

TEST REPORT

Product Name : Foldable Drone
Brand Mark : PLEGBLE
Model No. : PL-510
PL-310, PL-311, PL-312, PL-313,
PL-314, PL-315, PL-316, PL-317,
PL-318, PL-319, PL-511, PL-512,
Extension Model : PL-513, PL-514, PL-515, PL-516,
PL-517, PL-518, PL-519, PL-710,
PL-711, PL-712, PL-713, PL-714,
PL-715, PL-716, PL-717, PL-718, PL-719
Report Number : BLA-EMC-202312-A3302
FCC ID : 2BFKB-PL510
Date of Sample Receipt : 2023/12/15
Date of Test : 2023/12/16 to 2024/2/2
Date of Issue : 2024/2/2
Test Standard : 47 CFR Part 15, Subpart C 15.249
Test Result : Pass

Prepared for:

Walker Boundless Limited

**FLAT A516, 5/F, EFFICIENCY HOUSE, 35 TAI YAU STREET, SAN PO KONG,
KOWLOON, HONG KONG**

Prepared by:

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Compiled by:

Review by:

Approved by:

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Date:

2024/2/2



BlueAsia

REPORT REVISE RECORD

Version No.	Date	Description
00	2024/2/2	Original

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1 TEST SUMMARY

Test item	Test Requirement	Test Method	Class/Severity	Result
Radiated Emissions	47 CFR Part 15, Subpart C 15.249	ANSI C63.10 (2013) Section 6.4&6.5&6.6	47 CFR Part 15, Subpart C 15.209 & 15.249 (a),(d)	Pass
Restricted Band Around Fundamental Frequency	47 CFR Part 15, Subpart C 15.249	ANSI C63.10 (2013) Section 6.4&6.5&6.6	47 CFR Part 15, Subpart C 15.205 & 15.249(d) & 15.209	Pass
Field Strength of the Fundamental Signal (15.249(a))	47 CFR Part 15, Subpart C 15.249	ANSI C63.10 (2013) Section 6.5&6.6	47 CFR Part 15, Subpart C 15.249(a)	Pass
20dB Bandwidth	47 CFR Part 15, Subpart C 15.249	ANSI C63.10 (2013) Section 6.9	47 CFR Part 15, Subpart C 15.215	Pass
Conducted Emissions at AC Power Line (150kHz-30MHz)	47 CFR Part 15, Subpart C 15.249	ANSI C63.10 (2013) Section 6.2	47 CFR Part 15, Subpart C 15.207	N/A
Antenna Requirement	47 CFR Part 15, Subpart C 15.249	N/A	47 CFR Part 15, Subpart C 15.203	Pass

2 GENERAL INFORMATION

Applicant	Walker Boundless Limited
Address	FLAT A516, 5/F, EFFICIENCY HOUSE, 35 TAI YAU STREET, SAN PO KONG, KOWLOON, HONG KONG
Manufacturer	Walker Boundless Limited
Address	FLAT A516, 5/F, EFFICIENCY HOUSE, 35 TAI YAU STREET, SAN PO KONG, KOWLOON, HONG KONG
Factory	SHANTOU CHENGHAI QIZHI INTELLIGENT TECHNOLOGY CO.,LTD
Address	8 Xinfu Road, Fengxiang Xinning, Chenghai District, Shantou City
Product Name	Foldable Drone
Test Model No.	PL-510
Extension Model	PL-310, PL-311, PL-312, PL-313, PL-314, PL-315, PL-316, PL-317, PL-318, PL-319, PL-511, PL-512, PL-513, PL-514, PL-515, PL-516, PL-517, PL-518, PL-519, PL-710, PL-711, PL-712, PL-713, PL-714, PL-715, PL-716, PL-717, PL-718, PL-719
Remark	All above models are identical in the same PCB layout, interior structure and electrical circuits. The differences are model name for commercial purpose.

3 GENERAL DESCRIPTION OF E.U.T.

Hardware Version	N/A
Software Version	N/A
Operation Frequency:	2446MHz-2476MHz
Channel numbers:	31
Modulation type:	GFSK
Antenna Type:	internal antenna
Antenna gain:	0dBi (Provided by customer)
Power supply:	DC 4.5V (dry accumulator1.5V*3)

Channel:

Channel	Frequency (Mhz)	Channel	Frequency (Mhz)
0	2446	28	2474
1	2447	29	2475
2	2448	30	2476
3	2449		
4	2450		
5	2451		
6	2452		
7	2453		
8	2454		
9	2455		
10	2456		
11	2457		
12	2458		
13	2459		
14	2460		
15	2461		
16	2462		
17	2463		
18	2464		
19	2465		
20	2466		
21	2467		
22	2468		
23	2469		
24	2470		
25	2471		
26	2472		
27	2473		

4 TEST ENVIRONMENT

Environment	Temperature	Voltage
Normal	25°C	DC4.5V

5 TEST MODE

TEST MODE	TEST MODE DESCRIPTION
TX	Keep the EUT in transmitting mode
Remark: New battery is used during all test; The radiation measurements are performed in X, Y, Z axis position for Transmitting mode, and found the X axis position which it is the worst case and only reported worst case.	

6 MEASUREMENT UNCERTAINTY

Parameter	Expanded Uncertainty (Confidence of 95%)
Radiated Emission(9kHz-30MHz)	±4.34dB
Radiated Emission(30Mz-1000MHz)	±4.24dB
Radiated Emission(1GHz-18GHz)	±4.68dB
AC Power Line Conducted Emission(150kHz-30MHz)	±3.45dB

7 DESCRIPTION OF SUPPORT UNIT

Device Type	Manufacturer	Model Name	Serial No.	Remark
N/A	N/A	N/A	N/A	N/A

8 LABORATORY LOCATION

All tests were performed at:
BlueAsia of Technical Services(Shenzhen) Co.,Ltd.
Building C, No. 107, Shihuan Road, Shiyuan Sub-District, Baoan District, Shenzhen, Guangdong Province,
China
Telephone: TEL: +86-755-28682673 FAX: +86-755-28682673

9 TEST INSTRUMENTS LIST

Test Equipment Of Radiated Spurious Emissions					
Equipment	Manufacturer	Model	S/N	Cal.Date	Cal.Due
Chamber 1	SKET	966	N/A	2023/11/16	2026/11/15
Chamber 2	SKET	966	N/A	2021/07/20	2024/7/19
Spectrum	R&S	FSP40	100817	2023/08/30	2024/08/29
Receiver	R&S	ESR7	101199	2023/08/30	2024/08/29
Receiver	R&S	ESPI7	101477	2023/07/07	2024/07/06
broadband Antenna	Schwarzbeck	VULB9168	00836 P:00227	2022/10/12	2025/10/11
Horn Antenna	Schwarzbeck	BBHA9120D	01892 P:00331	2022/09/13	2025/09/12
Horn Antenna	Schwarzbeck	BBHA 9170	1106	2022/04/24	2024/04/23
Amplifier	SKET	LNPA_30M01G-30	SK2021060801	2023/07/07	2024/07/06
Amplifier	SKET	PA-000318G-45	N/A	2023/08/30	2024/08/29
Amplifier	SKET	LNPA_18G40G-50	SK2022071301	2023/07/14	2024/07/13
Filter group	SKET	2.4G/5G Filter group r	N/A	2023/07/07	2024/07/06
EMI software	EZ	EZ-EMC	EEMC-3A1	N/A	N/A
Loop antenna	SCHNARZBECK	FMZB1519B	00102	2022/09/14	2025/09/13
1kHz calibration audio source	SKET	MCS-ABT-C35	N/A	2023/09/04	2024/09/03
Free Field Microphone	SKET	MGS MP 663	0414	2023/09/04	2024/09/03
Audio shielding box	SKET	SB-ABT-C35	N/A	2023/03/30	2024/03/29
Controller	SKET	N/A	N/A	N/A	N/A
Coaxial Cable	BlueAsia	BLA-XC-02	N/A	N/A	N/A
Coaxial Cable	BlueAsia	BLA-XC-03	N/A	N/A	N/A
Coaxial Cable	BlueAsia	BLA-XC-01	N/A	N/A	N/A
Signal Generator DTV	ECREDIX	DSG-1000	N/A	N/A	N/A

Test Equipment Of Conducted Emissions at AC Power Line (150kHz-30MHz)					
Equipment	Manufacturer	Model	S/N	Cal.Date	Cal.Due
Shield room	SKET	833	N/A	2023/11/16	2025/11/15
Receiver	R&S	ESPI3	101082	2023/08/30	2024/08/29
LISN	R&S	ENV216	3560.6550.15	2023/08/30	2024/08/29
LISN	AT	AT166-2	AKK1806000003	2023/08/30	2024/08/29
ISN	TESEQ	ISNT8-cat6	53580	2023/08/30	2024/08/29
Single-channel vehicle artificial power network	Schwarzbeck	NNBM 8124	01045	2023/07/07	2024/07/06
Single-channel vehicle artificial power network	Schwarzbeck	NNBM 8124	01075	2023/07/07	2024/07/06
EMI software	EZ	EZ-EMC	EEMC-3A1	N/A	N/A
Coaxial Cable	BlueAsia	BLA-XC-05	N/A	N/A	N/A
impedance convertor	Eastsheep	N-JK-3G	N/A	2023/08/14	2024/08/13

Test Equipment Of RF Conducted Test					
Equipment	Manufacturer	Model	S/N	Cal.Date	Cal.Due
Spectrum	R&S	FSP40	100817	2023/08/30	2024/08/29
Spectrum	Agilent	N9020A	MY49100060	2023/08/30	2024/08/29
Spectrum	Agilent	N9020A	MY54420161	2023/08/30	2024/08/29
Signal Generator	Agilent	N5182A	MY47420955	2023/08/30	2024/08/29
Signal Generator	Agilent	N5181A	MY46240904	2023/07/07	2024/07/06
Signal Generator	R&S	CMW500	132429	2023/08/30	2024/08/29
BluetoothTester	Anritsu	MT8852B	06262047872	2023/08/30	2024/08/29
Power probe	DARE	RPR3006W	14I00889SN042	2023/09/01	2024/08/31
Power detection box	CDKMV	MW100-PSB	MW201020JYT	2023/07/07	2024/07/06
DCPowersupply	zhaoxin	KXN-305D	20K305D1221363	2023/08/30	2024/08/29
DCPowersupply	zhaoxin	RXN-1505D	19R1505D050168	2023/08/30	2024/08/29
2.4GHz/5GHz RF Test software	MTS	MTS 8310	Version 2.0.0.0	N/A	N/A
Audio Analyzer	Audio Precision	ATS-1	ATS141094	2023/07/07	2024/07/06

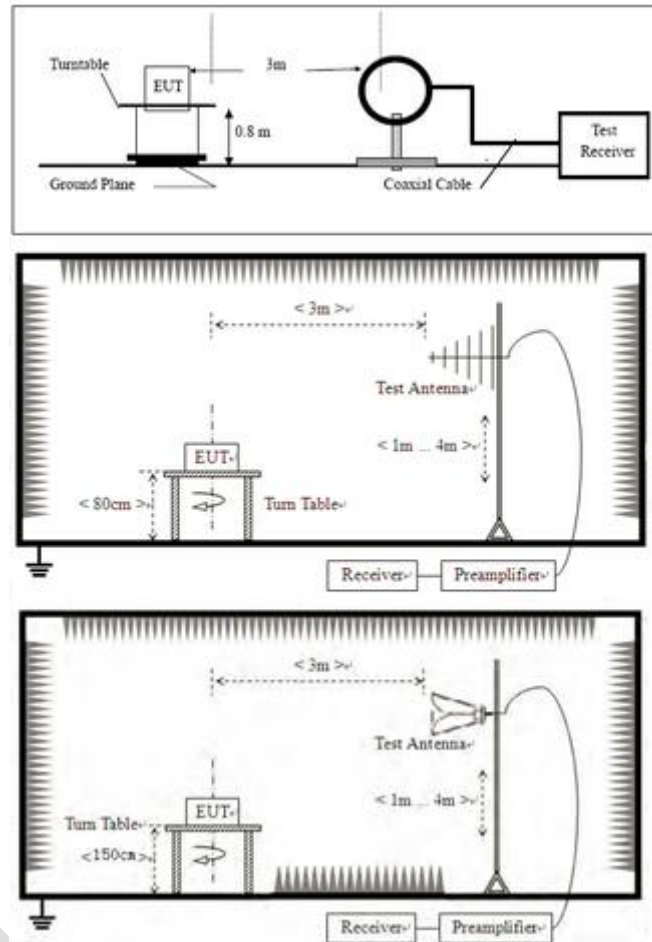
10 RADIATED EMISSIONS

Test Standard	47 CFR Part 15, Subpart C 15.249
Test Method	ANSI C63.10 (2013) Section 6.4&6.5&6.6
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX
Tester	Charlie
Temperature	25℃
Humidity	60%

10.1 LIMITS

Frequency(MHz)	Field strength (microvolts/meter)	Limit (dBuV/m)	Detector	Measurement 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	40.0	QP	3
88-216	150	43.5	QP	3
216-960	200	46.0	QP	3
960-1000	500	54.0	QP	3
Above 1000	500	54.0	AV	3

10.2 BLOCK DIAGRAM OF TEST SETUP



10.3 PROCEDURE

For testing performed with the loop antenna, the center of the loop was positioned 1 m above the ground and positioned with its plane vertical at the specified distance from the EUT. During testing the loop was rotated about its vertical axis for maximum response at each azimuth and also investigated with the loop positioned in the horizontal plane. Only the worst position of vertical was shown in the report.

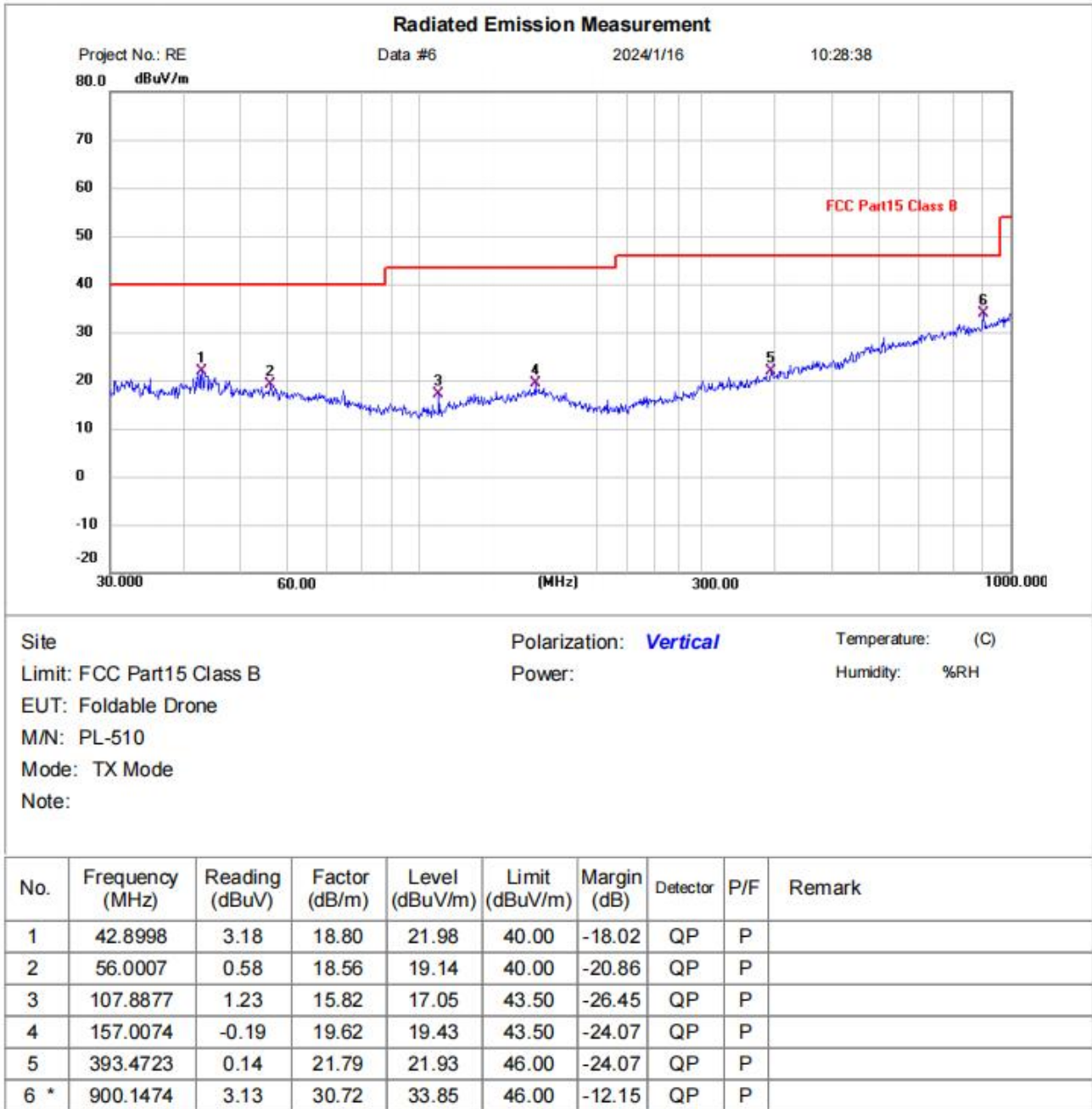
Remark:

- 1) For emission below 1GHz, through pre-scan found the worst case is the lowest channel. Only the worst case is recorded in the report.
- 2) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

$$\text{Final Test Level} = \text{Receiver Reading} + \text{Antenna Factor} + \text{Cable Factor} - \text{Preamplifier Factor}$$
- 3) Scan from 9kHz to 25GHz, the disturbance above 12.75GHz and below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported. fundamental frequency is blocked by filter, and only spurious emission is shown.
- 4) For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.

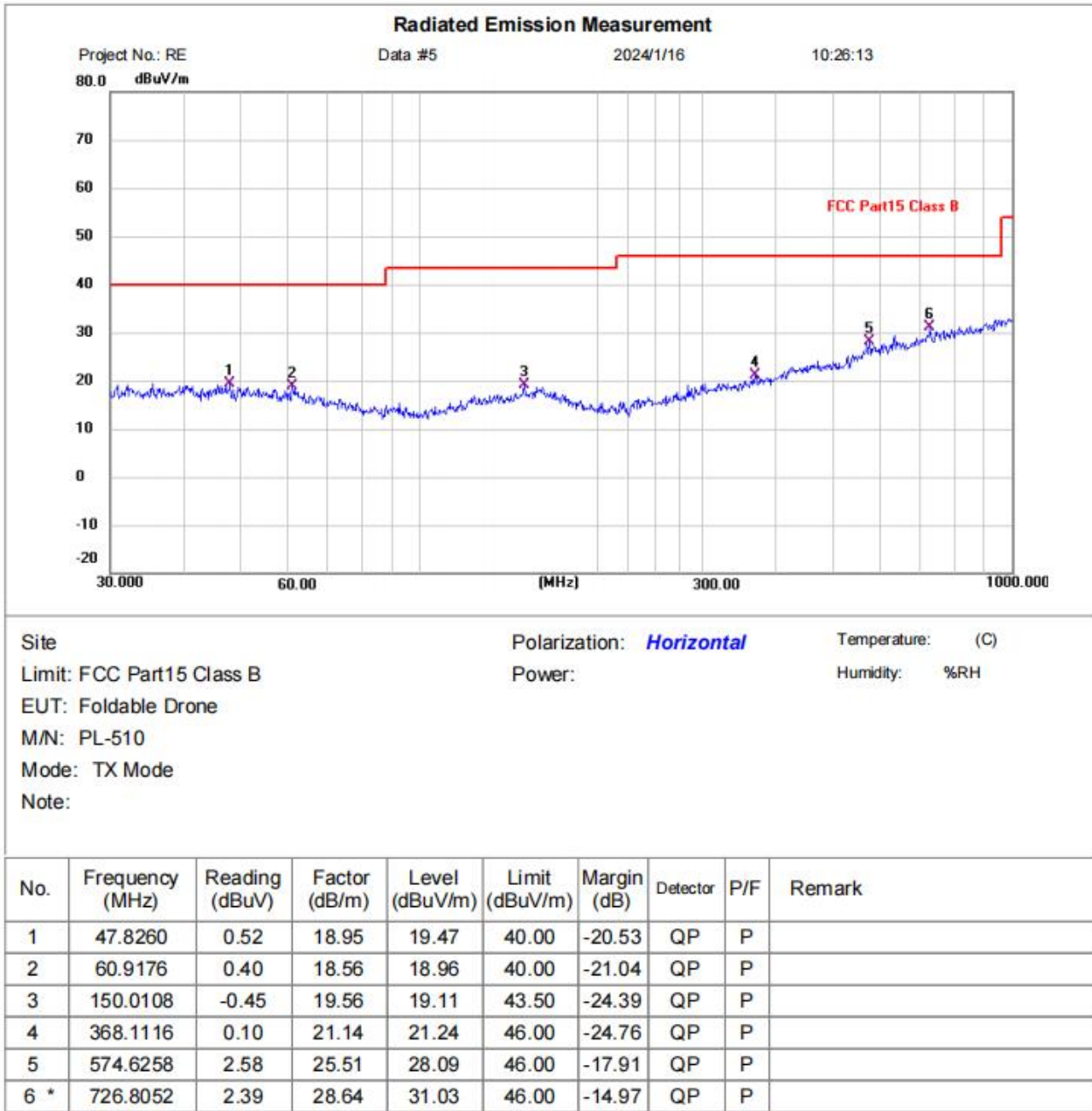
10.4 TEST DATA

[TestMode: TX below 1G]; [Polarity: Vertical]



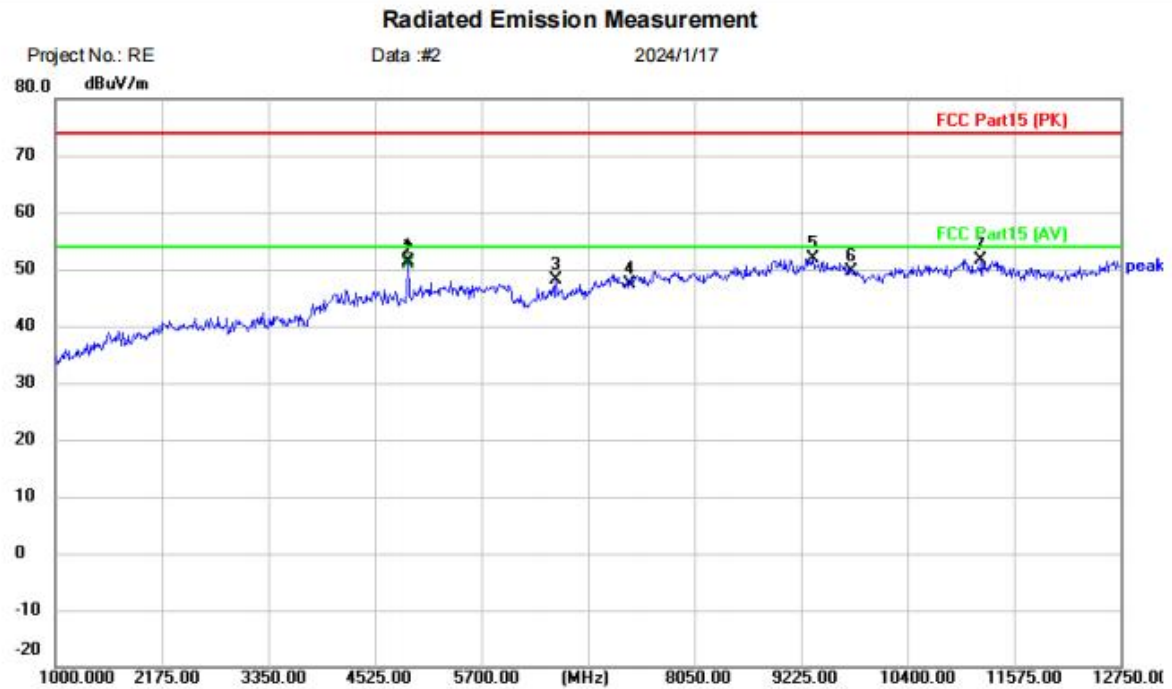
Test Result: Pass

[TestMode: TX below 1G]; [Polarity: Horizontal]



Test Result: Pass

[TestMode: TX low channel]; [Polarity: Vertical]

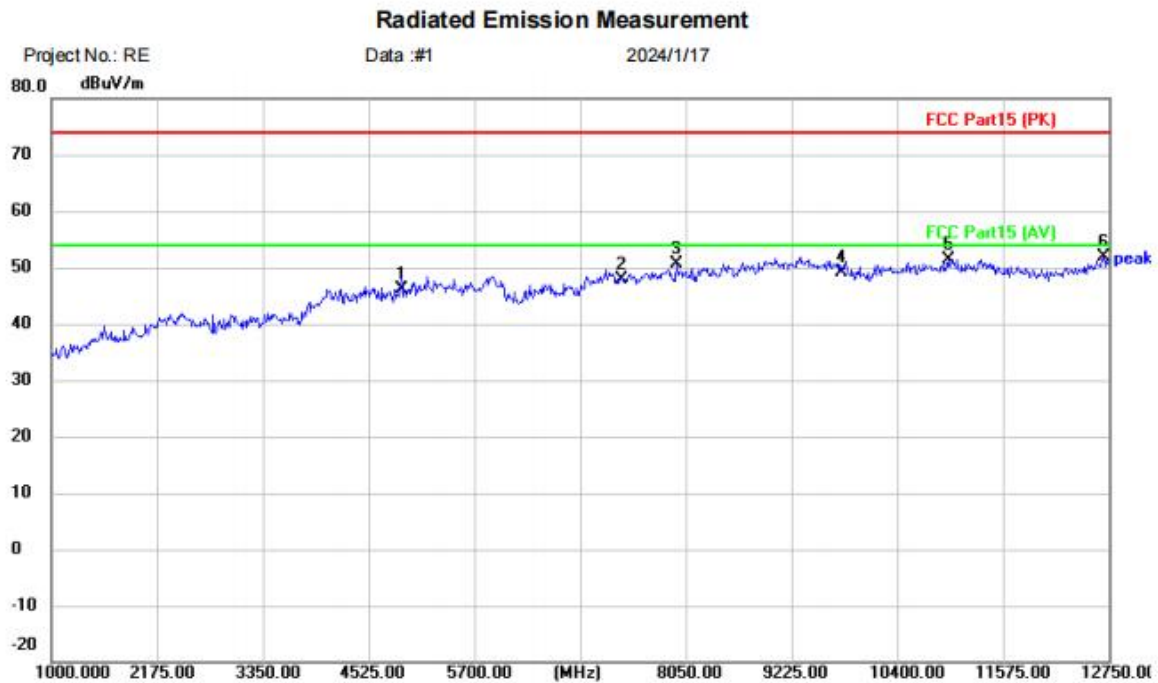


Site: Polarization: **Vertical** Temperature: (C)
Limit: FCC Part15 (PK) Power: Humidity: %RH
EUT:
M/N:
Mode: TX-2446
Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4889.250	45.57	5.75	51.32	74.00	-22.68	peak	
2	*	4889.250	45.25	5.75	51.00	54.00	-3.00	AVG	
3		6522.500	41.02	7.06	48.08	74.00	-25.92	peak	
4		7338.000	37.92	9.43	47.35	74.00	-26.65	peak	
5		9354.250	39.39	12.54	51.93	74.00	-22.07	peak	
6		9784.000	37.37	12.23	49.60	74.00	-24.40	peak	
7		11210.75	38.91	12.69	51.60	74.00	-22.40	peak	

Test Result: Pass

[TestMode: TX low channel]; [Polarity: Horizontal]



Site: Polarization: **Horizontal** Temperature: (C)

Limit: FCC Part15 (PK) Power: Humidity: %RH

EUT:

M/N:

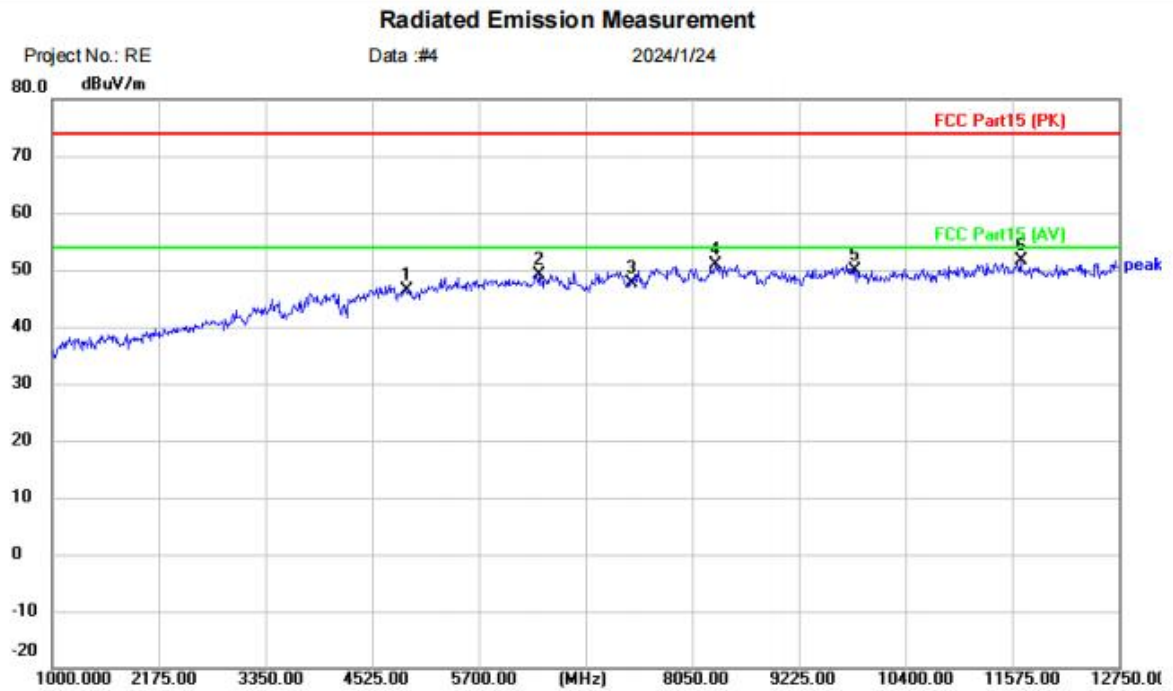
Mode: TX-2446

Note:

No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4892.000	40.39	5.76	46.15	74.00	-27.85	peak	
2	7338.000	38.51	9.43	47.94	74.00	-26.06	peak	
3	7944.250	41.03	9.69	50.72	74.00	-23.28	peak	
4	9784.000	36.93	12.23	49.16	74.00	-24.84	peak	
5	10964.00	38.14	13.35	51.49	74.00	-22.51	peak	
6 *	12691.25	38.50	13.30	51.80	74.00	-22.20	peak	

Test Result: Pass

[TestMode: TX mid channel]; [Polarity: Vertical]

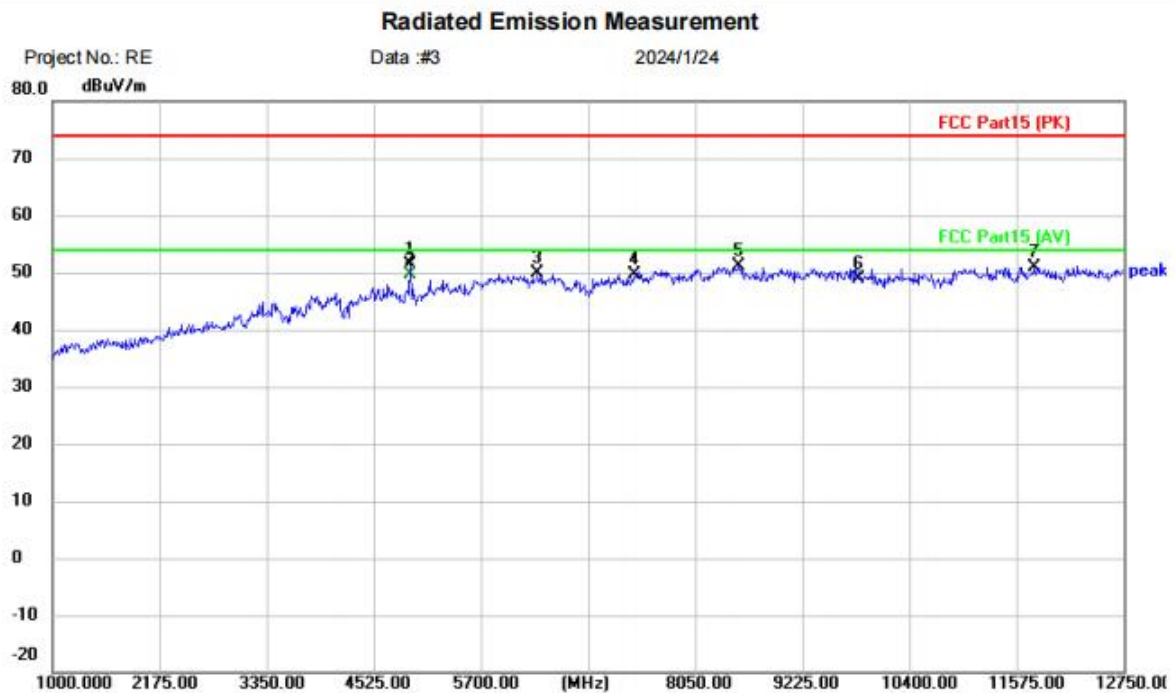


Site Polarization: **Vertical** Temperature: (C)
Limit: FCC Part15 (PK) Power: Humidity: %RH
EUT:
M/N:
Mode: TX-2461
Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4922.000	39.78	6.62	46.40	74.00	-27.60	peak	
2		6369.750	37.94	11.12	49.06	74.00	-24.94	peak	
3		7383.000	35.62	12.04	47.66	74.00	-26.34	peak	
4		8308.500	38.10	12.89	50.99	74.00	-23.01	peak	
5		9844.000	36.94	13.04	49.98	74.00	-24.02	peak	
6	*	11669.00	38.33	13.32	51.65	74.00	-22.35	peak	

Test Result: Pass

[TestMode: TX mid channel]; [Polarity: Horizontal]

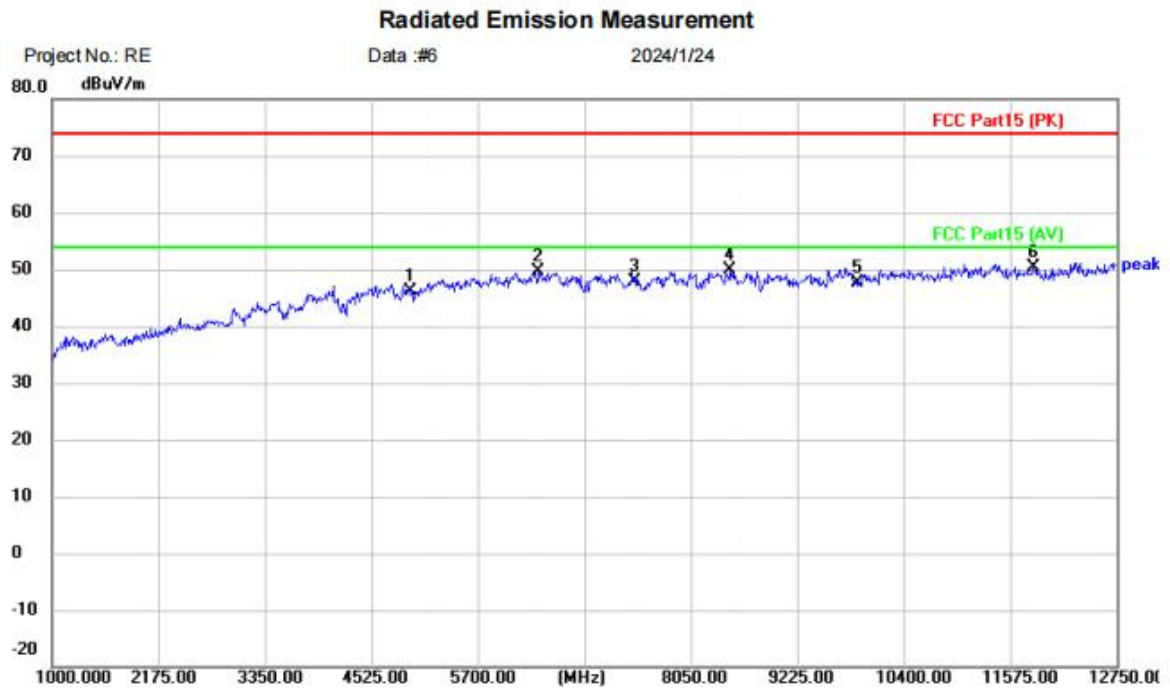


Site: Polarization: **Horizontal** Temperature: (C)
Limit: FCC Part15 (PK) Power: Humidity: %RH
EUT:
M/N:
Mode: TX-2461
Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4924.500	44.76	6.62	51.38	74.00	-22.62	peak	
2	*	4924.500	42.95	6.62	49.57	54.00	-4.43	AVG	
3		6322.750	38.70	11.09	49.79	74.00	-24.21	peak	
4		7383.000	37.53	12.04	49.57	74.00	-24.43	peak	
5		8531.750	38.32	12.90	51.22	74.00	-22.78	peak	
6		9844.000	35.76	13.04	48.80	74.00	-25.20	peak	
7		11763.00	37.67	13.32	50.99	74.00	-23.01	peak	

