TEST REPORT

TEST REPORT

Report Reference No......:	**CTA23070600202**
FCC ID..... **:**	**2BCDT-L-WP-05A7**
Compiled by (position+printed name+signature)..:	File administrators Zoey Cao
Supervised by (position+printed name+signature)..:	Project Engineer Amy Wen
Approved by (position+printed name+signature)..:	RF Manager Eric Wang
Date of issue.....:	Jul. 11, 2023

Representative Laboratory Name.:	**Shenzhen CTA Testing Technology Co., Ltd.**
Address.....:	Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, China
Applicant's name.....:	**Shen Zhen Loowoko Technology Limited**
Address .....:	4F, E building, Jin Bao Bao Industry Dis, No 2 North Part, Shang Xue Industry City, Long Gang, shenzhen, guangdong, China
Test specification .....**:**	
Standard .....:	**FCC Rules and Regulations part 2.1091** **KDB680106 D01v03**
TRF Originator.....:	Shenzhen CTA Testing Technology Co., Ltd.

Test item description .....:	Foldable Leather Kickstand Magnetic Wireless Powerbank
Trade Mark .....:	Loowoko
Manufacturer .....:	**Shen Zhen Loowoko Technology Limited**
Model/Type reference.....:	L-WP-05A7
Listed Models .....:	L-WP-05A7-T0, L-WP-05A7-T1
Modulation Type .....:	ASK
Operation Frequency.....:	From 110KHz~205KHz
Rating .....:	Type-C Input: 5V 3A, 9V 2.2A, 12V 1.67A Type-C output: 5V 3A, 9V 2.2A, 12V 1.67A MAX:20W Wireless output: 5W/7.5W/10W/15W Total ouput: 5V 3A Battery: 3.85V
Result.....:	**PASS**

Equipment under Test	:	Foldable Leather Kickstand Magnetic Wireless Powerbank
Model /Type	:	L-WP-05A7
Listed Models	:	L-WP-05A7-T0, L-WP-05A7-T1
Applicant	:	**Shen Zhen Loowoko Technology Limited**
Address	:	4F, E building, Jin Bao Bao lndustry Dis, No 2 North Part, Shang Xue lndustry City, Long Gang, shenzhen, guangdong, China
Manufacturer	:	**Shen Zhen Loowoko Technology Limited**
Address	:	4F, E building, Jin Bao Bao lndustry Dis, No 2 North Part, Shang Xue lndustry City, Long Gang, shenzhen, guangdong, China

Test Result:	**PASS**

The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Contents

1 SUMMARY

1.1 General Remarks

Date of receipt of test sample	:	Jul. 06, 2023
Testing commenced on	:	Jul. 06, 2023
Testing concluded on	:	Jul. 11, 2023

1.2 Product Description

Product Name:	Foldable Leather Kickstand Magnetic Wireless Powerbank
Model/Type reference:	L-WP-05A7
Hardware version:	V1.0
Software version:	V1.0
Test samples ID:	CTA230706002-1# (Engineer sample), CTA230706002-2# (Normal sample)
Power supply:	Type-C Input: 5V 3A, 9V 2.2A, 12V 1.67A Type-C output: 5V 3A, 9V 2.2A, 12V 1.67A MAX:20W Wireless output: 5W/7.5W/10W/15W Total ouput: 5V 3A Battery: 3.85V
Adapter information (Auxiliary test supplied by test Lab） :	Input: AC 100-240V 50/60Hz Output: DC 5V 3A, 9V 3A, 12V 2.25A
Operation frequency:	110KHz - 205KHz
Modulation type:	ASK
Antenna type:	Loop coil antenna

1.3 Description of the test mode

Equipment under test was operated during the measurement under the following conditions:
☒ Charging and communication mode

