

AWA14412 1" Prepolarized Pressure Field Measurement Microphone



Features

● Key Parameters

Sensitivity	50.0 mV/Pa
Frequency range	10 Hz~8.0 kHz
Dynamic Range	14.5 dBA~146 dB

● Applications

Low-Level Testing
Pressure Field Testing
Electroacoustic Testing

● Standards

IEC 61094-4:1995 Measurement Microphones Part 4:

Brief Description

The AWA14412 prepolarized pressure field measurement microphone features a large 18 mm diaphragm size and an ultra-low noise floor of 14.5 dBA, meeting the needs of various low-sound-level measurements. It includes an independent calibration certificate and is suitable for use with coupling cavities such as simulated ears for related electroacoustic testing. It exhibits good frequency stability and environmental adaptability.

Product Highlights

Applications of Prepolarized Pressure Field Measurement Microphones

The prepolarized pressure field low-noise microphone features a low noise floor, down to 14.5 dBA, and is designed specifically for precision cavity measurements, widely used in acoustic research and electroacoustic testing.

Compatibility

The AWA14412 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 measurement 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

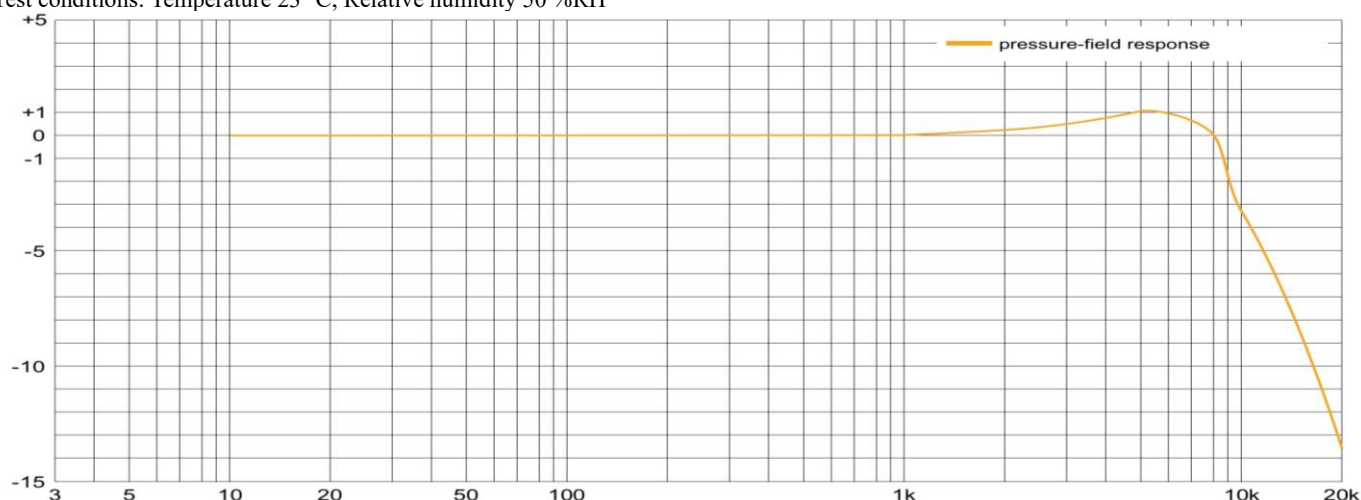
The microphones utilize a second-generation alloy diaphragm, a high-strength protective grille, and synthetic corundum insulators, making them stable and reliable measurement microphones on the market. Compared to traditional nickel and stainless steel, the alloy diaphragm offers superior corrosion resistance, 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. Microphones come with a one-year warranty, and we provide comprehensive after-sales service.

Technical Specifications

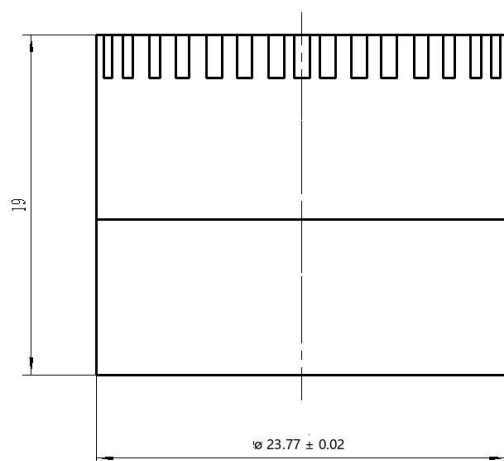
AWA14412 Prepolarized Pressure Field Measuring Microphone			
Field Type	Pressure Field	Lower limit frequency (-3dB) (Hz)	10
Diameter	1 Inch	Operating Temperature (°C)	-30~+80
IEC 61094	WS1P	Temperature coefficient (dB/°C) (@250 Hz)	-0.02 (-10 °C~50 °C)
Polarization Voltage (V)	0	Static pressure coefficient (dB/kPa)	-0.02
Sensitivity (mV/Pa) (@250 Hz ± 2.0 dB)	50	Operating humidity range (%RH)	0~100
Frequency range (Hz)	10~8k	Height with grid (mm)	19.0
Capacitance (pF) (@250 Hz)	35	Diameter with grid (mm)	23.77
Dynamic Range	14.5 dBA~146 dB	Height without grid (mm)	17.2
Noise floor (dBA)	≤14.5	Diameter without grid (mm)	23.77
Voltage Equalization Method	Side Equalization	Preamplifier Fitting Thread	23.12 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	
Connectors	AWA8751
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
AWA14423 1/2" Pre-Polarized Free-Field Measurement Microphone	50 mV/Pa, 3.15 Hz~20 kHz, 16 dBA~146 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" Prepolarized pressure field broadband high sound pressure measurement microphone	1.0 mV/Pa, 3.15 Hz~70 kHz, 53 dBA~176 dB
AWA14411 1" Pre-Polarized Free-Field Low-Noise Measurement Microphone	100.0 mV/Pa, 10 Hz~16 kHz, 6.5 dBA~137 dB