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JJG

**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

JJG 349-2014

Replacing JJG 349-2001

**Verification Regulation of the Universal Counters
(English Translation)**

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Introduction

This procedure is carried out revision of JJG 349-2001. Compared with JJG 349-2001, in addition to editorial changes outside the main technical changes are as follows.

--- Increase the frequency measurement limit, the lower limit of the measurement period and the time interval measurement limit;

--- New introduction, the term content, effective resolution proposed concept;

--- Modify, supplement the content requirements for performance measurement;

- Refine and clarify the test conditions and test methods;
- Modify, add cycle measurement error test methods;
- Supplementary time interval measurement error in the single-channel pulse width test method;
- New calibration certificate/test results notice page format, page format calibration certificate test results, test knot If the notice of test results page format, the original record test data page format.

The regulations previously issued as follows.

- JJG 349-2001.

Universal Counter test procedures

1 Scope

The order applies to the measurement frequency range of 18GHz or less universal counter initial verification, and follow-up Use checks.

2. References

JJG 180 electronic measuring instruments within the quartz oscillator JJG 181 quartz crystal frequency standard JJG 292 rubidium atomic frequency standard JJG 841 microwave frequency counter for dated references, only the dated edition applies to this procedure; undated reference documents Member, the latest edition (including any amendments) applies to this procedure.

3 Terms

Effective resolution Instrument displays measurement results in a stable, positive digit represents the lowest value.

4 Overview

Universal Counter basic principle is suitable logic circuit (gate time) within a predetermined standard time the cumulative number of oscillations measured input signal, or in the time interval measured cumulative standard time (time base) signal a Number, frequency, and period measurement time interval; basic circuit by the input channel when generating transform unit group, Main door, a control unit, a display unit and other components and counting; with a variety of measurement functions, including the frequency, period, and Time interval measurement, usually including frequency than at any time interval and the cumulative number of pulses counting measure Features.

5 metering performance requirements

5.1 Input characteristics Input characteristics are shown in Table 1.

Table 1 Input characteristics

Measurement of performance	Measurement function	Frequency	periodic time interval
Measuring range	(0 ~ 1) GHz (1 ~ 18) GHz	1ns ~ 10ns 10ns ~ 100s 2ns ~ 105s	Input
Sensitivity (RMS)	(10 ~ 300) mV (-33 ~ -20) dBm (-33 ~ -20) dBm (10 ~ 300) mV ---		