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

GB/T 44021.5-2024

**Audio, video and related equipment - Determination of power
consumption - Part 5: Set top boxes(STB)**

音视频及相关设备 功耗测量 第5部分：机顶盒（STB）

(English Translation)

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting:

This document is part 5 of GB/T 44021 "Measurement of power consumption of audio, video and related equipment": GB/T 44021 has been published in Lower part:

- Part 1: General;
- Part 2: Test signals and media;
- Part 3: Television sets;
- Part 4: Video recording equipment;
- Part 5: Set-top box (STB);
- Part 6: Audio equipment:

This document is equivalent to IEC 62087-5:2015 "Measurement of power consumption of

audio, video and related equipment - Part 5: Set-top box (STB)":

Introduction

As important consumer products, audio and video products are widely used in consumers' homes: The power consumption of audio and video and related equipment has become a major concern for consumers:

The development of this document provides a practical evaluation method for the power consumption evaluation of audio, video and related equipment, which will help strengthen the consumer product field:

It has played a positive role in building the domain standard system and promoting the healthy development of the industry:

GB/T 44021 "Measurement of power consumption of audio, video and related equipment" is planned to consist of 6 parts:

--- Part 1: General: The purpose is to specify general requirements for power consumption measurements of audio, video and related equipment:

--- Part 2: Test signals and media: The purpose is to give the test signals for audio, video and related equipment such as televisions and computer monitors:

Signals and media used when measuring power consumption:

--- Part 3: Television sets: The purpose is to specify the power consumption measurement and related characteristics of television sets:

--- Part 4: Video recording equipment: The purpose is to describe the power consumption measurement method of video recording equipment with removable media and give the power consumption Measurement related various operation modes:

--- Part 5: Set-top Box (STB): The purpose is to describe the power consumption measurement method of the set-top box and give various Operation mode:

--- Part 6: Audio equipment: The purpose is to describe the power consumption measurement method of audio equipment:

Power consumption measurement of audio, video and related equipment Part 5: Set-top Box (STB)

1 Scope

This document describes the power consumption measurement method for set-top boxes and presents the various operating modes that are relevant for power consumption measurement:

This document applies only to equipment that can be connected to a mains supply:

The measurement conditions of this document represent normal usage of the device and may differ from usage under specific conditions, such as those specified in safety standards:

The usage is different under different conditions:

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document:

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to this document:

GB/T 44021.1-2024 Measurement of power consumption of audio, video and related equipment Part 1: General (IEC 62087-1:2015, IDT) IEC 60107-1:1997 Methods of measurement for receivers for television broadcast transmissions Part 1: General considerations for radio and video frequencies Note: GB/T 17309.1-1998 Measurement methods for television broadcast receivers Part 1: General considerations for RF and video electrical performance measurements and display performance Measurement of energy (idt IEC 60107-1:1995) the DVB-T system):

3 Terms, definitions and abbreviations

3.1

Terms and Definitions the following terms and definitions apply to this document:

3.1.1

Additional functions Functions not required for basic operation of the device:

3.1.2

Buffering

In order to accomplish the time-shifting functionality, some form of storage is used to temporarily store the video and audio streams:

3.1.3

Cable TV set-top box cableTVSTB the main function is to receive and decode TV signals from broadband, hybrid fiber/coaxial, and community cable distribution systems and transmit them to the display recorder or recording device: