



FCC RADIO TEST REPORT

FCC ID : LHJ-FE5NA0010
Equipment : FE5NA0010, FE5NA0011
Brand Name : Continental
Model Name : FE5NA0010, FE5NA0011
Applicant : Continental Automotive Systems, Inc.
21440 W Lake Cook Rd., Deer Park, IL 60010, USA
Manufacturer : Continental Automotive Systems, Inc.
21440 W Lake Cook Rd., Deer Park, IL 60010, USA
Standard : FCC 47 CFR Part 2, 90(R)

The product was received on Nov. 22, 2022 and testing was performed from Jan. 17, 2023 to Apr. 07, 2023. We, Sporton International Inc. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA-603-E and has been in compliance with the applicable technical standards.

The test results in this variant report apply exclusively to the tested model / sample. Without written approval from Sporton International Inc. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Approved by: Louis Wu

Sportun International Inc. EMC & Wireless Communications Laboratory

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)



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History of this test report



Summary of Test Result

| Report Clause | Ref Std. Clause | Test Items | Result (PASS/FAIL) | Remark |
|---------------|--|--|--------------------|--|
| 3.2 | §2.1046 | Conducted Output Power | Reporting only | - |
| | §90.542 (a)(7) | Effective Radiated Power | Pass | - |
| - | - | Peak-to-Average Ratio | Not Required | - |
| - | §2.1049 | Occupied Bandwidth | Not Required | - |
| - | §2.1053 §90.543 (e)(2) | Conducted Band Edge Measurement | Not Required | - |
| - | §2.1051 §90.210 (n) | Emission Mask | Not Required | - |
| - | §2.1053 §90.543 (e)(3) | Conducted Spurious Emission | Not Required | - |
| - | §2.1055 §90.539 (e) | Frequency Stability Temperature & Voltage | Not Required | - |
| 4.2 | §2.1053 §90.543 (e)(3) §90.543 (f) | Radiated Spurious Emission | Pass | 15.49 dB under the limit at 1587.000 MHz |

Note:

1. Not required means after assessing, test items are not necessary to carry out.
2. This is a variant report by adding external antenna (Model: 42862899). All the test cases were performed on original report which can be referred to Sporton Report Number FG2N2201D. Based on the original report, only worst case was verified.

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section "Measurement Uncertainty".

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Yun Huang

Report Producer: Michelle Chen



1 General Description

1.1 Product Feature of Equipment Under Test

| Product Feature | |
|--|---|
| Equipment | FE5NA0010, FE5NA0011 |
| Brand Name | Continental |
| Model Name | FE5NA0010, FE5NA0011 |
| FCC ID | LHJ-FE5NA0010 |
| Installed into the Host | Equipment name: G12N510G1, G12N500G1 Brand name: Continental Model name: G12N510G1, G12N500G1 |
| EUT supports Radios application | WCDMA/HSPA/LTE/5G NR/GNSS |
| EUT Stage | Identical Prototype |

| Sample Information | | | |
|--------------------|-----------|-------------|---|
| Sample | TA-code | L2/L5 GNSS | Band Difference |
| 1 | FE5NA0010 | Support | / |
| 2 | FE5NA0011 | Not Support | BOM change: depopulated passive components from the GNSS RF front-end |

Remark: The above EUT's information was declared by manufacturer.

1.2 Product Specification of Equipment Under Test

| Product Specification is subject to this standard | |
|---|--|
| Tx Frequency | 790.5 MHz ~ 795.5 MHz |
| Rx Frequency | 760.5 MHz ~ 765.5 MHz |
| Bandwidth | 5 MHz / 10 MHz |
| Maximum Output Power to Antenna | 22.94 dBm |
| Antenna Type | <External (Model: 86783279) >: External Sharkfin Antenna + XM + Dual GNSS +5G <External (Model: 42862899) >: external sharkfin antenna, sharkfin NA 5G+Dual GNSS+XM <Internal >: TCP Antenna |
| Antenna Gain | <External (Model: 86783279) >: 3.50 dBi <External (Model: 42862899) >: 0.40 dBi <Internal >: 3.05 dBi |
| Type of Modulation | QPSK / 16QAM / 64QAM |

Remark: The EUT's information above is declared by manufacturer. Please refer to Disclaimer in report summary.

1.3 Modification of EUT

No modifications made to the EUT during the testing.



