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| Order number (essential) | your reference | our reference | Wolfenbüttel, |
|---|---|---|---|
| **2006-198** | | AM/SR/198_AT90_037_PrelimReport_AT90CAN32_00 | 2006-Oct-13 |

# CAN Conformance Test
# Atmel AT90CAN32
# Preliminary Report

## Performed Tests and References

The following tests according to the referred specification have been performed:

- ***ISO CAN Conformance Tests***
  Reference: ISO 16845:2004 Road vehicles - Controller area network (CAN) - Conformance test plan
  C&S enhancement / corrections
  Reference: CAN CONFORMANCE TESTING Test Specification C&S Version 1.4
- ***Register Functionality Tests***
  Reference: C&S Register Functionality Test Specification V2.0
  Reference: Hardware Manual Version for IUT
- ***Robustness Tests***
  Reference: C&S Robustness Test Specification V1.3

## Test Results

- **Atmel AT90CAN32 failed the ISO CAN conformance tests.**
- **Atmel AT90CAN32 passed the C&S Register Functionality tests successfully.**
- **The C&S Robustness tests for Atmel AT90CAN32 are in progress.**

For detailed information see chapters *Problem History* and *Test List* at the following pages. This document contains 30 pages. This test report shall not be reproduced except in full, without written approval of the test house.

Wolfenbüttel, 2006-Oct-13

..... A. Meitrodt, Project Manager

..... S. Romeike, Test Execution

## Test Equipment

The following test equipment and test system have been used:

- ***Tester***
  - C&S CAN Conformance Tester Version 2.2, Built: 33
  - C&S CouplerBox Version 6.0
  - Logic Analyzer System Mainframe Agilent 16702 B, ID-Nr. 009 LG
  - Pattern Generator 16720A
  - Logic Analyzer Module 16911A
  - CAN Card ID-Nr. 600 024
  - Pod ID-Nr. 500 037, 500 038

- ***Implementation Under Test (IUT)***
  - Device version: Atmel 90CAN32 -ESAZ 0618 A05224H
  - User manual / data sheet version: Atmel 8-bit AVR Microcontroller with 128K Bytes of ISP Flash and CAN Controller, AT90CAN128, Rev. 4250–CAN–05/06
  - Evaluation board version: DVKAN11-1.0.0
  - Quartz with 8 MHz
  - Emulator version: JTAGICE mkII – 11, Version: 1, 0, 1, 138
  - CAN clock: bit-timing: 8 MHz, ISO, RF, ROB: 8 MHz
  - IDE version: AVR Studio 4.12.490 Service Pack 3
  - Compiler version: Win AVR, 20060421

## Date of Test Execution

- Receipt of test items: 2006-Sep-20
- ISO tests: 2006-Oct
- Register Functionality tests: 2006-Oct
- Robustness tests: in progress

## Revision History

| Amendment | | Description | Editor | Remarks |
|---|---|---|---|---|
| **from revision** | **to revision** | | | |
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## Problem History

### Remark 1:

The following testcases of ISO 16845 only pass the test with the implemented workaround described on page 412 and 413 in document “Atmel 8-bit AVR Microcontroller with 128K Bytes of ISP Flash and CAN Controller, AT90CAN128, Rev. 4250–CAN–05/06”, section 34.1 “Rev C”, subsection 4. “CAN Transmission after a 3-bit intermission”:

| | |
|---|---|
| 2.1.3.1 – 2.1.3.12 | Arbitration in standard format frame |
| 2.1.4.1 – 2.1.4.32 | Arbitration in extended format frame |
| 2.3.2.4 – 2.3.2.6 | Transmission on the third bit of intermission field (C&S enhancement) |
| 2.5.1.1 – 2.5.1.3 | Acceptance of active-error flag overwriting passive-error flag |
| 2.5.2.0 | Frame acceptance after passive-error frame transmission |
| 2.5.3.1 – 2.5.3.3 | Acceptance of 7 consecutive dominant bits after passive-error flag |
| 2.5.8.0 | Transmission of frame without suspend transmission field |

## Test List: ISO CAN Conformance Tests

| Reference | Name | CAN Version | Verdict | Comment |
|---|---|---|---|---|
| **1.** | **Receiver Tests** | | | |
| *1.1.* | *Valid frame format class* | | | |
| 1.1.1.1 | Identifier and number of data test in standard format | A, B, BP | Pass | |
| 1.1.1.2 | Identifier and number of data test in standard format | A, B, BP | Pass | |
| 1.1.1.3 | Identifier and number of data test in standard format | A, B, BP | Pass | |
| 1.1.1.4 | Identifier and number of data test in standard format | A, B, BP | Pass | |
| 1.1.1.5 | Identifier and number of data test in standard format | A, B, BP | Pass | |
| 1.1.1.6 | Identifier and number of data test in standard format | A, B, BP | Pass | |
| 1.1.1.7 | Identifier and number of data test in standard format | A, B, BP | Pass | |
| 1.1.1.8 | Identifier and number of data test in standard format | A, B, BP | Pass | |
| 1.1.1.9 | Identifier and number of data test in standard format | A, B, BP | Pass | |
| 1.1.2.1 | Identifier and number of data test in extended format test 1 | B | Pass | |
| 1.1.2.2 | Identifier and number of data test in extended format test 1 | B | Pass | |
| 1.1.2.3 | Identifier and number of data test in extended format test 1 | B | Pass | |
| 1.1.2.4 | Identifier and number of data test in extended format test 1 | B | Pass | |
| 1.1.2.5 | Identifier and number of data test in extended format test 1 | B | Pass | |
| 1.1.2.6 | Identifier and number of data test in extended format test 1 | B | Pass | |
| 1.1.2.7 | Identifier and number of data test in extended format test 1 | B | Pass | |
| 1.1.2.8 | Identifier and number of data test in extended format test 1 | B | Pass | |
| 1.1.2.9 | Identifier and number of data test in extended format test 1 | B | Pass | |
| 1.1.3.1 | Identifier and number of data test in extended format test 2 | BP | Pass | |
| 1.1.3.2 | Identifier and number of data test in extended format test 2 | BP | Pass | |
| 1.1.3.3 | Identifier and number of data test in extended format test 2 | BP | Pass | |
| 1.1.3.4 | Identifier and number of data test in extended format test 2 | BP | Pass | |
| 1.1.3.5 | Identifier and number of data test in extended format test 2 | BP | Pass | |
| 1.1.3.6 | Identifier and number of data test in extended format test 2 | BP | Pass | |
| 1.1.3.7 | Identifier and number of data test in extended format test 2 | BP | Pass | |
| 1.1.3.8 | Identifier and number of data test in extended format test 2 | BP | Pass | |
| 1.1.3.9 | Identifier and number of data test in extended format test 2 | BP | Pass | |
| 1.1.4. | Acceptance of « r1,r0 » combination non-nominal value in standard format | A | | Not applicable |
| 1.1.5.0 | Acceptance of « IDE,r0 » combination non-nominal value in standard format | B, BP | Pass | |
| 1.1.6.1 | Acceptance of « SRR, r1, r0 » combination non-nominal value in extended format test 1 | B | Pass | |
| 1.1.6.2 | Acceptance of « SRR, r1, r0 » combination non-nominal value in extended format test 1 | B | Pass | |
| 1.1.6.3 | Acceptance of « SRR, r1, r0 » combination non-nominal value in extended format test 1 | B | Pass | |
| 1.1.6.4 | Acceptance of « SRR, r1, r0 » combination non-nominal value in extended format test 1 | B | Pass | |

