



FCC Test Report

**Test Report
On Behalf of
TRUSTSTONE GROUP, LLC
For
TRAVEL TUMBLER WARMER & CHARGING STATION
Model No.: PY-TRTMB-BLK, PY-TRMG-BLK, HG-PY-TRTMB-BLK,
HG-PY-TRMG-BLK
FCC ID: 2BBPL-PY-TRTMB-BLK**

Prepared For: TRUSTSTONE GROUP, LLC
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Date of Test: Sept. 26, 2024 ~ Oct. 23, 2024

Date of Report: Oct. 23, 2024

Report Number: HK2409265635-1E



Test Result Certification

Applicant's Name..... : TRUSTSTONE GROUP, LLC

Address..... : 1370 Broadway 9th floor, New York, NY 10018, United States

Manufacturer's Name : TRUSTSTONE GROUP, LLC

Address..... : 1370 Broadway 9th floor, New York, NY 10018, United States

Product Description

Trade Mark : XO POPPY

Product Name..... : TRAVEL TUMBLER WARMER &CHARGING STATION

Model and/or Type Reference : PY-TRTMB-BLK, PY-TRMG-BLK, HG-PY-TRTMB-BLK,
HG-PY-TRMG-BLK

Standards : FCC Rules and Regulations Part 15 Subpart C (Section 15.209),
ANSI C63.10: 2013

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Date of Test..... :

Date (s) of Performance of Tests : **Sept. 26, 2024 ~ Oct. 23, 2024**

Date of Issue..... : **Oct. 23, 2024**

Test Result..... : **Pass**

Testing Engineer

Len Liao

Technical Manager

Sliver Wan

Authorized Signatory

Jason Zhou

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**** Modified History ****

Revision	Description	Issued Data	Remark
Revision 1.0	Initial Test Report Release	Oct. 23, 2024	Jason Zhou



1. Test Summary

1.1. Test Procedures and Results

DESCRIPTION OF TEST	SECTION NUMBER	RESULT
CONDUCTED EMISSIONS TEST	15.207	COMPLIANT
RADIATED EMISSION TEST	15.209	COMPLIANT
ANTENNA REQUIREMENT	15.203	COMPLIANT

Note:

1. PASS: Test item meets the requirement.
2. Fail: Test item does not meet the requirement.
3. N/A: Test case does not apply to the test object.
4. The test result judgment is decided by the limit of test standard.

1.2. Information of the Test Laboratory

Shenzhen HUAKE Testing Technology Co., Ltd.
Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping,
Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

Testing Laboratory Authorization:

A2LA Accreditation Code is 4781.01.

FCC Designation Number is CPY-TRTMB-BLK229.

Canada IC CAB identifier is CN0045.

CNAS Registration Number is L9589.

1.3. Measurement Uncertainty

Measurement Uncertainty

Conducted Emission Expanded Uncertainty	=	2.71dB, k=2
Radiated emission expanded uncertainty(9kHz-30MHz)	=	3.90dB, k=2
Radiated emission expanded uncertainty(30MHz-1000MHz)	=	3.90dB, k=2
Radiated emission expanded uncertainty(Above 1GHz)	=	4.28dB, k=2



2. General Information

2.1 General Description of EUT

Equipment:	TRAVEL TUMBLER WARMER &CHARGING STATION
Model Name:	PY-TRTMB-BLK
Series Models:	PY-TRMG-BLK, HG-PY-TRTMB-BLK, HG-PY-TRMG-BLK
Model Difference:	All model's the function, software and electric circuit are the same, only with product accessories and model named different. Test sample model: PY-TRTMB-BLK.
Trade Mark:	XO POPPY
FCC ID:	2BBPL-PY-TRTMB-BLK
Antenna Type:	Coil Antenna
Operation Frequency:	112KHz~205KHz
Test Frequency:	Coil Antenna 1: 165KHz Coil Antenna 2: 165KHz
Modulation Type:	ASK
Power Source:	Input: DC9V/3A Output: 10W+10W
Power Rating:	Input: DC9V/3A Output: 10W+10W
Note: <ol style="list-style-type: none">1. The transfer system includes two coils, 2 coils can work individually or can work at the same time. All situations have been tested, only the worst situation was recorded in the report.2. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.3. Antenna gain Refer to the antenna specifications.4. The cable loss data is obtained from the supplier.5. The test results in the report only apply to the tested sample.	



