




Test report No:
2150461R-RF-US-P06V01

FCC TEST REPORT

Product Name	Charger Cradle
Trademark	Honeywell
Model and /or type reference	CCB01-010BT
FCC ID	HD5-CCB01A
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	2021-06-04
Report Version	V1.1
Report template No	Template_FCC 15.247-RF-V1.0

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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.

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GENERAL CONDITIONS

Test Location	No. 99, Hongye Road, Suzhou Industrial Park Suzhou, 215006, P.R. China
Date(receive sample)	May. 14, 2021
Date (start test)	May. 18, 2021
Date (finish test)	May. 27, 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
2150461R-RF-US-P06V01	V1.0	Initial issue of report.	2021-05-28
2150461R-RF-US-P06V01	V1.1	Page 61~64: Update test data of emissions in non-restricted frequency band. (The test report No.: 2150461R-RF-US-P06V01 V1.1 is to place the test report No.: 2150461R-RF-US-P06V01 V1.0, and test report 2150461R-RF-US-P06V01 V1.0 is obsoleted.)	2021-06-04

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	2021.03.20	2022.03.19
Two-Line V-Network	R&S	ENV216	101190	2021.01.27	2022.01.26
Two-Line V-Network	R&S	ENV216	101044	2021.03.20	2022.03.19
Current Probe	R&S	EZ-17	100678	2021.01.27	2022.01.26
50ohm Termination	SHX	TF2	07081402	2020.09.23	2021.09.22
50ohm Termination	SHX	TF2	07081403	2020.09.23	2021.09.22
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	N/A	N/A
Temperature/Humidity Meter	RTS	RTS-8S	TR1-TH	2020.08.13	2021.08.12
Coaxial Cable	Suhner	RG 223	TR1-C1	2020.08.13	2021.08.12
Coaxial Cable	Suhner	RG 223	TR1-C2	2020.08.13	2021.08.12
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
Spectrum Analyzer	Agilent	N9010A	MY48030494	2020.08.15	2021.08.14
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2021.03.20	2022.03.19
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2020.08.15	2021.08.14
Temperature/Humidity Meter	RTS	RTS-8S	RF08	2020.08.13	2021.08.12
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	100573	2020.12.06	2021.12.05
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2020.08.19	2021.08.18
Temperature/Humidity Meter	RTS	RTS-8S	AC2-TH	2020.08.13	2021.08.12
Coaxial Cable	Huber+Suhner	RG 214	AC2-C	2021.03.31	2022.03.30
Dekra test software	Dekra	-	-	-	-

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

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2021.03.20	2022.03.19
Preamplifier	Miteq	NSP1800-25	1364185	2020.09.25	2021.09.24
Preamplifier	QuieTek	AP-040G	CHM-0906001	2021.04.21	2022.04.20
DRG Horn	ETS-Lindgren	3117	00123988	2020.09.21	2021.09.20
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2020.08.13	2021.08.12
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2021.03.31	2022.03.30
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2021.03.31	2022.03.30
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	AC5-C3	2021.03.31	2022.03.30
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. :	CCB01-010BT
Trademark :	Honeywell
FCC ID :	HD5-CCB01A
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	<input checked="" type="checkbox"/>	GFSK	<input checked="" type="checkbox"/>	Pi/4 DQPSK	<input checked="" type="checkbox"/>	8DPSK
Data Rate :	<input checked="" type="checkbox"/>	1Mbit/s	<input checked="" type="checkbox"/>	2Mbit/s	<input checked="" type="checkbox"/>	3Mbit/s
Number of channel..... :	79					

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

1.2 Antenna Information

Antenna model / type number.....:	N/A		
Antenna serial number	N/A		
Antenna Delivery	<input checked="" type="checkbox"/>	1TX + 1RX	
	<input type="checkbox"/>	2TX + 2RX	
	<input type="checkbox"/>	Others:.....	
Antenna technology.....:	<input checked="" type="checkbox"/>	SISO	
	<input type="checkbox"/>	MIMO	<input type="checkbox"/> CDD
			<input type="checkbox"/> Beam-forming
Antenna Type.....:	<input type="checkbox"/>	External	<input type="checkbox"/> Dipole
			<input type="checkbox"/> Sectorized
			<input type="checkbox"/> Ceramic Chip
	<input checked="" type="checkbox"/>	Internal	<input type="checkbox"/> PIFA
			<input type="checkbox"/> PCB
			<input checked="" type="checkbox"/> Ceramic chip
			<input type="checkbox"/> 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.

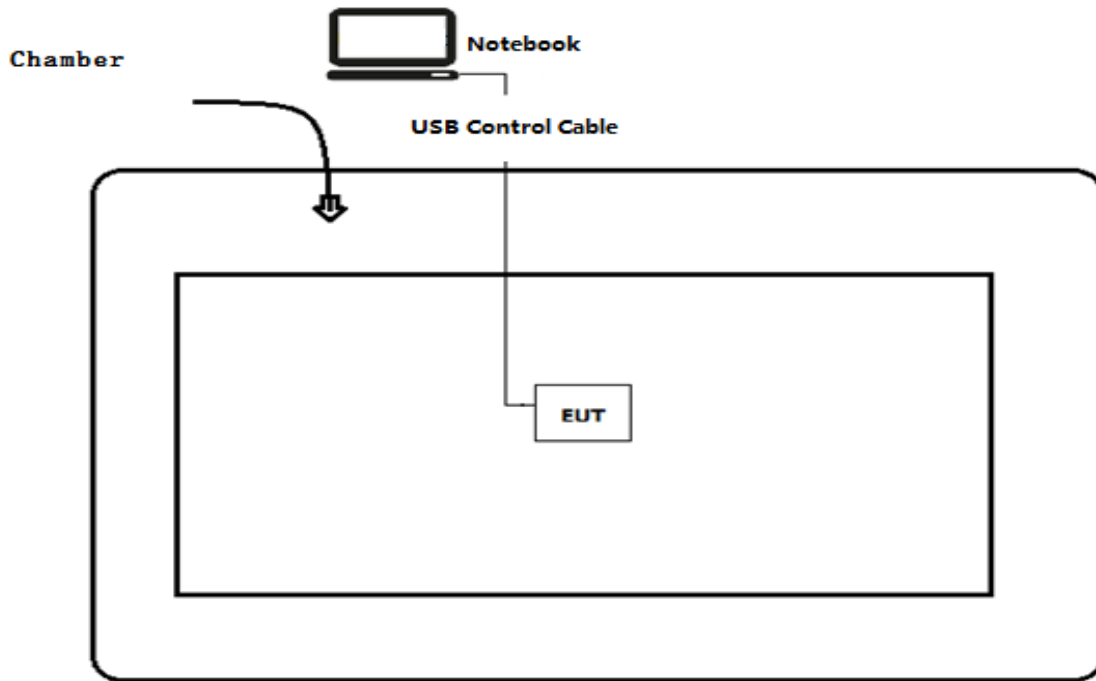
Test Mode For Bluetooth	Mode 1: Transmitter-1Mbps(GFSK_DH5)
	Mode 2: Transmitter-2Mbps(Pi/4 DQPSK_DH5)
	Mode 3: Transmitter-3Mbps(8DPSK_DH5)
	Mode 4: Transmitter-Hopping

2.2 Auxiliary equipment / Test software for the EUT

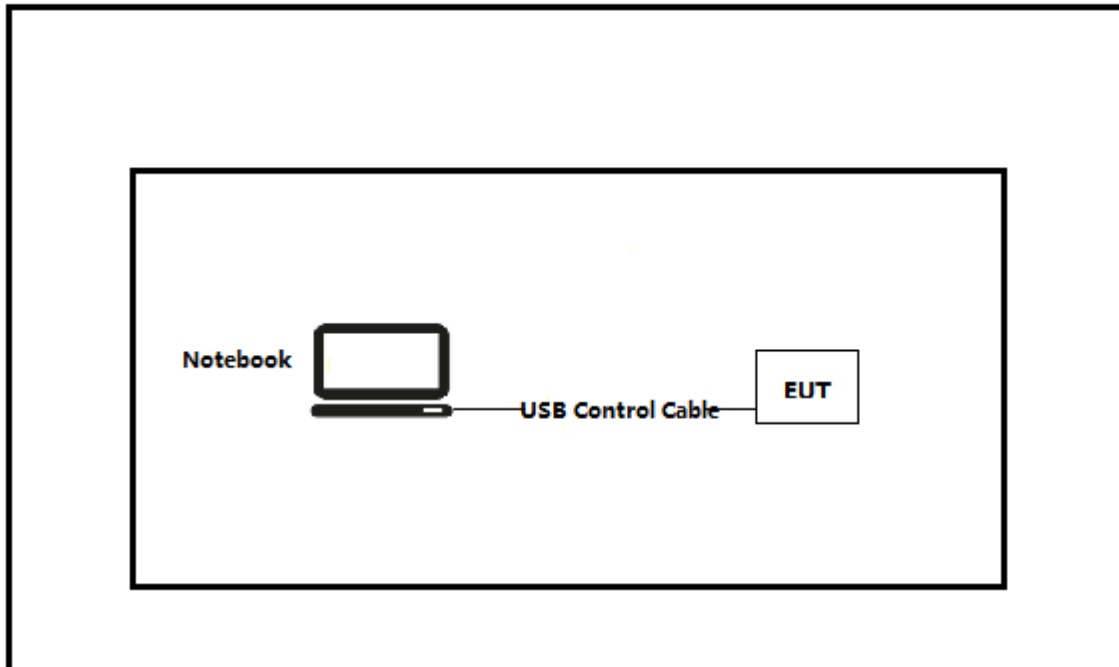
Auxiliary equipment	Type / Version	Manufacturer	Supplied by
Notebook	Think pad x220	Lenovo	Adapter
software	Type / Version	Manufacturer	Supplied by
CyBluetool	0.1.97.1	N/A	N/A

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

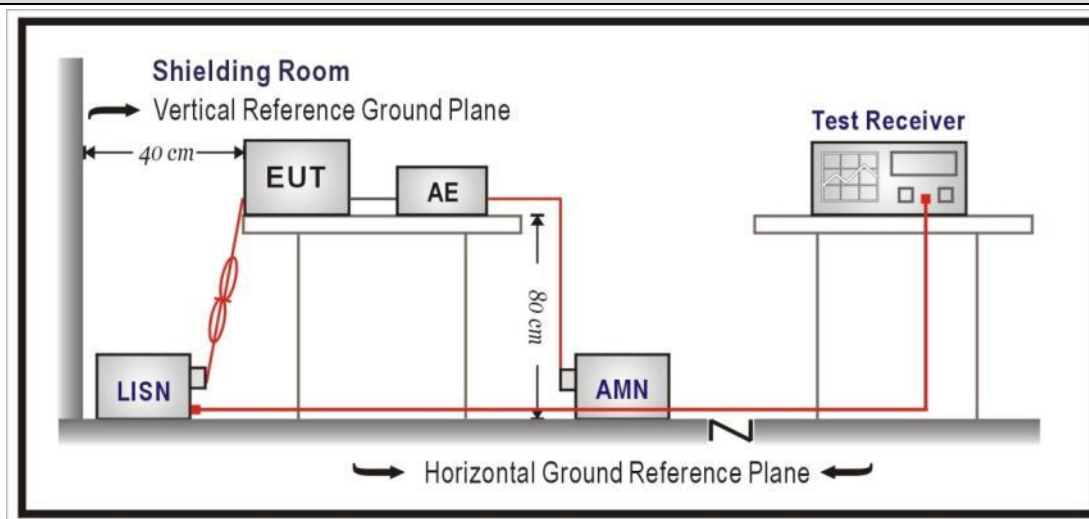
¹⁾ At the transition frequency, the lower limit applies.

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

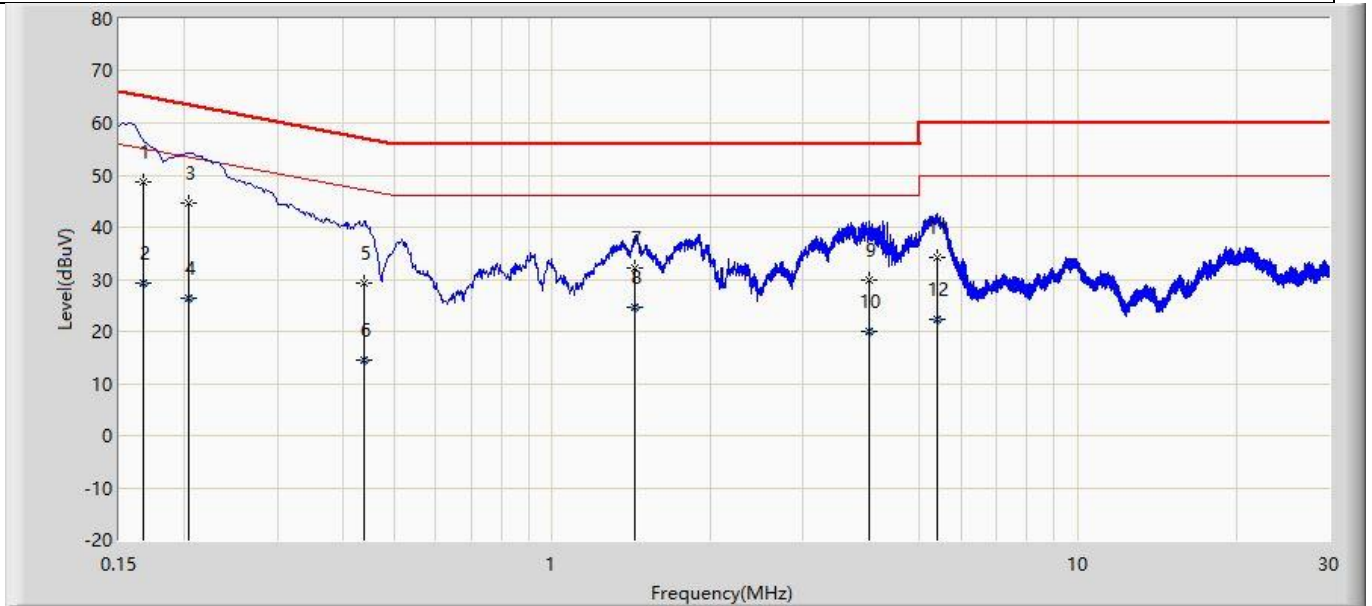


4.1.3 Test Procedure

References Rule	Chapter	Item
<input checked="" type="checkbox"/> 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: 2150461R	Page No.: 1
Engineer: Juliuszhou	
Site: TR1	Time: 2021/05/23 - 16:10
Limit: FCC_Part15.207_CE_AC Power	Margin: 0
Probe: ENV216_101044_(0.009-30MHz)	Polarity: Line
EUT: CCB01-010BT	Power: PoE- AC 120V/60Hz
Note: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1	*	0.167	48.612	38.943	-16.493	65.105	9.669	QP
2		0.167	29.351	19.682	-25.754	55.105	9.669	AV
3		0.204	44.522	34.843	-18.924	63.446	9.680	QP
4		0.204	26.479	16.800	-26.967	53.446	9.680	AV
5		0.440	29.179	19.456	-27.879	57.057	9.723	QP
6		0.440	14.426	4.704	-32.631	47.057	9.723	AV
7		1.437	32.079	22.308	-23.921	56.000	9.771	QP
8		1.437	24.649	14.878	-21.351	46.000	9.771	AV
9		3.995	29.870	19.981	-26.130	56.000	9.889	QP
10		3.995	20.020	10.131	-25.980	46.000	9.889	AV
11		5.408	34.074	24.123	-25.926	60.000	9.951	QP
12		5.408	22.337	12.386	-27.663	50.000	9.951	AV

Profile: 2150461R	Page No.: 2
Engineer: Juliuszhou	
Site: TR1	Time: 2021/05/23 - 03:30
Limit: FCC_Part15.207_CE_AC Power	Margin: 0
Probe: ENV216_101044_(0.009-30MHz)	Polarity: Neutral
EUT: CCB01-010BT	Power: PoE- AC 120V/60Hz
Note: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1	*	0.160	53.449	43.783	-12.000	65.449	9.665	QP
2		0.160	32.069	22.404	-23.380	55.449	9.665	AV
3		0.200	46.618	36.916	-17.014	63.631	9.701	QP
4		0.200	25.655	15.954	-27.976	53.631	9.701	AV
5		0.298	37.989	28.272	-22.296	60.284	9.716	QP
6		0.298	19.918	10.202	-30.367	50.284	9.716	AV
7		1.833	28.390	18.609	-27.610	56.000	9.781	QP
8		1.833	20.917	11.136	-25.083	46.000	9.781	AV
9		5.381	34.365	24.404	-25.635	60.000	9.961	QP
10		5.381	23.649	13.688	-26.351	50.000	9.961	AV
11		20.627	27.246	16.804	-32.754	60.000	10.441	QP
12		20.627	20.765	10.323	-29.235	50.000	10.441	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)

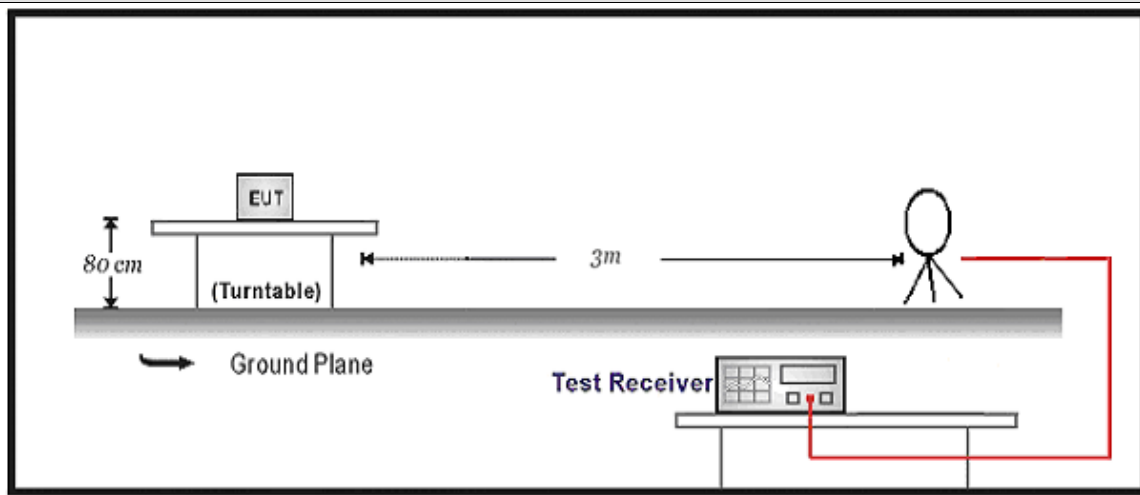
Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed 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

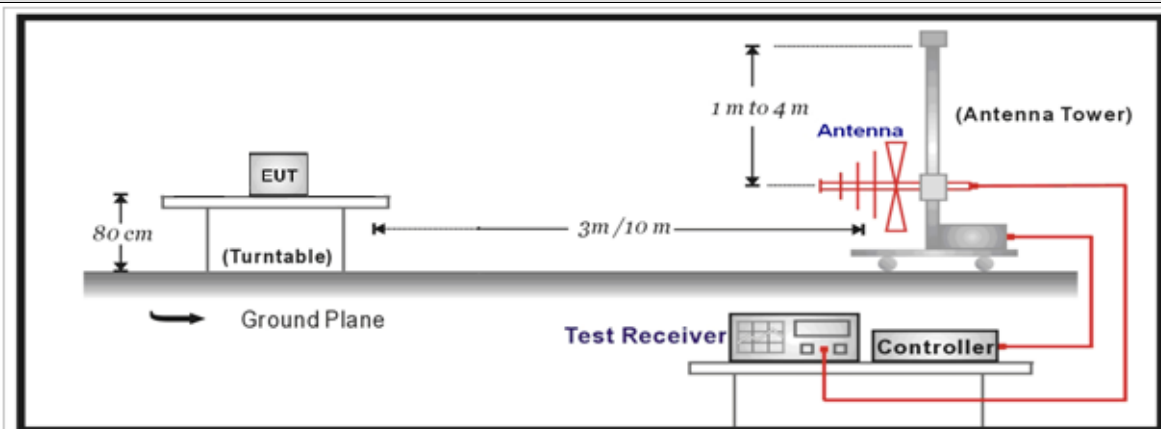
dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

4.2.2 Test Setup

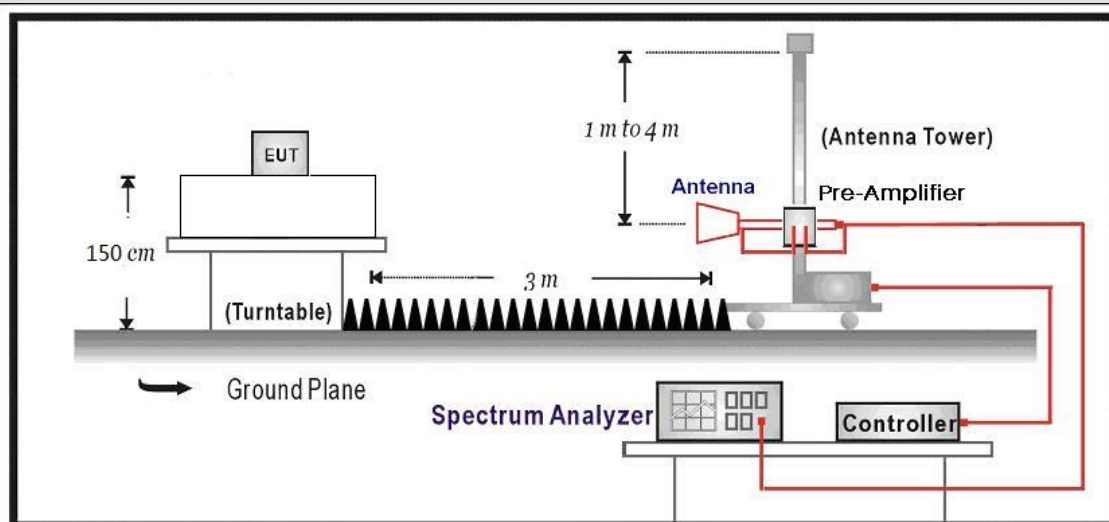
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



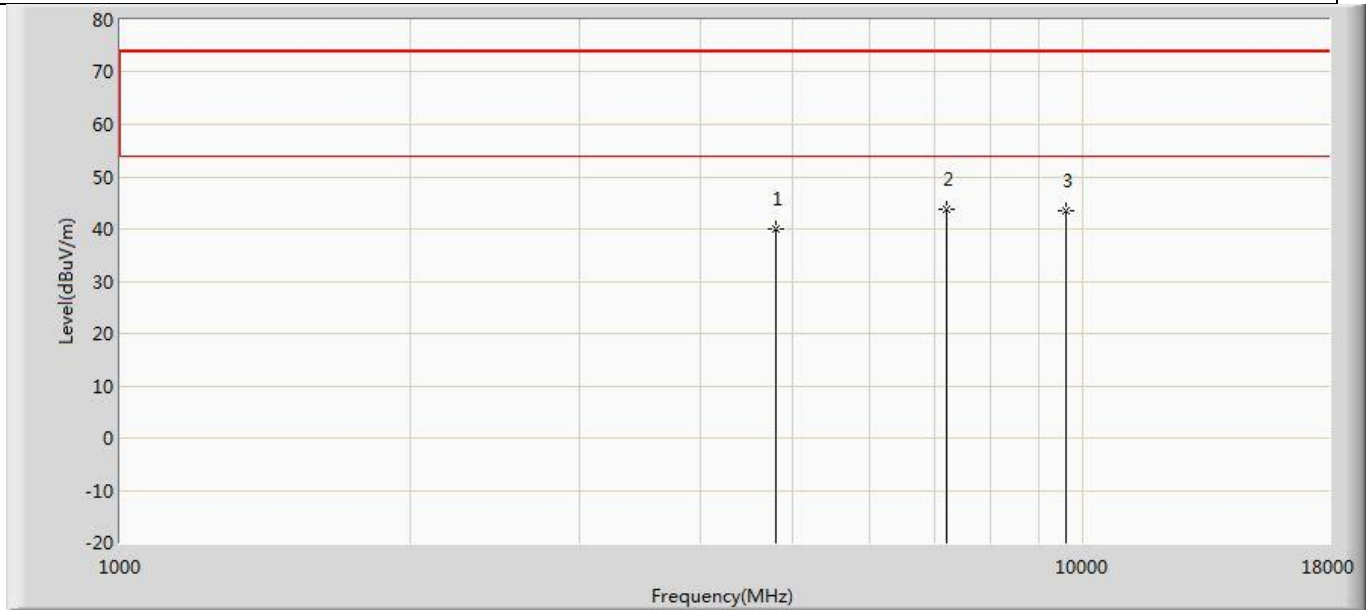
Above 1GHz Test Setup:



4.2.3 Test Procedure			
	References Rule	Chapter	Description
<input checked="" type="checkbox"/>	ANSI C63.10	11.12	Emissions in restricted frequency bands
	<input checked="" type="checkbox"/> ANSI C63.10	11.12.1	Radiated emission measurements
	<input checked="" type="checkbox"/> ANSI C63.10	11.12.2.7	Radiated spurious emission test
	<input checked="" type="checkbox"/> ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
	<input checked="" type="checkbox"/> ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
	<input checked="" type="checkbox"/> ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz

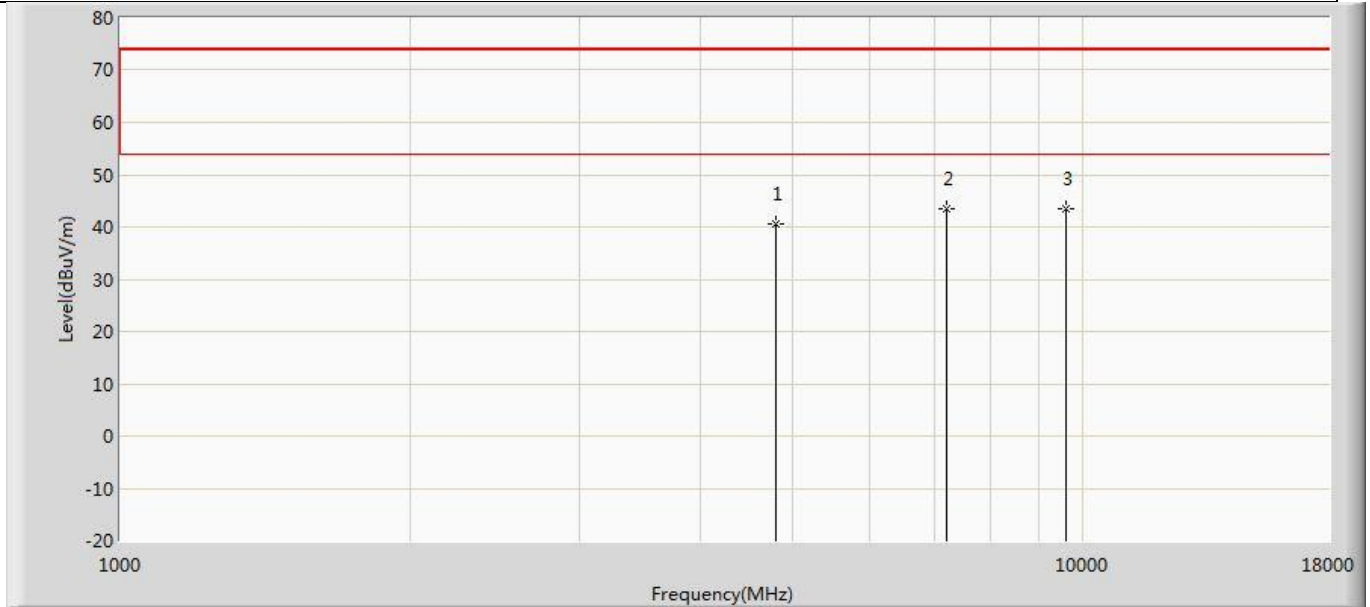
4.2.4 Test Data

Profile: 2150461R	Page No.: 13
Engineer: Neil	
Site: AC5	Time: 2021/05/13 - 23:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by DH5	



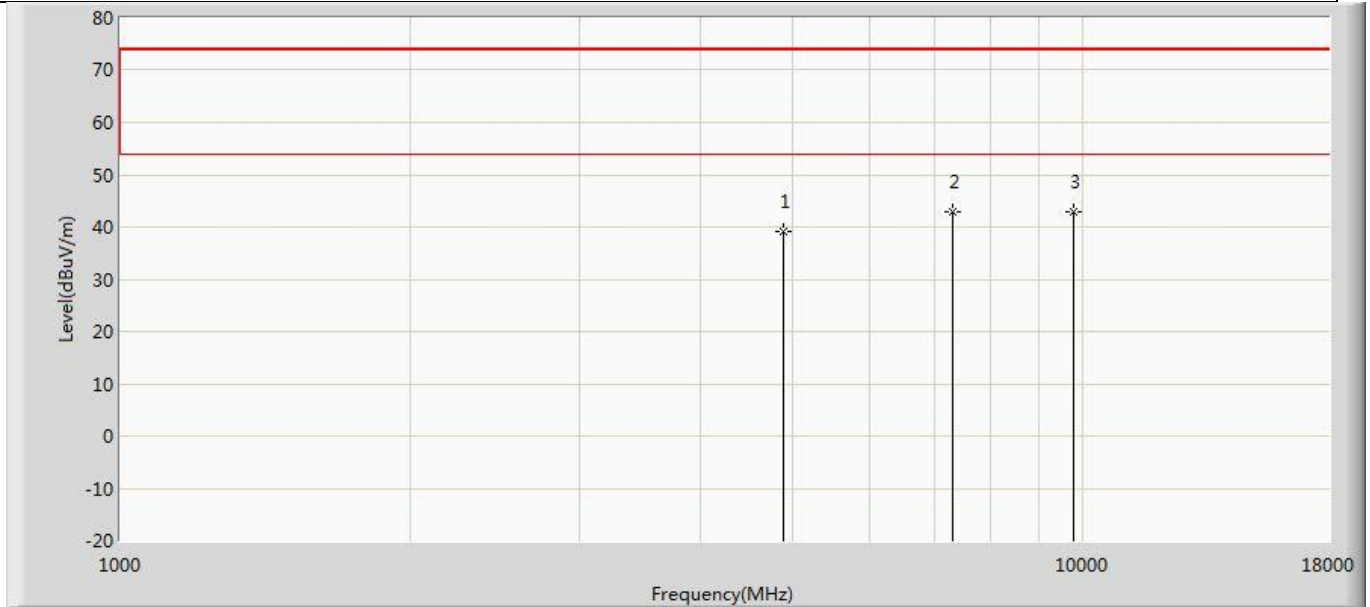
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4805.000	39.865	44.898	-34.135	74.000	-5.033	PK
2	*	7206.000	43.859	44.905	-30.141	74.000	-1.046	PK
3		9608.000	43.432	40.602	-30.568	74.000	2.830	PK

Profile: 2150461R	Page No.: 14
Engineer: Neil	
Site: AC5	Time: 2021/05/13 - 23:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by DH5	



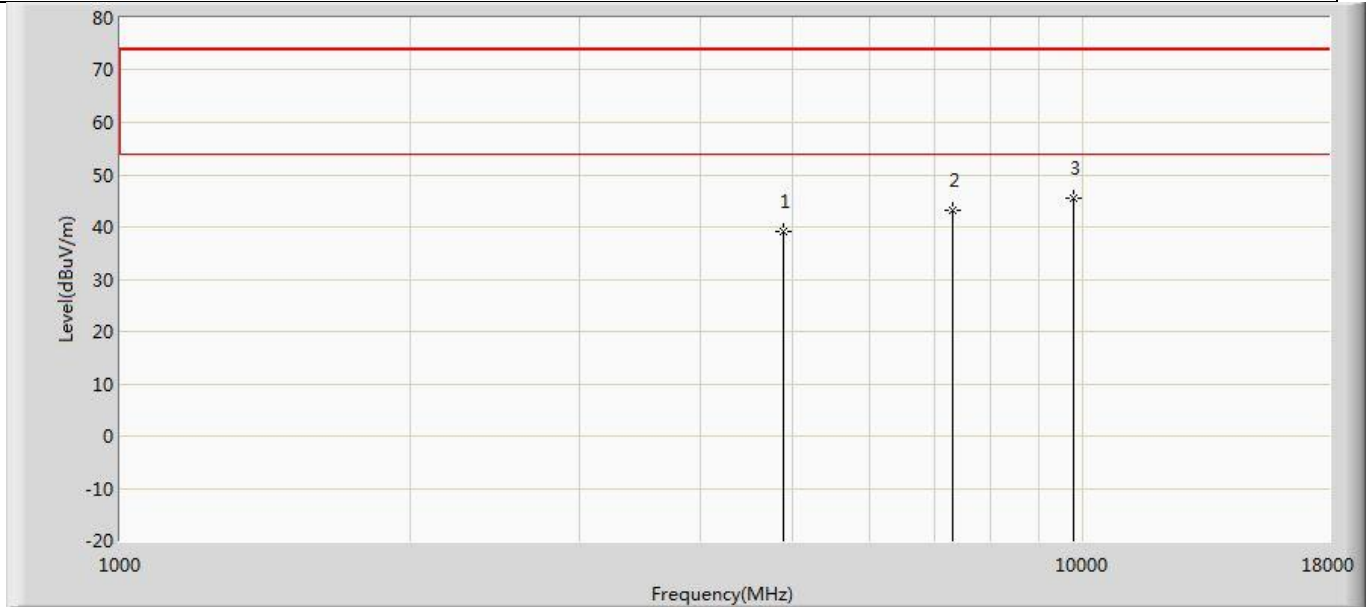
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	40.463	45.506	-33.537	74.000	-5.044	PK
2		7206.000	43.349	44.395	-30.651	74.000	-1.046	PK
3	*	9608.000	43.566	40.736	-30.434	74.000	2.830	PK

Profile: 2150461R	Page No.: 15
Engineer: Neil	
Site: AC5	Time: 2021/05/13 - 23:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2441MHz by DH5	



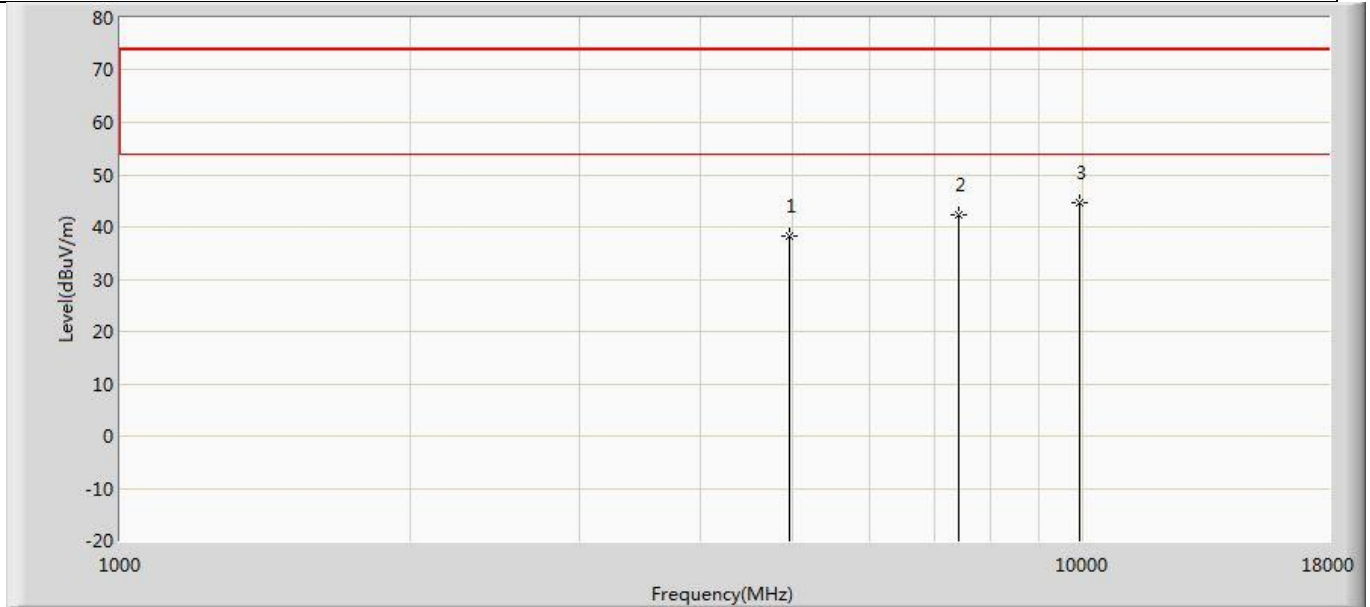
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	39.053	43.913	-34.947	74.000	-4.859	PK
2		7323.000	43.026	43.897	-30.974	74.000	-0.871	PK
3	*	9764.000	43.032	40.010	-30.968	74.000	3.023	PK

Profile: 2150461R	Page No.: 16
Engineer: Neil	
Site: AC5	Time: 2021/05/13 - 23:36
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2441MHz by DH5	



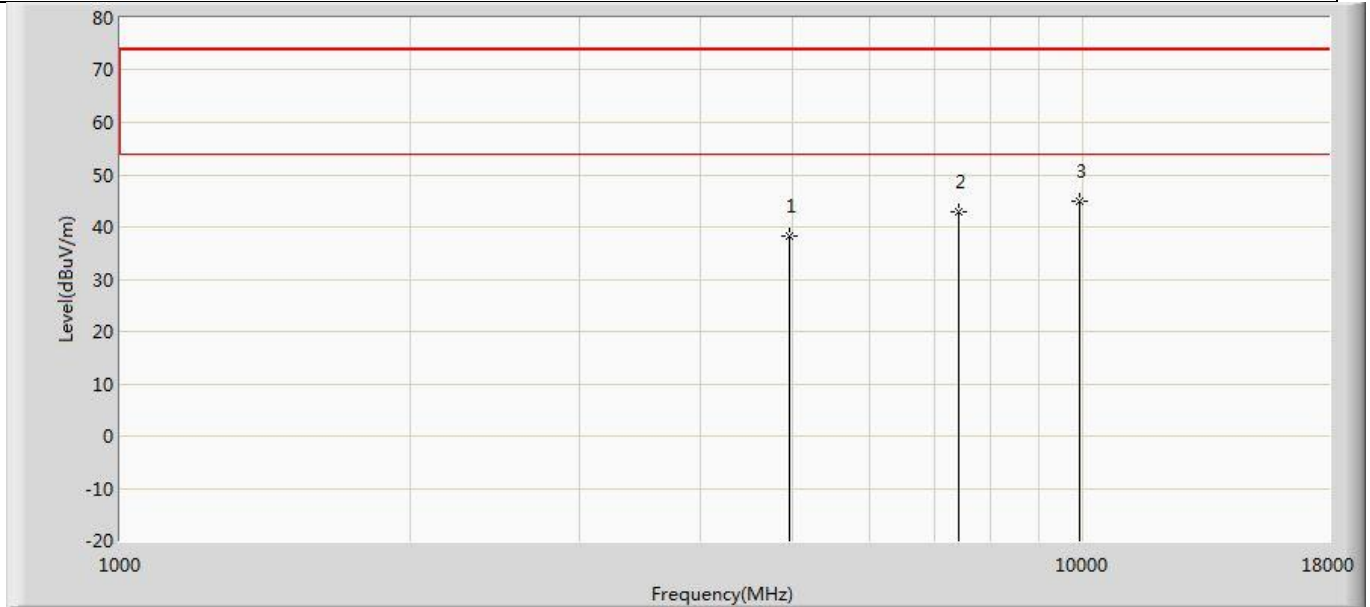
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	39.050	43.910	-34.950	74.000	-4.859	PK
2		7323.000	43.082	43.953	-30.918	74.000	-0.871	PK
3	*	9764.000	45.406	42.384	-28.594	74.000	3.023	PK

Profile: 2150461R	Page No.: 17
Engineer: Neil	
Site: AC5	Time: 2021/05/13 - 23:36
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by DH5	



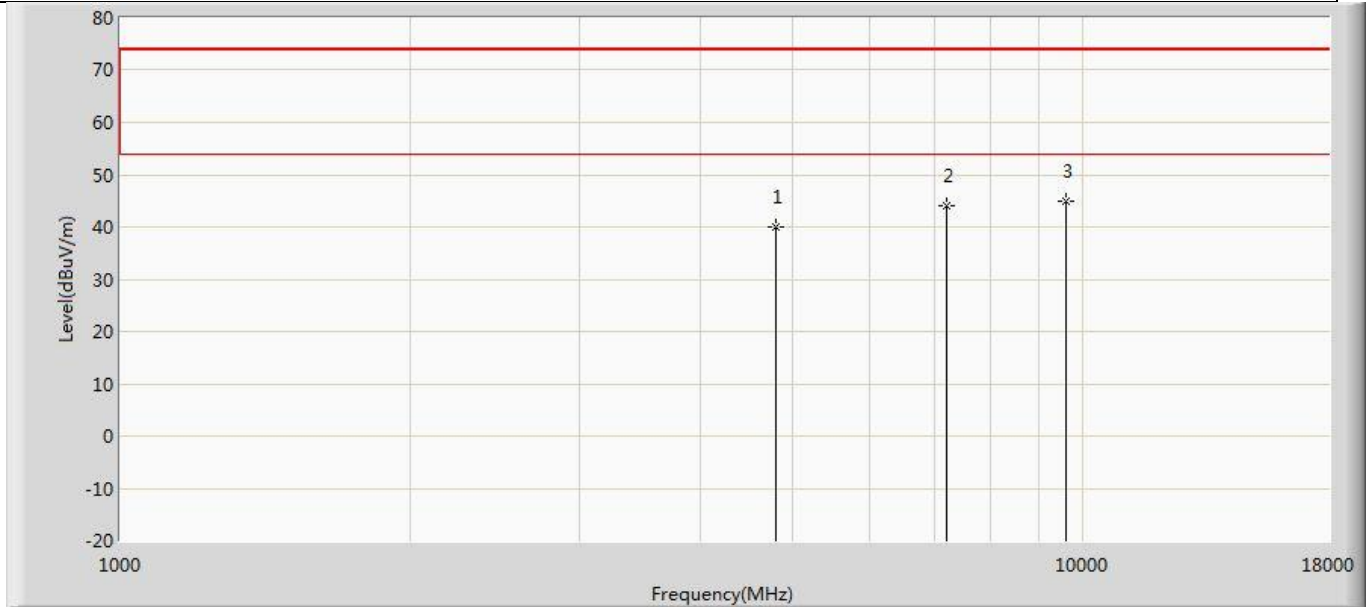
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	38.249	42.911	-35.751	74.000	-4.662	PK
2		7440.000	42.202	43.245	-31.798	74.000	-1.043	PK
3	*	9920.000	44.665	41.618	-29.335	74.000	3.047	PK

Profile: 2150461R	Page No.: 18
Engineer: Neil	
Site: AC5	Time: 2021/05/13 - 23:36
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by DH5	



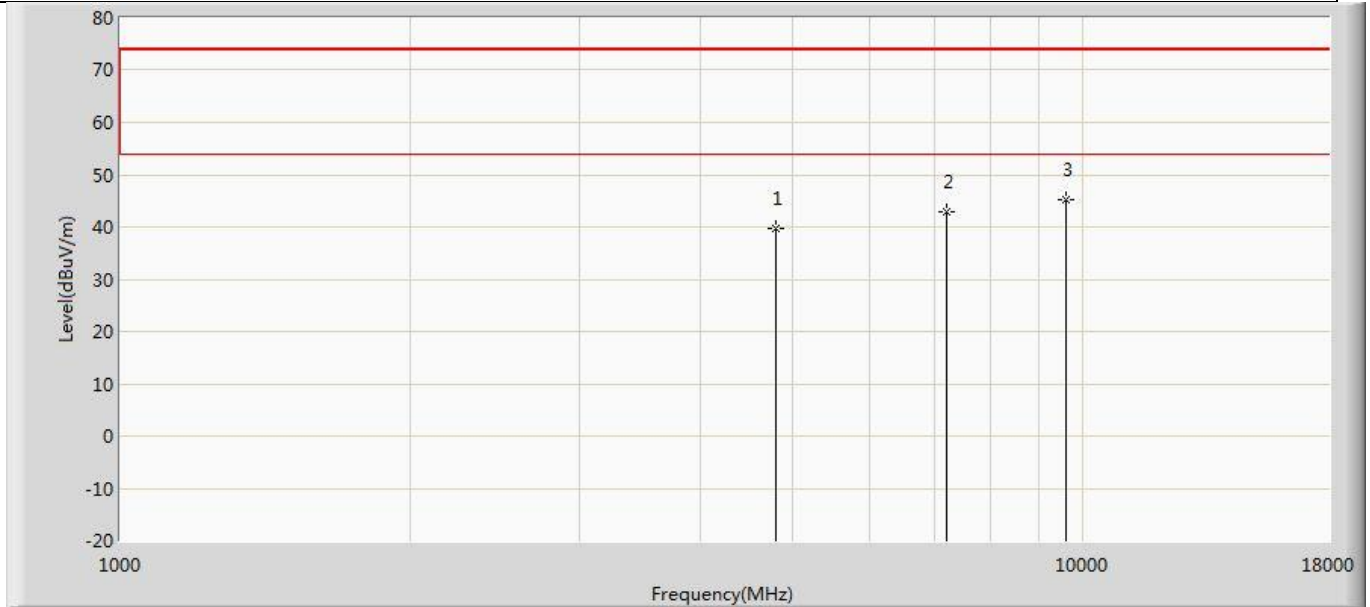
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	38.188	42.850	-35.812	74.000	-4.662	PK
2		7440.000	42.849	43.892	-31.151	74.000	-1.043	PK
3	*	9920.000	44.826	41.779	-29.174	74.000	3.047	PK

Profile: 2150461R	Page No.: 19
Engineer: Neil	
Site: AC5	Time: 2021/05/13 - 23:36
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by 2DH5	



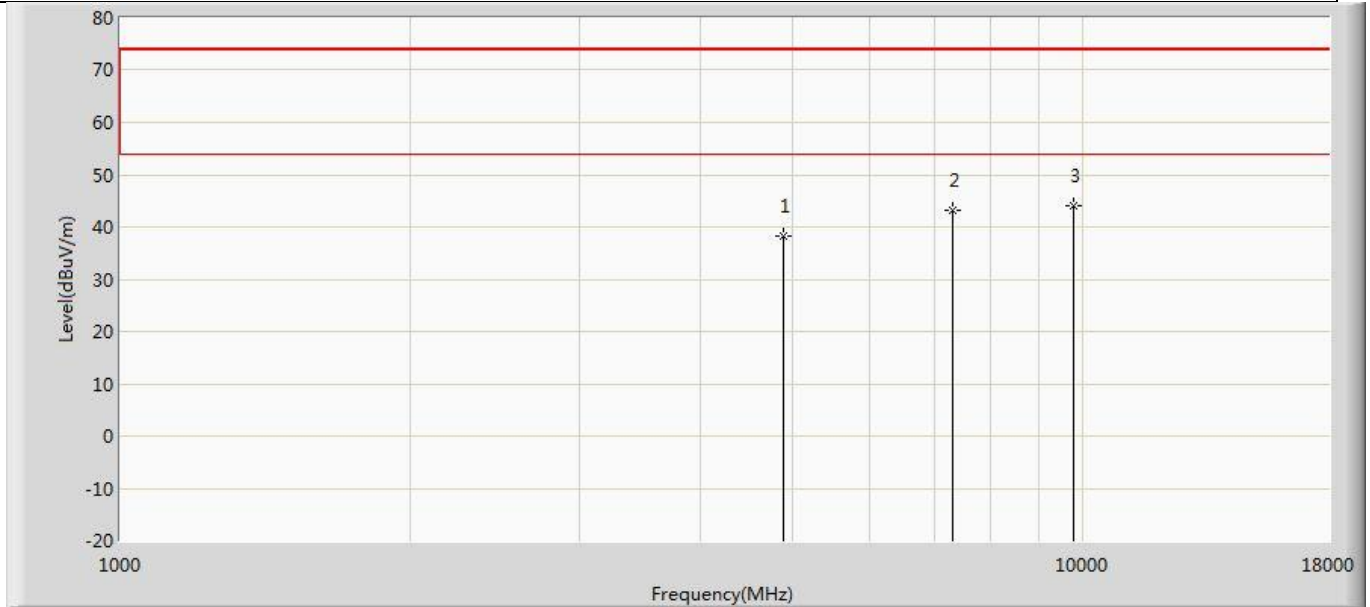
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	40.029	45.072	-33.971	74.000	-5.044	PK
2		7206.000	44.139	45.185	-29.861	74.000	-1.046	PK
3	*	9608.000	44.867	42.037	-29.133	74.000	2.830	PK

Profile: 2150461R	Page No.: 20
Engineer: Neil	
Site: AC5	Time: 2021/05/13 - 23:36
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by 2DH5	



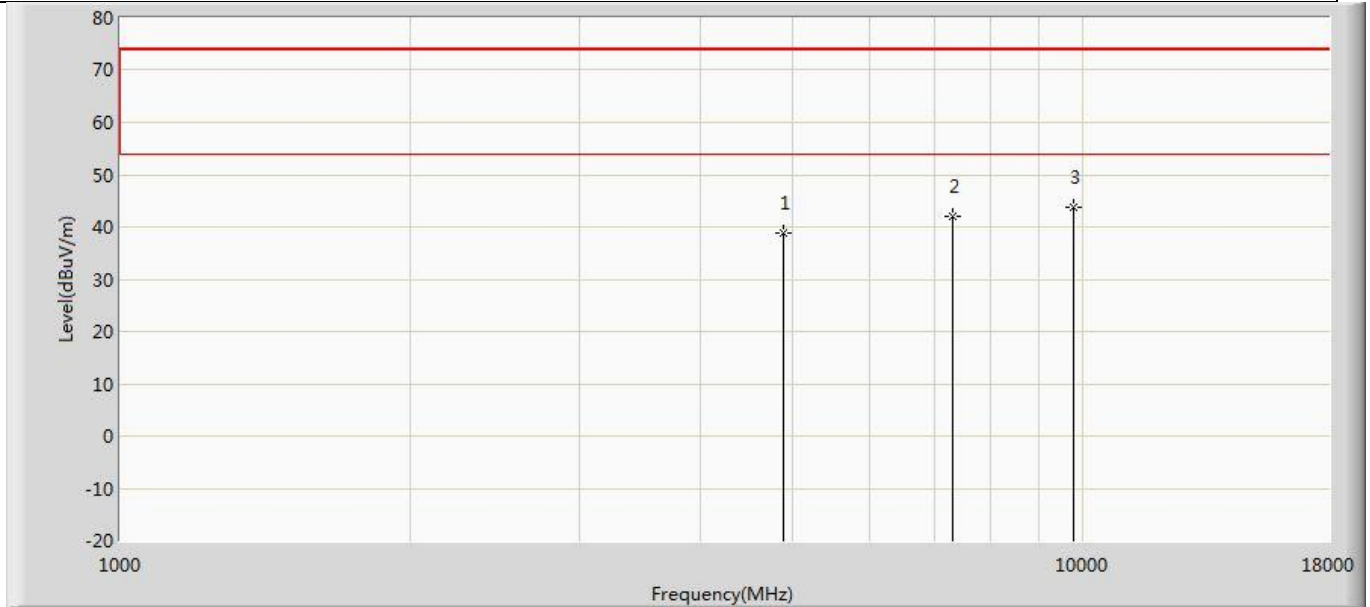
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	39.686	44.729	-34.314	74.000	-5.044	PK
2		7206.000	42.903	43.949	-31.097	74.000	-1.046	PK
3	*	9608.000	45.256	42.426	-28.744	74.000	2.830	PK

Profile: 2150461R	Page No.: 21
Engineer: Neil	
Site: AC5	Time: 2021/05/13 - 23:36
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2441MHz by 2DH5	



