

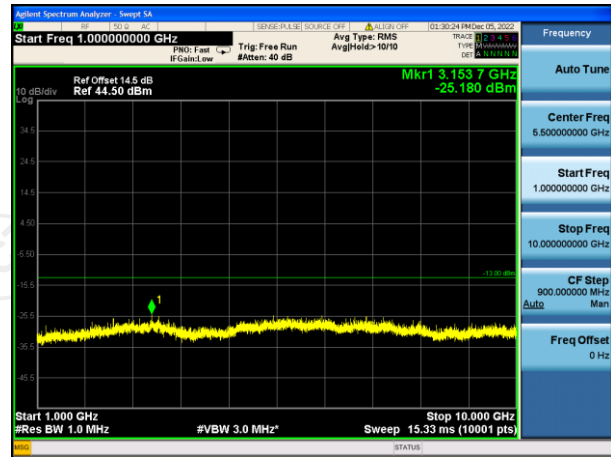
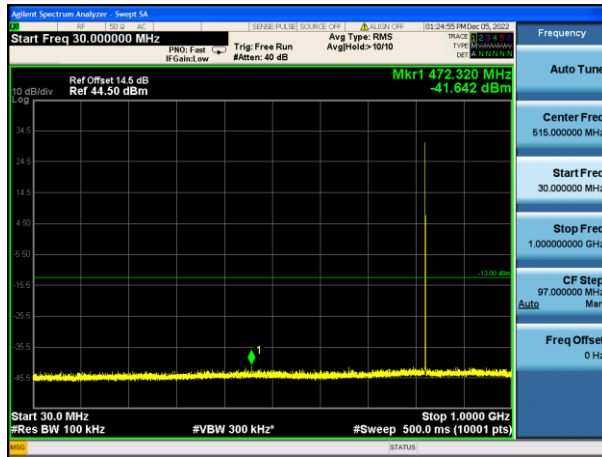
Band:

GSM 850

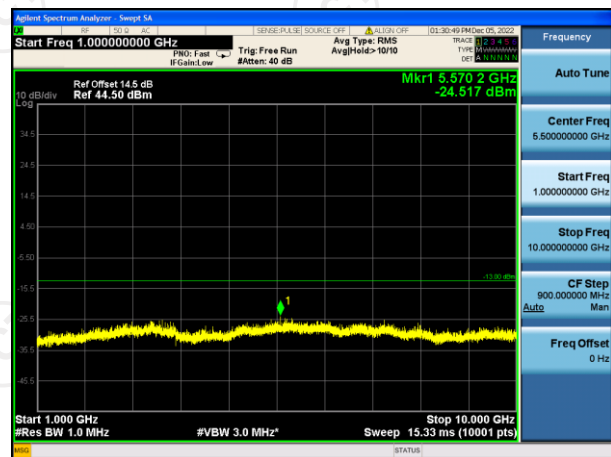
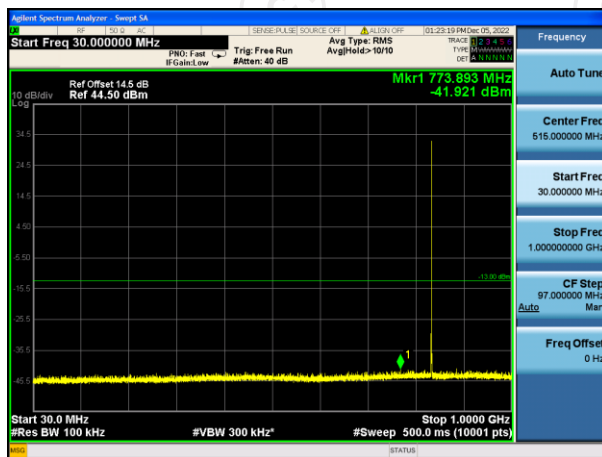
Test Mode:

GSM Link (GMSK)

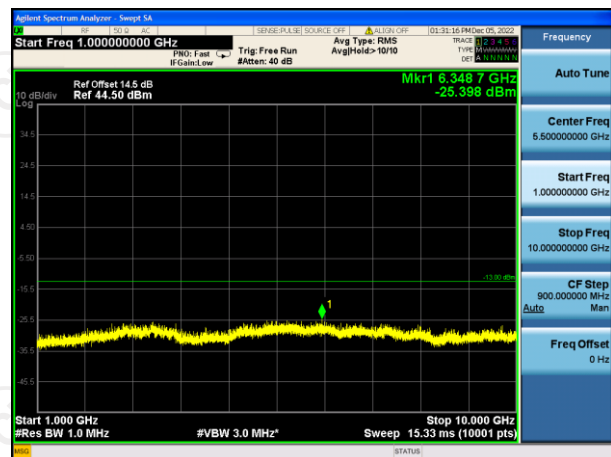
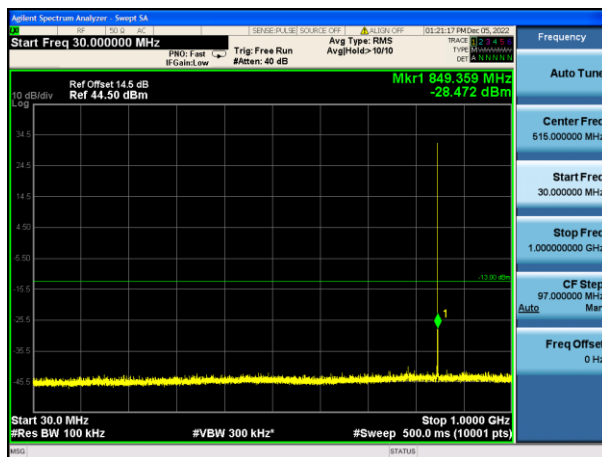
## Conducted Spurious Emission on Channel 128



## Conducted Spurious Emission on Channel 190



## Conducted Spurious Emission on Channel 251



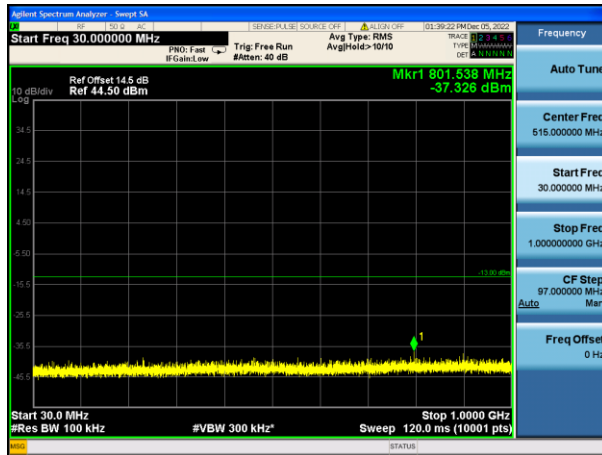
Band:

GSM 1900

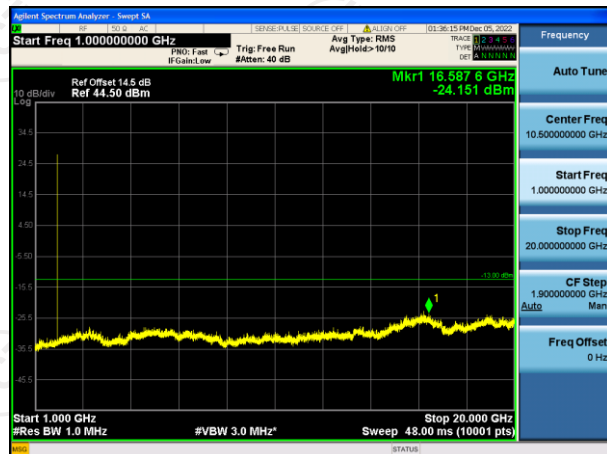
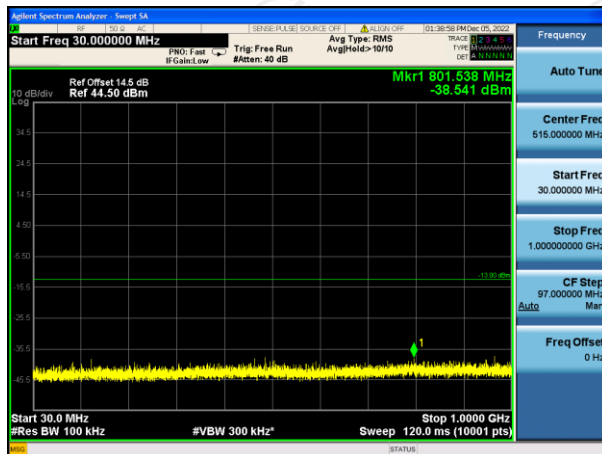
Test Mode:

GSM Link (GMSK)

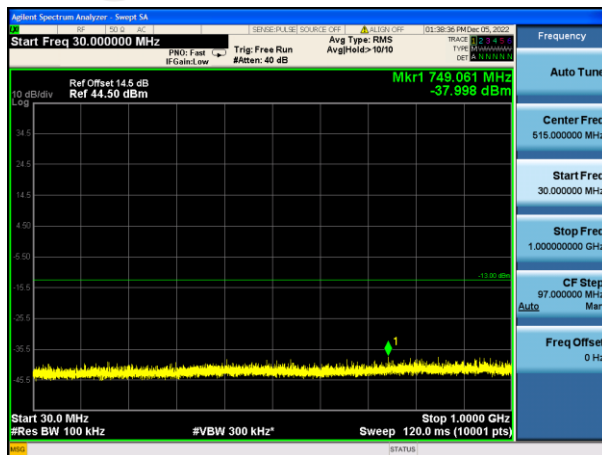
## Conducted Spurious Emission on Channel 512



