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Elektronikkomponenter – Fasta kondensatorer – Del 21: Gruppspecifikation för fasta keramiska flerskiktsskondensatorer för ytmontering, Klass 1

Fixed capacitors for use in electronic equipment –

*Part 21: Sectional specification: Fixed surface mount multilayer capacitors
of ceramic dielectric, Class 1*

Som svensk standard gäller europastandarden EN 60384-21:2012. Den svenska standarden innehåller den officiella engelska språkversionen av EN 60384-21:2012.

Nationellt förord

Europastandarden EN 60384-21:2012

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 60384-21, Second edition, 2011 - Fixed capacitors for use in electronic equipment -
Part 21: Sectional specification: Fixed surface mount
multilayer capacitors of ceramic dielectric, Class 1**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 60384-21, utgåva 1, 2004, gäller ej fr o m 2015-01-13.

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**Fixed capacitors for use in electronic equipment -
Part 21: Sectional specification -
Fixed surface mount multilayer capacitors of ceramic dielectric, Class 1
(IEC 60384-21:2011)**

Condensateurs fixes utilisés dans les
équipements électroniques -
Partie 21: Spécification intermédiaire:
Condensateurs multicouches fixes à
diélectriques en céramique pour montage
en surface, de classe 1
(CEI 60384-21:2011)

Festkondensatoren zur Verwendung in
Geräten der Elektronik -
Teil 21: Rahmenspezifikation -
Oberflächenmontierbare
Vielschichtkeramik-Festkondensatoren,
Klasse 1
(IEC 60384-21:2011)

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 40/2127/FDIS, future edition 2 of IEC 60384-21, prepared by IEC TC 40, "Capacitors and resistors for electronic equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60384-21:2012.

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) 2012-10-13
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-01-13

This document supersedes EN 60384-21:2004.

EN 60384-21:2012 includes the following significant technical changes with respect to EN 60384-21:2004:

- The test voltage of 1,2 U_R at $U_R \geq 1\,000\text{ V}$ has been added in 4.5.4 Voltage proof.
- Detail test conditions have been added in 4.7 Shear test and 4.8 Substrate bending test.
- Test conditions applying lead free solder alloy (Sn-Ag-Cu) have been included in 4.9 Resistance to soldering heat and 4.10 Solderability.
- A selection of the test conditions according to marketing needs have been stated in 4.13 Damp heat, steady state.
- The dimensions of 0402 M in Annex A have been added.
- The code of the temperature coefficient and the tolerance of capacitance for the reference temperature of 25 °C have been added, see Annex B.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 60384-21:2011 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 60384-14 NOTE Harmonized as EN 60384-14.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60063 + A1 + A2	1963 1967 1977	Preferred number series for resistors and capacitors	-	-
IEC 60068-1 + corr. October	1988 1988	Environmental testing - Part 1: General and guidance	EN 60068-1	1994
IEC 60068-2-58	2004	Environmental testing - Part 2-58: Tests - Test Td: Test methods for solderability, resistance to dissolution of metallization and to soldering heat of surface mounting devices (SMD)	EN 60068-2-58 + corr. December	2004 2004
IEC 60384-1 + corr. November	2008 2008	Fixed capacitors for use in electronic equipment - Part 1: Generic specification	EN 60384-1	2009
IEC 61193-2	2007	Quality assessment systems - Part 2: Selection and use of sampling plans for inspection of electronic components and packages	EN 61193-2	2007
ISO 3	1973	Preferred numbers - Series of preferred numbers	-	-

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FIXED CAPACITORS FOR USE IN ELECTRONIC EQUIPMENT –

Part 21: Sectional specification – Fixed surface mount multilayer capacitors of ceramic dielectric, Class 1

1 General

1.1 Scope

This part of IEC 60384 is applicable to fixed unencapsulated surface mount multilayer capacitors of ceramic dielectric, Class 1, for use in electronic equipment. These capacitors have metallized connecting pads or soldering strips and are intended to be mounted on printed boards, or directly onto substrates for hybrid circuits.

Capacitors for electromagnetic interference suppression are not included, but are covered by IEC 60384-14.

1.2 Object

The object of this standard is to prescribe preferred ratings and characteristics and to select from IEC 60384-1 the appropriate quality assessment procedures, tests and measuring methods and to give general performance requirements for this type of capacitor. Test severities and requirements prescribed in detail specifications referring to this sectional specification should be of equal or higher performance level, lower performance levels are not permitted.

1.3 Normative references

The following reference documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60063:1963, *Preferred number series for resistors and capacitors*
Amendment 1 (1967)
Amendment 2 (1977)

IEC 60068-1:1988, *Environmental testing – Part 1: General and guidance*

IEC 60068-2-58:2004, *Environmental testing – Part 2-58: Tests – Test Td – Test methods for solderability, resistance to dissolution of metallization and to soldering heat of surface mounting devices (SMD)*

IEC 60384-1:2008, *Fixed capacitors for use in electronic equipment – Part 1: Generic specification*

IEC 61193-2:2007, *Quality assessment systems – Part 2: Selection and use of sampling plans for inspection of electronic components and packages*

ISO 3:1973, *Preferred numbers – Series of preferred numbers*