

# SPECTRUM REPORT

## (E-UTRA)

**Applicant:** Shenzhen Huafurui Technology Co., Ltd.

**Address of Applicant:** Unit 1401 & 1402, 14/F, Jinqi zhigu mansion (No. 4 building of Chongwen Garden), Crossing of the Liuxian street and Tangling road, Taoyuan street, Nanshan district, Shenzhen, P.R. China

**Equipment Under Test (EUT)**

Product Name: Smart Phone

Model No.: CUBOT NOTE 20

Trade mark: CUBOT

**Applicable standards:** ETSI EN 301 908-1 V11.1.1 (2016-07)  
ETSI EN 301 908-13 V11.1.2 (2017-07)

**Date of sample receipt:** 09 Apr., 2020

**Date of Test:** 09 Apr., to 22 Apr., 2020

**Date of report issued:** 23 Apr., 2020

**Test Result:** PASS\*

\*In the configuration tested, the EUT complied with the standards specified above.

The CE mark as shown below can be used, under the responsibility of the manufacturer, after completion of an EC Declaration of Conformity and compliance with all relevant EC Directives. The protection requirements with respect to electromagnetic compatibility contained in Directive 2014/53/EU are considered.



Bruce Zhang  
Laboratory Manager



This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the CCIS product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

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## 2 Version

| Version No. | Date          | Description |
|-------------|---------------|-------------|
| 00          | 23 Apr., 2020 | Original    |
|             |               |             |
|             |               |             |
|             |               |             |
|             |               |             |

Tested by:

YT Yang  
Test Engineer

Date:

23 Apr., 2020

Reviewed by:

Winner Zhang  
Project Engineer

Date:

23 Apr., 2020

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## 4 Test Summary

| Test Item  | Test Requirement                  | Test method                       | Result |
|--|-----------------------------------|-----------------------------------|--------|
| Transmitter maximum output power                 | ETSI EN 301 908-13 section 4.2.2  | ETSI EN 301 908-13 section 5.3.1  | Pass   |
| Transmitter spectrum emission mask               | ETSI EN 301 908-13 section 4.2.3  | ETSI EN 301 908-13 section 5.3.2  | Pass   |
| Transmitter spurious emissions                   | ETSI EN 301 908-13 section 4.2.4  | ETSI EN 301 908-13 section 5.3.3  | Pass   |
| Transmitter minimum output power                 | ETSI EN 301 908-13 section 4.2.5  | ETSI EN 301 908-13 section 5.3.4  | Pass   |
| Receiver adjacent channel selectivity (ACS)      | ETSI EN 301 908-13 section 4.2.6  | ETSI EN 301 908-13 section 5.3.5  | Pass   |
| Receiver blocking characteristics                | ETSI EN 301 908-13 section 4.2.7  | ETSI EN 301 908-13 section 5.3.6  | Pass   |
| Receiver spurious response                       | ETSI EN 301 908-13 section 4.2.8  | ETSI EN 301 908-13 section 5.3.7  | Pass   |
| Receiver intermodulation characteristics         | ETSI EN 301 908-13 section 4.2.9  | ETSI EN 301 908-13 section 5.3.8  | Pass   |
| Receiver spurious emissions                      | ETSI EN 301 908-13 section 4.2.10 | ETSI EN 301 908-13 section 5.3.9  | Pass   |
| Transmitter adjacent channel leakage power ratio | ETSI EN 301 908-13 section 4.2.11 | ETSI EN 301 908-13 section 5.3.10 | Pass   |
| Receiver Reference Sensitivity Level             | ETSI EN 301 908-13 section 4.2.12 | ETSI EN 301 908-13 section 5.3.11 | Pass   |
| Radiated emissions(UE)                           | ETSI EN 301 908-1 Section 4.2.2   | ETSI EN 301 908-1 Section 5.3.1   | Pass   |
| Control and monitoring functions                 | ETSI EN 301 908-1 Section 4.2.4   | ETSI EN 301 908-1 Section 5.3.3   | Pass   |

*Remark:*

*Pass: The EUT complies with the essential requirements in the standard.*

## 5 General Information

### 5.1 Client Information

|                        |   |
|------------------------|---|
| Applicant:             | Shenzhen Huafurui Technology Co., Ltd.  |
| Address:               | Unit 1401 & 1402, 14/F, Jinqi zhigu mansion (No. 4 building of Chongwen Garden), Crossing of the Liuxian street and Tangling road, Taoyuan street, Nanshan district, Shenzhen, P.R. China |
| Manufacturer/ Factory: | Shenzhen Huafurui Technology Co., Ltd.  |
| Address:               | Unit 1401 & 1402, 14/F, Jinqi zhigu mansion (No. 4 building of Chongwen Garden), Crossing of the Liuxian street and Tangling road, Taoyuan street, Nanshan district, Shenzhen, P.R. China |

### 5.2 General Description of E.U.T.

|                              |  |
|------------------------------|--|
| Product Name:                | Smart Phone  |
| Model No.:                   | CUBOT NOTE 20  |
| Transmitter frequency range: | LTE Band 1: 1920MHz~1980MHz, LTE Band 3: 1710MHz~1785MHz<br>LTE Band 7: 2500MHz~2570MHz, LTE Band 8: 880MHz~915MHz<br>LTE Band 20: 832MHz~862MHz   |
| Receiver frequency range:    | LTE Band 1: 2110MHz~2170MHz, LTE Band 3: 1805MHz~1880MHz<br>LTE Band 7: 2620MHz~2690MHz, LTE Band 8: 925MHz~960MHz<br>LTE Band 20: 791MHz~821MHz   |
| Hardware version:            | TE626_MAIN_PCB_V1.0  |
| Software version:            | TE626_PUBLIC_V1.0_S200220  |
| Modulation type:             | QPSK, 16-QAM   |
| Antenna Type:                | Internal Antenna   |
| Antenna Gain:                | LTE Band 1: -0.75 dBi (Declared by applicant),<br>LTE Band 3: -0.80 dBi (Declared by applicant);<br>LTE Band 7: -0.90 dBi (Declared by applicant);<br>LTE Band 8: -0.80dBi (Declared by applicant);<br>LTE Band 20: -0.91 dBi (Declared by applicant); |
| Power supply :               | Rechargeable Li-ion polymer Battery DC3.85V/4200mAh  |
| AC adapter:                  | Model No.: HJ-0501500W2-EU<br>Input: AC100-240V, 50/60Hz 0.3A<br>Output: DC 5.0V, 1.5A   |

### 5.3 Test environment and mode

| Operating Environment:  |  |
|---|--|
| Temperature:  | Normal: 15°C ~ 35°C, Extreme: -20°C ~ +55°C                              |
| Humidity:   | 20 % ~ 75 % RH   |
| Atmospheric Pressure:   | 1008 mbar  |
| Voltage:  | Nominal: 3.85Vdc, Extreme: Low 3.50Vdc, High 4.40Vdc                     |
| Test mode:  |  |
| Single Carrier mode   | Keep the EUT communication with simulated station in Single carrier mode |
| Note:<br>1. All the test environments and test modes required following ETSI TS 136 521-1 and ETSI EN 301 908-13.<br>2. During the test, pre-scan SIM 1 and SIM 2, found SIM 1 was worse case. The report only reflects the worst case. |  |

### 5.4 Description of Support Units

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

### 5.5 Measurement Uncertainty

| Parameter                           | Expanded Uncertainty (Confidence of 95%) |
|-------------------------------------|--|
| Radio Frequency                     | $\pm 1.2 \times 10^{-9}$                 |
| RF Power, Conducted                 | $\pm 0.64$ dB                            |
| Spurious emission, Conducted        | $\pm 1.18$ dB                            |
| Temperature                         | $\pm 0.3$ °C                             |
| Voltage                             | $\pm 0.1$ %                              |
| Humidity                            | $\pm 2$ %                                |
| Time                                | $\pm 10$ %                               |
| Radiated Emission (30MHz ~ 1000MHz) | $\pm 4.32$ dB                            |
| Radiated Emission (1GHz ~ 18GHz)    | $\pm 5.38$ dB                            |

### 5.6 Laboratory Facility

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

- **FCC - Designation No.: CN1211**

Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.

