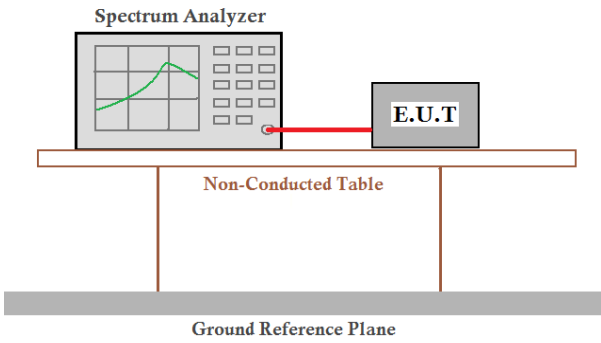


## 6.8 Pseudorandom Frequency Hopping Sequence

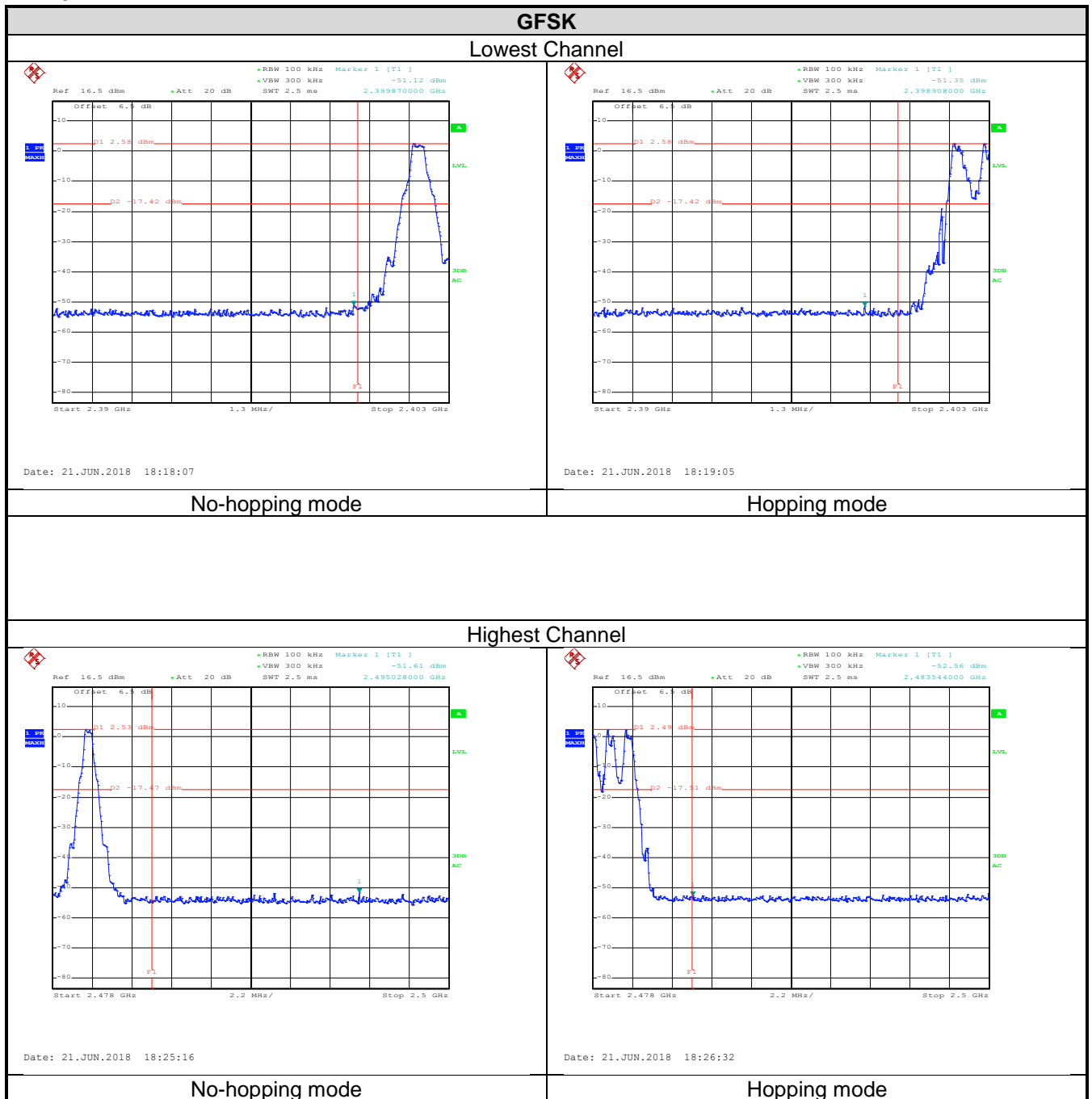
| Test Requirement:  | FCC Part 15 C Section 15.247 (a)(1) requirement: |
|--|--|
| <p>Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.</p> <p>Alternatively, Frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW. The system shall hop to channel frequencies that are selected at the system hopping rate from a Pseudorandom ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.</p>   |  |
| EUT Pseudorandom Frequency Hopping Sequence  |  |
| <p>The pseudorandom sequence may be generated in a nine-stage shift register whose 5th and 9th stage outputs are added in a modulo-two addition stage. And the result is fed back to the input of the first stage. The sequence begins with the first ONE of 9 consecutive ONES; i.e. the shift register is initialized with nine ones.</p> <ul style="list-style-type: none"> <li>• Number of shift register stages: 9</li> <li>• Length of pseudo-random sequence: <math>2^9 - 1 = 511</math> bits</li> <li>• Longest sequence of zeros: 8 (non-inverted signal)</li> </ul> <div data-bbox="256 909 1294 1055" style="text-align: center;"> </div> <p style="text-align: center;"><i>Linear Feedback Shift Register for Generation of the PRBS sequence</i></p> <p>An example of Pseudorandom Frequency Hopping Sequence as follow:</p> <div data-bbox="256 1155 1240 1294" style="text-align: center;"> </div> <p>Each frequency used equally on the average by each transmitter.<br/>The system receivers have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shift frequencies in synchronization with the transmitted signals.</p> |  |

