

# Human Exposure Report

**Project No.** : 2006C186  
**Equipment** : Wireless Charger  
**Brand Name** : RAZER  
**Test Model** : RC21-0160  
**Series Model** : RC21-0160XXXX-XXXX (X can be 0-9 or A-Z)  
**Applicant** : Razer Inc.  
**Address** : 9 Pasteur, Suite 100, Irvine, CA92618, USA.  
**Manufacturer** : Razer (Asia-Pacific) Pte.,Ltd.  
**Address** : 514 Chai Chee Lane, #07-01-06,Singapore 469029  
**Factory** : RAZER TECHNOLOGY AND DEVELOPMENT (SHENZHEN) CO., LTD  
**Address** : East Wing, 3rd Floor, Block 2, Phase 1 of Vision Shenzhen Business Park Keji South Road, Hi-Tech Industrial Park, Shenzhen 518057, China  
**Date of Receipt** : Jun. 28, 2020  
**Date of Test** : Jun. 29, 2020 ~ Sep. 24, 2020  
**Issued Date** : Sep. 25, 2020  
**Report Version** : R01  
**Test Sample** : Sample No.: DG2020070336  
**Standard(s)** : 47 CFR PART 1, Subpart I, Section 1.1310  
KDB680106 D01 RF Exposure Wireless Charging Apps v03

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.



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**REPORT ISSUED HISTORY**

Report Version	Description	Issued Date
R00	Original Issue.	Aug. 18, 2020
R01	Revised report to address comments.	Sep. 25, 2020

## 1. GENERAL INFORMATION

### 1.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China.

BTL's test firm number for FCC: 357015

BTL's designation number for FCC: CN1240

## 2. TEST RESULTS

### 2.1 LIMITS

#### For 47 CFR PART 1, Subpart I, Section 1.1310:

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	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/f <sup>2</sup> )	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	f/300	6
1500-100000	/	/	5	6
(B) Limits for General Population / Uncontrolled Exposures				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f <sup>2</sup> )	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100000	/	/	1.0	30

F=frequency in MHz

\*=Plane-wave equivalent power density

RF exposure compliance will need to be determined with respect to 1.1307(c) and (d) of the FCC rules.

The emissions should be within the limits at 300kHz in Table 1 of 1.1310 (use the 300kHz limits for 150kHz: 614V/m, 1.63A/m).

#### For KDB680106 D01:

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.

## 2.2 MEASUREMENT DATA

### Electric Field Emissions

Test Position(20cm)	Probe Measure Results (V/m)	Limit (V/m)
	intermediate charge	
Top	1.68	614

Test Position(15cm)	Probe Measure Results (V/m)	Limit (V/m)
	intermediate charge	
Top	1.81	614
Front Side	0.93	614
Back Side	1.01	614
Left Side	0.92	614
Right Side	0.84	614
Bottom	1.65	614

**Note:**

The maximum Probe Measure Results of this EUT is 1.81 V/m, less than 307 V/m( $614 * 50\%$ ).

### Magnetic Field Emissions

Test Position(20cm)	Probe Measure Results (A/m)	Limit (A/m)
	intermediate charge	
Top	0.041	1.63

Test Position(15cm)	Probe Measure Results (A/m)	Limit (A/m)
	intermediate charge	
Top	0.053	1.63
Front Side	0.032	1.63
Back Side	0.034	1.63
Left Side	0.027	1.63
Right Side	0.023	1.63
Bottom	0.055	1.63

**Note:**

The maximum Probe Measure Results of this EUT is 0.055 A/m, less than 0.815 V/m( $1.63 * 50\%$ ).

**Remark:**

1. The EUT has the maximum average output power when the support unit is in low power and being charged by EUT.
2. The transfer system includes only single primary. The transfer system desinged by Wireless Power Consortium (WPC). The main purpose is Provide convenient and universal wireless charging for mobile phones and other portable electronic devices. Under the Qi standard, the transmission and reception use flat inductors to transmit energy by inductive coupling.

