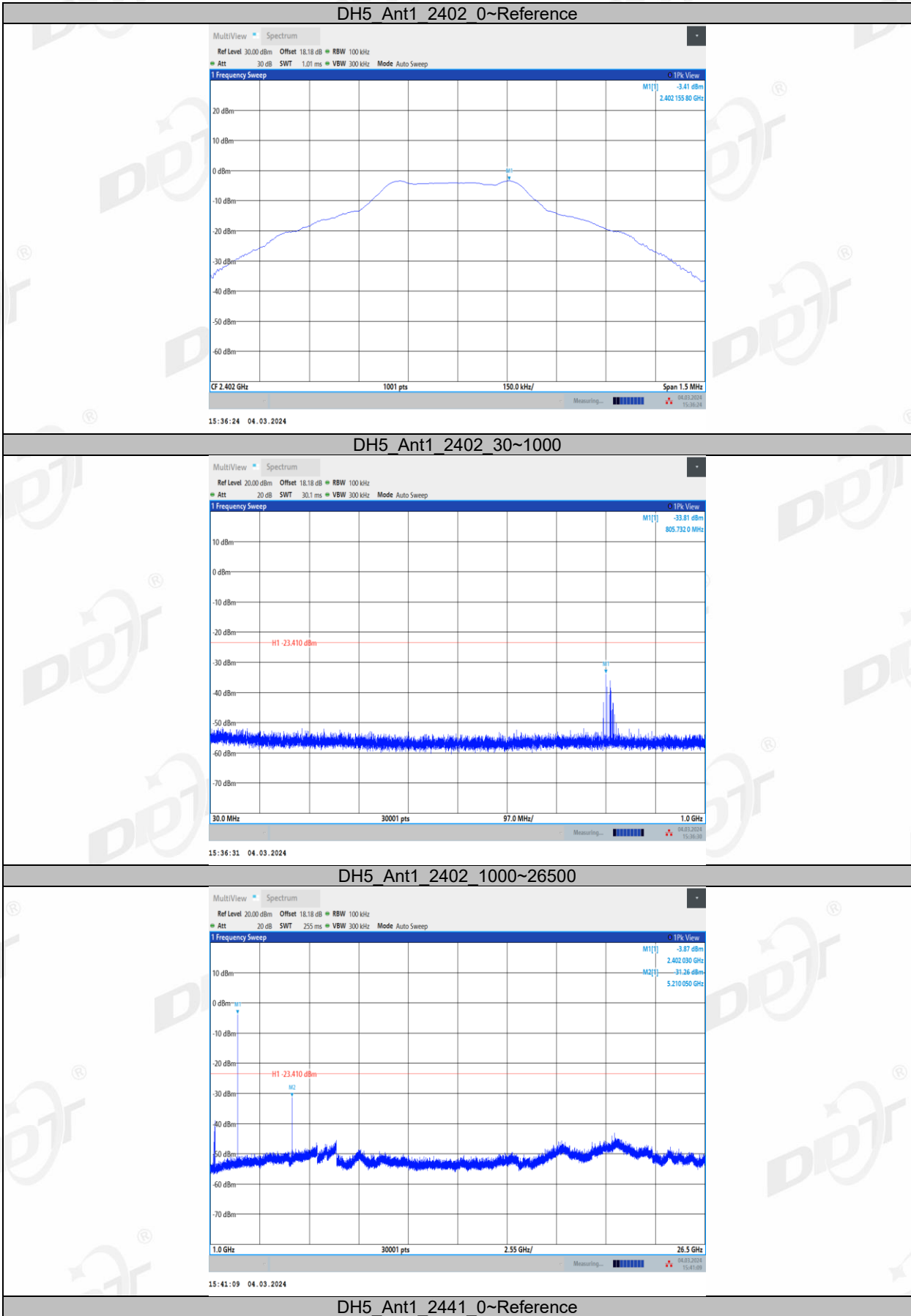


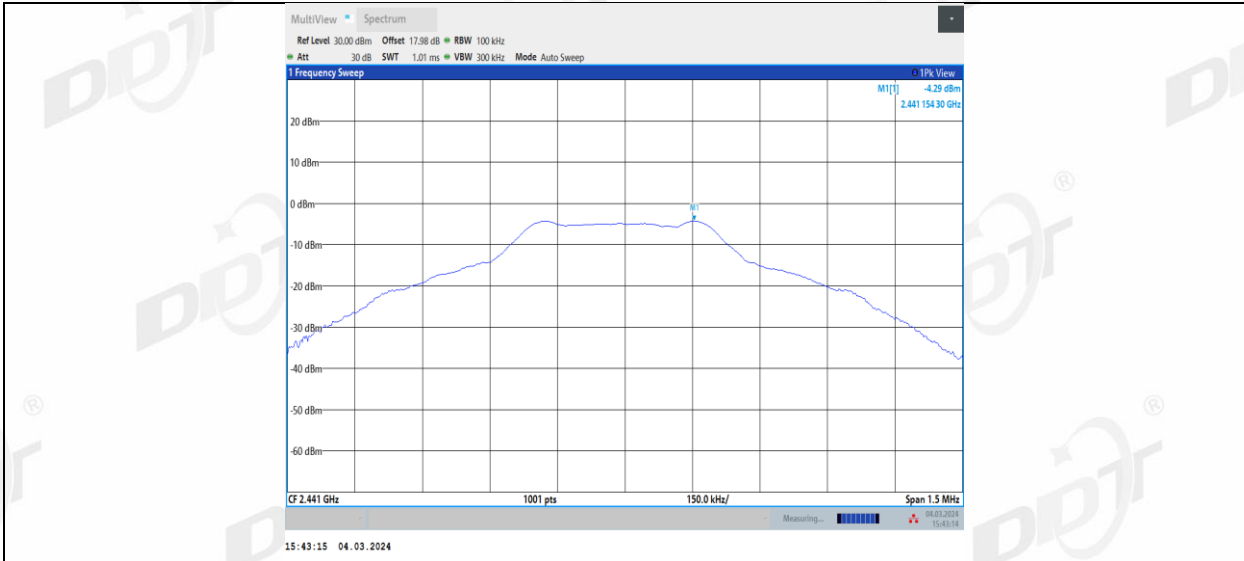
10.4. Test result

|                    |               |                |                          |
|--------------------|---------------|----------------|--------------------------|
| Test Engineer:     | Zoe           | Test Site:     | RF Measurement System 4# |
| Ambient Condition: | 23.8℃,56.3%RH | Test Date:     | 2024.03.04               |
| Test Power Supply: | DC 12V        | Sample Number: | S24012204-002            |

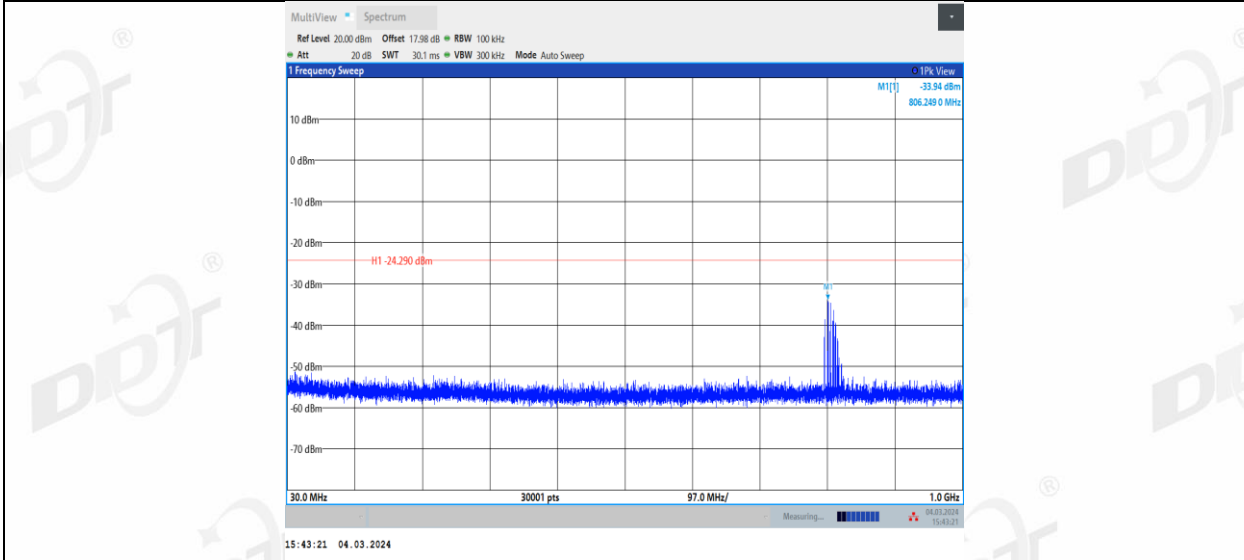
| Mode           | Freq. (MHz)      | Verdict |
|----------------|------------------|---------|
| GFSK           | Hopping off 2402 | Pass    |
|                | Hopping off 2441 | Pass    |
|                | Hopping off 2480 | Pass    |
| $\pi$ /4-DQPSK | Hopping off 2402 | Pass    |
|                | Hopping off 2441 | Pass    |
|                | Hopping off 2480 | Pass    |
| 8DPSK          | Hopping off 2402 | Pass    |
|                | Hopping off 2441 | Pass    |
|                | Hopping off 2480 | Pass    |

10.5. Test graphs

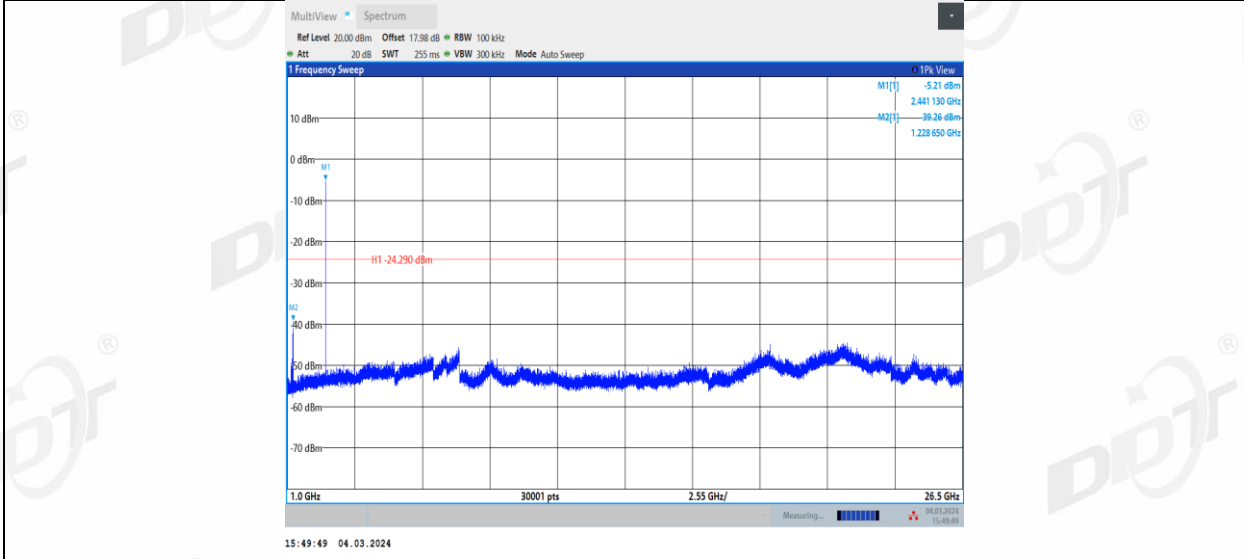




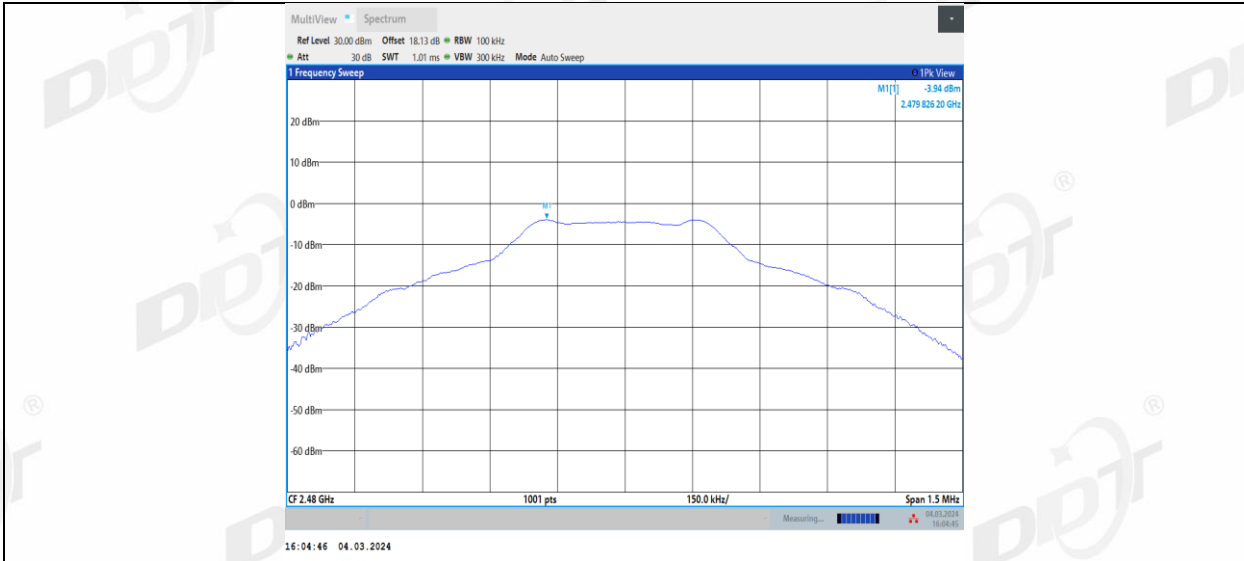
DH5\_Ant1\_2441\_30~1000



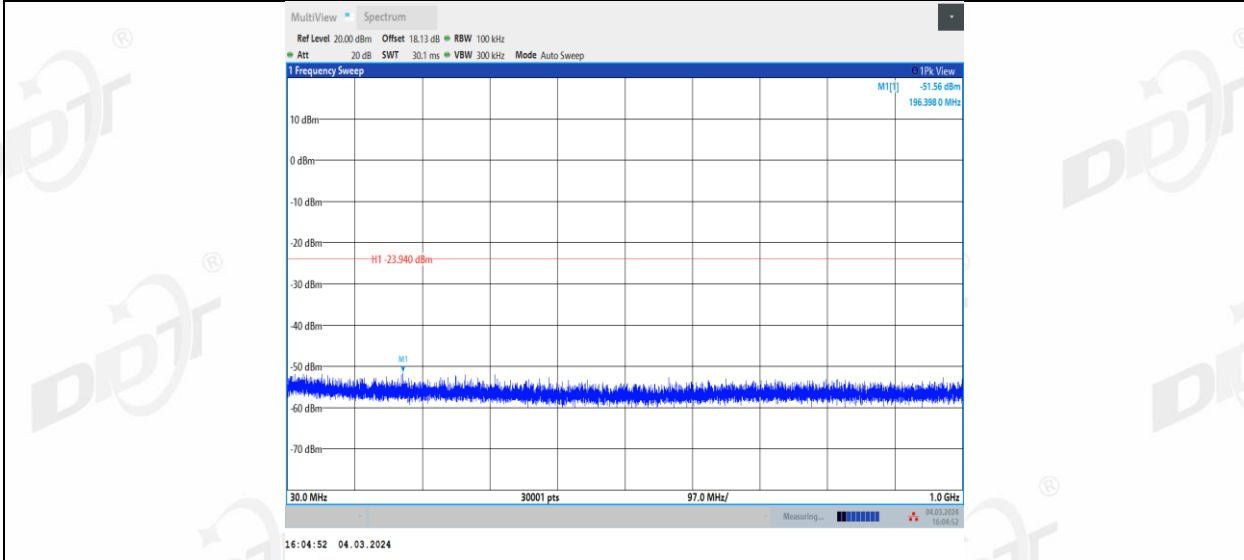
DH5\_Ant1\_2441\_1000~26500



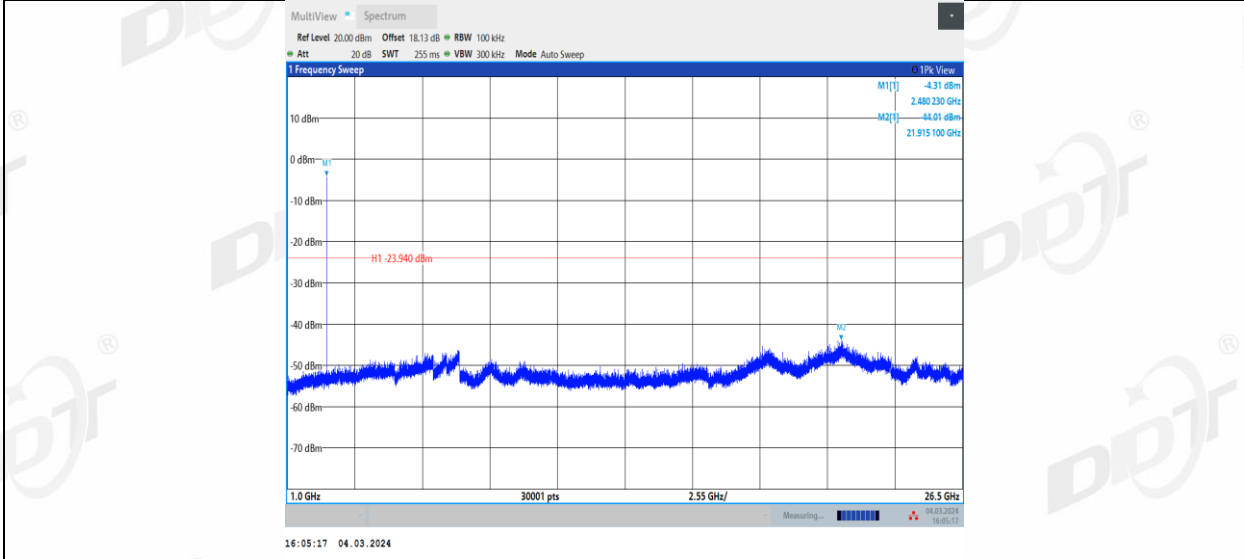
DH5\_Ant1\_2480\_0~Reference



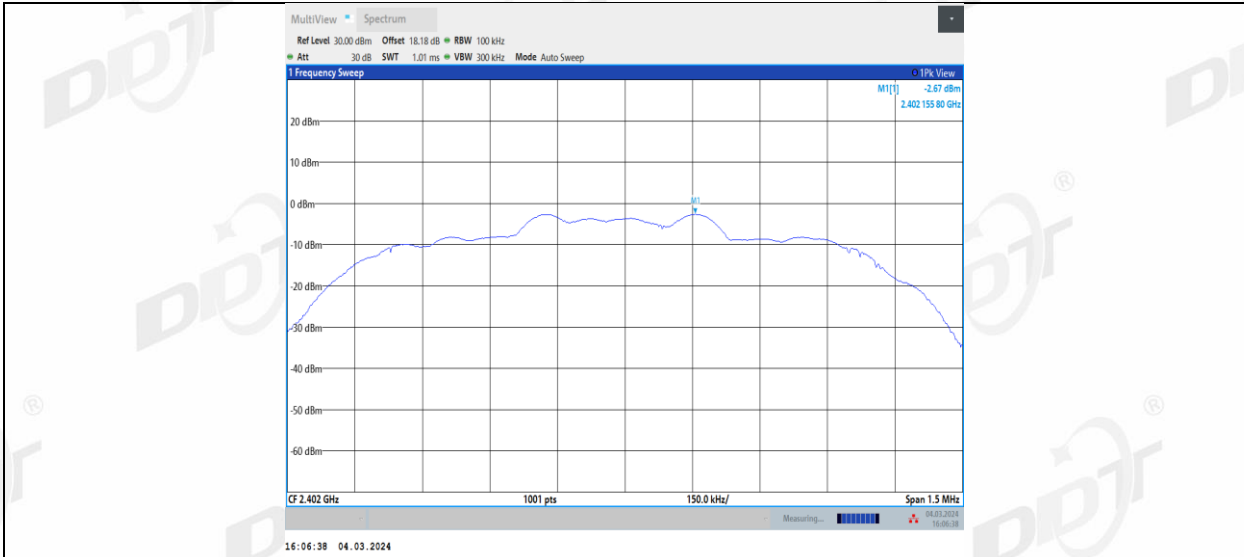
DH5\_Ant1\_2480\_30~1000



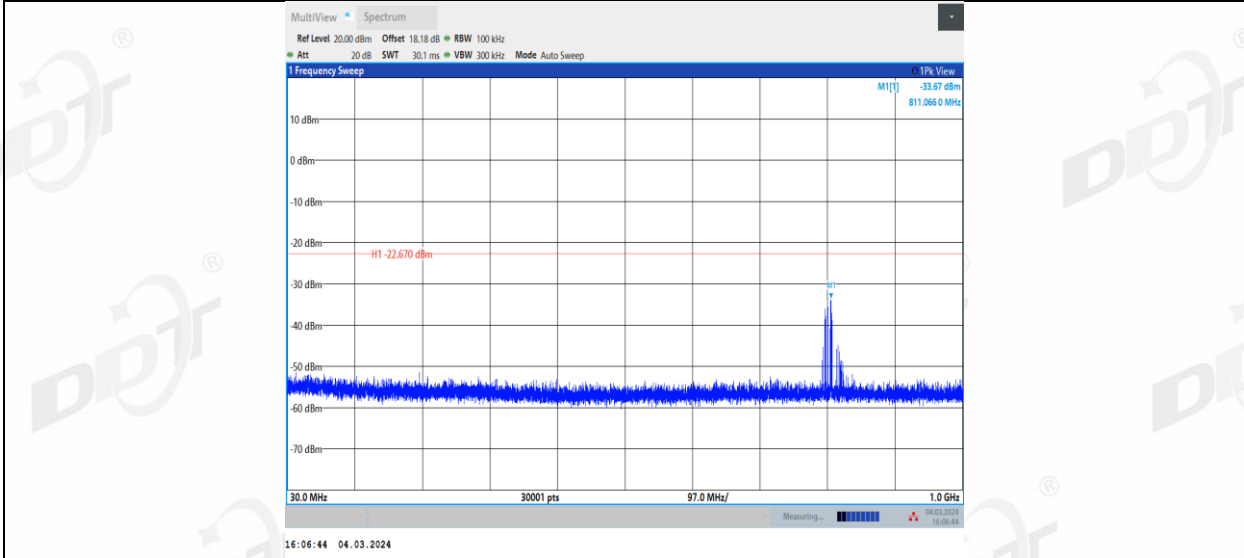
DH5\_Ant1\_2480\_1000~26500



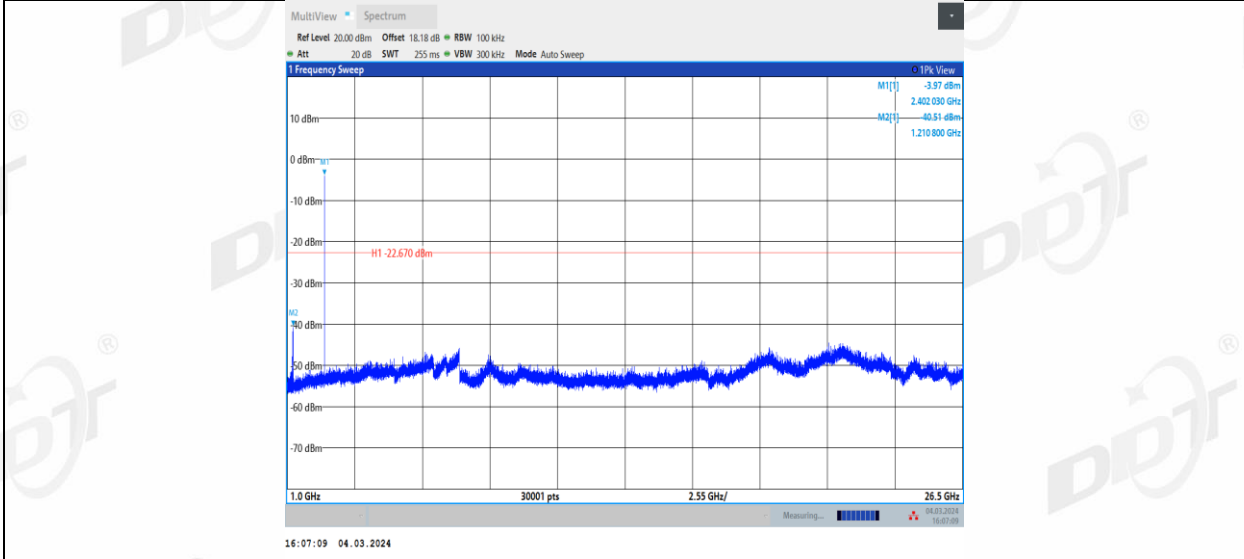
2DH5\_Ant1\_2402\_0~Reference



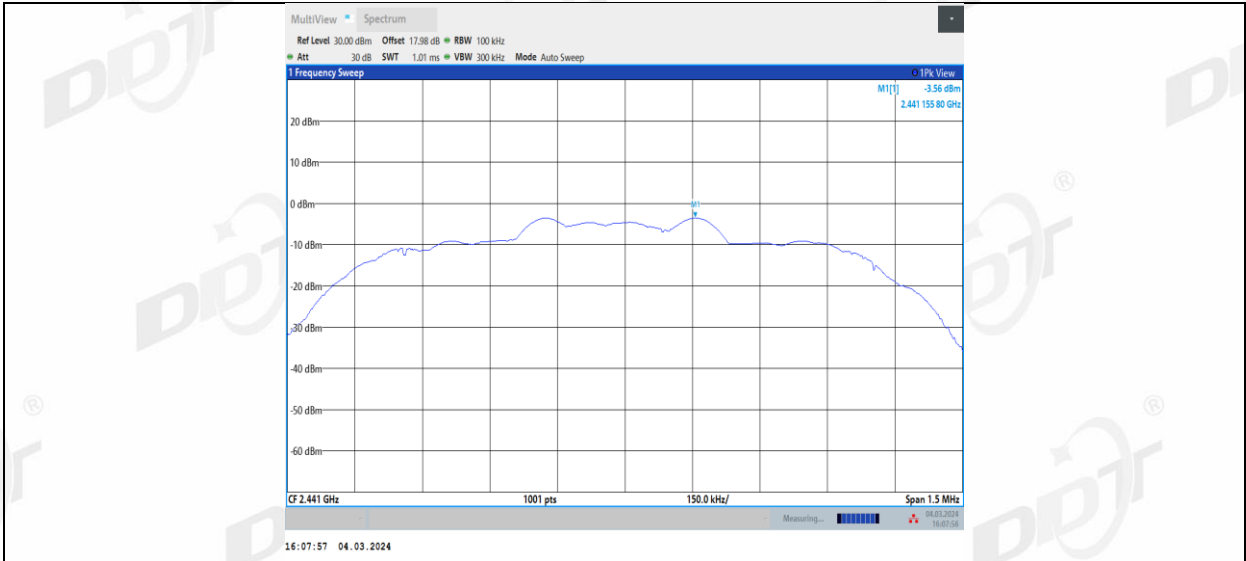
2DH5\_Ant1\_2402\_30~1000



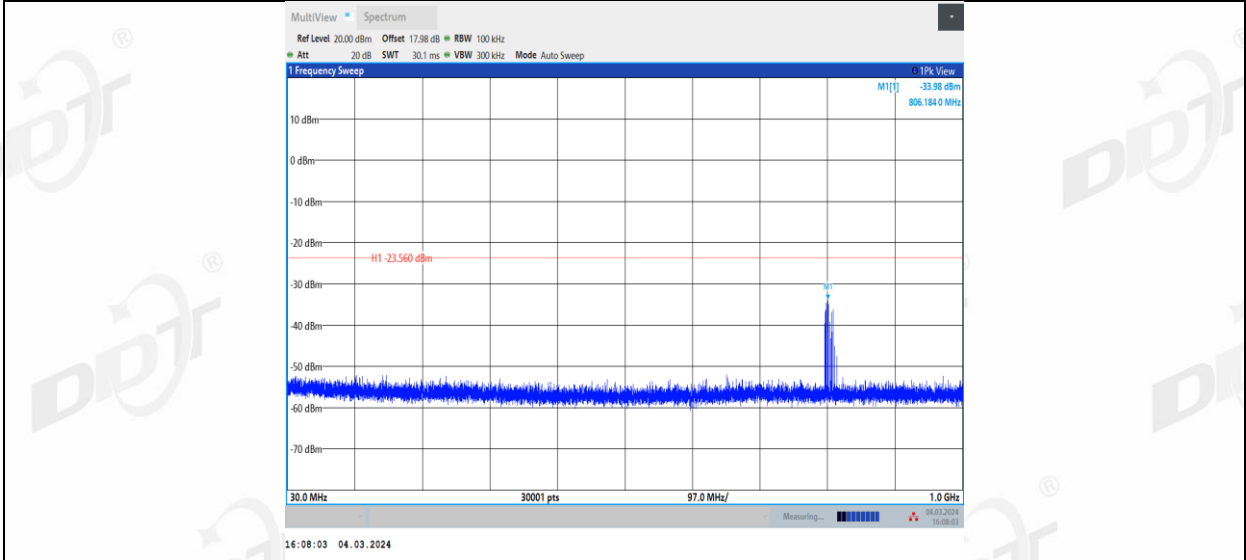
2DH5\_Ant1\_2402\_1000~26500



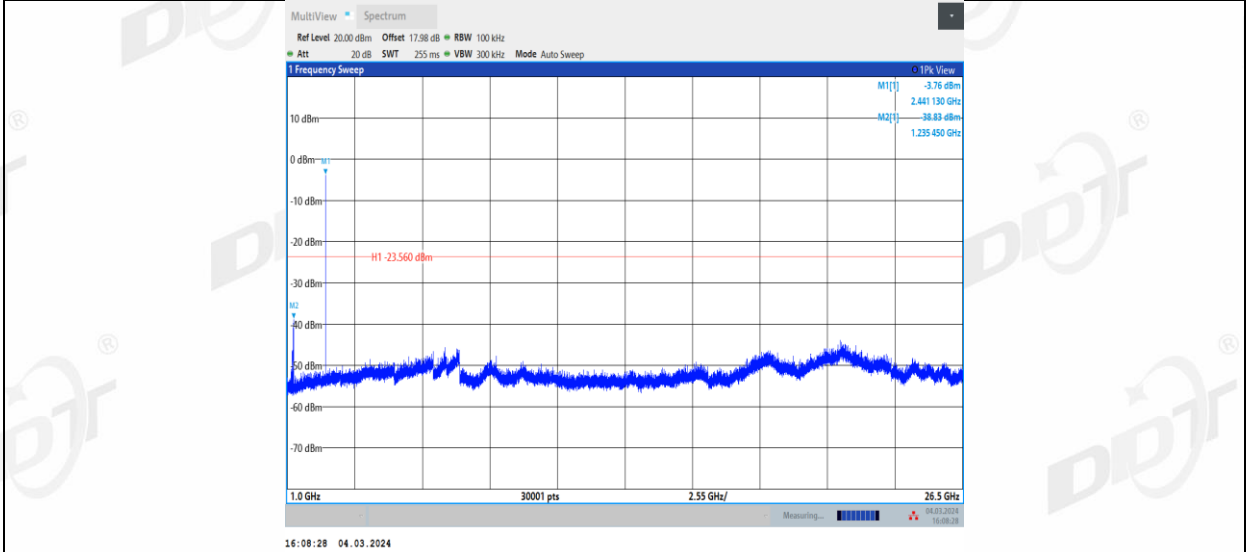
2DH5\_Ant1\_2441\_0~Reference



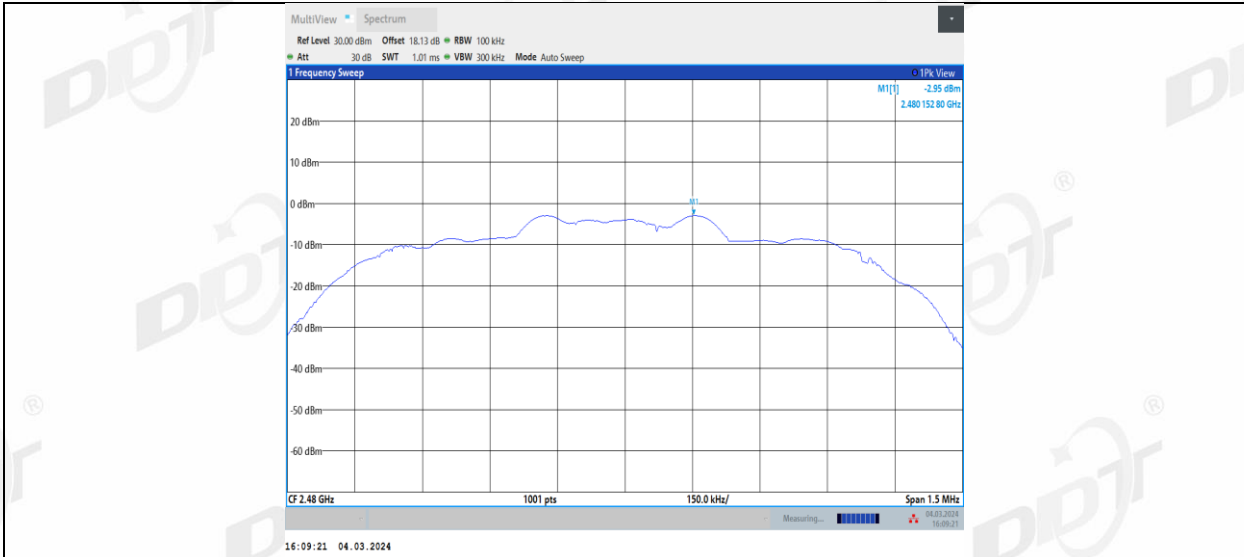
2DH5\_Ant1\_2441\_30~1000



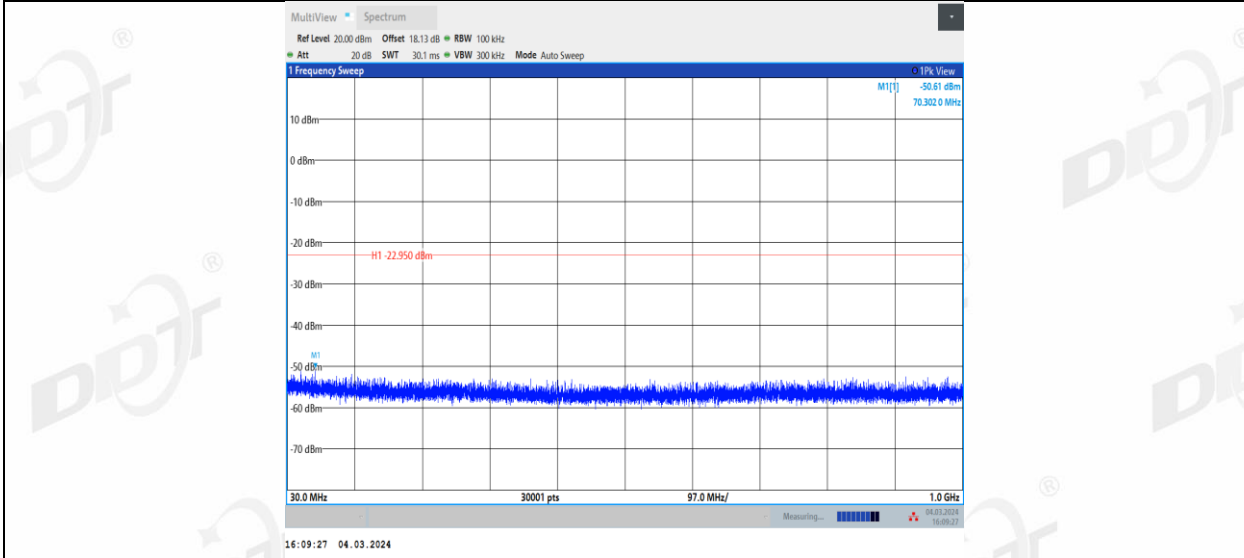
2DH5\_Ant1\_2441\_1000~26500



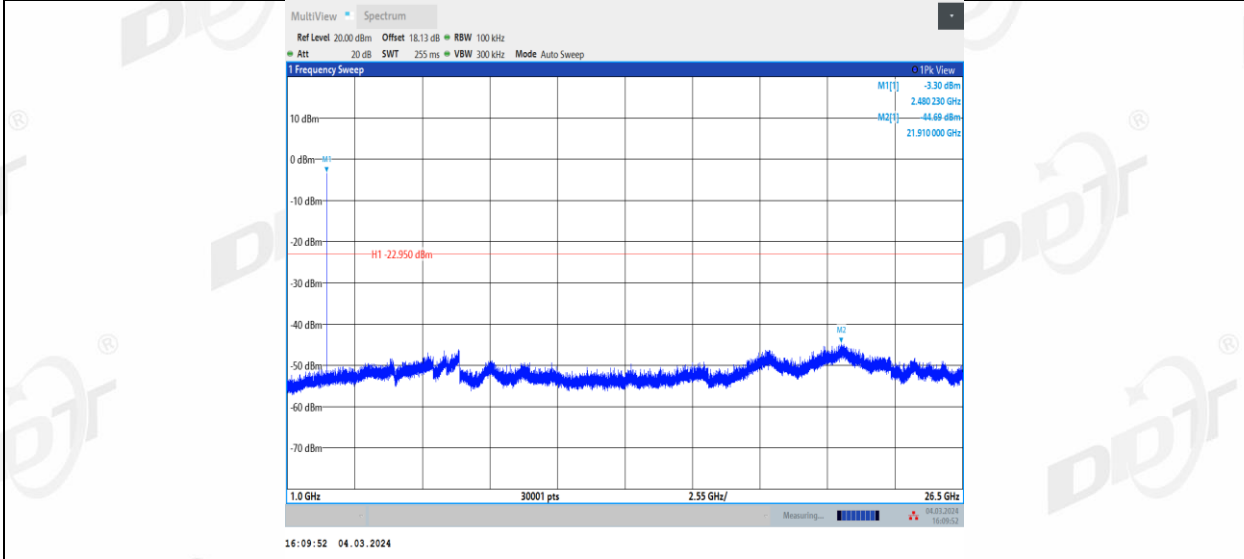
2DH5\_Ant1\_2480\_0~Reference



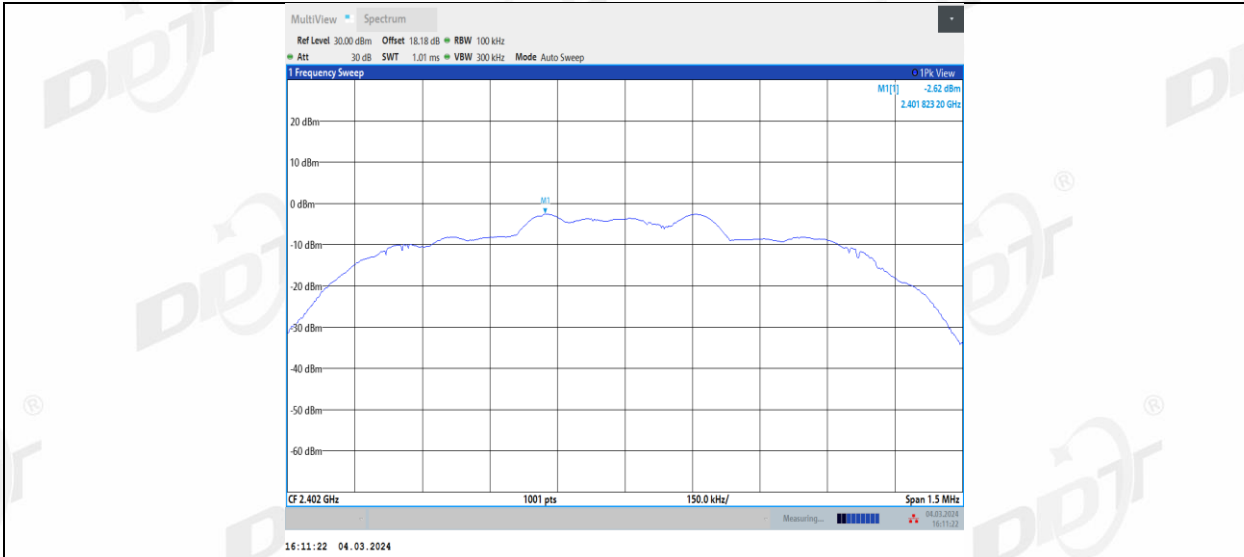
2DH5\_Ant1\_2480\_30~1000



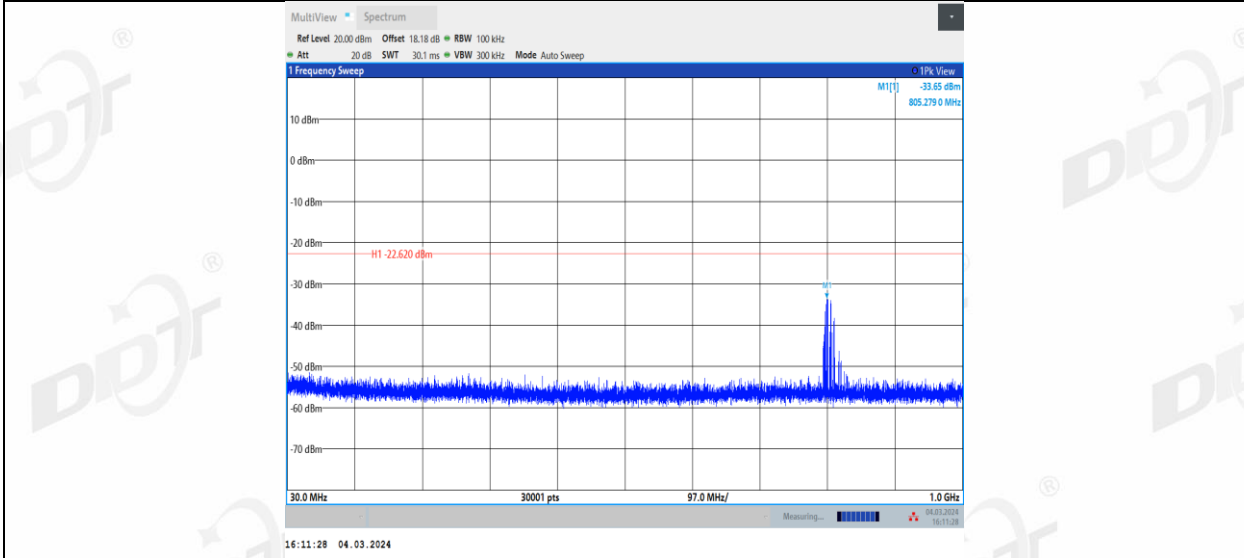
2DH5\_Ant1\_2480\_1000~26500



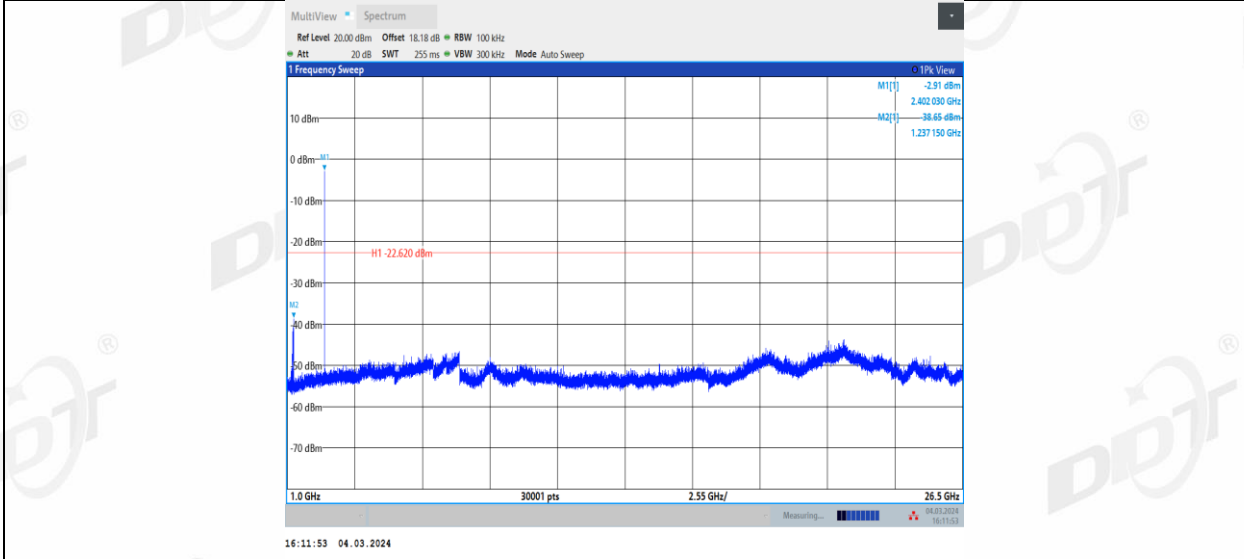
3DH5\_Ant1\_2402\_0~Reference



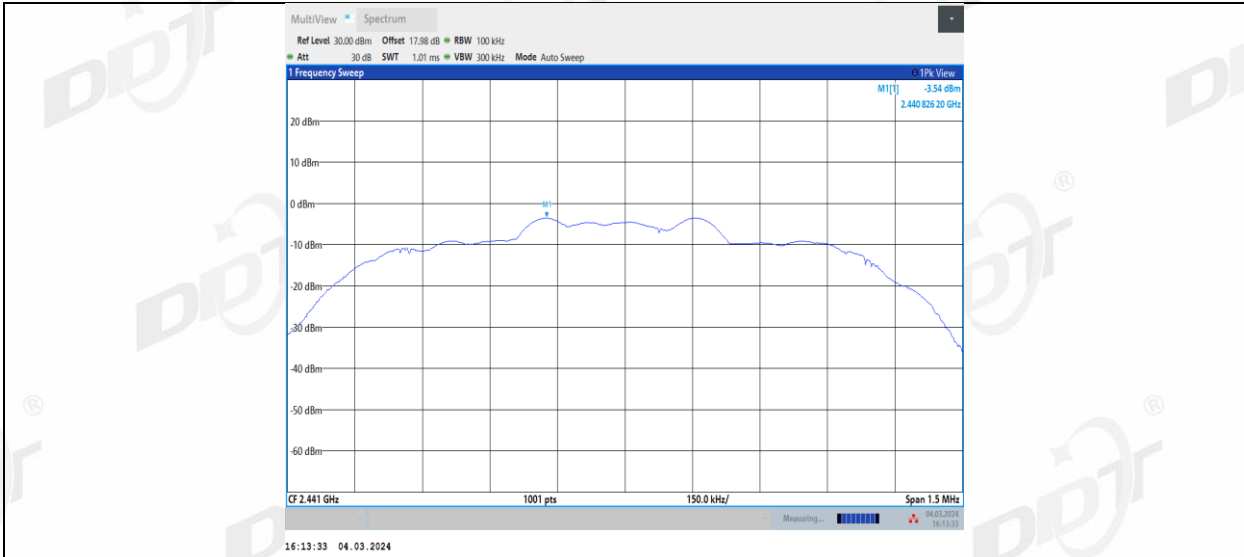
3DH5\_Ant1\_2402\_30~1000



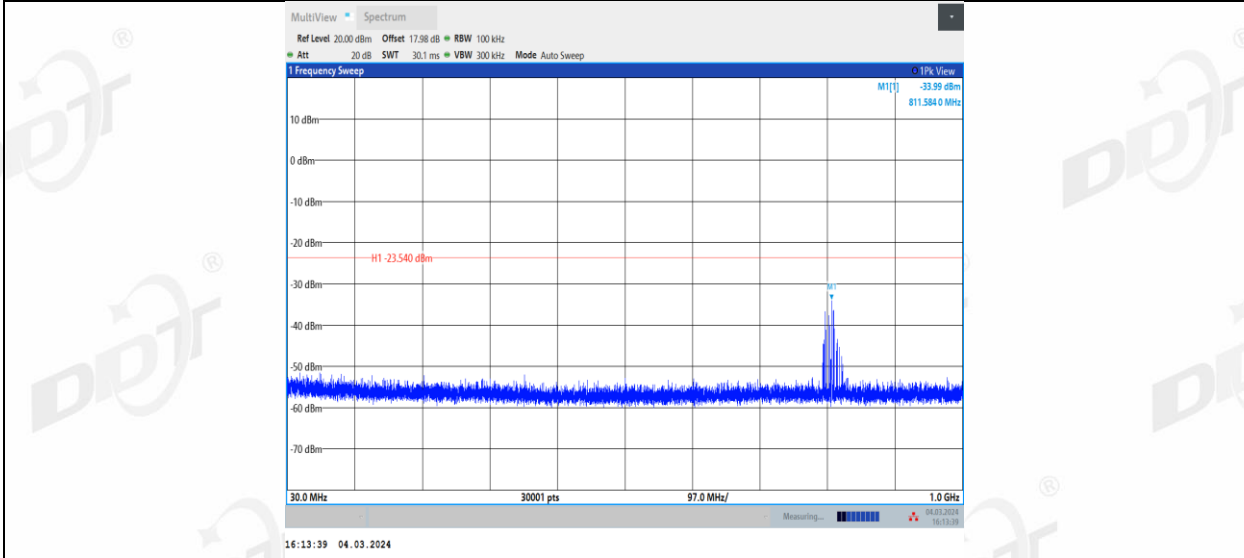
3DH5\_Ant1\_2402\_1000~26500



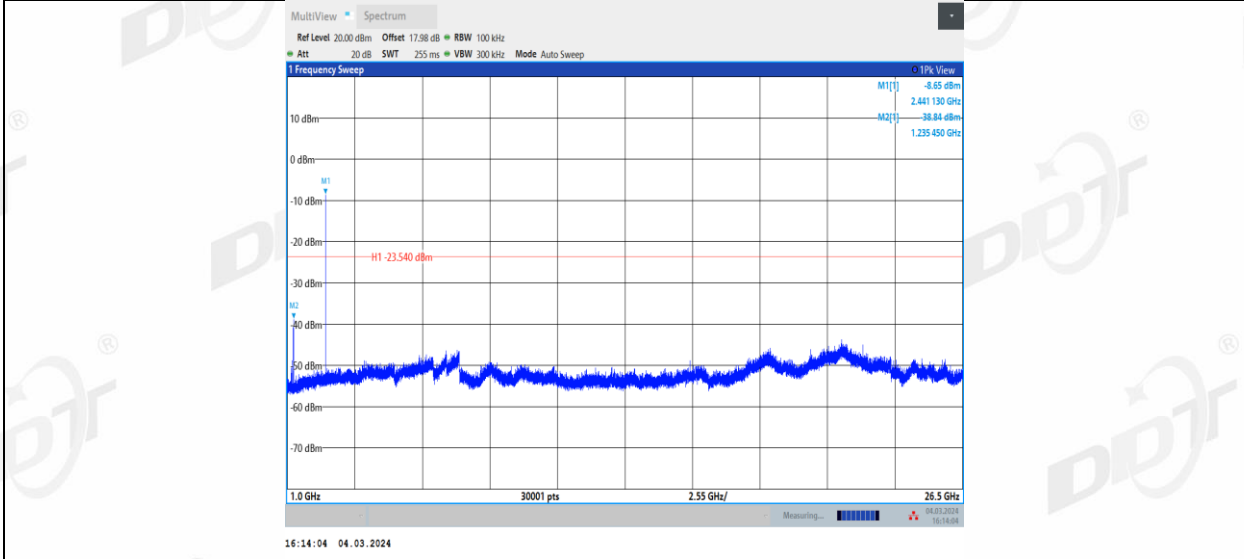
3DH5\_Ant1\_2441\_0~Reference



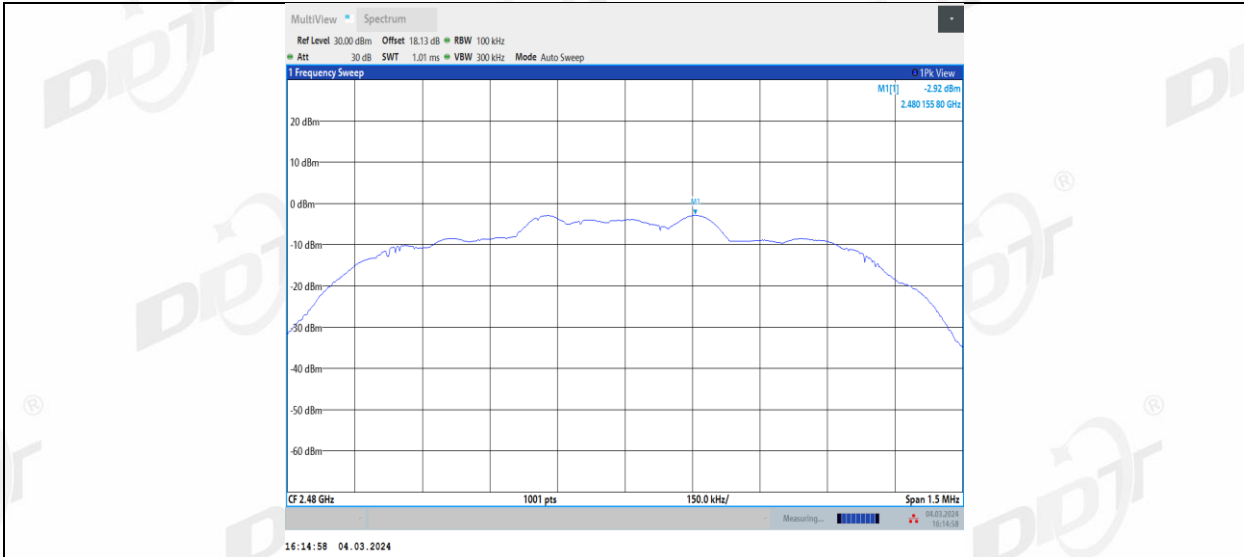
3DH5\_Ant1\_2441\_30~1000



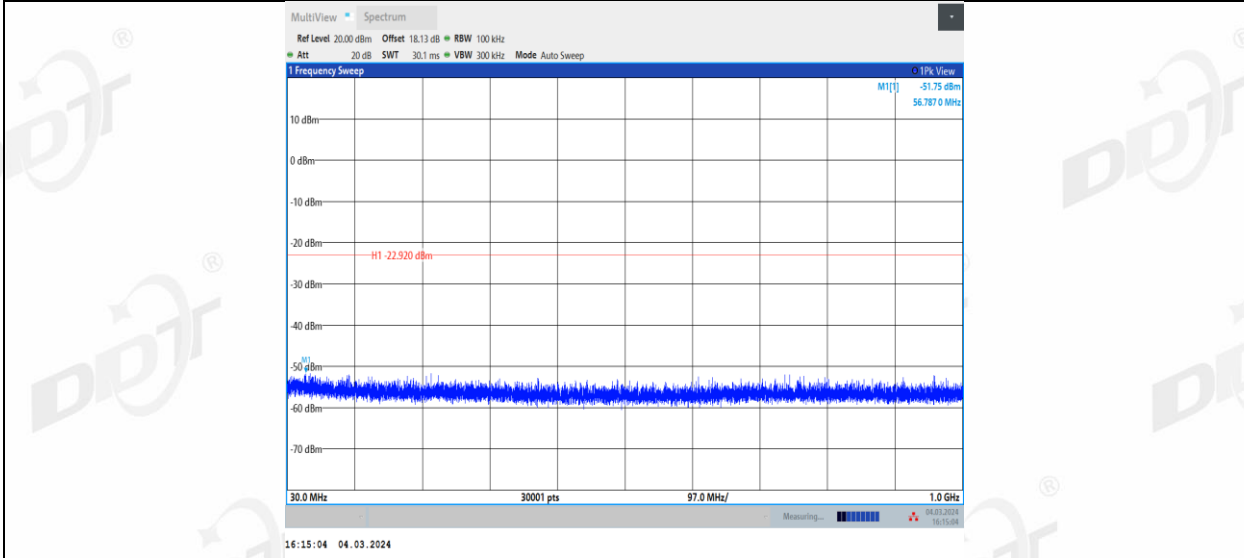
3DH5\_Ant1\_2441\_1000~26500



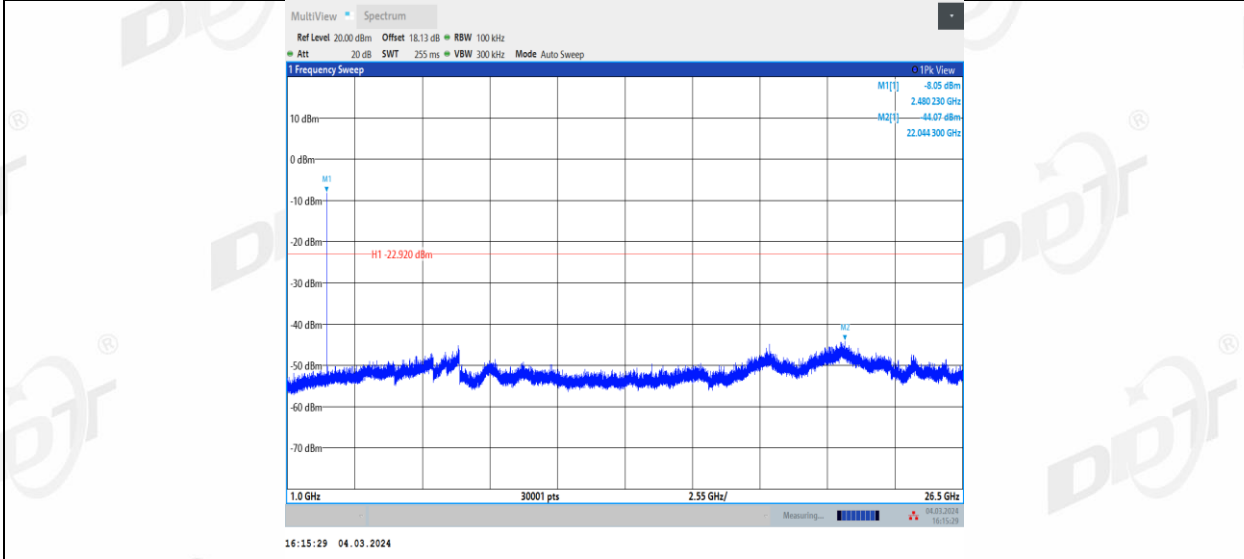
3DH5\_Ant1\_2480\_0~Reference



3DH5\_Ant1\_2480\_30~1000



3DH5\_Ant1\_2480\_1000~26500



## **11. Antenna Requirements**

### **11.1. Limit**

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### **11.2. Result**

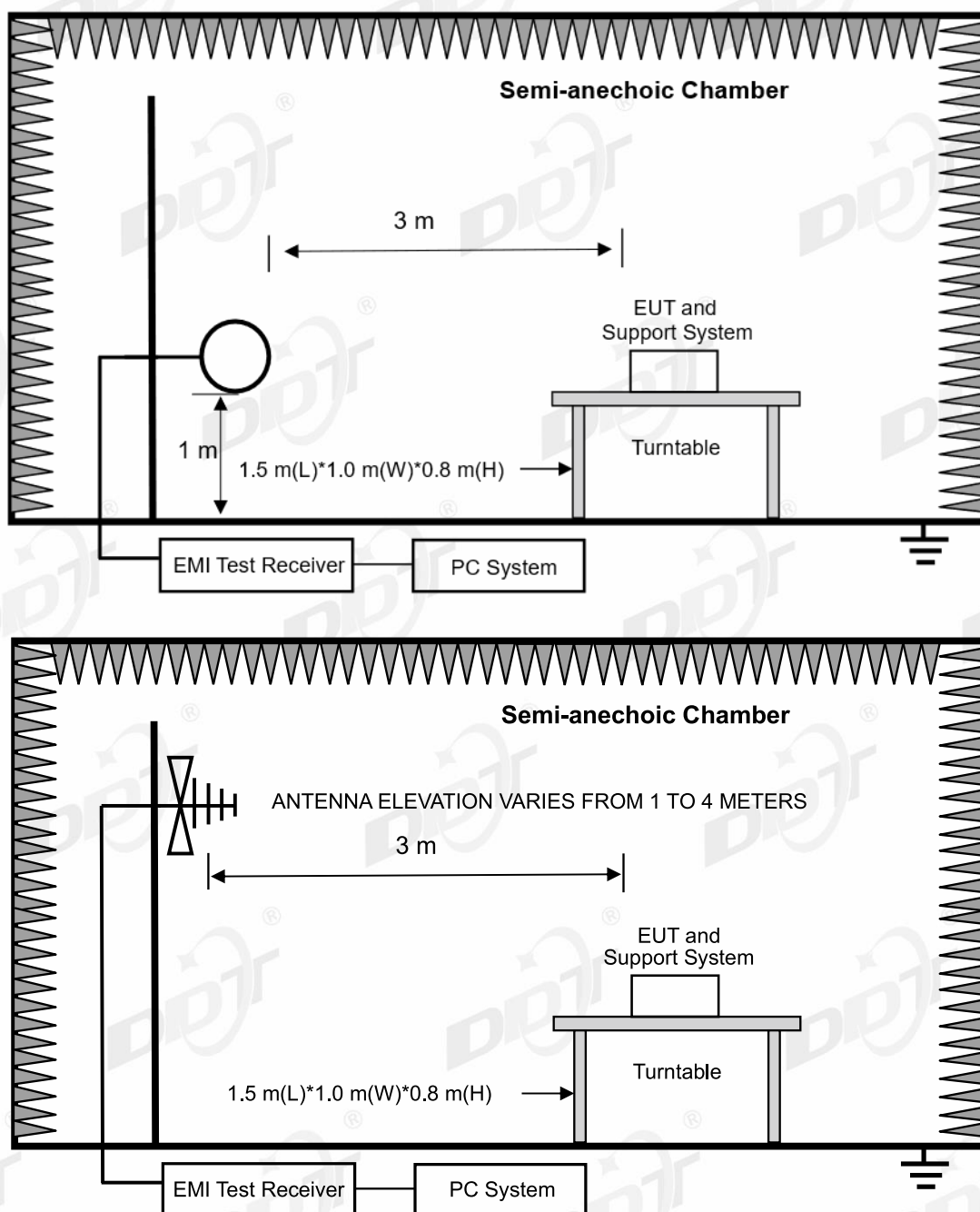
The antenna used for this product as Antenna information described in section 2.1 of the report, and there is no other antenna than that furnished by the responsible party shall be used with the device.

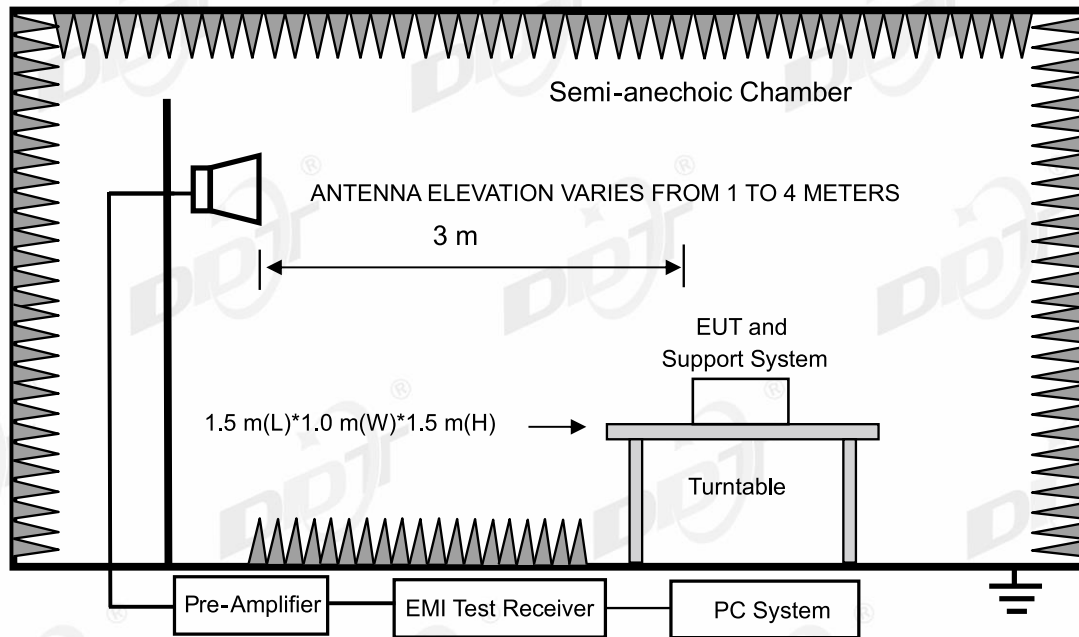
## 12.Radiated Emission

### 12.1. Test equipment

| Equipment                            | Manufacturer      | Model No.          | Serial No.  | Cal Due To |
|--------------------------------------|-------------------|--------------------|-------------|------------|
| Active Loop Antenna                  | Schwarzbeck       | FMZB1519           | DDT-ZC00524 | 2025/09/11 |
| High pass filter                     | Micro-Tronics     | HPM50108           | DDT-ZC00560 | 2025/04/23 |
| EMI TEST RECEIVER                    | R&S               | ESU26              | DDT-ZC01909 | 2025/04/01 |
| ELECTRIC AND MAGNETIC FIELD ANALYZER | Narda             | EHP-200A           | DDT-ZC01401 | 2024/09/21 |
| Trilog Broadband Antenna             | Schwarzbeck       | VULB 9163          | DDT-ZC02050 | 2024/07/12 |
| Broad-Band Horn Antenna              | Schwarzbeck       | BBHA 9170          | DDT-ZC00506 | 2025/04/26 |
| PSA Series Spectrum Analyzer         | Agilent           | E4447A             | DDT-ZC00517 | 2025/04/01 |
| Micro-Tronics filters                | REBES             | BRM50702           | DDT-ZC03242 | /          |
| High pass filter                     | Micro-Tronics     | HPM50102           | DDT-ZC00561 | 2025/04/23 |
| RF cable                             | Zhongke Junchuang | JCT26S-NJ-NJ-1.5M  | DDT-ZC02762 | 2025/04/01 |
| RF cable                             | Yuhu Technology   | JCTB810-NJ-NJ-9M   | DDT-ZC02538 | 2025/04/01 |
| Pre-amplifier                        | COM-POWER         | PAM-840A           | DDT-ZC01693 | 2025/04/01 |
| Pre-amplifier                        | COM-POWER         | PAM-118A           | DDT-ZC01293 | 2024/07/15 |
| RF Cable                             | N/A               | W13.02 AP1-X2      | DDT-ZC04023 | 2025/04/01 |
| Micro-Tronics filters                | REBES             | BRM50716           | DDT-ZC03240 | /          |
| RF Cable                             | N/A               | W24.02 HL-562      | DDT-ZC04022 | 2025/04/01 |
| RF cable                             | Yuhu Technology   | ZT26S-SMAJ-SMAJ-1M | DDT-ZC02037 | 2025/04/01 |
| Hochgewinn-Hornantenne               | SCHWARZBEC K      | BBHA 9120 D        | DDT-ZC02129 | 2025/09/18 |
| High Pass filter                     | Xi'an Xingbo      | XBLBQ-GTA67        | DDT-ZC02179 | 2025/04/23 |

## 12.2. Block diagram of test setup





### 12.3. Limits

#### (1) FCC 15.205 Restricted frequency band

| MHz                      | MHz                 | MHz           | GHz              |
|--------------------------|---------------------|---------------|------------------|
| 0.090-0.110              | 16.42-16.423        | 399.9-410     | 4.5-5.15         |
| <sup>1</sup> 0.495-0.505 | 16.69475-16.69525   | 608-614       | 5.35-5.46        |
| 2.1735-2.1905            | 16.80425-16.80475   | 960-1240      | 7.25-7.75        |
| 4.125-4.128              | 25.5-25.67          | 1300-1427     | 8.025-8.5        |
| 4.1772&4.17775           | 37.5-38.25          | 1435-1626.5   | 9.0-9.2          |
| 4.2072&4.20775           | 73-74.6             | 1645.5-1646.5 | 9.3-9.5          |
| 6.215-6.218              | 74.8-75.2           | 1660-1710     | 10.6-12.7        |
| 6.26775-6.26825          | 108-121.94          | 1718.8-1722.2 | 13.25-13.4       |
| 6.31175-6.31225          | 123-138             | 2200-2300     | 14.47-14.5       |
| 8.291-8.294              | 149.9-150.05        | 2310-2390     | 15.35-16.2       |
| 8.362-8.366              | 156.52475-156.52525 | 2483.5-2500   | 17.7-21.4        |
| 8.37625-8.38675          | 156.7-156.9         | 2690-2900     | 22.01-23.12      |
| 8.41425-8.41475          | 162.0125-167.17     | 3260-3267     | 23.6-24.0        |
| 12.29-12.293             | 167.72-173.2        | 3332-3339     | 31.2-31.8        |
| 12.51975-12.52025        | 240-285             | 3345.8-3358   | 36.43-36.5       |
| 12.57675-12.57725        | 322-335.4           | 3600-4400     | ( <sup>2</sup> ) |
| 13.36-13.41              |                     |               |                  |

<sup>1</sup>Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz

<sup>2</sup>Above 38.6

## (2) FCC 15.209 Limit

| FREQUENCY<br>MHz | DISTANCE<br>Meters | FIELD STRENGTHS LIMIT                                                           |                          |
|------------------|--------------------|---------------------------------------------------------------------------------|--------------------------|
|                  |                    | $\mu\text{V/m}$                                                                 | $\text{dB}\mu\text{V/m}$ |
| 0.009 ~ 0.490    | 300                | $2400/F(\text{kHz})$                                                            | $67.6-20\log(F)$         |
| 0.490 ~ 1.705    | 30                 | $24000/F(\text{kHz})$                                                           | $87.6-20\log(F)$         |
| 1.705 ~ 30.0     | 30                 | 30                                                                              | 29.54                    |
| 30~88            | 3                  | 100                                                                             | 40.0                     |
| 88~216           | 3                  | 150                                                                             | 43.5                     |
| 216~960          | 3                  | 200                                                                             | 46.0                     |
| 960~1000         | 3                  | 500                                                                             | 54.0                     |
| Above 1000       | 3                  | 74.0 $\text{dB}\mu\text{V/m}$ (Peak)<br>54.0 $\text{dB}\mu\text{V/m}$ (Average) |                          |

Note:

(1) The emission limits shown in the above table are based on measurements employing a CISPR QP detector except for the frequency bands 9 - 90 kHz, 110 - 490 kHz and above 1000 MHz, radiated emissions limits in these three bands are based on measurements employing an average detector.

(2) At frequencies below 30 MHz, measurement may be performed at a distance closer than that specified, and the limit at closer measurement distance can be extrapolated by below formula:

$$\text{Limit}_{3\text{m}}(\text{dB}\mu\text{V/m}) = \text{Limit}_{30\text{m}}(\text{dB}\mu\text{V/m}) + 40\log(30\text{m}/3\text{m})$$

## (3) Limit for this EUT

The emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20 dB below the fundamental emissions or comply with 15.209 limits.

**12.4. Assistant equipment used for test**

| Assistant equipment | Manufacturer | Model number | Description | other |
|---------------------|--------------|--------------|-------------|-------|
