



Report No.: 151103033GZU-001  
Issued: 2016-3-25

## **TEST REPORT**

Applicant Name & : POMCUBE Inc.  
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Manufacturing Site : Shenzhen 3sun Electronics Co.,Ltd  
3sun Electronics Industrial Park,No.10Jinlong First Road,Baolong  
Community,Longgang District,Shenzhen,Guangdong,China

### Sample Description

Product : iCAN  
FCC ID : 2AGZ2-PO1AAW1  
Operation : 178kHz  
frequency  
Model No. : PO1-AAW1  
Electrical Rating : 90-130Vac/60Hz/Max.10A

Date Received : 03 November 2015  
Date Test Conducted : 05 November 2015-22 March 2016

Test standards : **FCC Part 18: 2014**

Test Result : Pass

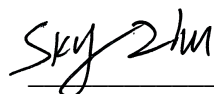
Conclusion : The submitted samples complied with the above rules/standards.

Remark : The report is for wireless charger function.

\*\*\*\*\*End of Page\*\*\*\*\*

**Prepared and Checked By:**

**Approved By:**



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 **Signature**

**Helen Ma**

**Team Leader**

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**25 March 2016** **Date**

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## **TEST RESULTS SUMMARY**

### **Classification of EUT: non-ISM frequency equipment**

Test Item	Standard	Result
Conducted disturbance voltage at mains ports	FCC Part 18: 2014	Pass
Radiated emission (Below 30MHz )	FCC Part 18: 2014	Pass
Radiated emission (30 MHz–1 GHz)	FCC Part 18: 2014	N/A
Radiated emission (Above 1 GHz)	FCC Part 18: 2014	N/A
Remark: Reference publication is used for methods of measurement: MP-5:1986		

Remark: 1. The symbol “N/A” in above table means Not Applicable.

2. When determining the test results, measurement uncertainty of tests has been considered.



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## **Test Results Conclusion** (with Justification)

RE: EMC Testing Pursuant to FCC Part 18 Performed on the iCAN, Model: PO1-AAW1.

We tested the iCAN, Model: PO1-AAW1, to determine if it was in compliance with the relevant FCC rules as marked on the Test Results Summary. We found that the unit met the requirement of FCC Part 18 when tested as received. The worst case's test data was presented in this test report.

### **Conclusion:**

The sample as received complied with the FCC Part 18 requirement.

The production units are required to conform to the initial sample as received when the units are placed on the market.

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## LABORATORY MEASUREMENTS

### Configuration Information

<b>Equipment Under Test (EUT):</b>	iCAN
<b>Model:</b>	PO1-AAW1
<b>Serial No.:</b>	Not Labeled
<b>Support Equipment:</b>	N/A
<b>Rated Voltage:</b>	AC 120V/60Hz
<b>Condition of Environment:</b>	Temperature : 22~28°C Relative Humidity: 35~60% Atmosphere Pressure 86~106kPa

#### Notes:

1. The EMI measurements had been made in the operating mode producing the largest emission in the frequency band being investigated consistent with normal applications.  
An attempt had been made to maximize the emission by varying the configuration of the EUT.

#### 2. Test Sites:

Intertek Testing Services Shenzhen Ltd. Guangzhou Branch

All tests were performed at:

Block E, No.7-2 Guang Dong Software Science Park, Caipin Road, Guangzhou Science City,  
GETDD Guangzhou, China

Except Radiated Disturbance was performed at:

Room 101, Block A, No.11 Jing Ye San Street, Yu Shu Industrial Park, Guangzhou Science City,  
GETDD Guangzhou