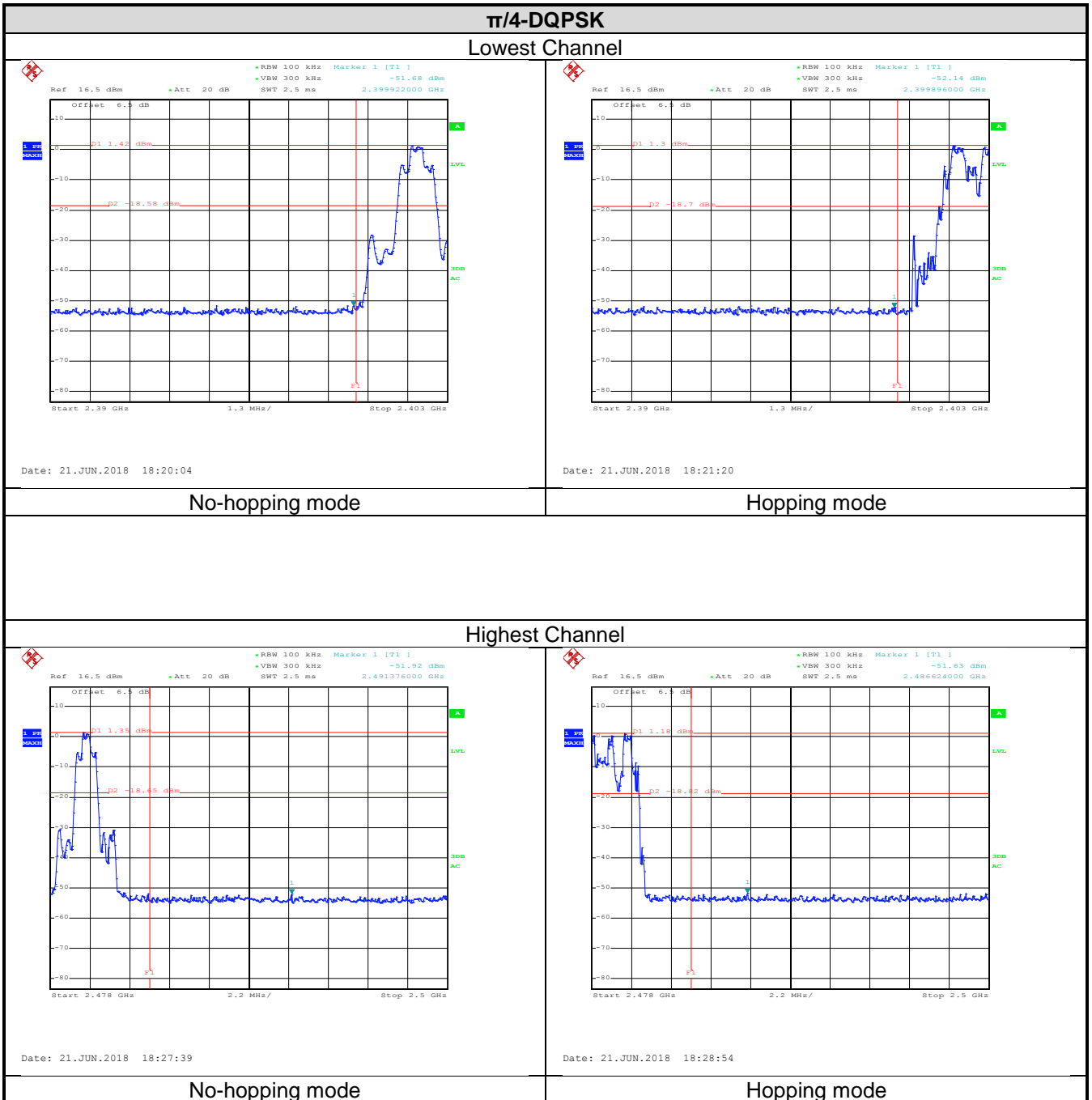
## 6.9 Band Edge

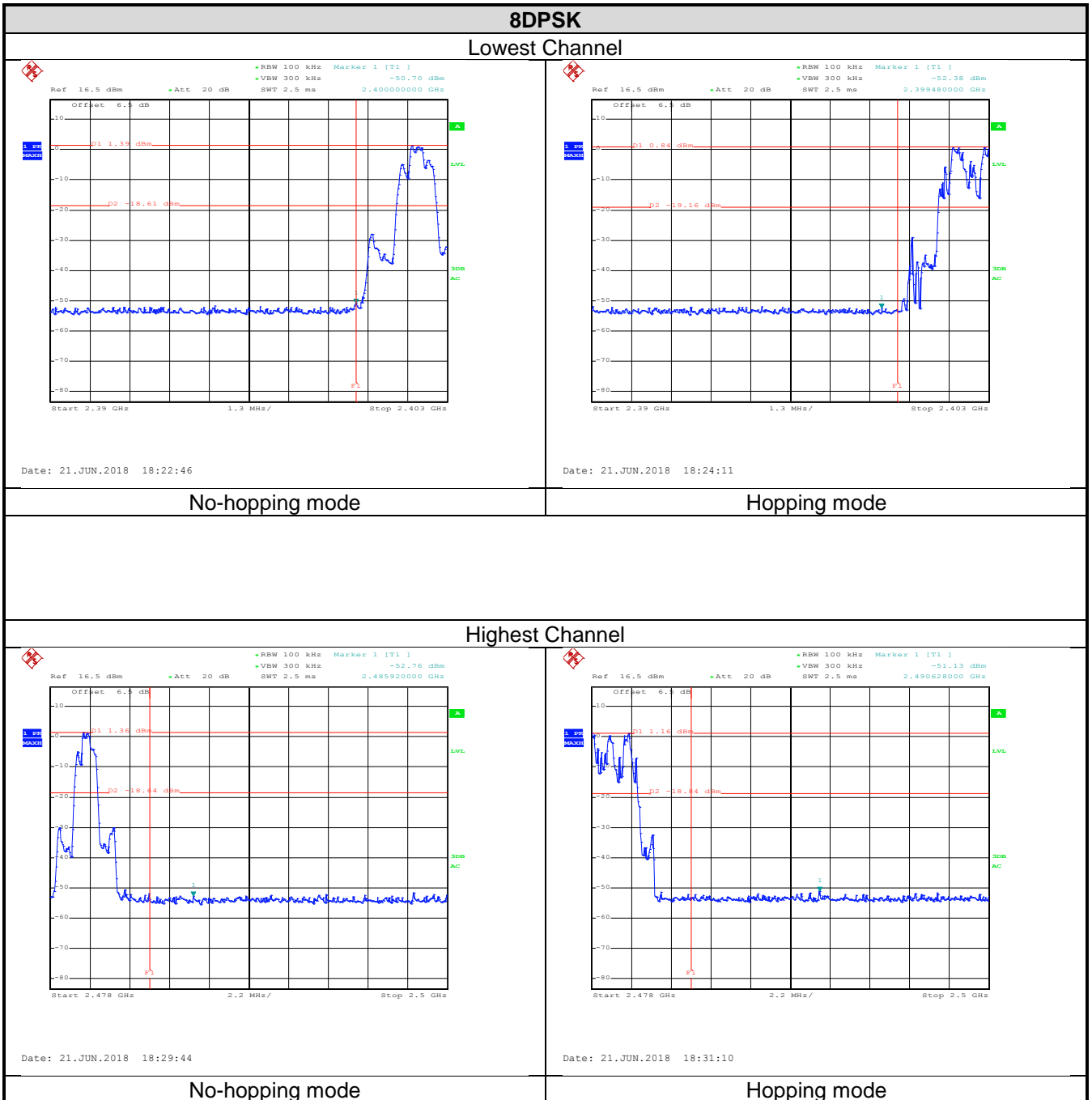
### 6.9.1 Conducted Emission Method

|                   |   |
|-------------------|---|
| Test Requirement: | FCC Part 15 C Section 15.247 (d)  |
| Test Method:      | ANSI C63.10:2013 and DA00-705   |
| Receiver setup:   | RBW=100 kHz, VBW=300 kHz, Detector=Peak   |
| Limit:            | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. |
| Test setup:       |  <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both the Spectrum Analyzer and the E.U.T. are placed on a Non-Conducted Table. The table is supported by a Ground Reference Plane.</p>                             |
| Test Instruments: | Refer to section 5.8 for details  |
| Test mode:        | Non-hopping mode and hopping mode   |
| Test results:     | Pass  |

Test plot as follows:







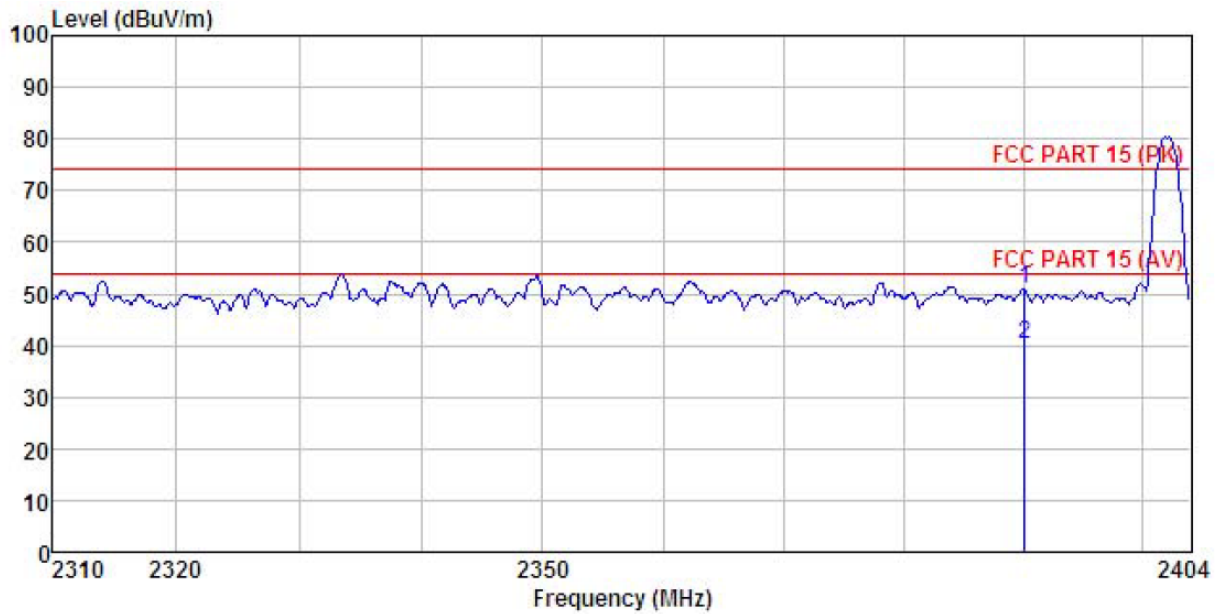
## 6.9.2 Radiated Emission Method

|                       |  |                    |      |               |               |
|-----------------------|--|--------------------|------|---------------|---------------|
| Test Requirement:     | FCC Part 15 C Section 15.209 and 15.205  |                    |      |               |               |
| Test Method:          | ANSI C63.10: 2013  |                    |      |               |               |
| Test Frequency Range: | 2.3GHz to 2.5GHz   |                    |      |               |               |
| Test Distance:        | 3m   |                    |      |               |               |
| Receiver setup:       | Frequency  | Detector           | RBW  | VBW           | Remark        |
|                       | Above 1GHz   | Peak               | 1MHz | 3MHz          | Peak Value    |
|                       |  | RMS                | 1MHz | 3MHz          | Average Value |
| Limit:                | Frequency  | Limit (dBuV/m @3m) |      | Remark        |               |
|                       | Above 1GHz   | 54.00              |      | Average Value |               |
|                       |  | 74.00              |      | Peak Value    |               |
| Test setup:           |  |                    |      |               |               |
| Test Procedure:       | <ol style="list-style-type: none"> <li>1. The EUT was placed on the top of a rotating table 1.5meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.</li> <li>2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li> <li>3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.</li> <li>4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.</li> <li>5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li> <li>6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.</li> </ol> |                    |      |               |               |
| Test Instruments:     | Refer to section 5.8 for details   |                    |      |               |               |
| Test mode:            | Non-hopping mode   |                    |      |               |               |
| Test results:         | Passed   |                    |      |               |               |

**GFSK mode**

**Test channel: Lowest channel**

Test Polarization: Horizontal



```

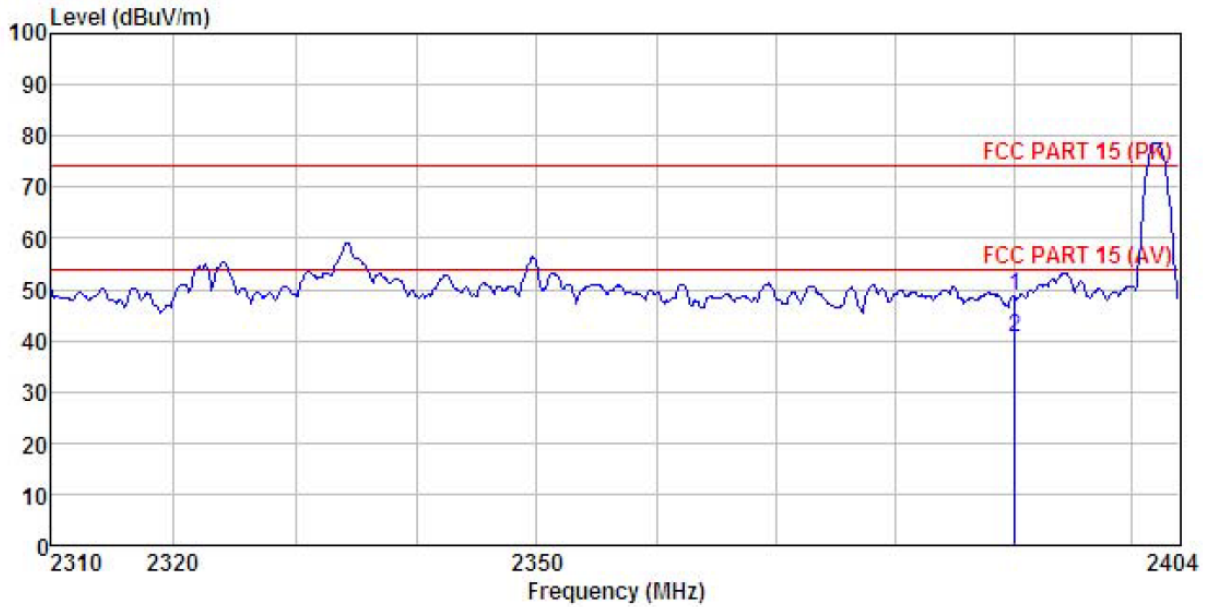
Site       : 3m chamber
Condition  : FCC PART 15 (PK) 3m BBHA9120(1G18G) HORIZONTAL
EUT        : LTE mobile phone
Model      : N5501L
Test mode  : DH1-L Mode
Power Rating : AC 120V/60Hz
Environment : Temp:25.5°C Humi:55%
Test Engineer: YT
REMARK     :
    
```

|   | Freq     | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Level  | Limit  | Over Limit | Remark  |
|---|----------|------------|----------------|------------|---------------|--------|--------|------------|---------|
|   | MHz      | dBuV       | dB/m           | dB         | dB            | dBUV/m | dBUV/m | dB         |         |
| 1 | 2390.000 | 18.89      | 27.37          | 4.69       | 0.00          | 50.95  | 74.00  | -23.05     | Peak    |
| 2 | 2390.000 | 8.13       | 27.37          | 4.69       | 0.00          | 40.19  | 54.00  | -13.81     | Average |

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Test Polarization: Vertical



Site : 3m chamber  
 Condition : FCC PART 15 (PK) 3m BBHA9120(1G18G) VERTICAL  
 EUT : LTE mobile phone  
 Model : N5501L  
 Test mode : DH1-L Mode  
 Power Rating : AC 120V/60Hz  
 Environment : Temp:25.5°C Humi:55%  
 Test Engineer: YT  
 REMARK :

|      | Read     | Antenna | Cable | Preamp | Limit  | Over   |                      |
|------|----------|---------|-------|--------|--------|--------|----------------------|
| Freq | Level    | Factor  | Loss  | Factor | Level  | Line   | Limit Remark         |
| MHz  | dBuV     | dB/m    | dB    | dB     | dBuV/m | dBuV/m | dB                   |
| 1    | 2390.000 | 16.67   | 27.37 | 4.69   | 0.00   | 48.73  | 74.00 -25.27 Peak    |
| 2    | 2390.000 | 8.44    | 27.37 | 4.69   | 0.00   | 40.50  | 54.00 -13.50 Average |