| /                   | /            | /            | /           | /     |

**12.5. Test procedure**

(1) EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber for below 1G and 150 cm above the ground plane inside a fully-anechoic chamber for above 1G.

(2) Test antenna was located 3 m from the EUT on an adjustable mast, and the antenna used as below table.

| Test frequency range | Test antenna used                        | Test antenna distance |
|----------------------|------------------------------------------|-----------------------|
| 9 kHz - 30 MHz       | Active Loop antenna                      | 3 m                   |
| 30 MHz - 1 GHz       | Trilog Broadband Antenna                 | 3 m                   |
| 1 GHz - 18 GHz       | Double Ridged Horn Antenna(1 GHz-18 GHz) | 3 m                   |

|                 |                             |     |
|-----------------|-----------------------------|-----|
| 18 GHz - 40 GHz | Horn Antenna(18 GHz-40 GHz) | 1 m |
|-----------------|-----------------------------|-----|

According ANSI C63.10:2013 clause 6.4.6 and 6.5.3, for measurements below 30 MHz, Antenna was located 3 m from EUT, the loop antenna was positioned in three antenna orientations (parallel, perpendicular, and round-parallel), for each measurement antenna alignment, the EUT shall be rotated through 0° to 360° on a turntable, and the lowest height of the magnetic antenna shall be 1 m above the ground. For measurement above 30MHz, the trilog Broadband Antenna or Horn Antenna was located 3m from EUT, Measurements were made with the antenna positioned in both the horizontal and vertical planes of Polarization, and the measurement antenna was varied from 1 m to 4 m. in height above the reference ground plane to obtain the maximum signal strength.

(3) Below pre-scan procedure was first performed in order to find prominent frequency spectrum radiated emissions from 9 kHz to 25 GHz:

(a) Scanning the peak frequency spectrum with the antenna specified in step (3), and the EUT was rotated 360 degree, the antenna height was varied from 1 m to 4 m (Except loop antenna, it's fixed 1 m above ground.)

(b) Change work frequency or channel of device if practicable.

(c) Change modulation type of device if practicable.

(d) Change power supply range from 85% to 115% of the rated supply voltage

(e) Rotated EUT though three orthogonal axes to determine the attitude of EUT arrangement produces highest emissions.

Spectrum frequency from 9 kHz to 25 GHz (tenth harmonic of fundamental frequency) was investigated, and no any obvious emission were detected from 18 GHz to 25 GHz, so below final test was performed with frequency range from 9 kHz to 18 GHz.

(4) For final emissions measurements at each frequency of interest, the EUT was rotated and the antenna height was varied between 1 m and 4 m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipment and all of the interface cables were changed according to ANSI C63.10:2013 on Radiated Emission test.

(5) The emissions from 9 kHz to 1 GHz were measured based on CISPR QP detector except for the frequency bands 9 - 90 kHz, 110 - 490 kHz, for emissions from 9 kHz - 90 kHz, 110 kHz - 490 kHz and above 1 GHz were measured based on average detector, for emissions above 1 GHz, peak emissions also be measured and need comply with Peak limit.

(6) The emissions from 9 kHz to 1 GHz, QP or average values were measured with EMI receiver with below RBW.

| Frequency band   | RBW     |
|------------------|---------|
| 9 kHz - 150 kHz  | 200 Hz  |
| 150 kHz - 30 MHz | 9 kHz   |
| 30 MHz - 1 GHz   | 120 kHz |

(7) For emissions above 1GHz, both Peak and Average level were measured with Spectrum Analyzer, and the RBW is set at 1 MHz, VBW is set at 3 MHz for Peak measure; According ANSI C63.10:2013 clause 4.1.4.2.2 procedure for average measure.

(8) According exploratory test, the emission levels are 20 dB below the limit detected from 9 kHz to 30 MHz and 18 GHz to 25 GHz, so the final test was performed with frequency range from 30 MHz to 18 GHz and recorded in below.

(9) For 30 MHz ~ 25 GHz: (Scan with GFSK,  $\pi/4$ -DQPSK and 8DPSK, the worst case is record and reported)

(10) For emissions below 1 GHz, according exploratory explorer test, when change Tx mode and channel, have no distinct influence on emissions level, so for emissions below 1 GHz, the final test was only performed with EUT working in worst mode.