- **ISED – CAB identifier.: CN0021**

The 3m Semi-anechoic chamber of Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

- **CNAS - Registration No.: CNAS L6048**

Shenzhen Zhongjian Nanfang Testing Co., Ltd. is accredited to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L6048.

- **A2LA - Registration No.: 4346.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: <https://portal.a2la.org/scopepdf/4346-01.pdf>

### 5.7 Laboratory Location

Shenzhen Zhongjian Nanfang Testing Co., Ltd.  
 Address: No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road,  
 Bao'an District, Shenzhen, Guangdong, China  
 Tel: +86-755-23118282, Fax: +86-755-23116366  
 Email: info@ccis-cb.com, Website: http://www.ccis-cb.com

## 5.8 Test Instruments list

| Radiated Emission: |                 |               |                    |                      |                          |
|--------------------|-----------------|---------------|--------------------|----------------------|--------------------------|
| Test Equipment     | Manufacturer    | Model No.     | Serial No.         | Cal. Date (mm-dd-yy) | Cal. Due date (mm-dd-yy) |
| 3m SAC             | SAEMC           | 9m*6m*6m      | 966                | 07-22-2017           | 07-21-2020               |
| BiConiLog Antenna  | SCHWARZBECK     | VULB9163      | 497                | 03-18-2020           | 03-17-2021               |
| Biconical Antenna  | SCHWARZBECK     | VUBA9117      | 359                | 06-22-2017           | 06-21-2020               |
| Horn Antenna       | SCHWARZBECK     | BBHA9120D     | 916                | 03-18-2020           | 03-17-2021               |
| Horn Antenna       | SCHWARZBECK     | BBHA9120D     | 1805               | 06-22-2017           | 06-21-2020               |
| EMI Test Software  | AUDIX           | E3            | Version: 6.110919b |                      |                          |
| Pre-amplifier      | HP              | 8447D         | 2944A09358         | 03-18-2020           | 03-17-2021               |
| Pre-amplifier      | CD              | PAP-1G18      | 11804              | 03-18-2020           | 03-17-2021               |
| Spectrum analyzer  | Rohde & Schwarz | FSP30         | 101454             | 03-18-2020           | 03-17-2021               |
| EMI Test Receiver  | Rohde & Schwarz | ESRP7         | 101070             | 03-18-2020           | 03-17-2021               |
| Signal Generator   | Rohde & Schwarz | SMX           | 835454/016         | 03-18-2020           | 03-17-2021               |
| Signal Generator   | Rohde & Schwarz | SMR20         | 1008100050         | 03-18-2020           | 03-17-2021               |
| Cable              | ZDECL           | Z108-NJ-NJ-81 | 1608458            | 03-18-2020           | 03-17-2021               |
| Cable              | MICRO-COAX      | MFR64639      | K10742-5           | 03-18-2020           | 03-17-2021               |
| Cable              | SUHNER          | SUCOFLEX100   | 58193/4PE          | 03-18-2020           | 03-17-2021               |
| RF Switch Unit     | MWRFTTEST       | MW200         | N/A                | N/A                  | N/A                      |
| Test Software      | MWRFTTEST       | MTS8200       | Version: 2.0.0.0   |                      |                          |

| Conducted method:            |                 |            |                  |                      |                          |
|------------------------------|-----------------|------------|------------------|----------------------|--------------------------|
| Test Equipment               | Manufacturer    | Model No.  | Serial No.       | Cal. Date (mm-dd-yy) | Cal. Due date (mm-dd-yy) |
| Spectrum Analyzer            | Agilent         | N9020A     | MY50510123       | 11-18-2019           | 11-17-2020               |
| Vector Signal Generator      | Agilent         | N5182A     | MY49060014       | 11-18-2019           | 11-17-2020               |
| Signal Generator             | Rohde & Schwarz | SMR20      | 1008100050       | 03-18-2020           | 03-17-2021               |
| Simulated Station            | Rohde & Schwarz | CMW500     | 140493           | 07-22-2019           | 07-21-2020               |
| RF Switch Unit               | MWRFTTEST       | MW200      | N/A              | N/A                  | N/A                      |
| Test Software                | MWRFTTEST       | MTS8200    | Version: 2.0.0.0 |                      |                          |
| DC Power Supply              | XinNuoEr        | WYK-10020K | 1409050110020    | 09-25-2019           | 09-24-2020               |
| Temperature Humidity Chamber | HengPu          | HPGDS-500  | 20140828008      | 11-01-2019           | 10-31-2020               |

## 6 Radio Technical Requirements Specification in ETSI EN 301 908-1/-13

### 6.1 Justification

The EUT and test equipment were configured for testing according to ETSI EN 301 908-13 and ETSI TS 136 521-1.

The EUT was tested in the normal operating mode to represent worst-case results during the final qualification test.

The EUT was tested with a dummy battery.

### 6.2 Test Configuration of EUT

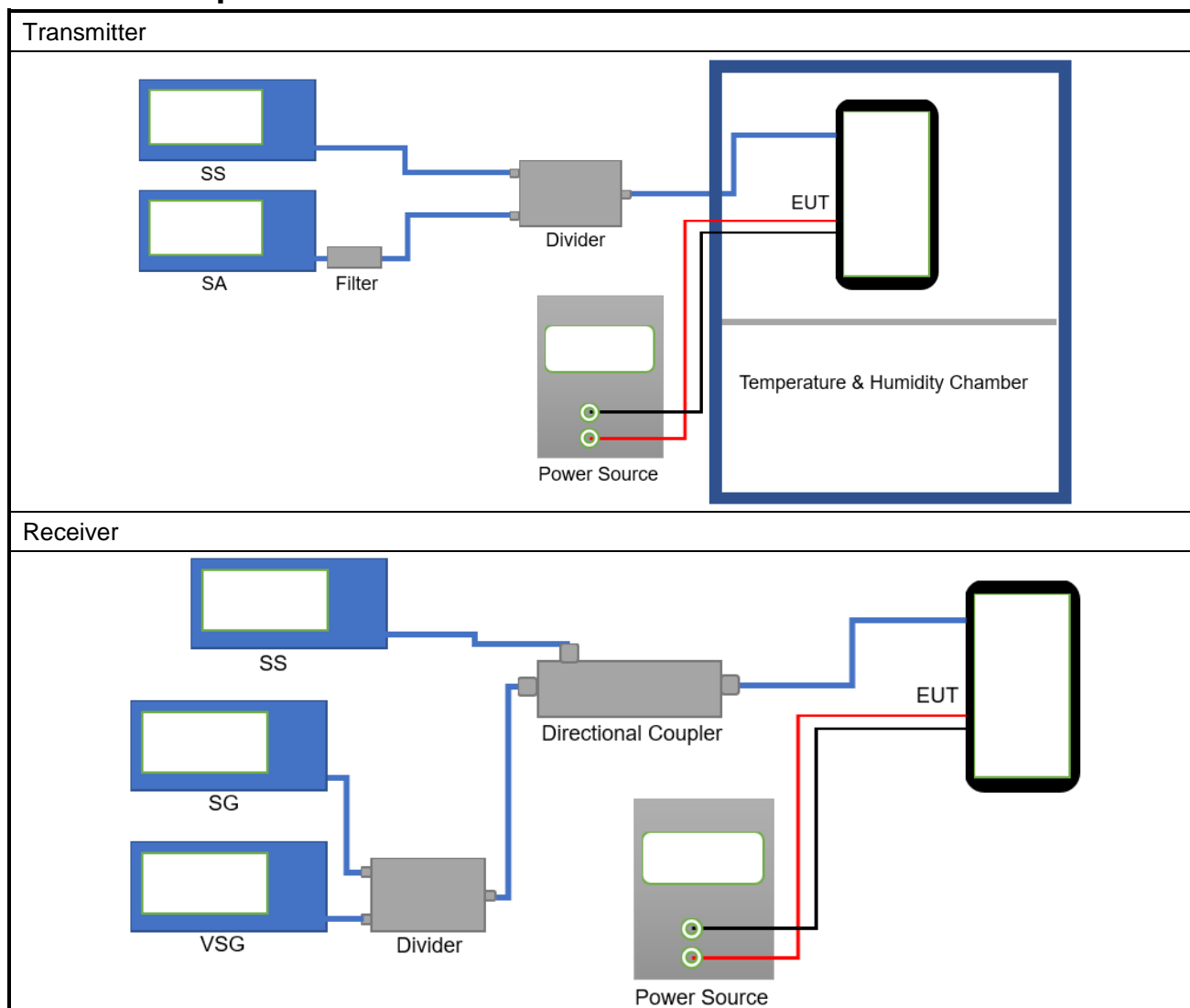
| LTE Band   | Bandwidth | Channel Number/ Frequency |       |            |
|------------|-----------|---------------------------|-------|------------|
| LTE Band 1 | 5 MHz     | Low                       | 18025 | 1922.5 MHz |
|            |           | Middle                    | 18300 | 1950.0 MHz |
|            |           | High                      | 18575 | 1977.5 MHz |
|            | 10 MHz    | Low                       | 18050 | 1925.0 MHz |
|            |           | Middle                    | 18300 | 1950.0 MHz |
|            |           | High                      | 18550 | 1975.0 MHz |
|            | 20 MHz    | Low                       | 18100 | 1930.0 MHz |
|            |           | Middle                    | 18300 | 1950.0 MHz |
|            |           | High                      | 18500 | 1970.0 MHz |
| LTE Band 3 | 1.4 MHz   | Low                       | 19207 | 1710.7 MHz |
|            |           | Middle                    | 19575 | 1747.5 MHz |
|            |           | High                      | 19943 | 1784.3 MHz |
|            | 5 MHz     | Low                       | 19225 | 1712.5 MHz |
|            |           | Middle                    | 19575 | 1747.5 MHz |
|            |           | High                      | 19925 | 1782.5 MHz |
|            | 10 MHz    | Low                       | 19250 | 1715.0 MHz |
|            |           | Middle                    | 19575 | 1747.5 MHz |
|            |           | High                      | 19900 | 1780.0 MHz |
|            | 20 MHz    | Low                       | 19300 | 1720.0 MHz |
|            |           | Middle                    | 19575 | 1747.5 MHz |
|            |           | High                      | 19850 | 1775.0 MHz |
| LTE Band 7 | 5 MHz     | Low                       | 20775 | 2502.5 MHz |
|            |           | Middle                    | 21100 | 2535.0 MHz |
|            |           | High                      | 21425 | 2567.5 MHz |
|            | 10 MHz    | Low                       | 20800 | 2505.0 MHz |
|            |           | Middle                    | 21100 | 2535.0 MHz |
|            |           | High                      | 21400 | 2565.0 MHz |
|            | 20 MHz    | Low                       | 20850 | 2510.0 MHz |
|            |           | Middle                    | 21100 | 2535.0 MHz |
|            |           | High                      | 21350 | 2560.0 MHz |
| LTE Band 8 | 1.4 MHz   | Low                       | 21457 | 880.7 MHz  |
|            |           | Middle                    | 21625 | 897.5 MHz  |
|            |           | High                      | 21793 | 914.3 MHz  |
|            | 5 MHz     | Low                       | 21475 | 882.5 MHz  |
|            |           | Middle                    | 21625 | 897.5 MHz  |
|            |           | High                      | 21775 | 912.5 MHz  |
|            | 10 MHz    | Low                       | 21500 | 885.0 MHz  |
|            |           | Middle                    | 21625 | 897.5 MHz  |
|            |           | High                      | 21750 | 910.0 MHz  |



| LTE Band    | Bandwidth | Channel Number/ Frequency |       |           |
|-------------|-----------|---------------------------|-------|-----------|
| LTE Band 20 | 5 MHz     | Low                       | 24175 | 834.5 MHz |
|             |           | Middle                    | 24300 | 847.0 MHz |
|             |           | High                      | 24425 | 859.5 MHz |
|             | 10 MHz    | Low                       | 24200 | 837.0 MHz |
|             |           | Middle                    | 24300 | 847.0 MHz |
|             |           | High                      | 24400 | 857.0 MHz |
|             | 20 MHz    | Low                       | 24250 | 842.0 MHz |
|             |           | Middle                    | 24300 | 847.0 MHz |
|             |           | High                      | 24350 | 852.0 MHz |

| Clause No.  | Test Conditions |      |      |      |      | Test Channel |        |      | Modulation |       | RB Allocation |         |      |
|---|-----------------|------|------|------|------|--------------|--------|------|------------|-------|---------------|---------|------|
|   | NTNV            | LTLV | LTHV | HTLV | HTHV | Low          | Middle | High | QPSK       | 16QAM | 1             | Partial | Full |
| 4.2.2   | √               | √    | √    | √    | √    | √            | √      | √    | √          |       | √             | √       |      |
| 4.2.3   | √               |      |      |      |      | √            | √      | √    | √          | √     |               | √       | √    |
| 4.2.4   | √               |      |      |      |      | √            | √      | √    | √          |       | √             |         | √    |
| 4.2.5   | √               | √    | √    | √    | √    | √            | √      | √    | √          |       |               |         | √    |
| 4.2.6   | √               |      |      |      |      |              | √      |      | √          |       |               |         | √    |
| 4.2.7   | √               |      |      |      |      |              | √      |      | √          |       |               |         | √    |
| 4.2.8   | √               |      |      |      |      |              | √      |      | √          |       |               |         | √    |
| 4.2.9   | √               |      |      |      |      |              | √      |      | √          |       |               |         | √    |
| 4.2.10  | √               |      |      |      |      |              | √      |      | √          |       | √             |         |      |
| 4.2.11  | √               | √    | √    | √    | √    | √            | √      | √    | √          | √     |               | √       | √    |
| 4.2.12  | √               | √    | √    | √    | √    | √            | √      | √    | √          |       |               |         | √    |
| Note:<br>1. "√" means that this configuration is chosen for test.<br>2. "NTNV" means Normal Temperature Normal Voltage, "LTLV" means Low Temperature Low Voltage, "LTHV" means Low Temperature High Voltage, "HTLV" means High Temperature Low Voltage, "HTHV" means High Temperature High Voltage. |                 |      |      |      |      |              |        |      |            |       |               |         |      |

## 6.3 Test Setup Block



## 6.4 Test Results

### 6.4.1 Test Result Summary

| Clause No.                    | Test Mode      | Test Condition | Test Band               |         |
|-------------------------------|----------------|----------------|-------------------------|---------|
|                               |                |                | LTE Band 1, 3, 7, 8, 20 |         |
|                               |                |                | Test Data               | Verdict |
| Requirements in EN 301 908-13 |                |                |                         |         |
| 4.2.2                         | Single Carrier | NTNV           | Appendix A - LTE - NTVN | Pass    |
|                               |                | LTLV           | Appendix B - LTE - LTLV | Pass    |
|                               |                | LTHV           | Appendix C - LTE - LTHV | Pass    |
|                               |                | HTLV           | Appendix D - LTE - HTLV | Pass    |
|                               |                | HTHV           | Appendix E - LTE - HTHV | Pass    |
| 4.2.3                         | Single Carrier | NTNV           | Appendix A - LTE - NTVN | Pass    |
| 4.2.4                         | Single Carrier | NTNV           | Appendix A - LTE - NTVN | Pass    |
| 4.2.5                         | Single Carrier | NTNV           | Appendix A - LTE - NTVN | Pass    |
|                               |                | LTLV           | Appendix B - LTE - LTLV | Pass    |
|                               |                | LTHV           | Appendix C - LTE - LTHV | Pass    |
|                               |                | HTLV           | Appendix D - LTE - HTLV | Pass    |
|                               |                | HTHV           | Appendix E - LTE - HTHV | Pass    |
| 4.2.6                         | Single Carrier | NTNV           | Appendix A - LTE - NTVN | Pass    |
| 4.2.7                         | Single Carrier | NTNV           | See Section 6.4.2       | Pass    |
| 4.2.8                         | Single Carrier | NTNV           | See Section 6.4.3       | Pass    |
| 4.2.9                         | Single Carrier | NTNV           | Appendix A - LTE - NTVN | Pass    |
| 4.2.10                        | Single Carrier | NTNV           | Appendix A - LTE - NTVN | Pass    |
| 4.2.11                        | Single Carrier | NTNV           | Appendix A - LTE - NTVN | Pass    |
|                               |                | LTLV           | Appendix B - LTE - LTLV | Pass    |
|                               |                | LTHV           | Appendix C - LTE - LTHV | Pass    |
|                               |                | HTLV           | Appendix D - LTE - HTLV | Pass    |
|                               |                | HTHV           | Appendix E - LTE - HTHV | Pass    |
| 4.2.12                        | Single Carrier | NTNV           | Appendix A - LTE - NTVN | Pass    |
|                               |                | LTLV           | Appendix B - LTE - LTLV | Pass    |
|                               |                | LTHV           | Appendix C - LTE - LTHV | Pass    |
|                               |                | HTLV           | Appendix D - LTE - HTLV | Pass    |
|                               |                | HTHV           | Appendix E - LTE - HTHV | Pass    |
| Requirements in EN 301 908-1  |                |                |                         |         |
| 4.2.2                         | Single Carrier | NTNV           | See Section 6.4.4       | Pass    |
| 4.2.4                         | Single Carrier | NTNV           | See Section 6.4.5       | Pass    |

## 6.4.2 Receiver blocking characteristics

## In-Band Blocking

| Band No. | Bandwidth | Channel | Downlink Configuration |               | Uplink Configuration |               | Result |
|----------|-----------|---------|------------------------|---------------|----------------------|---------------|--------|
|          |           |         | Modulation             | RB allocation | Modulation           | RB allocation |        |
| Band 1   | 5MHz      | Middle  | QPSK                   | 25            | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 20            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 15            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | N/A           | PASS   |
|          | 20MHz     | Middle  | QPSK                   | 100           | QPSK                 | 100           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 75            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 50            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 25            | PASS   |
| Band 3   | 1.4MHz    | Middle  | QPSK                   | 6             | QPSK                 | 6             | PASS   |
|          | 5MHz      | Middle  | QPSK                   | 25            | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 20            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 15            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | N/A           | PASS   |
|          | 20MHz     | Middle  | QPSK                   | 100           | QPSK                 | 100           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 75            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 50            | PASS   |
| Band 7   | 5MHz      | Middle  | QPSK                   | 25            | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 20            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 15            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | N/A           | PASS   |
|          | 20MHz     | Middle  | QPSK                   | 100           | QPSK                 | 100           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 75            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 50            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 25            | PASS   |
| Band 8   | 1.4MHz    | Middle  | QPSK                   | 6             | QPSK                 | 6             | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 20            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 15            | PASS   |
|          | 5MHz      | Middle  | QPSK                   | 25            | QPSK                 | N/A           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 100           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 75            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 50            | PASS   |
| Band 20  | 5MHz      | Middle  | QPSK                   | 100           | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 20            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 15            | PASS   |
|          | 20MHz     | Middle  | QPSK                   | 100           | QPSK                 | N/A           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 100           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 75            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 50            | PASS   |
| Band 20  | 5MHz      | Middle  | QPSK                   | 100           | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 20            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 15            | PASS   |
|          | 20MHz     | Middle  | QPSK                   | 100           | QPSK                 | N/A           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 100           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 75            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 50            | PASS   |
| Band 20  | 5MHz      | Middle  | QPSK                   | 100           | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 20            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 15            | PASS   |
|          | 20MHz     | Middle  | QPSK                   | 100           | QPSK                 | N/A           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 100           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 75            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 50            | PASS   |
| Band 20  | 5MHz      | Middle  | QPSK                   | 100           | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 20            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 15            | PASS   |
|          | 20MHz     | Middle  | QPSK                   | 100           | QPSK                 | N/A           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 100           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 75            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 50            | PASS   |
| Band 20  | 5MHz      | Middle  | QPSK                   | 100           | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 20            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 15            | PASS   |
|          | 20MHz     | Middle  | QPSK                   | 100           | QPSK                 | N/A           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 100           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 75            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 50            | PASS   |
| Band 20  | 5MHz      | Middle  | QPSK                   | 100           | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 20            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 15            | PASS   |
|          | 20MHz     | Middle  | QPSK                   | 100           | QPSK                 | N/A           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 100           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 75            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 50            | PASS   |
| Band 20  | 5MHz      | Middle  | QPSK                   | 100           | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 20            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 15            | PASS   |
|          | 20MHz     | Middle  | QPSK                   | 100           | QPSK                 | N/A           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 100           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 75            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 50            | PASS   |
| Band 20  | 5MHz      | Middle  | QPSK                   | 100           | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 20            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 15            | PASS   |
|          | 20MHz     | Middle  | QPSK                   | 100           | QPSK                 | N/A           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 100           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 75            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 50            | PASS   |

## Out-of-Band Blocking

| Band No. | Bandwidth | Channel | Downlink Configuration |               | Uplink Configuration |               | Result |
|----------|-----------|---------|------------------------|---------------|----------------------|---------------|--------|
|          |           |         | Modulation             | RB allocation | Modulation           | RB allocation |        |
| Band 1   | 5MHz      | Middle  | QPSK                   | 25            | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 20            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 15            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | N/A           | PASS   |
|          | 20MHz     | Middle  | QPSK                   | 100           | QPSK                 | 100           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 75            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 50            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 20            | PASS   |
| Band 3   | 1.4MHz    | Middle  | QPSK                   | 6             | QPSK                 | 6             | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 25            | PASS   |
|          | 5MHz      | Middle  | QPSK                   | 25            | QPSK                 | 20            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 15            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | N/A           | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | N/A           | PASS   |
|          | 20MHz     | Middle  | QPSK                   | 100           | QPSK                 | 100           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 75            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 50            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 20            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 20            | PASS   |
| Band 7   | 5MHz      | Middle  | QPSK                   | 25            | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 20            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 15            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | N/A           | PASS   |
|          | 20MHz     | Middle  | QPSK                   | 100           | QPSK                 | 100           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 75            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 50            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 20            | PASS   |
| Band 8   | 1.4MHz    | Middle  | QPSK                   | 6             | QPSK                 | 6             | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 25            | PASS   |
|          | 5MHz      | Middle  | QPSK                   | 25            | QPSK                 | 20            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 15            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | N/A           | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | N/A           | PASS   |
|          | 20MHz     | Middle  | QPSK                   | 100           | QPSK                 | 100           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 75            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 50            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 25            | PASS   |
| Band 20  | 5MHz      | Middle  | QPSK                   | 25            | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 20            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 15            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | N/A           | PASS   |
|          | 20MHz     | Middle  | QPSK                   | 100           | QPSK                 | 100           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 75            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 50            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 20            | PASS   |