Test Conditions	Description	Exposure conditions	
TM1	EUT + EUT + Full load	☐ Mobile ☒ Portable	Record
TM2	EUT + EUT + Half load	☐ Mobile ☒ Portable	Record
TM3	EUT + EUT + Empty load	☐ Mobile ☒ Portable	Record
TM4	AC/DC Adapter (12V/1.67A) + EUT + Full load	☒ Mobile ☐ Portable	Record
TM5	AC/DC Adapter (12V/1.67A) + EUT + Half load	☒ Mobile ☐ Portable	Record
TM6	AC/DC Adapter (12V/1.67A) + EUT + Empty load	☒ Mobile ☐ Portable	Record
TM7	AC/DC Adapter (12V/1.67A) + EUT + Full load	☒ Mobile ☐ Portable	Pre-Tested
TM8	AC/DC Adapter (12V/1.67A) + EUT + Half load	☒ Mobile ☐ Portable	Pre-Tested
TM9	AC/DC Adapter (12V/1.67A) + EUT + Empty load	☒ Mobile ☐ Portable	Pre-Tested
Note: 1. During the test the phone is attached the network in WWAN traffic mode and Wifi/BT is connected. 2. All test modes were pre-tested, but we only recorded the worst case in this report.			

1.4 Special Accessories

Follow auxiliary equipment(s) test with EUT that provided by the manufacturer or laboratory is listed as follow:

Description	Manufacturer	Model	Technical Parameters	Certificate	Provided by
Adapter	/	EP-TA20CBC	Input: 100-240V~, 50/60Hz, 0.5A Output: 12V⎓1.67A	CE/FCC	laboratory
/	/	/	/	/	/

1.5 Modifications

No modifications were implemented to meet testing criteria.

2 TEST ENVIRONMENT

2.1 Address of the test laboratory

Shenzhen CTA Testing Technology Co., Ltd.
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, China

The 3m-Semi anechoic test site fulfils CISPR 16-1-4 according to ANSI C63.4:2014 and CISPR 16-1-4:2010 SVSWR requirement for radiated emission above 1GHz.

2.2 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:
FCC-Registration No.: 517856 Designation Number: CN1318

Shenzhen CTA Testing Technology Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

A2LA-Lab Cert. No.: 6534.01

Shenzhen CTA Testing Technology Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.

The 3m-Semi anechoic test site fulfils CISPR 16-1-4 according to ANSI C63.10 and CISPR 16-1-4:2010.

2.3 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15-35 ° C
Humidity:	30-60 %
Atmospheric pressure:	950-1050mbar

2.4 Summary of measurement results

Test Item	Result
Electric Field Strength (E) (V/m)	Compliant
Magnetic Field Strength (H) (A/m)	Compliant

2.5 Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 „Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements“ and is documented in the Shenzhen Global Test Service Co.,Ltd quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Shenzhen GTS laboratory is reported:

Test	Range	Measurement Uncertainty	Notes
Radiated Emission	30~1000MHz	4.06 dB	(1)
Radiated Emission	1~18GHz	5.14 dB	(1)
Radiated Emission	18-40GHz	5.38 dB	(1)
Conducted Disturbance	0.15~30MHz	2.14 dB	(1)

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

2.6 Equipments Used during the Test

Test Equipment	Manufacturer	Model No.	SN.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
Exposure Level Tester	Narda	ELT-400	N-0231	June 25 2023	June 24 2024
Magnetic field probe 100cm^2	Narda	ELT probe 100cm^2	M0675	June 25 2023	June 24 2024

Note: The Cal.Interval was one year.

3 TEST CONDITIONS AND RESULTS

3.1 Applicable Standard

According to §1.1307(b)(1), 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.
According to §1.1310 and §2.1091 RF exposure is calculated.
According KDB 680106 D01 RF Exposure Wireless Charging App v03

