

## PRE-RELEASE VERSION (FDIS)



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**High frequency inductive components – Electrical characteristics and measuring methods –  
Part 1: Nanohenry range chip inductor**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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TITLE:

**High frequency inductive components - Electrical characteristics and measuring methods - Part 1: Nanohenry range chip inductor**

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NOTE FROM TC/SC OFFICERS:

## CONTENTS

FOREWORD .....	4
1 Scope .....	6
2 Normative references .....	6
3 Terms and definitions .....	6
4 Inductance, $Q$ -factor and impedance .....	6
4.1 Inductance .....	6
4.1.1 Measuring method .....	6
4.1.2 Measuring circuit .....	7
4.1.3 Mounting the inductor for the test .....	8
4.1.4 Measuring method and calculation formula .....	10
4.1.5 Notes on measurement .....	11
4.2 Quality factor .....	12
4.2.1 Measuring method .....	12
4.2.2 Measuring circuit .....	12
4.2.3 Mounting the inductor for test .....	12
4.2.4 Measuring method and calculation formula .....	12
4.2.5 Notes on measurement .....	13
4.3 Impedance .....	13
4.3.1 Measuring method .....	13
4.3.2 Measuring circuit .....	13
4.3.3 Mounting the inductor for test .....	13
4.3.4 Measuring method and calculation .....	13
4.3.5 Notes on measurement .....	13
5 Resonance frequency .....	13
5.1 Self-resonance frequency .....	13
5.2 Minimum output method .....	13
5.2.1 General .....	13
5.2.2 Measuring circuit .....	13
5.2.3 Mounting the inductor for test .....	14
5.2.4 Measuring method and calculation formula .....	15
5.2.5 Note on measurement .....	15
5.3 Measurement by analyzer .....	15
5.3.1 Measurement by impedance analyzer and one-port network analyzer .....	15
5.3.2 Measurement by two-port network analyzer .....	16
6 DC resistance .....	16
6.1 Voltage-drop method .....	16
6.1.1 Measuring circuit .....	16
6.1.2 Measuring method and calculation formula .....	16
6.2 Bridge method .....	17
6.2.1 Measuring circuit .....	17
6.2.2 Measuring method and calculation formula .....	17
6.3 Notes on measurement .....	18
6.4 Measuring temperature .....	18
7 S-parameter .....	18
7.1 Measurement setup and procedure .....	18

7.1.1	General .....	18
7.1.2	Two-port S-parameter .....	19
7.1.3	Test fixture .....	19
7.2	Calibrations and verification of test setup .....	20
7.2.1	General .....	20
7.2.2	Calibration .....	21
7.2.3	De-embedding .....	25
7.3	Indirect method of impedance .....	25
7.4	Evaluation from the two-port S-parameter .....	25
Annex A (normative)	Mounting method for a surface mounting inductor .....	28
A.1	Overview .....	28
A.2	Mounting printed-circuit board and mounting land .....	28
A.3	Solder .....	28
A.4	Test condition .....	28
A.5	Cleaning .....	29
Annex B (normative)	Elimination of residual parameter effects in test fixture .....	30
B.1	Overview .....	30
B.2	Test fixture represented by the ABCD matrix of a two-terminal pair network .....	30
Bibliography .....		32
Figure 1	– Example of circuit for vector voltage/current method .....	7
Figure 2	– Example of circuit for reflection coefficient method .....	8
Figure 3	– Fixture A .....	8
Figure 4	– Fixture B .....	9
Figure 5	– Fixture C .....	10
Figure 6	– Short device shape .....	11
Figure 7	– Example of test circuit for the minimum output method .....	14
Figure 8	– Self-resonance frequency test board (minimum output method) .....	15
Figure 9	– Example of test circuit for voltage-drop method .....	17
Figure 10	– Example of test circuit for bridge method .....	18
Figure 11	– Schematic diagram of the two-port S-parameter measurement setup and the network analyzer .....	19
Figure 12	– S-parameter test fixture for two-terminal devices .....	19
Figure 13	– Test fixture for a two-terminal device (shunt connection) .....	20
Figure 14	– Test fixture for a two-terminal device (series connection) .....	20
Figure 15	– Examples of the standards for TRL calibration .....	22
Figure 16	– Examples of the standards for TRL calibration with microprobes .....	24
Figure 17	– Examples of full two-port de-embedding with microprobes .....	25
Figure 18	– Two-port measurement of a two-terminal device in shunt connection .....	26
Figure 19	– Two-port measurement of a two-terminal device in series connection .....	26
Figure B.1	– Test fixture represented by the ABCD matrix .....	30
Table 1	– Dimensions of $l$ and $d$ .....	9
Table 2	– Short device dimensions and inductances .....	12

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

### HIGH FREQUENCY INDUCTIVE COMPONENTS – ELECTRICAL CHARACTERISTICS AND MEASURING METHODS –

#### Part 1: Nanohenry range chip inductor

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IEC 62024-1 has been prepared by IEC technical committee 51: Magnetic components, ferrite and magnetic powder materials. It is an International Standard.

This fourth edition cancels and replaces the third edition published in 2017. This edition constitutes a technical revision.

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

- a) addition of S parameter measurement;
- b) addition of the inductance, Q-factor and impedance of an inductor which are measured by the reflection coefficient method with a network analyzer;

- c) addition of the resonance frequency of an inductor which is measured by a two-port network analyzer;
- d) addition of the mounting method for a surface mounting inductor with Pb-free solder.

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

Draft	Report on voting
51/XX/FDIS	51/XX/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](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/publications](http://www.iec.ch/publications).

A list of all parts of the IEC 62024 series, published under the general title *High frequency inductive components – Electrical characteristics and measuring methods*, 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 [webstore.iec.ch](http://webstore.iec.ch) in the data related to the specific document. At this date, the document will be

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# HIGH FREQUENCY INDUCTIVE COMPONENTS – ELECTRICAL CHARACTERISTICS AND MEASURING METHODS –

## Part 1: Nanohenry range chip inductor

### 1 Scope

This part of IEC 62024 specifies the electrical characteristics and measuring methods for the nanohenry range chip inductor that is normally used in the high frequency (over 100 kHz) range.

### 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 60068-2-58, *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 61249-2-7, *Materials for printed boards and other interconnecting structures – Part 2-7: Reinforced base materials clad and unclad – Epoxide woven E-glass laminated sheet of defined flammability (vertical burning test) copper-clad*

IEC 62025-1, *High frequency inductive components – Non-electrical characteristics and measuring methods – Part 1: Fixed, surface mounted inductors for use in electronic and telecommunication equipment*

ISO 6353-3, *Reagents for chemical analysis – Part 3: Specifications – Second series*

ISO 9453, *Soft solder alloys – Chemical compositions and forms*