Shenzhen Most Technology Service Co., Ltd.
East A, 1/F., New Aolin Factory Buiding, Langshan Erlu, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China.

TEST REPORT
FCC PART 15.209

Report Reference No..... :	**MTEB24040234-R**
FCC ID..... :	**2A6QM-WMO10-121**
Compiled by (position+printed name+signature).. :	File administrators Alisa Luo
Supervised by (position+printed name+signature).. :	Test Engineer Sunny Deng
Approved by (position+printed name+signature).. :	Manager Yvette Zhou
Date of issue..... :	**Apr.17,2024**
Representative Laboratory Name. :	**Shenzhen Most Technology Service Co., Ltd.**
Address..... :	East A, 1/F., New Aolin Factory Buiding, Langshan Erlu, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China.
Applicant's name..... :	**Shenzhen Romoss Technology Co.,Ltd**
Address..... :	Room1601, BLOCK B, Building 7,Shenzhen International Innovation Valley, Dashi 1st Road Xili community, Xili Street, Nanshan , Shenzhen，Guangdong, P.R.China
Test specification/ Standard.....:	**FCC Rules and Regulations Part 15 Subpart C (Section 15.209), ANSI C63.10: 2013**
TRF Originator.....:	Shenzhen Most Technology Service Co., Ltd.

Test item description.....:	**Wireless Power Bank**
Trade Mark.....:	ROMOSS
Model/Type reference..... :	WMO10-121
Modulation Type..... :	ASK
Operation Frequency..... :	115-205KHz
Rating.....:	DC 3.7V by Battery Input:5V⎓2A or 9V⎓2A(Lightning1) Input:5V⎓3A or 9V⎓2A(Lightning/ Type-C) Output: 5V⎓3A or 9V⎓2.22A or 12V⎓1.67A (Lightning/ Type-C) Total Output: Lightning/ Type-C + Wireless output =5V⎓3A Wireless output: 5W,7.5W,10W,15W.
Hardware Version .....:	WMO10-A V1.0-20231221
Software Version ..... :	MCU/FT61E14F-MRB/CS=0XB489/MSOP10/WMO10
Result.....:	**PASS**

T E S T R E P O R T

Equipment under Test	:	Wireless Power Bank
Model /Type	:	WMO10-121
Series models:		N/A
Remark:		N/A
Applicant	:	Shenzhen Romoss Technology Co.,Ltd
Address	:	Room1601, BLOCK B, Building 7,Shenzhen International Innovation Valley, Dashi 1st Road Xili community, Xili Street, Nanshan , Shenzhen，Guangdong, P.R.China
Manufacturer	:	Jiangmen Romoss Technology Co., Ltd.
Address	:	Room 01-2, First floor, Building 8, No. 80, Renhe Road, Tangxia Town, Pengjiang District, Jiangmen City

Test Result:	**PASS**

Contents

1. Revision History

Revision	Issue Date	Revisions	Revised By
00	2024.04.17	Initial Issue	Alisa Luo

2. TEST STANDARDS

The tests were performed according to following standards:

The tests were performed according to following standards:
ANSI C63.10:2013 : American National Standard for Testing Unlicensed Wireless Devices
FCC Rules and Regulations Part 15 Subpart C (Section 15.207): Conducted limits.
FCC Rules and Regulations Part 15 Subpart C (Section 15.209): Radiated emission limits; general requirements.

3 . SUMMARY

3.1. General Remarks

Date of receipt of test sample	:	2024.04.14
Testing commenced on	:	2024.04.14
Testing concluded on	:	2024.04.17

3.2. Product Description

Product Name:	Wireless Power Bank
Model/Type reference:	WMO10-121
Power Supply：	DC9V/2A DC 3.7V by Battery
Testing sample ID：	MTYP04880
Modulation:	PWM
Operation frequency:	115-205KHz
Antenna type:	Coil Antenna

3.3. Equipment Under Test

Power supply system utilised

Power supply voltage	:	○	230V / 50 Hz	○	120V / 60Hz
		○	12 V DC	○	24 V DC
		○	Other (specified in blank below)		

DC9V/2A;DC 3.7V by Battery

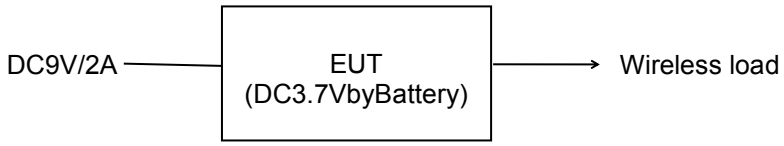
3.4. Short description of the Equipment under Test (EUT)

This is a Wireless Power Bank For more details, refer to the user's manual of the EUT.

3.5. EUT operation mode

Test Item	Test Modes	Test Voltage
Conducted Emission	Full load mode	DC9V/2A
	Half load mode	DC9V/2A
	Null load mode	DC9V/2A
Radiated Emission	Full load mode	DC9V/2A；DC 3.7V by Battery
	Half load mode	DC9V/2A；DC 3.7V by Battery
	Null load mode	DC9V/2A；DC 3.7V by Battery
Note:The mode is a was the worst case ande only the dato of the worst case record in this report.		

3.6. Block Diagram of Test Setup



3.7. Test Item (Equipment Under Test) Description*

Short designation	EUT Name	EUT Description	Serial number	Hardware status	Software status
EUT A	/	/	/	/	/

*: declared by the applicant. According to customers information EUTs A and B are the same devices.

