FCC Test Report

Test report
On Behalf of
Guangzhou Sleep Beauty Technology Co., Ltd.
For
UZZ Pudding
Model No.: SLC1
FCC ID: 2BE5S-SLC1

Prepared For : **Guangzhou Sleep Beauty Technology Co., Ltd.**
Room 614-616,Block 3,Merchants Land, No. 26 Guilan North Road, Guicheng Street Nanhai District, Foshan City, China

Prepared By : **Shenzhen DL Testing Technology Co., Ltd.**
101-201, Building C, Shuanghuan, No.8, Baoqing Road, Baolong Industrial Zone, Baolong Street, Longgang District, Shenzhen, Guangdong, China

Date of Test: **May 15, 2024 ~ May 23, 2024**
Date of Report: **May 23, 2024**
Report Number: **DL-240604014-1ER**

Test Result Certification

Applicant's name .....: Guangzhou Sleep Beauty Technology Co., Ltd.

Address .....: Room 614-616,Block 3,Merchants Land, No. 26 Guilan North Road, Guicheng Street Nanhai District, Foshan City, China

Manufacture's Name .....: Guangzhou Sleep Beauty Technology Co., Ltd.

Address .....: Room 614-616,Block 3,Merchants Land, No. 26 Guilan North Road, Guicheng Street Nanhai District, Foshan City, China

Product description

Trade Mark: UZZ

Product name .....: UZZ Pudding

Model and/or type reference .: SLC1

Standards .....: FCC CFR 47 PART 18

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Date of Test .....:

Date (s) of performance of tests .....: **May 15, 2024 ~ May 23, 2024**

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

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

Testing Engineer : Randy Xie

Randy Xie

Technical Manager : Jack Bu

Jack Bu

Authorized Signatory : Jade Yang

Jade Yang

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** Modified History **

Revision	Description	Issued Data	Remark
Revision 1.0	Initial Test Report Release	May 23, 2024	

1. Test Summary

1.1. Test Procedures And Results

DESCRIPTION OF TEST	SECTION NUMBER	RESULT
CONDUCTED EMISSIONS TEST	18.307(c)	COMPLIANT
RADIATED EMISSION TEST	18.305(c)	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 DL Testing Technology Co., Ltd.
Add.: 101-201, Building C, Shuanghuan, No.8, Baoqing Road, Baolong Industrial Zone, Baolong Street, Longgang District, Shenzhen, Guangdong, China

Testing Laboratory Authorization：

FCC Test Firm Registration Number: 854456
Designation Number: CN1307
IC Registered No.: 27485
CAB ID.: CN0118

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:	UZZ Pudding
Model Name:	SLC1
Series Models:	N/A
Model Difference:	N/A
Trade Mark:	UZZ
FCC ID:	**2BE5S-SLC1**
Antenna Type:	Coil Antenna
Operation frequency:	112KHz~205KHz
Test frequency:	132KHz
Number of Channels:	1
Modulation Type:	ASK
Power Source:	Input :DC 5V, 2.1A / DC 9V, 2A Wireless Output: 15W(Max)
Power Rating:	Input :DC 5V, 2.1A / DC 9V, 2A Wireless Output: 15W(Max)
Note: 1.For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual. 2. 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
1	132KHz

2.3. Operation of EUT during testing

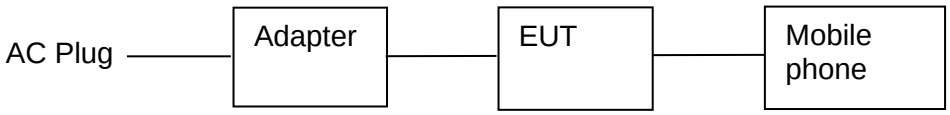
Test Item	Test mode	Description
Radiated & Conducted Test Cases	Mode 1	AC/DC Adapter+ EUT + Mobile Phone (Battery Status: >95%)
	Mode 2	AC/DC Adapter+ EUT + Mobile Phone (Battery Status: <50%)
	Mode 3	AC/DC Adapter+ EUT + Mobile Phone (Battery Status: <1%)

Note:

1. All modes and configurations above have been tested, Only the result of the worst case was recorded in the report.
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 provided by Lab.
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	Note
1	UZZ Pudding	UZZ	SLC1	N/A	EUT
2	USB Cable	N/A	N/A	Length: 1.0m	Peripheral
3	Adapter	N/A	CD289	Input: AC100-240V, 50/60Hz, 2A Max USB-C1 Output: DC5V/3A, 9V3A, 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 Total Output: 140W Max	Peripheral
4	Mobile phone	Apple	iPhone 13	N/A	Peripheral

Note:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was e*stablished in accordance with the manufacturer's requirements and conditions for the intended use.*

2.6. Measurement Instruments List

Radiation test, Band-edge test and 20db bandwidth test equipment

Item	Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	Spectrum Analyzer (9kHz-26.5GHz)	Agilent	E4408B	MY50140780	Nov. 04, 2023	Nov. 03, 2024
2	Test Receiver (9kHz-7GHz)	R&S	ESRP7	101393	Nov. 04, 2023	Nov. 03, 2024
3	Bilog Antenna (30MHz-1GHz)	R&S	VULB9162	00306	Nov. 04, 2023	Nov. 03, 2024
4	Horn Antenna (1GHz-18GHz)	Schwarzbeck	BBHA9120D	02139	Nov. 04, 2023	Nov. 03, 2024
5	Horn Antenna (18GHz-40GHz)	A.H. Systems	SAS-574	588	Nov. 04, 2023	Nov. 03, 2024
6	Amplifier (9KHz-6GHz)	Schwarzbeck	BBV9743B	00153	Nov. 04, 2023	Nov. 03, 2024
7	Amplifier (1GHz-18GHz)	EMEC	EM01G8GA	00270	Nov. 04, 2023	Nov. 03, 2024
8	Amplifier (18GHz-40GHz)	Quanjuda	DLE-161	97	Nov. 04, 2023	Nov. 03, 2024
9	Loop Antenna (9KHz-30MHz)	Schwarzbeck	FMZB1519B	00014	Nov. 04, 2023	Nov. 03, 2024
10	RF cables1 (9kHz-1GHz)	ChengYu	966	004	Nov. 04, 2023	Nov. 03, 2024
11	RF cables2 (1GHz-40GHz)	ChengYu	966	003	Nov. 04, 2023	Nov. 03, 2024
12	Antenna connector	Florida RF Labs	N/A	RF 01#	Nov. 04, 2023	Nov. 03, 2024
13	Power probe	KEYSIGHT	U2021XA	MY55210018	Nov. 04, 2023	Nov. 03, 2024
14	Signal Analyzer 9kHz-26.5GHz	Agilent	N9020A	MY55370280	Nov. 04, 2023	Nov. 03, 2024
15	Test Receiver 20kHz-40GHz	R&S	ESU 40	100376	Nov. 04, 2023	Nov. 03, 2024
16	D.C. Power Supply	LongWei	PS-305D	010964729	Nov. 04, 2023	Nov. 03, 2024

Conduction Test equipment

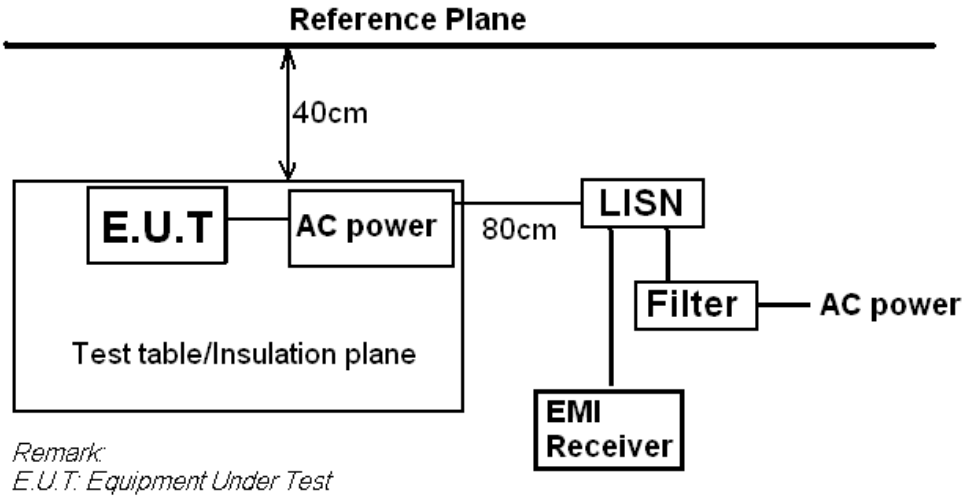
Item	Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	843 Shielded Room	ChengYu	843 Room	843	Sep. 20, 2022	Sep. 19, 2025
2	EMI Receiver	R&S	ESR	101421	Nov. 04, 2023	Nov. 03, 2024
3	LISN	R&S	ENV216	102417	Nov. 04, 2023	Nov. 03, 2024
4	843 Cable 1#	ChengYu	CE Cable	001	Nov. 04, 2023	Nov. 03, 2024
5	10dB Attenuator	Schwarzbeck	VTSD9561F	00154	Nov. 04, 2023	Nov. 03, 2024

Other

Item	Name	Manufacturer	Model	Software version
1	EMC Conduction Test System	FALA	EZ_EMC	EMC-CON 3A1.1
2	EMC radiation test system	FALA	EZ_EMC	FA-03A2
3	RF test system	MAIWEI	MTS8310	2.0.0.0
4	RF communication test system	MAIWEI	MTS8200	2.0.0.0

3. Conducted Emission Test

3.1. Block Diagram of Test Setup



Remark:
E.U.T: Equipment Under Test
LISN: Line Impedence Stabilization Network
Test table height=0.8m

3.2. Conducted Power Line Emission Limit

According to FCC Part 18.307(c)

Frequency (MHz)	Maximum RF line voltage measured with a 50 uH/50 ohm LISN (uV)
Consumer equipment:	
0.45 to 2.51	250
2.51 to 3.0	3,000
3.0 to 30	250

* 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

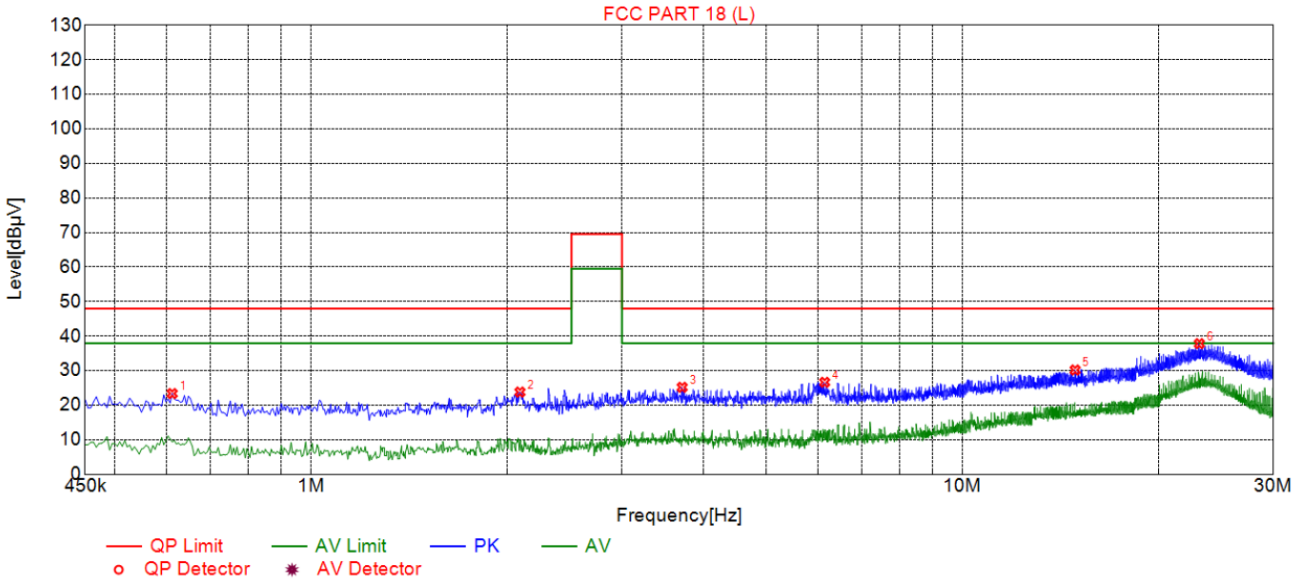
1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10.
2. Support equipment, if needed, was placed as per ANSI 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



