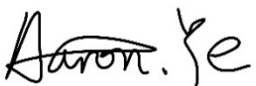


# TEST REPORT

**Product Name** : Tablet PC  
**Brand Name** : N/A  
**Model** : T12 Pro  
**Series Model** : N/A  
**FCC ID** : 2BU85-T12PRO  
**Applicant** : JIAHANG TECHNOLOGY (HONG KONG) CO.,LIMITED  
**Address** : 19H MAXGRAND PLAZA 3 TAI YAU STREET SAN PO KONG KL  
**Manufacturer** : LUZHENG TECHNOLOGY HONGKONG LIMITED  
**Address** : ROOM A08, 2/F LEE KA INDUSTRIAL BUILDING 8 NG FONG STREET SAN PO KONG HK  
FCC CFR Title 47 Part 2, Part 27  
**Standard(s)** : ANSI C63.26:2015  
KDB 971168 D01  
**Date of Receipt** : Mar. 05, 2026  
**Date of Test** : Mar. 05, 2026~ Mar. 13, 2026  
**Issued Date** : Mar. 14, 2026

**Issued By:** **Guangdong Asia Hongke Test Technology Limited**  
B1/F, Building 11, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street,  
Bao'an District, Shenzhen, Guangdong, China  
Tel.: +86 0755-230967639 Fax.: +86 0755-230967639

**Reviewed by:**   
Aalen.Ye

**Approved by:**   
Allen Wang



Note: This device has been tested and found to comply with the standard(s) listed, this test report merely corresponds to the test sample. It is not permitted to copy extracts of these test result without the written permission of the test laboratory. This report shall not be reproduced except in full, without the written approval of Guangdong Asia Hongke Test Technology Limited. If there is a need to alter or revise this document, the right belongs to Guangdong Asia Hongke Test Technology Limited, and it should give a prior written notice of the revision document. This test report must not be used by the client to claim product endorsement.

**Guangdong Asia Hongke Test Technology Limited**

B1/F, Building 11, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China.



**Report Revise Record**

| Report Version | Issued Date   | Notes           |
|----------------|---------------|-----------------|
| M0             | Mar. 14, 2026 | Initial Release |

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# 1 TEST SUMMARY

## 1.1 Test Standards

The tests were performed according to following standards:

[Part 27](#): MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES

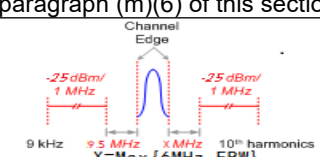
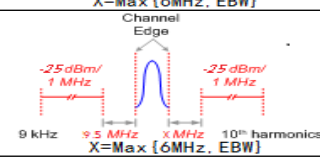
[FCC Part 2](#): FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS

[ANSI C63.26:2015](#): American National Standard of procedures for compliance testing of transmitters used in licensed radio services.

[KDB971168 D01:v03r01](#) MEASUREMENT GUIDANCE FOR CERTIFICATION OF LICENSED DIGITAL TRANSMITTERS

## 1.2 Test Summary

### Band 7/41

| Test Item                                        | FCC Rule No.              | Requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Verdict (Note1) |
|--------------------------------------------------|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| Effective (Isotropic) Radiated Power Output Data | Part 2.1046<br>27.50(h)   | $EIRP \leq 2 \text{ W}$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Pass            |
| Peak-Average Ratio                               | Part 27.50(a)             | Limit $\leq 13 \text{ dB}$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Pass            |
| Bandwidth                                        | Part 2.1049               | OBW: No limit.<br>EBW: No limit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Pass            |
| Band Edges Compliance                            | Part 2.1051,<br>27.53(m4) | For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P) \text{ dB}$ on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P) \text{ dB}$ on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P) \text{ dB}$ 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. | Pass            |
| Spurious Emission at Antenna Terminals           | Part 2.1051,<br>27.53(m)  |                                                                                                                                                                                                                                                                                                                                                                                                                                              | Pass            |
| Field Strength of Spurious Radiation             | Part 2.1053,<br>27.53(m)  |                                                                                                                                                                                                                                                                                                                                                                                                                                              | Pass            |
| Frequency Stability                              | Part 2.1055,<br>27.54     | Within authorized bands of operation/frequency block.                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Pass            |

Note1: For the verdict, the "N/A" denotes "not applicable", the "N/T" denotes "not tested".

### 1.3 Test Facility

#### Test Laboratory:

**Guangdong Asia Hongke Test Technology Limited**

B1/F, Building 11, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

The test facility is recognized, certified or accredited by the following organizations:

**FCC-Registration No.: 251906 Designation Number: CN1376**

Guangdong Asia Hongke Test Technology Limited has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

**IC —Registration No.: 31737 CAB identifier: CN0165**

The 3m Semi-anechoic chamber of Guangdong Asia Hongke Test Technology Limited has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 31737

**A2LA-Lab Cert. No.: 7133.01**

Guangdong Asia Hongke Test Technology Limited has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

### 1.4 Measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report according to CISPR 16 - 4 "Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements" and is documented in the Guangdong Asia Hongke Test Technology Limited's quality system according to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Asia Hongke laboratory is reported:

| Test                          | Measurement Uncertainty   | Notes |
|-------------------------------|---------------------------|-------|
| Power Line Conducted Emission | 9KHz~30MHz $\pm 1.20$ dB  | (1)   |
| Radiated Emission             | 9KHz~30MHz $\pm 3.10$ dB  | (1)   |
| Radiated Emission             | 30MHz ~1GHz $\pm 3.75$ dB | (1)   |
| Radiated Emission             | 1GHz~18GHz $\pm 3.88$ dB  | (1)   |
| Radiated Emission             | 18GHz-40GHz $\pm 3.88$ dB | (1)   |
| RF power, conducted           | 30MHz~6GHz $\pm 0.16$ dB  | (1)   |
| RF power density, conducted   | $\pm 0.24$ dB             | (1)   |
| Spurious emissions, conducted | $\pm 0.21$ dB             | (1)   |
| Temperature                   | $\pm 1^{\circ}\text{C}$   | (1)   |
| Humidity                      | $\pm 3\%$                 | (1)   |
| DC and low frequency voltages | $\pm 1.5\%$               | (1)   |
| Time                          | $\pm 2\%$                 | (1)   |
| Duty cycle                    | $\pm 2\%$                 | (1)   |

The report uncertainty of measurement  $y \pm U$ , where expended uncertainty  $U$  is based on a standard uncertainty Multiplied by a coverage factor of  $k=2$  , providing a level of confidence of approximately 95%

## 2 GENERAL INFORMATION

### 2.1 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

|                     |         |
|---------------------|---------|
| Normal Temperature: | 25°C    |
| Relative Humidity:  | 55 %    |
| Air Pressure:       | 101 kPa |

### 2.2 General Description of EUT

|                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name:                                                                                                                                                                            | Tablet PC                                                                                                                                                                                                                                                                                                                                                               |
| Model/Type reference:                                                                                                                                                                    | T12 Pro                                                                                                                                                                                                                                                                                                                                                                 |
| Serial Model:                                                                                                                                                                            | N/A                                                                                                                                                                                                                                                                                                                                                                     |
| Power Supply:                                                                                                                                                                            | DC 5V from adapter<br>DC 3.85V from Rechargeable Li-ion battery                                                                                                                                                                                                                                                                                                         |
| Adapter information:                                                                                                                                                                     | Model: KWHY10W-0502000US<br>Input: 100-240V AC50/60Hz 0.3A<br>Output: 5.0V=2000mA                                                                                                                                                                                                                                                                                       |
| Hardware Version:                                                                                                                                                                        | M100TBN                                                                                                                                                                                                                                                                                                                                                                 |
| Software Version:                                                                                                                                                                        | T12_Pro_EEA_20                                                                                                                                                                                                                                                                                                                                                          |
| Sample(s) Status:                                                                                                                                                                        | AiTSZ-260305081-1(Normal sample)<br>AiTSZ-260305081-2(Engineer sample)                                                                                                                                                                                                                                                                                                  |
| <b>LTE:</b>                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                         |
| Operation Band:                                                                                                                                                                          | FDD-LTE: Band 7; TDD-LTE: Band 41                                                                                                                                                                                                                                                                                                                                       |
| Support Bandwidth:                                                                                                                                                                       | Band 7: <input checked="" type="checkbox"/> 5MHz, <input checked="" type="checkbox"/> 10MHz, <input checked="" type="checkbox"/> 15MHz, <input checked="" type="checkbox"/> 20MHz<br>Band 41: <input checked="" type="checkbox"/> 5MHz, <input checked="" type="checkbox"/> 10MHz, <input checked="" type="checkbox"/> 15MHz, <input checked="" type="checkbox"/> 20MHz |
| Frequency Range:                                                                                                                                                                         | Band 7:uplink 2500MHz to 2570MHz; downlink 2620MHz to 2690MHz<br>Band 41:uplink 2555MHz to 2655MHz;downlink 2555MHz to 2655MHz                                                                                                                                                                                                                                          |
| Power Class:                                                                                                                                                                             | Power Class 3                                                                                                                                                                                                                                                                                                                                                           |
| Modulation Type:                                                                                                                                                                         | QPSK, 16QAM                                                                                                                                                                                                                                                                                                                                                             |
| Antenna type:                                                                                                                                                                            | FPC Antenna                                                                                                                                                                                                                                                                                                                                                             |
| Antenna gain:                                                                                                                                                                            | LTE Band 7: 1.66dBi;LTE Band 41: 1.66dBi                                                                                                                                                                                                                                                                                                                                |
| <b>Remark:</b> The above DUT's information was declared by manufacturer. For more detailed features description, please refer to the manufacturer's specifications or the User's Manual. |                                                                                                                                                                                                                                                                                                                                                                         |

## 2.3 Description of Test Modes and Test Frequency

The EUT has been tested under typical operating condition. The CMW500 used to control the EUT staying in continuous transmitting and receiving mode for testing. Regards to the frequency band operation: the lowest, middle and highest frequency of channel were selected to perform the test, then shown on this report.

