 10MHz – 43.5GHz / 50GHz)

## General Information

|                                      |                                                                                                                                       |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| <b>Display Method</b>                | 12.1 inch high resolution touch screen                                                                                                |
| <b>Dimension (LxHxW)</b>             | 426mm×266mm×600mm (Including handles, pad foot and footing)<br>463mm×279.5mm×690mm (handles, pad foot and footing are not included) ) |
| <b>The Maximum Power Consumption</b> | 500W                                                                                                                                  |
| <b>Maximum Weight</b>                | 47kg                                                                                                                                  |

## Standard Package

| Item | Name                                             | Qty   |
|------|--------------------------------------------------|-------|
| 1    | S3602C Vector Network Analyzer (10MHz - 43.5GHz) | 1 Set |
|      | S3602D Vector Network Analyzer (10MHz - 50GHz)   | 1 Set |
| 2    | Standard three-wire Power Cord                   | 1 PC  |
| 3    | USB keyboard / Mouse                             | 1 PC  |
| 4    | User Guide                                       | 1 PC  |

## Optional Package for S3602C

| Part No.   | Name                                        | Description                                                                                                                                                              |
|------------|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| S3602C-201 | Dual-Interface Programmable Step Attenuator | Equip source path with two 60dB programmable step attenuator and equip receiver path with two 35dB programmable step attenuator                                          |
| S3602C-400 | Four-Interface Measurement                  | Dual incentive four-interface Vector Network Analyzer                                                                                                                    |
| S3602C-401 | Four-Interface Programmable Step Attenuator | Equipping source path with four 60dB programmable step attenuator and equipping receiver channel with four 35dB programmable step attenuator (must work with option 400) |
| S3602B-402 | Active Inter modulation Measurement         | Applicable for active inter modulation measurement of amplifier (400 Options)                                                                                            |
| S3602C-008 | Pulse Measurement                           | Applicable for S parameter measurement under pulse circumstance                                                                                                          |
| S3602C-S10 | Time Domain Measurement                     | Able to recognize and analyze the discontinuous location of instrument, cable or fixture.                                                                                |

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# S3602C / D Vector Network Analyzer

(Frequency Range: 10MHz – 43.5GHz / 50GHz)

|               |                                                       |                                                                                                        |
|---------------|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| S3602C-S80    | Frequency Deviation Measurement                       | Applicable for frequency deviation measurement, necessary for millimeter wave spread spectrum monitor. |
| S3602C-S82    | Scalar Measurement of Mixer                           | Applicable for the mixer's scalar measurement                                                          |
| S3602C-S83    | Vector Measurement of Mixer                           | Applicable for the mixer's vector measurement                                                          |
| S3602C-S84    | Embedded Local Oscillator Measurement                 | Applicable for embedded local oscillator measurement                                                   |
| S3602C-S86    | Gain Compression Two Dimensional Scanning Measurement | Applicable for amplifier's gain compression two dimensional scanning measurement                       |
| SAV31123      | 2.4mm Calibration Kit                                 | Applicable for whole-machine calibration                                                               |
| FE0BN0BM025.0 | 2.4mm Test Cable                                      | Applicable for whole-machine measurement                                                               |
| FE0BN0BL025.0 | 2.4mm Test Cable                                      | Applicable for whole-machine measurement                                                               |
| SAV20404      | Electronic Calibration Kit                            | Applicable for whole-machine calibration (45MHz - 40GHz second interface)                              |

## Optional Package for S3602D

| Part No.   | Name                                        | Description                                                                                                                                                              |
|------------|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| S3602D-201 | Dual-Interface Programmable Step Attenuator | Equip source path with two 60dB programmable step attenuator and equip receiver path with two 35dB programmable step attenuator                                          |
| S3602D-400 | Four-Interface Measurement                  | Dual incentive four-interface Vector Network Analyzer                                                                                                                    |
| S3602D-401 | Four-Interface Programmable Step Attenuator | Equipping source path with four 60dB programmable step attenuator and equipping receiver channel with four 35dB Programmable step attenuator (must work with option 400) |
| S3602D-402 | Active Inter modulation Measurement         | Applicable for active inter modulation measurement of amplifier (400 Options)                                                                                            |
| S3602D-008 | Pulse Measurement                           | Applicable for S parameter measurement under pulse circumstance                                                                                                          |

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# S3602C / D Vector Network Analyzer

(Frequency Range: 10MHz – 43.5GHz / 50GHz)

|               |                                                       |                                                                                                        |
|---------------|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| S3602D-S10    | Time Domain Measurement                               | Able to recognize and analyze the discontinuous location of instrument, cable or fixture.              |
| S3602D-S80    | Frequency Deviation Measurement                       | Applicable for frequency deviation measurement, necessary for millimeter wave spread spectrum monitor. |
| S3602D-S82    | Scalar Measurement of Mixer                           | Applicable for the mixer's scalar measurement                                                          |
| S3602D-S83    | Vector Measurement of Mixer                           | Applicable for the mixer's vector measurement                                                          |
| S3602D-S84    | Embedded Local Oscillator Measurement                 | Applicable for embedded local oscillator measurement                                                   |
| S3602D-S86    | Gain Compression Two Dimensional Scanning Measurement | Applicable for amplifier's gain compression two dimensional scanning measurement                       |
| SAV31123A     | 2.4mm Calibration Kit                                 | Applicable for whole-machine calibration                                                               |
| FE0BN0BM025.0 | 2.4mm Test Cable                                      | Applicable for whole-machine measurement                                                               |
| FE0BN0BL025.0 | 2.4mm Test Cable                                      | Applicable for whole-machine measurement                                                               |

*Note: Information will conduct the necessary updates , the contents of this document are subject to change without notice*