Test Result: Pass

[TestMode: TX high channel]; [Polarity: Vertical]



Site Polarization: **Vertical** Temperature: (C)

Limit: FCC Part15 (PK) Power: Humidity: %RH

EUT:

M/N:

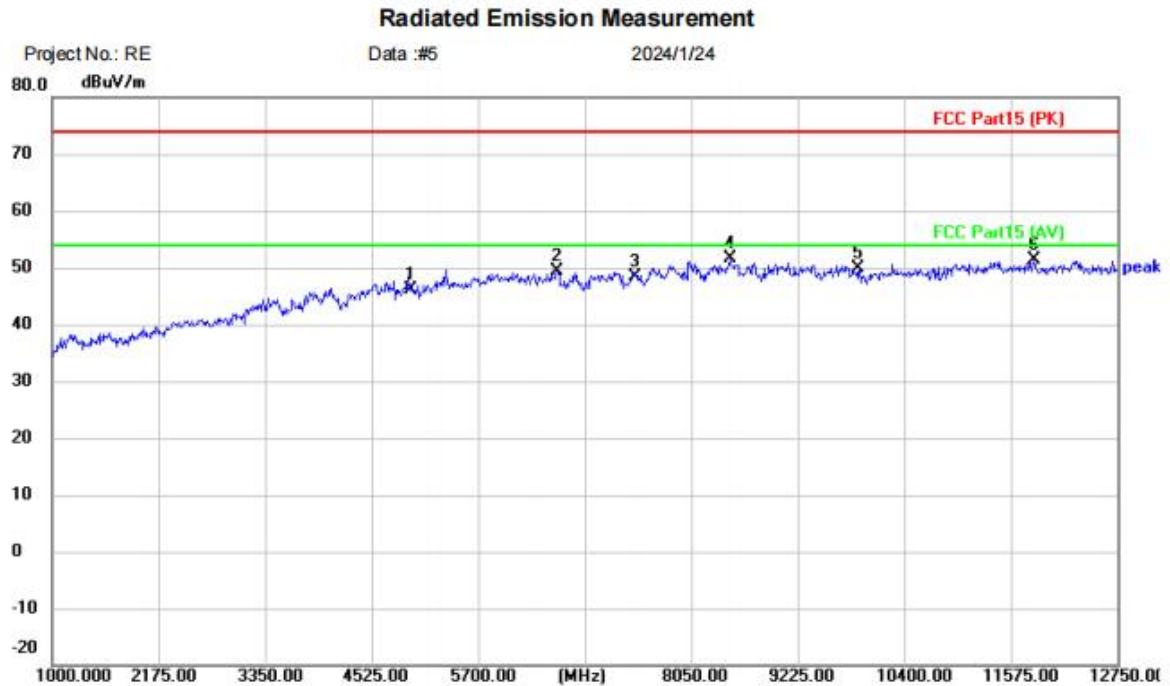
Mode: TX-2476

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4952.000	39.57	6.68	46.25	74.00	-27.75	peak	
2		6369.750	38.48	11.12	49.60	74.00	-24.40	peak	
3		7428.000	35.57	12.19	47.76	74.00	-26.24	peak	
4		8484.750	36.96	12.90	49.86	74.00	-24.14	peak	
5		9904.000	34.66	13.05	47.71	74.00	-26.29	peak	
6	*	11833.50	37.14	13.32	50.46	74.00	-23.54	peak	

Test Result: Pass

[TestMode: TX high channel]; [Polarity: Horizontal]



Site: Polarization: **Horizontal** Temperature: (C)
Limit: FCC Part15 (PK) Power: Humidity: %RH
EUT:
M/N:
Mode: TX-2476
Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4952.000	39.52	6.68	46.20	74.00	-27.80	peak	
2		6569.500	38.32	11.16	49.48	74.00	-24.52	peak	
3		7428.000	36.16	12.19	48.35	74.00	-25.65	peak	
4	*	8473.000	38.80	12.90	51.70	74.00	-22.30	peak	
5		9904.000	36.89	13.05	49.94	74.00	-24.06	peak	
6		11833.50	38.15	13.32	51.47	74.00	-22.53	peak	

Test Result: Pass

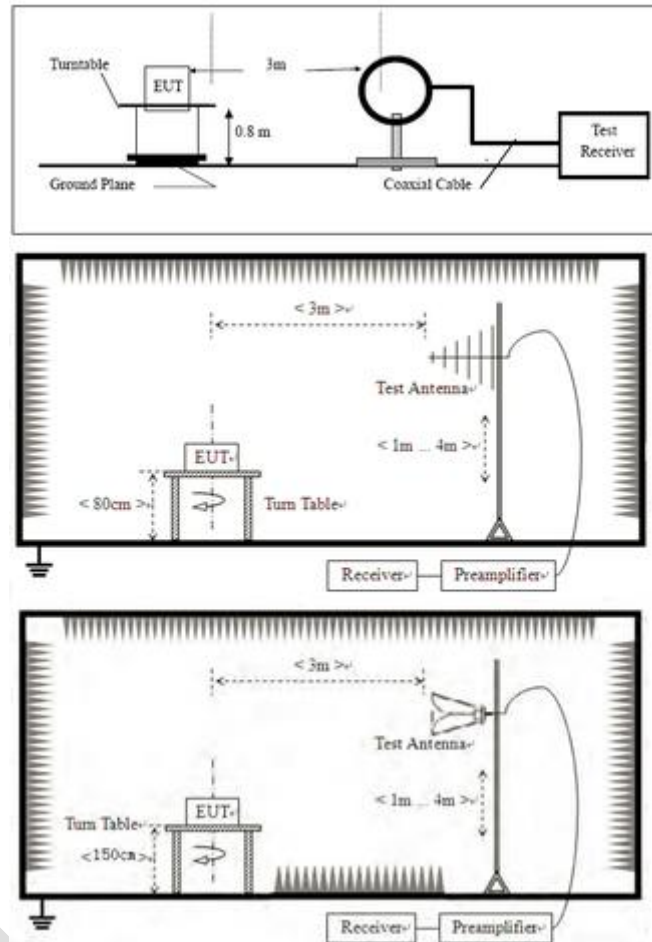
11 RESTRICTED BAND AROUND FUNDAMENTAL FREQUENCY

Test Standard	47 CFR Part 15, Subpart C 15.249
Test Method	ANSI C63.10 (2013) Section 6.4&6.5&6.6
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX
Tester	Charlie
Temperature	25℃
Humidity	60%

11.1 LIMITS

Frequency	Limit (dBuV/m @3m)	Remark
30MHz-88MHz	40.0	Quasi-peak Value
88MHz-216MHz	43.5	Quasi-peak Value
216MHz-960MHz	46.0	Quasi-peak Value
960MHz-1GHz	54.0	Quasi-peak Value
Above 1GHz	54.0	Average Value
Above 1GHz	74.0	Peak Value
Emission radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.		