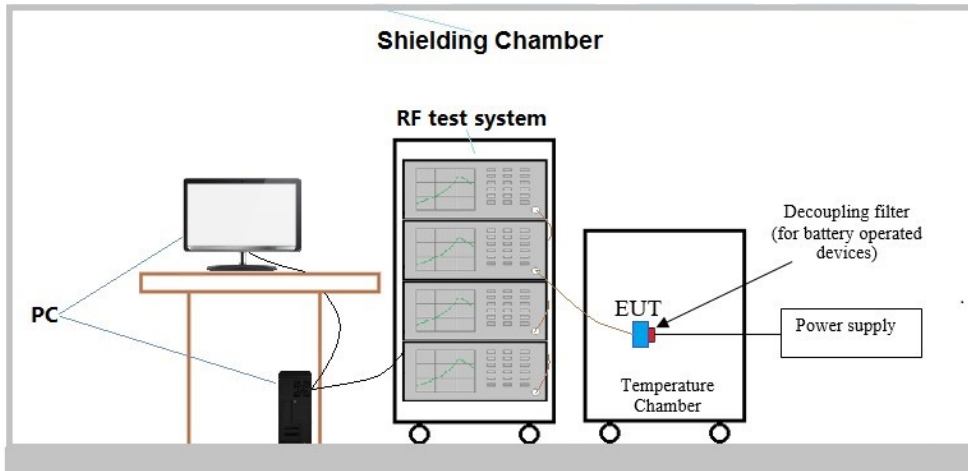
### Test Frequency:

| Band 7            |                 |       |                           |      |                             |
|-------------------|-----------------|-------|---------------------------|------|-----------------------------|
| Test Frequency ID | Bandwidth (MHz) | NUL   | Frequency of Uplink (MHz) | NDL  | Frequency of Downlink (MHz) |
| Low Range         | 5               | 20775 | 2502.5                    | 2775 | 2622.5                      |
|                   | 10              | 20800 | 2505                      | 2800 | 2625                        |
|                   | 15              | 20825 | 2507.5                    | 2825 | 2627.5                      |
|                   | 20              | 20850 | 2510                      | 2850 | 2630                        |
| Mid Range         | 5/10/15/20      | 21100 | 2535                      | 3100 | 2655                        |
| High Range        | 5               | 21425 | 2567.5                    | 3425 | 2687.5                      |
|                   | 10              | 21400 | 2565                      | 3400 | 2685                        |
|                   | 15              | 21375 | 2562.5                    | 3375 | 2682.5                      |
|                   | 20              | 21350 | 2560                      | 3350 | 2680                        |

| Band 41           |                 |       |                             |
|-------------------|-----------------|-------|-----------------------------|
| Test Frequency ID | Bandwidth [MHz] | NUL   | Frequency (UL and DL) [MHz] |
| Low Range         | 5               | 40265 | 2557.5                      |
|                   | 10              | 40290 | 2560                        |
|                   | 15              | 40315 | 2562.5                      |
|                   | 20              | 40340 | 2565                        |
| Mid Range         | 5/10/15/20      | 40740 | 2605                        |
| High Range        | 5               | 41215 | 2652.5                      |
|                   | 10              | 41190 | 2650                        |
|                   | 15              | 41165 | 2647.5                      |
|                   | 20              | 41140 | 2645                        |

