



FCC RADIO TEST REPORT

FCC ID : YY3-1102418
Equipment : Wireless Module
Brand Name : AirPrime
Model Name : EM9191
Applicant : Handheld Group AB
Handheld Group AB, Kinnegatan 17 A, SE-531
33, Lidköping, Sweden
Manufacturer : iBASE
11F, No. 3-1, Yuan Qu Street, Nankang, Taipei,
Taiwan, R.O.C.
Standard : FCC 47 CFR Part 2, and 90(S)

Equipment: AirPrime EM9191 tested inside of Handheld Group ALGIZ 10XR.

The product was received on Oct. 17, 2022 and testing was performed from Nov. 05, 2022 to Nov. 30, 2022. 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 partial 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

Sporton International Inc. EMC & Wireless Communications Laboratory



Table of Contents

| | |
|--|-----------|
| History of this test report..... | 3 |
| Summary of Test Result..... | 4 |
| 1 General Description | 5 |
| 1.1 Feature of Equipment Under Test..... | 5 |
| 1.2 Product Specification of Equipment Under Test | 5 |
| 1.3 Modification of EUT | 5 |
| 1.4 Testing Site..... | 6 |
| 1.5 Applied Standards | 6 |
| 2 Test Configuration of Equipment Under Test | 7 |
| 2.1 Test Mode..... | 7 |
| 2.2 Connection Diagram of Test System | 7 |
| 2.3 Support Unit used in test configuration and system..... | 8 |
| 2.4 Frequency List of Low/Middle/High Channels..... | 8 |
| 3 Conducted Test Items..... | 9 |
| 3.1 Measuring Instruments..... | 9 |
| 3.2 Conducted Output Power Measurement and ERP Measurement | 10 |
| 3.3 Field Strength of Spurious Radiation Measurement | 11 |
| 4 List of Measuring Equipment..... | 14 |
| 5 Uncertainty of Evaluation..... | 15 |
| Appendix A. Test Results of Conducted Test | |
| Appendix B. Test Results of Radiated Test | |
| Appendix C. Test Setup Photographs | |

Summary of Test Result

| Report Clause | Ref Std. Clause | Test Items | Result (PASS/FAIL) | Remark |
|---------------|--------------------|---|--------------------|--|
| 3.2 | §2.1046 §90.635 | Conducted Output Power and Effective Radiated Power | Pass | - |
| - | - | Peak-to-Average Ratio | - | See Note |
| - | §2.1049 §90.209 | Occupied Bandwidth and 26dB Bandwidth | - | See Note |
| - | §2.1051 §90.691 | Emission masks – In-band emissions | - | See Note |
| - | §2.1051 §90.691 | Emission masks – Out of band emissions | - | See Note |
| - | §2.1055 §90.213 | Frequency Stability for Temperature & Voltage | - | See Note |
| 3.3 | §2.1053 §90.691 | Field Strength of Spurious Radiation | Pass | 43.46 dB under the limit at 3257.000 MHz |

Note: The Original module was performed with an antenna of higher gain, and the antenna was connected to the module in an open environment. The current host platform under application uses an antenna with lower gain and is installed inside the host platform enclosure. The physical restraints introduced by the host platform should have resulted in equal or lower level of radiated emission. Therefore, based on each rule part retest worst band for radiated emission test.

Declaration of Conformity:

- The test results (PASS/FAIL) with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers. It's means measurement values may risk exceeding the limit of regulation standards, if measurement uncertainty is include in test results.
- The measurement uncertainty please refer to report "Uncertainty of Evaluation".

Comments and Explanations:

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

Reviewed by: Sheng Kuo

Report Producer: Lucy Wu

1 General Description

1.1 Feature of Equipment Under Test

| Product Feature | |
|---------------------------------|--|
| Equipment | Wireless Module |
| Brand Name | AirPrime |
| Model Name | EM9191 |
| FCC ID | YY3-1102418 |
| Installed into Host | Equipment Name: ALGIZ 10XR Brand Name: Handheld Group Model Name: ALGIZ 10XR Marketing Name: ALGIZ 10XR |
| EUT supports Radios application | WCDMA/HSPA/LTE/5G NR/GNSS |
| EUT Stage | Production Unit |

Remark:

1. The above EUT's information was declared by manufacturer.
2. Equipment: AirPrime EM9191 tested inside of Handheld Group ALGIZ 10XR.

1.2 Product Specification of Equipment Under Test

| Product Specification is subject to this standard | |
|---|--------------------------------------|
| Tx Frequency | LTE Band 26: 814.7 ~ 823.3 MHz |
| Rx Frequency | LTE Band 26: 859.7 ~ 868.3 MHz |
| Bandwidth | 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz |
| Maximum Output Power to Antenna | 23.40 dBm |
| Antenna Type | PIFA LDS with coaxial cable Antenna |
| Antenna Gain | 1.25 dBi |
| Type of Modulation | QPSK / 16QAM / 64QAM / 256QAM |

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

1.3 Modification of EUT

No modifications made to the EUT during the testing.



