

FCC RF Test Report

(LTE)

Applicant: Hangzhou Roombanker Technology Co., Ltd.

Address of Applicant: A#801 Wantong center, Hangzhou, China

Equipment Under Test (EUT)

Product Name: Indoor Nodle Miner

Model No.: DSGW-210N

Trade Mark: N/A

FCC ID: 2AUXBDSGW-210N

Applicable Standards: FCC CFR Title 47 Part 2, 24E, 27M

Date of Sample Receipt: 23 Mar., 2022

Date of Test: 24 Mar., to 11 Apr., 2022

Date of Report Issued: 18 Apr., 2022

Test Result: PASS

Tested by: _____

Mike Ou

Test Engineer

Date: _____

18 Apr., 2022

Reviewed by: _____

Wenwen Zhang

Project Engineer

Date: _____

18 Apr., 2022

Approved by: _____

Wenwen Zhang

Manager

Date: _____

18 Apr., 2022

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in above the application standard version. Test results reported herein relate only to the item(s) tested.

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2. Version

| Version No. | Date | Description |
|-------------|---------------|------------------------------|
| 00 | 12 Apr., 2022 | Original |
| 01 | 18 Apr., 2022 | Update page 11 and Appendix. |
| | | |
| | | |

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4. General Information

4.1 Client Information

| | |
|---------------|--|
| Applicant: | Hangzhou Roombanker Technology Co., Ltd. |
| Address: | A#801 Wantong center, Hangzhou, China |
| Manufacturer: | Hangzhou Roombanker Technology Co., Ltd. |
| Address: | A#801 Wantong center, Hangzhou, China |

4.2 General Description of E.U.T.

| | | | |
|----------------------------|--|---|---|
| Product Name: | Indoor Nodle Miner | | |
| Model No.: | DSGW-210N | | |
| Operation Frequency Range: | LTE Band 2: | Tx: 1850 MHz - 1910 MHz | Rx: 1930 MHz - 1990 MHz |
| | LTE Band 7: | Tx: 2500 MHz - 2570 MHz | Rx: 2620 MHz - 2690 MHz |
| | LTE Band 25: | Tx: 1850 MHz - 1915 MHz | Rx: 1930 MHz - 1995 MHz |
| | LTE Band 41: | Tx: 2496 MHz - 2690 MHz | Rx: 2496 MHz - 2690 MHz |
| Modulation Type: | <input checked="" type="checkbox"/> QPSK | <input checked="" type="checkbox"/> 16QAM | <input checked="" type="checkbox"/> 64QAM |
| Antenna Type: | FPC Antenna | | |
| Antenna Gain: | LTE Band 2: | 2.84 dBi (declare by Applicant) | |
| | LTE Band 7: | 2.84 dBi (declare by Applicant) | |
| | LTE Band 25: | 2.84 dBi (declare by Applicant) | |
| | LTE Band 41: | 2.84 dBi (declare by Applicant) | |
| AC Adapter: | Model: KA1501A-0503000US Input: AC100-240V, 50/60Hz, 0.55A MAX Output: DC 5.0V, 3000mA | | |
| Test Sample Condition: | The test samples were provided in good working order with no visible defects. | | |

4.3 Test Model and Environment

| Test Mode: | |
|--|---|
| QPSK mode: | Keep the EUT communication with simulated station in QPSK mode |
| 16QAM mode: | Keep the EUT communication with simulated station in 16QAM mode |
| Remark: The EUT has been tested under continuous transmitting mode. Channel Low, Mid and High for each type band with rated data rate were chosen for full testing. The field strength of spurious radiation emission was measured as EUT stand-up position (H mode) and lie down position (E1, E2 mode) for these modes. Just the worst case position (H mode) shown in report. | |
| Operating Environment: | |
| Temperature: | Normal: 15°C ~ 35°C, Extreme: -30°C ~ +50°C |
| Humidity: | 20 % ~ 75 % RH |
| Atmospheric Pressure: | 1008 mbar |
| Voltage: | Nominal: 5.00 Vdc, Extreme: Low 4.25 Vdc, High 5.75 Vdc |

4.4 Description of Test Auxiliary Equipment

| Test Equipment | Manufacturer | Model No. | Serial No. |
|-------------------|--------------|-----------|------------|
| Simulated Station | Anritsu | MT8820C | 6201026545 |

4.5 Measurement Uncertainty

| Parameter | Expanded Uncertainty (Confidence of 95%(U = 2Uc(y))) |
|--|---|
| Conducted Emission for LISN (9kHz ~ 150kHz) | ±3.11 dB |
| Conducted Emission for LISN (150kHz ~ 30MHz) | ±2.62 dB |
| Radiated Emission (30MHz ~ 1GHz) (3m SAC) | ±4.45 dB |
| Radiated Emission (1GHz ~ 18GHz) (3m SAC) | ±5.34 dB |
| Radiated Emission (18GHz ~ 40GHz) (3m SAC) | ±5.34 dB |

Note: All the measurement uncertainty value were shown with a coverage k=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

4.6 Additions to, Deviations, or Exclusions from the Method

| |
|----|
| No |
|----|

4.7 Laboratory Facility

| |
|--|
| <p>The test facility is recognized, certified, or accredited by the following organizations:</p> <ul style="list-style-type: none"> ● FCC - Designation No.: CN1211 JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551. ● ISED – CAB identifier.: CN0021 The 3m Semi-anechoic chamber and 10m Semi-anechoic chamber of JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1. ● CNAS - Registration No.: CNAS L15527 JianYan Testing Group Shenzhen Co., Ltd. is accredited to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L15527. ● A2LA - Registration No.: 4346.01 This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: https://portal.a2la.org/scopepdf/4346-01.pdf |
|--|