3.8. Auxiliary Equipment (AE) Description

AE short designation	EUT Name (if available)	EUT Description	Serial number (if available)	Software (if used)
AE 1	Wireless load	/	/	/
AE 2	Adapter	MDY-08-EH		

3.9. Antenna Information*

Short designation	Antenna Name	Antenna Type	Frequency Range	Serial number	Antenna Peak Gain
Antenna 1	---	/	Coil Antenna	---	/
Antenna 2	/	/	/	/	/

*: declared by the applicant.

3.10. EUT configuration

The following peripheral devices and interface cables were connected during the measurement:

○ - supplied by the manufacturer

● - Supplied by the lab

○	ADAPTER	M/N:	
		Manufacturer:	

3.11. Modifications

No modifications were implemented to meet testing criteria.

4. TEST ENVIRONMENT

4.1. Address of the test laboratory

Shenzhen Most Technology Service Co., Ltd.
East A, 1/F., New Aolin Factory Buiding, Langshan Erlu, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China.
The 3m-Semi anechoic test site fulfils CISPR 16-1-4 according to ANSI C63.4:2014 and CISPR 16-1-4:2010 SVSWR requirement for radiated emission above 1GHz.

Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

FCC-Registration No.: 0031192610

Shenzhen Most Technology Service 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.

A2LA-Lab Cert. No.: 6343.01

Shenzhen Most Technology Service Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

4.2. Environmental conditions

Radiated Emission:

Temperature:	23 ° C
Humidity:	48 %
Atmospheric pressure:	950-1050mbar

Conducted testing：

Temperature:	24 ° C
Humidity:	45 %
Atmospheric pressure:	950-1050mbar

4.3. Test Description

FCC and IC Requirements		
FCC Part 15.203	Antenna Requirement	PASS
FCC Part 15.207	AC Power Conducted Emission	PASS
FCC Part 15.209	Radiated emission; Radiated Spurious Emissions	PASS

Remark:
1. The measurement uncertainty is not included in the test result.
2. NA = Not Applicable; NP = Not Performed

4.4. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 „Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements“ and is documented in the Shenzhen Most Technology Service Co., Ltd. quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Shenzhen Most Technology Service Co., Ltd. is reported:

Test	Range	Measurement Uncertainty	Notes
Radiated Emission	30~1000MHz	4.10 dB	(1)
Radiated Emission	1~18GHz	4.32 dB	(1)
Radiated Emission	18-40GHz	5.54 dB	(1)
Conducted Disturbance	0.15~30MHz	3.12 dB	(1)

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

4.5. Equipments Used during the Test

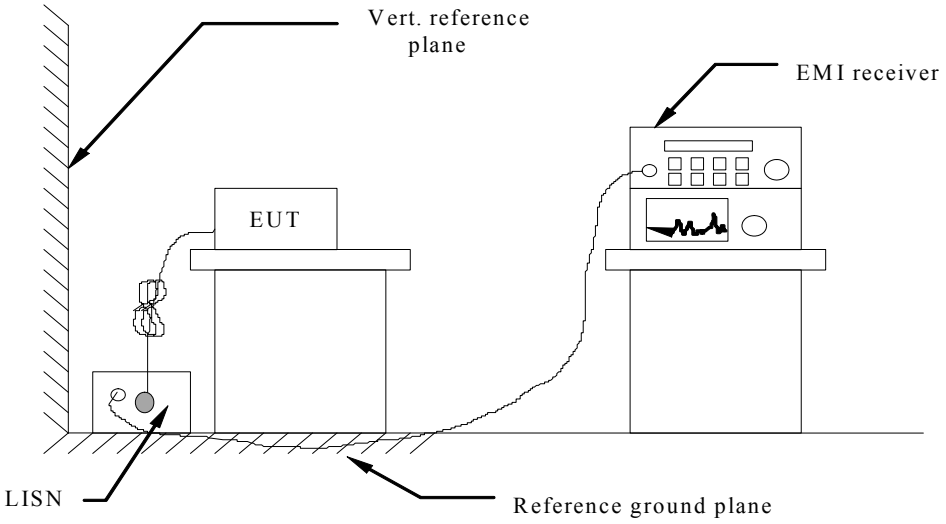
Item	Equipment	Manufacturer	Model No.	Serial No.	Firmware versions	Last Cal.
1.	L.I.S.N.	R&S	ENV216	100093	/	2024/03/15
2	Three-phase artificial power network	Schwarzback Mess	NNLK8129	8129178	/	2024/03/15
3.	Receiver	R&S	ESCI	100492	V3.0-10-2	2024/03/15
4	Receiver	R&S	ESPI	101202	V3.0-10-2	2024/03/15
5	Spectrum analyzer	Agilent	9020A	MT-E306	A14.16	2024/03/15
6	Bilong Antenna	Sunol Sciences	JB3	A121206	/	2023/08/15
7	Horn antenna	HF Antenna	HF Antenna	MT-E158	/	2024/03/15
8	Loop antenna	Beijing Daze	ZN30900B	/	/	2024/03/15
9	Horn antenna	R&S	OBH100400	26999002	/	2024/03/15
10	Wireless Communication Test Set	R&S	CMW500	/	CMW-BASE-3.7.21	2024/03/15
11	Spectrum analyzer	R&S	FSP	100019	V4.40 SP2	2024/03/15
12	High gain antenna	Schwarzbeck	LB-180400KF	MT-E389	/	2024/03/15
13	Preamplifier	Schwarzbeck	BBV 9743	MT-E390	/	2024/03/15
14	Pre-amplifier	EMCI	EMC051845SE	MT-E391	/	2024/03/15
15	Pre-amplifier	Agilent	83051A	MT-E392	/	2024/03/15
16	High pass filter unit	Tonscend	JS0806-F	MT-E393	/	2024/03/15
17	RF Cable(below1GHz)	Times	9kHz-1GHz	MT-E394	/	2024/03/15
18	RF Cable(above 1GHz)	Times	1-40G	MT-E395	/	2024/03/15
19	RF Cable (9KHz-40GHz)	Tonscend	170660	N/A	/	2024/03/15
20	Power meter	R&S	NRVS	100444	/	2024/03/15