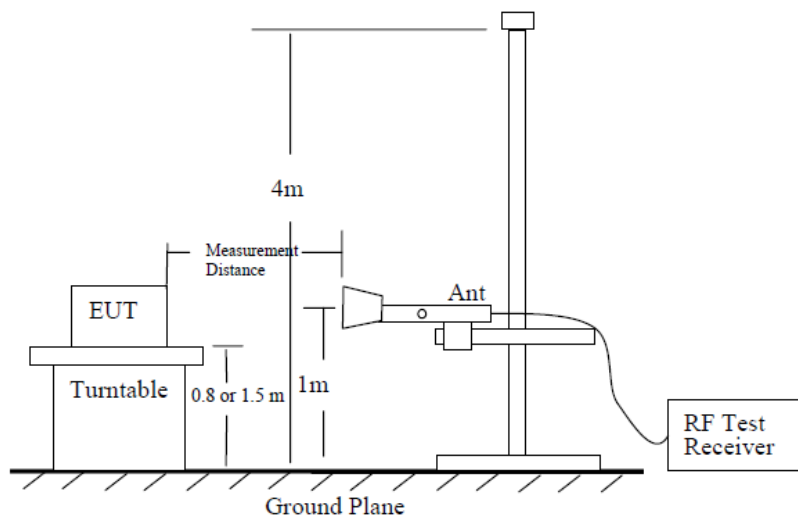
## 2.4 Test Setup and Conditions

### 2.4.1 Conducted Measurement Test Setup

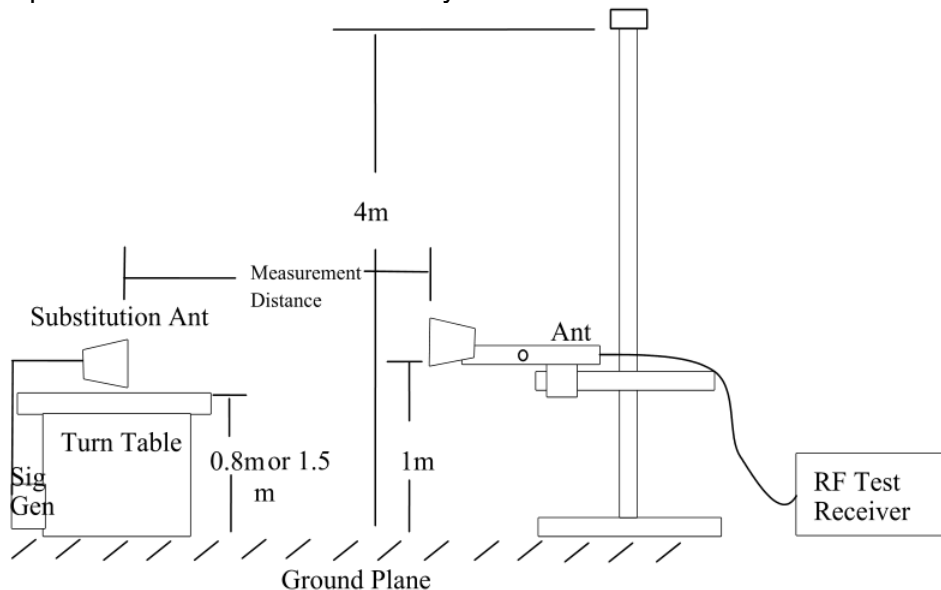


### 2.4.2 Radiated Measurement Test Setup

Step 1: Pre-test



Step 2: Substitution method to verify the maximum ERP/EIRP



## 2.5 Equipment List for the Test

| RF Conducted measurement              |                                     |              |            |              |            |            |
|---------------------------------------|-------------------------------------|--------------|------------|--------------|------------|------------|
| Item                                  | Test Equipment                      | Manufacturer | Model No.  | Serial No.   | Last Cal.  | Cal.Due    |
| <input checked="" type="checkbox"/> 1 | Spectrum Analyzer                   | Agilent      | N9020A     | MY53421570   | 2025.09.23 | 2026.09.22 |
| <input type="checkbox"/> 2            | Power Sensor                        | Agilent      | U2021XA    | MY54110007   | 2025.09.23 | 2026.09.22 |
| <input type="checkbox"/> 3            | Vector Signal Generator             | Agilent      | N5182A     | MY50143009   | 2025.09.23 | 2026.09.22 |
| <input type="checkbox"/> 4            | Analog signal generator             | Agilent      | E8257      | MY51554256   | 2025.09.23 | 2026.09.22 |
| <input checked="" type="checkbox"/> 5 | Const Temp. & Humidity Chamber      | Eastlab      | YH-HW-408L | 23051109     | 2025.09.23 | 2026.09.22 |
| <input checked="" type="checkbox"/> 6 | Wideband Radio communication tester | R&S          | CMW500     | 1201.0002K50 | 2025.09.23 | 2026.09.22 |
| <input checked="" type="checkbox"/> 7 | DC power supply                     | ZHAOXIN      | RXN-305D-2 | 28070002559  | 2025.09.23 | 2026.09.22 |
| <input checked="" type="checkbox"/> 8 | RF Test box                         | TST          | TSTPASS    | 21033016     | 2025.09.23 | 2026.09.22 |
| <input checked="" type="checkbox"/> 9 | RF Software                         | TST          | TSTPASS    | Version 2.0  | N/A        | N/A        |

| Radiation Emission measurement         |                                     |              |                        |               |            |            |
|----------------------------------------|-------------------------------------|--------------|------------------------|---------------|------------|------------|
| Item                                   | Test Equipment                      | Manufacturer | Model No.              | Serial No.    | Last Cal.  | Cal.Due    |
| <input checked="" type="checkbox"/> 1  | EMI Measuring Receiver              | R&S          | ESR                    | 101160        | 2025.09.23 | 2026.09.22 |
| <input checked="" type="checkbox"/> 2  | Low Noise Pre Amplifier             | SCHWARZBECK  | BBV 9745               | 00282         | 2025.09.23 | 2026.09.22 |
| <input checked="" type="checkbox"/> 3  | Low Noise Pre Amplifier             | COM-MW       | DLAN8-18000-40000-1066 | 08233242      | 2025.06.26 | 2026.06.25 |
| <input checked="" type="checkbox"/> 4  | Low Noise Pre Amplifier             | COM-MW       | DLAN8-1000-18000-1021  | 05231256      | 2025.06.26 | 2026.06.25 |
| <input checked="" type="checkbox"/> 5  | Spectrum Analyzer                   | R&S          | FSV40                  | 101470        | 2025.09.23 | 2026.09.22 |
| <input checked="" type="checkbox"/> 6  | TRILOG Super Broadband test Antenna | SCHWARZBECK  | VULB9168               | 01434         | 2024.08.29 | 2027.08.28 |
| <input checked="" type="checkbox"/> 7  | TRILOG Super Broadband test Antenna | SCHWARZBECK  | VULB9168               | 01435         | 2024.08.29 | 2027.08.28 |
| <input checked="" type="checkbox"/> 8  | Broadband Horn Antenna              | Schwarzbeck  | BBHA 9120D             | 452           | 2024.08.29 | 2027.08.28 |
| <input checked="" type="checkbox"/> 9  | Broadband Horn Antenna              | Schwarzbeck  | BBHA 9120D             | 453           | 2024.08.29 | 2027.08.28 |
| <input checked="" type="checkbox"/> 10 | Horn Antenna 15-40GHz               | SCHWARZBECK  | BBHA9170               | BBHA9170367   | 2024.08.28 | 2027.08.27 |
| <input checked="" type="checkbox"/> 11 | Horn Antenna 15-40GHz               | SCHWARZBECK  | BBHA9170               | BBHA9170368   | 2024.08.28 | 2027.08.27 |
| <input checked="" type="checkbox"/> 12 | Wideband Radio communication tester | R&S          | CMW500                 | 1201.0002K50  | 2025.09.23 | 2026.09.22 |
| <input checked="" type="checkbox"/> 13 | 6dB Attenuator                      | JFW          | 50FPE-006              | 4360846-949-1 | 2025.09.23 | 2026.09.22 |
| <input checked="" type="checkbox"/> 14 | Band Reject Filter Group            | COM-MW       | ZBFS6-700-3000         | 547           | 2025.09.23 | 2026.09.22 |
| <input checked="" type="checkbox"/> 15 | RE Software                         | EZ           | EZ-EMC_RE              | Ver.AIT-03A   | N/A        | N/A        |

