

AWA14421 Measuring Microphone



Features

● Key Parameters

Sensitivity	31.6 mV/Pa
Frequency range:	3.15 Hz to 12.5 kHz
Dynamic Range	21 dBA~148 dB

● Typical Applications

Free Field Testing
Electroacoustic Testing
Noise Testing

● Standards

IEC 61094-4:1995 Measuring Microphones Part 4: Operating

Brief Description

The AWA14421 measuring microphone is a high-sensitivity general-purpose measuring microphone specifically designed for high-precision free-field measurements, meeting the needs of conventional acoustic signal measurements. The AWA14421 microphone diaphragm is laser-welded, exhibiting good stability and environmental adaptability. Its structure conforms to the IEC 61094-4 WS2F standard requirements 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 AWA14421 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 Power Supply), CCP (Constant Current Power Supply), etc.

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

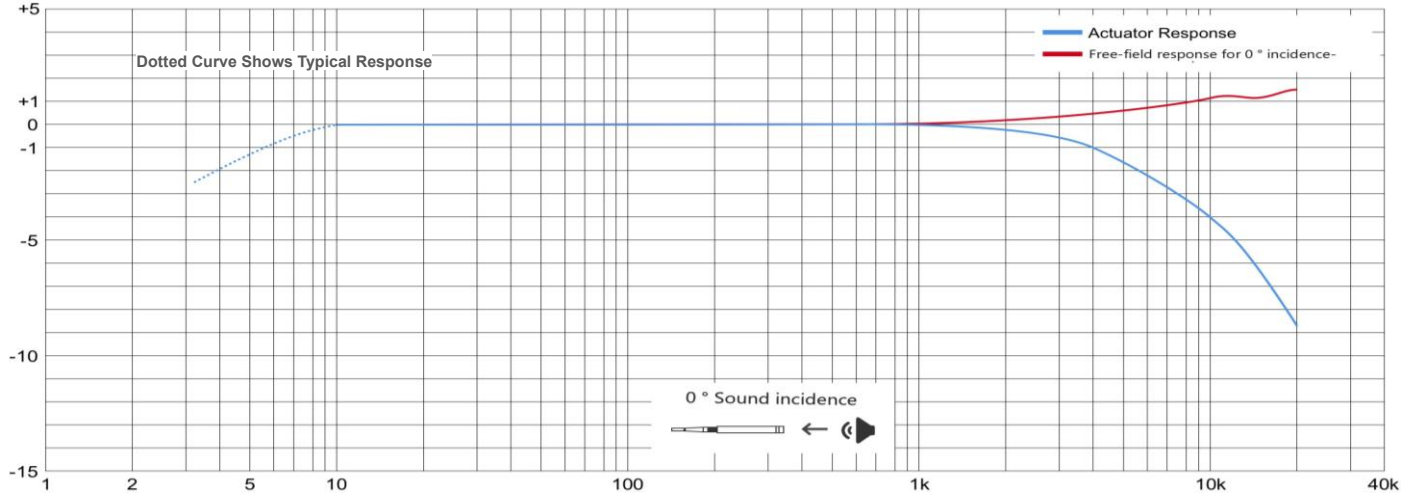
The microphones utilize a second-generation alloy diaphragm, a high-strength protective grille, and synthetic corundum insulators, making them stable and reliable measurement microphones on the market. Compared to traditional nickel and stainless steel, the alloy diaphragm offers superior corrosion resistance, high-temperature stability, shock resistance, and specific strength. All 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

AWA14421 Measuring Microphone			
Field Type	Free Field	Lower limit frequency (-3dB) (Hz)	3.15
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)	31.6	Operating humidity range (%RH)	0~100
Frequency range (Hz)	3.15~12.5k	Height with grid (mm)	17.5
Capacitance (pF) (@250 Hz)	17	Diameter with grid (mm)	13.2
Dynamic Range	21 dBA~148 dB	Height without grid (mm)	16.6
Noise floor (dBA)	≤21	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



Specifications and Dimensions