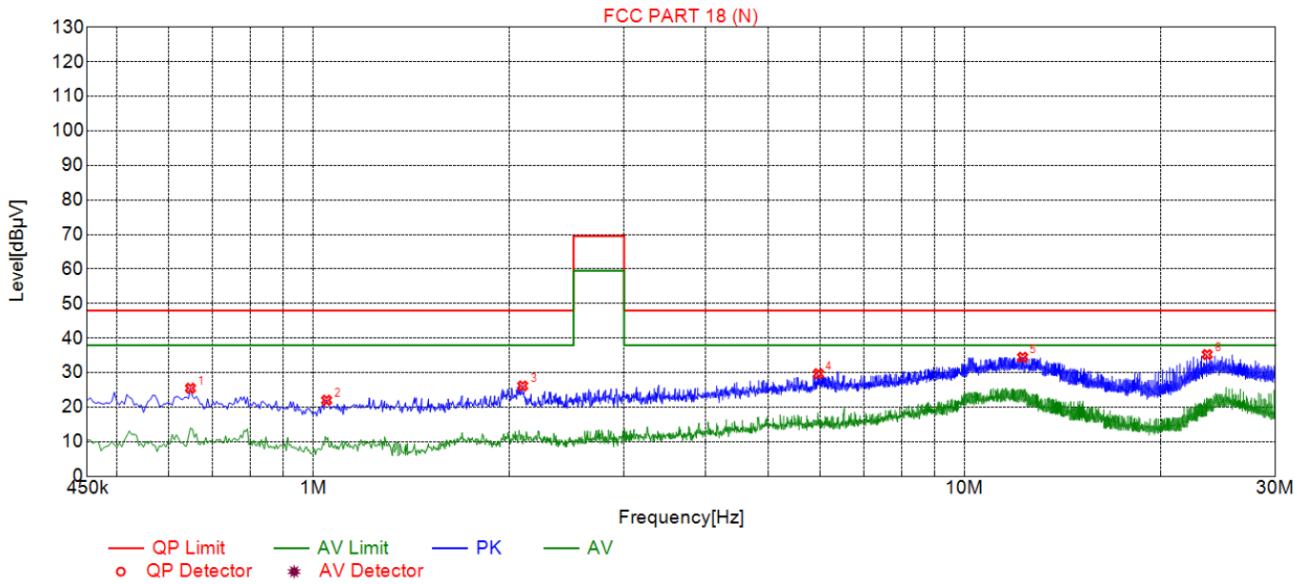
Suspected List								
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Reading [dBµV]	Detector	Type
1	0.6120	23.36	20.13	47.96	24.60	8.23	PK	L
2	2.0925	23.78	20.39	47.96	24.18	8.39	PK	L
3	3.7125	25.17	20.66	47.96	22.79	9.51	PK	L
4	6.1425	26.62	20.90	47.96	21.34	10.72	PK	L
5	14.8905	30.19	21.47	47.96	17.77	13.72	PK	L
6	23.0940	37.83	23.02	47.96	10.13	19.81	PK	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	0.6480	25.48	20.22	47.96	22.48	10.26	PK	N
2	1.0485	22.01	20.28	47.96	25.95	6.73	PK	N
3	2.0970	26.14	20.46	47.96	21.82	10.68	PK	N
4	5.9625	29.69	20.91	47.96	18.27	13.78	PK	N
5	12.2715	34.46	21.25	47.96	13.50	18.21	PK	N
6	23.5665	35.23	23.06	47.96	12.73	17.17	PK	N

