IEC 61000-4-16

Edition 1.2 2011-05

INTERNATIONAL STANDARD

NORME INTERNATIONALE

BASIC EMC PUBLICATION

PUBLICATION FONDAMENTALE EN CEM

Electromagnetic compatibility (EMC) –
Part 4-16: Testing and measurement techniques – Test for immunity to conducted, common mode disturbances in the frequency range 0 Hz to 150 kHz

Compatibilité électromagnétique (CEM) –
Partie 4-16: Techniques d’essai et de mesure – Essai d’immunité aux perturbations conduites en mode commun dans la gamme de fréquences de 0 Hz à 150 kHz

withdrawn

iTeh Standards
(https://standards.iteh.ai)
Document Preview

https://standards.iteh.ai/catalog/standards/iec/5830e066-d3aa-454b-921b-d8644f32f644/iec-61000-4-16-1998

IEC 61000-4-16:1998+A1:2001+A2:2009

THIS PUBLICATION IS COPYRIGHT PROTECTED

Copyright © 2011 IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester.
If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

Droits de reproduction réservés. Sauf indication contraire, aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de la CEI ou du Comité national de la CEI du pays du demandeur.
Si vous avez des questions sur le copyright de la CEI ou si vous désirez obtenir des droits supplémentaires sur cette publication, utilisez les coordonnées ci-après ou contactez le Comité national de la CEI de votre pays de résidence.

IEC Central Office
3, rue de Varembé
CH-1211 Geneva 20
Switzerland
Email: inmail@iec.ch
Web: www.iec.ch

Withdrawn

About the IEC

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigenda or an amendment might have been published.

- Catalogue of IEC publications: www.iec.ch/searchpub

The IEC on-line Catalogue enables you to search by a variety of criteria (reference number, text, technical committee,…). It also gives information on projects, withdrawn and replaced publications.

- IEC Just Published: www.iec.ch/online_news/justpub

Stay up to date on all new IEC publications. Just Published details twice a month all new publications released. Available on-line and also by email.

- Electropedia: www.electropedia.org

The world's leading online dictionary of electronic and electrical terms containing more than 20 000 terms and definitions in English and French, with equivalent terms in additional languages. Also known as the International Electrotechnical Vocabulary online.

- Customer Service Centre: www.iec.ch/webstore/custserv

If you wish to give us your feedback on this publication or need further assistance, please visit the Customer Service Centre FAQ or contact us:
Email: csc@iec.ch
Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00

iTeh Standards
(https://standards.iteh.ai)
Document Preview
IEC 61000-4-16:1998

A propos de la CEI

La Commission Electrotechnique Internationale (CEI) est la première organisation mondiale qui élabore et publie des normes internationales pour tout ce qui a trait à l'électricité, à l'électronique et aux technologies apparentées.

A propos des publications CEI

Le contenu technique des publications de la CEI est constamment revu. Veuillez vous assurer que vous possédez l'édition la plus récente, un corrigendum ou amendement peut avoir été publié.

- Catalogue des publications de la CEI: www.iec.ch/searchpub/cur_fut-f.htm

Le Catalogue en-ligne de la CEI vous permet d'effectuer des recherches en utilisant différents critères (numéro de référence, texte, comité d'études,…). Il donne aussi des informations sur les projets et les publications retirées ou remplacées.

- Just Published CEI: www.iec.ch/online_news/justpub

Restez informé sur les nouvelles publications de la CEI. Just Published détaille deux fois par mois les nouvelles publications parues. Disponible en-ligne et aussi par email.

- Electropedia: www.electropedia.org

Le premier dictionnaire en ligne au monde de termes électroniques et électriques. Il contient plus de 20 000 termes et définitions en anglais et en français, ainsi que les termes équivalents dans les langues additionnelles. Egalement appelé Vocabulaire Electrotechnique International en ligne.

- Service Clients: www.iec.ch/webstore/custserv/custserv_entry-f.htm

Si vous désirez nous donner des commentaires sur cette publication ou si vous avez des questions, visitez le FAQ du Service clients ou contactez-nous:
Email: csc@iec.ch
Tél.: +41 22 919 02 11
Fax: +41 22 919 03 00

