





	RF Exposure Evaluation			
Report Reference No:		Leo		
Testing Laboratory Name :	: Shenzhen LCS Compliance Testing Laboratory Ltd.			
Address	101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Shajing Street, Baoan District, Shenzhen, China			
Testing Location/ Procedure :	 Full application of Harmonised standards ■ Partial application of Harmonised standards □ Other standard testing method □ 			
Applicant's Name:	GCteq Wireless (Shenzhen) Co., L	td.		
Address	No. A402, Floor 4, Suojia Science pa Community, HangchengStreet, Bao'a Guangdong Province, China			
Test Specification				
Standard :	FCC KDB publication 680106 D01 R Charging Apps v04 FCC CFR 47 part1 1.1310 FCC CFR 47 part2 2.1091 FCC CFR 47 part 18.107	F Exposure Wireless		
Test Report Form No	노건별 10~ ~			
ac Testing	Shenzhen LCS Compliance Testing	aboratory I to		
Master TRF				
Shenzhen LCS Compliance Testing L the material. Shenzhen LCS Complia assume liability for damages resulting	in whole or in part for non-commen- aboratory Ltd. is acknowledged as c ince Testing Laboratory Ltd. takes no g from the reader's interpretation of th	opyright owner and source of responsibility for and will no		
its placement and context.	Funda a data at Mandati Funda da ana biasa an	atad Oras Haldan (1997)		
Test Item Description : Trade Mark : Test Model : Ratings :	GCteq GF-CH03A Input: 24-36V 3A Wireless output:10W			
Result:	USB-C: 5V 2A ,USB-A: 5V 2A Positive			
Compiled by:	Supervised by:	Approved by:		
Joker.Hu	Jack Liu	Jains Piang		
Joker Hu/ Administrator	Jack Liu/ Technique principal	Gavin Liang/ Manager		
518000, China		g Street, Baoan District, Shenzhen,		



RF Exposure Evaluation

Test Report No. : LCSA02175041EB

March 27, 2025 Date of issue

Test Model	: GF-CH03A		
EUT	: Embedded Multi-Functional Integrated Cup Holder		
Applicant	: GCteq Wireless (Shenzhen) Co., Ltd.		
Address	: No. A402, Floor 4, Suojia Science park Complex Sanwei Community, Hangcheng Street, Bao'an, District, Shenzhen City, Guangdong Province, China		
Telephone	:/		
Fax	: /		
Manufacturer	: GCteq Wireless (Shenzhen) Co., Ltd.		
Address	: No. A402, Floor 4, Suojia Science park Complex Sanwei Community, Hangcheng Street, Bao'an, District, Shenzhen City, Guangdong Province, China		
Telephone	:/		
Fax	: /		
Factory	: TEN PAO EIECTRONICS(HUIZHC)CoLTD.		
Address	: dongjiang indus trial Estate, shuikou Street, Huizhou City, Guangdong Province, P.R.C		
Telephone	:/		
Fax	:/ ISI ICS Testing Lab		

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.







Revision History



Report Version	Issue Date	Revision Content	Revised By	
000	March 27, 2025	Initial Issue		







TIRESTER

Page



Description

1. PRODUCT INFORMATION	6
2. EVALUATION METHOD	6
3. EVALUATION LIMIT	9
4. TEST SETUP DIAGRAM	
5. TEST EQUIPMENT	
6.SUPPORT EQUIPMENT LIST	
7. MEASUREMENT PROCEDURE	
8. EQUIPMENT APPROVAL CONSIDERATIONS	
9. E AND H FIELD STRENGTH	
10. TEST SETUP PHOTOS	
11. CONCLUSION	
12. DESCRIPTION OF TEST FACILITY	