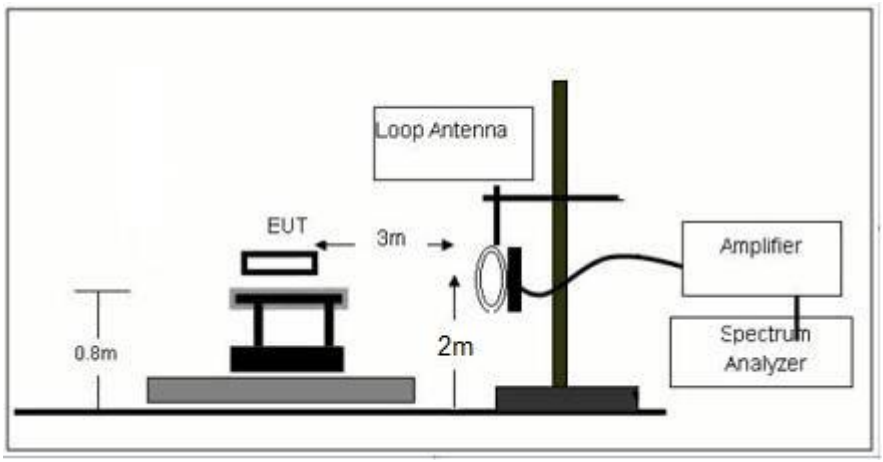
Remark: Margin = Limit – Level

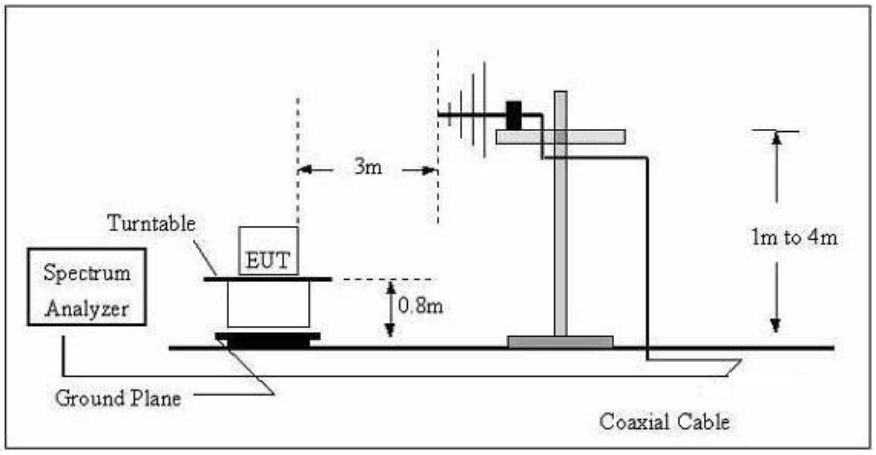
Correction factor = Cable lose + LISN insertion loss

Level=Test receiver reading + correction factor

4. Radiated Emissions

4.1. Block Diagram of Test Setup





4.2. Rules and specifications

Except as provided elsewhere in this Subpart 18.305 (c), the field strength levels of emissions which lie outside the bands specified in §18.301, unless otherwise indicated, shall not exceed the following table:

Equipment	Operating frequency	RF Power generated by equipment (watts)	Field strength limit (uV/m)	Distance (meters)
(miscellaneous)				
	Any non-ISM frequency	Below 500 500 or more	15 15 × SQRT(power/500)	300 [1]300

The field strength limits for RF lighting devices shall be the following:

Frequency (MHz)	Field strength limit at 30 meters (μV/m)
Consumer equipment:	
30-88	10
88-216	15
216-1000	20

Remark:

(1) Emission level dBuV/m for 0.009~30MHz = 20log (15) + 40log (300/3) dBuV/m;

(2) Calculated according FCC 18.305.

(3) The smaller limit shall apply at the cross point between two frequency bands.

(4) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

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 measurements are extrapolated to 300m and 30m distance respectively, by 40dB/decade, 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:

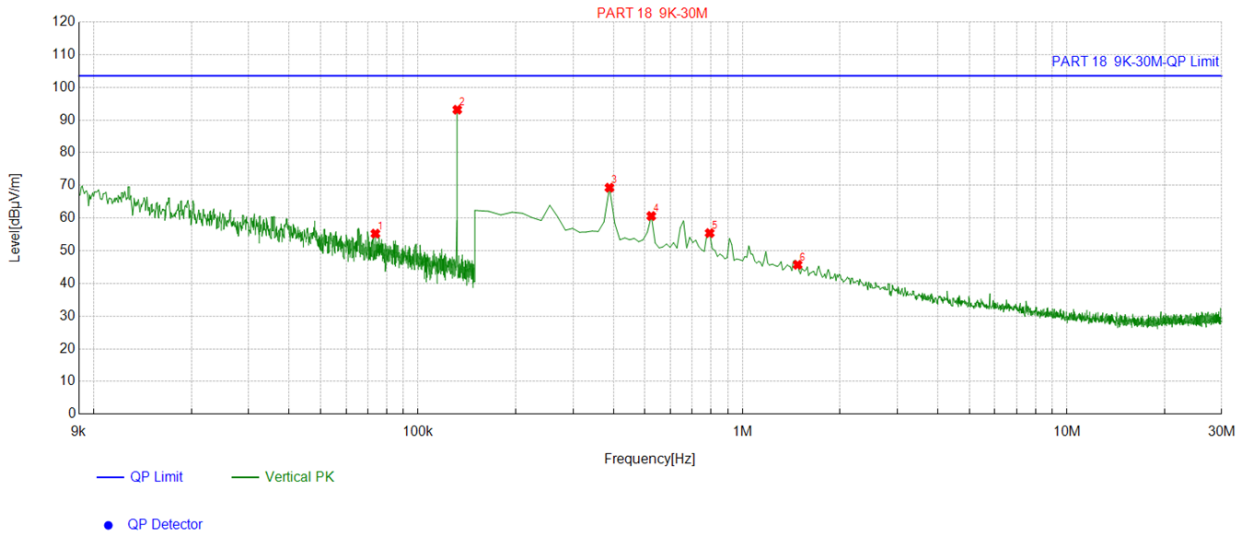
For battery operated equipment, the equipment tests shall be performed using a new battery.

4.4. Test Result

PASS

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

For 9KHz - 30MHz

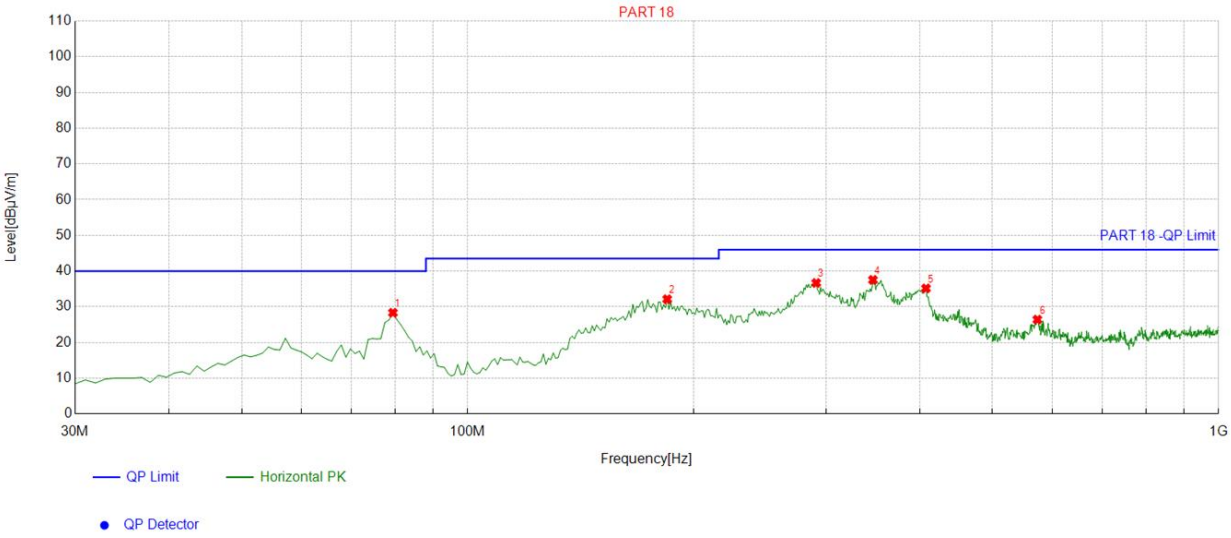


Suspected List						
NO.	Freq. [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]
1	0.073822	20.58	34.65	55.23	103.50	48.27
2	0.132014	20.40	72.77	93.17	103.50	10.33
3	0.388919	20.12	49.18	69.30	103.50	34.20
4	0.523312	20.24	40.39	60.63	103.50	42.87
5	0.792096	20.26	35.15	55.41	103.50	48.09
6	1.478989	20.50	25.20	45.70	103.50	57.80