## Narrow Band Blocking

| Band No. | Bandwidth | Channel | Downlink Configuration |               | Uplink Configuration |               | Result |
|----------|-----------|---------|------------------------|---------------|----------------------|---------------|--------|
|          |           |         | Modulation             | RB allocation | Modulation           | RB allocation |        |
| Band 1   | 5MHz      | Middle  | QPSK                   | 25            | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 20            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 15            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | N/A           | PASS   |
|          | 20MHz     | Middle  | QPSK                   | 100           | QPSK                 | 100           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 75            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 50            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 20            | PASS   |
| Band 3   | 1.4MHz    | Middle  | QPSK                   | 6             | QPSK                 | 6             | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 25            | PASS   |
|          | 5MHz      | Middle  | QPSK                   | 25            | QPSK                 | 20            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 15            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | N/A           | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 20            | PASS   |
|          | 20MHz     | Middle  | QPSK                   | 100           | QPSK                 | 100           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 75            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 50            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 20            | PASS   |
| Band 7   | 5MHz      | Middle  | QPSK                   | 25            | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 20            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 15            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | N/A           | PASS   |
|          | 20MHz     | Middle  | QPSK                   | 100           | QPSK                 | 100           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 75            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 50            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 20            | PASS   |
| Band 8   | 1.4MHz    | Middle  | QPSK                   | 6             | QPSK                 | 6             | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 25            | PASS   |
|          | 5MHz      | Middle  | QPSK                   | 25            | QPSK                 | 20            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 15            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | N/A           | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 20            | PASS   |
|          | 20MHz     | Middle  | QPSK                   | 100           | QPSK                 | 100           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 75            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 50            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 25            | PASS   |
| Band 20  | 5MHz      | Middle  | QPSK                   | 25            | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 20            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 15            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | N/A           | PASS   |
|          | 20MHz     | Middle  | QPSK                   | 100           | QPSK                 | 100           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 75            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 50            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 20            | PASS   |

## 6.4.3 Receiver spurious response

| Band No. | Bandwidth | Channel | Downlink Configuration |               | Uplink Configuration |               | Result |
|----------|-----------|---------|------------------------|---------------|----------------------|---------------|--------|
|          |           |         | Modulation             | RB allocation | Modulation           | RB allocation |        |
| Band 1   | 5MHz      | Middle  | QPSK                   | 25            | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 20            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 15            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | N/A           | PASS   |
|          | 20MHz     | Middle  | QPSK                   | 100           | QPSK                 | 100           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 75            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 50            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 20            | PASS   |
| Band 3   | 1.4MHz    | Middle  | QPSK                   | 6             | QPSK                 | 6             | PASS   |
|          | 5MHz      | Middle  | QPSK                   | 25            | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 20            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 15            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | N/A           | PASS   |
|          | 20MHz     | Middle  | QPSK                   | 100           | QPSK                 | 100           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 75            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 50            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 20            | PASS   |
| Band 7   | 5MHz      | Middle  | QPSK                   | 25            | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 20            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 15            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | N/A           | PASS   |
|          | 20MHz     | Middle  | QPSK                   | 100           | QPSK                 | 100           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 75            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 50            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 20            | PASS   |
| Band 8   | 1.4MHz    | Middle  | QPSK                   | 6             | QPSK                 | 6             | PASS   |
|          | 5MHz      | Middle  | QPSK                   | 25            | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 20            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 15            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | N/A           | PASS   |
|          | 20MHz     | Middle  | QPSK                   | 100           | QPSK                 | 100           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 75            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 50            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 20            | PASS   |
| Band 20  | 5MHz      | Middle  | QPSK                   | 25            | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 20            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | 15            | PASS   |
|          |           |         | QPSK                   | 25            | QPSK                 | N/A           | PASS   |
|          | 20MHz     | Middle  | QPSK                   | 100           | QPSK                 | 100           | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 75            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 50            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 25            | PASS   |
|          |           |         | QPSK                   | 100           | QPSK                 | 20            | PASS   |

## 6.4.4 Radiated spurious emissions

| LTE Band 1 - Middle channel - Traffic mode |                   |            |        |  |             |
|--|-------------------|------------|--------|--|-------------|
| Frequency (MHz)                            | Spurious Emission | Level(dBm) |        | Limit (dBm)                                    | Test Result |
|  |                   | 5MHz       | 20MHz  |  |             |
| 30.32                                      | Vertical          | -68.25     | -68.10 | -36 dBm below 1GHz,<br><br>-30 dBm above 1GHz. | Pass        |
| 52.03                                      | V                 | -67.41     | -67.98 |  |             |
| 3900.00                                    | V                 | -42.58     | -41.26 |  |             |
| 5850.00                                    | V                 | -41.42     | -42.01 |  |             |
| 193.10                                     | Horizontal        | -66.25     | -64.19 |  |             |
| 259.23                                     | H                 | -64.77     | -65.91 |  |             |
| 3900.00                                    | H                 | -44.18     | -45.26 |  |             |
| 5850.00                                    | H                 | -42.78     | -41.98 |  |             |
| LTE Band 1 - Middle channel - Idle mode    |                   |            |        |  |             |
| Frequency (MHz)                            | Spurious Emission | Level(dBm) |        | Limit (dBm)                                    | Test Result |
|  |                   | 5MHz       | 20MHz  |  |             |
| 30.32                                      | Vertical          | -69.25     | -64.12 | -57 dBm below 1GHz,<br><br>-47 dBm above 1GHz. | Pass        |
| 52.03                                      | V                 | -67.42     | -65.25 |  |             |
| 3900.00                                    | V                 | -59.02     | -60.13 |  |             |
| 193.10                                     | Horizontal        | -64.79     | -66.23 |  |             |
| 259.23                                     | H                 | -65.19     | -68.96 |  |             |
| 3900.00                                    | H                 | -60.34     | -59.12 |  |             |

| LTE Band 3 - Middle channel - Traffic mode |                   |            |        |        |  |             |
|--|-------------------|------------|--------|--------|--|-------------|
| Frequency (MHz)                            | Spurious Emission | Level(dBm) |        |        | Limit (dBm)                                    | Test Result |
|  |                   | 1.4MHz     | 5MHz   | 20MHz  |  |             |
| 30.32                                      | Vertical          | -67.25     | -68.61 | -66.39 | -36 dBm below 1GHz,<br><br>-30 dBm above 1GHz. | Pass        |
| 52.03                                      | V                 | -68.25     | -67.49 | -65.33 |  |             |
| 3495.00                                    | V                 | -44.20     | -45.25 | -44.29 |  |             |
| 5242.50                                    | V                 | -37.75     | -36.26 | -35.17 |  |             |
| 193.10                                     | Horizontal        | -66.25     | -65.17 | -64.39 |  |             |
| 259.23                                     | H                 | -68.02     | -67.62 | -66.93 |  |             |
| 3495.00                                    | H                 | -43.41     | -42.25 | -41.62 |  |             |
| 5242.50                                    | H                 | -32.57     | -33.66 | -32.52 |  |             |
| LTE Band 3 - Middle channel - Idle mode    |                   |            |        |        |  |             |
| Frequency (MHz)                            | Spurious Emission | Level(dBm) |        |        | Limit (dBm)                                    | Test Result |
|  |                   | 1.4MHz     | 5MHz   | 20MHz  |  |             |
| 30.32                                      | Vertical          | -65.20     | -69.17 | -68.25 | -57 dBm below 1GHz,<br><br>-47 dBm above 1GHz. | Pass        |
| 52.03                                      | V                 | -66.31     | -67.40 | -68.55 |  |             |
| 3495.00                                    | V                 | -61.25     | -59.40 | -59.17 |  |             |
| 193.10                                     | Horizontal        | -64.25     | -65.26 | -66.25 |  |             |
| 259.23                                     | H                 | -66.79     | -64.19 | -65.21 |  |             |
| 3495.00                                    | H                 | -59.19     | -60.37 | -63.32 |  |             |

