APPLICATION FOR CERTIFICATION
On Behalf of
GoodWe Technologies Co., Ltd.
Smart Dongle

Model No.	:	WiFi Kit-20
Brand	:	GOODWE
FCC ID	:	2AU7J-WIFIKIT20

Prepared for

GoodWe Technologies Co., Ltd.
No.90 Zijin Rd., New District, Suzhou, 215011, China

Prepared by

Audix Technology (Wujiang) Co., Ltd. EMC Dept.
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Report Number	:	ACWE-F2308014
Date of Test	:	Apr.04~May 10, 2024
Date of Report	:	May 31, 2024

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TEST REPORT CERTIFICATION

Applicant	:	GoodWe Technologies Co., Ltd.
Manufacturer	:	GoodWe Technologies Co., Ltd.
EUT Description	:	Smart Dongle
FCC ID	:	2AU7J-WIFIKIT20
(A) Model No.	:	WiFi Kit-20
(B) Brand	:	GOODWE
(C) Test Voltage	:	DC 5V

Applicable Standards:

Title 47 CFR FCC Part 15 Subpart C
ANSI C63.10:2020
KDB 558074 D01 DTS Meas Guidance v05r02

The device described above was tested by Audix Technology (Wujiang) Co., Ltd. EMC Dept.to determine the maximum emission levels emanating from the device. The maximum emission levels were compared to the FCC Part 15 subpart C section 15.247 limits.

The measurement results are contained in this test report and Audix Technology (Wujiang) Co., Ltd. EMC Dept. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliant with the FCC limits.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Audix Technology (Wujiang) Co., Ltd. EMC Dept.

Date of Test: Apr.04~May 10, 2024 Date of Report: May 31, 2024

Prepared by : Emma Hu
(Emma Hu/Assistant Administrator)

Approved & Authorized Signer : Kan Tong
(K.M Tong/Assistant Manager)

TESTING
NVLAP LAB CODE 200786-0

1. DESCRIPTION OF VERSION

Edition No.	Date of Rev.	Summary	Report No.
0	May 31, 2024	Original Report.	ACWE-F2308014

2. SUMMARY OF MEASUREMENTS AND RESULTS

The EUT have been tested according to the applicable standards as referenced below.

Rule	Description	Results
15.207	Conducted Emission	**PASS**
15.247(d)/ 15.205	Radiated Band Edge and Radiated Spurious Emission	**PASS**
15.247(a)(2)	6dB Bandwidth	**PASS**
15.247(b)(3)	Maximum Output Power	**PASS**
15.247(d)	Conducted Band Edges and Conducted Spurious Emission	**PASS**
15.247 (e)	Peak Power Spectral Density	**PASS**
15.203	Antenna Requirement	**Compliance**

3. GENERAL INFORMATION

3.1. Description of Device (EUT)

Description	:	Smart Dongle
Model No.	:	WiFi Kit-20
FCC ID	:	2AU7J-WIFIKIT20
Brand	:	GOODWE
Applicant	:	GoodWe Technologies Co., Ltd. No.90 Zijin Rd., New District, Suzhou, 215011, China
Manufacturer	:	GoodWe Technologies Co., Ltd. No.90 Zijin Rd., New District, Suzhou, 215011, China
I/O Ports	:	USB port*1
Date of Receipt of Sample	:	Aug.01, 2023

3.2. Antenna Information

Type	Frequency (MHz)	Gain(dBi)
PCB Antenna	2400-2500	3.76

3.3. EUT Specification Assessed in Current Report

Mode	Fundamental Range (MHz)	Channel Number	Modulation
802.11b	2412-2462	11	DSSS (DBPSK/DQPSK/CCK)
802.11g	2412-2462	11	OFDM (BPSK/QPSK/16QAM/64QAM)
802.11n-HT20			
BLE-1M	2402-2480	40	GFSK
Remark: The information of test software, fixture and antenna gain is provided by customer.			

3.4. Duty Cycle

Mode	Duty Cycle	Duty Cycle Factor
802.11b	100%	0
802.11g	100%	0
802.11nHT20	100%	0
802.11nHT40	100%	0

3.5. Tested Supporting System Details (AE)

3.5.1. Notebook

Manufacturer/Brand : DELL
Model Number : Vostro 14-5459
Serial Number : 8P9C4K2

3.6. Description of Test Facility

Name of Firm	:	**Audix Technology (Wujiang) Co., Ltd. EMC Dept.**
Site Location	:	No. 1289 Jiangxing East Road, the Eastern Part of Wujiang Economic Development Zone Jiangsu China 215200
Test Facilities	:	**No.2 Conducted Shielding Enclosure** **No.2 3m Semi-anechoic Chamber** **RF Fully Chamber**
NVLAP Lab Code	:	200786-0 Valid until on Sep.30, 2024 (NVLAP is a signatory member of ILAC MRA) Remark: This report shall not be imply endorsement, certification or approval by NVLAP, NIST, or any agency of the U.S. Federal Government.

3.7. Measurement Uncertainty

Test Item	Range Frequency	Uncertainty
No.2 Conducted Disturbance Measurement	0.15MHz ~ 30MHz	± 3.06dB
Radiated Disturbance Measurement (At 3m Chamber)	30MHz ~ 1GHz	± 3.95dB
	1GHz ~ 6GHz	± 4.46dB
	6GHz ~ 18GHz	± 5.00dB

Test items	Uncertainty
Unwanted Emission(Conducted measurement)	y(dBm/Hz) ±U=y(dBm/Hz) ±0.61dB
RF Output Power	y(dBm) ±U=y(dBm) ±0.73
RF Frequency	y(Volt) ±U=y(Volt) ±1.4x10($^{-3}$)Hz
Temperature and Humidity	y(℃)±U=y(℃) ±0.532℃ y(%)±U=y(%) ±3.36%
RF DC Voltage	y(Volt) ±U=y(Volt) ±0.044
Power Density	y(dBm/Hz) ±U=y(dBm/Hz) ±2.76dB
Radiated Spurious Emission(30MHz~1GHz)	y(dBm) ±U=y(dBm) ±4.96dB
Radiated Spurious Emission(1GHz~26.5GHz)	y(dBm) ±U=y(dBm) ±3.40dB

Remark: Uncertainty = $ku_c(y)$

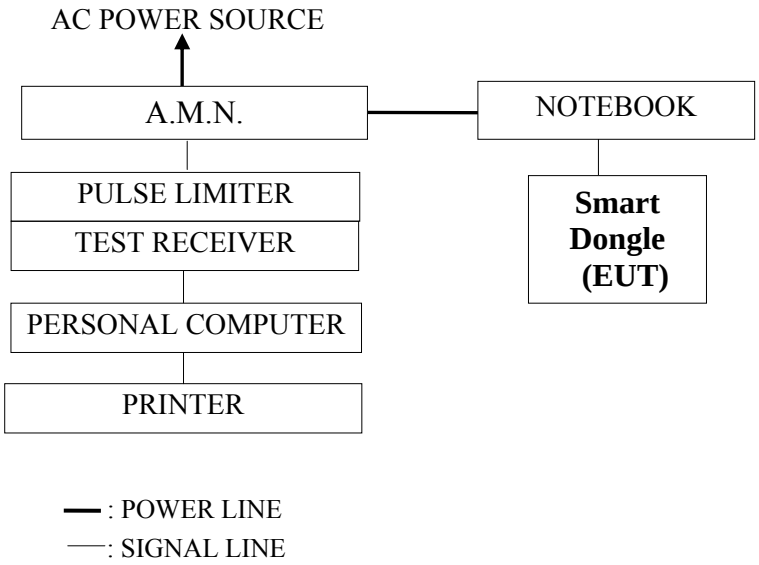
The standards listed in this report only require the uncertainty to be listed, and the measurement uncertainty is not required to be calculated in the measurement results. Therefore, the conformity judgment results are in accordance with the quality document TMC-205, and the test results in this report meet the requirements of the standards listed in this report.

4. CONDUCTED EMISSION MEASUREMET

4.1. Test Equipment

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Period
1.	Test Receiver	R & S	ESCI	100839	2024-03-24	1 Year
2.	A.M.N.	Schwarzbeck	NNLK 8129	8129-164	2023-12-13	1 Year
3.	L.I.S.N.	Kyoritsu	KNW-407	8-1793-4	2024-03-24	1 Year
4.	I.S.N.	TESEQ	T800	58414	2024-03-24	1 Year
5.	Pulse Limiter	R&S	ESH3-Z2	101832	2023-12-13	1 Year
6.	50Ω Terminator	Tektronis	MS4630B	001-CON	2023-12-13	1 Year
7.	RF Cable	Shengxuan	ROS400	59/3	2023-12-13	1 Year
8.	Software	Audix /e3 (210616)				

4.2. Block Diagram of Test Setup



4.3. Power line Conducted Emission Limit

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level	Average Level
150kHz ~ 500kHz	66 ~ 56 dBμV	56 ~ 46 dBμV
500kHz ~ 5MHz	56 dBμV	46 dBμV
5MHz ~ 30MHz	60 dBμV	50 dBμV

Remark1: If the average limit is met when using a Quasi-Peak detector, the EUT shall be deemed to meet both limits and measurement with the average detector is unnecessary.

2: The lower limit applies at the band edges.

4.4. Test Procedure

The measuring process is according to ANSI C63.10-2020 and laboratory internal procedure TKC-301-004. (For FCC Part15 Subpart C)

In the conducted emission measurement, the EUT and all peripheral devices were set up on a non-metallic table which was 0.8 meter height above the ground plane, and 0.4 meter far away from the vertical plane. The mains cable of the EUT connected to one Artificial Main Network(AMN). All other unit of the EUT and AE connected to a second Line Impedance Stabilization Network(L.I.S.N.). The telecommunication cable connected to the AE through a Impedance Stabilization Network(ISN) which terminated a 50Ω resistor. For the measurement, the A.M.N measuring port was terminated by a 50Ω measuring equipment and the second L.I.S.N measuring port was terminated by a 50Ω terminator. All measurements were done between the phase lead and the reference ground, and between the neutral lead and the reference ground. All cables or wires placement were verified to find out the maximum emission.

The bandwidth of measuring receiver was set at 9 kHz.

The required frequency band (0.15 MHz ~ 30 MHz) was pre-scanned with peak detector; the final measurement was measured with quasi-peak detector and average detector. (If the average limit is met when using a quasi-peak detector, the average detector is unnecessary).

The emission level is calculated automatically by the test system which uses the following equation:

Emission level (dBμV) = Reading (dBμV) + A.M.N factor (dB) + Cable loss (dB).
(Cable loss includes Pulse Att+Cable+Switch)

4.5. Conducted Emission Measurement Results

For FCC Part15 Subpart C

PASSED.

EUT was performed during this section testing and all the test results are attached in next pages.

Test Date: May 10, 2024 Temperature: 22.2℃ Humidity: 49%

Mode	Test Condition	Reference Test Data No.	
		Neutral	Line
1	TX Mode	# 8	# 7

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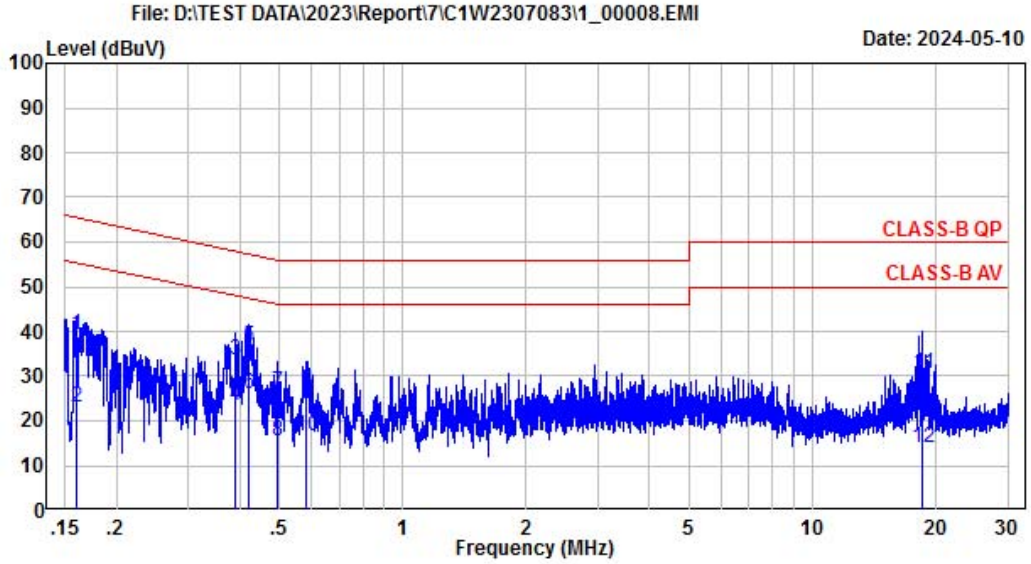

Site NO. : NO.2 shielded Room
Instrument 1 : Receiver ESCI (839)
Instrument 2 : NNLK 8129(164)|59/3|ESH3-Z2 (832)
Dis. / Ant. : NNLK8129-2312
Limit : CLASS-B QP
Env. / Ins. : 22.2℃& 49 %
EUT : Smart Dongle
M/N : WiFi Kit-20
Power Rating : DC 5V
Test Mode : TX Mode
Memo :

Ant. pol.: Neutral Data NO.:8

Engineer : Yinyarong

Freq. MHz	LISN Factor dB	Cable Loss dB	Reading dBuV	Emission Level dBuV	Limits dBuV	Margin dB	Remark
0.160	0.10	10.03	29.04	39.17	65.49	26.32	QP
0.160	0.10	10.03	13.06	23.19	55.49	32.30	Average
0.391	0.10	10.03	23.58	33.71	58.04	24.33	QP
0.391	0.10	10.03	13.23	23.36	48.04	24.68	Average
0.421	0.10	10.04	26.30	36.44	57.44	21.00	QP
0.421	0.10	10.04	15.92	26.06	47.44	21.38	Average
0.496	0.10	10.04	16.31	26.45	56.07	29.62	QP
0.496	0.10	10.04	5.46	15.60	46.07	30.47	Average
0.584	0.10	10.04	16.74	26.88	56.00	29.12	QP
0.584	0.10	10.04	6.31	16.45	46.00	29.55	Average
18.554	0.61	10.20	19.80	30.61	60.00	29.39	QP
18.554	0.61	10.20	3.24	14.05	50.00	35.95	Average

Remarks:Emisson Level = LISN factor+Cable loss(Cable+Pulse Att+Switch)+Reading

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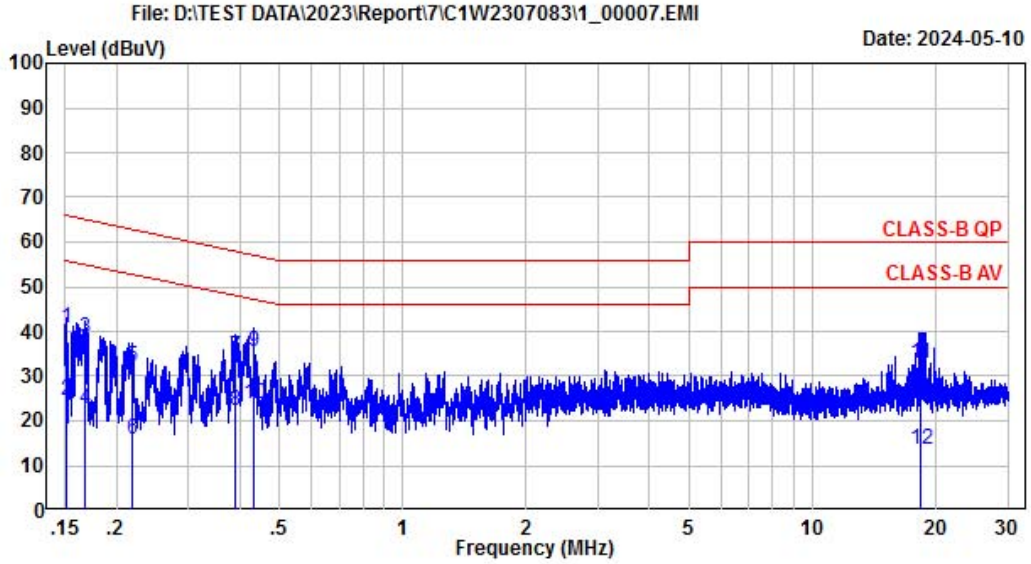


