

**ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT  
INTENTIONAL RADIATOR CERTIFICATION TO  
FCC PART 15 SUBPART C REQUIREMENT**

*OF*

**THE AIR BLUETOOTH/WIFI HOME SPEAKER SYSTEM WITH  
WIRELESS ALARM CLOCK + ALEXA VOICE CONTROL**

**Model No.: CAV5**

**Trademark: CAVALIER**

**FCC ID: EMOCAV5**

**Report No.: ES181105037E2**

**Issue Date: Novemver 15, 2018**

*Prepared for*

**SDI TECHNOLOGIES INC.  
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*Prepared by*

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EMTEK(SHENZHEN) CO., LTD.**

## VERIFICATION OF COMPLIANCE

Applicant:	SDI Technologies Inc. 1299, Main Street, Rahway, NJ 07065, U.S.A.
Manufacturer:	SDI Technologies Inc. 1299, Main Street, Rahway, NJ 07065, U.S.A.
Factory:	Shenzhen 3nod Digital Technology Co., Ltd. 4/F., and Section A, 1/F., Workshop 15, Zhongfu Road, Tangxiayong Community, Songgang Neighbourhood, Bao'an, Shenzhen, Guangdong, China.
Product Description:	THE AIR BLUETOOTH/WIFI HOME SPEAKER SYSTEM WITH WIRELESS ALARM CLOCK + ALEXA VOICE CONTROL
Trade Mark:	CAVALIER
Model Number:	CAV5

### We hereby certify that:

The above equipment was tested by EMTEK(SHENZHEN) CO., LTD. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10-2013 and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits of FCC Rules Part 15C.

Date of Test : November 05, 2018 to November 14, 2018

*Yaping Shen*

Prepared/Tested by :

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Yaping Shen/Editor

*Joe Xia*

Reviewer :

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Joe Xia/Supervisor

Approved & Authorized  
Signer :

*Lisa Wang*

\_\_\_\_\_  
Lisa Wang/Manager

## Modified Information

Version	Summary	Revision Date	Report No.
Ver.1.0	Original Report	/	ES181105037E2

## Table of Contents

<b>1</b>	<b>GENERAL INFORMATION .....</b>	<b>5</b>
1.1	PRODUCT DESCRIPTION .....	5
1.2	RELATED SUBMITTAL(S) / GRANT(S).....	6
1.3	TEST METHODOLOGY .....	6
1.4	SPECIAL ACCESSORIES .....	6
1.5	EQUIPMENT MODIFICATIONS .....	6
1.6	TEST FACILITY .....	6
<b>2</b>	<b>SYSTEM TEST CONFIGURATION .....</b>	<b>7</b>
2.1	EUT CONFIGURATION .....	7
2.2	EUT EXERCISE .....	7
2.3	TEST PROCEDURE.....	7
2.4	CONFIGURATION OF TESTED SYSTEM .....	8
<b>3</b>	<b>SUMMARY OF TEST RESULTS .....</b>	<b>8</b>
<b>4</b>	<b>DESCRIPTION OF TEST MODES.....</b>	<b>9</b>
<b>5</b>	<b>CONDUCTED EMISSIONS TEST .....</b>	<b>10</b>
5.1	MEASUREMENT PROCEDURE .....	10
5.2	TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION) .....	10
5.3	MEASUREMENT EQUIPMENT USED .....	10
5.4	CONDUCTED EMISSION LIMIT .....	10
5.5	MEASUREMENT RESULT .....	11
5.6	CONDUCTED MEASUREMENT PHOTO .....	16
<b>6</b>	<b>RADIATED EMISSION TEST.....</b>	<b>17</b>
6.1	MEASUREMENT PROCEDURE .....	17
6.2	TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION) .....	17
6.3	MEASUREMENT EQUIPMENT USED .....	18
6.4	RADIATED EMISSION LIMIT.....	18
6.5	MEASUREMENT RESULT .....	20
6.6	RADIATED MEASUREMENT PHOTOS .....	25
<b>7</b>	<b>20DB BANDWIDTH .....</b>	<b>26</b>
7.1	20dB BANDWIDTH LIMIT .....	26
7.2	TEST INSTRUMENTS .....	26
7.3	TEST PROCEDURE.....	26
7.4	TEST SETUP .....	26
7.5	TEST RESULT .....	26
<b>8</b>	<b>ANTENNA APPLICATION .....</b>	<b>28</b>
8.1	ANTENNA REQUIREMENT .....	28
8.2	RESULT .....	28
<b>9</b>	<b>PHOTOS OF EUT.....</b>	<b>28</b>

## 1 General Information

### 1.1 Product Description

Characteristics	Description
Product Name	THE AIR BLUETOOTH/WIFI HOME SPEAKER SYSTEM WITH WIRELESS ALARM CLOCK + ALEXA VOICE CONTROL
Model number	CAV5
Operation Mode	Qi-5W Wireless Charging,9W Sumsung Fast Wireless Charging
Input Rating	DC 12V from adapter
Power Supply	AC120V/60Hz for adapter
Adapter	Model number:S060A1205000U Input rating: 100-240V~, 50/60Hz, 1500mA Max. Output rating: DC 12V, 5000mA
Operating Frequency	110-148KHz
Modulation Technique	Induction
Antenna Type	Induction coil
Radio Software Version	V1.0
Radio Hardware version	V1.0

## 1.2 Related Submittal(s) / Grant(s)

This submittal(s) (test report) is intended for FCC ID: EMOCAV5 filing to comply with the FCC Part 15, Subpart C Rules.

## 1.3 Test Methodology

Both conducted and radiated testing was performed according to the procedures in ANSI C63.10 (2013). Radiated testing was performed at an antenna to EUT distance 3 meters.

## 1.4 Special Accessories

Not available for this EUT intended for grant.

## 1.5 Equipment Modifications

Not available for this EUT intended for grant.

## 1.6 Test Facility

Site Description  
EMC Lab.

: Accredited by CNAS, 2016.10.24  
The certificate is valid until 2022.10.28  
The Laboratory has been assessed and proved to be in compliance with  
CNAS-CL01:2006 (identical to ISO/IEC 17025:2005)  
The Certificate Registration Number is L2291.

Accredited by TUV Rheinland Shenzhen 2016.5.19  
The Laboratory has been assessed according to the requirements ISO/IEC  
17025.

Accredited by FCC, August 03, 2017  
Designation Number: CN1204  
Test Firm Registration Number: 882943

Accredited by Industry Canada, November 24, 2015  
The Certificate Registration Number is 4480A.

Accredited by A2LA, July 31, 2017  
The Certificate Number is 4321.01.

Name of Firm : EMTEK(SHENZHEN) CO., LTD.  
Site Location : Bldg 69, Majialong Industry Zone, Nanshan District, Shenzhen,  
Guangdong, China.

## **2 System Test Configuration**

### **2.1 EUT Configuration**

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

### **2.2 EUT Exercise**

The Transmitter was operated in the normal operating mode. The TX frequency was fixed which was for the purpose of the measurements.

