

ICS 83.180
CCS G 38



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

GB/T 7752-2025

Replacing GB/T 7752-1987

**Test method for dielectric strength and voltage withstand of
insulating adhesive tape at power frequency**

绝缘胶粘带工频介电强度和耐电压的试验方法

Issued on: August 29, 2025

Implemented on: March 1, 2026

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

Table of Contents

Preface	III
1 Scope	1
2 Normative References	1
3 Terms and Definitions	1
4 Principle	2
5 Instruments and Equipment	2
5.1 Thickness gauge	2
5.2 Electrode Device	2
5.3 Power Supply Unit	4
6 Samples and specimens	4
6.1 State Adjustment	4
6.2 Sample Selection	4
6.3 Sample Size and Quantity	4
7 Experimental Procedure	5
7.1 Standard Test Conditions	5
7.2 Thickness Measurement	5
7.3 Sample Installation	5
7.4 Boost Method	5
7.5 Penetration Detection	6
7.6 Voltage Measurement	6
7.7 Withstand Voltage Test	6
8 Experimental Results	7
8.1 Dielectric strength	7
8.2 Withstand voltage	7
9 Test Report	7

Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents". Drafting.

This document supersedes GB/T 7752-1987 "Test Method for Power Frequency Breakdown Strength of Insulating Adhesive Tapes" and is consistent with GB/T 7752-1987.

Aside from structural adjustments and editorial changes, the main technical changes are as follows.

- The scope of the file has been changed (see Chapter 1, Chapter 1 of the 1987 edition);
- Added terms and definitions (see Chapter 3);
- The principle has been changed (see Chapter 4, Chapter 2 of the 1987 edition);
- Added specifications for thickness gauges (see 5.1);
- Increased the boost rate under continuous uniform boost mode (see 7.4.2, 6.4 in the 1987 edition);
- A step-up voltage boost method has been added (see 7.4.3);
- Added penetration detection (see 7.5);
- A withstand voltage test has been added (see 7.7);
- The method of calculating the test results has been changed (see 8.1, Chapter 7 of the 1987 edition);
- The results of the withstand voltage test have been added (see 8.2);
- The test report has been amended (see Chapter 9, Chapter 8 of the 1987 edition).

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China Petroleum and Chemical Industry Federation.

This document is under the jurisdiction of the National Technical Committee on Standardization of Adhesives (SAC/TC185).

This document was drafted by: Meixin New Materials Co., Ltd., Shanghai Rubber Products Research Institute Co., Ltd., and Jiangsu Sidike New Materials Technology Co., Ltd.

Technology Co., Ltd., Kaiping Qiyu Adhesive Products Technology Co., Ltd., Huizhou Meixin Electronics Co., Ltd., Zhejiang Fulai New Materials Co., Ltd.

Limited Liability Company, Crown New Material Technology Co., Ltd., Yung-Ta (Zhongshan) Co., Ltd., Fujian Provincial Institute of Product Quality Inspection, Guangdong Dongli New Material Technology Co., Ltd., Guangdong Xinzhixuan Technology Co., Ltd., Fujian Nanxin Cable Co., Ltd., and Zhongshan New Asia Adhesive Products Co., Ltd.

Limited Liability Company, Fujian Huiyang Cable Technology Co., Ltd., Meiya Nissan Cable Co., Ltd., Foshan Nanhai Xinyongtai Adhesive Products Co., Ltd.

The company, Fujian Tongyu Cable Co., Ltd., and Foshan Shunde Yongchuang Xiangyi Electronic Materials Co., Ltd.

The main drafters of this document are: Chen Weibin, Shen Yan, Jin Chuang, Luo Jier, Lin Xuehao, Yang Zhiyong, Yang Xiaoming, Li Jianxiong, Chen Huachang, and Li Jie.

Ke Yuehu, Cai Junyun, Wu Weiqing, Chen Yunling, Yang Yongqiang, Liao Changchang, Liao Yanping, Pan Daman, Chen Da, Zeng Lijuan.

The release history of this document and the document it replaces is as follows.

- First published in 1987 as GB/T 7752-1987;
- This is the second revision.

Insulating adhesive tape power frequency dielectric strength and Test method for withstand voltage

1 Scope

This document describes the test methods for the power frequency dielectric strength and withstand voltage of insulating adhesive tapes.

This document applies to the determination and evaluation of the power frequency dielectric strength and withstand voltage of insulating adhesive tapes.

2 Normative references

GB/T 7125

GB/T 22396

3 Terms and Definitions

The terms and definitions defined in GB/T 22396 and the following terms and definitions apply to this document.

3.1

An adhesive tape used in electrical work that has excellent electrical insulation properties and prevents leakage.

3.2 power frequency

The rated frequency used by power generation, transmission, transformation and distribution equipment, as well as industrial and civil electrical equipment in the power system.

Note 1. The unit is Hertz (Hz).

Note 2. The standard frequency for China's power industry is set at 50Hz, while some

countries (such as the United States) set it at 60Hz.

3.3 Breakdown

When insulating adhesive tape is subjected to an electric field, it may experience violent discharge or conduction, resulting in damage and perforation.

3.4 [Source. GB/T 22396-2008, August 21, with modifications]

Under specified conditions, voltage is applied continuously or gradually along the thickness direction of the insulating adhesive tape until breakdown occurs (3.3), and the breakdown is measured (3.3).

The voltage value at that time. Note. The unit is volt (V).

3.5 dielectric strength

electrical strength The ratio of the breakdown voltage (3.4) of the insulating adhesive tape to its thickness.

Note. The unit is volts per meter (V/m).

[Source. GB/T 22396-2008, 8.22, with modifications]

3.6 Voltage withstand; voltage resistant

The voltage that an insulating adhesive tape can withstand within a certain time without causing insulation breakdown. Note. The unit is volt (V).

[Source. GB/T 22396-2008, 8.20, with modifications]

3.7 Flashover

An abnormal direct discharge phenomenon that occurs between two electrodes with high and low voltage.

4 Principles

Apply power frequency voltage to the insulating adhesive tape sample using different voltage boosting methods until breakdown occurs, measure the breakdown voltage, and record the breakdown voltage.

Divide by the sample thickness to obtain the power frequency dielectric strength.

The voltage is rapidly increased to the specified value and maintained at that value for a period of time. If the sample does not break down, this voltage value is taken as the insulation voltage.