Note: ☐ is not applicable in this Test Report. ☒ is applicable in this Test Report.

### 3 TEST CONDITIONS AND RESULTS

#### 3.1 Output Power

##### MEASUREMENT SETUP

Test set up as section 2.4.1& 2.4.2.

##### TEST PROCEDURE

The EUT was setup according to ANSI C63.26:2015

##### **Conducted Power Measurement:**

- Place the EUT on a bench and set it in transmitting mode.
- Connect a low loss RF cable from the antenna port to a spectrum analyzer and CMW500 by a Directional Couple.
- EUT Communicate with CMW500 then selects a channel for testing.
- Add a correction factor to the display of spectrum, and then test.

##### **Radiated Power Measurement:**

Determining ERP and/or EIRP from conducted RF output power measurements according to ANSI C63.26 2015 Section 5.2.5.5.

In many cases, RF output power limits are specified in terms of the ERP or the EIRP. Typically, ERP is specified when the operating frequency is less than or equal to 1 GHz and EIRP is specified when the operating frequency is greater than 1 GHz. Both are defined as the product of the power supplied to the antenna and its gain (relative to a dipole antenna in the case of ERP, and relative to an isotropic antenna in the case of EIRP); however, when working in decibels (i.e., logarithmic scale), the ERP and EIRP represent the sum of the transmit antenna gain (in dBd or dBi, respectively) and the conducted RF output power (expressed in dB relative to watts or milliwatts).

The relevant equation for determining the maximum ERP or EIRP from the measured RF output power is given in Equation (1) as follows:

$$\text{ERP or EIRP} = P_{\text{Meas}} + G_T$$

$$\text{ERP} = \text{EIRP} - 2.15$$

where

ERP or EIRP effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as  $P_{\text{Meas}}$ , e.g., dBm or dBW)

$P_{\text{Meas}}$  measured transmitter output power or PSD, in dBm or dBW

$G_T$  gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP)

For devices utilizing multiple antennas, see 6.4 for guidance with respect to determining the effective array transmit antenna gain term to be used in the above equation.

The following equations demonstrate the mathematical relationship between ERP and EIRP:

- $\text{ERP} = \text{EIRP} - 2.15$ , where ERP and EIRP are expressed in consistent units.
- $\text{EIRP} = \text{ERP} + 2.15$ , where ERP and EIRP are expressed in consistent units.

##### TEST RESULTS

##### **Passed**

☒ **Pass**      ☐ **Not Applicable**

Note:

For test data, please refer to Appendix RF test data for LTE.

## 3.2 Peak-to-Average Ratio

### MEASUREMENT SETUP

Test set up as section 2.4.1.

### TEST PROCEDURE

#### **CCDF Procedure for PAPR :**

1. Set resolution/measurement bandwidth  $\geq$  signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Set the measurement interval as follows:
  - for continuous transmissions, set to 1 ms,
  - or burst transmissions, employ an external trigger that is synchronized with the EUT burst timing sequence, or use the internal burst trigger with a trigger level that allows the burst to stabilize and set the measurement interval to a time that is less than or equal to the burst duration.
4. Record the maximum PAPR level associated with a probability of 0.1%.

### TEST RESULTS

#### **Passed**

☒ **Pass**                      ☐ **Not Applicable**

Note:

For test data, please refer to Appendix RF test data for LTE.

### 3.3 Occupied Bandwidth

#### **MEASUREMENT SETUP**

Test set up as section 2.4.1.

#### **TEST PROCEDURE**

1. The signal analyzer's automatic bandwidth measurement capability was used to perform the 99%occupied bandwidth and the 26dB bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2.  $RBW = 1 - 5\%$  of the expected OBW
3.  $VBW \geq 3 \times RBW$
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. The trace was allowed to stabilize
8. If necessary, steps 2 – 7 were repeated after changing the RBW such that it would be within 1 – 5% of the 99% occupied bandwidth observed in Step 7

#### **TEST RESULTS**

**Passed**

☒ **Pass**      ☐ **Not Applicable**

Note:

For test data, please refer to Appendix RF test data for LTE.

