

18GHz to 26.5GHz

According to C63.10, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement, so AV emission value did not show in below table if the peak value complies with average limit.

Note: Pre-scan all modes, only the worst case(TX/BLE_2M_2402MHz) in the worst power supply is recorded in this report.

Environment: 22.8°C/50%RH/101.0kPa

Voltage:DC 7.3V

Tested By: Chuang Li

Date: 2025-02-21

Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level for 1m [dBμV/m]	Level for 3m [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	19784.2	51.8	55.31	45.77	3.51	74	28.19	100	312	Horizontal
2	21465	51.18	55.22	45.68	4.04	74	28.28	150	81	Horizontal
3	24403.1	51.16	56.27	46.73	5.11	74	27.23	100	54	Horizontal
4	30386	53.47	59.87	50.33	6.40	74	23.63	100	341	Horizontal
5	33613.4	51.42	59.46	49.92	8.04	74	24.04	100	140	Horizontal
6	38584.3	46.45	60.19	50.65	13.74	74	23.31	150	283	Horizontal

Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level for 1m [dBμV/m]	Level for 3m [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	18320.1	53.51	56.07	46.53	2.56	74	27.43	100	340	Vertical
2	23091.9	50.61	55.62	46.08	5.01	74	27.88	150	252	Vertical
3	27037.6	52.03	58.18	48.64	6.15	74	25.32	100	195	Vertical
4	29837.1	52.69	58.91	49.37	6.22	74	24.59	150	0	Vertical
5	34230.5	51.22	59.92	50.38	8.70	74	23.58	100	0	Vertical
6	39019.9	45.45	60.61	51.07	15.16	74	22.89	100	77	Vertical

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS
- Above 18G test distance is 1m, so the Level for 3m= Level for 1m + 20*log(1/3)

7.7. Radiated Restricted Band Edge Measurement

7.7.1. Test Limit

For 15.205 requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a).

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.25 - 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	156.52480 - 156.525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)
13.36 - 13.41	--	--	--

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

7.7.2. Test Procedure Used

ANSI C63.10 Section 6.3 (General Requirements)

ANSI C63.10 Section 6.6 (Standard test method above 1GHz)

7.7.3. Test Setting

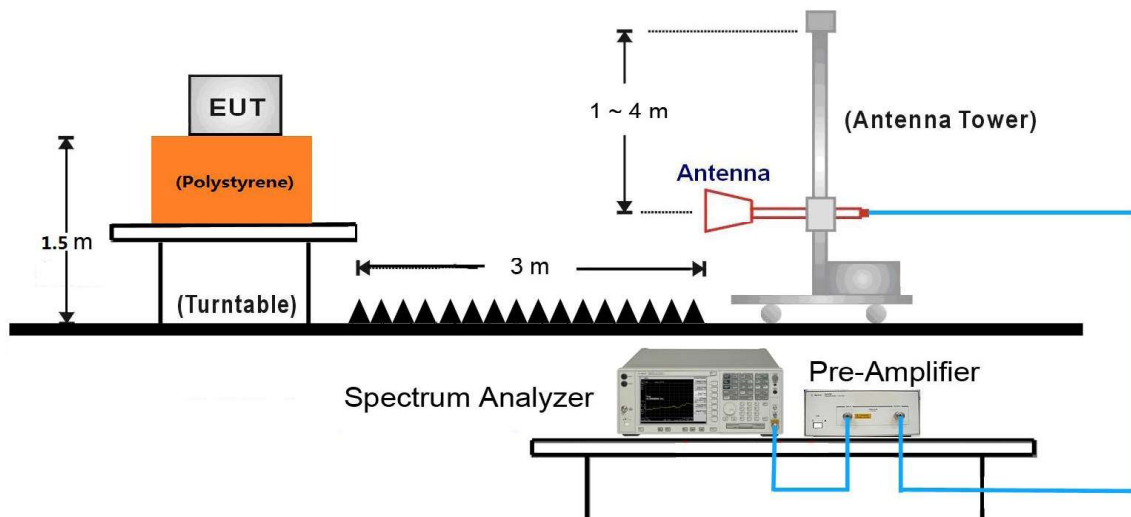
Peak Field Strength Measurements

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

Average Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = Power Average (RMS)
5. Number of sweep point = 2001 (Number of sweep points must be $\geq 2 \times \text{span} / \text{RBW}$)
6. Sweep time = auto
7. Trace (RMS) averaging was performed over at least 100 traces.

7.7.4. Test Setup



7.7.5. Test Result

Product	Smart Lock U400	Model No.	DL-D06E
Test Voltage:	DC 7.3V	Test Engineer:	Chuang Li
Test Date	2025-02-14	Environmental Conditions	21.7°C/49%RH/101.0kPa

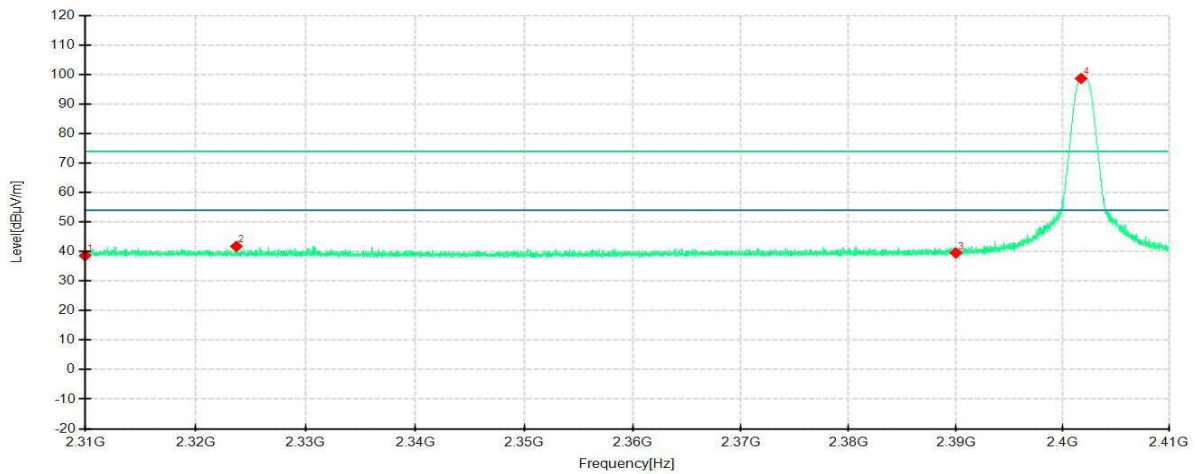
BLE 1M

Lowest Frequency

Frequency 2402MHz

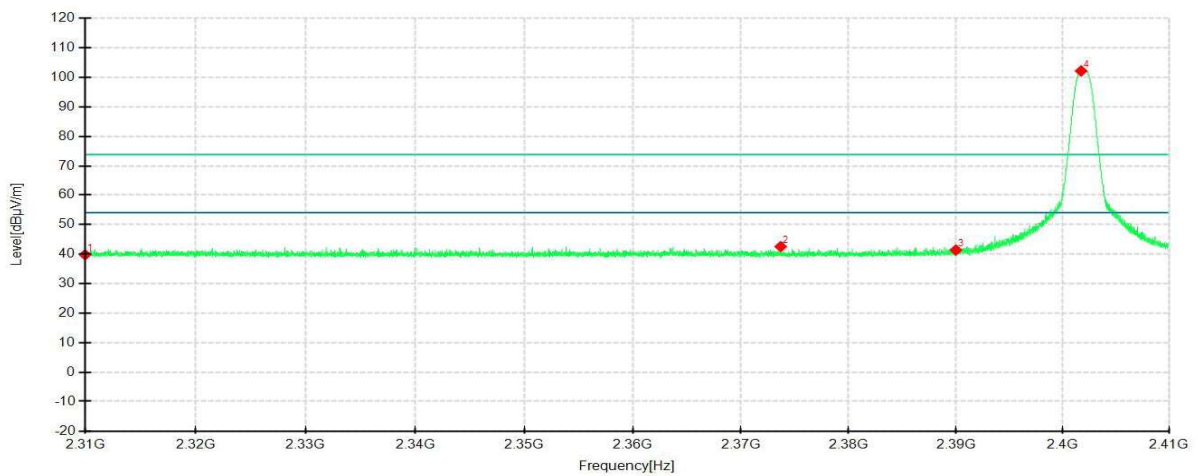
Detector mode: Peak

Polarity: Horizontal



Detector mode: Peak

Polarity: Vertical



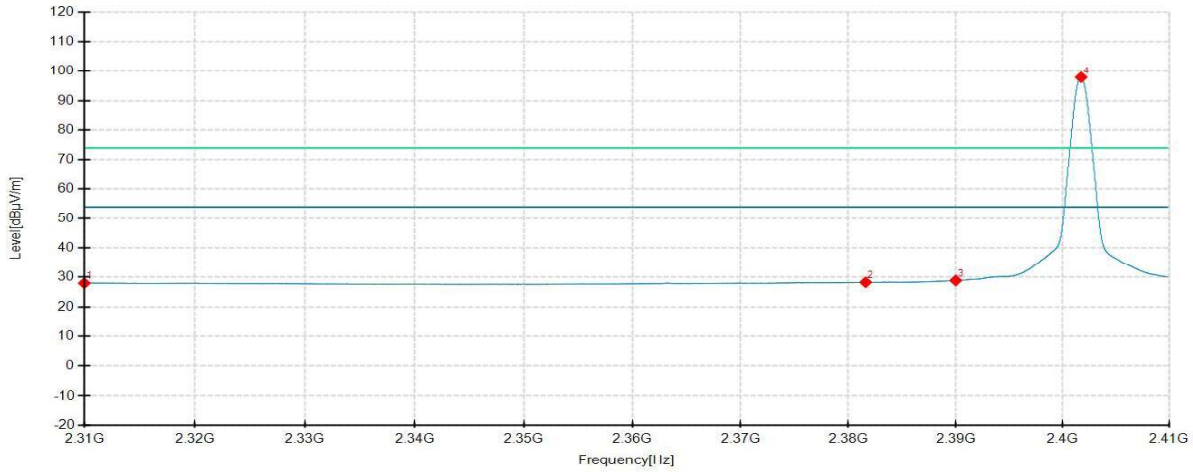
No.	Frequency MHz	Reading dB μ V/m	Level dB μ V/m	Factor dB	Limit dB μ V/m	Margin dB	Height cm	Angle °	Pole	Remark
1	2310.0000	44.51	38.61	-5.90	74.00	35.39	200	33	Horizontal	/
2	2323.7000	47.80	41.74	-6.06	74.00	32.26	200	33	Horizontal	/
3	2390.0000	45.26	39.53	-5.73	74.00	34.47	200	210	Horizontal	/
4	2401.7375	104.23	98.69	-5.54	74.00	-24.69	100	329	Horizontal	No limit
1	2310.0000	45.08	39.78	-5.30	74.00	34.22	200	102	Vertical	/
2	2373.6875	47.95	42.53	-5.42	74.00	31.47	200	279	Vertical	/
3	2390.0000	46.83	41.38	-5.45	74.00	32.62	200	360	Vertical	/
4	2401.7375	107.62	102.15	-5.47	74.00	-28.15	200	360	Vertical	No limit

Lowest Frequency

Frequency 2402MHz

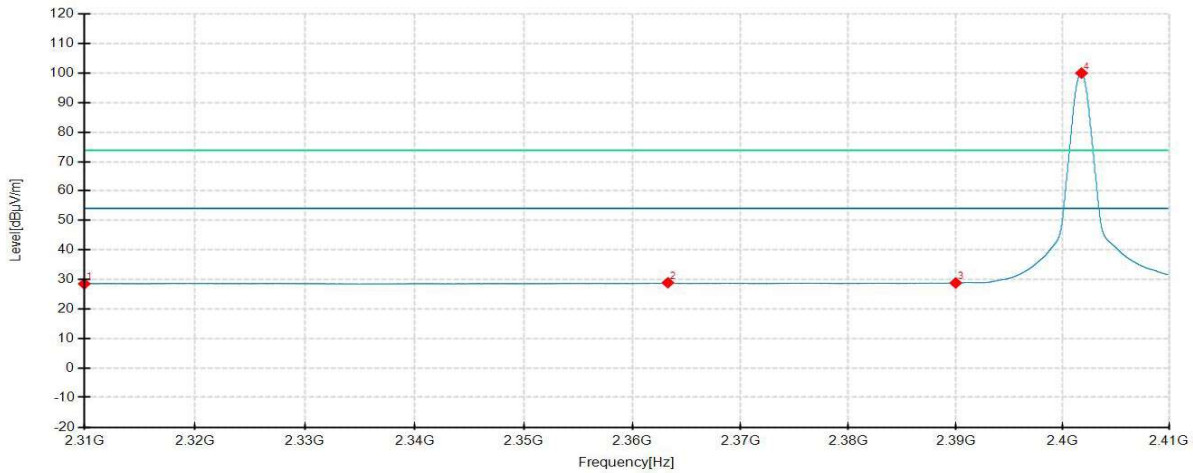
Detector mode: Average

Polarity: Horizontal



Detector mode: Average

Polarity: Vertical



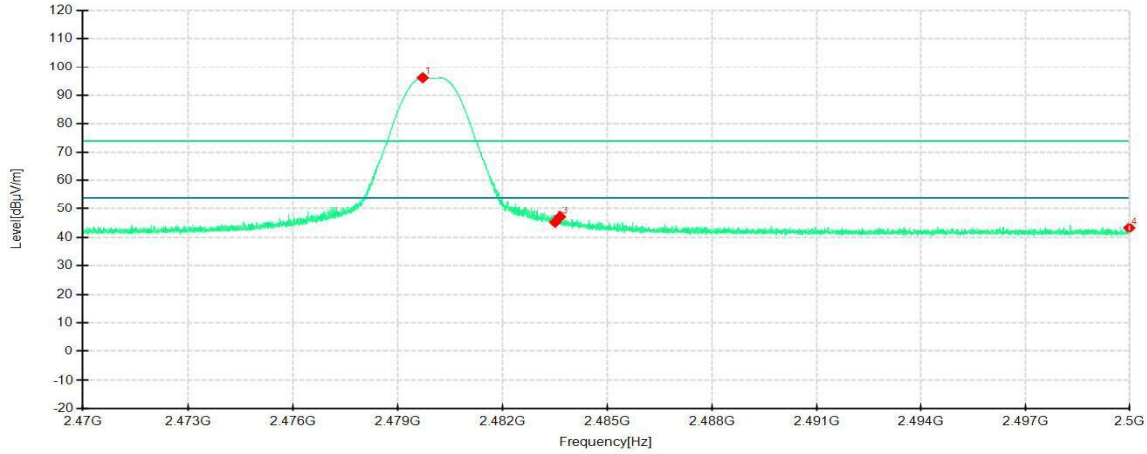
No.	Frequency MHz	Reading dBμV/m	Level dBμV/m	Factor dB	Limit dBuV/m	Margin dB	Height cm	Angle °	Pole	Remark
1	2310.0000	33.89	27.99	-5.90	54.00	26.01	100	25	Horizontal	/
2	2381.6000	34.15	28.29	-5.86	54.00	25.71	200	108	Horizontal	/
3	2390.0000	34.62	28.89	-5.73	54.00	25.11	100	287	Horizontal	/
4	2401.7375	103.41	97.87	-5.54	54.00	-43.87	100	338	Horizontal	No limit
1	2310.0000	33.86	28.56	-5.30	54.00	25.44	100	334	Vertical	/
2	2363.2750	34.34	28.94	-5.40	54.00	25.06	200	28	Vertical	/
3	2390.0000	34.31	28.86	-5.45	54.00	25.14	100	69	Vertical	/
4	2401.7750	105.47	100.00	-5.47	54.00	-46.00	100	334	Vertical	No limit

Highest Frequency

Frequency 2480MHz

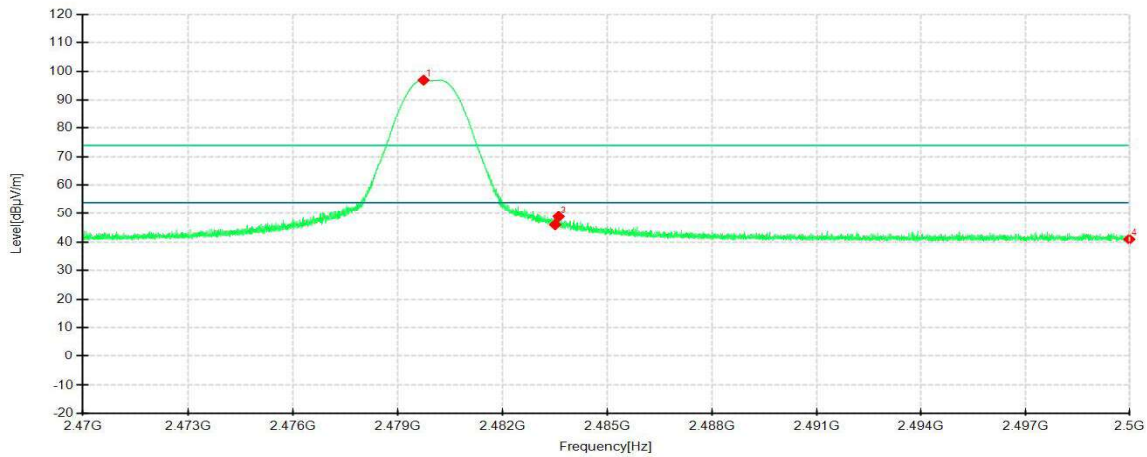
Detector mode: Peak

Polarity: Horizontal



Detector mode: Peak

Polarity: Vertical



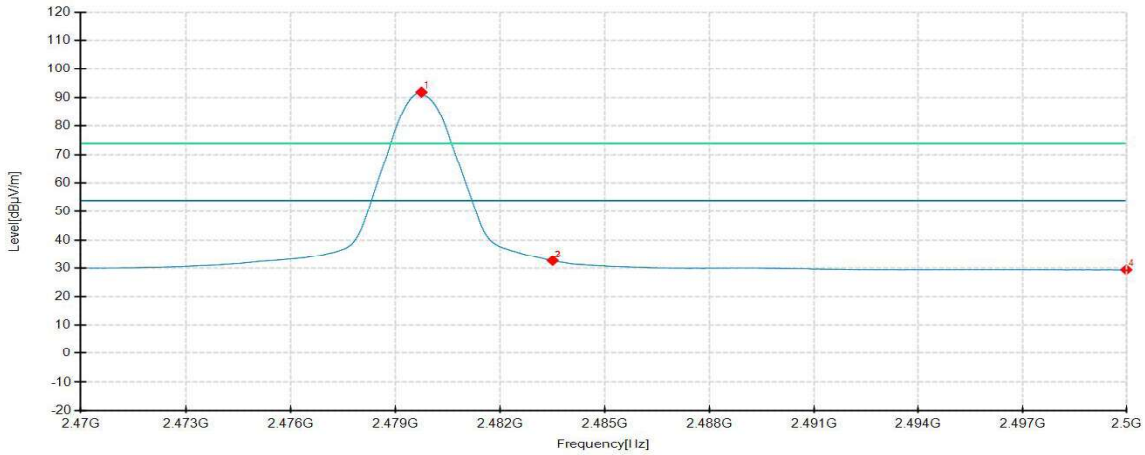
No.	Frequency MHz	Reading dBμV/m	Level dBμV/m	Factor dB	Limit dBuV/m	Margin dB	Height cm	Angle °	Pole	Remark
1	2479.7125	100.78	96.13	-4.65	74.00	-22.13	100	297	Horizontal	No limit
2	2483.5000	49.94	45.27	-4.67	74.00	28.73	100	297	Horizontal	/
3	2483.6425	51.78	47.11	-4.67	74.00	26.89	100	297	Horizontal	/
4	2500.0000	48.14	43.35	-4.79	74.00	30.65	200	153	Horizontal	/
1	2479.7350	102.09	96.94	-5.15	74.00	-22.94	100	331	Vertical	No limit
2	2483.5000	51.20	46.07	-5.13	74.00	27.93	200	335	Vertical	/
3	2483.6013	54.04	48.91	-5.13	74.00	25.09	100	342	Vertical	/
4	2500.0000	46.18	41.09	-5.09	74.00	32.91	100	318	Vertical	/

Highest Frequency

Frequency 2480MHz

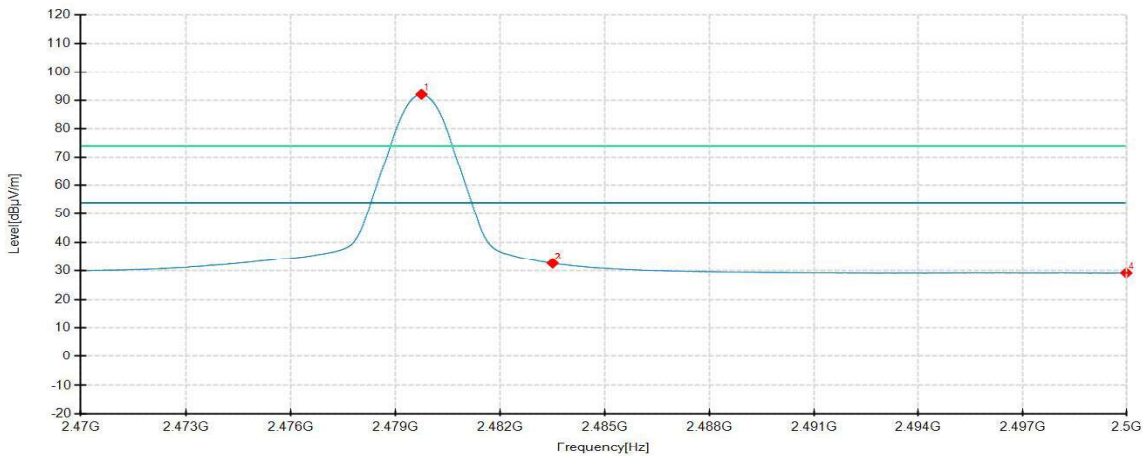
Detector mode: Average

Polarity: Horizontal



Detector mode: Average

Polarity: Vertical



No.	Frequency MHz	Reading dBμV/m	Level dBμV/m	Factor dB	Limit dBμV/m	Margin dB	Height cm	Angle °	Pole	Remark
1	2479.7425	96.52	91.87	-4.65	54.00	-37.87	100	1	Horizontal	No limit
2	2483.5000	37.44	32.77	-4.67	54.00	21.23	100	100	Horizontal	/
3	2483.5263	37.37	32.70	-4.67	54.00	21.30	100	100	Horizontal	/
4	2500.0000	34.25	29.46	-4.79	54.00	24.54	100	149	Horizontal	/
1	2479.7425	97.25	92.10	-5.15	54.00	-38.10	100	359	Vertical	No limit
2	2483.5000	37.79	32.66	-5.13	54.00	21.34	100	25	Vertical	/
3	2483.5263	37.77	32.64	-5.13	54.00	21.36	100	25	Vertical	/
4	2500.0000	34.34	29.25	-5.09	54.00	24.75	100	324	Vertical	/

