



RF EXPOSURE EVALUATION REPORT

TEST REPORT

For

Braemac Pty Ltd.

1/59-61 Burrows Road, ALEXANDRIA NSW 2015, Sydney, Australia

FCC ID: 2AV75WPCBR01

Report Type: Original Report	Product Type: Braemac Wireless Charger
Report Number:	RDG200407005A
Report Date:	2020-04-21
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GENERAL INFORMATION

Product Description for Equipment Under Test (EUT)

Product	Braemac Wireless Charger
Model	WPC_BR_01
Date of Test	2020/04/18
Sample serial number	RDG200407005 (Assigned by BAACL, Shenzhen)
Received date	2020/04/07
Sample/EUT Status	Good Condition

Objective

This report is prepared on behalf of *Braemac Pty Ltd.* in accordance with Part 2.1091 of the Federal Communications Commission's rules.

Related Submittal(s)/Grant(s)

No Related Submittal(s)/Grant(s).

Test Methodology

All measurements contained in this report were conducted with KDB680106 D01 RF Exposure Wireless Charging App v03.

All emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Shenzhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 6/F., West Wing, Third Phase of Wanli Industrial Building, Shihua Road, Futian Free Trade Zone, Shenzhen, Guangdong, China.

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No.: 342867, the FCC Designation No.: CN1221.

The test site has been registered with ISED Canada under ISED Canada Registration Number 3062B.

SYSTEM TEST CONFIGURATION

Justification

The system was configured for testing in normal operating mode

EUT Exercise Software

No software used in test.

Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
Unknown	Wireless load	Unknown	Unknown
Groovy	Adapter	G181104	Unknown

External I/O Cable

Cable Description	Length (m)	From Port	To
Un-shield Detachable USB Cable	0.8	EUT	Adapter

SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
FCC§1.1310 & §2.1091	Maximum Permissible Exposure(MPE)	Compliance

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Nerve Stimulation Exposure					
Narda	Exposure Level Tester	ELT-400	N-0229	2018/11/15	2020/11/15
Narda	B Field Probe	ELT Probe 100cm ²	M-0666	2018/11/15	2021/11/15
ETS-Lindgreen	Isotropic Field Probe	HI-6005	69461	2018-9-28	2021-9-27

FCC §1.1310, §2.1091- MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Applicable Standard

According to subpart §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission’s guidelines.

Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

(B) Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm²)	Averaging Time (minutes)
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f ²)	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;

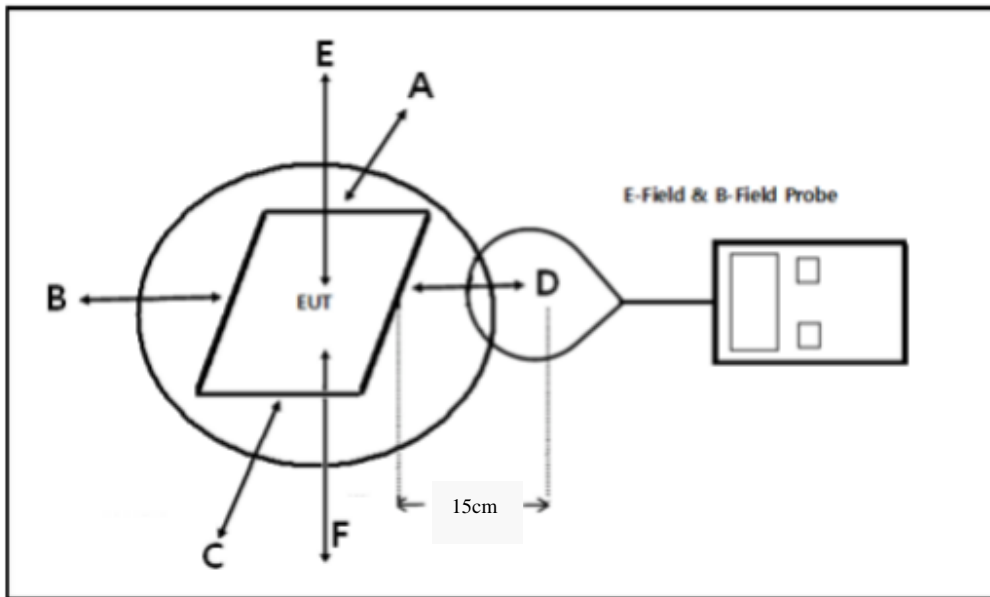
According with KDB 680106 D01 RF Exposure Wireless Charging Apps v03 clause 3 c)

- c) For devices designed for typical desktop applications, such a wireless charging pads, RF exposure evaluation should be conducted assuming a user separation distance of 15 cm. E and H field strength measurements or numerical modeling may be used to demonstrate compliance. Measurements should be made from all sides and the top of the primary/client pair, with the 15 cm measured from the center of the probe(s) to the edge of the device. Emissions between 100 kHz to 300 kHz should be assessed versus the limits at 300 kHz in Table 1 of Section 1.1310: 614 V/m and 1.63 A/m. A KDB inquiry is required to determine the applicable exposure limits below 100 kHz.

According to KDB 680106 D01 RF Exposure Wireless Charging App v03 clause 5 b)

- b) Inductive wireless power transfer applications with supporting field strength results and meeting all of the following requirements are not required to submit a KDB inquiry for devices approved using SDoC or a PAG for equipment approved using certification to address RF exposure compliance. However, the responsible party is required to keep a copy of the test report in accordance with KDB 865664 D02. A copy of the test report is to be submitted with the application if the device is approved using certification.
 - (1) Power transfer frequency is less than 1 MHz.
 - (2) Output power from each primary coil is less than or equal to 15 watts.
 - (3) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils.
 - (4) Client device is placed directly in contact with the transmitter.
 - (5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).
 - (6) 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.

Block Diagram of Test Setup



Note: 20 cm for Top test.

Test Data

Environmental Conditions

Temperature:	25°C
Relative Humidity:	65 %
ATM Pressure:	101.0 kPa

The testing was performed by Black Chen on 2020-04-18.

Test mode: Wireless charging

H-Filed Strength

Frequency Range (kHz)	Position A (A/m)	Position B (A/m)	Position C (A/m)	Position D (A/m)	Position E (A/m)	50% Limit (A/m)	Limit Test (A/m)
110-205	0.143	0.146	0.158	0.166	0.203	0.815	1.63

E-Filed Strength

Frequency Range (kHz)	Position A (V/m)	Position B (V/m)	Position C (V/m)	Position D (V/m)	Position E (V/m)	50% Limit (V/m)	Limit Test (V/m)
110-205	0.243	0.236	0.238	0.266	0.233	307	614

Note: Test with 15cm distance from the center of the probe(s) to the edge of the device, 20cm for the top test

Result: Compliance**Considerations of compliance 680106 D01 RF Exposure Wireless Charging App v03 clause 5 b:**

(1) Power transfer frequency is less than 1 MHz.

Yes, the operation frequency is 110-205 kHz.

(2) Output power from each primary coil is less than or equal to 15 watts.

Yes, the maximum output power of primary coil is 15 Watts.

(3) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils.

The transfer system includes one coil to detect and allow coupling only between individual pairs of coils.

(4) Client device is placed directly in contact with the transmitter.

Yes, client device is placed directly in contact with the transmitter

(5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).

Yes, mobile exposure conditions only

(6) 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.

Yes, the test result for H and E-filed strength less than 50% of the MPE limit.

******* END OF REPORT *******