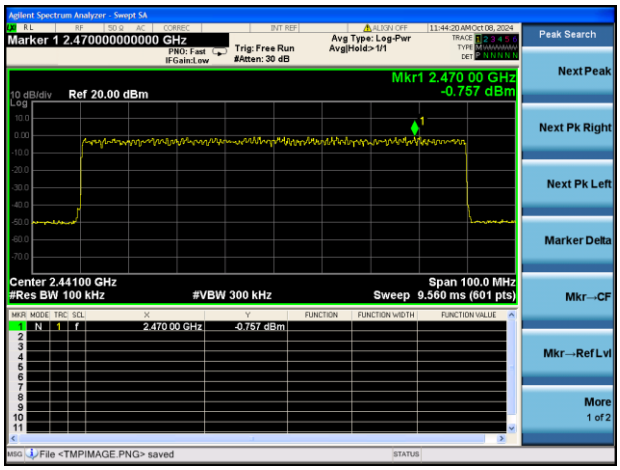
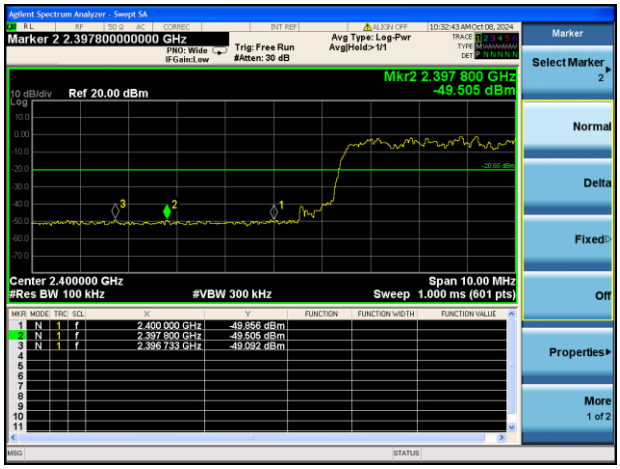
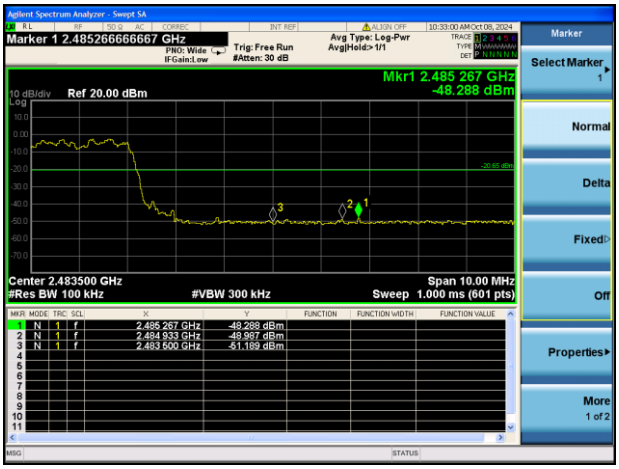
## 8-DPSK HOPPING, CARRIER LEVEL



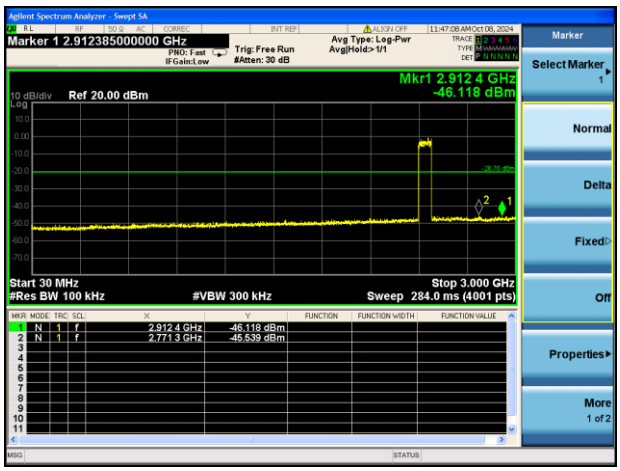

## 8-DPSK Hopping BAND EDGE (LOW)



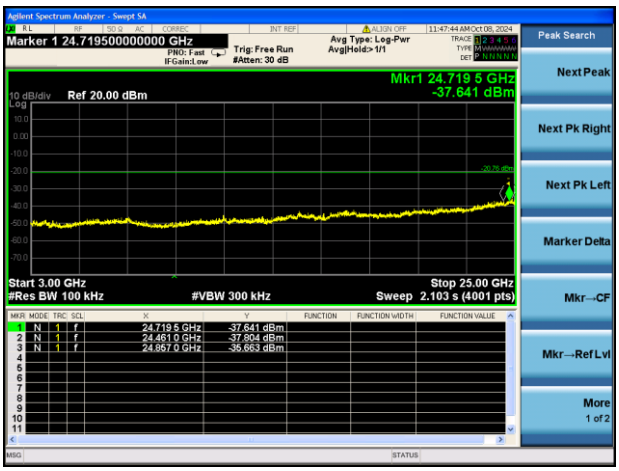

## 8-DPSK Hopping BAND EDGE (HIGH)




## 8-DPSK Hopping Mode, SPURIOUS 30 MHz ~ 3 GHz




## 8-DPSK Hopping Mode, SPURIOUS 3GHz ~ 25 GHz



## 5.9 Conducted Emission

### 5.9.1 Limit

FCC §15.207

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50μH/50Ω line impedance stabilization network (LISN).

| Frequency range (MHz) | Conducted Limit (dBμV) | |
|---|---|---|
| | Quai-peak | Average |
| 0.15 - 0.50 | 66 to 56 | 56 to 46 |
| 0.50 - 5 | 56 | 46 |
| 0.50 - 30 | 60 | 50 |

### 5.9.2 Test Setup

See section 4.5.2 for test setup description for the AC power supply port. The photo of test setup please refer to ANNEX A.

### 5.9.3 Test Procedure

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Refer to recorded points and plots below.
Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. A device rated for 50/60 Hz operation need not be tested at both frequencies provided the radiated and line conducted emissions are the same at both frequencies.

## 5.9.4 Test Result

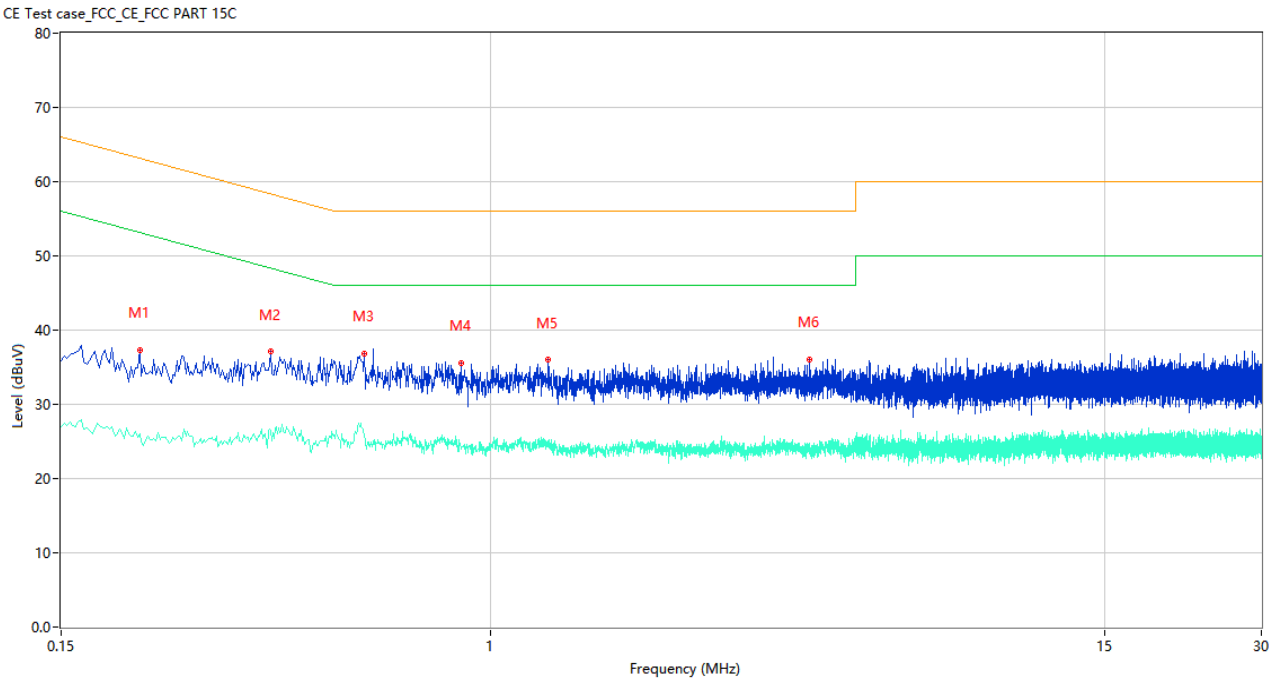
Note [1]: The EUT was tested in charging mode.

Note [2]: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 60 Hz and 240 VAC, 50 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst configuration (120 VAC, 60 Hz) shown here.

Note [3]: Results (dBuV) = Original reading level of Spectrum Analyzer (dBuV) + Factor (dB)

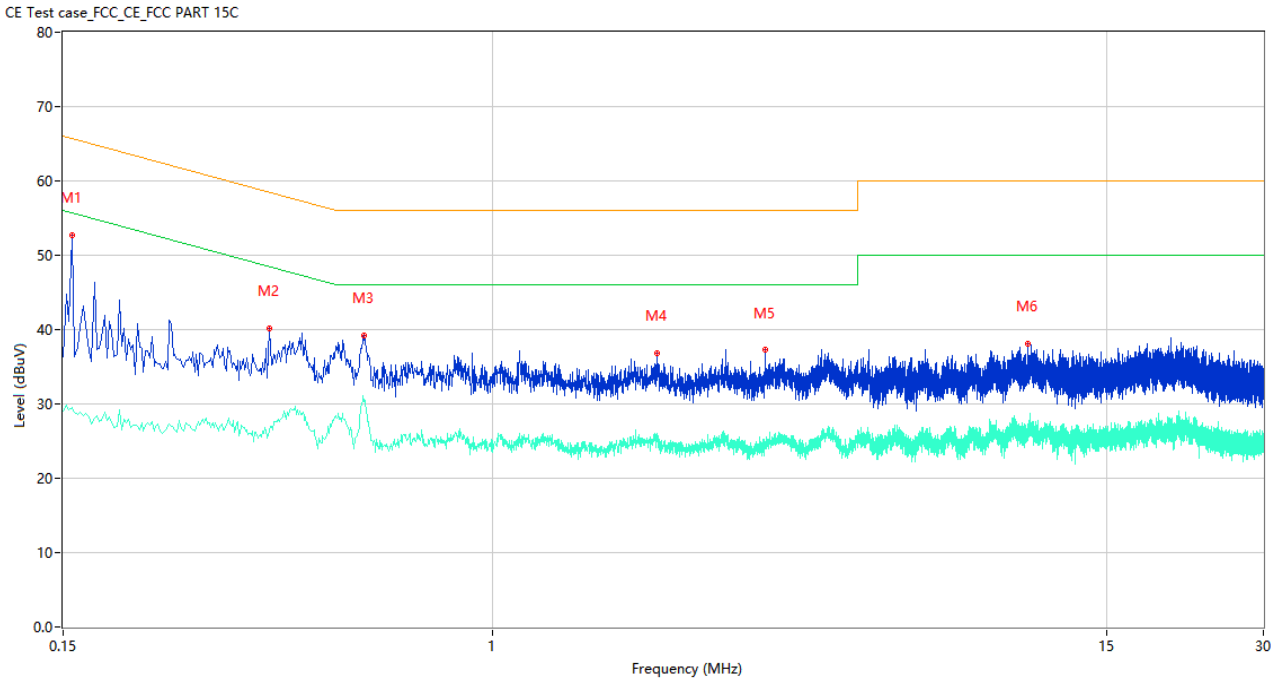
Test Data and Plots

PHASE L




| No. | Frequency (MHz) | Results (dBuV) | Factor (dB) | Limit (dBuV) | Margin (dB) | Detector | Line | Verdict |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.212 | 37.31 | 9.77 | 63.13 | 25.82 | Peak | L | Pass |
| 1** | 0.212 | 26.06 | 9.77 | 53.13 | 27.07 | AV | L | Pass |
| 2 | 0.378 | 37.12 | 10.64 | 58.32 | 21.20 | Peak | L | Pass |
| 2** | 0.378 | 26.43 | 10.64 | 48.32 | 21.89 | AV | L | Pass |
| 3 | 0.572 | 36.81 | 10.09 | 56.00 | 19.19 | Peak | L | Pass |
| 3** | 0.572 | 26.04 | 10.09 | 46.00 | 19.96 | AV | L | Pass |
| 4 | 0.878 | 35.56 | 10.36 | 56.00 | 20.44 | Peak | L | Pass |
| 4** | 0.878 | 24.15 | 10.36 | 46.00 | 21.85 | AV | L | Pass |
| 5 | 1.286 | 36.10 | 10.50 | 56.00 | 19.90 | Peak | L | Pass |
| 5** | 1.286 | 24.59 | 10.50 | 46.00 | 21.41 | AV | L | Pass |
| 6 | 4.082 | 36.10 | 10.42 | 56.00 | 19.90 | Peak | L | Pass |
| 6** | 4.082 | 24.32 | 10.42 | 46.00 | 21.68 | AV | L | Pass |

## PHASE N




| No. | Frequency (MHz) | Results (dBuV) | Factor (dB) | Limit (dBuV) | Margin (dB) | Detector | Line | Verdict |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.156 | 52.77 | 9.78 | 65.67 | 12.90 | Peak | N | Pass |
| 1** | 0.156 | 29.49 | 9.78 | 55.67 | 26.18 | AV | N | Pass |
| 2 | 0.372 | 40.20 | 10.67 | 58.46 | 18.26 | Peak | N | Pass |
| 2** | 0.372 | 26.41 | 10.67 | 48.46 | 22.05 | AV | N | Pass |
| 3 | 0.566 | 39.27 | 10.07 | 56.00 | 16.73 | Peak | N | Pass |
| 3** | 0.566 | 30.26 | 10.07 | 46.00 | 15.74 | AV | N | Pass |
| 4 | 2.062 | 36.87 | 10.33 | 56.00 | 19.13 | Peak | N | Pass |
| 4** | 2.062 | 25.33 | 10.33 | 46.00 | 20.67 | AV | N | Pass |
| 5 | 3.322 | 37.30 | 10.39 | 56.00 | 18.70 | Peak | N | Pass |
| 5** | 3.322 | 24.87 | 10.39 | 46.00 | 21.13 | AV | N | Pass |
| 6 | 10.584 | 38.10 | 10.70 | 60.00 | 21.90 | Peak | N | Pass |
| 6** | 10.584 | 26.91 | 10.70 | 50.00 | 23.09 | AV | N | Pass |

## 5.10 Radiated Spurious Emission

### 5.10.1 Limit

FCC §15.209&15.247(d)

Radiated emission outside the frequency band attenuation below the general limits specified in FCC section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in FCC section 15.205(a), must also comply with the radiated emission limits specified in FCC section 15.209(a).

According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

| Frequency (MHz) | Field Strength (μV/m) | Measurement Distance (m) |
|---|---|---|
| 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 |

Note:

1. Field Strength (dBμV/m) = 20*log[Field Strength (μV/m)].
2. In the emission tables above, the tighter limit applies at the band edges.
3. For Above 1000 MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.
4. For above 1000 MHz, limit field strength of harmonics: 54dBuV/m@3m (AV) and 74dBuV/m@3m (PK).

### 5.10.2 Test Setup

See section 4.5.3 to 4.5.5 for test setup description for the antenna port. The photo of test setup please refer to ANNEX A.

### 5.10.3 Test Procedure

The measurement frequency range is from 9 kHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

The power of the EUT transmitting frequency should be ignored.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured
RBW = 1 MHz for f ≥ 1 GHz, 100 kHz for f < 1 GHz
VBW ≥ RBW
Sweep = auto
Detector function = peak
Trace = max hold
For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported, Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

## 5.10.4 Test Result

Note [1]: The symbol of "--" in the table which means not application.

Note [2]: For the test data above 1 GHz, according the ANSI C63.10-2013, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

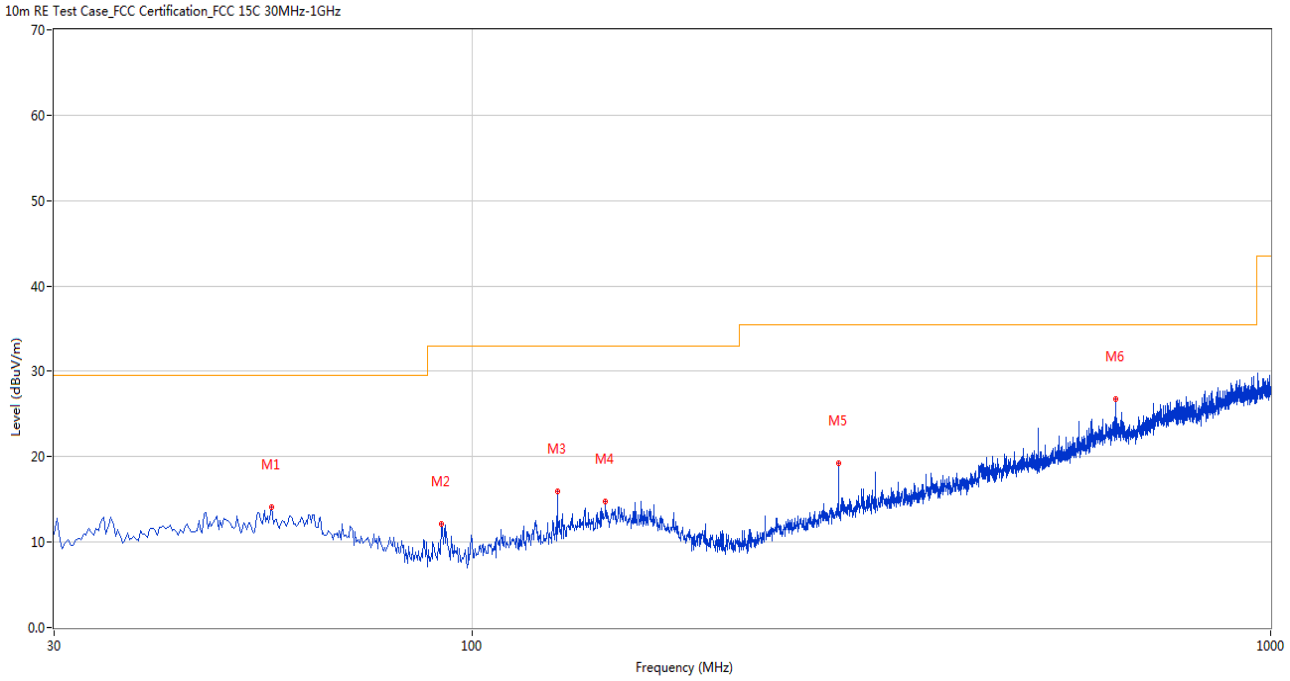
Note [3]: The EUT was tested in Link mode and the charging.

Note [4]: Results (dBuV/m) = Original reading level of Spectrum Analyzer (dBuV/m) + Factor (dB)

The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

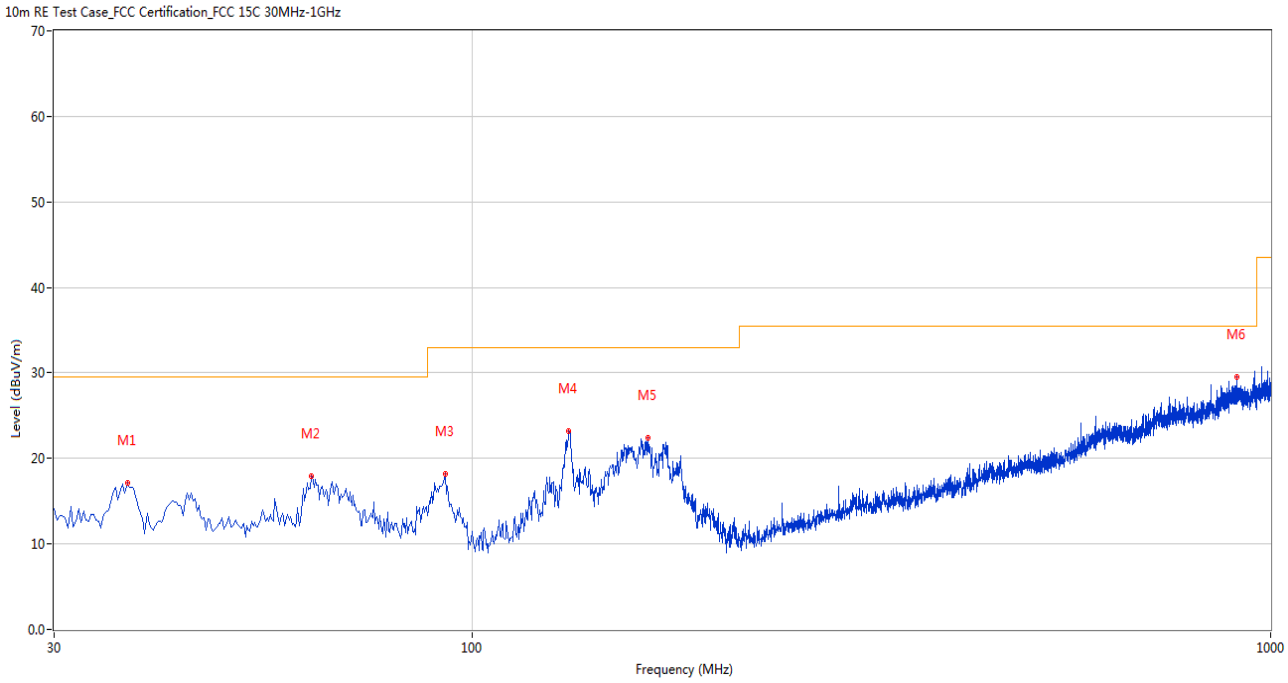
Test Data and Plots

30 MHz to 1 GHz, ANT H




| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Margin (dB) | Detector | Table (Degree) | Height (cm) | Antenna | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 56.183 | 14.08 | -26.23 | 29.5 | 15.42 | Peak | 291.00 | 100 | Horizontal | Pass |
| 2 | 91.580 | 12.14 | -31.46 | 33.0 | 20.86 | Peak | 0.00 | 200 | Horizontal | Pass |
| 3 | 127.946 | 15.94 | -27.27 | 33.0 | 17.06 | Peak | 2.00 | 200 | Horizontal | Pass |
| 4 | 147.098 | 14.80 | -25.56 | 33.0 | 18.20 | Peak | 0.00 | 200 | Horizontal | Pass |
| 5 | 287.956 | 19.28 | -25.18 | 35.5 | 16.22 | Peak | 0.00 | 200 | Horizontal | Pass |
| 6 | 639.978 | 26.81 | -15.87 | 35.5 | 8.69 | Peak | 241.00 | 100 | Horizontal | Pass |

## 30 MHz to 1 GHz, ANT V

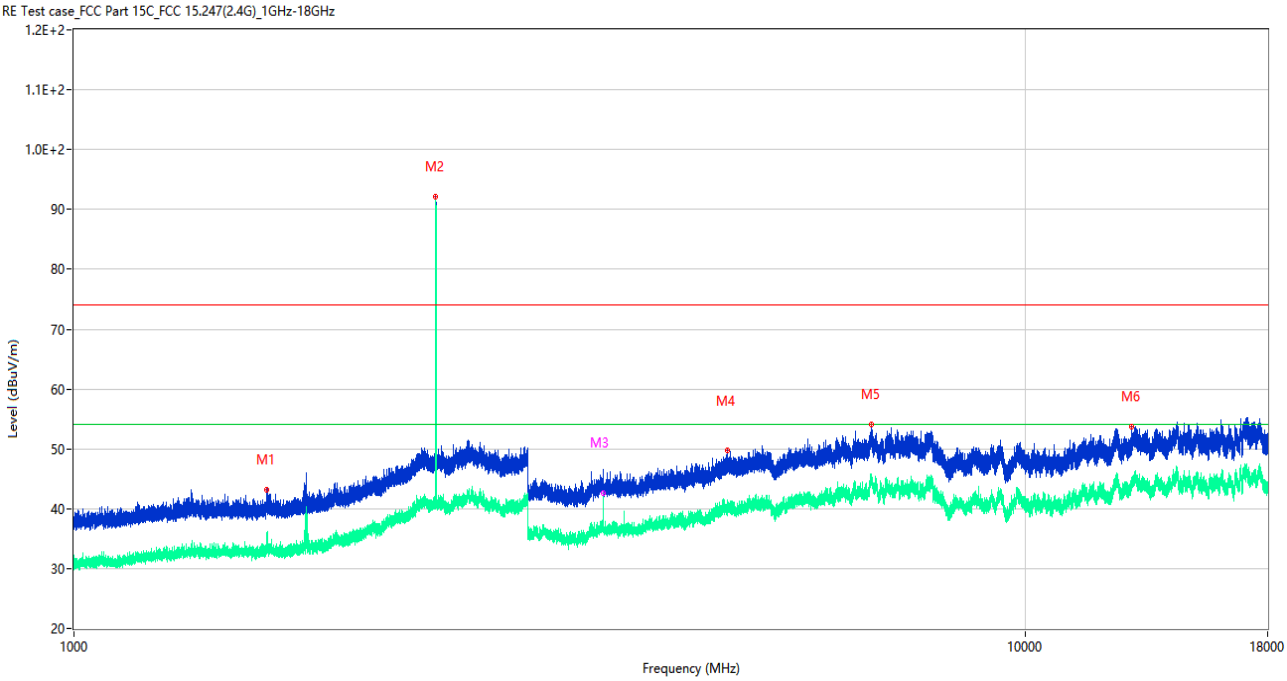



| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Margin (dB) | Detector | Table (Degree) | Height (cm) | Antenna | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 37.031 | 17.09 | -27.14 | 29.5 | 12.41 | Peak | 176.00 | 100 | Vertical | Pass |
| 2 | 62.972 | 17.96 | -26.98 | 29.5 | 11.54 | Peak | 316.00 | 100 | Vertical | Pass |
| 3 | 92.792 | 18.19 | -31.47 | 33.0 | 14.81 | Peak | 360.00 | 200 | Vertical | Pass |
| 4 | 132.309 | 23.18 | -26.91 | 33.0 | 9.82 | Peak | 0.00 | 200 | Vertical | Pass |
| 5 | 166.008 | 22.47 | -25.60 | 33.0 | 10.53 | Peak | 0.00 | 100 | Vertical | Pass |
| 6 | 907.631 | 29.59 | -10.86 | 35.5 | 5.91 | Peak | 122.00 | 200 | Vertical | Pass |

Note 1: The marked spikes near 2400 MHz with circle should be ignored because they are Fundamental signal.

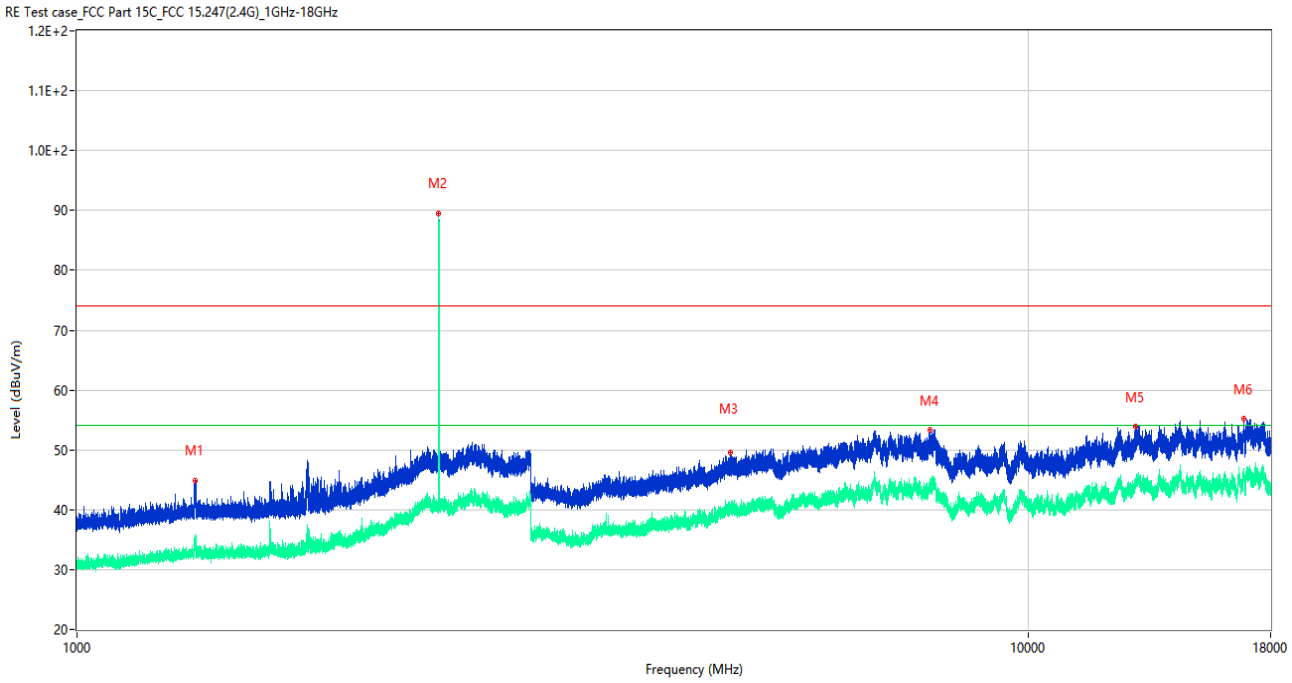
Note 2: The spurious from 18GHz-25GHz is noise only, do not show on the report.

GFSK LOW CHANNEL 1 GHz to 18 GHz, ANT H



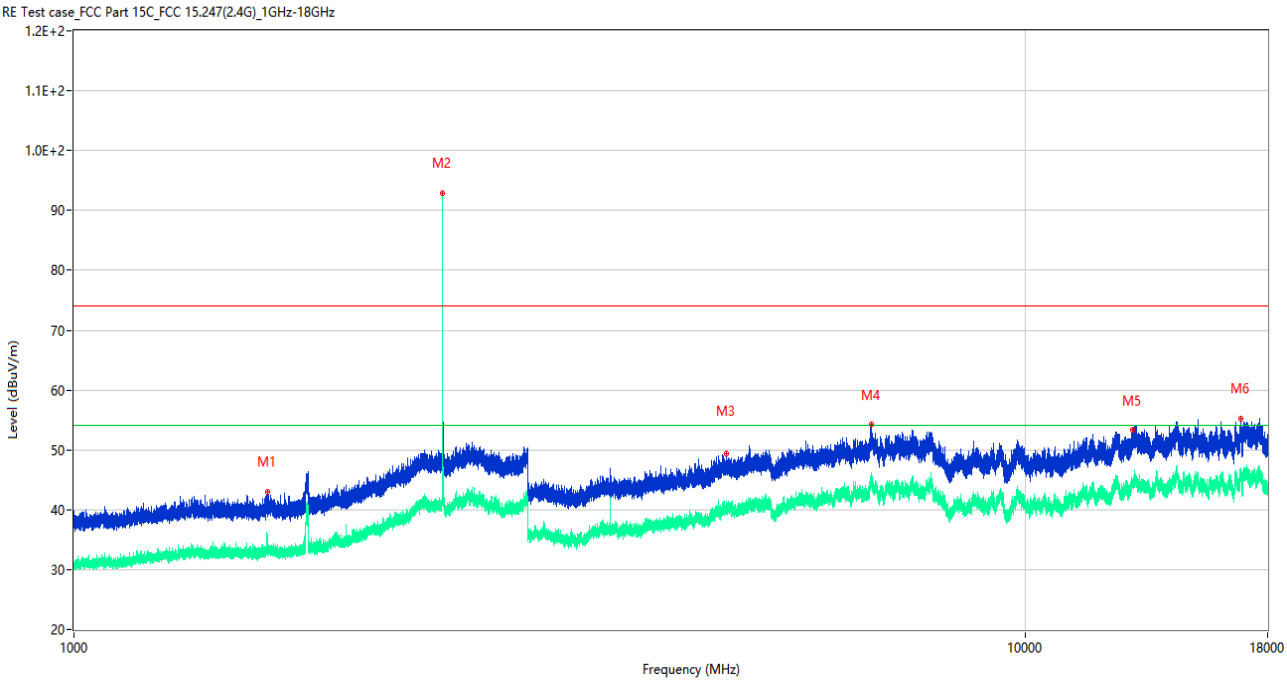

| No. | Frequency (MHz) | Results (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Table (Degree) | Height (cm) | Antenna | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1594.500 | 43.25 | 74.0 | 30.75 | Peak | 278.00 | 400 | Horizontal | Pass |
| 1** | 1594.500 | 33.32 | 54.0 | 20.68 | AV | 278.00 | 400 | Horizontal | Pass |
| 2 | 2402.000 | 92.20 | 74.0 | -18.20 | Peak | 223.00 | 200 | Horizontal | N/A |
| 2** | 2402.000 | 91.80 | 54.0 | -37.80 | AV | 223.00 | 200 | Horizontal | N/A |
| 3 | 3603.250 | 45.61 | 74.0 | 28.39 | Peak | 76.00 | 100 | Horizontal | Pass |
| 3** | 3603.250 | 42.67 | 54.0 | 11.33 | AV | 76.00 | 100 | Horizontal | Pass |
| 4 | 4868.750 | 49.69 | 74.0 | 24.31 | Peak | 360.00 | 200 | Horizontal | Pass |
| 4** | 4868.750 | 40.44 | 54.0 | 13.56 | AV | 360.00 | 200 | Horizontal | Pass |
| 5 | 6900.000 | 54.11 | 74.0 | 19.89 | Peak | 14.00 | 300 | Horizontal | Pass |
| 5** | 6900.000 | 44.15 | 54.0 | 9.85 | AV | 14.00 | 300 | Horizontal | Pass |
| 6 | 12955.013 | 53.73 | 74.0 | 20.27 | Peak | 346.00 | 200 | Horizontal | Pass |
| 6** | 12955.013 | 44.66 | 54.0 | 9.34 | AV | 346.00 | 200 | Horizontal | Pass |

## GFSK LOW CHANNEL 1 GHz to 18 GHz, ANT V



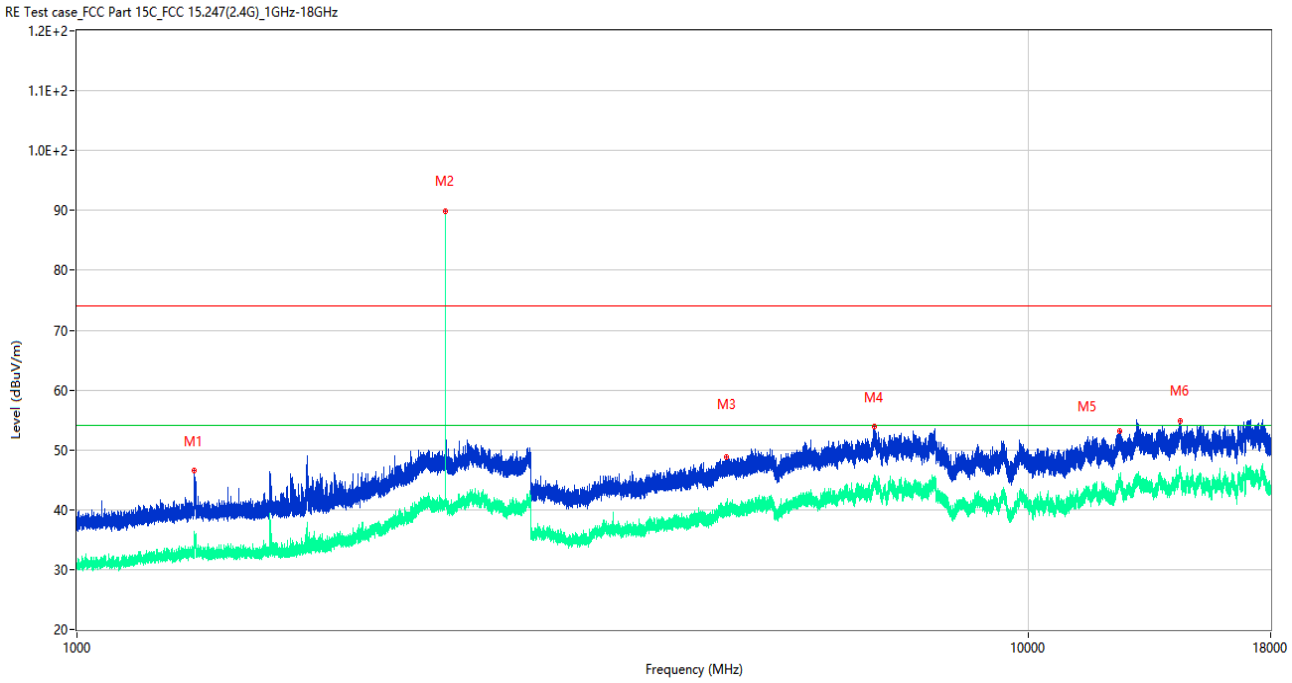

| No. | Frequency (MHz) | Results (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Table (Degree) | Height (cm) | Antenna | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1329.800 | 44.94 | 74.0 | 29.06 | Peak | 251.00 | 300 | Vertical | Pass |
| 1** | 1329.800 | 35.56 | 54.0 | 18.44 | AV | 251.00 | 300 | Vertical | Pass |
| 2 | 2402.200 | 89.52 | 74.0 | -15.52 | Peak | 173.00 | 200 | Vertical | N/A |
| 2** | 2402.200 | 89.17 | 54.0 | -35.17 | AV | 173.00 | 200 | Vertical | N/A |
| 3 | 4861.250 | 49.63 | 74.0 | 24.37 | Peak | 234.00 | 150 | Vertical | Pass |
| 3** | 4861.250 | 40.72 | 54.0 | 13.28 | AV | 234.00 | 150 | Vertical | Pass |
| 4 | 7897.500 | 53.31 | 74.0 | 20.69 | Peak | 254.00 | 400 | Vertical | Pass |
| 4** | 7897.500 | 44.37 | 54.0 | 9.63 | AV | 254.00 | 400 | Vertical | Pass |
| 5 | 12966.563 | 53.83 | 74.0 | 20.17 | Peak | 314.00 | 100 | Vertical | Pass |
| 5** | 12966.563 | 44.06 | 54.0 | 9.94 | AV | 314.00 | 100 | Vertical | Pass |
| 6 | 16856.550 | 55.18 | 74.0 | 18.82 | Peak | 254.00 | 300 | Vertical | Pass |
| 6** | 16856.550 | 46.50 | 54.0 | 7.50 | AV | 254.00 | 300 | Vertical | Pass |

## GFSK MIDDLE CHANNEL 1 GHz to 18 GHz, ANT H



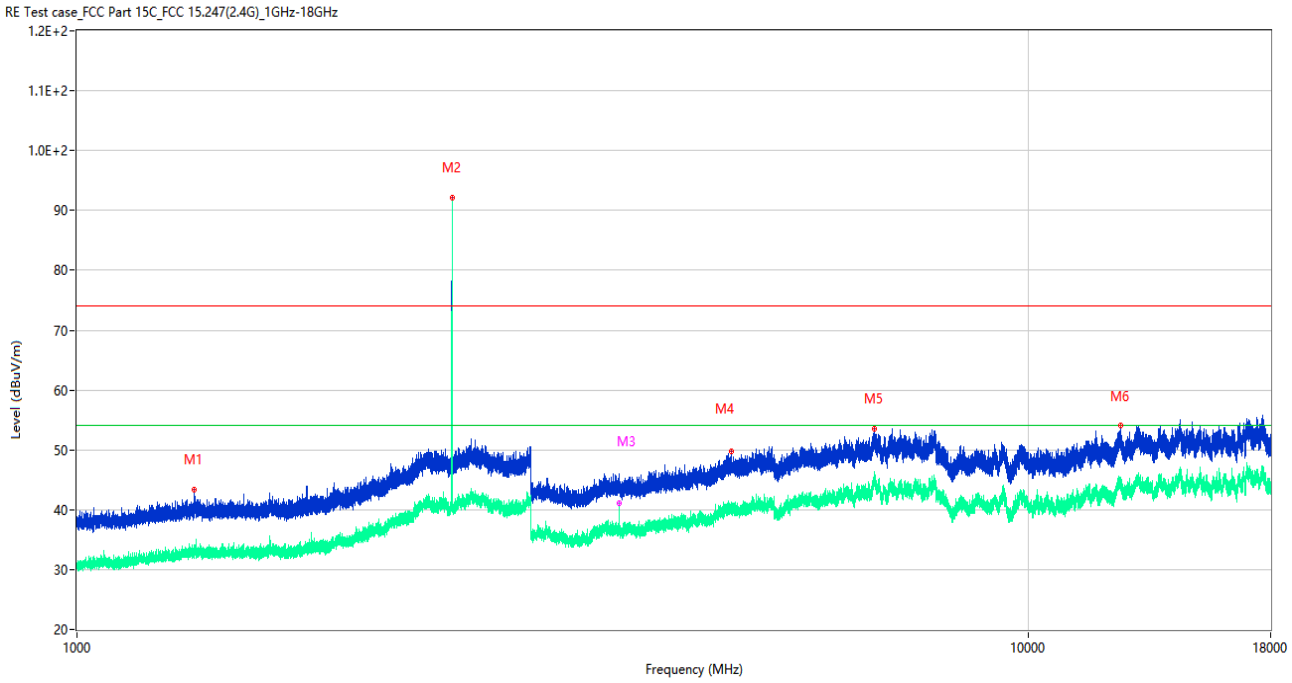

| No. | Frequency (MHz) | Results (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Table (Degree) | Height (cm) | Antenna | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1598.500 | 43.00 | 74.0 | 31.00 | Peak | 286.00 | 300 | Horizontal | Pass |
| 1** | 1598.500 | 33.90 | 54.0 | 20.10 | AV | 286.00 | 300 | Horizontal | Pass |
| 2 | 2440.800 | 92.88 | 74.0 | -18.88 | Peak | 103.00 | 150 | Horizontal | N/A |
| 2** | 2440.800 | 91.73 | 54.0 | -37.73 | AV | 103.00 | 150 | Horizontal | N/A |
| 3 | 4855.750 | 49.42 | 74.0 | 24.58 | Peak | 210.00 | 200 | Horizontal | Pass |
| 3** | 4855.750 | 39.42 | 54.0 | 14.58 | AV | 210.00 | 200 | Horizontal | Pass |
| 4 | 6894.000 | 54.25 | 74.0 | 19.75 | Peak | 290.00 | 300 | Horizontal | Pass |
| 4** | 6894.000 | 45.14 | 54.0 | 8.86 | AV | 290.00 | 300 | Horizontal | Pass |
| 5 | 12964.987 | 53.27 | 74.0 | 20.73 | Peak | 314.00 | 300 | Horizontal | Pass |
| 5** | 12964.987 | 44.49 | 54.0 | 9.51 | AV | 314.00 | 300 | Horizontal | Pass |
| 6 | 16862.850 | 55.21 | 74.0 | 18.79 | Peak | 239.00 | 300 | Horizontal | Pass |
| 6** | 16862.850 | 45.86 | 54.0 | 8.14 | AV | 239.00 | 300 | Horizontal | Pass |

## GFSK MIDDLE CHANNEL 1 GHz to 18 GHz, ANT V



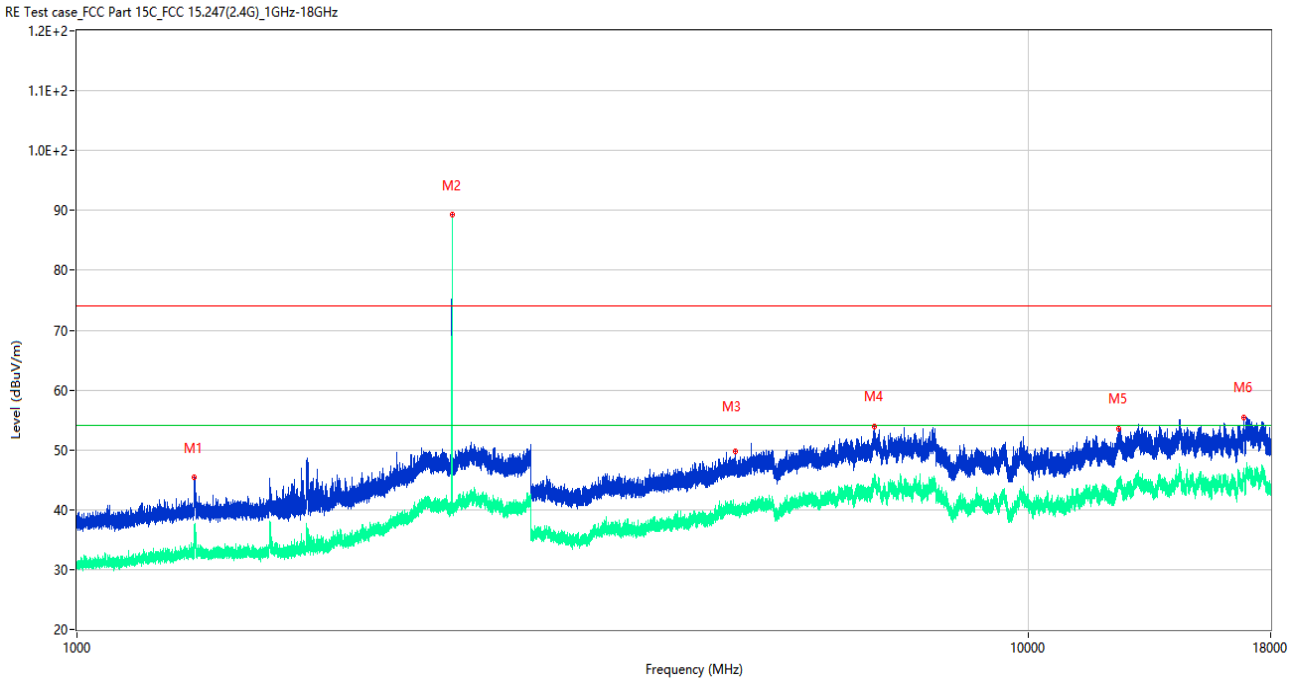

| No. | Frequency (MHz) | Results (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Table (Degree) | Height (cm) | Antenna | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1329.000 | 46.47 | 74.0 | 27.53 | Peak | 249.00 | 100 | Vertical | Pass |
| 1** | 1329.000 | 35.13 | 54.0 | 18.87 | AV | 249.00 | 100 | Vertical | Pass |
| 2 | 2441.200 | 89.92 | 74.0 | -15.92 | Peak | 171.00 | 150 | Vertical | N/A |
| 2** | 2441.200 | 89.60 | 54.0 | -35.60 | AV | 171.00 | 150 | Vertical | N/A |
| 3 | 4818.250 | 48.81 | 74.0 | 25.19 | Peak | 295.00 | 200 | Vertical | Pass |
| 3** | 4818.250 | 40.20 | 54.0 | 13.80 | AV | 295.00 | 200 | Vertical | Pass |
| 4 | 6900.250 | 53.81 | 74.0 | 20.19 | Peak | 236.00 | 200 | Vertical | Pass |
| 4** | 6900.250 | 44.50 | 54.0 | 9.50 | AV | 236.00 | 200 | Vertical | Pass |
| 5 | 12484.000 | 53.13 | 74.0 | 20.87 | Peak | 40.00 | 400 | Vertical | Pass |
| 5** | 12484.000 | 44.89 | 54.0 | 9.11 | AV | 40.00 | 400 | Vertical | Pass |
| 6 | 14474.362 | 54.91 | 74.0 | 19.09 | Peak | 173.00 | 100 | Vertical | Pass |
| 6** | 14474.362 | 45.49 | 54.0 | 8.51 | AV | 173.00 | 100 | Vertical | Pass |

## GFSK HIGH CHANNEL 1 GHz to 18 GHz, ANT H



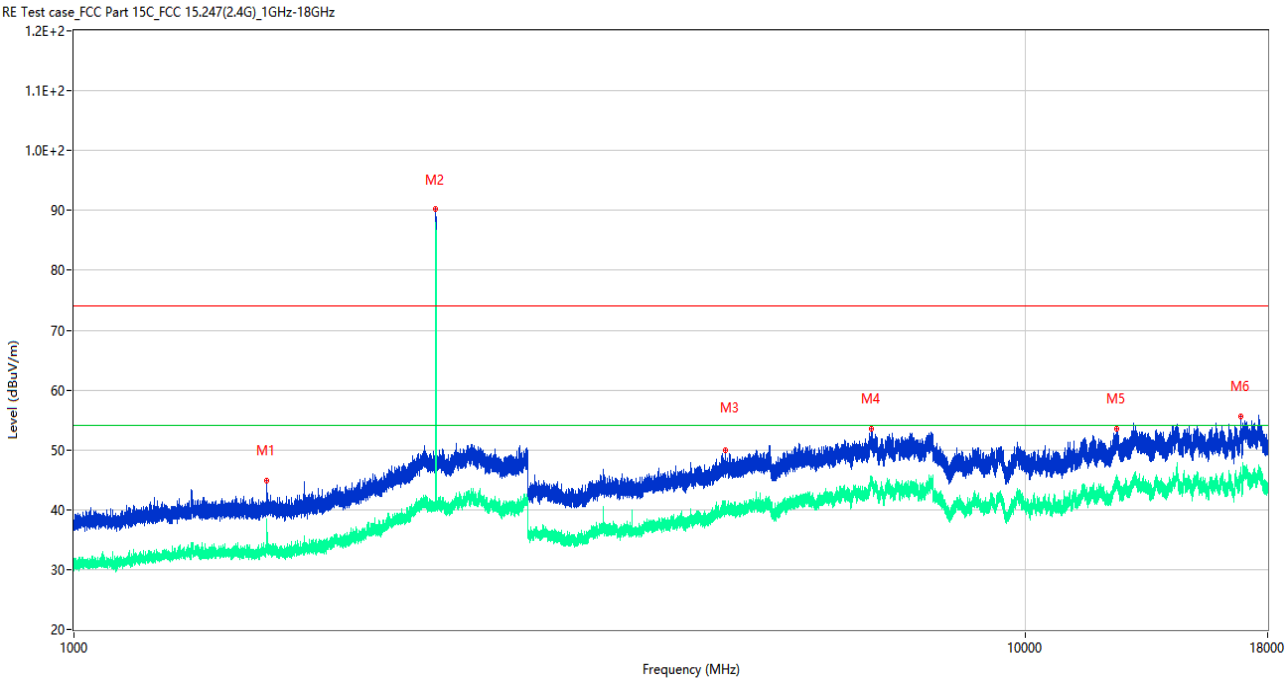

| No. | Frequency (MHz) | Results (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Table (Degree) | Height (cm) | Antenna | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1328.900 | 43.36 | 74.0 | 30.64 | Peak | 196.00 | 200 | Horizontal | Pass |
| 1** | 1328.900 | 33.47 | 54.0 | 20.53 | AV | 196.00 | 200 | Horizontal | Pass |
| 2 | 2480.100 | 92.20 | 74.0 | -18.20 | Peak | 108.00 | 200 | Horizontal | N/A |
| 2** | 2480.100 | 91.95 | 54.0 | -37.95 | AV | 108.00 | 200 | Horizontal | N/A |
| 3 | 3720.500 | 44.55 | 74.0 | 29.45 | Peak | 353.00 | 100 | Horizontal | Pass |
| 3** | 3720.500 | 41.05 | 54.0 | 12.95 | AV | 353.00 | 100 | Horizontal | Pass |
| 4 | 4875.250 | 49.76 | 74.0 | 24.24 | Peak | 292.00 | 100 | Horizontal | Pass |
| 4** | 4875.250 | 39.66 | 54.0 | 14.34 | AV | 292.00 | 100 | Horizontal | Pass |
| 5 | 6889.000 | 53.60 | 74.0 | 20.40 | Peak | 273.00 | 200 | Horizontal | Pass |
| 5** | 6889.000 | 44.50 | 54.0 | 9.50 | AV | 273.00 | 200 | Horizontal | Pass |
| 6 | 12511.075 | 54.01 | 74.0 | 19.99 | Peak | 261.00 | 400 | Horizontal | Pass |
| 6** | 12511.075 | 43.84 | 54.0 | 10.16 | AV | 261.00 | 400 | Horizontal | Pass |

## GFSK HIGH CHANNEL 1 GHz to 18 GHz, ANT V



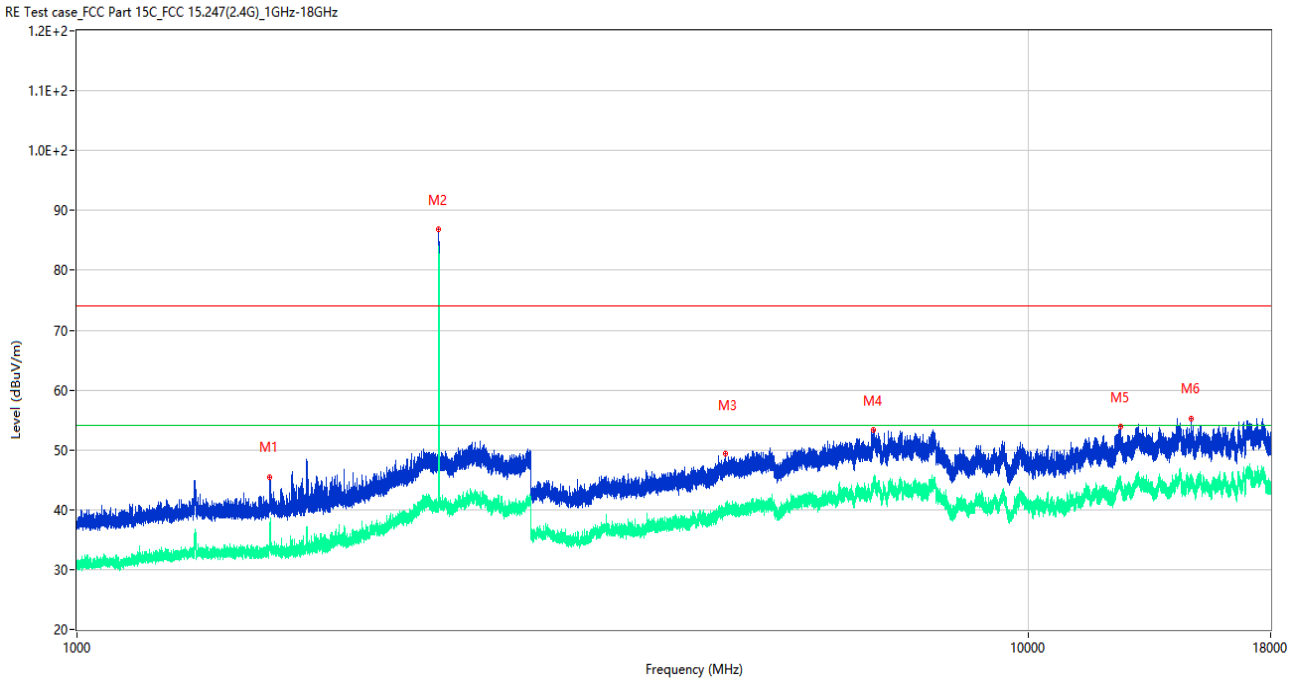

| No. | Frequency (MHz) | Results (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Table (Degree) | Height (cm) | Antenna | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1328.000 | 45.41 | 74.0 | 28.59 | Peak | 251.00 | 200 | Vertical | Pass |
| 1** | 1328.000 | 35.41 | 54.0 | 18.59 | AV | 251.00 | 200 | Vertical | Pass |
| 2 | 2479.900 | 89.25 | 74.0 | -15.25 | Peak | 181.00 | 100 | Vertical | N/A |
| 2** | 2479.900 | 88.40 | 54.0 | -34.40 | AV | 181.00 | 100 | Vertical | N/A |
| 3 | 4930.500 | 49.68 | 74.0 | 24.32 | Peak | 195.00 | 200 | Vertical | Pass |
| 3** | 4930.500 | 39.83 | 54.0 | 14.17 | AV | 195.00 | 200 | Vertical | Pass |
| 4 | 6896.000 | 53.94 | 74.0 | 20.06 | Peak | 195.00 | 400 | Vertical | Pass |
| 4** | 6896.000 | 44.86 | 54.0 | 9.14 | AV | 195.00 | 400 | Vertical | Pass |
| 5 | 12462.862 | 53.60 | 74.0 | 20.40 | Peak | 349.00 | 400 | Vertical | Pass |
| 5** | 12462.862 | 44.66 | 54.0 | 9.34 | AV | 349.00 | 400 | Vertical | Pass |
| 6 | 16869.412 | 55.40 | 74.0 | 18.60 | Peak | 13.00 | 200 | Vertical | Pass |
| 6** | 16869.412 | 45.79 | 54.0 | 8.21 | AV | 13.00 | 200 | Vertical | Pass |

## 8-DPSK LOW CHANNEL 1 GHz to 18 GHz, ANT H



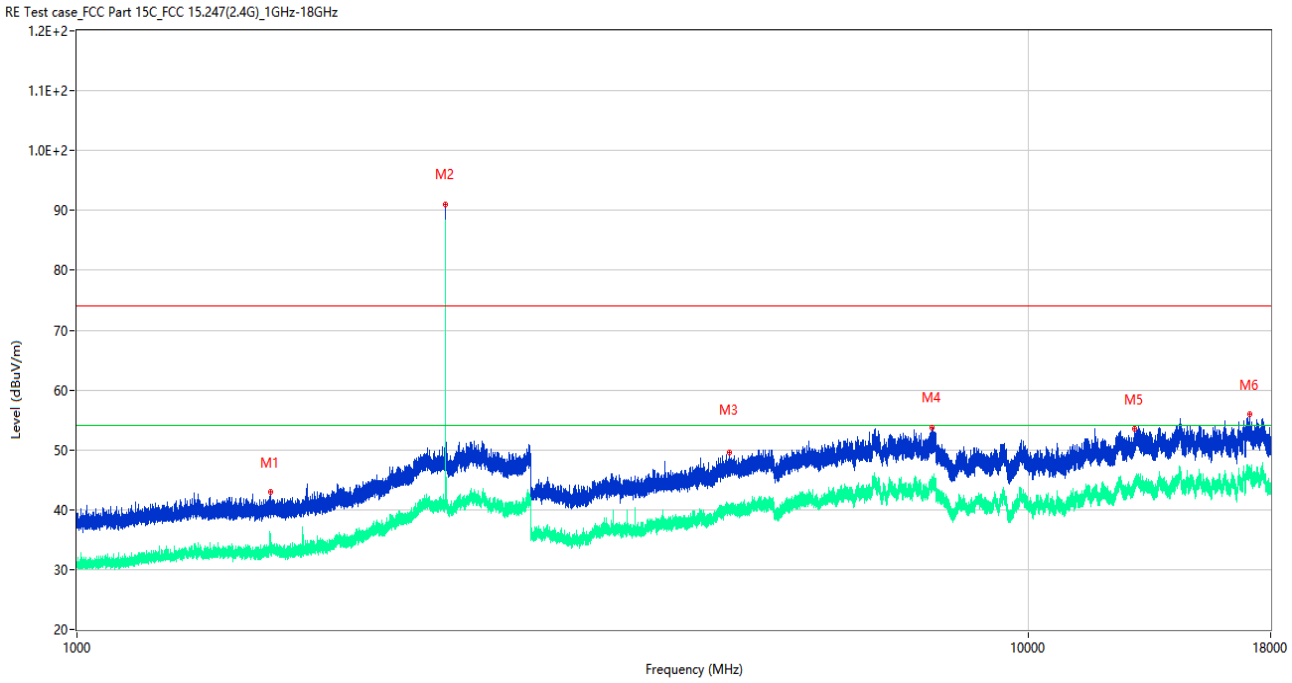

| No. | Frequency (MHz) | Results (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Table (Degree) | Height (cm) | Antenna | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1594.600 | 44.92 | 74.0 | 29.08 | Peak | 283.00 | 100 | Horizontal | Pass |
| 1** | 1594.600 | 33.16 | 54.0 | 20.84 | AV | 283.00 | 100 | Horizontal | Pass |
| 2 | 2402.000 | 90.15 | 74.0 | -16.15 | Peak | 310.00 | 200 | Horizontal | N/A |
| 2** | 2402.000 | 87.33 | 54.0 | -33.33 | AV | 310.00 | 200 | Horizontal | N/A |
| 3 | 4847.250 | 49.85 | 74.0 | 24.15 | Peak | 291.00 | 200 | Horizontal | Pass |
| 3** | 4847.250 | 41.39 | 54.0 | 12.61 | AV | 291.00 | 200 | Horizontal | Pass |
| 4 | 6892.000 | 53.53 | 74.0 | 20.47 | Peak | 272.00 | 400 | Horizontal | Pass |
| 4** | 6892.000 | 45.25 | 54.0 | 8.75 | AV | 272.00 | 400 | Horizontal | Pass |
| 5 | 12498.962 | 53.56 | 74.0 | 20.44 | Peak | 205.00 | 200 | Horizontal | Pass |
| 5** | 12498.962 | 43.98 | 54.0 | 10.02 | AV | 205.00 | 200 | Horizontal | Pass |
| 6 | 16871.250 | 55.67 | 74.0 | 18.33 | Peak | 321.00 | 300 | Horizontal | Pass |
| 6** | 16871.250 | 47.12 | 54.0 | 6.88 | AV | 321.00 | 300 | Horizontal | Pass |

## 8-DPSK LOW CHANNEL 1 GHz to 18 GHz, ANT V



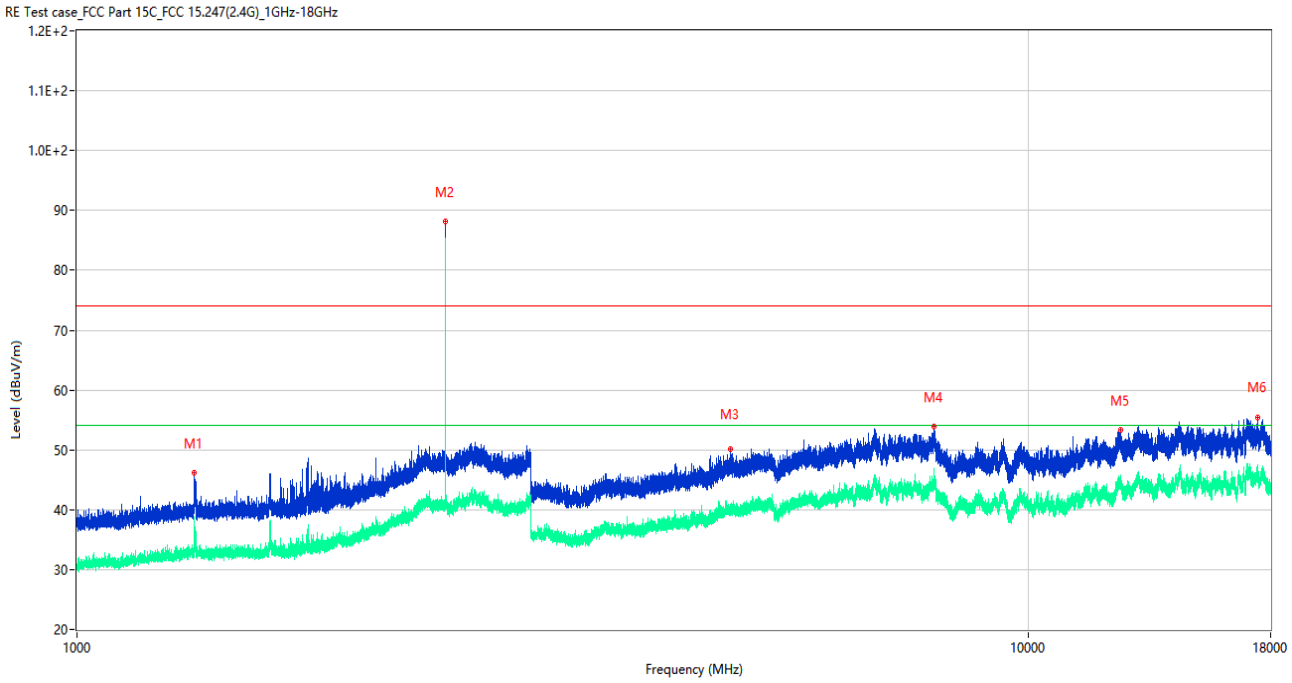

| No. | Frequency (MHz) | Results (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Table (Degree) | Height (cm) | Antenna | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1594.900 | 45.49 | 74.0 | 28.51 | Peak | 94.00 | 100 | Vertical | Pass |
| 1** | 1594.900 | 35.66 | 54.0 | 18.34 | AV | 94.00 | 100 | Vertical | Pass |
| 2 | 2402.200 | 86.78 | 74.0 | -12.78 | Peak | 165.00 | 100 | Vertical | N/A |
| 2** | 2402.200 | 83.38 | 54.0 | -29.38 | AV | 165.00 | 100 | Vertical | N/A |
| 3 | 4804.500 | 49.37 | 74.0 | 24.63 | Peak | 120.00 | 150 | Vertical | Pass |
| 3** | 4804.500 | 40.02 | 54.0 | 13.98 | AV | 120.00 | 150 | Vertical | Pass |
| 4 | 6883.250 | 53.25 | 74.0 | 20.75 | Peak | 183.00 | 300 | Vertical | Pass |
| 4** | 6883.250 | 45.39 | 54.0 | 8.61 | AV | 183.00 | 300 | Vertical | Pass |
| 5 | 12517.488 | 53.82 | 74.0 | 20.18 | Peak | 13.00 | 100 | Vertical | Pass |
| 5** | 12517.488 | 44.74 | 54.0 | 9.26 | AV | 13.00 | 100 | Vertical | Pass |
| 6 | 14846.850 | 55.29 | 74.0 | 18.71 | Peak | 134.00 | 400 | Vertical | Pass |
| 6** | 14846.850 | 43.93 | 54.0 | 10.07 | AV | 134.00 | 400 | Vertical | Pass |

