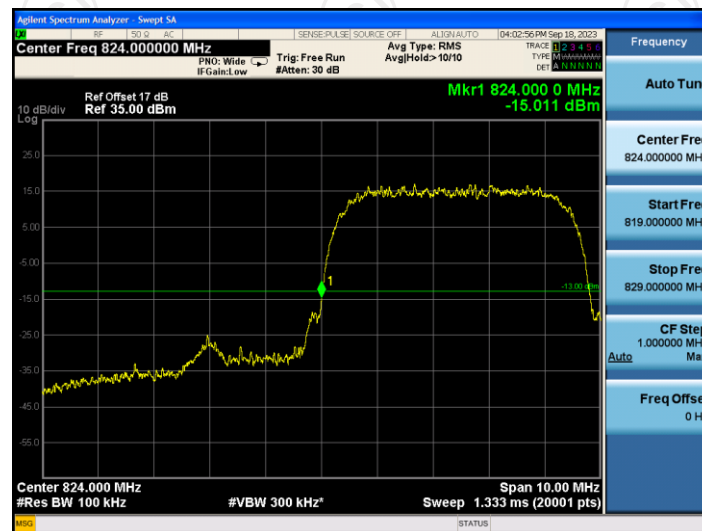
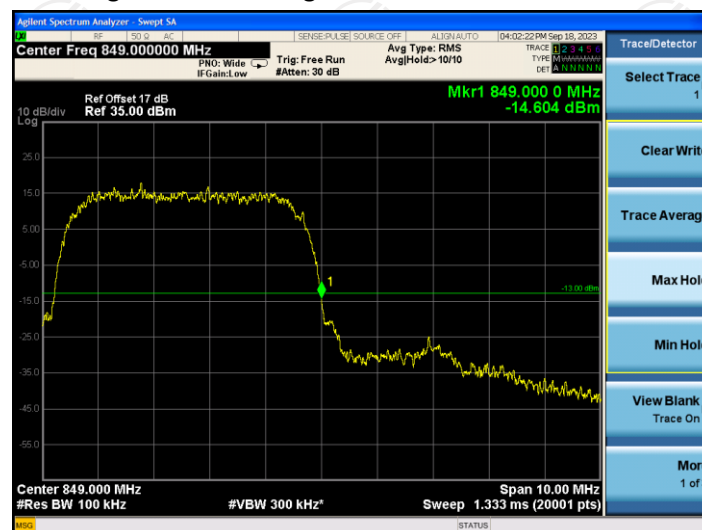


|       |              |            |                          |
|-------|--------------|------------|--------------------------|
| Band: | WCDMA Band V | Test Mode: | RMC 12.2Kbps Link (QPSK) |
|-------|--------------|------------|--------------------------|

Lower Band Edge Plot on Channel 4132

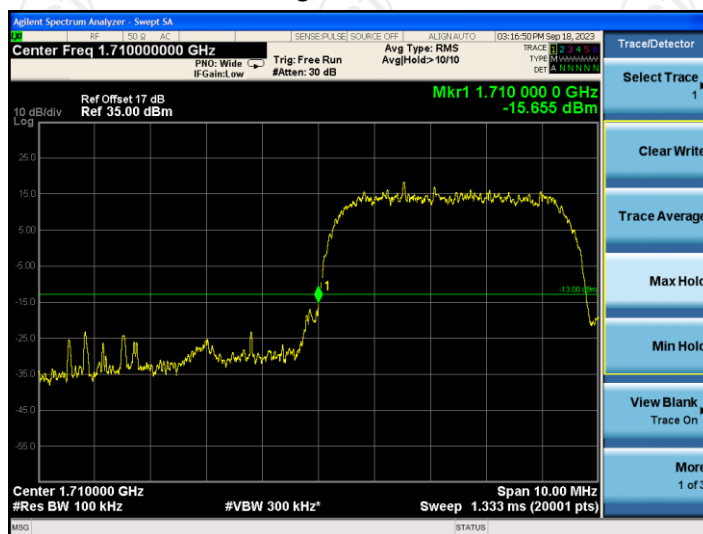


Higher Band Edge Plot on Channel 4233



|       |               |            |                          |
|-------|---------------|------------|--------------------------|
| Band: | WCDMA Band IV | Test Mode: | RMC 12.2Kbps Link (QPSK) |
|-------|---------------|------------|--------------------------|

Lower Band Edge Plot on Channel 1312

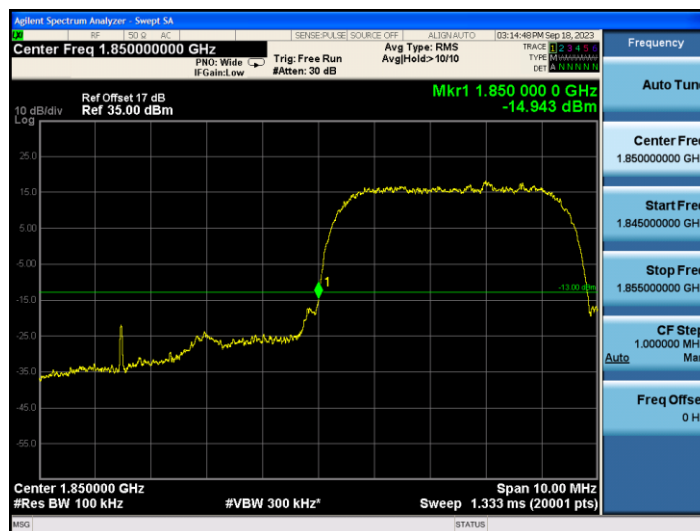


Higher Band Edge Plot on Channel 1513



|       |               |            |                          |
|-------|---------------|------------|--------------------------|
| Band: | WCDMA Band II | Test Mode: | RMC 12.2Kbps Link (QPSK) |
|-------|---------------|------------|--------------------------|

Lower Band Edge Plot on Channel 9262



Higher Band Edge Plot on Channel 9538



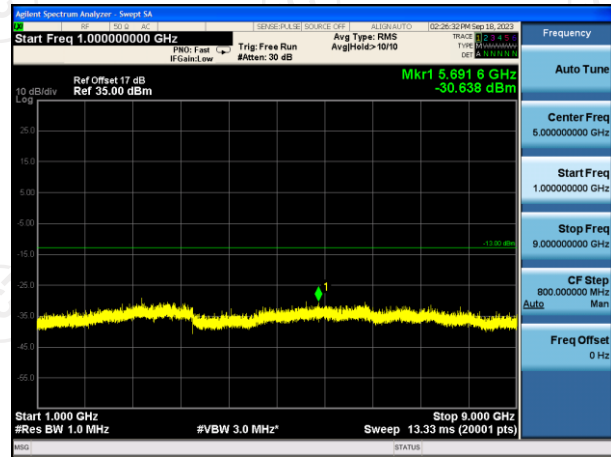
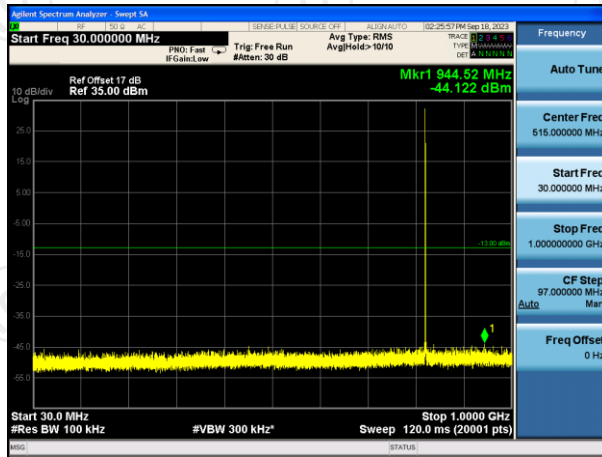
Band:

GSM 850

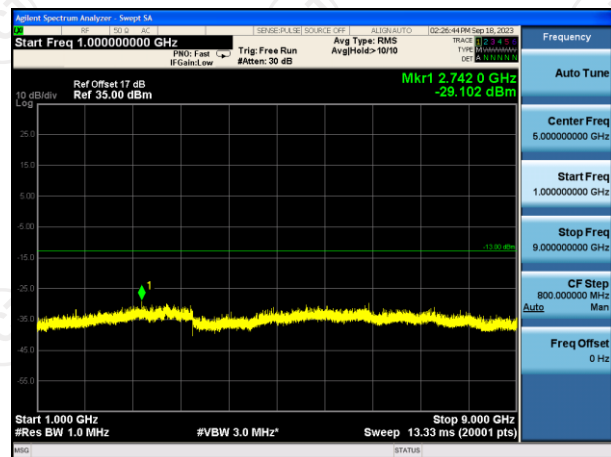
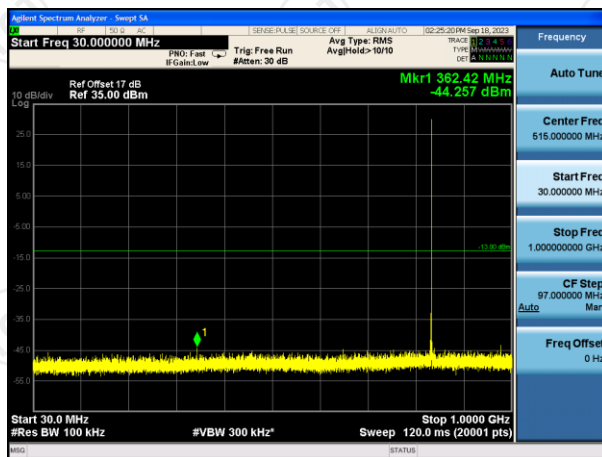
Test Mode:

GSM Link (GMSK)

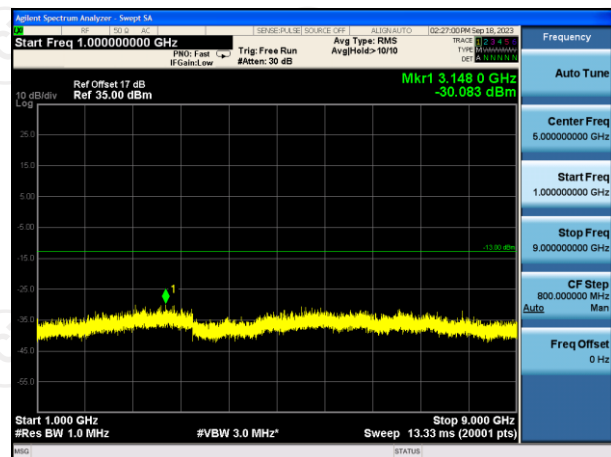
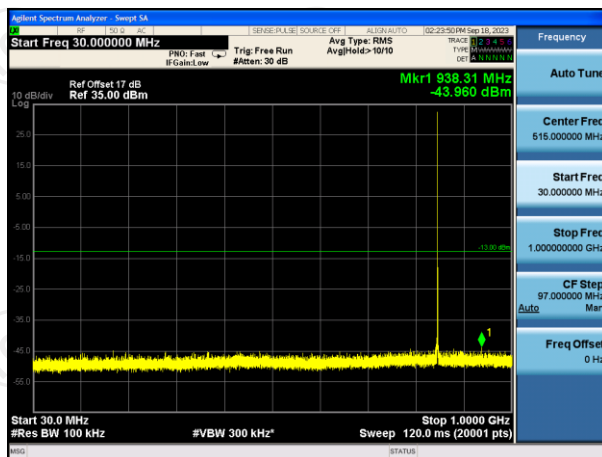
## Conducted Spurious Emission on Channel 128



## Conducted Spurious Emission on Channel 190



## Conducted Spurious Emission on Channel 251



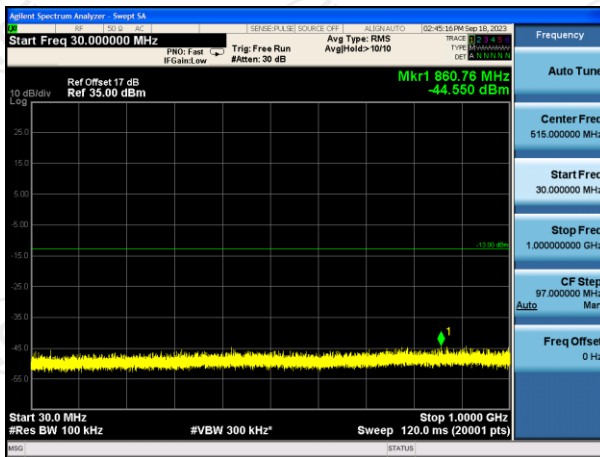
Band:

GSM 1900

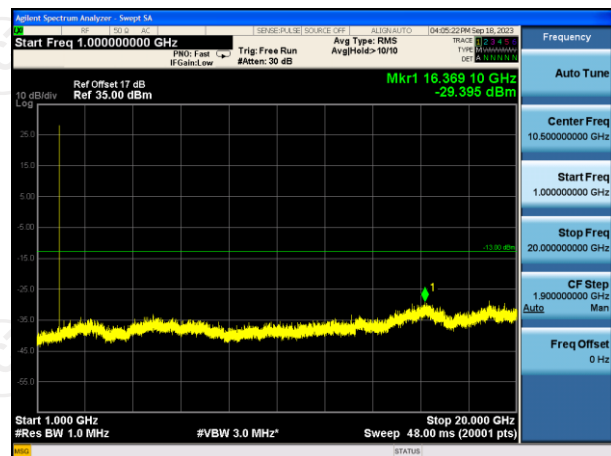
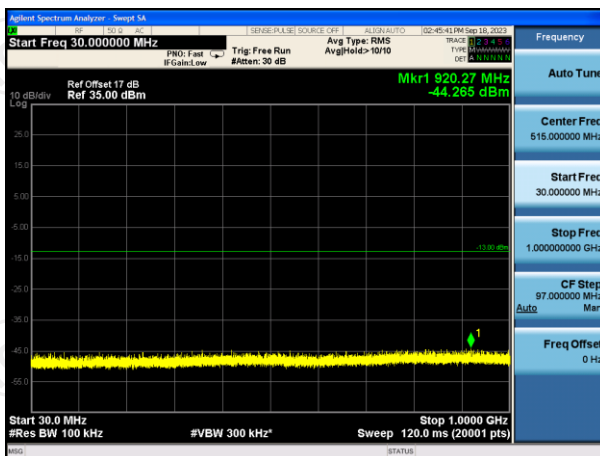
Test Mode:

GSM Link (GMSK)

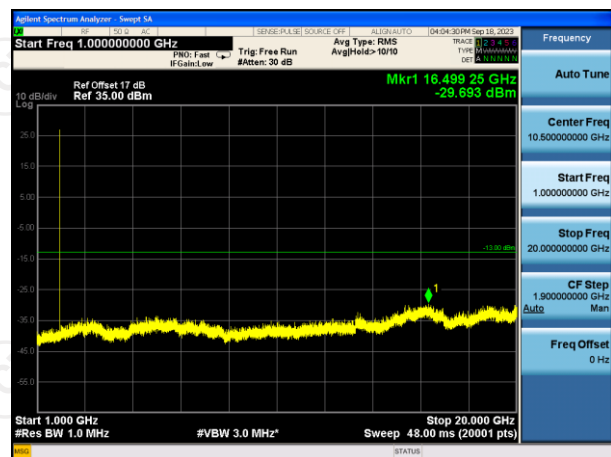
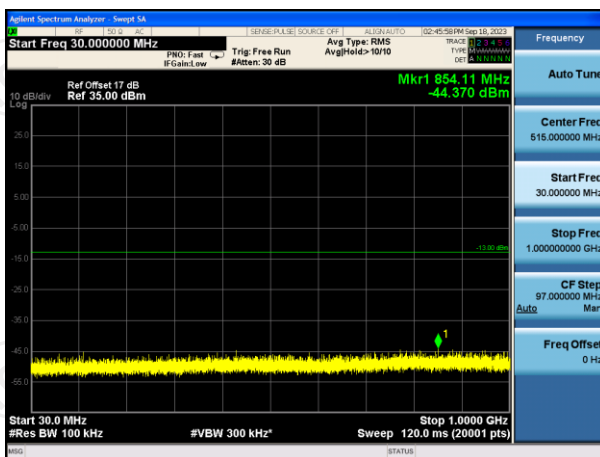
## Conducted Spurious Emission on Channel 512