1. Product	Information

1. Product Information				
Product Name	Embedded Multi-Functional Integr	ated Cup Holder	I Timesting	
Model Number	GF-CH03A	Pod Pco.	- Lea Loo	
Additional Model No.	GF-CH03B			
Model Declaration	PCB board, structure and intern additional models were tested	al of these model(s) are th	ne same, So no	
Ratings	Input: 24-36V 3A			
	Wireless output:10W			
	USB-C: 5V 2A ,USB-A: 5V 2A			
Modulation Type	ASK			
Frequency Range	110.0~205.0KHz	5	AP 400	
Antenna Type	Coil Antenna	b TI	R Ming Lab	
Hardware version	/ SO LOSTO	129 10	STRON	
Software version	1	1 million and		
Accessories	Phone*1			
Exposure category	General population/uncontrolled e	nvironment		
EUT Type	Production Unit			
Device Type	Mobile Device			

2. Evaluation Method

Per KDB 680106 D01 Section 3. RF Exposure Requirements;

- 1) Wireless power transfer devices must comply with RF exposure requirements for all design configurations in which they can operate. At a minimum, RF exposure must be evaluated for the worst-case scenario, typically when the transmitter, while delivering energy to a client device, is operating at maximum output power. RF exposure compliance for equipment authorization must be determined following the guidance of KDB447498, which includes consideration of the different test requirements for Mobile Device and Portable Device exposure categories, as defined in §§ 2.1091 and 2.1093 of the Rules.
- 2) The RF exposure limits, as set forth in § 1.1310, do not cover the frequency range below 100 kHz for Specific Absorption Rate (SAR) and below 300 kHz for Maximum Permitted Exposure (MPE). In addition, present limitations of RF exposure evaluation systems prevent an accurate evaluation of SAR below 4 MHz. For these reasons, a specific MPE-based RF Exposure compliance procedure for devices operating in the aforementioned low-frequency ranges has been set in place. This procedure is applicable to Equipment Authorization of all RF devices, thus including, but not limited to, Part 18 and WPT devices. Accordingly, for § 2.1091-Mobile devices, the MPE limits between 100 kHz to 300 kHz are to be considered the same as those at 300 kHz in Table 1 of § 1.1310, that is, 614 V/m and 1.63 A/m, for the electric field and magnetic field, respectively. For § 2.1093-Portable devices below 4 MHz and down to 100 kHz, the MPE limits in § 1.1310 (with the 300 kHz limit applicable all the way down to 100 kHz) can be used for the purpose of equipment authorization in lieu of SAR evaluations.

Furthermore, consistent with FCC's equipment authorization RF exposure guidance, any device (both portable and mobile) operating at frequencies below 100 kHz is considered compliant for the purpose of equipment authorization when the external (unperturbed) temporal peak field strengths do not exceed the following reference levels:

83 V/m for the electric field strength (E)

and 90 A/m for the magnetic field strength (H)

These data may be provided through measurements and/or numerical simulations, and for all the



Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com Scan code to check authenticity

positions in space relevant for any possible body exposure.

3) "Large size" probes may prevent the measurement of E- and/or H-fields near the surface of the radiating structure (e.g., a WPT source coil), as in the example shown in Figure 1.

If the center of the probe sensing element is located more than 5 mm from the probe outer surface, the field strengths need to be estimated through modeling for those positions that are not reachable. The estimates may be done either via numerical calculation, or via analytic model: e.g., approximated formulas for circular coils, dipoles, etc., may be acceptable if it is shown that the model is applicable for the design parameters considered. A typical example is the use of a quasi-static approximation formula for a low-frequency magnetic field source. These estimates shall include points spaced no more than 2 cm from each other. Thus, in the example of

Figure 1, at least the estimates at 0 cm2 and 2 cm are required, while only one point would not be sufficient. In addition, the model needs to be validated through the probe measurements for the two closest points to the device surface, and with 2-cm increments, as indicated in Figure 1. In that example, the same model must also be applied to the 4 cm and 6 cm positions, and then compared with the measured data, for validation purposes. The validation is considered sufficient if a 30% agreement between the model and the (E- and/or H-field) probe measurements is demonstrated. If such a level of agreement cannot be shown, a more accurate model (and/or a smaller probe) shall be used.