**3. MEASUREMENT INSTRUMENTS LIST**

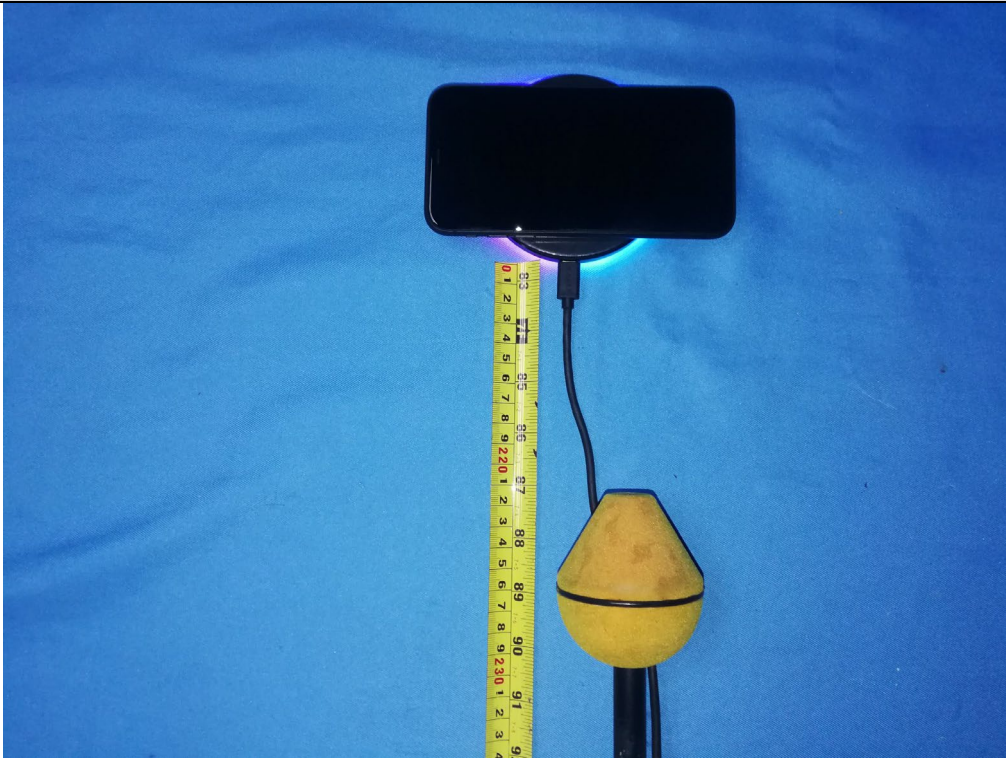
Human Exposure					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	EM Radiation Meter	N/A	EMR-30	E-081	Apr. 14, 2021

Remark: "N/A" denotes no model name, serial no. or calibration specified.

All calibration period of equipment list is one year.

**4. TEST PHOTOS**

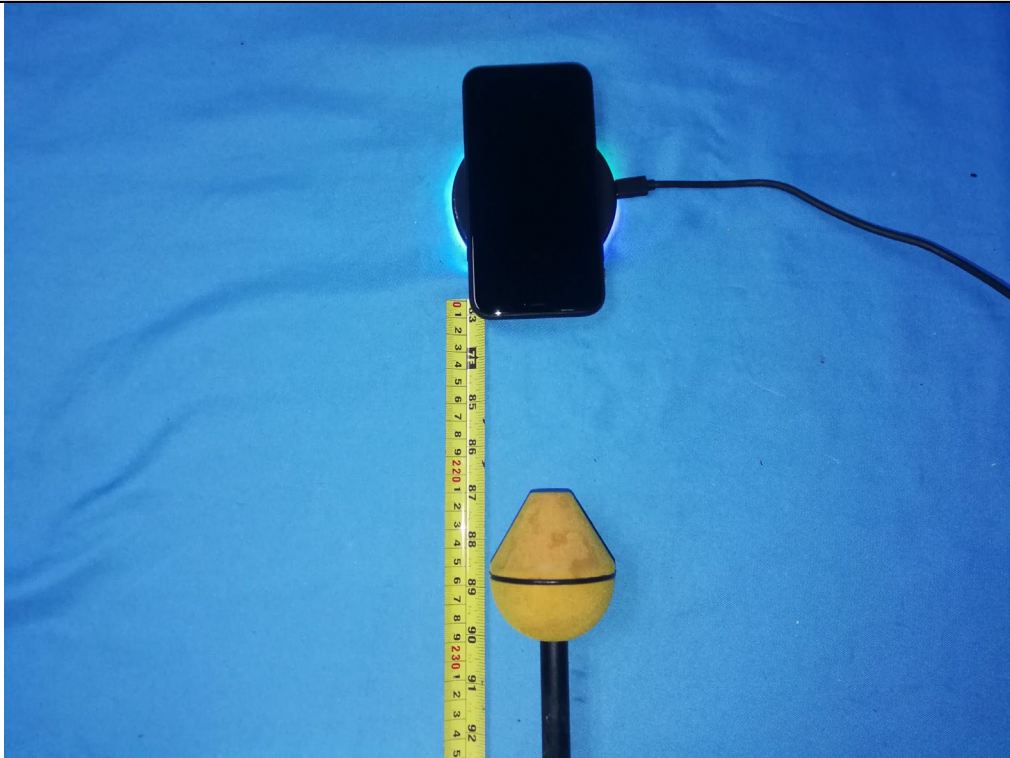
Front Side(15 cm)



