

# TEST REPORT

**Reference No.**..... : WTX21X11128963W-1  
**FCC ID** ..... : A4E-ICPRRWMS  
**Applicant** ..... : eMoMo Technology Co., Ltd  
**Address**..... : Yonghe Building, Taiwan Industrial Park, Shiyan, Baoan, Shenzhen, 518131, Guangdong, China  
**Product Name** ..... : Multi-function cup holder  
**Test Model.** ..... : ICPTW(S)  
**Standards** ..... : FCC Part 18  
**Date of Receipt sample** .... : Nov. 24, 2021  
**Date of Test**..... : Nov. 24, 2021 to Dec. 07, 2021  
**Date of Issue** ..... : Dec. 07, 2021  
**Test Result**..... : **Pass**

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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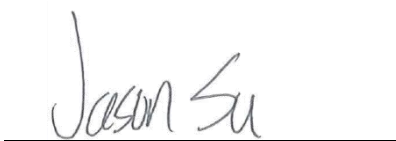
Tested by:

Reviewed By:

Approved & Authorized By:



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Jason Su / RF Manager



Silin Chen / Manager

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**Report version**

Version No.	Date of issue	Description
Rev.00	Dec. 07, 2021	Original
/	/	/

## 1. GENERAL INFORMATION

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### 1.1 Product Description for Equipment Under Test (EUT)

#### Client Information

Applicant: eMoMo Technology Co., Ltd  
 Address of applicant: Yonghe Building, Taiwan Industrial Park, Shiyan, Baoan, Shenzhen, 518131, Guangdong, China

Manufacturer: eMoMo Technology Co., Ltd  
 Address of manufacturer: Yonghe Building, Taiwan Industrial Park, Shiyan, Baoan, Shenzhen, 518131, Guangdong, China

General Description of EUT	
Product Name:	Multi-function cup holder
Trade Name:	/
Model No.:	ICPTRW(S)
Adding Model(s):	ICPRRW(S), ICPRRWMH(S)
<p><i>Note: The test data is gathered from a production sample, provided by the manufacturer. The appearance of others models listed in the report is different from main-test model ICPTRW(S), but the circuit and the electronic construction do not change, declared by the manufacturer.</i></p>	

Technical Characteristics of EUT	
Frequency Range:	112~205KHz
Modulation Type:	ASK
Antenna Type:	Coil Antenna
Input:	DC29V
Wireless output:	5.0W
USB output	5V3A, 9V2A, 12V1.5A
Power adapter:	/

## 1.2 Test Standards

The tests were performed according to following standards:

**FCC Part 18 Subpart C**: Industrial, Scientific, and medical medical equipment.

**ANSI C63.4-2014**: American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

*Maintenance of compliance* is the responsibility of the manufacturer. Any modification of the product, which result in lowering the emission, should be checked to ensure compliance has been maintained.

## 1.3 Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2014, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

## 1.4 Test Facility

Laboratory: Waltek Testing Group (Shenzhen) Co., Ltd.

Address: 1/F., Room 101, Building 1, Hongwei Industrial Park, Liuxian 2nd Road, Bao'an District, Shenzhen, P.R.C. (518101)

### **FCC – Registration No.: 125990**

Waltek Testing Group (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. The Designation Number is CN5010, and Test Firm Registration Number is 125990.

### **Industry Canada (IC) Registration No.: 11464A**

The 3m Semi-anechoic chamber of Waltek Testing Group (Shenzhen) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A.

## 1.5 EUT Setup and Operation Mode

The equipment under test (EUT) was configured to measure its highest possible emission level. The test modes were adapted according to the operation manual for use, more detailed description as follows:

### Test Mode List:

Test Mode	Description	Remark	Power Supply Mode
TM1	Wireless charging	Connect to the Adapter	AC120V 60Hz for adapter, Wireless Charging Output :5W;

### EUT Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
DC cable	1.2	Unshielded	Without Ferrite

### Auxiliary Equipment List and Details

Description	Manufacturer	Model	Serial Number
Adapter	/	ZB-H290020A-C	/
Wireless Charging Load	YBZ	YBZ wireless charging tester	/

### Special Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
/	/	/	/

## 1.6 Measurement Uncertainty

Measurement uncertainty		
Parameter	Conditions	Uncertainty
Conducted Emissions	Conducted	9-150kHz $\pm 3.74$ dB
		0.15-30MHz $\pm 3.34$ dB
Radiated Emissions	Radiated	30-200MHz $\pm 4.52$ dB
		0.2-1GHz $\pm 5.56$ dB
		1-6GHz $\pm 3.84$ dB
		6-18GHz $\pm 3.92$ dB

**1.7 Test Equipment List and Details**

Description	Manufacturer	Model	Serial No.	Cal Date	Due Date
Spectrum Analyzer	Rohde & Schwarz	FSP	836079/035	2021-03-30	2022-03-29
EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2021-04-12	2022-04-11
Amplifier	Agilent	8447F	3113A06717	2021-04-12	2022-04-11
Amplifier	C&D	PAP-1G18	2002	2021-04-12	2022-04-11
Trilog Broadband Antenna	Schwarz beck	VULB9163	9163-333	2021-03-20	2023-03-19
Horn Antenna	ETS	3117	00086197	2021-03-19	2023-03-18
Loop Antenna	Schwarz beck	FMZB 1516	9773	2021-03-20	2023-03-19
Trilog Broadband Antenna	Schwarz beck	VULB9163(B)	9163-635	2021-04-09	2023-04-08
Amplifier	Agilent	8447D	2944A10179	2021-04-12	2022-04-11
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2021-04-15	2022-04-14

Software List			
Description	Manufacturer	Model	Version
EMI Test Software (Radiated Emission)*	Farad	EZ-EMC	RA-03A1
EMI Test Software (Conducted Emission)*	Farad	EZ-EMC	RA-03A1

\*Remark: indicates software version used in the compliance certification testing



## 2. SUMMARY OF TEST RESULTS

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FCC RULES	DESCRIPTION OF TEST	RESULT
§ 18.307 (b)	Conducted Emission	Compliant
§ 18.305 (b)	Radiated Emission	Compliant

### 3. Conducted Emissions

#### 3.1 Standard Applicable

According to FCC 18.307(b), the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies shall not exceed the limits in the following tables:

Frequency (MHz)	Conducted limit (dB $\mu$ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

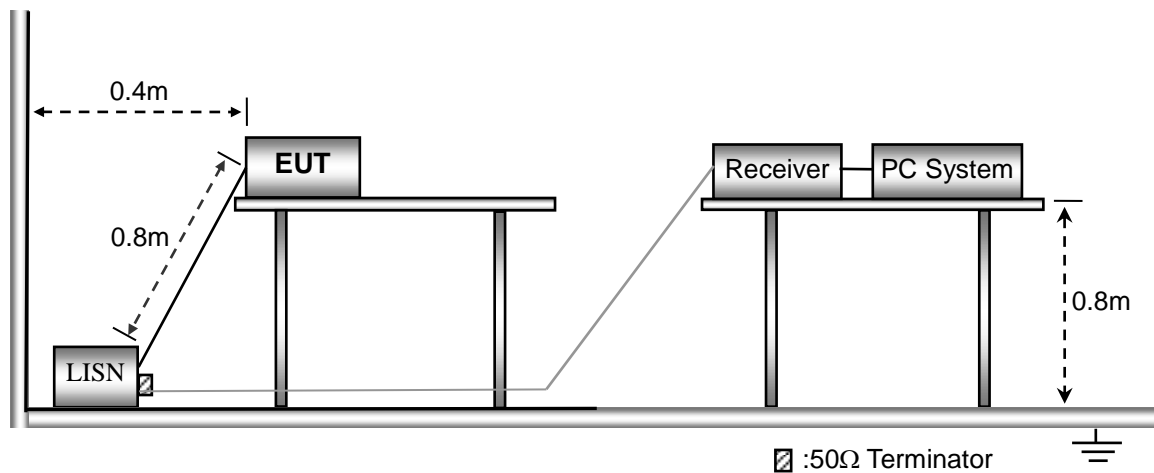
#### 3.2 Test Procedure

The setup of EUT is according with per ANSI C63.4-2014 measurement procedure. The specification used was with the FCC Part 18.307 Limit.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