2.2. Carrier Frequency of Channels

Operation Frequency each of channel	
Channel	Frequency
01	165KHz
02	165KHz



2.3. Test Mode

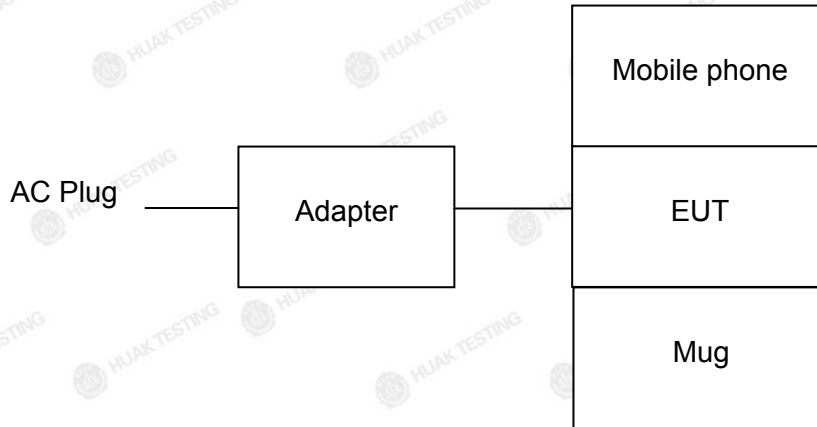
Test Item	Test Mode	Description
Radiated & Conducted Test Cases	Mode 1	AC/DC Adapter + EUT + mobile phone (Full Load) + Mug (Full Load)
	Mode 2	AC/DC Adapter + EUT + mobile phone (Full Load) + Mug (Half Load)
	Mode 3	AC/DC Adapter + EUT + mobile phone (Full Load) + Mug (Null Load)
	Mode 4	AC/DC Adapter + EUT + mobile phone (Half Load) + Mug (Full Load)
	Mode 5	AC/DC Adapter + EUT + mobile phone (Half Load) + Mug (Half Load)
	Mode 6	AC/DC Adapter + EUT + mobile phone (Half Load) + Mug (Null Load)
	Mode 7	AC/DC Adapter + EUT + mobile phone (Null Load) + Mug (Full Load)
	Mode 8	AC/DC Adapter + EUT + mobile phone (Null Load) + Mug (Half Load)
	Mode 9	AC/DC Adapter + EUT + mobile phone (Null Load) + Mug (Null Load)
	Mode 10	AC/DC Adapter + EUT + mobile phone (Full Load)
	Mode 11	AC/DC Adapter + EUT + mobile phone (Half Load)
	Mode 12	AC/DC Adapter + EUT + mobile phone (Null Load)
	Mode 13	AC/DC Adapter + EUT + Mug (Full Load)
	Mode 14	AC/DC Adapter + EUT + Mug (Half Load)
	Mode 15	AC/DC Adapter + EUT + Mug (Null Load)
	Mode 16	AC/DC Adapter + EUT (Null Load)

- Note: 1. All modes and configurations above have been tested, the report only shows the worst-case.
2. For Radiated Emission, 3axis were chosen for testing for each applicable mode, including the mobile phone in vertical and horizontal positions.
3. The Mobile Phone is provided by Lab, and the Mug is the product accessory.
4. According to the manufacturer's design principle, the wireless charging power will reach its maximum when the client device's battery level is between 1% and 10%.



2.4. Description of Test Setup

Operation of EUT during Testing:



The sample was placed (0.8m (30MHz~1GHz), 0.8m (9KHz~30MHz)) above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages. The worst case is X position.



2.5. Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Trade Mark	Model/Type No.	Specification	Remark
1	TRAVEL TUMBLER WARMER &CHARGING STATION	XO POPPY	PY-TRTMB-BLK	N/A	EUT
2	USB Cable	N/A	N/A	Length: 100cm	Accessory
3	Mug	N/A	N/A	N/A	Accessory
4	Mobile phone	HUAWEI	N/A	Mate 40	Peripheral
5	Adapter	N/A	CD289	Input: AC100-240V, 50/60Hz, 2A Max USB-C1 Output: DC5V/3A, 9V/3A, 12V/3A, 15V/3A, 20V/5A, 28V/5A 140W MAX USB-C2 Output: DC5V/3A, 9V/3A, 12V/3A, 15V/3A, 20V/5A 100W MAX USB-A Output: DC5V/4.5A, 4.5V/5A, 5V/3A, 9V/2A, 12V/1.5A 22.5W MAX	Peripheral

Note:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.
3. For conducted measurements (Output Power, 6dB Emission Bandwidth, Power Spectral Density, Spurious Emissions), the antenna of EUT is connected to the test equipment via temporary antenna connector, the antenna connector is soldered on the antenna port of EUT, and the temporary antenna connector is listed in the Test Instruments.