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|---|---|---|---|---|
| 1.1.6.5 | Acceptance of « SRR, r1, r0 » combination non-nominal value in extended format test 1 | B | Pass | |
| 1.1.6.6 | Acceptance of « SRR, r1, r0 » combination non-nominal value in extended format test 1 | B | Pass | |
| 1.1.6.7 | Acceptance of « SRR, r1, r0 » combination non-nominal value in extended format test 1 | B | Pass | |
| 1.1.7.1 | Acceptance of « SRR, r1, r0 » combination non-nominal value in extended format test 2 | BP | Pass | |
| 1.1.7.2 | Acceptance of « SRR, r1, r0 » combination non-nominal value in extended format test 2 | BP | Pass | |
| 1.1.7.3 | Acceptance of « SRR, r1, r0 » combination non-nominal value in extended format test 2 | BP | Pass | |
| 1.1.7.4 | Acceptance of « SRR, r1, r0 » combination non-nominal value in extended format test 2 | BP | Pass | |
| 1.1.7.5 | Acceptance of « SRR, r1, r0 » combination non-nominal value in extended format test 2 | BP | Pass | |
| 1.1.7.6 | Acceptance of « SRR, r1, r0 » combination non-nominal value in extended format test 2 | BP | Pass | |
| 1.1.7.7 | Acceptance of « SRR, r1, r0 » combination non-nominal value in extended format test 2 | BP | Pass | |
| 1.1.8.1 | DLC greater than 8 | A, B, BP | Pass | |
| 1.1.8.2 | DLC greater than 8 | A, B, BP | Pass | |
| 1.1.8.3 | DLC greater than 8 | A, B, BP | Pass | |
| 1.1.8.4 | DLC greater than 8 | A, B, BP | Pass | |
| 1.1.8.5 | DLC greater than 8 | A, B, BP | Pass | |
| 1.1.8.6 | DLC greater than 8 | A, B, BP | Pass | |
| 1.1.8.7 | DLC greater than 8 | A, B, BP | Pass | |
| 1.1.9.1 | Absent bus idle | A, B, BP | Pass | |
| 1.1.9.2 | Absent bus idle | A, B, BP | Pass | |
| 1.1.10.1 | Stuff acceptance test 1 | A, B, BP | Pass | |
| 1.1.10.2 | Stuff acceptance test 1 | A, B, BP | Pass | |
| 1.1.10.3 | Stuff acceptance test 1 | A, B, BP | Pass | |
| 1.1.10.4 | Stuff acceptance test 1 | A, B, BP | Pass | |
| 1.1.10.5 | Stuff acceptance test 1 | A, B, BP | Pass | |
| 1.1.10.6 | Stuff acceptance test 1 | A, B, BP | Pass | |
| 1.1.10.7 | Stuff acceptance test 1 | A, B, BP | Pass | |
| 1.1.10.8 | Stuff acceptance test 1 | A, B, BP | Pass | |
| 1.1.10.9 | Stuff acceptance test 1 | A, B, BP | Pass | |
| 1.1.10.10 | Stuff acceptance test 1 | A, B, BP | Pass | |
| 1.1.11.1 | Stuff acceptance test 2 | B, BP | Pass | |
| 1.1.11.2 | Stuff acceptance test 2 | B, BP | Pass | |
| 1.1.11.3 | Stuff acceptance test 2 | B, BP | Pass | |
| 1.1.11.4 | Stuff acceptance test 2 | B, BP | Pass | |
| 1.1.11.5 | Stuff acceptance test 2 | B, BP | Pass | |
| 1.1.11.6 | Stuff acceptance test 2 | B, BP | Pass | |
| 1.1.11.7 | Stuff acceptance test 2 | B, BP | Pass | |
| 1.1.12.0 | Message validation | A, B, BP | Pass | |
| *1.2.* | *Error detection class* | | | |

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|---|---|---|---|---|
| 1.2.1.0 | BIT ERROR in data frame | A, B, BP | Pass | |
| 1.2.2.1 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.2 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.3 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.4 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.5 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.6 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.7 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.8 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.9 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.10 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.11 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.12 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.13 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.14 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.15 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.16 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.17 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.18 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.19 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.20 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.21 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.22 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.23 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.24 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.25 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.26 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.27 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.28 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.29 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.30 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.31 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.32 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.33 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.34 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.35 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.36 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.37 | STUFF ERROR test 1 | A, B, BP | Pass | |

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| 1.2.2.38 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.39 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.40 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.41 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.42 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.43 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.44 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.45 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.46 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.47 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.48 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.49 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.50 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.51 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.52 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.53 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.54 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.55 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.56 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.57 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.58 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.59 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.60 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.61 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.62 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.2.63 | STUFF ERROR test 1 | A, B, BP | Pass | |
| 1.2.3.1 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.2 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.3 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.4 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.5 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.6 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.7 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.8 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.9 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.10 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.11 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.12 | STUFF ERROR test 2 | B, BP | Pass | |

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|---|---|---|---|---|
| 1.2.3.13 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.14 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.15 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.16 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.17 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.18 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.19 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.20 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.21 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.22 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.23 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.24 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.25 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.26 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.27 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.28 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.29 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.30 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.31 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.32 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.33 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.34 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.35 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.36 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.37 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.38 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.39 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.40 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.41 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.42 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.43 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.44 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.45 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.46 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.47 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.48 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.49 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.50 | STUFF ERROR test 2 | B, BP | Pass | |

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|---|---|---|---|---|
| 1.2.3.51 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.52 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.53 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.54 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.55 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.56 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.57 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.58 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.59 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.60 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.61 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.62 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.63 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.64 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.65 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.66 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.67 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.68 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.69 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.70 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.71 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.72 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.73 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.74 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.75 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.76 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.77 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.78 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.79 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.80 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.81 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.82 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.3.83 | STUFF ERROR test 2 | B, BP | Pass | |
| 1.2.4.1 | CRC ERROR test 1 | A, B, BP | Pass | |
| 1.2.4.2 | CRC ERROR test 1 | A, B, BP | Pass | |
| 1.2.5.0 | Combination of CRC ERROR and FORM ERROR test | A, B, BP | Pass | |
| 1.2.6.0 | FORM ERROR in data frame test 1 | A, B, BP | Pass | |
| 1.2.7.0 | FORM ERROR in data frame test 2 | A, B, BP | Pass | |

| | | | | |
|---|---|---|---|---|
| 1.2.8.1 | FORM ERROR in data frame test 3 | A, B, BP | Pass | |
| 1.2.8.2 | FORM ERROR in data frame test 3 | A, B, BP | Pass | |
| 1.2.8.3 | FORM ERROR in data frame test 3 | A, B, BP | Pass | |
| 1.2.9.0 | Message non-validation | A, B, BP | Pass | |
| *1.3.* | *Error frame management class* | | | |
| 1.3.1.1 | ERROR FLAG longer than 6 bits | A, B, BP | Pass | |
| 1.3.1.2 | ERROR FLAG longer than 6 bits | A, B, BP | Pass | |
| 1.3.1.3 | ERROR FLAG longer than 6 bits | A, B, BP | Pass | |
| 1.3.2.0 | Data frame starting on the third bit of intermission field | A, B, BP | Pass | |
| 1.3.3.1 | BIT ERROR in ERROR FLAG | A, B, BP | Pass | |
| 1.3.3.2 | BIT ERROR in ERROR FLAG | A, B, BP | Pass | |
| 1.3.3.3 | BIT ERROR in ERROR FLAG | A, B, BP | Pass | |
| 1.3.4.1 | FORM ERROR in ERROR DELIMITER | A, B, BP | Pass | |
| 1.3.4.2 | FORM ERROR in ERROR DELIMITER | A, B, BP | Pass | |
| 1.3.4.3 | FORM ERROR in ERROR DELIMITER | A, B, BP | Pass | |
| *1.4.* | *Overload frame management class* | | | |
| 1.4.1.1 | MAC overload generation during intermission field following a data frame | A, B, BP | Pass | |
| 1.4.1.2 | MAC overload generation during intermission field following a data frame | A, B, BP | Pass | |
| 1.4.2.0 | Last bit of EOF | A, B, BP | Pass | |
| 1.4.3.1 | Eighth bit of an ERROR and OVERLOAD DELIMITER | A, B, BP | Pass | |
| 1.4.3.2 | Eighth bit of an ERROR and OVERLOAD DELIMITER | A, B, BP | Pass | |
| 1.4.4.1 | BIT ERROR in OVERLOAD FLAG | A, B, BP | Pass | |
| 1.4.4.2 | BIT ERROR in OVERLOAD FLAG | A, B, BP | Pass | |
| 1.4.4.3 | BIT ERROR in OVERLOAD FLAG | A, B, BP | Pass | |
| 1.4.5.1 | FORM ERROR in OVERLOAD DELIMITER | A, B, BP | Pass | |
| 1.4.5.2 | FORM ERROR in OVERLOAD DELIMITER | A, B, BP | Pass | |
| 1.4.5.3 | FORM ERROR in OVERLOAD DELIMITER | A, B, BP | Pass | |
| 1.4.6.1_CS | MAC overload generation during intermission field following an error frame | A, B, BP | Pass | C&S Add |
| 1.4.6.2_CS | MAC overload generation during intermission field following an error frame | A, B, BP | Pass | C&S Add |
| 1.4.7.1_CS | MAC overload generation during intermission field following an overl. frame | A, B, BP | Pass | C&S Add |
| 1.4.7.2_CS | MAC overload generation during intermission field following an overl. frame | A, B, BP | Pass | C&S Add |
| *1.5.* | *Passive error state class* | | | |
| 1.5.1.1 | Passive ERROR FLAG  completion test 1 | A, B, BP | Pass | |
| 1.5.1.2 | Passive ERROR FLAG  completion test 1 | A, B, BP | Pass | |
| 1.5.1.3 | Passive ERROR FLAG  completion test 1 | A, B, BP | Pass | |
| 1.5.2.0 | Data frame acceptance after passive ERROR FRAME TRANSMISSION | A, B, BP | Pass | |
| 1.5.3.1 | Acceptance of 7 consecutive dominant bits after PASSIVE ERROR FLAG | A, B, BP | Pass | |
| 1.5.3.2 | Acceptance of 7 consecutive dominant bits after PASSIVE ERROR FLAG | A, B, BP | Pass | |