1.4 Testing Site

| | |
|-----------------------|---|
| Test Site | Sporton International Inc. EMC & Wireless Communications Laboratory |
| Test Site Location | No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333 |
| Test Site No. | Sporton Site No. |
| | TH03-HY |
| Test Engineer | Ivy Yeh |
| Temperature (°C) | 22~24 |
| Relative Humidity (%) | 50~53 |

| | |
|-----------------------|---|
| Test Site | Sporton International Inc. Wensan Laboratory |
| Test Site Location | No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010 |
| Test Site No. | Sporton Site No. |
| | 03CH13-HY (TAF Code: 3786) |
| Test Engineer | Rain Lee, Jacky Hong and Mancy Chou |
| Temperature (°C) | 20~26 |
| Relative Humidity (%) | 45~65 |
| 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:

- ♦ FCC 47 CFR Part 2, 90
- ♦ ANSI / TIA-603-E
- ♦ ANSI C63.26-2015
- ♦ 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
- ♦ Interim Guidance for Equipment Authorization of Devices with Channel Bandwidths Combined Across Two Contiguous Service Rule Allocations OET/Lab/EACB, June 6, 2013

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

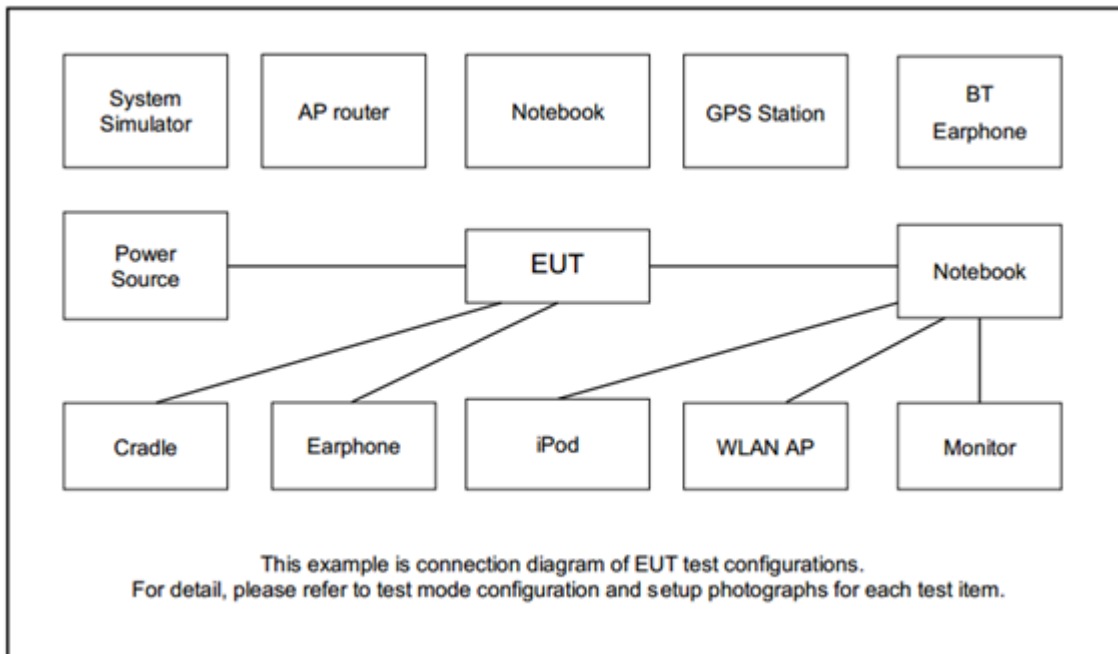
During all testing, EUT is in link mode with base station emulator at maximum power level.

For radiated measurement, the measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in three orthogonal axis (X: flat, Y: portrait, Z: landscape), and adjusting the measurement antenna orientation, following C63.26 exploratory test procedures and only the worst case emissions were reported in this report.

Frequency range investigated for radiated emission is 30 MHz to 9000 MHz.

| Conducted Test Cases | Band | Bandwidth (MHz) | | | | | | Modulation | | | | RB # | | | Test Channel | | | |
|----------------------------|--|-----------------|---|---|----|----|----|------------|-------|-------|--------|------------|------|------|--------------|---|---|---|
| | | 1.4 | 3 | 5 | 10 | 15 | 20 | QPSK | 16QAM | 64QAM | 256QAM | 1 | Half | Full | L | M | H | |
| Max. Output Power | 26 | v | v | v | v | v | - | v | v | v | v | v | v | v | v | v | v | v |
| E.R.P. | 26 | v | v | v | v | v | - | v | v | v | v | Max. Power | | | | | | |
| Radiated Spurious Emission | 26 | | | v | | v | - | v | | | | v | | | | v | v | v |
| Remark | 1. The mark "v" means that this configuration is chosen for testing 2. The mark "-" means that this bandwidth is not supported. | | | | | | | | | | | | | | | | | |

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. | System Simulator | Anritsu | MT8820C | N/A | N/A | Unshielded, 1.8 m |
| 2. | System Simulator | Anritsu | MT8821C | N/A | N/A | Unshielded, 1.8 m |