1.4 Testing Site

| | |
|------------------------------|--|
| Test Site | Sportun International Inc. EMC & Wireless Communications Laboratory |
| Test Site Location | No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978 |
| Test Site No. | Sportun Site No. TH03-HY |
| Test Engineer | Cotty Hsu and Luffy Lim |
| Temperature (°C) | 22.1~22.8 °C |
| Relative Humidity (%) | 53~55 % |
| Test Site | Sportun International Inc. Wensan Laboratory |
| Test Site Location | No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855 |
| Test Site No. | Sportun Site No. 03CH12-HY (TAF Code: 3786) |
| Test Engineer | Jesse Fan, Tim Lee and Wilson Wu |
| Temperature (°C) | 20~25 |
| Relative Humidity (%) | 50~60 |
| Remark | The Radiated Spurious Emission test item subcontracted to Sporton International Inc. Wensan Laboratory. |

Note: The test site complies with ANSI C63.4 2014 requirement.

FCC Designation No.: TW1190 and TW3786



1.5 Applied Standards

According to the specifications declared by the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ ANSI C63.26-2015
- ♦ FCC 47 CFR Part 2, Part 90(R)
- ♦ ANSI / TIA-603-E
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01r01
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01

Remark:

1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.
3. The TAF code is not including all the FCC KDB listed without accreditation.

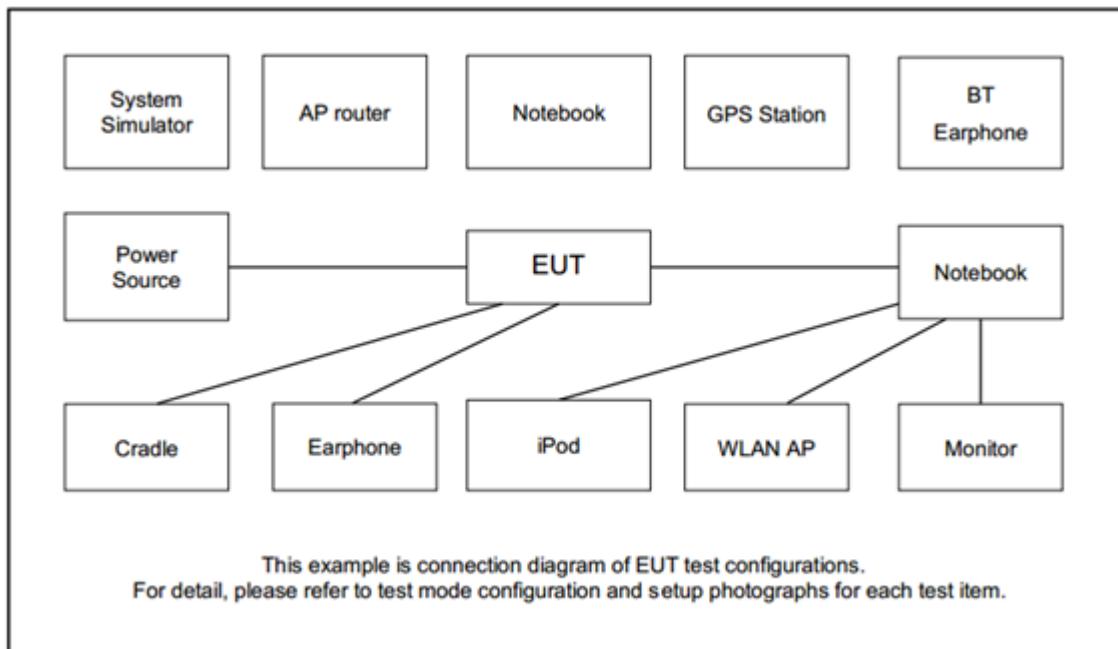
2 Test Configuration of Equipment Under Test

2.1 Test Mode

Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas. License Digital Systems v03r01 with maximum output power.

| Conducted Test Cases | Band | Bandwidth (MHz) | | | | | | Modulation | | | RB # | | | Test Channel | | |
|----------------------------|------|---|---|---|----|----|----|------------|-------|-------|------------|------|------|--------------|---|---|
| | | 1.4 | 3 | 5 | 10 | 15 | 20 | QPSK | 16QAM | 64QAM | 1 | Half | Full | L | M | H |
| Max. Output Power | 14 | - | - | v | v | - | - | v | v | v | v | v | v | v | v | v |
| E.R.P | 14 | - | - | v | v | - | - | v | v | v | Max. Power | | | | | |
| Radiated Spurious Emission | 14 | - | - | v | | - | - | v | | | v | | | v | v | v |
| Remark | | <ol style="list-style-type: none">1. The mark "v" means that this configuration is chosen for testing2. The mark "-" means that this bandwidth is not supported.3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.4. All the radiated test cases were performed with Sample 1. | | | | | | | | | | | | | | |