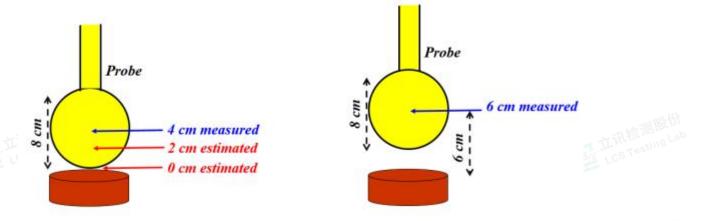


Figure 1. Example of probe (in yellow) measurements in points close to the WPT device (in red/brown). The probe radius is 4 cm, thus the closest point to the device where the field can be measured is at 4 cm from the surface (this example assumes that the probe calibration refers to the center of the sensing element structure, in this case a sphere of 4 cm radius). Data at 0 cm and 2 cm must be estimated through a model, and then the same model must be validated via comparison with the actual measurements at 4 cm and 6 cm, where the probe center can be positioned and collect valid data.

4) Part 18 Wireless Power Transfer up to One-Meter Distance. This section applies only to WPT transmitters that, by design, can provide power to a load located at a distance no greater than one meter. This distance shall be measured between the closest points between the transmitter and the receiver enclosure surfaces. For instance, two coils positioned as in Figure 2-a may be operated and considered under the provisions of this section, because both receivers are within one-meter distance from the transmitter. However, the case in Figure 2-b cannot be considered in the same way, and it is treated according to the prescription of Section 5.3.

For WPT designs with more than one radiating structure the distance to the load shall be considered as in Figure 3, thus measured between the receiver and the closest transmitting structure.



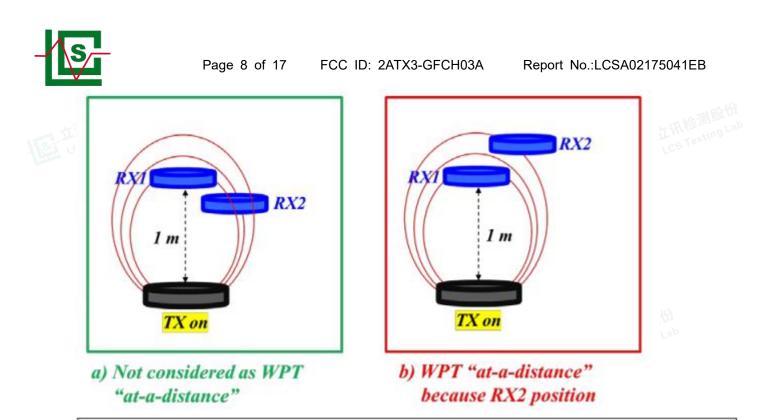


Figure 2-a) For multiple-receiver systems (here shown with two receivers, indicated with RX1 and RX2) the one-meter distance limit must apply for all the receivers that are engaged in the charging process. b) The WPT system is considered "at-a-distance" because it can function when the RX2 is further away than one meter from the transmitter.

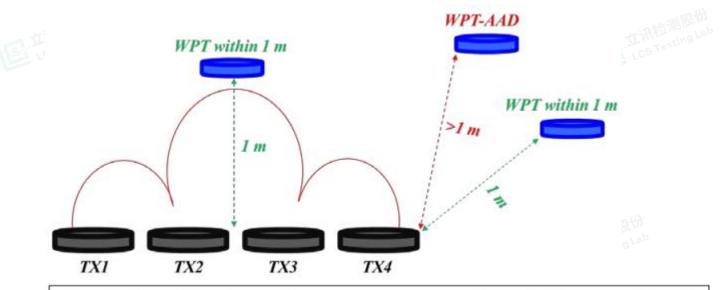


Figure 3. For multiple-coil transmitter systems, the one-meter distance limit is measured from the closest coil edge. A WPT within one meter operates with loads configured as those labeled in green font, if a load can be powered beyond one meter (in red), then it shall be considered "at-a-distance"

