FCC Test Report

Applicant	:	**Shenzhen Kingsun Enterprises Co., Ltd.**
Address	:	**25/F, CEC Information Building, Xinwen Rd., Shenzhen, Guangdong, China**
Product Name	:	**5-IN-1LED SPEAKER CHARGER WIALARM CLOCK**
Report Date	:	**Nov. 05, 2024**

Shenzhen Anbotek Compliance Laboratory Limited

Contents

TEST REPORT

Applicant	:	Shenzhen Kingsun Enterprises Co., Ltd.
Manufacturer	:	Shenzhen Kingsun Enterprises Co., Ltd.
Product Name	:	5-IN-1LED SPEAKER CHARGER WIALARM CLOCK
Model No.	:	SM-62674, MA-3642-A
Trade Mark	:	N/A
Rating(s)	:	Input: 9V⎓ 3A WPT Output: 15W Max Battery Capacity: DC 3.7V, 1200mAh
Test Standard(s)	:	**47 CFR Part 15.209** **ANSI C63.10-2020**

The device described above is tested by Shenzhen Anbotek Compliance Laboratory Limited to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and Shenzhen Anbotek Compliance Laboratory Limited is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) is technically compliant with above listed standard(s) requirements. This report applies to above tested sample only and shall not be reproduced in part without written approval of Shenzhen Anbotek Compliance Laboratory Limited.

Date of Receipt: Jun. 26, 2024

Date of Test: Jun. 26, 2024 to Aug. 06, 2024

Prepared By: _____
(TuTu Hong)

Approved & Authorized Signer: _____
(Kingkong Jin)

Revision History

Report Version	Description	Issued Date
R00	Original Issue.	Nov. 05, 2024

1. General Information

1.1. Client Information

Applicant	:	Shenzhen Kingsun Enterprises Co., Ltd.
Address	:	25/F, CEC Information Building, Xinwen Rd., Shenzhen, Guangdong, China
Manufacturer	:	Shenzhen Kingsun Enterprises Co., Ltd.
Address	:	25/F, CEC Information Building, Xinwen Rd., Shenzhen, Guangdong, China
Factory	:	Shenzhen Kingsun Enterprises Co., Ltd.
Address	:	25/F, CEC Information Building, Xinwen Rd., Shenzhen, Guangdong, China

1.2. Description of Device (EUT)

Product Name	:	5-IN-1LED SPEAKER CHARGER WIALARM CLOCK
Model No.	:	SM-62674, MA-3642-A (Note: All samples are the same except the model number, so we prepare "SM-62674" for test only.)
Trade Mark	:	N/A
Test Power Supply	:	AC 120V/60Hz for Adapter
Test Sample No.	:	1-2-1(Normal Sample), 1-2-2(Engineering Sample)
Adapter	:	N/A
RF Specification		
Operation Frequency	:	111-205kHz
Modulation Type	:	FSK
Antenna Type	:	Inductive loop coil Antenna

Remark:
(1) All of the RF specification are provided by customer.
(2) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

1.3. Auxiliary Equipment Used During Test

Title	Manufacturer	Model No.	Serial No.
Xiaomi 33W adapter	Xiaomi	MDY-11-EX	SA62212LA04358J
Mobile phone	Xiaomi	Xiaomi 14	50046/F3YQ05345

1.4. Description of Test Modes

Pretest Modes	Descriptions
TM1	Adapter + WPT mode

Note:

(1) All the situation(full load, half load and empty load) has been tested,only the worst situation (full load 15W) was recorded in the report.

1.5. Measurement Uncertainty

Parameter	Uncertainty
Conducted emissions (AMN 150kHz~30MHz)	3.4dB
Radiated emissions (Below 30MHz)	3.53dB
Radiated spurious emissions (30MHz~1GHz)	Horizontal: 3.92dB; Vertical: 4.52dB
Occupied Bandwidth	925Hz
The measurement uncertainty and decision risk evaluated according to AB/WI-RF-F-032. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

1.6. Test Summary

Test Items	Test Modes	Status
Antenna requirement	/	P
Conducted Emission at AC power line	Mode1	P
Emissions in frequency bands (below 30MHz)	Mode1	P
Emissions in frequency bands (30MHz - 1GHz)	Mode1	P
20dB Occupy Bandwidth	Mode1	P
Note: P: Pass N: N/A, not applicable		

1.7. Description of Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

FCC-Registration No.: 434132
Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No. 434132.

ISED-Registration No.: 8058A
Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registered and fully described in a report filed with the (ISED) Innovation, Science and Economic Development Canada. The acceptance letter from the ISED is maintained in our files. Registration 8058A.

Test Location
Shenzhen Anbotek Compliance Laboratory Limited.
Sogood Industrial Zone Laboratory & 1/F. of Building D, Sogood Science and Technology Park, Sanwei Community, Hangcheng Subdistrict, Bao'an District, Shenzhen, Guangdong, China.

1.8. Disclaimer

1. The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.
2. The test report is invalid if there is any evidence and/or falsification.
3. The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein.
4. This document may not be altered or revised in any way unless done so by Anbotek and all revisions are duly noted in the revisions section.
5. Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
6. The authenticity of the information provided by the customer is the responsibility of the customer and the laboratory is not responsible for its authenticity.

The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.

1.9. Test Equipment List

Conducted Emission at AC power line						
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.Due Date
1	L.I.S.N. Artificial Mains Network	Rohde & Schwarz	ENV216	100055	2024-01-18	2025-01-17
2	Three Phase V-type Artificial Power Network	CYBERTEK	EM5040DT	E215040DT001	2024-01-17	2025-01-16
3	Software Name EZ-EMC	Farad Technology	ANB-03A	N/A	/	/
4	EMI Test Receiver	Rohde & Schwarz	ESPI3	100926	2023-10-12	2024-10-11

Emissions in frequency bands (below 30MHz)						
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.Due Date
1	EMI Test Receiver	Rohde & Schwarz	ESR26	101481	2024-01-23	2025-01-22
2	Pre-amplifier	SONOMA	310N	186860	2024-01-17	2025-01-16
3	Loop Antenna (9K-30M)	Schwarzbeck	FMZB1519B	00053	2023-10-12	2024-10-11
4	Software Name EZ-EMC	Farad Technology	ANB-03A	N/A	/	/

Emissions in frequency bands (30MHz - 1GHz)						
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.Due Date
1	EMI Test Receiver	Rohde & Schwarz	ESR26	101481	2024-01-23	2025-01-22
2	Pre-amplifier	SONOMA	310N	186860	2024-01-17	2025-01-16
3	Bilog Broadband Antenna	Schwarzbeck	VULB9163	345	2022-10-23	2025-10-22
4	Loop Antenna (9K-30M)	Schwarzbeck	FMZB1519B	00053	2023-10-12	2024-10-11
5	EMI Test Software EZ-EMC	SHURPLE	N/A	N/A	/	/

20 db Occupied Bandwidth						
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.Due Date
1	Constant Temperature Humidity Chamber	ZHONGJIAN	ZJ-KHWS80B	N/A	2023-10-16	2024-10-15
2	DC Power Supply	IVYTECH	IV3605	1804D360510	2023-10-20	2024-10-19
3	Spectrum Analyzer	Rohde & Schwarz	FSV40-N	102150	2024-05-06	2025-05-05
4	MXA Spectrum Analysis	KEYSIGHT	N9020A	MY50531823	2024-02-22	2025-02-21
5	Oscilloscope	Tektronix	MDO3012	C020298	2023-10-12	2024-10-11
6	MXG RF Vector Signal Generator	Agilent	N5182A	MY47420647	2024-02-04	2025-02-03

2. Antenna requirement

Test Requirement:	Refer to 47 CFR Part 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

2.1. Conclusion

The antenna is a **Inductive loop coil Antenna** which permanently attached, and the best case gain of the antenna is **0 dBi**. It complies with the standard requirement.

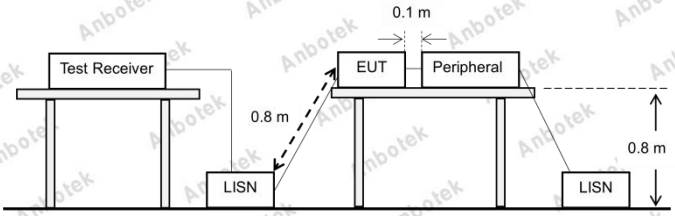
3. Conducted Emission at AC power line

Test Requirement:	Except as shown in paragraphs (b)and (c)of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN).
Test Limit:	Frequency of emission (MHz) / Conducted limit (dBμV): Quasi-peak / Average 0.15-0.5: 66 to 56* / 56 to 46* 0.5-5: 56 / 46 5-30: 60 / 50 *Decreases with the logarithm of the frequency.
Test Method:	ANSI C63.10-2020 section 6.2
Procedure:	Refer to ANSI C63.10-2020 section 6.2, standard test method for ac power-line conducted emissions from unlicensed wireless devices

