



3622 Series Vector Network Analyzer

3622B/D/E/G/H/K

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



Ceyear Technologies Co., Ltd

Product Overview

The frequency range of Ceyear 3622 vector network analyzer covers 300kHz~54GHz, with dual-port vector network analysis, antenna feeder analysis, vector voltmeter, optical time domain reflectometer, USB continuous wave power measurement and peak power measurement and other functions, with small size, light weight, strong environmental adaptability, flexible power supply, convenient control and other characteristics, the product can be used in mobile communications, satellite communications, microwave communications and other equipment on-site installation, debugging and maintenance guarantee testing..

Main Features

- **Wide frequency range coverage**
300kHz~54GHz wide band coverage
- **Excellent performance specifications**
Dynamic Range (Vector Network Analysis): 113dB (10MHz$f \leq 20\text{GHz}$, typical)
- **Abundant measurement functions**
Standard: vector network analysis
Optional: antenna feeder analysis, vector voltmeter, USB CW power measurement, USB peak power measurement, USB OTDR
- **Excellent vector network analysis**
Capable of measuring four S-parameters, amplitude and phase simultaneously
It supports time domain analysis and mixed reflection S-parameter testing
Full two-port calibration, unknown pass-through calibration, waveguide calibration, electronic calibration (external), support for defining calibration kits
- **Practical antenna feeder analysis**
It has the function of return loss and 1-port cable loss test
It has the function of distance to fault (DTF) function.
Supports TDR cable analysis to determine the location and nature of the fault (short circuit, open circuit, etc.)
- **Intuitive display of vector voltmeter**
Amplitude, phase, and electrical length measurements
A/B and B/A measurements to measure the amplitude and phase consistency of the receiver channel

- **Flexible OTDR and optical power meter**

Fiber type of OTDR is G.652 Single-Mode 9/125, Measurement Wavelength 1310nm± 20nm & 1550nm±20nm, Typical Dynamic Range 38dB

The calibration wavelength of the optical power meter is 850/980/1270/1300/1310/1490/1550/1577/1625/1650nm, and the typical measurement range is -50dBm ~+20dBm (sharing a single optical port with the OTDR)

- **Variety of auxiliary interfaces**

10MHz reference I/O interface

GPS/Beidou antenna interface

Wi-Fi wireless communication interface

LAN, USB, MicroSD card and other interfaces

- **Excellent user experience**

10.1-inch LCD and capacitive touch screen

8 independent cursors, support marker dragging

4 display windows, 8 trace displays

- **Fit for field test**

The working temperature is -20°C~55°C, and the storage temperature is -50°C~70°C

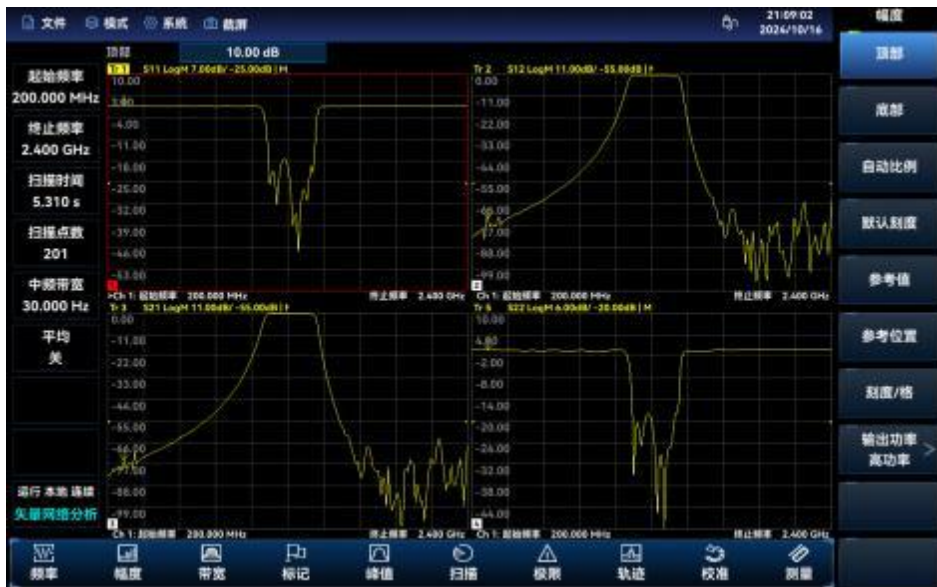
The weight of the whole machine without battery is about 3.7kg

Three display modes are supported: default, outdoor, and night vision

Built-in high-capacity lithium-ion battery with a typical battery life of 3 hours (varies by model and measurement mode)

Vector network analysis:

3622 vector network analyzer provides standard four S parameter vector network analysis measurement ability, for amplifier, filter, attenuator, duplexer components S parameter test, support mixed reflection S parameter test, display format including logarithmic, linear, phase, group delay, Smith circle, polar coordinates, standing wave ratio, etc.



