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GB/T 34094-2017

**Power consumption measurement methods of information
technology equipment**

信息技术设备功耗测量方法

(English Translation)

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard uses the translation method identical with IEC 62018:2003 "Information technology equipment power consumption - measurement methods." the documents of our country that are consistent with the corresponding international documents that are normative references in this standard are as follows.

--- GB 4943.1-2011 Information technology equipment safety Part 1. General requirements (IEC 60950-1:2005, MOD) this standard made the following editorial changes.

--- Modify the standard name.

Please note that some of this document may be patentable. The issuing agencies of this document do not bear the responsibility of identifying these patents.

This standard proposed by the Ministry of Industry and Information Technology of the People's Republic of China.

This standard by the People's Republic of China Ministry of Industry and Information Technology (E) centralized.

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Introduction

Energy management is where information technology (IT) equipment reduces the energy consumption of external energy sources or reduces the total energy consumption of the

equipment during the idle phases of any program, and is Through the equipment design, structure, operation to achieve.

The purpose of energy management is to minimize the energy consumed by the device in performing the necessary functions.

The design, operation or structure of the energy management program should not impair the function of the equipment itself or the equipment.

The above shows the purpose of minimum energy consumption to accomplish a task. Energy management is sometimes expressed as two levels of power consumption in different modes of operation the ratio.

When the completion of a particular function into idle state, the device receives a program instruction to enter the power saving mode. There may be a few different sections in power-on mode, an energy saver mode may turn off the drive, and in another power saver mode, more power may be turned off for maximum power saving.

In some cases, the most energy efficient mode is shutdown, with little or no energy consumption. User or software operation will re-enter the device into high energy Consumption level or reach full working mode without the need for external restart procedures interference.

If the device is mainly used for non-stop work, rarely enter the idle state, you do not need energy-saving mode.

Information technology equipment power measurement methods

1 Scope

This standard specifies the energy management method for the purpose of information technology equipment (ITE) in different modes of power measurement methods.

Information technology equipment includes products specified by IEC 60950-1.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article Pieces. For undated references, the latest edition (including all amendments) applies to this document.

IEC 60950-1 Information Technology Equipment Security Part 1. General requirements (Informationtechnologyequipment-Safety-Part 1: Generalrequirements)

3 Terms and definitions

IEC 60950-1 defines the following terms and definitions apply to this document.

Full working model full-on mode Information technology equipment in all functions fully activated under normal operating conditions.

Energy-saving mode One or more of the information technology equipment functions are turned off by the working conditions.

4.1 Measuring equipment

The measurement uses a calibrated voltage meter and power meter that provide true rms values. Voltmeter at the rated voltage accuracy should be $\pm 1\%$ Within the power meter at 100W or higher power accuracy should be within $\pm 1\%$, the waveform accuracy of the peak reading of the reading factor of 5, the test equipment should Have at least 1kHz bandwidth.

4.2 Configuration

Equipment test should use a typical representative of the configuration and the ability to perform the configuration function.

4.3 Temperature and humidity

If the manufacturer does not provide a working environment, or the specified temperature range includes 23 °C, the test should be carried out at 23 °C $\pm$ 5 °C. If the rules the fixed temperature range does not include 23 ° C. This test will be conducted at any temperature range closer to 23 ° C.

4.4.1 Frequency and waveform

The frequency of the test power supply shall be the rated frequency of the equipment under test. Test equipment shall be tested when the equipment under test is operating in the maximum configuration declared by the manufacturer