#### 3.3 Basic Test Setup Block Diagram



#### 3.4 Environmental Conditions

Temperature:	23.5° C
Relative Humidity:	54%
ATM Pressure:	1016 mbar

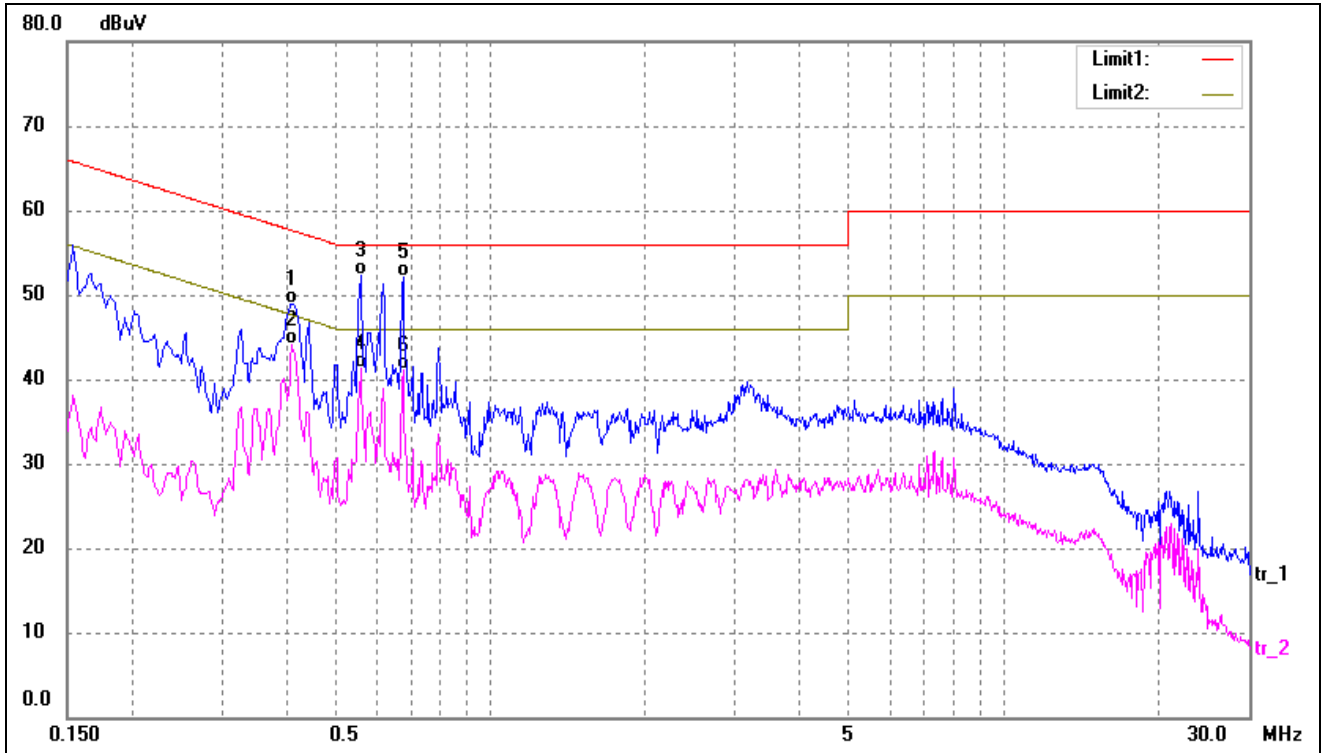
### 3.5 Test Receiver Setup

During the conducted emission test, the test receiver was set with the following configurations:

Start Frequency ..... 150 kHz  
Stop Frequency..... 30 MHz  
Sweep Speed ..... Auto  
IF Bandwidth..... 10 kHz  
Quasi-Peak Adapter Bandwidth ..... 9 kHz  
Quasi-Peak Adapter Mode..... Normal