## Conducted Spurious Emission on Channel 661



## Conducted Spurious Emission on Channel 810



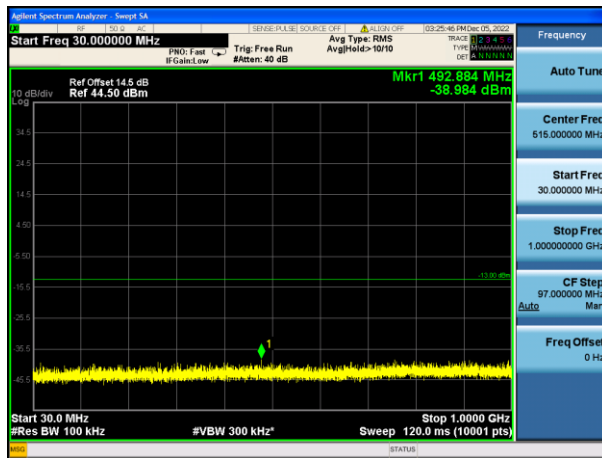
Band:

WCDMA Band V

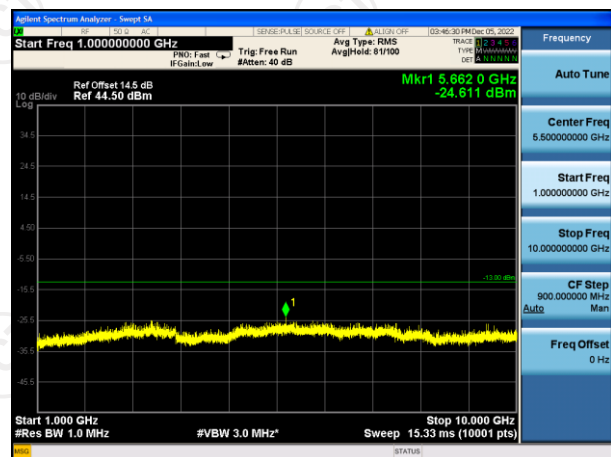
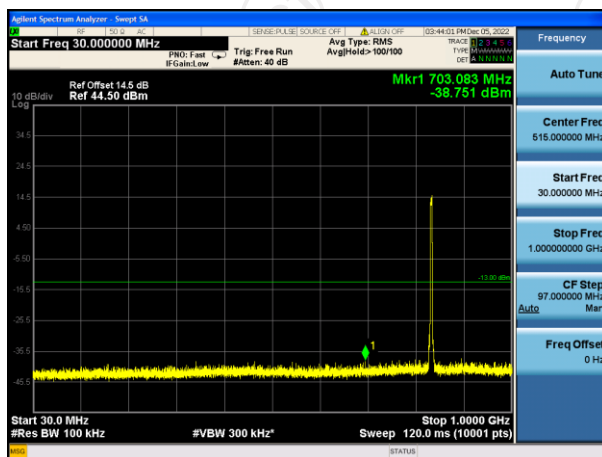
Test Mode:

RMC 12.2Kbps Link  
(QPSK)

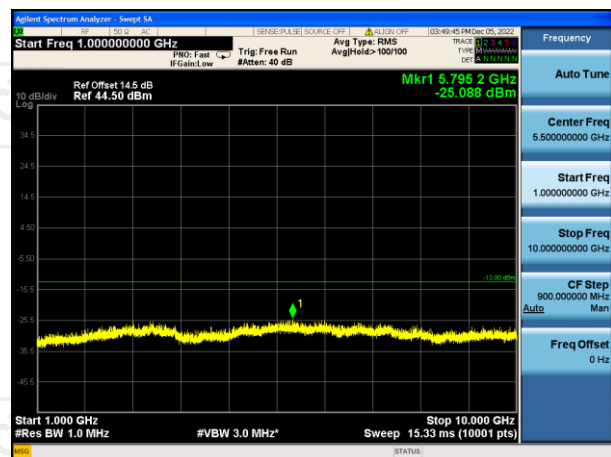
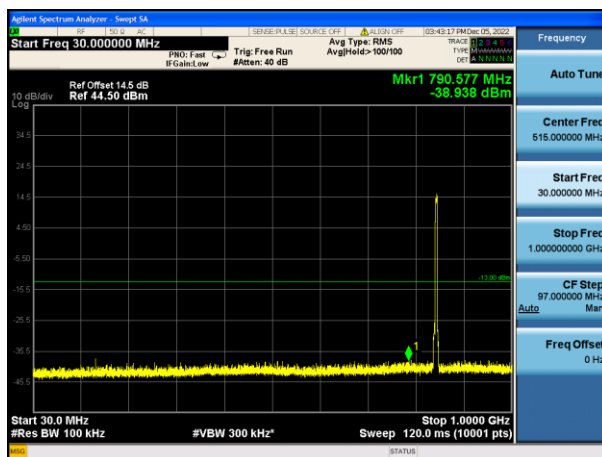
## Conducted Spurious Emission on Channel 4132



## Conducted Spurious Emission on Channel 4182



## Conducted Spurious Emission on Channel 4233



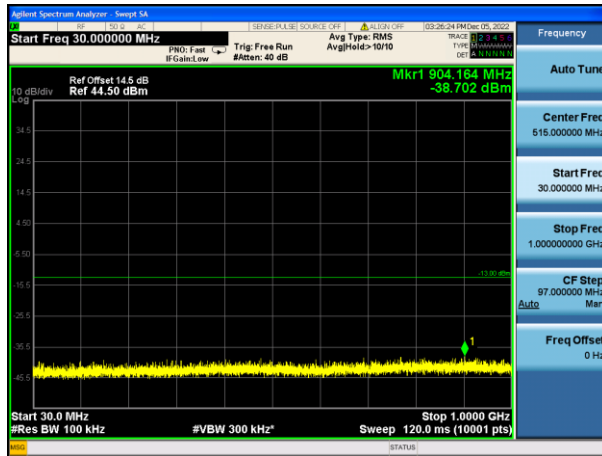
Band:

WCDMA Band IV

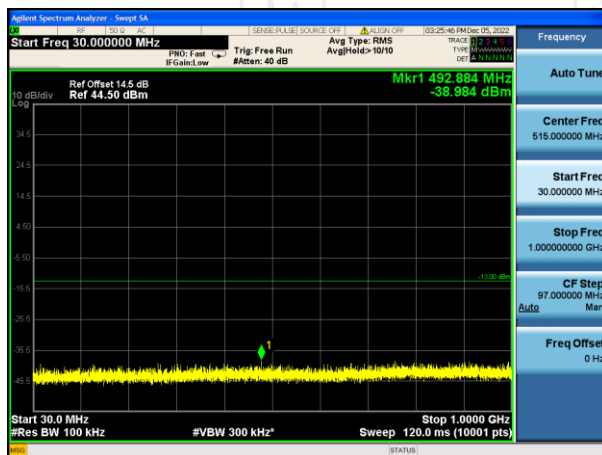
Test Mode:

RMC 12.2Kbps Link  
(QPSK)

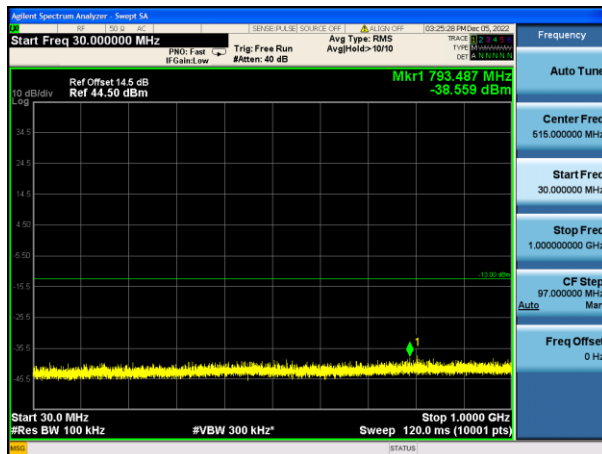
## Conducted Spurious Emission on Channel 1312



## Conducted Spurious Emission on Channel 1413



## Conducted Spurious Emission on Channel 1513



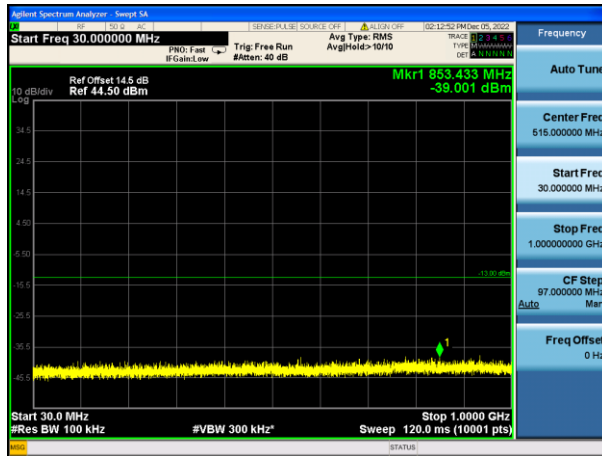
Band:

WCDMA Band II

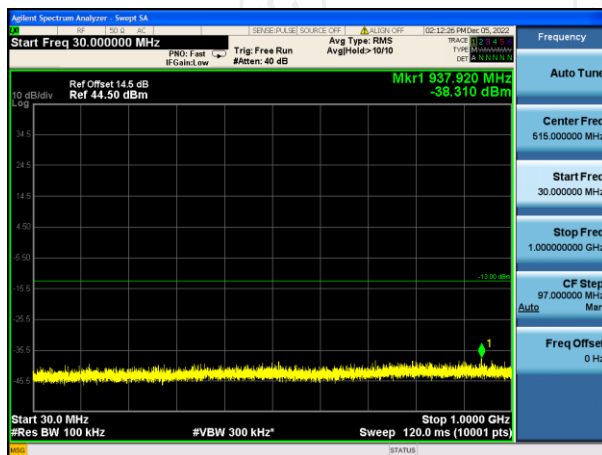
Test Mode:

RMC 12.2Kbps Link  
(QPSK)

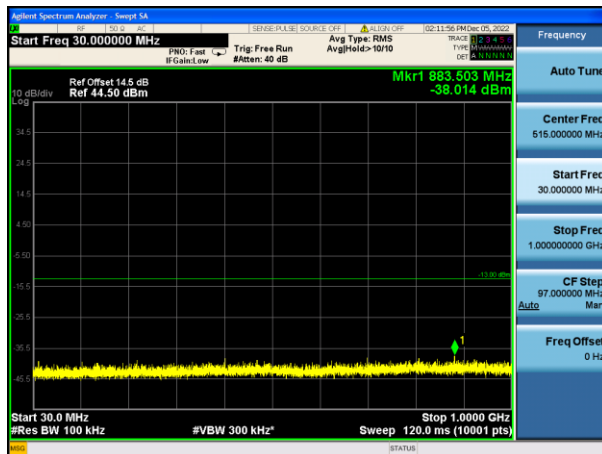
## Conducted Spurious Emission on Channel 9262



## Conducted Spurious Emission on Channel 9400



## Conducted Spurious Emission on Channel 9538

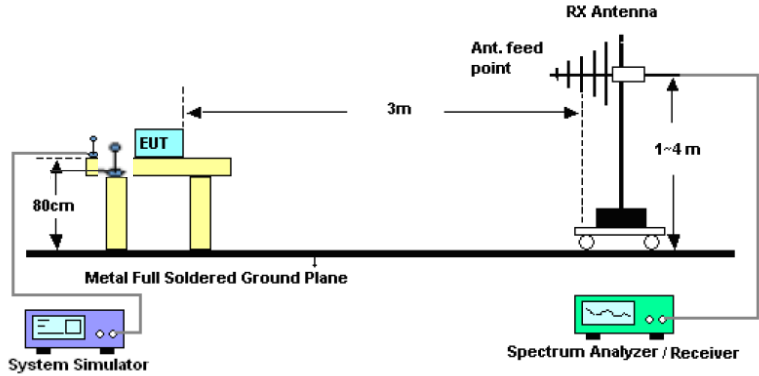
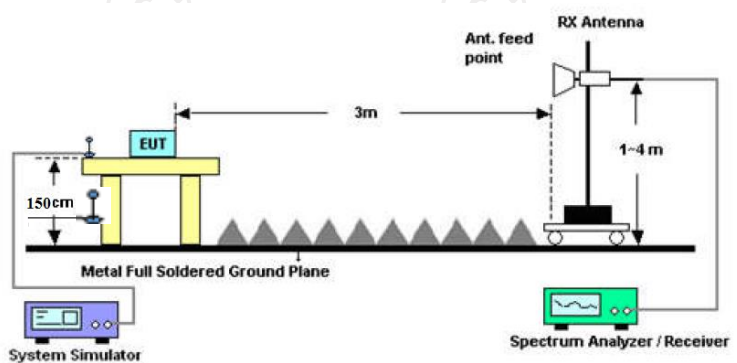


| GSM1900(GSM) Conducted Spurious Emission for Below 1G                                                                                                                                                                           |           |                   |           |                        |                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------------------|-----------|------------------------|----------------|
| Channel                                                                                                                                                                                                                         | RBW (KHz) | Test result (dBm) | RBW (MHz) | Calculate result (dBm) | Limit (-13dBm) |
| 512                                                                                                                                                                                                                             | 100       | -37.33            | 1         | -27.33                 | Pass           |
| 661                                                                                                                                                                                                                             | 100       | -38.54            | 1         | -28.54                 | Pass           |
| 810                                                                                                                                                                                                                             | 100       | -38.00            | 1         | -28.00                 | Pass           |
| WCDMA Band II(RMC 12.2Kbps) Conducted Spurious Emission for Below 1G                                                                                                                                                            |           |                   |           |                        |                |
| Channel                                                                                                                                                                                                                         | RBW (KHz) | Test result (dBm) | RBW (MHz) | Calculate result (dBm) | Limit (-13dBm) |
| 9262                                                                                                                                                                                                                            | 100       | -39.00            | 1         | -29.00                 | Pass           |
| 9400                                                                                                                                                                                                                            | 100       | -38.31            | 1         | -28.31                 | Pass           |
| 9538                                                                                                                                                                                                                            | 100       | -38.01            | 1         | -28.01                 | Pass           |
| WCDMA Band IV(RMC 12.2Kbps) Conducted Spurious Emission for Below 1G                                                                                                                                                            |           |                   |           |                        |                |
| Channel                                                                                                                                                                                                                         | RBW (KHz) | Test result (dBm) | RBW (MHz) | Calculate result (dBm) | Limit (-13dBm) |
| 1312                                                                                                                                                                                                                            | 100       | -38.70            | 1         | -28.70                 | Pass           |
| 1413                                                                                                                                                                                                                            | 100       | -38.98            | 1         | -28.98                 | Pass           |
| 1513                                                                                                                                                                                                                            | 100       | -38.56            | 1         | -28.56                 | Pass           |
| <p>Compensate 10dB is for Exchange rate of RBW</p> <p>Exchange rate of RBW = <math>10 \cdot \log_{10}(\text{Reference bandwidth}/\text{RBW at measurement}) = 10[\text{dB}]</math></p> <p>where Reference bandwidth = 1 MHz</p> |           |                   |           |                        |                |

**Note:** Measurements were conducted in all GMSK modulation (GSM/GPRS) and the worst case Mode (GSM) was submitted only.

## 5.5. Effective Radiated Power and Effective Isotropic Radiated Power Measurement

### 5.5.1. Test Specification

|                   |                                                                                                                |               |            |
|-------------------|----------------------------------------------------------------------------------------------------------------|---------------|------------|
| Test Requirement: | FCC part 22.913(a) and FCC part 24.232(c)<br>FCC part 27.50(d)                                                 |               |            |
| Test Method:      | FCC KDB 971168 D01v03r01                                                                                       |               |            |
| Receiver Setup:   |                                                                                                                | GSM/GPRS/EDGE | WCDMA/HSPA |
|                   | SPAN                                                                                                           | 500kHz        | 10MHz      |
|                   | RBW                                                                                                            | 10kHz         | 100kHz     |
|                   | VBW                                                                                                            | 30kHz         | 300kHz     |
|                   | Detector                                                                                                       | RMS           | RMS        |
|                   | Trace                                                                                                          | Average       | Average    |
|                   | Average Type                                                                                                   | Power         | Power      |
|                   | Sweep Count                                                                                                    | 100           | 100        |
| Limit:            | GSM850: 7W ERP<br>PCS1900: 2W EIRP<br>WCDMA Band V: 7W ERP<br>WCDMA Band II: 2W EIRP<br>WCDMA Band IV: 1W EIRP |               |            |
| Test Setup:       | From 30MHz to 1GHz                                                                                             |               |            |
|                   |                            |               |            |
| Test Setup:       | Above 1GHz                                                                                                     |               |            |
|                   |                            |               |            |

## Test Procedure:

1. The testing follows FCC KDB 971168 D01v03r01 Section 5.8. and ANSI / TIA-603-D-2010 Section 2.2.17.
2. The EUT was placed on a non-conductive rotating platform 0.8 meters high in a semi-anechoic chamber. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and a spectrum analyzer with RMS detector per section 5. of KDB 971168 D01v03.
3. Key the transmitter, then rotate the EUT 360° azimuthally and record spectrum analyzer power level (LVL) measurements at angular increments that are sufficiently small to permit resolution of all peaks. If a standard radiation test site is used, raise and lower the test antenna to obtain a maximum reading at each angular increment.
4. Replace the transmitter under test with a substitution antenna. The center of the antenna should be at the same location as the center of the antenna under test.
5. Connect the antenna to a signal generator with a known output power and record the path loss (in dB) as LOSS. If a standard radiation test site is used, raise and lower the test antenna to obtain a maximum reading.  