3.1. EUT Operation

Operating Environment:	
Test mode:	1: TM1: WPT Mode

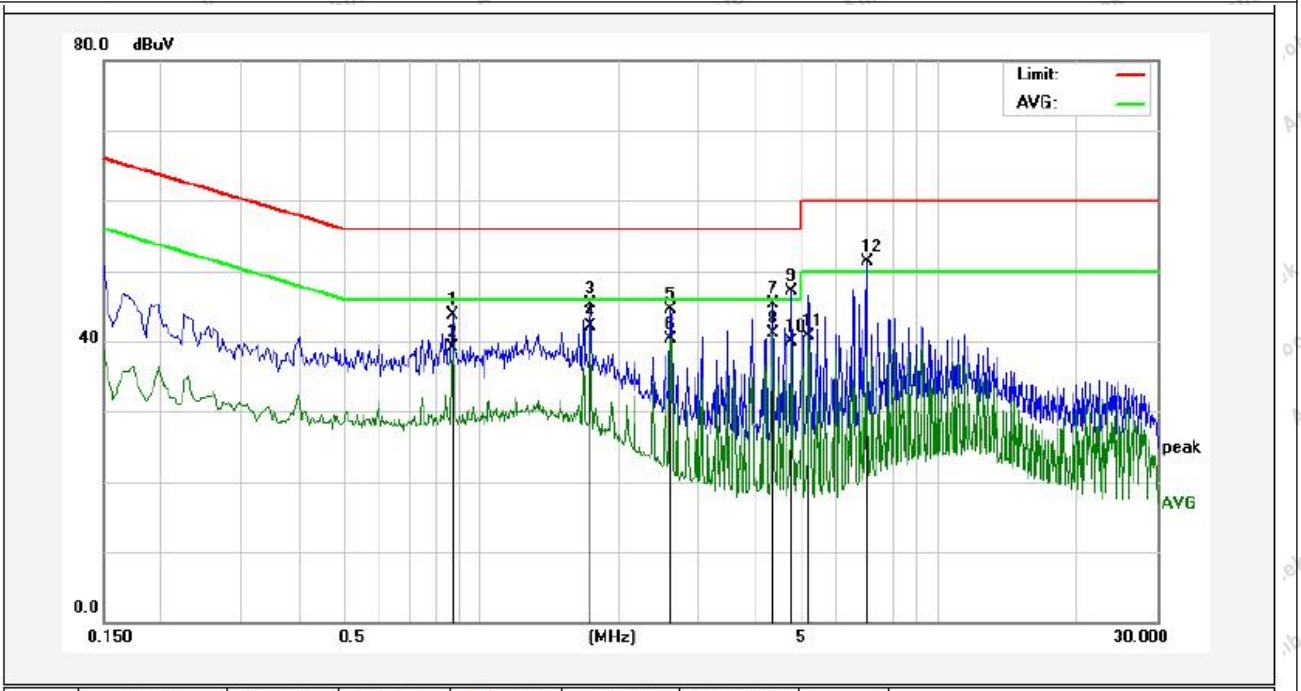
3.2. Test Setup



3.3. Test Data

Temperature:	25.8 °C	Humidity:	63 %	Atmospheric Pressure:	101 kPa

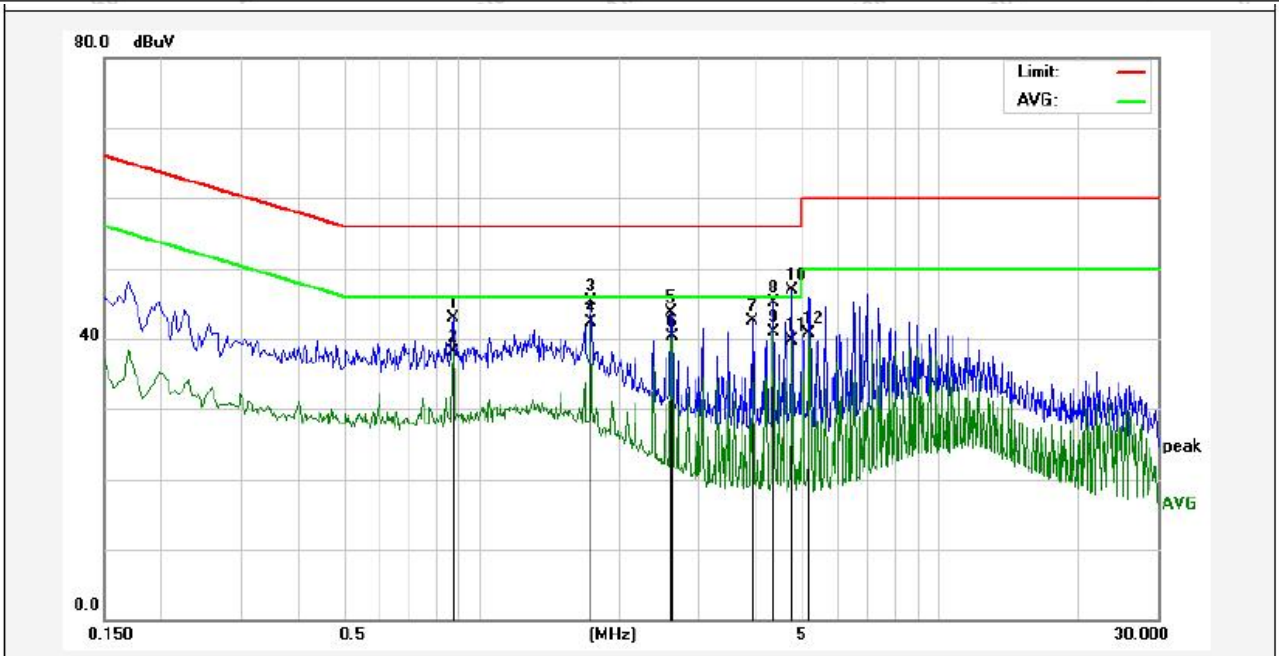
TM1 / Line: Line / BW: 1 / CH: L



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Over Limit (dB)	Detector	Remark
1	0.8700	25.77	17.86	43.63	56.00	-12.37	QP	
2	0.8700	21.30	17.86	39.16	46.00	-6.84	AVG	
3	1.7380	27.41	17.84	45.25	56.00	-10.75	QP	
4	1.7380	24.19	17.84	42.03	46.00	-3.97	AVG	
5	2.6060	26.63	17.84	44.47	56.00	-11.53	QP	
6	2.6060	22.51	17.84	40.35	46.00	-5.65	AVG	
7	4.3460	27.52	17.84	45.36	56.00	-10.64	QP	
8	4.3460	23.17	17.84	41.01	46.00	-4.99	AVG	
9	4.7860	29.26	17.85	47.11	56.00	-8.89	QP	
10	4.7860	22.13	17.85	39.98	46.00	-6.02	AVG	
11	5.2180	22.93	17.85	40.78	50.00	-9.22	AVG	
12	6.9540	33.38	17.86	51.24	60.00	-8.76	QP	

Temperature:	25.8 °C	Humidity:	63 %	Atmospheric Pressure:	101 kPa

TM1 / Line: Neutral / BW: 1 / CH: L



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Over Limit (dB)	Detector	Remark
1	0.8700	24.95	17.86	42.81	56.00	-13.19	QP	
2	0.8700	20.18	17.86	38.04	46.00	-7.96	AVG	
3	1.7380	27.52	17.84	45.36	56.00	-10.64	QP	
4	1.7380	24.38	17.84	42.22	46.00	-3.78	AVG	
5	2.6060	25.84	17.84	43.68	56.00	-12.32	QP	
6	2.6099	22.37	17.84	40.21	46.00	-5.79	AVG	
7	3.9140	24.56	17.85	42.41	56.00	-13.59	QP	
8	4.3500	27.22	17.84	45.06	56.00	-10.94	QP	
9	4.3500	23.11	17.84	40.95	46.00	-5.05	AVG	
10	4.7819	29.03	17.85	46.88	56.00	-9.12	QP	
11	4.7819	21.87	17.85	39.72	46.00	-6.28	AVG	
12	5.2180	22.78	17.85	40.63	50.00	-9.37	AVG	

Note: Only record the worst data in the report.

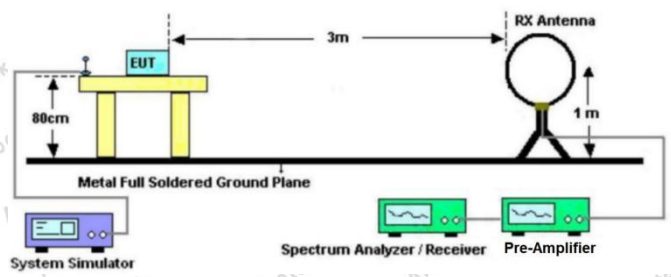
4. Emissions in frequency bands (below 30MHz)

Test Requirement:	47 CFR Part 15.209
Test Limit:	<table><tr><th>Frequency (MHz)</th><th>Field strength (microvolts/meter)</th><th>Measurement distance (meters)</th></tr><tr><td>0.009-0.490</td><td>2400/F(kHz)</td><td>300</td></tr><tr><td>0.490-1.705</td><td>24000/F(kHz)</td><td>30</td></tr><tr><td>1.705-30.0</td><td>30</td><td>30</td></tr><tr><td>30-88</td><td>100 **</td><td>3</td></tr><tr><td>88-216</td><td>150 **</td><td>3</td></tr><tr><td>216-960</td><td>200 **</td><td>3</td></tr><tr><td>Above 960</td><td>500</td><td>3</td></tr></table> ** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241. In the emission table above, the tighter limit applies at the band edges. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector. As shown in § 15.35(b), for frequencies above 1000 MHz, the field strength limits in paragraphs (a)and (b)of this section 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 point-to-point operation under paragraph (b)of this section, the peak field strength shall not exceed 2500 millivolts/meter at 3 meters along the antenna azimuth.
Test Method:	ANSI C63.10-2020 section 6.4
Procedure:	ANSI C63.10-2020 section 6.4