Antenna feeder analysis (option):

The antenna feeder analysis of the 3622 vector network analyzer can measure the echo loss, voltage standing wave ratio, impedance, cable loss and fault point distance of cables and feeders. The echo loss and fault point distance measurement will help you determine the specific reasons for the decrease of system performance in the antenna feeder system. The day feeder analysis function supports the TDR test, which can analyze the type of cable failure. In addition, the instrument is also built-in some commonly used cables, feeder parameters, easy to use.



Vector voltage meter (option):

The vector voltmeter of 3622 vector network analyzer can match the electrical length and phase shift of the measured device, support A / B and B / A measurement functions, and can measure the amplitude phase consistency of the receiver.



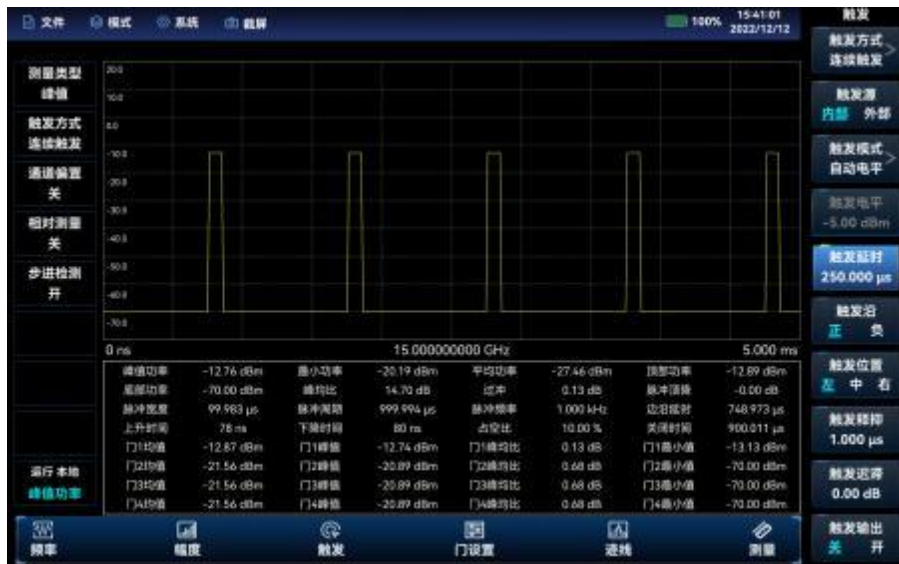
USB power measurement (option):

The USB power measurement function can measure CW signal power of up to 40GHz through the external Ceyear 8723X series external USB power sensor.



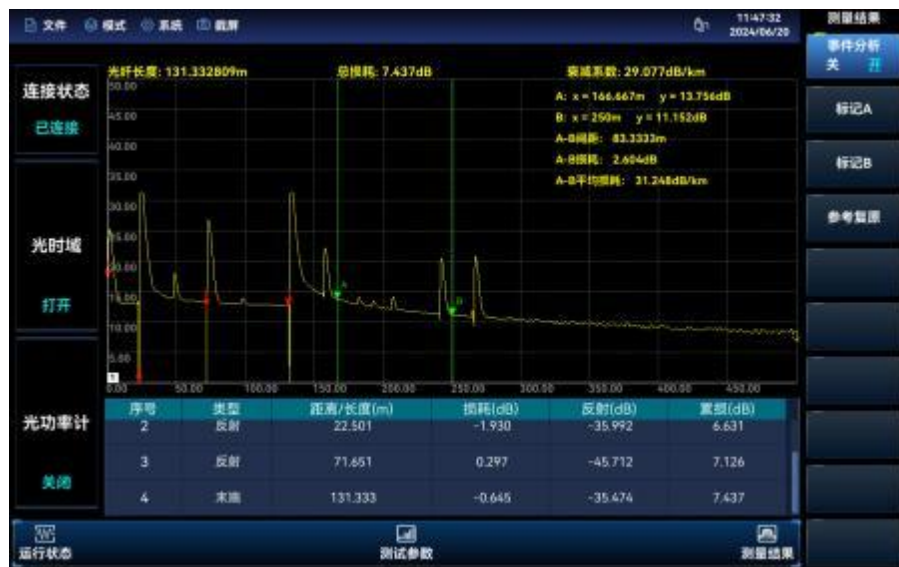
USB peak power measurement (option):

The 87234 USB peak power sensor can test RF / microwave signals of up to 67GHz to achieve pulse power measurement in a large dynamic range.