Site NO. : NO.2 shielded Room
Instrument 1 : Receiver ESCI (839)
Instrument 2 : NNLK 8129(164)|59/3|ESH3-Z2 (832)
Dis. / Ant. : NNLK8129-2312
Limit : CLASS-B QP
Env. / Ins. : 22.2℃& 49 %
EUT : Smart Dongle
M/N : WiFi Kit-20
Power Rating : DC 5V
Test Mode : TX Mode
Memo :

Ant. pol.: Line1 Data NO.:7

Engineer : Yinyarong

Freq. MHz	LISN Factor dB	Cable Loss dB	Reading dBuV	Emission Level dBuV	Limits dBuV	Margin dB	Remark
0.151	0.10	10.03	30.77	40.90	65.92	25.02	QP
0.151	0.10	10.03	14.39	24.52	55.92	31.40	Average
0.168	0.10	10.03	28.50	38.63	65.06	26.43	QP
0.168	0.10	10.03	12.46	22.59	55.06	32.47	Average
0.218	0.10	10.03	21.94	32.07	62.88	30.81	QP
0.218	0.10	10.03	5.57	15.70	52.88	37.18	Average
0.391	0.10	10.03	24.20	34.33	58.05	23.72	QP
0.391	0.10	10.03	12.11	22.24	48.05	25.81	Average
0.434	0.10	10.04	25.30	35.44	57.18	21.74	QP
0.434	0.10	10.04	13.51	23.65	47.18	23.53	Average
18.353	0.67	10.20	21.94	32.81	60.00	27.19	QP
18.353	0.67	10.20	2.81	13.68	50.00	36.32	Average

Remarks:Emisson Level = LISN factor+Cable loss(Cable+Pulse Att+Switch)+Reading

5. RADIATED EMISSION MEASUREMENT

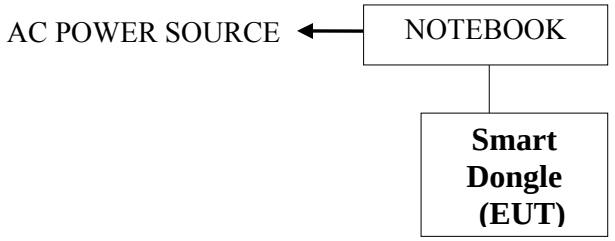
5.1. Test Equipment

The following test equipment was used during the radiated emission measurement:
At 3m Semi-Anechoic Chamber

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Period
1.	Preamplifier	Agilent	8447D	2944A10918	2023-12-13	1 Year
2.	PXA signal analyzer	Agilent	N9030A	MY53120367	2023-07-12	1 Year
3.	Bi-log Antenna	SCHWARZBECK	VULB 9168	705	2023-12-26	1 Year
4.	Horn Antenna	ETS	3115	00062593	2023-10-23	1 Year
5.	Microwave Preamplifier	Agilent	8449B	3008A02232	2024-03-24	1 Year
6.	EMI Test Receiver	R&S	ESR7	101956	2024-03-24	1 Year
7.	RF Cable	Chengyi+Shengxuan	NM500+ROS400	190945+6000+3000	2023-07-12	1 Year
8.	RF Cable	Chengyi	EMC104-SF-SM-8000/NM-1000	190938+190942	2023-07-11	1 Year
9.	Software	Audix /e3 (210616)				

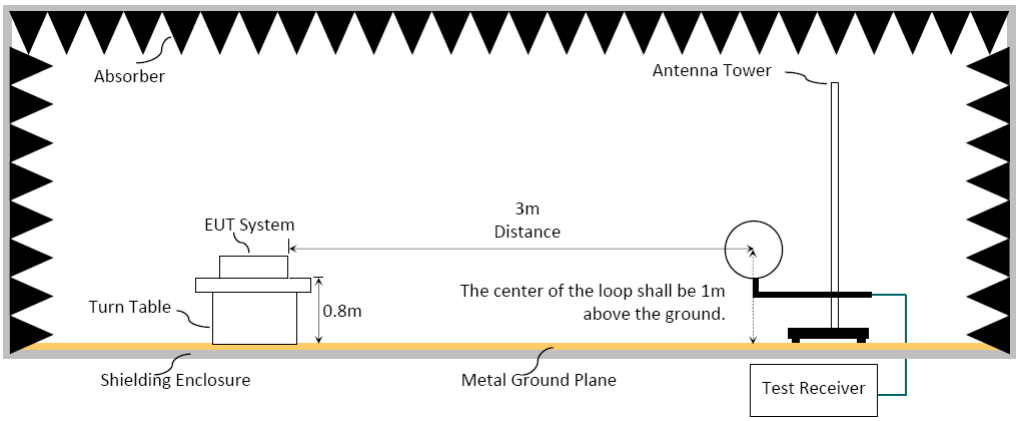
5.2. Block Diagram of Test Setup

5.2.1. Block Diagram of Test Setup between EUT and simulators

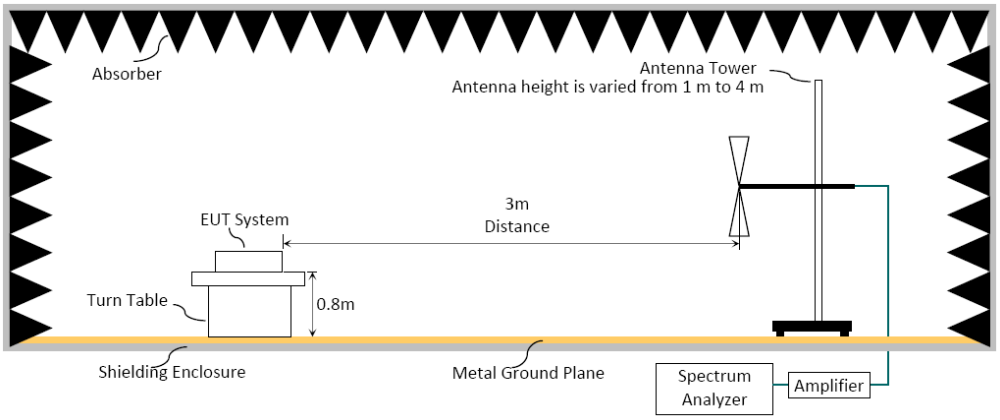


▬ : POWER LINE
─ : SIGNAL LINE

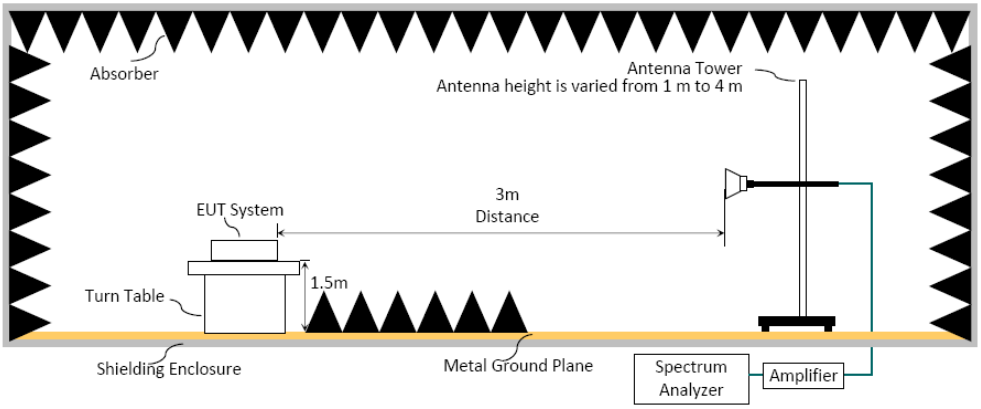
5.2.2. No. 2 3m Semi-Anechoic Chamber Setup Diagram (Test distance: 3m) for 9kHz-30MHz



5.2.3. No. 2 3m Semi-Anechoic Chamber Setup Diagram (Test distance: 3m) for 30MHz-1GHz



5.2.4. No. 2 3m Semi-Anechoic Chamber Setup Diagram (Test distance: 3m) for Above 1GHz



5.3. Radiated Emission Limits

In any 100kHz bandwidth outside the frequency band, the radio frequency power produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level. In addition, radiated emissions which fall in restricted bands, as defined in Section 15.205, must also comply with the radiated emission limits specified as below.

Frequency (MHz)	Distance (m)	Limits	
		dBμV/m	μV/m
0.009 - 0.490	300	67.6-20 log f(kHz)	2400/f kHz
0.490 - 1.705	30	87.6-20 log f(kHz)	24000/f kHz
1.705 - 30	30	29.5	30
30 - 88	3	40.0	100
88- 216	3	43.5	150
216- 960	3	46.0	200
Above 960	3	54.0	500
Above 1000	3	74.0 dBμV/m (Peak) 54.0 dBμV/m (Average)	

Remark: (1) dBμV/m = 20 log (μV/m)

(2)The tighter limit applies to the edge between two frequency bands.

(3)Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

(4)Fundamental and emission fall within operation band are exempted from this section.

(5)Pursuant to ANSI C63.10: 6.6.4.3, if the maximized peak measured value complies with the average limit, then it is unnecessary to perform an average measurement.

5.4. Test Procedure

Frequency Range 9kHz~30MHz:
The EUT setup on the turn table which has 0.8 m height to the ground. The turn table rotated 360 degrees and antenna fixed to 1 m to find the maximum emission level.
In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10-2013 regulation.

(1) RBW = 9kHz with peak and average detector.
(2) Detector: average and peak (9kHz-490kHz)
Q.P. (490kHz-30MHz)

Frequency Range 30MHz ~ 25GHz:
The EUT setup on the turn table which has 80 cm (for 30-1000 MHz) and 1.5m (for above 1GHz) height to the ground. The turn table rotated 360 degrees and antenna varied from 1 m to 4 m to find the maximum emission level. Both horizontal and vertical polarization are required. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10-2013 regulation.

Frequency below 1 GHz:
Spectrum Analyzer is used for pre-testing with following setting:

(1)RBW = 120KHz
(2)VBW ≥ 3 x RBW.
(3)Detector = Peak.
(4)Sweep time = auto.
(5)Trace mode = max hold.
(6)Allow sweeps to continue until the trace stabilizes.
(7)When peak-detected value is lower than limit that the measurement using the Q.P. detector is not required, otherwise using Q.P. for final measurement.

Frequency above 1GHz to 10th harmonic (up to 25GHz):
Peak Dector:

(1)RBW = 1MHz
(2)VBW ≥ 3 x RBW.
(3)Detector = Peak.
(4)Sweep time = auto.
(5)Trace mode = max hold.
(6)Allow sweeps to continue until the trace stabilizes.
(7)When peak-detected value is lower than limit that the measurement using the average detector is not required, otherwise using average detector for final measurement.

5.5. Measurement Results

PASSED

The EUT was tested in restricted bands and all the test results are listed in next page.
The frequency range from 9kHz to 10th harmonic(25GHz) are checked, and the emission (9kHz~30MHz,18GHz~25GHz)not reported for there is no emission be found.

5.5.1. Emission Measurement Results (For Below 1GHz)

EUT: Smart Dongle
M/N: WiFi Kit-20
Test Site: No.2 3m Chamber

Test Mode: TX 2.4G					
Frequency (MHz)	Antenna Polarization	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Conclusion
70.740	H	23.11	40.00	16.89	PASS
101.780	H	26.31	43.50	17.19	PASS
110.510	H	28.43	43.50	15.07	PASS
181.320	H	23.82	43.50	19.68	PASS
870.020	H	34.96	46.00	11.04	PASS
954.410	H	32.37	46.00	13.63	PASS
30.970	V	27.67	40.00	12.33	PASS
73.650	V	31.61	43.50	8.39	PASS
110.510	V	33.73	43.50	9.77	PASS
183.260	V	25.30	46.00	18.20	PASS
666.320	V	26.61	46.00	19.39	PASS
954.410	V	32.01	46.00	13.99	PASS

5.5.2. Emission Measurement Results (For Above 1GHz)

EUT: Smart Dongle
M/N: WiFi Kit-20
Test Site: No.2 3m Chamber

Test Mode: TX 802.11b 2412MHz					
Frequency (MHz)	Antenna Polarization	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Conclusion
4824.006	H	51.98	54.00	2.02	PASS
4825.000	H	57.59	74.00	16.41	PASS
14326.890	H	44.27	54.00	9.73	PASS
14328.000	H	53.71	74.00	20.29	PASS
17711.000	H	58.08	74.00	15.92	PASS
17715.410	H	45.60	54.00	8.40	PASS
4824.012	V	51.97	54.00	2.03	PASS
4825.000	V	59.60	74.00	14.40	PASS
14226.000	V	54.06	74.00	19.94	PASS
14228.420	V	42.21	54.00	11.79	PASS
17915.000	V	57.77	74.00	16.23	PASS
17916.320	V	45.78	54.00	8.22	PASS
Test Mode: TX 802.11b 2462MHz					
4924.080	H	50.93	54.00	3.07	PASS
4927.000	H	56.00	74.00	18.00	PASS
14395.650	H	43.17	54.00	10.83	PASS
14396.000	H	54.95	74.00	19.05	PASS
17915.000	H	58.15	74.00	15.85	PASS
17916.490	H	44.68	54.00	9.32	PASS
4924.024	V	50.23	54.00	3.77	PASS
4927.000	V	56.91	74.00	17.09	PASS
14498.000	V	54.17	54.00	19.83	PASS
14499.330	V	41.81	74.00	12.19	PASS
17898.000	V	57.85	54.00	16.15	PASS
17899.620	V	45.54	74.00	8.46	PASS
Test Mode: TX 802.11g 2412MHz					
4823.487	H	47.62	54.00	6.38	PASS
4825.000	H	51.45	74.00	22.55	PASS
14205.630	H	41.94	54.00	12.06	PASS
14209.000	H	54.19	74.00	19.81	PASS
17796.000	H	57.11	74.00	16.89	PASS
17798.620	H	44.87	54.00	9.13	PASS
4823.568	V	47.37	54.00	6.63	PASS
4825.000	V	52.58	74.00	21.42	PASS
14225.420	V	41.85	54.00	12.15	PASS
14226.000	V	54.06	74.00	19.94	PASS
17879.610	V	44.40	54.00	9.60	PASS
17881.000	V	58.53	74.00	15.47	PASS