4.8 Laboratory Location

JianYan Testing Group Shenzhen Co., Ltd.
 Address: No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China.
 Tel: +86-755-23118282, Fax: +86-755-23116366
 Email: info-JYTee@lets.com, Website: <http://jyt.lets.com>

4.9 Test Instruments List

| Radiated Emission: | | | | | |
|-------------------------------|-----------------|-----------------|------------------|---------------------|--------------------------|
| Test Equipment | Manufacturer | Model No. | Manage No. | Cal.Date (mm-dd-yy) | Cal. Due date (mm-dd-yy) |
| 3m SAC | ETS | 9m*6m*6m | WXJ001-1 | 01-19-2021 | 01-18-2024 |
| BiConiLog Antenna | Schwarzbeck | VULB9163 | WXJ002 | 02-17-2022 | 02-16-2023 |
| Biconical Antenna | Schwarzbeck | VUBA9117 | WXJ002-1 | 06-20-2021 | 06-19-2022 |
| Horn Antenna | Schwarzbeck | BBHA9120D | WXJ002-2 | 02-17-2022 | 02-16-2023 |
| Horn Antenna | Schwarzbeck | BBHA9120D | WXJ002-3 | 06-18-2021 | 06-17-2022 |
| Pre-amplifier (30MHz ~ 1GHz) | Schwarzbeck | BBV9743B | WXG001-7 | 02-17-2022 | 02-16-2023 |
| Pre-amplifier (1GHz ~ 18GHz) | SKET | LNPA_0118G-50 | WXG001-3 | 02-17-2022 | 02-16-2023 |
| Pre-amplifier (18GHz ~ 40GHz) | RF System | TRLA-180400G45B | WXG001-9 | 02-17-2022 | 02-16-2023 |
| EMI Test Receiver | Rohde & Schwarz | ESRP7 | WXJ003-1 | 02-17-2022 | 02-16-2023 |
| Spectrum Analyzer | KEYSIGHT | N9010B | WXJ004-2 | 10-27-2022 | 10-26-2022 |
| Simulated Station | Anritsu | MT8820C | WXJ008-4 | 03-03-2021 | 03-02-2023 |
| Band Reject Filter Group | Tonscend | JS0806-F | WXJ089 | 04-06-2021 | 04-05-2022 |
| | | | | 04-01-2022 | 03-31-2023 |
| Coaxial Cable (30MHz ~ 1GHz) | JYT | JYT3M-1G-NN-8M | WXG001-4 | 02-17-2022 | 02-16-2023 |
| Coaxial Cable (1GHz ~ 18GHz) | JYT | JYT3M-18G-NN-8M | WXG001-5 | 02-17-2022 | 02-16-2023 |
| Coaxial Cable (18GHz ~ 40GHz) | JYT | JYT3M-40G-SS-8M | WXG001-7 | 02-17-2022 | 02-16-2023 |
| Test Software | Tonscend | TS+ | Version: 3.0.0.1 | | |

| Conducted Method: | | | | | |
|------------------------------|-----------------|-----------|---------------------|----------------------|--------------------------|
| Test Equipment | Manufacturer | Model No. | Manage No. | Cal. Date (mm-dd-yy) | Cal. Due date (mm-dd-yy) |
| Spectrum Analyzer | Keysight | N9020B | WXJ081-1 | 07-02-2021 | 07-01-2022 |
| Simulated Station | Rohde & Schwarz | CMW500 | WXJ081 | 07-02-2021 | 07-01-2022 |
| DC Power Supply | Keysight | E3642A | WXJ025-2 | 10-25-2021 | 10-24-2022 |
| Temperature Humidity Chamber | ZHONG ZHI | CZ-A-80D | WXJ032-3 | 03-19-2021 | 03-18-2023 |
| RF Control Unit | Tonscend | JS0806-1 | WXG010 | N/A | |
| Band Reject Filter Group | Tonscend | JS0806-F | WXG010-1 | N/A | |
| Test Software | Tonscend | TS+ | Version: 2.6.9.0526 | | |

5. Measurement Setup and Procedure

5.1 Test Channel

According to ANSI C63.26-2015 chapter 5.1.2.1 Table 2 requirement, select lowest channel, middle channel, and highest channel in the frequency range in which device operates for testing. The detailed frequency points are as follows:

