

AWA14411 1" Prepolarized Free-Field Low-Noise Measurement Microphone



Characteristic

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- **Key parameters**

Sensitivity	100.0 mV/Pa
Frequency range	10 Hz~16 kHz
Dynamic range	6.5 dBA~137 dB
 - **Applications**
 - Low sound level test
 - Free field testing
 - Electroacoustic testing
 - Noise test
 - **Standard**
 - IEC 61094-4:1995 Measurement Microphones Part 4:

Brief description

The AWA14411 prepolarized free-field low-noise measurement microphone features a large 18 mm diaphragm size and an ultra-low noise floor of 6.5 dBA, meeting the needs of various low-sound-level measurements. It includes an independent calibration certificate and is suitable for acoustic environments with no reflections or only incident sound waves in a specific direction (such as anechoic chambers and semi-anechoic chambers). It features a frequency range of 10 Hz to 16 kHz, high sensitivity, and strong stability. The microphone supports connection to mainstream acoustic analysis instruments and is widely used in low-sound-level measurement, sound power measurement, automotive NVH evaluation, and other fields.

Product Highlights

Application of Pre polarized Free Field Low Noise Measurement Microphone

The prepolarized free-field low-noise microphone features a low noise floor, down to 6.5 dBA, suitable for various measurement scenarios, including low-noise measurement, sound power measurement, and automotive NVH assessment. The free-field prepolarized low-noise measurement microphone is also compatible with conventional acoustic measurements, used in acoustic research, noise monitoring, and sound system testing.

compatibility

The AWA14411 measurement 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 using traceable calibration equipment at the factory and comes with a calibration certificate. It is recommended to recalibrate at least once a year.

Quality and Warranty

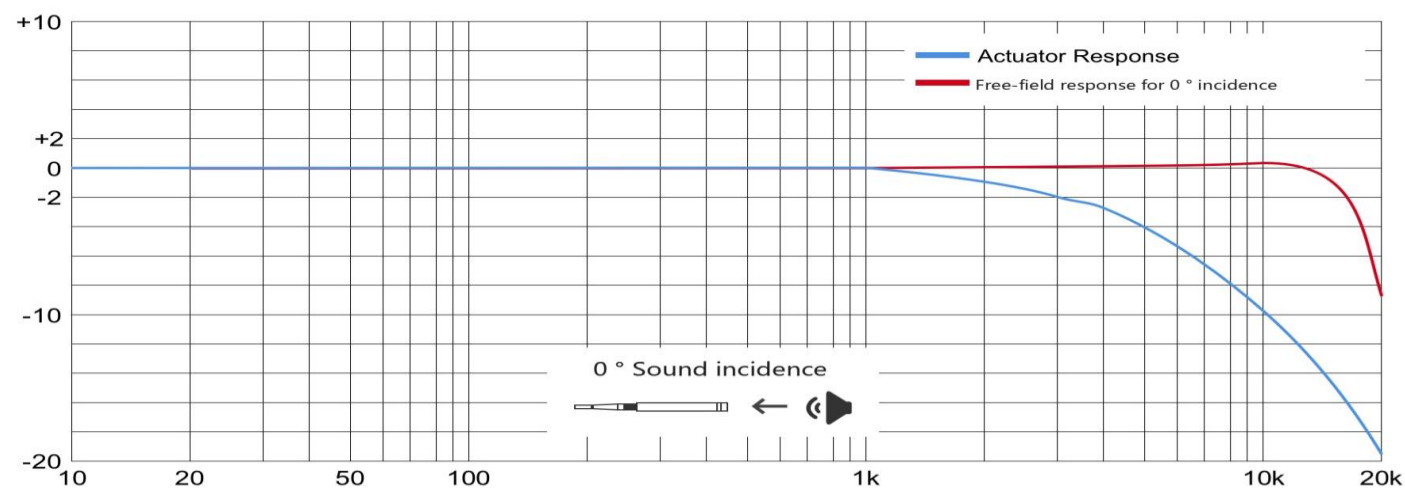
The microphone adopts a second-generation alloy diaphragm, high-strength protective grille, and artificial corundum insulator, which makes them stable and reliable measurement microphones on the market. Compared with traditional nickel and stainless steel, alloy diaphragms provide superior corrosion resistance, high temperature stability, impact resistance, and specific strength. All microphones are assembled and debugged in a Class 1000 cleanroom to ensure product consistency and stability. The microphone comes with a one-year warranty period, and we will provide users with comprehensive after-sales support services.

Technical Specifications

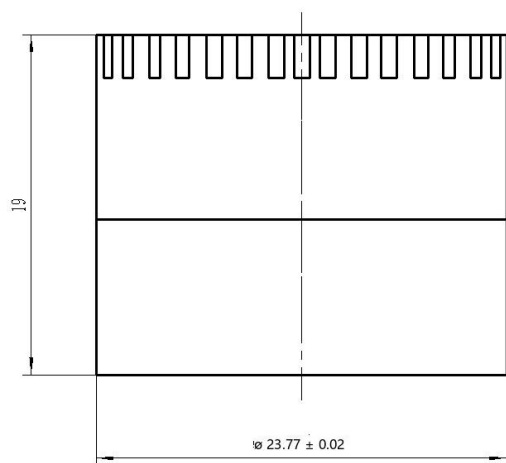
AWA14411 Prepolarized Free-Field Low-Noise Measurement Microphone			
Field Type	Free Field	Lower limit frequency (-3dB) (Hz)	10
Diameter	1 Inch	Operating Temperature (°C)	-30~+80
IEC 61094	WS1F	Temperature coefficient (dB/°C) (@250 Hz)	-0.02 (-10 °C~50 °C)
Polarization Voltage (V)	0	Static pressure coefficient (dB/kPa)	-0.02
Sensitivity (mV/Pa) (@250 Hz ± 2.0 dB)	100.0	Operating humidity range (%RH)	0~100
Frequency range (Hz)	10~16k	Height with grid (mm)	19.0
Capacitance (pF) (@250 Hz)	35	Diameter with grid (mm)	23.77
Dynamic Range	6.5 dBA~137 dB	Height without grid (mm)	18.2
Noise floor (dBA)	≤6.5	Diameter without grid (mm)	23.77
Voltage Equalization Method	Side Voltage Equalization	Preamplifier Fitting Thread	23.11 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
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" Standard Microphone for Pressure Field Operation	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
AWA14423C 1/2" Prepolarized Free Field Infrasound Sensor	50 mV/Pa, 0.1 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 broadband high sound pressure measurement microphone	1.0 mV/Pa, 3.15 Hz~70 kHz, 53 dBA~176 dB
AWA14412 1" Prepolarized Pressure Field Measurement Microphone	50 mV/Pa, 10 Hz~8 kHz, 14.5 dBA~146 dB