## 8-DPSK MIDDLE CHANNEL 1 GHz to 18 GHz, ANT H



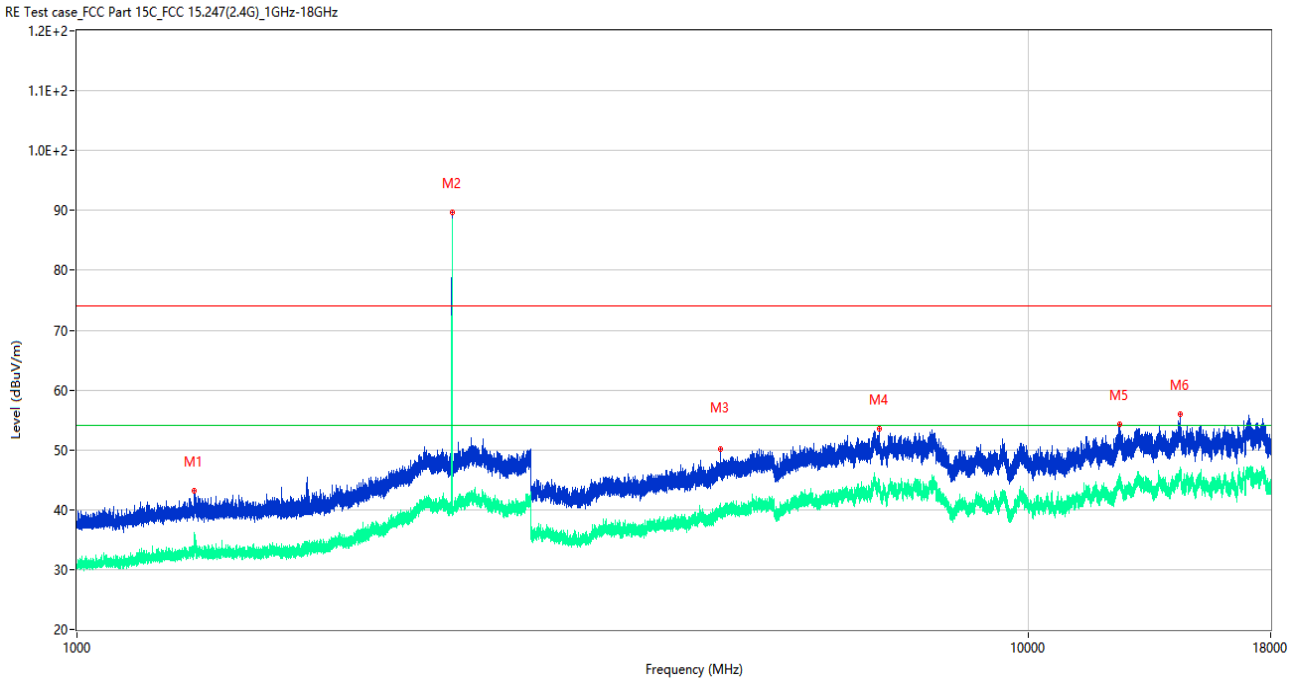

| No. | Frequency (MHz) | Results (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Table (Degree) | Height (cm) | Antenna | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1599.500 | 42.94 | 74.0 | 31.06 | Peak | 263.00 | 300 | Horizontal | Pass |
| 1** | 1599.500 | 33.65 | 54.0 | 20.35 | AV | 263.00 | 300 | Horizontal | Pass |
| 2 | 2441.200 | 91.04 | 74.0 | -17.04 | Peak | 91.00 | 150 | Horizontal | N/A |
| 2** | 2441.200 | 88.34 | 54.0 | -34.34 | AV | 91.00 | 150 | Horizontal | N/A |
| 3 | 4860.000 | 49.48 | 74.0 | 24.52 | Peak | 161.00 | 100 | Horizontal | Pass |
| 3** | 4860.000 | 40.28 | 54.0 | 13.72 | AV | 161.00 | 100 | Horizontal | Pass |
| 4 | 7934.750 | 53.72 | 74.0 | 20.28 | Peak | 120.00 | 300 | Horizontal | Pass |
| 4** | 7934.750 | 44.88 | 54.0 | 9.12 | AV | 120.00 | 300 | Horizontal | Pass |
| 5 | 12935.588 | 53.47 | 74.0 | 20.53 | Peak | 317.00 | 200 | Horizontal | Pass |
| 5** | 12935.588 | 44.01 | 54.0 | 9.99 | AV | 317.00 | 200 | Horizontal | Pass |
| 6 | 17118.000 | 55.92 | 74.0 | 18.08 | Peak | 317.00 | 400 | Horizontal | Pass |
| 6** | 17118.000 | 46.19 | 54.0 | 7.81 | AV | 317.00 | 400 | Horizontal | Pass |

## 8-DPSK MIDDLE CHANNEL 1 GHz to 18 GHz, ANT V



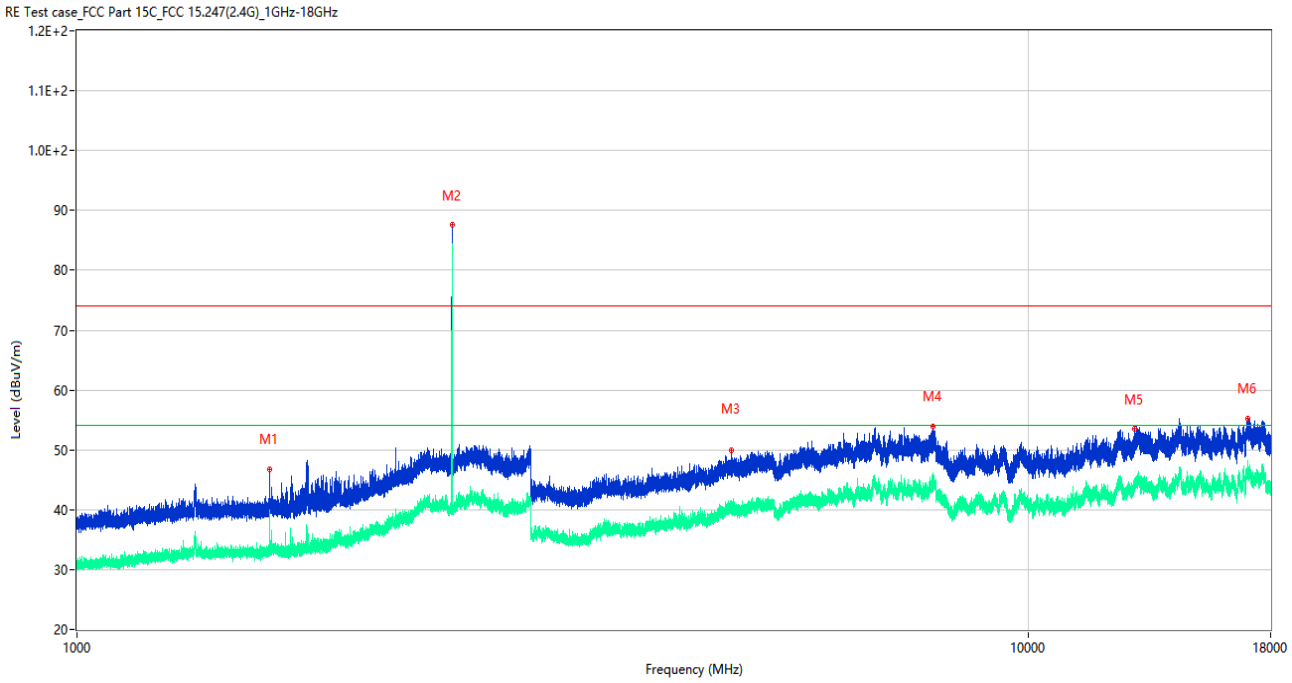

| No. | Frequency (MHz) | Results (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Table (Degree) | Height (cm) | Antenna | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1328.900 | 46.12 | 74.0 | 27.88 | Peak | 264.00 | 200 | Vertical | Pass |
| 1** | 1328.900 | 33.81 | 54.0 | 20.19 | AV | 264.00 | 200 | Vertical | Pass |
| 2 | 2440.900 | 88.12 | 74.0 | -14.12 | Peak | 173.00 | 150 | Vertical | N/A |
| 2** | 2440.900 | 85.01 | 54.0 | -31.01 | AV | 173.00 | 150 | Vertical | N/A |
| 3 | 4861.750 | 50.16 | 74.0 | 23.84 | Peak | 303.00 | 150 | Vertical | Pass |
| 3** | 4861.750 | 39.36 | 54.0 | 14.64 | AV | 303.00 | 150 | Vertical | Pass |
| 4 | 7964.500 | 53.83 | 74.0 | 20.17 | Peak | 161.00 | 100 | Vertical | Pass |
| 4** | 7964.500 | 44.86 | 54.0 | 9.14 | AV | 161.00 | 100 | Vertical | Pass |
| 5 | 12514.400 | 53.31 | 74.0 | 20.69 | Peak | 149.00 | 100 | Vertical | Pass |
| 5** | 12514.400 | 44.49 | 54.0 | 9.51 | AV | 149.00 | 100 | Vertical | Pass |
| 6 | 17450.062 | 55.47 | 74.0 | 18.53 | Peak | 205.00 | 200 | Vertical | Pass |
| 6** | 17450.062 | 46.13 | 54.0 | 7.87 | AV | 205.00 | 200 | Vertical | Pass |

## 8-DPSK HIGH CHANNEL 1 GHz to 18 GHz, ANT H




| No. | Frequency (MHz) | Results (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Table (Degree) | Height (cm) | Antenna | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1329.000 | 43.15 | 74.0 | 30.85 | Peak | 227.00 | 100 | Horizontal | Pass |
| 1** | 1329.000 | 33.69 | 54.0 | 20.31 | AV | 227.00 | 100 | Horizontal | Pass |
| 2 | 2480.000 | 89.59 | 74.0 | -15.59 | Peak | 84.00 | 200 | Horizontal | N/A |
| 2** | 2480.000 | 88.58 | 54.0 | -34.58 | AV | 84.00 | 200 | Horizontal | N/A |
| 3 | 4751.500 | 50.04 | 74.0 | 23.96 | Peak | 227.00 | 100 | Horizontal | Pass |
| 3** | 4751.500 | 40.14 | 54.0 | 13.86 | AV | 227.00 | 100 | Horizontal | Pass |
| 4 | 6980.500 | 53.51 | 74.0 | 20.49 | Peak | 122.00 | 100 | Horizontal | Pass |
| 4** | 6980.500 | 43.70 | 54.0 | 10.30 | AV | 122.00 | 100 | Horizontal | Pass |
| 5 | 12477.112 | 54.19 | 74.0 | 19.81 | Peak | 38.00 | 200 | Horizontal | Pass |
| 5** | 12477.112 | 44.68 | 54.0 | 9.32 | AV | 38.00 | 200 | Horizontal | Pass |
| 6 | 14451.526 | 55.94 | 74.0 | 18.06 | Peak | 360.00 | 200 | Horizontal | Pass |
| 6** | 14451.526 | 47.20 | 54.0 | 6.80 | AV | 360.00 | 200 | Horizontal | Pass |

## 8-DPSK HIGH CHANNEL 1 GHz to 18 GHz, ANT V




| No. | Frequency (MHz) | Results (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Table (Degree) | Height (cm) | Antenna | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1596.000 | 46.83 | 74.0 | 27.17 | Peak | 69.00 | 300 | Vertical | Pass |
| 1** | 1596.000 | 33.09 | 54.0 | 20.91 | AV | 69.00 | 300 | Vertical | Pass |
| 2 | 2479.900 | 87.55 | 74.0 | -13.55 | Peak | 179.00 | 100 | Vertical | N/A |
| 2** | 2479.900 | 84.25 | 54.0 | -30.25 | AV | 179.00 | 100 | Vertical | N/A |
| 3 | 4880.750 | 49.89 | 74.0 | 24.11 | Peak | 122.00 | 200 | Vertical | Pass |
| 3** | 4880.750 | 39.52 | 54.0 | 14.48 | AV | 122.00 | 200 | Vertical | Pass |
| 4 | 7937.500 | 53.95 | 74.0 | 20.05 | Peak | 310.00 | 200 | Vertical | Pass |
| 4** | 7937.500 | 44.51 | 54.0 | 9.49 | AV | 310.00 | 200 | Vertical | Pass |
| 5 | 12943.462 | 53.49 | 74.0 | 20.51 | Peak | 100.00 | 100 | Vertical | Pass |
| 5** | 12943.462 | 43.79 | 54.0 | 10.21 | AV | 100.00 | 100 | Vertical | Pass |
| 6 | 17043.974 | 55.30 | 74.0 | 18.70 | Peak | 180.00 | 400 | Vertical | Pass |
| 6** | 17043.974 | 45.65 | 54.0 | 8.35 | AV | 180.00 | 400 | Vertical | Pass |

## 5.11Band Edge (Restricted-band band-edge)

### 5.11.1 Limit

FCC §15.209&15.247(d)

Radiated emission outside the frequency band attenuation below the general limits specified in FCC section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in FCC section 15.205(a), must also comply with the radiated emission limits specified in FCC section 15.209(a).

### 5.11.2 Test Setup

See section 4.5.3 to 4.5.5 for test setup description for the antenna port. The photo of test setup please refer to ANNEX A.

### 5.11.3 Test Procedure

The measurement frequency range is from 9 kHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

The power of the EUT transmitting frequency should be ignored.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured
RBW = 1 MHz for f ≥ 1 GHz, 100 kHz for f < 1 GHz
VBW ≥ RBW
Sweep = auto
Detector function = peak
Trace = max hold

For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported, Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

### 5.11.4 Test Result

Note [1]: The lowest and highest channels are tested to verify the band edge emissions. Please refer to the following the plots for emissions values.