2.4 Frequency List of Low/Middle/High Channels

| LTE Band 26 Channel and Frequency List | | | | |
|--|------------------------|--------|--------|---------|
| BW [MHz] | Channel/Frequency(MHz) | Lowest | Middle | Highest |
| 15 | Channel | 26765 | - | - |
| | Frequency | 821.5 | - | - |
| 10 | Channel | - | 26740 | - |
| | Frequency | - | 819 | - |
| 5 | Channel | 26715 | 26740 | 26765 |
| | Frequency | 816.5 | 819 | 821.5 |
| 3 | Channel | 26705 | 26740 | 26775 |
| | Frequency | 815.5 | 819 | 822.5 |
| 1.4 | Channel | 26697 | 26740 | 26783 |
| | Frequency | 814.7 | 819 | 823.3 |

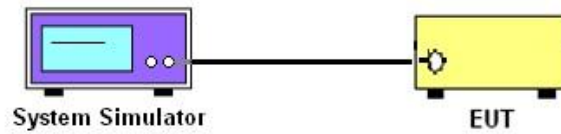
3 Conducted Test Items

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 Measurement

3.2.1 Description of the Conducted Output Power Measurement and ERP Measurement

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

The output power of mobile transmitters must not exceed 100 Watts for LTE Band 26.

According to KDB 412172 D01 Power Approach,

$EIRP = P_T + G_T - L_C$, 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 the system simulator.
2. Set EUT at maximum power through system simulator.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Measure and record the power level from the system simulator.

3.3 Field Strength of Spurious Radiation Measurement

3.3.1 Description of Field Strength of Spurious Radiated Measurement

The radiated spurious emission was measured by substitution method according to ANSI / TIA-603-E. The power of any emission FCC Part 90.691 on any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth at least $43 + 10 \log (P)$ dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

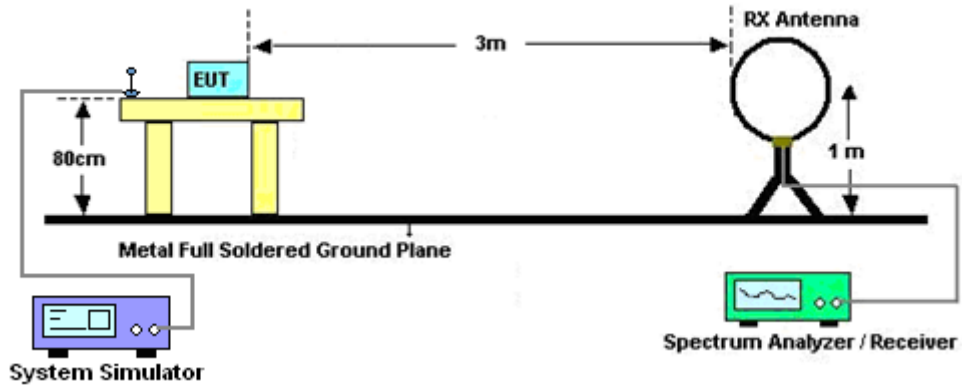
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $43+10\log_{10}(P[\text{Watts}])$ dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

3.3.2 Test Procedures

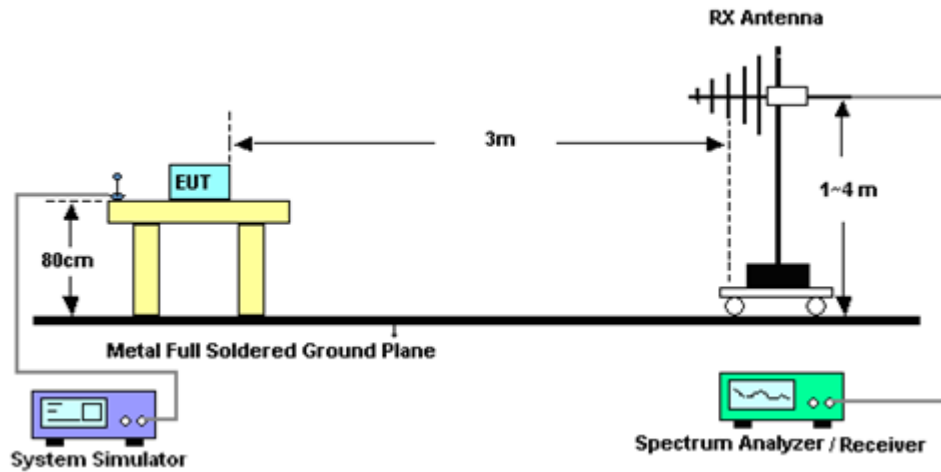
1. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
1. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
2. The table was rotated 360 degrees to determine the position of the highest spurious emission.
3. 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.
4. For testing below 1GHz, make the measurement with the spectrum analyzer's RBW = 100 kHz, VBW = 3MHz, Sweep = 500ms, Taking the record of maximum spurious emission.
5. For testing above 1GHz, 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. $\text{EIRP (dBm)} = \text{S.G. Power} - \text{Tx Cable Loss} + \text{Tx Antenna Gain}$
11. $\text{ERP (dBm)} = \text{EIRP} - 2.15$
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
13. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)