### **2.3 Test Procedure**

#### **2.3.1 Conducted Emissions**

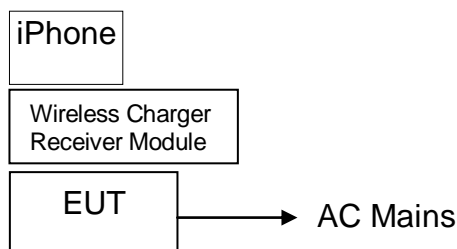
The EUT is placed on a turn table which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.10-2013 Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30 MHz using CISPR Quasi-Peak and average detector mode.

#### **2.3.2 Radiated Emissions**

The EUT is placed on a turn table which is 0.8 m above ground plane. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the fixed in a particular direction according to the requirements in Section 13.1.4.1 of ANSI C63.10-2013.

## 2.4 Configuration of Tested System

**Fig. 2-1 Configuration of Tested System**



**Table 2-1 Equipment Used in Tested System**

Item	Equipment	Trade Mark	Model No.	FCC ID	Note
1.	THE AIR BLUETOOTH/WIFI HOME SPEAKER SYSTEM WITH WIRELESS ALARM CLOCK + ALEXA VOICE CONTROL	CAVALIER	CAV5	EMOCAV5	<b>EUT</b>
2.	Adapter	CAVALIER	S060A120500 0U	N/A	<b>Support EUT</b>
3.	iPhone	Apple	A1524	N/A	<b>Support Equipment</b>
4.	Wireless Charger Receiver Module	Universal	N/A	N/A	<b>Support Equipment</b>
5.	SAMSUNG S9	Samsung	Samsung Gala xy S9	N/A	<b>Support Equipment</b>

**Note:**

- (1) Unless otherwise denoted as EUT in 『Remark』 column, device(s) used in tested system is a support equipment.

## 3 Summary of Test Results

FCC Rules	Description Of Test	Result
§15.207	AC Power Conducted Emission	Compliant
§15.209	Radiated Emission	Compliant
§2.1049	20dB Bandwidth	Compliant
§15.203	Antenna Requirement	Compliant



#### 4 Description of test modes

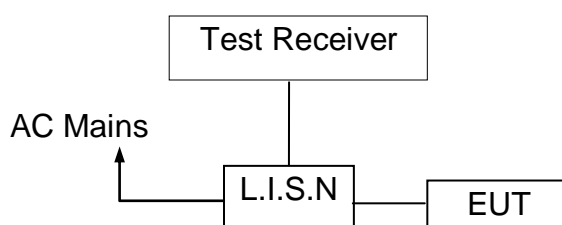
Channel	Frequency(KHz)
Low frequency	110
Mid frequency	125
High frequency	148

## 5 Conducted Emissions Test

### 5.1 Measurement Procedure

1. The EUT was placed on a table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured was complete.

### 5.2 Test SET-UP (Block Diagram of Configuration)



### 5.3 Measurement Equipment Used

Conducted Emission Test Site					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	Last Cal.	Due date
Test Receiver	Rohde & Schwarz	ESCS30	100018	05/16/2018	05/15/2019
L.I.S.N	Rohde & Schwarz	ENV216	100017	05/16/2018	05/15/2019
RF Switching Unit	CDS	RSU-M2	38401	05/16/2018	05/15/2019
Coaxial Cable	CDS	79254	46107086	05/16/2018	05/15/2019

### 5.4 Conducted Emission Limit

Conducted Emission Frequency(MHz)	Quasi-peak	Average
0.15-0.5	66-56	56-46
0.5-5.0	56	46
5.0-30.0	60	50

- Note:** 1. The lower limit shall apply at the transition frequencies  
 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

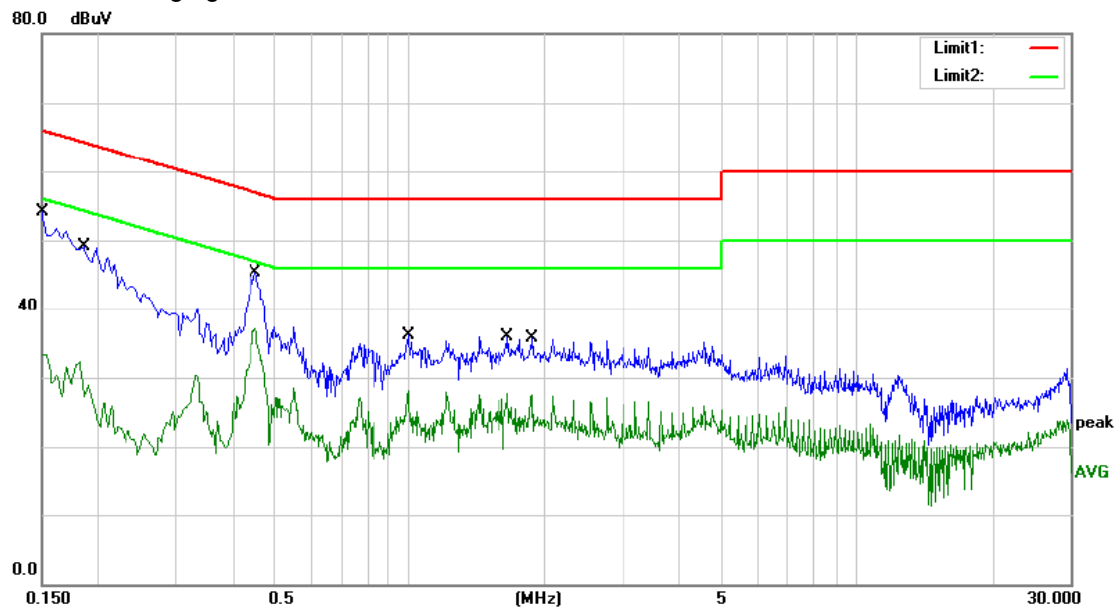
### 5.5 Measurement Result

Operation Mode:	TX	Test Date :	Novemver 05, 2018
Frequency Range:	0.15MHz~30MHz	Temperature :	28℃
Test Result:	PASS	Humidity :	65 %
Test By:	Yaping Shen		

Pass

We pretested two power and three modes (max load, mid load, min load) for EUT. The worst mode (max load) test data see follow the table.

