S4025 Spectrum Analyzer

(9kHz to 6/9/20/26.5/44/54GHz)

Saluki Technology Inc.

Product Overview

The Saluki S4025 spectrum analyzer is a new generation of high-performance handheld spectrum analyzer, with a frequency measurement range of 9kHz to 54GHz, mainly used for installation and commissioning of wireless communication equipment in the field, maintenance and interference detection, etc. It is small, lightweight, highly adaptable to the environment, flexible in power supply and easy to operate.

S4025 spectrum analyzer has many function modes such as Real-time Spectrum Analyzer，Interference Analyzer, Channel Scanner, Field Strength Measurement, USB CW and Peak Power Measurement, AM/FM/PM Analyzer, Location Analyzer, it also has the function of Channel Power, Occupied Bandwidth, Adjacent Channel Power, Spectrum Emission Mask, Carrier-to-Noise Ratio, Harmonic Distortion, Spurious Emission Mask, Indoor/Outdoor Map Coverage and other intelligent measurement. The spectrum analyzer supports LAN, USB, Micro SD card, Wi-Fi wireless communication and other interfaces. The instrument adopts a 10.1-inch capacitive touch screen, which supports marker dragging, frequency and amplitude parameters dragging and scaling, etc. The product can be applied to mobile communication, satellite communication, radar detection, microwave communication, on-site debugging and installation and maintenance of electronic reconnaissance and countermeasure equipment, interference source direction finding and map positioning, transient time-varying signal testing, etc.

Main Features

- **Frequency range coverage: 9 kHz to 54 GHz, low frequency can be extended to 5 kHz, full-band pre-amplifier are configured**

- **RF performance specifications:**

  DANL: ≤-165dBm/Hz(2MHz~2GHz, Pre-amplifier on, Typ. for S4025A/B/D Model)

  　　　　≤-163dBm/Hz(2MHz~2GHz, Pre-amplifier on, Typ. for S4025E/G/K Model)

  SSB Phase Noise: ≤-113dBc/Hz@100kHz offset@1GHz carrier(Typ.)

  　　　　　　　≤-108dBc/Hz@100kHz offset@10GHz carrier(Typ.)

  TOI: +16dBm@900MHz(Typ.)

  Total Amplitude Uncertainty: ±1.0dB(Typ.)

- **Fast Sweep Speed**

  Sweep time< 33ms (20 GHz span, 3 MHz RBW)

  Sweep time< 4s (1 GHz span, 1 kHz RBW, Fast FFT sweep mode)

- **Multiple measurement function modes**

  Spectrum Analyzer, Interference Analyzer (Spectrogram, RSSI), Channel Scanner, Field Strength Measurement, USB CW Power Measurement, USB Peak Power Measurement, AM/FM/PM Analyzer, Location Analyzer, Real-time Spectrum Analyzer (supporting DPX and Spectrogram display), 2G/4G/5G Demodulation Analysis, IQ analyzer, Time Gate Scanning etc.

- **Various intelligent measurement functions**

  Channel Power, Occupied Bandwidth, Adjacent Channel Power, Spectrum Emission Mask, Carrier-to-Noise Ratio, Harmonic Distortion, Spurious Emission Mask, Indoor/Outdoor Map, Gated Sweep, etc. Support GPS/Beidou positioning and frequency disciplined function for the crystal in the instrument, the typical frequency reference accuracy after GPS locking calibration can reach ±10ppb.

- **Multiple types of auxiliary test interfaces and digital interfaces**

10MHz Reference Input and Output, GPS/Beidou Antenna, Zero Span IF Output, Wi-Fi Wireless Communication Interface, LAN, USB, MicroSD, etc.

- **User-friendly operation experience:**

10.1" LCD and capacitive touch screen with 6 independent markers, support for marker dragging, frequency/amplitude parameters dragging and scaling functions, support for signal tracking and peak tracking, 3 display traces, 6 detection methods (Normal, Peak, Negative Peak, Sample, Average, RMS).

- **Excellent field usability:**

Strong environmental adaptability, working temperature -20℃ ~55℃ , storage temperature -50℃ ~70℃ ; light weight, the whole instrument including battery weighs about 3.5kg~3.8kg; supports three vision styles: Default, Black & White, Night Vision; built-in large-capacity lithium-ion battery, typical operating time up to 3~4 hours.

- **Multiple types of optional field test accessories can be configured**

Such as USB CW Power Sensors, USB Peak Power Sensors, omnidirectional antennas, directional antennas, USB electronic compasses, EMI near-field probes, car chargers, Smart Battery Charging Base, etc.

Various Measurement Modes and Options

- **Spectrum Analyzer Mode**

The Spectrum Analyzer function of the S4025 spectrum analyzer is equipped with Channel Power, Occupied Bandwidth, Adjacent Channel Power, Spectrum Emission Mask, Carrier-to-Noise Ratio, Audio Demodulation, Harmonic Distortion, Spectrum Emission Mask, Multi-Carrier Adjacent Channel Power and other test functions as standard, featuring high test sensitivity, fast sweeping speed, large dynamic range and good phase noise performance. S4025 spectrum analyzer has a variety of built-in predefined signal standards that can be called up directly, supports noise marker and frequency counter functions, can display 3 traces simultaneously, and has different detection methods such as Normal, Peak, Negative Peak, Sample, Average, RMS, and supports signal tracking and peak tracking functions.
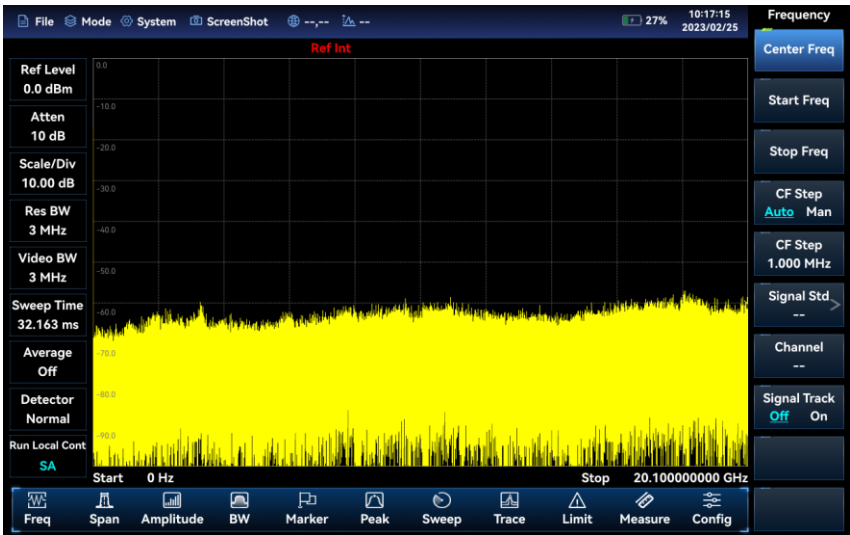

