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INTERNATIONAL STANDARD

Fixed electric double-layer capacitors for use in electric and electronic equipment –
Part 1: Generic specification

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INTERNATIONAL
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CONTENTS

FOREWORD 7
1 Scope 9
2 Normative references 9
3 Terms and definitions 10
4 General items 14
  4.1 Unit and symbols 14
  4.2 Preferred values and class 14
    4.2.1 General 14
    4.2.2 Preferred values of nominal capacitance 15
    4.2.3 Class 15
  4.3 Marking 15
    4.3.1 General 15
    4.3.2 Coding 15
  4.4 Quality assessment procedures 15
5 Tests and measurement 15
  5.1 General 15
  5.2 Test and measurement requirements 15
    5.2.1 Test conditions 15
    5.2.2 Measurement conditions 15
    5.2.3 Voltage treatment 16
    5.2.4 Thermal treatment 16
  5.3 Drying 16
  5.4 Visual examination and check of dimensions 16
    5.4.1 Visual examination 16
    5.4.2 Dimensions (gauging) 16
    5.4.3 Dimensions (detail) 16
  5.5 Measurement method 1 for capacitance and internal resistance (constant current discharge) 16
    5.5.1 Basic circuit for measuring 16
    5.5.2 Measuring equipment 17
    5.5.3 Measuring procedure 18
    5.5.4 Calculation methods for capacitance 20
    5.5.5 Calculation methods for internal resistance 21
    5.5.6 Conditions to be prescribed in the detail specification 22
  5.6 Measurement method 2 for capacitance and internal resistance 22
    5.6.1 Constant resistance charging method for capacitance measurement 22
    5.6.2 AC internal resistance measuring method 23
  5.7 Leakage current 23
    5.7.1 Measuring method 23
    5.7.2 Items to be specified in the detail specification 24
  5.8 Maintain voltage 24
    5.8.1 Measuring method 24
    5.8.2 Calculation of voltage maintenance rate 25
    5.8.3 Conditions to be prescribed in the detail specification 25
  5.9 Robustness of terminations 25
    5.9.1 Test Ua1 – Tensile 25

5.9.2 Test Ub – Bending (half of the sample) 25
5.9.3 Test Uc – Torsion (remaining sample) 26
5.9.4 Test Ud – Torque (for terminations with threaded studs or screws and for integral mounting devices) 26
5.9.5 Visual examination 26
5.10 Resistance to soldering heat 26
5.10.1 Preconditioning and initial measurement 26
5.10.2 Test 26
5.10.3 Recovery 26
5.10.4 Final inspection, measurements and requirements 27
5.11 Solderability 27
5.11.1 General 27
5.11.2 Preconditioning 27
5.11.3 Capacitors with leads 27
5.11.4 Surface mount capacitors 28
5.12 Rapid change of temperature 28
5.12.1 Initial measurement 28
5.12.2 Test 28
5.12.3 Final inspection, measurements and requirements 28
5.13 Vibration 28
5.13.1 Initial measurement 28
5.13.2 Test 28
5.13.3 Final measurement and requirements 29
5.14 Damp heat, steady state 29
5.14.1 Initial measurement 29
5.14.2 Test 29
5.14.3 Final measurement 29
5.15 Endurance 29
5.15.1 Initial measurements 29
5.15.2 Test 29
5.15.3 Final measurement, inspection and requirements 29
5.16 Storage 30
5.16.1 Storage at high temperature 30
5.16.2 Storage at low temperature 30
5.17 Characteristics at high and low temperature 30
5.17.1 General 30
5.17.2 Test procedure 30
5.17.3 Dry heat 31
5.17.4 Cold 31
5.17.5 Final measurement and requirements 31
5.18 Component solvent resistance 31
5.18.1 Initial measurements 31
5.18.2 Test 31
5.18.3 Requirements 31
5.19 Solvent resistance of marking 31
5.19.1 Test 31
5.19.2 Requirements 32
5.20 Passive flammability 32
5.20.1 Test procedure 32

