TEST REPORT

Product Name:	Smart Light Sound Machine
Trademark:	N/A
Model Number:	N69,N70,N71,N72,N73,N75,N76,N77,N78,N79,N80,N67, N68,N65,N61,N51,N39,N38,N35,N30
Prepared For:	Shenzhen Nuohao Technology Co., Ltd.
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Manufacturer:	Shenzhen Nuohao Technology Co., Ltd.
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Prepared By:	ShenZhen SJS Testing Technology Services Co., Ltd
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Sample Received Date:	Feb.16, 2023
Sample tested Date:	Feb.16, 2023 to Feb.22, 2023
Issue Date:	Feb.22, 2023
Report No.:	SJS2302122ZF-FCC-R1
Test Standards	47 CFR FCC Part 15 Subpart B ANSI C63.4: 2014
Test Results	PASS

Compiled by:	Reviewed by:	Approved by:
Cora Chan	Sam Zhu	Helen Lin/Manager

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(Note: N/A means not applicable)

1. VERSION

Report No.	Issue Date	Description	Approved
SJS2302122ZF-FCC-R1	Feb.22, 2023	Original	Valid

2. TEST SUMMARY

The Product has been tested according to the following specifications:

Standard	Test Item	Test result
FCC 15.107	Conducted Emission	Pass
FCC 15.109	Radiated Emission	Pass

3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Test item	Value (dB)
Conducted Emission (150kHz-30MHz)	3.20
Radiated Emission(30MHz~1GHz)	4.80
Radiated Emission(1GHz~6GHz)	4.90

4. PRODUCT INFORMATION AND TEST SETUP

4.1 Product Information

Ratings: DC 12V, 2.5A

Cable of Product

No.	Cable Type	Quantity	Provider	Length (m)	Specification	Note
1	--	--	Applicant	---	Shielded	With a ferrite ring in mid
2	--	--	SJS	--	Unshielded	--

4.2 Test Setup Configuration

See test photographs attached in EUT TEST SETUP PHOTOGRAPHS for the actual connections between Product and support equipment.

4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Data Cable	Power Cord
1.	Adaptor	N/A	XHY120 250UCC	N/A	1.0	12V

Notes:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

4.4 Test Mode

Test item	Test Mode	Test Voltage
Conducted Emission (150KHz-30MHz) Class B	Working	AC 120V/60Hz*
Radiated mission(30MHz-1GHz) Class B	Working	AC 120V/60Hz*
All test mode were tested and passed, only Conducted Emissions, Radiated Emissions shows (*) is the worst case mode which were recorded in this report.		

5. TEST FACILITY AND TEST INSTRUMENT USED

5.1 Test Facility

All measurement facilities used to collect the measurement data are located at SJS Room 405, No.6095-2, Bao'an Road, Qiaotou Community, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.

5.2 Test Instrument Used

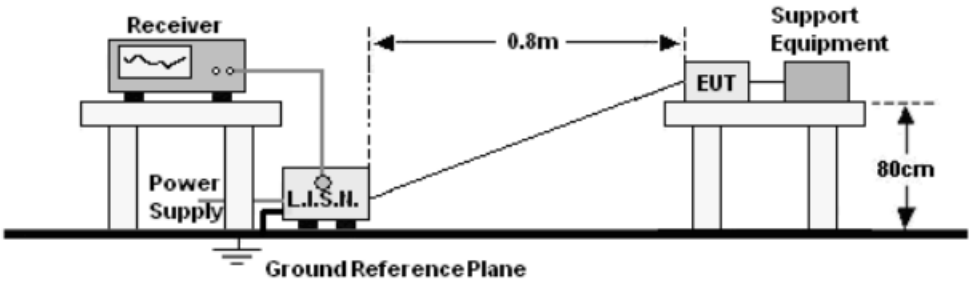
Disturbance voltages Test					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
Receiver	R&S	ESR	102075	Aug. 14, 2022	Aug. 13, 2023
LISN	R&S	ENV216	101375	Aug. 14, 2022	Aug. 13, 2023

Radiated disturbance Test (966 chamber)					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
966 chamber	ChengYu	966 Room	966	Aug. 14, 2022	Aug. 13, 2023
Receiver	R&S	ESR	102075	Aug. 14, 2022	Aug. 13, 2023
Receiver	R&S	ESRP	101154	Aug. 14, 2022	Aug. 13, 2023
Amplifier	Schwarzbeck	BBV9744	9744-0037	Aug. 14, 2022	Aug. 13, 2023
TRILOG Broadband Antenna	schwarzbeck	VULB 9163	VULB9163 -942	Aug. 14, 2022	Aug. 13, 2023
Horn Antenna	SCHWARZBECK	BBHA9120 D	1201	Aug. 14, 2022	Aug. 13, 2023
Amplifier	Schwarzbeck	BBV9718	9718-309	Aug. 14, 2022	Aug. 13, 2023

6. CONDUCTED EMISSION AT THE MAINS TERMINALS TEST

6.1 Block Diagram Of Test Setup

For mains ports:



6.2 Limit

Limits for Class B devices

(MHz)	Limits dB(μV)	
	Quasi-peak	Average
0,15 to 0,50	66 to 56*	56 to 46*
0,50 to 5	56	46
5 to 30	60	50

Notes: 1. *Decreasing linearly with logarithm of frequency.
2. The lower limit shall apply at the transition frequencies.