## Conducted Spurious Emission on Channel 661

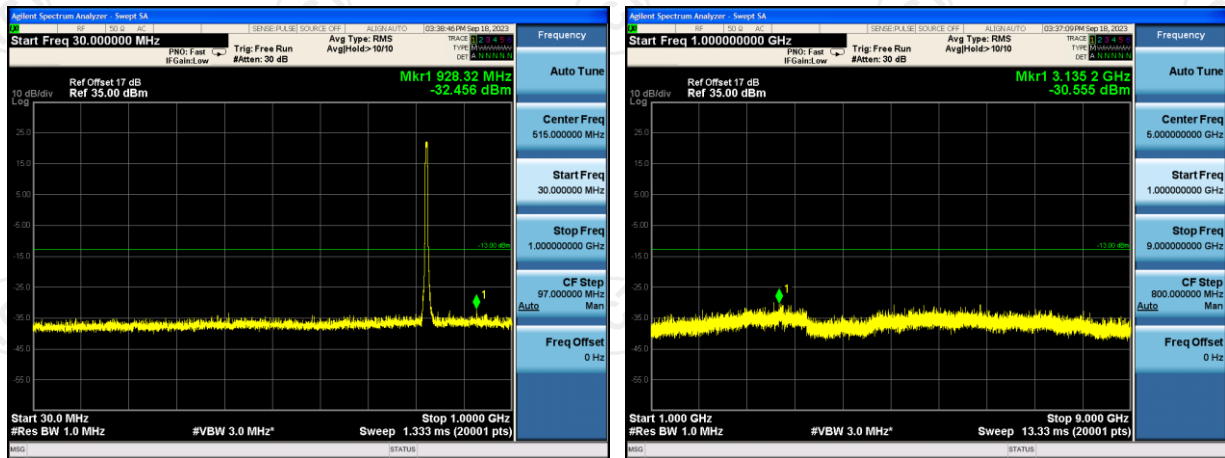


## Conducted Spurious Emission on Channel 810

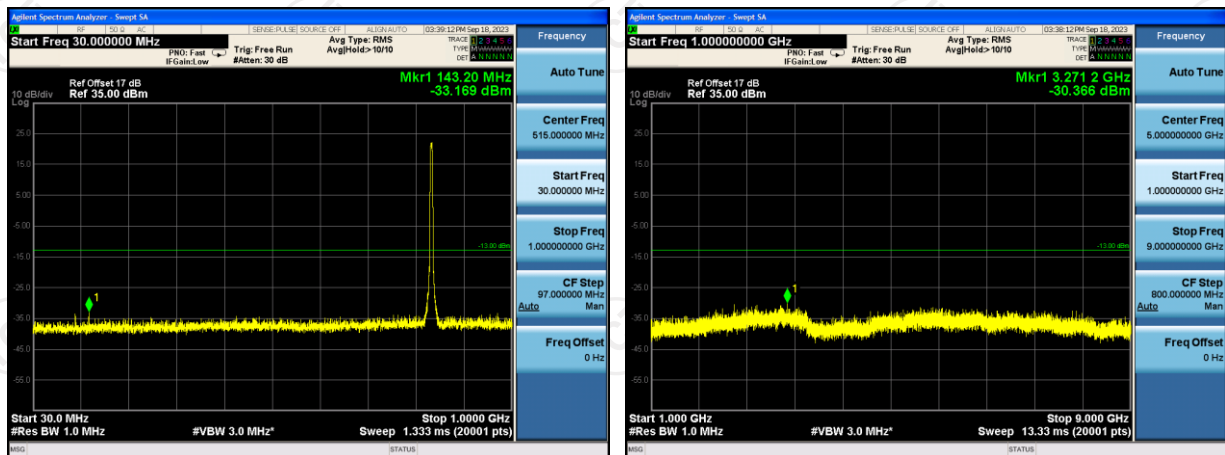


|       |              |            |                          |
|-------|--------------|------------|--------------------------|
| Band: | WCDMA Band V | Test Mode: | RMC 12.2Kbps Link (QPSK) |
|-------|--------------|------------|--------------------------|

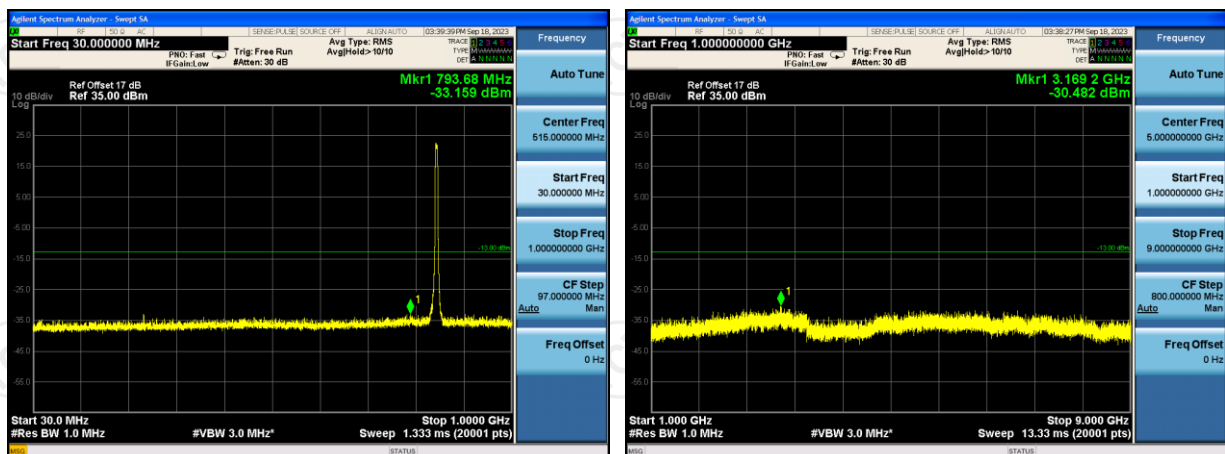
## Conducted Spurious Emission on Channel 4132



## Conducted Spurious Emission on Channel 4183



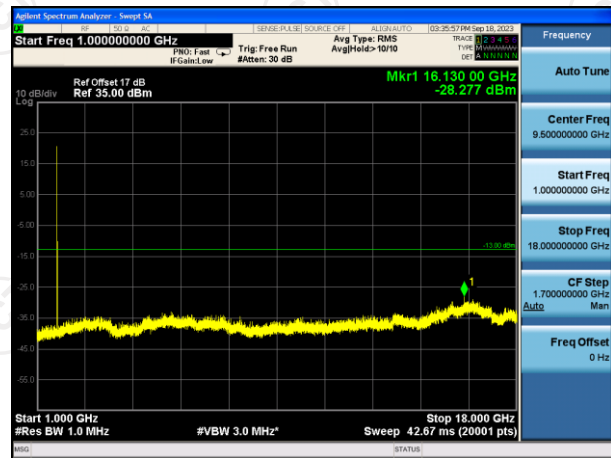
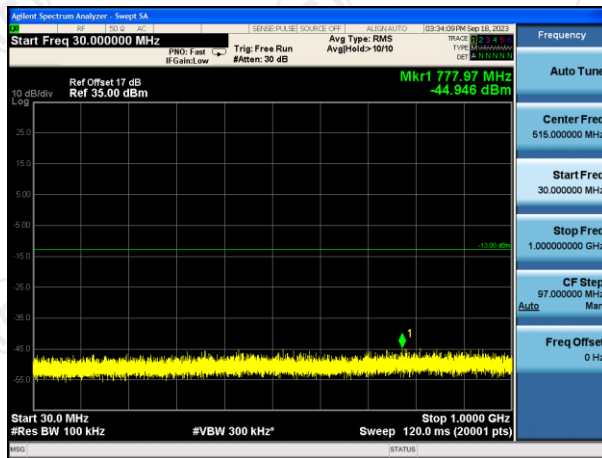
## Conducted Spurious Emission on Channel 4233



