

## FCC PART 15C TEST REPORT FOR CERTIFICATION

On Behalf of

Sony Group Corporation

System Name: Sound Bar

Model No.: HT-SD40

Active Speaker System: SA-SD40

Active Subwoofer: SA-WSD40

| EUT Name         | EUT Model No. |
|------------------|---------------|
| Active Subwoofer | SA-WSD40      |

FCC ID: AK8SAWSD40

Prepared for : Sony Group Corporation  
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Prepared By : Audix Technology (Shenzhen) Co., Ltd.  
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TESTING

NVLAP LAB CODE 200372-0

Report Number : ACS-F21280  
Date of Test : Sep.15 ~ Oct.19, 2021  
Date of Report : Oct.21, 2021

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Appendix A. Photograph of Test

Appendix B. Photo of the EUT

**TEST REPORT**

Applicant : Sony Group Corporation  
 Manufacturer : Sony Group Corporation  
 System Name : Sound Bar  
 Model No. : HT-SD40  
 Active Speaker System : SA-SD40  
 Active Subwoofer : SA-WSD40  
 FCC ID : AK8SAWSD40  
 (A) EUT Name : Active Subwoofer  
 (B) EUT Model No. : SA-WSD40  
 (C) Test Voltage : AC 120V/60Hz

Tested for comply with:

FCC CFR47 Part 15 Subpart C  
 Test procedure used: ANSI C63.10: 2013;  
 KDB 558074 D01v05r01

The device described above is tested by AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. to confirm comply with all the FCC Part 15 Subpart C requirements. The test results are contained in this test report and AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. is assumed full responsibility for the accuracy and completeness of these tests. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements. This report contains data that are not covered by the NVLAP accreditation.

This Report is made under FCC Part 2.1074. No modifications were required during testing to bring this product into compliance.

This report applies to single evaluation of one sample of above mentioned product. And shall not be reproduced in part without written approval of Audix Technology (Shenzhen) Co., Ltd..

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

Date of Test : Sep.15 ~ Oct.19, 2021 Report of date: Oct.21, 2021

Prepared by : Brave Zhang Reviewed by : Sunny Lu  
 Brave Zhang / Assistant Sunny Lu / Deputy Manager

 信華科技 (深圳) 有限公司  
 Audix Technology (Shenzhen) Co., Ltd.  
 EMC 部門報告專用章  
 Stamp only for EMC Dept. Report  
 Signature: David Jin  
 David Jin / Deputy General Manager

Approved & Authorized Signatures: \_\_\_\_\_

## 1. SUMMARY OF STANDARDS AND RESULTS

### 1.1. Description of Standards and Results

The EUT has been tested according to the applicable standards as referenced below.

| <b>EMISSION</b>                    |                                                                                            |                |
|------------------------------------|--------------------------------------------------------------------------------------------|----------------|
| <b>Description of Test Item</b>    | <b>Standard</b>                                                                            | <b>Results</b> |
| Power Line Conducted Emission Test | FCC Part 15: 15.207<br>ANSI C63.10 :2013                                                   | PASS           |
| Radiated Emission Test             | FCC Part 15: 15.209<br>FCC Part 15: 15.205<br>FCC Part 15: 15.247(d)<br>ANSI C63.10 : 2013 | PASS           |
| Conducted Spurious Emissions       | FCC Part 15: 15.247(d)<br>ANSI C63.10 : 2013                                               | PASS           |
| Carrier Frequency Separation Test  | FCC Part 15: 15.247(a)(2)<br>ANSI C63.10 : 2013                                            | N/A            |
| 6dB & 99% Bandwidth Test           | FCC Part 15: 15.247(b)(3)<br>ANSI C63.10 : 2013                                            | PASS           |
| Maximum Peak Output Power Test     | FCC Part 15: 15.247(d)<br>ANSI C63.10 : 2013                                               | PASS           |
| Band Edge Compliance Test          | FCC Part 15: 15.247(e)<br>ANSI C63.10 : 2013                                               | PASS           |
| Power Spectral Density Test        | FCC Part 15: 15.207<br>ANSI C63.10 :2013                                                   | PASS           |

Note: Measurement uncertainty affection to the result is considered, the EUT is technically compliant with standard requirements.

## 2. GENERAL INFORMATION

### 2.1. Description of Equipment Under Test

|                                                                                                                                                   |                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| Applicant                                                                                                                                         | Sony Group Corporation                      |
| Applicant Address                                                                                                                                 | 1-7-1 Konan Minato-ku Tokyo, 108-0075 Japan |
| Manufacturer                                                                                                                                      | Sony Group Corporation                      |
| Manufacturer Address                                                                                                                              | 1-7-1 Konan Minato-ku Tokyo, 108-0075 Japan |
| System Name                                                                                                                                       | Sound Bar                                   |
| Model No.                                                                                                                                         | HT-SD40                                     |
| Active Speaker System                                                                                                                             | SA-SD40                                     |
| Active Subwoofer                                                                                                                                  | SA-WSD40                                    |
| EUT Name                                                                                                                                          | Active Subwoofer                            |
| EUT Model No.                                                                                                                                     | SA-WSD40                                    |
| FCC ID                                                                                                                                            | AK8SAWSD40                                  |
| Radio                                                                                                                                             | General 2.4GHz wireless                     |
| Frequency Range                                                                                                                                   | 2404-2476MHz                                |
| Type of Modulation                                                                                                                                | GFSK                                        |
| Channel Separation                                                                                                                                | 2MHz                                        |
| Remote Control                                                                                                                                    | Manufacturer: Sony; Model: RMT-AH513U       |
| Power Cable                                                                                                                                       | Unshielded, Detachable, 1.5m (2 pins)       |
| Optical Cable                                                                                                                                     | Unshielded, Detachable, 1.5m                |
| HDMI Cable                                                                                                                                        | Shielded, Detachable, 1.5m (with two cores) |
| Hardware version                                                                                                                                  | V1                                          |
| Software version                                                                                                                                  | R1.04                                       |
| Sample Type                                                                                                                                       | Prototype production                        |
| Date of Receipt                                                                                                                                   | Sep.13,2021                                 |
| Date of Test                                                                                                                                      | Sep.15 ~ Oct.19, 2021                       |
| The Product covered in this report is Active Subwoofer; This product consists of Active Speaker System (SA-SD40) and Active Subwoofer (SA-WSD40). |                                             |

| Antenna System    |                                                                          |
|-------------------|--------------------------------------------------------------------------|
| Type of Antenna   | PCB Antenna                                                              |
| Antenna Peak Gain | Sound Bar BT=2.1 dBi<br>Subwoofer SRD=2.95 dBi<br>Sound Bar SRD=4.23 dBi |

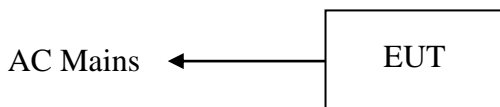
**2.2. Channel list of EUT**

| <b>Channel list</b> | <b>Frequency</b> | <b>Channel list</b> | <b>Frequency</b> |
|---------------------|------------------|---------------------|------------------|
| 1                   | 2404MHz          | 20                  | 2442MHz          |
| 2                   | 2406MHz          | 21                  | 2444MHz          |
| 3                   | 2408MHz          | 22                  | 2446MHz          |
| 4                   | 2410MHz          | 23                  | 2448MHz          |
| 5                   | 2412MHz          | 24                  | 2450MHz          |
| 6                   | 2414MHz          | 25                  | 2452MHz          |
| 7                   | 2416MHz          | 26                  | 2454MHz          |
| 8                   | 2418MHz          | 27                  | 2456MHz          |
| 9                   | 2420MHz          | 28                  | 2458MHz          |
| 10                  | 2422MHz          | 29                  | 2460MHz          |
| 11                  | 2424MHz          | 30                  | 2462MHz          |
| 12                  | 2426MHz          | 31                  | 2464MHz          |
| 13                  | 2428MHz          | 32                  | 2466MHz          |
| 14                  | 2430MHz          | 33                  | 2468MHz          |
| 15                  | 2432MHz          | 34                  | 2470MHz          |
| 16                  | 2434MHz          | 35                  | 2472MHz          |
| 17                  | 2436MHz          | 36                  | 2474MHz          |
| 18                  | 2438MHz          | 37                  | 2476MHz          |
| 19                  | 2440MHz          | --                  | --               |

### 2.3. Tested Supporting System Details

None

### 2.4. Block Diagram of connection between EUT and simulators



**(EUT: Active Subwoofer)**

### 2.5. Test information

A Special Test Software(Syncomm Debug Tool v21.03.24) was used to control EUT work in Continuous TX mode(GFSK modulation), and select test channel. This device do not support MIMO.

| Tested mode, channel, and Power setting information |              |                                   |                 |
|-----------------------------------------------------|--------------|-----------------------------------|-----------------|
| Mode                                                | Channel      | Power setting                     | Frequency (MHz) |
| Tx Mode<br>GFSK modulation                          | Low :CH 0    | RF Power=0x0F<br>RF iCurrent=0xF1 | 2404            |
|                                                     | Middle: CH19 |                                   | 2440            |
|                                                     | High: CH37   |                                   | 2476            |

Remark: The radiated emission, power line conducted emission and bandedge compliance tested use the sample with serial number 000062, the conductive test items use the sample with serial number 000017.

### 2.6. Test Facility

Site Description

Audix Technology (Shenzhen) Co., Ltd.

Name of Firm

: No. 6, Kefeng Road, Science & Technology Park,  
Nanshan District , Shenzhen, Guangdong, China

EMC Lab.

Certificated by ISED, Canada  
: Company Number: 5183A  
CAB identifier: CN0034  
Valid Date: Mar.31, 2022

Certificated by FCC, USA  
: Designation No.: CN5022  
Valid Date: Mar.31, 2022

Accredited by NVLAP, USA  
: NVLAP Code: 200372-0  
Valid Date: Mar.31, 2022



2.7. Measurement Uncertainty (95% confidence levels, k=2)

| Test Item                                                          | Uncertainty                       |
|--------------------------------------------------------------------|-----------------------------------|
| Uncertainty for Conduction emission test in No. 1 Conduction       | 2.6dB(150kHz to 30MHz)            |
| Uncertainty for Radiation Emission test in 3m chamber              | 3.2dB(30~200MHz, Polarization: H) |
|                                                                    | 3.6dB(30~200MHz, Polarization: V) |
|                                                                    | 3.4dB(200M~1GHz, Polarization: H) |
|                                                                    | 3.4dB(200M~1GHz, Polarization: V) |
| Uncertainty for Radiation Emission test in 3m chamber (1GHz~18GHz) | 5.0dB(1GHz~6GHz)                  |
|                                                                    | 5.2dB(6GHz~18GHz)                 |
| Uncertainty for Conduction Spurious emission test                  | 2.0dB                             |
| Uncertainty for Output power test                                  | 0.8dB                             |
| Uncertainty for Bandwidth test                                     | 83kHz                             |
| Uncertainty for DC power test                                      | 1.0%                              |
| Uncertainty for test site temperature and humidity                 | 0.6°C                             |
|                                                                    | 3%                                |

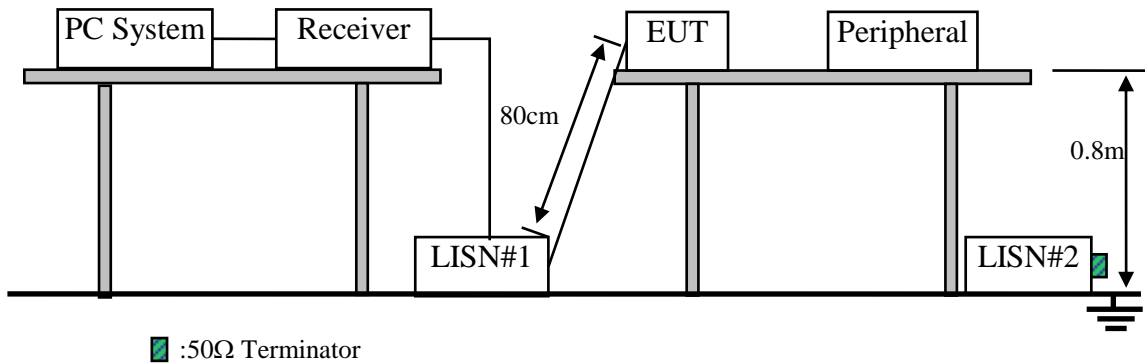
### 3. POWER LINE CONDUCTED EMISSION TEST

#### 3.1. Test Equipments

| Item | Equipment         | Manufacturer    | Model No.            | Serial No. | Last Cal. | Cal. Interval |
|------|-------------------|-----------------|----------------------|------------|-----------|---------------|
| 1.   | 1# Shielding Room | AUDIX           | N/A                  | N/A        | May.17,18 | 5 Year        |
| 2.   | EMI Test Receiver | Rohde & Schwarz | ESCI                 | 100842     | Apr.07,21 | 1 Year        |
| 3.   | L.I.S.N.#1        | Rohde & Schwarz | ENV216               | 102160     | Oct.09,21 | 1 Year        |
| 4.   | A.M.N             | Kyoritsu        | KNW-403D             | 8-1750-2   | Apr.07,21 | 1 Year        |
| 5.   | Terminator        | Hubersuhner     | 50Ω                  | No.1       | Apr.06,21 | 1 Year        |
| 6.   | Terminator        | Hubersuhner     | 50Ω                  | No.2       | Apr.06,21 | 1 Year        |
| 7.   | RF Cable          | EMCI            | EMCCFD300-BM-NM-2000 | 190422     | Apr.08,21 | 1 Year        |
| 8.   | Test Software     | AUDIX           | e3                   | 6.100913a  | N/A       | N/A           |

Note: N/A means Not applicable.

#### 3.2. Block Diagram of Test Setup



#### 3.3. Power Line Conducted Emission Test Limits

| Frequency       | Maximum RF Line Voltage    |                         |
|-----------------|----------------------------|-------------------------|
|                 | Quasi-Peak Level<br>dB(μV) | Average Level<br>dB(μV) |
| 150kHz ~ 500kHz | 66 ~ 56*                   | 56 ~ 46*                |
| 500kHz ~ 5MHz   | 56                         | 46                      |
| 5MHz ~ 30MHz    | 60                         | 50                      |

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

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

3. Emission Level (dBμV) = Factor (L.I.S.N.) (dB) + Cable Loss (dB) + Reading (Receiver) (dBμV)

### 3.4. Configuration of EUT on Test

The following equipment are installed on Power Line Conducted Emission Test to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application.

#### 3.4.1. Sound Bar (EUT)

Model Number : HT-SD40

Serial Number : N/A

3.4.2. Support Equipment: As Tested Supporting System Details, in Section 2.2.

### 3.5. Operating Condition of EUT

3.5.1. Setup the EUT and simulator as shown as Section 3.2.

3.5.2. Turn on the power of all equipments.

3.5.3. PC run test software to control EUT work in Tx mode.

### 3.6. Test Procedure

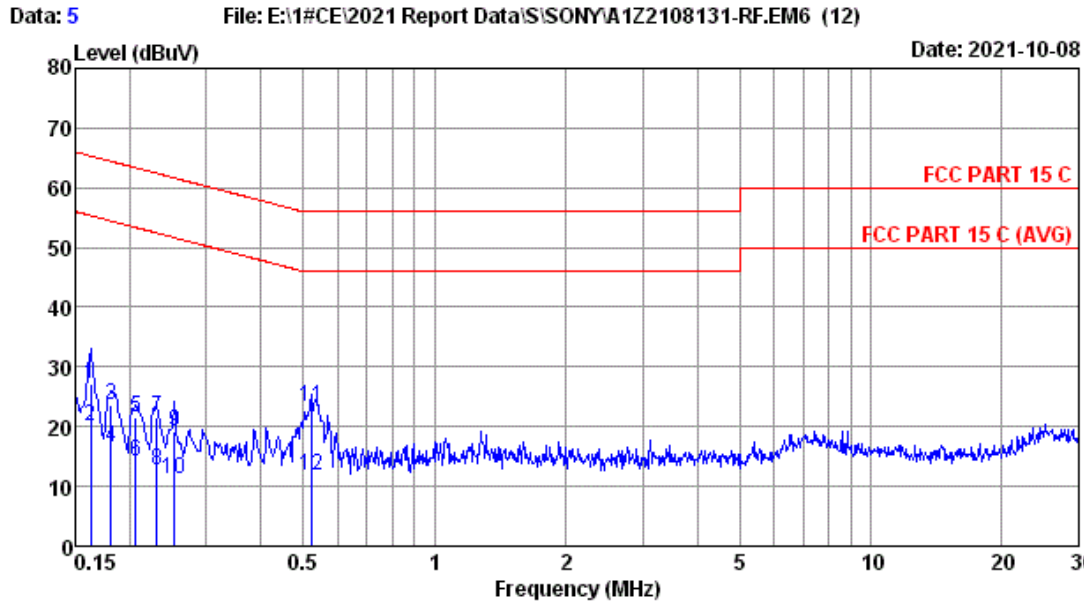
The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power Via AC unit connected to the power mains through a line impedance stabilization network (L.I.S.N. 1#). This provides a 50 ohm coupling impedance for the EUT (Please refer the block diagram of the test setup and photographs). The AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.10: 2013 on Conducted Emission Test.

