

Test methods for electrical materials, printed boards and other interconnection structures and assemblies - Part 2-721: Test methods for materials for interconnection structures - Measurement of Relative Permittivity and Loss Tangent for Copper Clad Laminate at Microwave Frequency Using Split Post Dielectric Resonator

EESTI STANDARDI EESSÕNA

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See Eesti standard EVS-EN 61189-2-721:2015 sisaldab Euroopa standardi EN 61189-2-721:2015 ingliskeelset teksti.	This Estonian standard EVS-EN 61189-2-721:2015 consists of the English text of the European standard EN 61189-2-721:2015.
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English Version

Test methods for electrical materials, printed boards and other interconnection structures and assemblies - Part 2-721: Test methods for materials for interconnection structures - Measurement of relative permittivity and loss tangent for copper clad laminate at microwave frequency using split post dielectric resonator
(IEC 61189-2-721:2015)

Méthodes d'essai pour les matériaux électriques, les cartes imprimées et autres structures d'interconnexion et ensembles - Partie 2-721: Méthodes d'essai des matériaux pour structures d'interconnexion - Mesure de la permittivité relative et de la tangente de perte pour les stratifiés recouverts de cuivre en hyperfréquences à l'aide d'un résonateur diélectrique en anneaux fendus
(IEC 61189-2-721:2015)

Prüfverfahren für Elektromaterialien, Leiterplatten und andere Verbindungsstrukturen und Baugruppen - Teil 2-721: Prüfverfahren für Verbindungsstrukturen (Leiterplatten) - Messung der relativen Permittivität und des Verlustfaktors von kupferkaschiertem Laminat im Mikrowellen-Frequenzbereich unter Verwendung eines Split Post dielektrischen Resonators
(IEC 61189-2-721:2015)

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European foreword

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- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2016-03-03
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TEST METHODS FOR ELECTRICAL MATERIALS, PRINTED BOARDS AND OTHER INTERCONNECTION STRUCTURES AND ASSEMBLIES –

Part 2-721: Test methods for materials for interconnection structures – Measurement of relative permittivity and loss tangent for copper clad laminate at microwave frequency using split post dielectric resonator

1 Scope

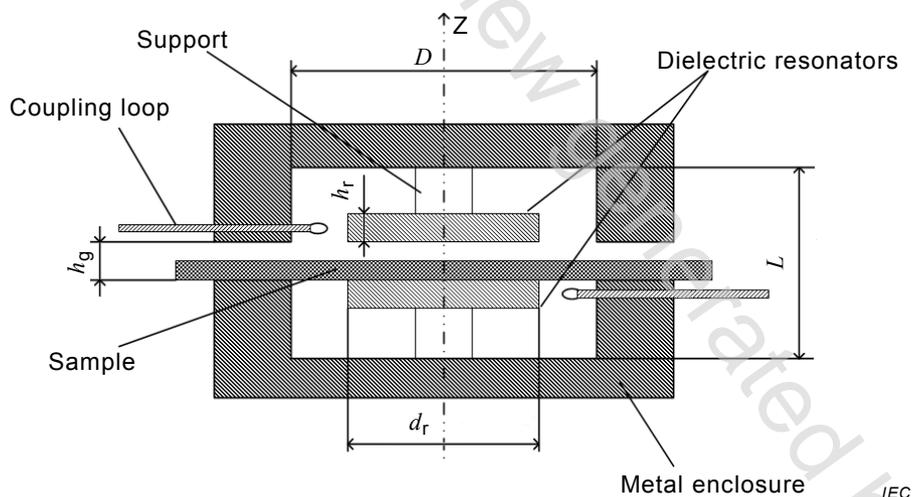
This part of IEC 61189 outlines a way to determine the relative permittivity (ϵ_r) and loss tangent ($\tan\delta$) (also called dielectric constant (Dk) and dissipation factor (Df)) of copper clad laminates at microwave frequencies (from 1,1 GHz to 20 GHz) using a split post dielectric resonator (SPDR).

This part of IEC 61189 is applicable to copper clad laminates and dielectric base materials.

2 Test specimens

2.1 Specimen size

The size of the specimen shall be larger than the internal diameter D of the metal enclosures, and the maximum thickness of the specimen shall be smaller than the distance h_g between the metal enclosures of the fixture. (See Figure 1.)



Key

- h_g distance between the metal enclosures of the fixture;
- D internal diameter of the metal enclosures;
- L internal height of the metal enclosures;
- d_r diameter of the dielectric resonator;
- h_r thickness of the dielectric resonator.

Figure 1 – Scheme of SPDR test fixture