S3622B/D/E/G/H/K Vector Network Analyzer

(300kHz~9GHz/18GHz/26.5GHz/44GHz/50GHz/54GHz)



Saluki Technology Inc.

Product Overview

The Saluki S3622 series vector network analyzer, with a frequency range of 300kHz~54GHz, is designed with such functions as dual-port vector network analysis, antenna feeder analysis, vector voltmeter, optical time-domain reflectometer, USB continuous wave power measurement and peak power measurement, etc. It is characterized by small size, light weight, strong environmental adaptability, flexible power supply, and easy operation, which is suitable for on-site installation commissioning and maintenance testing of equipment used in mobile communications, satellite communications, microcomputer communications, satellite communications, and other industries.

Main Features

- **Wide frequency coverage**

  300 kHz~54GHz

- **Excellent performance index**

  Dynamic range (vector network analysis): 113dB (10MHz<f≤20GHz, typical)

- **Rich measurement functions**

  Standard configuration: Vector network analyzer

  Optional functions: Antenna feeder analysis, vector voltmeter, USB continuous wave power measurement, USB peak power measurement, USB optical time-domain reflectometer.

- **Excellent vector network analysis**

  Simultaneous measurement of four S-parameters, time-domain analysis of amplitude and phase, mixed reflection S-parameter testing

  Full 2-port calibration, unknown through calibration, waveguide calibration, electronic calibration (external), definition of calibration parts

- **Practical antenna feeder analysis:**

  Testing of return loss, and 1-port cable loss

  Fault location capability (DTF)

  TDR cable analysis capability available to determine the location and nature (short circuit, open circuit, etc.) of the fault

- **Vector voltmeter with intuitive display**

  Amplitude, phase and electrical length measurements

  A/B and B/A measurements supported to measure the amplitude-phase coherence of the receiver channel

- **Flexible optical time-domain reflectometer and optical power meter**

  Optical time-domain reflectometer:

  Fiber type: G.652, single mode 9/125, measurement

  Wavelength: 1310nm±20nm & 1550nm±20nm, dynamic range: 38dB (typical)

  Optical power meter:

  Calibration wavelength

  850/980/1270/1300/1310/1490/1550/1577/1625/1650nm,

  Measurement range:

  -50dBm ~+20dBm (typical) (single optical port shared with OTDR)

- **Various auxiliary interfaces**

  10MHz reference I/O interface

  GPS/Beidou antenna interface

  Wi-Fi wireless communication interface

  LAN, USB, Micro-SD and other interfaces

- **Convenient use**

  10.1" LCD and capacitive touch screen

  8 independent cursors, with marker dragging supported

  4 display windows, 8 display traces

- **Good field adaptability**

  Operating temperature: -20C°C ~55°C, storage temperature: -50°C~70

  Total weight without battery: about 3.7kg

  Three display modes, including Default, Outdoor, Night

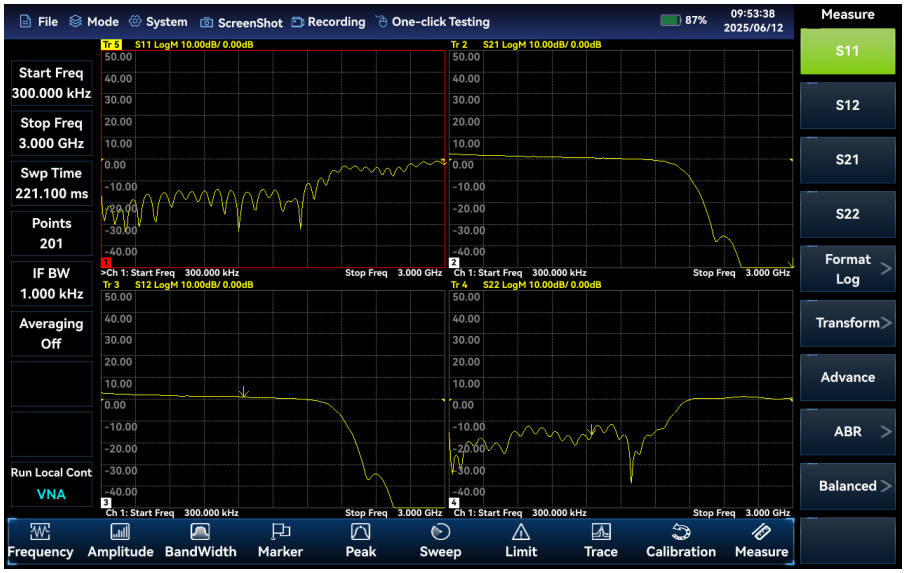
  Built in high-capacity lithium-ion battery, with a typical battery life of up to 4 hours

