

AWA14423C 1/2" Prepolarized Free-Field Infrasound Sensor



Features

● Key Parameters

Sensitivity	50 mV/Pa
Frequency range	0.1 Hz~20 kHz
Dynamic Range	16 dBA~146 dB

● Applications

Free Field Testing
Electroacoustic Testing
Noise Testing

● Standards

IEC 61094-4:1995 Measuring Microphones Part 4: Operating
Standard Microphone Specifications

Brief Description

The AWA14423C prepolarized free-field infrasound sensor is designed specifically for infrasound measurement scenarios, but can also be used for conventional acoustic measurements. It includes an independent calibration certificate and is suitable for acoustic environments with no reflection or only incident sound waves in a specific direction (such as anechoic chambers and semi-anechoic chambers). It features an ultra-low frequency limit of 0.1 Hz, high sensitivity, and strong stability. It supports connection to mainstream acoustic analysis instruments and is widely used in infrasound measurement, noise source localization, equipment acoustic performance testing, and building acoustic assessment.

Product Highlights

Applications of Prepolarized Free Field Infrasound Sensors

This sensor has a wide measurement frequency range, with a lower frequency limit down to 0.1 Hz, making it suitable for various measurement scenarios. It can perform infrasound measurements, sonic boom measurements, etc. The free-field infrasound sensor unit is also compatible with conventional acoustic measurements and can be used in acoustic research, noise monitoring, and sound system testing.

Compatibility

The AWA14423C sensor 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), CCP (Constant Current Source), etc.

Calibration

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

Quality and Warranty

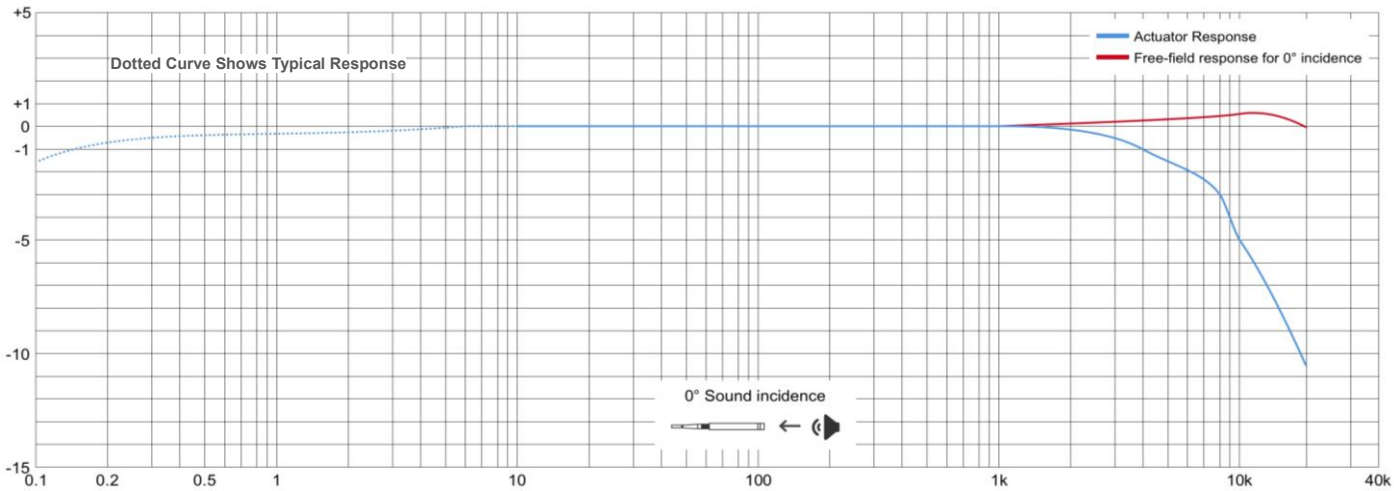
The infrasound sensors utilize a second-generation alloy diaphragm, a high-strength protective grid, and a synthetic corundum insulator, making them stable and reliable measurement microphones on the market. Compared to traditional nickel and stainless steel, the alloy diaphragm offers superior corrosion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

Technical Specifications

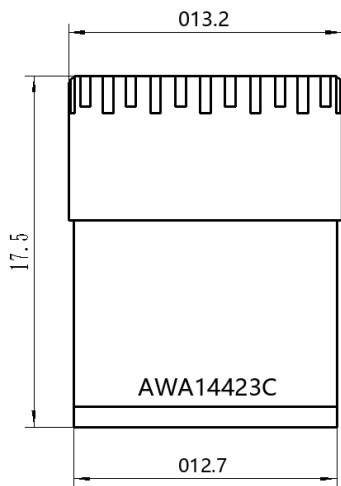
AWA14423C Prepolarized Free-Field Infrasound Sensor			
Field Type	Free Field	Lower limit frequency (-3dB) (Hz)	0.1
Diameter	1/2 inches	Operating Temperature (°C)	-30~+80
IEC 61094	WS2F	Temperature coefficient (dB/°C) (@250 Hz)	-0.01 (-10 °C~50 °C)
Polarization Voltage (V)	0	Static pressure coefficient (dB/kPa)	-0.01
Sensitivity (mV/Pa) (@250 Hz ± 2.0 dB)	50.0	Operating humidity range (%RH)	0~100
Frequency range (Hz)	0.1~20k	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	Side 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
Sensor Test Clip	1/2" Microphone Test Clip
Sound 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
AWA14423 1/2" Prepolarized Free Field Measurement Microphone	50 mV/Pa, 3.15 Hz~20 kHz, 16 dBA~146 dB
AWA14523 1/2" Prepolarized Free Field Infrasound Wideband Sensor	31.6 mV/Pa, 0.1 Hz~40 kHz, 20 dBA~153 dB
AWA14426 1/2" Prepolarized Pressure Field Measurement Microphone	12.6 mV/Pa, 3.15 Hz~20 kHz, 25 dBA~161 dB
AWA14431 1/4" Prepolarized Free-Field Wideband Measurement Microphone	4.0 mV/Pa, 3.15 Hz~80 kHz, 40 dBA~165 dB
AWA14436 1/4" Prepolarized 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