3.3.3 Test Setup

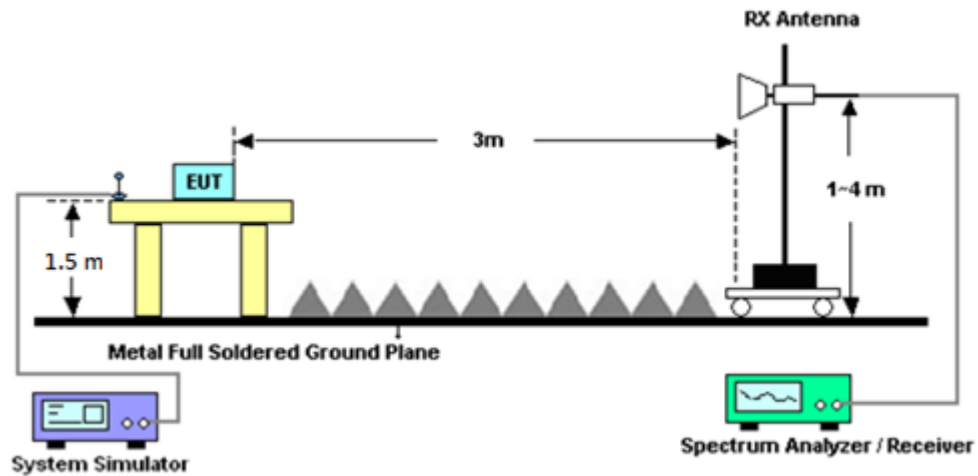
For radiated test below 30MHz



For radiated test from 30MHz to 1GHz



For radiated test above 1GHz



3.3.4 Test Result of Field Strength of Spurious Radiated

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 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 | Nov. 05, 2022~ Nov. 30, 2022 | Sep. 19, 2023 | Radiation (03CH13-HY) |
| RF Cable | HUBER + SUHNER | SUCOFLEX 102 | 505134/2 | 30MHz~40GHz | Feb. 21, 2022 | Nov. 05, 2022~ Nov. 30, 2022 | Feb. 20, 2023 | Radiation (03CH13-HY) |
| Amplifier | SONOMA | 310N | 187282 | 9kHz~1GHz | Dec. 15, 2021 | Nov. 05, 2022~ Nov. 30, 2022 | Dec. 14, 2022 | Radiation (03CH13-HY) |
| Bilog Antenna | TESEQ | CBL 6111D & 00800N1D01N-06 | 40103 & 07 | 30MHz~1GHz | Apr. 24, 2022 | Nov. 05, 2022~ Nov. 30, 2022 | Apr. 23, 2023 | Radiation (03CH13-HY) |
| Bilog Antenna | TESEQ | CBL 6111D & 00800N1D01N-06 | 41912 & 05 | 30MHz~1GHz | Feb. 06, 2022 | Nov. 05, 2022~ Nov. 30, 2022 | Feb. 05, 2023 | Radiation (03CH13-HY) |
| Hygrometer | TECPEL | DTM-303B | TP200722 | N/A | Mar. 22, 2022 | Nov. 05, 2022~ Nov. 30, 2022 | Mar. 21, 2023 | Radiation (03CH13-HY) |
| Preamplifier | MITEQ | AMF-7D-00101800 -30-10P | 1590074 | 1GHz~18GHz | May 17, 2022 | Nov. 05, 2022~ Nov. 30, 2022 | May 16, 2023 | Radiation (03CH13-HY) |
| Preamplifier | Keysight | 83017A | MY53270147 | 1GHz~26.5GHz | Oct. 25, 2022 | Nov. 05, 2022~ Nov. 30, 2022 | Oct. 24, 2023 | Radiation (03CH13-HY) |
| Spectrum Analyzer | Keysight | N9010A | MY55370526 | 10Hz~44GHz | Mar. 18, 2022 | Nov. 05, 2022~ Nov. 30, 2022 | Mar. 17, 2023 | Radiation (03CH13-HY) |
| Filter | Wainwright | WLK4-1000-1530- 8000-40SS | SN12 | 1.53GHz Low Pass Filter | Sep. 13, 2022 | Nov. 05, 2022~ Nov. 30, 2022 | Sep. 12, 2023 | Radiation (03CH13-HY) |
| Filter | Wainwright | WHKX12-1080-12 00-15000-60SS | SN3 | 1.2GHz High Pass Filter | Jun. 30, 2022 | Nov. 05, 2022~ Nov. 30, 2022 | Jun. 29, 2023 | Radiation (03CH13-HY) |
| Filter | Wainwright | WHKX12-2700-30 00-18000-60SS | SN2 | 3GHz High Pass Filter | Jul. 12, 2022 | Nov. 05, 2022~ Nov. 30, 2022 | Jul. 11, 2023 | Radiation (03CH13-HY) |
| RF Cable | HUBER + SUHNER | SUCOFLEX 126E | 0030/126E | 30MHz~18GHz | Feb. 09, 2022 | Nov. 05, 2022~ Nov. 30, 2022 | Feb. 08, 2023 | Radiation (03CH13-HY) |
| RF Cable | HUBER + SUHNER | SUCOFLEX 104 | 804793/4 | 30MHz~18GHz | Feb. 09, 2022 | Nov. 05, 2022~ Nov. 30, 2022 | Feb. 08, 2023 | Radiation (03CH13-HY) |
| RF Cable | HUBER + SUHNER | SUCOFLEX 104 | MY9837/4PE | 9 kHz~30 MHz | Mar. 10, 2022 | Nov. 05, 2022~ Nov. 30, 2022 | Mar. 09, 2023 | Radiation (03CH13-HY) |
| RF Cable | HUBER + SUHNER | SUCOFLEX 104 | MY24961/4 | 30MHz~18GHz | Feb. 09, 2022 | Nov. 05, 2022~ Nov. 30, 2022 | Feb. 08, 2023 | Radiation (03CH13-HY) |
| Controller | EMEC | EM1000 | N/A | Control Turn table & Ant Mast | N/A | Nov. 05, 2022~ Nov. 30, 2022 | N/A | Radiation (03CH13-HY) |
| Antenna Mast | EMEC | AM-BS-4500-B | N/A | 1m~4m | N/A | Nov. 05, 2022~ Nov. 30, 2022 | N/A | Radiation (03CH13-HY) |
| Turn Table | EMEC | TT2000 | N/A | 0~360 Degree | N/A | Nov. 05, 2022~ Nov. 30, 2022 | N/A | Radiation (03CH13-HY) |
| Horn Antenna | SCHWARZBE CK | BBHA 9120 D | 9120D-1241 | 1-18GHz | Jul. 25, 2022 | Nov. 05, 2022~ Nov. 30, 2022 | Jul. 24, 2023 | Radiation (03CH13-HY) |
| Horn Antenna | SCHWARZBE CK | BBHA 9120 D | 9120D-1212 | 1GHz~18GHz | Mar. 10, 2022 | Nov. 05, 2022~ Nov. 30, 2022 | Mar. 09, 2023 | Radiation (03CH13-HY) |
| Base Station (Measure) | Anritsu | MT8821C | 6262116730 | LTE | Jun. 15, 2022 | Nov. 21, 2022~ Nov. 25, 2022 | Jun. 14, 2023 | Conducted (TH03-HY) |
| Base Station (Measure) | Anritsu | MT8000A | 6262134933 | FR1 | Jun. 13, 2022 | Nov. 21, 2022~ Nov. 25, 2022 | Jun. 12, 2023 | Conducted (TH03-HY) |



