



FCC TEST REPORT

FCC ID: 2BDUE-N102

On Behalf of

Shenzhen Warm light Intelligent Technology Co., LTD

Music desk lamp

Model No.: N102

Prepared for : Shenzhen Warm light Intelligent Technology Co., LTD
Address : 303-1, No.1108 East Hengping Road, Baoan Community, Yuanshan
Street, Longgang District, Shenzhen

Prepared By : Shenzhen PSI Testing Co., Ltd.
Address : 1-2F, Building 5, Yudafu Industrial Park, No. 10, Xingye West Road,
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Report Number : psi2310048-C01-R02
Date of Receipt : October 28, 2023
Date of Test : October 29–December 11, 2023
Date of Report : December 12, 2023
Version Number : V0

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TEST REPORT DECLARATION

Applicant : Shenzhen Warm light Intelligent Technology Co., LTD
Address : 303-1, No.1108 East Hengping Road, Baoan Community, Yuanshan Street,
Longgang District, Shenzhen
Manufacturer : Shenzhen Warm light Intelligent Technology Co., LTD
Address : 303-1, No.1108 East Hengping Road, Baoan Community, Yuanshan Street,
Longgang District, Shenzhen
EUT Description : Music desk lamp
(A) Model No. : N102
(B) Trademark : HUERICH

Measurement Standard Used:

FCC CFR Title 47 Part 15 Subpart C

ANSI C63.10:2013

The device described above is tested by Shenzhen PSI Testing Co., Ltd. to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The test results are contained in this test report and Shenzhen PSI Testing Co., Ltd. is assumed full responsibility for the accuracy and completeness of test. Also, this report shows that the EUT is technically compliant with the FCC CFR Title 47 Part 15 Subpart C requirements.

This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Shenzhen PSI Testing Co., Ltd.

Tested by (name + signature).....:

Jensen Wang
Test Engineer

Jensen Wang

Approved by (name + signature).....:

Simple Guan
Project Manager

Simple Guan

Date of issue.....:

December 12, 2023

Revision History

Revision	Issue Date	Revisions	Revised By
REV0	December 12, 2023	Initial released Issue	Jensen Wang

1. Test Result Summary

Requirement	CFR 47 Section	Result
Antenna requirement	§15.203	PASS
AC Power Line Conducted Emission	§15.207	PASS
Spurious Emission	§15.209	PASS
Occupied Bandwidth	§15.215 (c)	PASS

Note:

1. *PASS: Test item meets the requirement.*
2. *Fail: Test item does not meet the requirement.*
3. *N/A: Test case does not apply to the test object.*
4. *The test result judgment is decided by the limit of test standard.*
5. Decision rules for the conclusion of this test report: decision by actual test data without considering measurement uncertainty.

2. General Information

2.1. Description of Device (EUT)

EUT Name : Music desk lamp
Model No. : N102
DIFF. : N/A
Power supply : DC 3.7V from battery or DC 5V/9V from Type C port
Built-in battery information: 3.7V 2000mAh 7.4Wh

Radio Technology : Wireless power transmission systems

Operation frequency : 115KHz -205KHz

Modulation : ASK

Antenna Type : Coil Antenna

Wireless output power : 5W, 7.5W, 10W, 15W

Connector cable loss : 0.5dB

Software version : V1.0

Hardware version : V1.0

Note : Antenna information is provided by applicant.
Testing lab is not responsible for the accuracy of the information.

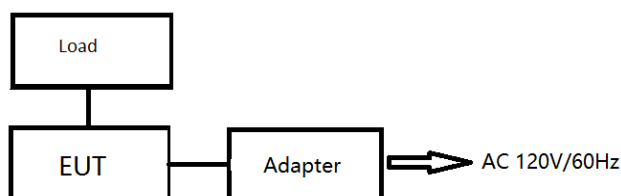
2.2. Accessories of Device (EUT)

Accessories	:	/
Manufacturer	:	/
Model	:	/
specifications	:	/

2.3. Tested Supporting System Details

No.	Description	Manufacturer	Model	Serial Number	Certification or SDoC
1	Adapter	RUIDIR	Q2W24-1U-C	N/A	N/A
2	Wireless Load	N/A	N/A	N/A	N/A

2.4. Block Diagram of connection between EUT and simulators



2.5. Description of Test Modes

Number	Modes
※1	Wireless Output(15W)
2	Wireless Output(10W)
3	Wireless Output(7.5W)
4	Wireless Output(5W)

Note: All test modes has been tested, ※ is worst case mode.

2.6. Test Conditions

Items	Required	Actual
Temperature range:	15-35℃	24℃
Humidity range:	25-75%	56%
Pressure range:	86-106kPa	98kPa

2.7. Test Facility

Shenzhen PSI Testing Co., Ltd.