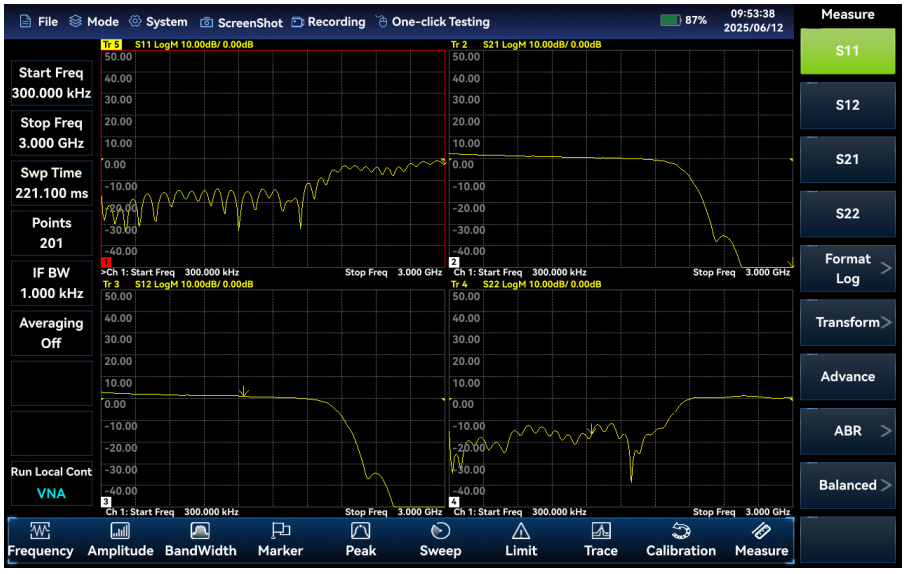
  Rich measurement functions and options

Rich measurement functions and options

Vector network analysis:

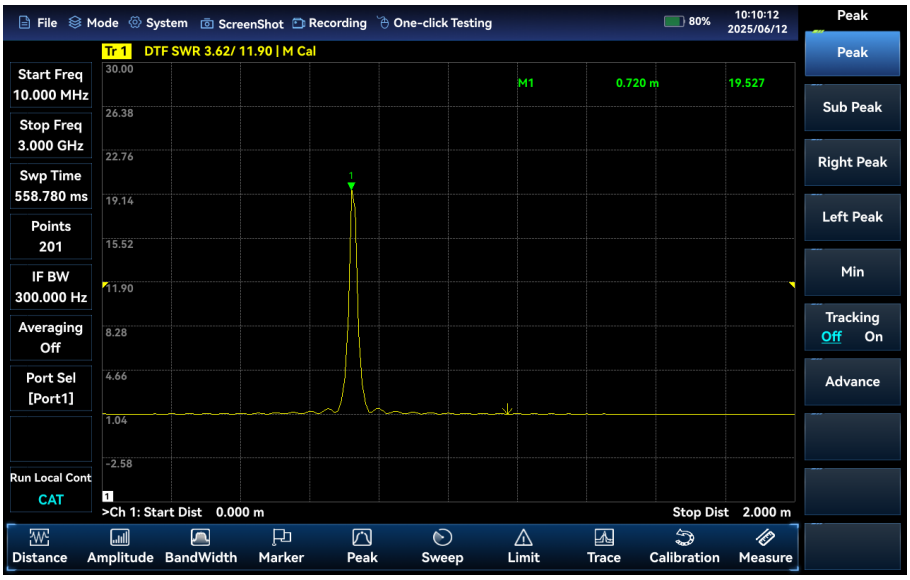
The S3622 series vector network analyzer is designed as standard with four S-parameter vecto r network analysis and measurement capability, supporting S-parameter testing of components suc h as amplifiers, filters, attenuators and duplexers, and mixed reflection S-parameter test, and als o supporting display formats including log, linear, phase, group delay, Smith plot, polar coordinate s, VSWR and etc.

