S2439D
Microwave Power Meter
(DC ~ 110GHz)

Saluki Technologies Co., Ltd

Product Overview

The S2439D microwave power meter can be equipped with different types of USB power sensors to achieve accurate measurement of average power and peak power; it can connect up to four power sensors simultaneously for high-efficiency multi-channel measurement; through the function keys and touchscreen on the front panel, fast power measurement can be realized in either numerical or waveform display mode.

The following table shows the types of USB power sensors compatible with the S2439D microwave power meter and their measurement modes allowing you to choose the appropriate USB power sensor according to your needs.

Model	Item	Feature	Measurement function (mode)				
			CW average	Modulated average	Trace	Time gate	CCDF
S87233	USB CW power sensor	fast and accurate measurement of CW signal	•	—	—	—	—
S87235	USB average power sensor	CW and modulated signal rapid and accurate measurement	•	•	—	—	—
S87236	USB peak/average power sensor	pulse test signal time and power parameter measurement analysis	•	•	•	•	•
S87237	USB thermocouple power sensor	accurate power measurement for the power reference and calibration laboratory	•	•	—	—	—

Main Characteristics

- Small in size, lightweight, and battery-powered, suitable for production lines, laboratories, and field use
- Connect up to 4 power sensors simultaneously for multi-channel power testing
- Combination of buttons and touchscreen for easy operation
- Quick and stable waveform display through the 'Auto Setup' feature
- Equipped with GPIB, LAN, and USB interfaces for remote control operation

Compatible with multiple types of high-accuracy power sensors

The S2439D microwave power meter is compatible with the S87233, S87235, S87236, and S87237 series power sensors, supporting plug-and-play measurement. The power sensors are compensated before leaving the factory, with all compensation data stored inside the sensor, requiring no calibration before measurement and offering long-term stability.

Abundant sensor interfaces

Front panel interfaces

Back panel interfaces

The front panel of the S2439D has two channel interfaces, A and B, the USB interface t he lower right corner can be shared with the rear panel C channeland onlTy one sensor can be connected at a time to either the lower right USB interface or the rear panel C channel.

The rear panel of the S2439D has two channel interfaces, C and D; the USB interface can be shared with the rear panel D channel, and only one sensor can be connected at a time to either the USB interface or the D channel.

Abundant measurement mode s

The S2439D Microwave Power Meter supports multiple measurement modes.

Average mode: It can accurately measure the average power of continuous wave signals and various modulated signals, covering common wireless signals such as 5G, LTE, WIFI, WLAN.

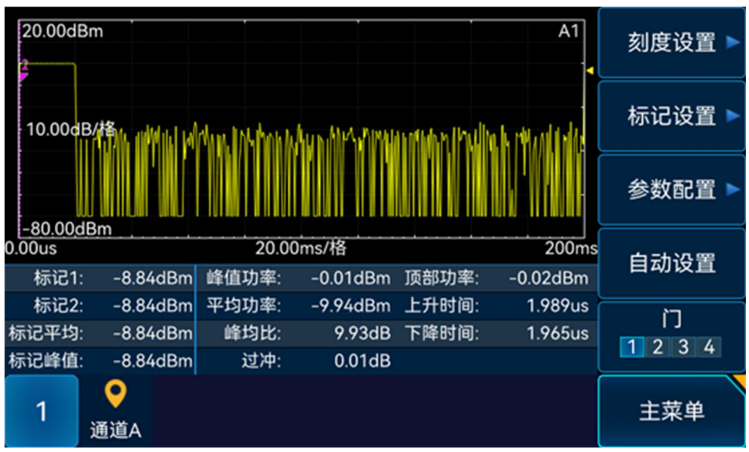
Trace mode: Displays the envelope power over time, and the measurement results are displayed in a combination of waveform and numerical form, supporting up to 16 pulse parameters to be measured simultaneously, and up to 8 parameters can be displayed simultaneously in the panel.

