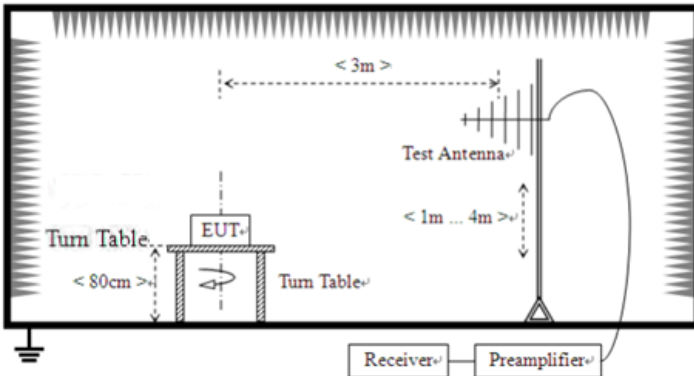
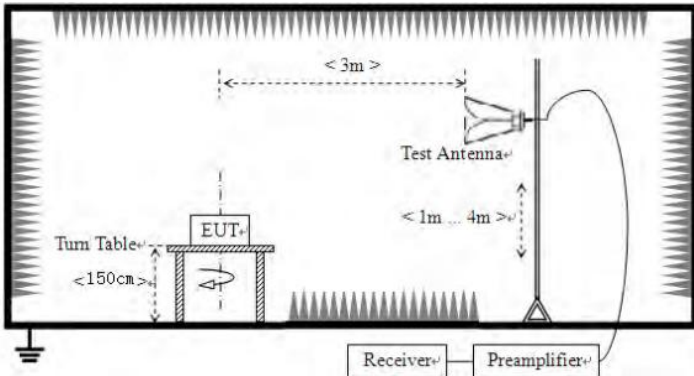
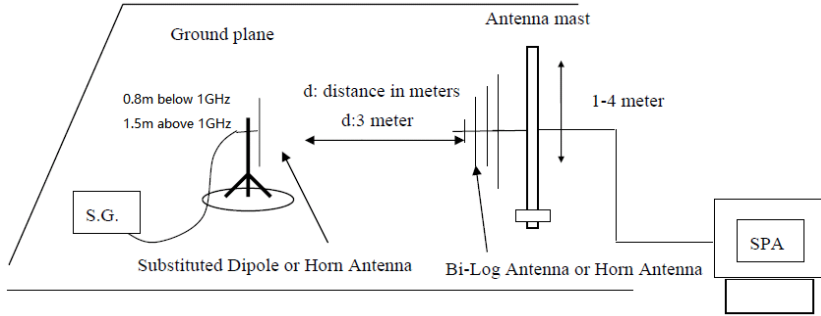


| EUT mode          | Channel | EUT Pol. | Antenna Pol. | ERP(dBm) | Limit (dBm) | Result |
|-------------------|---------|----------|--------------|----------|-------------|--------|
| Band 17<br>(5MHz) | Lowest  | H        | V            | 22.48    | 34.77       | Pass   |
|                   |         |          | H            | 20.41    |             |        |
|                   |         | E1       | V            | 22.37    |             |        |
|                   |         |          | H            | 19.91    |             |        |
|                   |         | E2       | V            | 21.71    |             |        |
|                   |         |          | H            | 18.92    |             |        |
|                   | Middle  | H        | V            | 22.80    | 34.77       | Pass   |
|                   |         |          | H            | 20.28    |             |        |
|                   |         | E1       | V            | 22.55    |             |        |
|                   |         |          | H            | 20.15    |             |        |
|                   |         | E2       | V            | 22.29    |             |        |
|                   |         |          | H            | 19.20    |             |        |
|                   | Highest | H        | V            | 22.54    | 34.77       | Pass   |
|                   |         |          | H            | 20.35    |             |        |
|                   |         | E1       | V            | 22.44    |             |        |
|                   |         |          | H            | 20.14    |             |        |
|                   |         | E2       | V            | 21.97    |             |        |
|                   |         |          | H            | 19.44    |             |        |

| EUT mode           | Channel | EUT Pol. | Antenna Pol. | ERP(dBm) | Limit (dBm) | Result |
|--------------------|---------|----------|--------------|----------|-------------|--------|
| Band 17<br>(10MHz) | Lowest  | H        | V            | 22.42    | 34.77       | Pass   |
|                    |         |          | H            | 20.31    |             |        |
|                    |         | E1       | V            | 22.35    |             |        |
|                    |         |          | H            | 19.83    |             |        |
|                    |         | E2       | V            | 21.69    |             |        |
|                    |         |          | H            | 18.88    |             |        |
|                    | Middle  | H        | V            | 22.79    | 34.77       | Pass   |
|                    |         |          | H            | 20.28    |             |        |
|                    |         | E1       | V            | 22.55    |             |        |
|                    |         |          | H            | 20.13    |             |        |
|                    |         | E2       | V            | 22.26    |             |        |
|                    |         |          | H            | 19.16    |             |        |
|                    | Highest | H        | V            | 22.54    | 34.77       | Pass   |
|                    |         |          | H            | 20.36    |             |        |
|                    |         | E1       | V            | 22.45    |             |        |
|                    |         |          | H            | 20.12    |             |        |
|                    |         | E2       | V            | 21.96    |             |        |
|                    |         |          | H            | 19.42    |             |        |

