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**INDUSTRY STANDARD OF THE
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**Calibration Specification for Electromagnetic Field Probes from
10 kHz to 100 MHz
(English Translation)**

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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 IEEE1309-2013 "IEEE Standard for Calibration of Electromagnetic Field Sensors and Probes (Excluding Antennas) from 9 kHz to 40 GHz" in the relevant clauses
Line preparation: It mainly stipulates the calibration method of electromagnetic field probe with frequency range of 10 kHz~100 MHz:

Calibration items include: electric field intensity, magnetic field intensity, magnetic induction intensity and isotropy: And the measurement is given in the appendix

Example of uncertainty evaluation for this specification is released for the first time:

10kHz~100MHz electromagnetic field probe Calibration specification

1 Scope

This specification specifies the electromagnetic field probes (including electric field probes, magnetic field probes, etc.) in the 10kHz~100MHz frequency band:

The calibration method called field probe is suitable for the calibration of field probes used in electromagnetic compatibility testing and other fields: Other types the field probe (except the antenna) can also be used as a reference:

2 Reference documents this specification refers to the following documents:

IEEEStd1309-2013 9kHz~40GHz electromagnetic field probe and sensor (except antenna) calibration

[IEEEStandardforCalibrationofElectromagneticFieldSensorsandProbes(Excluding Antennas)from9kHzto40GHz]:

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 Terms and units of measurement

3.1 Field sensor an electrically small-sized device used to measure electric or magnetic fields, does not contain electronic components, and should have as little disturbance as possible the field being tested: Theoretically its transfer function (the ratio of the output signal to the input electromagnetic field) can be measured by its physical parameters Number and electrical properties of materials are obtained:

3.2 fieldprobe

Contains a field sensor or a combination of several field sensors, diode detectors, resistors, amplifiers and other electronics Pieces: It is used to measure the radio frequency field component in a certain medium, and should disturb the measured field as little as possible: Theoretically the output cannot be obtained by simply measuring its physical parameters: Field probes include electric field probes and magnetic field probes:

3.3 E-fieldprobe

A field probe capable of measuring the electric field strength E (unit: V/m):

3.4 H-fieldprobe

It can measure the magnetic field intensity H (unit is A/m) or magnetic induction intensity B (unit is Wb/m² or T) Field probe:

Note: 1Wb/m²=1T=10⁶μT:

3.5 readout device the output signal of the acquisition field probe is converted into a

readable signal and sent to the electronic device of the data acquisition analyzer:

4 overview

Field probes are usually divided into passive and active two types: passive field probes include field sensors, diode detectors and high-impedance transmitters: