CERTIFICATION TEST REPORT

Report Number	BWTR-1813-FCCMPE
FCC ID	Y2SLTA100
Applicant	Libratone A/S
Product Name	Wireless Charger
Marketing Name	LIBRATONE COIL
Brand Name	LIBRATONE
Model Name	LTA100
Serial Number	B02
Test Standard	FCC 47 CFR Part 1 Subpart I
Tested Date	Jan. 05, 2019

Beijing Boomwave Test Service Co. Ltd.

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Revision History

Revision	Description	ISSUED DATE
A	Initial issue of report	2019/01/21
B	Add 2.8 Test Uncertainty	2019/01/24

1 Summary of Test Result

Report Section	FCC Section	Description	Result
4	1.1307 (b) / 1.1310	Maximum Permissible Exposure	Pass

We, Beijing Boomwave Test Service Co. Ltd., would like to declare that the tested sample has been evaluated and in compliance with the requirements of applicable standards.

Tested by: 李国栋 2019.01.24 16:38:07 +08'00'

Reviewed by: 赵昊宇 2019.01.24 16:39:04 +08'00'

Approved by: 赵轲 2019.01.24 16:43:17 +08'00'

北京铂帷检测服务有限公司 -1- 检测报告专用章

Rationale:
The test results in this report apply exclusively to the tested model / sample.
The electrical copy of test report is invalid without the signatures. The hard copy is invalid without seal.
The test report shall not be modified, republished or copied without the written authorization of the laboratory.

2 General Information

2.1 Applicant

Libratone A/S
Sundkaj 9, 2150 Nordhavn, Denmark

2.2 Manufacturer

Libratone A/S
Sundkaj 9, 2150 Nordhavn, Denmark

2.3 Product Feature of Equipment Under Test

Product Name	Wireless Charger
Marketing Name	LIBRATONE COIL
Model Name	LTA100
Sample Status	Prototype
Power Supply Rating	5V, 2A / 12V, 1.5A
Modulation Type	ASK
Operating Frequency	127.7 kHz
Antenna Type	Coil Antenna
Dimension for EUT	63.585 cm^2 (diameter = 90.0mm)
Dimension for iPhone	245.38 cm^2 (diameter = 176.8mm)
Maximum Power Output from the charging coil	10W
Maximum Power Output for iPhone from the charging coil	7.5W
Hardware Version	R2
Firmware Version	0.1.0.21

2.4 Ancillary Equipment

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following ancillary equipment were used to form a representative test configuration during the tests.

Accessory	Adapter
Manufacturer	Dongguan Aohai Power Technology Co., Ltd.
Model Name	A121A-120150U-US2
Input Power	100-240Vac, 50/60Hz, 0.5A
Output Power	5V, 2.5A / 9V, 2A / 12V, 1.5A
Power Line	1m non-shielded DC cable without core attached on
Serial Number	---

Support Unit	Smart Phone
Manufacturer	Apple
Model Name	iPhone 8 plus
Serial Number	F17VGQ7VJCM1

2.5 Applicable Standards

Standard	Version	Title
FCC 47 CFR Part 1 Subpart I	2018	PROCEDURES IMPLEMENTING THE NATIONAL ENVIRONMENTAL POLICY ACT OF 1969
FCC KDB 680106 D01	V03	RF EXPOSURE CONSIDERATIONS FOR LOW POWER CONSUMER WIRELESS POWER TRANSFER APPLICATIONS

2.6 Test Facilities

FCC Test Firm Registration Number: 613197

Test Site	Description	Dimension	Ground Plane Size
☒ SAC10	10m semi-anechoic chamber	19.5m×12.9m×8.6m	4m×4m
☐ FAR3	3m fully-anechoic chamber	9.6m×6.4m×6.0m	---
☐ Shielding Room#1	Shielding Room for EMS test	8.1m×4.05m×2.755m	8.1m×4.05m
☐ Shielding Room#2	Shielding Room for RF test	8.1m×4.05m×2.755m	---

2.7 Test Environmental Condition

Environmental Status	Temperature	Humidity
Test environment	21.4°C	28.6%

2.8 Test Uncertainty

0.8dB The reported uncertainty is an expanded uncertainty calculated using a coverage factor of 2 which gives a level of confidence of approximately 95 %.

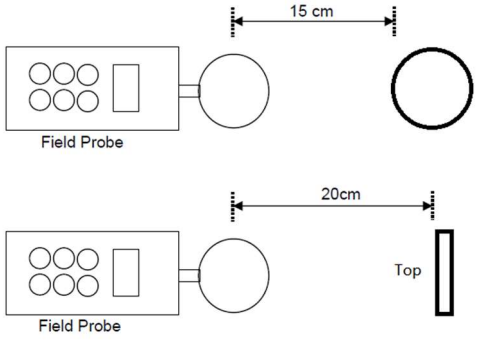
3 EUT Operational Mode and Test Setup

3.1 Operational Mode

Mode No.	Mode	Description
Mode 1	Power Transmission Arrangement with iPhone (as 7.5W load)	1. The transmitting part (EUT) connects with adapter 2. The receiving part (Smart Phone) shall be placed as 5 positions on EUT 3. Air gap between the EUT and the Smart Phone shall be 0mm and 3mm
Mode 2	Power Transmission Arrangement with 10W load	1. The transmitting part (EUT) connects with adapter 2. The receiving part (10W load) shall be placed as 5 positions on EUT 3. Air gap between the EUT and the 10W load shall be 0mm and 3mm

Note: 5 positions are: Center of the EUT and shift 1cm to the front/rear/left/right from the center.

3.2 Test Setup



Note: Measurements are performed from all sides and the top of the primary / client pair, with the 15 cm or 20 cm measured from the center of the probe(s) to the edge of the device.

4 Result of Maximum Permissible Exposure

4.1 FCC Requirement

§ 1.1310 The criteria listed in table 1 shall be used to evaluate the environmental impact of human exposure to radio-frequency (RF) radiation as specified in § 1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of § 2.1093 of this chapter.

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

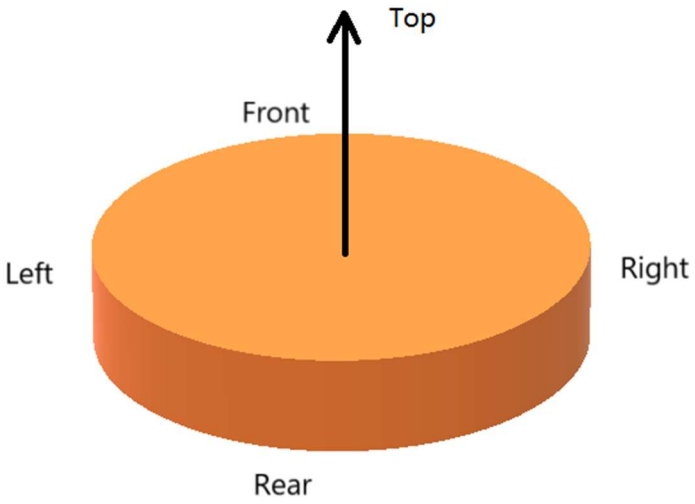
Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*(900/f²)	6
30–300	61.4	0.163	1.0	6
300–1500			f/300	6
1500–100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f²)	30
30–300	27.5	0.073	0.2	30
300–1500			f/1500	30
1500–100,000			1.0	30

f = frequency in MHz
* = Plane-wave equivalent power density
NOTE 1 TO TABLE 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.
NOTE 2 TO TABLE 1: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

FCC KDB 680106 D01 RF Exposure Wireless Charging App v03:

The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.