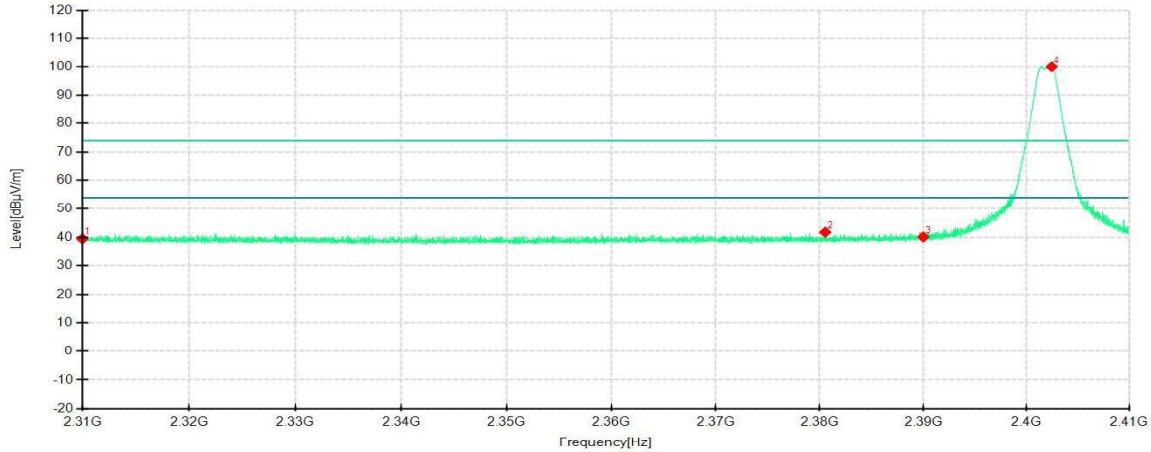
BLE 2M

Lowest Frequency

Frequency 2402MHz

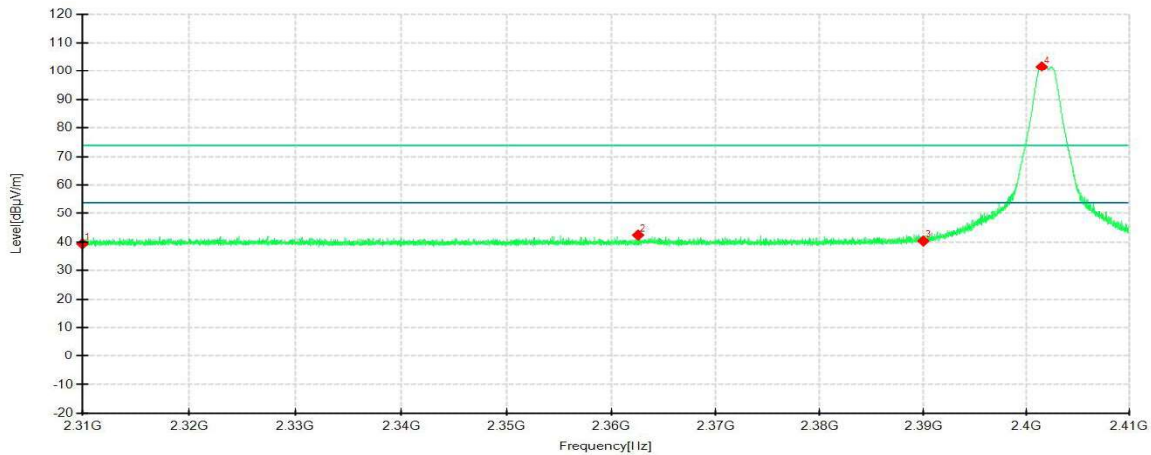
Detector mode: Peak

Polarity: Horizontal



Detector mode: Peak

Polarity: Vertical



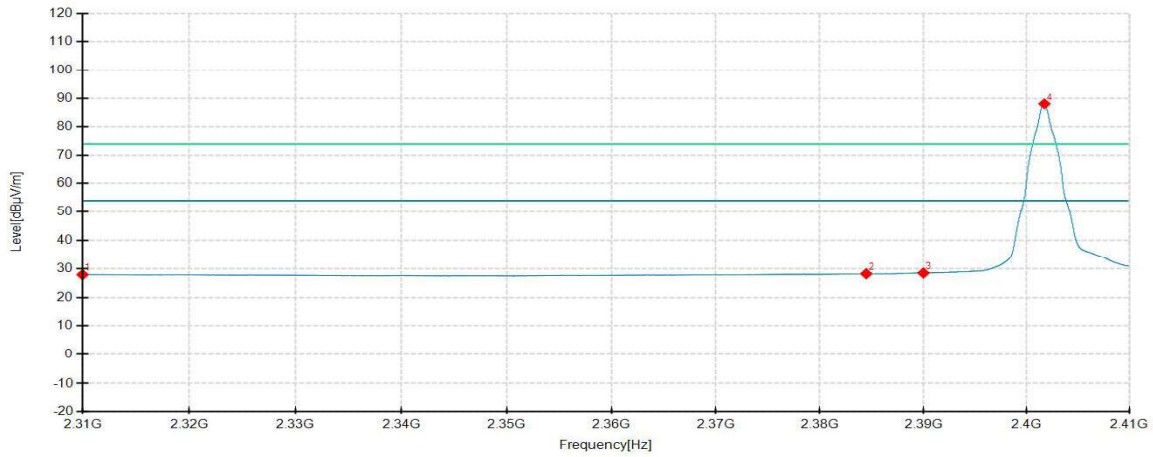
No.	Frequency MHz	Reading dBμV/m	Level dBμV/m	Factor dB	Limit dBμV/m	Margin dB	Height cm	Angle °	Pole	Remark
1	2310.0000	45.50	39.60	-5.90	74.00	34.40	200	25	Horizontal	/
2	2380.5250	47.76	41.88	-5.88	74.00	32.12	200	319	Horizontal	/
3	2390.0000	45.98	40.25	-5.73	74.00	33.75	100	43	Horizontal	/
4	2402.4625	105.53	100.02	-5.51	74.00	-26.02	100	295	Horizontal	No limit
1	2310.0000	44.83	39.53	-5.30	74.00	34.47	100	190	Vertical	/
2	2362.5625	47.91	42.51	-5.40	74.00	31.49	200	207	Vertical	/
3	2390.0000	45.94	40.49	-5.45	74.00	33.51	100	26	Vertical	/
4	2401.4875	107.10	101.63	-5.47	74.00	-27.63	200	335	Vertical	No limit