## 7.9 Field strength of spurious radiation measurement

|                   |                                                                                                                                                                                                                                                                                                                             |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | Part 24.238 (a); FCC Part 27.53(h)/(g)                                                                                                                                                                                                                                                                                      |
| Test Method:      | FCC part 2.1053 and ANSI C63.26:2015                                                                                                                                                                                                                                                                                        |
| Limit:            | Band 2/4/5/7/12/17:-13dBm                                                                                                                                                                                                                                                                                                   |
| Test setup:       | <p>Below 1GHz</p>  <p>Above 1GHz</p>  <p>Substituted method:</p>  |

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Procedure:   | <ol style="list-style-type: none"> <li>1. The EUT was placed on an non-conductive turntable using a non-conductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer.</li> <li>2. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.</li> <li>3. The frequency range up to tenth harmonic was investigated for each of three fundamental frequency (low, middle and high channels). Once spurious emission was identified, the power of the emission was determined using the substitution method.</li> <li>4. The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency.<br/> <math display="block">\text{ERP / EIRP} = \text{S.G. output (dBm)} + \text{Antenna Gain(dB/dBi)} - \text{Cable Loss (dB)}</math> </li> </ol> |
| Test Instruments: | Refer to section 6.0 for details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Test mode:        | Refer to section 7.1 for details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Test results:     | Pass                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

## Measurement Data

### Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Remark"---" means that the emission level is too low to be measured
3. The emission levels of below 1 GHz are very lower than the limit and not show in test report.

| Test mode:      | Band 2 (1.4MHz)   |             | Test channel: | Lowest  |
|-----------------|-------------------|-------------|---------------|---------|
| Frequency (MHz) | Spurious Emission |             | Limit (dBm)   | Result  |
|                 | Polarization      | Level (dBm) |               |         |
| 3701.40         | Vertical          | -36.05      | -13.00        | Pass    |
| 5552.10         | V                 | -38.78      |               |         |
| 7402.80         | V                 | -41.04      |               |         |
| 9253.50         | V                 | -43.20      |               |         |
| 11104.20        | V                 | ---         |               |         |
| 3701.40         | Horizontal        | -41.28      | -13.00        | Pass    |
| 5552.10         | H                 | -45.14      |               |         |
| 7402.80         | H                 | -46.71      |               |         |
| 9253.50         | H                 | -49.44      |               |         |
| 11104.20        | H                 | ---         |               |         |
| Test mode:      | Band 2 (1.4MHz)   |             | Test channel: | Middle  |
| Frequency (MHz) | Spurious Emission |             | Limit (dBm)   | Result  |
|                 | Polarization      | Level (dBm) |               |         |
| 3760.00         | Vertical          | -37.42      | -13.00        | Pass    |
| 5640.00         | V                 | -39.69      |               |         |
| 7520.00         | V                 | -41.58      |               |         |
| 9400.00         | V                 | -43.38      |               |         |
| 11280.00        | V                 | ---         |               |         |
| 3760.00         | Horizontal        | -41.78      | -13.00        | Pass    |
| 5640.00         | H                 | -45.00      |               |         |
| 7520.00         | H                 | -46.30      |               |         |
| 9400.00         | H                 | -48.58      |               |         |
| 11280.00        | H                 | ---         |               |         |
| Test mode:      | Band 2 (1.4MHz)   |             | Test channel: | Highest |
| Frequency (MHz) | Spurious Emission |             | Limit (dBm)   | Result  |
|                 | Polarization      | Level (dBm) |               |         |
| 3818.60         | Vertical          | -37.74      | -13.00        | Pass    |
| 5727.90         | V                 | -39.76      |               |         |
| 7637.20         | V                 | -41.42      |               |         |
| 9546.50         | V                 | -43.03      |               |         |
| 11455.80        | V                 | ---         |               |         |
| 3818.60         | Horizontal        | -41.61      | -13.00        | Pass    |
| 5727.90         | H                 | -44.47      |               |         |
| 7637.20         | H                 | -45.62      |               |         |
| 9546.50         | H                 | -47.64      |               |         |
| 11455.80        | H                 | ---         |               |         |

| Test mode:      | Band 4 (1.4MHz)   |             | Test channel: | Lowest  |
|-----------------|-------------------|-------------|---------------|---------|
| Frequency (MHz) | Spurious Emission |             | Limit (dBm)   | Result  |
|                 | Polarization      | Level (dBm) |               |         |
| 3421.40         | Vertical          | -37.16      | -13.00        | Pass    |
| 5132.10         | V                 | -39.53      |               |         |
| 6842.80         | V                 | -41.50      |               |         |
| 8553.50         | V                 | -43.39      |               |         |
| 10264.20        | V                 | ---         |               |         |
| 3421.40         | Horizontal        | -41.72      | -13.00        | Pass    |
| 5132.10         | H                 | -45.09      |               |         |
| 6842.80         | H                 | -46.43      |               |         |
| 8553.50         | H                 | -48.80      |               |         |
| 10264.20        | H                 | ---         |               |         |
| Test mode:      | Band 4 (1.4MHz)   |             | Test channel: | Middle  |
| Frequency (MHz) | Spurious Emission |             | Limit (dBm)   | Result  |
|                 | Polarization      | Level (dBm) |               |         |
| 3465.00         | Vertical          | -35.02      | -13.00        | Pass    |
| 5197.50         | V                 | -37.47      |               |         |
| 6930.00         | V                 | -39.49      |               |         |
| 8662.50         | V                 | -41.46      |               |         |
| 10395.00        | V                 | ---         |               |         |
| 3465.00         | Horizontal        | -39.74      | -13.00        | Pass    |
| 5197.50         | H                 | -43.20      |               |         |
| 6930.00         | H                 | -44.60      |               |         |
| 8662.50         | H                 | -47.04      |               |         |
| 10395.00        | H                 | ---         |               |         |
| Test mode:      | Band 4 (1.4MHz)   |             | Test channel: | Highest |
| Frequency (MHz) | Spurious Emission |             | Limit (dBm)   | Result  |
|                 | Polarization      | Level (dBm) |               |         |
| 3508.60         | Vertical          | -35.80      | -13.00        | Pass    |
| 5262.90         | V                 | -38.19      |               |         |
| 7017.20         | V                 | -40.17      |               |         |
| 8771.50         | V                 | -42.07      |               |         |
| 10525.80        | V                 | ---         |               |         |
| 3508.60         | Horizontal        | -40.39      | -13.00        | Pass    |
| 5262.90         | H                 | -43.78      |               |         |
| 7017.20         | H                 | -45.14      |               |         |
| 8771.50         | H                 | -47.53      |               |         |
| 10525.80        | H                 | ---         |               |         |