5 Uncertainty of Evaluation

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

| | |
|---|---------|
| Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$) | 3.40 dB |
|---|---------|

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

| | |
|---|---------|
| Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$) | 3.81 dB |
|---|---------|



Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power & ERP)

| LTE Band 26 Maximum Average Power [dBm] (GT - LC = 1.25 dB) | | | | | | | | |
|---|---------------------|-----------|---------|--------|--------|---------|-----------|---------|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | ERP (dBm) | ERP (W) |
| 15 | 1 | 0 | QPSK | 23.49 | - | - | 22.62 | 0.1828 |
| 15 | 1 | 37 | | 22.92 | - | - | | |
| 15 | 1 | 74 | | 23.52 | - | - | | |
| 15 | 36 | 0 | | 22.45 | - | - | | |
| 15 | 36 | 20 | | 22.57 | - | - | | |
| 15 | 36 | 39 | | 22.49 | - | - | | |
| 15 | 75 | 0 | | 22.54 | - | - | | |
| 15 | 1 | 0 | 16-QAM | 22.37 | - | - | 21.92 | 0.1556 |
| 15 | 1 | 37 | | 22.69 | - | - | | |
| 15 | 1 | 74 | | 22.82 | - | - | | |
| 15 | 36 | 0 | | 21.43 | - | - | | |
| 15 | 36 | 20 | | 21.56 | - | - | | |
| 15 | 36 | 39 | | 21.49 | - | - | | |
| 15 | 75 | 0 | | 21.55 | - | - | | |
| 15 | 1 | 0 | 64-QAM | 21.77 | - | - | 20.89 | 0.1227 |
| 15 | 1 | 37 | | 21.76 | - | - | | |
| 15 | 1 | 74 | | 21.79 | - | - | | |
| 15 | 36 | 0 | | 20.43 | - | - | | |
| 15 | 36 | 20 | | 20.53 | - | - | | |
| 15 | 36 | 39 | | 20.58 | - | - | | |
| 15 | 75 | 0 | | 20.42 | - | - | | |
| 15 | 1 | 0 | 256-QAM | 18.31 | - | - | 17.41 | 0.0551 |
| 15 | 1 | 37 | | 18.09 | - | - | | |
| 15 | 1 | 74 | | 17.91 | - | - | | |
| 15 | 36 | 0 | | 18.09 | - | - | | |
| 15 | 36 | 20 | | 17.89 | - | - | | |
| 15 | 36 | 39 | | 17.80 | - | - | | |
| 15 | 75 | 0 | | 17.91 | - | - | | |
| Limit | Output Power < 100W | | | Result | | | Pass | |



