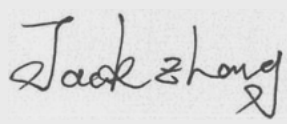


Test report No:
2170004R-RF-US-P06V01

FCC TEST REPORT

Product Name	Charger Cradle
Trademark	Honeywell
Model and /or type reference	CCB02-100BT
FCC ID	HD5CCB02B
Applicant's name / address	HONEYWELL INTERNATIONAL INC Honeywell Safety and Productivity Solutions 9680 OLD BAILES RD FORT MILL SC 29707-7539,USA
Test method requested, standard	FCC CFR Title 47 Part 15 Subpart C Section 15.247 ANSI C63.10: 2013 KD558074 D01 15.247 Meas Guidance v05r02
Verdict Summary	IN COMPLIANCE
Documented by (name / position & signature)	Tim Cao/Project Engineer 
Approved by (name / position & signature)	Jack Zhang/ Supervisor 
Date of issue	2021-09-14
Report Version	V2.0
Report template No	Template_FCC 15.247-RF-V1.0

INDEX

	page
General conditions	5
Environmental conditions	5
Possible test case verdicts	6
Abbreviations	6
Document History	7
Remarks and Comments.....	7
Used Equipment	8
Uncertainty	10
1 General Information.....	11
1.1 General Description of the Item(s)	11
1.2 Antenna Information	12
1.3 Channel List	13
2 Description of Test Setup	14
2.1 Operating mode(s) used for tests.....	14
2.2 Auxiliary equipment / Test software for the EUT.....	14
2.3 Test Configuration / Block diagram used for tests	15
2.4 Testing process	16
3 Verdict summary section	17
3.1 Standards.....	17
3.2 Deviation(s) from the Standard(s) / Test Specification(s).....	17
3.3 Overview of results.....	18
3.4 Test Facility.....	19
4 Test Results	20
4.1 Conducted Emission.....	20
4.1.1 Limit	20
4.1.2 Test Setup.....	20
4.1.3 Test Procedure.....	20
4.1.4 Test Data	21
4.2 Emissions in restricted frequency bands	23
4.2.1 Limit	23
4.2.2 Test Setup.....	24
4.2.3 Test Procedure.....	25
4.2.4 Test Data	26
4.3 20dB Bandwidth	46

4.3.1	Limit	46
4.3.2	Test Setup.....	46
4.3.3	Test Procedure.....	46
4.3.4	Test Data	47
4.4	Carrier Frequency Separation.....	48
4.4.1	Limit	48
4.4.2	Test Setup.....	48
4.4.3	Test Procedure.....	48
4.4.4	Test Data	49
4.5	Number of hopping Frequencies.....	51
4.5.1	Limit	51
4.5.2	Test Setup.....	51
4.5.3	Test Procedure.....	51
4.5.4	Test Data	52
4.6	Time of Occupancy(Dwell Time).....	53
4.6.1	Limit	53
4.6.2	Test Setup.....	53
4.6.3	Test Procedure.....	53
4.6.4	Test Data	54
4.7	Peak Output Power	57
4.7.1	Limit	57
4.7.2	Test Setup.....	57
4.7.3	Test Procedure.....	58
4.7.4	Test Data	59
4.8	Emissions in non-restricted frequency band.....	60
4.8.1	Limit	60
4.8.2	Test Setup.....	60
4.8.3	Test Procedure.....	60
4.8.4	Test Data	61
4.9	Duty cycle	65
4.9.1	Limit	65
4.9.2	Test Setup.....	65
4.9.3	Test Procedure.....	65
4.9.4	Test Data	66
4.10	Radiated Emission Band Edge	67
4.10.1	Limit	67
4.10.2	Test Setup.....	67



4.10.3	Test Procedure.....	67
4.10.4	Test Data	68
4.11	Antenna Requirement.....	92
4.11.1	Limit:	92
4.11.2	Antenna Connector Construction:	92
5	Test setup photo and EUT Photo.....	93

COMPETENCES AND GUARANTEES

DEKRA is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

DEKRA guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

DEKRA is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

IMPORTANT: No parts of this report may be reproduced or quoted out of context, in any form or by any means, except in full, without the previous written permission of DEKRA.

GENERAL CONDITIONS

Test Location	No. 99, Hongye Road, Suzhou Industrial Park Suzhou, 215006, P.R. China
Date(receive sample)	Jul. 01, 2021
Date (start test)	Jul. 13, 2021
Date (finish test)	Sept. 03, 2021

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or Competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA.

ENVIRONMENTAL CONDITIONS

The climatic conditions during the tests are within the limits specified by the manufacturer for the operation of the EUT and the test equipment. The climatic conditions during the tests were within the following limits:

Ambient temperature	15 °C – 35 °C
Relative Humidity air	30% - 60%

If explicitly required in the basic standard or applied product / product family standard the climatic values are recorded and documented separately in this test report.

POSSIBLE TEST CASE VERDICTS

Test case does not apply to test object	N/A
Test object does meet requirement	P (Pass) / PASS
Test object does not meet requirement	F (Fail) / FAIL
Not measured	N/M

ABBREVIATIONS

For the purposes of the present document, the following abbreviations apply:

EUT	: Equipment Under Test
QP	: Quasi-Peak
CAV	: CISPR Average
AV	: Average
CDN	: Coupling Decoupling Network
SAC	: Semi-Anechoic Chamber
OATS	: Open Area Test Site
BW	: Bandwidth
AM	: Amplitude Modulation
PM	: Pulse Modulation
HCP	: Horizontal Coupling Plane
VCP	: Vertical Coupling Plane
U_N	: Nominal voltage
T_x	: Transmitter
R_x	: Receiver
N/A	: Not Applicable
N/M	: Not Measured

DOCUMENT HISTORY

Report No.	Version	Description	Issued Date
2170004R-RF-US-P06V01	V1.0	Initial issue of report.	2021-09-09
2170004R-RF-US-P06V01	V2.0	Page 1,11: Update FCC ID. (The test report No.: 2170004R-RF-US-P06V01 V2.0 is to replace the test report No.: 2110202R-RF-CE-P06V01 V1.0, and test report 2110202R-RF-CE-P06V01 V1.0 is obsoleted.)	2021-09-14

REMARKS AND COMMENTS

1. The equipment under test (EUT) does meet the essential requirements of the stated standard(s)/test(s).
2. These test results on a sample of the device are for the purpose of demonstrating Compliance with Part 15 Subpart C Paragraph 15.247.
3. The measurement result is considered in conformance with the requirement if it is within the prescribed limit, It is not necessary to account the uncertainty associated with the measurement result.
4. The test results presented in this report relate only to the object tested.
5. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification (Suzhou) Co., Ltd.
6. This report will not be used for social proof function in China market.
7. DEKRA declines any responsibility with the following test data provided by customer that may affect the validity of result:
 - Chapter 1.1 General Description of the Item(s);
 - Chapter 1.2 Antenna Informaion;
 - Chapter 1.3 Channel List.

USED EQUIPMENT

AC Power Line Conducted Emission / TR1

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
EMI Test Receiver	R&S	ESCI	100906	2021.04.28	2022.04.27
Two-Line V-Network	R&S	ENV216	101044	2021.03.20	2022.03.19
50ohm Termination	SHX	TF2	7081402	2020.09.23	2021.09.22
50ohm Termination	SHX	TF2	7081403	2020.09.23	2021.09.22
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	N/A	N/A
Temperature/Humidity Meter	RTS	RTS-8S	TR1-TH	2021.07.09	2022.07.08
Dekra test software	Dekra	-	-	-	-

Emissions in non-restricted frequency bands/ Occupied Bandwidth/ Fundamental emission output power Power Spectral Density / TR8

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2021.03.20	2022.03.19
Power Meter	Keysight	N1912A	MY60300004	2020.11.14	2021.11.13
Power Sensor	Keysight	N1921A	MY60350003	2020.11.14	2021.11.13
Coaxial Cable	Woken	A50-SMAMSMAM-1m	20111443	2020.11.13	2021.11.12
Temperature/Humidity Meter	RTS	RTS-8S	RF08	2021.07.09	2022.07.08
Dekra test software	Dekra	-	-	-	-

Radiated Emission(30MHz-1GHz) / AC3

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
EMI Test Receiver	R&S	ESCI	100176	2020.08.15	2021.08.14
Loop Antenna	R&S	HFH2-Z2	833799/003	2021.03.04	2022.03.03
TRILOG Broadband Antenna	SCHWARZBECK	VULB 9168	1231	2021.04.19	2022.04.18
Temperature/Humidity Meter	RTS	RTS-8S	AC3-TH	2020.08.13	2021.08.12
Dekra test software	Dekra	-	-	-	-

Radiated Emission / AC5(1GHz-40GHz)(Chamber details)

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2021.03.20	2022.03.19
Pre-Amplifier	EMCI	EMC184045SE	980263	2021.05.22	2022.05.21
DRG Horn Antenna	ETS-Lindgren	3117	167055	2021.08.23	2022.08.22
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2021.04.19	2022.04.18
Pre-Amplifier	emci	EMC184045SE	980263	2021.05.22	2022.05.21
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2021.03.31	2022.03.30
Coaxial Cable	ROSENBERGER	LA1-C011- 2000/3000	AC5-40G	2021.03.20	2022.03.19
Temperature/Humidity Meter	RTS	RTS-8S	AC5-TH	2021.07.09	2022.07.08
Dekra test software	Dekra	-	-	-	-

UNCERTAINTY

Uncertainties have been calculated according to the DEKRA internal document. The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%.

Test item	Uncertainty
AC Power Line Conducted Emission	9kHz~150kHz: 2.80dB 150kHz~30MHz: 2.40dB
Radiated Emission(30MHz~1GHz)	Horizontal: 30MHz~200MHz: 3.50 dB 300MHz~1GHz: 3.60 dB Vertical: 30MHz~200MHz: 3.60 dB 300MHz~1GHz: 3.50 dB
Radiated Emission(1GHz~26.5GHz)	Horizontal: 1GHz~18GHz: 5.00 dB Vertical: 1GHz~18GHz: 4.80 dB
20dB Bandwidth	± 1 kHz
Carrier Frequency Separation	± 1 kHz
Number of Hopping Frequencies	± 1 kHz
Time of Occupancy (Dwell Time)	± 0.1 us
Peak Power Output	± 1.27 dB
Emissions in non-restricted frequency bands	± 1.0 dB
Radiated Emission Band Edge	± 3.9 dB

1 GENERAL INFORMATION

1.1 General Description of the Item(s)

Product Name	Charger Cradle
Model No.	CCB02-100BT
Trademark	Honeywell
FCC ID	HD5CCB02B
Manufacturer.....	HONEYWELL INTERNATIONAL INC Honeywell Safety and Productivity Solutions
Manufacturer address	9680 OLD BAILES RD FORT MILL SC 29707-7539,USA

Wireless specification.....	Bluetooth					
Bluetooth Specification.....	BR+EDR					
Operating frequency range(s)	2400~2483.5MHz					
Type of Modulation.....	GFSK					
PHYS	☒	GFSK	☒	Pi/4 DQPSK	☒	8DPSK
Data Rate	☒	1Mbit/s	☒	2Mbit/s	☒	3Mbit/s
Number of channel.....	79					

Rated power supply	Voltage and Frequency	
	☐	AC: 220 – 240 V, 50/60 Hz
	☐	AC: 100 – 240 V, 50/60 Hz
	☐	DC:.....
	☐	Battery:
	☒	Adapter: Input: 100-240 V ~50/60Hz Output: 5.2 Vdc
Adapter Trademark	HOIOTO	
Adapter Model	ADS-6AE-06 05252E	
Mounting position.....	☒	Table top equipment
	☐	Wall/Ceiling mounted equipment
	☐	Floor standing equipment
	☐	Hand-held equipment
	☐	Other:

1.2 Antenna Information

Antenna model / type number.....:	N/A		
Antenna serial number	N/A		
Antenna Delivery	☒	1TX + 1RX	
	☐	2TX + 2RX	
	☐	Others:.....	
Antenna technology.....:	☒	SISO	
	☐	MIMO	☐ CDD
			☐ Beam-forming
Antenna Type.....:	☐	External	☐ Dipole
			☐ Sectorized
	☒	Internal	☐ Ceramic Chip
			☐ PIFA
			☐ PCB
			☒ Ceramic chip
			☐ Others.....
Antenna Gain.....:	-1.0 dBi		

1.3 Channel List

Bluetooth Working Frequency of Each Channel: (For BR/EDR)							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
00	2402 MHz	01	2403 MHz	02	2404 MHz	03	2405 MHz
04	2406 MHz	05	2407 MHz	06	2408 MHz	07	2409 MHz
08	2410 MHz	09	2411 MHz	10	2412 MHz	11	2413 MHz
12	2414 MHz	13	2415 MHz	14	2416 MHz	15	2417 MHz
16	2418 MHz	17	2419 MHz	18	2420 MHz	19	2421 MHz
20	2422 MHz	21	2423 MHz	22	2424 MHz	23	2425 MHz
24	2426 MHz	25	2427 MHz	26	2428 MHz	27	2429 MHz
28	2430 MHz	29	2431 MHz	30	2432 MHz	31	2433 MHz
32	2434 MHz	33	2435 MHz	34	2436 MHz	35	2437 MHz
36	2438 MHz	37	2439 MHz	38	2440 MHz	39	2441 MHz
40	2442 MHz	41	2443 MHz	42	2444 MHz	43	2445 MHz
44	2446 MHz	45	2447 MHz	46	2448 MHz	47	2449 MHz
48	2450 MHz	49	2451 MHz	50	2452 MHz	51	2453 MHz
52	2454 MHz	53	2455 MHz	54	2456 MHz	55	2457 MHz
56	2458 MHz	57	2459 MHz	58	2460 MHz	59	2461 MHz
60	2462 MHz	61	2463 MHz	62	2464 MHz	63	2465 MHz
64	2466 MHz	65	2467 MHz	66	2468 MHz	67	2469 MHz
68	2470 MHz	69	2471 MHz	70	2472 MHz	71	2473 MHz
72	2474 MHz	73	2475 MHz	74	2476 MHz	75	2477 MHz
76	2478 MHz	77	2479 MHz	78	2480 MHz	N/A	N/A

Note: The General Description of the Item , antenna information and Channel List for the EUT in clause 1 are provided and confirmed by the client.

2 DESCRIPTION OF TEST SETUP

2.1 Operating mode(s) used for tests

During the tests the following operating mode(s) has(have) been used.

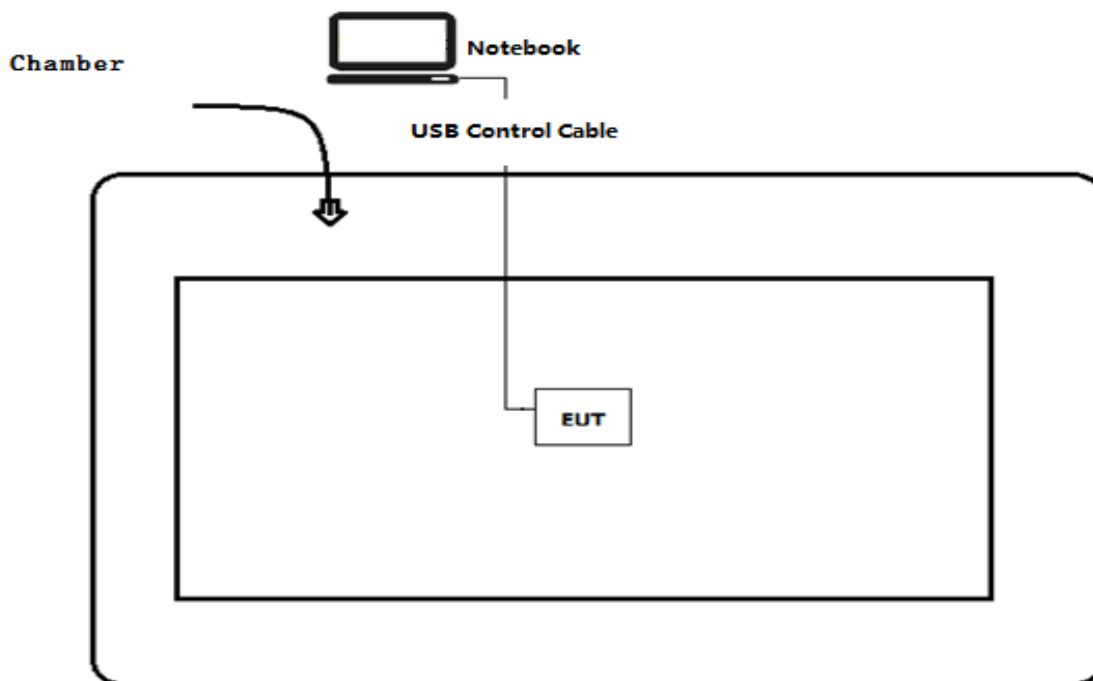
Test Mode For Bluetooth	Mode 1: Transmitter-1Mbps(GFSK_DH5)
	Mode 2: Transmitter-2Mbps(Pi/4 DQPSK_DH5)
	Mode 3: Transmitter-3Mbps(8DPSK_DH5)
	Mode 4: Transmitter-Hopping

2.2 Auxiliary equipment / Test software for the EUT

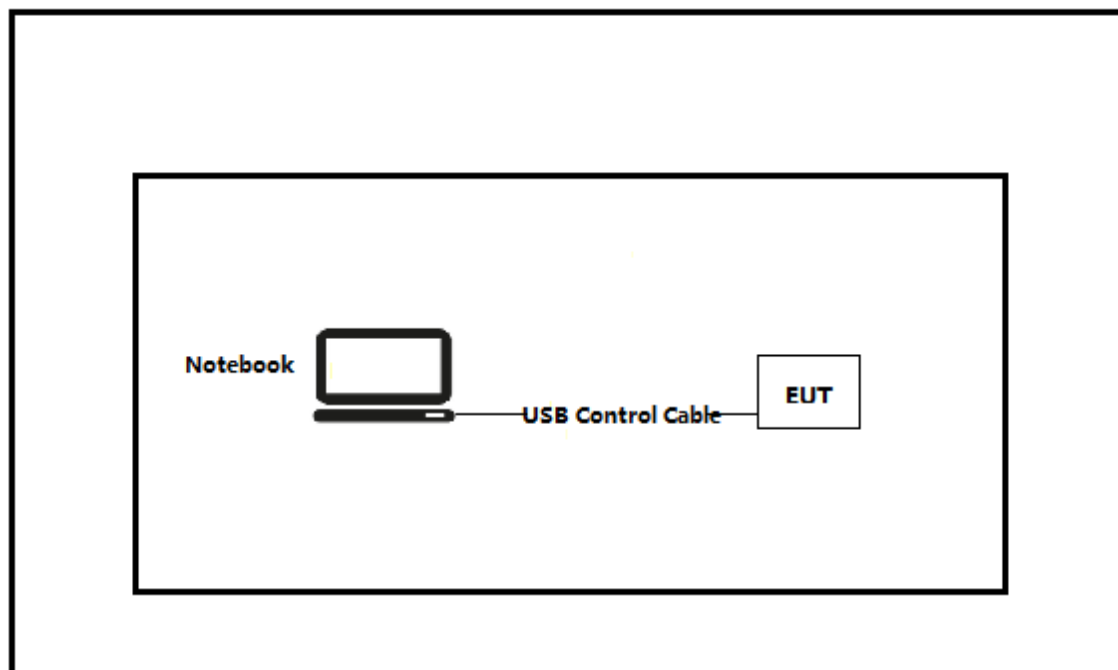
Auxiliary equipment	Type / Version	Manufacturer	Supplied by
Notebook	Think pad x220	Lenovo	Adapter
software	Type / Version	Manufacturer	Supplied by
CyBluetool	0.1.97.1	N/A	N/A

2.3 Test Configuration / Block diagram used for tests

Test setup Diagram- AC Power Line Conducted Emission Test



Test setup Diagram- Conducted test



2.4 Testing process

1	Setup the EUT as shown in Section 2.3.
2	Execute the “CyBluetool” tool on the auxiliary equipment.
3	Configure the test mode, the test channel, and the data rate.
4	Verify that the EUT works properly.

3 VERDICT SUMMARY SECTION

This chapter presents an overview of standards and results. Refer to the next chapters for details of measured test results and applied test levels.

3.1 Standards

Standard	Year	Description
FCC CFR Title 47 Part 15 Subpart C Section 15.247	2019	Operation within the bands 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz.
ANSI C63.10	2013	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
KDB 558074 D01 v05r02	2019	Guidance for performing compliance measurements on Digital Transmission System (DTS) operating under section 15.247

3.2 Deviation(s) from the Standard(s) / Test Specification(s)

The following deviation(s) was / were made from the published requirements of the listed standards: N/A.

(Please define the deviations from the standard(s) if applicable)

3.3 Overview of results

Performed Test Item	Normative References	Test Performed	Deviation
Conducted Emission	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.207	Yes	No
Emissions in restricted frequency bands	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.209	Yes	No
20dB Bandwidth	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(a)(1)	Yes	No
Carrier Frequency Separation	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(a)(1)	Yes	No
Number of Hopping Frequencies	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(a)(1)(iii)	Yes	No
Time of Occupancy (Dwell Time)	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(a)(1)(iii)	Yes	No
Peak Output Power	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(b)(1)	Yes	No
Emissions in non-restricted frequency bands	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.215(c), 15.247(d)	Yes	No
Radiated Emission Band Edge	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(d)	Yes	No
Antenna Requirement	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.203	Yes	No

3.4 Test Facility

USA : FCC Designation Number: CN1199

4 TEST RESULTS

4.1 Conducted Emission

VERDICT: PASS

4.1.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.207	
Frequency range [MHz]	Limit: QP [dB(μV) ¹⁾]	Limit: AV [dB(μV) ¹⁾]
0,15 - 0,50	66 - 56 ²⁾	56 - 46 ²⁾
0,50 - 5,0	56	46
5,0 - 30	60	50

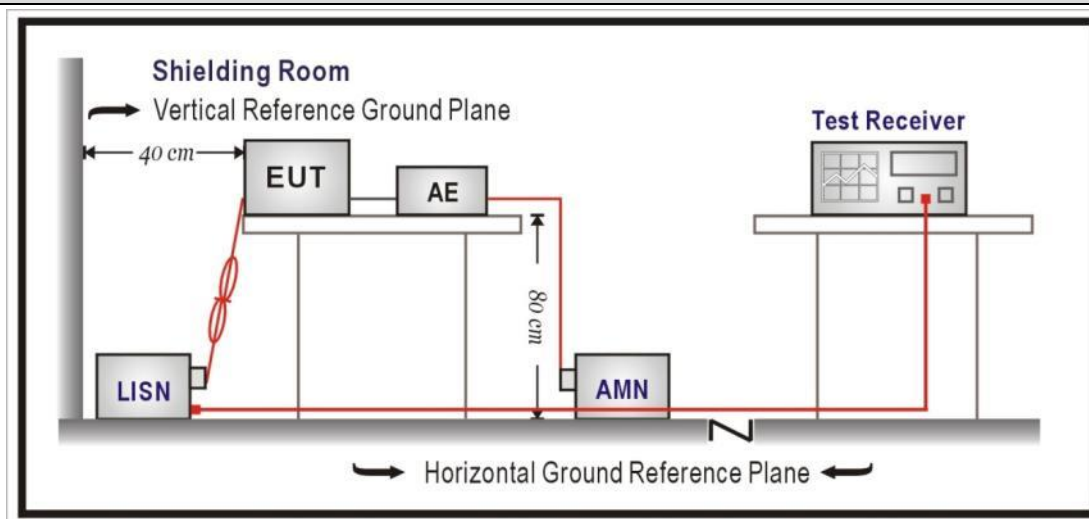
¹⁾ At the transition frequency, the lower limit applies.

²⁾ The limit decreases linearly with the logarithm of the frequency.

NOTE 1: The exclusion band for transmitters shall be considered for transmitters operating at frequencies below 30 MHz.

NOTE 2: Where the AC output port is directly connected (or via a circuit breaker) to the AC power input port of the EUT the AC power output port need not to be tested.

4.1.2 Test Setup

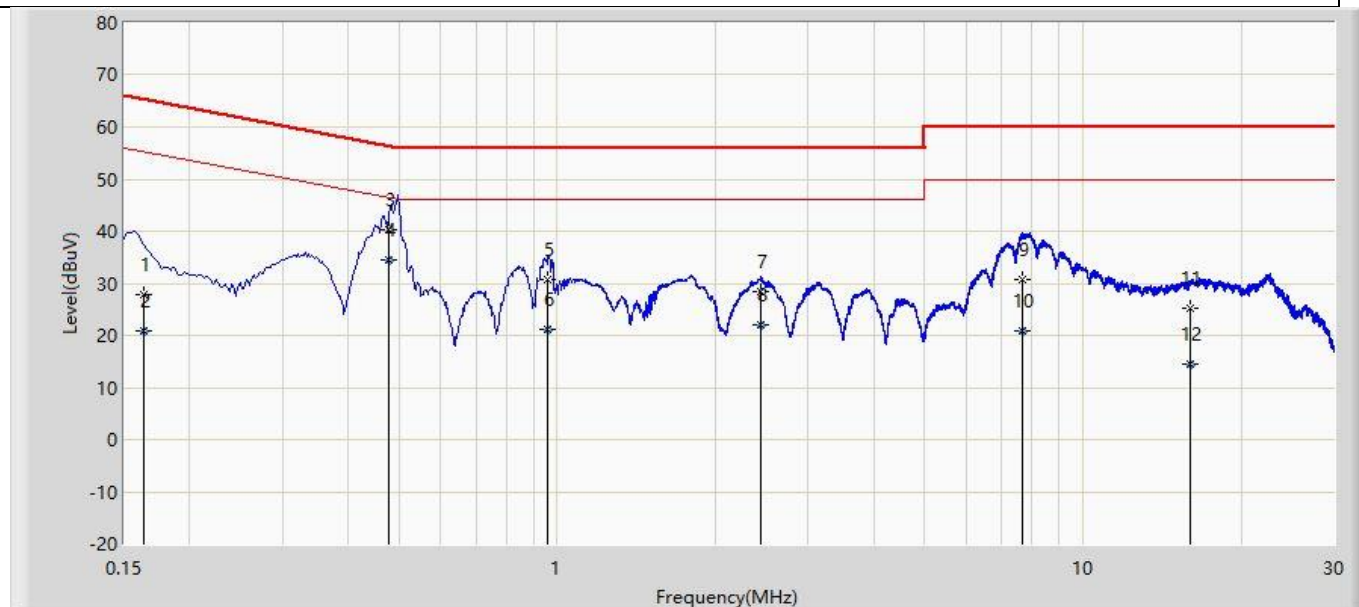


4.1.3 Test Procedure

	References Rule	Chapter	Item
☒	ANSI C63.10-2013	6.2	Standard test method for ac power-line conducted emissions from unlicensed wireless devices

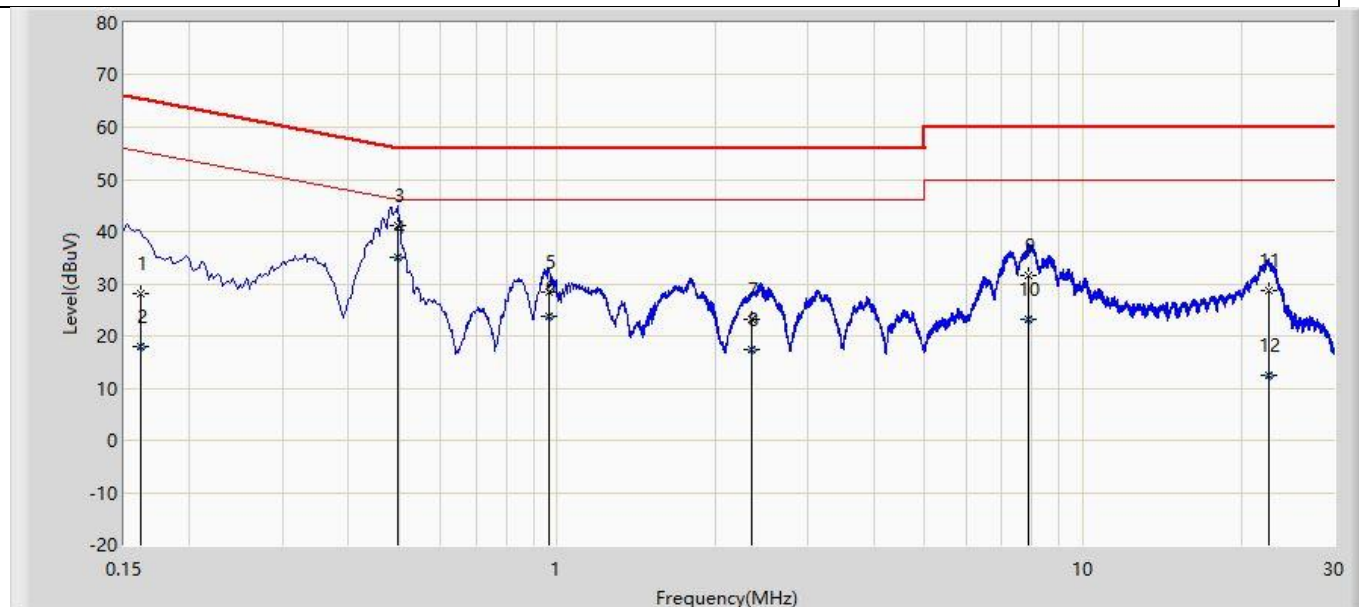
4.1.4 Test Data

Profile: 2170004R	Page No.: 23
Engineer: Yu Liu	
Site: TR1	Time: 2021/09/02 - 20:57
Limit: FCC_Part15.107_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Line
EUT: PHILIPS	Power: AC 120V/60Hz
Note: Mode: L-line	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		0.164	27.945	18.282	-37.339	65.284	9.663	QP
2		0.164	20.827	11.164	-34.457	55.284	9.663	AV
3		0.479	40.324	30.505	-16.034	56.358	9.820	QP
4	*	0.479	34.524	24.704	-11.835	46.358	9.820	AV
5		0.960	30.664	20.703	-25.336	56.000	9.962	QP
6		0.960	21.076	11.115	-24.924	46.000	9.962	AV
7		2.441	28.396	18.340	-27.604	56.000	10.055	QP
8		2.441	21.991	11.935	-24.009	46.000	10.055	AV
9		7.647	30.592	20.336	-29.408	60.000	10.256	QP
10		7.647	20.898	10.642	-29.102	50.000	10.256	AV
11		15.970	25.282	14.775	-34.718	60.000	10.507	QP
12		15.970	14.408	3.901	-35.592	50.000	10.507	AV