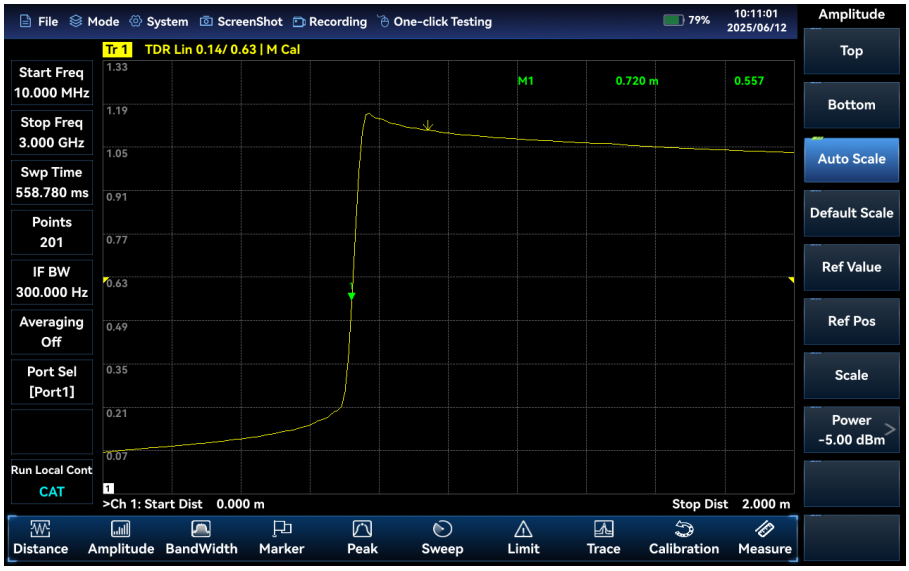




Antenna feeder analyzer (optional):

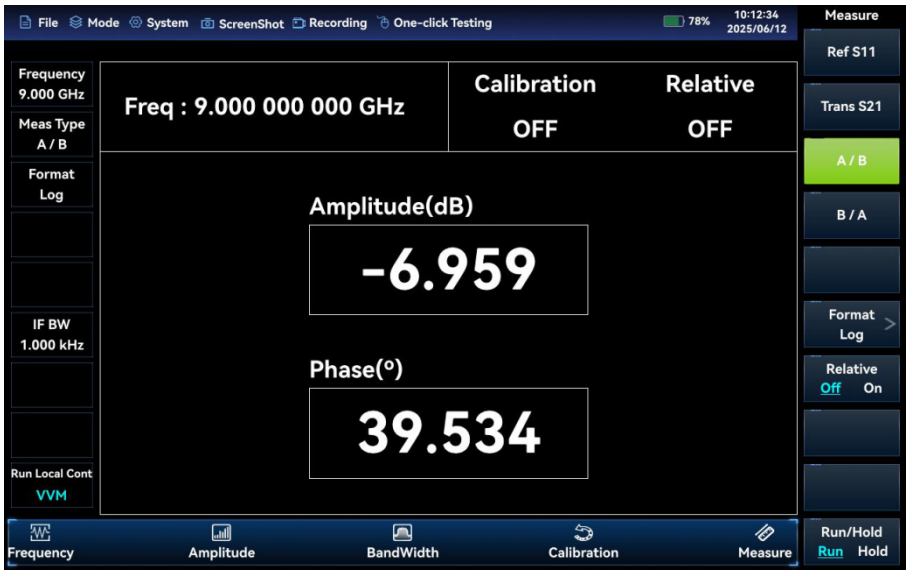
The S3622 series vector network analyzer supports measurement of return loss, VSWR, impedance , cable loss, and distance to faults of cables, feeders, and other DUTs, among which th e measurement of return loss and distance to faults will help the user determine the specific caus es of system performance degradation in the antenna feeder system. The antenna feeder analy zer supports TDR testing to analyze the types of cable faults. In addition, the instrument is also buil t in with some commonly used parameters of cables and feeders for ease of use.