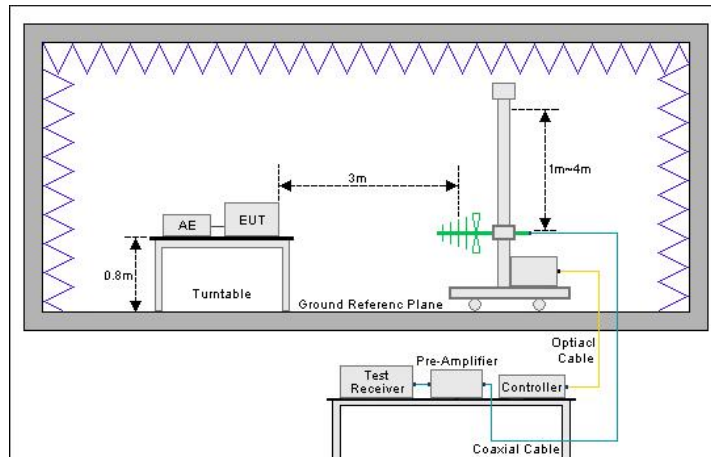
| LTE band 2 | | | | | |
|-----------------|-------|-----------------|-----------------|-------|-----------------|
| Channels | | Frequency (MHz) | Channels | | Frequency (MHz) |
| 1.4 MHz | | | 3 MHz | | |
| Lowest channel | 18607 | 1850.7 | Lowest channel | 18915 | 1851.5 |
| Middle channel | 18900 | 1880.0 | Middle channel | 18900 | 1880.0 |
| Highest channel | 19193 | 1909.3 | Highest channel | 19185 | 1908.5 |
| 5 MHz | | | 10 MHz | | |
| Lowest channel | 18625 | 1852.5 | Lowest channel | 18650 | 1855.0 |
| Middle channel | 18900 | 1880.0 | Middle channel | 18900 | 1880.0 |
| Highest channel | 19175 | 1907.5 | Highest channel | 19150 | 1905.0 |
| 15 MHz | | | 20 MHz | | |
| Lowest channel | 18675 | 1857.5 | Lowest channel | 18700 | 1860.0 |
| Middle channel | 18900 | 1880.0 | Middle channel | 18900 | 1880.0 |
| Highest channel | 19125 | 1902.5 | Highest channel | 19100 | 1900.0 |
| LTE band 7 | | | | | |
| Channels | | Frequency (MHz) | Channels | | Frequency (MHz) |
| 5 MHz | | | 10 MHz | | |
| Lowest channel | 20775 | 2502.5 | Lowest channel | 20800 | 2505.0 |
| Middle channel | 21100 | 2535.0 | Middle channel | 21100 | 2535.0 |
| Highest channel | 21425 | 2567.5 | Highest channel | 21400 | 2565.0 |
| 15 MHz | | | 20 MHz | | |
| Lowest channel | 20825 | 2507.5 | Lowest channel | 20850 | 2510.0 |
| Middle channel | 21100 | 2535.0 | Middle channel | 21100 | 2535.0 |
| Highest channel | 21375 | 2562.5 | Highest channel | 21350 | 2560.0 |

| LTE band 25 | | | | | |
|--------------------------------|-------|-----------------|-----------------|-------|-----------------|
| Channels | | Frequency (MHz) | Channels | | Frequency (MHz) |
| 1.4 MHz | | | 3 MHz | | |
| Lowest channel | 26047 | 1850.70 | Lowest channel | 26055 | 1851.50 |
| Middle channel | 26365 | 1882.50 | Middle channel | 26365 | 1882.50 |
| Highest channel | 26683 | 1914.30 | Highest channel | 26675 | 1913.50 |
| 5 MHz | | | 10 MHz | | |
| Lowest channel | 26065 | 1852.50 | Lowest channel | 26090 | 1855.00 |
| Middle channel | 26365 | 1882.50 | Middle channel | 26365 | 1882.50 |
| Highest channel | 26665 | 1912.50 | Highest channel | 26640 | 1910.00 |
| 15 MHz | | | 20 MHz | | |
| Lowest channel | 26115 | 1857.50 | Lowest channel | 26140 | 1860.00 |
| Middle channel | 26365 | 1882.50 | Middle channel | 26365 | 1882.50 |
| Highest channel | 26615 | 1907.50 | Highest channel | 26590 | 1905.00 |
| LTE band 41(2496MHz ~ 2690MHz) | | | | | |
| Channels | | Frequency (MHz) | Channels | | Frequency (MHz) |
| 5 MHz | | | 10 MHz | | |
| Lowest channel | 39675 | 2498.5 | Lowest channel | 39700 | 2501.0 |
| Middle channel | 40620 | 2593.0 | Middle channel | 40620 | 2593.0 |
| Highest channel | 41565 | 2687.5 | Highest channel | 41540 | 2685.0 |
| 15 MHz | | | 20 MHz | | |
| Lowest channel | 39725 | 2503.5 | Lowest channel | 39750 | 2506.0 |
| Middle channel | 40620 | 2593.0 | Middle channel | 40620 | 2593.0 |
| Highest channel | 41515 | 2682.5 | Highest channel | 41490 | 2680.0 |

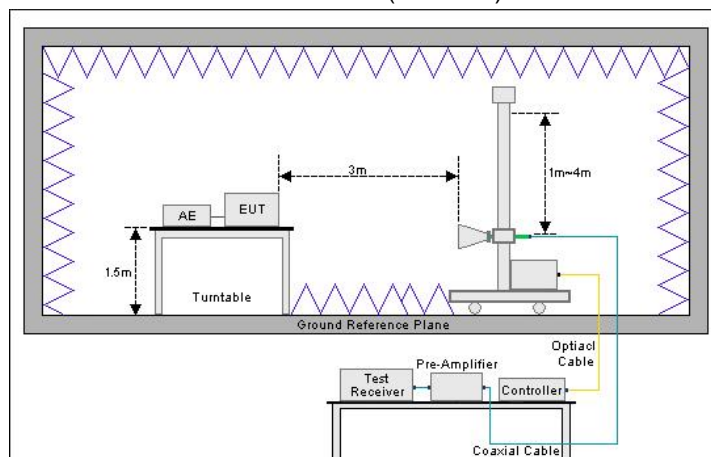
5.2 Test Setup

1) Radiated emission measurement:

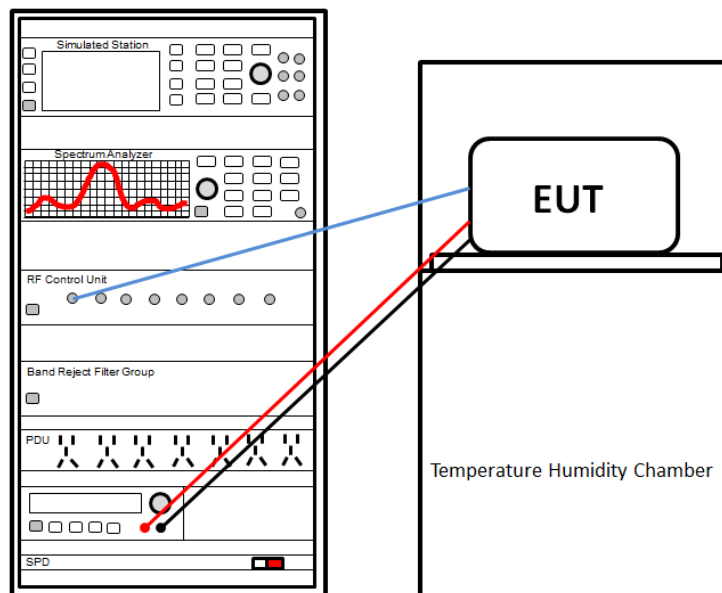
Below 1GHz (3m SAC)



Above 1GHz (3m SAC)



2) Conducted test method



5.3 Test Procedure

| Test method | Test step |
|-----------------------|---|
| Radiated emission | <p>For below 1GHz:</p> <ol style="list-style-type: none"> The EUT was placed on the tabletop of a rotating table 0.8 m the ground at a 3 m semi anechoic chamber. The measurement distance from the EUT to the receiving antenna is 3 m. EUT works in each mode of operation that needs to be tested , and having the EUT continuously working, respectively on 3 axis (X, Y & Z) and considered typical configuration to obtain worst position. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations. Open the test software to control the test antenna and test turntable. Perform the test, save the test results, and export the test data. <p>For above 1GHz:</p> <ol style="list-style-type: none"> The EUT was placed on the tabletop of a rotating table 1.5 m the ground at a 3 m fully anechoic room. The measurement distance from the EUT to the receiving antenna is 3 m. EUT works in each mode of operation that needs to be tested , and having the EUT continuously working, respectively on 3 axis (X, Y & Z) and considered typical configuration to obtain worst position. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations. Open the test software to control the test antenna and test turntable. Perform the test, save the test results, and export the test data. |
| Conducted test method | <ol style="list-style-type: none"> The LTE antenna port of EUT was connected to the test port of the test system through an RF cable. The EUT is keeping in continuous transmission mode and tested in all modulation modes. Open the test software, prepare a test plan, and control the system through the software. After the test is completed, the test report is exported through the test software. |

6. Test Results

6.1 Summary

6.1.1 Clause and Data Summary

| Test items | Standard clause | Test data | Result |
|--|---|-----------------------------|--------|
| RF Exposure (SAR) | Part 1.1307 Part 2.1091 | Report JYTSZ-R12-2200596 | Pass |
| RF Output Power | Part 2.1046 Part 24.232 (c) Part 27.50 (h)(2) | Appendix – LTE | Pass |
| Peak-to-Average Power Ratio | Part 24.232 (d) | Report HR20191001601 | Pass* |
| Modulation Characteristics | Part 2.1047 | Report HR20191001601 | Pass* |
| 26dB Emission Bandwidth 99% Occupied Bandwidth | Part 2.1049 Part 24.238 (b) Part 27.53 (g) Part 27.53 (m)(6) | Report HR20191001601 | Pass* |
| Out of Band Emission at Antenna Terminals | Part 2.1051 Part 24.238 (a) Part 27.53 (m)(4) | Report HR20191001601 | Pass* |
| Field Strength of Spurious Radiation | Part 2.1053 Part 22.917 (a) Part 24.238 (a) Part 27.53 (g) Part 27.53 (h) Part 27.53 (m) | See Section 6.2 | Pass |
| Frequency Stability vs. Temperature | Part 2.1055 (a)(1)(b) Part 22.355 Part 27.54 | Report HR20191001601 | Pass* |
| Frequency Stability vs. Voltage | Part 2.1055 (a)(1)(b) Part 22.355 Part 27.54 | Report HR20191001601 | Pass* |
| Remark: <ol style="list-style-type: none"> Pass: The EUT complies with the essential requirements in the standard. The cable insertion loss used by "RF Output Power" and other conduction measurement items is 0.5dB (Fundamental Frequency below 1GHz)/1.0dB (Fundamental Frequency above 1GHz) (provided by the customer). Pass*: Refer to the FCC ID: XMR201903EG25G, Report No. HR20191001601. The EUT only supports LTE Band 2/7/25/41, other frequencies are disabled by software. | | | |
| Test Method: | ANSI/TIA-603-E-2016 ANSI C63.26-2015 | | |

6.1.2 Test Limit

| Test items | Limit |
|---|--|
| RF Output Power | LTE band 2/7/25/41: 2W EIRP, |
| Peak-to-Average Power Ratio | The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB |
| Modulation Characteristics | N/A |
| 26dB Emission Bandwidth 99% Occupied Bandwidth | N/A |
| Out of Band Emission at Antenna Terminals Field Strength of Spurious Radiation | <p>LTE band 2, 25: The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.</p> <p>LTE band 7, 41: For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log(P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log(P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log(P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log(P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log(P)$ dB at or below 2490.5 MHz.</p> |
| Frequency Stability vs. Temperature Frequency Stability vs. Voltage | <p>LTE band 2, 25: The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.</p> <p>LTE band 7, 41: The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.</p> |