## 4 TEST RESULTS

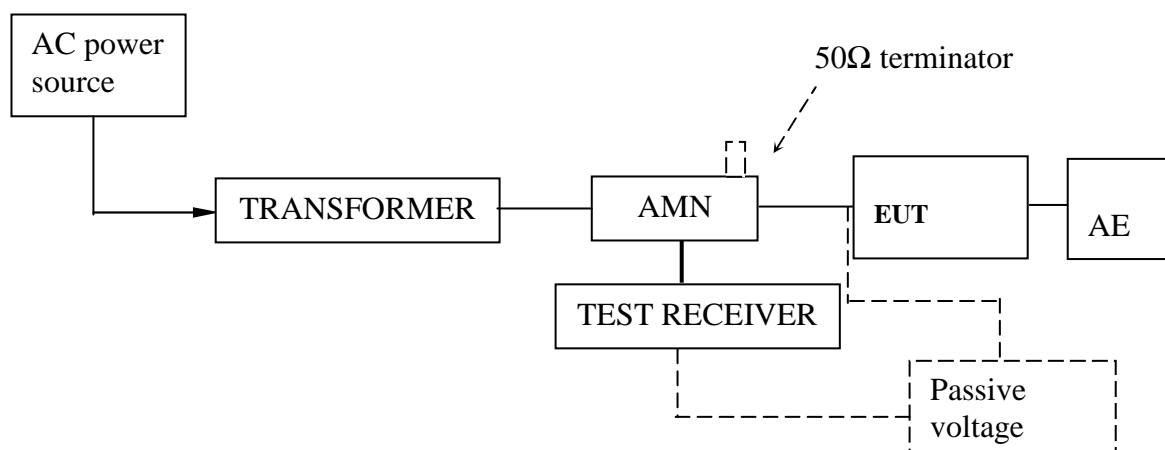
### 4.1 Conducted Disturbance Voltage at mains ports

**Test Result: Pass**

#### 4.1.1 Used Test Equipment

Equipment No.	Equipment	Model	Manufacturer	Cal.Due date	Calibration Interval
EM004-04	EMC shield Room	8m×3m×3m	Zhongyu	2015-08-04	1Y
EM080-05	EMI receiver	ESCI	R&S	2015-08-04	1Y
EM006-05	LISN	ENV216	R&S	2015-09-12	1Y

#### 4.1.2 Block Diagram of Test Setup



#### 4.1.3 Test Setup and Procedure

Test was performed according to FCC OST/ MP-5:1986. The EUT was set to achieve the maximum emission level. The mains terminal disturbance voltage was measured with the EUT in a shielded room. The EUT was connected to AC power source through an Artificial Mains Network which provides a 50Ω linear impedance. Artificial hand is used if appropriate (for handheld apparatus). The load/control terminal disturbance voltage was measured with passive voltage probe if appropriate.

The table-top EUT was placed on a 0.8m high non-metallic table above earthed ground plane (Ground Reference Plane). And for floor standing EUT, was placed on a 10mm high non-metallic supported on GRP. The EUT keeps a distance of at least 0.8m from any other of the metallic surface. The Artificial Mains Network is situated at a distance of 0.8m from the EUT.

During the test, mains lead of EUT excess 0.8m was folded back and forth parallel to the lead so as to form a horizontal bundle with a length between 0.3m and 0.4m.

The bandwidth of test receiver was set at 9 kHz. The frequency range from 150 kHz to 30MHz was checked.

#### 4.1.4 Limit

##### Class B

Frequency range MHz	AC mains terminals dB (uV)	
	Quasi-peak	Average
0.15 to 0.5	66 to 56	56 to 46
0.5 to 5	56	46
5 to 30	60	50
Note 1: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.		
Note 2: The lower limit is applicable at the transition frequency.		

#### 4.1.5 Test Data

**At main terminal: Pass**

**Tested Wire: Live**

**Operation Mode: wireless charging**

EDIT PEAK LIST (Final Measurement Results)				
Trace1:	FCC15QP			
Trace2:	FCC15AV			
Trace3:	---			
TRACE	FREQUENCY	LEVEL dBμV		DELTA LIMIT dB
2 Average	190 kHz	42.20 L1		-11.83
2 Average	378 kHz	32.99 L1		-15.33
2 Average	26.486 MHz	32.85 L1		-17.14
1 Quasi Peak	286 kHz	42.62 L1		-18.01
1 Quasi Peak	374 kHz	39.46 L1		-18.95
1 Quasi Peak	26.17 MHz	37.62 L1		-22.37