6.3 Test procedure

For mains ports:

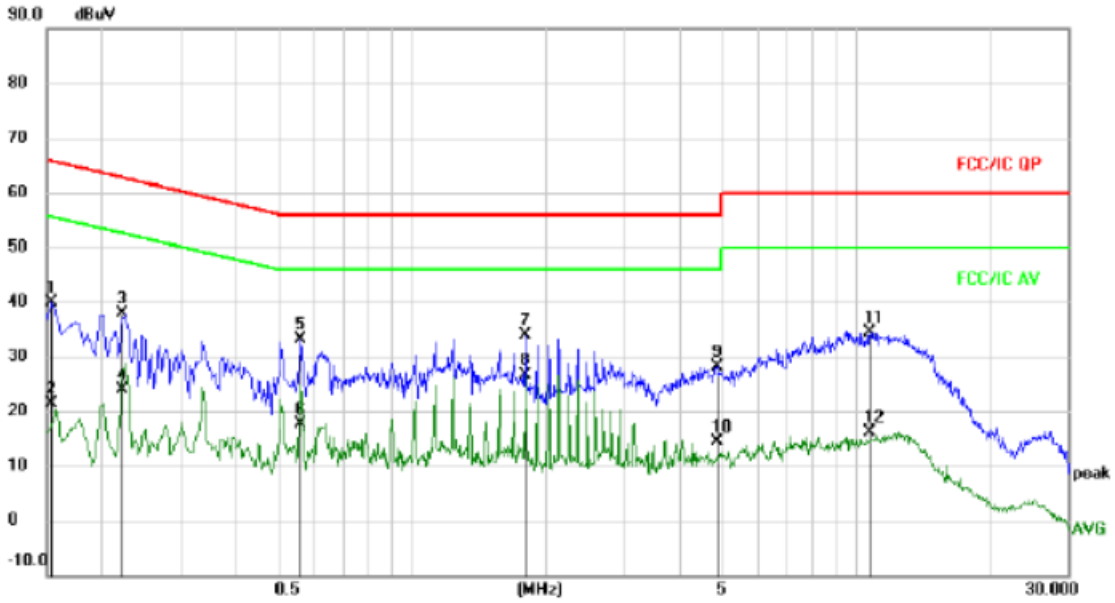
a. The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).

b. The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak and AVG detector in Max Hold mode. Run the receiver's pre-scan to record the maximum disturbance generated from Product in all power lines in the full band.

c. For each frequency whose maximum record was higher or close to limit, measure its QP and AVG values and record.

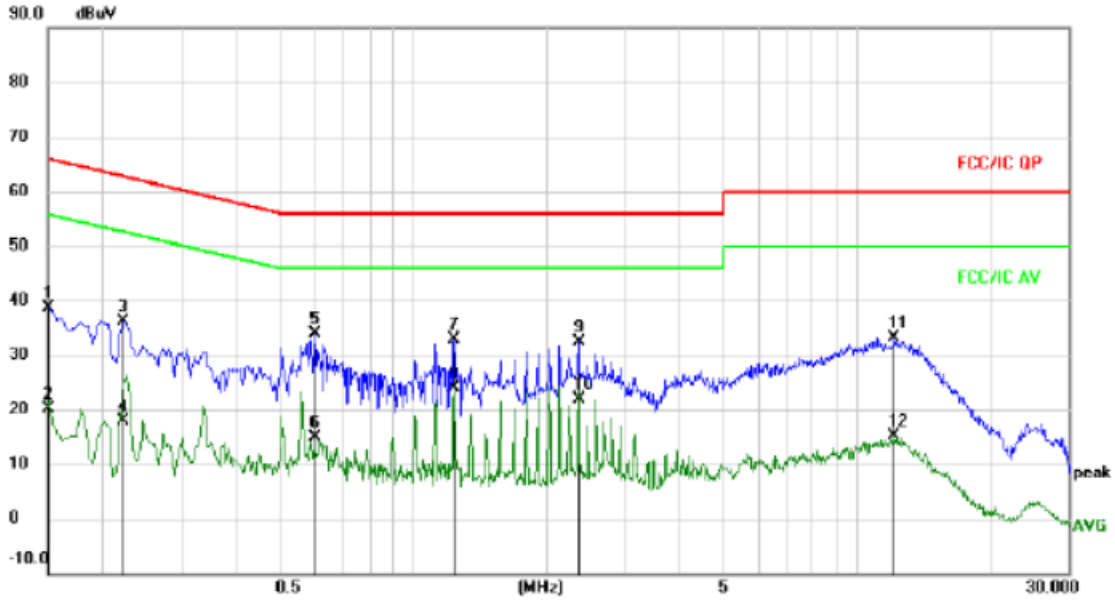
6.4 Test Result

Temperature:	24.2 ℃	Relative Humidity:	52 %
Pressure:	101kPa	Phase :	Line
Test Voltage :	DC 12V from adapter Input AC120V/60Hz	Test Mode:	Charging