## Qi-5W Wireless Charging



Site site #1

Phase: **L1**

Temperature: 25

Limit: (CE)FCC PART 15 C\_QP

Power: AC 120V/60Hz

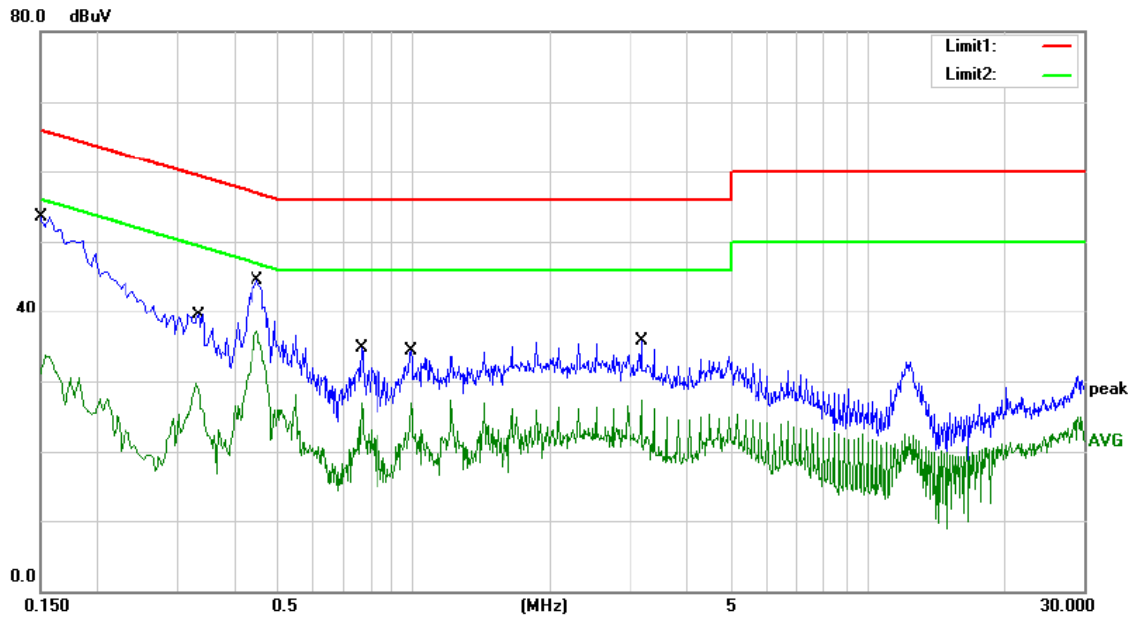
Humidity: 55 %

Mode: Wireless Charging(Qi-5W)

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1500	42.35	9.78	52.13	66.00	-13.87	QP	
2		0.1500	23.53	9.78	33.31	56.00	-22.69	AVG	
3		0.1860	36.59	9.79	46.38	64.21	-17.83	QP	
4		0.1860	22.50	9.79	32.29	54.21	-21.92	AVG	
5		0.4500	32.35	9.83	42.18	56.88	-14.70	QP	
6	*	0.4500	27.26	9.83	37.09	46.88	-9.79	AVG	
7		0.9940	24.32	9.84	34.16	56.00	-21.84	QP	
8		0.9940	18.18	9.84	28.02	46.00	-17.98	AVG	
9		1.6540	22.68	9.84	32.52	56.00	-23.48	QP	
10		1.6540	17.92	9.84	27.76	46.00	-18.24	AVG	
11		1.8780	22.83	9.84	32.67	56.00	-23.33	QP	
12		1.8780	17.48	9.84	27.32	46.00	-18.68	AVG	

\*:Maximum data    x:Over limit    !:over margin    Comment: Factor build in receiver.    Operator: Yaping shen

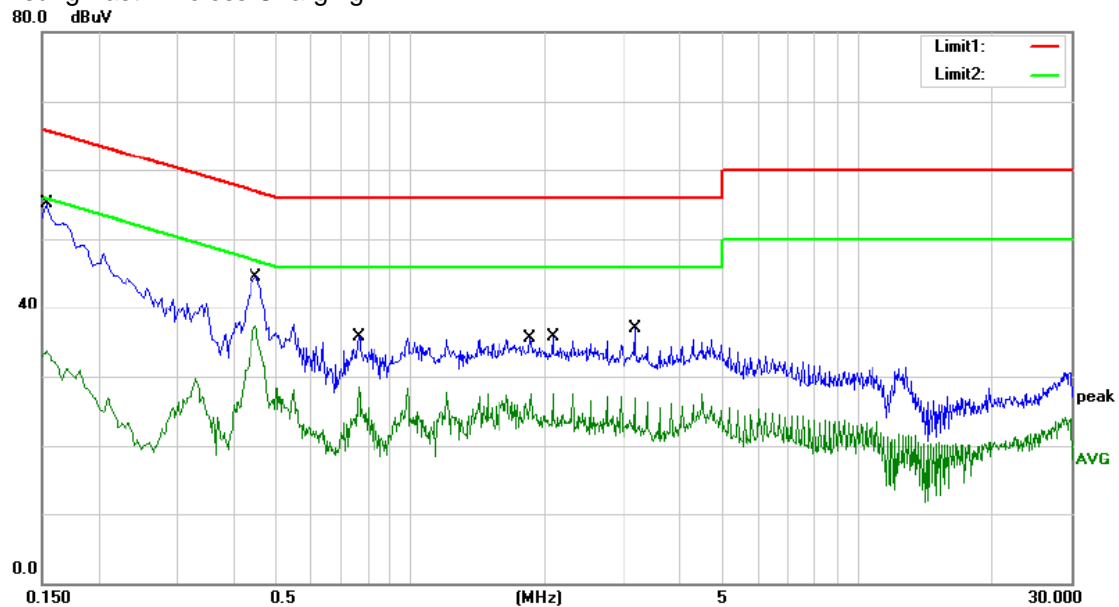


Site site #1 Phase: **N** Temperature: 25  
 Limit: (CE)FCC PART 15 C\_QP Power: AC 120V/60Hz Humidity: 55 %  
 Mode: Wireless Charging(Qi-5W)  
 Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1500	41.55	9.78	51.33	66.00	-14.67	QP	
2		0.1500	23.91	9.78	33.69	56.00	-22.31	AVG	
3		0.3340	27.17	9.81	36.98	59.35	-22.37	QP	
4		0.3340	19.94	9.81	29.75	49.35	-19.60	AVG	
5		0.4500	32.35	9.83	42.18	56.88	-14.70	QP	
6	*	0.4500	27.30	9.83	37.13	46.88	-9.75	AVG	
7		0.7660	22.68	9.84	32.52	56.00	-23.48	QP	
8		0.7660	16.98	9.84	26.82	46.00	-19.18	AVG	
9		0.9860	22.27	9.84	32.11	56.00	-23.89	QP	
10		0.9860	17.08	9.84	26.92	46.00	-19.08	AVG	
11		3.1780	22.90	9.85	32.75	56.00	-23.25	QP	
12		3.1780	17.45	9.85	27.30	46.00	-18.70	AVG	