The bandwidth of test receiver (R & S ESCI) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

### 3.7. Power Line Conducted Emission Test Results

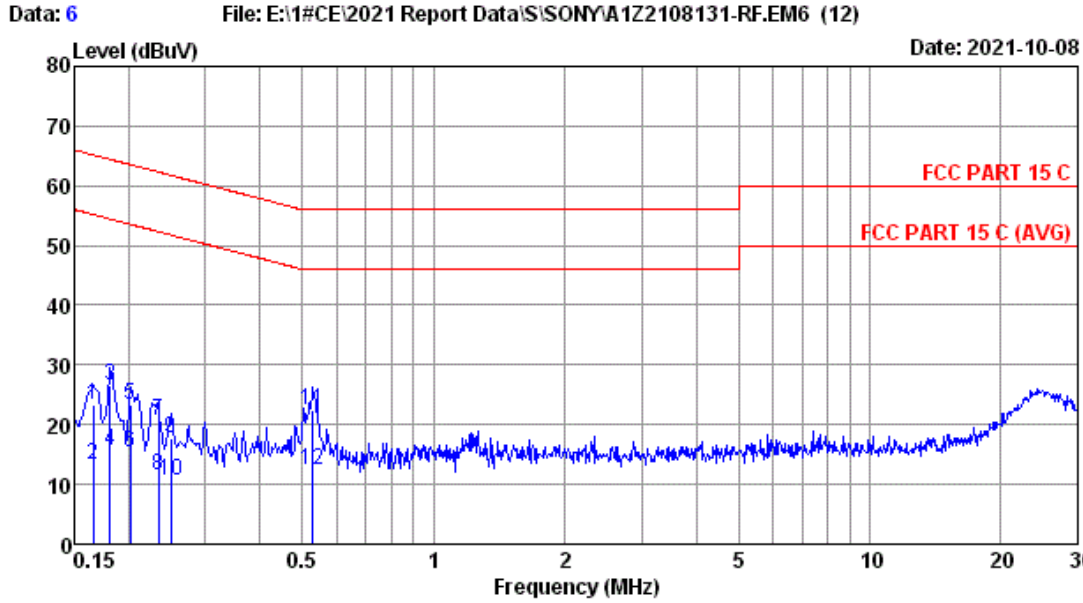
**PASS.** (All emissions not reported below are too low against the prescribed limits.)



Site no :1# Conduction Data No :5  
 Dis./Lisn :2020 ENV216-L LISN phase:  
 Limit :FCC PART 15 C  
 Env./Ins. :24.7°C/56% Engineer :Evan  
 Power Rating :AC 120V/60Hz  
 Test Mode :Subwoofer:Generic 2.4G

| No | Freq (MHz) | LISN Factor (dB) | Cable loss (dB) | Reading (dBuV) | Emission Level (dBuV) | Limits (dBuV) | Margin (dB) | Remark  |
|----|------------|------------------|-----------------|----------------|-----------------------|---------------|-------------|---------|
| 1  | 0.162      | 9.70             | 0.01            | 17.45          | 27.16                 | 65.34         | 38.18       | QP      |
| 2  | 0.162      | 9.70             | 0.01            | 10.40          | 20.11                 | 55.34         | 35.23       | Average |
| 3  | 0.182      | 9.70             | 0.01            | 13.90          | 23.61                 | 64.42         | 40.81       | QP      |
| 4  | 0.182      | 9.70             | 0.01            | 6.80           | 16.51                 | 54.42         | 37.91       | Average |
| 5  | 0.206      | 9.70             | 0.01            | 11.80          | 21.51                 | 63.36         | 41.85       | QP      |
| 6  | 0.206      | 9.70             | 0.01            | 4.50           | 14.21                 | 53.36         | 39.15       | Average |
| 7  | 0.230      | 9.70             | 0.01            | 11.70          | 21.41                 | 62.44         | 41.03       | QP      |
| 8  | 0.230      | 9.70             | 0.01            | 3.00           | 12.71                 | 52.44         | 39.73       | Average |
| 9  | 0.253      | 9.70             | 0.01            | 9.40           | 19.11                 | 61.64         | 42.53       | QP      |
| 10 | 0.253      | 9.70             | 0.01            | 1.50           | 11.21                 | 51.64         | 40.43       | Average |
| 11 | 0.521      | 9.70             | 0.01            | 13.60          | 23.31                 | 56.00         | 32.69       | QP      |
| 12 | 0.521      | 9.70             | 0.01            | 2.10           | 11.81                 | 46.00         | 34.19       | Average |

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.  
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



Site no :1# Conduction Data No :6  
 Dis./Lisn :2020 ENV216-N LISN phase:  
 Limit :FCC PART 15 C  
 Env./Ins. :24.7°C/56% Engineer :Evan  
 Power Rating :AC 120V/60Hz  
 Test Mode :Subwoofer:Generic 2.4G

| No | Freq (MHz) | LISN Factor (dB) | Cable loss (dB) | Reading (dBuV) | Emission Level (dBuV) | Limits (dBuV) | Margin (dB) | Remark  |
|----|------------|------------------|-----------------|----------------|-----------------------|---------------|-------------|---------|
| 1  | 0.166      | 9.70             | 0.01            | 13.73          | 23.44                 | 65.16         | 41.72       | QP      |
| 2  | 0.166      | 9.70             | 0.01            | 3.70           | 13.41                 | 55.16         | 41.75       | Average |
| 3  | 0.182      | 9.70             | 0.01            | 16.84          | 26.55                 | 64.42         | 37.87       | QP      |
| 4  | 0.182      | 9.70             | 0.01            | 5.80           | 15.51                 | 54.42         | 38.91       | Average |
| 5  | 0.202      | 9.70             | 0.01            | 13.51          | 23.22                 | 63.54         | 40.32       | QP      |
| 6  | 0.202      | 9.70             | 0.01            | 5.51           | 15.22                 | 53.54         | 38.32       | Average |
| 7  | 0.234      | 9.70             | 0.01            | 10.94          | 20.65                 | 62.30         | 41.65       | QP      |
| 8  | 0.234      | 9.70             | 0.01            | 1.90           | 11.61                 | 52.30         | 40.69       | Average |
| 9  | 0.249      | 9.70             | 0.01            | 8.04           | 17.75                 | 61.78         | 44.03       | QP      |
| 10 | 0.249      | 9.70             | 0.01            | 1.04           | 10.75                 | 51.78         | 41.03       | Average |
| 11 | 0.529      | 9.70             | 0.01            | 12.64          | 22.35                 | 56.00         | 33.65       | QP      |
| 12 | 0.529      | 9.70             | 0.01            | 2.64           | 12.35                 | 46.00         | 33.65       | Average |

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.  
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

## 4. RADIATED EMISSION MEASUREMENT

### 4.1. Test Equipment

Frequency range: 30~1000MHz

| Item | Equipment         | Manufacturer    | Model No.   | Serial No. | Last Cal. | Cal. Interval |
|------|-------------------|-----------------|-------------|------------|-----------|---------------|
| 1.   | 3#Chamber(NSA)    | AUDIX           | N/A         | N/A        | May.02,21 | 1 Year        |
| 2.   | 3#Chamber(SE)     | AUDIX           | N/A         | N/A        | May.17,18 | 5 Year        |
| 3.   | Signal Analyzer   | Rohde & Schwarz | FSV30       | 104050     | Apr.07,21 | 1 Year        |
| 4.   | EMI Test Receiver | Rohde & Schwarz | ESR7        | 101547     | Apr.07,21 | 1 Year        |
| 5.   | Amplifier         | HP              | 8447D       | 2944A11159 | Apr.07,21 | 1 Year        |
| 6.   | Bi log Antenna    | TESEQ           | CBL6112D    | 25237      | Dec.22,20 | 1 Year        |
| 7.   | NSA Cable         | HUBER+SUHNER    | CFD400NL-LW | No.3       | Oct.09,21 | 1 Year        |
| 8.   | Coaxial Switch    | Anritsu         | MP59B       | 6201397223 | Apr.07,21 | 1 Year        |
| 9.   | Test Software     | AUDIX           | e3          | 6.100913a  | N/A       | N/A           |

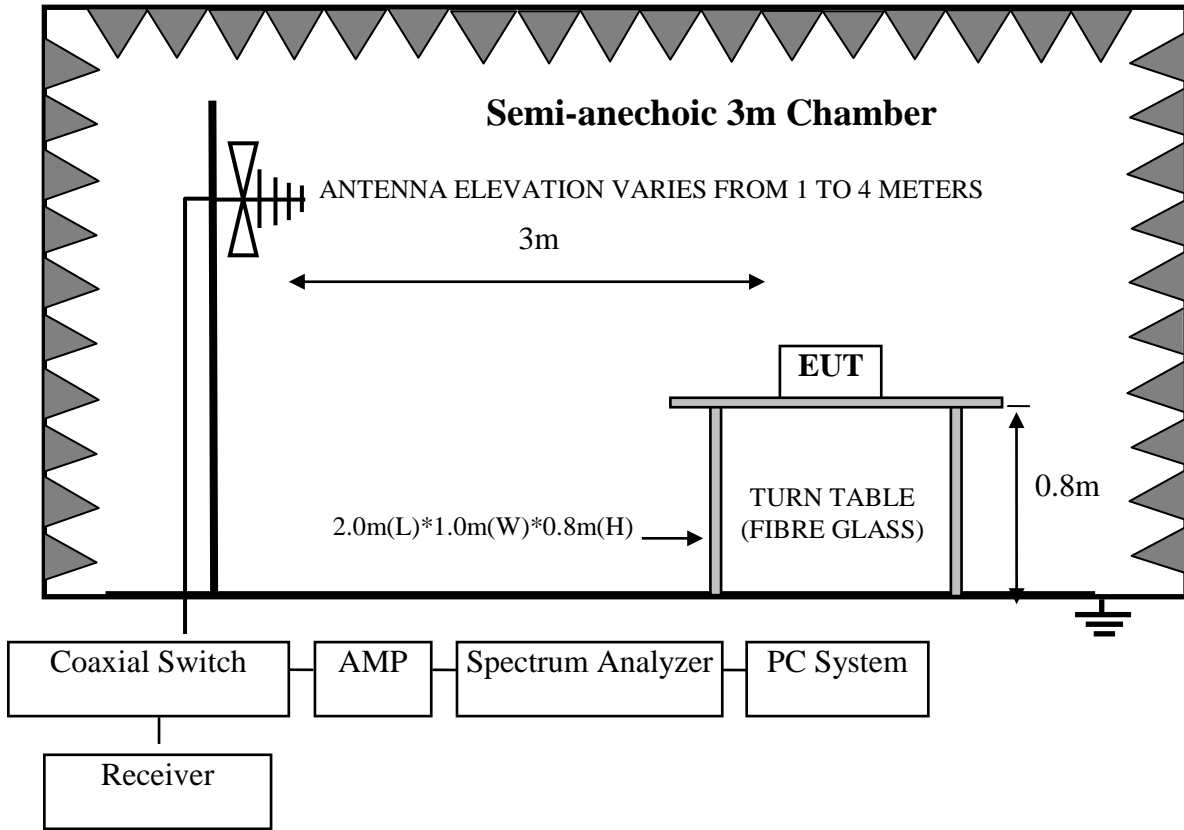
Note: N/A means Not applicable.

Frequency range: above 1000MHz

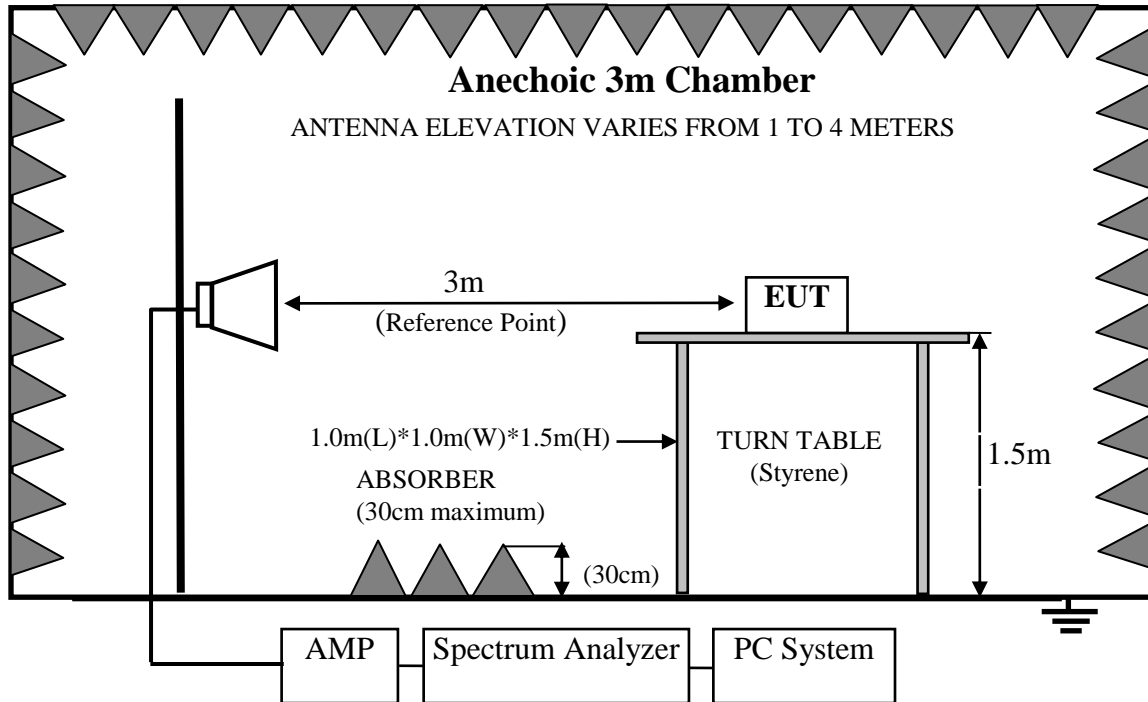
| Item | Equipment        | Manufacturer    | Model No.    | Serial No.  | Last Cal. | Cal. Interval |
|------|------------------|-----------------|--------------|-------------|-----------|---------------|
| 1.   | 3#Chamber(Svswr) | AUDIX           | N/A          | N/A         | Apr.14,21 | 1 Year        |
| 2.   | 3#Chamber(SE)    | AUDIX           | N/A          | N/A         | May.17,18 | 5 Year        |
| 3.   | Signal Analyzer  | Rohde & Schwarz | FSV30        | 104050      | Apr.07,21 | 1 Year        |
| 4.   | Horn Antenna     | ETC             | MCTD 1209    | DRH15F03006 | Jul.26,21 | 1 Year        |
| 5.   | Amplifier        | Agilent         | 83017A       | MY53270084  | Oct.11,20 | 1 Year        |
| 6.   | Amplifier        | Agilent         | 83017A       | MY53270084  | Oct.09,21 | 1 Year        |
| 7.   | RF Cable         | Hubersuhner     | SUCOFLEX-106 | 505238/6    | Apr.07,21 | 1 Year        |
| 8.   | Test Software    | AUDIX           | e3           | 6.100913a   | N/A       | N/A           |

Note: N/A means Not applicable.