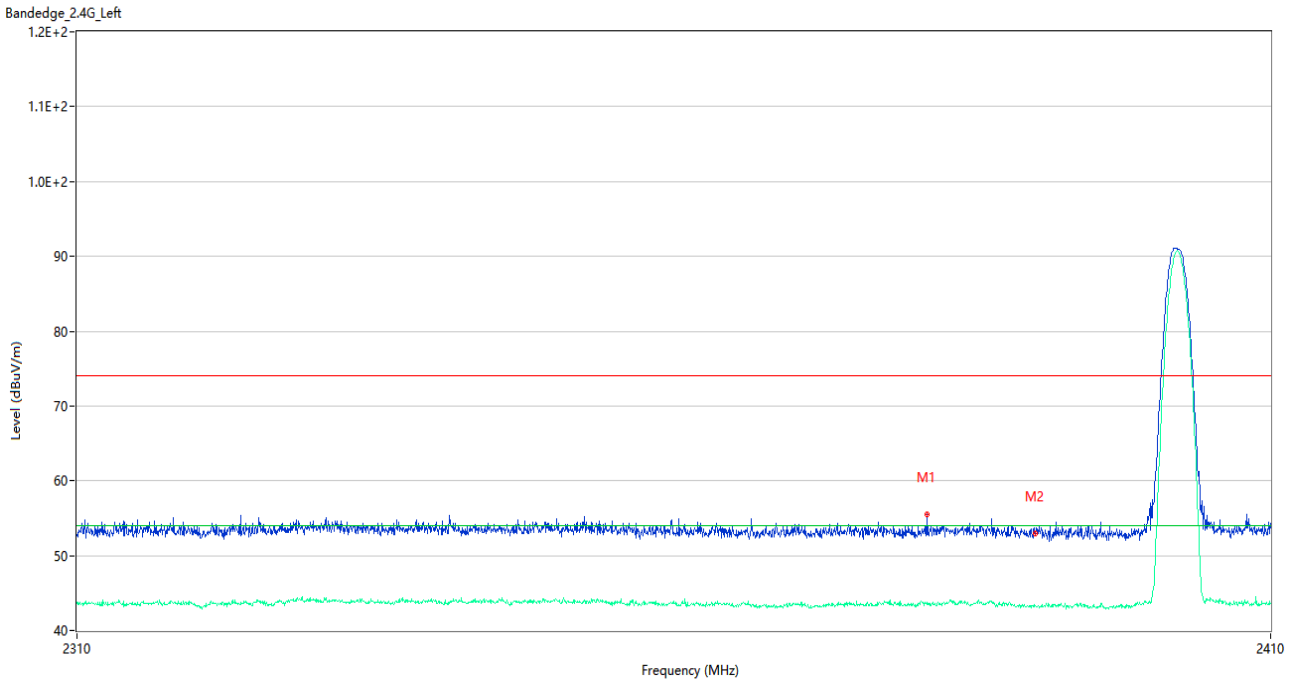
Note [2]: The test data all are tested in the vertical and horizontal antenna which the trace is max hold. So these plots have shown the worst case.

Note [3]: According the ANSI C63.10-2013, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Note [4]: The Level (dBuV/m) has been corrected by factor.

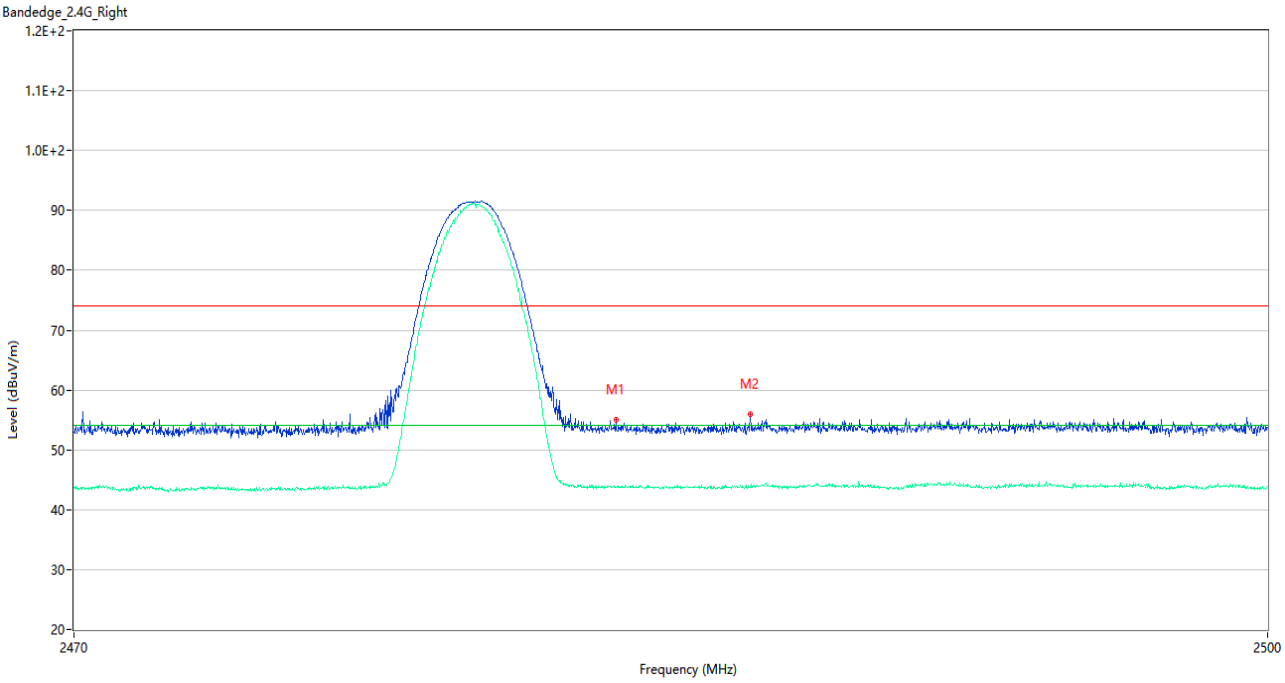
Test Data and Plots

GFSK LOW CHANNEL



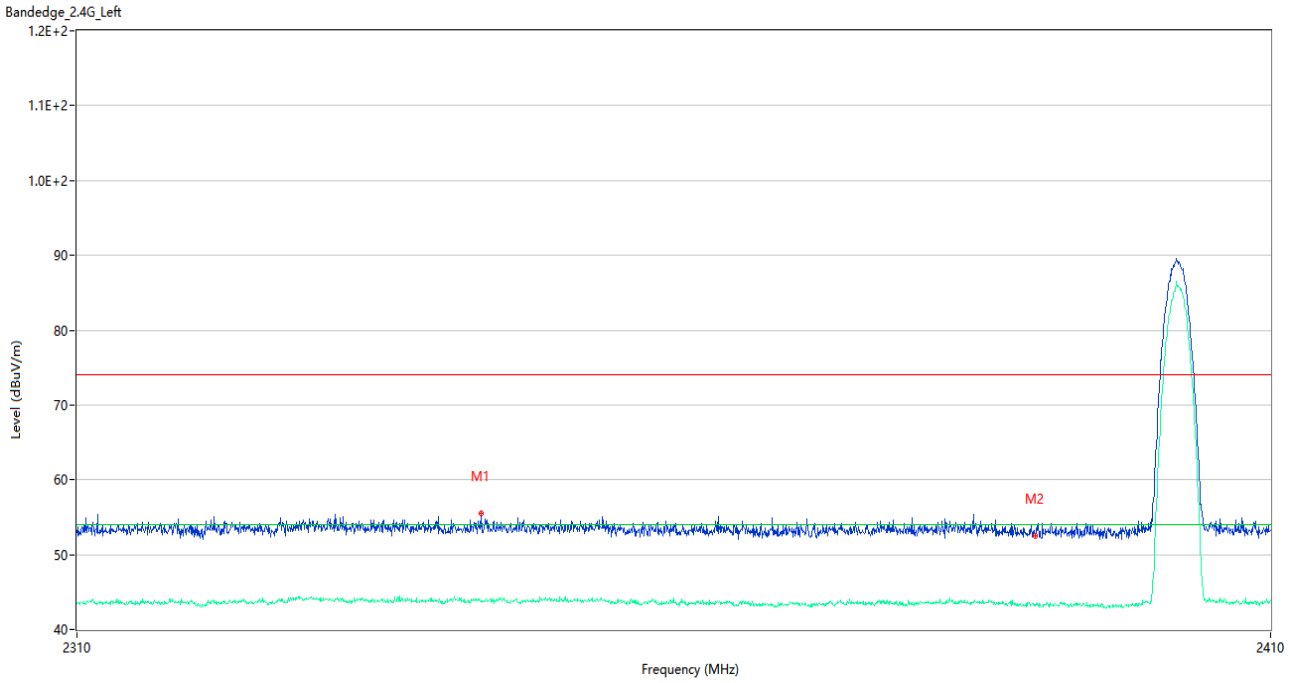

| No. | Frequency (MHz) | Results (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Table (Degree) | Height (cm) | Antenna | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2380.750 | 55.45 | 74.0 | 18.55 | Peak | 349.00 | 100 | Horizontal | Pass |
| 1** | 2380.750 | 43.71 | 54.0 | 10.29 | AV | 349.00 | 100 | Horizontal | Pass |
| 2 | 2389.950 | 52.94 | 74.0 | 21.06 | Peak | 302.00 | 150 | Horizontal | Pass |
| 2** | 2389.950 | 43.36 | 54.0 | 10.64 | AV | 302.00 | 150 | Horizontal | Pass |

## GFSK HIGH CHANNEL



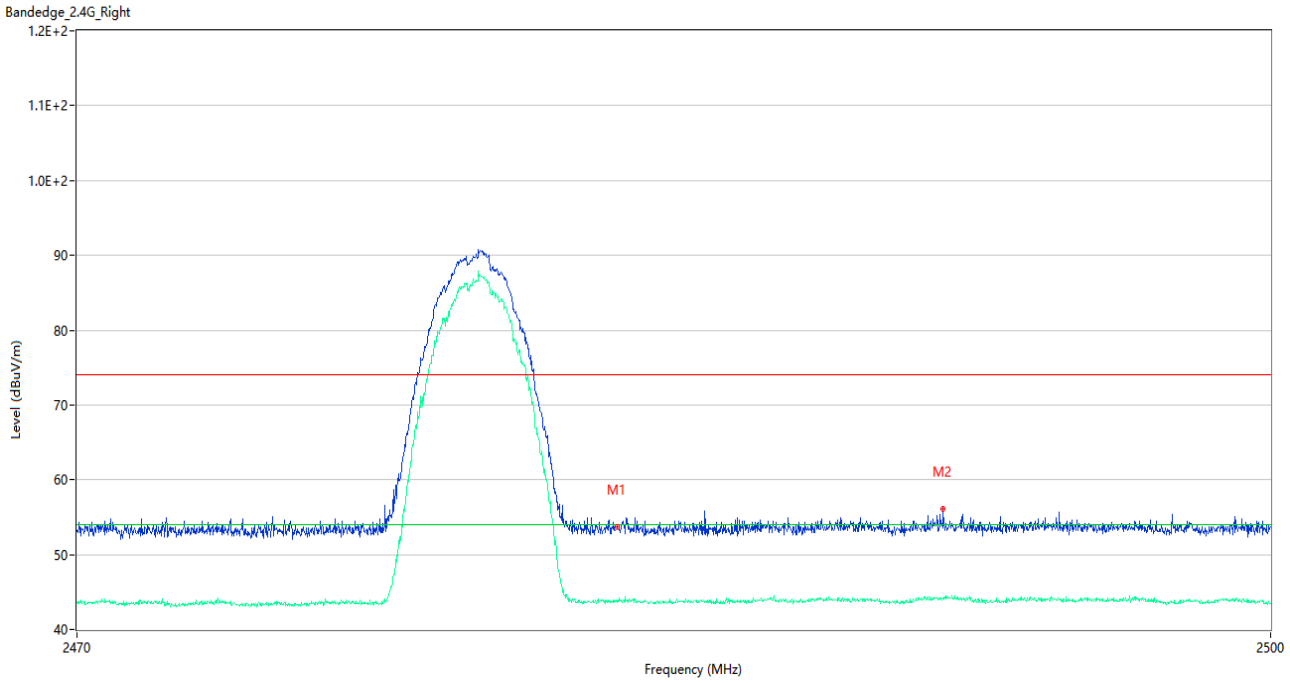

| No. | Frequency (MHz) | Results (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Table (Degree) | Height (cm) | Antenna | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2483.575 | 55.08 | 74.0 | 18.92 | Peak | 360.00 | 200 | Horizontal | Pass |
| 1** | 2483.575 | 43.73 | 54.0 | 10.27 | AV | 360.00 | 200 | Horizontal | Pass |
| 2 | 2486.950 | 55.98 | 74.0 | 18.02 | Peak | 318.00 | 150 | Horizontal | Pass |
| 2** | 2486.950 | 43.81 | 54.0 | 10.19 | AV | 318.00 | 150 | Horizontal | Pass |

## 8-DPSK LOW CHANNEL




| No. | Frequency (MHz) | Results (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Table (Degree) | Height (cm) | Antenna | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2343.350 | 55.50 | 74.0 | 18.50 | Peak | 110.00 | 150 | Horizontal | Pass |
| 1** | 2343.350 | 43.77 | 54.0 | 10.23 | AV | 110.00 | 150 | Horizontal | Pass |
| 2 | 2389.950 | 52.50 | 74.0 | 21.50 | Peak | 155.00 | 150 | Horizontal | Pass |
| 2** | 2389.950 | 43.24 | 54.0 | 10.76 | AV | 155.00 | 150 | Horizontal | Pass |

## 8-DPSK HIGH CHANNEL

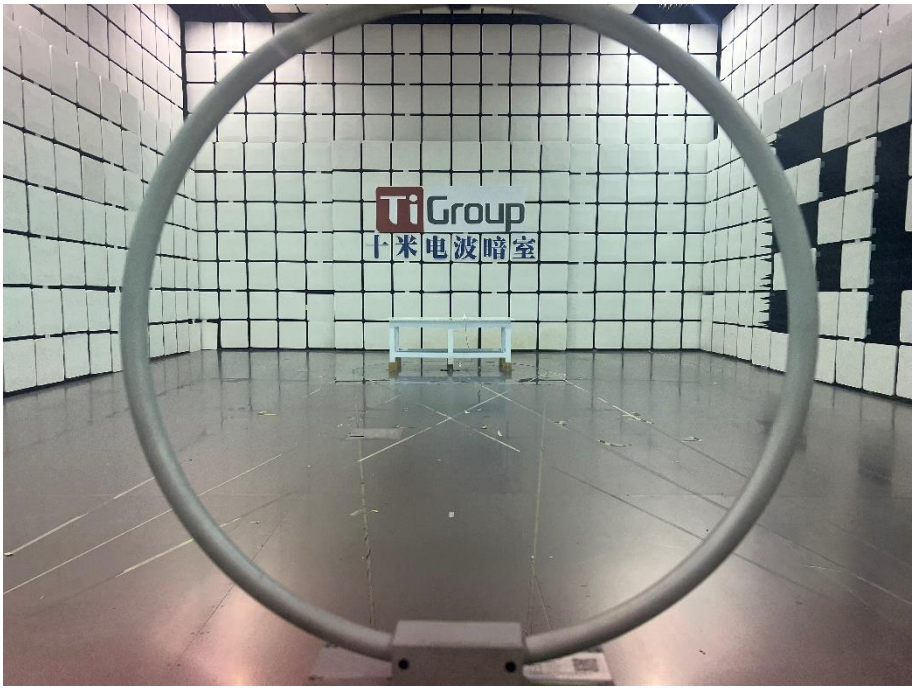



| No. | Frequency (MHz) | Results (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Table (Degree) | Height (cm) | Antenna | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2483.545 | 53.71 | 74.0 | 20.29 | Peak | 286.00 | 100 | Horizontal | Pass |
| 1** | 2483.545 | 43.78 | 54.0 | 10.22 | AV | 286.00 | 100 | Horizontal | Pass |
| 2 | 2491.735 | 56.10 | 74.0 | 17.90 | Peak | 360.00 | 100 | Horizontal | Pass |
| 2** | 2491.735 | 44.19 | 54.0 | 9.81 | AV | 360.00 | 100 | Horizontal | Pass |

