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**Calibration Specification for Audio Analyzer
(English Translation)**

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Introduction

The calibration specification based JJF 1071-2010 "National Calibration Specifications writing rules" establishment.

The specification for the 10Hz ~ 200kHz audio analyzer calibration method, respectively, from the audio signal analysis section and Performed for a predetermined portion of the audio signal occurs in two ways. Audio signal analysis section of the calibration include. frequency measurement, AC voltage measuring intrinsic noise, measuring AC voltage, AC voltage measurement frequency of the additional error distortion measure residual loss True distortion measure; the audio signal generating portion of the calibration include. output frequency, output voltage, output voltage Frequency response, distortion sine wave output. And gives the AC voltage measurement in the appendix, distortion measure other items Objective evaluation of measurement uncertainty method example.

This specification is the first release.

Audio Analyzer Calibration Specification

1 Scope

This calibration new specification applies to the frequency range of 10Hz ~ 200kHz in manufacturing, use and repair of audio post Analyzer calibration.

2. References

This specification references the following documents.

JJF 1071-2010 National Calibration Specifications writing rules for dated references, only the dated edition applies to this specification; undated reference documents Member, the latest edition (including any amendments) applies to this specification.

3 Overview

Audio analyzer commonly used in audio amplifiers, filters, cell phone transmission characteristics such as performance testing. Audio Analyzer Section and audio signal analysis components typically occurs by the audio signal. Audio signal generation portion may object to be measured mention for 1 to 2 road test excitation signal; an audio signal analysis section for receiving the object to be measured output of the audio signal, and its comprehensive measurement of total harmonic distortion, voltage amplitude, frequency and other parameters analyzed.

Audio analyzer audio signal generating portion of the output signal frequency is usually in the range 10Hz ~ 200kHz, sound Frequency signal analysis section generally measure the frequency, voltage, total harmonic distortion and other parameters within the frequency range of the signal.

4 Metrological characteristics 4.1 audio signal analysis section

4.1.1 Frequency Measurement

4.1.1.1 Measuring range. 10Hz ~ 200kHz;

4.1.1.2 The maximum permissible error. $\pm (0.005\% \sim 0.3\%)$.

4.1.2 AC voltage measurement

4.1.2.1 Measuring range. 1mV ~ 300V (10Hz ~ 200kHz);

4.1.2.2 The maximum permissible error. $\pm (0.5\% \sim 5\%)$ (1kHz);

4.1.2.3 additional error frequency (1kHz reference). $\pm (2\% \sim 10\%)$ (10Hz ~ 200kHz);

4.1.3 Voltage measurement inherent noise. $\leq 50\mu\text{V}$ (20kHzBW).

4.1.4 Distortion Measurement

4.1.4.1 Measuring range. (0.01% ~ 100%) (10Hz ~ 200kHz);

4.1.4.2 The maximum permissible error. $\pm (5\% \sim 20\%)$.

4.1.5 distortion measure residual distortion. $\leq (0.003\% \sim 0.05\%)$ (10Hz ~ 200kHz).

4.2 audio signal generation section

4.2.1 Output frequency