Test Mode: TX 802.11g 2462MHz					
Frequency (MHz)	Antenna Polarization	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Conclusion
10076.470	H	40.42	54.00	13.58	PASS
10078.000	H	52.21	74.00	21.79	PASS
14243.000	H	54.24	74.00	19.76	PASS
14245.630	H	42.21	54.00	11.79	PASS
17847.000	H	57.62	74.00	16.38	PASS
17849.620	H	44.80	54.00	9.20	PASS
4925.860	V	47.66	54.00	6.34	PASS
4927.000	V	51.63	74.00	22.37	PASS
13954.000	V	54.01	74.00	19.99	PASS
13956.620	V	42.76	54.00	11.24	PASS
17881.000	V	58.11	74.00	15.89	PASS
17881.120	V	44.41	54.00	9.59	PASS
Test Mode: TX 802.11nHT20 2412MHz					
4823.568	H	46.41	54.00	7.59	PASS
4825.000	H	49.62	74.00	24.38	PASS
14272.640	H	43.22	54.00	10.78	PASS
14277.000	H	54.19	74.00	19.81	PASS
17931.060	H	44.91	54.00	9.09	PASS
17932.000	H	58.56	74.00	15.44	PASS
4823.538	V	49.24	54.00	4.76	PASS
4825.000	V	52.33	74.00	21.67	PASS
14532.000	V	54.55	74.00	19.45	PASS
14535.420	V	42.16	54.00	11.84	PASS
17914.020	V	44.26	54.00	9.74	PASS
17915.000	V	58.20	74.00	15.80	PASS
Test Mode: TX 802.11nHT20 2462MHz					
8037.538	H	39.77	54.00	14.23	PASS
8038.000	H	51.38	74.00	22.62	PASS
14156.860	H	43.35	54.00	10.65	PASS
14158.000	H	53.75	74.00	20.25	PASS
17999.650	H	44.40	54.00	9.60	PASS
18000.000	H	58.92	74.00	15.08	PASS
4926.830	V	46.66	54.00	7.34	PASS
4927.000	V	50.45	74.00	23.55	PASS
14190.580	V	45.26	54.00	8.74	PASS
14192.000	V	53.68	74.00	20.32	PASS
17998.410	V	44.25	54.00	9.75	PASS
18000.000	V	58.59	74.00	15.41	PASS

Test Mode: TX 802.11nHT40 2422MHz					
Frequency (MHz)	Antenna Polarization	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Conclusion
5930.000	H	47.57	74.00	26.43	PASS
5932.456	H	35.61	54.00	18.39	PASS
14362.000	H	54.59	74.00	19.41	PASS
14362.620	H	41.23	54.00	12.77	PASS
17915.000	H	59.16	74.00	14.84	PASS
17918.030	H	44.27	54.00	9.73	PASS
4842.000	V	49.33	74.00	24.67	PASS
4843.453	V	46.41	54.00	7.59	PASS
14362.000	V	54.59	74.00	19.41	PASS
14362.620	V	42.19	54.00	11.81	PASS
17915.000	V	59.16	74.00	14.84	PASS
17918.410	V	44.25	54.00	9.75	PASS
Test Mode: TX 802.11nHT40 2452MHz					
4910.000	H	48.27	74.00	25.73	PASS
4912.456	H	47.53	54.00	6.47	PASS
14253.700	H	41.22	54.00	12.78	PASS
14260.000	H	53.94	74.00	20.06	PASS
17847.000	H	59.02	74.00	14.98	PASS
17848.630	H	44.55	54.00	9.45	PASS
4910.000	V	48.19	74.00	25.81	PASS
4912.453	V	46.61	54.00	7.39	PASS
14032.620	V	42.27	54.00	11.73	PASS
14039.000	V	54.36	74.00	19.64	PASS
17864.000	V	58.40	74.00	15.60	PASS
17865.940	V	44.57	54.00	9.43	PASS

5.5.3. Spurious Emission Measurement Results in Band Edge Emission

Mode	802.11b	Frequency	TX 2412MHz

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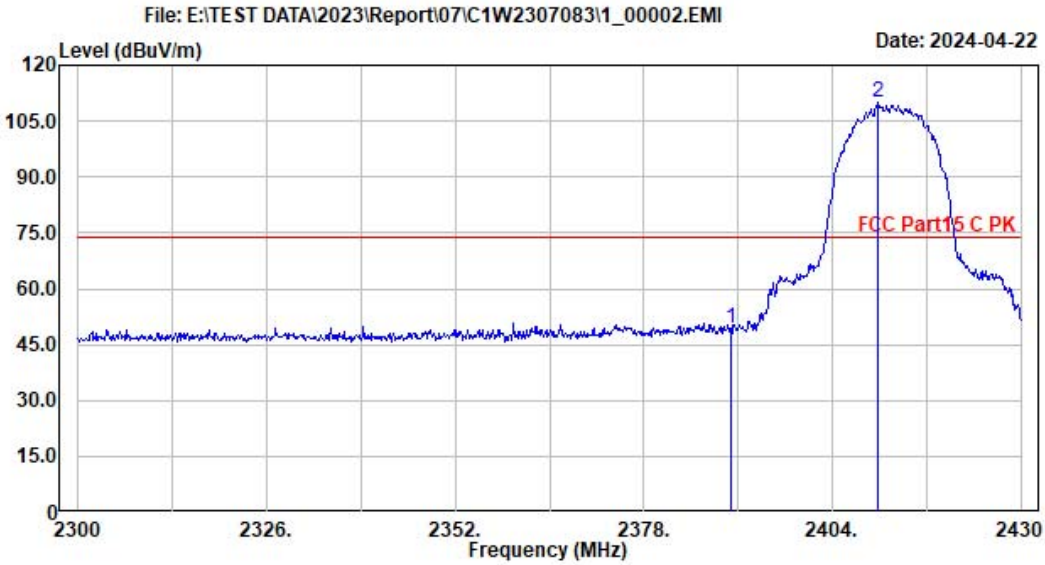

Site NO. : NO.2 3M Chamber
Instrument 1 : Spectrum N9030A(367)
Instrument 2 : Preamplifier 8449B(232)|000
Dis. / Ant. : 3115-593-2310
Limit : FCC Part15 C PK
Env. / Ins. : 21.3°C/54%
EUT : Smart Dongle
M/N : Wifi Kit-20
Power Rating : DC 5V
Test Mode : TX 802.11b 2412MHz
Memo :

Ant. pol.: Horizontal Data NO.:2

Engineer : Liuyujie

Freq. MHz	Ant. Factor dB/m	Cable Loss dB	Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Remark
2390.000	28.46	3.10	50.26	32.51	49.31	74.00	24.69	Peak
2410.370	28.50	3.12	110.93	32.49	110.06	74.00	-36.06	Peak

Remarks:Emission Level = Antenna factor+Cable loss+Reading-Preamp Factor

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Economic Development Zone,JiangSu,China
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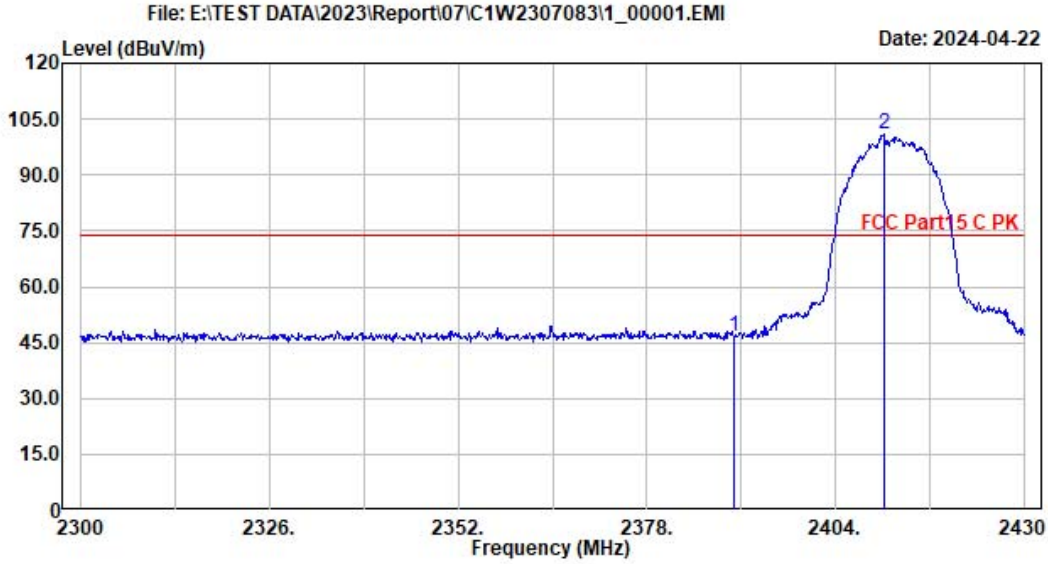

Site NO. : NO.2 3M Chamber
Instrument 1 : Spectrum N9030A(367)
Instrument 2 : Preamplifier 8449B(232)|000
Dis. / Ant. : 3115-593-2310
Limit : FCC Part15 C PK
Env. / Ins. : 21.3°C/54%
EUT : Smart Dongle
M/N : Wifi Kit-20
Power Rating : DC 5V
Test Mode : TX 802.11b 2412MHz
Memo :

Ant. pol.: Vertical Data NO.:1

Engineer : Liuyujie

Freq. MHz	Ant. Factor dB/m	Cable Loss dB	Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Remark
2390.000	28.46	3.10	47.59	32.51	46.64	74.00	27.36	Peak
2410.630	28.50	3.12	101.72	32.49	100.85	74.00	-26.85	Peak

Remarks:Emission Level = Antenna factor+Cable loss+Reading-Preamp Factor

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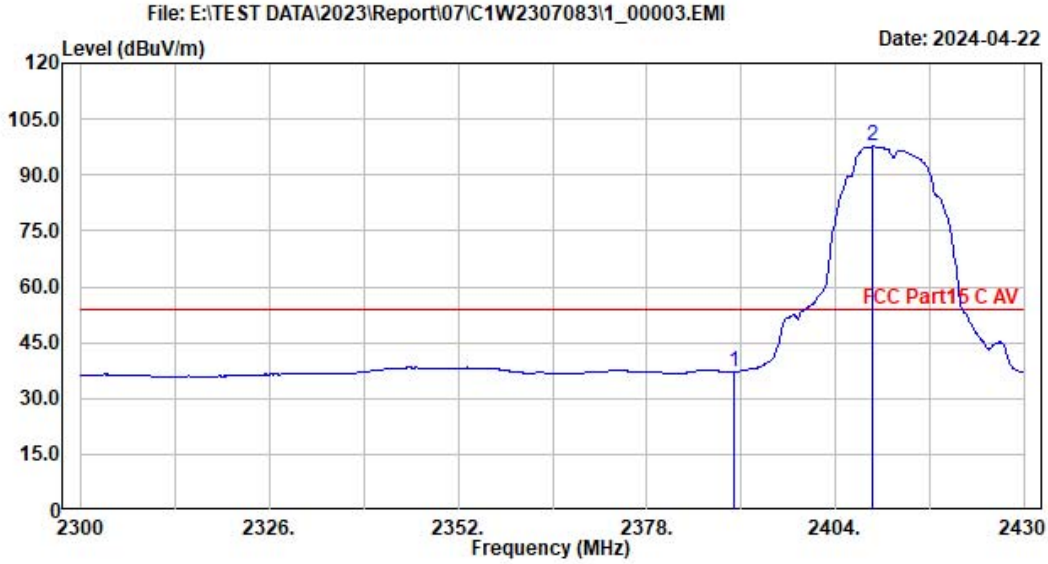

Site NO. : NO.2 3M Chamber
Instrument 1 : Spectrum N9030A(367)
Instrument 2 : Preamplifier 8449B(232)|000
Dis. / Ant. : 3115-593-2310
Limit : FCC Part15 C AV
Env. / Ins. : 21.3°C/54%
EUT : Smart Dongle
M/N : Wifi Kit-20
Power Rating : DC 5V
Test Mode : TX 802.11b 2412MHz
Memo :

Ant. pol.: Horizontal Data NO.:3

Engineer : Liuyujie

Freq. MHz	Ant. Factor dB/m	Cable Loss dB	Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Remark
2389.960	28.46	3.10	38.24	32.51	37.29	54.00	16.71	Average
2409.200	28.50	3.12	98.51	32.50	97.63	54.00	-43.63	Average

Remarks:Emission Level = Antenna factor+Cable loss+Reading-Preamp Factor

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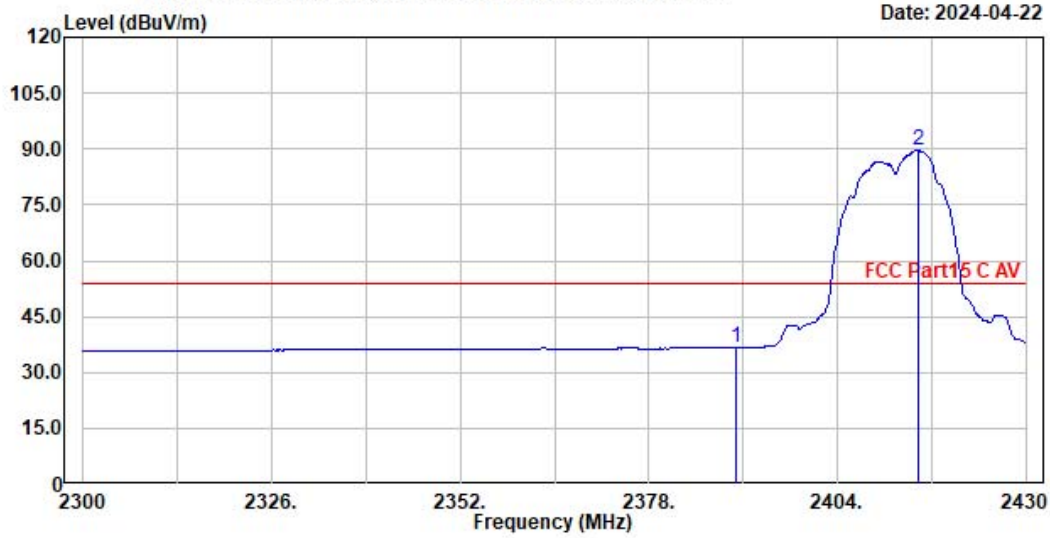
Date: 2024-04-22



Site NO. : NO.2 3M Chamber
Instrument 1 : Spectrum N9030A(367)
Instrument 2 : Preamplifier 8449B(232)|000
Dis. / Ant. : 3115-593-2310
Limit : FCC Part15 C AV
Env. / Ins. : 21.3°C/54%
EUT : Smart Dongle
M/N : Wifi Kit-20
Power Rating : DC 5V
Test Mode : TX 802.11b 2412MHz
Memo :

Ant. pol.: Vertical Data NO.:4

Engineer : Liuyujie

Freq. MHz	Ant. Factor dB/m	Cable Loss dB	Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Remark
2390.000	28.46	3.10	37.59	32.51	36.64	54.00	17.36	Average
2415.180	28.50	3.13	90.40	32.49	89.54	54.00	-35.54	Average

Remarks:Emission Level = Antenna factor+Cable loss+Reading-Preamp Factor

Mode	802.11b	Frequency	TX 2462MHz

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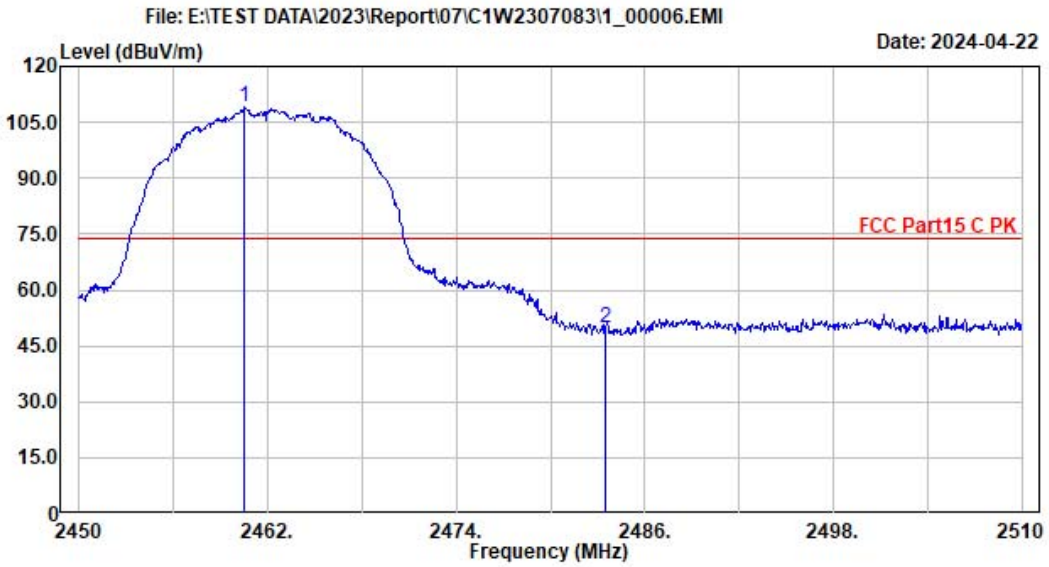

Site NO. : NO.2 3M Chamber
Instrument 1 : Spectrum N9030A(367)
Instrument 2 : Preamplifier 8449B(232)|000
Dis. / Ant. : 3115-593-2310
Limit : FCC Part15 C PK
Env. / Ins. : 21.3°C/54%
EUT : Smart Dongle
M/N : Wifi Kit-20
Power Rating : DC 5V
Test Mode : TX 802.11b 2462MHz
Memo :

Ant. pol.: Horizontal Data NO.:6

Engineer : Liuyujie

Freq. MHz	Ant. Factor dB/m	Cable Loss dB	Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Remark
2460.500	28.50	3.17	109.77	32.47	108.97	74.00	-34.97	Peak
2483.500	28.50	3.19	50.59	32.46	49.82	74.00	24.18	Peak

Remarks:Emission Level = Antenna factor+Cable loss+Reading-Preamp Factor

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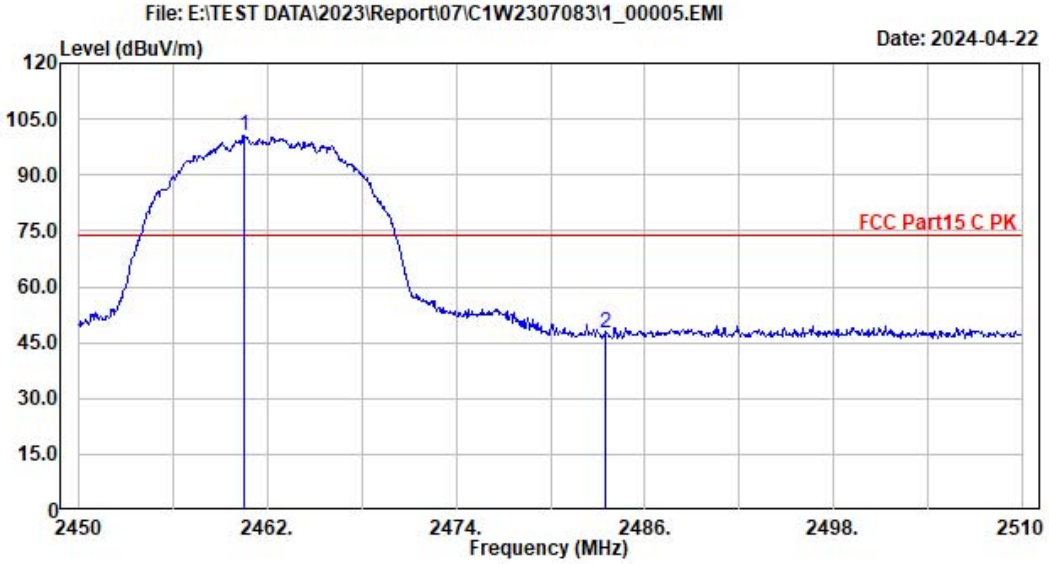

Site NO. : NO.2 3M Chamber
Instrument 1 : Spectrum N9030A(367)
Instrument 2 : Preamplifier 8449B(232)|000
Dis. / Ant. : 3115-593-2310
Limit : FCC Part15 C PK
Env. / Ins. : 21.3°C/54%
EUT : Smart Dongle
M/N : Wifi Kit-20
Power Rating : DC 5V
Test Mode : TX 802.11b 2462MHz
Memo :

Ant. pol.: Vertical Data NO.:5

Engineer : Liuyujie

Freq. MHz	Ant. Factor dB/m	Cable Loss dB	Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Remark
2460.500	28.50	3.17	101.40	32.47	100.60	74.00	-26.60	Peak
2483.500	28.50	3.19	48.42	32.46	47.65	74.00	26.35	Peak

Remarks:Emission Level = Antenna factor+Cable loss+Reading-Preamp Factor

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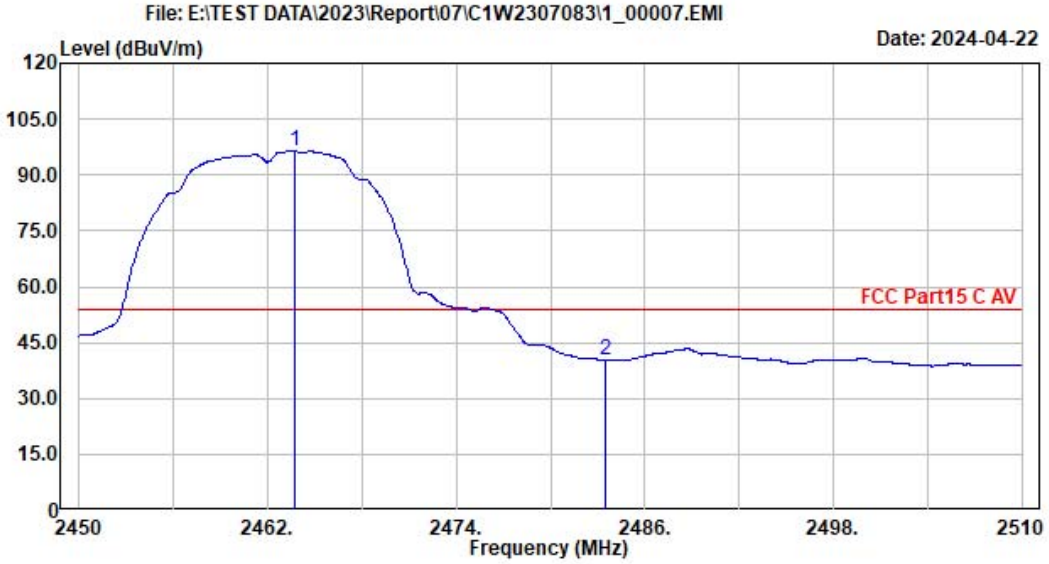

Site NO. : NO.2 3M Chamber
Instrument 1 : Spectrum N9030A(367)
Instrument 2 : Preamplifier 8449B(232)|000
Dis. / Ant. : 3115-593-2310
Limit : FCC Part15 C AV
Env. / Ins. : 21.3°C/54%
EUT : Smart Dongle
M/N : Wifi Kit-20
Power Rating : DC 5V
Test Mode : TX 802.11b 2462MHz
Memo :

Ant. pol.: Horizontal Data NO.:7

Engineer : Liuyujie

Freq. MHz	Ant. Factor dB/m	Cable Loss dB	Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Remark
2463.680	28.50	3.17	97.10	32.47	96.30	54.00	-42.30	Average
2483.500	28.50	3.19	41.00	32.46	40.23	54.00	13.77	Average

Remarks:Emission Level = Antenna factor+Cable loss+Reading-Preamp Factor

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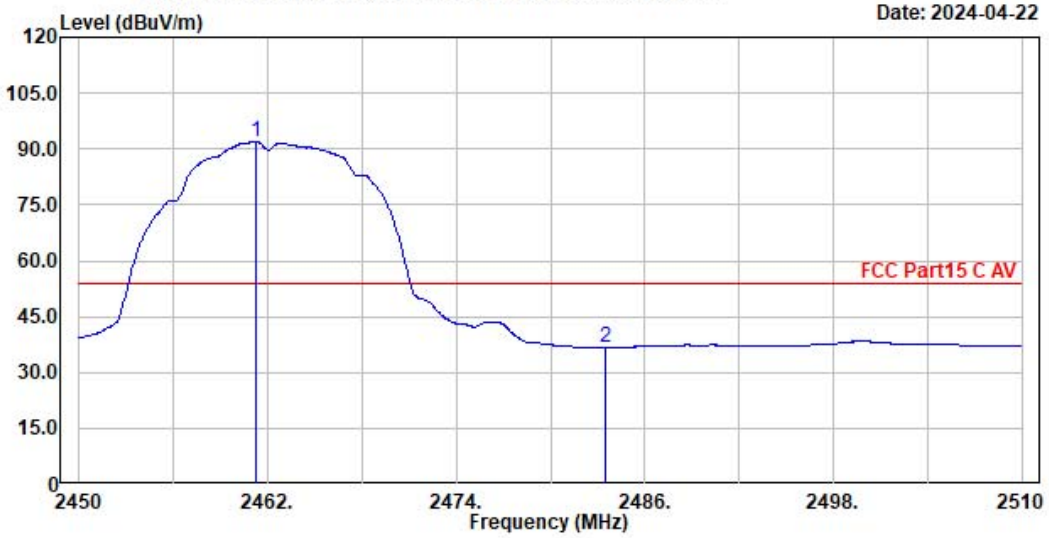
Date: 2024-04-22



Site NO. : NO.2 3M Chamber
Instrument 1 : Spectrum N9030A(367)
Instrument 2 : Preamplifier 8449B(232)|000
Dis. / Ant. : 3115-593-2310
Limit : FCC Part15 C AV
Env. / Ins. : 21.3°C/54%
EUT : Smart Dongle
M/N : Wifi Kit-20
Power Rating : DC 5V
Test Mode : TX 802.11b 2462MHz
Memo :

Ant. pol.: Vertical Data NO.:8

Engineer : Liuyujie

Freq. MHz	Ant. Factor dB/m	Cable Loss dB	Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Remark
2461.220	28.50	3.17	92.92	32.47	92.12	54.00	-38.12	Average
2483.500	28.50	3.19	37.64	32.46	36.87	54.00	17.13	Average

Remarks:Emission Level = Antenna factor+Cable loss+Reading-Preamp Factor

Mode	802.11g	Frequency	TX 2412MHz

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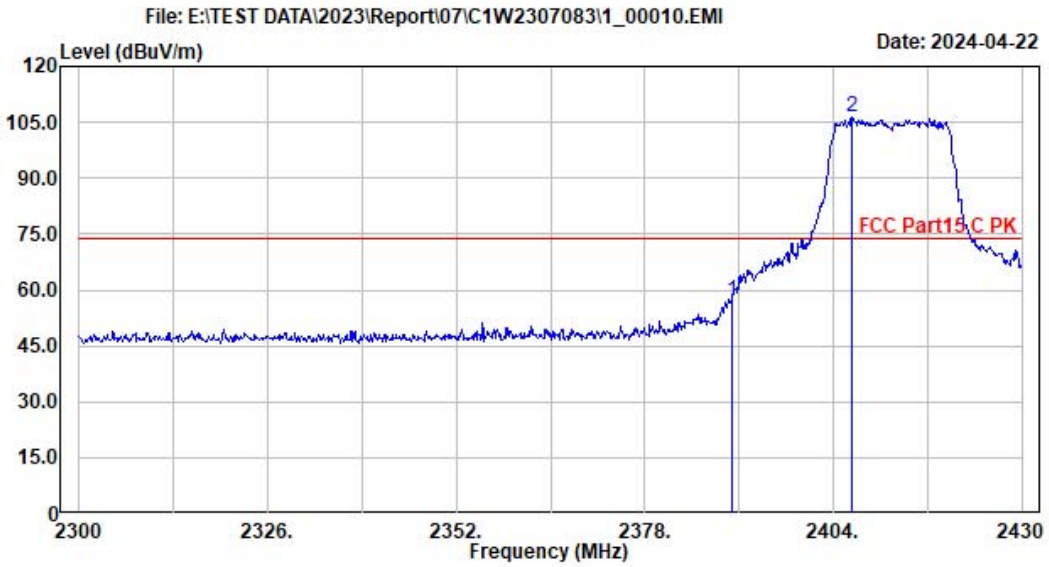

Site NO. : NO.2 3M Chamber
Instrument 1 : Spectrum N9030A(367)
Instrument 2 : Preamplifier 8449B(232)|000
Dis. / Ant. : 3115-593-2310
Limit : FCC Part15 C PK
Env. / Ins. : 21.3°C/54%
EUT : Smart Dongle
M/N : Wifi Kit-20
Power Rating : DC 5V
Test Mode : TX 802.11g 2412MHz
Memo :

Ant. pol.: Horizontal Data NO.:10

Engineer : Liuyujie

Freq. MHz	Ant. Factor dB/m	Cable Loss dB	Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Remark
2390.000	28.46	3.10	58.18	32.51	57.23	74.00	16.77	Peak
2406.470	28.50	3.12	107.13	32.50	106.25	74.00	-32.25	Peak

Remarks:Emission Level = Antenna factor+Cable loss+Reading-Preamp Factor

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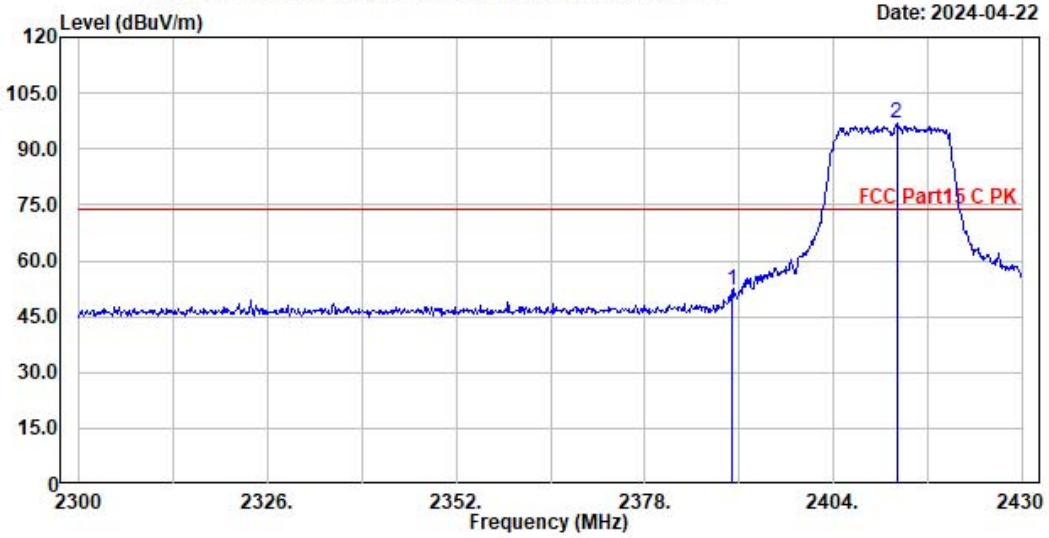
Date: 2024-04-22



Site NO. : NO.2 3M Chamber
Instrument 1 : Spectrum N9030A(367)
Instrument 2 : Preamplifier 8449B(232)|000
Dis. / Ant. : 3115-593-2310
Limit : FCC Part15 C PK
Env. / Ins. : 21.3°C/54%
EUT : Smart Dongle
M/N : Wifi Kit-20
Power Rating : DC 5V
Test Mode : TX 802.11g 2412MHz
Memo :