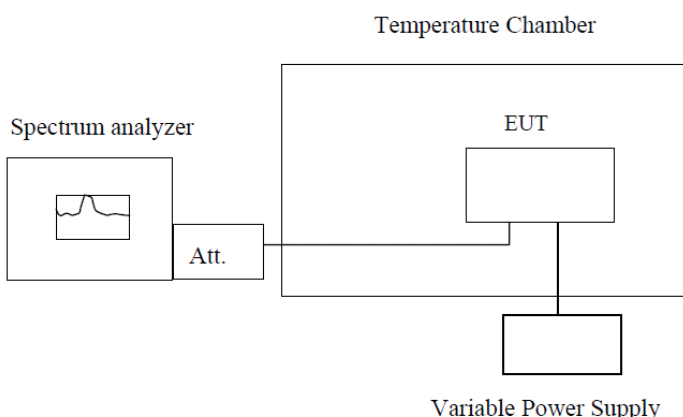
| Test mode:      | Band 5 (1.4MHz)   |             | Test channel: | Lowest  |
|-----------------|-------------------|-------------|---------------|---------|
| Frequency (MHz) | Spurious Emission |             | Limit (dBm)   | Result  |
|                 | Polarization      | Level (dBm) |               |         |
| 1649.40         | Vertical          | -40.16      | -13.00        | Pass    |
| 2474.10         | V                 | -40.86      |               |         |
| 3298.80         | V                 | -42.23      |               |         |
| 4123.50         | V                 | -44.38      |               |         |
| 4948.20         | V                 | ---         |               |         |
| 1649.40         | Horizontal        | -43.06      | -13.00        | Pass    |
| 2474.10         | H                 | -45.18      |               |         |
| 3298.80         | H                 | -46.65      |               |         |
| 4123.50         | H                 | -49.07      |               |         |
| 4948.20         | H                 | ---         |               |         |
| Test mode:      | Band 5 (1.4MHz)   |             | Test channel: | Middle  |
| Frequency (MHz) | Spurious Emission |             | Limit (dBm)   | Result  |
|                 | Polarization      | Level (dBm) |               |         |
| 1673.00         | Vertical          | -41.08      | -13.00        | Pass    |
| 2509.50         | V                 | -43.02      |               |         |
| 3346.00         | V                 | -44.23      |               |         |
| 4182.50         | V                 | -48.12      |               |         |
| 5019.00         | V                 | ---         |               |         |
| 1673.00         | Horizontal        | -44.36      | -13.00        | Pass    |
| 2509.50         | H                 | -44.88      |               |         |
| 3346.00         | H                 | -47.06      |               |         |
| 4182.50         | H                 | -50.39      |               |         |
| 5019.00         | H                 | ---         |               |         |
| Test mode:      | Band 5 (1.4MHz)   |             | Test channel: | Highest |
| Frequency (MHz) | Spurious Emission |             | Limit (dBm)   | Result  |
|                 | Polarization      | Level (dBm) |               |         |
| 1696.60         | Vertical          | -38.65      | -13.00        | Pass    |
| 2544.90         | V                 | -40.29      |               |         |
| 3393.20         | V                 | -42.22      |               |         |
| 4241.50         | V                 | -43.15      |               |         |
| 5089.80         | V                 | ---         |               |         |
| 1696.60         | Horizontal        | -44.50      | -13.00        | Pass    |
| 2544.90         | H                 | -48.18      |               |         |
| 3393.20         | H                 | -50.48      |               |         |
| 4241.50         | H                 | -53.53      |               |         |
| 5089.80         | H                 | ---         |               |         |