4.2 Test Point Description



4.3 H-Field RMS Test Data

Test Result for using Smart Phone (A/m)							
Phone Position \ Probe Position		Front	Rear	Left	Right	Top	Limit
Normal	Center	0.063	0.062	0.063	0.060	0.074	1.63
	1cm to left	0.078	0.067	0.061	0.061	0.089	1.63
	1cm to right	0.063	0.063	0.061	0.082	0.096	1.63
	1cm to front	0.073	0.084	0.093	0.092	0.122	1.63
	1cm to rear	0.056	0.076	0.082	0.103	0.137	1.63
3mm Air Gap	Center	0.065	0.062	0.063	0.063	0.061	1.63
	1cm to left	0.064	0.062	0.061	0.066	0.063	1.63
	1cm to right	0.063	0.061	0.061	0.062	0.063	1.63
	1cm to front	0.075	0.086	0.095	0.086	0.099	1.63
	1cm to rear	0.069	0.066	0.063	0.087	0.102	1.63

Test Result for using 10W Load (A/m)							
Phone Position \ Probe Position		Front	Rear	Left	Right	Top	Limit
Normal	Center	0.064	0.061	0.058	0.057	0.059	1.63
	1cm to left	0.042	0.033	0.047	0.049	0.075	1.63
	1cm to right	0.044	0.045	0.047	0.051	0.082	1.63
	1cm to front	0.056	0.067	0.084	0.069	0.099	1.63
	1cm to rear	0.065	0.048	0.054	0.049	0.112	1.63
3mm Air Gap	Center	0.057	0.060	0.058	0.058	0.049	1.63
	1cm to left	0.043	0.045	0.057	0.041	0.121	1.63
	1cm to right	0.051	0.043	0.051	0.048	0.102	1.63
	1cm to front	0.056	0.055	0.078	0.065	0.132	1.63
	1cm to rear	0.073	0.072	0.066	0.076	0.087	1.63

4.4 E-Field RMS Test Data

Test Result for using Smart Phone (V/m)							
Phone Position \ Probe Position		Front	Rear	Left	Right	Top	Limit
Normal	Center	1.011	1.114	2.200	1.146	1.164	614
	1cm to left	0.961	1.143	1.679	1.942	1.953	614
	1cm to right	1.281	2.172	2.422	2.006	2.712	614
	1cm to front	2.876	1.644	2.004	1.824	3.948	614
	1cm to rear	2.660	1.725	2.404	1.849	3.643	614
3mm Air Gap	Center	1.246	2.319	2.147	1.966	2.567	614
	1cm to left	1.212	2.339	2.126	2.013	2.537	614
	1cm to right	1.329	2.478	2.513	2.134	2.713	614
	1cm to front	2.498	1.442	2.411	1.786	3.541	614
	1cm to rear	1.685	3.643	1.142	3.922	2.019	614

Test Result for using 10W Load (V/m)							
Phone Position \ Probe Position		Front	Rear	Left	Right	Top	Limit
Normal	Center	0.718	0.734	0.839	1.025	1.844	614
	1cm to left	1.073	0.746	0.837	0.795	1.125	614
	1cm to right	1.387	0.874	0.952	0.946	1.874	614
	1cm to front	2.664	1.202	2.052	3.653	3.507	614
	1cm to rear	1.081	2.697	1.454	2.270	3.494	614
3mm Air Gap	Center	1.154	0.987	0.965	1.072	1.788	614
	1cm to left	1.301	1.217	1.286	1.178	1.376	614
	1cm to right	0.856	0.749	1.253	0.868	3.054	614
	1cm to front	1.452	1.595	1.436	2.011	3.571	614
	1cm to rear	2.425	1.420	0.899	1.457	2.936	614

4.5 Test Summary

Maximum Exposure			Limit	50% Limit	Comment
H-Field (A/m)	Smart Phone	0.137	1.63A/m	0.815A/m	Pass
	10W Load	0.132			Pass
E-Field (V/m)	Smart Phone	3.948	614V/m	307V/m	Pass
	10W Load	3.653			Pass

5 Test Instruments

Description	Brand	Model No.	Calibrated Until
Portable Field Meter	PMM 8053B	262WL20518	2019.12.31
Magnetic field probe	PMM HP032	001WX10309	2019.12.31
Broadband probes	EP601	611WX70368	2019.02.27

--- End of Test Report ---