4.1. EUT Operation

Operating Environment:	
Test mode:	1: TM1: WPT Mode

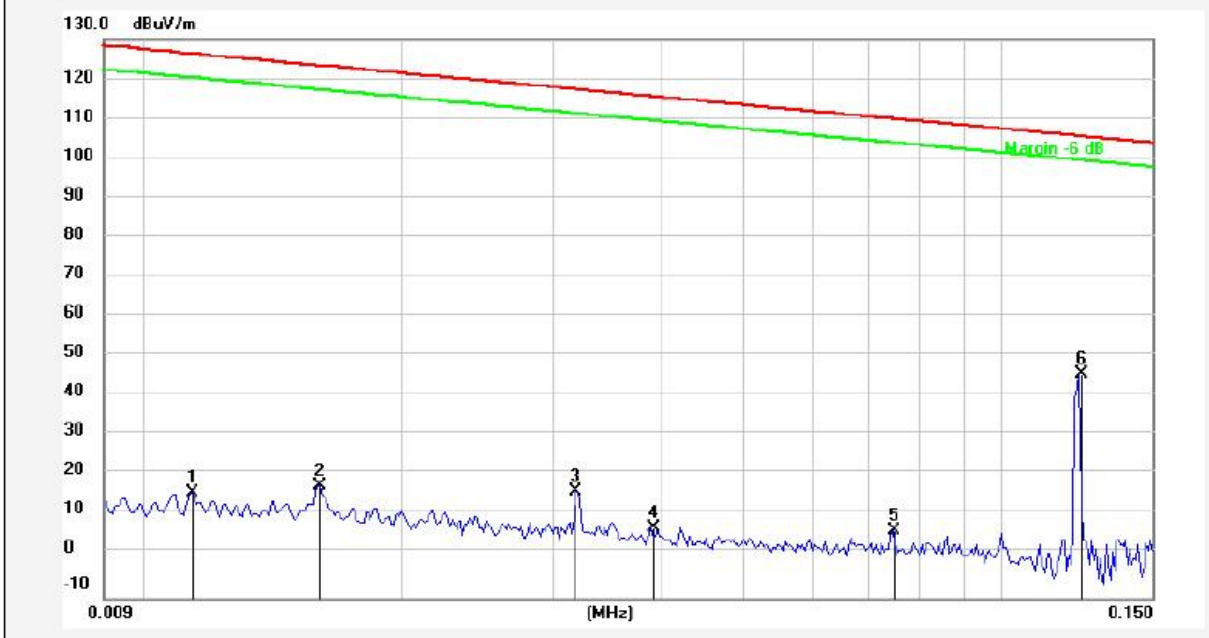
4.2. Test Setup



4.3. Test Data

Temperature:	23.5 °C	Humidity:	49 %	Atmospheric Pressure:	101 kPa

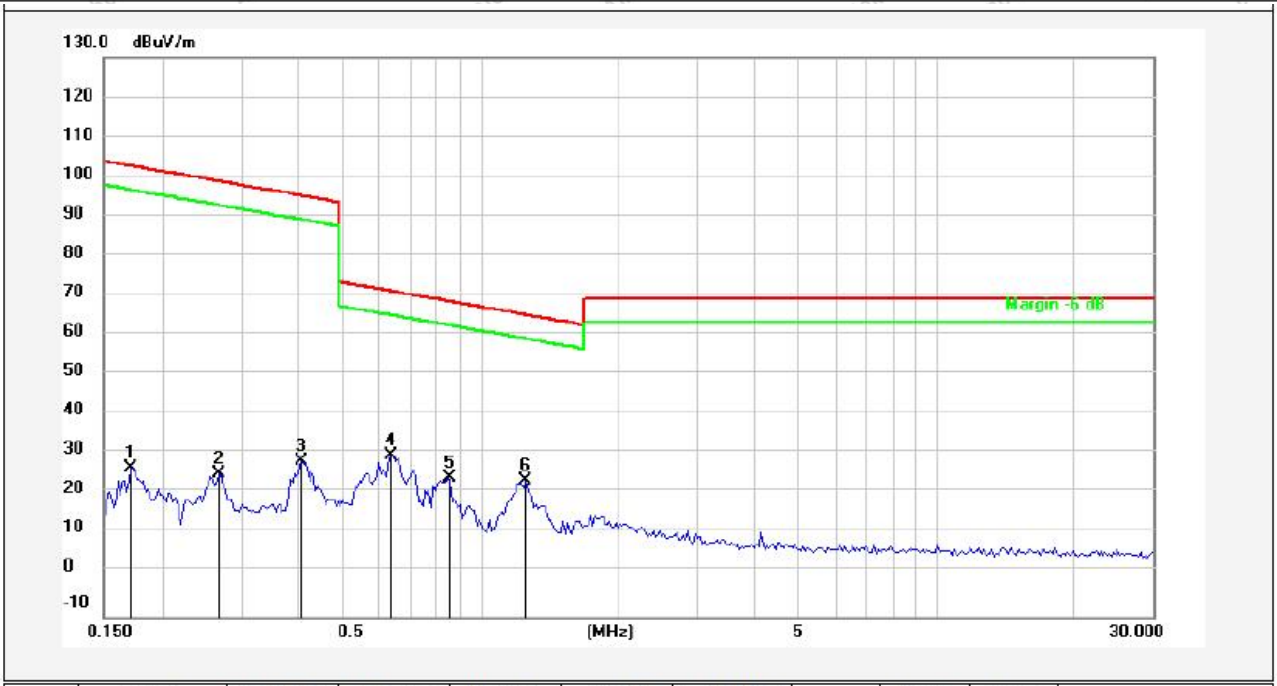
TM1 / Polarization: Horizontal / BW: 1 / CH: L



No.	Freq. (MHz)	Reading (dBuV)	Factor ()	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	0.0114	-3.68	20.08	16.40	126.27	-109.87	peak			
2	0.0160	-2.05	20.30	18.25	123.34	-105.09	peak			
3	0.0319	-3.81	20.56	16.75	117.38	-100.63	peak			
4	0.0391	-12.65	20.43	7.78	115.63	-107.85	peak			
5	0.0747	-13.44	20.37	6.93	110.04	-103.11	peak			