- **Interference Analyzer Mode (Option)**

The Interference Analyzer option features spectrum measurement, Spectrogram and RSSI measurement. The Spectrogram uses a three-dimensional display of frequency-amplitude-time, making it easy to observe periodic or intermittent signals. The different colors in the Spectrogram show the strength of the signal amplitude, RSSI is mainly used to measure the power change of a point

frequency signal in a time period, both Spectrogram and RSSI measurement support the automatic storage function of the signal.
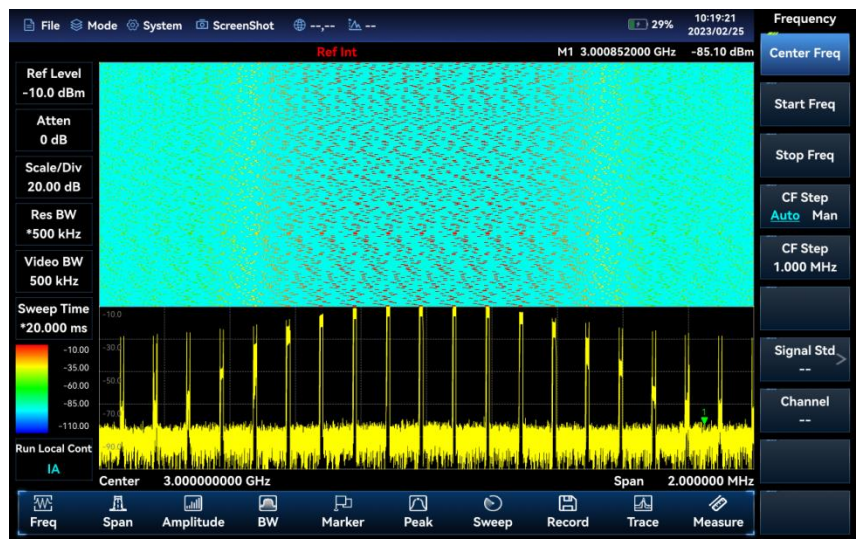
- **Channel Scanner Mode (Option)**

The Channel Scanner Mode provides the measurement of the signal power of multiple channels. The signal power is displayed as a bar graph or as a table, and the signal power of up to 20 channels can be measured. There are three measurement modes depending on how the channels are set up: channel scanner, frequency scanner and list scanner, all of which allow the bandwidth and number of channels to be set.
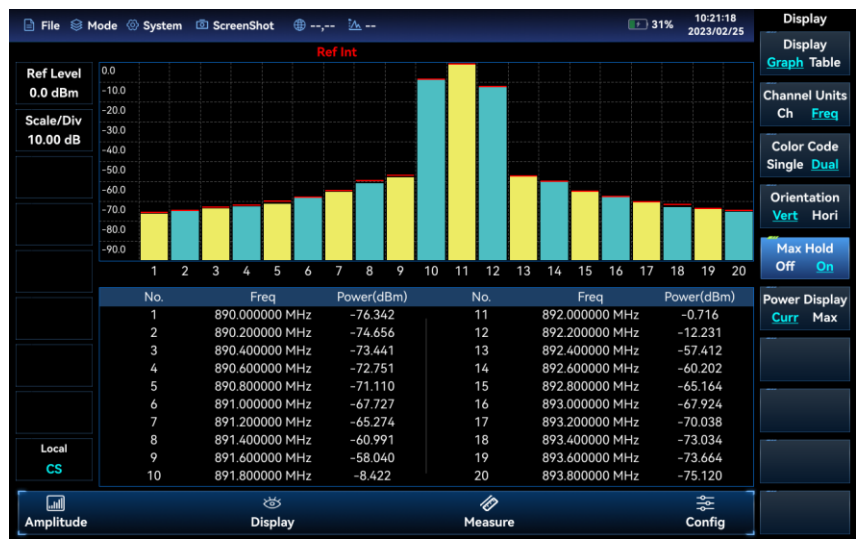

- **AM/FM/PM Analyzer Mode (Option)**

The AM/FM/PM Analyzer mode provides the display of AM, FM and PM modulation signal profiles and the analysis of the associated parameters. The main plots and related parameters are measured as shown below.

RF spectrum: similar to the spectrum analyzer mode, the spectrum plot of the modulated Signal is displayed and the occupied bandwidth can be measured.

Audio Spectrum: displays the spectrum of the demodulated audio signal.

Audio Waveform: displays the waveform of the demodulated audio signal in the time domain.

Parameter analysis function: Carrier power, Demodulation rate, carrier frequency offset, modulation depth (AM), modulation frequency offset (FM), SINAD, modulation distortion, total harmonic distortion and other parameters of the modulated signal can be measured and analyzed.
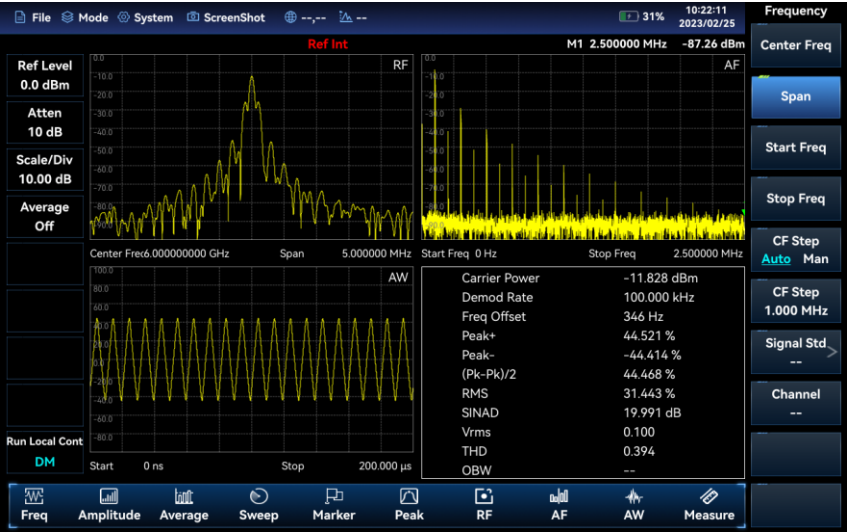
- **USB CW Power Meter(Option)**

  The USB Power Meter can measure the CW signal power up to 40GHz with the external USB power sensor of S87230/S87231/S84232/S87233 series.


