

AWA14423 1/2" Prepolarized Free-Field Measurement Microphone



Features

● Key Parameters

Sensitivity:	50 mV/Pa
Frequency range:	3.15 Hz~20 kHz
Dynamic Range:	16 dBA~146 dB

● Applications

Free Field Testing
Electroacoustic Testing
Noise Testing

● Standards

IEC 61094-4:1995 Measurement Microphones Part 4:

Brief Description

The AWA14423 measurement microphone is a high-sensitivity general-purpose measurement microphone specifically designed for high-precision free-field measurements, meeting the needs of routine acoustic signal measurements. The AWA14423 microphone diaphragm is laser-welded, exhibiting good stability and environmental adaptability. Its performance meets the requirements of IEC 61094-4 WS2F standards and is widely used in noise measurement, electroacoustic measurement, audio measurement, and acoustic research.

Product Highlights

Applications of Prepolarized Free Field Microphones

This microphone features a wide frequency response and low background, primarily used in acoustic measurements such as environmental noise monitoring, building acoustic testing, and equipment acoustic characteristic analysis. It accurately captures reflection-free direct sound in a free sound field, ensuring the accuracy and reliability of acoustic data acquisition, providing crucial support for acoustic research, product noise reduction optimization, and environmental acoustic assessment.

Compatibility

The AWA14423 measuring microphone is compatible with IEPE or conventional preamplifiers from various manufacturers. IEPE is a general-purpose constant current source power supply technology used in preamplifiers. Different manufacturers may use different names, such as ICP (Integrated Circuit Constant Current Source) or CCP (Constant Current Source).

Calibration

Each measuring microphone is calibrated at the factory using traceable calibration equipment and comes with a calibration certificate. Recalibration is recommended at least annually.

Quality and Warranty

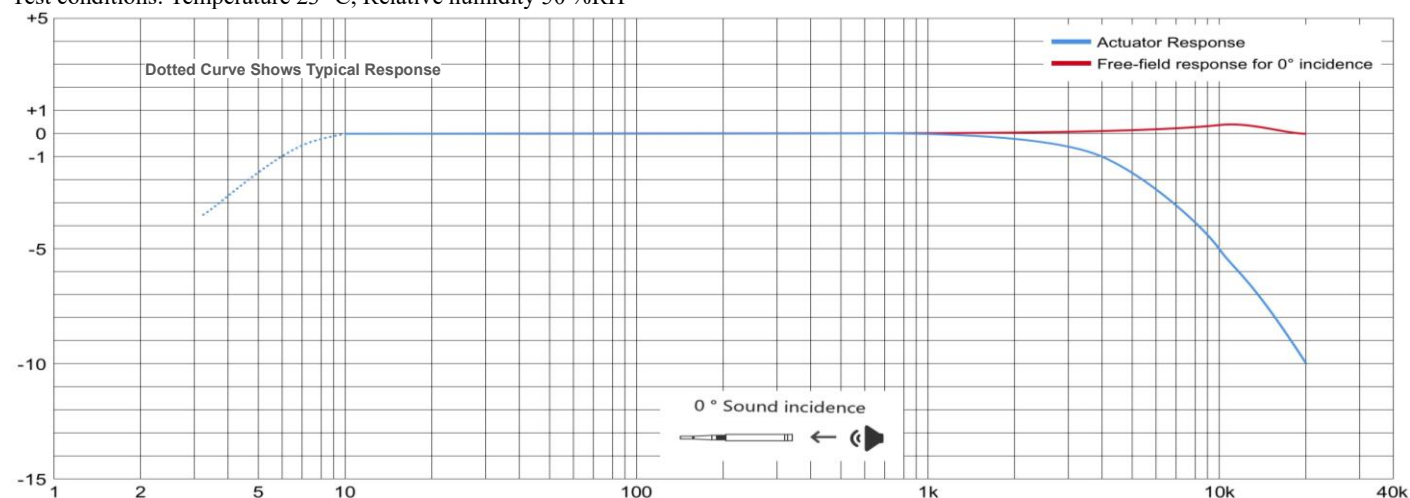
The microphones utilize a second-generation alloy diaphragm, a high-strength protective grille, and synthetic corundum insulators, making them stable and reliable measuring microphones on the market. Compared to traditional nickel and stainless steel, the alloy diaphragm offers superior corrosion resistance, high-temperature stability, shock resistance, and specific strength. All microphones are assembled and tested in a Class 1000 cleanroom to ensure product consistency and stability. The microphones come with a one-year warranty, and we will provide users with comprehensive after-sales support services.