Note: The Cal.Interval was one year.

5. TEST CONDITIONS AND RESULTS

5.1. AC Power Conducted Emission

TEST CONFIGURATION



TEST PROCEDURE

1 The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10-2013.
2 Support equipment, if needed, was placed as per ANSI C63.10-2013
3 All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10-2013
4 The EUT received DC9V power, the adapter received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
5 All support equipments received AC power from a second LISN, if any.
6 The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
7 Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.
8 During the above scans, the emissions were maximized by cable manipulation.

AC Power Conducted Emission Limit

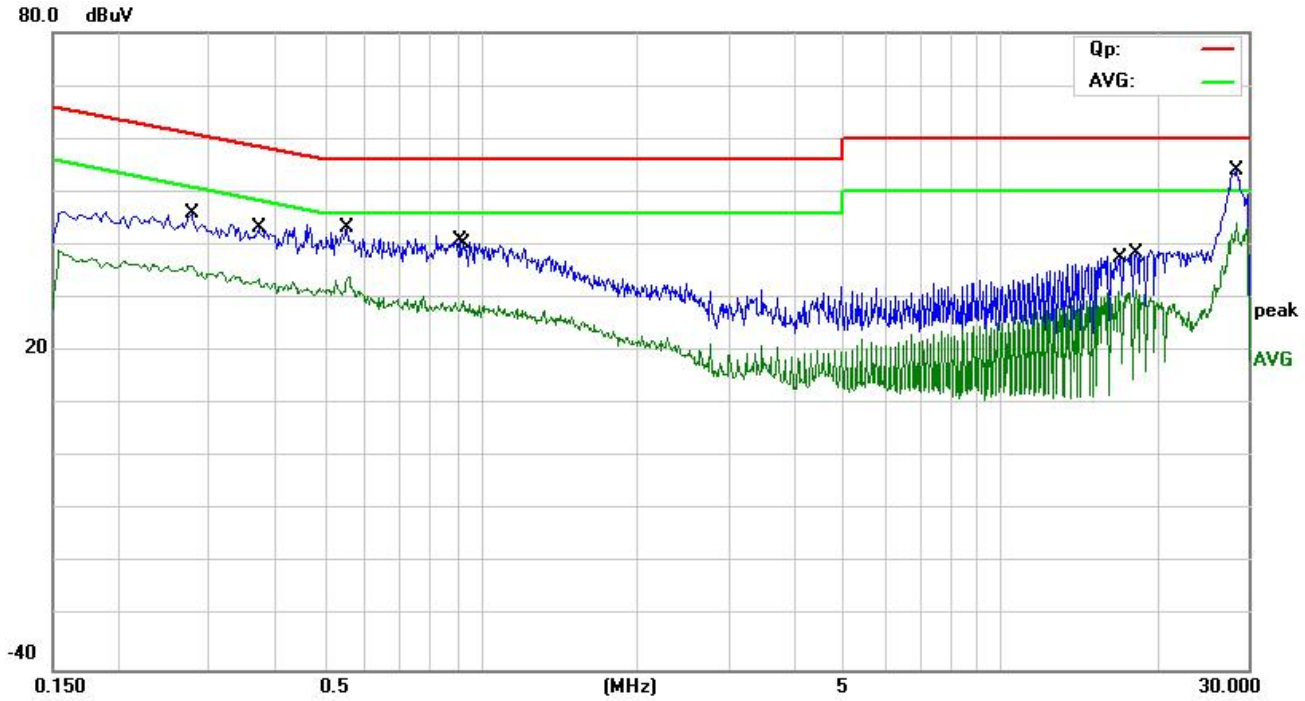
For unintentional device, according to RSS Gen 8.8 and § 15.207(a) Line Conducted Emission Limits is as following:

Frequency range (MHz)	Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50
* Decreases with the logarithm of the frequency.		