## 12.6. Test result

**PASS. (See below detailed test result)**

12.7. Test data

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-03-15

Tested By:

Junchang Du

EUT:

In-Vehicle infotainment System

Model Number:

CRD8612UBA/DMR675

Test Mode:

Tx mode

Power Supply:

DC 12V

Condition:

Temp:22.4°C;Humi:63.3%

Test Site:

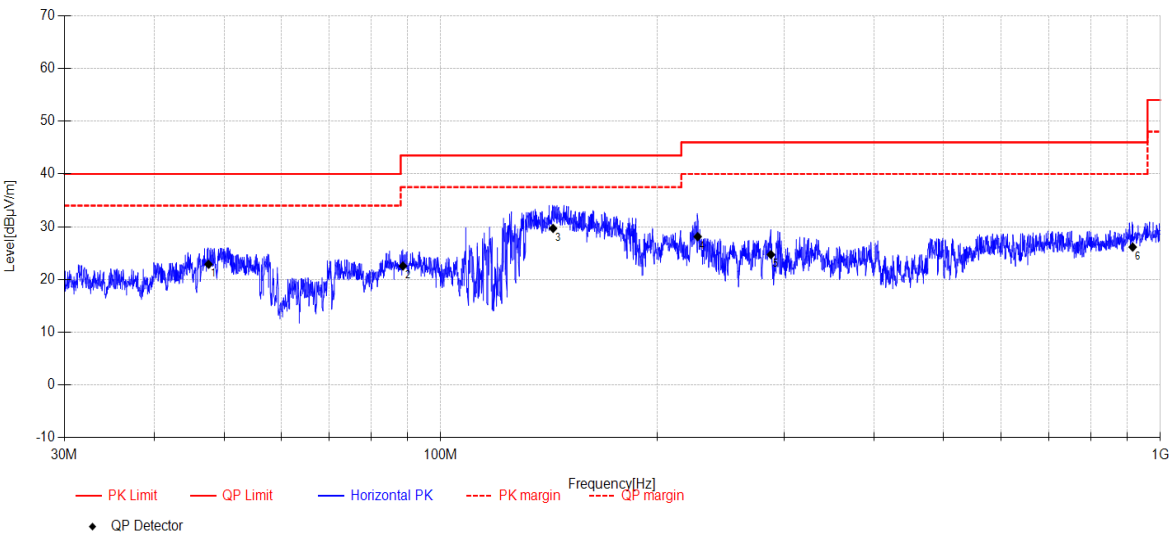
DDT 3# Chamber

File Path:

d:\ts\2024 report data\Q24012204-2E DMR675\FCC BELOW 1G\20240315-234930\_H

Memo:

Sample Number: S24012204-003



| Data List |             |                  |                     |                 |          |                 |                |             |          |            |
|-----------|-------------|------------------|---------------------|-----------------|----------|-----------------|----------------|-------------|----------|------------|
| NO.       | Freq. [MHz] | Reading [dBμV/m] | Antenna Factor [dB] | Cable Loss [dB] | AMP [dB] | Result [dBμV/m] | Limit [dBμV/m] | Margin [dB] | Detector | Polarity   |
| 1         | 47.59       | 36.45            | 12.47               | 4.70            | -30.74   | 22.88           | 40.00          | 17.12       | QP       | Horizontal |
| 2         | 88.63       | 39.14            | 9.15                | 4.93            | -30.67   | 22.55           | 43.50          | 20.95       | QP       | Horizontal |
| 3         | 143.28      | 46               | 9.16                | 5.29            | -30.77   | 29.68           | 43.50          | 13.82       | QP       | Horizontal |
| 4         | 227.60      | 41.23            | 11.56               | 5.85            | -30.52   | 28.12           | 46.00          | 17.88       | QP       | Horizontal |
| 5         | 287.66      | 36.22            | 12.73               | 6.10            | -30.34   | 24.71           | 46.00          | 21.29       | QP       | Horizontal |
| 6         | 915.44      | 25.44            | 21.17               | 8.39            | -28.86   | 26.14           | 46.00          | 19.86       | QP       | Horizontal |

Note:

1. Result Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-03-15

Tested By:

Junchang Du

EUT:

In-Vehicle infotainment System

Model Number:

CRD8612UBA/DMR675

Test Mode:

Tx mode

Power Supply:

DC 12V

Condition:

Temp:22.4°C;Humi:63.3%

Test Site:

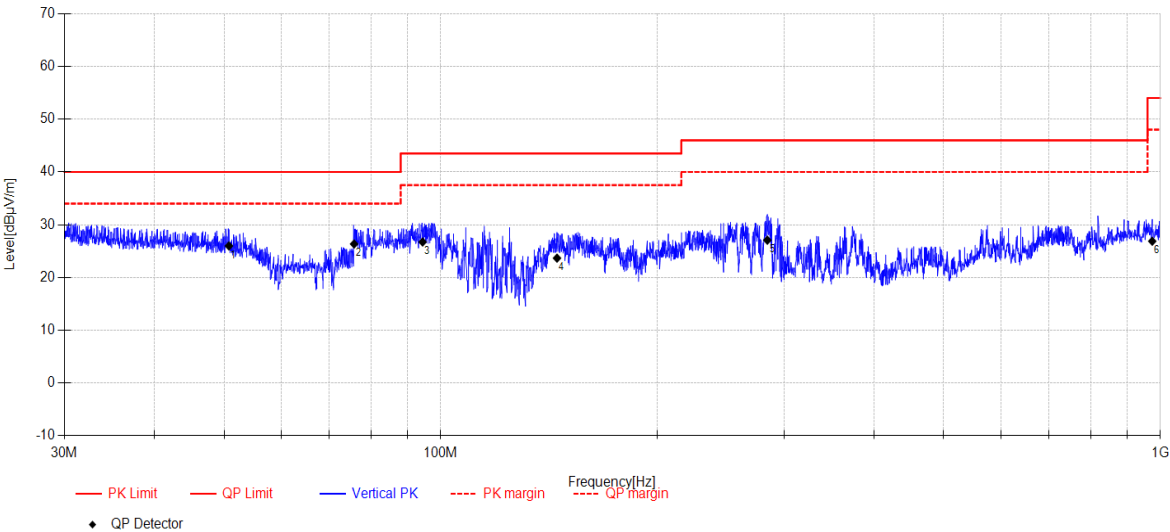
DDT 3# Chamber

File Path:

d:\ts\2024 report data\Q24012204-2E DMR675\FCC BELOW 1G\20240315-235021\_V

Memo:

Sample Number: S24012204-003



| Data List |             |                  |                     |                 |          |                 |                |             |          |          |
|-----------|-------------|------------------|---------------------|-----------------|----------|-----------------|----------------|-------------|----------|----------|
| NO.       | Freq. [MHz] | Reading [dBµV/m] | Antenna Factor [dB] | Cable Loss [dB] | AMP [dB] | Result [dBµV/m] | Limit [dBµV/m] | Margin [dB] | Detector | Polarity |
| 1         | 50.79       | 39.65            | 12.29               | 4.73            | -30.69   | 25.98           | 40.00          | 14.02       | QP       | Vertical |
| 2         | 75.80       | 44.11            | 7.96                | 4.81            | -30.53   | 26.35           | 40.00          | 13.65       | QP       | Vertical |
| 3         | 94.41       | 42.26            | 10.26               | 5.00            | -30.79   | 26.73           | 43.50          | 16.77       | QP       | Vertical |
| 4         | 145.10      | 40.65            | 8.48                | 5.30            | -30.76   | 23.67           | 43.50          | 19.83       | QP       | Vertical |
| 5         | 284.45      | 39.12            | 12.22               | 6.08            | -30.35   | 27.07           | 46.00          | 18.93       | QP       | Vertical |
| 6         | 974.39      | 24.56            | 22.04               | 8.60            | -28.33   | 26.87           | 54.00          | 27.13       | QP       | Vertical |

Note:

1. Result Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.

3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-03-15

Tested By:

Junchang Du

EUT:

In-Vehicle infotainment System

Model Number:

CRD8612UBA/DMR675

Test Mode:

3DH5 TX 2402MHz

Power Supply:

DC 12V

Condition:

Temp:22.4°C;Humi:63.3%

Test Site:

DDT 3# Chamber

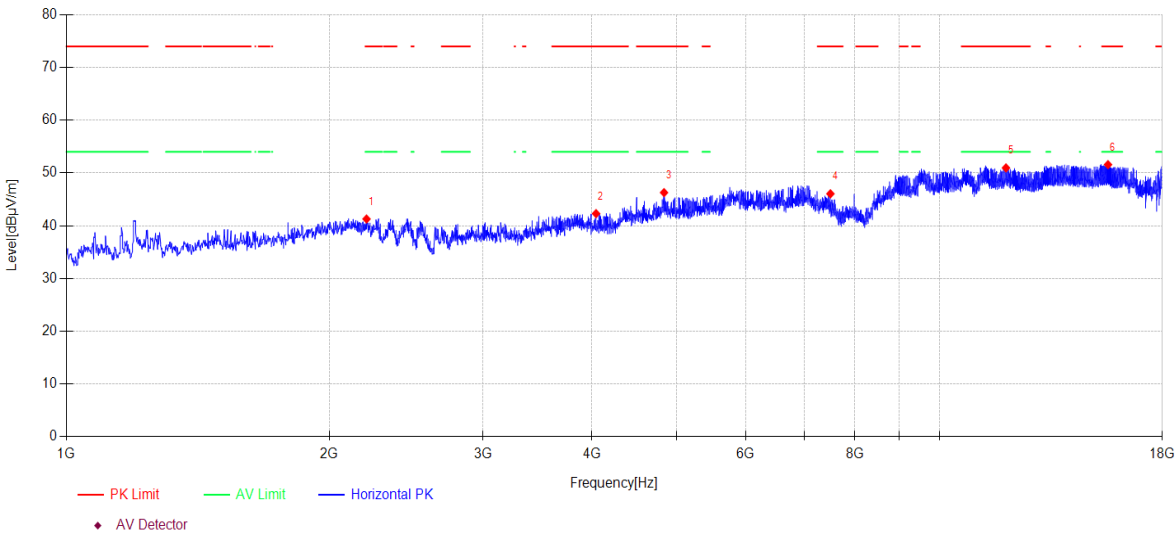
File Path:

d:\ts\2024 report data\Q24012204-2E DMR675\FCC ABOVE 1G\1

Memo:

Sample Number: S24012204-003

Test Graph



| Data List |             |                  |                     |                 |          |                |                |             |          |            |
|-----------|-------------|------------------|---------------------|-----------------|----------|----------------|----------------|-------------|----------|------------|
| NO.       | Freq. [MHz] | Reading [dBμV/m] | Antenna Factor [dB] | Cable loss [dB] | AMP [dB] | Level [dBμV/m] | Limit [dBμV/m] | Margin [dB] | Detector | Polarity   |
| 1         | 2207.000    | 45.17            | 27.73               | 5.98            | -37.60   | 41.28          | 74.00          | 32.72       | PK       | Horizontal |
| 2         | 4043.000    | 45.79            | 30.99               | 5.94            | -40.43   | 42.29          | 74.00          | 31.71       | PK       | Horizontal |
| 3         | 4836.900    | 45.42            | 33.46               | 7.54            | -40.14   | 46.28          | 74.00          | 27.72       | PK       | Horizontal |
| 4         | 7500.800    | 43.85            | 36.50               | 7.65            | -41.95   | 46.05          | 74.00          | 27.95       | PK       | Horizontal |
| 5         | 11917.400   | 41.06            | 38.95               | 10.47           | -39.52   | 50.96          | 74.00          | 23.04       | PK       | Horizontal |
| 6         | 15597.900   | 38.04            | 38.60               | 14.06           | -39.12   | 51.58          | 74.00          | 22.42       | PK       | Horizontal |

Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-03-15

Tested By:

Junchang Du

EUT:

In-Vehicle infotainment System

Model Number:

CRD8612UBA/DMR675

Test Mode:

3DH5 TX 2402MHz

Power Supply:

DC 12V

Condition:

Temp:22.4°C;Humi:63.3%

Test Site:

DDT 3# Chamber

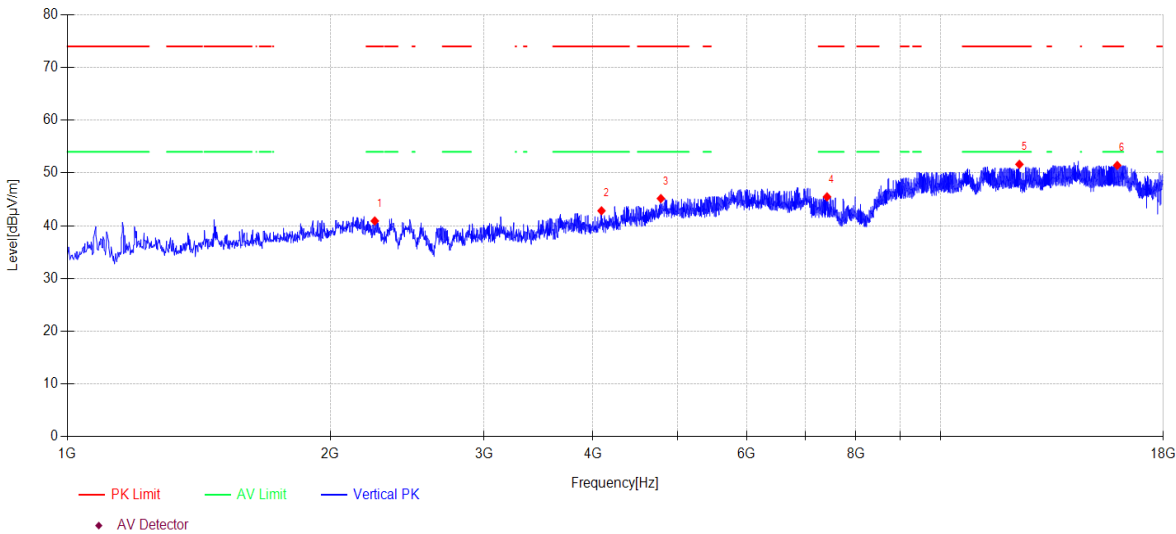
File Path:

d:\ts\2024 report data\Q24012204-2E DMR675\FCC ABOVE 1G\2

Memo:

Sample Number: S24012204-003

Test Graph



| Data List |             |                  |                     |                 |          |                |                |             |          |          |
|-----------|-------------|------------------|---------------------|-----------------|----------|----------------|----------------|-------------|----------|----------|
| NO.       | Freq. [MHz] | Reading [dBμV/m] | Antenna Factor [dB] | Cable loss [dB] | AMP [dB] | Level [dBμV/m] | Limit [dBμV/m] | Margin [dB] | Detector | Polarity |
| 1         | 2249.500    | 45.35            | 27.31               | 5.96            | -37.72   | 40.90          | 74.00          | 33.10       | PK       | Vertical |
| 2         | 4090.600    | 46.14            | 31.08               | 6.03            | -40.42   | 42.83          | 74.00          | 31.17       | PK       | Vertical |
| 3         | 4784.200    | 45.44            | 32.44               | 7.43            | -40.16   | 45.15          | 74.00          | 28.85       | PK       | Vertical |
| 4         | 7414.100    | 42.91            | 36.67               | 7.64            | -41.74   | 45.48          | 74.00          | 28.52       | PK       | Vertical |
| 5         | 12315.200   | 41.47            | 39.30               | 10.54           | -39.68   | 51.63          | 74.00          | 22.37       | PK       | Vertical |
| 6         | 15939.600   | 37.09            | 38.06               | 15.61           | -39.32   | 51.44          | 74.00          | 22.56       | PK       | Vertical |

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-03-15

Tested By:

Junchang Du

EUT:

In-Vehicle infotainment System

Model Number:

CRD8612UBA/DMR675

Test Mode:

3DH5 TX 2441MHz

Power Supply:

DC 12V

Condition:

Temp:22.4°C;Humi:63.3%

Test Site:

DDT 3# Chamber

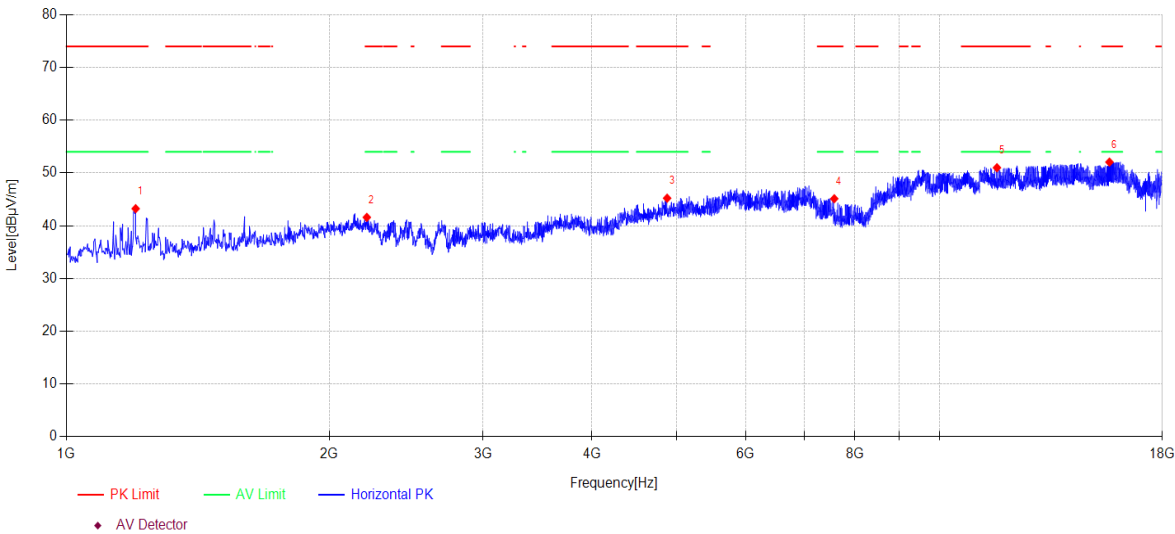
File Path:

d:\ts\2024 report data\Q24012204-2E DMR675\FCC ABOVE 1G\3

Memo:

Sample Number: S24012204-003

Test Graph



| Data List |             |                  |                     |                 |          |                |                |             |          |            |
|-----------|-------------|------------------|---------------------|-----------------|----------|----------------|----------------|-------------|----------|------------|
| NO.       | Freq. [MHz] | Reading [dBµV/m] | Antenna Factor [dB] | Cable loss [dB] | AMP [dB] | Level [dBµV/m] | Limit [dBµV/m] | Margin [dB] | Detector | Polarity   |
| 1         | 1200.600    | 51.69            | 24.90               | 3.55            | -36.91   | 43.23          | 74.00          | 30.77       | PK       | Horizontal |
| 2         | 2208.700    | 45.50            | 27.71               | 5.98            | -37.60   | 41.59          | 74.00          | 32.41       | PK       | Horizontal |
| 3         | 4876.000    | 44.35            | 33.38               | 7.62            | -40.13   | 45.22          | 74.00          | 28.78       | PK       | Horizontal |
| 4         | 7577.300    | 43.16            | 36.45               | 7.65            | -42.14   | 45.12          | 74.00          | 28.88       | PK       | Horizontal |
| 5         | 11636.900   | 41.16            | 39.00               | 10.22           | -39.39   | 50.99          | 74.00          | 23.01       | PK       | Horizontal |
| 6         | 15657.400   | 38.34            | 38.54               | 14.33           | -39.15   | 52.06          | 74.00          | 21.94       | PK       | Horizontal |

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-03-15

Tested By:

Junchang Du

EUT:

In-Vehicle infotainment System

Model Number:

CRD8612UBA/DMR675

Test Mode:

3DH5 TX 2441MHz

Power Supply:

DC 12V

Condition:

Temp:22.4°C;Humi:63.3%

Test Site:

DDT 3# Chamber

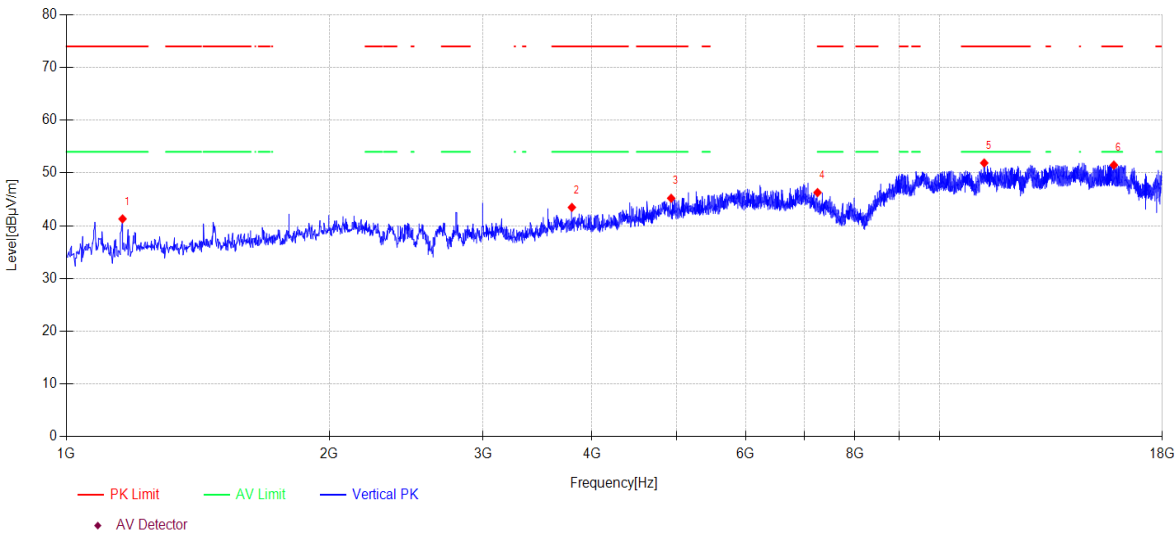
File Path:

d:\ts\2024 report data\Q24012204-2E DMR675\FCC ABOVE 1G\4

Memo:

Sample Number: S24012204-003

Test Graph



| Data List |             |                  |                     |                 |          |                |                |             |          |          |
|-----------|-------------|------------------|---------------------|-----------------|----------|----------------|----------------|-------------|----------|----------|
| NO.       | Freq. [MHz] | Reading [dBµV/m] | Antenna Factor [dB] | Cable loss [dB] | AMP [dB] | Level [dBµV/m] | Limit [dBµV/m] | Margin [dB] | Detector | Polarity |
| 1         | 1159.800    | 49.96            | 24.82               | 3.42            | -36.90   | 41.30          | 74.00          | 32.70       | PK       | Vertical |
| 2         | 3793.100    | 47.32            | 30.67               | 5.80            | -40.32   | 43.47          | 74.00          | 30.53       | PK       | Vertical |
| 3         | 4928.700    | 44.52            | 33.06               | 7.73            | -40.11   | 45.20          | 74.00          | 28.80       | PK       | Vertical |
| 4         | 7250.900    | 43.19            | 36.80               | 7.63            | -41.33   | 46.29          | 74.00          | 27.71       | PK       | Vertical |
| 5         | 11252.700   | 42.03            | 39.20               | 9.87            | -39.21   | 51.89          | 74.00          | 22.11       | PK       | Vertical |
| 6         | 15841.000   | 37.37            | 38.22               | 15.16           | -39.26   | 51.49          | 74.00          | 22.51       | PK       | Vertical |

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-03-15

Tested By:

Junchang Du

EUT:

In-Vehicle infotainment System

Model Number:

CRD8612UBA/DMR675

Test Mode:

3DH5 TX 2480MHz

Power Supply:

DC 12V

Condition:

Temp:22.4°C;Humi:63.3%

Test Site:

DDT 3# Chamber

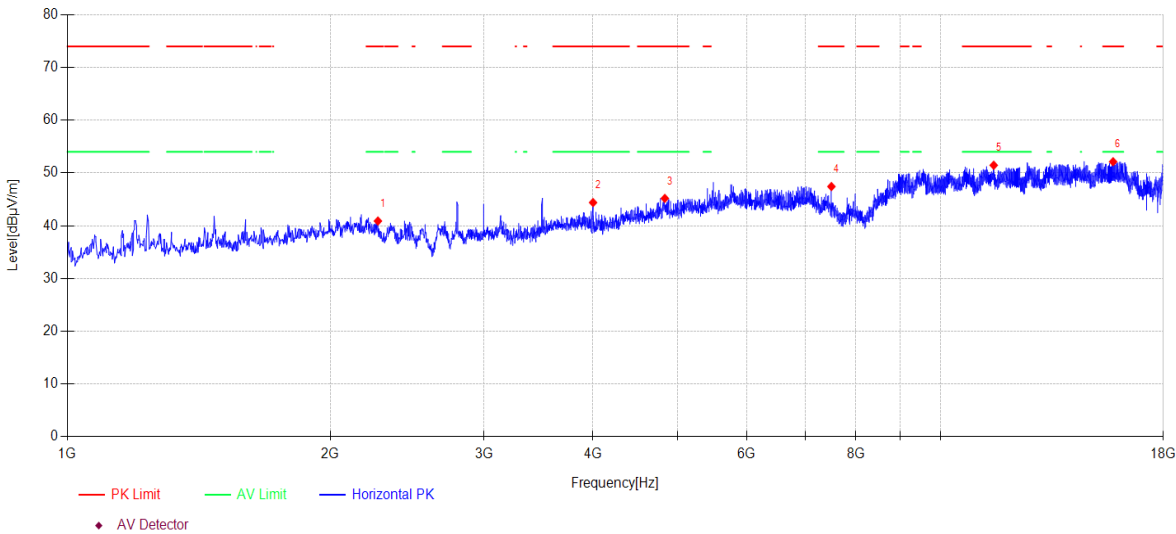
File Path:

d:\ts\2024 report data\Q24012204-2E DMR675\FCC ABOVE 1G\5

Memo:

Sample Number: S24012204-003

Test Graph



| Data List |             |                  |                     |                 |          |                |                |             |          |            |
|-----------|-------------|------------------|---------------------|-----------------|----------|----------------|----------------|-------------|----------|------------|
| NO.       | Freq. [MHz] | Reading [dBµV/m] | Antenna Factor [dB] | Cable loss [dB] | AMP [dB] | Level [dBµV/m] | Limit [dBµV/m] | Margin [dB] | Detector | Polarity   |
| 1         | 2268.200    | 45.59            | 27.12               | 5.95            | -37.77   | 40.89          | 74.00          | 33.11       | PK       | Horizontal |
| 2         | 4000.500    | 48.09            | 30.90               | 5.85            | -40.45   | 44.39          | 74.00          | 29.61       | PK       | Horizontal |
| 3         | 4833.500    | 44.42            | 33.37               | 7.53            | -40.14   | 45.18          | 74.00          | 28.82       | PK       | Horizontal |
| 4         | 7500.800    | 45.23            | 36.50               | 7.65            | -41.95   | 47.43          | 74.00          | 26.57       | PK       | Horizontal |
| 5         | 11509.400   | 41.51            | 39.18               | 10.10           | -39.33   | 51.46          | 74.00          | 22.54       | PK       | Horizontal |
| 6         | 15766.200   | 38.16            | 38.37               | 14.82           | -39.22   | 52.13          | 74.00          | 21.87       | PK       | Horizontal |

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-03-15

Tested By:

Junchang Du

EUT:

In-Vehicle infotainment System

Model Number:

CRD8612UBA/DMR675

Test Mode:

3DH5 TX 2480MHz

Power Supply:

DC 12V

Condition:

Temp:22.4°C;Humi:63.3%

Test Site:

DDT 3# Chamber

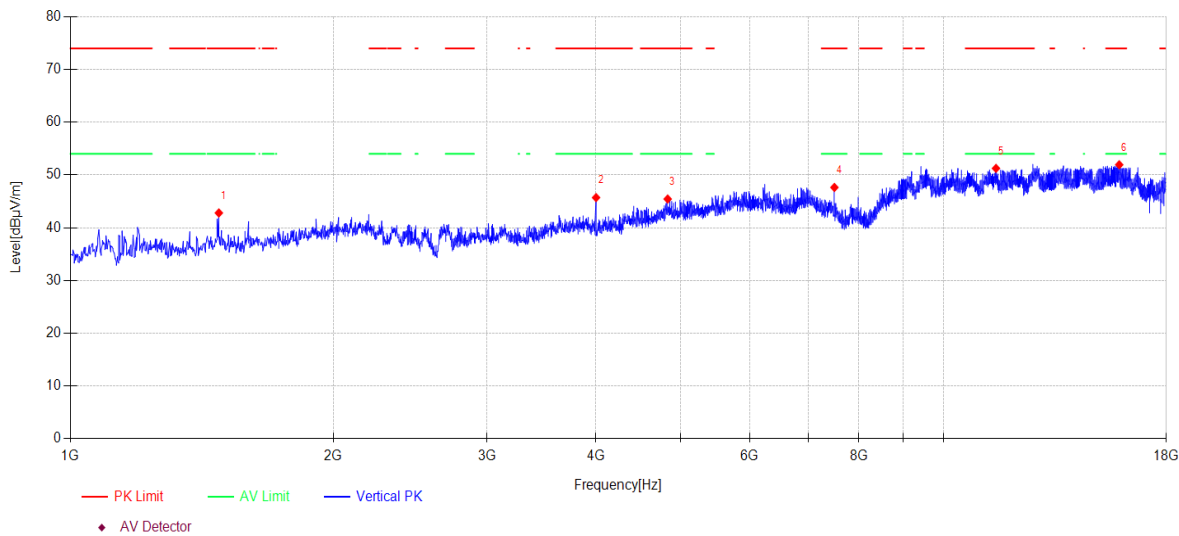
File Path:

d:\ts\2024 report data\Q24012204-2E DMR675\FCC ABOVE 1G\6

Memo:

Sample Number: S24012204-003

Test Graph



| Data List |             |                  |                     |                 |          |                |                |             |          |          |
|-----------|-------------|------------------|---------------------|-----------------|----------|----------------|----------------|-------------|----------|----------|
| NO.       | Freq. [MHz] | Reading [dBμV/m] | Antenna Factor [dB] | Cable loss [dB] | AMP [dB] | Level [dBμV/m] | Limit [dBμV/m] | Margin [dB] | Detector | Polarity |
| 1         | 1479.400    | 49.89            | 25.42               | 4.43            | -36.94   | 42.80          | 74.00          | 31.20       | PK       | Vertical |
| 2         | 4000.500    | 49.41            | 30.90               | 5.85            | -40.45   | 45.71          | 74.00          | 28.29       | PK       | Vertical |
| 3         | 4831.800    | 44.72            | 33.33               | 7.53            | -40.14   | 45.44          | 74.00          | 28.56       | PK       | Vertical |
| 4         | 7500.800    | 45.44            | 36.50               | 7.65            | -41.95   | 47.64          | 74.00          | 26.36       | PK       | Vertical |
| 5         | 11485.600   | 41.28            | 39.21               | 10.08           | -39.32   | 51.25          | 74.00          | 22.75       | PK       | Vertical |
| 6         | 15897.100   | 37.72            | 38.11               | 15.41           | -39.30   | 51.94          | 74.00          | 22.06       | PK       | Vertical |

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

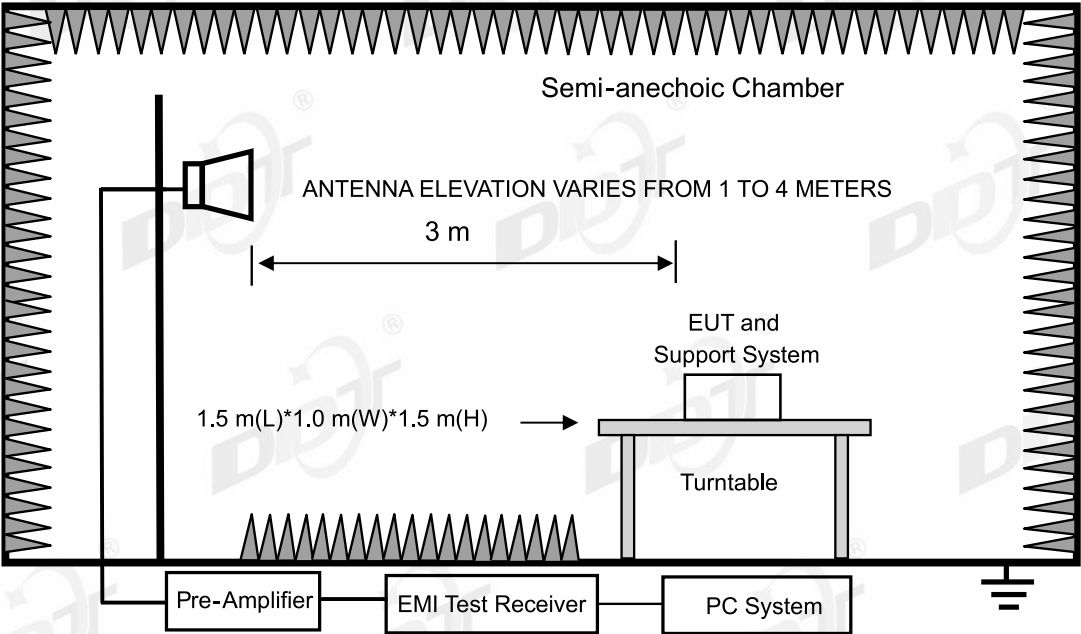
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

## 13.Band Edge Compliance

### 13.1. Test equipment

| Equipment                            | Manufacturer      | Model No.          | Serial No.  | Cal Due To |
|--------------------------------------|-------------------|--------------------|-------------|------------|
| Active Loop Antenna                  | Schwarzbeck       | FMZB1519           | DDT-ZC00524 | 2025/09/11 |
| High pass filter                     | Micro-Tronics     | HPM50108           | DDT-ZC00560 | 2025/04/23 |
| EMI TEST RECEIVER                    | R&S               | ESU26              | DDT-ZC01909 | 2025/04/01 |
| ELECTRIC AND MAGNETIC FIELD ANALYZER | Narda             | EHP-200A           | DDT-ZC01401 | 2024/09/21 |
| Trilog Broadband Antenna             | Schwarzbeck       | VULB 9163          | DDT-ZC02050 | 2024/07/12 |
| Broad-Band Horn Antenna              | Schwarzbeck       | BBHA 9170          | DDT-ZC00506 | 2025/04/26 |
| PSA Series Spectrum Analyzer         | Agilent           | E4447A             | DDT-ZC00517 | 2025/04/01 |
| Micro-Tronics filters                | REBES             | BRM50702           | DDT-ZC03242 | /          |
| High pass filter                     | Micro-Tronics     | HPM50102           | DDT-ZC00561 | 2025/04/23 |
| RF cable                             | Zhongke Junchuang | JCT26S-NJ-NJ-1.5M  | DDT-ZC02762 | 2025/04/01 |
| RF cable                             | Yuhu Technology   | JCTB810-NJ-NJ-9M   | DDT-ZC02538 | 2025/04/01 |
| Pre-amplifier                        | COM-POWER         | PAM-840A           | DDT-ZC01693 | 2025/04/01 |
| Pre-amplifier                        | COM-POWER         | PAM-118A           | DDT-ZC01293 | 2024/07/15 |
| RF Cable                             | N/A               | W13.02 AP1-X2      | DDT-ZC04023 | 2025/04/01 |
| Micro-Tronics filters                | REBES             | BRM50716           | DDT-ZC03240 | /          |
| RF Cable                             | N/A               | W24.02 HL-562      | DDT-ZC04022 | 2025/04/01 |
| RF cable                             | Yuhu Technology   | ZT26S-SMAJ-SMAJ-1M | DDT-ZC02037 | 2025/04/01 |
| Hochgewinn-Hornantenne               | SCHWARZBEC K      | BBHA 9120 D        | DDT-ZC02129 | 2025/09/18 |
| High Pass filter                     | Xi'an Xingbo      | XBLBQ-GTA67        | DDT-ZC02179 | 2025/04/23 |

13.2. Block diagram of test setup



13.3. Limits

All restriction band should comply with 15.209 limits, other emission should be at least 20 dB below the fundamental.

13.4. Assistant equipment used for test

| Assistant equipment | Manufacturer | Model number | Description | other |
|---------------------|--------------|--------------|-------------|-------|
| /                   | /            | /            | /           | /     |

13.5. Test procedure

Same with Radiated Emission except change investigated frequency range.  
Remark: All restriction band have been tested, and only the worst case is shown in report.

13.6. Test result

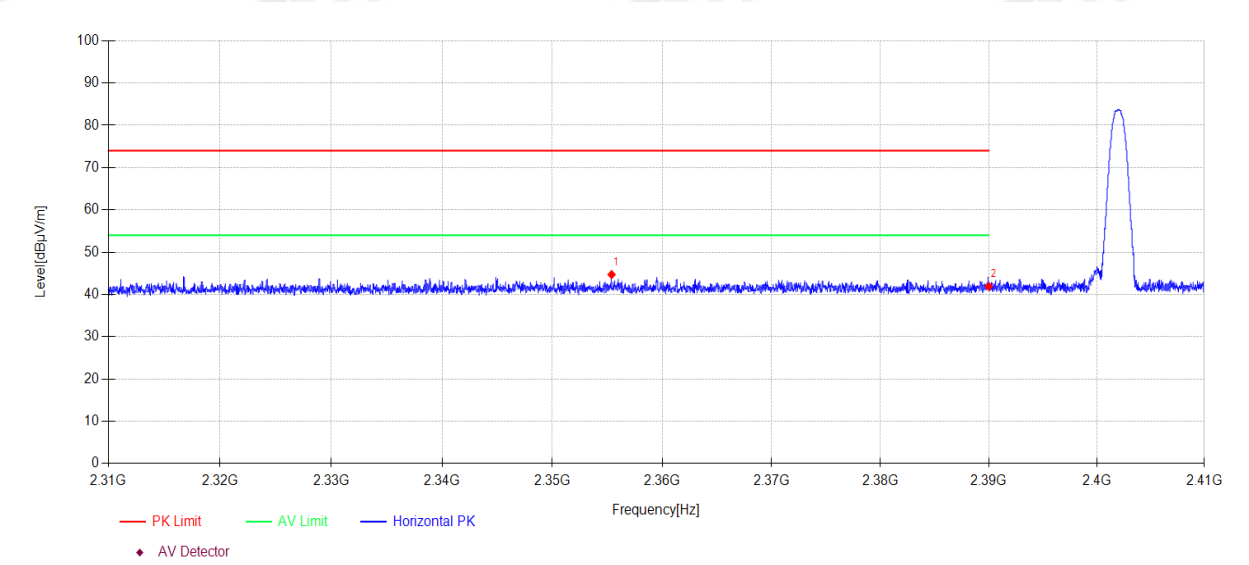
**PASS.** (See below detailed test result)

13.7. Test data

TR-4-E-009 Radiated Emission Test Result

|            |                                                           |               |                   |
|------------|-----------------------------------------------------------|---------------|-------------------|
| Test Date: | 2024-03-15                                                | Tested By:    | Junchang Du       |
| EUT:       | In-Vehicle infotainment System                            | Model Number: | CRD8612UBA/DMR675 |
| Test Mode: | DH5 TX 2402MHz                                            | Power Supply: | DC 12V            |
| Condition: | Temp:22.4°C;Humi:63.3%                                    | Test Site:    | DDT 3# Chamber    |
| File Path: | d:\ts\2024 report data\Q24012204-2E DMR675\FCC ABOVE 1G\7 |               |                   |
| Memo:      | Sample Number: S24012204-003                              |               |                   |

Test Graph



| Data List |             |                  |                     |                 |          |                |                |             |          |            |
|-----------|-------------|------------------|---------------------|-----------------|----------|----------------|----------------|-------------|----------|------------|
| NO.       | Freq. [MHz] | Reading [dBμV/m] | Antenna Factor [dB] | Cable loss [dB] | AMP [dB] | Level [dBμV/m] | Limit [dBμV/m] | Margin [dB] | Detector | Polarity   |
| 1         | 2355.390    | 13.74            | 27.12               | 3.84            | 0.00     | 44.70          | 74.00          | 29.30       | PK       | Horizontal |
| 2         | 2390.000    | 10.77            | 27.26               | 3.87            | 0.00     | 41.90          | 74.00          | 32.10       | PK       | Horizontal |

Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-03-15

Tested By:

Junchang Du

EUT:

In-Vehicle infotainment System

Model Number:

CRD8612UBA/DMR675

Test Mode:

DH5 TX 2402MHz

Power Supply:

DC 12V

Condition:

Temp:22.4°C;Humi:63.3%

Test Site:

DDT 3# Chamber

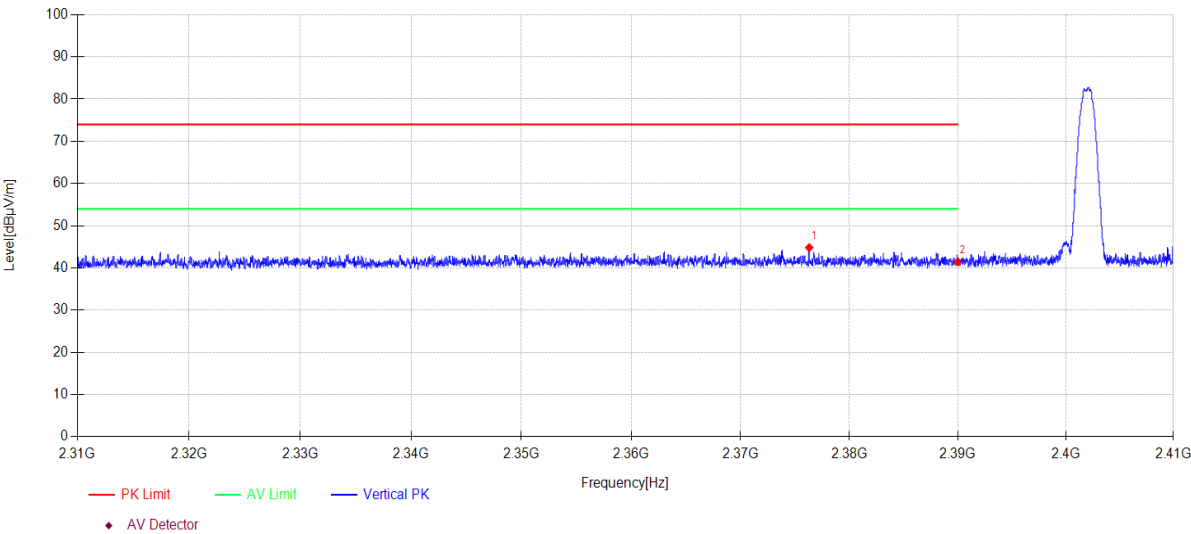
File Path:

d:\ts\2024 report data\Q24012204-2E DMR675\FCC ABOVE 1G\8

Memo:

Sample Number: S24012204-003

Test Graph



| Data List |             |                  |                     |                 |          |                |                |             |          |          |
|-----------|-------------|------------------|---------------------|-----------------|----------|----------------|----------------|-------------|----------|----------|
| NO        | Freq. [MHz] | Reading [dBμV/m] | Antenna Factor [dB] | Cable loss [dB] | AMP [dB] | Level [dBμV/m] | Limit [dBμV/m] | Margin [dB] | Detector | Polarity |
| 1         | 2376.310    | 13.75            | 27.21               | 3.86            | 0.00     | 44.82          | 74.00          | 29.18       | PK       | Vertical |
| 2         | 2390.000    | 10.27            | 27.26               | 3.87            | 0.00     | 41.40          | 74.00          | 32.60       | PK       | Vertical |

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-03-15

Tested By:

Junchang Du

EUT:

In-Vehicle infotainment System

Model Number:

CRD8612UBA/DMR675

Test Mode:

2DH5 TX 2402MHz

Power Supply:

DC 12V

Condition:

Temp:22.4°C;Humi:63.3%

Test Site:

DDT 3# Chamber

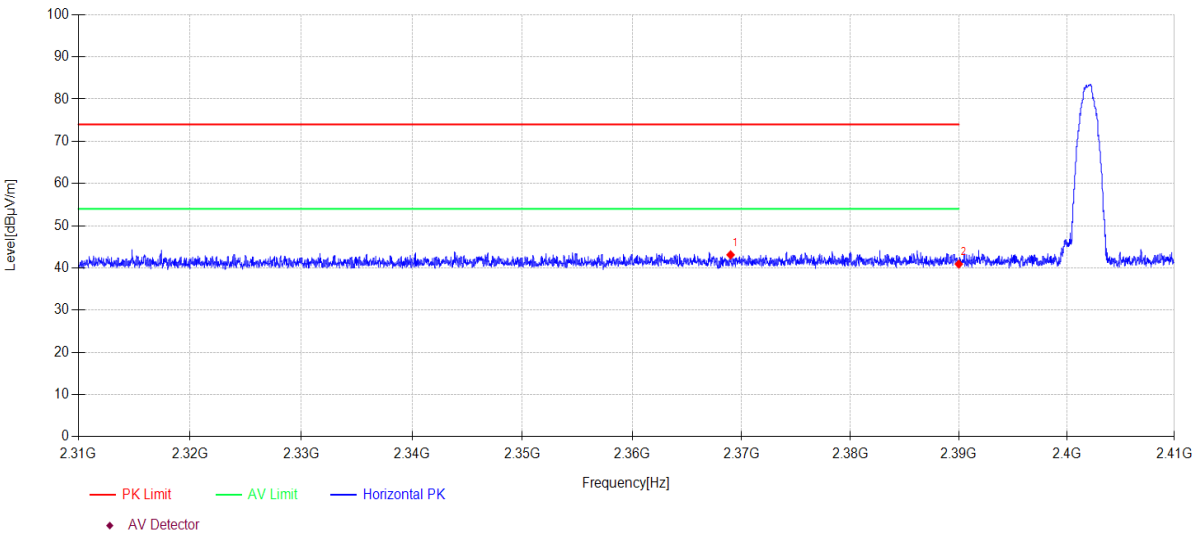
File Path:

d:\ts\2024 report data\Q24012204-2E DMR675\FCC ABOVE 1G\9

Memo:

Sample Number: S24012204-003

Test Graph



| Data List |             |                  |                     |                 |          |                |                |             |          |            |
|-----------|-------------|------------------|---------------------|-----------------|----------|----------------|----------------|-------------|----------|------------|
| NO        | Freq. [MHz] | Reading [dBμV/m] | Antenna Factor [dB] | Cable loss [dB] | AMP [dB] | Level [dBμV/m] | Limit [dBμV/m] | Margin [dB] | Detector | Polarity   |
| 1         | 2369.000    | 12.07            | 27.18               | 3.85            | 0.00     | 43.10          | 74.00          | 30.90       | PK       | Horizontal |
| 2         | 2390.000    | 9.78             | 27.26               | 3.87            | 0.00     | 40.91          | 74.00          | 33.09       | PK       | Horizontal |

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-03-15

Tested By:

Junchang Du

EUT:

In-Vehicle infotainment System

Model Number:

CRD8612UBA/DMR675

Test Mode:

2DH5 TX 2402MHz

Power Supply:

DC 12V

Condition:

Temp:22.4°C;Humi:63.3%

Test Site:

DDT 3# Chamber

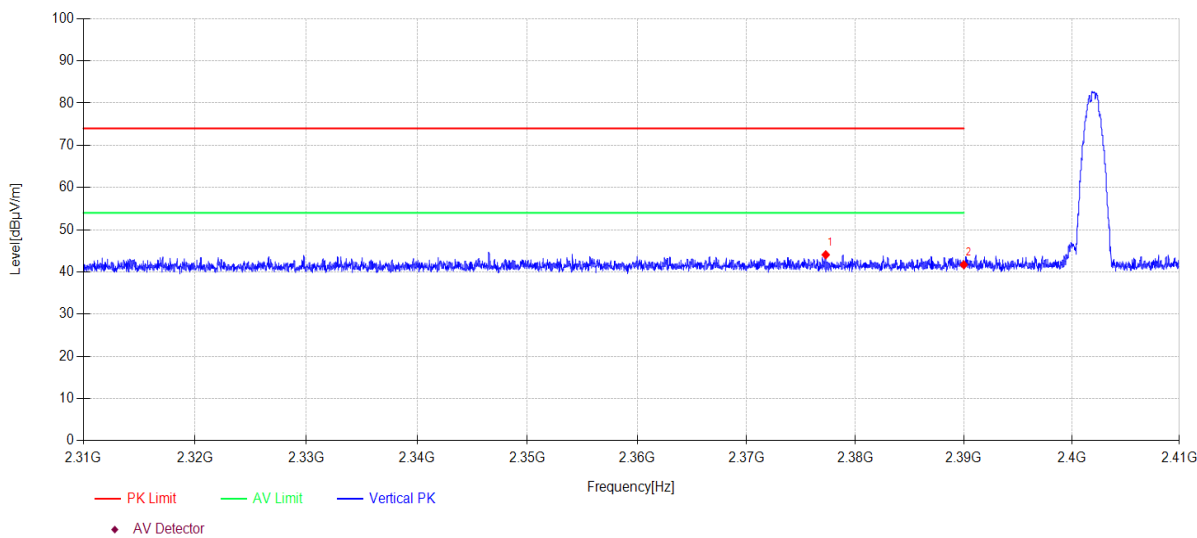
File Path:

d:\ts\2024 report data\Q24012204-2E DMR675\FCC ABOVE 1G\10

Memo:

Sample Number: S24012204-003

Test Graph



| Data List |             |                  |                     |                 |          |                |                |             |          |          |
|-----------|-------------|------------------|---------------------|-----------------|----------|----------------|----------------|-------------|----------|----------|
| NO.       | Freq. [MHz] | Reading [dBμV/m] | Antenna Factor [dB] | Cable loss [dB] | AMP [dB] | Level [dBμV/m] | Limit [dBμV/m] | Margin [dB] | Detector | Polarity |
| 1         | 2377.270    | 13.00            | 27.21               | 3.86            | 0.00     | 44.07          | 74.00          | 29.93       | PK       | Vertical |
| 2         | 2390.000    | 10.58            | 27.26               | 3.87            | 0.00     | 41.71          | 74.00          | 32.29       | PK       | Vertical |

Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-03-15

Tested By:

Junchang Du

EUT:

In-Vehicle infotainment System

Model Number:

CRD8612UBA/DMR675

Test Mode:

3DH5 TX 2402MHz

Power Supply:

DC 12V

Condition:

Temp:22.4°C;Humi:63.3%

Test Site:

DDT 3# Chamber

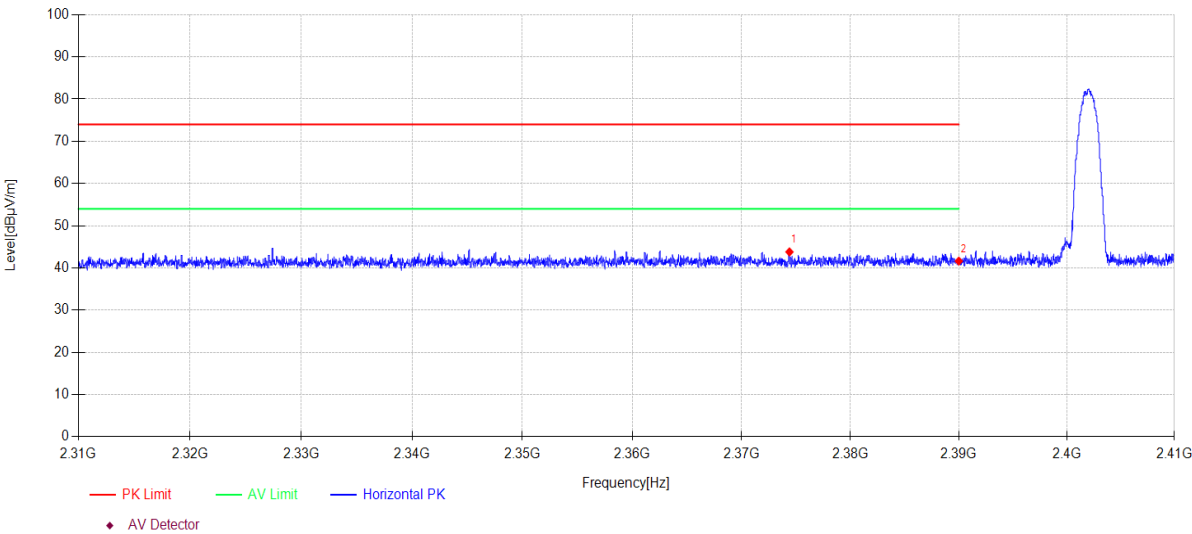
File Path:

d:\ts\2024 report data\Q24012204-2E DMR675\FCC ABOVE 1G\11

Memo:

Sample Number: S24012204-003

Test Graph



| Data List |             |                  |                     |                 |          |                |                |             |          |            |
|-----------|-------------|------------------|---------------------|-----------------|----------|----------------|----------------|-------------|----------|------------|
| NO        | Freq. [MHz] | Reading [dBμV/m] | Antenna Factor [dB] | Cable loss [dB] | AMP [dB] | Level [dBμV/m] | Limit [dBμV/m] | Margin [dB] | Detector | Polarity   |
| 1         | 2374.400    | 12.75            | 27.20               | 3.85            | 0.00     | 43.80          | 74.00          | 30.20       | PK       | Horizontal |
| 2         | 2390.000    | 10.50            | 27.26               | 3.87            | 0.00     | 41.63          | 74.00          | 32.37       | PK       | Horizontal |

Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-03-15

Tested By:

Junchang Du

EUT:

In-Vehicle infotainment System

Model Number:

CRD8612UBA/DMR675

Test Mode:

3DH5 TX 2402MHz

Power Supply:

DC 12V

Condition:

Temp:22.4°C;Humi:63.3%

Test Site:

DDT 3# Chamber

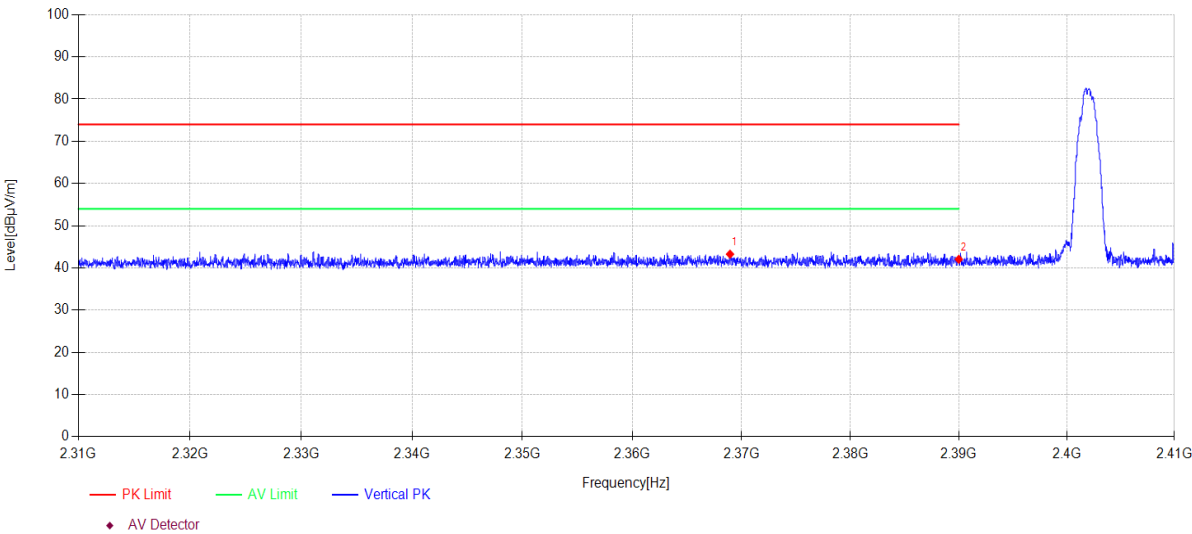
File Path:

d:\ts\2024 report data\Q24012204-2E DMR675\FCC ABOVE 1G\12

Memo:

Sample Number: S24012204-003

Test Graph



| Data List |             |                  |                     |                 |          |                |                |             |          |          |
|-----------|-------------|------------------|---------------------|-----------------|----------|----------------|----------------|-------------|----------|----------|
| NO.       | Freq. [MHz] | Reading [dBμV/m] | Antenna Factor [dB] | Cable loss [dB] | AMP [dB] | Level [dBμV/m] | Limit [dBμV/m] | Margin [dB] | Detector | Polarity |
| 1         | 2368.950    | 12.23            | 27.18               | 3.85            | 0.00     | 43.26          | 74.00          | 30.74       | PK       | Vertical |
| 2         | 2390.000    | 10.92            | 27.26               | 3.87            | 0.00     | 42.05          | 74.00          | 31.95       | PK       | Vertical |

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-03-15

Tested By:

Junchang Du

EUT:

In-Vehicle infotainment System

Model Number:

CRD8612UBA/DMR675

Test Mode:

DH5 TX 2480MHz

Power Supply:

DC 12V

Condition:

Temp:22.4°C;Humi:63.3%

Test Site:

DDT 3# Chamber

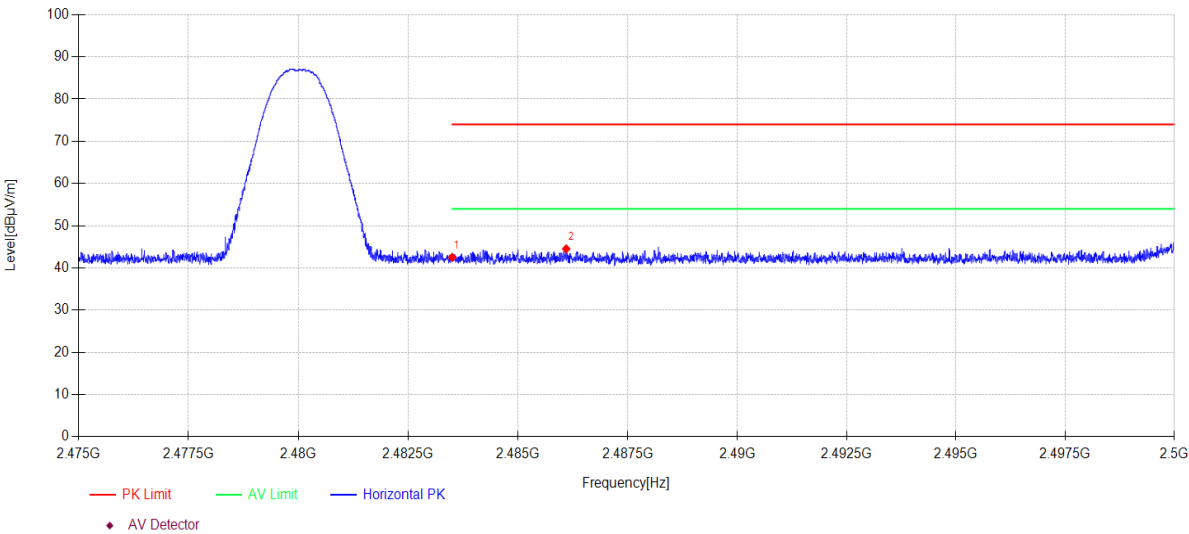
File Path:

d:\ts\2024 report data\Q24012204-2E DMR675\FCC ABOVE 1G\13

Memo:

Sample Number: S24012204-003

Test Graph



| Data List |             |                  |                     |                 |          |                |                |             |          |            |
|-----------|-------------|------------------|---------------------|-----------------|----------|----------------|----------------|-------------|----------|------------|
| NO.       | Freq. [MHz] | Reading [dBμV/m] | Antenna Factor [dB] | Cable loss [dB] | AMP [dB] | Level [dBμV/m] | Limit [dBμV/m] | Margin [dB] | Detector | Polarity   |
| 1         | 2483.500    | 11.04            | 27.53               | 3.94            | 0.00     | 42.51          | 74.00          | 31.49       | PK       | Horizontal |
| 2         | 2486.098    | 13.05            | 27.54               | 3.94            | 0.00     | 44.53          | 74.00          | 29.47       | PK       | Horizontal |

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-03-15

Tested By:

Junchang Du

EUT:

In-Vehicle infotainment System

Model Number:

CRD8612UBA/DMR675

Test Mode:

DH5 TX 2480MHz

Power Supply:

DC 12V

Condition:

Temp:22.4°C;Humi:63.3%

Test Site:

DDT 3# Chamber

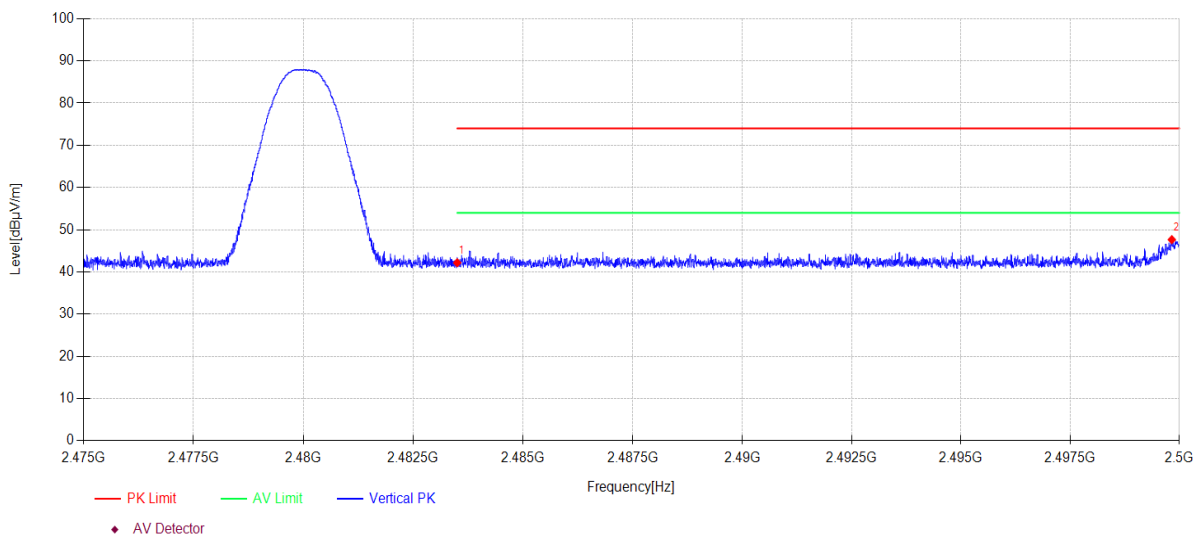
File Path:

d:\ts\2024 report data\Q24012204-2E DMR675\FCC ABOVE 1G\14

Memo:

Sample Number: S24012204-003

Test Graph



| Data List |             |                  |                     |                 |          |                |                |             |          |          |
|-----------|-------------|------------------|---------------------|-----------------|----------|----------------|----------------|-------------|----------|----------|
| NO.       | Freq. [MHz] | Reading [dBμV/m] | Antenna Factor [dB] | Cable loss [dB] | AMP [dB] | Level [dBμV/m] | Limit [dBμV/m] | Margin [dB] | Detector | Polarity |
| 1         | 2483.500    | 10.72            | 27.53               | 3.94            | 0.00     | 42.19          | 74.00          | 31.81       | PK       | Vertical |
| 2         | 2499.828    | 16.10            | 27.60               | 3.95            | 0.00     | 47.65          | 74.00          | 26.35       | PK       | Vertical |

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-03-15

Tested By:

Junchang Du

EUT:

In-Vehicle infotainment System

Model Number:

CRD8612UBA/DMR675

Test Mode:

2DH5 TX 2480MHz

Power Supply:

DC 12V

Condition:

Temp:22.4°C;Humi:63.3%

Test Site:

DDT 3# Chamber

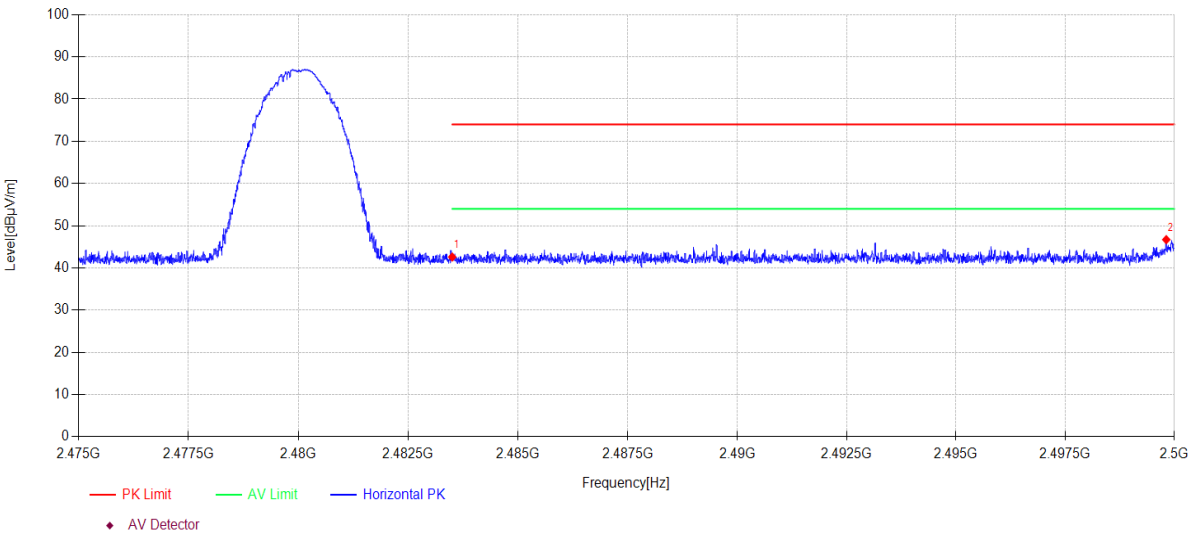
File Path:

d:\ts\2024 report data\Q24012204-2E DMR675\FCC ABOVE 1G\15

Memo:

Sample Number: S24012204-003

Test Graph



| Data List |             |                  |                     |                 |          |                |                |             |          |            |
|-----------|-------------|------------------|---------------------|-----------------|----------|----------------|----------------|-------------|----------|------------|
| NO.       | Freq. [MHz] | Reading [dBμV/m] | Antenna Factor [dB] | Cable loss [dB] | AMP [dB] | Level [dBμV/m] | Limit [dBμV/m] | Margin [dB] | Detector | Polarity   |
| 1         | 2483.500    | 11.12            | 27.53               | 3.94            | 0.00     | 42.59          | 74.00          | 31.41       | PK       | Horizontal |
| 2         | 2499.815    | 15.16            | 27.60               | 3.95            | 0.00     | 46.71          | 74.00          | 27.29       | PK       | Horizontal |

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-03-15

Tested By:

Junchang Du

EUT:

In-Vehicle infotainment System

Model Number:

CRD8612UBA/DMR675

Test Mode:

2DH5 TX 2480MHz

Power Supply:

DC 12V

Condition:

Temp:22.4°C;Humi:63.3%

Test Site:

DDT 3# Chamber

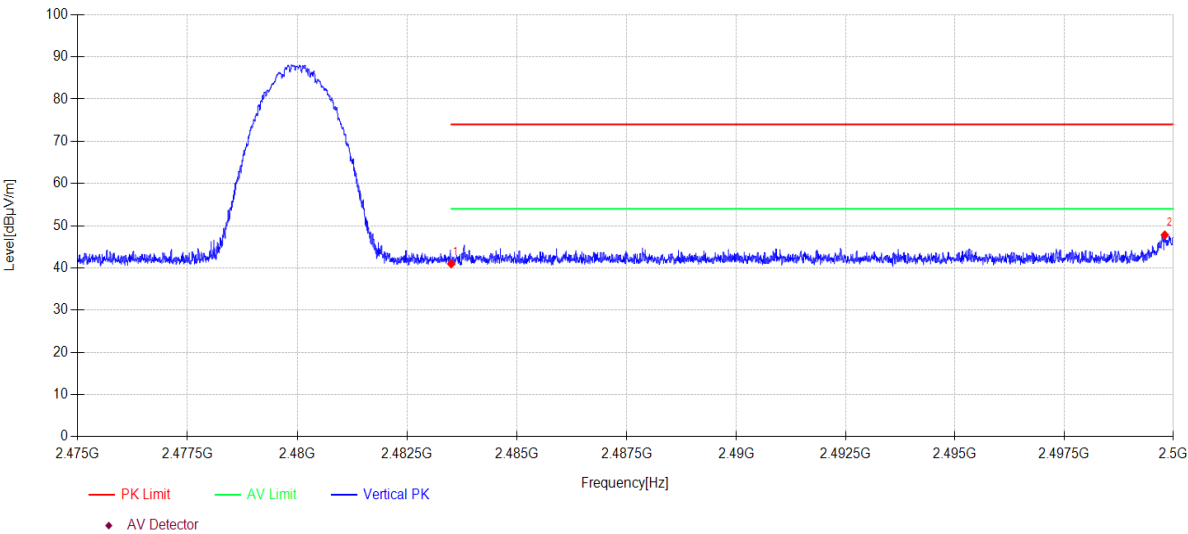
File Path:

d:\ts\2024 report data\Q24012204-2E DMR675\FCC ABOVE 1G\16

Memo:

Sample Number: S24012204-003

Test Graph



| Data List |             |                  |                     |                 |          |                |                |             |          |          |
|-----------|-------------|------------------|---------------------|-----------------|----------|----------------|----------------|-------------|----------|----------|
| NO.       | Freq. [MHz] | Reading [dBμV/m] | Antenna Factor [dB] | Cable loss [dB] | AMP [dB] | Level [dBμV/m] | Limit [dBμV/m] | Margin [dB] | Detector | Polarity |
| 1         | 2483.500    | 9.50             | 27.53               | 3.94            | 0.00     | 40.97          | 74.00          | 33.03       | PK       | Vertical |
| 2         | 2499.805    | 16.26            | 27.60               | 3.95            | 0.00     | 47.81          | 74.00          | 26.19       | PK       | Vertical |

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-03-15

Tested By:

Junchang Du

EUT:

In-Vehicle infotainment System

Model Number:

CRD8612UBA/DMR675

Test Mode:

3DH5 TX 2480MHz

Power Supply:

DC 12V

Condition:

Temp:22.4°C;Humi:63.3%

Test Site:

DDT 3# Chamber

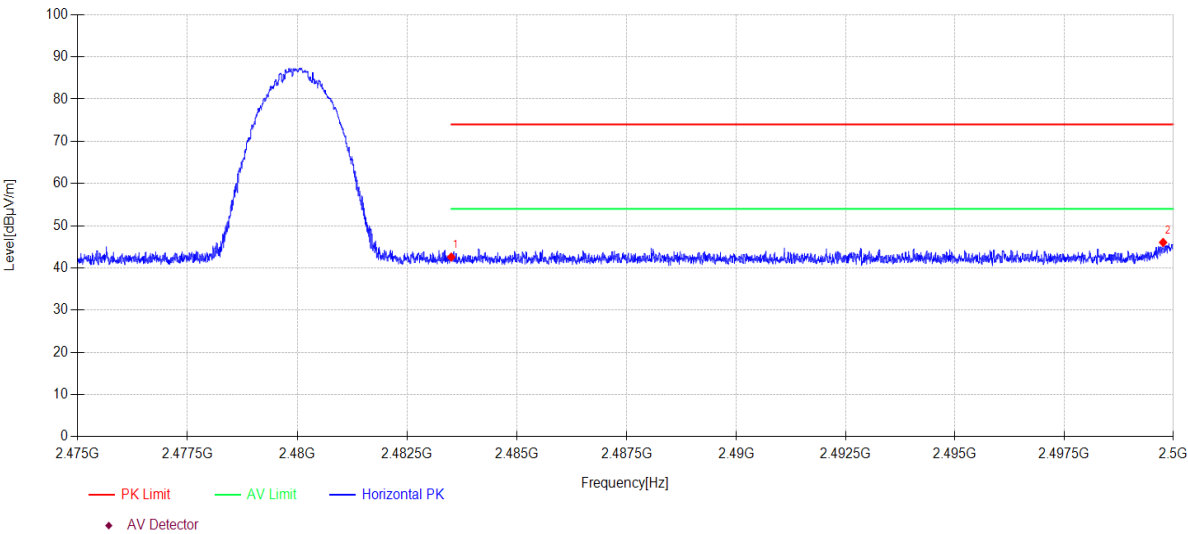
File Path:

d:\ts\2024 report data\Q24012204-2E DMR675\FCC ABOVE 1G\17

Memo:

Sample Number: S24012204-003

Test Graph



| Data List |             |                  |                     |                 |          |                |                |             |          |            |
|-----------|-------------|------------------|---------------------|-----------------|----------|----------------|----------------|-------------|----------|------------|
| NO.       | Freq. [MHz] | Reading [dBμV/m] | Antenna Factor [dB] | Cable loss [dB] | AMP [dB] | Level [dBμV/m] | Limit [dBμV/m] | Margin [dB] | Detector | Polarity   |
| 1         | 2483.500    | 11.10            | 27.53               | 3.94            | 0.00     | 42.57          | 74.00          | 31.43       | PK       | Horizontal |
| 2         | 2499.765    | 14.49            | 27.60               | 3.95            | 0.00     | 46.04          | 74.00          | 27.96       | PK       | Horizontal |

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-03-15

Tested By:

Junchang Du

EUT:

In-Vehicle infotainment System

Model Number:

CRD8612UBA/DMR675

Test Mode:

3DH5 TX 2480MHz

Power Supply:

DC 12V

Condition:

Temp:22.4°C;Humi:63.3%

Test Site:

DDT 3# Chamber

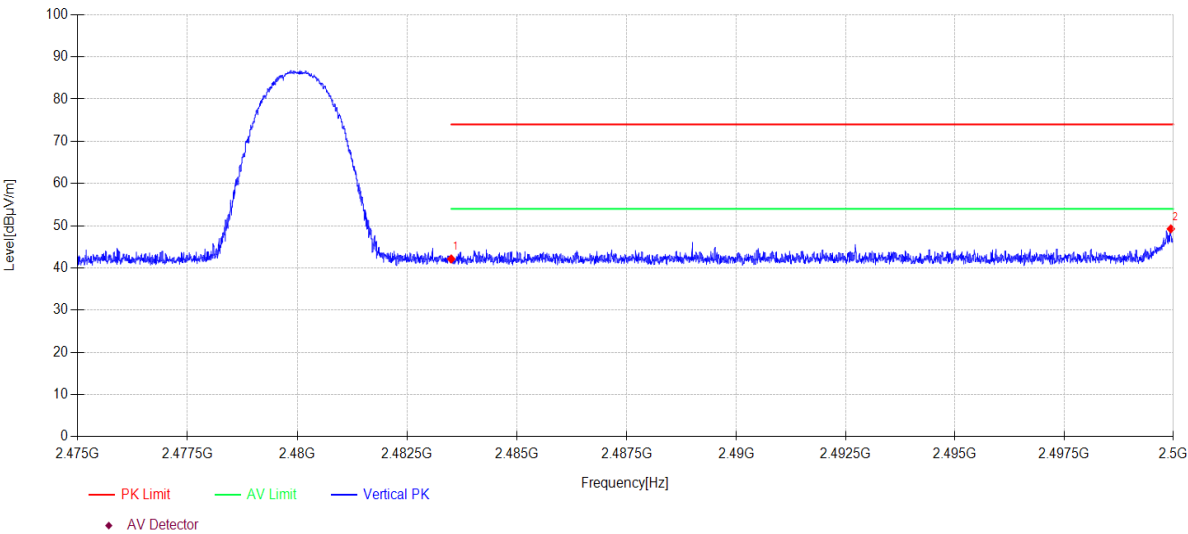
File Path:

d:\ts\2024 report data\Q24012204-2E DMR675\FCC ABOVE 1G\18

Memo:

Sample Number: S24012204-003

Test Graph



| Data List |             |                  |                     |                 |          |                |                |             |          |          |
|-----------|-------------|------------------|---------------------|-----------------|----------|----------------|----------------|-------------|----------|----------|
| NO.       | Freq. [MHz] | Reading [dBμV/m] | Antenna Factor [dB] | Cable loss [dB] | AMP [dB] | Level [dBμV/m] | Limit [dBμV/m] | Margin [dB] | Detector | Polarity |
| 1         | 2483.500    | 10.65            | 27.53               | 3.94            | 0.00     | 42.12          | 74.00          | 31.88       | PK       | Vertical |
| 2         | 2499.943    | 17.70            | 27.60               | 3.95            | 0.00     | 49.25          | 74.00          | 24.75       | PK       | Vertical |

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

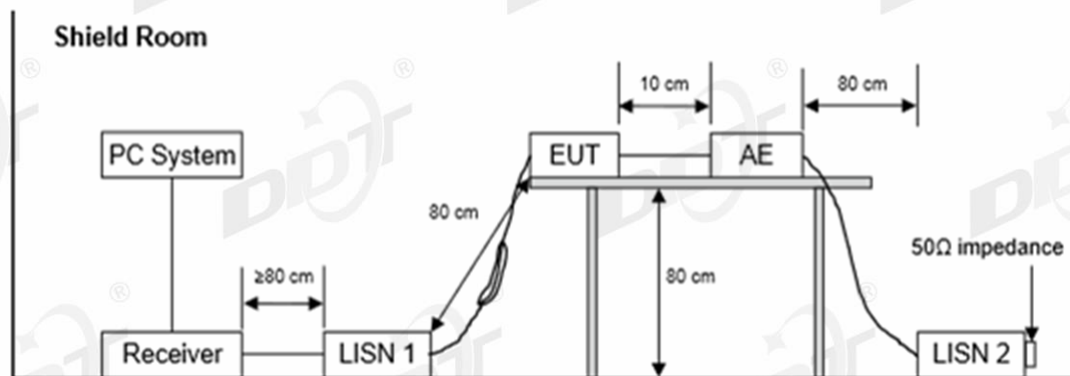
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

## 14. Power Line Conducted Emissions

### 14.1. Test equipment

| Equipment | Manufacturer | Model No. | Serial No. | Cal Due To |
|-----------|--------------|-----------|------------|------------|
| /         | /            | /         | /          | /          |

### 14.2. Block diagram of test setup



### 14.3. Limits

| Frequency       | Quasi-Peak Level<br>dB $\mu$ V/m | Average Level<br>dB $\mu$ V/m |
|-----------------|----------------------------------|-------------------------------|
| 150 kHz~500 kHz | 66 ~ 56*                         | 56 ~ 46*                      |
| 500 kHz~5 MHz   | 56                               | 46                            |
| 5 MHz~30 MHz    | 60                               | 50                            |

Note 1: \* Decreasing linearly with logarithm of frequency.

Note 2: The lower limit shall apply at the transition frequencies.

### 14.4. Assistant equipment used for test

| Assistant equipment | Manufacturer | Model number | Description | other |
|---------------------|--------------|--------------|-------------|-------|
| /                   | /            | /            | /           | /     |

### 14.5. Test procedure

The EUT and Support equipment, if needed, were put placed on a non-metallic table, 80cm above the ground plane.

All support equipment power received from a second LISN.

Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT.

The Receiver scanned from 150 kHz to 30 MHz for emissions in each of the test modes.

During the above scans, the emissions were maximized by cable manipulation.

The test mode(s) described in clause 2.4 were scanned during the preliminary test.

After the preliminary scan, we found the test mode producing the highest emission level.

The EUT configuration and worse cable configuration of the above highest emission levels were recorded for reference of the final test.

EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test.

A scan was taken on both power lines, Neutral and Line, recording at least the six highest emissions.

Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit.

The test data of the worst-case condition(s) was recorded.

The bandwidth of test receiver is set at 9 kHz.

#### **14.6. Test result**

Not Applicable

Remark: Conducted limits are not required for devices which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines according to 15.207(C).

## 16. Photos of the EUT

Please refer to DDT-Q24012204-1E appendix I

-----End Report-----