IEC 61000-4-16

Edition 1.2 2011-05

INTERNATIONAL STANDARD

NORME INTERNATIONALE

BASIC EMC PUBLICATION

PUBLICATION FONDAMENTALE EN CEM

Withdrawn

Electromagnetic compatibility (EMC) – Part 4-16: Testing and measurement techniques – Test for immunity to conducted, common mode disturbances in the frequency range 0 Hz to 150 kHz

iTeh Standards
(https://standards.iteh.ai)
Document Preview

Compatibilité électromagnétique (CEM) – Partie 4-16: Techniques d'essai et de mesure – Essai d'immunité aux perturbations conduites en mode commun dans la gamme de fréquences de 0 Hz à 150 kHz

https://standards.iteh.ai/catalog/standards/iec/5830e066-d3aa-454b-921b-d8644f32f644/iec-61000-4-16-1998

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

PRICE CODE
CODE PRIX CK

ICS 33.100.20

ISBN 978-2-88912-418-3

® Registered trademark of the International Electrotechnical Commission
Marque déposée de la Commission Electrotechnique Internationale

CONTENTS

Withdrawn
iTeh Standards
(https://standards.iteh.ai)
Document Preview
IEC 61000-4-16:1998
https://standards.iteh.ai/catalog/standards/iec/5800e066-d3aa-454b-921b-d8644f32f644/iec-61000-4-16-1998

INTERNATIONAL ELECTROTECHNICAL COMMISSION

____

ELECTROMAGNETIC COMPATIBILITY (EMC) –

Part 4-16: Testing and measurement techniques – Test for immunity to conducted, common mode disturbances in the frequency range 0 Hz to 150 kHz

Withdrawn

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.

iTeh Standards (https://standards.iteh.ai) Document Preview IEC 61000-4-16:1998

5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
6) All users should ensure that they have the latest edition of this publication.
7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61000-4-16 has been prepared by subcommittee 77A: Low-frequency phenomena, of IEC technical committee 77: Electromagnetic compatibility.

It forms part 4-16 of IEC 61000. It has the status of a basic EMC publication in accordance with IEC Guide 107.

This consolidated version of IEC 61000-4-16 consists of the first edition (1998) [documents 77A/201/FDIS and 77A/221/RVD], its amendment 1 (2001) [documents 77B/291+293/FDIS and 77B/298+300/RVD] and its amendment 2 (2009) [documents 77A/691/FDIS and 77A/698/RVD].

The technical content is therefore identical to the base edition and its amendments and has been prepared for user convenience.

It bears the edition number 1.2.

A vertical line in the margin shows where the base publication has been modified by amendments 1 and 2.

Annexes A, B and C are for information only.

The committee has decided that the contents of the base publication and its amendments will remain unchanged until the stability date indicated on the IEC web site 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.

Withdrawn

iTeh Standards
(https://standards.iteh.ai)
Document Preview

IEC 61000-4-16:1998

https://standards.iteh.ai/catalog/standards/iec/5830e066-d3aa-454b-921b-d8644f32f644/iec-61000-4-16-1998

INTRODUCTION

This standard is part of the IEC 61000 series, according to the following structure:

Part 1: General

General considerations (introduction, fundamental principles)

Definitions, terminology

Part 2: Environment

Description of the environment

Classification of the environment

Compatibility levels

Part 3: Limits

Emission limits

Immunity limits (in so far as they do not fall under the responsibility of the product committees)

Part 4: Testing and measurement techniques

Measurement techniques

Testing techniques

Part 5: Installation and mitigation guidelines

Installation guidelines

Mitigation methods and devices

Part 6: Generic standards

Part 9: Miscellaneous

Each part is further subdivided into several parts, published either as international standards or as technical specifications or technical reports, some of which have already been published as sections. Others will be published with the part number followed by a dash and a second number identifying the subdivision (example: IEC 61000-6-1).

This part is an international standard which gives immunity requirements and test procedures related to conducted, common mode disturbances in the range d.c. to 150 kHz.

Withdrawn
iTeh Standards
(https://standards.iteh.ai)
Document Preview
IEC 61000-4-16:1998
https://standards.iteh.ai/catalog/standards/iec/5830e066-d3aa-454b-921b-d8644f32f644/iec-61000-4-16-1998

ELECTROMAGNETIC COMPATIBILITY (EMC) –

Part 4-16: Testing and measurement techniques – Test for immunity to conducted, common mode disturbances in the frequency range 0 Hz to 150 kHz

1 Scope

This part of IEC 61000 relates to the immunity requirements and test methods for electrical and electronic equipment to conducted, common mode disturbances in the range d.c. to 150 kHz.

The object of this standard is to establish a common and reproducible basis for testing electrical and electronic equipment with the application of common mode disturbances to power supply, control, signal and communication ports.

This standard defines

– test voltage and current waveform;

– range of test levels;

– test equipment;

– test set-up;

– test procedures.

For some types of ports, for example ports intended to be used with highly balanced lines, additional test provisions may be established by product committee specifications.

