

## FCC CERTIFICATION TEST REPORT

### FOR

|                             |   |                                                                                                               |
|-----------------------------|---|---------------------------------------------------------------------------------------------------------------|
| <b>Applicant</b>            | : | SELVAS Healthcare, Inc.                                                                                       |
| <b>Address</b>              | : | 155, Sinseong-ro, Yuseong-gu, Daejeon, Republic of Korea                                                      |
| <b>Equipment under Test</b> | : | OCR Multi-Player                                                                                              |
| <b>Model No.</b>            | : | T90ET, T90EZ                                                                                                  |
| <b>Trade Mark</b>           | : | N/A                                                                                                           |
| <b>FCC ID</b>               | : | 2AL4D-T90                                                                                                     |
| <b>Manufacturer</b>         | : | Shenzhen Moss Technology Co., Ltd.                                                                            |
| <b>Address</b>              | : | Room 498, F1, TCL International E-City, 1001 Sun Yat-sen Garden Road, Xili Street, Nanshan District, Shenzhen |

**Issued By: Dongguan Dongdian Testing Service Co., Ltd.**

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# REPORT

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## Test Report Declare

|                             |   |                                                                                                               |
|-----------------------------|---|---------------------------------------------------------------------------------------------------------------|
| <b>Applicant</b>            | : | SELVAS Healthcare, Inc.                                                                                       |
| <b>Address</b>              | : | 155, Sinseong-ro, Yuseong-gu, Daejeon, Republic of Korea                                                      |
| <b>Equipment under Test</b> | : | OCR Multi-Player                                                                                              |
| <b>Model No.</b>            | : | T90ET, T90EZ                                                                                                  |
| <b>Trade Mark</b>           | : | N/A                                                                                                           |
| <b>Manufacturer</b>         | : | Shenzhen Moss Technology Co., Ltd.                                                                            |
| <b>Address</b>              | : | Room 498, F1, TCL International E-City, 1001 Sun Yat-sen Garden Road, Xili Street, Nanshan District, Shenzhen |

### Test Standard Used:

FCC Rules and Regulations Part 15.247.

### Test procedure used:

ANSI C63.10:2013, 558074 D01 15.247 Meas Guidance v05r02

### We Declare:

The equipment described above is tested by Dongguan Dongdian Testing Service Co., Ltd. and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Dongguan Dongdian Testing Service Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

**After test and evaluation, our opinion is that the equipment provided for test compliance with the requirement of the above FCC standards.**

|                         |                    |                      |                               |
|-------------------------|--------------------|----------------------|-------------------------------|
| <b>Report No:</b>       | DDT-R22051321-2E03 |                      |                               |
| <b>Date of Receipt:</b> | Jul. 26, 2022      | <b>Date of Test:</b> | Jul. 26, 2022 ~ Aug. 30, 2022 |

**Prepared By:**

*Sanvin Zheng*

**Sanvin Zheng /Engineer**

**Approved By:**



**Damon Hu/EMC Manager**

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Dongguan Dongdian Testing Service Co., Ltd.

## Revision History

| Rev. | Revisions     | Issue Date    | Revised By |
|------|---------------|---------------|------------|
| ---  | Initial issue | Oct. 19, 2022 |            |
|      |               |               |            |

## 1. Summary of Test Results

| The EUT have been tested according to the applicable standards as referenced below. |                                            |         |
|-------------------------------------------------------------------------------------|--------------------------------------------|---------|
| Description of Test Item                                                            | Standard                                   | Verdict |
| 6dB Bandwidth and 99% Bandwidth                                                     | FCC 15.247 (a)                             | Pass    |
| Conducted Output Power                                                              | FCC 15.247 (b) (3)                         | Pass    |
| Power Spectral Density                                                              | FCC 15.247 (e)                             | Pass    |
| Band-edge and Spurious Emissions (Conducted)                                        | FCC 15.247 (d)                             | Pass    |
| Radiated Spurious Emissions                                                         | FCC 15.247 (d)<br>FCC 15.209<br>FCC 15.205 | Pass    |
| Radiated Band Edge Compliance                                                       | FCC 15.247 (d)<br>FCC 15.209<br>FCC 15.205 | Pass    |
| Power Line Conducted Emission                                                       | FCC 15.207                                 | Pass    |
| Antenna Requirement                                                                 | FCC 15.203                                 | Pass    |

## 2. General Test Information

### 2.1. Description of EUT

|                          |                                                                                                                                                                                                                                 |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EUT* Name                | : OCR Multi-Player                                                                                                                                                                                                              |
| Model Number             | : T90ET, T90EZ                                                                                                                                                                                                                  |
| Difference of models     | : All model circuits share the same electrical, mechanical and physical structure, with the only difference is that T90ET has rear camera and OCR functions, while T90EZ does not. Therefore, the test model is T90ET.          |
| EUT Function Description | : Please reference user manual of this device                                                                                                                                                                                   |
| Power Supply             | : DC 3.8V powered by Li-Polymer Battery<br>: DC 5V powered by external USB                                                                                                                                                      |
| Radio Technology         | : IEEE 802.11b/g/n                                                                                                                                                                                                              |
| FCC Operation Frequency  | : IEEE 802.11b: 2412MHz-2462MHz<br>: IEEE 802.11g: 2412MHz-2462MHz<br>: IEEE 802.11n HT20: 2412MHz-2462MHz<br>: IEEE 802.11n HT40: 2422MHz-2452MHz                                                                              |
| Modulation               | : IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK)<br>: IEEE 802.11g: OFDM (64QAM, 16QAM, QPSK, BPSK)<br>: IEEE 802.11n HT20: OFDM (64QAM, 16QAM, QPSK, BPSK)<br>: IEEE 802.11n HT40: OFDM (64QAM, 16QAM, QPSK, BPSK)                     |
| Transmitter Rate         | : IEEE 802.11b: 1, 2, 5.5, 11 Mbps<br>: IEEE 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps<br>: IEEE 802.11n HT20: 7.2, 14.2, 21.7, 28.9, 43.3, 57.8, 65, 72.2 Mbps<br>: IEEE 802.11n HT40: 15, 30, 45, 60, 90, 120, 135, 150 Mbps |
| Antenna Gain             | : FPC antenna, maximum PK gain: 1.58 dBi                                                                                                                                                                                        |
| Sample Number            | : S22051321-04 for conductive<br>: S22051321-05 for radiation                                                                                                                                                                   |

Note: EUT is the ab. of equipment under test.

| Channel information |                 |    |                 |    |                 |
|---------------------|-----------------|----|-----------------|----|-----------------|
| CH                  | Frequency (MHz) | CH | Frequency (MHz) | CH | Frequency (MHz) |
| 1                   | 2412            | 5  | 2432            | 9  | 2452            |
| 2                   | 2417            | 6  | 2437            | 10 | 2457            |
| 3                   | 2422            | 7  | 2442            | 11 | 2462            |
| 4                   | 2427            | 8  | 2447            | /  | /               |

### 2.2. Accessories of EUT

| Accessories  | Manufacturer | Model number   | Description                                                |
|--------------|--------------|----------------|------------------------------------------------------------|
| Power Supply | N/A          | ICP12-050-200B | Input: 100-240V~50/60Hz 0.3A<br>Output: DC 5.0V/2.0A 10.0W |
| Type-C cable | N/A          | N/A            | N/A                                                        |

### 2.3. Assistant equipment used for test

| Assistant equipment | Manufacturer | Model number | EMC Compliance | Other |
|---------------------|--------------|--------------|----------------|-------|
| N/A                 | N/A          | N/A          | N/A            | N/A   |

### 2.4. Block diagram of EUT configuration for test

EUT

Test software: srcpy.exe

The test software was used to control EUT work in Continuous Tx mode, and select test channel, wireless mode as below table.

The pathloss of external cable: 0.5dB (According to the manufacturer's claims)

| Tested mode, channel, and data rate information |                      |                             |           |                 |
|-------------------------------------------------|----------------------|-----------------------------|-----------|-----------------|
| Mode                                            | Setting Tx Power Ant | data rate (Mbps) (see Note) | Channel   | Frequency (MHz) |
| IEEE 802.11b                                    | 16                   | 1                           | LCH: CH1  | 2412            |
|                                                 | 16                   | 1                           | MCH: CH6  | 2437            |
|                                                 | 16                   | 1                           | HCH: CH11 | 2462            |
| IEEE 802.11g                                    | 16                   | 6                           | LCH: CH1  | 2412            |
|                                                 | 16                   | 6                           | MCH: CH6  | 2437            |
|                                                 | 16                   | 6                           | HCH: CH11 | 2462            |
| IEEE 802.11n HT20                               | 16                   | MCS 0                       | LCH: CH1  | 2412            |
|                                                 | 16                   | MCS 0                       | MCH: CH6  | 2437            |
|                                                 | 16                   | MCS 0                       | HCH: CH11 | 2462            |
| IEEE 802.11n HT40                               | 13                   | MCS 0                       | LCH: CH3  | 2422            |
|                                                 | 13                   | MCS 0                       | MCH: CH6  | 2437            |
|                                                 | 13                   | MCS 0                       | HCH: CH9  | 2452            |

Note: According exploratory test, EUT will have maximum output power in those data rate, so those data rate were used for all test.

### 2.5. Deviations of test standard

No Deviation

### 2.6. Test environment conditions

During the measurement the environmental conditions were within the listed ranges:

|                    |           |
|--------------------|-----------|
| Temperature range: | 21-25°C   |
| Humidity range:    | 40-75%    |
| Pressure range:    | 86-106kPa |

## 2.7. Test laboratory

Dongguan Dongdian Testing Service Co., Ltd.

Add.: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park, Dongguan City,

Guangdong Province, China, 523808

Tel.: +86-0769-38826678, <http://www.dgddt.com>, Email: ddt@dgddt.com

CNAS Accreditation No. L6451; A2LA Accreditation Number: 3870.01

FCC Designation Number: CN1182, Test Firm Registration Number: 540522

Innovation, Science and Economic Development Canada Site Registration Number: 10288A

Conformity Assessment Body identifier: CN0048

VCCI facility registration number: C-20087, T-20088, R-20123, R-20155, G-20118

## 2.8. Measurement uncertainty

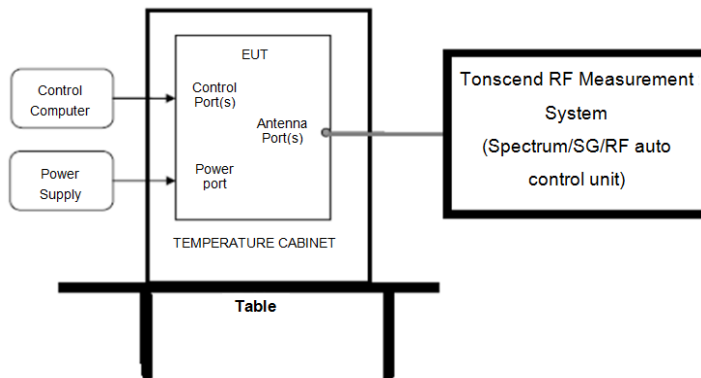
| Test Item                                                                                                                                     | Uncertainty                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| Bandwidth                                                                                                                                     | 1.1%                                                   |
| Peak Output Power (Conducted) (Spectrum analyzer)                                                                                             | 0.86 dB ( $10 \text{ MHz} \leq f < 3.6 \text{ GHz}$ ); |
|                                                                                                                                               | 1.38 dB ( $3.6 \text{ GHz} \leq f < 8 \text{ GHz}$ )   |
| Peak Output Power (Conducted) (Power Sensor)                                                                                                  | 0.74 dB                                                |
| Power Spectral Density                                                                                                                        | 0.74 dB ( $10 \text{ MHz} \leq f < 3.6 \text{ GHz}$ ); |
|                                                                                                                                               | 1.38 dB ( $3.6 \text{ GHz} \leq f < 8 \text{ GHz}$ )   |
| Frequencies Stability                                                                                                                         | $6.7 \times 10^{-8}$ (Antenna couple method)           |
|                                                                                                                                               | $5.5 \times 10^{-8}$ (Conducted method)                |
| Conducted spurious emissions                                                                                                                  | 0.86 dB ( $10 \text{ MHz} \leq f < 3.6 \text{ GHz}$ ); |
|                                                                                                                                               | 1.40 dB ( $3.6 \text{ GHz} \leq f < 8 \text{ GHz}$ )   |
|                                                                                                                                               | 1.66 dB ( $8 \text{ GHz} \leq f < 26.5 \text{ GHz}$ )  |
| Uncertainty for radio frequency (RBW<20 kHz)                                                                                                  | $3 \times 10^{-8}$                                     |
| Temperature                                                                                                                                   | .4°C                                                   |
| Humidity                                                                                                                                      | 2%                                                     |
| Uncertainty for Radiation Emission test<br>(30 MHz-1 GHz)                                                                                     | 4.70 dB (Antenna Polarize: V)                          |
|                                                                                                                                               | 4.84 dB (Antenna Polarize: H)                          |
| Uncertainty for Radiation Emission test<br>(1 GHz-40 GHz)                                                                                     | 4.10 dB (1-6 GHz)                                      |
|                                                                                                                                               | 4.40 dB (6 GHz-18 GHz)                                 |
|                                                                                                                                               | 3.54 dB (18 GHz-26 GHz)                                |
|                                                                                                                                               | 4.30 dB (26 GHz-40 GHz)                                |
| Uncertainty for Power line conduction emission test                                                                                           | 3.32 dB (150 kHz-30 MHz)                               |
| Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2. |                                                        |

### 3. Equipment Used During Test

| Equipment                                                                                        | Manufacturer | Model No.   | Serial No.      | Last Cal.     | Cal. Interval |
|--------------------------------------------------------------------------------------------------|--------------|-------------|-----------------|---------------|---------------|
| <input checked="" type="checkbox"/> <b>RF Connected Test (Tonscend RF Measurement System 3#)</b> |              |             |                 |               |               |
| Spectrum analyzer                                                                                | R&S          | FSV40       | 101407          | Jul. 21, 2022 | 1 Year        |
| Wideband Radio Communication tester                                                              | R&S          | CMW500      | 117491          | May 18, 2022  | 1 Year        |
| Vector Signal Generator                                                                          | Agilent      | N5182A      | MY19060405      | May 18, 2022  | 1 Year        |
| Vector Signal Generator                                                                          | Agilent      | N5182A      | MY48180912      | May 18, 2022  | 1 Year        |
| RF Control Unit                                                                                  | Tonscend     | JS0806-2    | DDT-ZC01449     | May 18, 2022  | 1 Year        |
| Temp&Humi Programmable                                                                           | ZHIXIANG     | ZXGDJS-150L | ZX170110-A      | May 26, 2022  | 1 Year        |
| Test Software                                                                                    | JS Tonscend  | JS1120-3    | Ver.2.6.77.0518 | N/A           | N/A           |
| <input checked="" type="checkbox"/> <b>Radiation 3#chamber</b>                                   |              |             |                 |               |               |
| EMI Test Receiver                                                                                | R&S          | ESU         | 100472          | May 18, 2022  | 1 Year        |
| Spectrum analyzer                                                                                | Agilent      | E4447A      | MY50180031      | May 18, 2022  | 1 Year        |
| Active Loop antenna                                                                              | Schwarzbeck  | FMZB-1519   | 1519-038        | Sep. 19, 2021 | 1 Year        |
| Trilog Broadband Antenna                                                                         | Schwarzbeck  | VULB 9161   | 4034            | Sep. 19, 2021 | 1 Year        |
| Double Ridged Horn Antenna                                                                       | Schwarzbeck  | BBHA 9120D  | 02468           | Nov. 29, 2021 | 1 Year        |
| Broad Band Horn Antenna                                                                          | Schwarzbeck  | BBHA 9170   | 790             | May 06, 2022  | 1 Year        |
| Pre-amplifier                                                                                    | COM-POWER    | PAM-118A    | 18040084        | Sep. 02, 2021 | 1 Year        |
| Pre-amplifier                                                                                    | COM-POWER    | PAM-840A    | 461369          | Apr. 11, 2022 | 1 Year        |
| Test software                                                                                    | Audix        | E3          | V 6.1.1.1       | N/A           | N/A           |
| <input checked="" type="checkbox"/> <b>Power Line Conducted Emissions Test 1#</b>                |              |             |                 |               |               |
| Test Receiver                                                                                    | R&S          | ESCI        | 100551          | Sep. 02, 2021 | 1 Year        |
| LISN 1                                                                                           | R&S          | ENV216      | 101109          | Sep. 02, 2021 | 1 Year        |
| LISN 2                                                                                           | R&S          | ESH2-Z5     | 100309          | Sep. 02, 2021 | 1 Year        |
| Pulse Limiter                                                                                    | R&S          | ESH3-Z2     | 101242          | Sep. 02, 2021 | 1 Year        |
| CE Cable 1                                                                                       | HUBSER       | N/A         | W10.01          | Sep. 02, 2021 | 1 Year        |
| LISN 3                                                                                           | SCHWARZBECK  | NSLK 8163   | 00017           | Sep. 02, 2021 | 1 Year        |
| Test software                                                                                    | Audix        | E3          | V 6.11111b      | N/A           | N/A           |

## 4. 6dB Bandwidth and 99% Bandwidth

### 4.1. Block diagram of test setup



### 4.2. Limits

For direct sequence systems, the minimum 6 dB bandwidth shall be at least 500 kHz

### 4.3. Test procedure

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.

(2) 99% Bandwidth set the spectrum analyzer as follows:

RBW: 500 kHz/ 1MHz

VBW: 2 MHz/ 3MHz

Detector Mode: Peak

Sweep time: auto

Trace mode Max hold

(3) 6dB Bandwidth set the spectrum analyzer as follows:

RBW: 100 kHz

VBW: 300 kHz

Detector Mode: Peak

Sweep time: auto

Trace mode Max hold

(4) Allow the trace to stabilize, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

## 4.4. Test result

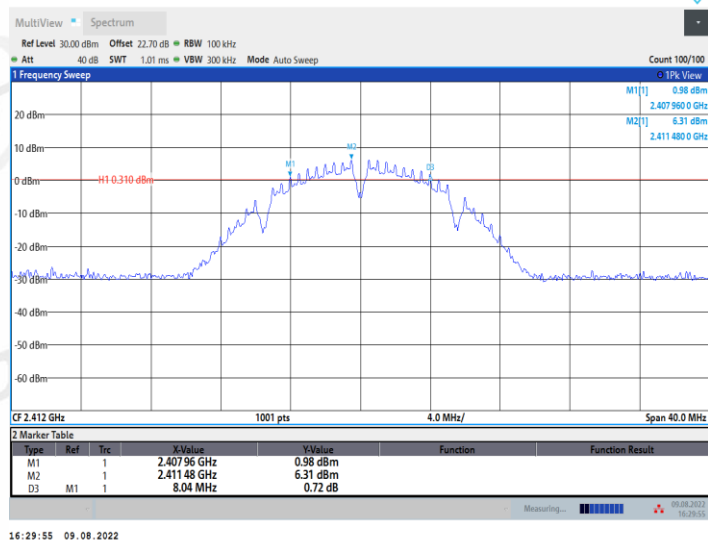
| Test Mode | Antenna | Frequency [MHz] | DTS BW [MHz] | FL [MHz] | FH [MHz] | Limit [MHz] | Verdict |
|-----------|---------|-----------------|--------------|----------|----------|-------------|---------|
| 11B       | Ant1    | 2412            | 8.04         | 2407.96  | 2416.00  | 0.5         | PASS    |
|           |         | 2437            | 8.04         | 2432.96  | 2441.00  | 0.5         | PASS    |
|           |         | 2462            | 8.04         | 2457.96  | 2466.00  | 0.5         | PASS    |
| 11G       | Ant1    | 2412            | 15.48        | 2404.40  | 2419.88  | 0.5         | PASS    |
|           |         | 2437            | 15.48        | 2429.40  | 2444.88  | 0.5         | PASS    |
|           |         | 2462            | 15.12        | 2454.44  | 2469.56  | 0.5         | PASS    |
| 11N20SISO | Ant1    | 2412            | 15.48        | 2404.40  | 2419.88  | 0.5         | PASS    |
|           |         | 2437            | 15.92        | 2429.44  | 2445.36  | 0.5         | PASS    |
|           |         | 2462            | 15.16        | 2454.40  | 2469.56  | 0.5         | PASS    |
| 11N40SISO | Ant1    | 2422            | 35.36        | 2404.48  | 2439.84  | 0.5         | PASS    |
|           |         | 2437            | 33.84        | 2420.76  | 2454.60  | 0.5         | PASS    |
|           |         | 2452            | 35.12        | 2434.48  | 2469.60  | 0.5         | PASS    |

| Test Mode | Antenna | Frequency [MHz] | OCB [MHz] | FL [MHz]  | FH [MHz]  | Limit [MHz] | Verdict |
|-----------|---------|-----------------|-----------|-----------|-----------|-------------|---------|
| 11B       | Ant1    | 2412            | 14.331    | 2404.9248 | 2419.2557 | ---         | Pass    |
|           |         | 2437            | 14.243    | 2429.9853 | 2444.2288 | ---         | Pass    |
|           |         | 2462            | 14.212    | 2454.9469 | 2469.1588 | ---         | Pass    |
| 11G       | Ant1    | 2412            | 17.536    | 2403.3669 | 2420.9026 | ---         | Pass    |
|           |         | 2437            | 17.989    | 2428.3171 | 2446.3065 | ---         | Pass    |
|           |         | 2462            | 17.730    | 2453.2145 | 2470.9441 | ---         | Pass    |
| 11N20SISO | Ant1    | 2412            | 18.345    | 2402.9549 | 2421.2999 | ---         | Pass    |
|           |         | 2437            | 18.620    | 2427.9061 | 2446.5261 | ---         | Pass    |
|           |         | 2462            | 18.556    | 2452.7867 | 2471.3423 | ---         | Pass    |
| 11N40SISO | Ant1    | 2422            | 37.598    | 2403.6349 | 2441.2328 | ---         | Pass    |
|           |         | 2437            | 37.623    | 2418.7243 | 2456.3472 | ---         | Pass    |
|           |         | 2452            | 37.194    | 2433.6463 | 2470.8402 | ---         | Pass    |

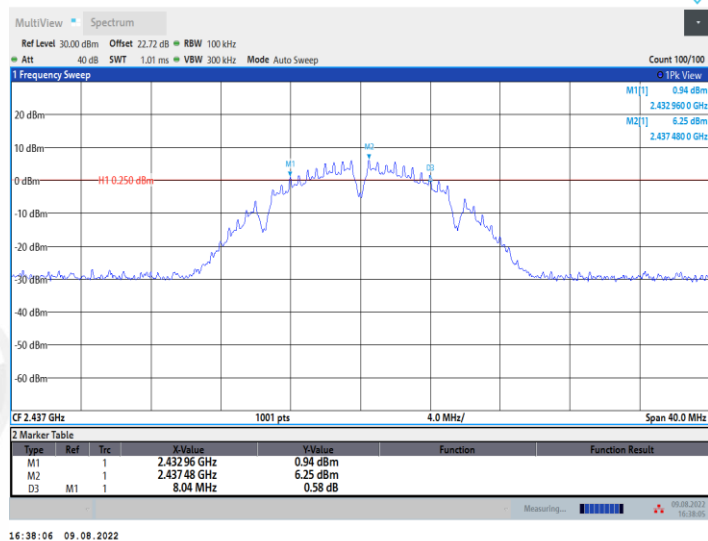
#### 4.5. original test data

6dB Bandwidth:

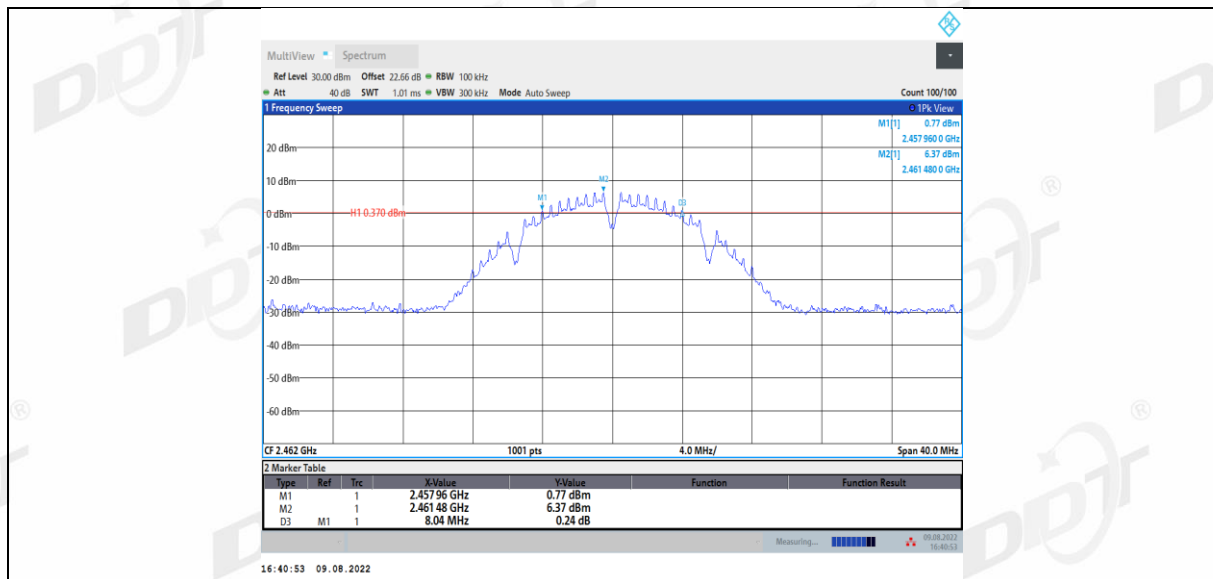
11B\_Ant1\_2412



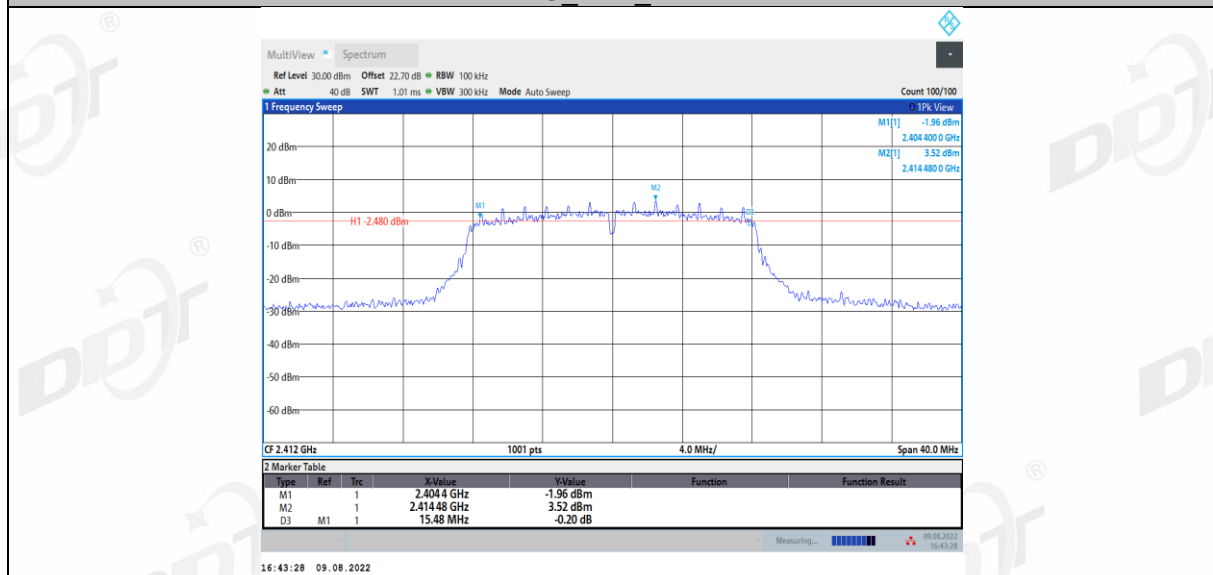
11B\_Ant1\_2437



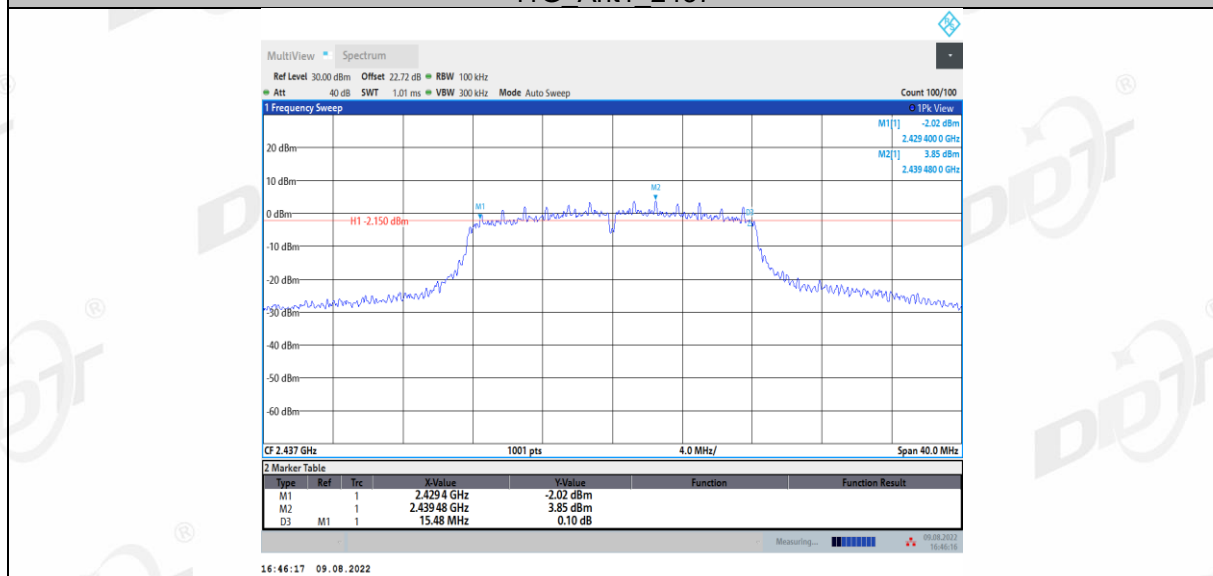
11B\_Ant1\_2462



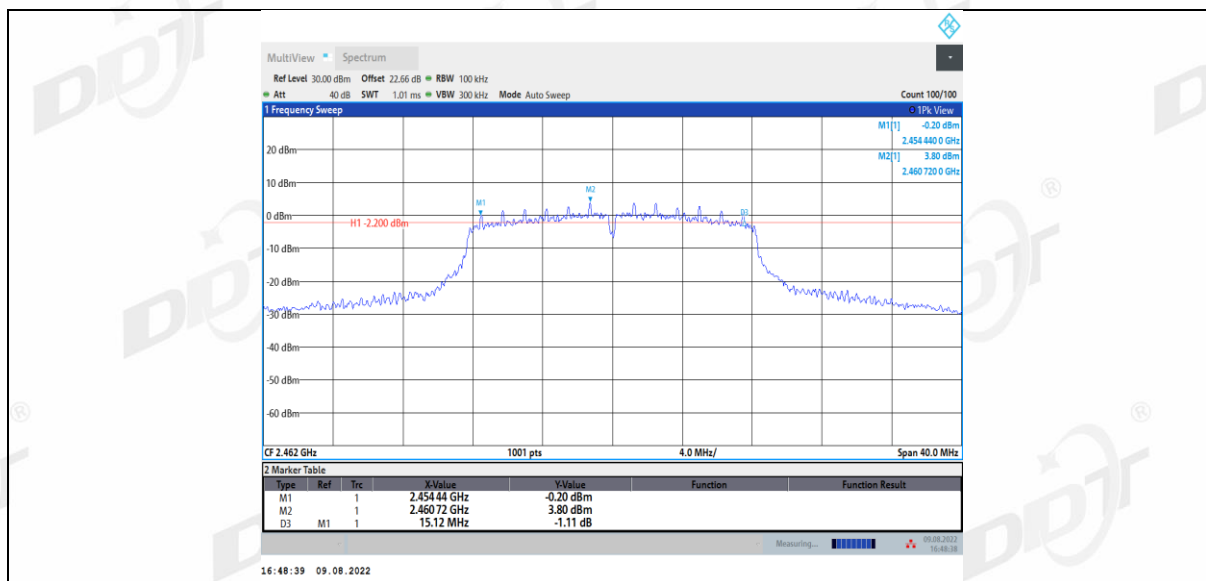
11G\_Ant1\_2412



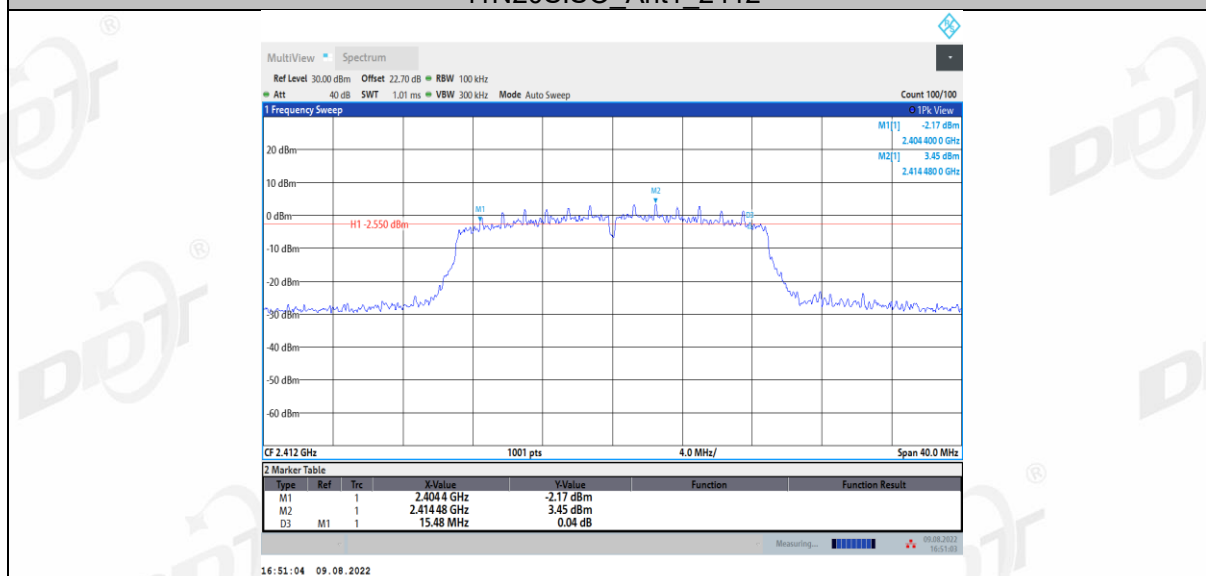
11G\_Ant1\_2437



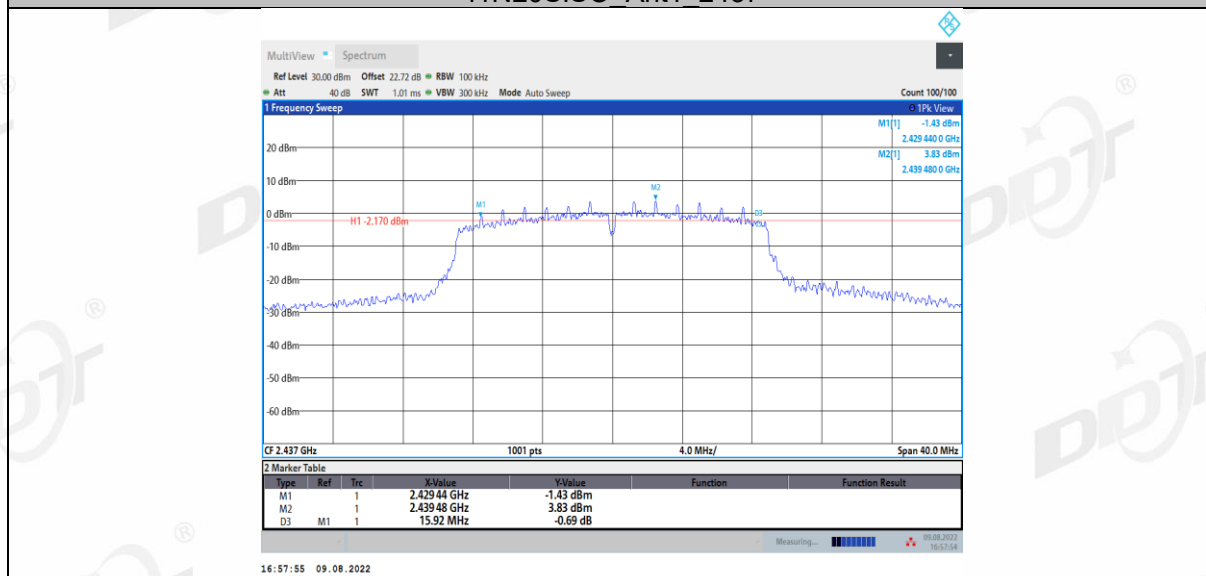
11G\_Ant1\_2462



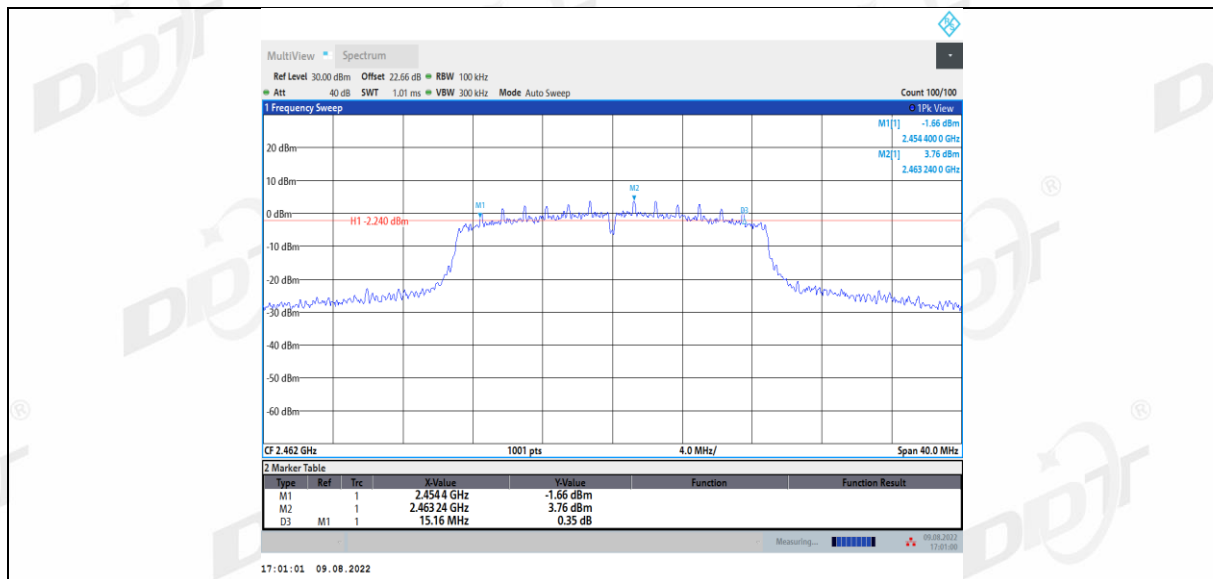
11N20SISO\_Ant1\_2412



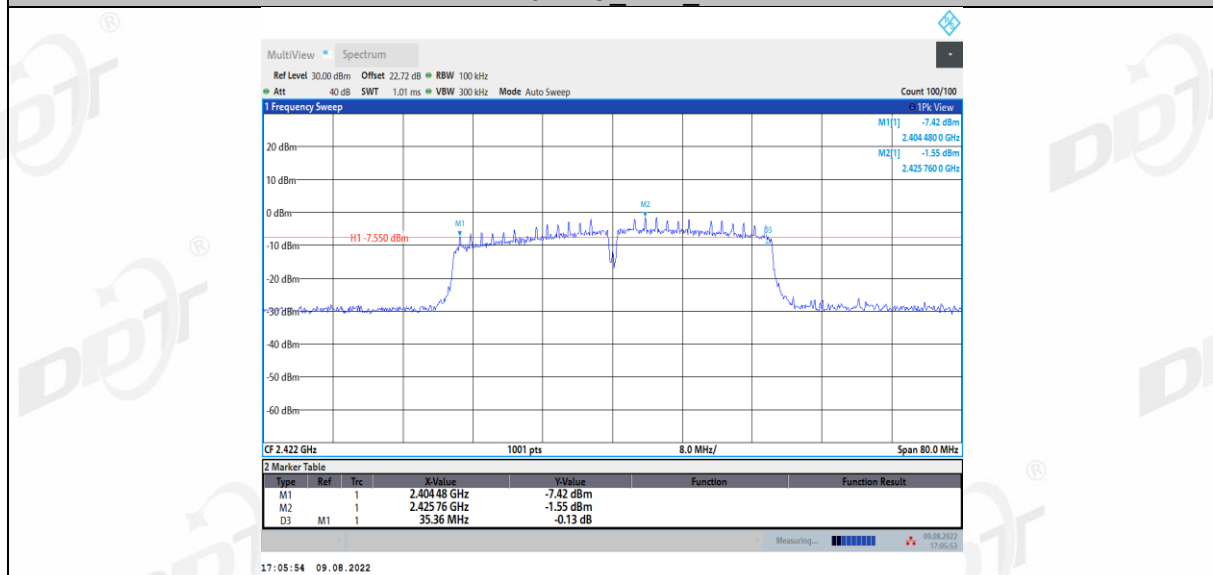
11N20SISO\_Ant1\_2437



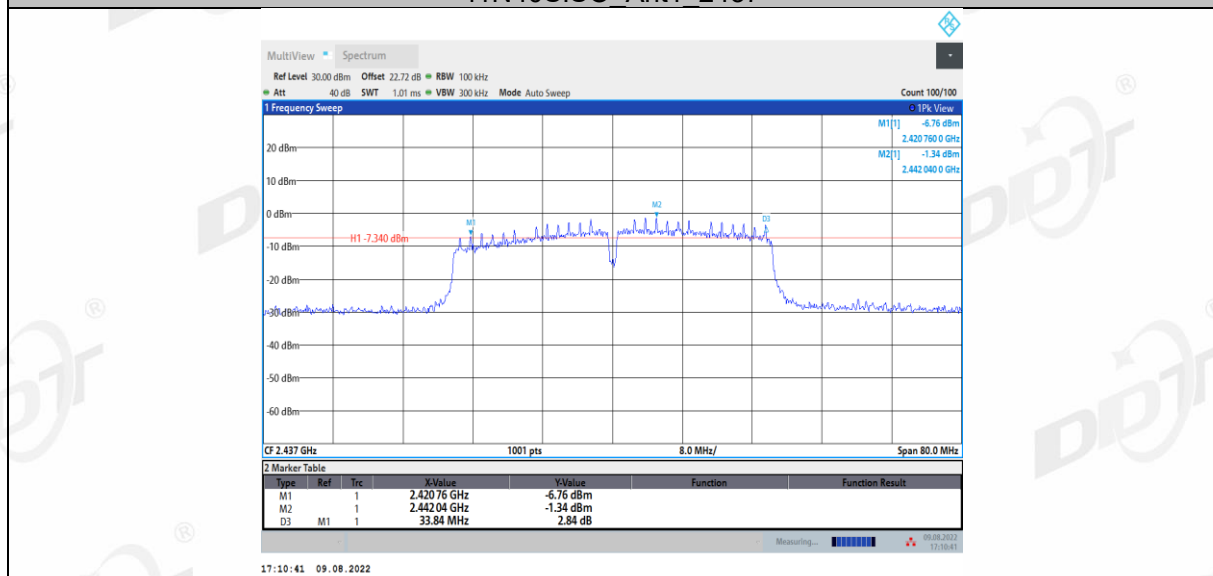
11N20SISO\_Ant1\_2462



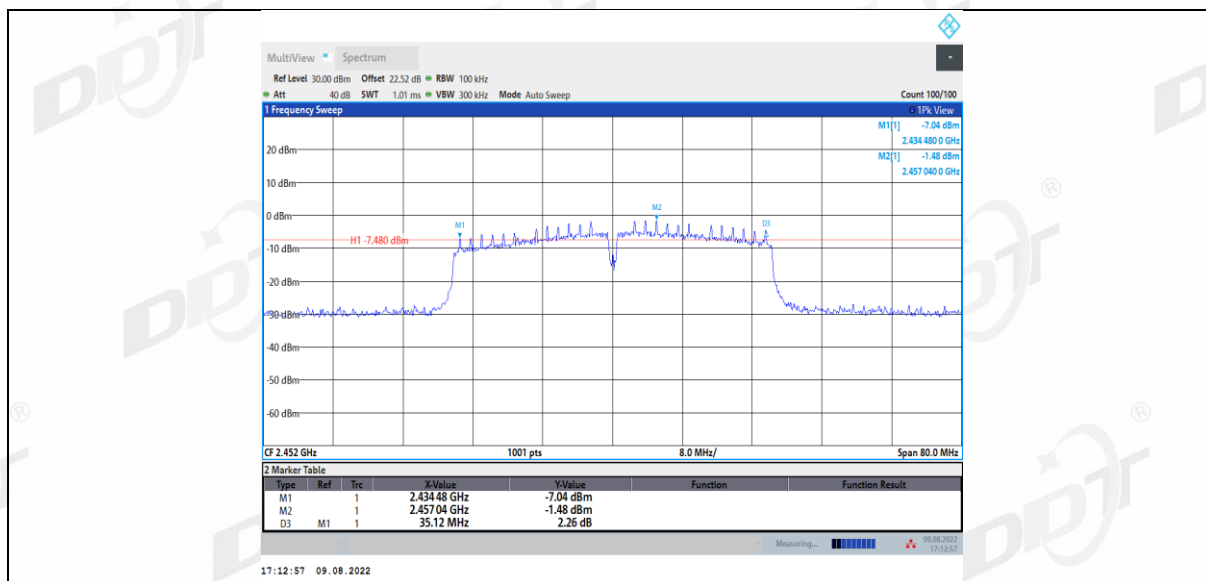
11N40SISO\_Ant1\_2422



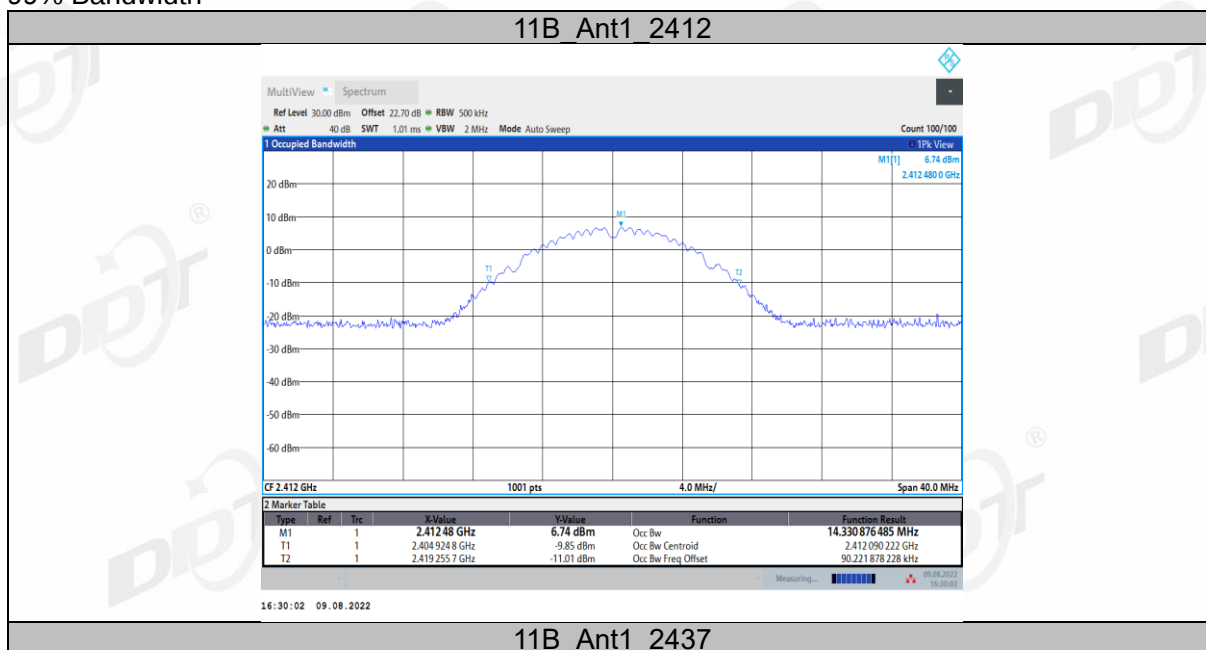
11N40SISO\_Ant1\_2437

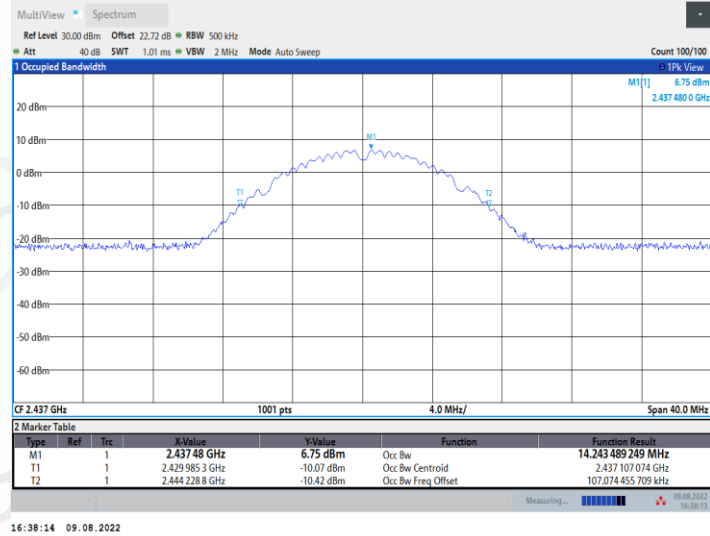


11N40SISO\_Ant1\_2452

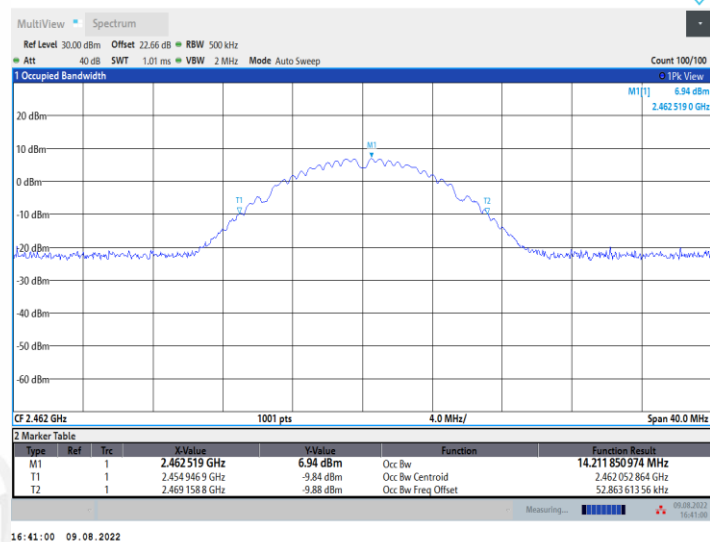


## 99% Bandwidth

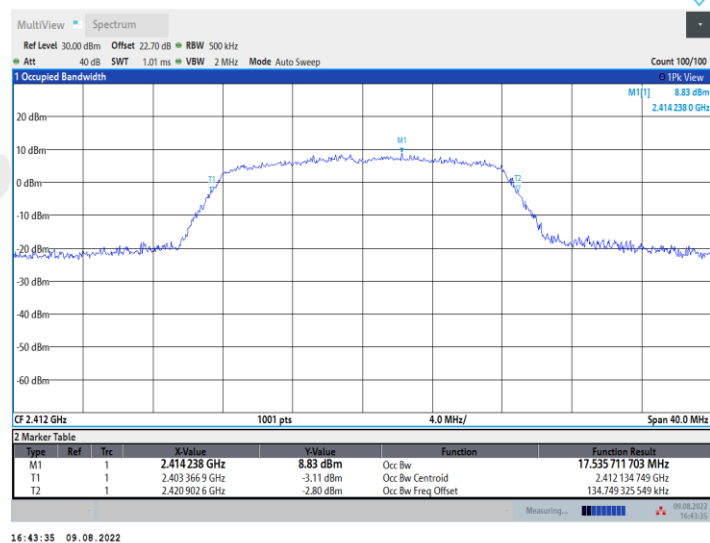