- **USB Peak Power Meter (Option)**

  S4025 spectrum analyzer connects S87234D/E/F/L USB peak power sensor through a USB interface, which can test RF/microwave signals up to 67GHz, and realize pulse power measurement in a large dynamic range.
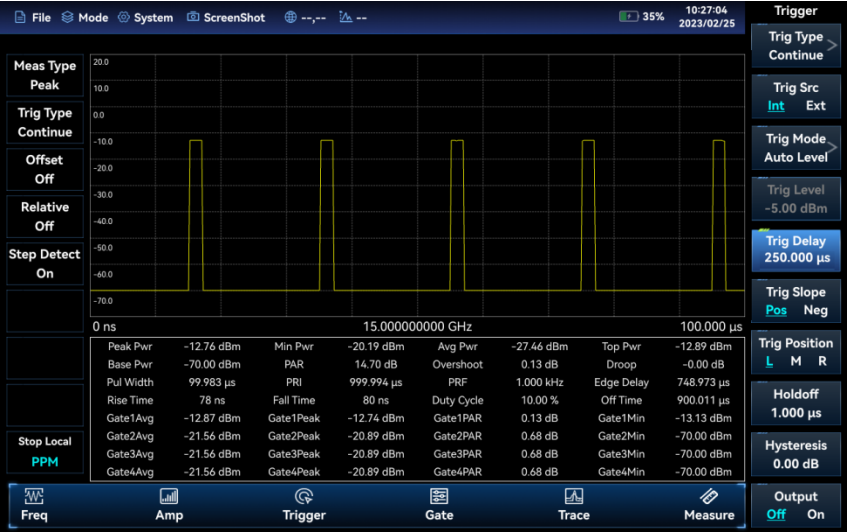
- **Field Strength Measurement (Option)**

  The S4025 spectrum analyzer can be used with portable antennas for field strength measurements and is widely used in space electromagnetic environment monitoring and radio management. The antenna file can be called up directly by the user or the antenna factor can be defined. Field Strength measurements can be made in three modes: point frequency measurements, frequency scan measurements and list scan measurements. Point frequency measurement is performed by setting the point frequency to observe the frequency offset, amplitude and field strength of the current signal; frequency scan measurement is performed by setting the start frequency, step frequency and number of scanning points to observe the amplitude and field strength of a frequency range; list scan measurement is performed by calling a pre-edited or saved list to observe the amplitude and field strength of the listed frequency points.
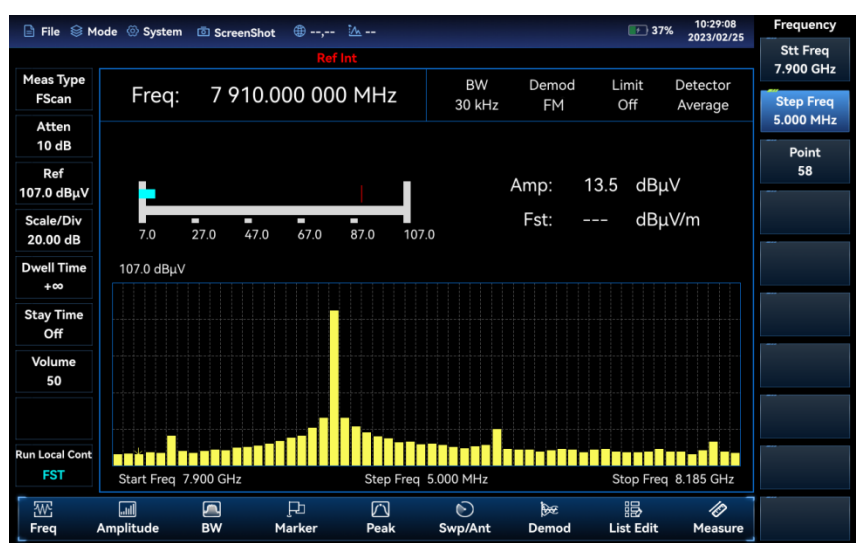
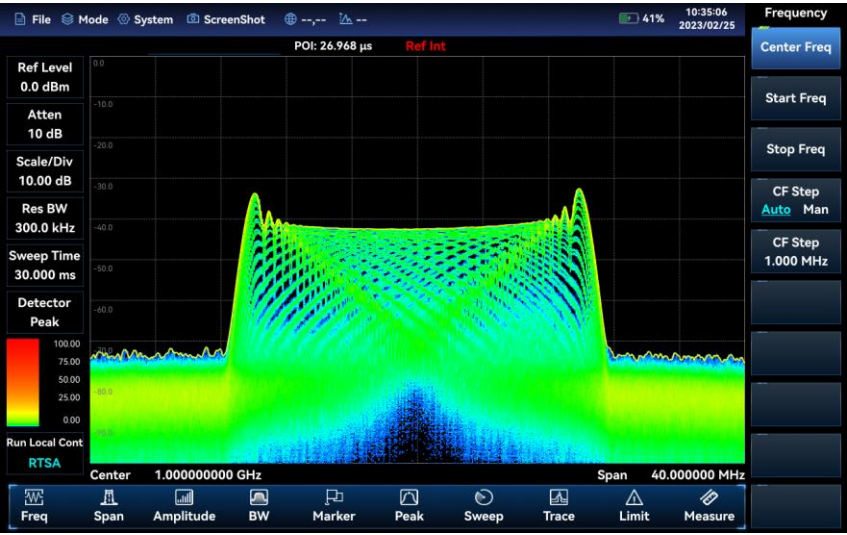- **Location Analyzer Mode (Option)**

  The Location Analyzer option requires a directional antenna, USB electronic compass and GPS/Beidou options to achieve direct interference signal finding, horizontal scan direction finding and map cross-location. When equipped with the ZE9080 series antenna and handheld handle, a separate configuration is not necessary due to its built-in electronic compass.
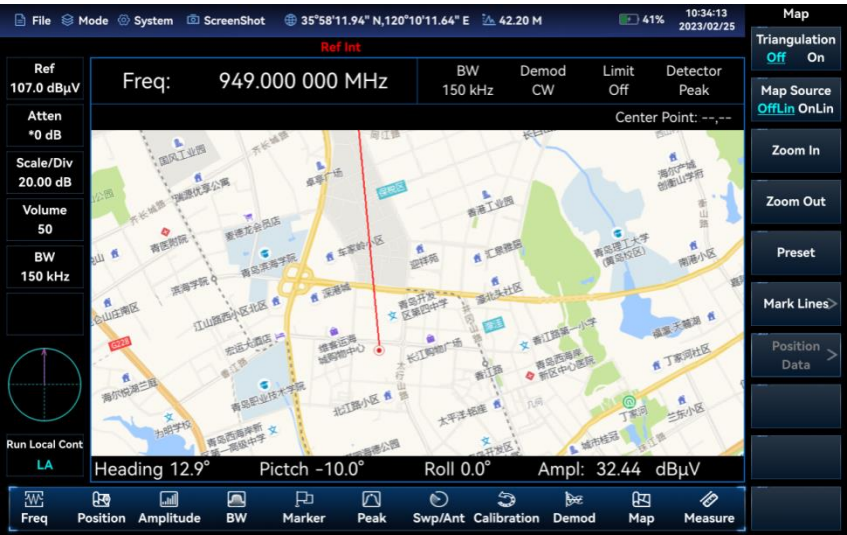
- **Real-time Spectrum Analyzer Mode (Option)**

  The S4025 spectrum analyzer has a Real-time Spectrum analyzer function, which is mainly used for the capture and analysis of transient time-varying signals and burst signals. The real-time analysis bandwidth is up to 40MHz or 120MHz, and the transient signal DPX and Spectrogram measurement functions can be realized.

- **Out-door Map (Option)**

  The Outdoor Map option is a measurement function in Spectrum Analyzer mode that allows RSSI and Adjacent Channel Power Ratio tests to be performed and the test results can be marked on a map in real-time based on time or distance. The test results marked on the map can be saved to the instrument for subsequent recall.

