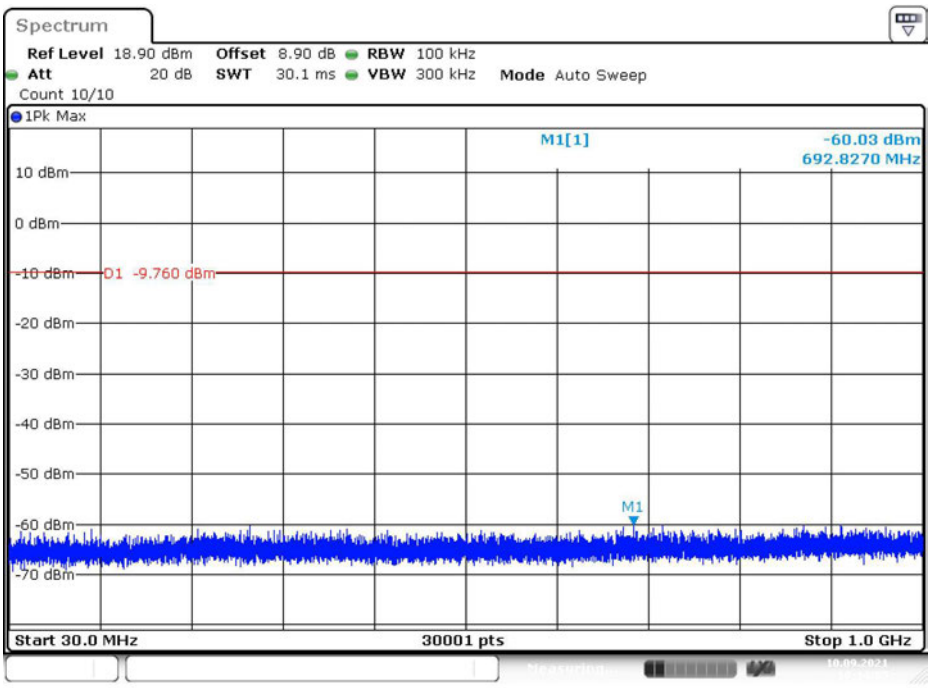
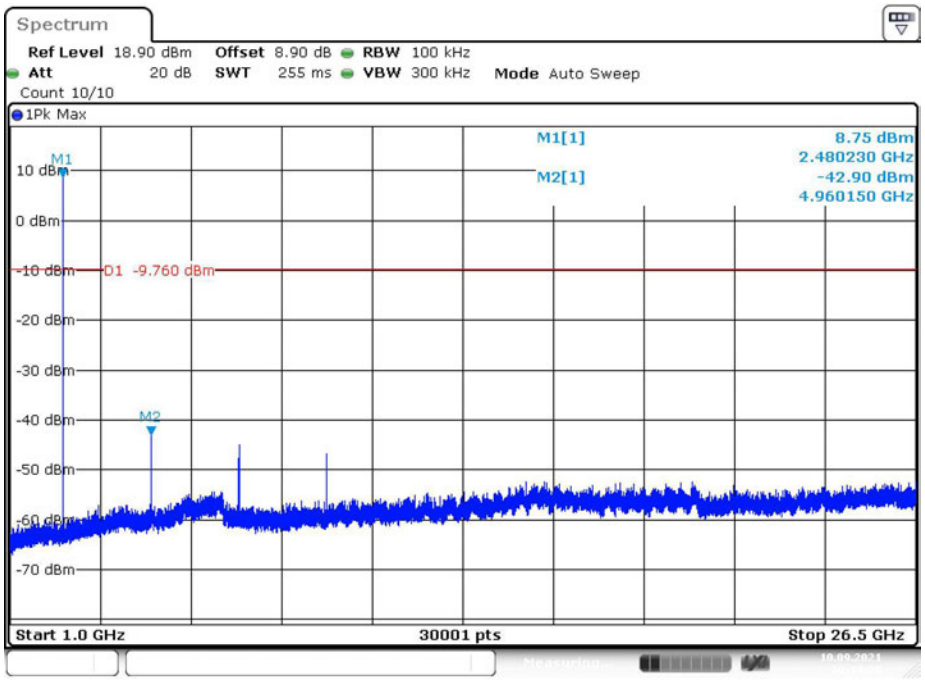



comment

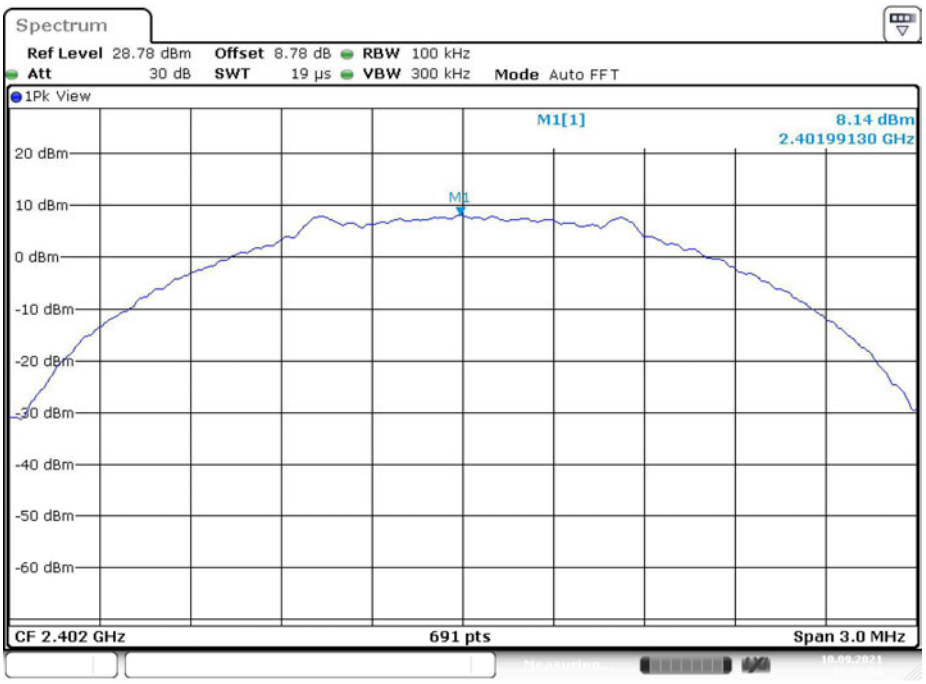
Date: 10.SEP.2021 10:14:05

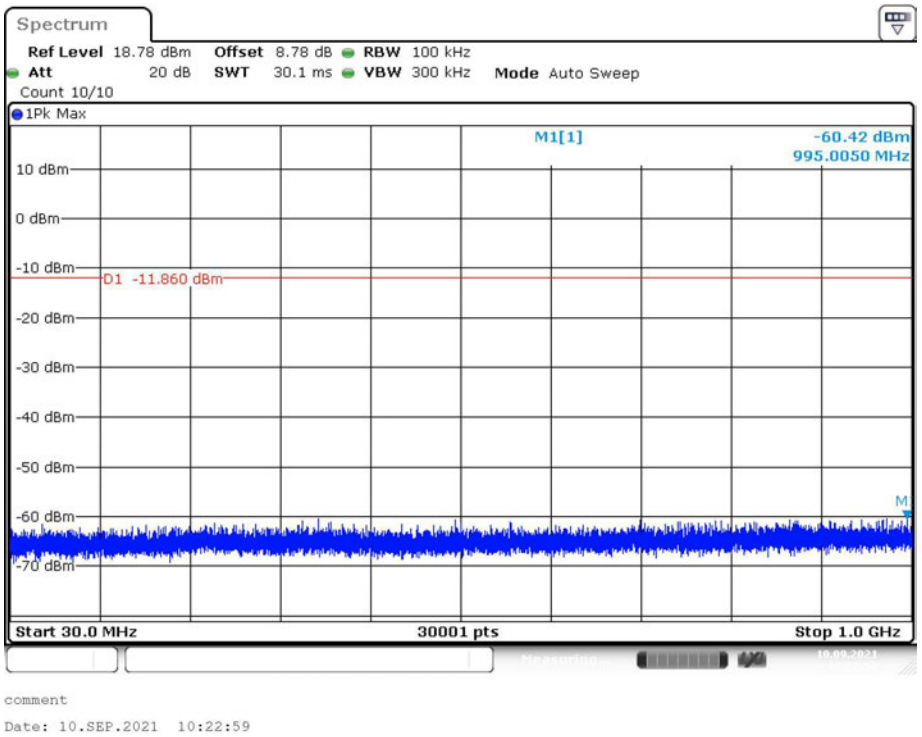


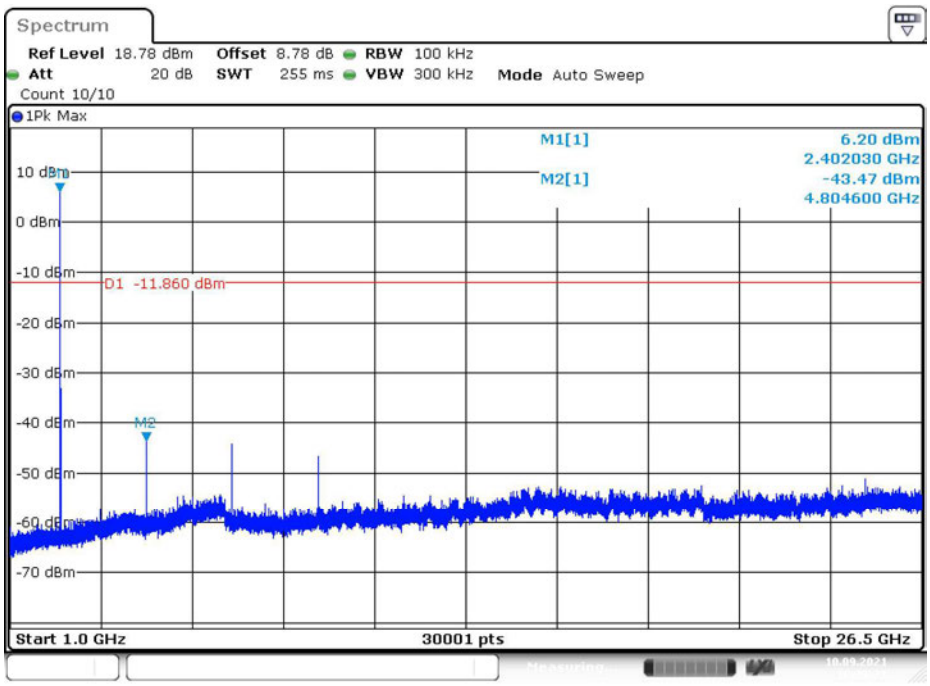

comment

Date: 10.SEP.2021 10:14:28

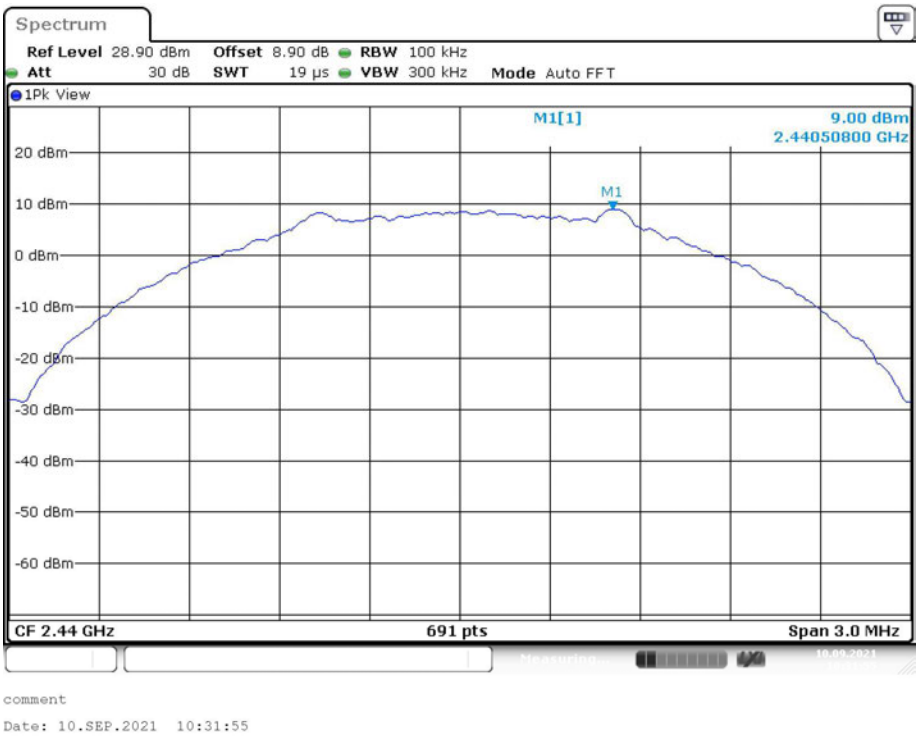
**GFSK (BLE 2Mbps):**
**CH Lowest (No.0)**

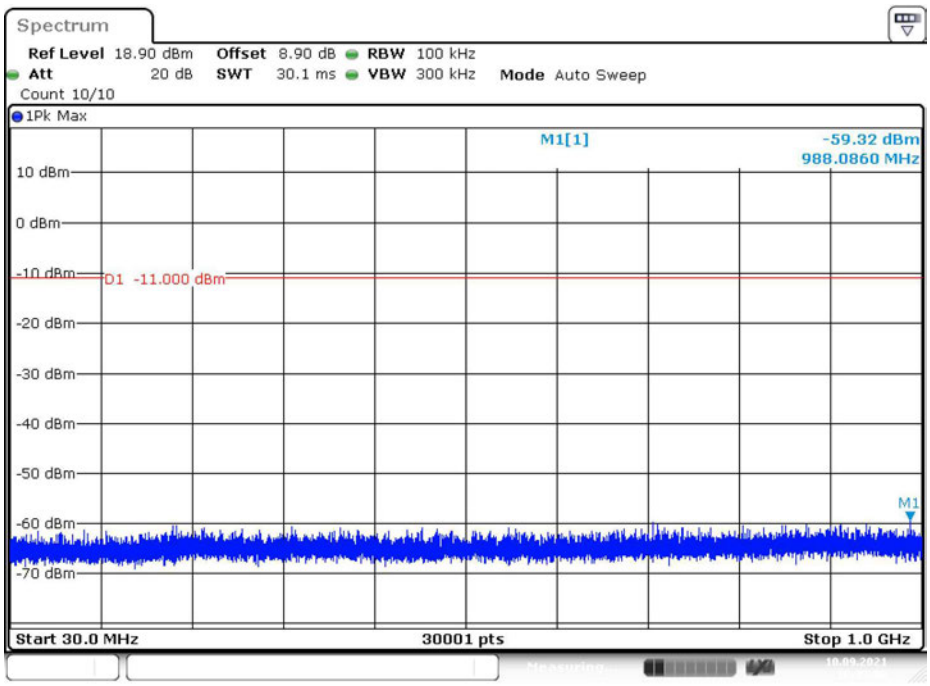




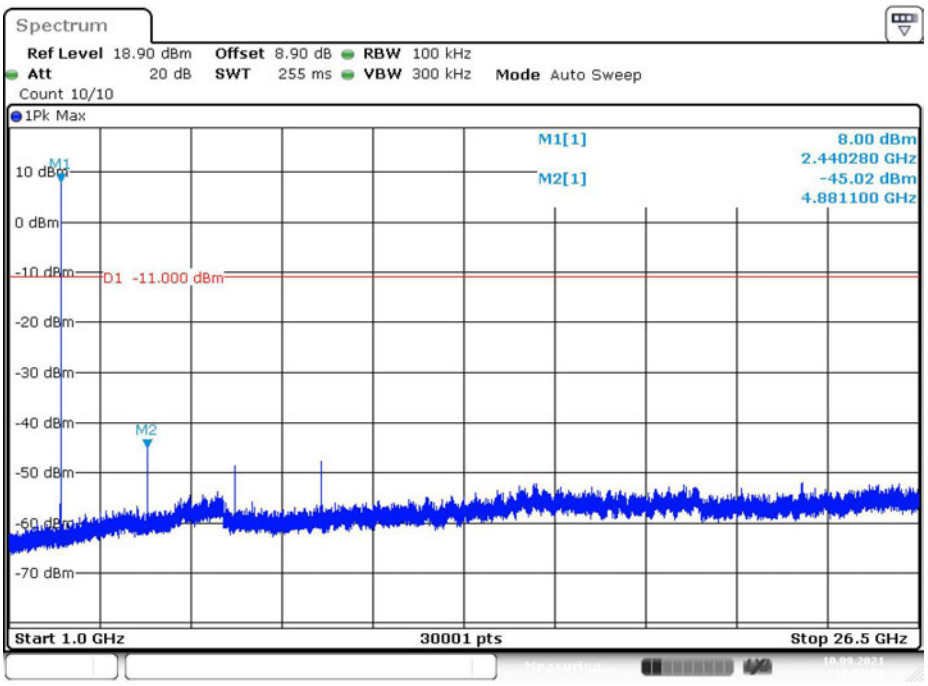

**CH Middle (No.19)**






comment

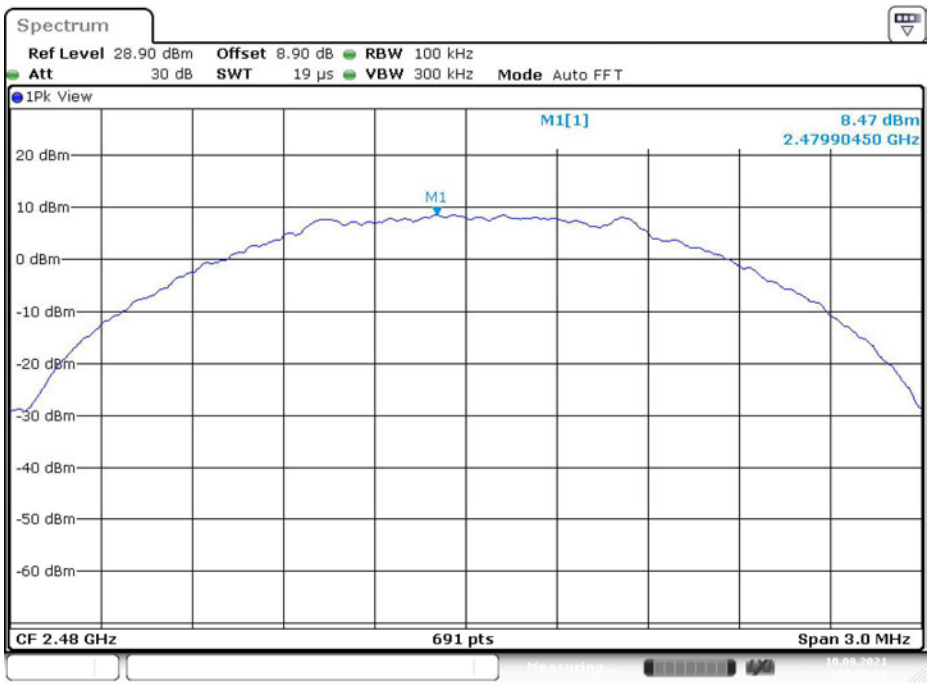
Date: 10.SEP.2021 10:32:01

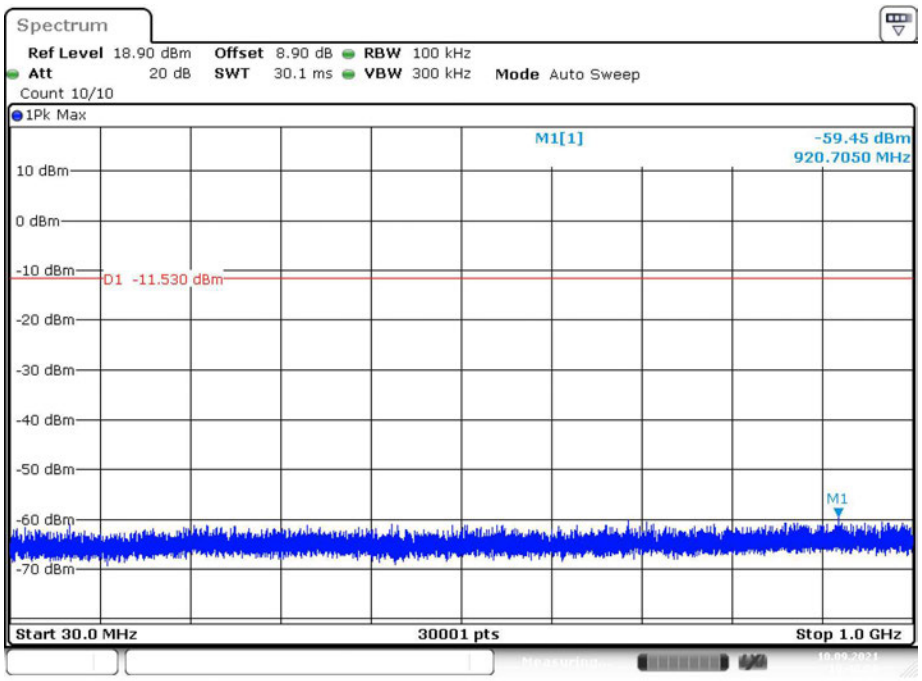


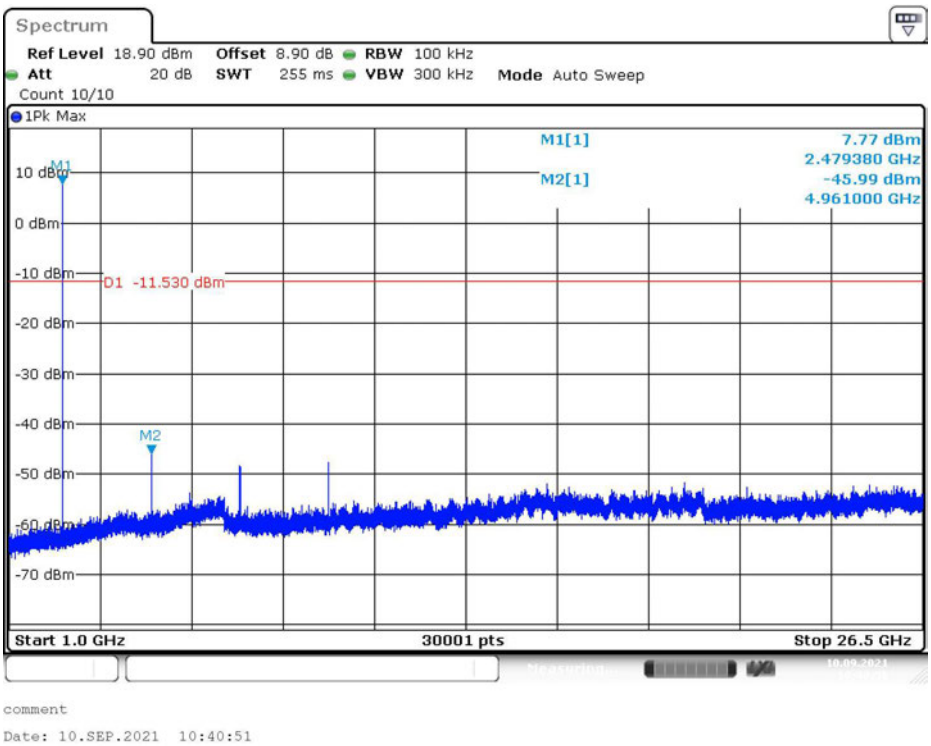

comment

Date: 10.SEP.2021 10:32:23

**CH Highest (No.39)**






### 3.4.5. Uncertainty

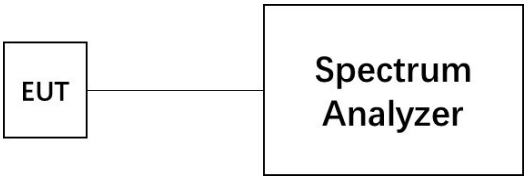
$U_{lab}$=2.74dB ($k$=2)

## 3.5 Authorized-band Band-edge

### 3.5.1. Limit

FCC 47 CFR Part 15 Subpart C - §15.247 (d)
ISED RSS-247 - §5.5
In any 100kHz bandwidth outside the frequency band in which the digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on an RF conducted measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

### 3.5.2. Test Setup




### 3.5.3. Test Procedures

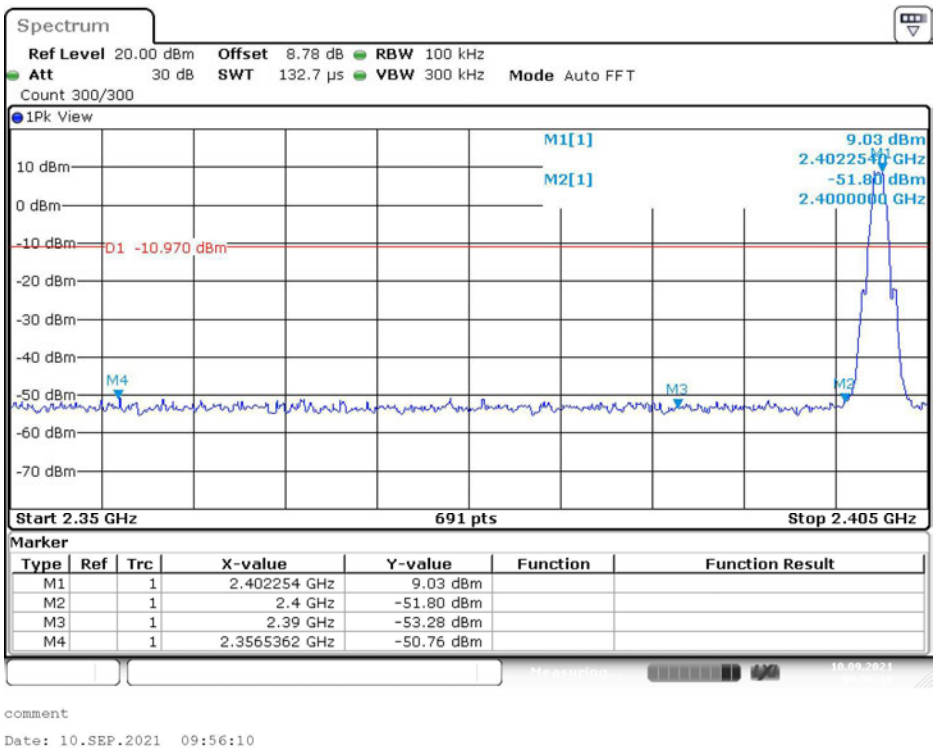
1) The measurement procedure follows ANSI C63.10-2013, clause 6.10.4.
2) Set the EUT to operate at maximum output power and equivalent normal mode of operation.
3) Use the following spectrum analyzer settings:
   a) Span: Wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products which fall outside of the authorized band of operation;
   b) Set RBW = 100kHz;
   c) Set VBW ≥ 3×RBW;
   d) Detector = Peak;
   e) Trace Mode = Max Hold;
   f) Sweep = Auto Couple;
   g) Allow the trace to stabilize;
4) Set the marker on the emission at the band edge, or on the highest modulation product outside of the band, if this level is greater than that at the band edge. Enable the marker-delta function, then use the marker-to-peak function to move the marker to the peak of the in-band emission.

### 3.5.4. Test Result

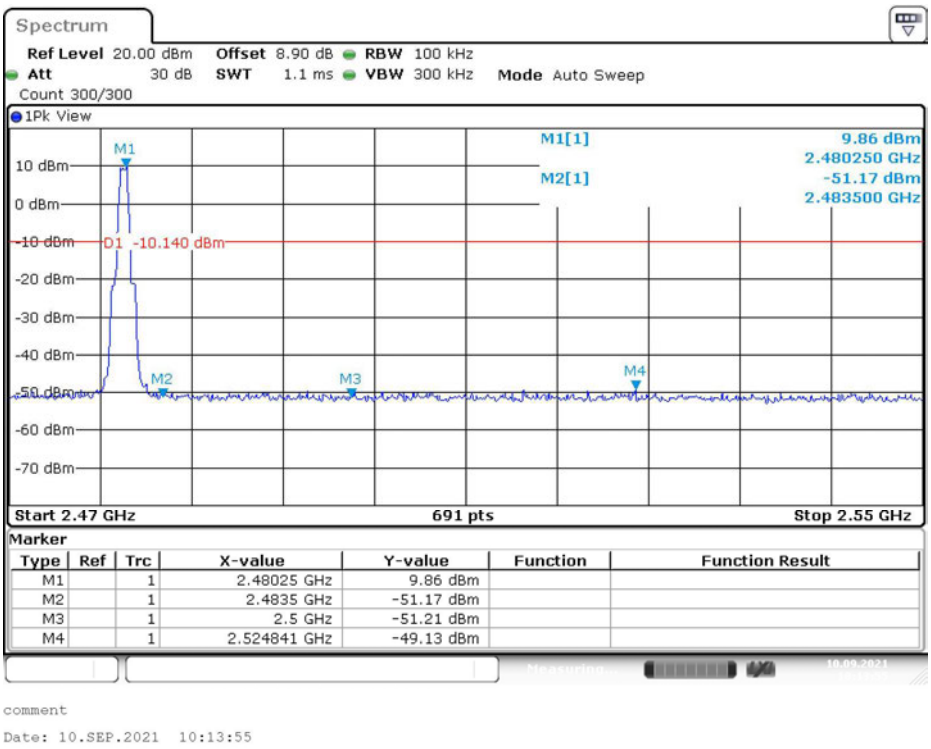
| | | | |
|---|---|---|---|
| **Test Engineer** | Xu Dongxu | **Test Date** | 2021/09/10 |
| **Temperature** | 23.7°C | **Relative Humidity** | 62.0% |
| **Pressure** | 104.9kPa | **Test Sample Selected** | No.1 |

| Modulation Type | Channel | Frequency (MHz) | Ref Level (dBm) | Result (dBm) | -20dBc Limit (dBm) |
|---|---|---|---|---|---|
| GFSK (BLE 1Mbps) | CH Lowest (No.0) | 2402 | 9.03 | -50.76 | ≤-10.97 |
| | CH Highest (No.39) | 2480 | 9.86 | -49.13 | ≤-10.14 |
| GFSK (BLE 2Mbps) | CH Lowest (No.0) | 2402 | 7.94 | -26.42 | ≤-12.06 |
| | CH Highest (No.39) | 2480 | 8.31 | -49.12 | ≤-11.69 |

**GFSK (BLE 1Mbps):**

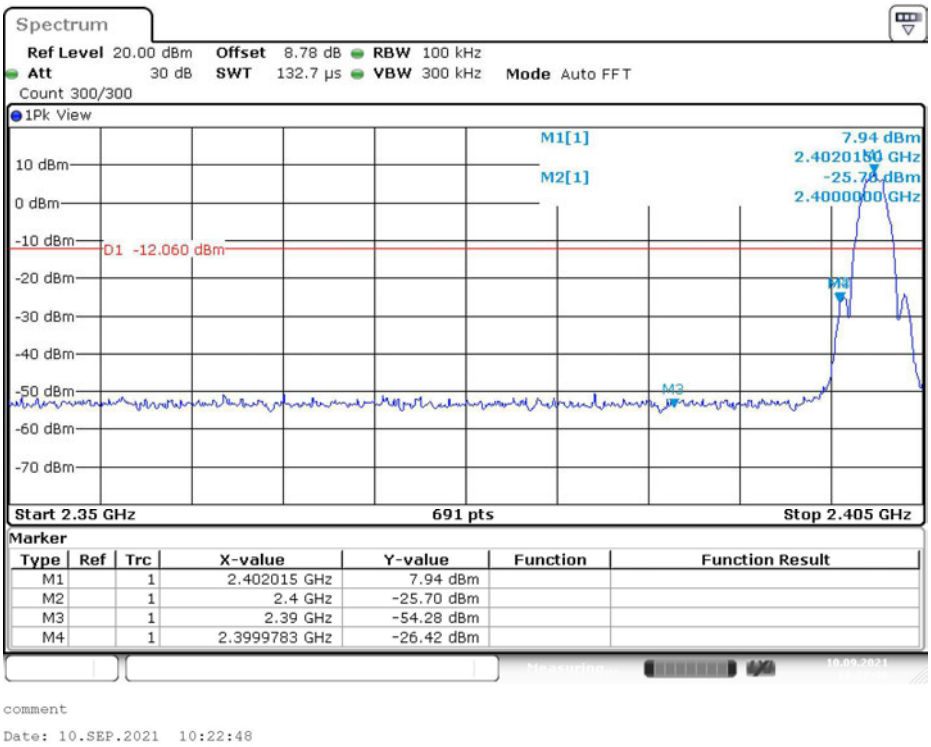



CH Lowest (No.0)

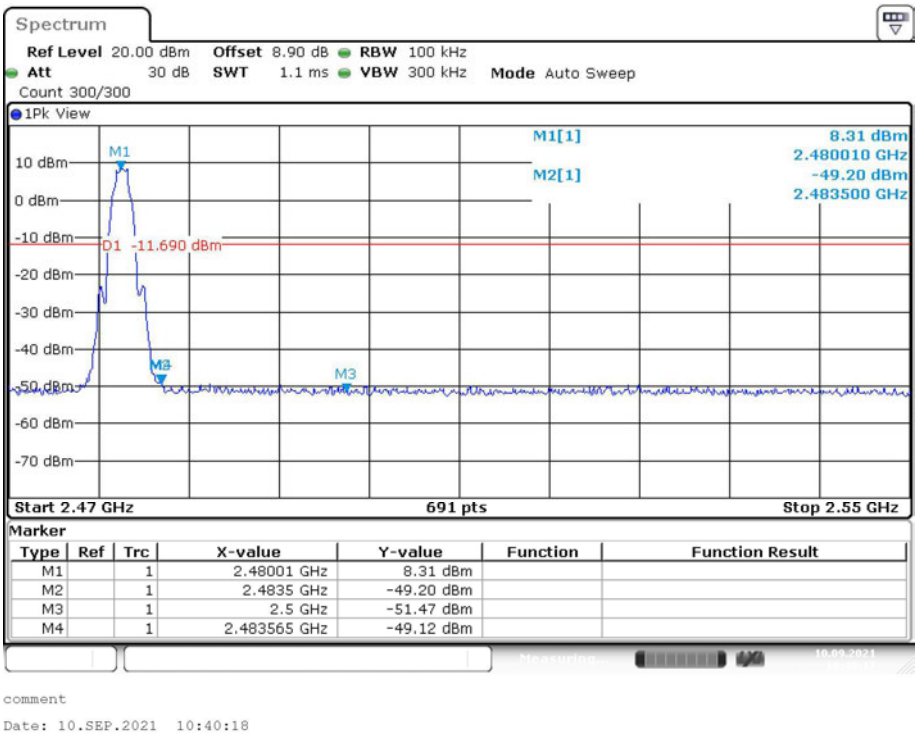



CH Highest (No.39)

**GFSK (BLE 2Mbps):**




CH Lowest (No.0)




CH Highest (No.39)

### 3.5.5. Uncertainty

$U_{lab}$=1.08dB ($k$=2)

## 3.6 Spurious Radiated Emissions and Restricted-band Band-edge

### 3.6.1. Limit

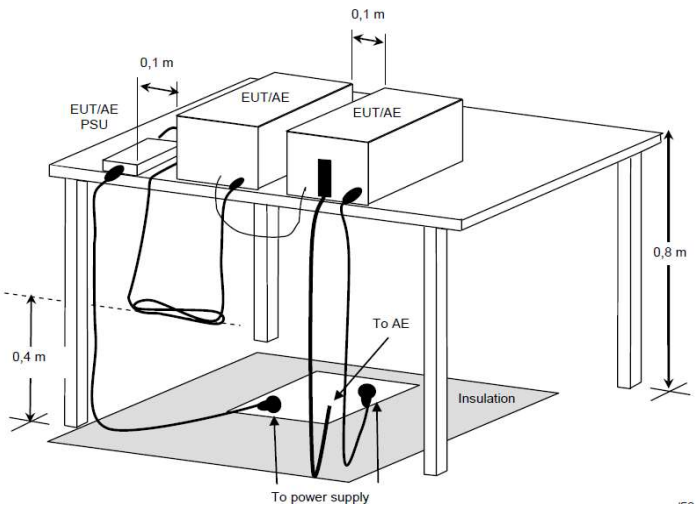
FCC 47 CFR Part 15 Subpart C - §15.205, §15.209 and §15.247 (d)
ISED RSS-247 - §5.5
ISED RSS-Gen - §8.9 and §8.10
All out of band emissions appearing in restricted band must not exceed the limits shown in below table:

| Frequency (MHz) | Field Strength (microvolts/meter) | Measurement Distance (meters) |
|---|---|---|
| 0.009-0.490 | 2400/F(kHz) | 300 |
| 0.490-1.705 | 24000/F(kHz) | 30 |
| 1.705-30.0 | 30 | 30 |
| 30-88 | 100 | 3 |
| 88-216 | 150 | 3 |
| 216-960 | 200 | 3 |
| Above 960 | 500 | 3 |

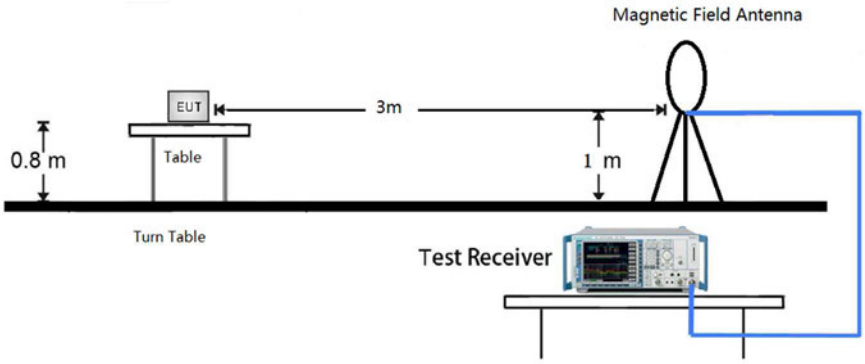
FCC 47 CFR Part 15 Subpart C - §15.35 (b)
There is also a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit.
Used conversion factor: Limit (dBμV/m) = 20log (Limit (μV/m)/1μV/m)

| Frequency (MHz) | Detector | Unit (dBμV/m) |
|---|---|---|
| 30-88 | Quasi-Peak | 40.0 |
| 88-216 | Quasi-Peak | 43.5 |
| 216-960 | Quasi-Peak | 46.0 |
| 960-1000 | Quasi-Peak | 54.0 |
| 1000~5th harmonic of the highest frequency or 40GHz, whichever is lower | Average | 54.0 |
| | Peak | 74.0 |

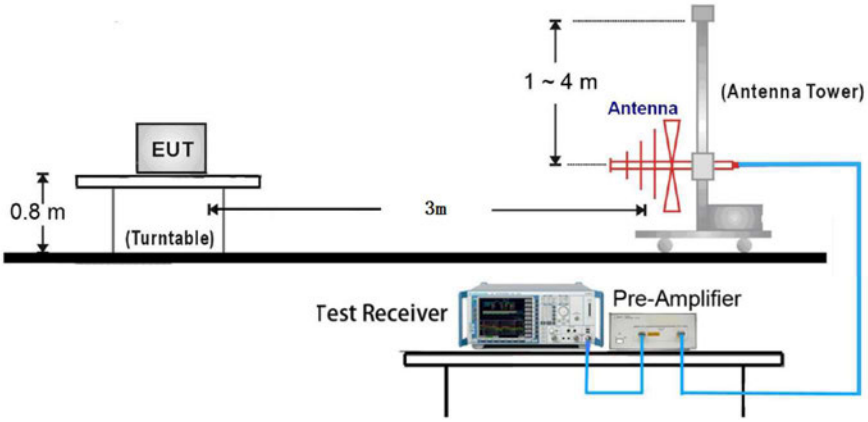
### 3.6.2. Test Setup



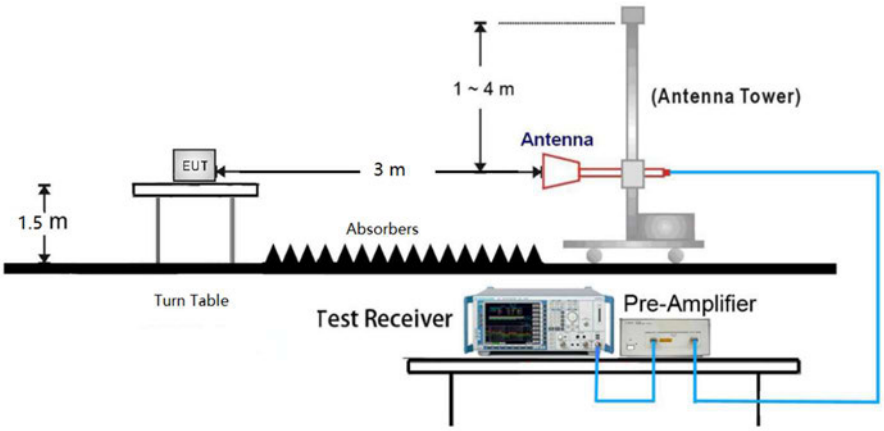
Test Connection Diagram




Below 30MHz Test Setup




30MHz-1GHz Test Setup




Above 1GHz Test Setup

### 3.6.3. Test Procedures

1) The measurement procedure follows ANSI C63.10-2013, clause 6.3, 6.5, 6.6, 6.10.5 and 6.10.6.
2) The data of cable loss and antenna factor has been calibrated in full testing frequency range before the testing.
3) EUT is placed on a non-conducting table 80cm above the ground plane for measurement below 1GHz;

1.5m above the ground plane for measurement above 1GHz. The antenna to EUT distance is 3 meters.

4) For measurements below 30MHz, the resolution bandwidth and video bandwidth is set to 9kHz for quasi-peak detection measurements.

   For measurements from 30MHz to 1GHz, the resolution bandwidth is set to 100kHz for peak detection measurements or 120kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

   For pre-scans above 1GHz, the resolution bandwidth is set to 1MHz; the video bandwidth is set to 30kHz for peak measurements.

   For final scans above 1GHz, the resolution bandwidth is set to 1MHz and video bandwidth is set to 30MHz for peak measurements. And 1MHz resolution bandwidth with 1/T (10Hz) video bandwidth with peak detector for average measurements.

5) The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and horizontal positions.

6) The spectrum from 1GHz to 18GHz is investigated with the EUT set to transmit at the lowest, middle and highest channels with the highest output power and worst-case modulation type (defined in section 2.6 of this report). Below 1GHz and above 18GHz emissions were performed with the EUT set to transmit at the channel and modulation type with the highest output power as worst-case scenario.