3.2 Limit

Limits for Maximum Permissible Exposure (MPE)/Controlled Exposure

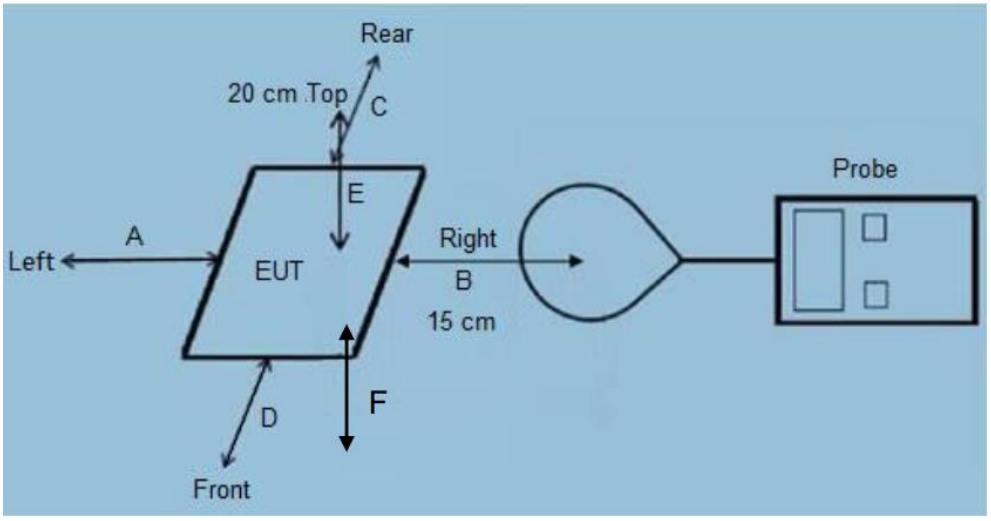
Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm^2)	Averaging Time (minute)
Limits for Occupational/Controlled Exposure				
0.3 – 3.0	614	1.63	(100) *	6
3.0 – 30	1842/f	4.89/f	(900/f)*	6
30 – 300	61.4	0.163	1.0	6
300 – 1500	/	/	f/300	6
1500 – 100,000	/	/	5	6

Limits for Maximum Permissible Exposure (MPE)/Uncontrolled Exposure

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm^2)	Averaging Time (minute)
Limits for Occupational/Controlled Exposure				
0.3 – 3.0	614	1.63	(100) *	30
3.0 – 30	824/f	2.19/f	(180/f)*	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

3.3 Test Setup



Note: A, B, C, D, E, F for six surfaces of the product.

3.4 Measurement Procedure

For mobile RF exposure

a) The RF exposure test was performed on 360 degree turn table in anechoic chamber.
b) The measurement probe was placed at test distance (15cm) which is between the edge of the charger and the geometric center of probe.
c) The turn table was rotated 360d degree to search of highest strength.
d) The highest emission level was recorded and compared with limit as soon as measurement of each points (A, B, C, D, E) were completed.
e) The EUT were measured according to the dictates of KDB 680106D01v03.

For portable RF exposure

a) The RF exposure test was performed on 360 degree turn table in anechoic chamber.
b) The measurement probe was placed at test distance (0cm) which is between the edge of the charger and the geometric center of probe.
c) The turn table was rotated 360d degree to search of highest strength.
d) The highest emission level was recorded and compared with limit as soon as measurement of each points (A, B, C, D, E, F) were completed.
e). Repeated measured (a) – (d) at measure distance 5cm, 10cm and 15cm.
f) The EUT were measured according to the dictates of KDB 680106D01v03.

3.5 Test Result of E and H field Strength

Temperature:	22.4℃	Humidity:	52.1%
Test Engineer:	Amy Wen	Test site:	Anechoic chamber

For mobile exposure
E-Field Strength at 15 cm from the edges surrounding the EUT and 15cm from the top surface of the EUT

Battery Level	Unit	Measured E-Field Strength Values (V/m)					FCC E-Field Strength 50% Limits (V/m)	FCC E-Field Strength Limits (V/m)
		Test Position A	Test Position B	Test Position C	Test Position D	Test Position E		
1%	v/m	85.579	80.301	78.416	74.269	77.662	307.0	614.0
50%	v/m	55.796	56.927	57.681	55.796	53.911	307.0	614.0
99%	v/m	44.863	45.994	47.879	45.994	42.978	307.0	614.0

Note: V/m= A/m *377

H-Field Strength at 15 cm from the edges surrounding the EUT and 15cm from the top surface of the EUT

Battery Level	Unit	Measured H-Field Strength Values (A/m)					FCC H-Field Strength50% Limits (A/m)	FCC H-Field Strength Limits (A/m)
		Test Position A	Test Position B	Test Position C	Test Position D	Test Position E		
1%	uT	0.284	0.266	0.260	0.246	0.258	--	--
1%	A/m	0.227	0.213	0.208	0.197	0.206	0.815	1.63
50%	uT	0.185	0.189	0.191	0.185	0.179	--	--
50%	A/m	0.148	0.151	0.153	0.148	0.143	0.815	1.63
99%	uT	0.149	0.153	0.159	0.153	0.143	--	--
99%	A/m	0.119	0.122	0.127	0.122	0.114	0.815	1.63