1-2F, Building 5, Yudafu Industrial Park, No. 10, Xingye West Road, Shajing Street, Bao'an District, Shenzhen, Guangdong, China 518104

September 13, 2023 File on Federal Communication Commission

Registration Number: 916281

2.8. Measurement Uncertainty

(95% confidence levels, k=2)

Item	Uncertainty
Uncertainty for Power point Conducted Emissions Test	2.17dB
Uncertainty for Radiation Emission test in 3m chamber (below 30MHz)	3.5dB
Uncertainty for Radiation Emission test in 3m chamber (30MHz to 1GHz)	2.74dB(Polarize: V)
	2.76dB(Polarize: H)
Uncertainty for Radiation Emission test in 3m chamber (1GHz to 18GHz)	4.29dB(Polarize: V)
	4.82dB(Polarize: H)
Uncertainty for Radiation Emission test in 3m chamber (18GHz to 40GHz)	4.31 dB(Polarize: V)
	4.30 dB(Polarize: H)
Uncertainty for radio frequency	48.24KHz
Uncertainty for conducted RF Power	0.41dB

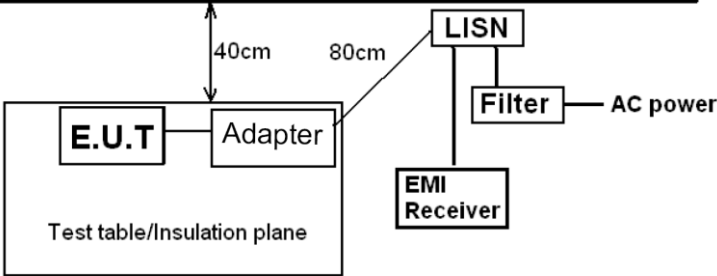
2.9. Test Equipment List

Item	Equipment	Manufacturer	Model No.	Serial No.	Firmware Version	Last Cal.	Cal. Interval
1.	9*6*6 anechoic chamber	SKET	9*6*6	N/A	/	2022.12.20	3 Year
2.	Test Receiver	Rohde&Schwarz	ESCI 7	101032/003	4.42 SP3	2022.12.30	1 Year
3.	L.I.S.N.#1	Rohde&Schwarz	ENV216	102282	/	2022.12.30	1 Year
4.	L.I.S.N.#2	RFT	NNB111	13835240	/	2023.05.04	1 Year
5.	Loop Antenna	Schwarz beck	FMZB 1519B	00128	/	2023.04.03	2 Year
6.	Bilog Antenna	Schwarz beck	VULB 9168	01448	/	2022.12.26	2 Year
7.	Spectrum Analyzer	Rohde&Schwarz	FSV-40N	101648	3.70	2022.12.30	1 Year
8.	Horn Antenna	Schwarz beck	BBHA 9120 D	02706	/	2022.12.26	2 Year
9.	Amplifier	SKET	LAPA_01G18G-45dB	SK2022032901	/	2022.12.29	1 Yea
10.	Horn Antenna	Schwarz beck	BBHA 9170	00946	/	2022.12.25	2 Year
11.	Amplifier	SKET	LNPA_0118G-45	SK2020010801	/	2022.12.30	1 Yea
12.	RF Power Probe	Rohde&Schwarz	NRP-Z11	1138.3004.02-1111533-Fz	/	2023.03.30	1 Yea
For Test Software Information							
Item	Software Name	Manufacturer			Version		
RE	EMC-I	SKET			V1.5.0.3		
CE	EMC-I	SKET			V1.5.0.3		
RF	RTS	TACHOY			V1.0.0		