# ANNEX A TEST SETUP PHOTOS

## 1 Radiated Test Photo

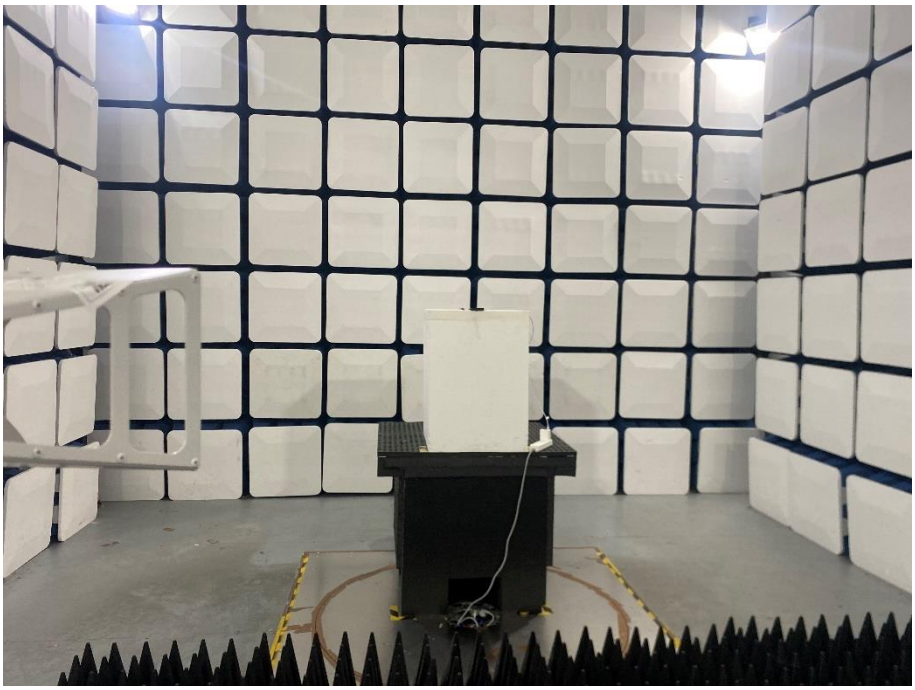
Below 30MHz



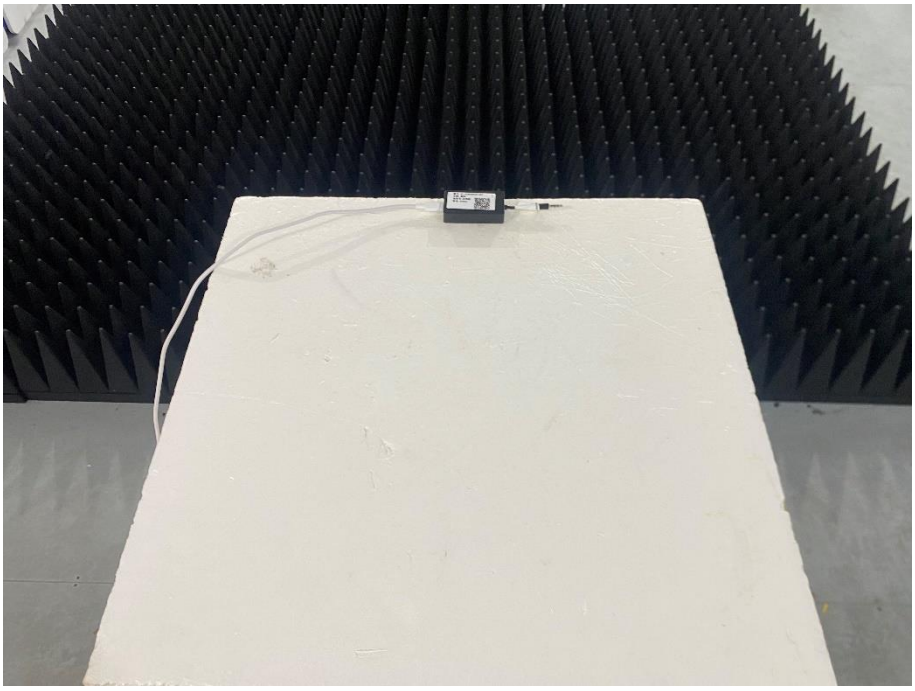

30MHz-1GHz

Close-up


Above 1GHz

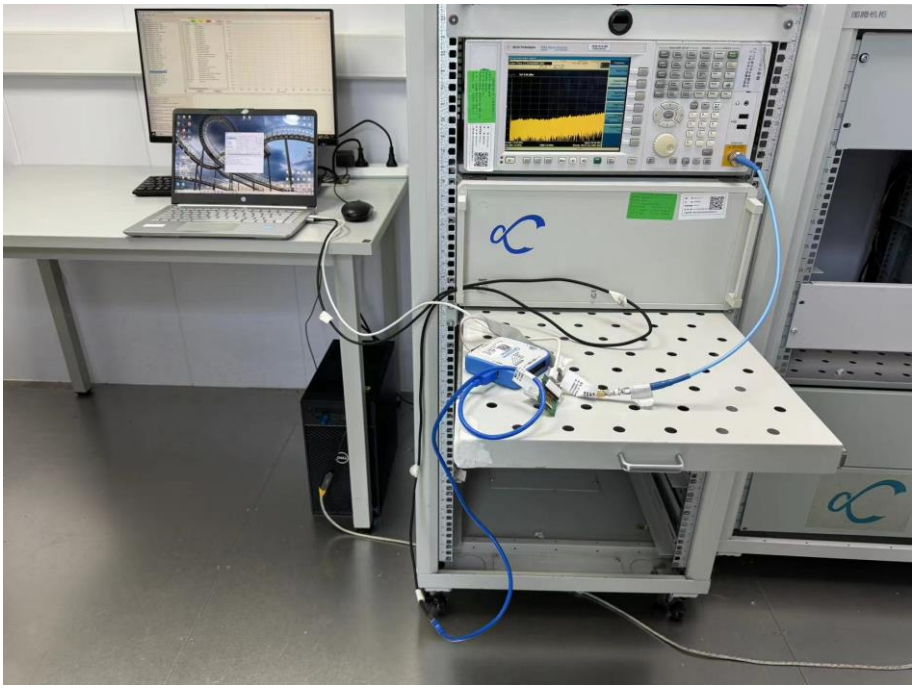


Close-up



## 2 Conducted Test Photo

Conducted Test



# 3 Conducted Emission

Photo 1

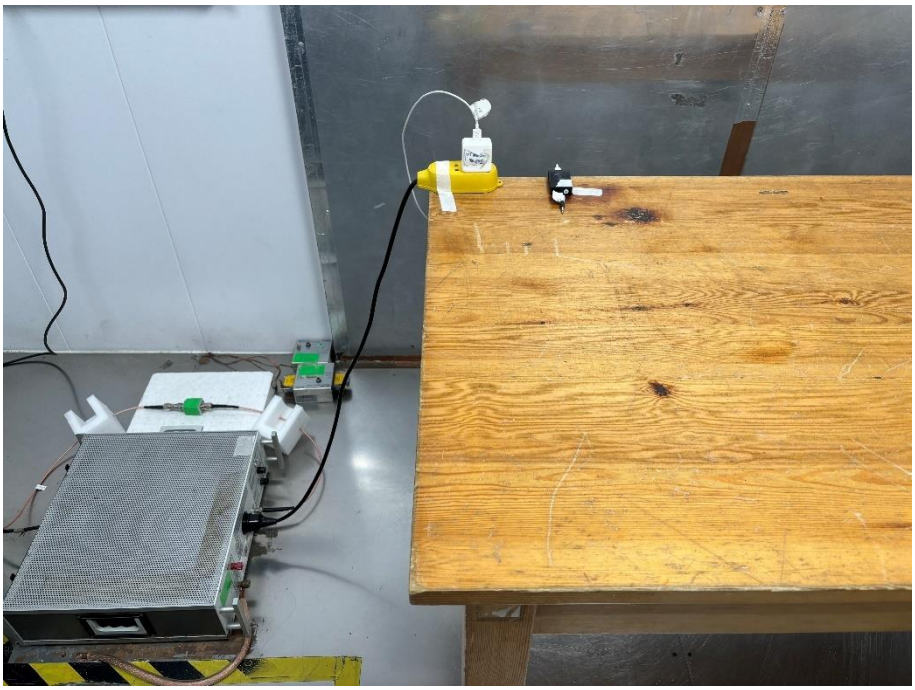
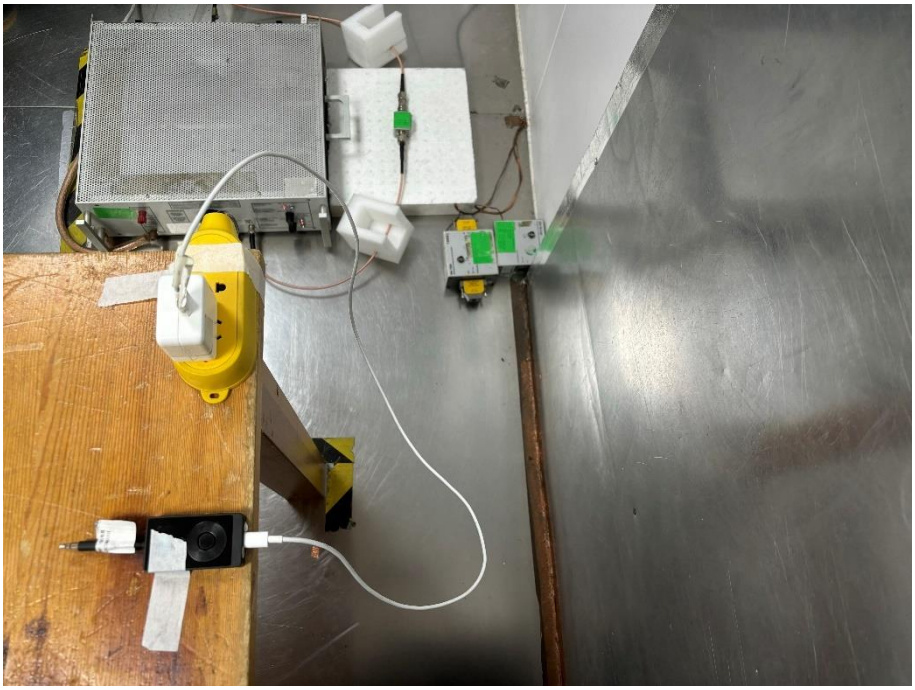