TEST RESULTS

Pass---The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.
(Test Worst mode: Full load mode;DC 9V/2A Input)

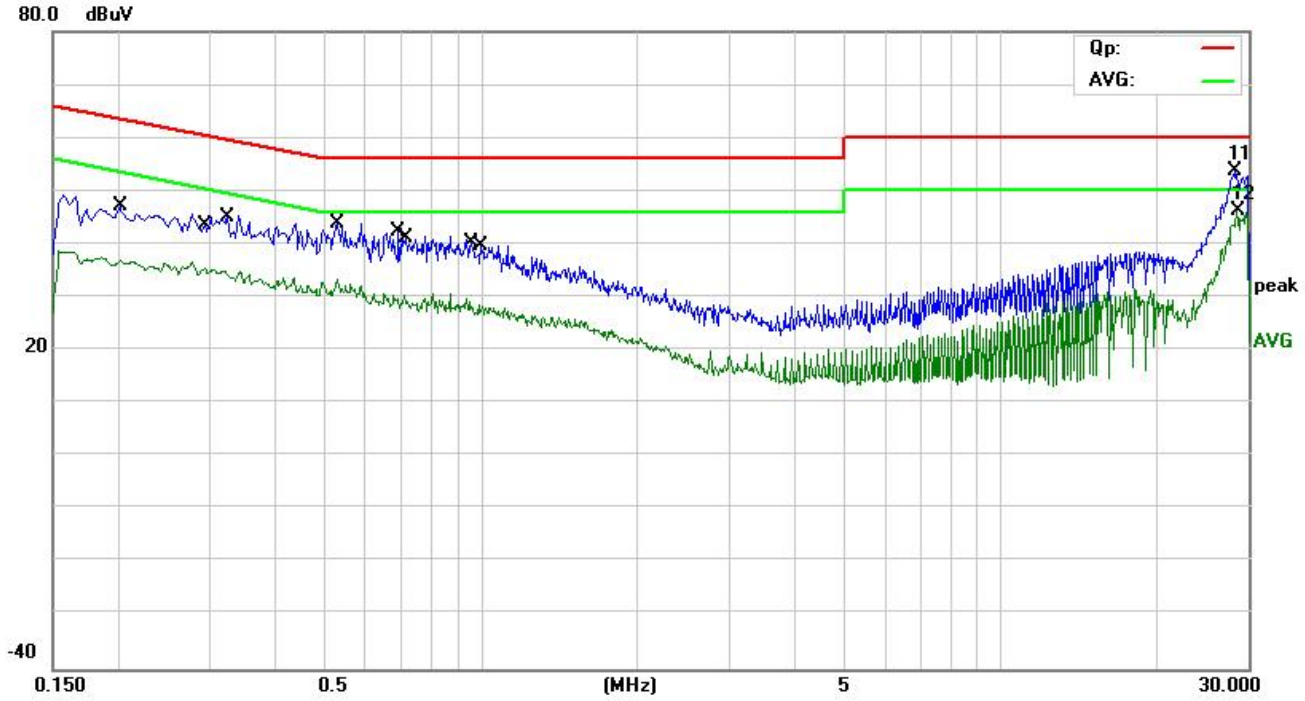
Power Supply	DC 9V	Line	L



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2780	36.46	9.59	46.05	60.88	-14.83	QP	
2		0.2780	26.59	9.59	36.18	50.88	-14.70	AVG	
3		0.3740	33.52	9.59	43.11	58.41	-15.30	QP	
4		0.3740	24.15	9.59	33.74	48.41	-14.67	AVG	
5		0.5540	33.62	9.59	43.21	56.00	-12.79	QP	
6		0.5580	24.34	9.59	33.93	46.00	-12.07	AVG	
7		0.9180	31.36	9.60	40.96	56.00	-15.04	QP	
8		0.9260	19.81	9.60	29.41	46.00	-16.59	AVG	
9		16.8420	21.61	9.71	31.32	50.00	-18.68	AVG	
10		18.0500	28.48	9.72	38.20	60.00	-21.80	QP	
11		28.5140	44.38	9.76	54.14	60.00	-5.86	QP	
12	*	28.5140	34.49	9.76	44.25	50.00	-5.75	AVG	

*:Maximum data x:Over limit !:over margin

Power Supply	DC 9V	Line	N



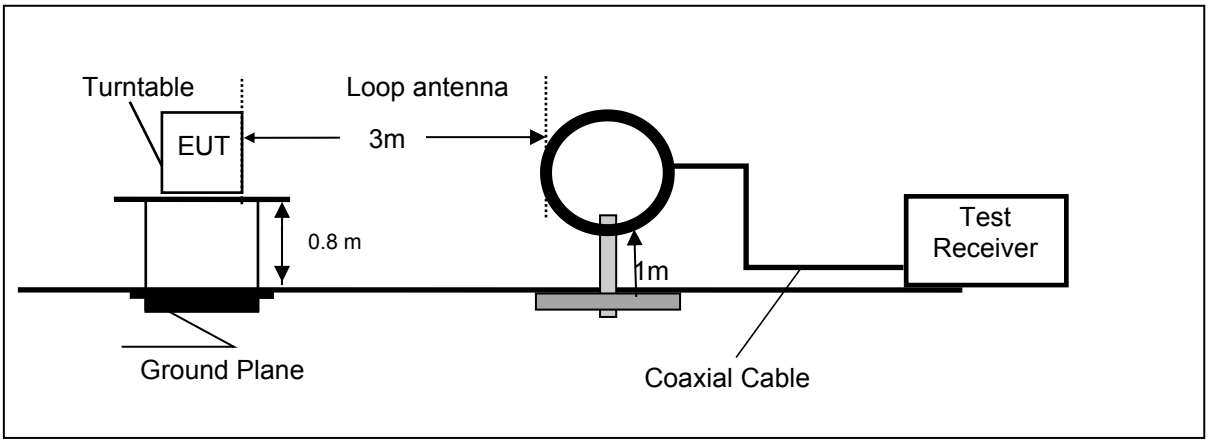
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2020	37.64	9.60	47.24	63.53	-16.29	QP	
2		0.2020	27.43	9.60	37.03	53.53	-16.50	AVG	
3		0.2940	25.74	9.59	35.33	50.41	-15.08	AVG	
4		0.3260	35.42	9.59	45.01	59.55	-14.54	QP	
5		0.5300	34.36	9.59	43.95	56.00	-12.05	QP	
6		0.5300	23.87	9.59	33.46	46.00	-12.54	AVG	
7		0.6940	32.62	9.60	42.22	56.00	-13.78	QP	
8		0.7140	20.69	9.60	30.29	46.00	-15.71	AVG	
9		0.9620	30.79	9.60	40.39	56.00	-15.61	QP	
10		0.9940	18.95	9.60	28.55	46.00	-17.45	AVG	
11	*	28.2700	43.95	9.76	53.71	60.00	-6.29	peak	
12		28.5060	36.50	9.76	46.26	60.00	-13.74	peak	