Vector voltmeter (option):

The S3622 series vector network analyzer supports matching measurement of electrical length an d phase shift of the DUTs, and also supports A/B and B/A measurement to measure the amplitu de and phase consistency of the receiver.



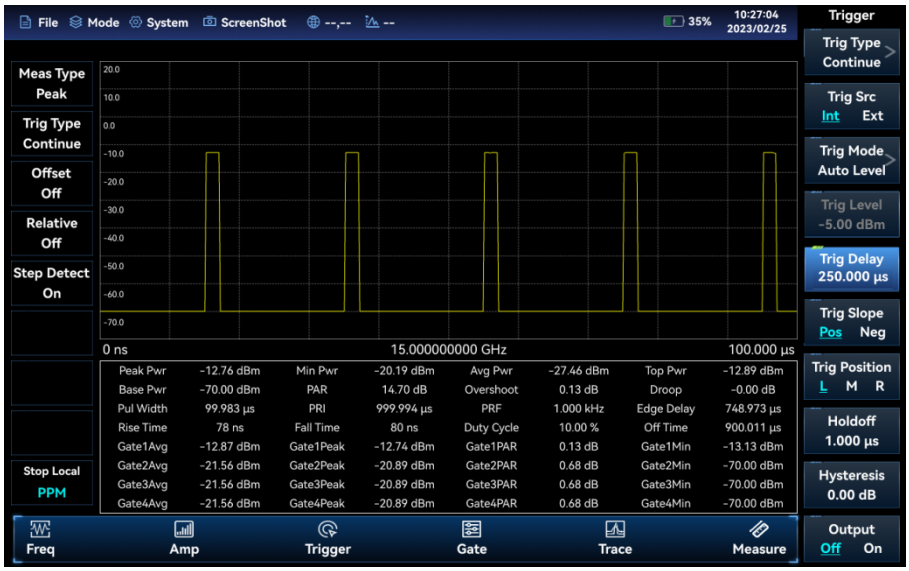
USB power measurement (option):

With the external USB power probe of the Saluki S87230/87231/87232/87233 series, the US B power measurement function can be used to measure CW signal power of up to 40GHz.



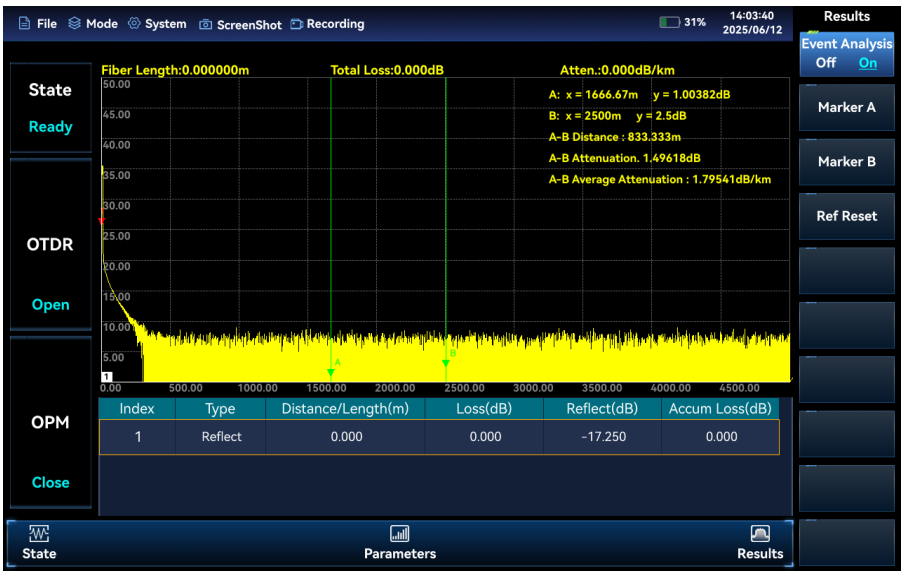
USB peal power measurement (option):

By connecting to the Saluki S87234D/E/F/L USB peak power probe via the USB interface, this function can be used to test RF/microwave signals up to 67GHz, enabling pulse power measurement in a large dynamic range.



Optical Time Domain Reflectometer (option):

The optical time-domain reflectometer of the S3622 series vector network analyzer, when being used together with an external USB optical time-domain reflectometer, can achieve locating and analysis of optical fiber fault, as well as optical power measurement.





Typical Applications

- **Field comprehensive performance evaluation of electronic equipment**

The S3622 series vector network analyzer has such advantages as high performance index , diversified testing functions and simple operation, which can be handheld with small size, ligh t weight and excellent environmental adaptability. It can be battery-powered, and can be used fo r field installation, commissioning and maintenance of electronic equipment.

- **Field test and diagnosis of transmitter and receiver**

The S3622 series vector network analyzer is designed with various measurement modes such a s vector network analysis, antenna feeder testing, and power measurement for measurement an d testing of the VSWR, reflection coefficient, insertion loss, return loss and impedan ce characterization of the transmitting and receiving antenna subsystems.

- **Multi-parameter testing for cable TV, wireless communication, etc.**

The S3622 series vector network analyzer is applicable to operators and equipment manufacturers i n cable TV, cellular phone systems, digital mobile telecommunication operators and equipme nt manufacturers for on-site integrated testing of antenna feeder contact performance, componen ts' S-parameters, and feed through power.

Technical Specifications

Model	S3622B : 300kHz ~ 9GHz S3622D : 300kHz ~ 18GHz S3622E : 300kHz ~ 26.5GHz S3622G : 300kHz ~ 44GHz S3622H : 300kHz ~ 50GHz S3622K : 300kHz ~ 54GHz
Frequency aging rate	1ppm/year; Accuracy: ±0.9ppm
Frequency resolution	1Hz
IFBW	3Hz, 10Hz, 30Hz, 100Hz, 300Hz, 1kHz, 3kHz, 10kHz, 30kHz, 100kHz
Power level	High, Low, Manual Setting Power
Port output power	High power: ≥-8.0dBm 300kHz≤f≤10MHz ≥3.0dBm 10MHz<f≤9GHz ≥0.0dBm 9GHz<f≤20GHz ≥-2.0dBm 20GHz<f≤26.5GHz ≥-8.0dBm 26.5GHz<f≤44GHz ≥-8.0dBm 44GHz<f≤50GHz ≥-12.0dBm 50GHz<f≤54GHz Low power: ≤-35dBm 10MHz≤f≤54GHz
Port output power accuracy	Note: -10dBm output, 23±5°C ±2.0dB 300kHz≤f≤26.5GHz ±2.5dB 26.5GHz<f≤50GHz ±3.0dB 50GHz<f≤54GHz
Valid directivity	≥42dB 300kHz≤f≤4GHz ≥34dB 4GHz<f≤20GHz ≥26dB 20GHz<f≤54GHz
Reflection tracking	±0.06dB 300kHz≤f≤20GHz ±0.08dB 20GHz<f≤50GHz ±0.12dB 50GHz<f≤54GHz
Effective load matching	≥30dB 300kHz≤f≤4GHz ≥27dB 4GHz<f≤26.5GHz ≥23dB 26.5GHz<f≤54GHz
Transmission tracking	±0.08dB 300kHz≤f≤4GHz ±0.16dB 4GHz<f≤26.5GHz ±0.24dB 26.5GHz<f≤50GHz ±0.28dB 50GHz<f≤54GHz
System dynamic range	≥90dB 300kHz≤f≤2MHz ≥103dB 2MHz<f≤20GHz ≥93dB 20GHz<f≤26.5GHz ≥90dB 26.5GHz<f≤40GHz ≥81dB 40GHz<f≤50GHz ≥80dB 50GHz<f≤54GHz

