

ICS 33.060.30

CCS M75



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

GB/T 16954-2017

Replacing GB/T 16954-1997

**General specification for Ku-Band satellite television
receive-only station**

Ku频段卫星电视接收站通用规范

Issued on: July 31, 2017

Implemented on: February 1, 2018

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China;
Standardization Administration of China**

Table of Contents

1	Scope	
2	Normative references	
3	Classification and composition	
3.1	Classification	
3.2	Equipment Composition	
4	Requirements	
4.1	System Requirements	
4.1.1	Satellite digital TV requirements	
4.1.2	Satellite data receiving station requirements	
4.1.2.7	Security requirements Same as 4.1.1.7. Table	
4.2	Antenna requirements	
4.2.1	Working environment conditions	
4.2.2	Features	
4.2.3	Structure	
4.2.3.3	Surface accuracy root mean square error $\sigma \leq$	
4.3	Outdoor unit requirements	
4.4	Indoor unit requirements	
5	Test methods	
5.1	Test conditions	
5.2	Appearance, Structure and Process Inspection	
5.3	Electrical performance measurement	
5.4	Function check	
5.5	Convolutional code rate $=3/4 \leq 4.5 \leq$	
5.6	Security Check	
5.7	Environmental Adaptability	
5.8	Reliability Test	
6	Data reception and collection times $\leq 3 - 7$ CPU usage % ≤ 50 when receiving data	
6.1	Inspection classification	
6.2	Stereotype test	
6.3	Settlement inspection	
6.4	Routine inspection	
7	Marking, packaging, transport and storage	

7.1 mark

7.2 Packing

7.3 Transportation

8 Memory usage % ≤

11 Multi-carrier intermodulation dB ≥40 ≥40 F1-f2=4MHz Level. -70dBm

12 Feed illumination angle - - See Table 5 -

12.2 Can be extended to 10.7~

12.75 Table 2 (continued) Serial number project unit performance parameter description

Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009. This standard replaces GB/T 16954-1997 "General Specification for Ku-band Satellite TV Receiving Station". Compared with GB/T 16954-1997, the main technical changes in this standard are as follows:

--- System part added satellite digital TV (SD and HD) and satellite data receiving station content (see

4.1.1 and 4.1.2), delete Satellite analog television content;

--- Antenna, according to different materials, and increase the functional and structural requirements that users are very concerned about (see

4.2.2 and 4.2.3);

---The outdoor unit adds requirements for integrated outdoor units (see

4.3.4 and 4.3.6);

--- Indoor unit to increase satellite digital TV (SD and HD) and satellite data reception (see

4.4.1 and 4.4.2), delete Wei Star analog TV content; This standard was proposed by the Ministry of Industry and Information Technology of the People's Republic of China. This standard is under the jurisdiction of China Electronics Technology Standardization Institute. This standard was drafted. China Electronics Technology Group Corporation 54th Research Institute, Shaanxi Ruyi Electric Corporation, Jiangsu Yinhe Electronics Stock Co., Ltd., Fujian Shenzhou Electronics Co., Ltd., Nanjing Panda Electronics Co., Ltd., Hunan Aerospace Satellite Communication Technology Co., Ltd., Qing Island Hisense Electric Co., Ltd., Sichuan Video Electronics Co., Ltd., Guizhou Zhenhua Tiantong Equipment Co., Ltd., Anhui SiChuang Electronic Stock Co., Ltd. Co., Ltd. and so on. Drafters of this standard. Li Shengli, Tian Li, Li Peihong, Wang Xinglin, Yu Weidong, Shu Xiumei, Gu Hongchun, Liu Jingquan, Zhou Chun, Ma Jianzhong, Qi Zhiyong, Liu Changyong, Zheng Xiaoming, Hu

Bin, Heng Yongtian. The previous versions of the standards replaced by this standard are.

---GB/T 16954-1997

The issuing body of this document draws attention to the fact that the use of the relevant patents of

1 Scope

GB/T 16954-2017 is the Chinese national standard on general specification for ku-band satellit television receive-only station, in the field of telecommunications and audio-video engineering. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 31 July 2017 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China, Standardization Administration of China, and has been in force since 1 February 2018. Classification: ICS 33.060.30, CCS M75. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the requirements, test methods, inspection rules, signs and packages for Ku-band satellite digital TV/data receiving stations and their equipment. Loading, transport and storage. This standard applies to the design and production of Ku-band satellite digital TV and data receiving stations and antennas, outdoor units, indoor units, etc. Production and inspection.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article. Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 191-2008 packaging storage and transportation icon

GB 2312-1980 Basic set of Chinese character coded character set for information exchange

GB/T 2828.1-2012.Sampling procedures for sampling by sampling - Part 1 . Batch-by-batch inspections by Retrieving Quality of Acceptance (AQL) plan

GB/T 2829-2002 Periodic inspection count sampling procedures and tables (applicable to the inspection of process stability)

GB 8898-2011 Safety requirements for audio, video and similar electronic equipment GB/T

11298.1-1997~

GB/T 11298.4-1997 Satellite television earth receiving station measurement method

GB/T 12322-1990 General-purpose application television equipment reliability test method

GB/T 12840-1996 Cartridge tape recorder transport belt reliability requirements and test methods

GB 13837-2012 Limits and methods of measurement for interference characteristics of sound and television broadcast receivers and related equipment

GB/T 17191.3-1997 Information technology digital storage media moving image with 1.5Mbit/s data transmission rate and its companion Coding of sounds Part 3. Audio

GB/T 17700-1999 Satellite digital broadcasting channel coding and modulation standard

GB/T 17975.2-2000 Information technology - General coding for motion pictures and associated audio information - Part 2. Video

GB/T 17975.3-2002 Information technology - General coding for motion pictures and associated audio information - Part 3. Audio GY/T 150-2000 Satellite Digital TV Receiving Station Measurement Method

3 Classification and composition

3.1 Classification The satellite television receiving station is divided into a television receiving station and a data receiving station. TV receiving stations are classified into engineering, professional and general types according to technical performance and functions. Data receiving stations are not classified. Engineering type. Its electrical performance and function can meet the requirements of receiving or receiving satellite TV programs. Professional type. its electrical performance is the same as the engineering type, only the functional requirements are different (with remote control function). Ordinary type. Its electrical performance and function can meet the requirements of direct reception of satellite TV programs.

3.2 Equipment composition The satellite TV receiving station consists of an antenna, an outdoor unit (commonly referred to as a tuner) and an indoor unit (commonly known as a receiver), as shown in Figure 1. In the room An L-band power splitter can be connected between the external unit and the indoor unit, and can receive multiple sets of satellite television programs transmitted by the same satellite in real time. Figure

1 Single satellite TV receiving station equipment The second composition mode is as shown in FIG. 2, and the power splitter and the switch are connected between the outdoor unit and the indoor unit, and multiple indoors can be realized. The unit simultaneously receives multiple sets of satellite television programs transmitted by two or more satellites independently. Figure