Ant. pol.: Vertical Data NO.:9

Engineer : Liuyujie

Freq. MHz	Ant. Factor dB/m	Cable Loss dB	Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Remark
2390.000	28.46	3.10	52.90	32.51	51.95	74.00	22.05	Peak
2412.710	28.50	3.12	97.56	32.49	96.69	74.00	-22.69	Peak

Remarks:Emission Level = Antenna factor+Cable loss+Reading-Preamp Factor

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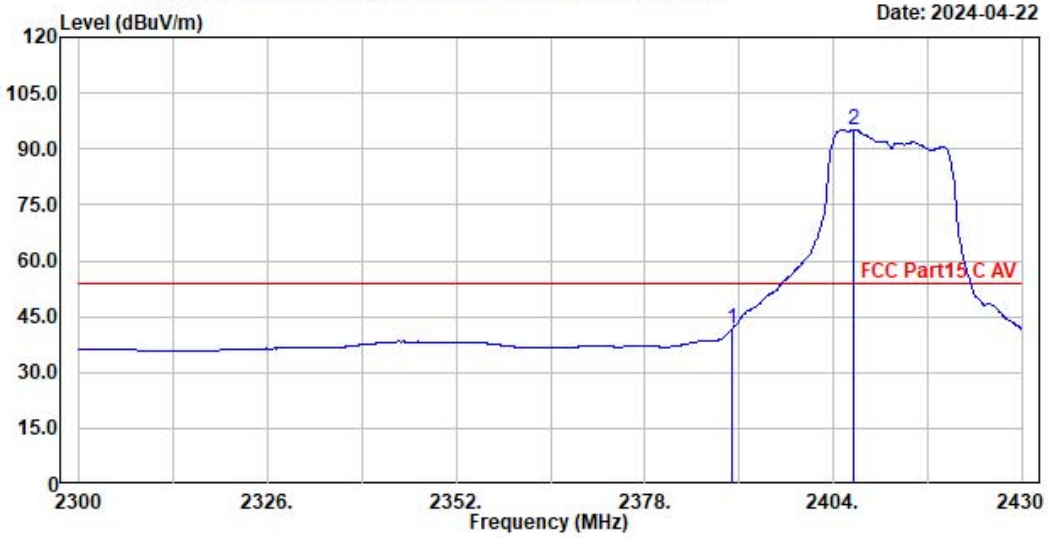
Date: 2024-04-22



Site NO. : NO.2 3M Chamber
Instrument 1 : Spectrum N9030A(367)
Instrument 2 : Preamplifier 8449B(232)|000
Dis. / Ant. : 3115-593-2310
Limit : FCC Part15 C AV
Env. / Ins. : 21.3°C/54%
EUT : Smart Dongle
M/N : Wifi Kit-20
Power Rating : DC 5V
Test Mode : TX 802.11g 2412MHz
Memo :

Ant. pol.: Horizontal Data NO.:11

Engineer : Liuyujie

Freq. MHz	Ant. Factor dB/m	Cable Loss dB	Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Remark
2390.000	28.46	3.10	42.59	32.51	41.64	54.00	12.36	Average
2406.860	28.50	3.12	96.12	32.50	95.24	54.00	-41.24	Average

Remarks:Emission Level = Antenna factor+Cable loss+Reading-Preamp Factor

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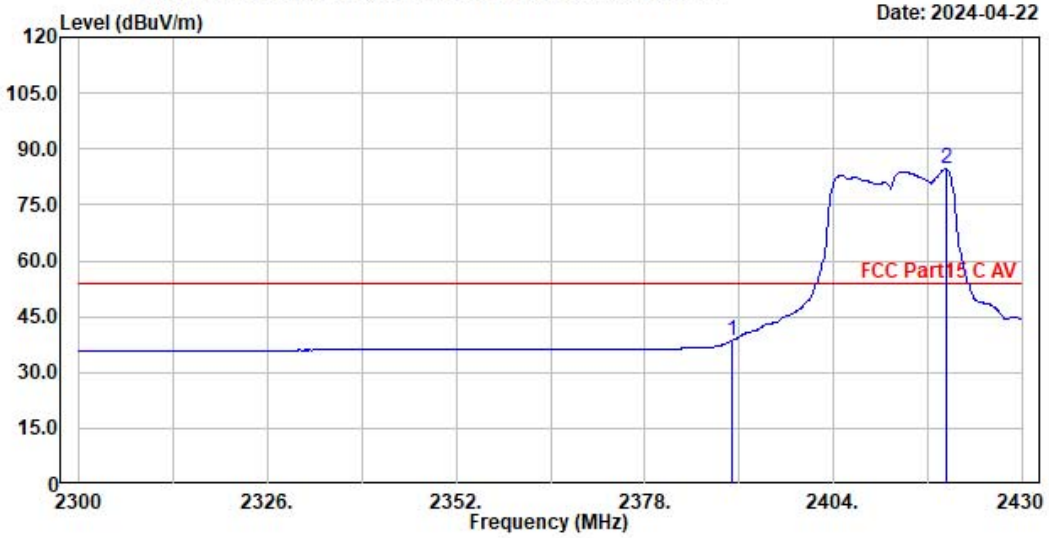
Date: 2024-04-22



Site NO. : NO.2 3M Chamber
Instrument 1 : Spectrum N9030A(367)
Instrument 2 : Preamplifier 8449B(232)|000
Dis. / Ant. : 3115-593-2310
Limit : FCC Part15 C AV
Env. / Ins. : 21.3°C/54%
EUT : Smart Dongle
M/N : Wifi Kit-20
Power Rating : DC 5V
Test Mode : TX 802.11g 2412MHz
Memo :

Ant. pol.: Vertical Data NO.:12

Engineer : Liuyujie

Freq. MHz	Ant. Factor dB/m	Cable Loss dB	Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Remark
2390.000	28.46	3.10	39.53	32.51	38.58	54.00	15.42	Average
2419.470	28.50	3.13	85.37	32.49	84.51	54.00	-30.51	Average

Remarks:Emission Level = Antenna factor+Cable loss+Reading-Preamp Factor

Mode	802.11g	Frequency	TX 2462MHz

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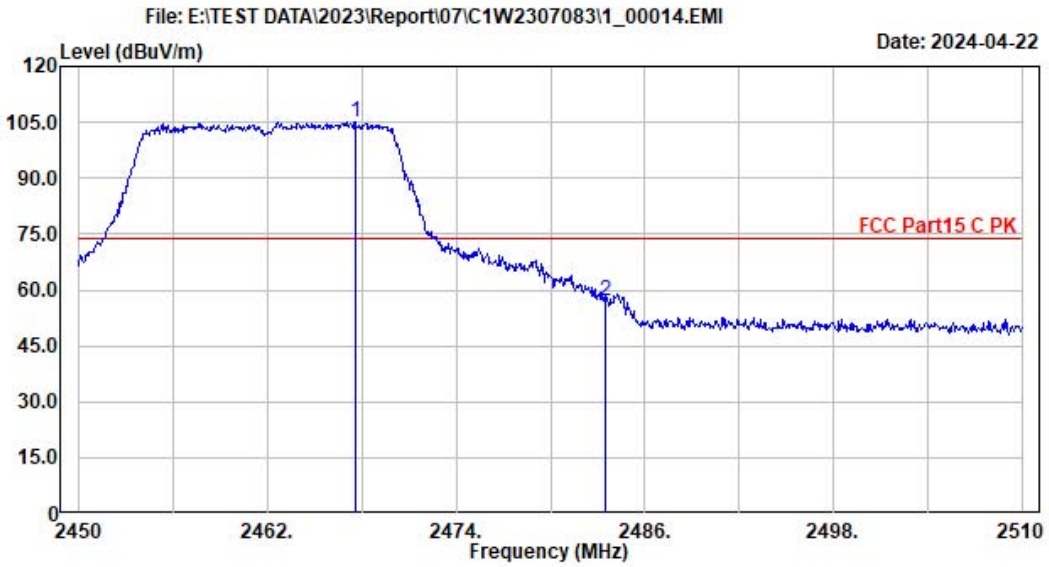

Site NO. : NO.2 3M Chamber
Instrument 1 : Spectrum N9030A(367)
Instrument 2 : Preamplifier 8449B(232)|000
Dis. / Ant. : 3115-593-2310
Limit : FCC Part15 C PK
Env. / Ins. : 21.3°C/54%
EUT : Smart Dongle
M/N : Wifi Kit-20
Power Rating : DC 5V
Test Mode : TX 802.11g 2462MHz
Memo :

Ant. pol.: Horizontal Data NO.:14

Engineer : Liuyujie

Freq. MHz	Ant. Factor dB/m	Cable Loss dB	Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Remark
2467.580	28.50	3.18	105.84	32.47	105.05	74.00	-31.05	Peak
2483.500	28.50	3.19	57.65	32.46	56.88	74.00	17.12	Peak

Remarks:Emission Level = Antenna factor+Cable loss+Reading-Preamp Factor

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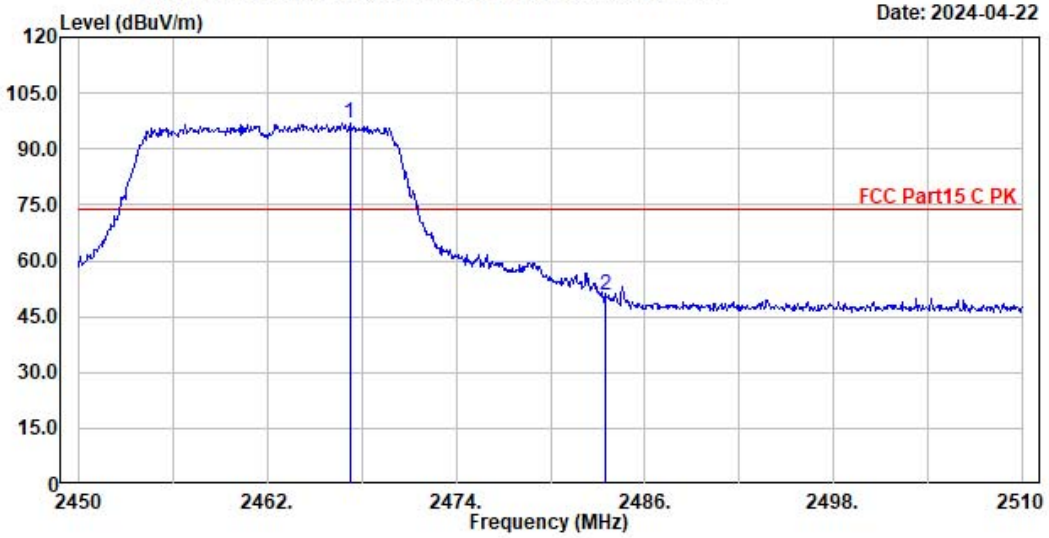
Date: 2024-04-22



Site NO. : NO.2 3M Chamber
Instrument 1 : Spectrum N9030A(367)
Instrument 2 : Preamplifier 8449B(232)|000
Dis. / Ant. : 3115-593-2310
Limit : FCC Part15 C PK
Env. / Ins. : 21.3°C/54%
EUT : Smart Dongle
M/N : Wifi Kit-20
Power Rating : DC 5V
Test Mode : TX 802.11g 2462MHz
Memo :

Ant. pol.: Vertical Data NO.:13

Engineer : Liuyujie

Freq. MHz	Ant. Factor dB/m	Cable Loss dB	Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Remark
2467.220	28.50	3.18	97.57	32.47	96.78	74.00	-22.78	Peak
2483.500	28.50	3.19	51.41	32.46	50.64	74.00	23.36	Peak

Remarks:Emission Level = Antenna factor+Cable loss+Reading-Preamp Factor

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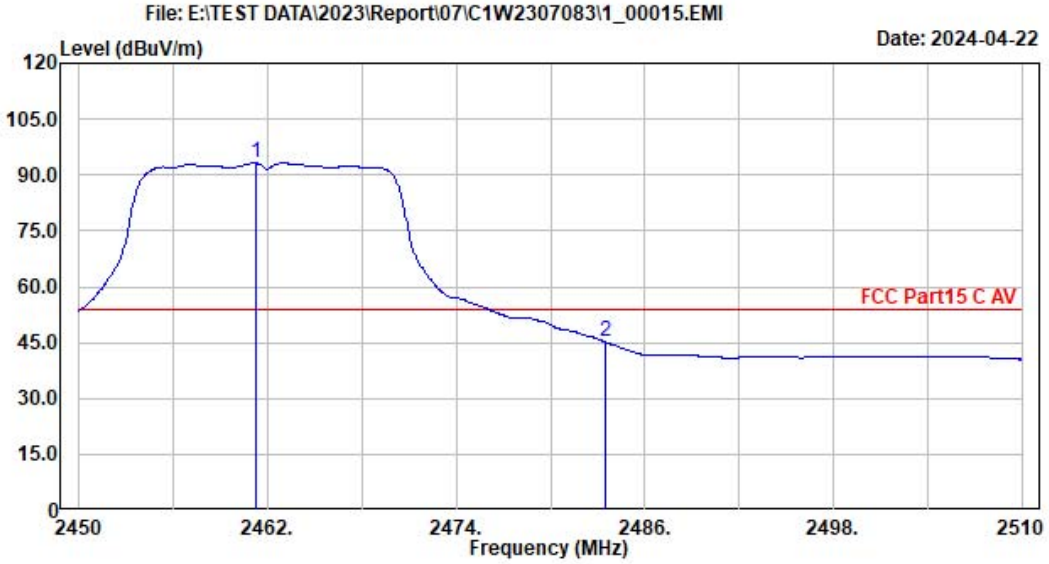

Site NO. : NO.2 3M Chamber
Instrument 1 : Spectrum N9030A(367)
Instrument 2 : Preamplifier 8449B(232)|000
Dis. / Ant. : 3115-593-2310
Limit : FCC Part15 C AV
Env. / Ins. : 21.3°C/54%
EUT : Smart Dongle
M/N : Wifi Kit-20
Power Rating : DC 5V
Test Mode : TX 802.11g 2462MHz
Memo :

Ant. pol.: Horizontal Data NO.:15

Engineer : Liuyujie

Freq. MHz	Ant. Factor dB/m	Cable Loss dB	Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Remark
2461.220	28.50	3.17	93.98	32.47	93.18	54.00	-39.18	Average
2483.500	28.50	3.19	45.88	32.46	45.11	54.00	8.89	Average

Remarks:Emission Level = Antenna factor+Cable loss+Reading-Preamp Factor

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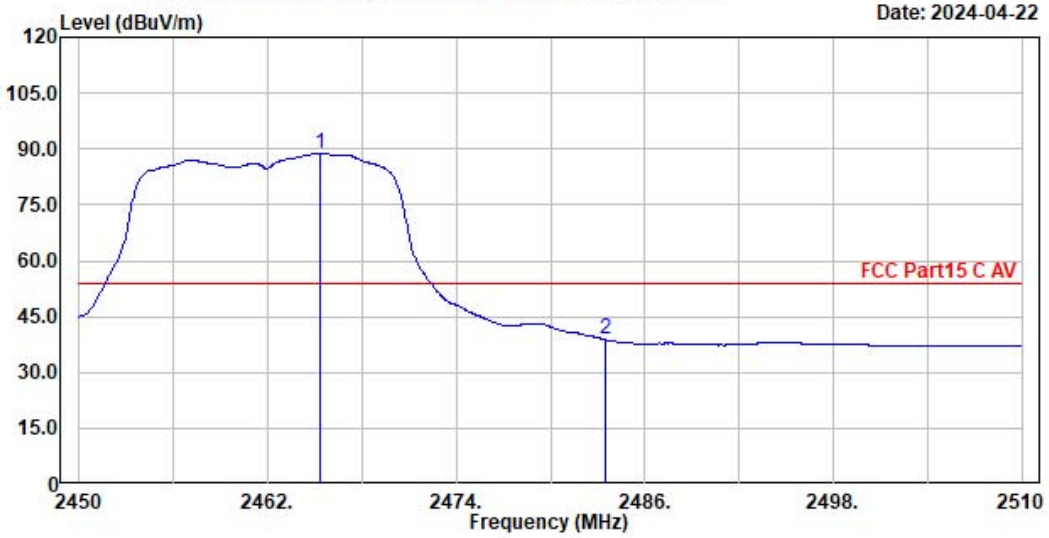
Date: 2024-04-22