The test is intended to demonstrate the immunity of electrical and electronic equipment when subjected to conducted, common mode disturbances such as those originating from power line currents and return leakage currents in the earthing/grounding system.

The disturbances produced by 400 Hz mains systems are not included in the scope of this standard.

Actual interference due to these disturbance phenomena is relatively rare, except in industrial plants. Product Committees should therefore consider whether there is a justification for applying this standard in their Product/Product Family standards (see also clause 3).

This test is not relevant for equipment ports intended to be connected to short cables, having a length less than 20 m or less.

The immunity to harmonics and interharmonics, including mains signalling, on a.c. power ports (in differential mode) is not included in the scope of this standard and is covered by IEC 61000-4-13.

The immunity to conducted disturbances generated by intentional radio-frequency transmitters is not included in the scope of this standard and is covered by IEC 61000-4-6.

Withdrawn
iTeh Standards
(https://standards.iteh.ai)
Document Preview

2 Normative references

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.

IEC 60050(161), *International Electrotechnical Vocabulary – Chapter 161: Electromagnetic compatibility*

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

3 General

The conducted, common mode disturbances in the frequency range d.c. to 150 kHz may influence the reliable operation of equipment and systems installed in residential areas, industrial areas and electrical plants.

Only those ports of an EUT which are likely to be subjected to the disturbances dealt with by this standard shall be considered for the application of its requirements.

The disturbances are typically generated by

– the power distribution system, with its fundamental frequency, significant harmonics and interharmonics;
– power electronic equipment (e.g. power convertors), which may inject disturbances into the ground conductors and earthing system (through stray capacitance or filters), or generate disturbances in signal and control lines by induction.

iTeh Standards
(https://standards.iteh.ai)
Document Preview

At the mains frequency, and harmonics of the mains frequency, the disturbances are usually generated by the power distribution system (fault and leakage currents in the ground and earthing systems).

IEC 61000-4-16:1998
https://standards.iteh.ai/catalog/standards/iec/5830e066-d3aa-454b-921b-d8644f32f644/iec-61000-4-16-1998

At frequencies above the range of harmonics of the mains frequency (up to 150 kHz) the disturbances are usually generated by power electronic equipment, which is often found in industrial and electrical plants.

The coupling of the source of disturbances with the power supply, signal, control and communication cables, transfer these disturbances to the ports of the equipment under test.

Because the coupling mechanisms defined above cannot be completely eliminated, it is necessary for equipment to have adequate immunity to the disturbances.

Depending on the type of installation, the disturbances may be classified as follows:

a) voltage/current at power frequency: d.c., $16^{2/3}$ Hz, 50 Hz and 60 Hz;
b) voltage/current in the frequency range 15 Hz-150 kHz (including the harmonics of the mains frequency).

This standard defines the test procedures for both the categories of disturbance defined above. The applicability of the tests should be defined in the product standard.

Annex A contains more information on the phenomena.

4 Definitions

For the purpose of this part of IEC 61000, the following definitions are used and apply to the restricted field of conducted, common mode disturbances in the range d.c. to 150 kHz (not all of these definitions are included in IEC 60050-161).

4.1
EUT
equipment under test

4.2
auxiliary equipment (AE)
equipment that is necessary for setting up all functions and assessing the correct performance (operation) of the EUT during the test

4.3
port
particular interface of the specified equipment with the external electromagnetic environment (see figure 1)

4.4
coupling
interaction between circuits, transferring energy from one circuit to another

4.5
coupling network
electrical circuit for the purpose of transferring energy from one circuit to another

4.6
decoupling network
electrical circuit for the purpose of preventing test voltage applied to the equipment under test from affecting other devices, equipment or systems which are not under test

4.7
immunity (to a disturbance)
ability of a device, equipment or system to perform without degradation in the presence of an electromagnetic disturbance [IEV 161-01-20]

5 Test levels

The preferred range of test levels, applicable to equipment ports as a function of the different types and sources of disturbances, is given in 5.1 and 5.2.

The levels are given for the tests at the mains frequency (d.c., $16^{2/3}$ Hz, 50 Hz and 60 Hz) and in the frequency range 15 Hz-150 kHz.

The applicability of each test shall be defined in the product standard.

The test voltage shall be applied in common mode to power supply, control, signal and communication ports (the differential mode voltage is dependent on the circuit unbalance).

A guide for the selection of the test levels is given in annex B.

Withdrawn
iTeh Standards
(https://standards.iteh.ai)
Document Preview
https://standards.iteh.ai/...644/iec-61000-4-16-1998

5.1 Test levels at mains frequency

Tables 1 and 2 define the preferred test levels.

