

AMW-RF-1617PM Series

USB Average Power Sensor

(10MHz -8GHz/18GHz/33GHz/40GHz/50GHz)



Product Overview

AMW-RF-1617PM series USB average power sensor is a USB 2.0 interface-based diode detector type high-precision, large dynamic range average power measurement instrument, can achieve accurate measurement of various formats of signal average power. 1617PM series average power sensor frequency range covers 10MHz ~ 50GHz, the average power measurement accuracy can reach $\leq \pm 0.20\text{dB}$. This product features small size, light weight, USB interface power supply and communication. It can be connected to a computer. It can flexibly expand the power measurement function of electronic measuring instruments and test systems, mainly for field testing, production line testing and system integration.

Main Features

- **Wider frequency band and large dynamic range power measurement**
- **Accurate measurement of the average power of signals in various formats**
- **50,000 readings/s measurement speed**
- **Compact and easy to carry**

Wide band, large dynamic range power measurement

1617PM series USB average power probe, frequency coverage 10MHz ~ 50GHz, power measurement range covers -70dBm ~ +26dBm.

Accurate measurement of the average power of signals in various formats

1617PM series USB average power probe has excellent average power measurement accuracy, signal formats including continuous wave, pulse modulation, 3G/4G/5G and other vector modulated signals, especially suitable for communications and other areas of power testing. For example, 1617PMC in the -40dBm ~ +20dBm range, power measurement accuracy $\leq \pm 0.20\text{dB}$; 1617PMF in the -45dBm ~ +20dBm range, power measurement accuracy $\leq \pm 0.23\text{dB}$.

50,000 times/s measurement speed

The 1617PM series USB average power probe can measure up to 50,000 readings per second in buffered mode.

Compact and easy to carry

The 1617PM series USB average power probes are full-featured power measurement devices that do not require a power meter host or external power supply and can be connected to a PC via the USB interface for power measurement, making them suitable for field testing. Together with the power measurement soft panel, measurement results and data can be obtained

Intuitively in various display formats.

Technical Specifications

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Frequency Range	1617PMC	10MHz ~ 8GHz
	1617PMD	10MHz ~ 18GHz
	1617PMF	10MHz ~ 33GHz
	1617PMFA	10MHz ~ 40GHz
	1617PMH	10MHz ~ 50GHz
Measurement Power Range	1617PMC	-60dBm ~ +23dBm
	1617PMD	-70dBm ~ +26dBm
	1617PMF	-65dBm ~ +26dBm
	1617PMFA	-65dBm ~ +23dBm
	1617PMH	-65dBm ~ +23dBm
Damage Level	1617PMC/D/F	+29dBm, average power; +32dBm, peak power, duration time < 10us
	1617PMH/FA	+26Bm, average power; +29dBm, peak power, duration time < 10us
Amplitude Measurement Accuracy ¹	1617PMC	±0.20dB (±4.6%)
	1617PMD	±0.20dB (±4.6%)
	1617PMF	±0.23dB (±5.3%)
	1617PMFA	±0.24dB (±5.6%)
	1617PMH	±0.25dB (±5.7%)
Maximum VSWR	1617PMC	1.20 (10MHz ~ 8GHz)
		1.20 (10MHz ~ 6GHz) 1.26 (6GHz ~ 18GHz)
	1617PMF	1.16 (10MHz ~ 6GHz)
		1.24 (6GHz ~ 16GHz)
		1.33 (16GHz ~ 26.5GHz)
		1.41 (26.5GHz ~ 33GHz)
	1617PMFA	1.15 (10MHz ~ 6GHz)
		1.25 (6GHz ~ 16GHz)
		1.35 (16GHz ~ 26.5GHz)
		1.45 (26.5GHz ~ 40GHz)
	1617PMH	1.13 (10MHz ~ 6GHz)
		1.24 (6GHz ~ 16GHz)
		1.29 (16GHz ~ 26.5GHz)
		1.32 (26.5GHz ~ 40GHz)

