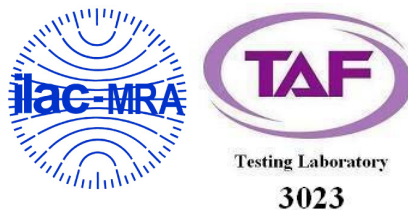


FCC Test Report

Product Name	Remote Control
Model No.	RC-S01
FCC ID	Q3V-RC-S01

Applicant	Nien Made Enterprise Co., Ltd.
Address	23F.-1, No. 98, Shizheng N. 7th Rd., Xitun Dist., Taichung City 407, Taiwan (R.O.C.)

Date of Receipt	May 26, 2022
Issued Date	June 28, 2022
Report No.	2250827R-RFUSOTHV06-A
Report Version	V1.0



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by TAF or any agency of the government.

The test report shall not be reproduced without the written approval of DEKRA Testing and Certification Co., Ltd.

Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Test Report

Issued Date: June 28, 2022

Report No.: 2250827R-RFUSOTHV06-A



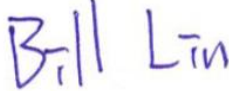
Product Name	Remote Control
Applicant	Nien Made Enterprise Co., Ltd.
Address	23F.-1, No. 98, Shizheng N. 7th Rd., Xitun Dist., Taichung City 407, Taiwan (R.O.C.)
Manufacturer	BRICKCOM CORPORATION
Model No.	RC-S01
FCC ID	Q3V-RC-S01
EUT Rated Voltage	DC 3V (Power by battery)
EUT Test Voltage	DC 3V (Power by battery)
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C ANSI C63.4: 2014, ANSI C63.10: 2013
Test Result	Complied

Documented By :



(Senior Project Specialist / Genie Chang)

Tested By :



(Senior Engineer / Bill Lin)

Approved By :



(Senior Engineer / Alan Chen)

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Appendix 1: EUT Test Photographs

Appendix 2: Product Photos-Please refer to the file: 2250827R-Product Photos

Revision History

Report No.	Version	Description	Issued Date
2250827R-RFUSOTHV06-A	V1.0	Initial issue of report.	June 28, 2022

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	Remote Control
Model No.	RC-S01
FCC ID	Q3V-RC-S01
Frequency Range	2415-2459MHz
Channel Number	3
Type of Modulation	GFSK
Antenna Type	PCB Antenna
Antenna Gain	Refer to the table “Antenna List”
Channel Control	Auto

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	Brickcom	BKM-RC-ANT	PCB Antenna	3.12dBi for 2.4GHz

Note: The antenna of EUT is conform to FCC 15.203.

Center Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 15:	2415 MHz	Channel 39:	2439 MHz	Channel 59:	2459 MHz

Note:

1. The EUT is a Remote Control with a built-in 2.4G wireless transmitter.
2. Regarding to the operation frequency, the lowest, middle, and highest frequency are selected to perform the test.
3. The radiation measurements are performed in X, Y, Z axis positioning. Only the worst case is shown in the report.
4. These tests are conducted on a sample of the equipment for the purpose of demonstrating compliance of transmitter with Part 15 Subpart C Paragraph 15.249 for spread spectrum devices.

Test Mode	Mode 1: Transmit
	Mode 2: Normal mode

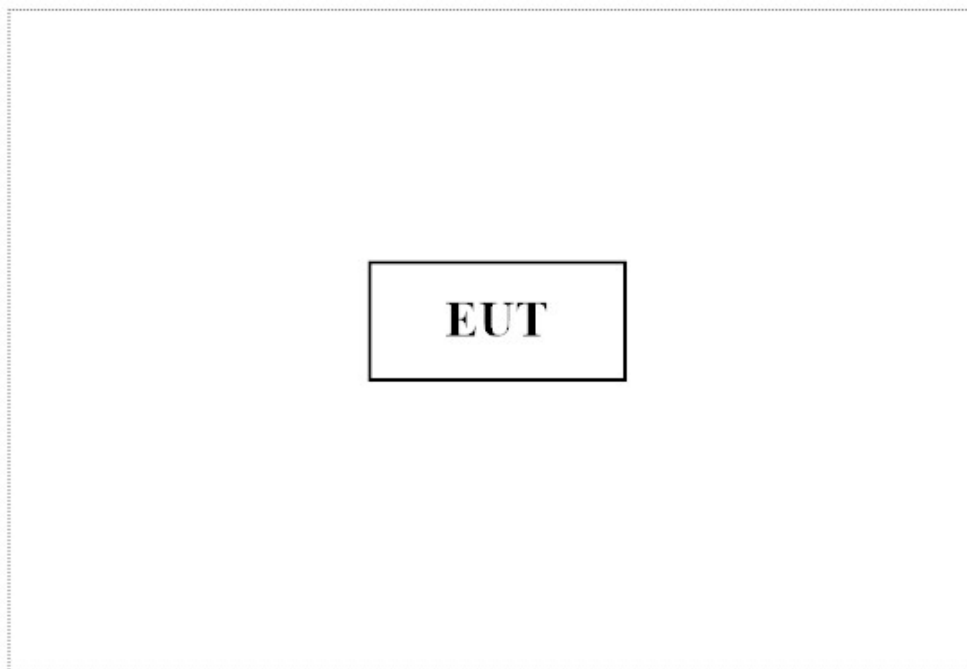
1.2. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product	Manufacturer	Model No.	Serial No.	Power Cord
N/A				

Product	Manufacturer	Model No.	Serial No.	Power Cord
N/A				

1.3. Configuration of Test System



1.4. EUT Exercise Software

- (1) Setup the EUT as shown in Section 1.3.
- (2) Provide the DC Power Source.
- (3) Start the continuous transmit.
- (4) Verify that the EUT works properly.

1.5. Test Facility

Ambient conditions in the laboratory:

Performed Item	Items	Required	Actual
Radiated Emission	Temperature (°C)	10~40 °C	25.6 °C
	Humidity (%RH)	10~90 %	58.2 %

USA : FCC Registration Number: TW0033

Canada : CAB Identifier Number: TW3023 / Company Number: 26930

Site Description : Accredited by TAF
Accredited Number: 3023

Test Laboratory : DEKRA Testing and Certification Co., Ltd
Address : No. 5-22, Ruishukeng Linkou District, New Taipei City,
24451, Taiwan

Performed Location : No. 26, Huaya 1st Rd., Guishan Dist., Taoyuan City
333411, Taiwan, R.O.C.

Phone number : +886-3-275-7255
Fax number : +866-3-327-8031
Email address : info.tw@dekra.com
Website : <http://www.dekra.com.tw>

1.6. List of Test Equipment

For Conduction measurements /HY-SR01

	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due. Date
	EMI Test Receiver	R&S	ESR7	101601	2021/06/19	2022/06/18
	Two-Line V-Network	R&S	ENV216	101306	2022/05/23	2023/05/22
	Two-Line V-Network	R&S	ENV216	101307	2022/05/04	2023/05/03
	Coaxial Cable	SUHNER	RG400_BNC	RF001	2021/05/24	2022/05/23

Note:

1. All equipments are calibrated every one year.
2. The test instruments marked with "X" are used to measure the final test results.
3. Test Software version : E3 210616 dekra V9.

For Conducted measurements /HY-SR02

	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due. Date
X	Spectrum Analyzer	R&S	FSV40	101149	2022/03/25	2023/03/24
	Peak Power Analyzer	KEYSIGHT	8900B	MY51000539	2021/06/07	2022/06/06
	Power Sensor	KEYSIGHT	N1923A	MY59240002	2021/05/17	2022/05/16
	Power Sensor	KEYSIGHT	N1923A	MY59240003	2021/05/17	2022/05/16

Note:

1. All equipments are calibrated every one year.
2. The test instruments marked with "X" are used to measure the final test results.
3. Test Software version : RF Conducted Test Tools R3 V3.0.1.19.