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV		dBuV	dBuV	dB	Detector	Comment
1	*	0.1539	30.07	9.77	39.84	55.79	-15.95	AVG	
2		0.1539	11.65	9.77	21.42	55.79	-34.37	AVG	
3		0.2208	28.06	9.76	37.82	62.79	-24.97	QP	
4		0.2208	14.20	9.76	23.96	52.79	-28.83	AVG	
5		0.5620	23.19	10.04	33.23	56.00	-22.77	QP	
6		0.5620	7.62	10.04	17.66	46.00	-28.34	AVG	
7		1.8020	24.15	9.79	33.94	56.00	-22.06	QP	
8		1.8020	16.85	9.79	26.64	46.00	-19.36	AVG	
9		4.8540	18.36	9.89	28.25	56.00	-27.75	QP	
10		4.8540	4.47	9.89	14.36	46.00	-31.64	AVG	
11		10.7739	24.53	9.91	34.44	60.00	-25.56	QP	
12		10.7739	6.19	9.91	16.10	50.00	-33.90	AVG	

Temperature:	24.2 ℃	Relative Humidity:	52%
Pressure:	101kPa	Phase :	Neutral
Test Voltage :	DC 12V from adapter Input AC120V/60Hz	Test Mode:	Charging



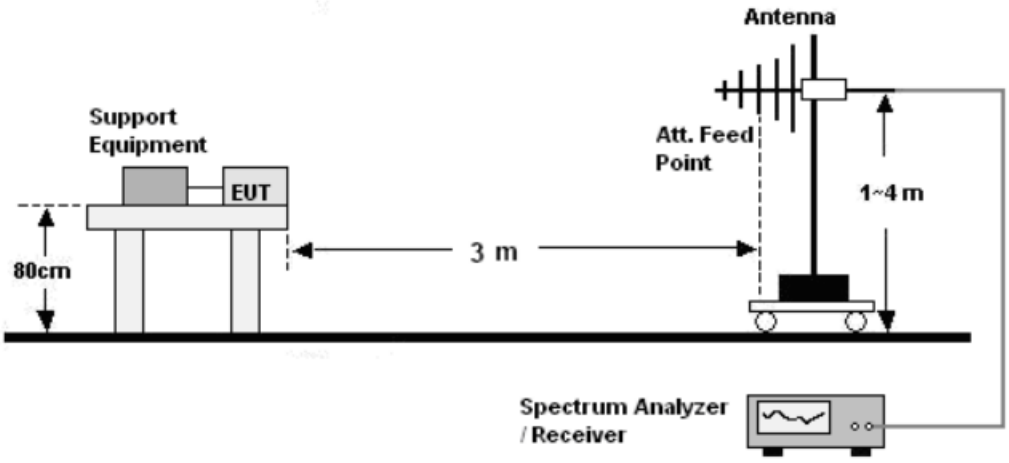
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV		dBuV	dBuV	dB	Detector	Comment
1		0.1500	28.94	9.77	38.71	66.00	-27.29	QP	
2		0.1500	10.31	9.77	20.08	56.00	-35.92	AVG	
3		0.2220	26.42	9.76	36.18	62.74	-26.56	QP	
4		0.2220	8.19	9.76	17.95	52.74	-34.79	AVG	
5		0.6020	23.59	10.19	33.78	56.00	-22.22	QP	
6		0.6020	4.77	10.19	14.96	46.00	-31.04	AVG	
7		1.2380	23.17	9.77	32.94	56.00	-23.06	QP	
8	*	1.2380	14.18	9.77	23.95	46.00	-22.05	AVG	
9		2.3620	22.56	9.80	32.36	56.00	-23.64	QP	
10		2.3620	11.98	9.80	21.78	46.00	-24.22	AVG	
11		12.1580	23.09	9.94	33.03	60.00	-26.97	QP	
12		12.1580	5.07	9.94	15.01	50.00	-34.99	AVG	

Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

7. RADIATION EMISSION TEST

7.1 Block Diagram Of Test Setup

30MHz ~ 1GHz:



7.2 Limit

Limits for Class B devices

Frequency (MHz)	limits at 3m dB(μV/m)		
	QP Detector	PK Detector	AV Detector
30-88	40.0	--	--
88-216	43.5	--	--
216-960	46.0	--	--
960 to 1000	54.0	--	--
Above 1000	--	74.0	54.0

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

7.3 Test Procedure

30MHz ~ 1GHz:

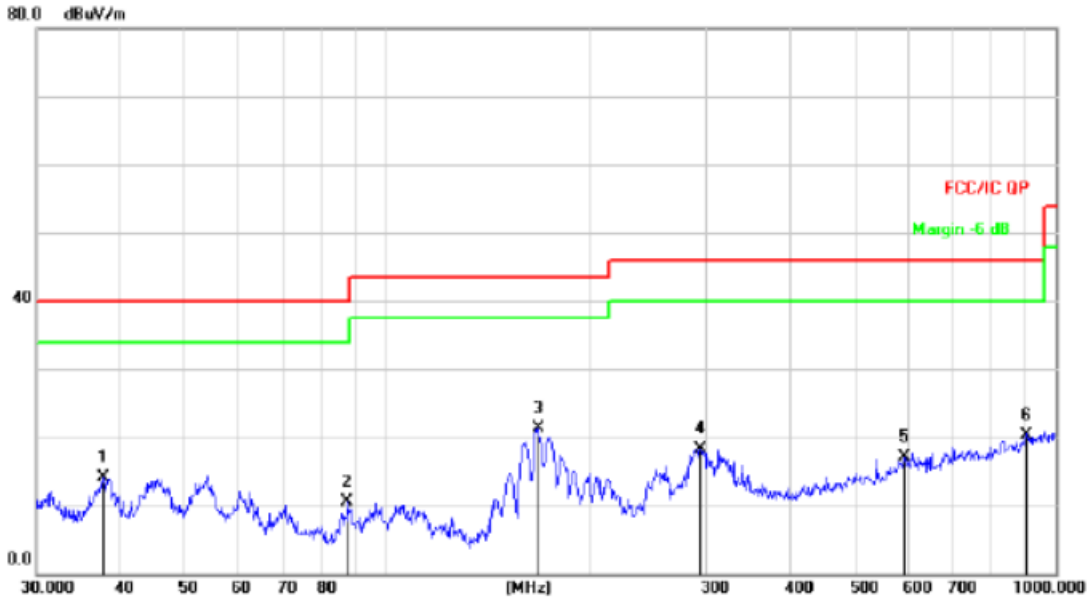
a. The Product was placed on the nonconductive turntable 0.8 m above the ground at a chamber.

b. Set the spectrum analyzer/receiver in Peak detector, Max Hold mode, and 120 kHz RBW. Record the maximum field strength of all the pre-scan process in the full band when the antenna is varied between 1~4 m in both horizontal and vertical, and the turntable is rotated from 0 to 360 degrees.

c. For each frequency whose maximum record was higher or close to limit, measure its QP value: vary the antenna's height and rotate the turntable from 0 to 360 degrees to find the height and degree where Product radiated the maximum emission, then set the test frequency analyzer/receiver to QP Detector and specified bandwidth with Maximum Hold Mode, and record the maximum value.

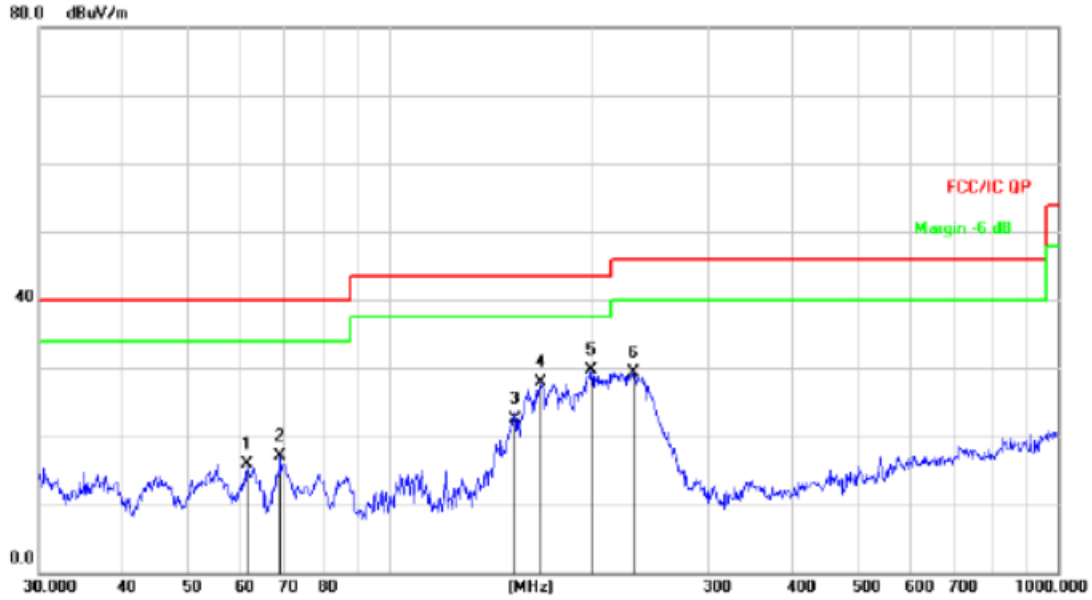
7.4 Test Result

Temperature:	24.2 ℃	Relative Humidity:	52%
Pressure:	101kPa	Phase :	Horizontal
Test Voltage :	DC 12V from adapter Input AC120V/60Hz	Test Mode:	Working



