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# TECHNICAL SPECIFICATION

# IEC TS 62228

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## Integrated circuits – EMC evaluation of CAN transceivers

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## CONTENTS

FOREWORD.....	4
1 Scope.....	6
2 Normative references .....	6
3 Terms and definitions .....	7
4 Measurements and tests.....	7
4.1 General.....	7
4.2 RF and transient tests .....	8
4.3 ESD .....	35
5 Test report.....	39
Annex A (informative) Test circuit boards.....	40
Annex B (informative) Documentation of test results .....	42
Bibliography.....	44
Figure 1 – Overview of a minimum configuration of a CAN system for emission and immunity tests against transient and RF disturbances.....	9
Figure 2 – Example of the circuit diagram of the minimum network for a CAN high speed system for measuring emission and immunity in respect to RF disturbances and transients.....	10
Figure 3 – Example of the circuit diagram of the minimum network for a CAN low speed system for measuring emission and immunity in respect to RF disturbances and transients.....	11
Figure 4 – Example of the circuit diagram of the minimum network for a CAN high speed system for measuring the emission of RF disturbances .....	15
Figure 5 – Example of the circuit diagram of the minimum network for a CAN low speed system for measuring the emission of RF disturbances.....	16
Figure 6 – Test set-up for measurement of RF disturbances on the bus lines.....	18
Figure 7 – Decoupling network for emission measurement at CAN_High and CAN_Low in the frequency domain.....	18
Figure 8 – Example of the circuit diagram of the minimum network for a CAN high speed system for testing the RF immunity.....	21
Figure 9 – Example of the circuit diagram of the minimum network for a CAN low speed system for testing the RF immunity .....	22
Figure 10 – Test set-up for DPI measurements .....	24
Figure 11 – Coupling network for DPI measurements on bus lines .....	25
Figure 12 – RF monitoring network for DPI measurements of bus lines.....	25
Figure 13 – Coupling network for DPI measurements on $V_{Bat}$ .....	25
Figure 14 – RF monitoring network for DPI measurements of $V_{Bat}$ .....	26
Figure 15 – Coupling network for DPI measurements on wake-up.....	26
Figure 16 – RF monitoring network for DPI measurements of wake-up.....	26
Figure 17 – Example of the circuit diagram of the minimum network for a CAN high speed system for testing the transient immunity.....	29
Figure 18 – Example of the circuit diagram of the minimum network for a CAN low speed system for testing the transient immunity.....	30

Figure 19 – Test set-up for direct capacitive impulse coupling .....	32
Figure 20 – Coupling network for direct capacitive impulse coupling on CAN_High and CAN_Low .....	33
Figure 21 – Coupling network for direct capacitive impulse coupling on $V_{Bat}$ .....	33
Figure 22 – Coupling network for direct capacitive impulse coupling on wake-up .....	33
Figure 23 – Circuit diagram of the test set-up for ESD measurements at CAN high speed transceivers.....	36
Figure 24 – Circuit diagram of the test set-up for ESD measurements at CAN low speed transceivers.....	36
Figure 25 – Test set-up for ESD measurements .....	37
Figure 26 – Coupling network for ESD measurements on bus lines, $V_{Bat}$ and wake-up .....	38
Figure A.1 – Example of IC interconnections of CAN high and CAN low.....	40
Figure B.1 – Example of presentation of emission test results in the frequency domain .....	42
Figure B.2 – Example of presentation of DPI test results.....	43
Table 1 – Overview of requested measurements and tests.....	7
Table 2 – General test conditions.....	8
Table 3 – Communication test signal TX1 .....	13
Table 4 – Communication test signal TX2 .....	13
Table 5 – Basic scheme for immunity evaluation .....	14
Table 6 – Boundary values for normal IC operation.....	14
Table 7 – Overview of decoupling ports for emission.....	17
Table 8 – Parameters for emission test in the frequency domain.....	19
Table 9 – Settings of the measurement device for measurement of emission in the frequency domain .....	20
Table 10 – Overview of coupling ports .....	23
Table 11 – Specifications for DPI measurements .....	27
Table 12 – Required DPI measurements for function test.....	28
Table 13 – Combination of resistors for coupling on DPI measurements .....	28
Table 14 – Overview of coupling ports .....	31
Table 15 – Parameters for functional test.....	34
Table 16 – Required impulse tests for functioning .....	34
Table 17 – Parameters for impulse test (damage test) .....	35
Table 18 – Required impulse tests for damage .....	35
Table 19 – Summary of ESD coupling points .....	37
Table 20 – Specifications for ESD measurements .....	39
Table A.1 – Parameter ESD test circuit board .....	41

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### **INTEGRATED CIRCUITS – EMC EVALUATION OF CAN TRANSCEIVERS**

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

IEC 62228, which is a technical specification, has been prepared by subcommittee 47A: Integrated circuits, of IEC technical committee 47: Semiconductor devices.

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

Enquiry draft	Report on voting
47A/747/DTS	47A/761/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.

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.

## INTEGRATED CIRCUITS – EMC EVALUATION OF CAN TRANSCEIVERS

### 1 Scope

This document specifies test and measurement methods, test conditions, test setups, test procedures, failure criteria and test signals for the EMC evaluation of CAN transceivers concerning:

- the immunity against RF common mode disturbances on the signal lines,
- the emissions caused by non-symmetrical signals regarding the time and frequency domain,
- the immunity against transients (function and damage), and
- the immunity against electrostatic discharges – ESD (damage).

All measurements and functional tests except ESD are performed in a small (three transceiver) network. For ESD damage tests a single transceiver configuration on a special test board is used.

External protection circuits are not applied during the tests in order to get results for the transceiver IC only.

### 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 (all parts), *Integrated circuits – Measurement of electromagnetic emissions, 150 kHz to 1 GHz*

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*

IEC 62132 (all parts), *Integrated circuits – Measurement of electromagnetic immunity, 150 kHz to 1 GHz*

IEC 62132-1, *Integrated circuits – Measurement of electromagnetic immunity, 150 kHz to 1 GHz – Part 1: General conditions and definitions*

IEC 62132-4, *Integrated circuits – Measurement of electromagnetic immunity 150 kHz to 1 GHz – Part 4: Direct RF Power Injection Method*

IEC 61000-4-2:1995, *Electromagnetic compatibility – Part 4: Testing and measurement techniques – Section 2: Electrostatic discharge immunity test*<sup>1)</sup>  
Amendment 1 (1998)  
Amendment 2 (2000)

ISO 7637-2: 2004, *Road vehicles – Electrical disturbances from conduction and coupling – Part 2: Electrical transient conduction along supply lines only*

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<sup>1)</sup> A consolidated edition 1.2 exists, including IEC 61000-4-2:1995 and its Amendment 1 (1998) and Amendment 2 (2000)