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 STANDARDIKESKUS EVS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA	NATIONAL FOREWORD
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.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 19.06.2015.	Date of Availability of the European standard is 19.06.2015.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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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 (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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CENELEC

European Committee for Electrotechnical Standardization
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European foreword

The text of document 91/1246/FDIS, future edition 1 of IEC 61189-2-721, prepared by IEC/TC 91 "Electronics assembly technology" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61189-2-721:2015.

The following dates are fixed:

• 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
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2018-06-03

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Endorsement notice

The text of the International Standard IEC 61189-2-721:2015 was approved by CENELEC as a European Standard without any modification.

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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

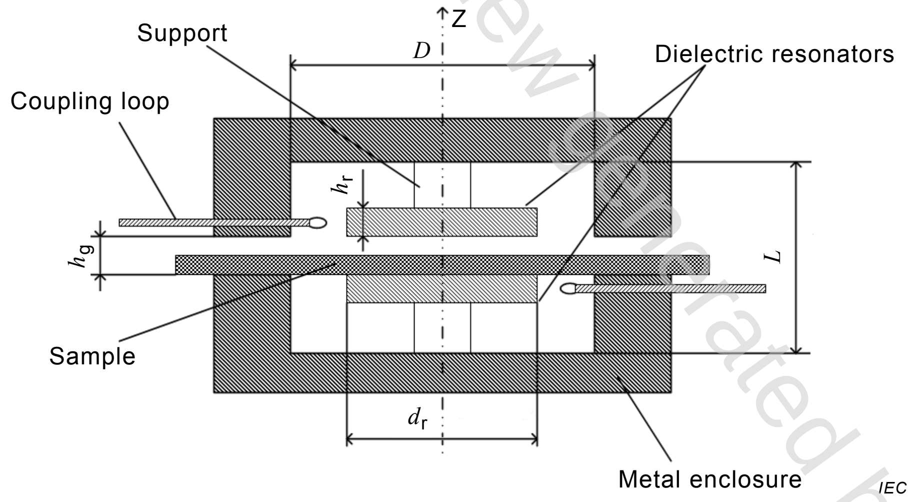
This part of IEC 61189 outlines a way to determine the relative permittivity (ε_r) and loss tangent (tanδ) (also called dielectric constant (*Dk)* and dissipation factor (*Df)*) of copper clad laminates at microwave frequencies (from 1,1 GHz to 20 GHz) using a split post dielectric resonator (SPDR).

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