4.2. Block Diagram of Test Setup  
For frequency range 30MHz-1000MHz



For frequency range 1GHz-25GHz



4.3. Radiated Emission Limit Standard:

| FREQUENCY<br>MHz | DISTANCE<br>Meters | FIELD STRENGTHS LIMIT                           |          |
|------------------|--------------------|-------------------------------------------------|----------|
|                  |                    | μV/m                                            | dB(μV)/m |
| 30 ~ 88          | 3                  | 100                                             | 40.0     |
| 88 ~ 216         | 3                  | 150                                             | 43.5     |
| 216 ~ 960        | 3                  | 200                                             | 46.0     |
| 960 ~ 1000       | 3                  | 500                                             | 54.0     |
| Above 1000MHz    | 3                  | 74.0 dB(μV)/m (Peak)<br>54.0 dB(μV)/m (Average) |          |

- Remark :
- (1) Emission level dBμV = 20 log Emission level μV/m
  - (2) Emission Level (dBμV/m) = Reading (Receiver) (dBμV) + Antenna Factor (dB/m) + Cable Loss (dB)  
Emission Level (dBμV/m) = Reading (Spectrum) (dBμV) + Antenna Factor (dB/m) – Amp Factor (dB) + Cable Loss (dB)(above 1000MHz)
  - (3) The smaller limit shall apply at the cross point between two frequency bands.
  - (4) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.
  - (5) The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

4.4. EUT Configuration on Test

The following equipment are installed on Radiated Emission Test to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

4.4.1. Sound Bar (EUT)

Model Number : HT-SD40  
Serial Number : N/A

4.5. Operating Condition of EUT

- 4.5.1. Setup the EUT and simulator as shown as Section 4.2.
- 4.5.2. Turn on the power of all equipments.
- 4.5.3. Let EUT work in Tx mode.

4.6. Test Procedure

**Frequency below 30MHz:**

The EUT setup on the turn table which has 0.8 m height to the ground. The turn table rotated 360 degrees and antenna fixed to 1 m to find the maximum emission level. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10-2013 regulation.

EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground for frequency 30MHz~1000MHz, 1.5 meter high above ground for frequency above 1GHz and put the absorbing with 2.4m(L)\*2.4m(W)\*0.3m(H) on the ground . The turn table can rotate 360 degrees to determine the position of the maximum emission level. Power on the EUT and let it working in test mode, then test it. EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna for frequency 30MHz~1000MHz, and the Horn antenna is used as receiving antenna for frequency above 1GHz. Both horizontal and vertical polarization of the



antenna is set on Test. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.10-2013 on radiated emission Test.

This test was performed with EUT in X, Y, Z position, and the worse case was found when EUT in X position as the test photo indicated.

The bandwidth of the EMI test receiver (R&S ESR7) is set at 120kHz for frequency range from 30MHz to 1000 MHz.

The bandwidth of the Spectrum's RBW is set at 1MHz and VBW is set at 3MHz for peak emissions measurement above 1GHz.

The frequency range from 30MHz to 10th harmonic (25GHz) are checked. and no any emissions were found from 18GHz to 25 GHz, So the radiated emissions from 18GHz to 25GHz were not record.

#### 4.7.Radiated Emission Test Results

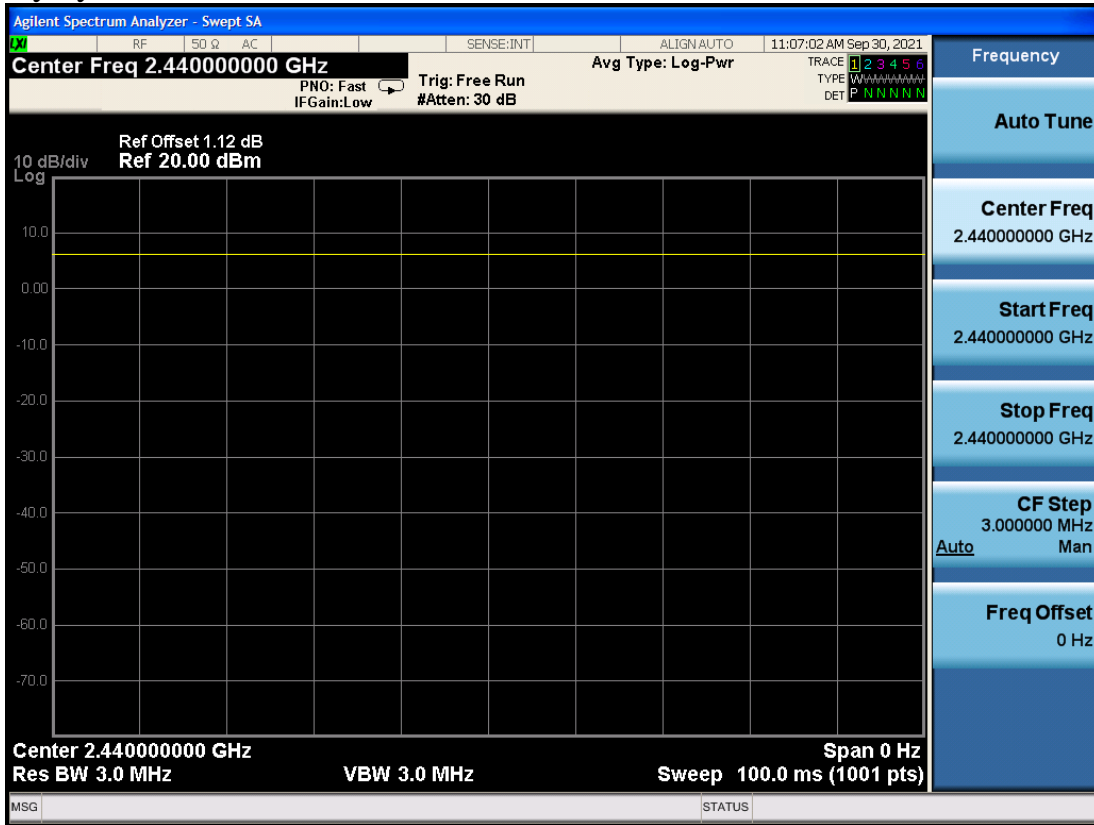
**PASS.**

All the emissions from 30MHz to 25GHz were comply with the 15.209 Limit.

Note 1: For emissions above 1GHz, if peak level comply with average limit, then the average level is deemed to comply with average limit.

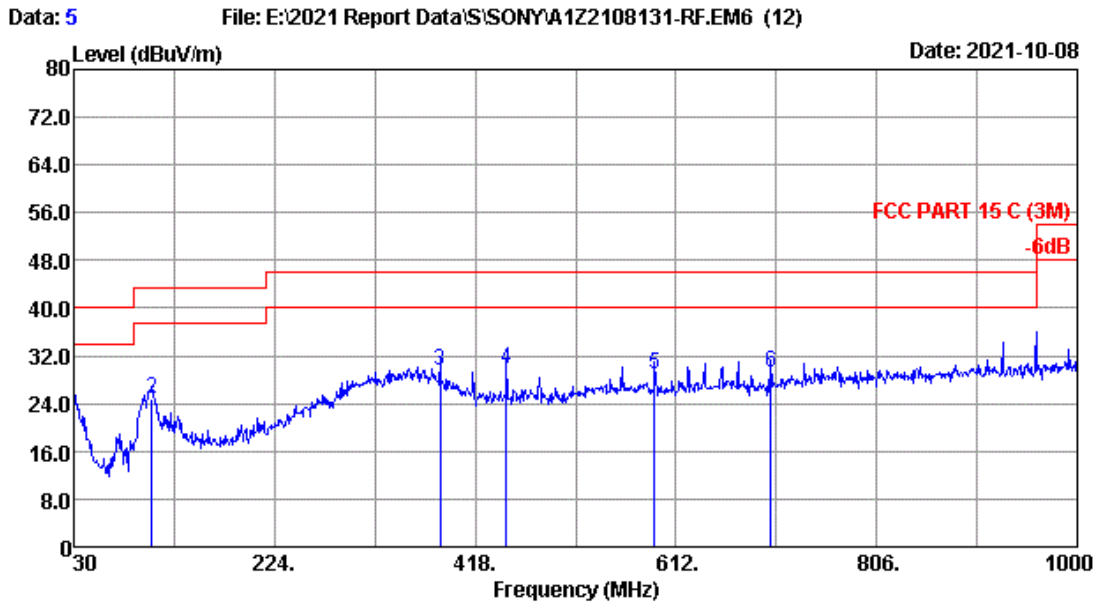
Note 2: The emissions (9kHz~30MHz) not reported for there is no emission be found.

### Duty cycle



Note: The duty cycle of the test signal is 100%.

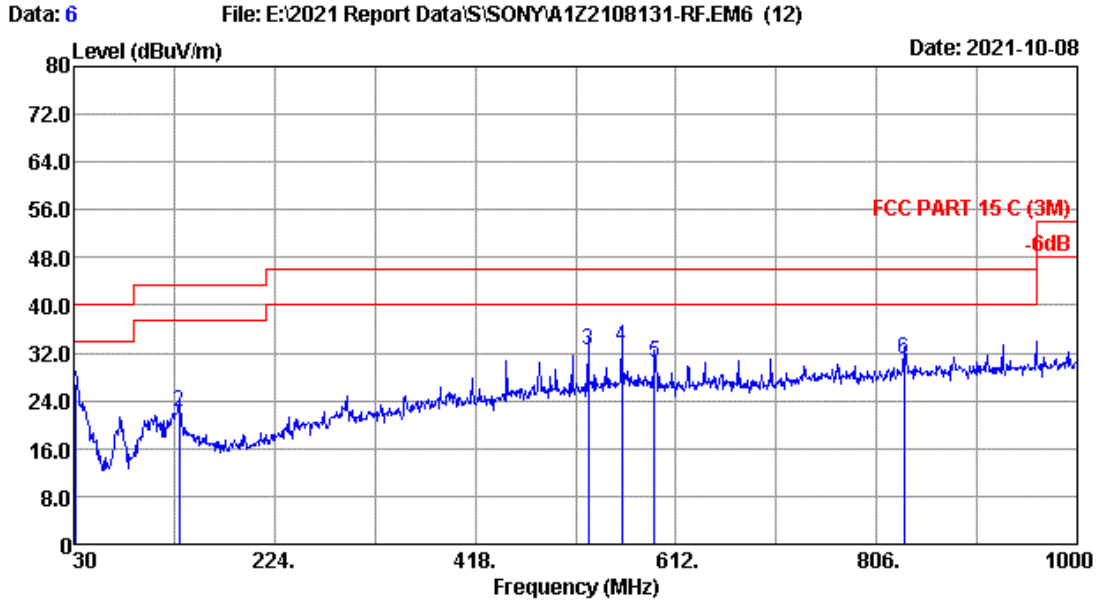
Frequency: 30MHz~1GHz



Site no. : 3m Chamber Data no. : 5  
 Dis. / Ant. : 3m 2020 CBL6112D-25237 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15 C (3M)  
 Env. / Ins. : 23.5°C/52% Engineer : Jack  
 Power rating : AC 120V/60Hz  
 Test Mode : Subwoofer: Generic 2.4G

| No. | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBUV) | Emission Level (dBUV/m) | Limits (dBUV/m) | Margin (dB) | Remark |
|-----|-------------|--------------------|-----------------|----------------|-------------------------|-----------------|-------------|--------|
| 1   | 30.000      | 24.80              | 0.63            | -1.04          | 24.39                   | 40.00           | 15.61       | QP     |
| 2   | 105.660     | 17.54              | 1.05            | 6.20           | 24.79                   | 43.50           | 18.71       | QP     |
| 3   | 384.050     | 21.02              | 1.98            | 6.60           | 29.60                   | 46.00           | 16.40       | QP     |
| 4   | 448.070     | 22.55              | 2.18            | 4.98           | 29.71                   | 46.00           | 16.29       | QP     |
| 5   | 591.630     | 24.29              | 2.55            | 2.22           | 29.06                   | 46.00           | 16.94       | QP     |
| 6   | 704.150     | 24.78              | 2.81            | 1.73           | 29.32                   | 46.00           | 16.68       | QP     |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.

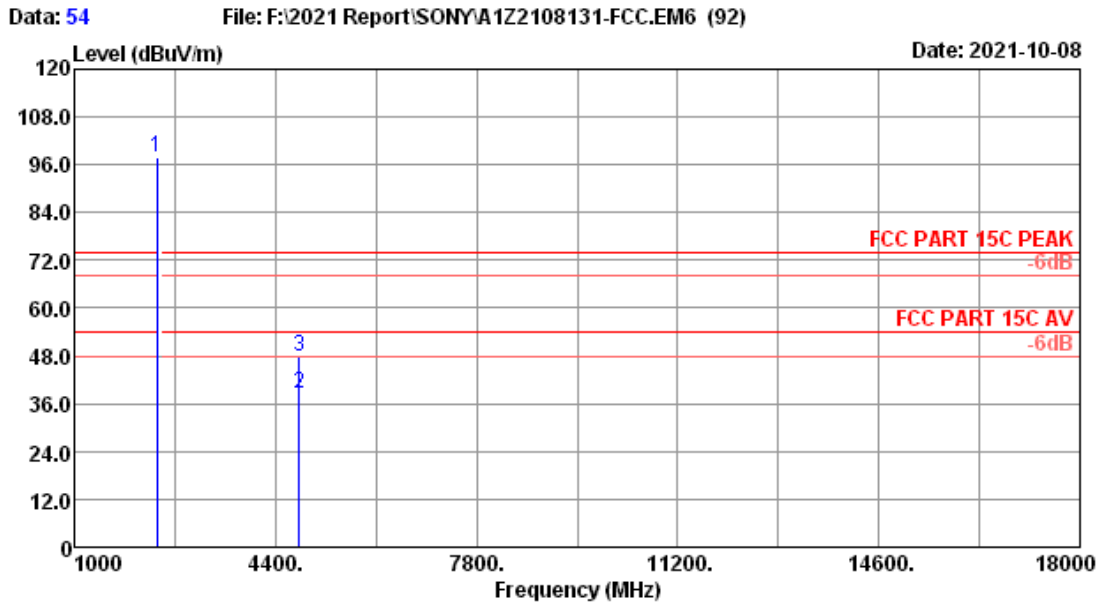


Site no. : 3m Chamber Data no. : 6  
 Dis. / Ant. : 3m 2020 CBL6112D-25237 Ant. pol. : VERTICAL  
 Limit : FCC PART 15 C (3M)  
 Env. / Ins. : 23.5°C/52% Engineer : Jack  
 Power rating : AC 120V/60Hz  
 Test Mode : Subwoofer: Generic 2.4G

| No. | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|-----|-------------|--------------------|-----------------|----------------|-------------------------|-----------------|-------------|--------|
| 1   | 30.970      | 24.26              | 0.64            | 1.97           | 26.87                   | 40.00           | 13.13       | QP     |
| 2   | 131.850     | 17.76              | 1.15            | 3.19           | 22.10                   | 43.50           | 21.40       | QP     |
| 3   | 527.610     | 23.98              | 2.40            | 6.19           | 32.57                   | 46.00           | 13.43       | QP     |
| 4   | 559.620     | 24.60              | 2.48            | 5.89           | 32.97                   | 46.00           | 13.03       | QP     |
| 5   | 591.630     | 24.29              | 2.55            | 3.70           | 30.54                   | 46.00           | 15.46       | QP     |
| 6   | 832.190     | 25.89              | 3.19            | 2.03           | 31.11                   | 46.00           | 14.89       | QP     |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.

