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

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**Measurement of relative permittivity and loss tangent for
copper clad laminate at microwave frequency - Split post
dielectric resonator method**

微波频段覆铜箔层压板相对介电常数和损耗正切值测试方法 分离介质谐振器法
(English Translation)

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is equivalent to IEC 61189-2-721:2015 "Test methods for electrical materials, printed boards and other interconnecting structures and assemblies" Part 2-721. Test methods for interconnection structure materials - Relative dielectric constant and loss tangent separation of copper-clad laminates in the microwave frequency band Dielectric resonator test method.

This document adds two chapters. "Normative References" and "Terms and Definitions".

The following minimal editorial changes were made to this document.

--- In order to coordinate with the existing standards, the name of the standard is changed to "Test Method for Relative Dielectric Constant and Loss Tangent of Copper-clad Laminates in Microwave Frequency Band" Method. Separation of dielectric resonator method";

--- Notes were added to 5.3.2, 6.2.6 and 6.2.9;

---6.2.11.3 added Note 1 and Note 2;

---6.3.7 added Note 1 and Note 2;

--- Notes were added to 6.3.10, 6.3.13.1, 6.3.13.2 and 6.3.13.3.

1 Scope

This document describes the use of a Split Dielectric Resonator (SPDR) to measure the thermal conductivity of laminates at discrete frequency points in the range of 1.1 GHz to 20 GHz.

The method of relative dielectric constant (D_k or ϵ_{rnr}) and dielectric loss tangent (D_f or $\tan\delta$).

This document applies to the testing of copper clad laminates and insulating dielectric substrates for printed circuit boards.

2 Normative references

This document has no normative references.

3 Terms and definitions

There are no terms or definitions that require definition in this document.

4.1 Specimen size

The specimen size should be larger than the inner diameter (D) of the metal cavity, and the maximum thickness of the specimen should be smaller than the distance between the upper and lower metal cavities of the fixture.

(hg), as shown in Figure 1.