| Test mode:      | Band 7 (5MHz)     |             | Test channel: | Lowest  |
|-----------------|-------------------|-------------|---------------|---------|
| Frequency (MHz) | Spurious Emission |             | Limit (dBm)   | Result  |
|                 | Polarization      | Level (dBm) |               |         |
| 5005.00         | Vertical          | -38.58      | -13.00        | Pass    |
| 7507.50         | V                 | -41.67      |               |         |
| 10010.00        | V                 | -44.23      |               |         |
| 12512.50        | V                 | -46.69      |               |         |
| 15015.00        | V                 | ---         |               |         |
| 5005.00         | Horizontal        | -44.51      | -13.00        | Pass    |
| 7507.50         | H                 | -48.88      |               |         |
| 10010.00        | H                 | -50.65      |               |         |
| 12512.50        | H                 | -53.73      |               |         |
| 15015.00        | H                 | ---         |               |         |
| Test mode:      | Band 7 (5MHz)     |             | Test channel: | Middle  |
| Frequency (MHz) | Spurious Emission |             | Limit (dBm)   | Result  |
|                 | Polarization      | Level (dBm) |               |         |
| 5070.00         | Vertical          | -39.03      | -13.00        | Pass    |
| 7605.00         | V                 | -41.98      |               |         |
| 10140.00        | V                 | -44.41      |               |         |
| 12675.00        | V                 | -46.75      |               |         |
| 15210.00        | V                 | ---         |               |         |
| 5070.00         | Horizontal        | -44.68      | -13.00        | Pass    |
| 7605.00         | H                 | -48.85      |               |         |
| 10140.00        | H                 | -50.53      |               |         |
| 12675.00        | H                 | -53.47      |               |         |
| 15210.00        | H                 | ---         |               |         |
| Test mode:      | Band 7 (5MHz)     |             | Test channel: | Highest |
| Frequency (MHz) | Spurious Emission |             | Limit (dBm)   | Result  |
|                 | Polarization      | Level (dBm) |               |         |
| 5135.00         | Vertical          | -38.27      | -13.00        | Pass    |
| 7702.50         | V                 | -41.02      |               |         |
| 10270.00        | V                 | -43.29      |               |         |
| 12837.50        | V                 | -45.48      |               |         |
| 15405.00        | V                 | ---         |               |         |
| 5135.00         | Horizontal        | -43.54      | -13.00        | Pass    |
| 7702.50         | H                 | -47.43      |               |         |
| 10270.00        | H                 | -49.00      |               |         |
| 12837.50        | H                 | -51.74      |               |         |
| 15405.00        | H                 | ---         |               |         |

| Test mode:      | Band 12 (1.4MHz)  |             | Test channel: | Lowest  |
|-----------------|-------------------|-------------|---------------|---------|
| Frequency (MHz) | Spurious Emission |             | Limit (dBm)   | Result  |
|                 | Polarization      | Level (dBm) |               |         |
| 1399.40         | Vertical          | -37.50      | -13.00        | Pass    |
| 2099.10         | V                 | -41.24      |               |         |
| 2798.80         | V                 | -43.97      |               |         |
| 3498.50         | V                 | -41.50      |               |         |
| 4198.20         | V                 | ---         |               |         |
| 1399.40         | Horizontal        | -40.30      | -13.00        | Pass    |
| 2099.10         | H                 | -42.98      |               |         |
| 2798.80         | H                 | -48.39      |               |         |
| 3498.50         | H                 | -52.01      |               |         |
| 4198.20         | H                 | ---         |               |         |
| Test mode:      | Band 12 (1.4MHz)  |             | Test channel: | Middle  |
| Frequency (MHz) | Spurious Emission |             | Limit (dBm)   | Result  |
|                 | Polarization      | Level (dBm) |               |         |
| 1415.00         | Vertical          | -39.69      | -13.00        | Pass    |
| 2122.50         | V                 | -40.99      |               |         |
| 2830.00         | V                 | -44.60      |               |         |
| 3537.50         | V                 | -47.06      |               |         |
| 4245.00         | V                 | ---         |               |         |
| 1415.00         | Horizontal        | -42.13      | -13.00        | Pass    |
| 2122.50         | H                 | -44.02      |               |         |
| 2830.00         | H                 | -48.69      |               |         |
| 3537.50         | H                 | -51.06      |               |         |
| 4245.00         | H                 | ---         |               |         |
| Test mode:      | Band 12 (1.4MHz)  |             | Test channel: | Highest |
| Frequency (MHz) | Spurious Emission |             | Limit (dBm)   | Result  |
|                 | Polarization      | Level (dBm) |               |         |
| 1430.60         | Vertical          | -37.96      | -13.00        | Pass    |
| 2145.90         | V                 | -40.39      |               |         |
| 2861.20         | V                 | -43.02      |               |         |
| 3576.50         | V                 | -45.91      |               |         |
| 4291.80         | V                 | ---         |               |         |
| 1430.60         | Horizontal        | -41.30      | -13.00        | Pass    |
| 2145.90         | H                 | -43.72      |               |         |
| 2861.20         | H                 | -45.09      |               |         |
| 3576.50         | H                 | -51.28      |               |         |
| 4291.80         | H                 | ---         |               |         |

| Test mode:      | Band 17 (5MHz)    |             | Test channel: | Lowest  |
|-----------------|-------------------|-------------|---------------|---------|
| Frequency (MHz) | Spurious Emission |             | Limit (dBm)   | Result  |
|                 | Polarization      | Level (dBm) |               |         |
| 1413.00         | Vertical          | -40.27      | -13.00        | Pass    |
| 2119.50         | V                 | -40.96      |               |         |
| 2826.00         | V                 | -42.37      |               |         |
| 3532.50         | V                 | -44.60      |               |         |
| 4239.00         | V                 | ---         |               |         |
| 1413.00         | Horizontal        | -43.44      | -13.00        | Pass    |
| 2119.50         | H                 | -45.08      |               |         |
| 2826.00         | H                 | -46.00      |               |         |
| 3532.50         | H                 | -48.91      |               |         |
| 4239.00         | H                 | ---         |               |         |
| Test mode:      | Band 17 (5MHz)    |             | Test channel: | Middle  |
| Frequency (MHz) | Spurious Emission |             | Limit (dBm)   | Result  |
|                 | Polarization      | Level (dBm) |               |         |
| 1420.00         | Vertical          | -40.66      | -13.00        | Pass    |
| 2130.00         | V                 | -42.78      |               |         |
| 2840.00         | V                 | -44.36      |               |         |
| 3550.00         | V                 | -48.45      |               |         |
| 4260.00         | V                 | ---         |               |         |
| 1420.00         | Horizontal        | -43.85      | -13.00        | Pass    |
| 2130.00         | H                 | -44.72      |               |         |
| 2840.00         | H                 | -46.96      |               |         |
| 3550.00         | H                 | -50.02      |               |         |
| 4260.00         | H                 | ---         |               |         |
| Test mode:      | Band 17 (5MHz)    |             | Test channel: | Highest |
| Frequency (MHz) | Spurious Emission |             | Limit (dBm)   | Result  |
|                 | Polarization      | Level (dBm) |               |         |
| 1427.00         | Vertical          | -38.58      | -13.00        | Pass    |
| 2140.50         | V                 | -40.00      |               |         |
| 2854.00         | V                 | -42.06      |               |         |
| 3567.50         | V                 | -43.14      |               |         |
| 4281.00         | V                 | ---         |               |         |
| 1427.00         | Horizontal        | -44.38      | -13.00        | Pass    |
| 2140.50         | H                 | -48.21      |               |         |
| 2854.00         | H                 | -50.30      |               |         |
| 3567.50         | H                 | -53.29      |               |         |
| 4281.00         | H                 | ---         |               |         |