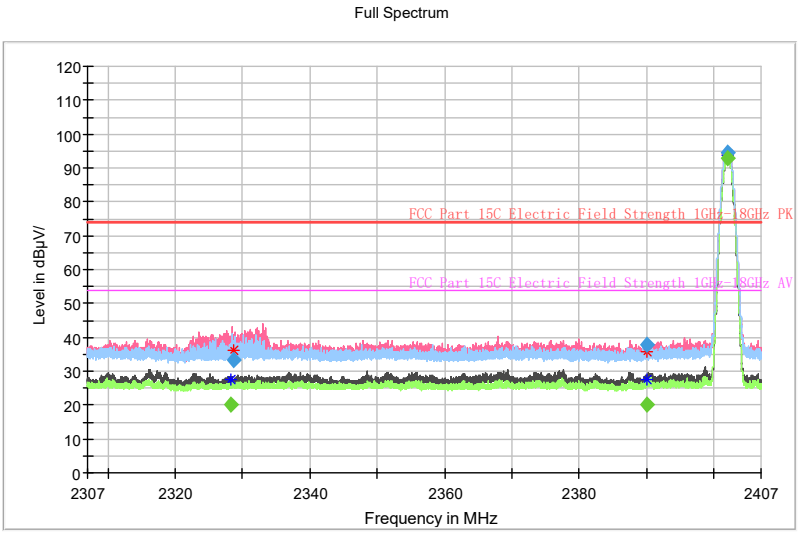
### 3.6.4. Test Result

**Restricted-band Band-edge:**

| | | | |
|---|---|---|---|
| **Test Engineer** | Gao Shuang | **Test Date** | 2021/09/10 |
| **Temperature** | 23.7°C | **Relative Humidity** | 57.2% |
| **Pressure** | 104.3kPa | **Test Sample Selected** | No.2 |

The measurement results are obtained as described below:
Measure Level = Reading Level + Factor;
Factor = cable loss + antenna factor + preamplifier gain;
Sample calculation: (62.07dBuV/m) = (33.20dBμV) +(-29.50dB), the corresponding frequency is 2328.62MHz.

**GFSK (BLE 1Mbps):**
**CH Lowest (No.0)**



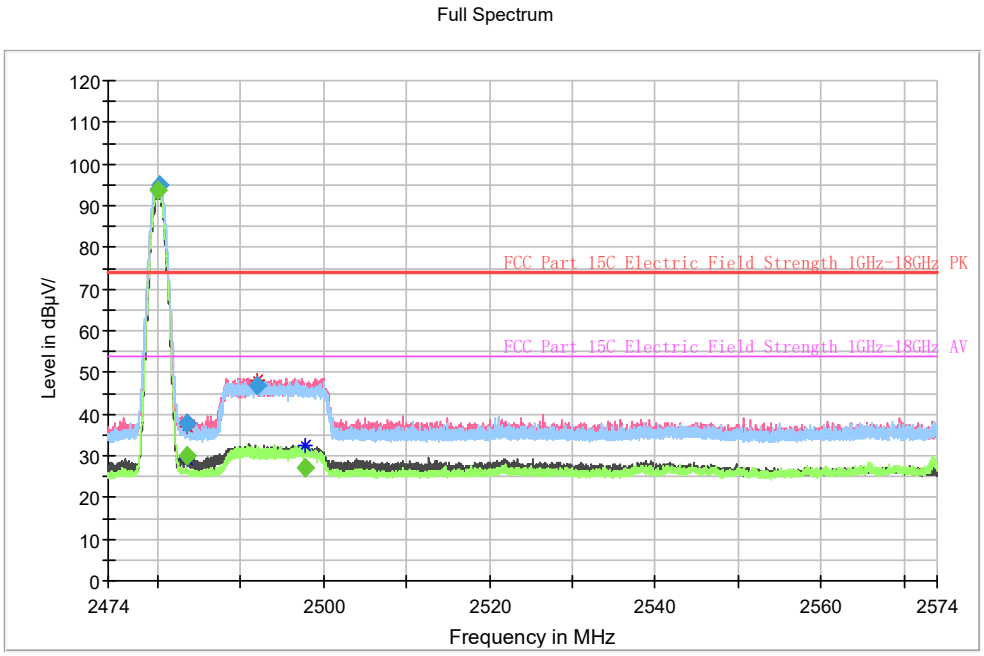
Result: PK

| Frequency (MHz) | Reading MaxPeak (dBuV/m) | MaxPeak (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|---|---|---|---|---|---|---|---|---|
| 2328.62 | 62.70 | 33.20 | 74.00 | 40.80 | 274.30 | V | 218.00 | -29.50 |
| 2390.00 | 67.30 | 37.70 | 74.00 | 36.30 | 174.90 | V | 58.00 | -29.60 |
| 2402.00 | 124.09 | 94.39 | 74.00 | -20.39 | 174.20 | H | 86.00 | -29.70 |

Result: AV

| Frequency (MHz) | Reading Average (dBuV/m) | Average (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|---|---|---|---|---|---|---|---|---|
| 2328.36 | 49.73 | 20.23 | 54.00 | 33.77 | 274.30 | V | 218.00 | -29.50 |
| 2390.00 | 49.91 | 20.31 | 54.00 | 33.69 | 274.40 | V | 218.00 | -29.60 |
| 2402.00 | 122.40 | 92.70 | 54.00 | -38.70 | 174.30 | H | 84.00 | -29.70 |

**CH Highest (No.39)**



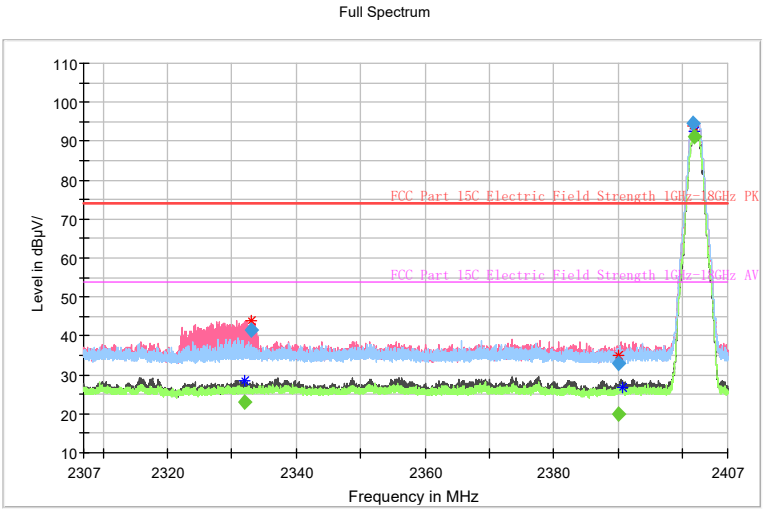

Result: PK

| Frequency (MHz) | Reading MaxPeak (dBuV/m) | MaxPeak (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|---|---|---|---|---|---|---|---|---|
| 2480.29 | 124.36 | 94.96 | 74.00 | -20.96 | 100.00 | H | 204.00 | -29.40 |
| 2483.50 | 67.40 | 38.00 | 74.00 | 32.10 | 105.30 | V | 187.00 | -29.40 |
| 2492.07 | 76.03 | 46.73 | 74.00 | 27.27 | 297.80 | H | -25.00 | -29.30 |

Result: AV

| Frequency (MHz) | Reading Average (dBuV/m) | Average (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|---|---|---|---|---|---|---|---|---|
| 2479.93 | 123.20 | 93.80 | 54.00 | -39.80 | 174.20 | H | 199.00 | -29.40 |
| 2483.50 | 59.40 | 30.00 | 54.00 | 24.10 | 274.30 | H | 307.00 | -29.40 |
| 2497.70 | 56.61 | 27.31 | 54.00 | 26.69 | 274.30 | V | 316.00 | -29.30 |

**GFSK (BLE 2Mbps):**
**CH Lowest (No.0)**



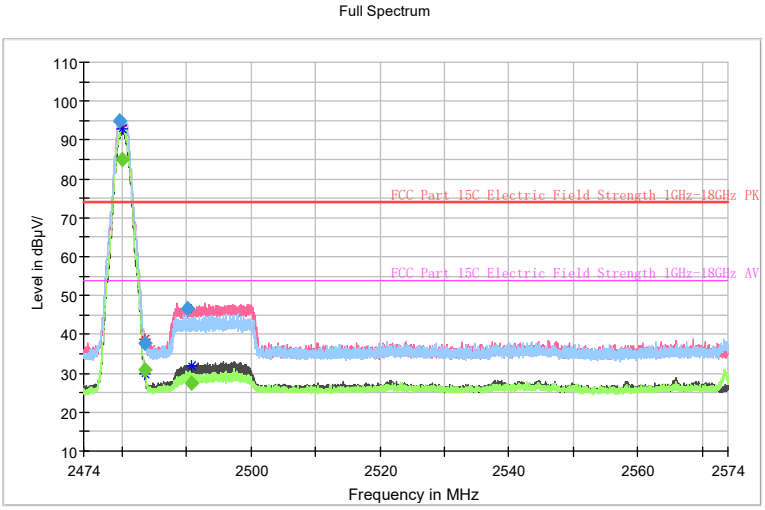

Result: PK

| Frequency (MHz) | Reading MaxPeak (dBuV/m) | MaxPeak (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|---|---|---|---|---|---|---|---|---|
| 2333.03 | 71.17 | 41.67 | 74.00 | 32.33 | 174.20 | V | 166.00 | -29.50 |
| 2390.08 | 62.51 | 32.91 | 74.00 | 41.09 | 99.90 | H | 296.00 | -29.60 |
| 2401.54 | 124.13 | 94.43 | 74.00 | -20.43 | 99.90 | H | 108.00 | -29.70 |

Result: AV

| Frequency (MHz) | Reading Average (dBuV/m) | Average (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|---|---|---|---|---|---|---|---|---|
| 2332.00 | 52.50 | 23.00 | 54.00 | 31.00 | 125.20 | V | 170.00 | -29.50 |
| 2390.00 | 49.55 | 19.95 | 54.00 | 34.05 | 99.90 | V | 192.00 | -29.60 |
| 2401.81 | 120.87 | 91.17 | 54.00 | -37.17 | 99.90 | H | 108.00 | -29.70 |

**CH Highest (No.39)**



Result: PK

| Frequency (MHz) | Reading MaxPeak (dBuV/m) | MaxPeak (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|---|---|---|---|---|---|---|---|---|
| 2479.53 | 124.21 | 94.81 | 74.00 | -20.81 | 99.90 | H | 134.00 | -29.40 |
| 2483.50 | 67.00 | 37.60 | 74.00 | 26.50 | 174.20 | H | 119.00 | -29.40 |
| 2490.17 | 75.99 | 46.69 | 74.00 | 27.31 | 174.20 | V | 73.00 | -29.30 |

Result: AV

| Frequency (MHz) | Reading Average (dBuV/m) | Average (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|---|---|---|---|---|---|---|---|---|
| 2480.05 | 114.54 | 85.14 | 54.00 | -31.14 | 274.30 | H | 111.00 | -29.40 |
| 2483.50 | 60.40 | 31.00 | 54.00 | 23.10 | 274.30 | H | 127.00 | -29.40 |
| 2490.83 | 56.64 | 27.34 | 54.00 | 26.66 | 174.20 | V | 72.00 | -29.30 |

