

TX cyclic frame monitoring tests

| | |
|----------------|-------------------|
| Project | AML422EV |
| Tester | ughyg |
| Execution Date | 2018.07.30 |
| Runtime | 0:03:18 |
| Responsible | ughyg |
| SW version | dummy sw version |
| HW version | dummy hw version |
| FBL version | dummy fbl version |

Table of Contents

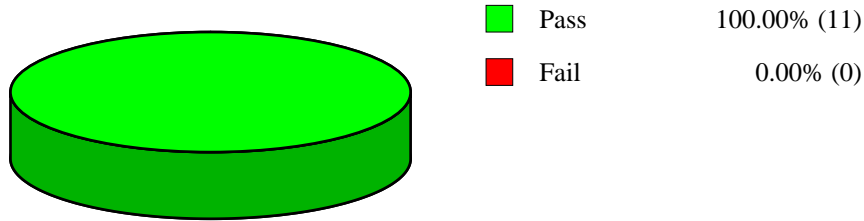
| | |
|--|----|
| About | 3 |
| Summary | 4 |
| TX 0x050: RCM_HV_01 frame monitor test under normal conditions | 5 |
| TX 0x202: RCM_HV_02 frame monitor test under normal conditions | 6 |
| TX 0x302: RCM_HV_03 frame monitor test under normal conditions | 7 |
| TX 0x203: RCM_HV_04 frame monitor test under normal conditions | 8 |
| TX 0x050: RCM_HV_01 frame monitor test under diagnostics in background | 9 |
| TX 0x202: RCM_HV_02 frame monitor test under diagnostics in background | 10 |
| TX 0x302: RCM_HV_03 frame monitor test under diagnostics in background | 11 |
| TX 0x203: RCM_HV_04 frame monitor test under diagnostics in background | 12 |
| TX 0x050: RCM_HV_01 frame monitor test under high busload | 13 |
| TX 0x202: RCM_HV_02 frame monitor test under high busload | 14 |
| TX 0x302: RCM_HV_03 frame monitor test under high busload | 15 |
| TX 0x203: RCM_HV_04 frame monitor test under high busload | 16 |

About

Monitor frame for a period and verify repetition rate, dlcs, crcs, counters

[Back to Summary](#)

Summary



| Test Cases | ID | Verdict |
|--|---------|---------|
| TX 0x050: RCM_HV_01 frame monitor test under normal conditions | TC-0001 | Pass |
| TX 0x202: RCM_HV_02 frame monitor test under normal conditions | TC-0002 | Pass |
| TX 0x302: RCM_HV_03 frame monitor test under normal conditions | TC-0003 | Pass |
| TX 0x203: RCM_HV_04 frame monitor test under normal conditions | TC-0004 | Pass |
| TX 0x050: RCM_HV_01 frame monitor test under diagnostics in background | TC-0005 | Pass |
| TX 0x202: RCM_HV_02 frame monitor test under diagnostics in background | TC-0006 | Pass |
| TX 0x302: RCM_HV_03 frame monitor test under diagnostics in background | TC-0007 | Pass |
| TX 0x203: RCM_HV_04 frame monitor test under diagnostics in background | TC-0008 | Pass |
| TX 0x050: RCM_HV_01 frame monitor test under high busload | TC-0009 | Pass |
| TX 0x202: RCM_HV_02 frame monitor test under high busload | TC-0010 | Pass |
| TX 0x302: RCM_HV_03 frame monitor test under high busload | TC-0011 | Pass |
| TX 0x203: RCM_HV_04 frame monitor test under high busload | TC-0012 | Pass |

[Back to Summary](#)