For Radiated measurements /HY-CB03

	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due. Date
	Loop Antenna	AMETEK	HLA6121	49611	2022/03/18	2023/03/17
X	Bi-Log Antenna	SCHWARZBECK	VULB9168	9168-675	2021/08/11	2022/08/10
X	Horn Antenna	ETS-Lindgren	3117	00227700	2021/10/12	2022/10/11
X	Horn Antenna	Com-Power	AH-840	101100	2021/10/04	2022/10/03
X	Pre-Amplifier	SGH	0301	20211007-10	2022/02/22	2023/02/21
X	Pre-Amplifier	SGH	PRAMP118	20200202	2022/03/23	2023/03/22
X	Pre-Amplifier	EMCI	EMC05820SE	980310	2021/07/07	2022/07/06
	Pre-Amplifier	EMCI	EMC184045SE	980369		
	Coaxial Cable	EMCI	EMC102-KM-KM-600	1160314	2022/05/12	2023/05/11
	Coaxial Cable	EMCI	EMC102-KM-KM-7000	170242		
X	Filter	MICRO TRONICS	BRM50702	G251	2021/09/16	2022/09/15
	Filter	MICRO TRONICS	BRM50716	G188	2021/09/16	2022/09/15
X	EMI Test Receiver	R&S	ESR	102793	2021/12/15	2022/12/14
X	Spectrum Analyzer	R&S	FSV3044	101114	2022/02/11	2023/02/10
	Coaxial Cable	SGH	SGH18	2021005-3		
	Coaxial Cable	SGH	SGH18	202108-4		
	Coaxial Cable	SGH	SGH18	202110223-1		
X	Coaxial Cable	SGH	HA800	GD20110222-3	2022/01/05	2023/01/04

Note:

1. All equipments are calibrated every one year.
2. The test instruments marked with "X" are used to measure the final test results.
3. Test Software version : E3 210616 dekra V9.

1.7. Uncertainty

Uncertainties have been calculated according to the DEKRA internal document.

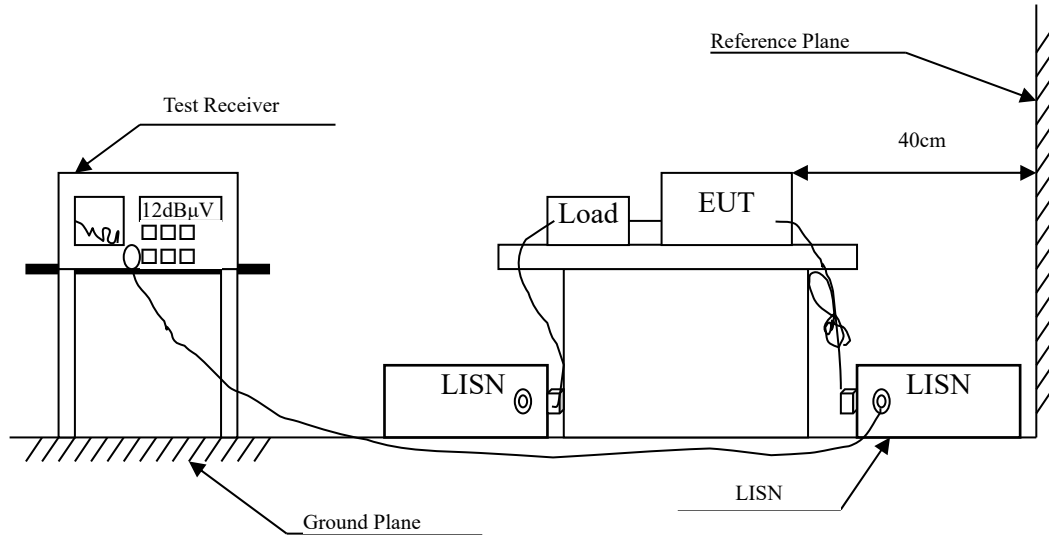
The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%.

Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Test item	Uncertainty	
	Under 1GHz	Above 1GHz
Radiated Emission	± 4.06 dB	± 3.73 dB
Band Edge	± 4.06 dB	± 3.73 dB
Duty Cycle	± 2.31 ms	

2. Conducted Emission

2.1. Test Setup



2.2. Limits

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

Remarks: In the above table, the tighter limit applies at the band edges.

2.3. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2014 on conducted measurement.

Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

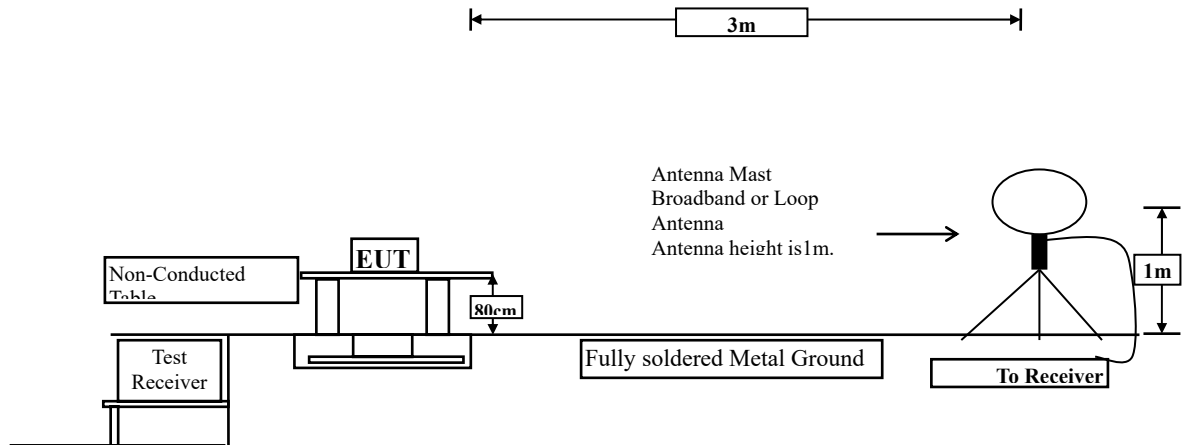
2.4. Test Result of Conducted Emission

Owing to the EUT use DC battery, this test item is not performed.

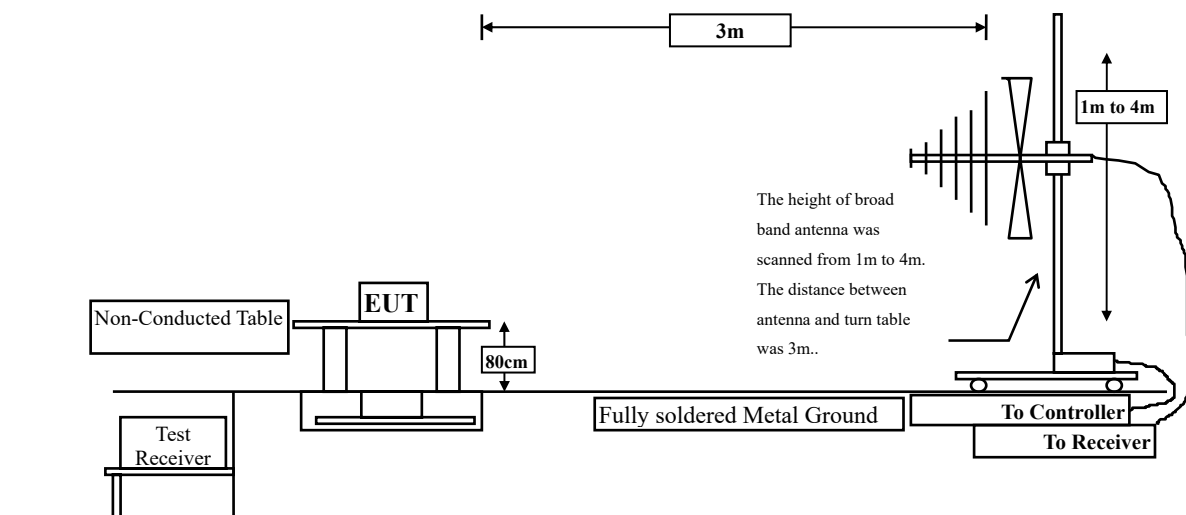
3. Radiated Emission

3.1. Test Setup

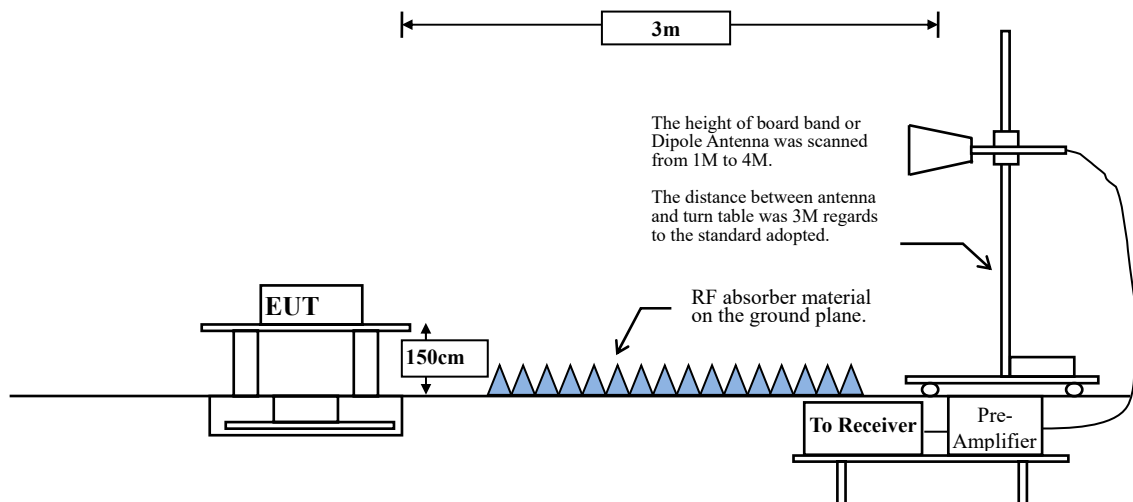
Radiated Emission Under 30MHz



Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



3.2. Limits

➤ Fundamental and Harmonics Emission Limits

FCC Part 15 Subpart C Paragraph 15.249 Limits				
Frequency MHz	Field Strength of Fundamental		Field Strength of Harmonics	
	(mV/m @3m)	(dBμV /m @3m)	(uV/m @3m)	(dBμV /m @3m)
902-928	50	94	500	54
2400-2483.5	50	94	500	54
5725-5875	50	94	500	54
24000-24250	250	108	2500	68