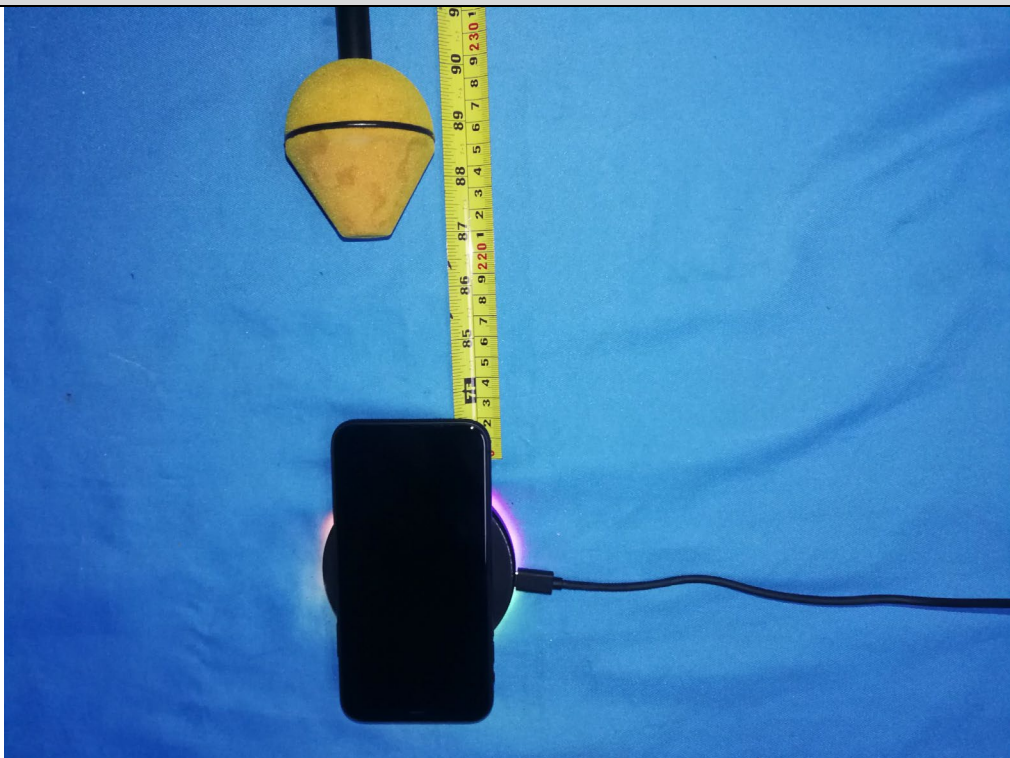
Back Side(15 cm)



Left Side(15 cm)