## 7.10 Frequency stability V.S. Temperature measurement

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | FCC Part2.1055(a)(1)(b)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Test Method:      | FCC Part2.1055(a)(1)(b)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Limit:            | 2.5ppm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Test setup:       |  <p><b>Note :</b> Measurement setup for testing on Antenna connector</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Test procedure:   | <ol style="list-style-type: none"> <li>1. The equipment under test was connected to an external DC power supply and input rated voltage.</li> <li>2. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators.</li> <li>3. The EUT was placed inside the temperature chamber.</li> <li>4. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency.</li> <li>5. Turn EUT off and set the chamber temperature to –20°C. After the temperature stabilized for approximately 30 minutes recorded the frequency.</li> <li>6. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.</li> </ol> |
| Test Instruments: | Refer to section 6.0 for details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Test mode:        | Refer to section 7.1 for details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Test results:     | Pass                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

## Measurement Data

### Modulation Mode: QPSK Mode

| Reference Frequency: LTE Band 2 Middle channel=18900 channel=1880MHz   |                  |                 |        |             |        |
|------------------------------------------------------------------------|------------------|-----------------|--------|-------------|--------|
| Power supplied (Vdc)                                                   | Temperature (°C) | Frequency error |        | Limit (ppm) | Result |
|                                                                        |                  | Hz              | ppm    |             |        |
| 3.70                                                                   | -30              | 47              | 0.0248 | 2.5         | Pass   |
|                                                                        | -20              | 52              | 0.0275 |             |        |
|                                                                        | -10              | 45              | 0.0238 |             |        |
|                                                                        | 0                | 38              | 0.0202 |             |        |
|                                                                        | 10               | 43              | 0.0229 |             |        |
|                                                                        | 20               | 38              | 0.0202 |             |        |
|                                                                        | 30               | 59              | 0.0312 |             |        |
|                                                                        | 40               | 53              | 0.0284 |             |        |
|                                                                        | 50               | 52              | 0.0275 |             |        |
| Reference Frequency: LTE Band 4 Middle channel=20175 channel=1732.5MHz |                  |                 |        |             |        |
| Power supplied (Vdc)                                                   | Temperature (°C) | Frequency error |        | Limit (ppm) | Result |
|                                                                        |                  | Hz              | ppm    |             |        |
| 3.70                                                                   | -30              | 52              | 0.0299 | 2.5         | Pass   |
|                                                                        | -20              | 57              | 0.0326 |             |        |
|                                                                        | -10              | 49              | 0.0285 |             |        |
|                                                                        | 0                | 45              | 0.0258 |             |        |
|                                                                        | 10               | 47              | 0.0272 |             |        |
|                                                                        | 20               | 42              | 0.0244 |             |        |
|                                                                        | 30               | 68              | 0.0395 |             |        |
|                                                                        | 40               | 59              | 0.0340 |             |        |
|                                                                        | 50               | 57              | 0.0326 |             |        |
| Reference Frequency: LTE Band 5 Middle channel=20525 channel=836.5MHz  |                  |                 |        |             |        |
| Power supplied (Vdc)                                                   | Temperature (°C) | Frequency error |        |             | Result |
|                                                                        |                  | Hz              | ppm    |             |        |
| 3.70                                                                   | -30              | 49              | 0.0582 | 2.5         | Pass   |
|                                                                        | -20              | 56              | 0.0665 |             |        |
|                                                                        | -10              | 47              | 0.0565 |             |        |
|                                                                        | 0                | 42              | 0.0498 |             |        |
|                                                                        | 10               | 46              | 0.0552 |             |        |
|                                                                        | 20               | 41              | 0.0487 |             |        |
|                                                                        | 30               | 66              | 0.0787 |             |        |
|                                                                        | 40               | 58              | 0.0692 |             |        |
|                                                                        | 50               | 55              | 0.0658 |             |        |

