Chinastandards.org

ICS 17.220

JJF

NATIONAL METROLOGY TECHNICAL SPECIFICATION OF THE PEOPLE'S REPUBLIC OF CHINA

JJF 1740-2019

Calibration Specification for Cable and Antenna Analyzers

天馈线测试仪校准规范

(English Translation)

Implemented on: December 27, 2019

Issued by: State Administration for Market Regulation

Preview: page 1 of 4 shown, 13 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/jjf-1740-2019

Chinastandards.org

Table of Contents

Introduction (II)
1 Scope (1)
2 Terminology (1)
3 Overview (1)
4 Measurement characteristics (1)
4.1 Output signal frequency (1)
4.2 Output power (1)
4.3 Voltage standing wave ratio (1)
4.4 Attenuation (1)
4.5 Fault location distance (1)
4.6 RF power (1)
5 Calibration conditions (1)
5.1 Environmental conditions (1)
5.2 Calibration equipment (2)
6 Calibration items and calibration methods (2)
6.1 Appearance and work normality inspection (3)
6.2 Output signal frequency (3)
6.3 Output power (3)
6.4 Voltage standing wave ratio (3)
6.5 Attenuation (4)
6.6 Fault location distance (4)
6.7 RF power (4)
7 Expression of calibration results (5)
8 Recalibration interval (5)
Appendix A Original Record Format (6)
Appendix B. Internal page format of the calibration certificate (8)
Appendix C Examples of Uncertainty Evaluation of Calibration Results of Main Items (10)

8 Recalibration interval (5)

Appendix A Original Record Format (6)

Appendix B. Internal page format of the calibration certificate (8)

Preview: page 2 of 4 shown, 13 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/jjf-1740-2019

Appendix C Examples of Uncertainty Evaluation of Calibration Results of Main Items (10)

Introduction

This specification is based on JJF 1071-2010 "Rules for Compiling National Measurement and Calibration Specifications" and JJF 1059.1-2012 Preparation of "Measurement Uncertainty Evaluation and Representation".

This specification specifies the frequency accuracy, output power, voltage standing wave ratio, and attenuation of the output signal of the antenna feeder tester the calibration method of the quantity, fault location distance, RF power, and the measurement uncertainty of the calibration items are given in the appendix Evaluation example.

This specification is the first release.

Calibration specification for antenna feeder tester

1 Scope

This specification applies to the calibration of antenna feeder testers.

2 Terminology

Distance to fault

The antenna feeder tester determines the fault location according to the reflection coefficient or the maximum value of the voltage standing wave ratio.

The distance of the location is the fault location distance.

3 Overview

The antenna feeder tester can quickly evaluate the condition of the transmission line and antenna system, and measure the reflection coefficient or voltage standing wave Ratio, cable loss and fault location distance. Antenna feeder tester is a commonly used measuring instrument in communication, widely used in Wireless system installation, configuration, maintenance and failure analysis.

Antenna feeder tester usually consists of signal source unit, signal separation unit, receiver unit, digital control and display unit Composition. The port impedance is generally 50ohm.

4 Metering characteristics

4.1 Output signal frequency Range. 2MHz ~ 18GHz, maximum allowable error. ± (1 x 10-6 ~ 7.5 x 10-5).

4.2 Output power

Range. -30dBm ~ 20dBm, the maximum allowable error. ± 2dB.

4.3 Voltage standing wave ratio Range. VSWR > 1, maximum allowable error. ± 20%.

Preview: page 3 of 4 shown, 13 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/jjf-1740-2019

Chinastandards.org

4.4 Attenuation

Range. 0dB ~ 30dB, maximum allowable error. ± 1.5dB.

4.5 Fault location distance Range. 0m ~ 1500m, maximum allowable error. ± (3% x physical length 0.1m).

4.6 RF power

Range. -50dBm ~ 20dBm, maximum allowable error. ± 2dB.

Note: The above technical indicators are not used to determine eligibility, only for reference.

5 Calibration conditions

5.1 Environmental conditions

a) Ambient temperature. (23 ± 5) °C;

b) Relative humidity. <=80%;

Preview: page 4 of 4 shown, 13 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/jjf-1740-2019