\*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: Yaping shen

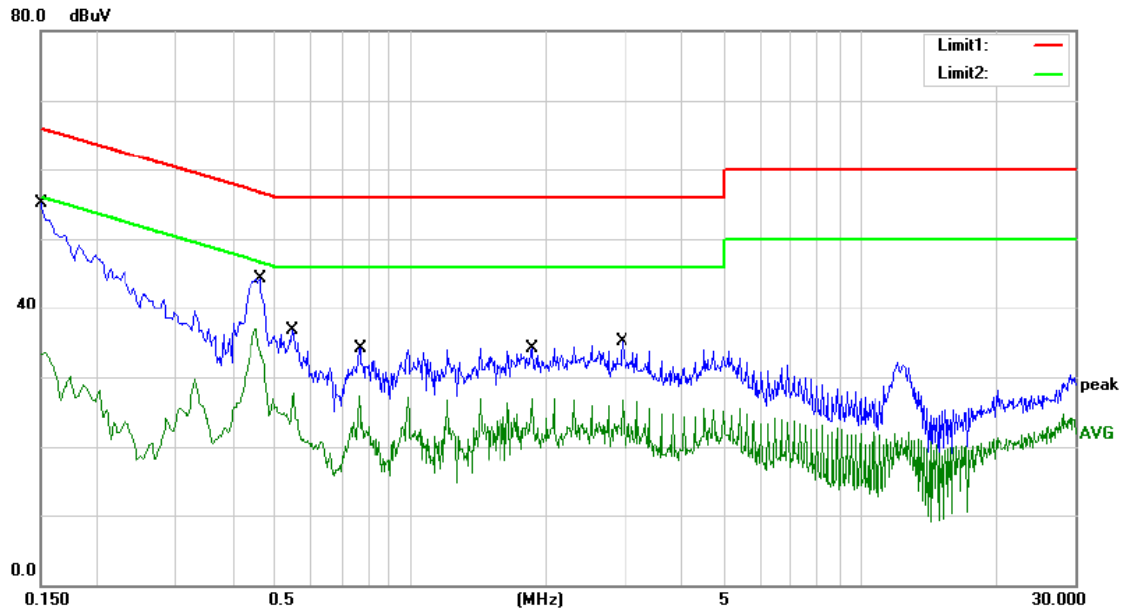
## 9W Sumsung Fast Wireless Charging



Site site #1 Phase: **L1** Temperature: 25  
 Limit: (CE)FCC PART 15 C\_QP Power: AC 120V/60Hz Humidity: 55 %  
 Mode: Wireless Charging(Samsung-9W)  
 Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1540	42.38	9.78	52.16	65.78	-13.62	QP	
2		0.1540	23.84	9.78	33.62	55.78	-22.16	AVG	
3		0.4500	32.34	9.83	42.17	56.88	-14.71	QP	
4	*	0.4500	27.52	9.83	37.35	46.88	-9.53	AVG	
5		0.7660	22.84	9.84	32.68	56.00	-23.32	QP	
6		0.7660	18.69	9.84	28.53	46.00	-17.47	AVG	
7		1.8580	22.70	9.84	32.54	56.00	-23.46	QP	
8		1.8580	17.64	9.84	27.48	46.00	-18.52	AVG	
9		2.0820	23.45	9.84	33.29	56.00	-22.71	QP	
10		2.0820	17.62	9.84	27.46	46.00	-18.54	AVG	
11		3.1780	24.33	9.85	34.18	56.00	-21.82	QP	
12		3.1780	17.13	9.85	26.98	46.00	-19.02	AVG	

\*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: Yaping shen



Site site #1 Phase: **N** Temperature: 25  
 Limit: (CE)FCC PART 15 C\_QP Power: AC 120V/60Hz Humidity: 55 %  
 Mode: Wireless Charging(Samsung-9W)  
 Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1500	42.71	9.78	52.49	66.00	-13.51	QP	
2		0.1500	23.74	9.78	33.52	56.00	-22.48	AVG	
3		0.4620	32.51	9.83	42.34	56.66	-14.32	QP	
4	*	0.4620	27.09	9.83	36.92	46.66	-9.74	AVG	
5		0.5460	23.84	9.84	33.68	56.00	-22.32	QP	
6		0.5460	17.84	9.84	27.68	46.00	-18.32	AVG	
7		0.7700	22.68	9.84	32.52	56.00	-23.48	QP	
8		0.7700	17.52	9.84	27.36	46.00	-18.64	AVG	
9		1.8620	22.32	9.84	32.16	56.00	-23.84	QP	
10		1.8620	17.10	9.84	26.94	46.00	-19.06	AVG	
11		2.9580	23.00	9.85	32.85	56.00	-23.15	QP	
12		2.9580	16.79	9.85	26.64	46.00	-19.36	AVG	