2.2 Connection Diagram of Test System





2.3 Support Unit used in test configuration and system

| Item | Equipment | Brand Name | Model No. | FCC ID | Data Cable | Power Cord |
|------|-------------------|-------------|-----------|--------|------------|-------------------|
| 1. | Sharkfin Antenna | Amphenol | 42862899 | N/A | N/A | Unshielded, 1.8 m |
| 2. | Metal Plate | N/A | N/A | N/A | N/A | Unshielded, 1.8 m |
| 3. | Adapter | TePoo | PT-WC-03 | N/A | N/A | N/A |
| 4. | Teddy Jr Load Box | Continental | N/A | N/A | N/A | N/A |
| 5. | DC Power Supply | GW Insteek | SP-606 | N/A | N/A | N/A |
| 6. | System Simulator | Anritsu | MT8821C | N/A | N/A | N/A |

2.4 Frequency List of Low/Middle/High Channels

| LTE Band 14 Channel and Frequency List | | | | |
|--|------------------------|--------|--------|---------|
| BW [MHz] | Channel/Frequency(MHz) | Lowest | Middle | Highest |
| 10 | Channel | - | 23330 | - |
| | Frequency | - | 793 | - |
| 5 | Channel | 23305 | 23330 | 23355 |
| | Frequency | 790.5 | 793 | 795.5 |

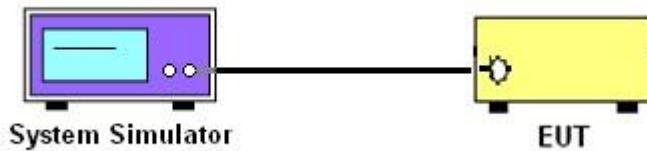
3 Conducted Test Items

3.1 Measuring Instruments

See list of measuring instruments of this test report.

3.1.1 Test Setup

3.1.2 Conducted Output Power



3.1.3 Test Result of Conducted Test

Please refer to Appendix A.



3.2 Conducted Output Power Measurement and ERP

3.2.1 Description of the Conducted Output Power Measurement and ERP Measurement

A base station simulator was used to establish communication with the EUT. Its parameters were set to transmit the maximum power on the EUT. The measured power in the radio frequency on the transmitter output terminals shall be reported.

The ERP of mobile transmitters must not exceed 3 Watts for LTE Band 14.

According to KDB 412172 D01 Power Approach,

$EIRP = P_T + G_T - L_c$, $ERP = EIRP - 2.15$, where

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

L_c = signal attenuation in the connecting cable between the transmitter and antenna in dB

3.2.2 Test Procedures

1. The transmitter output port was connected to base station.
2. Set EUT at maximum power through base station.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Measure and record the power level from the system simulator.