OTDR (option):

The optical time domain reflector function of 3622 vector network analyzer can realize the external USB optical time domain reflector, and can realize optical power measurement.





Typical application

On-site comprehensive performance assessment of electronic equipment

3622 vector network analyzer has multiple advantages of high performance index, fast scanning speed, many test functions, easy operation and so on, etc., using hand-held structure, small size, light weight, strong environmental adaptability, can be battery power supply, can be applied to the field installation, debugging and maintenance of various electronic equipment.

Field test and diagnosis of the transmitter and receiver

3622 vector network analyzer products has a variety of measurement functions, such as vector network analysis, antenna feeder testing, power measurement, etc., which can complete the standing wave ratio, reflection coefficient, insertion loss, return loss and impedance characteristic tests of the transmitting and receiving antenna feeder subsystems.

Cable TV, wireless communication and other fields of multi-parameter test

Cable TV, cellular telephone system, digital mobile communication operators and equipment manufacturers use 3622 vector network analyzer to test the spectrum distribution, antenna feeder contact performance, S parameters, feed pass power, etc.

Technical Specifications

Model	3622B: 300kHz ~ 9GHz
	3622D: 300kHz ~ 18GHz
	3622E: 300kHz ~ 26.5GHz
	3622G: 300kHz ~ 44GHz
	3622H: 300kHz ~ 50GHz

	3622K: 300kHz ~ 54GHz
Frequency accuracy	$\pm 0.9\text{ppm}$
Frequency resolution	1Hz
IFBW	3Hz、10Hz、30Hz、100Hz、300Hz、1kHz、3kHz、10kHz、30kHz、100kHz
Power rating	Set the power high, low and manually
Port output power	high power: $\geq -8.0\text{dBm}$ ($300\text{kHz} \leq f \leq 10\text{MHz}$); $\geq 3.0\text{dBm}$ ($10\text{MHz} < f \leq 9\text{GHz}$); $\geq 0.0\text{dBm}$ ($9\text{GHz} < f \leq 20\text{GHz}$); $\geq -2.0\text{dBm}$ ($20\text{GHz} < f \leq 26.5\text{GHz}$); $\geq -8.0\text{dBm}$ ($26.5\text{GHz} < f \leq 44\text{GHz}$); $\geq -8.0\text{dBm}$ ($44\text{GHz} < f \leq 50\text{GHz}$); $\geq -12.0\text{dBm}$ ($50\text{GHz} < f \leq 54\text{GHz}$) low power: $\leq -35\text{dBm}$ ($10\text{MHz} \leq f \leq 54\text{GHz}$)
Port output power accuracy	Note: -10dBm output, $23 \pm 5^\circ\text{C}$ $\pm 2.0\text{dB}$ ($300\text{kHz} \leq f \leq 26.5\text{GHz}$); $\pm 2.5\text{dB}$ ($26.5\text{GHz} < f \leq 50\text{GHz}$); $\pm 3.0\text{dB}$ ($50\text{GHz} < f \leq 54\text{GHz}$)
Effective directivity	$\geq 42\text{dB}$ ($300\text{kHz} \leq f \leq 4\text{GHz}$); $\geq 34\text{dB}$ ($4\text{GHz} < f \leq 20\text{GHz}$); $\geq 26\text{dB}$ ($20\text{GHz} < f \leq 54\text{GHz}$)
Reflection tracking	$\pm 0.06\text{dB}$ ($300\text{kHz} \leq f \leq 20\text{GHz}$); $\pm 0.08\text{dB}$ ($20\text{GHz} < f \leq 50\text{GHz}$); $\pm 0.12\text{dB}$ ($50\text{GHz} < f \leq 54\text{GHz}$)
Effective load matching	$\geq 30\text{dB}$ ($300\text{kHz} \leq f \leq 4\text{GHz}$); $\geq 27\text{dB}$ ($4\text{GHz} < f \leq 26.5\text{GHz}$); $\geq 23\text{dB}$ ($26.5\text{GHz} < f \leq 54\text{GHz}$)
Transmission tracking	$\pm 0.08\text{dB}$ ($300\text{kHz} \leq f \leq 4\text{GHz}$); $\pm 0.16\text{dB}$ ($4\text{GHz} < f \leq 26.5\text{GHz}$); $\pm 0.24\text{dB}$ ($26.5\text{GHz} < f \leq 50\text{GHz}$); $\pm 0.28\text{dB}$ ($50\text{GHz} < f \leq 54\text{GHz}$)
System dynamic range	$\geq 90\text{dB}$ ($300\text{kHz} \leq f \leq 10\text{MHz}$); $\geq 103\text{dB}$ ($10\text{MHz} < f \leq 20\text{GHz}$); $\geq 93\text{dB}$ ($20\text{GHz} < f \leq 26.5\text{GHz}$); $\geq 90\text{dB}$ ($26.5\text{GHz} < f \leq 40\text{GHz}$); $\geq 81\text{dB}$ ($40\text{GHz} < f \leq 50\text{GHz}$); $\geq 80\text{dB}$ ($50\text{GHz} < f \leq 54\text{GHz}$)