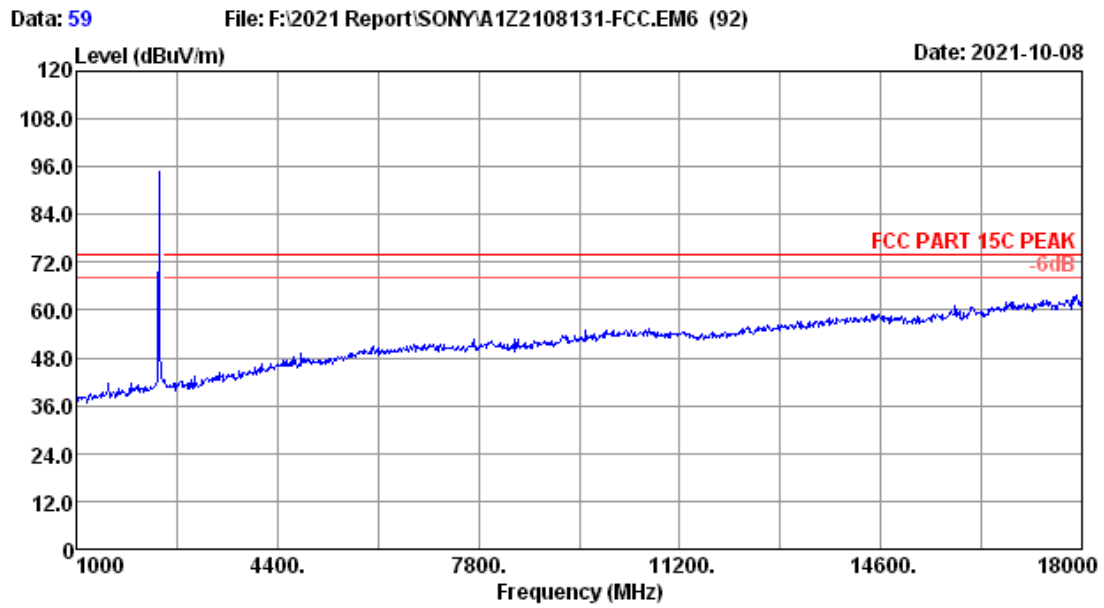




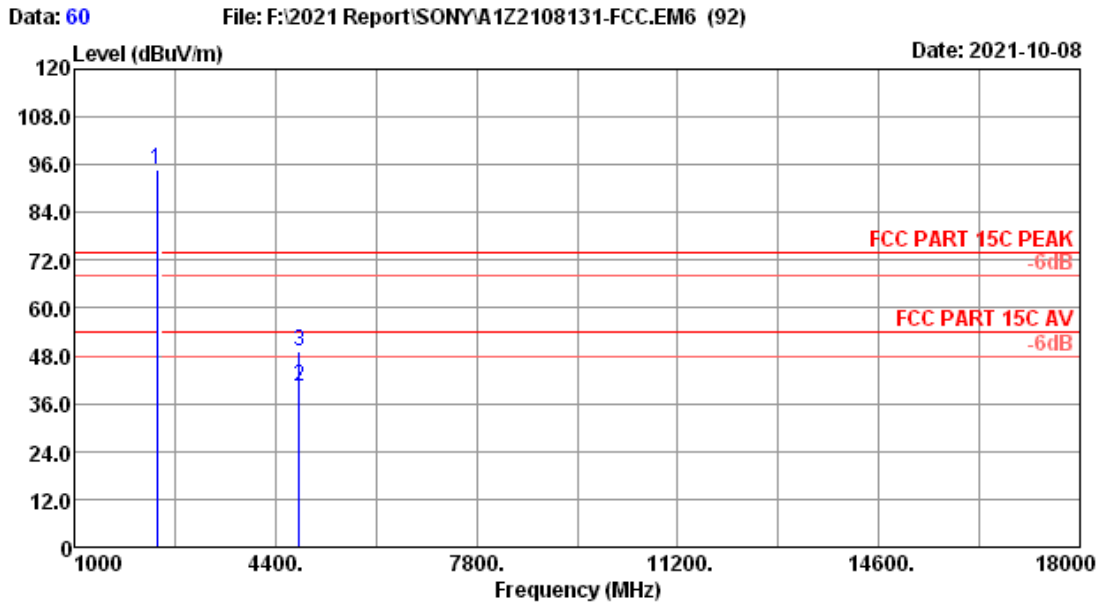
Site no. : 3m Chamber Data no. : 54  
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23.8°C/53.5% Engineer : Winter  
 Power rating : AC 120V/60Hz  
 Test Mode : Subwoofer: SRD 2404MHz ANT A Tx

| No. | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Amp factor (dB) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark  |
|-----|-------------|--------------------|-----------------|----------------|-----------------|-------------------------|-----------------|-------------|---------|
| 1   | 2404.00     | 27.93              | 1.66            | 103.37         | 35.24           | 97.72                   | -----           | -----       | Peak    |
| 2   | 4808.00     | 32.69              | 2.66            | 37.48          | 34.46           | 38.37                   | 54.00           | 15.63       | Average |
| 3   | 4808.00     | 32.69              | 2.66            | 46.74          | 34.46           | 47.63                   | 74.00           | 26.37       | Peak    |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 59  
Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : HORIZONTAL  
Limit : FCC PART 15C PEAK  
Env. / Ins. : 23.8°C/53.5% Engineer : Winter  
Power rating : AC 120V/60Hz  
Test Mode : Subwoofer: SRD 2404MHz ANT A Tx

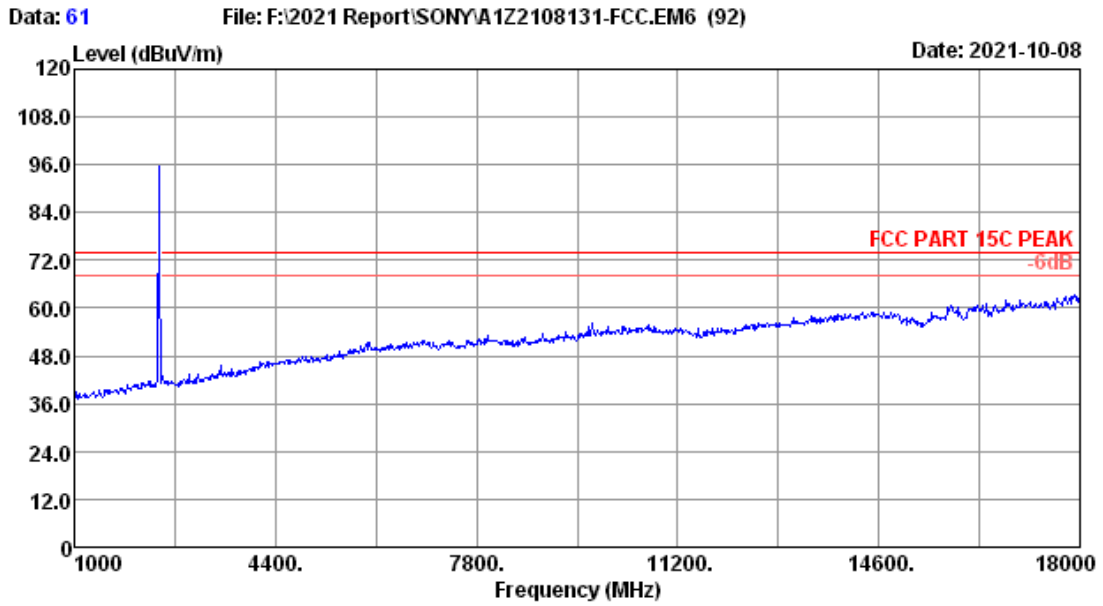


Site no. : 3m Chamber Data no. : 60  
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23.8°C/53.5% Engineer : Winter  
 Power rating : AC 120V/60Hz  
 Test Mode : Subwoofer: SRD 2404MHz ANT A Tx

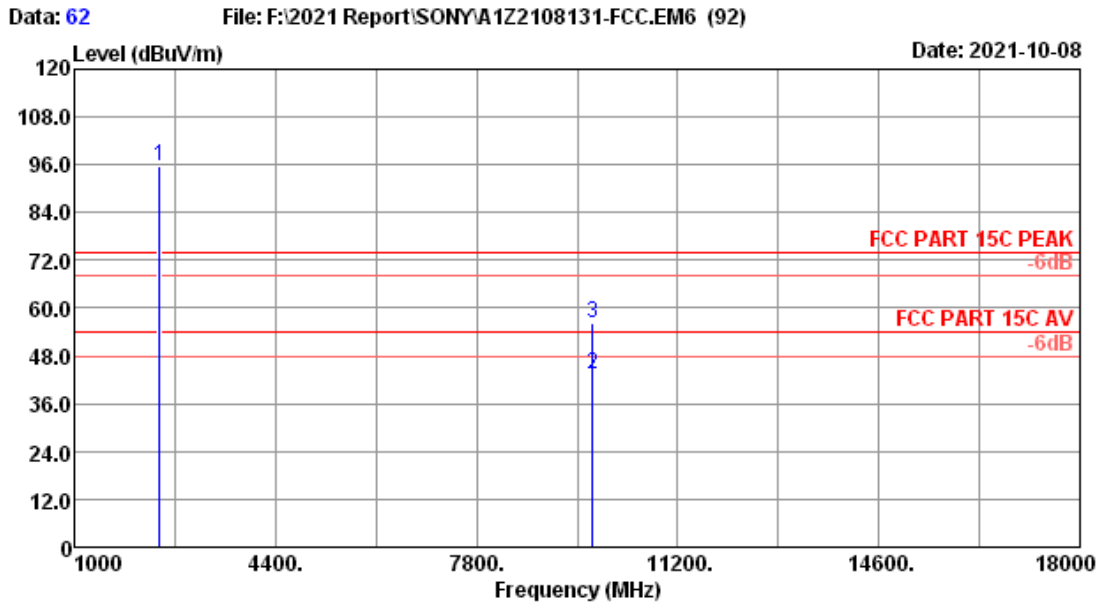
| No. | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBUV) | Amp factor (dB) | Emission Level (dBUV/m) | Limits (dBUV/m) | Margin (dB) | Remark  |
|-----|-------------|--------------------|-----------------|----------------|-----------------|-------------------------|-----------------|-------------|---------|
| 1   | 2404.00     | 27.93              | 1.66            | 100.44         | 35.24           | 94.79                   | -----           | -----       | Peak    |
| 2   | 4808.00     | 32.69              | 2.66            | 39.47          | 34.46           | 40.36                   | 54.00           | 13.64       | Average |
| 3   | 4808.00     | 32.69              | 2.66            | 48.13          | 34.46           | 49.02                   | 74.00           | 24.98       | Peak    |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.





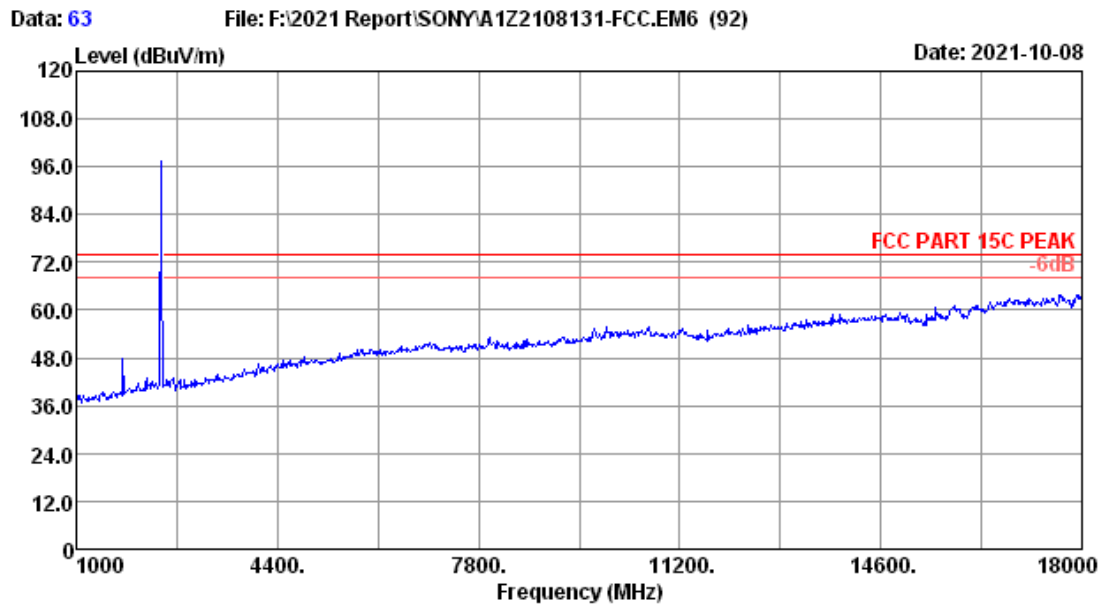
Site no. : 3m Chamber Data no. : 61  
Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : HORIZONTAL  
Limit : FCC PART 15C PEAK  
Env. / Ins. : 23.8°C/53.5% Engineer : Winter  
Power rating : AC 120V/60Hz  
Test Mode : Subwoofer: SRD 2440MHz ANT A Tx



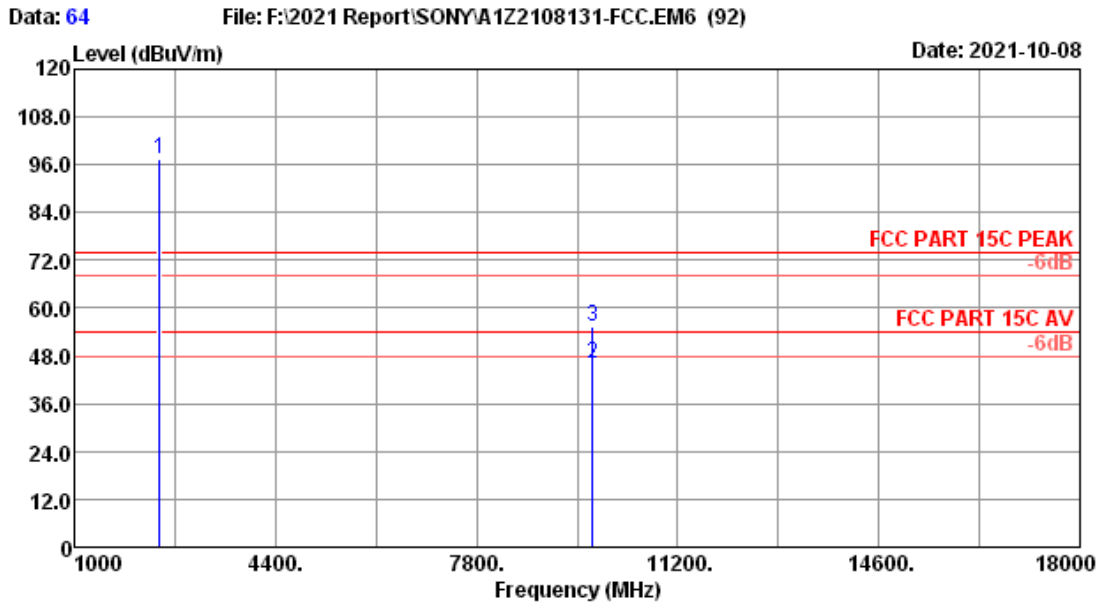
Site no. : 3m Chamber Data no. : 62  
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23.8°C/53.5% Engineer : Winter  
 Power rating : AC 120V/60Hz  
 Test Mode : Subwoofer: SRD 2440MHz ANT A Tx

| No. | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Amp factor (dB) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark  |
|-----|-------------|--------------------|-----------------|----------------|-----------------|-------------------------|-----------------|-------------|---------|
| 1   | 2440.00     | 28.00              | 1.68            | 101.06         | 35.24           | 95.50                   | -----           | -----       | Peak    |
| 2   | 9760.00     | 37.56              | 3.94            | 36.28          | 34.53           | 43.25                   | 54.00           | 10.75       | Average |
| 3   | 9760.00     | 37.56              | 3.94            | 49.22          | 34.53           | 56.19                   | 74.00           | 17.81       | Peak    |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.