$$\text{LOSS} = \text{Generator Output Power (dBm)} - \text{Analyzer reading (dBm)}$$
6. Determine the effective radiated output power at each angular position from the readings in steps 3) and 5) using the following equation:  

$$\text{ERP (dBm)} = \text{LVL (dBm)} + \text{LOSS (dB)}$$
7. The maximum ERP is the maximum value determined in the preceding step.
8. Calculating ERP:  

$$\text{ERP (dBm)} = \text{Output Power (dBm)} - \text{Losses (dB)} + \text{Antenna Gain (dBd)}$$

$$\text{Antenna Gain (dBd)} = \text{Antenna Gain (dBi)} - 2.15$$

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

## Test results:

PASS

### 5.5.2. Test Instruments

| Radiated Emission Test Site (966)    |                    |            |               |                 |
|--------------------------------------|--------------------|------------|---------------|-----------------|
| Name of Equipment                    | Manufacturer       | Model      | Serial Number | Calibration Due |
| Universal Radio Communication Tester | R&S                | CMU200     | 110188        | Jul. 04, 2023   |
| Spectrum Analyzer                    | R&S                | FSQ40      | 200061        | Jul. 03, 2023   |
| Signal Generator                     | HP                 | 83623B     | 3614A00396    | Feb. 24, 2023   |
| Broadband Antenna                    | Schwarzbeck        | VULB9163   | 340           | Jul. 05, 2024   |
| Horn Antenna                         | Schwarzbeck        | BBHA 9120D | 631           | Jul. 05, 2024   |
| Broadband Antenna                    | Schwarzbeck        | VULB9163   | 412           | Jul. 05, 2024   |
| Horn Antenna                         | Schwarzbeck        | BBHA 9120D | 1201          | Jul. 05, 2024   |
| Horn Antenna                         | Schwarzbeck        | BBHA 9170  | 00956         | Apr. 10, 2023   |
| Coaxial cable                        | SKET               | RC-18G-N-M | /             | Feb. 24, 2024   |
| Coaxial cable                        | SKET               | RC_40G-K-M | /             | Feb. 24, 2024   |
| Antenna Mast                         | Keleto             | RE-AM      | /             | /               |
| EMI Test Software                    | Shurple Technology | EZ-EMC     | /             | /               |

### 5.5.3. Test Data

#### Test Result of ERP

| GSM850 (GSM) Radiated Power ERP        |            |           |                        |           |         |
|----------------------------------------|------------|-----------|------------------------|-----------|---------|
| Horizontal Polarization (Antenna Pol.) |            |           |                        |           |         |
| Frequency (MHz)                        | (EUT Pol.) | LVL (dBm) | Correction Factor (dB) | ERP (dBm) | ERP (W) |
| 824.2                                  | H          | 10.47     | 21.66                  | 29.98     | 1.00    |
| 836.6                                  | H          | 10.55     | 21.54                  | 29.94     | 0.99    |
| 848.8                                  | H          | 10.82     | 21.46                  | 30.13     | 1.03    |
| Vertical Polarization (Antenna Pol.)   |            |           |                        |           |         |
| Frequency (MHz)                        | (EUT Pol.) | LVL (dBm) | Correction Factor (dB) | ERP (dBm) | ERP (W) |
| 824.2                                  | H          | 10.39     | 21.66                  | 29.90     | 0.98    |
| 836.6                                  | H          | 10.59     | 21.54                  | 29.98     | 1.00    |
| 848.8                                  | H          | 10.71     | 21.46                  | 30.02     | 1.00    |

| GPRS 850 (1-slot) Radiated Power ERP   |            |           |                        |           |         |
|----------------------------------------|------------|-----------|------------------------|-----------|---------|
| Horizontal Polarization (Antenna Pol.) |            |           |                        |           |         |
| Frequency (MHz)                        | (EUT Pol.) | LVL (dBm) | Correction Factor (dB) | ERP (dBm) | ERP (W) |
| 824.2                                  | H          | 10.01     | 21.66                  | 29.52     | 0.90    |
| 836.6                                  | H          | 10.24     | 21.54                  | 29.63     | 0.92    |
| 848.8                                  | H          | 10.35     | 21.46                  | 29.66     | 0.92    |
| Vertical Polarization (Antenna Pol.)   |            |           |                        |           |         |
| Frequency (MHz)                        | (EUT Pol.) | LVL (dBm) | Correction Factor (dB) | ERP (dBm) | ERP (W) |
| 824.2                                  | H          | 10.25     | 21.66                  | 29.76     | 0.95    |
| 836.6                                  | H          | 10.33     | 21.54                  | 29.72     | 0.94    |
| 848.8                                  | H          | 10.37     | 21.46                  | 29.68     | 0.93    |

**Note:** All GPRS slot have been tested, but only the worst GPRS 1-slot show in this test item.

| WCDMA Band V (RMC 12.2Kbps) Radiated Power ERP |            |           |                        |           |         |
|------------------------------------------------|------------|-----------|------------------------|-----------|---------|
| Horizontal Polarization (Antenna Pol.)         |            |           |                        |           |         |
| Frequency (MHz)                                | (EUT Pol.) | LVL (dBm) | Correction Factor (dB) | ERP (dBm) | ERP (W) |
| 826.4                                          | H          | 1.01      | 21.66                  | 20.52     | 0.11    |
| 836.4                                          | H          | 1.23      | 21.54                  | 20.62     | 0.12    |
| 846.6                                          | H          | 1.55      | 21.46                  | 20.86     | 0.12    |
| Vertical Polarization (Antenna Pol.)           |            |           |                        |           |         |
| Frequency (MHz)                                | (EUT Pol.) | LVL (dBm) | Correction Factor (dB) | ERP (dBm) | ERP (W) |
| 826.4                                          | H          | 1.05      | 21.66                  | 20.56     | 0.11    |
| 836.4                                          | H          | 1.12      | 21.54                  | 20.51     | 0.11    |
| 846.6                                          | H          | 1.36      | 21.46                  | 20.67     | 0.12    |

**Note:** \* ERP = LVL (dBm) + Correction Factor (dB) - 2.15

Correction Factor= S.G. Power - Cable loss + Antenna Gain- SPA. Reading

Test Result of EIRP

| GSM1900 (GSM) Radiated Power EIRP      |            |           |                        |            |          |
|----------------------------------------|------------|-----------|------------------------|------------|----------|
| Horizontal Polarization (Antenna Pol.) |            |           |                        |            |          |
| Frequency (MHz)                        | (EUT Pol.) | LVL (dBm) | Correction Factor (dB) | EIRP (dBm) | EIRP (W) |
| 1850.2                                 | H          | 7.51      | 21.66                  | 29.17      | 0.83     |
| 1880.0                                 | H          | 7.74      | 21.54                  | 29.28      | 0.85     |
| 1909.8                                 | H          | 7.93      | 21.46                  | 29.39      | 0.87     |
| Vertical Polarization (Antenna Pol.)   |            |           |                        |            |          |
| Frequency (MHz)                        | (EUT Pol.) | LVL (dBm) | Correction Factor (dB) | EIRP (dBm) | EIRP (W) |
| 1850.2                                 | H          | 7.45      | 21.66                  | 29.11      | 0.81     |
| 1880.0                                 | H          | 7.71      | 21.54                  | 29.25      | 0.84     |
| 1909.8                                 | H          | 8.02      | 21.46                  | 29.48      | 0.89     |

| GPRS1900 (1-slot) Radiated Power EIRP  |            |           |                        |            |          |
|----------------------------------------|------------|-----------|------------------------|------------|----------|
| Horizontal Polarization (Antenna Pol.) |            |           |                        |            |          |
| Frequency (MHz)                        | (EUT Pol.) | LVL (dBm) | Correction Factor (dB) | EIRP (dBm) | EIRP (W) |
| 1850.2                                 | H          | 7.02      | 21.66                  | 28.68      | 0.74     |
| 1880.0                                 | H          | 7.14      | 21.54                  | 28.68      | 0.74     |
| 1909.8                                 | H          | 7.36      | 21.46                  | 28.82      | 0.76     |
| Vertical Polarization (Antenna Pol.)   |            |           |                        |            |          |
| Frequency (MHz)                        | (EUT Pol.) | LVL (dBm) | Correction Factor (dB) | EIRP (dBm) | EIRP (W) |
| 1850.2                                 | H          | 7.01      | 21.66                  | 28.67      | 0.74     |
| 1880.0                                 | H          | 7.23      | 21.54                  | 28.77      | 0.75     |
| 1909.8                                 | H          | 7.45      | 21.46                  | 28.91      | 0.78     |

**Note:** All GPRS slot have been tested, but only the worst GPRS 1-slot show in this test item

| WCDMA Band IV (RMC 12.2Kbps) Radiated Power EIRP |            |           |                        |            |          |
|--------------------------------------------------|------------|-----------|------------------------|------------|----------|
| Horizontal Polarization (Antenna Pol.)           |            |           |                        |            |          |
| Frequency (MHz)                                  | (EUT Pol.) | LVL (dBm) | Correction Factor (dB) | EIRP (dBm) | EIRP (W) |
| 1712.4                                           | H          | 2.08      | 21.66                  | 23.74      | 0.24     |
| 1732.6                                           | H          | 2.15      | 21.54                  | 23.69      | 0.23     |
| 1752.6                                           | H          | 2.47      | 21.46                  | 23.93      | 0.25     |
| Vertical Polarization (Antenna Pol.)             |            |           |                        |            |          |
| Frequency (MHz)                                  | (EUT Pol.) | LVL (dBm) | Correction Factor (dB) | EIRP (dBm) | EIRP (W) |
| 1712.4                                           | H          | 2.03      | 21.66                  | 23.69      | 0.23     |
| 1732.6                                           | H          | 2.21      | 21.54                  | 23.75      | 0.24     |
| 1752.6                                           | H          | 2.45      | 21.46                  | 23.91      | 0.25     |