Remarks : 1. RF Voltage (dBμV /m) = 20 log RF Voltage (uV/m)
 2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

➤ General Radiated Emission Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209(a) Limits		
Frequency MHz	Field strength (microvolts/meter)	Measurement distance (meter)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remarks: E field strength (dBμV /m) = 20 log E field strength (uV/m)

3.3. Test Procedure

The EUT was setup according to ANSI C63.10, 2013 and tested compliance to FCC 47CFR 15.249 requirements.

Measuring the frequency range below 1GHz, the EUT is placed on a turn table which is 0.8 meter above ground, when measuring the frequency range above 1GHz, the EUT is placed on a turn table which is 1.5 meter above ground.

The turn table is rotated 360 degrees to determine the position of the maximum emission level.

The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned between 1 meter and 4 meters to find out the maximum emission level.

This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10: 2013 on radiated measurement.

The resolution bandwidth below 30MHz setting on the field strength meter is 9kHz and 30MHz~1GHz is 120kHz and above 1GHz is 1MHz.

Radiated emission measurements below 30MHz are made using Loop Antenna and 30MHz~1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

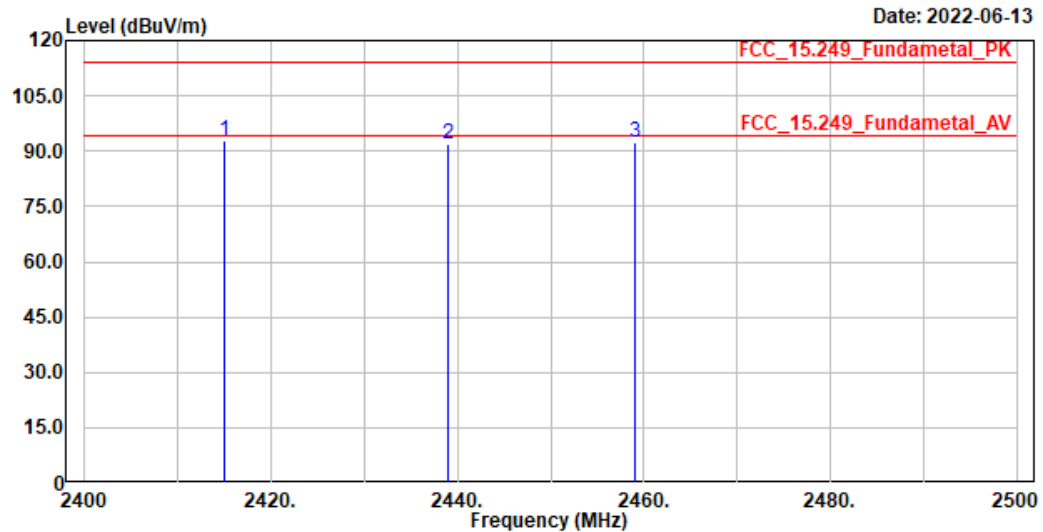
The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna.

The measurement frequency range from 9kHz - 10th Harmonic of fundamental was investigated.

3.4. Test Result of Radiated Emission

Site :HY-CB03
 Condition :3m ,Horizontal
 Mode :TX_Wirless_X
 Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2415.000	92.99	113.97	-20.98	80.00	12.99	Peak
2	2439.000	91.80	113.97	-22.17	78.78	13.02	Peak
3	2459.000	92.50	113.97	-21.47	79.46	13.04	Peak

Note:

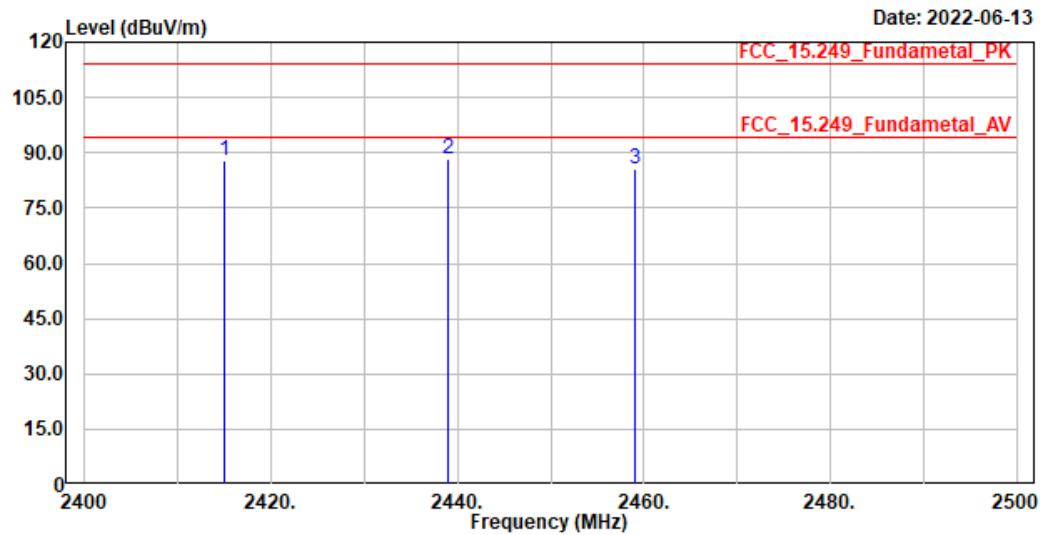
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

Frequency (MHz)	Peak Measurement (dBuV/m)	Duty Cycle Factor (dB)	Average Measurement (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)
2415	92.99	-40.772	52.218	-41.752	93.970
2439	91.8	-40.772	51.028	-42.942	93.970
2459	92.5	-40.772	51.728	-42.242	93.970

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 5.

Site :HY-CB03
 Condition :3m ,Vertical
 Mode :TX_Wirless_X
 Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2415.000	87.94	113.97	-26.03	74.95	12.99	Peak
2	2439.000	88.38	113.97	-25.59	75.36	13.02	Peak
3	2459.000	85.40	113.97	-28.57	72.36	13.04	Peak

Note:

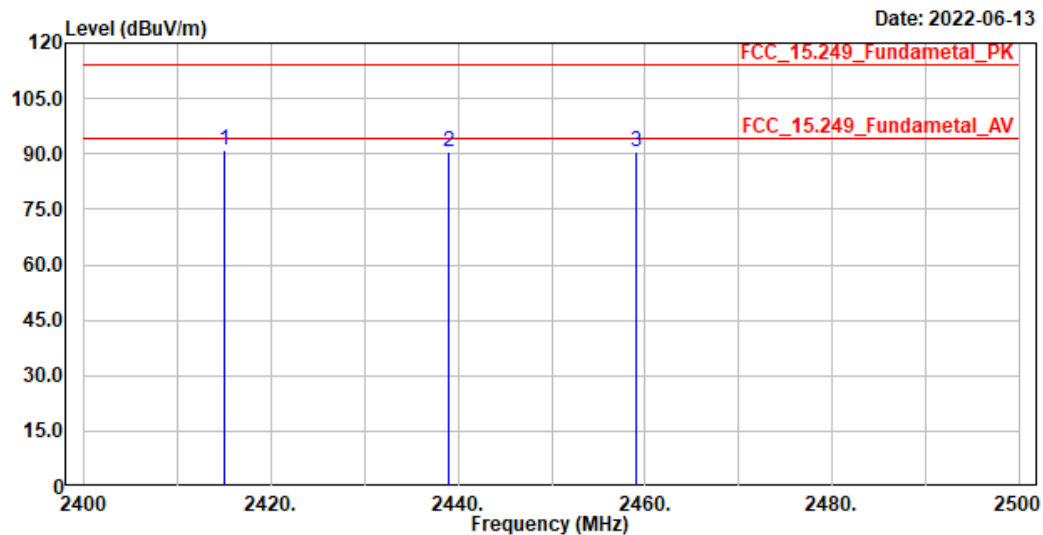
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

Frequency (MHz)	Peak Measurement (dBμV/m)	Duty Cycle Factor (dB)	Average Measurement (dBμV/m)	Margin (dB)	Average Limit (dBμV/m)
2415	87.94	-40.772	47.168	-46.802	93.970
2439	88.38	-40.772	47.608	-46.362	93.970
2459	85.4	-40.772	44.628	-49.342	93.970

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 5.

Site :HY-CB03
 Condition :3m ,Horizontal
 Mode :TX_Wirless_Y
 Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2415.000	91.10	113.97	-22.87	78.11	12.99	Peak
2	2439.000	90.35	113.97	-23.62	77.33	13.02	Peak
3	2459.000	90.54	113.97	-23.43	77.50	13.04	Peak

Note:

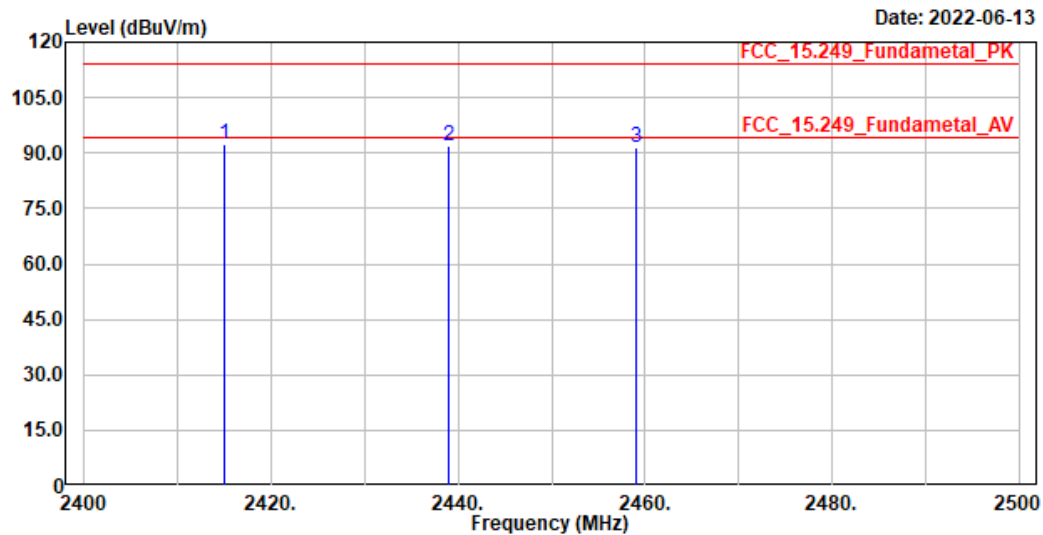
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

Frequency (MHz)	Peak Measurement (dBμV/m)	Duty Cycle Factor (dB)	Average Measurement (dBμV/m)	Margin (dB)	Average Limit (dBμV/m)
2415	91.1	-40.772	50.328	-43.642	93.970
2439	90.35	-40.772	49.578	-44.392	93.970
2459	90.54	-40.772	49.768	-44.202	93.970

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 5.

Site :HY-CB03
 Condition :3m ,Vertical
 Mode :TX_Wirless_Y
 Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2415.000	92.38	113.97	-21.59	79.39	12.99	Peak
2	2439.000	92.09	113.97	-21.88	79.07	13.02	Peak
3	2459.000	91.26	113.97	-22.71	78.22	13.04	Peak

Note:

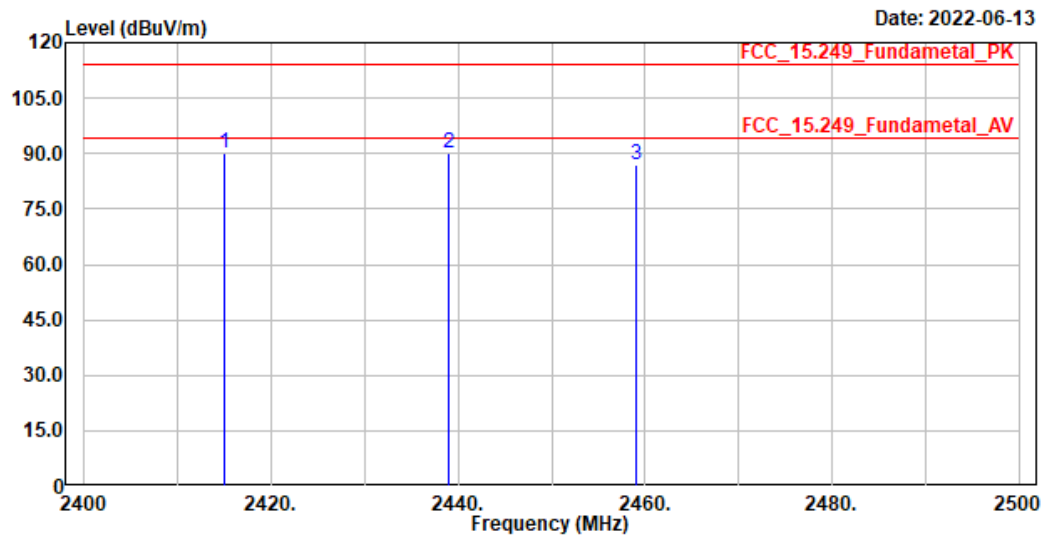
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

Frequency (MHz)	Peak Measurement (dBμV/m)	Duty Cycle Factor (dB)	Average Measurement (dBμV/m)	Margin (dB)	Average Limit (dBμV/m)
2415	92.38	-40.772	51.608	-42.362	93.970
2439	92.09	-40.772	51.318	-42.652	93.970
2459	91.26	-40.772	50.488	-43.482	93.970

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 5.

Site :HY-CB03
 Condition :3m ,Horizontal
 Mode :TX_Wirless_Z
 Test BY :Jing Chang



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	Line	Limit	Level		
			dBuV/m	dB	dBuV	dB	
1	2415.000	90.29	113.97	-23.68	77.30	12.99	Peak
2	2439.000	90.31	113.97	-23.66	77.30	13.01	Peak
3	2459.000	87.01	113.97	-26.96	73.97	13.04	Peak

Note:

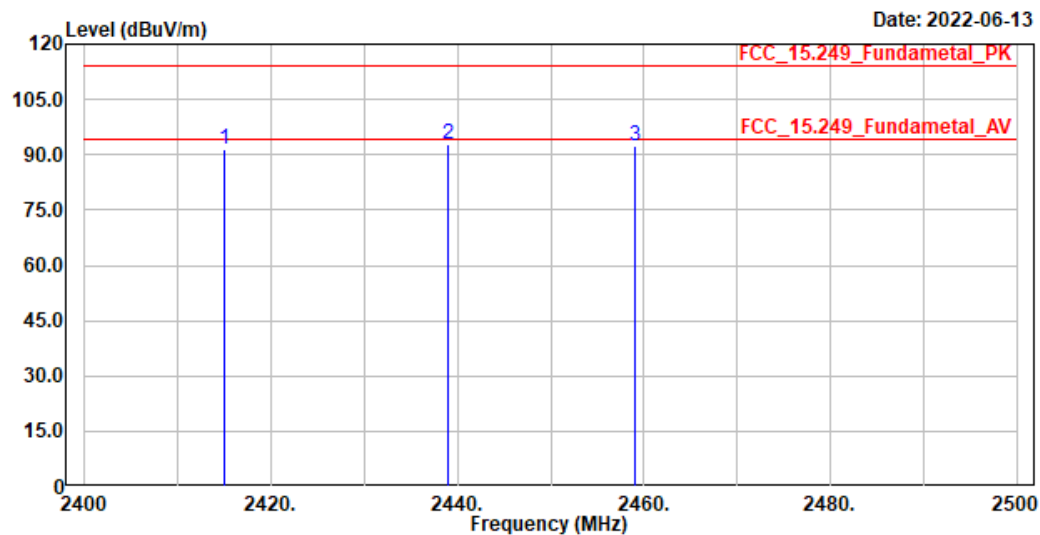
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

Frequency (MHz)	Peak Measurement (dBμV/m)	Duty Cycle Factor (dB)	Average Measurement (dBμV/m)	Margin (dB)	Average Limit (dBμV/m)
2415	90.29	-40.772	49.518	-44.452	93.970
2439	90.31	-40.772	49.538	-44.432	93.970
2459	87.01	-40.772	46.238	-47.732	93.970

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 5.

