



S8723X Series Continuous Wave USB Power Sensor Datasheet



Saluki Technology Inc.

The document applies to the continuous wave USB power sensors of the following models:

- S87230 continuous wave USB power sensor (9kHz - 6GHz).
- S87231 continuous wave USB power sensor (10MHz - 18GHz).
- S87232 continuous wave USB power sensor (50MHz - 26.5GHz).
- S87233 continuous wave USB power sensor (50MHz - 40GHz).

Preface

Thanks for choosing S8723X continuous wave USB power sensor produced by Saluki Technology Inc.

We devote ourselves to meeting your demands, providing you high-quality measuring instrument and the best after-sales service. We persist with “superior quality and considerate service”, and are committed to offering satisfactory products and service for our clients.

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Document Authorization

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Product Quality Assurance

The warranty period of the product is 36 months from the date of delivery. The instrument manufacturer will repair or replace damaged parts according to the actual situation within the warranty period.

Product Quality Certificate

The product meets the indicator requirements of the document at the time of delivery. Calibration and measurement are completed by the measuring organization with qualifications specified by the state, and relevant data are provided for reference.

Quality/Settings Management

Research, development, manufacturing and testing of the product comply with the requirements of the quality and environmental management system.

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1. Overview

Based on a USB 2.0 full-speed/high-speed adaptive interface, Saluki S8723X Series is a diode detector USB power sensor. An internal high-performance processing chip and a variety of calibration and compensation techniques makes the sensor has a wide frequency range and large power dynamic range. It can be connected to a computer or other electronic measuring instruments use, easy to set up a power test system, particularly useful for field and other low-cost production line testing and power testing.

2. Key Features

- An accurate continuous wave signal absolute power measurement function
- With internal and external zeroing function
- Single sensor size, light weight, easy to carry
- Support USB programmable function, Interchangeable Virtual Instrument (IVI) drivers, support USBTMC (USB Test & Measurement Class) protocol
- Compatible with other USB interface on a computer or measuring instrument, it can be used to quickly set up microwave power measurement system

3. Application

Saluki S8723X Series USB power sensors can be connected to computer to implement power microwave test function, can be connected with Saluki's measuring instruments to achieve power microwave and millimeter wave testing.

- **Connected to a computer**

Be equipped with a USB host interface to the computer, by using a virtual control panel to achieve power microwave test function; Be connected with an automatic test system host computer, through commands compliance with standard SCPI , to establish microwave power measurement system rapidly.

- **With USB-HUB to achieve multi-channel microwave power measurements**

With USB-HUB, it can support multi-channel microwave power measurements functions through a virtual control panel, convenient to facilitate the production line and on-site microwave power monitoring

- **Patched to Saluki other measuring instruments.**

As an option, it can be used for microwave power testing through connecting to Saluki's spectrum analyzer, RF&Microwave multifunctional tester, VNA etc.

4. Specifications

Parameter	S87230	S87231	S87232	S87233
Frequency Range	9kHz - 6GHz	10MHz - 18GHz	50MHz - 26.5GHz	50MHz - 40GHz
Power Range	-50dBm to +20dBm	-60dBm to +20dBm		
Zeroing Accuracy	≤10nW	≤1nW		
Input Port VSWR	100kHz - 6GHz: 1.15	10MHz - 50MHz:1.21 50MHz - 2GHz: 1.15 2GHz - 12.4GHz: 1.20 12.4GHz - 18GHz: 1.27	50MHz - 2GHz: 1.15 2GHz - 12.4GHz: 1.20 12.4GHz - 18GHz: 1.27 18GHz - 26.5GHz: 1.30	50MHz - 2GHz:1.15 2GHz - 12.4GHz:1.20 12.4GHz - 18GHz:1.27 18GHz - 26.5GHz:1.30 26.5GHz - 40GHz:1.50
Input Connector	N (m)		3.5mm (m)	2.4mm (m)
Calibration Factor Uncertainty	±0.16dB	±0.25dB	50MHz - 18GHz: ±0.25dB 18GHz - 26.5GHz:±0.35dB	50MHz - 18GHz: ±0.25dB 18GHz - 40GHz: ±0.35dB
Linearity Power (23 ± 5 °C)	+10dBm to +20dBm: ±0.18dB -40dBm to +10dBm: ±0.14dB -50dBm to -40dBm: ±0.79dB	+10dBm to +20dBm: ±0.18dB -40dBm to +10dBm: ±0.14dB -50dBm to -40dBm: ±0.39dB -60dBm to -50dBm: ±0.79dB		
Max Input power	+23dBm			
Power supply	Mini USB port			
Power Consumption	≤1.8W			
Operating Temp.	0°C to 50°C			
Storage Temp.	-40°C to +70°C			
Dimension(mm)	46.2×35.6×142.6	46.2 ×35.6 ×142.6	46.2×35.6×135.4	46.2×35.6×125.9
Weight	235g	235g	225g	216g

5. Ordering Information

Part No.	Frequency Range
S87230	9kHz - 6GHz
S87231	10MHz - 18GHz
S87232	50MHz - 26.5GHz
S87233	50MHz - 40GHz

6. Standard Package

Item	Name	Description
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1	S8723X Series USB power sensor	1
2	USB cable, 2m	1
3	U disk (PC software and manuals)	1
4	Certificate of Quality	1

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