- **Indoor Map** （**Option)**

The Indoor Map option allows RSSI and Adjacent Channel Power Ratio tests to be carried out. As the GPS signal cannot be received indoors, the user has to manually move the position and mark the test results on the map. The test results marked on the map can be saved to the instrument for later recall and viewing. A special software (included with the option) allows the user to convert the floor plan in image format into a tile map for storage on the instrument.

- **Time Gate Function(Option)**

The Time Gate scanning function is used for interference detection of time-division signals, and the time gate scanning function is divided into the time domain window and the frequency domain window. In the time domain window, you can select the signals in a specific time period by setting the [Delay] and [Length], and the frequency domain results of the selected signals will be displayed in the frequency domain window. By setting [Delay] and [Length], the uplink signal can be selected out, so as to achieve the effect of "filtering" the downlink signal (the downlink signal will have an effect on the search of interfering signals).
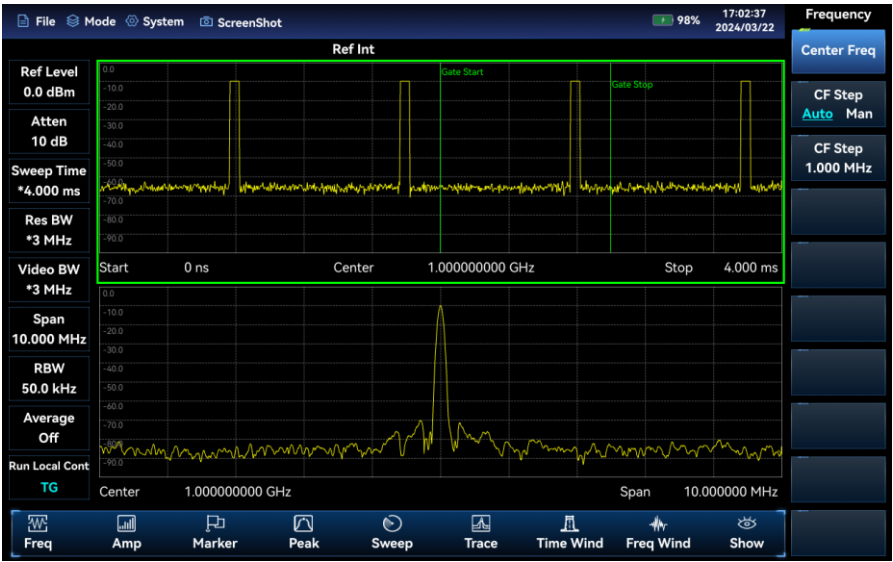
Comprehensive Intelligent Measurement Function

- **Channel Power**
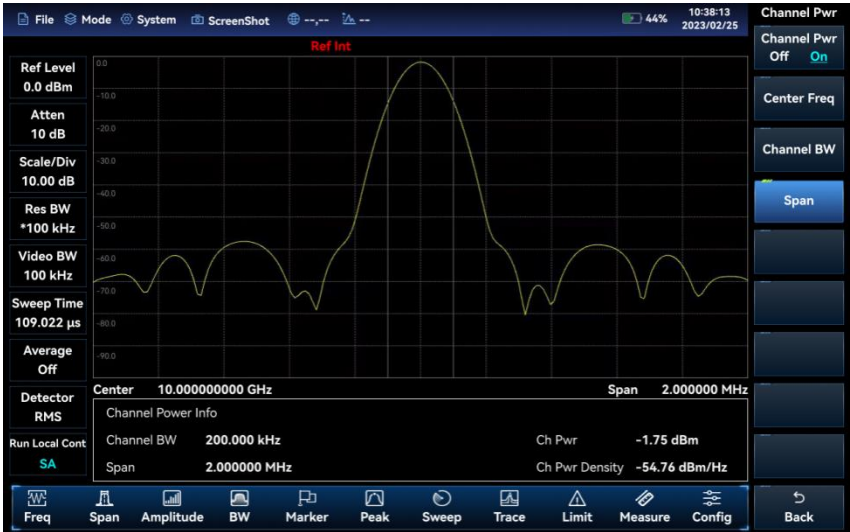
- **Occupied Bandwidth**
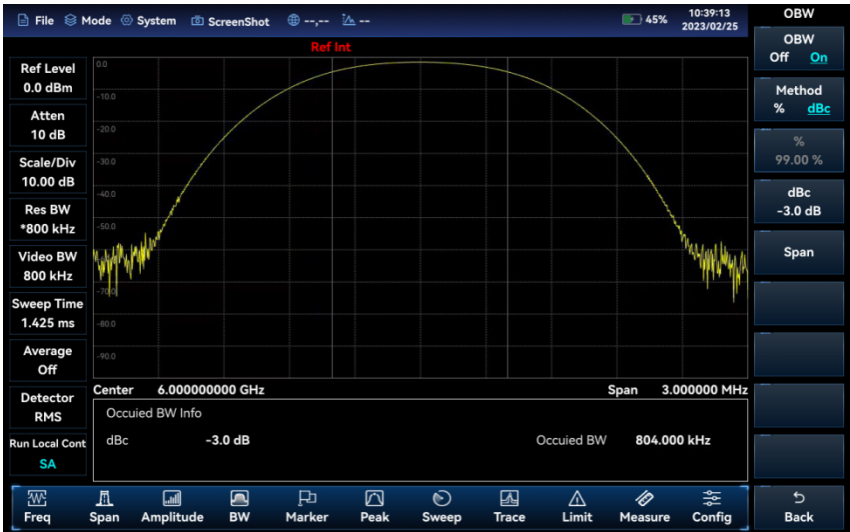
- **Adjacent Channel Power Ratio**

