1. GENERAL INFORMATION

1.1 CLIENT INFORMATION

Applicant	Design Pool Ltd
FCC ID	X3QDROPXL01

1.2 EUT INFORMATION

Product Name:	Wireless Charger
Model No.:	DROP XL 01
Trade Mark:	N/A
DUT Stage:	*Identical Prototype*
Operating Frequency Range:	110 – 205kHz
Antenna Type:	Coil antenna
Power Supply	100-240V 50/60HZ
Sample Received Date:	June 24, 2019
Sample Tested Date:	June 24, 2019 to September 24, 2019

1.3 OTHER INFORMATION

Support Equipment

Description	Manufacturer	Model No.	Input/ Output
Mobile phone	XIAOMI	M1803D5XA	N/A

1.4 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF product, according to the specifications of the manufacturers. It must comply with the requirements of the following standards:

RF Exposure Considerations For Low Power Consumer Wireless Power Transfer Applications – 680106 D01 RF Exposure Wireless Charging App v03

All test items have been performed and recorded as per the above standards

1.5 DEVIATION FROM STANDARDS

None.

1.6 ABNORMALITIES FROM STANDARD CONDITIONS

None.

1.7 OTHER INFORMATION REQUESTED BY THE CUSTOMER

None.

2. EQUIPMENT LIST

Test Equipment List						
Used	**Equipment**	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. date (mm dd, yyyy)**	**Cal. Due date (mm dd, yyyy)**
☒	Broadband Field meter	STT	SEM-600	D-1044	May 28, 2019	May 27, 2020
☒	Probe	STT	LF-04	I-1044	May 28, 2019	May 27, 2020
☒	Probe holder	STT	TR-01	N/A	N/A	N/A
☒	Optical fiber line	STT	L=5M	N/A	N/A	N/A

3. MPE EVALUATION

3.1 REFERENCE DOCUMENTS FOR EVALUATION

RF Exposure Considerations For Low Power Consumer Wireless Power Transfer Applications – 680106 D01 RF Exposure Wireless Charging App v03

3.2 MPE COMPLIANCE REQUIREMENT

3.2.1 Limits

3.2.1.1 Error! Reference source not found.

According to §1.1307(b)(1), system operating under the provisions of this section shall be operating in a manner that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure.

Limits for Occupational / Controlled Exposure

Frequency range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Times $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f)*	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	F/300	6
1500-100000	/	/	5	6

Limits for General Population/Uncontrolled Exposure

Frequency range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Times $\|E\|^2$, $\|H\|^2$ or S (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
300-1,500	/	/	f/1500	30
1,500-100,000	/	/	1.0	30

Note: f = frequency in MHz: * = Plane-wave equivalents power density.

3.2.2 Test Procedure

Enabled the EUT to transmit and receive data continue

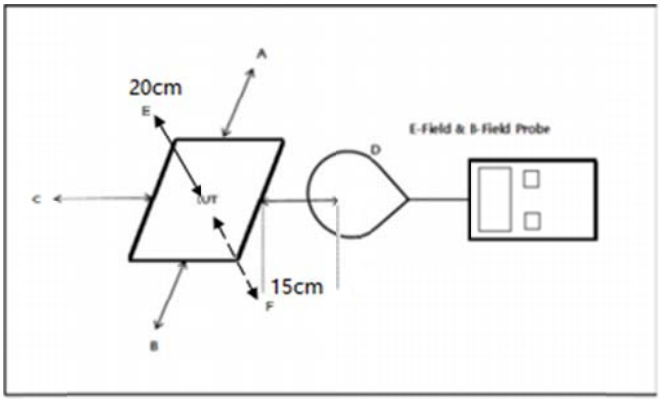
a. The field strength of both E-field and H-field was measured at 15 cm surrounding the device and 20 cm above the top surface using the equipment list above for determining compliance with the MPE requirements of FCC Part 1.1310.

b. The RF power density was measured with the battery at 3 different charge conditions: battery at less than 1 % , battery at 50% charger, battery at 99% charger,.

c. Maximum E-field and H-field measurements were made 15cm from each side of the EUT. Along the side of the EUT and still 15cm away from the edge of the EU T, the field probes were positioned at the location where there is maximum field strength. The maximum E-field and H-field is reported below.

d. This device uses a wireless charging circuit for power transfer operating at the frequency of 110-148 kHz. Thus, the 300 kHz limits were used: E-field Limit = 614 (V/m); H-field limit = 1.63 (A/m).