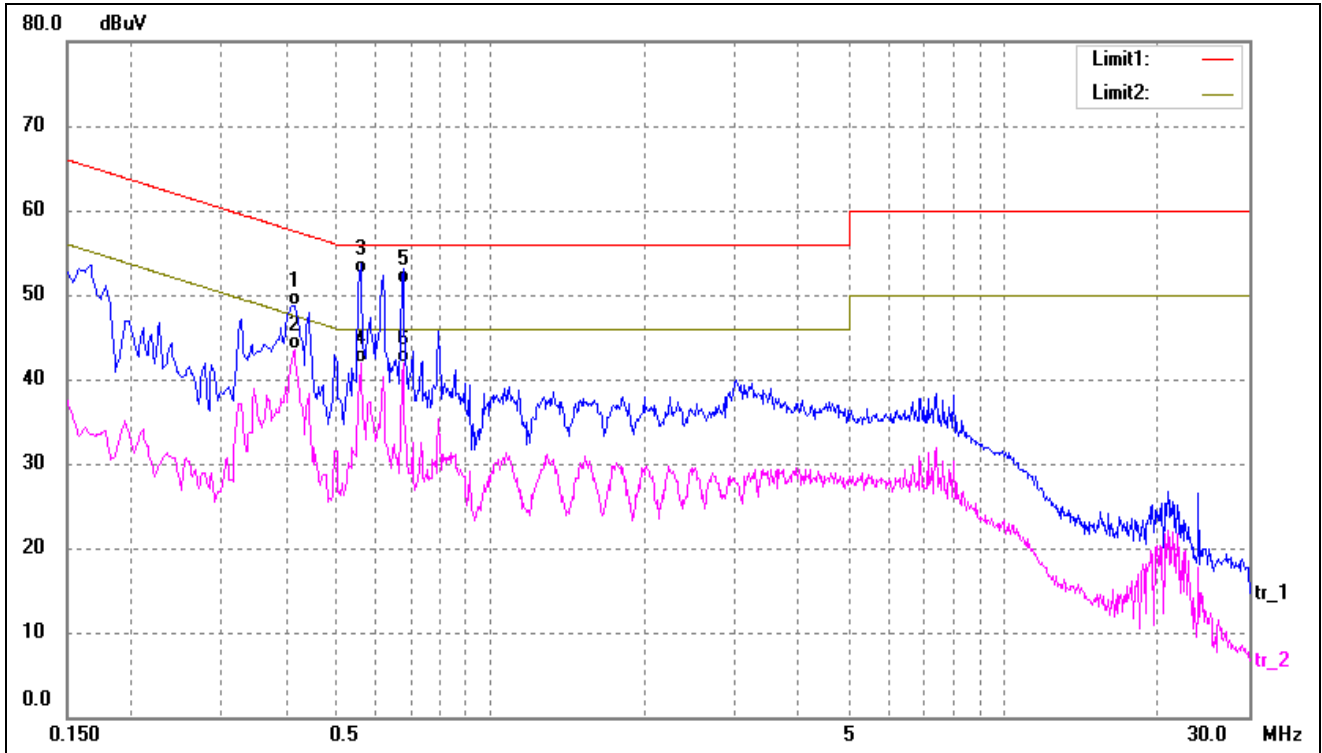
### 3.6 Summary of Test Results/Plots

Test mode:	TM1	Polarity:	Line
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No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.4100	38.63	10.29	48.92	57.65	-8.73	QP
2*	0.4100	33.79	10.29	44.08	47.65	-3.57	AVG
3	0.5580	42.07	10.29	52.36	56.00	-3.64	QP
4	0.5580	31.05	10.29	41.34	46.00	-4.66	AVG
5	0.6780	41.82	10.37	52.19	56.00	-3.81	QP
6	0.6780	30.65	10.37	41.02	46.00	-4.98	AVG

Test mode:	TM1	Polarity:	Neutral
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No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.4100	38.38	10.29	48.67	57.65	-8.98	QP
2	0.4140	33.25	10.29	43.54	47.57	-4.03	AVG
3*	0.5580	42.17	10.29	52.46	56.00	-3.54	QP
4	0.5580	31.59	10.29	41.88	46.00	-4.12	AVG
5	0.6780	40.98	10.37	51.35	56.00	-4.65	QP
6	0.6780	31.54	10.37	41.91	46.00	-4.09	AVG

## 4. Radiated Emissions

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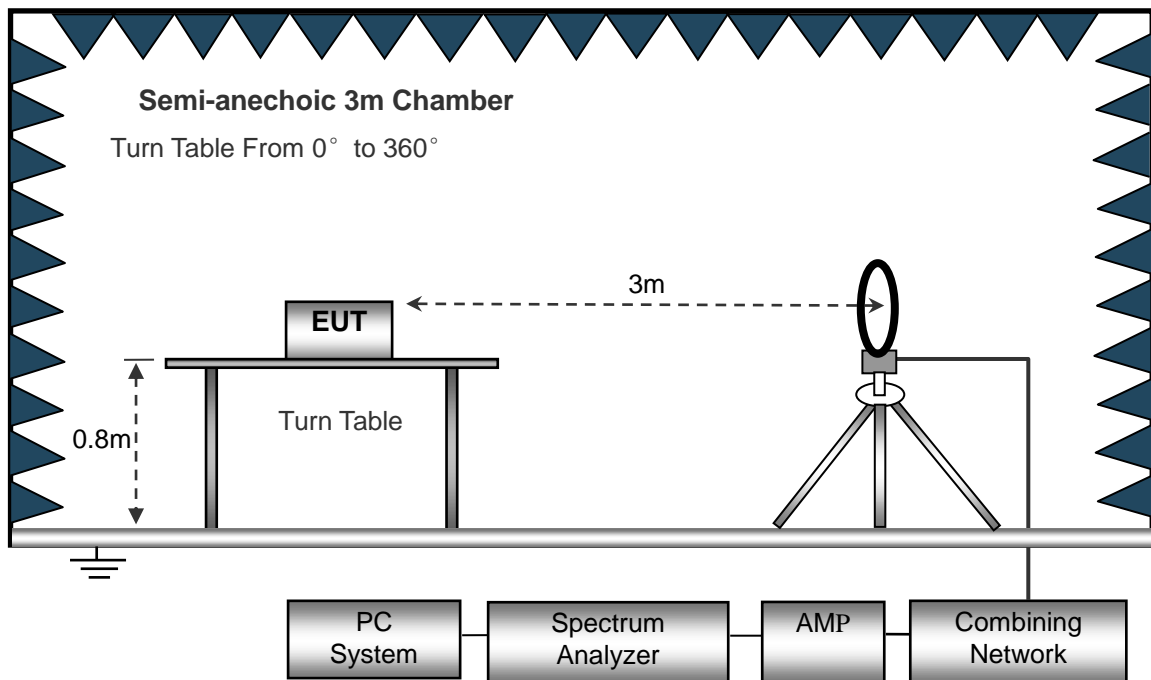
### 4.1 Test Procedure

The setup of EUT is according with per ANSI C63.4-2014 measurement procedure. The specification used was with the FCC Part 18.305 Limit.

