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**INDUSTRY STANDARD OF THE
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**Calibration Specification for Waveform Recorders
(English Translation)**

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4 Measurement characteristics (1)

4.1

DC voltage(1)

4.2

AC voltage(1)

4.3

Time base(1)

4.4

Bandwidth(1)

4.5

Input resistance (1)

4.6

DC gain(2)

4.7

Length of recording time (2)

5 Calibration conditions (2)

5.1

Environmental conditions (2)

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Measurement standards and other equipment (2)

6 Calibration items and calibration methods (2)

6.1

Appearance and working normality inspection (3)

6.2

DC voltage(3)

6.3

AC voltage(4)

6.4

Time base(4)

6.5

Bandwidth(5)

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Input resistance(5)

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DC gain(5)

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Length of recording time(6)

8 Recalibration interval (7)

Appendix A Original Record Format (8)

Appendix B: Internal page format of calibration certificate (10)

Appendix C Example of Uncertainty Evaluation (12)

Introduction

This specification is based on JJF 1071-2010 "Rules for the Compilation of National Metrology and Calibration Specifications" and JJF 1059.1-2012 "Evaluation and Expression of Measurement Uncertainty" was compiled:

This specification refers to JJF 1057 "Digital Storage Oscilloscope Calibration Specification", GB/T 15289 "Digital Storage Oscilloscope General Specification for Digital Waveform Recorder" and IEEEStd1057 "IEEE Standard for Digital Waveform Recorder":

This specification is released for the first time:

Waveform recorder calibration specification

1 Scope

This specification applies to voltage measurement types with a voltage range of 5mV~1000V and a frequency range of DC~2MHz Calibration of the waveform recorder:

2 Reference documents this specification refers to the following documents:

JJF 1057 Calibration Specification for Digital Storage Oscilloscope
GB/T 15289 General Specification for Digital Storage Oscilloscope
IEEEStd1057 Digital Waveform Recorder
IEEE Standard (IEEEStandardforDigitizing WaveformRecorders) for dated reference documents, only the dated version applies to this specification; for undated references the

latest version (including all amendments) is applicable to this specification:

3 overview

Waveform recorder is a comprehensive instrument that measures voltage and records electrical parameters: Its types can be divided into analog Waveform recorder and digital wave recorder: The analog waveform recorder uses an analog stylus to record measurements on a recording paper:

Measured data: The digital waveform recorder stores the measured waveform data in the recorder:

After recording, the recorded waveform and data can be called out: Waveform recorders are widely used in electricity, electronics, and traffic safety Industry fields such as monitoring and environmental monitoring:

4 Measurement characteristics

4.1 DC voltage

Measuring range: $\pm (5\text{mV}\sim 1000\text{V})$;

Maximum allowable error: $\pm (0.25\%\text{FS}\sim 1\%\text{FS})$:

4.2 AC voltage

Measuring range: $5\text{mV}\sim 1000\text{V}$ (peak-peak);

Maximum allowable error: $\pm(0.5\%\text{FS}\sim 3\%\text{FS})$:

4.3 Time base

Maximum allowable error: $\pm 1\times 10^{-6}$:

4.4 Bandwidth

Frequency range: $\leq 2\text{MHz}$ (-3dB):

4.5 Input resistance Range: $50\text{ohm}\sim 100\text{Mohm}$;