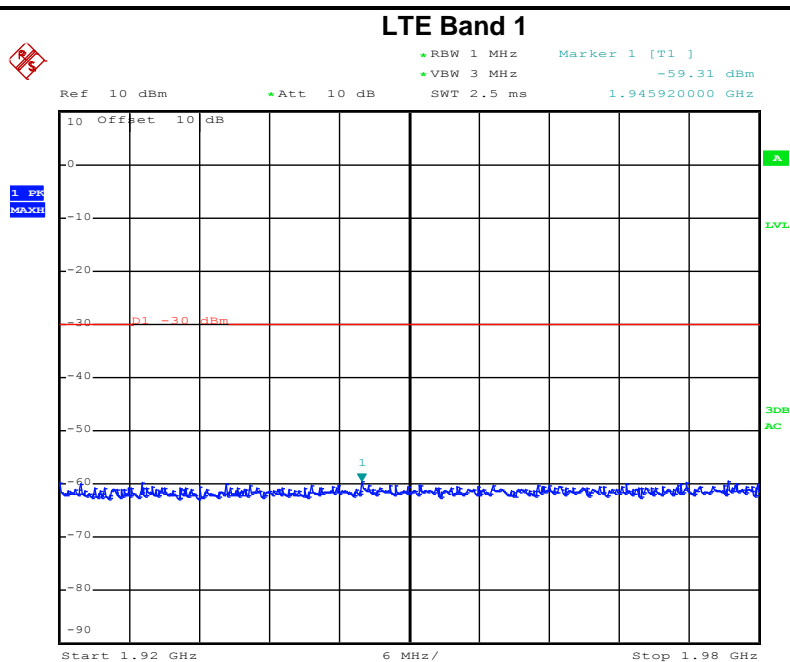


| LTE Band 7 - Middle channel - Traffic mode |                   |            |        |  |             |
|--|-------------------|------------|--------|--|-------------|
| Frequency (MHz)                            | Spurious Emission | Level(dBm) |        | Limit (dBm)                                    | Test Result |
|  |                   | 5MHz       | 20MHz  |  |             |
| 30.32                                      | Vertical          | -68.25     | -67.49 | -36 dBm below 1GHz,<br><br>-30 dBm above 1GHz. | Pass        |
| 52.03                                      | V                 | -66.32     | -68.26 |  |             |
| 5070.00                                    | V                 | -44.03     | -45.77 |  |             |
| 7605.00                                    | V                 | -31.57     | -32.69 |  |             |
| 193.10                                     | Horizontal        | -63.25     | -65.41 |  |             |
| 259.23                                     | H                 | -66.88     | -65.19 |  |             |
| 5070.00                                    | H                 | -42.34     | -41.52 |  |             |
| 7605.00                                    | H                 | -34.95     | -33.69 |  |             |
| LTE Band 7 - Middle channel - Idle mode    |                   |            |        |  |             |
| Frequency (MHz)                            | Spurious Emission | Level(dBm) |        | Limit (dBm)                                    | Test Result |
|  |                   | 5MHz       | 20MHz  |  |             |
| 30.32                                      | Vertical          | -65.26     | -64.73 | -57 dBm below 1GHz,<br><br>-47 dBm above 1GHz. | Pass        |
| 52.03                                      | V                 | -68.56     | -69.25 |  |             |
| 5070.00                                    | V                 | -60.37     | -59.36 |  |             |
| 193.10                                     | Horizontal        | -66.45     | -64.71 |  |             |
| 259.23                                     | H                 | -64.19     | -65.26 |  |             |
| 5070.00                                    | H                 | -59.02     | -61.47 |  |             |

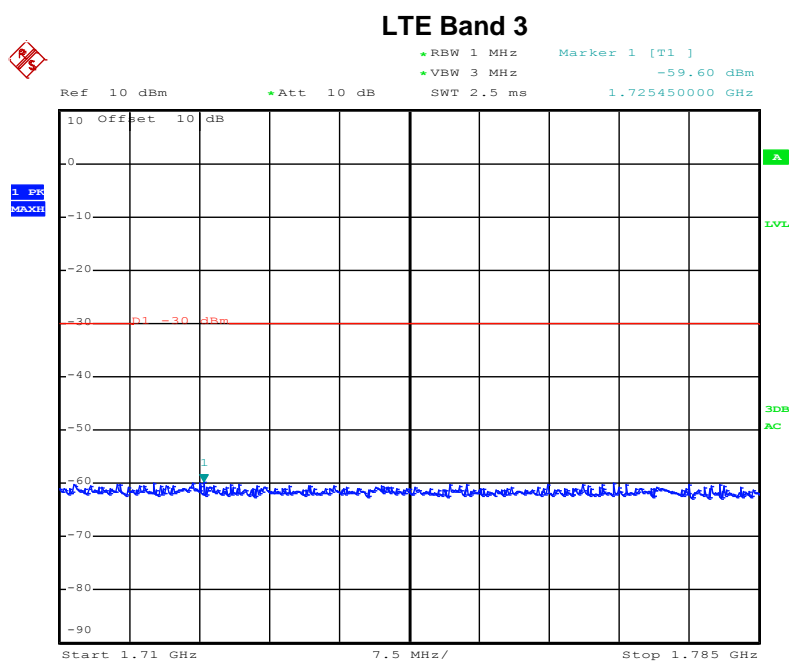
| LTE Band 8 - Middle channel - Traffic mode |                      |            |        |        |  |             |
|--|----------------------|------------|--------|--------|--|-------------|
| Frequency<br>(MHz)                         | Spurious<br>Emission | Level(dBm) |        |        | Limit (dBm)  | Test Result |
|  |                      | 1.4MHz     | 5MHz   | 20MHz  |  |             |
| 30.32                                      | Vertical             | -66.25     | -67.36 | -68.29 | -36 dBm<br>below 1GHz,<br><br>-30 dBm<br>above 1GHz. | Pass        |
| 52.03                                      | V                    | -65.79     | -64.13 | -67.66 |  |             |
| 1795.00                                    | V                    | -51.91     | -52.25 | -53.12 |  |             |
| 2692.50                                    | V                    | -53.37     | -54.10 | -53.79 |  |             |
| 193.10                                     | Horizontal           | -66.25     | -64.15 | -65.38 |  |             |
| 259.23                                     | H                    | -65.19     | -63.34 | -64.70 |  |             |
| 1795.00                                    | H                    | -52.46     | -51.32 | -49.62 |  |             |
| 2692.50                                    | H                    | -50.95     | -48.25 | -47.13 |  |             |
| LTE Band 8 - Middle channel - Idle mode    |                      |            |        |        |  |             |
| Frequency<br>(MHz)                         | Spurious<br>Emission | Level(dBm) |        |        | Limit (dBm)  | Test Result |
|  |                      | 1.4MHz     | 5MHz   | 20MHz  |  |             |
| 30.32                                      | Vertical             | -66.14     | -65.73 | -64.19 | -57 dBm<br>below 1GHz,<br><br>-47 dBm<br>above 1GHz. | Pass        |
| 52.03                                      | V                    | -64.95     | -65.39 | -65.31 |  |             |
| 2692.50                                    | V                    | -58.19     | -59.79 | -63.15 |  |             |
| 193.10                                     | Horizontal           | -66.32     | -65.41 | -63.72 |  |             |
| 259.23                                     | H                    | -66.47     | -68.25 | -63.43 |  |             |
| 2692.50                                    | H                    | -59.02     | -62.26 | -61.77 |  |             |