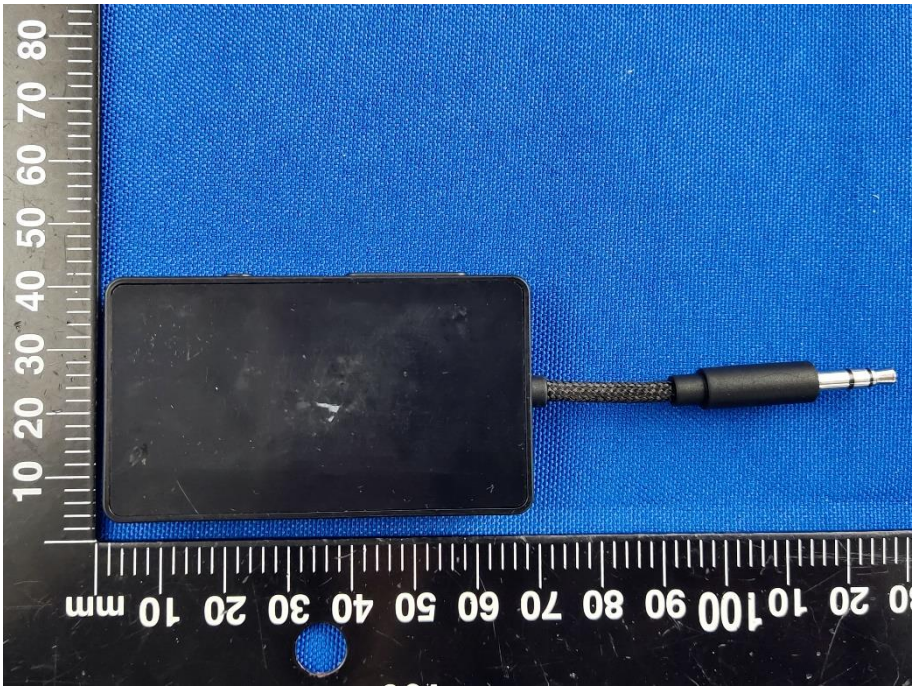
Photo 2



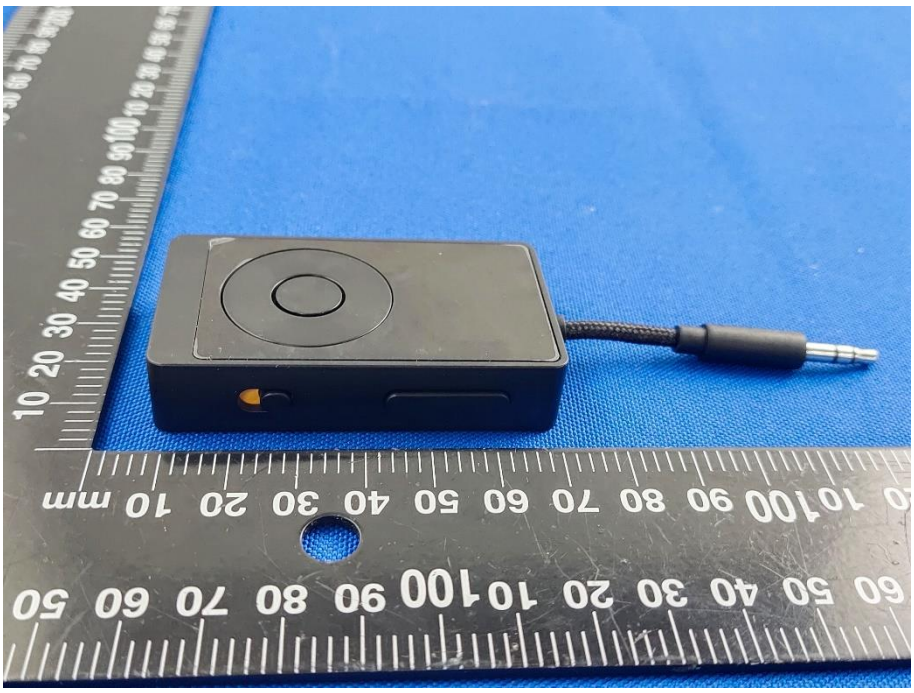
# ANNEX B EUT EXTERNAL PHOTOS

FRONT VIEW OF EUT

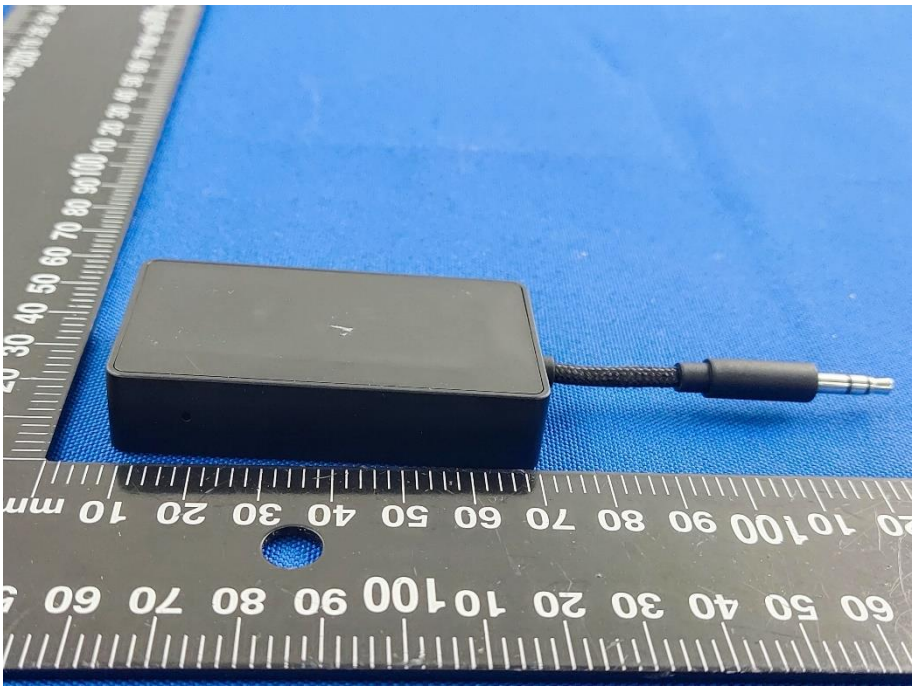
REAR VIEW OF EUT



LEFT VIEW OF EUT



RIGHT VIEW OF EUT



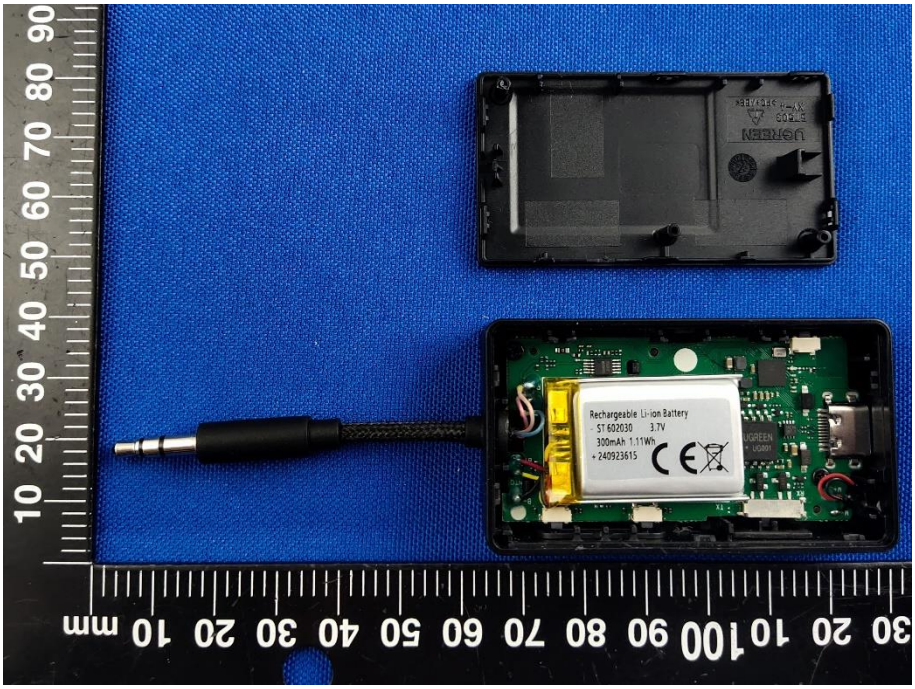
TOP VIEW OF EUT


CLOSE-UP

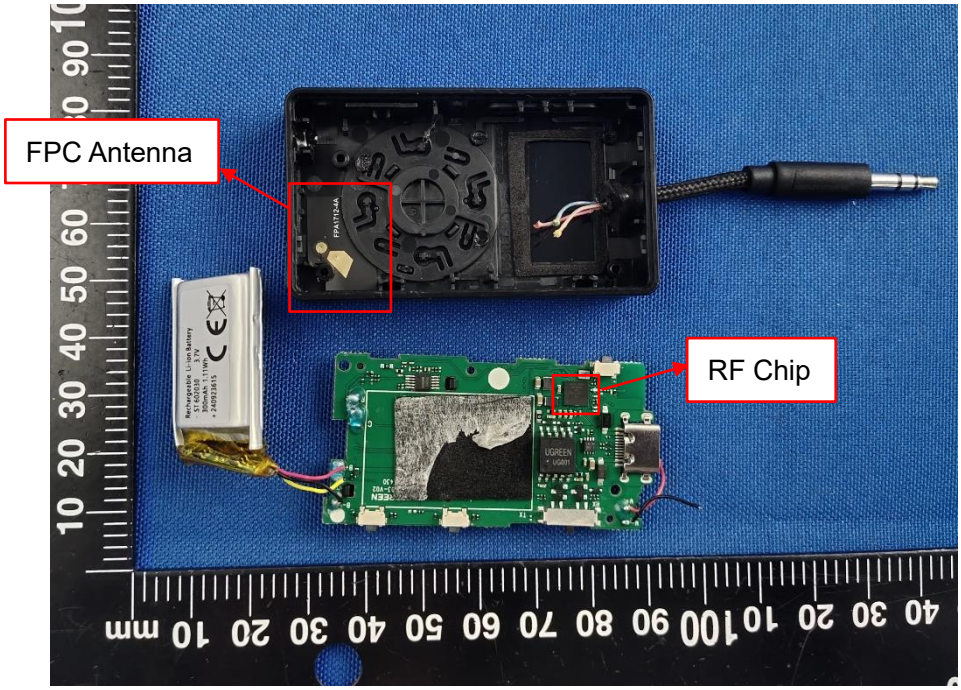
BOTTOM VIEW OF EUT

# ANNEX C EUT INTERNAL PHOTOS

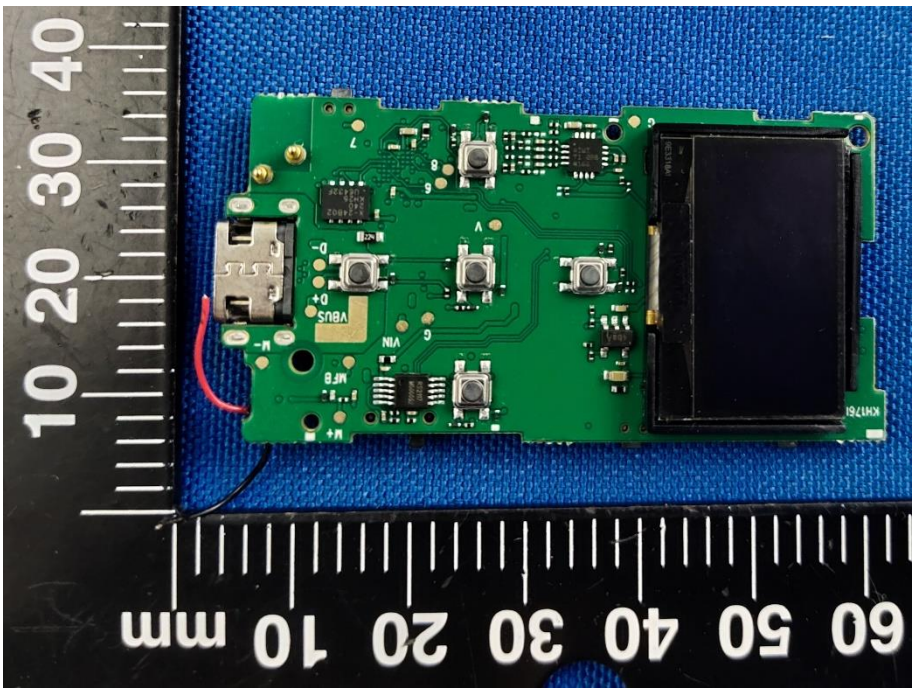
EUT UNCOVER VIEW 1



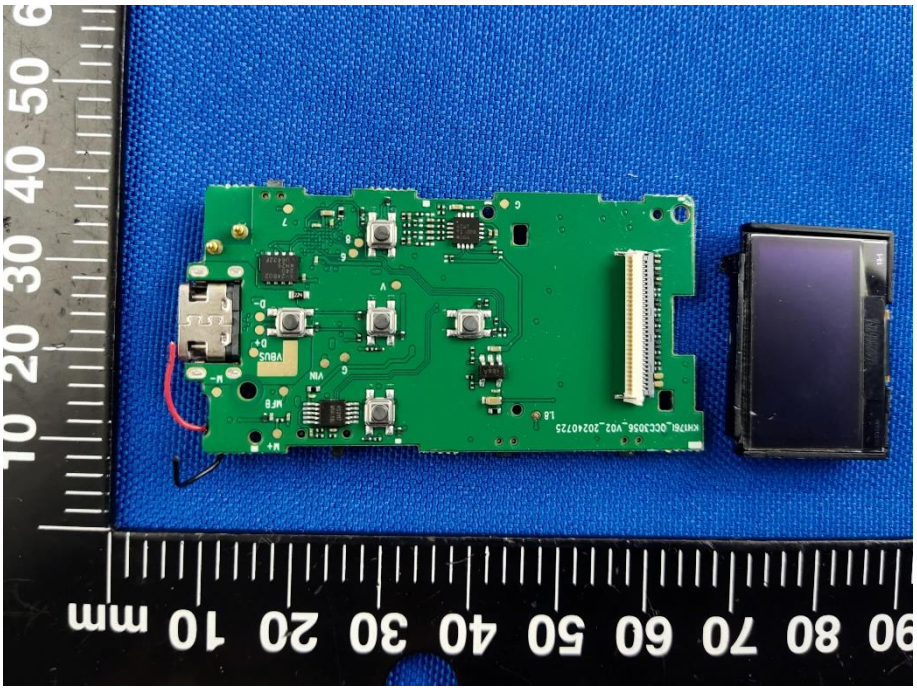

EUT UNCOVER VIEW 2



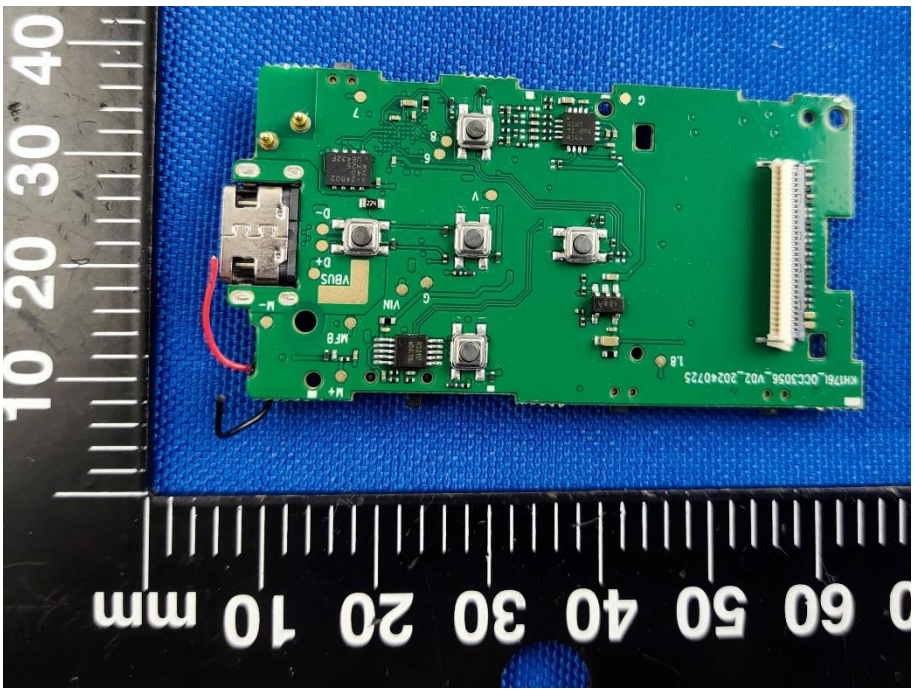
EUT UNCOVER VIEW 3



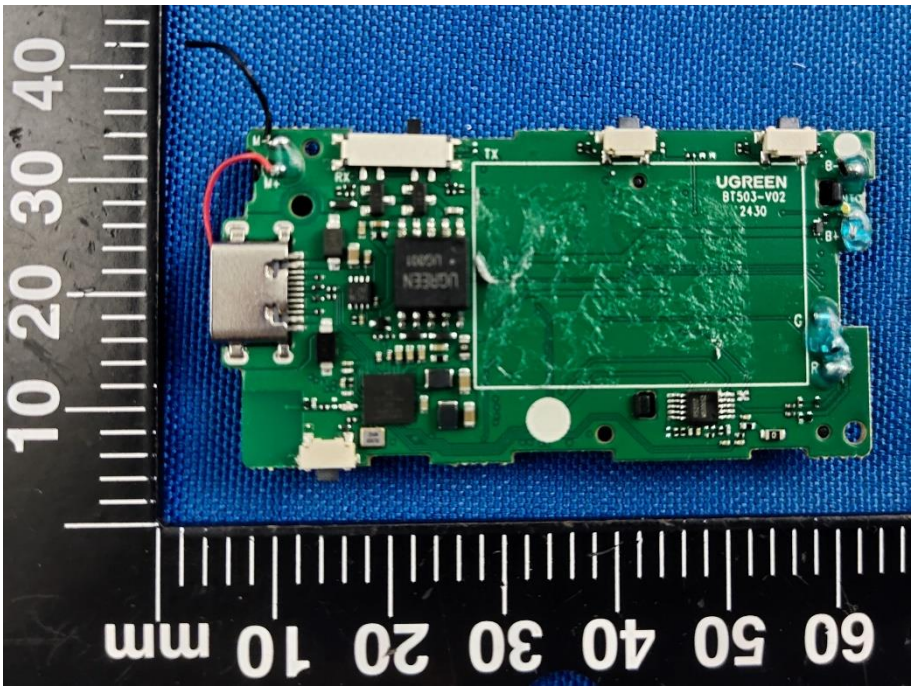
EUT UNCOVER VIEW 4



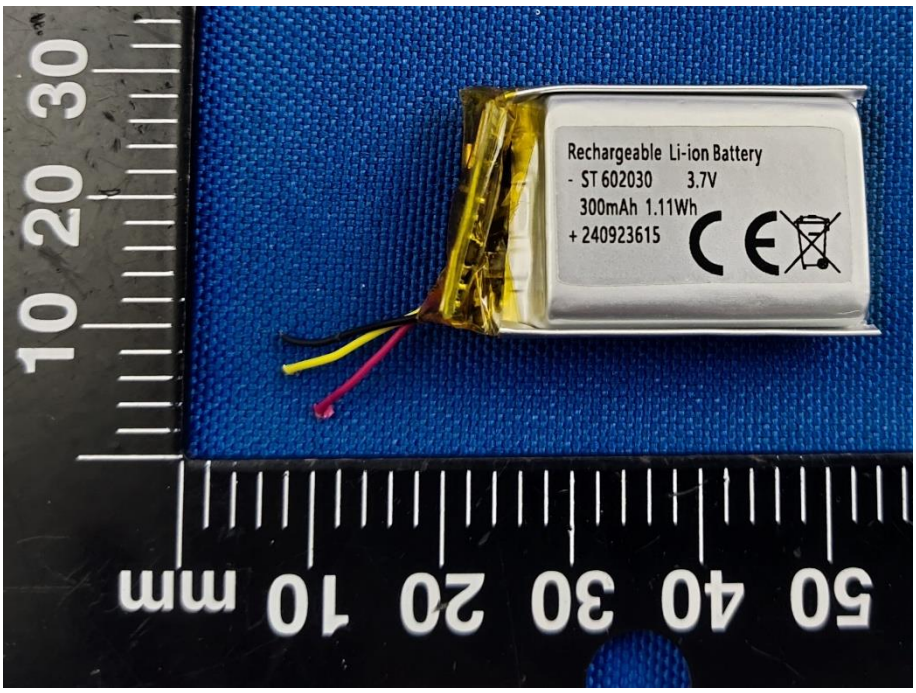
MAIN BOARD TOP VIEW



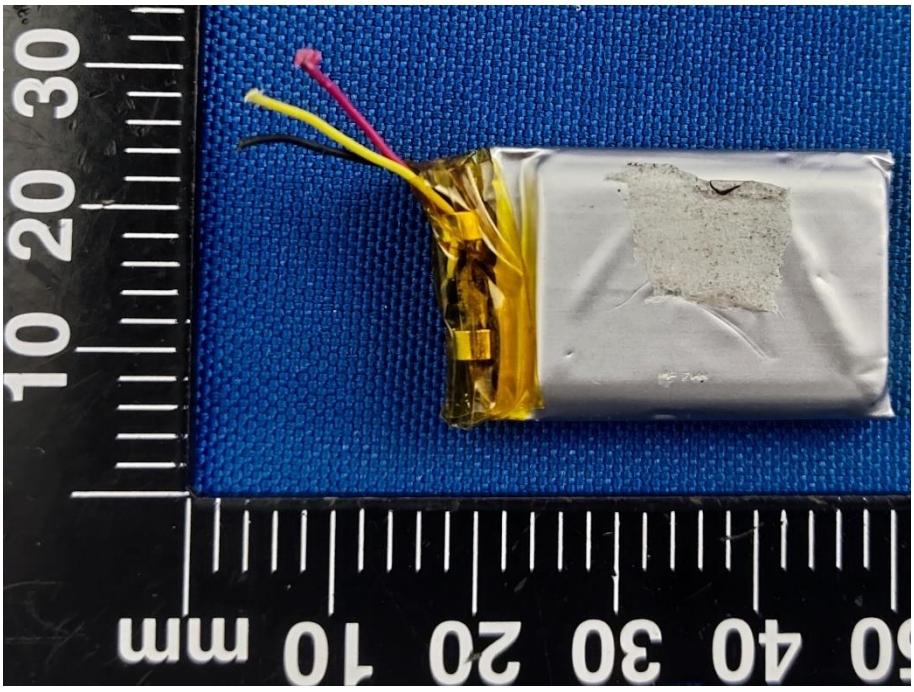
MAIN BOARD REAR VIEW



BATTERY (FRONT)




BATTERY (REAR)



# Statement

1. The laboratory guarantees the scientificity, accuracy and impartiality of the test, and is responsible for all the information in the report, except the information provided by the customer. The customer is responsible for the impact of the information provided on the validity of the results.
2. The report without China inspection body and laboratory Mandatory Approval (CMA) mark has no effect of proving to the society.
3. For the report with CNAS mark or A2LA mark, the items marked with "☆" are not within the accredited scope.
4. This report is invalid if it is altered, without the signature of the testing and approval personnel, or without the “inspection and testing dedicated stamp” or test report stamp.
5. The test data and results are only valid for the tested samples provided by the customer.
6. This report shall not be partially reproduced without the written permission of the laboratory.
7. Any objection shall be raised to the laboratory within 30 days after receiving the report.

--END OF REPORT--