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		37.8121	29.60	-15.50	14.10	40.00	-25.90	QP			
2		87.4177	28.50	-18.01	10.49	40.00	-29.51	QP			
3	*	168.4138	40.05	-18.66	21.39	43.50	-22.11	QP			
4		294.1137	32.15	-13.79	18.36	46.00	-27.64	QP			
5		593.0497	23.95	-6.83	17.12	46.00	-28.88	QP			
6		903.3094	22.68	-2.28	20.40	46.00	-25.60	QP			

Temperature:	24.2 ℃	Relative Humidity:	52%
Pressure:	101kPa	Phase :	Vertical
Test Voltage :	DC 12V from adapter Input AC120V/60Hz	Test Mode:	Working

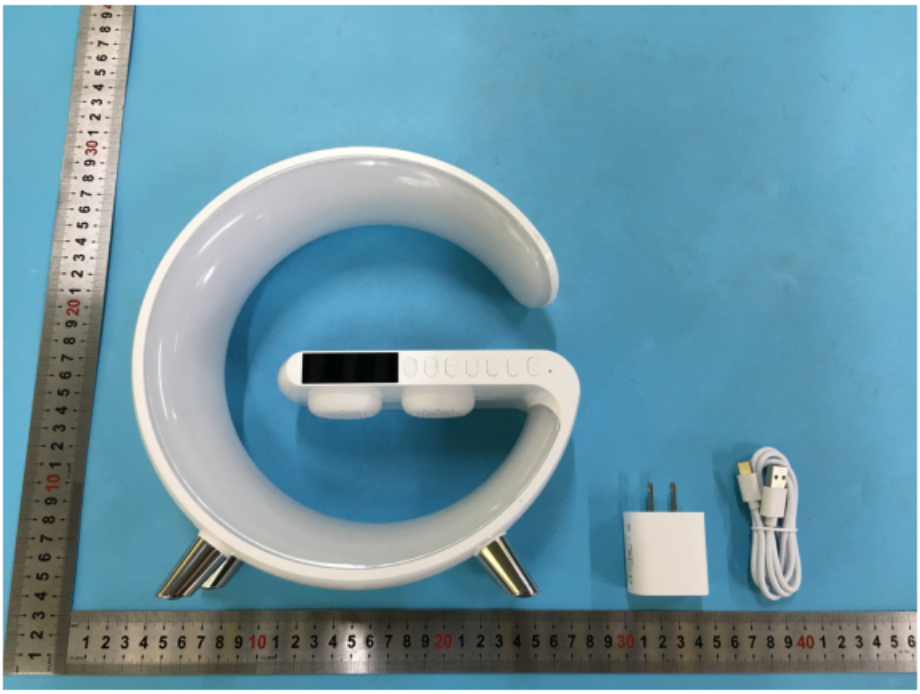


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		61.3463	31.73	-15.86	15.87	40.00	-24.13	QP			
2		68.8721	34.47	-17.36	17.11	40.00	-22.89	QP			
3		153.7385	41.59	-19.00	22.59	43.50	-20.91	QP			
4		169.0054	46.48	-18.63	27.85	43.50	-15.65	QP			
5	*	200.6881	46.05	-16.28	29.77	43.50	-13.73	QP			
6		231.7179	45.25	-15.86	29.39	46.00	-16.61	QP			

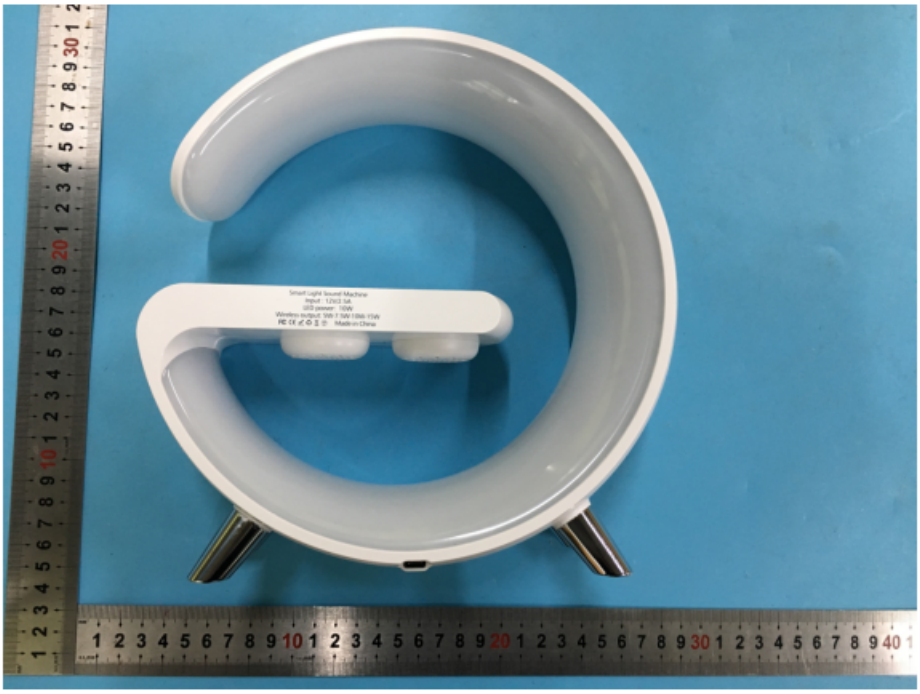
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

