

NB-IoT Functional and Performance Report

3GPP and Qualcomm Based Tests

Classification: Confidential

Doc. Type: Report

Revision: Rev. 02

Date: 10/21/2024

Code: Tests, Report, Performance

Report Info

Operator: admin

DUT: HTNB32L-0XX

Batch: NB2PT07-06-000-RETEST

Testplan: ['Yield_Platform_for_Production_1.0_PCB2.ini']

Plat SW Ver.: Yield-Alpha 0.1

Plat HW Ver.: 1.0 ID1

Summary

Test Start Time: 10/21/2024 17:16:41

Test End Time: 10/21/2024 17:19:08

Total Test Time: 0:02:27

Test Items Passed: 57

Test Items Failed: 2

Number of Test Items: 59

Tests Resume

| Test item | Qty | Set Lower | Set Upper | Res Lower | Res Mean | Res Upper | Unit | Judg |
|----------------|-----|-----------|-----------|-----------|----------|-----------|------|------|
| Short Open | 13 | 8 | 340 | 10.3 | 236.8 | 330.0 | kΩ | PASS |
| Firmware Flash | 5 | - | - | - | - | - | - | PASS |
| Interleaved | 22 | - | - | - | - | - | - | PASS |
| Peripherals | 11 | - | - | - | - | - | - | PASS |
| DeepSleep | 4 | 0.4 | 25.0 | 1.1 | 6.6 | 14.9 | μA | PASS |
| Calibration | 4 | - | - | - | - | - | - | FAIL |

Tests Details #01

Test HT criteria - ShortOpen in Default configuration

| Pin Name | Lower | Upper | Result | Unit | Judgement |
|-------------|-------|-------|--------|------|-----------|
| VCC | 8 | 340 | 10.3 | kΩ | PASS |
| NRST | 8 | 340 | 330.0 | kΩ | PASS |
| BOOT | 8 | 340 | 330.0 | kΩ | PASS |
| UART1_TX | 8 | 340 | 330.0 | kΩ | PASS |
| UART1_RX | 8 | 340 | 330.0 | kΩ | PASS |
| USIM_VCC | 8 | 340 | 39.2 | kΩ | PASS |
| ESIM_VCC | 8 | 340 | 82.1 | kΩ | PASS |
| IO_1833_SEL | 8 | 340 | 262.4 | kΩ | PASS |
| USIM_IO | 8 | 340 | 330.0 | kΩ | PASS |
| ESIM_IO | 8 | 340 | 330.0 | kΩ | PASS |
| USIM_CLK | 8 | 340 | 330.0 | kΩ | PASS |
| ESIM_CLK | 8 | 340 | 330.0 | kΩ | PASS |
| SIM_Nrst | 8 | 340 | 43.9 | kΩ | PASS |

Tests Details #01

Test HT criteria - Firmware Flash in Default configuration

| ID | Lower | Upper | Result | Unit | Judgement |
|------------------|-------|-------|--------|------|-----------|
| Erase | - | - | PASS | - | PASS |
| Bootload | - | - | PASS | - | PASS |
| App Data | - | - | PASS | - | PASS |
| Merge RF Table 1 | - | - | PASS | - | PASS |
| Merge RF Table 2 | - | - | PASS | - | PASS |

Tests Details #01

Test HT criteria - Interleaved in Default configuration

| ID | Lower | Upper | Result | Unit | Judgement |
|-----------------|-------|-------|--------|------|-----------|
| GPIO2 [Int0] | 0 | - | 0 | - | PASS |
| GPIO3 [Int0] | 0 | - | 0 | - | PASS |
| GPIO5 [Int0] | 0 | - | 0 | - | PASS |
| SWD_CLK [Int0] | 0 | - | 0 | - | PASS |
| GPIO6 [Int0] | 0 | - | 0 | - | PASS |
| GPIO10 [Int0] | 0 | - | 0 | - | PASS |
| GPIO7 [Int0] | 0 | - | 0 | - | PASS |
| GPIO1 [Int0] | - | 1 | 1 | - | PASS |
| GPIO4 [Int0] | - | 1 | 1 | - | PASS |
| SWD_IO [Int0] | - | 1 | 1 | - | PASS |
| AON_GPIO [Int0] | - | 1 | 1 | - | PASS |
| GPIO2 [Int1] | - | 1 | 1 | - | PASS |
| GPIO3 [Int1] | - | 1 | 1 | - | PASS |
| GPIO5 [Int1] | - | 1 | 1 | - | PASS |
| SWD_CLK [Int1] | - | 1 | 1 | - | PASS |
| GPIO6 [Int1] | - | 1 | 1 | - | PASS |
| GPIO10 [Int1] | - | 1 | 1 | - | PASS |
| GPIO7 [Int1] | - | 1 | 1 | - | PASS |
| GPIO1 [Int1] | 0 | - | 0 | - | PASS |
| GPIO4 [Int1] | 0 | - | 0 | - | PASS |
| SWD_IO [Int1] | 0 | - | 0 | - | PASS |
| AON_GPIO [Int1] | 0 | - | 0 | - | PASS |

Tests Details #01

Test HT criteria - Peripherals in Default configuration

| ID | Lower | Upper | Result | Unit | Judgement |
|----------|-------|-------|--------|------|-----------|
| UART0 TX | - | - | PASS | - | PASS |
| UART0 RX | - | - | PASS | - | PASS |
| UART2 TX | - | - | PASS | - | PASS |
| UART2 RX | - | - | PASS | - | PASS |
| I2C0 TX | - | - | PASS | - | PASS |
| I2C0 RX | - | - | PASS | - | PASS |
| I2C1 TX | - | - | PASS | - | PASS |
| I2C1 RX | - | - | PASS | - | PASS |
| SPI1 TX | - | - | PASS | - | PASS |
| SPI1 RX | - | - | PASS | - | PASS |
| USIM | - | - | PASS | - | PASS |

Tests Details #01

Test HT criteria - DeepSleep in Default configuration

| Sleep Mode | Lower | Upper | Result | Unit | Judgement |
|------------|-------|-------|--------|------|-----------|
| HIB2 | 0.4 | 1.5 | 1.1 | μA | PASS |
| HIB1 | 2.0 | 4.0 | 3.2 | μA | PASS |
| SLEEP2 | 5.0 | 10.0 | 7.0 | μA | PASS |
| SLEEP1 | 10.0 | 25.0 | 14.9 | μA | PASS |

Tests Details #01

Test Qualcomm criteria - Calibration in Default configuration

| ID | Lower | Upper | Result | Unit | Judgement |
|-----|-------|-------|--------|------|-----------|
| AFC | - | - | PASS | - | PASS |
| AGC | - | - | PASS | - | PASS |
| APC | - | - | FAIL | - | FAIL |
| DPD | - | - | SKIP | - | SKIP |