



RF MEASUREMENT REPORT

FCC ID: WAF-0564565201
Applicant: Testo SE & Co. KGaA
Product: testo 565i
Model No.: 0564 5652 01
FCC Classification: Digital Transmission System (DTS)
FCC Rule Part(s): Part 15 Subpart C (Section 15.247)
Result: Complies
Received Date: 2023-12-20
Test Date: 2023-12-26 ~ 2024-01-14

Reviewed By:

Sunny Sun

Sunny Sun

Approved By:

Robin Wu

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
2312RSU053-U1	V01	Initial Report	2024-02-04	Valid

CONTENTS

Description	Page
1. General Information	5
1.1. Applicant	5
1.2. Manufacturer	5
1.3. Factory	5
1.4. Testing Facility	5
1.5. Product Information.....	6
1.6. Radio Specification under Test	6
1.7. Working Frequencies	7
2. Test Configuration	8
2.1. Test Mode.....	8
2.2. Test System Connection Diagram.....	8
2.3. Test Software	8
2.4. Applied Standards.....	9
2.5. Test Environment Condition	9
3. Antenna Requirements	10
4. Measuring Instrument	11
5. Decision Rules and Measurement Uncertainty	12
5.1. Decision Rules	12
5.2. Measurement Uncertainty	12
6. Test Result.....	13
6.1. Summary	13
6.2. 6dB Bandwidth Measurement.....	14
6.2.1. Test Limit	14
6.2.2. Test Procedure	14
6.2.3. Test Setting	14
6.2.4. Test Setup	14
6.2.5. Test Result	14
6.3. Output Power Measurement	15
6.3.1. Test Limit	15
6.3.2. Test Procedure	15
6.3.3. Test Setting	15
6.3.4. Test Setup	15
6.3.5. Test Result	15
6.4. Power Spectral Density Measurement	16
6.4.1. Test Limit	16

6.4.2.	Test Procedure	16
6.4.3.	Test Setting	16
6.4.4.	Test Setup	16
6.4.5.	Test Result	16
6.5.	Conducted Band Edge and Out-of-Band Emissions Measurement	17
6.5.1.	Test Limit	17
6.5.2.	Test Procedure	17
6.5.3.	Test Setting	17
6.5.4.	Test Setup	18
6.5.5.	Test Result	18
6.6.	Radiated Spurious Emission Measurement.....	19
6.6.1.	Test Limit	19
6.6.2.	Test Procedure	19
6.6.3.	Test Setting	19
6.6.4.	Test Setup	21
6.6.5.	Test Result	22
6.7.	Radiated Restricted Band Edge Measurement	23
6.7.1.	Test Limit	23
6.7.2.	Test Procedure	24
6.7.3.	Test Setting	24
6.7.4.	Test Setup	25
6.7.5.	Test Result	25
6.8.	AC Conducted Emissions Measurement	26
6.8.1.	Test Limit	26
6.8.2.	Test Setup	26
6.8.3.	Test Result	26
Appendix A - Test Result.....		27
A.1	Duty Cycle Test Result	27
A.2	6dB Bandwidth Test Result	28
A.3	Output Power Test Result	30
A.4	Power Spectral Density Test Result	31
A.5	Conducted Band Edge and Out-of-Band Emissions Test Result.....	33
A.6	Radiated Spurious Emission Test Result.....	37
A.7	Radiated Restricted Band Edge Test Result.....	42
A.8	AC Conducted Emissions Test Result	58
Appendix B - Test Setup Photograph		62
Appendix C - EUT Photograph		63

1. General Information

1.1. Applicant

Testo SE & Co. KGaA

Celsiusstr. 2, 79822 Titisee-Neustadt, Germany

1.2. Manufacturer

Testo SE & Co. KGaA

Celsiusstr. 2, 79822 Titisee-Neustadt, Germany

1.3. Factory

Zhejiang VALUE Mechanical & Electrical Products CO., LTD

No. 5, 3rd Street, East Industrial Park, Wenling, Zhejiang, China

1.4. 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: 3261 FCC: 291082, TW3261 ISED: TW3261

1.5. Product Information

Product Name	testo 565i
Model No.	0564 5652 01
EUT Identification No.	20231220Sample#06(Conducted Testing) 20231220Sample#05(Radiated Testing)
Bluetooth Specification	BLE (1M & 2M)
Antenna Information	Refer to Section 1.5
Power Type	AC 120V/60Hz
Operating Temperature	5 ~ 40 °C
Remark: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	

1.6. Radio Specification under Test

Bluetooth Frequency	2402 ~ 2480MHz
Channel Number	40
Type of modulation	GFSK
Data Rate	1Mbps & 2Mbps
Antenna Type	PCB Antenna
Antenna Gain	-0.16dBi

1.7. 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	--	--	--	--

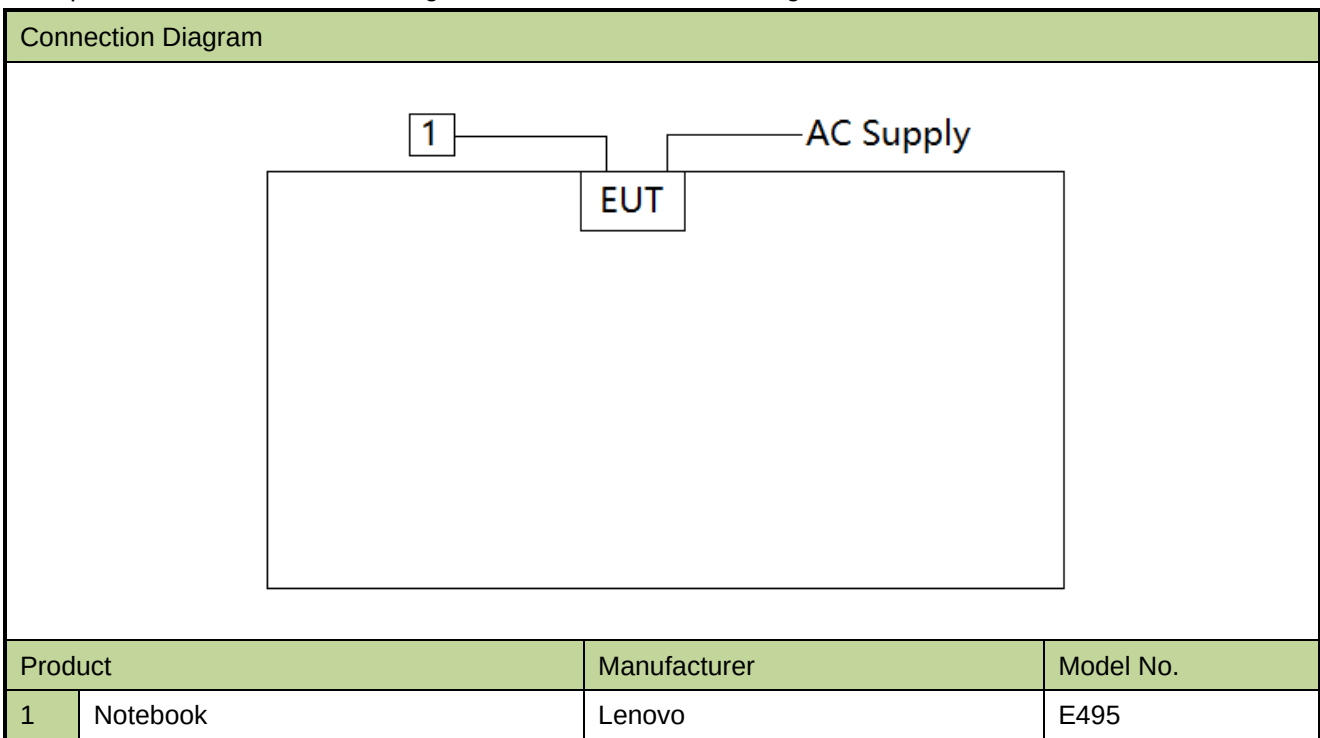
2. Test Configuration

2.1. Test Mode

Mode 1: Transmit by BLE-1Mbps
Mode 2: Transmit by BLE-2Mbps

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.



2.3. Test Software

The test utility software used during testing was “sscom.exe”, and the version was 5.13.1.

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
Anechoic Chamber	RIKEN	SIP-AC1	MRTSUE06554	1 year	2024-12-21	SIP-AC1
Horn Antenna	R&S	HF907	MRTSUE06610	1 year	2024-06-17	SIP-AC1
Thermohygrometer	testo	608-H1	MRTSUE06616	1 year	2024-10-28	SIP-AC1
TRILOG Antenna	Schwarzbeck	VULB 9168	MRTSUE06645	1 year	2024-07-13	SIP-AC1
Preamplifier	MRT	AMP-AC1	MRTSUE11265	1 year	2024-11-03	SIP-AC1
Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06599	1 year	2024-09-24	SIP-AC1
EMI Test Receiver	R&S	ESR3	MRTSUE06185	1 year	2024-12-17	SIP-AC1
Preamplifier	EMCI	EMC184045SE	MRTSUE06602	1 year	2024-10-09	SIP-AC1
EMI Test Receiver	R&S	ESR3	MRTSUE06613	1 year	2024-10-23	SIP-AC2
Loop Antenna	Schwarzbeck	FMZB 1519 B	MRTSUE06937	1 year	2024-02-26	SIP-AC1
Signal Analyzer	Keysight	N9010B	MRTSUE07028	1 year	2024-10-23	SIP-AC1
Signal Analyzer	Keysight	N9010B	MRTSUE06559	1 year	2024-05-23	SIP-AC2
Preamplifier	EMCI	EMC051845SE	MRTSUE06601	1 year	2024-11-02	SIP-AC2
Thermohygrometer	testo	608-H1	MRTSUE06622	1 year	2024-11-03	SIP-AC2
TRILOG Antenna	Schwarzbeck	VULB 9168	MRTSUE06647	1 year	2024-06-17	SIP-AC2
Anechoic Chamber	RIKEN	SIP-AC2	MRTSUE06781	1 year	2024-12-21	SIP-AC2
Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06648	1 year	2024-10-21	SIP-AC2
Two-Line V-Network	R&S	ENV216	MRTSUE06003	1 year	2024-05-23	SIP-SR2
EMI Test Receiver	R&S	ESR3	MRTSUE06612	1 year	2024-05-23	SIP-SR2
Four-Line V-Network	R&S	ENV432	MRTSUE06614	1 year	2024-10-23	SIP-SR2
Thermohygrometer	testo	608-H1	MRTSUE06621	1 year	2024-11-03	SIP-SR2
50 Ω to 150 Ω Adapter	Schwarzbeck	SR100-6W	MRTSUE06936	1 year	2024-02-12	SIP-SR2
Shielding Room	MIX-BEP	SIP-SR2	MRTSUE06949	5 years	2024-10-23	SIP-SR2
Thermohygrometer	testo	608-H1	MRTSUE11022	1 year	2024-10-28	SIP-TR1
Signal Analyzer	Keysight	N9010B	MRTSUE07036	1 year	2024-02-29	SIP-TR1
USB Power Sensor	Agilent	U2021XA	MRTSUE06030	1 year	2024-09-27	SIP-TR1

Software	Version	Function
EMI V3	V 3.0.0	EMI Test Software
Controller_MF 7802BS	1.02	RE Antenna & Turntable
Agilent Power Panel	V R03.09.00	Power

5. Decision Rules and Measurement Uncertainty

5.1. Decision Rules

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4: 2012 Clause 8.2.
(Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

5.2. 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
The maximum measurement uncertainty is evaluated as: 9kHz~150kHz: 3.58dB 150kHz~30MHz: 3.20dB
Radiated Emission Measurement
The maximum measurement uncertainty is evaluated as: Coaxial: 9kHz~30MHz: 2.61dB Coplanar: 9kHz~30MHz: 2.62dB Horizontal: 30MHz~200MHz: 3.79dB 200MHz~1GHz: 3.91dB 1GHz~40GHz: 4.99dB Vertical: 30MHz~200MHz: 4.06dB 200MHz~1GHz: 5.21dB 1GHz~40GHz: 4.90dB
Spurious Emissions, Conducted
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 2.2dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 1.4dB
Power Spectrum Density
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 2.2dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 2.7%

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

Notes:

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 test, 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.

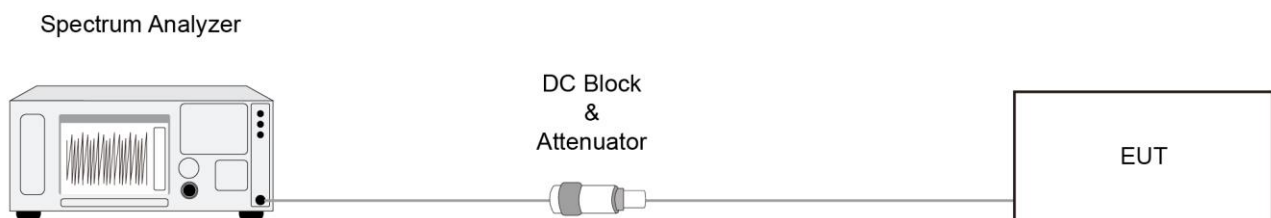
6.2.2. Test Procedure

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

ANSI C63.10 - 2013 - Section 11.9.2.3.2

6.3.3. Test Setting

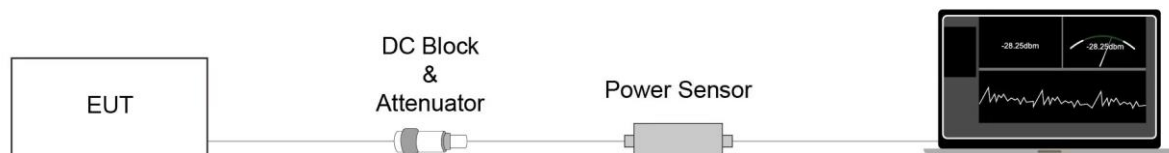
Method PKPM1 (Peak Power Measurement of Signals with DTS BW $\leq$ 50MHz)

Peak 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 pulse sensor employs a VBW = 50MHz so this method was only used for signals whose DTS bandwidth was less than or equal to 50MHz.

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.

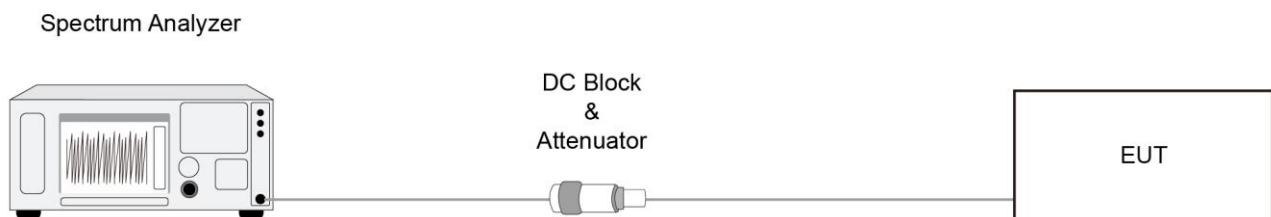
6.4.2. Test Procedure

ANSI C63.10-2013 Section 11.10.2

6.4.3. Test Setting

1. Analyzer was set to the center frequency of the DTS channel under investigation
2. Span = 1.5 times the DTS channel bandwidth
3. RBW = 3kHz
4. VBW = 10kHz
5. Detector = peak
6. Sweep time = auto couple
7. Trace mode = max hold
8. Trace was allowed to stabilize

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 Settling

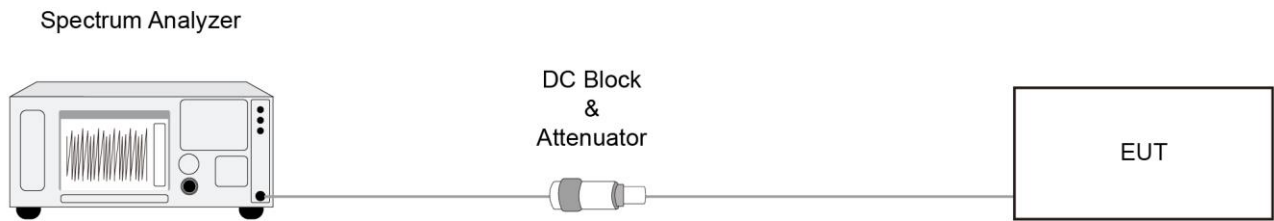
Reference level measurement

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

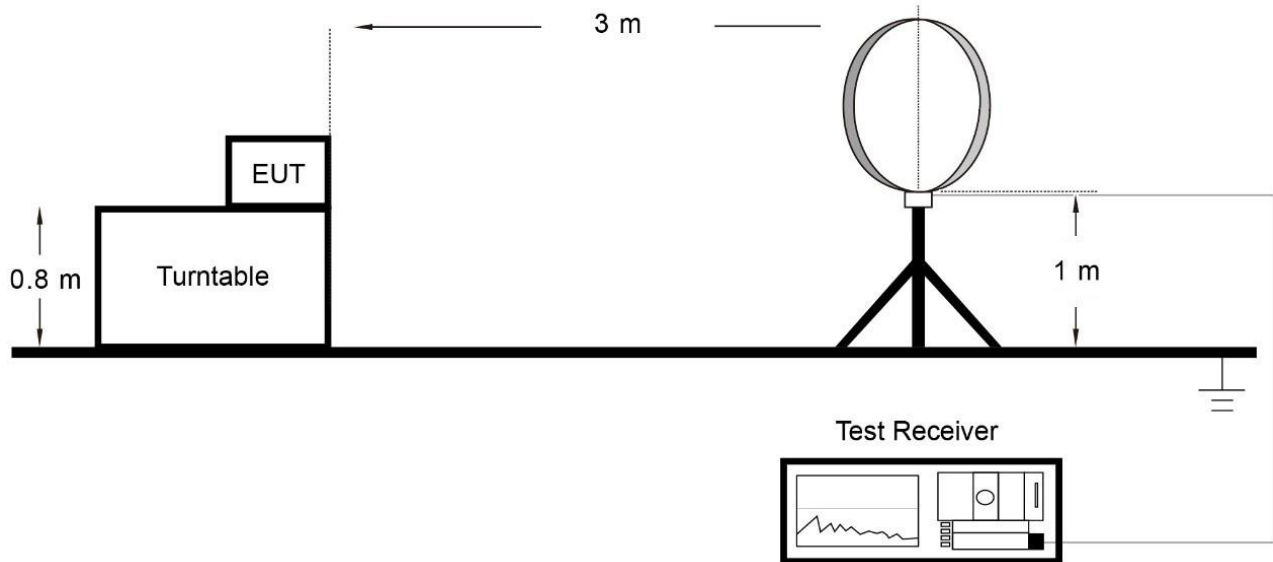
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Measurements above 1GHz (Method VB)

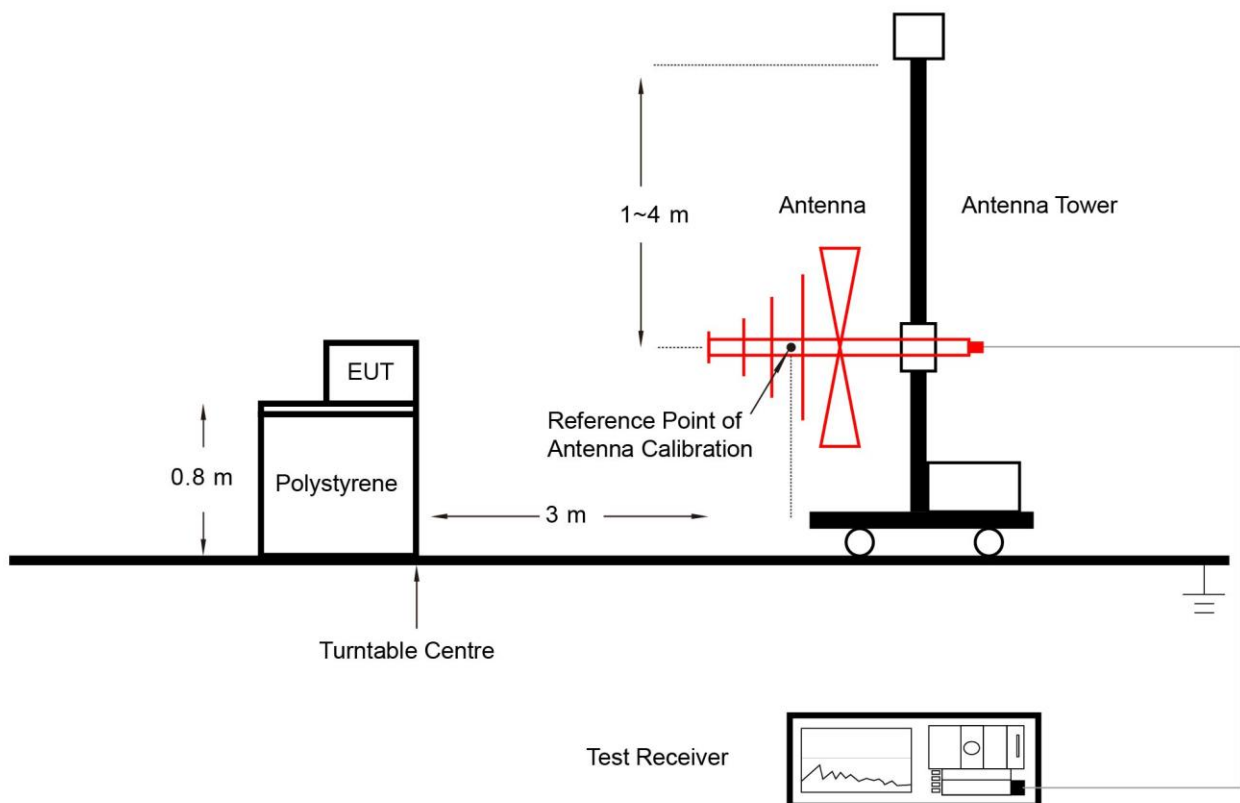
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle $\geq 98\%$, set VBW = 10 Hz.
If the EUT duty cycle is $< 98\%$, set VBW $\geq 1/T$. T is the minimum transmission duration.
4.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

6.6.4. Test Setup

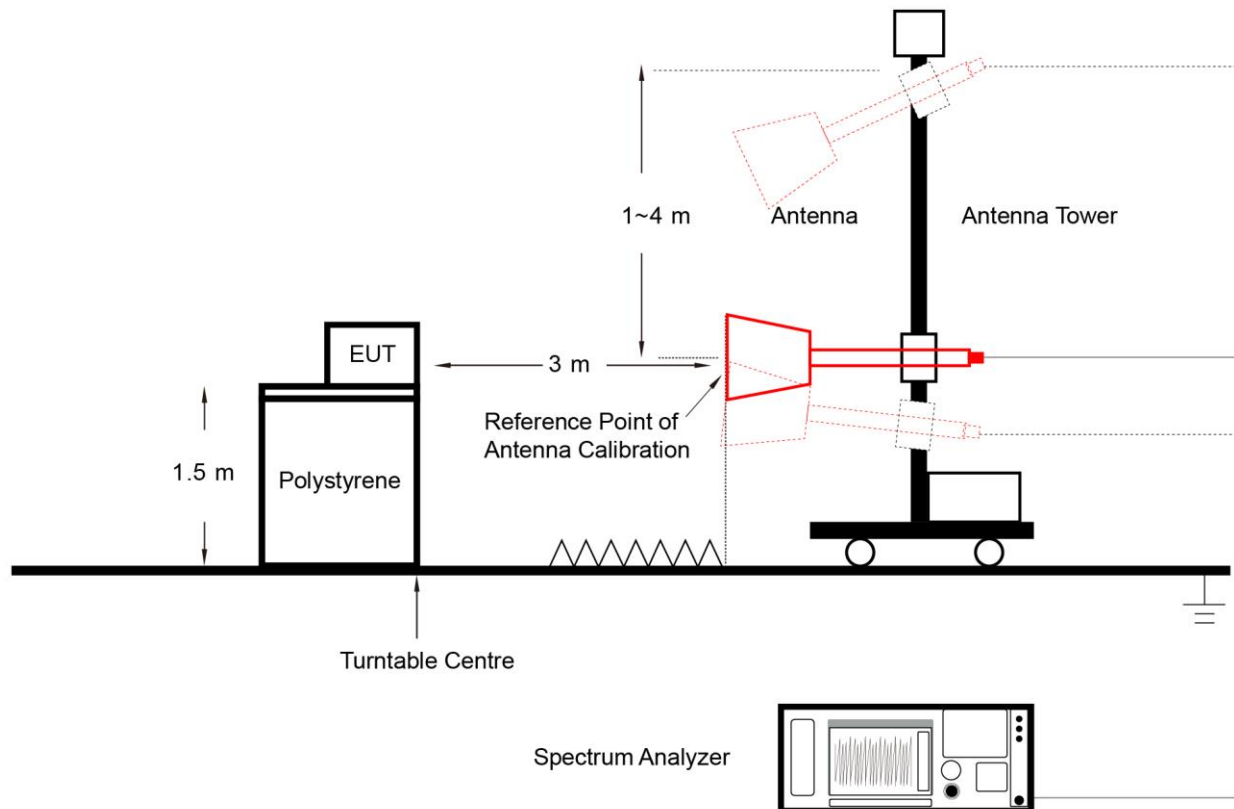
Below 30MHz Test Setup:



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	--	--	--

¹Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

²Above 38.6

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 & 6.6 & 11.13

6.7.3. Test Setting

Peak Field Strength Measurements

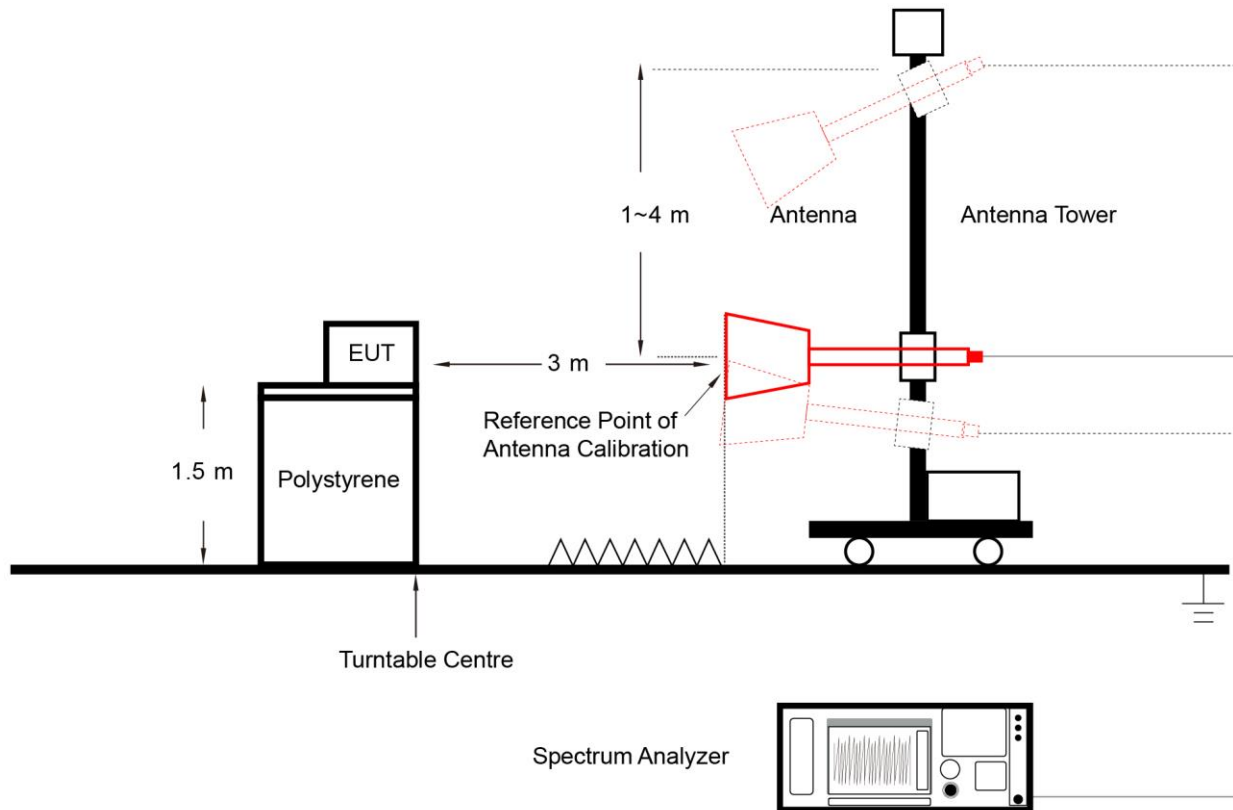
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

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 Range (MHz)	QP (dBuV)	AV (dBuV)
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

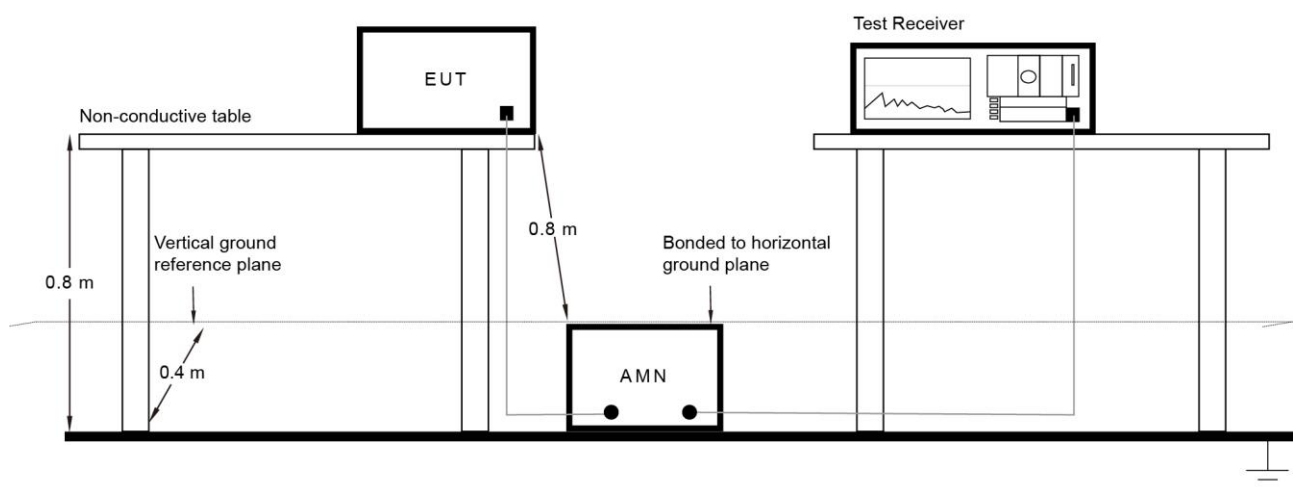
Note 1: The lower limit shall apply at the transition frequencies.

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

FCC Part 15.107 Conducted Emission Limits				
Frequency Range (MHz)	Class A Limits		Class B Limits	
	QP dB(μV)	AV dB(μV)	QP dB(μV)	AV dB(μV)
0.15 ~ 0.5	79	66	66 to 56	56 to 46
0.5 ~ 5	73	60	56	46
5 ~ 30	73	60	60	50

Note: Test the composite device to meet the Class A limits and requirements.

6.8.2. Test Setup



6.8.3. Test Result

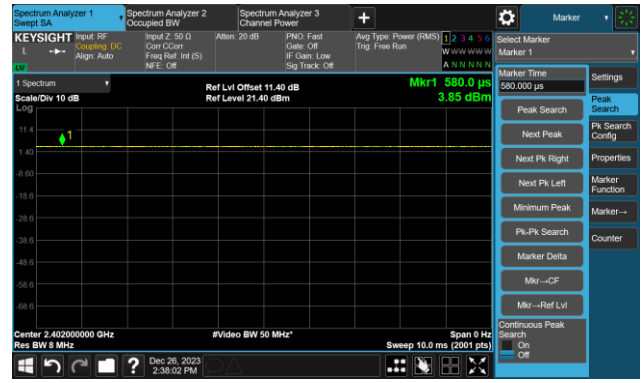
Refer to Appendix A.8.

Appendix A - Test Result

A.1 Duty Cycle Test Result

Test Site	SIP-TR1	Test Engineer	Alisa Deng
Test Date	2023-12-26 ~ 2024-01-12		

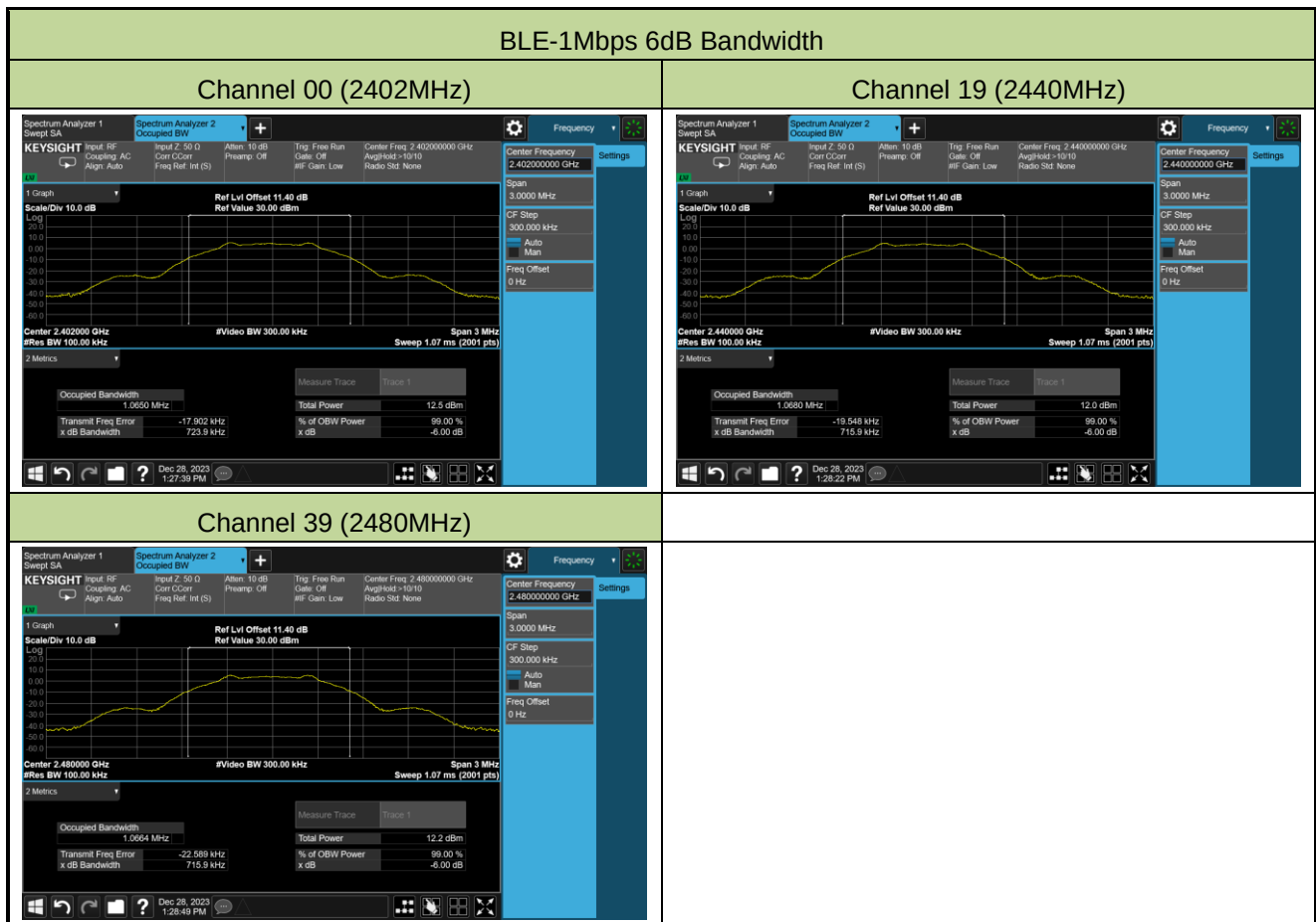
Test Mode	Duty Cycle
BLE-1Mbps	100.0%
BLE-2Mbps	100.0%
Duty Cycle (T = Transmission Duration)	
BLE-1Mbps (T = 580.0µs)	BLE-2Mbps (T = 7.967ms)




A.2 6dB Bandwidth Test Result

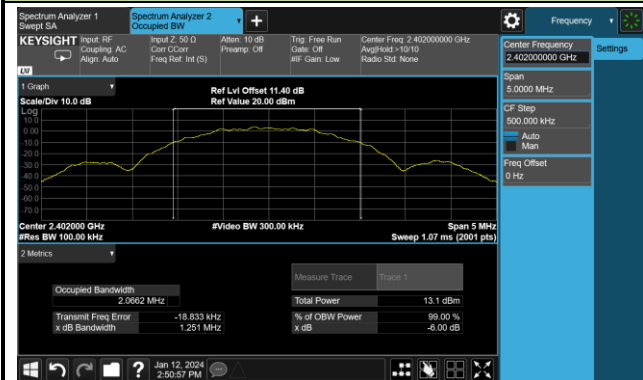
Test Site	SIP-TR1	Test Engineer	Alisa Deng
Test Date	2023-12-28 ~ 2024-01-12		

Test Mode	Data Rate	Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
BLE	1Mbps	00	2402	0.7239	≥ 0.5
BLE	1Mbps	19	2440	0.7159	≥ 0.5
BLE	1Mbps	39	2480	0.7159	≥ 0.5
BLE	2Mbps	00	2402	1.251	≥ 0.5
BLE	2Mbps	19	2440	1.317	≥ 0.5
BLE	2Mbps	39	2480	1.376	≥ 0.5

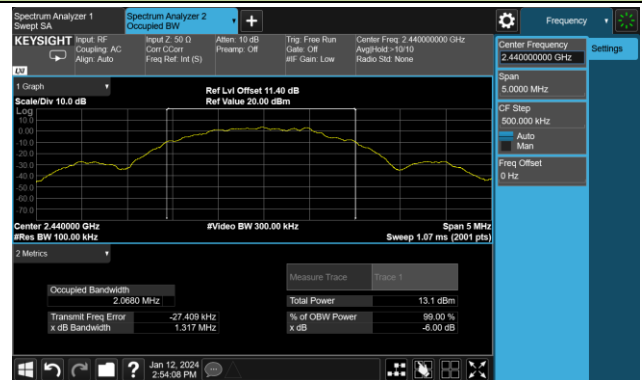


BLE-2Mbps 6dB Bandwidth

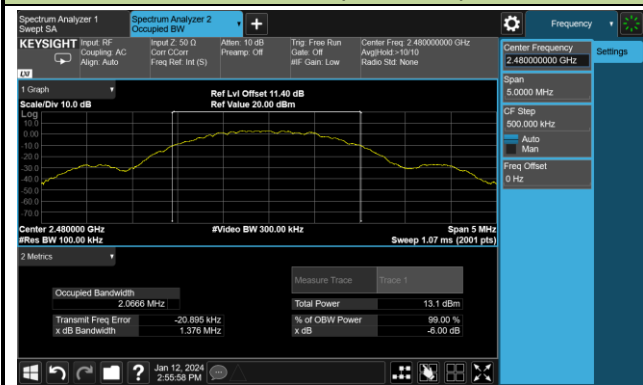
Channel 00 (2402MHz)



Channel 19 (2440MHz)



Channel 39 (2480MHz)



A.3 Output Power Test Result

Test Site	SIP-TR1	Test Engineer	Alisa Deng
Test Date	2023-12-26 ~ 2024-01-12		

Test Result of Peak Output Power

Test Mode	Data Rate	Channel No.	Frequency (MHz)	Peak Power (dBm)	Limit (dBm)	Result
BLE	1Mbps	00	2402	5.75	≤ 30.00	Pass
BLE	1Mbps	19	2440	5.32	≤ 30.00	Pass
BLE	1Mbps	39	2480	5.48	≤ 30.00	Pass
BLE	2Mbps	00	2402	5.77	≤ 30.00	Pass
BLE	2Mbps	19	2440	5.45	≤ 30.00	Pass
BLE	2Mbps	39	2480	5.36	≤ 30.00	Pass

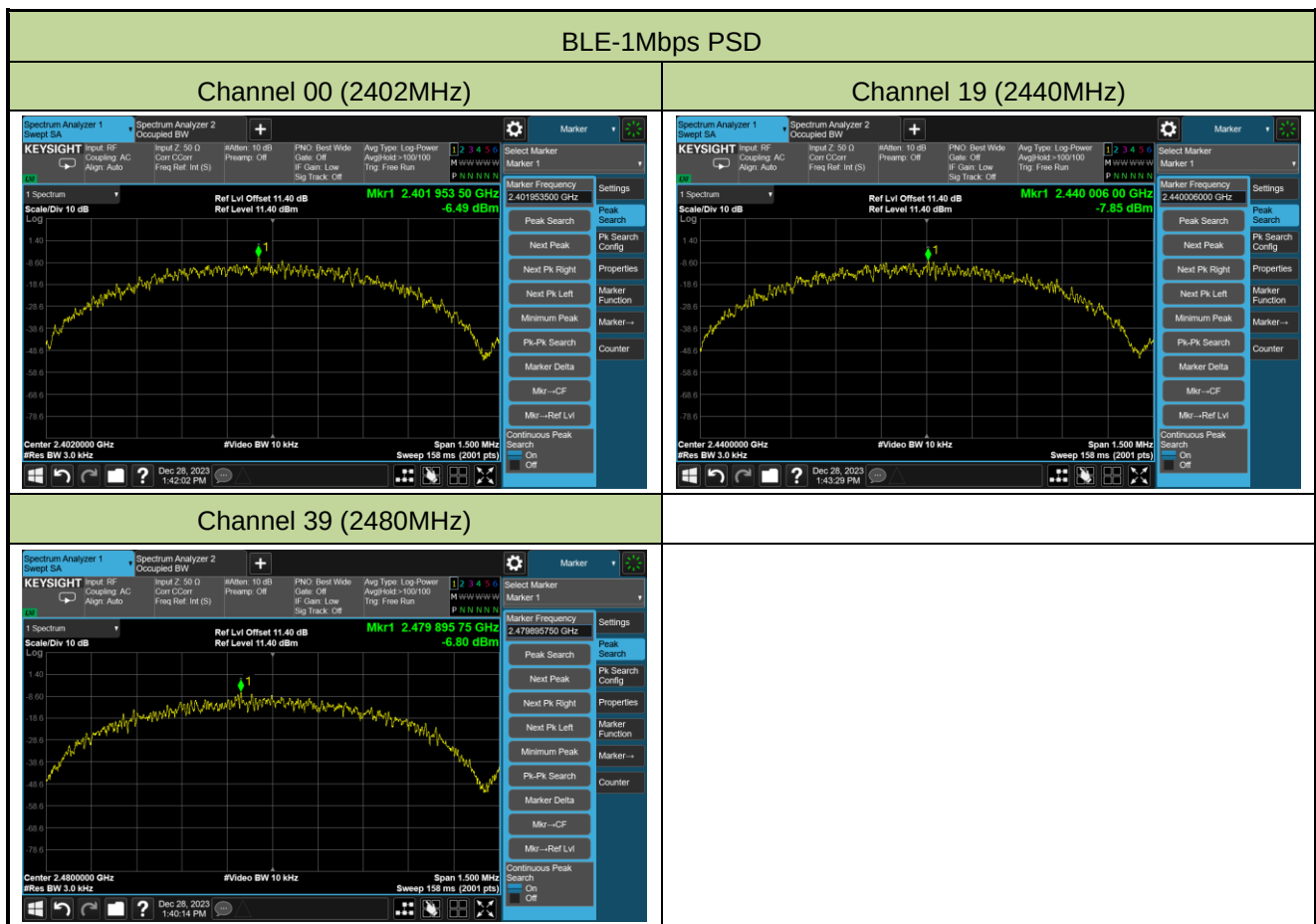
Test Result of Average Output Power (Reporting Only)

Test Mode	Data Rate	Channel No.	Frequency (MHz)	Average Power (dBm)	Limit (dBm)	Result
BLE	1Mbps	00	2402	5.63	≤ 30.00	Pass
BLE	1Mbps	19	2440	5.22	≤ 30.00	Pass
BLE	1Mbps	39	2480	5.37	≤ 30.00	Pass
BLE	2Mbps	00	2402	5.67	≤ 30.00	Pass
BLE	2Mbps	19	2440	5.37	≤ 30.00	Pass
BLE	2Mbps	39	2480	5.26	≤ 30.00	Pass

A.4 Power Spectral Density Test Result

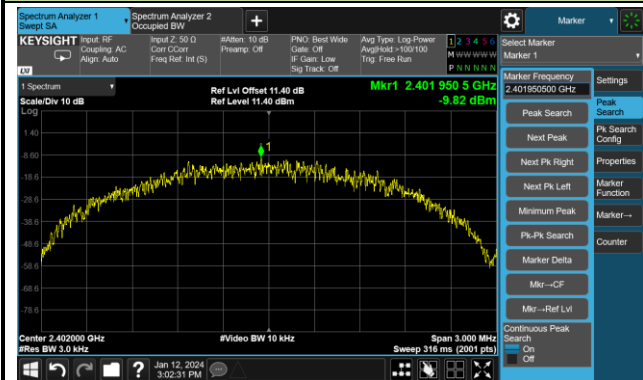
Test Site	SIP-TR1	Test Engineer	Alisa Deng
Test Date	2023-12-28 ~ 2024-01-12		

Test Mode	Data Rate	Channel No.	Frequency (MHz)	PSD Result (dBm / 3kHz)	Limit (dBm / 3kHz)	Result
BLE	1Mbps	00	2402	-6.49	≤ 8.00	Pass
BLE	1Mbps	19	2440	-7.85	≤ 8.00	Pass
BLE	1Mbps	39	2480	-6.80	≤ 8.00	Pass
BLE	2Mbps	00	2402	-9.82	≤ 8.00	Pass
BLE	2Mbps	19	2440	-10.58	≤ 8.00	Pass
BLE	2Mbps	39	2480	-10.62	≤ 8.00	Pass

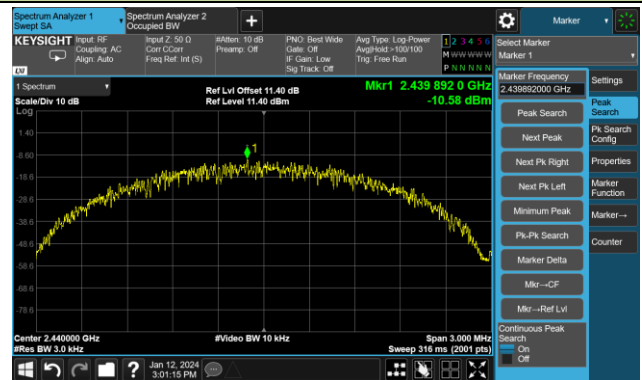


BLE-2Mbps PSD

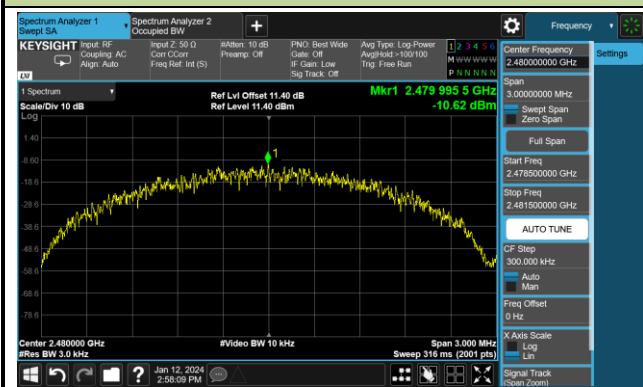
Channel 00 (2402MHz)



Channel 19 (2440MHz)



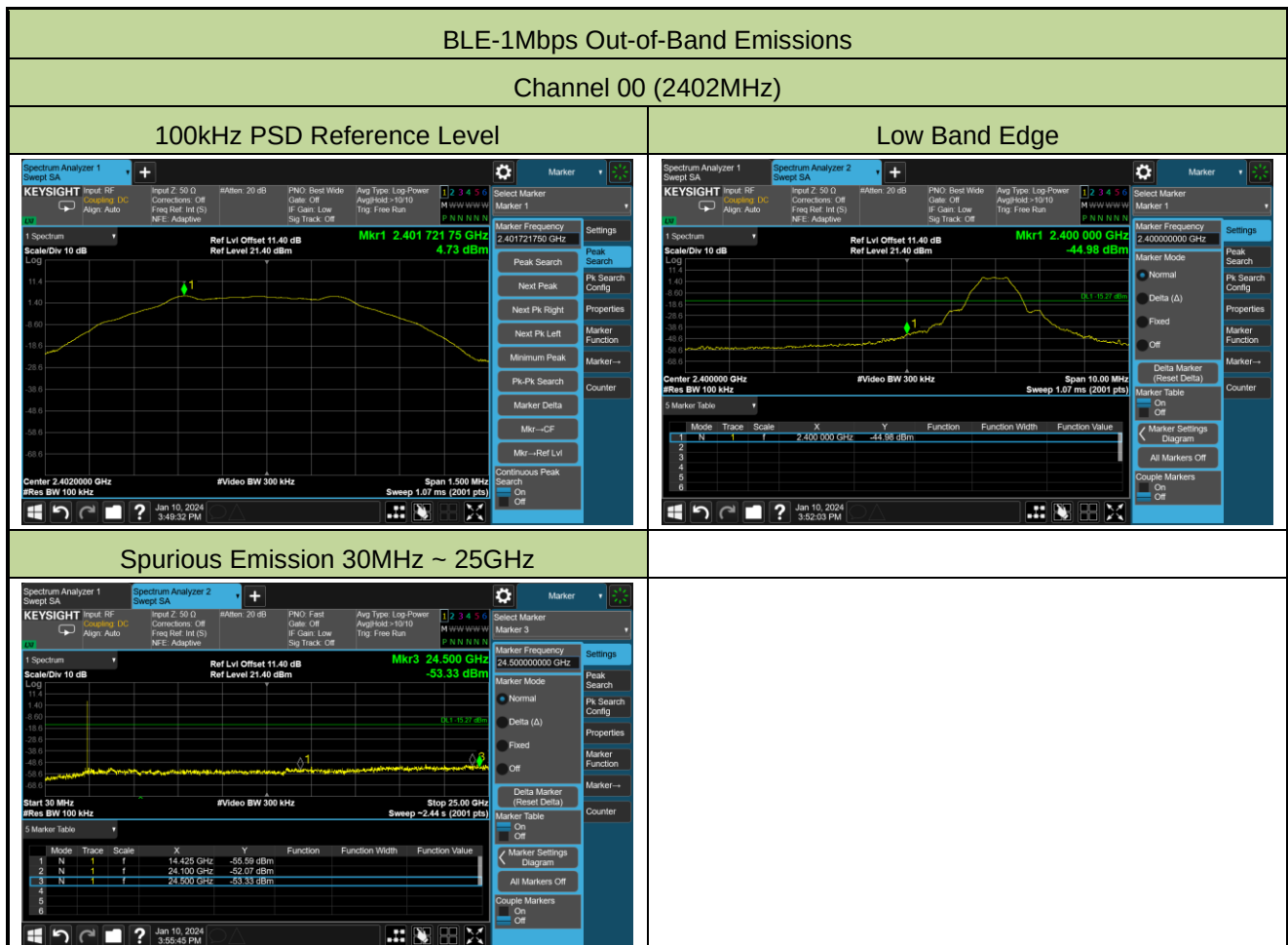
Channel 39 (2480MHz)



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

Test Site	SIP-TR1	Test Engineer	Alisa Deng
Test Date	2024-01-10 ~ 2024-01-12		

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
BLE	2	00	2402	20	Pass
BLE	2	19	2440	20	Pass
BLE	2	39	2480	20	Pass

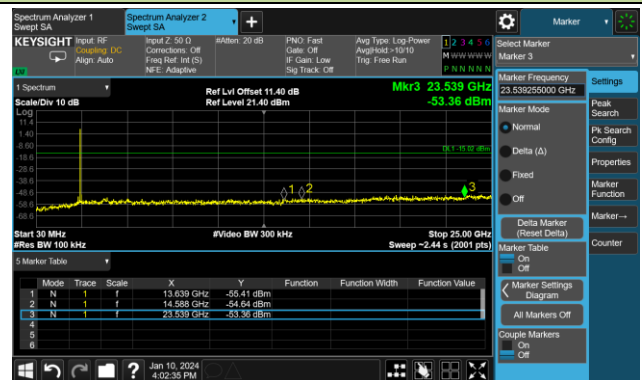


Channel 19 (2440MHz)

100kHz PSD Reference Level

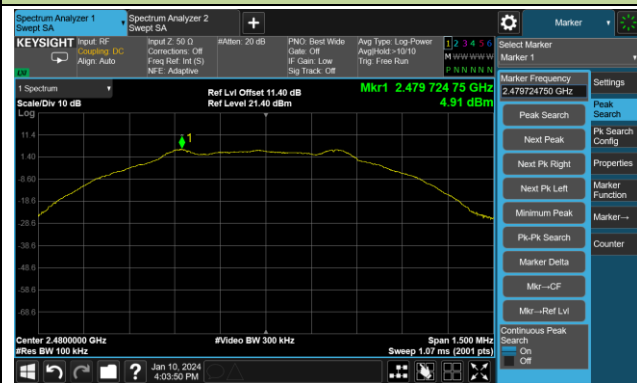


Spurious Emission 30MHz ~ 25GHz

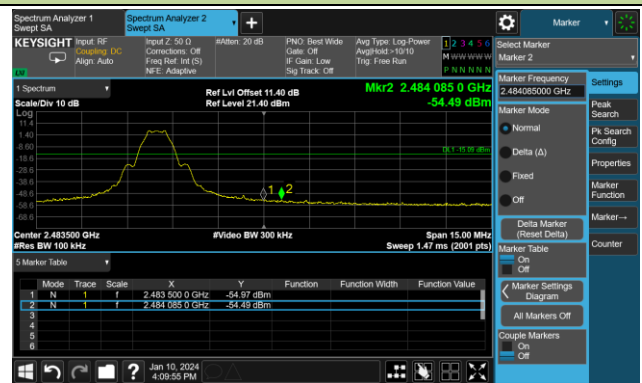


Channel 39 (2480MHz)

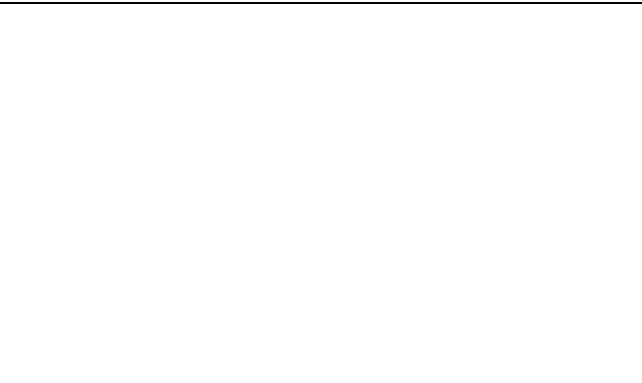
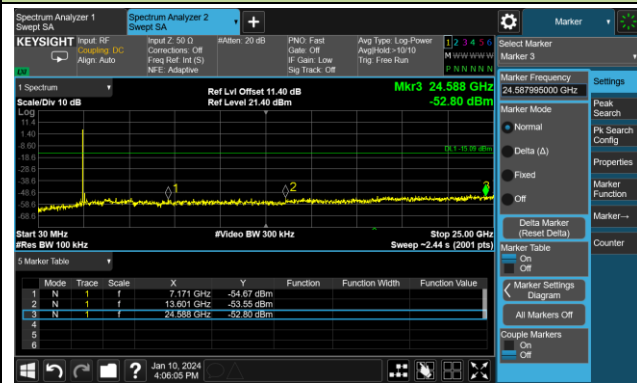
100kHz PSD Reference Level



High Band Edge



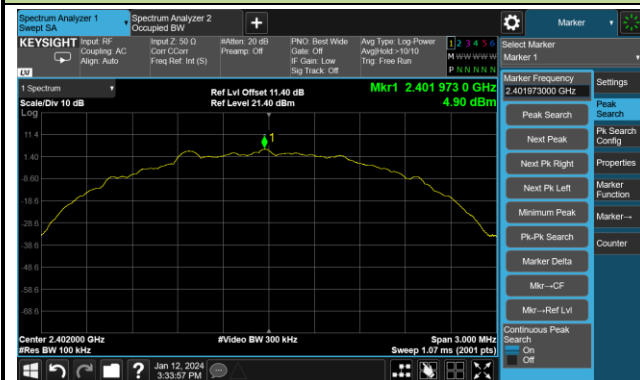
Spurious Emission 30MHz ~ 25GHz



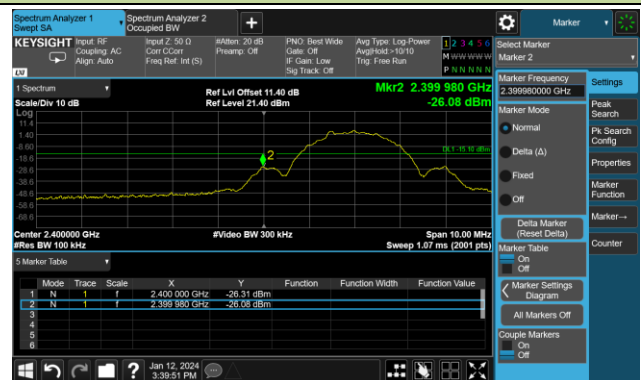
BLE-2Mbps Out-of-Band Emissions

Channel 00 (2402MHz)

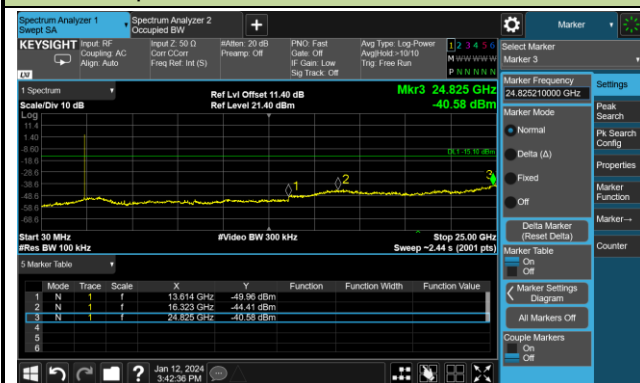
100kHz PSD Reference Level



Low Band Edge



Spurious Emission 30MHz ~ 25GHz



Channel 19 (2440MHz)

100kHz PSD Reference Level

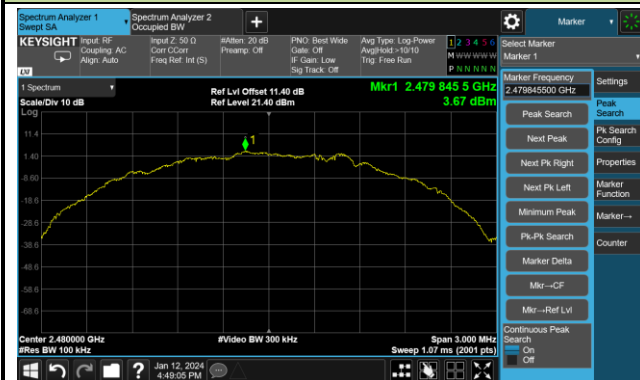


Spurious Emission 30MHz ~ 25GHz

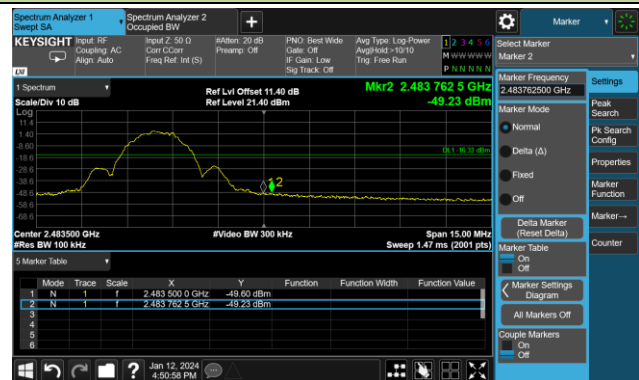


Channel 39 (2480MHz)

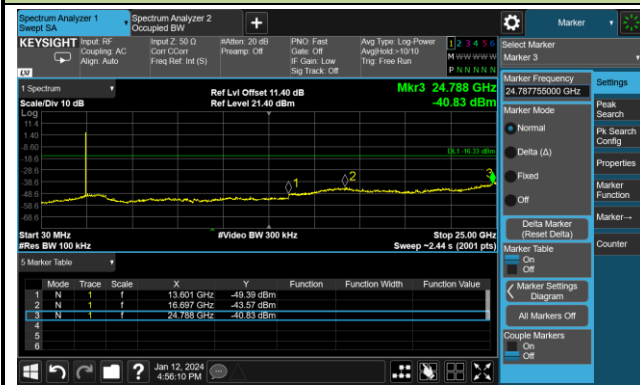
100kHz PSD Reference Level



High Band Edge



Spurious Emission 30MHz ~ 25GHz



A.6 Radiated Spurious Emission Test Result

Test Site	SIP-AC1	Test Engineer	Justin Guo
Test Date	2023-12-29	Test Mode	BLE-1Mbps
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. The other frequencies were 20dB below limit line within 1-18GHz, which is not shown 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	11497.5	33.8	12.3	46.1	74.0	-27.9	Peak	Horizontal
	15909.0	33.5	19.2	52.7	74.0	-21.3	Peak	Horizontal
	15909.0	20.0	19.2	39.2	54.0	-14.8	Average	Horizontal
	17966.0	32.5	22.3	54.8	74.0	-19.2	Peak	Horizontal
	17966.0	18.3	22.3	40.6	54.0	-13.4	Average	Horizontal
	11030.0	34.1	12.0	46.1	74.0	-27.9	Peak	Vertical
	15917.5	32.7	19.2	51.9	74.0	-22.1	Peak	Vertical
	15917.5	20.1	19.2	39.3	54.0	-14.7	Average	Vertical
	17864.0	31.0	23.2	54.2	74.0	-19.8	Peak	Vertical
	17864.0	19.1	23.2	42.3	54.0	-11.7	Average	Vertical
19	11123.5	34.5	12.1	46.6	74.0	-27.4	Peak	Horizontal
	15586.0	32.2	19.3	51.5	74.0	-22.5	Peak	Horizontal
	15586.0	19.5	19.3	38.8	54.0	-15.2	Average	Horizontal
	17864.0	30.5	23.2	53.7	74.0	-20.3	Peak	Horizontal
	17864.0	18.1	23.2	41.3	54.0	-12.7	Average	Horizontal
	11047.0	34.1	12.2	46.3	74.0	-27.7	Peak	Vertical
	15713.5	32.2	18.6	50.8	74.0	-23.2	Peak	Vertical
	17830.0	29.7	23.4	53.1	74.0	-20.9	Peak	Vertical
	17830.0	17.5	23.4	40.9	54.0	-13.1	Average	Vertical
39	11531.5	35.0	12.4	47.4	74.0	-26.6	Peak	Horizontal
	15577.5	32.4	19.3	51.7	74.0	-22.3	Peak	Horizontal
	15577.5	20.5	19.3	39.8	54.0	-14.2	Average	Horizontal
	17864.0	31.6	23.2	54.8	74.0	-19.2	Peak	Horizontal
	17864.0	19.3	23.2	42.5	54.0	-11.5	Average	Horizontal
	12160.5	34.7	12.2	46.9	74.0	-27.1	Peak	Vertical
	15586.0	34.2	19.3	53.5	74.0	-20.5	Peak	Vertical
	15586.0	20.8	19.3	40.1	54.0	-13.9	Average	Vertical
	17864.0	32.4	23.2	55.6	74.0	-18.4	Peak	Vertical

	17864.0	19.3	23.2	42.5	54.0	-11.5	Average	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)								

Test Site	SIP-AC2	Test Engineer	Arvin Ding
Test Date	2024-01-14	Test Mode	BLE-2Mbps
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. The other frequencies were 20dB below limit line within 1-18GHz, which is not shown in the report.		

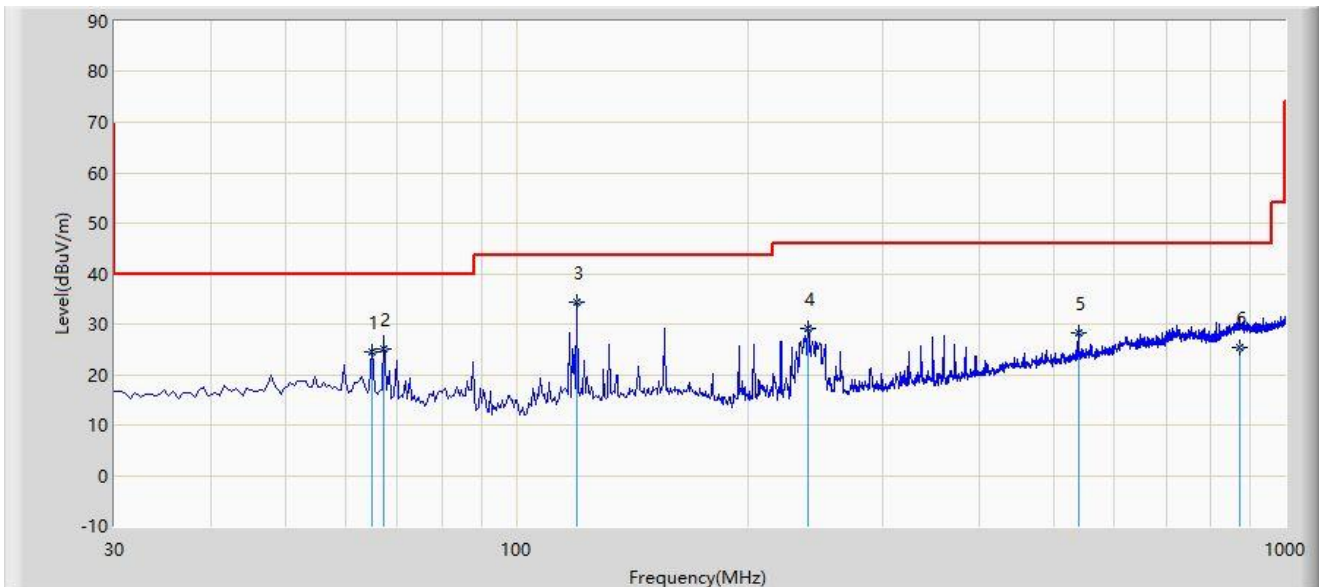
Test Channel	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
00	8199.5	43.2	0.6	43.8	74.0	-30.2	Peak	Horizontal
	9313.0	42.7	2.9	45.6	74.0	-28.4	Peak	Horizontal
	11217.0	41.5	5.7	47.2	74.0	-26.8	Peak	Horizontal
	7307.0	43.8	-0.7	43.1	74.0	-30.9	Peak	Vertical
	9355.5	43.3	2.6	45.9	74.0	-28.1	Peak	Vertical
	11157.5	42.3	5.2	47.5	74.0	-26.5	Peak	Vertical
19	7324.0	43.8	-0.6	43.2	74.0	-30.8	Peak	Horizontal
	9032.5	43.4	1.6	45.0	74.0	-29.0	Peak	Horizontal
	11344.5	42.5	5.4	47.9	74.0	-26.1	Peak	Horizontal
	8131.5	42.8	0.7	43.5	74.0	-30.5	Peak	Vertical
	11472.0	42.8	5.5	48.3	74.0	-25.7	Peak	Vertical
	15356.5	39.3	6.8	46.1	74.0	-27.9	Peak	Vertical
39	7443.0	43.1	-0.4	42.7	74.0	-31.3	Peak	Horizontal
	9024.0	44.2	1.5	45.7	74.0	-28.3	Peak	Horizontal
	10979.0	42.1	5.3	47.4	74.0	-26.6	Peak	Horizontal
	7341.0	43.6	-0.7	42.9	74.0	-31.1	Peak	Vertical
	9321.5	43.2	2.8	46.0	74.0	-28.0	Peak	Vertical
	10783.5	43.5	4.3	47.8	74.0	-26.2	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-AC2	Test Date: 2024-01-14
Limit: FCC_Part15.209_RSE(3m)	Engineer: Arvin Ding
Probe: VULB 9168_00999_25-2000MHz	Polarity: Horizontal
EUT: testo 565i	Power: AC 120V/60Hz
Test Mode: Transmit by BLE_2M at 2402MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		64.920	24.522	7.546	-15.478	40.000	16.976	QP
2		67.345	25.055	8.471	-14.945	40.000	16.583	QP
3	*	119.725	34.210	18.325	-9.290	43.500	15.886	QP
4		240.005	29.147	12.475	-16.853	46.000	16.672	QP
5		538.280	28.377	3.874	-17.623	46.000	24.503	QP
6		873.900	25.485	-4.795	-20.515	46.000	30.281	QP

Note 1: " * ", means this data is the worst emission level.

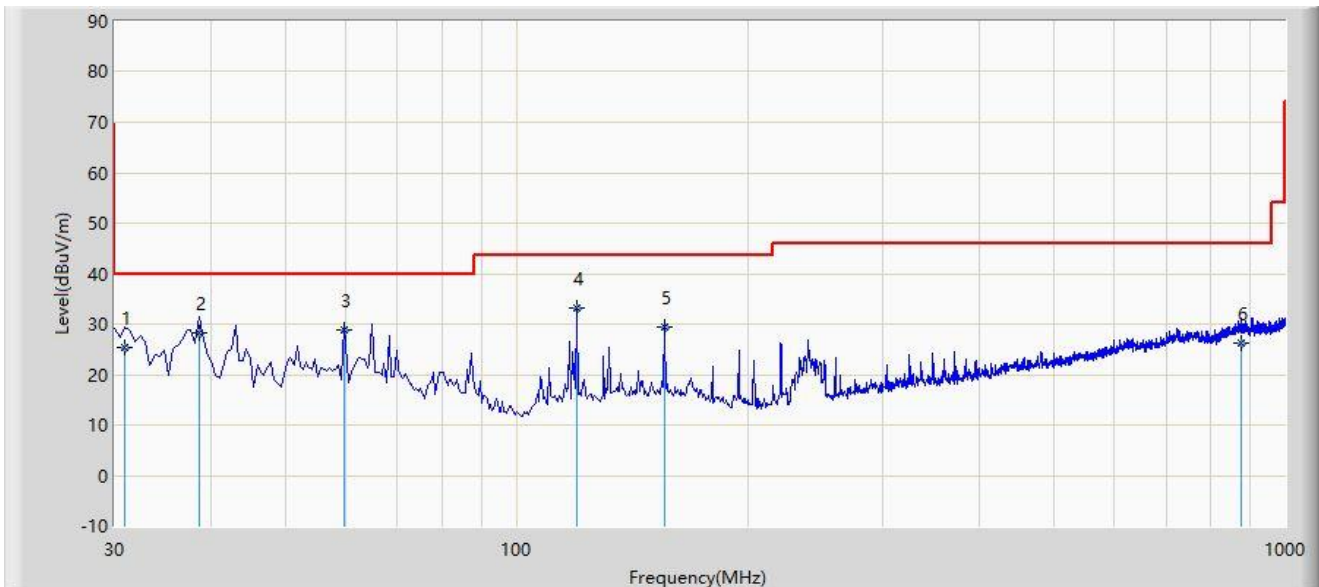
Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Note 4: 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-AC2	Test Date: 2024-01-14
Limit: FCC_Part15.209_RSE(3m)	Engineer: Arvin Ding
Probe: VULB 9168_00999_25-2000MHz	Polarity: Vertical
EUT: testo 565i	Power: AC 120V/60Hz
Test Mode: Transmit by BLE_2M at 2402MHz	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB/m)	Type
1		30.970	25.466	8.546	-14.534	40.000	16.920	QP
2		38.730	28.156	10.754	-11.844	40.000	17.403	QP
3		59.585	28.861	11.107	-11.139	40.000	17.754	QP
4	*	119.725	33.250	17.365	-10.250	43.500	15.886	QP
5		155.615	29.462	11.185	-14.038	43.500	18.277	QP
6		878.265	26.337	-3.879	-19.663	46.000	30.215	QP

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB/m).

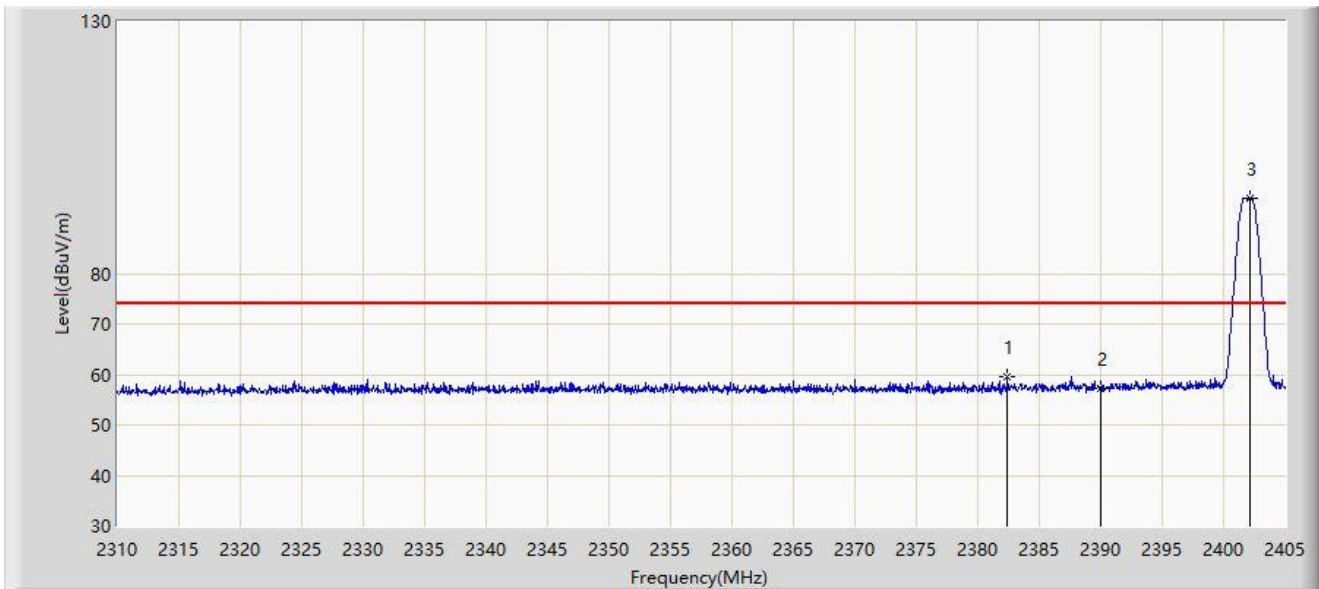
Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Note 4: 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	Test Date: 2023-12-29
Limit: FCC_2.4G_RE(3m)	Engineer: Justin Guo
Probe: HF907_102862_1-18GHz	Polarity: Horizontal
EUT: testo 565i	Power: AC 120V/60Hz
Test Mode: Transmit by BLE_1M at 2402MHz	



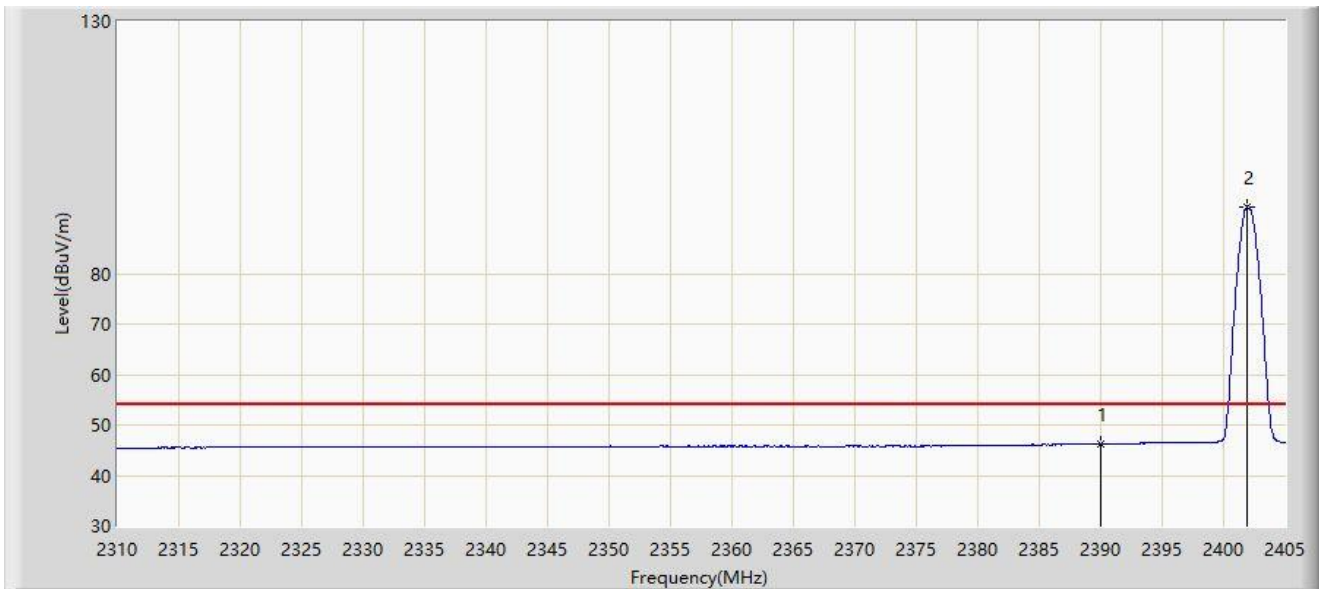
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2382.437	59.441	27.863	-14.559	74.000	31.577	PK
2		2390.000	57.331	25.616	-16.669	74.000	31.715	PK
3		2402.150	94.932	63.136	N/A	N/A	31.795	PK

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: SIP-AC1	Test Date: 2023-12-29
Limit: FCC_2.4G_RE(3m)	Engineer: Justin Guo
Probe: HF907_102862_1-18GHz	Polarity: Horizontal
EUT: testo 565i	Power: AC 120V/60Hz
Test Mode: Transmit by BLE_1M at 2402MHz	



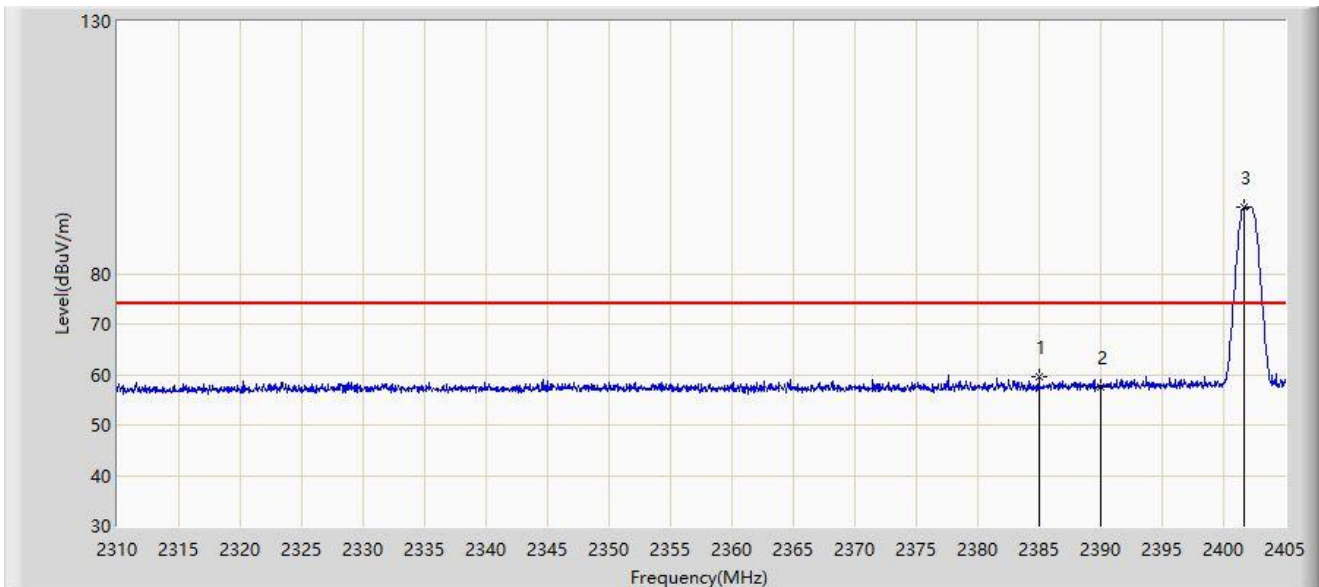
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2390.000	46.189	14.474	-7.811	54.000	31.715	AV
2		2401.865	93.222	61.427	N/A	N/A	31.796	AV

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: SIP-AC1	Test Date: 2023-12-29
Limit: FCC_2.4G_RE(3m)	Engineer: Justin Guo
Probe: HF907_102862_1-18GHz	Polarity: Vertical
EUT: testo 565i	Power: AC 120V/60Hz
Test Mode: Transmit by BLE_1M at 2402MHz	



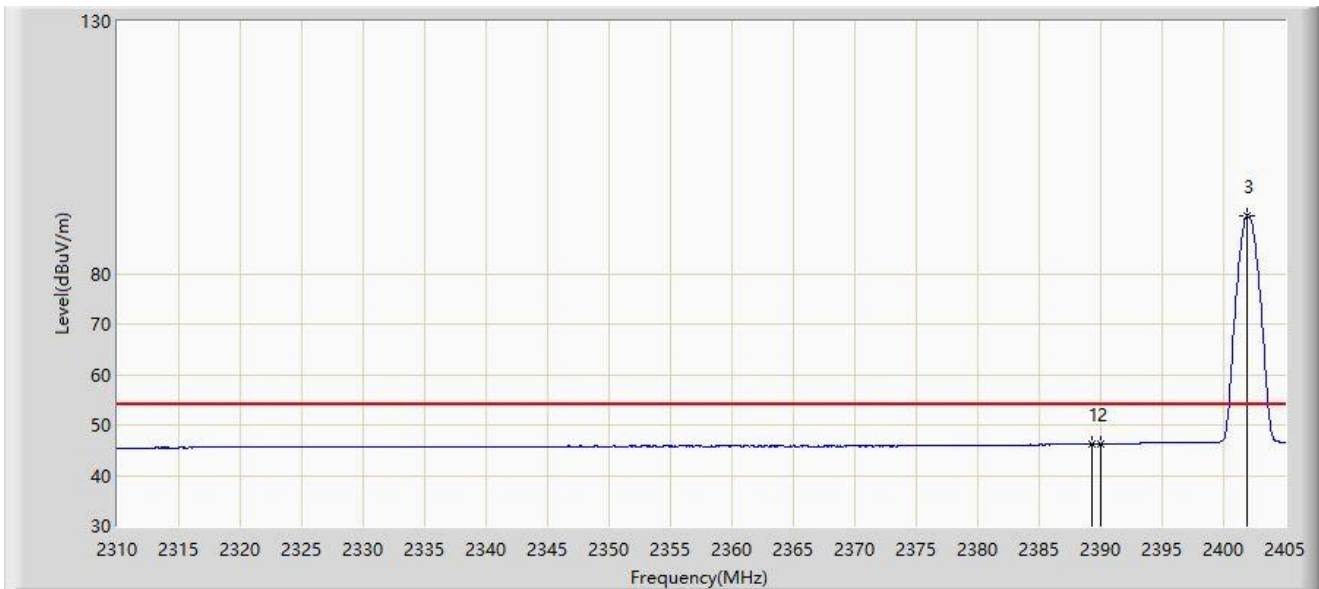
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2385.002	59.629	28.005	-14.371	74.000	31.624	PK
2		2390.000	57.655	25.940	-16.345	74.000	31.715	PK
3		2401.722	93.235	61.440	N/A	N/A	31.795	PK

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: SIP-AC1	Test Date: 2023-12-29
Limit: FCC_2.4G_RE(3m)	Engineer: Justin Guo
Probe: HF907_102862_1-18GHz	Polarity: Vertical
EUT: testo 565i	Power: AC 120V/60Hz
Test Mode: Transmit by BLE_1M at 2402MHz	



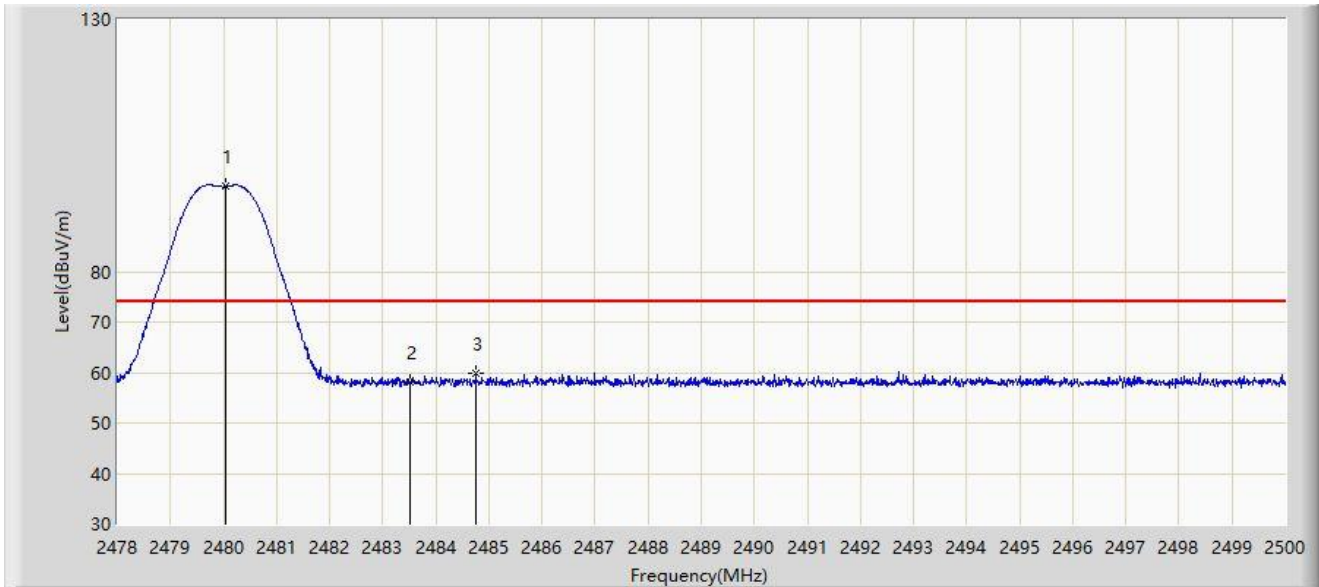
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2389.325	46.240	14.537	-7.760	54.000	31.703	AV
2		2390.000	46.200	14.485	-7.800	54.000	31.715	AV
3		2401.865	91.410	59.615	N/A	N/A	31.796	AV

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: SIP-AC1	Test Date: 2023-12-29
Limit: FCC_2.4G_RE(3m)	Engineer: Justin Guo
Probe: HF907_102862_1-18GHz	Polarity: Horizontal
EUT: testo 565i	Power: AC 120V/60Hz
Test Mode: Transmit by BLE_1M at 2480MHz	



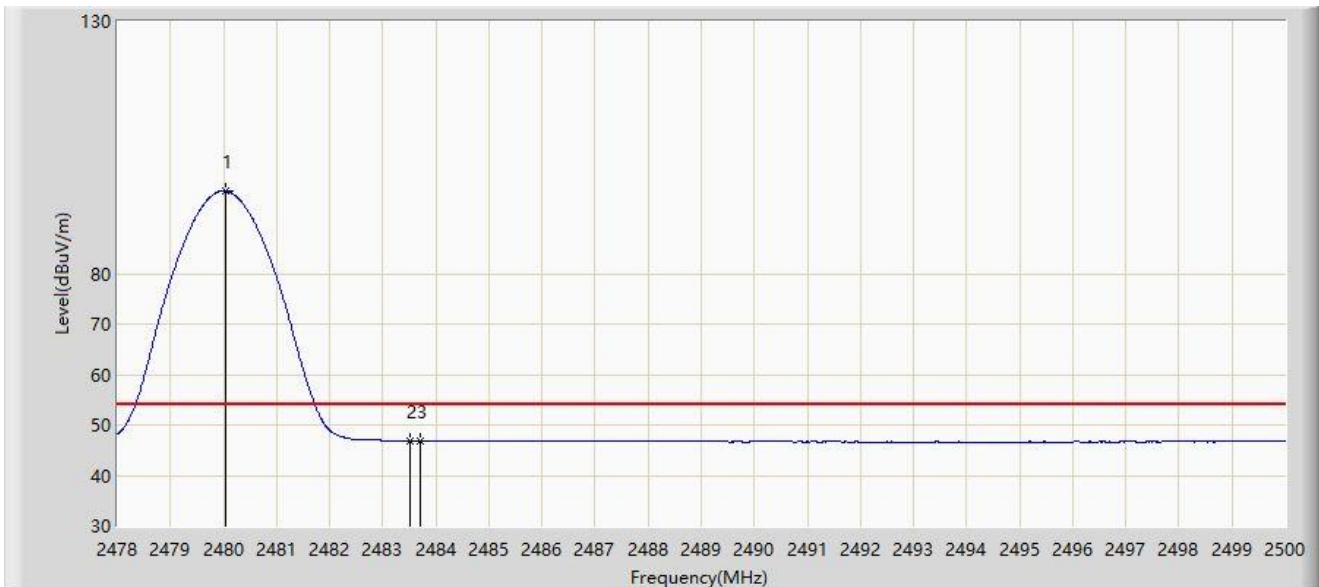
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2480.046	96.942	64.857	N/A	N/A	32.085	PK
2		2483.500	58.077	25.987	-15.923	74.000	32.090	PK
3	*	2484.754	59.900	27.809	-14.100	74.000	32.091	PK

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: SIP-AC1	Test Date: 2023-12-29
Limit: FCC_2.4G_RE(3m)	Engineer: Justin Guo
Probe: HF907_102862_1-18GHz	Polarity: Horizontal
EUT: testo 565i	Power: AC 120V/60Hz
Test Mode: Transmit by BLE_1M at 2480MHz	



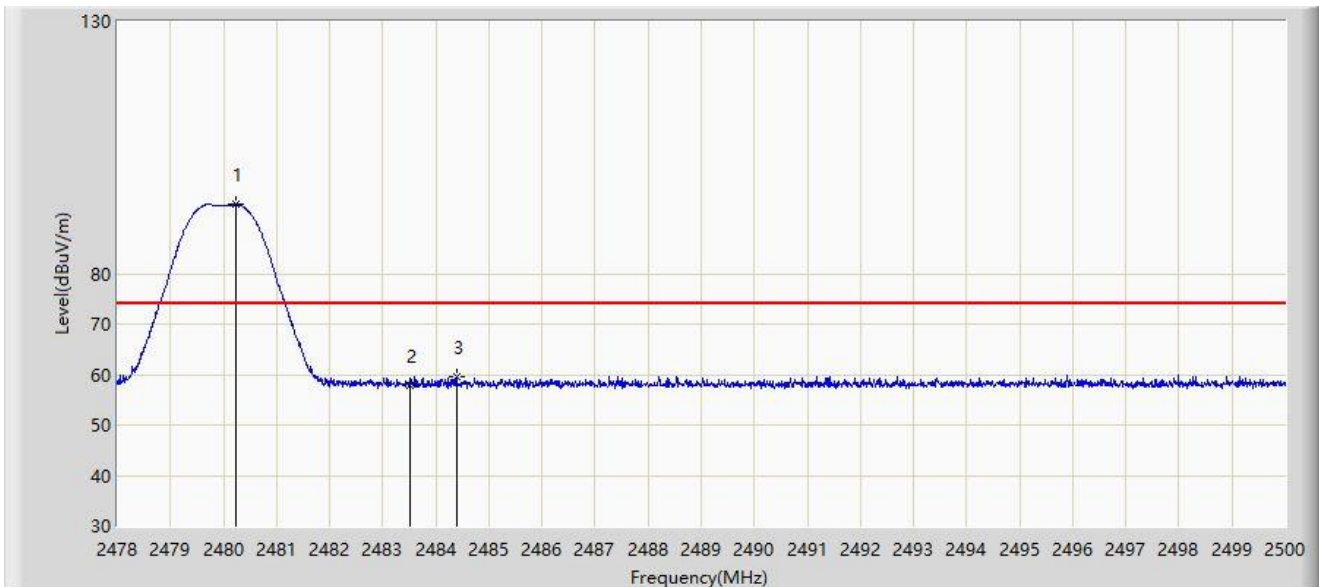
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2480.046	96.330	64.245	N/A	N/A	32.085	AV
2		2483.500	46.848	14.758	-7.152	54.000	32.090	AV
3	*	2483.709	46.892	14.802	-7.108	54.000	32.089	AV

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: SIP-AC1	Test Date: 2023-12-29
Limit: FCC_2.4G_RE(3m)	Engineer: Justin Guo
Probe: HF907_102862_1-18GHz	Polarity: Vertical
EUT: testo 565i	Power: AC 120V/60Hz
Test Mode: Transmit by BLE_1M at 2480MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2480.244	93.673	61.588	N/A	N/A	32.085	PK
2		2483.500	57.943	25.853	-16.057	74.000	32.090	PK
3	*	2484.391	59.504	27.413	-14.496	74.000	32.090	PK

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: SIP-AC1	Test Date: 2023-12-29
Limit: FCC_2.4G_RE(3m)	Engineer: Justin Guo
Probe: HF907_102862_1-18GHz	Polarity: Vertical
EUT: testo 565i	Power: AC 120V/60Hz
Test Mode: Transmit by BLE_1M at 2480MHz	



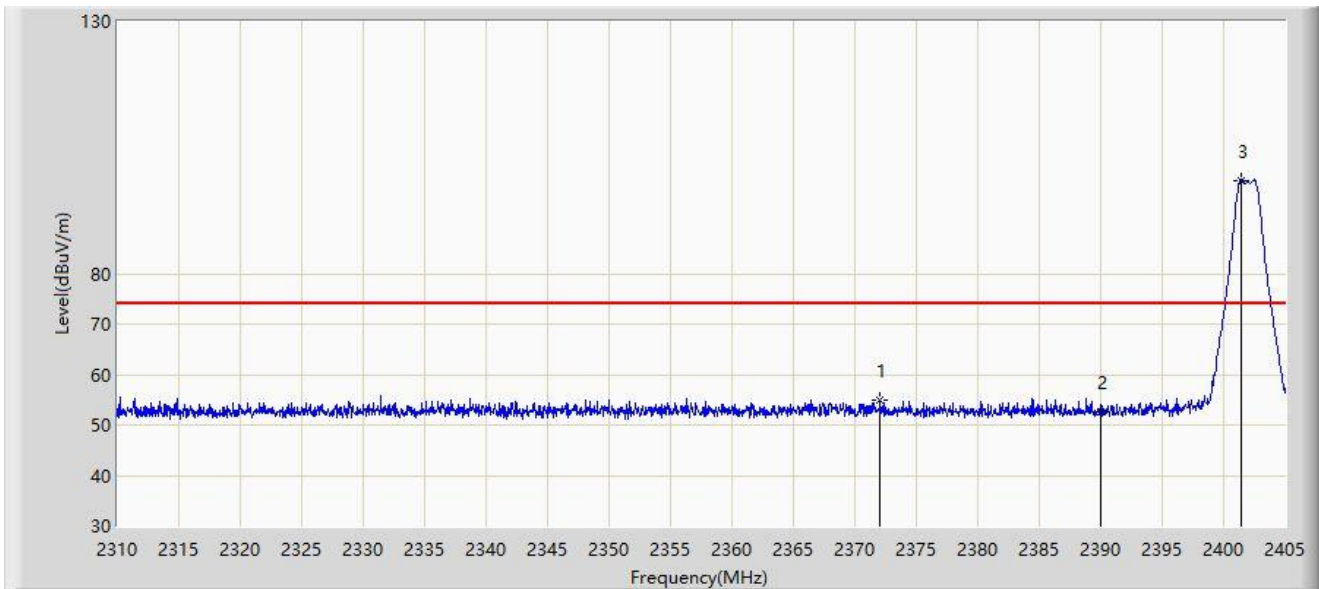
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2479.936	92.069	59.984	N/A	N/A	32.085	AV
2	*	2483.500	46.788	14.698	-7.212	54.000	32.090	AV

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: SIP-AC2	Test Date: 2024-01-14
Limit: FCC_2.4G_RE(3m)	Engineer: Arvin Ding
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Horizontal
EUT: testo 565i	Power: AC 120V/60Hz
Test Mode: Transmit by BLE_2M at 2402MHz	



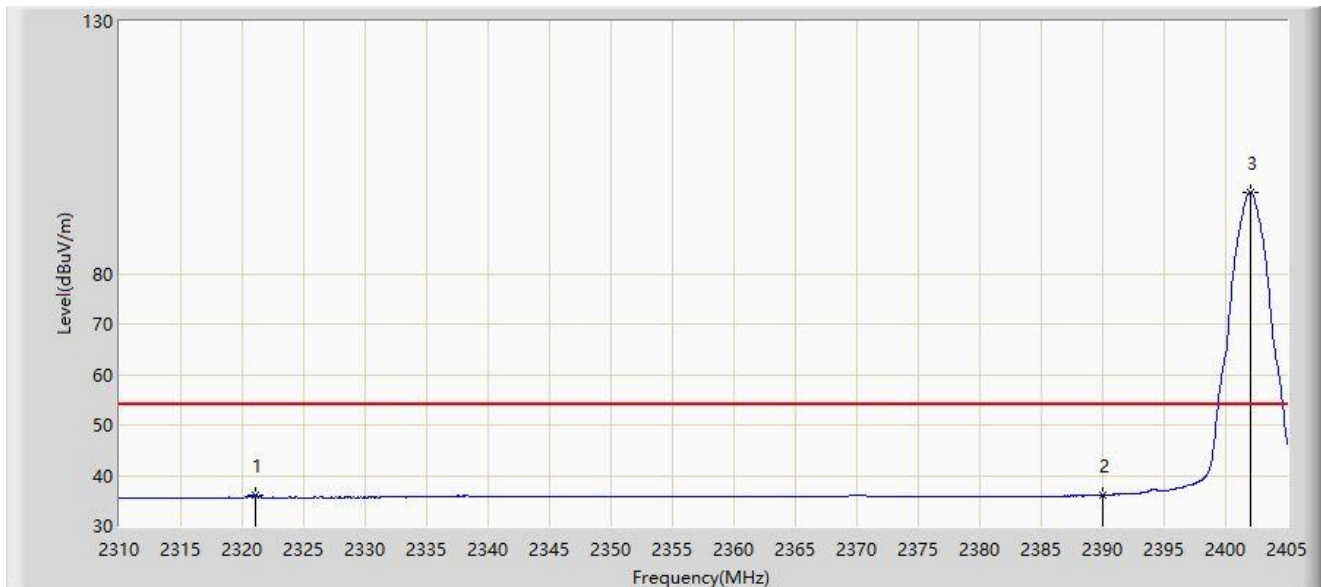
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2372.083	54.902	23.031	-19.098	74.000	31.871	PK
2		2390.000	52.551	20.798	-21.449	74.000	31.753	PK
3		2401.390	98.539	66.821	N/A	N/A	31.717	PK

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: SIP-AC2	Test Date: 2024-01-14
Limit: FCC_2.4G_RE(3m)	Engineer: Arvin Ding
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Horizontal
EUT: testo 565i	Power: AC 120V/60Hz
Test Mode: Transmit by BLE_2M at 2402MHz	



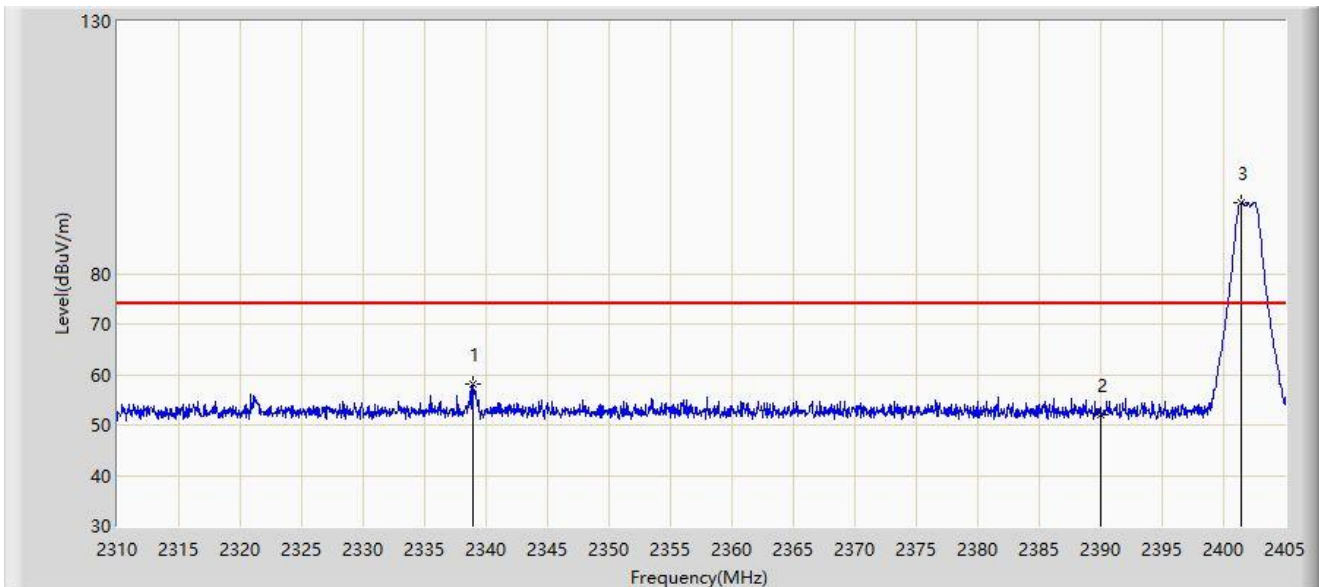
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2321.067	36.164	4.247	-17.836	54.000	31.917	AV
2		2390.000	36.048	4.295	-17.952	54.000	31.753	AV
3		2402.008	96.083	64.366	N/A	N/A	31.717	AV

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: SIP-AC2	Test Date: 2024-01-14
Limit: FCC_2.4G_RE(3m)	Engineer: Arvin Ding
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Vertical
EUT: testo 565i	Power: AC 120V/60Hz
Test Mode: Transmit by BLE_2M at 2402MHz	



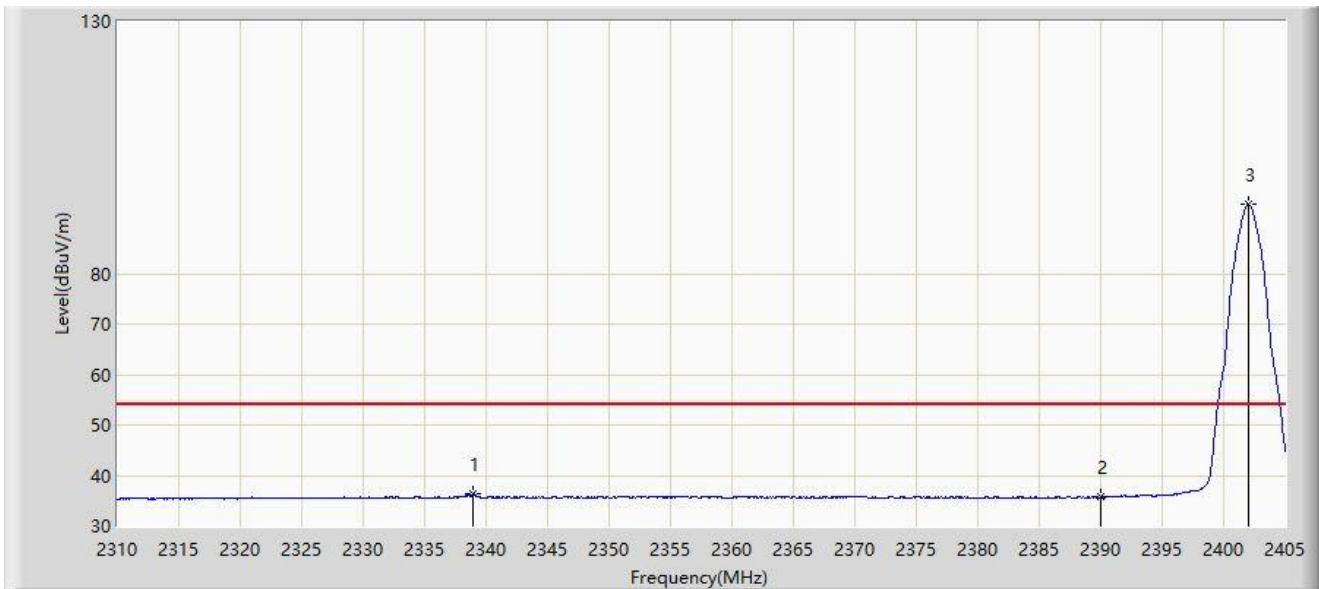
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2338.975	58.134	26.194	-15.866	74.000	31.940	PK
2		2390.000	52.161	20.408	-21.839	74.000	31.753	PK
3		2401.437	94.159	62.441	N/A	N/A	31.718	PK

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: SIP-AC2	Test Date: 2024-01-14
Limit: FCC_2.4G_RE(3m)	Engineer: Arvin Ding
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Vertical
EUT: testo 565i	Power: AC 120V/60Hz
Test Mode: Transmit by BLE_2M at 2402MHz	



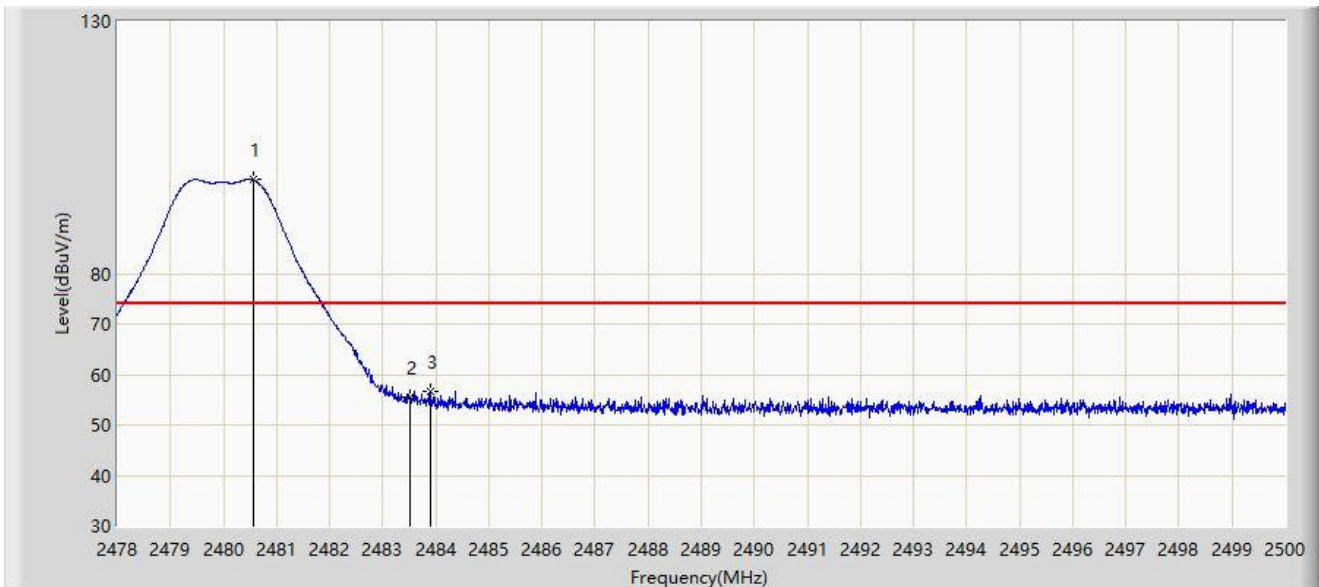
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1	*	2338.880	36.472	4.532	-17.528	54.000	31.940	AV
2		2390.000	35.675	3.922	-18.325	54.000	31.753	AV
3		2402.008	93.660	61.943	N/A	N/A	31.717	AV

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: SIP-AC2	Test Date: 2024-01-14
Limit: FCC_2.4G_RE(3m)	Engineer: Arvin Ding
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Horizontal
EUT: testo 565i	Power: AC 120V/60Hz
Test Mode: Transmit by BLE_2M at 2480MHz	



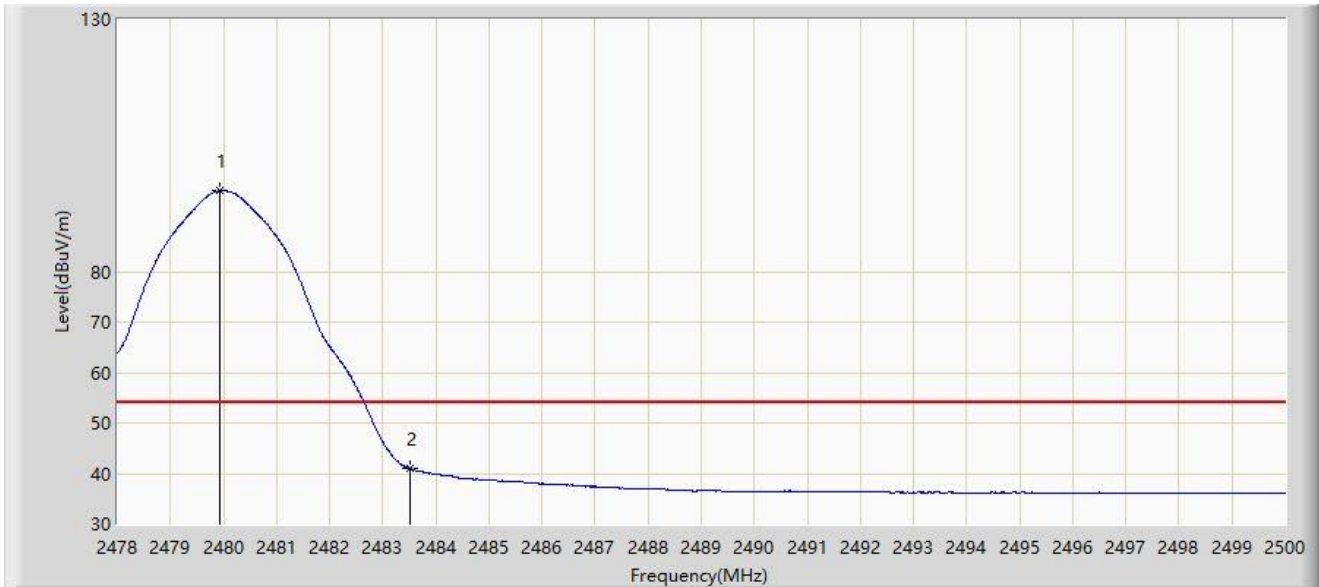
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2480.552	98.566	66.825	N/A	N/A	31.741	PK
2		2483.500	55.426	23.661	-18.574	74.000	31.765	PK
3	*	2483.907	56.677	24.908	-17.323	74.000	31.769	PK

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: SIP-AC2	Test Date: 2024-01-14
Limit: FCC_2.4G_RE(3m)	Engineer: Arvin Ding
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Horizontal
EUT: testo 565i	Power: AC 120V/60Hz
Test Mode: Transmit by BLE_2M at 2480MHz	



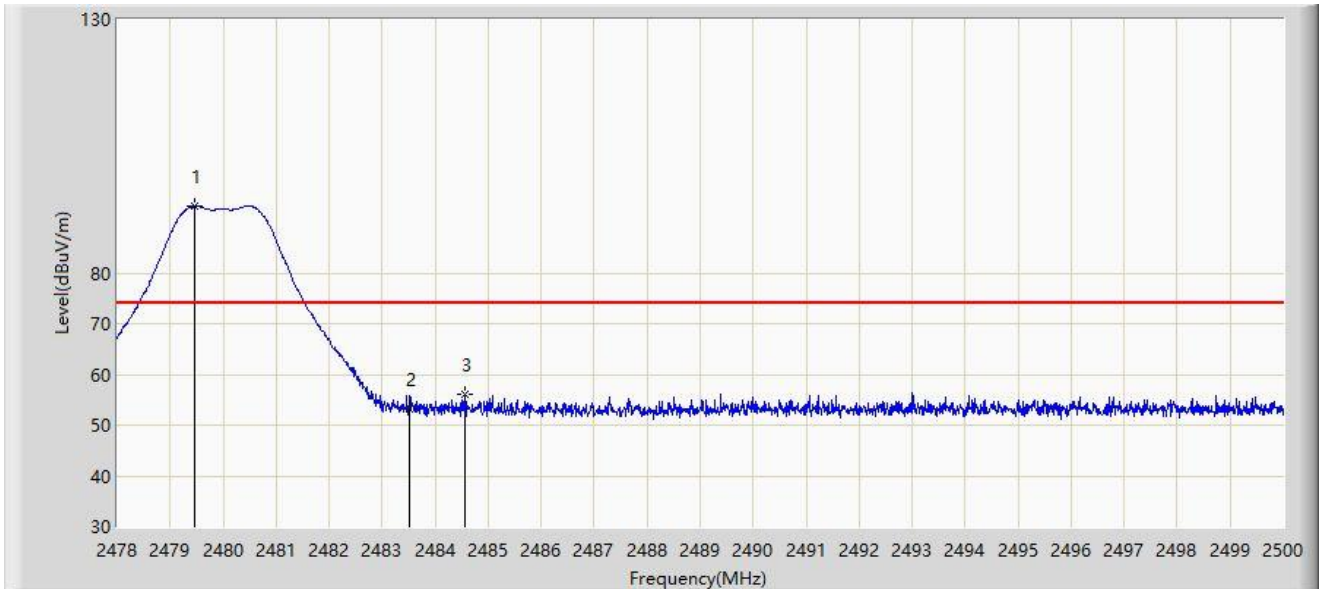
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2479.936	96.002	64.266	N/A	N/A	31.736	AV
2	*	2483.500	41.049	9.284	-12.951	54.000	31.765	AV

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: SIP-AC2	Test Date: 2024-01-14
Limit: FCC_2.4G_RE(3m)	Engineer: Arvin Ding
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Vertical
EUT: testo 565i	Power: AC 120V/60Hz
Test Mode: Transmit by BLE_2M at 2480MHz	



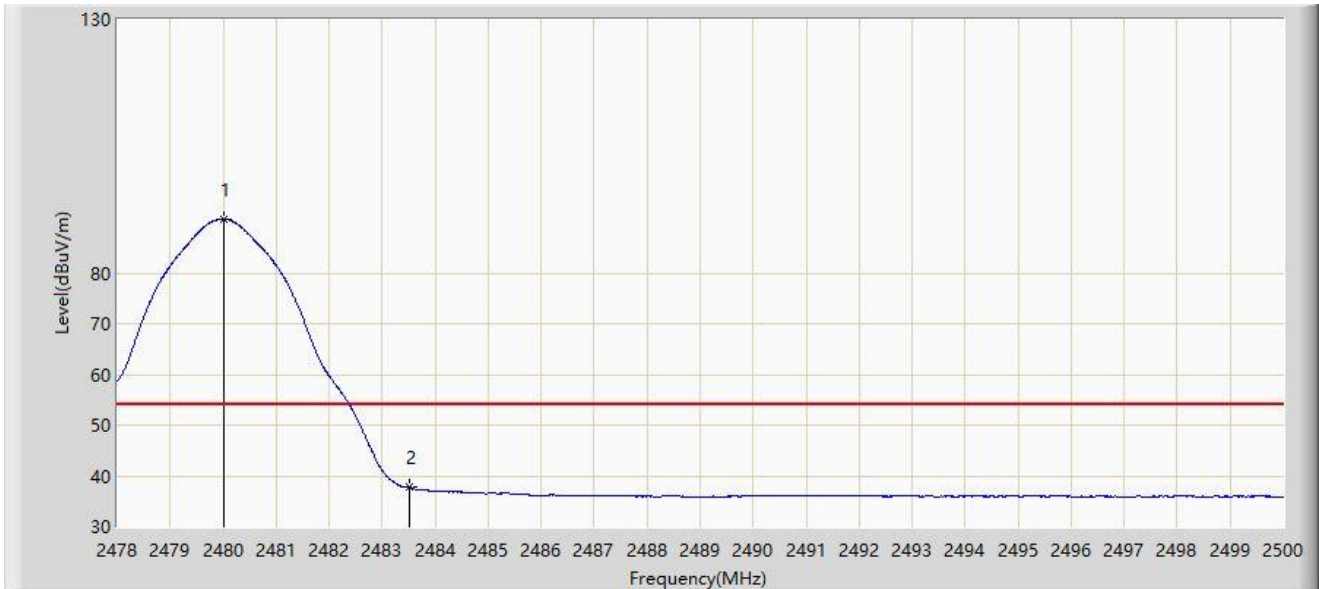
No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2479.463	93.213	61.481	N/A	N/A	31.732	PK
2		2483.500	53.217	21.452	-20.783	74.000	31.765	PK
3	*	2484.556	56.128	24.354	-17.872	74.000	31.774	PK

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: SIP-AC2	Test Date: 2024-01-14
Limit: FCC_2.4G_RE(3m)	Engineer: Arvin Ding
Probe: BBHA 9120D_02042_1-18GHz	Polarity: Vertical
EUT: testo 565i	Power: AC 120V/60Hz
Test Mode: Transmit by BLE_2M at 2480MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB/m)	Type
1		2480.002	90.609	58.872	N/A	N/A	31.736	AV
2	*	2483.500	37.715	5.950	-16.285	54.000	31.765	AV

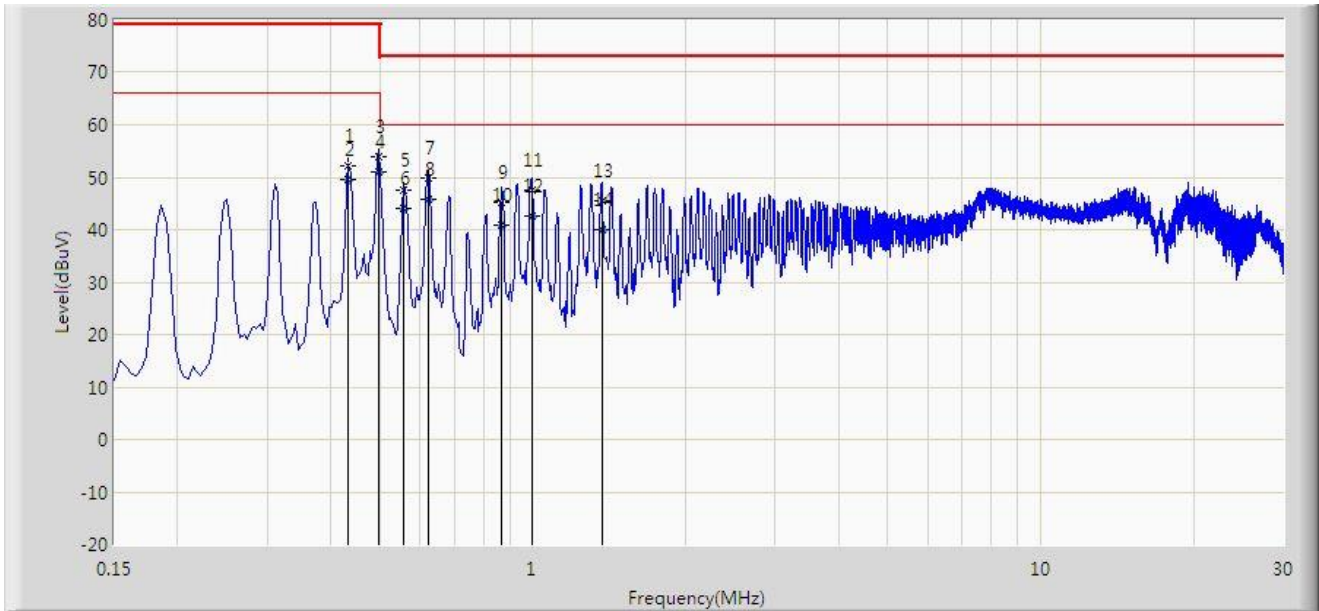
Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m).

Note 3: Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

A.8 AC Conducted Emissions Test Result

Site: SIP-SR2	Test Date: 2024-01-02
Temperature: 16.1°C	Humidity: 46.8%
Limit: FCC_Part15.107_CE_AC Power_Class A ^{Note 4}	Engineer: Mark Long
Probe: SIP-SR2-ENV216_101684_C	Polarity: Line
EUT: testo 565i	Power: AC 120V/60Hz
Test Mode: Transmit by BLE_1M at 2402MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV)	Factor (dB)	Type
1		0.434	52.249	42.519	-26.751	79.000	9.730	QP
2		0.434	49.509	39.779	-16.491	66.000	9.730	AV
3		0.498	53.899	44.168	-25.101	79.000	9.731	QP
4		0.498	50.889	41.158	-15.111	66.000	9.731	AV
5		0.558	47.614	37.878	-25.386	73.000	9.736	QP
6		0.558	44.113	34.377	-15.887	60.000	9.736	AV
7		0.622	49.832	40.090	-23.168	73.000	9.742	QP
8	*	0.622	45.923	36.181	-14.077	60.000	9.742	AV
9		0.870	45.113	35.365	-27.887	73.000	9.749	QP
10		0.870	40.839	31.090	-19.161	60.000	9.749	AV
11		0.994	47.552	37.812	-25.448	73.000	9.740	QP
12		0.994	42.468	32.728	-17.532	60.000	9.740	AV
13		1.366	45.373	35.613	-27.627	73.000	9.760	QP
14		1.366	39.995	30.235	-20.005	60.000	9.760	AV

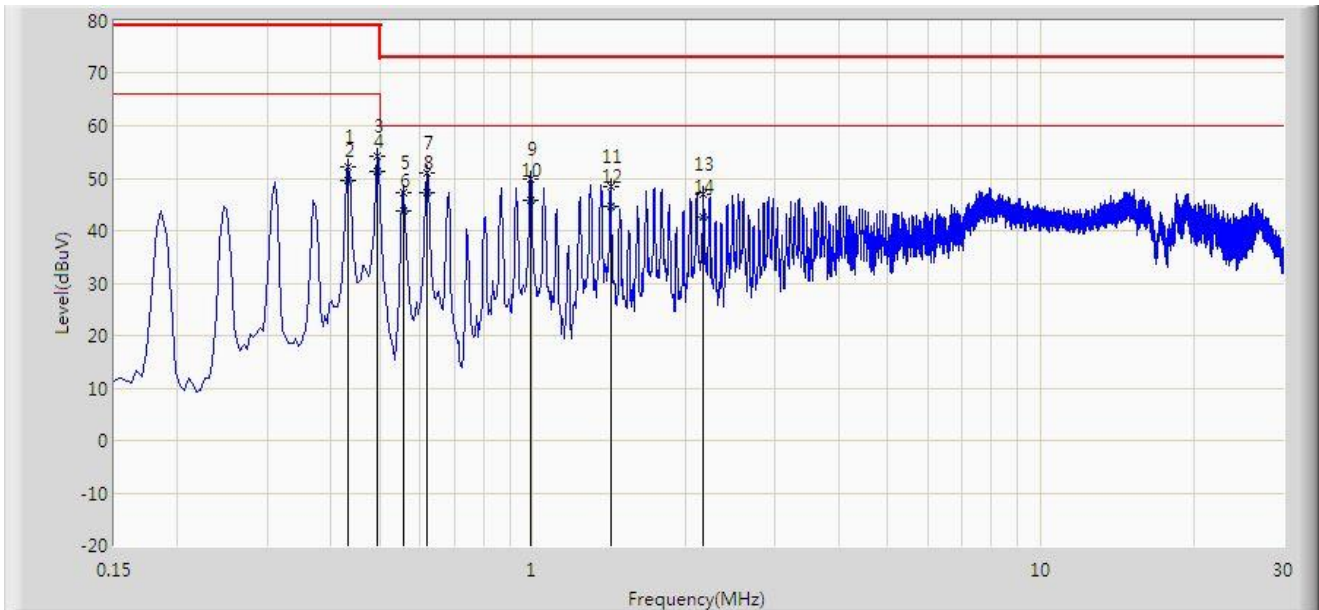
Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dB μ V) = Reading Level (dB μ V) + Factor (dB).

Note 3: Factor (dB) = Cable Loss (dB) + LISN Factor (dB).

Note 4: The product meets the Class A limits and requirements due to this product belongs to composite device.

Site: SIP-SR2	Test Date: 2024-01-02
Temperature: 16.1°C	Humidity: 46.8%
Limit: FCC_Part15.107_CE_AC Power_Class A ^{Note 4}	Engineer: Mark Long
Probe: SIP-SR2-ENV216_101684_C	Polarity: Neutral
EUT: testo 565i	Power: AC 120V/60Hz
Test Mode: Transmit by BLE_1M at 2402MHz	



No	Mark	Frequency (MHz)	Measure Level (dBμV)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV)	Factor (dB)	Type
1		0.434	52.289	42.579	-26.711	79.000	9.710	QP
2		0.434	49.507	39.797	-16.493	66.000	9.710	AV
3		0.494	54.315	44.605	-24.685	79.000	9.710	QP
4		0.494	51.393	41.683	-14.607	66.000	9.710	AV
5		0.558	47.244	37.534	-25.756	73.000	9.710	QP
6		0.558	43.700	33.990	-16.300	60.000	9.710	AV
7		0.618	51.023	41.313	-21.977	73.000	9.710	QP
8	*	0.618	47.335	37.625	-12.665	60.000	9.710	AV
9		0.990	49.875	40.165	-23.125	73.000	9.710	QP
10		0.990	45.729	36.019	-14.271	60.000	9.710	AV
11		1.422	48.503	38.773	-24.497	73.000	9.730	QP
12		1.422	44.625	34.895	-15.375	60.000	9.730	AV
13		2.166	46.824	37.091	-26.176	73.000	9.733	QP
14		2.166	42.712	32.979	-17.288	60.000	9.733	AV

Note 1: " * ", means this data is the worst emission level.

Note 2: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB).

Note 3: Factor (dB) = Cable Loss (dB) + LISN Factor (dB).

Note 4: The product meets the Class A limits and requirements due to this product belongs to composite device.

Appendix B - Test Setup Photograph

Refer to “2312RSU053-UT” file.

Appendix C - EUT Photograph

Refer to “2312RSU053-UE” file.

The End
