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**Calibration Specification for Medium Power Meters
(English Translation)**

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Introduction

This specification based JJF 1071-2010 "National Calibration Specifications writing rules" and JJF 1059-1999 "test Evaluation and Expression of Uncertainty "Writing. This specification was first released, mainly for the frequency range of 1MHz ~ 40GHz, power range from 0.1W ~ 500W by type and calibration method in which the power meter terminal were Regulation set. Calibration projects include. DC power or RF power calibration factor

and voltage standing wave ratio. Given in the Appendix Measuring alternating comparison, the standard transfer method and direct method of measuring the power meter calibration factors Calibration Uncertainty Evaluation instance.

The power meter calibration specification

1 Scope

This specification applies to the calibration frequency range of 1MHz ~ 40GHz, power range from 0.1W ~ 500W each RF and microwave power meter calibration types.

2 Overview

The power meter is used to measure the power of the microwave signal equipment, access systems based on their different ways, can be divided through Through type and terminal type two types.

Meter usually consists of small directional coupler power meter and composed by the formula of power, the use of a directional coupler coupled adjacent portion of the arm Power, after detecting an indication of the magnitude of power through.

Wherein the terminal is a power meter can be used as a terminal load absorbed power, while indicating the magnitude of the power meter Device. Press measuring principle can be divided calorimeter where power meter, thermocouple type of power meter.

3 Metrological characteristics DC power range. 0.1W ~ 9W;

Calibration factor measurement uncertainty. 2.0% ~ 9% ($k = 2$);

VSWR. greater than 1.00.

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

4 calibration conditions

4.1 Calibration environmental conditions Ambient temperature. $(23 \pm 5) ^\circ\text{C}$;

Relative humidity. less than 80%;

Power supply. voltage $(220 \pm 11) \text{ V}$, frequency $(50 \pm 1) \text{ Hz}$;

Other. around no effect mechanical vibration and electromagnetic interference calibration system to work.

4.2 Calibration Equipment Calibration equipment must be certified by the agency and are subject to legal metrology within the validity period, or registered calibrated real Calibration laboratories, and within the recommended recalibration interval specified by the user.

Major equipment calibration as follows.

4.2.1 Signal Generator Frequency range. 1MHz ~ 40GHz;

Frequency stability. better than $1 \times 10^{-6}/5\text{min}$;

Amplitude stability. better than 0.01dB/5min;

Output power range. -70dBm ~ 20dBm.