| LTE Band 26 Maximum Average Power [dBm] (GT - LC = 1.25 dB) | | | | | | | | |
|---|---------------------|-----------|---------|--------|--------|---------|-----------|---------|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | ERP (dBm) | ERP (W) |
| 10 | 1 | 0 | QPSK | - | 23.39 | - | 22.49 | 0.1774 |
| 10 | 1 | 25 | | - | 22.76 | - | | |
| 10 | 1 | 49 | | - | 22.58 | - | | |
| 10 | 25 | 0 | | - | 21.76 | - | | |
| 10 | 25 | 12 | | - | 21.91 | - | | |
| 10 | 25 | 25 | | - | 21.63 | - | | |
| 10 | 50 | 0 | | - | 21.77 | - | | |
| 10 | 1 | 0 | 16-QAM | - | 22.79 | - | 21.89 | 0.1545 |
| 10 | 1 | 25 | | - | 22.08 | - | | |
| 10 | 1 | 49 | | - | 21.95 | - | | |
| 10 | 25 | 0 | | - | 20.92 | - | | |
| 10 | 25 | 12 | | - | 20.86 | - | | |
| 10 | 25 | 25 | | - | 20.67 | - | | |
| 10 | 50 | 0 | | - | 20.83 | - | | |
| 10 | 1 | 0 | 64-QAM | - | 21.62 | - | 20.92 | 0.1236 |
| 10 | 1 | 25 | | - | 21.76 | - | | |
| 10 | 1 | 49 | | - | 21.82 | - | | |
| 10 | 25 | 0 | | - | 20.54 | - | | |
| 10 | 25 | 12 | | - | 20.53 | - | | |
| 10 | 25 | 25 | | - | 20.49 | - | | |
| 10 | 50 | 0 | | - | 20.40 | - | | |
| 10 | 1 | 0 | 256-QAM | - | 18.34 | - | 17.44 | 0.0555 |
| 10 | 1 | 25 | | - | 18.05 | - | | |
| 10 | 1 | 49 | | - | 17.80 | - | | |
| 10 | 25 | 0 | | - | 18.03 | - | | |
| 10 | 25 | 12 | | - | 18.06 | - | | |
| 10 | 25 | 25 | | - | 17.81 | - | | |
| 10 | 50 | 0 | | - | 18.04 | - | | |
| Limit | Output Power < 100W | | | Result | | | Pass | |



| LTE Band 26 Maximum Average Power [dBm] (GT - LC = 1.25 dB) | | | | | | | | |
|---|---------------------|-----------|---------|--------|--------|---------|-----------|---------|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | ERP (dBm) | ERP (W) |
| 5 | 1 | 0 | QPSK | 22.88 | 23.64 | 23.50 | 22.74 | 0.1879 |
| 5 | 1 | 12 | | 22.75 | 22.75 | 22.54 | | |
| 5 | 1 | 24 | | 22.69 | 22.60 | 22.28 | | |
| 5 | 12 | 0 | | 22.06 | 21.78 | 21.62 | | |
| 5 | 12 | 7 | | 22.08 | 21.91 | 21.67 | | |
| 5 | 12 | 13 | | 21.96 | 21.77 | 21.50 | | |
| 5 | 25 | 0 | | 22.08 | 21.74 | 21.69 | | |
| 5 | 1 | 0 | 16-QAM | 22.94 | 22.02 | 22.06 | 22.04 | 0.1600 |
| 5 | 1 | 12 | | 22.16 | 22.04 | 21.79 | | |
| 5 | 1 | 24 | | 22.06 | 21.87 | 21.49 | | |
| 5 | 12 | 0 | | 20.91 | 20.85 | 20.72 | | |
| 5 | 12 | 7 | | 20.91 | 20.78 | 20.75 | | |
| 5 | 12 | 13 | | 20.91 | 20.76 | 20.56 | | |
| 5 | 25 | 0 | | 21.11 | 20.80 | 20.72 | | |
| 5 | 1 | 0 | 64-QAM | 21.78 | 21.36 | 21.50 | 21.05 | 0.1274 |
| 5 | 1 | 12 | | 21.68 | 21.32 | 21.89 | | |
| 5 | 1 | 24 | | 21.95 | 21.82 | 21.84 | | |
| 5 | 12 | 0 | | 20.56 | 20.52 | 20.70 | | |
| 5 | 12 | 7 | | 20.54 | 20.48 | 20.58 | | |
| 5 | 12 | 13 | | 20.47 | 20.58 | 20.58 | | |
| 5 | 25 | 0 | | 20.57 | 20.44 | 20.53 | | |
| 5 | 1 | 0 | 256-QAM | 18.11 | 18.20 | 18.12 | 17.30 | 0.0537 |
| 5 | 1 | 12 | | 18.04 | 18.05 | 18.06 | | |
| 5 | 1 | 24 | | 17.77 | 17.84 | 17.75 | | |
| 5 | 12 | 0 | | 17.90 | 18.07 | 17.81 | | |
| 5 | 12 | 7 | | 17.74 | 17.93 | 17.81 | | |
| 5 | 12 | 13 | | 17.77 | 17.78 | 17.86 | | |
| 5 | 25 | 0 | | 17.81 | 17.86 | 17.80 | | |
| Limit | Output Power < 100W | | | Result | | | Pass | |