8. EUT PHOTOGRAPHS

EUT Photo 1



EUT Photo 2



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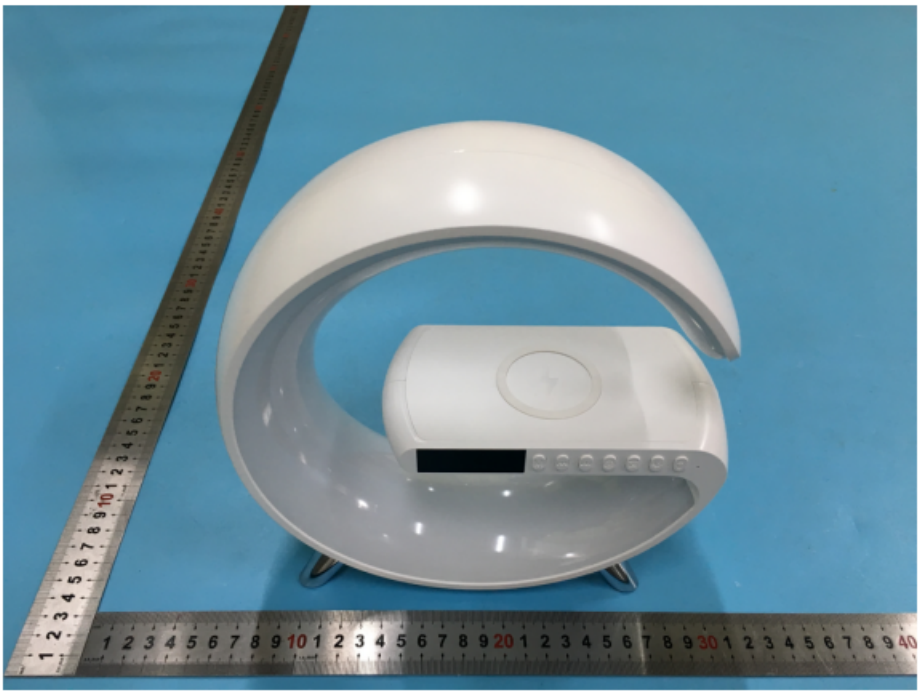
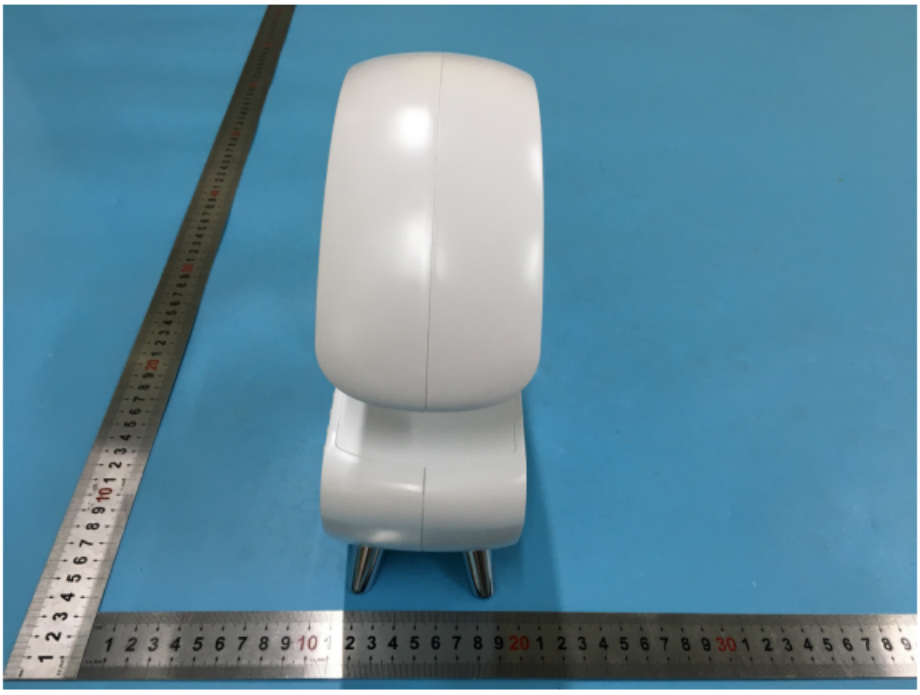
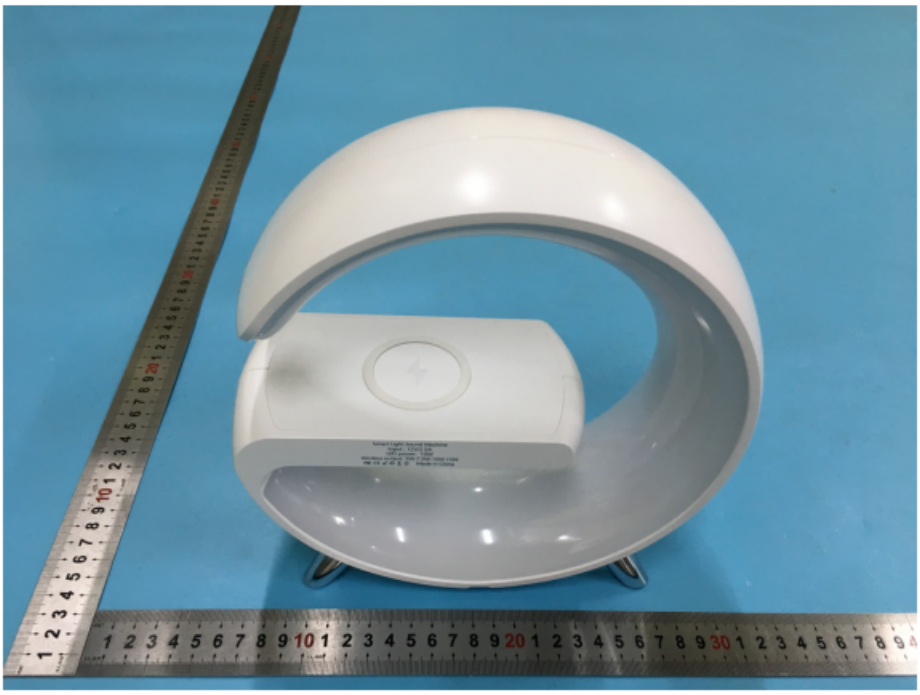
EUT Photo 3