6.2 Field Strength of Spurious Radiation Measurement

| LTE band 2 – 1.4 MHz bandwidth | | | | | | |
|--|---------------------|-------------|-------------|-------------|-------------|--------------|
| Lowest channel | | | | | | |
| Frequency (MHz) | Reading Level (dBm) | Factor (dB) | Level (dBm) | Limit (dBm) | Margin (dB) | Polarization |
| 3701.40 | -49.29 | -1.60 | -50.89 | -13.00 | 37.89 | Vertical |
| 5552.10 | -50.95 | 5.43 | -45.52 | -13.00 | 32.52 | Vertical |
| 7402.00 | -47.51 | 13.11 | -34.40 | -13.00 | 21.40 | Vertical |
| 3701.40 | -50.52 | -2.09 | -52.61 | -13.00 | 39.61 | Horizontal |
| 5552.10 | -50.70 | 3.81 | -46.89 | -13.00 | 33.89 | Horizontal |
| 7402.00 | -53.66 | 11.38 | -42.28 | -13.00 | 29.28 | Horizontal |
| Middle channel | | | | | | |
| Frequency (MHz) | Reading Level (dBm) | Factor (dB) | Level (dBm) | Limit (dBm) | Margin (dB) | Polarization |
| 3760.00 | -49.65 | -1.31 | -50.96 | -13.00 | 37.96 | Vertical |
| 5640.00 | -50.58 | 6.98 | -43.60 | -13.00 | 30.60 | Vertical |
| 7520.00 | -47.36 | 11.74 | -35.62 | -13.00 | 22.62 | Vertical |
| 3760.00 | -50.25 | -1.80 | -52.05 | -13.00 | 39.05 | Horizontal |
| 5640.00 | -50.61 | 4.30 | -46.31 | -13.00 | 33.31 | Horizontal |
| 7520.00 | -53.94 | 10.25 | -43.69 | -13.00 | 30.69 | Horizontal |
| Highest channel | | | | | | |
| Frequency (MHz) | Reading Level (dBm) | Factor (dB) | Level (dBm) | Limit (dBm) | Margin (dB) | Polarization |
| 3816.60 | -49.27 | -1.02 | -50.29 | -13.00 | 37.29 | Vertical |
| 5724.90 | -50.26 | 8.20 | -42.06 | -13.00 | 29.06 | Vertical |
| 7633.20 | -47.36 | 11.17 | -36.19 | -13.00 | 23.19 | Vertical |
| 3816.60 | -50.25 | -1.49 | -51.74 | -13.00 | 38.74 | Horizontal |
| 5724.90 | -51.07 | 5.68 | -45.39 | -13.00 | 32.39 | Horizontal |
| 7633.20 | -53.66 | 10.01 | -43.65 | -13.00 | 30.65 | Horizontal |
| Remark: | | | | | | |
| 1. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report. | | | | | | |

| LTE band 2 – 20 MHz bandwidth | | | | | | |
|--|---------------------|-------------|-------------|-------------|-------------|--------------|
| Lowest channel | | | | | | |
| Frequency (MHz) | Reading Level (dBm) | Factor (dB) | Level (dBm) | Limit (dBm) | Margin (dB) | Polarization |
| 3720.00 | -49.10 | -1.51 | -50.61 | -13.00 | 37.61 | Vertical |
| 5580.00 | -50.10 | 5.80 | -44.30 | -13.00 | 31.30 | Vertical |
| 7440.00 | -47.52 | 12.61 | -34.91 | -13.00 | 21.91 | Vertical |
| 3720.00 | -49.93 | -2.00 | -51.93 | -13.00 | 38.93 | Horizontal |
| 5580.00 | -51.31 | 3.95 | -47.36 | -13.00 | 34.36 | Horizontal |
| 7440.00 | -53.52 | 10.94 | -42.58 | -13.00 | 29.58 | Horizontal |
| Middle channel | | | | | | |
| Frequency (MHz) | Reading Level (dBm) | Factor (dB) | Level (dBm) | Limit (dBm) | Margin (dB) | Polarization |
| 3760.00 | -49.23 | -1.31 | -50.54 | -13.00 | 37.54 | Vertical |
| 5640.00 | -49.91 | 6.98 | -42.93 | -13.00 | 29.93 | Vertical |
| 7520.00 | -47.55 | 11.74 | -35.81 | -13.00 | 22.81 | Vertical |
| 3760.00 | -50.39 | -1.80 | -52.19 | -13.00 | 39.19 | Horizontal |
| 5640.00 | -51.25 | 4.30 | -46.95 | -13.00 | 33.95 | Horizontal |
| 7520.00 | -53.32 | 10.25 | -43.07 | -13.00 | 30.07 | Horizontal |
| Highest channel | | | | | | |
| Frequency (MHz) | Reading Level (dBm) | Factor (dB) | Level (dBm) | Limit (dBm) | Margin (dB) | Polarization |
| 3800.00 | -49.70 | -1.11 | -50.81 | -13.00 | 37.81 | Vertical |
| 5700.00 | -50.26 | 8.28 | -41.98 | -13.00 | 28.98 | Vertical |
| 7600.00 | -47.39 | 11.38 | -36.01 | -13.00 | 23.01 | Vertical |
| 3800.00 | -50.00 | -1.61 | -51.61 | -13.00 | 38.61 | Horizontal |
| 5700.00 | -51.37 | 4.67 | -46.70 | -13.00 | 33.70 | Horizontal |
| 7600.00 | -53.62 | 10.20 | -43.42 | -13.00 | 30.42 | Horizontal |
| Remark: | | | | | | |
| 1. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report. | | | | | | |