3. Test Results and Measurement Data

3.1. Conducted Emission

3.1.1. Test Specification

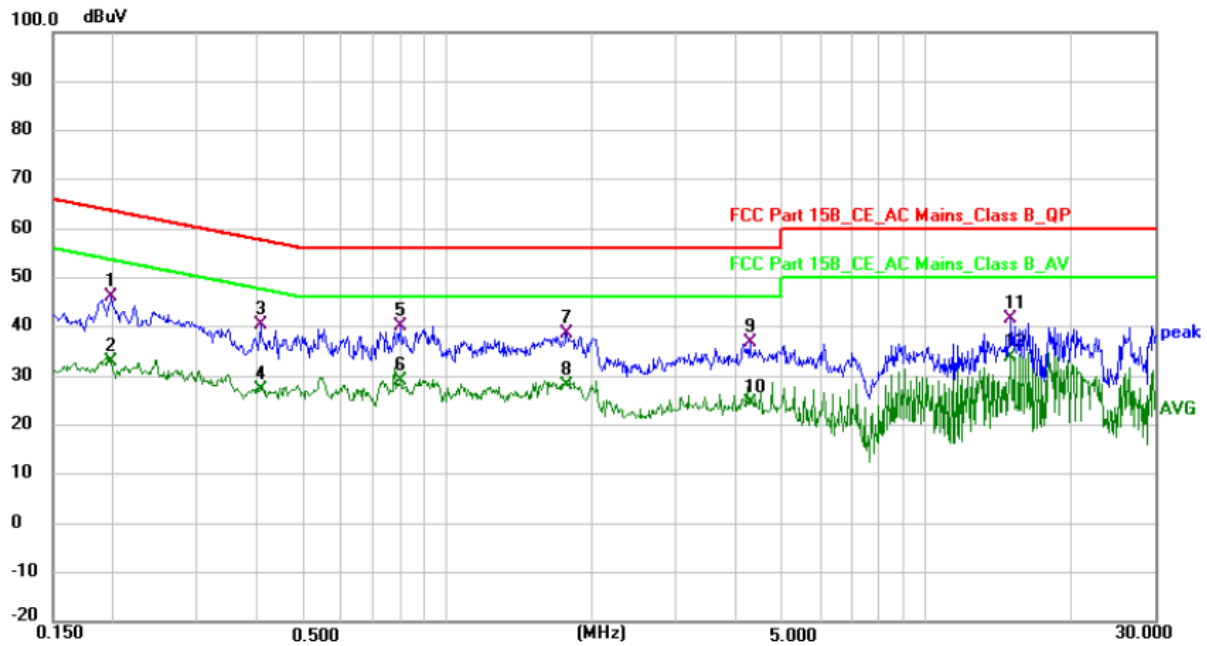
Test Requirement:	FCC Part15 C Section 15.207																
Test Method:	ANSI C63.10:2013																
Frequency Range:	150 kHz to 30 MHz																
Receiver setup:	RBW=9 kHz, VBW=30 kHz, Sweep time=auto																
Limits:	<table><tr><th rowspan="2">Frequency range (MHz)</th><th colspan="2">Limit (dBuV)</th></tr><tr><th>Quasi-peak</th><th>Average</th></tr><tr><td>0.15-0.5</td><td>66 to 56*</td><td>56 to 46*</td></tr><tr><td>0.5-5</td><td>56</td><td>46</td></tr><tr><td>5-30</td><td>60</td><td>50</td></tr></table>			Frequency range (MHz)	Limit (dBuV)		Quasi-peak	Average	0.15-0.5	66 to 56*	56 to 46*	0.5-5	56	46	5-30	60	50
Frequency range (MHz)	Limit (dBuV)																
	Quasi-peak	Average															
0.15-0.5	66 to 56*	56 to 46*															
0.5-5	56	46															
5-30	60	50															
Test Setup:	Reference Plane  E.U.T Adapter LISN Filter AC power EMI Receiver Test table/Insulation plane 40cm 80cm Remark: E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m																
Test Mode:	Transmitting Mode																
Test Procedure:	1. The E.U.T is connected to an adapter through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). 3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10: 2013 on conducted measurement.																
Test Result:	PASS																

3.1.2. Test data

Please refer to following diagram for individual

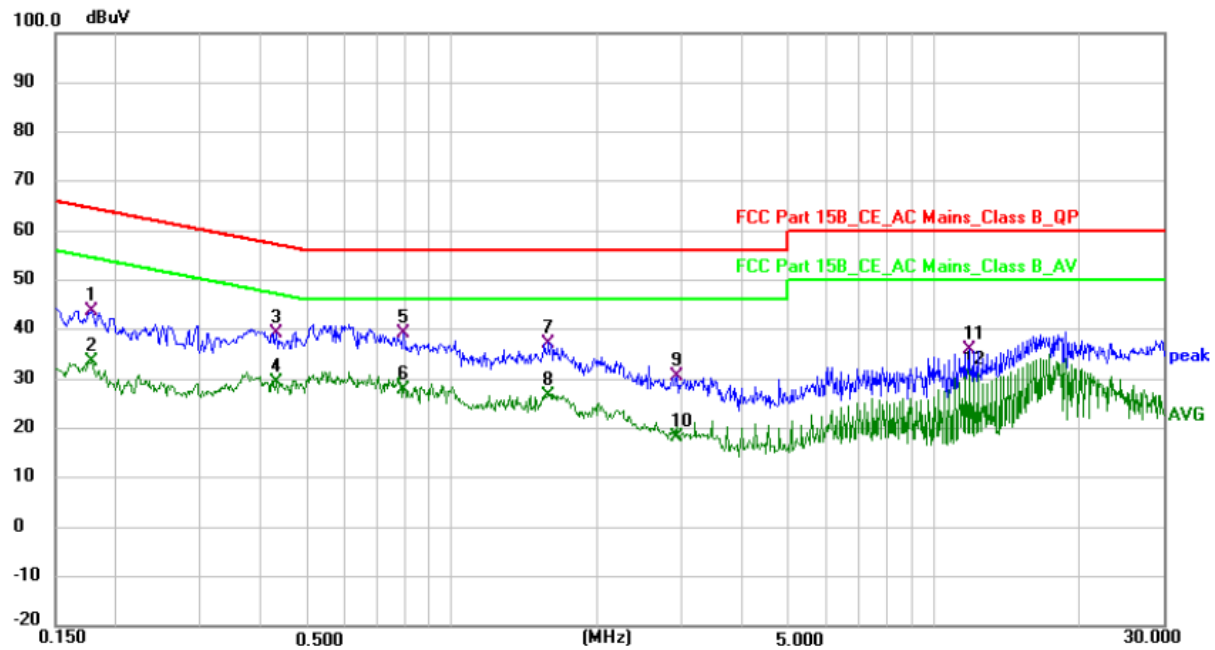
Test Mode	: Wireless Output(15W)
Test Results	: PASS
Note:	The test results are listed in next pages. All test modes has been tested, this report only reflected the worst mode. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector and quasi-peak detector need not be carried out. If the limits for the measurement with the average detector are met when using a receiver with a quasi-peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.