*:Maximum data x:Over limit !:over margin

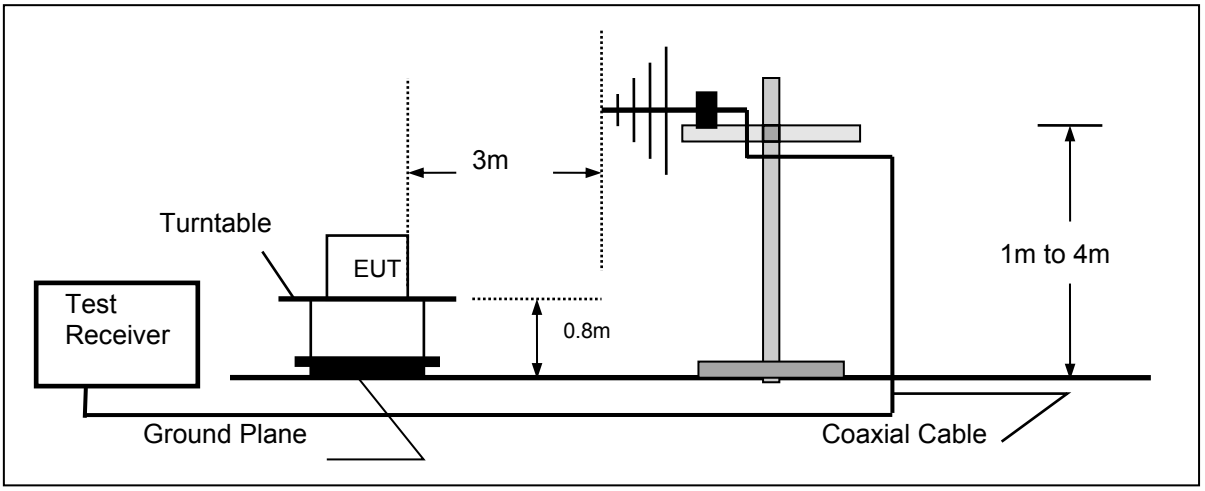
5.2. Radiated Emission

TEST CONFIGURATION

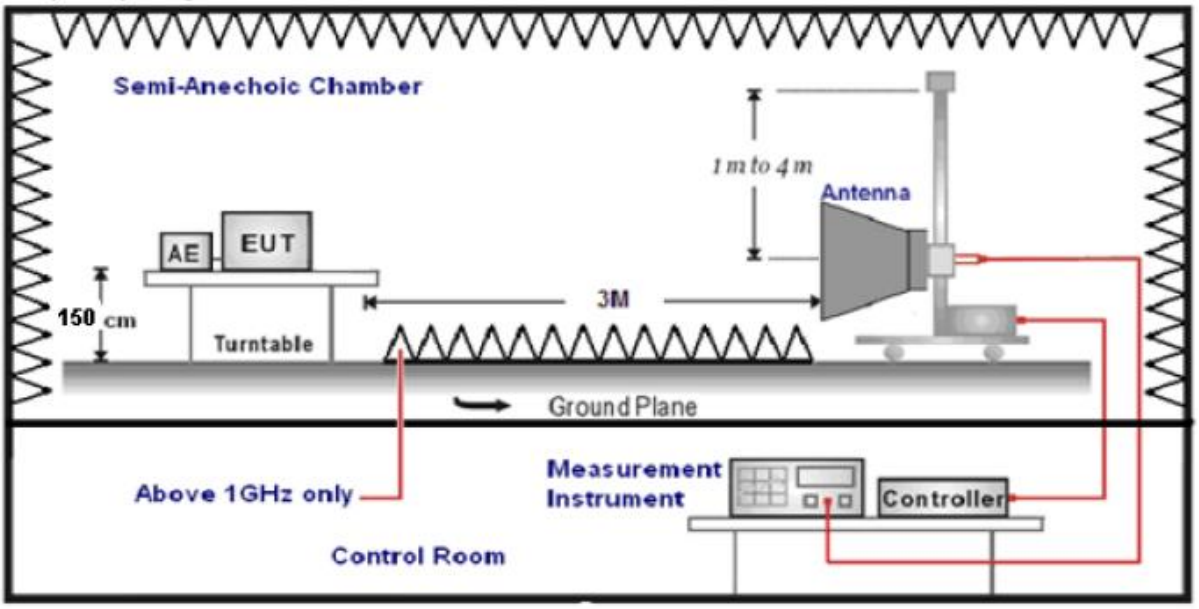
Frequency range 9 KHz – 30MHz



Frequency range 30MHz – 1000MHz



Frequency range above 1GHz-25GHz



TEST PROCEDURE

1. The EUT was placed on a turn table which is 0.8m above ground plane when testing frequency range 9 KHz –1GHz;the EUT was placed on a turn table which is 1.5m above ground plane when testing frequency range 1GHz – 25GHz.
2. Maximum procedure was performed by raising the receiving antenna from 1m to 4m and rotating the turn table from 0℃ to 360℃ to acquire the highest emissions from EUT.
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 measurements have been completed.
5. The EUT minimum operation frequency was 32.768KHz and maximum operation frequency was 2480MHz.so radiated emission test frequency band from 9KHz to 25GHz.
6. The distance between test antenna and EUT as following table states:

Test Frequency range	Test Antenna Type	Test Distance
9KHz-30MHz	Active Loop Antenna	3
30MHz-1GHz	Ultra-Broadband Antenna	3
1GHz-18GHz	Double Ridged Horn Antenna	3
18GHz-25GHz	Horn Anternna	1

7. Setting test receiver/spectrum as following table states:

Test Frequency range	Test Receiver/Spectrum Setting	Detector
9KHz-150KHz	RBW=200Hz/VBW=3KHz,Sweep time=Auto	QP
150KHz-30MHz	RBW=9KHz/VBW=100KHz,Sweep time=Auto	QP
30MHz-1GHz	RBW=120KHz/VBW=1000KHz,Sweep time=Auto	QP
1GHz-40GHz	Peak Value: RBW=1MHz/VBW=3MHz, Sweep time=Auto Average Value: RBW=1MHz/VBW=10Hz, Sweep time=Auto	Peak

Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor(if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CL - AG

Where FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
RA = Reading Amplitude	AG = Amplifier Gain