Site NO. : NO.2 3M Chamber
Instrument 1 : Spectrum N9030A(367)
Instrument 2 : Preamplifier 8449B(232)|000
Dis. / Ant. : 3115-593-2310
Limit : FCC Part15 C AV
Env. / Ins. : 21.3°C/54%
EUT : Smart Dongle
M/N : Wifi Kit-20
Power Rating : DC 5V
Test Mode : TX 802.11g 2462MHz
Memo :

Ant. pol.: Vertical Data NO.:16

Engineer : Liuyujie

Freq. MHz	Ant. Factor dB/m	Cable Loss dB	Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Remark
2465.300	28.50	3.18	89.57	32.47	88.78	54.00	-34.78	Average
2483.500	28.50	3.19	39.56	32.46	38.79	54.00	15.21	Average

Remarks:Emission Level = Antenna factor+Cable loss+Reading-Preamp Factor

Mode	802.11nHT20	Frequency	TX 2412MHz

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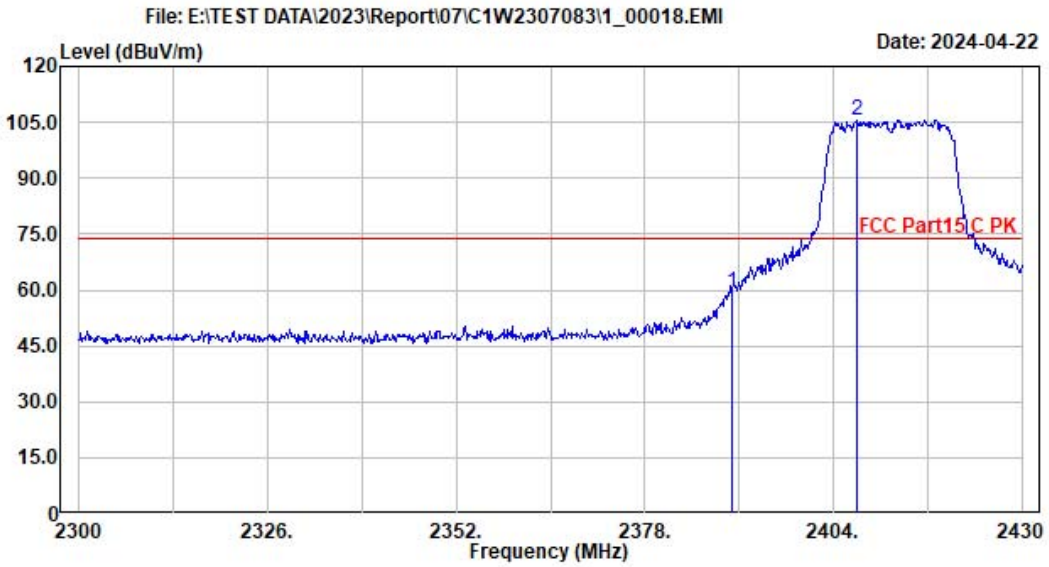

Site NO. : NO.2 3M Chamber
Instrument 1 : Spectrum N9030A(367)
Instrument 2 : Preamplifier 8449B(232)|000
Dis. / Ant. : 3115-593-2310
Limit : FCC Part15 C PK
Env. / Ins. : 21.3°C/54%
EUT : Smart Dongle
M/N : Wifi Kit-20
Power Rating : DC 5V
Test Mode : TX 802.11nHT20 2412MHz
Memo :

Ant. pol.: Horizontal Data NO.:18

Engineer : Liuyujie

Freq. MHz	Ant. Factor dB/m	Cable Loss dB	Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Remark
2390.000	28.46	3.10	60.41	32.51	59.46	74.00	14.54	Peak
2407.250	28.50	3.12	106.60	32.50	105.72	74.00	-31.72	Peak

Remarks:Emission Level = Antenna factor+Cable loss+Reading-Preamp Factor

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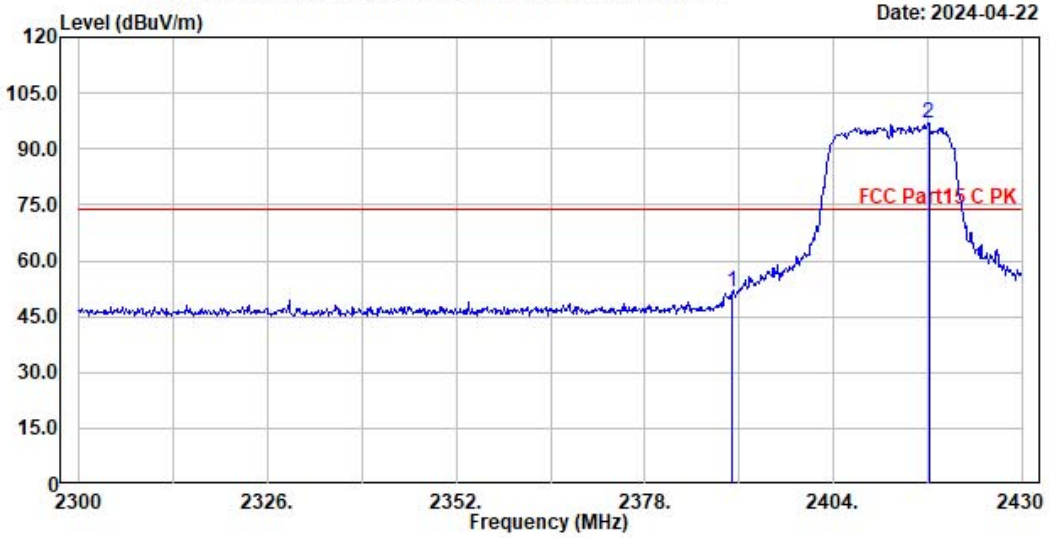

Site NO. : NO.2 3M Chamber
Instrument 1 : Spectrum N9030A(367)
Instrument 2 : Preamplifier 8449B(232)|000
Dis. / Ant. : 3115-593-2310
Limit : FCC Part15 C PK
Env. / Ins. : 21.3°C/54%
EUT : Smart Dongle
M/N : Wifi Kit-20
Power Rating : DC 5V
Test Mode : TX 802.11nHT20 2412MHz
Memo :

Ant. pol.: Vertical Data NO.:17

Engineer : Liuyujie

Freq. MHz	Ant. Factor dB/m	Cable Loss dB	Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Remark
2390.000	28.46	3.10	52.69	32.51	51.74	74.00	22.26	Peak
2417.130	28.50	3.13	97.90	32.49	97.04	74.00	-23.04	Peak

Remarks:Emission Level = Antenna factor+Cable loss+Reading-Preamp Factor

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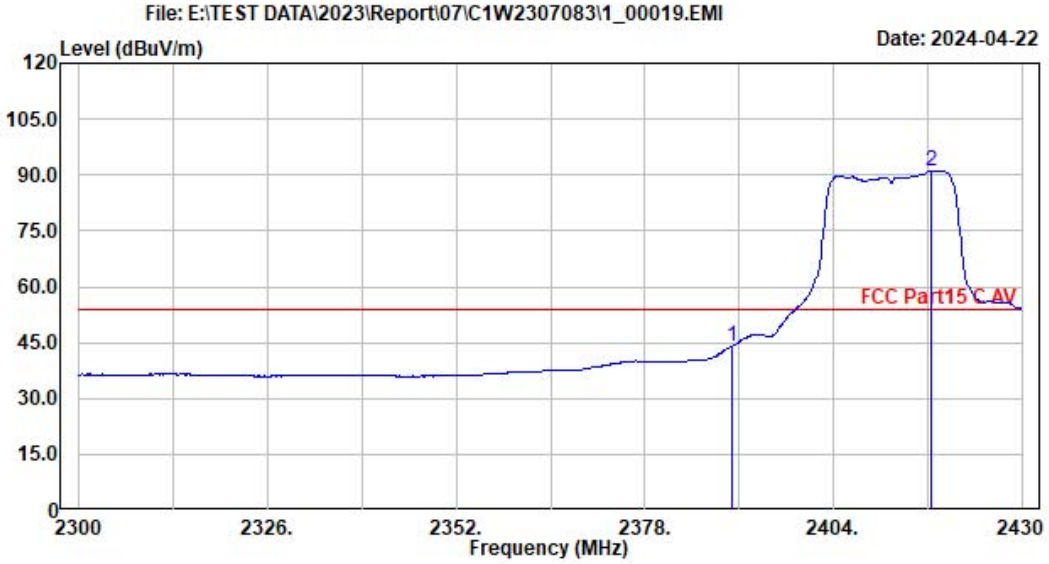

Site NO. : NO.2 3M Chamber
Instrument 1 : Spectrum N9030A(367)
Instrument 2 : Preamplifier 8449B(232)|000
Dis. / Ant. : 3115-593-2310
Limit : FCC Part15 C AV
Env. / Ins. : 21.3°C/54%
EUT : Smart Dongle
M/N : Wifi Kit-20
Power Rating : DC 5V
Test Mode : TX 802.11nHT20 2412MHz
Memo :

Ant. pol.: Horizontal Data NO.:19

Engineer : Liuyujie

Freq. MHz	Ant. Factor dB/m	Cable Loss dB	Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Remark
2390.000	28.46	3.10	44.92	32.51	43.97	54.00	10.03	Average
2417.390	28.50	3.13	92.07	32.49	91.21	54.00	-37.21	Average

Remarks:Emission Level = Antenna factor+Cable loss+Reading-Preamp Factor

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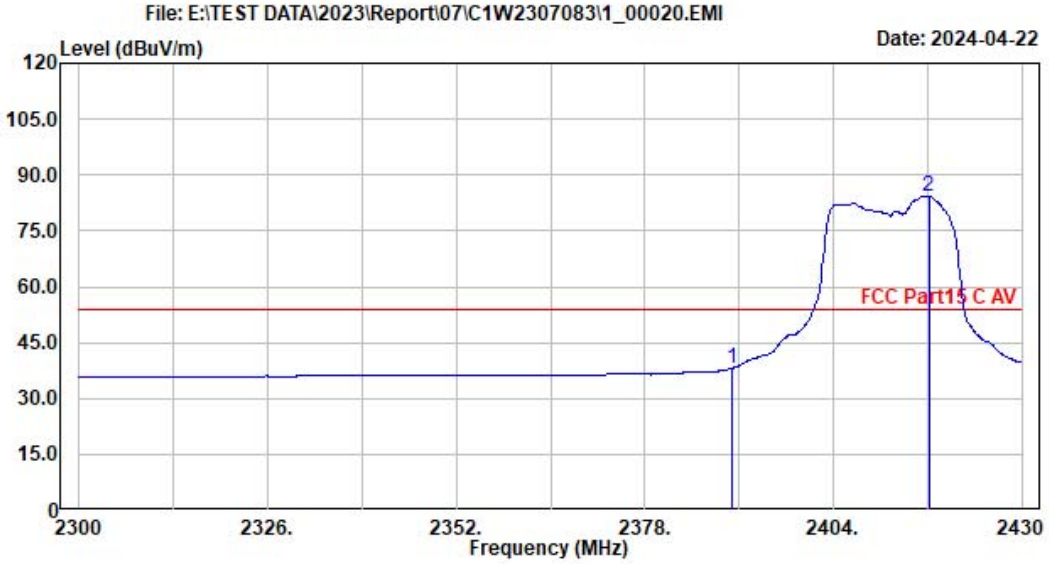

Site NO. : NO.2 3M Chamber
Instrument 1 : Spectrum N9030A(367)
Instrument 2 : Preamplifier 8449B(232)|000
Dis. / Ant. : 3115-593-2310
Limit : FCC Part15 C AV
Env. / Ins. : 21.3°C/54%
EUT : Smart Dongle
M/N : Wifi Kit-20
Power Rating : DC 5V
Test Mode : TX 802.11nHT20 2412MHz
Memo :

Ant. pol.: Vertical Data NO.:20

Engineer : Liuyujie

Freq. MHz	Ant. Factor dB/m	Cable Loss dB	Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Remark
2390.000	28.46	3.10	39.09	32.51	38.14	54.00	15.86	Average
2417.130	28.50	3.13	85.25	32.49	84.39	54.00	-30.39	Average

Remarks:Emission Level = Antenna factor+Cable loss+Reading-Preamp Factor

Mode	802.11nHT20	Frequency	TX 2462MHz

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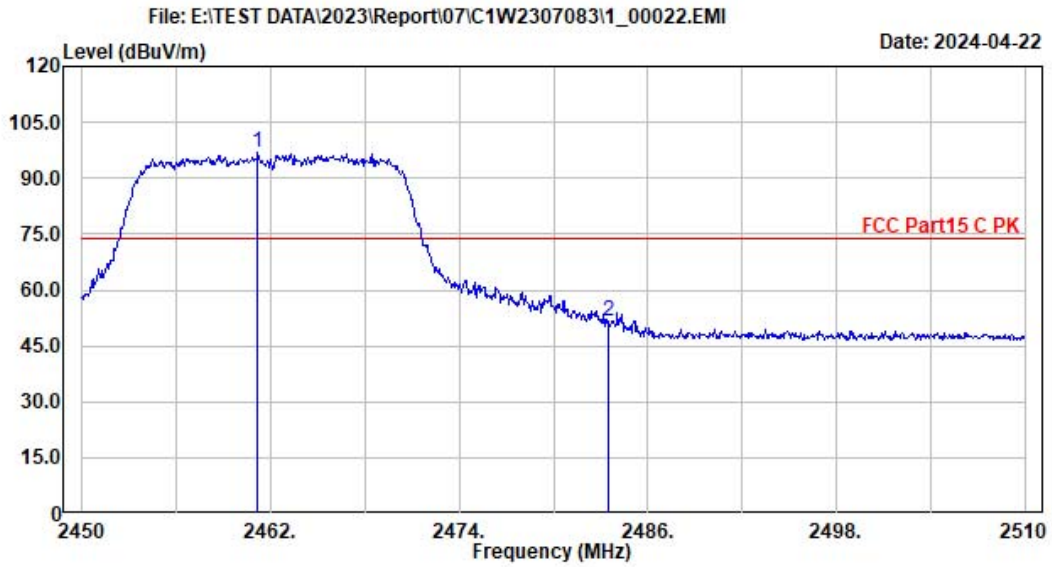

Site NO. : NO.2 3M Chamber
Instrument 1 : Spectrum N9030A(367)
Instrument 2 : Preamplifier 8449B(232)|000
Dis. / Ant. : 3115-593-2310
Limit : FCC Part15 C PK
Env. / Ins. : 21.3°C/54%
EUT : Smart Dongle
M/N : Wifi Kit-20
Power Rating : DC 5V
Test Mode : TX 802.11nHT20 2462MHz
Memo :

Ant. pol.: Horizontal Data NO.:22

Engineer : Liuyujie

Freq. MHz	Ant. Factor dB/m	Cable Loss dB	Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Remark
2461.160	28.50	3.17	97.51	32.47	96.71	74.00	-22.71	Peak
2483.500	28.50	3.19	52.38	32.46	51.61	74.00	22.39	Peak