TX 0x050: RCM_HV_01 frame monitor test under normal conditions

Test Case ID: TC-0001

Pass (6 Steps)

| | Precondition steps |
|---|---------------------------------|
| 1 | Normal communication conditions |

| | Test Step | Expected | Measured | Verdict |
|---|---|--------------------|----------|---------|
| 1 | Frame with 0.09000 cycle time is measured for 60.00000 time | | | |
| 2 | Number of frames | [654, 674] | 663 | Pass |
| 3 | Check minimum frame repetition rate | ≥ 0.08100 | 0.08911 | Pass |
| 4 | Check maximum frame repetition rate | ≤ 0.09900 | 0.09202 | Pass |
| 5 | Check average frame repetition rate | [0.08910, 0.09090] | 0.09023 | Pass |
| 6 | Check frame error flags | All 0 | All 0 | Pass |
| 7 | Check frame lengths | All 8 | All 8 | Pass |

[Back to Summary](#)

TX 0x202: RCM_HV_02 frame monitor test under normal conditions

Test Case ID: TC-0002

Pass (6 Steps)

| | Precondition steps |
|---|---------------------------------|
| 1 | Normal communication conditions |

| | Test Step | Expected | Measured | Verdict |
|---|---|--------------------|----------|---------|
| 1 | Frame with 0.09000 cycle time is measured for 60.00000 time | | | |
| 2 | Number of frames | [654, 674] | 663 | Pass |
| 3 | Check minimum frame repetition rate | ≥ 0.08100 | 0.08911 | Pass |
| 4 | Check maximum frame repetition rate | ≤ 0.09900 | 0.09202 | Pass |
| 5 | Check average frame repetition rate | [0.08910, 0.09090] | 0.09023 | Pass |
| 6 | Check frame error flags | All 0 | All 0 | Pass |
| 7 | Check frame lengths | All 8 | All 8 | Pass |

[Back to Summary](#)

TX 0x302: RCM_HV_03 frame monitor test under normal conditions

Test Case ID: TC-0003

Pass (6 Steps)

| | Precondition steps |
|---|---------------------------------|
| 1 | Normal communication conditions |

| | Test Step | Expected | Measured | Verdict |
|---|---|--------------------|----------|---------|
| 1 | Frame with 0.20000 cycle time is measured for 60.00000 time | | | |
| 2 | Number of frames | [288, 308] | 297 | Pass |
| 3 | Check minimum frame repetition rate | ≥ 0.18000 | 0.19913 | Pass |
| 4 | Check maximum frame repetition rate | ≤ 0.22000 | 0.20226 | Pass |
| 5 | Check average frame repetition rate | [0.19800, 0.20200] | 0.20052 | Pass |
| 6 | Check frame error flags | All 0 | All 0 | Pass |
| 7 | Check frame lengths | All 8 | All 8 | Pass |

[Back to Summary](#)

TX 0x203: RCM_HV_04 frame monitor test under normal conditions

Test Case ID: TC-0004

Pass (6 Steps)

| | Precondition steps |
|---|---------------------------------|
| 1 | Normal communication conditions |

| | Test Step | Expected | Measured | Verdict |
|---|---|--------------------|----------|---------|
| 1 | Frame with 0.10000 cycle time is measured for 60.00000 time | | | |
| 2 | Number of frames | [588, 608] | 596 | Pass |
| 3 | Check minimum frame repetition rate | ≥ 0.09000 | 0.09913 | Pass |
| 4 | Check maximum frame repetition rate | ≤ 0.11000 | 0.10203 | Pass |
| 5 | Check average frame repetition rate | [0.09900, 0.10100] | 0.10026 | Pass |
| 6 | Check frame error flags | All 0 | All 0 | Pass |
| 7 | Check frame lengths | All 8 | All 8 | Pass |

[Back to Summary](#)

TX 0x050: RCM_HV_01 frame monitor test under diagnostics in background

Test Case ID: TC-0005

Pass (6 Steps)

| Precondition steps | |
|--------------------|--|
| 1 | Start diagnostics commands in background |

| | Test Step | Expected | Measured | Verdict |
|---|---|--------------------|----------|---------|
| 1 | Frame with 0.09000 cycle time is measured for 60.00000 time | | | |
| 2 | Number of frames | [654, 674] | 661 | Pass |
| 3 | Check minimum frame repetition rate | ≥ 0.08100 | 0.08900 | Pass |
| 4 | Check maximum frame repetition rate | ≤ 0.09900 | 0.09500 | Pass |
| 5 | Check average frame repetition rate | [0.08910, 0.09090] | 0.09053 | Pass |
| 6 | Check frame error flags | All 0 | All 0 | Pass |
| 7 | Check frame lengths | All 8 | All 8 | Pass |

| Postcondition steps | |
|---------------------|---|
| 1 | Stop diagnostics commands in background |