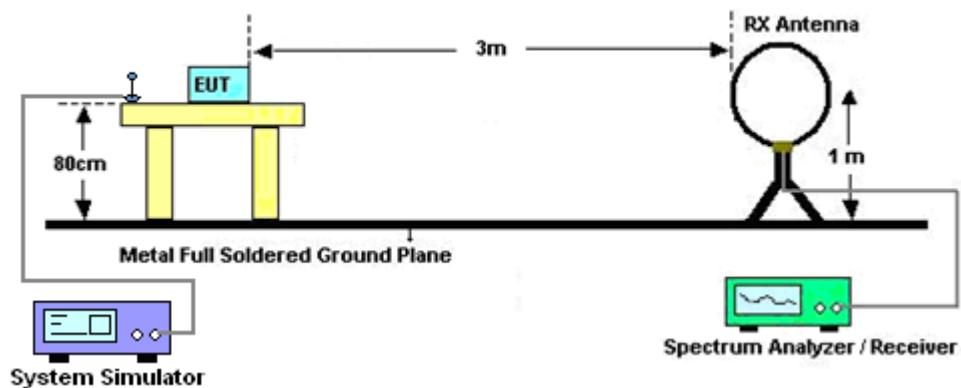
4 Radiated Test Items

4.1 Measuring Instruments

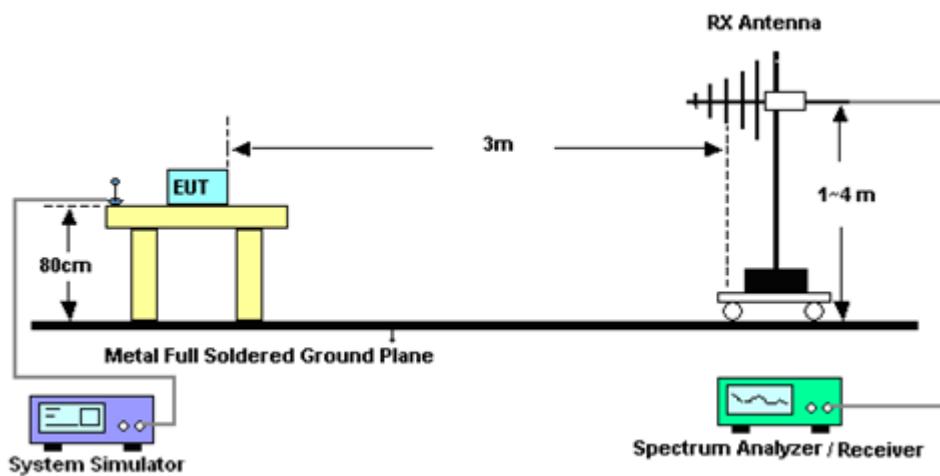
See list of measuring instruments of this test report.

4.1.1 Test Setup

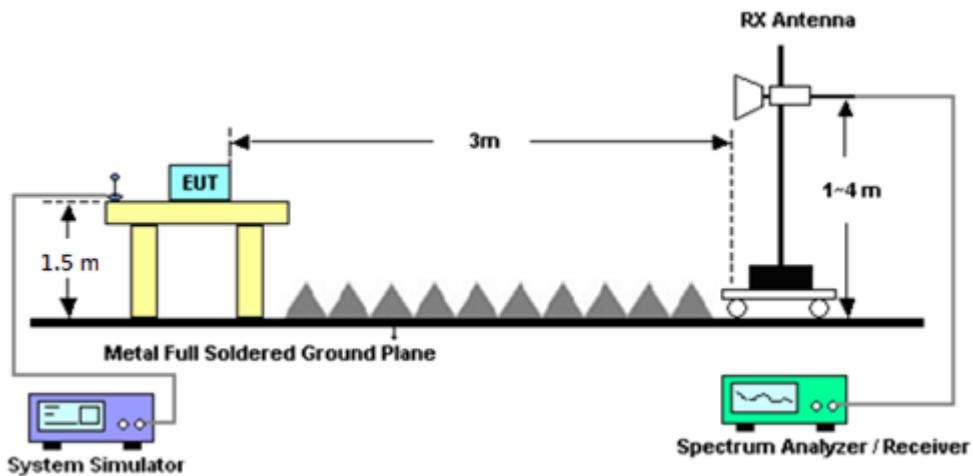
For radiated test below 30MHz



For radiated test from 30MHz to 1GHz



For radiated test above 1GHz



4.1.2 Test Result of Radiated Test

Please refer to Appendix B.

Note:

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is adequate comparison measurement of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.



4.2 Radiated Spurious Emission

4.2.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI / TIA-603-E.

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB.

For operations in the 758-775 MHz and 788-805 MHz bands, all emissions including harmonics in the band 1559–1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

4.2.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 7 and ANSI / TIA-603-E Section 2.2.12.

1. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, Sweep = 500ms, Taking the record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
11. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)



