

<b>STN</b>	<b>Elektrické dvojvrstvé kondenzátory na používanie v hybridných elektrických vozidlách</b> <b>Skúšobné metódy elektrických charakteristík</b>	<b>STN</b> <b>EN IEC 62576</b>  35 8228
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Electric double-layer capacitors for use in hybrid electric vehicles - Test methods for electrical characteristics

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

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**EN IEC 62576**

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 2018

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English Version

**Electric double-layer capacitors for use in hybrid electric vehicles  
- Test methods for electrical characteristics  
(IEC 62576:2018)**

Condensateurs électriques à double couche pour véhicules  
électriques hybrides - Méthodes d'essai des  
caractéristiques électriques  
(IEC 62576:2018)

Elektrische Doppelschichtkondensatoren für die  
Verwendung in Hybridelektrofahrzeugen - Prüfverfahren für  
die elektrischen Kennwerte  
(IEC 62576:2018)

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**EN IEC 62576:2018****European foreword**

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IEC 62391 Series	NOTE	Harmonized as EN 62391 Series.



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# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



**Electric double-layer capacitors for use in hybrid electric vehicles –  
Test methods for electrical characteristics**

**Condensateurs électriques à double couche pour véhicules électriques hybrides –  
Méthodes d'essai des caractéristiques électriques**





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IEC 62576

Edition 2.0 2018-02

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



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**Electric double-layer capacitors for use in hybrid electric vehicles –  
Test methods for electrical characteristics**

**Condensateurs électriques à double couche pour véhicules électriques hybrides –  
Méthodes d'essai des caractéristiques électriques**

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## CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope.....	7
2 Normative references .....	7
3 Terms and definitions .....	7
4 Tests methods .....	10
4.1 Capacitance, internal resistance, and maximum power density .....	10
4.1.1 Circuit for measurement .....	10
4.1.2 Test equipment.....	10
4.1.3 Measurement procedure .....	11
4.1.4 Calculation method for capacitance .....	12
4.1.5 Calculation method for internal resistance .....	12
4.1.6 Calculation method for maximum power density .....	13
4.2 Voltage maintenance characteristics .....	13
4.2.1 Circuit for measurement .....	13
4.2.2 Test equipment.....	14
4.2.3 Measurement procedures .....	15
4.2.4 Calculation of voltage maintenance rate .....	16
4.3 Energy efficiency .....	16
4.3.1 Circuit for test.....	16
4.3.2 Test equipment.....	16
4.3.3 Measurement procedures .....	17
4.3.4 Calculation of energy efficiency .....	18
Annex A (informative) Endurance test: continuous application of rated voltage at high temperature .....	20
A.1 General.....	20
A.2 Test procedure.....	20
A.2.1 Test condition .....	20
A.2.2 Test procedure .....	20
A.2.3 Judgment criteria .....	20
Annex B (informative) Heat equilibrium time of capacitors.....	22
B.1 General.....	22
B.2 Heat equilibrium time of capacitors .....	22
Annex C (informative) Charging/discharging efficiency and measurement current .....	24
C.1 General.....	24
C.2 Charging efficiency, discharging efficiency, and current .....	24
Annex D (informative) Procedures for setting the measurement current of capacitor with uncertain nominal internal resistance.....	26
D.1 General.....	26
D.2 Current setting procedures for measurement of capacitor .....	26
D.3 Example of setting current for determining capacitor characteristics .....	26
Annex E (informative) Endurance cycling test .....	27
E.1 General.....	27
E.2 Test method.....	27
E.2.1 Test temperature .....	27
E.2.2 Test equipment.....	27

E.2.3	Preconditioning.....	27
E.2.4	Initial measurements .....	27
E.2.5	Test steps.....	27
E.2.6	Test.....	28
E.2.7	End of test criteria .....	28
E.2.8	Post treatment.....	29
E.2.9	Final measurement .....	29
E.2.10	Acceptance criteria .....	29
Bibliography.....		30
Figure 1	– Basic circuit for measuring capacitance, internal resistance and maximum power density .....	10
Figure 2	– Voltage–time characteristics between capacitor terminals in capacitance and internal resistance measurement.....	11
Figure 3	– Basic circuit for measuring the voltage maintenance characteristics.....	14
Figure 4	– Time characteristics of voltage between capacitor terminals in voltage maintenance test .....	15
Figure 5	– Voltage-time characteristics between capacitor terminals in charging/discharging efficiency test .....	17
Figure B.1	– Heat equilibrium times of capacitors (from 85 °C to 25 °C).....	22
Figure B.2	– Heat equilibrium times of capacitors (from –40 °C to 25 °C).....	23
Figure B.3	– Temperature changes of capacitors' central portions .....	23
Figure E.1	– Endurance cycling test steps .....	28
Table D.1	– Example of setting current for measurement of capacitor .....	26



## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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### **ELECTRIC DOUBLE-LAYER CAPACITORS FOR USE IN HYBRID ELECTRIC VEHICLES – TEST METHODS FOR ELECTRICAL CHARACTERISTICS**

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International Standard IEC 62576 has been prepared by IEC technical committee 69: Electric road vehicles and electric industrial trucks.

This second edition cancels and replaces the first edition published in 2009. This edition constitutes a technical revision.

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

- a) information on applicability of this document has been added in Clause 1;
- b) the definitions of some terms in Clause 3 have been improved;
- c) the description of test procedures in Clause 4 has been clarified;
- d) information on endurance cycling test has been added (Annex E).

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

CDV	Report on voting
69/486/CDV	69/539/RVC

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

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## INTRODUCTION

The electric double-layer capacitor (capacitor) is used as an energy storage system for vehicles. Capacitor-installed electric vehicles are commercialized with an eye to improving fuel economy by recovering regenerative energy, and by peak power assistance during acceleration, etc. Although standards for capacitors already exists (IEC 62391 series), those for electric vehicles involve patterns of use, usage environment, and values of current that are quite different from those assumed in the existing standards. Standard evaluation and test methods will be useful for both auto manufacturers and capacitor suppliers to speed up the development and lower the costs of such capacitors. With these points in mind, this document aims to provide basic and minimum specifications in terms of the methods for testing electrical characteristics, and to create an environment that supports the expanding market of electric vehicles and large capacity capacitors. Additional practical test items to be standardized should be reconsidered after technology and market stabilization of capacitors for electric vehicles. Regarding endurance, which is important in practical use, just a basic concept is set forth in the informative annexes.

## **ELECTRIC DOUBLE-LAYER CAPACITORS FOR USE IN HYBRID ELECTRIC VEHICLES – TEST METHODS FOR ELECTRICAL CHARACTERISTICS**

### **1 Scope**

This document describes the methods for testing electrical characteristics of electric double-layer capacitor cells (hereinafter referred to as "capacitor") used for peak power assistance in hybrid electric vehicles.

All the tests in this document are type tests.

This document can also be applicable to the capacitor used in idling reduction systems (start and-stop systems) for the vehicles.

This document can also be applicable to the capacitor modules consisting of more than one cell.

NOTE Annex E provides information on endurance cycling test.

### **2 Normative references**

There are no normative references in this document.

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