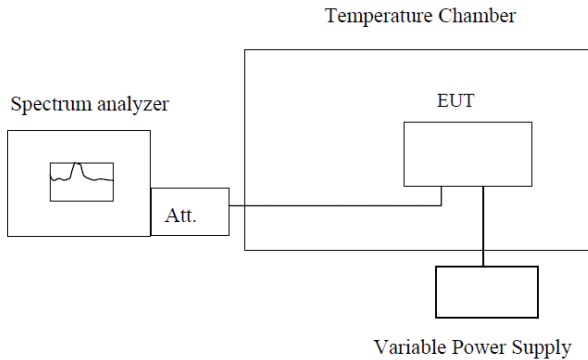
| Reference Frequency: LTE Band 7 Middle channel=21100 channel=2535MHz   |                  |                 |        |             |        |
|------------------------------------------------------------------------|------------------|-----------------|--------|-------------|--------|
| Power supplied (Vdc)                                                   | Temperature (°C) | Frequency error |        | Limit (ppm) | Result |
|                                                                        |                  | Hz              | ppm    |             |        |
| 3.70                                                                   | -30              | 38              | 0.0148 | 2.5         | Pass   |
|                                                                        | -20              | 45              | 0.0177 |             |        |
|                                                                        | -10              | 35              | 0.0137 |             |        |
|                                                                        | 0                | 28              | 0.0109 |             |        |
|                                                                        | 10               | 36              | 0.0143 |             |        |
|                                                                        | 20               | 28              | 0.0109 |             |        |
|                                                                        | 30               | 52              | 0.0205 |             |        |
|                                                                        | 40               | 42              | 0.0165 |             |        |
|                                                                        | 50               | 45              | 0.0177 |             |        |
| Reference Frequency: LTE Band 12 Middle channel=23095 channel=707.5MHz |                  |                 |        |             |        |
| Power supplied (Vdc)                                                   | Temperature (°C) | Frequency error |        |             | Result |
|                                                                        |                  | Hz              | ppm    |             |        |
| 3.70                                                                   | -30              | 32              | 0.0448 | 2.5         | Pass   |
|                                                                        | -20              | 39              | 0.0547 |             |        |
|                                                                        | -10              | 32              | 0.0448 |             |        |
|                                                                        | 0                | 26              | 0.0365 |             |        |
|                                                                        | 10               | 32              | 0.0448 |             |        |
|                                                                        | 20               | 27              | 0.0381 |             |        |
|                                                                        | 30               | 47              | 0.0663 |             |        |
|                                                                        | 40               | 40              | 0.0563 |             |        |
|                                                                        | 50               | 38              | 0.0530 |             |        |
| Reference Frequency: LTE Band 17 Middle channel=23790 channel=710MHz   |                  |                 |        |             |        |
| Power supplied (Vdc)                                                   | Temperature (°C) | Frequency error |        |             | Result |
|                                                                        |                  | Hz              | ppm    |             |        |
| 3.70                                                                   | -30              | 29              | 0.0412 | 2.5         | Pass   |
|                                                                        | -20              | 35              | 0.0495 |             |        |
|                                                                        | -10              | 27              | 0.0378 |             |        |
|                                                                        | 0                | 21              | 0.0295 |             |        |
|                                                                        | 10               | 28              | 0.0395 |             |        |
|                                                                        | 20               | 21              | 0.0295 |             |        |
|                                                                        | 30               | 41              | 0.0578 |             |        |
|                                                                        | 40               | 33              | 0.0461 |             |        |
|                                                                        | 50               | 35              | 0.0495 |             |        |

**Modulation Mode: 16QAM Mode**

| Reference Frequency: LTE Band 2 Middle channel=18900 channel=1880MHz   |                  |                 |        |             |        |
|------------------------------------------------------------------------|------------------|-----------------|--------|-------------|--------|
| Power supplied (Vdc)                                                   | Temperature (°C) | Frequency error |        | Limit (ppm) | Result |
|                                                                        |                  | Hz              | ppm    |             |        |
| 3.70                                                                   | -30              | 45              | 0.0240 | 2.5         | Pass   |
|                                                                        | -20              | 50              | 0.0268 |             |        |
|                                                                        | -10              | 43              | 0.0231 |             |        |
|                                                                        | 0                | 37              | 0.0194 |             |        |
|                                                                        | 10               | 42              | 0.0222 |             |        |
|                                                                        | 20               | 37              | 0.0194 |             |        |
|                                                                        | 30               | 57              | 0.0304 |             |        |
|                                                                        | 40               | 52              | 0.0277 |             |        |
|                                                                        | 50               | 50              | 0.0268 |             |        |
| Reference Frequency: LTE Band 4 Middle channel=20175 channel=1732.5MHz |                  |                 |        |             |        |
| Power supplied (Vdc)                                                   | Temperature (°C) | Frequency error |        | Limit (ppm) | Result |
|                                                                        |                  | Hz              | ppm    |             |        |
| 3.70                                                                   | -30              | 51              | 0.0291 | 2.5         | Pass   |
|                                                                        | -20              | 55              | 0.0319 |             |        |
|                                                                        | -10              | 48              | 0.0278 |             |        |
|                                                                        | 0                | 43              | 0.0251 |             |        |
|                                                                        | 10               | 46              | 0.0264 |             |        |
|                                                                        | 20               | 41              | 0.0237 |             |        |
|                                                                        | 30               | 67              | 0.0386 |             |        |
|                                                                        | 40               | 58              | 0.0332 |             |        |
|                                                                        | 50               | 55              | 0.0319 |             |        |
| Reference Frequency: LTE Band 5 Middle channel=20525 channel=836.5MHz  |                  |                 |        |             |        |
| Power supplied (Vdc)                                                   | Temperature (°C) | Frequency error |        |             | Result |
|                                                                        |                  | Hz              | ppm    |             |        |
| 3.70                                                                   | -30              | 50              | 0.0597 | 2.5         | Pass   |
|                                                                        | -20              | 57              | 0.0682 |             |        |
|                                                                        | -10              | 48              | 0.0579 |             |        |
|                                                                        | 0                | 43              | 0.0510 |             |        |
|                                                                        | 10               | 47              | 0.0565 |             |        |
|                                                                        | 20               | 42              | 0.0499 |             |        |
|                                                                        | 30               | 68              | 0.0807 |             |        |
|                                                                        | 40               | 59              | 0.0710 |             |        |
|                                                                        | 50               | 56              | 0.0674 |             |        |