- **Spectrum Emission Mask**
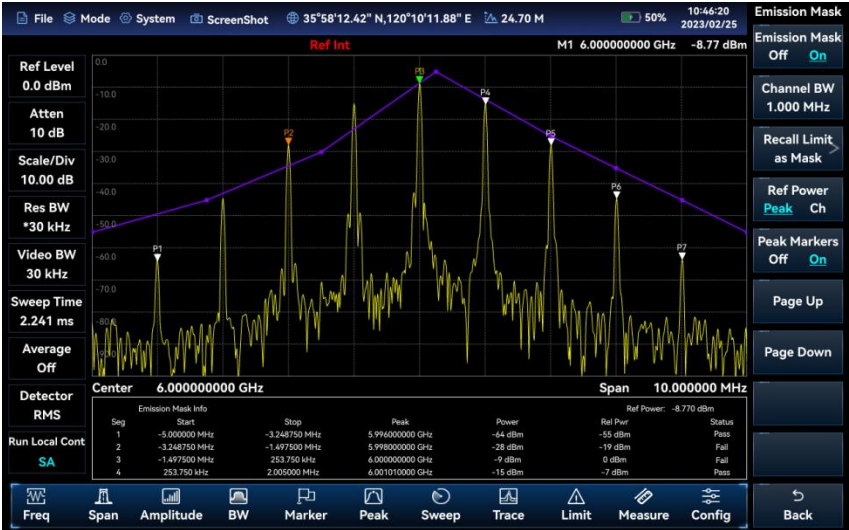
- **Carrier to Noise Ratio**
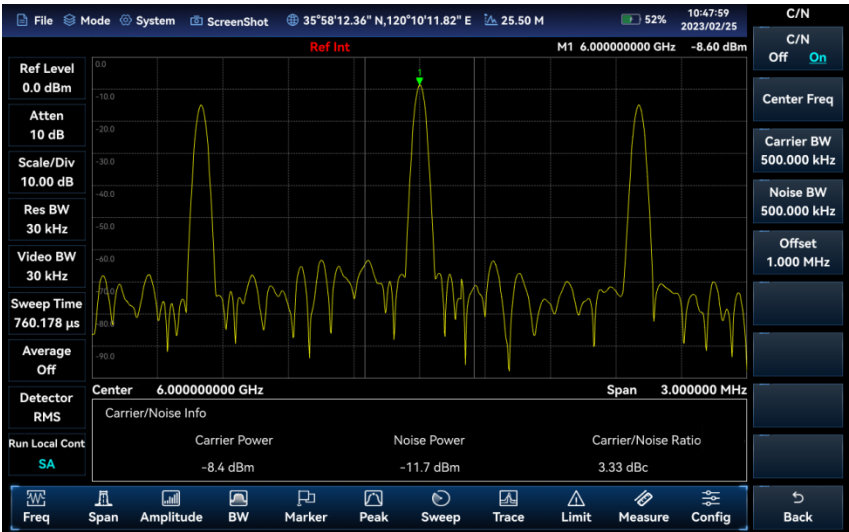
- **Harmonic Distortion**
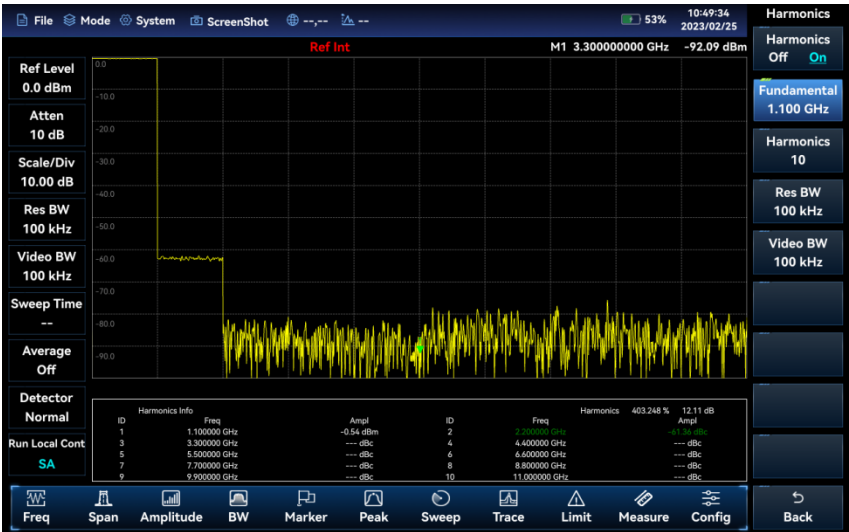
- **Spur Emissions Mask**
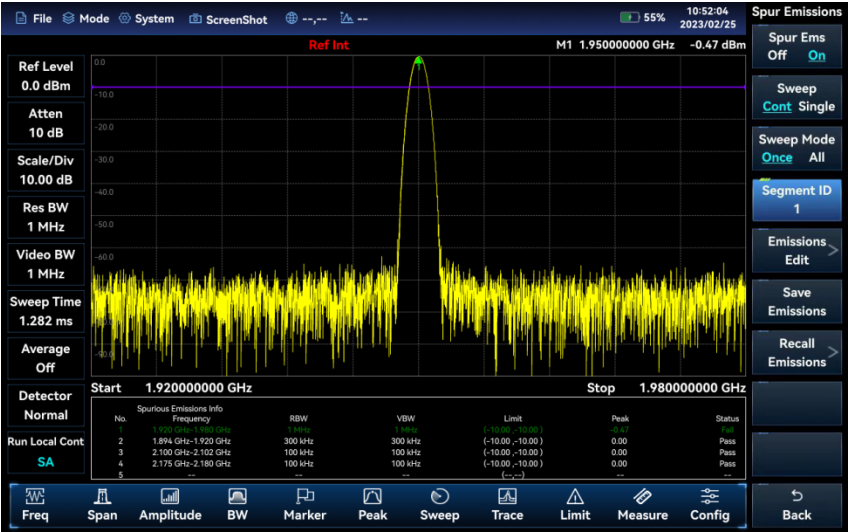
- **Peak List**
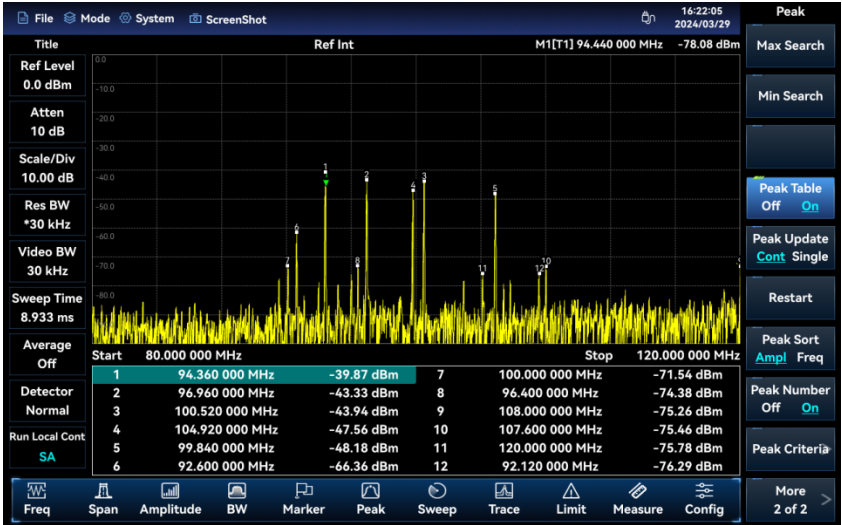
Multiple RF and Auxiliary Test Interfaces
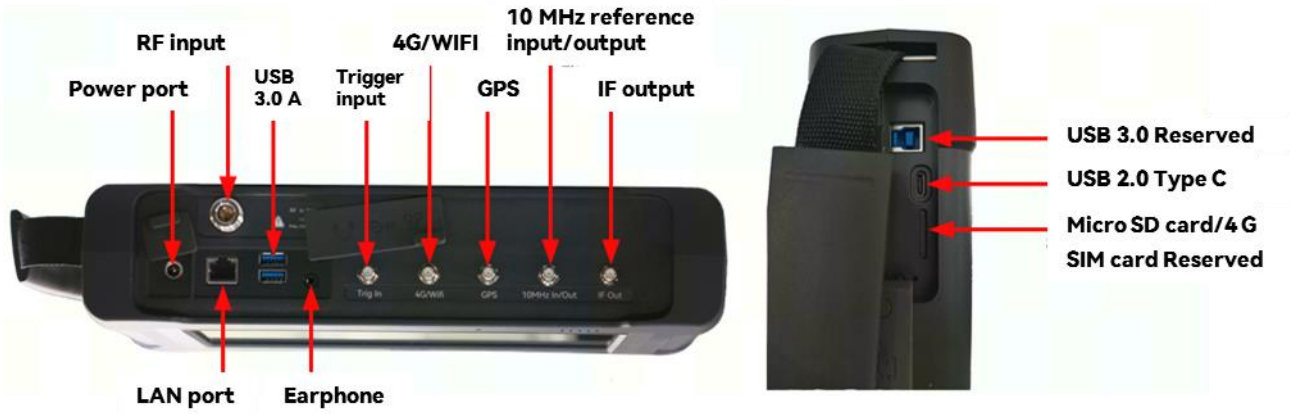
Typical Applications

