



XCA919 High Frequency Free-field Sound Source

Features:

- 1-inch high-sensitivity loudspeaker
- Frequency response 2 kHz ~ 40 kHz (± 4 dB)
- Spherical enclosure design with low secondary radiation effects



Applications:

- The free-field sensitivity and frequency response measurement of microphone or sound level meter at high frequency

Introduction

XCA919 is a sound source designed to meet the requirements of free-field measurement of working standard microphone according to IEC 61094-8. It also can be used as free-field sound source required by IEC 62585, IEC 61672, GB/T 3785 and JJG 188 etc. to carry out the free-field sensitivity and frequency response measurement of microphone, sound level meter or other acoustic related equipment.

The frequency range of **XCA919** covers from 2 kHz to 40 kHz. Within this range, it has excellent signal-to-noise ratio, which can meet the free-field testing requirements of microphones in the ultrasonic frequency band.

XCA919 is equipped with a 1-inch high-sensitivity speaker driver, featuring a mechanical Q factor (Q_{ms}) as low as 2.3, and a total Q factor (Q_{ts}) as low as 0.4. Such low Q values enable the speaker to deliver a wider frequency response range. It can achieve a relatively flat response curve over the range of 2 kHz to 40 kHz. With a nominal impedance of 4 Ω , it can deliver a maximum output power of 130 W while reducing the output voltage requirement of the power amplifier.

Moreover, since the sound signals in the high-frequency band are more susceptible to the acoustic reflection effect compared to the mid and low-frequency bands, the housing design of the **XCA919** speaker source is spherical, and the edges of the speaker are tangent to the sphere, reducing the secondary radiation effect caused by the enclosure.

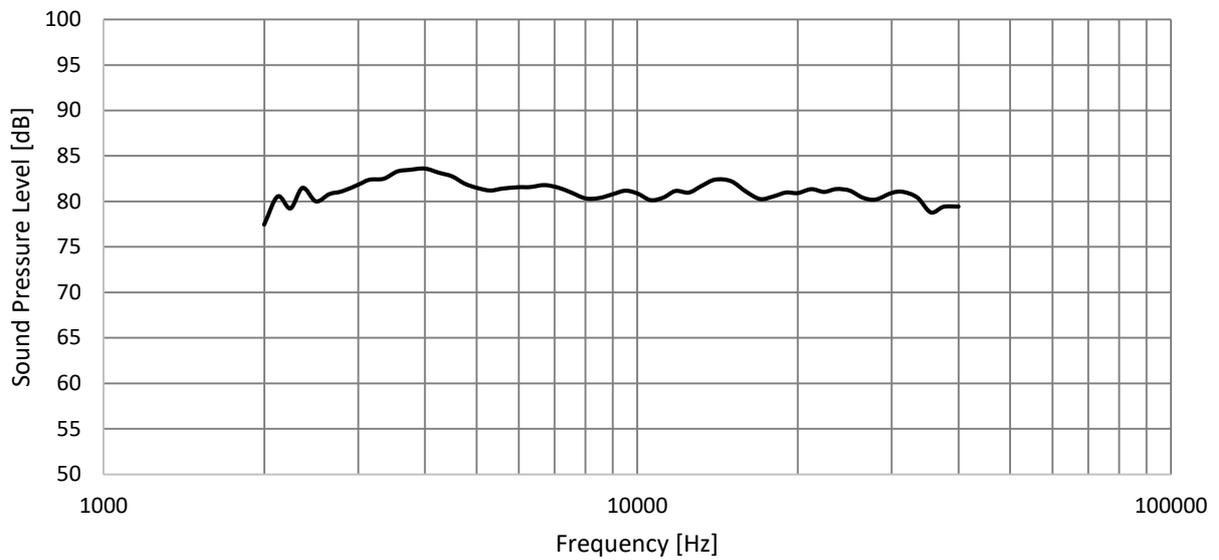
Specifications

Frequency Response	2 kHz ~ 40 kHz (± 4 dB)
Reference Sound Level	80 dB
Total Distortion	$\leq 3\%$
Nominal Impedance	4 Ω
Rated Power	50 W (continuous)
Peak Power	130 W
Input Connector	BNC
Dimension ¹ (mm)	W90 x H90 x D102
Weight ¹	0.55 kg

Note 1: the data is only applicable to the sound source, not including the support rod.



Typical Free-field Frequency Response



XCA919 Installed on the Adaptor