\* EIRP = LVL (dBm) + Correction Factor (dB)

Correction Factor= S.G. Power - Cable loss + Antenna Gain- SPA. Reading

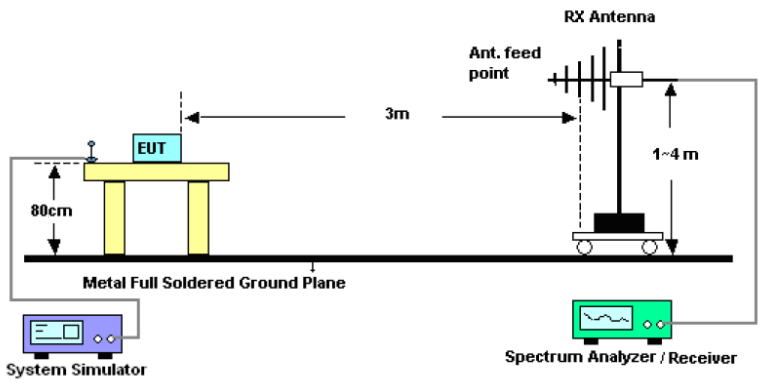
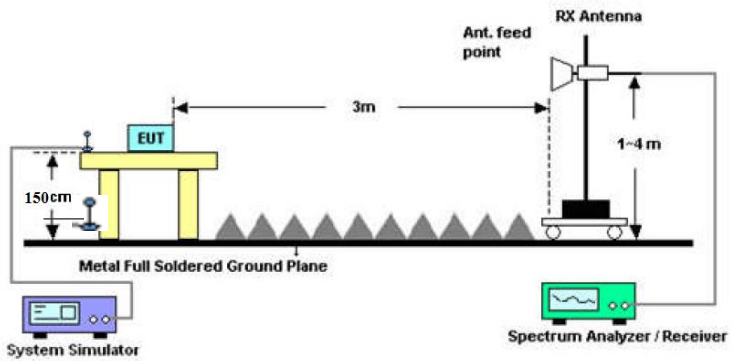
| WCDMA Band II (RMC 12.2Kbps) Radiated Power EIRP |            |           |                        |            |          |
|--------------------------------------------------|------------|-----------|------------------------|------------|----------|
| Horizontal Polarization (Antenna Pol.)           |            |           |                        |            |          |
| Frequency (MHz)                                  | (EUT Pol.) | LVL (dBm) | Correction Factor (dB) | EIRP (dBm) | EIRP (W) |
| 1852.4                                           | H          | 2.05      | 21.66                  | 23.71      | 0.23     |
| 1880.0                                           | H          | 2.21      | 21.54                  | 23.75      | 0.24     |
| 1907.6                                           | H          | 2.46      | 21.46                  | 23.92      | 0.25     |
| Vertical Polarization (Antenna Pol.)             |            |           |                        |            |          |
| Frequency (MHz)                                  | (EUT Pol.) | LVL (dBm) | Correction Factor (dB) | EIRP (dBm) | EIRP (W) |
| 1852.4                                           | H          | 2.09      | 21.66                  | 23.75      | 0.24     |
| 1880.0                                           | H          | 2.12      | 21.54                  | 23.66      | 0.23     |
| 1907.6                                           | H          | 2.43      | 21.46                  | 23.89      | 0.24     |

**Note:** \* EIRP = LVL (dBm) + Correction Factor (dB)

Correction Factor= S.G. Power - Cable loss + Substitution Antenna Gain- SPA. Reading

## 5.6. Field Strength of Spurious Radiation Measurement

### 5.6.1. Test Specification

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Test Requirement:</b> | FCC part 22.917(a) and FCC part 24.238(a)<br>FCC part 27.53(g)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Test Method:</b>      | FCC KDB 971168 D01v03r01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Operation mode:</b>   | Refer to item 3.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Limit:</b>            | -13dBm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Test setup:</b>       | <p>For 30MHz~1GHz</p>  <p>Above 1GHz</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Test Procedure:</b>   | <ol style="list-style-type: none"> <li>1. The testing follows FCC KDB 971168 D01v03r01 Section 6 and ANSI / TIA-603-D-2010 Section 2.2.12.</li> <li>2. The EUT was placed on a rotatable wooden table 0.8 meters above the ground.</li> <li>3. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.</li> <li>4. The table was rotated 360 degrees to determine the position of the highest spurious emission.</li> <li>5. The height of the receiving antenna is varied between one meter and four meters to search for the maximum spurious emission for both horizontal and vertical polarizations.</li> <li>6. Make the measurement with the spectrum analyzer's</li> </ol> |

|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                      | <p>RBW = 1MHz, VBW = 3MHz, taking record of maximum spurious emission.</p> <p>7. A horn antenna was substituted in place of the EUT and was driven by a signal generator.</p> <p>8. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.</p> <p>9. Taking the record of output power at antenna port.</p> <p>10. Repeat step 7 to step 8 for another polarization.</p> <p>11. <math>EIRP\ (dBm) = S.G.\ Power - Tx\ Cable\ Loss + Tx\ Antenna\ Gain</math></p> <p>12. <math>ERP\ (dBm) = EIRP - 2.15</math></p> <p>13. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.</p> <p>14. The limit line is derived from <math>43 + 10\log(P)</math> dB below the transmitter power P(Watts)</p> <p><math>= P(W) - [43 + 10\log(P)]\ (dB)</math></p> <p><math>= [30 + 10\log(P)]\ (dBm) - [43 + 10\log(P)]\ (dB)</math></p> <p><math>= -13dBm.</math></p> |
| <b>Test results:</b> | PASS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Remark:</b>       | All modulations have been tested, but only the worst modulation show in this test item.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

### 5.6.2. Test Instruments

| Radiated Emission Test Site (966)    |                    |            |               |                 |
|--------------------------------------|--------------------|------------|---------------|-----------------|
| Name of Equipment                    | Manufacturer       | Model      | Serial Number | Calibration Due |
| Universal Radio Communication Tester | R&S                | CMU200     | 110188        | Jul. 04, 2023   |
| Spectrum Analyzer                    | R&S                | FSQ40      | 200061        | Jul. 03, 2023   |
| Signal Generator                     | HP                 | 83623B     | 3614A00396    | Feb. 24, 2023   |
| Broadband Antenna                    | Schwarzbeck        | VULB9163   | 340           | Jul. 05, 2024   |
| Horn Antenna                         | Schwarzbeck        | BBHA 9120D | 631           | Jul. 05, 2024   |
| Broadband Antenna                    | Schwarzbeck        | VULB9163   | 412           | Jul. 05, 2024   |
| Horn Antenna                         | Schwarzbeck        | BBHA 9120D | 1201          | Jul. 05, 2024   |
| Horn Antenna                         | Schwarzbeck        | BBHA 9170  | 00956         | Apr. 10, 2023   |
| Coaxial cable                        | SKET               | RC-18G-N-M | /             | Feb. 24, 2024   |
| Coaxial cable                        | SKET               | RC_40G-K-M | /             | Feb. 24, 2024   |
| Antenna Mast                         | Keleto             | RE-AM      | /             | /               |
| EMI Test Software                    | Shurple Technology | EZ-EMC     | /             | /               |

### 5.6.3. Test Data

#### Frequency Range (9 kHz-30MHz)

| Frequency (MHz) | Level@3m (dB $\mu$ V/m) | Limit@3m (dB $\mu$ V/m) |
|-----------------|-------------------------|-------------------------|
| --              | --                      | --                      |
| --              | --                      | --                      |
| --              | --                      | --                      |
| --              | --                      | --                      |

**Note:** 1. Emission Level=Reading+ Cable loss+Antenna factor-Amp factor

2. The emission levels are 20 dB below the limit value, which are not reported. It is deemed to comply with the requirement

|            |         |                    |        |
|------------|---------|--------------------|--------|
| Band       | GSM 850 | Test channel:      | Lowest |
| Test mode: |         | Temperature :      | 25°C   |
|            |         | Relative Humidity: | 56%    |

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

| Frequency (MHz) | Spurious Emission |             |                        |                          | Limit (dBm) | Result |
|-----------------|-------------------|-------------|------------------------|--------------------------|-------------|--------|
|                 | Polarization      | Level (dBm) | Correction Factor (dB) | Spurious emissions (dBm) |             |        |
| 1648.4          | Vertical          | -59.17      | 23.12                  | -36.05                   | -13.00      | PASS   |
| 2472.6          | V                 | -66.74      | 23.20                  | -43.54                   |             |        |
| 3296.8          | V                 | -79.42      | 23.28                  | -56.14                   |             |        |
| 1648.4          | Horizontal        | -58.96      | 23.12                  | -35.84                   |             |        |
| 2472.6          | H                 | -65.28      | 23.20                  | -42.08                   |             |        |
| 3296.8          | H                 | -78.47      | 23.28                  | -55.19                   |             |        |

|            |         |                    |        |
|------------|---------|--------------------|--------|
| Band       | GSM 850 | Test channel:      | Middle |
| Test mode: |         | Temperature :      | 25°C   |
|            |         | Relative Humidity: | 56%    |