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| 1.5.3.3 | Acceptance of 7 consecutive dominant bits after PASSIVE ERROR FLAG | A, B, BP | Pass | |
| 1.5.4.0 | 'error passive' state unchanged on further errors | A, B, BP | Pass | |
| 1.5.5.1 | Passive ERROR FLAG completion test 2 | A, B, BP | Pass | |
| 1.5.5.2 | Passive ERROR FLAG completion test 2 | A, B, BP | Pass | |
| 1.5.5.3 | Passive ERROR FLAG completion test 2 | A, B, BP | Pass | |
| 1.5.6.1 | FORM ERROR in passive ERROR DELIMITER | A, B, BP | Pass | |
| 1.5.6.2 | FORM ERROR in passive ERROR DELIMITER | A, B, BP | Pass | |
| 1.5.6.3 | FORM ERROR in passive ERROR DELIMITER | A, B, BP | Pass | |
| 1.5.7.0_CS | Transition from Active to Passive ERROR FLAG | A, B, BP | Pass | C&S Add-on |
| *1.6.* | *Error counter management class* | | | |
| 1.6.1.1 | REC increment on BIT ERROR in ACTIVE ERROR FLAG | A, B, BP | Pass | |
| 1.6.1.2 | REC increment on BIT ERROR in ACTIVE ERROR FLAG | A, B, BP | Pass | |
| 1.6.1.3 | REC increment on BIT ERROR in ACTIVE ERROR FLAG | A, B, BP | Pass | |
| 1.6.2.1 | REC increment on BIT ERROR in OVERLOAD FLAG | A, B, BP | Pass | |
| 1.6.2.2 | REC increment on BIT ERROR in OVERLOAD FLAG | A, B, BP | Pass | |
| 1.6.2.3 | REC increment on BIT ERROR in OVERLOAD FLAG | A, B, BP | Pass | |
| 1.6.3.0 | REC increment when active ERROR FLAG is longer than 13 bits | A, B, BP | Pass | |
| 1.6.4.0 | REC increment when OVERLOAD FLAG is longer than 13 bits | A, B, BP | Pass | |
| 1.6.5.0 | REC increment on BIT ERROR in the ACK field | A, B, BP | Pass | |
| 1.6.6.0 | REC increment on Form Error in a frame | A, B, BP | Pass | |
| 1.6.7.0 | REC increment on FORM ERROR at ACK DELIMITER | A, B, BP | Pass | |
| 1.6.8.1 | REC increment on FORM ERROR in EOF Field | A, B, BP | Pass | |
| 1.6.8.2 | REC increment on FORM ERROR in EOF Field | A, B, BP | Pass | |
| 1.6.8.3 | REC increment on FORM ERROR in EOF Field | A, B, BP | Pass | |
| 1.6.9.1 | REC increment on STUFF ERROR | A, B, BP | Pass | |
| 1.6.9.2 | REC increment on STUFF ERROR | A, B, BP | Pass | |
| 1.6.9.3 | REC increment on STUFF ERROR | A, B, BP | Pass | |
| 1.6.9.4 | REC increment on STUFF ERROR | A, B, BP | Pass | |
| 1.6.9.5 | REC increment on STUFF ERROR | A, B, BP | Pass | |
| 1.6.9.6 | REC increment on STUFF ERROR | A, B, BP | Pass | |
| 1.6.9.7 | REC increment on STUFF ERROR | A, B, BP | Pass | |
| 1.6.9.8 | REC increment on STUFF ERROR | A, B, BP | Pass | |
| 1.6.10.0 | REC increment on CRC ERROR | A, B, BP | Pass | |
| 1.6.11.0 | REC increment on dominant bit after end of ERROR FLAG | A, B, BP | Pass | |
| 1.6.12.1 | REC increment on FORM ERROR in ERROR DELIMITER | A, B, BP | Pass | |
| 1.6.12.2 | REC increment on FORM ERROR in ERROR DELIMITER | A, B, BP | Pass | |
| 1.6.13.1 | REC increment on FORM ERROR in OVERLOAD DELIMITER | A, B, BP | Pass | |
| 1.6.13.2 | REC increment on FORM ERROR in OVERLOAD DELIMITER | A, B, BP | Pass | |

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| 1.6.14.0 | REC decrement on valid frame reception | A, B, BP | Pass | |
| 1.6.15.0 | REC decremented on valid frame reception during passive state | A, B, BP | Pass | |
| 1.6.16.0 | REC non-increment on last bit of EOF field | A, B, BP | Pass | |
| 1.6.17.0 | REC non-increment on 13-bit length OVERLOAD FLAG | A, B, BP | Pass | |
| 1.6.18.0 | REC non-increment on 13-bit length ERROR FLAG | A, B, BP | Pass | |
| 1.6.19.0 | REC non-increment on last bit of Error Delimiter | A, B, BP | Pass | |
| 1.6.20.0 | REC non-increment on last bit of Overload Delimiter | A, B, BP | Pass | |
| *1.7.* | *Bit timing class* | | | *See 3.*1 Generation of Bit Timing Test Atoms |
| | | | | |
| **2.** | **Transmitter Tests** | | | |
| *2.1.* | *Valid frame format class* | | | |
| 2.1.1.1 | Identifier and number of data bytes test in standard format | A, B, BP | Pass | |
| 2.1.1.2 | Identifier and number of data bytes test in standard format | A, B, BP | Pass | |
| 2.1.1.3 | Identifier and number of data bytes test in standard format | A, B, BP | Pass | |
| 2.1.1.4 | Identifier and number of data bytes test in standard format | A, B, BP | Pass | |
| 2.1.1.5 | Identifier and number of data bytes test in standard format | A, B, BP | Pass | |
| 2.1.1.6 | Identifier and number of data bytes test in standard format | A, B, BP | Pass | |
| 2.1.1.7 | Identifier and number of data bytes test in standard format | A, B, BP | Pass | |
| 2.1.1.8 | Identifier and number of data bytes test in standard format | A, B, BP | Pass | |
| 2.1.1.9 | Identifier and number of data bytes test in standard format | A, B, BP | Pass | |
| 2.1.2.1 | Identifier and number of data bytes test in extended format | B | Pass | |
| 2.1.2.2 | Identifier and number of data bytes test in extended format | B | Pass | |
| 2.1.2.3 | Identifier and number of data bytes test in extended format | B | Pass | |
| 2.1.2.4 | Identifier and number of data bytes test in extended format | B | Pass | |
| 2.1.2.5 | Identifier and number of data bytes test in extended format | B | Pass | |
| 2.1.2.6 | Identifier and number of data bytes test in extended format | B | Pass | |
| 2.1.2.7 | Identifier and number of data bytes test in extended format | B | Pass | |
| 2.1.2.8 | Identifier and number of data bytes test in extended format | B | Pass | |
| 2.1.2.9 | Identifier and number of data bytes test in extended format | B | Pass | |
| 2.1.3.1 | Arbitration in standard format frame | A, B, BP | Pass | notice remark 1 |
| 2.1.3.2 | Arbitration in standard format frame | A, B, BP | Pass | notice remark 1 |
| 2.1.3.3 | Arbitration in standard format frame | A, B, BP | Pass | notice remark 1 |
| 2.1.3.4 | Arbitration in standard format frame | A, B, BP | Pass | notice remark 1 |
| 2.1.3.5 | Arbitration in standard format frame | A, B, BP | Pass | notice remark 1 |
| 2.1.3.6 | Arbitration in standard format frame | A, B, BP | Pass | notice remark 1 |
| 2.1.3.7 | Arbitration in standard format frame | A, B, BP | Pass | notice remark 1 |
| 2.1.3.8 | Arbitration in standard format frame | A, B, BP | Pass | notice remark 1 |

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| 2.1.3.9 | Arbitration in standard format frame | A, B, BP | Pass | notice remark 1 |
| 2.1.3.10 | Arbitration in standard format frame | A, B, BP | Pass | notice remark 1 |
| 2.1.3.11 | Arbitration in standard format frame | A, B, BP | Pass | notice remark 1 |
| 2.1.3.12 | Arbitration in standard format frame | A, B, BP | Pass | notice remark 1 |
| 2.1.4.1 | Arbitration in extended format frame test | B | Pass | notice remark 1 |
| 2.1.4.2 | Arbitration in extended format frame test | B | Pass | notice remark 1 |
| 2.1.4.3 | Arbitration in extended format frame test | B | Pass | notice remark 1 |
| 2.1.4.4 | Arbitration in extended format frame test | B | Pass | notice remark 1 |
| 2.1.4.5 | Arbitration in extended format frame test | B | Pass | notice remark 1 |
| 2.1.4.6 | Arbitration in extended format frame test | B | Pass | notice remark 1 |
| 2.1.4.7 | Arbitration in extended format frame test | B | Pass | notice remark 1 |
| 2.1.4.8 | Arbitration in extended format frame test | B | Pass | notice remark 1 |
| 2.1.4.9 | Arbitration in extended format frame test | B | Pass | notice remark 1 |
| 2.1.4.10 | Arbitration in extended format frame test | B | Pass | notice remark 1 |
| 2.1.4.11 | Arbitration in extended format frame test | B | Pass | notice remark 1 |
| 2.1.4.12 | Arbitration in extended format frame test | B | Pass | notice remark 1 |
| 2.1.4.13 | Arbitration in extended format frame test | B | Pass | notice remark 1 |
| 2.1.4.14 | Arbitration in extended format frame test | B | Pass | notice remark 1 |
| 2.1.4.15 | Arbitration in extended format frame test | B | Pass | notice remark 1 |
| 2.1.4.16 | Arbitration in extended format frame test | B | Pass | notice remark 1 |
| 2.1.4.17 | Arbitration in extended format frame test | B | Pass | notice remark 1 |
| 2.1.4.18 | Arbitration in extended format frame test | B | Pass | notice remark 1 |
| 2.1.4.19 | Arbitration in extended format frame test | B | Pass | notice remark 1 |
| 2.1.4.20 | Arbitration in extended format frame test | B | Pass | notice remark 1 |
| 2.1.4.21 | Arbitration in extended format frame test | B | Pass | notice remark 1 |
| 2.1.4.22 | Arbitration in extended format frame test | B | Pass | notice remark 1 |
| 2.1.4.23 | Arbitration in extended format frame test | B | Pass | notice remark 1 |
| 2.1.4.24 | Arbitration in extended format frame test | B | Pass | notice remark 1 |
| 2.1.4.25 | Arbitration in extended format frame test | B | Pass | notice remark 1 |
| 2.1.4.26 | Arbitration in extended format frame test | B | Pass | notice remark 1 |
| 2.1.4.27 | Arbitration in extended format frame test | B | Pass | notice remark 1 |
| 2.1.4.28 | Arbitration in extended format frame test | B | Pass | notice remark 1 |
| 2.1.4.29 | Arbitration in extended format frame test | B | Pass | notice remark 1 |
| 2.1.4.30 | Arbitration in extended format frame test | B | Pass | notice remark 1 |
| 2.1.4.31 | Arbitration in extended format frame test | B | Pass | notice remark 1 |
| 2.1.4.32 | Arbitration in extended format frame test | B | Pass | notice remark 1 |
| 2.1.5.0 | Message validation | A, B, BP | Pass | |
| 2.1.6.1 | STUFF bit generation capability in standard frame | A, B, BP | Pass | |