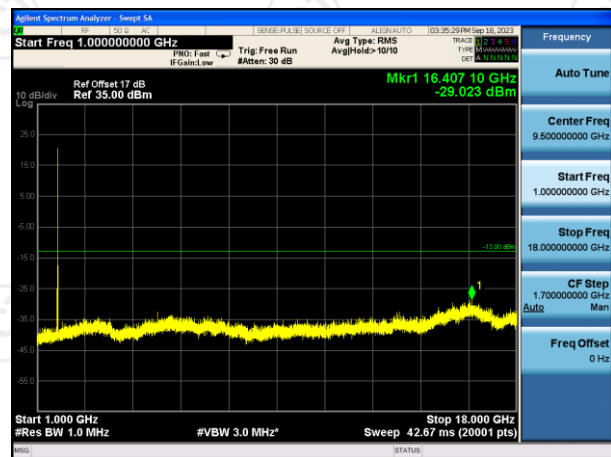
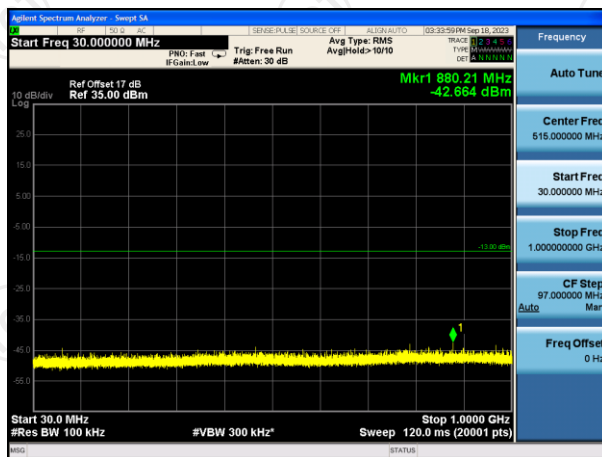


|       |               |            |                          |
|-------|---------------|------------|--------------------------|
| Band: | WCDMA Band IV | Test Mode: | RMC 12.2Kbps Link (QPSK) |
|-------|---------------|------------|--------------------------|

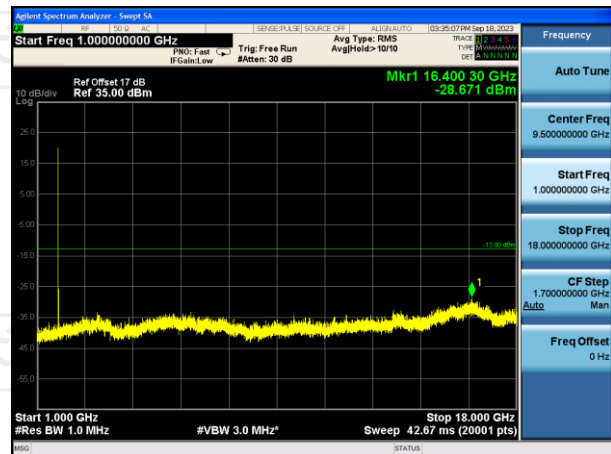
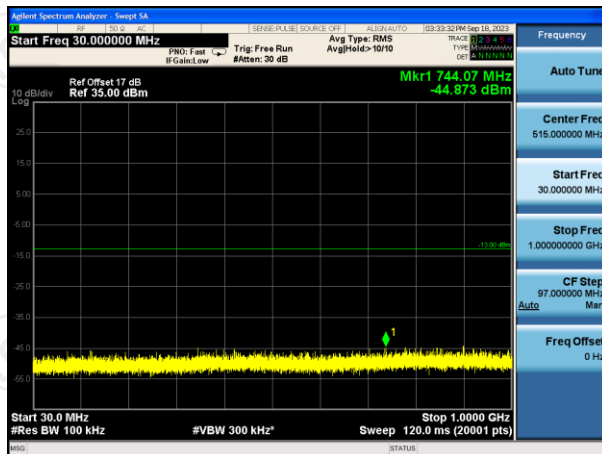
### Conducted Spurious Emission on Channel 1312



### Conducted Spurious Emission on Channel 1413

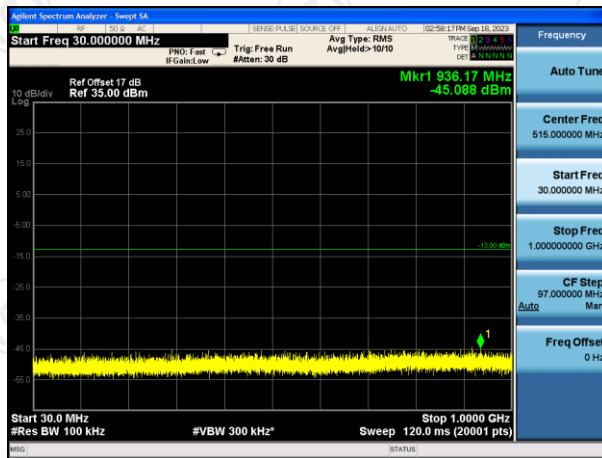


### Conducted Spurious Emission on Channel 1513

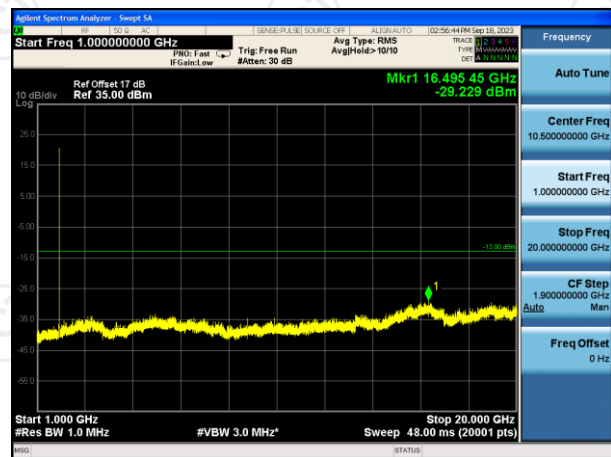
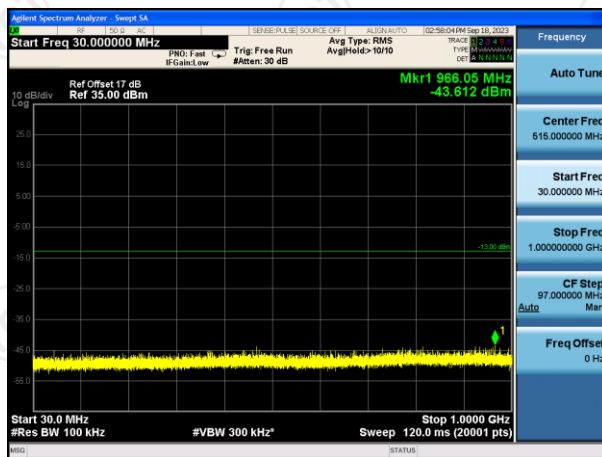


|       |               |            |                          |
|-------|---------------|------------|--------------------------|
| Band: | WCDMA Band II | Test Mode: | RMC 12.2Kbps Link (QPSK) |
|-------|---------------|------------|--------------------------|

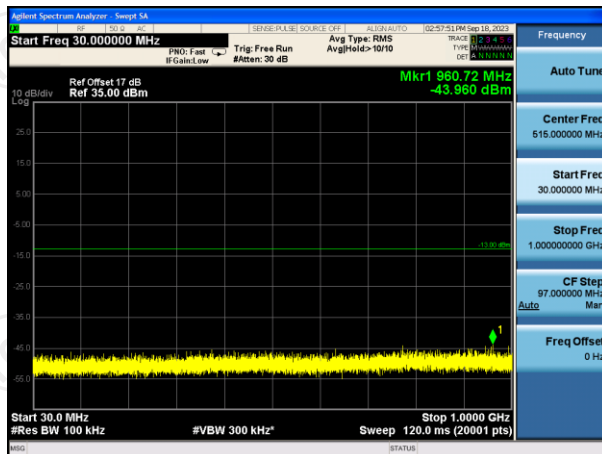
## Conducted Spurious Emission on Channel 9262