11.2 BLOCK DIAGRAM OF TEST SETUP



11.3 PROCEDURE

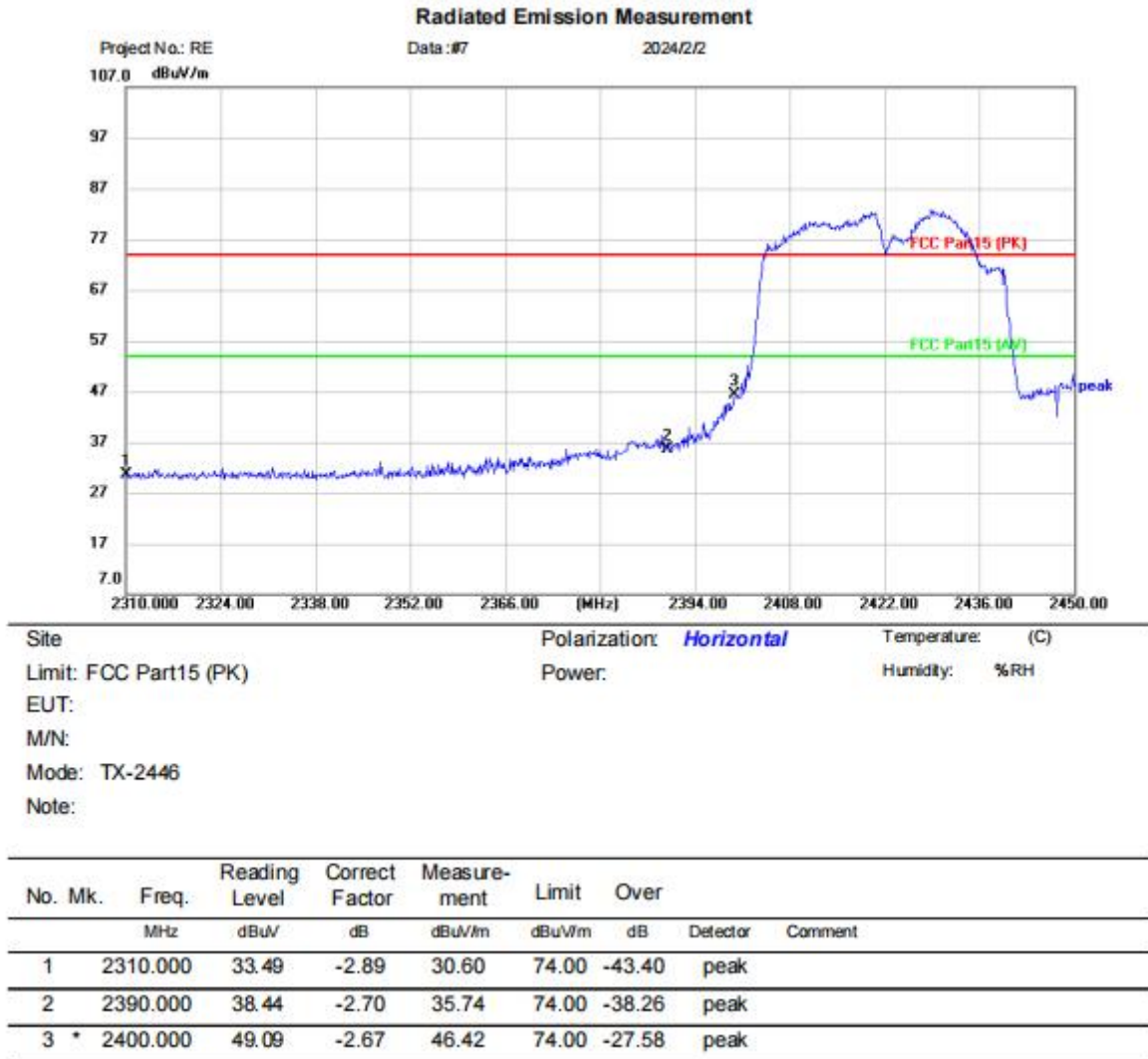
- For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

- h. Test the EUT in the lowest channel, the middle channel, the Highest channel.
 - i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
 - j. Repeat above procedures until all frequencies measured was complete.
- Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

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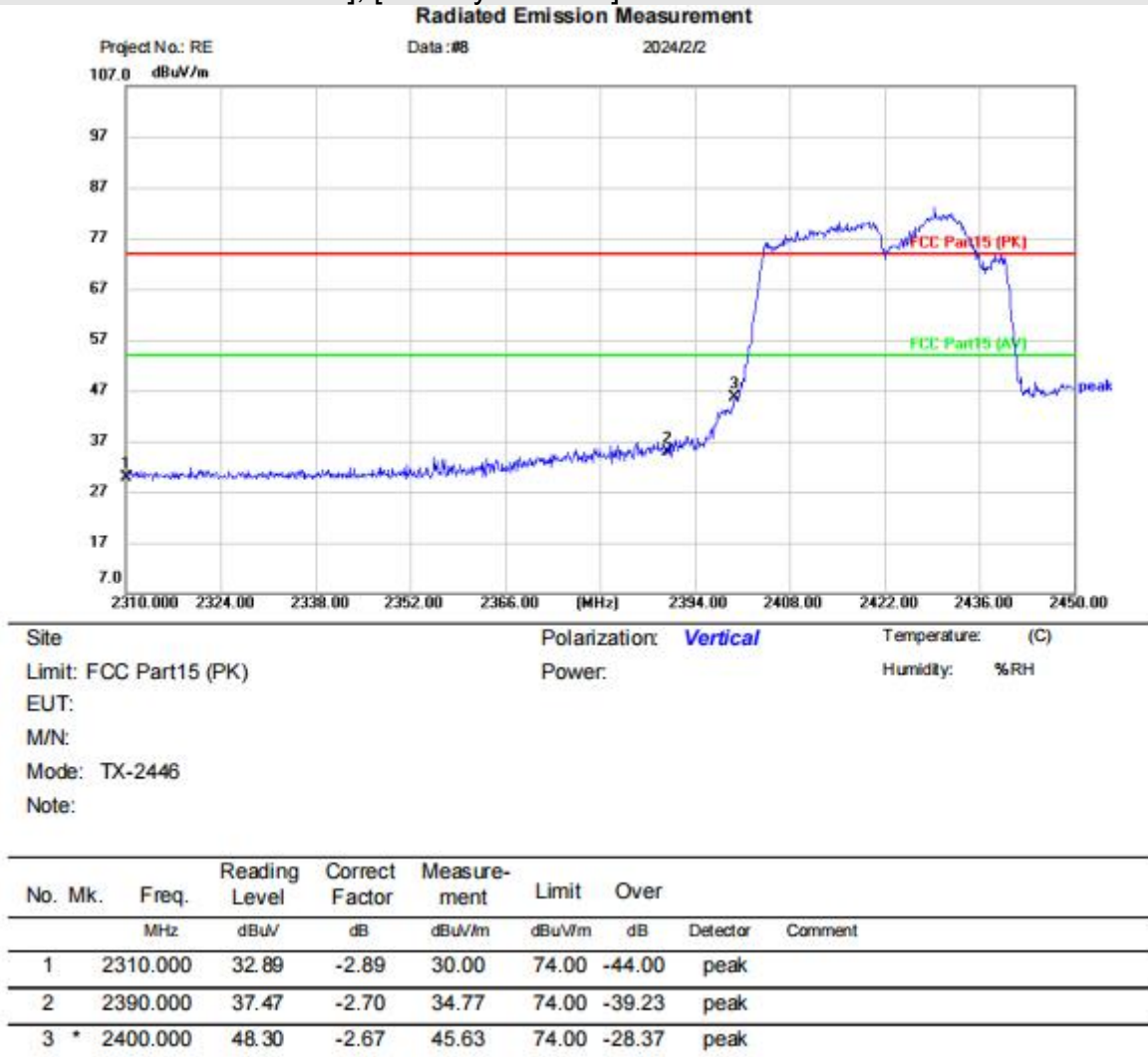
11.4 TEST DATA

[TestMode: TX low channel]; [Polarity: Horizontal]



Test Result: Pass

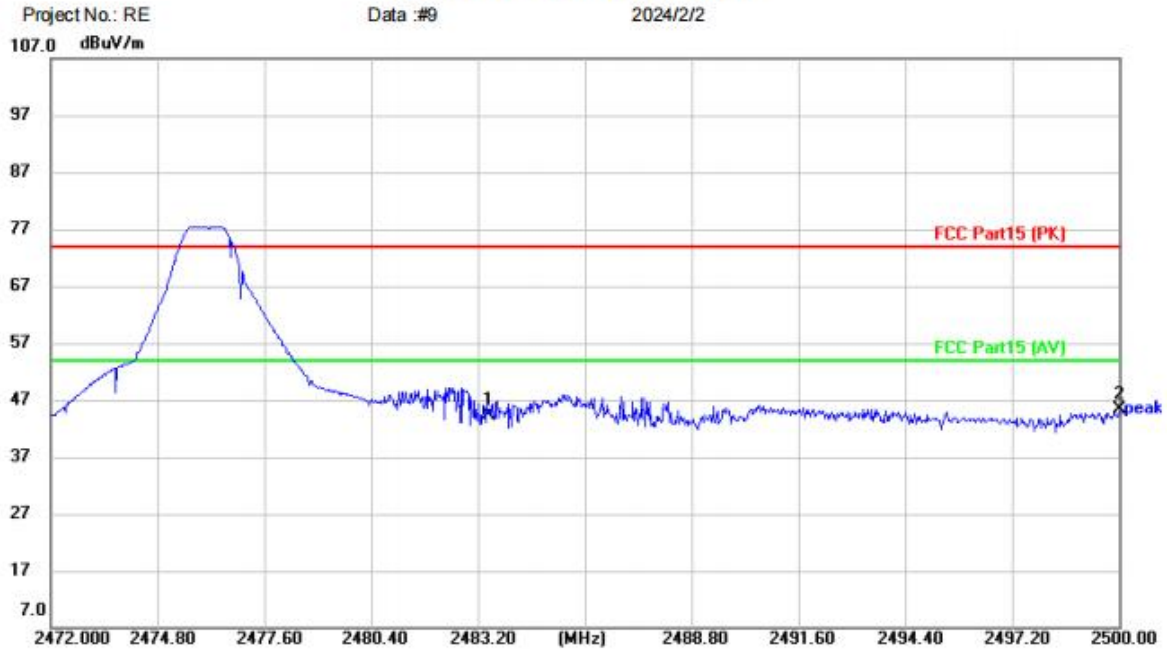
[TestMode: TX low channel]; [Polarity: Vertical]



Test Result: Pass

[TestMode: TX high channel]; [Polarity: Horizontal]