Note:A/m=uT/1.25

H-Field Strength at 20cm from the top surface of the EUT

Battery Level	Unit	Measured H-Field Strength Values (A/m)	FCC H-Field Strength 50% Limits (A/m)	FCC H-Field Strength Limits (A/m)
		Test Position E		
1%	uT	0.236	--	--
1%	A/m	0.189	0.815	1.63
50%	uT	0.185	--	--
50%	A/m	0.148	0.815	1.63
99%	uT	0.136	--	--
99%	A/m	0.109	0.815	1.63

Note:A/m=uT/1.25

For portable exposure

E-Field Strength at 0/2/4/6/8/10/12/14/16/18/20cm from the edges surrounding the EUT

Charging Battery Level	Measured Distance (cm)	Measured E-Field Strength Values (V/m)						FCC E-Field Strength Limits (V/m)
		Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Test Position F	
1%	0	138.34	140.73	137.67	150.12	139.27	147.98	614
50%	0	115.95	120.63	120.67	116.99	119.67	115.10	614
99%	0	102.14	119.61	125.51	98.05	121.07	117.68	614
1%	2	117.79	127.33	127.23	127.61	127.07	119.11	614
50%	2	108.26	104.74	103.86	118.51	103.39	108.58	614
99%	2	96.78	97.29	96.15	104.77	96.65	102.21	614
1%	4	102.65	99.97	91.23	97.59	106.91	80.88	614
50%	4	86.06	102.34	85.80	104.51	114.78	102.58	614
99%	4	106.33	83.76	107.62	102.05	82.05	88.04	614
1%	6	84.02	81.34	80.33	98.64	92.84	63.86	614
50%	6	66.91	85.01	71.62	73.10	76.27	66.56	614
99%	6	54.13	56.48	60.51	56.44	49.52	49.32	614
1%	8	66.42	80.91	89.67	71.06	77.32	52.12	614
50%	8	81.06	67.99	67.87	73.11	71.45	43.95	614
99%	8	53.06	66.52	65.60	56.06	60.39	59.81	614
1%	10	61.36	66.35	63.86	62.03	47.84	67.00	614
50%	10	78.00	55.75	78.96	58.50	72.35	66.56	614
99%	10	49.13	80.67	49.46	67.53	43.31	61.22	614
1%	12	45.57	62.18	51.23	56.83	50.82	29.08	614
50%	12	47.98	62.94	62.33	69.08	60.37	61.32	614
99%	12	52.14	57.18	75.66	52.35	53.77	56.31	614
1%	14	35.18	29.36	29.85	25.49	50.50	18.26	614
50%	14	44.22	42.08	50.68	51.20	51.35	38.96	614
99%	14	53.36	24.90	27.38	35.67	56.06	41.36	614
1%	16	33.50	40.28	16.55	38.55	31.95	33.38	614
50%	16	23.15	35.91	26.52	15.52	31.47	25.04	614
99%	16	24.47	28.03	29.00	39.38	39.41	6.20	614
1%	18	20.51	23.69	16.35	8.85	28.43	12.85	614
50%	18	14.60	8.59	22.37	5.33	5.43	9.94	614
99%	18	22.09	18.16	19.13	29.41	21.23	21.68	614
1%	20	16.83	20.93	15.70	16.04	0.47	16.32	614

50%	20	19.71	8.01	11.91	20.87	18.90	8.85	614
99%	20	16.36	17.88	13.44	12.57	11.09	14.67	614

Note: V/m= A/m *377

H-Field Strength at 0/2/4/6/8/10/12/14/16/18/20cm from the edges surrounding the EUT