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| 2.1.6.2 | STUFF bit generation capability in standard frame | A, B, BP | Pass | |
| 2.1.6.3 | STUFF bit generation capability in standard frame | A, B, BP | Pass | |
| 2.1.6.4 | STUFF bit generation capability in standard frame | A, B, BP | Pass | |
| 2.1.6.5 | STUFF bit generation capability in standard frame | A, B, BP | Pass | |
| 2.1.6.6 | STUFF bit generation capability in standard frame | A, B, BP | Pass | |
| 2.1.7.1 | STUFF bit generation capability in extended frame | B, BP | Pass | |
| 2.1.7.2 | STUFF bit generation capability in extended frame | B, BP | Pass | |
| 2.1.7.3 | STUFF bit generation capability in extended frame | B, BP | Pass | |
| *2.2.* | *Error detection class* | | | |
| 2.2.1.1 | Bit Error in standard frame test | A, B, BP | Pass | |
| 2.2.1.2 | Bit Error in standard frame test | A, B, BP | Pass | |
| 2.2.1.3 | Bit Error in standard frame test | A, B, BP | Pass | |
| 2.2.1.4 | Bit Error in standard frame test | A, B, BP | Pass | |
| 2.2.1.5 | Bit Error in standard frame test | A, B, BP | Pass | |
| 2.2.1.6 | Bit Error in standard frame test | A, B, BP | Pass | |
| 2.2.1.7 | Bit Error in standard frame test | A, B, BP | Pass | |
| 2.2.1.8 | Bit Error in standard frame test | A, B, BP | Pass | |
| 2.2.1.9_CS | Bit Error in standard frame test | A, B, BP | Pass | C&S Add-on (RTR) |
| 2.2.1.10_CS | Bit Error in standard frame test | A, B, BP | Pass | C&S Add-on (r0) |
| 2.2.2.1 | Bit Error in extended frame test | B | Pass | |
| 2.2.2.2 | Bit Error in extended frame test | B | Pass | |
| 2.2.2.3 | Bit Error in extended frame test | B | Pass | |
| 2.2.2.4 | Bit Error in extended frame test | B | Pass | |
| 2.2.2.5 | Bit Error in extended frame test | B | Pass | |
| 2.2.2.6 | Bit Error in extended frame test | B | Pass | |
| 2.2.2.7 | Bit Error in extended frame test | B | Pass | |
| 2.2.2.8 | Bit Error in extended frame test | B | Pass | |
| 2.2.2.9_CS | Bit Error in extended frame test | B | Pass | C&S Add-on (RTR) |
| 2.2.2.10_CS | Bit Error in extended frame test | B | Pass | C&S Add-on (r0) |
| 2.2.2.11_CS | Bit Error in extended frame test | B | Pass | C&S Add-on (r1) |
| 2.2.3.1 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.2 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.3 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.4 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.5 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.6 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.7 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.8 | Stuff Error test in standard frame | A, B, BP | Pass | |

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| 2.2.3.9 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.10 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.11 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.12 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.13 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.14 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.15 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.16 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.17 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.18 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.19 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.20 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.21 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.22 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.23 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.24 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.25 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.26 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.27 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.28 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.29 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.30 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.31 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.32 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.33 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.34 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.3.35 | Stuff Error test in standard frame | A, B, BP | Pass | |
| 2.2.4.1 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.2 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.3 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.4 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.5 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.6 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.7 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.8 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.9 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.10 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.11 | Stuff Error test in extended frame | B | Pass | |

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| 2.2.4.12 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.13 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.14 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.15 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.16 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.17 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.18 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.19 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.20 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.21 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.22 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.23 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.24 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.25 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.26 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.27 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.28 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.29 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.30 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.31 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.32 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.33 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.34 | Stuff Error test in extended frame | B | Pass | |
| 2.2.4.35_CS | Stuff Error test in extended frame | B | Pass | C&S Add-on |
| 2.2.5.1 | FORM ERROR | A, B, BP | Pass | |
| 2.2.5.2 | FORM ERROR | A, B, BP | Pass | |
| 2.2.5.3 | FORM ERROR | A, B, BP | Pass | |
| 2.2.5.4 | FORM ERROR | A, B, BP | Pass | |
| 2.2.5.5 | FORM ERROR | A, B, BP | Pass | |
| 2.2.6.0 | Acknowledgement Error | A, B, BP | Pass | |
| *2.3.* | *Error Frame Management Class* | | | |
| 2.3.1.1 | ERROR FLAG longer than 6 Bits | A, B, BP | Pass | |
| 2.3.1.2 | ERROR FLAG longer than 6 Bits | A, B, BP | Pass | |
| 2.3.1.3 | ERROR FLAG longer than 6 Bits | A, B, BP | Pass | |
| 2.3.2.0 | Transmission on the third bit of intermission field | A, B, BP | Pass | |
| 2.3.2.0_CS | Transmission on the third bit of intermission field | A, B, BP | Pass | C&S Add-on |
| 2.3.2.1_CS | Transmission on the third bit of intermission field with recessive ID bits | A, B, BP | Pass | C&S Add-on |
| 2.3.2.2_CS | Transmission on the third bit of intermission field with recessive ID bits | A, B, BP | Pass | C&S Add-on |