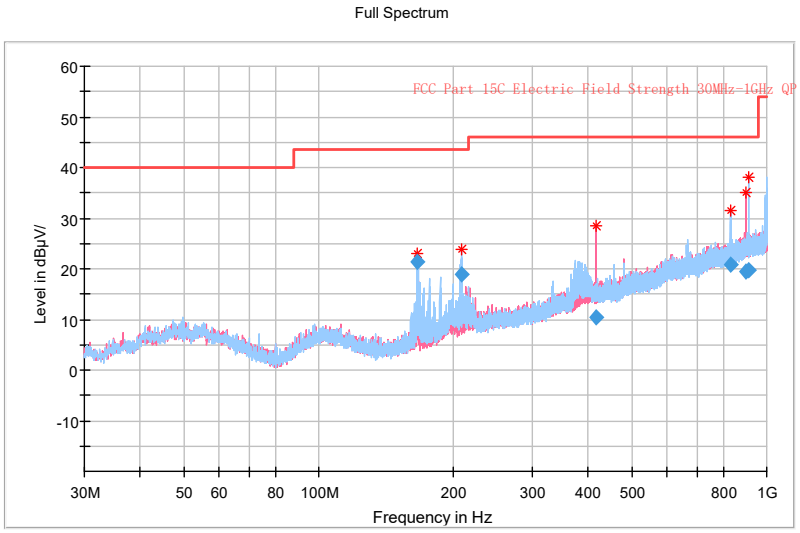
**Spurious Radiated Emissions:**

| | | | |
|---|---|---|---|
| **Test Engineer** | Gao Shuang | **Test Date** | 2021/09/10 |
| **Temperature** | 23.7°C | **Relative Humidity** | 57.2% |
| **Pressure** | 104.3kPa | **Test Sample Selected** | No.2 |

A "reference path loss" is established and the $A_{Rpl}$ is the attenuation of "reference path loss", and including the gain of receive antenna, the gain of the preamplifier, the cable loss.
The measurement results are obtained as described below:
Result = $P_{mea} + A_{Rpl}$
Sample calculation: (21.45dBμV/m) = (44.75.dBμV) + (-23.30dB/m), the corresponding frequency is 166.24MHz.

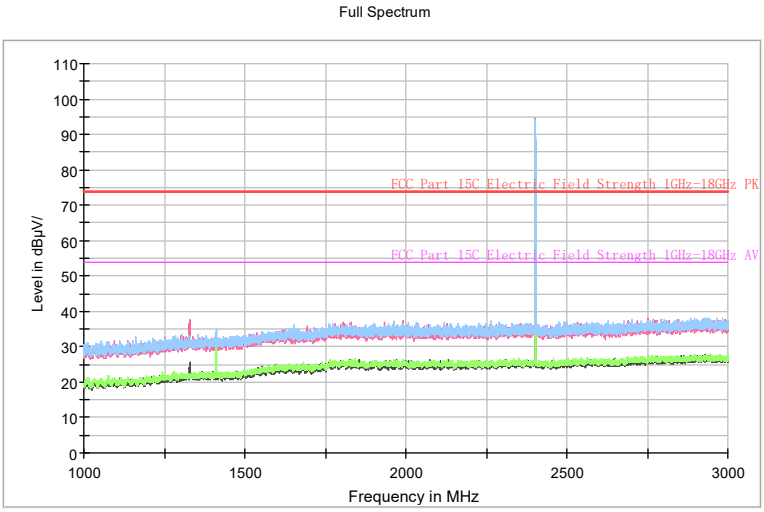
**Spurious Radiated Emissions below 30MHz:**
There were no emissions from 9kHz to 30MHz found within 20dB of the limit. Thus, the test result was not reported according to §15.31 (o)

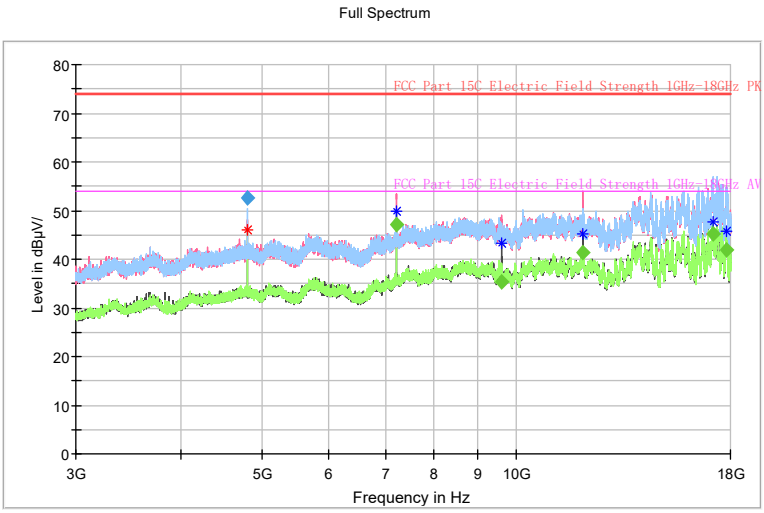
**Spurious Radiated Emissions from 30MHz to 1GHz:**
**GFSK (BLE 1Mbps):**
**CH Middle (No.19)**



| Frequency (MHz) | Reading (dBuV/m) | QuasiPeak (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|---|---|---|---|---|---|---|---|---|---|
| 166.24 | 44.75 | 21.45 | 43.50 | 22.05 | 120.00 | 224.70 | H | 192.00 | -23.30 |
| 208.14 | 39.88 | 18.98 | 43.50 | 24.52 | 120.00 | 174.10 | H | 149.00 | -20.90 |
| 415.09 | 24.11 | 10.31 | 46.00 | 35.69 | 120.00 | 99.70 | V | 358.00 | -13.80 |
| 830.30 | 25.89 | 20.69 | 46.00 | 25.31 | 120.00 | 174.10 | H | 171.00 | -5.20 |
| 899.70 | 23.16 | 19.56 | 46.00 | 26.44 | 120.00 | 174.10 | V | 155.00 | -3.60 |
| 913.23 | 23.19 | 19.79 | 46.00 | 26.21 | 120.00 | 190.60 | H | 258.00 | -3.40 |

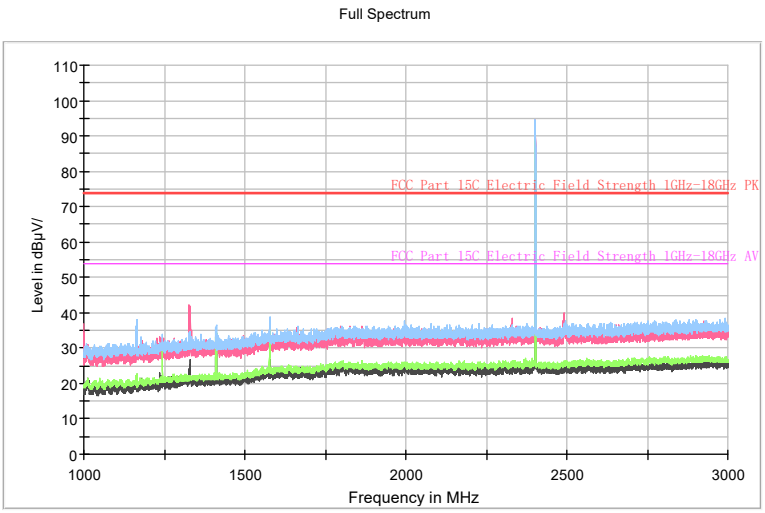
**Spurious Radiated Emissions from 1GHz to 18GHz:**
**GFSK (BLE 1Mbps):**
**CH Lowest (No.0)**

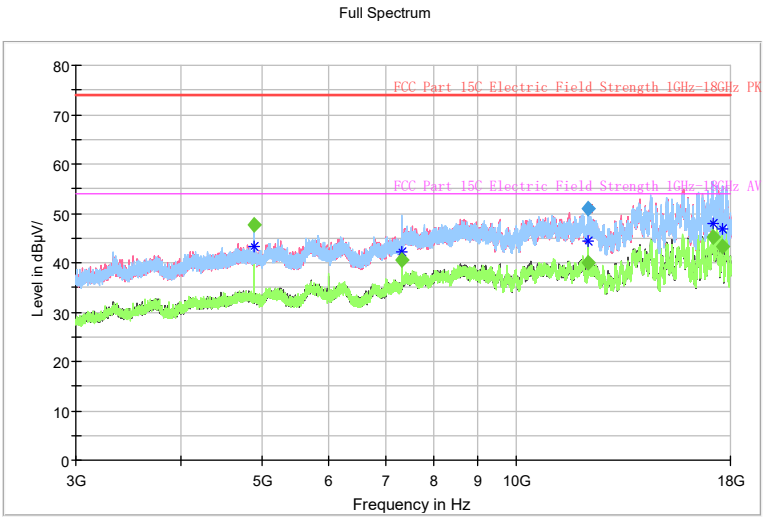



| Frequency (MHz) | MaxPeak Reading (dBuV/m) | Average Reading (dBuV/m) | MaxPeak (dBuV/m) | Average (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|---|---|---|---|---|---|---|---|---|---|---|
| 4804.44 | 73.49 | --- | 52.49 | --- | 74.00 | 21.51 | 99.90 | V | 146.00 | -21.00 |
| 7205.55 | --- | 68.47 | --- | 47.17 | 54.00 | 6.83 | 100.20 | V | 113.00 | -21.30 |
| 9605.45 | --- | 55.08 | --- | 35.28 | 54.00 | 18.72 | 224.90 | V | 150.00 | -19.80 |
| 12009.01 | --- | 58.00 | --- | 41.50 | 54.00 | 12.50 | 99.90 | V | 133.00 | -16.50 |
| 17143.05 | --- | 56.74 | --- | 45.14 | 54.00 | 8.86 | 174.30 | V | 25.00 | -11.60 |
| 17833.66 | --- | 52.25 | --- | 41.95 | 54.00 | 12.05 | 174.40 | V | 21.00 | -10.30 |

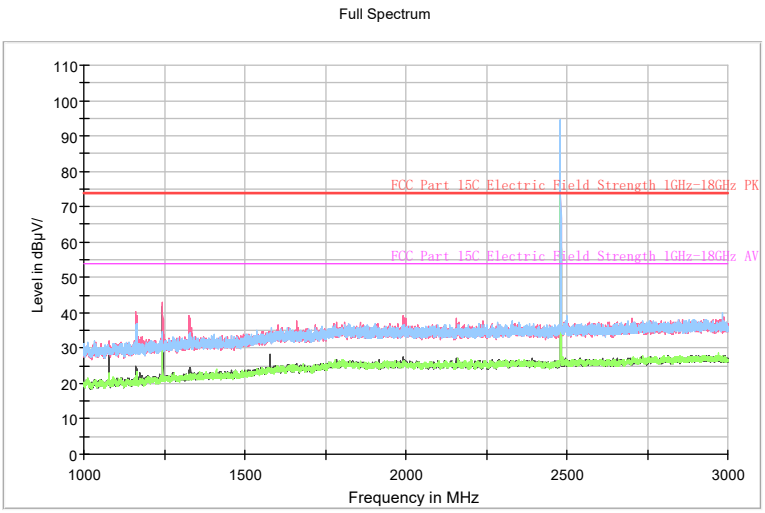
**CH Middle (No.19)**

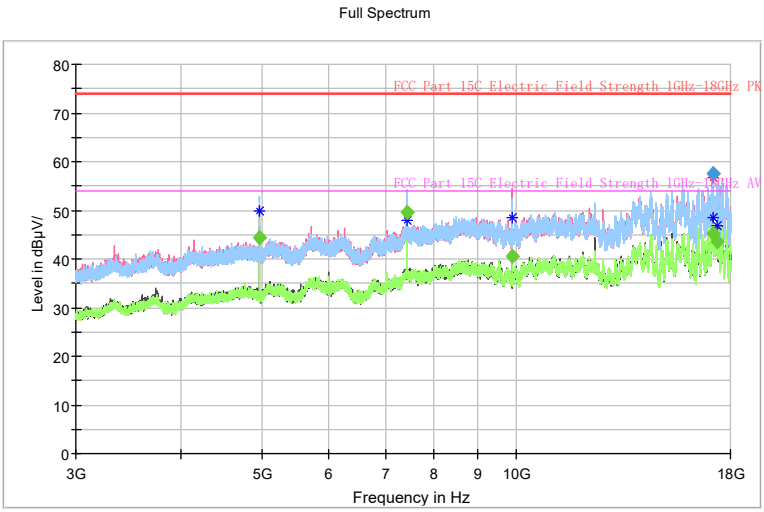



| Frequency (MHz) | MaxPeak Reading (dBuV/m) | Average Reading (dBuV/m) | MaxPeak (dBuV/m) | Average (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|---|---|---|---|---|---|---|---|---|---|---|
| 4879.97 | --- | 69.17 | --- | 47.57 | 54.00 | 6.43 | 325.00 | H | -8.00 | -21.60 |
| 7319.47 | --- | 61.78 | --- | 40.58 | 54.00 | 13.42 | 297.80 | V | 90.00 | -21.20 |
| 12201.43 | --- | 57.16 | --- | 40.06 | 54.00 | 13.94 | 325.00 | H | 89.00 | -17.10 |
| 12201.53 | 68.12 | --- | 51.02 | --- | 74.00 | 22.98 | 298.70 | H | 100.00 | -17.10 |
| 17139.65 | --- | 56.73 | --- | 45.13 | 54.00 | 8.87 | 297.90 | V | 102.00 | -11.60 |
| 17602.13 | --- | 54.46 | --- | 43.26 | 54.00 | 10.74 | 299.20 | V | 173.00 | -11.20 |

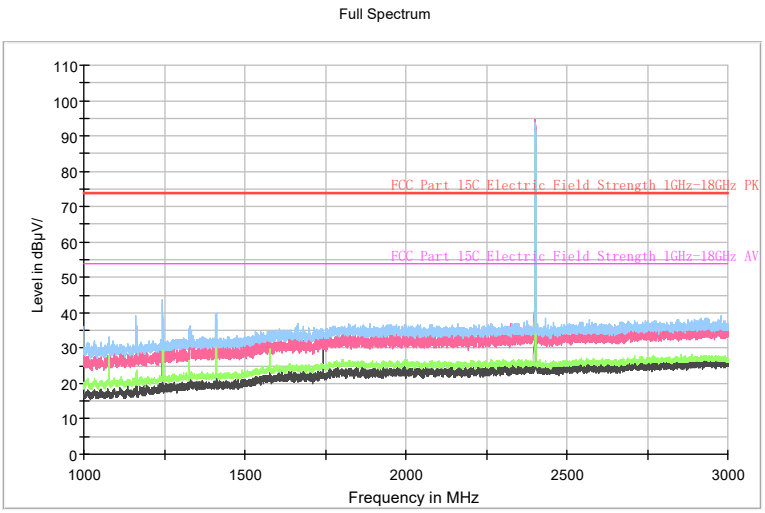
**CH Highest (No.39)**

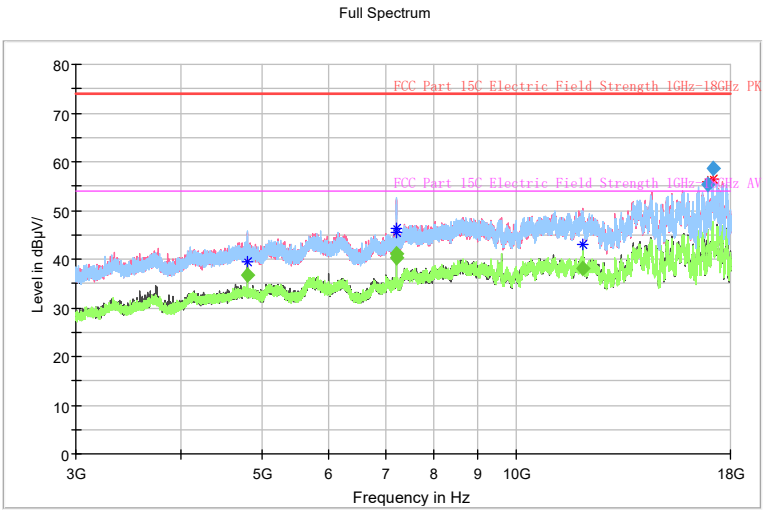



| Frequency (MHz) | MaxPeak Reading (dBuV/m) | Average Reading (dBuV/m) | MaxPeak (dBuV/m) | Average (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|---|---|---|---|---|---|---|---|---|---|---|
| 4960.59 | --- | 66.64 | --- | 44.34 | 54.00 | 9.66 | 125.20 | H | 146.00 | -22.30 |
| 7439.41 | --- | 70.78 | --- | 49.58 | 54.00 | 4.42 | 174.20 | H | 154.00 | -21.20 |
| 9921.21 | --- | 61.13 | --- | 40.63 | 54.00 | 13.37 | 116.00 | V | 115.00 | -20.50 |
| 17138.10 | 69.15 | --- | 57.55 | --- | 74.00 | 16.45 | 224.90 | H | 25.00 | -11.60 |
| 17140.21 | --- | 56.72 | --- | 45.12 | 54.00 | 8.88 | 206.10 | V | 190.00 | -11.60 |
| 17374.99 | --- | 55.09 | --- | 43.59 | 54.00 | 10.41 | 224.90 | H | 66.00 | -11.50 |

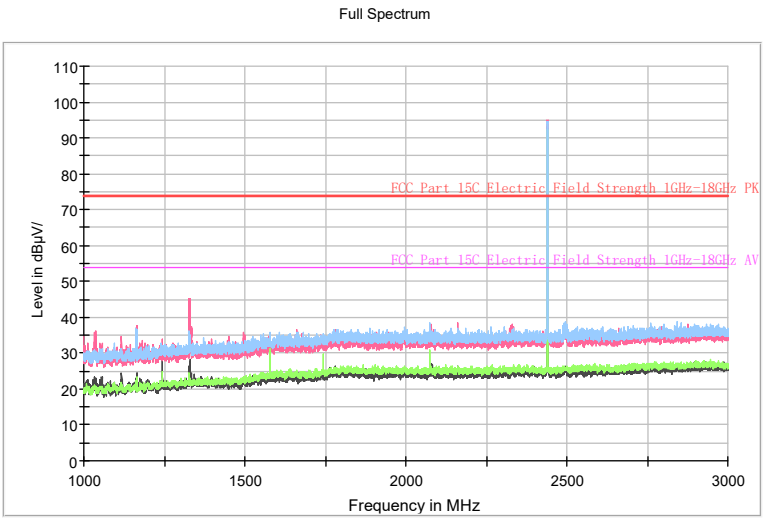
**GFSK (BLE 2Mbps):**
**CH Lowest (No.0)**

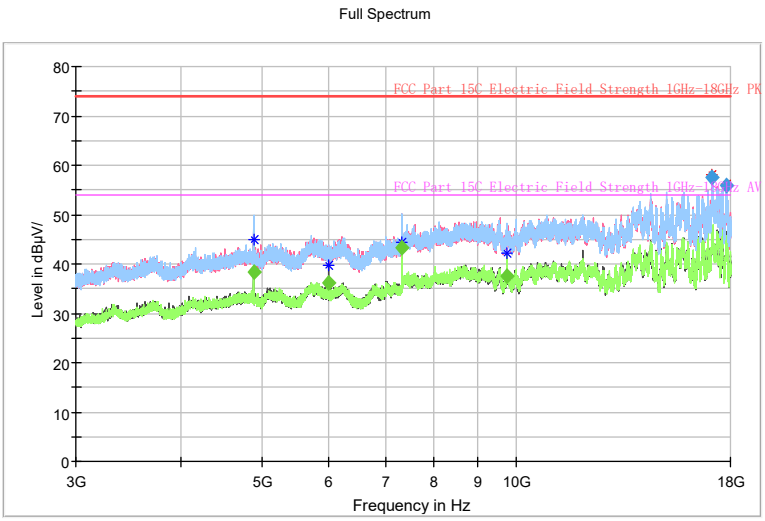



| Frequency (MHz) | MaxPeak Reading (dBuV/m) | Average Reading (dBuV/m) | MaxPeak (dBuV/m) | Average (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|---|---|---|---|---|---|---|---|---|---|---|
| 4803.01 | --- | 57.77 | --- | 36.77 | 54.00 | 17.23 | 307.80 | V | 270.00 | -21.00 |
| 7204.71 | --- | 62.44 | --- | 41.14 | 54.00 | 12.86 | 105.90 | V | 32.00 | -21.30 |
| 7207.42 | --- | 61.44 | --- | 40.14 | 54.00 | 13.86 | 114.40 | V | 31.00 | -21.30 |
| 12012.55 | --- | 54.46 | --- | 37.96 | 54.00 | 16.04 | 99.90 | H | 136.00 | -16.50 |
| 16915.86 | 67.56 | --- | 55.26 | --- | 74.00 | 18.74 | 308.30 | V | 120.00 | -12.30 |
| 17142.44 | 70.13 | --- | 58.53 | --- | 74.00 | 15.47 | 280.00 | V | 257.00 | -11.60 |