Trace noise	Note: The output power of port within the band of 300kHz≤f≤10MHz is set to -5dBm; and the output power of port within the band of 10MHz<f≤54GHz is set to 0dBm, with IF bandwidth set to 100Hz , S21 and S12. Amplitude trace noise (dB rms): 0.0040 300kHz≤f≤10MHz 0.0015 2MHz<f≤10GHz 0.0018 10GHz<f≤20GHz 0.0040 20GHz<f≤26.5GHz 0.0050 26.5GHz<f≤36GHz 0.0050 36GHz<f≤50GHz 0.0100 50GHz<f≤54GHz Phase trace noise within the band (deg rms): 0.0600 300kHz≤f≤10MHz 0.0200 10MHz<f≤10GHz 0.0270 10GHz<f≤20GHz 0.0500 20GHz<f≤26.5GHz 0.0600 26.5GHz<f≤36GHz 0.1200 36GHz<f≤50GHz 0.5000 50GHz<f≤54GHz
Overall dimensions	316.5mm (width) ×236.5mm (height) ×75mm (depth) (excluding side straps, panel connector, interface plugs, rear bracket closure)
Weight	≤3.7kg excluding built-in battery)
Operating temperature range	-20°C~+55°C (battery discharging temperature -20°C~+55°C, battery charging temperature +10°C~+45°C)
Storage temperature	-50°C~+70°C (battery storage temperature -20°C~+50°C, storage time < 1 month)
Electromagnetic compatibility	Comply with relevant requirements of 3.9.1 in GJB 3947A-2009
Power input type	AC power adapter: input voltage 100V ~ 240V AC, 50Hz/60Hz, output voltage 19V DC, 4.7A. Built-in Li-ion battery: nominal voltage 10.8V
Battery power endurance time	S3622B/D: 4h(typ.); S3622E/G/H/K: 3h(typ.)
Test port	S3622B/D: N-type female adapter S3622E: 3.5mm male adapter S3622G/H: 2.4mm male adapter S3622K: 1.85mm male adapter
Other interface	10MHz reference input/output: SMA female External trigger input interface: SMA female GPS antenna interface: SMA female Wi-Fi/4G antenna interface: SMA female (optional, in which the input interface of 4G antenna is reserved and temporarily not supported).
Communication and auxiliary interfaces	USB interfaces: 2 USB3.0 Type A interfaces, 1 USB2.0 Type C type interface and 1 USB3.0 Type C interface (reserved). LAN interface: Standard RJ-45 type. Earphone interface: standard 3.5 mm. Memory card/SIM card: MicroSD card and SIM card (for reserved 4G option) slots

Ordering Information

- **Mainframe**

Model	Name	Frequency range
S3622B	RF microwave analyzer	300kHz ~ 9GHz
S3622D	Microwave analyzer	300kHz ~ 18GHz
S3622E	Microwave analyzer	300kHz ~ 26.5GHz
S3622G	Microwave analyzer	300kHz ~ 44GHz
S3622H	Microwave analyzer	300kHz ~ 50GHz
S3622K	Microwave analyzer	300kHz ~ 54GHz

- **Standard configuration**

No.	Name	Quantity	Description
1	Power cord	1	
2	9000mAh rechargeable li-ion battery	1	
3	Power adapter	1	
4	Quick Start Guide	1	Quick Start Guide
5	Product certificate of conformity	1	Certificate of Conformity

- **Option**

No.	Option No.	Option name	Function
1	S3622-01	English version	Including English signs, menus and Quick Start Guide.
2	S3622-02	User' manual (Chinese version)	User' manual (Chinese version).
3	S3622-03	User' manual (English version)	User' manual (English version).
4	S3622-04	Programming manual (Chinese version)	Programming manual (Chinese version).
5	S3622-05	Programming manual (English version)	Programming manual (English version).
6	S3622-S01	USB power measurement	It provides power measurement function, which can be used with an external USB CW power probe S87230/87231/87232/87233.
7	S3622-S02	USB peal power	It provides peak power measurement, which can be used with the S87234D/E/F/L USB peak/average power meter.