| LTE Band 20 - Middle channel - Traffic mode |                   |            |        |  |             |
|---|-------------------|------------|--------|--|-------------|
| Frequency (MHz)                             | Spurious Emission | Level(dBm) |        | Limit (dBm)                                    | Test Result |
|   |                   | 5MHz       | 20MHz  |  |             |
| 30.32                                       | Vertical          | -67.26     | -68.32 | -36 dBm below 1GHz,<br><br>-30 dBm above 1GHz. | Pass        |
| 52.03                                       | V                 | -65.29     | -66.25 |  |             |
| 1694.00                                     | V                 | -58.04     | -57.32 |  |             |
| 2541.00                                     | V                 | -54.92     | -53.99 |  |             |
| 193.10                                      | Horizontal        | -61.45     | -65.29 |  |             |
| 259.23                                      | H                 | -65.18     | -63.47 |  |             |
| 1694.00                                     | H                 | -58.46     | -57.21 |  |             |
| 2541.00                                     | H                 | -55.49     | -54.19 |  |             |
| LTE Band 20 - Middle channel - Idle mode    |                   |            |        |  |             |
| Frequency (MHz)                             | Spurious Emission | Level(dBm) |        | Limit (dBm)                                    | Test Result |
|   |                   | 5MHz       | 20MHz  |  |             |
| 30.32                                       | Vertical          | -67.25     | -68.62 | -57 dBm below 1GHz,<br><br>-47 dBm above 1GHz. | Pass        |
| 52.03                                       | V                 | -68.16     | -68.34 |  |             |
| 1694.00                                     | V                 | -59.02     | -62.77 |  |             |
| 193.10                                      | Horizontal        | -65.21     | -64.75 |  |             |
| 259.23                                      | H                 | -63.32     | -65.18 |  |             |
| 1694.00                                     | H                 | -60.17     | -59.39 |  |             |