6	0.1232	25.97	20.34	46.31	105.72	-59.41	peak			

Temperature:	23.5 °C	Humidity:	49 %	Atmospheric Pressure:	101 kPa

TM1 / Polarization: Vertical / BW: 1 / CH: L



No.	Freq. (MHz)	Reading (dBuV)	Factor ()	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	0.1720	6.88	20.32	27.20	102.84	-75.64	peak			
2	0.2686	5.72	20.30	26.02	98.99	-72.97	peak			
3	0.4061	8.70	20.28	28.98	95.42	-66.44	peak			
4	0.6401	10.04	20.27	30.31	71.49	-41.18	QP			
5	0.8528	4.52	20.26	24.78	69.00	-44.22	QP			
6	1.2620	3.89	20.26	24.15	65.61	-41.46	QP			

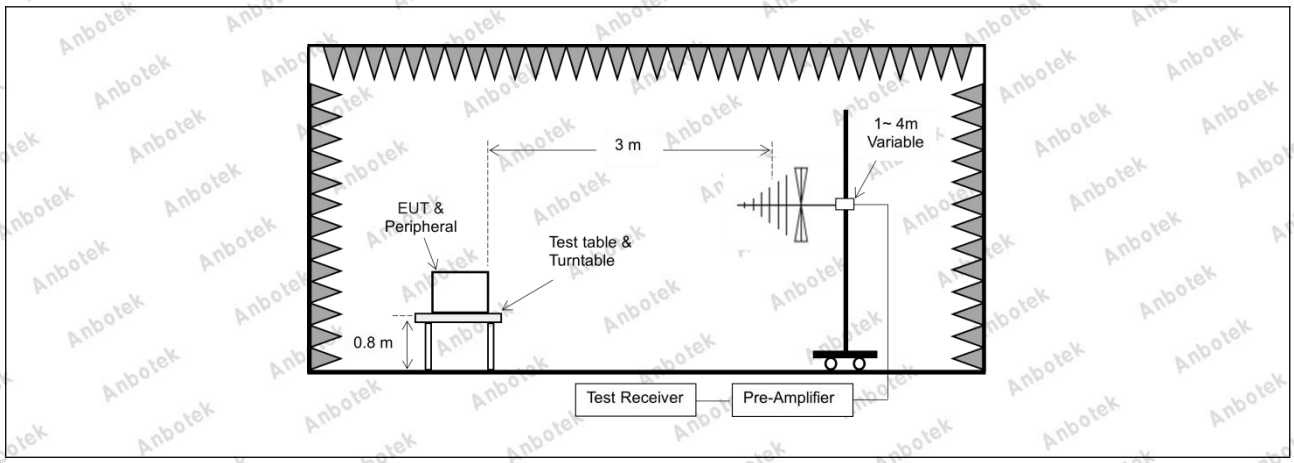
5. Emissions in frequency bands (30MHz - 1GHz)