| LTE Band 26 Maximum Average Power [dBm] (GT - LC = 1.25 dB) | | | | | | | | |
|---|---------------------|-----------|---------|--------|--------|---------|-----------|---------|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | ERP (dBm) | ERP (W) |
| 3 | 1 | 0 | QPSK | 23.53 | 23.54 | 23.48 | 22.64 | 0.1837 |
| 3 | 1 | 8 | | 22.87 | 22.64 | 22.53 | | |
| 3 | 1 | 14 | | 22.76 | 22.54 | 22.39 | | |
| 3 | 8 | 0 | | 22.08 | 21.75 | 21.69 | | |
| 3 | 8 | 4 | | 22.08 | 21.81 | 21.54 | | |
| 3 | 8 | 7 | | 22.02 | 21.77 | 21.45 | | |
| 3 | 15 | 0 | | 21.91 | 21.77 | 21.68 | | |
| 3 | 1 | 0 | 16-QAM | 22.11 | 21.99 | 21.98 | 21.24 | 0.1330 |
| 3 | 1 | 8 | | 22.08 | 22.14 | 21.67 | | |
| 3 | 1 | 14 | | 22.01 | 21.89 | 21.56 | | |
| 3 | 8 | 0 | | 21.03 | 20.75 | 20.69 | | |
| 3 | 8 | 4 | | 20.99 | 20.82 | 20.62 | | |
| 3 | 8 | 7 | | 21.01 | 20.66 | 20.49 | | |
| 3 | 15 | 0 | | 20.93 | 20.78 | 20.75 | | |
| 3 | 1 | 0 | 64-QAM | 21.61 | 21.98 | 21.56 | 21.08 | 0.1282 |
| 3 | 1 | 8 | | 21.50 | 21.76 | 21.63 | | |
| 3 | 1 | 14 | | 21.19 | 21.46 | 21.96 | | |
| 3 | 8 | 0 | | 20.53 | 20.64 | 20.56 | | |
| 3 | 8 | 4 | | 20.57 | 20.45 | 20.59 | | |
| 3 | 8 | 7 | | 20.53 | 20.53 | 20.55 | | |
| 3 | 15 | 0 | | 20.58 | 20.43 | 20.61 | | |
| 3 | 1 | 0 | 256-QAM | 18.17 | 18.24 | 18.12 | 17.34 | 0.0542 |
| 3 | 1 | 8 | | 18.07 | 18.02 | 17.94 | | |
| 3 | 1 | 14 | | 17.79 | 17.90 | 17.77 | | |
| 3 | 8 | 0 | | 17.98 | 18.09 | 17.87 | | |
| 3 | 8 | 4 | | 17.80 | 17.97 | 17.93 | | |
| 3 | 8 | 7 | | 17.66 | 17.86 | 17.82 | | |
| 3 | 15 | 0 | | 17.71 | 17.85 | 17.92 | | |
| Limit | Output Power < 100W | | | Result | | | Pass | |



| LTE Band 26 Maximum Average Power [dBm] (GT - LC = 1.25 dB) | | | | | | | | |
|---|---------------------|-----------|---------|--------|--------|---------|-----------|---------|
| BW [MHz] | RB Size | RB Offset | Mod | Lowest | Middle | Highest | ERP (dBm) | ERP (W) |
| 1.4 | 1 | 0 | QPSK | 22.79 | 23.43 | 23.47 | 22.57 | 0.1807 |
| 1.4 | 1 | 3 | | 22.88 | 22.77 | 22.40 | | |
| 1.4 | 1 | 5 | | 22.80 | 22.63 | 22.36 | | |
| 1.4 | 3 | 0 | | 22.91 | 22.77 | 22.70 | | |
| 1.4 | 3 | 1 | | 22.92 | 22.62 | 22.54 | | |
| 1.4 | 3 | 3 | | 22.73 | 22.63 | 22.28 | | |
| 1.4 | 6 | 0 | | 21.93 | 21.75 | 21.70 | | |
| 1.4 | 1 | 0 | 16-QAM | 22.19 | 22.14 | 22.06 | 21.29 | 0.1346 |
| 1.4 | 1 | 3 | | 22.15 | 22.04 | 21.72 | | |
| 1.4 | 1 | 5 | | 22.09 | 21.78 | 21.56 | | |
| 1.4 | 3 | 0 | | 22.19 | 21.94 | 22.07 | | |
| 1.4 | 3 | 1 | | 22.19 | 21.97 | 21.81 | | |
| 1.4 | 3 | 3 | | 21.94 | 21.75 | 21.49 | | |
| 1.4 | 6 | 0 | | 21.11 | 20.72 | 20.65 | | |
| 1.4 | 1 | 0 | 64-QAM | 21.67 | 21.64 | 21.42 | 20.79 | 0.1199 |
| 1.4 | 1 | 3 | | 21.64 | 21.69 | 21.46 | | |
| 1.4 | 1 | 5 | | 21.62 | 21.62 | 21.48 | | |
| 1.4 | 3 | 0 | | 21.55 | 21.57 | 21.44 | | |
| 1.4 | 3 | 1 | | 21.47 | 21.38 | 21.48 | | |
| 1.4 | 3 | 3 | | 21.40 | 21.35 | 21.50 | | |
| 1.4 | 6 | 0 | | 20.27 | 20.48 | 20.45 | | |
| 1.4 | 1 | 0 | 256-QAM | 0.00 | 18.29 | 18.17 | 17.39 | 0.0548 |
| 1.4 | 1 | 3 | | 17.89 | 18.13 | 18.02 | | |
| 1.4 | 1 | 5 | | 17.81 | 17.76 | 17.87 | | |
| 1.4 | 3 | 0 | | 18.04 | 18.17 | 17.83 | | |
| 1.4 | 3 | 1 | | 17.84 | 17.98 | 17.93 | | |
| 1.4 | 3 | 3 | | 17.67 | 17.94 | 17.87 | | |
| 1.4 | 6 | 0 | | 17.72 | 17.92 | 17.82 | | |
| Limit | Output Power < 100W | | | Result | | | Pass | |