### 3.4 Band Edge compliance

#### **MEASUREMENT SETUP**

Test set up as section 2.4.1.

#### **TEST PROCEDURE**

1. Set the spectrum analyzer center frequency to the block, band, or channel edge frequency.
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. RBW > 1% of the emission bandwidth
4. VBW  $\geq 3 \times$  RBW
5. Detector = RMS
6. Number of sweep points  $\geq 2 \times$  Span/RBW
7. Trace mode = Average
8. Sweep time = > (number of points in sweep)  $\times$  (symbol period)
9. Sweep = Single

Or

1. Set the spectrum analyzer center frequency to the block, band, or channel edge frequency.
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. RBW > 1% of the emission bandwidth
4. VBW  $\geq 3 \times$  RBW
5. Detector = Peak
6. Number of sweep points  $\geq 2 \times$  Span/RBW
7. Trace mode = Maxhold
8. Sweep time = Auto
9. Sweep = Single

#### **TEST RESULTS**

**Passed**

☒ **Pass**      ☐ **Not Applicable**

Note:

For test data, please refer to Appendix RF test data for LTE.

### 3.5 Spurious Emission

#### **MEASUREMENT SETUP**

Test set up as section 2.4.1& 2.4.2.

#### **TEST PROCEDURE**

The EUT was setup according to ANSI C63.26:2015

#### **Conducted Spurious Measurement:**

##### **Test Settings**

1. RBW = 1KHz (for 9K-150KHz), 10KHz (for 150KHz-10MHz), 100KHz (for 10MHz-30MHz), 1MHz(for above 1GHz)
2. VBW  $\geq 3 * \text{RBW}$
3. Detector = RMS
4. Trace Mode = Trace average
5. Sweep time  $> (\text{number of points in sweep}) \times (\text{symbol period})$
6. Number of points in sweep  $\geq 2 \times \text{Span} / \text{RBW}$
7. Sweep =Single

Or

1. RBW = 1KHz(for 9K-150KHz), 10KHz(for 150KHz-10MHz), 100KHz(for 10MHz-30MHz), 1MHz(for above 1GHz)
2. VBW  $\geq 3 * \text{RBW}$
3. Detector = Peak
4. Trace Mode = Maxhold
5. Sweep time = Auto
6. Number of points in sweep  $\geq 2 \times \text{Span} / \text{RBW}$
7. Sweep =Single

#### **Radiated Spurious Measurement:**

1. The EUT shall be placed at the specified height on a support, and in the position closest to normal use as declared by provider.
2. The test antenna shall be oriented initially for vertical polarization and shall be chosen to correspond to the frequency of the transmitter
3. The output of the test antenna shall be connected to the measuring receiver.
4. The transmitter shall be switched on and the measuring receiver shall be tuned to the frequency of the transmitter under test.
5. The test antenna shall be raised and lowered through the specified range of height until a maximum signal level is detected by the measuring receiver.
6. The transmitter shall then be rotated through  $360^\circ$  in the horizontal plane, until the maximum

signal level is detected by the measuring receiver.

7. The test antenna shall be raised and lowered again through the specified range of height until a maximum signal level is detected by the measuring receiver.
8. The maximum signal level detected by the measuring receiver shall be noted.
9. The transmitter shall be replaced by a substitution antenna.
10. The substitution antenna shall be orientated for vertical polarization and the length of the substitution antenna shall be adjusted to correspond to the frequency of the transmitter.
11. The substitution antenna shall be connected to a calibrated signal generator.
12. If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
13. The test antenna shall be raised and lowered through the specified range of height to ensure that the maximum signal is received.
14. The input signal to the substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuator setting of the measuring receiver.
15. The measurement shall be repeated with the test antenna and the substitution antenna orientated for horizontal polarization.
16. The measure of the effective radiated power is the larger of the two levels recorded at the input to the substitution antenna, corrected for gain of the substitution antenna if necessary.
17. The frequency range need checked up to 10th harmonic.

Final measurement calculation as below:

The relevant equation for determining the ERP/EIRP from the radiated RF output power is:

$$\text{ERP/EIRP (dBm)} = \text{SA Read Value (dBm)} + \text{Correction Factor (dB)}$$

where:

ERP/EIRP = effective or equivalent radiated power, in dBm;

SA Read Value = measured transmitter power received by EMI receiver or spectrum analyzer, in dBm;

Correction Factor = total correction factor including cable loss, in dB;

**TEST RESULTS**

**Conducted Measurement result:**

**Passed**

☒ **Pass**      ☐ **Not Applicable**

Note:

For test data, please refer to Appendix RF test data for LTE.