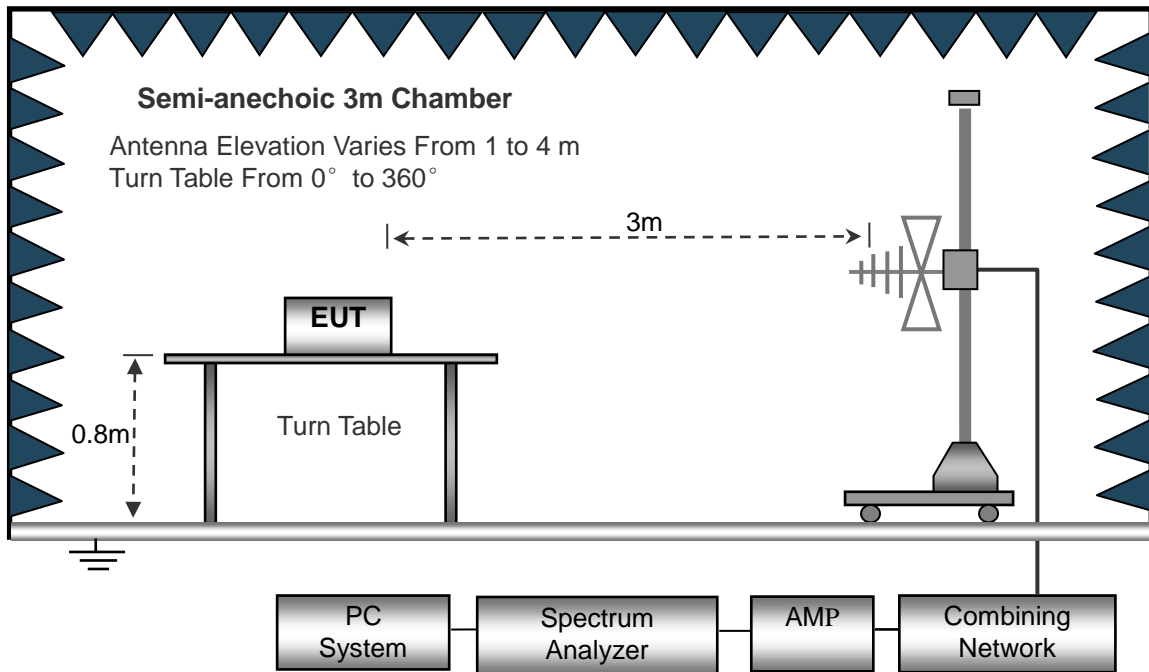
The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

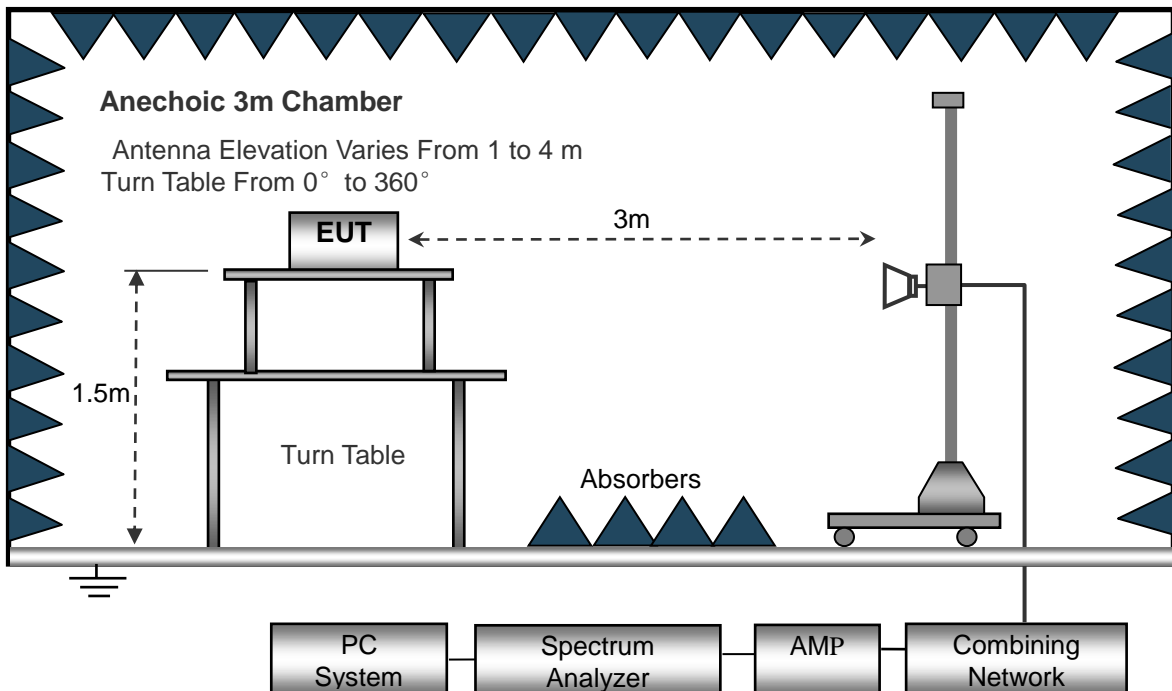
The test setup for emission measurement below 30MHz..