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

  The S4025 spectrum analyzer has multiple advantages such as high-performance, fast sweeping speed, multiple test functions, easy operation, etc. With a handheld structure, small size, light weight, strong adaptability to the environment, and battery-powered, it can be applied to the field installation and commissioning of various electronic equipment such as radar, communications, electronic countermeasures and electronic reconnaissance, precision guidance and maintenance.

- **Field testing and diagnosis of transmitters and receivers**

  The S4025 spectrum analyzer has a variety of measurement function modes such as Spectrum Analyzer, Real-time Spectrum Analyzer, Interference Analyzer, AM/FM/PM Analyzer, Power Meter, Channel Scanner, Field Strength measurement, etc., and has a variety of intelligent measurement functions such as Channel Power, Occupied Bandwidth, Adjacent Channel Power Ratio, Carrier-to-Noise Ratio, Spurious Mask, Harmonic Distortion, etc., which can provide comprehensive spectrum analysis and diagnosis for field testing of transmitters and receivers. The new product is designed to provide comprehensive spectrum analysis and diagnostic services for transmitter and receiver field testing.

- **Broadband spectrum monitoring, interference identification**

  The S4025 spectrum analyzer can be used for electromagnetic environment detection, radio interference analysis, electromagnetic environment background assessment, spectrum monitoring and identification of illegal channel interference signals by means of external omnidirectional or directional antennas; it can be used for spectrum testing of complex signals such as time division multiple access signals and transient time-varying signals by means of Gated Sweep and Real-time Spectrum Analyzer.

Technical Specifications

Model	S4025A: 9kHz~6GHz S4025B: 9kHz~9GHz S4025D: 9kHz~20GHz S4025E: 9kHz~26.5GHz S4025G: 9kHz~44GHz S4025K: 9kHz~54GHz
Frequency Reference Error	Reference Frequency:10MHz Aging: ±5×10^{-7}/year Initial Frequency Accuracy: ±3×10^{-7} Temperature Stability: ±1×10^{-7}(–20℃ ~+55℃ , Comparative to 25℃ ±10℃) Frequency reference error: ± (last calibration date x aging rate + temperature stability + calibration accuracy) Note: default to the last calibration time is 1 year, the performance is guaranteed by the crystal manufacturer
Sweep Time	Range: 1μs~6000s(Zero Span) Accuracy: ±1.0%(Zero Span)
Frequency Readout Accuracy	±(Frequency Readout× frequency Reference Error+1%× Span +10%× Resolution Bandwidth)
Frequency Span	Range: 0Hz(Zero Span),10Hz~ Upper limit of frequency range for corresponding models Accuracy: ±1.0%
Resolution Bandwidth	1Hz~20MHz(1–2–3–5–8 steps)
Video Bandwidth	1Hz~20MHz(1–2–3–5–8 steps)
SSB Phase Noise **(1GHz Carrier,+15℃ ~+35℃)**	≤–108dBc/Hz@10kHz,≤–110dBc/Hz@100kHz ≤–118dBc/Hz@1MHz,≤–129dBc/Hz@10MHz
Displayed Average Noise Level **(input port is connected with a 50Ω load, 0dB input attenuation, average detector, the logarithm of video type, RBW normalized to 1Hz,+15℃ to +35℃)**	**S4025A/B/D** **Pre-amplifier ON:** ≤–161dBm(2MHz~2.4GHz),≤–160dBm(2.4GHz~6GHz), ≤–159dBm(6GHz~9GHz), ≤–158dBm(9GHz~14GHz), ≤–156dBm(14GHz~20GHz) **Pre-amplifier OFF:** ≤–142dBm(2MHz~2.4GHz),≤–141dBm(2.4GHz~6GHz), ≤–140dBm(6GHz~9GHz), ≤–138dBm(9GHz~14GHz), ≤–138dBm(14GHz~20GHz) **S4025E/G/K** **Pre-amplifier ON:** ≤–159dBm(2MHz~9GHz), ≤–156dBm(9GHz~14GHz) ≤–154dBm(14GHz~21GHz), ≤–154dBm(21GHz~32GHz) ≤–152dBm(32GHz~40GHz), ≤–148dBm(40GHz~44GHz) ≤–145dBm(44GHz~50GHz), ≤–140dBm(50GHz~54GHz) **Pre-amplifier OFF:** ≤–140dBm(2MHz~6GHz), ≤–138dBm(6GHz~9GHz) ≤–136dBm(9GHz~14GHz), ≤–136dBm(14GHz~21GHz) ≤–135dBm(21GHz~32GHz), ≤–133dBm(32GHz~40GHz), ≤–130dBm(40GHz~44GHz), ≤–126dBm(44GHz~50GHz), ≤–123dBm(50GHz~54GHz)
Second Harmonic Distortion **(0dB attenuation, –30dBm input signal, Pre-amplifier OFF)**	≤–70dBc(50MHz~27GHz)