| Reference Frequency: LTE Band 7 Middle channel=21100 channel=2535MHz   |                  |                 |        |             |        |
|------------------------------------------------------------------------|------------------|-----------------|--------|-------------|--------|
| Power supplied (Vdc)                                                   | Temperature (°C) | Frequency error |        | Limit (ppm) | Result |
|                                                                        |                  | Hz              | ppm    |             |        |
| 3.70                                                                   | -30              | 32              | 0.0128 | 2.5         | Pass   |
|                                                                        | -20              | 39              | 0.0154 |             |        |
|                                                                        | -10              | 30              | 0.0118 |             |        |
|                                                                        | 0                | 23              | 0.0092 |             |        |
|                                                                        | 10               | 31              | 0.0123 |             |        |
|                                                                        | 20               | 23              | 0.0092 |             |        |
|                                                                        | 30               | 46              | 0.0180 |             |        |
|                                                                        | 40               | 36              | 0.0144 |             |        |
|                                                                        | 50               | 39              | 0.0154 |             |        |
| Reference Frequency: LTE Band 12 Middle channel=23095 channel=707.5MHz |                  |                 |        |             |        |
| Power supplied (Vdc)                                                   | Temperature (°C) | Frequency error |        |             | Result |
|                                                                        |                  | Hz              | ppm    |             |        |
| 3.70                                                                   | -30              | 31              | 0.0437 | 2.5         | Pass   |
|                                                                        | -20              | 38              | 0.0535 |             |        |
|                                                                        | -10              | 31              | 0.0437 |             |        |
|                                                                        | 0                | 25              | 0.0355 |             |        |
|                                                                        | 10               | 31              | 0.0437 |             |        |
|                                                                        | 20               | 26              | 0.0371 |             |        |
|                                                                        | 30               | 46              | 0.0650 |             |        |
|                                                                        | 40               | 39              | 0.0551 |             |        |
|                                                                        | 50               | 37              | 0.0519 |             |        |
| Reference Frequency: LTE Band 17 Middle channel=23790 channel=710MHz   |                  |                 |        |             |        |
| Power supplied (Vdc)                                                   | Temperature (°C) | Frequency error |        |             | Result |
|                                                                        |                  | Hz              | ppm    |             |        |
| 3.70                                                                   | -30              | 43              | 0.0609 | 2.5         | Pass   |
|                                                                        | -20              | 51              | 0.0721 |             |        |
|                                                                        | -10              | 40              | 0.0565 |             |        |
|                                                                        | 0                | 32              | 0.0454 |             |        |
|                                                                        | 10               | 42              | 0.0587 |             |        |
|                                                                        | 20               | 32              | 0.0454 |             |        |
|                                                                        | 30               | 59              | 0.0832 |             |        |
|                                                                        | 40               | 48              | 0.0676 |             |        |
|                                                                        | 50               | 51              | 0.0721 |             |        |

## 7.11 Frequency stability V.S. Voltage measurement

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | FCC Part2.1055(d)(1)(2)                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Test Method:      | FCC Part2.1055(d)(1)(2)                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Limit:            | 2.5ppm                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Test setup:       |  <p><b>Note :</b> Measurement setup for testing on Antenna connector</p>                                                                                                                                                                                                                                                                                       |
| Test procedure:   | <ol style="list-style-type: none"> <li>1. Set chamber temperature to 25°C. Use a variable DC power source to power the EUT and set the voltage to rated voltage.</li> <li>2. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.</li> <li>3. Reduce the input voltage to specified extreme voltage variation (+/- 15%) and endpoint, record the maximum frequency change.</li> </ol> |
| Test Instruments: | Refer to section 6.0 for details                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Test mode:        | Refer to section 7.1 for details                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Test results:     | Pass                                                                                                                                                                                                                                                                                                                                                                                                                                             |