## Conducted Spurious Emission on Channel 9400



## Conducted Spurious Emission on Channel 9538



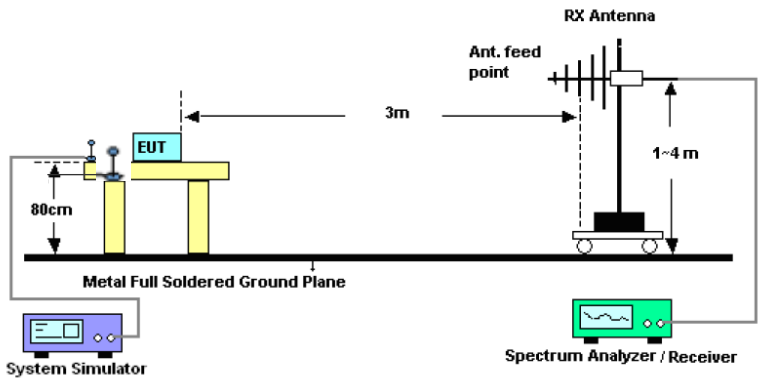
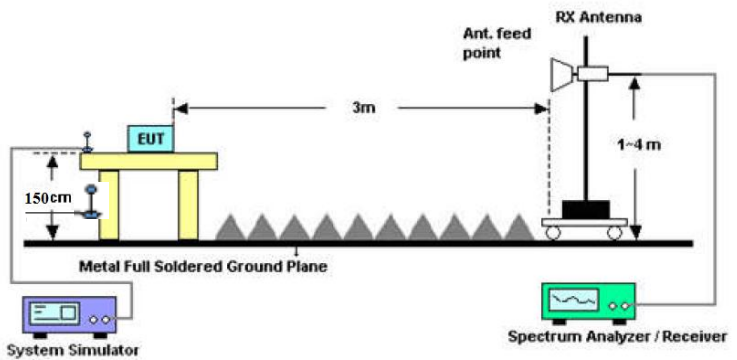


| GSM1900(GSM) Conducted Spurious Emission for Below 1G                                                                                                                                                          |           |                   |           |                        |                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------------------|-----------|------------------------|----------------|
| Channel                                                                                                                                                                                                        | RBW (KHz) | Test result (dBm) | RBW (MHz) | Calculate result (dBm) | Limit (-13dBm) |
| 512                                                                                                                                                                                                            | 100       | -55.74            | 1         | -45.74                 | Pass           |
| 661                                                                                                                                                                                                            | 100       | -55.18            | 1         | -45.18                 | Pass           |
| 810                                                                                                                                                                                                            | 100       | -55.36            | 1         | -45.36                 | 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       | -55.48            | 1         | -45.48                 | Pass           |
| 9400                                                                                                                                                                                                           | 100       | -55.03            | 1         | -45.03                 | Pass           |
| 9538                                                                                                                                                                                                           | 100       | -55.92            | 1         | -45.92                 | 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       | -55.76            | 1         | -45.76                 | Pass           |
| 1413                                                                                                                                                                                                           | 100       | -56.29            | 1         | -46.29                 | Pass           |
| 1513                                                                                                                                                                                                           | 100       | -55.41            | 1         | -45.41                 | Pass           |
| Compensate 10dB is for Exchange rate of RBW<br>$\text{Exchange rate of RBW} = 10 \cdot \log_{10}(\text{Reference bandwidth} / \text{RBW at measurement}) = 10[\text{dB}]$<br>where Reference bandwidth = 1 MHz |           |                   |           |                        |                |

**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

|                          |                                                                                                                                                                                             |               |            |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|------------|
| <b>Test Requirement:</b> | FCC part 22.913(a) and FCC part 24.232(c)<br>FCC part 27.50(d)                                                                                                                              |               |            |
| <b>Test Method:</b>      | FCC KDB 971168 D01v03r01                                                                                                                                                                    |               |            |
| <b>Receiver Setup:</b>   |                                                                                                                                                                                             | 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        |
| <b>Limit:</b>            | 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                                                                              |               |            |
| <b>Test Setup:</b>       | From 30MHz to 1GHz                                                                                                                                                                          |               |            |
|                          |  <p>Above 1GHz</p>  |               |            |

## 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        | Jun. 28, 2024   |
| Spectrum Analyzer                    | R&S                | FSQ40      | 200061        | Jun. 29, 2024   |
| Signal Generator                     | HP                 | 83623B     | 3614A00396    | Feb. 24, 2024   |
| Broadband Antenna                    | Schwarzbeck        | VULB9163   | 340           | Jul. 01, 2024   |
| Horn Antenna                         | Schwarzbeck        | BBHA 9120D | 631           | Jul. 01, 2024   |
| Broadband Antenna                    | Schwarzbeck        | VULB9163   | 412           | Jul. 01, 2024   |
| Horn Antenna                         | Schwarzbeck        | BBHA 9120D | 1201          | Jul. 01, 2024   |
| Horn Antenna                         | Schwarzbeck        | BBHA 9170  | 00956         | Feb. 24, 2024   |
| 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          | 9.36      | 21.66                  | 28.87     | 0.77    |
| 836.6                                  | H          | 9.70      | 21.54                  | 29.09     | 0.81    |
| 848.8                                  | H          | 9.94      | 21.46                  | 29.25     | 0.84    |
| Vertical Polarization (Antenna Pol.)   |            |           |                        |           |         |
| Frequency (MHz)                        | (EUT Pol.) | LVL (dBm) | Correction Factor (dB) | ERP (dBm) | ERP (W) |
| 824.2                                  | H          | 9.57      | 21.66                  | 29.08     | 0.81    |
| 836.6                                  | H          | 9.83      | 21.54                  | 29.22     | 0.84    |
| 848.8                                  | H          | 9.06      | 21.46                  | 28.37     | 0.69    |

| 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          | 9.41      | 21.66                  | 28.92     | 0.78    |
| 836.6                                  | H          | 9.82      | 21.54                  | 29.21     | 0.83    |
| 848.8                                  | H          | 9.37      | 21.46                  | 28.68     | 0.74    |
| Vertical Polarization (Antenna Pol.)   |            |           |                        |           |         |
| Frequency (MHz)                        | (EUT Pol.) | LVL (dBm) | Correction Factor (dB) | ERP (dBm) | ERP (W) |
| 824.2                                  | H          | 9.62      | 21.66                  | 29.13     | 0.82    |
| 836.6                                  | H          | 9.88      | 21.54                  | 29.27     | 0.85    |
| 848.8                                  | H          | 9.15      | 21.46                  | 28.46     | 0.70    |

**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          | 0.73      | 21.66                  | 20.24     | 0.11    |
| 836.6                                          | H          | 0.49      | 21.54                  | 19.88     | 0.10    |
| 846.6                                          | H          | 0.60      | 21.46                  | 19.91     | 0.10    |
| Vertical Polarization (Antenna Pol.)           |            |           |                        |           |         |
| Frequency (MHz)                                | (EUT Pol.) | LVL (dBm) | Correction Factor (dB) | ERP (dBm) | ERP (W) |
| 826.4                                          | H          | 0.27      | 21.66                  | 19.78     | 0.10    |
| 836.6                                          | H          | 0.49      | 21.54                  | 19.88     | 0.10    |
| 846.6                                          | H          | 0.51      | 21.46                  | 19.82     | 0.10    |