Trace noise	<p>Note: The output power of the port in the band $300\text{kHz} \leq f \leq 10\text{MHz}$ is set to -5dBm, and the output power of the port in the band $10\text{MHz} \leq f \leq 54\text{GHz}$ is set to 0dBm. The intermediate frequency bandwidth is 100Hz, S21 and S12.</p> <p>Range track noise (dB rms): 0.0040 ($300\text{kHz} \leq f \leq 10\text{MHz}$); 0.0015 ($10\text{MHz} < f \leq 10\text{GHz}$); 0.0018 ($10\text{GHz} < f \leq 20\text{GHz}$); 0.0040 ($20\text{GHz} < f \leq 26.5\text{GHz}$); 0.0050 ($26.5\text{GHz} < f \leq 36\text{GHz}$); 0.0050 ($36\text{GHz} < f \leq 50\text{GHz}$); 0.0100 ($50\text{GHz} < f \leq 54\text{GHz}$)</p> <p>Phase trace noise (deg rms): 0.0600 ($300\text{kHz} \leq f \leq 10\text{MHz}$); 0.0200 ($10\text{MHz} < f \leq 10\text{GHz}$); 0.0270 ($10\text{GHz} < f \leq 20\text{GHz}$); 0.0500 ($20\text{GHz} < f \leq 26.5\text{GHz}$); 0.0600 ($26.5\text{GHz} < f \leq 36\text{GHz}$); 0.1200 ($36\text{GHz} < f \leq 50\text{GHz}$); 0.5000 ($50\text{GHz} < f \leq 54\text{GHz}$)</p>
Dimension	316.5mm (wide) x 236.5mm (high) x 75mm (deep) (excluding side handle, panel connector and interface plug, closed rear bracket)
Weight	Up to 3.7kg (excluding built-in battery)
Working temperature	$-20^{\circ}\text{C} \sim +55^{\circ}\text{C}$ (battery discharge temperature $-20^{\circ}\text{C} \sim +55^{\circ}\text{C}$, charging temperature $+10^{\circ}\text{C} \sim +45^{\circ}\text{C}$)
Storage temperature	$-50^{\circ}\text{C} \sim +70^{\circ}\text{C}$ (where the storage temperature of the battery is $-20^{\circ}\text{C} \sim +50^{\circ}\text{C}$, and the storage time is less than 1 month)
Electromagnetic compatibility	Comply with the relevant requirements of GJB 3947A-20093.9.1
Power input form	<p>Alternating current power adapter: input voltage 100V to 240V AC, 50Hz/60Hz;</p> <p>Output voltage 19V DC, 4.7A</p> <p>Built-in lithium ion battery: nominal voltage 10.8V</p>
Battery life	Typical value 3h
Test port	<p>3622B/D: N-type male</p> <p>3622E: 3.5mm male</p> <p>3622G/H: 2.4mm male</p> <p>3622K: 1.85mm male</p>
Other interfaces	<p>10MHz reference input/output: SMA female;</p> <p>External trigger input interface: SMA female;</p> <p>GPS antenna interface: SMA female (optional);</p> <p>Medium frequency output interface: SMA female (optional);</p> <p>Wi-Fi/4G antenna interface: SMA female (optional, where the 4G antenna input interface is reserved and not supported for the time being)</p>
Communication and auxiliary interfaces	<p>USB interface: 2 USB3.0 Type A interfaces, 1 USB2.0 Type C interface, 1 USB3.0 Type B port (reserved).</p> <p>LAN interface: standard RJ-45 type.</p> <p>Headphone jack: standard 3.5mm.</p> <p>Memory card/SIM card: Micro SD card and SIM card (reserved for 4G option) slot</p>