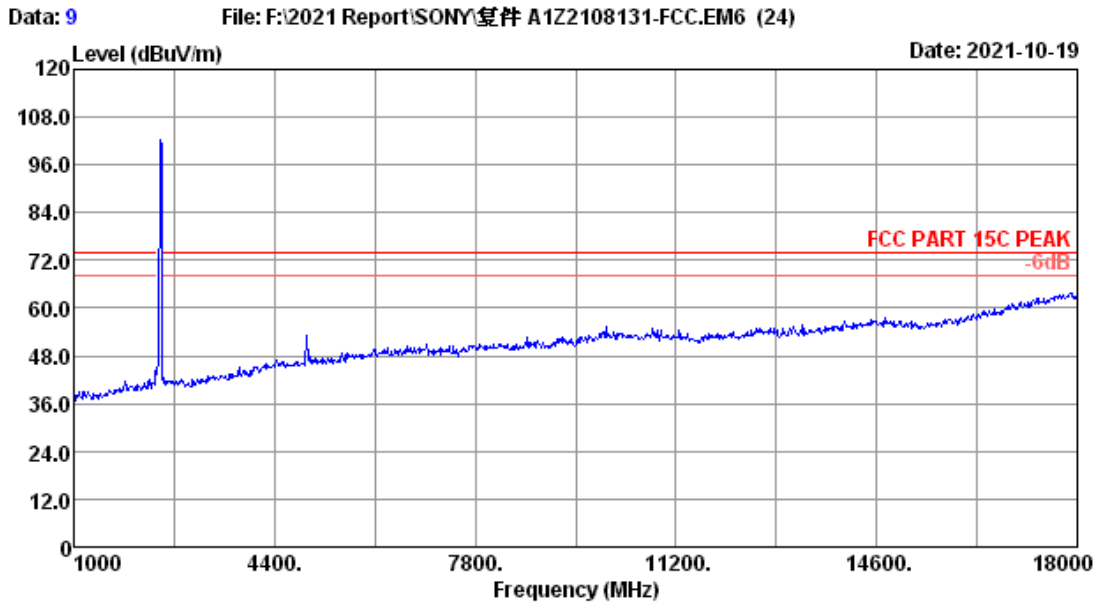
Site no. : 3m Chamber Data no. : 63  
Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : VERTICAL  
Limit : FCC PART 15C PEAK  
Env. / Ins. : 23.8°C/53.5% Engineer : Winter  
Power rating : AC 120V/60Hz  
Test Mode : Subwoofer: SRD 2440MHz ANT A Tx



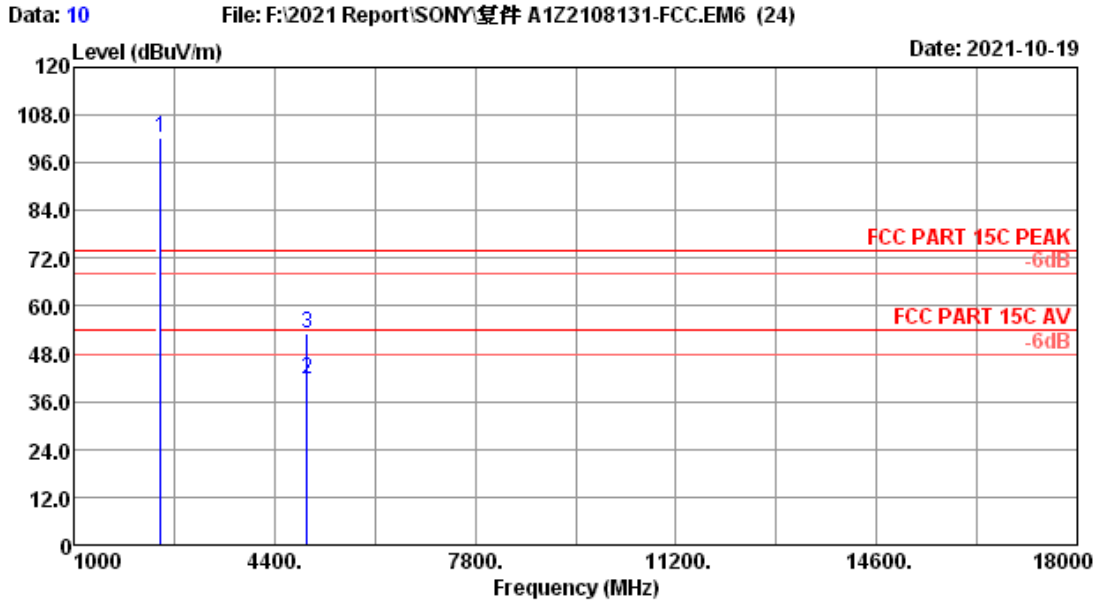
Site no. : 3m Chamber Data no. : 64  
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23.8°C/53.5% Engineer : Winter  
 Power rating : AC 120V/60Hz  
 Test Mode : Subwoofer: SRD 2440MHz ANT A Tx

| No. | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Amp factor (dB) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark  |
|-----|-------------|--------------------|-----------------|----------------|-----------------|-------------------------|-----------------|-------------|---------|
| 1   | 2440.00     | 28.00              | 1.68            | 103.07         | 35.24           | 97.51                   | -----           | -----       | Peak    |
| 2   | 9760.00     | 37.56              | 3.94            | 39.15          | 34.53           | 46.12                   | 54.00           | 7.88        | Average |
| 3   | 9760.00     | 37.56              | 3.94            | 48.24          | 34.53           | 55.21                   | 74.00           | 18.79       | Peak    |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.



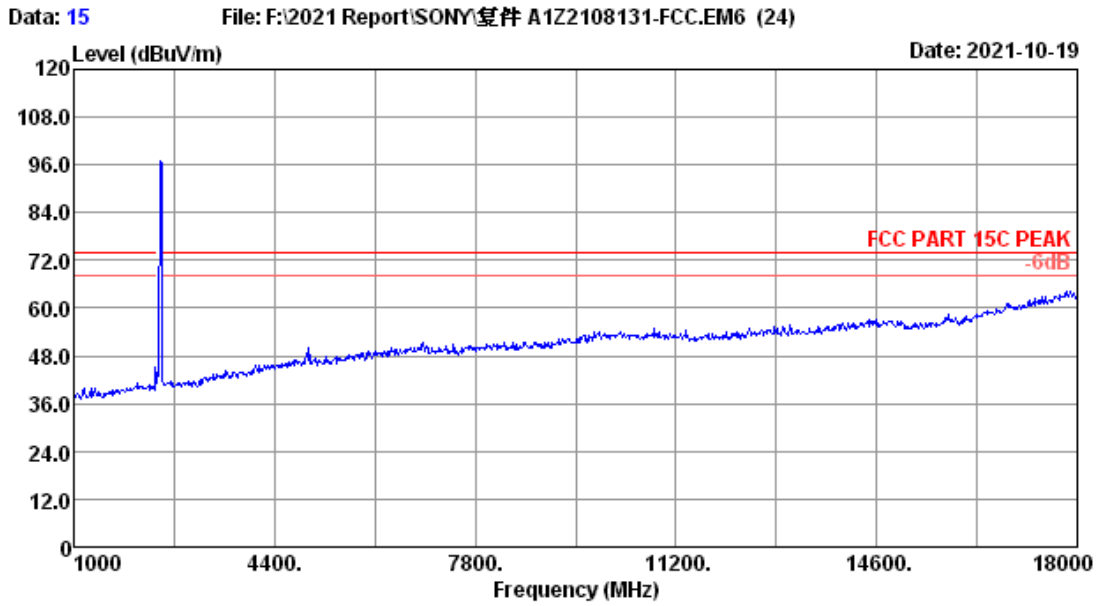
|             |                                   |           |            |
|-------------|-----------------------------------|-----------|------------|
| Site no.    | : 3m Chamber                      | Data no.  | : 9        |
| Dis. / Ant. | : 3m 2021 MCTD1209-3006           | Ant. pol. | : VERTICAL |
| Limit       | : FCC PART 15C PEAK               |           |            |
| Env. / Ins. | : 23.8°C/53.5%                    | Engineer  | : Winter   |
| Test Mode   | : Subwoofer: SRD 2476MHz ANT & Tx |           |            |



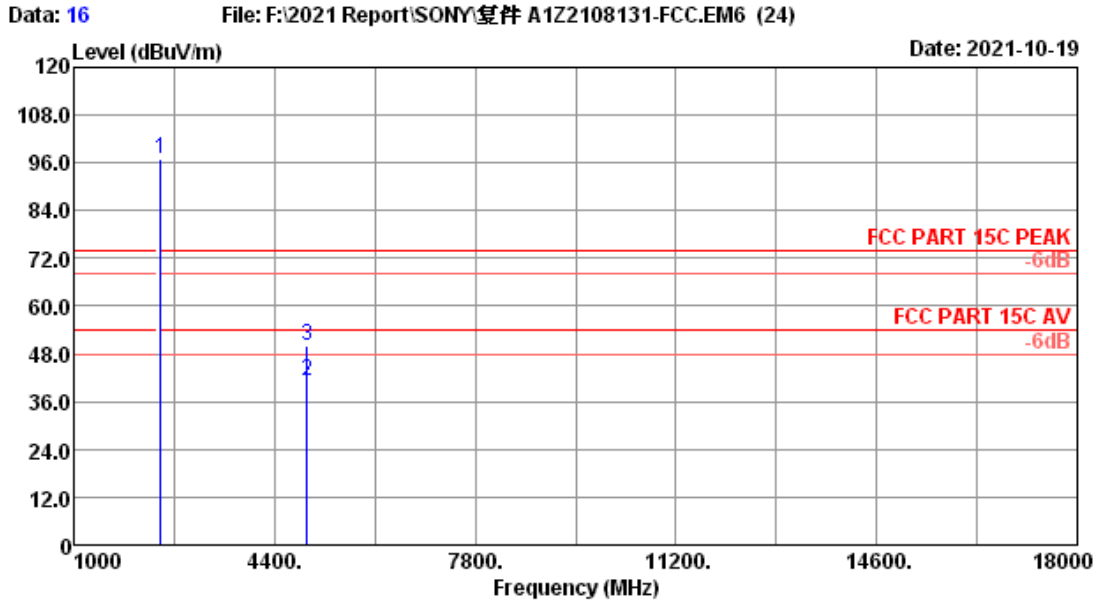
Site no. : 3m Chamber Data no. : 10  
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23.8°C/53.5% Engineer : Winter  
 Test Mode : Subwoofer: SRD 2476MHz ANT & Tx

| No. | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Amp factor (dB) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark  |
|-----|-------------|--------------------|-----------------|----------------|-----------------|-------------------------|-----------------|-------------|---------|
| 1   | 2476.00     | 28.07              | 1.69            | 107.83         | 35.25           | 102.34                  | -----           | -----       | Peak    |
| 2   | 4952.00     | 32.77              | 2.73            | 40.65          | 34.49           | 41.66                   | 54.00           | 12.34       | Average |
| 3   | 4952.00     | 32.77              | 2.73            | 52.13          | 34.49           | 53.14                   | 74.00           | 20.86       | Peak    |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.



|             |                                   |           |              |
|-------------|-----------------------------------|-----------|--------------|
| Site no.    | : 3m Chamber                      | Data no.  | : 15         |
| Dis. / Ant. | : 3m 2021 MCTD1209-3006           | Ant. pol. | : HORIZONTAL |
| Limit       | : FCC PART 15C PEAK               |           |              |
| Env. / Ins. | : 23.8°C/53.5%                    | Engineer  | : Winter     |
| Test Mode   | : Subwoofer: SRD 2476MHz ANT & Tx |           |              |

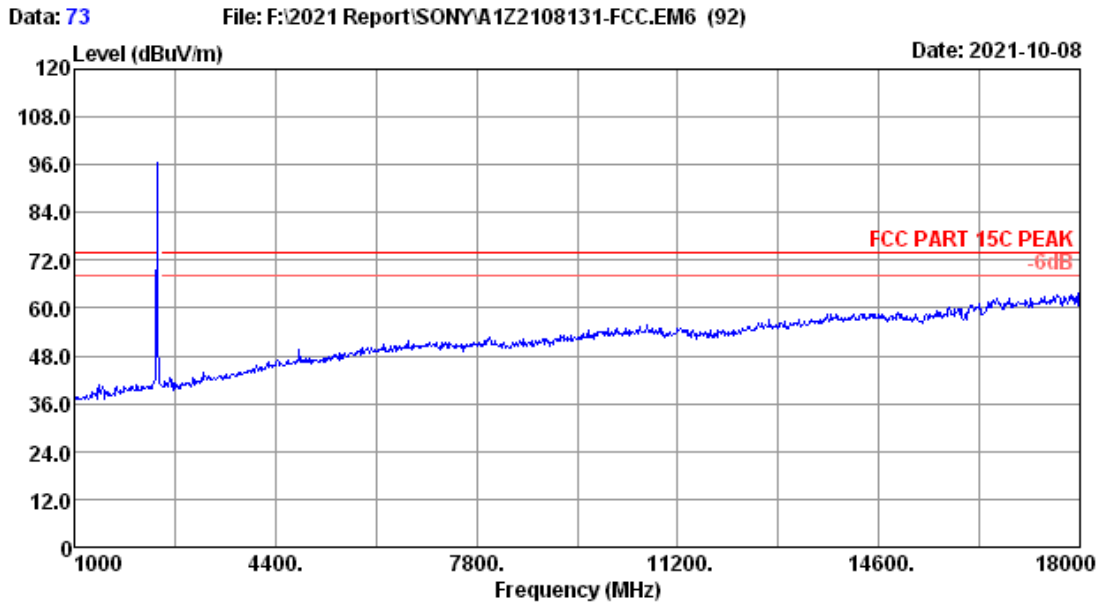


Site no. : 3m Chamber Data no. : 16  
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23.8°C/53.5% Engineer : Winter  
 Test Mode : Subwoofer: SRD 2476MHz ANT & Tx

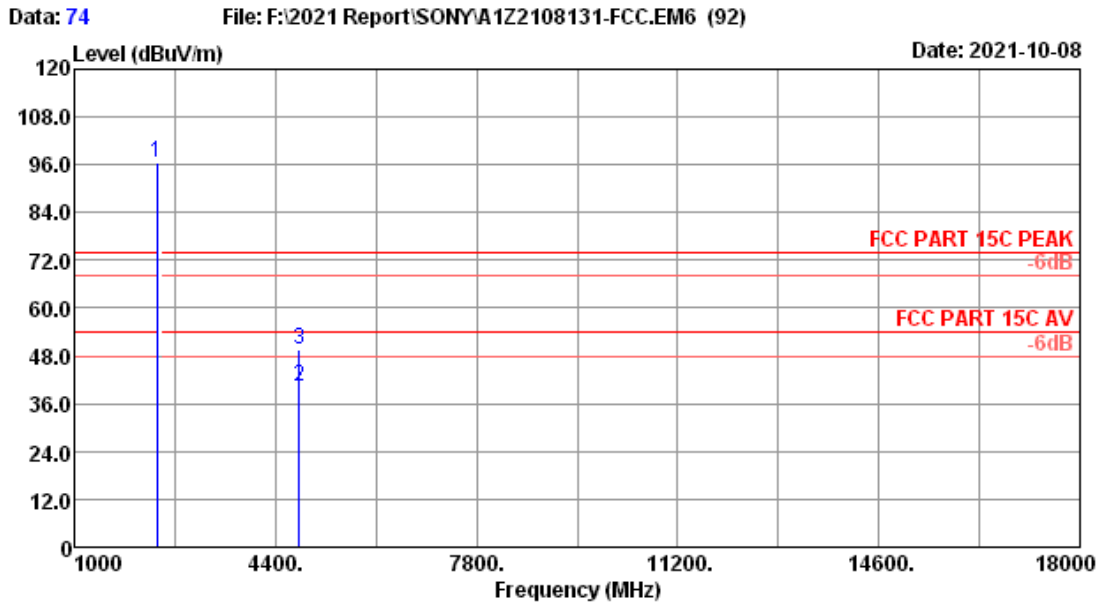
| No. | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Amp factor (dB) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark  |
|-----|-------------|--------------------|-----------------|----------------|-----------------|-------------------------|-----------------|-------------|---------|
| 1   | 2476.00     | 28.07              | 1.69            | 102.40         | 35.25           | 96.91                   | -----           | -----       | Peak    |
| 2   | 4952.00     | 32.77              | 2.73            | 40.25          | 34.49           | 41.26                   | 54.00           | 12.74       | Average |
| 3   | 4952.00     | 32.77              | 2.73            | 48.97          | 34.49           | 49.98                   | 74.00           | 24.02       | Peak    |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.