AF = Antenna Factor	

Transd=AF +CL-AG

RADIATION LIMIT

For intentional device, according to § 15.209(a), the general requirement of field strength of radiated emission out of authorized band shall not exceed the following table at a 3 meters measurement distance.

In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a)

Except when the requirements applicable to a given device state otherwise, emissions from licence‑exempt transmitters shall comply with the field strength limits shown in table below. Additionally, the level of any transmitter emission shall not exceed the level of the transmitter’s fundamental emission

Unwanted emissions that fall into restricted bands shall comply with the limits specified in RSS-Gen; and Unwanted emissions that do not fall within the restricted frequency bands shall comply either with the limits specified in the applicable RSS or with those specified in this RSS-Gen.

Frequency (MHz)	Distance (Meters)	Radiated (dBμV/m)	Radiated (μV/m)
0.009-0.49	3	20log(2400/F(KHz))+40log(300/3)	2400/F(KHz)
0.49-1.705	3	20log(24000/F(KHz))+ 40log(30/3)	24000/F(KHz)
1.705-30	3	20log(30)+ 40log(30/3)	30
30-88	3	40.0	100
88-216	3	43.5	150
216-960	3	46.0	200
Above 960	3	54.0	500

Radiated Emissions
Below 9K~30MHz
(Test Worst mode: Full load mode;DC 3.7V by Battery)

Frequency	Polarization	Reading	Factor	Result	Limits Average	Magin	PASS/FAIL
(kHz)		(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
123.00	Face	65.77	20.55	86.32	106.02	19.70	PASS
123.00	Side	65.69	20.55	86.24	106.02	19.78	PASS

Remark:
Frequency(MHz) = Emission frequency in MHz
Reading(dBv) = Uncorrected Analyzer/Receiver reading
Factor (dB/m)= Antenna factor + Cable Loss – Amplifier gain
Result(dBv/m) = Reading + Factor
Limit (dBv/m)= Limit stated in standard.