Appendix B. Test Results of Radiated Test

LTE Band 26

| LTE Band 26 / 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 | 1624 | -60.26 | -13 | -47.26 | -75.26 | -61.08 | 6.31 | 9.28 | H |
| | 2443 | -58.80 | -13 | -45.80 | -75.58 | -59.00 | 7.87 | 10.22 | H |
| | 3257 | -56.86 | -13 | -43.86 | -76.07 | -57.45 | 9.07 | 11.81 | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | 1624 | -59.60 | -13 | -46.60 | -74.61 | -60.42 | 6.31 | 9.28 | V |
| | 2443 | -58.74 | -13 | -45.74 | -75.37 | -58.94 | 7.87 | 10.22 | V |
| | 3257 | -56.46 | -13 | -43.46 | -75.8 | -57.05 | 9.07 | 11.81 | V |
| | | | | | | | | | V |
| | | | | | | | | | V |
| | | | | | | | | | V |
| Middle | 1632 | -59.85 | -13 | -46.85 | -74.95 | -60.69 | 6.32 | 9.31 | H |
| | 2450 | -58.94 | -13 | -45.94 | -75.68 | -59.13 | 7.91 | 10.25 | H |
| | 3267 | -56.55 | -13 | -43.55 | -75.76 | -57.18 | 9.09 | 11.87 | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | 1632 | -60.17 | -13 | -47.17 | -75.28 | -61.01 | 6.32 | 9.31 | V |
| | 2450 | -59.13 | -13 | -46.13 | -75.72 | -59.32 | 7.91 | 10.25 | V |
| | 3267 | -56.92 | -13 | -43.92 | -76.25 | -57.55 | 9.09 | 11.87 | V |
| | | | | | | | | | V |
| | | | | | | | | | V |
| | | | | | | | | | V |



| | | | | | | | | | |
|---------|------|--------|-----|--------|--------|--------|------|-------|---|
| Highest | 1640 | -60.06 | -13 | -47.06 | -75.27 | -60.92 | 6.33 | 9.34 | H |
| | 2458 | -56.86 | -13 | -43.86 | -73.59 | -57.05 | 7.95 | 10.29 | H |
| | 3277 | -56.85 | -13 | -43.85 | -76.07 | -57.51 | 9.11 | 11.92 | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | 1640 | -59.82 | -13 | -46.82 | -74.99 | -60.68 | 6.33 | 9.34 | V |
| | 2458 | -59.50 | -13 | -46.50 | -76.07 | -59.69 | 7.95 | 10.29 | V |
| | 3277 | -56.62 | -13 | -43.62 | -75.95 | -57.28 | 9.11 | 11.92 | V |
| | | | | | | | | | V |
| | | | | | | | | | V |
| | | | | | | | | | V |



| LTE Band 26 / 15MHz / 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 | 1632 | -60.51 | -13 | -47.51 | -75.61 | -61.35 | 6.32 | 9.31 | H |
| | 2444 | -58.96 | -13 | -45.96 | -75.73 | -59.15 | 7.88 | 10.22 | H |
| | 3259 | -57.12 | -13 | -44.12 | -76.33 | -57.72 | 9.07 | 11.82 | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | | | | | | | | | H |
| | 1632 | -60.42 | -13 | -47.42 | -75.53 | -61.26 | 6.32 | 9.31 | V |
| | 2444 | -59.20 | -13 | -46.20 | -75.83 | -59.39 | 7.88 | 10.22 | V |
| | 3259 | -56.80 | -13 | -43.80 | -76.14 | -57.40 | 9.07 | 11.82 | V |
| | | | | | | | | | V |
| | | | | | | | | | V |
| | | | | | | | | | V |