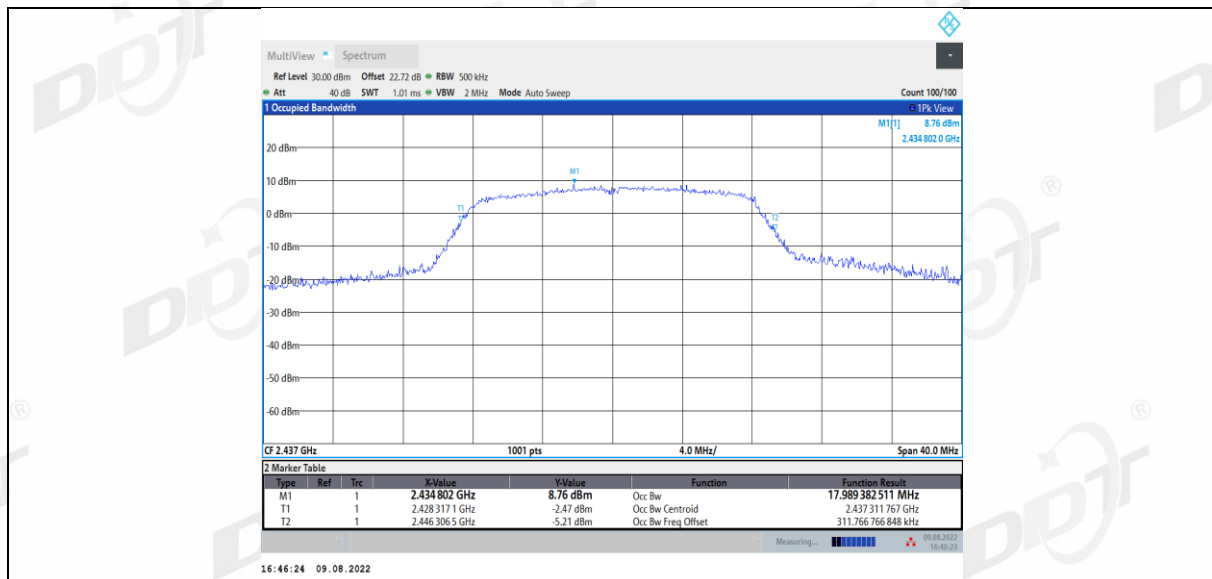
11B\_Ant1\_2462



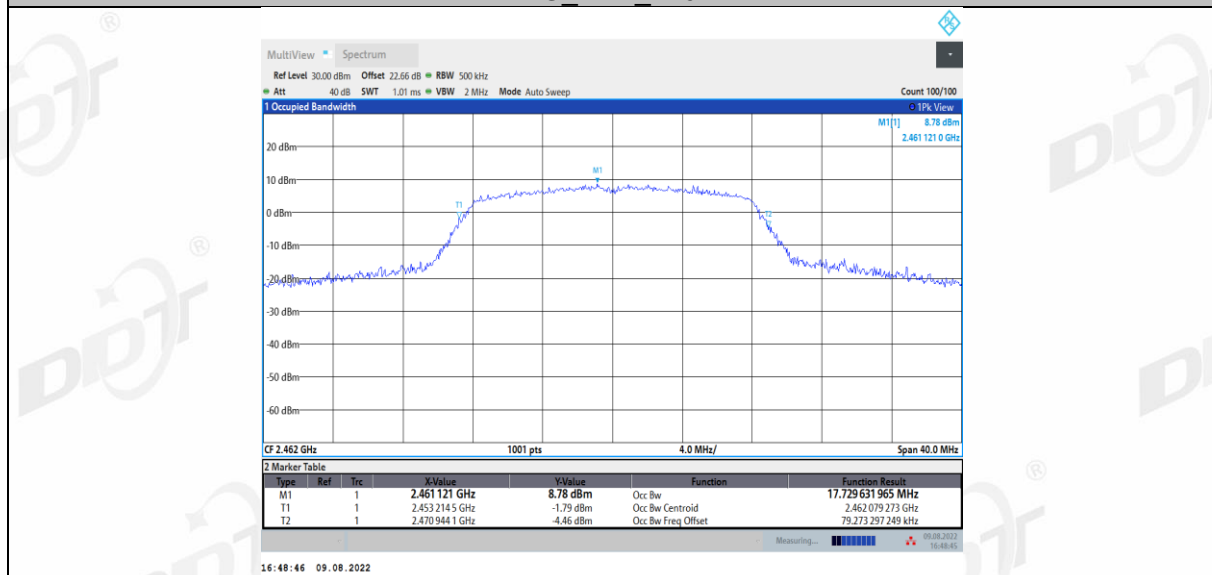
11G\_Ant1\_2412



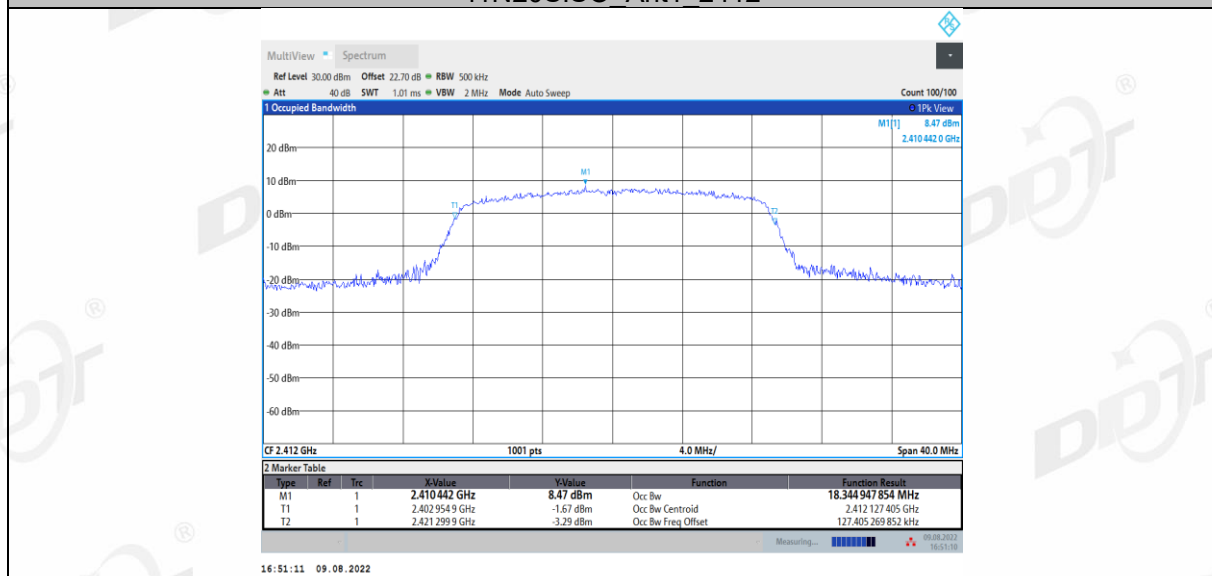
11G\_Ant1\_2437



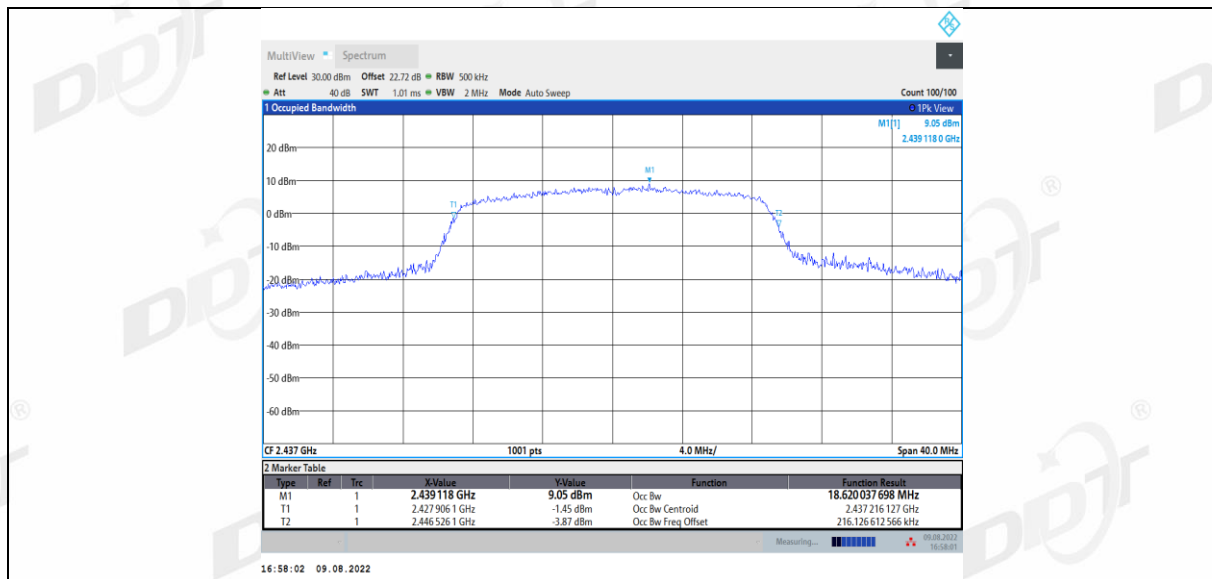
11G\_Ant1\_2462



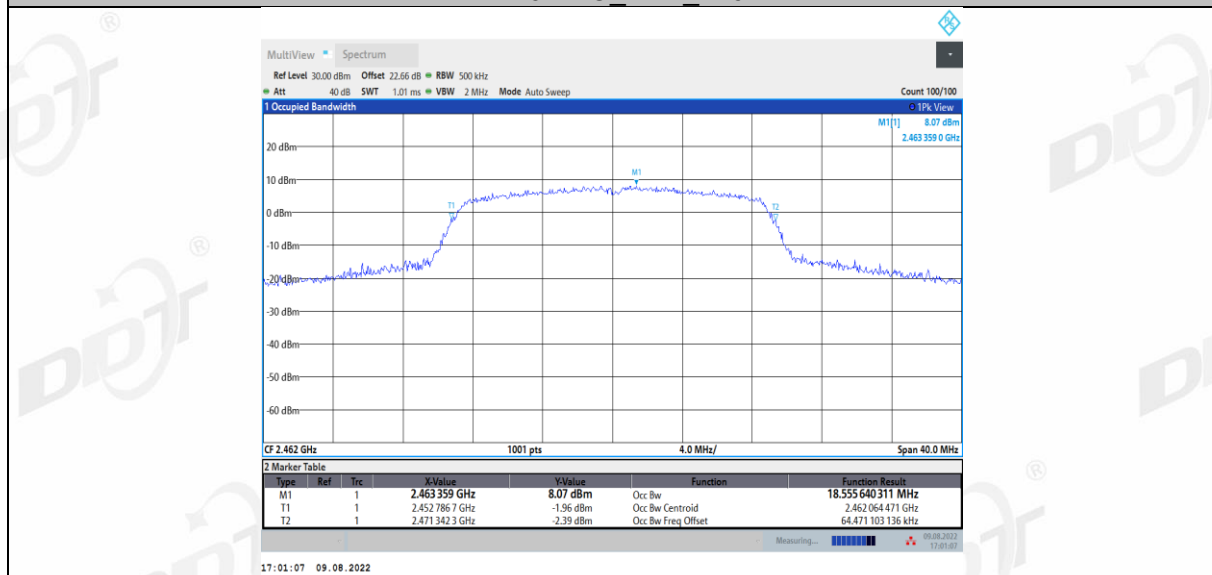
11N20SISO\_Ant1\_2412



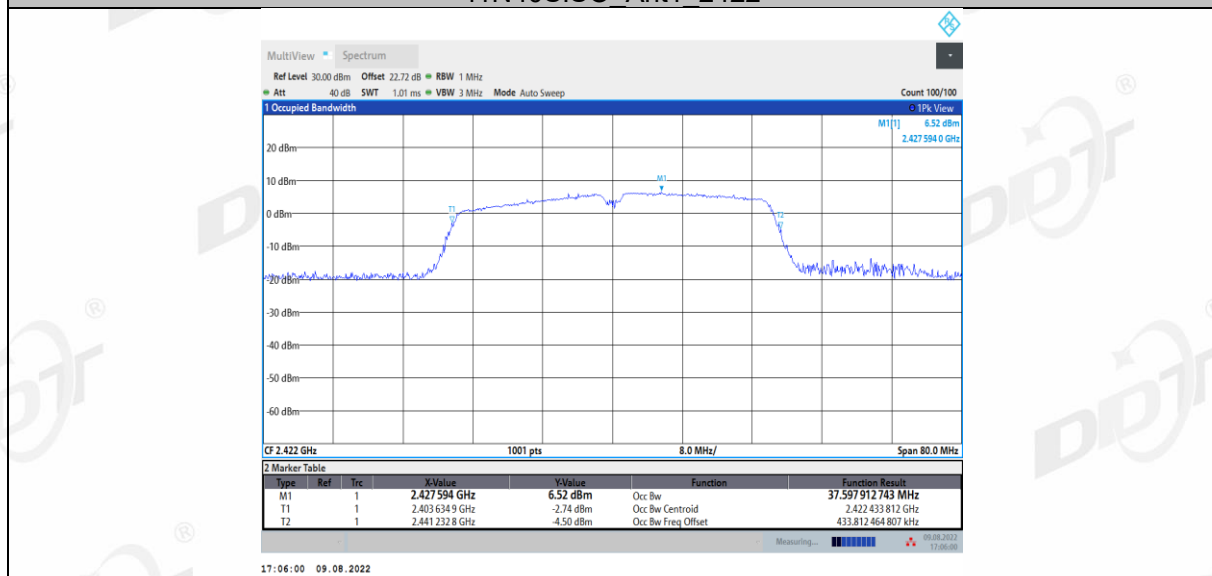
11N20SISO\_Ant1\_2437



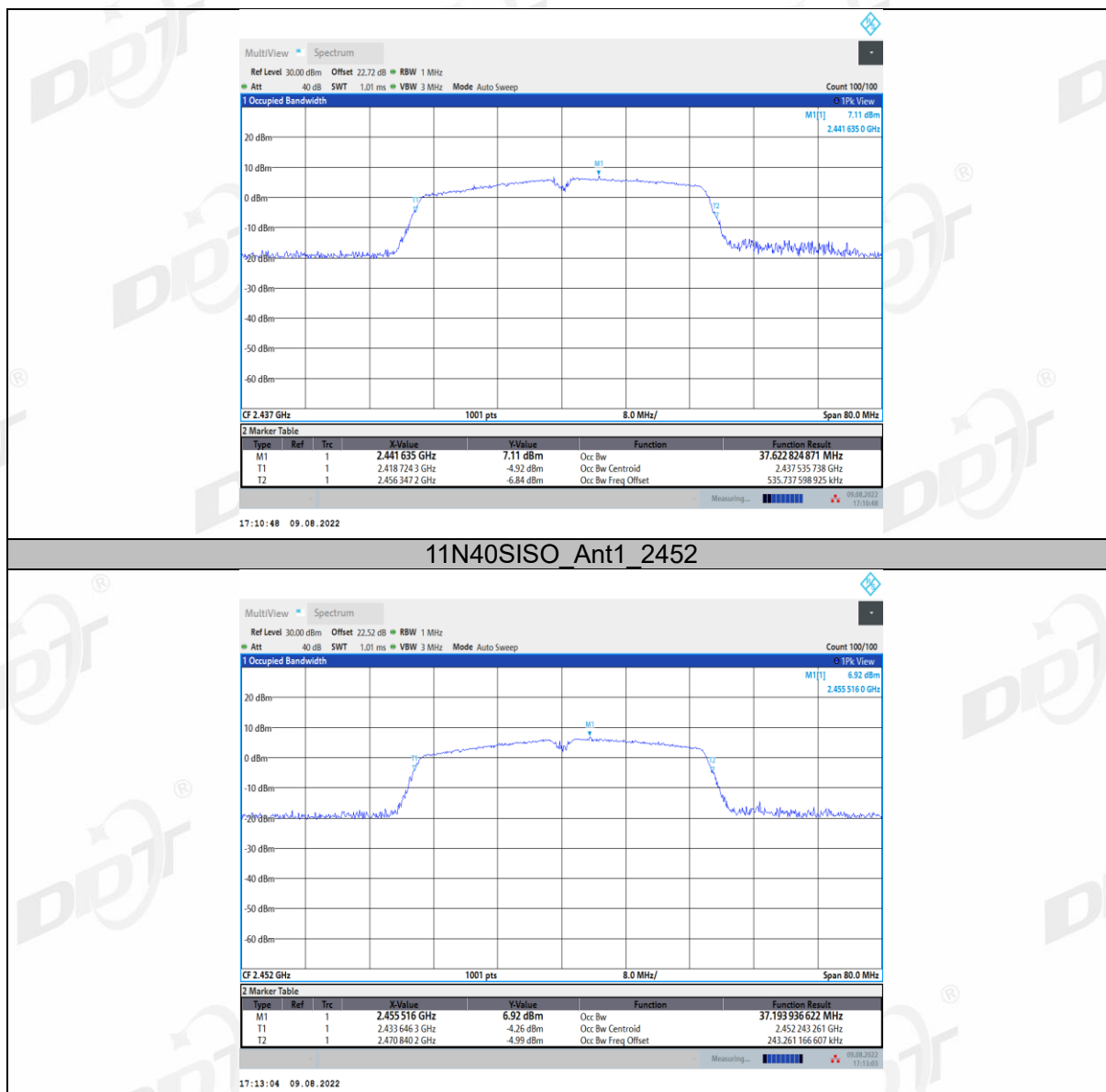
11N20SISO\_Ant1\_2462



11N40SISO\_Ant1\_2422



11N40SISO\_Ant1\_2437



## 5. Conducted Average Output Power

### 5.1. Block diagram of test setup

Same as section 4.1

### 5.2. Limits

For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### 5.3. Test procedure

Connect each EUT's antenna output to power sensor by RF cable and attenuator

Measure the AVG output power of each antenna port by power meter.