Charging Battery Level	Measured Distance (cm)	Unit	Measured H-Field Strength Values (A/m)						FCC H-Field Strength Limits (A/m)
			Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Test Position F	
1%	0	uT	0.4587	0.4666	0.4565	0.4977	0.4618	0.4907	--
1%	0	A/m	0.3669	0.3733	0.3652	0.3982	0.3694	0.3925	1.63
50%	0	uT	0.3844	0.4000	0.4001	0.3879	0.3968	0.3816	--
50%	0	A/m	0.3076	0.3200	0.3201	0.3103	0.3174	0.3053	1.63
99%	0	uT	0.3387	0.3966	0.4161	0.3251	0.4014	0.3902	--
99%	0	A/m	0.2709	0.3173	0.3329	0.2601	0.3211	0.3121	1.63
1%	2	uT	0.3905	0.4222	0.4219	0.4231	0.4213	0.3949	--
1%	2	A/m	0.3124	0.3377	0.3375	0.3385	0.3370	0.3159	1.63
50%	2	uT	0.3590	0.3473	0.3444	0.3929	0.3428	0.3600	--
50%	2	A/m	0.2872	0.2778	0.2755	0.3144	0.2742	0.2880	1.63
99%	2	uT	0.3209	0.3226	0.3188	0.3474	0.3204	0.3389	--
99%	2	A/m	0.2567	0.2581	0.2550	0.2779	0.2564	0.2711	1.63
1%	4	uT	0.3403	0.3315	0.3025	0.3236	0.3545	0.2682	--
1%	4	A/m	0.2723	0.2652	0.2420	0.2589	0.2836	0.2145	1.63
50%	4	uT	0.2853	0.3393	0.2845	0.3465	0.3806	0.3401	--
50%	4	A/m	0.2283	0.2715	0.2276	0.2772	0.3045	0.2721	1.63
99%	4	uT	0.3526	0.2777	0.3568	0.3383	0.2721	0.2919	--
99%	4	A/m	0.2821	0.2222	0.2855	0.2707	0.2176	0.2335	1.63
1%	6	uT	0.2786	0.2697	0.2664	0.3271	0.3078	0.2117	--
1%	6	A/m	0.2229	0.2158	0.2131	0.2616	0.2463	0.1694	1.63
50%	6	uT	0.2218	0.2819	0.2375	0.2424	0.2529	0.2207	--
50%	6	A/m	0.1775	0.2255	0.1900	0.1939	0.2023	0.1765	1.63
99%	6	uT	0.1795	0.1873	0.2006	0.1871	0.1642	0.1635	--
99%	6	A/m	0.1436	0.1498	0.1605	0.1497	0.1314	0.1308	1.63
1%	8	uT	0.2202	0.2683	0.2973	0.2356	0.2564	0.1728	--
1%	8	A/m	0.1762	0.2146	0.2378	0.1885	0.2051	0.1383	1.63
50%	8	uT	0.2688	0.2254	0.2250	0.2424	0.2369	0.1457	--
50%	8	A/m	0.2150	0.1803	0.1800	0.1939	0.1895	0.1166	1.63
99%	8	uT	0.1759	0.2206	0.2175	0.1859	0.2002	0.1983	--
99%	8	A/m	0.1408	0.1764	0.1740	0.1487	0.1602	0.1586	1.63
1%	10	uT	0.2034	0.2200	0.2117	0.2057	0.1586	0.2222	--
1%	10	A/m	0.1628	0.1760	0.1694	0.1645	0.1269	0.1777	1.63
50%	10	uT	0.2586	0.1849	0.2618	0.1940	0.2399	0.2207	--
50%	10	A/m	0.2069	0.1479	0.2095	0.1552	0.1919	0.1765	1.63
99%	10	uT	0.1629	0.2675	0.1640	0.2239	0.1436	0.2030	--
99%	10	A/m	0.1303	0.2140	0.1312	0.1791	0.1149	0.1624	1.63
1%	12	uT	0.1511	0.2062	0.1699	0.1884	0.1685	0.0964	--