Site :HY-CB03
 Condition :3m ,Vertical
 Mode :TX_Wirless_Z
 Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2415.000	91.64	113.97	-22.33	78.65	12.99	Peak
2	2439.000	92.61	113.97	-21.36	79.59	13.02	Peak
3	2459.000	92.37	113.97	-21.60	79.33	13.04	Peak

Note:

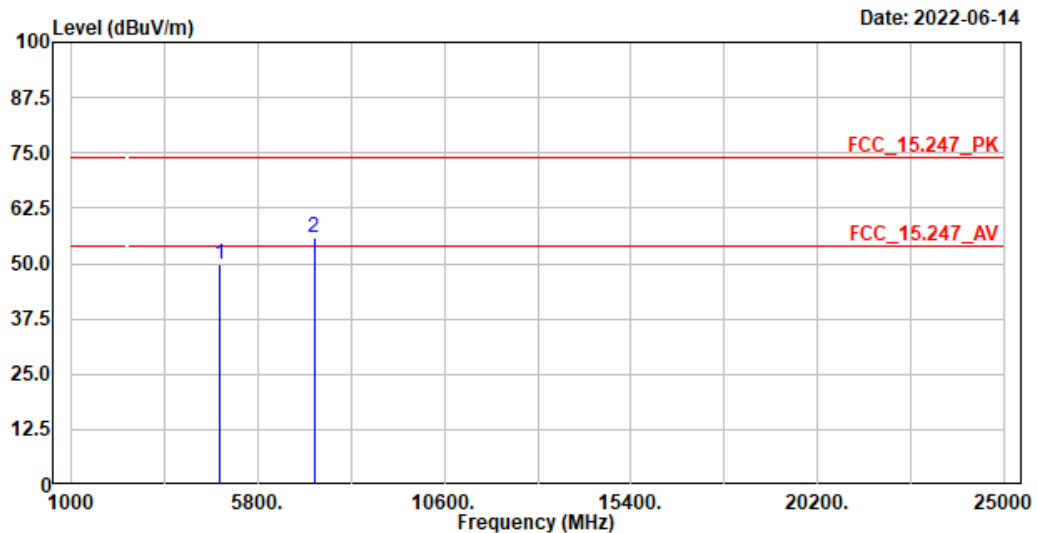
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

Frequency (MHz)	Peak Measurement (dBμV/m)	Duty Cycle Factor (dB)	Average Measurement (dBμV/m)	Margin (dB)	Average Limit (dBμV/m)
2415	91.64	-40.772	50.868	-43.102	93.970
2439	92.61	-40.772	51.838	-42.132	93.970
2459	92.37	-40.772	51.598	-42.372	93.970

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 5.

Site :HY-CB03
 Condition :3m ,HORIZONTAL
 Mode :TX_2415MHz
 Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4830.000	49.77	74.00	-24.23	48.90	0.87	Peak
2	7245.000	56.00	74.00	-18.00	52.03	3.97	Peak

Note:

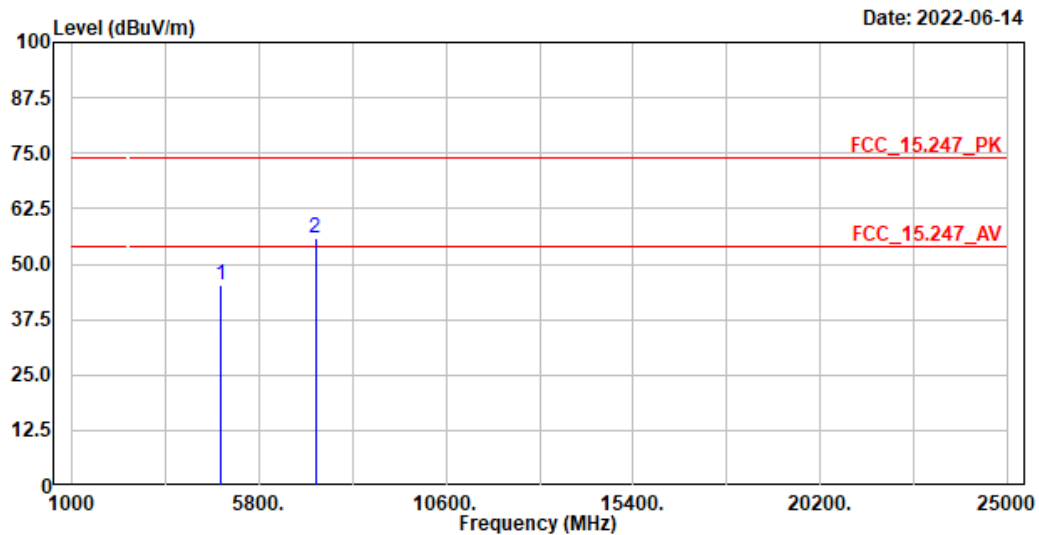
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

Frequency (MHz)	Peak Measurement (dBμV/m)	Duty Cycle Factor (dB)	Average Measurement (dBμV/m)	Margin (dB)	Average Limit (dBμV/m)
7245	56	-40.772	15.228	-38.772	54.000

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 5.

Site :HY-CB03
 Condition :3m ,VERTICAL
 Mode :TX_2415MHz
 Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4830.000	45.18	74.00	-28.82	44.31	0.87	Peak
2	7245.000	55.69	74.00	-18.31	51.72	3.97	Peak

Note:

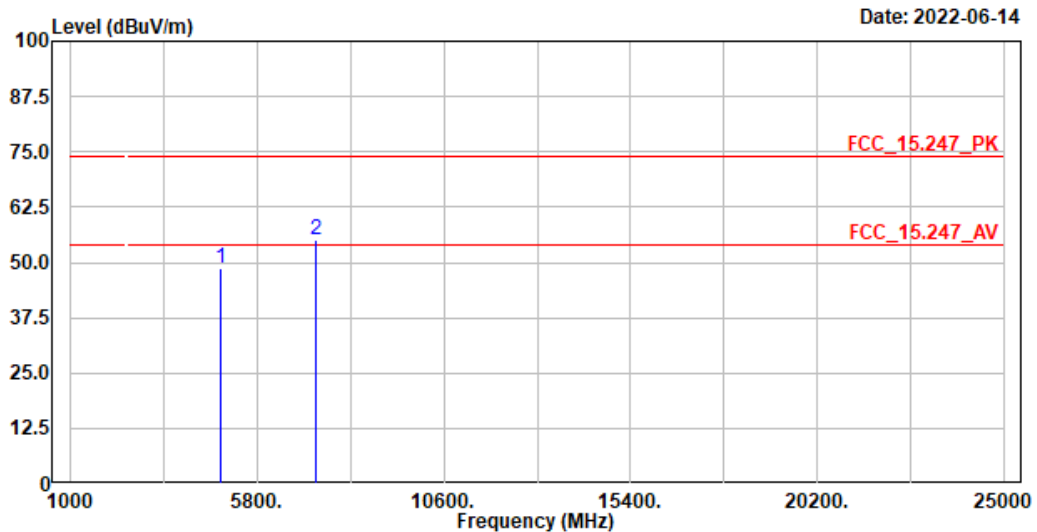
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

Frequency (MHz)	Peak Measurement (dBμV/m)	Duty Cycle Factor (dB)	Average Measurement (dBμV/m)	Margin (dB)	Average Limit (dBμV/m)
7245	55.69	-40.772	14.918	-39.082	54.000

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 5.

Site :HY-CB03
 Condition :3m ,HORIZONTAL
 Mode :TX_2439MHz
 Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4878.000	48.49	74.00	-25.51	47.60	0.89	Peak
2	7317.000	54.93	74.00	-19.07	50.96	3.97	Peak

Note:

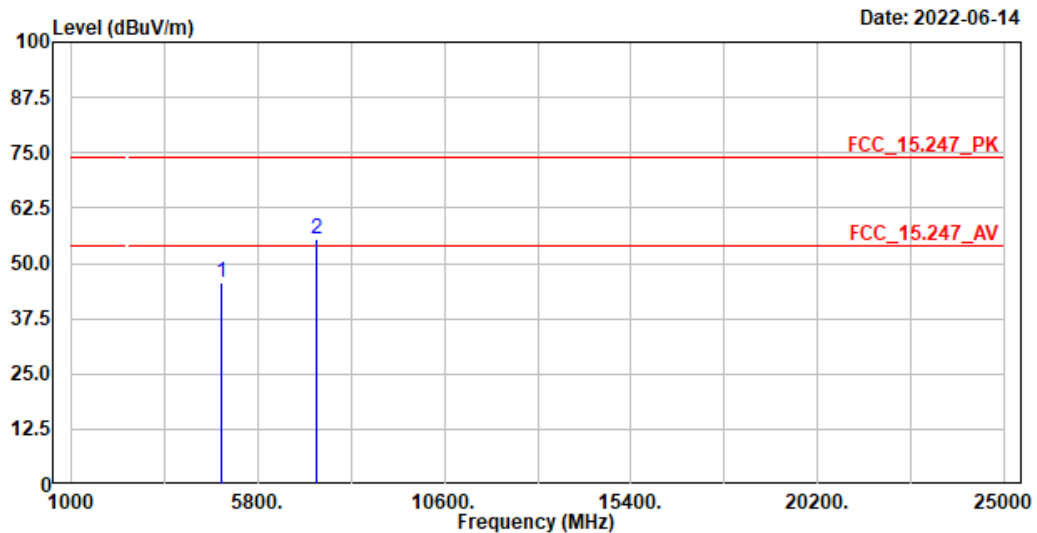
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

Frequency (MHz)	Peak Measurement (dBμV/m)	Duty Cycle Factor (dB)	Average Measurement (dBμV/m)	Margin (dB)	Average Limit (dBμV/m)
7317	54.93	-40.772	14.158	-39.842	54.000

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 5.