5.20.2 Requirements 32
5.21 Pressure relief (if applicable) 32
5.21.1 Test 32
5.21.2 Requirements 32
Annex A (normative) Classification according to capacitance and internal resistance 33
A.1 General 33
A.2 Classification by capacitance and internal resistance 33
Annex B (informative) Measuring method of capacitance and low resistance by low frequency a.c. method (reference) 35
B.1 General 35
B.2 Measuring system 35
B.3 Calculation of capacitance 35
B.4 Measuring conditions 36
Annex C (informative) Thermal equilibrium time of capacitors 37
C.1 General 37
C.2 Thermal equilibrium time of capacitors 37
Annex D (informative) Charging/discharging efficiency and measurement current 39
D.1 General 39
D.2 Charging efficiency, discharging efficiency, and current 39
Annex E (informative) Procedures for setting the measurement current of capacitor with uncertain nominal internal resistance 41
E.1 General 41
E.2 Current setting procedures for measurement of capacitor 41
E.3 Example of setting current for determining capacitor characteristics 41
Annex F (informative) Policy on uncertainty of measurement and inset limits 42
F.1 Objective 42
F.2 Terms and definitions 42
F.3 Calculation of measurement uncertainty 42
F.4 Policy 43
F.5 Calculation of inset and outset limits 43
F.6 Examples 43
F.6.1 General 43
F.6.2 Example 1: Resistor measurement 43
F.6.3 Example 2: Resistor measurement 44
F.6.4 Example 3: Transistor measurement (gain) 44
F.6.5 Example 4: Comparison between initial and final measurement results 44
Annex G (informative) Reference to IEC 62391-1:2006 45
Annex Q (normative) Quality assessment procedures 46
Q.1 General 46
Q.1.1 Overview 46
Q.1.2 Applicability of qualification approval 46
Q.1.3 Applicability of capability approval 46
Q.1.4 Applicability of technology approval 47
Q.2 Primary stage of manufacture 47
Q.3 Subcontracting 47
Q.4 Structurally similar components 47
Q.5 Qualification approval procedures 47
Q.5.1 Eligibility for qualification approval 47

Q.5.2 Application for qualification approval 48
Q.5.3 Test procedure for qualification approval 48
Q.5.4 Granting of qualification approval 48
Q.5.5 Maintenance of qualification approval 48
Q.5.6 Quality conformance inspection 48
Q.6 Capability approval procedures 48
Q.6.1 General 48
Q.6.2 Eligibility for capability approval 49
Q.6.3 Application for capability approval 49
Q.6.4 Description of capability 49
Q.6.5 Demonstration and verification of capability 50
Q.6.6 Programme for capability approval 50
Q.6.7 Capability approval test report 51
Q.6.8 Abstract of description of capability 51
Q.6.9 Modifications likely to affect the capability approval 51
Q.6.10 Initial capability approval 51
Q.6.11 Granting of capability approval 52
Q.6.12 Maintenance of capability approval 52
Q.6.13 Extension of capability approval 53
Q.6.14 Quality conformance inspection 53
Q.7 Rework and repair 53
Q.7.1 Rework 53
Q.7.2 Repair 54
Q.8 Release for delivery 54
Q.8.1 General 54
Q.8.2 Release for delivery under qualification approval before the completion of Group B tests 54
Q.9 Certified test records of released lots 54
Q.10 Delayed delivery 54
Q.11 Alternative test methods 54
Q.12 Manufacture outside the geographical limits of IECQ CBs 54
Q.13 Unchecked parameters 54
Q.14 Technology approval procedures 55
Q.14.1 General 55
Q.14.2 Eligibility for technology approval 55
Q.14.3 Application of technology approval 55
Q.14.4 Description of technology 55
Q.14.5 Demonstration and verification of the technology 55
Q.14.6 Granting of technology approval 55
Q.14.7 Maintenance of technology approval 55
Q.14.8 Quality conformance inspection 55
Q.14.9 Failure rate level determination 56
Q.14.10 Outgoing quality level 56
Bibliography 57

Figure 1 − Basic circuit for measuring 17
Figure 2 – Voltage–time characteristics between capacitor terminals in capacitance and internal resistance measurement 18
Figure 3 − Circuit for constant resistance charging method 22