The S2439D microwave power meter is equipped with a battery option, which connects 2 power sensors when fully charged, and can work continuously for no less than 5 hours, which is convenient for you to test in the field.

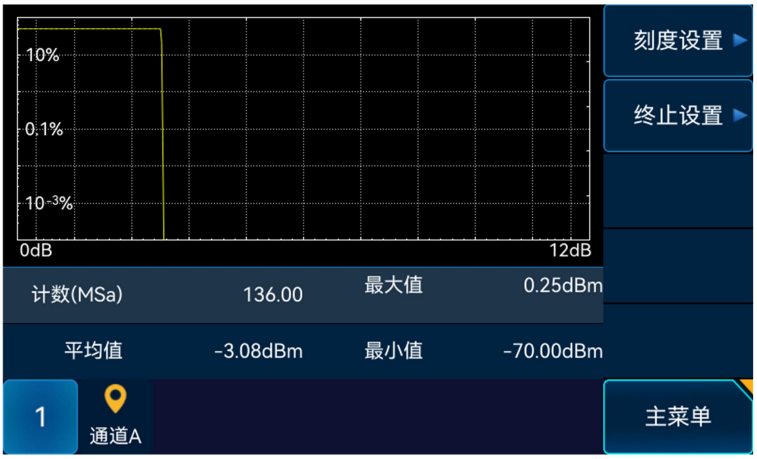
Time gate mode: It can measure the average power, peak power, peak-to-peak ratio, and minimum power within up to four independent time gates, define the starting position and length of each time gate, and also calculate the measured values of 2 time gates.

Burst Power Mode: By setting the normal trigger mode, you can quickly capture and measure the burst power of large periods.

CCDF mode: CCDF statistical measurement mode, which can count the percentage of power greater than or equal to a specified value.



Burst power mode



CCDF mode

External trigger function, useful for low-power testing and timed testing

By accessing the triggering cable to external trigger synchronization signal, stable triggering of low-power signals can be achieved, and timed measurements can also be initiated according to the external trigger signal.

Wider operating temperature range

The S2439D microwave power meter and series of USB power sensors operate within a temperature range of -10° C to 50° C, and even at the extreme limits of this range, they maintain the same power measurement accuracy as under normal temperature conditions.

Supports 2U standard rack-mounted kit

The 2U standard rack-mount kit option for the S2439D microwave power meter makes it easy to integrate into your cabinet and set up a test system.

Battery option provides over 5 hours of continuous operation

The 2S439D microwave power meter comes with a battery option. When fully charged and connected to two power sensors, it can operate continuously for more than 5 hours, making it convenient for field testing.

Rich programmable interfaces

The S2439D comes standard with LAN, USB, and GPIB interfaces, with LAN communication fully supporting Socket, VXI-11, and HiSLIP protocols, as well as network auto-discovery, making instrument connectivity simple and efficient.

Technical Specifications

Model	S2439D
Channels	4
Frequency range	DC~ 110GHz (depends on power sensor)
Power range	-70dBm ~ +44dBm (depends on power sensor)
Max. display resolution	Log：0.001dB Linear：0.0001
Channel offset range	±100.00dB
Level scale range	2 ns/div ~ 3600 s/div
Reference source frequency	50MHz±0.5MHz (23℃±5℃)
Reference source power	1.000mW(1±1.0%) (23℃±5℃)
Display	5 inch colorful LCD, display resolution: 800 x 480
Power	100VAC~240VAC, 50Hz~60Hz
Power consumption	<25W (with 2 power sensor connected, no battery)
Battery (option)	Nominal voltage: 14.4V, nominal capacity: 91.76Wh Battery life: >5h (with 2 power sensors connected)
Dimensions (W×H×D)	Overall dimensions: (231.0±2.5) mm × (105.6±1.5) mm × (251.0±2.5) mm Nominal dimensions: (213.0±1.2) mm × (88.1±0.8) mm × (213.5±1.2) mm, excluding the casing
Weight	<2.4 kg (without battery), <3.0 kg (with battery)
Operating/storage temperature	Operating temperature: -10℃ to 50℃; Storage temperature: -40℃ to 70℃
Communication interface	USB Interface: Type-A host port, 1 on the front panel, 1 on the rear panel; USB Interface: Type-B device port, 1 on the rear panel, used for remote control; LAN Interface: RJ45, used for remote control; GPIB Interface: IEEE-488 bus connector, used for remote control.
Other interface	Trigger input interface: BNC (female), used to connect an external trigger signal; Analog output interface: BNC (female), used to output an analog voltage that follows the power variation.

