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

GB/T 6046-2016

Analogue quartz clocks

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Foreword

This standard is drafted in accordance with the rules given in GB/T 1.1-2009. This standard replaces GB/T 6046-2007 "pointer quartz clock". This standard compared with GB/T 6046-2007, the main technical changes as follows:

- modify the contents of the scope (see Chapter 1);
- modify the "average instantaneous difference" and "voltage coefficient" of the index value (see Table 1);
- Change the "average temperature coefficient" to "temperature coefficient" and modify its index value (see Table 1);
- modified button battery "power consumption" of the index value (see Table 2);
- modified the "equipment" requirements (see Table 3); - Amend the terms of the "factory inspection" (see 5.1.1, 5.1.2 and 5.1.3); - Added "power dissipation" test item in "factory inspection" and modified the reception quality limit of the "appearance" test item (see Table 4);
- Amend the terms of the "sign" (see 6.1);
- modified the "alarm volume" value (see A.1.5.1);
- modified the "press volume" value (see B.1.4);
- Revised "swing" items and indicators (see table C.1). This standard is proposed by the China Light Industry Federation. This standard by the National Standardization Technical Committee (SAC/TC160) centralized. The drafting of this standard. Guangzhou Fidelity Watch Industry Co., Ltd., Yantai Polaris State Holding Co., Ltd., Fujian Province, State Electronics Technology Co., Ltd., Fujian Shangrun Precision Instrument Co., Ltd., Shenzhen Titan Clock Watch Co., Ltd., Fujian Ji Bang Electronics Co., Ltd., Shenzhen City Overlord Industrial Group Co., Ltd., light industry watches and clocks, Fujian Ruida Seiko Co., Ltd., Changzhou Jingke Industry Co., Ltd. Company, Zhangzhou Haibo Industry & Trade Co., Ltd. The main drafters of this standard. Luo Xiaomei, Meng Baoquan, Luo Jianyi,

Ji Yonggang, Lin Jian, Wu Xiaolin, Su Fangzhong, Fan Yaorong, He Guangxian, Zhang Ping, Chen Yili, Liu Yi, Yin Xiaoyu, Jin Yingshu, Chen Bin, Jiang Xin, Li Xia, Sun Gang, Huang Yuanbin, Huang Yuanfeng. This standard replaced the previous version of the standard release. GB/T 6046-1985, GB/T 6046-1992, GB/T 6046-2007. Pointer quartz clock

1 Scope

China's national standard for analogue quartz clocks. The quartz clock is one of the most successful pieces of engineering ever made a commodity: a tuning fork crystal cut to oscillate at 32768 Hz - a power of two, so fifteen divisions give exactly one pulse per second - drives a stepper motor that advances the hands, all from a single 1.5 V cell for a year or more. China makes the overwhelming majority of the world's movements, and the standard covers both complete clocks and the movements sold separately to be built into other products, which is how most of them are used. What determines quality is not the principle but the execution: the crystal's frequency drifts with temperature and with age, the trimming at manufacture is what sets the initial accuracy, and the motor's ability to keep stepping as the cell's voltage falls is what sets the useful life. The standard specifies the technical requirements, test methods, inspection rules, marking, packaging, transport and storage, and excludes special purpose clocks for aircraft, ships and cars.

This standard specifies the technical requirements, test methods, inspection rules, signs, packaging and transportation of the standard quartz clock (hereinafter referred to as "quartz clock") Lose, store. This standard applies to the crystal frequency of 32768Hz, the nominal operating voltage of DC1.50V quartz clock, quartz clock heart and the use of the Other timing devices such as the movement can also be used. This standard does not apply to special purpose quartz clocks, such as aircraft, ships and cars with quartz clocks.

2 Normative reference documents

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

GB/T 2828.1 Sampling inspection procedures Part 1. Batch inspection sampling plan for retrieval by quality limit (AQL)

GB/T 2829 Periodic inspection count Sampling procedures and tables (for inspection of process stability)

3 Request

3.1 Operating temperature Quartz clock in the -10 °C ~ 50 °C temperature range should not stop.

3.2 voltage range Quartz clock in the DC1.70V ~ DC1.25V operating voltage range should not stop.

3.3 Use reliability

3.3.1 quartz clock in normal use conditions should not stop, the function keys should be flexible and reliable, zero, the Department, the components should not fall off their own.

3.3.2 Quartz clock in the pre-transport and the average instantaneous difference, the temperature coefficient test cumulative error should not exceed 2min.

3.3.3 Quartz clock hour and time when the center of the coincidence, the sub-needle deviation from the "12" when the center of the angle should not be greater than 90 °.

3.4 Average instantaneous difference m The average instantaneous difference between the days of 3d and 3d shall be in accordance with Table 1. Table

1 Projects and indicators Serial number item index Excellent first class qualified 1 average instantaneous difference m/(s/d) -0.5 ~ 0.5 -1.0 ~ 1.0 -1.5 ~ 1.5 2 voltage coefficient $C_v/[s/(d \cdot V)]$ -

0.8 to 0.8-