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          | 6.45      | 21.66                  | 28.11      | 0.65     |
| 1880.0                                 | H          | 6.80      | 21.54                  | 28.34      | 0.68     |
| 1909.8                                 | H          | 6.21      | 21.46                  | 27.67      | 0.58     |
| Vertical Polarization (Antenna Pol.)   |            |           |                        |            |          |
| Frequency (MHz)                        | (EUT Pol.) | LVL (dBm) | Correction Factor (dB) | EIRP (dBm) | EIRP (W) |
| 1850.2                                 | H          | 6.34      | 21.66                  | 28.00      | 0.63     |
| 1880.0                                 | H          | 6.89      | 21.54                  | 28.43      | 0.70     |
| 1909.8                                 | H          | 7.13      | 21.46                  | 28.59      | 0.72     |

| 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          | 6.79      | 21.66                  | 28.45      | 0.70     |
| 1880.0                                 | H          | 6.11      | 21.54                  | 27.65      | 0.58     |
| 1909.8                                 | H          | 6.48      | 21.46                  | 27.94      | 0.62     |
| Vertical Polarization (Antenna Pol.)   |            |           |                        |            |          |
| Frequency (MHz)                        | (EUT Pol.) | LVL (dBm) | Correction Factor (dB) | EIRP (dBm) | EIRP (W) |
| 1850.2                                 | H          | 6.62      | 21.66                  | 28.28      | 0.67     |
| 1880.0                                 | H          | 6.33      | 21.54                  | 27.87      | 0.61     |
| 1909.8                                 | H          | 7.97      | 21.46                  | 29.43      | 0.88     |

**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          | -0.86     | 21.66                  | 20.80      | 0.12     |
| 1732.6                                           | H          | -0.54     | 21.54                  | 21.00      | 0.13     |
| 1752.6                                           | H          | -0.32     | 21.46                  | 21.14      | 0.13     |
| Vertical Polarization (Antenna Pol.)             |            |           |                        |            |          |
| Frequency (MHz)                                  | (EUT Pol.) | LVL (dBm) | Correction Factor (dB) | EIRP (dBm) | EIRP (W) |
| 1712.4                                           | H          | -0.49     | 21.66                  | 21.17      | 0.13     |
| 1732.6                                           | H          | -0.81     | 21.54                  | 20.73      | 0.12     |
| 1752.6                                           | H          | -0.60     | 21.46                  | 20.86      | 0.12     |

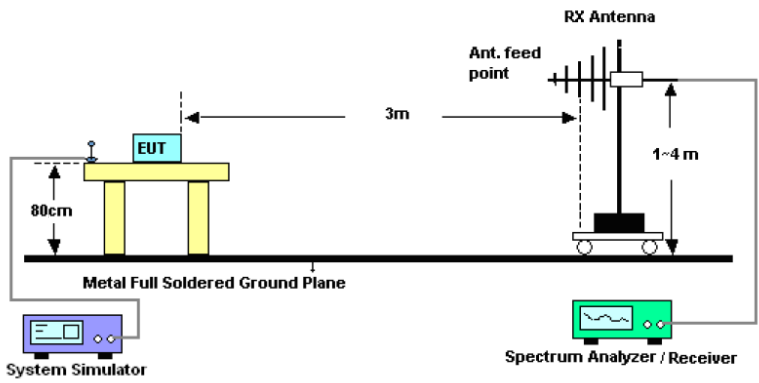
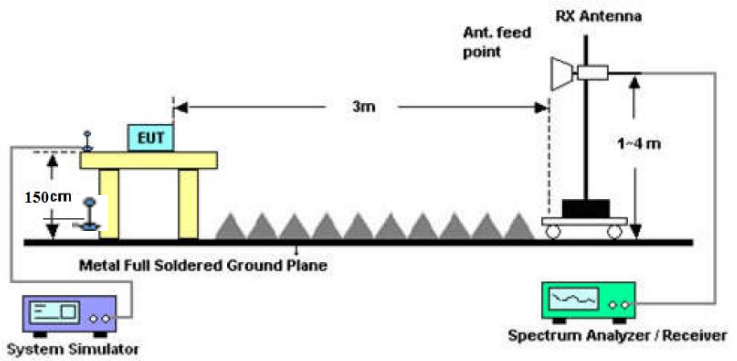
| WCDMA Band II (RMC 12.2Kbps) Radiated Power EIRP |            |           |                        |            |          |
|--------------------------------------------------|------------|-----------|------------------------|------------|----------|
| Horizontal Polarization (Antenna Pol.)           |            |           |                        |            |          |
| Frequency (MHz)                                  | (EUT Pol.) | LVL (dBm) | Correction Factor (dB) | EIRP (dBm) | EIRP (W) |
| 1852.4                                           | H          | 0.92      | 21.66                  | 22.58      | 0.18     |
| 1880.0                                           | H          | 0.70      | 21.54                  | 22.24      | 0.17     |
| 1907.6                                           | H          | 0.28      | 21.46                  | 21.74      | 0.15     |
| Vertical Polarization (Antenna Pol.)             |            |           |                        |            |          |
| Frequency (MHz)                                  | (EUT Pol.) | LVL (dBm) | Correction Factor (dB) | EIRP (dBm) | EIRP (W) |
| 1852.4                                           | H          | 0.63      | 21.66                  | 22.29      | 0.17     |
| 1880.0                                           | H          | 0.49      | 21.54                  | 22.03      | 0.16     |
| 1907.6                                           | H          | 0.71      | 21.46                  | 22.17      | 0.16     |

**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        | Jun. 28, 2024   |
| Spectrum Analyzer                    | R&S                | FSQ40      | 200061        | Jun. 29, 2024   |
| Signal Generator                     | HP                 | 83623B     | 3614A00396    | Feb. 24, 2024   |
| Broadband Antenna                    | Schwarzbeck        | VULB9163   | 340           | Jul. 01, 2024   |
| Horn Antenna                         | Schwarzbeck        | BBHA 9120D | 631           | Jul. 01, 2024   |
| Broadband Antenna                    | Schwarzbeck        | VULB9163   | 412           | Jul. 01, 2024   |
| Horn Antenna                         | Schwarzbeck        | BBHA 9120D | 1201          | Jul. 01, 2024   |
| Horn Antenna                         | Schwarzbeck        | BBHA 9170  | 00956         | Feb. 24, 2024   |
| 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          | -60.83      | 23.12                  | -37.71                   | -13.00      | PASS   |
| 2472.6          | V                 | -69.25      | 23.20                  | -46.05                   |             |        |
| 3296.8          | V                 | -82.76      | 23.28                  | -59.48                   |             |        |
| 1648.4          | Horizontal        | -60.33      | 23.12                  | -37.21                   |             |        |
| 2472.6          | H                 | -67.81      | 23.20                  | -44.61                   |             |        |
| 3296.8          | H                 | -80.45      | 23.28                  | -57.17                   |             |        |

| 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          | -61.56      | 23.17                  | -38.39                   | -13.00      | PASS   |
| 2509.8          | V                 | -72.63      | 23.26                  | -49.37                   |             |        |
| 3346.4          | V                 | -82.87      | 23.38                  | -59.49                   |             |        |
| 1673.2          | Horizontal        | -61.51      | 23.17                  | -38.34                   |             |        |
| 2509.8          | H                 | -68.76      | 23.26                  | -45.50                   |             |        |
| 3346.4          | H                 | -82.18      | 23.38                  | -58.80                   |             |        |

| 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          | -62.44      | 23.23                  | -39.21                   | -13.00      | PASS   |
| 2546.4          | V                 | -73.77      | 23.32                  | -50.45                   |             |        |
| 3395.2          | V                 | -80.81      | 23.44                  | -57.37                   |             |        |
| 1697.6          | Horizontal        | -59.90      | 23.23                  | -36.67                   |             |        |
| 2546.4          | H                 | -69.38      | 23.32                  | -46.06                   |             |        |
| 3395.2          | H                 | -81.02      | 23.44                  | -57.58                   |             |        |



|                   |                 |                           |               |
|-------------------|-----------------|---------------------------|---------------|
| <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          | -69.19      | 23.49                  | -45.70                   | -13.00      | PASS   |
| 5550.6          | V                 | -76.72      | 23.75                  | -52.97                   |             |        |
| 7400.8          | V                 | -83.96      | 23.89                  | -60.07                   |             |        |
| 3700.4          | Horizontal        | -65.87      | 23.49                  | -42.38                   |             |        |
| 5550.6          | H                 | -72.59      | 23.75                  | -48.84                   |             |        |
| 7400.8          | H                 | -81.37      | 23.89                  | -57.48                   |             |        |