\*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: Yaping shen

## 5.6 Conducted Measurement Photo





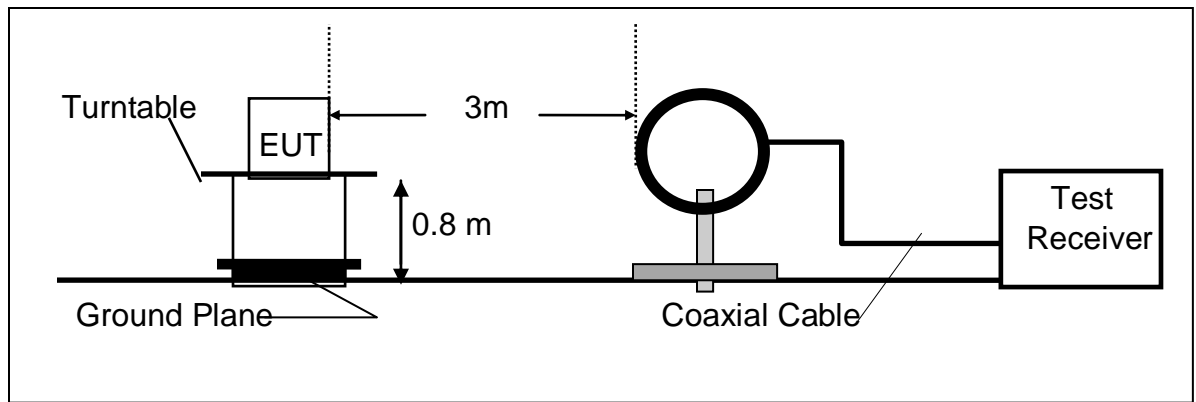
## 6 Radiated Emission Test

### 6.1 Measurement Procedure

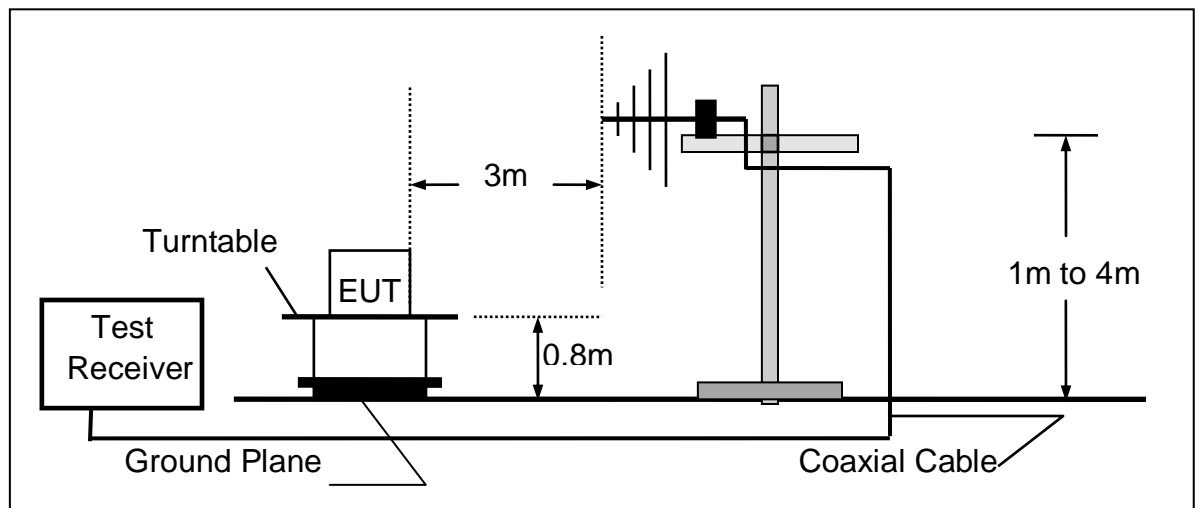
1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
4. Repeat above procedures until all frequency measured were complete.

### 6.2 Test SET-UP (Block Diagram of Configuration)

(A) Radiated Emission Test Set-Up, Frequency Below 30MHz



(B) Radiated Emission Test Set-Up, Frequency Below 1000MHz



### 6.3 Measurement Equipment Used

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due date
Test Receiver	Rohde & Schwarz	ESCI	1166.5950.03	05/16/2018	05/15/2019
Signal Analyzer	Rohde & Schwarz	FSV30	103040	05/16/2018	05/15/2019
Loop Antenna	Schwarzbeck	FMZB 1519	012	05/16/2018	05/15/2019
Bilog Antenna	Schwarzbeck	VULB9163	000141	05/16/2018	05/15/2019
Power Amplifier	CDS	RSU-M352	818	05/16/2018	05/15/2019
Power Amplifier	HP	8447F	OPT H64	05/16/2018	05/15/2019
Color Monitor	SUNSPO	SP-140A	N/A	05/16/2018	05/15/2019
Single Line Filter	JIANLI	XL-3	N/A	05/16/2018	05/15/2019
Single Phase Power Line Filter	JIANLI	DL-2X100B	N/A	05/16/2018	05/15/2019
3 Phase Power Line Filter	JIANLI	DL-4X100B	N/A	05/16/2018	05/15/2019
DC Power Filter	JIANLI	DL-2X50B	N/A	05/16/2018	05/15/2019
Cable	Schwarzbeck	PLF-100	549489	05/16/2018	05/15/2019
Cable	Rosenberger	CIL02	A0783566	05/16/2018	05/15/2019
Cable	Rosenberger	RG 233/U	525178	05/16/2018	05/15/2019

### 6.4 Radiated Emission Limit

The emissions from an intentional radiator shall not exceed the field strength levels specified in the following table 15.209(a):

FCC Part 15.209				
Frequency (MHz)	Field Strength Limitation		Field Strength Limitation Frequency tion at 3m Measurement Dist	
	(uV/m)	Dist	(uV/m)	(dBuV/m)
0.009 – 0.490	2400 / F(KHz)	300m	10000 * 2400/F(KHz)	20log 2400/F(KHz) + 80
0.490 – 1.705	24000 / F(KHz)	30m	100 * 24000/F(KHz)	20log 24000/F(KHz) + 40
1.705 – 30.00	30	30m	100* 30	20log 30 + 40
30.0 – 88.0	100	3m	100	20log 100
88.0 – 216.0	150	3m	150	20log 150
216.0 – 960.0	200	3m	200	20log 200
Above 960.0	500	3m	500	20log 500

## 15.205 Restricted bands of operation

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
<sup>1</sup> 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	( <sup>2</sup> )

Remark: 1. Emission level in dBuV/m=20 log (uV/m)  
 2. Measurement was performed at an antenna to the closed point of EUT distance of meters.  
 3. Only spurious frequency is permitted to locate within the Restricted Bands specified in provision of § 15.205, and the emissions located in restricted bands also comply with 15.209 limit.

## 6.5 Measurement Result

We pretested two power and three modes (max load, mid load, min load) for EUT. The worst mode (9W Samsung Fast Wireless charging max load) and worst test frequency(Low frequency: 110KHz)test data see follow the table.

Operation Mode:	Low frequency	Test Date :	Novemver 05, 2018
Frequency Range:	9KHz~30MHz	Temperature :	20℃
Test Result:	PASS	Humidity :	55 %
Measured Distance:	3m	Test By:	Yaping Shen

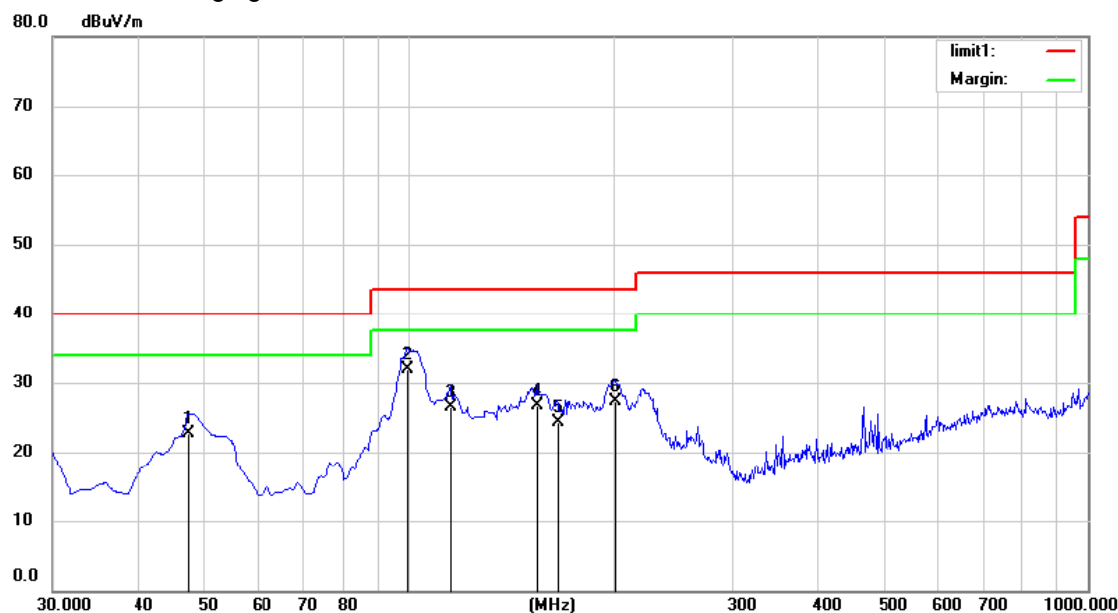
Freq. (MHz)	Ant.Pol. H/V	Emission Level (dBuV/m)	Limit 3m (dBuV/m)	Over (dB)	Note
0.110(F)	H	75.32	106.86	-31.54	PK
0.219	H	62.30	100.80	-38.50	PK
0.329	H	60.30	97.26	-36.96	PK
0.437	H	58.63	94.79	-36.16	PK
0.548	H	58.32	72.83	-14.51	PK
0.110(F)	V	75.72	106.86	-31.14	PK
0.219	V	64.32	100.80	-36.48	PK
0.329	V	60.35	97.26	-36.91	PK
0.437	V	59.32	94.79	-35.47	PK
0.548	V	59.03	72.83	-13.80	PK

**Note:**

- (1) All Readings are Peak Value.
- (2) Emission Level= Reading Level+Probe Factor +Cable Loss.
- (3) The average measurement was not performed when the peak measured data under the limit of average detection.
- (4) EUT lying on the table position is the worst case result in the report.