Profile: 2170004R	Page No.: 24
Engineer: Yu Liu	
Site: TR1	Time: 2021/09/02 - 21:02
Limit: FCC_Part15.107_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Neutral
EUT: PHILIPS	Power: AC 120V/60Hz
Note: Mode: N-line	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		0.161	28.209	18.468	-37.190	65.399	9.741	QP
2		0.161	17.873	8.131	-37.526	55.399	9.741	AV
3		0.496	41.190	31.351	-14.868	56.058	9.839	QP
4	*	0.496	35.059	25.219	-11.000	46.058	9.839	AV
5		0.965	28.427	18.487	-27.573	56.000	9.940	QP
6		0.965	23.715	13.775	-22.285	46.000	9.940	AV
7		2.348	23.256	13.295	-32.744	56.000	9.961	QP
8		2.348	17.531	7.570	-28.469	46.000	9.961	AV
9		7.886	31.470	21.299	-28.530	60.000	10.171	QP
10		7.886	23.064	12.894	-26.936	50.000	10.171	AV
11		22.553	28.783	18.137	-31.217	60.000	10.646	QP
12		22.553	12.538	1.892	-37.462	50.000	10.646	AV

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

4.2 Emissions in restricted frequency bands**VERDICT: PASS****4.2.1 Limit****Standard** FCC Part 15 Subpart C Paragraph 15.207

Restricted Bands of operation for FCC

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 – 0.110	16.42 – 16.423	399.9 – 410	4.5 – 5.15
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
8.81425 – 8.81475	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	
13.36 – 13.41			

Restricted Band Emissions Limit

Frequency (MHz)	Field strength (μ V/m)	Field strength (dB μ V/m)	Measurement distance (m)
0.009 - 0.49	2400/F(kHz)	48.5 – 13.8	300 ^(Note 1)
0.49 - 1.705	24000/F(kHz)	33.8 - 23	30 ^(Note 1)
1.705 - 30	30	29.5	30 ^(Note 1)
30 - 88	100	40	3 ^(Note 2)
88 - 216	150	43.5	3 ^(Note 2)
216 - 960	200	46	3 ^(Note 2)
Above 960	500	54	3 ^(Note 2)

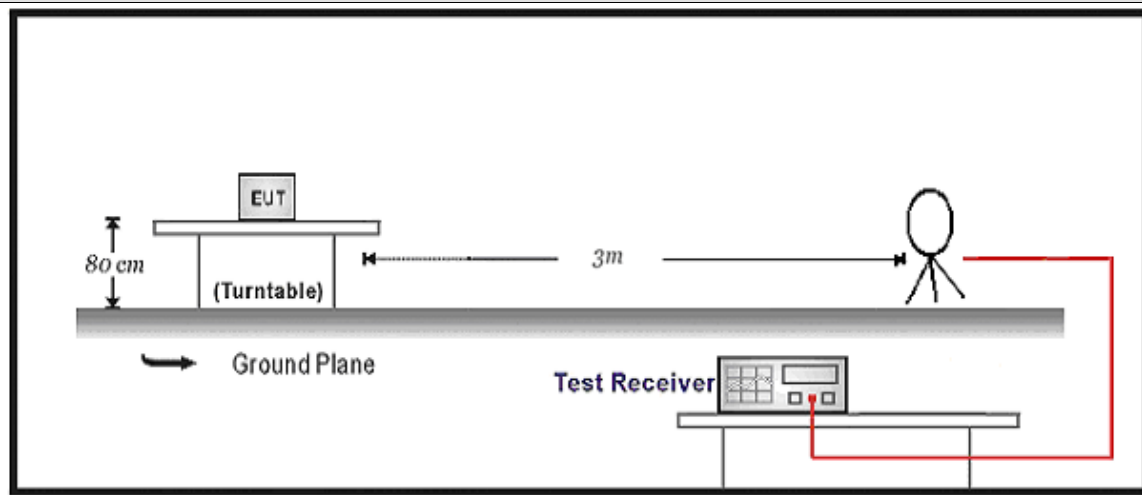
Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade).

Note 2: At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20

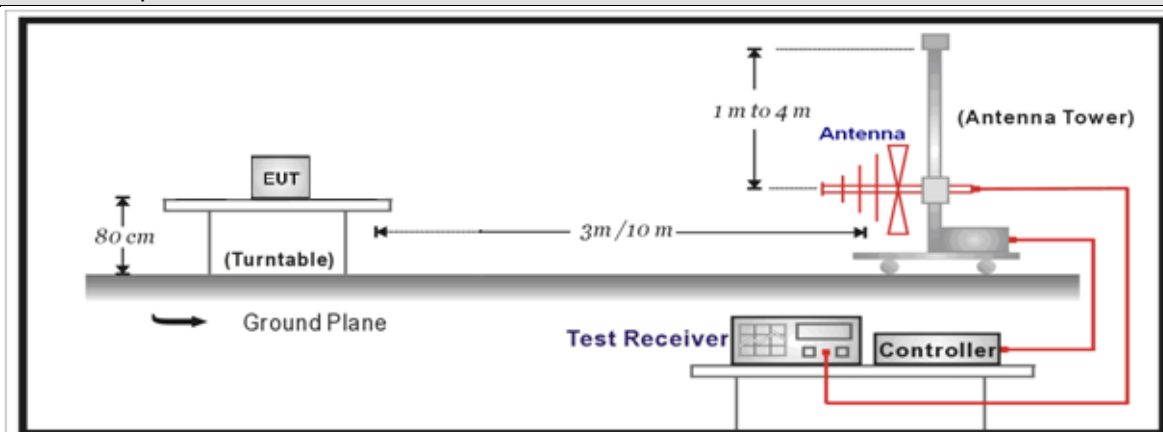
dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

4.2.2 Test Setup

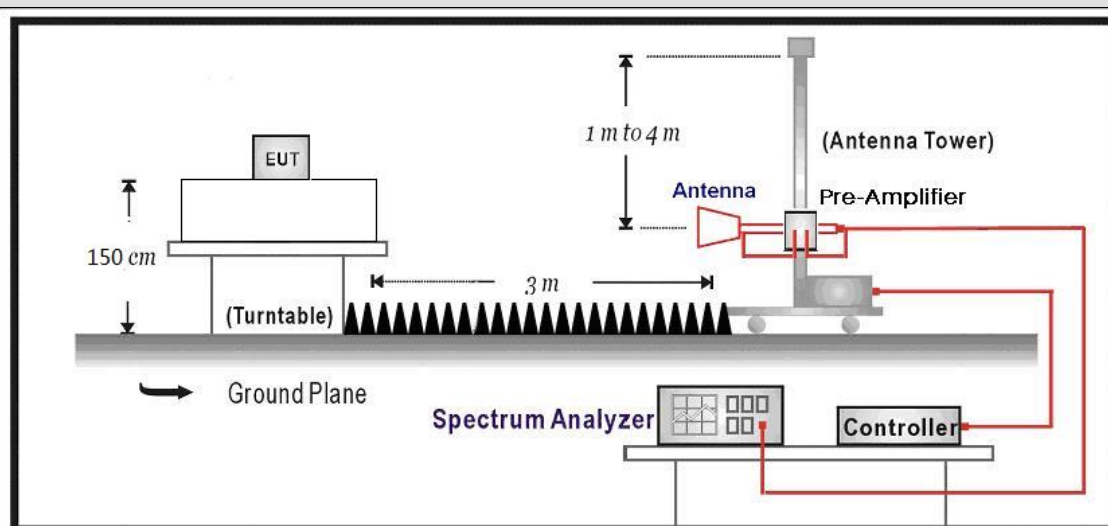
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:

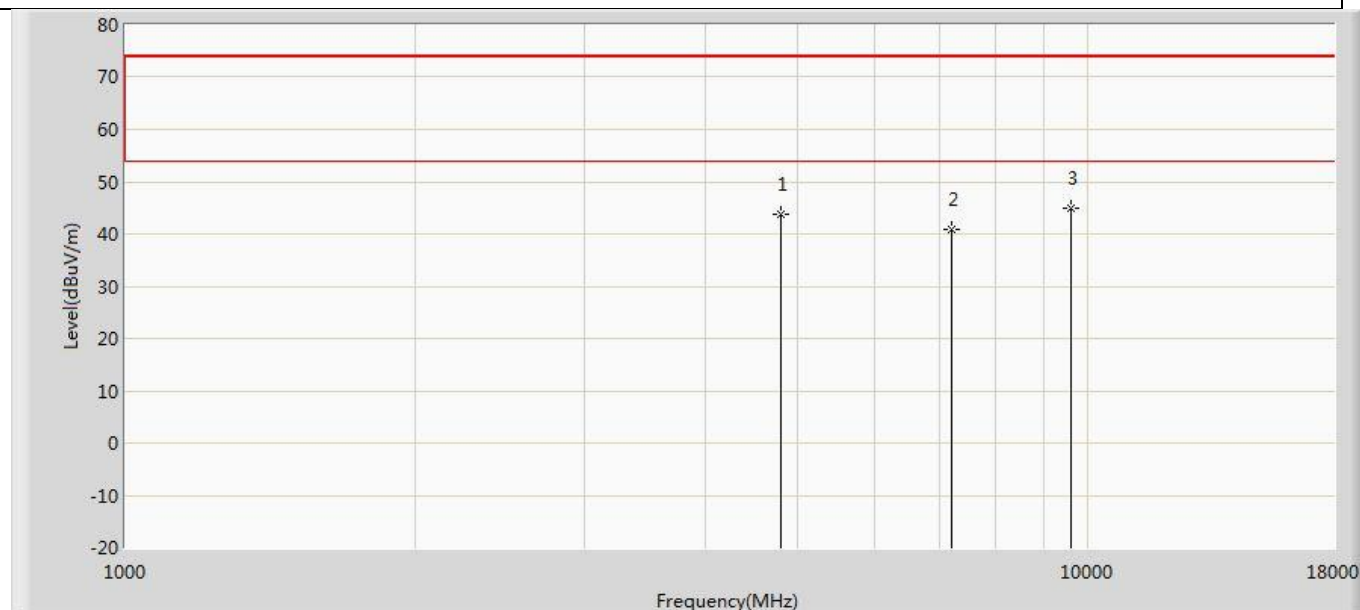


4.2.3 Test Procedure

	References Rule		Chapter	Description
☒	ANSI C63.10		11.12	Emissions in restricted frequency bands
	☒	ANSI C63.10	11.12.1	Radiated emission measurements
	☒	ANSI C63.10	11.12.2.7	Radiated spurious emission test
	☒	ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
	☒	ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
	☒	ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz

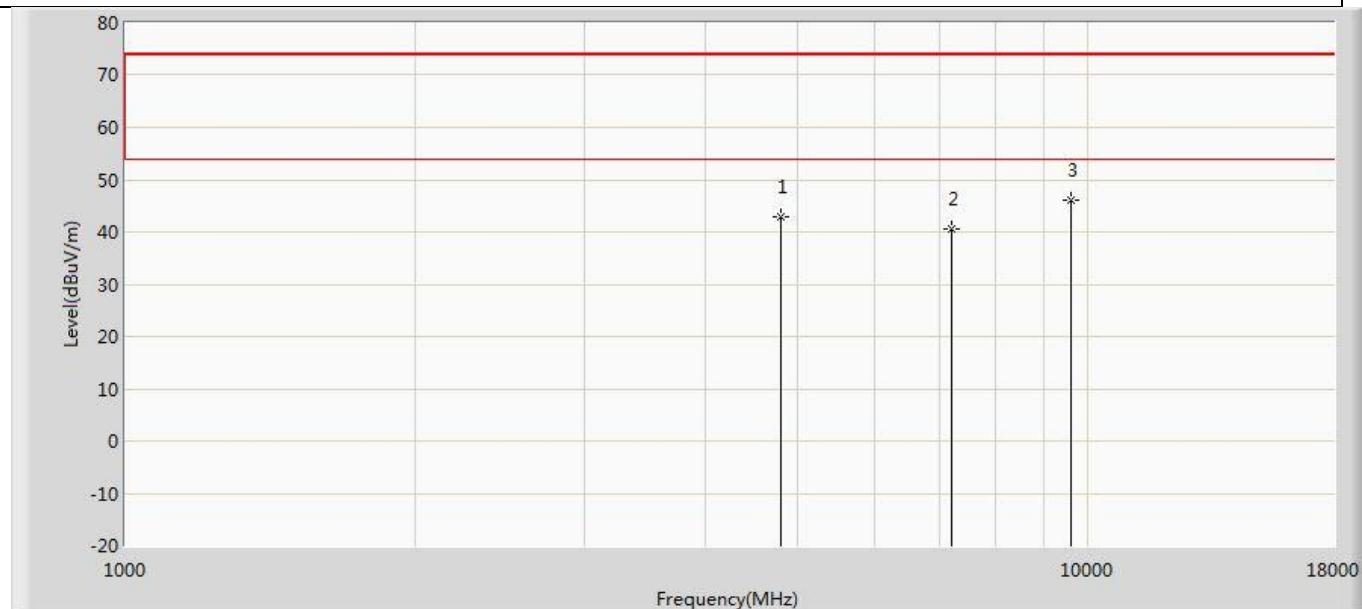
4.2.4 Test Data

Profile: 2170004R	Page No.: 1
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/03 - 19:49
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by DH5	



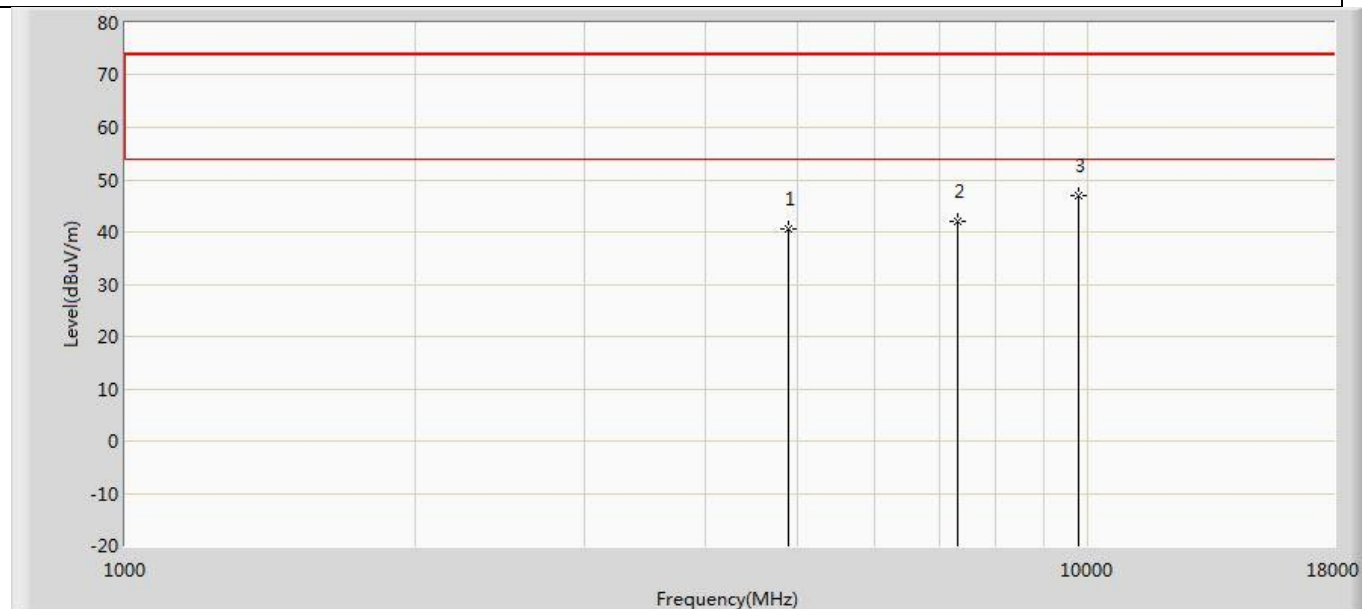
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	43.913	48.956	-30.087	74.000	-5.044	PK
2		7206.000	40.899	41.945	-33.101	74.000	-1.046	PK
3	*	9608.000	44.915	42.085	-29.085	74.000	2.830	PK

Profile: 2170004R	Page No.: 2
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/03 - 19:49
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by DH5	



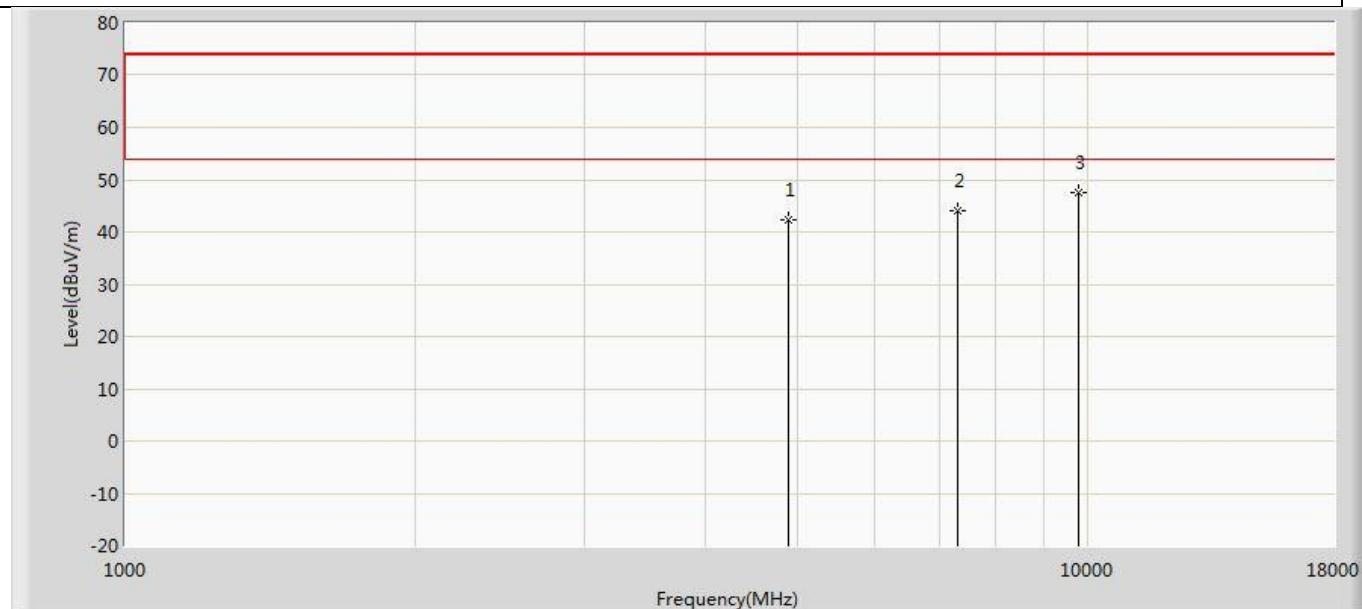
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	43.003	48.046	-30.997	74.000	-5.044	PK
2		7206.000	40.546	41.592	-33.454	74.000	-1.046	PK
3	*	9608.000	45.960	43.130	-28.040	74.000	2.830	PK

Profile: 2170004R	Page No.: 3
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/03 - 19:49
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2441MHz by DH5	



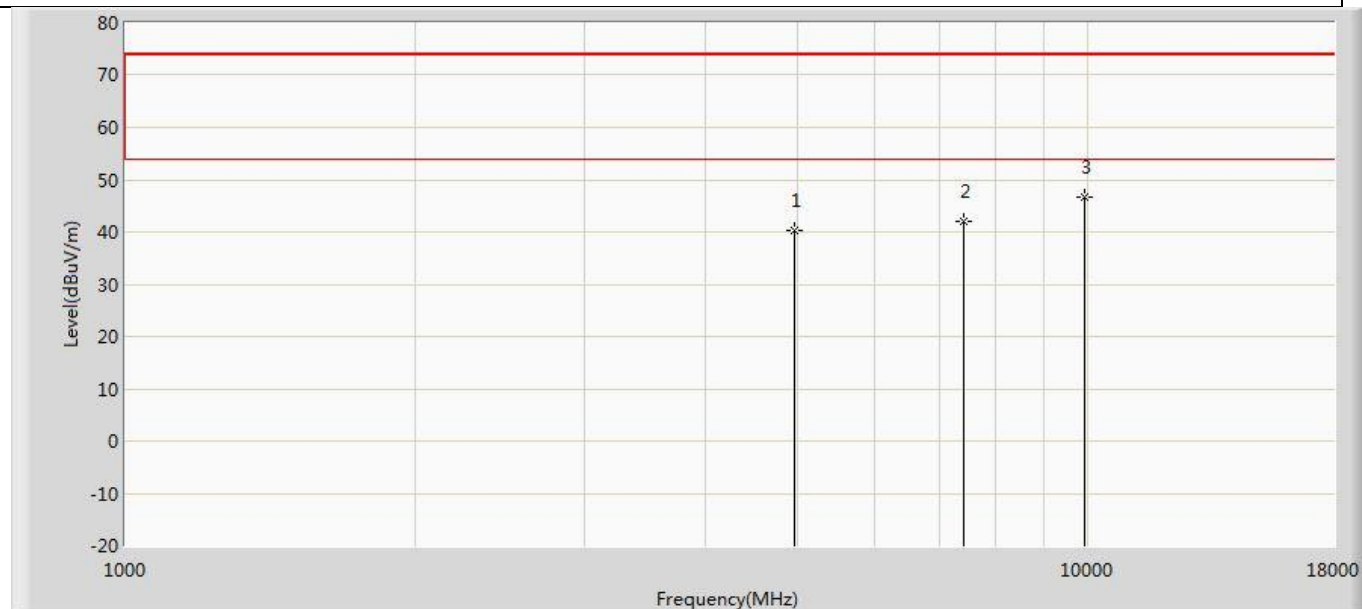
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	40.715	45.575	-33.285	74.000	-4.859	PK
2		7323.000	42.092	42.963	-31.908	74.000	-0.871	PK
3	*	9764.000	46.875	43.853	-27.125	74.000	3.023	PK

Profile: 2170004R	Page No.: 4
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/03 - 19:49
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2441MHz by DH5	



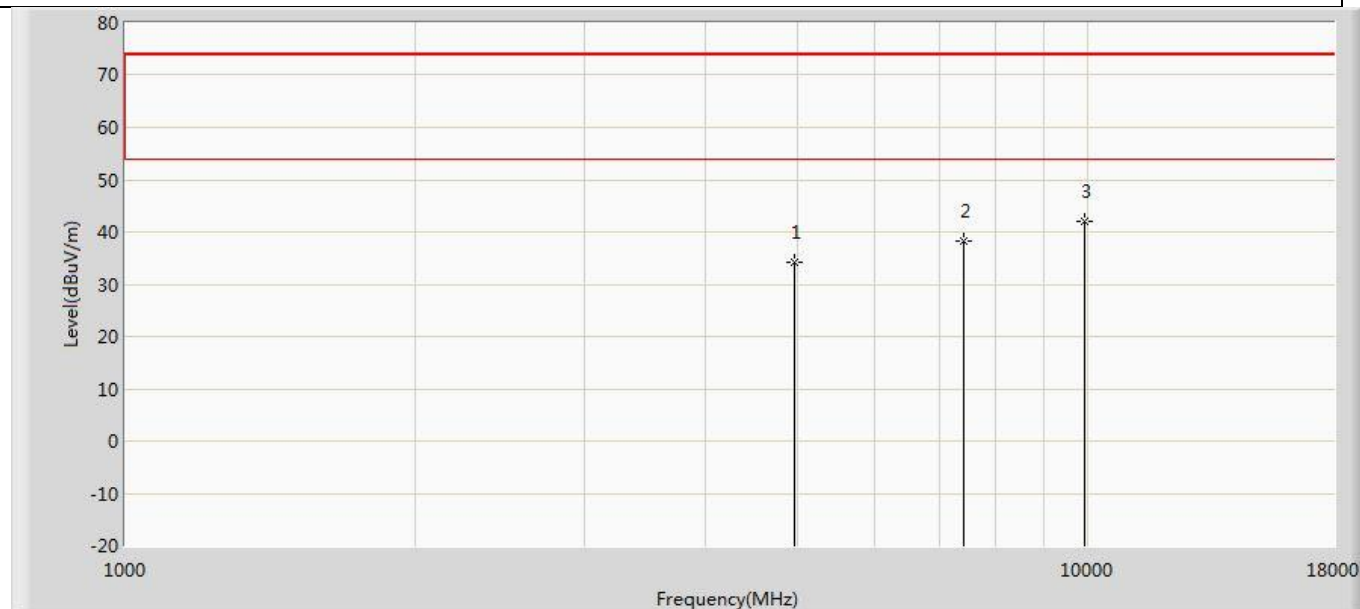
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	42.317	47.177	-31.683	74.000	-4.859	PK
2		7323.000	43.933	44.804	-30.067	74.000	-0.871	PK
3	*	9764.000	47.563	44.541	-26.437	74.000	3.023	PK

Profile: 2170004R	Page No.: 5
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/03 - 19:49
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by DH5	



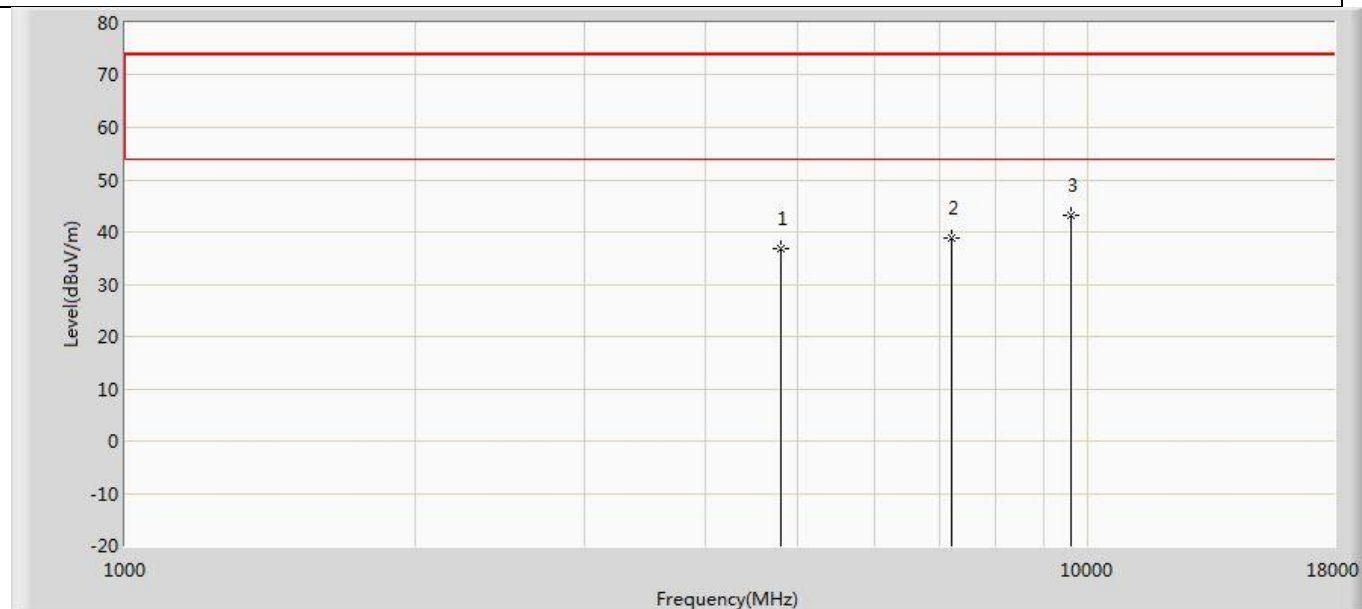
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	40.229	44.891	-33.771	74.000	-4.662	PK
2		7440.000	41.993	43.036	-32.007	74.000	-1.043	PK
3	*	9920.000	46.690	43.643	-27.310	74.000	3.047	PK

Profile: 2170004R	Page No.: 6
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/03 - 19:50
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by DH5	



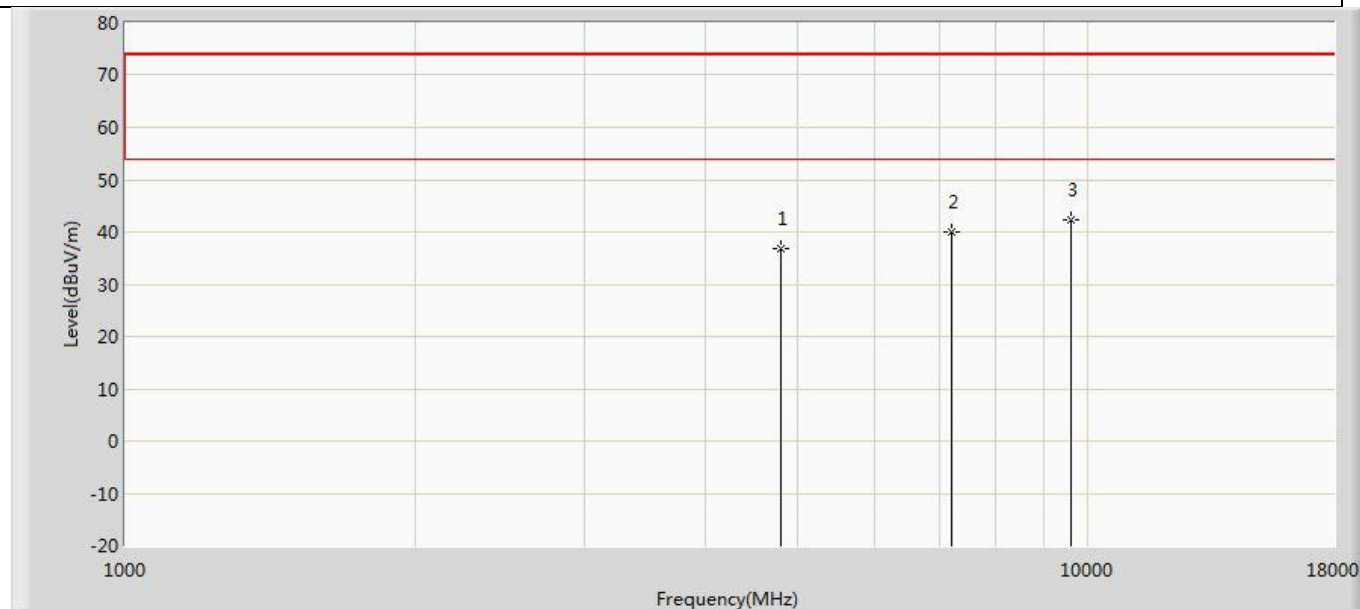
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	34.255	38.917	-39.745	74.000	-4.662	PK
2		7440.000	38.358	39.401	-35.642	74.000	-1.043	PK
3	*	9920.000	42.064	39.017	-31.936	74.000	3.047	PK

Profile: 2170004R	Page No.: 7
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/03 - 19:50
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by 2DH5	



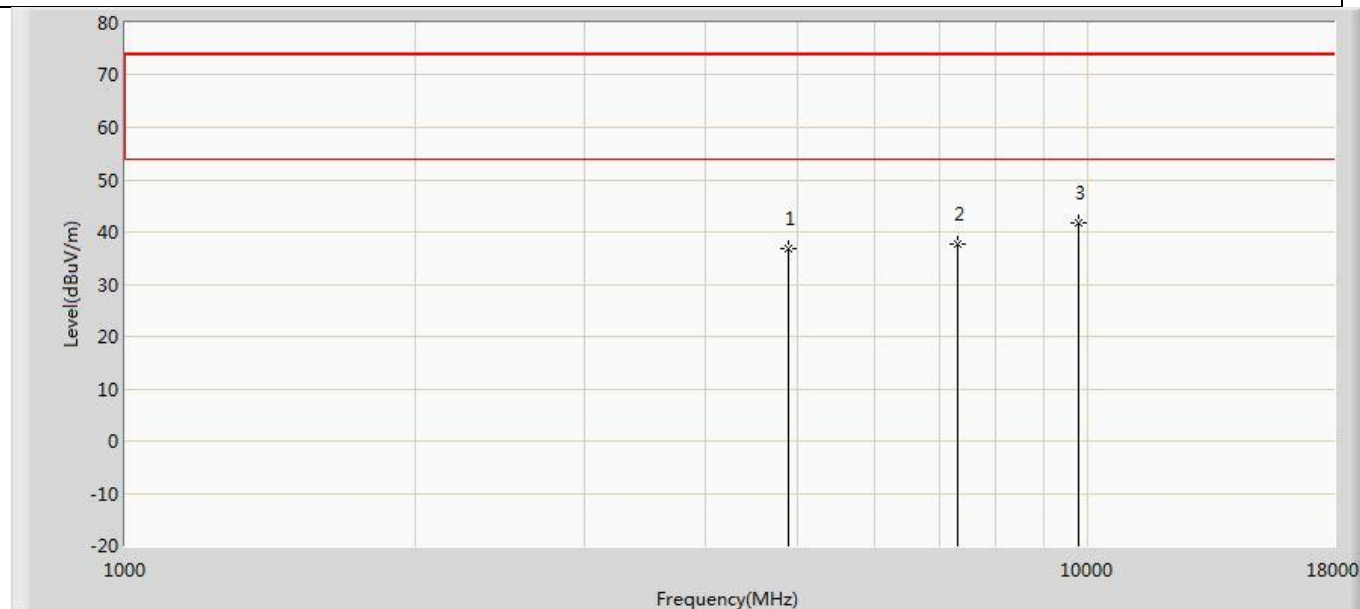
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	36.689	41.732	-37.311	74.000	-5.044	PK
2		7206.000	38.959	40.005	-35.041	74.000	-1.046	PK
3	*	9608.000	43.069	40.239	-30.931	74.000	2.830	PK

Profile: 2170004R	Page No.: 8
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/03 - 19:50
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by 2DH5	



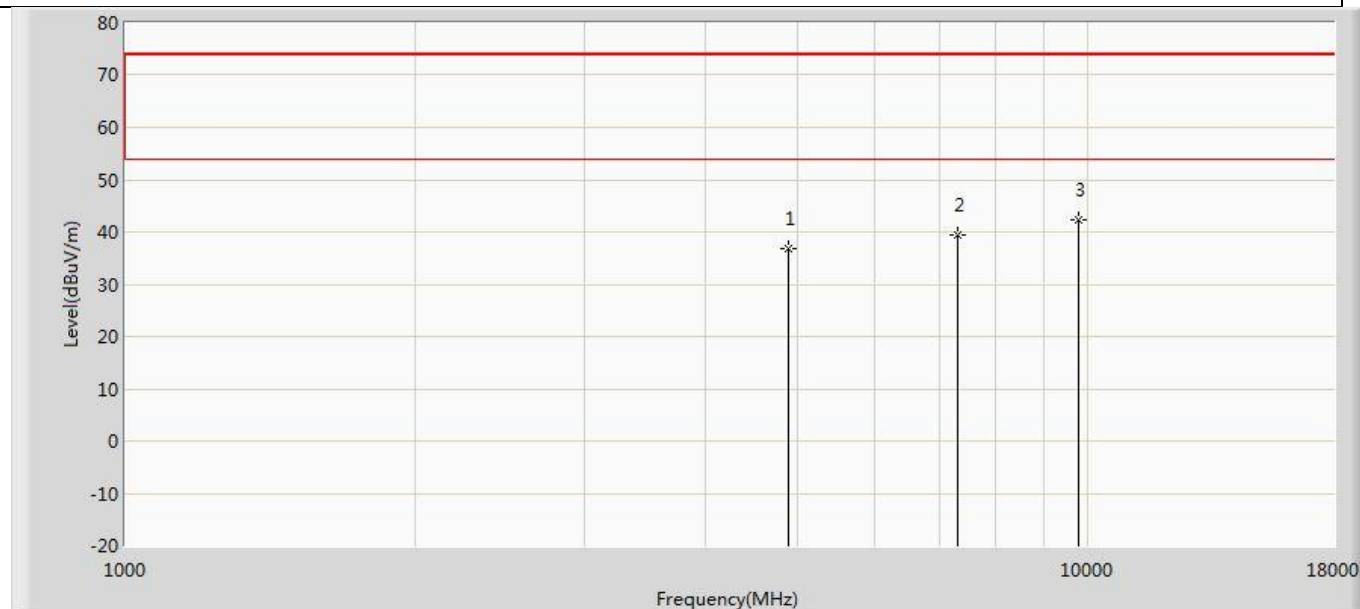
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	36.715	41.758	-37.285	74.000	-5.044	PK
2		7206.000	40.112	41.158	-33.888	74.000	-1.046	PK
3	*	9608.000	42.338	39.508	-31.662	74.000	2.830	PK

Profile: 2170004R	Page No.: 9
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/03 - 19:50
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2441MHz by 2DH5	



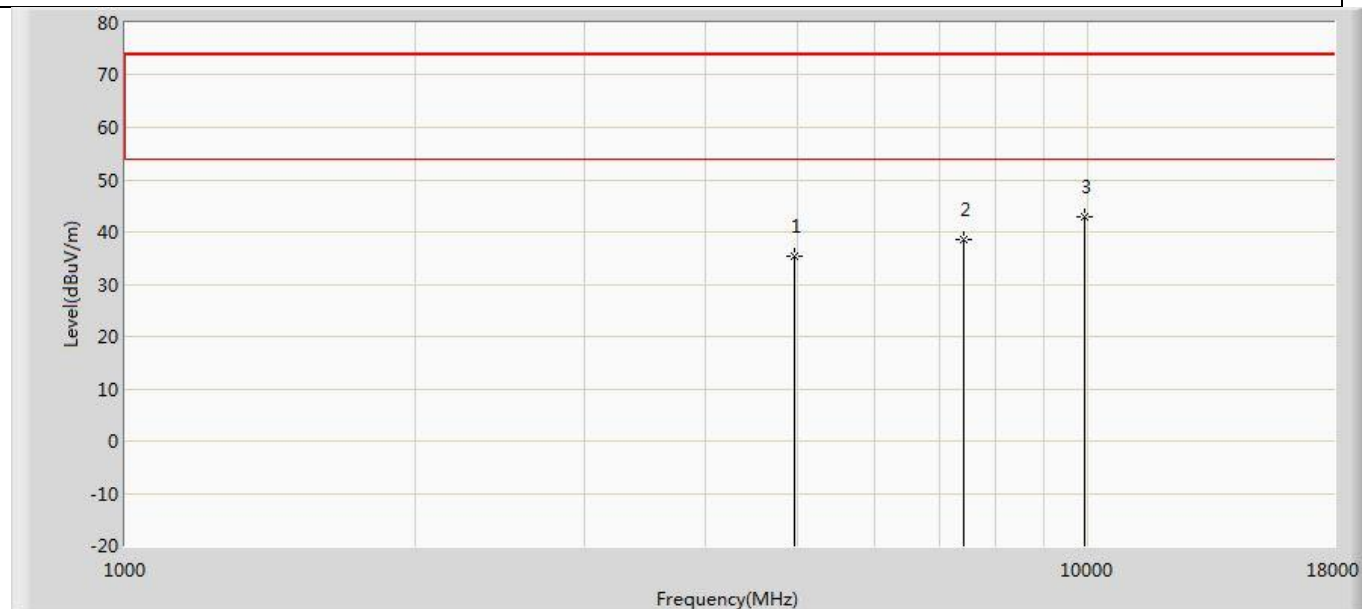
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	36.844	41.704	-37.156	74.000	-4.859	PK
2		7323.000	37.788	38.659	-36.212	74.000	-0.871	PK
3	*	9764.000	41.792	38.770	-32.208	74.000	3.023	PK

Profile: 2170004R	Page No.: 10
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/03 - 19:50
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2441MHz by 2DH5	



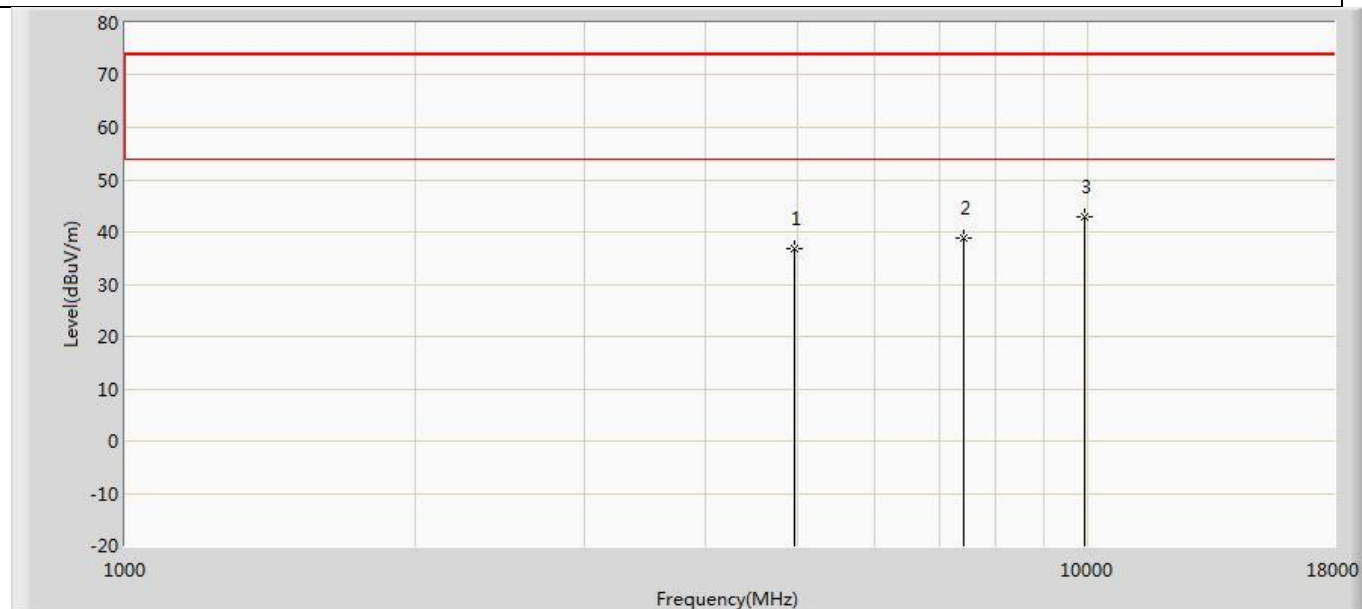
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	36.940	41.800	-37.060	74.000	-4.859	PK
2		7323.000	39.394	40.265	-34.606	74.000	-0.871	PK
3	*	9764.000	42.407	39.385	-31.593	74.000	3.023	PK

Profile: 2170004R	Page No.: 11
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/03 - 19:50
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by 2DH5	



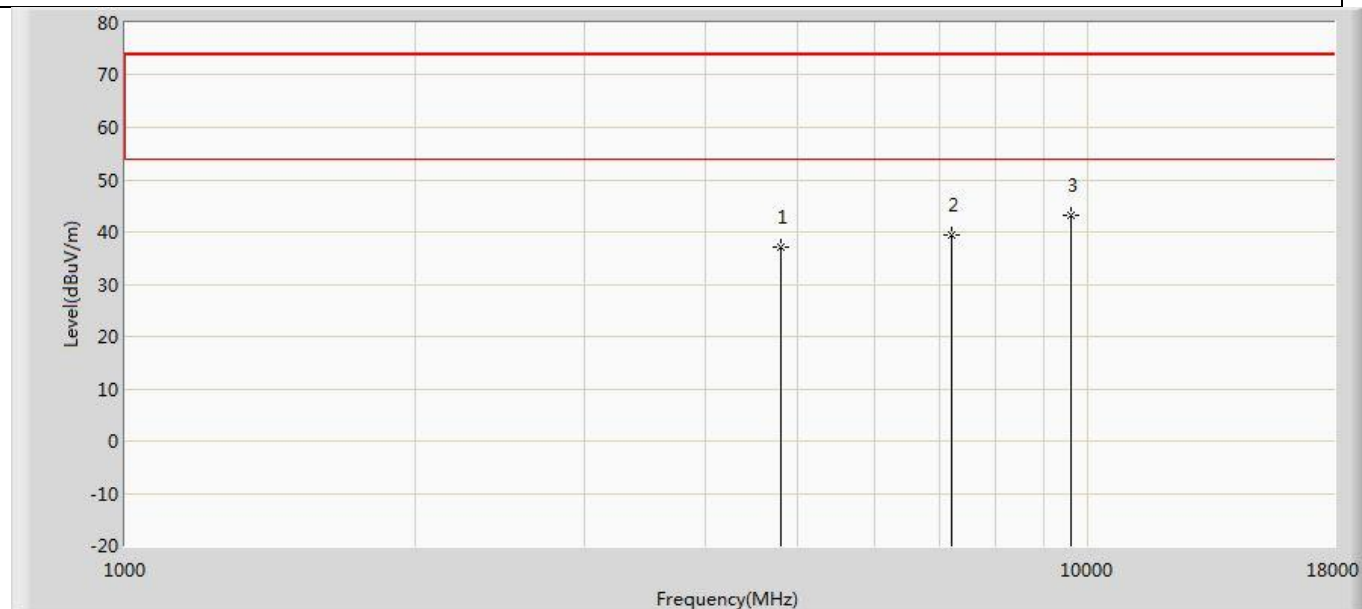
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	35.230	39.892	-38.770	74.000	-4.662	PK
2		7440.000	38.511	39.554	-35.489	74.000	-1.043	PK
3	*	9920.000	42.828	39.781	-31.172	74.000	3.047	PK

Profile: 2170004R	Page No.: 12
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/03 - 19:50
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by 2DH5	



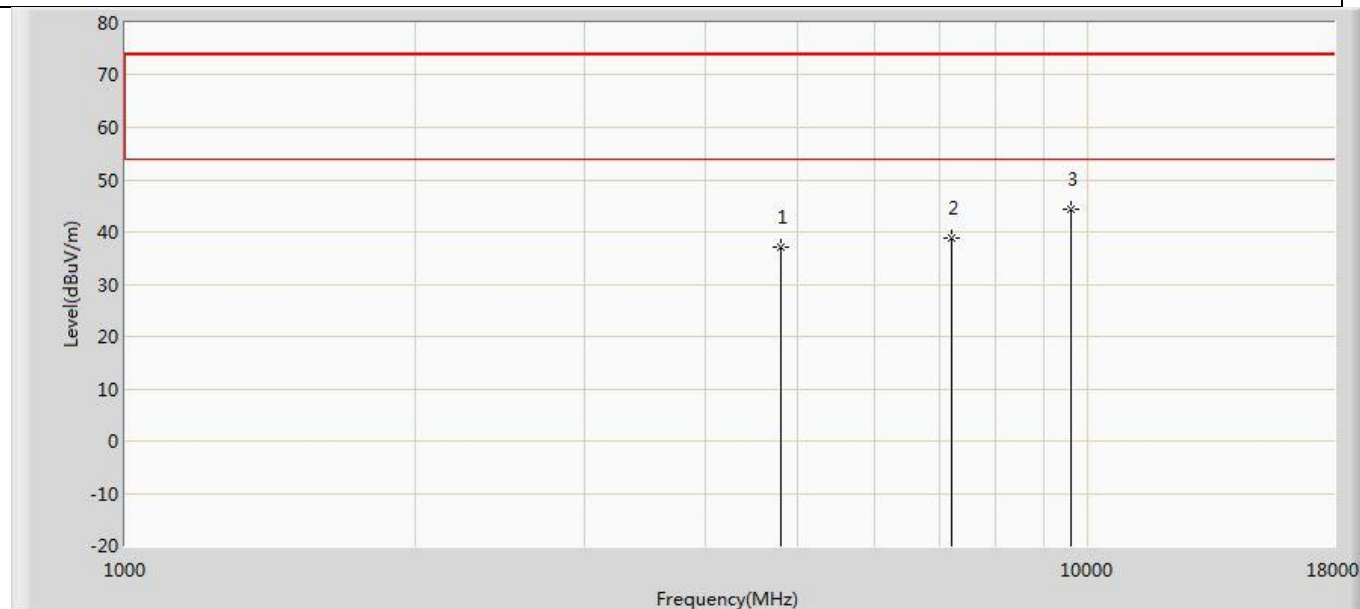
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	36.827	41.489	-37.173	74.000	-4.662	PK
2		7440.000	38.845	39.888	-35.155	74.000	-1.043	PK
3	*	9920.000	42.849	39.802	-31.151	74.000	3.047	PK

Profile: 2170004R	Page No.: 13
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/03 - 19:50
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by 3DH5	



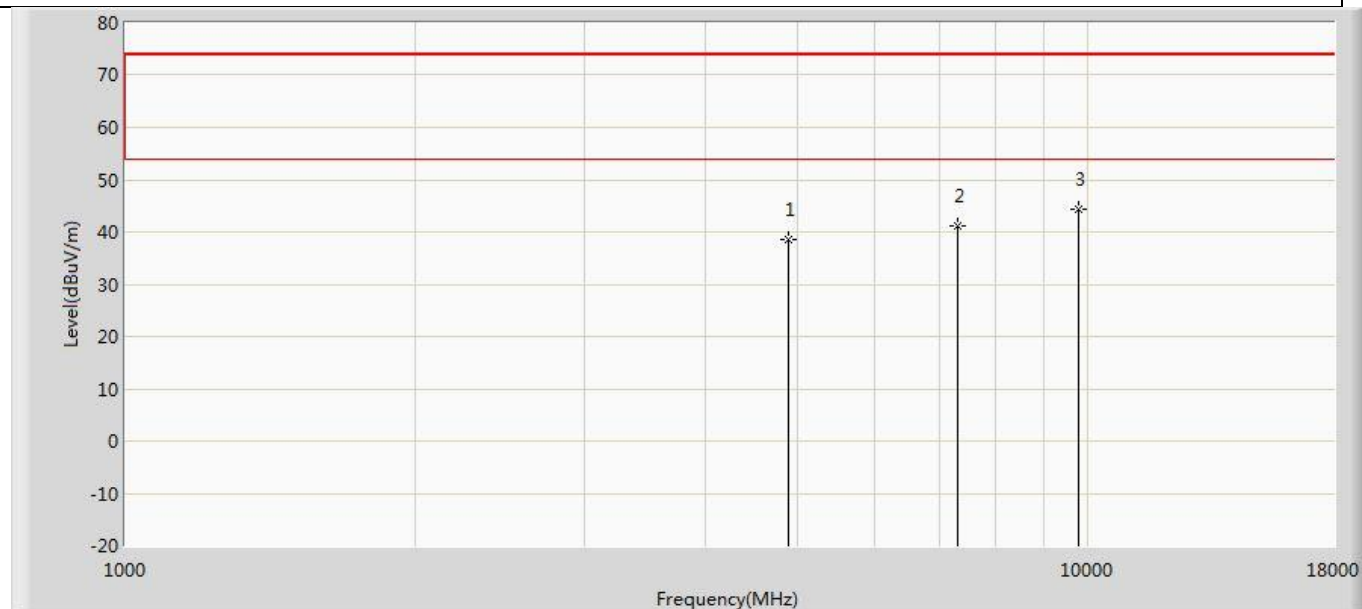
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	37.181	42.224	-36.819	74.000	-5.044	PK
2		7206.000	39.279	40.325	-34.721	74.000	-1.046	PK
3	*	9608.000	43.210	40.380	-30.790	74.000	2.830	PK

Profile: 2170004R	Page No.: 14
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/03 - 19:50
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by 3DH5	



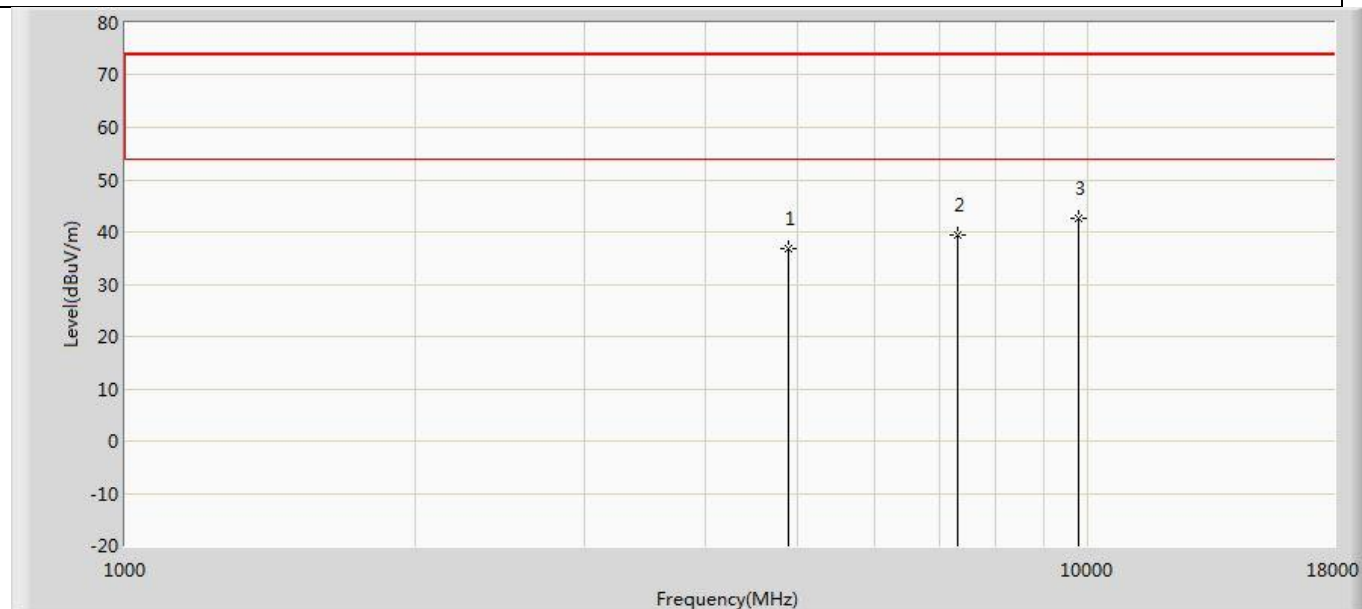
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	37.199	42.242	-36.801	74.000	-5.044	PK
2		7206.000	38.914	39.960	-35.086	74.000	-1.046	PK
3	*	9608.000	44.489	41.659	-29.511	74.000	2.830	PK

Profile: 2170004R	Page No.: 15
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/03 - 19:50
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2441MHz by 3DH5	



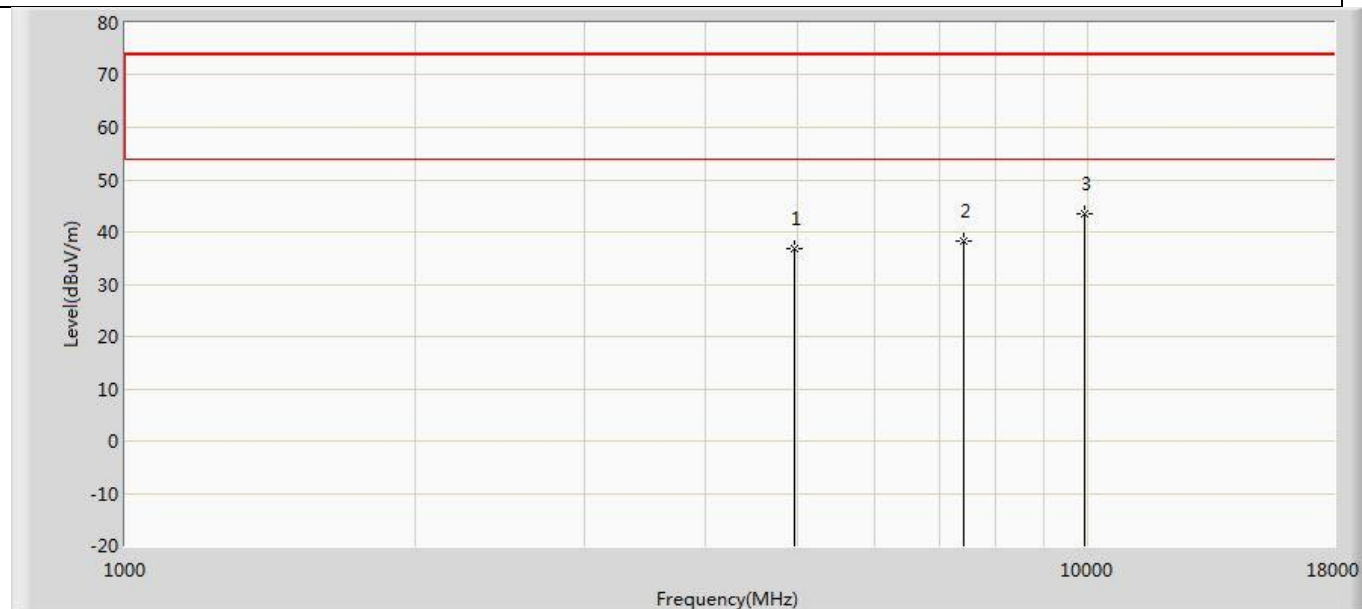
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	38.627	43.487	-35.373	74.000	-4.859	PK
2		7323.000	41.142	42.013	-32.858	74.000	-0.871	PK
3	*	9764.000	44.403	41.381	-29.597	74.000	3.023	PK

Profile: 2170004R	Page No.: 16
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/03 - 19:51
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2441MHz by 3DH5	



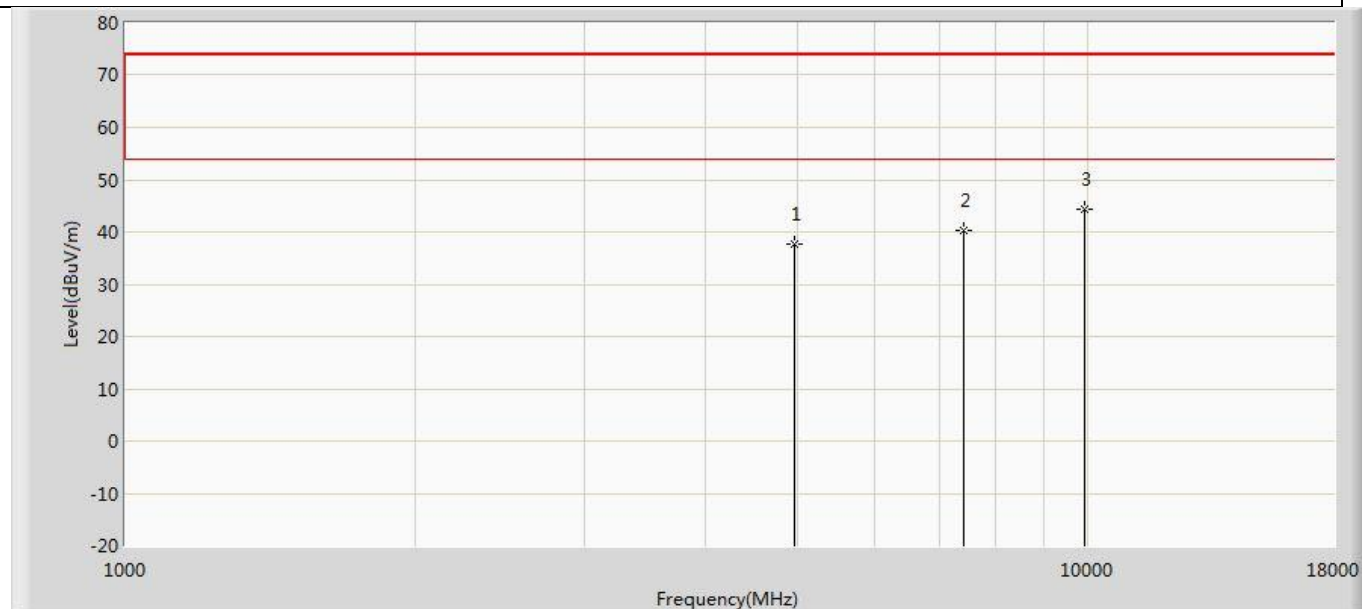
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	36.812	41.672	-37.188	74.000	-4.859	PK
2		7323.000	39.401	40.272	-34.599	74.000	-0.871	PK
3	*	9764.000	42.586	39.564	-31.414	74.000	3.023	PK

Profile: 2170004R	Page No.: 17
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/03 - 19:51
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by 3DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	36.688	41.350	-37.312	74.000	-4.662	PK
2		7440.000	38.394	39.437	-35.606	74.000	-1.043	PK
3	*	9920.000	43.346	40.299	-30.654	74.000	3.047	PK

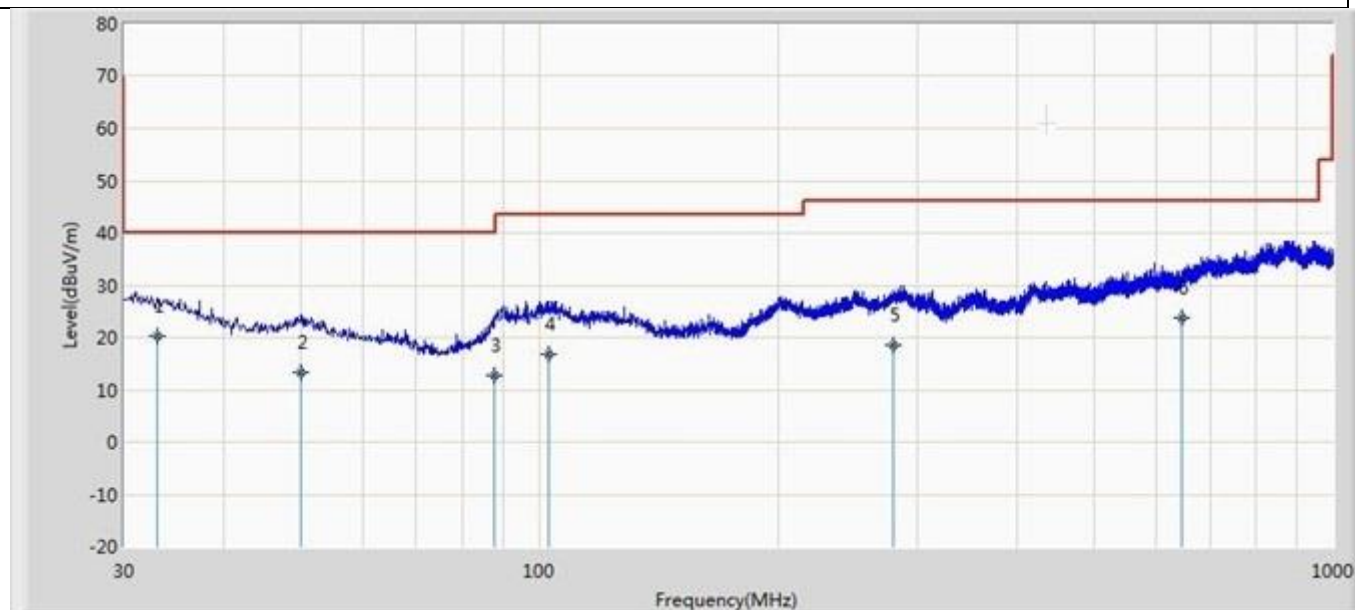
Profile: 2170004R	Page No.: 18
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/03 - 19:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by 3DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	37.583	42.245	-36.417	74.000	-4.662	PK
2		7440.000	40.247	41.290	-33.753	74.000	-1.043	PK
3	*	9920.000	44.405	41.358	-29.595	74.000	3.047	PK

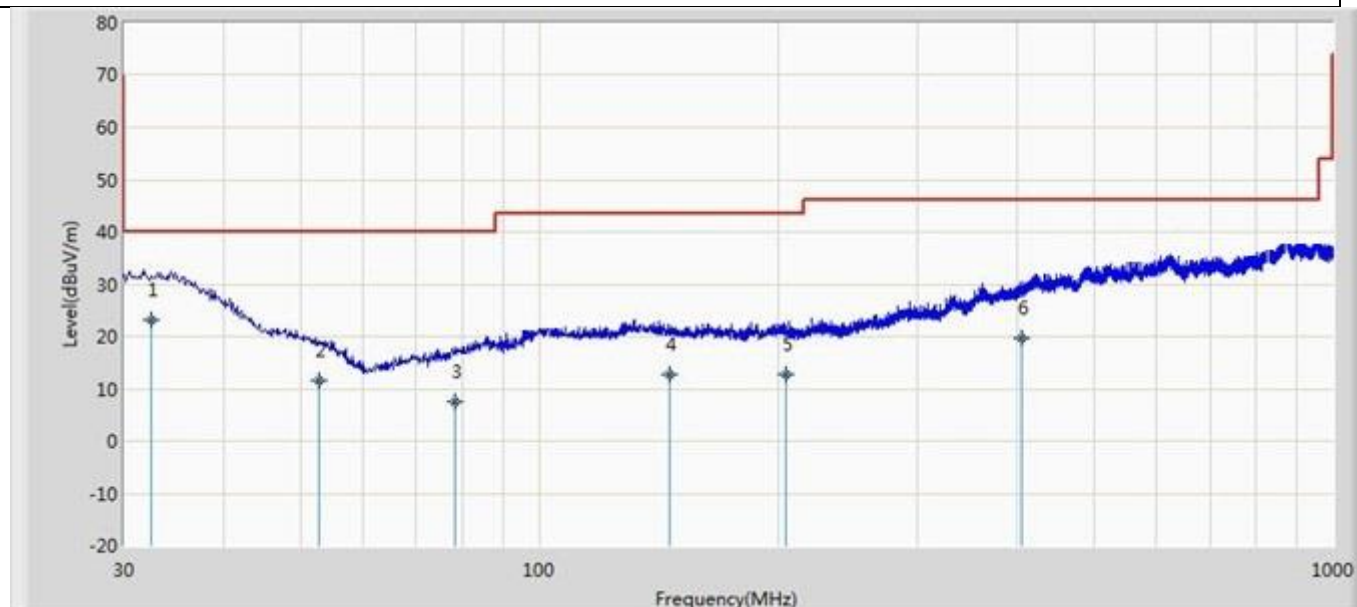
The worst case of Radiated Emission below 1GHz:

Profile: 2170004R	Page No.: 1
Engineer: Yu Liu	
Site: AC2	Time: 2021/09/03 - 20:38
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC2_3M(30-1000M)	Polarity: Vertical
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Model1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1	*	33.000	20.164	-2.900	-19.836	40.000	23.063	100	25	QP
2		50.030	13.412	-6.000	-26.588	40.000	19.412	100	60	QP
3		87.900	12.834	-3.800	-27.166	40.000	16.634	100	106	QP
4		102.750	16.814	-5.300	-26.686	43.500	22.114	100	182	QP
5		279.600	18.624	-6.200	-27.376	46.000	24.824	100	265	QP
6		645.000	23.745	-4.500	-22.255	46.000	28.245	100	306	QP

Profile: 2170004R	Page No.: 2
Engineer: Yu Liu	
Site: AC2	Time: 2021/09/03 - 20:41
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC2_3M(30-1000M)	Polarity: Horizontal
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1	*	32.500	23.147	-3.900	-16.853	40.000	27.047	100	25	QP
2		52.900	11.558	-2.900	-28.442	40.000	14.458	100	36	QP
3		78.460	7.591	-5.400	-32.409	40.000	12.992	100	100	QP
4		145.900	12.785	-4.200	-30.715	43.500	16.984	100	254	QP
5		204.600	12.824	-4.700	-30.676	43.500	17.524	100	300	QP
6		405.000	19.651	-5.600	-26.349	46.000	25.252	100	355	QP

Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

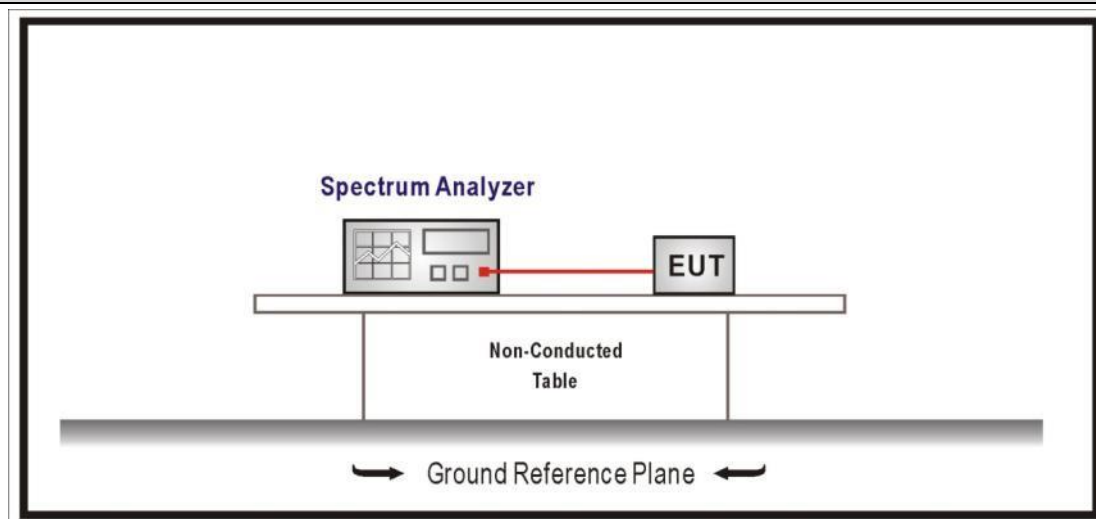
4.3 20dB Bandwidth

VERDICT: PASS

4.3.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.247(a)
☒	For frequency hopping systems operating in 2400-2483.5 MHz band, within frequency range.
☐	For frequency hopping systems operating in 902-928 MHz band, the maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.
☐	For frequency hopping systems operating in 5725-5850 MHz band, the maximum 20 dB bandwidth of the hopping channel is 1 MHz.

4.3.2 Test Setup



4.3.3 Test Procedure

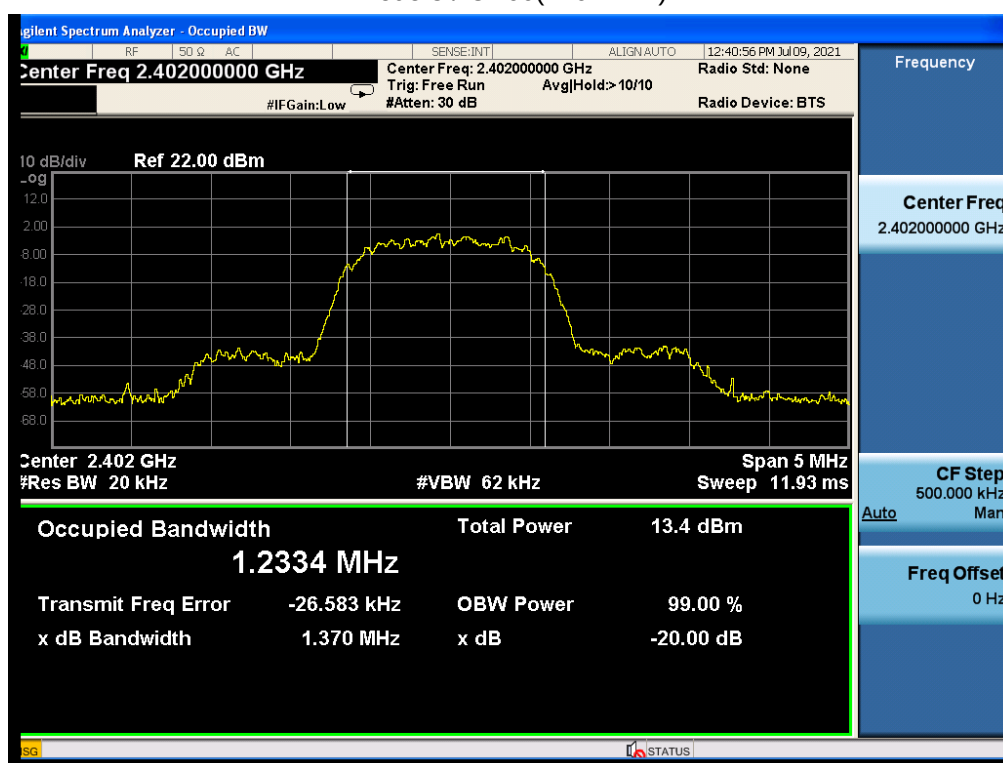
References Rule	Chapter	Description
☒ ANSI C63.10	6.9	Occupied bandwidth tests
☒ ANSI C63.10	6.9.2	Occupied bandwidth—relative measurement procedure

4.3.4 Test Data

Mode	Channel	Frequency (MHz)	20dB Bandwidth (kHz)	99% Bandwidth (kHz)
1	00	2402	925.20	889.52
	39	2441	924.00	888.19
	79	2480	922.50	885.34
2	00	2402	1388.00	1238.50
	39	2441	1391.00	1237.40
	79	2480	1390.00	1238.10
3	00	2402	1370.00	1233.40
	39	2441	1374.00	1233.60
	79	2480	1370.00	1238.10

Note : The worst case of Occupied Bandwidth as below:

Mode 3 / CH00(2402MHz)



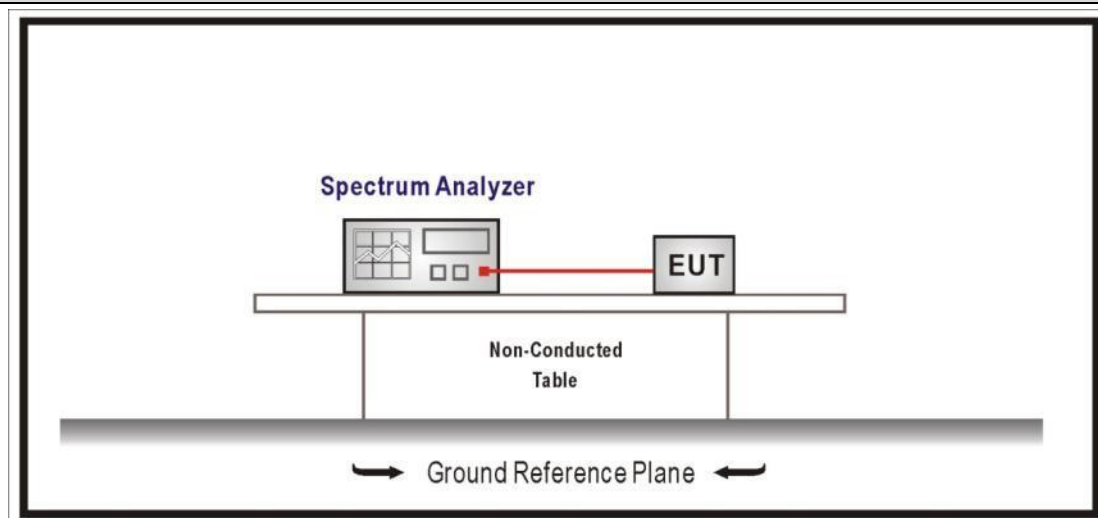
4.4 Carrier Frequency Separation

VERDICT: PASS

4.4.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.247(a)
☐	Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.
☒	Frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel.
☐	The 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4
☐	The 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4
☐	Frequency hopping systems operating in the 5725-5850 MHz band shall use at least 75 hopping frequencies. The maximum 20 dB bandwidth of the hopping channel is 1 MHz.

4.4.2 Test Setup



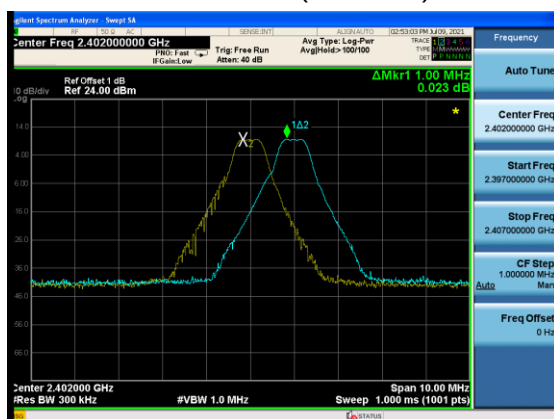
4.4.3 Test Procedure

References Rule	Chapter	Description
☒ ANSI C63.10	7.8	Evaluation of frequency-hopping device parameters
☒ ANSI C63.10	7.8.2	Carrier frequency separation

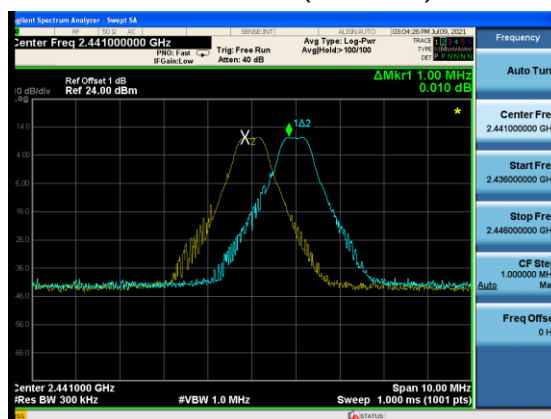
4.4.4 Test Data

Mode	Channel	Frequency (MHz)	Carrier Frequency Separation (kHz)	Limit (kHz)	Result
1	00	2402	1000	617.20	Pass
	39	2441	1000	616.67	Pass
	78	2480	1000	615.40	Pass
2	00	2402	1000	925.33	Pass
	39	2441	1000	926.00	Pass
	78	2480	1000	803.33	Pass
3	00	2402	1000	917.33	Pass
	39	2441	1000	914.67	Pass
	78	2480	1000	914.67	Pass

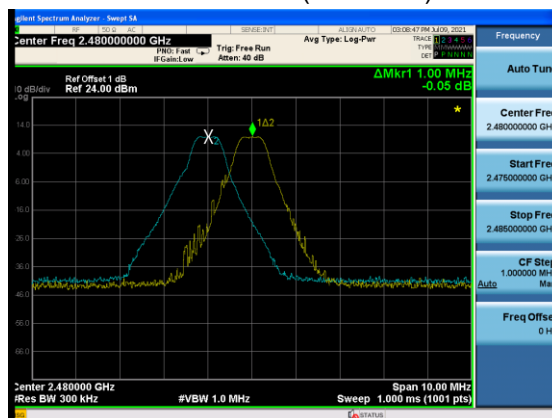
Mode 1 CH00(2402MHz)



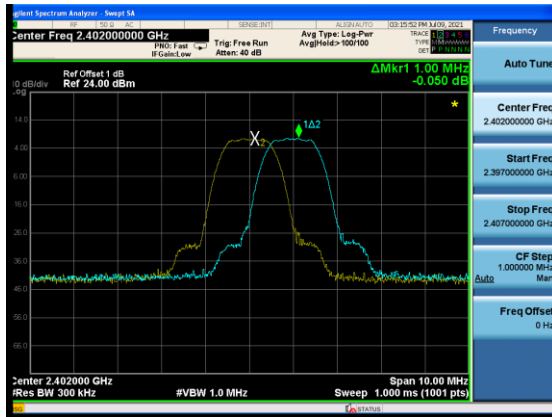
Mode 1 CH39(2441MHz)



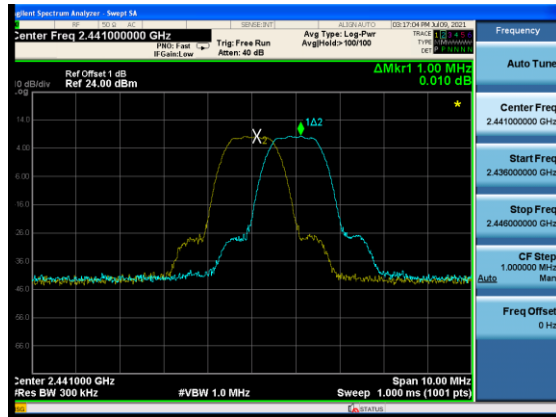
Mode 1 CH78(2480MHz)



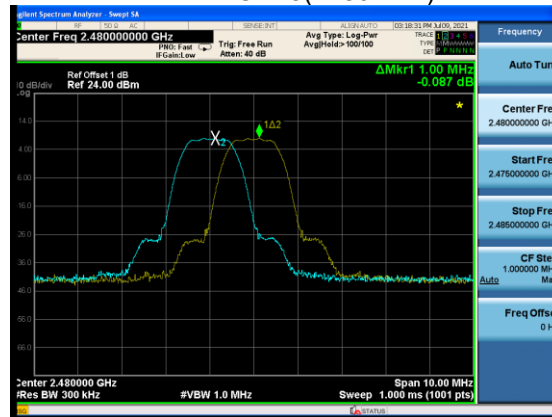
Mode 2 CH00(2402MHz)



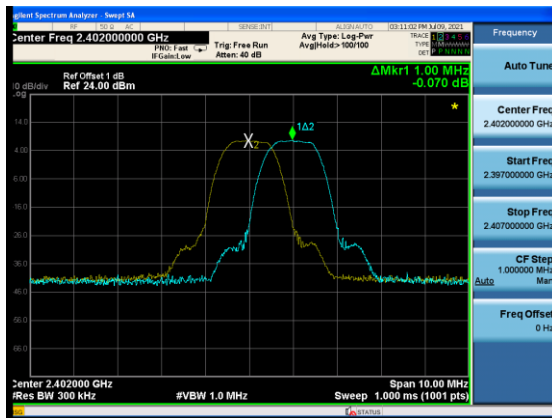
Mode 2 CH39(2441MHz)



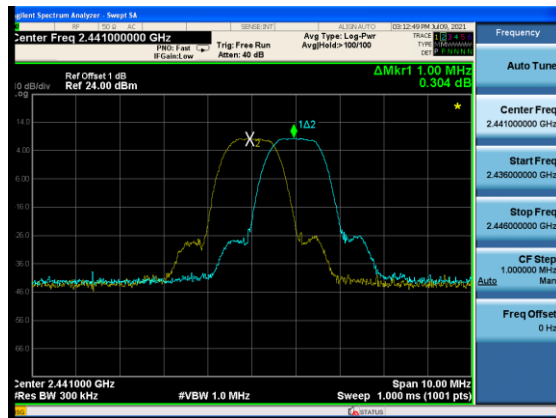
Mode 2 CH78(2480MHz)



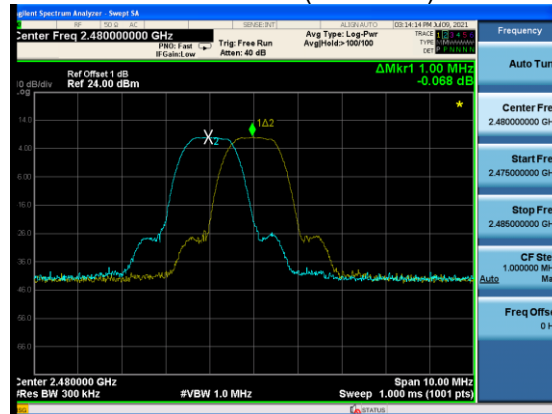
Mode 3 CH00(2402MHz)



Mode 3 CH39(2441MHz)



Mode 3 CH78(2480MHz)



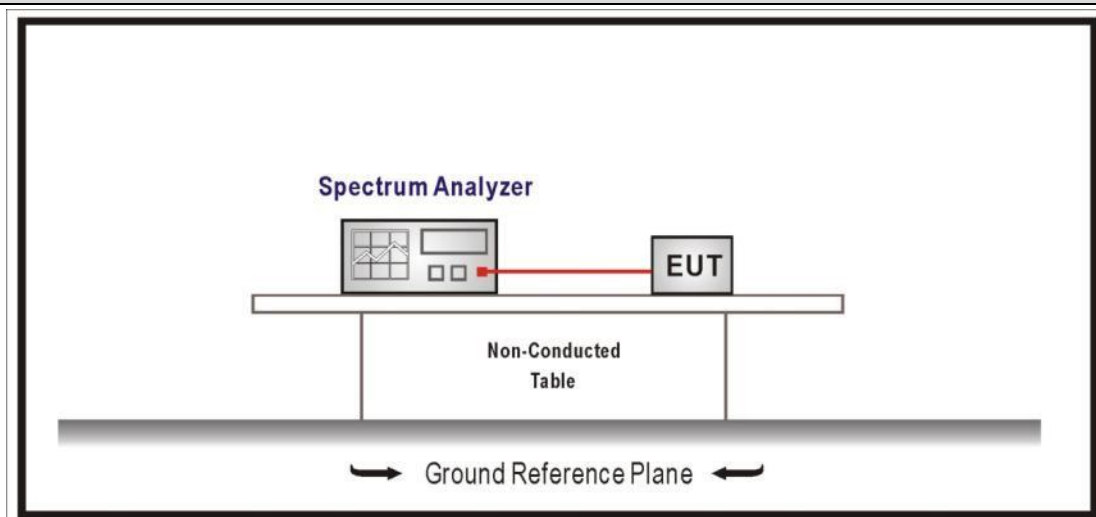
4.5 Number of Hopping Frequencies

VERDICT: PASS

4.5.1 Limit

Standard		FCC Part 15 Subpart C Paragraph 15.247(a)
☒	For frequency hopping systems operating in the 2400-2483.5 MHz band shall use at least 15 hopping frequencies.	
☐	For frequency hopping systems operating in 902-928 MHz band, if the 20 dB bandwidth of the hopping channel is less than 250 kHz, shall use at least 50 hopping frequencies.	
☐	For frequency hopping systems operating in 902-928 MHz band, if the 20 dB bandwidth of the hopping channel is higher than 250 kHz, shall use at least 25 hopping frequencies.	
☐	For frequency hopping systems operating in the 5725-5850 MHz band shall use at least 75 hopping frequencies.	

4.5.2 Test Setup



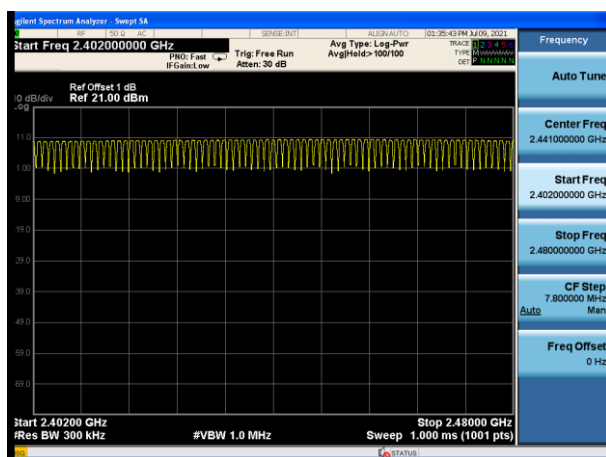
4.5.3 Test Procedure

References Rule		Chapter	Description
☒	ANSI C63.10	7.8.	Evaluation of frequency-hopping device parameters
☒	ANSI C63.10	7.8.3	Number of Hopping Frequencies

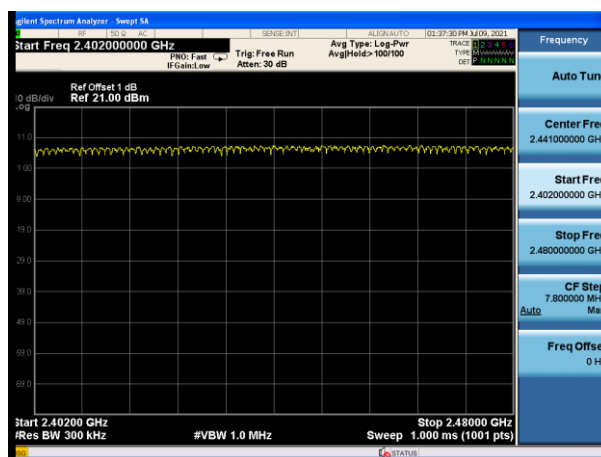
4.5.4 Test Data

Mode	Number of Hopping Frequencies	Limit	Result
1	79	>15	Pass
2	79	>15	Pass
3	79	>15	Pass

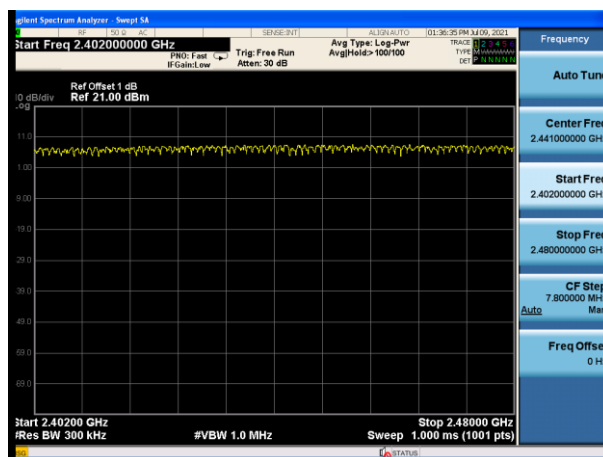
Mode 1



Mode 2

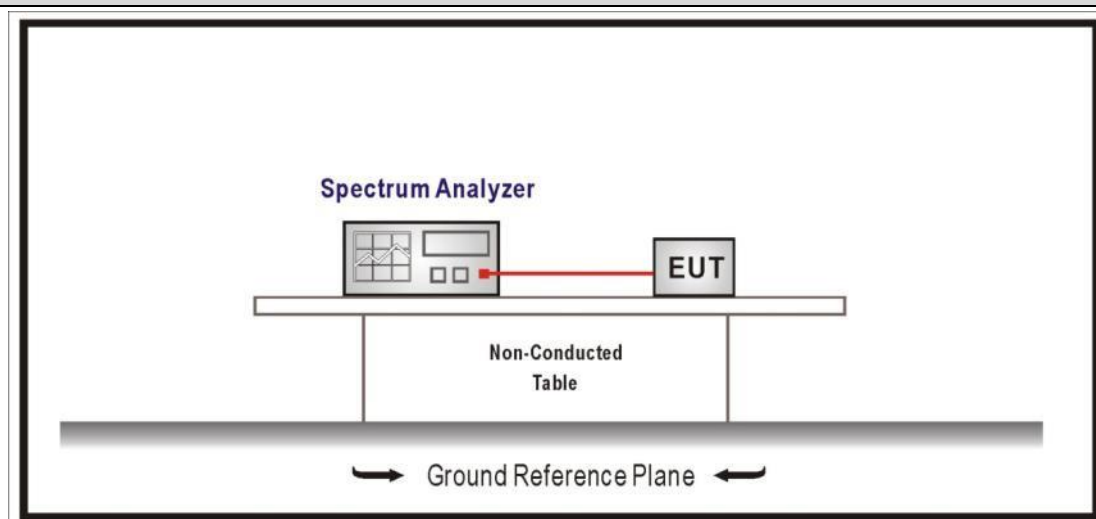


Mode 3



4.6 Time of Occupancy(Dwell Time)**VERDICT: PASS****4.6.1 Limit**

Standard		FCC Part 15 Subpart C Paragraph 15.247(a)
☒	Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.	
☐	For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20	
☐	For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10	
☐	Frequency hopping systems operating in the 5725-5850 MHz band shall use at least 75 hopping frequencies. The maximum 20 dB bandwidth of the hopping channel is 1 MHz. The average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 30 second period.	

4.6.2 Test Setup**4.6.3 Test Procedure**

References Rule		Chapter	Description
☒	ANSI C63.10	7.8	Evaluation of frequency-hopping device parameters
☒	ANSI C63.10	7.8.4	Time of occupancy (dwell time)

4.6.4 Test Data

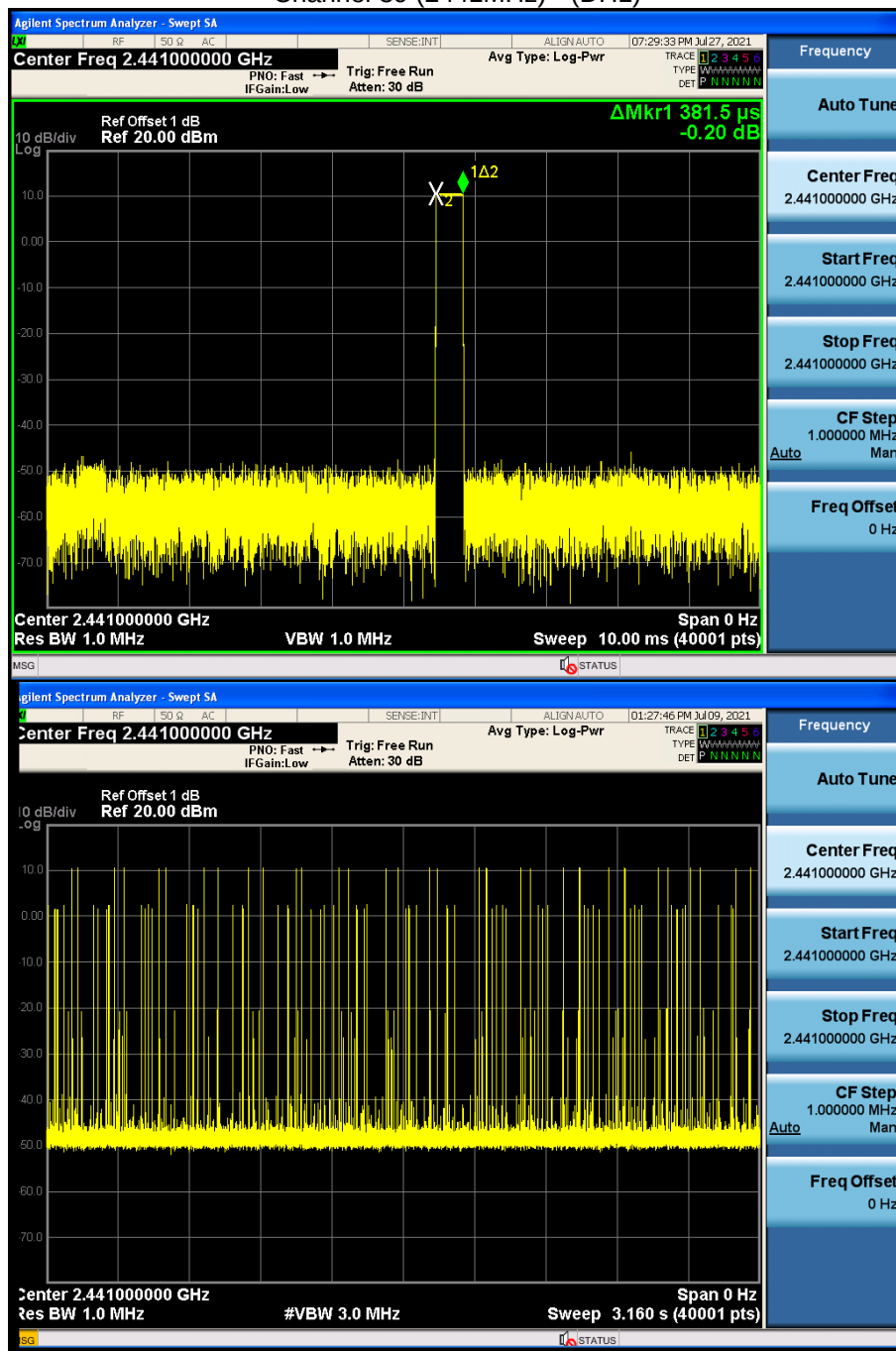
Mode	Channel	Frequency (MHz)	Time of Occupancy (ms)	Limit (ms)	Result
1	39	2441	122.08	< 400	Pass

Note1: Test Time Period: $0.4 \times 79 = 31.6 \text{ sec}$

Note2: Time of Occupancy = $0.3815 \times 32 \times 31.6 / 3.16 = 122.08 \text{ ms}$

Note3: We have evaluated different packet type, shown in the report is the worst data.

Channel 39 (2441MHz) - (DH1)



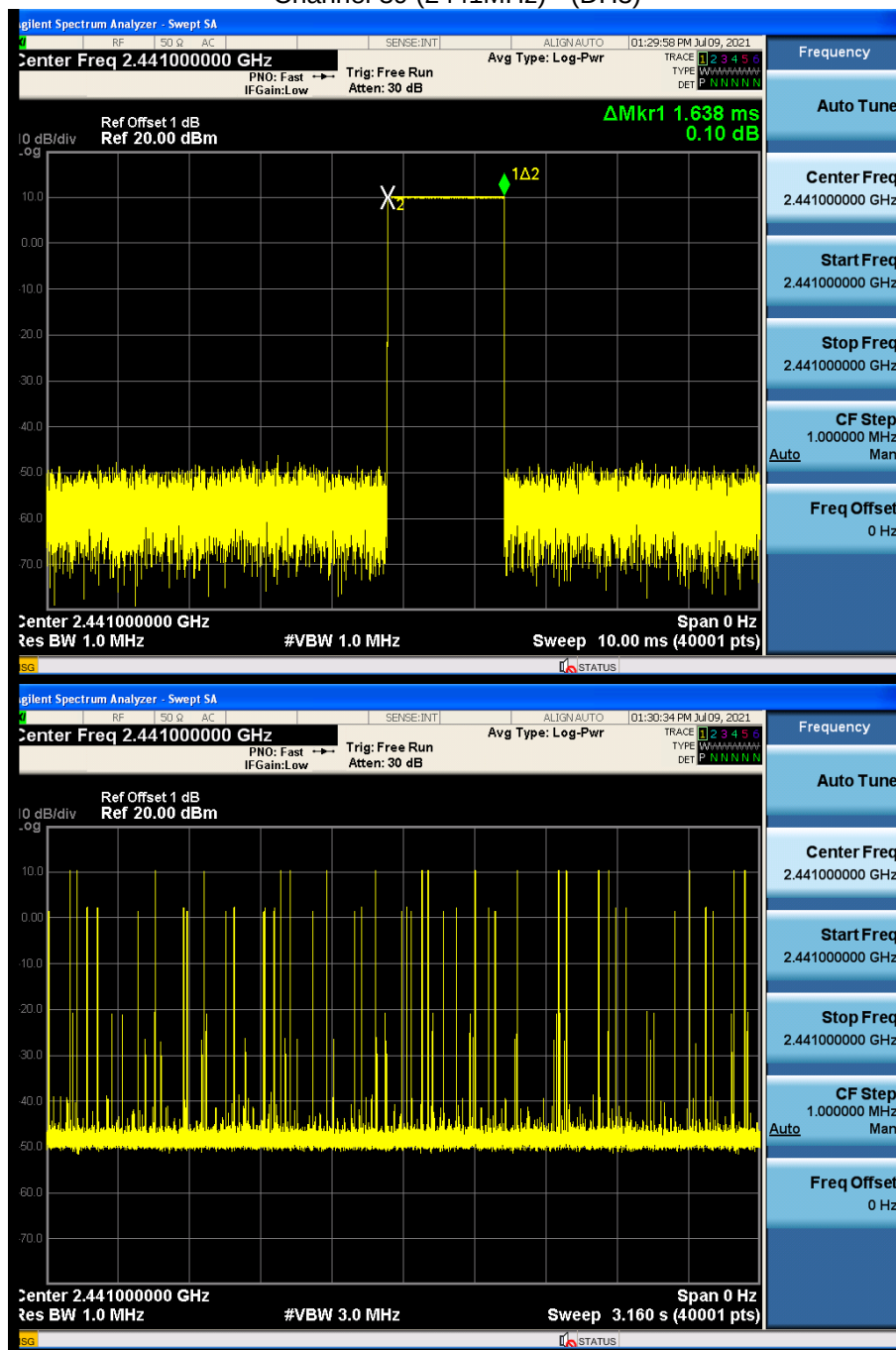
Mode	Channel	Frequency (MHz)	Time of Occupancy (ms)	Limit (ms)	Result
1	39	2441	311.22	< 400	Pass

Note1: Test Time Period: $0.4 \times 79 = 31.6 \text{ sec}$

Note2: Time of Occupancy = $1.638 \times 19 \times 31.6 / 3.16 = 311.22 \text{ ms}$

Note3: We have evaluated different packet type, shown in the report is the worst data.

Channel 39 (2441MHz) - (DH3)



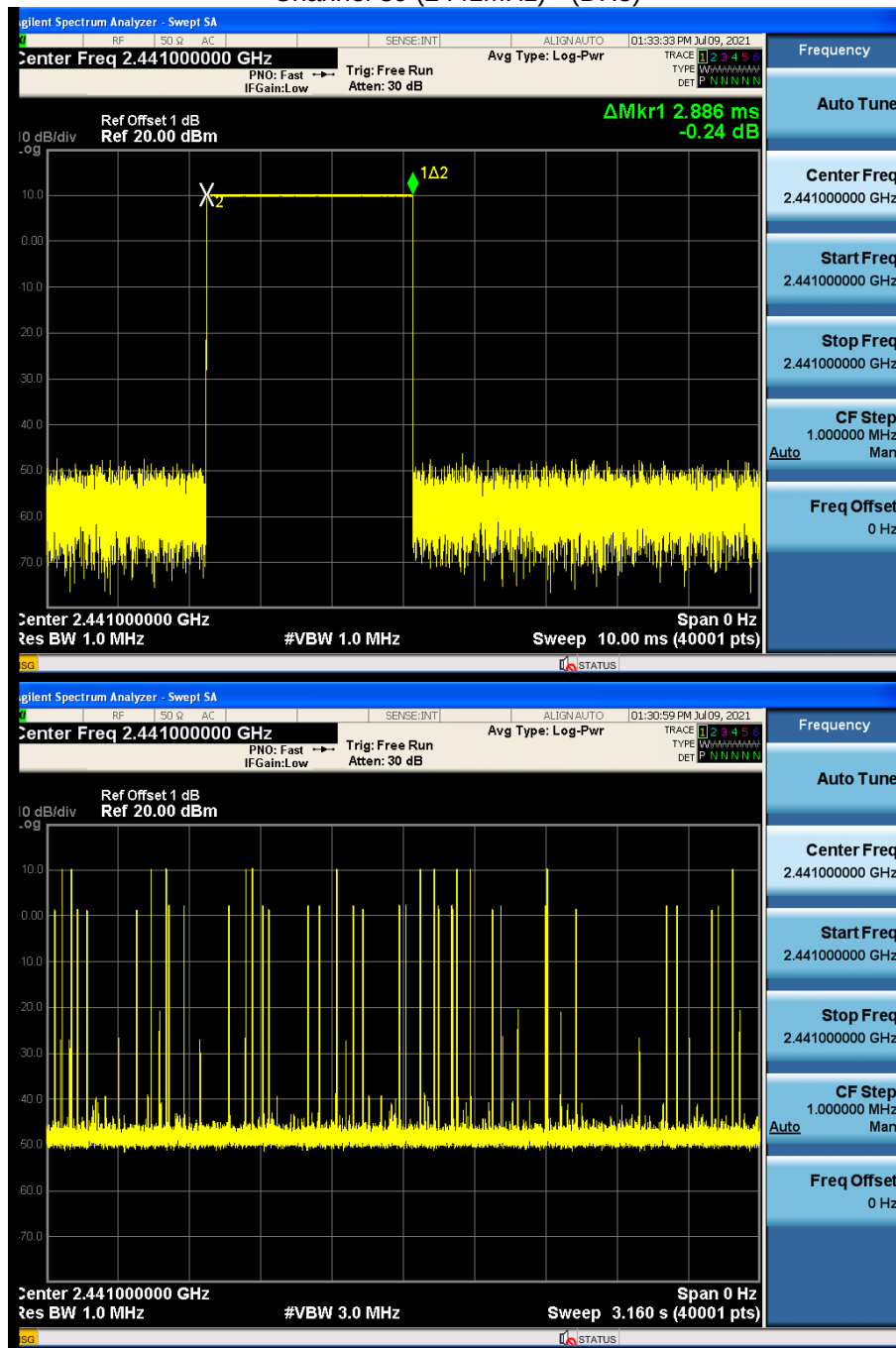
Mode	Channel	Frequency (MHz)	Time of Occupancy (ms)	Limit (ms)	Result
1	39	2441	375.18	< 400	Pass

Note1: Test Time Period: $0.4 \times 79 = 31.6 \text{ sec}$

Note2: Time of Occupancy = $2.886 \times 13 \times 31.6 / 3.16 = 375.18 \text{ ms}$

Note3: We have evaluated different packet type, shown in the report is the worst data.

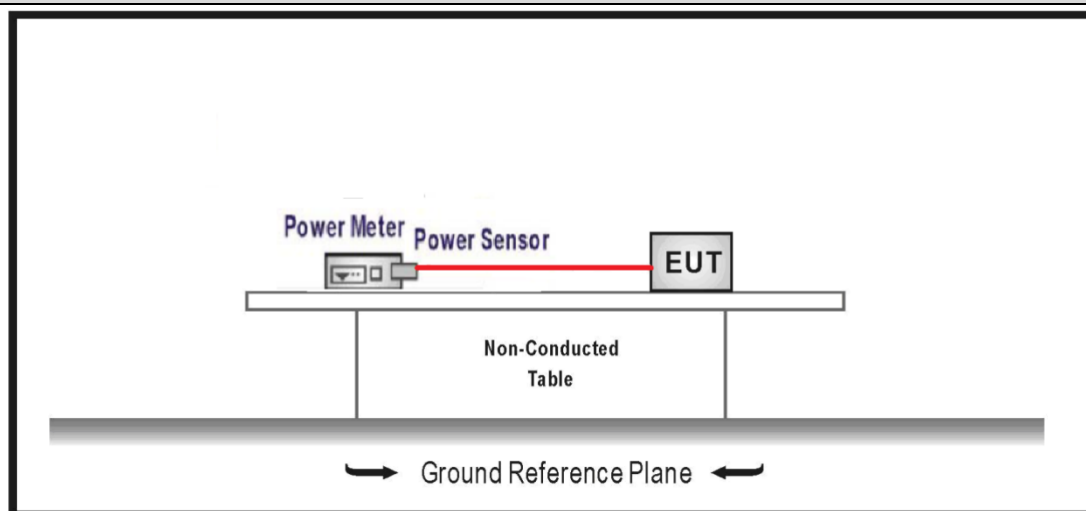
Channel 39 (2441MHz) - (DH5)



Note: The packet time of AFH mode is same as normal mode, due to the packet time of AFH mode multiply with lesser factor is dwell time of $0.4 \times 20 = 8 \text{ S}$, the dwell time of AFH mode comply with the limit.

4.7 Peak Output Power**VERDICT: PASS****4.7.1 Limit**

Standard	FCC Part 15 Subpart C Paragraph 15.247 (a)(1)
☐	Frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.
☒	Frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.
☐	For frequency hopping systems operating in the 902-928 MHz band: 1 watt for systems employing at least 50 hopping channels; and, 0.25 watts for systems employing less than 50 hopping channels, but at least 25 hopping channels

4.7.2 Test Setup

4.7.3 Test Procedure

	References Rule		Chapter	Description
☒	ANSI C63.10		7.8	Evaluation of frequency-hopping device parameters
	☒	ANSI C63.10	7.8.5	Output power test procedure for frequency-hopping spread-spectrum (FHSS) devices

4.7.4 Test Data

Mode	Channel	Test Frequency (MHz)	Power Output (dBm)	Limit (dBm)	Result
Mode 1	00	2402	11.40	≤21	Pass
	39	2442	11.92	≤21	Pass
	78	2480	11.68	≤21	Pass
Mode 2	00	2402	10.22	≤21	Pass
	39	2442	10.92	≤21	Pass
	78	2480	10.48	≤21	Pass
Mode 3	00	2402	10.35	≤21	Pass
	39	2442	11.05	≤21	Pass
	78	2480	10.59	≤21	Pass

4.8 Emissions in non-restricted frequency band

VERDICT: PASS

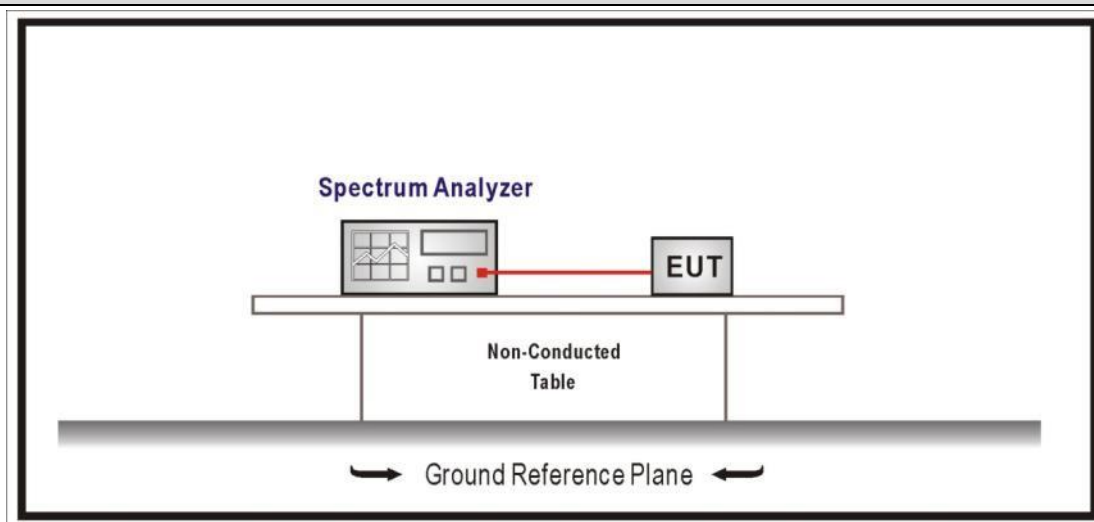
4.8.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.247(d)
RF Output power (Detection methods)	Limit(dB)
RF Output power(Average detector)	30dBc(Note1)
RF Output power(PK detector)	20dBc(Note2)

Note 1: If maximum conducted (average) output power was used to demonstrate compliance as described in 9.2, then the peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 30 dBc).

Note 2: If the maximum peak conducted output power procedure was used, then the peak output power measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 20 dBc).

4.8.2 Test Setup

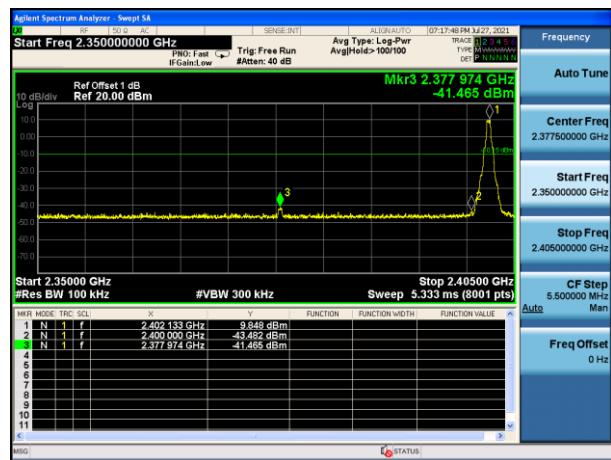


4.8.3 Test Procedure

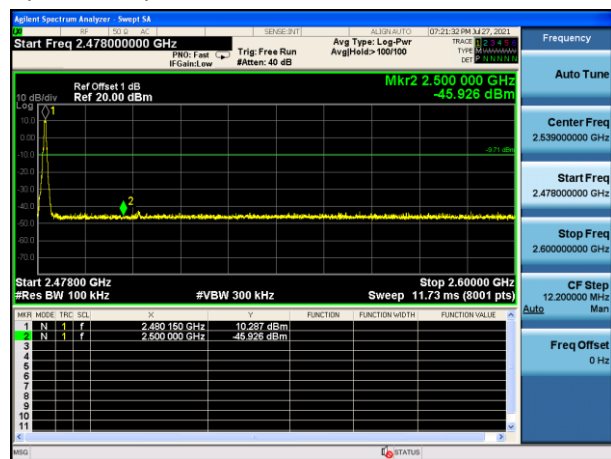
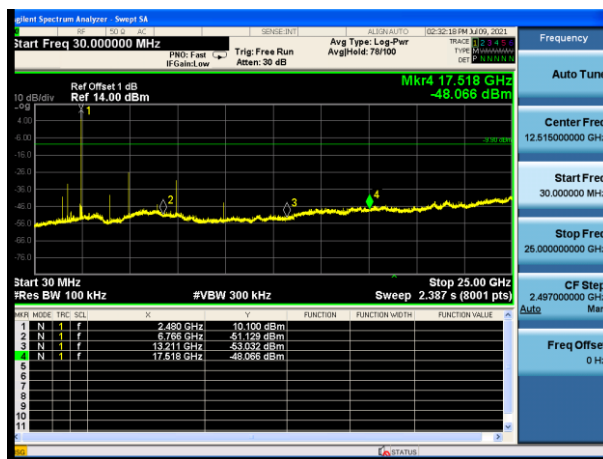
References Rule	Chapter	Description
☒ ANSI C63.10	7.8	Evaluation of frequency-hopping device parameters
☒ ANSI C63.10	7.8.6	Band-edge measurements for RF conducted emissions

4.8.4 Test Data

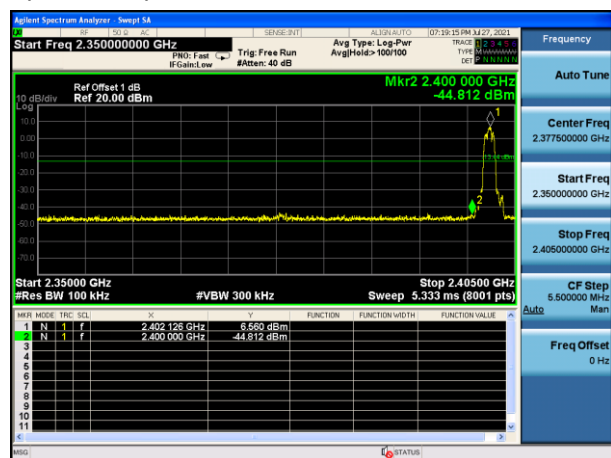
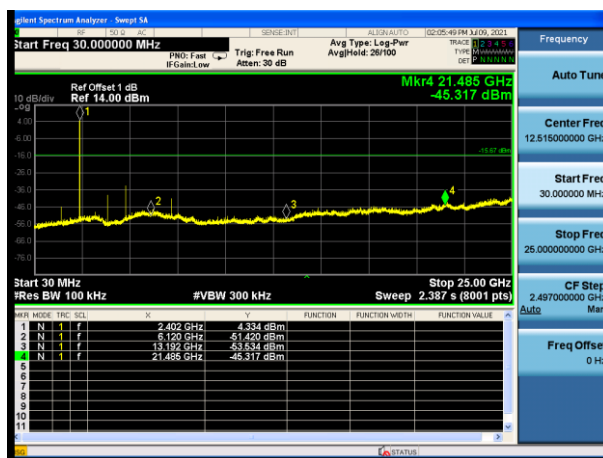
Mode 1/ CH00(2402MHz)



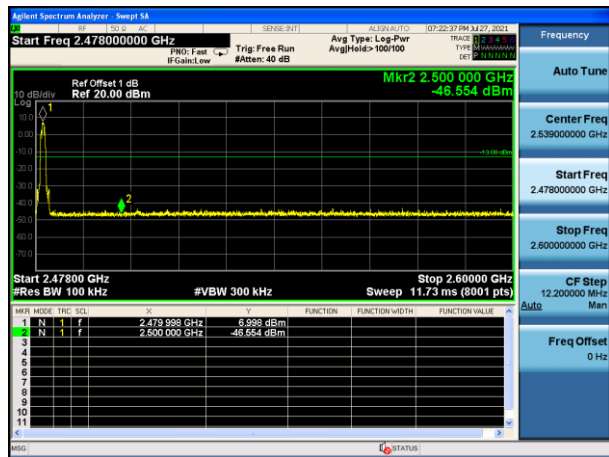
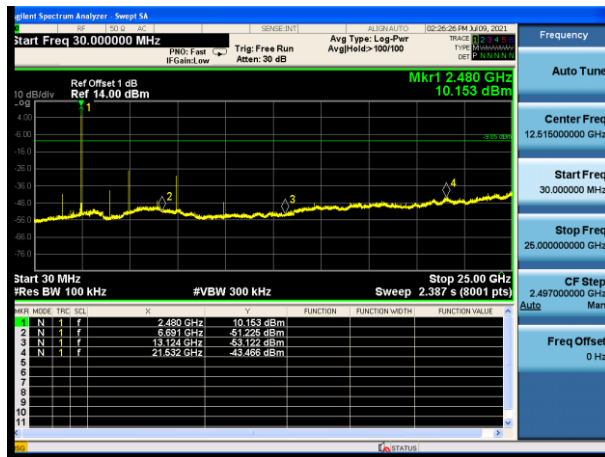
Mode 1/ CH78(2480MHz)



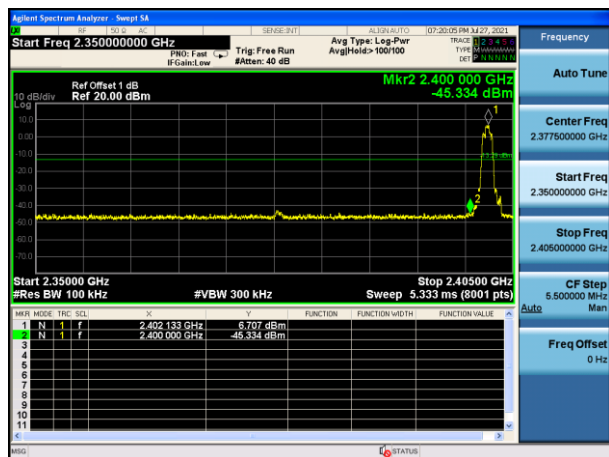
Mode 2/ CH00(2402MHz)



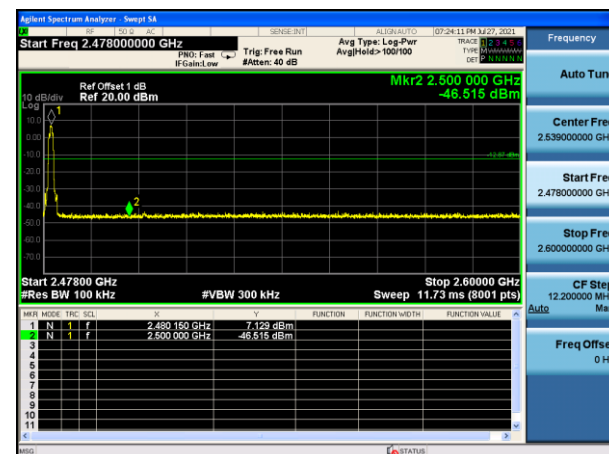
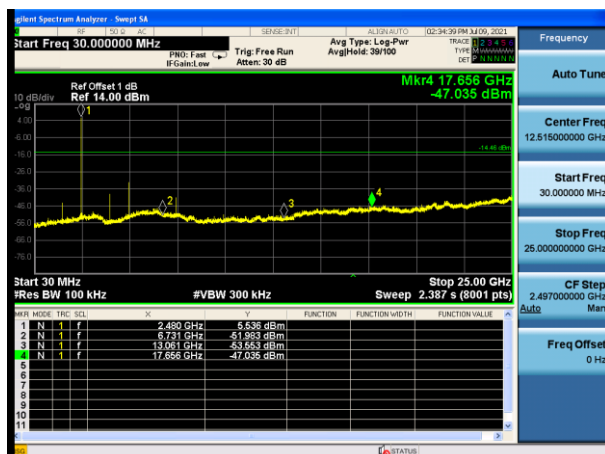
Mode 2/ CH78(2480MHz)



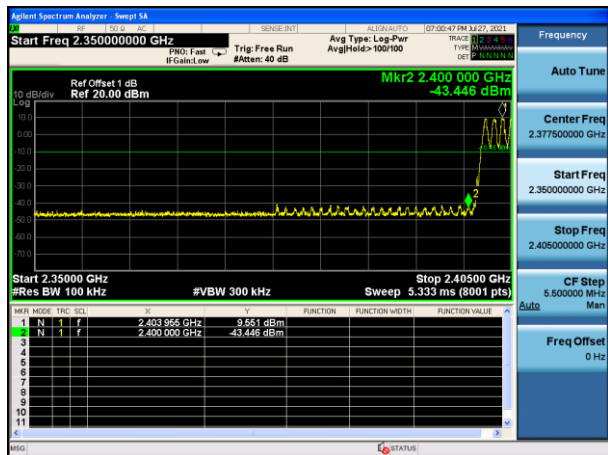
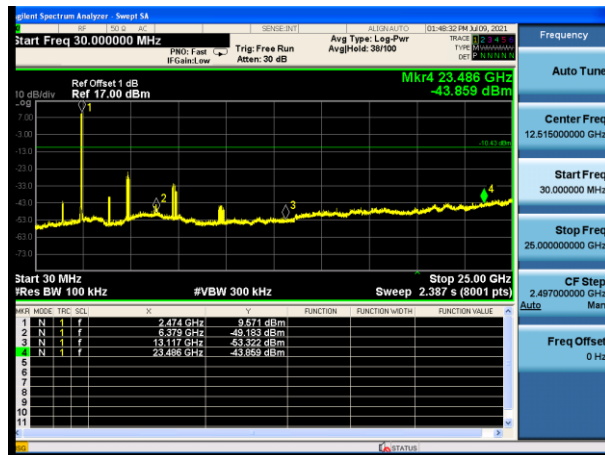
Mode 3/ CH00(2402MHz)



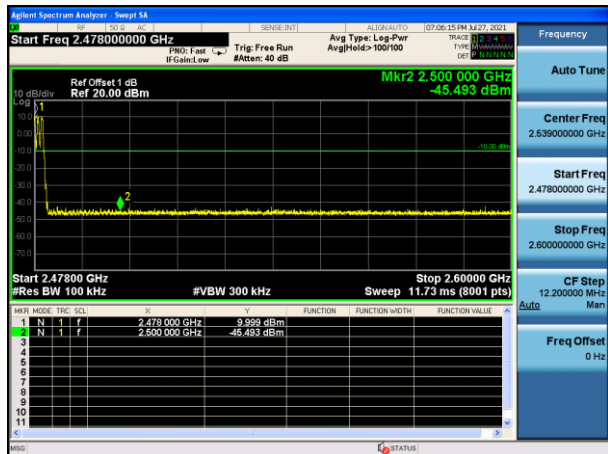
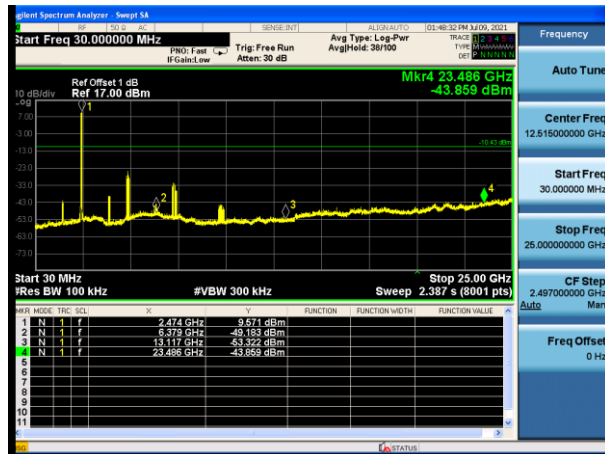
Mode 3/ CH78(2480MHz)



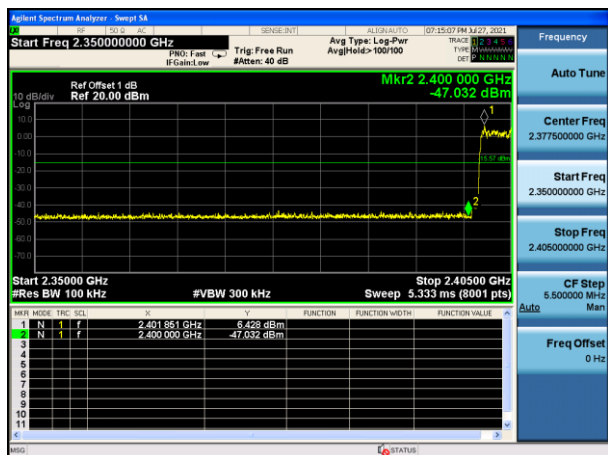
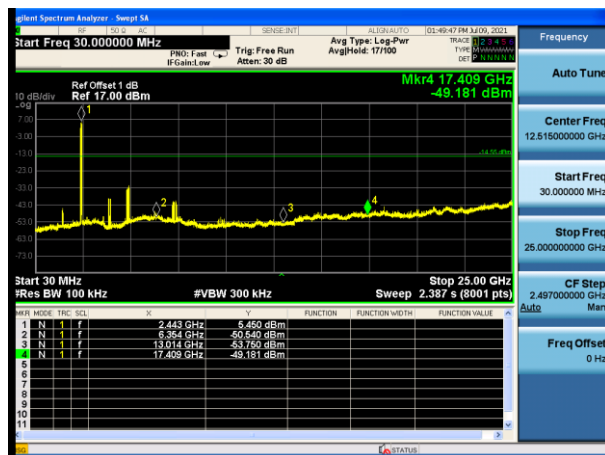
Mode 4/ Hopping(DH 5) -1



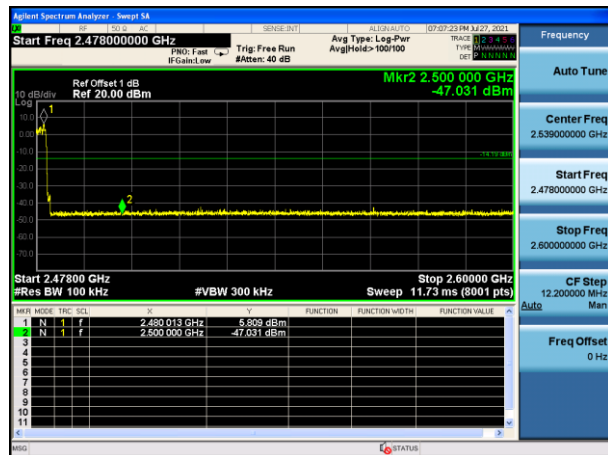
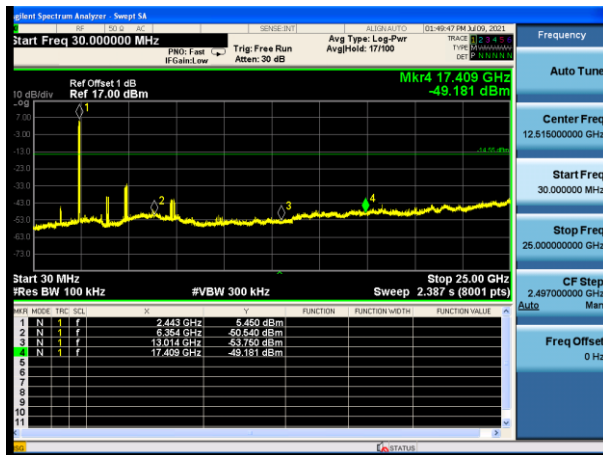
Mode 4/ Hopping(DH 5) -2



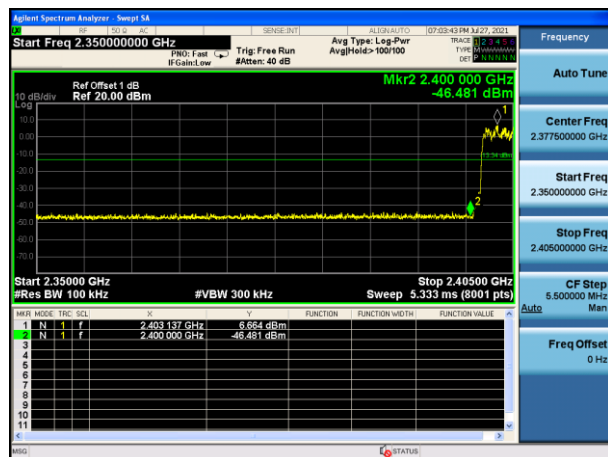
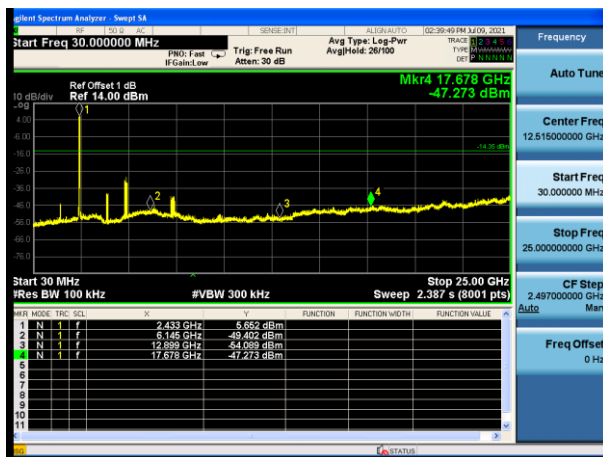
Mode 4/ Hopping(2DH 5) -1



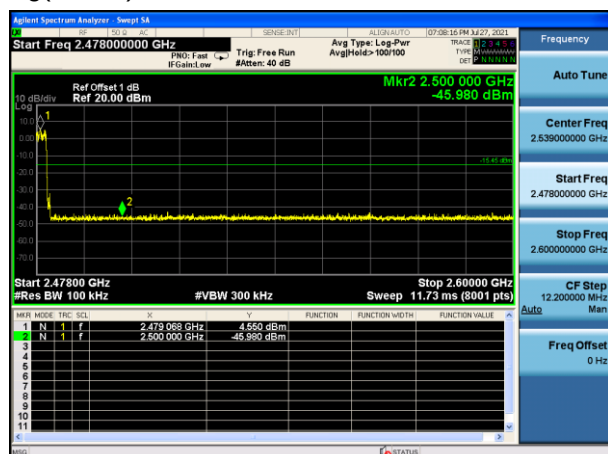
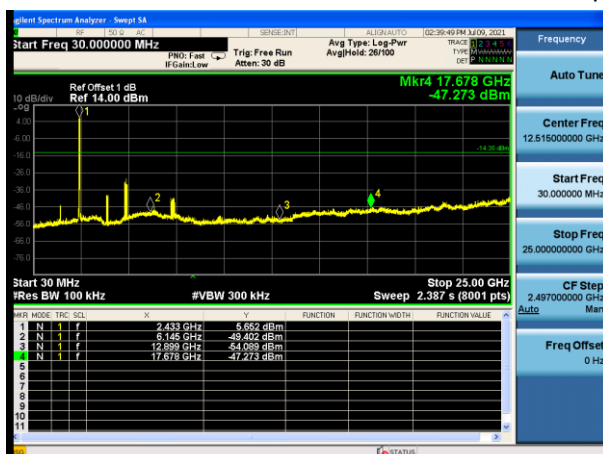
Mode 4/ Hopping(2DH 5) -2



Mode 4/ Hopping(3DH 5) -1

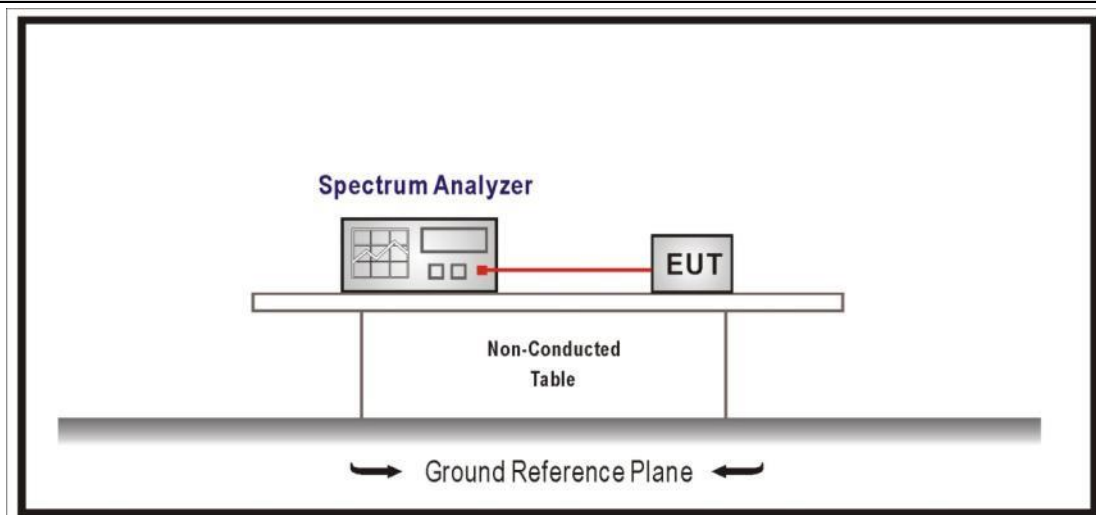


Mode 4/ Hopping(3DH 5) -2



4.9 Duty cycle**VERDICT: PASS****4.9.1 Limit**

N/A

4.9.2 Test Setup**4.9.3 Test Procedure**

References Rule		Chapter	Description
☒	ANSI C63.10	11.6	Duty cycle (D), transmission duration (T), and maximum power control level

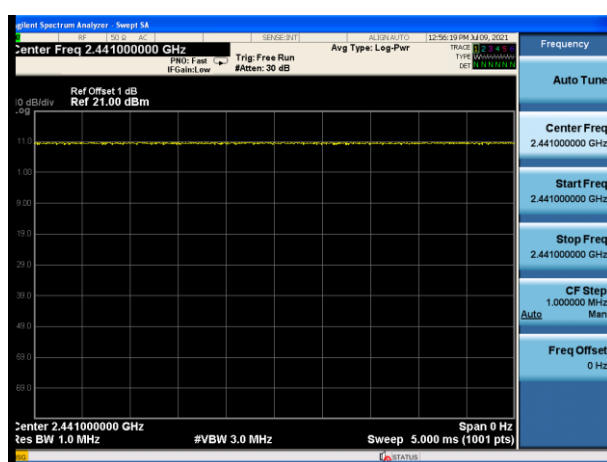
4.9.4 Test Data

Test Mode	Tx On (ms)	VBW	Tx On + Tx Off (ms)	Duty Cycle
Mode 1	--	10 Hz	--	100%
Mode 2	--	10 Hz	--	100%
Mode 3	--	10 Hz	--	100%

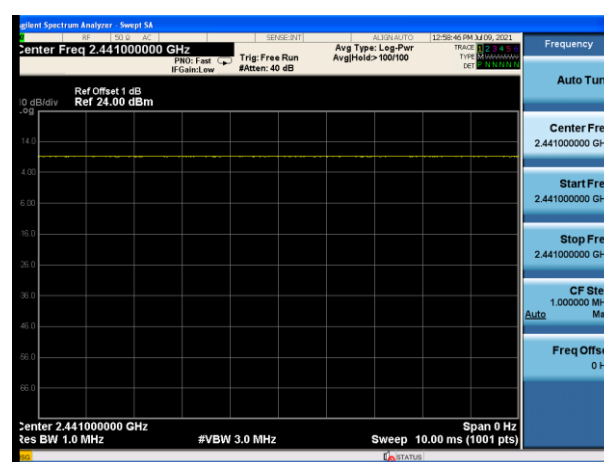
Note 1: T means the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

Note 2: According to KDB 558074, when test for Radiated Emission Band Edge and Radiated Emission, for average detector set: $VBW \geq 1/T$ will be used.

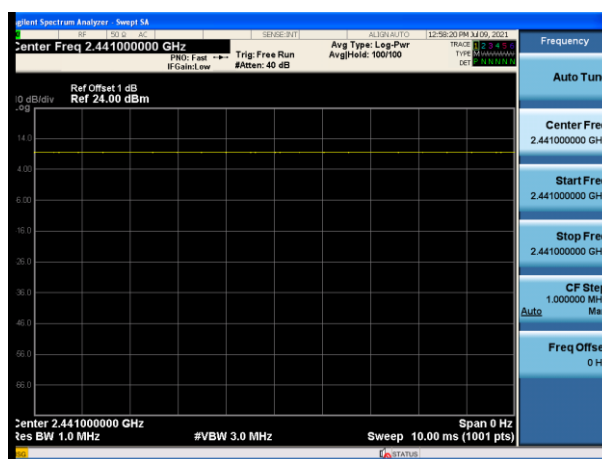
Mode 1 CH39 2441MHz



Mode 2 CH39 2441MHz



Mode 3 CH39 2441MHz



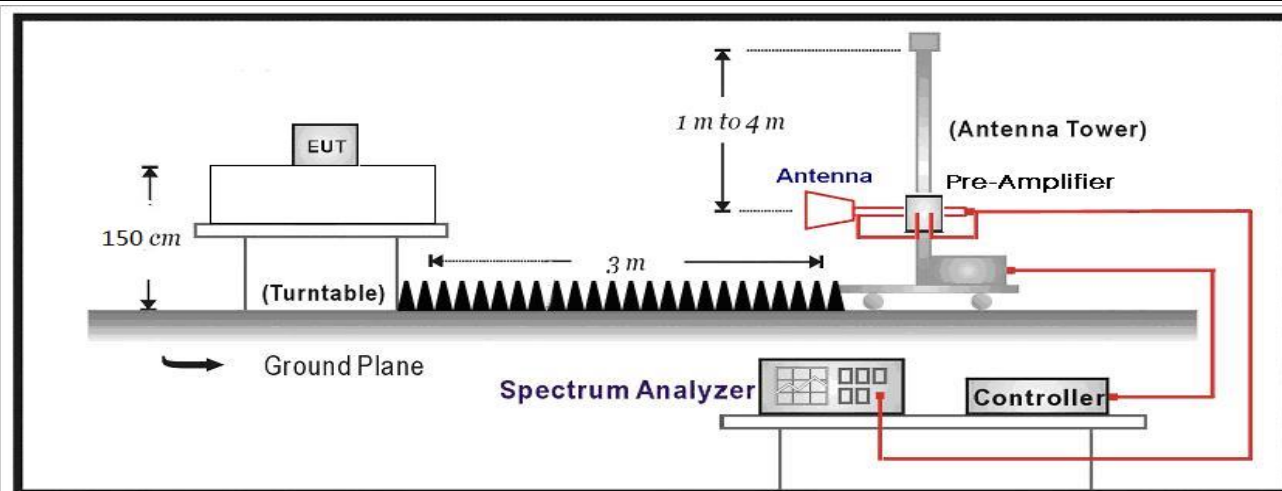
4.10 Radiated Emission Band Edge**VERDICT: PASS****4.10.1 Limit**

Standard		FCC Part 15 Subpart C Paragraph 15.247(d) , 15.209		
Frequency bands (MHz)	Detector	Limit (dB μ V/m)	RBW (MHz)	Distance (m)
2310-2390	PK	74	1	3
2483.5-2500	AV	54	1	3

Note: The field strength of emissions appearing within these frequency bands shall not exceed the limits.

4.10.2 Test Setup

Above 1GHz Test Setup:

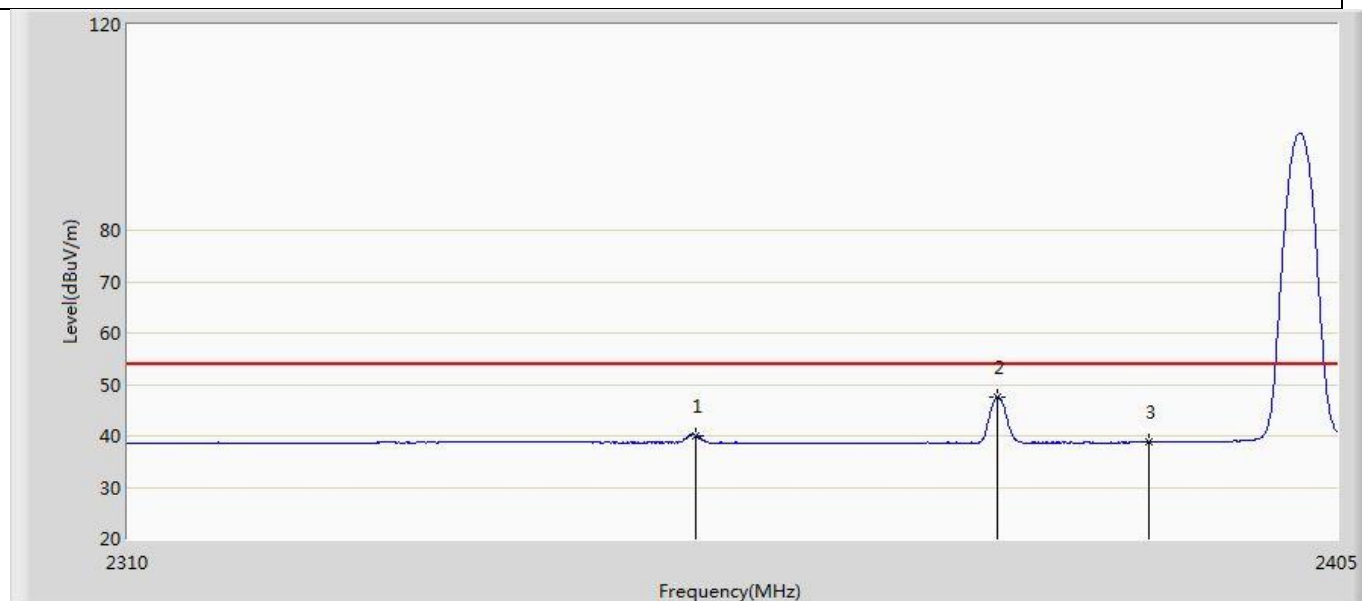
**4.10.3 Test Procedure**

Test Method

	References Rule	Chapter	Description
☐	DA 00-705	N/A	duty cycle correction factor
☒	ANSI C63.10	6.10	Band-edge testing
☒	ANSI C63.10	6.10.5	Restricted-band band-edge measurements
☐	ANSI C63.10	6.10.6	Marker-delta method
☐	ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
☐	ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
☒	ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz

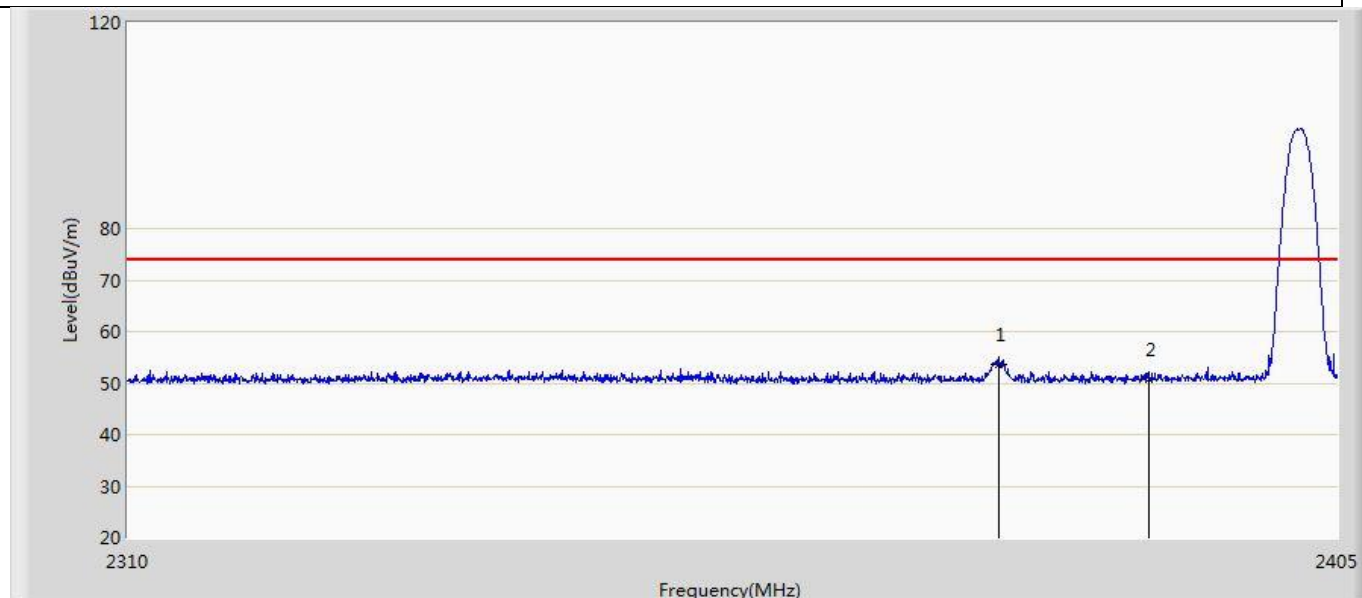
4.10.4 Test Data

Profile: 2170004R	Page No.: 1
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/02 - 00:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by DH5	



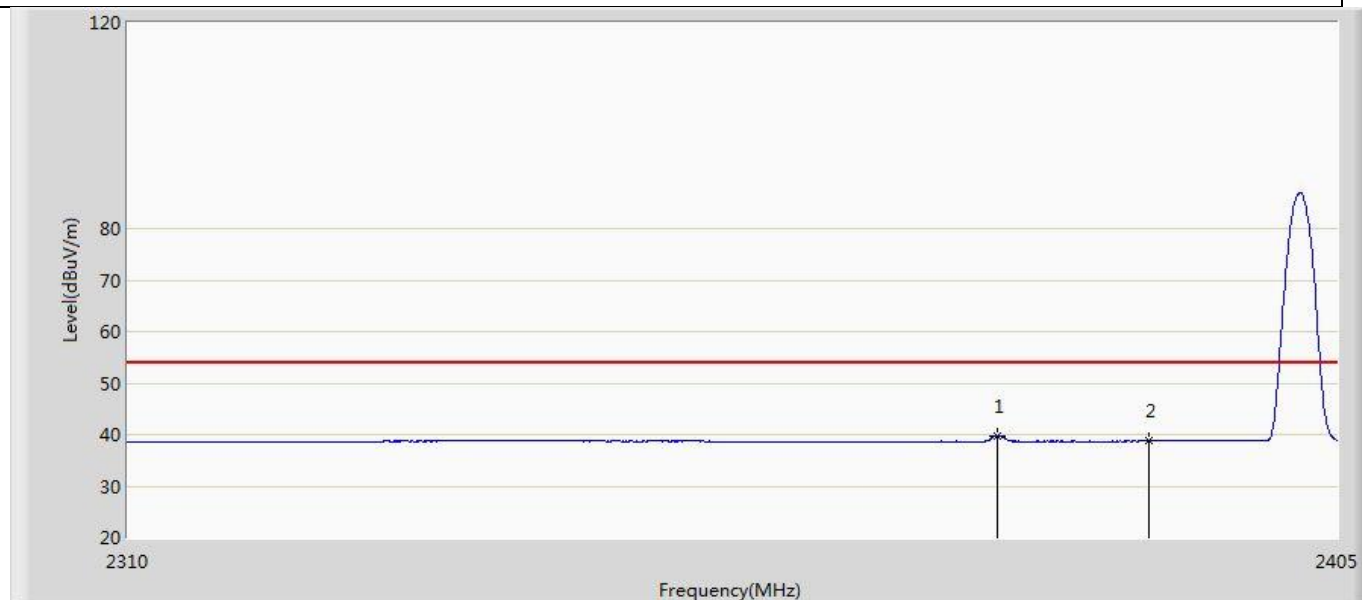
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2354.175	39.956	4.504	-14.044	54.000	35.452	AV
2	*	2377.972	47.594	12.230	-6.406	54.000	35.364	AV
3		2390.000	38.751	3.292	-15.249	54.000	35.459	AV

Profile: 2170004R	Page No.: 2
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/02 - 18:22
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by DH5	



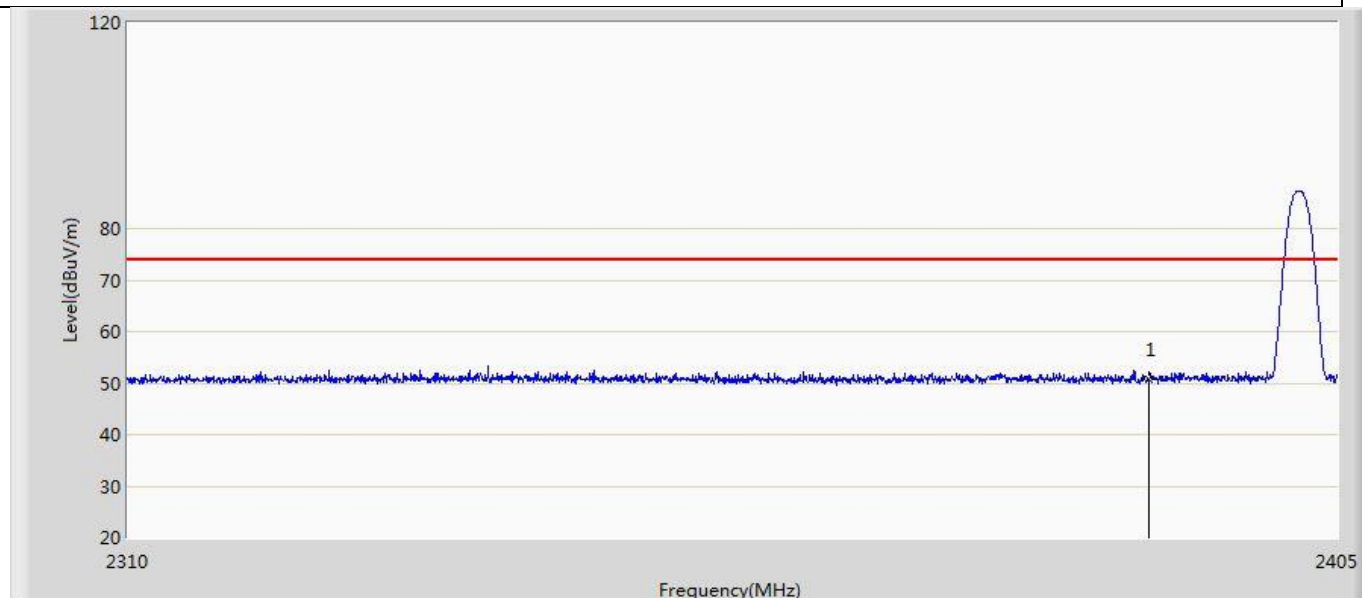
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2378.020	53.614	18.249	-20.386	74.000	35.364	PK
2		2390.000	50.787	15.328	-23.213	74.000	35.459	PK

Profile: 2170004R	Page No.: 3
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/02 - 18:24
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by DH5	



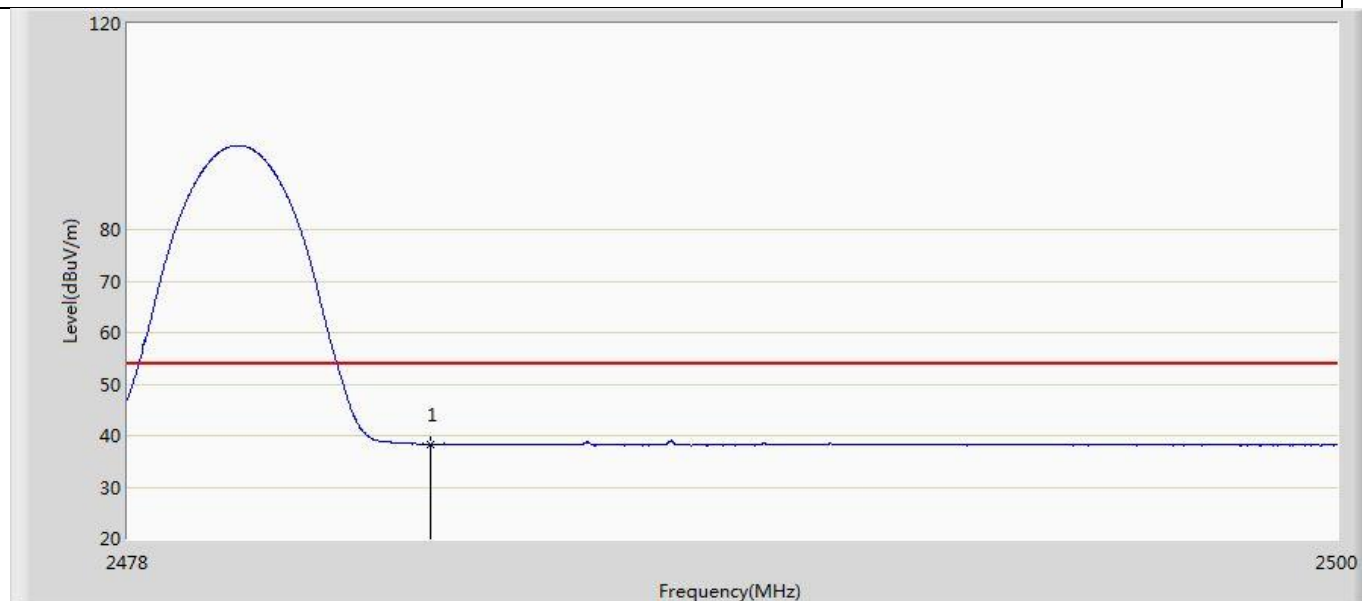
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2377.972	39.840	4.476	-14.160	54.000	35.364	AV
2		2390.000	38.793	3.334	-15.207	54.000	35.459	AV

Profile: 2170004R	Page No.: 4
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/02 - 18:27
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by DH5	



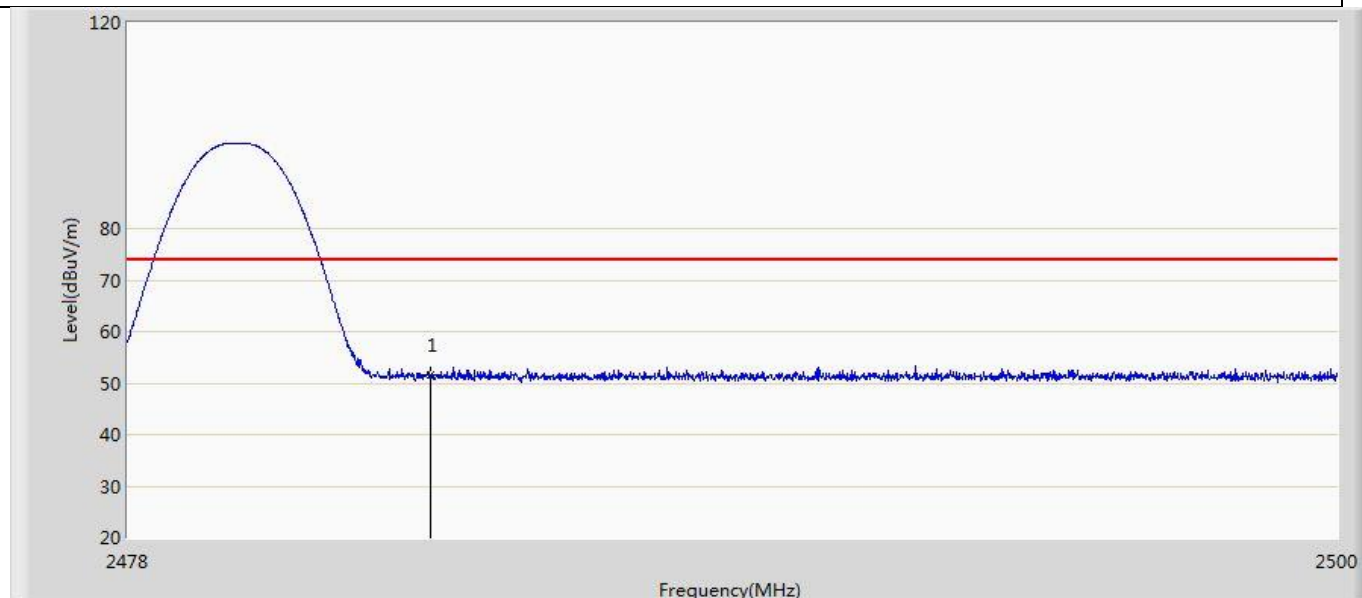
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	50.750	15.291	-23.250	74.000	35.459	PK

Profile: 2170004R	Page No.: 5
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/02 - 18:47
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by DH5	



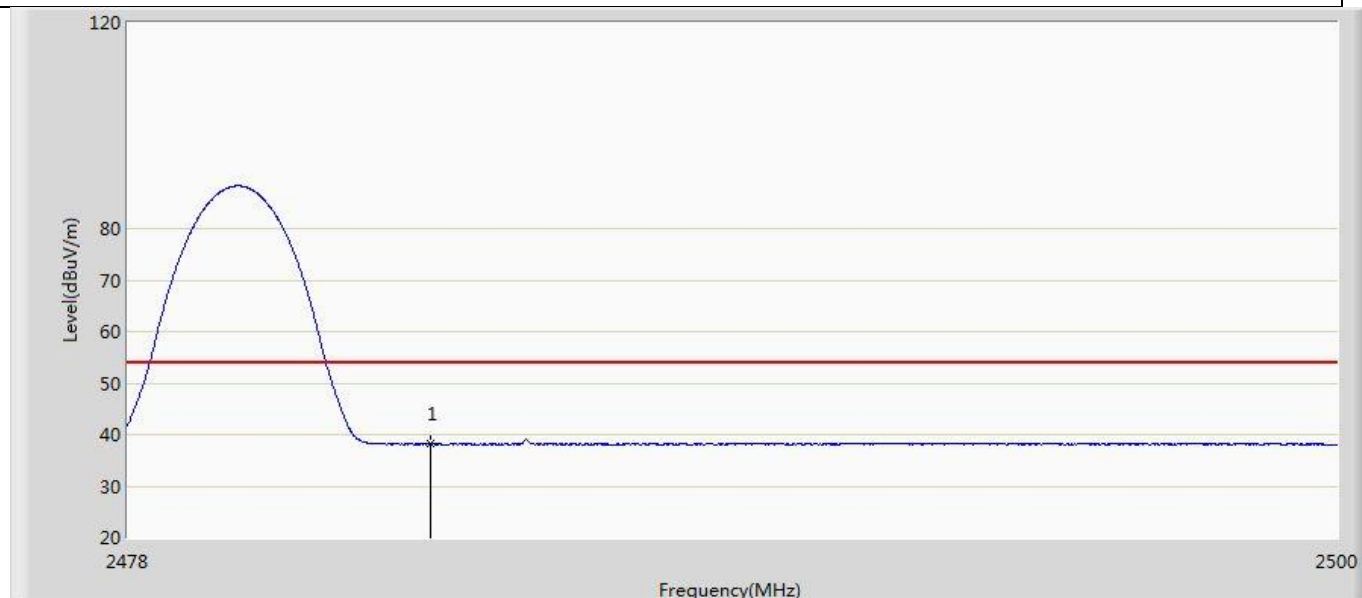
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	38.348	2.673	-15.652	54.000	35.675	AV

Profile: 2170004R	Page No.: 6
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/02 - 18:53
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by DH5	



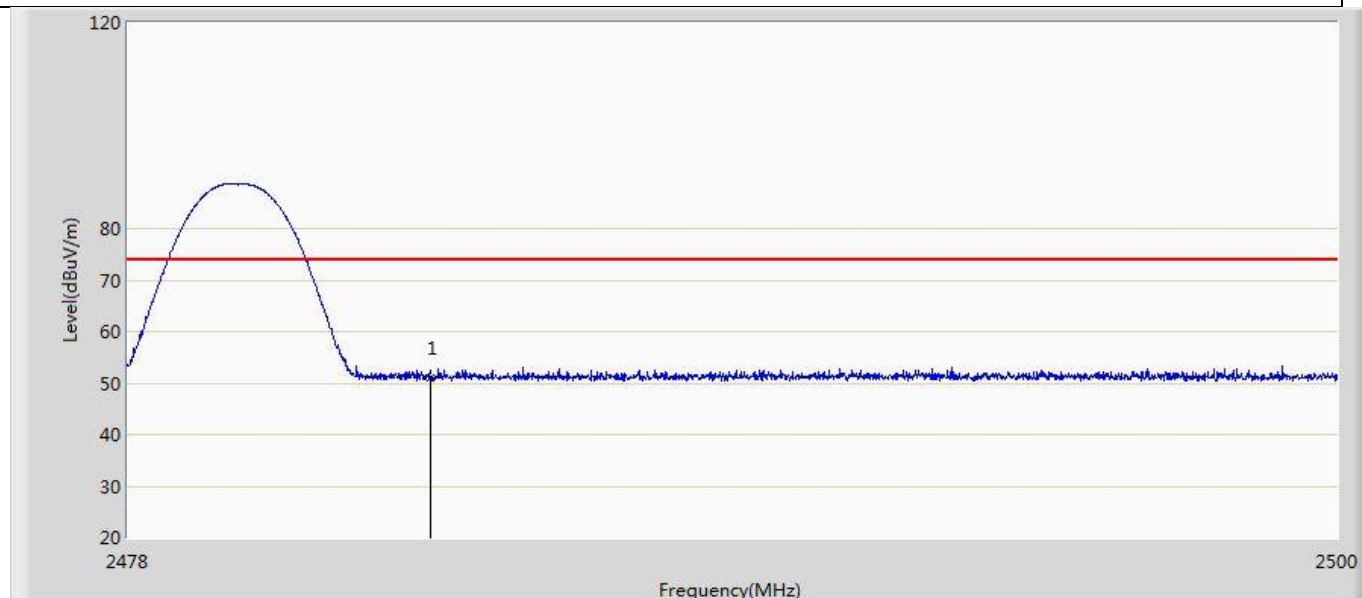
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	51.534	15.859	-22.466	74.000	35.675	PK

Profile: 2170004R	Page No.: 7
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/02 - 18:55
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by DH5	



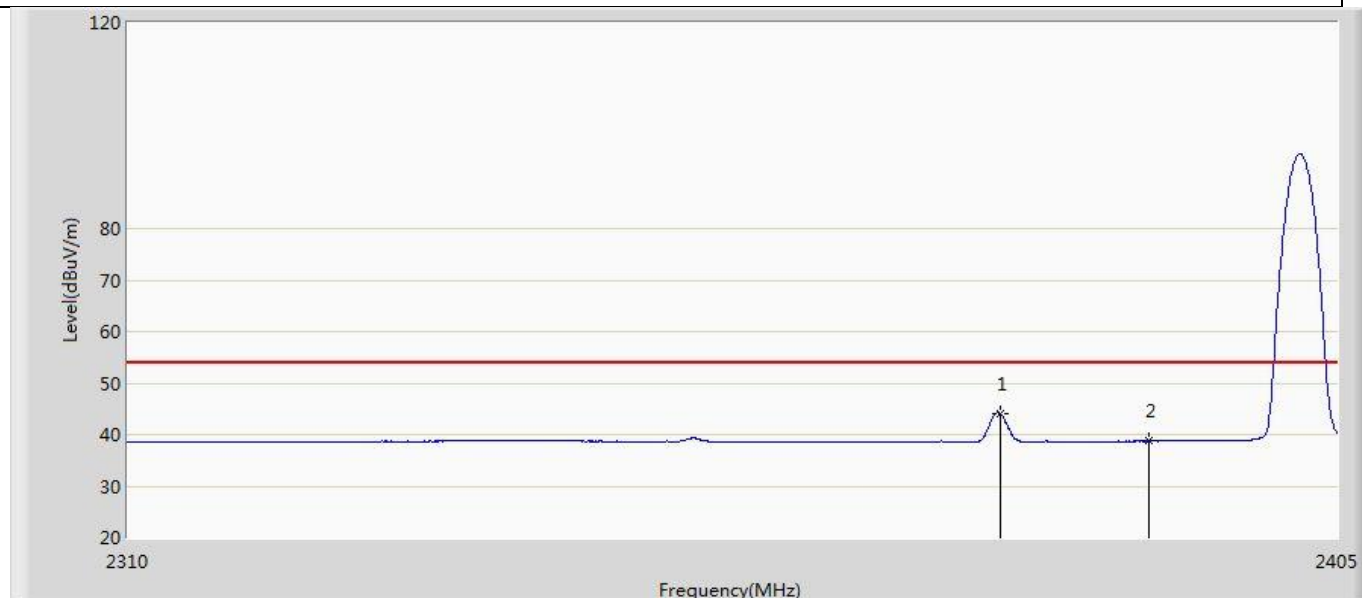
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	38.129	2.454	-15.871	54.000	35.675	AV

Profile: 2170004R	Page No.: 8
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/02 - 18:56
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by DH5	



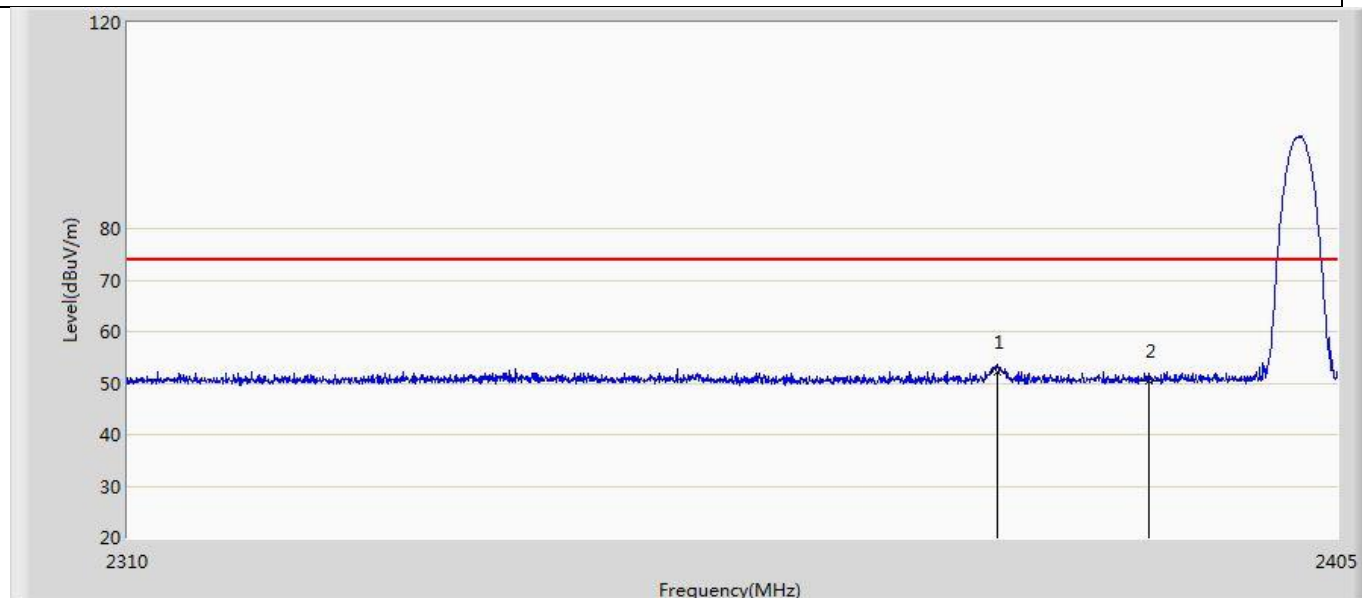
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	50.950	15.275	-23.050	74.000	35.675	PK

Profile: 2170004R	Page No.: 9
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/02 - 18:30
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by 2DH5	



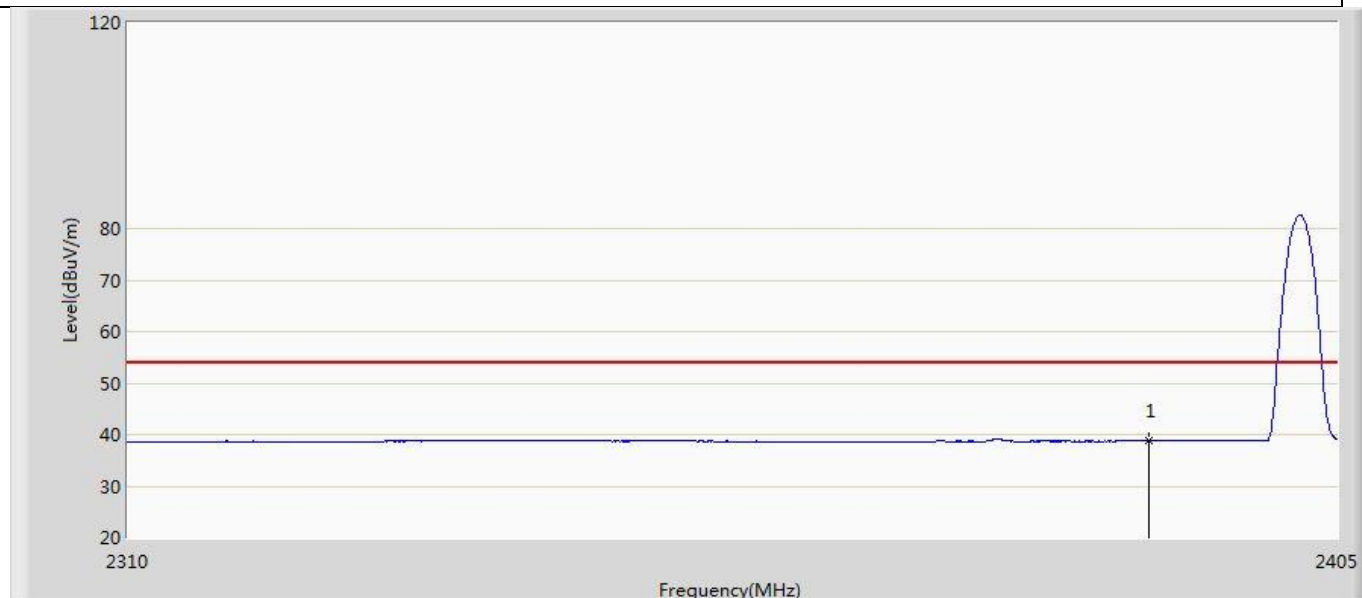
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2378.163	44.011	8.645	-9.989	54.000	35.366	AV
2		2390.000	38.723	3.264	-15.277	54.000	35.459	AV

Profile: 2170004R	Page No.: 10
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/02 - 18:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by 2DH5	



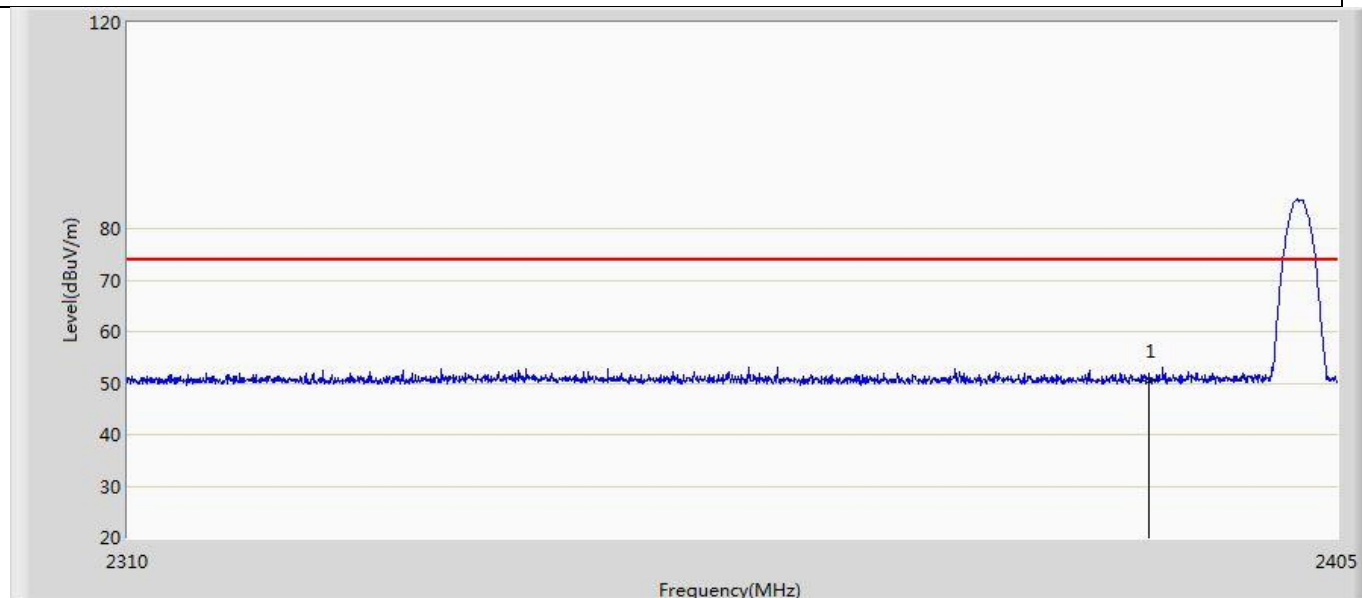
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2377.972	52.132	16.768	-21.868	74.000	35.364	PK
2		2390.000	50.370	14.911	-23.630	74.000	35.459	PK

Profile: 2170004R	Page No.: 11
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/02 - 18:34
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by 2DH5	



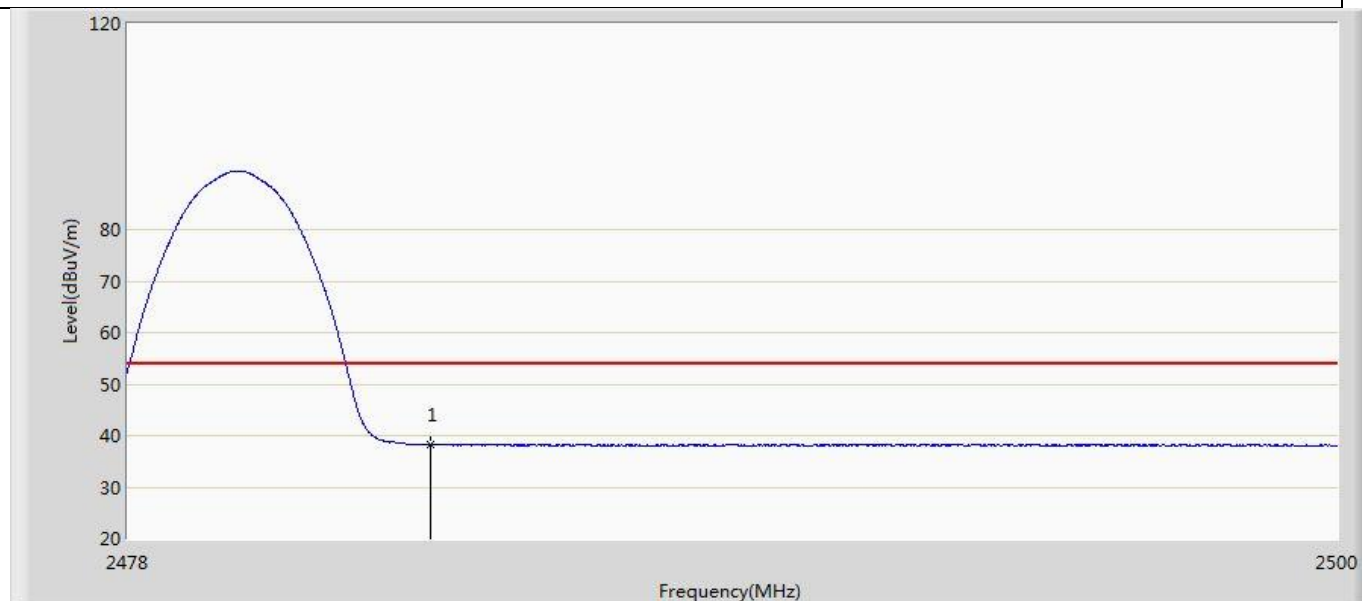
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	38.835	3.376	-15.165	54.000	35.459	AV

Profile: 2170004R	Page No.: 12
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/02 - 18:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by 2DH5	



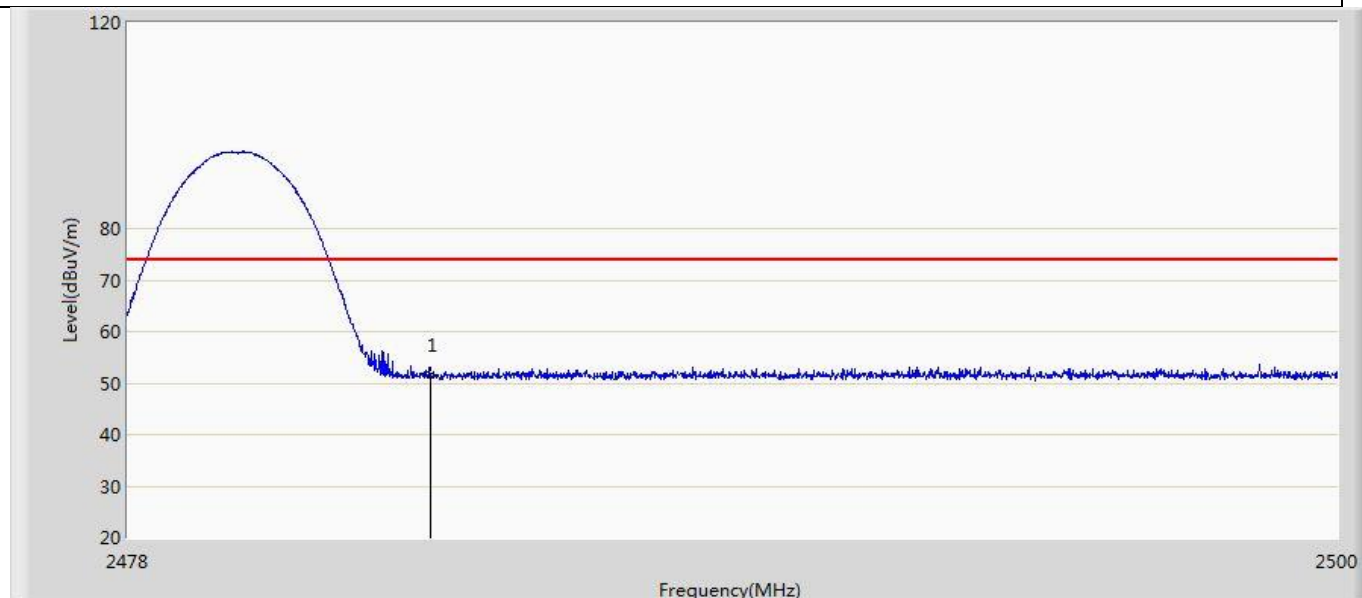
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	50.447	14.988	-23.553	74.000	35.459	PK

Profile: 2170004R	Page No.: 13
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/02 - 18:59
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by 2DH5	



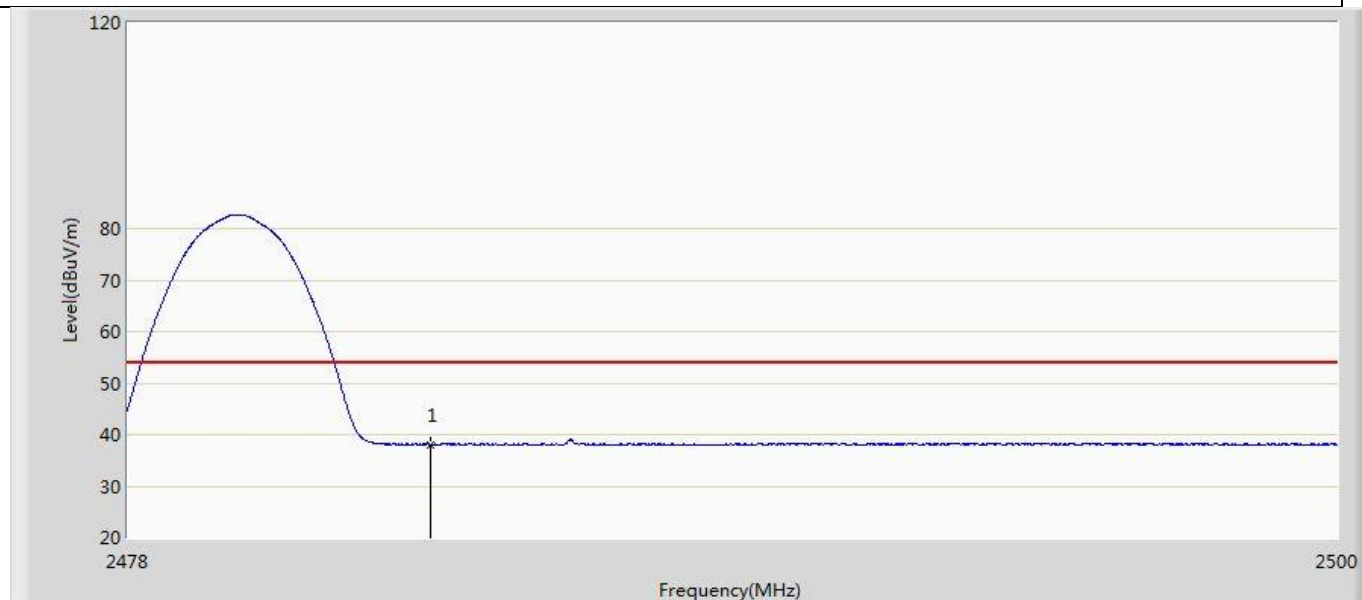
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	38.160	2.485	-15.840	54.000	35.675	AV

Profile: 2170004R	Page No.: 14
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/02 - 19:03
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by 2DH5	



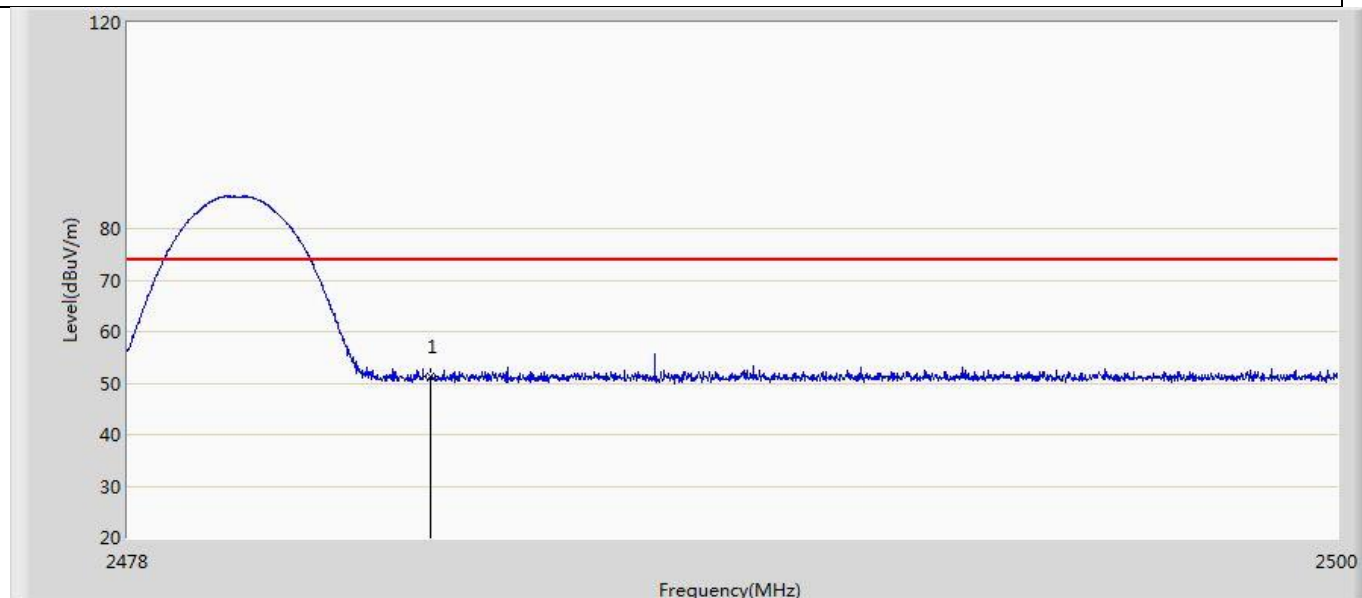
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	51.642	15.967	-22.358	74.000	35.675	PK

Profile: 2170004R	Page No.: 15
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/02 - 19:06
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by 2DH5	



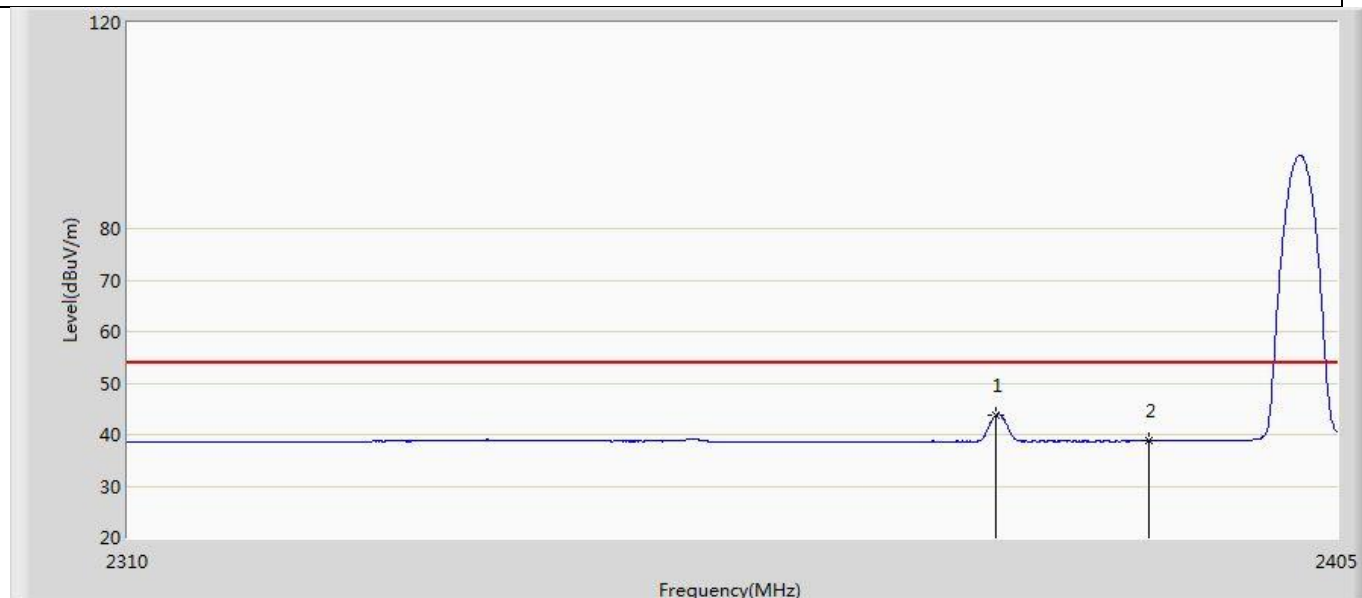
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	38.081	2.406	-15.919	54.000	35.675	AV

Profile: 2170004R	Page No.: 26
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/02 - 19:07
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by 2DH5	



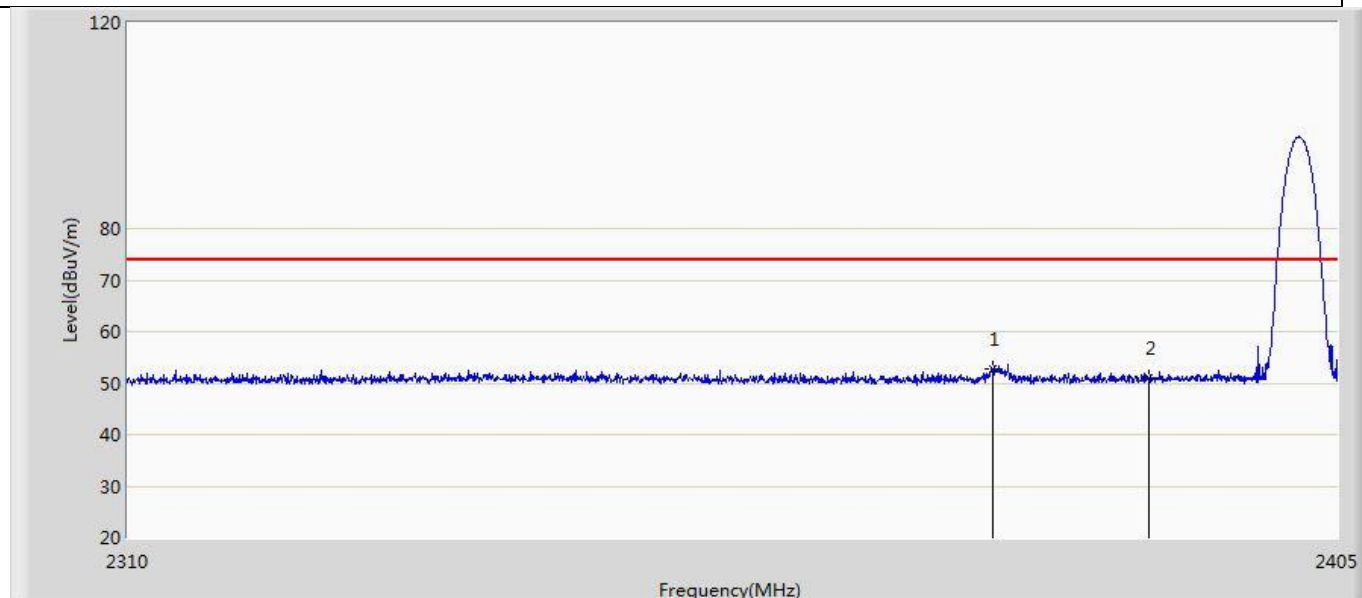
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	51.270	15.595	-22.730	74.000	35.675	PK

Profile: 2170004R	Page No.: 17
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/02 - 18:38
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by 3DH5	



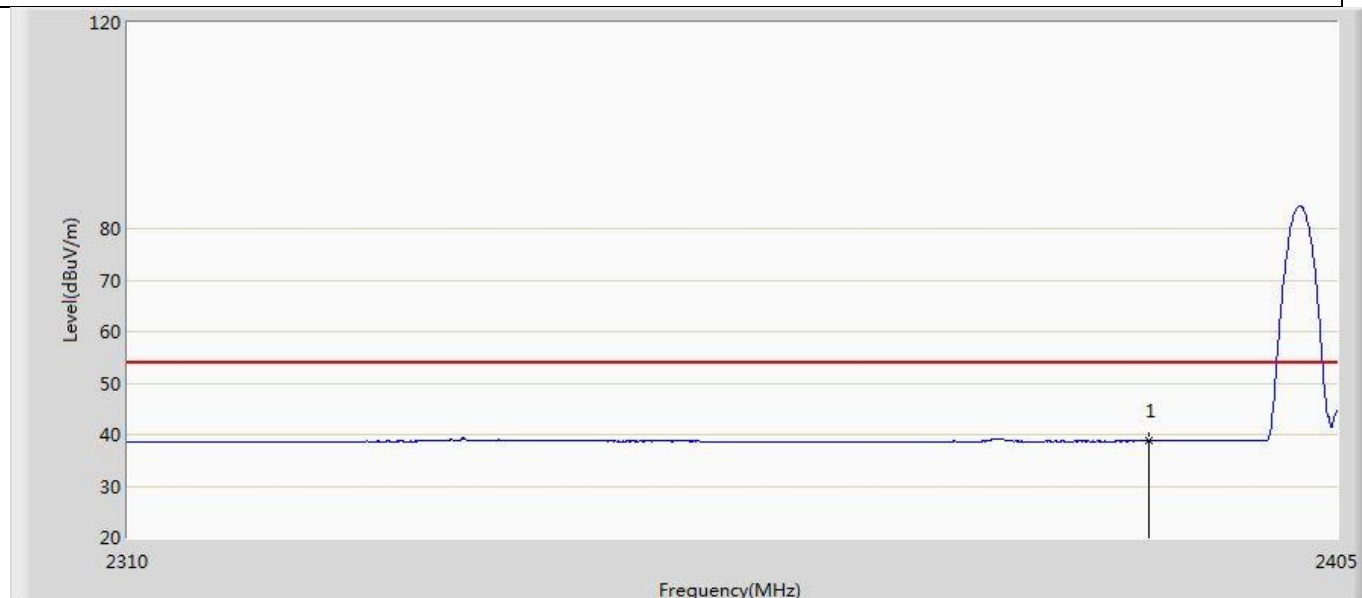
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2377.782	43.715	8.352	-10.285	54.000	35.363	AV
2		2390.000	38.831	3.372	-15.169	54.000	35.459	AV

Profile: 2170004R	Page No.: 18
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/02 - 18:42
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by 3DH5	



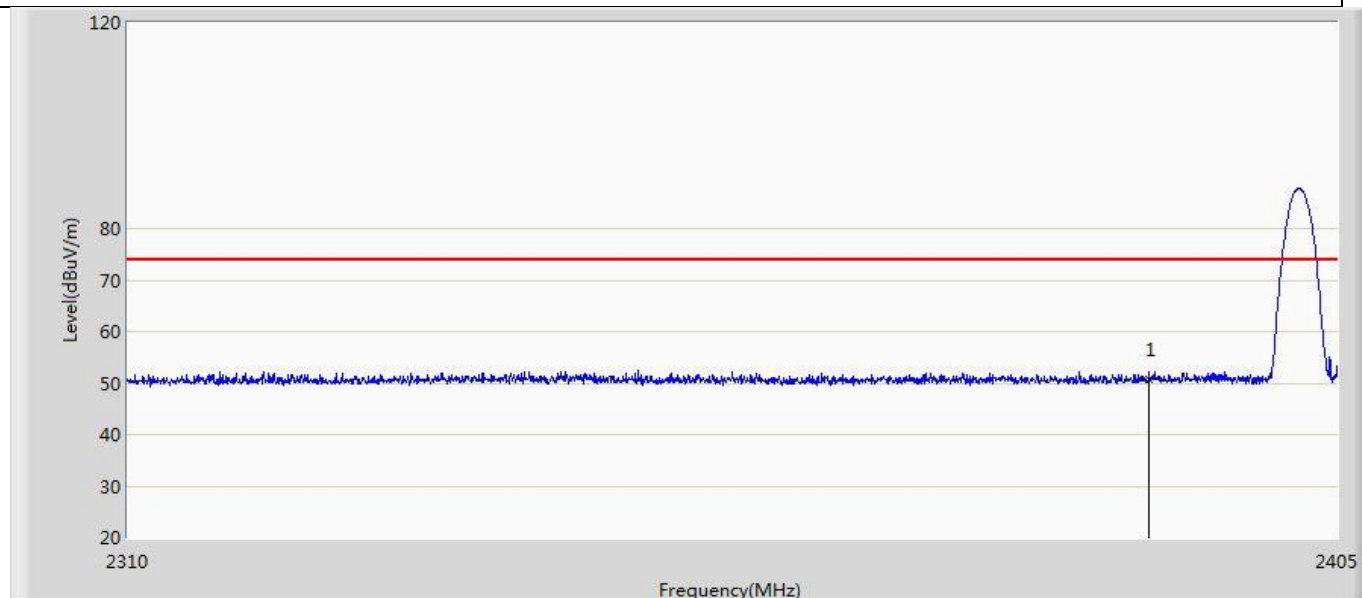
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2377.640	52.648	17.286	-21.352	74.000	35.362	PK
2		2390.000	50.889	15.430	-23.111	74.000	35.459	PK

Profile: 2170004R	Page No.: 19
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/02 - 18:43
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by 3DH5	



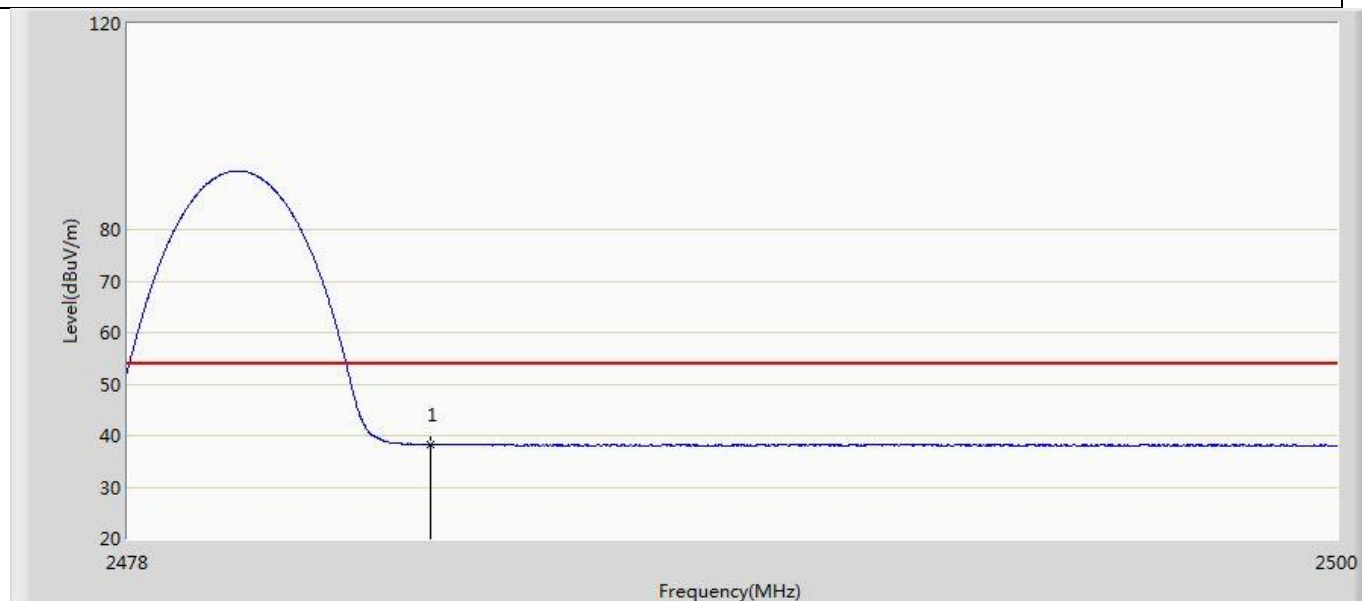
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	38.744	3.285	-15.256	54.000	35.459	AV

Profile: 2170004R	Page No.: 20
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/02 - 18:45
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by 3DH5	



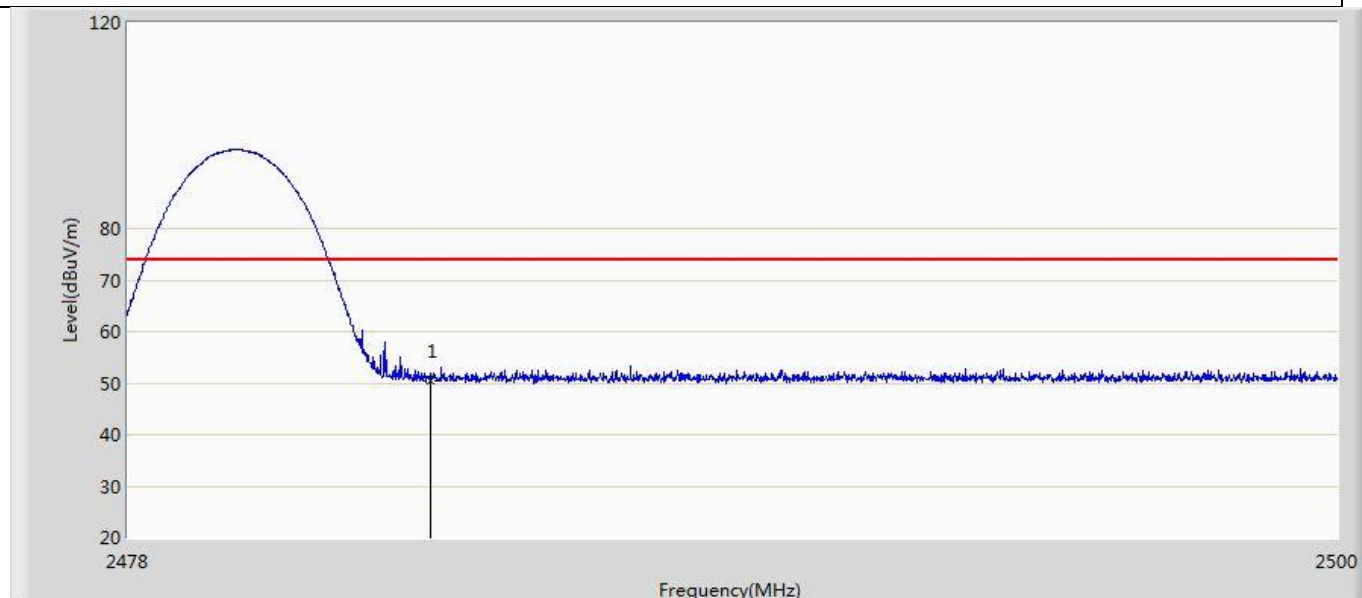
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	50.673	15.214	-23.327	74.000	35.459	PK

Profile: 2170004R	Page No.: 21
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/02 - 19:11
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by 3DH5	



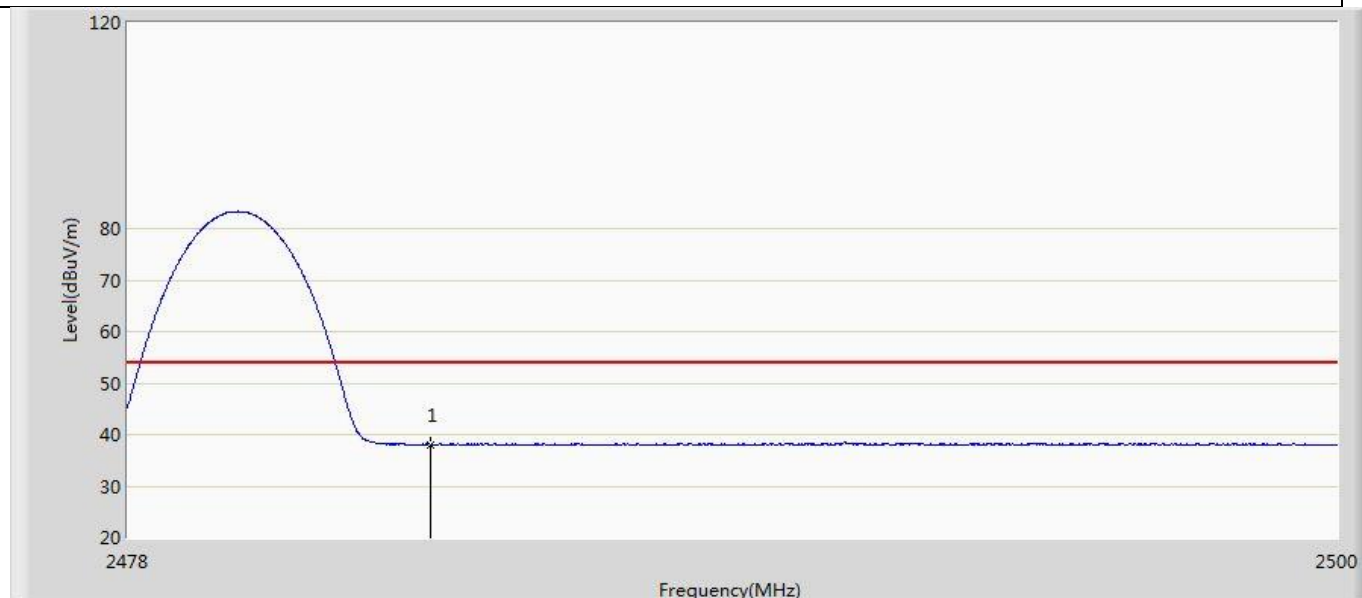
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	38.251	2.576	-15.749	54.000	35.675	AV

Profile: 2170004R	Page No.: 22
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/02 - 19:15
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by 3DH5	



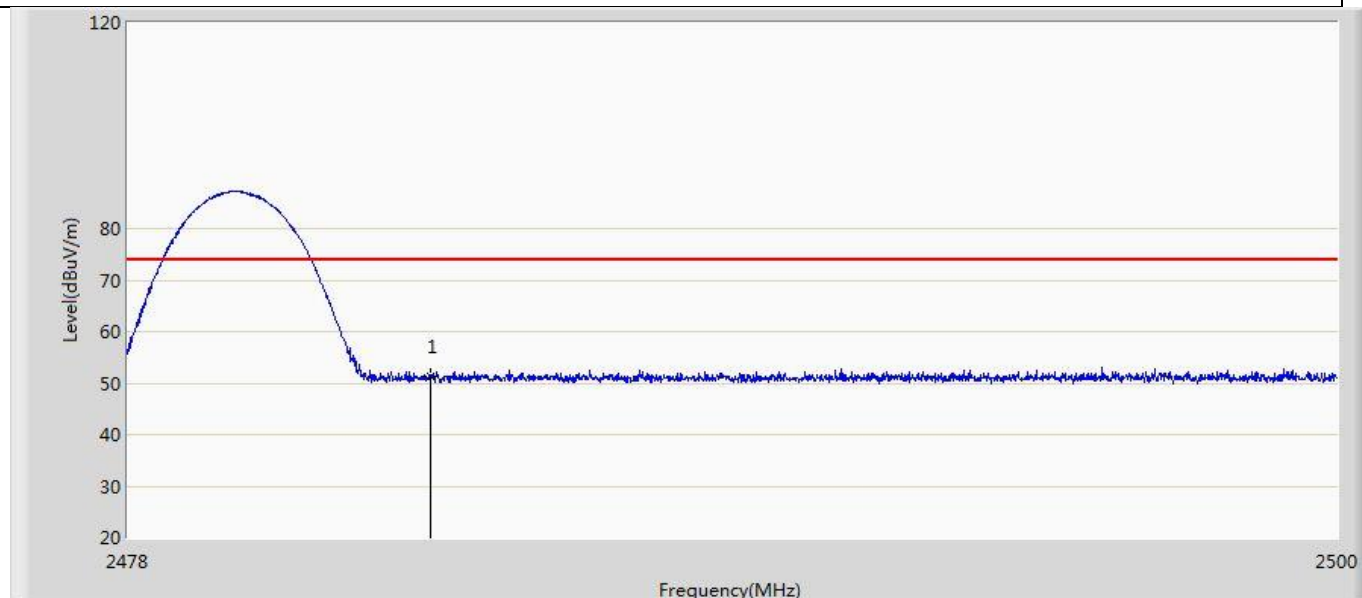
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	50.538	14.863	-23.462	74.000	35.675	PK

Profile: 2170004R	Page No.: 23
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/02 - 19:16
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by 3DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	38.046	2.371	-15.954	54.000	35.675	AV

Profile: 2170004R	Page No.: 24
Engineer: Yu Liu	
Site: AC5	Time: 2021/09/02 - 19:17
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: CCB02-100BT	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by 3DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	51.269	15.594	-22.731	74.000	35.675	PK

Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

4.11 Antenna Requirement**VERDICT: PASS****4.11.1 Limit:****Standard**

FCC Part 15 Subpart C Paragraph 15.203

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

4.11.2 Antenna Connector Construction:

- | | |
|-------------------------------------|--|
| ☒ | The use of a permanently attached antenna |
| ☐ | The antenna use of a unique coupling to the intentional radiator |
| ☐ | The use of a nonstandard antenna jack or electrical connector |

Please refer to the attached document "Internal Photograph" to show the antenna connector.

5 TEST SETUP PHOTO AND EUT PHOTO

Remark: The test setup photo and EUT Photo please see appendix.

_____ The End _____