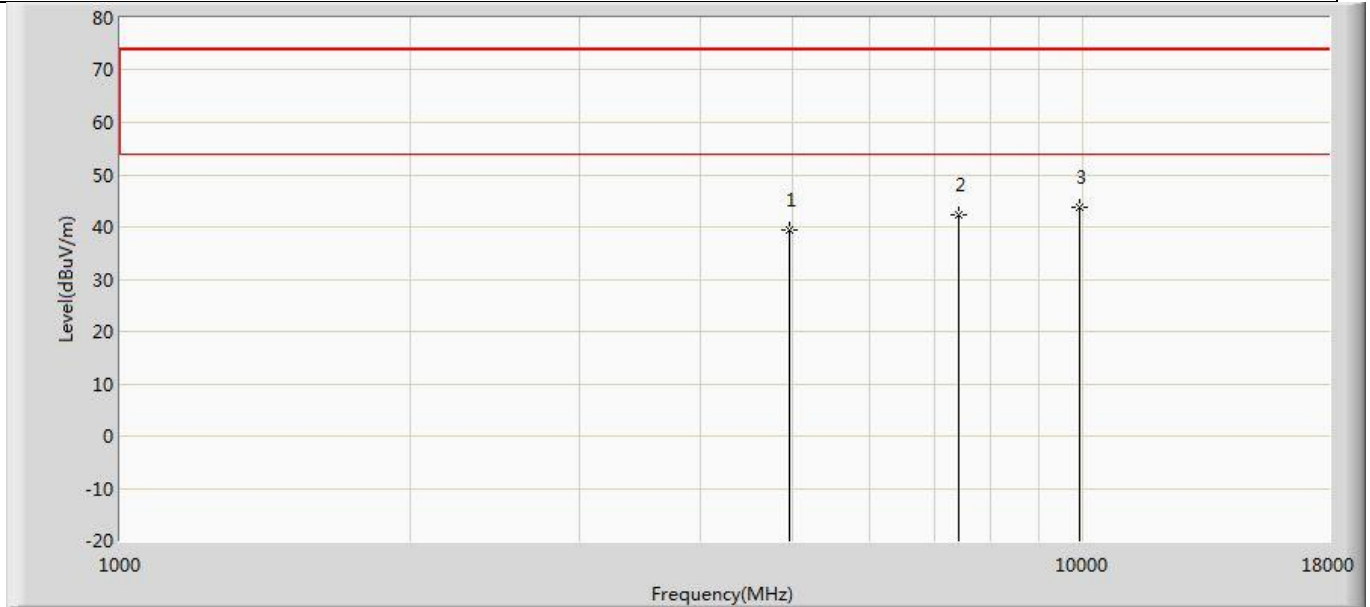
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	38.307	43.167	-35.693	74.000	-4.859	PK
2		7323.000	43.044	43.915	-30.956	74.000	-0.871	PK
3	*	9764.000	44.195	41.173	-29.805	74.000	3.023	PK

Profile: 2150461R	Page No.: 22
Engineer: Neil	
Site: AC5	Time: 2021/05/13 - 23:36
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2441MHz by 2DH5	



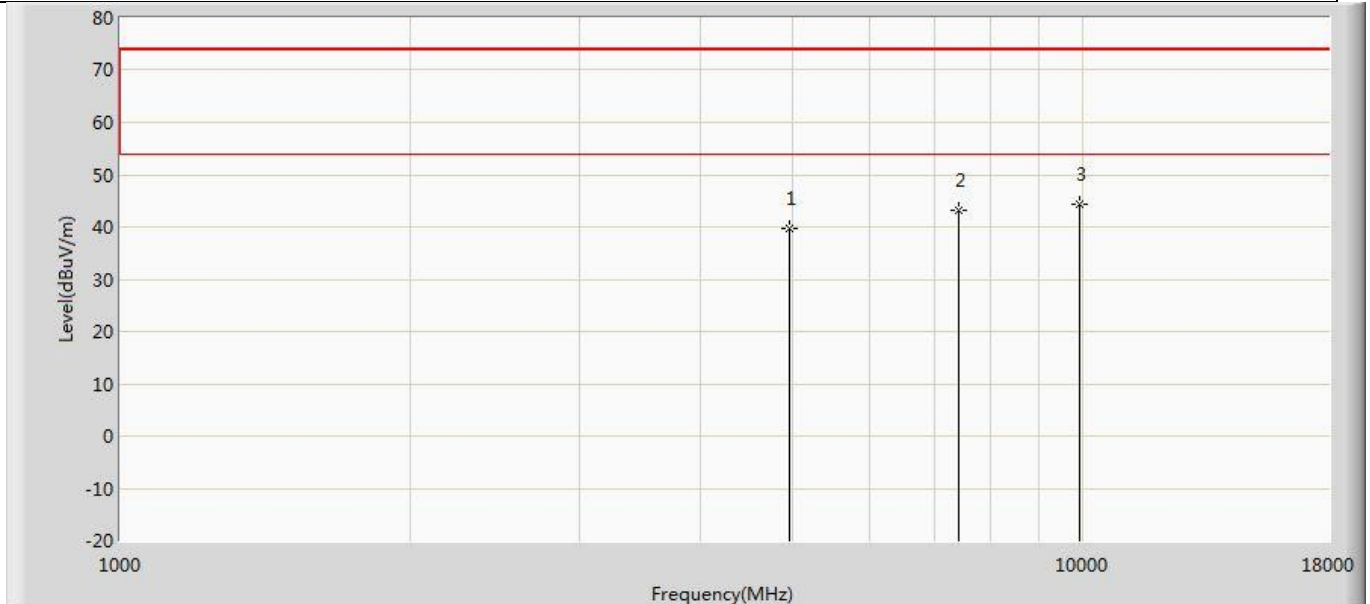
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	38.851	43.711	-35.149	74.000	-4.859	PK
2		7323.000	41.953	42.824	-32.047	74.000	-0.871	PK
3	*	9764.000	43.816	40.794	-30.184	74.000	3.023	PK

Profile: 2150461R	Page No.: 23
Engineer: Neil	
Site: AC5	Time: 2021/05/13 - 23:36
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: CCB01-010BT	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	39.488	44.150	-34.512	74.000	-4.662	PK
2		7440.000	42.368	43.411	-31.632	74.000	-1.043	PK
3	*	9920.000	43.909	40.862	-30.091	74.000	3.047	PK

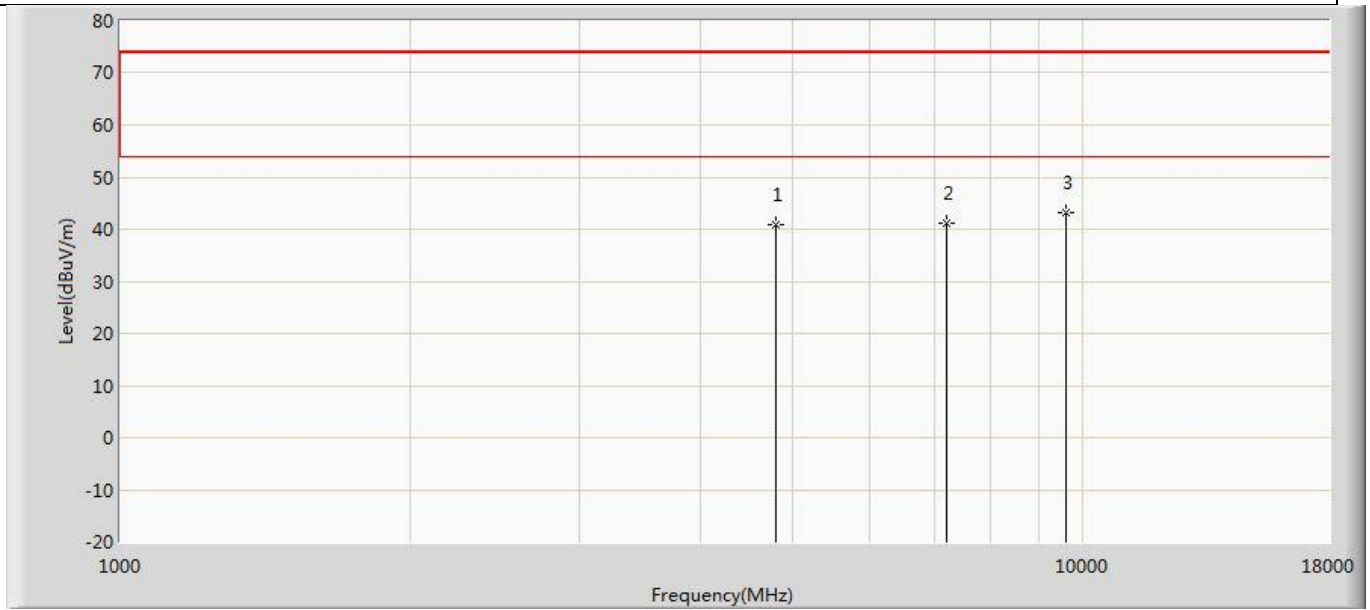
Profile: 2150461R	Page No.: 24
Engineer: Neil	
Site: AC5	Time: 2021/05/13 - 23:36
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by 2DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	39.606	44.268	-34.394	74.000	-4.662	PK
2		7440.000	43.300	44.343	-30.700	74.000	-1.043	PK
3	*	9920.000	44.203	41.156	-29.797	74.000	3.047	PK

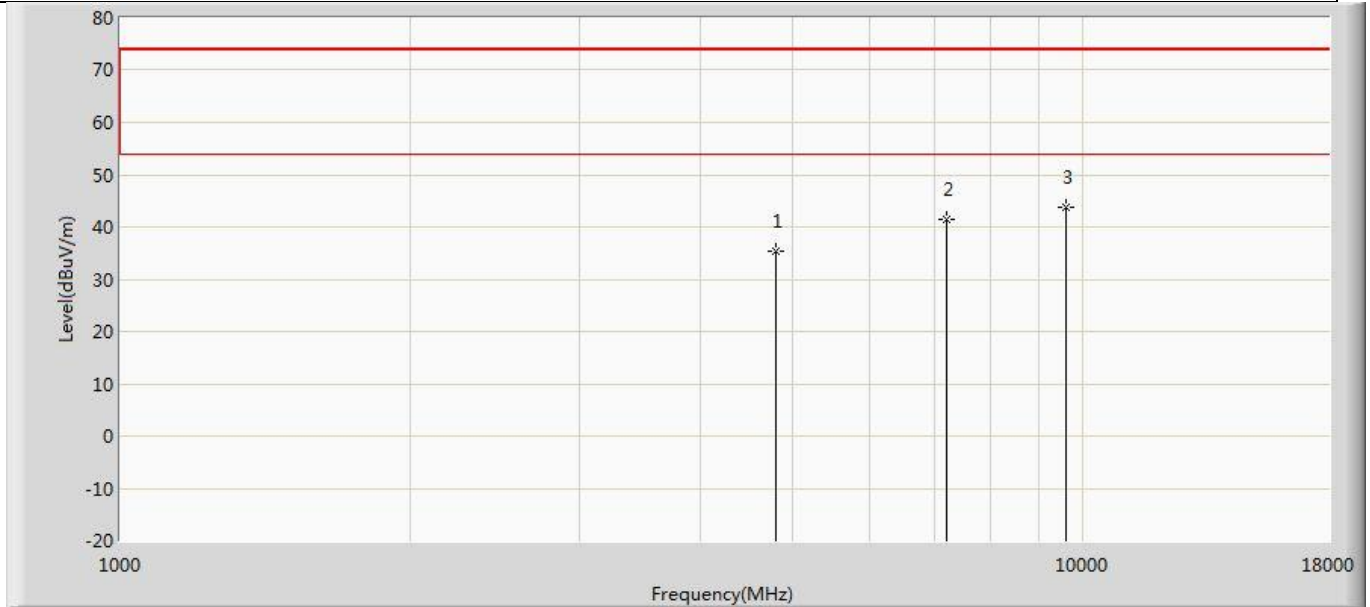
Profile: 2150461R	Page No.: 31
Engineer: Neil	
Site: AC5	Time: 2021/05/14 - 02:31
Limit: FCC_Part15.209_RE(3m)	Margin: 0

Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by 3DH5	



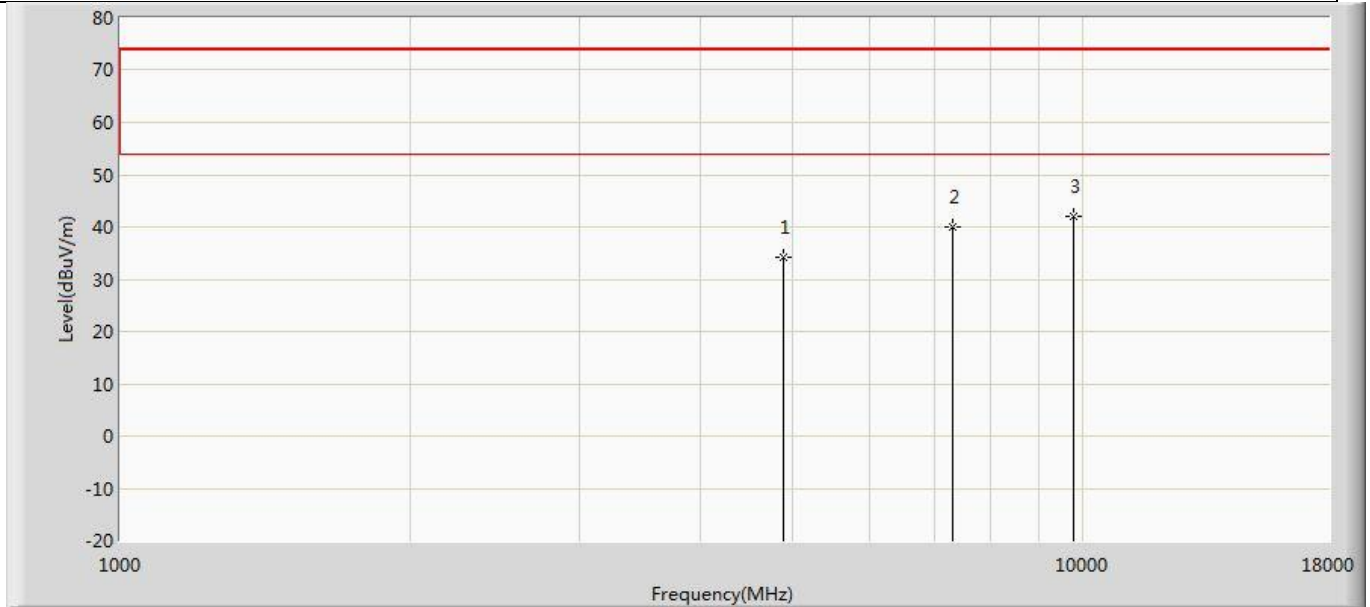
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	41.011	46.054	-32.989	74.000	-5.044	PK
2		7206.000	41.248	42.294	-32.752	74.000	-1.046	PK
3	*	9608.000	43.124	40.294	-30.876	74.000	2.830	PK

Profile: 2150461R	Page No.: 32
Engineer: Neil	
Site: AC5	Time: 2021/05/14 - 02:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by 3DH5	



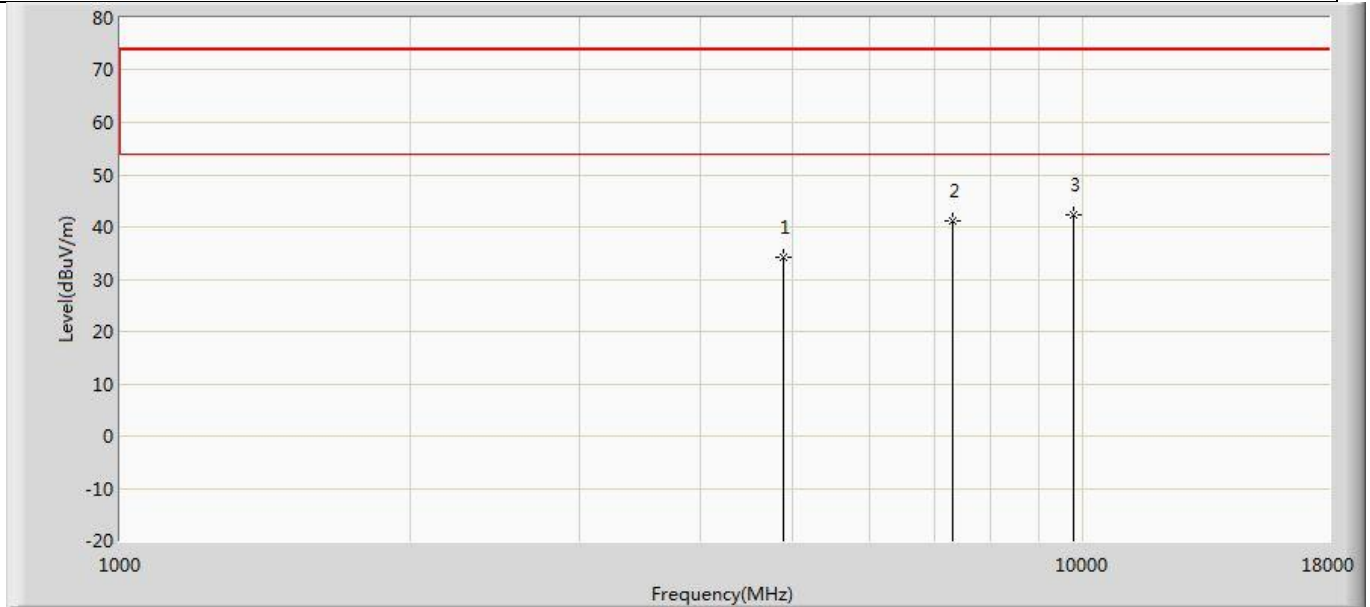
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	35.414	40.457	-38.586	74.000	-5.044	PK
2		7206.000	41.314	42.360	-32.686	74.000	-1.046	PK
3	*	9608.000	43.771	40.941	-30.229	74.000	2.830	PK

Profile: 2150461R	Page No.: 33
Engineer: Neil	
Site: AC5	Time: 2021/05/14 - 02:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2441MHz by 3DH5	



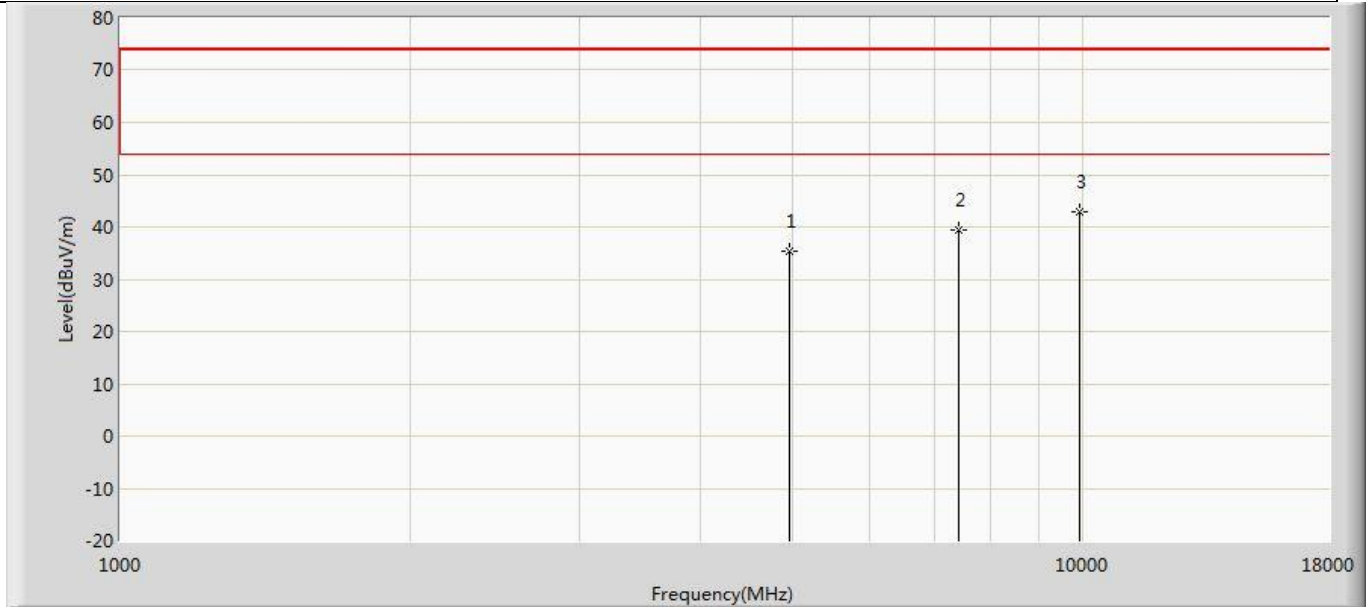
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	34.213	39.073	-39.787	74.000	-4.859	PK
2		7323.000	39.963	40.834	-34.037	74.000	-0.871	PK
3	*	9764.000	42.157	39.135	-31.843	74.000	3.023	PK

Profile: 2150461R	Page No.: 34
Engineer: Neil	
Site: AC5	Time: 2021/05/14 - 02:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2441MHz by 3DH5	



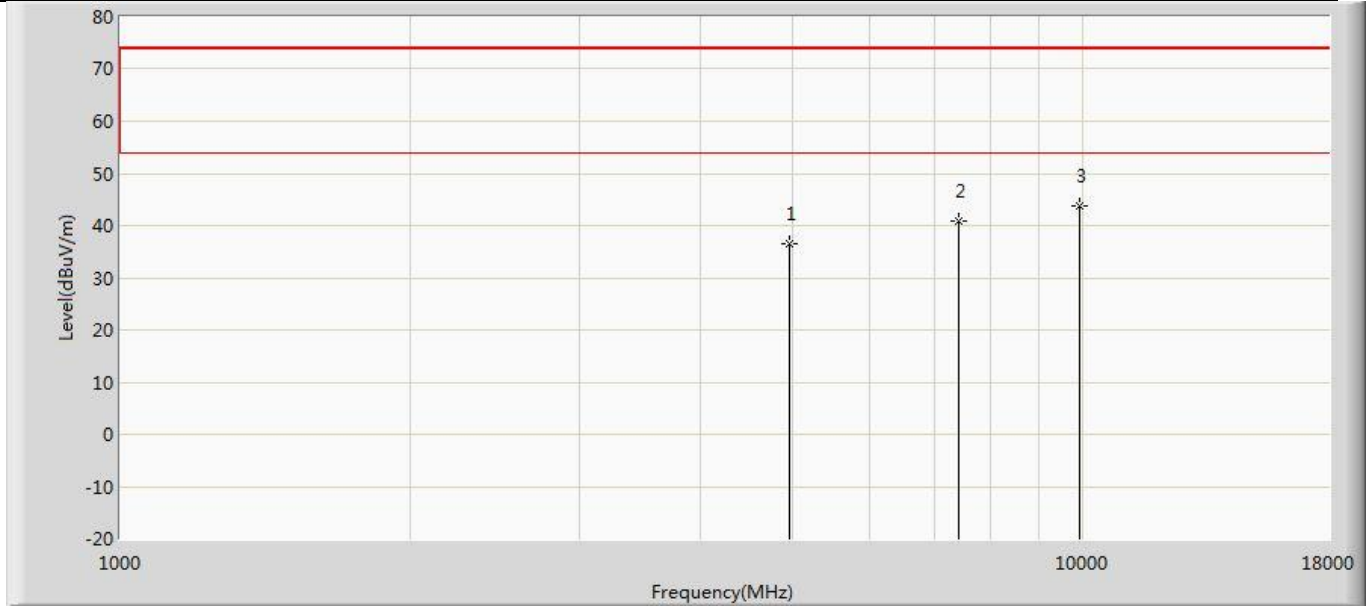
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	34.228	39.088	-39.772	74.000	-4.859	PK
2		7323.000	41.020	41.891	-32.980	74.000	-0.871	PK
3	*	9764.000	42.388	39.366	-31.612	74.000	3.023	PK

Profile: 2150461R	Page No.: 35
Engineer: Neil	
Site: AC5	Time: 2021/05/14 - 02:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Horizontal
EUT: CCB01-010BT	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		4960.000	35.471	40.133	-38.529	74.000	-4.662	PK
2		7440.000	39.353	40.396	-34.647	74.000	-1.043	PK
3	*	9920.000	42.830	39.783	-31.170	74.000	3.047	PK

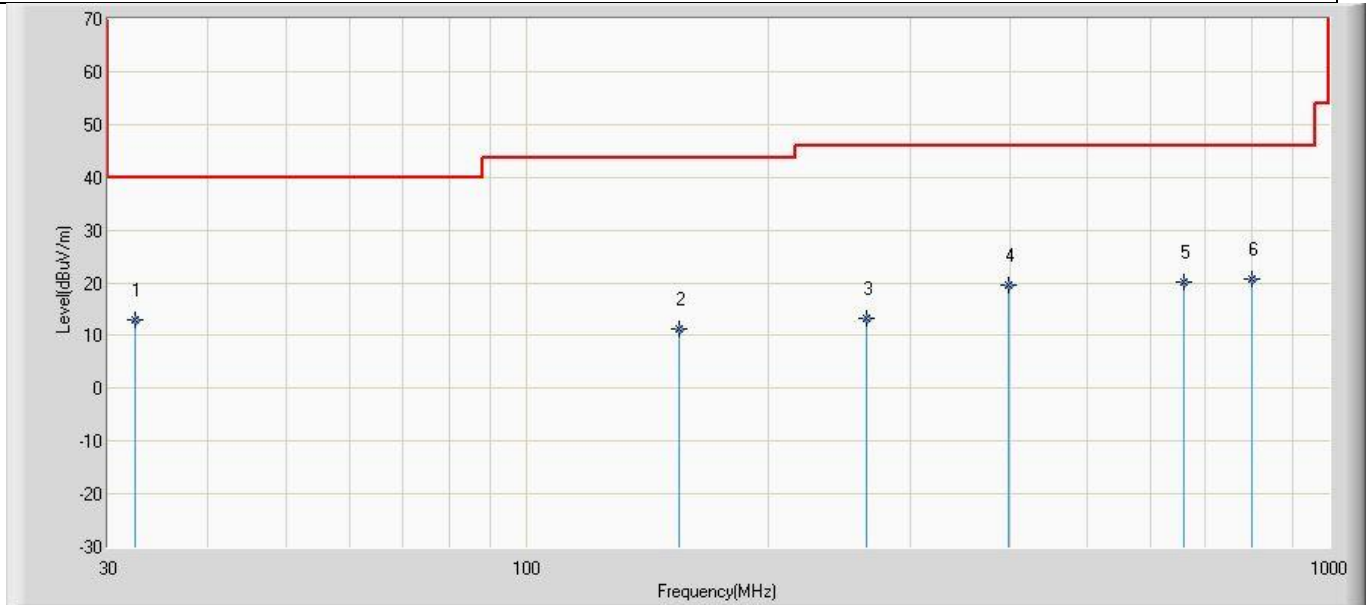
Profile: 2150461R	Page No.: 36
Engineer: Neil	
Site: AC5	Time: 2021/05/14 - 02:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00123988_(1-18GHz)	Polarity: Vertical
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by 3DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	36.478	41.140	-37.522	74.000	-4.662	PK
2		7440.000	40.907	41.950	-33.093	74.000	-1.043	PK
3	*	9920.000	43.782	40.735	-30.218	74.000	3.047	PK

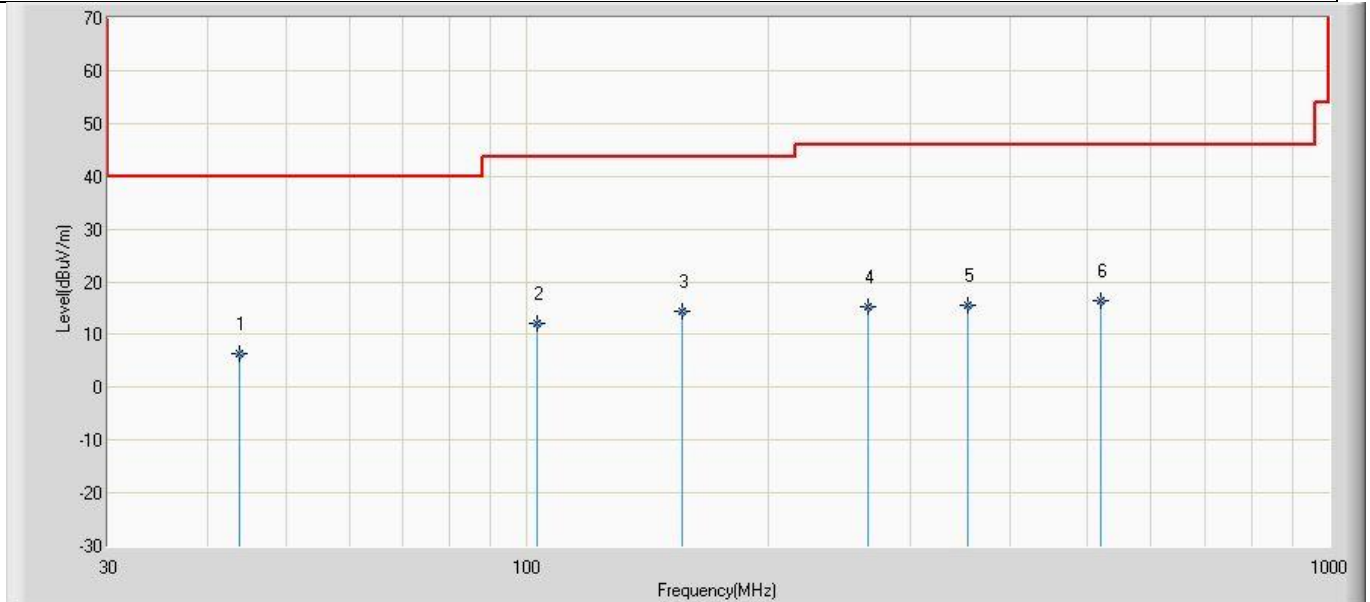
The worst case of Radiated Emission below 1GHz:

Profile: 2150461R	Page No.: 3
Engineer: Neil	
Site: AC3	Time: 2021/05/27 - 20:22
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC3_3m (30-1000MHz)	Polarity: Horizontal
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		32.464	12.954	-13.507	-27.046	40.000	26.461	QP
2		154.698	11.352	-5.899	-32.148	43.500	17.252	QP
3		265.556	13.201	-5.494	-32.799	46.000	18.695	QP
4		398.526	19.564	-5.568	-26.436	46.000	25.133	QP
5		658.625	20.156	-9.089	-25.844	46.000	29.244	QP
6	*	801.365	20.581	-9.029	-25.419	46.000	29.610	QP

Profile: 2150461R	Page No.: 4
Engineer: Neil	
Site: AC3	Time: 2021/05/27 - 20:23
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC3_3m (30-1000MHz)	Polarity: Vertical
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		43.854	6.525	-11.006	-33.475	40.000	17.531	QP
2		102.758	12.256	-9.713	-31.244	43.500	21.970	QP
3	*	156.109	14.458	-4.101	-29.042	43.500	18.559	QP
4		265.845	15.241	-7.400	-30.759	46.000	22.642	QP
5		354.329	15.652	-9.069	-30.348	46.000	24.721	QP
6		520.123	16.528	-8.955	-29.472	46.000	25.484	QP

Note:

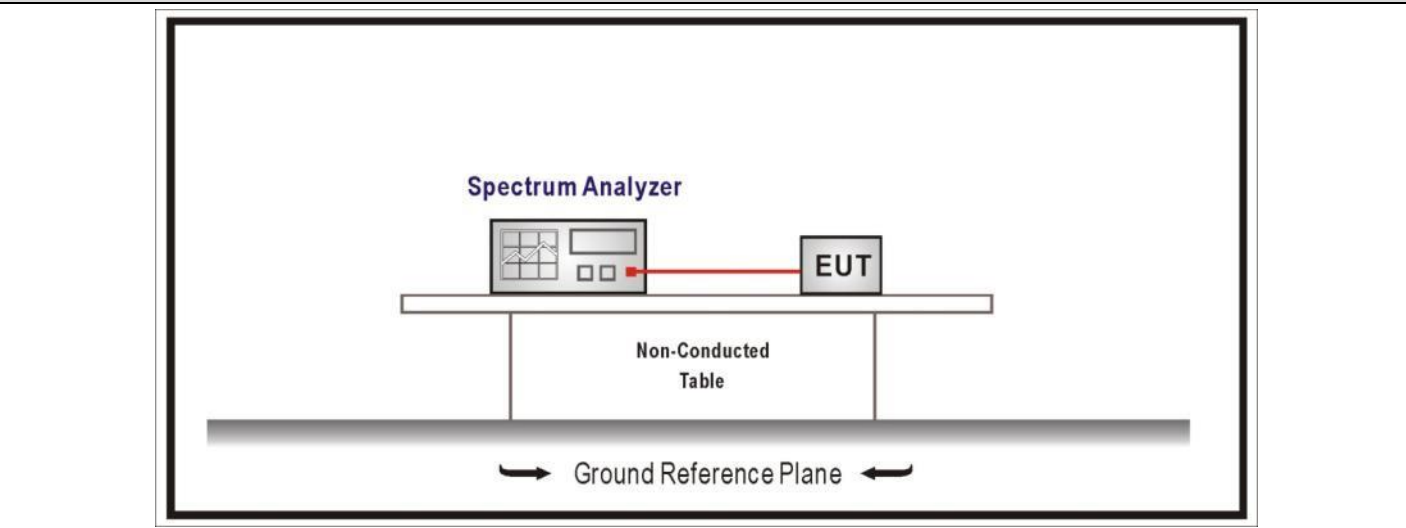
1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

4.3 20dB Bandwidth	VERDICT: PASS
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4.3.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.247(a)
<input checked="" type="checkbox"/>	For frequency hopping systems operating in 2400-2483.5 MHz band, within frequency range.
<input type="checkbox"/>	For frequency hopping systems operating in 902-928 MHz band, the maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.
<input type="checkbox"/>	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

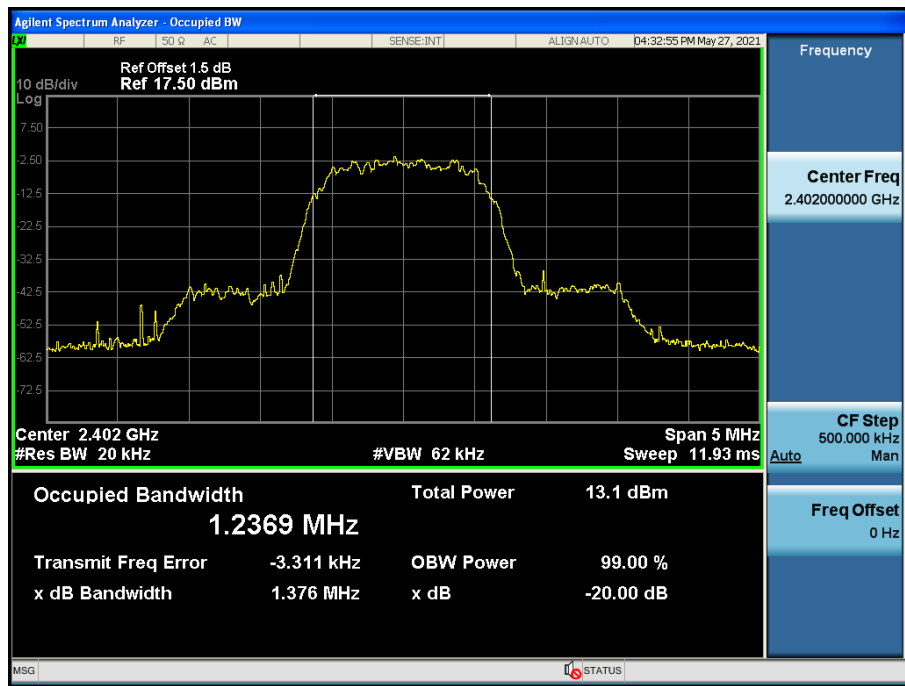
	References Rule	Chapter	Description
<input checked="" type="checkbox"/>	ANSI C63.10	6.9	Occupied bandwidth tests
<input checked="" type="checkbox"/>	ANSI C63.10	6.9.2	Occupied bandwidth—relative measurement procedure

4.3.4 Test Data

Mode	Channel	Frequency (MHz)	20dB Bandwidth (kHz)	99% Bandwidth (kHz)
1	00	2402	925.80	886.62
	39	2441	925.00	888.39
	79	2480	923.10	885.34
2	00	2402	1388.00	1237.40
	39	2441	1389.00	1236.00
	79	2480	1205.00	1131.60
3	00	2402	1376.00	1236.90
	39	2441	1372.00	1231.20
	79	2480	1372.00	1230.30

Note : The worst case of Occupied Bandwidth as below:

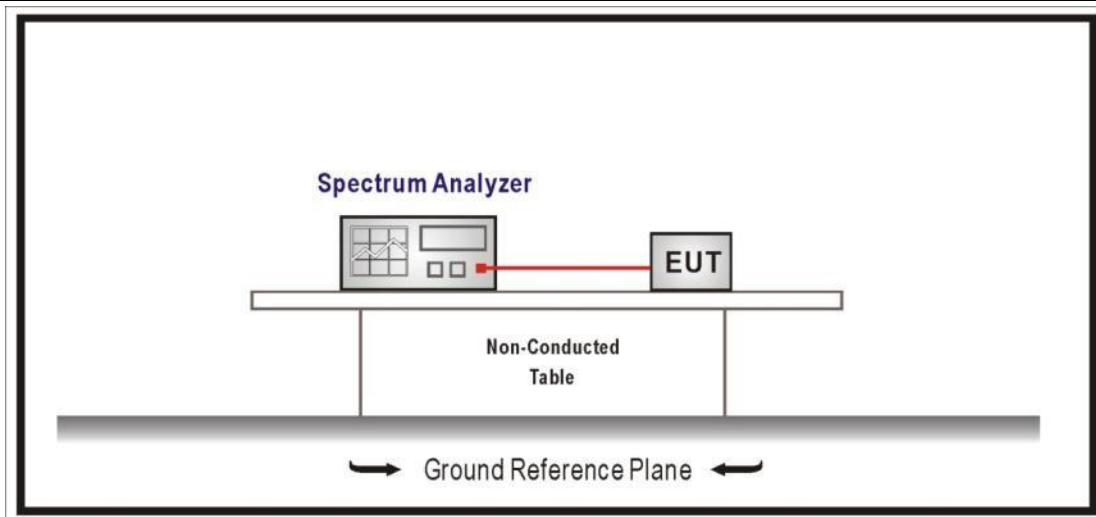
Mode 3 / CH00(2402MHz)



4.4 Carrier Frequency Separation	VERDICT: PASS
---	----------------------

4.4.1 Limit	
Standard	FCC Part 15 Subpart C Paragraph 15.247(a)
<input type="checkbox"/>	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.
<input checked="" type="checkbox"/>	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.
<input type="checkbox"/>	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
<input type="checkbox"/>	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
<input type="checkbox"/>	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



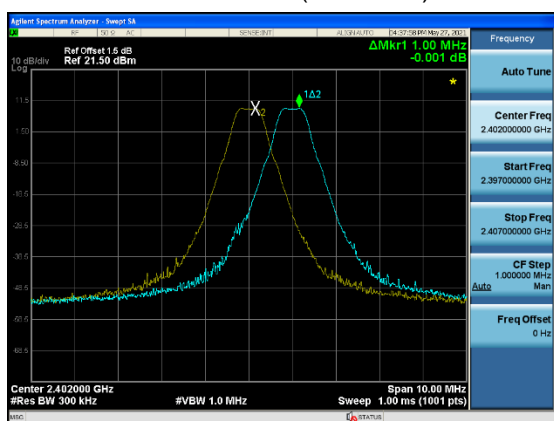
4.4.3 Test Procedure			
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	References Rule	Chapter	Description
<input checked="" type="checkbox"/>	ANSI C63.10	7.8	Evaluation of frequency-hopping device parameters
<input checked="" type="checkbox"/>	ANSI C63.10	7.8.2	Carrier frequency separation

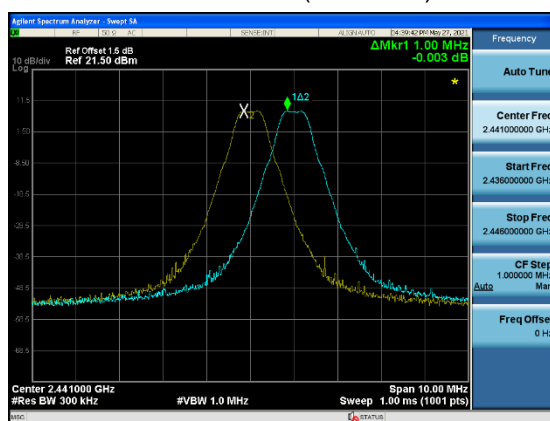
4.4.4 Test Data

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

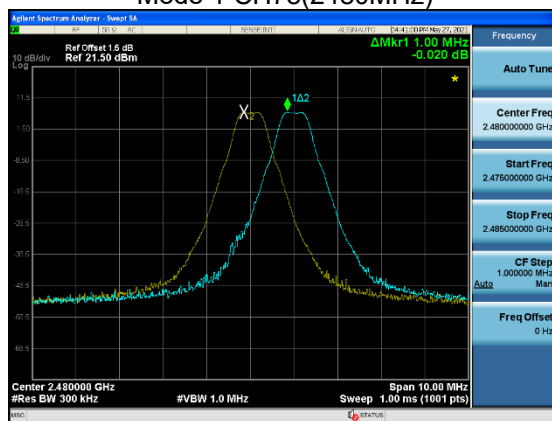
Mode 1 CH00(2402MHz)



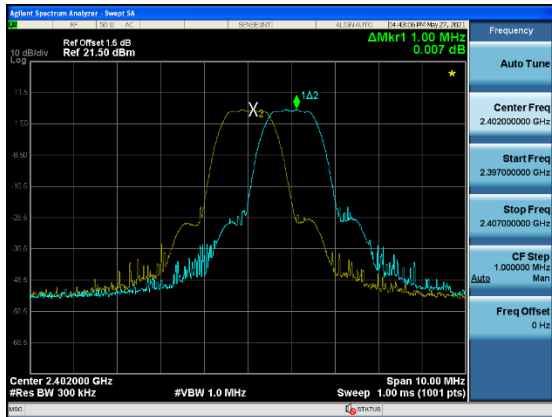
Mode 1 CH39(2441MHz)



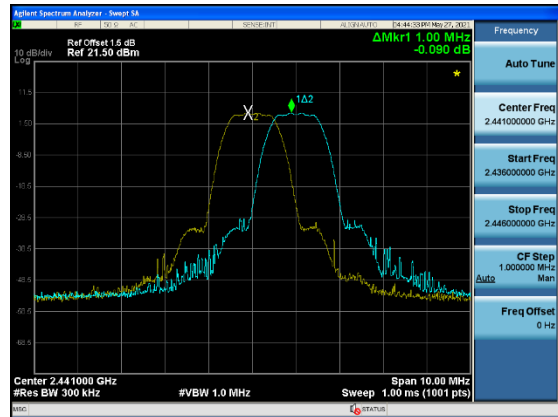
Mode 1 CH78(2480MHz)



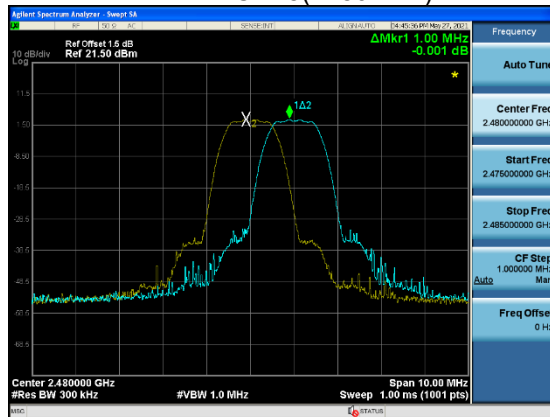
Mode 2 CH00(2402MHz)



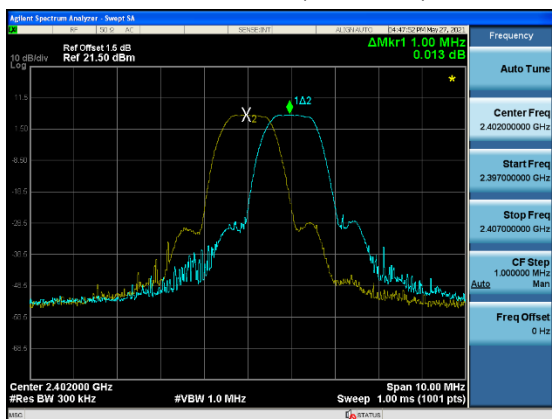
Mode 2 CH39(2441MHz)



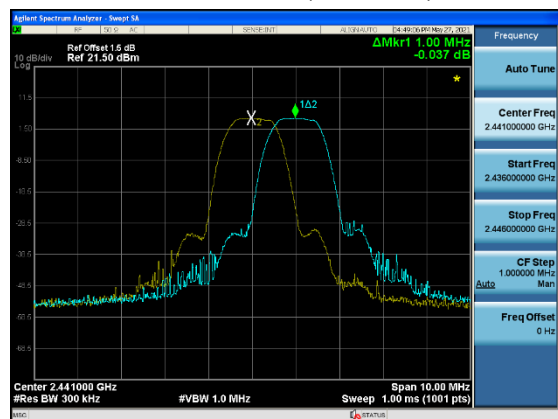
Mode 2 CH78(2480MHz)



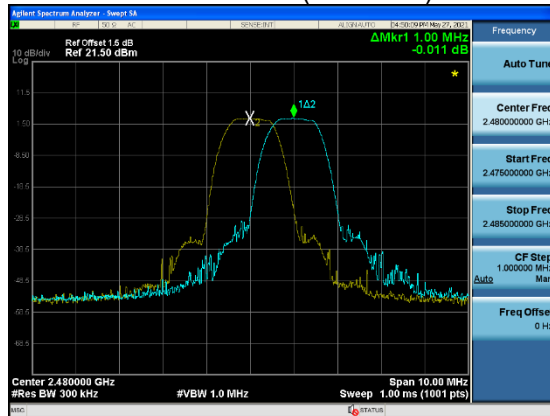
Mode 3 CH00(2402MHz)



Mode 3 CH39(2441MHz)



Mode 3 CH78(2480MHz)



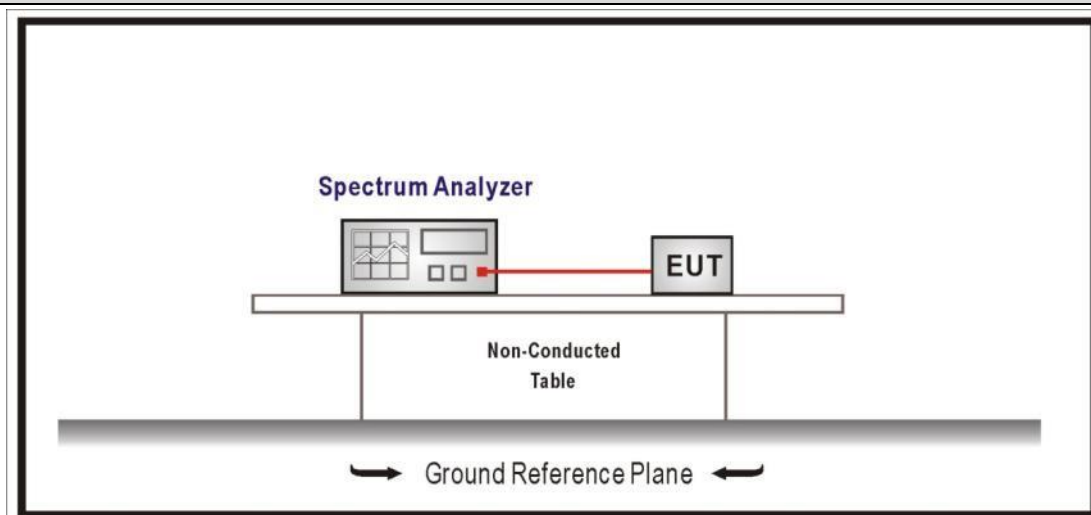
4.5 Number of Hopping Frequencies

VERDICT: PASS

4.5.1 Limit

Standard	FCC Part 15 Subpart C Paragraph 15.247(a)
<input checked="" type="checkbox"/>	For frequency hopping systems operating in the 2400-2483.5 MHz band shall use at least 15 hopping frequencies.
<input type="checkbox"/>	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.
<input type="checkbox"/>	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.
<input type="checkbox"/>	For frequency hopping systems operating in the 5725-5850 MHz band shall use at least 75 hopping frequencies.

4.5.2 Test Setup



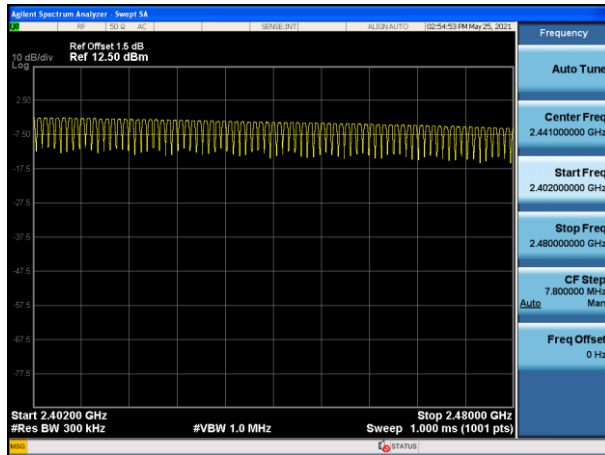
4.5.3 Test Procedure

References Rule	Chapter	Description
<input checked="" type="checkbox"/> ANSI C63.10	7.8.	Evaluation of frequency-hopping device parameters
<input checked="" type="checkbox"/> ANSI C63.10	7.8.3	Number of Hopping Frequencies

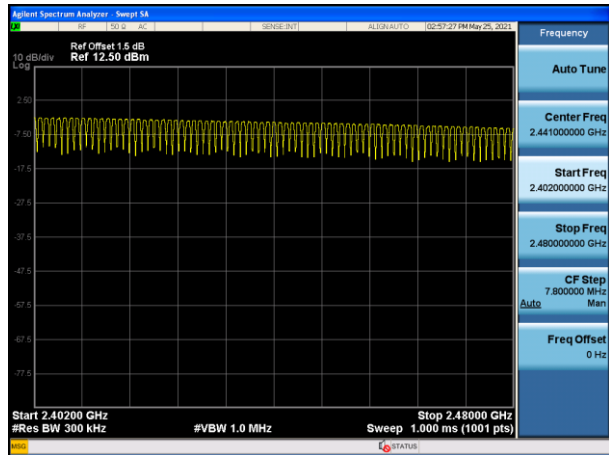
4.5.4 Test Data

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

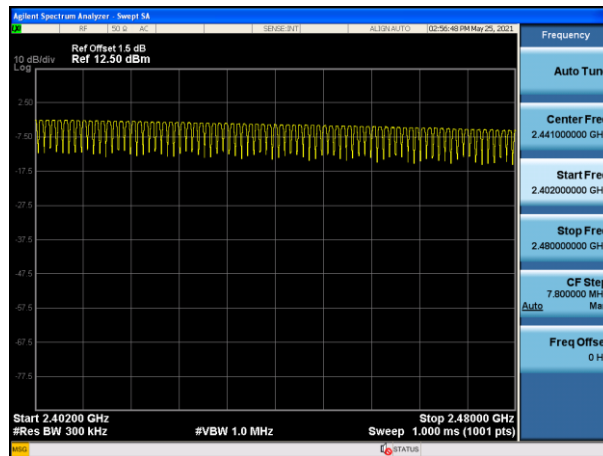
Mode 1



Mode 2



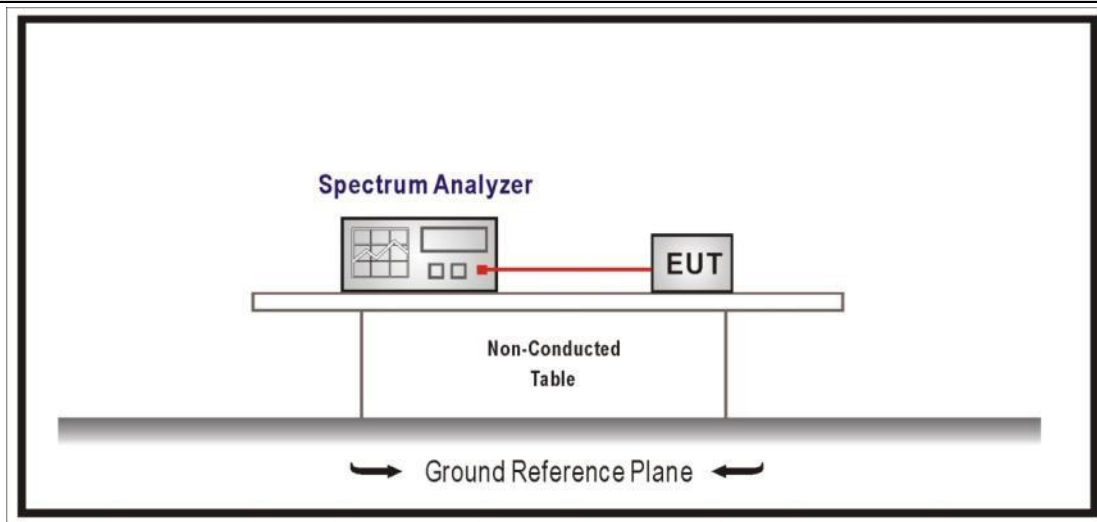
Mode 3



4.6 Time of Occupancy(Dwell Time)	VERDICT: PASS
--	----------------------

4.6.1 Limit	
Standard	FCC Part 15 Subpart C Paragraph 15.247(a)
<input checked="" type="checkbox"/>	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.
<input type="checkbox"/>	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
<input type="checkbox"/>	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
<input type="checkbox"/>	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			
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References Rule	Chapter	Description
<input checked="" type="checkbox"/> ANSI C63.10	7.8	Evaluation of frequency-hopping device parameters
<input checked="" type="checkbox"/> ANSI C63.10	7.8.4	Time of occupancy (dwell time)

