

# RF Exposure Evaluation

## FCC ID: 2AZWI-3108LEQI

### Original Grant

**Report No.** : TB-MPE183166  
**Applicant** : Shenzhen Leqi Network Technology Co., LTD  
**Equipment Under Test (EUT)**  
**EUT Name** : Charging Tripod  
**Model No.** : 3108  
**Series Model No.** : 3541, 3534, 3544, 3545, 3546, 3547, 3548, 3549, 3550  
**Brand Name** : SmallRig  
**Sample ID** : 20210729-01-1#  
**Receipt Date** : 2021-08-05  
**Test Date** : 2021-08-05 to 2021-09-18  
**Issue Date** : 2021-09-18  
**Standards** : ANSI C95.1-1999  
FCC KDB publication 680106 D01  
FCC CFR 47 part 15.209  
FCC KDB publication 447498 D01

**Conclusions** : **PASS**

In the configuration tested, the EUT complied with the standards specified above.

**Test/Witness Engineer** :

*Seven Wu*

Seven Wu

**Engineer Supervisor** :

*IVAN SU*

Ivan Su

**Engineer Manager** :

*Ray Lai*

Ray Lai



This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in the report.



## CONTENTS

<b>CONTENTS.....</b>	<b>2</b>
<b>1. CLIENT INFORMATION .....</b>	<b>4</b>
<b>2. GENERAL DESCRIPTION OF EUT .....</b>	<b>4</b>
<b>3. TEST FACILITY.....</b>	<b>5</b>
<b>4. RF EXPOSURE CONSIDERATIONS .....</b>	<b>6</b>
4.1. Evaluation Method.....	6
4.2. Measuring Standard .....	8
4.3. Requirements .....	8
4.4. Test Setup.....	9
4.5. Test Procedure.....	9
4.6. Test Equipment List.....	9
4.7. Measurement Uncertainty .....	9
4.8. Support equipment List.....	10
4.9. Equipment Approval Considerations .....	10
4.10. Deviation From Test Standard .....	10
<b>5. TEST DESCRIPTION AND TEST RESULT .....</b>	<b>11</b>
5.1. Bluetooth Evaluation .....	11
5.2. Wireless Charge Evaluation - H field Strength.....	11
5.3. Simultaneous Transmission for SAR Exclusion.....	13
5.4. Conclusion .....	13
<b>6. TEST SET-UP PHOTO.....</b>	<b>14</b>



## Revision History

Report No.	Version	Description	Issued Date
TB-MPE183166	Rev.01	Initial issue of report	2021-09-18



## 1. Client Information

<b>Applicant</b>	:	Shenzhen Leqi Network Technology Co., LTD
<b>Address</b>	:	Room 101, Building 9 & Room 401, Building 12, Yazhou Industrial Park, Bantian, Longgang, Shenzhen, Guangdong, China.
<b>Manufacturer</b>	:	Shenzhen Leqi Network Technology Co., LTD
<b>Address</b>	:	Room 101, Building 9 & Room 401, Building 12, Yazhou Industrial Park, Bantian, Longgang, Shenzhen, Guangdong, China.

## 2. General Description of EUT

<b>EUT Name</b>	:	Charging Tripod
<b>HVIN/Models No.</b>	:	3108, 3541, 3534, 3544, 3545, 3546, 3547, 3548, 3549, 3550
<b>Model Difference</b>	:	All these models are the same in the same PCB, layout and circuit, the only difference is the model name and appearance color.
<b>Product Description</b>	Operation Frequency:	Bluetooth LE: 2402MHz~2480MHz WPT: 113KHz-205KHz
	Modulation Type:	WPT: CW (Continuous Wave) Bluetooth LE: GFSK
	Antenna:	WPT: Coil Antenna Bluetooth LE: PCB Antenna
<b>Power Supply</b>	:	Charging Tripod: Type-C Input: 15W DC 5V, 3A Wireless Charger: Type-C Input: 10W DC 5V, 2A Output: 5W, 10W
<b>Battery:</b>	:	DC 3.7V by 4000mAh Li-ion battery
<b>Software Version</b>	:	V1.1
<b>Hardware Version</b>	:	V1.1
<b>Exposure category</b>	:	General population/uncontrolled environment
<b>EUT Type</b>	:	Production Unit
<b>Device Type</b>	:	Mixed Mobile and Portable Device

**Note:** More test information about the EUT please refer the RF Test Report.



### 3. Test Facility

The testing report were performed by the Shenzhen Toby Technology Co., Ltd., in their facilities located at 1/F., Building 6, Rundongsheng Industrial Zone, Longzhu, Xixiang, Bao'an District, Shenzhen, Guangdong, China. At the time of testing, the following bodies accredited the Laboratory:

#### **CNAS (L5813)**

The Laboratory has been accredited by CNAS to ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories for the competence in the field of testing. And the Registration No.: CNAS L5813.

#### **A2LA Certificate No.: 4750.01**

The laboratory has been accredited by American Association for Laboratory Accreditation(A2LA) to ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories for the technical competence in the field of Electrical Testing. And the A2LA Certificate No.: 4750.01.FCC Accredited Test Site Number: 854351. Designation Number: CN1223.

#### **IC Registration No.: (11950A)**

The Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing. The site registration: Site# 11950A. CAB identifier: CN0056.



## 4. RF Exposure Considerations

### 4.1. Evaluation Method

#### Per KDB 447498 D01 Section 4.3.1 Standalone SAR test exclusion considerations;

a) For 100 MHz to 6 GHz and test separation distances  $\leq 50$  mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$  for 1-g SAR, and  $\leq 7.5$  for 10-g extremity SAR, 30 where

- $f(\text{GHz})$  is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison
- The values 3.0 and 7.5 are referred to as numeric thresholds in step b) below

The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  mm, and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is  $< 5$  mm, a distance of 5 mm according to 4.1 f) is applied to determine SAR test exclusion.

b) For 100 MHz to 6 GHz and test separation distances  $> 50$  mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following (also illustrated in Appendix B):

- (1)  $\{[\text{Power allowed at numeric threshold for 50 mm in step a)}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot (f(\text{MHz})/150)]\}$  mW, for 100 MHz to 1500 MHz
- (2)  $\{[\text{Power allowed at numeric threshold for 50 mm in step a)}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot 10]\}$  mW, for  $> 1500$  MHz and  $\leq 6$  GHz
- (3) For frequencies below 100 MHz, the following may be considered for SAR test exclusion (also illustrated in Appendix C):
- (4) For test separation distances  $> 50$  mm and  $< 200$  mm, the power threshold at the corresponding test separation distance at 100 MHz in step b) is multiplied by  $[1 + \log(100/f(\text{MHz}))]$
- (5) For test separation distances  $\leq 50$  mm, the power threshold determined by the equation in c) 1) for 50 mm and 100 MHz is multiplied by  $\frac{1}{2}$
- (6) SAR measurement procedures are not established below 100 MHz.

When SAR test exclusion cannot be applied, a KDB inquiry is required to determine SAR evaluation requirements for any SAR test results below 100 MHz to be acceptable.

#### Per KDB 447498 D01 Section 4.3.2 Simultaneous transmission SAR test exclusion considerations;

When an antenna qualifies for the standalone SAR test exclusion of 4.3.1 and also transmits simultaneously with other antennas, the standalone SAR value must be estimated according to the following to determine the simultaneous transmission SAR test exclusion criteria:

- 1)  $[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})/x}] \text{ W/kg}$ , for test separation distances  $\leq 50$  mm; where  $x = 7.5$  for 1-g SAR and  $x = 18.75$  for 10-g SAR.
- 2) 0.4 W/kg for 1-g SAR and 1.0 W/kg for 10-g SAR, when the test separation distance is  $> 50$  mm



**Per KDB 680106 D01 Section 3. RF Exposure Requirements;**

1) Consumer wireless power transfer devices approved under Part 18 in some cases have to demonstrate compliance with RF exposure requirements. The potential for exposure must be assessed according to the operating configurations of the wireless system and the exposure conditions of users and bystanders. RF exposure must be evaluated with the client device(s) being charged by the primary at maximum output power. The RF exposure requirements must be determined in conjunction with the device operating characteristics, according to the mobile and portable exposure requirements in Section 2.1091 and Section 2.1093 of the rules. SAR and MPE limits do not cover the frequency range for wireless power transfer applications which operate below 100 kHz and 300 kHz respectively; therefore, RF exposure compliance needs to be determined with respect to 1.1307 (c) and (d) of the FCC rules.

2) Based on the design and implementation of the power transfer application, it must be clearly identified if mobile or portable RF exposure conditions apply. Devices that are installed to provide separation of at least 20 cm from users and bystanders may qualify for mobile exposure conditions. For some conditions where users and bystanders may be exposed at closer than 20 cm, section 2.1091(d) (4) of the rules may apply.

3) For devices designed for typical desktop applications, such as 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.

4) Portable exposure conditions from 100 kHz to 6 GHz are determined with respect to SAR requirements. Existing SAR systems and test procedures are generally intended for measurements above 100 MHz. While numerical modeling can be an alternative, the constraints of substantial computational resources at low frequencies could introduce further limitations. Under these circumstances, including operations below 100 kHz, the Commission may consider a combination of analytical analysis, field strength, radiated and conducted power measurements, in conjunction with some limited numerical modeling to assess compliance.

5) Depending on the operating frequency, existing SAR and MPE measurement procedures may be adapted to evaluate wireless power transfer devices for compliance with respect to mobile or portable exposure conditions. If the grantee or its test lab have any questions regarding RF exposure evaluation they should contact the FCC Laboratory with sufficient system operating configuration details to determine if RF exposure evaluation is necessary and, if required, how to apply specific test procedures. Below 100 MHz, when SAR testing is required and the device is operating at close proximity to persons, information on device design, implementation, operating configurations, exposure conditions of users and bystanders are needed to determine the evaluation and testing requirements. In addition, the influence of nearby objects may also need consideration according to the wireless power transfer system implementation; for example, the effects of placing the device, its coils or radiating elements on or near metallic surfaces.

6) According to April 2018 TCB Workshop, No need to report E-field measurements. Only H-field required.



## 4.2. Measuring Standard

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

[FCC KDB publication 680106 D01 RF Exposure Wireless Charging Apps v03](#): RF Exposure Considerations for Low Power Consumer Wireless Power Transfer Applications.

[FCC CFR 47 part 15.209](#): Radiated Emission Limits; General Requirements.

[FCC KDB publication 447498 D01 General RF Exposure Guidance v06](#): Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies.

## 4.3. Requirements

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 <sup>2</sup> )	Averaging Time (minute)
<b>Limits for Occupational/Controlled Exposure</b>				
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
300-1,500	/	/	f/300	6
1,500-100,000	/	/	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 <sup>2</sup> )	Averaging Time (minute)
<b>Limits for General Population/Uncontrolled Exposure</b>				
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
300-1,500	/	/	f/1500	30
1,500-100,000	/	/	1.0	30

F=frequency in MHz

\*=Plane-wave equivalent power density

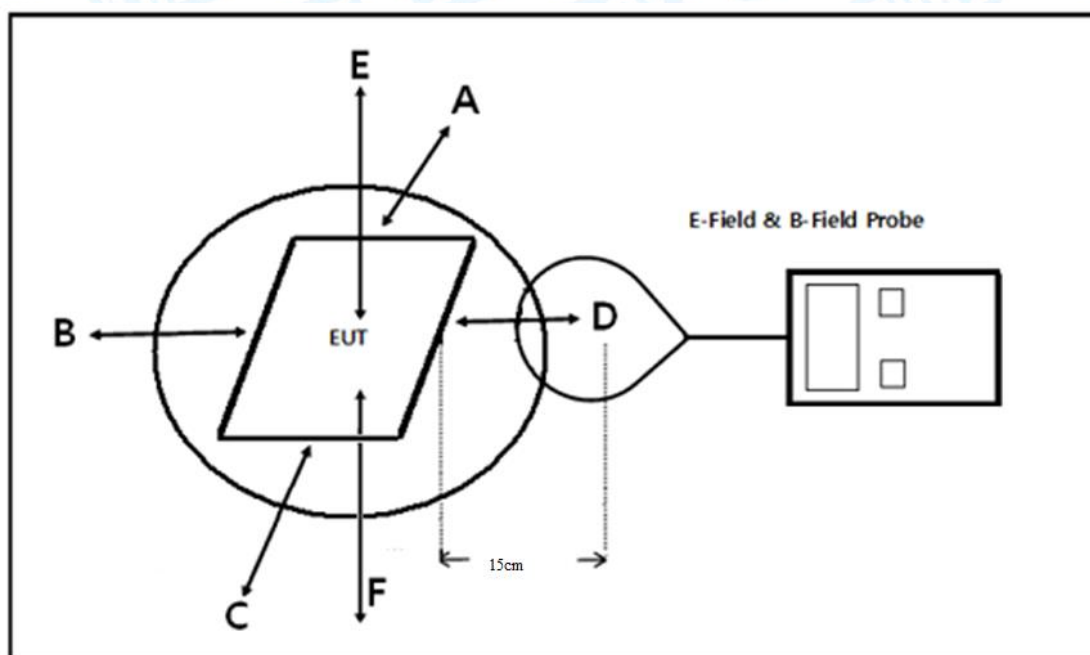
According to FCC KDB 680106 D01 Section 3. RF Exposure Requirements clause 3 the Emission-Limits in the frequency range from 100 KHz to 300 KHz should be assessed versus the limits at 300 KHz in Table 1 of CFR 47 – Section1.310 as following (measured distance shall be 15cm from the center of the probe to the edge of the device):

	E-filed	H-filed	B-filed
Frequency	V/m	A/m	uT
<b>0.3 MHz – 3.0 MHz</b>	614	1.613	2.0
<b>3.0 MHz – 30 MHz</b>	824/f (=27.5 <sub>30MHz</sub> )	2.19/f (=0.073 <sub>30MHz</sub> )	--

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



#### 4.4. Test Setup



#### 4.5. Test Procedure

- 1) The RF exposure test was performed in anechoic chamber.
- 2) The aggregate H-field strengths at 5/10/15 cm surrounding the device and 5/10/15/20 cm above the top surface.
- 3) 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.
- 4) The EUT was measured according to the dictates of KDB 680106 D01 v03.

#### 4.6. Test Equipment List

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
Magnetic field meter	NARDA	ELT-400	O-0449	Aug. 27, 2021	Aug. 26, 2022
Magnetic field probe	NARDA	ELT- probe 100cm <sup>2</sup>	M-1850	Aug. 27, 2021	Aug. 26, 2022
Field intensity probe	NARDA	EP-601	811ZX01000	Jun. 05, 2021	Jun. 04, 2022

#### 4.7. Measurement Uncertainty

The reported uncertainty of measurement  $y \pm U$ , where expanded uncertainty  $U$  is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately 95 %.

Test Item	Parameters	Uncertainty
Field Strength Uncertainty	1Hz~400KHz	1%



#### 4.8. Support equipment List

Equipment Information				
Name	Model	FCC ID/SDOC	S/N	Manufacturer
Iphone	Iphone X	ID/SDOC	----	Apple
Adapter	XY-PQ018C1	SDOC	----	HUAWEI

#### 4.9. Equipment Approval Considerations

The EUT does comply with item 5.2 of KDB 680106 D01v02 as follows 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 113.0 KHz - 205.0 KHz
Output power from each primary coil is less than 15 watts	Yes	The maximum output power of the primary coil is 10W.
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.	Yes	The transfer system includes one primary coils and clients that are able to detect and allow coupling only between individual pairs of 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	Portable exposure conditions
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.	No	Portable exposure condition.

In all other cases, unless excluded above, an RF exposure evaluation report must be reviewed and accepted through a KDB or PBA inquiry to enable authorization of the equipment. When evaluation is required to show compliance; for example, using field strength, power density, SAR measurements or computational modeling etc., the specific authorization requirements will be determined based on the results of the RF exposure evaluation

#### 4.10. Deviation From Test Standard

No deviation



## 5. Test Description and Test Result

### 5.1. Bluetooth Evaluation

#### 5.1.1. Maximum Conducted Power

Mode	Channel	Frequency (MHz)	Peak Conducted Output Power (dBm)
GFSK (1Mbps)	0	2402	-0.297
	20	2442	-0.613
	39	2480	-1.248
GFSK (2Mbps)	0	2402	-0.332
	20	2442	-0.641
	39	2480	-1.217

#### 5.1.2. Manufacturing Tolerance

GFSK (Peak)			
Channel	Channel 0	Channel 20	Channel 39
Target (dBm)	-1	-1	-1
Tolerance $\pm$ (dB)	1.0	1.0	1.0

#### 5.1.3. Standalone Evaluation Results

Band/Mode	f (GHz)	Antenna Distance (mm)	RF output power		SAR Test Exclusion Threshold	SAR Test Exclusion
			dBm	mW		
GFSK(1Mbps)	2.402	5	-0.297	0.934	0.29 < 3.0	Yes

Remark:

1. Output power including tune up tolerance;

2. When the minimum test separation distance is < 5 mm, a distance of 5 mm according to f) in section 4.1 is applied to determine SAR test exclusion.

## 5.2. Wireless Charge Evaluation - H field Strength

### 5.2.1. Mode of operation during the test / Test peripherals used

Test Modes		Exposure conditions	Test Frequency	Remark
TM1	EUT(10W) + Mobile Phone (Battery Status: <1%)	<input type="checkbox"/> Mobile <input checked="" type="checkbox"/> Portable	115KHz	Record
TM2	EUT(10W) + Mobile Phone (Battery Status: <50%)	<input type="checkbox"/> Mobile <input checked="" type="checkbox"/> Portable	115KHz	Record
TM3	EUT(10W) + Mobile Phone (Battery Status: <99%)	<input type="checkbox"/> Mobile <input checked="" type="checkbox"/> Portable	115KHz	Record
TM4	EUT(5W) + Mobile Phone (Battery Status: <1%)	<input type="checkbox"/> Mobile <input checked="" type="checkbox"/> Portable	115KHz	Pre-tested
TM5	EUT(5W) + Mobile Phone (Battery Status: <50%)	<input type="checkbox"/> Mobile <input checked="" type="checkbox"/> Portable	115KHz	Pre-tested
TM6	EUT(5W) + Mobile Phone (Battery Status: <99%)	<input type="checkbox"/> Mobile <input checked="" type="checkbox"/> Portable	115KHz	Pre-tested

Note: All test modes were pre-tested, but we only recorded the worst case (TM1, TM2, TM3) in this report.

### 5.2.2. Characterization for frequency range reduction

The default frequency range of ETL-400 is 30Hz~400kHz, As per test plot in clause 7.7 of report TB-FCC180217. All Emission in frequency range of 400kHz to 10MHz is below 20dBc, thus conform the situation for test frequency range reduction.

### 5.2.3. Description of Test Quantities

The ETL-400 can only measure Magnetic field density(B), following calculation is applied for convert Magnetic field density to H-field:  $H\text{-field}(A/m) = B(uT)/1.25$



## 5.2.4. Test Result

Operate mode	Charging Battery Level	Measured Distance (cm)	Frequency Range (MHz)	Magnetic field density(B) (uT)					
				Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Test Position F
TM1	1%	5	0.115	0.372	0.217	0.335	0.279	0.256	0.695
TM2	50%	5	0.115	0.354	0.215	0.321	0.254	0.234	0.687
TM3	99%	5	0.115	0.302	0.201	0.306	0.214	0.210	0.598
TM1	1%	10	0.115	0.231	0.216	0.249	0.235	0.229	0.305
TM2	50%	10	0.115	0.224	0.196	0.231	0.212	0.211	0.297
TM3	99%	10	0.115	0.214	0.187	0.219	0.199	0.199	0.265
TM1	1%	15	0.115	0.216	0.215	0.222	0.224	0.227	0.232
TM2	50%	15	0.115	0.206	0.207	0.213	0.204	0.220	0.214
TM3	99%	15	0.115	0.198	0.189	0.200	0.186	0.218	0.207
TM1	1%	20	0.115	/	/	/	/	0.217	0.218
TM2	50%	20	0.115	/	/	/	/	0.212	0.207
TM3	99%	20	0.115	/	/	/	/	0.197	0.189

Operate mode	Charging Battery Level	Measured Distance (cm)	Frequency Range (MHz)	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	
TM1	1%	5	0.115	0.298	0.174	0.268	0.223	0.205	0.556	1.63
TM2	50%	5	0.115	0.283	0.172	0.257	0.203	0.187	0.550	1.63
TM3	99%	5	0.115	0.242	0.161	0.245	0.171	0.168	0.478	1.63
TM1	1%	10	0.115	0.185	0.173	0.199	0.188	0.183	0.244	1.63
TM2	50%	10	0.115	0.179	0.157	0.185	0.170	0.169	0.238	1.63
TM3	99%	10	0.115	0.171	0.150	0.175	0.159	0.159	0.212	1.63
TM1	1%	15	0.115	0.173	0.172	0.178	0.179	0.182	0.186	1.63
TM2	50%	15	0.115	0.165	0.166	0.170	0.163	0.176	0.171	1.63
TM3	99%	15	0.115	0.158	0.151	0.160	0.149	0.174	0.166	1.63
TM1	1%	20	0.115	/	/	/	/	0.174	0.174	1.63
TM2	50%	20	0.115	/	/	/	/	0.170	0.166	1.63
TM3	99%	20	0.115	/	/	/	/	0.158	0.151	1.63

Operate mode	Charging Battery Level	Measured Distance (cm)	Frequency Range (MHz)	Measured E-Field Strength Values (V/m)						E-Field Strength 50% Limits (V/m)
				Test Position A	Test Position B	Test Position C	Test Position D	Test Position E	Test Position F	
TM1	1%	5	0.115	7.585	8.236	7.125	7.462	7.365	8.561	307.0
TM2	50%	5	0.115	7.978	7.326	7.356	7.236	8.563	8.456	307.0
TM3	99%	5	0.115	7.457	8.126	7.456	8.236	7.266	8.326	307.0
TM1	1%	10	0.115	7.298	7.174	7.268	7.223	7.205	8.264	307.0
TM2	50%	10	0.115	7.452	6.562	7.561	5.462	6.562	9.452	307.0
TM3	99%	10	0.115	7.326	6.236	7.236	5.326	6.356	8.126	307.0
TM1	1%	15	0.115	7.562	8.456	9.690	7.123	7.585	8.936	307.0
TM2	50%	15	0.115	7.125	7.652	7.312	7.236	8.362	8.562	307.0
TM3	99%	15	0.115	7.453	7.356	7.236	6.561	7.456	8.324	307.0
TM1	1%	20	0.115	/	/	/	/	7.561	8.562	307.0
TM2	50%	20	0.115	/	/	/	/	8.562	9.456	307.0
TM3	99%	20	0.115	/	/	/	/	7.356	8.326	307.0



### 5.3. Simultaneous Transmission for SAR Exclusion

The WPT and BT share difference antenna and difference modular, WPT and BT can transmit at the same, need consider simultaneous transmission.

Maximum Simultaneous transmission SAR Ratio for BT and WPT.

Maximum SAR Ratio <sub>BT</sub>	Maximum SAR Ratio <sub>WPT</sub>	$\sum \text{SAR ratio}_{\text{BT}} + \text{SAR ratio}_{\text{WPT}}$	Limit	Results
0.18	0.34	< 0.52	1.0	PASS

Remark:

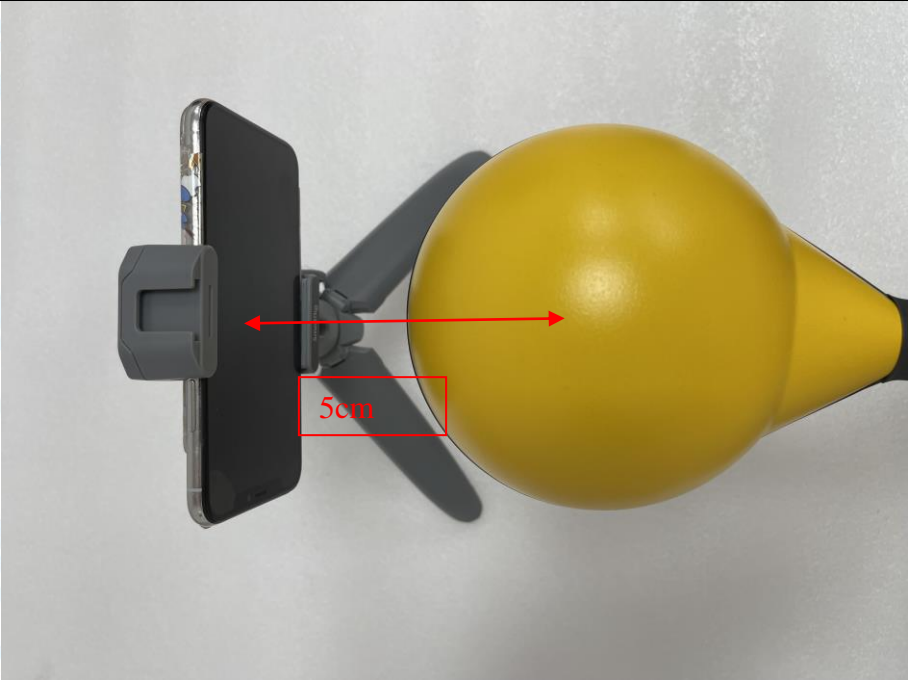
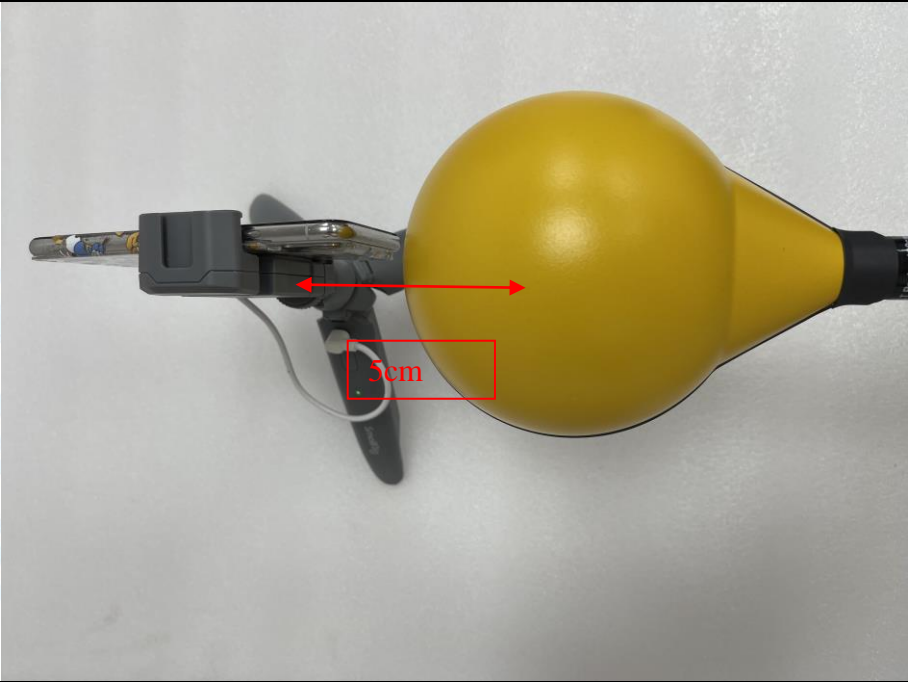
1. Output power including tune-up tolerance;
2. Evaluate limits for WPT at Field-Strength Limit.
3. Max. SAR Ratio=Max. Evaluation Values/Sar Limit, So:  
**Maximum SAR Ratio<sub>BT</sub> = 0.29/1.6 = 0.18**  
**Maximum SAR Ratio<sub>WPT</sub> = 0.556/1.63 = 0.34**

### 5.4. Conclusion

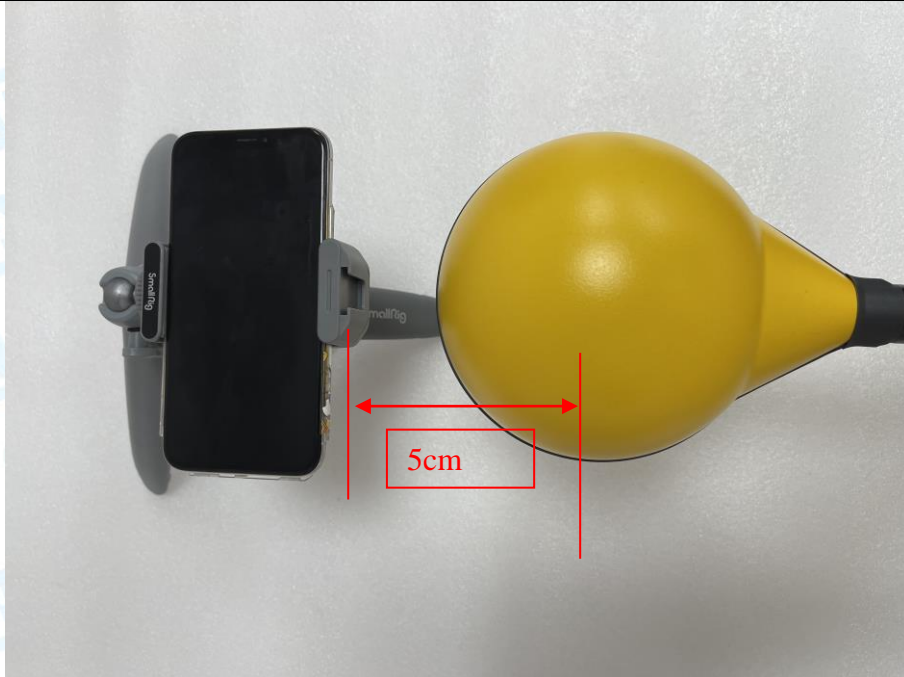
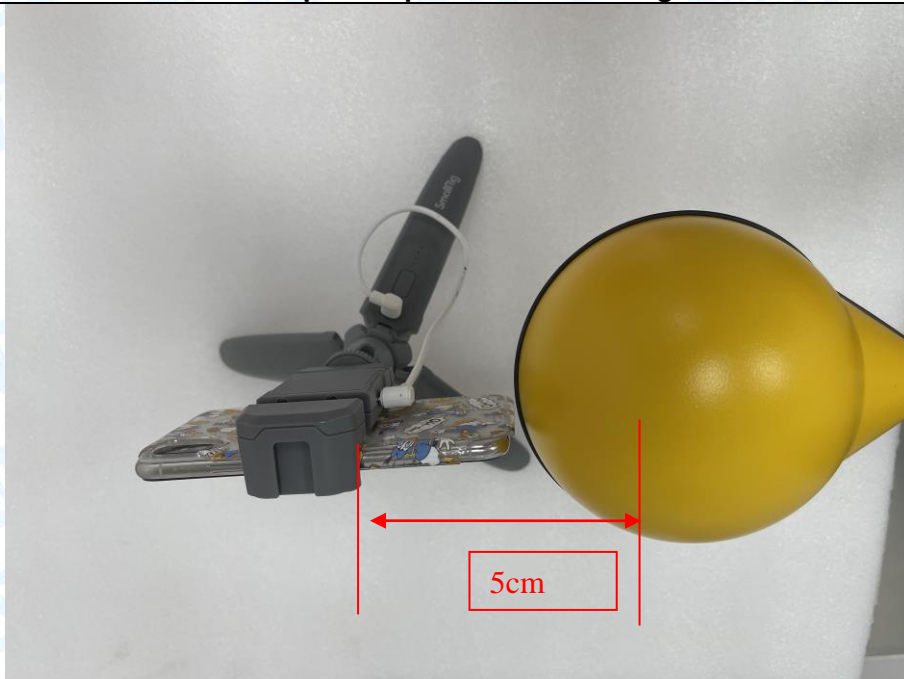
A minimum safety distance of 5cm to the antenna is required when the device is charging a smart phone for portable exposure. The detected emissions are below the limitations according FCC KDB 680106 and confirmed by the FCC according to KDB Inquire.



**6. Test Set-up Photo**

<b>H-Field Strength-5cm</b>	
<b>Test Position E - Exposure photo from top surface</b>	
	
<b>H-Field Strength-5cm</b>	
<b>Test Position A - Exposure photo from side edge surface-Rear</b>	
	

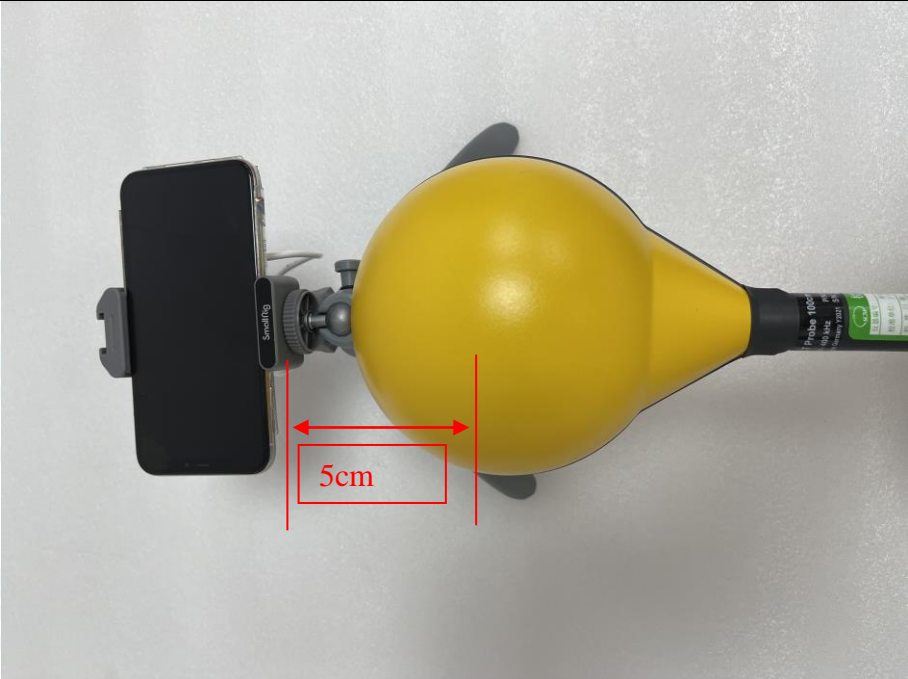


**H-Field Strength-5cm****Test Position B - Exposure photo from side edge surface-Left****H-Field Strength-5cm****Test Position C - Exposure photo from side edge surface-Front**



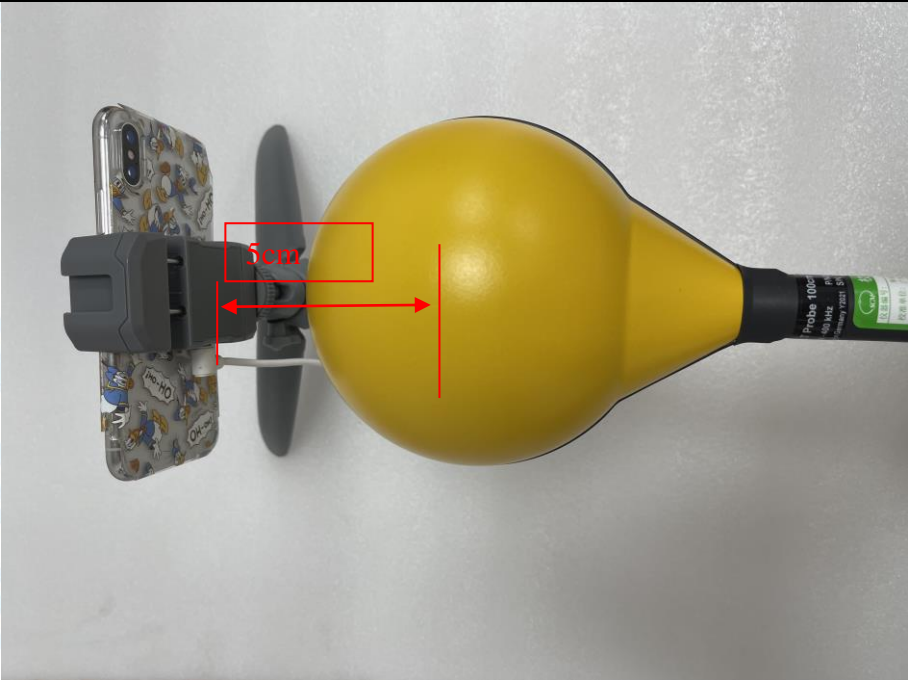
**H-Field Strength-5cm**

**Test Position D - Exposure photo from side edge surface-Right**



**E-Field Strength-5cm**

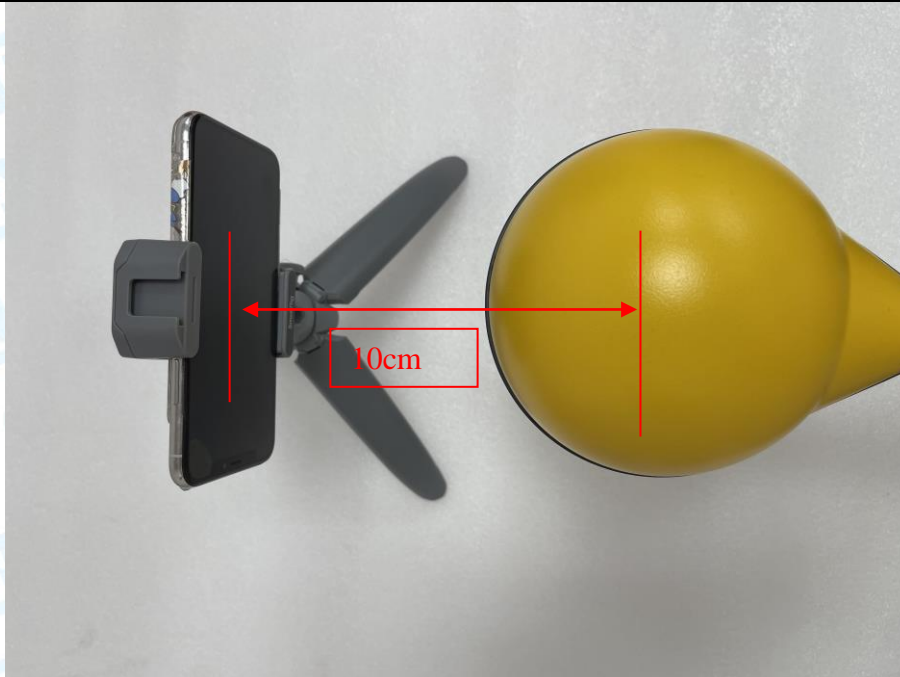
**Test Position F - Exposure photo from Back surface**