No.	Option No.	Option name	Function
8	S3622-S30	Antenna feeder analyzer	Testing of return loss, VSWR and breakpoints of cables and feeders.
9	S3622-S31	Vector voltmeter	Testing of cable phase shift and electrical length.
10	S3622-S32	TDR	Analysis of the location and nature of cable faults
11	S3622-S33	Electronic calibration	A software option, which shall be used together with electronic calibration parts for vector network analysis, antenna analysis, vector voltmeter calibration.
12	S3622-S34	Optical Time Domain Reflectometer	Optical time-domain reflectometer and optical power meter functions To be used together with S3622-H67 option.
13	3622-S35	Mixed reflection S-parameter	Differential S-parameter measurements.
14	S3622-S36	VNA time-domain measurement	Time-domain measurement in vector network analysis mode.
15	S3622-H01	GPS/Beidou function	GPS or BSD positioning when an external antenna is connected.
16	S3622-H02	WiFi wireless communication	Wireless data transmission and communication with external devices.
17	S3622-H03	Aluminum alloy trolley case	Aluminum alloy trolley case
18	S3622-H04	Trolley case	Trolley case
19	S3622-H05	Portable backpack	Portable backpack
20	S3622-H06	Power adapter	Power adapter.
21	S3622-H07	9900mAh rechargeable li-ion battery	Backup battery pack, nominal voltage 10.8V, battery capacity 9900mAh, not suitable for air transportation.
22	S3622-H08	9000mAh rechargeable li-ion battery	Backup battery pack, nominal voltage 10.8V, battery capacity 9000mAh, allowed for air transportation.
23	S3622-H09	On-board power adapter	The on-board charger with input voltage of 12~24V and output voltage of 19V can be used to power handheld measuring instruments.
24	S3622-H10	Intelligent battery charging dock	Lithium-ion battery charging standard
25	S3622-H11	Memory card	Mrico SD card, capacity 128G.
26	S87231	USB CW power probe	Frequency range: 10MHz ~ 18GHz, interface type N(m).
27	S87232	USB CW power probe	Frequency range: 50MHz ~ 26.5GHz, interface type 3.5mm (m).
28	S87233	USB CW power probe	Frequency range: 50MHz ~ 40GHz, interface type 2.4mm (m).
29	S87234D	USB peak/average power meter	Frequency range: 50MHz ~ 18GHz, interface type N(m).

No.	Option No.	Option name	Function
30	S87234E	USB peak/average power meter	Frequency range: 50MHz ~ 26.5GHz, interface type 3.5mm (m).
31	S87234F	USB peak/average power meter	Frequency range: 50MHz ~ 40GHz, interface type 2.4mm (m).
32	S87234L	USB peak/average power meter	Frequency range: 500MHz ~ 67GHz, interface type 1.85mm (m).
33	S31101A	Coaxial calibration kits	N(M), DC-18GHz, for calibration of vector network analyzer, CAT and VVM.
34	S31101B	Coaxial calibration kits	N(F), DC-18GHz, for calibration of vector network analyzer, CAT and VVM.
35	S31121	Coaxial calibration kits	3.5mm, DC-26.5GHz, for calibration of vector network analyzer, CAT and VVM.
36	S31123A	Coaxial calibration kits	2.4mm, DC-50GHz, for calibration of vector network analyzer, CAT and VVM.
37	S20209LB	Coaxial calibration kits	1.85Mm, DC-67GH.
38	S20402	Electronic calibration kit	300kHz ~ 18GHz (N type)
39	S20403	Electronic calibration kit	10MHz ~ 26.5GHz (3.5mm)
40	S20404	Electronic calibration kit	10MHz ~ 50GHz (2.4mm)
41	S20409	Electronic calibration kit	10MHz ~ 67GHz (1.85mm)
42	S3622-H49	N-type male-male calibration cable GORE-OSZKUZKU0240	Cable for calibration or testing
43	S3622-H50	N-type female-male calibration cable GORE-OSZKUZKV0240	Cable for calibration or testing
44	S3622-H51	3.5 mm female-female calibration cable GORE-0RD02D02024.0	Cable for calibration or testing
45	S3622-H52	3.5mm female-male calibration cable GORE-0RD01D02024.0	Cable for calibration or testing
46	S3622-H53	2.4 mm female-female calibration cable GORE-0K0CK0CK024.0	Cable for calibration or testing
47	S3622-H54	2.4mm female-male calibration cable GORE-0K0CJ0CK024.0	Cable for calibration or testing
48	S3622-H55	2.4mm (female-male), 50GHz calibration cable 0Z0CJ0CK024.0	Cable for calibration or testing