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

For 30MHz-1GHz

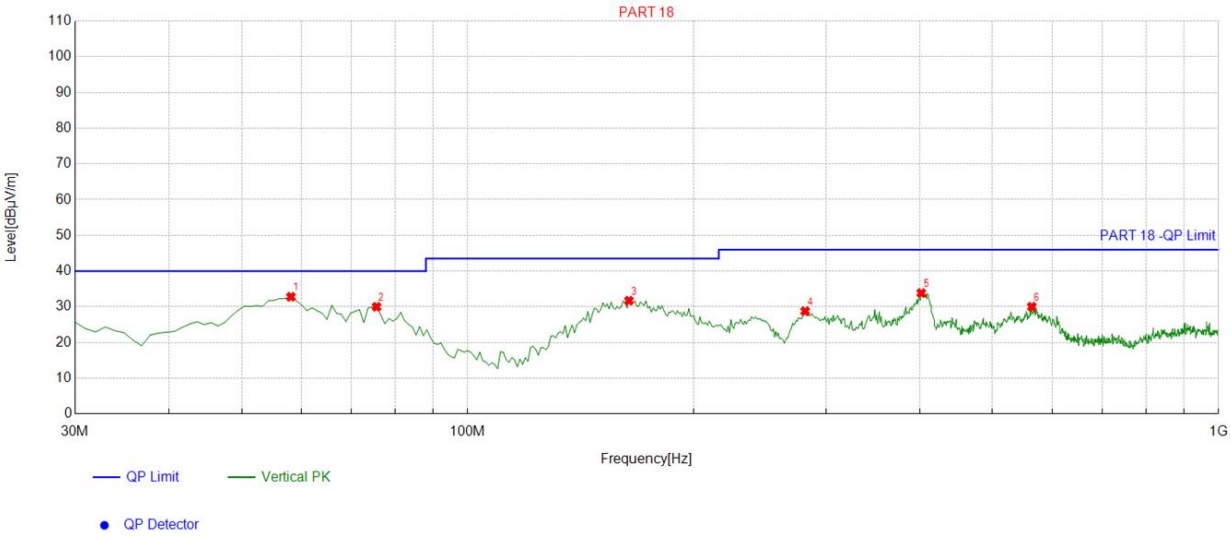
Antenna polarity: H



Suspected List									
NO.	Freq. [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	79.51952	-18.01	46.34	28.33	40.00	11.67	100	189	Horizontal
2	184.38438	-15.77	47.89	32.12	43.50	11.38	100	88	Horizontal
3	291.19119	-12.01	48.68	36.67	46.00	9.33	100	218	Horizontal
4	346.53653	-10.10	47.62	37.52	46.00	8.48	100	101	Horizontal
5	407.70770	-9.71	44.86	35.15	46.00	10.85	100	68	Horizontal
6	573.74374	-5.56	31.97	26.41	46.00	19.59	100	239	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	58.158158	-14.00	46.80	32.80	40.00	7.20	100	43	Vertical
2	75.635636	-17.98	47.97	29.99	40.00	10.01	100	192	Vertical
3	163.99399	-17.59	49.30	31.71	43.50	11.79	100	51	Vertical
4	281.48148	-12.59	41.36	28.77	46.00	17.23	100	51	Vertical
5	401.88188	-9.84	43.68	33.84	46.00	12.16	100	309	Vertical
6	564.03403	-6.26	36.28	30.02	46.00	15.98	100	18	Vertical