Site :HY-CB03
 Condition :3m ,VERTICAL
 Mode :TX_2439MHz
 Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4878.000	45.51	74.00	-28.49	44.63	0.88	Peak
2	7317.000	55.32	74.00	-18.68	51.35	3.97	Peak

Note:

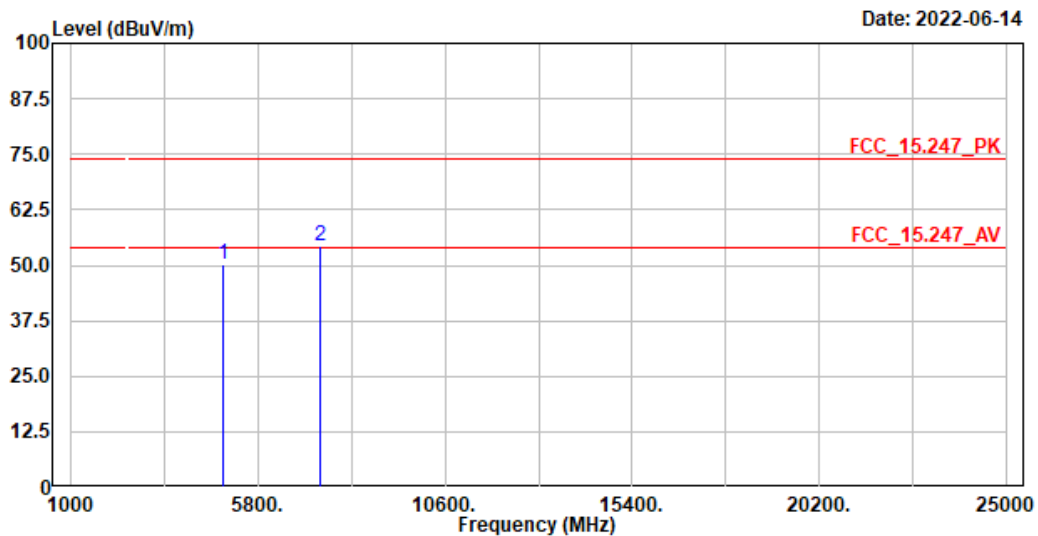
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

Frequency (MHz)	Peak Measurement (dBμV/m)	Duty Cycle Factor (dB)	Average Measurement (dBμV/m)	Margin (dB)	Average Limit (dBμV/m)
7317	55.32	-40.772	14.548	-39.452	54.000

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 5.

Site :HY-CB03
 Condition :3m ,HORIZONTAL
 Mode :TX_2459MHz
 Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4918.000	50.09	74.00	-23.91	49.12	0.97	Peak
2	7377.000	54.22	74.00	-19.78	50.23	3.99	Peak

Note:

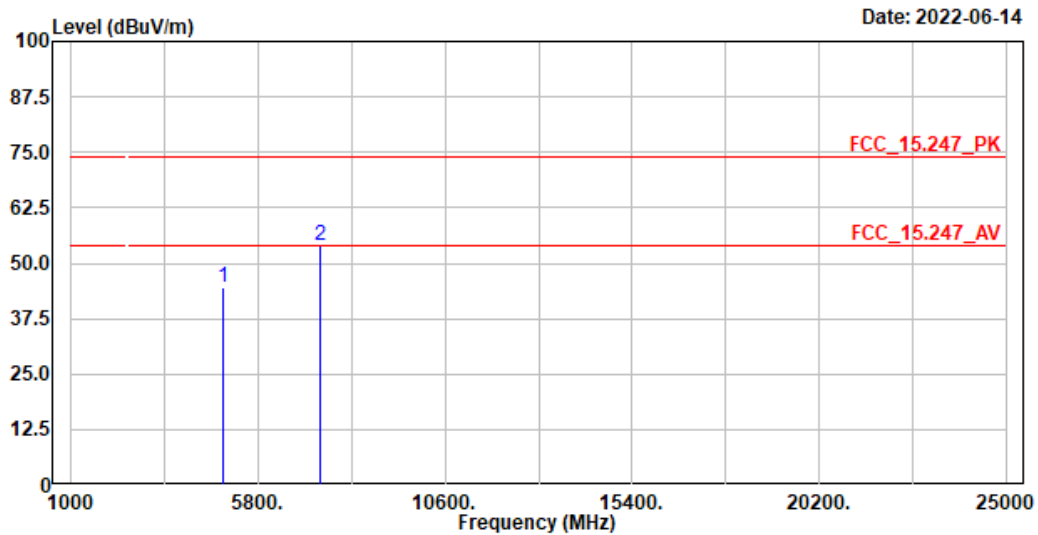
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

Frequency (MHz)	Peak Measurement (dBμV/m)	Duty Cycle Factor (dB)	Average Measurement (dBμV/m)	Margin (dB)	Average Limit (dBμV/m)
7377	54.22	-40.772	13.448	-40.552	54.000

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 5.

Site :HY-CB03
 Condition :3m ,VERTICAL
 Mode :TX_2459MHz
 Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4918.000	44.63	74.00	-29.37	43.66	0.97	Peak
2	7377.000	54.06	74.00	-19.94	50.07	3.99	Peak

Note:

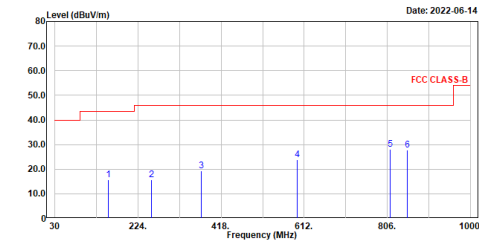
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

Frequency (MHz)	Peak Measurement (dBμV/m)	Duty Cycle Factor (dB)	Average Measurement (dBμV/m)	Margin (dB)	Average Limit (dBμV/m)
7377	54.06	-40.772	13.288	-40.712	54.000

Note:

1. AVG Measurement=Peak Measurement + Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 5.

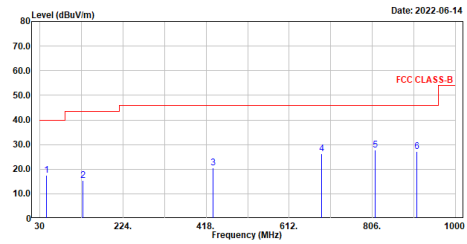
Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_2439MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	Line	Limit	Level	dB	
1	155.130	15.68	43.50	-27.82	39.96	-24.28	QP
2	255.040	15.67	46.00	-30.33	41.14	-25.47	QP
3	371.440	19.23	46.00	-26.77	41.15	-21.92	QP
4	596.480	23.88	46.00	-22.12	40.25	-16.37	QP
5	812.790	28.05	46.00	-17.95	41.59	-13.54	QP
6	852.560	27.73	46.00	-18.27	40.82	-13.09	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_2439MHz
Test BY :Jing Chang