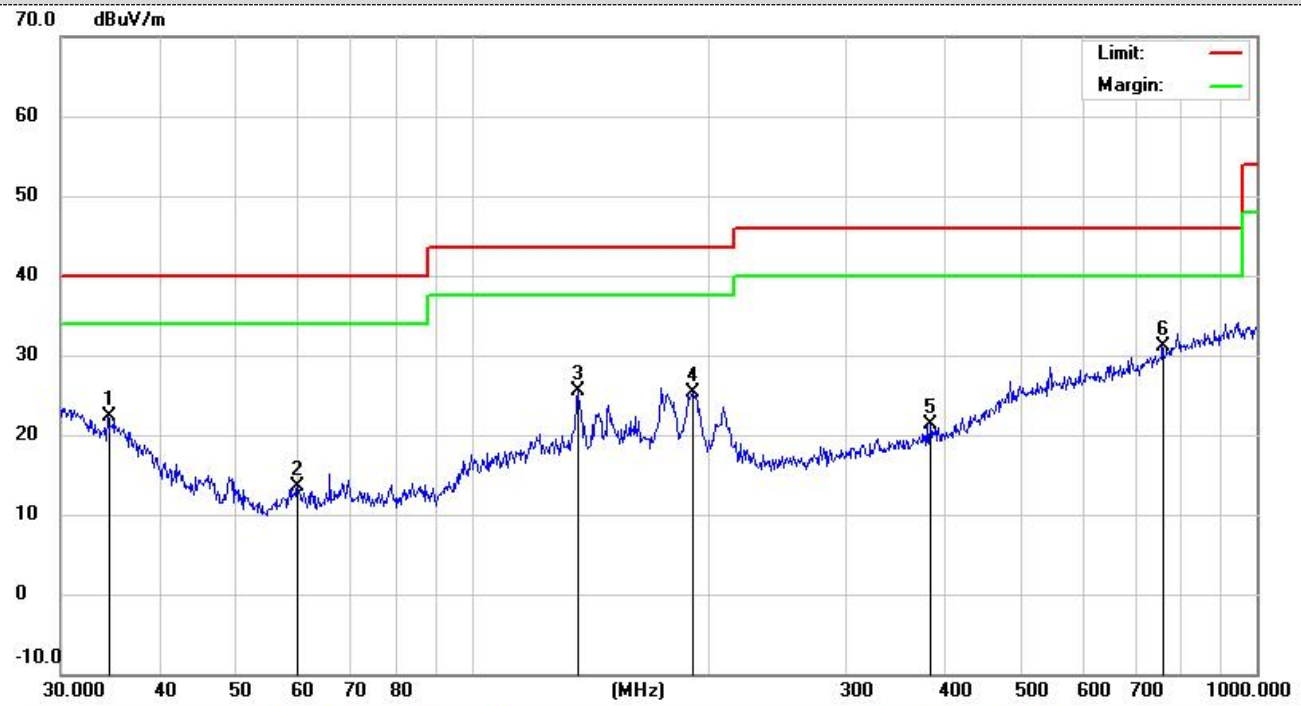
Note: No other emissions found between lowest intemal used/generates frequencies to 30MHz.The peak level of the emission is less than the average limit,so the average level shall be less than the limit without test.

Radiated Emissions

For 30MHz-1GHz

(Test Worst mode: Full load mode;DC 9V/2A Input)

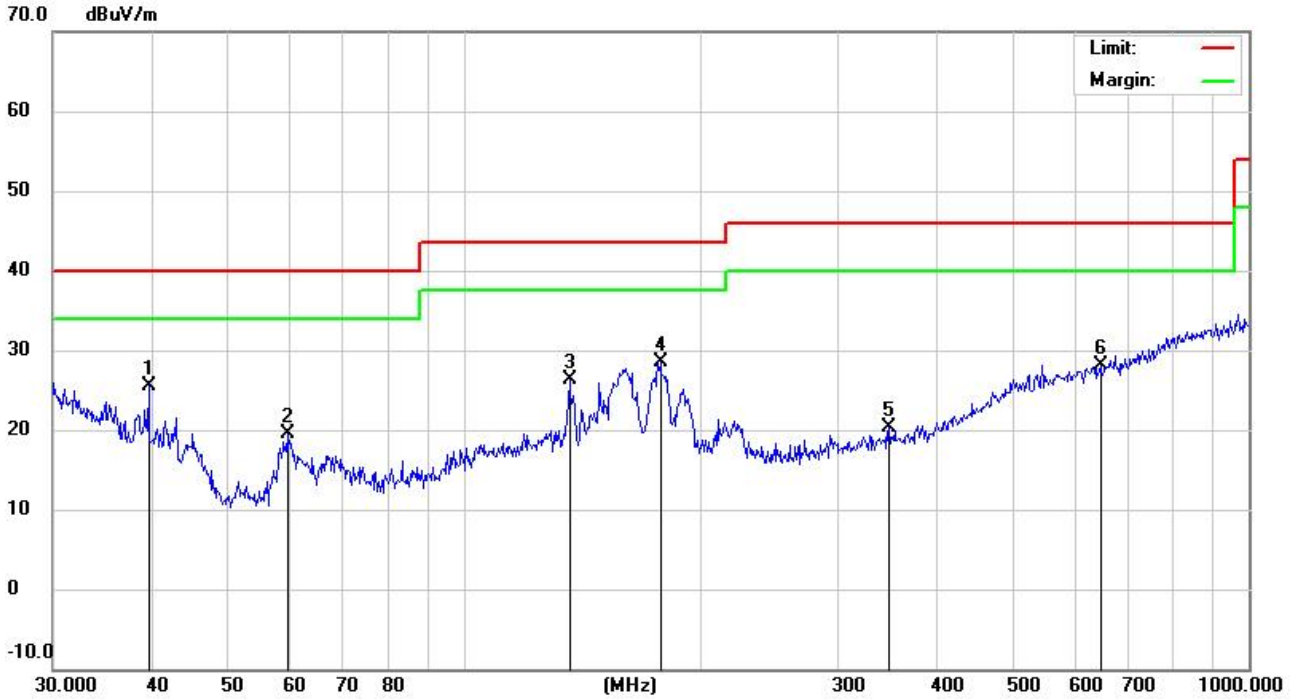
Horizontal



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	Comment
1		34.3964	4.39	17.91	22.30	40.00	-17.70	QP	200	23	
2		60.0691	4.92	8.60	13.52	40.00	-26.48	QP	200	88	
3		136.4598	9.23	16.31	25.54	43.50	-17.96	QP	200	137	
4		191.7450	10.38	14.95	25.33	43.50	-18.17	QP	200	169	
5		383.9318	4.24	17.09	21.33	46.00	-24.67	QP	200	234	
6	*	758.0408	4.45	26.73	31.18	46.00	-14.82	QP	200	288	