4.6.4 Test Data

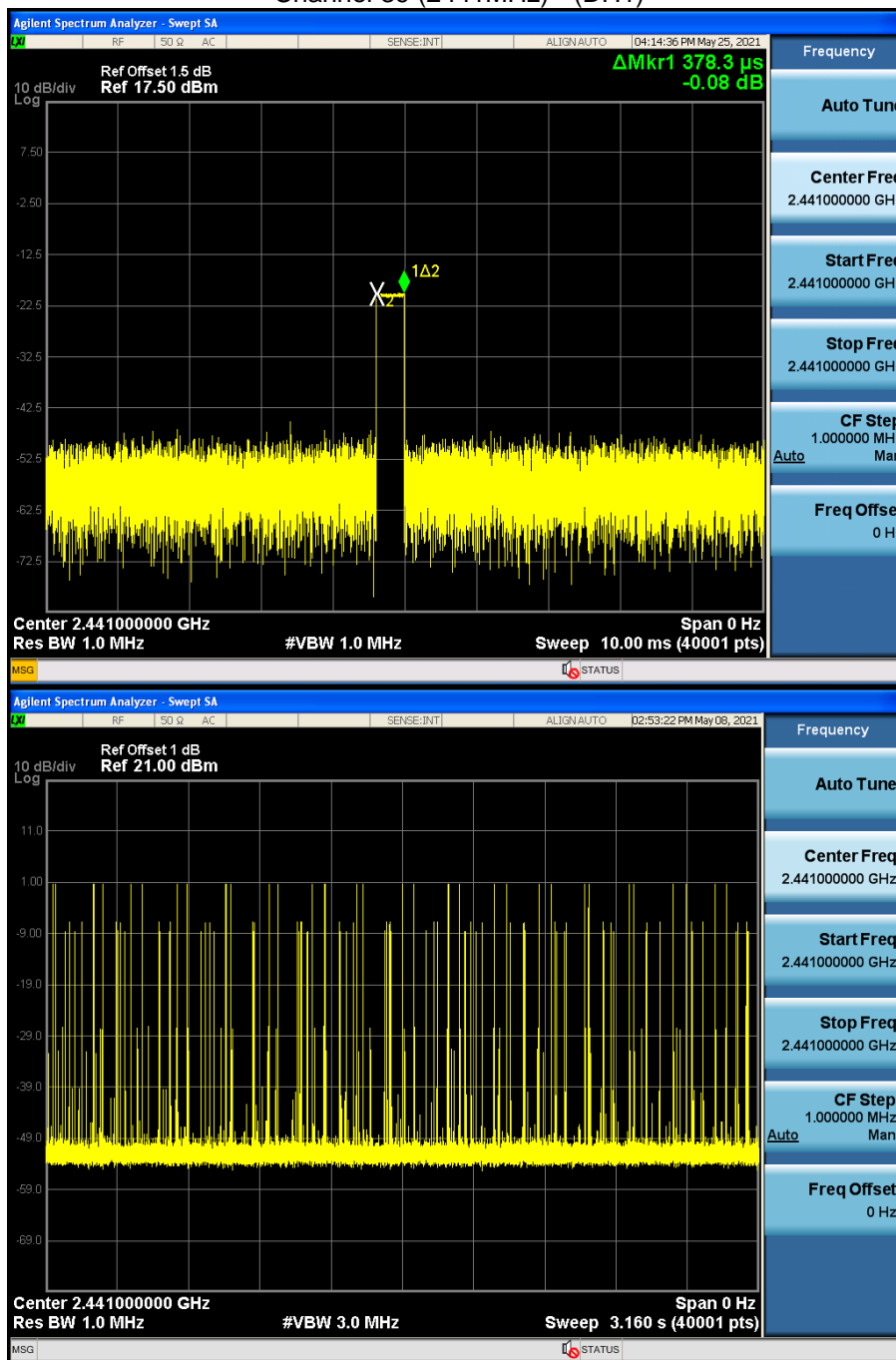
Mode	Channel	Frequency (MHz)	Time of Occupancy (ms)	Limit (ms)	Result
1	39	2441	117.27	< 400	Pass

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

Note2: Time of Occupancy = $0.3783 \times 31 \times 31.6 / 3.16 = 117.273 \text{ms}$

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

Channel 39 (2441MHz) - (DH1)



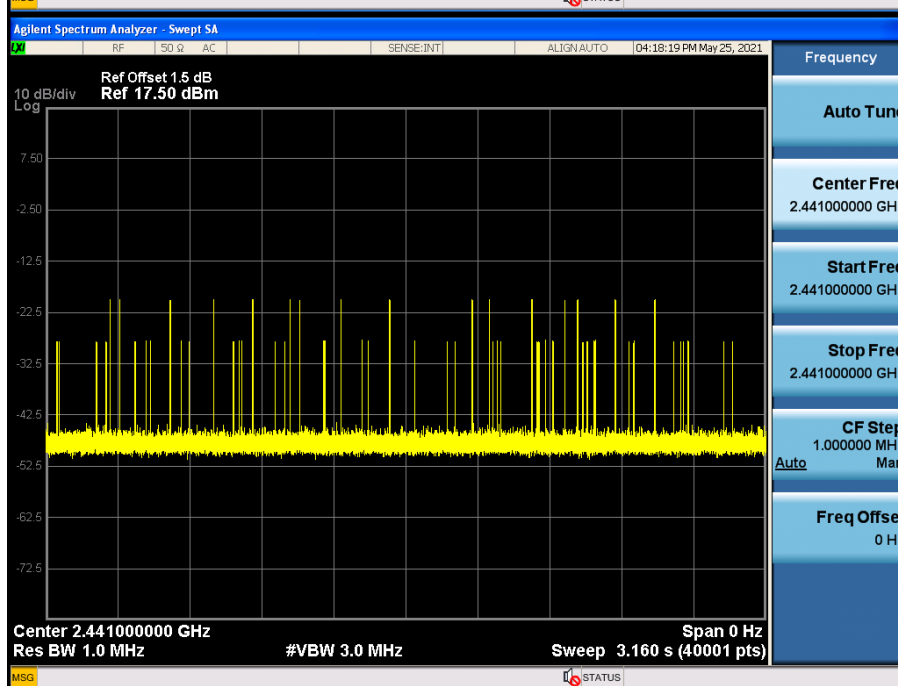
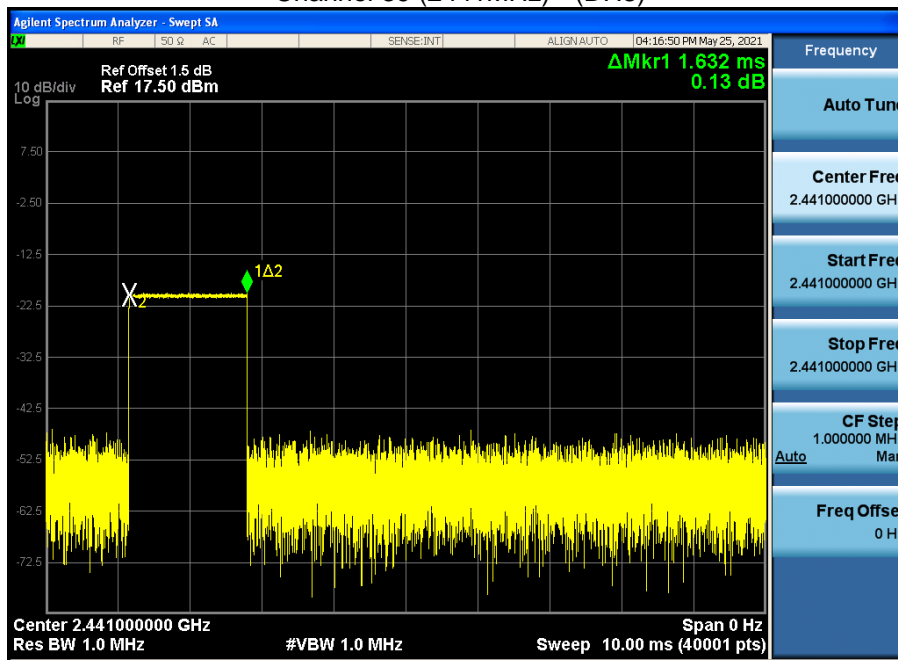
Mode	Channel	Frequency (MHz)	Time of Occupancy (ms)	Limit (ms)	Result
1	39	2441	261.12	< 400	Pass

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

Note2: Time of Occupancy = $1.632 \times 16 \times 31.6 / 3.16 = 261.12 \text{ms}$

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

Channel 39 (2441MHz) - (DH3)



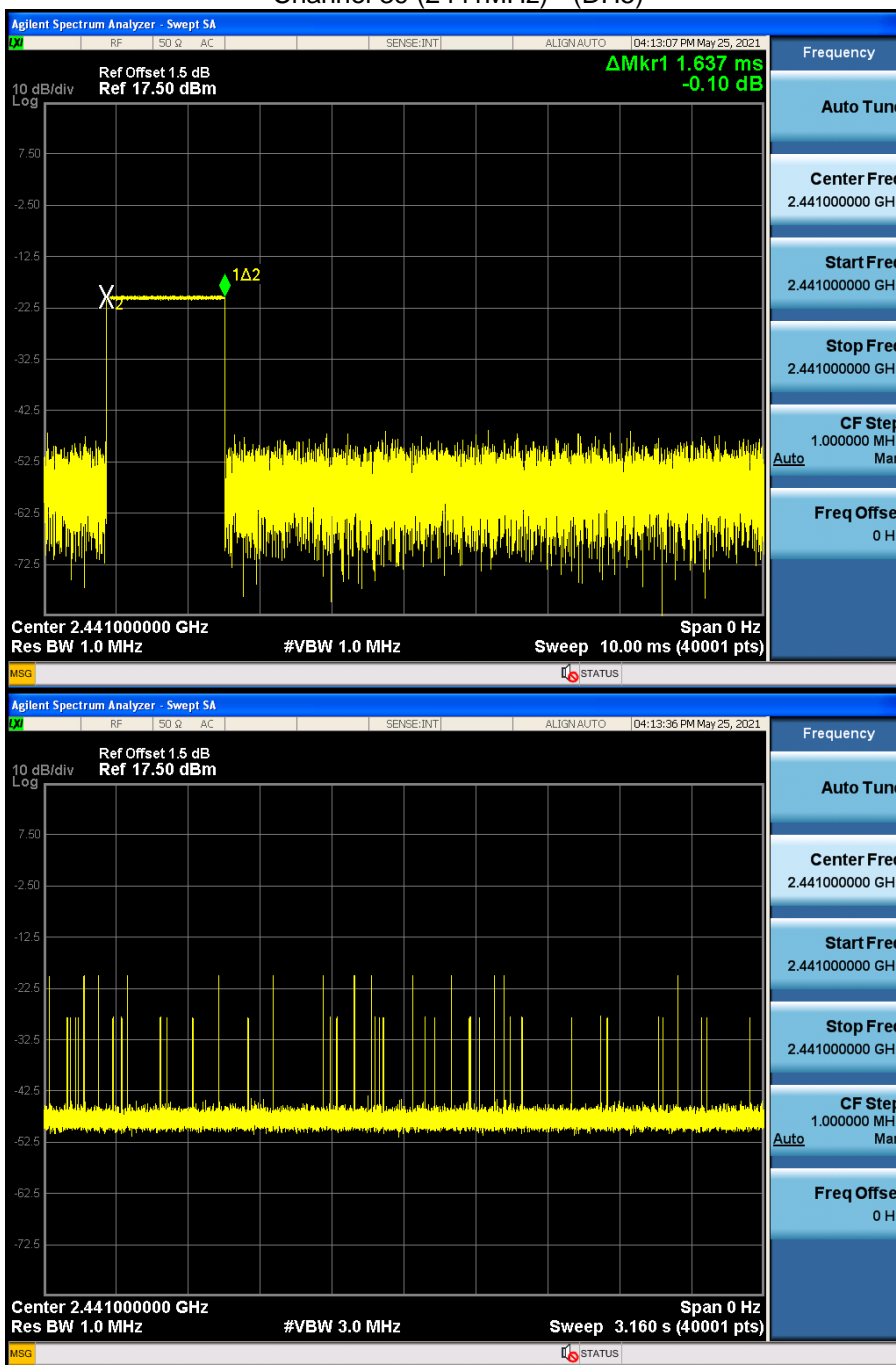
Mode	Channel	Frequency (MHz)	Time of Occupancy (ms)	Limit (ms)	Result
1	39	2441	229.18	< 400	Pass

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

Note2: Time of Occupancy = $1.637 \times 14 \times 31.6 / 3.16 = 229.18 \text{ms}$

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

Channel 39 (2441MHz) - (DH5)

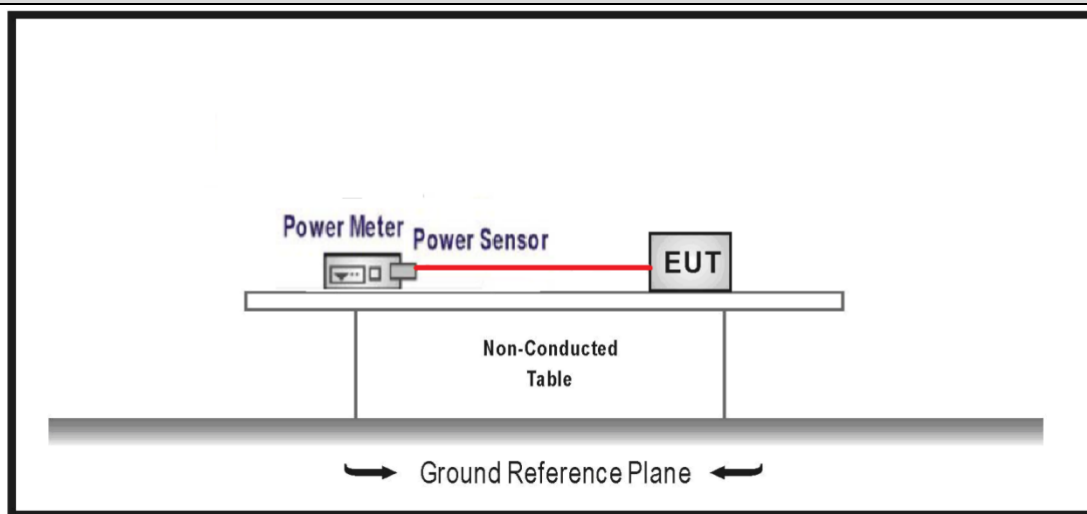


Note: The packet time of AFH mode is same as normal mode, due to the packet time of AFH mode multiply with lesser factor is dwell time of $0.4 \times 20 = 8 \text{S}$, the dwell time of AFH mode comply with the limit.

4.7 Peak Output Power	VERDICT: PASS
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4.7.1 Limit	
Standard	FCC Part 15 Subpart C Paragraph 15.247 (a)(1)
<input type="checkbox"/>	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.
<input checked="" type="checkbox"/>	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.
<input type="checkbox"/>	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
<input checked="" type="checkbox"/>	ANSI C63.10		7.8	Evaluation of frequency-hopping device parameters
	<input checked="" type="checkbox"/>	ANSI C63.10	7.8.5	Output power test procedure for frequency-hopping spread-spectrum (FHSS) devices

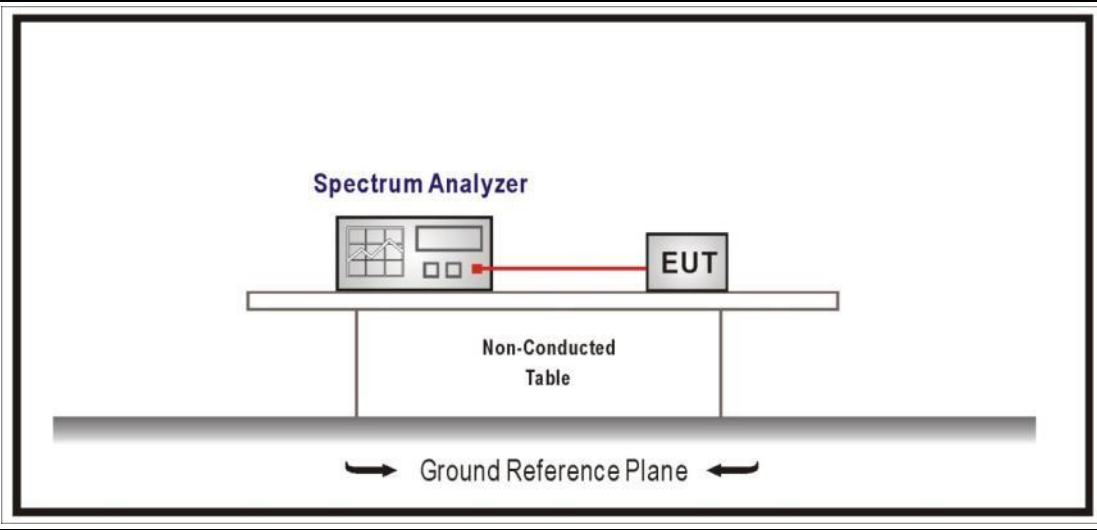
4.7.4 Test Data

Mode	Channel	Test Frequency (MHz)	Power Output (dBm)	Limit (dBm)	Result
Mode 1	00	2402	9.51	≤21	Pass
	39	2442	8.63	≤21	Pass
	78	2480	7.23	≤21	Pass
Mode 2	00	2402	8.75	≤21	Pass
	39	2442	7.72	≤21	Pass
	78	2480	6.04	≤21	Pass
Mode 3	00	2402	8.94	≤21	Pass
	39	2442	7.96	≤21	Pass
	78	2480	6.29	≤21	Pass

4.8 Emissions in non-restricted frequency band	VERDICT: PASS
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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)
<p>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).</p> <p>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).</p>	

4.8.2 Test Setup

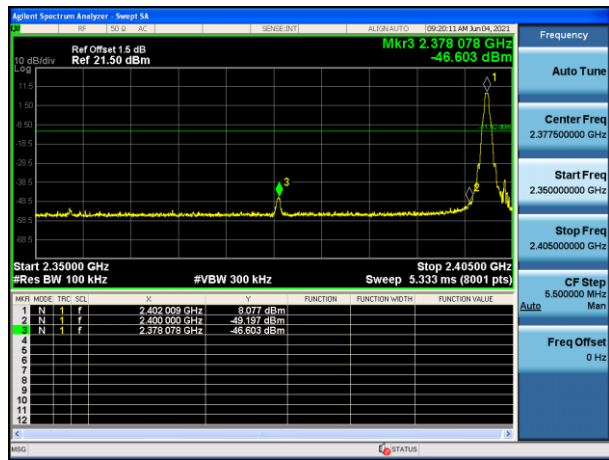


4.8.3 Test Procedure		
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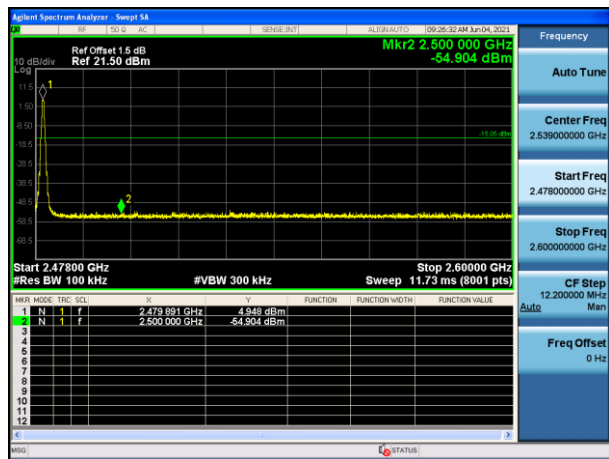
	References Rule	Chapter	Description
<input checked="" type="checkbox"/>	ANSI C63.10	7.8	Evaluation of frequency-hopping device parameters
<input checked="" type="checkbox"/>	ANSI C63.10	7.8.6	Band-edge measurements for RF conducted emissions

4.8.4 Test Data

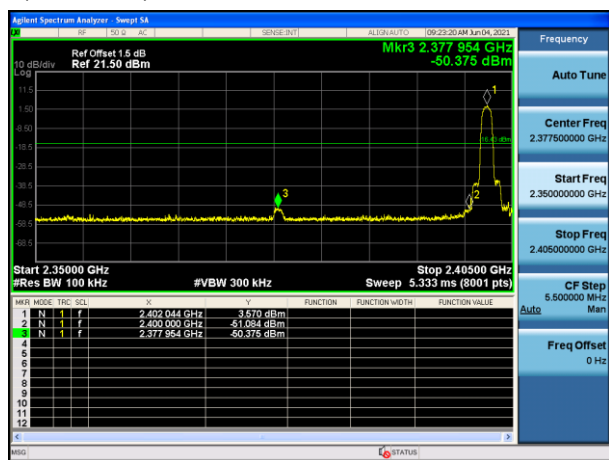
Mode 1/ CH00(2402MHz)



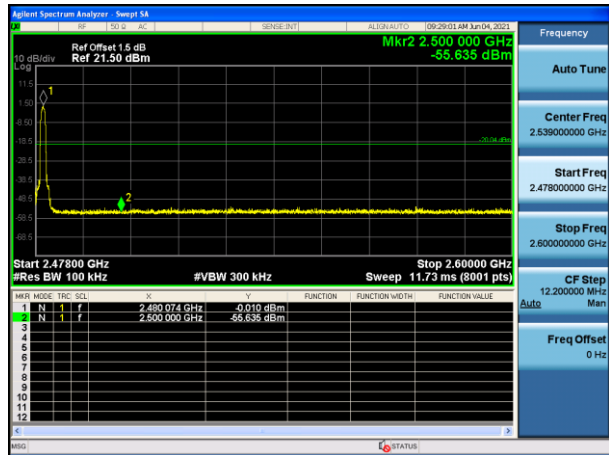
Mode 1/ CH78(2480MHz)



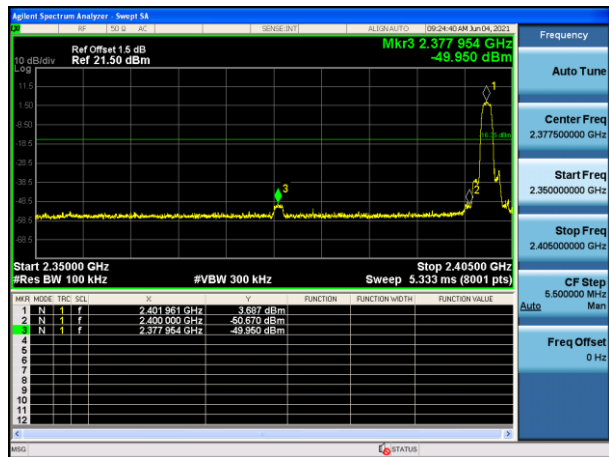
Mode 2/ CH00(2402MHz)



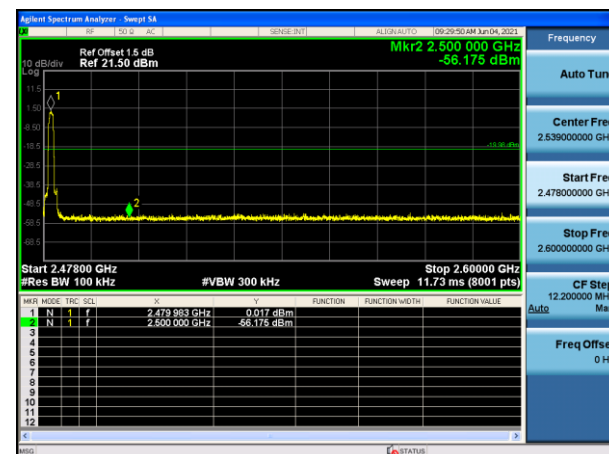
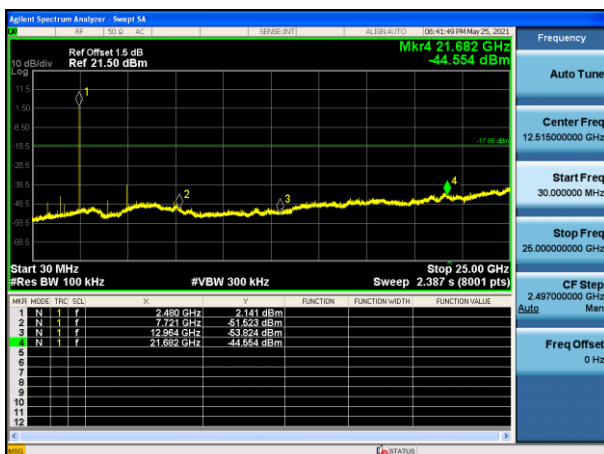
Mode 2/ CH78(2480MHz)



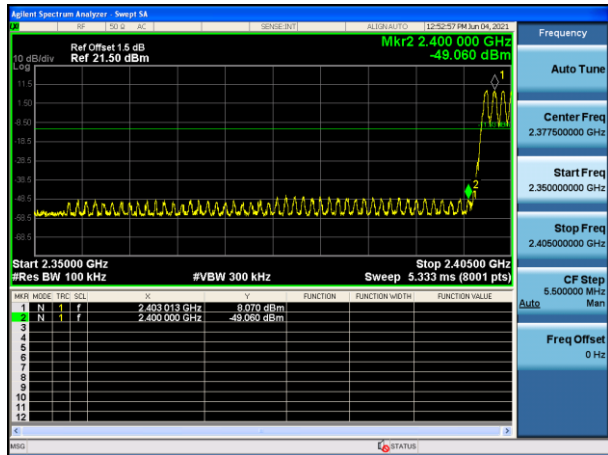
Mode 3/ CH00(2402MHz)



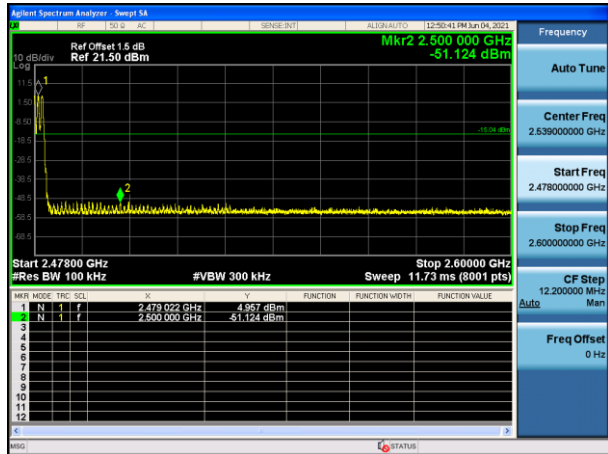
Mode 3/ CH78(2480MHz)