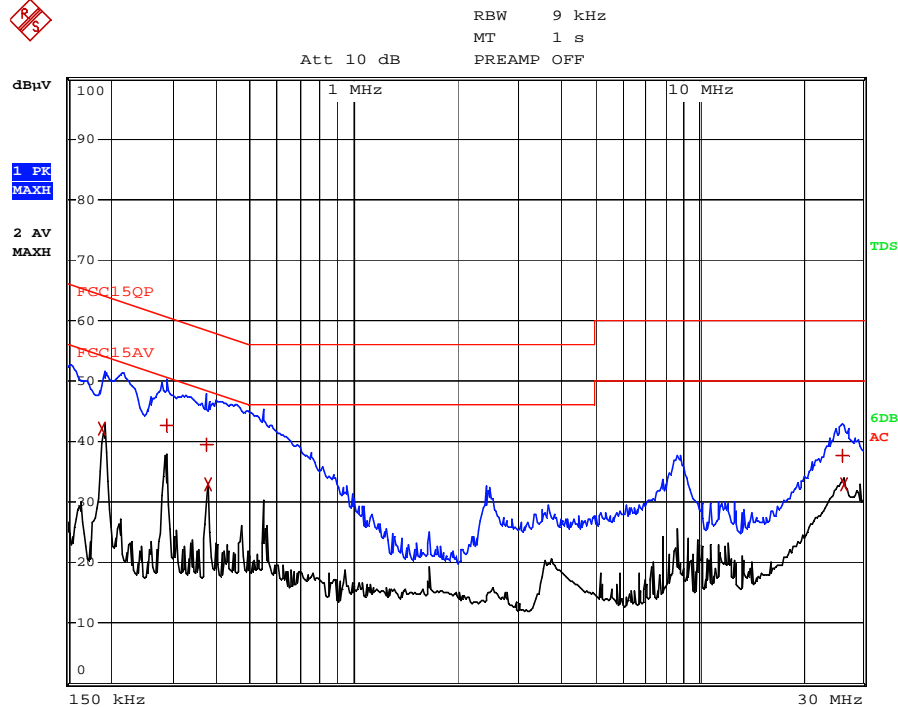
**Tested Wire: Neutral**

**Operation Mode: wireless charging**

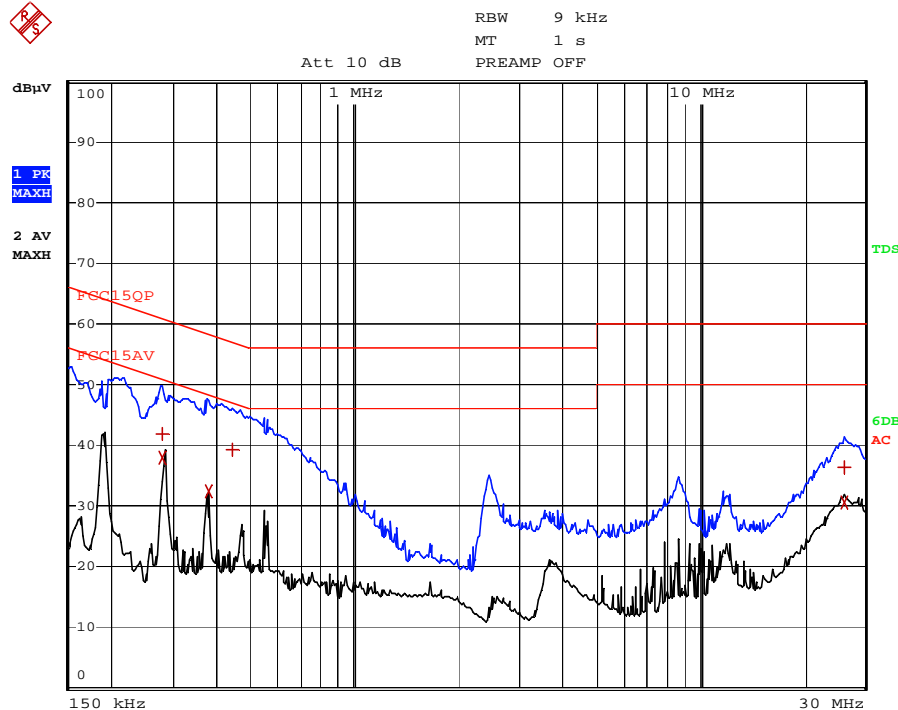
EDIT PEAK LIST (Final Measurement Results)				
Trace1:	FCC15QP			
Trace2:	FCC15AV			
Trace3:	---			
TRACE	FREQUENCY	LEVEL dBμV		DELTA LIMIT dB
2 Average	282 kHz	38.00 L1		-12.75
2 Average	378 kHz	32.31 L1		-16.00
1 Quasi Peak	442 kHz	39.37 L1		-17.65
1 Quasi Peak	278 kHz	41.86 L1		-19.00
2 Average	26.186 MHz	30.49 L1		-19.50
1 Quasi Peak	25.998 MHz	36.24 L1		-23.76



