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IEC/TS 62215-2

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# TECHNICAL SPECIFICATION

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**Integrated circuits – Measurement of impulse immunity –  
Part 2: Synchronous transient injection method**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

### INTEGRATED CIRCUITS – MEASUREMENT OF IMPULSE IMMUNITY –

#### Part 2: Synchronous transient injection method

#### FOREWORD

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- the required support cannot be obtained for the publication of an International Standard, despite repeated efforts, or
- the subject is still under technical development or where, for any other reason, there is the future but no immediate possibility of an agreement on an International Standard.

Technical specifications are subject to review within three years of publication to decide whether they can be transformed into International Standards.

IEC 62215-2, which is a technical specification, has been prepared by subcommittee 47A: Integrated circuits, of IEC technical committee 47: Semiconductor devices.

The text of this technical specification is based on the following documents:

Enquiry draft	Report on voting
47A/762/DTS	47A/769A/RVC

Full information on the voting for the approval of this technical specification 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 the parts in the IEC 62215 series, under the general title *Integrated circuits – Measurement of impulse immunity*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result 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

- transformed into an International standard,
- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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

## INTRODUCTION

In future standards, test methods and measurement procedures will be given for transient immunity of integrated circuits:

- ESD pulse with resemblance to IEC 61000-4-2;
- EFT pulse with resemblance to IEC 61000-4-4;
- Surge pulse with resemblance to IEC 61000-4-5.

## **INTEGRATED CIRCUITS – MEASUREMENT OF IMPULSE IMMUNITY –**

### **Part 2: Synchronous transient injection method**

#### **1 Scope**

IEC/TS 62215-2, which is a technical specification, contains general information and definitions on the test method to evaluate the immunity of integrated circuits (ICs) against fast conducted synchronous transient disturbances. This information is followed by a description of measurement conditions, test equipment and test set-up as well as the test procedures and the requirements on the content of the test report.

The objective of this technical specification is to describe general conditions to obtain a quantitative measure of immunity of ICs establishing a uniform testing environment. Critical parameters that are expected to influence the test results are described. Deviations from this specification should be explicitly noted in the individual test report.

This synchronous transient immunity measurement method, as described in this specification, uses short impulses with fast rise times of different amplitude, duration and polarity in a conductive mode to the IC. In this method, the applied impulse should be synchronized with the activity of the IC to make sure that controlled and reproducible conditions can be assured.

#### **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 61967-4, *Integrated circuits – Measurement of electromagnetic emissions, 150 kHz to 1 GHz – Part 4: Measurement of conducted emissions – 1  $\Omega$ /150  $\Omega$  direct coupling method*