EUT Description	Music desk lamp	Model No.	N102
Temperature	24℃	Humidity	56%
Test Voltage	AC 120V/60Hz		
Pol	Line		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1980	36.13	9.95	46.08	63.69	-17.61	QP	P	
2	0.1980	23.01	9.95	32.96	53.69	-20.73	AVG	P	
3	0.4060	30.85	9.64	40.49	57.73	-17.24	QP	P	
4	0.4060	17.57	9.64	27.21	47.73	-20.52	AVG	P	
5 *	0.7980	30.77	9.42	40.19	56.00	-15.81	QP	P	
6	0.7980	19.55	9.42	28.97	46.00	-17.03	AVG	P	
7	1.7740	29.20	9.39	38.59	56.00	-17.41	QP	P	
8	1.7740	18.89	9.39	28.28	46.00	-17.72	AVG	P	
9	4.2860	27.33	9.40	36.73	56.00	-19.27	QP	P	
10	4.2860	15.01	9.40	24.41	46.00	-21.59	AVG	P	
11	15.0380	32.06	9.56	41.62	60.00	-18.38	QP	P	
12	15.0380	24.19	9.56	33.75	50.00	-16.25	AVG	P	

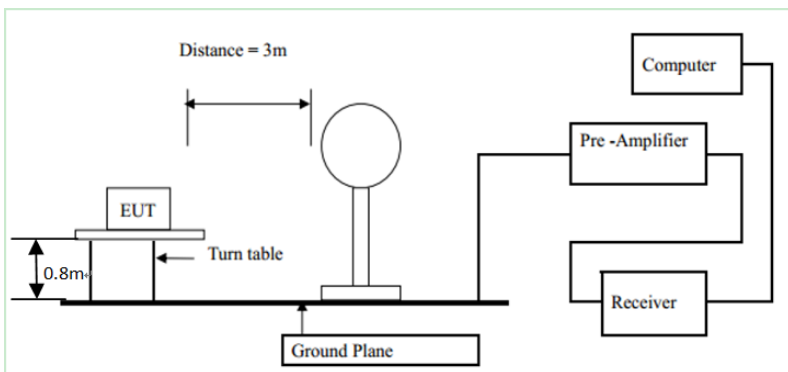
Pol	Neutral
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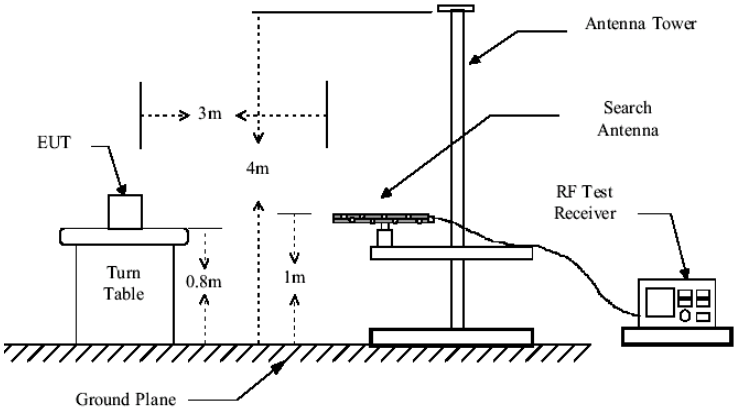


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1780	33.90	9.93	43.83	64.58	-20.75	QP	P	
2	0.1780	23.55	9.93	33.48	54.58	-21.10	AVG	P	
3	0.4300	29.63	9.62	39.25	57.25	-18.00	QP	P	
4	0.4300	19.80	9.62	29.42	47.25	-17.83	AVG	P	
5 *	0.7940	29.46	9.69	39.15	56.00	-16.85	QP	P	
6	0.7940	18.22	9.69	27.91	46.00	-18.09	AVG	P	
7	1.5900	27.94	9.36	37.30	56.00	-18.70	QP	P	
8	1.5900	17.36	9.36	26.72	46.00	-19.28	AVG	P	
9	2.9460	20.99	9.54	30.53	56.00	-25.47	QP	P	
10	2.9460	8.70	9.54	18.24	46.00	-27.76	AVG	P	
11	11.8460	26.50	9.57	36.07	60.00	-23.93	QP	P	
12	11.8460	21.29	9.57	30.86	50.00	-19.14	AVG	P	