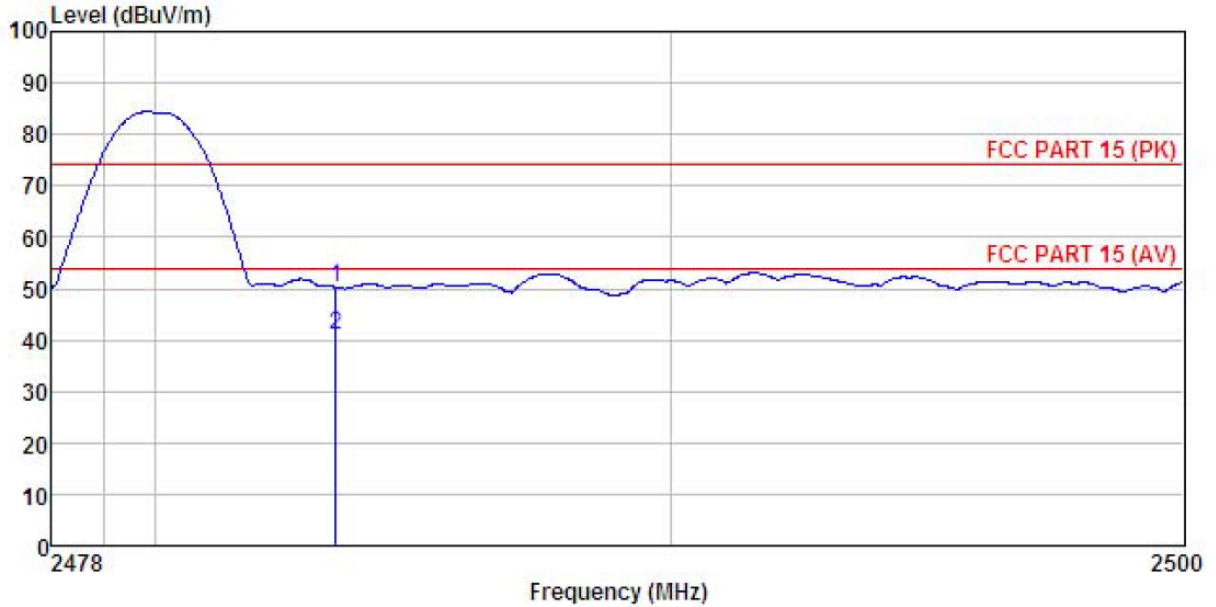
Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss - Preamp Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test channel: Highest channel

Test Polarization: Horizontal



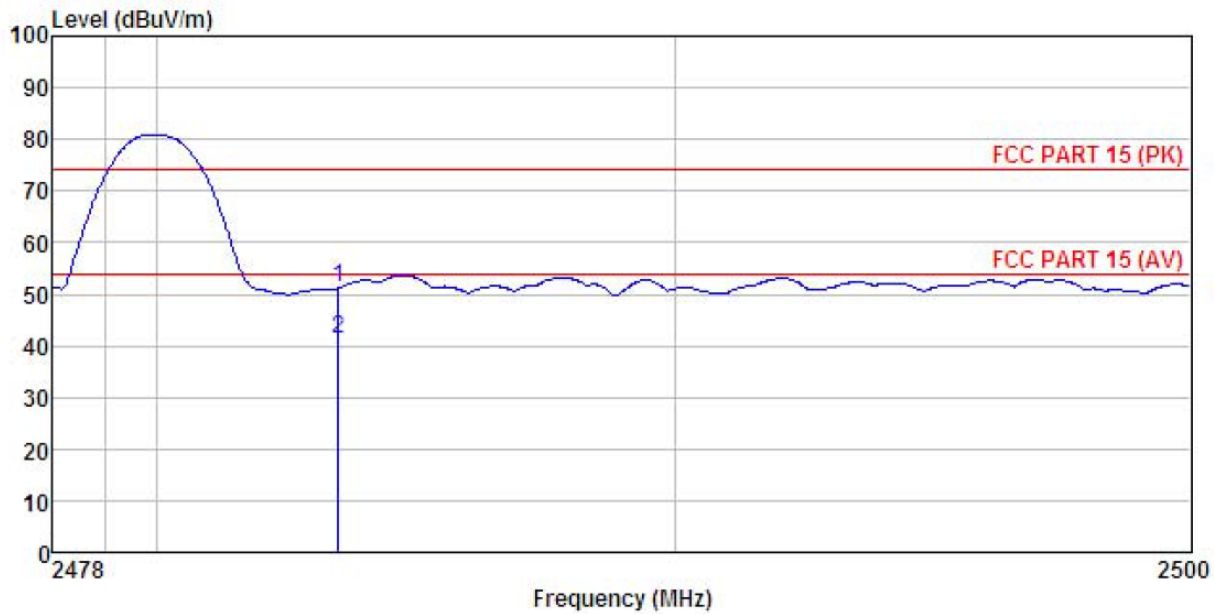
Site : 3m chamber  
 Condition : FCC PART 15 (PK) 3m BBHA9120(1G18G) HORIZONTAL  
 EUT : LTE mobile phone  
 Model : N5501L  
 Test mode : DH1-H Mode  
 Power Rating : AC 120V/60Hz  
 Environment : Temp:25.5°C Humi:55%  
 Test Engineer: YT  
 REMARK :

|      | Read     | Antenna | Cable | Preamp | Limit  | Over   |                      |
|------|----------|---------|-------|--------|--------|--------|----------------------|
| Freq | Level    | Factor  | Loss  | Factor | Level  | Line   | Limit Remark         |
| MHz  | dBuV     | dB/m    | dB    | dB     | dBuV/m | dBuV/m | dB                   |
| 1    | 2483.500 | 17.70   | 27.57 | 4.81   | 0.00   | 50.08  | 74.00 -23.92 Peak    |
| 2    | 2483.500 | 8.53    | 27.57 | 4.81   | 0.00   | 40.91  | 54.00 -13.09 Average |

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss - Pre-amplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Test Polarization: Vertical

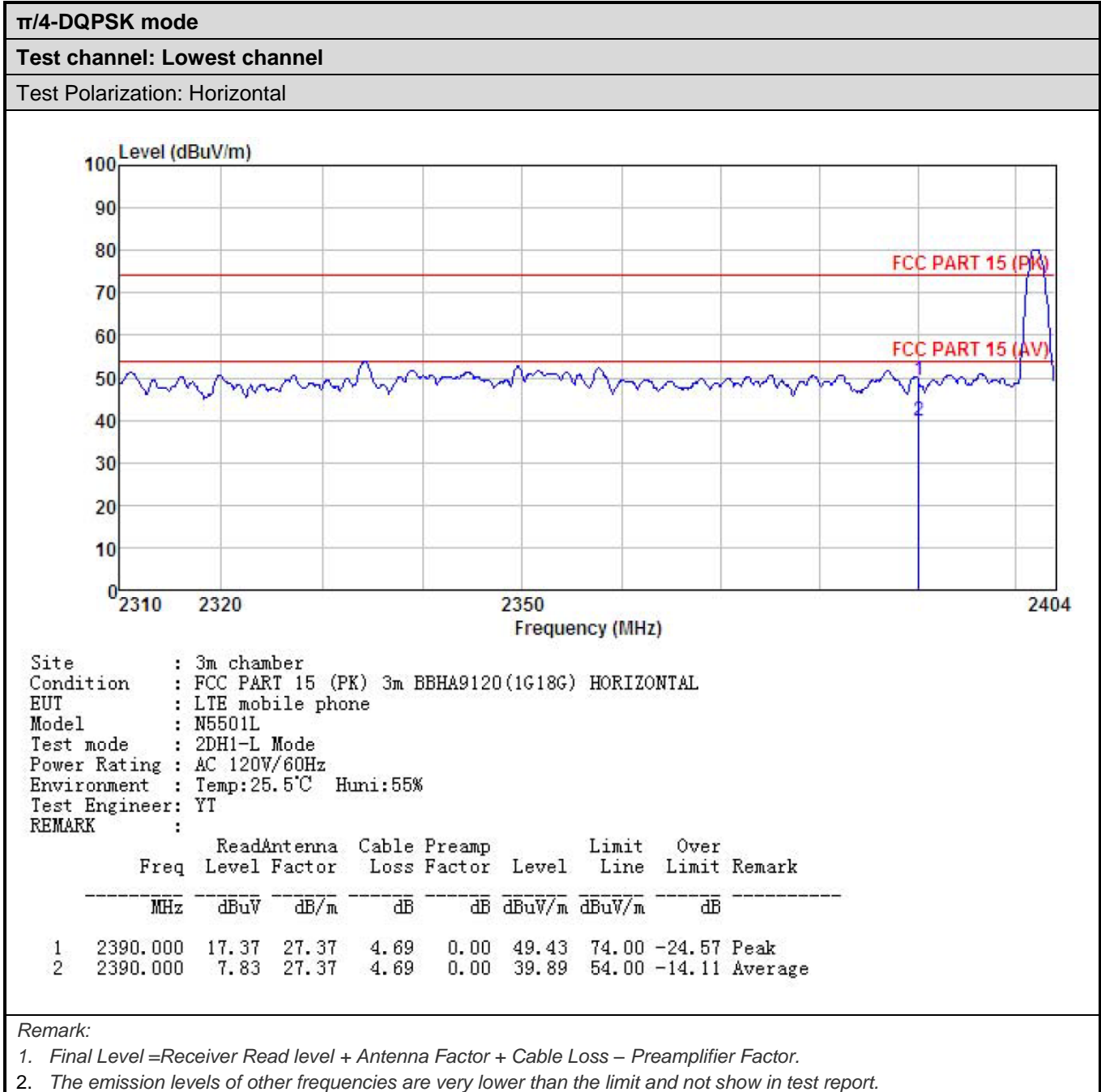


Site : 3m chamber  
 Condition : FCC PART 15 (PK) 3m BBHA9120(1G18G) VERTICAL  
 EUT : LTE mobile phone  
 Model : N5501L  
 Test mode : DH1-H Mode  
 Power Rating : AC 120V/60Hz  
 Environment : Temp:25.5°C Humi:55%  
 Test Engineer: YI  
 REMARK :

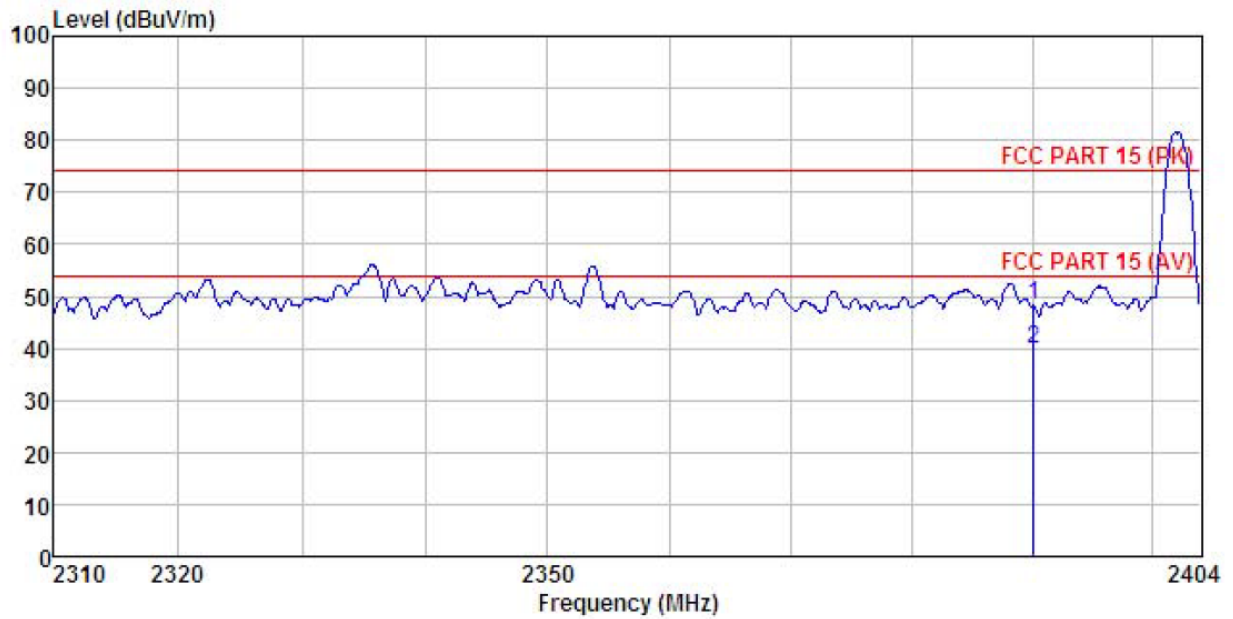
|      | Read     | Antenna | Cable | Preamp | Limit  | Over   |                      |
|------|----------|---------|-------|--------|--------|--------|----------------------|
| Freq | Level    | Factor  | Loss  | Factor | Line   | Limit  | Remark               |
| MHz  | dBuV     | dB/m    | dB    | dB     | dBuV/m | dBuV/m | dB                   |
| 1    | 2483.500 | 18.96   | 27.57 | 4.81   | 0.00   | 51.34  | 74.00 -22.66 Peak    |
| 2    | 2483.500 | 8.95    | 27.57 | 4.81   | 0.00   | 41.33  | 54.00 -12.67 Average |

