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

**GB/T 33772.3-2025**

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**Quality assessment systems - Part 3: Selection and use of  
sampling plans for printed board and laminate end-product and  
in-process auditing**

质量评定体系 第3部分：印制板及层压板最终产品检验及过程监督用抽样方案的  
选择和使用

**(English Translation)**

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## 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 is Part 3 of GB/T 33772 "Quality Assessment Systems". GB/T 33772 has already published the following parts.

---Part 1: Statistics and Analysis of Defects on Printed Circuit Board Assemblies;

---Part 2: Selection and Use of Sampling Plans for the Inspection of Electronic Components and Packages;

---Part 3: Selection and use of sampling schemes for final product inspection and process monitoring of printed circuit boards and laminates.

This document is modified to adopt IEC 61193-3:2013 "Quality assessment systems - Part 3: Inspection and testing of final products of printed circuit boards and laminates".

"Procedure for supervising the selection and use of sampling plans." Compared with IEC 61193-3:2013, this document has undergone the following structural adjustments.

---Added abbreviations for Chapter 4;

---Chapter 5 corresponds to Chapter 4 of IEC 61193-3:2013, and Chapter 6 corresponds to Chapters 4 and 5 of IEC 61193-3:2013.

Chapters 6 and 7 correspond to Chapters 7, 8, and 9 of IEC 61193-3:2013, and Chapter 8 corresponds to IEC 61193-Chapter 10 in 2013.

The technical differences between this document and IEC 61193-3:2013, and the reasons therefor, are as follows.

---IEC 60194:2006 has been replaced by the normatively referenced GB/T 2036 (see Chapter 3), and GB/T 4588.4 has been replaced by the normatively referenced GB/T 4588.4.

IEC 62326-4:1996 (see 6.2, 7.1.1) has been replaced, and ISO 9000:2005 (see section 7.1.1) has been replaced with normative reference GB/T 19000.

(Chapter 3) to adapt to my country's technological conditions and increase operability;

---Table 6 in section 10.4, Process Testing and Control, of IEC 61193-3:2013 has been deleted to align with GB/T 4588.4;

---Due to adjustments made to the main text, and to maintain consistency, some terms and definitions from IEC 61193-3:2013 have been removed.

(See Chapter 3 of IEC 61193-3:2013);

---ISO 14560:2004, which is normatively referenced in IEC 61193-3:2013, has been removed because ISO 14560:2004 is obsolete.

The following editorial changes have been made to this document.

---The fields "Test Number" and "Process Control Code" have been removed from Table A.1 of Appendix A (Informative) of IEC 61193-3:2013;

---Note 3.3 in IEC 61193-3:2013 has been deleted;

---The "Characteristics" in Table A.1 have been adjusted to be consistent with GB/T 4588.4.

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 and is under the jurisdiction of the National Technical Committee on Standardization of Printed Circuits (SAC/TC47).

## Introduction

GB/T 33772 "Quality Assessment System" is proposed to consist of three parts.

---Part 1: Statistics and Analysis of Defects on Printed Circuit Board Assemblies. The purpose is to specify various processing methods for soldered printed circuit board assemblies.

The statistical and analytical methods for defects also specify two methods for collecting defect parts per million (ppm) data ( $1\text{ppm} = 1 \times 10^{-6}$ ).

---Part 2: Selection and Use of Sampling Plans for the Inspection of Electronic Components and Packages. The purpose is to provide sampling plans for the inspection of electronic components and packages.

The inspection of assemblies provides sampling systems and protocols applicable to products manufactured under effective process control to prevent non-conforming products.

Outflow.

---Part 3: Selection and Use of Sampling Plans for Final Product Inspection and Process Monitoring of Printed Circuit Boards and Laminates. The purpose is to regulate...

The selection and use of sampling plans for attribute testing in the final product inspection and process monitoring of printed circuit boards and laminates, including sampling.

Applications of methods, attribute classification, testing plans, and sampling plans, etc.

This document clearly describes the basic sampling criteria that meet customer requirements, and outlines the sampling methods, attribute classification, inspection plans, and sampling procedures.

The application of the case was stipulated.

The sampling plan selected and used for final product inspection and process supervision of printed circuit boards and laminates must clearly define the sampling criteria and sampling plan.

Ideally, different sampling strategies should be developed based on the key impact of each specific characteristic.

Batch counting methods are divided into continuous sampling and production batch sampling. Production batch sampling is further divided into production batch counting sampling and production batch counting sampling.

In quantity sampling, any sampling plan can generate an operational characteristic curve, representing the percentage of nonconforming or defective batches at different levels.

risk.

Product attributes are part of the sampling process; based on importance or severity, individual attributes related to a specified requirement are selected.

Product attributes are categorized into critical attributes, important attributes, and minor attributes. Sampling plans are based on the quality conformity inspection level and the attributes (critical, important, minor, etc.).

Choose from primary and secondary characteristics and defect features (critical, primary, secondary).

As the industry develops, customers require process control methods to monitor the production process from the outset. This includes evaluating product delivery, Sampling criteria should be clearly defined and continuously improved in process control, as follows.

- a) Sampling statistics A specified number of samples are drawn from a given batch for statistical analysis, and the probability of anomalies is assessed using the statistical data.
- b) Zero Defect Standard Zero defects in production batches can be achieved by defining and revising product acceptance standards.
- c) Economic efficiency Establish higher levels of nonconforming product characteristics to reduce quality costs incurred when nonconforming products are discovered or accidentally