[Back to Summary](#)

TX 0x202: RCM_HV_02 frame monitor test under diagnostics in background

Test Case ID: TC-0006

Pass (6 Steps)

| Precondition steps | |
|--------------------|--|
| 1 | Start diagnostics commands in background |

| | Test Step | Expected | Measured | Verdict |
|---|---|--------------------|----------|---------|
| 1 | Frame with 0.09000 cycle time is measured for 60.00000 time | | | |
| 2 | Number of frames | [654, 674] | 661 | Pass |
| 3 | Check minimum frame repetition rate | ≥ 0.08100 | 0.08900 | Pass |
| 4 | Check maximum frame repetition rate | ≤ 0.09900 | 0.09500 | Pass |
| 5 | Check average frame repetition rate | [0.08910, 0.09090] | 0.09053 | Pass |
| 6 | Check frame error flags | All 0 | All 0 | Pass |
| 7 | Check frame lengths | All 8 | All 8 | Pass |

| Postcondition steps | |
|---------------------|---|
| 1 | Stop diagnostics commands in background |

[Back to Summary](#)

TX 0x302: RCM_HV_03 frame monitor test under diagnostics in background

Test Case ID: TC-0007

Pass (6 Steps)

| Precondition steps | |
|--------------------|--|
| 1 | Start diagnostics commands in background |

| | Test Step | Expected | Measured | Verdict |
|---|---|--------------------|----------|---------|
| 1 | Frame with 0.20000 cycle time is measured for 60.00000 time | | | |
| 2 | Number of frames | [288, 308] | 296 | Pass |
| 3 | Check minimum frame repetition rate | ≥ 0.18000 | 0.19949 | Pass |
| 4 | Check maximum frame repetition rate | ≤ 0.22000 | 0.20514 | Pass |
| 5 | Check average frame repetition rate | [0.19800, 0.20200] | 0.20116 | Pass |
| 6 | Check frame error flags | All 0 | All 0 | Pass |
| 7 | Check frame lengths | All 8 | All 8 | Pass |

| Postcondition steps | |
|---------------------|---|
| 1 | Stop diagnostics commands in background |

[Back to Summary](#)

TX 0x203: RCM_HV_04 frame monitor test under diagnostics in background

Test Case ID: TC-0008

Pass (6 Steps)

| Precondition steps | |
|--------------------|--|
| 1 | Start diagnostics commands in background |

| | Test Step | Expected | Measured | Verdict |
|---|---|--------------------|----------|---------|
| 1 | Frame with 0.10000 cycle time is measured for 60.00000 time | | | |
| 2 | Number of frames | [588, 608] | 594 | Pass |
| 3 | Check minimum frame repetition rate | ≥ 0.09000 | 0.09910 | Pass |
| 4 | Check maximum frame repetition rate | ≤ 0.11000 | 0.10505 | Pass |
| 5 | Check average frame repetition rate | [0.09900, 0.10100] | 0.10058 | Pass |
| 6 | Check frame error flags | All 0 | All 0 | Pass |
| 7 | Check frame lengths | All 8 | All 8 | Pass |

| Postcondition steps | |
|---------------------|---|
| 1 | Stop diagnostics commands in background |

[Back to Summary](#)

