



RF MEASUREMENT REPORT

FCC ID: 2AYHI-AM3A
Applicant: Kinship Partners, Inc.
Product: Pet activity monitor
Model No.: Whistle Health
FCC Classification: Digital Transmission System (DTS)
FCC Rule Part(s): Part 15 Subpart C (Section 15.247)
Test Date: January 10 ~ 26, 2022

Reviewed By:

Sunny Sun

Approved By:

Robin Wu



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.10-2013. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
2112RSU060-U1	Rev. 01	Initial Report	03-09-2022	Valid

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1. General Information

1.1. Applicant

Kinship Partners, Inc.

114 Sansome St, Suite 1000 San Francisco, CA 94104, USA

1.2. Manufacturer

Kinship Partners, Inc.

114 Sansome St, Suite 1000 San Francisco, CA 94104, USA

1.3. Testing Facility

☒	Test Site – MRT Suzhou Laboratory Laboratory Location (Suzhou - Wuzhong) D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China Laboratory Location (Suzhou - SIP) 4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China Laboratory Accreditations A2LA: 3628.01 CNAS: L10551 FCC: CN1166 ISED: CN0001 VCCI: ☐ R-20025 ☐ G-20034 ☐ C-20020 ☐ T-20020 ☐ R-20141 ☐ G-20134 ☐ C-20103 ☐ T-20104
☐	Test Site – MRT Shenzhen Laboratory Laboratory Location (Shenzhen) 1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China Laboratory Accreditations A2LA: 3628.02 CNAS: L10551 FCC: CN1284 ISED: CN0105
☐	Test Site – MRT Taiwan Laboratory Laboratory Location (Taiwan) No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) Laboratory Accreditations TAF: L3261-190725 FCC: 291082, TW3261 ISED: TW3261

1.4. Product Information

Product Name	Pet activity monitor
Model No. (HVIN/PMN)	Whistle Health
EUT Identification:	AM6-53175A3
Wi-Fi Specification	802.11b/g/n
Bluetooth Specification	V5.0 BLE
Antenna Information	Refer to Section 1.7
Accessories	
Rechargeable Li-ion Battery	Model: EVE 362022 Output: 3.8V, 170mAh, 0.65Wh
Remark: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	

1.5. Radio Specification

Bluetooth Frequency	2402 ~ 2480MHz
Channel Number	40
Type of modulation	GFSK
Data Rate	1Mbps

Note: For other features of this EUT, test report will be issued separately.

1.6. Working Frequencies

Channel	Frequency	Channel	Frequency	Channel	Frequency
00	2402 MHz	01	2404 MHz	02	2406 MHz
03	2408 MHz	04	2410 MHz	05	2412 MHz
06	2414 MHz	07	2416 MHz	08	2418 MHz
09	2420 MHz	10	2422 MHz	11	2424 MHz
12	2426 MHz	13	2428 MHz	14	2430 MHz
15	2432 MHz	16	2434 MHz	17	2436 MHz
18	2438 MHz	19	2440 MHz	20	2442 MHz
21	2444 MHz	22	2446 MHz	23	2448 MHz
24	2450 MHz	25	2452 MHz	26	2454 MHz
27	2456 MHz	28	2458 MHz	29	2460 MHz
30	2462 MHz	31	2464 MHz	32	2466 MHz
33	2468 MHz	34	2470 MHz	35	2472 MHz
36	2474 MHz	37	2476 MHz	38	2478 MHz
39	2480 MHz	--	--	--	--

1.7. Antenna Details

Antenna Type	Frequency Band (MHz)	Tx Paths	Antenna Gain (dBi)
2.4G Wi-Fi			
FPCB	2412 ~ 2462	1	-0.11
Bluetooth			
FPCB	2402 ~ 2480	1	-0.11

2. Test Configuration

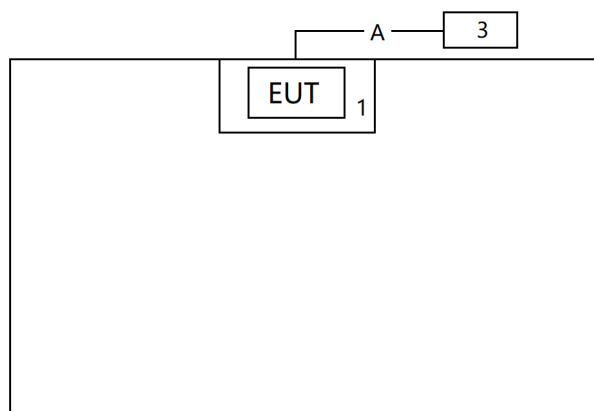
2.1. Test Mode

Mode 1: Transmit by BLE

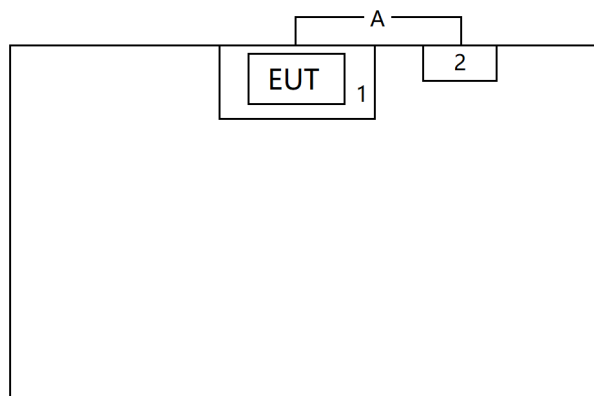
2.2. Test System Connection Diagram

The device was tested per the guidance ANSI C63.10: 2013 was used to reference the appropriate EUT setup for radiated emissions testing and AC line conducted testing.

Connection Diagram – Radiated Emission testing



Connection Diagram – AC Conducted Emissions



Cable Type		Cable Description	
A	USB Serial Cable	Shielded, < 2.0 m	
Product		Manufacturer	Model No.
1	Serial Board	NA	NA
2	Adapter	Newmine	LC203
3	Notebook	Lenovo	E431

Note: The adapter used in the test was from lab.

2.3. Test Software

The test utility software used during testing was “Tera Term”, and the version was 4.106.

2.4. Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15.247
- KDB 558074 D01v05r02
- ANSI C63.10-2013

2.5. Test Environment Condition

Ambient Temperature	15 ~ 35°C
Relative Humidity	20 ~75%RH

3. Antenna Requirements

Excerpt from §15.203 of the FCC Rules/Regulations:

“An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can 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.”

- The antenna of the device is **permanently attached**.
- There are no provisions for connection to an external antenna.

Conclusion:

The unit complies with the requirement of §15.203.

4. Measuring Instrument

Instrument	Manufacturer	Model No.	Asset No.	Cali. Interval	Cali. Due Date	Test Site
EMI Test Receiver	R&S	ESR3	MRTSUE06185	1 year	2022/12/29	SIP-AC1
Anechoic Chamber	RIKEN	SIP-AC1	MRTSUE06554	1 year	2022/12/23	SIP-AC1
Preamplifier	EMCI	EMC051845SE	MRTSUE06600	1 year	2022/11/8	SIP-AC1
Horn Antenna	R&S	HF907	MRTSUE06610	1 year	2022/8/5	SIP-AC1
Thermohygrometer	testo	608-H1	MRTSUE06616	1 year	2022/11/2	SIP-AC1
Thermohygrometer	testo	608-H1	MRTSUE06620	1 year	2022/11/28	SIP-AC1
Preamplifier	EMCI	EMC001330	MRTSUE06643	1 year	2022/1/14	SIP-AC1
				1 year	2023/1/13	SIP-AC1
TRILOG Antenna	Schwarzbeck	VULB 9168	MRTSUE06645	1 year	2022/8/26	SIP-AC1
Loop Antenna	Schwarzbeck	FMZB 1519 B	MRTSUE06937	1 year	2022/3/9	SIP-AC1
Signal Analyzer	Keysight	N9010B	MRTSUE07028	1 year	2022/12/9	SIP-AC1
Preamplifier	Schwarzbeck	BBV 9721	MRTSUE06121	1 year	2022/6/9	SIP-AC3
Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06598	1 year	2022/11/9	SIP-AC3
Horn Antenna	R&S	HF907	MRTSUE06611	1 year	2022/9/12	SIP-AC3
Thermohygrometer	testo	608-H1	MRTSUE06619	1 year	2022/11/2	SIP-AC3
Thermohygrometer	testo	608-H1	MRTSUE06622	1 year	2022/11/28	SIP-AC3
Preamplifier	EMCI	EMC012645SE	MRTSUE06642	1 year	2022/1/14	SIP-AC3
				1 year	2023/1/13	SIP-AC3
TRILOG Antenna	Schwarzbeck	VULB 9168	MRTSUE06646	1 year	2022/8/26	SIP-AC3
Anechoic Chamber	RIKEN	SIP-AC3	MRTSUE06782	1 year	2022/12/23	SIP-AC3
Two-Line V-Network	R&S	ENV216	MRTSUE06003	1 year	2022/6/8	SIP-SR2
EMI Test Receiver	R&S	ESR3	MRTSUE06612	1 year	2022/6/24	SIP-SR2
Four-Line V-Network	R&S	ENV432	MRTSUE06614	1 year	2022/10/10	SIP-SR2
Thermohygrometer	testo	608-H1	MRTSUE06621	1 year	2022/11/28	SIP-SR2
CDNE	Schwarzbeck	CDNE M2	MRTSUE06934	1 year	2023/2/27	SIP-SR2
CDNE	Schwarzbeck	CDNE M3	MRTSUE06935	1 year	2023/2/27	SIP-SR2
50 Ω to 150 Ω Adapter	Schwarzbeck	SR100-6W	MRTSUE06936	1 year	2023/2/27	SIP-SR2
Shielding Room	MIX-BEP	SIP-SR2	MRTSUE06949	/	/	SIP-SR2
Signal Analyzer	Keysight	N9030B	MRTSUE06395	1 year	2022/8/8	SIP-TR1
USB Power Sensor	Keysight	U2021XA	MRTSUE06595	1 year	2022/9/7	SIP-TR1
Temperature Chamber	BAOYT	BYG-408CS	MRTSUE06847	1 year	2023/2/22	SIP-TR1
Thermohygrometer	testo	Testo 608-H1	MRTSUE11022	1 year	2022/11/2	SIP-TR1

Software	Version	Function
EMI Software	V3	EMI Test Software

5. Measurement Uncertainty

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

AC Conducted Emission Measurement
Measurement Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 9kHz~150kHz: 3.74dB 150kHz~30MHz: 3.44dB
Radiated Disturbance
Measurement Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): Horizontal: 30MHz~300MHz: 5.04dB 300MHz~1GHz: 4.95dB 1GHz~40GHz: 6.40dB Vertical: 30MHz~300MHz: 5.24dB 300MHz~1GHz: 6.03dB 1GHz~40GHz: 6.40dB
Spurious Emissions, Conducted
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 0.78dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 1.13dB
Power Spectrum Density
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 1.15dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 0.28%

6. Test Result

6.1. Summary

FCC Section(s)	Test Description	Test Condition	Verdict
15.247(a)(2)	6dB Bandwidth	Conducted	Pass
15.247(b)(3)	Output Power		Pass
15.247(e)	Power Spectral Density		Pass
15.247(d)	Band Edge / Out-of-Band Emissions		Pass
15.205 15.209	General Field Strength (Restricted Bands and Radiated Emission)	Radiated	Pass
15.207	AC Conducted Emissions 150kHz - 30MHz	Line Conducted	Pass

Remark:

1. The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.
2. For radiated emission tests, every axis (X, Y, Z) was also verified. The test results shown in the following sections represent the worst-case emissions.