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| 2.3.2.3_CS | Transmission on the third bit of intermission field | A, B, BP | Pass | C&S Add-on |
| 2.3.2.4_CS | Transmission on the third bit of intermission field | A, B, BP | Pass | C&S Add-on, notice remark 1 |
| 2.3.2.5_CS | Transmission on the third bit of intermission field | A, B, BP | Pass | C&S Add-on, notice remark 1 |
| 2.3.2.6_CS | Transmission on the third bit of intermission field | A, B, BP | Pass | C&S Add-on, notice remark 1 |
| 2.3.3.1 | BIT ERROR in ERROR FLAG | A, B, BP | Pass | |
| 2.3.3.2 | BIT ERROR in ERROR FLAG | A, B, BP | Pass | |
| 2.3.3.3 | BIT ERROR in ERROR FLAG | A, B, BP | Pass | |
| 2.3.4.1_CS | Form Error in ERROR DELIMITER | A, B, BP | Pass | C&S Add-on |
| 2.3.4.2 | Form Error in ERROR DELIMITER | A, B, BP | Pass | |
| 2.3.4.3_CS | Form Error in ERROR DELIMITER | A, B, BP | Pass | C&S Add-on |
| 2.3.4.4 | Form Error in ERROR DELIMITER | A, B, BP | Pass | |
| 2.3.4.5_CS | Form Error in ERROR DELIMITER | A, B, BP | Pass | C&S Add-on |
| 2.3.4.6_CS | Form Error in ERROR DELIMITER | A, B, BP | Pass | C&S Add-on |
| 2.3.4.7 | Form Error in ERROR DELIMITER | A, B, BP | Pass | |
| 2.3.4.8_CS | Form Error in ERROR DELIMITER | A, B, BP | Pass | C&S Add-on |
| *2.4.* | *Overload frame management class* | | | |
| 2.4.1.1 | MAC Overload generation in Intermission field | A, B, BP | Pass | |
| 2.4.1.2 | MAC Overload generation in Intermission field | A, B, BP | Pass | |
| 2.4.2.1 | Eighth bit of an ERROR and OVERLOAD DELIMITER | A, B, BP | Pass | |
| 2.4.2.2 | Eighth bit of an ERROR and OVERLOAD DELIMITER | A, B, BP | Pass | |
| 2.4.3.0 | Transmission on the third Bit of Intermission Field | A, B, BP | Pass | |
| 2.4.3.0_CS | Transmission on the third Bit of Intermission Field | A, B, BP | Pass | C&S Add-on |
| 2.4.4.1 | Bit Error in Overload FLAG | A, B, BP | Pass | |
| 2.4.4.2 | Bit Error in Overload FLAG | A, B, BP | Pass | |
| 2.4.4.3 | Bit Error in Overload FLAG | A, B, BP | Pass | |
| 2.4.5.1 | Form Error in OVERLOAD DELIMITER | A, B, BP | Pass | |
| 2.4.5.2 | Form Error in OVERLOAD DELIMITER | A, B, BP | Pass | |
| 2.4.5.3 | Form Error in OVERLOAD DELIMITER | A, B, BP | Pass | |
| *2.5.* | *Passive error state and BUS-OFF class* | | | |
| 2.5.1.1 | Acceptance of Active Error Flag overwriting Passive Error Flag | A, B, BP | Pass | notice remark 1 |
| 2.5.1.2 | Acceptance of Active Error Flag overwriting Passive Error Flag | A, B, BP | Pass | notice remark 1 |
| 2.5.1.3 | Acceptance of Active Error Flag overwriting Passive Error Flag | A, B, BP | Pass | notice remark 1 |
| 2.5.2.0 | Frame acceptance after passive Error Frame transmission | A, B, BP | Pass | notice remark 1 |
| 2.5.3.1 | Acceptance of 7 consecutive dominant bits after Passive Error Flag | A, B, BP | Pass | notice remark 1 |
| 2.5.3.2 | Acceptance of 7 consecutive dominant bits after Passive Error Flag | A, B, BP | Pass | notice remark 1 |
| 2.5.3.3 | Acceptance of 7 consecutive dominant bits after Passive Error Flag | A, B, BP | Pass | notice remark 1 |
| 2.5.4.1 | Reception of a frame during Suspend Transmission Field | A, B, BP | Pass | |
| 2.5.4.2 | Reception of a frame during Suspend Transmission Field | A, B, BP | Pass | |

| | | | | |
|---|---|---|---|---|
| 2.5.4.3 | Reception of a frame during Suspend Transmission Field | A, B, BP | Pass | |
| 2.5.5.0 | Transmission of a frame after Suspend Transmission Field test 1 | A, B, BP | Pass | |
| 2.5.6.0 | Transmission of a frame after Suspend Transmission Field test 2 | A, B, BP | Pass | |
| 2.5.7.0 | Transmission of a frame after Suspend Transmission Field test 3 | A, B, BP | Pass | |
| 2.5.8.0 | Transmission of a frame without Suspend Transmission Field | A, B, BP | Pass | notice remark 1 |
| 2.5.9.0 | No transmission of a frame on the third bit of Intermission field | A, B, BP | Pass | |
| 2.5.9.1_CS | No-transmission of frame on the 7th bit of suspend field | A, B, BP | Pass | C&S Add-on |
| 2.5.10.0 | BUS-OFF state | A, B, BP | Pass | |
| 2.5.11.1 | BUS-OFF Recovery | A, B, BP | Pass | |
| 2.5.11.2 | BUS-OFF Recovery | A, B, BP | Pass | |
| 2.5.12.0 | Completion condition for a Passive Error Flag | A, B, BP | Pass | |
| 2.5.13.1 | Form Error in passive Error Delimiter | A, B, BP | Pass | |
| 2.5.13.2 | Form Error in passive Error Delimiter | A, B, BP | Pass | |
| 2.5.13.3 | Form Error in passive Error Delimiter | A, B, BP | Pass | |
| 2.5.14.0 | Maximum Recovery time after a corrupted frame | A, B, BP | Pass | |
| 2.5.15.0_CS | Transition from Active to Passive Error Flag | A, B, BP | Pass | C&S Add-on |
| *2.6.* | *Error Counter Management Class* | | | |
| 2.6.1.1 | TEC increment on Bit Error during Active Error Flag | A, B, BP | Pass | |
| 2.6.1.2 | TEC increment on Bit Error during Active Error Flag | A, B, BP | Pass | |
| 2.6.1.3 | TEC increment on Bit Error during Active Error Flag | A, B, BP | Pass | |
| 2.6.2.1 | TEC increment on Bit Error during Overload Flag | A, B, BP | Pass | |
| 2.6.2.2 | TEC increment on Bit Error during Overload Flag | A, B, BP | Pass | |
| 2.6.2.3 | TEC increment on Bit Error during Overload Flag | A, B, BP | Pass | |
| 2.6.3.0 | TEC increment when Active Error Flag is followed by dominant bits | A, B, BP | Pass | |
| 2.6.4.0 | TEC increment when Passive Error Flag is followed by dominant bits | A, B, BP | Pass | |
| 2.6.5.0 | TEC increment when Overload Flag is followed by dominant bits | A, B, BP | Pass | |
| 2.6.6.1 | TEC increment on Bit Error in data frame | A, B, BP | Pass | |
| 2.6.6.2 | TEC increment on Bit Error in data frame | A, B, BP | Pass | |
| 2.6.6.3 | TEC increment on Bit Error in data frame | A, B, BP | Pass | |
| 2.6.6.4 | TEC increment on Bit Error in data frame | A, B, BP | Pass | |
| 2.6.6.5 | TEC increment on Bit Error in data frame | A, B, BP | Pass | |
| 2.6.6.6_CS | TEC increment on Bit Error in data frame | A, B, BP | Pass | |
| 2.6.6.7_CS | TEC increment on Bit Error in data frame | A, B, BP | Pass | |
| 2.6.6.8_CS | TEC increment on Bit Error in data frame | A, B, BP | Pass | |
| 2.6.7.1 | TEC increment on Form Error in a frame | A, B, BP | Pass | |
| 2.6.7.2 | TEC increment on Form Error in a frame | A, B, BP | Pass | |
| 2.6.7.3 | TEC increment on Form Error in a frame | A, B, BP | Pass | |
| 2.6.7.4 | TEC increment on Form Error in a frame | A, B, BP | Pass | |