| LTE band 7 – 5 MHz bandwidth | | | | | | |
|--|---------------------|-------------|-------------|-------------|-------------|--------------|
| Lowest channel | | | | | | |
| Frequency (MHz) | Reading Level (dBm) | Factor (dB) | Level (dBm) | Limit (dBm) | Margin (dB) | Polarization |
| 5005.00 | -52.24 | 4.56 | -47.68 | -25.00 | 22.68 | Vertical |
| 7507.50 | -52.52 | 13.14 | -39.38 | -25.00 | 14.38 | Vertical |
| 10010.00 | -54.03 | 16.93 | -37.10 | -25.00 | 12.10 | Vertical |
| 5005.00 | -50.86 | 4.56 | -46.30 | -25.00 | 21.30 | Horizontal |
| 7507.50 | -53.52 | 13.14 | -40.38 | -25.00 | 15.38 | Horizontal |
| 10010.00 | -53.82 | 16.93 | -36.89 | -25.00 | 11.89 | Horizontal |
| Middle channel | | | | | | |
| Frequency (MHz) | Reading Level (dBm) | Factor (dB) | Level (dBm) | Limit (dBm) | Margin (dB) | Polarization |
| 5070.00 | -52.05 | 4.55 | -47.50 | -25.00 | 22.50 | Vertical |
| 7605.00 | -52.18 | 13.58 | -38.60 | -25.00 | 13.60 | Vertical |
| 10140.00 | -53.64 | 17.44 | -36.20 | -25.00 | 11.20 | Vertical |
| 5070.00 | -51.05 | 4.55 | -46.50 | -25.00 | 21.50 | Horizontal |
| 7605.00 | -53.18 | 13.58 | -39.60 | -25.00 | 14.60 | Horizontal |
| 10140.00 | -54.02 | 17.44 | -36.58 | -25.00 | 11.58 | Horizontal |
| Highest channel | | | | | | |
| Frequency (MHz) | Reading Level (dBm) | Factor (dB) | Level (dBm) | Limit (dBm) | Margin (dB) | Polarization |
| 5135.00 | -51.90 | 4.62 | -47.28 | -25.00 | 22.28 | Vertical |
| 7702.50 | -51.78 | 13.24 | -38.54 | -25.00 | 13.54 | Vertical |
| 10270.00 | -53.48 | 18.40 | -35.08 | -25.00 | 10.08 | Vertical |
| 5135.00 | -50.87 | 4.62 | -46.25 | -25.00 | 21.25 | Horizontal |
| 7702.50 | -53.48 | 13.24 | -40.24 | -25.00 | 15.24 | Horizontal |
| 10270.00 | -53.90 | 18.40 | -35.50 | -25.00 | 10.50 | Horizontal |
| Remark: | | | | | | |
| 1. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report. | | | | | | |

| LTE band 7 – 20 MHz bandwidth | | | | | | |
|--|---------------------|-------------|-------------|-------------|-------------|--------------|
| Lowest channel | | | | | | |
| Frequency (MHz) | Reading Level (dBm) | Factor (dB) | Level (dBm) | Limit (dBm) | Margin (dB) | Polarization |
| 5020.00 | -51.73 | 4.56 | -47.17 | -25.00 | 22.17 | Vertical |
| 7530.00 | -52.06 | 13.29 | -38.77 | -25.00 | 13.77 | Vertical |
| 10040.00 | -53.85 | 16.98 | -36.87 | -25.00 | 11.87 | Vertical |
| 5020.00 | -50.91 | 4.56 | -46.35 | -25.00 | 21.35 | Horizontal |
| 7530.00 | -53.52 | 13.29 | -40.23 | -25.00 | 15.23 | Horizontal |
| 10040.00 | -53.85 | 16.98 | -36.87 | -25.00 | 11.87 | Horizontal |
| Middle channel | | | | | | |
| Frequency (MHz) | Reading Level (dBm) | Factor (dB) | Level (dBm) | Limit (dBm) | Margin (dB) | Polarization |
| 5070.00 | -51.75 | 4.55 | -47.20 | -25.00 | 22.20 | Vertical |
| 7605.00 | -52.03 | 13.58 | -38.45 | -25.00 | 13.45 | Vertical |
| 10140.00 | -53.86 | 17.44 | -36.42 | -25.00 | 11.42 | Vertical |
| 5070.00 | -50.77 | 4.55 | -46.22 | -25.00 | 21.22 | Horizontal |
| 7605.00 | -53.03 | 13.58 | -39.45 | -25.00 | 14.45 | Horizontal |
| 10140.00 | -54.15 | 17.44 | -36.71 | -25.00 | 11.71 | Horizontal |
| Highest channel | | | | | | |
| Frequency (MHz) | Reading Level (dBm) | Factor (dB) | Level (dBm) | Limit (dBm) | Margin (dB) | Polarization |
| 5120.00 | -51.57 | 4.62 | -46.95 | -25.00 | 21.95 | Vertical |
| 7680.00 | -52.16 | 13.18 | -38.98 | -25.00 | 13.98 | Vertical |
| 10240.00 | -53.50 | 18.27 | -35.23 | -25.00 | 10.23 | Vertical |
| 5120.00 | -50.56 | 4.62 | -45.94 | -25.00 | 20.94 | Horizontal |
| 7680.00 | -52.64 | 13.18 | -39.46 | -25.00 | 14.46 | Horizontal |
| 10240.00 | -54.27 | 18.27 | -36.00 | -25.00 | 11.00 | Horizontal |
| Remark: | | | | | | |
| 1. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report. | | | | | | |