**Radiated Measurement:**

| <b>LTE Band 7 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest</b>  |               |          |      |               |             |              |          |
|------------------------------------------------------------------------------------------|---------------|----------|------|---------------|-------------|--------------|----------|
| Frequency(MHz)                                                                           | S G.Lev (dBm) | Ant(dBi) | Loss | PMea (dBm)    | Limit (dBm) | Margin (dBm) | Polarity |
| 5004.85                                                                                  | -44.32        | 11.33    | 5.76 | -38.75        | -25.00      | -13.75       | H        |
| 7507.60                                                                                  | -46.29        | 11.33    | 7.63 | -42.59        | -25.00      | -17.59       | H        |
| 10010.00                                                                                 | -46.33        | 11.72    | 9.09 | -43.70        | -25.00      | -18.70       | H        |
| 5004.85                                                                                  | -44.21        | 11.33    | 5.76 | <b>-38.64</b> | -25.00      | -13.64       | V        |
| 7507.60                                                                                  | -46.03        | 11.33    | 7.63 | -42.33        | -25.00      | -17.33       | V        |
| 10010.00                                                                                 | -45.68        | 11.72    | 9.09 | -43.05        | -25.00      | -18.05       | V        |
| <b>LTE Band 7 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle</b>  |               |          |      |               |             |              |          |
| Frequency(MHz)                                                                           | S G.Lev (dBm) | Ant(dBi) | Loss | PMea (dBm)    | Limit (dBm) | Margin (dBm) | Polarity |
| 5070.05                                                                                  | -43.17        | 11.33    | 5.67 | -37.51        | -25.00      | -12.51       | H        |
| 7604.30                                                                                  | -44.36        | 11.44    | 7.69 | -40.61        | -25.00      | -15.61       | H        |
| 10140.00                                                                                 | -45.71        | 11.61    | 9.21 | -43.31        | -25.00      | -18.31       | H        |
| 5070.05                                                                                  | -42.08        | 11.33    | 5.67 | <b>-36.42</b> | -25.00      | -11.42       | V        |
| 7604.30                                                                                  | -43.39        | 11.44    | 7.69 | -39.64        | -25.00      | -14.64       | V        |
| 10140.00                                                                                 | -45.47        | 11.61    | 9.21 | -43.07        | -25.00      | -18.07       | V        |
| <b>LTE Band 7 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest</b> |               |          |      |               |             |              |          |
| Frequency(MHz)                                                                           | S G.Lev (dBm) | Ant(dBi) | Loss | PMea (dBm)    | Limit (dBm) | Margin (dBm) | Polarity |
| 5134.40                                                                                  | -42.05        | 11.41    | 5.71 | -36.35        | -25.00      | -11.35       | H        |
| 7703.15                                                                                  | -43.34        | 11.40    | 7.71 | -39.65        | -25.00      | -14.65       | H        |
| 10270.00                                                                                 | -45.80        | 11.63    | 9.19 | -43.36        | -25.00      | -18.36       | H        |
| 5134.40                                                                                  | -41.68        | 11.41    | 5.71 | <b>-35.98</b> | -25.00      | -10.98       | V        |
| 7703.15                                                                                  | -42.66        | 11.40    | 7.71 | -38.97        | -25.00      | -13.97       | V        |
| 10270.00                                                                                 | -44.65        | 11.63    | 9.19 | -42.21        | -25.00      | -17.21       | V        |

| LTE Band 41 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest  |               |          |      |               |             |              |          |
|------------------------------------------------------------------------------------|---------------|----------|------|---------------|-------------|--------------|----------|
| Frequency(MHz)                                                                     | S G.Lev (dBm) | Ant(dBi) | Loss | PMea (dBm)    | Limit (dBm) | Margin (dBm) | Polarity |
| 5114.25                                                                            | -40.68        | 11.37    | 5.66 | -34.97        | -25.00      | -9.97        | H        |
| 7673.15                                                                            | -41.90        | 11.42    | 7.70 | -38.18        | -25.00      | -13.18       | H        |
| 10229.30                                                                           | -47.64        | 11.61    | 9.25 | -45.28        | -25.00      | -20.28       | H        |
| 5114.25                                                                            | -40.42        | 11.37    | 5.66 | <b>-34.71</b> | -25.00      | -9.71        | V        |
| 7673.15                                                                            | -41.46        | 11.42    | 7.70 | -37.74        | -25.00      | -12.74       | V        |
| 10229.30                                                                           | -47.35        | 11.61    | 9.25 | -44.99        | -25.00      | -19.99       | V        |
| LTE Band 41 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle  |               |          |      |               |             |              |          |
| Frequency(MHz)                                                                     | S G.Lev (dBm) | Ant(dBi) | Loss | PMea (dBm)    | Limit (dBm) | Margin (dBm) | Polarity |
| 5209.90                                                                            | -41.62        | 11.58    | 5.89 | -35.93        | -25.00      | -10.93       | H        |
| 7814.60                                                                            | -42.60        | 11.28    | 7.72 | -39.04        | -25.00      | -14.04       | H        |
| 10419.40                                                                           | -48.91        | 11.71    | 9.26 | -46.46        | -25.00      | -21.46       | H        |
| 5209.90                                                                            | -41.14        | 11.58    | 5.89 | <b>-35.45</b> | -25.00      | -10.45       | V        |
| 7814.60                                                                            | -41.53        | 11.28    | 7.72 | -37.97        | -25.00      | -12.97       | V        |
| 10419.40                                                                           | -48.52        | 11.71    | 9.26 | -46.07        | -25.00      | -21.07       | V        |
| LTE Band 41 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest |               |          |      |               |             |              |          |
| Frequency(MHz)                                                                     | S G.Lev (dBm) | Ant(dBi) | Loss | PMea (dBm)    | Limit (dBm) | Margin (dBm) | Polarity |
| 5305.00                                                                            | -44.92        | 11.84    | 5.96 | -39.04        | -25.00      | -14.04       | H        |
| 7958.10                                                                            | -41.77        | 11.26    | 7.78 | -38.29        | -25.00      | -13.29       | H        |
| 10609.95                                                                           | -46.83        | 11.67    | 9.44 | -44.60        | -25.00      | -19.60       | H        |
| 5305.00                                                                            | -44.18        | 11.84    | 5.96 | -38.30        | -25.00      | -13.30       | V        |
| 7958.10                                                                            | -41.72        | 11.26    | 7.78 | <b>-38.24</b> | -25.00      | -13.24       | V        |
| 10609.95                                                                           | -45.93        | 11.67    | 9.44 | -43.70        | -25.00      | -18.70       | V        |