TX 0x050: RCM_HV_01 frame monitor test under high busload

Test Case ID: TC-0009

Pass (6 Steps)

| Precondition steps | |
|--------------------|--------------------------|
| 1 | Increase busload to >75% |

| | Test Step | Expected | Measured | Verdict |
|---|---|--------------------|----------|---------|
| 1 | Frame with 0.09000 cycle time is measured for 60.00000 time | | | |
| 2 | Number of frames | [654, 674] | 663 | Pass |
| 3 | Check minimum frame repetition rate | ≥ 0.08100 | 0.08953 | Pass |
| 4 | Check maximum frame repetition rate | ≤ 0.09900 | 0.09201 | Pass |
| 5 | Check average frame repetition rate | [0.08910, 0.09090] | 0.09022 | Pass |
| 6 | Check frame error flags | All 0 | All 0 | Pass |
| 7 | Check frame lengths | All 8 | All 8 | Pass |

| Postcondition steps | |
|---------------------|-------------------------|
| 1 | Decrease busload to <6% |

[Back to Summary](#)

TX 0x202: RCM_HV_02 frame monitor test under high busload

Test Case ID: TC-0010

Pass (6 Steps)

| Precondition steps | |
|--------------------|--------------------------|
| 1 | Increase busload to >75% |

| | Test Step | Expected | Measured | Verdict |
|---|---|--------------------|----------|---------|
| 1 | Frame with 0.09000 cycle time is measured for 60.00000 time | | | |
| 2 | Number of frames | [654, 674] | 664 | Pass |
| 3 | Check minimum frame repetition rate | ≥ 0.08100 | 0.03722 | Pass |
| 4 | Check maximum frame repetition rate | ≤ 0.09900 | 0.09201 | Pass |
| 5 | Check average frame repetition rate | [0.08910, 0.09090] | 0.09022 | Pass |
| 6 | Check frame error flags | All 0 | All 0 | Pass |
| 7 | Check frame lengths | All 8 | All 8 | Pass |

| Postcondition steps | |
|---------------------|-------------------------|
| 1 | Decrease busload to <6% |

[Back to Summary](#)

TX 0x302: RCM_HV_03 frame monitor test under high busload

Test Case ID: TC-0011

Pass (6 Steps)

| Precondition steps | |
|--------------------|--------------------------|
| 1 | Increase busload to >75% |

| | Test Step | Expected | Measured | Verdict |
|---|---|--------------------|----------|---------|
| 1 | Frame with 0.20000 cycle time is measured for 60.00000 time | | | |
| 2 | Number of frames | [288, 308] | 298 | Pass |
| 3 | Check minimum frame repetition rate | ≥ 0.18000 | 0.19935 | Pass |
| 4 | Check maximum frame repetition rate | ≤ 0.22000 | 0.20252 | Pass |
| 5 | Check average frame repetition rate | [0.19800, 0.20200] | 0.20048 | Pass |
| 6 | Check frame error flags | All 0 | All 0 | Pass |
| 7 | Check frame lengths | All 8 | All 8 | Pass |

| Postcondition steps | |
|---------------------|-------------------------|
| 1 | Decrease busload to <6% |

[Back to Summary](#)

TX 0x203: RCM_HV_04 frame monitor test under high busload

Test Case ID: TC-0012

Pass (6 Test Case)

| Precondition steps | |
|--------------------|--------------------------|
| 1 | Increase busload to >75% |

| | Test Step | Expected | Measured | Verdict |
|---|---|--------------------|----------|---------|
| 1 | Frame with 0.10000 cycle time is measured for 60.00000 time | | | |
| 2 | Number of frames | [588, 608] | 597 | Pass |
| 3 | Check minimum frame repetition rate | ≥ 0.09000 | 0.09917 | Pass |
| 4 | Check maximum frame repetition rate | ≤ 0.11000 | 0.10170 | Pass |
| 5 | Check average frame repetition rate | [0.09900, 0.10100] | 0.10024 | Pass |
| 6 | Check frame error flags | All 0 | All 0 | Pass |
| 7 | Check frame lengths | All 8 | All 8 | Pass |

| Postcondition steps | |
|---------------------|-------------------------|
| 1 | Decrease busload to <6% |

[Back to Summary](#)