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss - Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Polarization: Vertical



Site : 3m chamber  
 Condition : FCC PART 15 (PK) 3m BBHA9120(1G18G) VERTICAL  
 EUT : LTE mobile phone  
 Model : N5501L  
 Test mode : 2DH1-L Mode  
 Power Rating : AC 120V/60Hz  
 Environment : Temp:25.5°C Humi:55%  
 Test Engineer: YT  
 REMARK :

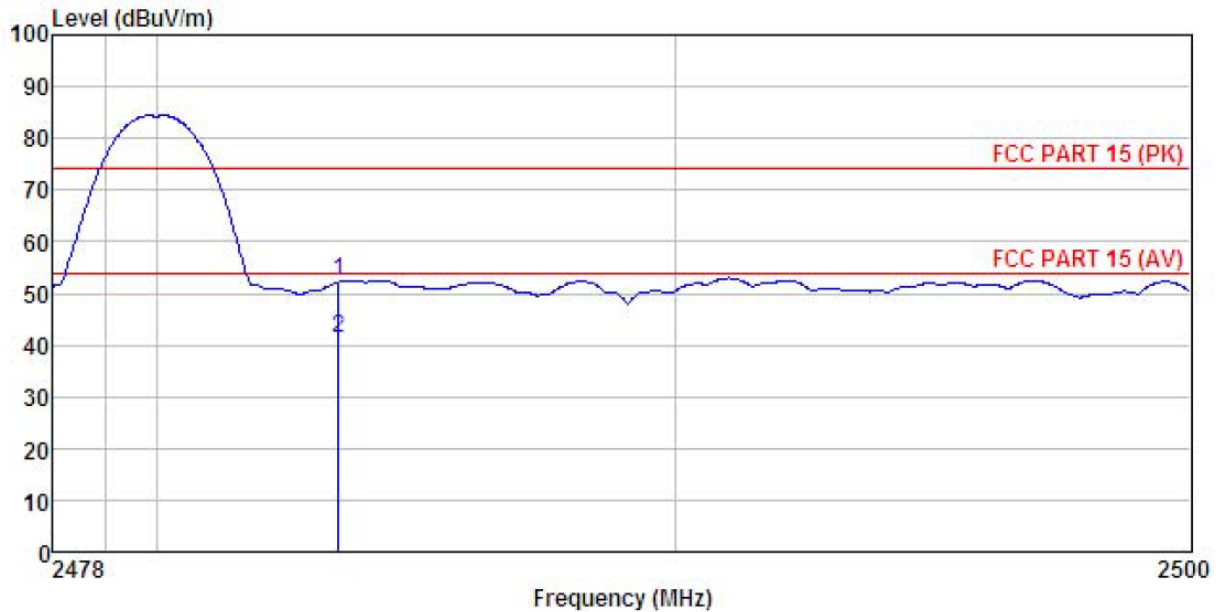
|      | Read     | Antenna | Cable | Preamp | Limit  | Over   |        |                |
|------|----------|---------|-------|--------|--------|--------|--------|----------------|
| Freq | Level    | Factor  | Loss  | Factor | Line   | Limit  | Remark |                |
| MHz  | dBuV     | dB/m    | dB    | dB     | dBuV/m | dBuV/m | dB     |                |
| 1    | 2390.000 | 16.13   | 27.37 | 4.69   | 0.00   | 48.19  | 74.00  | -25.81 Peak    |
| 2    | 2390.000 | 7.84    | 27.37 | 4.69   | 0.00   | 39.90  | 54.00  | -14.10 Average |

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss - Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Test channel: Highest channel

Test Polarization: Horizontal



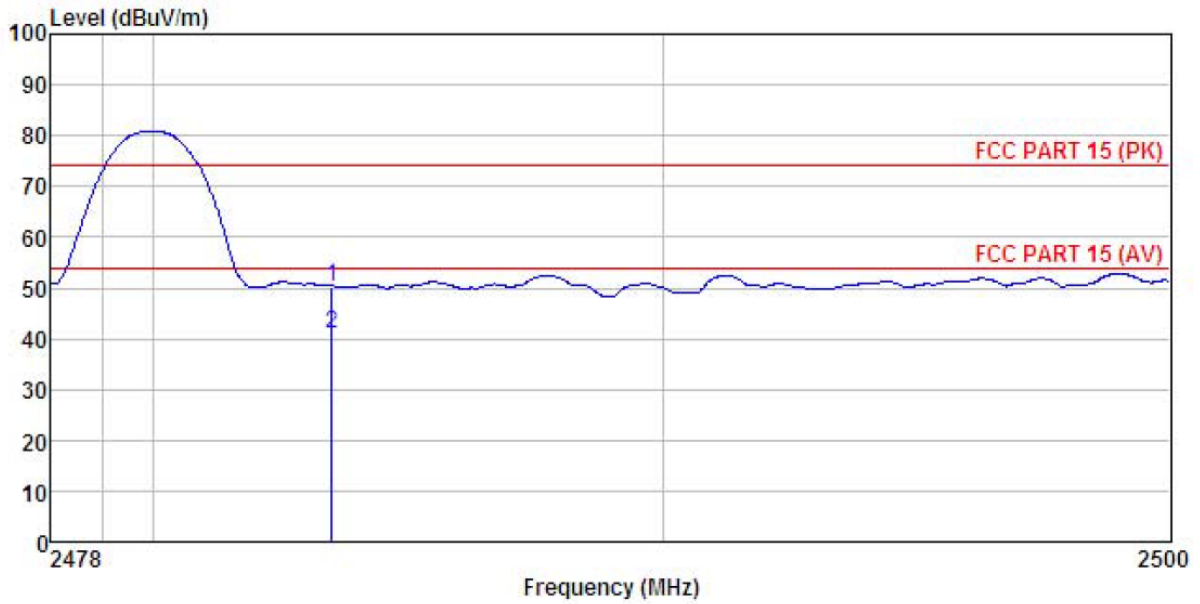
Site : 3m chamber  
 Condition : FCC PART 15 (PK) 3m BBHA9120(1G18G) HORIZONTAL  
 EUT : LTE mobile phone  
 Model : N5501L  
 Test mode : 2DH1-H Mode  
 Power Rating : AC 120V/60Hz  
 Environment : Temp:25.5°C Humi:55%  
 Test Engineer: YI  
 REMARK :

|       | Read     | Antenna | Cable | Preamp | Limit  | Over   |                      |
|-------|----------|---------|-------|--------|--------|--------|----------------------|
| Freq  | Level    | Factor  | Loss  | Factor | Level  | Line   | Limit Remark         |
| ----- | -----    | -----   | ----- | -----  | -----  | -----  | -----                |
| MHz   | dBuV     | dB/m    | dB    | dB     | dBuV/m | dBuV/m | dB                   |
| 1     | 2483.500 | 19.92   | 27.57 | 4.81   | 0.00   | 52.30  | 74.00 -21.70 Peak    |
| 2     | 2483.500 | 8.97    | 27.57 | 4.81   | 0.00   | 41.35  | 54.00 -12.65 Average |

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Test Polarization: Vertical



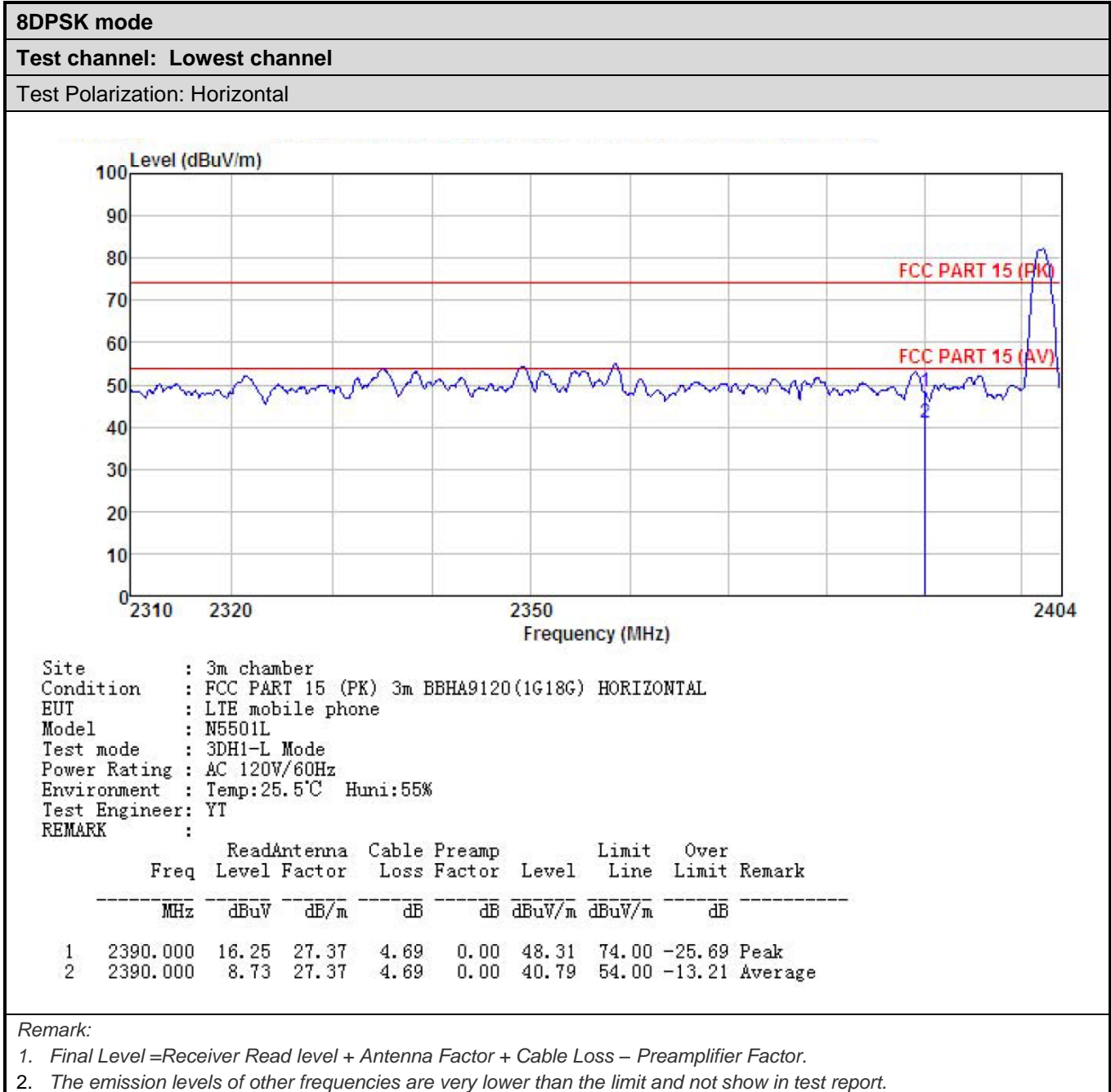
Site : 3m chamber  
 Condition : FCC PART 15 (PK) 3m BBHA9120(1G18G) VERTICAL  
 EUT : LTE mobile phone  
 Model : N5501L  
 Test mode : 2DH1-H Mode  
 Power Rating : AC 120V/60Hz  
 Environment : Temp:25.5°C Humi:55%  
 Test Engineer: YT  
 REMARK :

|      | Read     | Antenna | Cable | Preamp | Limit  | Over   |                      |
|------|----------|---------|-------|--------|--------|--------|----------------------|
| Freq | Level    | Factor  | Loss  | Factor | Level  | Line   | Limit Remark         |
| MHz  | dBuV     | dB/m    | dB    | dB     | dBuV/m | dBuV/m | dB                   |
| 1    | 2483.500 | 17.96   | 27.57 | 4.81   | 0.00   | 50.34  | 74.00 -23.66 Peak    |
| 2    | 2483.500 | 8.41    | 27.57 | 4.81   | 0.00   | 40.79  | 54.00 -13.21 Average |