Remark:

1.  $PMea = S\ G.Lev + Ant - Loss$
2.  $Margin = PMea - Limit$
3. Other emission levels are attenuated 20dB below the limit and not recorded in report.

### 3.6 Frequency Stability under Temperature & Voltage Variations

#### **TEST CONFIGURATION**

Test set up as section 2.4.1.

#### **TEST PROCEDURE**

The EUT was setup according to ANSI C63.26:2015

##### **Frequency Stability under Temperature Variations:**

The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.

##### **Frequency Stability under Voltage Variations:**

Set chamber temperature to 20°C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specify extreme voltage variation ( $\pm 15\%$ ) and endpoint, record the maximum frequency change.

#### **TEST RESULTS**

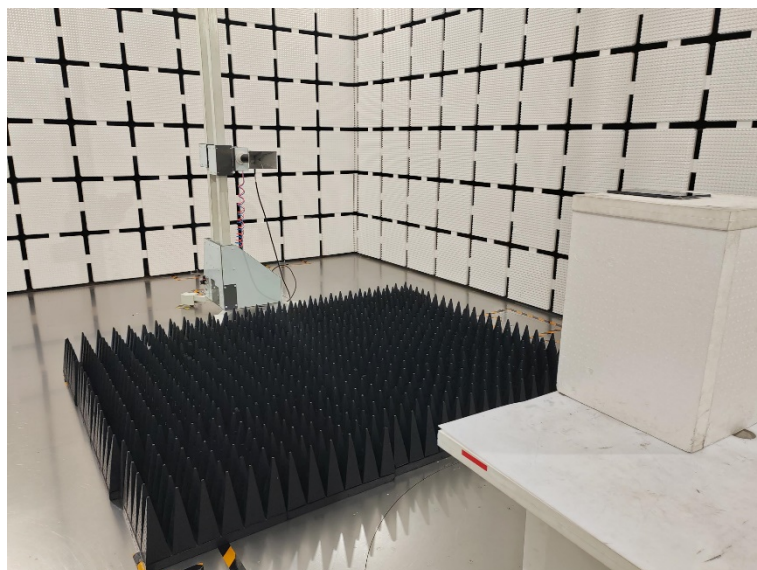
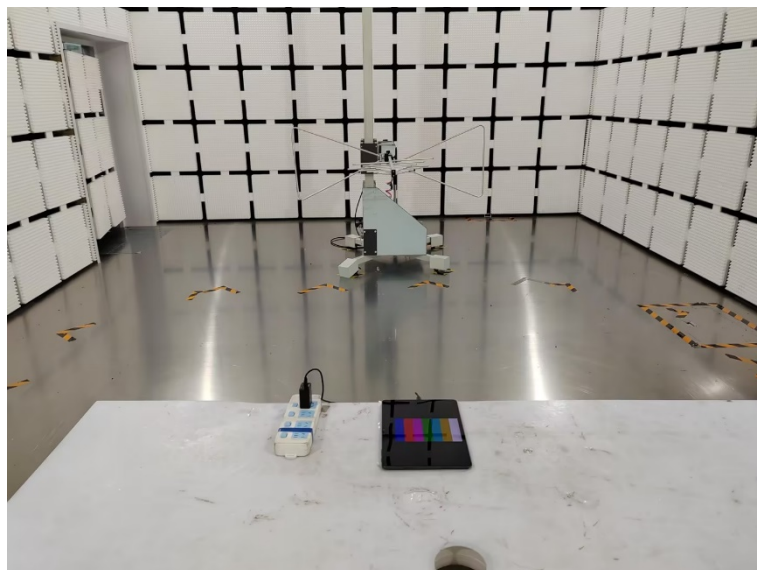
**Passed**

☒ **Pass**                      ☐ **Not Applicable**

Note:

For test data, please refer to Appendix RF test data for LTE.

## 4 Test Setup Photographs of EUT



## 5 Photos of EUT

Please refer to test Report No.: AiTSZ-260305081FW1.

\*\*\*\*\* End of Report \*\*\*\*\*