The levels apply to test voltage at d.c. and at the mains frequencies of $16^{2/3}$ Hz, 50 Hz and 60 Hz.

Table 1 – Levels for continuous disturbance

Level	Open circuit test voltage V (r.m.s.)
1	1
2	3
3	10
4	30
x	Special
NOTE x is an open level. This level may be defined in the product standard.	

Table 2 – Levels for short duration disturbance

Level	Open circuit test voltage V (r.m.s.)
1	10
2	30
3	100
4	300
x	Special
NOTE x is an open level. This level may be defined in the product standard.	

For short duration disturbances, the normal duration for each applied disturbance is 1 s; however, product standards may specify different durations for specific applications.

The test shall be carried out at one or more of the following frequencies: d.c., $16^{2/3}$ Hz, 50 Hz or 60 Hz, according to the relevant mains frequency in the equipment location (see annex A); the test at $16^{2/3}$ Hz is therefore only applicable where the equipment is intended to be used in the proximity of railway systems at this frequency.

The test level shall not exceed the test voltage defined in the product standard.

Information on the proposed test levels is given in annex B.

5.2 Test levels in the frequency range 15 Hz-150 kHz

Table 3 defines the preferred test levels.

Table 3 – Test levels in the frequency range 15 Hz-150 kHz

Level	Profile of the test voltage (open circuit) V (r.m.s.)			
	15 Hz-150 Hz	150 Hz-1,5 kHz	1,5 kHz-15 kHz	15 kHz-150 kHz
1	1 – 0,1	0,1	0,1 – 1	1
2	3 – 0,3	0,3	0,3 – 3	3
3	10 – 1	1	1 – 10	10
4	30 – 3	3	3 – 30	30
x	x	x	x	x
NOTE x is an open level. This level can be given in the product specification.				

The profile of the test voltage in relation to frequency (see annex B for information) is as follows:

– starting from the frequency 15 Hz, the level decreases up to 150 Hz at 20 dB/decade;

– the level is constant from 150 Hz to 1,5 kHz;

– the level increases from 1,5 kHz to 15 kHz at 20 dB/decade;

– the level is constant from 15 kHz to 150 kHz.

The profile of the test voltage is represented in figure 2.

Withdrawn
iTeh Standards
(https://standards.iteh.ai)
Document Preview
IEC 61000-4-16:1998

No test level is defined below 15 Hz, excluding d.c., as tests in this frequency range are not considered to be relevant.

6 Test equipment

6.1 Test generators

The features of the test generators for each specific test are given in 6.1.1, 6.1.2 and 6.1.3.

The generators shall have provisions to prevent the emission of disturbances which, if injected in the power supply network, may influence the test results.

Information on the impedance of the test generators is given in annex A.

6.1.1 Characteristics and performance of the generator for d.c. tests

The test generator typically consists of a d.c. power supply unit with variable output voltage and a time controlled switch for the short duration test.

Generator for continuous disturbance

- waveform: direct current, ripple less than 5 %;
- open circuit output voltage range (r.m.s.): 1 V, with a relative tolerance of – 10 % to 30 V, with a relative tolerance of + 10 %;
- impedance: 50 Ω, with a relative tolerance of ± 10 %.

Generator for short duration disturbance

- waveform: direct current, ripple less than 5 %;
- open circuit output voltage range: 10 V, with a relative tolerance of – 10 % to 300 V, with a relative tolerance of + 10 %;
- impedance: 50 Ω, with a relative tolerance of ± 10 %.
- rise and fall time of the output voltage at on/off switching: between 1 to 5 µs.

The schematic in principle of the test generator is given in figure 3.

6.1.2 Characteristics and performance of the generator for tests at mains frequency: $16^{2/3}$ Hz, 50 Hz and 60 Hz

The test generator typically consists of a variable transformer (connected to the mains distribution network), an isolation transformer and a time controlled switch for the short duration test; the switch shall be synchronized at 0° of the mains voltage waveform.

Generator for continuous disturbance

- waveform: sinusoidal, total harmonic distortion less than 10 %;
- open circuit output voltage range (r.m.s.): 1 V, with a relative tolerance of – 10 % to 30 V, with a relative tolerance of + 10 %;
- impedance: 50 Ω, with a relative tolerance of ± 10 %.
- frequency: selected mains frequency.