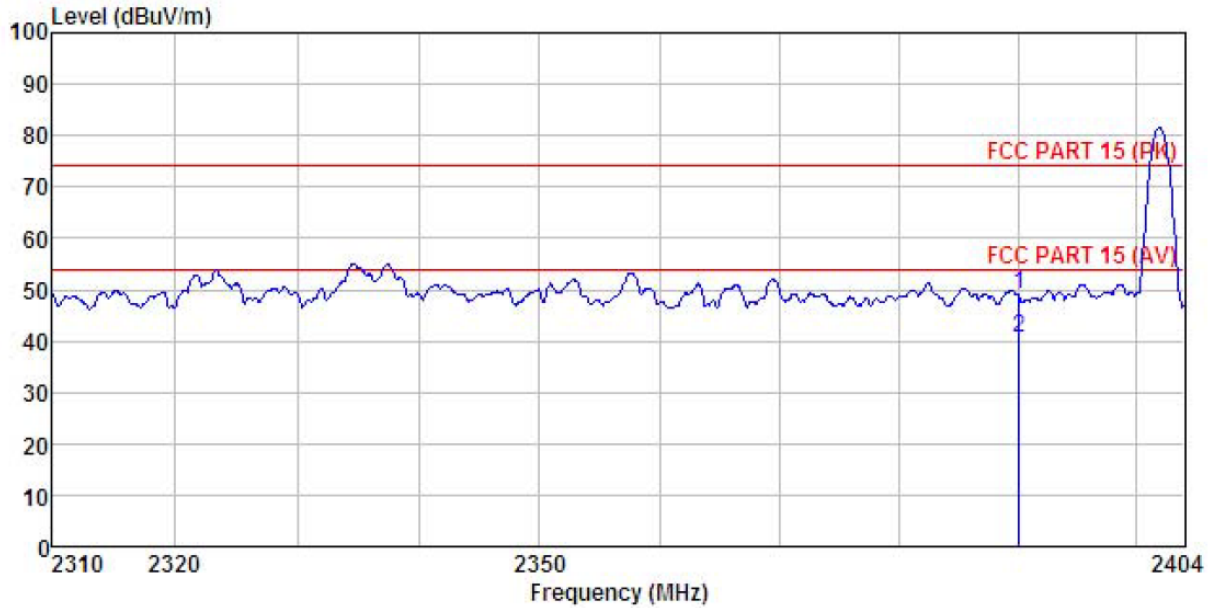
Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.





Test Polarization: Vertical



Site : 3m chamber  
 Condition : FCC PART 15 (PK) 3m BBHA9120(1G18G) VERTICAL  
 EUT : LTE mobile phone  
 Model : N5501L  
 Test mode : 3DH1-L Mode  
 Power Rating : AC 120V/60Hz  
 Environment : Temp:25.5°C Humi:55%  
 Test Engineer: YT

REMARK :

|      | Read     | Antenna | Cable | Preamp | Limit  | Over   |                      |
|------|----------|---------|-------|--------|--------|--------|----------------------|
| Freq | Level    | Factor  | Loss  | Factor | Level  | Line   | Limit Remark         |
| MHz  | dBuV     | dB/m    | dB    | dB     | dBuV/m | dBuV/m | dB                   |
| 1    | 2390.000 | 16.86   | 27.37 | 4.69   | 0.00   | 48.92  | 74.00 -25.08 Peak    |
| 2    | 2390.000 | 8.46    | 27.37 | 4.69   | 0.00   | 40.52  | 54.00 -13.48 Average |

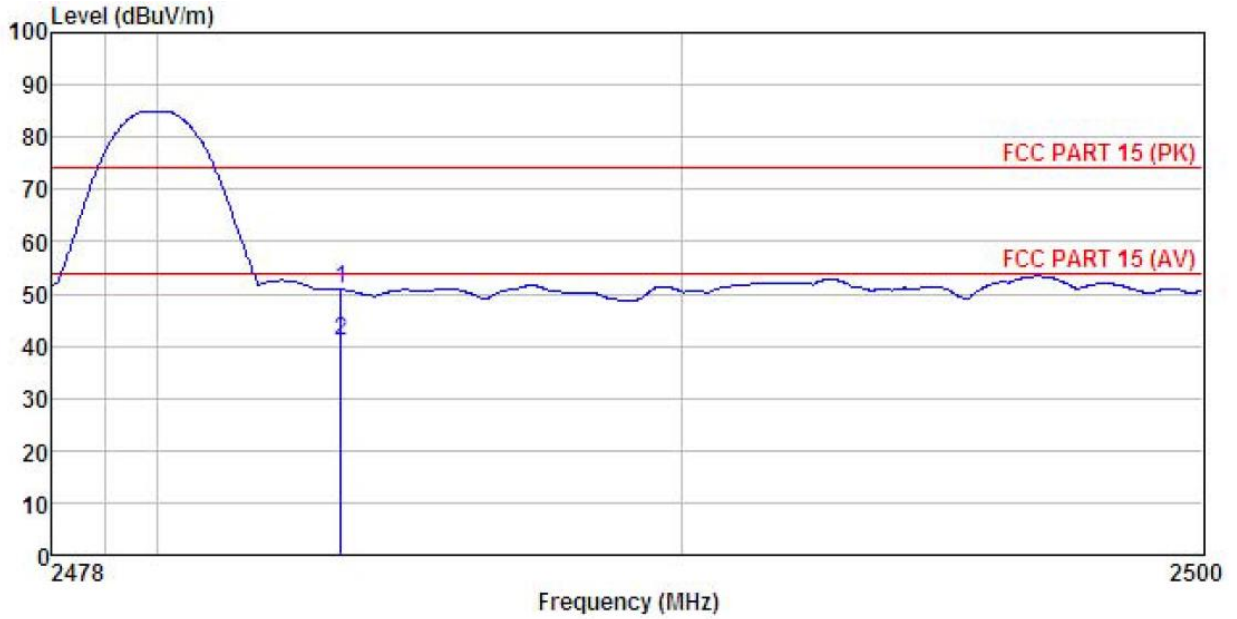
Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss - Pre-amplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test channel: Highest channel

Test Polarization: Horizontal



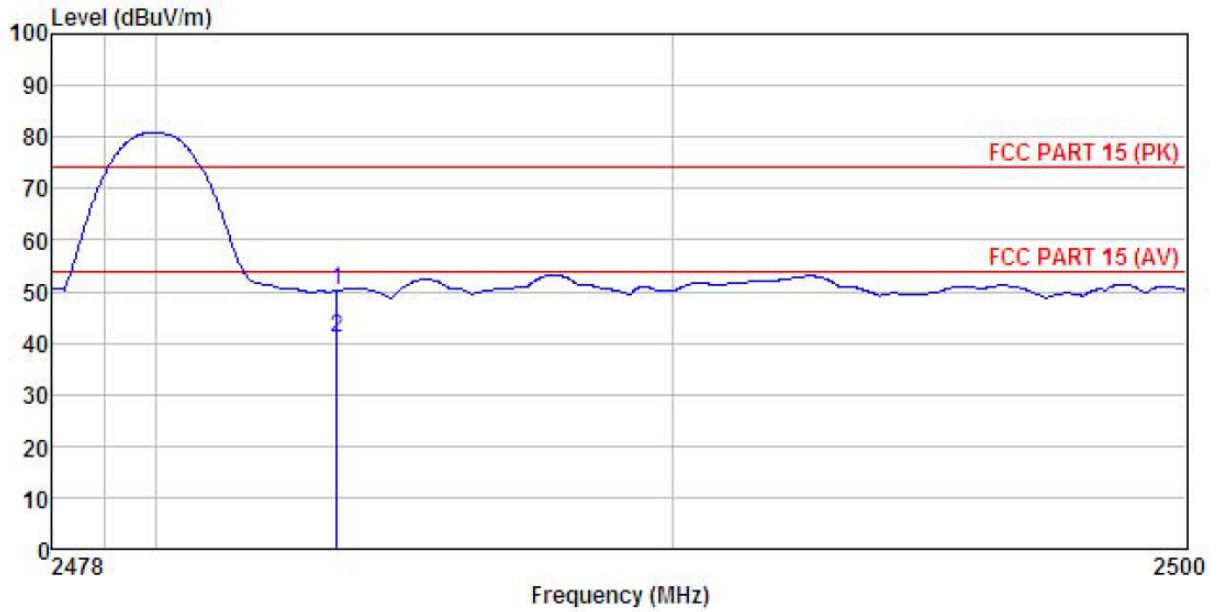
Site : 3m chamber  
 Condition : FCC PART 15 (PK) 3m BBHA9120(1G18G) HORIZONTAL  
 EUT : LTE mobile phone  
 Model : N5501L  
 Test mode : 3DH1-H Mode  
 Power Rating : AC 120V/60Hz  
 Environment : Temp:25.5°C Humi:55%  
 Test Engineer: YT  
 REMARK :

|      | Read     | Antenna | Cable | Preamp | Limit  | Over   |                      |
|------|----------|---------|-------|--------|--------|--------|----------------------|
| Freq | Level    | Factor  | Loss  | Factor | Level  | Line   | Limit Remark         |
| MHz  | dBuV     | dB/m    | dB    | dB     | dBuV/m | dBuV/m | dB                   |
| 1    | 2483.500 | 18.43   | 27.57 | 4.81   | 0.00   | 50.81  | 74.00 -23.19 Peak    |
| 2    | 2483.500 | 8.56    | 27.57 | 4.81   | 0.00   | 40.94  | 54.00 -13.06 Average |

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss - Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Test Polarization: Vertical



Site : 3m chamber  
 Condition : FCC PART 15 (PK) 3m BBHA9120(1G18G) VERTICAL  
 EUT : LTE mobile phone  
 Model : N5501L  
 Test mode : 3DH1-H Mode  
 Power Rating : AC 120V/60Hz  
 Environment : Temp:25.5°C Humi:55%  
 Test Engineer: YI  
 REMARK :

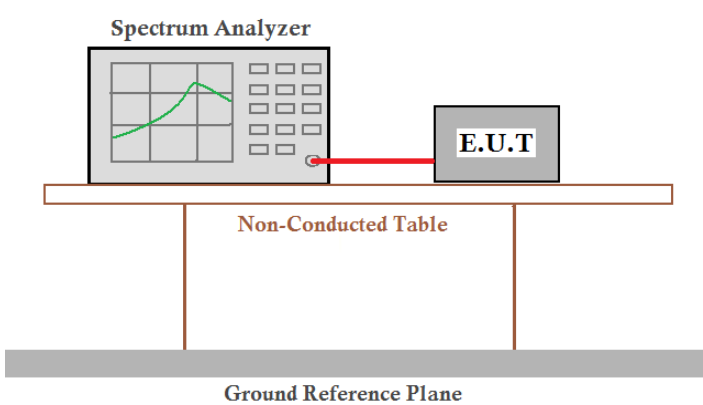
|      | Read     | Antenna | Cable | Preamp | Limit  | Over   |                      |
|------|----------|---------|-------|--------|--------|--------|----------------------|
| Freq | Level    | Factor  | Loss  | Factor | Line   | Limit  | Remark               |
| MHz  | dBuV     | dB/m    | dB    | dB     | dBuV/m | dBuV/m | dB                   |
| 1    | 2483.500 | 17.88   | 27.57 | 4.81   | 0.00   | 50.26  | 74.00 -23.74 Peak    |
| 2    | 2483.500 | 8.56    | 27.57 | 4.81   | 0.00   | 40.94  | 54.00 -13.06 Average |