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

| Frequency (MHz) | Spurious Emission |             |                        |                          | Limit (dBm) | Result |
|-----------------|-------------------|-------------|------------------------|--------------------------|-------------|--------|
|                 | Polarization      | Level (dBm) | Correction Factor (dB) | Spurious emissions (dBm) |             |        |
| 1673.2          | Vertical          | -59.42      | 23.17                  | -36.25                   | -13.00      | PASS   |
| 2509.8          | V                 | -70.35      | 23.26                  | -47.09                   |             |        |
| 3346.4          | V                 | -79.90      | 23.38                  | -56.52                   |             |        |
| 1673.2          | Horizontal        | -58.64      | 23.17                  | -35.47                   |             |        |
| 2509.8          | H                 | -67.65      | 23.26                  | -44.39                   |             |        |
| 3346.4          | H                 | -80.06      | 23.38                  | -56.68                   |             |        |

|            |         |                    |         |
|------------|---------|--------------------|---------|
| Band       | GSM 850 | Test channel:      | Highest |
| Test mode: |         | Temperature :      | 25°C    |
|            |         | Relative Humidity: | 56%     |

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

| Frequency (MHz) | Spurious Emission |             |                        |                          | Limit (dBm) | Result |
|-----------------|-------------------|-------------|------------------------|--------------------------|-------------|--------|
|                 | Polarization      | Level (dBm) | Correction Factor (dB) | Spurious emissions (dBm) |             |        |
| 1697.6          | Vertical          | -61.09      | 23.23                  | -37.86                   | -13.00      | PASS   |
| 2546.4          | V                 | -71.25      | 23.32                  | -47.93                   |             |        |
| 3395.2          | V                 | -78.55      | 23.44                  | -55.11                   |             |        |
| 1697.6          | Horizontal        | -57.16      | 23.23                  | -33.93                   |             |        |
| 2546.4          | H                 | -66.89      | 23.32                  | -43.57                   |             |        |
| 3395.2          | H                 | -79.83      | 23.44                  | -56.39                   |             |        |

|                   |                 |                           |               |
|-------------------|-----------------|---------------------------|---------------|
| <b>Band</b>       | <b>PCS 1900</b> | <b>Test channel:</b>      | <b>Lowest</b> |
| <b>Test mode:</b> |                 | <b>Temperature :</b>      | <b>25°C</b>   |
|                   |                 | <b>Relative Humidity:</b> | <b>56%</b>    |

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

| Frequency (MHz) | Spurious Emission |             |                        |                          | Limit (dBm) | Result |
|-----------------|-------------------|-------------|------------------------|--------------------------|-------------|--------|
|                 | Polarization      | Level (dBm) | Correction Factor (dB) | Spurious emissions (dBm) |             |        |
| 3700.4          | Vertical          | -66.17      | 23.49                  | -42.68                   | -13.00      | PASS   |
| 5550.6          | V                 | -75.70      | 23.75                  | -51.95                   |             |        |
| 7400.8          | V                 | -81.85      | 23.89                  | -57.96                   |             |        |
| 3700.4          | Horizontal        | -63.42      | 23.49                  | -39.93                   |             |        |
| 5550.6          | H                 | -69.28      | 23.75                  | -45.53                   |             |        |
| 7400.8          | H                 | -79.71      | 23.89                  | -55.82                   |             |        |

|                   |                 |                           |               |
|-------------------|-----------------|---------------------------|---------------|
| <b>Band</b>       | <b>PCS 1900</b> | <b>Test channel:</b>      | <b>Middle</b> |
| <b>Test mode:</b> |                 | <b>Temperature :</b>      | <b>25°C</b>   |
|                   |                 | <b>Relative Humidity:</b> | <b>56%</b>    |

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

| Frequency (MHz) | Spurious Emission |             |                        |                          | Limit (dBm) | Result |
|-----------------|-------------------|-------------|------------------------|--------------------------|-------------|--------|
|                 | Polarization      | Level (dBm) | Correction Factor (dB) | Spurious emissions (dBm) |             |        |
| 3760.0          | Vertical          | -66.44      | 23.58                  | -42.86                   | -13.00      | PASS   |
| 5640.0          | V                 | -76.26      | 23.85                  | -52.41                   |             |        |
| 7520.0          | V                 | -75.04      | 23.99                  | -51.05                   |             |        |
| 3760.0          | Horizontal        | -63.49      | 23.58                  | -39.91                   |             |        |
| 5640.0          | H                 | -76.10      | 23.85                  | -52.25                   |             |        |
| 7520.0          | H                 | -81.43      | 23.99                  | -57.44                   |             |        |

|                   |                 |                           |                |
|-------------------|-----------------|---------------------------|----------------|
| <b>Band</b>       | <b>PCS 1900</b> | <b>Test channel:</b>      | <b>Highest</b> |
| <b>Test mode:</b> |                 | <b>Temperature :</b>      | <b>25°C</b>    |
|                   |                 | <b>Relative Humidity:</b> | <b>56%</b>     |

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

| Frequency (MHz) | Spurious Emission |             |                        |                          | Limit (dBm) | Result |
|-----------------|-------------------|-------------|------------------------|--------------------------|-------------|--------|
|                 | Polarization      | Level (dBm) | Correction Factor (dB) | Spurious emissions (dBm) |             |        |
| 3819.6          | Vertical          | -64.68      | 23.64                  | -41.04                   | -13.00      | PASS   |
| 5729.4          | V                 | -73.92      | 23.93                  | -49.99                   |             |        |
| 7639.2          | V                 | -80.83      | 24.08                  | -56.75                   |             |        |
| 3819.6          | Horizontal        | -63.22      | 23.64                  | -39.58                   |             |        |
| 5729.4          | H                 | -69.04      | 23.93                  | -45.11                   |             |        |
| 7639.2          | H                 | -80.75      | 24.08                  | -56.67                   |             |        |

| Band       | WCDMA Band V             | Test channel:      | Lowest |
|------------|--------------------------|--------------------|--------|
| Test mode: | RMC 12.2Kbps Link (QPSK) | Temperature :      | 25°C   |
|            |                          | Relative Humidity: | 56%    |

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

| Frequency (MHz) | Spurious Emission |             |                        |                          | Limit (dBm) | Result |
|-----------------|-------------------|-------------|------------------------|--------------------------|-------------|--------|
|                 | Polarization      | Level (dBm) | Correction Factor (dB) | Spurious emissions (dBm) |             |        |
| 1652.8          | Vertical          | -72.49      | 23.14                  | -49.35                   | -13.00      | PASS   |
| 2479.2          | V                 | -80.23      | 23.23                  | -57.00                   |             |        |
| 3305.6          | V                 | -77.86      | 23.34                  | -54.52                   |             |        |
| 1652.8          | Horizontal        | -69.33      | 23.14                  | -46.19                   |             |        |
| 2479.2          | H                 | -79.21      | 23.23                  | -55.98                   |             |        |
| 3305.6          | H                 | -79.86      | 23.34                  | -56.52                   |             |        |

| Band       | WCDMA Band V             | Test channel:      | Middle |
|------------|--------------------------|--------------------|--------|
| Test mode: | RMC 12.2Kbps Link (QPSK) | Temperature :      | 25°C   |
|            |                          | Relative Humidity: | 56%    |

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

| Frequency (MHz) | Spurious Emission |             |                        |                          | Limit (dBm) | Result |
|-----------------|-------------------|-------------|------------------------|--------------------------|-------------|--------|
|                 | Polarization      | Level (dBm) | Correction Factor (dB) | Spurious emissions (dBm) |             |        |
| 1673.2          | Vertical          | -69.87      | 23.17                  | -46.70                   | -13.00      | PASS   |
| 2509.8          | V                 | -79.44      | 23.26                  | -56.18                   |             |        |
| 3346.4          | V                 | -80.19      | 23.38                  | -56.81                   |             |        |
| 1673.2          | Horizontal        | -68.78      | 23.17                  | -45.61                   |             |        |
| 2509.8          | H                 | -82.09      | 23.26                  | -58.83                   |             |        |
| 3346.4          | H                 | -79.03      | 23.38                  | -55.65                   |             |        |

| Band       | WCDMA Band V             | Test channel:      | Highest |
|------------|--------------------------|--------------------|---------|
| Test mode: | RMC 12.2Kbps Link (QPSK) | Temperature :      | 25°C    |
|            |                          | Relative Humidity: | 56%     |

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

| Frequency (MHz) | Spurious Emission |             |                        |                          | Limit (dBm) | Result |
|-----------------|-------------------|-------------|------------------------|--------------------------|-------------|--------|
|                 | Polarization      | Level (dBm) | Correction Factor (dB) | Spurious emissions (dBm) |             |        |
| 1693.2          | Vertical          | -74.42      | 23.20                  | -51.22                   | -13.00      | PASS   |
| 2539.8          | V                 | -80.14      | 23.29                  | -56.85                   |             |        |
| 3386.4          | V                 | -83.88      | 23.42                  | -60.46                   |             |        |
| 1693.2          | Horizontal        | -70.80      | 23.20                  | -47.60                   |             |        |
| 2539.8          | H                 | -79.67      | 23.29                  | -56.38                   |             |        |
| 3386.4          | H                 | -83.99      | 23.42                  | -60.57                   |             |        |

| Band       | WCDMA Band IV            | Test channel:      | Lowest |
|------------|--------------------------|--------------------|--------|
| Test mode: | RMC 12.2Kbps Link (QPSK) | Temperature :      | 25°C   |
|            |                          | Relative Humidity: | 56%    |