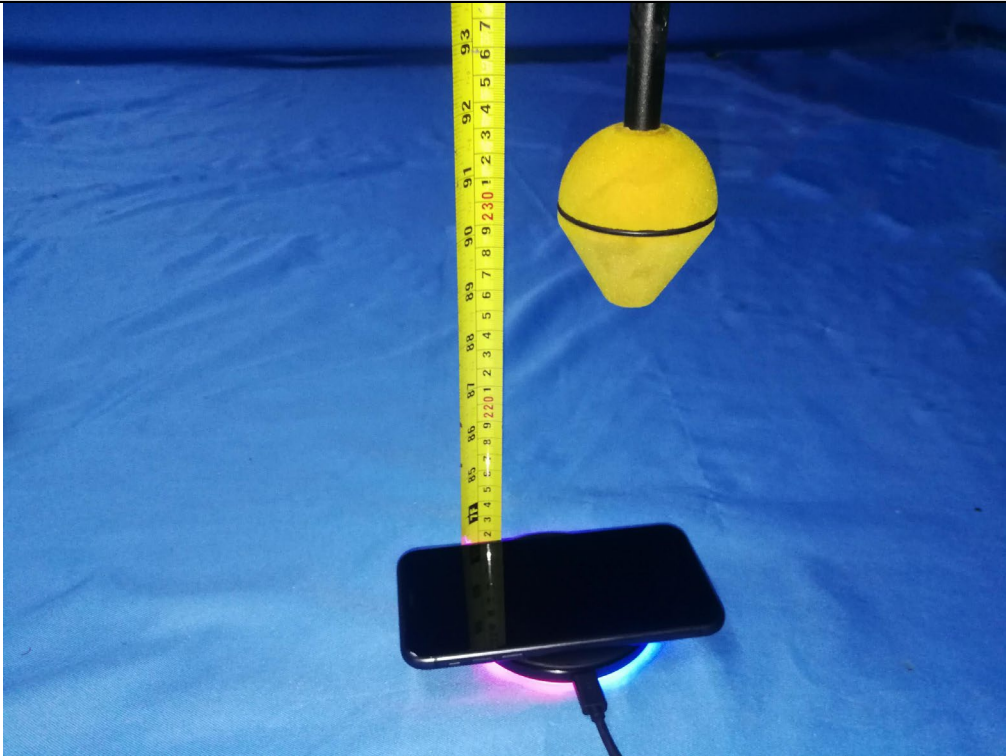


Right Side(15 cm)