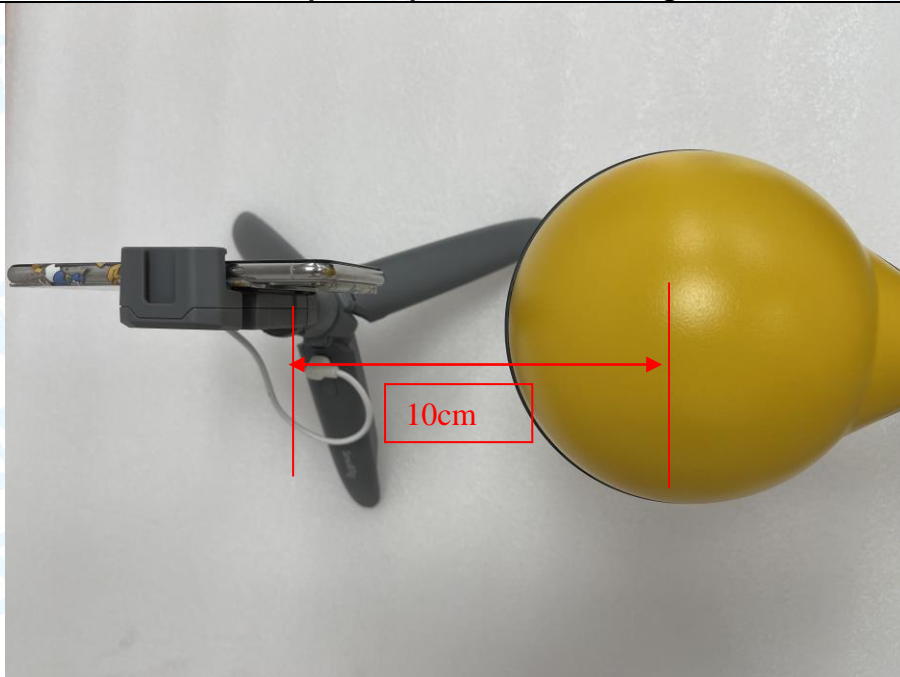
**H-Field Strength-10cm**

**Test Position E - Exposure photo from top surface**



**H-Field Strength-10cm**

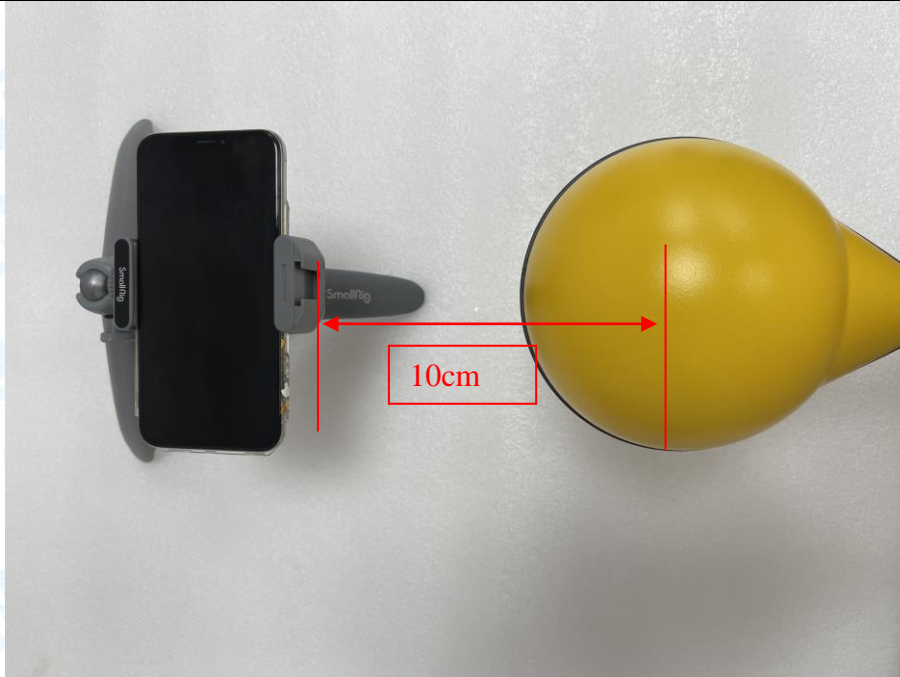
**Test Position A - Exposure photo from side edge surface-Rear**





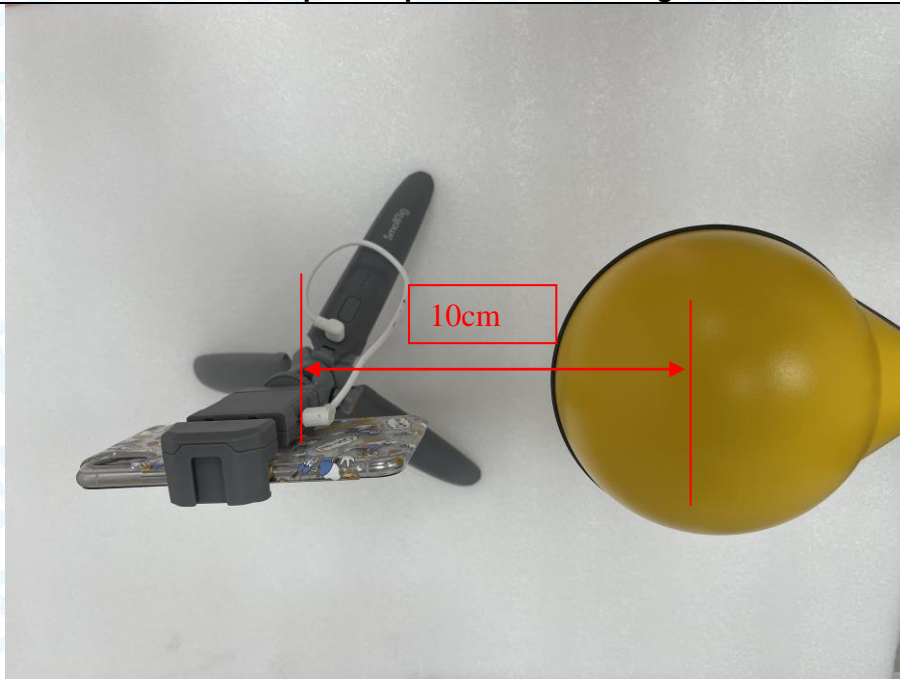
**H-Field Strength-10cm**

**Test Position B - Exposure photo from side edge surface-Left**

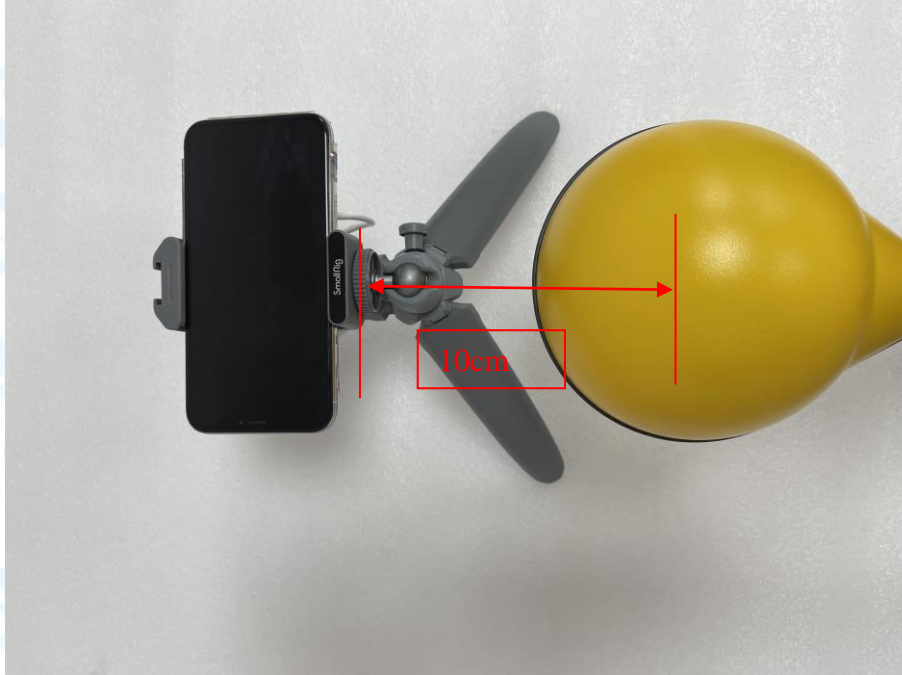
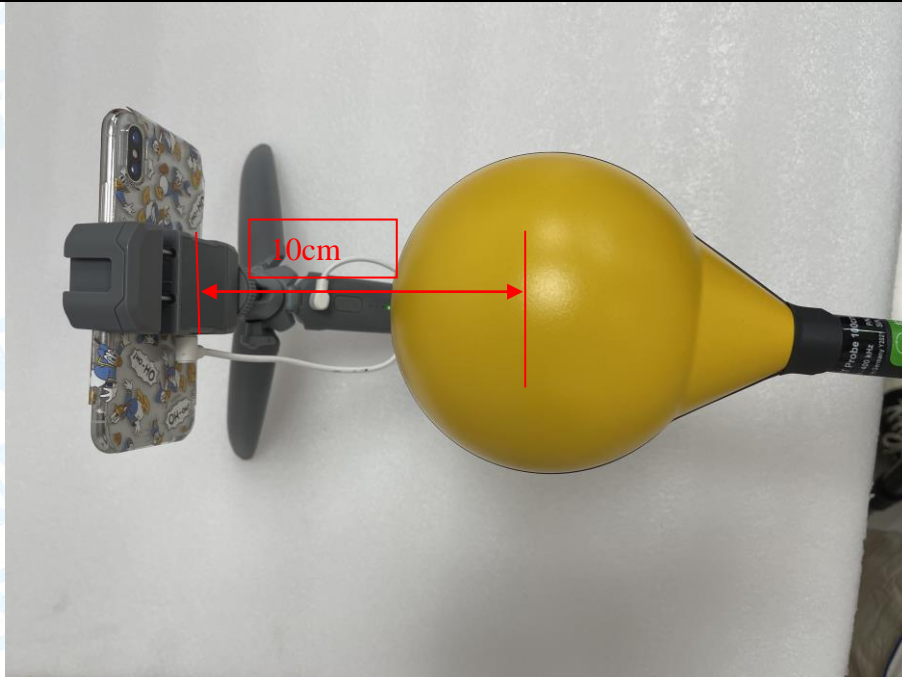


**H-Field Strength-10cm**

**Test Position C - Exposure photo from side edge surface-Front**



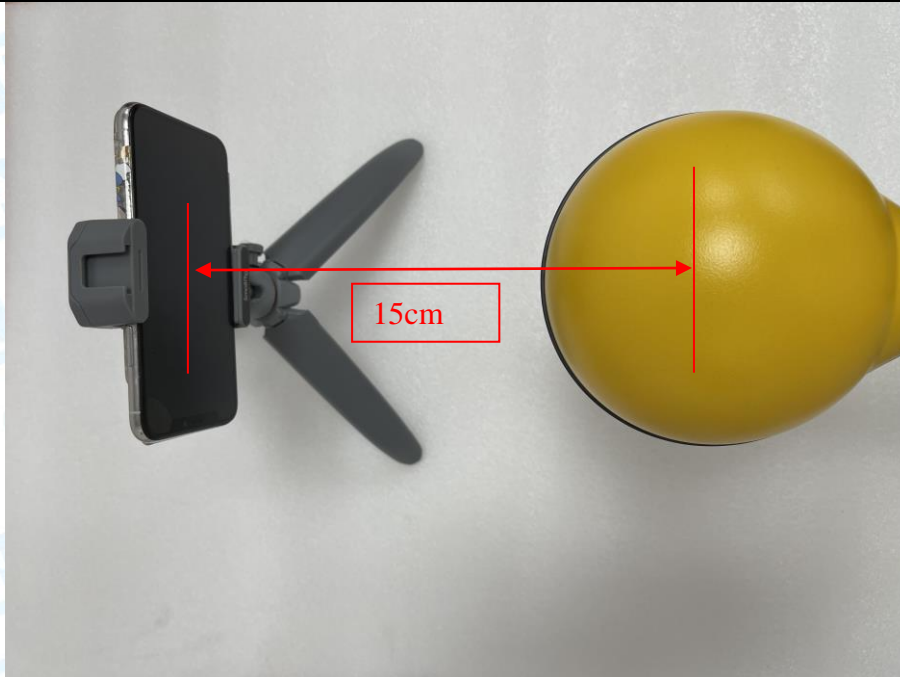


**H-Field Strength-10cm****Test Position D - Exposure photo from side edge surface-Right****E-Field Strength-10cm****Test Position F - Exposure photo from Back surface**