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

| Frequency (MHz) | Spurious Emission |             |                        |                          | Limit (dBm) | Result |
|-----------------|-------------------|-------------|------------------------|--------------------------|-------------|--------|
|                 | Polarization      | Level (dBm) | Correction Factor (dB) | Spurious emissions (dBm) |             |        |
| 2452.3          | Vertical          | -81.88      | 23.16                  | -58.72                   | -13.00      | PASS   |
| 3424.8          | V                 | -81.12      | 23.37                  | -57.75                   |             |        |
| 5137.2          | V                 | -81.59      | 23.65                  | -57.94                   |             |        |
| 2452.3          | Horizontal        | -79.73      | 23.16                  | -56.57                   |             |        |
| 3424.8          | H                 | -80.66      | 23.37                  | -57.29                   |             |        |
| 5137.2          | H                 | -79.13      | 23.65                  | -55.48                   |             |        |

| Band       | WCDMA Band IV            | Test channel:      | Middle |
|------------|--------------------------|--------------------|--------|
| Test mode: | RMC 12.2Kbps Link (QPSK) | Temperature :      | 25°C   |
|            |                          | Relative Humidity: | 56%    |

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

| Frequency (MHz) | Spurious Emission |             |                        |                          | Limit (dBm) | Result |
|-----------------|-------------------|-------------|------------------------|--------------------------|-------------|--------|
|                 | Polarization      | Level (dBm) | Correction Factor (dB) | Spurious emissions (dBm) |             |        |
| 2641.3          | Vertical          | -82.46      | 23.30                  | -59.16                   | -13.00      | PASS   |
| 3465.2          | V                 | -78.18      | 23.42                  | -54.76                   |             |        |
| 5197.8          | V                 | -83.64      | 23.73                  | -59.91                   |             |        |
| 2641.3          | Horizontal        | -79.56      | 23.30                  | -56.26                   |             |        |
| 3465.2          | H                 | -81.69      | 23.42                  | -58.27                   |             |        |
| 5197.8          | H                 | -82.35      | 23.73                  | -58.62                   |             |        |

| Band       | WCDMA Band IV            | Test channel:      | Highest |
|------------|--------------------------|--------------------|---------|
| Test mode: | RMC 12.2Kbps Link (QPSK) | Temperature :      | 25°C    |
|            |                          | Relative Humidity: | 56%     |

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

| Frequency (MHz) | Spurious Emission |             |                        |                          | Limit (dBm) | Result |
|-----------------|-------------------|-------------|------------------------|--------------------------|-------------|--------|
|                 | Polarization      | Level (dBm) | Correction Factor (dB) | Spurious emissions (dBm) |             |        |
| 3102.2          | Vertical          | -80.96      | 23.35                  | -57.61                   | -13.00      | PASS   |
| 3505.2          | V                 | -80.78      | 23.45                  | -57.33                   |             |        |
| 5257.8          | V                 | -78.14      | 23.82                  | -54.32                   |             |        |
| 3102.2          | Horizontal        | -80.58      | 23.35                  | -57.23                   |             |        |
| 3505.2          | H                 | -80.94      | 23.45                  | -57.49                   |             |        |
| 5257.8          | H                 | -84.11      | 23.82                  | -60.29                   |             |        |

|                   |                                 |                           |               |
|-------------------|---------------------------------|---------------------------|---------------|
| <b>Band</b>       | <b>WCDMA Band II</b>            | <b>Test channel:</b>      | <b>Lowest</b> |
| <b>Test mode:</b> | <b>RMC 12.2Kbps Link (QPSK)</b> | <b>Temperature :</b>      | <b>25°C</b>   |
|                   |                                 | <b>Relative Humidity:</b> | <b>56%</b>    |

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

| Frequency (MHz) | Spurious Emission |             |                        |                          | Limit (dBm) | Result |
|-----------------|-------------------|-------------|------------------------|--------------------------|-------------|--------|
|                 | Polarization      | Level (dBm) | Correction Factor (dB) | Spurious emissions (dBm) |             |        |
| 3704.8          | Vertical          | -69.86      | 23.53                  | -46.33                   | -13.00      | PASS   |
| 5557.2          | V                 | -81.64      | 23.78                  | -57.86                   |             |        |
| 7409.6          | V                 | -83.30      | 23.92                  | -59.38                   |             |        |
| 3704.8          | Horizontal        | -72.46      | 23.53                  | -48.93                   |             |        |
| 5557.2          | H                 | -79.02      | 23.78                  | -55.24                   |             |        |
| 7409.6          | H                 | -83.94      | 23.92                  | -60.02                   |             |        |

|                   |                                 |                           |               |
|-------------------|---------------------------------|---------------------------|---------------|
| <b>Band</b>       | <b>WCDMA Band II</b>            | <b>Test channel:</b>      | <b>Middle</b> |
| <b>Test mode:</b> | <b>RMC 12.2Kbps Link (QPSK)</b> | <b>Temperature :</b>      | <b>25°C</b>   |
|                   |                                 | <b>Relative Humidity:</b> | <b>56%</b>    |

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

| Frequency (MHz) | Spurious Emission |             |                        |                          | Limit (dBm) | Result |
|-----------------|-------------------|-------------|------------------------|--------------------------|-------------|--------|
|                 | Polarization      | Level (dBm) | Correction Factor (dB) | Spurious emissions (dBm) |             |        |
| 3760.0          | Vertical          | -80.68      | 23.58                  | -57.10                   | -13.00      | PASS   |
| 5640.0          | V                 | -83.24      | 23.85                  | -59.39                   |             |        |
| 7520.0          | V                 | -73.43      | 23.99                  | -49.44                   |             |        |
| 3760.0          | Horizontal        | -78.95      | 23.58                  | -55.37                   |             |        |
| 5640.0          | H                 | -83.62      | 23.85                  | -59.77                   |             |        |
| 7520.0          | H                 | -80.85      | 23.99                  | -56.86                   |             |        |

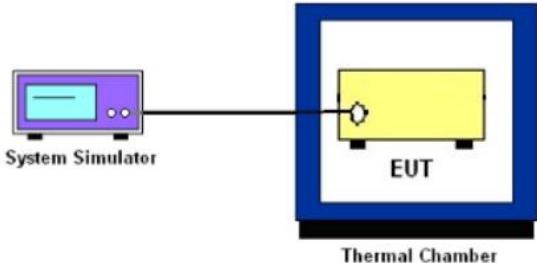
|                   |                                 |                           |                |
|-------------------|---------------------------------|---------------------------|----------------|
| <b>Band</b>       | <b>WCDMA Band II</b>            | <b>Test channel:</b>      | <b>Highest</b> |
| <b>Test mode:</b> | <b>RMC 12.2Kbps Link (QPSK)</b> | <b>Temperature :</b>      | <b>25°C</b>    |
|                   |                                 | <b>Relative Humidity:</b> | <b>56%</b>     |

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

| Frequency (MHz) | Spurious Emission |             |                        |                          | Limit (dBm) | Result |
|-----------------|-------------------|-------------|------------------------|--------------------------|-------------|--------|
|                 | Polarization      | Level (dBm) | Correction Factor (dB) | Spurious emissions (dBm) |             |        |
| 3815.2          | Vertical          | -73.54      | 23.62                  | -49.92                   | -13.00      | PASS   |
| 5722.8          | V                 | -84.27      | 23.90                  | -60.37                   |             |        |
| 7630.4          | V                 | -85.34      | 24.05                  | -61.29                   |             |        |
| 3815.2          | Horizontal        | -71.83      | 23.62                  | -48.21                   |             |        |
| 5722.8          | H                 | -80.04      | 23.90                  | -56.14                   |             |        |
| 7630.4          | H                 | -84.66      | 24.05                  | -60.61                   |             |        |

## 5.7. Frequency Stability Measurement

### 5.7.1. Test Specification

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Test Requirement:</b> | FCC Part 2.1055 ; FCC Part 22.355 ; FCC Part 24.235<br>FCC Part 27.54                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Test Method:</b>      | FCC KDB 971168 D01v03r01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Operation mode:</b>   | Refer to item 3.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Limit:</b>            | FCC Part 22.355 : $\pm 2.5$ ppm<br>FCC Part 24.235 :<br>The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Test Setup:</b>       |  <p>The diagram shows a purple box labeled 'System Simulator' connected by a black line to a yellow box labeled 'EUT'. The 'EUT' box is positioned inside a blue square frame labeled 'Thermal Chamber'.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Test Procedure:</b>   | <p><b>Test Procedures for Temperature Variation</b></p> <ol style="list-style-type: none"> <li>1. The testing follows FCC KDB 971168 D01v03r01 Section 9.0.</li> <li>2. The EUT was set up in the thermal chamber and connected with the system simulator.</li> <li>3. With power OFF, the temperature was decreased to <math>-30^{\circ}\text{C}</math> and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.</li> <li>4. With power OFF, the temperature was raised in <math>10^{\circ}\text{C}</math> steps up to <math>50^{\circ}\text{C}</math>. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.</li> </ol> <p><b>Test Procedures for Voltage Variation</b></p> <ol style="list-style-type: none"> <li>1. The testing follows FCC KDB 971168 D01v03r01 Section 9.0.</li> <li>2. The EUT was placed in a temperature chamber at <math>25 \pm 5^{\circ}\text{C}</math> and connected with the system simulator.</li> <li>3. The power supply voltage to the EUT was varied from BEP to 115% of the nominal value measured at the input to the EUT.</li> <li>4. The variation in frequency was measured for the worst case.</li> </ol> |
| <b>Test Result:</b>      | PASS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Remark:</b>           | All three channels of all modulations have been tested, but only the worst channel and the worst modulation show in this test item.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