Remarks:Emission Level = Antenna factor+Cable loss+Reading-Preamp Factor

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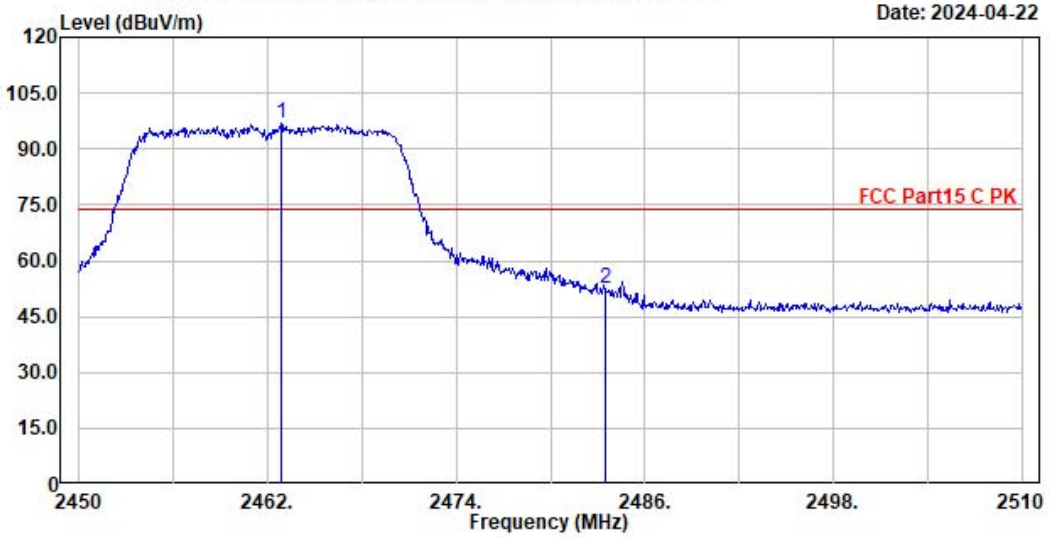

Site NO. : NO.2 3M Chamber
Instrument 1 : Spectrum N9030A(367)
Instrument 2 : Preamplifier 8449B(232)|000
Dis. / Ant. : 3115-593-2310
Limit : FCC Part15 C PK
Env. / Ins. : 21.3°C/54%
EUT : Smart Dongle
M/N : Wifi Kit-20
Power Rating : DC 5V
Test Mode : TX 802.11nHT20 2462MHz
Memo :

Ant. pol.: Vertical Data NO.:21

Engineer : Liuyujie

Freq. MHz	Ant. Factor dB/m	Cable Loss dB	Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Remark
2462.900	28.50	3.17	97.78	32.47	96.98	74.00	-22.98	Peak
2483.500	28.50	3.19	53.23	32.46	52.46	74.00	21.54	Peak

Remarks:Emission Level = Antenna factor+Cable loss+Reading-Preamp Factor

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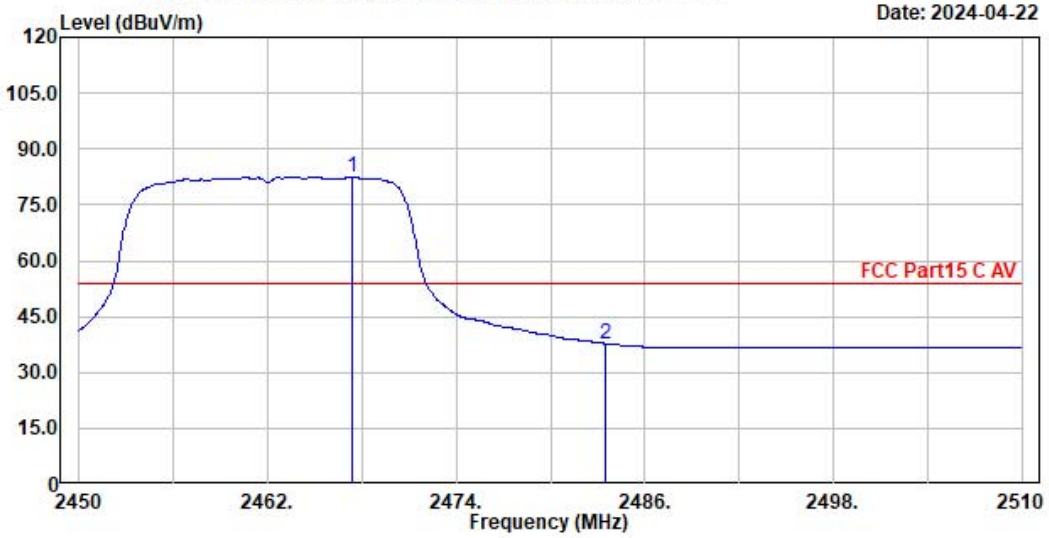

Site NO. : NO.2 3M Chamber
Instrument 1 : Spectrum N9030A(367)
Instrument 2 : Preamplifier 8449B(232)|000
Dis. / Ant. : 3115-593-2310
Limit : FCC Part15 C AV
Env. / Ins. : 21.3°C/54%
EUT : Smart Dongle
M/N : Wifi Kit-20
Power Rating : DC 5V
Test Mode : TX 802.11nHT20 2462MHz
Memo :

Ant. pol.: Horizontal Data NO.:23

Engineer : Liuyujie

Freq. MHz	Ant. Factor dB/m	Cable Loss dB	Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Remark
2467.340	28.50	3.18	83.24	32.47	82.45	54.00	-28.45	Average
2483.500	28.50	3.19	38.53	32.46	37.76	54.00	16.24	Average

Remarks:Emission Level = Antenna factor+Cable loss+Reading-Preamp Factor

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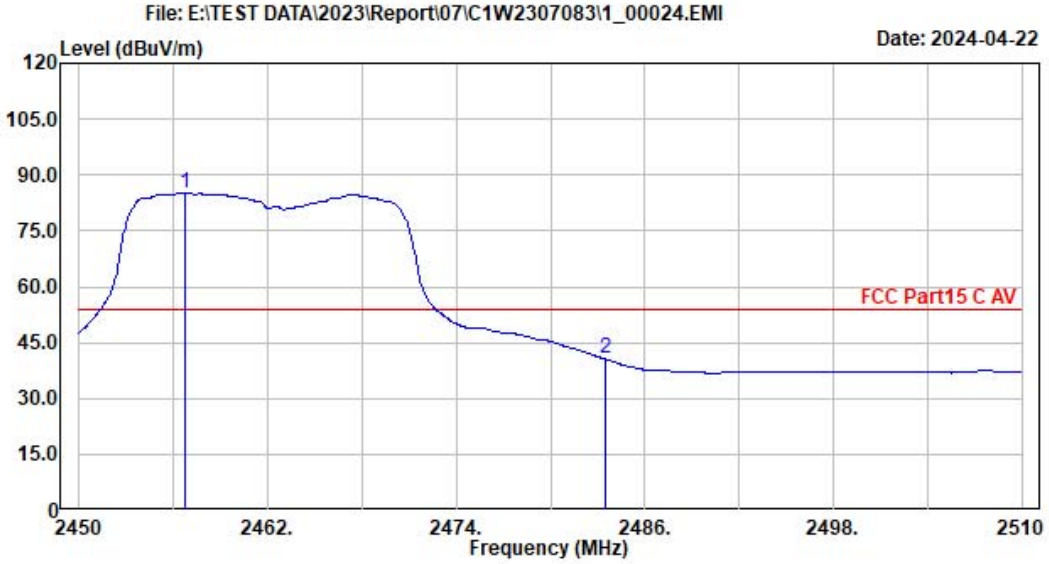

Site NO. : NO.2 3M Chamber
Instrument 1 : Spectrum N9030A(367)
Instrument 2 : Preamplifier 8449B(232)|000
Dis. / Ant. : 3115-593-2310
Limit : FCC Part15 C AV
Env. / Ins. : 21.3°C/54%
EUT : Smart Dongle
M/N : Wifi Kit-20
Power Rating : DC 5V
Test Mode : TX 802.11nHT20 2462MHz
Memo :

Ant. pol.: Vertical Data NO.:24

Engineer : Liuyujie

Freq. MHz	Ant. Factor dB/m	Cable Loss dB	Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Remark
2456.720	28.50	3.17	86.06	32.47	85.26	54.00	-31.26	Average
2483.500	28.50	3.19	41.34	32.46	40.57	54.00	13.43	Average

Remarks:Emission Level = Antenna factor+Cable loss+Reading-Preamp Factor

Mode	802.11nHT40	Frequency	TX 2422MHz

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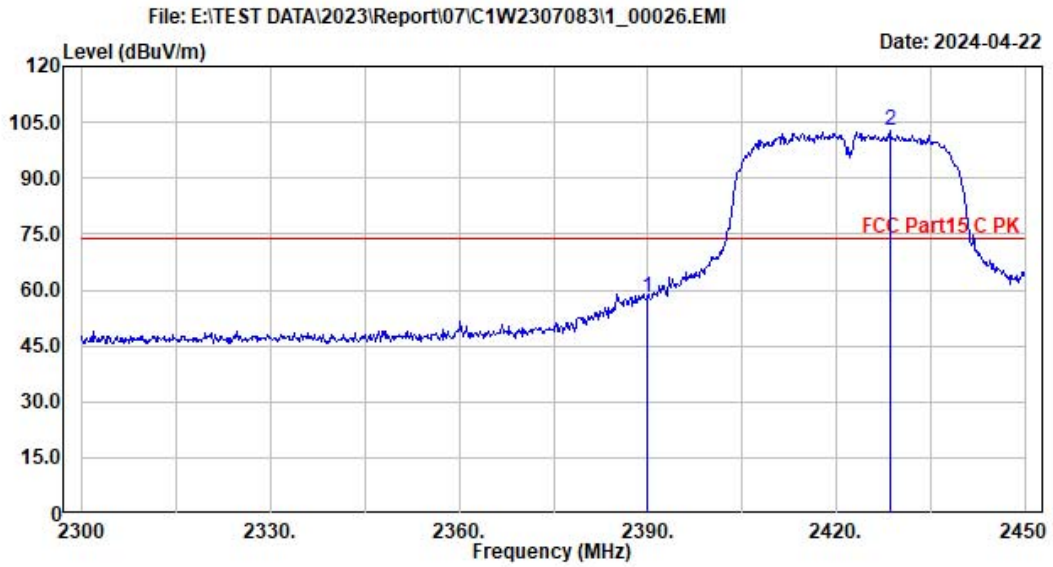

Site NO. : NO.2 3M Chamber
Instrument 1 : Spectrum N9030A(367)
Instrument 2 : Preamplifier 8449B(232)|000
Dis. / Ant. : 3115-593-2310
Limit : FCC Part15 C PK
Env. / Ins. : 21.3°C/54%
EUT : Smart Dongle
M/N : Wifi Kit-20
Power Rating : DC 5V
Test Mode : TX 802.11nHT40 2422MHz
Memo :

Ant. pol.: Horizontal Data NO.:26

Engineer : Liuyujie

Freq. MHz	Ant. Factor dB/m	Cable Loss dB	Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Remark
2390.000	28.46	3.10	58.96	32.51	58.01	74.00	15.99	Peak
2428.550	28.50	3.14	103.75	32.49	102.90	74.00	-28.90	Peak

Remarks:Emission Level = Antenna factor+Cable loss+Reading-Preamp Factor

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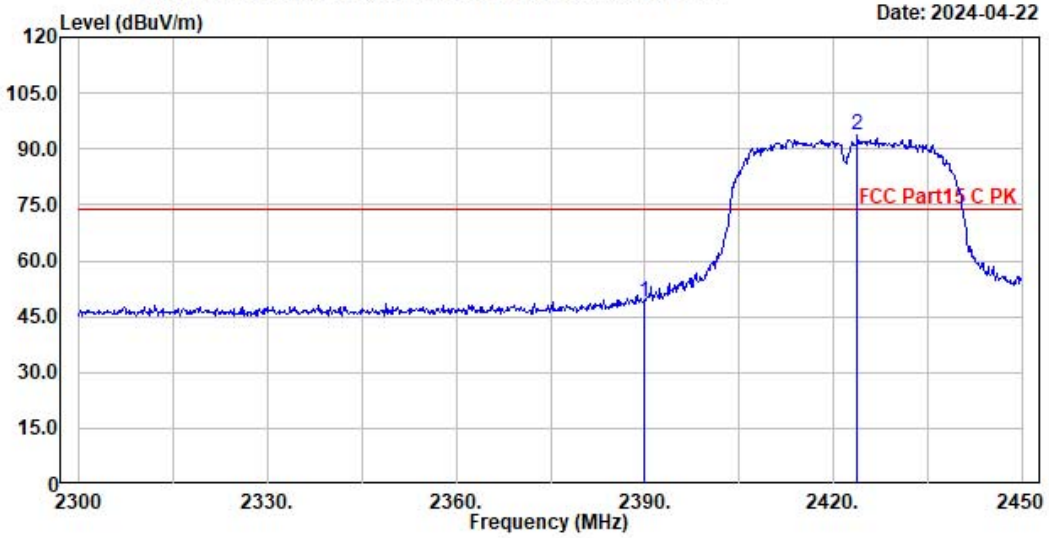
Date: 2024-04-22



Site NO. : NO.2 3M Chamber
Instrument 1 : Spectrum N9030A(367)
Instrument 2 : Preamplifier 8449B(232)|000
Dis. / Ant. : 3115-593-2310
Limit : FCC Part15 C PK
Env. / Ins. : 21.3°C/54%
EUT : Smart Dongle
M/N : Wifi Kit-20
Power Rating : DC 5V
Test Mode : TX 802.11nHT40 2422MHz
Memo :

Ant. pol.: Vertical Data NO.:25

Engineer : Liuyujie

Freq. MHz	Ant. Factor dB/m	Cable Loss dB	Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Remark
2390.000	28.46	3.10	49.90	32.51	48.95	74.00	25.05	Peak
2423.750	28.50	3.13	94.50	32.49	93.64	74.00	-19.64	Peak

Remarks:Emission Level = Antenna factor+Cable loss+Reading-Preamp Factor

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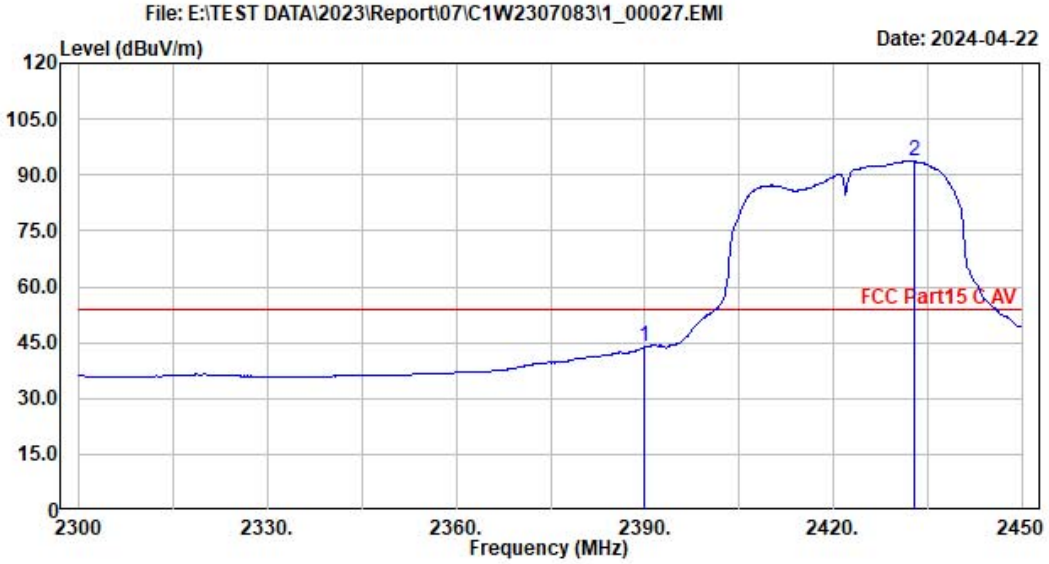