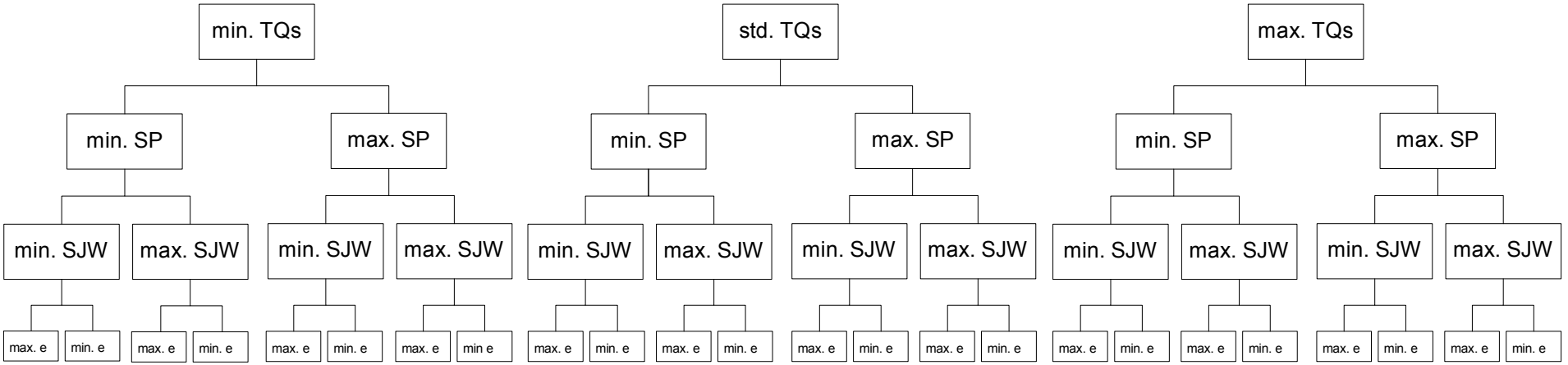
| | | | | |
|---|---|---|---|---|
| 2.6.7.5 | TEC increment on Form Error in a frame | A, B, BP | Pass | |
| 2.6.8.0 | TEC increment on Acknowledgement Error | A, B, BP | Pass | |
| 2.6.9.1 | TEC increment on Form Error in Error Delimiter | A, B, BP | Pass | |
| 2.6.9.2 | TEC increment on Form Error in Error Delimiter | A, B, BP | Pass | |
| 2.6.9.3 | TEC increment on Form Error in Error Delimiter | A, B, BP | Pass | |
| 2.6.10.1 | TEC increment on Form Error in Overload Delimiter | A, B, BP | Pass | |
| 2.6.10.2 | TEC increment on Form Error in Overload Delimiter | A, B, BP | Pass | |
| 2.6.11.0 | TEC decrement on successful Frame transmission for TEC < 128 | A, B, BP | Pass | |
| 2.6.12.0 | TEC decrement on successful Frame transmission for TEC > 127 | A, B, BP | Pass | |
| 2.6.13.0 | TEC non-increment on 13-bits long Overload FLAG | A, B, BP | Pass | |
| 2.6.14.0 | TEC non-increment on 13-bit long Error Flag | A, B, BP | Pass | |
| 2.6.15.0 | TEC non-increment on Form Error at last bit of Overload Delimiter | A, B, BP | Pass | |
| 2.6.16.0 | TEC non-increment on Form Error at last bit of Error Delimiter | A, B, BP | Pass | |
| 2.6.17.0 | TEC non-increment on Acknowledgement Error in Passive State | A, B, BP | Pass | |
| 2.6.18.0 | TEC increment on Acknowledgement Error in Passive State | A, B, BP | Pass | |
| 2.6.19.0 | TEC non-increment on Stuff Error during arbitration | A, B, BP | Pass | |
| *2.7.* | *Bit timing class* | | | *See 3.*1 Generation of Bit Timing Test Atoms |
| | | | | |
| **3.** | **Remote Tests** | | | |
| *3.1.* | *Valid frame format class* | | | |
| 3.1.1.1_CS | Receive standard remote frame and number of data | A, B, BP | Pass | C&S Add-on |
| 3.1.1.2_CS | Receive standard remote frame and number of data | A, B, BP | Pass | C&S Add-on |
| 3.1.1.3_CS | Receive standard remote frame and number of data | A, B, BP | Pass | C&S Add-on |
| 3.1.1.4_CS | Receive standard remote frame and number of data | A, B, BP | Pass | C&S Add-on |
| 3.1.1.5_CS | Receive standard remote frame and number of data | A, B, BP | Pass | C&S Add-on |
| 3.1.1.6_CS | Receive standard remote frame and number of data | A, B, BP | Pass | C&S Add-on |
| 3.1.1.7_CS | Receive standard remote frame and number of data | A, B, BP | Pass | C&S Add-on |
| 3.1.1.8_CS | Receive standard remote frame and number of data | A, B, BP | Pass | C&S Add-on |
| 3.1.1.9_CS | Receive standard remote frame and number of data | A, B, BP | Pass | C&S Add-on |
| 3.1.2.1_CS | Receive extended remote frame and number of data | B, BP | Pass | C&S Add-on |
| 3.1.2.2_CS | Receive extended remote frame and number of data | B, BP | Pass | C&S Add-on |
| 3.1.2.3_CS | Receive extended remote frame and number of data | B, BP | Pass | C&S Add-on |
| 3.1.2.4_CS | Receive extended remote frame and number of data | B, BP | Pass | C&S Add-on |
| 3.1.2.5_CS | Receive extended remote frame and number of data | B, BP | Pass | C&S Add-on |
| 3.1.2.6_CS | Receive extended remote frame and number of data | B, BP | Pass | C&S Add-on |
| 3.1.2.7_CS | Receive extended remote frame and number of data | B, BP | Pass | C&S Add-on |
| 3.1.2.8_CS | Receive extended remote frame and number of data | B, BP | Pass | C&S Add-on |

| | | | | |
|---|---|---|---|---|
| 3.1.2.9_CS | Receive extended remote frame and number of data | B, BP | Pass | C&S Add-on |
| 3.1.3.1_CS | DLC greater than 8 | A, B, BP | Pass | C&S Add-on |
| 3.1.3.2_CS | DLC greater than 8 | A, B, BP | Pass | C&S Add-on |
| 3.1.3.3_CS | DLC greater than 8 | A, B, BP | Pass | C&S Add-on |
| 3.1.3.4_CS | DLC greater than 8 | A, B, BP | Pass | C&S Add-on |
| 3.1.3.5_CS | DLC greater than 8 | A, B, BP | Pass | C&S Add-on |
| 3.1.3.6_CS | DLC greater than 8 | A, B, BP | Pass | C&S Add-on |
| 3.1.3.7_CS | DLC greater than 8 | A, B, BP | Pass | C&S Add-on |
| 3.1.4.1_CS | Transmit standard remote frame and number of data | A, B, BP | Pass | C&S Add-on |
| 3.1.4.2_CS | Transmit standard remote frame and number of data | A, B, BP | Pass | C&S Add-on |
| 3.1.4.3_CS | Transmit standard remote frame and number of data | A, B, BP | Pass | C&S Add-on |
| 3.1.4.4_CS | Transmit standard remote frame and number of data | A, B, BP | Pass | C&S Add-on |
| 3.1.4.5_CS | Transmit standard remote frame and number of data | A, B, BP | Pass | C&S Add-on |
| 3.1.4.6_CS | Transmit standard remote frame and number of data | A, B, BP | Pass | C&S Add-on |
| 3.1.4.7_CS | Transmit standard remote frame and number of data | A, B, BP | Pass | C&S Add-on |
| 3.1.4.8_CS | Transmit standard remote frame and number of data | A, B, BP | Pass | C&S Add-on |
| 3.1.4.9_CS | Transmit standard remote frame and number of data | A, B, BP | Pass | C&S Add-on |
| 3.1.5.1_CS | Transmit extended remote frame and number of data | B | Pass | C&S Add-on |
| 3.1.5.2_CS | Transmit extended remote frame and number of data | B | Pass | C&S Add-on |
| 3.1.5.3_CS | Transmit extended remote frame and number of data | B | Pass | C&S Add-on |
| 3.1.5.4_CS | Transmit extended remote frame and number of data | B | Pass | C&S Add-on |
| 3.1.5.5_CS | Transmit extended remote frame and number of data | B | Pass | C&S Add-on |
| 3.1.5.6_CS | Transmit extended remote frame and number of data | B | Pass | C&S Add-on |
| 3.1.5.7_CS | Transmit extended remote frame and number of data | B | Pass | C&S Add-on |
| 3.1.5.8_CS | Transmit extended remote frame and number of data | B | Pass | C&S Add-on |
| 3.1.5.9_CS | Transmit extended remote frame and number of data | B | Pass | C&S Add-on |
| 3.1.6.1_CS | DLC greater than 8 | A, B, BP | Pass | C&S Add-on |
| 3.1.6.2_CS | DLC greater than 8 | A, B, BP | Pass | C&S Add-on |
| 3.1.6.3_CS | DLC greater than 8 | A, B, BP | Pass | C&S Add-on |
| 3.1.6.4_CS | DLC greater than 8 | A, B, BP | Pass | C&S Add-on |
| 3.1.6.5_CS | DLC greater than 8 | A, B, BP | Pass | C&S Add-on |
| 3.1.6.6_CS | DLC greater than 8 | A, B, BP | Pass | C&S Add-on |
| 3.1.6.7_CS | DLC greater than 8 | A, B, BP | Pass | C&S Add-on |
| 3.1.7.0_CS | Arbitration in standard format | A, B, BP | Pass | C&S Add-on |
| 3.1.8.0_CS | Arbitration in extended format | B | Pass | C&S Add-on |

## 3.1 Generation of Bit Timing Test Atomes

To reduce the test time of the bit timing the following configurations are tested instead of the hole possible setups. This configurations are the most critical timing setups where errors can occur. In the past we recognized that the errors which occur can be found with this configurations without testing the setups between the minimal and maximal timing configuration. If we will find an error with this setup, we expand this configuration to isolate the error. If the chip pass this test the normal timing setups shall be pass too.

Bit Timing Configurations:




std / min / max TQs: The standard, minimal and maximal number of Time Quanta per Bit Time.
min / max SP: The minimal and maximal Sample Point configuration which is possible.
min / max SJW: The minimal and maximal Resynchronization Jump Width
min / max e: The minimal and maximal phase error "e". This is used only at the synchronization and glitch tests.

### Standard Time Quanta:

Configuration of NTQs and BRP for optimal minimal and maximal Sample Point setups.

### Maximal Time Quanta:

Maximal number of Time Quanta per Bit-Time and if possible additional a low BRP. The result of this configuration is the test of the bit timing in a critical state (very short time quanta). At this configuration the delay time of the real CAN node is considered.

