Quality&**Precise**

MAXWELLON 87235

10MHz~8GHz/ 18GHz/ 33GHz/ 50GHz

USB Average Power Sensor

2023

Maxwellon

87235C/D/F/H USB average power sensor is a diode-detection type high-precision, large dynamic range average power measuring instrument based on the USB 2.0 interface, which can accurately measure the average power of signals in various formats. The frequency range of 87235 series average power probe covers 10MHz-50GHz, and the average power measurement accuracy can reach ≤±0.20dB.

87235 series USB average power sensor is small in size, light in weight, uses USB interface for power supply and communication, and can be connected to a computer for use. It can flexibly expand the power measurement function of electronic measuring instruments and test systems, and is mainly used for field testing, production line testing and system integration.

Key Feature

Broadband, large dynamic range power measurement

The 87235 series includes 4 modules, the frequency covers 10MHz to 50GHz, and the power measurement range covers -70dBm to +26dBm.

Accurate measurement of average power of signals in various formats

The 87235 series USB average power sensor has excellent average power measurement accuracy. The signal formats include continuous wave, pulse modulation, 3G/4G/5G and other vector modulation signals, which are especially suitable for power testing in communications and other fields.

For example, 87235C is in the range of -40dBm to +20dBm, and the power measurement accuracy is ≤±0.20dB. 87235F is in the range of -45dBm to +20dBm, and the power measurement accuracy is ≤±0.23dB.

50000 times/second measurement speed

The 87235 series USB average power sensor can measure up to 50,000 readings per second in buffered mode.

Compact structure and easy to carry

The 87235 series USB average power sensor is a full-featured power measurement device. It does not require a power meter host or external power supply. It can be connected to a computer through the USB interface for power measurement, so it is suitable for on-site testing. With the power measurement soft panel, measurement results and data in various display formats can be obtained intuitively.

Specification

Technical Specifications		
Frequency Range	87235C	10MHz ~ 8GHz
	87235D	10MHz ~ 18GHz
	87235F	10MHz ~ 33GHz
	87235H	10MHz ~ 50GHz
Power Range	87235C	-60dBm to +23dBm
	87235D	-70dBm to +26dBm
	87235F	-65dBm to +26dBm
	87235H	-65dBm to +23dBm
Damage Level	87235C/D/F	Average:+29dBm Peak: +32dBm for <10us duration
	87235H	Average:+26dBm Peak: +29dBm for <10us duration
Power Measurement Accuracy	87235C	±0.20dB (±4.6%)
	87235D	±0.20dB (±4.6%)
	87235F	±0.23dB (±5.3%)
	87235H	±0.25dB (±5.7%)

Technical Specifications		
Maximum VSWR	87235C	1.20 (10MHz ~ 8GHz)
	87235D	1.20 (10MHz ~ 6GHz) 1.26 (6GHz ~ 18GHz)
	87235F	1.16 (10MHz ~ 6GHz) 1.24 (6GHz ~ 16GHz) 1.33 (16GHz ~ 26.5GHz) 1.41 (26.5GHz ~ 33GHz)
	87235H	1.13 (10MHz ~ 6GHz) 1.24 (6GHz ~ 16GHz) 1.29 (16GHz ~ 26.5GHz) 1.32 (26.5GHz ~ 40GHz) 1.48 (40GHz ~ 50GHz)
Calibration Uncertainty	87235C	3.7% (10MHz ~ 8GHz)
	87235D	4.1% (10MHz ~ 18GHz)
	87235F	4.1% (10MHz ~ 18GHz) 5.1% (18GHz ~ 33GHz)
	87235H	4.1% (10MHz ~ 18GHz) 5.1% (18GHz ~ 33GHz) 5.6% (33GHz ~ 50GHz)
Connector	87235C	N-Type(m)
	87235D	N-Type(m)
	87235F	3.5mm(m)
	87235H	2.4mm(m)
Programmable Interface	USB2.0, compatible USB-TMC	
Sampling Rate	50,000/second	
General Information		
Display	Master PC monitor	
Power Supply	+5V, 500mA	
Operation Temperature	0°C to 50°C	
Storage Temperature	-40°C to +70°C	
Operation Humidity	Humidity is not controlled when the temperature is below 10°C, When the temperature range is 10°C ~ 30°C, the relative humidity is (5 ~ 95)%, When the temperature range is 30°C ~ 40°C, the relative humidity is (5 ~ 75)%, When the temperature range is above 40°C, the relative humidity is (5 ~ 45)%.	
Altitude	0 - 4600m	
Weight	<0.4kg	
Dimension (W×H×D)	87235C	52.0mm×34.0 mm×176.0 mm
	87235D	52.0mm×34.0 mm×161.0 mm
	87235F	52.0mm×34.0 mm×150.0 mm
	87235H	52.0mm×34.0 mm×163.0 mm
Vibration	Random vibration: random vibration: frequency 5~100Hz, power spectral density 0.015g^2/Hz; frequency 100-137Hz, slope -6dB; frequency 137-350Hz, power spectral density 0.0075g^2/Hz; frequency 350-500Hz, slope -6dB; Frequency 500Hz, power spectral density 0.0039g^2/Hz.	
Reliable	MTBF (θ_h)≥5000h	
Calibration Period	1 year (recommended)	
Master PC		
Operation System	Windows 10 32-bit or 64-bit; Windows 7 32-bit; Windows XP 64-bit; Linux	
Hardware	Processor: 1GHz or higher (2GHz or higher recommended) RAM: 2GB or more (4GB or more recommended) Hard Disk Space: 1.0GB or more Display: 1280×1024 or higher	

Ordering Information

Model

Part Number	Name	Frequency Range
87235C	USB average power sensor	10MHz ~ 8GHz
87235D	USB average power sensor	10MHz ~ 18GHz
87235F	USB average power sensor	10MHz ~ 33GHz
87235H	USB average power sensor	10MHz ~ 50GHz

Standard

No.	Name	Qty.
1	87235X series USB power sensor	1
2	Power sensor cable, 1.5m	1
3	CD (PC software)	1

Options

Option Number	Name	Note
87235-H01	Power sensor cable, 4.5m	/
87235-H05A	Hard carrying case	Can carry one set
87235-H05B	Hard carrying case	Can carry two sets

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