TOI **(-15dBm 2-tone signal input,100kHz span,0dB attenuator, Pre-amplifier OFF)**	≥+13dBm(50MHz~54GHz)
Image, multiple and out-of-band response (Mixer Level: -10dBm)	<-65dBc (10MHz~7.5GHz),<-60dBc (7.5GHz~10.5GHz), <-65dBc (10.5GHz~54GHz)
Residual Response (RF input：50 Ω load, input attenuation: 0dB)	**Pre-amplifier ON:** ≤-110dBm (10MHz~3GHz),≤-105dBm (3GHz~9GHz) ≤-103dBm (9GHz~12GHz),≤-100dBm (12GHz~20GHz) ≤-95dBm (20GHz~54GHz) **Pre-amplifier OFF:** ≤-90dBm (10MHz~20GHz) ≤-85dBm (20GHz~54GHz)
Reference Level	Range: -150dBm~+30dBm
Absolute Amplitude Accuracy (Attenuation: 10dB,-15dBm input power level, Pre-amplifier: OFF, RBW 1kHz)	**S4025D** ±1.30 dB (10MHz to 20GHz)
	S4025A/B/E/G/K： ±1.00 dB (10MHz～20GHz) ±1.40 dB (20GHz～44GHz) ±1.80 dB (44GHz～54GHz)
Input Attenuator	Attenuation range: 0~30dB,2dB steps
Maximum Input Power	S4025A/B/D:+27dBm CW Power(input frequency ≥50MHz) S4025E/G/K:+25dBm CW Power(input frequency ≥50MHz)
Display	Logarithmic Scale: 0.1~10dB/div, minimum 0.1dB step (10 division display) Scale Unit: V, A, W, dBm, dBW, dBV, dBmV, dBμV, dBA, dBmA, dBμA
Detector Type	Normal, Peak, Negative peak, Sample, Average, RMS
Dimensions	316.5mm(W)×236.5mm(H)×75mm(D) (Without side strap and interface plug, the back bracket is closed) 316.5mm(W)×236.5mm(H)×68mm(D) (Without side strap、 interface plug and back bracket)
Weight	S4025A/B/D: Typical: 3.0kg (without internal battery),3.5kg (with internal battery) S4025E/G/K: Typical: 3.3kg (without internal battery),3.8kg (with internal battery)
Working Temperature	-20℃ ~+55℃ (Battery discharge: -20℃ ~+55℃ , Battery charge: +10℃ ~+45℃)
Storage Temperature	-50℃ ~+70℃ (Storage temperature of the battery: -20℃ ~+50℃ ,Storage time:＜1 month)
Electromagnetic Compatibility	Conforms to the relevant requirements of item 3.9.1 of GJB3947A-2009
Power Input Requirement	AC power adapter: input voltage: 100 to 240VAC,50/60Hz Output voltage: 19VDC,4.7A Built-in Lithium-ion rechargeable battery: Nominal voltage: 10.8V
Power Consumption	S4025A/B/D: Typical: 22W~28W (Spectrum Analyzer mode，default state) S4025E/G/K: Typical: 26W~33W (Spectrum Analyzer mode，default state)
Battery Operating Time	S4025A/B/D: Typical: 4h (Spectrum Analyzer mode，default state) S4025E/G/K: Typical: 3h (Spectrum Analyzer mode，default state)
Test Interface	S4025A/B/D RF input: N(F) connector S4025E RF input: 3.5mm(M) connector S4025G/K RF input: 2.4mm(M) connector

Other Interfaces	10MHz reference input/output: SMA(f) External trigger input: SMA(f) GPS antenna: SMA(f)(option) IF output: SMA(f)(option) Wi-Fi/4G antenna: SMA(f)(option, The input interface of 4G antenna is reserved and not supported for now.)
Communication and Auxiliary Interfaces	USB interface:　2　USB3.0 A-type interface 　　　　　　　　 1　USB2.0 Type C-type interface 　　　　　　　　 1　USB3.0 B-type interface(reserved) LAN interface:　standard RJ-45 type Audio phone interface:　standard 3.5mm SD/SIM card: Micro SD card and SIM card slot(The 4G option is reserved)

Ordering Information

- **Main Unit:** S4025A Spectrum Analyzer(9kHz~6GHz)

  S4025B Spectrum Analyzer(9kHz~9GHz)

  S4025D Spectrum Analyzer(9kHz~20GHz)

  S4025E Spectrum Analyzer(9kHz~26.5GHz)

  S4025G Spectrum Analyzer(9kHz~44GHz)

  S4025K Spectrum Analyzer(9kHz~54GHz)

- **Standard Package**

No.	Description	Quantity	Remarks
1	**Power line assembly**	1	Standard 3-Phase Power Cord Power adapter:100~240V 50/60Hz input, 19V,4.7A output Lithium-ion rechargeable battery
2	**Product quick user guide**	1	Quick start using the instrument
3	**Product certificate**	1	Certificate of Conformity

- **Option**

No.	Option	Description	Function
1	**S4025-01**	Optional Accessories of English Version	English Signs, Menu
3	**S4025-03**	User Manual (English)	User Manual English Version
5	**S4025-05**	Programming Manual (English)	Programming Manual English Version
6	**S4025-S01**	USB CW Power Meter Option	CW Power measurement function available with external USB continuous wave power sensor S87230/S87231/S87232/S87233.
7	**S4025-S02**	USB Peak Power Meter Option	Peak power measurement is available and requires the S87234D/E/F/L USB peak/ average power sensor to be used.
8	**S4025-S03**	Interference Analyzer Option	Provides spectrogram, RSSI measurements and more
9	**S4025-S04**	Channel Scanner Option	To Realize Signal Power Measurement of Multiple Channels and Frequency
10	**S4025-S05**	Field Strength Option	For measuring the radiation intensity of the electric field of the device under test.
11	**S4025-S06**	Outdoor Map Option	RSSI test and Adjacent Channel Power Ratio test can be done under the outdoor interference map, and the test results can be marked on the map in real time according to time or distance, to be used S4025 the S4025-H01 option.
12	**S4025-S07**	Indoor Map Option	RSSI and Adjacent Channel Power Ratio tests can be carried out under the indoor map, with the results marked on the map by dotting the correlation between signal strength and color.
13	**S4025-S08**	AM/FM/PM Analyzer Option	Realize AM, FM and PM modulation signal analysis and measurement function.

No.	Option	Description	Function
14	S4025-S09	Zero Span IF Output	Output IF signal at zero span
15	S4025-S10	Gated Sweep Option	Used for time division interference signal testing
16	S4025-S11	Location Analyzer Option	For locating external sources of interference or unknown signals, to be used in conjunction with the S4025-H01 option, the USB electronic compass option and the directional antenna option.
17	S4025-S12	40MHz Bandwidth Real-time Spectrum Analyzer Option	Provide 40 MHz bandwidth Real-time Spectrum analysis function
18	S4025-S13	List Sweep Option	Realize continuous sweep of multiple frequency bands
19	S4025-S14	IQ Analyzer Option	Realization of IQ data capture and display function
20	S4025-S15	GSM/EDGE Measurement Option	2G GSM/EDGE demodulation analysis with S4025-H37X option
21	S4025-S16	LTE Analyzer Option	Demodulation analysis of 4G LTE FDD/TDD signals with S4025-H37X option
22	S4025-S17	5G NR Option	Demodulation of 5G NR signals can be analyzed with S4025-H37X option
23	S4025-H01	GPS/Beidou Location	GPS or Beidou positioning function can be realized through the external antenna.
24	S4025-H02	Wi-Fi Communication Option	Wireless communication with external devices.
25	S4025-H03	Aluminium alloy transit case with wheels and handle	Tie rod aluminium alloy box
26	S4025-H04	Transit case with wheels and handle	Pull-rod transport box
27	S4025-H05	Backpack	Portable Backpack
28	S4025-H06	Power Adapter	Power Adapter
29	S4025-H07	9900mAh Lithium-ion Rechargeable Battery	Standby battery pack, nominal voltage 10.8V, battery capacity 9900mAh, not suitable for air transport carry-on.
30	S4025-H08	9000mAh Lithium-ion Rechargeable Battery	Standby battery pack, nominal voltage 10.8V, battery capacity 9000mAh, suitable for air transport carry-on.
31	S4025-H09	Vehicle Power Adaptor	Car charger with input voltage 12~24V and output voltage 19V for powering handheld measuring instruments.
32	S4025-H10	Smart Battery Charging Base	Lithium-ion battery charging stand
33	S4025-H11	Micro SD Card	Micro SD card, capacity: 128G.
34	S4025-H12	S87230 USB CW Power Sensor	Frequency range: 9kHz~6GHz, Interface: N(m).
35	S4025-H13	S87231 USB CW Power Sensor	Frequency range: 10MHz~18GHz, Interface: N(m).
36	S4025-H14	S87232 USB CW Power Sensor	Frequency range: 50MHz~26.5GHz, Interface: 3.5mm(m).
37	S4025-H15	S87233 USB CW Power Sensor	Frequency range: 50MHz~40GHz, Interface: 2.4mm(m).
38	S4025-H16	S87234 USB Peak/ CW Power Sensor	Frequency range: 50MHz~18GHz, Interface: N(m).
39	S4025-H17	S87234E USB Peak/ CW Power Sensor	Frequency range: 50MHz~26.5GHz, Interface: 3.5mm(m).
40	S4025-H18	S87234F USB Peak/ CW Power Sensor	Frequency range: 50MHz~40GHz, Interface: 2.4mm(m).
41	S4025-H19	S87234L USB Peak/ CW	Frequency range: 500MHz~67GHz, Interface:

No.	Option	Description	Function
		Power Sensor	1.85mm(m).
42	S4025-H20	ZE9080 Directional Antenna A	Frequency range: 9kHz~20MHz, Interface: N(f). Recommended for use with H24.
43	S4025-H21	ZE9080 Directional Antenna B	Frequency range: 20MHz~200MHz, Interface: N(f). Recommended for use with H24
44	S4025-H22	ZE9080 Directional Antenna C	Frequency range: 200MHz~500MHz, Interface: N(f). Recommended for use with H24
45	S4025-H23	ZE9080 Directional Antenna D	Frequency range: 500MHz~8GHz, Interface: N(f). Recommended for use with H24.
46	S4025-H24	ZE9080 Antenna Amplifier	Frequency range: : 9kHz~8GHz,N(f), can be used with the ZE9080 Antenna Module A/B/C/D option, Internal with amplifier and electronic compass.
47	S4025-H25	ZE9080 Antenna Transport Case	Transport case for ZE9080 antenna, to hold ZE9080 Antenna Module A/B/C/D and ZE9080 handheld module.
48	S4025-H26	700MHz~6GHz Directional Antenna	Active Log-periodic Antenna, Frequency: 700MHz~6GHz, Interface: SMA(f).
49	S4025-H27	680MHz~10GHz Directional Antenna	Active Log-periodic Antenna, Frequency: 680MHz~10GHz, Interface: SMA(f).
50	S4025-H28	680MHz~20GHz Directional Antenna	Active Log-periodic Antenna, Frequency: 680MHz~20GHz, Interface: SMA(f).
51	S4025-H29	6GHz Omni-directional Antenna	Portable Omni-directional Antenna, Frequency: 680MHz~6GHz, Interface: SMA(m).
52	S4025-H30	8GHz Omni-directional Antenna	Portable Omni-directional antenna, Frequency: 300MHz~8GHz, Interface: SMA(m).
53	S4025-H31	700MHz~6GHz Passive Directional Antenna	Passive Log-periodic Antenna, Frequency: 700MHz~6GHz, Interface: SMA(f).
54	S4025-H32	680MHz~10GHz Passive Directional Antenna	Passive Log-periodic Antenna , Frequency: 680MHz~10GHz, Interface: SMA(f)
55	S4025-H33	680MHz~18GHz Passive Directional Antenna	Passive Log-periodic Antenna, Frequency: 680MHz~18GHz, Interface: SMA(f).
56	S4025-H34	USB Electronic Compass	External USB Electronic Compass can be used with S4025-H26~S4025-H28, S4025-S11 options.
57	S4025-H35	N/SMA-JJ RF Cable(2m)	N/SMA (M-M) RF coaxial cable, DC~18GHz,length: 2m
58	S4025-H36	PBS1 Near-field Probe	Maximum frequency: 9 GHz, with 1 electric field probe and One magnetic field probe for 6mm, 12mm, 25mm and 50mm, Interface: SMB(m).
59	S4025-H37A	120MHz Bandwidth Real-time Spectrum Analysis Option	120MHz bandwidth real-time spectrum analysis option for S4025A only.
60	S4025-H37B	120MHz Bandwidth Real-time Spectrum Analysis Option	120MHz bandwidth real-time spectrum analysis option for S4025B only.
61	S4025-H37D	120MHz Bandwidth Real-time Spectrum Analysis Option	120MHz bandwidth real-time spectrum analysis option for S4025 only.
62	S4025-H37E	120MHz Bandwidth Real-time Spectrum Analysis Option	120MHz bandwidth real-time spectrum analysis option for S4025E only.
63	S4025-H37G	120MHz Bandwidth Real-time Spectrum Analysis Option	120MHz bandwidth real-time spectrum analysis option for S4025G only.

No.	Option	Description	Function
64	**S4025-H37K**	120MHz Bandwidth Real-time Spectrum Analysis Option	120MHz bandwidth real-time spectrum analysis option for S4025K only.
65	**S4025A-JL**	Calibration Service	Provides metrological calibration services, provides metrological reports, applies to S4025A only.
66	**S4025B-JL**	Calibration Service	Provides metrological calibration services, provides metrological reports, applies to S4025B only.
67	**S4025D-JL**	Calibration Service	Provides metrological calibration services, provides metrological reports, applies to S4025D only.
68	**S4025E-JL**	Calibration Service	Provides metrological calibration services, provides metrological reports, applies to S4025E only.
69	**S4025G-JL**	Calibration Service	Provides metrological calibration services, provides metrological reports, applies to S4025G only.
70	**S4025K-JL**	Calibration Service	Provides metrological calibration services, provides metrological reports, applies to S4025K only.
71	**S4025A-EWT1**	Extended Warranty-1 year	Extended 1-year out of standard warranty, 2 optional for 2-year extended warranties, and so on, service does not include calibration, one-way shipping only
72	**S4025B-EWT1**	Extended Warranty-1 year	Extended 1-year out of standard warranty, 2 optional for 2-year extended warranties, and so on, service does not include calibration, one-way shipping only
73	**S4025D-EWT1**	Extended Warranty-1 year	Extended 1-year out of standard warranty, 2 optional for 2-year extended warranties, and so on, service does not include calibration, one-way shipping only
74	**S4025E-EWT1**	Extended Warranty-1 year	Extended 1-year out of standard warranty, 2 optional for 2-year extended warranties, and so on, service does not include calibration, one-way shipping only
75	**S4025G-EWT1**	Extended Warranty-1 year	Extended 1-year out of standard warranty, 2 optional for 2-year extended warranties, and so on, service does not include calibration, one-way shipping only
76	**S4025K-EWT1**	Extended Warranty-1 year	Extended 1-year out of standard warranty, 2 optional for 2-year extended warranties, and so on, service does not include calibration, one-way shipping only

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