6.2. 6dB Bandwidth Measurement

6.2.1. Test Limit

The minimum 6dB bandwidth shall be at least 500 kHz.

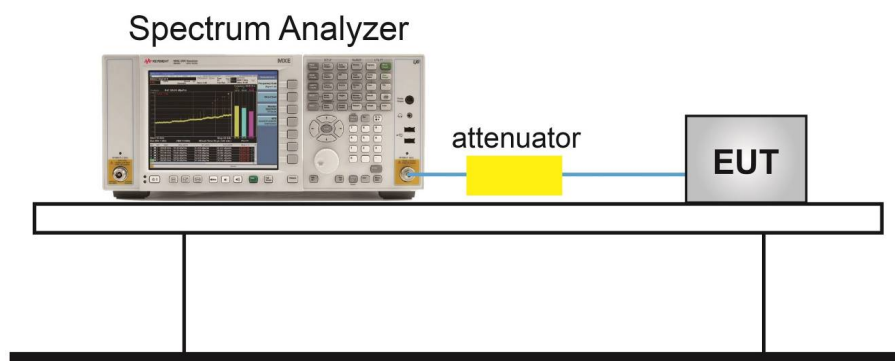
6.2.2. Test Procedure

ANSI C63.10 - 2013 - Section 11.8

6.2.3. Test Setting

1. The Spectrum's automatic bandwidth measurement capability was used to perform the 6dB bandwidth measurement. The "X" dB bandwidth parameter was set to $X = 6$. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. Set RBW = 100 kHz
3. $VBW \geq 3 \times RBW$
4. Detector = Peak
5. Trace mode = Max hold
6. Sweep = Auto couple
7. Allow the trace to stabilize

6.2.4. Test Setup



6.2.5. Test Result

Refer to Appendix A.2.

6.3. Output Power Measurement

6.3.1. Test Limit

The maximum output power shall be less 1 Watt (30dBm).

The conducted output power limit specified in paragraph FCC Part 15.247(b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs FCC Part 15.247(b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

6.3.2. Test Procedure

ANSI C63.10 - 2013 - Section 11.9.1.3 & 11.9.2.3.2

6.3.3. Test Setting

PKPM1 Peak Power meter Measurement

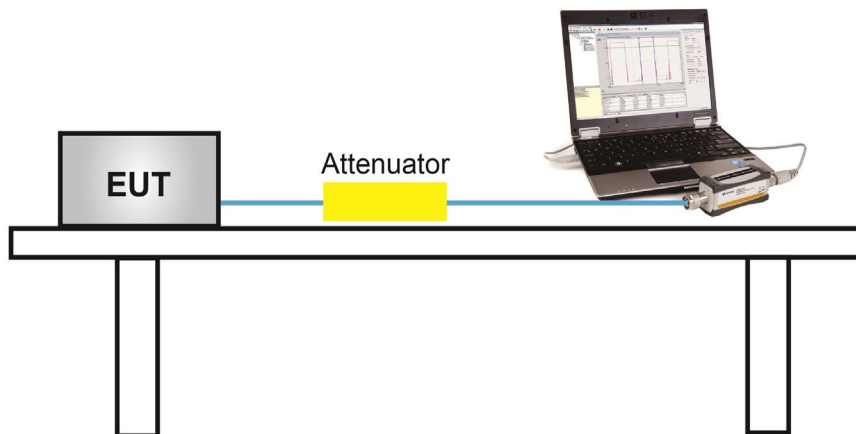
The maximum peak conducted output power may be measured using a broadband peak RF power meter.

The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall use a fast-responding diode detector.

Average Power Measurement

Average power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.

6.3.4. Test Setup



6.3.5. Test Result

Refer to Appendix A.3.

6.4. Power Spectral Density Measurement

6.4.1. Test Limit

The maximum permissible power spectral density is 8dBm in any 3 kHz band.

The same method of determining the conducted output power shall be used to determine the power spectral density.

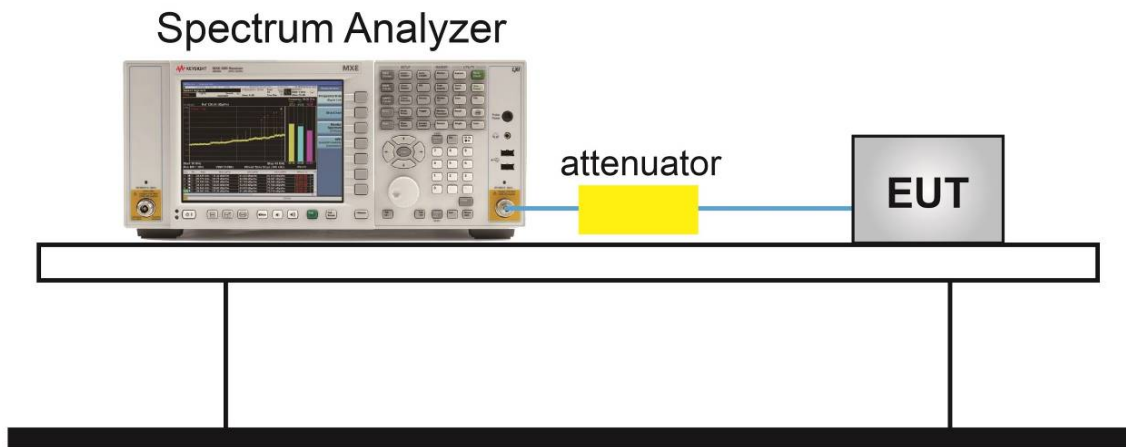
6.4.2. Test Procedure

ANSI C63.10 - 2013 - Section 11.10.2

6.4.3. Test Setting

1. Measure the duty cycle (x) of the transmitter output signal.
2. Set instrument center frequency to DTS channel center frequency.
3. Set span to at least 1.5 times the OBW.
4. RBW = 10 kHz.
5. VBW = 30 kHz.
6. Detector = RMS.
7. Ensure that the number of measurement points in the sweep $\geq 2 \times \text{span}/\text{RBW}$.
8. Sweep time = auto couple.
9. Don't use sweep triggering. Allow sweep to "free run".
10. Employ trace averaging (RMS) mode over a minimum of 100 traces.
11. Use the peak marker function to determine the maximum amplitude level.
12. Add $10 \log (1/x)$, where x is the duty cycle measured in step (a), to the measured PSD to compute the average PSD during the actual transmission time. If measured value exceeds requirement specified by regulatory agency, then reduce RBW (but no less than 3 kHz) and repeat (note that this may require zooming in on the emission of interest and reducing the span to meet the minimum measurement point requirement as the RBW is reduced).

6.4.4. Test Setup



6.4.5. Test Result

Refer to Appendix A.4.

6.5. Conducted Band Edge and Out-of-Band Emissions Measurement

6.5.1. Test Limit

The limit for out-of-band spurious emissions at the band edge is 20dB below the fundamental emission level, as determined from the in-band power measurement of the DTS channel performed in a 100 kHz bandwidth per the PSD procedure.

6.5.2. Test Procedure

ANSI C63.10-2013 - Section 11.11

6.5.3. Test Setting

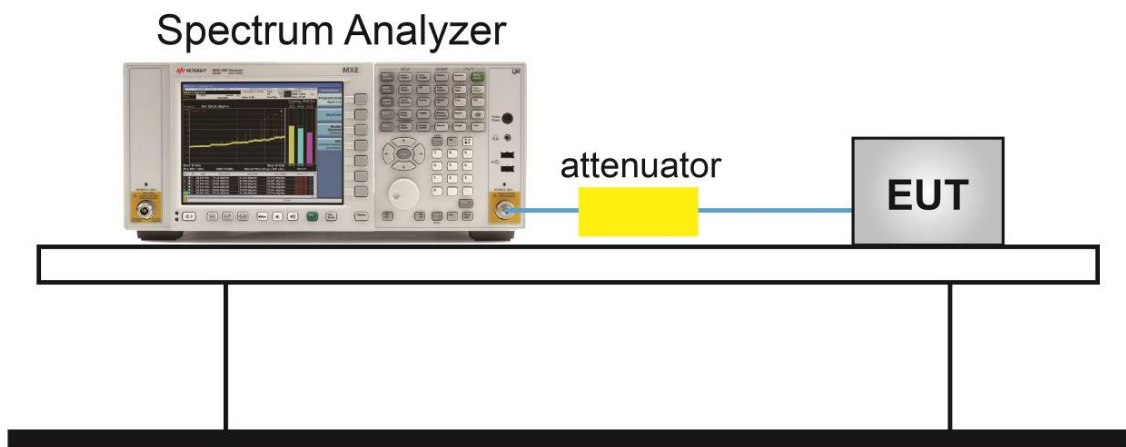
Reference level measurement

1. Set instrument center frequency to DTS channel center frequency
2. Set the span to ≥ 1.5 times the DTS bandwidth
3. Set the RBW = 100 kHz
4. Set the VBW $\geq 3 \times$ RBW
5. Detector = peak
6. Sweep time = auto couple
7. Trace mode = max hold
8. Allow trace to fully stabilize

Emission level measurement

1. Set the center frequency and span to encompass frequency range to be measured
2. RBW = 100kHz
3. VBW = 300kHz
4. Detector = Peak
5. Trace mode = max hold
6. Sweep time = auto couple
7. The trace was allowed to stabilize

6.5.4. Test Setup



6.5.5. Test Result

Refer to Appendix A.5.

6.6. Radiated Spurious Emission Measurement

6.6.1. Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

6.6.2. Test Procedure

ANSI C63.10 - 2013 - Section 11.11 & 11.12

ANSI C63.10 - 2013 - Section 6.3 (General Requirements)

ANSI C63.10 - 2013 - Section 6.4 (Standard test method below 30MHz)

ANSI C63.10 - 2013 - Section 6.5 (Standard test method above 30MHz to 1GHz)

ANSI C63.10 - 2013 - Section 6.6 (Standard test method above 1GHz)

6.6.3. Test Setting

Table 1 - RBW as a function of frequency

Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000MHz	1MHz

Quasi-Peak Measurements below 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = as specified in Table 1
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

Peak Measurements above 1GHz

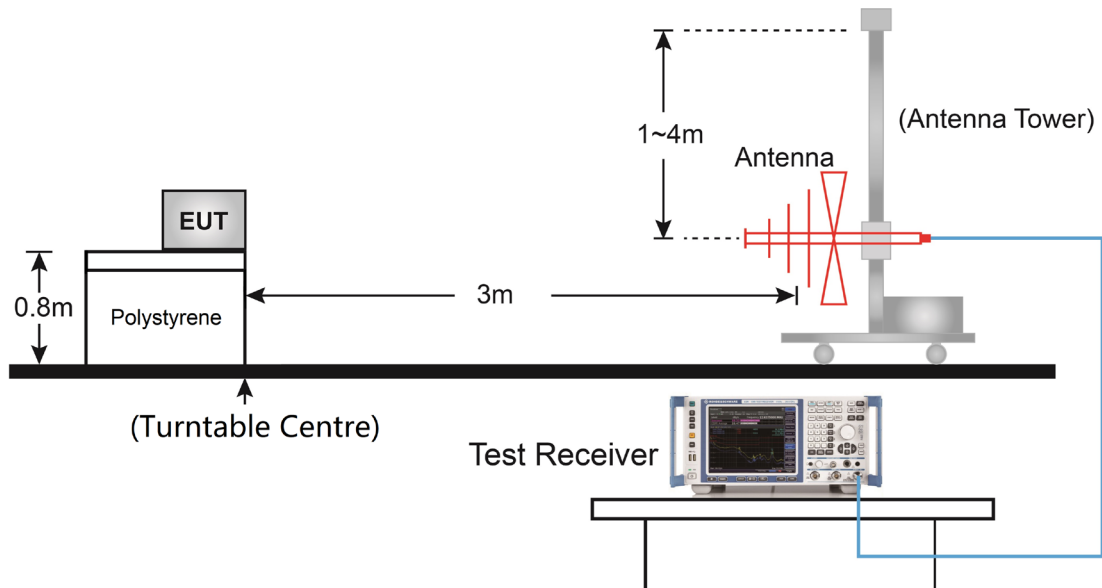
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Measurements above 1GHz (Method VB)

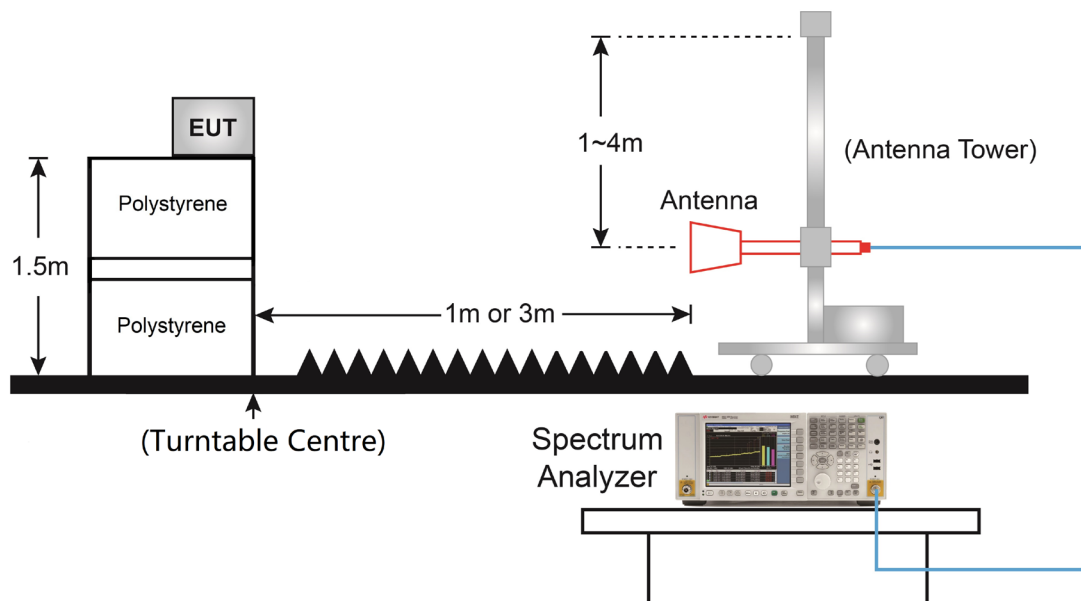
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle $\geq 98\%$, set VBW = 10 Hz.
If the EUT duty cycle is $< 98\%$, set VBW $\geq 1/T$. T is the minimum transmission duration.
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Trace was allowed to stabilize

6.6.4. Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



6.6.5. Test Result

Refer to Appendix A.6.

6.7. Radiated Restricted Band Edge Measurement

6.7.1. Test Limit

For 15.205 requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a).

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)
13.36 - 13.41	--	--	--

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

6.7.2. Test Procedure

ANSI C63.10-2013 Section 6.3

ANSI C63.10-2013 Section 6.6

ANSI C63.10-2013 Section 11.13

6.7.3. Test Setting

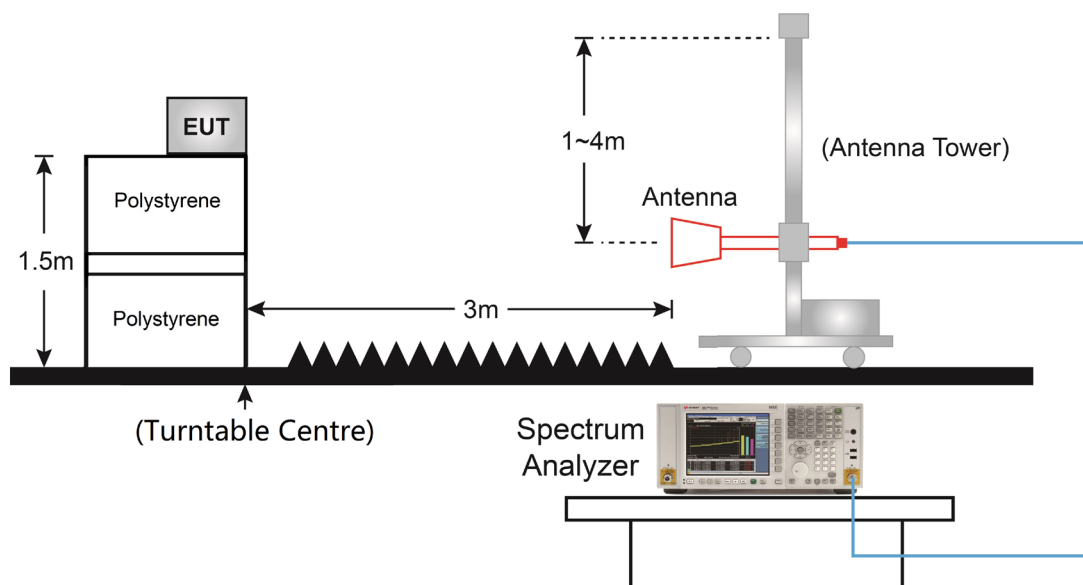
Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW $\geq 1/T$
4. As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to "Voltage" regardless of the display mode
5. Detector = Peak
6. Sweep time = auto
7. Trace mode = max hold
8. Allow max hold to run for at least 50 times (1/duty cycle) traces

6.7.4. Test Setup



6.7.5. Test Result

Refer to Appendix A.7.

6.8. AC Conducted Emissions Measurement

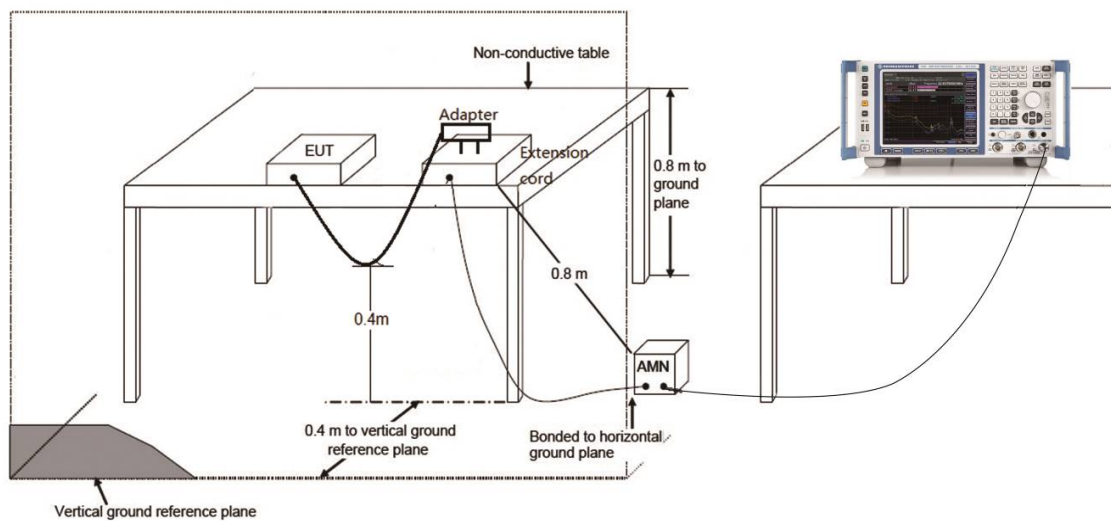
6.8.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.207 Limits		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Note 1: The lower limit shall apply at the transition frequencies.

Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

6.8.2. Test Setup



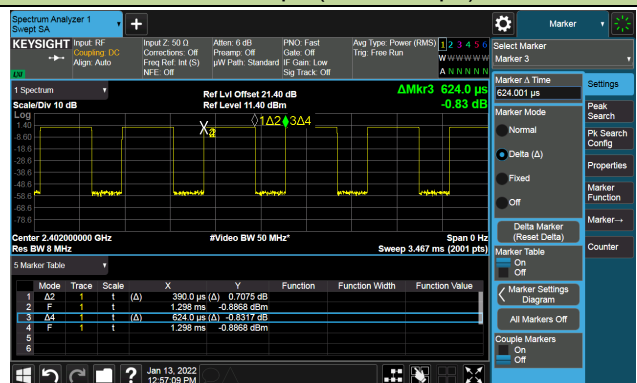
6.8.3. Test Result

Refer to Appendix A.8.