Test Requirement:	47 CFR Part 15.209
Test Limit:	<table><tr><th>Frequency (MHz)</th><th>Field strength (microvolts/meter)</th><th>Measurement distance (meters)</th></tr><tr><td>0.009-0.490</td><td>2400/F(kHz)</td><td>300</td></tr><tr><td>0.490-1.705</td><td>24000/F(kHz)</td><td>30</td></tr><tr><td>1.705-30.0</td><td>30</td><td>30</td></tr><tr><td>30-88</td><td>100 **</td><td>3</td></tr><tr><td>88-216</td><td>150 **</td><td>3</td></tr><tr><td>216-960</td><td>200 **</td><td>3</td></tr><tr><td>Above 960</td><td>500</td><td>3</td></tr></table> ** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241. In the emission table above, the tighter limit applies at the band edges. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector. As shown in § 15.35(b), for frequencies above 1000 MHz, the field strength limits in paragraphs (a)and (b)of this section 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 point-to-point operation under paragraph (b)of this section, the peak field strength shall not exceed 2500 millivolts/meter at 3 meters along the antenna azimuth.
Test Method:	ANSI C63.10-2020 section 6.5
Procedure:	ANSI C63.10-2020 section 6.5

5.1. EUT Operation

Operating Environment:	
Test mode:	1: TM1: WPT Mode

5.2. Test Setup



5.3. Test Data

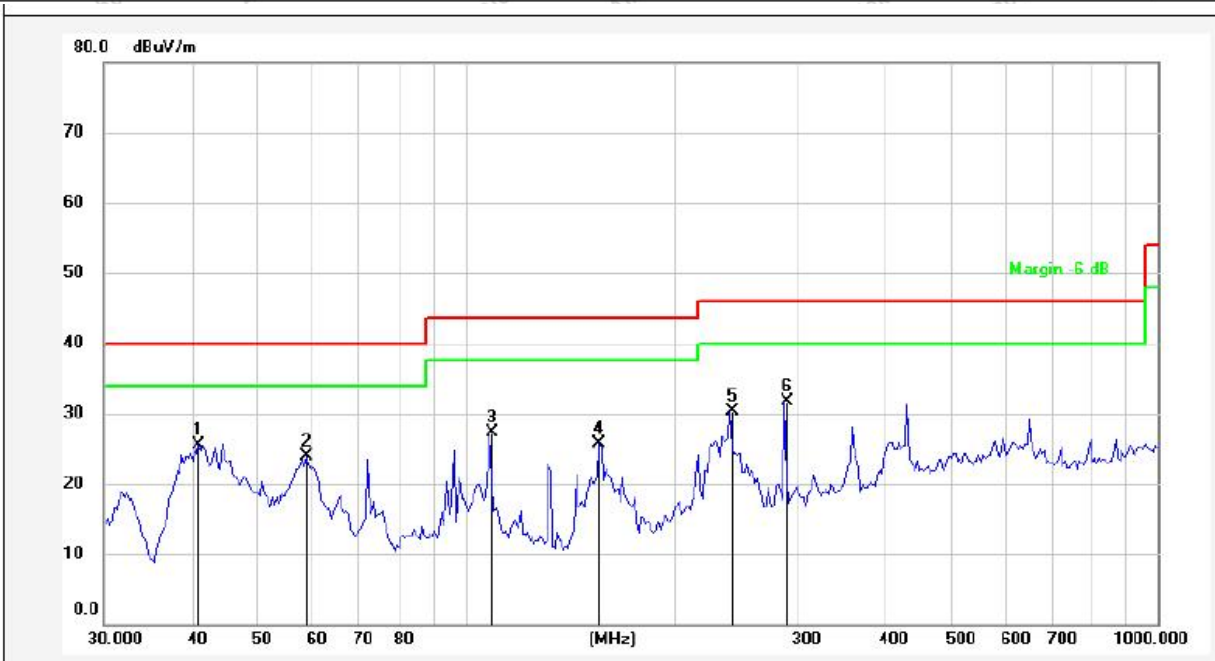
Temperature:	23.5 °C	Humidity:	49 %	Atmospheric Pressure:	101 kPa