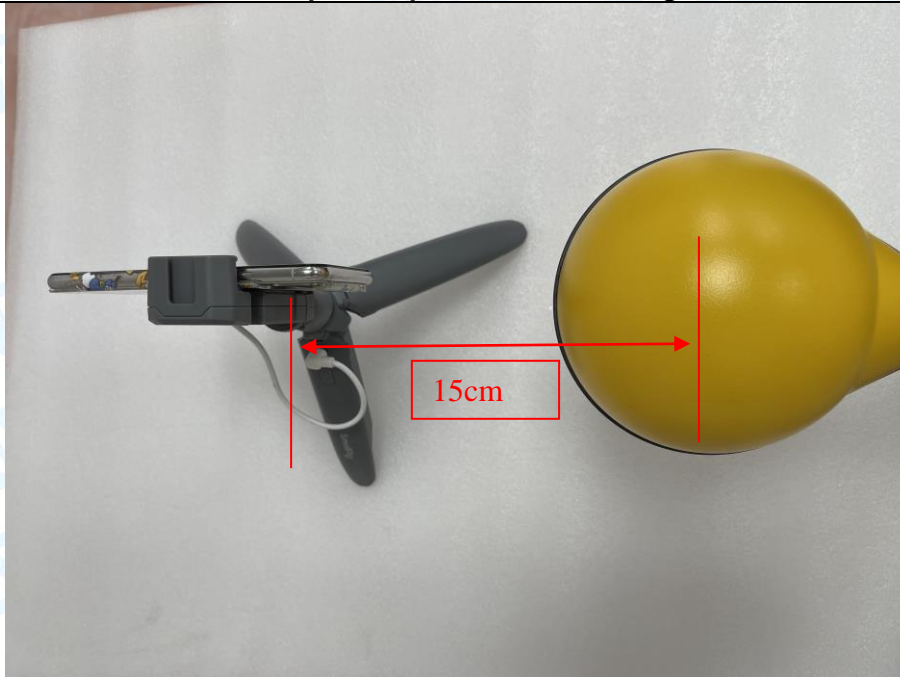
**H-Field Strength-15cm**

**Test Position E - Exposure photo from top surface**



**H-Field Strength-15cm**

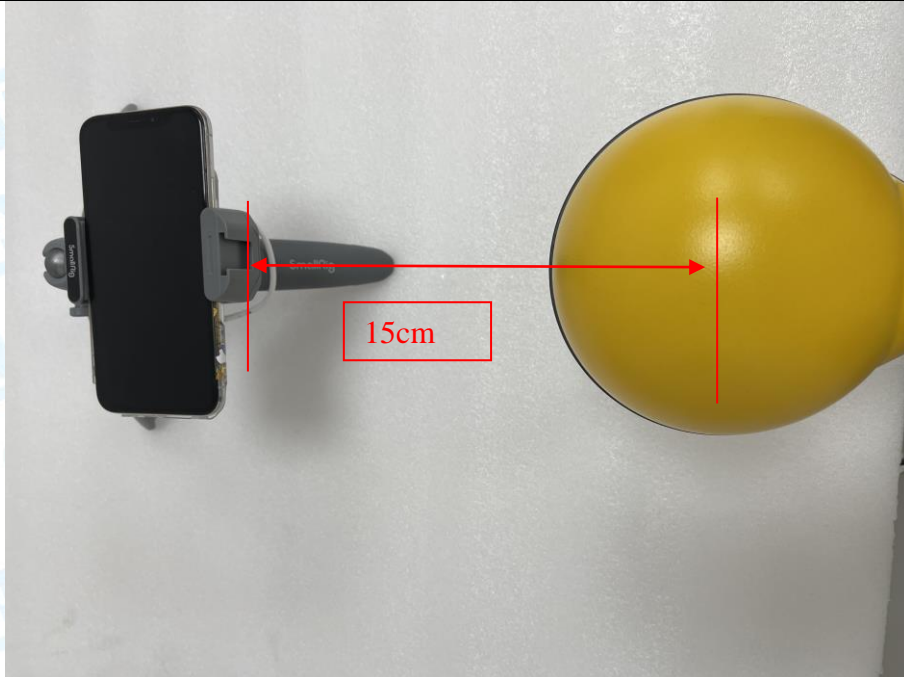
**Test Position A - Exposure photo from side edge surface-Rear**





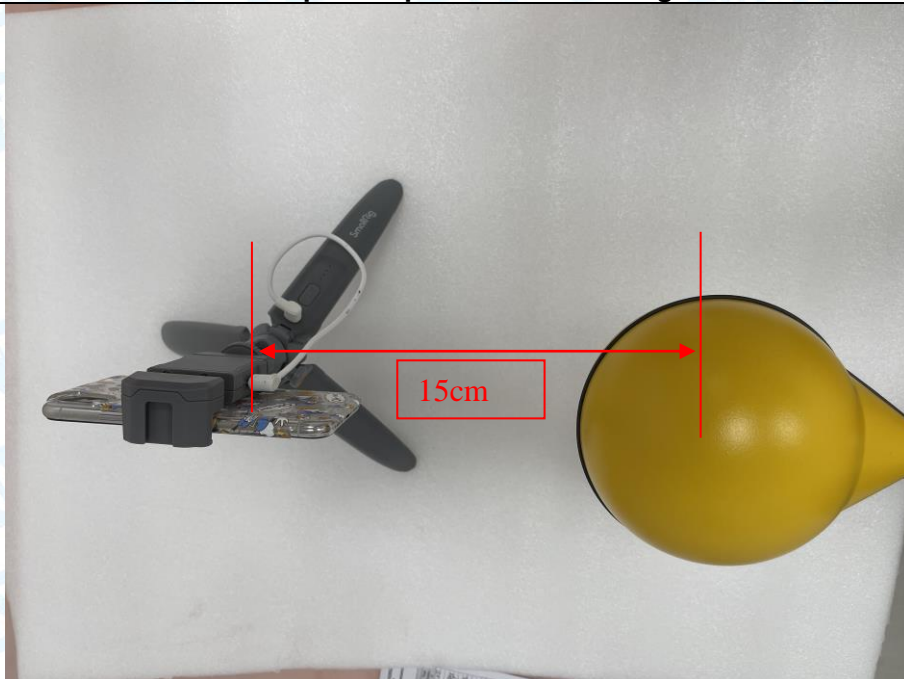
**H-Field Strength-15cm**

**Test Position B - Exposure photo from side edge surface-Left**



**H-Field Strength-15cm**

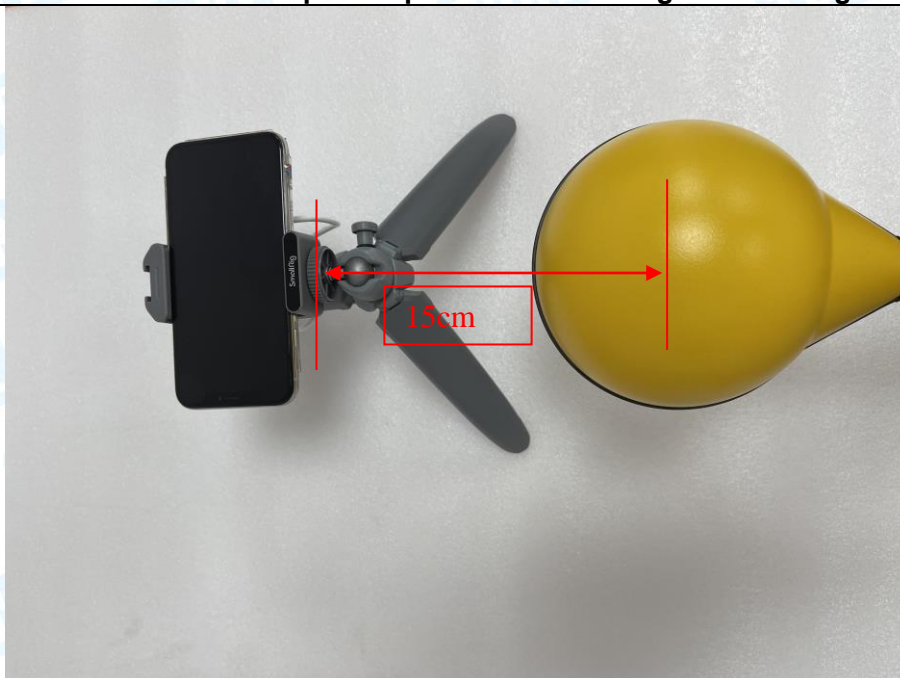
**Test Position C - Exposure photo from side edge surface-Front**





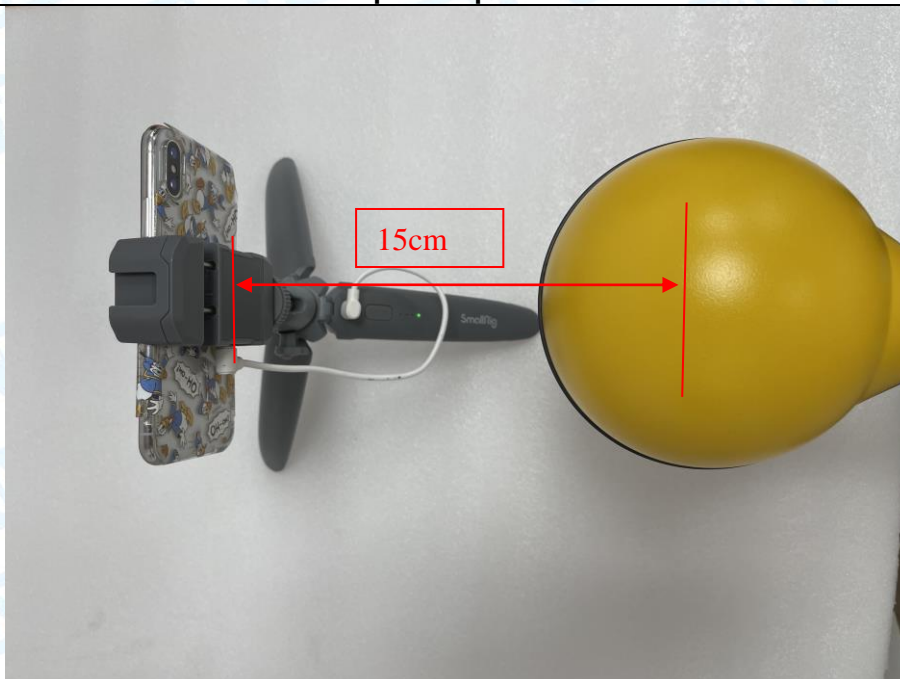
**H-Field Strength-15cm**

**Test Position D - Exposure photo from side edge surface-Right**



**E-Field Strength-15cm**

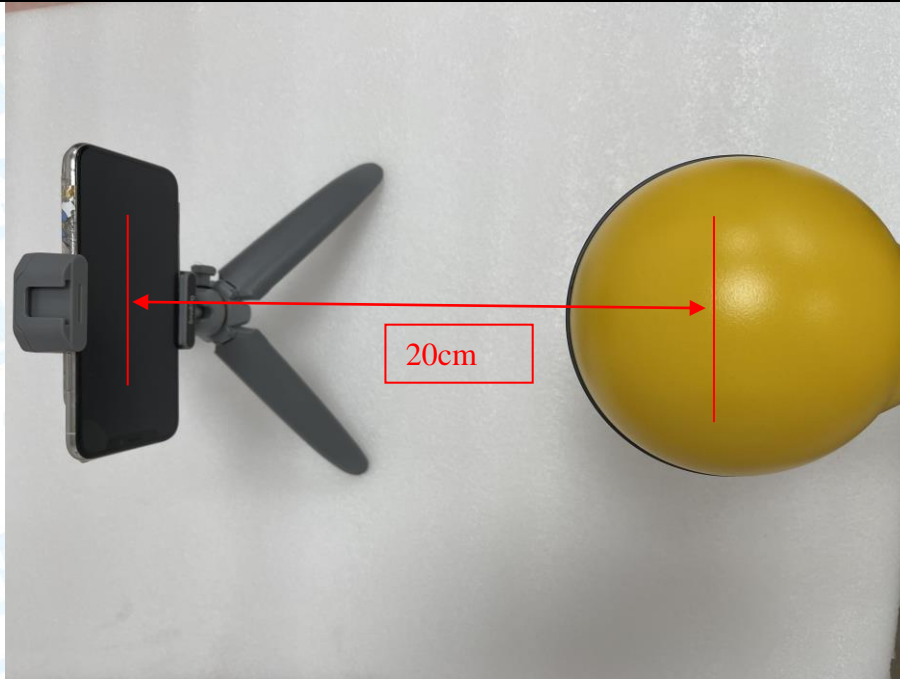
**Test Position F - Exposure photo from Back surface**