The test setup for emission measurement from 30 MHz to 1 GHz..



The test setup for emission measurement above 1 GHz..



## 4.2 Test Receiver Setup

Frequency :9kHz-30MHz

RBW=10KHz,

VBW =30KHz

Sweep time= Auto

Trace = max hold

Detector function = peak

Frequency :30MHz-1GHz

RBW=120KHz,

VBW=300KHz

Sweep time= Auto

Trace = max hold

Detector function = peak, QP

Frequency :Above 1GHz

RBW=1MHz,

VBW=3MHz(Peak), 10Hz(AV)

Sweep time= Auto

Trace = max hold

Detector function = peak, AV

## 4.3 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and the Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

$$\text{Corr. Ampl.} = \text{Indicated Reading} - \text{Corr. Factor}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -6dB $\mu$ V means the emission is 6dB $\mu$ V below the maximum limit for Any non-ISM frequency device. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Corr. Ampl.} - \text{FCC Part 18.305 Limit}$$

## 4.4 Environmental Conditions

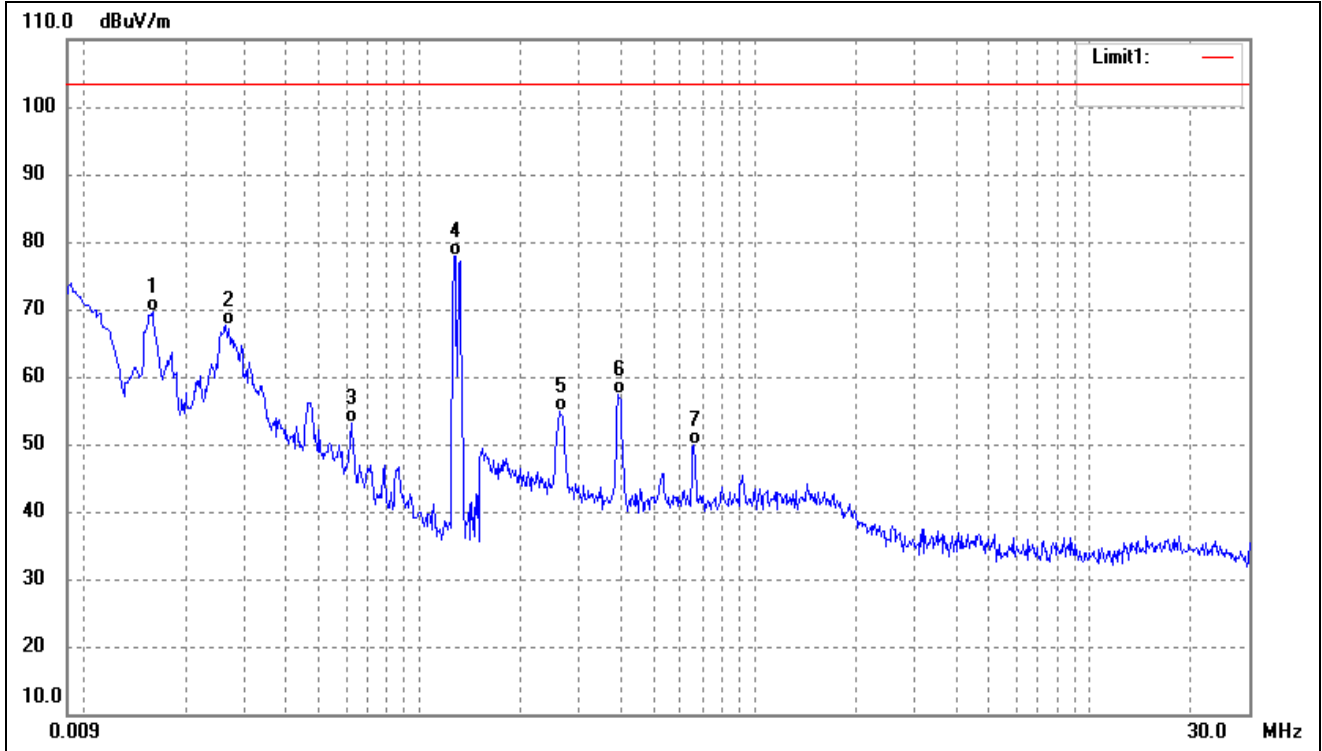
Temperature:	22 °C
Relative Humidity:	54 %
ATM Pressure:	1011 mbar

