

ICS 33.040.30

CCS M15



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

GB/T 15838-2008

Replacing GB/T 15838-1995

**Test methods for the performances of switching equipment
clocks in digital network**

数字网中交换设备时钟性能测试方法

Issued on: October 7, 2008

Implemented on: April 1, 2009

**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 Abbreviations
- 4 Frequency accuracy
- 4.2 Test Schematic Frequency accuracy test schematic shown in Figure 1. Figure

Foreword

The standard reference ITU-TG. 810 "definitions and terminology for synchronization networks", G. 812 "is suitable for clock synchronization network nodes from the timing requirements" and G. 823 "inside to 2048kbit/s hierarchical level based digital network jitter and wander control", and GB/T 15838-1995 conduct Amendments. This standard replaces GB/T 15838-1995 "Test Method equipment clock performance digital synchronous network." This standard GB/T 15838-1995 The main amendments are as follows:

- a) the standard name was changed to "Test Method digital network switching equipment clock performance";
- b) reference to ITU-T Recommendation G. 812 and G. 823, and YD/T 1011-1999, for all test items proposed a complete The new test method, and as a benchmarking methodology;
- c) the original standard test methods as an alternative test method preserves;
- d) original standard Chapter 1, "the main content and scope" was changed to Chapter 1, "scope";
- e) the original standard in Chapter 2, "reference standard" was changed to Chapter 2, "Normative references";
- f) increased Chapter 3, "Acronyms";
- g) According YDN065-1997, increase the Chapter 4, "frequency accuracy";
- h) the original standard in Appendix A "main performance requirements of this standard test configuration for each use of the instrument (Supplement)" was changed to Appendix A (Regulation Normative appendix) "The main use of the instrument's performance requirements," and according to the new test method proposed Appendix A accordingly supplement;
- i) according to ITU-T Recommendation G. 810, an increase of Annex B (informative) "parameter defines the test." The standard proposed by the Ministry of Industry and

Information Technology of the People's Republic of China. The standard by the China Communications Standards Association is responsible for centralized. This standard is mainly drafted by: Ministry of Information Industry Telecommunications Research Institute. The main drafters of this standard. Wang Jianhua, Xu Yijun, Hu Changjun. This standard was first released in 1995, this is the first revision. Digital network switching equipment clock performance Test Methods

1 Scope

GB/T 15838-2008 is the Chinese national standard on test methods for the performances of switching equipment clocks in digital network, 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 7 October 2008 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 April 2009. Classification: ICS 33.040.30, CCS M15. 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 frequency accuracy of the digital telephone switching equipment clock pulling range, jitter/wander generation, jitter/wander tolerance input Limit, the jitter/wander transfer characteristics, the test methods to keep properties, phase transient/phase discontinuity and other properties, as well as monitoring, alarm and control Detection functions. This standard applies to digital telephone switching equipment clocks.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 7611-2001 bit rate for digital network electrical interface characteristics

3 Abbreviations

The following abbreviations apply to this standard. MTIE MaximumTimeIntervalError maximum time interval error STM-N SynchronousTransportModule, LevelN N order Synchronous Transport Module TDEV TimeDeviation time deviation Unit interval UI

UnitInterval

4 Frequency accuracy

4.1 index requirements For two transit switching equipment clocks whose frequency accuracy should be better than $\pm 4.0\text{E-}7$. For three local switching equipment clocks whose frequency accuracy should be better than $\pm 4.6\text{E-}6$.