		1.48 (40GHz ~ 50GHz)
Calibration Uncertainty	1617PMC	3.7% (10MHz ~ 8GHz)
	1617PMD	4.1% (10MHz ~ 18GHz)
	1617PMF	4.1% (10MHz ~ 18GHz)
		5.1% (18GHz ~ 33GHz)
	1617PMFA	4.1% (10MHz ~ 18GHz)
		5.1% (18GHz ~ 33GHz)
		5.6% (33GHz ~ 40GHz)
	1617PMH	4.1% (10MHz ~ 18GHz)
		5.1% (18GHz ~ 33GHz)
5.6% (33GHz ~ 50GHz)		
Interface Connectors	1617PMC	N-Type(m)
	1617PMD	N-Type(m)
	1617PMF	3.5mm(m)
	1617PMFA	2.92mm(m)
	1617PMH	2.4mm(m)
Control Interface	USB2.0 interface, compatible USB-TMC	
Maximum Measurement Speed	50000 readings/s	
Product Characteristics		
Display	Master computer display	
Operation System Language	Chinese/English	
Power Supply	+5V, 500mA	
Operation Temperature Range	0°C ~ 50°C	
Storage Temperature Range	-40°C ~ +70°C	
Operation Humidity	Uncontrolled humidity at temperatures below 10°C. Relative humidity of (5 to 95)% when the temperature range is from 10°C to 30°C. Relative humidity of (5 to 75)% when the temperature range is 30°C to 40°C Relative humidity of (5 to 45)% when the temperature range is 40°C or more	
Operation Altitude	0 ~ 4600m	
Weight	< 0.4kg	
Dimensions (W×H×D)	1617PMC	51.5mm×33.5 mm×176.0 mm
	1617PMD	51.5mm×33.5 mm×160.5 mm

	1617PMF	51.5mm×33.5 mm×150.0 mm
	1617PMFA	51.5mm×33.5 mm×157.0 mm
	1617PMH	51.5mm×33.5 mm×154.5 mm
Vibratility	Random vibration: random vibration: frequency 5 ~ 100Hz, power spectral density 0.015g2/Hz; frequency 100 ~ 137Hz, slope -6dB; frequency 137 ~ 350Hz, power spectral density 0.0075g2/Hz; frequency 350 ~ 500Hz, slope -6dB; frequency 500Hz, power spectral density 0.0039g2/Hz.	
Reliability Requirements	MTBF (θ0) ≥5000h	
Calibration Cycle (Recommend)	12 months	
Host Computer		
Operation System	Windows 10 32-bit and 64-bit Windows 7 32-bit and 64-bit Windows XP Linux	
Hardware	Processor: 1GHz or higher (More than 2GB is recommended) Memory: 2GB or higher (More than 4GB is recommended) Hard Disk: 1.0GB or higher Display: 1280×1024 or higher	

Notes: 1617PMC/FA/H in the power range -40dBm ~ +20dBm, to be tested device SWR <1.20 when effective, the average number of times set to 32, the power measurement accuracy to meet the requirements; 1617PMD/F in the power range -45dBm ~ +20dBm, to be tested device SWR <1.20 when effective, the average number of times set to 32, the power measurement accuracy meet the requirements.

Ordering Information

Main Unit:

Model	Description
1617PMC	USB Average Power Sensor, 10MHz ~ 8GHz
1617PMD	USB Average Power Sensor, 10MHz ~ 18GHz
1617PMF	USB Average Power Sensor, 10MHz ~ 33GHz
1617PMFA	USB Average Power Sensor, 10MHz ~ 40GHz
1617PMH	USB Average Power Sensor, 10MHz ~ 50GHz

Standard:

Accessories	Description
1	USB Cable, 1.5m
2	1 CD

Option:

Option	Description
1617PM-H01	USB Cable, 4.5m
1617PM-H03C	Commercial Calibration Certificate, 1617PMC
1617PM-H03D	Commercial Calibration Certificate, 1617PMD
1617PM-H03F	Commercial Calibration Certificate, 1617PMF
1617PM-H03FA	Commercial Calibration Certificate, 1617PMFA
1617PM-H03H	Commercial Calibration Certificate, 1617PMH
1617PM-H04	English Suite
1617PM-H05A	Hard Suitcase (for 1 unit)
1617PM-H05B	Hard Suitcase (for 2 units)
1617PMC-EWT1	Extended Warranty Service
1617PMD-EWT1	Extended Warranty Service
1617PMF-EWT1	Extended Warranty Service
1617PMFA-EWT1	Extended Warranty Service
1617PMH-EWT1	Extended Warranty Service



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