3.2. Radiated Spurious Emission Measurement

3.2.1. Test Specification

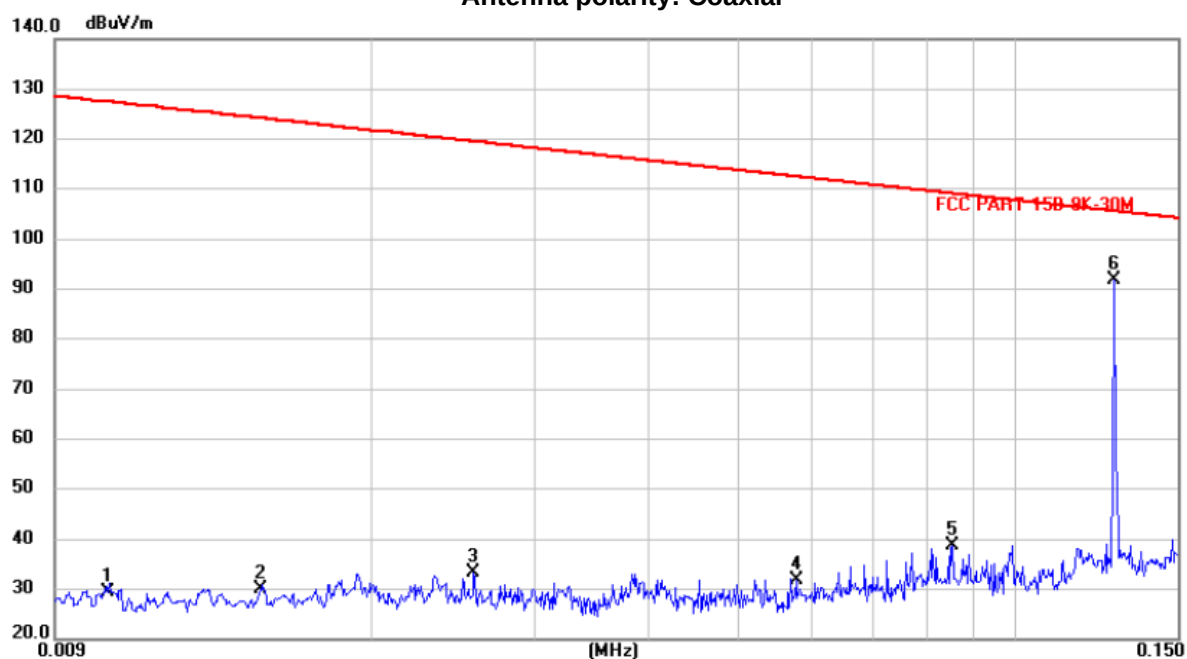
Test Requirement:	FCC Part15 C Section 15.209				
Test Method:	ANSI C63.10: 2013				
Frequency Range:	9 kHz to 1 GHz				
Measurement Distance:	3 m				
Antenna Polarization:	Coaxial & Coplanar(9KHz-30MHz) Horizontal & Vertical(30MHz-1GHz)				
Operation mode:	Refer to item 4.1				
Receiver Setup:	Frequency	Detector	RBW	VBW	Remark
	9kHz- 150kHz	Quasi-peak	200Hz	1kHz	Quasi-peak Value
	150kHz-30MHz	Quasi-peak	9kHz	30kHz	Quasi-peak Value
	30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak Value
	Note: 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.				
Limit:	Frequency		Field Strength (microvolts/meter)		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		3
	88-216		150		3
	216-960		200		3
	Above 960		500		3
	Test setup:	For radiated emissions below 30MHz			
 30MHz to 1GHz					

	
Test Procedure:	1. For the radiated emission test below 1GHz: The EUT was placed on a turntable with 0.8 meter above ground. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high PASS filter are used for the test in order to get better signal level. 2. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level 3. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported. 4. Use the following spectrum analyzer settings: (1) Span shall wide enough to fully capture the emission being measured; (2) Set RBW=100 kHz for $f < 1$ GHz; VBW $\geq$ RBW; Sweep = auto; Detector function = peak; Trace = max hold; For average measurement: VBW = 10 Hz, when duty cycle is no less than 98 percent. VBW $\geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
Test mode:	Refer to section 4.1 for details
Test results:	PASS

