

ICS 31.030
CCS L90



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

GB/T 14619-2013

Replacing GB/T 14619-1993

Alumina ceramic substrates for thick film integrated circuits

厚膜集成电路用氧化铝陶瓷基片

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Quarantine of the People's Republic of China;
Standardization Administration of China**

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Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules. This standard replacement GB/T 14619-1993 "thick film integrated with an alumina ceramic substrate," and GB/T 14619-1993 compared to primary Technological change to the following.

- Increasing the terms and product identification (see Chapters 3 and 4);
- When using a nominal increase of the alumina content of the substrate type represents the actual value of the alumina content requirements (see 4.3);
- Increasing the diameter of pits (see Table 1);
- 96% increase in the classification of non-alumina ceramic, and gives the index (see Table 5);
- Increasing the bore requirements (see 5.2.2);
- Refine the size requirements of the substrate after the index crossed (see 5.2.3);
- Test substrate warpage will be described in detail (see Appendix A). The standard proposed by the Ministry of Industry and Information Technology of the People's Republic of China. The standard by the China Electronics Standardization Institute. This standard was drafted. China Electronics Standardization Institute. Drafters of this standard. Cao Yi, T.. This standard replaces the standards previously issued as follows:
- GB/T 14619-1993. Thick film integrated with an alumina ceramic substrate

1 Scope

GB/T 14619-2013 is the Chinese national standard on alumina ceramic substrates for thick film integrated circuits, in the field of electronics. 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 12 November 2013 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 15 April 2014. Classification: ICS

31.030, CCS L90. 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 thick film integrated circuit with an alumina ceramic substrate requirements, test methods, inspection rules, marking, packaging, transport and Storage. This standard applies to thick film integrated with an alumina ceramic substrate production and procurement, the use of thick film technology of chip components alumina Ceramic substrate (hereinafter referred to as substrate) can also refer to use.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 1958 Geometrical Product Specifications (GPS) and a positional deviation detecting a predetermined shape

GB/T 2413 piezoelectric ceramic material bulk density measurement method

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

GB/T 2829 Periodic inspection Sampling procedures and sample forms (for checking the stability of the production process)

GB/T 5593 structure ceramic electronic components

GB/T 5594.3 Electronic Component structure ceramic average linear expansion coefficient Test Method Test Method Test

GB/T 5594.4 electronic structure ceramic component test method dielectric constant and dielectric loss tangent values method

GB/T 5594.5 electronic structure ceramic components volume resistivity test methods Test Method

GB/T 5594.7 electronic structure ceramic components liquid permeability test method Test Method

GB/T 5598 beryllium oxide ceramic thermal conductivity measurement method

GB/T 6062 Geometrical product specifications (GPS) Surface texture Profile method of contact (stylus) instruments nominal characteristics

GB/T 6569 fine ceramic bending strength test method

GB/T 6900 LAS Chemical analysis of refractories

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 Alumina ceramic substrate aluminaceramicsubstrate; aluminasubstrate Can be printed on the surface of the conductor pattern, the membrane element or paste a chip support alumina ceramic electronic components, referred to as substrate.