## 6.4.5 Control and monitoring functions

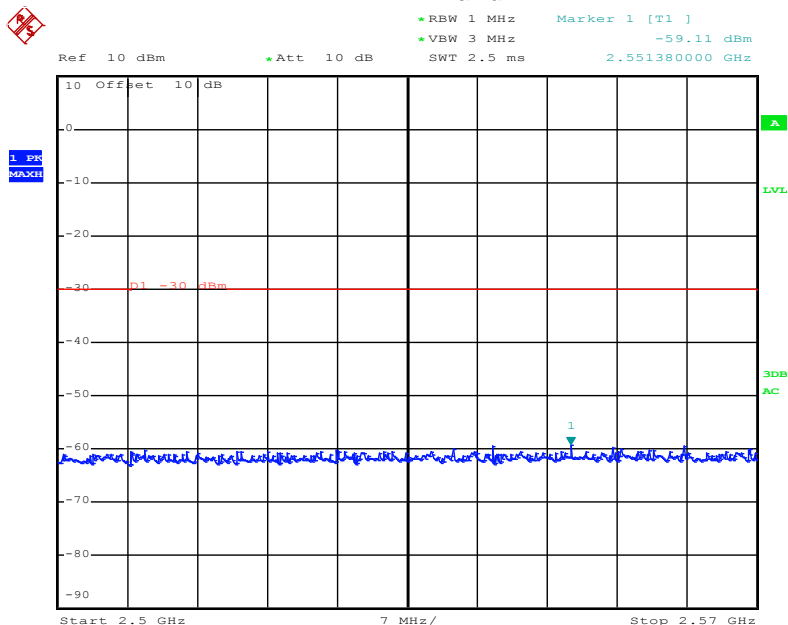


Date: 16.APR.2020 15:41:15



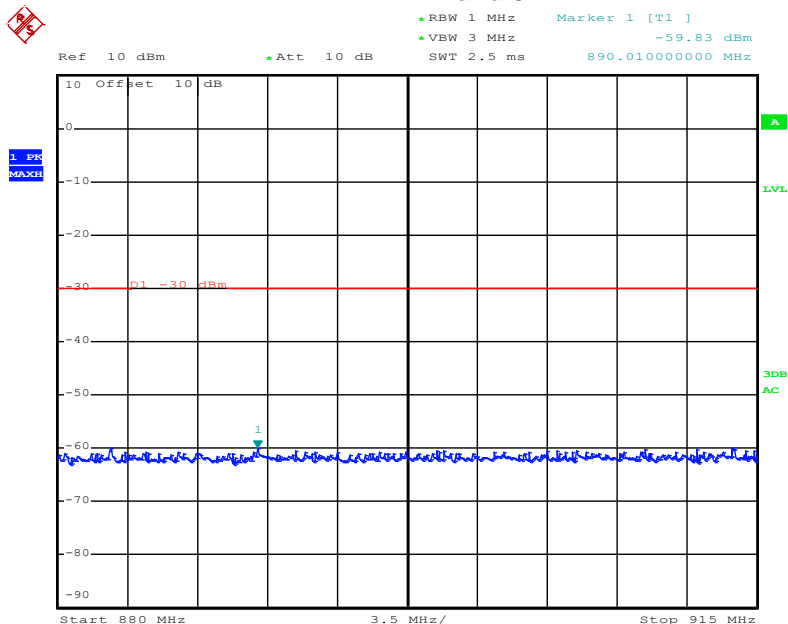
Date: 16.APR.2020 15:44:44

## LTE Band 7

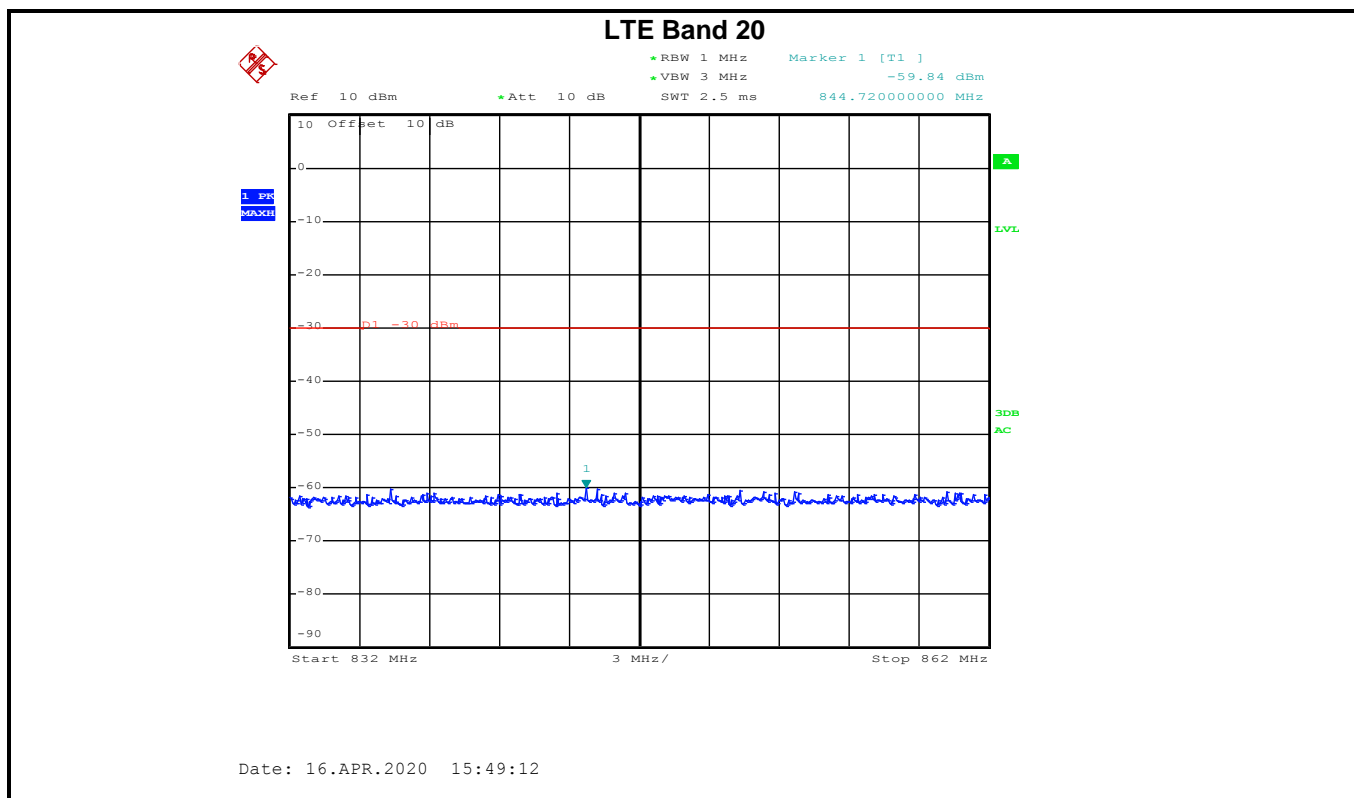


Date: 16.APR.2020 15:45:33

## LTE Band 8

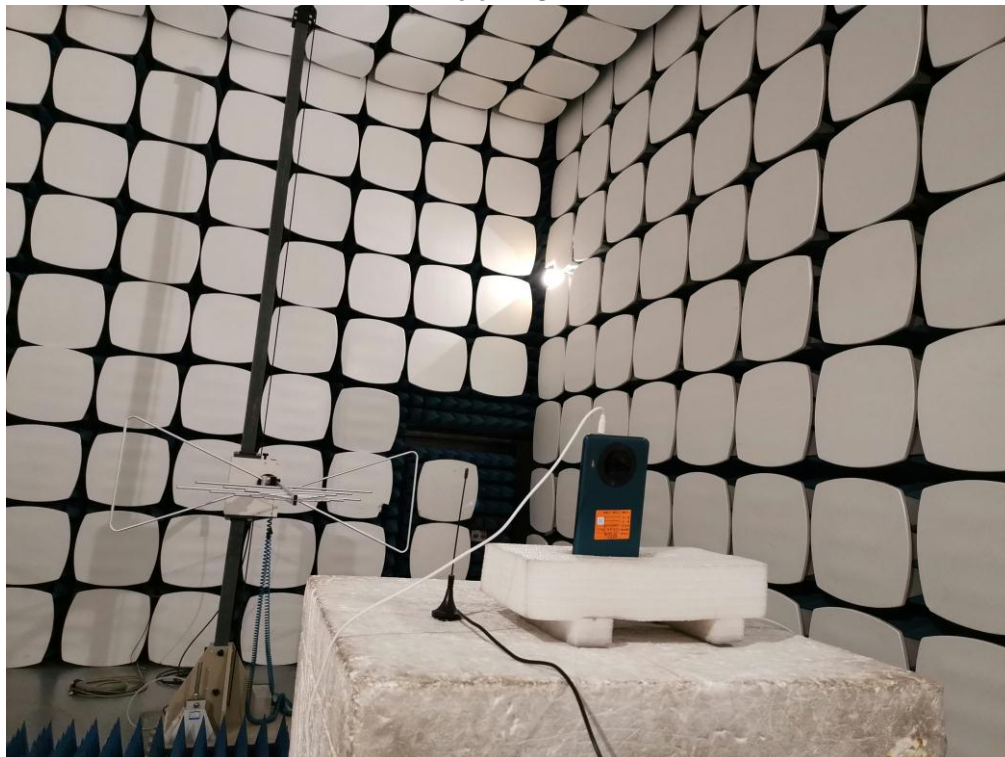


Date: 16.APR.2020 15:48:22

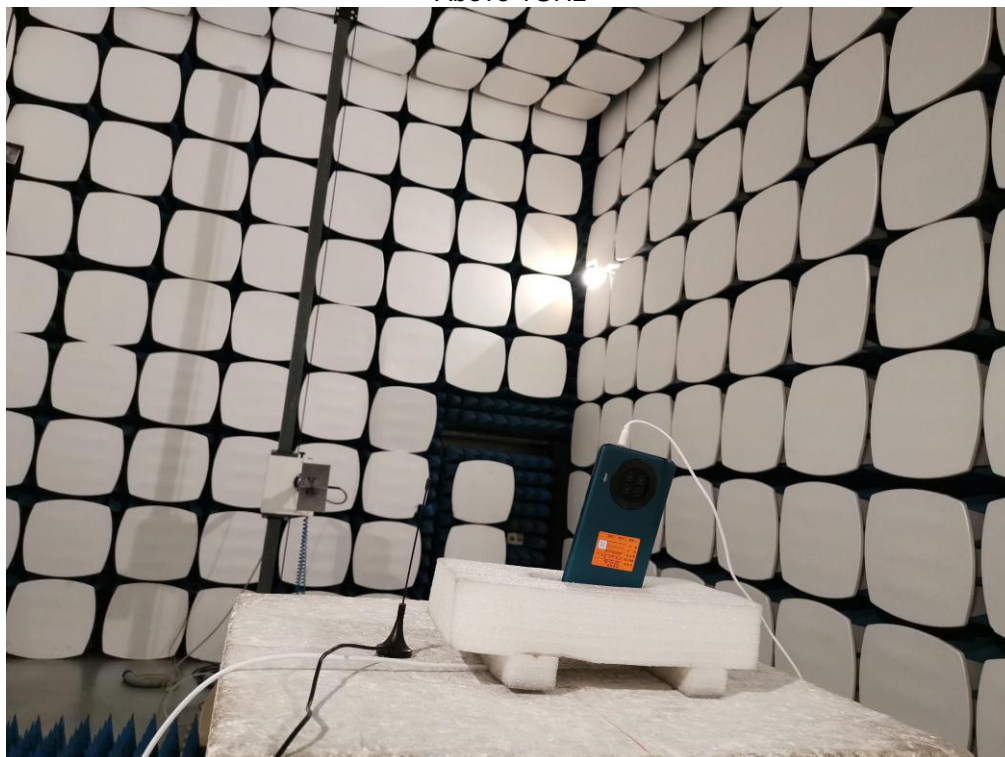


## 7 Test Setup Photo

Radiated Spurious Emission  
Below 1GHz



Above 1GHz



## **8 EUT Constructional Details**

Reference to the test report No. CCISE200402401

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