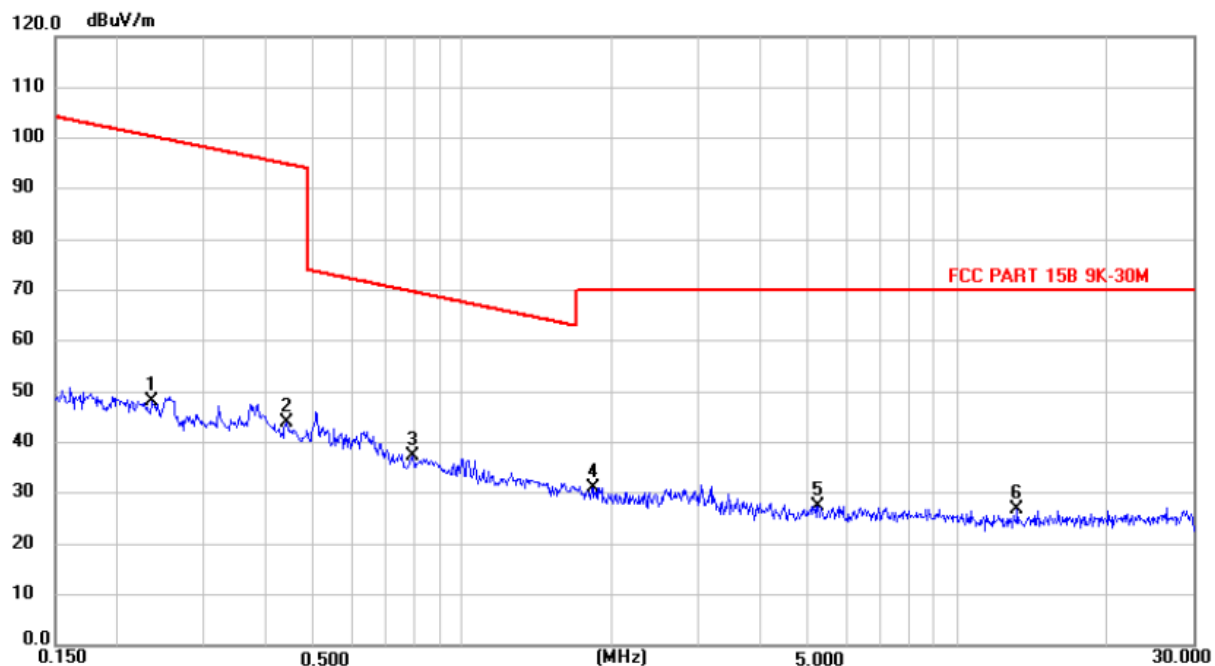
3.2.2. Test Data

Please refer to following diagram for individual

Frequency Range	: 9KHz~30MHz
Test Mode	: Wireless Output(15W)
Test Results	: PASS
Note:	1. The test results are listed in next pages. 2. This mode is worst case mode, so this report only reflected the worst mode. 3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the quasi-peak detector need not be carried out.

For signal coil:**Antenna polarity: Coaxial**

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	0.0103	7.91	21.49	29.40	127.44	-98.04	peak
2	0.0151	8.83	21.37	30.20	124.13	-93.93	peak
3	0.0257	12.30	21.10	33.40	119.52	-86.12	peak
4	0.0577	11.94	20.02	31.96	112.52	-80.56	peak
5	0.0854	18.85	19.97	38.82	109.13	-70.31	peak
6 *	0.1280	72.09	19.88	91.97	105.62	-13.65	peak



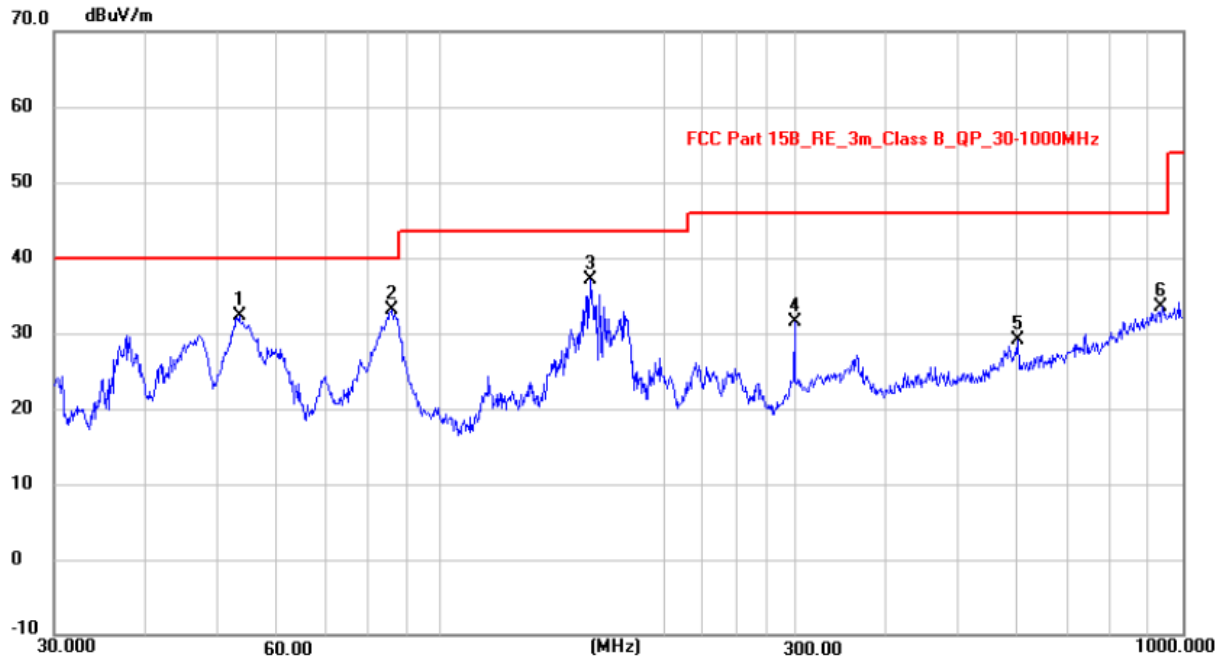
Note: All polarization has been tested and only the worst polarization direction data is displayed.