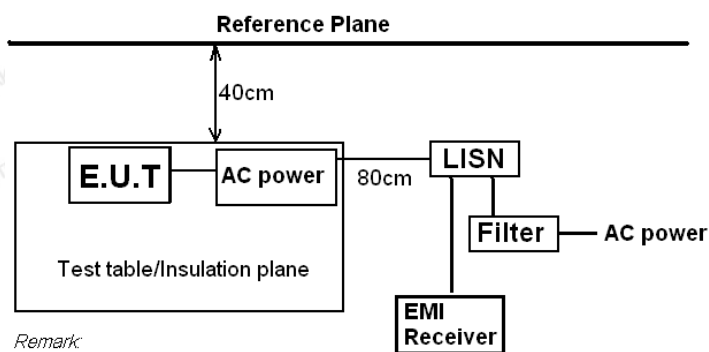
**2.6. Measurement Instruments List**

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	L.I.S.N.	R&S	ENV216	HKE-002	Feb. 20, 2024	1 Year
2.	L.I.S.N.	R&S	ENV216	HKE-059	Feb. 20, 2024	1 Year
3.	EMI Test Receiver	R&S	ESR	HKE-005	Feb. 20, 2024	1 Year
4.	Spectrum analyzer	Agilent	N9020A	HKE-025	Feb. 20, 2024	1 Year
5.	Spectrum analyzer	R&S	FSV3044	HKE-126	Feb. 20, 2024	1 Year
6.	Preamplifier	EMCI	EMC051845S	HKE-006	Feb. 20, 2024	1 Year
7.	Preamplifier	Schwarzbeck	BBV 9743	HKE-016	Feb. 20, 2024	1 Year
8.	Preamplifier	A.H. Systems	SAS-574	HKE-182	Feb. 20, 2024	1 Year
9.	6dB Attenuator	Pasternack	6db	HKE-184	Feb. 20, 2024	1 Year
10.	EMI Test Receiver	Rohde & Schwarz	ESR-7	HKE-010	Feb. 20, 2024	1 Year
11.	Broadband Antenna	Schwarzbeck	VULB9168	HKE-167	Feb. 21, 2024	2 Year
12.	Loop Antenna	COM-POWER	AL-130R	HKE-014	Feb. 21, 2024	2 Year
13.	Horn Antenna	Schwarzbeck	9120D	HKE-013	Feb. 21, 2024	2 Year
14.	EMI Test Software	Tonscend	JS32-CE 2.5.0.6	HKE-081	/	/
15.	EMI Test Software	Tonscend	JS32-RE 5.0.0	HKE-082	/	/
16.	10dB Attenuator	Schwarzbeck	VTSD9561F	HKE-153	Feb. 20, 2024	1 Year



3. Conducted Emission Test

3.1. Block Diagram of Test Setup



Remark:

E.U.T: Equipment Under Test

LISN: Line Impedance Stabilization Network

Test table height=0.8m

3.2. Conducted Power Line Emission Limit

According to FCC Part 18.307(b)

Frequency (MHz)	Maximum RF Line Voltage (dBμV)			
	CLASS A		CLASS B	
	Q.P.	Ave.	Q.P.	Ave.
0.15 - 0.50	79	66	66-56*	56-46*
0.50 - 5.00	73	60	56	46
5.00 - 30.0	73	60	60	50

* Decreasing linearly with the logarithm of the frequency

For intentional device, according to §18.307 Line Conducted Emission Limit is same as above table.

3.3. 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.
2. Support equipment, if needed, was placed as per ANSI C63.10.
3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
4. If a EUT received DC power from the USB Port of Notebook PC, the PC's 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.

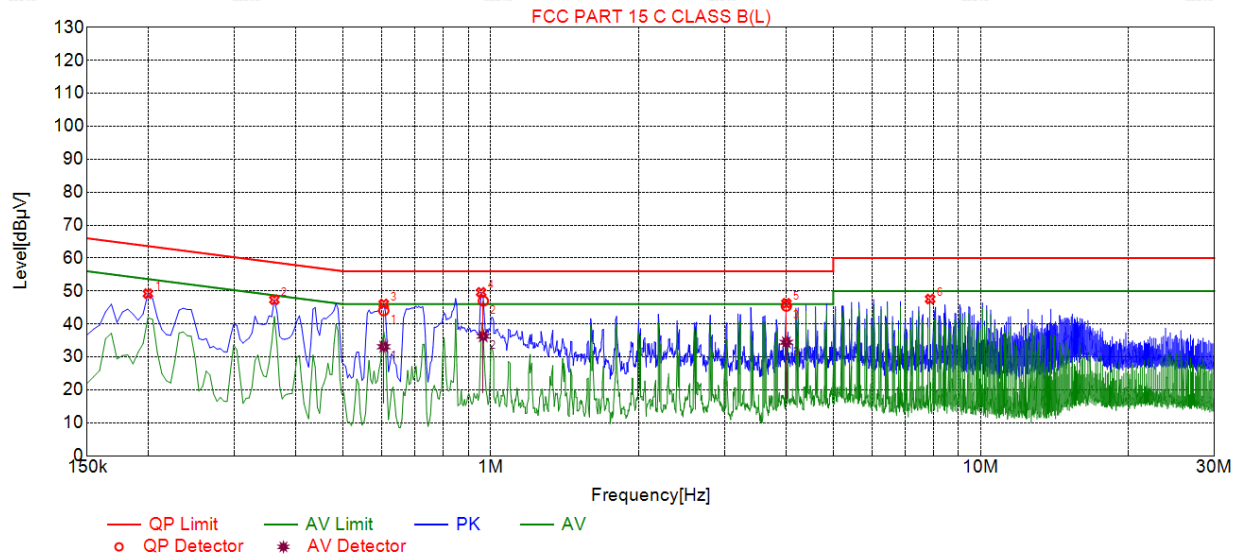


3.4. Test Result

PASS

All the test modes completed for test. Only the worst result was reported as below:

Test Specification: Line



Suspected List

NO.	Freq. [MHz]	Level [dBμV]	Factor [dB]	Limit [dBμV]	Margin [dB]	Reading [dBμV]	Detector	Type
1	0.1995	49.21	19.83	63.63	14.42	29.38	PK	L
2	0.3615	47.35	19.84	58.69	11.34	27.51	PK	L
3	0.6045	46.10	19.86	56.00	9.90	26.24	PK	L
4	0.9555	49.61	19.87	56.00	6.39	29.74	PK	L
5	4.0110	46.31	20.09	56.00	9.69	26.22	PK	L
6	7.8855	47.57	20.03	60.00	12.43	27.54	PK	L