1%	12	A/m	0.1209	0.1649	0.1359	0.1507	0.1348	0.0771	1.63
50%	12	uT	0.1591	0.2087	0.2067	0.2291	0.2002	0.2033	--
50%	12	A/m	0.1273	0.1670	0.1653	0.1832	0.1601	0.1627	1.63
99%	12	uT	0.1729	0.1896	0.2509	0.1736	0.1783	0.1867	--
99%	12	A/m	0.1383	0.1517	0.2007	0.1389	0.1426	0.1494	1.63
1%	14	uT	0.1167	0.0974	0.0990	0.0845	0.1675	0.0605	--
1%	14	A/m	0.0933	0.0779	0.0792	0.0676	0.1340	0.0484	1.63
50%	14	uT	0.1466	0.1395	0.1681	0.1698	0.1703	0.1292	--
50%	14	A/m	0.1173	0.1116	0.1344	0.1358	0.1362	0.1033	1.63
99%	14	uT	0.1769	0.0826	0.0908	0.1183	0.1859	0.1371	--
99%	14	A/m	0.1415	0.0661	0.0726	0.0946	0.1487	0.1097	1.63
1%	16	uT	0.1111	0.1336	0.0549	0.1278	0.1059	0.1107	--
1%	16	A/m	0.0889	0.1069	0.0439	0.1023	0.0847	0.0885	1.63
50%	16	uT	0.0768	0.1191	0.0879	0.0515	0.1043	0.0830	--
50%	16	A/m	0.0614	0.0953	0.0704	0.0412	0.0835	0.0664	1.63
99%	16	uT	0.0811	0.0929	0.0961	0.1306	0.1307	0.0206	--
99%	16	A/m	0.0649	0.0744	0.0769	0.1044	0.1045	0.0165	1.63
1%	18	uT	0.0680	0.0786	0.0542	0.0293	0.0943	0.0426	--
1%	18	A/m	0.0544	0.0628	0.0434	0.0235	0.0754	0.0341	1.63
50%	18	uT	0.0484	0.0285	0.0742	0.0177	0.0180	0.0330	--
50%	18	A/m	0.0387	0.0228	0.0593	0.0141	0.0144	0.0264	1.63
99%	18	uT	0.0733	0.0602	0.0634	0.0975	0.0704	0.0719	--
99%	18	A/m	0.0586	0.0482	0.0507	0.0780	0.0563	0.0575	1.63
1%	20	uT	0.0558	0.0694	0.0520	0.0532	0.0016	0.0541	--
1%	20	A/m	0.0446	0.0555	0.0416	0.0426	0.0012	0.0433	1.63
50%	20	uT	0.0653	0.0266	0.0395	0.0692	0.0627	0.0293	--
50%	20	A/m	0.0523	0.0213	0.0316	0.0554	0.0501	0.0235	1.63
99%	20	uT	0.0542	0.0593	0.0446	0.0417	0.0368	0.0486	--
99%	20	A/m	0.0434	0.0474	0.0356	0.0333	0.0294	0.0389	1.63

Note:A/m=uT/1.25

3.6 Equipment Approval Considerations

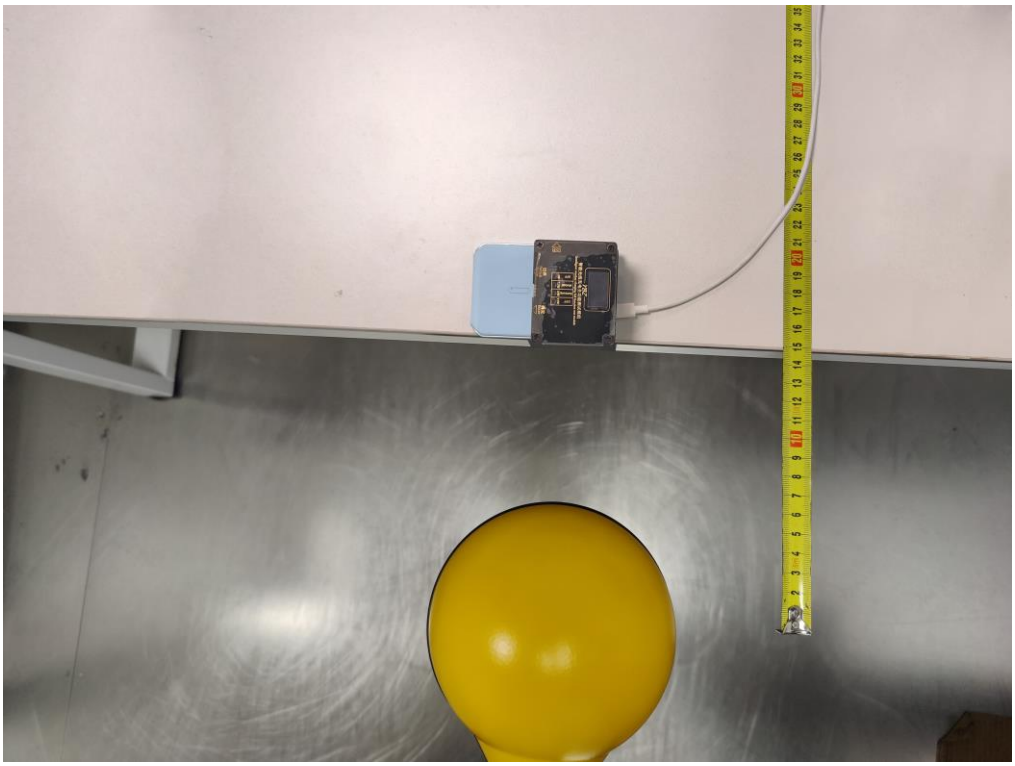
The EUT does comply with KDB 680106 D01 as follow table.