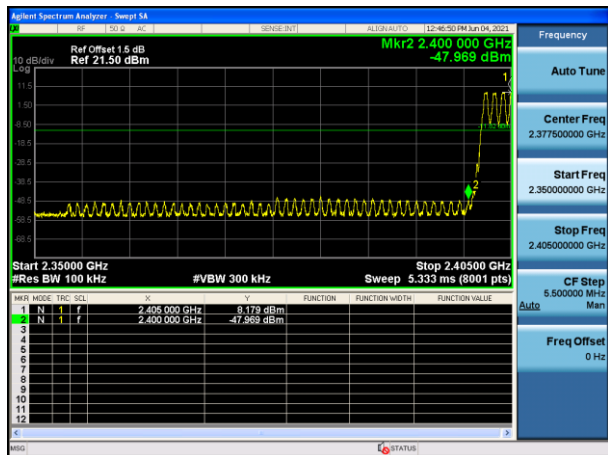
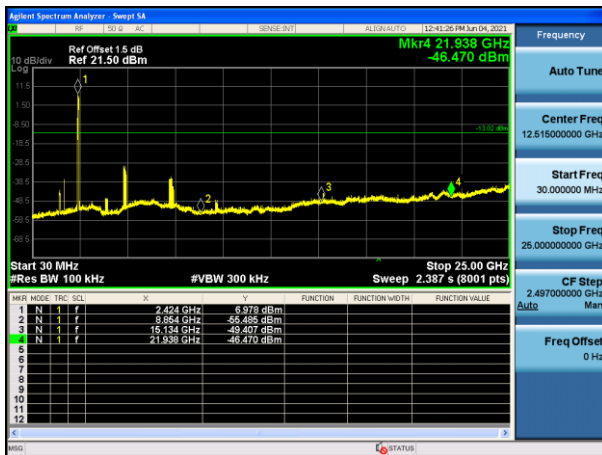
Mode 4/ Hopping(DH 5) -1



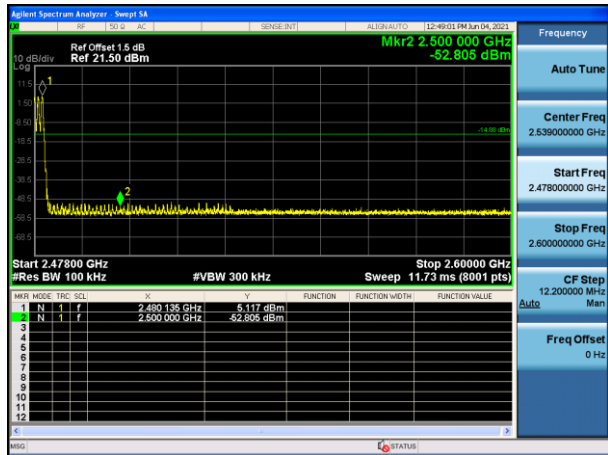
Mode 4/ Hopping(DH 5) -2



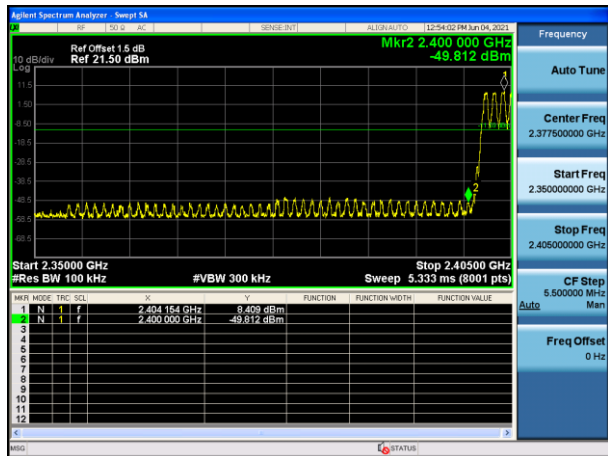
Mode 4/ Hopping(2DH 5) -1



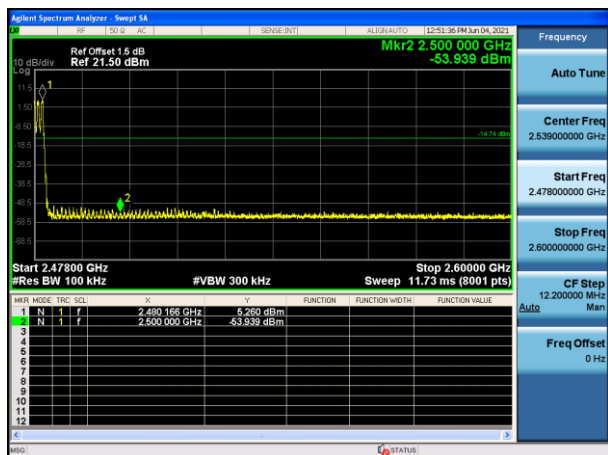
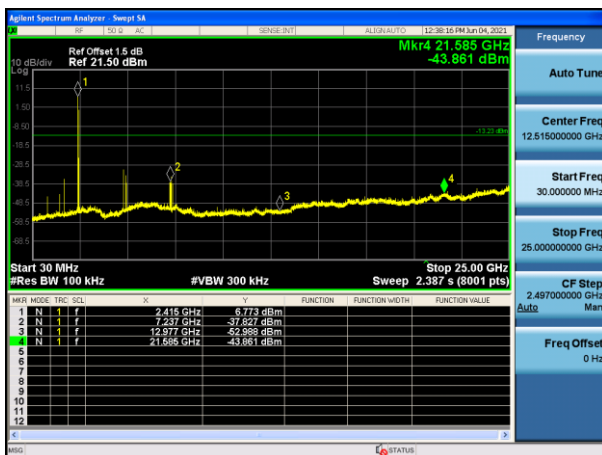
Mode 4/ Hopping(2DH 5) -2



Mode 4/ Hopping(3DH 5) -1



Mode 4/ Hopping(3DH 5) -2



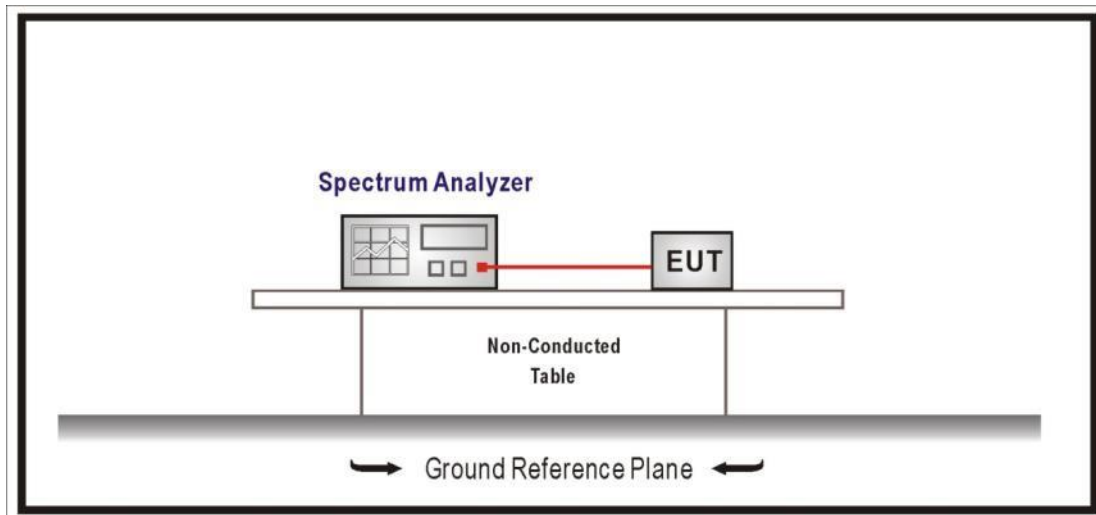
4.9 Duty cycle

VERDICT: PASS

4.9.1 Limit

N/A

4.9.2 Test Setup



4.9.3 Test Procedure

References Rule	Chapter	Description
<input checked="" type="checkbox"/> 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%

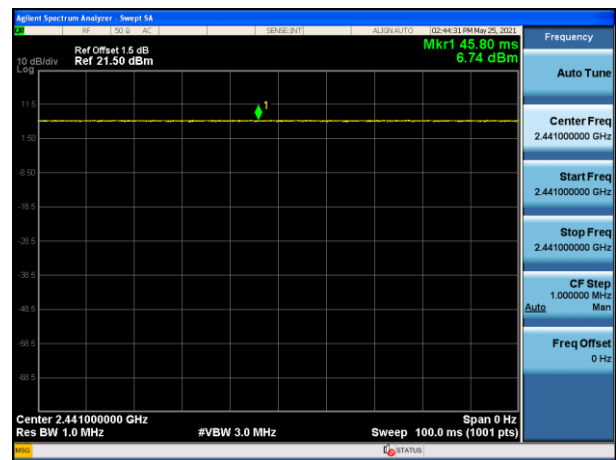
Note 1: T means the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

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
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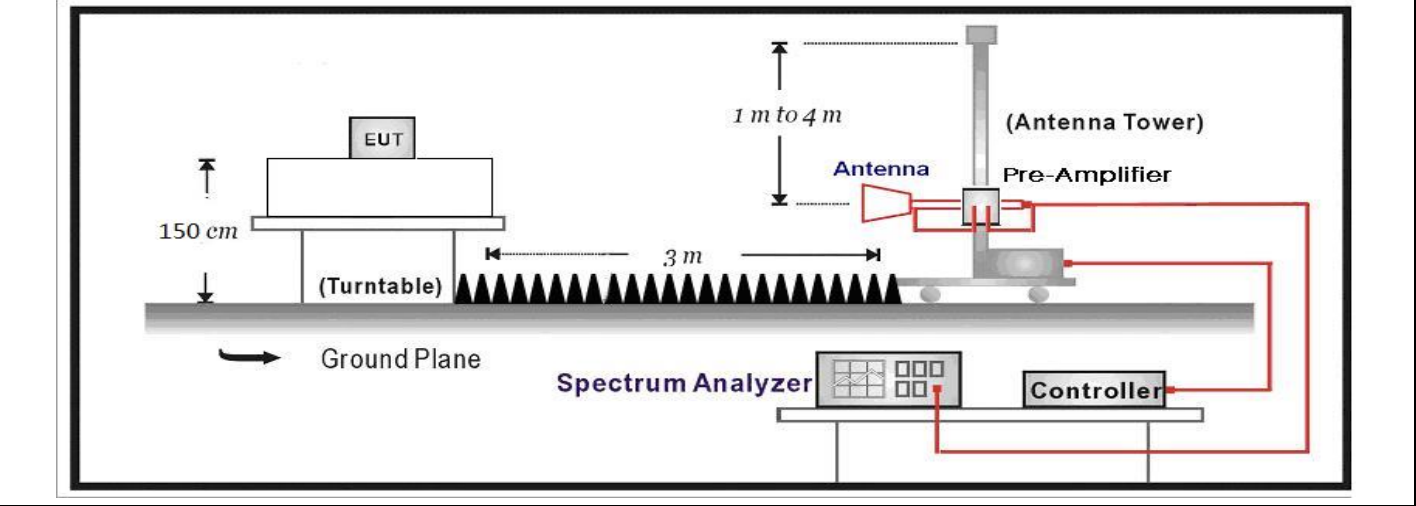
4.10.1 Limit

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:

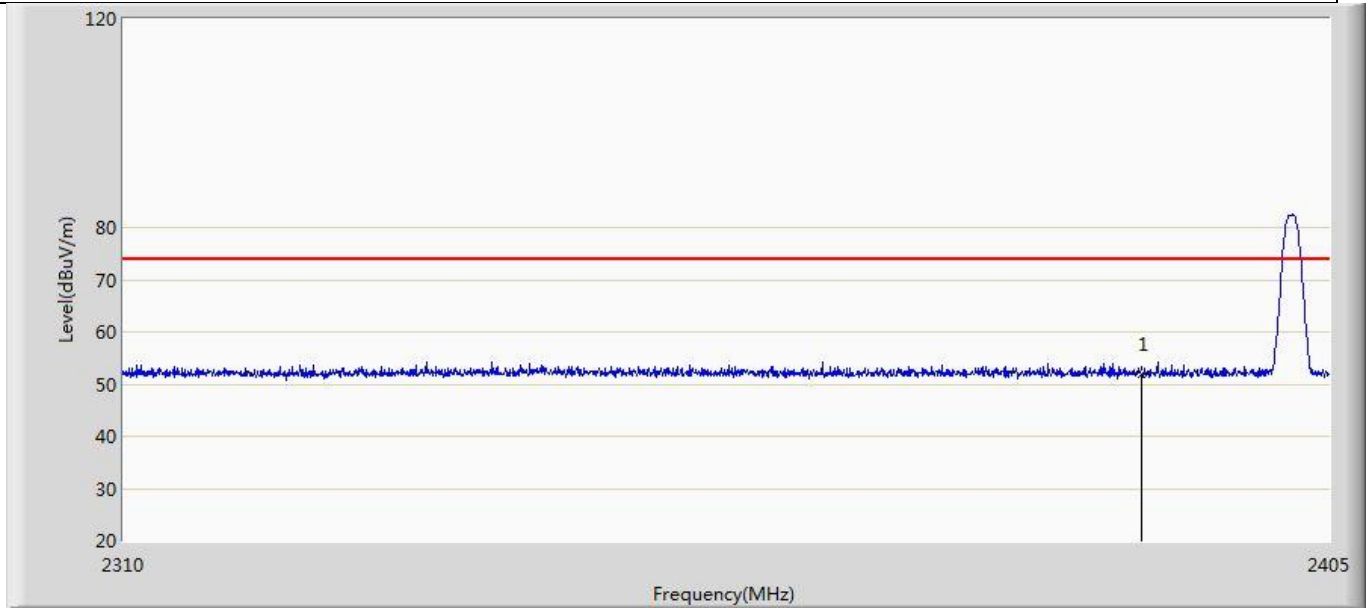


4.10.3 Test Procedure

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

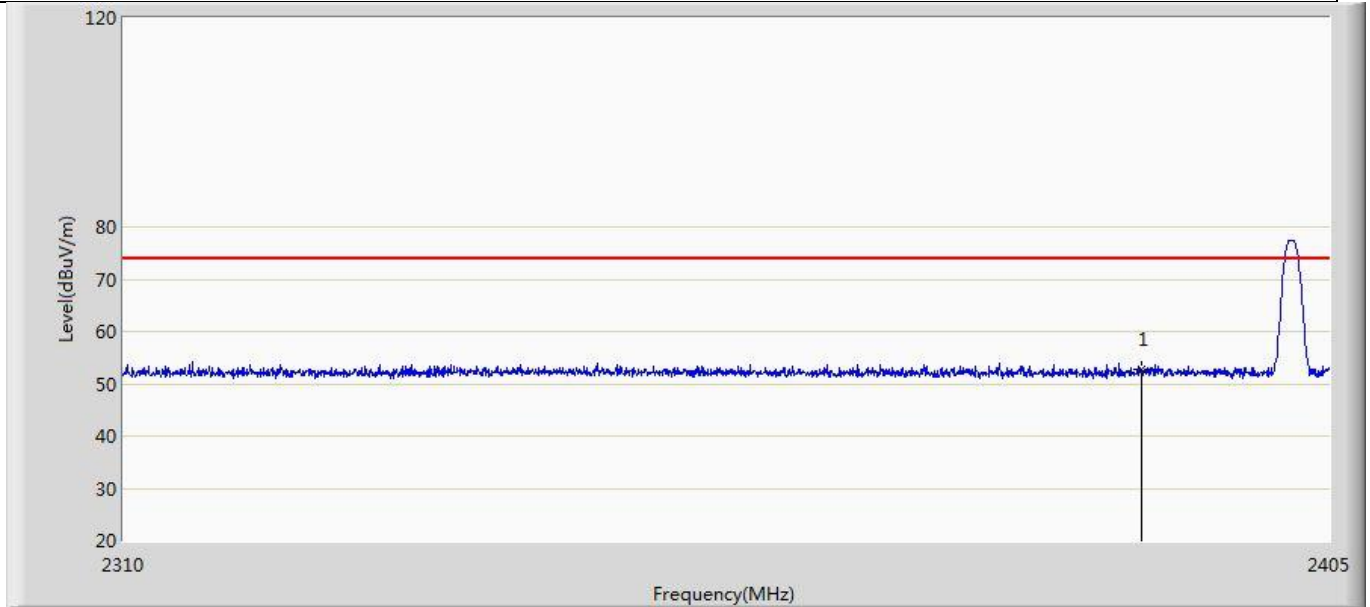
4.10.4 Test Data

Profile: 2150461R	Page No.: 1
Engineer: Juliuszhou	
Site: AC5	Time: 2020/03/12 - 00:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by DH5	



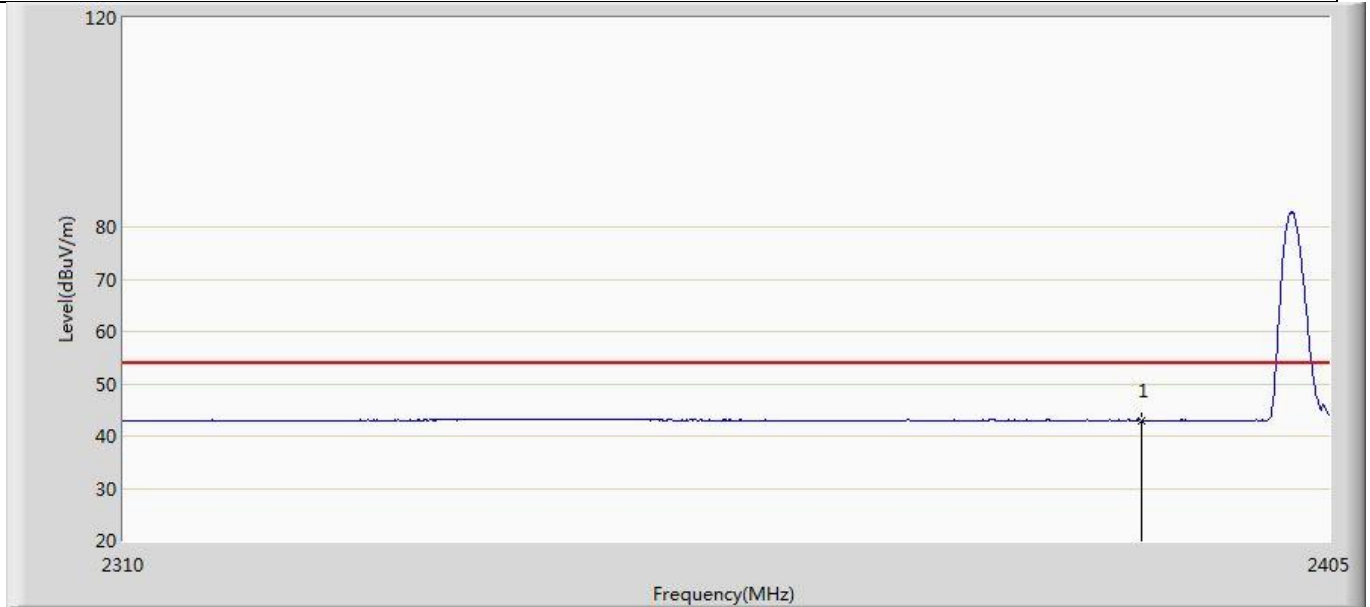
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	51.932	15.576	-22.068	74.000	36.357	PK

Profile: 2150461R	Page No.: 2
Engineer: Juliuszhou	
Site: AC5	Time: 2021/05/11 - 21:19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by DH5	



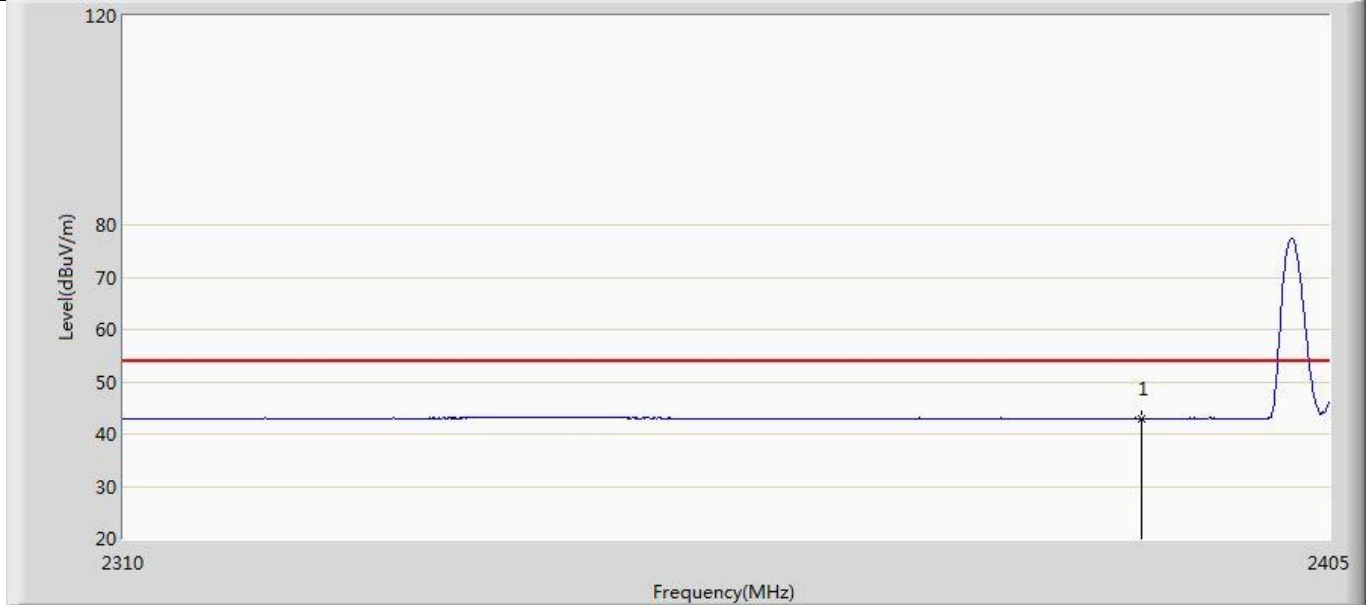
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	52.775	16.419	-21.225	74.000	36.357	PK

Profile: 2150461R	Page No.: 3
Engineer: Juliuszhou	
Site: AC5	Time: 2021/05/11 - 21:23
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by DH5	



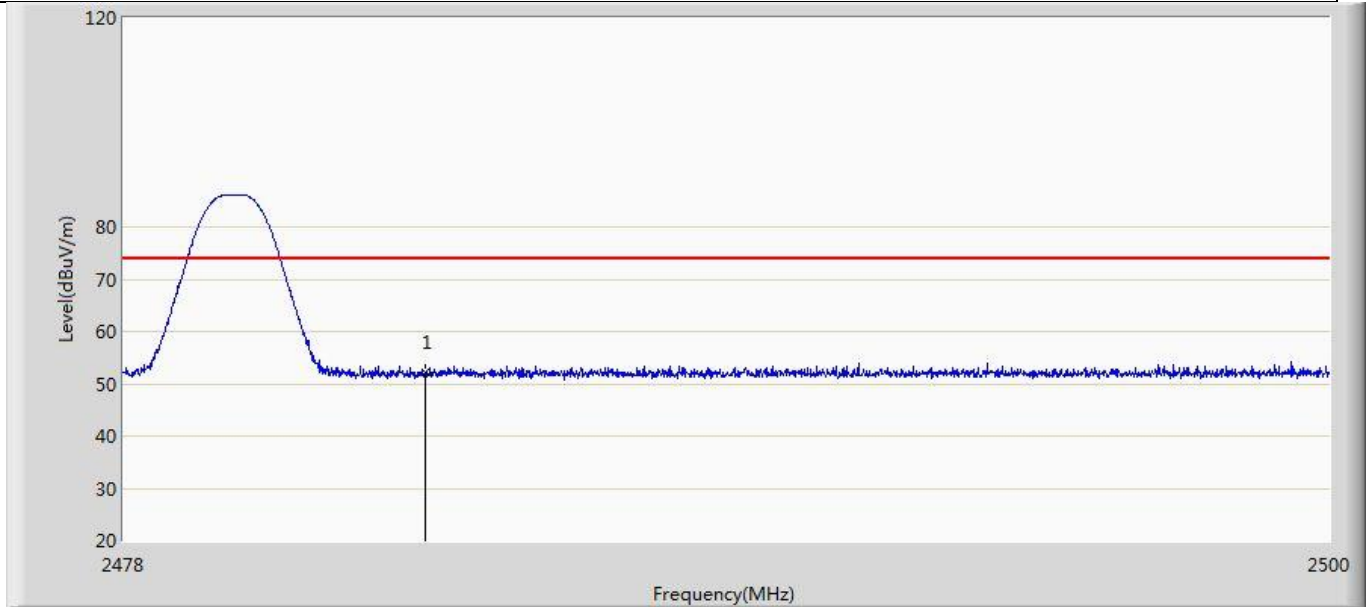
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	43.017	6.661	-10.983	54.000	36.357	AV

Profile: 2150461R	Page No.: 4
Engineer: Juliuszhou	
Site: AC5	Time: 2021/05/11 - 21:30
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by BLE	



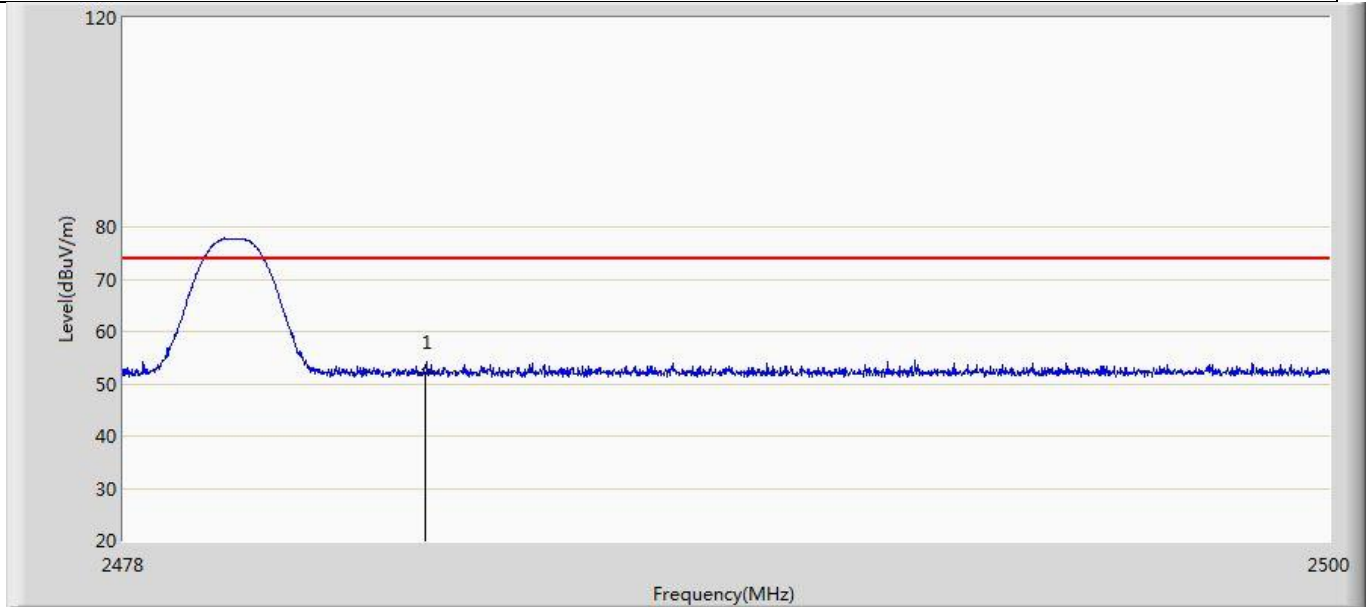
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	42.925	6.569	-11.075	54.000	36.357	AV