There might be situations where the WPT RF emissions are limited enough that even operations in a "crowded" environment, where many similar WPT devices are present, do not pose significant EMC and RF exposure concerns. In this scenario, and for devices operating within a one-meter distance from the receiver, as defined above, a manufacturer will not have to submit an "Equipment Compliance Review" KDB, and receive FCC concurrence before proceeding with equipment authorization. This exception to the requirement of submitting the ECR to obtain FCC concurrence only applies when all the following criteria (1) through (6) are met:





- (1) The power transfer frequency is below 1 MHz.
- (2) The output power from each transmitting element (e.g., coil) is less than or equal to 15 watts.
- (3) A client device providing the maximum permitted load is placed in physical contact with the transmitter (i.e., the surfaces of the transmitter and client device enclosures need to be in physical contact)
- (4) Only § 2.1091- Mobile exposure conditions apply (i.e., this provision does not cover § 2.1093 Portable exposure conditions).
- (5) The E-field and H-field strengths, at and beyond 20 cm surrounding the device surface, are demonstrated to be less than 50% of the applicable MPE limit, per KDB 447498, Table 1. These measurements shall be taken along the principal axes of the device, with one axis oriented along the direction of the estimated maximum field strength, and for three points per axis or until a 1/d (inverse distance from the emitter structure) field strength decay is observed. Symmetry considerations may be used for test reduction purposes. The device shall be operated in documented worst-case compliance scenarios (i.e., the ones that lead to the maximum field components), and while all the radiating structures (e.g., coils or antennas) that by design can simultaneously transmit are energized at their nominal maximum power.
- 5) For systems with more than one radiating structure, the conditions specified in (5) must be met when the system is fully loaded (i.e., clients absorbing maximum power available), and with all the radiating structures operating at maximum power at the same time, as per design conditions. If the design allows one or more radiating structures to be powered at a higher level while other radiating structures are not powered, then those cases must be tested as well. For instance, a device may use three RF coils powered at 5 W, or one coil powered at 15 W: in this case, both scenarios shall be tested

3. Evaluation Limit

3. 1 Refer Evaluation Method

ANSI C95.1–1999: IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.

<u>FCC KDB publication 680106 D01 RF Exposure Wireless Charging Apps v04:</u> RF Exposure Considerations for Low Power Consumer Wireless Power Transfer Applications <u>FCC CFR 47 part1 1.1310</u>: Radiofrequency radiation exposure limits. <u>FCC CFR 47 part2 2.1091</u>: Radiofrequency radiation exposure evaluation: mobile devices FCC CFR 47 part 18.107:Indusial, Scientific, and Medical Equipment

3.2 Limit

Limits for Maximum Permissible Exposure (MPE)/Controlled Exposure

		· · ·	•	
Frequency	Electric Field	Magnetic Field	Power Density	Averaging Time
Range(MHz)	Strength(V/m)	Strength(A/m)	(mW/cm²)	(minute)
	Limits for Oc	cupational/Controlle	ed Exposure	
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f ²	6
30-300	61.4	0.163	1.0	6
300-1,500	人一個限的	/	f/300	6
1,500-100,000	Till Jesting Lab	1 17	5	6
	103 LC3 .	1/27 rc	2	A SA LCS





Limits for Maximum	n Permissible Exposure (MPE)/l	Uncontrolled Exposure

Frequency	Electric Field	Ire (MPE)/Uncontrol Magnetic Field	Power Density	Averaging Time
Range(MHz)	Strength(V/m)	Strength(A/m)	(mW/cm²)	(minute)
	Limits for Gener	al Population/Uncon	trolled Exposure	
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	/	J. UK	1.0	30