Final Data List

NO.	Freq. [MHz]	Correction factor [dB]	QP Value [dBμV]	QP Limit [dBμV]	QP Margin [dB]	QP Reading [dBμV]	AV Value [dBμV]	AV Limit [dBμV]	AV Margin [dB]	AV Reading [dBμV]	Type
1	0.6045	19.86	44.09	56.00	11.91	24.23	33.10	46.00	12.90	13.24	L
2	0.9650	19.87	46.96	56.00	9.04	27.09	36.28	46.00	9.72	16.41	L
3	4.0110	20.09	45.43	56.00	10.57	25.34	34.43	46.00	11.57	14.34	L

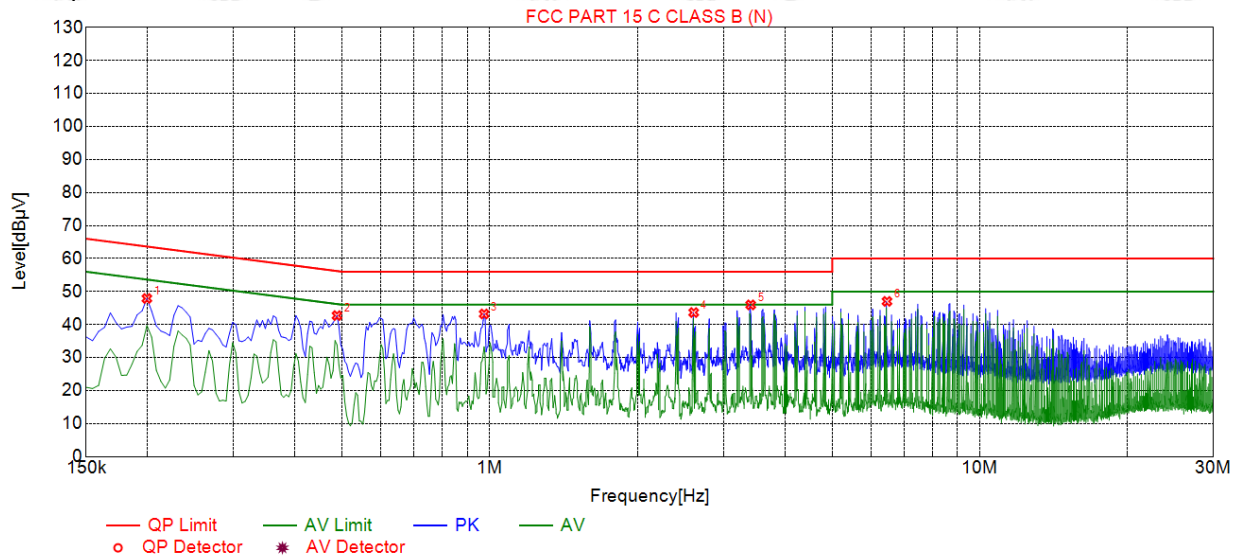
Remark: Margin = Limit – Level

Correction factor = Cable lose + LISN insertion loss

Level = Test receiver reading + correction factor



Test Specification: Neutral



Suspected List

NO.	Freq. [MHz]	Level [dBμV]	Factor [dB]	Limit [dBμV]	Margin [dB]	Reading [dBμV]	Detector	Type
1	0.1995	47.90	19.73	63.63	15.73	28.17	PK	N
2	0.4875	42.72	19.73	56.21	13.49	22.99	PK	N
3	0.9735	43.22	19.74	56.00	12.78	23.48	PK	N
4	2.6070	43.64	19.91	56.00	12.36	23.73	PK	N
5	3.4080	45.96	19.96	56.00	10.04	26.00	PK	N
6	6.4680	47.02	19.97	60.00	12.98	27.05	PK	N

Remark: Margin = Limit – Level

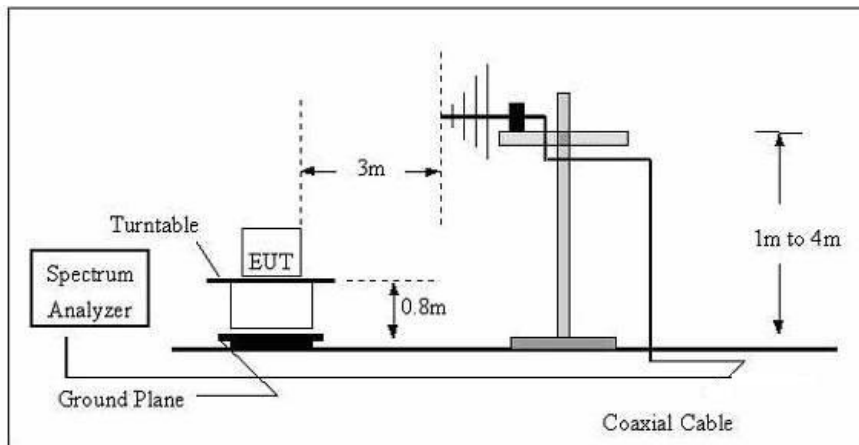
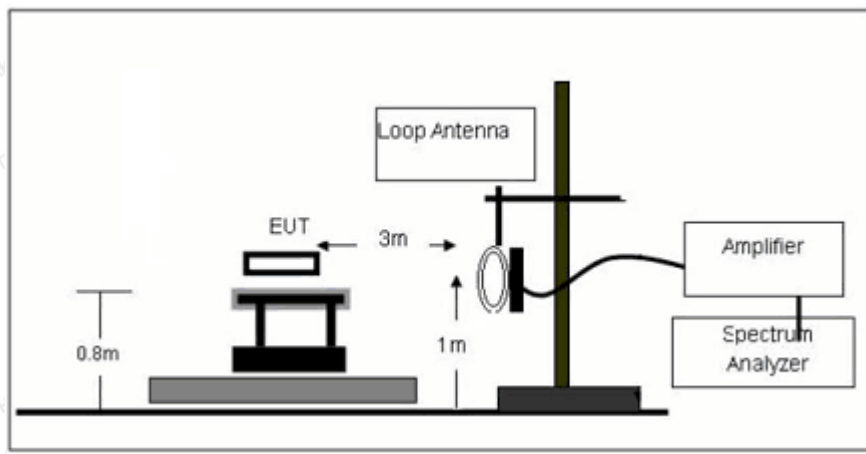
Correction factor = Cable loss + LISN insertion loss