Lowest Frequency

Frequency 2402MHz

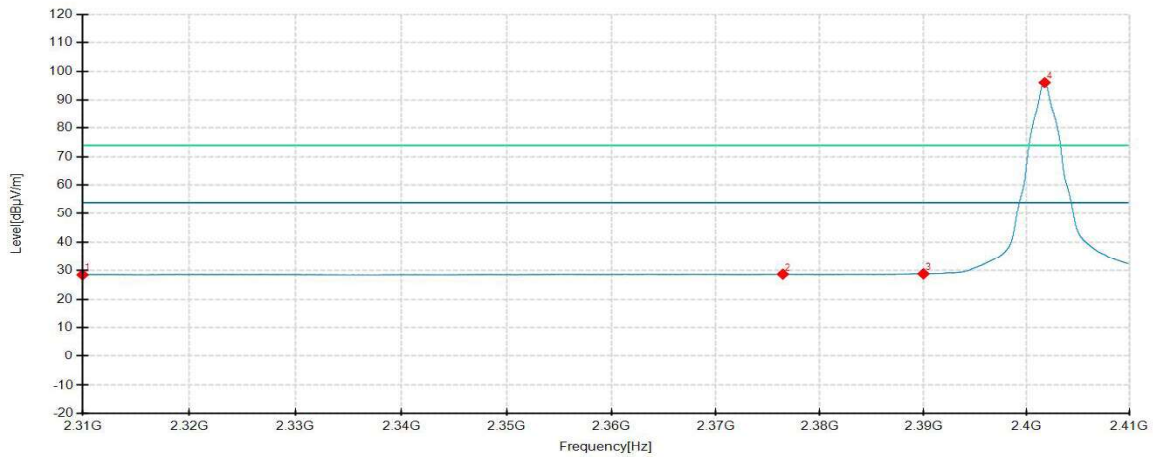
Detector mode: Average

Polarity: Horizontal



Detector mode: Average

Polarity: Vertical



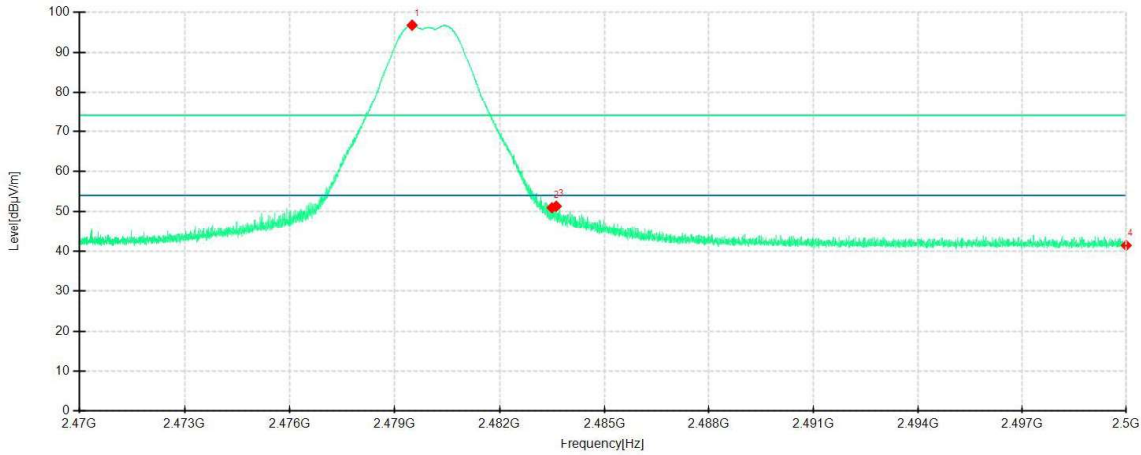
No.	Frequency MHz	Reading dBμV/m	Level dBμV/m	Factor dB	Limit dBμV/m	Margin dB	Height cm	Angle °	Pole	Remark
1	2310.0000	33.88	27.98	-5.90	54.00	26.02	200	360	Horizontal	/
2	2384.4750	34.13	28.31	-5.82	54.00	25.69	100	91	Horizontal	/
3	2390.0000	34.29	28.56	-5.73	54.00	25.44	200	292	Horizontal	/
4	2401.7375	93.63	88.09	-5.54	54.00	-34.09	200	330	Horizontal	No limit
1	2310.0000	33.83	28.53	-5.30	54.00	25.47	200	1	Vertical	/
2	2376.4375	34.18	28.76	-5.42	54.00	25.24	100	241	Vertical	/
3	2390.0000	34.33	28.88	-5.45	54.00	25.12	200	337	Vertical	/
4	2401.7625	101.57	96.10	-5.47	54.00	-42.10	100	331	Vertical	No limit