5 List of Measuring Equipment

| Instrument | Brand Name | Model No. | Serial No. | Characteristics | Calibration Date | Test Date | Due Date | Remark |
|------------------------------|------------------------|----------------------------------|-------------|-------------------------------|------------------|-----------------------------|---------------|-----------------------|
| Loop Antenna | Rohde & Schwarz | HFH2-Z2 | 100488 | 9 kHz~30 MHz | Sep. 20, 2022 | Mar. 18, 2023~Apr. 07, 2023 | Sep. 19, 2023 | Radiation (03CH12-HY) |
| Bilog Antenna | TESEQ | CBL 6111D & 00800N1D01N-06 | 37059 & 01 | 30MHz~1GHz | Nov. 10, 2022 | Mar. 18, 2023~Apr. 07, 2023 | Nov. 09, 2023 | Radiation (03CH12-HY) |
| Horn Antenna | SCHWARZBECK | BBHA 9120 D | 9120D-02114 | 1GHz~18GHz | Aug. 09, 2022 | Mar. 18, 2023~Apr. 07, 2023 | Aug. 08, 2023 | Radiation (03CH12-HY) |
| Preamplifier | COM-POWER | PA-103A | 161241 | 10MHz~1GHz | Oct. 03, 2022 | Mar. 18, 2023~Apr. 07, 2023 | Oct. 02, 2023 | Radiation (03CH12-HY) |
| Preamplifier | Agilent | 8449B | 3008A02375 | 1GHz~26.5GHz | May 24, 2022 | Mar. 18, 2023~Apr. 07, 2023 | May 23, 2023 | Radiation (03CH12-HY) |
| Preamplifier | E-INSTRUMENT TECH LTD. | ERA-100M-18G-56-01-A70 | EC1900249 | 1GHz-18GHz | Dec. 21, 2022 | Mar. 18, 2023~Apr. 07, 2023 | Dec. 20, 2023 | Radiation (03CH12-HY) |
| Spectrum Analyzer | Agilent | N9010A | MY53470118 | 10Hz~44GHz | Jan. 10, 2023 | Mar. 18, 2023~Apr. 07, 2023 | Jan. 09, 2024 | Radiation (03CH12-HY) |
| Filter | Wainwright | WHKX12-1080-1200-15000-60SS | SN1 | 1.2GHz High Pass Filter | Mar. 14, 2023 | Mar. 18, 2023~Apr. 07, 2023 | Mar. 13, 2024 | Radiation (03CH12-HY) |
| Filter | Wainwright | WHKX12-2700-3000-18000-60ST | SN2 | 3GHz High Pass Filter | Mar. 14, 2023 | Mar. 18, 2023~Apr. 07, 2023 | Mar. 13, 2024 | Radiation (03CH12-HY) |
| Filter | Wainwright | WHKX8-5872.5-6750-18000-40ST | SN2 | 6.75GHz High Pass Filter | Mar. 14, 2023 | Mar. 18, 2023~Apr. 07, 2023 | Mar. 13, 2024 | Radiation (03CH12-HY) |
| RF Cable | HUBER + SUHNER | SUCOFLEX 102 | 803951/2 | 9kHz~30MHz | Mar. 07, 2023 | Mar. 18, 2023~Apr. 07, 2023 | Mar. 06, 2024 | Radiation (03CH12-HY) |
| RF Cable | HUBER + SUHNER | SUCOFLEX 126E | 0058/126E | 30MHz~18GHz | Dec. 20, 2022 | Mar. 18, 2023~Apr. 07, 2023 | Dec. 19, 2023 | Radiation (03CH12-HY) |
| RF Cable | HUBER + SUHNER | SUCOFLEX 102 | 505134/2 | 30MHz~40GHz | Dec. 20, 2022 | Mar. 18, 2023~Apr. 07, 2023 | Dec. 19, 2023 | Radiation (03CH12-HY) |
| RF Cable | HUBER + SUHNER | SUCOFLEX 102 | 803953/2 | 30MHz~40GHz | Dec. 20, 2022 | Mar. 18, 2023~Apr. 07, 2023 | Dec. 19, 2023 | Radiation (03CH12-HY) |
| Hygrometer | TECPEL | DTM-303B | TP210090 | N/A | Oct. 03, 2022 | Mar. 18, 2023~Apr. 07, 2023 | Oct. 02, 2023 | Radiation (03CH12-HY) |
| Controller | EMEC | EM1000 | N/A | Control Turn table & Ant Mast | N/A | Mar. 18, 2023~Apr. 07, 2023 | N/A | Radiation (03CH12-HY) |
| Antenna Mast | EMEC | AM-BS-4500-B | N/A | 1m~4m | N/A | Mar. 18, 2023~Apr. 07, 2023 | N/A | Radiation (03CH12-HY) |
| Turn Table | EMEC | TT2000 | N/A | 0~360 Degree | N/A | Mar. 18, 2023~Apr. 07, 2023 | N/A | Radiation (03CH12-HY) |
| Software | Audix | E3 6.2009-8-24 | RK-000989 | N/A | N/A | Mar. 18, 2023~Apr. 07, 2023 | N/A | Radiation (03CH12-HY) |
| Radio Communication Analyzer | Anritsu | MT8821C | 6262025353 | LTE FDD/TDD LTE-2CC DLCA/ULCA | Oct. 13, 2022 | Jan. 17, 2023~Mar. 23, 2023 | Oct. 12, 2023 | Conducted (TH03-HY) |
| Thermal Chamber | ESPEC | SH-641 | 92013720 | -40°C ~90°C | Sep. 07, 2022 | Jan. 17, 2023~Mar. 23, 2023 | Sep. 06, 2023 | Conducted (TH03-HY) |
| DC Power Supply | GW Instek | GPP-2323 | GES906037 | 0V~64V ; 0A~6A | Dec. 29, 2022 | Jan. 17, 2023~Mar. 23, 2023 | Dec. 28, 2023 | Conducted (TH03-HY) |
| Coupler | Warison | 20dB 25W SMA Directional Coupler | #B | 1-18GHz | Jan. 06, 2023 | Jan. 17, 2023~Mar. 23, 2023 | Jan. 05, 2024 | Conducted (TH03-HY) |
| Base Station (Measure) | Anritsu | MT8000A | 6262134933 | FR1 | Jun. 13, 2022 | Jan. 17, 2023~Mar. 23, 2023 | Jun. 12, 2023 | Conducted (TH03-HY) |