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss - Pre-amplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

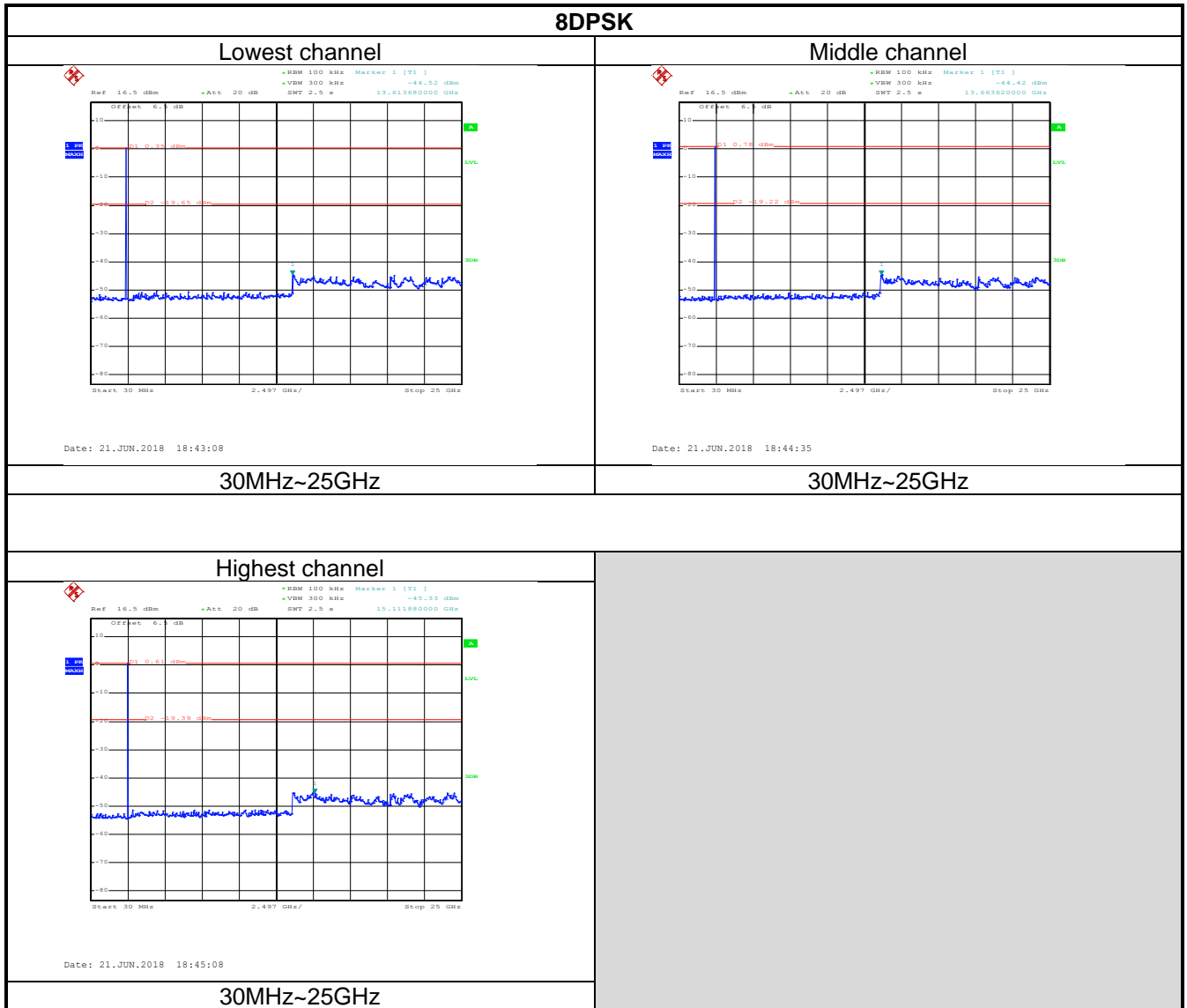
## 6.10 Spurious Emission

### 6.10.1 Conducted Emission Method

|                   |   |
|-------------------|---|
| Test Requirement: | FCC Part 15 C Section 15.247 (d)  |
| Test Method:      | ANSI C63.10:2013 and DA00-705   |
| Limit:            | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. |
| Test setup:       |  <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both the Spectrum Analyzer and the E.U.T. are placed on a Non-Conducted Table. Below the table is a Ground Reference Plane.</p>                                    |
| Test Instruments: | Refer to section 5.8 for details  |
| Test mode:        | Non-hopping mode  |
| Test results:     | Pass  |

Test plot as follows:

|  |  |
|--|--|
| <p style="text-align: center;"><b>GFSK</b></p> <p style="text-align: center;"><b>Lowest channel</b></p> <p style="text-align: right;">Date: 21.JUN.2018 18:36:48</p> | <p style="text-align: center;"><b><math>\pi/4</math>-DQPSK</b></p> <p style="text-align: center;"><b>Lowest channel</b></p> <p style="text-align: right;">Date: 21.JUN.2018 18:39:59</p> |
| 30MHz~25GHz  | 30MHz~25GHz  |
| <p style="text-align: center;"><b>Middle channel</b></p> <p style="text-align: right;">Date: 21.JUN.2018 18:38:29</p>  | <p style="text-align: center;"><b>Middle channel</b></p> <p style="text-align: right;">Date: 21.JUN.2018 18:40:48</p>  |
| 30MHz~25GHz  | 30MHz~25GHz  |
| <p style="text-align: center;"><b>Highest channel</b></p> <p style="text-align: right;">Date: 21.JUN.2018 18:39:04</p>   | <p style="text-align: center;"><b>Highest channel</b></p> <p style="text-align: right;">Date: 21.JUN.2018 18:41:43</p>   |
| 30MHz~25GHz  | 30MHz~25GHz  |



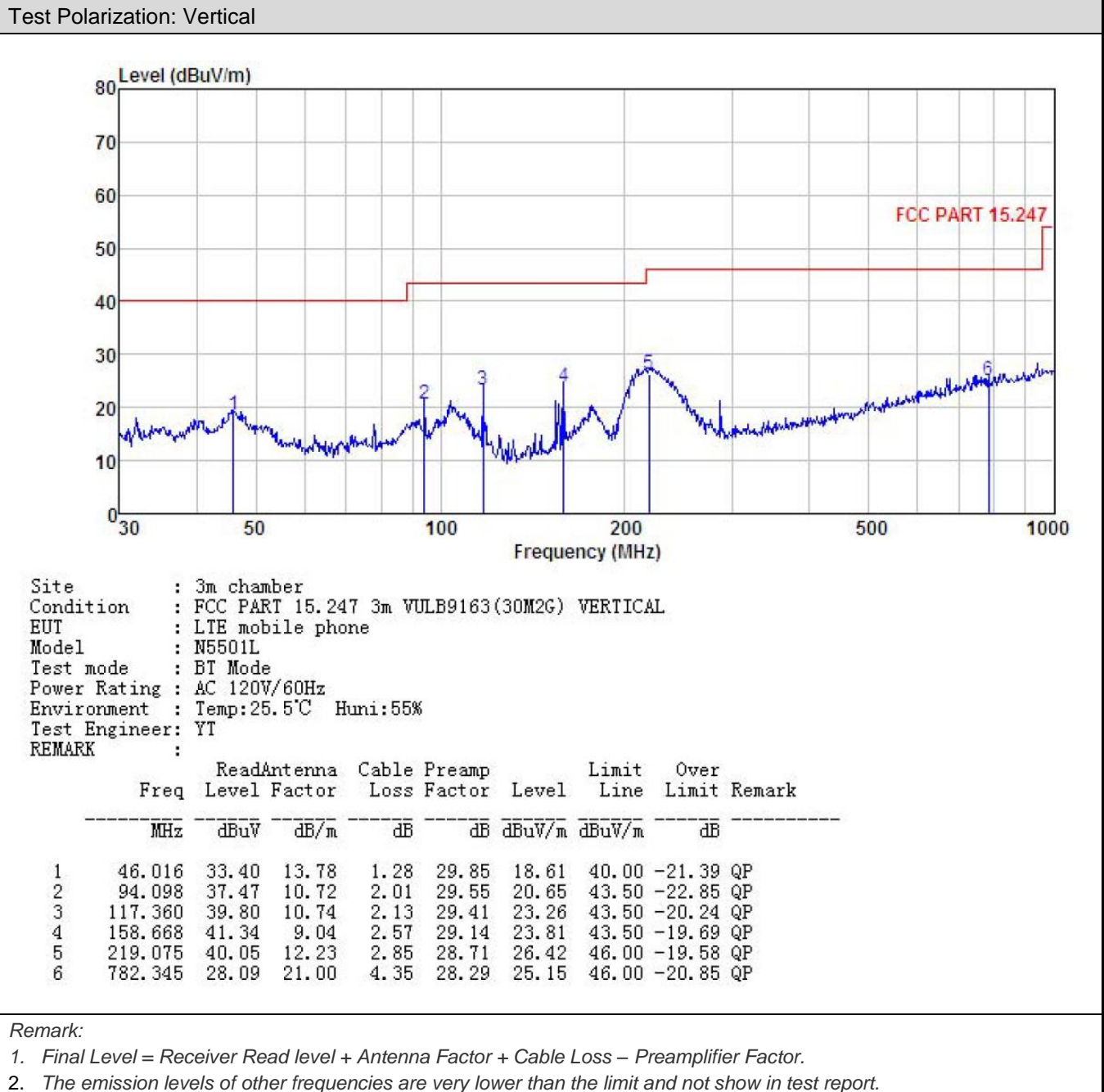
## 6.10.2 Radiated Emission Method

|                       |  |                    |        |                  |                  |
|-----------------------|--|--------------------|--------|------------------|------------------|
| Test Requirement:     | FCC Part 15 C Section 15.209   |                    |        |                  |                  |
| Test Method:          | ANSI C63.10: 2013  |                    |        |                  |                  |
| Test Frequency Range: | 9 kHz to 25 GHz  |                    |        |                  |                  |
| Test Distance:        | 3m   |                    |        |                  |                  |
| Receiver setup:       | Frequency  | Detector           | RBW    | VBW              | Remark           |
|                       | 30MHz-1GHz   | Quasi-peak         | 120kHz | 300kHz           | Quasi-peak Value |
|                       | Above 1GHz   | Peak               | 1MHz   | 3MHz             | Peak Value       |
|                       |  | RMS                | 1MHz   | 3MHz             | Average Value    |
| Limit:                | Frequency  | Limit (dBuV/m @3m) |        | Remark           |                  |
|                       | 30MHz-88MHz  | 40.0               |        | Quasi-peak Value |                  |
|                       | 88MHz-216MHz   | 43.5               |        | Quasi-peak Value |                  |
|                       | 216MHz-960MHz  | 46.0               |        | Quasi-peak Value |                  |
|                       | 960MHz-1GHz  | 54.0               |        | Quasi-peak Value |                  |
|                       | Above 1GHz   | 54.0               |        | Average Value    |                  |
|                       |  | 74.0               |        | Peak Value       |                  |
| Test setup:           | Below 1GHz   |                    |        |                  |                  |
|                       |  |                    |        |                  |                  |
|                       | Above 1GHz   |                    |        |                  |                  |
|                       |  |                    |        |                  |                  |
| Test Procedure:       | 1. The EUT was placed on the top of a rotating table 0.8m(below 1GHz) /1.5m(above 1GHz) above the ground at a 3 meter chamber. The table |                    |        |                  |                  |

|                   |   |
|-------------------|---|
|                   | <p>was rotated 360 degrees to determine the position of the highest radiation.</p> <ol style="list-style-type: none"> <li>2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li> <li>3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.</li> <li>4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.</li> <li>5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li> <li>6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.</li> </ol> |
| Test Instruments: | Refer to section 5.8 for details  |
| Test mode:        | Non-hopping mode  |
| Test results:     | Pass  |
| Remark:           | <ol style="list-style-type: none"> <li>1. Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis is the worst case.</li> <li>2. 9 kHz to 30 MHz is noise floor, so only shows the data of above 30MHz in this report.</li> </ol>  |