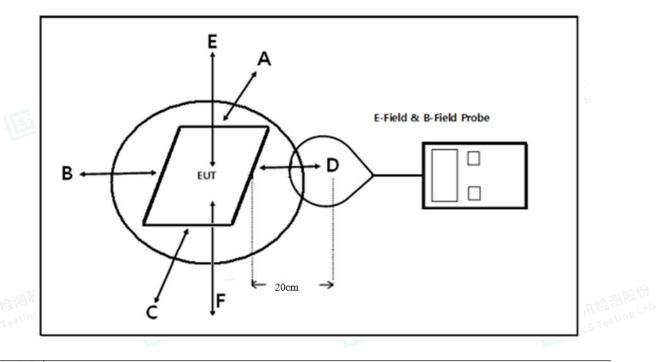
*=Plane-wave equivalent power density

According to FCC KDB 680106 D01 Section 3. RF Exposure Requirements clause 3 the Emission-Limits in the frequency range from 100 KHz to 300 KHz should be assessed versus the limits at 300 KHz in Table 1 of CFR 47 - Section 1.310 as following (measured distance shall be 15cm from the center of the probe to the edge of the device):

	E-Field	*/*	B-Field
Frequency	V/m	A/m	uT
0.3 MHz – 3.0 MHz	614	1.613	2.0
3.0 MHz – 30 MHz	824/f (=27.5 _{30MHz})	2.19/f (=0.073 _{30MHz})	T ill nu Testing
	102		Sold Co

A KDB inquire was required to determine/confirm the applicable limits below 100 KHz.

4. Test Setup Diagram





Shenzhen LCS Compliance Testing Laboratory Ltd. Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com Scan code to check authenticity

5. Test Equipment

i. Test Equipment					
Equipment	Manufacturer	Model	Serial no.	Calibrated date	Calibrated Due
Exposure Level Tester	Narda	ELT-400	N-0713	2024-11-11	2025-11-10
B-Field Probe	Narda	ELT-400	M-1154	2024-10-08	2025-10-07
Electric field probe	Narda	EP601	611WX70332	N/A	N/A

6.Support equipment List

Manufacturer	Description	Model	Serial Number	Certificate	
Trimble Electronics Co., LTD	Power Adapter	S058AAC29 00200	-	FCC	
Huawei	Mobile phone	FRD-AL10	FRD-AL10C00B 373	FCC	

Note: Auxiliary equipment is provided by the laboratory and only use tested.

7. Measurement Procedure

a) The RF exposure test was performed on 360 degree turn table in anechoic chamber.

b) The measurement probe was placed at test distance (20cm) which is between the edges 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 680106 D01v04.







8. Equipment Approval Considerations

The EUT does comply with item 5.2 of KDB 680106 D01v04 as follows table;

Requirements of KDB 680106 D01	Yes / No	Description
Power transfer frequency is less than 1 MHz	Yes	The device operates in the frequency range 110.0 KHz - 205 KHz
The output power from each transmitting element (e.g., coil) is less than or equal to 15 watts.	Yes	The maximum output power of the primary coil is 10W.
A client device providing the maximum permitted load is placed in physical contact with the transmitter (i.e., the surfaces of the transmitter and client device enclosures need to be in physical contact)	Yes	Client device is placed directly in contact with the transmitter.
Only § 2.1091- Mobile exposure conditions apply (i.e., this provision does not cover § 2.1093-Portable exposure conditions).	Yes	Mobile exposure conditions only
The E-field and H-field strengths, at and beyond 20 cm surrounding the device surface, are demonstrated to be less than 50% of the applicable MPE limit, per KDB 447498, Table 1. These measurements shall be taken along the principal axes of the device, with one axis oriented along the direction of the estimated maximum field strength, and for three points per axis or until a 1/d (inverse distance from the emitter structure) field strength decay is observed. Symmetry considerations may be used for test reduction purposes. The device shall be operated in documented worst-case compliance scenarios (i.e., the ones that lead to the maximum field components), and while all the radiating structures (e.g., coils or antennas) that by design can simultaneously transmit are energized at their nominal maximum power.	Yes	The EUT H-field strengths at 20 cm all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.
For systems with more than one radiating structure, the conditions specified in (5) must be met when the system is fully loaded (i.e., clients absorbing maximum power available), and with all the radiating structures operating at maximum power at the same time, as per design conditions. If the design allows one or more radiating structures to be powered at a higher level while other radiating structures are not powered, then those cases must be tested as well.	Yes	Only one radiating structure and tested at maximum Output Power