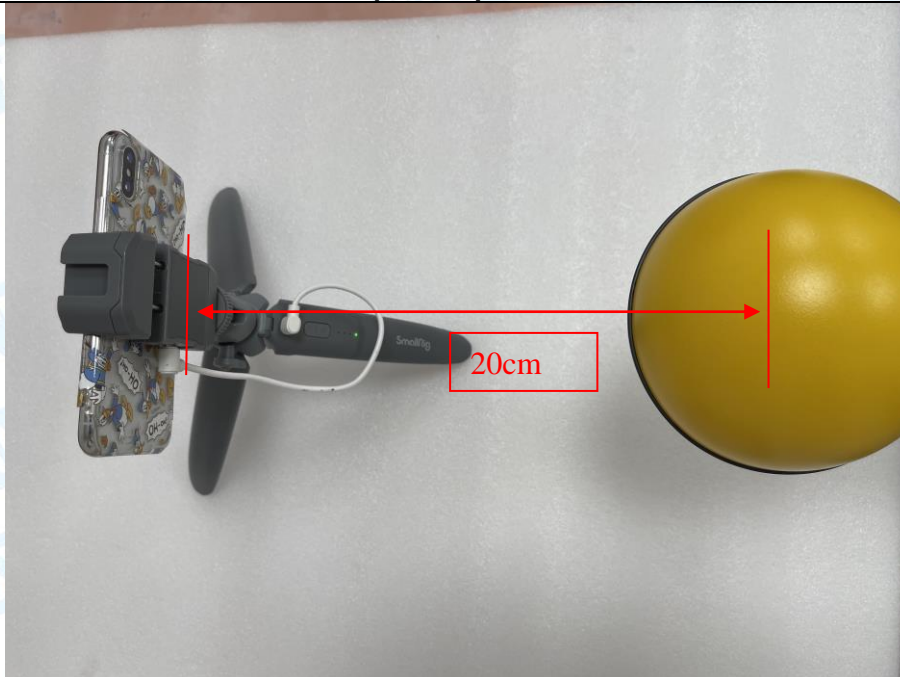
**H-Field Strength-20cm**

**Test Position E - Exposure photo from top surface**



**E-Field Strength-20cm**

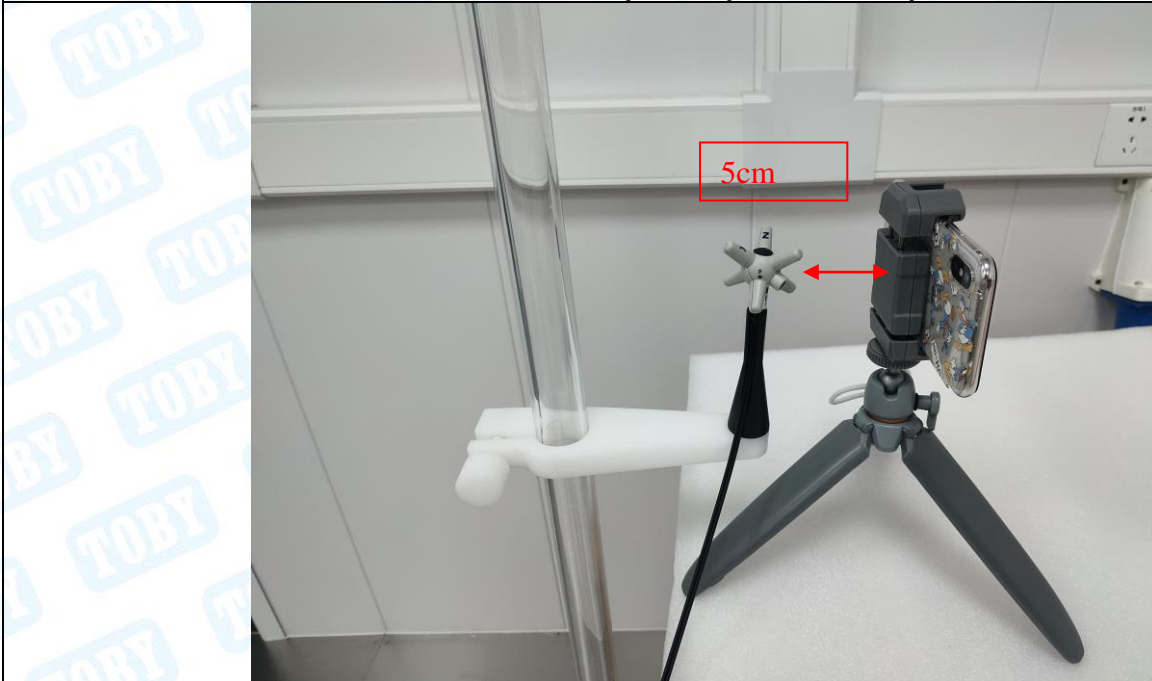
**Test Position F - Exposure photo from Back surface**





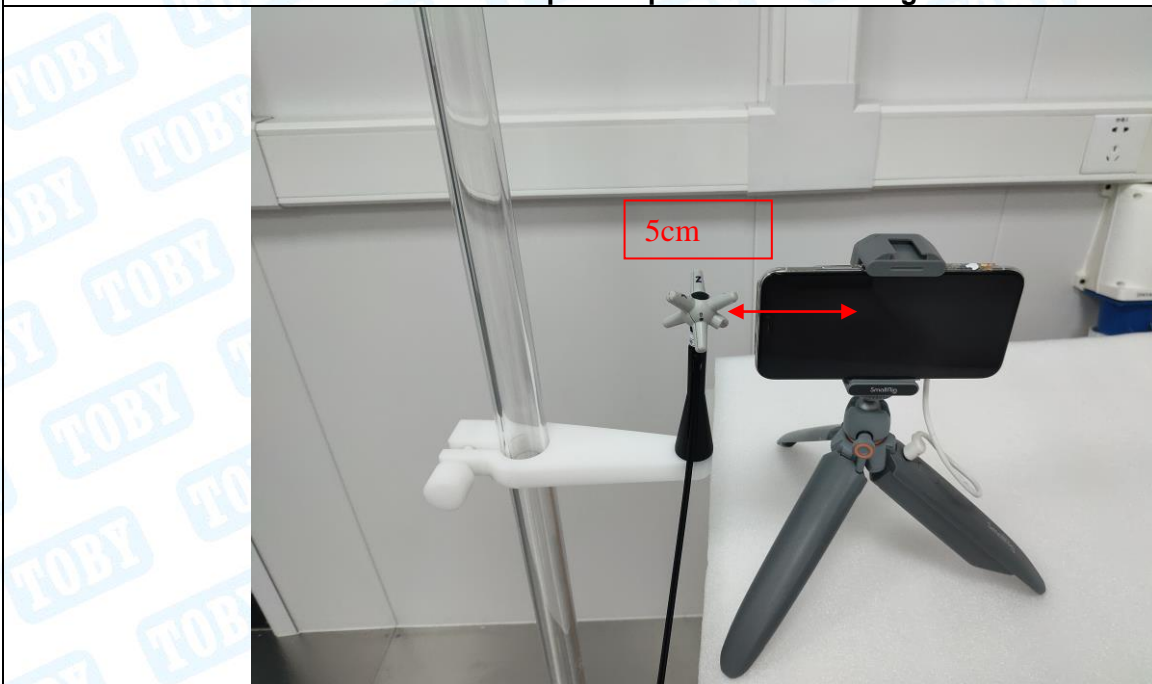
**H-Field Strength-5cm**

**Test Position E - Exposure photo from top surface**



**H-Field Strength-5cm**

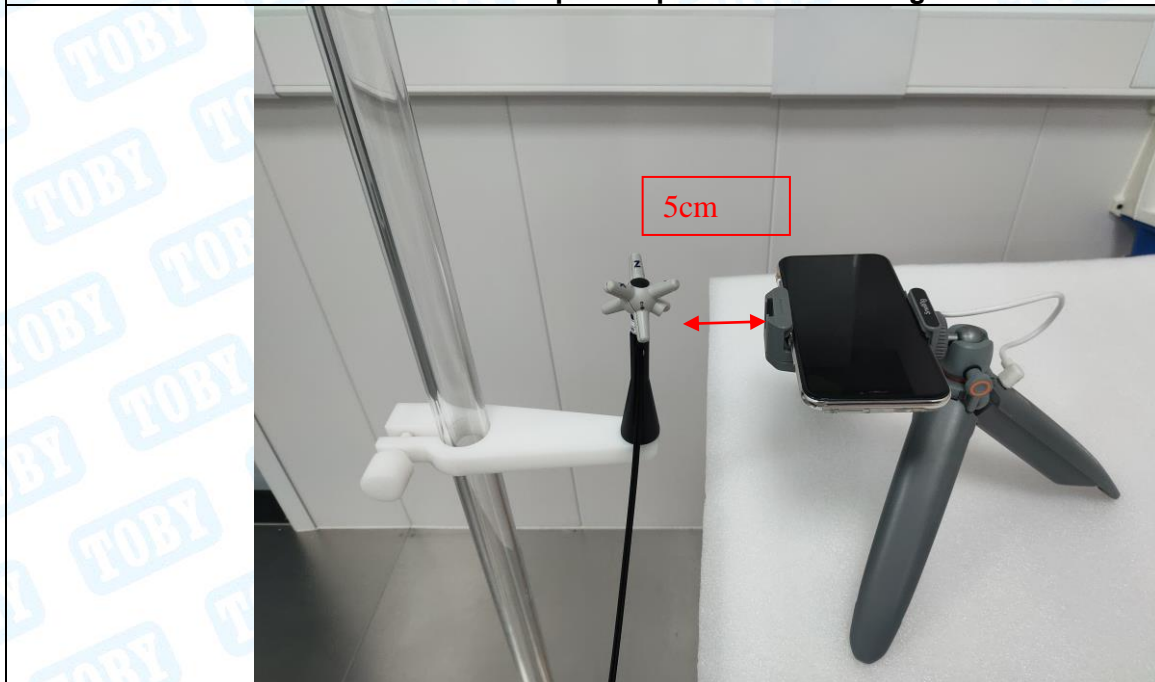
**Test Position A - Exposure photo from side edge surface-Rear**