No.	Option No.	Option name	Function
49	S3622-H56	2.4mm (female-male), 50GHz calibration cable 0Z0CK0CK024.0	Cable for calibration or testing
50	S3622-H57	1.85mm (female-male), 67GHz calibration cable 0F0CB0CA024.0	Cable for calibration or testing
51	S3622-H58	1.85mm (female-male), 67GHz calibration cable 0F0CA0CA024.0	Cable for calibration or testing
52	S87302FZ	Test cable	3.5/3.5-KK test cable (0.6m)
53	S87302FE	Test cable	3.5/3.5-KJ test cable (0.6m)
54	S87302AZ	Test cable	N/N-JJ test cable (0.6m)
55	S87302BA	Test cable	N/N-KJ test cable (0.6m)
56	S3622-H63	AL50-35FNM-01.00M test cable	3.5mm/N-KJ, DC to 26.5GHz test cable (1.0m)
57	S3622-H64	AL50-35MNM-01.00M test cable	3.5mm/N-JJ, DC to 26.5GHz test cable (1.0m)
58	S3622-H65	AL50-24F35F-01.00M test cable	2.4mm/3.5mm-KK test cable (1.0m)
59	S3622-H66	AL50-24F35M-01.00M test cable	2.4mm/3.5mm-KJ test cable (1.0m)
60	S3622-H67	USB Optical Time Domain Reflectometer	
61	S3622B-JL	Measurement service	Measurement and calibration services and measurement reports are provided, which applies to S3622B only.
62	S3622D-JL	Measurement service	Measurement and calibration services and measurement reports are provided, which applies to S3622D only.
63	S3622E-JL	Measurement service	Measurement and calibration services and measurement reports are provided, which applies to S3622E only.
64	S3622G-JL	Measurement service	Measurement and calibration services and measurement reports are provided, which applies to S3622G only.
65	S3622H-JL	Measurement service	Measurement and calibration services and measurement reports are provided, which applies to S3622H only.
66	S3622K-JL	Measurement service	Measurement and calibration services and measurement reports are provided, which applies to S3622K only.
67	S3622B-EWT1	An extended warranty beyond the standard warranty period is available for 1 year.	An extended warranty beyond the standard warranty period is available for 1 year. For a 2-year extension, 2 items can be selected, and so on. The service does not include calibration and covers only one-way shipping costs.

No.	Option No.	Option name	Function
68	S3622D-EWT1	An extended warranty beyond the standard warranty period is available for 1 year.	An extended warranty beyond the standard warranty period is available for 1 year. For a 2-year extension, 2 items can be selected, and so on. The service does not include calibration and covers only one-way shipping costs.
69	S3622E-EWT1	An extended warranty beyond the standard warranty period is available for 1 year.	An extended warranty beyond the standard warranty period is available for 1 year. For a 2-year extension, 2 items can be selected, and so on. The service does not include calibration and covers only one-way shipping costs.
70	S3622G-EWT1	An extended warranty beyond the standard warranty period is available for 1 year.	An extended warranty beyond the standard warranty period is available for 1 year. For a 2-year extension, 2 items can be selected, and so on. The service does not include calibration and covers only one-way shipping costs.
71	S3622H-EWT1	An extended warranty beyond the standard warranty period is available for 1 year.	An extended warranty beyond the standard warranty period is available for 1 year. For a 2-year extension, 2 items can be selected, and so on. The service does not include calibration and covers only one-way shipping costs.
72	3622K-EWT1	An extended warranty beyond the standard warranty period is available for 1 year.	An extended warranty beyond the standard warranty period is available for 1 year. For a 2-year extension, 2 items can be selected, and so on. The service does not include calibration and covers only one-way shipping costs.

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