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**INDUSTRY STANDARD OF THE
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**Calibration Specification for Frequency Response Analyzers
(English Translation)**

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7 Re-study interval (14)

Appendix A Original Record Format (15)
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Introduction

This specification is based on JJF 1071-2010 "Rules for the Preparation of National Metrology Calibration Specifications", related terms and uncertainties.

The qualitative assessment follows JJF 1001-2011 "General Measurement Terms and Definitions" and JJF 1059.1-2012 "Measurement is not accurate Qualitative assessment and representation.

This specification is the first release.

Frequency Response Analyzer Calibration Specifications

1 Scope

This specification applies to the calibration of frequency response analyzers with a frequency range below 50 MHz. Other instruments of the same type the calibration can be performed by reference.

2 Overview

Frequency response analyzers are widely used in aerospace,, marine, electrochemical, materials research, mechanical manufacturing, and rotary Turn to mechanical fault monitoring, fault diagnosis, modal parameter identification and other fields. Frequency response analyzer can directly analyze the system the frequency characteristics include amplitude frequency characteristics and phase frequency characteristics. The system is driven by the excitation of the built-in signal source of the frequency response analyzer.

The response signal is input to the frequency response analyzer for arithmetic processing,

and finally according to polar coordinates (r, theta) or logarithmic pole the coordinate (logr, theta) form shows the frequency response result.

3 Measurement characteristics

3.1 Source output frequency Frequency range. 1mHz~50MHz;

Maximum allowable error. $\pm 1 \times 10^{-5}$.

3.2 Source output sine wave amplitude Range of amplitude. 10mV~10V (10Hz~65kHz);

10mV~5V (65kHz~1MHz);

10mV~2V (1MHz~10MHz);

10mV~1V (10MHz~20MHz);

10mV~0.5V (20MHz~35MHz);

10mV~0.25V (20MHz~50MHz).

Maximum allowable error. $\pm (1\% \sim 5\%)$ (10Hz ~ 35MHz);

$\pm (5\% \sim 10\%)$ (35MHz~50MHz).

3.3 Source output sine wave distortion (total harmonic distortion) $< 2\%$ ($\leq 100\text{kHz}$).

3.4 Source Output DC Bias Bias voltage range. -10V~ 10V;

Maximum allowable error. $\pm (1\% \times \text{reading } 10\text{mV})$.

3.5 input resistance Input resistance. 1Mohm;

Maximum allowable error. $\pm 2\%$.

3.6 single channel amplitude Frequency range. 10Hz~50MHz;