TM1 / Polarization: Horizontal / BW: 1 / CH: L

No.	Freq. (MHz)	Reading (dBuV)	Factor ()	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	72.0843	52.97	-25.76	27.21	40.00	-12.79	QP			
2	108.2667	43.36	-19.42	23.94	43.50	-19.56	QP			
3	155.9101	54.50	-22.38	32.12	43.50	-11.38	QP			
4	240.8304	55.33	-18.49	36.84	46.00	-9.16	QP			
5	289.0021	55.49	-17.41	38.08	46.00	-7.92	QP			
6	361.7139	48.67	-15.97	32.70	46.00	-13.30	QP			

Temperature:	23.5 °C	Humidity:	49 %	Atmospheric Pressure:	101 kPa

TM1 / Polarization: Vertical / BW: 1 / CH: L



No.	Freq. (MHz)	Reading (dBuV)	Factor ()	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	41.1320	43.76	-18.27	25.49	40.00	-14.51	QP			
2	58.8185	42.08	-18.18	23.90	40.00	-16.10	QP			
3	108.2667	46.72	-19.42	27.30	43.50	-16.20	QP			
4	155.9101	47.19	-21.50	25.69	43.50	-17.81	QP			
5	240.8304	48.78	-18.49	30.29	46.00	-15.71	QP			
6	289.0021	49.19	-17.41	31.78	46.00	-14.22	QP			

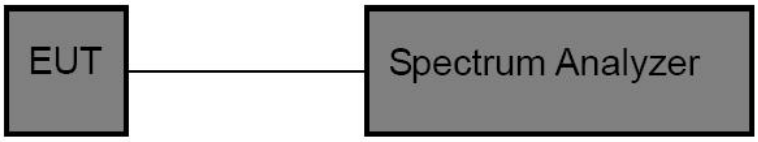
Note: Only record the worst data in the report.

6.20dB Occupy Bandwidth Test

6.1 Test Standard and Limit

Test Standard	FCC Part15 C Section 15.215(c)
Test Limit	Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

6.2 Test Setup



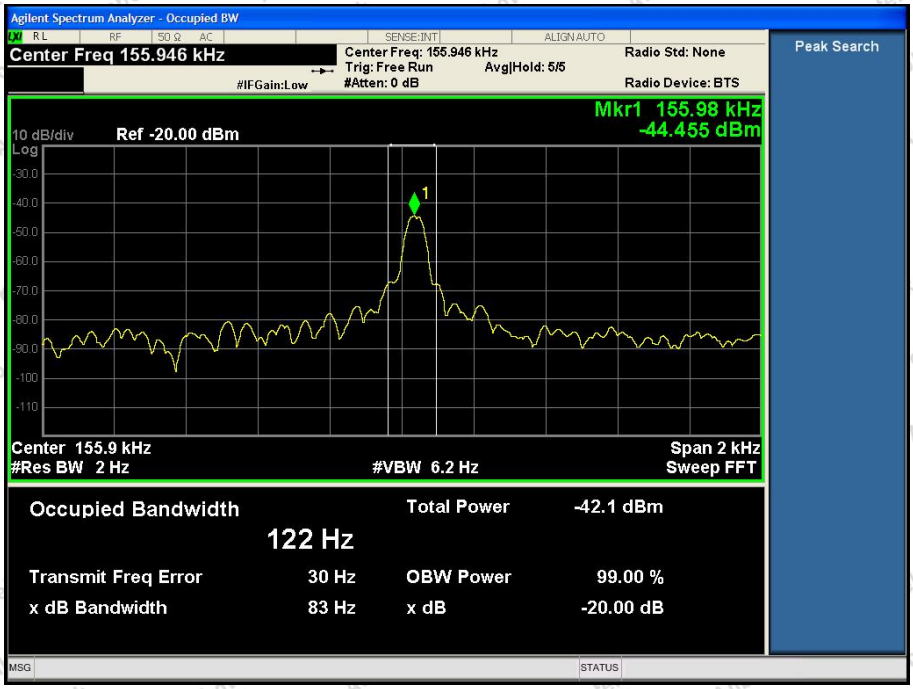
6.3 Test Procedure

The bandwidth of the fundamental frequency was measured by spectrum analyzer with RBW=1%-5%OBW, VBW≥3*RBW. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

6.4 Test Data

Temperature:	25.7 °C	Humidity:	56 %	Atmospheric Pressure:	101 kPa

Freq. (MHz)	Bandwidth (kHz)	Results
0.1559	0.083	PASS



APPENDIX I -- TEST SETUP PHOTOGRAPH

Please refer to separated files Appendix I -- Test Setup Photograph_RF(WPT)

APPENDIX II -- EXTERNAL PHOTOGRAPH

Please refer to separated files Appendix II -- External Photograph

APPENDIX III -- INTERNAL PHOTOGRAPH

Please refer to separated files Appendix III -- Internal Photograph

---------- End of Report ----------