## 4.5 Summary of Test Results/Plots



**Plot of Radiated Emissions Test Data (Below 30MHz)**

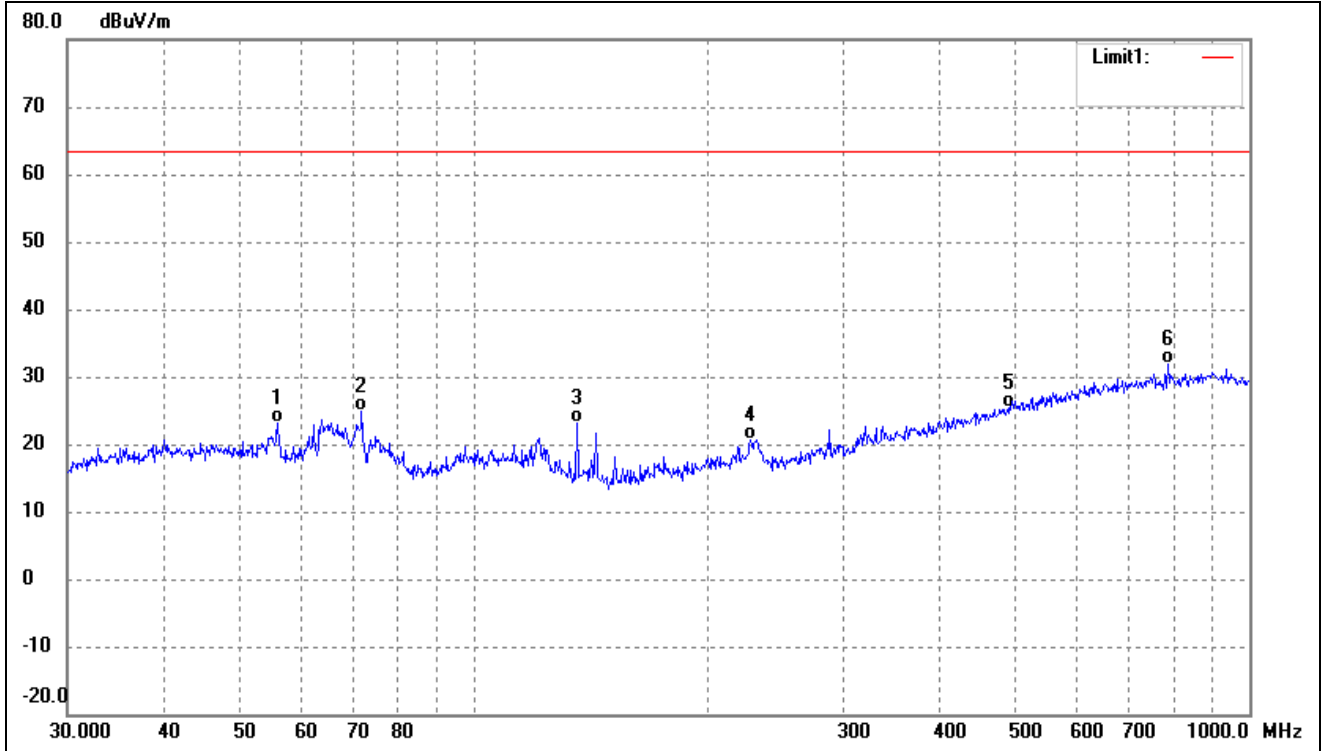
Test mode:	TM1	Polarity:	Vertical
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No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ( )	Height (cm)	Remark
1	0.0160	75.10	-5.58	69.52	103.50	-33.98	-	-	QP
2	0.0265	72.79	-5.20	67.59	103.50	-35.91	-	-	QP
3	0.0625	57.41	-4.25	53.16	103.50	-50.34	-	-	QP
4	0.1267	82.26	-4.43	77.83	103.50	-25.67	-	-	QP
5	0.2615	59.78	-4.98	54.80	103.50	-48.70	-	-	QP
6	0.3914	62.01	-4.70	57.31	103.50	-46.19	-	-	QP
7	0.6543	53.52	-3.67	49.85	103.50	-53.65	-	-	QP