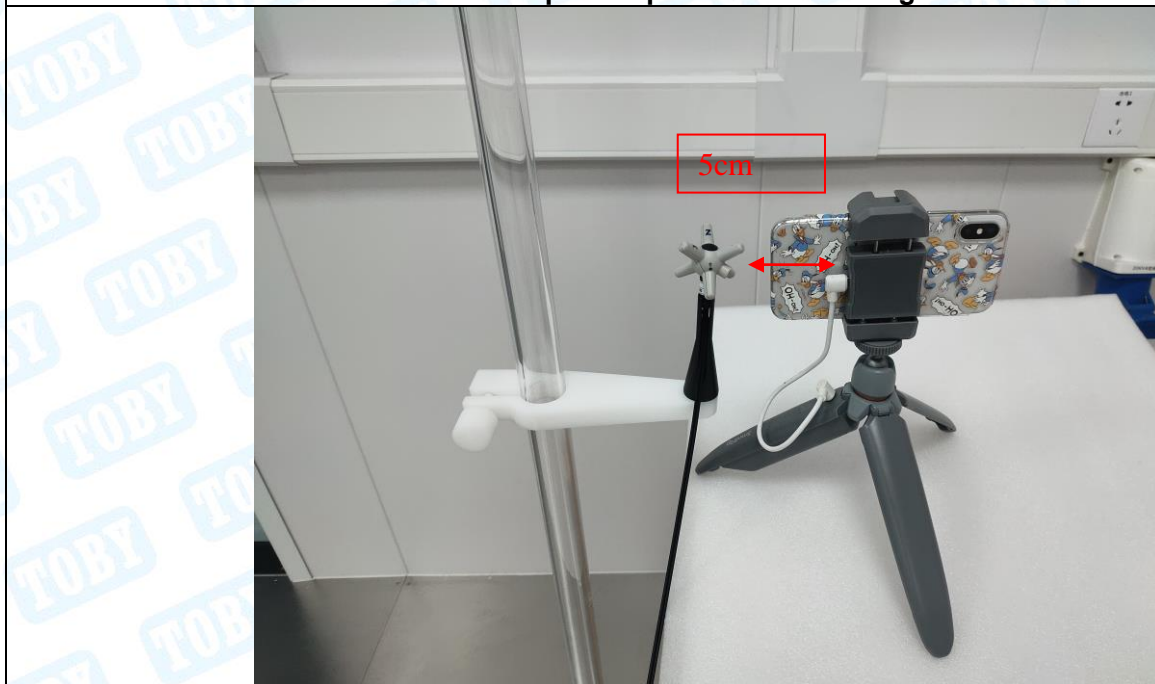
**H-Field Strength-5cm**

**Test Position B - Exposure photo from side edge surface-Left**

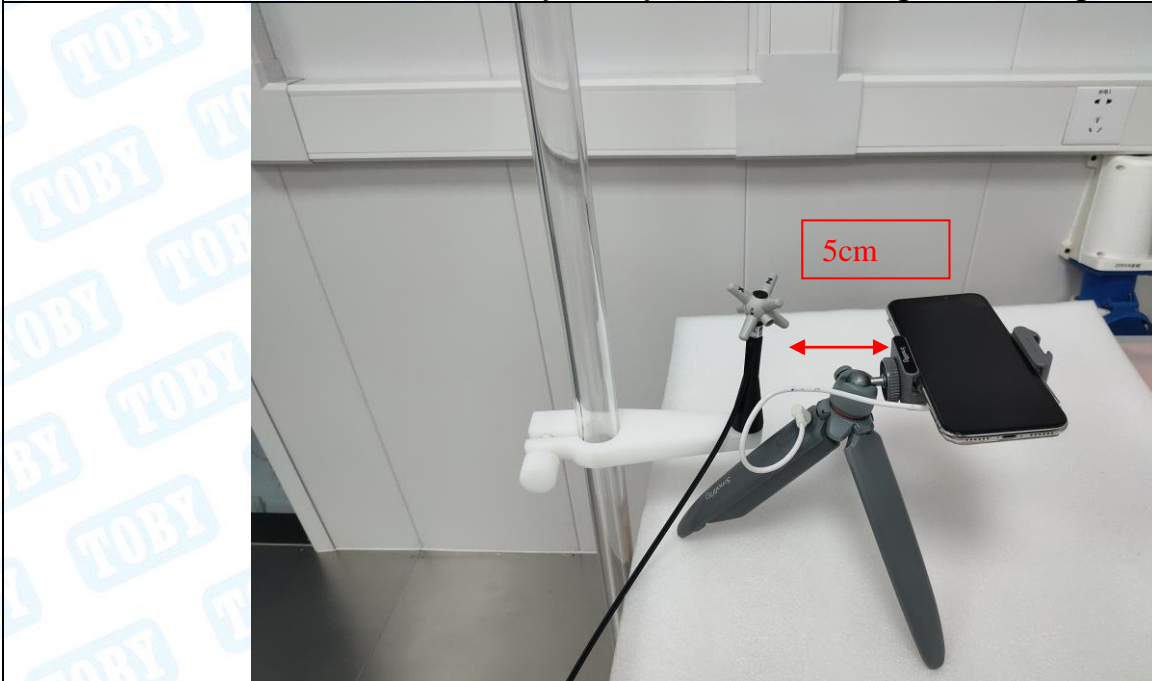
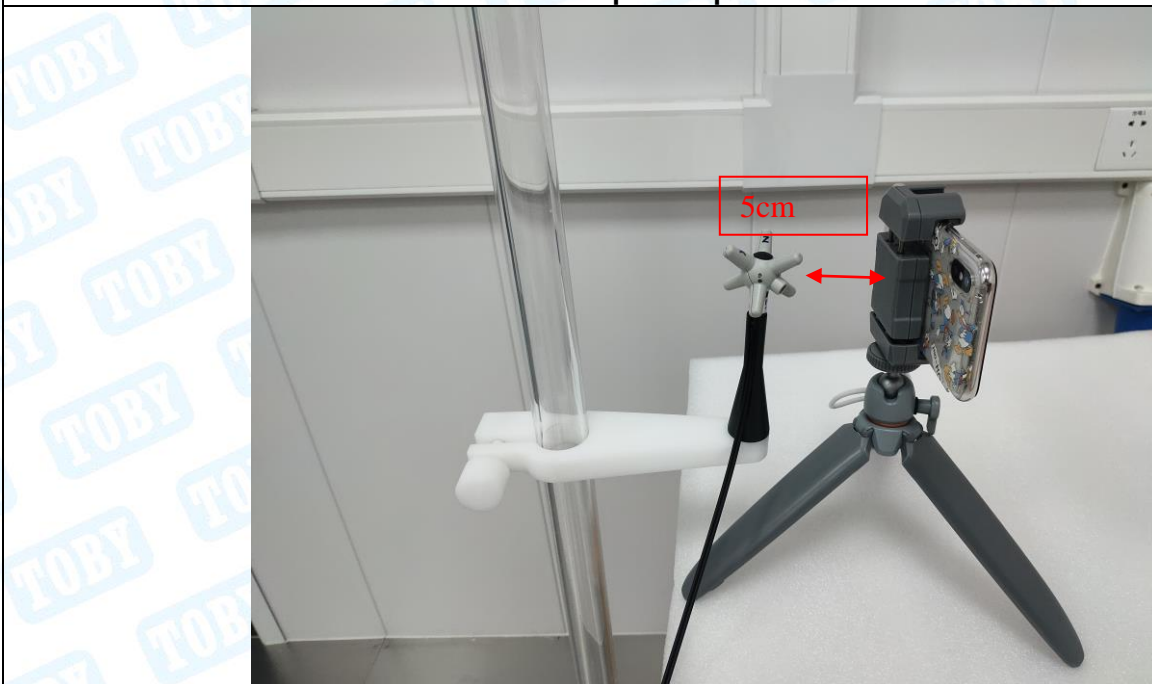


**H-Field Strength-5cm**

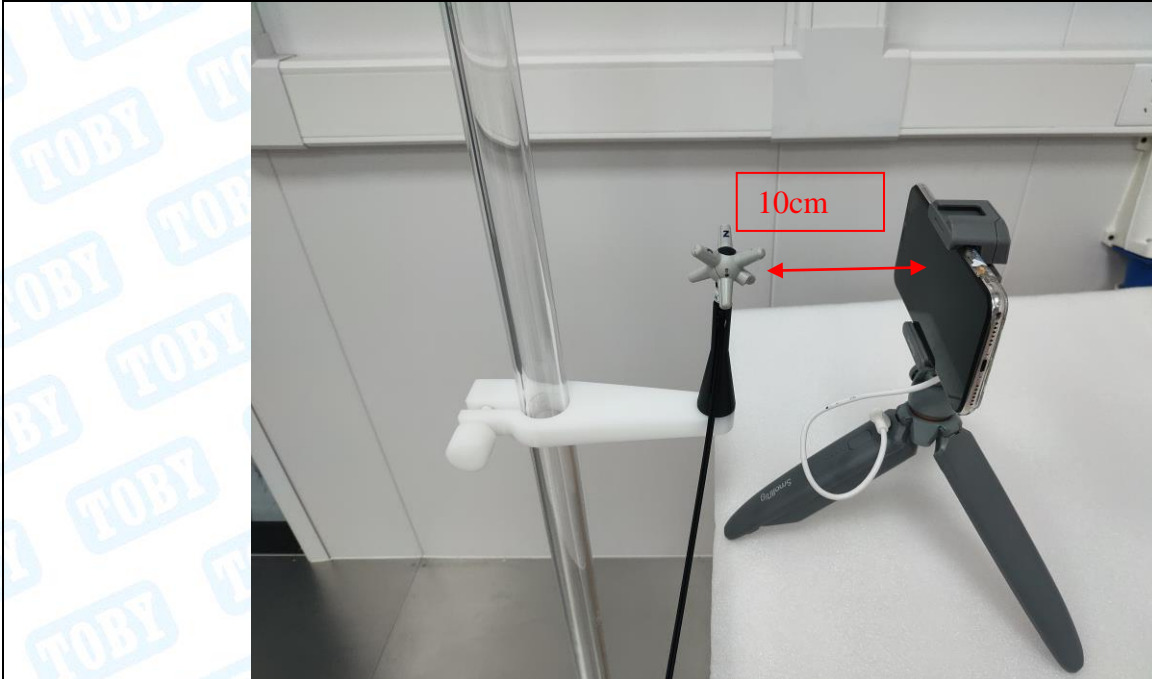
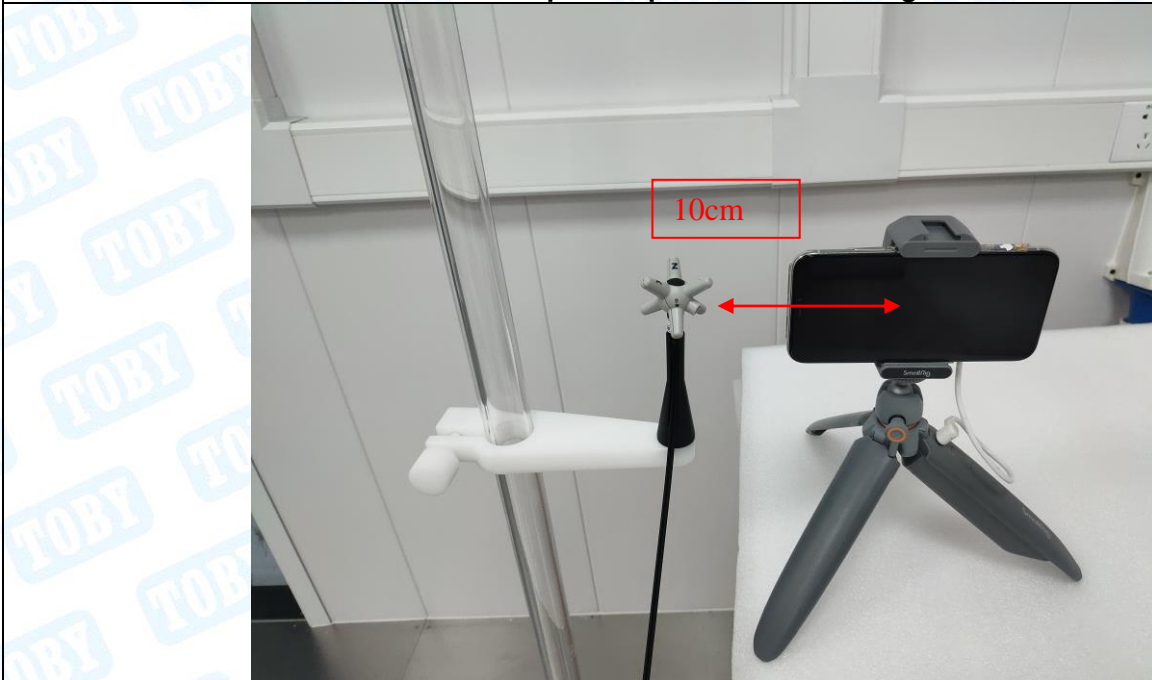
**Test Position C - Exposure photo from side edge surface-Front**





**H-Field Strength-5cm****Test Position D - Exposure photo from side edge surface-Right****E-Field Strength-5cm****Test Position F - Exposure photo from Back surface**