Profile: 2150461R	Page No.: 5
Engineer: Juliuszhou	
Site: AC5	Time: 2021/05/11 - 22:42
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by DH5	



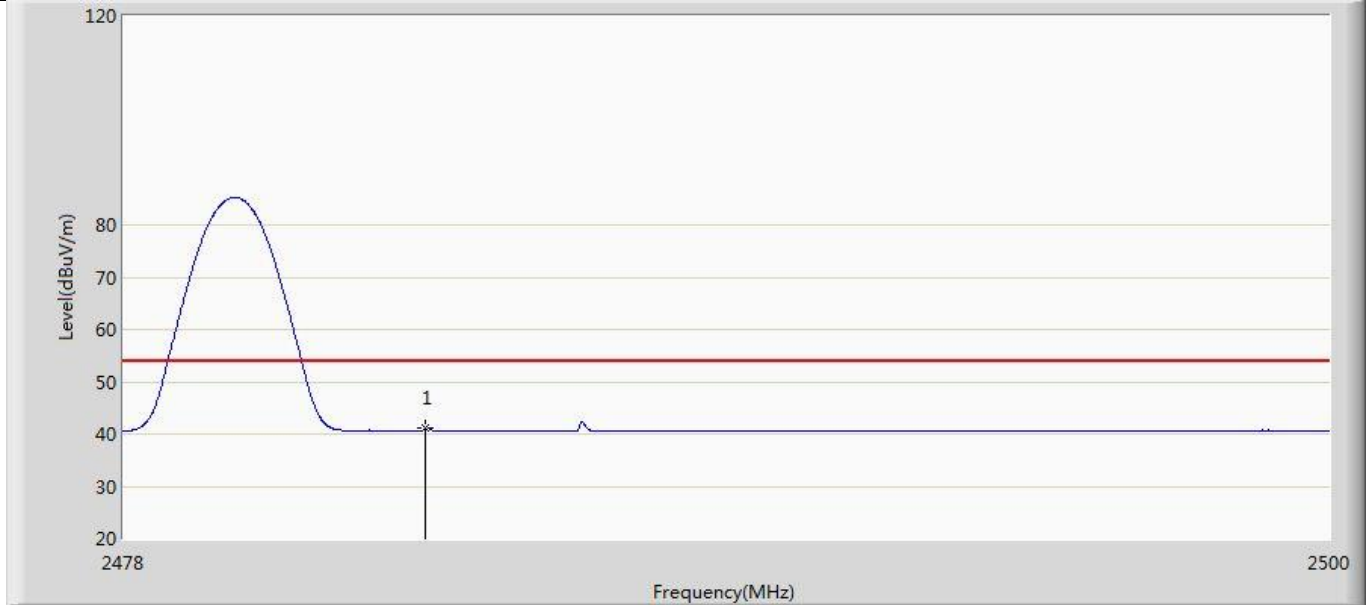
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	52.049	15.645	-21.951	74.000	36.404	PK

Profile: 2150461R	Page No.: 6
Engineer: Juliuszhou	
Site: AC5	Time: 2021/05/11 - 22:51
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by DH5	



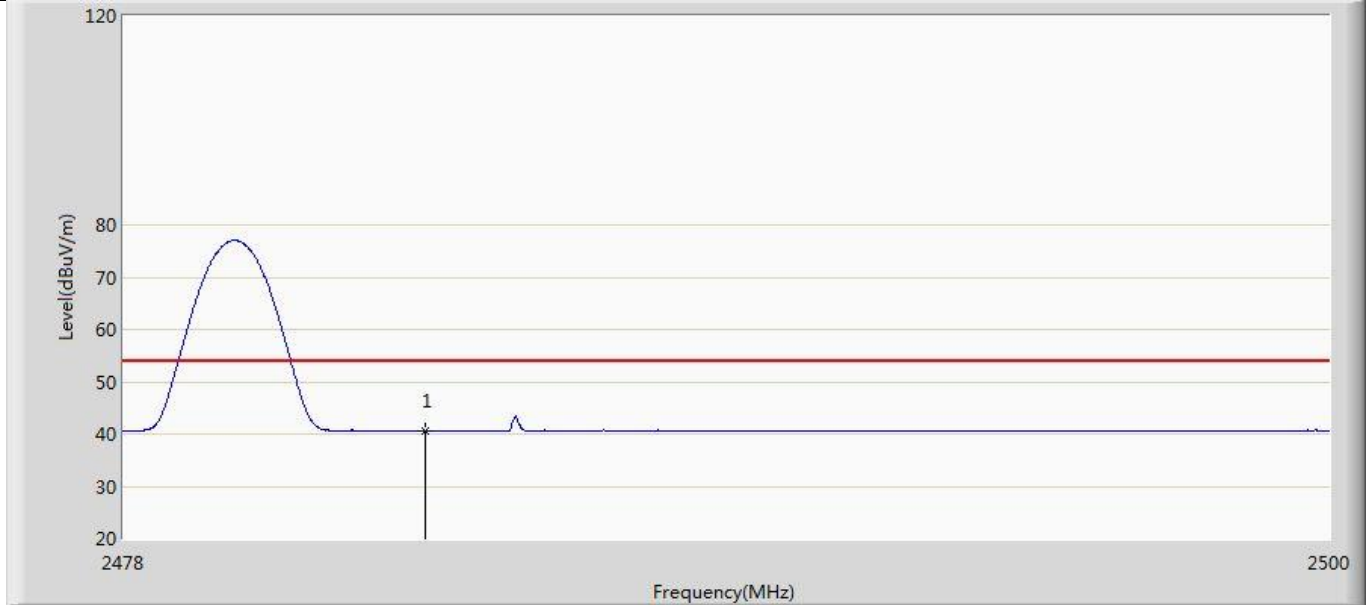
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	52.259	15.855	-21.741	74.000	36.404	PK

Profile: 2150461R	Page No.: 7
Engineer: Juliuszhou	
Site: AC5	Time: 2021/05/11 - 22:51
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by DH5	



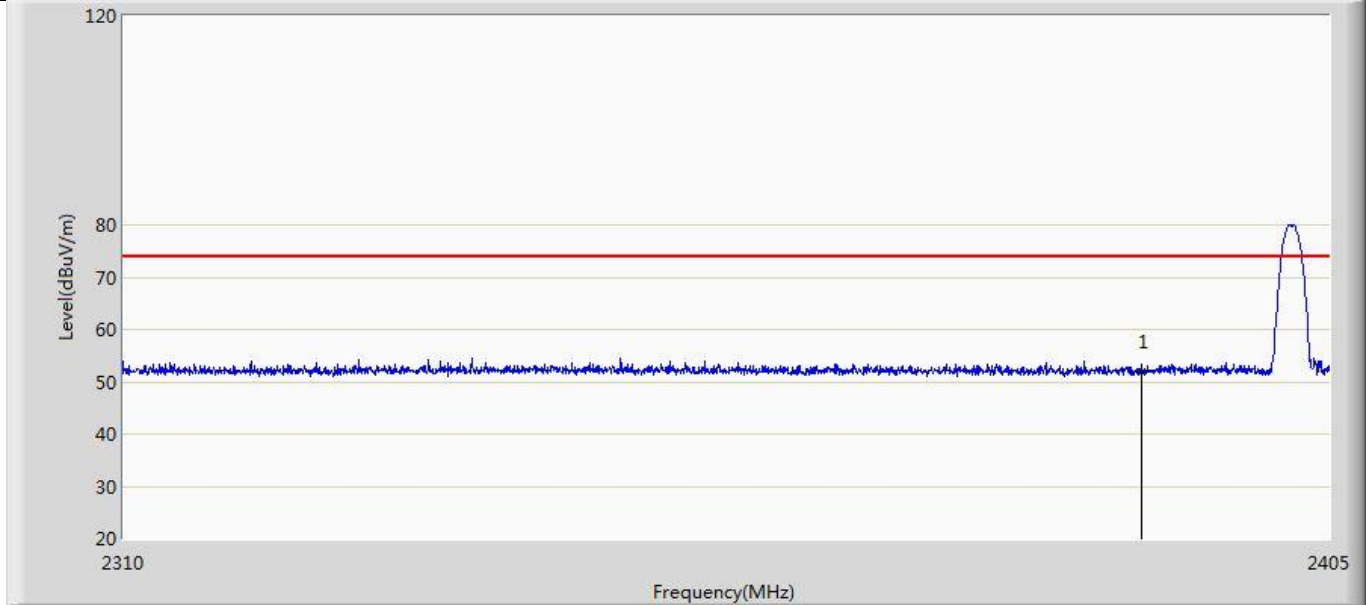
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	41.268	4.864	-12.732	54.000	36.404	AV

Profile: 2150461R	Page No.: 8
Engineer: Juliuszhou	
Site: AC5	Time: 2021/05/11 - 22:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by DH5	



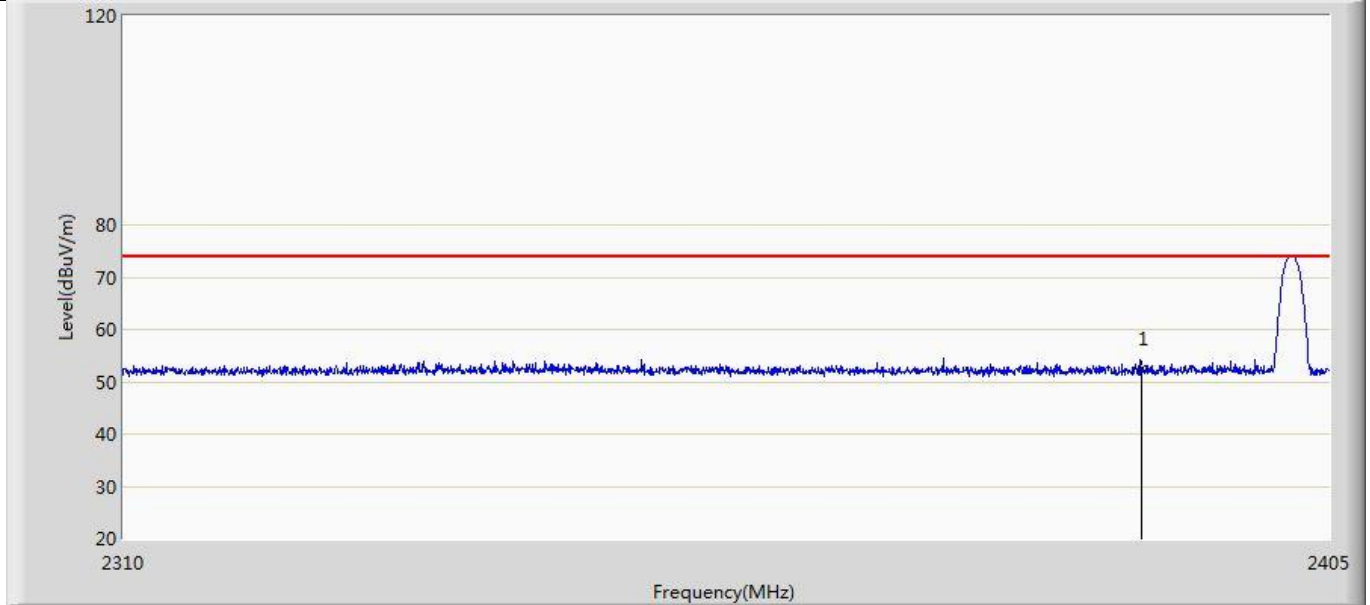
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	40.565	4.161	-13.435	54.000	36.404	AV

Profile: 2150461R	Page No.: 9
Engineer: Juliuszhou	
Site: AC5	Time: 2021/05/14 - 00:36
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by 2DH5	



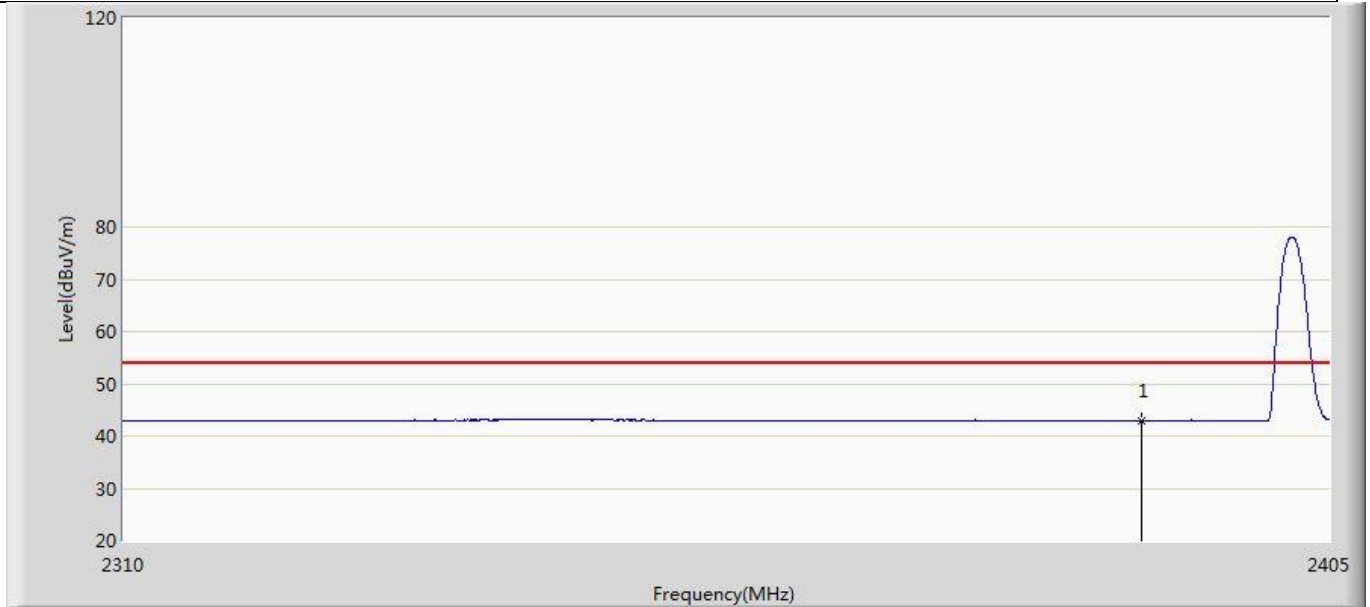
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	51.929	15.573	-22.071	74.000	36.357	PK

Profile: 2150461R	Page No.: 10
Engineer: Juliuszhou	
Site: AC5	Time: 2021/05/14 - 00:38
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by 2DH5	



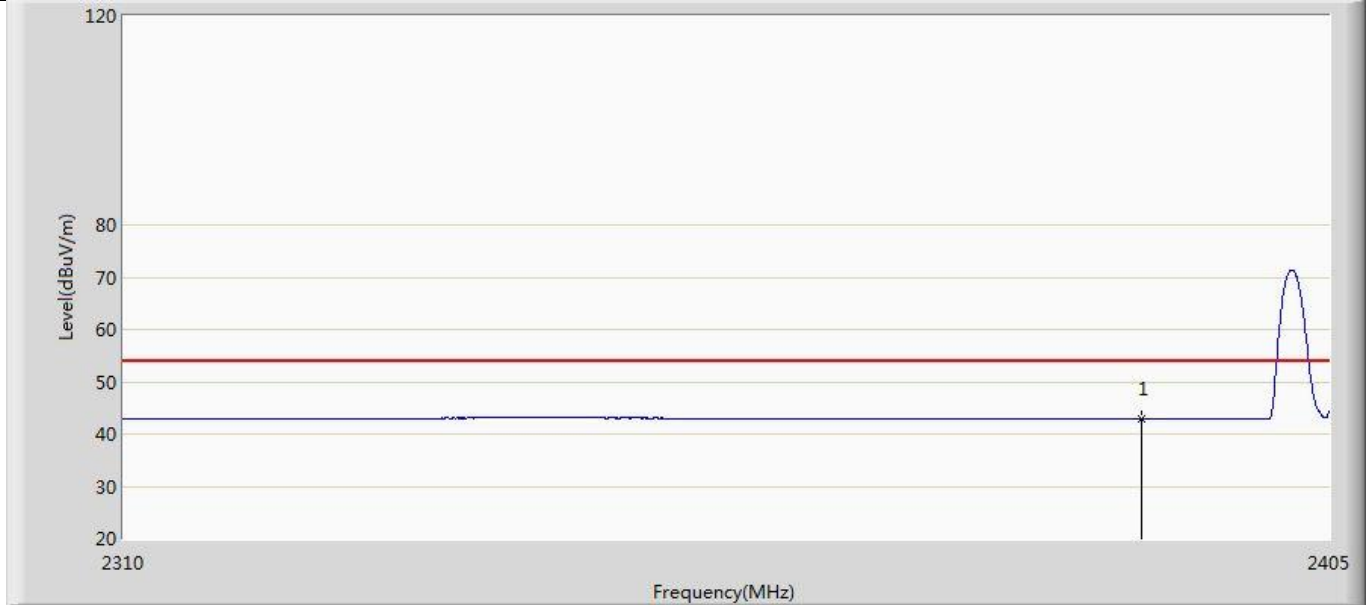
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	52.390	16.034	-21.610	74.000	36.357	PK

Profile: 2150461R	Page No.: 11
Engineer: Juliuszhou	
Site: AC5	Time: 2021/05/14 - 00:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by 2DH5	



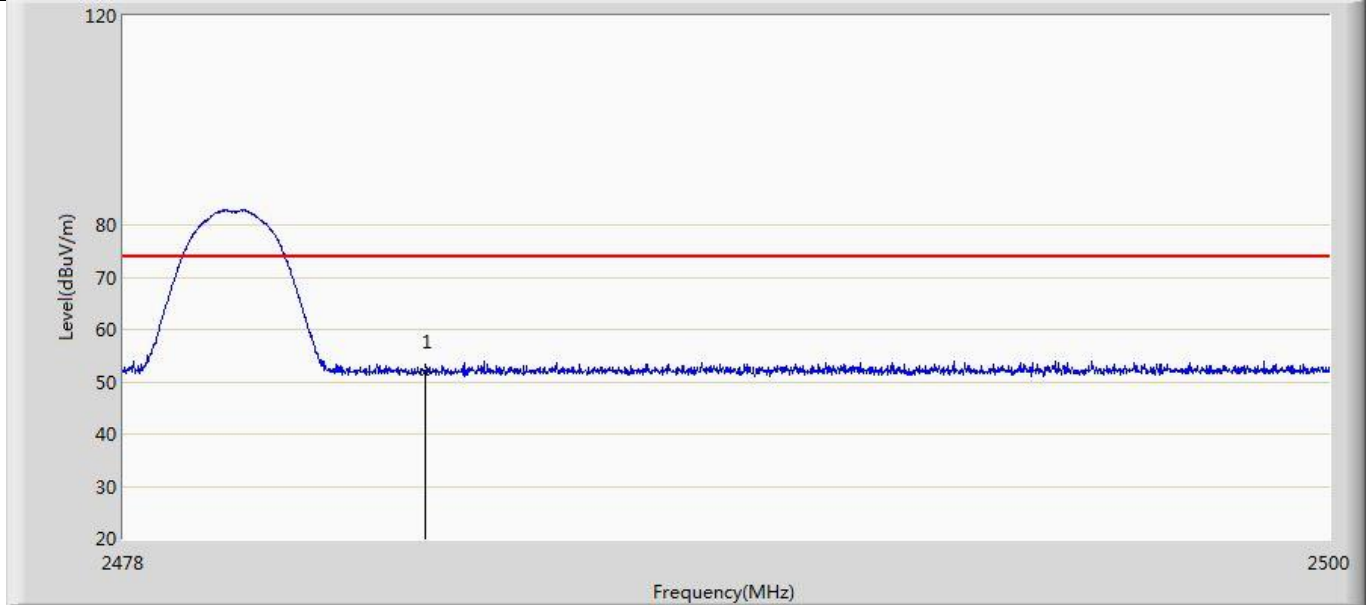
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	42.885	6.529	-11.115	54.000	36.357	AV

Profile: 2150461R	Page No.: 12
Engineer: Juliuszhou	
Site: AC5	Time: 2021/05/14 - 00:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by 2DH5	



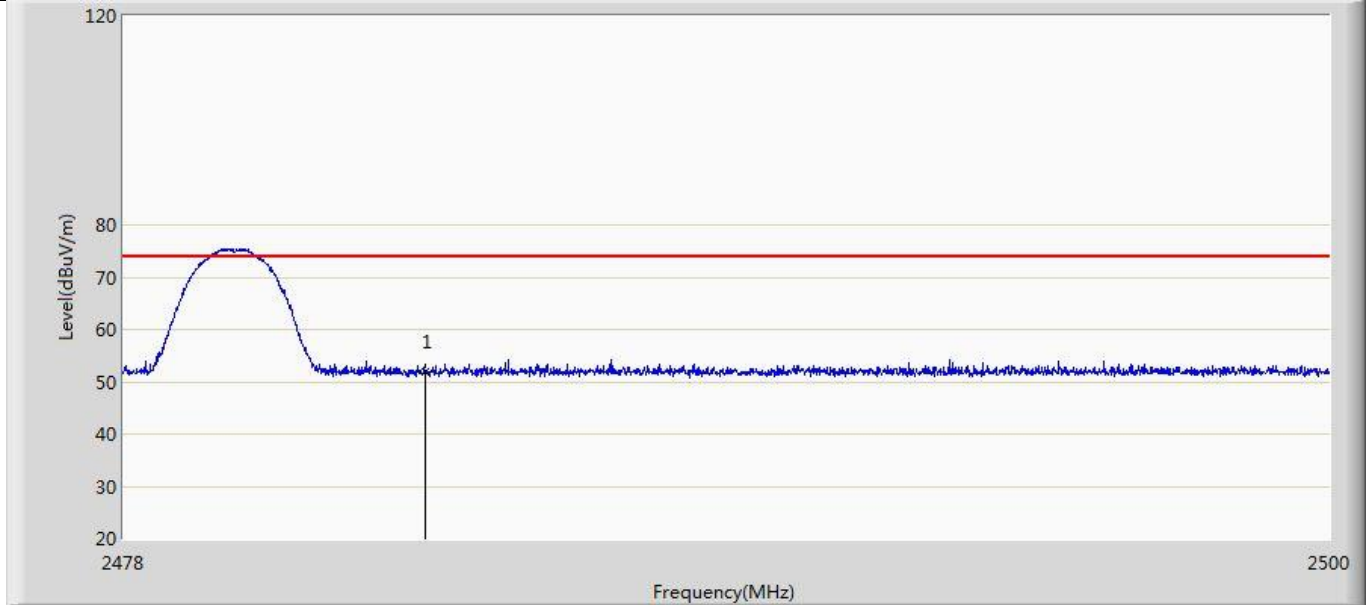
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	42.944	6.588	-11.056	54.000	36.357	AV

Profile: 2150461R	Page No.: 13
Engineer: Juliuszhou	
Site: AC5	Time: 2021/05/14 - 00:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by 2DH5	



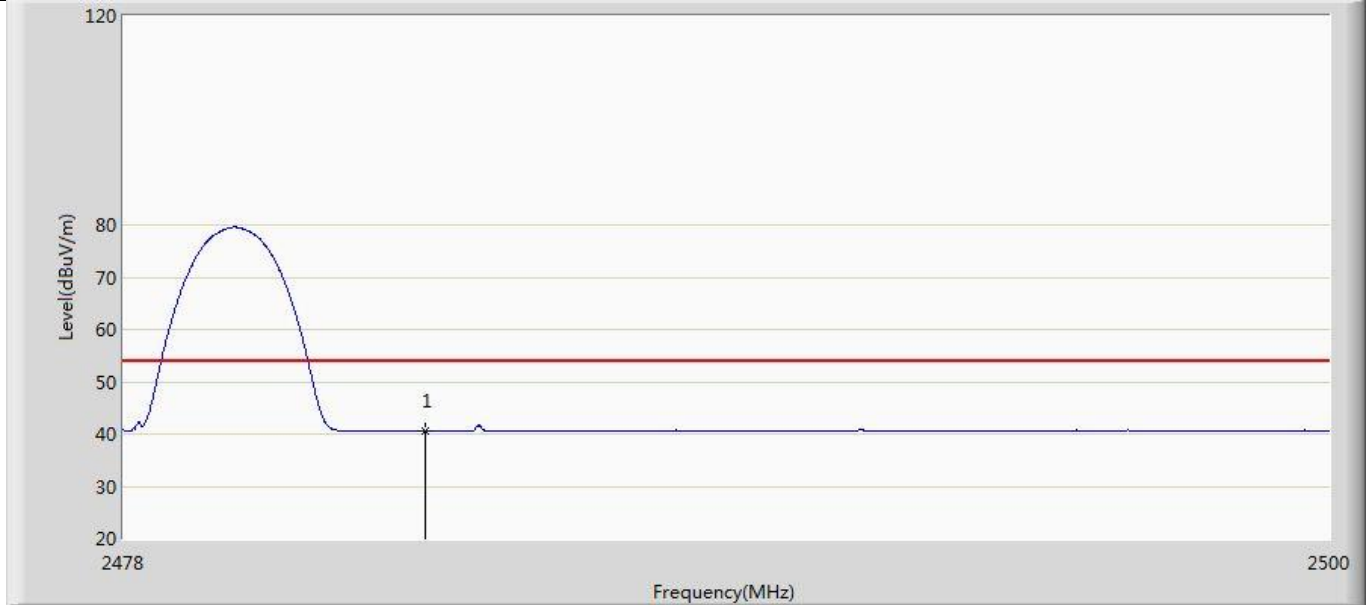
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	52.003	15.599	-21.997	74.000	36.404	PK