| LTE band 25 – 1.4 MHz bandwidth | | | | | | |
|--|---------------------|-------------|-------------|-------------|-------------|--------------|
| Lowest channel | | | | | | |
| Frequency (MHz) | Reading Level (dBm) | Factor (dB) | Level (dBm) | Limit (dBm) | Margin (dB) | Polarization |
| 3701.40 | -50.11 | -1.60 | -51.71 | -13.00 | 38.71 | Vertical |
| 5552.10 | -49.16 | 5.43 | -43.73 | -13.00 | 30.73 | Vertical |
| 7402.80 | -43.53 | 13.11 | -30.42 | -13.00 | 17.42 | Vertical |
| 3701.40 | -50.68 | -2.09 | -52.77 | -13.00 | 39.77 | Horizontal |
| 5552.10 | -52.26 | 3.81 | -48.45 | -13.00 | 35.45 | Horizontal |
| 7402.80 | -49.49 | 11.38 | -38.11 | -13.00 | 25.11 | Horizontal |
| Middle channel | | | | | | |
| Frequency (MHz) | Reading Level (dBm) | Factor (dB) | Level (dBm) | Limit (dBm) | Margin (dB) | Polarization |
| 3765.00 | -50.39 | -1.28 | -51.67 | -13.00 | 38.67 | Vertical |
| 5647.50 | -49.36 | 7.14 | -42.22 | -13.00 | 29.22 | Vertical |
| 7530.00 | -43.23 | 11.69 | -31.54 | -13.00 | 18.54 | Vertical |
| 3765.00 | -50.52 | -1.78 | -52.30 | -13.00 | 39.30 | Horizontal |
| 5647.50 | -51.92 | 4.34 | -47.58 | -13.00 | 34.58 | Horizontal |
| 7530.00 | -49.98 | 10.24 | -39.74 | -13.00 | 26.74 | Horizontal |
| Highest channel | | | | | | |
| Frequency (MHz) | Reading Level (dBm) | Factor (dB) | Level (dBm) | Limit (dBm) | Margin (dB) | Polarization |
| 3828.60 | -50.30 | -0.97 | -51.27 | -13.00 | 38.27 | Vertical |
| 5742.90 | -49.18 | 8.17 | -41.01 | -13.00 | 28.01 | Vertical |
| 7657.20 | -43.14 | 11.06 | -32.08 | -13.00 | 19.08 | Vertical |
| 3828.60 | -50.28 | -1.43 | -51.71 | -13.00 | 38.71 | Horizontal |
| 5742.90 | -52.11 | 6.21 | -45.90 | -13.00 | 32.90 | Horizontal |
| 7657.20 | -49.87 | 9.91 | -39.96 | -13.00 | 26.96 | Horizontal |
| Remark: | | | | | | |
| 1. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report. | | | | | | |

| LTE band 25 – 20 MHz bandwidth | | | | | | |
|--|---------------------|-------------|-------------|-------------|-------------|--------------|
| Lowest channel | | | | | | |
| Frequency (MHz) | Reading Level (dBm) | Factor (dB) | Level (dBm) | Limit (dBm) | Margin (dB) | Polarization |
| 3720.00 | -50.21 | -1.51 | -51.72 | -13.00 | 38.72 | Vertical |
| 5580.00 | -49.67 | 5.80 | -43.87 | -13.00 | 30.87 | Vertical |
| 7440.00 | -43.38 | 12.61 | -30.77 | -13.00 | 17.77 | Vertical |
| 3720.00 | -50.76 | -2.00 | -52.76 | -13.00 | 39.76 | Horizontal |
| 5580.00 | -51.95 | 3.95 | -48.00 | -13.00 | 35.00 | Horizontal |
| 7440.00 | -49.38 | 10.94 | -38.44 | -13.00 | 25.44 | Horizontal |
| Middle channel | | | | | | |
| Frequency (MHz) | Reading Level (dBm) | Factor (dB) | Level (dBm) | Limit (dBm) | Margin (dB) | Polarization |
| 3465.00 | -50.13 | -1.28 | -51.41 | -13.00 | 38.41 | Vertical |
| 5197.50 | -49.51 | 7.14 | -42.37 | -13.00 | 29.37 | Vertical |
| 6930.00 | -43.70 | 11.69 | -32.01 | -13.00 | 19.01 | Vertical |
| 3465.00 | -50.58 | -1.78 | -52.36 | -13.00 | 39.36 | Horizontal |
| 5197.50 | -51.82 | 4.34 | -47.48 | -13.00 | 34.48 | Horizontal |
| 6930.00 | -49.37 | 10.24 | -39.13 | -13.00 | 26.13 | Horizontal |
| Highest channel | | | | | | |
| Frequency (MHz) | Reading Level (dBm) | Factor (dB) | Level (dBm) | Limit (dBm) | Margin (dB) | Polarization |
| 3810.00 | -49.67 | -1.06 | -50.73 | -13.00 | 37.73 | Vertical |
| 5715.00 | -49.36 | 8.24 | -41.12 | -13.00 | 28.12 | Vertical |
| 7620.00 | -43.84 | 11.27 | -32.57 | -13.00 | 19.57 | Vertical |
| 3810.00 | -50.57 | -1.55 | -52.12 | -13.00 | 39.12 | Horizontal |
| 5715.00 | -52.07 | 5.20 | -46.87 | -13.00 | 33.87 | Horizontal |
| 7620.00 | -49.50 | 10.10 | -39.40 | -13.00 | 26.40 | Horizontal |
| Remark: | | | | | | |
| 1. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report. | | | | | | |