*:Maximum data x:Over limit !:over margin

Vertical



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	Comment
1	*	39.7146	11.58	14.01	25.59	40.00	-14.41	QP	100	32	
2		59.6493	10.86	8.58	19.44	40.00	-20.56	QP	100	86	
3		136.4598	9.93	16.31	26.24	43.50	-17.26	QP	100	137	
4		178.1327	13.17	15.42	28.59	43.50	-14.91	QP	100	196	
5		348.0274	3.86	16.41	20.27	46.00	-25.73	QP	100	253	
6		647.3856	3.70	24.42	28.12	46.00	-17.88	QP	100	301	

*:Maximum data x:Over limit !:over margin

5.3. Antenna Requirement

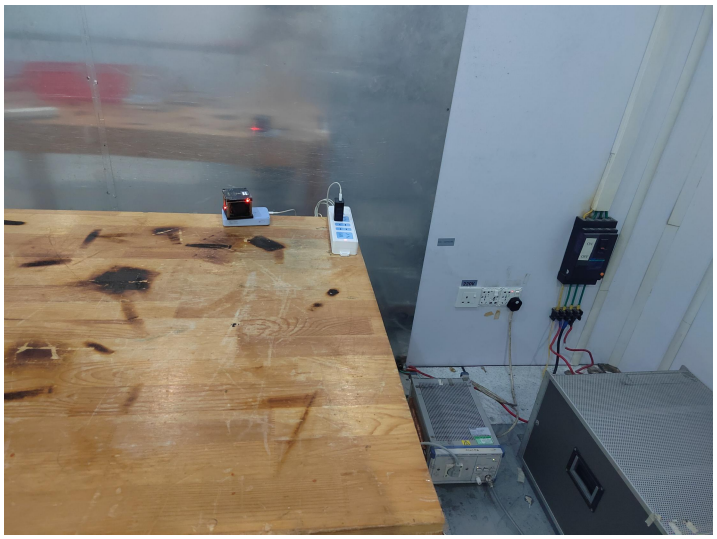
Standard Applicable

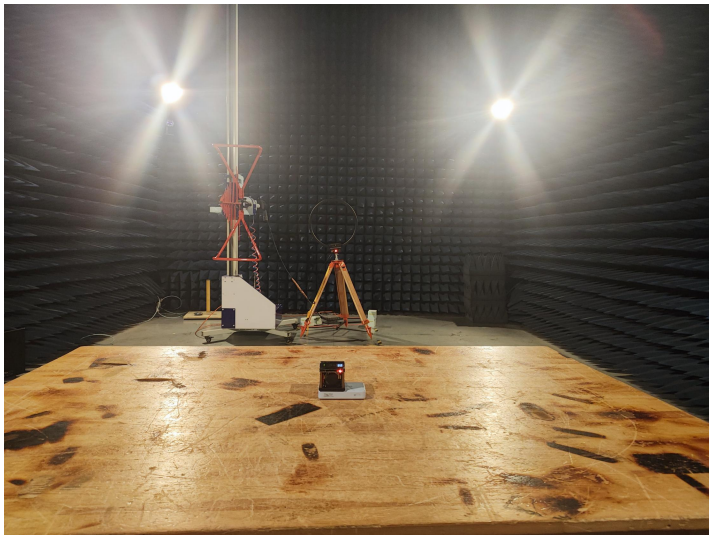
For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

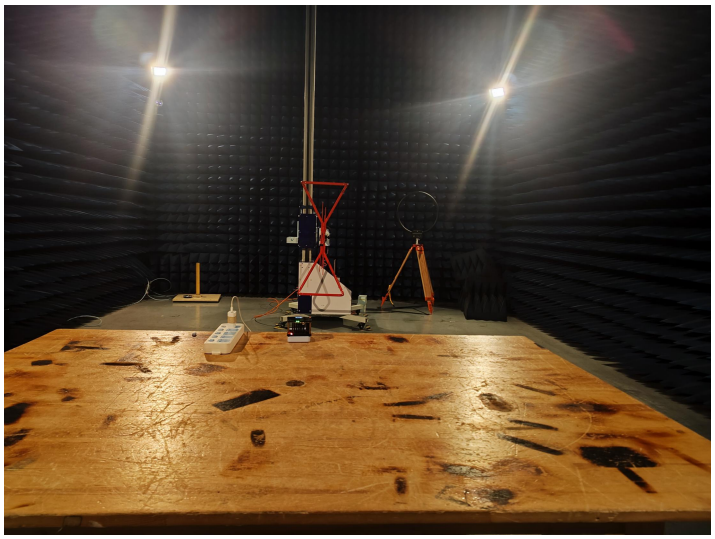
Antenna Connected Construction

Device is equipped with permanent attached antenna, which isn't displaced by other antenna. Therefore, the equipment complies with the antenna requirement of Section 15.203 and RSS-Gen Section 6.8.

6. Test Setup Photos of the EUT







7. External and Internal Photos of the EUT

See related photo report.

.....End of Report.....