* Note:

1. The frequency range of the S2439D microwave power meter depends on the frequency range that the connected sensor can cover. When connected with the S87237P USB thermocouple power sensor, the frequency range covers DC~110 GHz.
2. The power range of the S2439D microwave power meter depends on the connected power sensor. For example, when both S87235D and S87235DG power sensors are connected simultaneously, the power range of the two power sensors can cover -70 dBm~44 dBm.

Ordering Information

- **Standard accessories**

No.	Designation	Remarks
1	Power cord	Standard 3-core power cord
2	User manual	--
3	Programming manual	--
4	Certificate of conformity	--

- **Options**

Model	Item	Functions
S2439D-H05	Safety instrument transport case	portable carrying case with handle
S2439D-H06	2U Rack mount kits	for installation in a cabinet
S2439D-H12	English option	English panels, labels, manuals, software
S2439D-H13	Battery option	lithium battery, rated voltage: 14.4V, rated capacity: 91.76Wh
S2439D-JL	Calibration Service	provides calibration services with report
S2439D-EWT1	1-year extended warranty	

Type	Model	Frequency	Power range	Power accuracy	Port
USB CW power sensor	S87233C	8kHz～12GHz	-60dBm～+20dBm	±0.20dB	N-Type(m)
	S87233D	10MHz～18GHz	-70dBm～+20dBm	±0.20dB	N-Type(m)
	S87233E	50MHz～26.5GHz	-70dBm～+20dBm	±0.23dB	3.5mm(m)
	S87233F	50MHz～40GHz	-70dBm～+20dBm	±0.25dB	2.4mm(m)
	S87233L	50MHz～67GHz	-55dBm～+20dBm	±0.33dB	1.85mm(m)
USB average power sensor	S87235B	8kHz～8GHz	-70dBm～+26dBm	±0.20dB	N-Type(m)
	S87235C	10MHz～8GHz	-60dBm～+23dBm	±0.20dB	N-Type(m)
	S87235D	10MHz～18GHz	-70dBm～+26dBm	±0.20dB	N-Type(m)
	S87235F	10MHz～33GHz	-65dBm～+26dBm	±0.23dB	3.5mm(m)
	S87235FA	10MHz～40GHz	-65dBm～+26dBm	±0.24dB	2.92mm(m)
	S87235H	10MHz～50GHz	-65dBm～+23dBm	±0.25dB	2.4mm(m)
	S87235L	50MHz～67GHz	-60dBm～+23dBm	±0.33dB	1.85mm(m)
	S87235DG	10MHz～18GHz	-50dBm～+44dBm	±0.19dB(≤8GHz);±0.23dB(≤18GHz)	N-Type(m)
USB peak/average power sensor	S87236D	50MHz～18GHz	-45dBm～+20dBm	±0.20dB	N-Type(m)
	S87236E	50MHz～26.5GHz	-45dBm～+20dBm	±0.25dB	3.5mm(m)
	S87236F	50MHz～40GHz	-45dBm～+20dBm	±0.30dB	2.4mm(m)
	S87236L	500MHz～67GHz	-45dBm～+20dBm	±0.33dB	1.85mm(m)
USB thermocouple power sensor	S87237D	DC～18GHz	-35dBm～+20dBm	±0.19dB	N-Type(m)
	S87237L	DC～67GHz	-35dBm～+20dBm	±0.25dB	1.85mm(m)
	S87237P	DC～110GHz	-30dBm～+20dBm	±0.31dB	1.0mm(m)