6 Measurement Uncertainty

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

| | |
|---|---------|
| Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y)) | 3.31 dB |
|---|---------|

Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

| | |
|---|---------|
| Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y)) | 3.25 dB |
|---|---------|



Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power & ERP)

| LTE Band 14 Maximum Average Power [dBm] (GT - LC = 0.4 dB) | | | | | | | | |
|--|----------|-----------|--------|--------|--------|---------|-----------|---------|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | ERP (dBm) | ERP (W) |
| 10 | 1 | 0 | QPSK | 22.94 | - | 21.19 | 0.1315 | |
| 10 | 1 | 25 | | 22.81 | | | | |
| 10 | 1 | 49 | | 22.76 | | | | |
| 10 | 25 | 0 | | 21.83 | | | | |
| 10 | 25 | 12 | | 21.89 | | | | |
| 10 | 25 | 25 | | 21.83 | | | | |
| 10 | 50 | 0 | | 21.80 | | | | |
| 10 | 1 | 0 | 16-QAM | 22.33 | - | 20.58 | 0.1143 | |
| 10 | 1 | 25 | | 22.19 | | | | |
| 10 | 1 | 49 | | 22.16 | | | | |
| 10 | 25 | 0 | | 20.82 | | | | |
| 10 | 25 | 12 | | 20.87 | | | | |
| 10 | 25 | 25 | | 20.81 | | | | |
| 10 | 50 | 0 | | 20.81 | | | | |
| 10 | 1 | 0 | 64-QAM | 21.14 | - | 19.39 | 0.0869 | |
| 10 | 1 | 25 | | 21.13 | | | | |
| 10 | 1 | 49 | | 21.05 | | | | |
| 10 | 25 | 0 | | 19.87 | | | | |
| 10 | 25 | 12 | | 19.95 | | | | |
| 10 | 25 | 25 | | 19.86 | | | | |
| 10 | 50 | 0 | | 19.85 | | | | |
| Limit | ERP < 3W | | | Result | | | Pass | |