We pretested two power and three modes (max load, mid load, min load) for EUT. The worst mode (max load) and worst test frequency(Low frequency: 110KHz)test data see follow the page.

## Qi-5W Wireless Charging

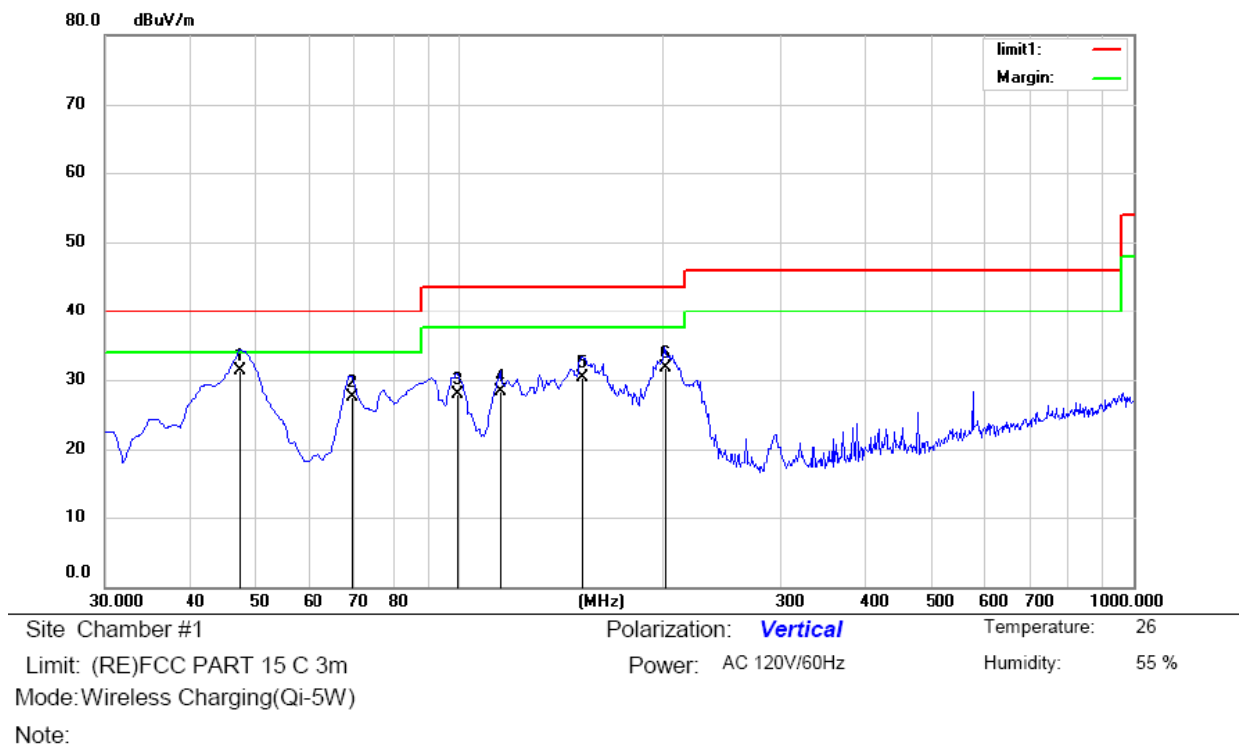


Site: Chamber #1  
 Limit: (RE)FCC PART 15 C 3m  
 Mode: Wireless Charging(Qi-5W)  
 Note:

Polarization: **Horizontal**  
 Power: AC 120V/60Hz  
 Temperature: 26  
 Humidity: 55 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		47.4917	38.46	-15.69	22.77	40.00	-17.23	QP		
2	*	99.8777	50.54	-18.64	31.90	43.50	-11.60	QP		
3		115.3600	45.61	-19.19	26.42	43.50	-17.08	QP		
4		155.1300	47.59	-20.96	26.63	43.50	-16.87	QP		
5		165.8000	44.67	-20.31	24.36	43.50	-19.14	QP		
6		200.7200	44.59	-17.25	27.34	43.50	-16.16	QP		

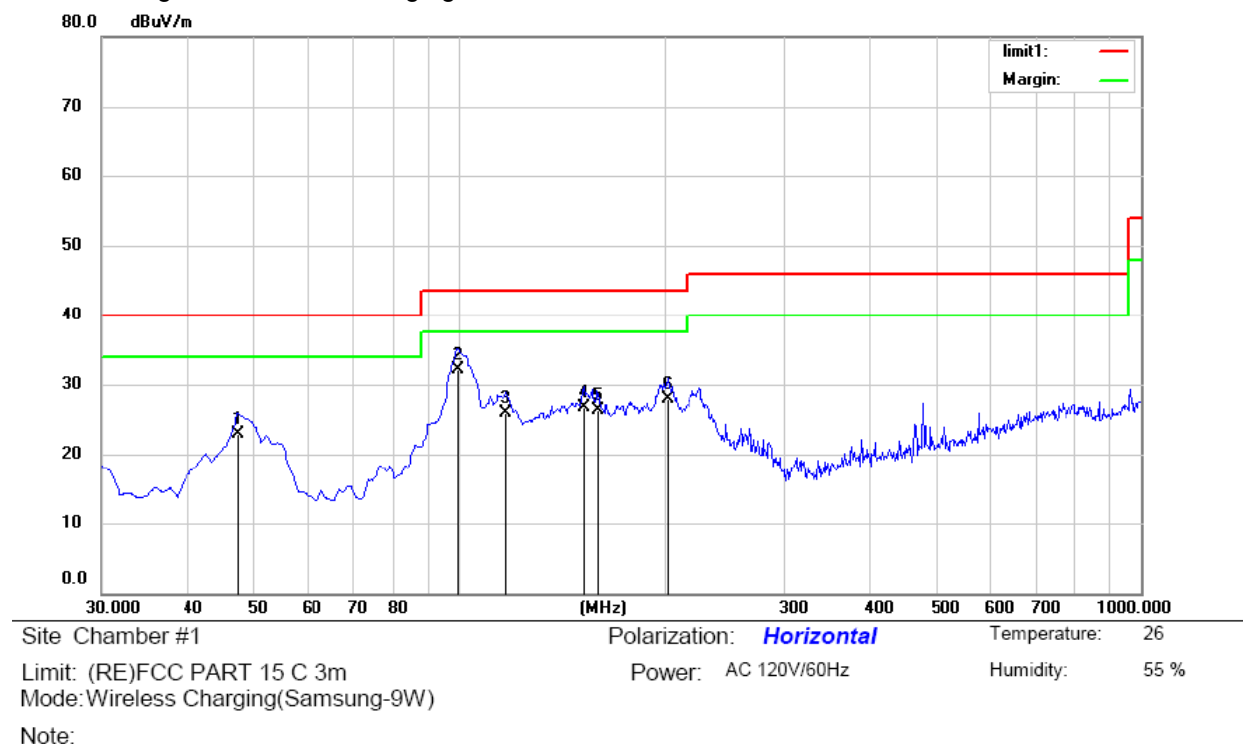
\*:Maximum data    x:Over limit    !:over margin    Comment: Factor build in receiver.    Operator: Yaping shen