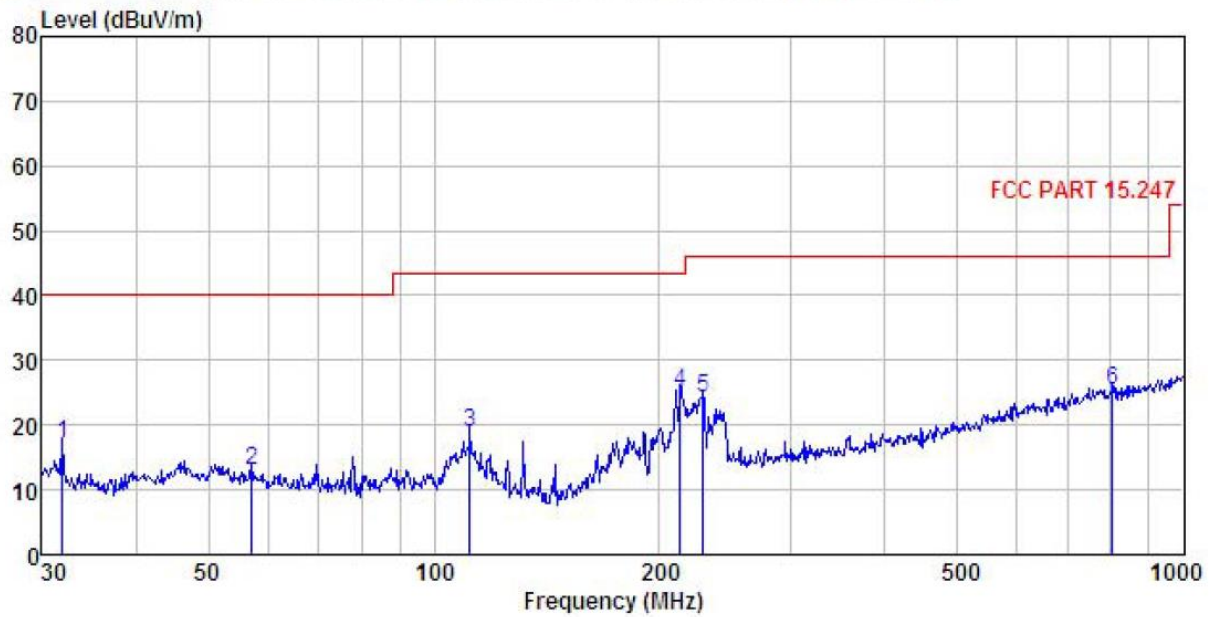
Adapter (1)

Measurement Data (worst case):  
Below 1GHz:





Test Polarization: Horizontal



Site : 3m chamber  
 Condition : FCC PART 15.247 3m WULB9163(30M2G) HORIZONTAL  
 EUT : LTE mobile phone  
 Model : N5501L  
 Test mode : BT Mode  
 Power Rating : AC 120W/60Hz  
 Environment : Temp:25.5°C Humi:55%  
 Test Engineer: YT  
 REMARK :

|      | Read    | Antenna | Cable | Preamp | Limit  | Over   |                 |
|------|---------|---------|-------|--------|--------|--------|-----------------|
| Freq | Level   | Factor  | Loss  | Factor | Level  | Line   | Limit Remark    |
| MHz  | dBuV    | dB/m    | dB    | dB     | dBuV/m | dBuV/m | dB              |
| 1    | 31.955  | 35.21   | 11.05 | 0.85   | 29.97  | 17.14  | 40.00 -22.86 QP |
| 2    | 57.191  | 28.61   | 12.85 | 1.37   | 29.79  | 13.04  | 40.00 -26.96 QP |
| 3    | 111.738 | 34.28   | 11.92 | 2.08   | 29.44  | 18.84  | 43.50 -24.66 QP |
| 4    | 213.015 | 39.03   | 12.01 | 2.85   | 28.75  | 25.14  | 43.50 -18.36 QP |
| 5    | 228.490 | 37.32   | 12.57 | 2.84   | 28.66  | 24.07  | 46.00 -21.93 QP |
| 6    | 804.603 | 28.14   | 21.03 | 4.33   | 28.18  | 25.32  | 46.00 -20.68 QP |

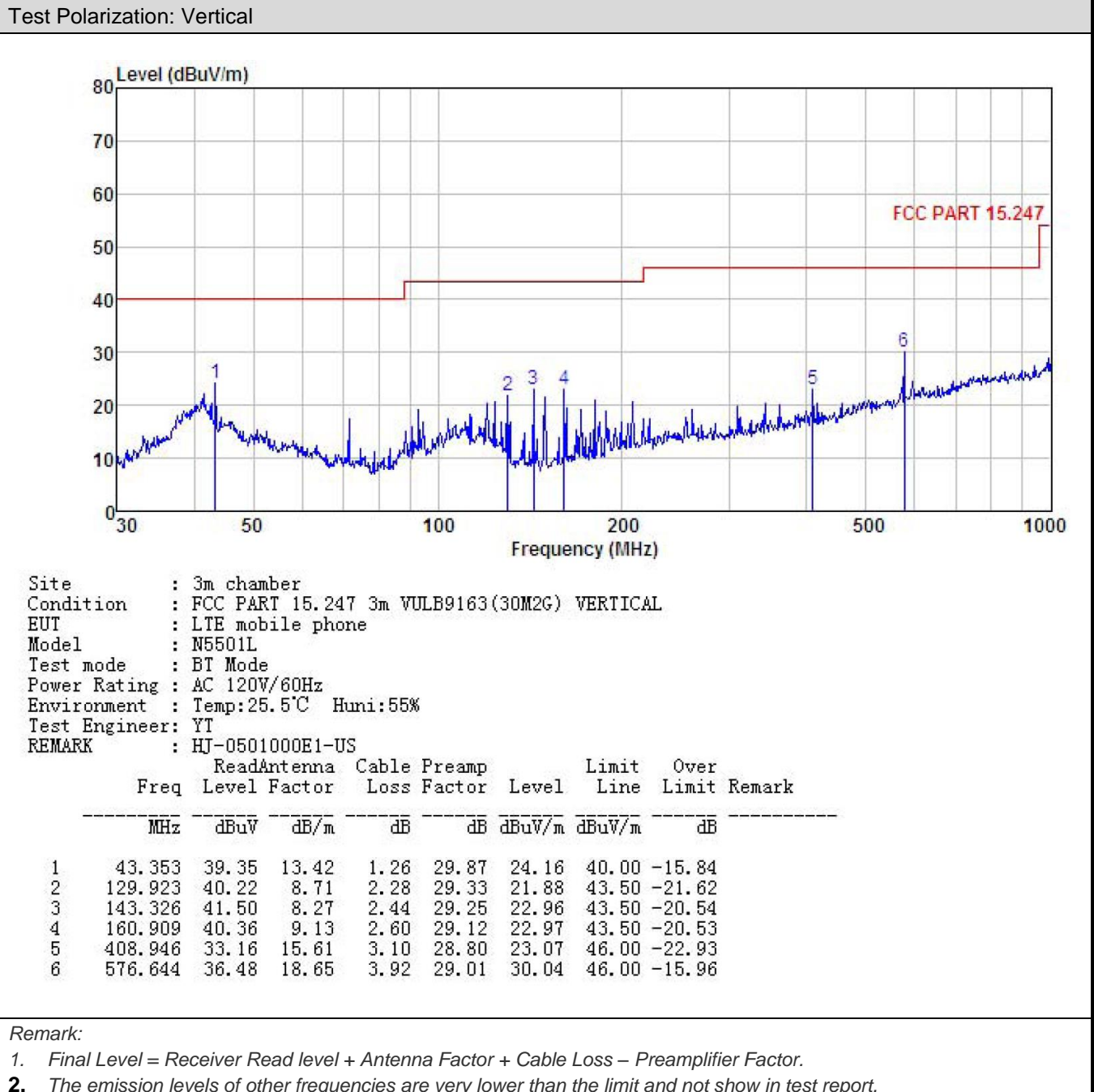
Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss - Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

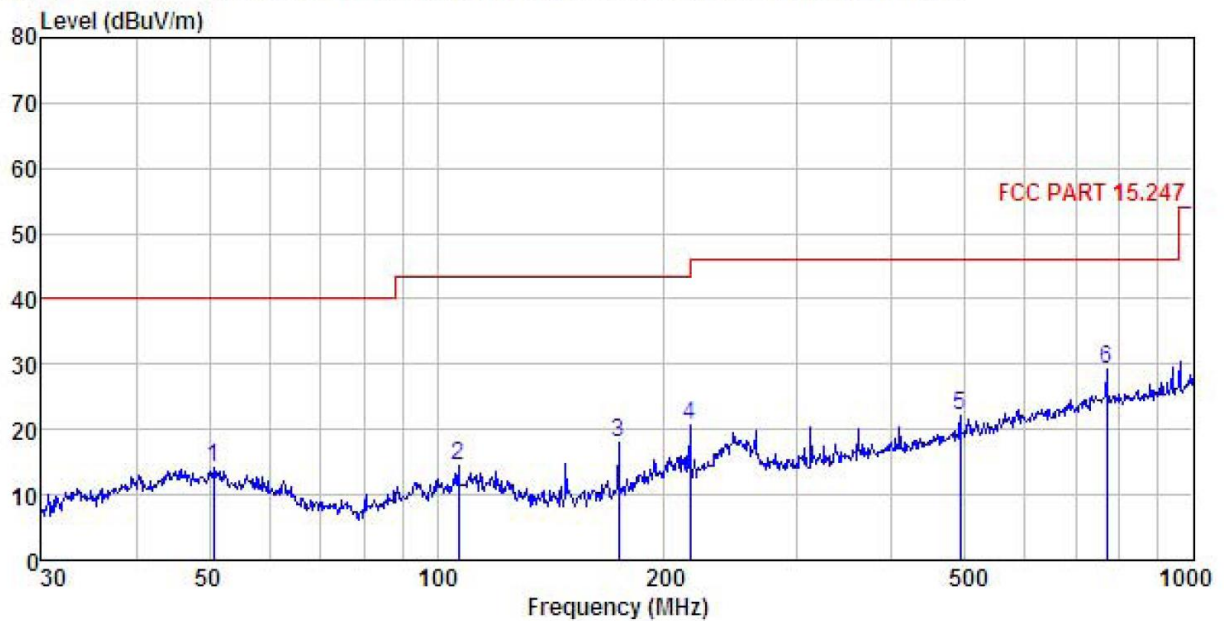
Adapter (2)

Measurement Data (worst case):

Below 1GHz:



Test Polarization: Horizontal



Site : 3m chamber  
 Condition : FCC PART 15.247 3m VULB9163(30M2G) HORIZONTAL  
 EUT : LTE mobile phone  
 Model : N5501L  
 Test mode : BT Mode  
 Power Rating : AC 120V/60Hz  
 Environment : Temp:25.5°C Humi:55%  
 Test Engineer: YT  
 REMARK : HJ-0501000E1-US

| Freq | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Level  | Limit Line | Over Limit | Remark    |
|------|------------|----------------|------------|---------------|--------|------------|------------|-----------|
| MHz  | dBuV       | dB/m           | dB         | dB            | dBuV/m | dBuV/m     | dB         |           |
| 1    | 50.586     | 28.73          | 13.99      | 1.25          | 29.82  | 14.15      | 40.00      | -25.85 QP |
| 2    | 106.759    | 29.76          | 12.11      | 2.02          | 29.48  | 14.41      | 43.50      | -29.09 QP |
| 3    | 173.814    | 34.66          | 9.56       | 2.68          | 29.02  | 17.88      | 43.50      | -25.62 QP |
| 4    | 216.024    | 34.33          | 12.12      | 2.85          | 28.73  | 20.57      | 46.00      | -25.43 QP |
| 5    | 492.469    | 30.38          | 17.30      | 3.55          | 28.94  | 22.29      | 46.00      | -23.71 QP |
| 6    | 768.748    | 32.13          | 21.00      | 4.36          | 28.37  | 29.12      | 46.00      | -16.88 QP |

