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

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CONTENTS

FOREWORD 4
INTRODUCTION 6

1 Scope 7
2 Normative references 7
3 Terms and definitions 7
4 General 8
4.1 Introduction 8
4.2 Measurement philosophy 8
4.3 Set-up concept 9
4.4 Response signal 9
4.5 Coupling networks 10
4.5.1 General 10
4.5.2 Design of coupling networks 10
4.5.3 Coupling network for the ground/ V_{ss} pin(s) 10
4.5.4 Coupling network for the supply/ V_{dd} pin(s) 11
4.5.5 Coupling network for the I/O pin(s) 13
4.5.6 Coupling network for the reference pins 13
4.5.7 Coupling network verification 14
4.6 Test circuit board 14
4.6.1 General 14
4.6.2 IC pin loading / termination 14
4.6.3 Power supply requirements 15
4.7 IC specific considerations 15
4.7.1 IC supply voltage 15
4.7.2 IC decoupling 15
4.7.3 Activity of IC 15
4.7.4 Guidelines for IC stimulation 15
4.7.5 IC monitoring 15
4.7.6 IC stability over time 15
5 Test conditions 16
5.1 Default test conditions 16
5.1.1 General 16
5.1.2 Ambient conditions 16
5.1.3 Ambient temperature 16
5.2 Impulse immunity of the test set-up 16
6 Test set-up 16
6.1 General 16
6.2 Test equipment 17
6.3 Set-up explanation 17
6.4 Explanation of signal relations 18
6.5 Calculation of time step and number of measurements to be conducted 18
6.6 Test procedure 19
6.7 Monitoring check 19
6.8 System verification 19

7 Test report 20
7.1 General 20
7.2 Immunity limits or levels 20
7.3 Performance classes 20
7.4 Interpretation and comparison of results 20

Annex A (informative) Flow chart of the software used in a microcontroller 21
Annex B (informative) Flow chart for the set-up control S/W (bus control program) 22
Annex C (informative) Test board requirements 23

Bibliography 27

Figure 1 – Synchronous transient injection immunity methodology waveforms 9
Figure 2 – Test set-up diagram for synchronous transient injection immunity testing 10
Figure 3 – Circuit diagram of the coupling network for ground/ V_{ss} pin(s) of an IC 11
Figure 4 – Method to impose synchronous transient injection into ground/ V_{ss} pin(s) 11
Figure 5 – Circuit diagram of the coupling network for supply/ V_{dd} pin(s) of an IC 12
Figure 6 – Method to impose synchronous transient injection into supply/ V_{dd} pin(s) 12
Figure 7 – Method to impose synchronous transient injection into I/O pins 13
Figure 8 – Measurement set-up for synchronous transient injection 16
Figure 9 – The waveforms (not in scale) appearing in the test set-up 18
Figure A.1 – Test code flow chart 21
Figure B.1 – Test measurement flow chart 22
Figure C.1 – Typical test board topology 26

Table 1 – IC pin loading recommendations 14
Table C.1 – Position of vias over the board 23

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 Ω/150 Ω direct coupling method*