S

Frequency Range	: 30MHz~1000MHz
Test Mode	: Wireless Output(15W)
Test Results	: PASS
Note:	1. The test results are listed in next pages. 2. All test modes has been tested, this report only reflected the worst mode. 3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the quasi-peak detector need not be carried out.

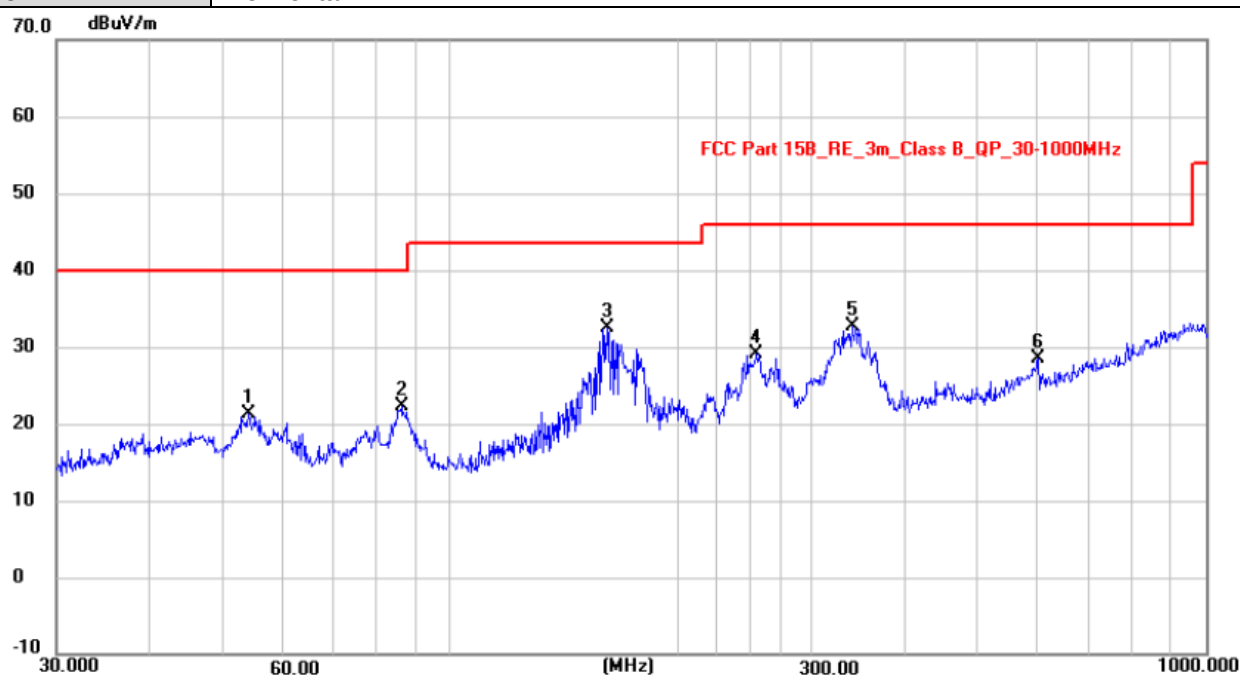
30MHz-1GHz

EUT Description	Music desk lamp	Model No.	N102
Temperature	24°C	Humidity	56%
Test Voltage	AC 120V/60Hz		
Pol	Vertical		