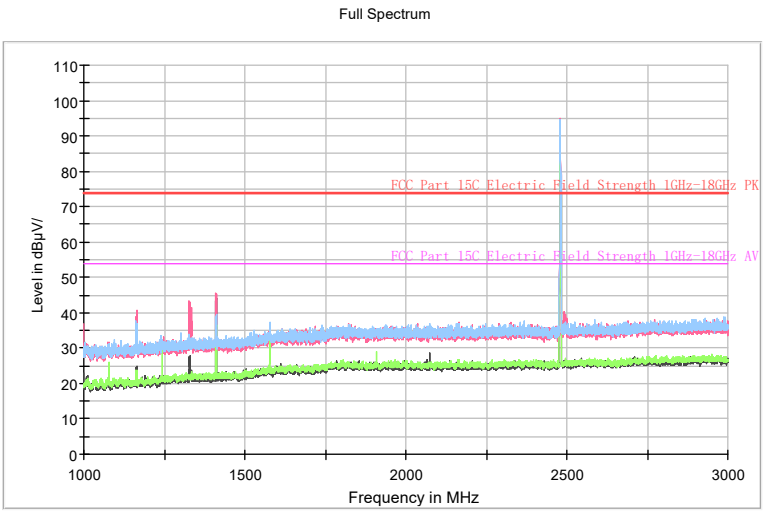
**CH Middle (No.19)**

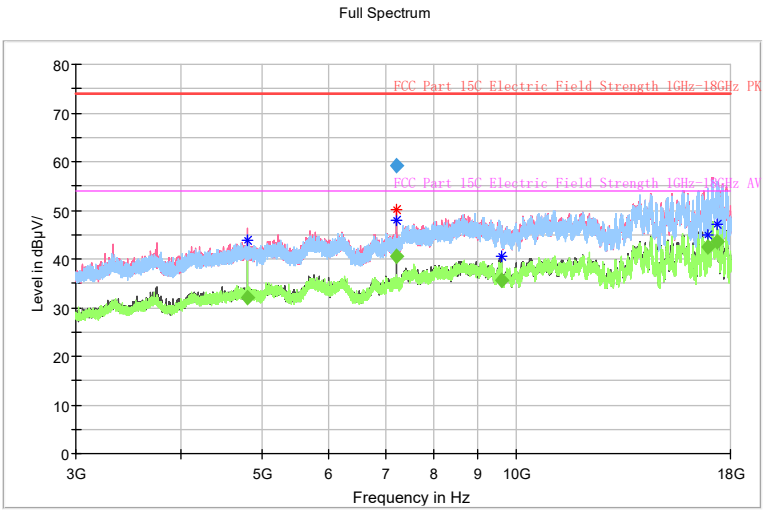



| Frequency (MHz) | MaxPeak Reading (dBuV/m) | Average Reading (dBuV/m) | MaxPeak (dBuV/m) | Average (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|---|---|---|---|---|---|---|---|---|---|---|
| 4881.02 | --- | 59.88 | --- | 38.28 | 54.00 | 15.72 | 114.10 | H | 181.00 | -21.60 |
| 6001.11 | --- | 56.41 | --- | 36.11 | 54.00 | 17.89 | 274.30 | V | 186.00 | -20.30 |
| 7321.39 | --- | 64.40 | --- | 43.20 | 54.00 | 10.80 | 224.90 | V | 124.00 | -21.20 |
| 9762.08 | --- | 57.51 | --- | 37.41 | 54.00 | 16.59 | 100.20 | H | 196.00 | -20.10 |
| 17133.67 | 69.12 | --- | 57.42 | --- | 74.00 | 16.58 | 324.90 | H | 205.00 | -11.70 |
| 17803.46 | 66.39 | --- | 55.89 | --- | 74.00 | 18.11 | 180.40 | H | 58.00 | -10.50 |

**CH Highest (No.39)**




| Frequency (MHz) | MaxPeak Reading (dBuV/m) | Average Reading (dBuV/m) | MaxPeak (dBuV/m) | Average (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB) |
|---|---|---|---|---|---|---|---|---|---|---|
| 4804.03 | --- | 53.10 | --- | 32.10 | 54.00 | 21.90 | 319.30 | V | 277.00 | -21.00 |
| 7206.16 | --- | 61.73 | --- | 40.43 | 54.00 | 13.57 | 125.20 | V | 142.00 | -21.30 |
| 7206.20 | 80.36 | --- | 59.06 | --- | 74.00 | 14.94 | 125.20 | V | 142.00 | -21.30 |
| 9608.24 | --- | 55.34 | --- | 35.54 | 54.00 | 18.46 | 99.90 | V | 131.00 | -19.80 |
| 16921.90 | --- | 54.65 | --- | 42.35 | 54.00 | 11.65 | 113.80 | H | 352.00 | -12.30 |
| 17372.65 | --- | 55.02 | --- | 43.52 | 54.00 | 10.48 | 224.90 | V | 25.00 | -11.50 |

**Spurious Radiated Emissions above 18GHz:**
There were no emissions above 18GHz found within 20dB of the limit. Thus, the test result was not reported according to §15.31 (o)

### 3.6.5. Uncertainty

| Frequency | Antenna Polarization | Distance | $U_{lab}$ | $k$ |
|---|---|---|---|---|
| 30MHz-200MHz | Horizontal | 3m | 4.58 | 2 |
| | Vertical | 3m | 4.73 | 2 |
| 200MHz-1GHz | Horizontal | 3m | 4.90 | 2 |
| | Vertical | 3m | 4.93 | 2 |
| 1GHz-6GHz | -- | 3m | 4.66 | 2 |
| 6GHz-18GHz | -- | 3m | 5.14 | 2 |
| 18GHz-26GHz | -- | 3m | 4.80 | 2 |

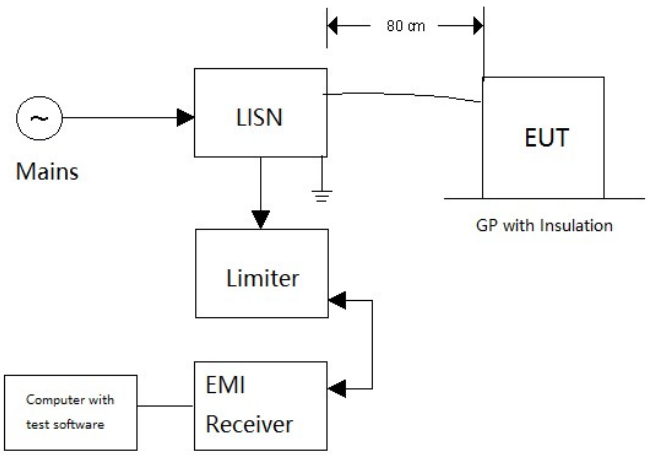
## 3.7 AC Power Line Conducted Emission

### 3.7.1. Limit

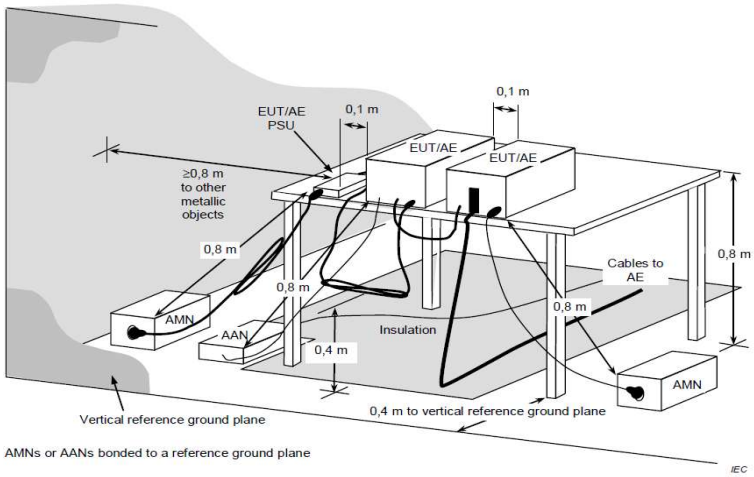
FCC 47 CFR Part 15 Subpart C - §15.207
ISED RSS-Gen - §8.8

| Frequency of Emission (MHz) | Conducted Limit (dBµV) | |
|---|---|---|
| | Quasi-peak | Average |
| 0.15 - 0.50 | 66 - 56 | 56 - 46 |
| 0.50 - 5 | 56 | 46 |
| 5 - 30 | 60 | 50 |
| Note: The limits decrease linearly with the logarithm of the frequency in the range of 0.15MHz to 0.5MHz | | |

### 3.7.2. Test Setup




Test Connection Diagram




Typical Test Layout

### 3.7.3. Test Procedures

1) The measurement procedure follows ANSI C63.10-2013, clause 6.2;
2) The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50ohm/50uH of coupling impedance for the measuring instrument;
3) Both lines of the power mains connected to the EUT were checked for maximum conducted interference;
4) The frequency range from 150kHz to 30MHz was searched. Emission levels under limit -20dB were not recorded;
5) The resolution bandwidth and video bandwidth of test receiver is 9kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15MHz-30MHz;
6) The EUT shall test under the power AC120V/60Hz.

### 3.7.4. Test Result

N/A

Note:
This test was not performed since the EUT is only powered by the button battery.

### 3.7.5. Uncertainty

$U_{lab}$=3.0dB，$k$=2 ($U_{Cispr}$=3.4dB)
Determining compliance with the limits shall be based on the results of the compliance measurements, taking into account the considerations on measurement instrumentation uncertainty.
Because Ulab is equal to UCISPR (as specified in CISPR16-4-2), then:
-compliance is deemed to occur if no measured disturbance exceeds the disturbance limit;
-non-compliance is deemed to occur if any measured disturbance exceeds the disturbance limit;

# 4 Test Instruments

| Description | Model Name | S/N | Manufacturer | Next Cal Date |
|---|---|---|---|---|
| Spectrum Analyzer | FSV40 | 101403 | R&S | 2022/01/12 |
| USB Wideband Power Sensor | U2021XA | MY56120024 | Keysight | 2022/01/12 |
| RF Control Unit | JS0806-2 | 1918060196 | TONSCEND | 2022/01/12 |
| Hybrid Antenna | VULB9163 | 01266 | SCHWARZBECK | 2022/07/04 |
| Double Ridged Broadband Horn Antenna | BBHA 9120D | 1276 | SCHWARZBECK | 2022/04/07 |
| Pre-Amplifier | SCU40 | 2046336 | R&S | 2022/04/07 |
| Pre-Amplifier | TAP-011858 | AP19L806047 | TONSCEND | 2022/04/07 |
| Pre-Amplifier | PE15A1009 | V00140120181115E825 | Pasternack Enterprises | 2022/01/12 |
| EMI Test Receiver | ESR26 | 101320 | R&S | 2022/01/12 |
| Active Loop Antenna | HFH2-Z2 | 100533 | R&S | 2022/01/12 |
| Double-Ridged Waveguide Horn Antenna | HF907 | 100096 | R&S | 2022/04/07 |
| Broad-Band Horn Antenna | BBHA9170 | 797 | R&S | 2022/04/07 |
| Digital Display Temperature and Humidity Recorder | TM320 | 15082 | DICKSON | 2022/05/12 |
| Digital Display Temperature and Humidity Recorder | TM320 | 15080 | DICKSON | 2021/05/12 |
| Aneroid Barometer | DYM3 | 00868 | Shanghai Boji | 2022/05/05 |

--- End of Test Report ---