Highest Frequency

Frequency 2480MHz

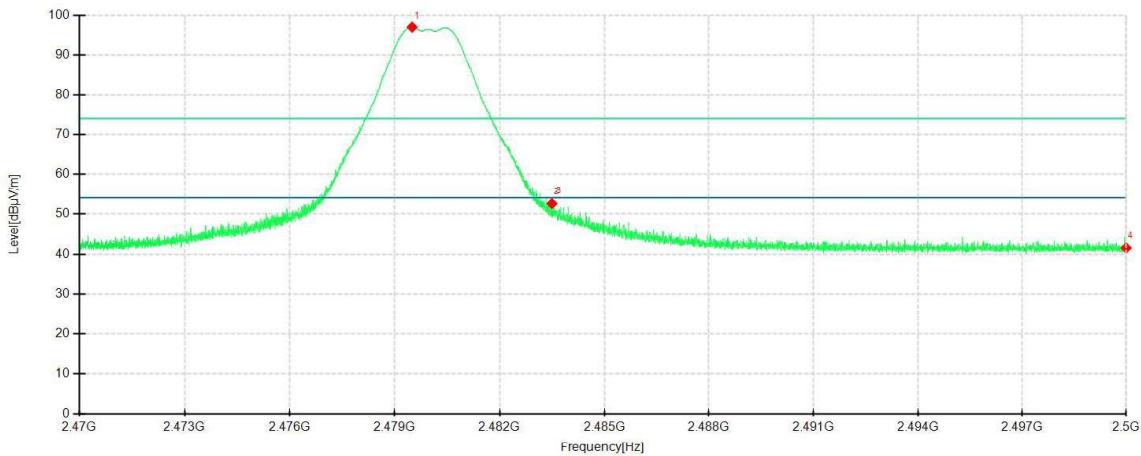
Detector mode: Peak

Polarity: Horizontal



Detector mode: Peak

Polarity: Vertical



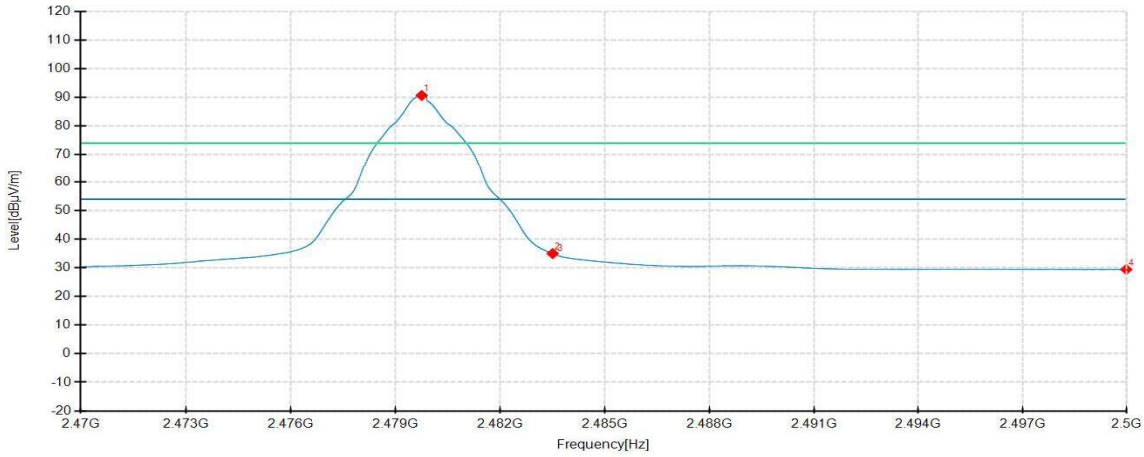
No.	Frequency MHz	Reading dBμV/m	Level dBμV/m	Factor dB	Limit dBμV/m	Margin dB	Height cm	Angle °	Pole	Remark
1	2479.4988	101.17	96.52	-4.65	74.00	-22.52	100	297	Horizontal	No limit
2	2483.5000	55.65	50.98	-4.67	74.00	23.02	100	297	Horizontal	/
3	2483.6238	56.02	51.35	-4.67	74.00	22.65	100	297	Horizontal	/
4	2500.0000	46.22	41.43	-4.79	74.00	32.57	100	56	Horizontal	/
1	2479.4988	101.93	96.78	-5.15	74.00	-22.78	100	326	Vertical	No limit
2	2483.5000	57.67	52.54	-5.13	74.00	21.46	100	326	Vertical	/
3	2483.5600	57.92	52.79	-5.13	74.00	21.21	100	326	Vertical	/
4	2500.0000	46.69	41.60	-5.09	74.00	32.40	100	99	Vertical	/

Highest Frequency

Frequency 2480MHz

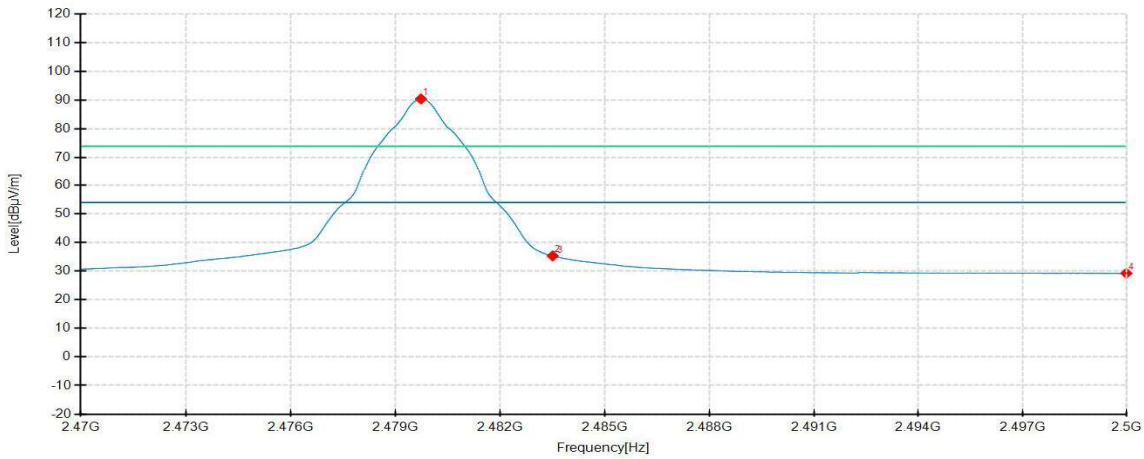
Detector mode: Average

Polarity: Horizontal



Detector mode: Average

Polarity: Vertical



No.	Frequency MHz	Reading dBμV/m	Level dBμV/m	Factor dB	Limit dBuV/m	Margin dB	Height cm	Angle °	Pole	Remark
1	2479.7500	95.29	90.64	-4.65	54.00	-36.64	100	0	Horizontal	No limit
2	2483.5000	39.67	35.00	-4.67	54.00	19.00	100	96	Horizontal	/
3	2483.5713	39.34	34.67	-4.67	54.00	19.33	100	96	Horizontal	/
4	2500.0000	34.24	29.45	-4.79	54.00	24.55	200	326	Horizontal	/
1	2479.7275	95.58	90.43	-5.15	54.00	-36.43	200	335	Vertical	No limit
2	2483.5000	40.46	35.33	-5.13	54.00	18.67	100	26	Vertical	/
3	2483.5713	40.28	35.15	-5.13	54.00	18.85	100	26	Vertical	/
4	2500.0000	34.33	29.24	-5.09	54.00	24.76	100	327	Vertical	/

Remark: Max field strength in 3m distance. No any other emission which falls in restricted bands can be detected and be reported.