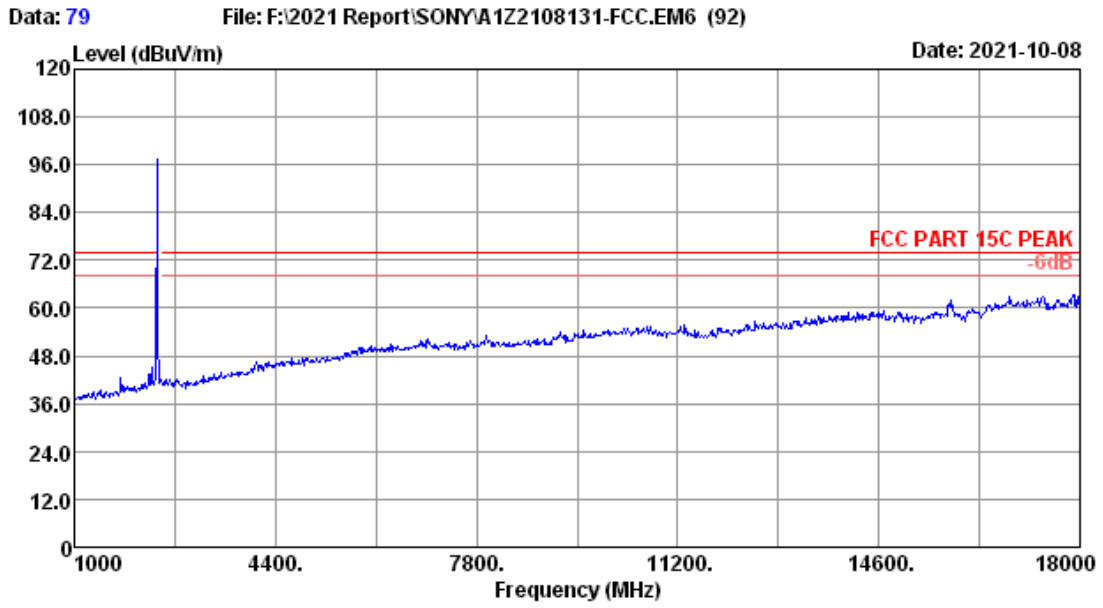
Site no. : 3m Chamber Data no. : 73  
Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : HORIZONTAL  
Limit : FCC PART 15C PEAK  
Env. / Ins. : 23.8°C/53.5% Engineer : Winter  
Power rating : AC 120V/60Hz  
Test Mode : Subwoofer: SRD 2404MHz ANT B Tx



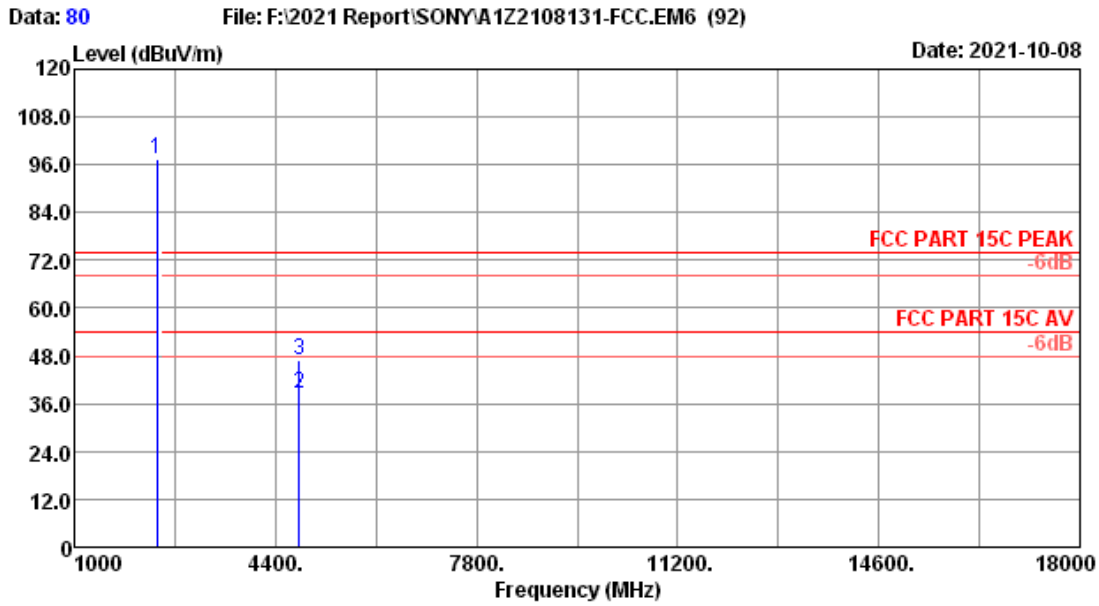
Site no. : 3m Chamber Data no. : 74  
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23.8°C/53.5% Engineer : Winter  
 Power rating : AC 120V/60Hz  
 Test Mode : Subwoofer: SRD 2404MHz ANT B Tx

| No. | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Amp factor (dB) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark  |
|-----|-------------|--------------------|-----------------|----------------|-----------------|-------------------------|-----------------|-------------|---------|
| 1   | 2404.00     | 27.93              | 1.66            | 102.27         | 35.24           | 96.62                   | -----           | -----       | Peak    |
| 2   | 4808.00     | 32.69              | 2.66            | 39.26          | 34.46           | 40.15                   | 54.00           | 13.85       | Average |
| 3   | 4808.00     | 32.69              | 2.66            | 48.74          | 34.46           | 49.63                   | 74.00           | 24.37       | Peak    |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.



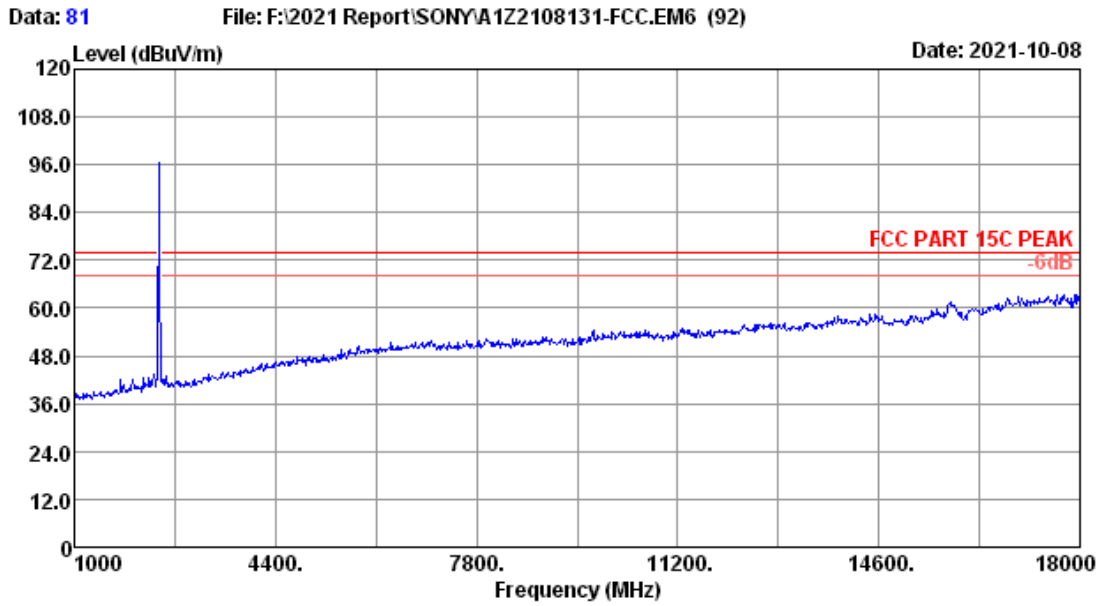
|              |                                   |           |            |
|--------------|-----------------------------------|-----------|------------|
| Site no.     | : 3m Chamber                      | Data no.  | : 79       |
| Dis. / Ant.  | : 3m 2021 MCTD1209-3006           | Ant. pol. | : VERTICAL |
| Limit        | : FCC PART 15C PEAK               |           |            |
| Env. / Ins.  | : 23.8°C/53.5%                    | Engineer  | : Winter   |
| Power rating | : AC 120V/60Hz                    |           |            |
| Test Mode    | : Subwoofer: SRD 2404MHz ANT B Tx |           |            |



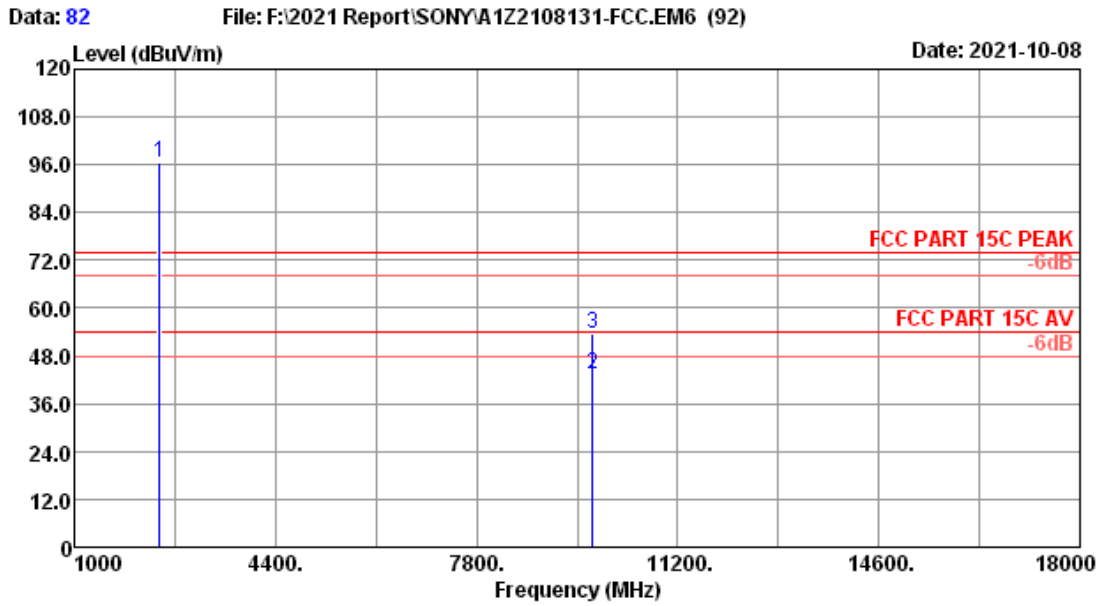
Site no. : 3m Chamber Data no. : 80  
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23.8°C/53.5% Engineer : Winter  
 Power rating : AC 120V/60Hz  
 Test Mode : Subwoofer: SRD 2404MHz ANT B Tx

| No. | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBUV) | Amp factor (dB) | Emission Level (dBUV/m) | Limits (dBUV/m) | Margin (dB) | Remark  |
|-----|-------------|--------------------|-----------------|----------------|-----------------|-------------------------|-----------------|-------------|---------|
| 1   | 2404.00     | 27.93              | 1.66            | 102.88         | 35.24           | 97.23                   | -----           | -----       | Peak    |
| 2   | 4808.00     | 32.69              | 2.66            | 37.42          | 34.46           | 38.31                   | 54.00           | 15.69       | Average |
| 3   | 4808.00     | 32.69              | 2.66            | 46.21          | 34.46           | 47.10                   | 74.00           | 26.90       | Peak    |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.



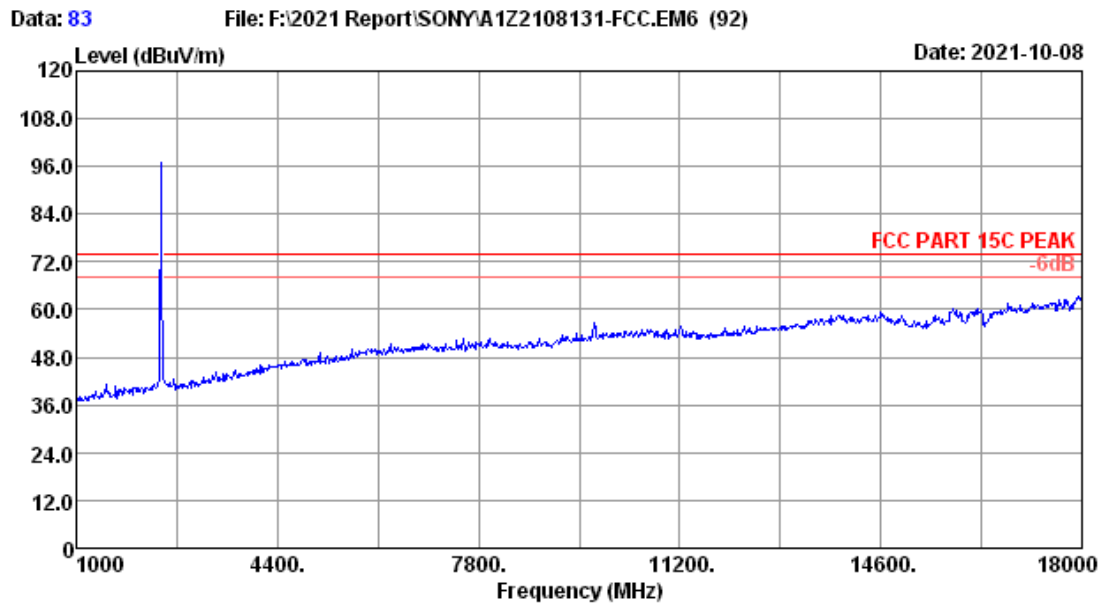
|              |                                   |           |            |
|--------------|-----------------------------------|-----------|------------|
| Site no.     | : 3m Chamber                      | Data no.  | : 81       |
| Dis. / Ant.  | : 3m 2021 MCTD1209-3006           | Ant. pol. | : VERTICAL |
| Limit        | : FCC PART 15C PEAK               |           |            |
| Env. / Ins.  | : 23.8°C/53.5%                    | Engineer  | : Winter   |
| Power rating | : AC 120V/60Hz                    |           |            |
| Test Mode    | : Subwoofer: SRD 2440MHz ANT B Tx |           |            |



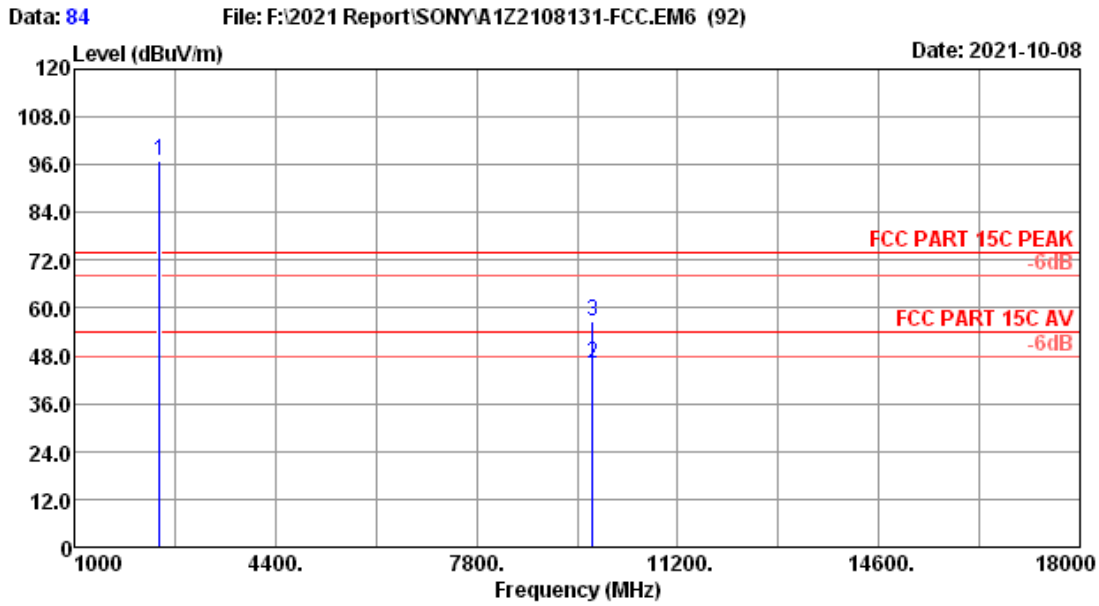
Site no. : 3m Chamber Data no. : 82  
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23.8°C/53.5% Engineer : Winter  
 Power rating : AC 120V/60Hz  
 Test Mode : Subwoofer: SRD 2440MHz ANT B Tx

| No. | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Amp factor (dB) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark  |
|-----|-------------|--------------------|-----------------|----------------|-----------------|-------------------------|-----------------|-------------|---------|
| 1   | 2440.00     | 28.00              | 1.68            | 102.26         | 35.24           | 96.70                   | -----           | -----       | Peak    |
| 2   | 9760.00     | 37.56              | 3.94            | 36.58          | 34.53           | 43.55                   | 54.00           | 10.45       | Average |
| 3   | 9760.00     | 37.56              | 3.94            | 46.49          | 34.53           | 53.46                   | 74.00           | 20.54       | Peak    |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.



|              |                                   |           |              |
|--------------|-----------------------------------|-----------|--------------|
| Site no.     | : 3m Chamber                      | Data no.  | : 83         |
| Dis. / Ant.  | : 3m 2021 MCTD1209-3006           | Ant. pol. | : HORIZONTAL |
| Limit        | : FCC PART 15C PEAK               |           |              |
| Env. / Ins.  | : 23.8°C/53.5%                    | Engineer  | : Winter     |
| Power rating | : AC 120V/60Hz                    |           |              |
| Test Mode    | : Subwoofer: SRD 2440MHz ANT B Tx |           |              |

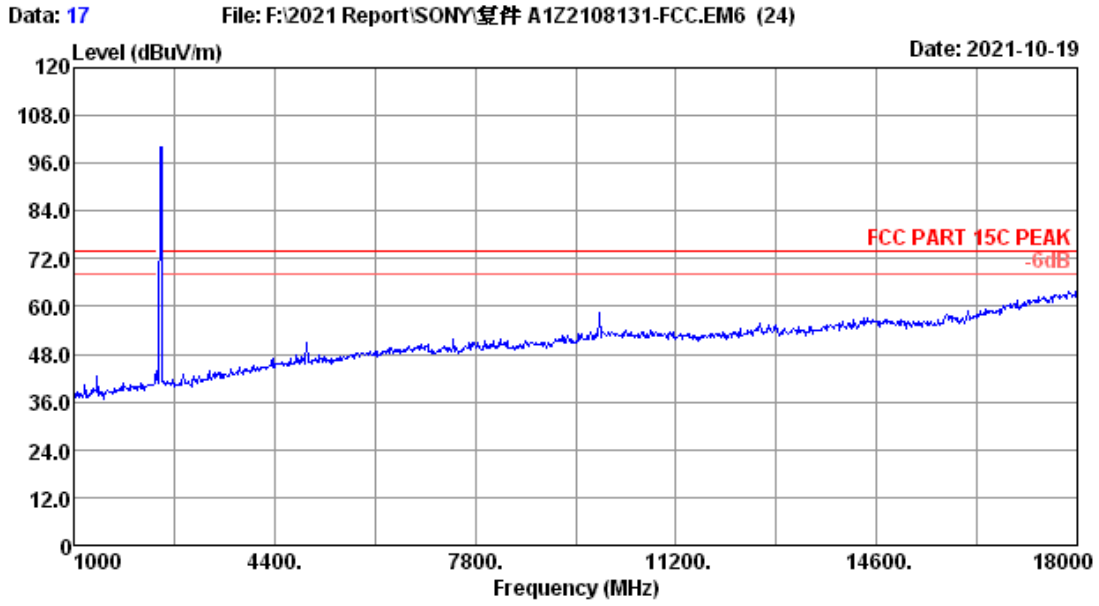


Site no. : 3m Chamber Data no. : 84  
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23.8°C/53.5% Engineer : Winter  
 Power rating : AC 120V/60Hz  
 Test Mode : Subwoofer: SRD 2440MHz ANT B Tx

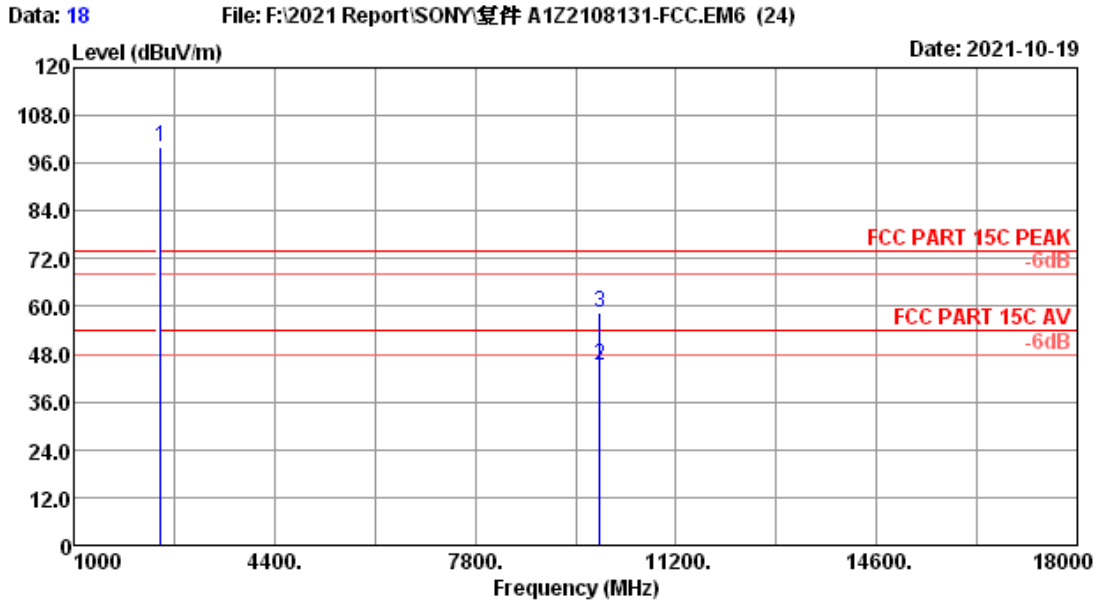
| No. | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Amp factor (dB) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark  |
|-----|-------------|--------------------|-----------------|----------------|-----------------|-------------------------|-----------------|-------------|---------|
| 1   | 2440.00     | 28.00              | 1.68            | 102.41         | 35.24           | 96.85                   | -----           | -----       | Peak    |
| 2   | 9760.00     | 37.56              | 3.94            | 39.23          | 34.53           | 46.20                   | 54.00           | 7.80        | Average |
| 3   | 9760.00     | 37.56              | 3.94            | 49.49          | 34.53           | 56.46                   | 74.00           | 17.54       | Peak    |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.





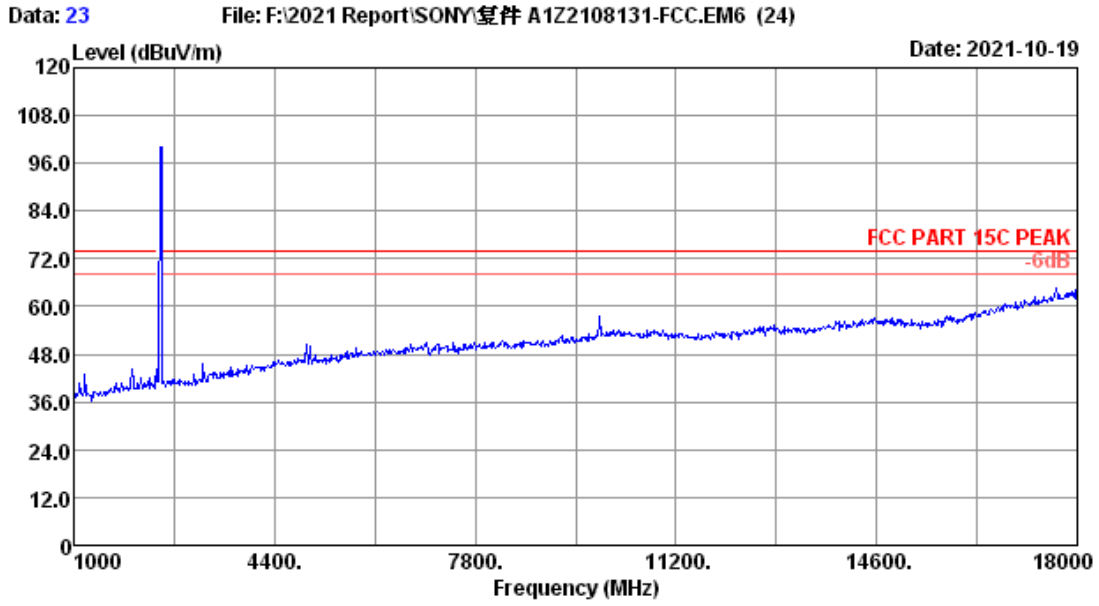
|             |                          |           |              |
|-------------|--------------------------|-----------|--------------|
| Site no.    | : 3m Chamber             | Data no.  | : 17         |
| Dis. / Ant. | : 3m 2021 MCTD1209-3006  | Ant. pol. | : HORIZONTAL |
| Limit       | : FCC PART 15C PEAK      |           |              |
| Env. / Ins. | : 23.8°C/53.5%           | Engineer  | : Winter     |
| Test Mode   | : Subwoofer: SRD 2476MHz | ANT B Tx  |              |



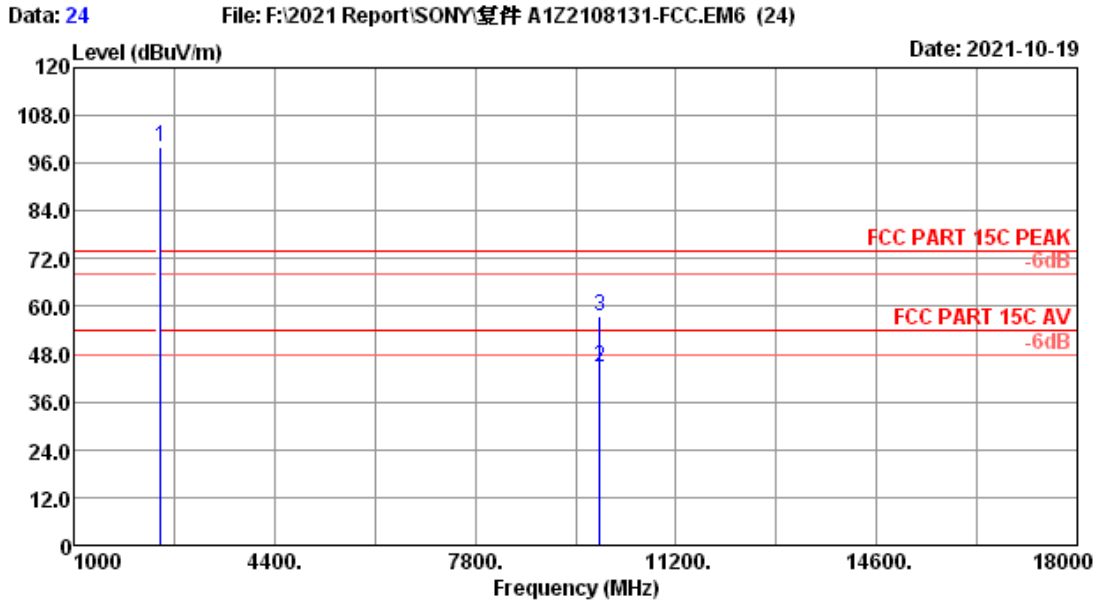
Site no. : 3m Chamber Data no. : 18  
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23.8°C/53.5% Engineer : Winter  
 Test Mode : Subwoofer: SRD 2476MHz ANT B Tx

| No. | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Amp factor (dB) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark  |
|-----|-------------|--------------------|-----------------|----------------|-----------------|-------------------------|-----------------|-------------|---------|
| 1   | 2476.00     | 28.07              | 1.69            | 105.62         | 35.25           | 100.13                  | -----           | -----       | Peak    |
| 2   | 9904.00     | 37.65              | 3.98            | 38.08          | 34.40           | 45.31                   | 54.00           | 8.69        | Average |
| 3   | 9904.00     | 37.65              | 3.98            | 51.05          | 34.40           | 58.28                   | 74.00           | 15.72       | Peak    |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.



|             |                          |           |            |
|-------------|--------------------------|-----------|------------|
| Site no.    | : 3m Chamber             | Data no.  | : 23       |
| Dis. / Ant. | : 3m 2021 MCTD1209-3006  | Ant. pol. | : VERTICAL |
| Limit       | : FCC PART 15C PEAK      |           |            |
| Env. / Ins. | : 23.8°C/53.5%           | Engineer  | : Winter   |
| Test Mode   | : Subwoofer: SRD 2476MHz | ANT B Tx  |            |



Site no. : 3m Chamber Data no. : 24  
 Dis. / Ant. : 3m 2021 MCTD1209-3006 Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : 23.8°C/53.5% Engineer : Winter  
 Test Mode : Subwoofer: SRD 2476MHz ANT B Tx

| No. | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Amp factor (dB) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark  |
|-----|-------------|--------------------|-----------------|----------------|-----------------|-------------------------|-----------------|-------------|---------|
| 1   | 2476.00     | 28.07              | 1.69            | 105.61         | 35.25           | 100.12                  | -----           | -----       | Peak    |
| 2   | 9904.00     | 37.65              | 3.98            | 37.36          | 34.40           | 44.59                   | 54.00           | 9.41        | Average |
| 3   | 9904.00     | 37.65              | 3.98            | 50.24          | 34.40           | 57.47                   | 74.00           | 16.53       | Peak    |

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.  
 2. The emission levels that are 20dB below the official limit are not reported.

## 5. CONDUCTED SPURIOUS EMISSIONS

### 5.1. Test Equipment

| Item | Equipment           | Manufacturer | Model No.    | Serial No. | Last Cal. | Cal. Interval |
|------|---------------------|--------------|--------------|------------|-----------|---------------|
| 1.   | PXA Signal Analyzer | Agilent      | N9030A       | MY51380221 | Apr.07,21 | 1 Year        |
| 2.   | Attenuator          | Agilent      | 8491B        | MY39269201 | Oct.12,20 | 1 Year        |
| 3.   | Attenuator          | Agilent      | 8491B        | MY39269201 | Oct.09,21 | 1 Year        |
| 4.   | RF Cable            | Hubersuhner  | SUCOFLEX-106 | 505238/6   | Apr.07,21 | 1 Year        |

### 5.2. Block Diagram of Test Setup



### 5.3. Limit

In any 100kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power.

### 5.4. Test Procedure

Use the test method described in ANSI C63.10:

The transmitter output was connected to a spectrum analyzer, The resolution bandwidth is set to 100 kHz, The video bandwidth is set to 300 kHz and measure all the emissions With peak detector.