Ordering Information

● Mainframe:

Model	Item	Frequency range
3622B	Vector Network Analyzer	300kHz ~ 9GHz
3622D	Vector Network Analyzer	300kHz ~ 18GHz
3622E	Vector Network Analyzer	300kHz ~ 26.5GHz
3622G	Vector Network Analyzer	300kHz ~ 44GHz
3622H	Vector Network Analyzer	300kHz ~ 50GHz
3622K	Vector Network Analyzer	300kHz ~ 54GHz

● Standard:

No.	Description	Remarks
1	Power cord	/
2	9000mAh rechargeable lithium ion battery	
3	Power adapter	
4	Quick start guide	
5	The product certificate of conformity	/

● Option:

Option No.	Description	Function and performance
3622-01	English option	Includes English signs, menus and quick use guides.
3622-03	English user manual	English version of user manual.
3622-05	Programming Manual in English	Programming Manual in English.
3622-S01	USB CW power measurement	Power measurement function is provided and should be used with external USB continuous wave power probe 87230/87231 /87232/87233.
3622-S02	USB peak power measurement	Provides peak power measurement function, which needs to be combined. The 87234D/E/F/LUSB peak/average power meter is used.
3622-S30	Antenna feeder analysis	Used for cable, feeder and other echo loss, standing wave ratio, breakpoint testing.
3622-S31	Vector voltmeter	Used for cable phase shift and electrical length test.
3622-S32	TDR	Used to analyze the fault nature of cable fault point location.
3622-S33	Electronic calibration kit support	Software options require additional electronic calibration components for vector network analysis,

Option No.	Description	Function and performance
		antenna feeder analysis, vector voltmeter calibration, etc.
3622-S34	OTDR	Provides optical time domain reflectometer and optical power meter functions.
3622-S35	Mixed S parameters	Used for differential S parameter measurement.
3622-S36	VNA time domain measurement	Used for vector network analysis mode time domain measurement.
3622-H01	GPS/Beidou function	GPS or Beidou positioning function can be realized by external antenna.
3622-H02	WiFi wireless communication	It can communicate with external devices for wireless data transmission.
3622-H03	Pole aluminum alloy box	Rack aluminum alloy box.
3622-H04	Pole transport box	Pole transport box.
3622-H05	Portable backpack	Portable backpack.
3622-H06	Power adapter	Power adapter.
3622-H08	9000mAh rechargeable lithium ion battery	Backup battery pack, nominal voltage 10.8V, battery capacity 9000mAh, can be carried by air transportation.
3622-H09	Vehicle power adapter	The vehicle-mounted charger has an input voltage of 12~24V and an output voltage of 19V, which can supply power to handheld measuring instruments.
3622-H10	Smart battery charging dock	Lithium ion battery charging dock.
3622-H11	Memory card	Mrico SD Card, capacity 128G.
87230	USB CW power sensor	Frequency range 9kHz~6GHz, interface type N (m).
87231	USB CW power sensor	Frequency range 10MHz~18GHz, interface type N (m).
87232	USB CW power sensor	Frequency range 50MHz~26.5GHz, interface type 3.5mm (m).
87233	USB CW power sensor	Frequency range 50MHz~40GHz, interface type 2.4mm (m).
87234D	USB peak/average power sensor	Frequency range 50MHz~18GHz, interface type N (m).
87234E	USB peak/average power sensor	Frequency range 50MHz~26.5GHz, interface type 3.5mm (m).
87234F	USB peak/average power sensor	Frequency range 50MHz~40GHz, interface type 2.4mm (m).
87234L	USB peak/average power sensor	Frequency range 500MHz~67GHz, interface type 1.85mm (m).
31101A	Coaxial calibration kit	N type positive head, DC-18GHz, used for vector network analysis, antenna feeder testing, vector