Requirements of KDB 680106 D01	Yes / No	Description
Power transfer frequency is less than 1 MHz	Yes	The device operate in the frequency range 110KHz~205KHz
Output power from each primary coil is less than 15 watts	Yes	The maximum output power for each primary coil is 15W.
The system may consist of more than one source primary coils, charging one or more clients. If more than one primary coil is present, the coil pairs may be powered on at the same time.	Yes	The transfer system includes only one primary coils.
Client device is placed directly in contact with the transmitter.	Yes	Client device is placed directly in contact with the transmitter.
Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).	No	Mixed mobile and portable exposure conditions
The aggregate H-field strengths anywhere at or beyond 15 cm surrounding the device, and 20 cm away from the surface from all coils that by design can simultaneously transmit, and while those coils are simultaneously energized, are demonstrated to be less than 50% of the applicable MPE limit.	Yes	The EUT 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.

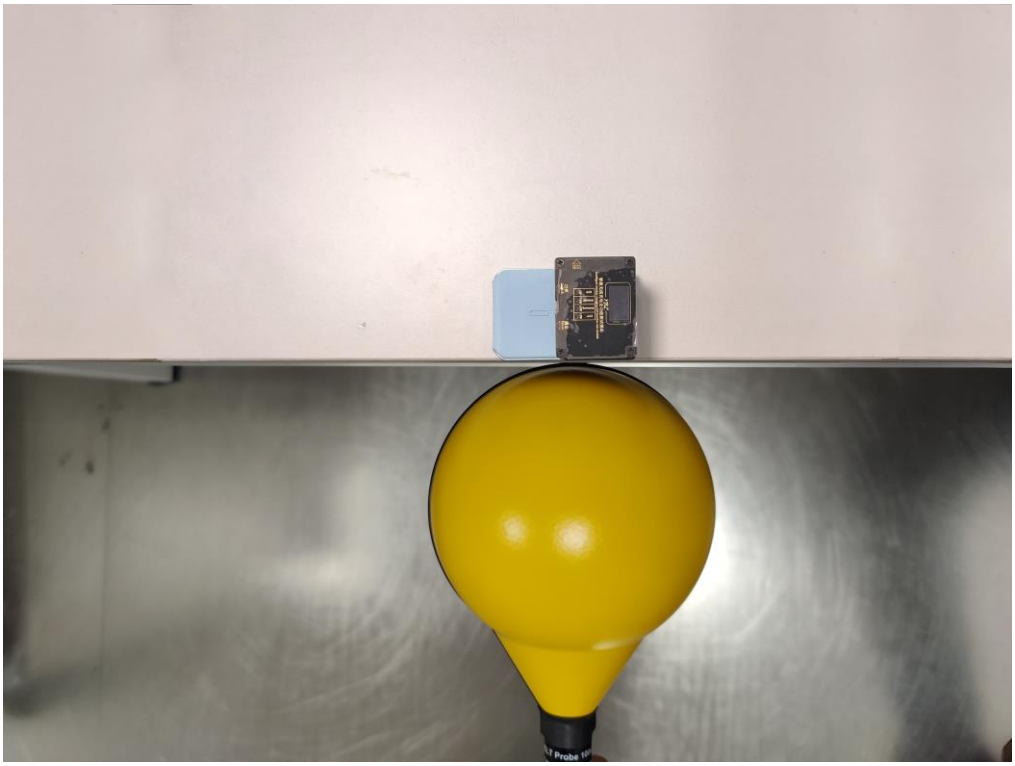
3.7 Conclusion

A minimum safety distance of 0 cm to the antenna is required when the device is charging a smart phone for portable exposure and 20 cm to the antenna for mobile exposure. The detected emissions are below the limitations according FCC KDB 680106 and confirmed by the FCC according to KDB Inquire.

4 Test Setup Photos of the EUT



Mobile use



Portable use

********** End of Report **********