Appendix A - Test Result

A.1 Duty Cycle Test Result

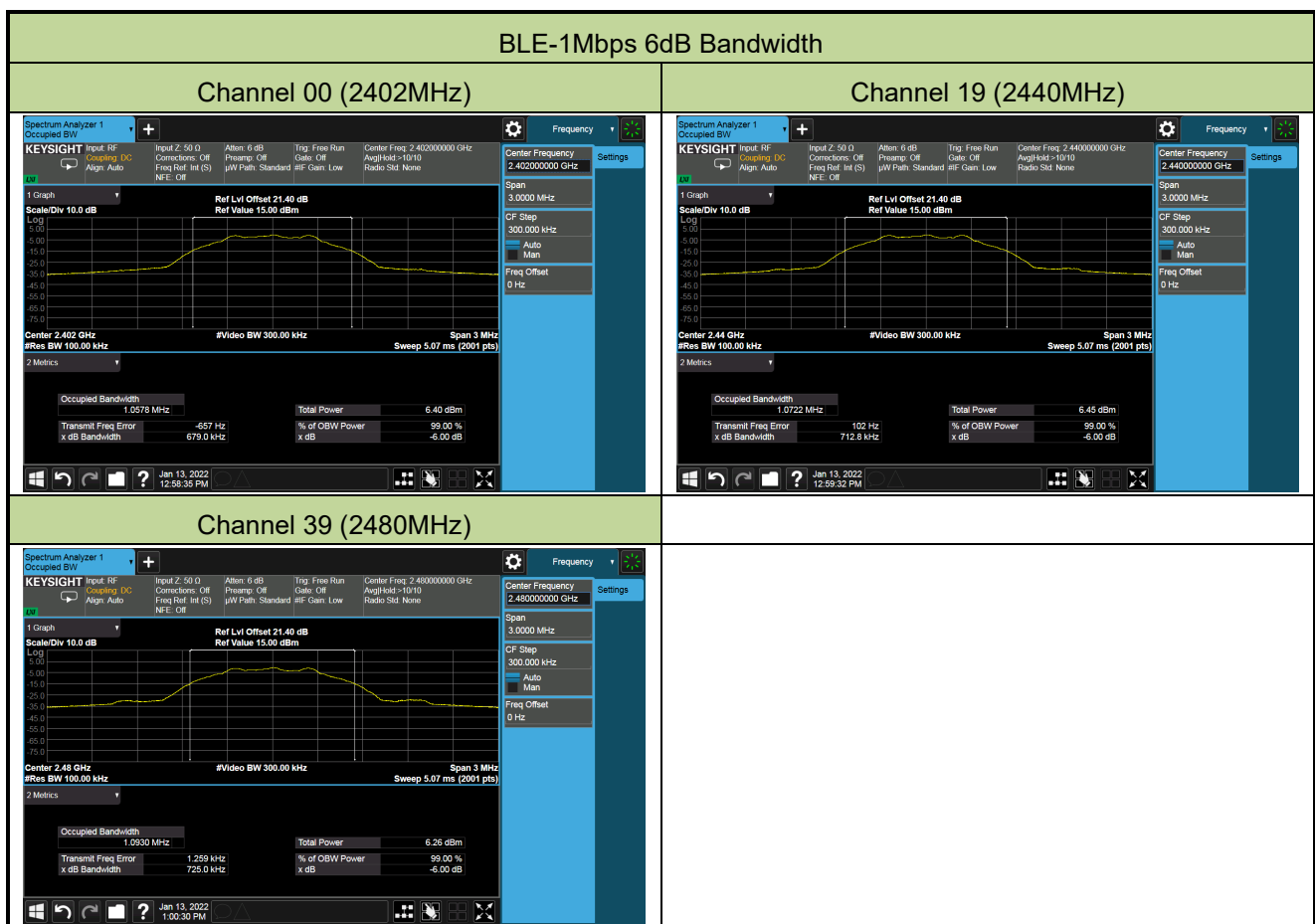
Test Site	SIP-TR1	Test Engineer	Nandy Zhang
Test Date	2022/01/13		

Test Mode	Duty Cycle
BLE-1Mbps	62.50%
Duty Cycle (T = Transmission Duration)	
BLE-1Mbps (T = 390.0µs)	
	

A.2 6dB Bandwidth Test Result

Test Site	SIP-TR1	Test Engineer	Nandy Zhang
Test Date	2022/01/13		

Test Mode	Data Rate	Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
BLE	1Mbps	00	2402	0.679	≥ 0.5
BLE	1Mbps	19	2440	0.713	≥ 0.5
BLE	1Mbps	39	2480	0.725	≥ 0.5



A.3 Output Power Test Result

Test Site	SIP-TR1	Test Engineer	Nandy Zhang
Test Date	2022/01/11		

Test Result of Peak Output Power

Test Mode	Data Rate	Channel No.	Frequency (MHz)	Peak Power (dBm)	Limit (dBm)	Result
BLE	1Mbps	00	2402	1.75	≤ 30.00	Pass
BLE	1Mbps	19	2440	1.65	≤ 30.00	Pass
BLE	1Mbps	39	2480	1.58	≤ 30.00	Pass

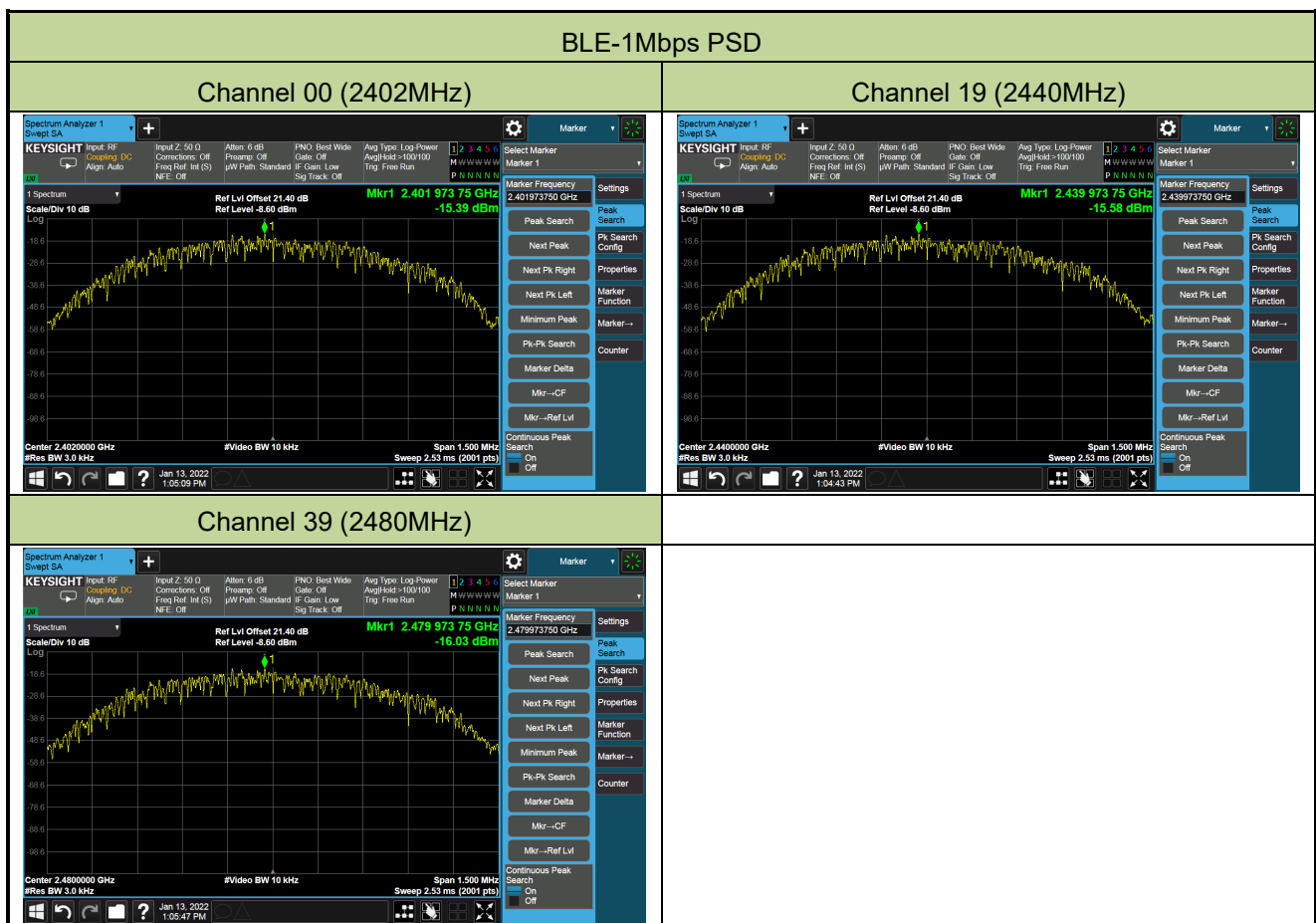
Test Result of Average Output Power (Reporting Only)

Test Mode	Data Rate	Channel No.	Frequency (MHz)	Average Power (dBm)	Limit (dBm)	Result
BLE	1Mbps	00	2402	0.31	≤ 30.00	Pass
BLE	1Mbps	19	2440	0.18	≤ 30.00	Pass
BLE	1Mbps	39	2480	0.10	≤ 30.00	Pass

A.4 Power Spectral Density Test Result

Test Site	SIP-TR1	Test Engineer	Nandy Zhang
Test Date	2022/01/13		

Test Mode	Data Rate	Channel No.	Frequency (MHz)	PSD Result (dBm / 3kHz)	Limit (dBm / 3kHz)	Result
BLE	1Mbps	00	2402	-15.39	≤ 8.00	Pass
BLE	1Mbps	19	2440	-15.58	≤ 8.00	Pass
BLE	1Mbps	39	2480	-16.03	≤ 8.00	Pass



A.5 Conducted Band Edge and Out-of-Band Emissions Test Result

Test Site	SIP-TR1	Test Engineer	Nandy Zhang
Test Date	2022/01/13		

Test Mode	Data Rate / Mbps	Channel No.	Frequency (MHz)	Limit (dBc)	Result
BLE	1	00	2402	20	Pass
BLE	1	19	2440	20	Pass
BLE	1	39	2480	20	Pass



Channel 19 (2440MHz)

100kHz PSD Reference Level



Spurious Emission 30MHz ~ 25GHz



Channel 39 (2480MHz)

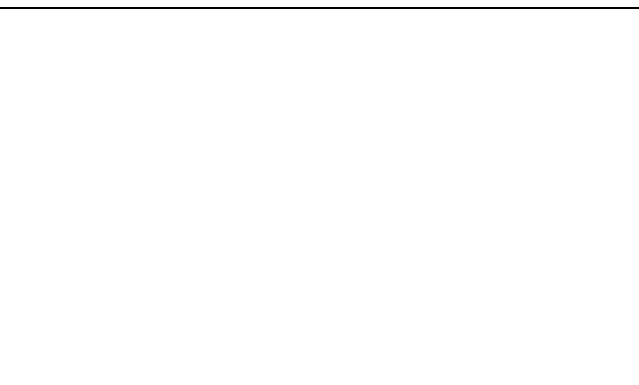
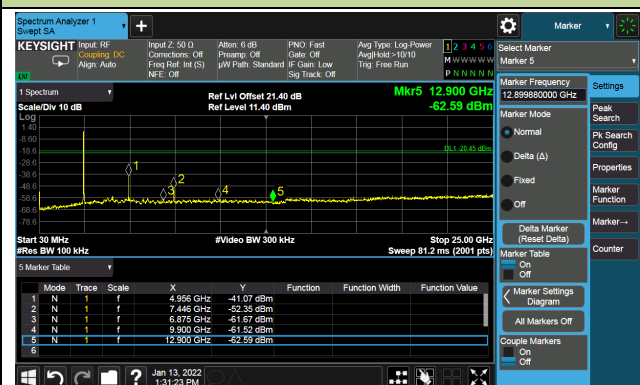
100kHz PSD Reference Level



High Band Edge



Spurious Emission 30MHz ~ 25GHz



A.6 Radiated Spurious Emission Test Result

Test Site	SIP-AC3 & SIP-AC1	Test Engineer	Stephen Dong & Wayen Wang
Test Date	2022/01/11 ~ 2022/01/26	Test Mode:	BLE-1Mbps
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

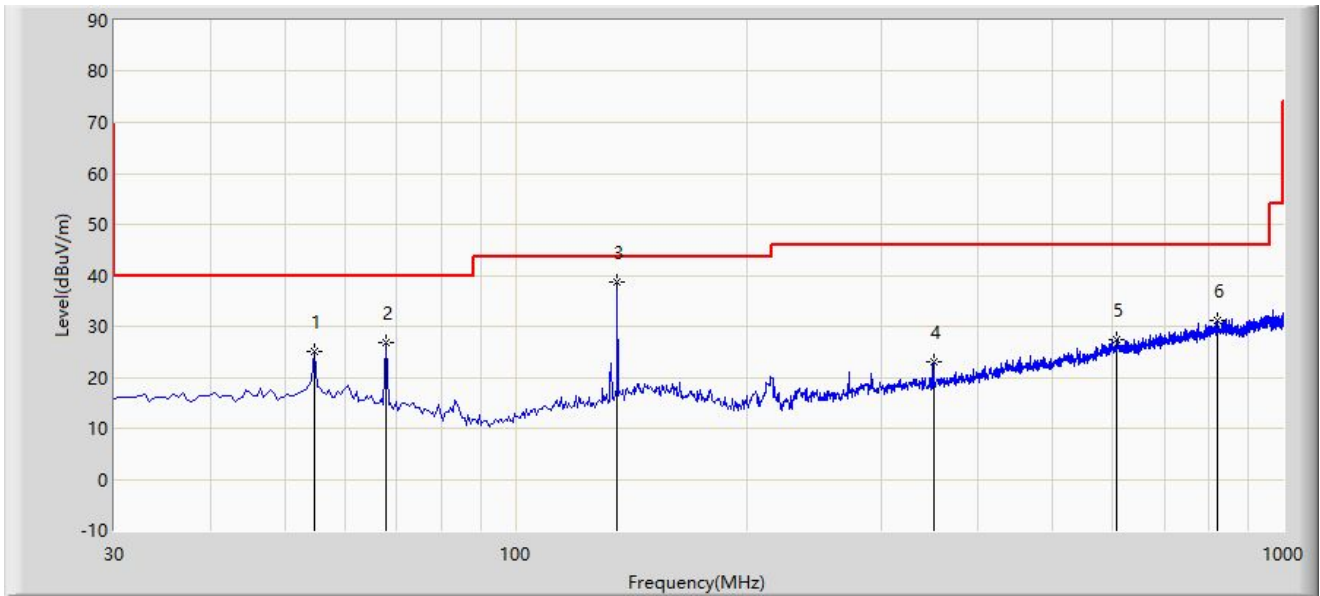
Test Channel	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
00	4808.0	53.2	-9.3	43.9	74.0	-30.1	Peak	Horizontal
	7587.5	48.2	-6.1	42.1	74.0	-31.9	Peak	Horizontal
	12152.0	48.4	-3.4	45.0	74.0	-29.0	Peak	Horizontal
	4799.5	54.3	-9.3	45.0	74.0	-29.0	Peak	Vertical
	10749.5	46.9	-3.0	43.9	74.0	-30.1	Peak	Vertical
	11897.0	47.2	-3.2	44.0	74.0	-30.0	Peak	Vertical
19	4884.5	61.8	-9.5	52.3	74.0	-21.7	Peak	Horizontal
	11098.0	49.6	-3.4	46.2	74.0	-27.8	Peak	Horizontal
	12169.0	49.0	-2.2	46.8	74.0	-27.2	Peak	Horizontal
	4876.0	63.4	-9.6	53.8	74.0	-20.2	Peak	Vertical
	4876.0	58.7	-9.6	49.1	54.0	-4.9	Average	Vertical
	8097.5	51.3	-4.7	46.6	74.0	-27.4	Peak	Vertical
	11914.0	49.0	-2.6	46.4	74.0	-27.6	Peak	Vertical
39	4961.0	55.7	-9.3	46.4	74.0	-27.6	Peak	Horizontal
	11047.0	47.3	-3.4	43.9	74.0	-30.1	Peak	Horizontal
	11871.5	47.8	-3.9	43.9	74.0	-30.1	Peak	Horizontal
	4961.0	58.5	-9.3	49.2	74.0	-24.8	Peak	Vertical
	10817.5	47.0	-3.1	43.9	74.0	-30.1	Peak	Vertical
	12160.5	47.9	-3.4	44.5	74.0	-29.5	Peak	Vertical

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

The Result of Radiated Emission below 1GHz:

Site: SIP-AC1	Time: 2022/01/10
Limit: FCC_Part15.209_RSE(3m)	Engineer: Stephen Dong
Probe: SIP-AC1_VULB 9168 _30-1000MHz	Polarity: Horizontal
EUT: Pet activity monitor	Power: By Notebook
Test Mode: Transmit at 2402MHz by BLE	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1			54.735	24.939	7.050	-15.061	40.000	17.889	PK
2			67.830	26.930	10.766	-13.070	40.000	16.164	PK
3		*	135.730	38.608	21.525	-4.892	43.500	17.083	PK
4			350.100	23.036	3.735	-22.964	46.000	19.301	PK
5			605.695	27.481	1.741	-18.519	46.000	25.739	PK
6			821.520	31.278	2.385	-14.722	46.000	28.893	PK

Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

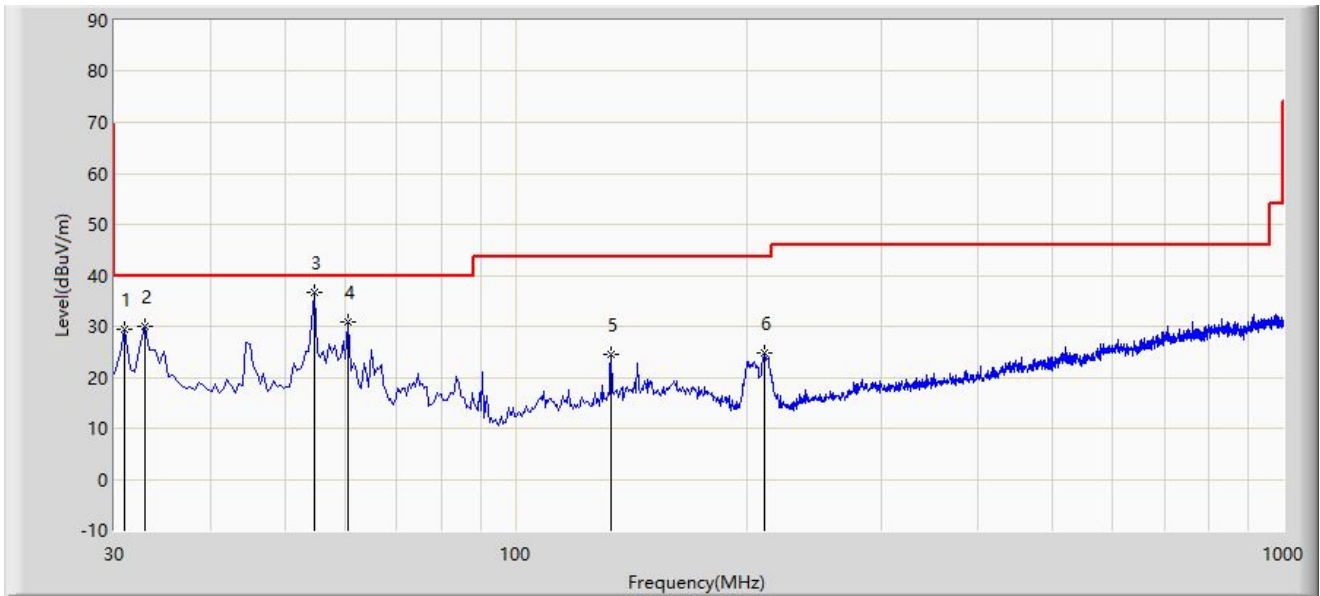
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: QP measurement was not performed when peak measure level was lower than the QP limit.

Note 3: The amplitude of radiated emissions (frequency range from 9kHz to 30MHz and 18GHz to 25GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value.

Therefore, the data is not presented in the report.

Site: SIP-AC1	Time: 2022/01/10
Limit: FCC_Part15.209_RSE(3m)	Engineer: Stephen Dong
Probe: SIP-AC1_VULB 9168 _30-1000MHz	Polarity: Vertical
EUT: Pet activity monitor	Power: By Notebook
Test Mode: Transmit at 2402MHz by BLE	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1			30.970	29.344	12.875	-10.656	40.000	16.469	PK
2			32.910	30.013	13.137	-9.987	40.000	16.876	PK
3		*	54.735	36.642	18.753	-3.358	40.000	17.889	PK
4			60.555	30.976	13.512	-9.024	40.000	17.464	PK
5			133.305	24.433	7.666	-19.067	43.500	16.767	PK
6			211.390	24.752	10.281	-18.748	43.500	14.471	PK

Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

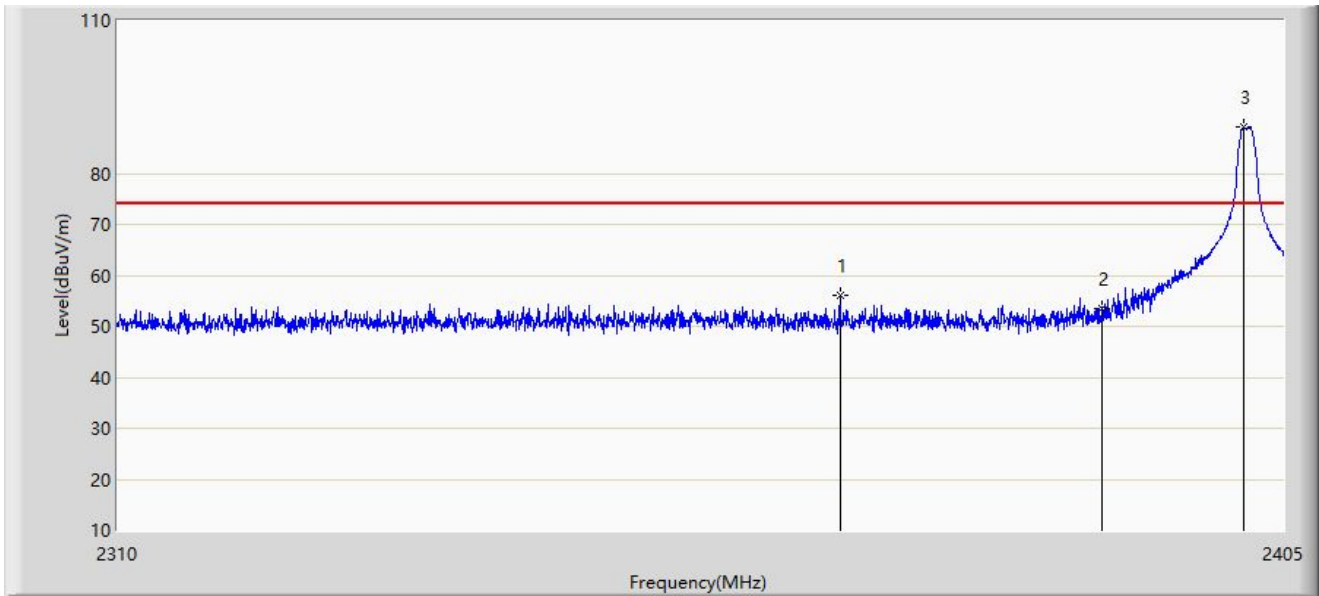
Note 2: QP measurement was not performed when peak measure level was lower than the QP limit.

Note 3: The amplitude of radiated emissions (frequency range from 9kHz to 30MHz and 18GHz to 25GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value.

Therefore, the data is not presented in the report.

A.7 Radiated Restricted Band Edge Test Result

Site: SIP-AC1	Time: 2022/01/11
Limit: FCC_Part15.209_RE(3m)	Engineer: Kyrie Xie
Probe: SIP-AC1_HF907_102862_1-18GHz	Polarity: Horizontal
EUT: Pet activity monitor	Power: By Notebook
Test Mode: Transmit at 2402MHz by BLE	

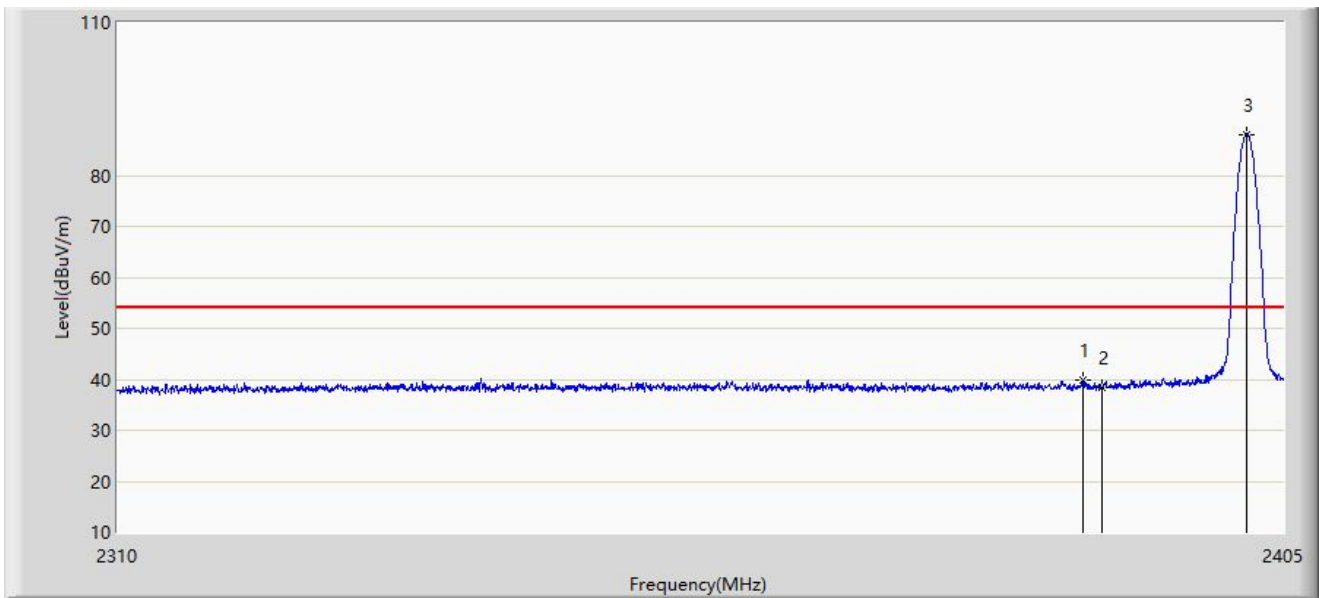


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1			2368.425	55.989	24.587	-18.011	74.000	31.401	PK
2			2390.000	53.470	21.881	-20.530	74.000	31.588	PK
3		*	2401.770	89.009	57.337	N/A	N/A	31.672	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: SIP-AC1	Time: 2022/01/11
Limit: FCC_Part15.209_RE(3m)	Engineer: Kyrie Xie
Probe: SIP-AC1_HF907_102862_1-18GHz	Polarity: Horizontal
EUT: Pet activity monitor	Power: By Notebook
Test Mode: Transmit at 2402MHz by BLE	

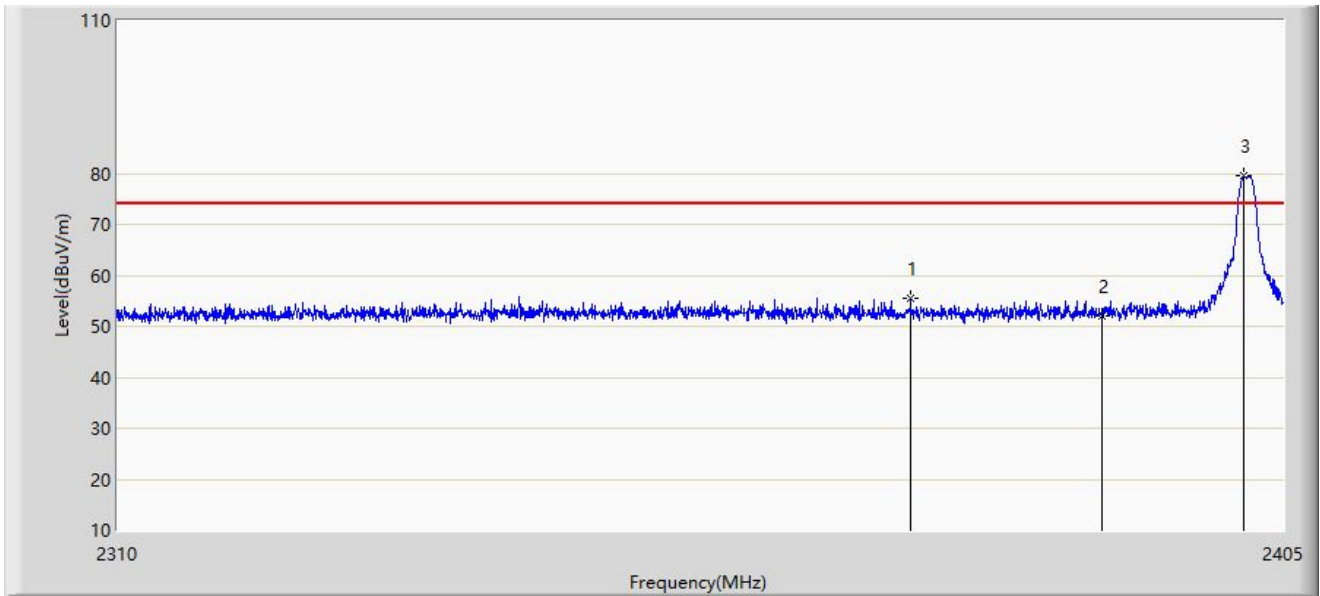


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1			2388.375	39.904	8.345	-14.096	54.000	31.559	AV
2			2390.000	38.349	6.760	-15.651	54.000	31.588	AV
3		*	2401.913	88.112	56.440	N/A	N/A	31.673	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: SIP-AC1	Time: 2022/01/11
Limit: FCC_Part15.209_RE(3m)	Engineer: Kyrie Xie
Probe: SIP-AC1_HF907_102862_1-18GHz	Polarity: Vertical
EUT: Pet activity monitor	Power: By Notebook
Test Mode: Transmit at 2402MHz by BLE	

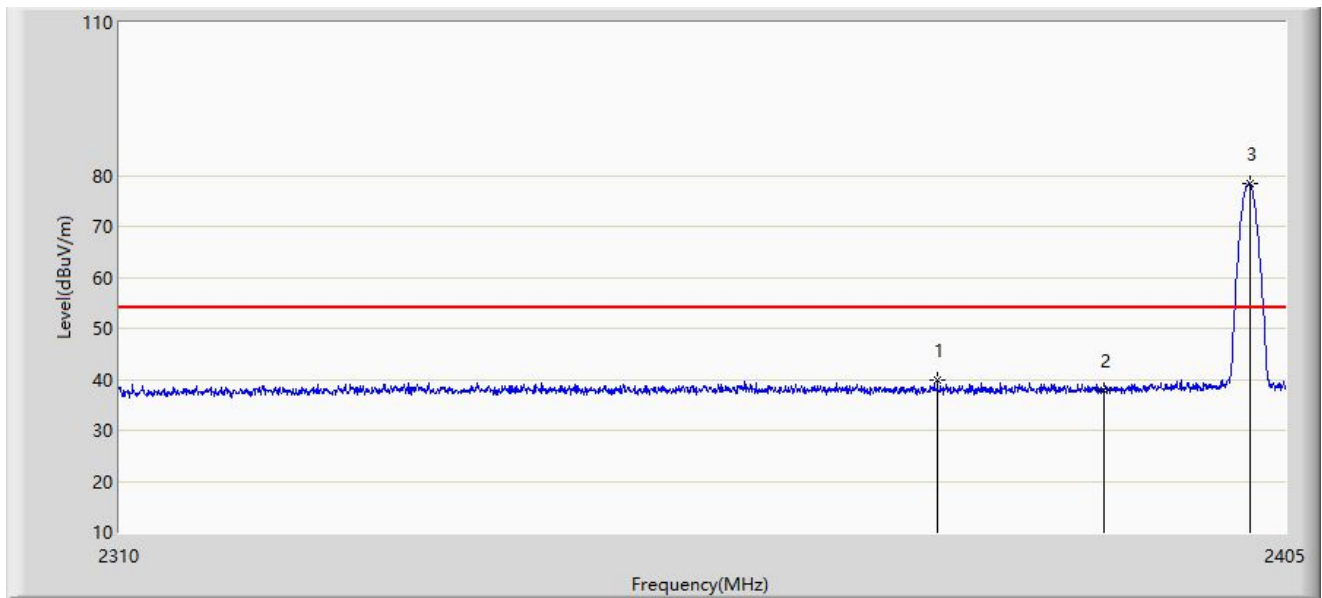


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1			2374.220	55.606	24.240	-18.394	74.000	31.365	PK
2			2390.000	52.116	20.527	-21.884	74.000	31.588	PK
3		*	2401.722	79.437	47.765	N/A	N/A	31.672	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: SIP-AC1	Time: 2022/01/11
Limit: FCC_Part15.209_RE(3m)	Engineer: Kyrie Xie
Probe: SIP-AC1_HF907_102862_1-18GHz	Polarity: Vertical
EUT: Pet activity monitor	Power: By Notebook
Test Mode: Transmit at 2402MHz by BLE	

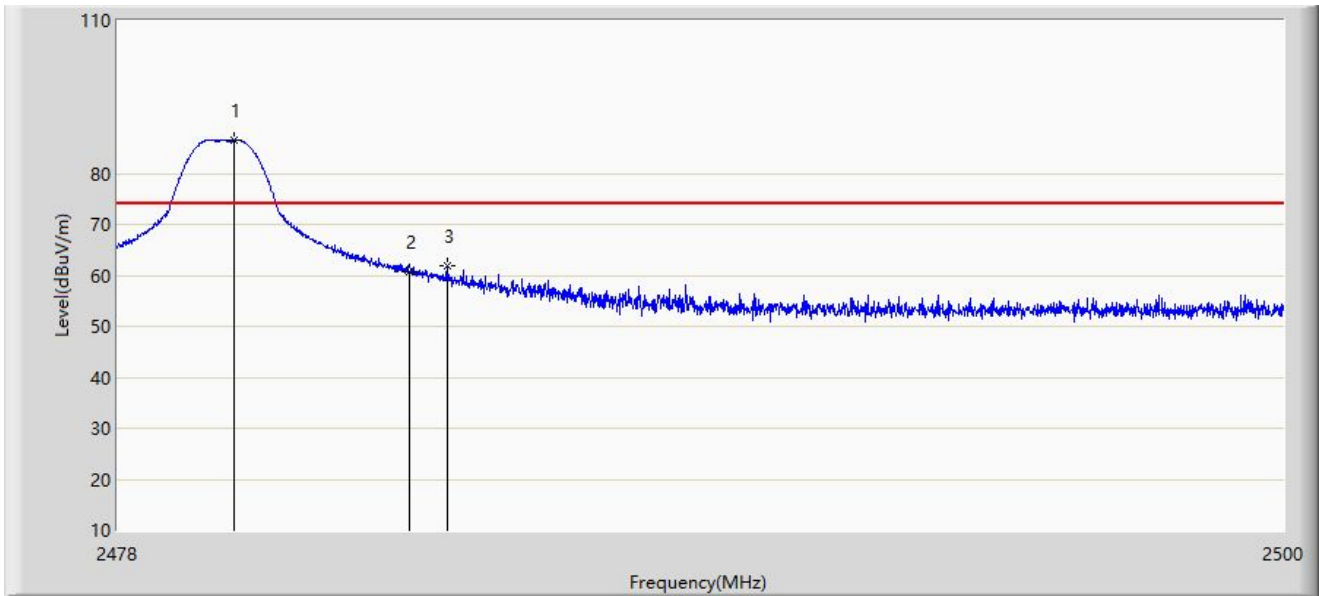


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1			2376.262	39.711	8.358	-14.289	54.000	31.353	AV
2			2390.000	37.740	6.151	-16.260	54.000	31.588	AV
3		*	2402.055	78.481	46.809	N/A	N/A	31.672	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: SIP-AC1	Time: 2022/01/11
Limit: FCC_Part15.209_RE(3m)	Engineer: Kyrie Xie
Probe: SIP-AC1_HF907_102862_1-18GHz	Polarity: Horizontal
EUT: Pet activity monitor	Power: By Notebook
Test Mode: Transmit at 2480MHz by BLE	

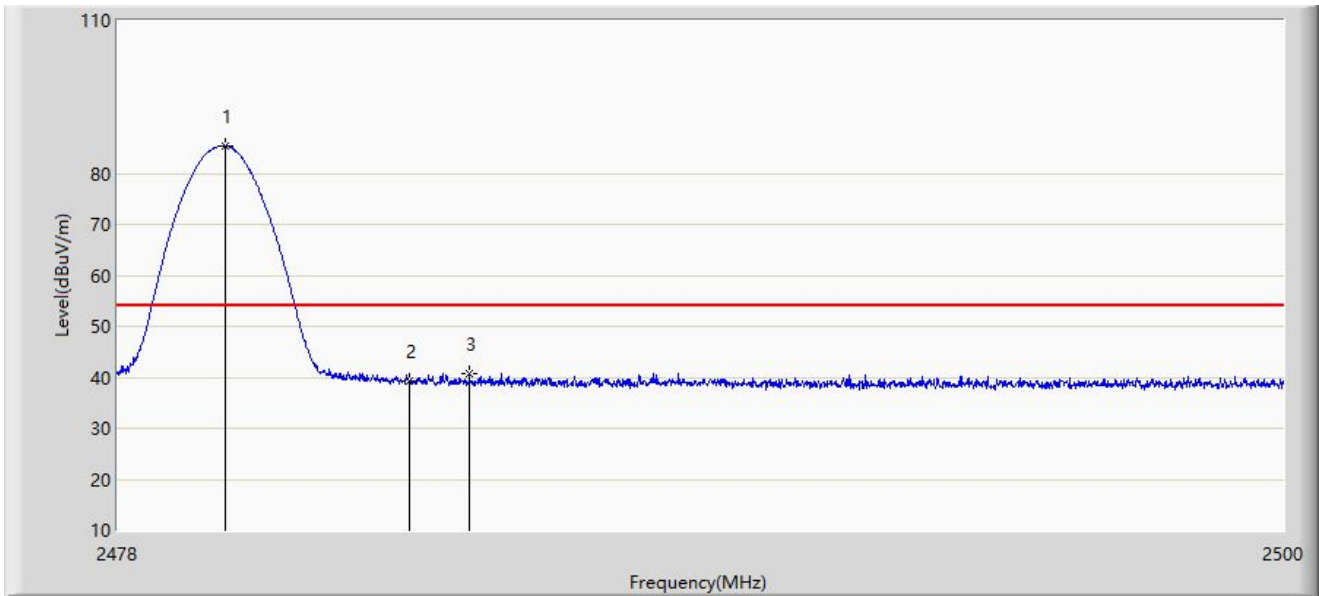


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1		*	2480.200	86.494	54.621	N/A	N/A	31.873	PK
2			2483.500	60.690	28.818	-13.310	74.000	31.872	PK
3			2484.204	61.985	30.113	-12.015	74.000	31.872	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: SIP-AC1	Time: 2022/01/11
Limit: FCC_Part15.209_RE(3m)	Engineer: Kyrie Xie
Probe: SIP-AC1_HF907_102862_1-18GHz	Polarity: Horizontal
EUT: Pet activity monitor	Power: By Notebook
Test Mode: Transmit at 2480MHz by BLE	

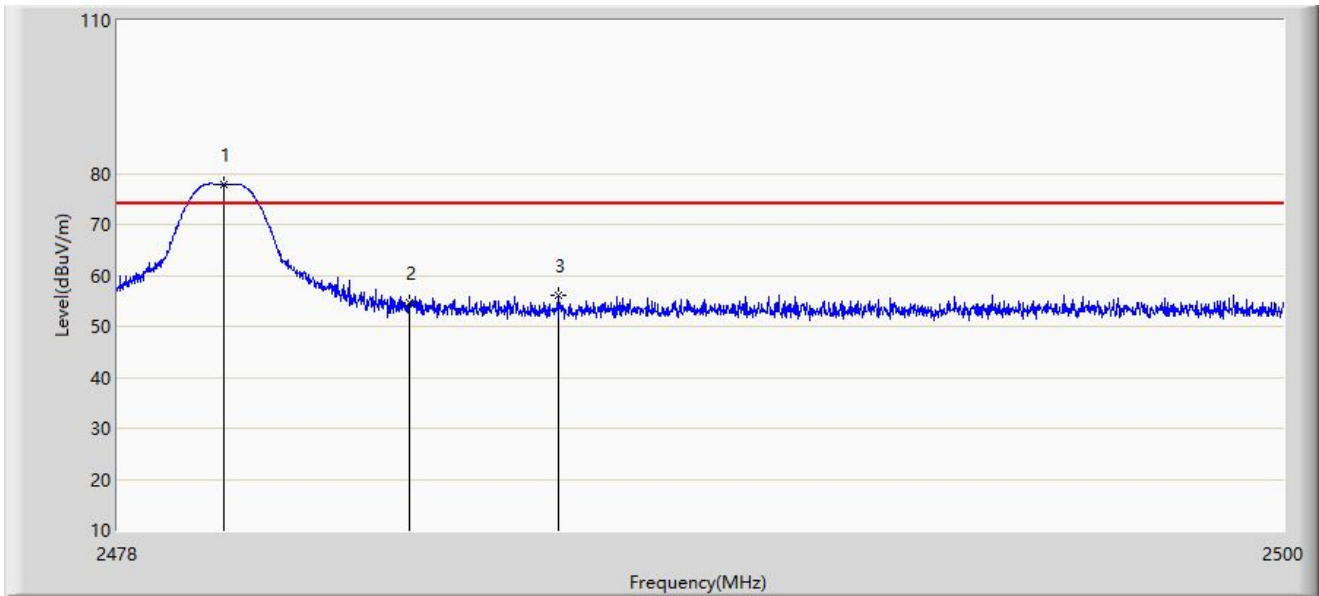


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		*	2480.035	85.389	53.516	N/A	N/A	31.873	AV
2			2483.500	39.149	7.277	-14.851	54.000	31.872	AV
3			2484.622	40.727	8.855	-13.273	54.000	31.872	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: SIP-AC1	Time: 2022/01/11
Limit: FCC_Part15.209_RE(3m)	Engineer: Kyrie Xie
Probe: SIP-AC1_HF907_102862_1-18GHz	Polarity: Vertical
EUT: Pet activity monitor	Power: By Notebook
Test Mode: Transmit at 2480MHz by BLE	

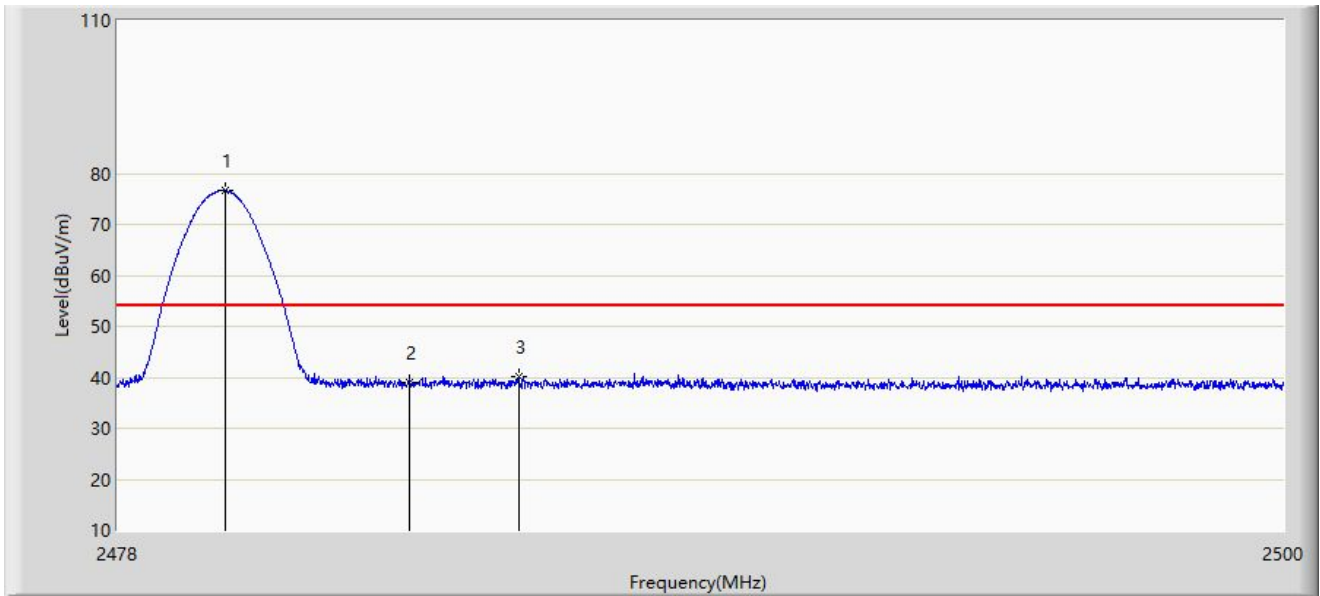


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1		*	2480.002	77.870	45.997	N/A	N/A	31.874	PK
2			2483.500	54.568	22.696	-19.432	74.000	31.872	PK
3			2486.294	55.978	24.107	-18.022	74.000	31.872	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: SIP-AC1	Time: 2022/01/11
Limit: FCC_Part15.209_RE(3m)	Engineer: Kyrie Xie
Probe: SIP-AC1_HF907_102862_1-18GHz	Polarity: Vertical
EUT: Pet activity monitor	Power: By Notebook
Test Mode: Transmit at 2480MHz by BLE	



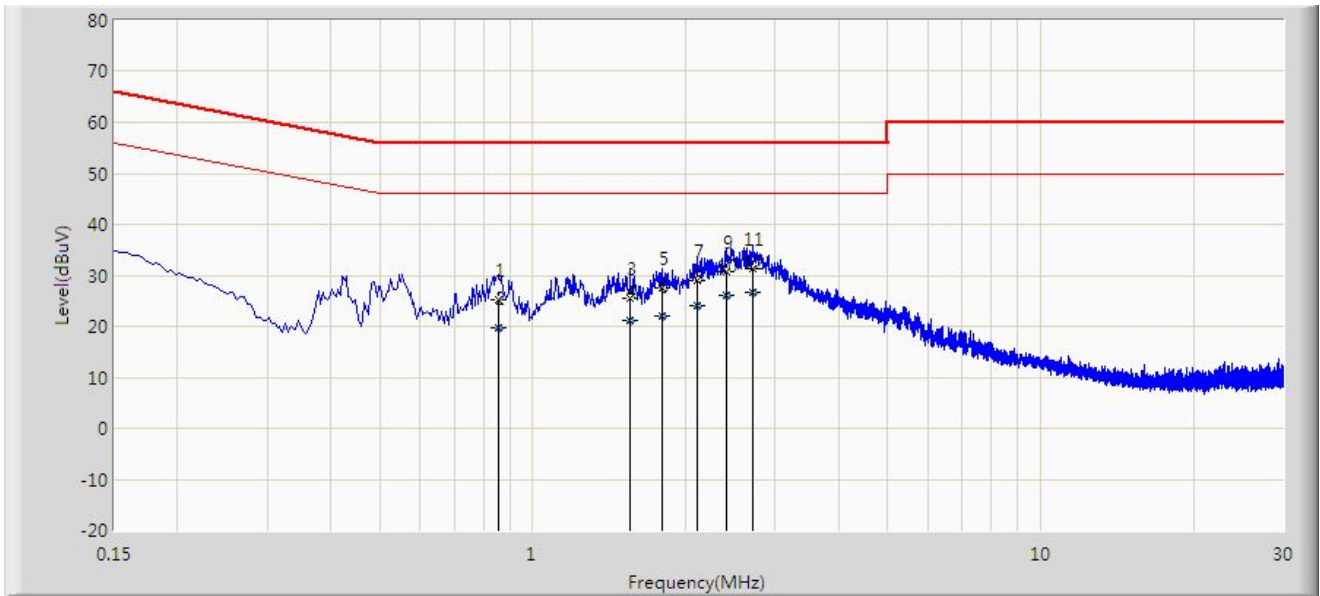
No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		*	2480.035	76.624	44.751	N/A	N/A	31.873	AV
2			2483.500	38.876	7.004	-15.124	54.000	31.872	AV
3			2485.557	40.071	8.199	-13.929	54.000	31.872	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

A.8 AC Conducted Emissions Test Result

Site: SIP-SR2	Time: 2022/01/18
Limit: FCC_Part15.207_CE_AC Power	Engineer: Barry Wu
Probe: SIP-SR2-ENV216_101684_E	Polarity: Neutral
EUT: Pet activity monitor	Power: AC 120V/60Hz
Test Mode: Transmit at 2402MHz by BLE	

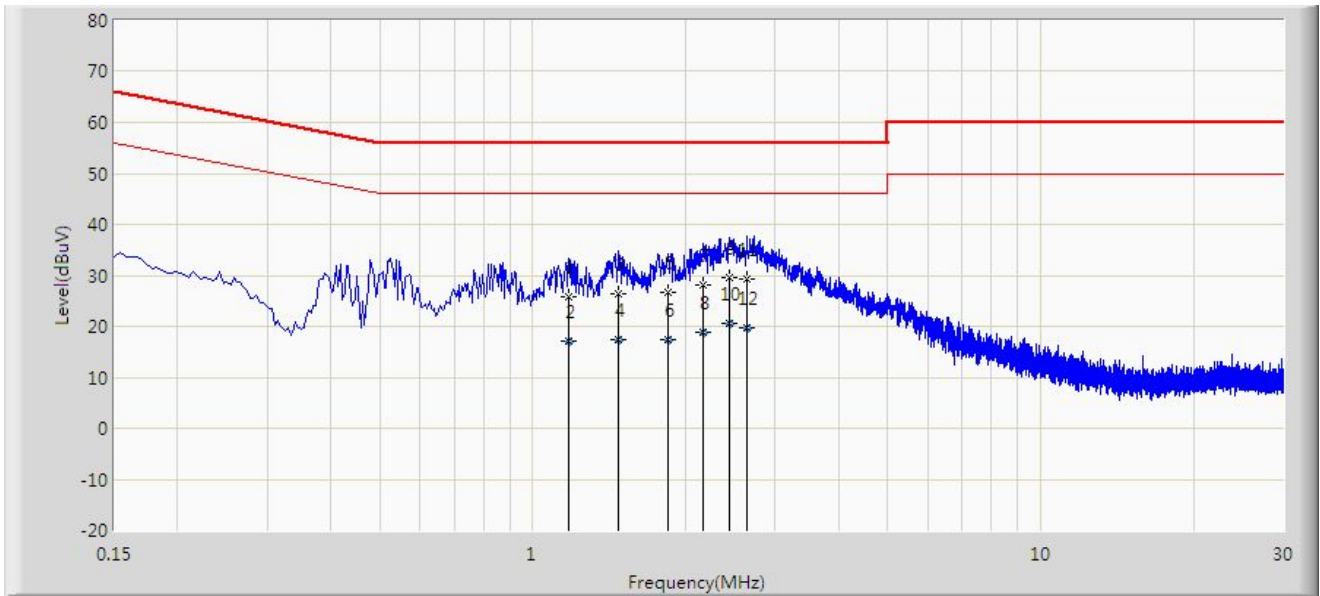


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV)	Factor (dB)	Type
1			0.854	25.142	15.301	-30.858	56.000	9.842	QP
2			0.854	19.844	10.003	-26.156	46.000	9.842	AV
3			1.554	25.427	15.524	-30.573	56.000	9.903	QP
4			1.554	21.148	11.245	-24.852	46.000	9.903	AV
5			1.794	27.414	17.496	-28.586	56.000	9.918	QP
6			1.794	21.957	12.039	-24.043	46.000	9.918	AV
7			2.102	29.060	19.124	-26.940	56.000	9.936	QP
8			2.102	23.980	14.044	-22.020	46.000	9.936	AV
9			2.402	30.784	20.798	-25.216	56.000	9.986	QP
10			2.402	26.058	16.072	-19.942	46.000	9.986	AV
11			2.718	31.283	21.311	-24.717	56.000	9.972	QP
12		*	2.718	26.630	16.659	-19.370	46.000	9.972	AV

Note: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

Site: SIP-SR2	Time: 2022/01/18
Limit: FCC_Part15.207_CE_AC Power	Engineer: Barry Wu
Probe: SIP-SR2-ENV216_101684_E	Polarity: Line
EUT: Pet activity monitor	Power: AC 120V/60Hz
Test Mode: Transmit at 2402MHz by BLE	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV)	Factor (dB)	Type
1			1.174	25.722	15.851	-30.278	56.000	9.871	QP
2			1.174	17.013	7.142	-28.987	46.000	9.871	AV
3			1.474	26.442	16.543	-29.558	56.000	9.899	QP
4			1.474	17.448	7.549	-28.552	46.000	9.899	AV
5			1.842	26.522	16.601	-29.478	56.000	9.920	QP
6			1.842	17.500	7.580	-28.500	46.000	9.920	AV
7			2.170	28.197	18.257	-27.803	56.000	9.940	QP
8			2.170	18.854	8.914	-27.146	46.000	9.940	AV
9			2.430	29.649	19.684	-26.351	56.000	9.965	QP
10		*	2.430	20.614	10.648	-25.386	46.000	9.965	AV
11			2.642	29.279	19.311	-26.721	56.000	9.968	QP
12			2.642	19.616	9.648	-26.384	46.000	9.968	AV

Note: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

Appendix B - Test Setup Photograph

Refer to “2112RSU060-UT” file.

Appendix C - EUT Photograph

Refer to "2112RSU060-UE" file.