Option No.	Description	Function and performance
		voltmeter calibration.
31101B	Coaxial calibration kit	N type negative head, DC-18GHz, used for vector network analysis, antenna feeder testing, vector voltmeter calibration.
31121	Coaxial calibration kit	3.5mm,DC-26.5GHz, used for vector network analysis, antenna feeder testing, vector voltmeter calibration.
31123A	Coaxial calibration kit	2.4mm, DC-50GHz, for vector network analysis Antenna feeder line test, vector voltmeter calibration.
20209LB	Coaxial calibration kit	1.85mm, DC-67GH.
20402	Electronic calibration kit	300kHz to 18GHz (Type N)
20403	Electronic calibration kit	10MHz ~ 26.5GHz(3.5mm)
20404	Electronic calibration kit	10MHz ~ 50GHz(2.4mm)
20409	Electronic calibration kit	10MHz ~ 67GHz(1.85mm)
3622-H49	N type male-male calibration cable GORE-OSZKUZKU0240	Calibrate or test cables
3622-H50	N type male-female calibration cable GORE-OSZKUZKV0240	Calibrate or test cables
3622-H51	3.5mm female-female calibration cable GORE-0RD02D02024.0	Calibrate or test cables
3622-H52	3.5mm male-female calibration cable GORE-0RD01D02024.0	Calibrate or test cables
3622-H53	2.4mm female-female calibration cable GORE-0K0CK0CK024.0	Calibrate or test cables
3622-H54	2.4mm male-female calibration cable GORE-0K0CJ0CK024.0	Calibrate or test cables
3622-H55	2.4mm male-female 50GHz calibration cable 0Z0CJ0CK024.0	Calibrate or test cables
3622-H56	2.4mm female-female 50GHz calibration cable 0Z0CK0CK024.0	Calibrate or test cables
3622-H57	1.85mm male-female 67GHz calibration cable 0F0CB0CA024.0	Calibrate or test cables
3622-H58	1.85mm female-female 67GHz calibration cable 0F0CA0CA024.0	Calibrate or test cables
87302FZ	test cable	3.5/3.5-KK Test cable (0.6 m)

Option No.	Description	Function and performance
87302FE	test cable	3.5/3.5-KJ Test cable (0.6m)
87302AZ	test cable	N / N-JJ Test cable (0.6 m)
87302BA	test cable	N / N-KJ Test cable (0.6m)
3622-H63	AL50-35FNM-01.00M Test cables	3.5mm / N-KJ test cable (1.0m)
3622-H64	AL50-35MNM-01.00M Test cables	3.5mm / N-JJ test cable (1.0m)
3622-H65	AL50-24F35F-01.00M Test cables	2.4mm/3.5mm-KK Test cable (1.0m)
3622-H66	AL50-24F35M-01.00M Test cables	2.4mm/3.5mm-KJ Test cable (1.0m)
3622-H67	USB OTDR	
3622B-JL	Calibration service	Provides metrological calibration services and metrological reports, which are only applicable to 3622B.
3622D-JL	Calibration service	Provides metrological calibration services and provides metrological reports, which are only applicable to 3622D.
3622E-JL	Calibration service	Provides metrological calibration services and provides metrological reports, which are only applicable to 3622E.
3622G-JL	Calibration service	Provides metrological calibration services and reports, which are only applicable to 3622G.
3622H-JL	Calibration service	Provides metrological calibration services and provides metrological reports, which are only applicable to 3622H.
3622K-JL	Calibration service	Provides metrological calibration services and provides metrological reports, which are only applicable to 3622K.
3622B-EWT1	The warranty period is extended for 1 year beyond the warranty period	The warranty period is extended for 1 year beyond the warranty period. 2 years of extended warranty can be selected in 2 options, and so on. The service does not include calibration, only one-way goods are included
3622D-EWT1	The warranty period is extended for 1 year beyond the warranty period	The warranty period is extended for 1 year beyond the warranty period. 2 years of extended warranty can be selected in 2 options, and so on. The service does not include calibration, only one-way freight charges.
3622E-EWT1	The warranty period is extended for 1 year beyond the warranty period	The warranty period is extended for 1 year beyond the warranty period. 2 years of extended warranty can be selected in 2 items, and so on. The service does not include calibration, only one-way freight.
3622G-EWT1	The warranty period is extended for 1 year beyond the warranty period	The warranty period is extended for 1 year beyond the warranty period. 2 years of extended warranty can be selected in 2 options, and so on. The service does not include calibration, only one-way freight charges.
3622H-EWT1	The warranty period is extended for 1 year	The warranty period is extended for 1 year beyond the warranty period. 2 years of extended warranty

Option No.	Description	Function and performance
	beyond the warranty period	can be selected in 2 options, and so on. The service does not include calibration, only one-way freight of goods is included.
3622K-EWT1	The warranty period is extended for 1 year beyond the warranty period	The warranty period is extended for 1 year beyond the warranty period. 2 years of extended warranty can be selected in 2 options, and so on. The service does not include calibration, only one-way freight charges.