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		47.4917	38.46	-15.69	22.77	40.00	-17.23	QP		
2	*	99.8777	50.54	-18.64	31.90	43.50	-11.60	QP		
3		115.3600	45.61	-19.19	26.42	43.50	-17.08	QP		
4		155.1300	47.59	-20.96	26.63	43.50	-16.87	QP		
5		165.8000	44.67	-20.31	24.36	43.50	-19.14	QP		
6		200.7200	44.59	-17.25	27.34	43.50	-16.16	QP		

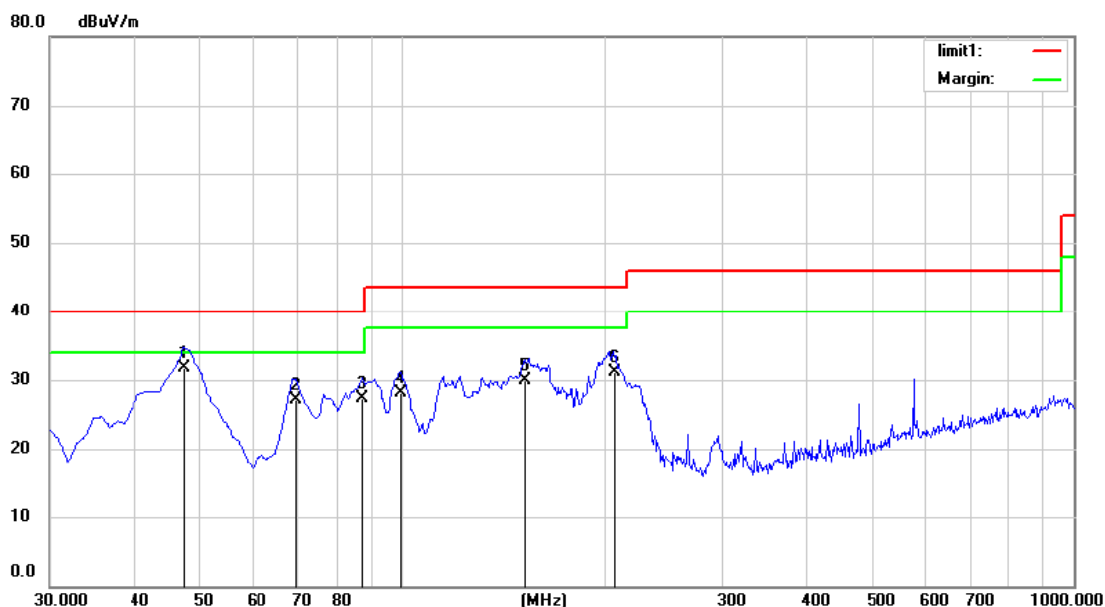
\*:Maximum data    x:Over limit    !:over margin    Comment: Factor build in receiver.    Operator: Yaping shen

## 9W Sumsung Fast Wireless Charging



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree
1		47.4600	38.64	-15.69	22.95	40.00	-17.05	QP		
2	*	99.8777	50.83	-18.64	32.19	43.50	-11.31	QP		
3		117.3000	45.46	-19.51	25.95	43.50	-17.55	QP		
4		153.2003	47.80	-21.18	26.62	43.50	-16.88	QP		
5		159.9800	46.97	-20.71	26.26	43.50	-17.24	QP		
6		202.6600	45.18	-17.27	27.91	43.50	-15.59	QP		