|                   |                 |                           |               |
|-------------------|-----------------|---------------------------|---------------|
| <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          | -68.61      | 23.58                  | -45.03                   | -13.00      | PASS   |
| 5640.0          | V                 | -78.20      | 23.85                  | -54.35                   |             |        |
| 7520.0          | V                 | -77.52      | 23.99                  | -53.53                   |             |        |
| 3760.0          | Horizontal        | -66.23      | 23.58                  | -42.65                   |             |        |
| 5640.0          | H                 | -78.00      | 23.85                  | -54.15                   |             |        |
| 7520.0          | H                 | -80.16      | 23.99                  | -56.17                   |             |        |

|                   |                 |                           |                |
|-------------------|-----------------|---------------------------|----------------|
| <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          | -66.50      | 23.64                  | -42.86                   | -13.00      | PASS   |
| 5729.4          | V                 | -75.63      | 23.93                  | -51.70                   |             |        |
| 7639.2          | V                 | -83.51      | 24.08                  | -59.43                   |             |        |
| 3819.6          | Horizontal        | -65.25      | 23.64                  | -41.61                   |             |        |
| 5729.4          | H                 | -71.94      | 23.93                  | -48.01                   |             |        |
| 7639.2          | H                 | -80.10      | 24.08                  | -56.02                   |             |        |

| 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          | -74.59      | 23.14                  | -51.45                   | -13.00      | PASS   |
| 2479.2          | V                 | -82.99      | 23.23                  | -59.76                   |             |        |
| 3305.6          | V                 | -81.31      | 23.34                  | -57.97                   |             |        |
| 1652.8          | Horizontal        | -71.28      | 23.14                  | -48.14                   |             |        |
| 2479.2          | H                 | -81.22      | 23.23                  | -57.99                   |             |        |
| 3305.6          | H                 | -79.90      | 23.34                  | -56.56                   |             |        |

| 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          | -71.74      | 23.17                  | -48.57                   | -13.00      | PASS   |
| 2509.8          | V                 | -81.71      | 23.26                  | -58.45                   |             |        |
| 3346.4          | V                 | -82.02      | 23.38                  | -58.64                   |             |        |
| 1673.2          | Horizontal        | -70.63      | 23.17                  | -47.46                   |             |        |
| 2509.8          | H                 | -80.55      | 23.26                  | -57.29                   |             |        |
| 3346.4          | H                 | -82.21      | 23.38                  | -58.83                   |             |        |

| 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          | -75.97      | 23.20                  | -52.77                   | -13.00      | PASS   |
| 2539.8          | V                 | -82.60      | 23.29                  | -59.31                   |             |        |
| 3386.4          | V                 | -78.62      | 23.42                  | -55.20                   |             |        |
| 1693.2          | Horizontal        | -73.19      | 23.20                  | -49.99                   |             |        |
| 2539.8          | H                 | -81.66      | 23.29                  | -58.37                   |             |        |
| 3386.4          | H                 | -80.72      | 23.42                  | -57.30                   |             |        |

| 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          | -84.08      | 23.16                  | -60.92                   | -13.00      | PASS   |
| 3424.8          | V                 | -81.95      | 23.37                  | -58.58                   |             |        |
| 5137.2          | V                 | -84.57      | 23.65                  | -60.92                   |             |        |
| 2452.3          | Horizontal        | -81.69      | 23.16                  | -58.53                   |             |        |
| 3424.8          | H                 | -82.35      | 23.37                  | -58.98                   |             |        |
| 5137.2          | H                 | -81.06      | 23.65                  | -57.41                   |             |        |

| 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          | -84.66      | 23.30                  | -61.36                   | -13.00      | PASS   |
| 3465.2          | V                 | -80.13      | 23.42                  | -56.71                   |             |        |
| 5197.8          | V                 | -85.55      | 23.73                  | -61.82                   |             |        |
| 2641.3          | Horizontal        | -81.80      | 23.30                  | -58.50                   |             |        |
| 3465.2          | H                 | -84.72      | 23.42                  | -61.30                   |             |        |
| 5197.8          | H                 | -83.65      | 23.73                  | -59.92                   |             |        |

| 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          | -82.82      | 23.35                  | -59.47                   | -13.00      | PASS   |
| 3505.2          | V                 | -83.37      | 23.45                  | -59.92                   |             |        |
| 5257.8          | V                 | -79.31      | 23.82                  | -55.49                   |             |        |
| 3102.2          | Horizontal        | -83.27      | 23.35                  | -59.92                   |             |        |
| 3505.2          | H                 | -82.74      | 23.45                  | -59.29                   |             |        |
| 5257.8          | H                 | -85.91      | 23.82                  | -62.09                   |             |        |

|                   |                                 |                           |               |
|-------------------|---------------------------------|---------------------------|---------------|
| <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          | -71.98      | 23.53                  | -48.45                   | -13.00      | PASS   |
| 5557.2          | V                 | -80.29      | 23.78                  | -56.51                   |             |        |
| 7409.6          | V                 | -74.82      | 23.92                  | -50.90                   |             |        |
| 3704.8          | Horizontal        | -74.24      | 23.53                  | -50.71                   |             |        |
| 5557.2          | H                 | -81.18      | 23.78                  | -57.40                   |             |        |
| 7409.6          | H                 | -81.12      | 23.92                  | -57.20                   |             |        |

|                   |                                 |                           |               |
|-------------------|---------------------------------|---------------------------|---------------|
| <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          | -72.54      | 23.58                  | -48.96                   | -13.00      | PASS   |
| 5640.0          | V                 | -76.02      | 23.85                  | -52.17                   |             |        |
| 7520.0          | V                 | -75.77      | 23.99                  | -51.78                   |             |        |
| 3760.0          | Horizontal        | -80.80      | 23.58                  | -57.22                   |             |        |
| 5640.0          | H                 | -75.34      | 23.85                  | -51.49                   |             |        |
| 7520.0          | H                 | -72.48      | 23.99                  | -48.49                   |             |        |

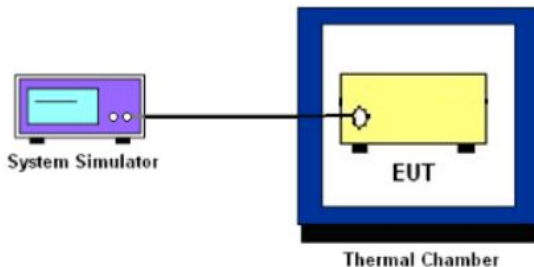
|                   |                                 |                           |                |
|-------------------|---------------------------------|---------------------------|----------------|
| <b>Band</b>       | <b>WCDMA Band II</b>            | <b>Test channel:</b>      | <b>Highest</b> |
| <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          | -75.37      | 23.62                  | -51.75                   | -13.00      | PASS   |
| 5722.8          | V                 | -76.08      | 23.90                  | -52.18                   |             |        |
| 7630.4          | V                 | -78.01      | 24.05                  | -53.96                   |             |        |
| 3815.2          | Horizontal        | -74.91      | 23.62                  | -51.29                   |             |        |
| 5722.8          | H                 | -82.22      | 23.90                  | -58.32                   |             |        |
| 7630.4          | H                 | -76.68      | 24.05                  | -52.63                   |             |        |

## 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 System Simulator (a purple box with a screen) connected by a cable to a yellow box labeled 'EUT'. The EUT is placed 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        | Jun. 28, 2024   |
| Programable tempratuce and humidity chamber | JQ           | JQ-2000   | 510101234     | Jun. 28, 2024   |
| DC power supply                             | Kingrang     | KR3005K   | /             | Jun. 28, 2024   |
| 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> |
| Temperature (°C)     | Deviation (ppm) | Result            |                 |
| 50                   | 0.019           | PASS              |                 |
| 40                   | 0.017           |                   |                 |
| 30                   | 0.016           |                   |                 |
| 20                   | 0.018           |                   |                 |
| 10                   | 0.019           |                   |                 |
| 0                    | 0.020           |                   |                 |
| -10                  | 0.015           |                   |                 |
| -20                  | 0.014           |                   |                 |
| -30                  | 0.018           |                   |                 |

| <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> |
| Temperature (°C)     | Deviation (ppm) | Result            |                |
| 50                   | 0.020           | PASS              |                |
| 40                   | 0.017           |                   |                |
| 30                   | 0.019           |                   |                |
| 20                   | 0.016           |                   |                |
| 10                   | 0.021           |                   |                |
| 0                    | 0.023           |                   |                |
| -10                  | 0.022           |                   |                |
| -20                  | 0.019           |                   |                |
| -30                  | 0.024           |                   |                |