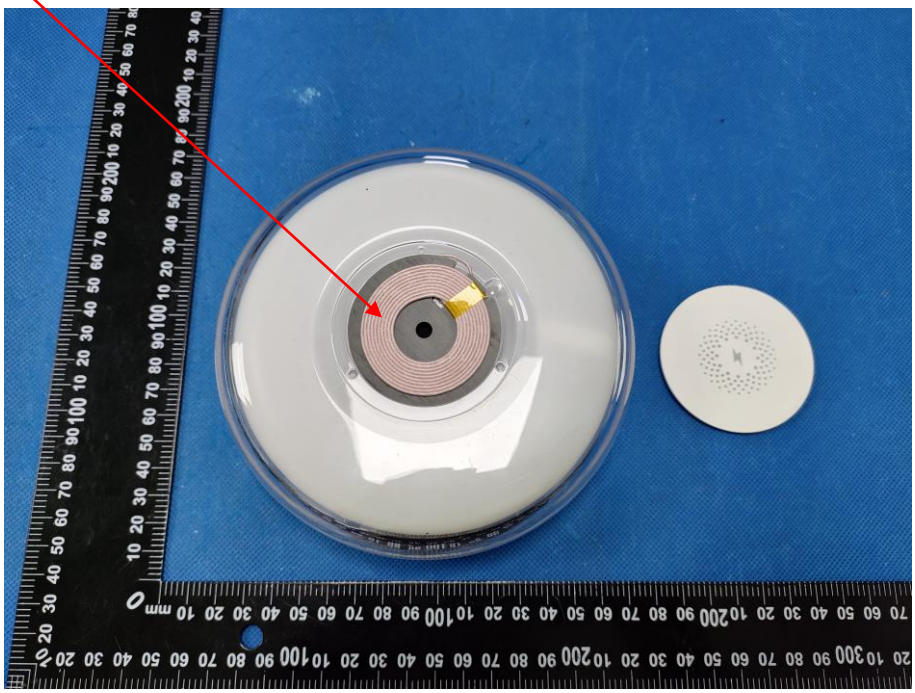
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Limit – Level

5. Antenna Requirement

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.

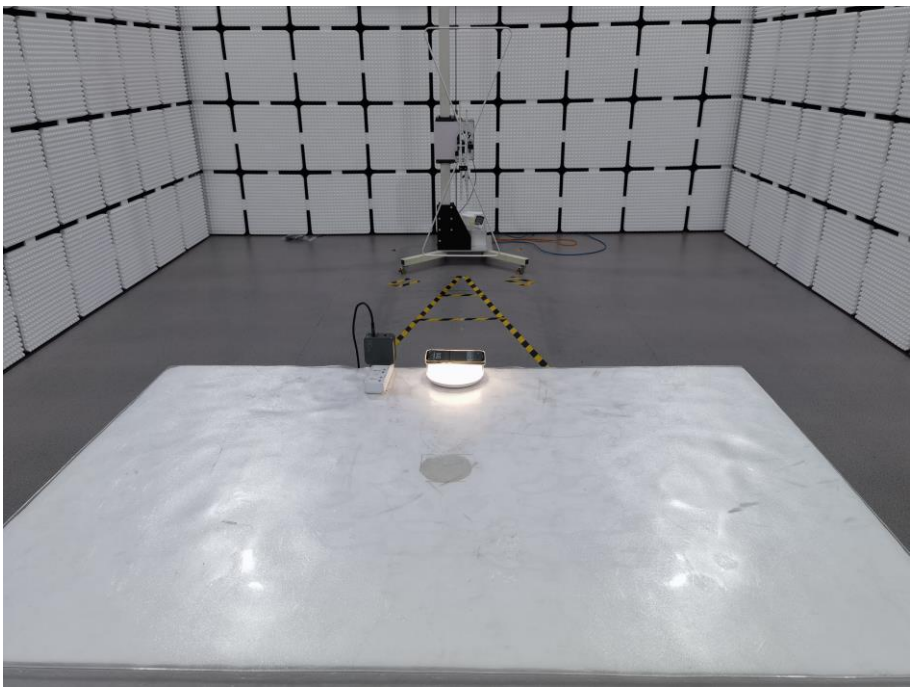
Antenna Connected Construction
The antenna used in this product is a Coil Antenna, which permanently attached. It conforms to the standard requirements.

Antenna location：



6. Photograph of Test

Radiated Emission



Conducted Emissions

7. Photos of the EUT

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

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