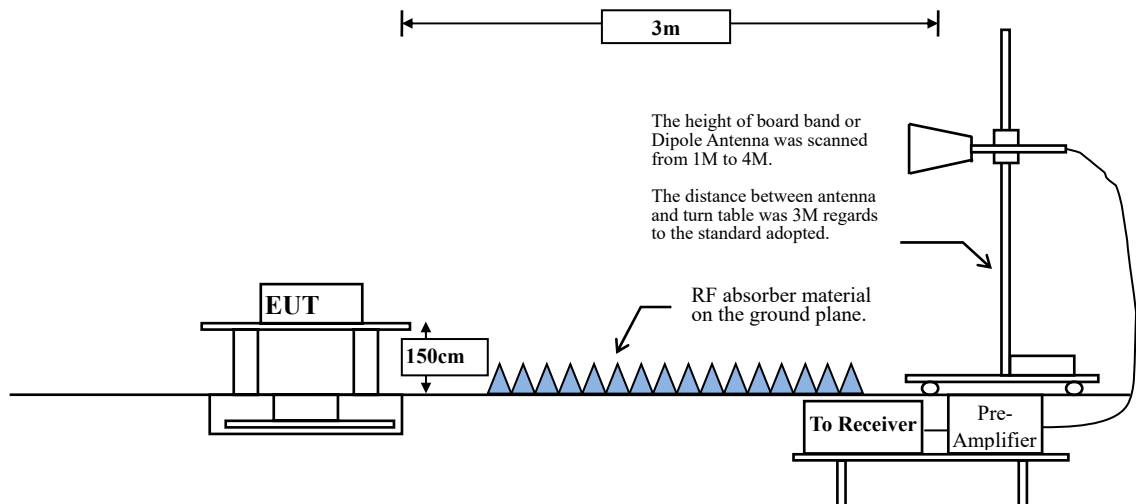
No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	Line	Limit	Level	dB	
1	45.520	17.56	40.00	-22.44	41.63	-24.07	QP
2	129.910	15.49	43.50	-28.01	41.04	-25.55	QP
3	433.520	20.41	46.00	-25.59	40.62	-20.21	QP
4	687.660	26.36	46.00	-19.64	41.59	-15.23	QP
5	812.790	27.87	46.00	-18.13	41.41	-13.54	QP
6	910.760	27.26	46.00	-18.74	39.45	-12.19	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

4. Band Edge

4.1. Test Setup

RF Radiated Measurement:



4.2. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209(a) Limits		
Frequency MHz	Field strength (microvolts/meter)	Measurement distance (meter)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remarks: E field strength (dBμV /m) = 20 log E field strength (uV/m)

4.3. Test Procedure

The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

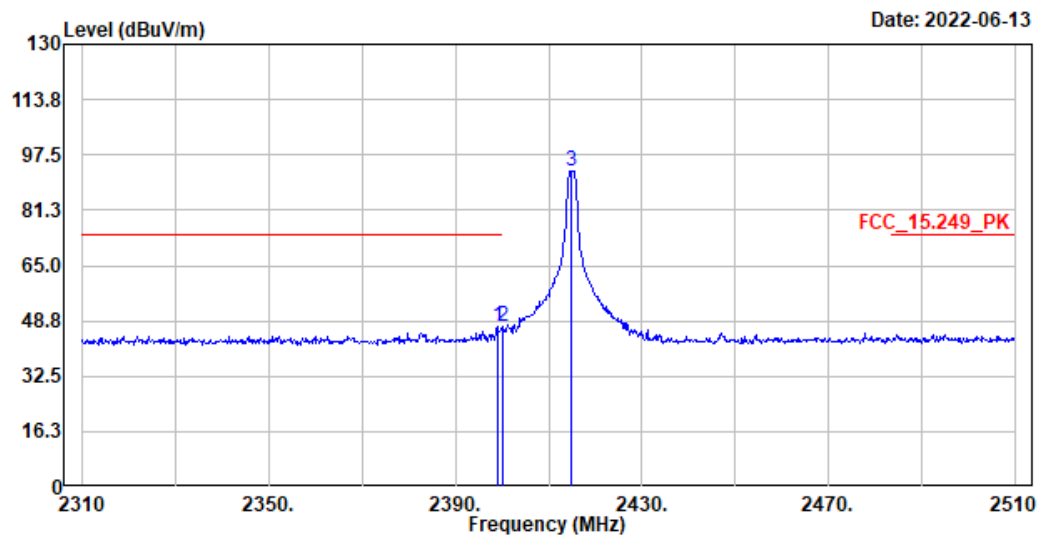
The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10: 2013 on radiated measurement.

The bandwidth setting below 1GHz and above 1GHz on the field strength meter is 120 kHz and 1MHz, respectively.

4.4. Test Result of Band Edge

Site :HY-CB03
 Condition :3m ,Horizontal
 Mode :TX_2415MHz
 Test BY :Jing Chang



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	Line	Limit	Level		
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2399.000	47.16	74.00	-26.84	34.19	12.97	Peak
2	2400.000	46.99	74.00	-27.01	34.02	12.97	Peak
3	2414.800	92.89	-----	-----	79.90	12.99	Peak

Note:

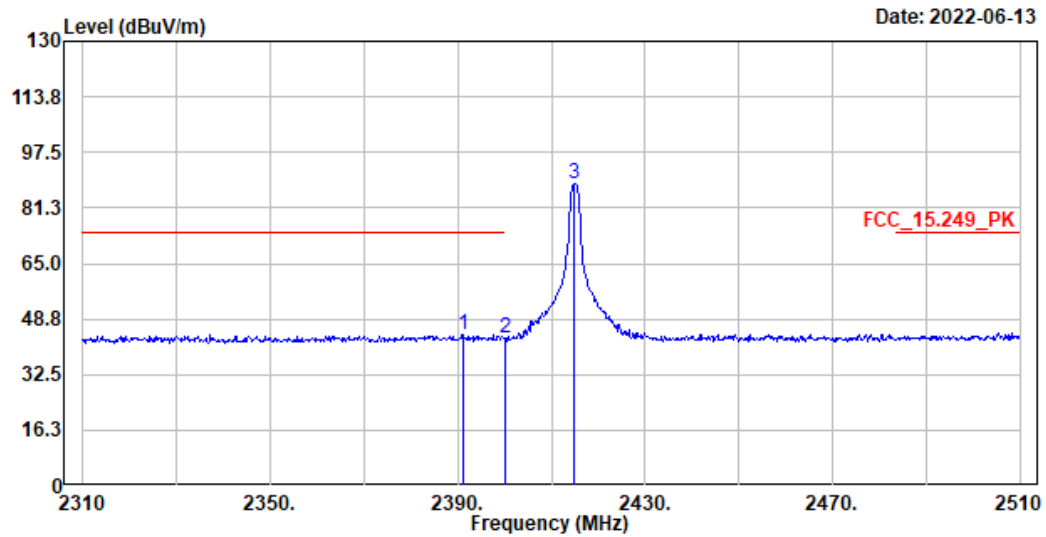
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

Frequency (MHz)	Peak Measurement (dBμV/m)	Duty Cycle Factor (dB)	Average Measurement (dBμV/m)	Margin (dB)	Average Limit (dBμV/m)	Result
2399	47.16	-40.772	6.388	-47.612	54.000	Pass
2400	46.99	-40.772	6.218	-47.782	54.000	Pass
2414.8	92.89	-40.772	52.118	--	--	Pass

Note:

1. Average Measurement=Peak Measurement + Duty Cycle Factor
2. The Duty Cycle is refer to section 5.

Site :HY-CB03
 Condition :3m ,Vertical
 Mode :TX_2415MHz
 Test BY :Jing Chang



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	Line	Limit	Level		
			dBuV/m	dB	dBuV	dB	
1	2391.200	44.38	74.00	-29.62	31.46	12.92	Peak
2	2400.000	43.19	74.00	-30.81	30.22	12.97	Peak
3	2414.800	88.13	-----	-----	75.14	12.99	Peak

Note:

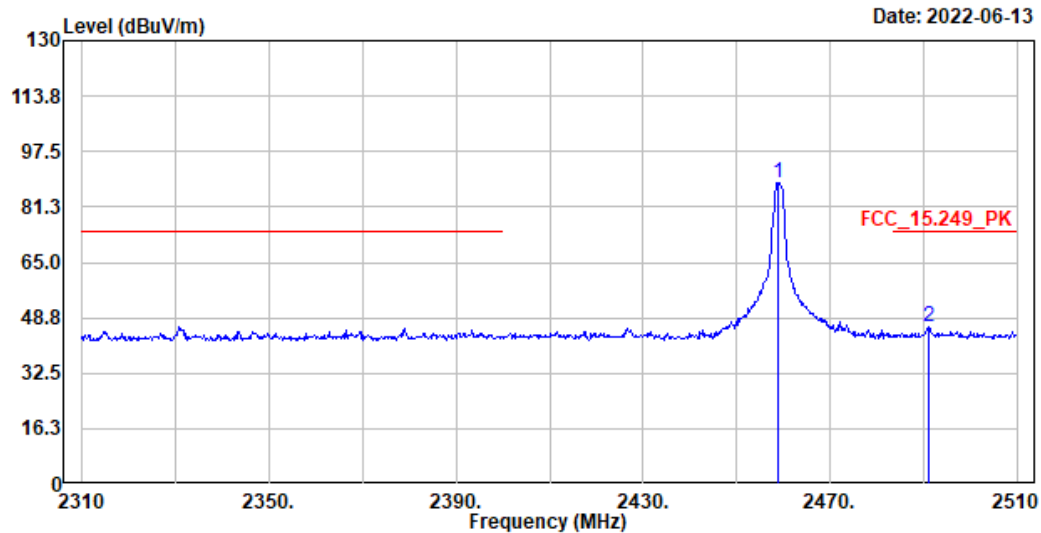
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

