

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Fixed electric double-layer capacitors for use in electronic equipment –
Part 2: Sectional specification – Electric double-layer capacitors for power
application**

**Condensateurs électriques fixes à double couche utilisés dans les équipements
électriques et électroniques –
Partie 2: Spécification intermédiaire – Condensateurs électriques à double
couche pour application de puissance**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**FIXED ELECTRIC DOUBLE-LAYER CAPACITORS
FOR USE IN ELECTRIC AND ELECTRONIC EQUIPMENT –****Part 2: Sectional specification –
Electric double-layer capacitors for power application**

FOREWORD

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IEC 62391-2 has been prepared by IEC technical committee 40: Capacitors and resistors for electric and electronic equipment. It is an International Standard.

This International Standard is to be used in conjunction with IEC 62391-1:2022.

This second edition cancels and replaces the first edition published in 2006. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) the document has been completely restructured to comply with the ISO/IEC Directives, Part 2;

- b) introduction of a new technical categorization for the test methods;
- c) reorganization of the test methods according to these new categories;
- d) revision of the tables, figures and references according to changes.

The text of this International Standard is based on the following documents:

Draft	Report on voting
40/3193/FDIS	40/3199/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts in the IEC 62391 series, published under the general title *Fixed electric double-layer capacitors for use in electric and electronic equipment*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under www.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

FIXED ELECTRIC DOUBLE-LAYER CAPACITORS FOR USE IN ELECTRIC AND ELECTRONIC EQUIPMENT –

Part 2: Sectional specification – Electric double-layer capacitors for power application

1 Scope

This part of IEC 62391 applies to electric double-layer capacitors for power application.

Electric double-layer capacitors for power are intended for applications that require to discharge currents in the range from mA to A. The characteristics of the capacitors include such performance as relatively high capacitance and low internal resistance, which is applicable to Class 3 and Class 5 of the measurement classification specified in IEC 62391-1:2022.

The object of this document is to specify preferred ratings and characteristics and to select from IEC 62391-1:2022 the appropriate quality assessment procedures, tests and measuring methods and to give general performance requirements for this type of capacitor. Test severities and requirements specified in detail specifications referring to this document provide specific test severities and requirements of an equal or higher performance level.

The definition of power density and its calculating procedure can be found in Annex A.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 60068-2-6:2007, *Environmental testing – Part 2-6: Tests – Test Fc: Vibration (sinusoidal)*

IEC 60068-2-14:2023, *Environmental testing – Part 2-14: Tests – Test N: Change of temperature*

IEC 60068-2-20:2021, *Environmental testing – Part 2-20: Tests – Test Ta and Tb: Test methods for solderability and resistance to soldering heat of devices with leads*

IEC 60417, *Graphical symbols for use on equipment*, available at <http://www.graphical-symbols.info/equipment>

IEC 6190-2:2007, *Quality assessment systems – Part 2: Selection and use of sampling plans for inspection of electronic components and packages*

IEC 62391-1:2022, *Fixed electric double-layer capacitors for use in electric and electronic equipment – Part 1: Generic specification*

IEC 62391-2-1:2006, *Fixed electric double-layer capacitors for use in electronic equipment – Part 2-1: Blank detail specification – Electric double-layer capacitors for power application – Assessment level EZ*