## Measurement Data

### Modulation Mode: QPSK Mode

| Reference Frequency: LTE Band 2 Middle channel=18900 channel=1880MHz   |                      |                 |        |             |        |
|------------------------------------------------------------------------|----------------------|-----------------|--------|-------------|--------|
| Temperature (°C)                                                       | Power supplied (Vdc) | Frequency error |        | Limit (ppm) | Result |
|                                                                        |                      | Hz              | ppm    |             |        |
| 25                                                                     | 4.23                 | 25              | 0.0131 | 2.5         | Pass   |
|                                                                        | 3.70                 | 27              | 0.0146 |             |        |
|                                                                        | 3.15                 | 30              | 0.0160 |             |        |
| Reference Frequency: LTE Band 4 Middle channel=20175 channel=1732.5MHz |                      |                 |        |             |        |
| Temperature (°C)                                                       | Power supplied (Vdc) | Frequency error |        | Limit (ppm) | Result |
|                                                                        |                      | Hz              | ppm    |             |        |
| 25                                                                     | 4.23                 | 32              | 0.0184 | 2.5         | Pass   |
|                                                                        | 3.70                 | 24              | 0.0141 |             |        |
|                                                                        | 3.15                 | 27              | 0.0155 |             |        |
| Reference Frequency: LTE Band 5 Middle channel=20525 channel=836.5MHz  |                      |                 |        |             |        |
| Temperature (°C)                                                       | Power supplied (Vdc) | Frequency error |        | Limit (ppm) | Result |
|                                                                        |                      | Hz              | ppm    |             |        |
| 25                                                                     | 4.23                 | 38              | 0.0460 | 2.5         | Pass   |
|                                                                        | 3.70                 | 43              | 0.0512 |             |        |
|                                                                        | 3.15                 | 47              | 0.0564 |             |        |
| Reference Frequency: LTE Band 7 Middle channel=21100 channel=2535MHz   |                      |                 |        |             |        |
| Temperature (°C)                                                       | Power supplied (Vdc) | Frequency error |        | Limit (ppm) | Result |
|                                                                        |                      | Hz              | ppm    |             |        |
| 25                                                                     | 4.23                 | 62              | 0.0243 | 2.5         | Pass   |
|                                                                        | 3.70                 | 47              | 0.0186 |             |        |
|                                                                        | 3.15                 | 50              | 0.0197 |             |        |
| Reference Frequency: LTE Band 12 Middle channel=23095 channel=707.5MHz |                      |                 |        |             |        |
| Temperature (°C)                                                       | Power supplied (Vdc) | Frequency error |        | Limit (ppm) | Result |
|                                                                        |                      | Hz              | ppm    |             |        |
| 25                                                                     | 4.23                 | 33              | 0.0462 | 2.5         | Pass   |
|                                                                        | 3.70                 | 40              | 0.0560 |             |        |
|                                                                        | 3.15                 | 40              | 0.0560 |             |        |
| Reference Frequency: LTE Band 17 Middle channel=23790 channel=710MHz   |                      |                 |        |             |        |
| Temperature (°C)                                                       | Power supplied (Vdc) | Frequency error |        | Limit (ppm) | Result |
|                                                                        |                      | Hz              | ppm    |             |        |
| 25                                                                     | 4.23                 | 55              | 0.0777 | 2.5         | Pass   |
|                                                                        | 3.70                 | 42              | 0.0587 |             |        |
|                                                                        | 3.15                 | 44              | 0.0625 |             |        |

**Modulation Mode: 16QAM Mode**

| Reference Frequency: LTE Band 2 Middle channel=18900 channel=1880MHz   |                      |                 |        |             |        |
|------------------------------------------------------------------------|----------------------|-----------------|--------|-------------|--------|
| Temperature (°C)                                                       | Power supplied (Vdc) | Frequency error |        | Limit (ppm) | Result |
|                                                                        |                      | Hz              | ppm    |             |        |
| 25                                                                     | 4.23                 | 22              | 0.0116 | 2.5         | Pass   |
|                                                                        | 3.70                 | 24              | 0.0129 |             |        |
|                                                                        | 3.15                 | 27              | 0.0142 |             |        |
| Reference Frequency: LTE Band 4 Middle channel=20175 channel=1732.5MHz |                      |                 |        |             |        |
| Temperature (°C)                                                       | Power supplied (Vdc) | Frequency error |        | Limit (ppm) | Result |
|                                                                        |                      | Hz              | ppm    |             |        |
| 25                                                                     | 4.23                 | 34              | 0.0198 | 2.5         | Pass   |
|                                                                        | 3.70                 | 26              | 0.0150 |             |        |
|                                                                        | 3.15                 | 29              | 0.0166 |             |        |
| Reference Frequency: LTE Band 5 Middle channel=20525 channel=836.5MHz  |                      |                 |        |             |        |
| Temperature (°C)                                                       | Power supplied (Vdc) | Frequency error |        | Limit (ppm) | Result |
|                                                                        |                      | Hz              | ppm    |             |        |
| 25                                                                     | 4.23                 | 41              | 0.0493 | 2.5         | Pass   |
|                                                                        | 3.70                 | 47              | 0.0557 |             |        |
|                                                                        | 3.15                 | 52              | 0.0619 |             |        |
| Reference Frequency: LTE Band 7 Middle channel=21100 channel=2535MHz   |                      |                 |        |             |        |
| Temperature (°C)                                                       | Power supplied (Vdc) | Frequency error |        | Limit (ppm) | Result |
|                                                                        |                      | Hz              | ppm    |             |        |
| 25                                                                     | 4.23                 | 56              | 0.0220 | 2.5         | Pass   |
|                                                                        | 3.70                 | 42              | 0.0167 |             |        |
|                                                                        | 3.15                 | 45              | 0.0178 |             |        |
| Reference Frequency: LTE Band 12 Middle channel=23095 channel=707.5MHz |                      |                 |        |             |        |
| Temperature (°C)                                                       | Power supplied (Vdc) | Frequency error |        | Limit (ppm) | Result |
|                                                                        |                      | Hz              | ppm    |             |        |
| 25                                                                     | 4.23                 | 33              | 0.0465 | 2.5         | Pass   |
|                                                                        | 3.70                 | 39              | 0.0558 |             |        |
|                                                                        | 3.15                 | 39              | 0.0558 |             |        |
| Reference Frequency: LTE Band 17 Middle channel=23790 channel=710MHz   |                      |                 |        |             |        |
| Temperature (°C)                                                       | Power supplied (Vdc) | Frequency error |        | Limit (ppm) | Result |
|                                                                        |                      | Hz              | ppm    |             |        |
| 25                                                                     | 4.23                 | 54              | 0.0761 | 2.5         | Pass   |
|                                                                        | 3.70                 | 41              | 0.0575 |             |        |
|                                                                        | 3.15                 | 43              | 0.0612 |             |        |

## 8 Test Setup Photo

Reference to the **appendix I** for details.

## 9 EUT Constructional Details

Reference to the **appendix II** for details.

-----End-----