Figure 4 − Circuit for a.c. resistance method 23
Figure 5 − Maintain voltage test diagram 24
Figure A.1 – Conceptual rendering orientated by characteristics in each classification 34
Figure B.1 – Capacitance measuring system by the low frequency a.c. method 35
Figure C.1 – Thermal equilibrium times of capacitors (from 85 °C to 25 °C) 37
Figure C.2 – Thermal equilibrium times of capacitors (from −40 °C to 25 °C) 38
Figure C.3 – Capacitor core temperature change with respect to time 38
Figure Q.1 – General scheme for capability approval 49

Table 1 – Measuring conditions for measuring method 1A 19
Table 2 – Measuring conditions for measuring method 1B 20
Table 3 – Tensile force 25
Table 4 – Torque 26
Table 5 – Severities and requirements 32
Table A.1 – Electrical performance and measuring method by class 34
Table E.1 – Example of setting current for measurement of capacitor 41

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

Part 1: Generic specification

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International Standard IEC 62391-1 has been prepared by IEC technical committee 40: Capacitors and resistors for electronic equipment.

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

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

a) enhancement of the scope to include electric (high power) application;
b) implementation of Annex Q, replacing Clause 3 in the first edition;
c) in addition, minor revisions related to tables, figures and references.

The text of this standard is based on the following documents:

FDIS	Report on voting
40/2393/FDIS	40/2415/RVD

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

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

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

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

Part 1: Generic specification

1 Scope

This part of IEC 62391 applies to fixed electric double-layer capacitors (hereafter referred to as capacitor(s)) mainly used in d.c. circuits of electric and electronic equipment.

This part of IEC 62391 establishes standard terms, inspection procedures and methods of test for use in sectional and detail specifications of electronic components for quality assessment or any other purpose.

2 Normative references

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

IEC 60027 (all parts), *Letter symbols to be used in electrical technology*

IEC 60050 (all parts), *International Electrotechnical Vocabulary*

IEC 60062, *Marking codes for resistors and capacitors*

IEC 60063, *Preferred number series for resistors and capacitors*

IEC 60068-1:2013, *Environmental testing – Part 1: General and guidance*

IEC 60068-2-1:2007, *Environmental testing – Part 2-1: Tests – Tests A: Cold*

IEC 60068-2-2:2007, *Environmental testing – Part 2-2: Tests – Tests B: Dry Heat*

IEC 60068-2-6:2007, *Environmental testing – Part 2-6: Tests – Test Fc: Vibration (sinusoidal)*

IEC 60068-2-14:2009, *Environmental testing – Part 2-14: Tests – Test N: Change of temperature*

IEC 60068-2-20:2008, *Environmental testing – Part 2-20: Tests – Test T: Test methods for solderability and resistance to soldering heat of devices of with leads*

IEC 60068-2-21:2006, *Environmental testing – Part 2-21: Tests – Test U: Robustness of terminations and integral mounting devices*

IEC 60068-2-45:1980, *Environmental testing – Part 2-45: Tests – Test XA and guidance: Immersion in cleaning solvents*
Amendment 1:1993)

IEC 60068-2-54:2006, *Environmental testing – Part 2-54: Tests – Test Ta: Solderbility testing of electronic components by the wetting balance method*

IEC 60068-2-58:2015, *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 60068-2-69:2007, *Environmental testing – Part 2-69: Tests – Test Te: Solderability testing of electronic components for surface mounting devices (SMD) by the wetting balance method*

IEC 60068-2-78:2012, *Environmental testing – Part 2-78: Tests – Test Cab: Damp heat, steady state*

IEC 60294:2012, *Measurement of the dimensions of a cylindrical component with axial terminations*

IEC 60617 (all parts), *Graphical symbols for diagrams*

IEC 60695-11-5, *Fire hazard testing – Part 11-5: Test flames – Needle-flame test method – Apparatus, confirmatory test arrangement and guidance*

IEC 60717:2012, *Method for the determination of the space required by capacitors and resistors with unidirectional terminations*

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