3.2.3 Test setup



Note
- The RF exposure test is performed in the shield room
- The test distance is between the edge of the charger and the geometric center of probe
- The aggregate at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrate

3.3 TEST DATA

Double coil:

Test Mode	Battery status	Probe Position (V/m) right	Probe Position (V/m) left	Probe Position (V/m) after	Probe Position (V/m) before	Probe Position (V/m) Top	Probe Position (V/m) down	Limits (V/m)
Mode 1	<1% Battery status	0.42	0.72	0.67	0.65	0.98	0.81	614
Mode 2	50% Battery status	0.45	0.71	0.67	0.65	1.23	0.88	614
Mode 3	99% Battery status	0.45	0.77	0.69	0.64	0.95	0.84	614

E-Field Strength

Test Mode	Battery status	Probe Position (A/m) right	Probe Position (A/m) left	Probe Position (A/m) after	Probe Position (A/m) before	Probe Position (A/m) Top	Probe Position (A/m) down	Limits (A/m)
Mode 1	<1% Battery status	0.0102	0.0119	0.0132	0.0102	0.0108	0.0260	1.63
Mode 2	50% Battery status	0.0109	0.0121	0.0139	0.0118	0.0109	0.0265	1.63
Mode 3	99% Battery status	0.0107	0.0123	0.0133	0.0108	0.0109	0.0264	1.63

H-Field Strength

Left coil

Test Mode	Battery status	Probe Position (V/m) right	Probe Position (V/m) left	Probe Position (V/m) after	Probe Position (V/m) before	Probe Position (V/m) Top	Probe Position (V/m) down	Limits (V/m)
Mode 1	<1% Battery status	0.56	0.17	0.55	0.72	0.66	0.72	614
Mode 2	50% Battery status	0.59	0.18	0.54	0.79	0.61	0.77	614
Mode 3	99% Battery status	0.59	0.19	0.54	0.76	0.63	0.92	614

E-Field Strength

Test Mode	Battery status	Probe Position (A/m) right	Probe Position (A/m) left	Probe Position (A/m) after	Probe Position (A/m) before	Probe Position (A/m) Top	Probe Position (A/m) down	Limits (A/m)
Mode 1	<1% Battery status	0.0109	0.0120	0.0110	0.0104	0.0149	0.0142	1.63
Mode 2	50% Battery status	0.0115	0.0128	0.0127	0.0121	0.0132	0.0149	1.63
Mode 3	99% Battery status	0.0111	0.0126	0.0121	0.0109	0.0136	0.0136	1.63

H-Field Strength

Right coil:

Test Mode	Battery status	Probe Position (V/m) right	Probe Position (V/m) left	Probe Position (V/m) after	Probe Position (V/m) before	Probe Position (V/m) Top	Probe Position (V/m) down	Limits (V/m)
Mode 1	<1% Battery status	0.59	0.19	0.54	0.69	0.61	0.53	614
Mode 2	50% Battery status	0.56	0.22	0.84	0.89	0.51	0.67	614
Mode 3	99% Battery status	0.57	0.29	0.61	0.66	0.83	0.92	614

E-Field Strength

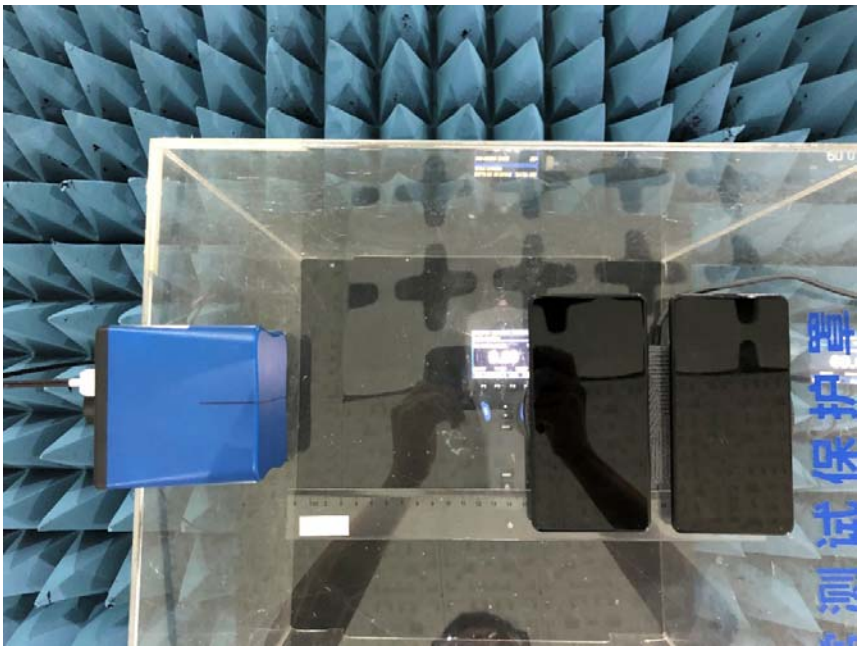
Test Mode	Battery status	Probe Position (A/m) right	Probe Position (A/m) left	Probe Position (A/m) after	Probe Position (A/m) before	Probe Position (A/m) Top	Probe Position (A/m) down	Limits (A/m)
Mode 1	<1% Battery status	0.0111	0.0127	0.0121	0.0123	0.0129	0.0131	1.63
Mode 2	50% Battery status	0.0119	0.0127	0.0129	0.0126	0.0138	0.0136	1.63
Mode 3	99% Battery status	0.0117	0.0124	0.0122	0.0113	0.0121	0.0129	1.63