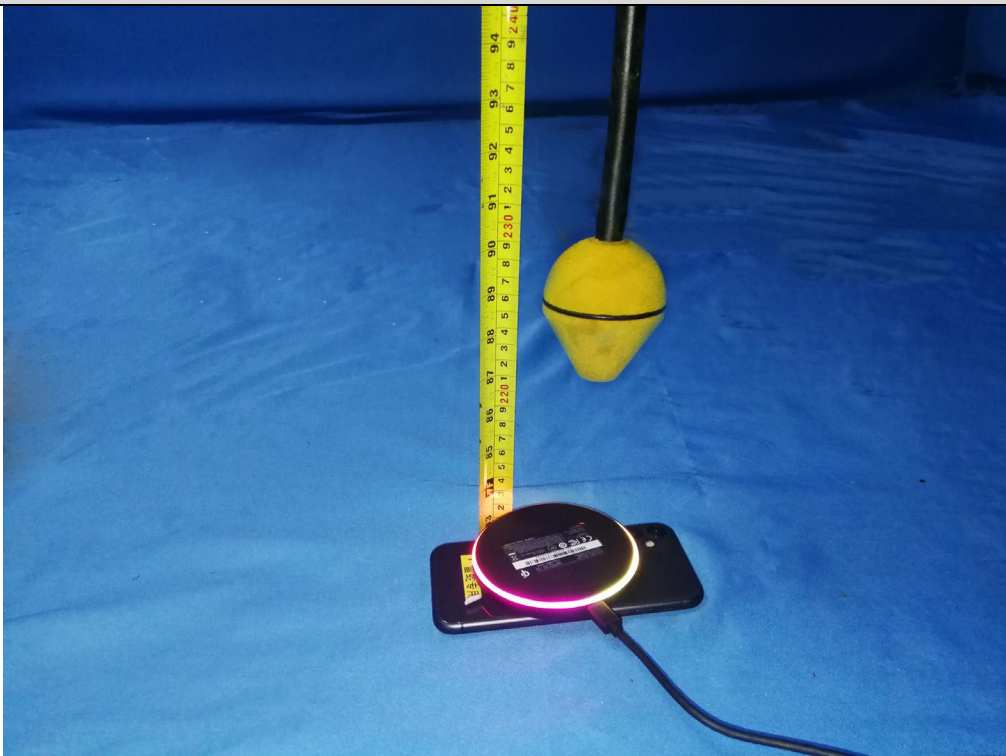




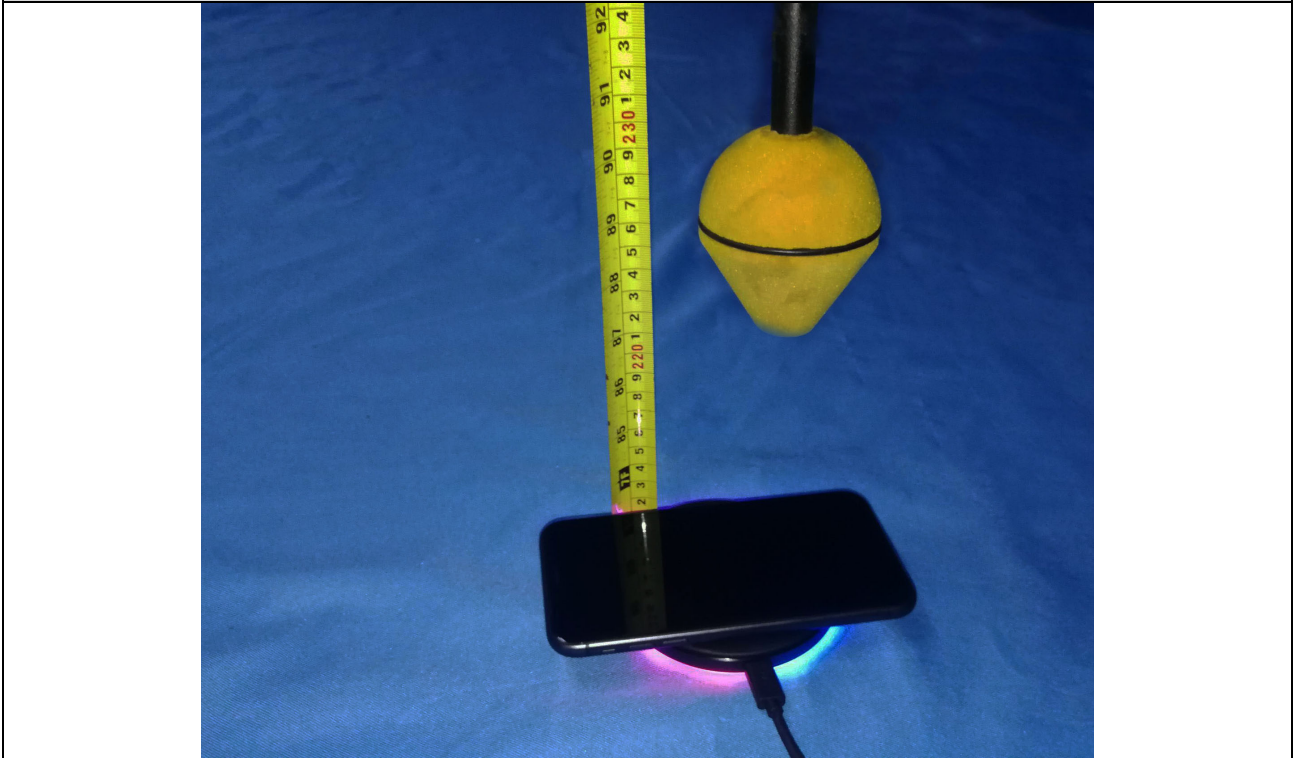
Top(20 cm)



Bottom(15 cm)



Top(15 cm)



**End of Test Report**