#### 4.1.6 Emission Curve Tested Wire: Live



#### Tested Wire: Neutral



#### 4.1.7 Measurement Uncertainty

Uncertainty: 2.58 dB at a level of confidence of 95%

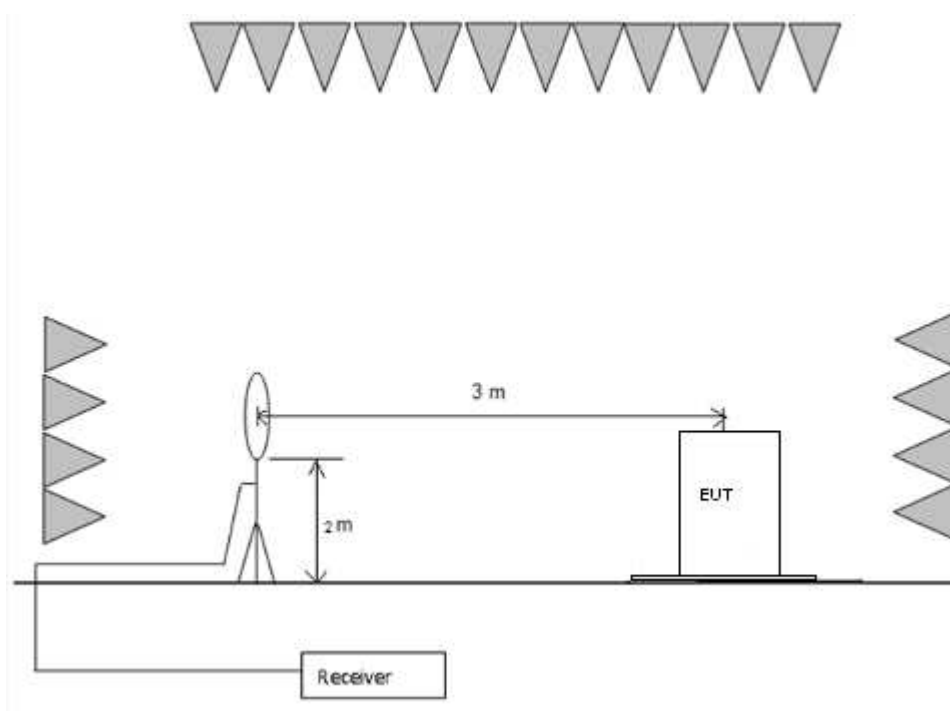
## 4.2 Radiated Emission (below 30MHz)

**Test Result: Pass**

### 4.2.1 Used Test Equipment

Equip. No.	Equipment	Model	Manufacturer	Cal. Due date (YYYY-MM-DD)	Calibration Interval
EM030-01	3m Semi-Anechoic Chamber	9×6×6 m3	ETS•LINDGREN	2015-04-02	1Y
EM030-02	Control room for 3m Semi-Anechoic Chamber	4×4×3 m3	ETS•LINDGREN	2015-06-03	1Y
EM031-02	EMI Test Receiver (9 kHz~7 GHz)	R&S ESR7	R&S	2015-06-03	1Y
EM011-04	Loop Antenna (0.009 - 30) MHz	HFH2-Z2	SCHWARZBECK	2015-05-25	1Y
EM031-02-01	Coaxial cable	/	R&S	2015-05-25	1Y

### 4.2.2 Block Diagram of Test Setup



### 4.2.3 Test Setup and Procedure

Radiated testing was performed at a 3 meters semi-anechoic chamber. The EUT was placed on 10mm above ground. The table was 360 degrees to determine the position of the highest radiation. The center of the loop shall be 2 m above the ground. EUT is set 3 meters from the EMI receiving antenna; the levels are quasi peak value readings. The frequency spectrum from 0.009MHz to 30MHz was investigated.

Loop antenna was used as receiving antenna. Both horizontal and vertical polarization of the antenna was set on measurement. In order to find the maximum emission, all of the interface cables were manipulated according to FCC OST/ MP-5:1986 requirement during radiated test. The bandwidth setting on R&S Test Receiver was 200Hz from 9kHz to 150kHz and 9kHz from 150kHz to 30MHz. The frequency range from 0.009MHz to 30MHz was checked.