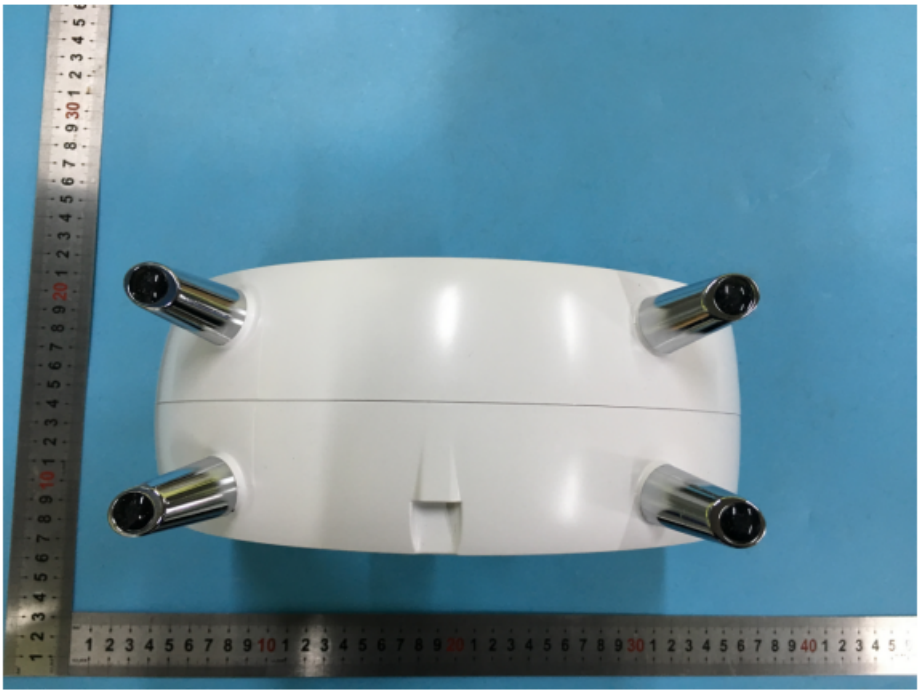
EUT Photo 4



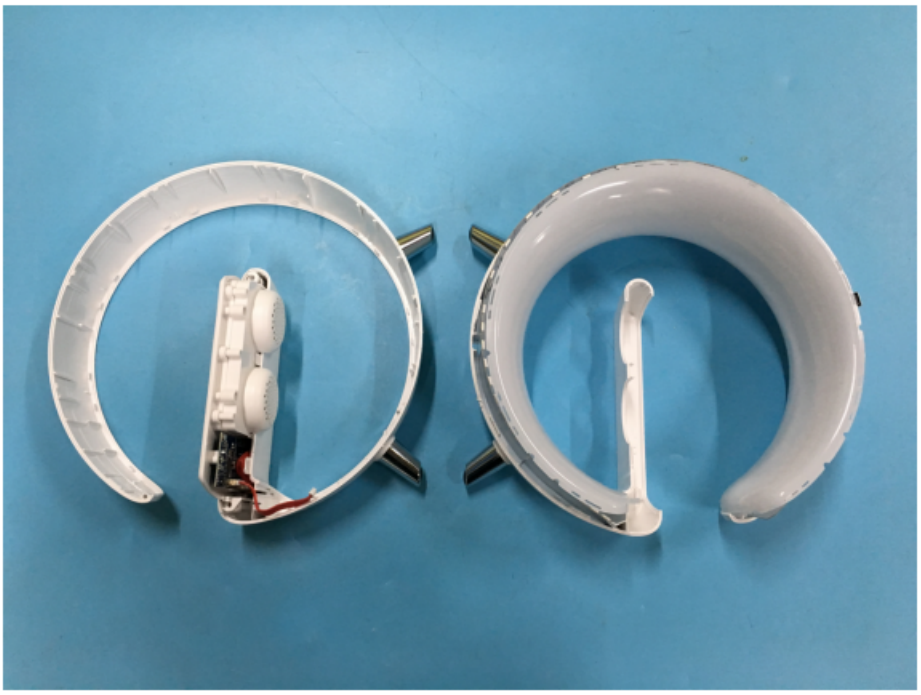
EUT Photo 5



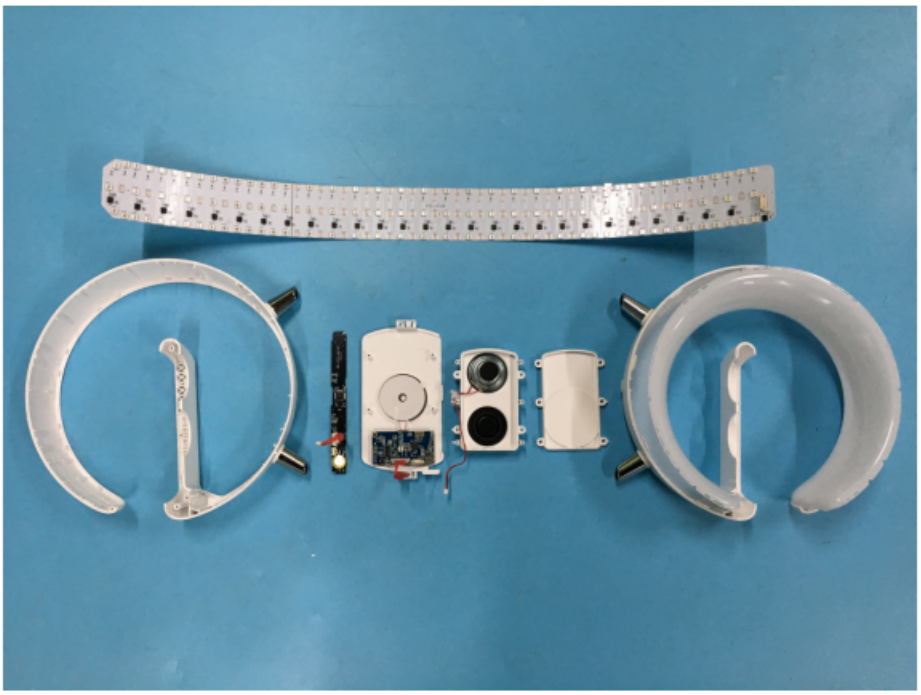
