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JJF

NATIONAL METROLOGY TECHNICAL SPECIFICATION OF THE

PEOPLE'S REPUBLIC OF CHINA

# JJF 1805-2020

# Calibration Specification for Frequency and Phase Offset Generators

相位微跃器校准规范

**(English Translation)**

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## 8 Recalibration interval (10)

Appendix A Original Record Format (11)

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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 is released for the first time.

Calibration specification for phase micro jumper

1 Scope

This specification applies to the calibration of phase micro-hops with input frequencies of



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5MHz, 10MHz, and 100MHz.

2 Reference documents this specification refers to the following documents.

JJF 1001 General measurement terms and definitions 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

The phase micro jumper is a kind of locking the input frequency signal f0, adjusting it within a certain range and outputting it.

A device that outputs time-frequency signals. When working, the local crystal oscillator is locked to the external input frequency signal f0.

When the precision adjustment deltaf is applied to the loop, the adjusted time and frequency signals are generated. Adjusted frequency the signal generates a local 1PPS signal through frequency division, and the external 1PPS signal can initially synchronize the local output 1PPS.

By adjusting the phase of the frequency signal, the purpose of precisely adjusting the phase of 1PPS is achieved. The working principle of the phase micro jumper is shown in the figure 1 shown.

Phase micro-steps are widely used in time and frequency control, time keeping, satellite navigation and metering.

Figure 1 Working principle diagram of phase micro-hop

4 Measurement characteristics

4.1 Input power range. (7~15)dBm.

4.2 Output power. (10~17)dBm.

4.3 Harmonic distortion. <=-40dBc.



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