Profile: 2150461R	Page No.: 14
Engineer: Juliuszhou	
Site: AC5	Time: 2021/05/14 - 00:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by 2DH5	



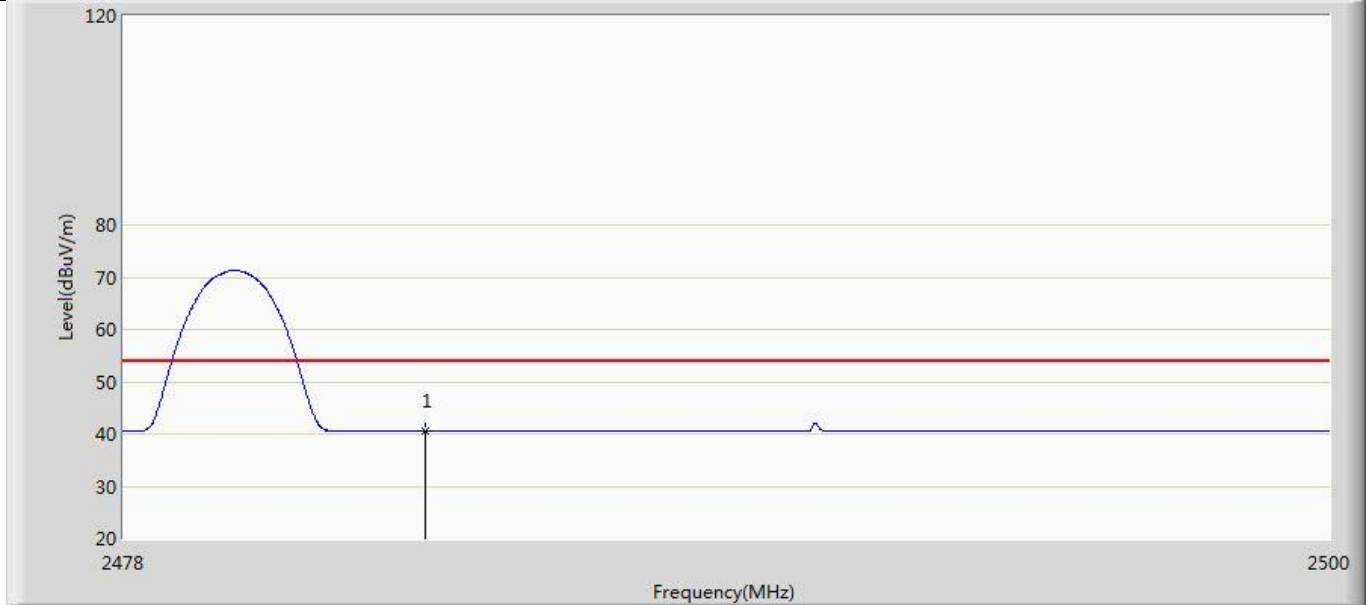
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	52.018	15.614	-21.982	74.000	36.404	PK

Profile: 2150461R	Page No.: 15
Engineer: Juliuszhou	
Site: AC5	Time: 2021/05/14 - 00:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by 2DH5	



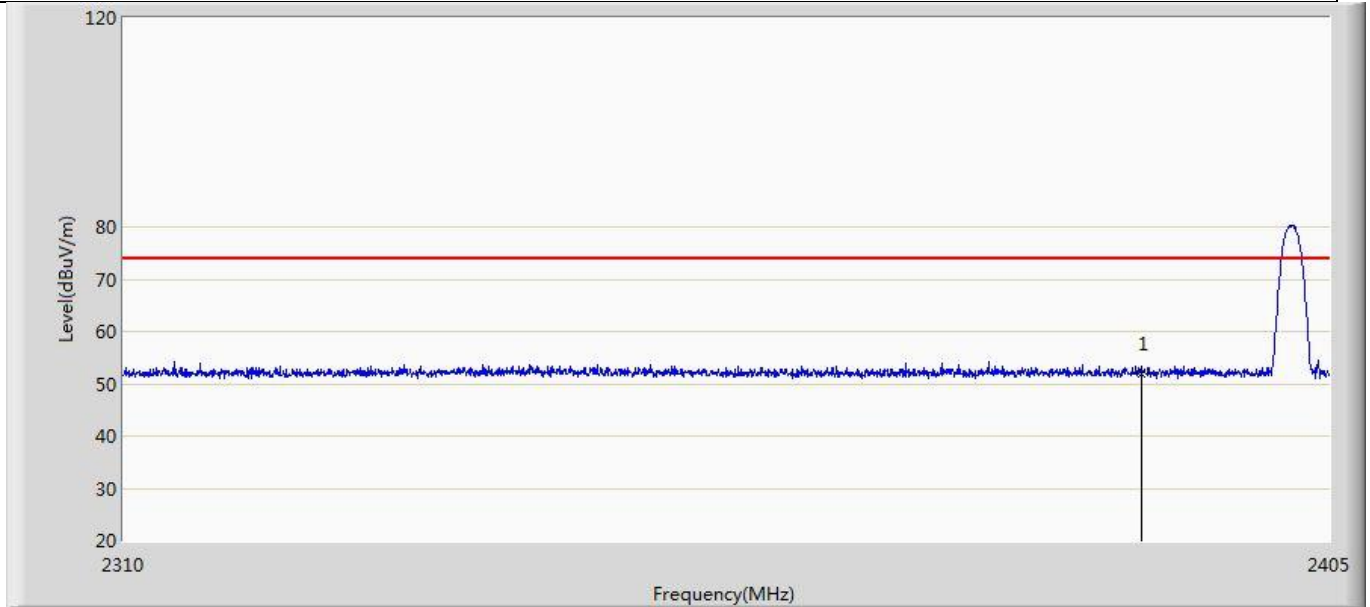
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	40.626	4.222	-13.374	54.000	36.404	AV

Profile: 2150461R	Page No.: 16
Engineer: Juliuszhou	
Site: AC5	Time: 2021/05/14 - 00:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by 2DH5	



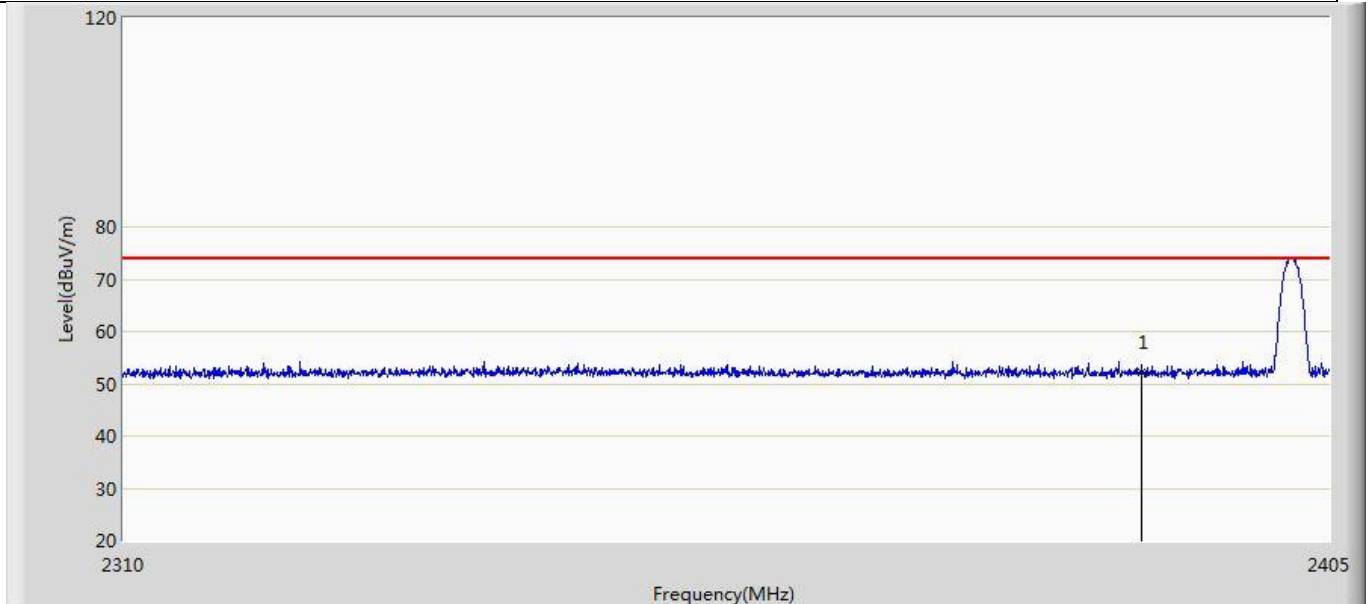
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	40.522	4.118	-13.478	54.000	36.404	AV

Profile: 2150461R	Page No.: 17
Engineer: Juliuszhou	
Site: AC5	Time: 2021/05/14 - 00:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by 3DH5	



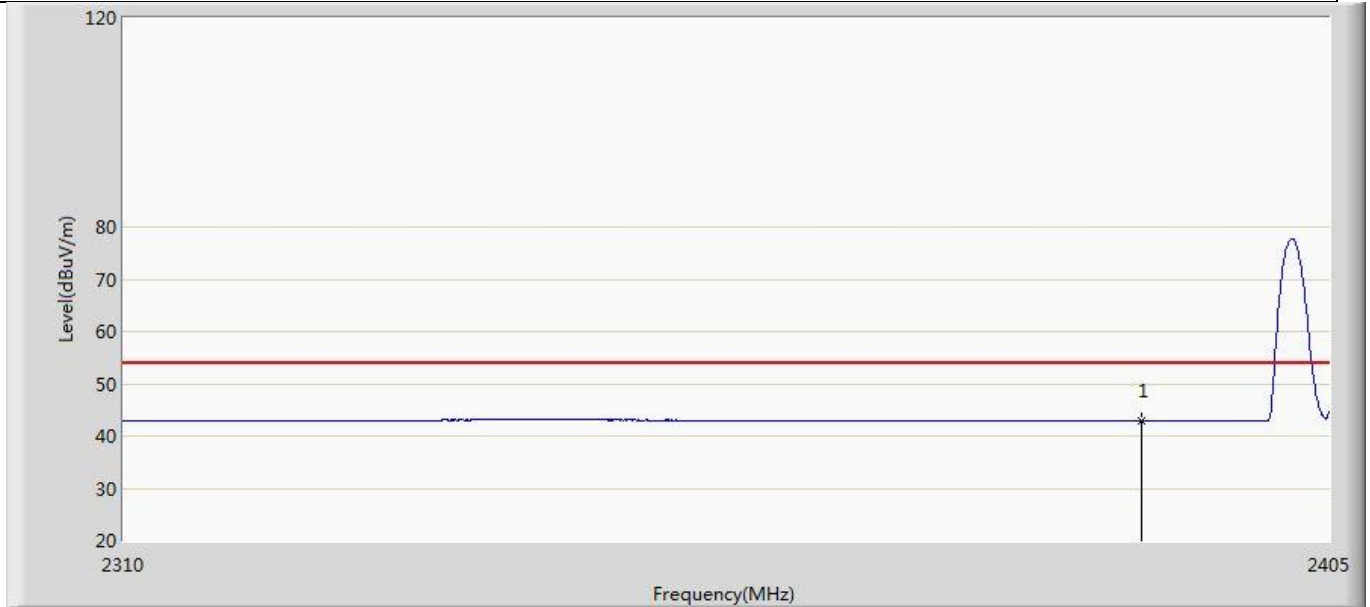
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	51.907	15.551	-22.093	74.000	36.357	PK

Profile: 2150461R	Page No.: 18
Engineer: Juliuszhou	
Site: AC5	Time: 2021/05/14 - 00:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by 3DH5	



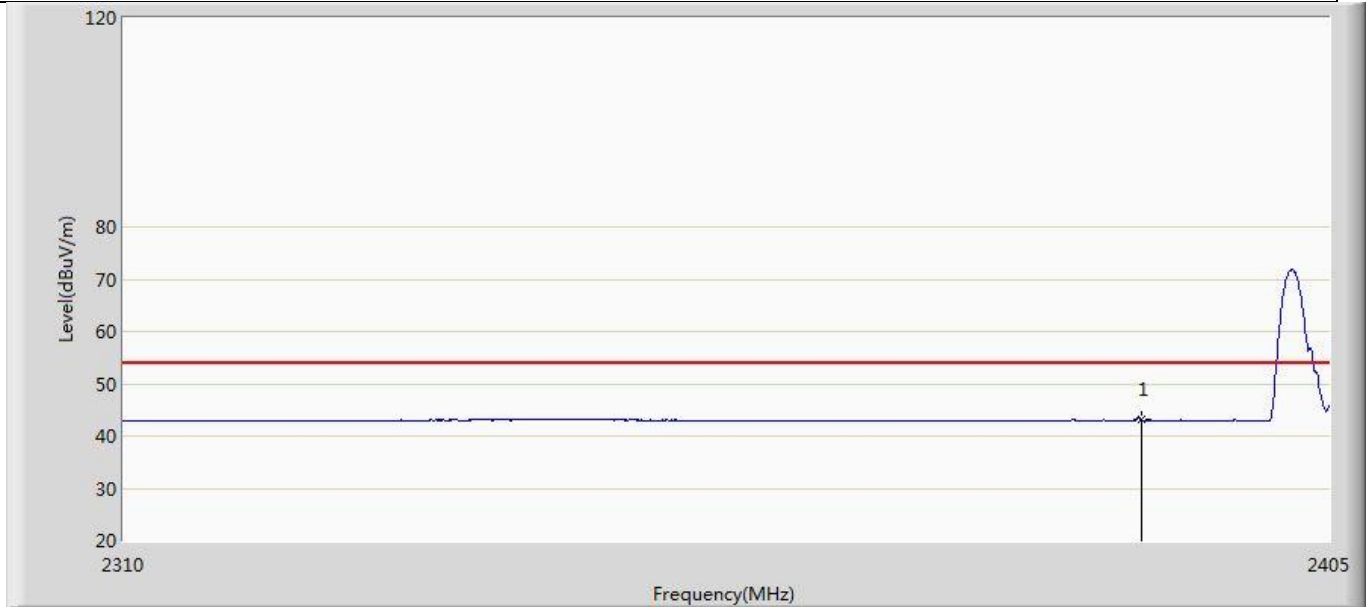
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	52.078	15.722	-21.922	74.000	36.357	PK

Profile: 2150461R	Page No.: 19
Engineer: Juliuszhou	
Site: AC5	Time: 2021/05/14 - 00:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by 3DH5	



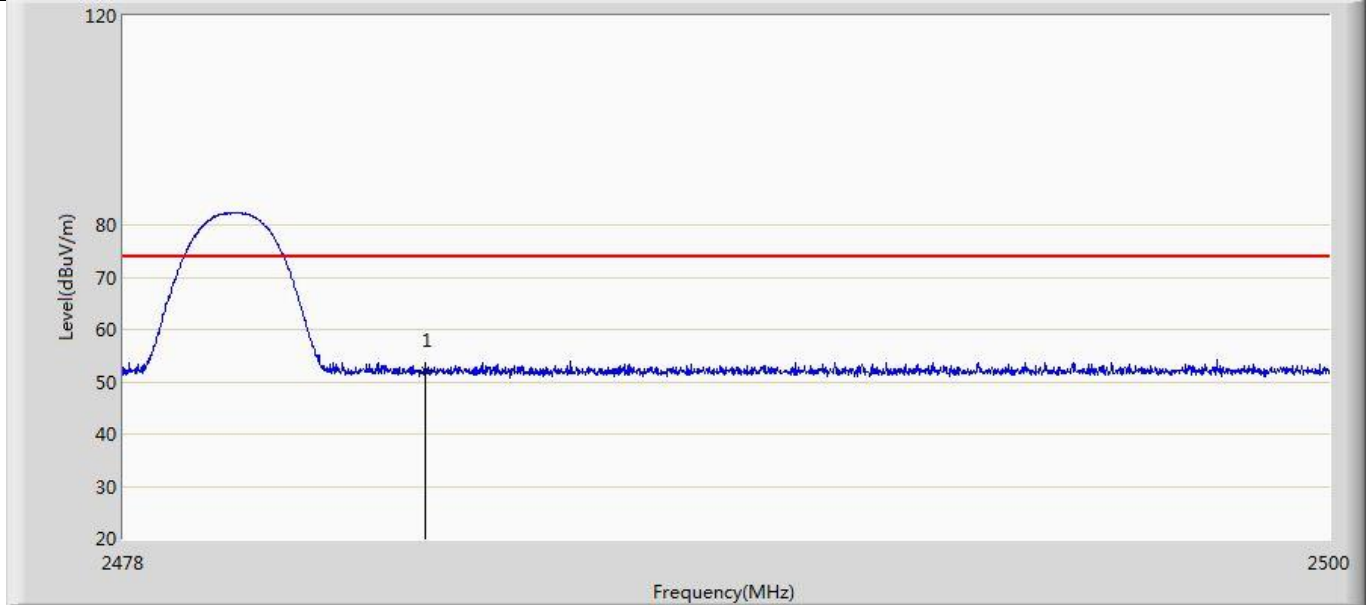
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	42.914	6.558	-11.086	54.000	36.357	AV

Profile: 2150461R	Page No.: 20
Engineer: Juliuszhou	
Site: AC5	Time: 2021/05/14 - 00:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by 3DH5	



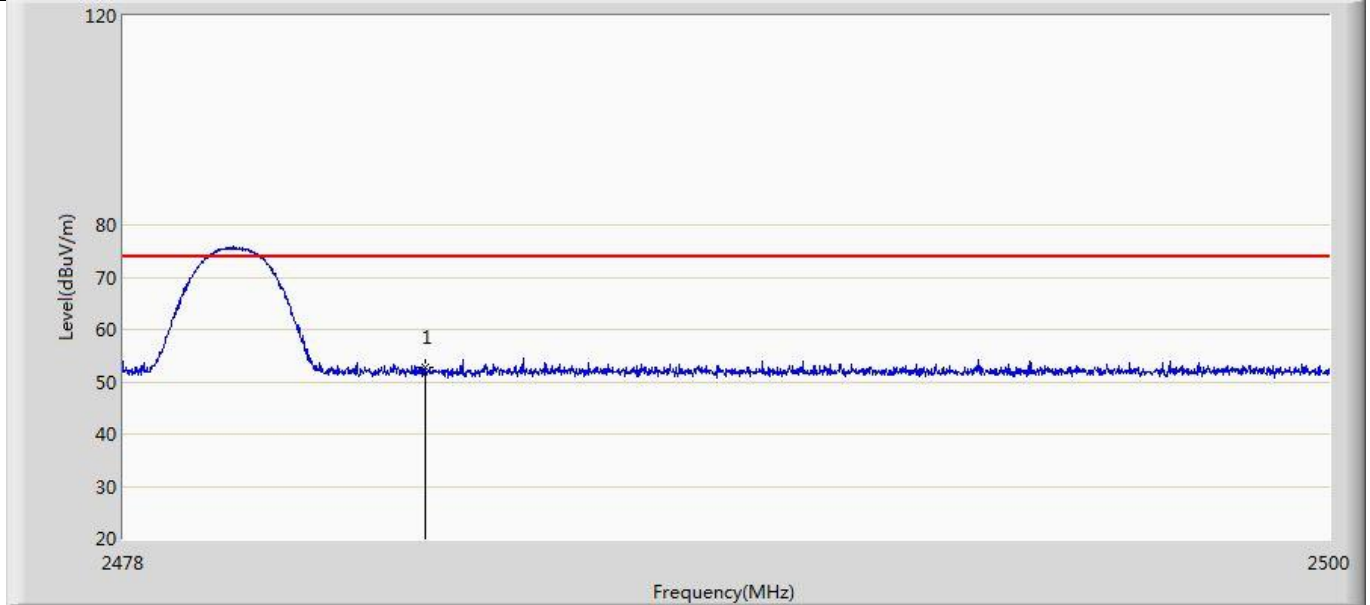
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2390.000	43.097	6.741	-10.903	54.000	36.357	AV

Profile: 2150461R	Page No.: 21
Engineer: Juliuszhou	
Site: AC5	Time: 2021/05/14 - 00:41
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by 3DH5	



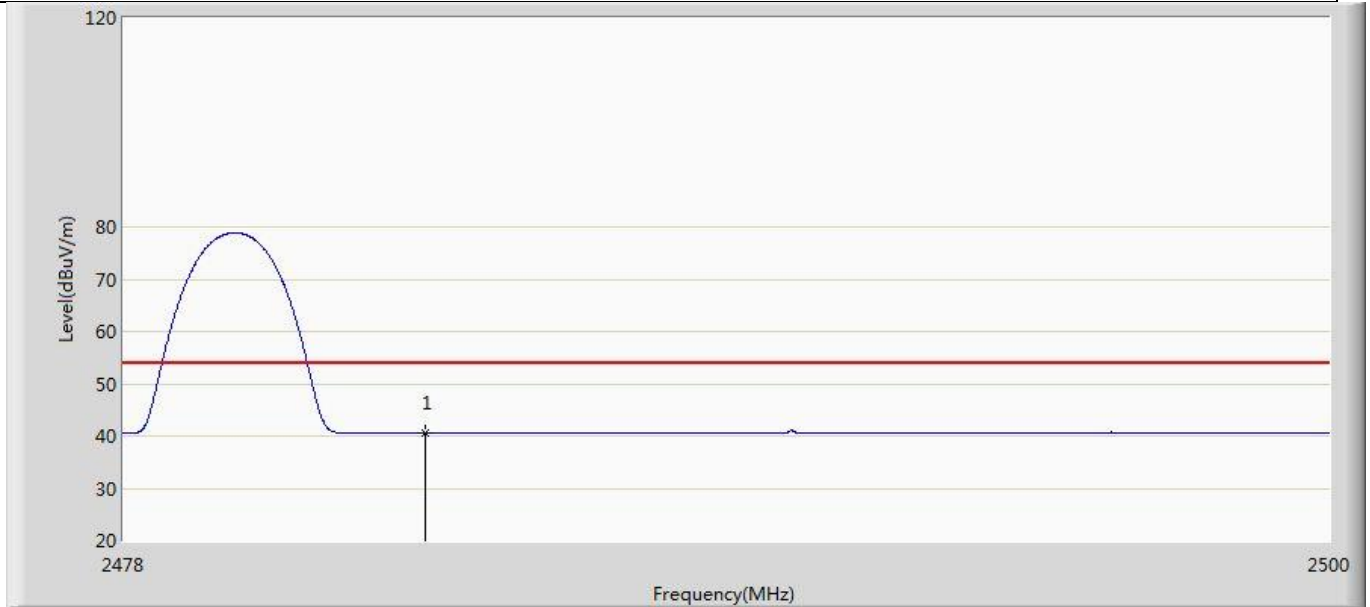
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	52.291	15.887	-21.709	74.000	36.404	PK

Profile: 2150461R	Page No.: 22
Engineer: Juliuszhou	
Site: AC5	Time: 2021/05/14 - 00:41
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CCB01-010BT	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by 3DH5	



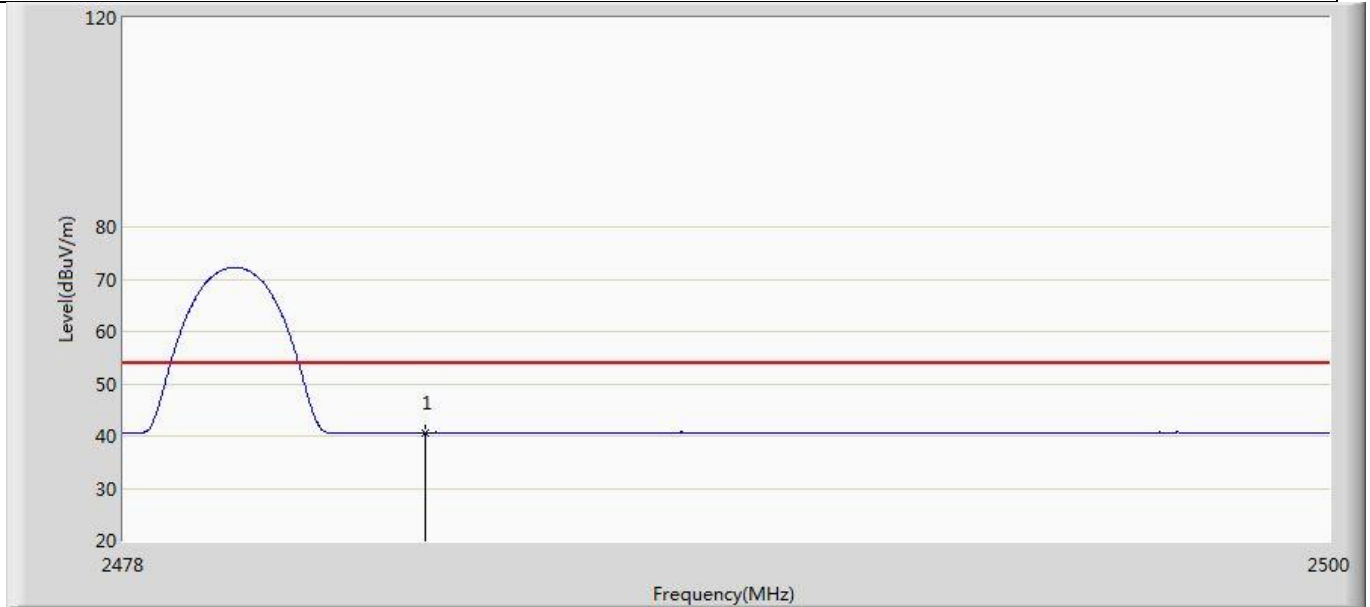
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2483.500	52.767	16.363	-21.233	74.000	36.404	PK

Profile: 2150461R	Page No.: 23
Engineer: Juliuszhou	
Site: AC5	Time: 2021/05/14 - 00:41
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: CCB01-010BT	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	40.662	4.258	-13.338	54.000	36.404	AV

Profile: 2150461R	Page No.: 24
Engineer: Juliuszhou	
Site: AC5	Time: 2021/05/14 - 00:41
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: CCB01-010BT	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	40.517	4.113	-13.483	54.000	36.404	AV

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
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4.11.1 Limit:	
Standard	FCC Part 15 Subpart C Paragraph 15.203
<p>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.</p>	

4.11.2 Antenna Connector Construction:	
<input checked="" type="checkbox"/>	The use of a permanently attached antenna
<input type="checkbox"/>	The antenna use of a unique coupling to the intentional radiator
<input type="checkbox"/>	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 _____