Frequency (MHz)	Peak Measurement (dBμV/m)	Duty Cycle Factor (dB)	Average Measurement (dBμV/m)	Margin (dB)	Average Limit (dBμV/m)	Result
2391.2	44.38	-40.772	3.608	-50.392	54.000	Pass
2400	43.19	-40.772	2.418	-51.582	54.000	Pass
2414.8	88.13	-40.772	47.358	--	--	Pass

Note:

1. Average Measurement=Peak Measurement + Duty Cycle Factor
2. The Duty Cycle is refer to section 5.

Site :HY-CB03
 Condition :3m ,Horizontal
 Mode :TX_2459MHz
 Test BY :Jing Chang



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	Line	Limit	Level		
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2458.800	88.50	-----	-----	75.46	13.04	Peak
2	2491.000	46.13	74.00	-27.87	33.04	13.09	Peak

Note:

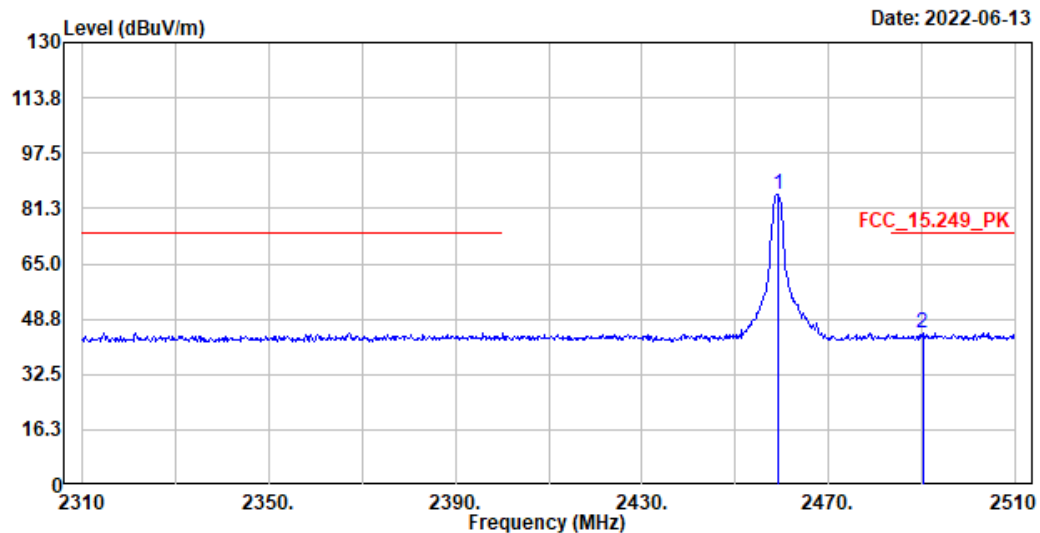
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

Frequency (MHz)	Peak Measurement (dBμV/m)	Duty Cycle Factor (dB)	Average Measurement (dBμV/m)	Margin (dB)	Average Limit (dBμV/m)	Result
2458.8	88.5	-40.772	47.728	--	--	Pass
2491	46.13	-40.772	5.358	-48.642	54.000	Pass

Note:

1. Average Measurement=Peak Measurement + Duty Cycle Factor
2. The Duty Cycle is refer to section 5.

Site :HY-CB03
 Condition :3m ,Vertical
 Mode :TX_2459MHz
 Test BY :Jing Chang



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	Line	Limit	Level		
			dBuV/m	dB	dBuV	dB	
1	2459.200	85.33	-----	-----	72.29	13.04	Peak
2	2490.200	44.64	74.00	-29.36	31.55	13.09	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

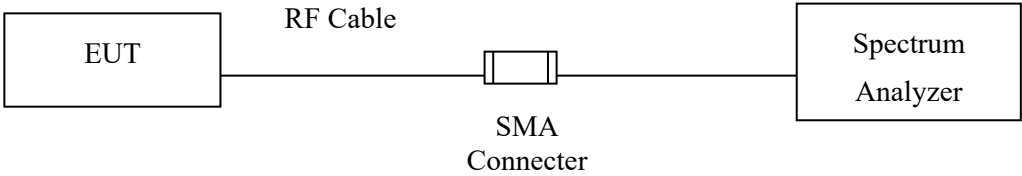
Frequency (MHz)	Peak Measurement (dBμV/m)	Duty Cycle Factor (dB)	Average Measurement (dBμV/m)	Margin (dB)	Average Limit (dBμV/m)	Result
2459.2	85.33	-40.772	44.558	--	--	Pass
2490.2	44.64	-40.772	3.868	-50.132	54.000	Pass

Note:

1. Average Measurement=Peak Measurement + Duty Cycle Factor
2. The Duty Cycle is refer to section 5.

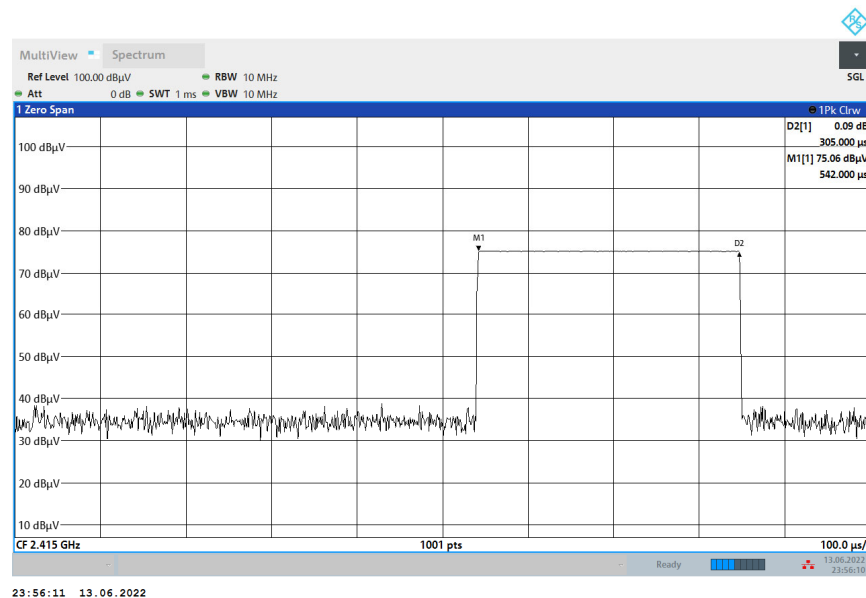
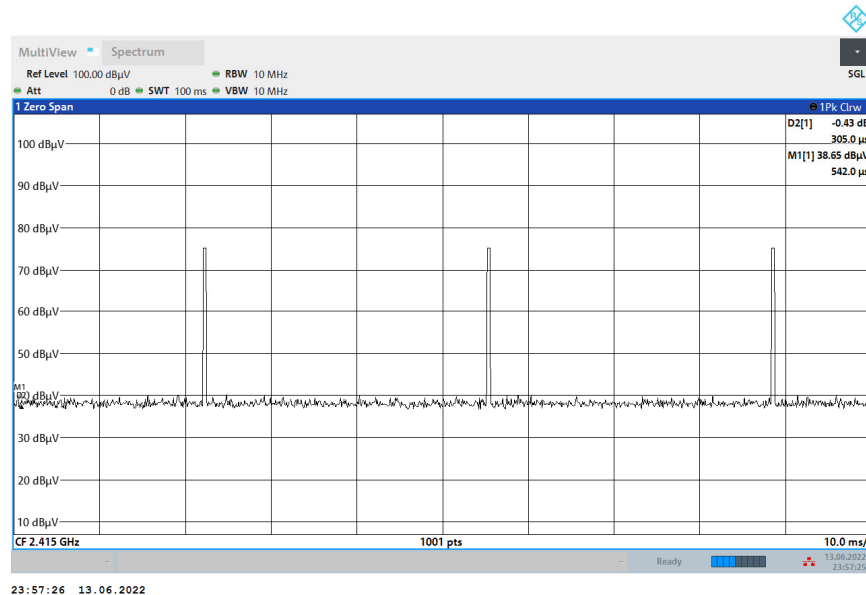
5. Duty Cycle

5.1. Test Setup



5.2. Test Result of Duty Cycle

Product : Remote Control
 Test Item : Duty Cycle Data
 Test Mode : Mode 1: Transmit



Time on of 100ms = 0.915ms

Duty Cycle= 0.915ms / 100ms= 0.00915

Duty Cycle correction factor= 20 LOG 0.00915= -40.772 dB

Duty Cycle correction factor	-40.772 dB
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6. EMI Reduction Method During Compliance Testing

No modification was made during testing.