\*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: Yaping shen



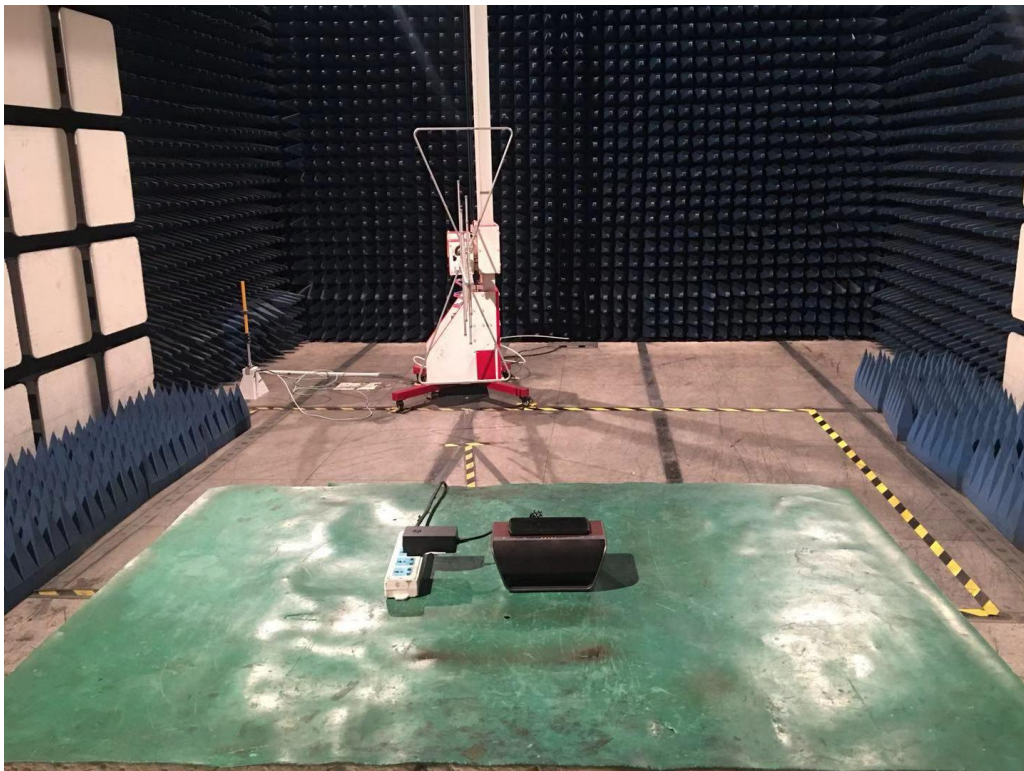
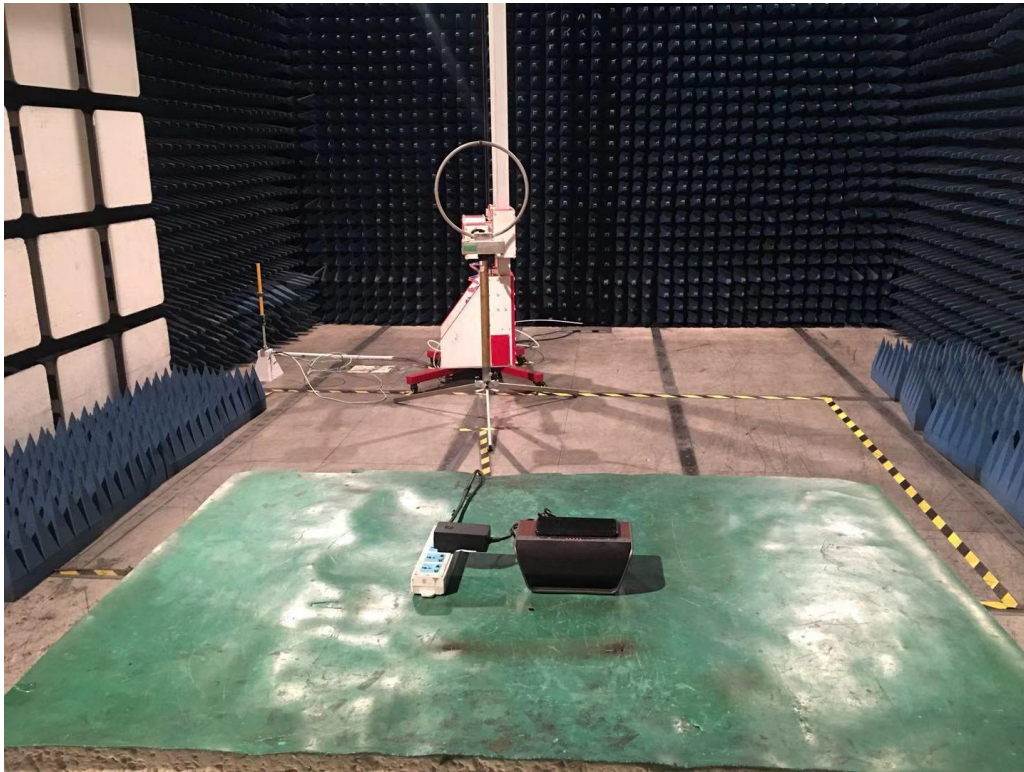
Site Chamber #1 Polarization: **Vertical** Temperature: 26  
 Limit: (RE)FCC PART 15 C 3m Power: AC 120V/60Hz Humidity: 55 %  
 Mode: Wireless Charging(Samsung-9W)  
 Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	47.4600	47.31	-15.69	31.62	40.00	-8.38	QP		
2		69.7700	48.97	-21.78	27.19	40.00	-12.81	QP		
3		87.2300	49.22	-22.01	27.21	40.00	-12.79	QP		
4		99.8777	48.33	-20.25	28.08	43.50	-15.42	QP		
5		153.2003	51.10	-21.18	29.92	43.50	-13.58	QP		
6		206.5400	48.44	-17.34	31.10	43.50	-12.40	QP		

\*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: Yaping shen



## 6.6 Radiated Measurement Photos



## 7 20db Bandwidth

### 7.1 20dB Bandwidth Limit

None: for reporting purposed only.

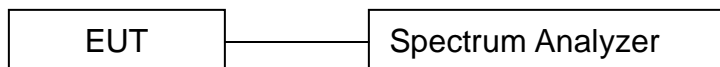
### 7.2 Test Instruments

Refer a test equipment and calibration data table in this test report.

### 7.3 Test Procedure

The bandwidth of the fundamental frequency was measured by spectrum analyzer with 10Hz RBW and 30Hz VBW. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

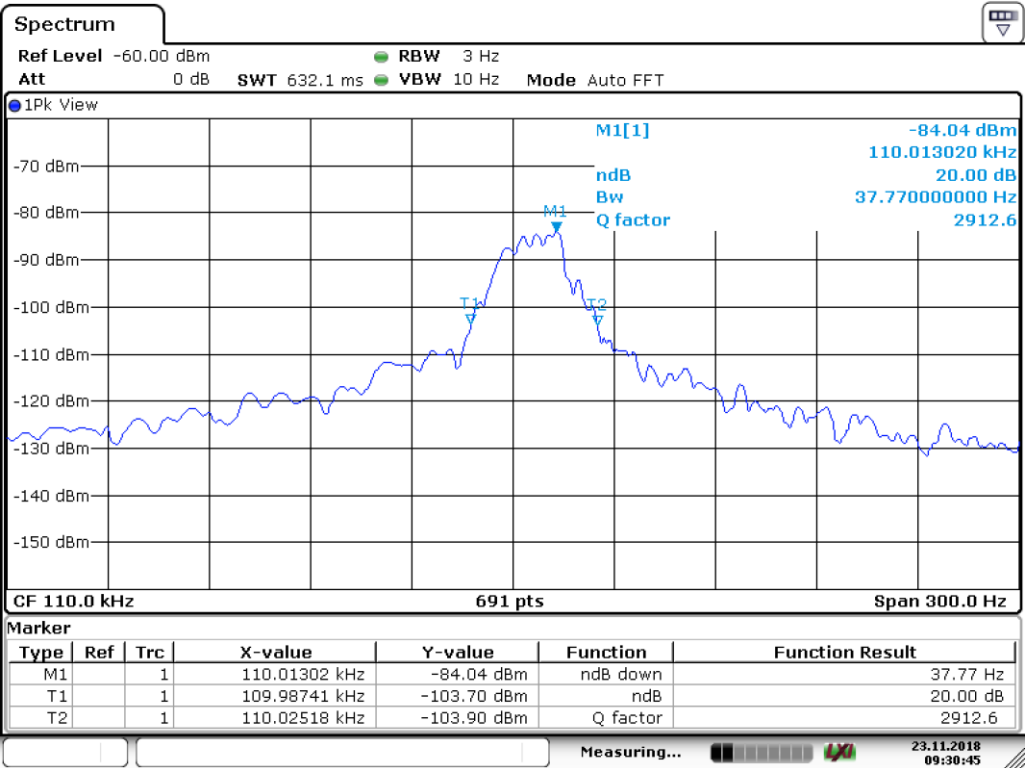
### 7.4 Test Setup



### 7.5 Test Result

Frequency (KHz)	20dB Bandwidth (Hz)	Results
110	37.77	PASS

20 dB Bandwidth Test plot



## **8 Antenna Application**

### **8.1 Antenna requirement**

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

### **8.2 Result**

The EUT's antenna, permanent attached antenna, used an Induction coil and integrated on PCB, The antenna's gain meets the requirement.

## **9 Photos of EUT**

Please refer to external photos.pdf and internal photos.pdf.