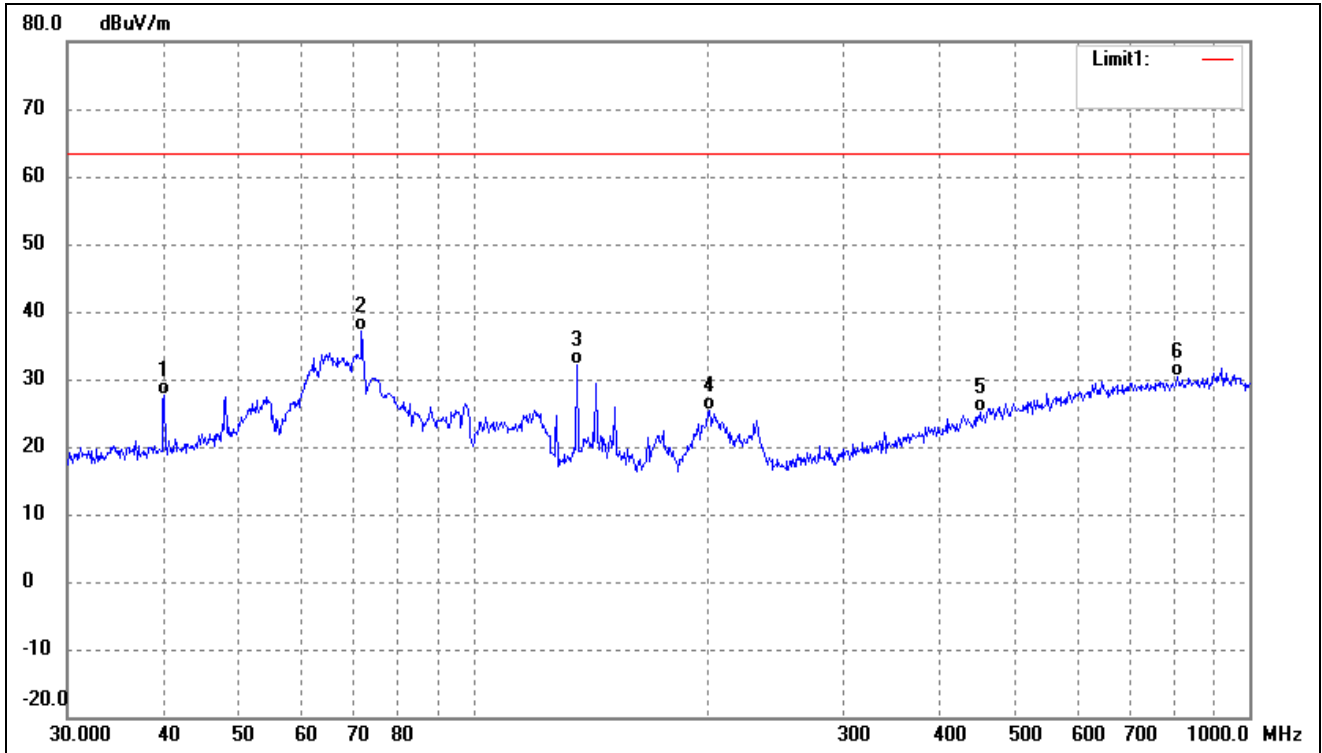
**Plot of Radiated Emissions Test Data ( Above 30MHz)**

Test mode:	TM1	Polarity:	Horizontal
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No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ( )	Height (cm)	Remark
1	56.0007	31.08	-7.84	23.24	63.50	-40.26	-	-	QP
2	71.8320	35.07	-10.27	24.80	63.50	-38.70	-	-	QP
3	135.9822	35.04	-11.94	23.10	63.50	-40.40	-	-	QP
4	227.6906	29.62	-8.94	20.68	63.50	-42.82	-	-	QP
5	489.0269	27.02	-1.58	25.44	63.50	-38.06	-	-	QP
6	785.0935	29.83	2.00	31.83	63.50	-31.67	-	-	QP

Test mode:	TM1	Polarity:	Vertical
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No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ( )	Height (cm)	Remark
1	39.9942	34.72	-7.00	27.72	63.50	-35.78	-	-	QP
2	71.8320	47.43	-10.27	37.16	63.50	-26.34	-	-	QP
3	135.9822	44.14	-11.94	32.20	63.50	-31.30	-	-	QP
4	201.3930	34.99	-9.66	25.33	63.50	-38.17	-	-	QP
5	449.5558	27.58	-2.57	25.01	63.50	-38.49	-	-	QP
6	807.4291	28.18	2.15	30.33	63.50	-33.17	-	-	QP

Remark: '-' Means the test Degree and Height are not recorded by the test software and only show the worst case in the test report.

## **APPENDIX PHOTOGRAPHS**

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**Please refer to “ANNEX”**

**\*\*\*\*\* END OF REPORT \*\*\*\*\***