Level=Test receiver reading + correction factor



4. Radiated Emissions

4.1. Block Diagram of Test Setup





4.2. Rules and Specifications

CFR 47 Part 15, section 15.205

Only spurious emissions are permitted in any of the frequency bands listed the tables in these sections.

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
1\ 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	(2)
13.36-13.41			

CFR 47 Part 15, section 15.209

The emissions from an intentional radiator shall not exceed the limits in the tables in these sections using an average detector.

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Limit calculation and transfer to 3m distance as showed in the following table:

Frequency (MHz)	Limit (dBuV/m)	Distance (m)
0.009-0.490	$20\log(2400/F(KHz))+40\log(300/3)$	3
0.490-1.705	$20\log(24000/F(KHz))+40\log(30/3)$	3
1.705-30.0	69.5	3
30-88	40.0	3
88-216	43.5	3
216-960	46.0	3
Above 960	54.0	3

CFR 47 Part 15, section 15.35

When average radiated emission measurements are specified, the limit on the peak level of the radio Frequency emission is 20dB above the maximum permitted average emission limit.

Transmitter Spurious Emissions 9KHz-30MHz			
	9-150KHz	150-490KHz	490KHz-30MHz
Resolution Bandwidth	200Hz	9KHz	9KHz
Video Bandwidth	600Hz	30KHz	30KHz
Detector	Peak	Peak	Peak
Trace Mode	Max Hold	Max Hold	Max Hold
Sweep Time	Auto	Auto	Auto



4.3. Test Procedure

Measurement distance 3m

For the measurement range up to 30MHz in the following plots the field strength result from 3m

Distance measurement are extrapolated to 300m and 30m distance respectively, by 40dB/decade,

According to part 15.31(f)(2), per antenna factor scaling.

Measurements below 1000MHz are performed with a peak detector and compared to average limits,

Measurements with an average detector are not required.

Note:

For battery operated equipment, the equipment tests shall be performed using a new battery.



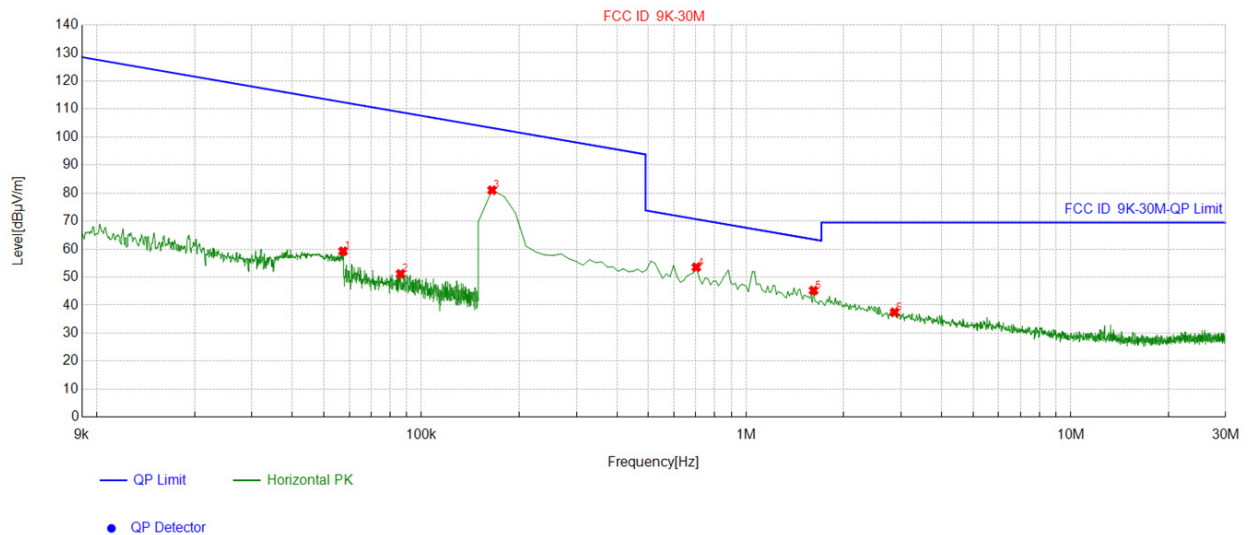
4.4. Test Result

PASS

Note: All the test modes completed for test. Only the worst result Full Load was reported as below:

For 9KHz - 30MHz

Coil 1:



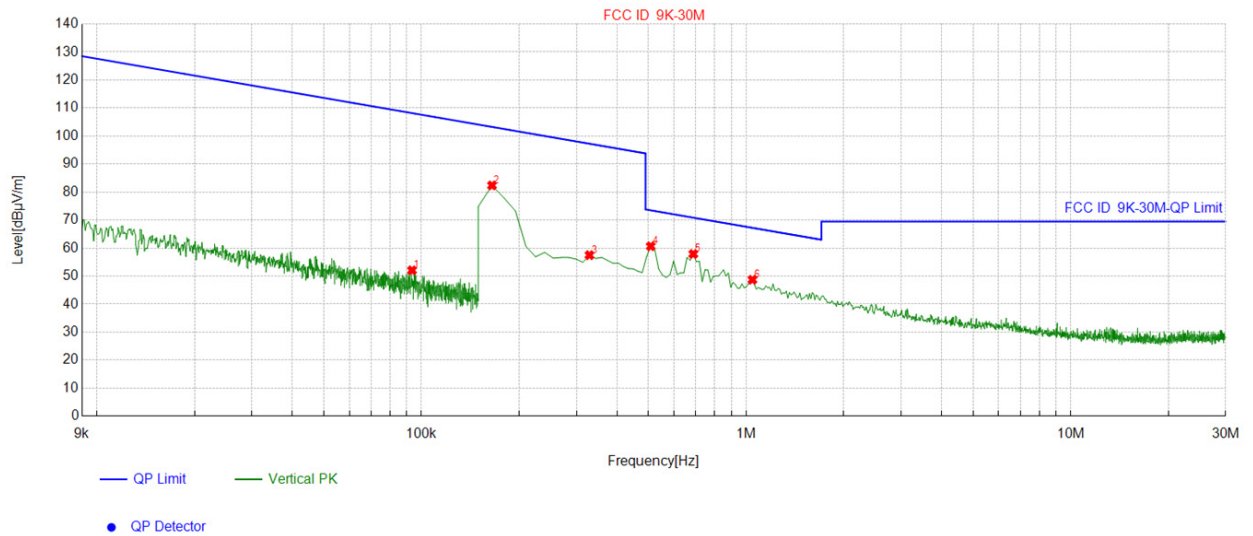
Suspected List

NO.	Freq. [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]
1	0.057317	20.45	38.78	59.23	112.43	53.20
2	0.086166	20.74	30.41	51.15	108.89	57.74
3	0.164932	20.42	60.59	81.01	103.25	22.24
4	0.702501	20.25	33.28	53.53	70.68	17.15
5	1.613382	20.50	24.71	45.21	63.48	18.27
6	2.867709	20.19	17.24	37.43	69.50	32.07

Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Limit – Level;



Coil 2:



Suspected List

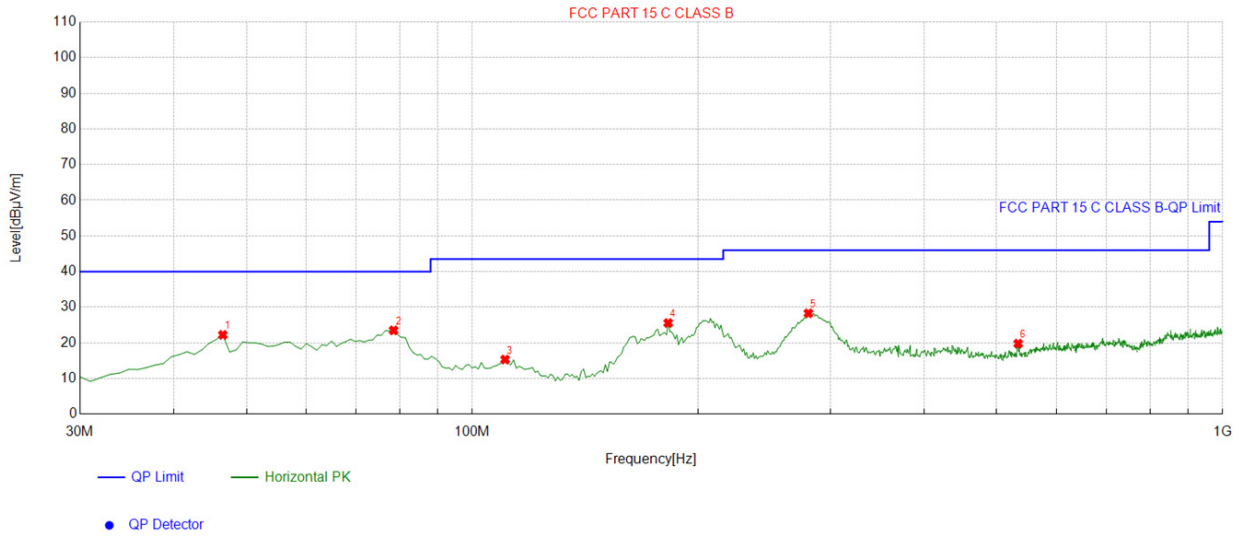
NO.	Freq. [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]
1	0.093501	20.67	31.40	52.07	108.18	56.11
2	0.164932	20.42	61.96	82.38	103.25	20.87
3	0.32919	20.06	37.42	57.48	97.25	39.77
4	0.508379	20.24	40.42	60.66	73.48	12.82
5	0.687569	20.25	37.64	57.89	70.87	12.98
6	1.045948	20.47	28.24	48.71	67.23	18.52

Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Limit – Level;



For 30MHz-1GHz

Antenna polarity: H



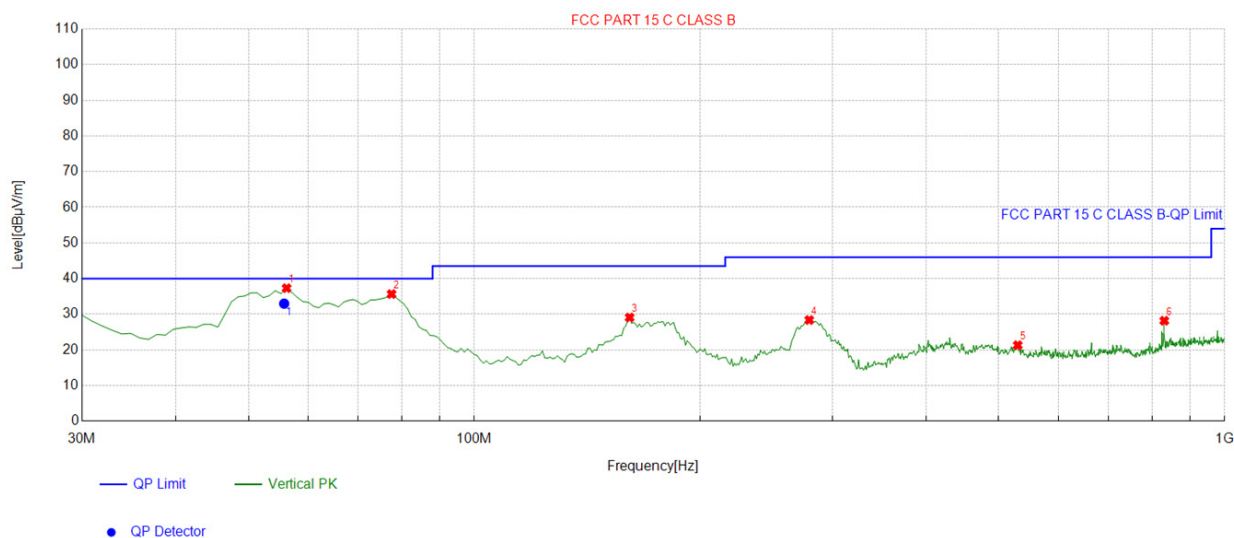
Suspected List

NO.	Freq. [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	46.506507	-13.89	36.13	22.24	40.00	17.76	100	220	Horizontal
2	78.548549	-17.92	41.43	23.51	40.00	16.49	100	190	Horizontal
3	110.59059	-14.50	29.83	15.33	43.50	28.17	100	14	Horizontal
4	182.44244	-15.91	41.48	25.57	43.50	17.93	100	97	Horizontal
5	280.51051	-12.61	40.91	28.30	46.00	17.70	100	114	Horizontal
6	533.93393	-7.18	26.97	19.79	46.00	26.21	100	268	Horizontal

Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Limit – Level;



Antenna polarity: V



Suspected List

NO.	Freq. [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	56.216216	-13.94	51.24	37.30	40.00	2.70	100	277	Vertical
2	77.577578	-18.02	53.67	35.65	40.00	4.35	100	299	Vertical
3	161.08108	-17.67	46.75	29.08	43.50	14.42	100	92	Vertical
4	279.53954	-12.64	41.01	28.37	46.00	17.63	100	25	Vertical
5	530.05005	-7.28	28.58	21.30	46.00	24.70	100	170	Vertical
6	831.05105	-2.33	30.50	28.17	46.00	17.83	100	310	Vertical

Final Data List

NO.	Freq. [MHz]	Factor [dB]	QP Reading [dBμV/m]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	55.7909	-13.94	46.91	32.97	40.00	7.03	100	277	Vertical

Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Limit – Level;



5. 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.

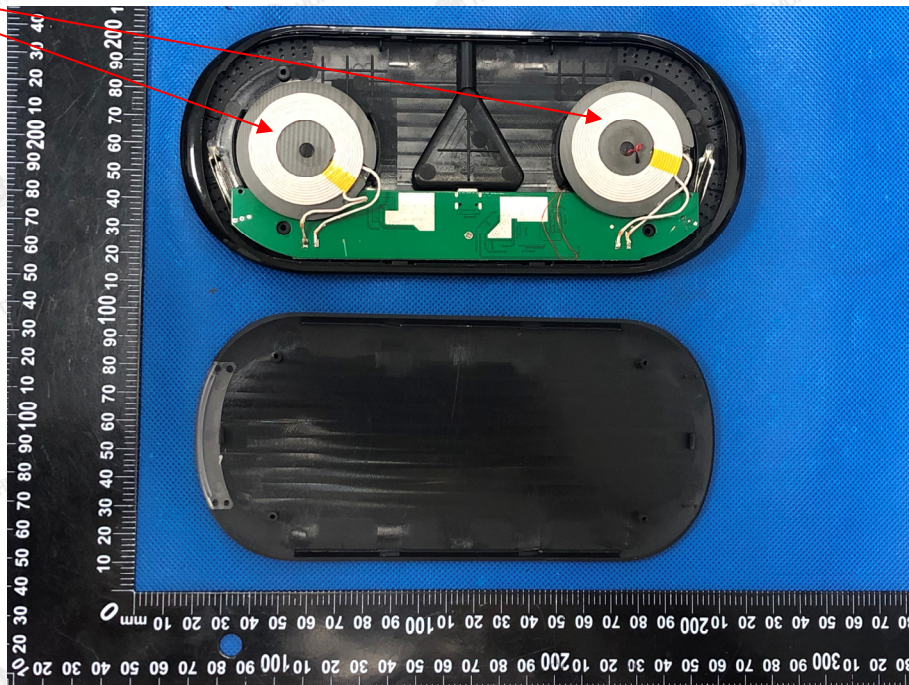
Refer to statement below for compliance.