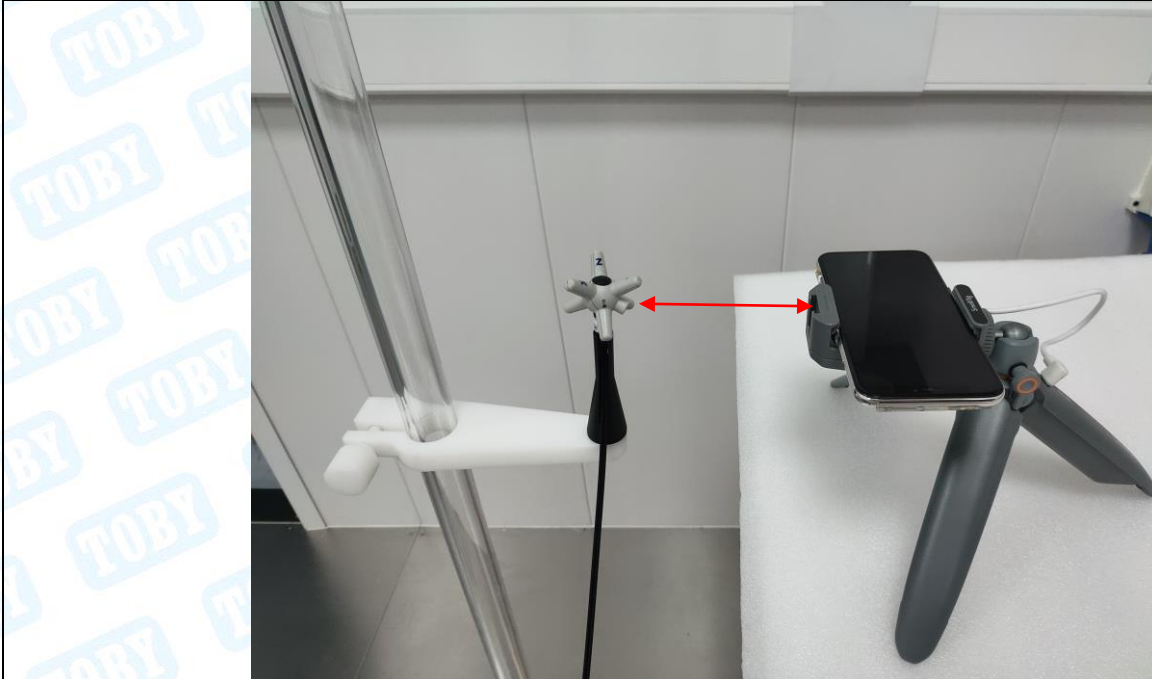


**H-Field Strength-10cm****Test Position E - Exposure photo from top surface****H-Field Strength-10cm****Test Position A - Exposure photo from side edge surface-Rear**



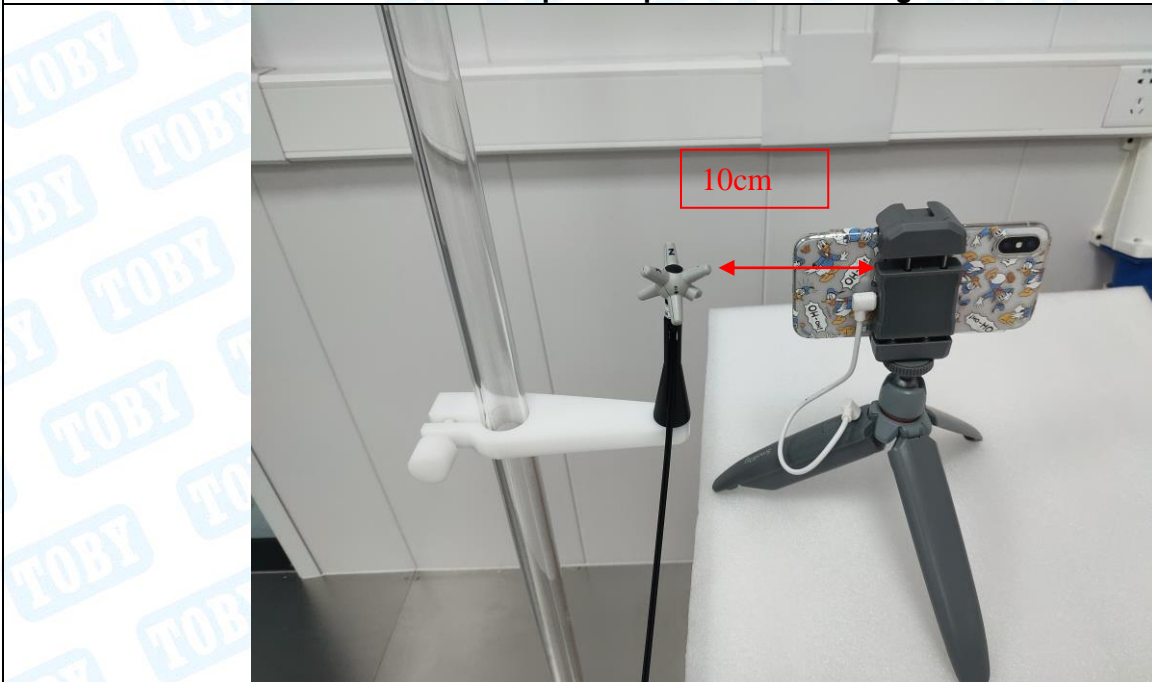
**H-Field Strength-10cm**

**Test Position B - Exposure photo from side edge surface-Left**

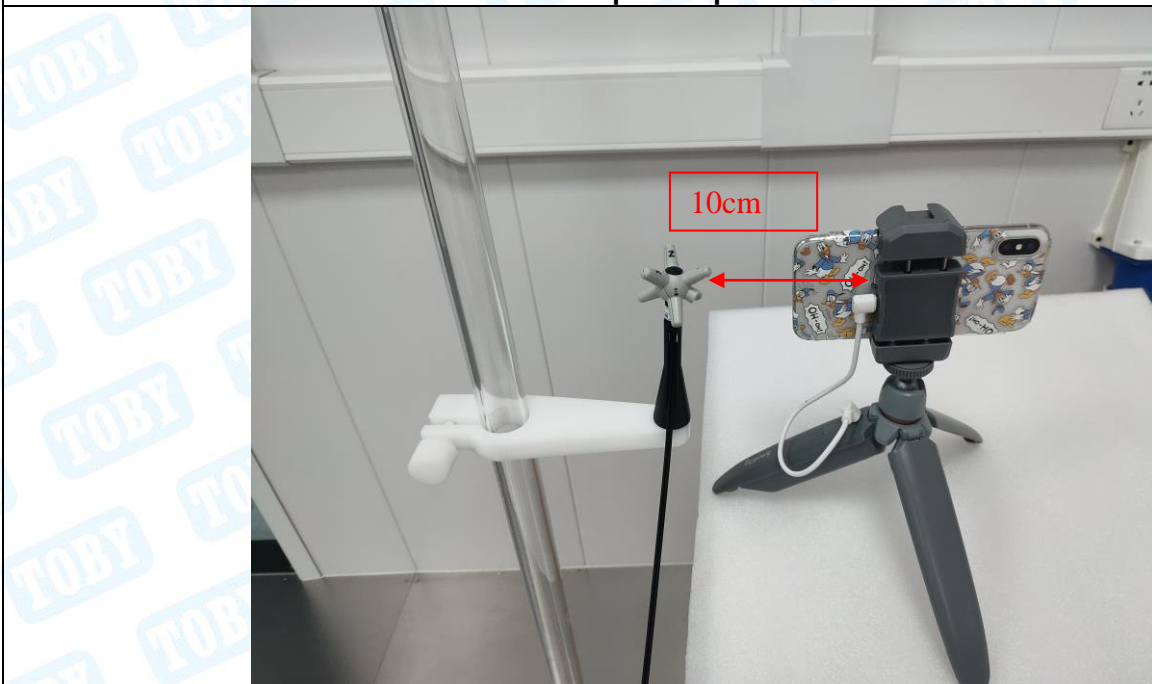


**H-Field Strength-10cm**

**Test Position C - Exposure photo from side edge surface-Front**



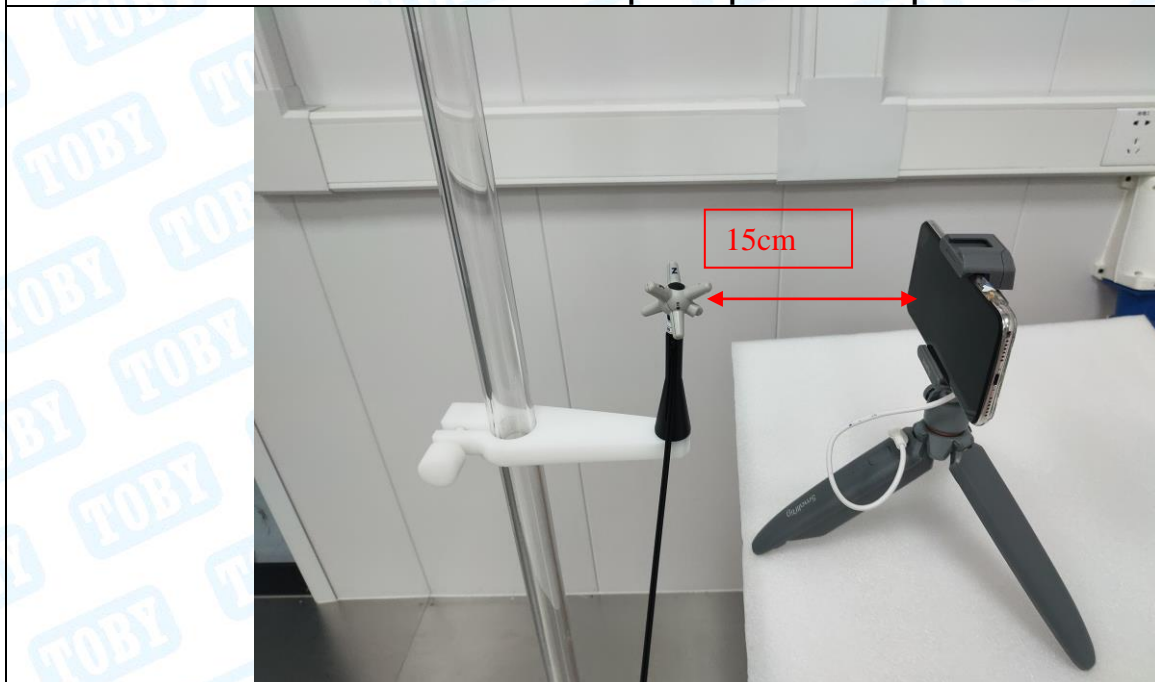


**H-Field Strength-10cm****Test Position D - Exposure photo from side edge surface-Right****E-Field Strength-10cm****Test Position F - Exposure photo from Back surface**



**H-Field Strength-15cm**

**Test Position E - Exposure photo from top surface**



**H-Field Strength-15cm**

**Test Position A - Exposure photo from side edge surface-Rear**





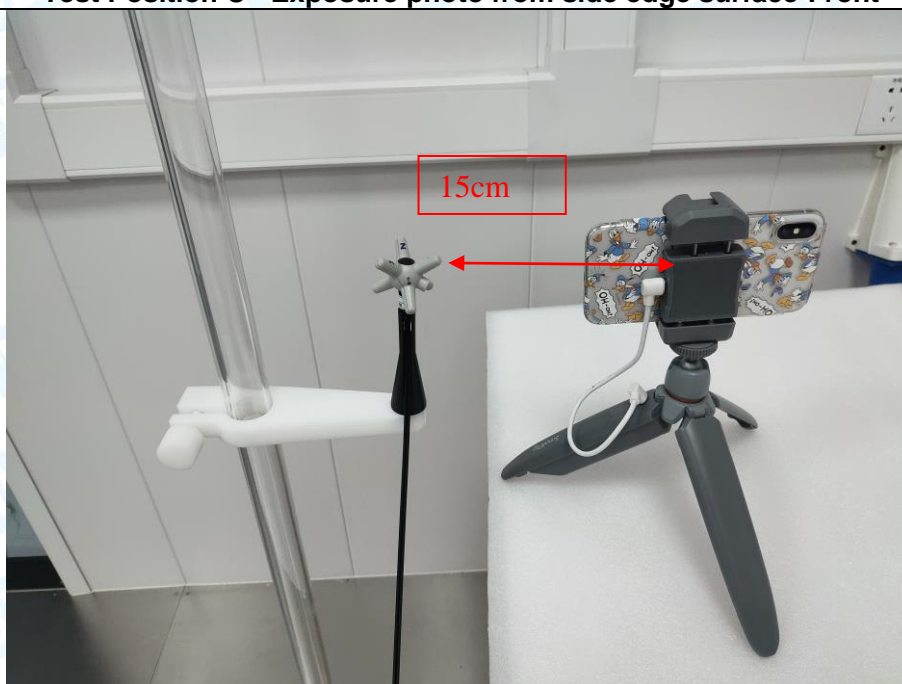
**H-Field Strength-15cm**

**Test Position B - Exposure photo from side edge surface-Left**



**H-Field Strength-15cm**

**Test Position C - Exposure photo from side edge surface-Front**





**H-Field Strength-15cm****Test Position D - Exposure photo from side edge surface-Right****E-Field Strength-15cm****Test Position F - Exposure photo from Back surface**



**H-Field Strength-20cm****Test Position E - Exposure photo from top surface****E-Field Strength-20cm****Test Position F - Exposure photo from Back surface**

-----END OF REPORT-----