### 5.5. Test result

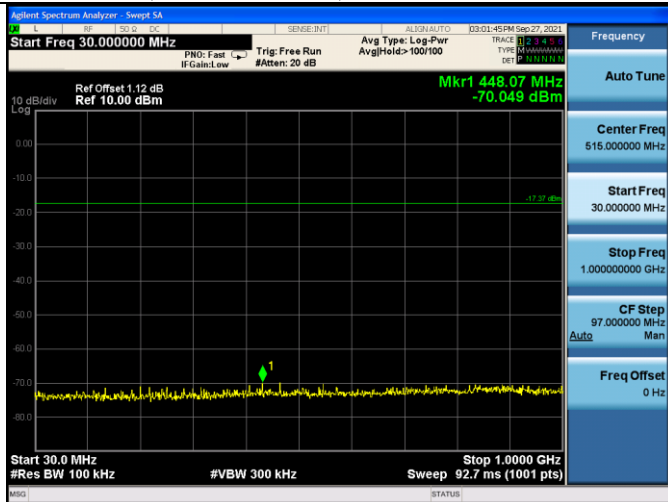
**PASS** (The testing data was attached in the next pages.)

|                               |                         |                         |
|-------------------------------|-------------------------|-------------------------|
| EUT: Active Subwoofer         |                         |                         |
| M/N: SA-WSD40                 |                         |                         |
| Test date: 2021-09-27 ~ 10-19 | Pressure: 102.1±1.0 kpa | Humidity: 53.2±3.0%     |
| Tested by: Lynn               | Test site: RF site      | Temperature: 22.3±0.6°C |

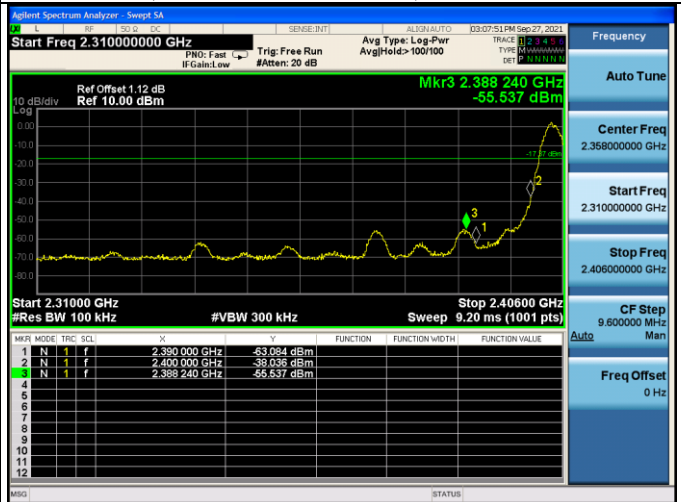
ANT A

GFSK

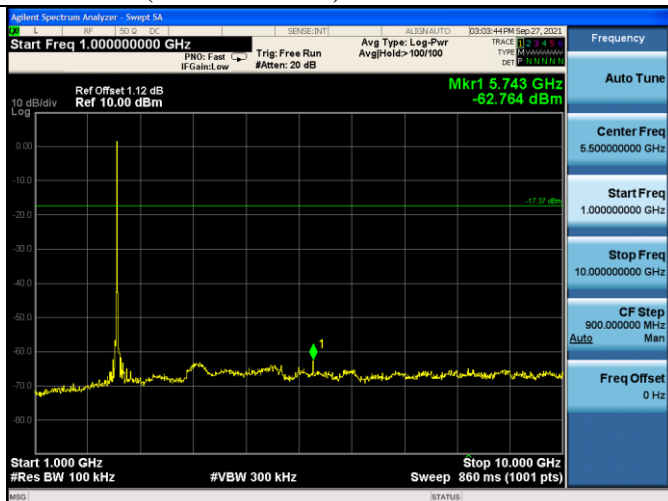
2404MHz(30MHz-1GHz)



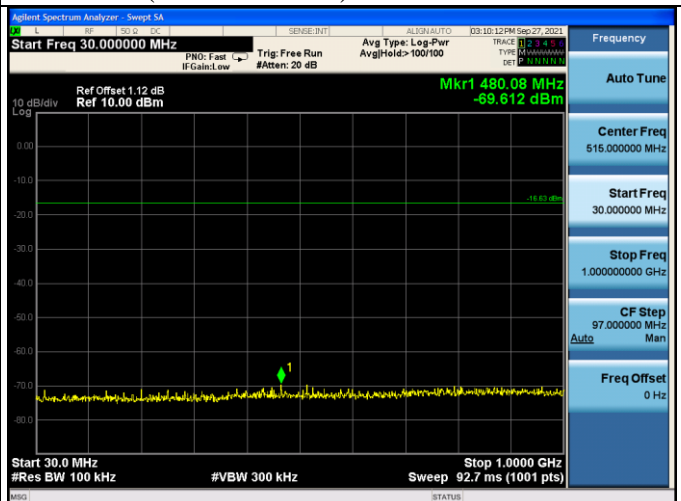
2404MHz(2.31GHz-2.405GHz)



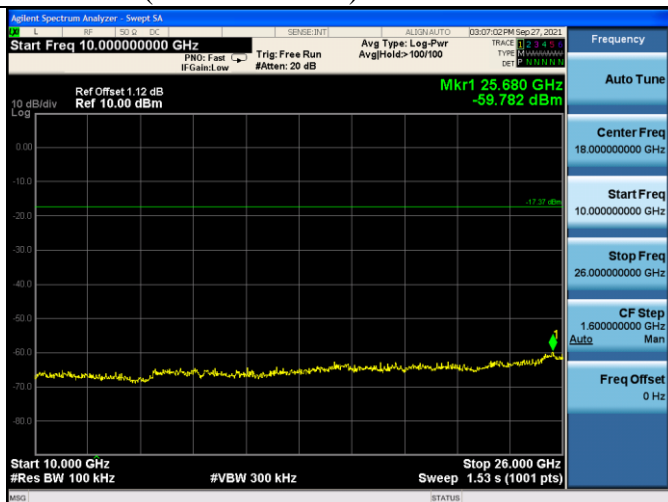
2404MHz(1GHz-10GHz)



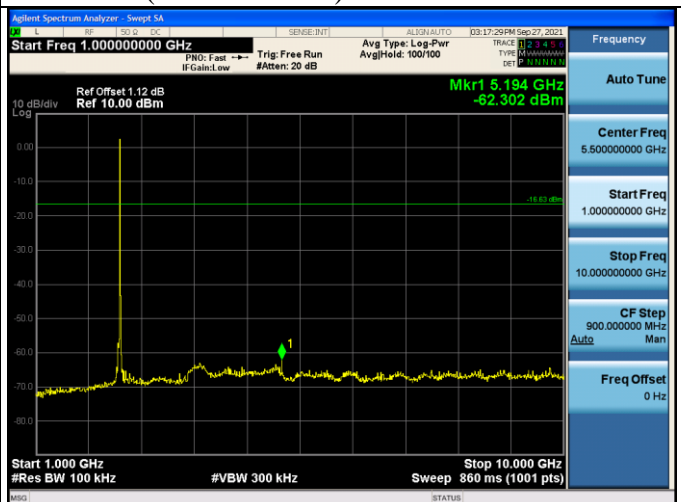
2440MHz(30MHz-1GHz)



2404MHz(10GHz-26GHz)



2440MHz(1GHz-10GHz)



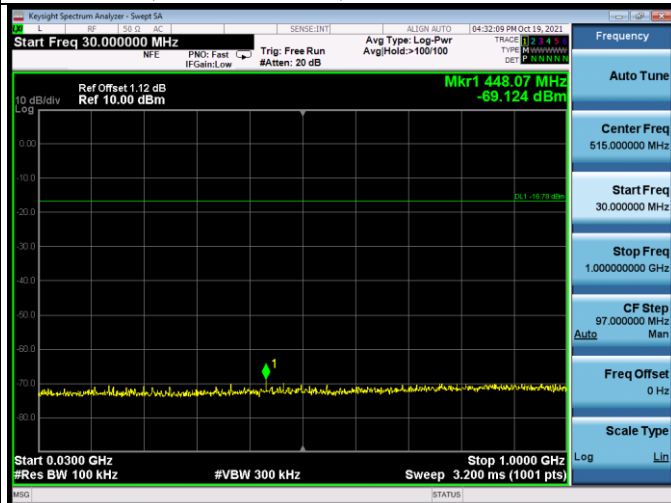
2440MHz(10GHz-26GHz)



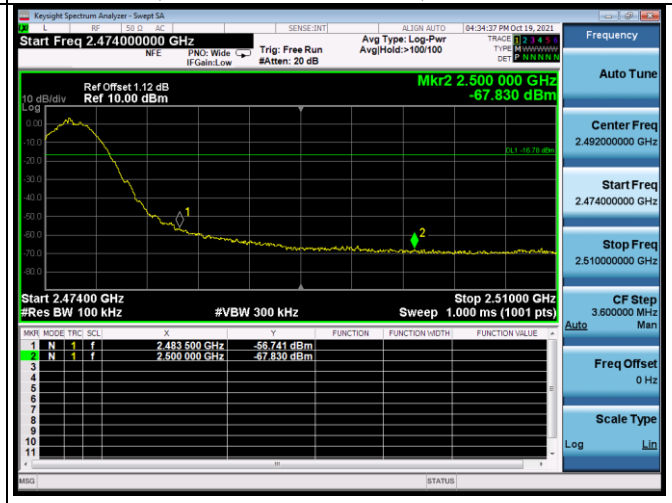
2476MHz(10GHz-26GHz)



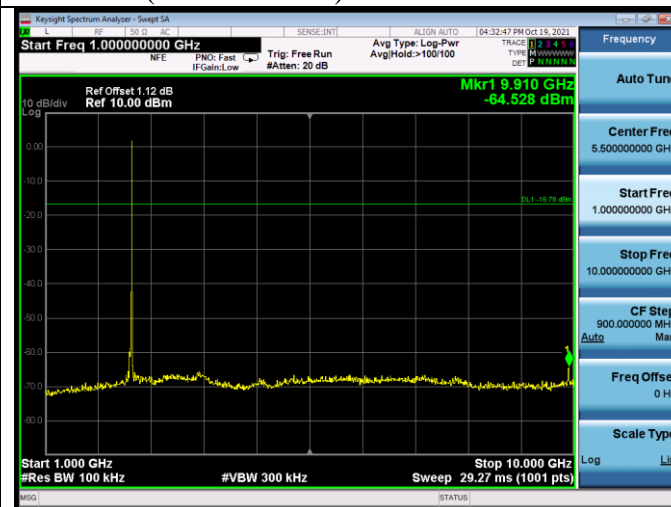
2476MHz(30MHz-1GHz)



2476MHz(2.477GHz-2.51GHz)



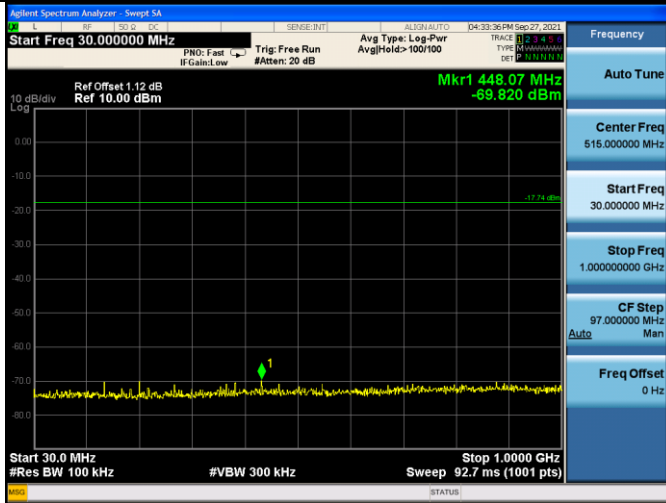
2476MHz(1GHz-10GHz)



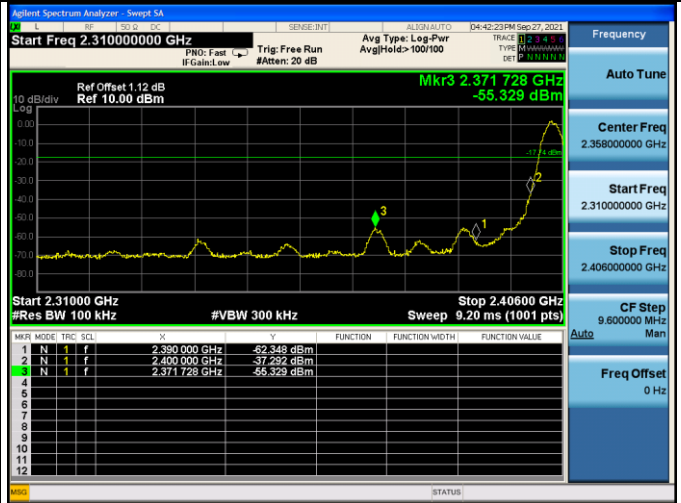
ANT B

GFSK

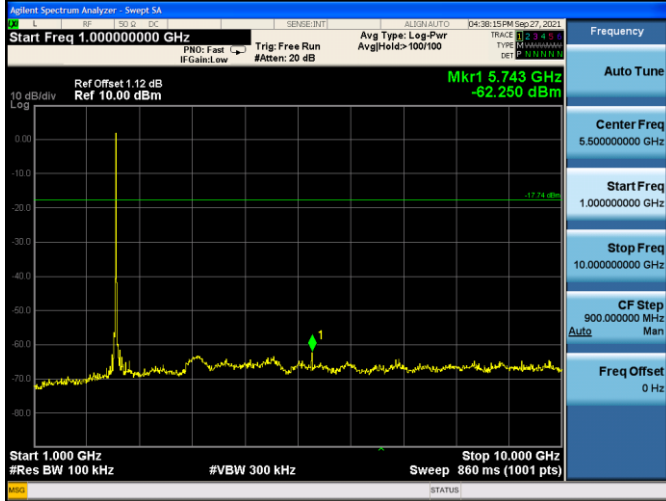
2404MHz(30MHz-1GHz)



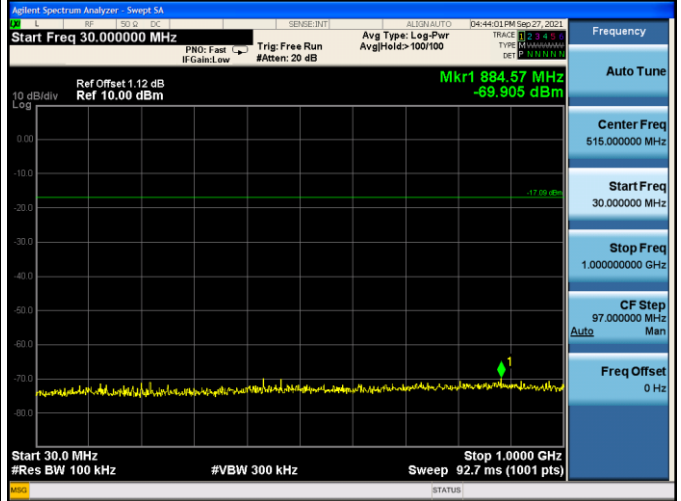
2404MHz(2.31GHz-2.405GHz)



2404MHz(1GHz-10GHz)



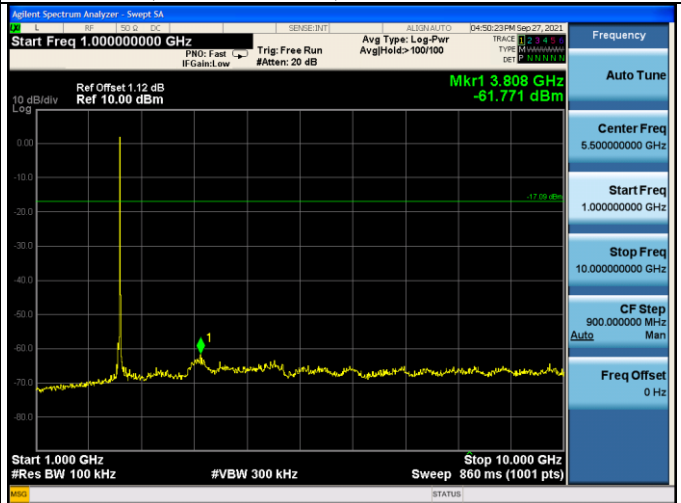
2440MHz(30MHz-1GHz)



2404MHz(10GHz-26GHz)



2440MHz(1GHz-10GHz)





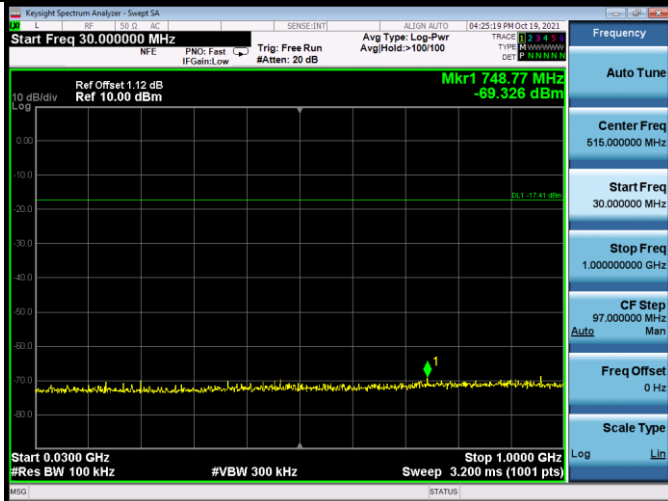
2440MHz(10GHz-26GHz)



2476MHz(10GHz-26GHz)



2476MHz(30MHz-1GHz)



2476MHz(2.477GHz-2.51GHz)



2476MHz(1GHz-10GHz)