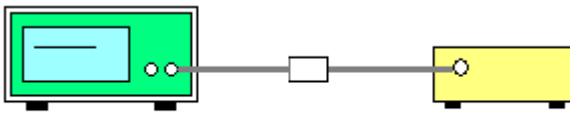
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	53.4583	19.46	12.84	32.30	40.00	-7.70	peak	100	360	P	
2	85.6352	24.56	8.58	33.14	40.00	-6.86	peak	100	360	P	
3 *	159.0856	23.91	13.23	37.14	43.50	-6.36	peak	100	360	P	
4	299.8410	17.91	13.66	31.57	46.00	-14.43	peak	100	360	P	
5	600.1099	8.39	20.69	29.08	46.00	-16.92	peak	100	360	P	
6	941.3049	8.49	25.10	33.59	46.00	-12.41	peak	100	360	P	

Pol	Horizontal
-----	------------



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	53.9763	8.48	12.78	21.26	40.00	-18.74	peak	100	0	P	
2	86.1623	13.70	8.59	22.29	40.00	-17.71	peak	100	0	P	
3 *	161.1207	19.39	13.15	32.54	43.50	-10.96	peak	100	0	P	
4	254.5051	16.79	12.29	29.08	46.00	-16.92	peak	100	0	P	
5	340.6323	17.99	14.69	32.68	46.00	-13.32	peak	100	0	P	
6	600.1099	7.76	20.69	28.45	46.00	-17.55	peak	100	0	P	

3.3. Test Specification

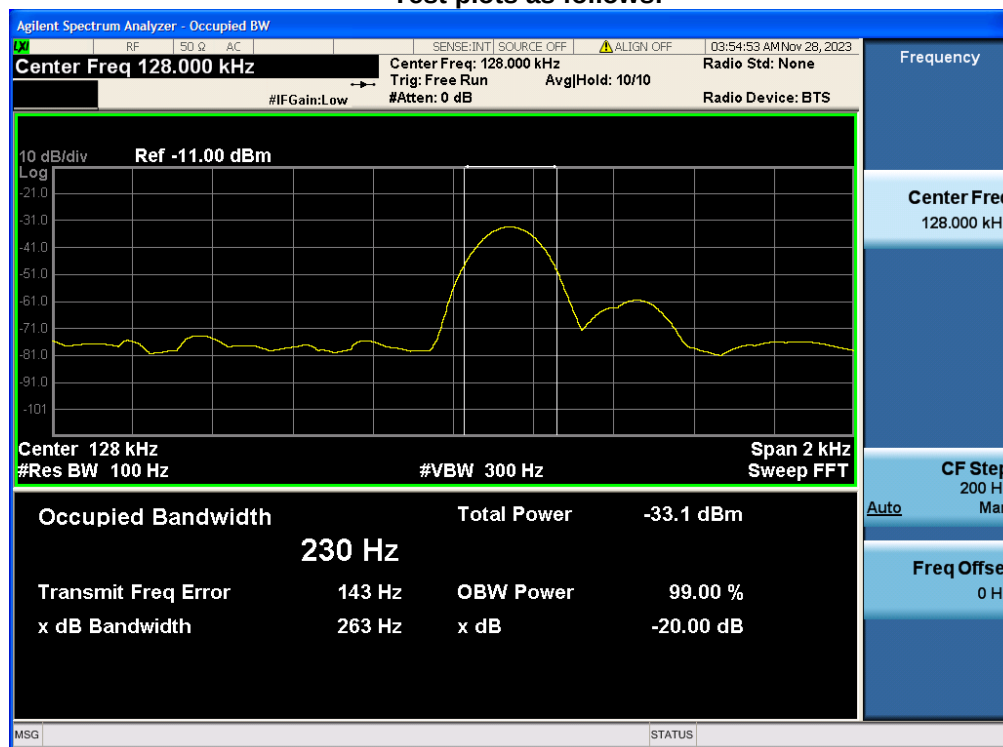
Test Requirement:	FCC Part15 C Section 15.215(c)
Test Method:	ANSI C63.10: 2013
Limit:	N/A
Test Procedure:	1. According to the follow Test-setup, keep the relative position between the artificial antenna and the EUT. 2. Set to the maximum power setting and enable the EUT transmit continuously. 3. Use the following spectrum analyzer settings for 20dB Bandwidth measurement. Span = approximately 2 to 3 times the 20 dB bandwidth, centered on a hopping channel; RBW$\geq$1% of the 20 dB bandwidth; VBW$\geq$RBW; Sweep = auto; Detector function = peak; Trace = max hold. 4. Measure and record the results in the test report.
Test setup:	 The diagram illustrates the test setup. On the left is a green box representing the 'Spectrum Analyzer'. A cable connects it to a yellow box on the right representing the 'EUT' (Equipment Under Test). The cable passes through a small white rectangular component, likely an attenuator or a coupler, before reaching the EUT.
Test Mode:	Refer to section 4.1 for details
Test results:	PASS

3.3.1. Test data

Test Mode: Wireless Output(15W)

Frequency(kHz)	20dB Occupy Bandwidth (kHz)	Limit (kHz)	Conclusion
128	0.263	---	Pass

Test plots as follows:



-----End-----