| LTE band 41 – 5 MHz bandwidth | | | | | | |
|--|---------------------|-------------|-------------|-------------|-------------|--------------|
| Lowest channel | | | | | | |
| Frequency (MHz) | Reading Level (dBm) | Factor (dB) | Level (dBm) | Limit (dBm) | Margin (dB) | Polarization |
| 4997.00 | -35.68 | 3.56 | -32.12 | -25.00 | 7.12 | Vertical |
| 7495.50 | -43.14 | 11.88 | -31.26 | -25.00 | 6.26 | Vertical |
| 9994.00 | -44.81 | 16.91 | -27.90 | -25.00 | 2.90 | Vertical |
| 4997.00 | -45.92 | 3.11 | -42.81 | -25.00 | 17.81 | Horizontal |
| 7495.50 | -53.18 | 10.31 | -42.87 | -25.00 | 17.87 | Horizontal |
| 9994.00 | -52.59 | 16.59 | -36.00 | -25.00 | 11.00 | Horizontal |
| Middle channel | | | | | | |
| Frequency (MHz) | Reading Level (dBm) | Factor (dB) | Level (dBm) | Limit (dBm) | Margin (dB) | Polarization |
| 5186.00 | -35.28 | 4.00 | -31.28 | -25.00 | 6.28 | Vertical |
| 7779.00 | -43.03 | 11.19 | -31.84 | -25.00 | 6.84 | Vertical |
| 10372.00 | -45.19 | 19.16 | -26.03 | -25.00 | 1.03 | Vertical |
| 5186.00 | -45.64 | 3.50 | -42.14 | -25.00 | 17.14 | Horizontal |
| 7779.00 | -53.33 | 10.72 | -42.61 | -25.00 | 17.61 | Horizontal |
| 10372.00 | -52.12 | 17.88 | -34.24 | -25.00 | 9.24 | Horizontal |
| Highest channel | | | | | | |
| Frequency (MHz) | Reading Level (dBm) | Factor (dB) | Level (dBm) | Limit (dBm) | Margin (dB) | Polarization |
| 5375.00 | -35.41 | 4.27 | -31.14 | -25.00 | 6.14 | Vertical |
| 8062.50 | -42.96 | 12.21 | -30.75 | -25.00 | 5.75 | Vertical |
| 10750.00 | -45.66 | 20.11 | -25.55 | -25.00 | 0.55 | Vertical |
| 5375.00 | -46.12 | 3.43 | -42.69 | -25.00 | 17.69 | Horizontal |
| 8062.50 | -53.04 | 12.00 | -41.04 | -25.00 | 16.04 | Horizontal |
| 10750.00 | -52.35 | 18.90 | -33.45 | -25.00 | 8.45 | Horizontal |
| Remark: | | | | | | |
| 1. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report. | | | | | | |

| LTE band 41– 20 MHz bandwidth | | | | | | |
|--|---------------------|-------------|-------------|-------------|-------------|--------------|
| Lowest channel | | | | | | |
| Frequency (MHz) | Reading Level (dBm) | Factor (dB) | Level (dBm) | Limit (dBm) | Margin (dB) | Polarization |
| 5012.00 | -35.62 | 3.70 | -31.92 | -25.00 | 6.92 | Vertical |
| 7518.00 | -42.85 | 11.74 | -31.11 | -25.00 | 6.11 | Vertical |
| 10024.00 | -45.22 | 17.18 | -28.04 | -25.00 | 3.04 | Vertical |
| 5012.00 | -45.79 | 3.26 | -42.53 | -25.00 | 17.53 | Horizontal |
| 7518.00 | -53.41 | 10.25 | -43.16 | -25.00 | 18.16 | Horizontal |
| 10024.00 | -52.22 | 16.69 | -35.53 | -25.00 | 10.53 | Horizontal |
| Middle channel | | | | | | |
| Frequency (MHz) | Reading Level (dBm) | Factor (dB) | Level (dBm) | Limit (dBm) | Margin (dB) | Polarization |
| 5186.00 | -36.06 | 4.00 | -32.06 | -25.00 | 7.06 | Vertical |
| 7779.00 | -43.20 | 11.19 | -32.01 | -25.00 | 7.01 | Vertical |
| 10372.00 | -45.53 | 19.16 | -26.37 | -25.00 | 1.37 | Vertical |
| 5186.00 | -45.61 | 3.50 | -42.11 | -25.00 | 17.11 | Horizontal |
| 7779.00 | -53.74 | 10.72 | -43.02 | -25.00 | 18.02 | Horizontal |
| 10372.00 | -52.66 | 17.88 | -34.78 | -25.00 | 9.78 | Horizontal |
| Highest channel | | | | | | |
| Frequency (MHz) | Reading Level (dBm) | Factor (dB) | Level (dBm) | Limit (dBm) | Margin (dB) | Polarization |
| 5360.00 | -35.79 | 3.87 | -31.92 | -25.00 | 6.92 | Vertical |
| 8040.00 | -42.90 | 12.42 | -30.48 | -25.00 | 5.48 | Vertical |
| 10720.00 | -45.52 | 19.45 | -26.07 | -25.00 | 1.07 | Vertical |
| 5360.00 | -45.19 | 3.36 | -41.83 | -25.00 | 16.83 | Horizontal |
| 8040.00 | -54.08 | 11.96 | -42.12 | -25.00 | 17.12 | Horizontal |
| 10720.00 | -52.61 | 18.93 | -33.68 | -25.00 | 8.68 | Horizontal |
| Remark: | | | | | | |
| 1. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report. | | | | | | |

-----End of report-----