

AWA14423C-S01C 1/2" Free-field Infrasond Microphone set



Features

Key Parameters

Sensitivity: 39.8 mV/Pa

Frequency Range: 0.1 Hz~20 kHz

Dynamic Range: 21 dBA~137 dB

Typical Applications

Infrasound testing

Free field testing

Electroacoustic testing

Noise testing

Standards

IEC 61094-4:1995 Measurement microphones – Part 4: Specifications for working standard microphones

SJ/T 10724-2013 Electroacoustics – General specifications for measurement condenser microphones

Main Components

AWA14423C Measurement Microphone

AWA14601C Preamplifier

Brief Introduction

The AWA14423C-S01C is a set comprising a free-field infrasound microphone and a preamplifier; designed specifically for infrasound measurement scenarios, it is also capable of standard acoustic measurements. Supplied with an individual calibration certificate, it is suitable for acoustic environments that are either anechoic or involve sound waves incident from specific directions (such as anechoic or semi-anechoic chambers). It utilizes a high-precision capacitive microphone, featuring an ultra-low frequency lower limit of 0.1 Hz, high sensitivity, and excellent stability. Compatible with mainstream acoustic analysis instruments, the set is widely used in fields such as infrasound measurement, noise source localization, acoustic performance testing of equipment, and architectural acoustics assessment.

Product Highlights

Applications of the Free-Field Infrasound Microphone set

The free-field infrasound microphone set features a wide frequency response range, extending as low as 0.1 Hz, making it suitable for various measurement scenarios such as infrasound and sonic boom measurements. It is also compatible with standard acoustic measurements, serving applications in acoustic research, noise monitoring, and sound system testing.

Compatibility

The AWA14423C-S01C free-field infrasound microphone set requires an external constant voltage source module capable of providing low-noise voltage. The source should operate within a voltage range of 5–18 V (15 V is recommended) and support a load current exceeding 10 mA.

Calibration

Each infrasound microphone set is calibrated using traceable equipment prior to shipment and is supplied with a calibration certificate. Annual recalibration is recommended.

Quality and Warranty

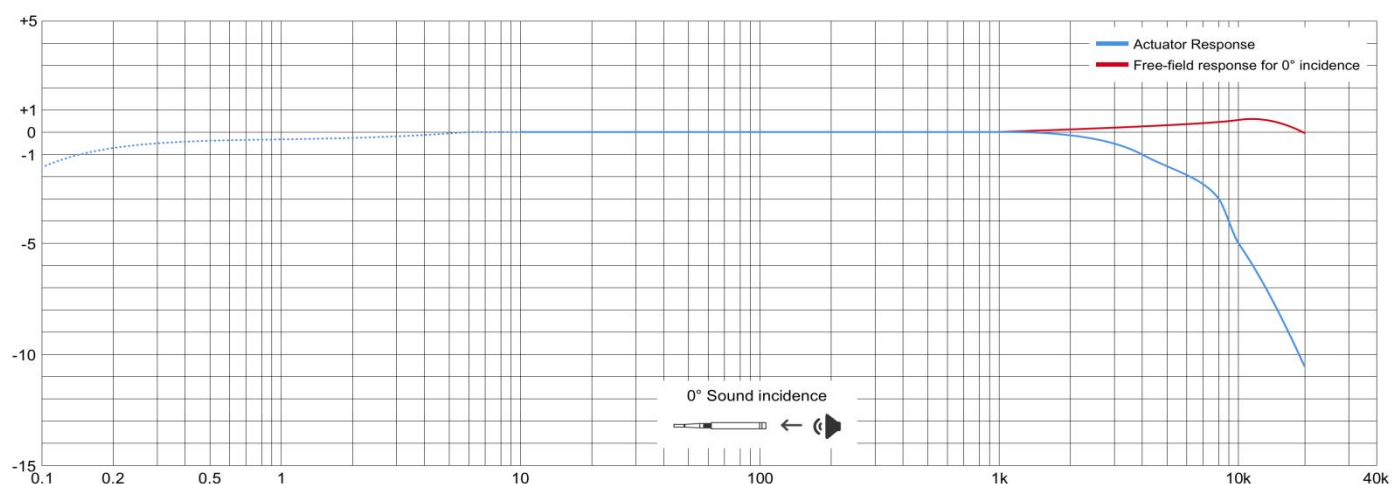
All Aihua infrasound microphones utilize second-generation alloy diaphragms, high-strength protective grids, and synthetic corundum insulators, ensuring exceptional stability and reliability. Compared to traditional nickel or stainless steel, these alloy diaphragms offer superior corrosion resistance, high-temperature stability, impact resistance, and specific strength. To ensure the highest quality, all microphones are assembled and tested in a Class 1000 cleanroom. The infrasound microphone sets come with a one-year warranty, backed by comprehensive after-sales support.