Technical Specifications

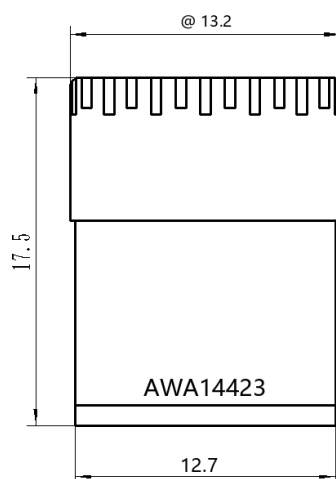
AWA14423 Prepolarized Free Field Measuring Microphone			
Field Type	Free Field	Lower limit frequency (-3dB) (Hz)	3.15
Diameter	1/2 Inch	Operating Temperature (°C)	-30~+80
IEC 61094	WS2F	Temperature coefficient (dB/°C) (@250 Hz)	-0.01 (-10 °C~50 °C)
Polarization Voltage (V)	0	Static pressure coefficient (dB/kPa)	-0.01
Sensitivity (mV/Pa) (@250 Hz±1.5 dB)	50.0	Operating humidity range (%RH)	0~100
Frequency range (Hz)	3.15~20k	Height with grid (mm)	17.5
Capacitance (pF) (@250 Hz)	18	Diameter with grid (mm)	13.2
Dynamic Range	16 dBA~146 dB	Height without grid (mm)	16.6
Noise floor (dBA)	≤16	Diameter without grid (mm)	12.7
Voltage Equalization Method	Post-Equalization	Preamplifier Fitting Thread	11.7 mm-60 UNS

Frequency Response

Test conditions: Temperature 23 °C, Relative humidity 50 %RH



Dimensions



Ordering Information

Optional Accessories

Preamplifier	AWA14604E 1/2" BNC Interface
	AWA14600E 1/2" LEMO Interface
Microphone Test Clip	1/2" Microphone Test Clip
Acoustic Calibrator	AWA6021A

Related Products

AWA14403 1/2" Free-Field Standard Microphone	14.1 mV/Pa, 3.15 Hz~40 kHz, 22 dBA~159 dB
AWA14404 1/2" Pressure Field Standard Microphone	12.6 mV/Pa, 3.15 Hz~20 kHz, 22 dBA~160 dB
AWA14423C 1/2" Pre-Polarized Free-Field Infrasound Sensor	50 mV/Pa, 0.1 Hz~20 kHz, 16 dBA~146 dB
AWA14523 1/2" Pre-Polarized Free-Field Infrasound Wideband Sensor	31.6 mV/Pa, 0.1 Hz~40 kHz, 20 dBA~153 dB
AWA14426 1/2" Pre-Polarized Pressure Field Measurement Microphone	12.6 mV/Pa, 3.15 Hz~20 kHz, 25 dBA~161 dB
AWA14431 1/4" Pre-Polarized Free-Field Wideband Measurement Microphone	4.0 mV/Pa, 3.15 Hz~80 kHz, 40 dBA~165 dB
AWA14436 1/4" Pre-Polarized Pressure Field Wideband High Sound Pressure Measurement Microphone	1.0 mV/Pa, 3.15 Hz~70 kHz, 53 dBA~176 dB
AWA14411 1" Prepolarized Free-Field Low-Noise Measurement Microphone	100 mV/Pa, 10 Hz~16 kHz, 6.5 dBA~137 dB
AWA14412 1" Prepolarized Pressure Field Measurement Microphone	50 mV/Pa, 10 Hz~8 kHz, 14.5 dBA~146 dB