### 5.4. Test result

| TestMode  | Antenna | Frequency [MHz] | Average Power [dBm] | Limit [dBm] | Verdict |
|-----------|---------|-----------------|---------------------|-------------|---------|
| 11B       | Ant1    | 2412            | <b>14.43</b>        | ≤30.00      | PASS    |
|           |         | 2437            | 14.19               | ≤30.00      | PASS    |
|           |         | 2462            | 14.32               | ≤30.00      | PASS    |
| 11G       | Ant1    | 2412            | 14.30               | ≤30.00      | PASS    |
|           |         | 2437            | 14.37               | ≤30.00      | PASS    |
|           |         | 2462            | 14.11               | ≤30.00      | PASS    |
| 11N20SISO | Ant1    | 2412            | 14.21               | ≤30.00      | PASS    |
|           |         | 2437            | 14.26               | ≤30.00      | PASS    |
|           |         | 2462            | 14.06               | ≤30.00      | PASS    |
| 11N40SISO | Ant1    | 2422            | 12.07               | ≤30.00      | PASS    |
|           |         | 2437            | 11.91               | ≤30.00      | PASS    |
|           |         | 2452            | 11.82               | ≤30.00      | PASS    |

## 6. Power Spectral Density

### 6.1. Block diagram of test setup

Same as section 4.1

### 6.2. Limits

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

### 6.3. Test procedure

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.

(2) Set the spectrum analyzer as follows:

|                  |                                                      |
|------------------|------------------------------------------------------|
| Center frequency | DTS Channel center frequency                         |
| RBW:             | $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$ |
| VBW:             | $\geq 3\text{RBW}$                                   |
| Span             | 1.5 times the DTS bandwidth                          |
| Detector Mode:   | RMS                                                  |
| Sweep time:      | auto                                                 |
| Trace mode       | Max hold                                             |

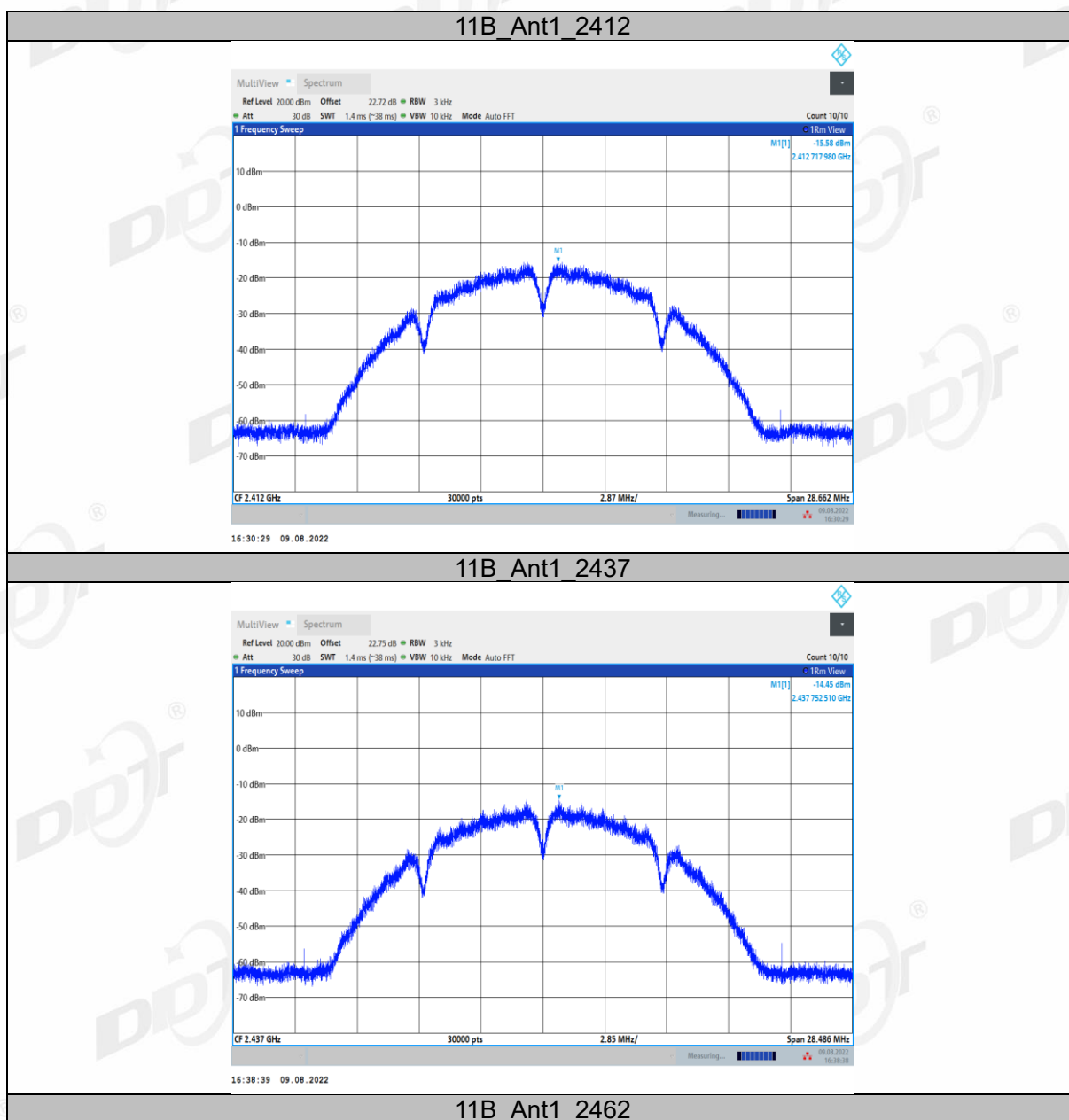
(3) Allow the trace to stabilize, use the peak marker function to determine the maximum amplitude level within the RBW.

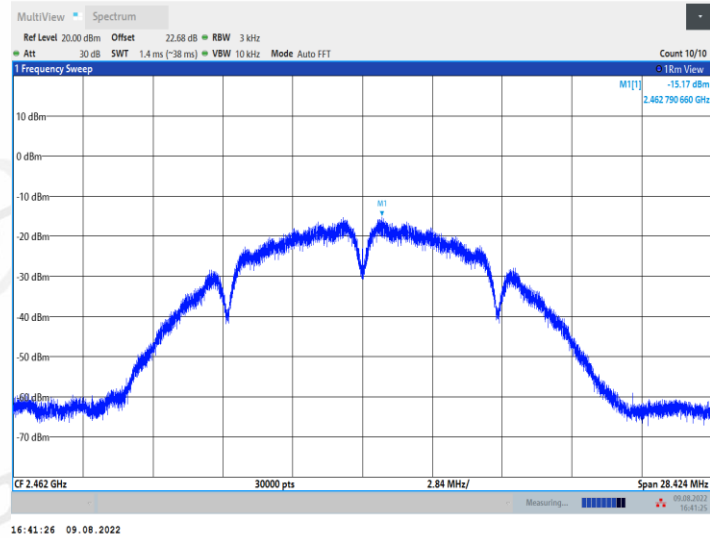
(4) If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

### 6.4. Test result

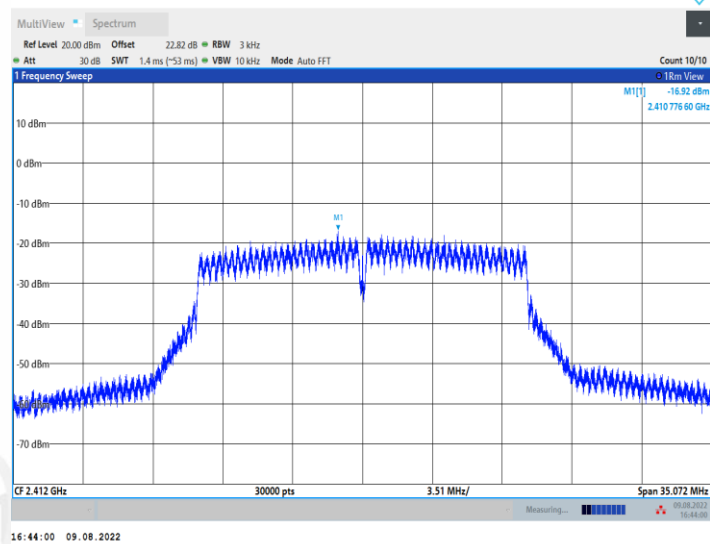
| Test Mode | Antenna | Frequency [MHz] | Result [dBm/3kHz] | Limit [dBm/3kHz] | Verdict |
|-----------|---------|-----------------|-------------------|------------------|---------|
| 11B       | Ant1    | 2412            | -15.58            | $\leq 8.00$      | PASS    |
|           |         | 2437            | -14.45            | $\leq 8.00$      | PASS    |
|           |         | 2462            | -15.17            | $\leq 8.00$      | PASS    |
| 11G       | Ant1    | 2412            | -16.92            | $\leq 8.00$      | PASS    |
|           |         | 2437            | -17.25            | $\leq 8.00$      | PASS    |
|           |         | 2462            | -16.69            | $\leq 8.00$      | PASS    |
| 11N20SISO | Ant1    | 2412            | -18.18            | $\leq 8.00$      | PASS    |
|           |         | 2437            | -17.32            | $\leq 8.00$      | PASS    |
|           |         | 2462            | -16.70            | $\leq 8.00$      | PASS    |
| 11N40SISO | Ant1    | 2422            | -22.48            | $\leq 8.00$      | PASS    |
|           |         | 2437            | -22.50            | $\leq 8.00$      | PASS    |
|           |         | 2452            | -21.89            | $\leq 8.00$      | PASS    |

## 6.5. original test data

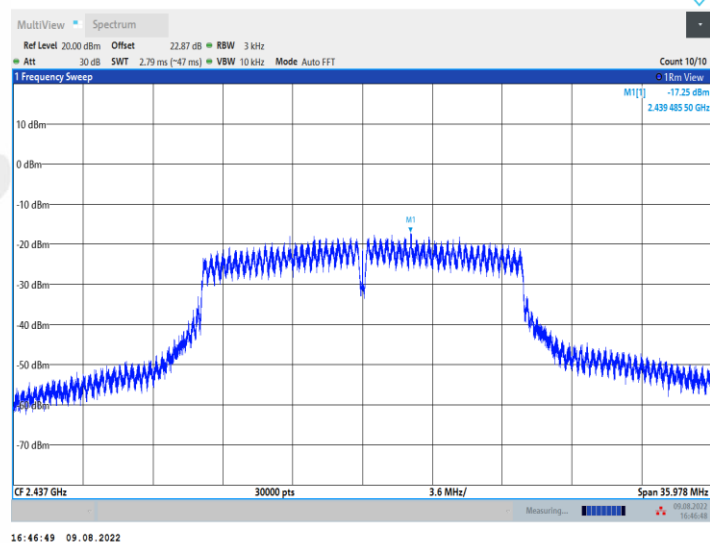




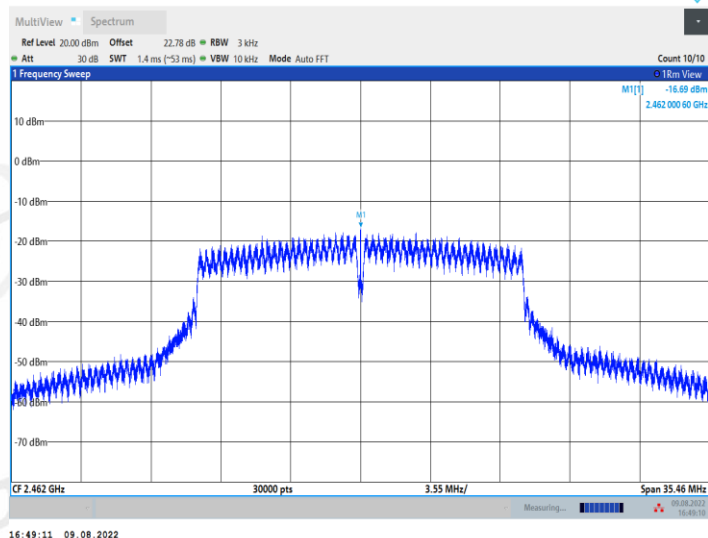
11G\_Ant1\_2412



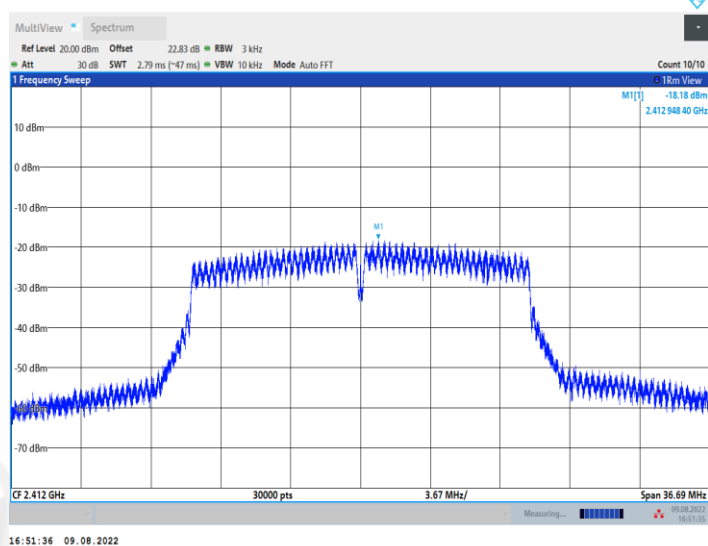
11G\_Ant1\_2437



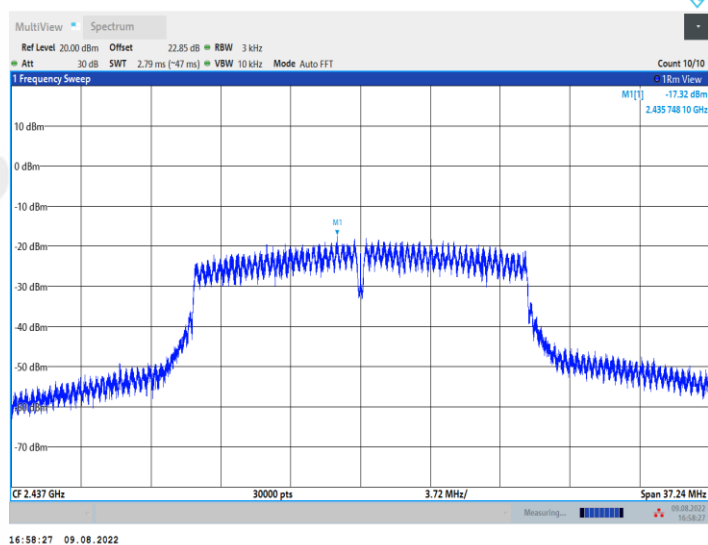
11G\_Ant1\_2462



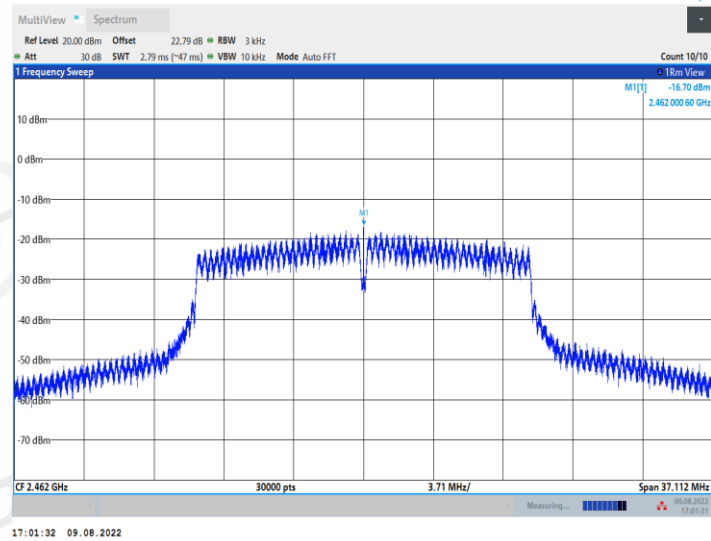
11N20SISO\_Ant1\_2412



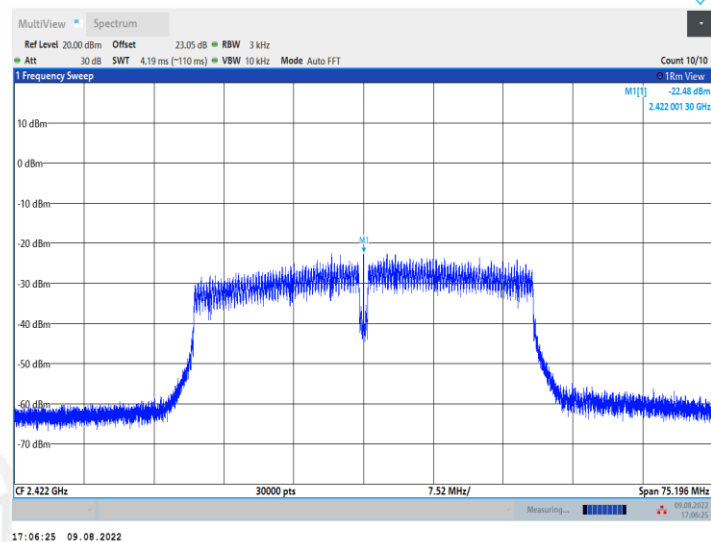
11N20SISO\_Ant1\_2437



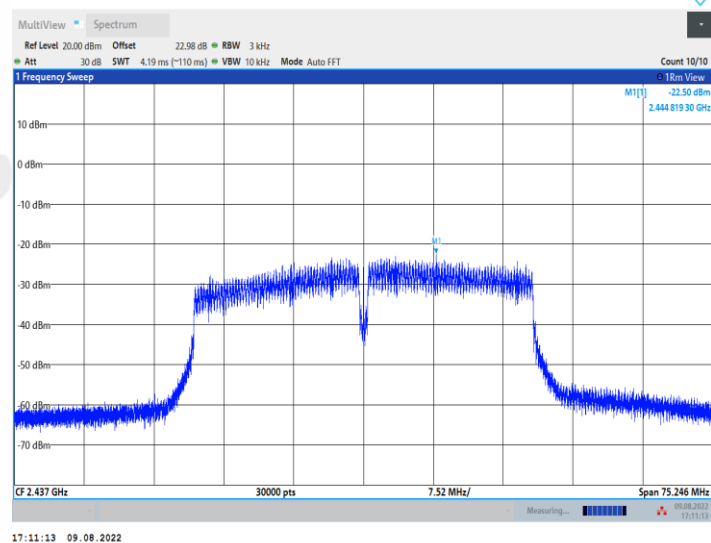
11N20SISO\_Ant1\_2462



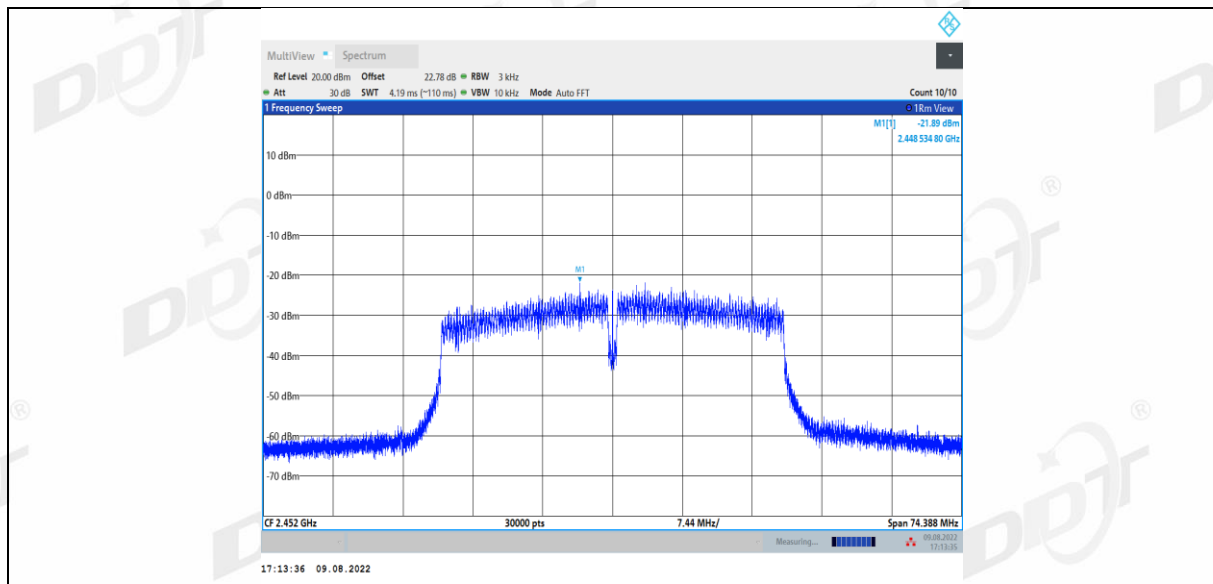
11N40SISO\_Ant1\_2422



11N40SISO\_Ant1\_2437



11N40SISO\_Ant1\_2452



## 7. Band Edge and Compliance (Conducted Method)

### 7.1. Block diagram of test setup

Same as section 4.1

### 7.2. Limits

In any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

### 7.3. Test procedure

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.