| LTE Band 14 Maximum Average Power [dBm] (GT - LC = 0.4 dB) | | | | | | | | |
|--|----------|-----------|--------|--------|--------|---------|-----------|---------|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | ERP (dBm) | ERP (W) |
| 5 | 1 | 0 | QPSK | 22.65 | 22.89 | 22.69 | 21.14 | 0.1300 |
| | 1 | 12 | | 22.72 | 22.79 | 22.63 | | |
| | 1 | 24 | | 22.38 | 22.61 | 22.52 | | |
| | 12 | 0 | | 21.65 | 21.74 | 21.69 | | |
| | 12 | 7 | | 21.71 | 21.80 | 21.72 | | |
| | 12 | 13 | | 21.59 | 21.73 | 21.55 | | |
| | 25 | 0 | | 21.65 | 21.72 | 21.49 | | |
| 5 | 1 | 0 | 16-QAM | 22.17 | 22.30 | 22.16 | 20.55 | 0.1135 |
| | 1 | 12 | | 21.99 | 22.18 | 21.88 | | |
| | 1 | 24 | | 22.09 | 22.05 | 22.07 | | |
| | 12 | 0 | | 20.46 | 20.76 | 20.49 | | |
| | 12 | 7 | | 20.77 | 20.68 | 20.80 | | |
| | 12 | 13 | | 20.60 | 20.62 | 20.46 | | |
| | 25 | 0 | | 20.53 | 20.78 | 20.49 | | |
| 5 | 1 | 0 | 64-QAM | 20.83 | 21.02 | 20.93 | 19.27 | 0.0845 |
| | 1 | 12 | | 20.94 | 20.93 | 20.93 | | |
| | 1 | 24 | | 20.81 | 20.94 | 20.85 | | |
| | 12 | 0 | | 19.54 | 19.76 | 19.72 | | |
| | 12 | 7 | | 19.77 | 19.90 | 19.74 | | |
| | 12 | 13 | | 19.59 | 19.68 | 19.79 | | |
| | 25 | 0 | | 19.67 | 19.75 | 19.77 | | |
| Limit | ERP < 3W | | | Result | | | Pass | |

**Appendix B. Test Results of Radiated Test**

<External Antenna>

LTE Band 14

| LTE Band 14 / 5MHz / QPSK | | | | | | | | | |
|---------------------------|-------------------|-------------|---------------|---------------|-------------------|--------------------|----------------------|-----------------------|--------------------|
| Channel | Frequency (MHz) | ERP (dBm) | Limit (dBm) | Margin (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Lowest | 1577 | -60.52 | -42.15 | -18.37 | -70.84 | -66.52 | 0.80 | 8.95 | H |
| | 2365 | -57.11 | -13 | -44.11 | -70.87 | -63.79 | 0.99 | 9.83 | H |
| | 3153 | -55.06 | -13 | -42.06 | -71.51 | -63.22 | 1.10 | 11.41 | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | 1577 | -60.04 | -42.15 | -17.89 | -70.29 | -66.04 | 0.80 | 8.95 | V |
| | 2365 | -55.39 | -13 | -42.39 | -69.32 | -62.07 | 0.99 | 9.83 | V |
| Middle | 3153 | -54.69 | -13 | -41.69 | -71.38 | -62.85 | 1.10 | 11.41 | V |
| | | | | | | | | | V |
| | | | | | | | | | V |
| | | | | | | | | | V |
| | | | | | | | | | V |
| | | | | | | | | | V |
| | 1582 | -60.50 | -42.15 | -18.35 | -70.84 | -66.55 | 0.80 | 9.00 | H |
| | 2370 | -57.31 | -13 | -44.31 | -71.07 | -64.02 | 0.99 | 9.85 | H |
| | 3163 | -54.18 | -13 | -41.18 | -70.68 | -62.35 | 1.10 | 11.43 | H |
| | | | | | | | | | H |
| Middle | | | | | | | | | H |
| | 1582 | -59.07 | -42.15 | -16.92 | -69.32 | -65.12 | 0.80 | 9.00 | V |
| | 2373 | -55.45 | -13 | -42.45 | -69.36 | -62.17 | 0.99 | 9.87 | V |
| | 3163 | -53.98 | -13 | -40.98 | -70.73 | -62.15 | 1.10 | 11.43 | V |
| | | | | | | | | | V |
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|---------|------|--------|--------|--------|--------|--------|------|-------|---|
| Highest | 1587 | -59.89 | -42.15 | -17.74 | -70.23 | -66.00 | 0.80 | 9.06 | H |
| | 2380 | -57.24 | -13 | -44.24 | -70.98 | -63.99 | 1.00 | 9.90 | H |
| | 3173 | -54.12 | -13 | -41.12 | -70.68 | -62.31 | 1.10 | 11.45 | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | 1587 | -57.64 | -42.15 | -15.49 | -67.87 | -63.75 | 0.80 | 9.06 | V |
| | 2380 | -55.07 | -13 | -42.07 | -68.93 | -61.82 | 1.00 | 9.90 | V |
| | 3173 | -54.10 | -13 | -41.10 | -70.91 | -62.29 | 1.10 | 11.45 | V |
| | | | | | | | | | V |
| | | | | | | | | | V |
| | | | | | | | | | V |
| | | | | | | | | | V |

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.