H-Field Strength

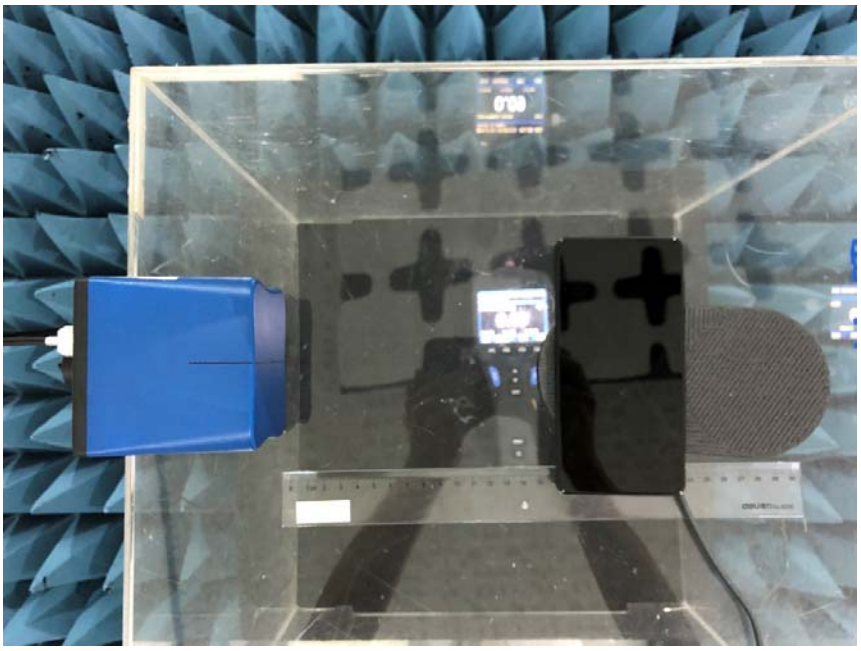
Remark:
The device meets the mobile RF exposure limit at a 15cm and 20cm separation distance as specified in &2.1091 of the FCC Rules.

All simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.

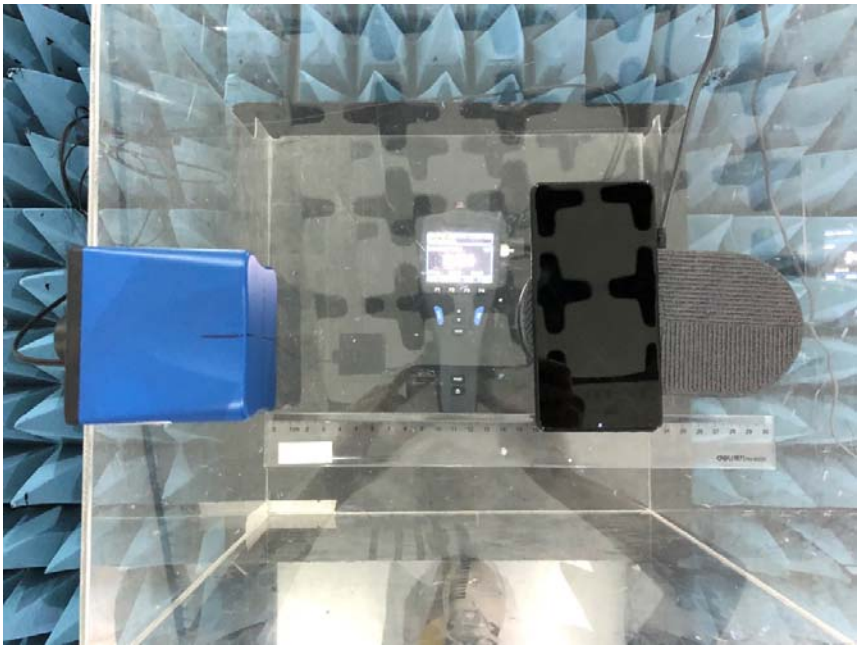
Test Setup Photo:
Double coil:



Left coil



Right coil:



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