(2) Establish a reference level by using the following procedure:

|                |                                          |
|----------------|------------------------------------------|
| RBW:           | 100 kHz                                  |
| VBW:           | 300 kHz                                  |
| Span           | Encompass frequency range to be measured |
| Detector Mode: | Peak                                     |
| Sweep time:    | auto                                     |
| Trace mode     | Max hold                                 |
| RBW:           | 100 kHz                                  |

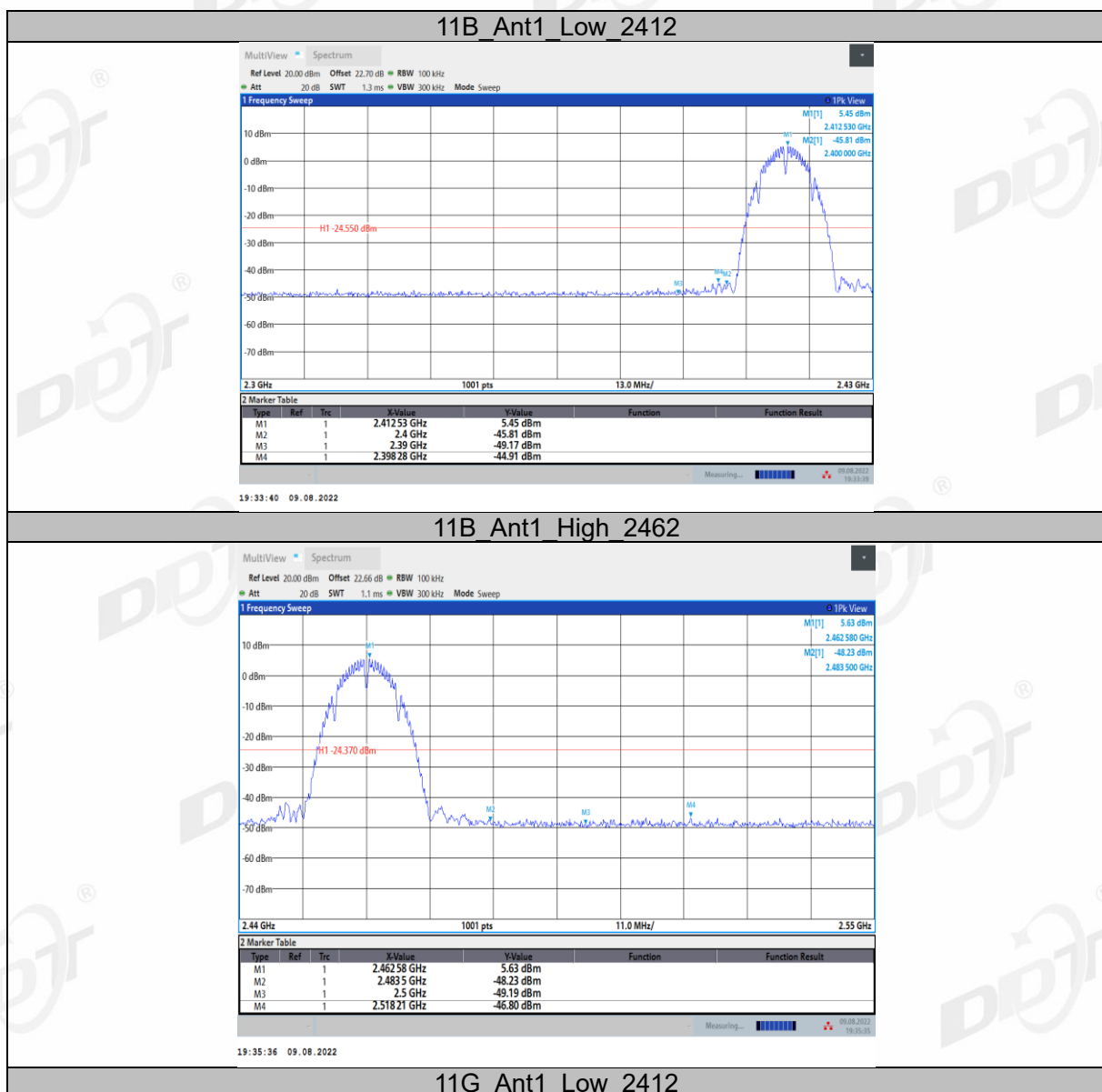
(3) Allow the trace to stabilize, use the peak marker function to determine the maximum peak power level to establish the reference level.

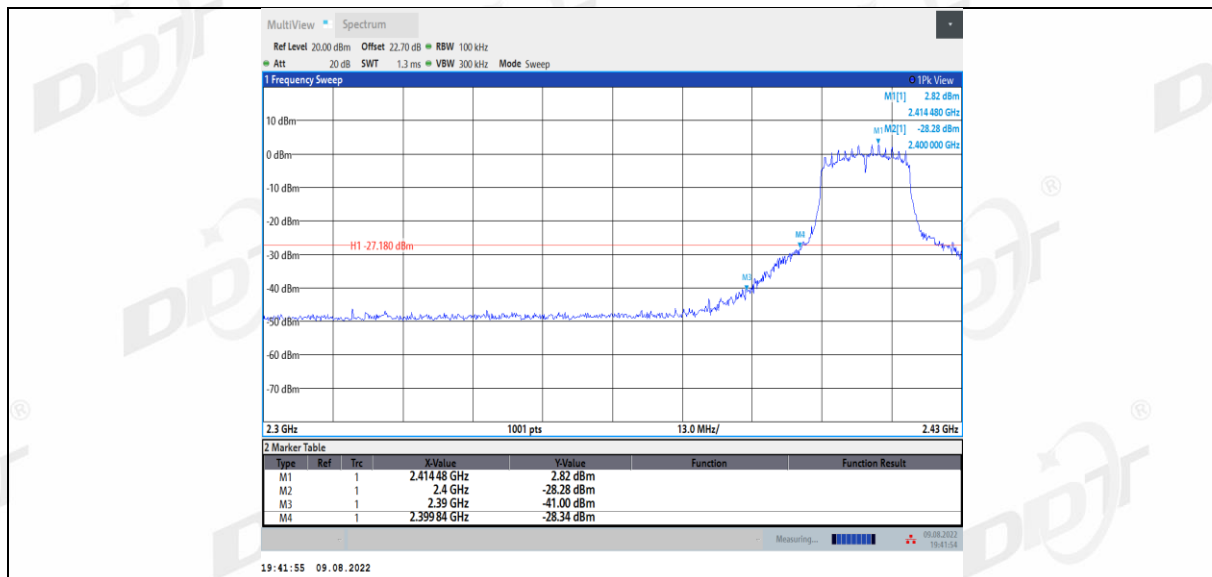
(4) Then mark the maximum amplitude of all unwanted emissions outside of the authorized frequency band.

## 7.4. Test result

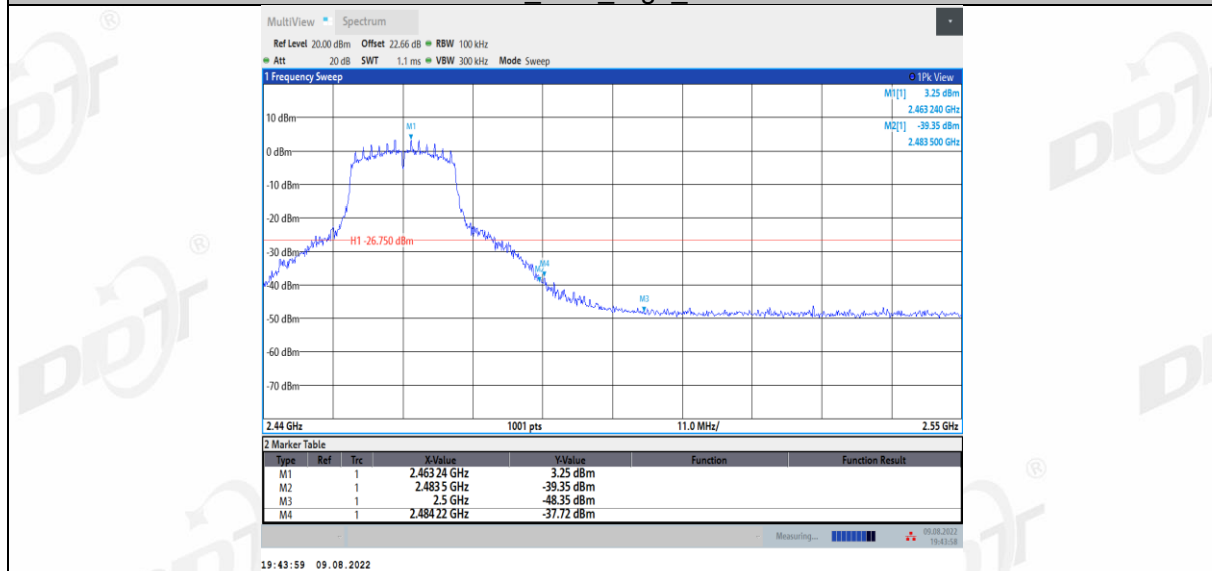
| EUT Set Mode | CH or Frequency | Result (dBm) | EUT Set Mode | CH or Frequency | Result Result (dBm) |
|--------------|-----------------|--------------|--------------|-----------------|---------------------|
| 11b          | CH1             | Pass         | 11n HT 20    | CH1             | Pass                |
|              | CH6             | Pass         |              | CH6             | Pass                |
|              | CH11            | Pass         |              | CH11            | Pass                |
| 11g          | CH1             | Pass         | 11n HT 40    | CH3             | Pass                |
|              | CH6             | Pass         |              | CH6             | Pass                |
|              | CH11            | Pass         |              | CH9             | Pass                |

## 7.5. original test data

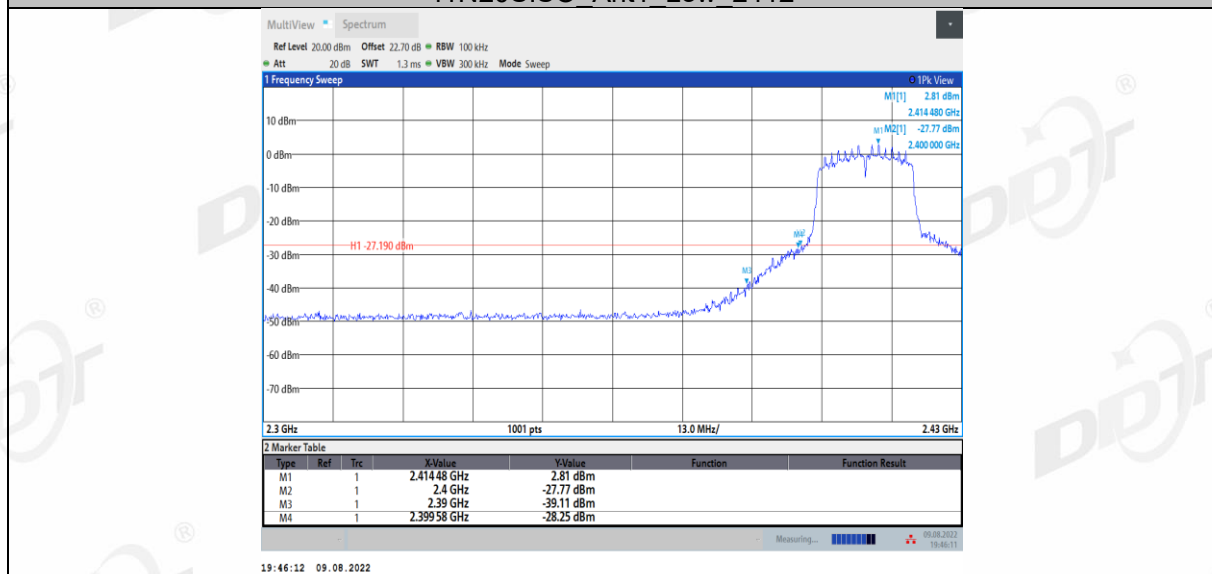




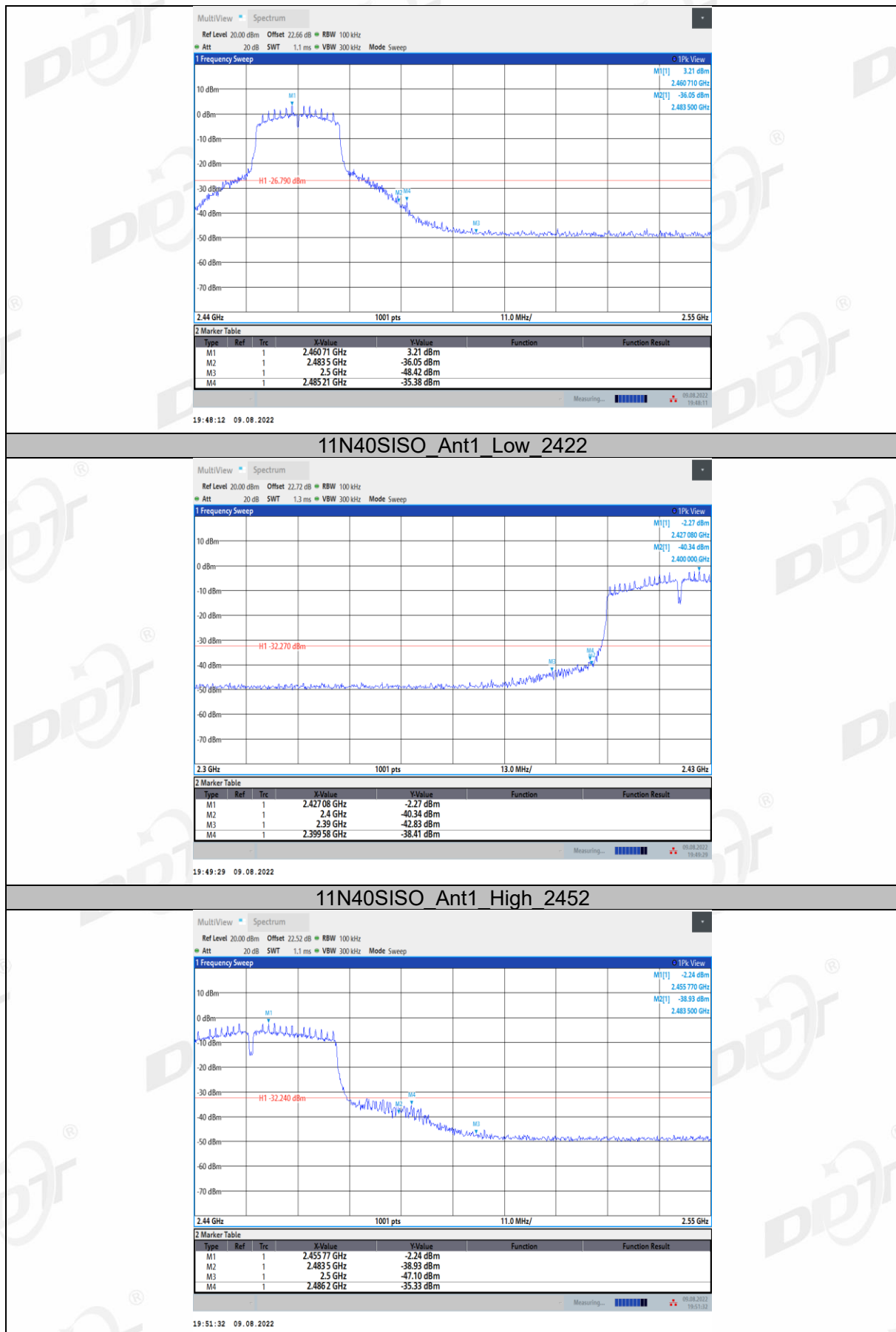
11G\_Ant1\_High\_2462



11N20SISO Ant1\_Low\_2412



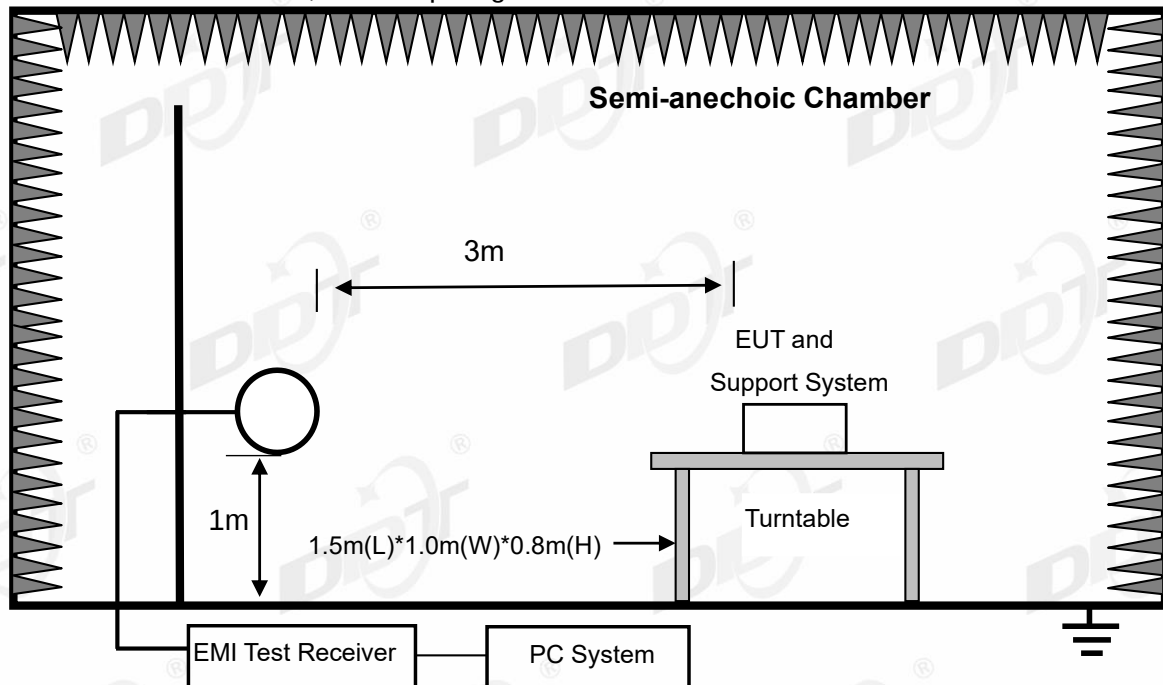
11N20SISO Ant1\_High\_2462



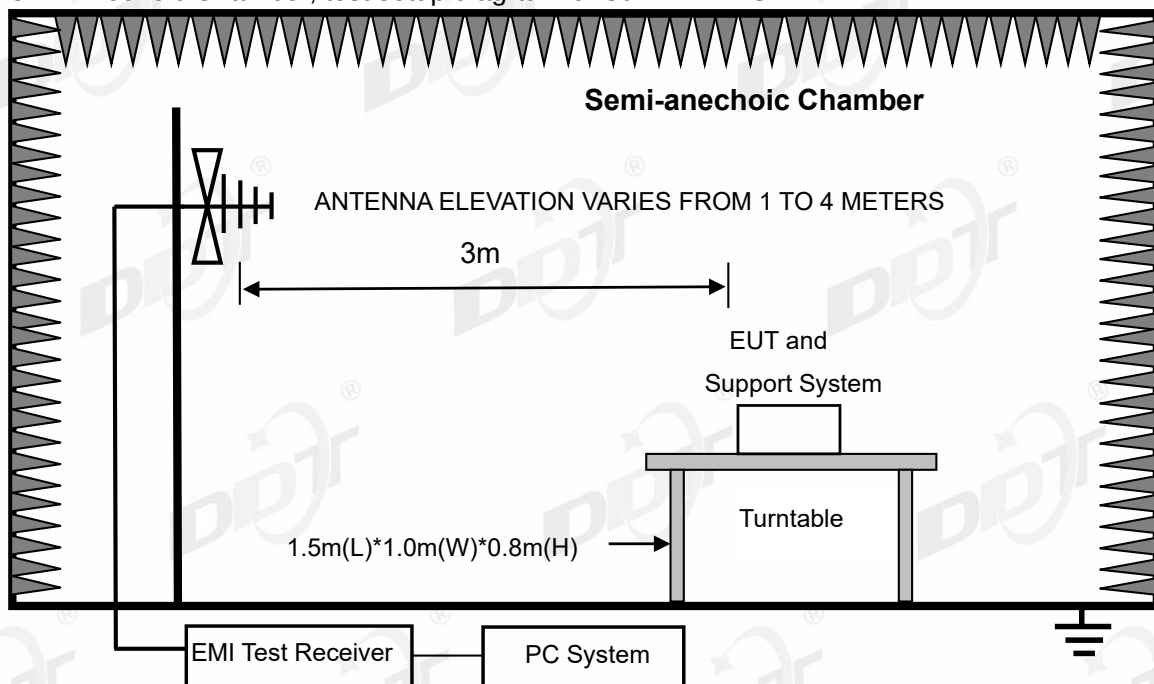
## 8. Radiated Spurious Emissions

### 8.1. Block diagram of test setup

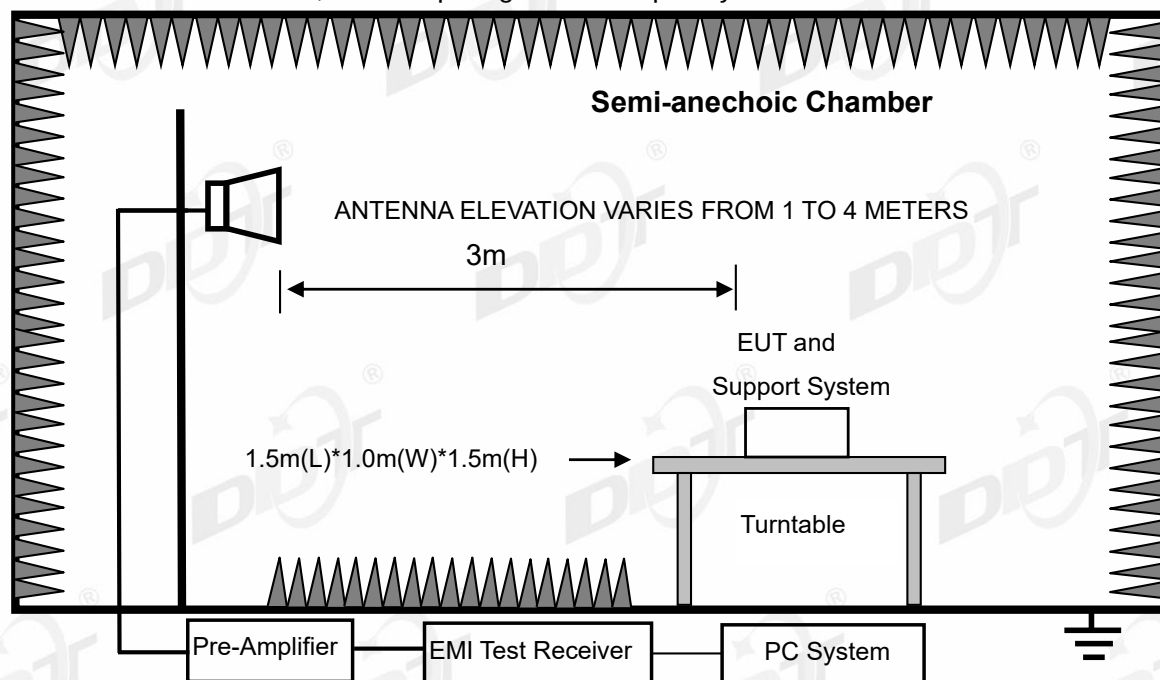
In 3 m Anechoic Chamber, test setup diagram for 9 kHz - 30 MHz:



In 3 m Anechoic Chamber, test setup diagram for 30 MHz - 1 GHz:



In 3 m Anechoic Chamber, test setup diagram for frequency above 1 GHz:



Note: For harmonic emissions test an appropriate high pass filter was inserted in the input port of AMP.

## 8.2. Limit

### 8.2.1 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

## 8.2.2 FCC 15.209 Limit.

| FREQUENCY<br>MHz | DISTANCE<br>Meters | FIELD STRENGTHS LIMIT                                                     |                                   |
|------------------|--------------------|---------------------------------------------------------------------------|-----------------------------------|
|                  |                    | $\mu\text{V/m}$                                                           | $\text{dB}(\mu\text{V})/\text{m}$ |
| 0.009 ~ 0.490    | 300                | 2400/F(kHz)                                                               | 67.6-20log(F)                     |
| 0.490 ~ 1.705    | 30                 | 24000/F(kHz)                                                              | 87.6-20log(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 dB( $\mu\text{V}$ )/m (Peak)<br>54.0 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 1000MHz. Radiated emissions limits in these three bands are based on measurements employing an average detector.

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

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

## 8.2.3 Limit for this EUT

All 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 20dB below the fundamental emissions or comply with 15.209 limits.

## 8.3. Test procedure

(1) EUT height should be 0.8 m for below 1 GHz at a semi-anechoic chamber while EUT height should be 1.5 m for above 1 GHz at full chamber or semi-anechoic chamber ground with absorbers.

(2) The antenna used as below table.

| Test frequency range | Test antenna used                      | Measuring 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(1GHz-18GHz) | 3 m                |
| 18 GHz-40 GHz        | Horn Antenna(18GHz-40GHz)              | 1 m                |

According ANSI C63.10:2013 clause 6.4.4.2 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 30 MHz, the Trilog Broadband Antenna or Horn Antenna was located 3 m 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 1m 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 18GHz to 25GHz, so below final test was performed with frequency range from 9kHz to 18GHz.

(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 equipments 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; RMS detector RBW 1 MHz VBW 10 Hz for Average measure (according ANSI C63.10:2013 clause 4.2.3.2.3 procedure for average measure).

#### 8.4. Test result

##### **Pass. (See below detailed test result)**

All the emissions except fundamental emission from 9 kHz to 25 GHz were comply with 15.209 limit.

Note1: 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.

Note2: 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 802.11b 2412MHz.

Note3: For emissions above 1 GHz. If peak results comply with AV limit, AV Result is deemed to comply with AV limit.

## Radiated Emission test (below 1GHz)

## TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 3#

D:\E3 6.111\2022 Report Data\Q22051321-2E T90ET\FCC  
BELOW 1G.EM6

Test Date : 2022-08-16

Tested By : James Gan

EUT : OCR Multi-Player

Model Number : T90ET

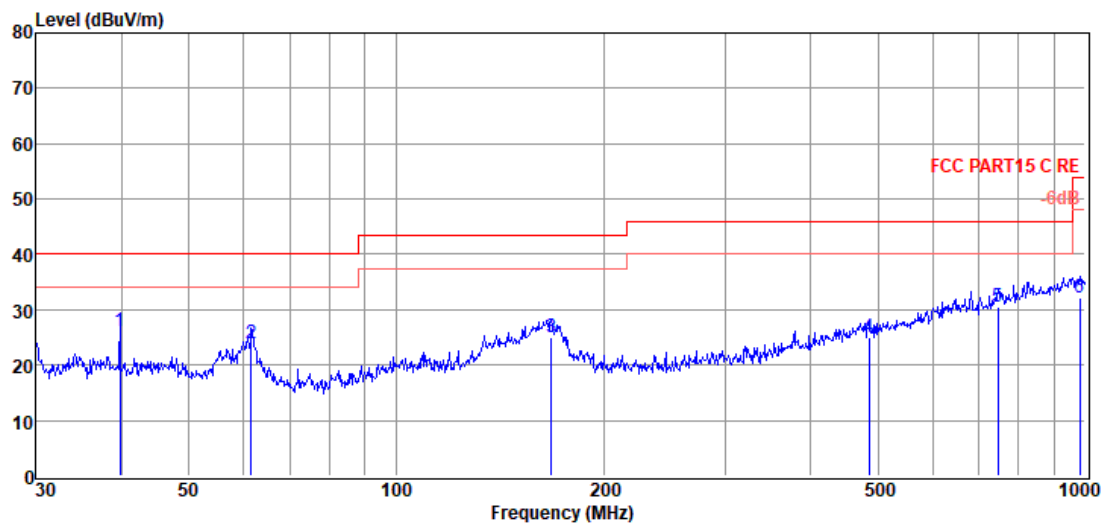
Power Supply : Battery

Test Mode : Tx Mode

Condition : Temp:23°C,Humi:52.4%,Press:100.3kPa

Antenna/Distance : 2022 9161 #3/3m/HORIZONTAL

Memo :



| Item<br>(Mark) | Freq.<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | Cable<br>Loss<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|----------------|-------------------------|-----------------------------|---------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 39.72          | 10.34                   | 12.27                       | 3.61                | 26.22                       | 40.00                     | -13.78                | QP       | HORIZONTAL   |
| 2              | 61.56          | 8.30                    | 11.73                       | 3.76                | 23.79                       | 40.00                     | -16.21                | QP       | HORIZONTAL   |
| 3              | 167.82         | 1.32                    | 19.50                       | 4.33                | 25.15                       | 43.50                     | -18.35                | QP       | HORIZONTAL   |
| 4              | 485.61         | 2.44                    | 17.20                       | 5.44                | 25.08                       | 46.00                     | -20.92                | QP       | HORIZONTAL   |
| 5              | 747.48         | 2.83                    | 21.50                       | 6.09                | 30.42                       | 46.00                     | -15.58                | QP       | HORIZONTAL   |
| 6              | 982.62         | 1.56                    | 23.80                       | 6.75                | 32.11                       | 54.00                     | -21.89                | QP       | HORIZONTAL   |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

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 Site** : DDT 3m Chamber 3#

D:\E3 6.111\2022 Report Data\Q22051321-2E T90ET\FCC  
BELOW 1G.EM6

**Test Date** : 2022-08-16

**Tested By** : James Gan

**EUT** : OCR Multi-Player

**Model Number** : T90ET

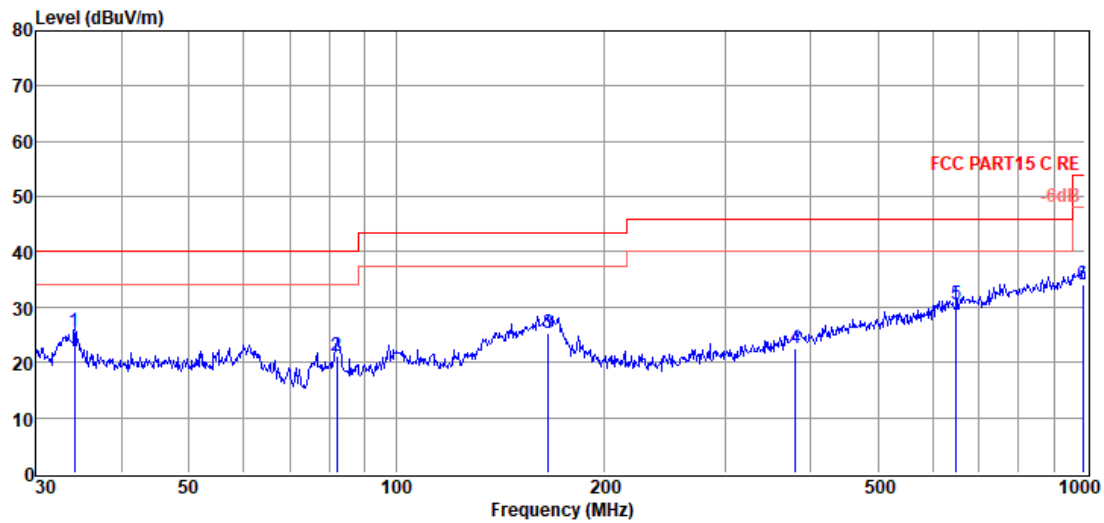
**Power Supply** : Battery

**Test Mode** : Tx Mode

**Condition** : Temp:23°C,Humi:52.4%,Press:100.3kPa

**Antenna/Distance** : 2022 9161 #3/3m/VERTICAL

**Memo** :



| Item<br>(Mark) | Freq.<br>(MHz) | Read Level<br>(dBμV) | Antenna Factor<br>(dB/m) | Cable Loss<br>dB | Result Level<br>(dBμV/m) | Limit Line<br>(dBμV/m) | Over Limit<br>(dB) | Detector | Polarization |
|----------------|----------------|----------------------|--------------------------|------------------|--------------------------|------------------------|--------------------|----------|--------------|
| 1              | 34.16          | 10.52                | 11.52                    | 3.58             | 25.62                    | 40.00                  | -14.38             | QP       | VERTICAL     |
| 2              | 82.07          | 7.47                 | 9.71                     | 3.89             | 21.07                    | 40.00                  | -18.93             | QP       | VERTICAL     |
| 3              | 166.07         | 1.52                 | 19.50                    | 4.32             | 25.34                    | 43.50                  | -18.16             | QP       | VERTICAL     |
| 4              | 379.91         | 1.98                 | 15.60                    | 5.09             | 22.67                    | 46.00                  | -23.33             | QP       | VERTICAL     |
| 5              | 649.66         | 4.66                 | 19.90                    | 5.86             | 30.42                    | 46.00                  | -15.58             | QP       | VERTICAL     |
| 6              | 993.01         | 3.53                 | 23.80                    | 6.80             | 34.13                    | 54.00                  | -19.87             | QP       | VERTICAL     |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

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.

## Radiated Emission test (Above 1GHz)

## TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 3#

D:\E3 6.111\2022 Report Data\Q22051321-2E T90ET\FCC ABOVE 1G 2.4G.EM6

Test Date : 2022-08-16

Tested By : James Gan

EUT : OCR Multi-Player

Model Number : T90ET

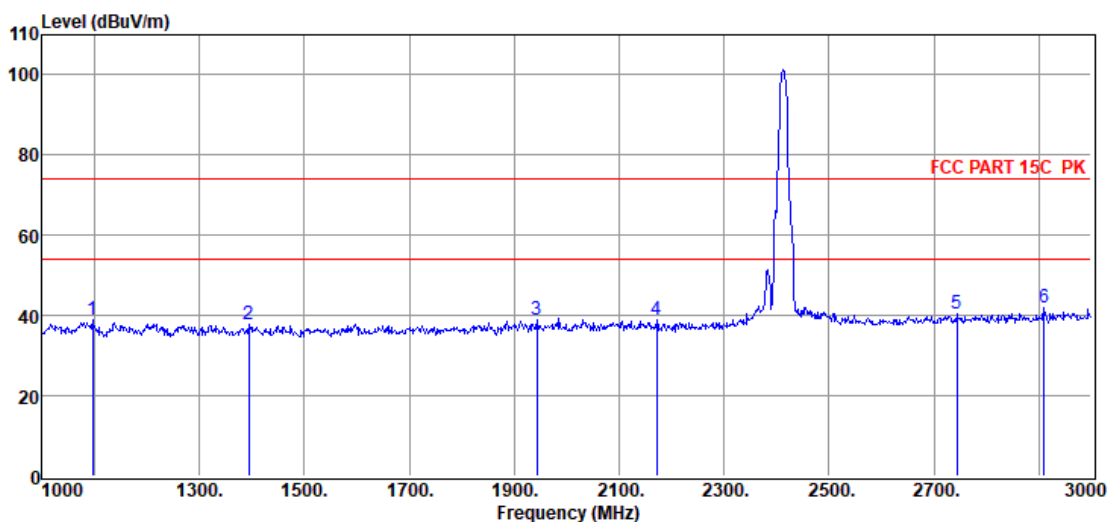
Power Supply : BATTERY

Test Mode : Tx Mode

Condition : Temp:23.2°C,Humi:53%,Press:100.1kPa

Antenna/Distance : 2021 BBHA 9120D  
3#/3m/HORIZONTAL

Memo : 11B 2412



| Item<br>(Mark) | Freq.<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Filter<br>Factor<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|----------------|-------------------------|-----------------------------|---------------------|---------------------|------------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 1096.00        | 49.77                   | 25.48                       | 38.04               | 1.15                | 0.52                   | 38.88                       | 74.00                     | -35.12                | Peak     | HORIZONTAL   |
| 2              | 1394.00        | 49.00                   | 25.42                       | 38.49               | 1.32                | 0.57                   | 37.82                       | 74.00                     | -36.18                | Peak     | HORIZONTAL   |
| 3              | 1944.00        | 49.60                   | 26.55                       | 39.32               | 1.58                | 0.67                   | 39.08                       | 74.00                     | -34.92                | Peak     | HORIZONTAL   |
| 4              | 2172.00        | 49.13                   | 27.01                       | 39.49               | 1.65                | 0.70                   | 39.00                       | 74.00                     | -35.00                | Peak     | HORIZONTAL   |
| 5              | 2744.00        | 49.04                   | 28.53                       | 39.77               | 1.80                | 0.76                   | 40.36                       | 74.00                     | -33.64                | Peak     | HORIZONTAL   |
| 6              | 2910.00        | 50.10                   | 29.16                       | 39.86               | 1.85                | 0.78                   | 42.03                       | 74.00                     | -31.97                | Peak     | HORIZONTAL   |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.

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 Site** : DDT 3m Chamber 3#

D:\E3 6.111\2022 Report Data\Q22051321-2E T90ET\FCC  
ABOVE 1G 2.4G.EM6

**Test Date** : 2022-08-16

**Tested By** : James Gan

**EUT** : OCR Multi-Player

**Model Number** : T90ET

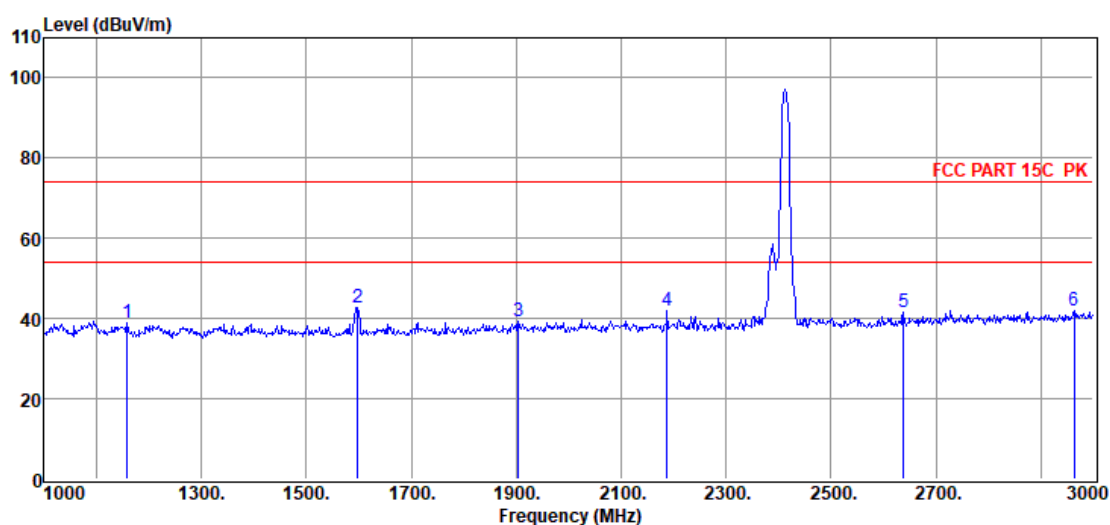
**Power Supply** : BATTERY

**Test Mode** : Tx Mode

**Condition** : Temp:23.2°C,Humi:53%,Press:100.1kPa

**Antenna/Distance** : 2021 BBHA 9120D 3#/3m/VERTICAL

**Memo** : 11B 2412



| Item<br>(Mark) | Freq.<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Filter<br>Factor<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|----------------|-------------------------|-----------------------------|---------------------|---------------------|------------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 1158.00        | 49.70                   | 25.47                       | 38.14               | 1.19                | 0.53                   | 38.75                       | 74.00                     | -35.25                | Peak     | VERTICAL     |
| 2              | 1598.00        | 54.01                   | 25.65                       | 38.80               | 1.42                | 0.61                   | 42.89                       | 74.00                     | -31.11                | Peak     | VERTICAL     |
| 3              | 1904.00        | 49.85                   | 26.45                       | 39.26               | 1.56                | 0.66                   | 39.26                       | 74.00                     | -34.74                | Peak     | VERTICAL     |
| 4              | 2188.00        | 51.97                   | 27.04                       | 39.49               | 1.65                | 0.70                   | 41.87                       | 74.00                     | -32.13                | Peak     | VERTICAL     |
| 5              | 2638.00        | 50.63                   | 28.12                       | 39.72               | 1.78                | 0.75                   | 41.56                       | 74.00                     | -32.44                | Peak     | VERTICAL     |
| 6              | 2964.00        | 49.70                   | 29.36                       | 39.88               | 1.86                | 0.79                   | 41.83                       | 74.00                     | -32.17                | Peak     | VERTICAL     |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.  
 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 Site** : DDT 3m Chamber 3#

D:\E3 6.111\2022 Report Data\Q22051321-2E T90ET\FCC  
ABOVE 1G 2.4G.EM6

**Test Date** : 2022-08-16

**Tested By** : James Gan

**EUT** : OCR Multi-Player

**Model Number** : T90ET

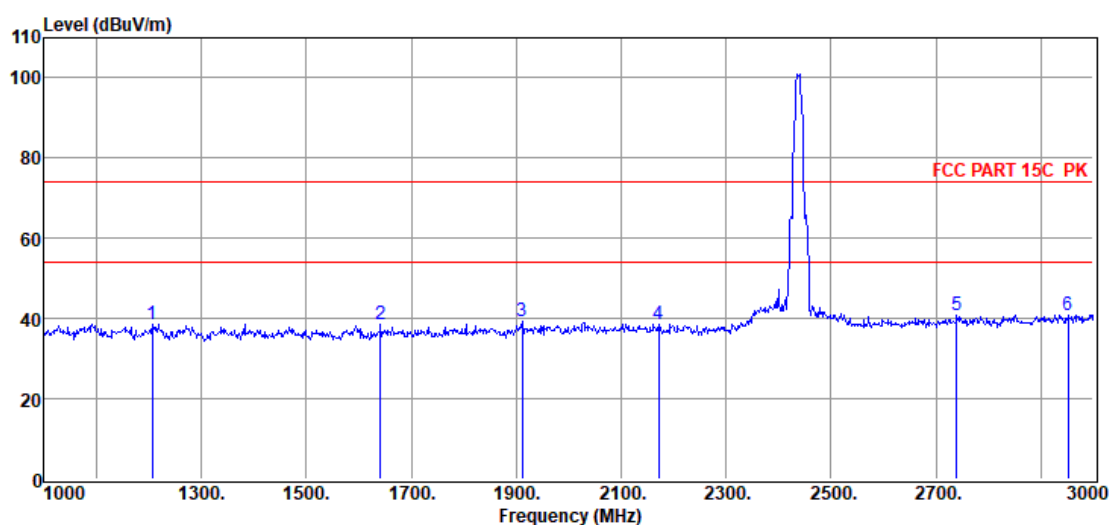
**Power Supply** : BATTERY

**Test Mode** : Tx Mode

**Condition** : Temp:23.2°C,Humi:53%,Press:100.1kPa

**Antenna/Distance** : 2021 BBHA 9120D  
3#/3m/HORIZONTAL

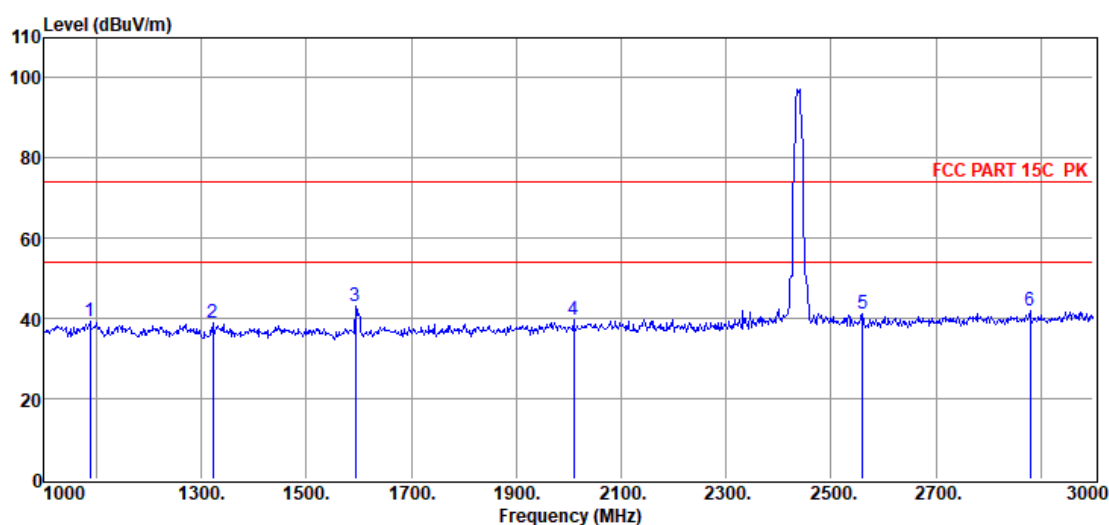
**Memo** : 11B 2437



| Item<br>(Mark) | Freq.<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Filter<br>Factor<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|----------------|-------------------------|-----------------------------|---------------------|---------------------|------------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 1206.00        | 49.46                   | 25.46                       | 38.21               | 1.22                | 0.54                   | 38.47                       | 74.00                     | -35.53                | Peak     | HORIZONTAL   |
| 2              | 1642.00        | 49.72                   | 25.77                       | 38.86               | 1.44                | 0.62                   | 38.69                       | 74.00                     | -35.31                | Peak     | HORIZONTAL   |
| 3              | 1912.00        | 49.71                   | 26.47                       | 39.27               | 1.56                | 0.66                   | 39.13                       | 74.00                     | -34.87                | Peak     | HORIZONTAL   |
| 4              | 2172.00        | 48.74                   | 27.01                       | 39.49               | 1.65                | 0.70                   | 38.61                       | 74.00                     | -35.39                | Peak     | HORIZONTAL   |
| 5              | 2740.00        | 49.44                   | 28.51                       | 39.77               | 1.80                | 0.76                   | 40.74                       | 74.00                     | -33.26                | Peak     | HORIZONTAL   |
| 6              | 2952.00        | 48.87                   | 29.32                       | 39.88               | 1.86                | 0.78                   | 40.95                       | 74.00                     | -33.05                | Peak     | HORIZONTAL   |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.  
 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 Site** : DDT 3m Chamber 3#D:\E3 6.111\2022 Report Data\Q22051321-2E T90ET\FCC  
ABOVE 1G 2.4G.EM6**Test Date** : 2022-08-16**Tested By** : James Gan**EUT** : OCR Multi-Player**Model Number** : T90ET**Power Supply** : BATTERY**Test Mode** : Tx Mode**Condition** : Temp:23.2°C,Humi:53%,Press:100.1kPa**Antenna/Distance** : 2021 BBHA 9120D 3#/3m/VERTICAL**Memo** : 11B 2437

| Item<br>(Mark) | Freq.<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Filter<br>Factor<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|----------------|-------------------------|-----------------------------|---------------------|---------------------|------------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 1088.00        | 50.23                   | 25.48                       | 38.03               | 1.15                | 0.52                   | 39.35                       | 74.00                     | -34.65                | Peak     | VERTICAL     |
| 2              | 1322.00        | 49.86                   | 25.44                       | 38.38               | 1.28                | 0.56                   | 38.76                       | 74.00                     | -35.24                | Peak     | VERTICAL     |
| 3              | 1594.00        | 54.19                   | 25.64                       | 38.79               | 1.42                | 0.61                   | 43.07                       | 74.00                     | -30.93                | Peak     | VERTICAL     |
| 4              | 2010.00        | 49.94                   | 26.72                       | 39.41               | 1.60                | 0.68                   | 39.53                       | 74.00                     | -34.47                | Peak     | VERTICAL     |
| 5              | 2560.00        | 50.47                   | 27.83                       | 39.68               | 1.76                | 0.74                   | 41.12                       | 74.00                     | -32.88                | Peak     | VERTICAL     |
| 6              | 2880.00        | 49.98                   | 29.04                       | 39.84               | 1.84                | 0.78                   | 41.80                       | 74.00                     | -32.20                | Peak     | VERTICAL     |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.  
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 Site** : DDT 3m Chamber 3#

D:\E3 6.111\2022 Report Data\Q22051321-2E T90ET\FCC  
ABOVE 1G 2.4G.EM6

**Test Date** : 2022-08-16

**Tested By** : James Gan

**EUT** : OCR Multi-Player

**Model Number** : T90ET

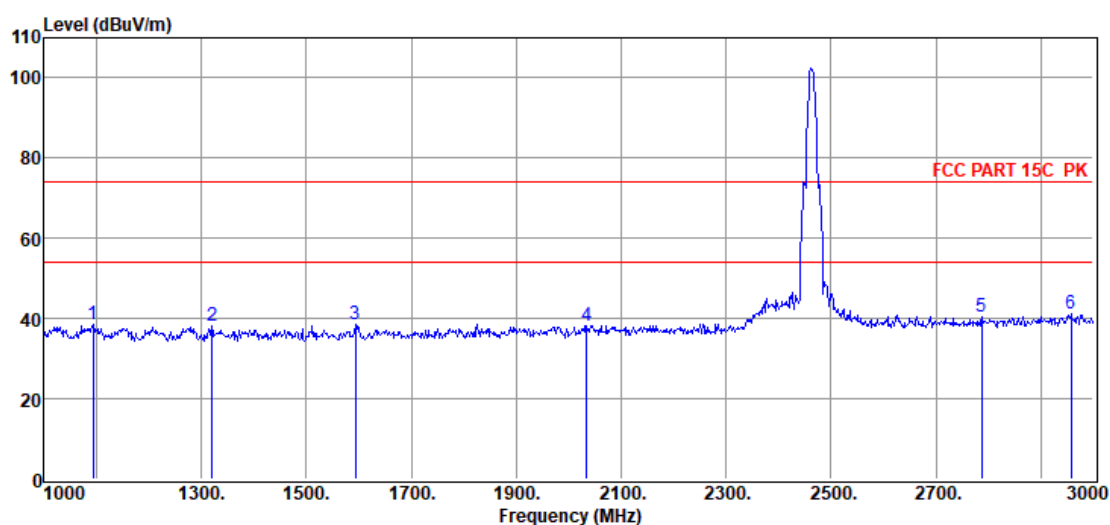
**Power Supply** : BATTERY

**Test Mode** : Tx Mode

**Condition** : Temp:23.2°C,Humi:53%,Press:100.1kPa

**Antenna/Distance** : 2021 BBHA 9120D  
3#/3m/HORIZONTAL

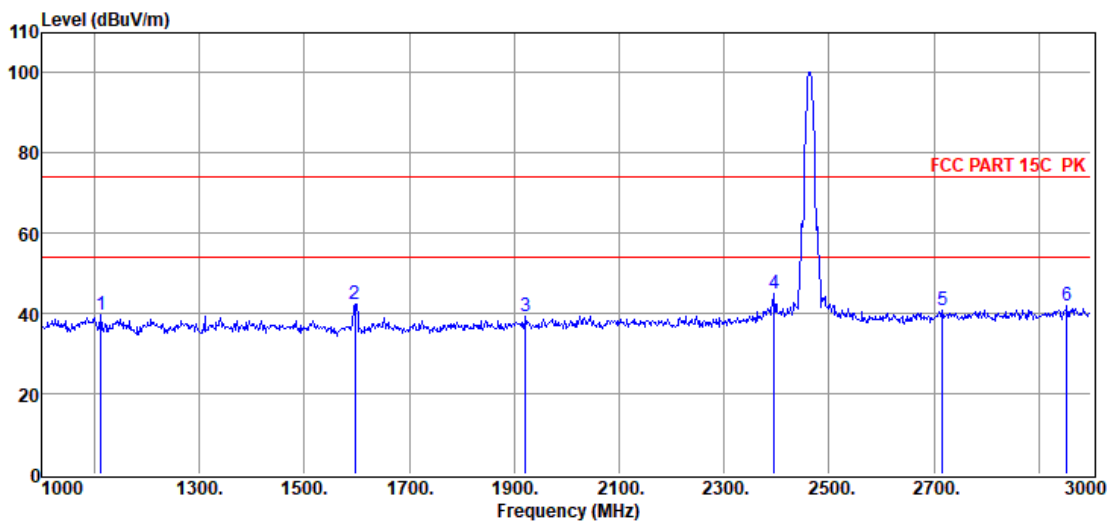
**Memo** : 11B 2462



| Item<br>(Mark) | Freq.<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Filter<br>Factor<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|----------------|-------------------------|-----------------------------|---------------------|---------------------|------------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 1094.00        | 49.30                   | 25.48                       | 38.04               | 1.15                | 0.52                   | 38.41                       | 74.00                     | -35.59                | Peak     | HORIZONTAL   |
| 2              | 1320.00        | 49.40                   | 25.44                       | 38.38               | 1.28                | 0.56                   | 38.30                       | 74.00                     | -35.70                | Peak     | HORIZONTAL   |
| 3              | 1594.00        | 49.53                   | 25.64                       | 38.79               | 1.42                | 0.61                   | 38.41                       | 74.00                     | -35.59                | Peak     | HORIZONTAL   |
| 4              | 2034.00        | 48.48                   | 26.76                       | 39.42               | 1.61                | 0.68                   | 38.11                       | 74.00                     | -35.89                | Peak     | HORIZONTAL   |
| 5              | 2788.00        | 49.07                   | 28.69                       | 39.79               | 1.81                | 0.77                   | 40.55                       | 74.00                     | -33.45                | Peak     | HORIZONTAL   |
| 6              | 2958.00        | 48.94                   | 29.34                       | 39.88               | 1.86                | 0.79                   | 41.05                       | 74.00                     | -32.95                | Peak     | HORIZONTAL   |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.  
 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 Site** : DDT 3m Chamber 3#D:\E3 6.111\2022 Report Data\Q22051321-2E T90ET\FCC  
ABOVE 1G 2.4G.EM6**Test Date** : 2022-08-16**Tested By** : James Gan**EUT** : OCR Multi-Player**Model Number** : T90ET**Power Supply** : BATTERY**Test Mode** : Tx Mode**Condition** : Temp:23.2°C,Humi:53%,Press:100.1kPa**Antenna/Distance** : 2021 BBHA 9120D 3#/3m/VERTICAL**Memo** : 11B 2462

| Item<br>(Mark) | Freq.<br>(MHz) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Filter<br>Factor<br>dB | Result<br>Level<br>(dBuV/m) | Limit<br>Line<br>(dBuV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|----------------|-------------------------|-----------------------------|---------------------|---------------------|------------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 1112.00        | 50.42                   | 25.48                       | 38.07               | 1.16                | 0.52                   | 39.51                       | 74.00                     | -34.49                | Peak     | VERTICAL     |
| 2              | 1596.00        | 53.33                   | 25.65                       | 38.79               | 1.42                | 0.61                   | 42.22                       | 74.00                     | -31.78                | Peak     | VERTICAL     |
| 3              | 1922.00        | 49.74                   | 26.50                       | 39.28               | 1.57                | 0.67                   | 39.20                       | 74.00                     | -34.80                | Peak     | VERTICAL     |
| 4              | 2396.00        | 54.74                   | 27.41                       | 39.60               | 1.71                | 0.72                   | 44.98                       | 74.00                     | -29.02                | Peak     | VERTICAL     |
| 5              | 2716.00        | 49.73                   | 28.42                       | 39.76               | 1.80                | 0.76                   | 40.95                       | 74.00                     | -33.05                | Peak     | VERTICAL     |
| 6              | 2954.00        | 49.96                   | 29.33                       | 39.88               | 1.86                | 0.78                   | 42.05                       | 74.00                     | -31.95                | Peak     | VERTICAL     |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.  
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 Site** : DDT 3m Chamber 3#

D:\E3 6.111\2022 Report Data\Q22051321-2E T90ET\FCC ABOVE 1G 2.4G.EM6

**Test Date** : 2022-08-16

**Tested By** : James Gan

**EUT** : OCR Multi-Player

**Model Number** : T90ET

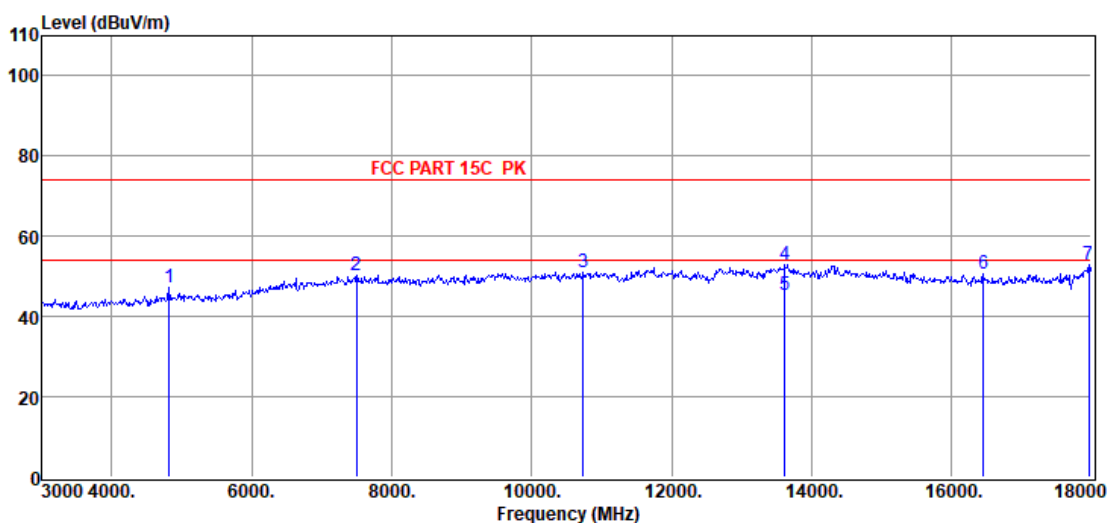
**Power Supply** : BATTERY

**Test Mode** : Tx Mode

**Condition** : Temp:23.2°C,Humi:53%,Press:100.1kPa

**Antenna/Distance** : 2021 BBHA 9120D  
3#/3m/HORIZONTAL

**Memo** : 11B 2412



| Item<br>(Mark) | Freq.<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Filter<br>Factor<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|----------------|-------------------------|-----------------------------|---------------------|---------------------|------------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 4824.00        | 50.47                   | 32.54                       | 40.36               | 2.48                | 2.16                   | 47.29                       | 74.00                     | -26.71                | Peak     | HORIZONTAL   |
| 2              | 7500.00        | 48.09                   | 36.40                       | 39.75               | 3.14                | 2.27                   | 50.15                       | 74.00                     | -23.85                | Peak     | HORIZONTAL   |
| 3              | 10740.00       | 46.00                   | 39.14                       | 40.30               | 3.73                | 2.41                   | 50.98                       | 74.00                     | -23.02                | Peak     | HORIZONTAL   |
| 4              | 13620.00       | 46.04                   | 39.98                       | 39.97               | 4.12                | 2.92                   | 53.09                       | 74.00                     | -20.91                | Peak     | HORIZONTAL   |
| 5              | 13620.00       | 38.29                   | 39.98                       | 39.97               | 4.12                | 2.92                   | 45.34                       | 54.00                     | -8.66                 | Average  | HORIZONTAL   |
| 6              | 16455.00       | 44.71                   | 37.90                       | 39.99               | 4.72                | 3.30                   | 50.64                       | 74.00                     | -23.36                | Peak     | HORIZONTAL   |
| 7              | 17970.00       | 42.48                   | 42.31                       | 40.68               | 4.95                | 3.78                   | 52.84                       | 74.00                     | -21.16                | Peak     | HORIZONTAL   |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.

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 Site** : DDT 3m Chamber 3#

D:\E3 6.111\2022 Report Data\Q22051321-2E T90ET\FCC ABOVE 1G 2.4G.EM6

**Test Date** : 2022-08-16

**Tested By** : James Gan

**EUT** : OCR Multi-Player

**Model Number** : T90ET

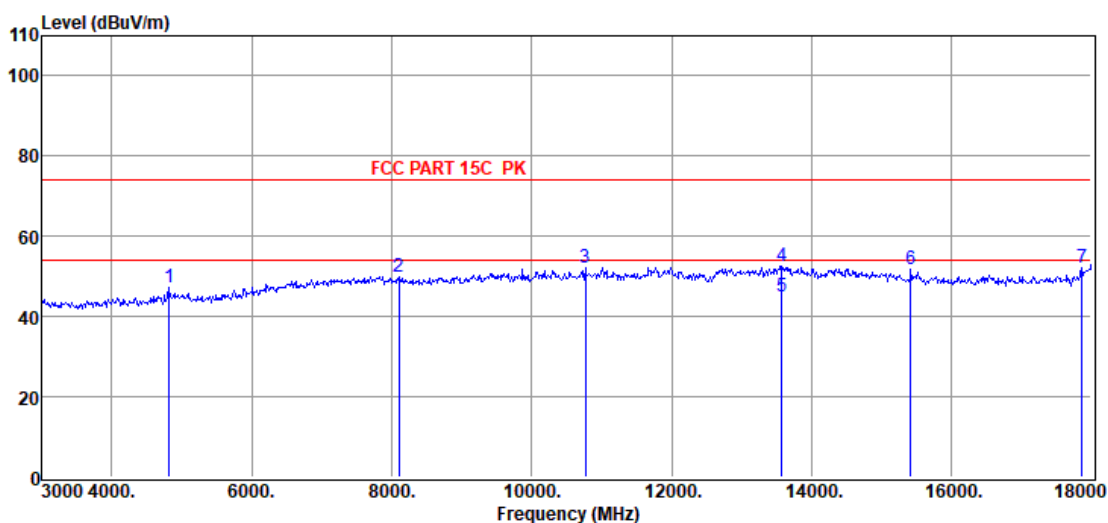
**Power Supply** : BATTERY

**Test Mode** : Tx Mode

**Condition** : Temp:23.2°C,Humi:53%,Press:100.1kPa

**Antenna/Distance** : 2021 BBHA 9120D 3#/3m/VERTICAL

**Memo** : 11B 2412



| Item<br>(Mark) | Freq.<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Filter<br>Factor<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|----------------|-------------------------|-----------------------------|---------------------|---------------------|------------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 4824.00        | 50.44                   | 32.54                       | 40.36               | 2.48                | 2.16                   | 47.26                       | 74.00                     | -26.74                | Peak     | VERTICAL     |
| 2              | 8100.00        | 47.20                   | 37.16                       | 39.81               | 3.20                | 2.27                   | 50.02                       | 74.00                     | -23.98                | Peak     | VERTICAL     |
| 3              | 10770.00       | 47.16                   | 39.16                       | 40.29               | 3.74                | 2.40                   | 52.17                       | 74.00                     | -21.83                | Peak     | VERTICAL     |
| 4              | 13575.00       | 45.63                   | 39.99                       | 40.00               | 4.07                | 2.93                   | 52.62                       | 74.00                     | -21.38                | Peak     | VERTICAL     |
| 5              | 13575.00       | 38.10                   | 39.99                       | 40.00               | 4.07                | 2.93                   | 45.09                       | 54.00                     | -8.91                 | Average  | VERTICAL     |
| 6              | 15420.00       | 45.05                   | 38.91                       | 39.73               | 4.55                | 2.83                   | 51.61                       | 74.00                     | -22.39                | Peak     | VERTICAL     |
| 7              | 17865.00       | 42.40                   | 41.66                       | 40.62               | 4.92                | 3.75                   | 52.11                       | 74.00                     | -21.89                | Peak     | VERTICAL     |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.

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 Site** : DDT 3m Chamber 3#

D:\E3 6.111\2022 Report Data\Q22051321-2E T90ET\FCC  
ABOVE 1G 2.4G.EM6

**Test Date** : 2022-08-16

**Tested By** : James Gan

**EUT** : OCR Multi-Player

**Model Number** : T90ET

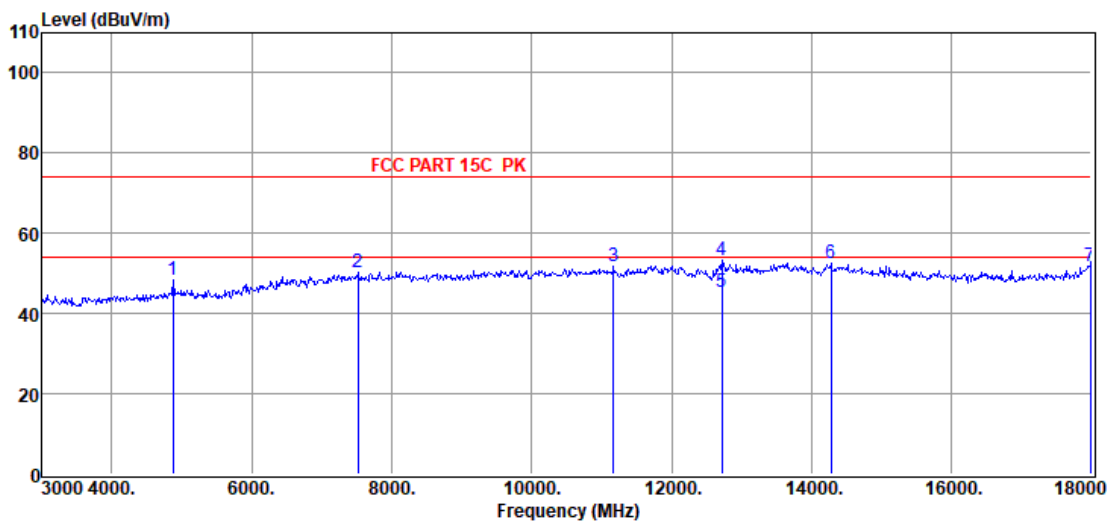
**Power Supply** : BATTERY

**Test Mode** : Tx Mode

**Condition** : Temp:23.2°C,Humi:53%,Press:100.1kPa

**Antenna/Distance** : 2021 BBHA 9120D  
3#/3m/HORIZONTAL

**Memo** : 11B 2437



| Item<br>(Mark) | Freq.<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Filter<br>Factor<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|----------------|-------------------------|-----------------------------|---------------------|---------------------|------------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 4874.00        | 51.51                   | 32.70                       | 40.37               | 2.49                | 2.17                   | 48.50                       | 74.00                     | -25.50                | Peak     | HORIZONTAL   |
| 2              | 7515.00        | 48.27                   | 36.42                       | 39.75               | 3.14                | 2.27                   | 50.35                       | 74.00                     | -23.65                | Peak     | HORIZONTAL   |
| 3              | 11175.00       | 46.52                   | 39.19                       | 40.18               | 3.86                | 2.38                   | 51.77                       | 74.00                     | -22.23                | Peak     | HORIZONTAL   |
| 4              | 12720.00       | 47.42                   | 39.26                       | 40.32               | 4.01                | 2.80                   | 53.17                       | 74.00                     | -20.83                | Peak     | HORIZONTAL   |
| 5              | 12720.00       | 39.53                   | 39.26                       | 40.32               | 4.01                | 2.80                   | 45.28                       | 54.00                     | -8.72                 | Average  | HORIZONTAL   |
| 6              | 14280.00       | 45.18                   | 39.90                       | 39.67               | 4.43                | 2.82                   | 52.66                       | 74.00                     | -21.34                | Peak     | HORIZONTAL   |
| 7              | 17985.00       | 41.37                   | 42.41                       | 40.69               | 4.96                | 3.79                   | 51.84                       | 74.00                     | -22.16                | Peak     | HORIZONTAL   |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.