**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>4183</b>     |
| <b>Limit (ppm) :</b>    | <b>2.5</b>                          | <b>Frequency:</b> | <b>836.6MHz</b> |
| <b>Temperature (°C)</b> | <b>RMC 12.2Kbps Deviation (ppm)</b> | <b>Result</b>     |                 |
| 50                      | 0.014                               | PASS              |                 |
| 40                      | 0.018                               |                   |                 |
| 30                      | 0.017                               |                   |                 |
| 20                      | 0.015                               |                   |                 |
| 10                      | 0.020                               |                   |                 |
| 0                       | 0.019                               |                   |                 |
| -10                     | 0.016                               |                   |                 |
| -20                     | 0.014                               |                   |                 |
| -30                     | 0.017                               |                   |                 |

|                         |                              |                   |               |
|-------------------------|------------------------------|-------------------|---------------|
| <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                      | 0.024                        | PASS              |               |
| 40                      | 0.022                        |                   |               |
| 30                      | 0.021                        |                   |               |
| 20                      | 0.019                        |                   |               |
| 10                      | 0.018                        |                   |               |
| 0                       | 0.015                        |                   |               |
| -10                     | 0.016                        |                   |               |
| -20                     | 0.023                        |                   |               |
| -30                     | 0.021                        |                   |               |

|                  |                              |            |         |
|------------------|------------------------------|------------|---------|
| Band :           | WCDMA Band II                | Channel:   | 9400    |
| Limit (ppm) :    | Note                         | Frequency: | 1880MHz |
| Temperature (°C) | RMC 12.2Kbps Deviation (ppm) | Result     |         |
| 50               | 0.013                        | PASS       |         |
| 40               | 0.019                        |            |         |
| 30               | 0.016                        |            |         |
| 20               | 0.015                        |            |         |
| 10               | 0.017                        |            |         |
| 0                | 0.021                        |            |         |
| -10              | 0.015                        |            |         |
| -20              | 0.018                        |            |         |
| -30              | 0.020                        |            |         |

**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            | +0.019          | 2.5         | PASS   |
|                      |              | 3.7            | +0.018          |             |        |
|                      |              | BEP            | +0.015          |             |        |
| GSM 1900 CH661       | GSM          | 4.2            | +0.017          | (Note 3.)   |        |
|                      |              | 3.7            | +0.021          |             |        |
|                      |              | BEP            | +0.016          |             |        |
| WCDMA Band V CH4182  | RMC 12.2Kbps | 4.2            | -0.013          | 2.5         |        |
|                      |              | 3.7            | -0.018          |             |        |
|                      |              | BEP            | -0.016          |             |        |
| WCDMA Band IV CH1413 | RMC 12.2Kbps | 4.2            | -0.020          |             |        |
|                      |              | 3.7            | -0.022          |             |        |
|                      |              | BEP            | -0.023          |             |        |
| WCDMA Band II CH9400 | RMC 12.2Kbps | 4.2            | -0.018          | (Note 3.)   |        |
|                      |              | 3.7            | -0.015          |             |        |
|                      |              | BEP            | -0.016          |             |        |

### Note:

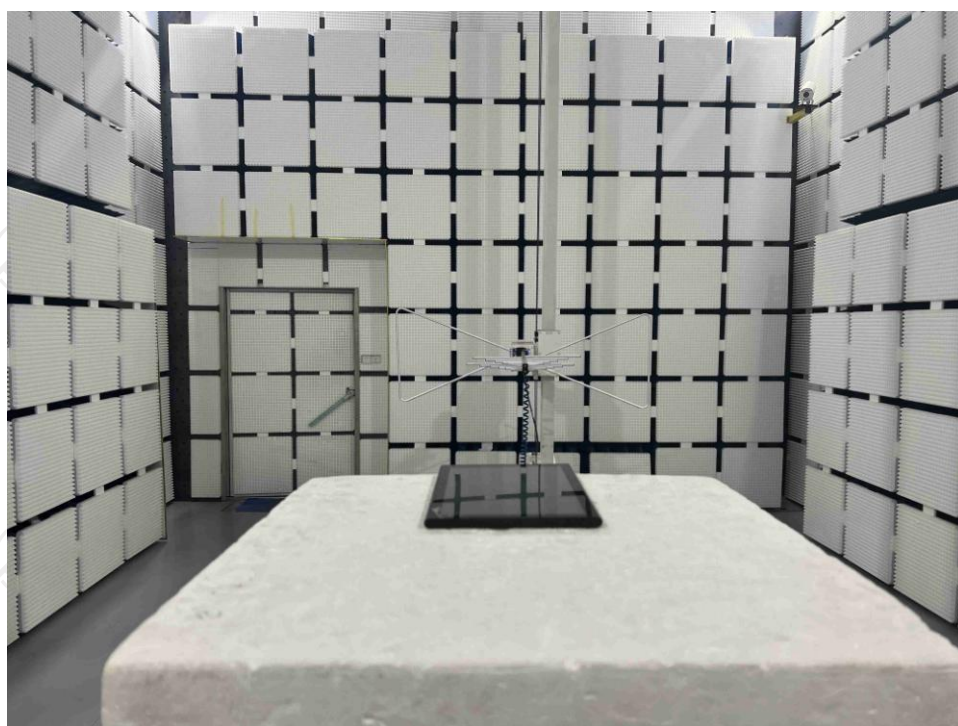
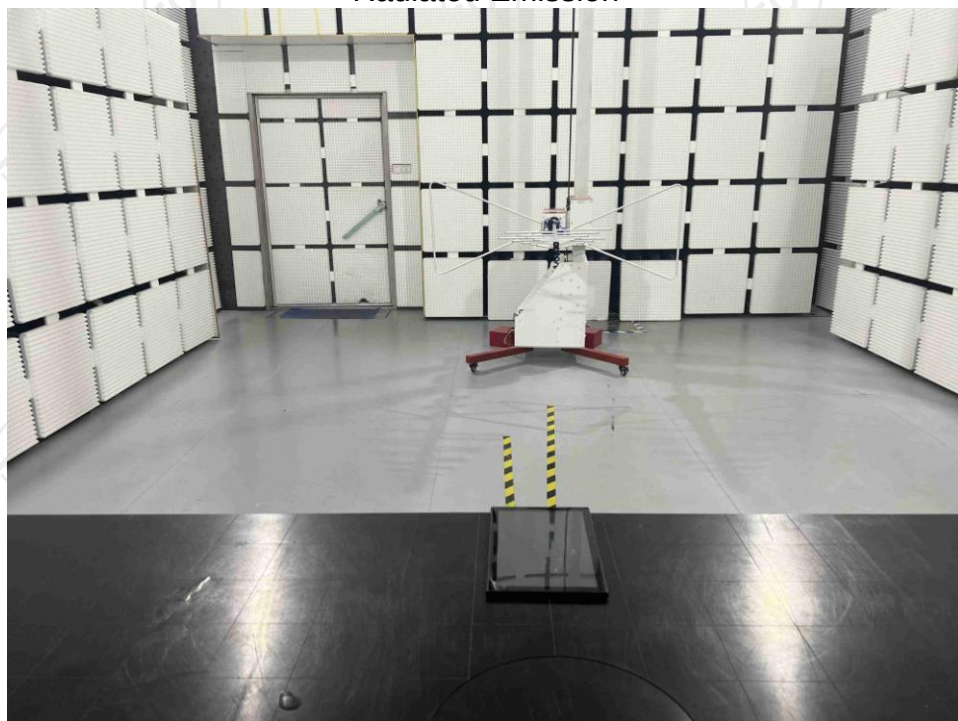
1. Normal Voltage = 3.7V.
2. Battery End Point (BEP) = 3.4V.
3. The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.

## Appendix B: Photographs of Test Setup

Product: Smart Phone

Model: G65

Radiated Emission



## Appendix C: Photographs of EUT

Refer to the test report No. TCT230906E010

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