Radiated Emission Measurement



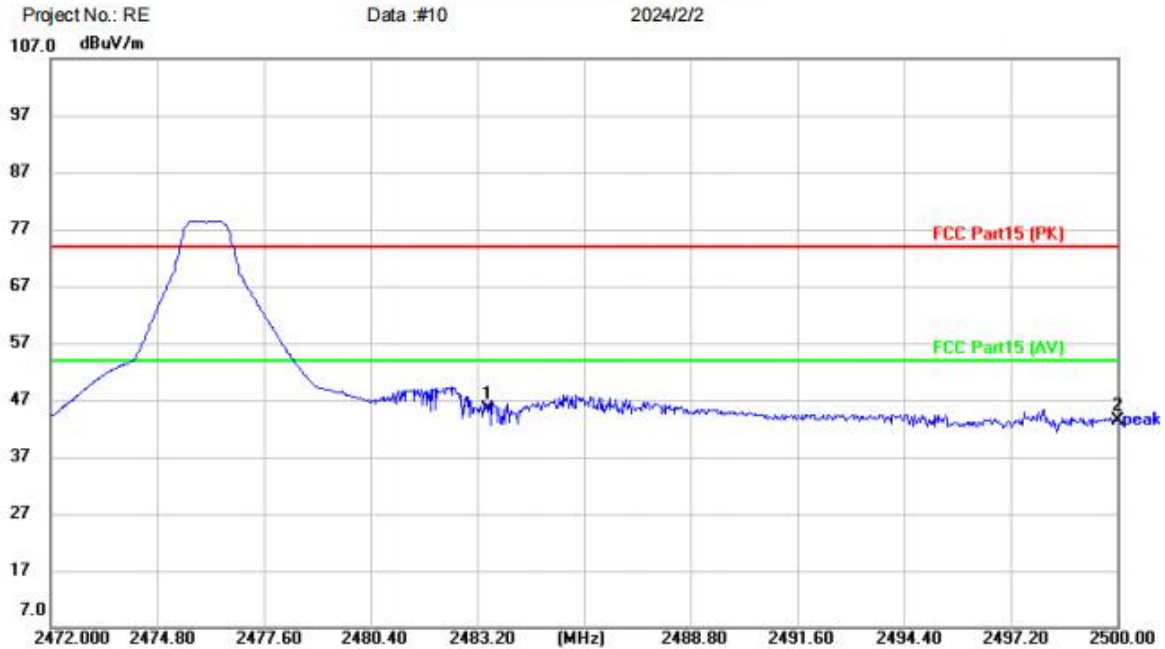
Site Polarization: **Horizontal** Temperature: (C)
Limit: FCC Part15 (PK) Power: Humidity: %RH
EUT:
M/N:
Mode: TX-2476
Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		2483.500	47.39	-2.91	44.48	74.00	-29.52	peak	
2	*	2500.000	48.37	-3.00	45.37	74.00	-28.63	peak	

Test Result: Pass

[TestMode: TX high channel]; [Polarity: Vertical]

Radiated Emission Measurement



Site Polarization: **Vertical** Temperature: (C)
Limit: FCC Part15 (PK) Power: Humidity: %RH
EUT:
M/N:
Mode: TX-2476
Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	2483.500	48.18	-2.91	45.27	74.00	-28.73	peak	
2		2500.000	46.39	-3.00	43.39	74.00	-30.61	peak	

Test Result: Pass

12 FIELD STRENGTH OF THE FUNDAMENTAL SIGNAL (15.249(A))

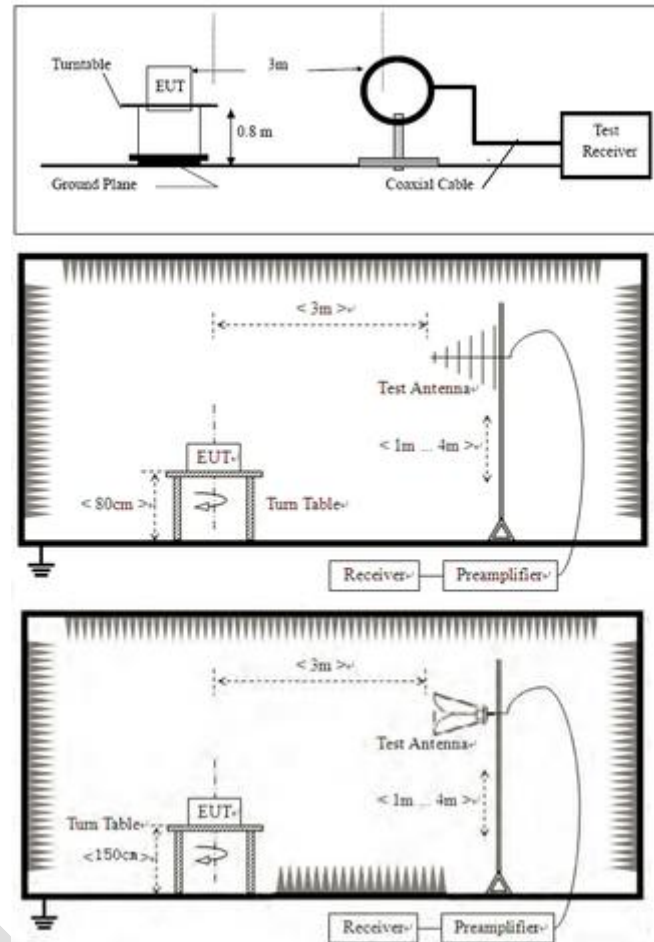
Test Standard	47 CFR Part 15, Subpart C 15.249
Test Method	ANSI C63.10 (2013) Section 6.5&6.6
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX
Tester	Charlie
Temperature	25℃
Humidity	60%

12.1 LIMITS

Fundamental frequency(MHz)	Field strength of fundamental(microvolts/meter)	Field strength of harmonics(microvolts/meter)
902-928	50	500
2400-2483.5	50	500
5725-5875	50	500
24000-24250	250	2500

Remark: The frequencies above 1000MHz are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

12.2 BLOCK DIAGRAM OF TEST SETUP



12.3 PROCEDURE

- For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

- h. Test the EUT in the lowest channel, the middle channel, the Highest channel.
 - i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
 - j. Repeat above procedures until all frequencies measured was complete.
- Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

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12.4 TEST DATA

Peak value:

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Antenna Polaxis
2446	100.73	-3.78	96.95	114.00	-17.05	H
2446	91.53	-3.78	87.75	114.00	-26.25	V
2461	99.83	-3.85	95.98	114.00	-18.02	H
2461	91.85	-3.85	88.00	114.00	-26	V
2476	98.99	-3.95	95.04	114.00	-18.96	H
2476	97.26	-3.95	93.31	114.00	-20.69	V

Average value:

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Antenna Polaxis
2446	67.66	-3.78	63.88	94.00	-30.12	H
2446	60.74	-3.78	56.96	94.00	-37.04	V
2461	66.67	-3.85	62.82	94.00	-31.18	H
2461	61.23	-3.85	57.38	94.00	-36.62	V
2476	65.60	-3.95	61.65	94.00	-32.35	H
2476	60.22	-3.95	56.27	94.00	-37.73	V

NOTE: RBW 3MHz VBW 10MHz · PK detector is for PK value ,RMS detector is for AV value.

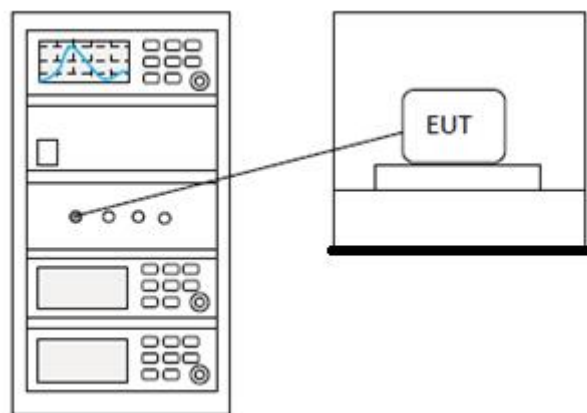
13 20DB BANDWIDTH

Test Standard	47 CFR Part 15, Subpart C 15.249
Test Method	ANSI C63.10 (2013) Section 6.9
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX
Tester	Charlie
Temperature	25°C
Humidity	60%

13.1 LIMITS

Limit:	N/A
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13.2 BLOCK DIAGRAM OF TEST SETUP