### Minimal Time Quanta:

Minimal number of Time Quanta and a normal BRP. At this configuration the lowest possible set ups will be tested.

| **Configuration Table for Bit Timing Tests with BRP = 1:** | | |
|---|---|---|
| **max. TQ:** | BRP | 1 |
| | TQ | 25 |
| | Baudrate (KBit) | 320 |
| | | |
| **std. TQ:** | BRP | 1 |
| | TQ | 16 |
| | Baudrate (KBit) | 500 |
| | | |
| **min. TQ:** | BRP | 1 |
| | TQ | 8 |
| | Baudrate (KBit) | 1000 |

| **Configuration Table for Bit Timing Tests with BRP = 4:** | | |
|---|---|---|
| **max. TQ:** | BRP | 4 |
| | TQ | 25 |
| | Baudrate (KBit) | 80 |
| | | |
| **std. TQ:** | BRP | 4 |
| | TQ | 16 |
| | Baudrate (KBit) | 125 |
| | | |
| **min. TQ:** | BRP | 4 |
| | TQ | 8 |
| | Baudrate (KBit) | 250 |

## Test List: Bit timing Tests

| 1.7.1 and 2.7.1 | Bit timing Tests, BRP = 1, 8 MHz | Verdict | Verdict | Verdict | Comment |
|---|---|---|---|---|---|
| | | max. TQ | std. TQ | min. TQ | |
| **1.7.1** | **Receiver** | | | | |
| 1.7.1.1 | Sample point test | Fail | Fail | Fail | |
| 1.7.1.2 | Hard synchronization on SOF reception | Fail | Fail | Fail | |
| 1.7.1.3 | Synchronization when e>0 and e≤SJW | Fail | Fail | Fail | |
| 1.7.1.4 | Synchronization when e>0 and e>SJW | Fail | Fail | Fail | |
| 1.7.1.5 | Synchronization when e<0 and \|e\|≤SJW | Fail | Fail | Fail | |
| 1.7.1.6 | Synchronization when e<0 and \|e\|>SJW | Fail | Fail | Fail | |
| 1.7.1.7 | Glitch filtering test on positive phase error | Fail | Fail | Fail | |
| 1.7.1.8 | Glitch filtering test on negative phase error | Fail | Fail | Fail | |
| 1.7.1.9 | Non-Resynchronization after a dominant sampled bit | Fail | Fail | Fail | |
| 1.7.1.10 | Glitch filtering during bus idle | Fail | Fail | Fail | |
| | | | | | |
| **2.7.1** | **Transmitter** | | | | |
| 2.7.1.1 | Sample Point Test | Fail | Fail | Fail | |
| 2.7.1.2 | Hard Synchronization on SOF Reception before sample point | Fail | Fail | Fail | |
| 2.7.1.3 | Hard Synchronization on SOF Reception after sample point | Fail | Fail | Fail | |
| 2.7.1.4 | Synchronization when e < 0 and \|e\| ≤ SJW | Fail | Fail | Fail | |
| 2.7.1.5 | Synchronization for e < 0 and \|e\| > SJW | Fail | Fail | Fail | *Test performed with NTQ=10@800K |
| 2.7.1.6 | Glitch filtering test on negative phase error | Fail | Fail | Fail | |
| 2.7.1.7 | Non-synchronization on dominant bit transmission | Fail | Fail | Fail | |
| 2.7.1.8 | Synchronization before information processing time | Fail | Fail | Fail | *Test performed with NTQ=10@800K |
| 2.7.1.9 | Synchronization after sample point while sending a dominant bit | Fail | Fail | Fail | *Test performed with NTQ=10@800K |

| 1.7.2 and 2.7.2 | Bit timing Tests, BRP = 4, 8 MHz | Verdict | Verdict | Verdict | Comment |
|---|---|---|---|---|---|
| | | max. TQ | std. TQ | min. TQ | |
| **1.7.2** | **RECEIVER** | | | | |
| 1.7.2.1 | Sample point test | Pass | Pass | Pass | |
| 1.7.2.2 | Hard synchronization on SOF reception | Pass | Pass | Pass | |
| 1.7.2.3 | Synchronization when e>0 and e≤SJW | Pass | Pass | Pass | |
| 1.7.2.4 | Synchronization when e>0 and e>SJW | Pass | Pass | Pass | |
| 1.7.2.5 | Synchronization when e<0 and \|e\|≤SJW | Pass | Pass | Pass | |
| 1.7.2.6 | Synchronization when e<0 and \|e\|>SJW | Pass | Pass | Pass | |
| 1.7.2.7 | Glitch filtering test on positive phase error | Pass | Pass | Pass | |
| 1.7.2.8 | Glitch filtering test on negative phase error | Pass | Pass | Pass | |
| 1.7.2.9 | Non-Resynchronization after a dominant sampled bit | Pass | Pass | Pass | |
| 1.7.2.10 | Glitch filtering during bus idle | Pass | Pass | Pass | |
| | | | | | |
| **2.7.2** | **TRANSMITTER** | | | | |
| 2.7.2.1 | Sample Point Test | Pass | Pass | Pass | |
| 2.7.2.2 | Hard Synchronization on SOF Reception before sample point | Pass | Pass | Pass | |
| 2.7.2.3 | Hard Synchronization on SOF Reception after sample point | Pass | Pass | Pass | |
| 2.7.2.4 | Synchronization when e < 0 and \|e\| ≤ SJW | Pass | Pass | Pass | |
| 2.7.2.5 | Synchronization for e < 0 and \|e\| > SJW | Pass | Pass | Pass | *Test performed with NTQ=10@200K |
| 2.7.2.6 | Glitch filtering test on negative phase error | Pass | Pass | Pass | |
| 2.7.2.7 | Non-synchronization on dominant bit transmission | Pass | Pass | Pass | |
| 2.7.2.8 | Synchronization before information processing time | Pass | Pass | Pass | *Test performed with NTQ=10@200K |
| 2.7.2.9 | Synchronization after sample point while sending a dominant bit | Pass | Pass | Pass | *Test performed with NTQ=10@200K |

## Test List: Processor Interface V2.0 Tests

| Reference | Name | Verdict | Comment |
|---|---|---|---|
| **4.1** | **RECEIVE MESSAGES** | | |
| | | | |
| **4.1.1** | **RECEIVE INTO SINGLE BUFFER** | | |
| 4.1.1.1 | Receiving into single Buffer / standard ID, Mailbox 0 – 14 | Pass | |
| 4.1.1.2 | Receiving into single Buffer / extended ID, Mailbox 0 – 14 | Pass | |
| | | | |
| **4.1.2** | **OVERRUN HANDLING** | | |
| 4.1.2.1 | Overrun Handling for single Buffer, Mailbox 0 – 14 | Pass | |
| 4.1.2.2 | Overrun Handling for single Buffer Remote Flag set, Mailbox 0 – 14 | Pass | |
| 4.1.2.3 | Overwrite Handling for single Buffer, Mailbox 0 – 14 | Pass | |
| 4.1.2.4 | Overwrite Handling for single Buffer Remote Flag set, Mailbox 0 – 14 | Pass | |
| | | | |
| **4.1.3** | **RECEIVE INTO MULTIPLE BUFFERS / RECEIVE BUFFER ORDER** | | |
| 4.1.3.1 | Receive into multiple Buffers – even Receive Mailboxes | Pass | |
| 4.1.3.2 | Receive into multiple Buffers – odd Receive Mailboxes | Pass | |
| 4.1.3.3 | Receive into multiple Buffers – all Receive Mailboxes | Pass | |
| | | | |
| **4.1.4** | **RECEIVE INTO MULTIPLE BUFFERS / MESSAGE FILTERING** | | |
| 4.1.4.1 | Global Message Filter | --- | |
| | | | |
| **4.1.5** | **LOCAL MESSAGE FILTER** | | |
| 4.1.5.1 | Local Message Filter / standard ID, Mailbox 0 – 14 | Pass | |
| 4.1.5.2 | Local Message Filter / extended ID, Mailbox 0 – 14 | Pass | |
| | | | |
| **4.1.6** | **MESSAGE ACCEPTANCE FILTER COMBINATION** | | |
| 4.1.6.1 | Message Acceptance Filter Combination, Mailbox 0 – 14 | --- | |
| | | | |
| **4.1.7** | **RECEIVE TIME STAMP** | | |
| 4.1.7.1 | Time Stamp generation for a single receive Buffer on SOF, Mailbox 0 – 14 | Pass | |
| 4.1.7.2 | Time Stamp generation for a single receive Buffer on EOF, Mailbox 0 – 14 | Pass | |

| 4.2 | TRANSMIT MESSAGES | | |
|---|---|---|---|
| | | | |
| **4.2.1** | **TRANSMIT FROM SINGLE BUFFER** | | |
| 4.2.1.1 | Transmit from single Buffer / standard ID, Mailbox 0 – 14 | Pass | |
| 4.2.1.2 | Transmit from single Buffer / extended ID, Mailbox 0 – 14 | Pass | |
| | | | |
| **4.2.2** | **TRANSMIT FROM MULTIPLE BUFFER** | | |
| 4.2.2.1 | Transmit Buffer Order / Mailbox priority, Mailbox 0 – 14 | Pass | |
| 4.2.2.2 | Transmit Buffer Order / Identifier priority, Mailbox 0 – 14 | --- | |
| 4.2.2.3 | Transmit Buffer Order / Mailbox priority and Arbitration lost, Mailbox 0 – 14 | Pass | |
| 4.2.2.4 | Transmit Buffer Order / Identifier priority and Arbitration lost, Mailbox 0 – 14 | --- | |
| 4.2.2.5 | Transmit Buffer Order / Mailbox priority and Bus-Errors, Mailbox 0 – 14 | Pass | |
| 4.2.2.6 | Transmit Buffer Order / Identifier priority and Bus-Errors, Mailbox 0 – 14 | --- | |
| | | | |
| **4.2.3** | **STOP TRANSMISSION** | | |
| 4.2.3.1 | Abort Transmission, Mailbox 0 – 14 | Pass | |
| 4.2.3.2 | Abort Transmission / Arbitration lost, Mailbox 0 – 14 | Pass | |
| 4.2.3.3 | Abort Transmission / Bus Errors, Mailbox 0 – 14 | Pass | |
| | | | |
| **4.2.4** | **TIME STAMP GENERATION FOR A SINGLE TRANSMIT BUFFER** | | |
| 4.2.4.1 | Time Stamp generation for a single transmit Buffer on SOF, Mailbox 0 – 14 | Pass | |
| 4.2.4.2 | Time Stamp generation for a single transmit Buffer on ACK, Mailbox 0 – 14 | Pass | |