Site NO. : NO.2 3M Chamber
Instrument 1 : Spectrum N9030A(367)
Instrument 2 : Preamplifier 8449B(232)|000
Dis. / Ant. : 3115-593-2310
Limit : FCC Part15 C AV
Env. / Ins. : 21.3°C/54%
EUT : Smart Dongle
M/N : Wifi Kit-20
Power Rating : DC 5V
Test Mode : TX 802.11nHT40 2422MHz
Memo :

Ant. pol.: Horizontal Data NO.:27

Engineer : Liuyujie

Freq. MHz	Ant. Factor dB/m	Cable Loss dB	Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Remark
2390.000	28.46	3.10	44.83	32.51	43.88	54.00	10.12	Average
2432.750	28.50	3.14	94.45	32.48	93.61	54.00	-39.61	Average

Remarks:Emission Level = Antenna factor+Cable loss+Reading-Preamp Factor

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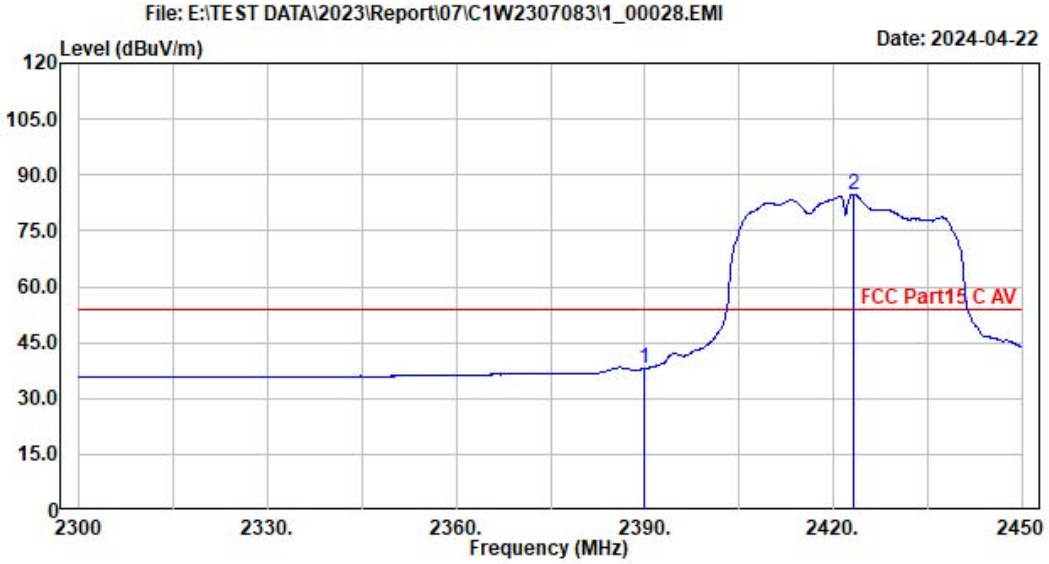

Site NO. : NO.2 3M Chamber
Instrument 1 : Spectrum N9030A(367)
Instrument 2 : Preamplifier 8449B(232)|000
Dis. / Ant. : 3115-593-2310
Limit : FCC Part15 C AV
Env. / Ins. : 21.3°C/54%
EUT : Smart Dongle
M/N : Wifi Kit-20
Power Rating : DC 5V
Test Mode : TX 802.11nHT40 2422MHz
Memo :

Ant. pol.: Vertical Data NO.:28

Engineer : Liuyujie

Freq. MHz	Ant. Factor dB/m	Cable Loss dB	Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Remark
2390.000	28.46	3.10	39.10	32.51	38.15	54.00	15.85	Average
2423.150	28.50	3.13	85.73	32.49	84.87	54.00	-30.87	Average

Remarks:Emission Level = Antenna factor+Cable loss+Reading-Preamp Factor

Mode	802.11nHT40	Frequency	TX 2452MHz

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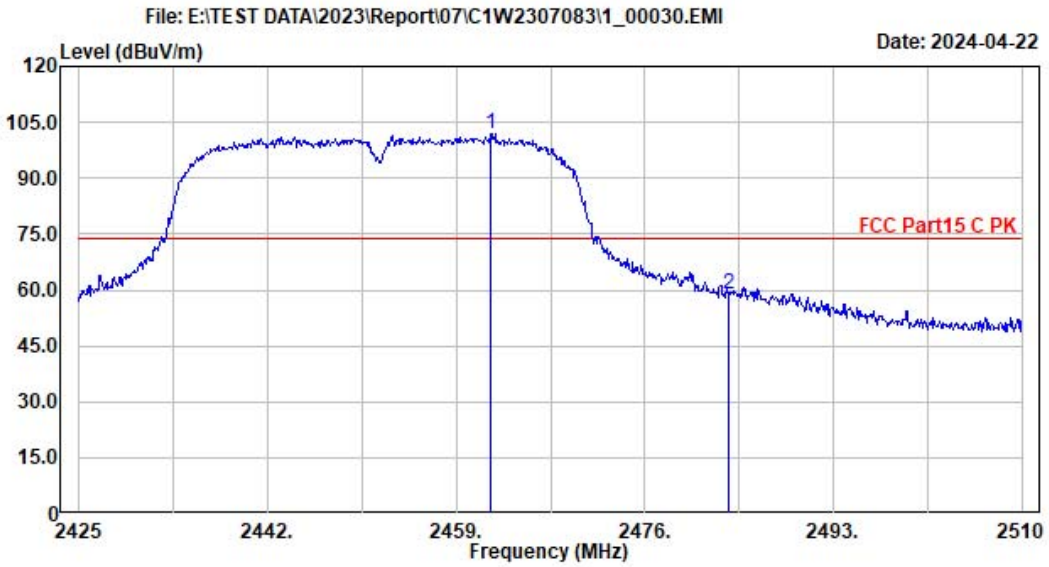

Site NO. : NO.2 3M Chamber
Instrument 1 : Spectrum N9030A(367)
Instrument 2 : Preamplifier 8449B(232)|000
Dis. / Ant. : 3115-593-2310
Limit : FCC Part15 C PK
Env. / Ins. : 21.3°C/54%
EUT : Smart Dongle
M/N : Wifi Kit-20
Power Rating : DC 5V
Test Mode : TX 802.11nHT40 2452MHz
Memo :

Ant. pol.: Horizontal Data NO.:30

Engineer : Liuyujie

Freq. MHz	Ant. Factor dB/m	Cable Loss dB	Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Remark
2462.145	28.50	3.17	102.73	32.47	101.93	74.00	-27.93	Peak
2483.500	28.50	3.19	59.75	32.46	58.98	74.00	15.02	Peak

Remarks:Emission Level = Antenna factor+Cable loss+Reading-Preamp Factor

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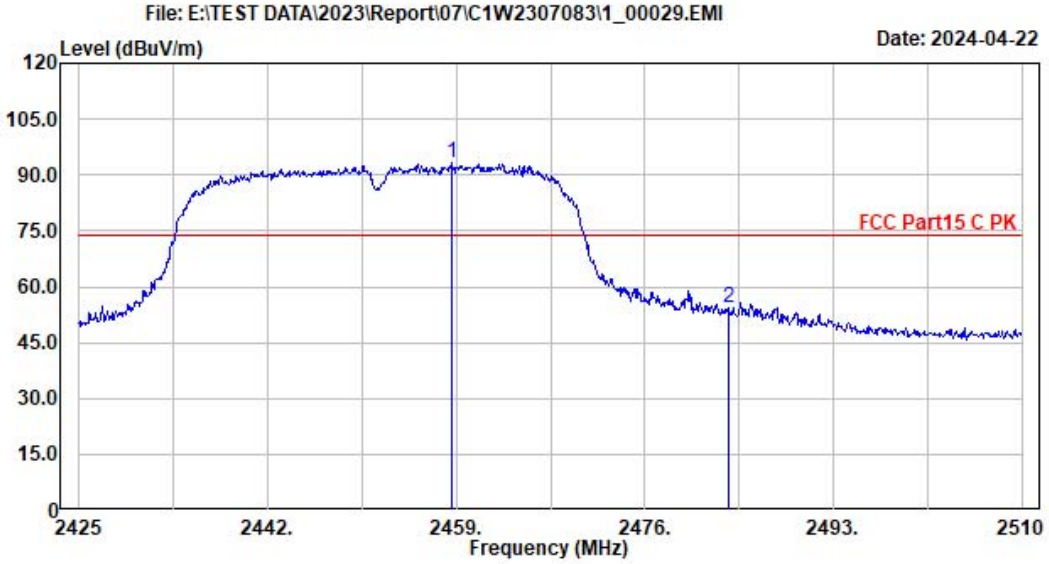

Site NO. : NO.2 3M Chamber
Instrument 1 : Spectrum N9030A(367)
Instrument 2 : Preamplifier 8449B(232)|000
Dis. / Ant. : 3115-593-2310
Limit : FCC Part15 C PK
Env. / Ins. : 21.3°C/54%
EUT : Smart Dongle
M/N : Wifi Kit-20
Power Rating : DC 5V
Test Mode : TX 802.11nHT40 2452MHz
Memo :

Ant. pol.: Vertical Data NO.:29

Engineer : Liuyujie

Freq. MHz	Ant. Factor dB/m	Cable Loss dB	Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Remark
2458.575	28.50	3.17	93.87	32.47	93.07	74.00	-19.07	Peak
2483.500	28.50	3.19	55.32	32.46	54.55	74.00	19.45	Peak

Remarks:Emission Level = Antenna factor+Cable loss+Reading-Preamp Factor

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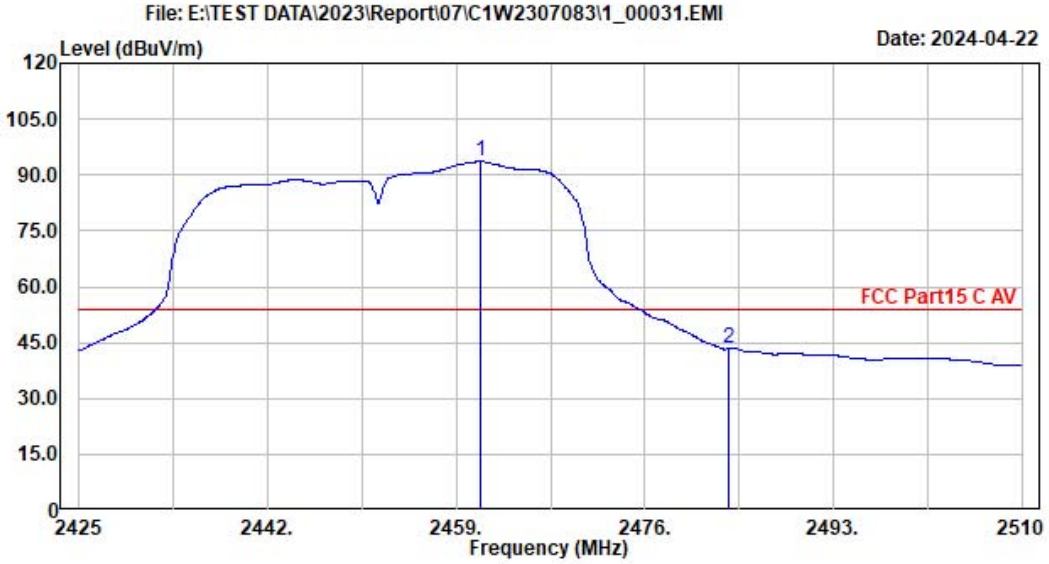

Site NO. : NO.2 3M Chamber
Instrument 1 : Spectrum N9030A(367)
Instrument 2 : Preamplifier 8449B(232)|000
Dis. / Ant. : 3115-593-2310
Limit : FCC Part15 C AV
Env. / Ins. : 21.3°C/54%
EUT : Smart Dongle
M/N : Wifi Kit-20
Power Rating : DC 5V
Test Mode : TX 802.11nHT40 2452MHz
Memo :

Ant. pol.: Horizontal Data NO.:31

Engineer : Liuyujie

Freq. MHz	Ant. Factor dB/m	Cable Loss dB	Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Remark
2461.210	28.50	3.17	94.41	32.47	93.61	54.00	-39.61	Average
2483.500	28.50	3.19	44.03	32.46	43.26	54.00	10.74	Average

Remarks:Emission Level = Antenna factor+Cable loss+Reading-Preamp Factor

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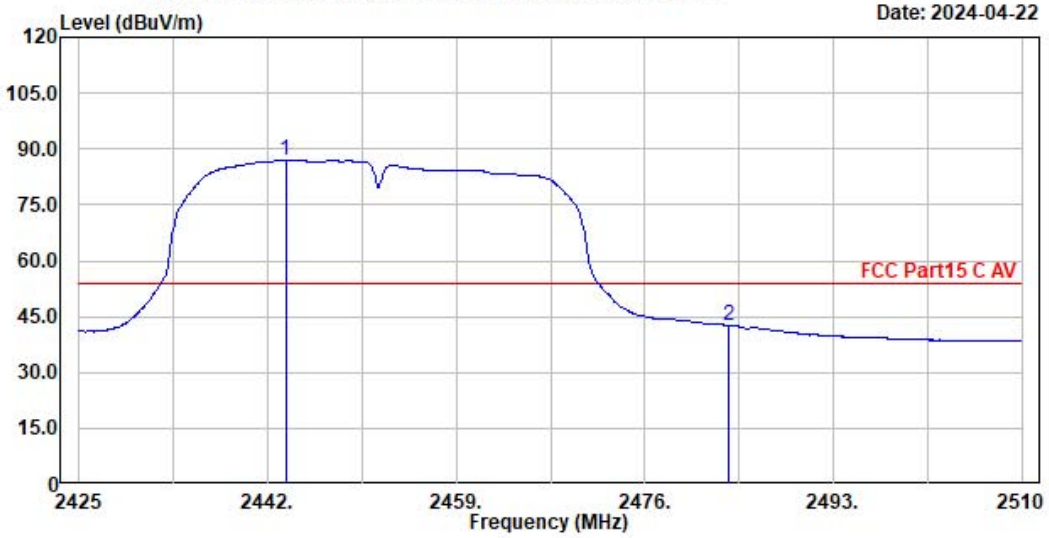
Date: 2024-04-22



Site NO. : NO.2 3M Chamber
Instrument 1 : Spectrum N9030A(367)
Instrument 2 : Preamplifier 8449B(232)|000
Dis. / Ant. : 3115-593-2310
Limit : FCC Part15 C AV
Env. / Ins. : 21.3°C/54%
EUT : Smart Dongle
M/N : Wifi Kit-20
Power Rating : DC 5V
Test Mode : TX 802.11nHT40 2452MHz
Memo :

Ant. pol.: Vertical Data NO.:92

Engineer : Liuyujie

Freq. MHz	Ant. Factor dB/m	Cable Loss dB	Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limits dBuV/m	Margin dB	Remark
2443.615	28.50	3.15	90.47	35.21	86.91	54.00	-32.91	Average
2483.500	28.50	3.19	46.11	35.18	42.62	54.00	11.38	Average

Remarks:Emission Level = Antenna factor+Cable loss+Reading-Preamp Factor