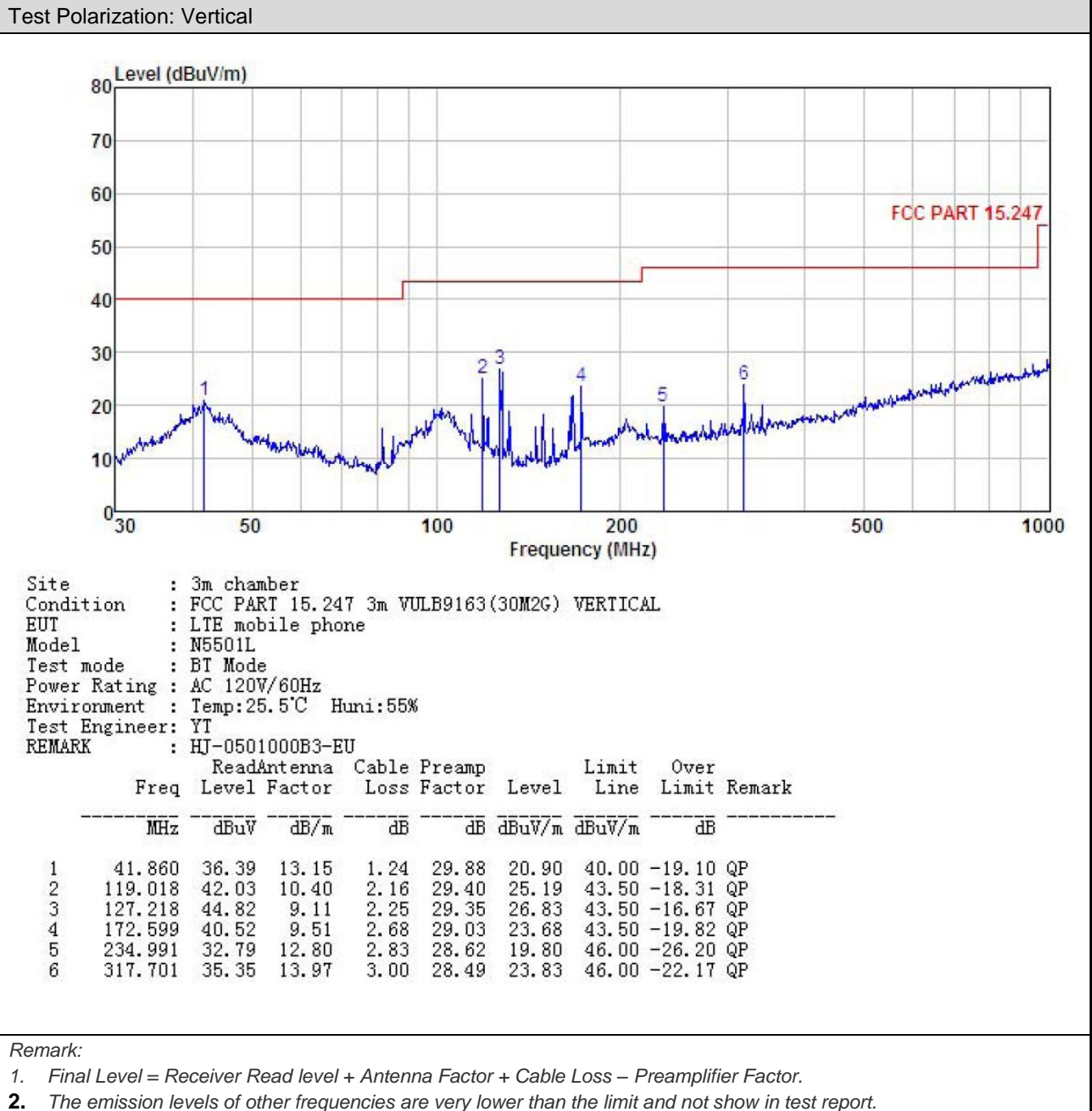
Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Adapter (3)

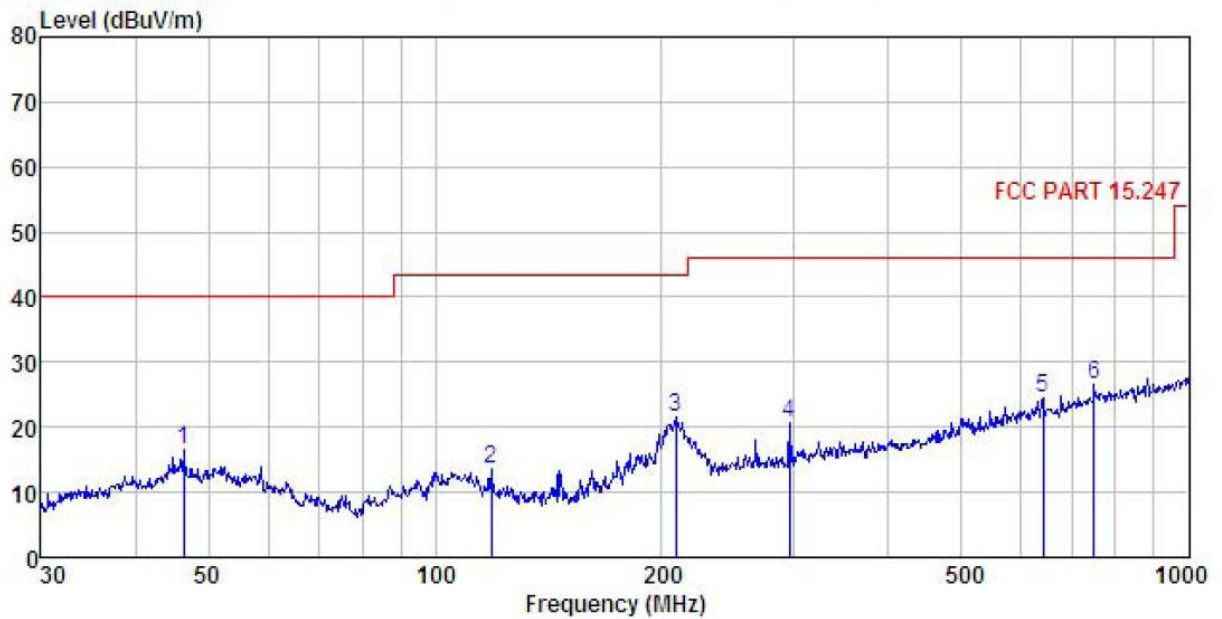
Measurement Data (worst case):

Below 1GHz:





Test Polarization: Horizontal



Site : 3m chamber  
 Condition : FCC PART 15.247 3m VULB9163(30M2G) HORIZONTAL  
 EUT : LTE mobile phone  
 Model : N5501L  
 Test mode : BT Mode  
 Power Rating : AC 120V/60Hz  
 Environment : Temp:25.5°C Humi:55%  
 Test Engineer: YT  
 REMARK : HJ-0501000B3-EU

| Freq | MHz     | Read  | Antenna | Cable | Preamp | Level  | Limit  | Over   | Remark |
|------|---------|-------|---------|-------|--------|--------|--------|--------|--------|
|      |         | Level | Factor  | Loss  | Factor |        | Line   | Limit  |        |
|      |         | dBuV  | dB/m    | dB    | dB     | dBuV/m | dBuV/m | dB     |        |
| 1    | 46.340  | 31.28 | 13.81   | 1.28  | 29.85  | 16.52  | 40.00  | -23.48 | QP     |
| 2    | 118.601 | 30.40 | 10.48   | 2.16  | 29.40  | 13.64  | 43.50  | -29.86 | QP     |
| 3    | 208.580 | 35.62 | 11.84   | 2.86  | 28.78  | 21.54  | 43.50  | -21.96 | QP     |
| 4    | 295.147 | 32.62 | 13.57   | 2.93  | 28.46  | 20.66  | 46.00  | -25.34 | QP     |
| 5    | 640.611 | 29.59 | 19.69   | 3.88  | 28.81  | 24.35  | 46.00  | -21.65 | QP     |
| 6    | 750.108 | 29.74 | 21.00   | 4.36  | 28.48  | 26.62  | 46.00  | -19.38 | QP     |

Remark:

- Final Level = Receiver Read level + Antenna Factor + Cable Loss - Pre-amplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

**Above 1GHz:**

| Test channel: Lowest channel   |                   |                       |                 |                    |                |                     |                 |              |
|--|-------------------|-----------------------|-----------------|--------------------|----------------|---------------------|-----------------|--------------|
| Detector: Peak Value   |                   |                       |                 |                    |                |                     |                 |              |
| Frequency (MHz)  | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 4804.00  | 49.85             | 30.85                 | 6.80            | 41.81              | 45.69          | 74.00               | -28.31          | Vertical     |
| 4804.00  | 48.12             | 30.85                 | 6.80            | 41.81              | 43.96          | 74.00               | -30.04          | Horizontal   |
| Detector: Average Value  |                   |                       |                 |                    |                |                     |                 |              |
| Frequency (MHz)  | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 4804.00  | 39.62             | 30.85                 | 6.80            | 41.81              | 35.46          | 54.00               | -18.54          | Vertical     |
| 4804.00  | 38.12             | 30.85                 | 6.80            | 41.81              | 33.96          | 54.00               | -20.04          | Horizontal   |
| Test channel: Middle channel   |                   |                       |                 |                    |                |                     |                 |              |
| Detector: Peak Value   |                   |                       |                 |                    |                |                     |                 |              |
| Frequency (MHz)  | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 4882.00  | 48.72             | 31.20                 | 6.86            | 41.84              | 44.94          | 74.00               | -29.06          | Vertical     |
| 4882.00  | 47.19             | 31.20                 | 6.86            | 41.84              | 43.41          | 74.00               | -30.59          | Horizontal   |
| Detector: Average Value  |                   |                       |                 |                    |                |                     |                 |              |
| Frequency (MHz)  | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 4882.00  | 39.62             | 31.20                 | 6.86            | 41.84              | 35.84          | 54.00               | -18.16          | Vertical     |
| 4882.00  | 38.46             | 31.20                 | 6.86            | 41.84              | 34.68          | 54.00               | -19.32          | Horizontal   |
| Test channel: Highest channel  |                   |                       |                 |                    |                |                     |                 |              |
| Detector: Peak Value   |                   |                       |                 |                    |                |                     |                 |              |
| Frequency (MHz)  | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 4960.00  | 49.20             | 31.63                 | 6.91            | 41.87              | 45.87          | 74.00               | -28.13          | Vertical     |
| 4960.00  | 48.15             | 31.63                 | 6.91            | 41.87              | 44.82          | 74.00               | -29.18          | Horizontal   |
| Detector: Average Value  |                   |                       |                 |                    |                |                     |                 |              |
| Frequency (MHz)  | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 4960.00  | 39.62             | 31.63                 | 6.91            | 41.87              | 36.29          | 54.00               | -17.71          | Vertical     |
| 4960.00  | 38.45             | 31.63                 | 6.91            | 41.87              | 35.12          | 54.00               | -18.88          | Horizontal   |
| <i>Remark:</i>   |                   |                       |                 |                    |                |                     |                 |              |
| 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.              |                   |                       |                 |                    |                |                     |                 |              |
| 2. The emission levels of other frequencies are very lower than the limit and not show in test report. |                   |                       |                 |                    |                |                     |                 |              |