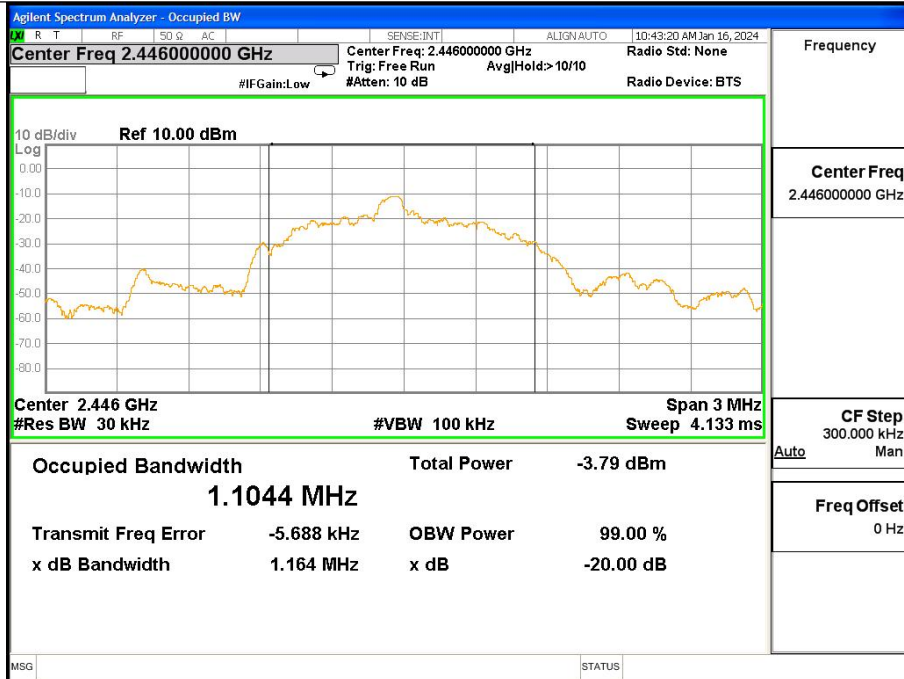


1.1 TEST DATA

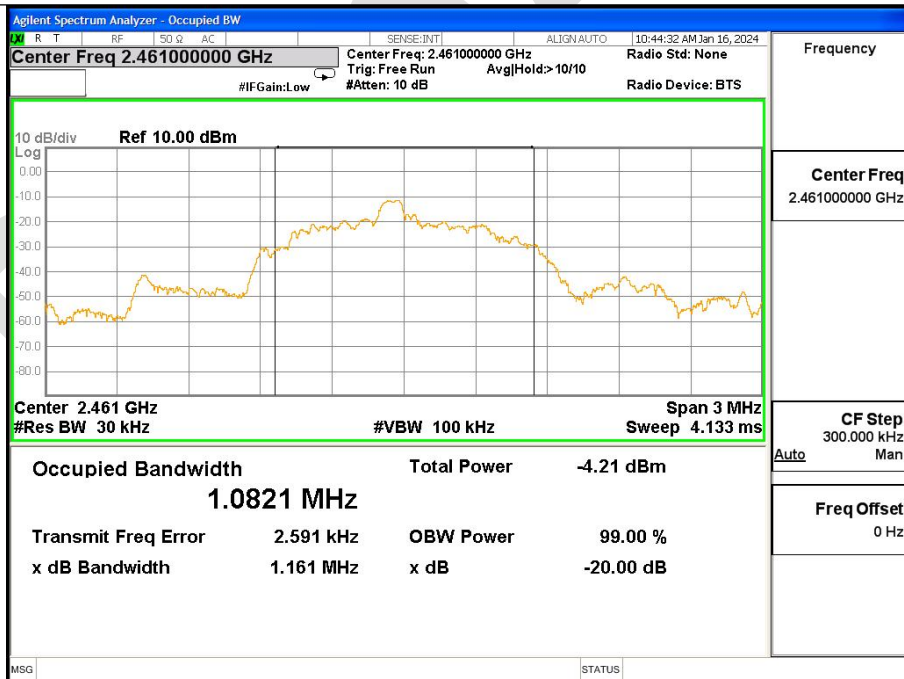
Test Frequency MHz	20dB Bandwidth kHz	Result
2446	1.164	Pass
2461	1.161	Pass
2476	1.153	Pass

1.2 TEST PLOTS

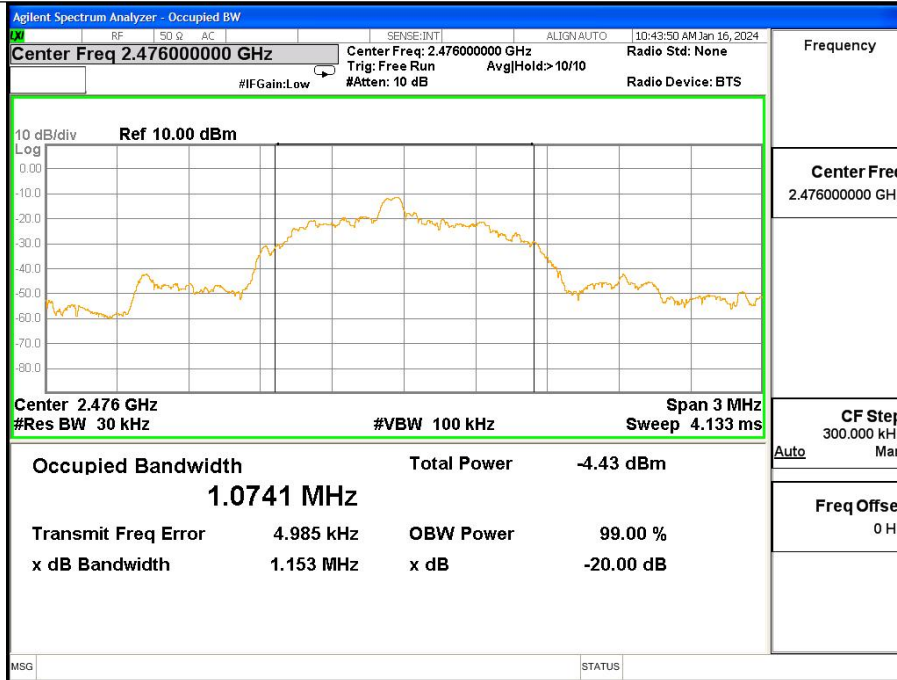
2446



2461



2476



14 ANTENNA REQUIREMENT

Test Standard	47 CFR Part 15, Subpart C 15.249
Test Method	N/A

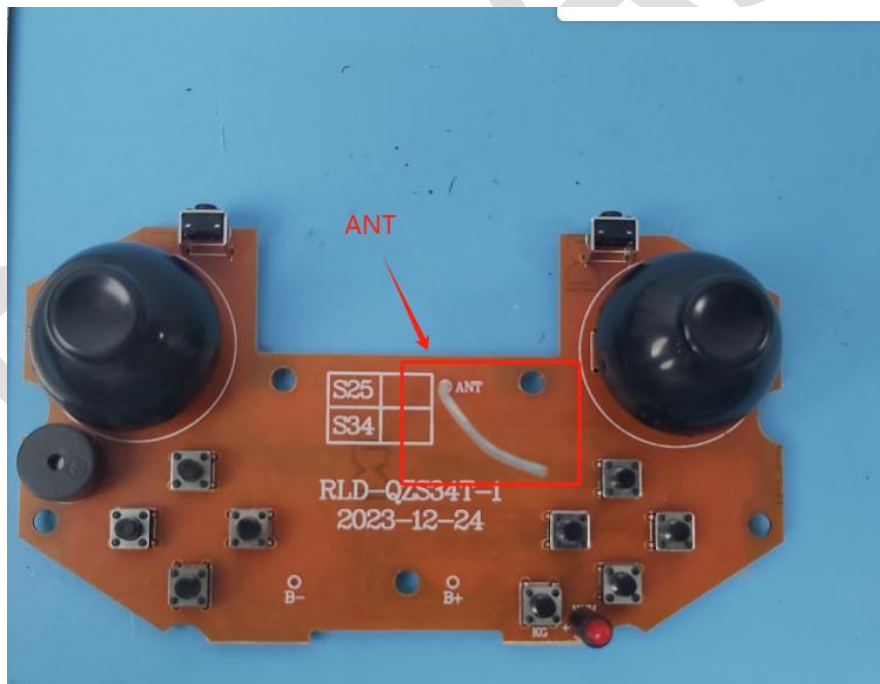
14.1 CONCLUSION

Standard Requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit permanently attached antenna or of an so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

EUT Antenna:

The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 0dBi..

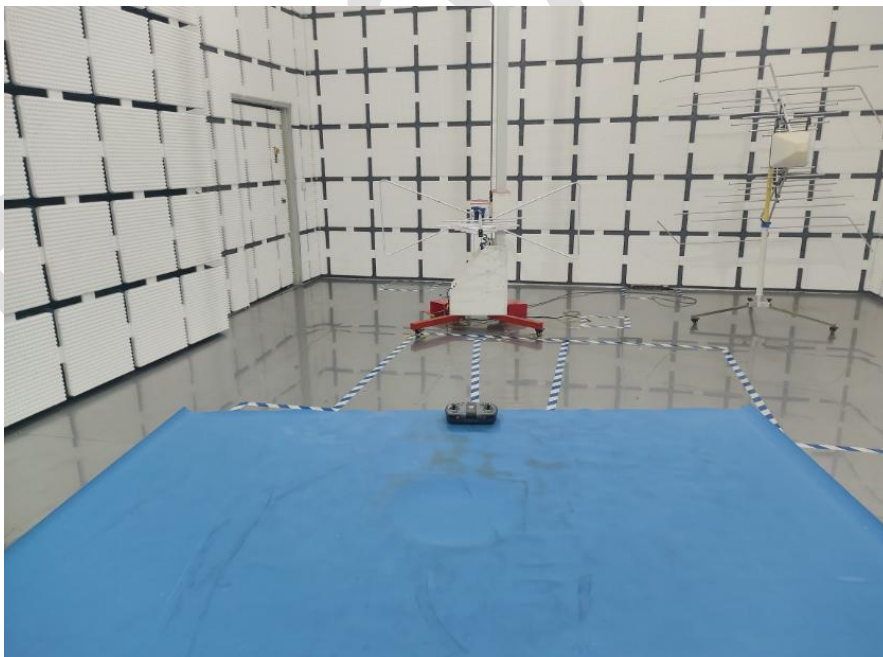


APPENDIX A: PHOTOGRAPHS OF TEST SETUP

Radiated Emissions



Above 1GHz



30MHz-1000MHz

APPENDIX B: PHOTOGRAPHS OF EUT

Reference to the test report No. BLA-EMC-202312-A3301

----END OF REPORT----

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