Withdrawn
iTeh Standards
(https://standards.iteh.ai)
Document Preview
IEC 61000-4-16:1998
https://standards.iteh.ai/catalog/standards/iec/5830e066-d3aa-454b-921b-d8644f32f644/iec-61000-4-16-1998

Generator for short duration disturbance

– waveform:	sinusoidal, total harmonic distortion less than 10 %;
– open circuit output voltage range:	10 V, with a relative tolerance of – 10 % to 300 V, with a relative tolerance of + 10 %;
– impedance:	50 Ω, with a relative tolerance of ± 10 %.
– frequency:	selected mains frequency;
– on/off switching of the output voltage:	synchronized at zero crossing (0° ± 5 %).

The schematic in principle of the test generator is given in figure 4.

6.1.3 Characteristics and performance of the generator for tests in the frequency range 15 Hz-150 kHz

The test generator typically consists of a waveform generator capable of covering the frequency band of interest. It shall have an automated sweep capability of 1×10^{-2} decade/s or slower or, in the case of a synthesizer, be capable of being programmed with frequency-dependent step-sizes of 10 % of the preceding frequency value. It shall also be capable of being set manually.

Specifications

– waveform:	sinusoidal, total harmonic distortion less than 1 %;
– open circuit output voltage range (r.m.s.):	0,1 V, with a relative tolerance of – 10 % to 30 V, with a relative tolerance of + 10 %;
– impedance:	50 Ω, with a relative tolerance of ± 10 %;
– frequency range:	15 Hz, with a relative tolerance of – 10 % to 150 kHz, with a relative tolerance of + 10 %.

iTeh Standards
(https://standards.iteh.ai)
Document Preview
IEC 61000-4-16:1998
https://standards.iteh.ai/catalog/standards/iec/5830e066-d3aa-4[illegible]4b-921b-d8644f32f644/iec-61000-4-16-1998

6.2 Verification of the characteristics of the test generators

In order to make it possible to compare the results dealing with different test generators, they must be calibrated or verified for the most essential characteristics.

The following generator characteristics must be verified:

- output voltage waveform;
- generator impedance;
- frequency accuracy;
- open circuit output voltage accuracy;
- rise and fall time of the output voltage at on/off switching (where applicable).

The verifications shall be carried out with voltage probe and oscilloscope or other equivalent measurement instrumentation with 1 MHz minimum bandwidth.

The accuracy of the measuring equipment shall be better than ±5 %.

6.3 Coupling/decoupling networks

The coupling networks enable the test voltage to be applied, in common mode, to the power supply, input/output (signal and control) and communication ports of the EUT. The decoupling networks prevent the application of the test voltage to the auxiliary equipment needed to perform the test.

6.3.1 Coupling networks

6.3.1.1 Coupling network for power supply and input/output ports

For power supply and input/output ports, the coupling network for each conductor is composed of a resistor and a capacitor in series. The coupling networks of each conductor are connected in parallel to form the coupling network of the port.

Figure 6 shows a schematic circuit for a coupling network, the value of the capacitor is C = 1,0 μF and the resistor is R = 100 × n Ω where n is the number of the conductors (n is greater than or equal to 2).

The capacitors and the resistors for each of the conductors in the coupling network for a port shall be matched with a tolerance of 1 %.

For the d.c. voltage test the 1,0 μF capacitors shall be short-circuited.

NOTE When performing the d.c. voltage test on a signal port, the impedance of the coupling network may cause the operating signal to be degraded.

For screened cables, the test signal is injected directly onto the cable shield, so no coupling network is required (see figure 6).

6.3.1.2 Coupling networks for communication port

For communication ports and other ports intended for connection to balanced pairs (single or multiple pairs), the coupling network is a T network.

Figure 5 shows a schematic circuit for a T network. The value of the capacitor is C = 4,7 μF, the resistor is R = 200 Ω and the inductor is L = 2 × 38 mH (bifilar winding).

The components of the T network shall be matched with a tolerance such that the T network does not significantly degrade the common mode rejection ratio of the EUT.

NOTE It may be possible to produce T networks suitable for use with common mode rejection ratios greater than 80 dB, in which case the product standard should define an alternative coupling method.

6.3.2 Decoupling devices

6.3.2.1 General characteristics

The function of the decoupling device is to isolate the AE and/or simulator from the EUT port under test and thereby prevent the application of the test voltage to the AE and/or simulator.

The most important characteristic of a decoupling device is its common mode attenuation over the frequency range 0 Hz to 150 kHz.

Both active and passive isolation devices are available; examples of active devices include amplifiers and opto-isolators, whilst examples of passive devices include isolation transformers.

Withdrawn
iTeh Standards
(https://standards.iteh.ai)
Document Preview
https://standards.iteh.ai/catalog/standards/iec/...d3aa-454b-921b-d8644f32f644/iec-61000-4-16-1998