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7.8. AC Conducted Emissions Measurement

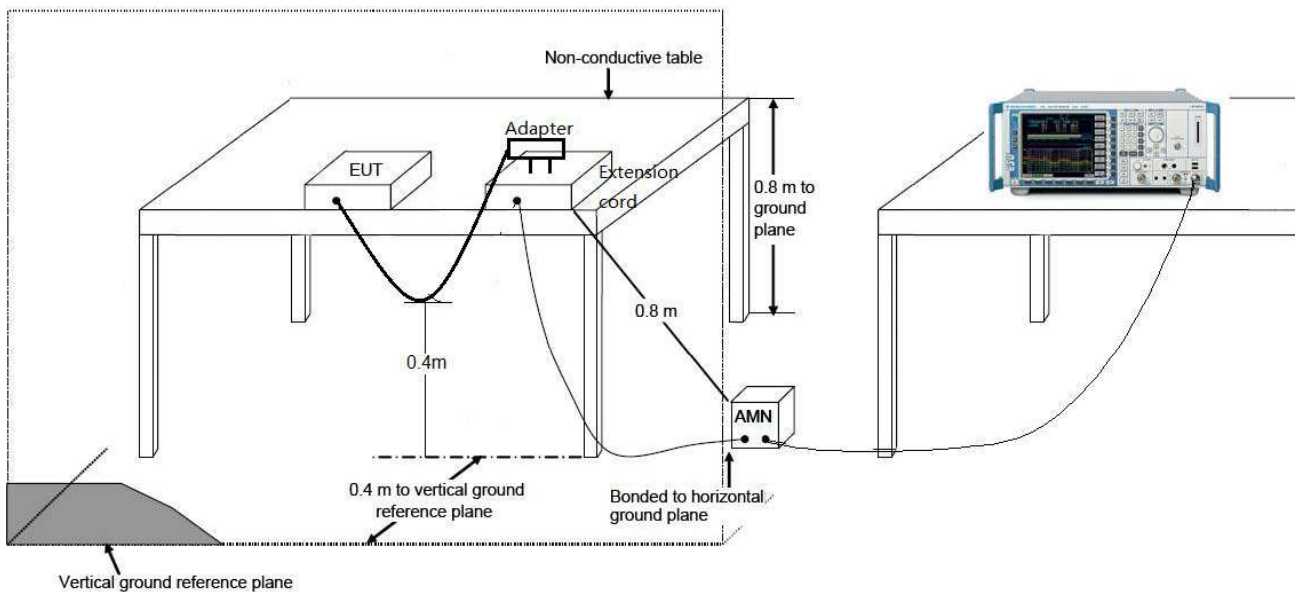
7.8.1. Test Limit

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

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

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

7.8.2. Test Setup



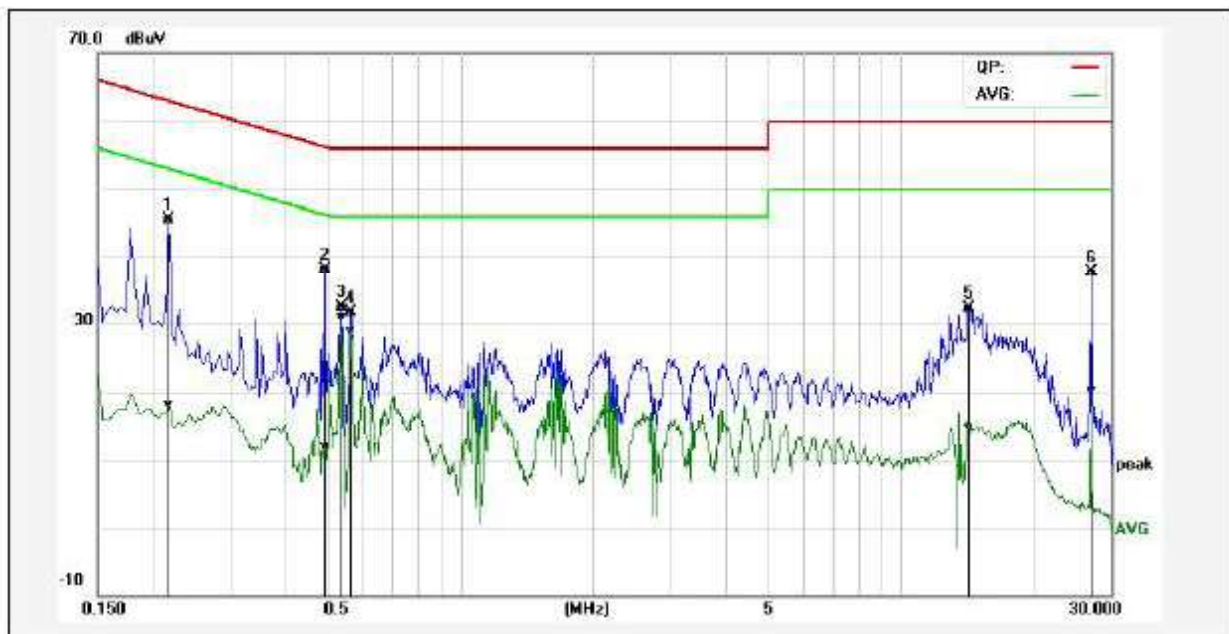
7.8.3. Test Result

Note: Pre-scan all test mode, recorded the worst case (TX_BLE_2M_2402MHz) test results in the report.

Product	Smart Lock U400	Model No.	DL-D06E
Environmental Conditions	23.1°C/51%RH/101.0kPa	Test Voltage	AC 120V/60Hz
Tested By	Hongyuan Wang	Line	L
Tested Date	2025-02-26	Sample No:	S20250623263901-1-1

(The chart below shows the highest readings taken from the final data.)

REMARKS: L = Live Line



No.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark
1	0.2180	45.48	18.04	0.00	45.48	18.04	62.89	52.89	-17.41	-34.85	Pass
2	0.4940	38.16	11.89	0.00	38.16	11.89	56.10	46.10	-17.94	-34.21	Pass
3*	0.5380	32.48	30.83	0.00	32.48	30.83	56.00	46.00	-23.52	-15.17	Pass
4	0.5660	31.64	28.83	0.00	31.64	28.83	56.00	46.00	-24.36	-17.17	Pass
5	14.2820	32.35	14.69	0.00	32.35	14.69	60.00	50.00	-27.65	-35.31	Pass
6	27.1220	37.70	20.08	0.00	37.70	20.08	60.00	50.00	-22.30	-29.92	Pass