| 4.3 | REMOTE MESSAGES | | |
|---|---|---|---|
| | | | |
| **4.3.1** | **REMOTE FRAME RECEPTION** | | |
| 4.3.1.1 | Remote Frame Reception / standard ID, Mailbox 0 – 14 | Pass | |
| 4.3.1.2 | Remote Frame Reception / extended ID, Mailbox 0 – 14 | Pass | |
| | | | |
| **4.3.2** | **REMOTE FRAME TRANSMISSION** | | |
| 4.3.2.1 | Remote Frame Request / standard ID, Mailbox 0 – 14 | Pass | |
| 4.3.2.2 | Remote Frame Request / extended ID, Mailbox 0 – 14 | Pass | |
| | | | |
| **4.3.3** | **AUTO ANSWER MODE** | | |
| 4.3.3.1 | Automatic Remote Frame Reply / standard ID, Mailbox 0 – 14 | Pass | |
| 4.3.3.2 | Automatic Remote Frame Reply / extended ID, Mailbox 0 – 14 | Pass | |

| | | | |
|---|---|---|---|
| **4.3.4** | **REMOTE FRAME HANDLING WITH A SINGLE BUFFER** | | |
| 4.3.4.1 | Remote Frame Handling with a single Buffer / standard ID, Mailbox 0 – 14 | Pass | |
| 4.3.4.2 | Remote Frame Handling with a single Buffer / extended ID, Mailbox 0 – 14 | Pass | |

| | | | |
|---|---|---|---|
| **4.4** | **ERROR SIGNALING** | | |
| | | | |
| **4.4.1** | **ERROR DETECTION AS RECEIVER** | | |
| 4.4.1.1 | Error Signaling during Reception, Mailbox 0 – 14 | Pass | |
| | | | |
| **4.4.2** | **ERROR DETECTION AS TRANSMITTER** | | |
| 4.4.2.1 | Error Signaling during Transmission, Mailbox 0 – 14 | Pass | |

| | | | |
|---|---|---|---|
| **4.5** | **CONTROLLER STATE SIGNALING** | | |
| | | | |
| **4.5.1** | **STATUS CHANGE DUE TO REC** | | |
| 4.5.1.1 | Transition from Error Active over Error Warning to Error Passive due to REC | Pass | |
| 4.5.1.2 | Transition from Error Passive to Error Active due to REC | Pass | |
| | | | |
| **4.5.2** | **STATUS CHANGE DUE TO TEC** | | |
| 4.5.2.1 | Transition from Error Active over Error Warning to Error Passive due to TEC | Pass | |
| 4.5.2.2 | Transition from Error Passive to Error Active due to TEC | Pass | |
| | | | |
| **4.5.3** | **BUSS OFF STATE** | | |
| 4.5.3.1 | Entering Bus Off State and Recovery Sequence | Pass | |

| | | | |
|---|---|---|---|
| **4.6** | **POWER MODE CAN CORE** | | |
| 4.6.1.1.1 | Entering Sleep Mode by setting Sleep request bit during bus idle | Pass | |
| 4.6.1.2.1 | Entering Sleep Mode during Reception | Pass | |
| 4.6.1.2.2 | Entering Sleep Mode during Reception and Bus Errors | Pass | |
| 4.6.1.3.1 | Entering Sleep Mode during Transmission | Pass | |
| 4.6.1.3.2 | Entering Sleep Mode during Transmission and Arbitration lost | Pass | |
| 4.6.1.3.3 | Entering Sleep Mode during Transmission and Bus Errors | Pass | |
| 4.6.1.4.1 | Leaving Sleep Mode by resetting Sleep request bit | Pass | |
| 4.6.1.4.2 | Leaving Sleep Mode by Auto-WakeUp | Pass | |

| | | | |
|---|---|---|---|
| 4.6.2.1.1 | Entering Halt Mode by setting Halt request bit during bus idle | --- | |
| 4.6.2.2.1 | Entering Halt Mode during Reception | --- | |
| 4.6.2.2.2 | Entering Halt Mode during Reception and Bus Errors | --- | |
| 4.6.2.3.1 | Entering Halt Mode during Transmission | --- | |
| 4.6.2.3.2 | Entering Halt Mode during Transmission and Arbitration lost | --- | |
| 4.6.2.3.3 | Entering Halt Mode during Transmission and Bus Errors | --- | |
| 4.6.2.4.1 | Leaving Halt Mode by resetting Halt request bit | --- | |
| 4.6.2.4.2 | Leaving Halt Mode by SW-Reset during Bus Off | --- | |

| **4.7** | **MISCELLANEOUS** | | |
|---|---|---|---|
| 4.7.2.1 | Listen Mode Test | Pass | |
| 4.7.3.1 | Overload Frame Request | Pass | |
| 4.7.3.2.1 | Disable Automatic Retransmission, Time Trigger Communication Mode | Pass | |
| 4.7.3.2.2 | Time Trigger Communication Mode, Synchronization of TTC | Pass | |

## Test List: Robustness Tests 100k

| Reference | Name | Verdict | Comment |
|---|---|---|---|
| | | **8 MHz CAN** | CAN core clock |
| **5.1** | **VALID STANDARD FRAMES ONLY** | | |
| 5.1.1 | Standard Random Test - LT: Odd Identifiers | | not yet executed |
| 5.1.2 | Standard Random Test - LT: Even Identifiers | | not yet executed |
| | | | |
| **5.2** | **STANDARD FRAMES WITH ERRORS** | | |
| 5.2.1 | Standard Random Test - LT: Odd Identifiers with Errors | | not yet executed |
| 5.2.2 | Standard Random Test - LT: Even Identifiers with Errors | | not yet executed |
| | | | |
| **5.3** | **VALID EXTENDED FRAMES ONLY** | | |
| 5.3.1 | Extended Random Test - LT: Odd Identifiers | | not yet executed |
| 5.3.2 | Extended Random Test - LT: Even Identifiers | | not yet executed |
| | | | |
| **5.4** | **EXTENDED FRAMES WITH ERRORS** | | |
| 5.4.1 | Extended Random Test - LT: Odd Identifiers with Errors | | not yet executed |
| 5.4.2 | Extended Random Test - LT: Even Identifiers with Errors | | not yet executed |

## Test List: Robustness Tests 250k

| Reference | Name | Verdict | Comment |
|---|---|---|---|
| | | **8 MHz CAN** | CAN core clock |
| **5.1** | **VALID STANDARD FRAMES ONLY** | | |
| 5.1.1 | Standard Random Test - LT: Odd Identifiers | | not yet executed |
| 5.1.2 | Standard Random Test - LT: Even Identifiers | | not yet executed |
| | | | |
| **5.2** | **STANDARD FRAMES WITH ERRORS** | | |
| 5.2.1 | Standard Random Test - LT: Odd Identifiers with Errors | | not yet executed |
| 5.2.2 | Standard Random Test - LT: Even Identifiers with Errors | | not yet executed |
| | | | |
| **5.3** | **VALID EXTENDED FRAMES ONLY** | | |
| 5.3.1 | Extended Random Test - LT: Odd Identifiers | | not yet executed |
| 5.3.2 | Extended Random Test - LT: Even Identifiers | | not yet executed |
| | | | |
| **5.4** | **EXTENDED FRAMES WITH ERRORS** | | |
| 5.4.1 | Extended Random Test - LT: Odd Identifiers with Errors | | not yet executed |
| 5.4.2 | Extended Random Test - LT: Even Identifiers with Errors | | not yet executed |

## Test List: Robustness Tests 500k

| Reference | Name | Verdict | Comment |
|---|---|---|---|
| | | **8 MHz CAN** | CAN core clock |
| **5.1** | **VALID STANDARD FRAMES ONLY** | | |
| 5.1.1 | Standard Random Test - LT: Odd Identifiers | | not yet executed |
| 5.1.2 | Standard Random Test - LT: Even Identifiers | | not yet executed |
| | | | |
| **5.2** | **STANDARD FRAMES WITH ERRORS** | | |
| 5.2.1 | Standard Random Test - LT: Odd Identifiers with Errors | | not yet executed |
| 5.2.2 | Standard Random Test - LT: Even Identifiers with Errors | | not yet executed |
| | | | |
| **5.3** | **VALID EXTENDED FRAMES ONLY** | | |
| 5.3.1 | Extended Random Test - LT: Odd Identifiers | | not yet executed |
| 5.3.2 | Extended Random Test - LT: Even Identifiers | | not yet executed |
| | | | |
| **5.4** | **EXTENDED FRAMES WITH ERRORS** | | |
| 5.4.1 | Extended Random Test - LT: Odd Identifiers with Errors | | not yet executed |
| 5.4.2 | Extended Random Test - LT: Even Identifiers with Errors | | not yet executed |