### 4.2.4 Limit

Equipment	Operating frequency	RF Power generated by equipment (watts)	Field strength limit (uV/m)	Distance (meters)
Any type unless otherwise specified (miscellaneous).	Any ISM frequency .....	Below 500 .....	25 .....	300
		500 or more .....	$25 \times \text{SQRT}(\text{power}/500)$ .....	1300
	Any non-ISM frequency ..	Below 500 .....	15 .....	300
		500 or more .....	$15 \times \text{SQRT}(\text{power}/500)$ .....	1300

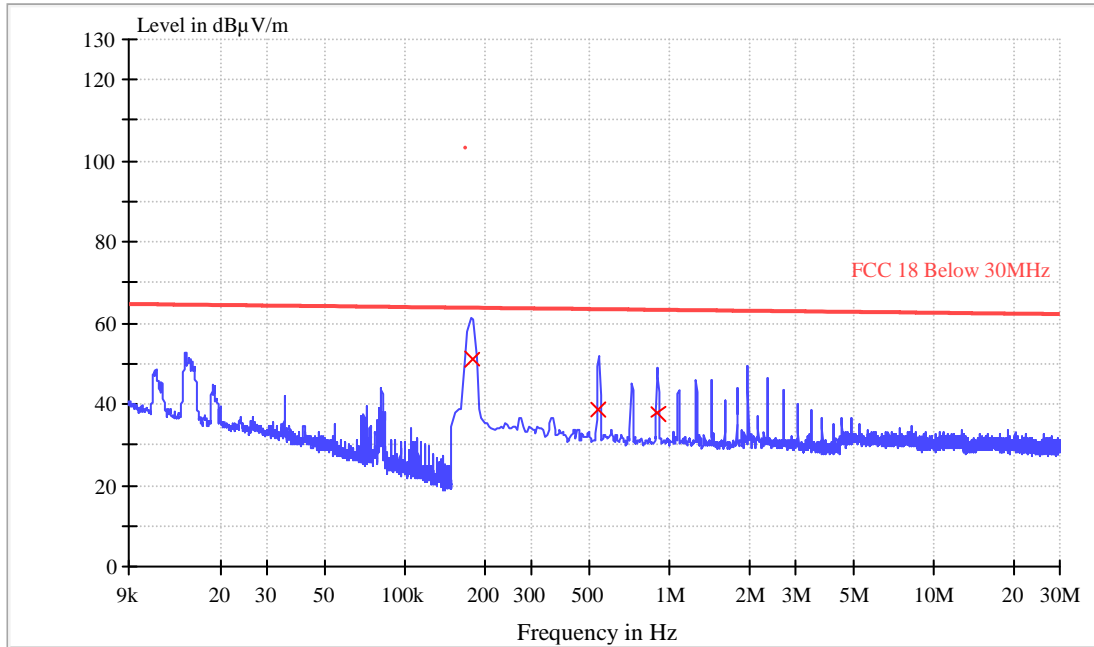
Measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (20 dB/decade).

So, any non-ISM frequency at distance 3m was 63.5dBuV/m

#### 4.2.5 Test Data and Curve

Test mode: wireless charging

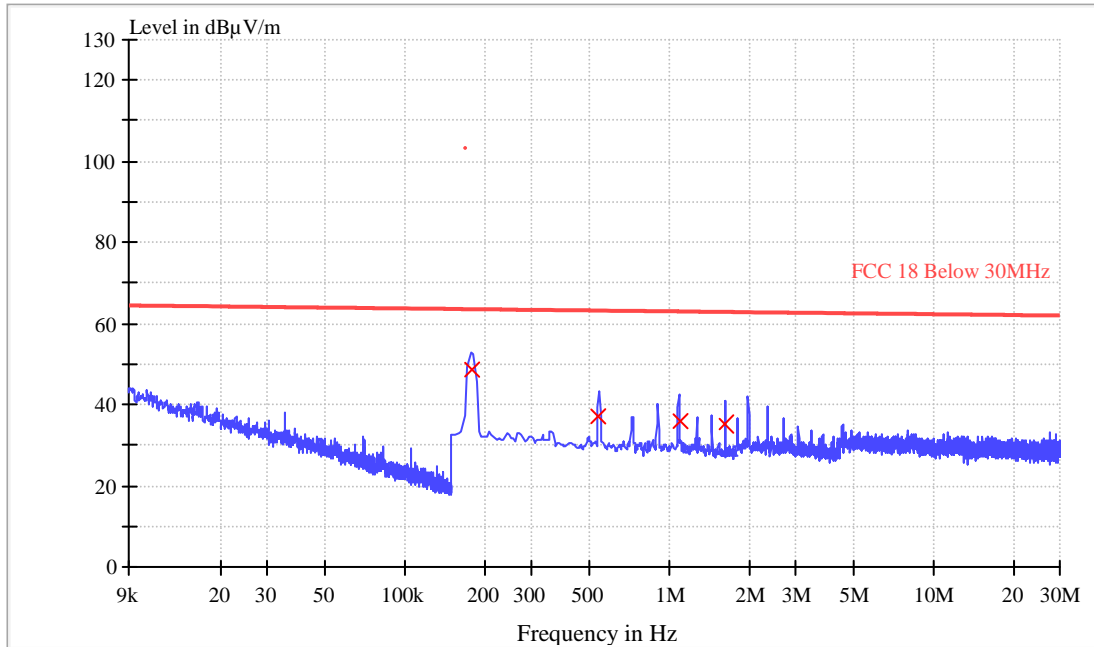
Horizontal:



#### AV

Frequency (MHz)	Average (dBμV/m)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
0.178000	50.1	9.000	H	21.0	13.4	63.5
0.538000	33.8	9.000	H	21.6	29.7	63.5
0.898000	34.6	9.000	H	22.1	28.9	63.5

Vertical:



## AV

Frequency (MHz)	Average (dBμV/m)	Bandwidth (kHz)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
0.178000	49.6	9.000	H	21.0	13.9	63.5
0.538000	31.9	9.000	H	21.6	31.6	63.5
1.082000	32.1	9.000	H	22.1	31.4	63.5
1.626000	32.6	9.000	H	21.7	30.9	63.5

**4.3 Radiated Emission (30 MHz -1000 MHz)**

**Test Result: Not Applicable**

**Remark: The wireless charger frequency is below 1.705MHz**

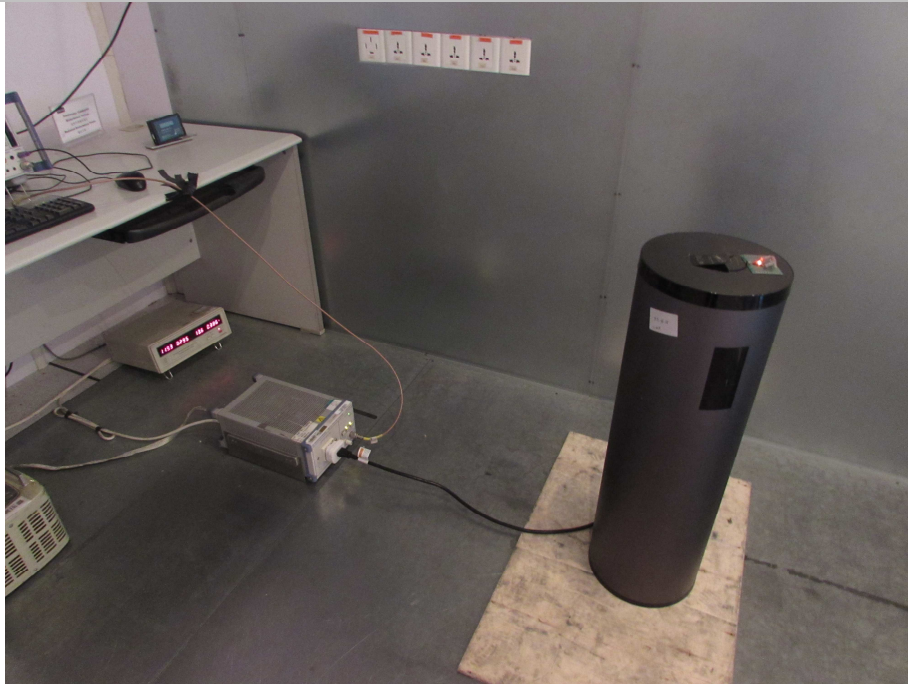
**4.4 Radiated Emission above 1 GHz**

**Test Result: Not Applicable**

**Remark: The wireless charger frequency is below 1.705MHz**

## 5 Appendix I - Photos of test setup

Conducted Emission



Radiated Emission (Below 30 MHz)