Shenzhen LCS Compliance Testing Laboratory Ltd. Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

For instance, a device may use three RF coils powered at 5 W, or one coil powered at 15 W: in this case, both scenarios shall be tested

ered at 15 W: in this sted

There might be situations where the WPT RF emissions are limited enough that even operations in a "crowded" environment, where many similar WPT devices are present, do not pose significant EMC and RF exposure concerns. In this scenario, and for devices operating within a one-meter distance from the receiver, as defined above, a manufacturer will not have to submit an "Equipment Compliance Review" KDB, and receive FCC concurrence before proceeding with equipment authorization. This exception to the requirement of submitting the ECR to obtain FCC concurrence only applies when all the following criteria (1) through (6) are met.

9. E and H field Strength

Test Modes				
Mode 1	AC/DC Adapter(36V)+EUT+mobile phone (Battery Status: <1%)	Record		
Mode 2	AC/DC Adapter(36V)+EUT+mobile phone (Battery Status: <50%)	Record		
Mode 3	AC/DC Adapter(36V)+EUT+mobile phone (Battery Status: 100%)	Record		
Mode 4	AC/DC Adapter(15V)+EUT+mobile phone (Battery Status: <1%)	Pre-tested		
Mode 5	AC/DC Adapter(15V)+EUT+mobile phone (Battery Status: <50%)	Pre-tested		
Mode 6	AC/DC Adapter(15V)+EUT+mobile phone (Battery Status: 100%)	Pre-tested		

Note: All test modes were pre-tested, but we only recorded the worst case in this report.

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

				Measured	Field Strer	igth Values	6		
Load	Frequency Range	Field	Test	Test	Test	Test	Test	50%	Limits
mode	(kHz)	Strength	Position	Position	Position	Position	Position	Limits	Linito
			А	В	С	D	E		
Mode 1	110.0~205.0	uT	0.125	0.138	0.137	0.128	0.142		
Mode 1	110.0~205.0	A/m	0.100	0.111	0.110	0.102	0.114	0.815	1.63
Mode 1	110.0~205.0	V/m	37.511	41.635	41.164	38.474	42.778	307.0	614.0
Mode 2	110.0~205.0	uT	0.128	0.133	0.143	0.128	0.143	esting	
Mode 2	110.0~205.0	A/m	0.102	0.106	0.115	0.102	0.114	0.815	1.63
Mode 2	110.0~205.0	V/m	38.461	39.938	43.039	38.423	43.028	307.0	614.0
Mode 3	110.0~205.0	uT	0.119	0.136	0.138	0.127	0.142		
Mode 3	110.0~205.0	A/m	0.095	0.109	0.111	0.102	0.114	0.815	1.63
Mode 3	110.0~205.0	V/m	35.857	40.960	41.638	38.225	42.698	307.0	614.0









Field Strength at 20 cm from the edges surrounding the EUT and 20cm from the top surface of the EUT

See 444, 9,584 1	5.00					
Load mode	Frequency Range	Field	Measured Field Strength Values	50% Limits	Lingita	
	(kHz)	Strength	Test Position E	50% Limits	Limits	
Mode 1	110.0~205.0	uT	0.144			
Mode 1	110.0~205.0	A/m	0.116	0.815	1.63	
Mode 1	110.0~205.0	V/m	43.415	307	614	
Mode 2	110.0~205.0	uT	0.136			
Mode 2	110.0~205.0	A/m	0.109	0.815	1.63	
Mode 2	110.0~205.0	V/m	40.831	307	614	
Mode 3	110.0~205.0	uT	0.134	150 res		
Mode 3	110.0~205.0	A/m	0.108	0.815	1.63	
Mode 3	110.0~205.0	V/m	40.422	307	614	

