

# TEST REPORT

Report No..... KS2210S4407E01

FCC ID..... 2A7SL-ZORDAI Z8ULTRA

Applicant..... Shenzhen Zhongdai e-commerce Co., Ltd

Address..... 14,block C,electronic technology building,No.2070 Shennan Middle Road,Shenzhen

Manufacturer..... Shenzhen Zhongdai e-commerce Co., Ltd

Address..... 14,block C,electronic technology building,No.2070 Shennan Middle Road,Shenzhen

Product Name..... ZORDAI Smart wear

Trademark..... ZORDAI

Model/Type reference..... ZORDAI Z8Ultra,  
ZORDAI Z8,ZORDAI Z8pro,ZORDAI Z8promax,ZORDAI Z8Ultrapro,ZORDAI Z8Ultramax

Standard..... 47 CFR Part 15.247

Date of Receipt..... October 12, 2022

Date of Test Date..... October 12, 2022 to October 21, 2022

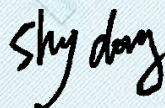
Date of issue..... October 21, 2022

**Test result..... Pass**

Prepared by:  
( Printed name + Signature) pandy pan



Approved by:  
( Printed name + Signature) Sky Dong



**Testing Laboratory Name..... KSIGN(Guangdong) Testing Co., Ltd.**

Address..... West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

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## 1. TEST SUMMARY

### 1.1. Test Standards

The tests were performed according to following standards:

**47 CFR Part 15.247:** Operation within the bands 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz

### 1.2. Report Version

| Revised No. | Date of issue    | Description |
|-------------|------------------|-------------|
| 01          | October 21, 2022 | Original    |
|             |                  |             |
|             |                  |             |
|             |                  |             |

### 1.3. Test Description

| Test Item                                            | Standard           | Requirement         | Result |
|------------------------------------------------------|--------------------|---------------------|--------|
| Antenna requirement                                  | 47 CFR Part 15.247 | Part 15.203         | Pass   |
| Conducted Emission at AC power line                  | 47 CFR Part 15.247 | 47 CFR 15.207(a)    | Pass   |
| Occupied Bandwidth                                   | 47 CFR Part 15.247 | 47 CFR 15.247(a)(2) | Pass   |
| Maximum Conducted Output Power                       | 47 CFR Part 15.247 | 47 CFR 15.247(b)(3) | Pass   |
| Power Spectral Density                               | 47 CFR Part 15.247 | 47 CFR 15.247(e)    | Pass   |
| Emissions in non-restricted frequency bands          | 47 CFR Part 15.247 | 47 CFR 15.247(d)    | Pass   |
| Emissions around the fundamental                     | 47 CFR Part 15.247 | 47 CFR 15.247(d)    | Pass   |
| Emissions in restricted frequency bands (below 1GHz) | 47 CFR Part 15.247 | 47 CFR 15.247(d)    | Pass   |
| Emissions in restricted frequency bands (above 1GHz) | 47 CFR Part 15.247 | 47 CFR 15.247(d)    | Pass   |

## 1.4. Test Facility

### **KSIGN(Guangdong) Testing Co., Ltd.**

West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

The test facility is recognized, certified, or accredited by the following organizations:

#### **CNAS-Lab Code: L13261**

KSIGN(Guangdong) Testing Co., Ltd. has been assessed and proved to be in Compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2017 General Requirements) for the Competence of Testing and Calibration Laboratories.

#### **A2LA-Lab Cert. No.: 5457.01**

KSIGN(Guangdong) Testing Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing

#### **ISED#: 25693 CAB identifier.: CN0096**

KSIGN(Guangdong) Testing Co., Ltd. has been listed by Innovation, Science and Economic Development Canada to perform electromagnetic emission measurement.

#### **FCC-Registration No.: 294912 Designation Number: CN1328**

KSIGN(Guangdong) Testing Co., Ltd. EMC Laboratory has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

## 1.5. Measurement Uncertainty

| Test Items                      | Measurement Uncertainty |
|---------------------------------|-------------------------|
| Conducted Emission (150k-30MHz) | $\pm 3.34\text{dB}$     |
| Output Power, Conducted         | $\pm 1.4\text{dB}$      |
| PSD, Conducted                  | $\pm 1.0\text{dB}$      |
| Spurious Emissions, Conducted   | $\pm 3.3\text{dB}$      |
| RSE (1-18GHz)                   | $\pm 4.68\text{dB}$     |
| RSE (30-1000MHz)                | $\pm 5.7\text{dB}$      |
| RSE (18-40GHz)                  | $\pm 5.18\text{dB}$     |

The reported uncertainty of measurement  $y \pm U$ , where expanded uncertainty  $U$  is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately 95 %.

## 2. GENERAL INFORMATION

### 2.1. General Description Of EUT

|                         |                                                                                                                                                                                                                                                                                        |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name:           | ZORDAI Smart wear                                                                                                                                                                                                                                                                      |
| Trademark:              | ZORDAI                                                                                                                                                                                                                                                                                 |
| Model / Type reference: | ZORDAI Z8Ultra,<br>ZORDAI Z8,ZORDAI Z8pro,ZORDAI Z8promax,ZORDAI Z8Ultrapro,ZORDAI Z8 Ultramax                                                                                                                                                                                         |
| Model Difference:       | The only difference between product models is the color.Different model names are available to meet market demands. Other power supply methods, internal structures, circuits and key components are the same, and do not affect safety and electromagnetic compatibility performance. |
| Power Supply:           | DC3.7V from the battery                                                                                                                                                                                                                                                                |
| Operation Frequency:    | 2402MHz to 2480MHz                                                                                                                                                                                                                                                                     |
| Number of Channels:     | 40                                                                                                                                                                                                                                                                                     |
| Modulation Type:        | GFSK                                                                                                                                                                                                                                                                                   |
| Antenna Type:           | Internal Antenna                                                                                                                                                                                                                                                                       |
| Antenna Gain:           | 1.4dBi                                                                                                                                                                                                                                                                                 |

### 2.2. Accessory Equipment Information

The EUT was tested as an independent device.

### 2.3. Description of Test Modes

| No. | Title   | Description of Mode                                                                                     |
|-----|---------|---------------------------------------------------------------------------------------------------------|
| TM1 | TX mode | Keep the EUT connect to AC power line and works in continuously transmitting mode with GFSK modulation. |

## 2.4. Measurement Instruments List

| Conducted Emission at AC power line |                     |           |              |            |
|-------------------------------------|---------------------|-----------|--------------|------------|
| Test Equipment                      | Manufacturer        | Model No. | Serial No.   | Cal. Until |
| ISN                                 | Schwarzbeck         | CAT5 8158 | 227          | 2023-03-04 |
| EMF Test Fixture                    | Schwarzbeck         | VDHH 9502 | 176          | 2023-03-06 |
| Manual RF Switch                    | JS TOYO             | /         | MSW-01/002   | 2023-03-04 |
| EMI Test Receiver                   | R&S                 | ESR       | 102524       | 2023-03-04 |
| LISN                                | R&S                 | ENV432    | 1326.6105.02 | 2023-03-04 |
| Power Absorbing Clamp               | R&S                 | MDS-21    | 100925       | 2023-03-06 |
| Triple Loop Antenna                 | Beijin ZHINAN       | ZN30401   | 17028        | 2023-03-04 |
| Hygrothermograph                    | /                   | HTC-1     | /            | 2023-03-07 |
| High Voltage Probe                  | Tektronix           | P6015A    | X070429      | 2023-03-04 |
| Flexible current probe              | DKFLEX              | DK-7000   | 181327       | 2023-03-04 |
| LISN                                | Schwarzbeck         | NNLK 8121 | 8121-442     | 2023-03-04 |
| Current Sensor Probe                | TESEQ               | CSP9160A  | 71674        | 2023-03-04 |
| Capacitive Voltage Probe            | TESEQ               | CPV2200A  | 27045        | 2023-03-04 |
| Click Analyzer                      | SCHAFFNER           | DIA1512D  | 5244         | 2023-03-04 |
| Digital Multimeter                  | FLUKE               | 17B+      | 38830666WS   | 2023-03-04 |
| 854 shield room                     | JS TOYO Corporation | 854       | /            | 2024-11-24 |

| Occupied Bandwidth                  |                            |                      |            |            |
|-------------------------------------|----------------------------|----------------------|------------|------------|
| Test Equipment                      | Manufacturer               | Model No.            | Serial No. | Cal. Until |
| Spectrum Analyzer                   | R&S                        | FSV40-N              | 101798     | 2023-03-04 |
| Wideband Radio Communication Tester | R&S                        | CMW500               | 157282     | 2023-03-04 |
| Vector Signal Generator             | Agilent                    | N5182A               | MY50142520 | 2023-03-04 |
| Analog Signal Generator             | HP                         | 83752A               | 3344A00337 | 2023-03-04 |
| RF Control Unit                     | Tonscend                   | JS0806-2             | /          | 2023-03-04 |
| Dual Output DC Power Supply         | Agilent                    | E3646A               | MY40009992 | 2023-03-04 |
| Spectrum Analyzer                   | HP                         | 8593E                | 3831U02087 | 2023-03-04 |
| Climate Chamber                     | Angul                      | AGNH80L              | 1903042120 | 2023-03-04 |
| Hygrothermograph                    | Anymetre                   | JB913                | /          | 2023-03-07 |
| Coaxial Cable                       | BEBES                      | A40-2.92M2.92 F-4.5M | 1907021    | 2023-03-04 |
| Splitter                            | COM-MW Technology Co., Ltd | ZPD-M1-8-2103        | 09203407   | 2023-03-04 |
| Band Stop Filter                    | COM-MW Technology Co., Ltd | ZBSF6-C820-92 0-188  | 09203401   | 2023-03-04 |
| High Pass Filter                    | COM-MW Technology Co., Ltd | ZHPF-M1.2-9G-187     | 09203403   | 2023-03-04 |
| Shielding box                       | Gxiong                     | GX-5915A             | 2201113    | 2023-04-23 |

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|                                     |     |        |        |            |
|-------------------------------------|-----|--------|--------|------------|
| Audio Analyzer                      | R&S | UPL16  | 100001 | 2023-03-04 |
| Wideband Radio Communication Tester | R&S | CMU200 | 115297 | 2023-03-04 |

| Maximum Conducted Output Power      |                            |                         |            |            |
|-------------------------------------|----------------------------|-------------------------|------------|------------|
| Test Equipment                      | Manufacturer               | Model No.               | Serial No. | Cal. Until |
| Spectrum Analyzer                   | R&S                        | FSV40-N                 | 101798     | 2023-03-04 |
| Wideband Radio Communication Tester | R&S                        | CMW500                  | 157282     | 2023-03-04 |
| Vector Signal Generator             | Agilent                    | N5182A                  | MY50142520 | 2023-03-04 |
| Analog Signal Generator             | HP                         | 83752A                  | 3344A00337 | 2023-03-04 |
| RF Control Unit                     | Tonscend                   | JS0806-2                | /          | 2023-03-04 |
| Dual Output DC Power Supply         | Agilent                    | E3646A                  | MY40009992 | 2023-03-04 |
| Spectrum Analyzer                   | HP                         | 8593E                   | 3831U02087 | 2023-03-04 |
| Climate Chamber                     | Angul                      | AGNH80L                 | 1903042120 | 2023-03-04 |
| Hygrothermograph                    | Anymetre                   | JB913                   | /          | 2023-03-07 |
| Coaxial Cable                       | BEBES                      | A40-2.92M2.92<br>F-4.5M | 1907021    | 2023-03-04 |
| Splitter                            | COM-MW Technology Co., Ltd | ZPD-M1-8-2103           | 09203407   | 2023-03-04 |
| Band Stop Filter                    | COM-MW Technology Co., Ltd | ZBSF6-C820-92<br>0-188  | 09203401   | 2023-03-04 |
| High Pass Filter                    | COM-MW Technology Co., Ltd | ZHPF-M1.2-9G-<br>187    | 09203403   | 2023-03-04 |
| Shielding box                       | Gxiong                     | GX-5915A                | 2201113    | 2023-04-23 |
| Audio Analyzer                      | R&S                        | UPL16                   | 100001     | 2023-03-04 |
| Wideband Radio Communication Tester | R&S                        | CMU200                  | 115297     | 2023-03-04 |

| Power Spectral Density              |              |           |            |            |
|-------------------------------------|--------------|-----------|------------|------------|
| Test Equipment                      | Manufacturer | Model No. | Serial No. | Cal. Until |
| Spectrum Analyzer                   | R&S          | FSV40-N   | 101798     | 2023-03-04 |
| Wideband Radio Communication Tester | R&S          | CMW500    | 157282     | 2023-03-04 |
| Vector Signal Generator             | Agilent      | N5182A    | MY50142520 | 2023-03-04 |
| Analog Signal Generator             | HP           | 83752A    | 3344A00337 | 2023-03-04 |
| RF Control Unit                     | Tonscend     | JS0806-2  | /          | 2023-03-04 |
| Dual Output DC Power Supply         | Agilent      | E3646A    | MY40009992 | 2023-03-04 |
| Spectrum Analyzer                   | HP           | 8593E     | 3831U02087 | 2023-03-04 |
| Climate Chamber                     | Angul        | AGNH80L   | 1903042120 | 2023-03-04 |
| Hygrothermograph                    | Anymetre     | JB913     | /          | 2023-03-07 |

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|                                        |                                  |                         |          |            |
|----------------------------------------|----------------------------------|-------------------------|----------|------------|
| Coaxial Cable                          | BEBES                            | A40-2.92M2.92<br>F-4.5M | 1907021  | 2023-03-04 |
| Splitter                               | COM-MW<br>Technology Co.,<br>Ltd | ZPD-M1-8-2103           | 09203407 | 2023-03-04 |
| Band Stop Filter                       | COM-MW<br>Technology Co.,<br>Ltd | ZBSF6-C820-92<br>0-188  | 09203401 | 2023-03-04 |
| High Pass Filter                       | COM-MW<br>Technology Co.,<br>Ltd | ZHPF-M1.2-9G-<br>187    | 09203403 | 2023-03-04 |
| Shielding box                          | Gxiong                           | GX-5915A                | 2201113  | 2023-04-23 |
| Audio Analyzer                         | R&S                              | UPL16                   | 100001   | 2023-03-04 |
| Wideband Radio<br>Communication Tester | R&S                              | CMU200                  | 115297   | 2023-03-04 |

| Emissions in non-restricted frequency bands |                                  |                         |            |            |
|---------------------------------------------|----------------------------------|-------------------------|------------|------------|
| Test Equipment                              | Manufacturer                     | Model No.               | Serial No. | Cal. Until |
| Spectrum Analyzer                           | R&S                              | FSV40-N                 | 101798     | 2023-03-04 |
| Wideband Radio<br>Communication Tester      | R&S                              | CMW500                  | 157282     | 2023-03-04 |
| Vector Signal<br>Generator                  | Agilent                          | N5182A                  | MY50142520 | 2023-03-04 |
| Analog Signal<br>Generator                  | HP                               | 83752A                  | 3344A00337 | 2023-03-04 |
| RF Control Unit                             | Tonscend                         | JS0806-2                | /          | 2023-03-04 |
| Dual Output DC<br>Power Supply              | Agilent                          | E3646A                  | MY40009992 | 2023-03-04 |
| Spectrum Analyzer                           | HP                               | 8593E                   | 3831U02087 | 2023-03-04 |
| Climate Chamber                             | Angul                            | AGNH80L                 | 1903042120 | 2023-03-04 |
| Hygrothermograph                            | Anymetre                         | JB913                   | /          | 2023-03-07 |
| Coaxial Cable                               | BEBES                            | A40-2.92M2.92<br>F-4.5M | 1907021    | 2023-03-04 |
| Splitter                                    | COM-MW<br>Technology Co.,<br>Ltd | ZPD-M1-8-2103           | 09203407   | 2023-03-04 |
| Band Stop Filter                            | COM-MW<br>Technology Co.,<br>Ltd | ZBSF6-C820-92<br>0-188  | 09203401   | 2023-03-04 |
| High Pass Filter                            | COM-MW<br>Technology Co.,<br>Ltd | ZHPF-M1.2-9G-<br>187    | 09203403   | 2023-03-04 |
| Shielding box                               | Gxiong                           | GX-5915A                | 2201113    | 2023-04-23 |
| Audio Analyzer                              | R&S                              | UPL16                   | 100001     | 2023-03-04 |
| Wideband Radio<br>Communication Tester      | R&S                              | CMU200                  | 115297     | 2023-03-04 |

| Emissions around the fundamental      |              |           |            |            |
|---------------------------------------|--------------|-----------|------------|------------|
| Test Equipment                        | Manufacturer | Model No. | Serial No. | Cal. Until |
| Ultra-Broadband<br>logarithmic period | Schwarzbeck  | VULB 9163 | 01230      | 2023-12-04 |

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|                   |                     |                       |             |            |
|-------------------|---------------------|-----------------------|-------------|------------|
| Antenna           |                     |                       |             |            |
| Pre-Amplifier     | Schwarzbeck         | BBV 9745              | 9745#129    | 2023-03-04 |
| Horn Antenna      | Schwarzbeck         | BBHA 9120 D           | 2023        | 2023-03-29 |
| Pre-Amplifier     | EMCI                | EMC051835SE           | 980662      | 2023-03-04 |
| Spectrum Analyzer | Keysight            | N9020A                | MY46471971  | 2023-03-04 |
| Loop Antenna      | Beijin ZHINAN       | ZN30900C              | 18050       | 2023-03-05 |
| High Pass Filter  | Chengdu E-Microwave | OHF-3-18-S            | 0E01901038  | 2023-03-04 |
| High Pass Filter  | Chengdu E-Microwave | OHF-6.5-18-S          | 0E01901039  | 2023-03-04 |
| Band Stop Filter  | Chengdu E-Microwave | OBSF-2400-248 3.5-50N | 0E01901040  | 2023-03-04 |
| Band Stop Filter  | Chengdu E-Microwave | OBSF-5100-590 0-50N   | /           | 2023-03-04 |
| EMI Test Receiver | R&S                 | ESR                   | 102525      | 2023-03-04 |
| Hygrothermograph  | /                   | HTC-1                 | /           | 2023-03-07 |
| RF Switch         | JS TOYO Corporation | NS 4903               | 1901-214    | 2023-03-04 |
| 996 chamber       | JS TOYO Corporation | 966                   | /           | 2024-11-24 |
| Horn Antenna      | Schwarzbeck         | BBHA9170              | 00943       | 2022-11-28 |
| Pre-Amplifier     | EMCI                | BBV 9721              | BBV 9721-57 | 2023-03-04 |

| Emissions in restricted frequency bands (below 1GHz) |                     |                       |             |            |
|------------------------------------------------------|---------------------|-----------------------|-------------|------------|
| Test Equipment                                       | Manufacturer        | Model No.             | Serial No.  | Cal. Until |
| Ultra-Broadband logarithmic period Antenna           | Schwarzbeck         | VULB 9163             | 01230       | 2023-12-04 |
| Pre-Amplifier                                        | Schwarzbeck         | BBV 9745              | 9745#129    | 2023-03-04 |
| Horn Antenna                                         | Schwarzbeck         | BBHA 9120 D           | 2023        | 2023-03-29 |
| Pre-Amplifier                                        | EMCI                | EMC051835SE           | 980662      | 2023-03-04 |
| Spectrum Analyzer                                    | Keysight            | N9020A                | MY46471971  | 2023-03-04 |
| Loop Antenna                                         | Beijin ZHINAN       | ZN30900C              | 18050       | 2023-03-05 |
| High Pass Filter                                     | Chengdu E-Microwave | OHF-3-18-S            | 0E01901038  | 2023-03-04 |
| High Pass Filter                                     | Chengdu E-Microwave | OHF-6.5-18-S          | 0E01901039  | 2023-03-04 |
| Band Stop Filter                                     | Chengdu E-Microwave | OBSF-2400-248 3.5-50N | 0E01901040  | 2023-03-04 |
| Band Stop Filter                                     | Chengdu E-Microwave | OBSF-5100-590 0-50N   | /           | 2023-03-04 |
| EMI Test Receiver                                    | R&S                 | ESR                   | 102525      | 2023-03-04 |
| Hygrothermograph                                     | /                   | HTC-1                 | /           | 2023-03-07 |
| RF Switch                                            | JS TOYO Corporation | NS 4903               | 1901-214    | 2023-03-04 |
| 996 chamber                                          | JS TOYO Corporation | 966                   | /           | 2024-11-24 |
| Horn Antenna                                         | Schwarzbeck         | BBHA9170              | 00943       | 2022-11-28 |
| Pre-Amplifier                                        | EMCI                | BBV 9721              | BBV 9721-57 | 2023-03-04 |

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| Emissions in restricted frequency bands (above 1GHz) |                     |                       |             |            |
|------------------------------------------------------|---------------------|-----------------------|-------------|------------|
| Test Equipment                                       | Manufacturer        | Model No.             | Serial No.  | Cal. Until |
| Ultra-Broadband logarithmic period Antenna           | Schwarzbeck         | VULB 9163             | 01230       | 2023-12-04 |
| Pre-Amplifier                                        | Schwarzbeck         | BBV 9745              | 9745#129    | 2023-03-04 |
| Horn Antenna                                         | Schwarzbeck         | BBHA 9120 D           | 2023        | 2023-03-29 |
| Pre-Amplifier                                        | EMCI                | EMC051835SE           | 980662      | 2023-03-04 |
| Spectrum Analyzer                                    | Keysight            | N9020A                | MY46471971  | 2023-03-04 |
| Loop Antenna                                         | Beijin ZHINAN       | ZN30900C              | 18050       | 2023-03-05 |
| High Pass Filter                                     | Chengdu E-Microwave | OHF-3-18-S            | 0E01901038  | 2023-03-04 |
| High Pass Filter                                     | Chengdu E-Microwave | OHF-6.5-18-S          | 0E01901039  | 2023-03-04 |
| Band Stop Filter                                     | Chengdu E-Microwave | OBSF-2400-248 3.5-50N | 0E01901040  | 2023-03-04 |
| Band Stop Filter                                     | Chengdu E-Microwave | OBSF-5100-590 0-50N   | /           | 2023-03-04 |
| EMI Test Receiver                                    | R&S                 | ESR                   | 102525      | 2023-03-04 |
| Hygrothermograph                                     | /                   | HTC-1                 | /           | 2023-03-07 |
| RF Switch                                            | JS TOYO Corporation | NS 4903               | 1901-214    | 2023-03-04 |
| 996 chamber                                          | JS TOYO Corporation | 966                   | /           | 2024-11-24 |
| Horn Antenna                                         | Schwarzbeck         | BBHA9170              | 00943       | 2022-11-28 |
| Pre-Amplifier                                        | EMCI                | BBV 9721              | BBV 9721-57 | 2023-03-04 |

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### 3. Evaluation Results (Evaluation)

#### 3.1. Antenna requirement

|                   |                                                                                                                                                                                                                                                                                                                                                        |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

##### 3.1.1. E.U.T. Operation:

|                        |          |
|------------------------|----------|
| Operating Environment: |          |
| Temperature:           | 24.7 °C  |
| Humidity:              | 46.4 %   |
| Atmospheric Pressure:  | 102 mbar |
| Final test mode:       | TM1      |

**3.1.2. Test Data:**

The antenna gain is 1.4dB, the directional gain of the antenna less than 6dBi. It comply with the standard requirement. In case of replacement of broken antenna the same antenna type must be used.  
Antenna structure please refer to the EUT internal photographs antenna photo.

## 4. Radio Spectrum Matter Test Results (RF)

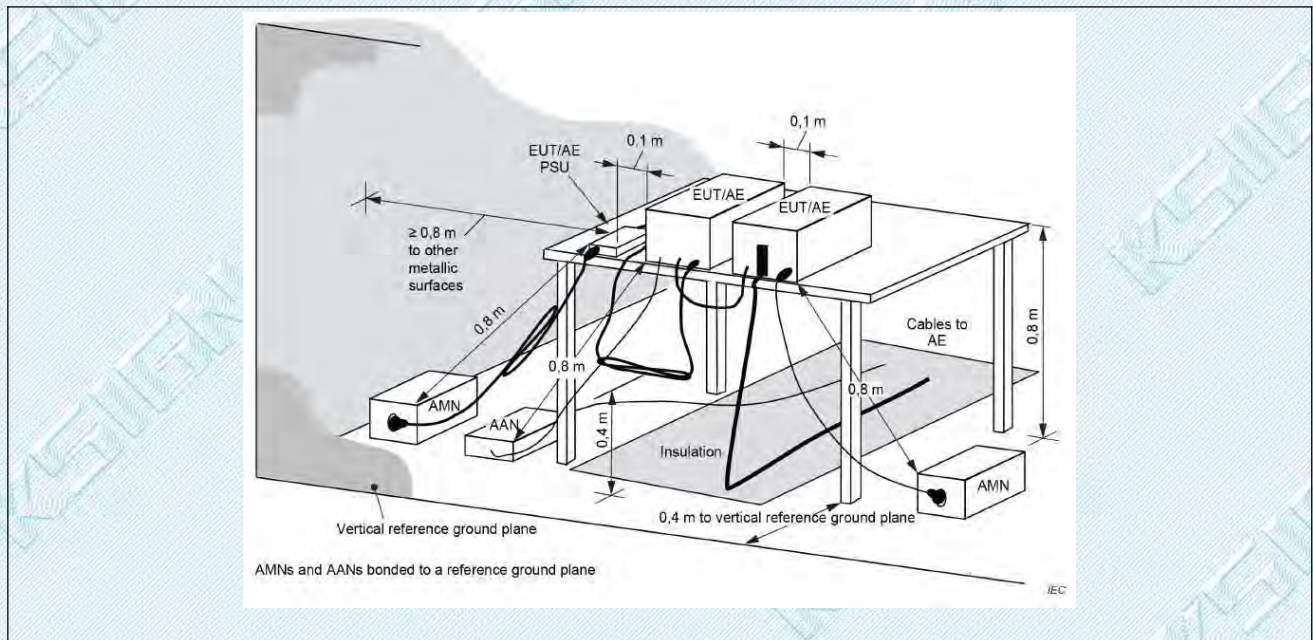
### 4.1. Conducted Emission at AC power line

|                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                              |           |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-----------|
| Test Requirement:                               | Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 $\mu$ H/50 ohms line impedance stabilization network (LISN). |                              |           |
| Test Limit:                                     | Frequency of emission (MHz)                                                                                                                                                                                                                                                                                                                                                                                                                          | Conducted limit (dB $\mu$ V) |           |
|                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Quasi-peak                   | Average   |
|                                                 | 0.15-0.5                                                                                                                                                                                                                                                                                                                                                                                                                                             | 66 to 56*                    | 56 to 46* |
|                                                 | 0.5-5                                                                                                                                                                                                                                                                                                                                                                                                                                                | 56                           | 46        |
|                                                 | 5-30                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 60                           | 50        |
| *Decreases with the logarithm of the frequency. |                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                              |           |
| Test Method:                                    | Refer to ANSI C63.10-2013 section 6.2, standard test method for ac power-line conducted emissions from unlicensed wireless devices                                                                                                                                                                                                                                                                                                                   |                              |           |

#### 4.1.1. E.U.T. Operation:

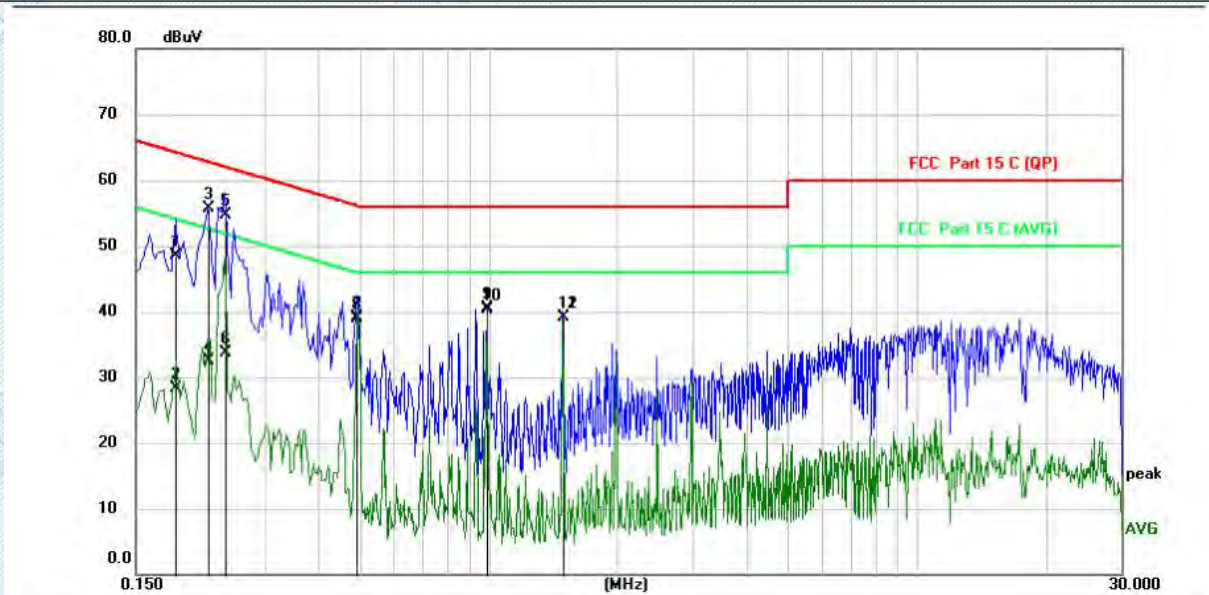
|                        |          |
|------------------------|----------|
| Operating Environment: |          |
| Temperature:           | 23.1 °C  |
| Humidity:              | 44.5 %   |
| Atmospheric Pressure:  | 102 mbar |
| Final test mode:       | TM1      |

#### 4.1.2. Test Setup Diagram:



### 4.1.3. Test Data:

TM1 / Line: Line / Band: 2.4G / BW: 1 / CH: L

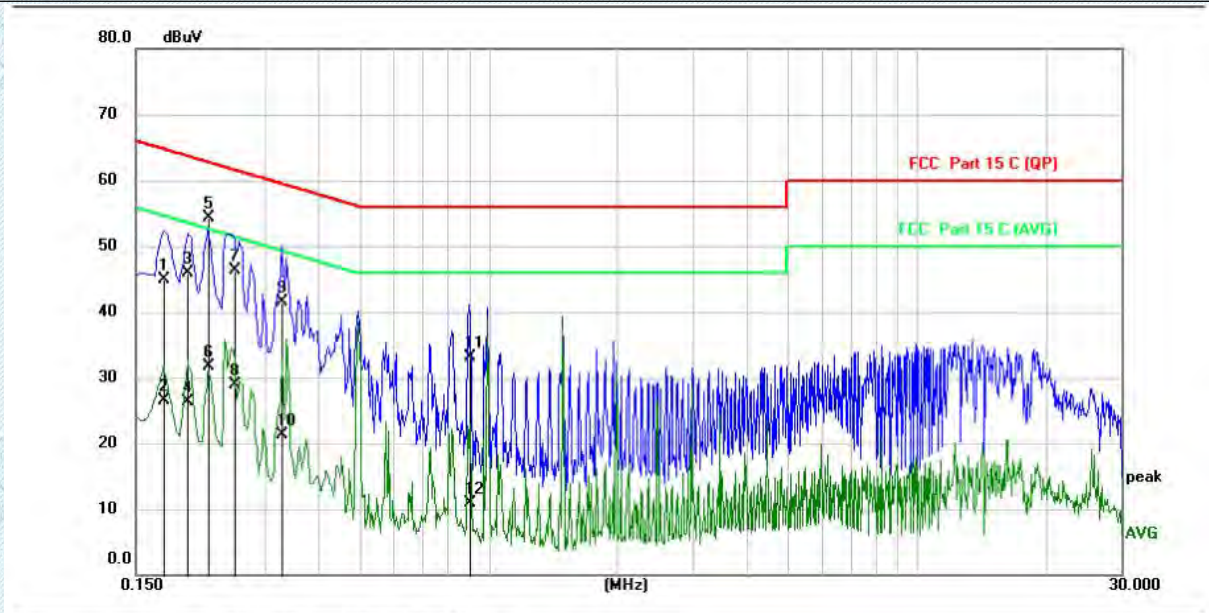


| No. Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV | Limit<br>dBuV | Over<br>dB | Detector | Comment |
|---------|--------------|--------------------------|-------------------------|--------------------------|---------------|------------|----------|---------|
| 1       | 0.1860       | 37.81                    | 10.75                   | 48.56                    | 64.21         | -15.65     | QP       |         |
| 2       | 0.1860       | 17.48                    | 10.75                   | 28.23                    | 54.21         | -25.98     | AVG      |         |
| 3       | 0.2220       | 45.02                    | 10.73                   | 55.75                    | 62.74         | -6.99      | QP       |         |
| 4       | 0.2220       | 21.80                    | 10.73                   | 32.53                    | 52.74         | -20.21     | AVG      |         |
| 5       | 0.2420       | 43.90                    | 10.72                   | 54.62                    | 62.03         | -7.41      | QP       |         |
| 6       | 0.2420       | 22.95                    | 10.72                   | 33.67                    | 52.03         | -18.36     | AVG      |         |
| 7       | 0.4940       | 28.55                    | 10.52                   | 39.07                    | 56.10         | -17.03     | QP       |         |
| 8       | 0.4940       | 28.31                    | 10.52                   | 38.83                    | 46.10         | -7.27      | AVG      |         |
| 9       | 0.9940       | 29.98                    | 10.50                   | 40.48                    | 56.00         | -15.52     | QP       |         |
| 10 *    | 0.9940       | 29.84                    | 10.50                   | 40.34                    | 46.00         | -5.66      | AVG      |         |
| 11      | 1.4900       | 28.61                    | 10.50                   | 39.11                    | 56.00         | -16.89     | QP       |         |
| 12      | 1.4900       | 28.62                    | 10.50                   | 39.12                    | 46.00         | -6.88      | AVG      |         |

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**TM1 / Line: Neutral / Band: 2.4G / BW: 1 / CH: L**


| No. Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV | Limit<br>dBuV | Over<br>dB | Detector | Comment |
|---------|--------------|--------------------------|-------------------------|--------------------------|---------------|------------|----------|---------|
| 1       | 0.1740       | 34.09                    | 10.73                   | 44.82                    | 64.77         | -19.95     | QP       |         |
| 2       | 0.1740       | 15.85                    | 10.73                   | 26.58                    | 54.77         | -28.19     | AVG      |         |
| 3       | 0.1980       | 35.05                    | 10.76                   | 45.81                    | 63.69         | -17.88     | QP       |         |
| 4       | 0.1980       | 15.52                    | 10.76                   | 26.28                    | 53.69         | -27.41     | AVG      |         |
| 5 *     | 0.2220       | 43.63                    | 10.75                   | 54.38                    | 62.74         | -8.36      | QP       |         |
| 6       | 0.2220       | 20.88                    | 10.75                   | 31.63                    | 52.74         | -21.11     | AVG      |         |
| 7       | 0.2540       | 35.53                    | 10.71                   | 46.24                    | 61.63         | -15.39     | QP       |         |
| 8       | 0.2540       | 18.17                    | 10.71                   | 28.88                    | 51.63         | -22.75     | AVG      |         |
| 9       | 0.3300       | 30.93                    | 10.54                   | 41.47                    | 59.45         | -17.98     | QP       |         |
| 10      | 0.3300       | 10.71                    | 10.54                   | 21.25                    | 49.45         | -28.20     | AVG      |         |
| 11      | 0.9020       | 22.58                    | 10.48                   | 33.06                    | 56.00         | -22.94     | QP       |         |
| 12      | 0.9020       | 0.47                     | 10.48                   | 10.95                    | 46.00         | -35.05     | AVG      |         |

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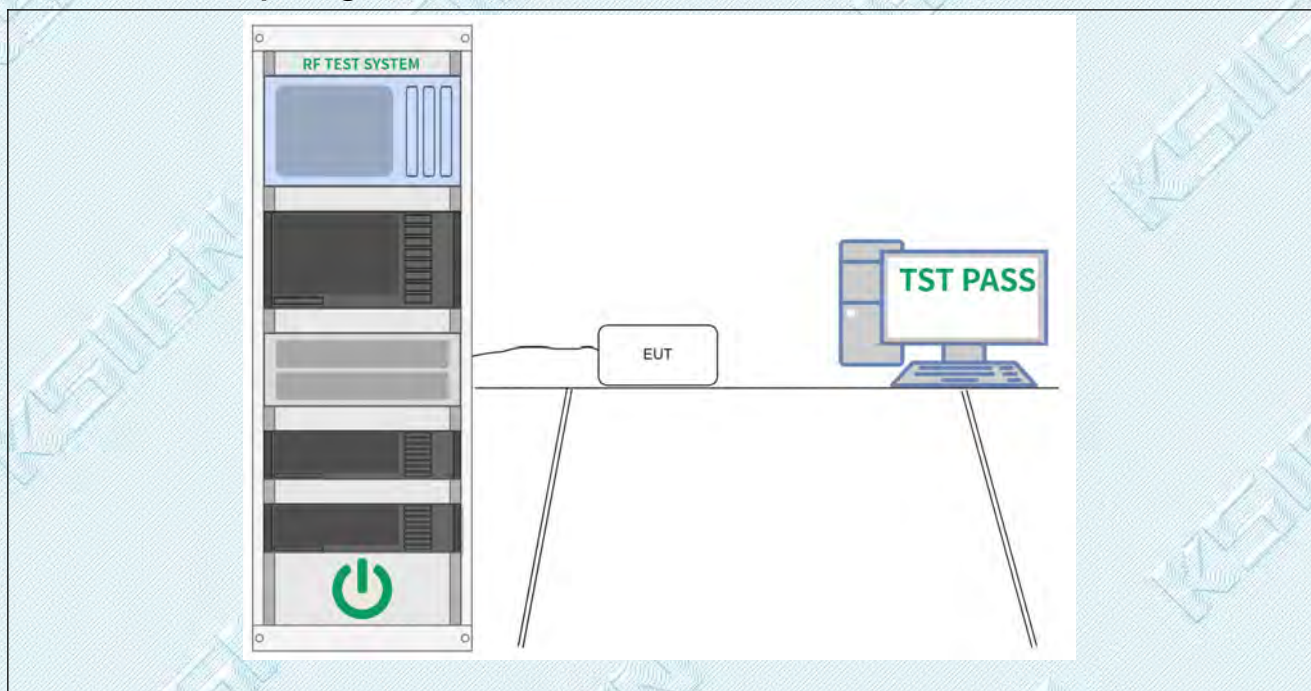
## 4.2. Occupied Bandwidth

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | Systems using digital modulation techniques may operate in the 902-928 MHz, and 2400-2483.5 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.                                                                                                                                                                                                                                                                                                      |
| Test Limit:       | Section (a)(2), Systems using digital modulation techniques may operate in the 902-928 MHz, and 2400-2483.5 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.                                                                                                                                                                                                                                                                                      |
| Test Method:      | DTS bandwidth                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Procedure:        | a) Set RBW = 100 kHz.<br>b) Set the VBW $\geq [3 \times \text{RBW}]$ .<br>c) Detector = peak.<br>d) Trace mode = max hold.<br>e) Sweep = auto couple.<br>f) Allow the trace to stabilize.<br>g) 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. |

### 4.2.1. E.U.T. Operation:

|                        |          |
|------------------------|----------|
| Operating Environment: |          |
| Temperature:           | 25.2 °C  |
| Humidity:              | 52.1 %   |
| Atmospheric Pressure:  | 102 mbar |
| Final test mode:       | TM1      |

### 4.2.2. Test Setup Diagram:



### 4.2.3. Test Data:

Please Refer to Appendix for Details.

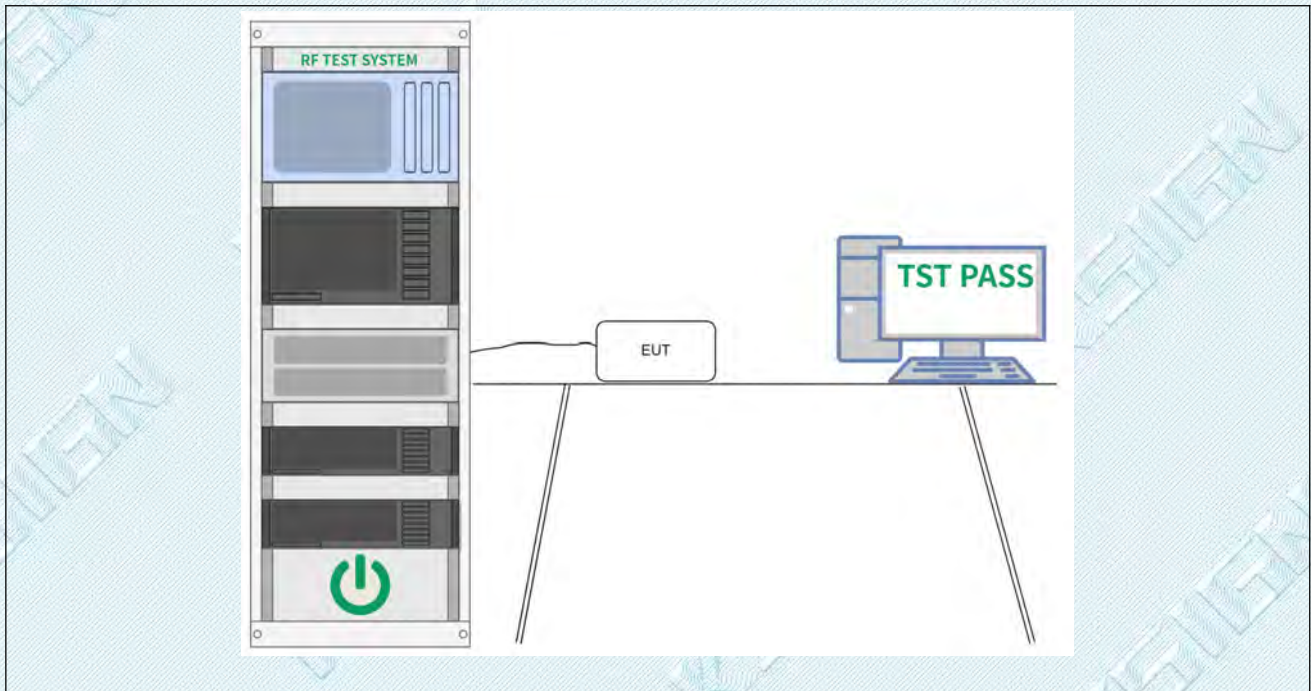
### 4.3. Maximum Conducted Output Power

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode. |
| Test Limit:       | For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode. |
| Test Method:      | Maximum peak conducted output power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Procedure:        | ANSI C63.10-2013, section 11.9.1 Maximum peak conducted output power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

#### 4.3.1. E.U.T. Operation:

|                        |          |
|------------------------|----------|
| Operating Environment: |          |
| Temperature:           | 24.1 °C  |
| Humidity:              | 52.6 %   |
| Atmospheric Pressure:  | 102 mbar |
| Final test mode:       | TM1      |

#### 4.3.2. Test Setup Diagram:



#### 4.3.3. Test Data:

Please Refer to Appendix for Details.

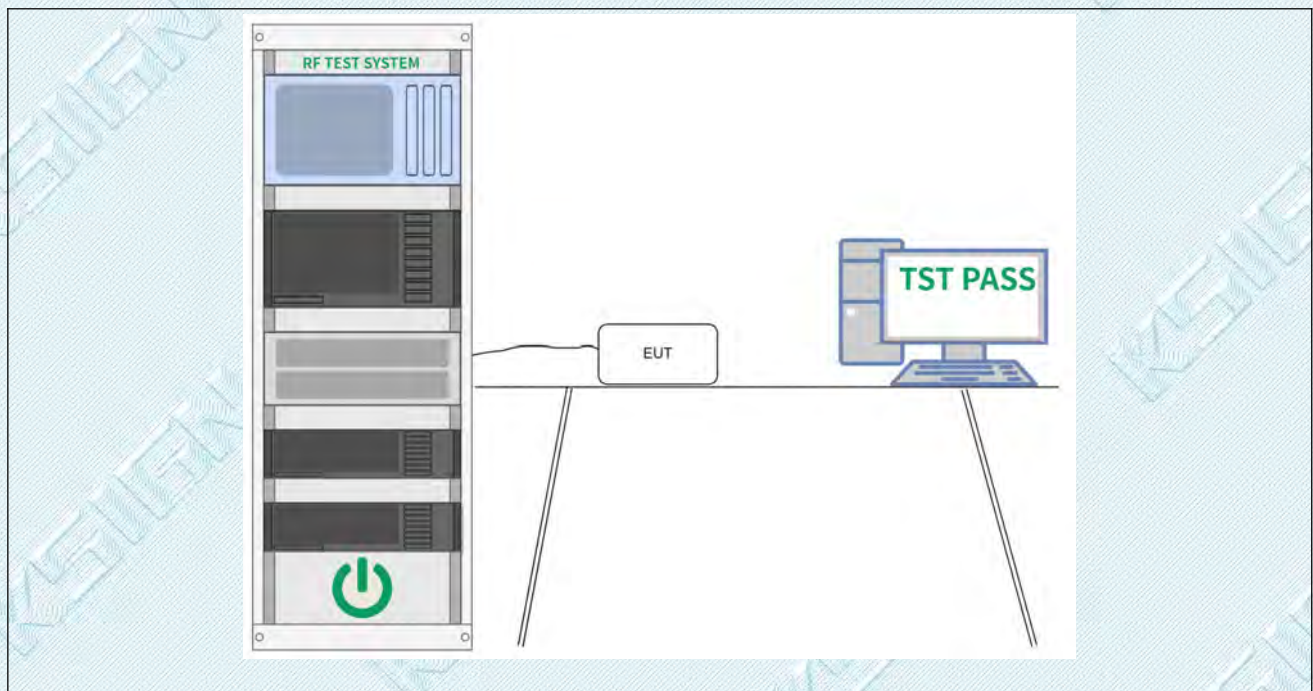
#### 4.4. Power Spectral Density

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | 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. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density. |
| Test Limit:       | 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. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density. |
| Test Method:      | Maximum power spectral density level in the fundamental emission                                                                                                                                                                                                                                                                                                                                                                                               |

##### 4.4.1. E.U.T. Operation:

|                        |          |
|------------------------|----------|
| Operating Environment: |          |
| Temperature:           | 23.1 °C  |
| Humidity:              | 47.7 %   |
| Atmospheric Pressure:  | 102 mbar |
| Final test mode:       | TM1      |

##### 4.4.2. Test Setup Diagram:



##### 4.4.3. Test Data:

Please Refer to Appendix for Details.

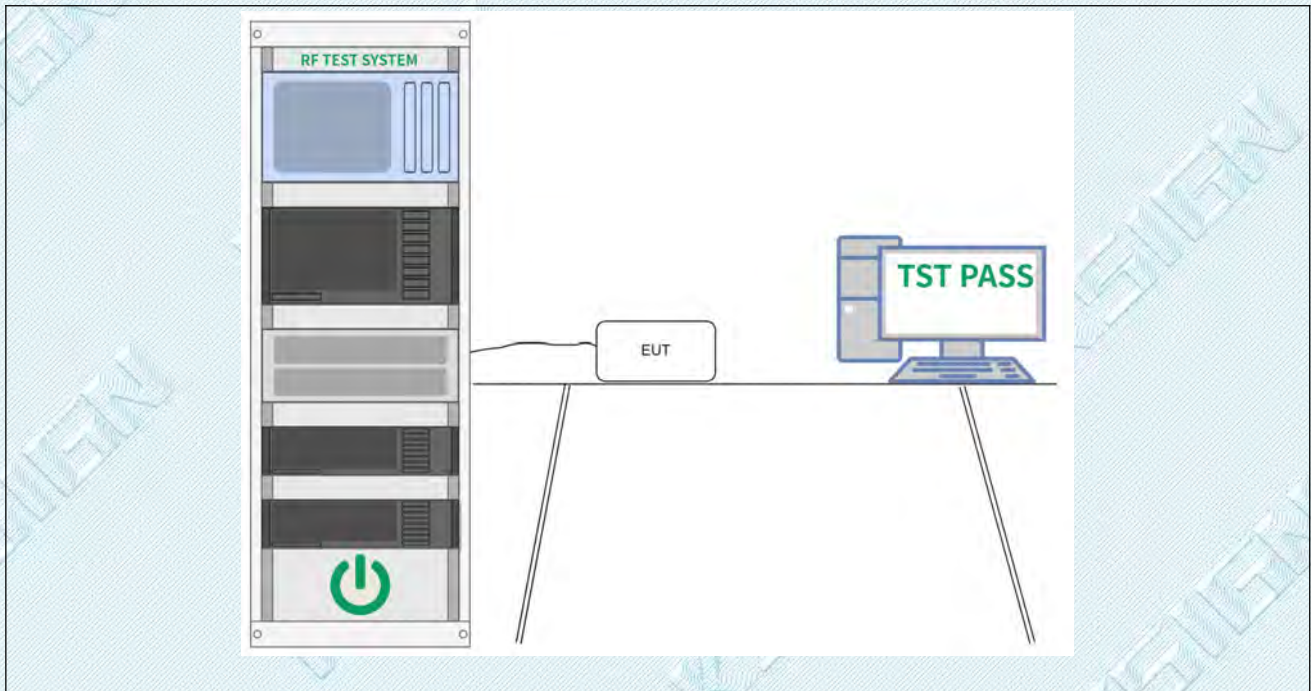
#### 4.5. Emissions in non-restricted frequency bands

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in § 15.209(a) is not required. |
| Test Limit:       | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in § 15.209(a) is not required. |
| Test Method:      | Emissions in nonrestricted frequency bands                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Procedure:        | ANSI C63.10-2013<br>Section 11.11.1, Section 11.11.2, Section 11.11.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

##### 4.5.1. E.U.T. Operation:

|                        |          |
|------------------------|----------|
| Operating Environment: |          |
| Temperature:           | 25.9 °C  |
| Humidity:              | 48 %     |
| Atmospheric Pressure:  | 102 mbar |
| Final test mode:       | TM1      |

#### 4.5.2. Test Setup Diagram:



#### 4.5.3. Test Data:

Please Refer to Appendix for Details.

#### 4.6. Emissions around the fundamental

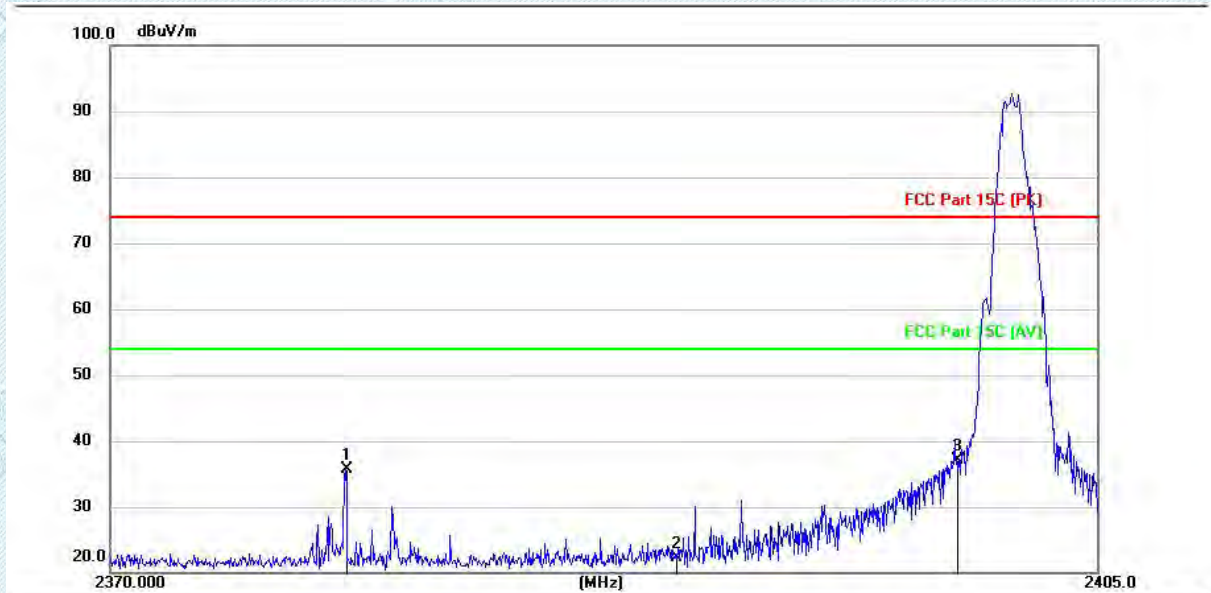
|                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                               |                                   |                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------|
| Test Requirement:                                                                                                                                                                                                                                                                                                                               | In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a)(see § 15.205(c)).` |                                   |                               |
| Test Limit:                                                                                                                                                                                                                                                                                                                                     | Frequency (MHz)                                                                                                                                                                               | Field strength (microvolts/meter) | Measurement distance (meters) |
|                                                                                                                                                                                                                                                                                                                                                 | 0.009-0.490                                                                                                                                                                                   | 2400/F(kHz)                       | 300                           |
|                                                                                                                                                                                                                                                                                                                                                 | 0.490-1.705                                                                                                                                                                                   | 24000/F(kHz)                      | 30                            |
|                                                                                                                                                                                                                                                                                                                                                 | 1.705-30.0                                                                                                                                                                                    | 30                                | 30                            |
|                                                                                                                                                                                                                                                                                                                                                 | 30-88                                                                                                                                                                                         | 100 **                            | 3                             |
|                                                                                                                                                                                                                                                                                                                                                 | 88-216                                                                                                                                                                                        | 150 **                            | 3                             |
|                                                                                                                                                                                                                                                                                                                                                 | 216-960                                                                                                                                                                                       | 200 **                            | 3                             |
|                                                                                                                                                                                                                                                                                                                                                 | Above 960                                                                                                                                                                                     | 500                               | 3                             |
| ** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241. |                                                                                                                                                                                               |                                   |                               |
| Test Method:                                                                                                                                                                                                                                                                                                                                    | Radiated emissions tests                                                                                                                                                                      |                                   |                               |
| Procedure:                                                                                                                                                                                                                                                                                                                                      | ANSI C63.10-2013 section 6.6.4                                                                                                                                                                |                                   |                               |

##### 4.6.1. E.U.T. Operation:

|                        |          |
|------------------------|----------|
| Operating Environment: |          |
| Temperature:           | 24.2 °C  |
| Humidity:              | 42.3 %   |
| Atmospheric Pressure:  | 102 mbar |
| Final test mode:       | TM1      |

#### 4.6.2. Test Data:

TM1 / Polarization: Horizontal / Band: 2.4G / BW: 1 / CH: L



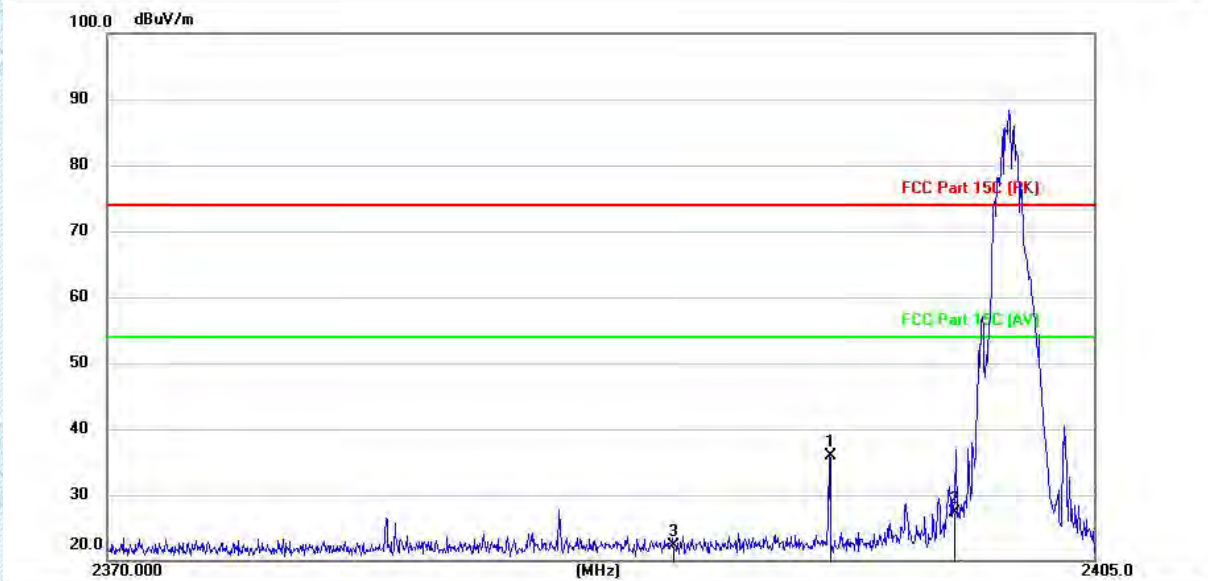
| No. | Mk. | Freq.<br>MHz | Reading Level<br>(dBuV) | Correct Factor<br>(dB/m) | Measurement<br>(dBuV/m) | Limit<br>(dBuV/m) | Over<br>(dB) | Detector |
|-----|-----|--------------|-------------------------|--------------------------|-------------------------|-------------------|--------------|----------|
| 1   |     | 2378.340     | 46.66                   | -10.92                   | 35.74                   | 74.00             | -38.26       | peak     |
| 2   |     | 2390.000     | 33.15                   | -10.92                   | 22.23                   | 74.00             | -51.77       | peak     |
| 3   | *   | 2400.000     | 47.93                   | -10.92                   | 37.01                   | 74.00             | -36.99       | peak     |

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TM1 / Polarization: Vertical / Band: 2.4G / BW: 1 / CH: L

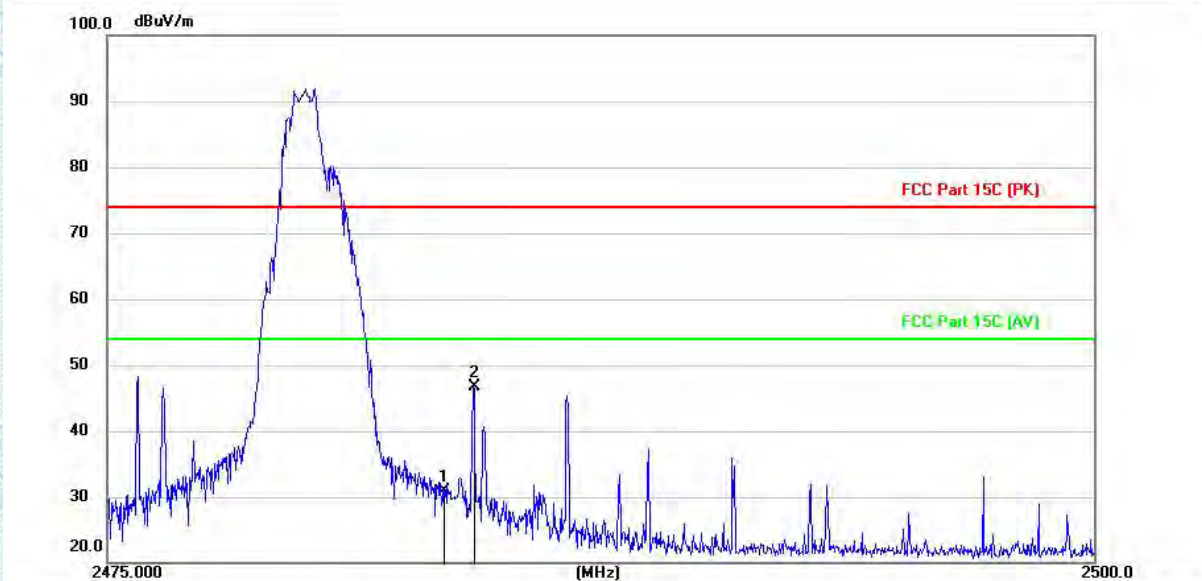


| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit    | Over   |          |
|-----|-----|----------|---------------|----------------|-------------|----------|--------|----------|
|     |     | MHz      | (dBuV)        | (dB/m)         | (dBuV/m)    | (dBuV/m) | (dB)   | Detector |
| 1   | *   | 2395.564 | 46.83         | -10.91         | 35.92       | 74.00    | -38.08 | peak     |
| 2   |     | 2400.000 | 38.15         | -10.92         | 27.23       | 74.00    | -46.77 | peak     |
| 3   |     | 2390.000 | 33.17         | -10.92         | 22.25       | 74.00    | -51.75 | peak     |

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Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com

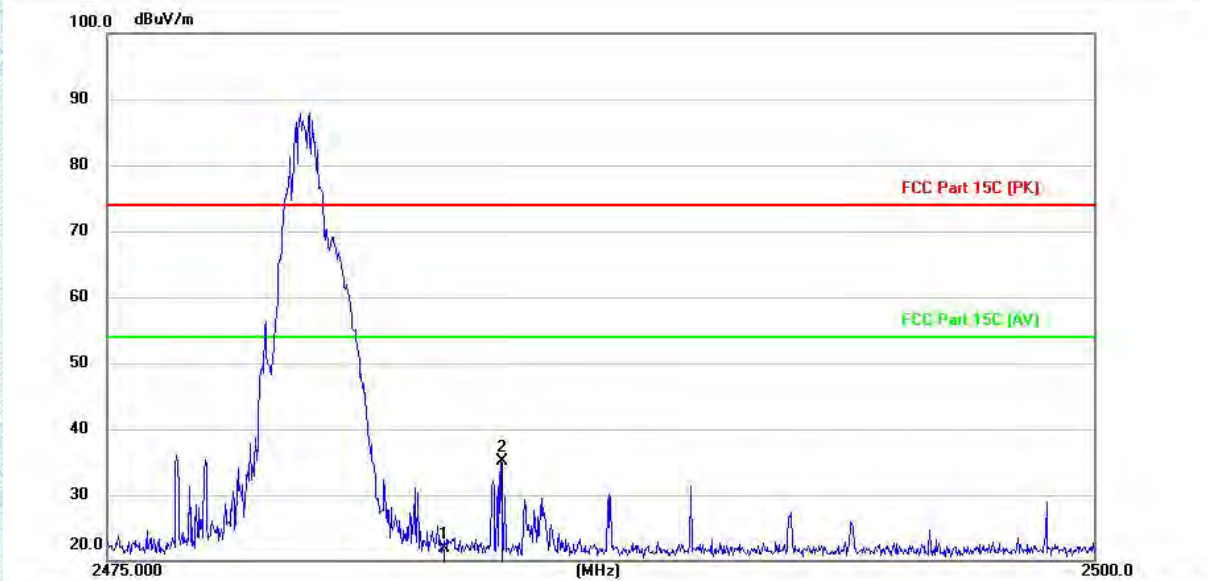
**TM1 / Polarization: Horizontal / Band: 2.4G / BW: 1 / CH: H**


| No. | Mk. | Freq.<br>MHz | Reading Level<br>(dBuV) | Correct Factor<br>(dB/m) | Measurement<br>(dBuV/m) | Limit<br>(dBuV/m) | Over<br>(dB) | Detector |
|-----|-----|--------------|-------------------------|--------------------------|-------------------------|-------------------|--------------|----------|
| 1   |     | 2483.500     | 41.82                   | -10.88                   | 30.94                   | 74.00             | -43.06       | peak     |
| 2   | *   | 2484.247     | 57.55                   | -10.88                   | 46.67                   | 74.00             | -27.33       | peak     |

TRF EMC\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

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**TM1 / Polarization: Vertical / Band: 2.4G / BW: 1 / CH: H**


| No. | Mk. | Freq.<br>MHz | Reading Level<br>(dBuV) | Correct Factor<br>(dB/m) | Measurement<br>(dBuV/m) | Limit<br>(dBuV/m) | Over<br>(dB) | Detector |
|-----|-----|--------------|-------------------------|--------------------------|-------------------------|-------------------|--------------|----------|
| 1   |     | 2483.500     | 32.68                   | -10.88                   | 21.80                   | 74.00             | -52.20       | peak     |
| 2   | *   | 2484.950     | 46.01                   | -10.88                   | 35.13                   | 74.00             | -38.87       | peak     |

TRF EMC\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

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#### 4.7. Emissions in restricted frequency bands (below 1GHz)

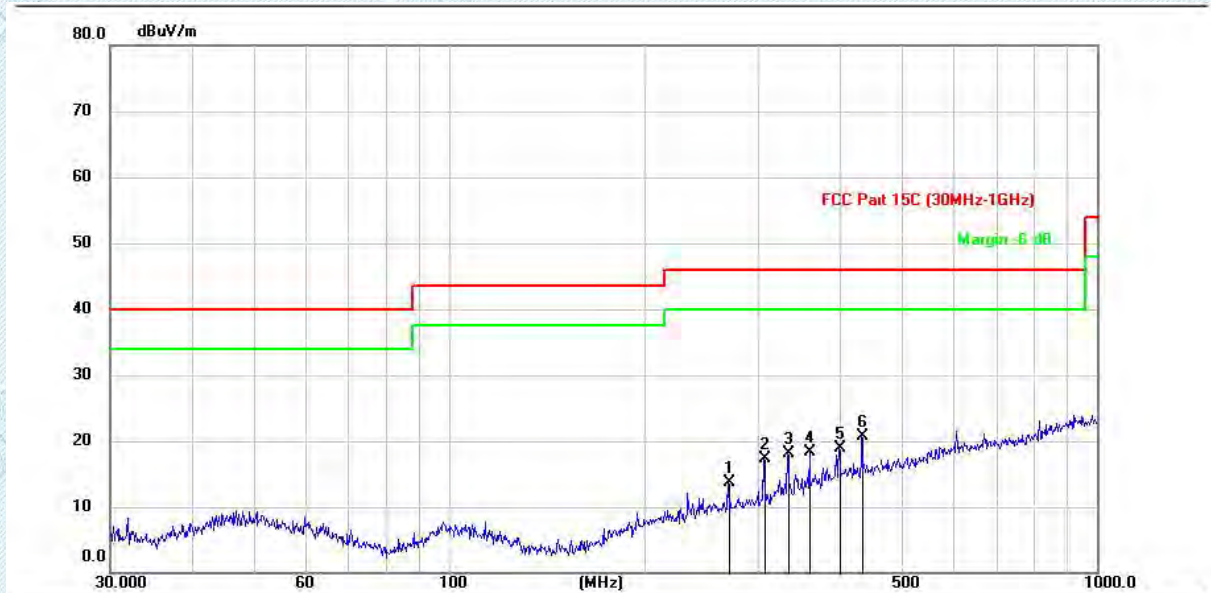
|                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                               |                                   |                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------|
| Test Requirement:                                                                                                                                                                                                                                                                                                                               | In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a)(see § 15.205(c)).` |                                   |                               |
| Test Limit:                                                                                                                                                                                                                                                                                                                                     | Frequency (MHz)                                                                                                                                                                               | Field strength (microvolts/meter) | Measurement distance (meters) |
|                                                                                                                                                                                                                                                                                                                                                 | 0.009-0.490                                                                                                                                                                                   | 2400/F(kHz)                       | 300                           |
|                                                                                                                                                                                                                                                                                                                                                 | 0.490-1.705                                                                                                                                                                                   | 24000/F(kHz)                      | 30                            |
|                                                                                                                                                                                                                                                                                                                                                 | 1.705-30.0                                                                                                                                                                                    | 30                                | 30                            |
|                                                                                                                                                                                                                                                                                                                                                 | 30-88                                                                                                                                                                                         | 100 **                            | 3                             |
|                                                                                                                                                                                                                                                                                                                                                 | 88-216                                                                                                                                                                                        | 150 **                            | 3                             |
|                                                                                                                                                                                                                                                                                                                                                 | 216-960                                                                                                                                                                                       | 200 **                            | 3                             |
|                                                                                                                                                                                                                                                                                                                                                 | Above 960                                                                                                                                                                                     | 500                               | 3                             |
| ** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241. |                                                                                                                                                                                               |                                   |                               |
| Test Method:                                                                                                                                                                                                                                                                                                                                    | Radiated emissions tests                                                                                                                                                                      |                                   |                               |
| Procedure:                                                                                                                                                                                                                                                                                                                                      | ANSI C63.10-2013 section 6.6.4                                                                                                                                                                |                                   |                               |

##### 4.7.1. E.U.T. Operation:

|                        |          |
|------------------------|----------|
| Operating Environment: |          |
| Temperature:           | 24.2 °C  |
| Humidity:              | 44.2 %   |
| Atmospheric Pressure:  | 102 mbar |
| Final test mode:       | TM1      |

#### 4.7.2. Test Data:

TM1 / Polarization: Horizontal / Band: 2.4G / BW: 1 / CH: L

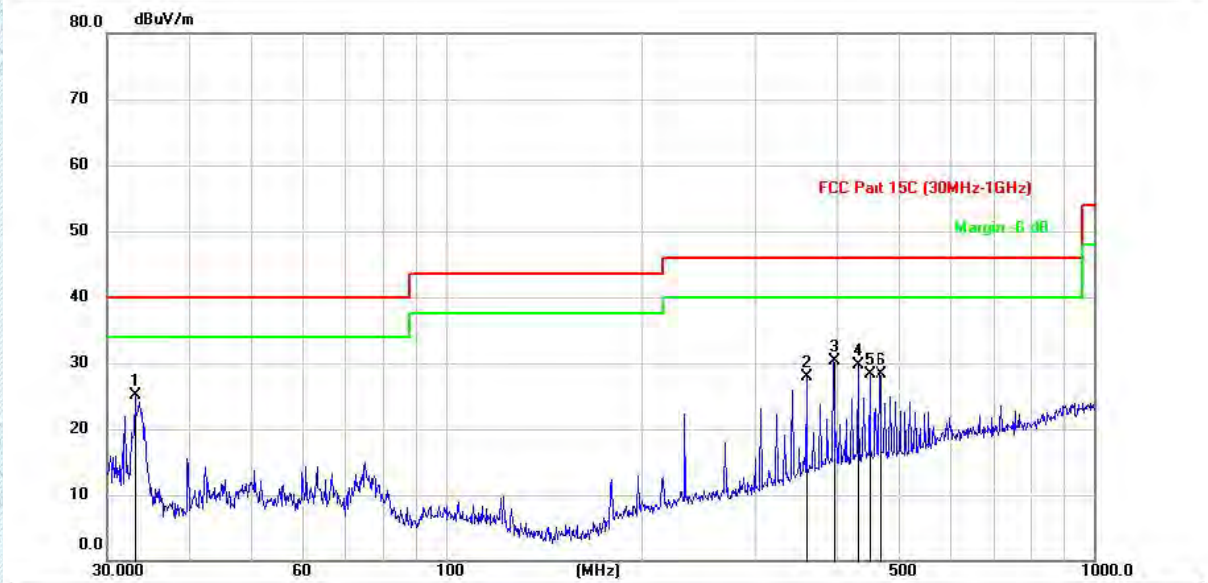


| No. | Mk. | Freq.<br>MHz | Reading Level<br>(dBuV) | Correct Factor<br>(dB/m) | Measurement<br>(dBuV/m) | Limit<br>(dBuV/m) | Over<br>(dB) | Detector |
|-----|-----|--------------|-------------------------|--------------------------|-------------------------|-------------------|--------------|----------|
| 1   |     | 269.9958     | 28.98                   | -15.36                   | 13.62                   | 46.00             | -32.38       | QP       |
| 2   |     | 306.0017     | 31.75                   | -14.41                   | 17.34                   | 46.00             | -28.66       | QP       |
| 3   |     | 333.3359     | 31.40                   | -13.24                   | 18.16                   | 46.00             | -27.84       | QP       |
| 4   |     | 360.0687     | 30.61                   | -12.21                   | 18.40                   | 46.00             | -27.60       | QP       |
| 5   |     | 400.0109     | 29.82                   | -10.91                   | 18.91                   | 46.00             | -27.09       | QP       |
| 6   | *   | 433.3047     | 31.15                   | -10.51                   | 20.64                   | 46.00             | -25.36       | QP       |

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**TM1 / Polarization: Vertical / Band: 2.4G / BW: 1 / CH: L**


| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit    | Over   |          |
|-----|-----|----------|---------------|----------------|-------------|----------|--------|----------|
|     |     | MHz      | (dBuV)        | (dB/m)         | (dBuV/m)    | (dBuV/m) | (dB)   | Detector |
| 1   | *   | 33.1066  | 43.90         | -18.87         | 25.03       | 40.00    | -14.97 | QP       |
| 2   |     | 360.0687 | 40.05         | -12.21         | 27.84       | 46.00    | -18.16 | QP       |
| 3   |     | 395.9638 | 41.43         | -11.04         | 30.39       | 46.00    | -15.61 | QP       |
| 4   |     | 432.0909 | 40.14         | -10.53         | 29.61       | 46.00    | -16.39 | QP       |
| 5   |     | 450.0290 | 38.67         | -10.32         | 28.35       | 46.00    | -17.65 | QP       |
| 6   |     | 468.0549 | 38.43         | -10.18         | 28.25       | 46.00    | -17.75 | QP       |

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#### 4.8. Emissions in restricted frequency bands (above 1GHz)

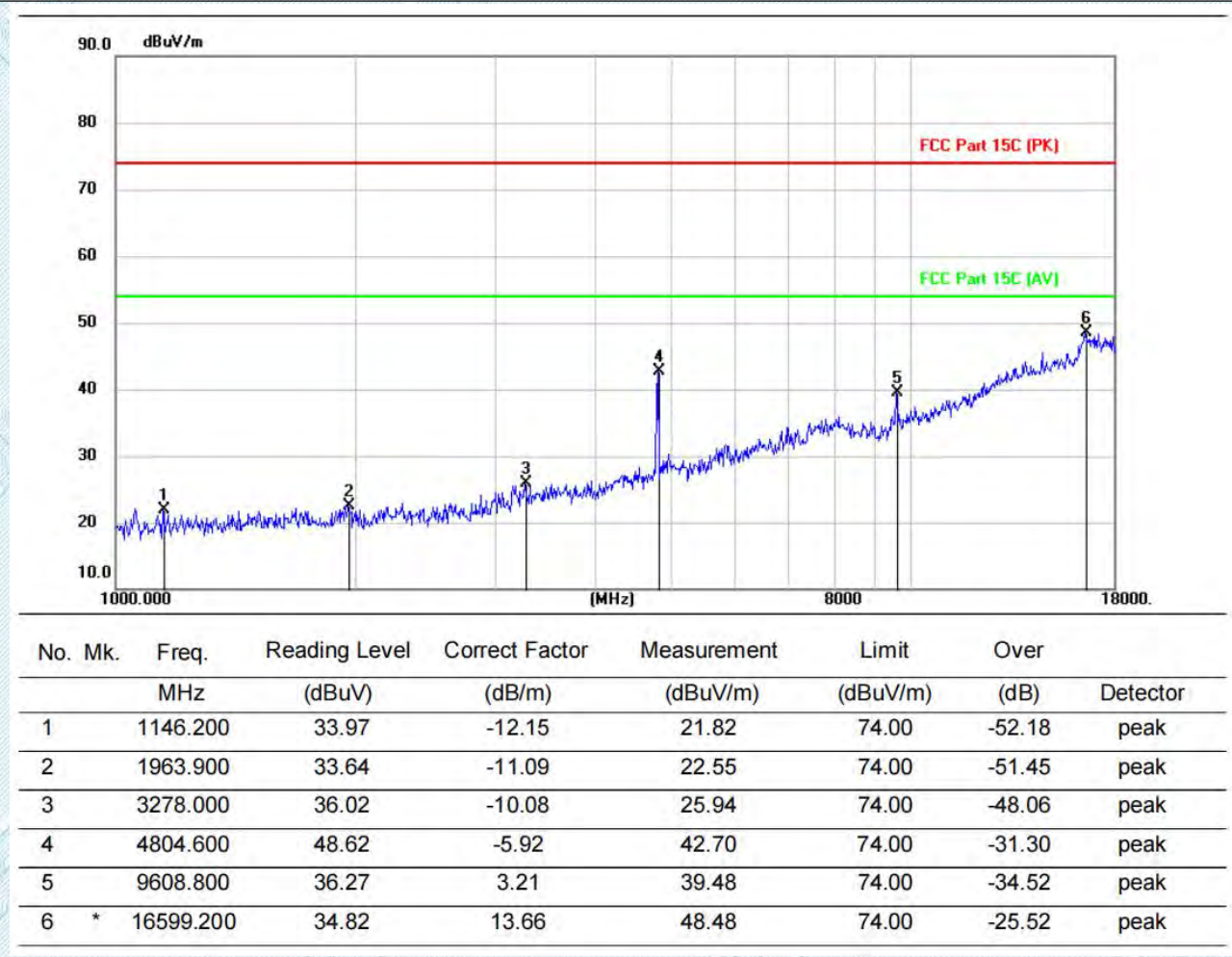
|                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                               |                                   |                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------|
| Test Requirement:                                                                                                                                                                                                                                                                                                                               | In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a)(see § 15.205(c)).` |                                   |                               |
| Test Limit:                                                                                                                                                                                                                                                                                                                                     | Frequency (MHz)                                                                                                                                                                               | Field strength (microvolts/meter) | Measurement distance (meters) |
|                                                                                                                                                                                                                                                                                                                                                 | 0.009-0.490                                                                                                                                                                                   | 2400/F(kHz)                       | 300                           |
|                                                                                                                                                                                                                                                                                                                                                 | 0.490-1.705                                                                                                                                                                                   | 24000/F(kHz)                      | 30                            |
|                                                                                                                                                                                                                                                                                                                                                 | 1.705-30.0                                                                                                                                                                                    | 30                                | 30                            |
|                                                                                                                                                                                                                                                                                                                                                 | 30-88                                                                                                                                                                                         | 100 **                            | 3                             |
|                                                                                                                                                                                                                                                                                                                                                 | 88-216                                                                                                                                                                                        | 150 **                            | 3                             |
|                                                                                                                                                                                                                                                                                                                                                 | 216-960                                                                                                                                                                                       | 200 **                            | 3                             |
|                                                                                                                                                                                                                                                                                                                                                 | Above 960                                                                                                                                                                                     | 500                               | 3                             |
| ** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241. |                                                                                                                                                                                               |                                   |                               |
| Test Method:                                                                                                                                                                                                                                                                                                                                    | Radiated emissions tests                                                                                                                                                                      |                                   |                               |
| Procedure:                                                                                                                                                                                                                                                                                                                                      | ANSI C63.10-2013 section 6.6.4                                                                                                                                                                |                                   |                               |

##### 4.8.1. E.U.T. Operation:

|                        |          |
|------------------------|----------|
| Operating Environment: |          |
| Temperature:           | 24 °C    |
| Humidity:              | 43.2 %   |
| Atmospheric Pressure:  | 102 mbar |
| Final test mode:       | TM1      |

#### 4.8.2. Test Data:

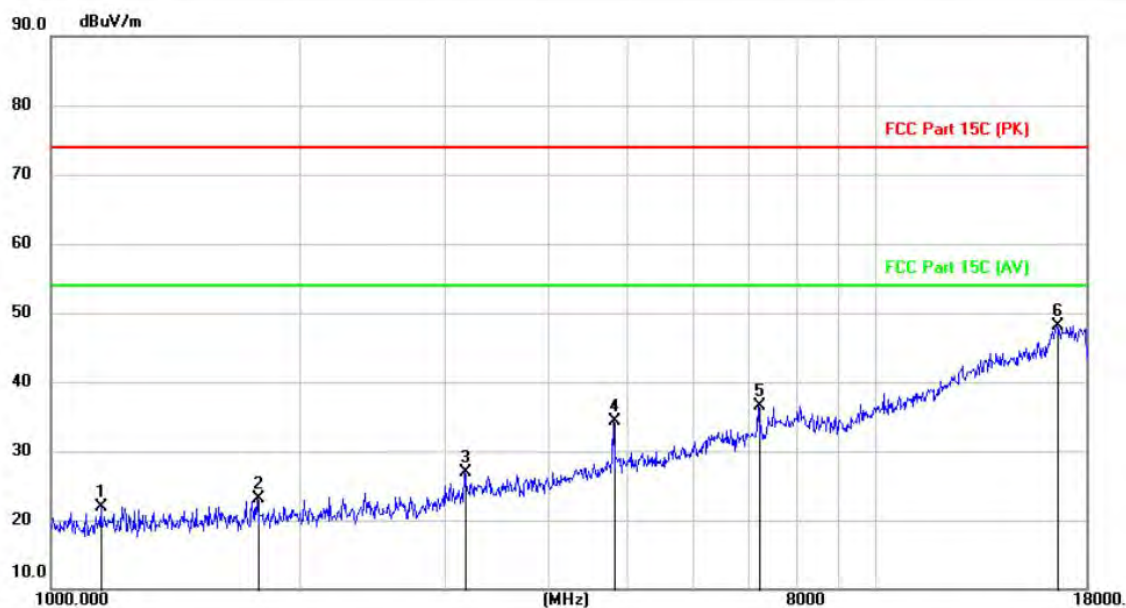
TM1 / Polarization: Horizontal / Band: 2.4G / BW: 1 / CH: L



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**TM1 / Polarization: Vertical / Band: 2.4G / BW: 1 / CH: L**


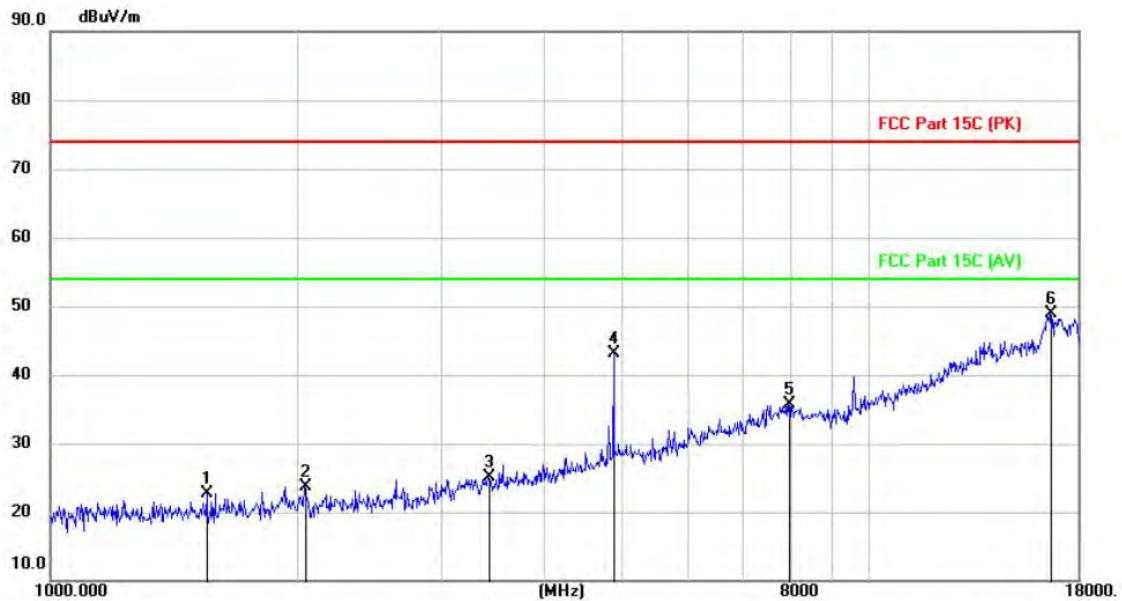
| No. | Mk. | Freq.     | Reading Level | Correct Factor | Measurement | Limit    | Over   |          |
|-----|-----|-----------|---------------|----------------|-------------|----------|--------|----------|
|     |     | MHz       | (dBuV)        | (dB/m)         | (dBuV/m)    | (dBuV/m) | (dB)   | Detector |
| 1   |     | 1149.600  | 34.11         | -12.13         | 21.98       | 74.00    | -52.02 | peak     |
| 2   |     | 1780.300  | 34.43         | -11.27         | 23.16       | 74.00    | -50.84 | peak     |
| 3   |     | 3169.200  | 37.23         | -10.29         | 26.94       | 74.00    | -47.06 | peak     |
| 4   |     | 4804.600  | 40.14         | -5.92          | 34.22       | 74.00    | -39.78 | peak     |
| 5   |     | 7206.700  | 36.56         | -0.07          | 36.49       | 74.00    | -37.51 | peak     |
| 6   | *   | 16573.700 | 34.41         | 13.69          | 48.10       | 74.00    | -25.90 | peak     |

TRF EMC\_R1

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TM1 / Polarization: Horizontal / Band: 2.4G / BW: 1 / CH: M

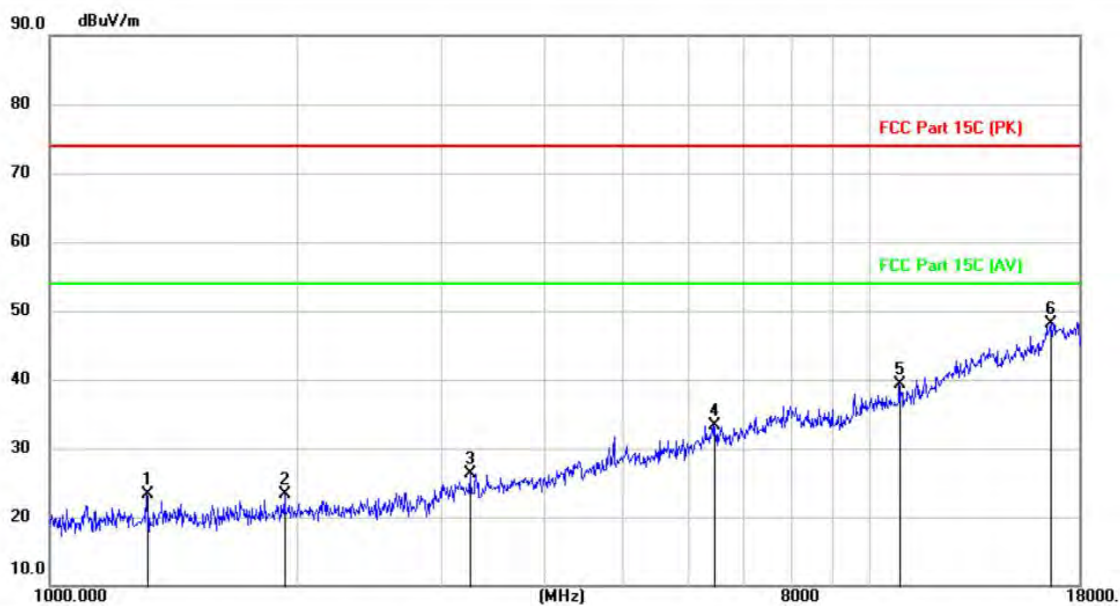


| No. | Mk. | Freq.<br>MHz | Reading Level<br>(dBuV) | Correct Factor<br>(dB/m) | Measurement<br>(dBuV/m) | Limit<br>(dBuV/m) | Over<br>(dB) | Detector |
|-----|-----|--------------|-------------------------|--------------------------|-------------------------|-------------------|--------------|----------|
| 1   |     | 1554.200     | 34.36                   | -11.67                   | 22.69                   | 74.00             | -51.31       | peak     |
| 2   |     | 2045.500     | 34.77                   | -11.04                   | 23.73                   | 74.00             | -50.27       | peak     |
| 3   |     | 3434.400     | 34.81                   | -9.80                    | 25.01                   | 74.00             | -48.99       | peak     |
| 4   |     | 4881.100     | 48.81                   | -5.71                    | 43.10                   | 74.00             | -30.90       | peak     |
| 5   |     | 7981.900     | 33.71                   | 2.03                     | 35.74                   | 74.00             | -38.26       | peak     |
| 6   | *   | 16662.100    | 35.41                   | 13.56                    | 48.97                   | 74.00             | -25.03       | peak     |

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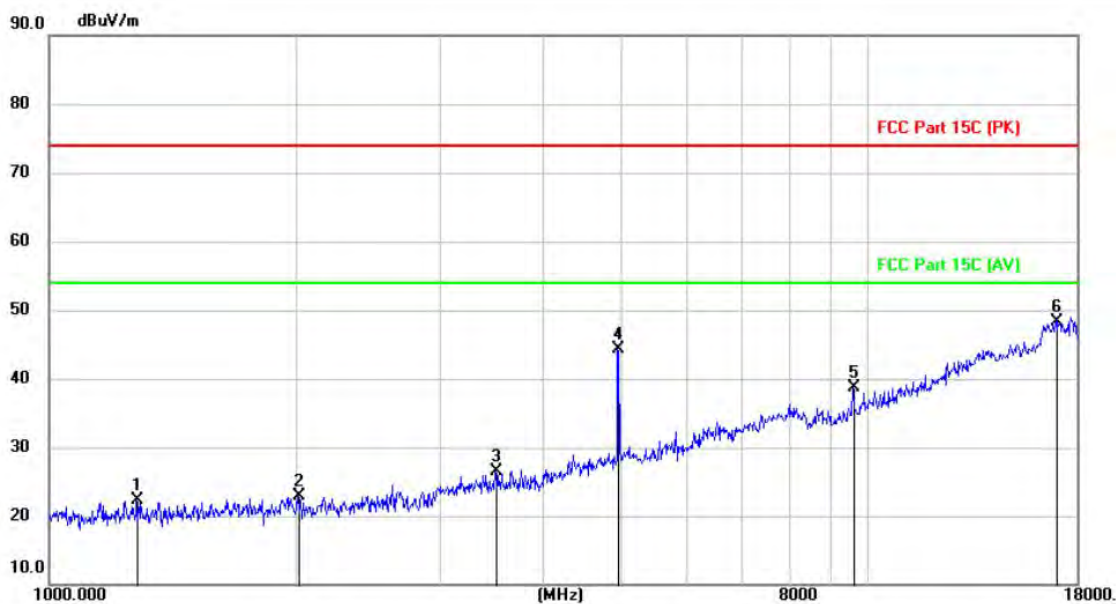
**TM1 / Polarization: Vertical / Band: 2.4G / BW: 1 / CH: M**


| No. | Mk. | Freq.<br>MHz | Reading Level<br>(dBuV) | Correct Factor<br>(dB/m) | Measurement<br>(dBuV/m) | Limit<br>(dBuV/m) | Over<br>(dB) | Detector |
|-----|-----|--------------|-------------------------|--------------------------|-------------------------|-------------------|--------------|----------|
| 1   |     | 1314.500     | 35.36                   | -11.96                   | 23.40                   | 74.00             | -50.60       | peak     |
| 2   |     | 1938.400     | 34.37                   | -11.11                   | 23.26                   | 74.00             | -50.74       | peak     |
| 3   |     | 3255.900     | 36.45                   | -10.13                   | 26.32                   | 74.00             | -47.68       | peak     |
| 4   |     | 6462.100     | 35.49                   | -2.24                    | 33.25                   | 74.00             | -40.75       | peak     |
| 5   |     | 10882.100    | 33.71                   | 5.52                     | 39.23                   | 74.00             | -34.77       | peak     |
| 6   | *   | 16645.100    | 34.49                   | 13.58                    | 48.07                   | 74.00             | -25.93       | peak     |

TRF EMC\_R1

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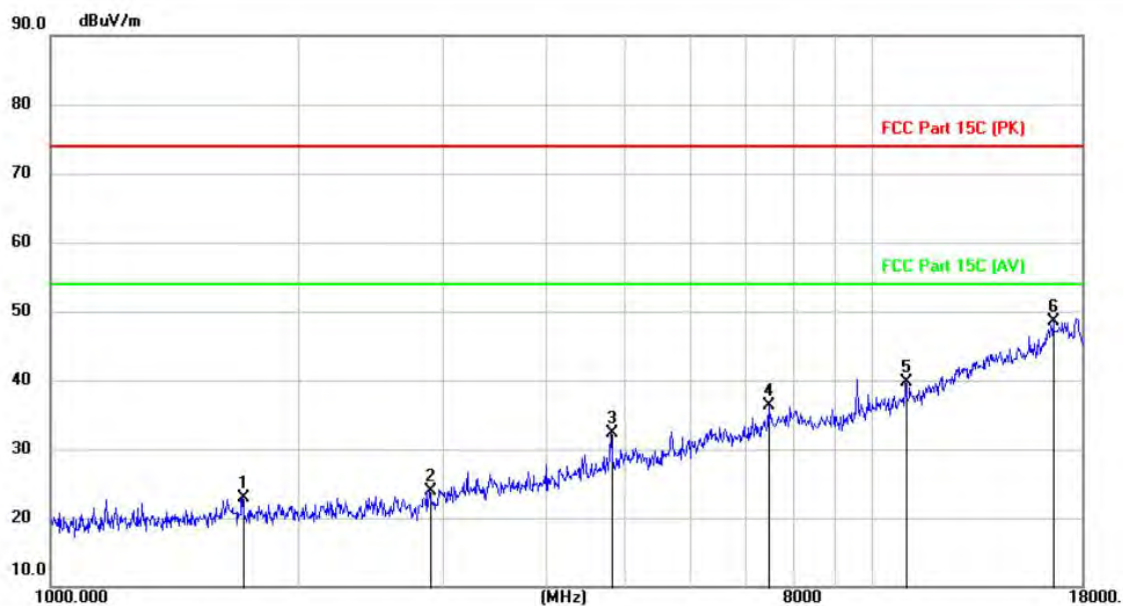
**TM1 / Polarization: Horizontal / Band: 2.4G / BW: 1 / CH: H**


| No. | Mk. | Freq.<br>MHz | Reading Level<br>(dBuV) | Correct Factor<br>(dB/m) | Measurement<br>(dBuV/m) | Limit<br>(dBuV/m) | Over<br>(dB) | Detector |
|-----|-----|--------------|-------------------------|--------------------------|-------------------------|-------------------|--------------|----------|
| 1   |     | 1278.800     | 34.21                   | -11.99                   | 22.22                   | 74.00             | -51.78       | peak     |
| 2   |     | 2018.300     | 33.89                   | -11.05                   | 22.84                   | 74.00             | -51.16       | peak     |
| 3   |     | 3512.600     | 36.13                   | -9.64                    | 26.49                   | 74.00             | -47.51       | peak     |
| 4   |     | 4959.300     | 49.79                   | -5.51                    | 44.28                   | 74.00             | -29.72       | peak     |
| 5   |     | 9608.800     | 35.57                   | 3.21                     | 38.78                   | 74.00             | -35.22       | peak     |
| 6   | *   | 16971.500    | 35.18                   | 13.07                    | 48.25                   | 74.00             | -25.75       | peak     |

TRF EMC\_R1

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**TM1 / Polarization: Vertical / Band: 2.4G / BW: 1 / CH: H**


| No. | Mk. | Freq.     | Reading Level | Correct Factor | Measurement | Limit    | Over   | Detector |
|-----|-----|-----------|---------------|----------------|-------------|----------|--------|----------|
|     |     | MHz       | (dBuV)        | (dB/m)         | (dBuV/m)    | (dBuV/m) | (dB)   |          |
| 1   |     | 1712.300  | 34.34         | -11.39         | 22.95       | 74.00    | -51.05 | peak     |
| 2   |     | 2892.100  | 34.56         | -10.65         | 23.91       | 74.00    | -50.09 | peak     |
| 3   |     | 4804.600  | 38.16         | -5.92          | 32.24       | 74.00    | -41.76 | peak     |
| 4   |     | 7480.400  | 35.56         | 0.76           | 36.32       | 74.00    | -37.68 | peak     |
| 5   |     | 10990.900 | 33.94         | 5.69           | 39.63       | 74.00    | -34.37 | peak     |
| 6   | *   | 16602.600 | 34.77         | 13.65          | 48.42       | 74.00    | -25.58 | peak     |

**Note:**

1. From 18GHz to 26.5GHz, the amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
2. Since the peak value is less than the limit of the AVG value, there is no AVG data.

**TRF EMC\_R1**

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## 5. EUT TEST PHOTOS

Conducted Emission at AC power line



Emissions in restricted frequency bands (above 1GHz)



Emissions in restricted frequency bands (below 1GHz)



TRF EMC\_R1

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## 6. PHOTOGRAPHS OF EUT CONSTRUCTIONAL

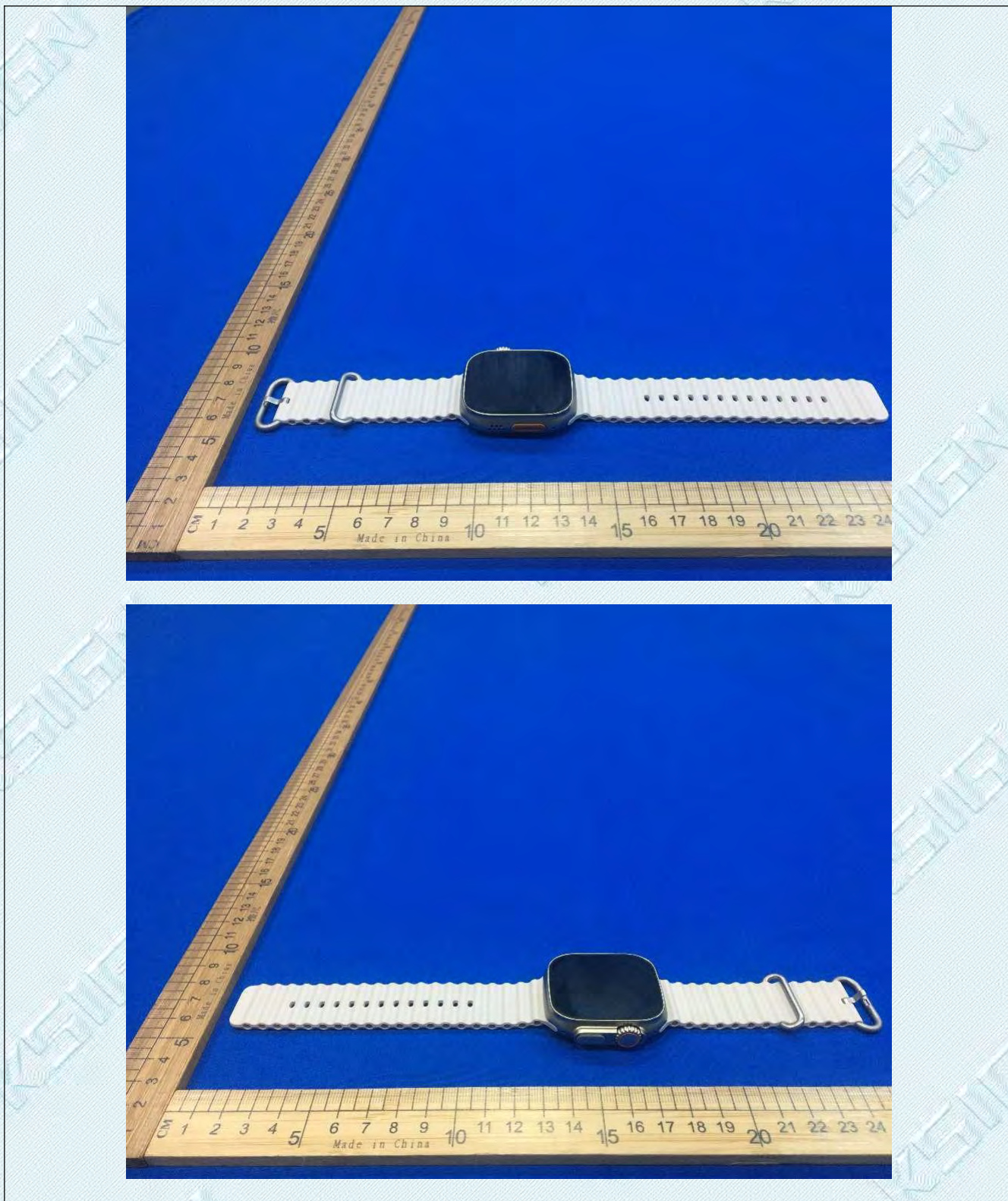
### External



TRF EMC\_R1

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TRF EMC\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

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TRF EMC\_R1

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**Internal**



TRF EMC\_R1

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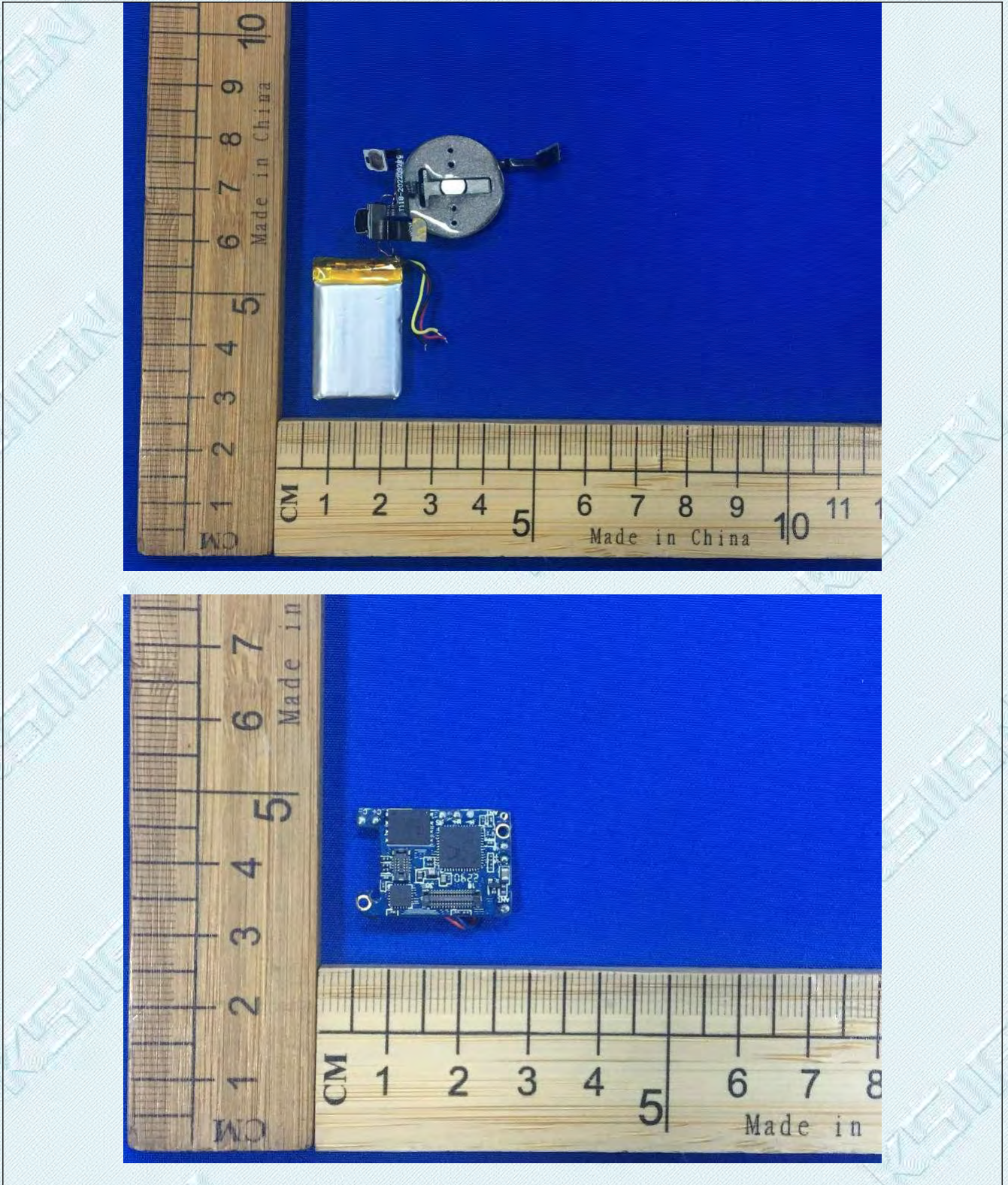
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TRF EMC\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

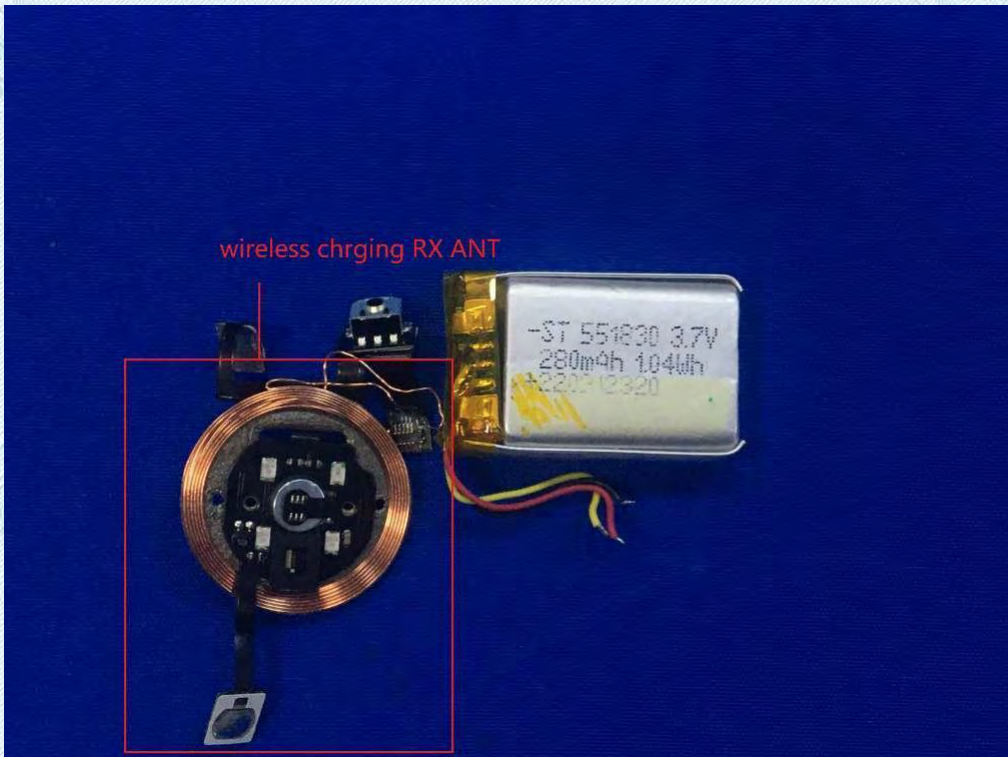
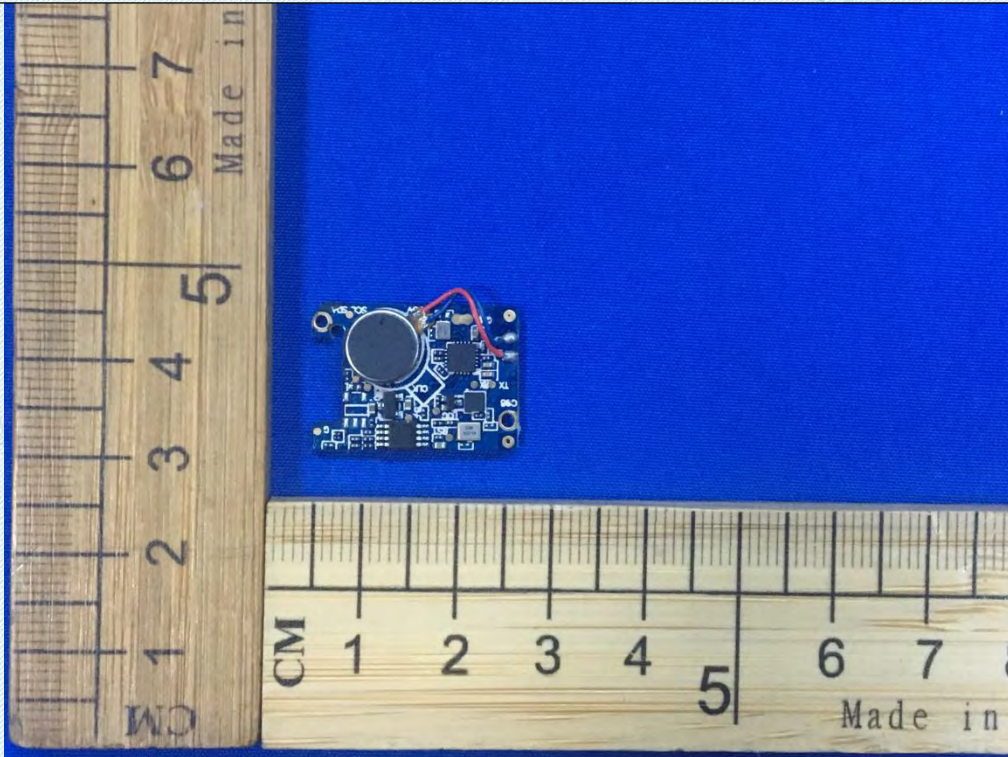
Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdkesign.cn Web: www.gdkesign.com

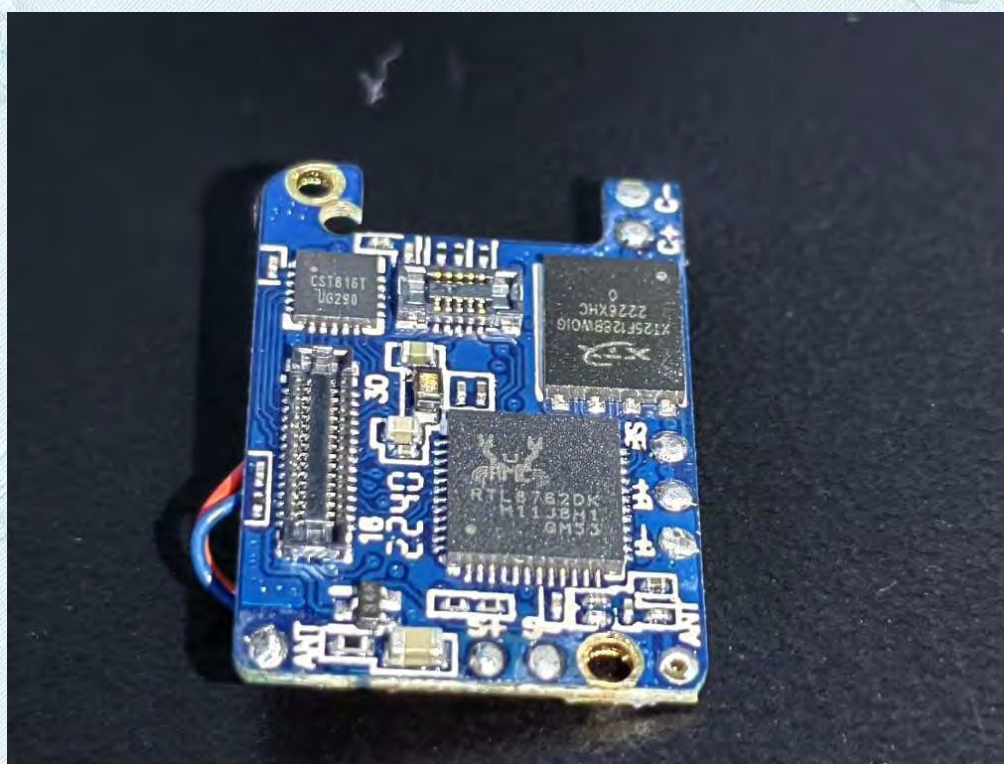
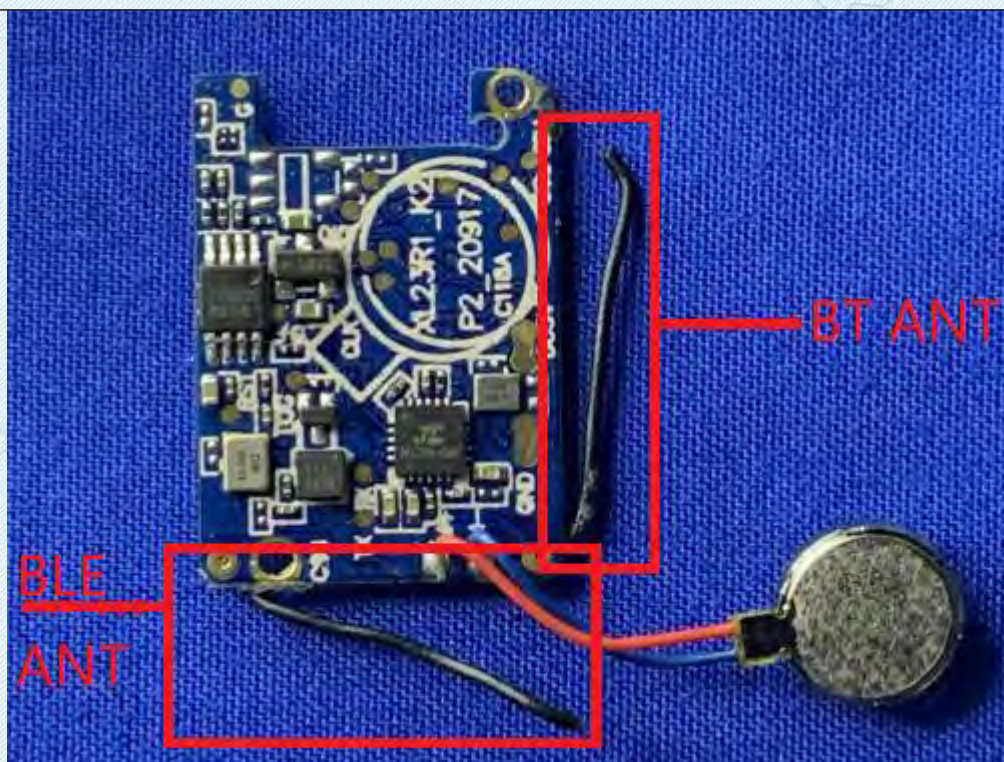


TRF EMC\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

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# Appendix

## 6.1. Appendix A: DTS Bandwidth

### 6.1.1. Test Result

| TestMode | Antenna | Freq(MHz) | DTS BW [MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|----------|---------|-----------|--------------|---------|---------|------------|---------|
| BLE_1M   | Ant1    | 2402      | 0.69         | 2401.63 | 2402.32 | 0.5        | PASS    |
|          |         | 2440      | 0.76         | 2439.56 | 2440.31 | 0.5        | PASS    |
|          |         | 2480      | 0.84         | 2479.47 | 2480.31 | 0.5        | PASS    |
| BLE_2M   | Ant1    | 2402      | 1.14         | 2401.41 | 2402.56 | 0.5        | PASS    |
|          |         | 2440      | 1.14         | 2439.41 | 2440.56 | 0.5        | PASS    |
|          |         | 2480      | 1.14         | 2479.41 | 2480.55 | 0.5        | PASS    |

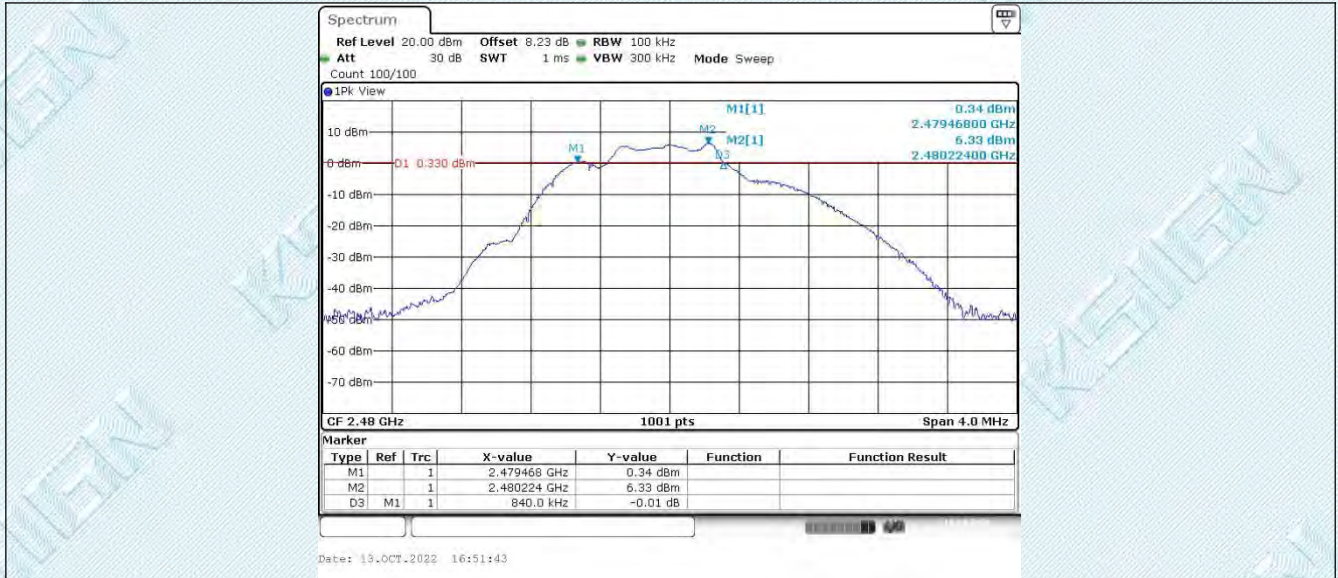
### 6.1.2. Test Graphs



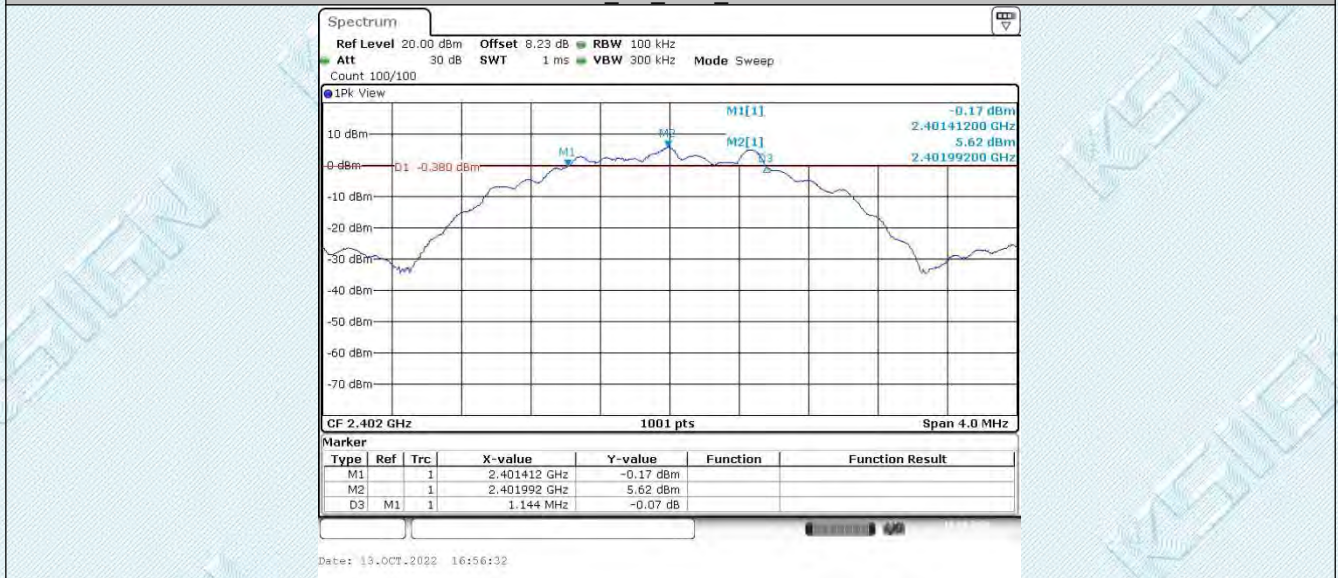
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Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

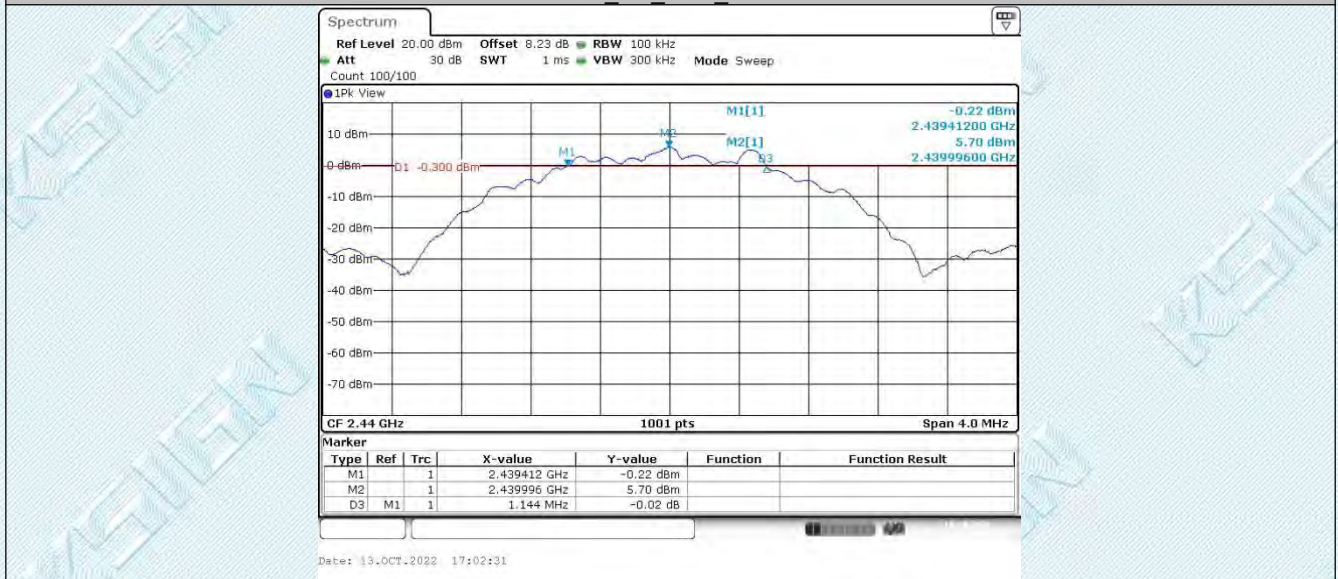
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BLE\_2M\_Ant1\_2402



BLE\_2M\_Ant1\_2440

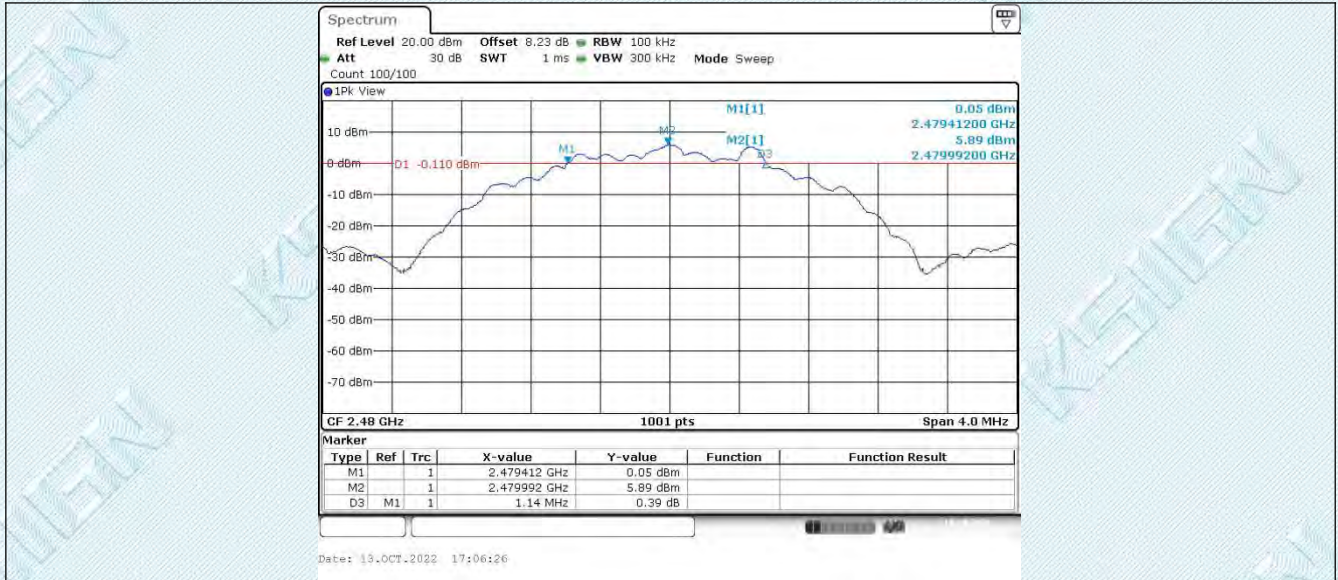


BLE\_2M\_Ant1\_2480

TRF EMC\_R1

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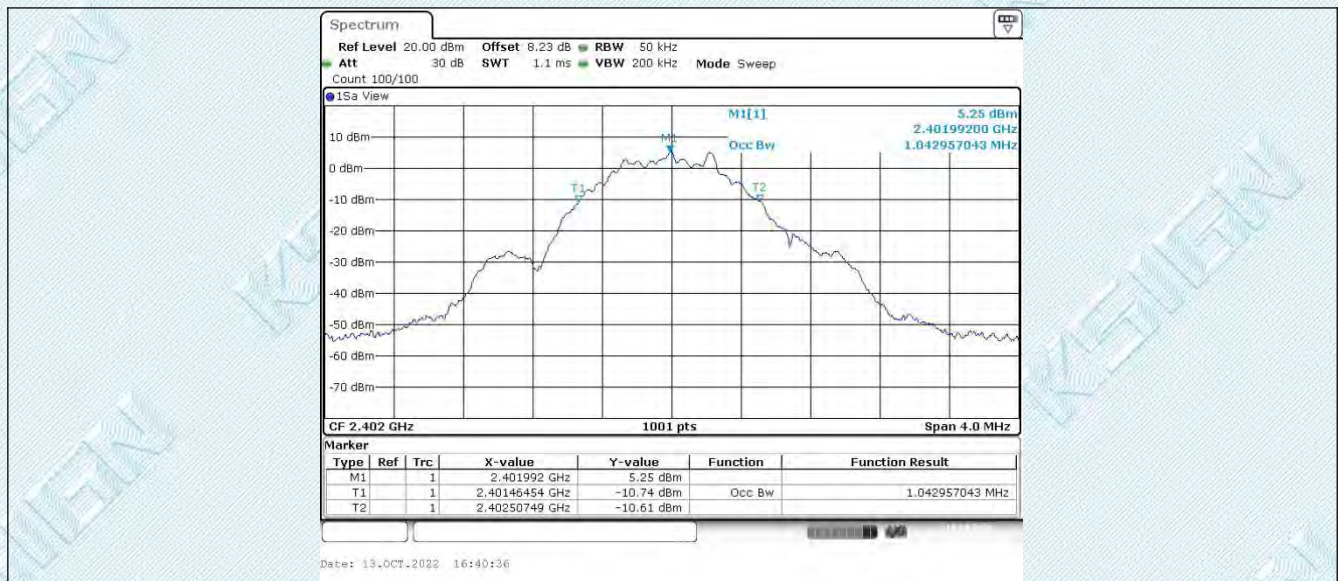
## 6.2. Appendix B: Occupied Channel Bandwidth

### 6.2.1. Test Result

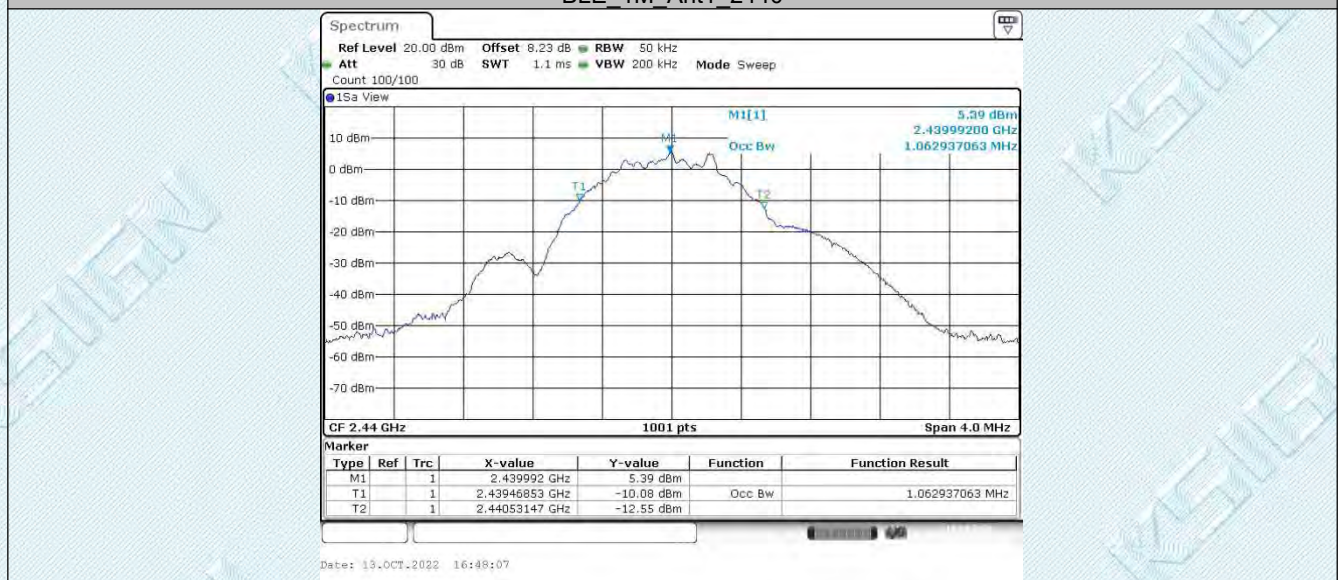
| TestMode | Antenna | Freq(MHz) | OCB [MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|----------|---------|-----------|-----------|----------|----------|------------|---------|
| BLE_1M   | Ant1    | 2402      | 1.043     | 2401.465 | 2402.507 | ---        | ---     |
|          |         | 2440      | 1.063     | 2439.469 | 2440.531 | ---        | ---     |
|          |         | 2480      | 1.359     | 2479.353 | 2480.711 | ---        | ---     |
| BLE_2M   | Ant1    | 2402      | 2.046     | 2400.973 | 2403.019 | ---        | ---     |
|          |         | 2440      | 2.038     | 2438.977 | 2441.015 | ---        | ---     |
|          |         | 2480      | 2.03      | 2478.977 | 2481.007 | ---        | ---     |

### 6.2.2. Test Graphs

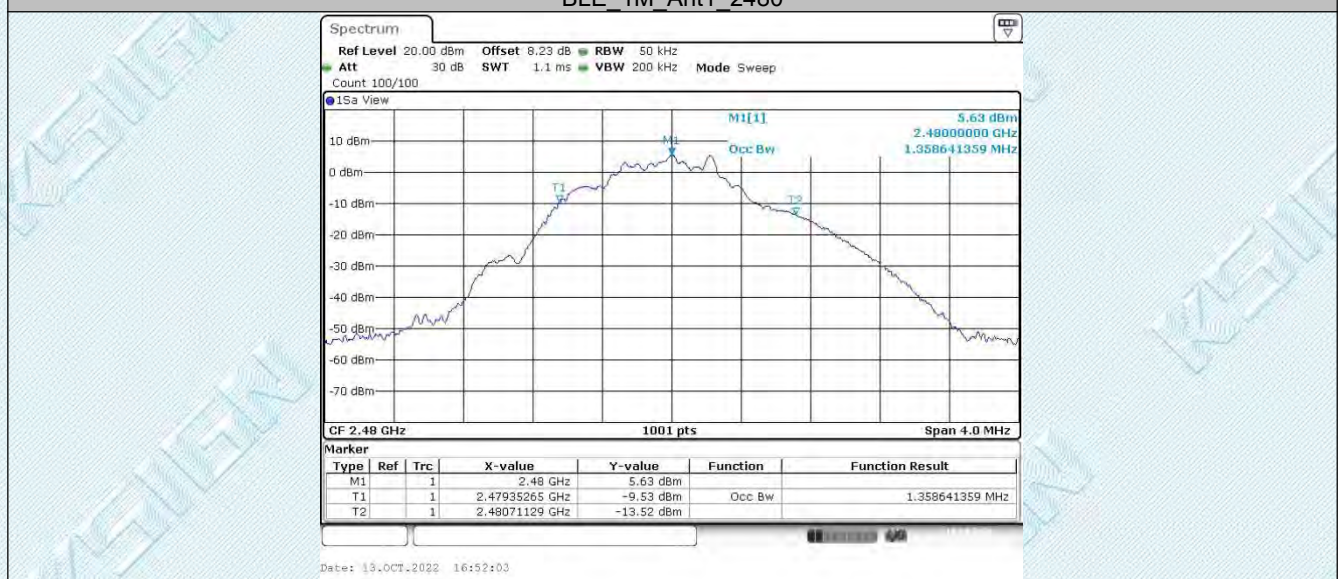
|                  |
|------------------|
| BLE_1M_Ant1_2402 |
|------------------|



BLE\_1M\_Ant1\_2440



BLE\_1M\_Ant1\_2480

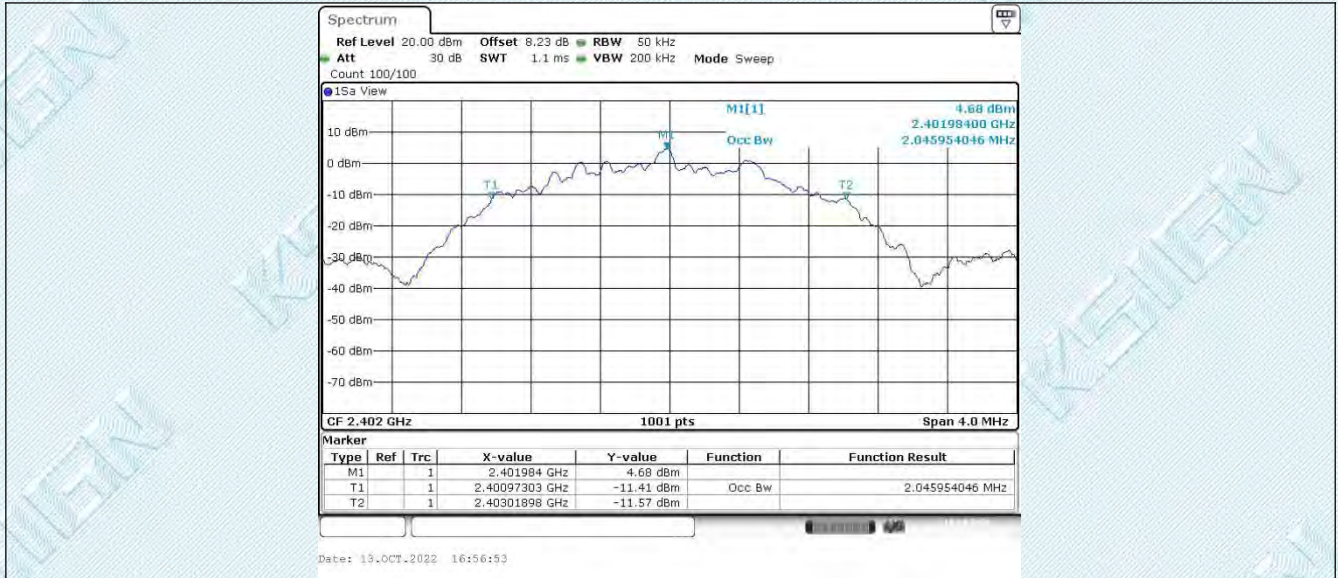


BLE\_2M\_Ant1\_2402

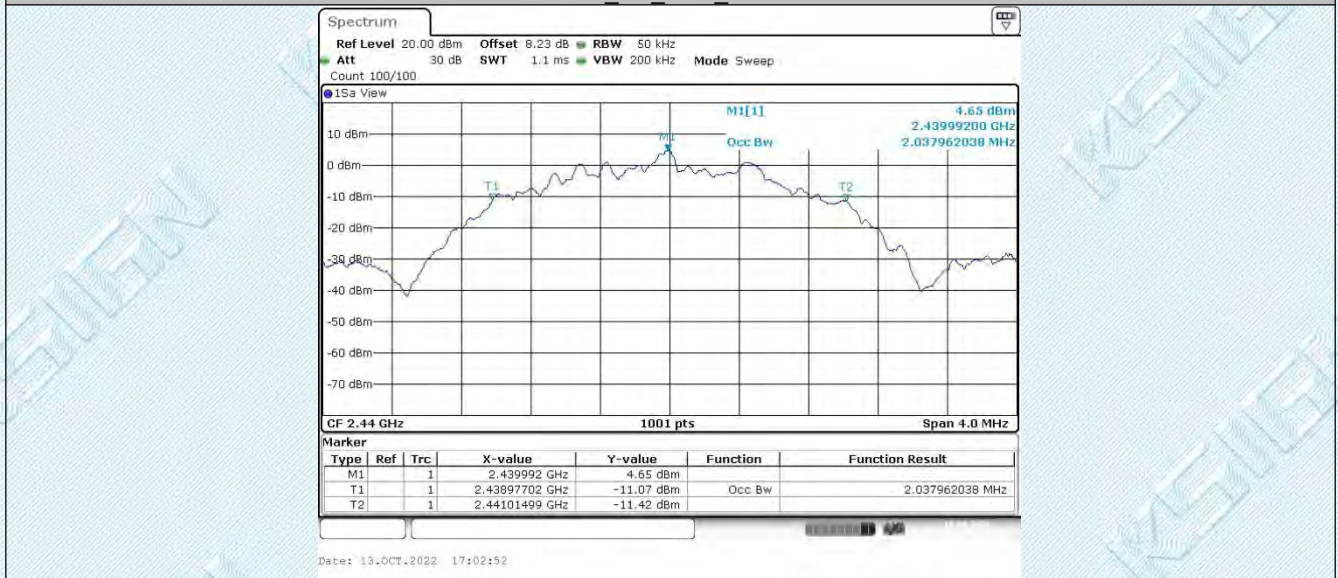
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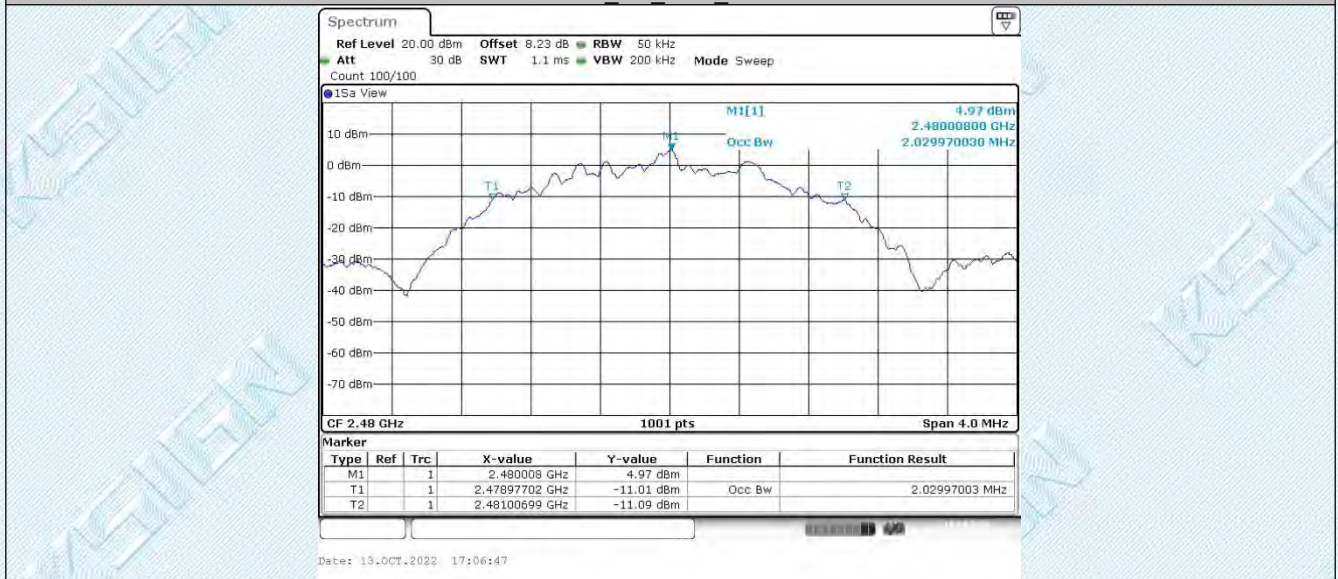
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BLE\_2M\_Ant1\_2440



BLE\_2M\_Ant1\_2480



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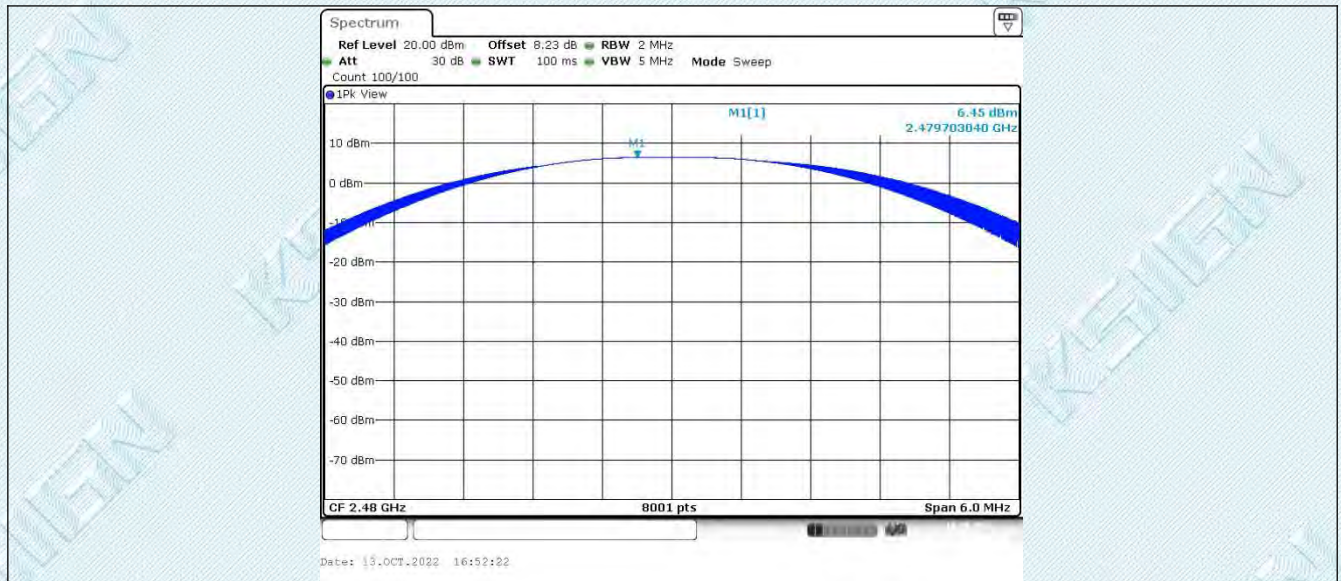
### 6.3. Appendix C: Maximum conducted output power

#### 6.3.1. Test Result Peak

| TestMode | Antenna | Freq(MHz) | Conducted Peak Power[dBm] | Conducted Limit[dBm] | Verdict |
|----------|---------|-----------|---------------------------|----------------------|---------|
| BLE_1M   | Ant1    | 2402      | 6.12                      | ≤30                  | PASS    |
|          |         | 2440      | 6.21                      | ≤30                  | PASS    |
|          |         | 2480      | 6.45                      | ≤30                  | PASS    |
| BLE_2M   | Ant1    | 2402      | 6.12                      | ≤30                  | PASS    |
|          |         | 2440      | 6.22                      | ≤30                  | PASS    |
|          |         | 2480      | 6.47                      | ≤30                  | PASS    |

#### 6.3.2. Test Graphs Peak

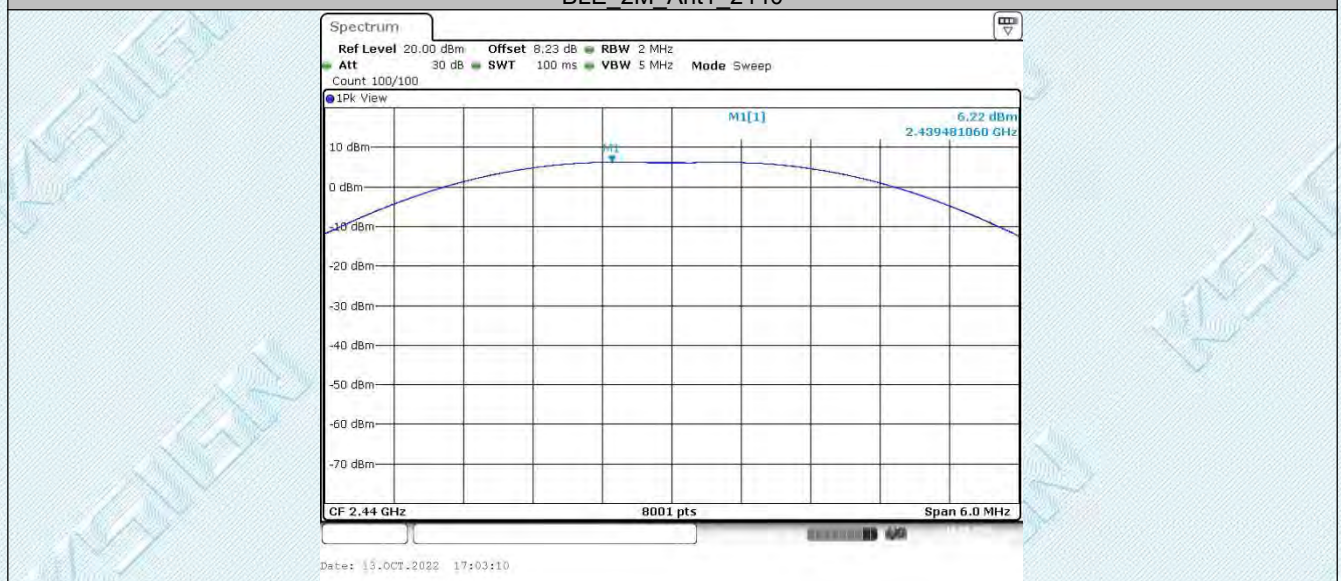




BLE\_2M\_Ant1\_2402



BLE\_2M\_Ant1\_2440



BLE\_2M\_Ant1\_2480

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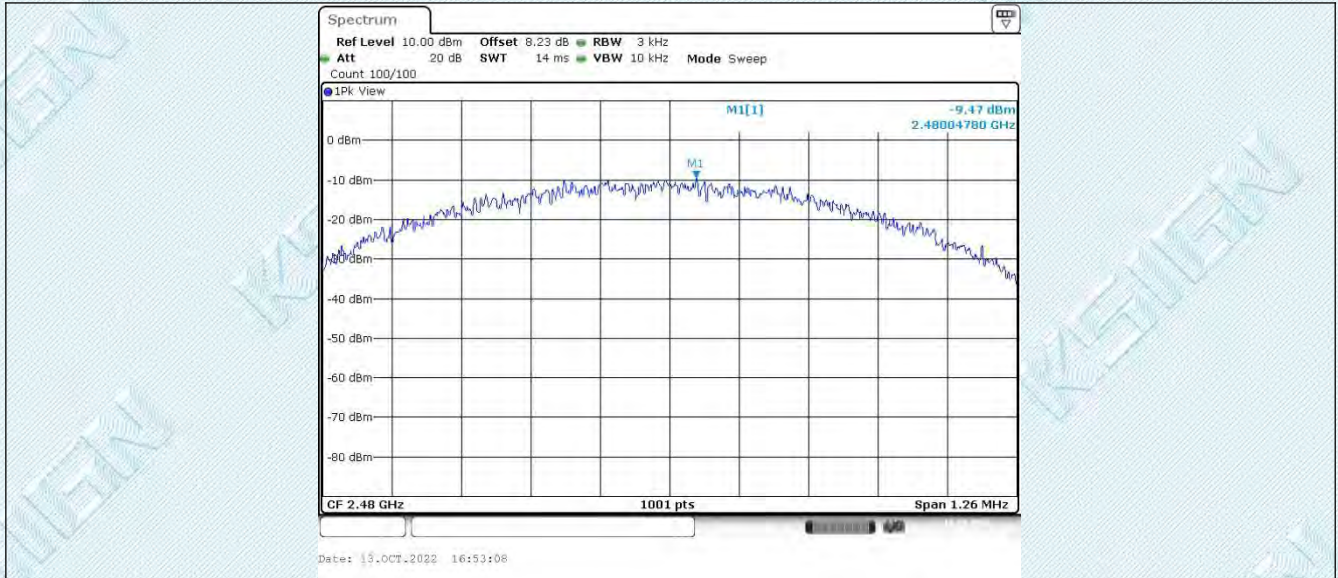
## 6.4. Appendix D: Maximum power spectral density

### 6.4.1. Test Result

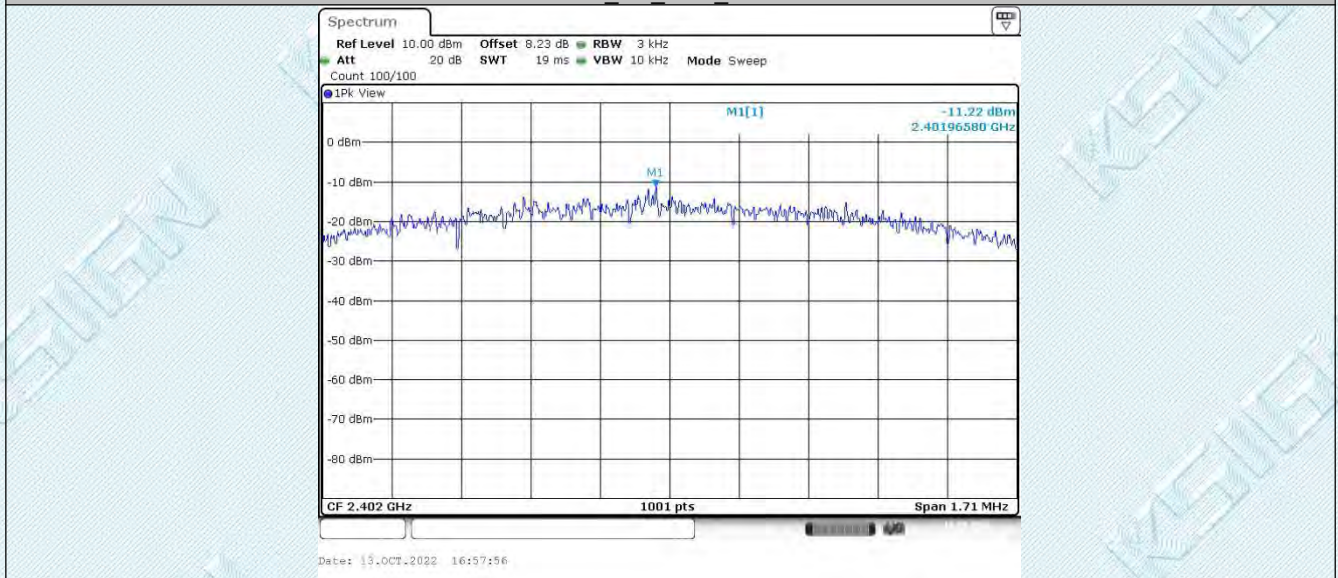
| TestMode | Antenna | Freq(MHz) | Result[dBm/3kHz] | Limit[dBm/3kHz] | Verdict |
|----------|---------|-----------|------------------|-----------------|---------|
| BLE_1M   | Ant1    | 2402      | -9.91            | ≤8.00           | PASS    |
|          |         | 2440      | -9.9             | ≤8.00           | PASS    |
|          |         | 2480      | -9.47            | ≤8.00           | PASS    |
| BLE_2M   | Ant1    | 2402      | -11.22           | ≤8.00           | PASS    |
|          |         | 2440      | -11.04           | ≤8.00           | PASS    |
|          |         | 2480      | -11.62           | ≤8.00           | PASS    |

### 6.4.2. Test Graphs

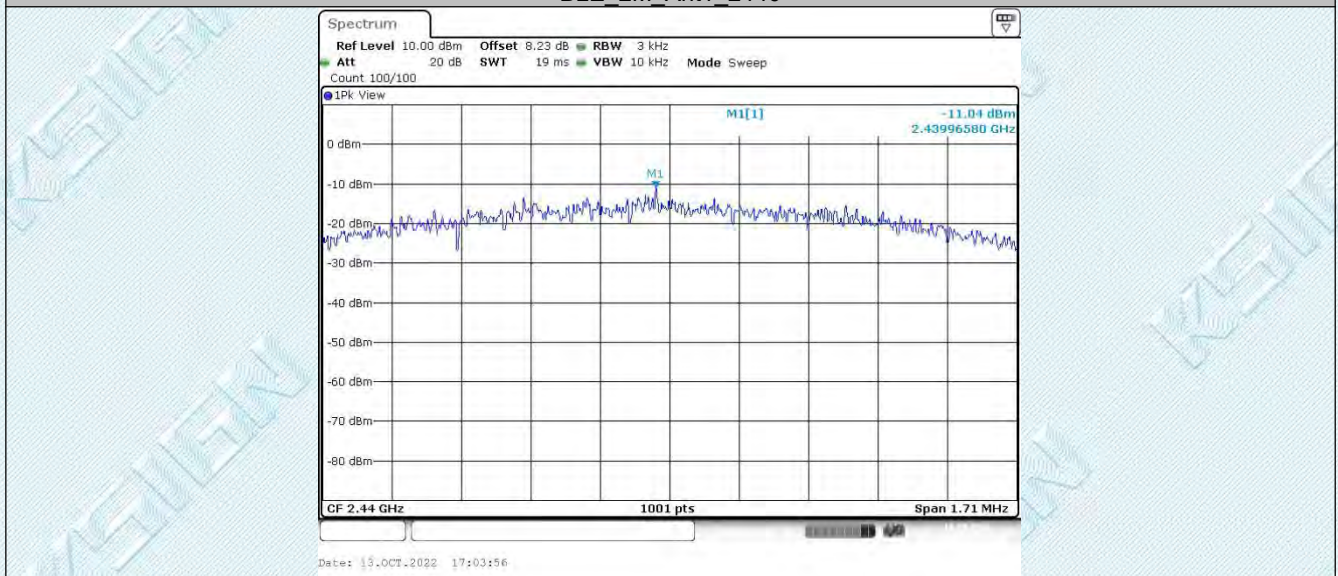




BLE\_2M\_Ant1\_2402



BLE\_2M\_Ant1\_2440

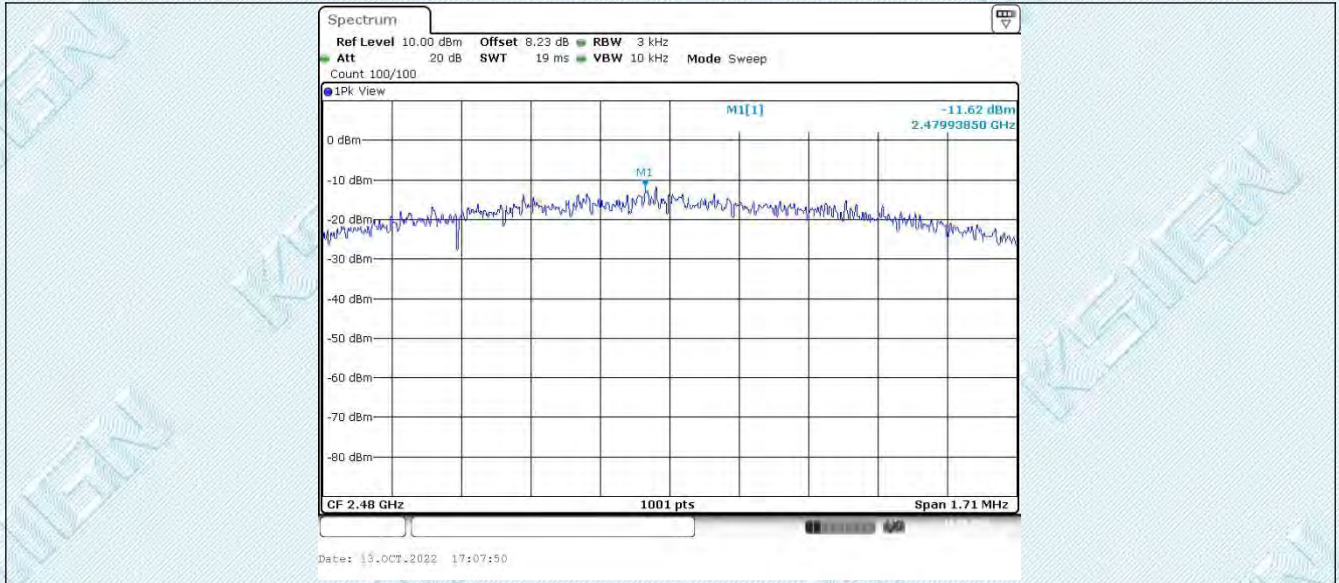


BLE\_2M\_Ant1\_2480

TRF EMC\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

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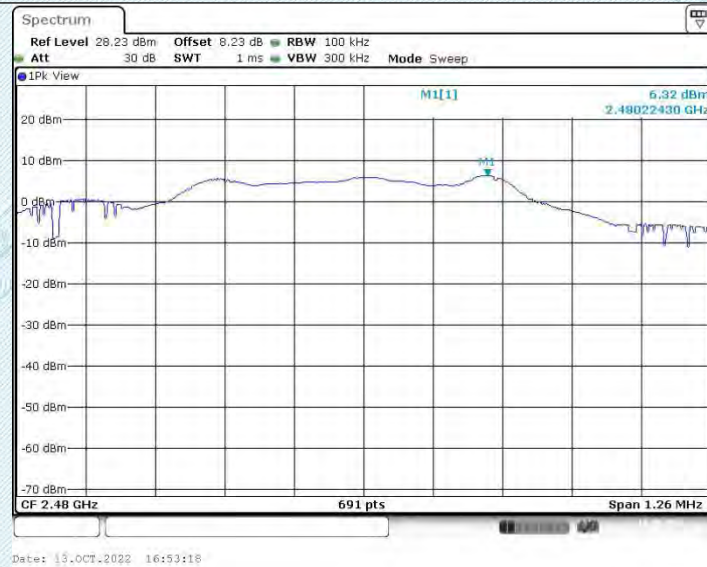
## 6.5. ppendix E: Reference level measurement

### 6.5.1. Test Result

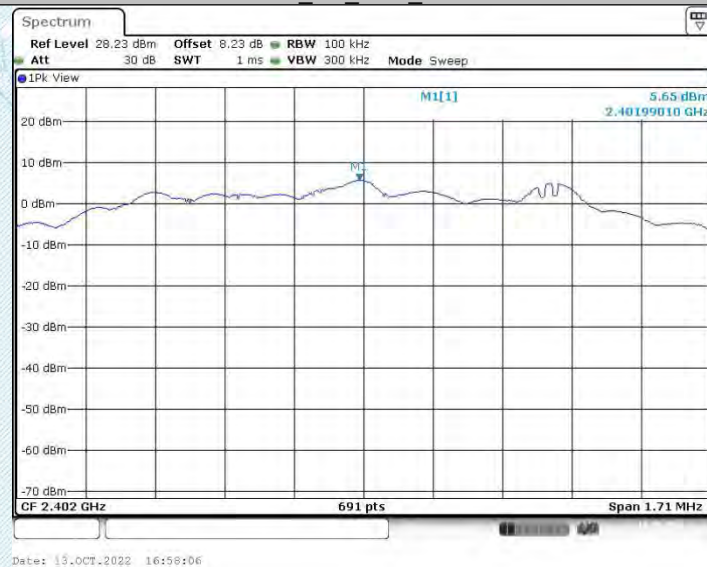
| TestMode | Antenna | Freq(MHz) | Max.Point[MHz] | Result[dBm] |
|----------|---------|-----------|----------------|-------------|
| BLE_1M   | Ant1    | 2402      | 2402.22        | 6.01        |
|          |         | 2440      | 2440.22        | 6.10        |
|          |         | 2480      | 2480.22        | 6.32        |
| BLE_2M   | Ant1    | 2402      | 2401.99        | 5.65        |
|          |         | 2440      | 2439.99        | 5.70        |
|          |         | 2480      | 2479.99        | 5.94        |

### 6.5.2. Test Graphs

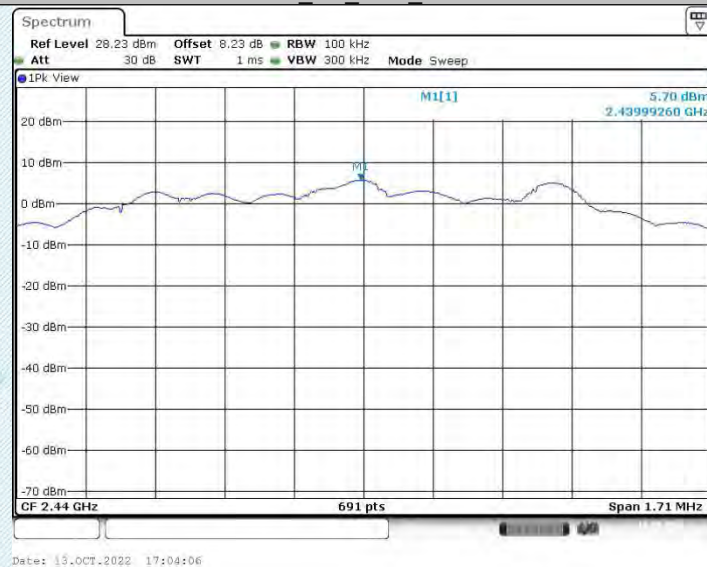




BLE\_2M\_Ant1\_2402



BLE\_2M\_Ant1\_2440

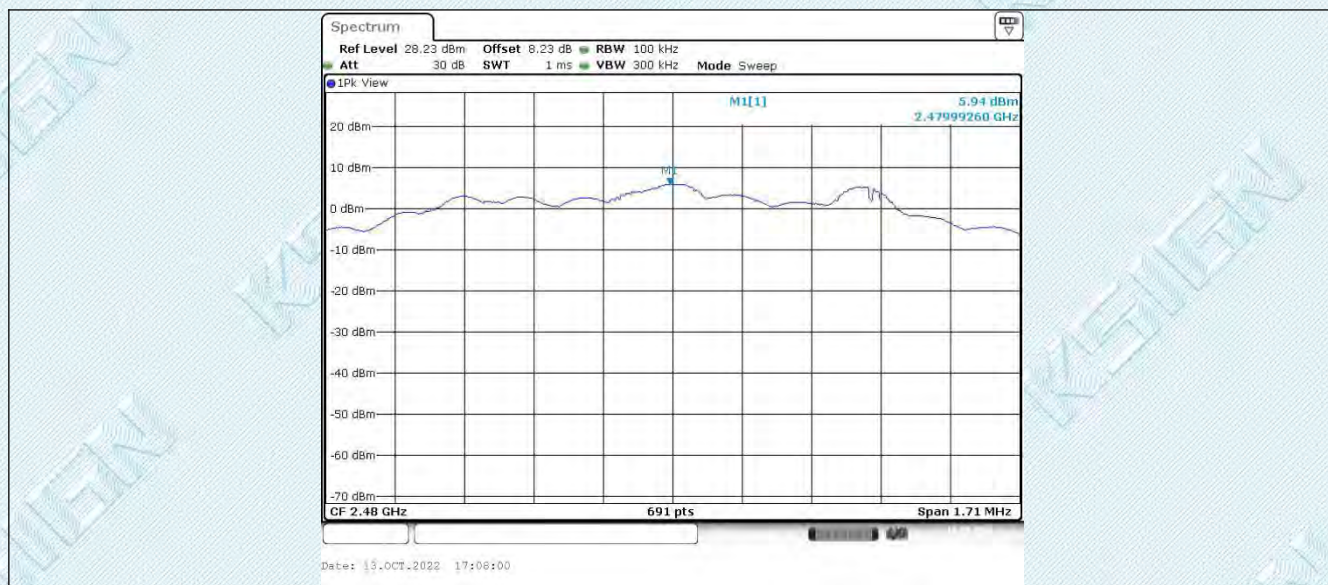


BLE\_2M\_Ant1\_2480

TRF EMC\_R1

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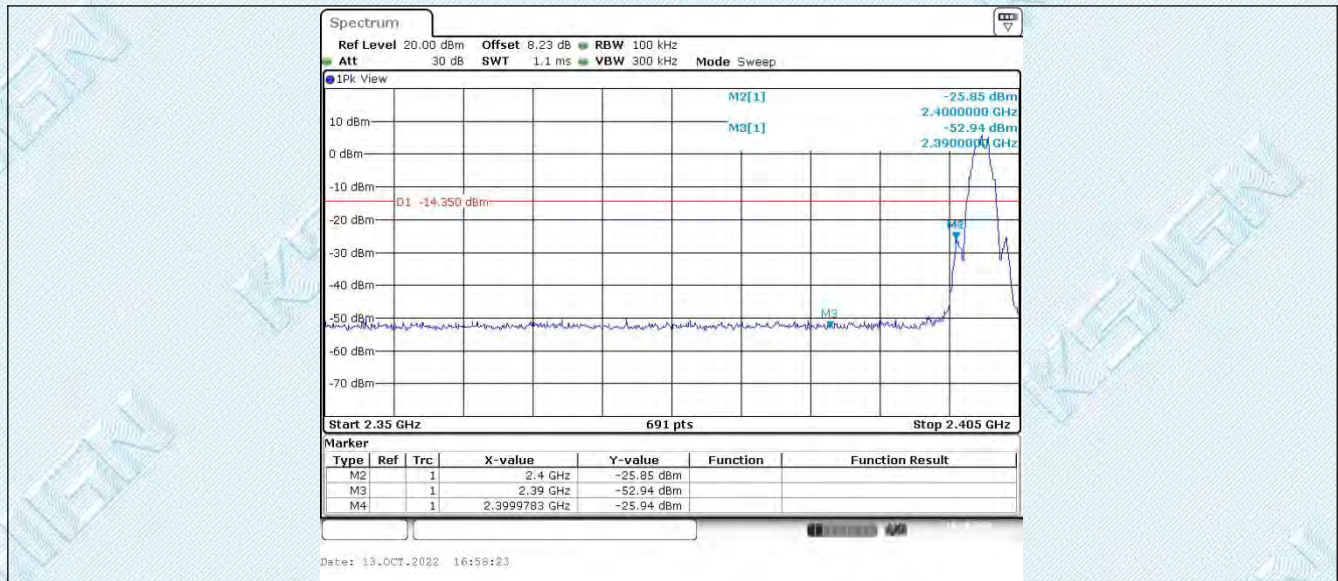
## 6.6. Appendix F: Band edge measurements

### 6.6.1. Test Result

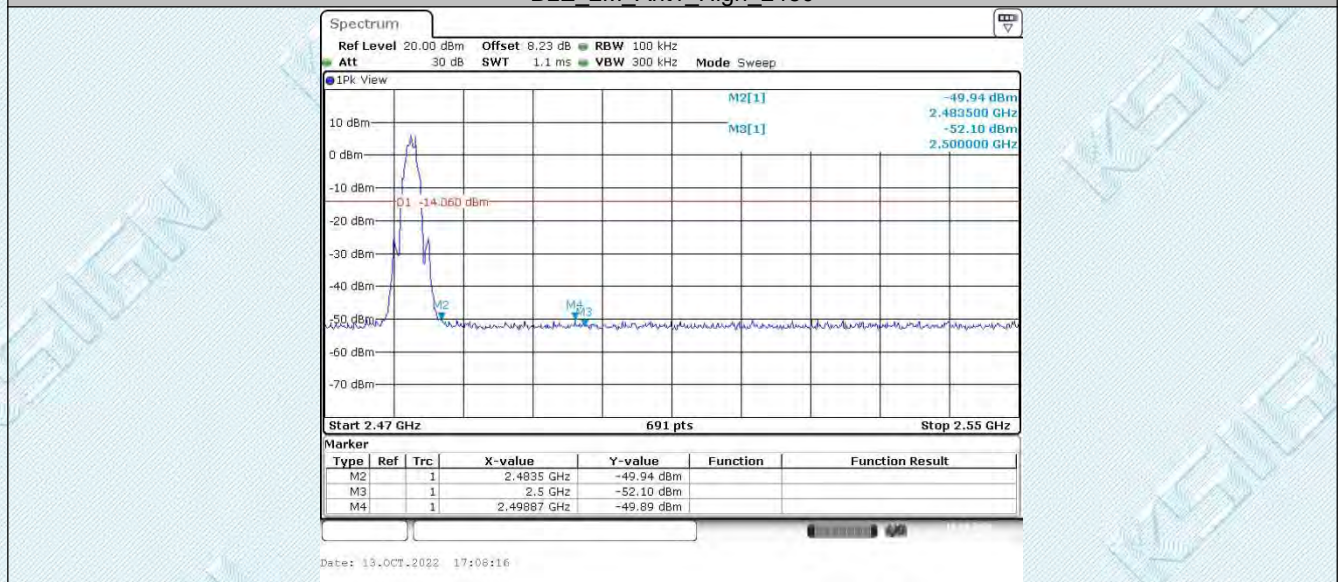
| TestMode | Antenna | ChName | Freq(MHz) | RefLevel[dBm] | Result[dBm] | Limit[dBm] | Verdict |
|----------|---------|--------|-----------|---------------|-------------|------------|---------|
| BLE_1M   | Ant1    | Low    | 2402      | 6.01          | -49.61      | ≤-13.99    | PASS    |
|          |         | High   | 2480      | 6.32          | -49.24      | ≤-13.68    | PASS    |
| BLE_2M   | Ant1    | Low    | 2402      | 5.65          | -25.94      | ≤-14.35    | PASS    |
|          |         | High   | 2480      | 5.94          | -49.89      | ≤-14.06    | PASS    |

### 6.6.2. Test Graphs





### BLE\_2M\_Ant1\_High\_2480



TRF EMC\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

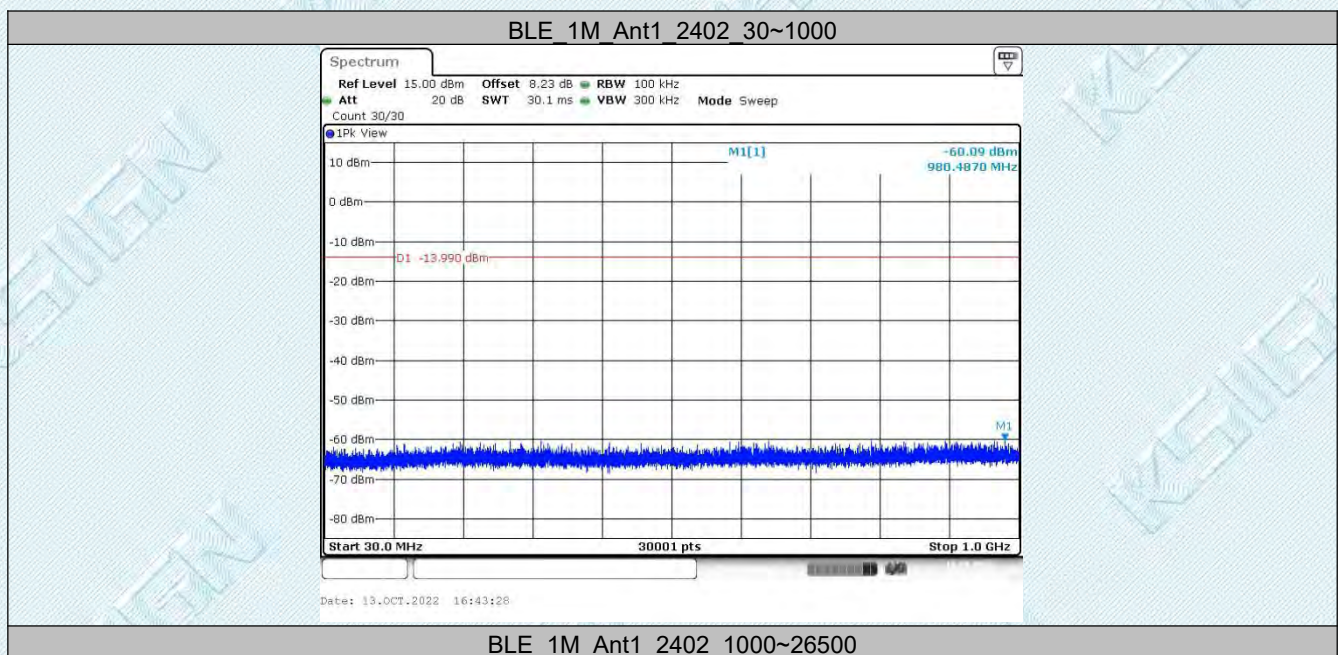
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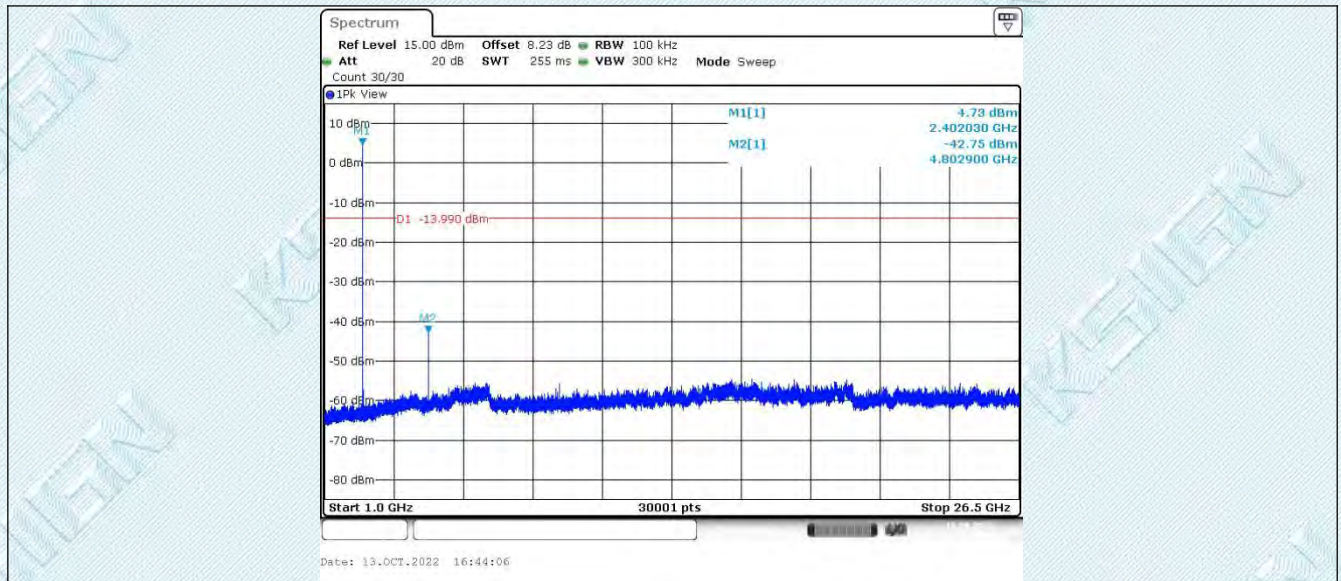
## 6.7. Appendix G: Conducted Spurious Emission

### 6.7.1. Test Result

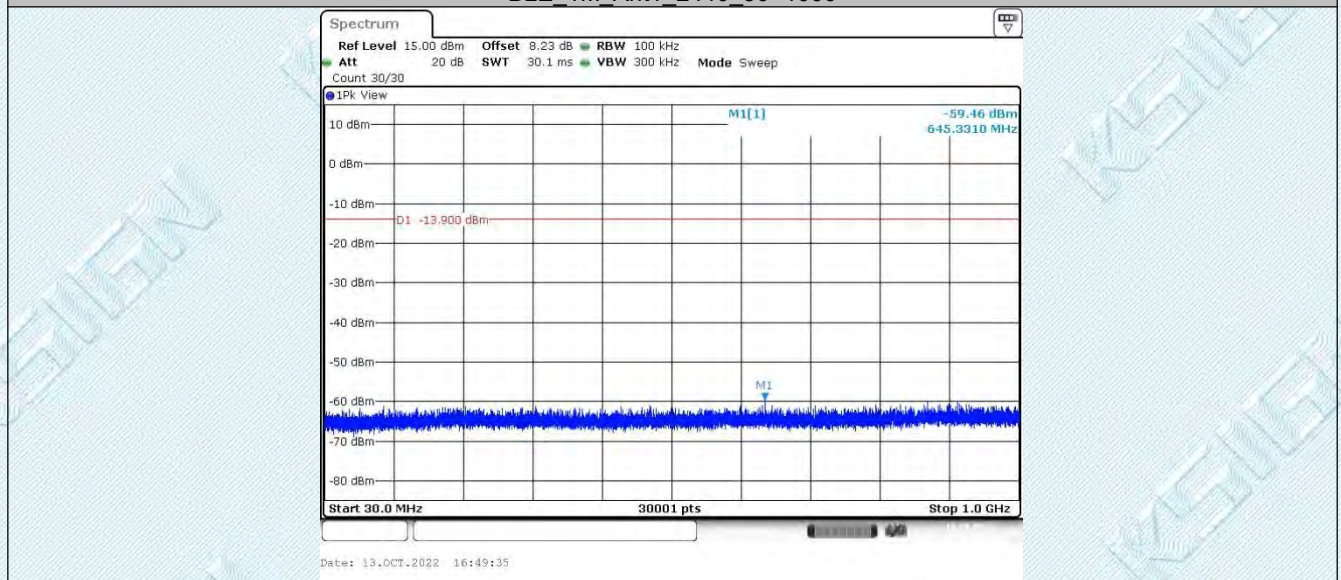
| TestMode | Antenna | Freq(MHz) | FreqRange [MHz] | RefLevel [dBm] | Result[dBm] | Limit[dBm] | Verdict |
|----------|---------|-----------|-----------------|----------------|-------------|------------|---------|
| BLE_1M   | Ant1    | 2402      | 30~1000         | 6.01           | -60.09      | ≤-13.99    | PASS    |
|          |         |           | 1000~26500      | 6.01           | -42.75      | ≤-13.99    | PASS    |
|          |         | 2440      | 30~1000         | 6.10           | -59.46      | ≤-13.9     | PASS    |
|          |         |           | 1000~26500      | 6.10           | -42.95      | ≤-13.9     | PASS    |
|          |         | 2480      | 30~1000         | 6.32           | -60.22      | ≤-13.68    | PASS    |
|          |         |           | 1000~26500      | 6.32           | -44.82      | ≤-13.68    | PASS    |
| BLE_2M   | Ant1    | 2402      | 30~1000         | 5.65           | -59.7       | ≤-14.35    | PASS    |
|          |         |           | 1000~26500      | 5.65           | -45.34      | ≤-14.35    | PASS    |
|          |         | 2440      | 30~1000         | 5.70           | -59.36      | ≤-14.3     | PASS    |
|          |         |           | 1000~26500      | 5.70           | -41.08      | ≤-14.3     | PASS    |
|          |         | 2480      | 30~1000         | 5.94           | -59.84      | ≤-14.06    | PASS    |
|          |         |           | 1000~26500      | 5.94           | -46.7       | ≤-14.06    | PASS    |

### 6.7.2. Test Graphs

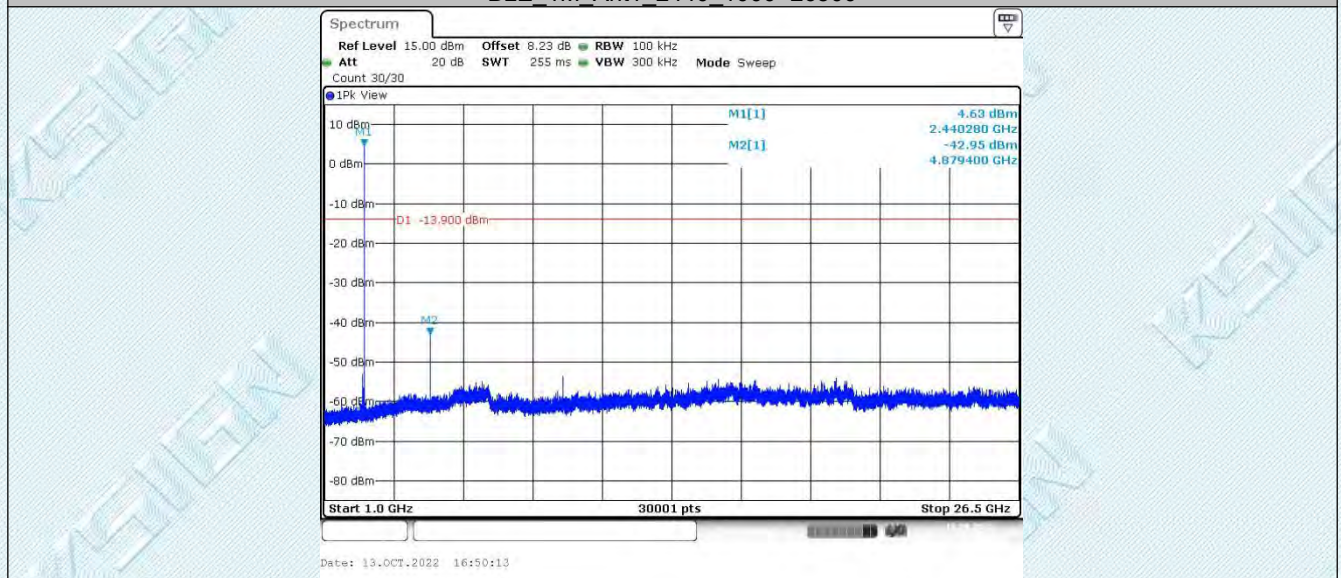




BLE 1M Ant1 2440 30~1000



BLE 1M Ant1 2440 1000~26500

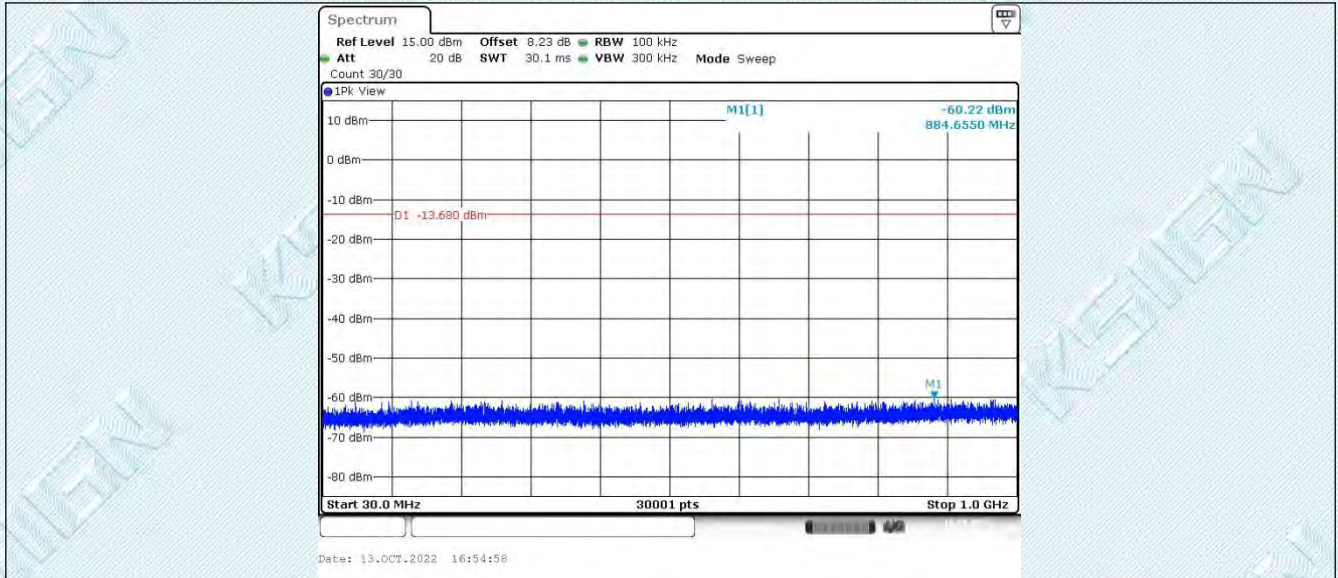


BLE 1M Ant1 2480 30~1000

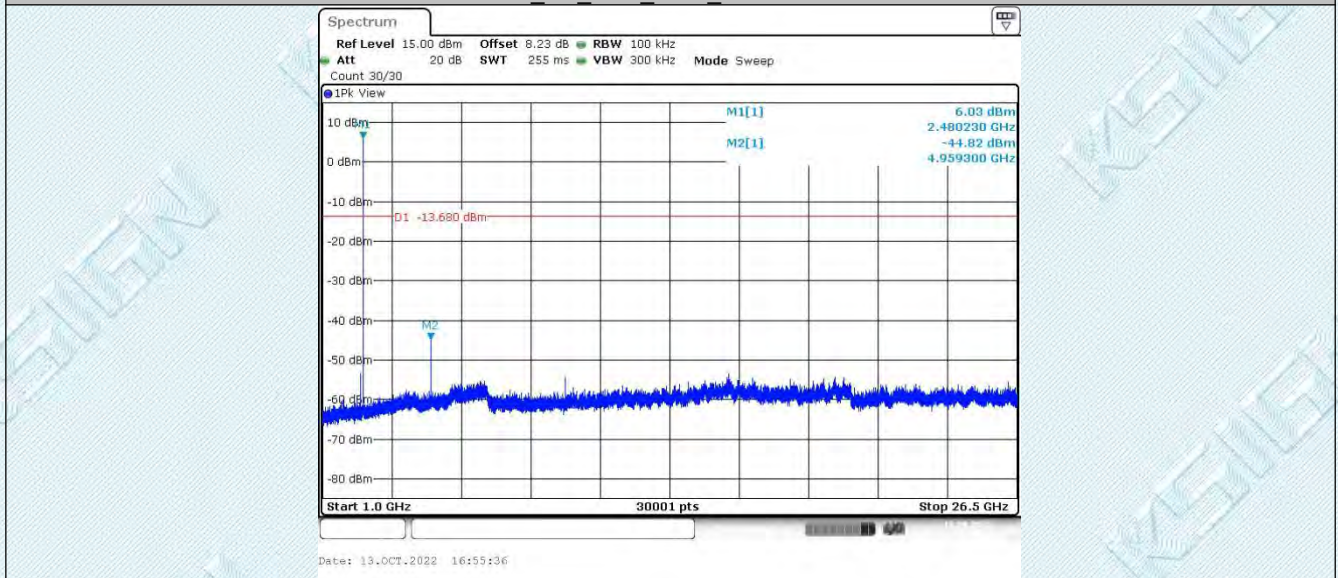
TRF EMC\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

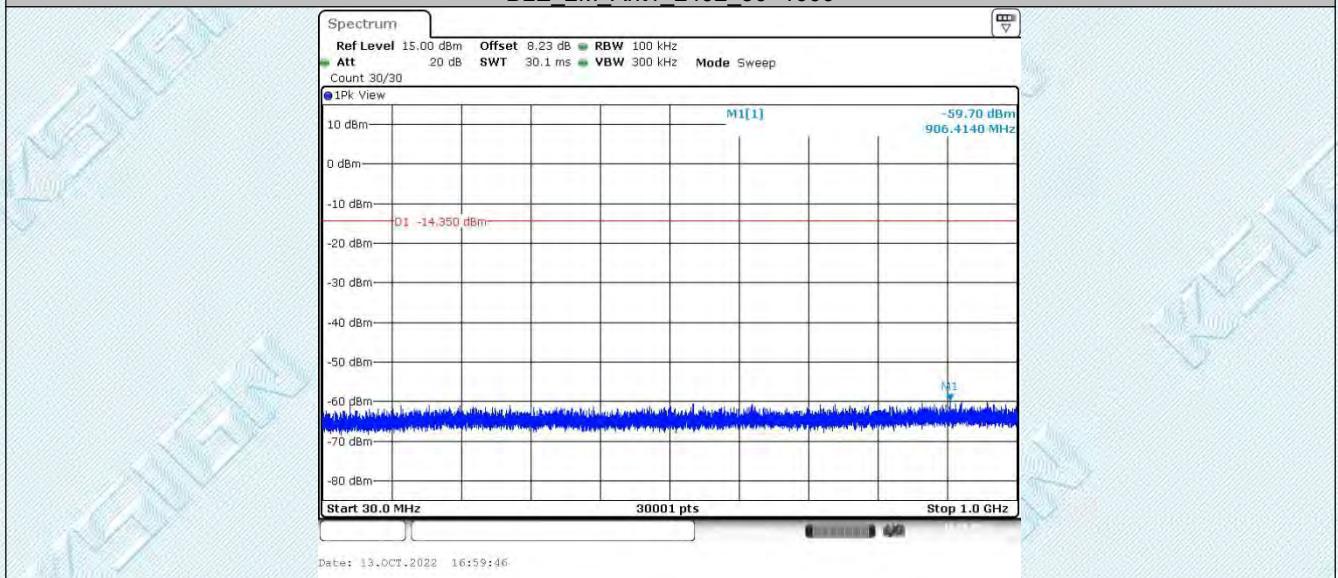
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BLE\_1M\_Ant1\_2480\_1000~26500



BLE\_2M\_Ant1\_2402\_30~1000

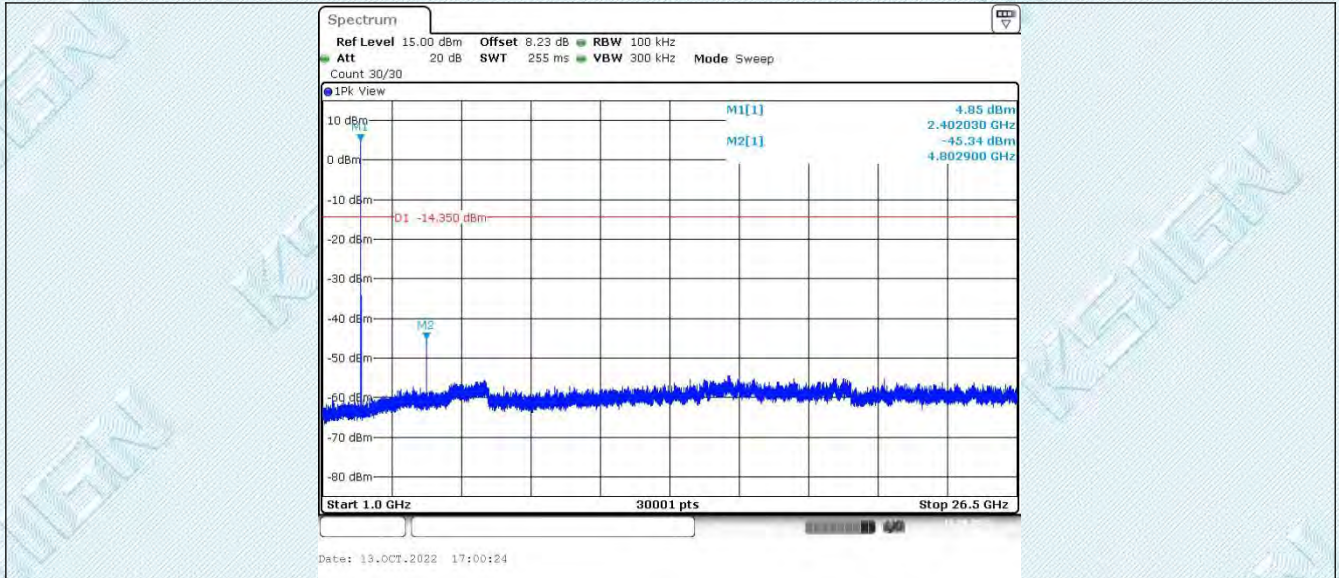


BLE\_2M\_Ant1\_2402\_1000~26500

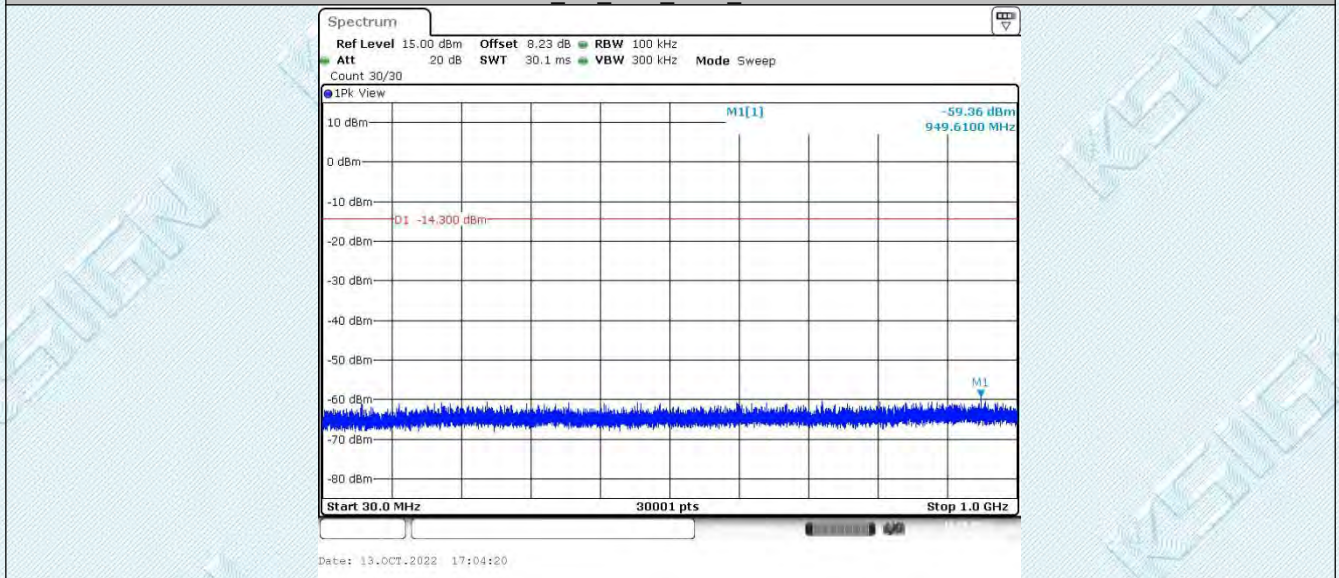
TRF EMC\_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

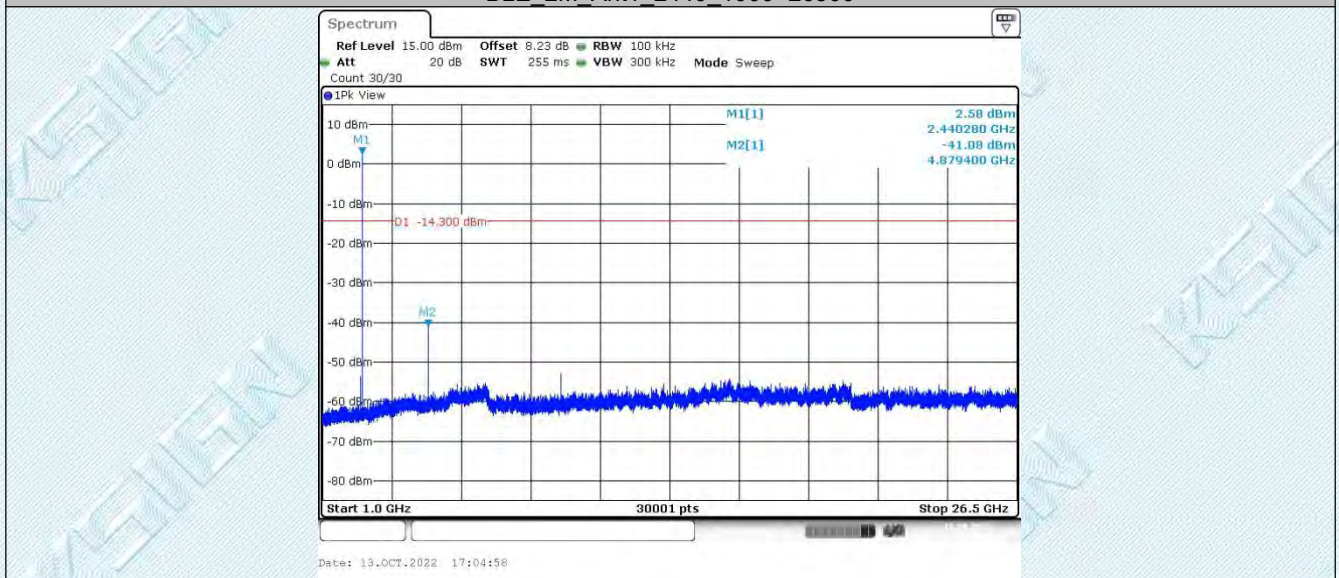
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BLE 2M Ant1 2440 30~1000



BLE 2M Ant1 2440 1000~26500

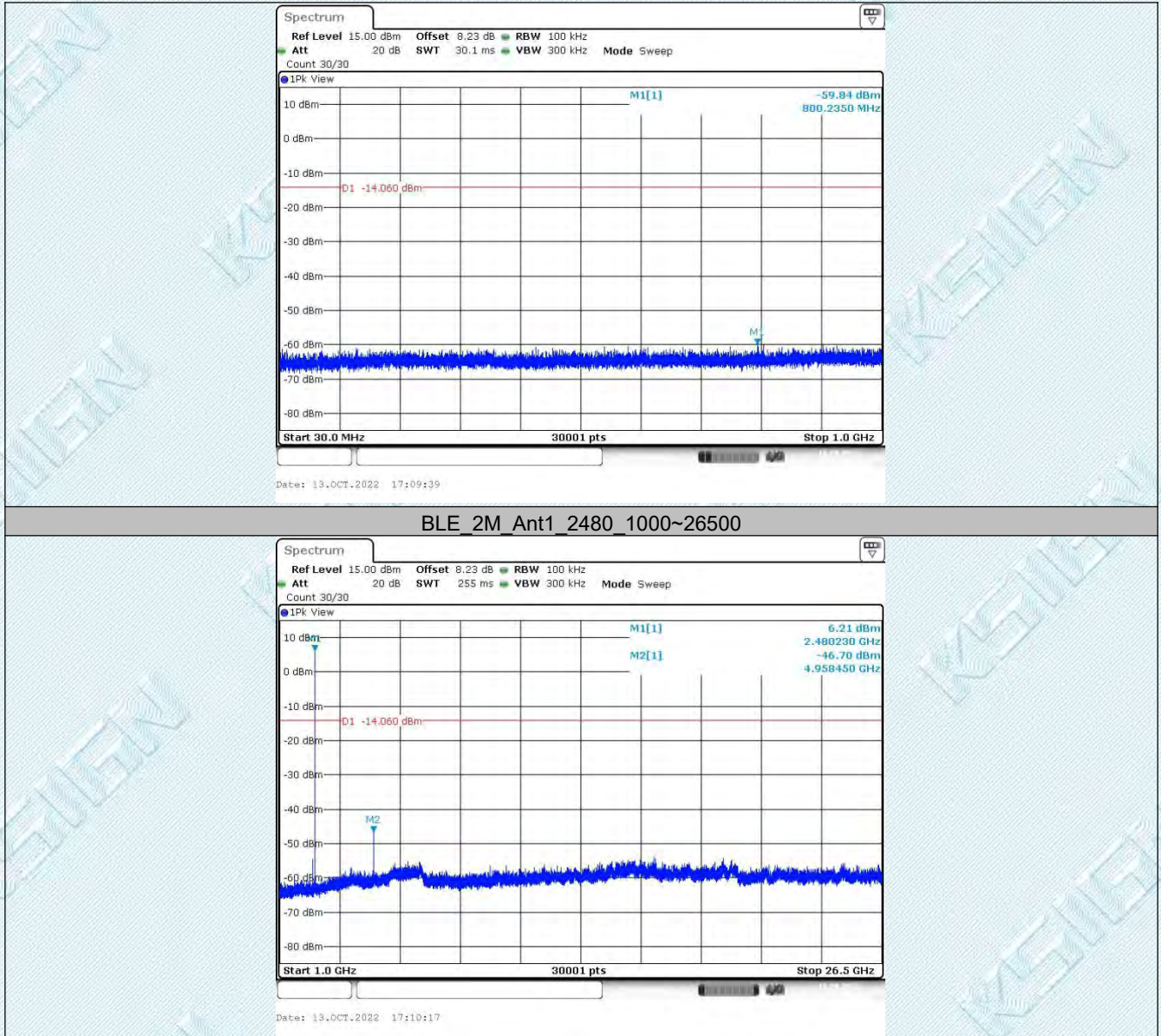


BLE 2M Ant1 2480 30~1000

TRF EMC\_R1

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## 6.8. Appendix H: Duty Cycle

### 6.8.1. Test Result

| TestMode | Antenna | Freq(MHz) | ON Time [ms] | Period [ms] | DC [%] | Factor | Limit | Verdict |
|----------|---------|-----------|--------------|-------------|--------|--------|-------|---------|
| BLE_1M   | Ant1    | 2440      | 2.16         | 2.50        | 86.40  | 0.63   | ---   | ---     |
| BLE_2M   | Ant1    | 2440      | 1.11         | 1.88        | 59.04  | 2.29   | ---   | ---     |

### 6.8.2. Test Graphs



## 6.9. Appendix I: Emissions in Restricted Bands

### 6.9.1. Test Result

| TestMode | Antenna | ChName | Freq(MHz) | Detector | Freq [MHz] | Result [dBm] | Limit [dBm] | Result [dBuV/m] | Limit [dBuV/m] | Verdict |
|----------|---------|--------|-----------|----------|------------|--------------|-------------|-----------------|----------------|---------|
| BLE_1M   | Ant1    | Low    | 2402      | Peak     | 2310.000   | -39.75       | ≤-21.20     | 55.45           | ≤74            | PASS    |
|          |         |        |           | Peak     | 2365.283   | -38.17       | ≤-21.20     | 57.03           | ≤74            | PASS    |
|          |         |        |           | Peak     | 2390.000   | -39.74       | ≤-21.20     | 55.46           | ≤74            | PASS    |
|          |         | High   | 2480      | Peak     | 2483.500   | -32.15       | ≤-21.20     | 63.05           | ≤74            | PASS    |
|          |         |        |           | Peak     | 2483.797   | -31.64       | ≤-21.20     | 63.56           | ≤74            | PASS    |
|          |         |        |           | Peak     | 2500.000   | -37.91       | ≤-21.20     | 57.29           | ≤74            | PASS    |
| BLE_2M   | Ant1    | Low    | 2402      | Peak     | 2310.000   | -39.79       | ≤-21.20     | 55.41           | ≤74            | PASS    |
|          |         |        |           | Peak     | 2336.674   | -37.55       | ≤-21.20     | 57.65           | ≤74            | PASS    |
|          |         |        |           | Peak     | 2390.000   | -39.07       | ≤-21.20     | 56.13           | ≤74            | PASS    |
|          |         | High   | 2480      | Peak     | 2483.500   | -32.26       | ≤-21.20     | 62.94           | ≤74            | PASS    |
|          |         |        |           | Peak     | 2483.681   | -31.23       | ≤-21.20     | 63.97           | ≤74            | PASS    |
|          |         |        |           | Peak     | 2500.000   | -38.88       | ≤-21.20     | 56.32           | ≤74            | PASS    |

Note:

1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

## 6.9.2. Test Graphs



TRF EMC\_R1

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--THE END--