The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

Antenna Connected Construction

The antenna used in this product is Coil Antenna, which permanently attached. It conforms to the standard requirements. The directional gains of antenna used for transmitting is 0dBi.

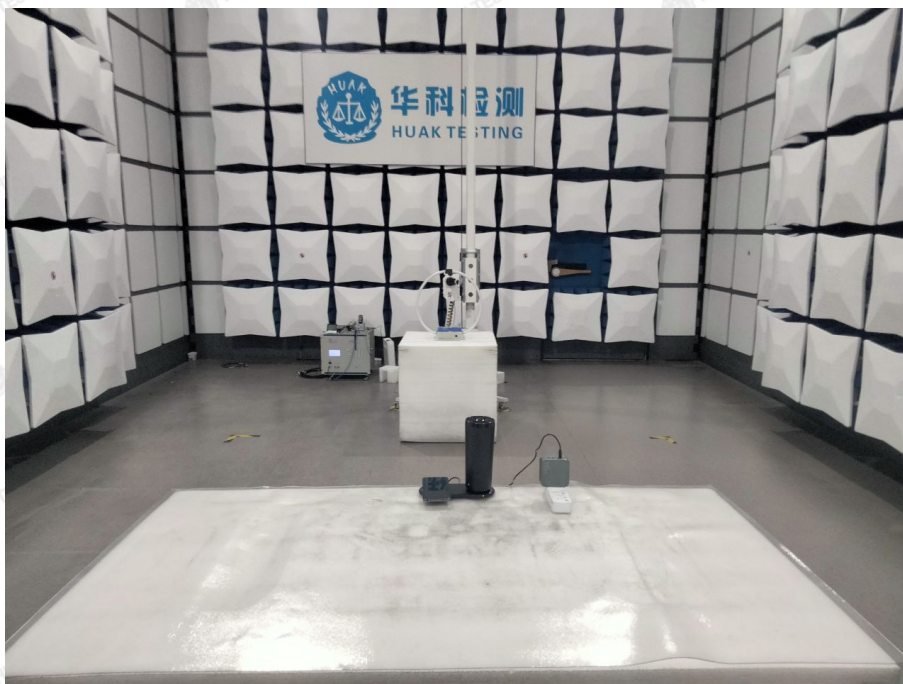
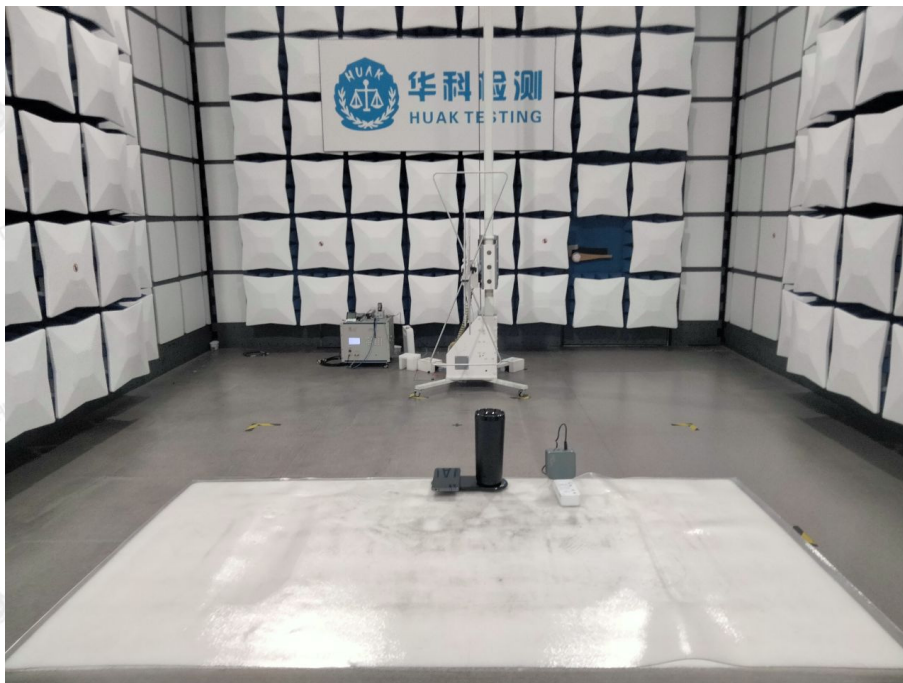
Antenna





6. Photographs of Test

Radiated Emission





Conducted Emission





7. Photos of the EUT

Reference to the report: ANNEX A of external photos and ANNEX B of internal photos.

-----End of test report-----