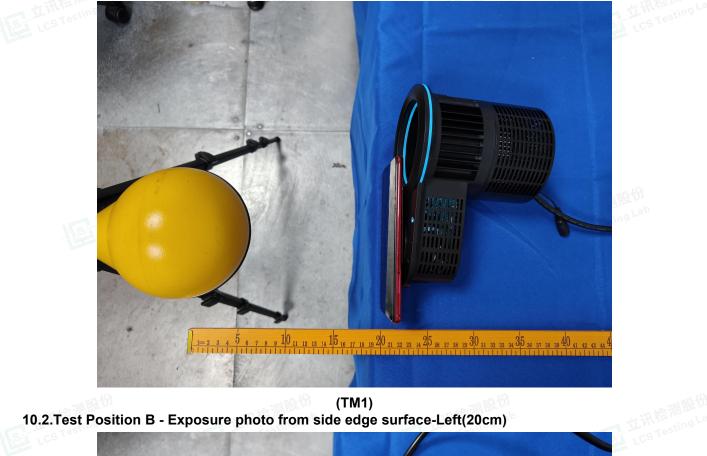
Note:V/m=10(((20lg(A/m*10^6)+51.5)-120)/20)

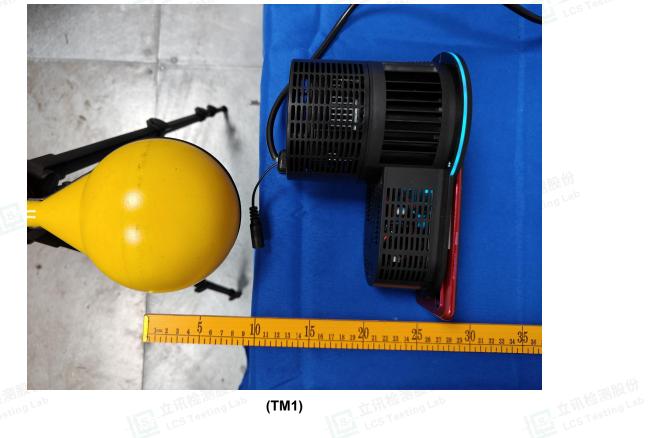
Note:A/m=uT/1.25













Shenzhen LCS Compliance Testing Laboratory Ltd. Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.co Scan code to check authenticity



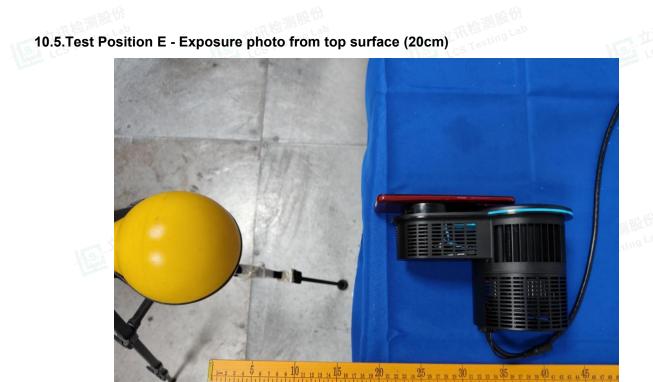




Shenzhen LCS Compliance Testing Laboratory Ltd. Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com Scan code to check authenticity

(TM1)





11. Conclusion

A minimum safety distance of at 20 cm surrounding the device of is required when the device is charging a smart phone. The detected emissions with a distance of 20 cm surrounding the device a below the limitations according to FCC KDB 680106 D01 Section 3. RF Exposure Requirement Clause 3.

(TM1)

12. Description of Test Facility

NVLAP Accreditation Code is 600167-0.

FCC Designation Number is CN5024

CAB identifier is CN0071.

CNAS Registration Number is L4595.

Test Firm Registration Number: 254912.







Shenzhen LCS Compliance Testing Laboratory Ltd. Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com Scan code to check authenticity

.END OF REPORT..