EUT Photo 6



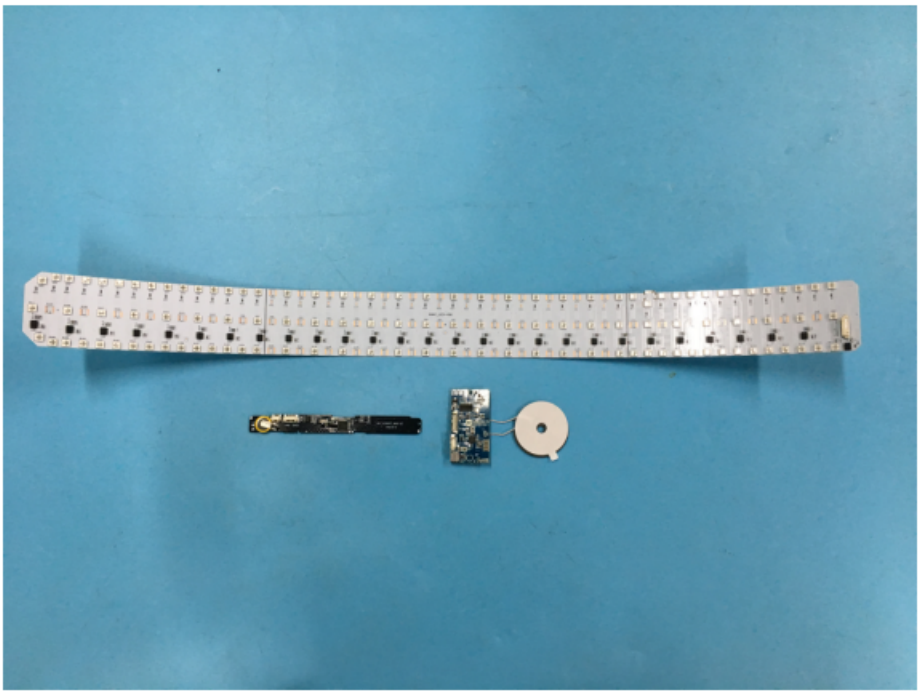
EUT Photo 7



EUT Photo 8



EUT Photo 9



EUT Photo 10