**5.7.2. Test Instruments**

| Equipment                                   | Manufacturer | Model     | Serial Number | Calibration Due |
|---------------------------------------------|--------------|-----------|---------------|-----------------|
| Universal Radio Communication Tester        | R&S          | CMU200    | 110188        | Jul. 04, 2023   |
| Programable tempratuce and humidity chamber | JQ           | JQ-2000   | /             | Jul. 04, 2023   |
| DC power supply                             | Kingrang     | KR3005K   | /             | Jul. 04, 2023   |
| Combiner Box                                | AT890-RFB    | Ascentest | /             | /               |

### 5.7.3. Test Data

#### Test Result of Temperature Variation

|                         |                        |                   |                 |
|-------------------------|------------------------|-------------------|-----------------|
| <b>Band :</b>           | <b>GSM 850</b>         | <b>Channel:</b>   | <b>190</b>      |
| <b>Limit (ppm) :</b>    | <b>2.5</b>             | <b>Frequency:</b> | <b>836.6MHz</b> |
| <b>Temperature (°C)</b> | <b>Deviation (ppm)</b> | <b>Result</b>     |                 |
| 50                      | 0.014                  | PASS              |                 |
| 40                      | 0.012                  |                   |                 |
| 30                      | 0.011                  |                   |                 |
| 20                      | 0.016                  |                   |                 |
| 10                      | 0.014                  |                   |                 |
| 0                       | 0.018                  |                   |                 |
| -10                     | 0.013                  |                   |                 |
| -20                     | 0.015                  |                   |                 |
| -30                     | 0.017                  |                   |                 |

|                         |                        |                   |                |
|-------------------------|------------------------|-------------------|----------------|
| <b>Band :</b>           | <b>GSM 1900</b>        | <b>Channel:</b>   | <b>661</b>     |
| <b>Limit (ppm) :</b>    | <b>Note</b>            | <b>Frequency:</b> | <b>1880MHz</b> |
| <b>Temperature (°C)</b> | <b>Deviation (ppm)</b> | <b>Result</b>     |                |
| 50                      | 0.019                  | PASS              |                |
| 40                      | 0.016                  |                   |                |
| 30                      | 0.014                  |                   |                |
| 20                      | 0.015                  |                   |                |
| 10                      | 0.018                  |                   |                |
| 0                       | 0.020                  |                   |                |
| -10                     | 0.018                  |                   |                |
| -20                     | 0.013                  |                   |                |
| -30                     | 0.021                  |                   |                |

**Note:** The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.

|                         |                                     |                   |                 |
|-------------------------|-------------------------------------|-------------------|-----------------|
| <b>Band :</b>           | <b>WCDMA Band V</b>                 | <b>Channel:</b>   | <b>4182</b>     |
| <b>Limit (ppm) :</b>    | <b>2.5</b>                          | <b>Frequency:</b> | <b>836.4MHz</b> |
| <b>Temperature (°C)</b> | <b>RMC 12.2Kbps Deviation (ppm)</b> | <b>Result</b>     |                 |
| 50                      | 0.018                               | PASS              |                 |
| 40                      | 0.017                               |                   |                 |
| 30                      | 0.010                               |                   |                 |
| 20                      | 0.012                               |                   |                 |
| 10                      | 0.019                               |                   |                 |
| 0                       | 0.017                               |                   |                 |
| -10                     | 0.015                               |                   |                 |
| -20                     | 0.013                               |                   |                 |
| -30                     | 0.011                               |                   |                 |

|                         |                              |                   |               |
|-------------------------|------------------------------|-------------------|---------------|
| <b>Band :</b>           | <b>WCDMA Band IV</b>         | <b>Channel:</b>   | <b>1413</b>   |
| <b>Limit (ppm) :</b>    | <b>Note</b>                  | <b>Frequency:</b> | <b>1732.6</b> |
| <b>Temperature (°C)</b> | <b>HSUPA Deviation (ppm)</b> | <b>Result</b>     |               |
| 50                      | 0.022                        | PASS              |               |
| 40                      | 0.020                        |                   |               |
| 30                      | 0.019                        |                   |               |
| 20                      | 0.017                        |                   |               |
| 10                      | 0.016                        |                   |               |
| 0                       | 0.015                        |                   |               |
| -10                     | 0.014                        |                   |               |
| -20                     | 0.021                        |                   |               |
| -30                     | 0.023                        |                   |               |

|                  |                              |            |         |
|------------------|------------------------------|------------|---------|
| Band :           | WCDMA Band II                | Channel:   | 9400    |
| Limit (ppm) :    | Note                         | Frequency: | 1880MHz |
| Temperature (°C) | RMC 12.2Kbps Deviation (ppm) | Result     |         |
| 50               | 0.018                        | PASS       |         |
| 40               | 0.015                        |            |         |
| 30               | 0.014                        |            |         |
| 20               | 0.018                        |            |         |
| 10               | 0.020                        |            |         |
| 0                | 0.022                        |            |         |
| -10              | 0.016                        |            |         |
| -20              | 0.020                        |            |         |
| -30              | 0.021                        |            |         |

**Note:** The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.

## Test Result of Voltage Variation

| Band & Channel       | Mode         | Voltage (Volt) | Deviation (ppm) | Limit (ppm) | Result |
|----------------------|--------------|----------------|-----------------|-------------|--------|
| GSM 850 CH190        | GSM          | 4.2            | +0.018          | 2.5         | PASS   |
|                      |              | 3.8            | +0.014          |             |        |
|                      |              | BEP            | +0.015          |             |        |
| GSM 1900 CH661       | GSM          | 4.2            | +0.017          | (Note 3.)   |        |
|                      |              | 3.8            | +0.020          |             |        |
|                      |              | BEP            | +0.015          |             |        |
| WCDMA Band V CH4182  | RMC 12.2Kbps | 4.2            | -0.011          | 2.5         |        |
|                      |              | 3.8            | -0.016          |             |        |
|                      |              | BEP            | -0.019          |             |        |
| WCDMA Band IV CH1413 | RMC 12.2Kbps | 4.2            | -0.017          |             |        |
|                      |              | 3.8            | -0.019          |             |        |
|                      |              | BEP            | -0.022          |             |        |
| WCDMA Band II CH9400 | RMC 12.2Kbps | 4.2            | -0.018          | (Note 3.)   |        |
|                      |              | 3.8            | -0.013          |             |        |
|                      |              | BEP            | -0.017          |             |        |

### Note:

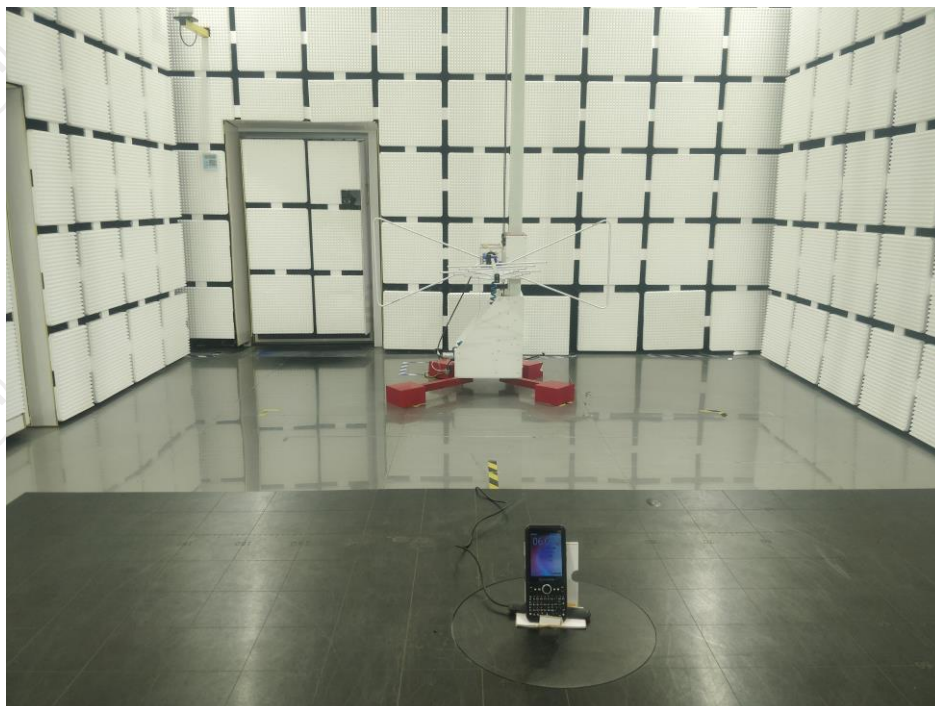
1. Normal Voltage = 3.8V.
2. Battery End Point (BEP) = 3.3V.
3. The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.

## Appendix B: Photographs of Test Setup

Product: Mobile Phone

Model: K5

Radiated Emission



## Appendix C: Photographs of EUT

Refer to the test report No. TCT221109E033

**\*\*\*\*\*END OF REPORT\*\*\*\*\***