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 Site** : DDT 3m Chamber 3#

D:\E3 6.111\2022 Report Data\Q22051321-2E T90ET\FCC ABOVE 1G 2.4G.EM6

**Test Date** : 2022-08-16

**Tested By** : James Gan

**EUT** : OCR Multi-Player

**Model Number** : T90ET

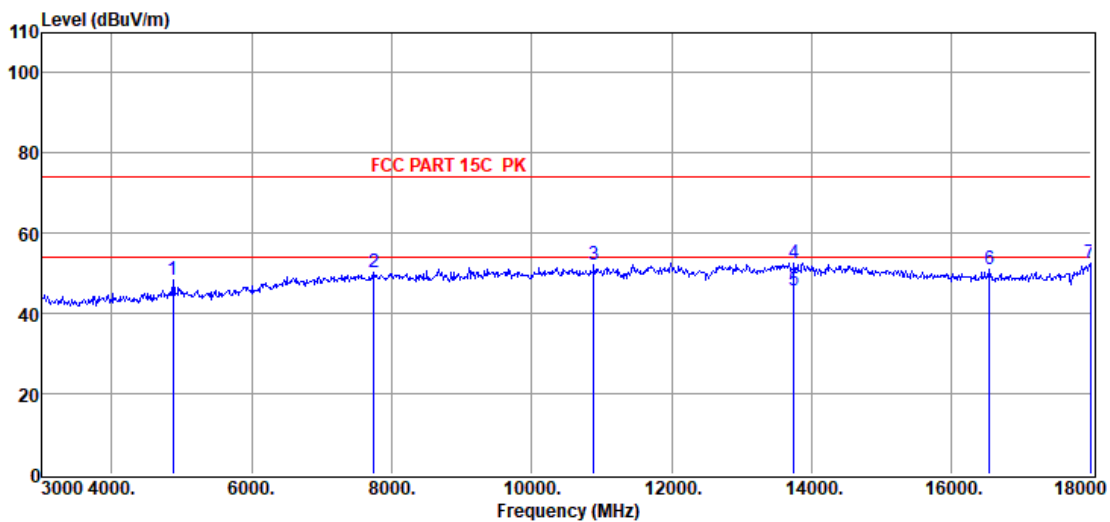
**Power Supply** : BATTERY

**Test Mode** : Tx Mode

**Condition** : Temp:23.2°C,Humi:53%,Press:100.1kPa

**Antenna/Distance** : 2021 BBHA 9120D 3#/3m/VERTICAL

**Memo** : 11B 2437



| Item<br>(Mark) | Freq.<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Filter<br>Factor<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|----------------|-------------------------|-----------------------------|---------------------|---------------------|------------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 4874.00        | 51.27                   | 32.70                       | 40.37               | 2.49                | 2.17                   | 48.26                       | 74.00                     | -25.74                | Peak     | VERTICAL     |
| 2              | 7740.00        | 47.96                   | 36.69                       | 39.77               | 3.16                | 2.27                   | 50.31                       | 74.00                     | -23.69                | Peak     | VERTICAL     |
| 3              | 10890.00       | 46.87                   | 39.23                       | 40.24               | 3.77                | 2.39                   | 52.02                       | 74.00                     | -21.98                | Peak     | VERTICAL     |
| 4              | 13755.00       | 45.41                   | 39.95                       | 39.87               | 4.27                | 2.91                   | 52.67                       | 74.00                     | -21.33                | Peak     | VERTICAL     |
| 5              | 13755.00       | 38.66                   | 39.95                       | 39.87               | 4.27                | 2.91                   | 45.92                       | 54.00                     | -8.08                 | Average  | VERTICAL     |
| 6              | 16545.00       | 44.94                   | 37.95                       | 40.01               | 4.73                | 3.33                   | 50.94                       | 74.00                     | -23.06                | Peak     | VERTICAL     |
| 7              | 17985.00       | 41.96                   | 42.41                       | 40.69               | 4.96                | 3.79                   | 52.43                       | 74.00                     | -21.57                | Peak     | VERTICAL     |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.

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 Site** : DDT 3m Chamber 3#

D:\E3 6.111\2022 Report Data\Q22051321-2E T90ET\FCC ABOVE 1G 2.4G.EM6

**Test Date** : 2022-08-16

**Tested By** : James Gan

**EUT** : OCR Multi-Player

**Model Number** : T90ET

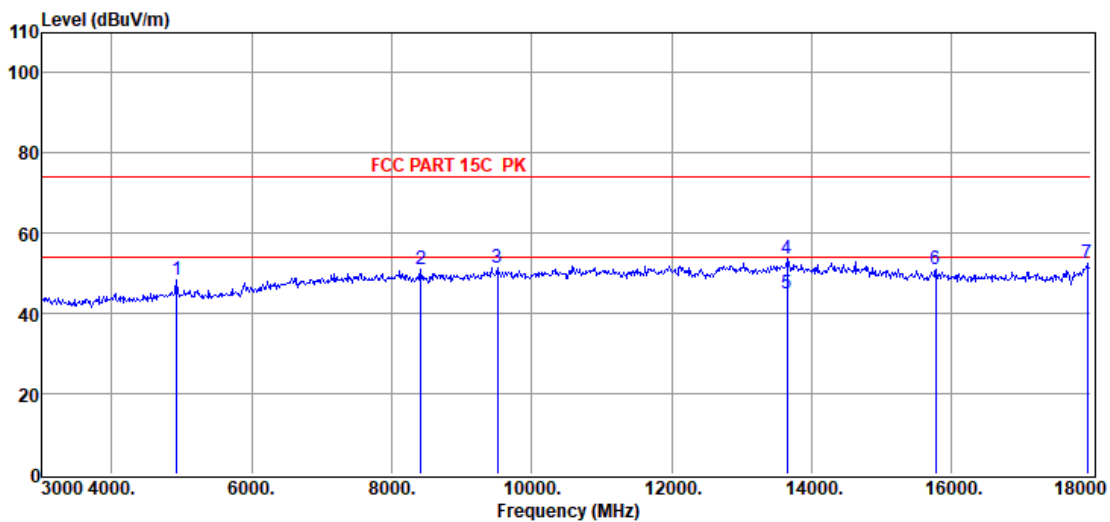
**Power Supply** : BATTERY

**Test Mode** : Tx Mode

**Condition** : Temp:23.2°C,Humi:53%,Press:100.1kPa

**Antenna/Distance** : 2021 BBHA 9120D  
3#/3m/HORIZONTAL

**Memo** : 11B 2462



| Item<br>(Mark) | Freq.<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Filter<br>Factor<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|----------------|-------------------------|-----------------------------|---------------------|---------------------|------------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 4924.00        | 51.07                   | 32.86                       | 40.38               | 2.51                | 2.18                   | 48.24                       | 74.00                     | -25.76                | Peak     | HORIZONTAL   |
| 2              | 8415.00        | 47.58                   | 37.66                       | 39.84               | 3.21                | 2.24                   | 50.85                       | 74.00                     | -23.15                | Peak     | HORIZONTAL   |
| 3              | 9510.00        | 47.06                   | 38.69                       | 40.26               | 3.62                | 2.33                   | 51.44                       | 74.00                     | -22.56                | Peak     | HORIZONTAL   |
| 4              | 13650.00       | 46.45                   | 39.97                       | 39.94               | 4.15                | 2.92                   | 53.55                       | 74.00                     | -20.45                | Peak     | HORIZONTAL   |
| 5              | 13650.00       | 37.86                   | 39.97                       | 39.94               | 4.15                | 2.92                   | 44.96                       | 54.00                     | -9.04                 | Average  | HORIZONTAL   |
| 6              | 15780.00       | 45.00                   | 38.30                       | 39.83               | 4.58                | 3.01                   | 51.06                       | 74.00                     | -22.94                | Peak     | HORIZONTAL   |
| 7              | 17940.00       | 42.24                   | 42.13                       | 40.66               | 4.94                | 3.77                   | 52.42                       | 74.00                     | -21.58                | Peak     | HORIZONTAL   |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.

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 Site** : DDT 3m Chamber 3#

D:\E3 6.111\2022 Report Data\Q22051321-2E T90ET\FCC ABOVE 1G 2.4G.EM6

**Test Date** : 2022-08-16

**Tested By** : James Gan

**EUT** : OCR Multi-Player

**Model Number** : T90ET

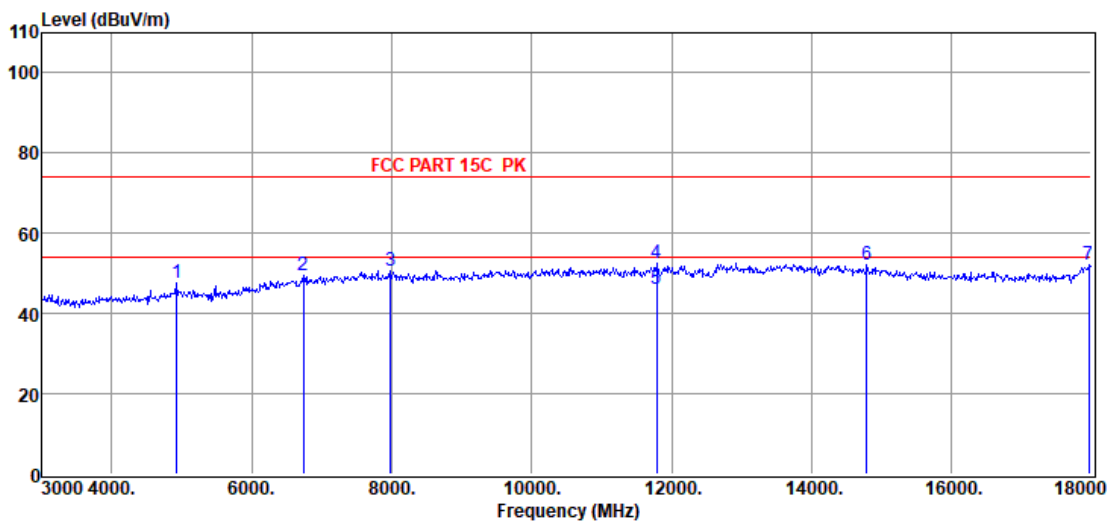
**Power Supply** : BATTERY

**Test Mode** : Tx Mode

**Condition** : Temp:23.2°C,Humi:53%,Press:100.1kPa

**Antenna/Distance** : 2021 BBHA 9120D 3#/3m/VERTICAL

**Memo** : 11B 2462



| Item<br>(Mark) | Freq.<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Filter<br>Factor<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|----------------|-------------------------|-----------------------------|---------------------|---------------------|------------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 4924.00        | 50.32                   | 32.86                       | 40.38               | 2.51                | 2.18                   | 47.49                       | 74.00                     | -26.51                | Peak     | VERTICAL     |
| 2              | 6735.00        | 48.19                   | 35.58                       | 39.91               | 3.15                | 2.40                   | 49.41                       | 74.00                     | -24.59                | Peak     | VERTICAL     |
| 3              | 7980.00        | 48.00                   | 36.98                       | 39.80               | 3.19                | 2.28                   | 50.65                       | 74.00                     | -23.35                | Peak     | VERTICAL     |
| 4              | 11790.00       | 46.98                   | 39.12                       | 40.12               | 4.02                | 2.40                   | 52.40                       | 74.00                     | -21.60                | Peak     | VERTICAL     |
| 5              | 11790.00       | 40.74                   | 39.12                       | 40.12               | 4.02                | 2.40                   | 46.16                       | 54.00                     | -7.84                 | Average  | VERTICAL     |
| 6              | 14790.00       | 44.84                   | 39.67                       | 39.62               | 4.42                | 2.68                   | 51.99                       | 74.00                     | -22.01                | Peak     | VERTICAL     |
| 7              | 17970.00       | 41.81                   | 42.31                       | 40.68               | 4.95                | 3.78                   | 52.17                       | 74.00                     | -21.83                | Peak     | VERTICAL     |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.

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.

## 9. RF Conducted Spurious Emissions

### 9.1. Block diagram of test setup

Same as section 4.1

### 9.2. Limits

In any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

### 9.3. Test procedure

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.

(2) Establish a reference level by using the following procedure:

|                  |                                                               |
|------------------|---------------------------------------------------------------|
| Center frequency | Test frequency                                                |
| RBW:             | 100 kHz                                                       |
| VBW:             | 300 kHz                                                       |
| Span             | Wide enough to capture the peak level of the in-band emission |
| Detector Mode:   | Peak                                                          |
| Sweep time:      | auto                                                          |
| Trace mode       | Max hold                                                      |

(3) Allow the trace to stabilize, use the peak marker function to determine the maximum peak power level to establish the reference level.

(4) Set the spectrum analyzer as follows:

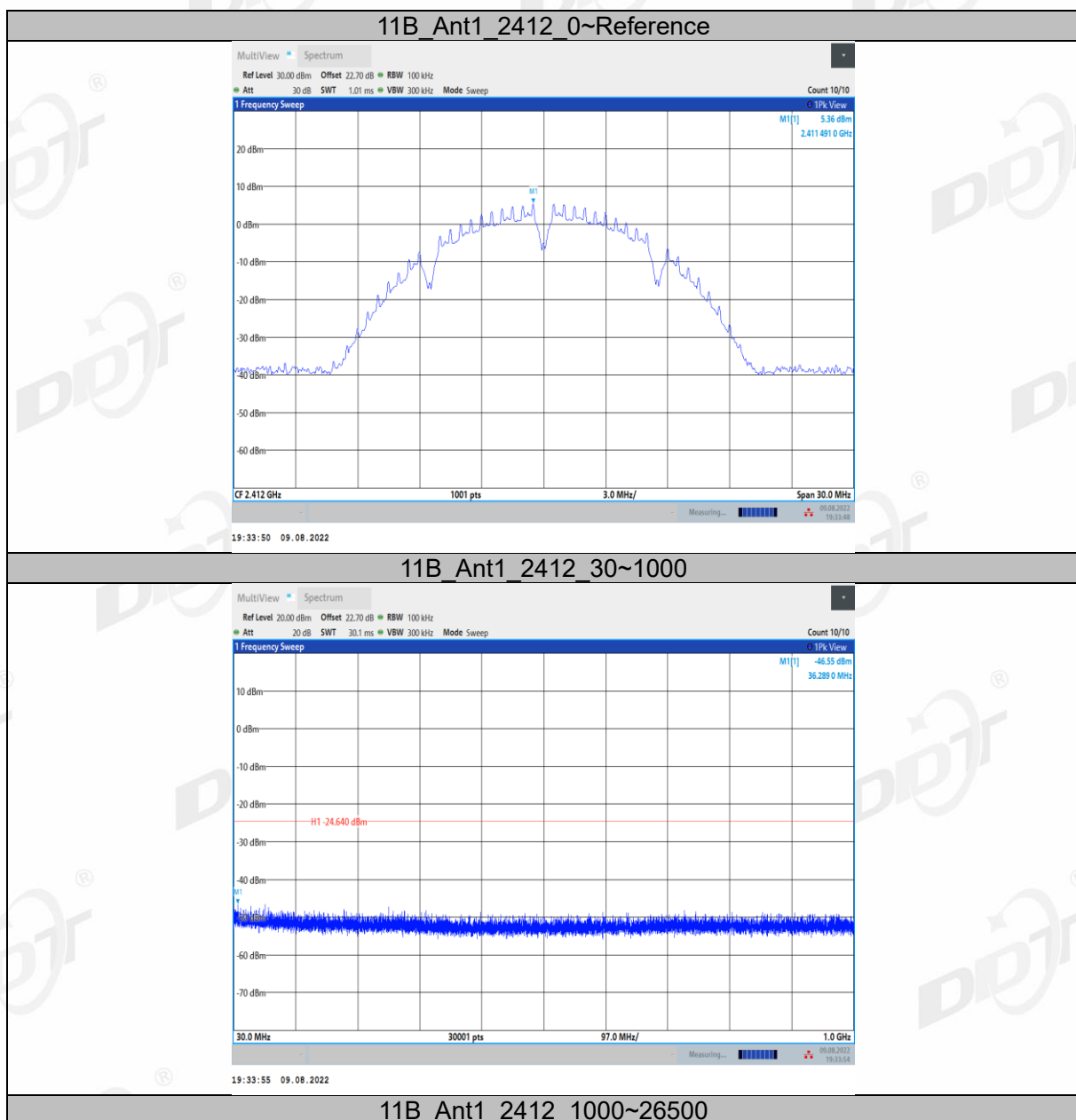
|                              |                                          |
|------------------------------|------------------------------------------|
| RBW:                         | 100 kHz                                  |
| VBW:                         | 300 kHz                                  |
| Span                         | Encompass frequency range to be measured |
| Number of measurement points | $\geq \text{span/RBW}$                   |
| Detector Mode:               | Peak                                     |
| Sweep time:                  | auto                                     |
| Trace mode                   | Max hold                                 |

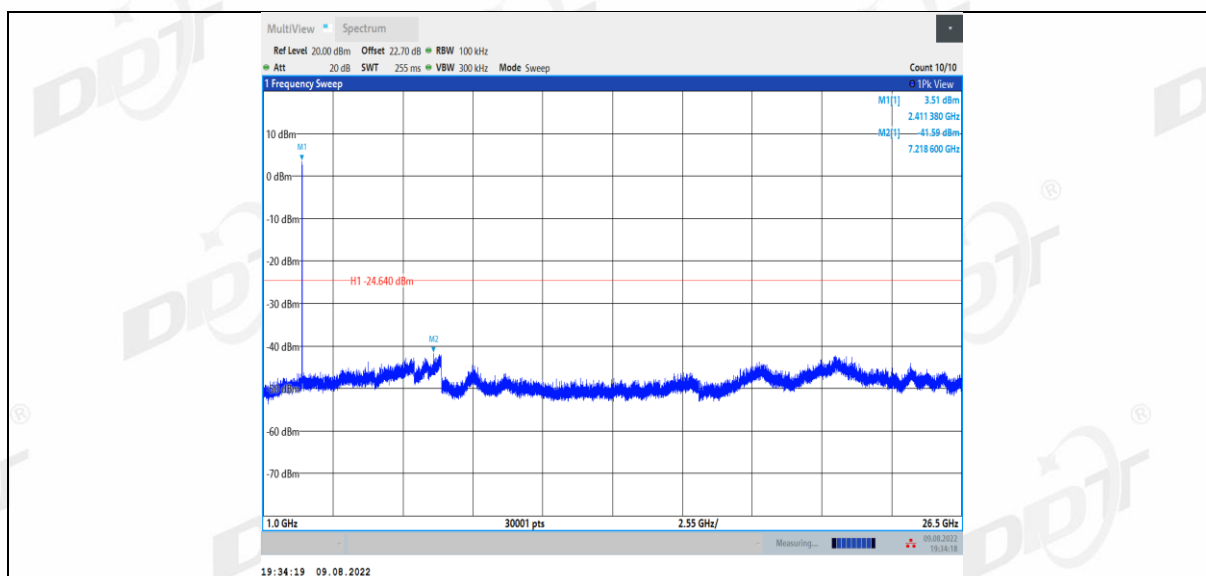
(5) Allow the trace to stabilize, use the peak marker function to determine the maximum amplitude of all unwanted emissions outside of the authorized frequency band

#### 9.4. Test result

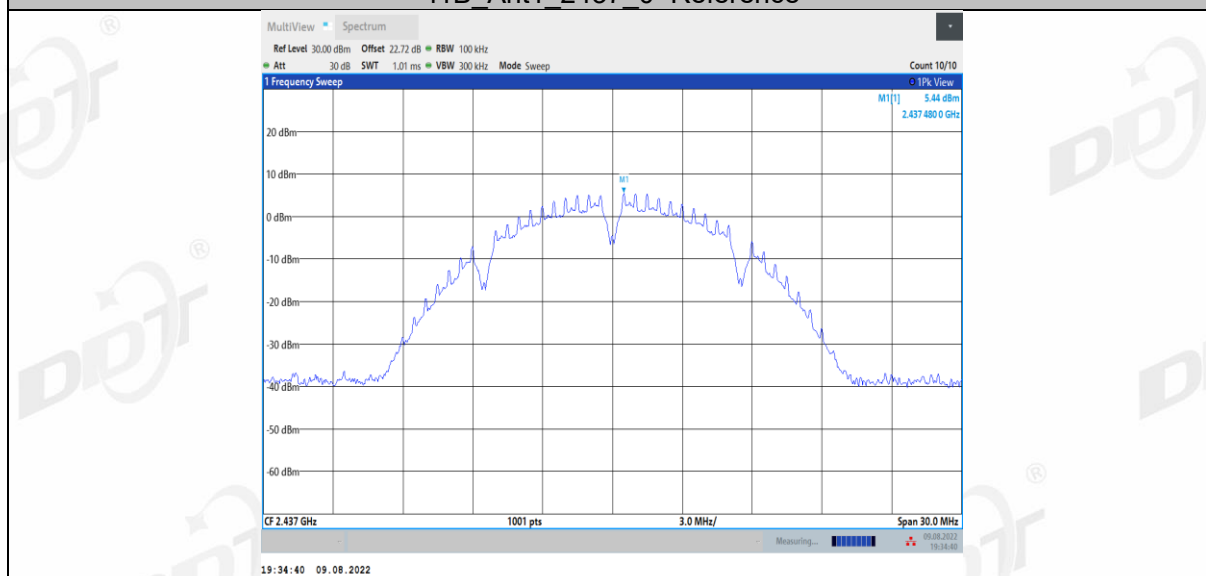
| EUT Set Mode | CH or Frequency | Result (dBm) | EUT Set Mode | CH or Frequency | Result Result (dBm) |
|--------------|-----------------|--------------|--------------|-----------------|---------------------|
| 11b          | CH1             | Pass         | 11n HT 20    | CH1             | Pass                |
|              | CH6             | Pass         |              | CH6             | Pass                |
|              | CH11            | Pass         |              | CH11            | Pass                |
| 11g          | CH1             | Pass         | 11n HT 40    | CH3             | Pass                |
|              | CH6             | Pass         |              | CH6             | Pass                |
|              | CH11            | Pass         |              | CH9             | Pass                |

#### 9.5. Original test data

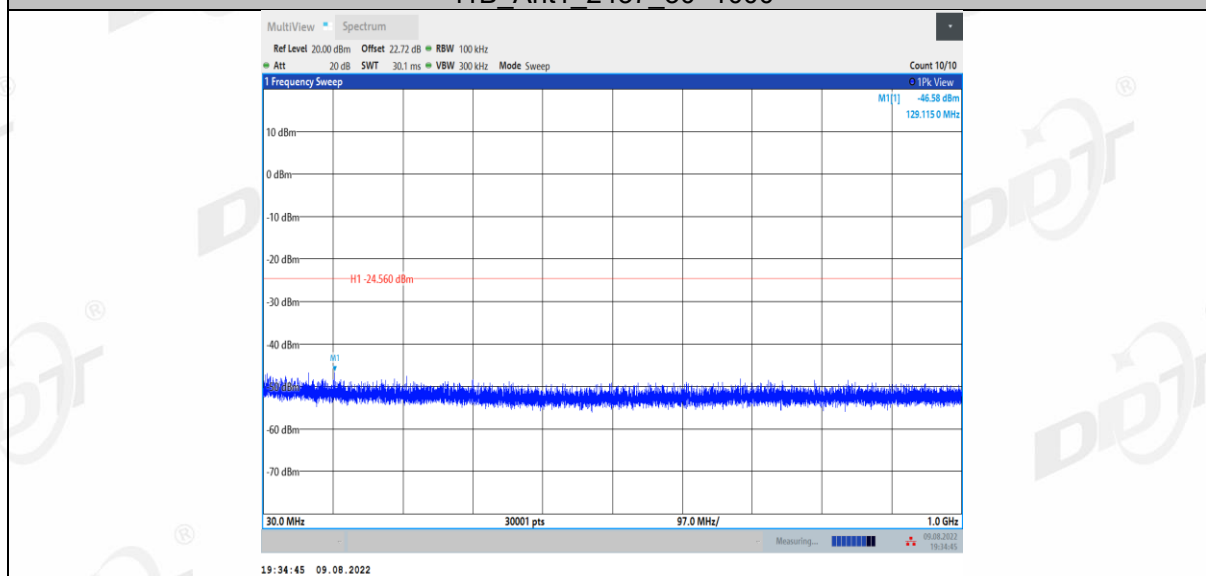




11B\_Ant1\_2437\_0~Reference



11B\_Ant1\_2437\_30~1000



11B\_Ant1\_2437\_1000~26500