Technical Specifications

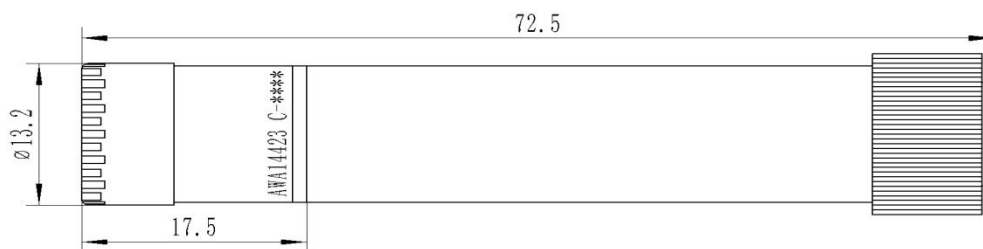
AWA14423C-S01C 1/2" Free-field Infrasonnd Microphone set			
Sound Field Type	Free field	Pressure Equalization	Lateral pressure equalization
Diameter	1/2 inch	Operating Temperature (°C)	-30 to +80
Dimensions Standard (IEC 61094)	WS2F	Temperature Coefficient (dB/°C) (@250 Hz)	-0.01 (-10°C to 50°C)
Power Supply	5~18 (DC)	Operating humidity (%RH)	0~100
Sensitivity (mV/Pa) (@250 Hz ±2.0 dB)	39.8	Static pressure coefficient (dB/kPa)	-0.01
Frequency Range (Hz)	0.2~20k	Output Voltage	≥7 Vrms@15V Supply
Polarization Voltage (V)	0	Output Impedance	≤50 Ω
Dynamic Range	21 dBA~137 dB	Input Impedance/Capacitance	≥10 GΩ/≤4.3 pF
Noise Floor (dBA)	≤21	Output Connector	X9

Frequency response

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



Specifications and Dimensions



Ordering Information

Optional Accessories

Microphone test clip	1/2" microphone test clip
Preamplifier power supply	AWA1710
Cable	AWA8743

Related Products:

AWA14404-S00E 1/2" Pressure-field working standard microphone set
12.6 mV/Pa, 3.15 Hz–20 kHz, 24 dBA–160 dB

AWA14403-S00E 1/2" Free-field working standard microphone set
14.1 mV/Pa, 3.15 Hz–40 kHz, 23 dBA–159 dB

AWA14423-S04E 1/2" Free-field measurement microphone set
50.0 mV/Pa, 3.15 Hz–20 kHz, 17 dBA–135 dB

AWA14523-S04E 1/2" Free-field Infrasonic broadband microphone set
31.6 mV/Pa, 0.5 Hz–40 kHz, 21 dBA–139 dB

AWA14424C-S01C 1/2" Pressure-Field infrasound microphone set
21.1 mV/Pa, 0.2 Hz–16 kHz, 28 dBA–143 dB

AWA14434-S14E 1/4" Pressure-field high-SPL measurement microphone set
0.63 mV/Pa, 3.15 Hz–40 kHz, 61 dBA–173 dB

AWA14435-S14E 1/4" Free-field High-SPL Measurement microphone set
4.0 mV/Pa, 5 Hz – 20 kHz, 43 dBA – 160 dB

AWA14436-S14E 1/4" Pressure-Field Wideband High-SPL measurement microphone set
1.0 mV/Pa, 3.15 Hz~70 kHz, 57 dBA~171 dB

AWA14411-S04E 1-inch free-field low-noise measurement microphone set
100.0 mV/Pa, 10 Hz–16 kHz, 11.5 dBA–129 dB
