



# FCC Test Report

**Test Report  
On Behalf of  
ShangXing Technology(ShenZhen) Co.,Ltd.  
For  
3-in-1 Foldable Magnetic Wireless Charger  
Model No.: X41, X41S, X41+, X41S+**

**FCC ID: 2APDM-X41**

**Prepared For :** ShangXing Technology(ShenZhen) Co.,Ltd.  
Room 408, 4th Floor, Building 30.Wisdomland Business Park, Guankou 2nd  
road, Nantou, Nanshan, Shenzhen, 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:** Mar. 19, 2024 ~ Apr. 01, 2024

**Date of Report:** Apr. 01, 2024

**Report Number:** DL-240606005-1ER



## Test Result Certification

**Applicant's Name** ..... : ShangXing Technology(ShenZhen) Co.,Ltd.

**Address** ..... : Room 408, 4th Floor, Building 30.Wisdomland Business Park,  
Guankou 2nd road, Nantou, Nanshan, Shenzhen, China

**Manufacturer's Name** ..... : ShangXing Technology(ShenZhen) Co.,Ltd.

**Address** ..... : Room 408, 4th Floor, Building 30.Wisdomland Business Park,  
Guankou 2nd road, Nantou, Nanshan, Shenzhen, China

### Product Description

**Trade Mark** ..... : N/A

**Product Name** ..... : 3-in-1 Foldable Magnetic Wireless Charger

**Model and/or Type Reference** : X41, X41S, X41+, X41S+

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

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**Date of Test** ..... :

**Date (s) of performance of tests** ..... : **Mar. 19, 2024 ~ Apr. 01, 2024**

**Date of Issue** ..... : **Apr. 01, 2024**

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

Testing Engineer

*Randy Xie*

Randy Xie

Technical Manager

*Jack Bu*

Jack Bu

Authorized Signatory

*Jade Yang*

Jade Yang





| <b>Table of Contents</b>                 | <b>Page</b> |
|------------------------------------------|-------------|
| 1 . Test Summary                         | 5           |
| 1.1 . Test Procedures and Results        | 5           |
| 1.2 . Information of the Test Laboratory | 5           |
| 1.3 . Measurement Uncertainty            | 5           |
| 2. General Information                   | 6           |
| 2.1. General Description of EUT          | 6           |
| 2.2. Carrier Frequency of Channels       | 7           |
| 2.3. Test Mode                           | 8           |
| 2.4. Description of Test Setup           | 9           |
| 2.5. Description of Support Units        | 10          |
| 2.6. Measurement Instruments List        | 11          |
| 3. Conducted Emission Test               | 12          |
| 3.1. Block Diagram of Test Setup         | 12          |
| 3.2. Conducted Power Line Emission Limit | 12          |
| 3.3. Test Procedure                      | 12          |
| 4. Radiated Emissions                    | 15          |
| 4.1. Block Diagram of Test Setup         | 15          |
| 4.2. Rules and Specifications            | 16          |
| 4.3. Test Procedure                      | 16          |
| 4.4. Test Result                         | 16          |
| 5. Antenna Requirement                   | 22          |
| 6. Photographs of Test                   | 23          |
| 7. Photos of the EUT                     | 25          |



**\*\* Modified History \*\***

| Revision     | Description                 | Issued Data   | Remark |
|--------------|-----------------------------|---------------|--------|
| Revision 1.0 | Initial Test Report Release | Apr. 01, 2024 |        |
|              |                             |               |        |
|              |                             |               |        |



## 1. Test Summary

### 1.1. Test Procedures and Results

| Description of Test      | Section Number | Result    |
|--------------------------|----------------|-----------|
| Conducted Emissions Test | 18.307         | COMPLIANT |
| Radiated Emission Test   | 18.305         | 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:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 3-in-1 Foldable Magnetic Wireless Charger                                                                                                      |
| Model Name:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | X41                                                                                                                                            |
| Series Models:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | X41S, X41+, X41S+                                                                                                                              |
| Model Difference:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | All model's the function, software and electric circuit are the same, only with product model named different. Test sample model: X41.         |
| Trade Mark:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | N/A                                                                                                                                            |
| FCC ID:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2APDM-X41                                                                                                                                      |
| Antenna Type:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Coil Antenna                                                                                                                                   |
| Operation Frequency:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 112KHz~205KHz                                                                                                                                  |
| Test Frequency:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Mobile Phone: 149KHz<br>Earphone: 134KHz<br>Watch: 128KHz                                                                                      |
| Modulation Type:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ASK                                                                                                                                            |
| Power Source:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Input: DC5V/3A, 9V/2.22A, 12V/3A<br>Output:<br>Magnetic Wireless Charger: 5W/7.5W/10W/15W<br>AirPods Charger: 5W<br>Apple Watch Charger: 3W/5W |
| Power Rating:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Input: DC5V/3A, 9V/2.22A, 12V/3A<br>Output:<br>Magnetic Wireless Charger: 5W/7.5W/10W/15W<br>AirPods Charger: 5W<br>Apple Watch Charger: 3W/5W |
| Note:<br><ol style="list-style-type: none"><li>1. The transfer system includes three coils, 3 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.</li><li>2. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.</li><li>3. The cable loss data is obtained from the supplier.</li><li>4. The test results in the report only apply to the tested sample.</li></ol> |                                                                                                                                                |



## 2.2. Carrier Frequency of Channels

| Operation Frequency each of channel |           |
|-------------------------------------|-----------|
| Channel                             | Frequency |
| 01                                  | 149KHz    |
| 02                                  | 134KHz    |
| 03                                  | 128KHz    |



### 2.3. Test Mode

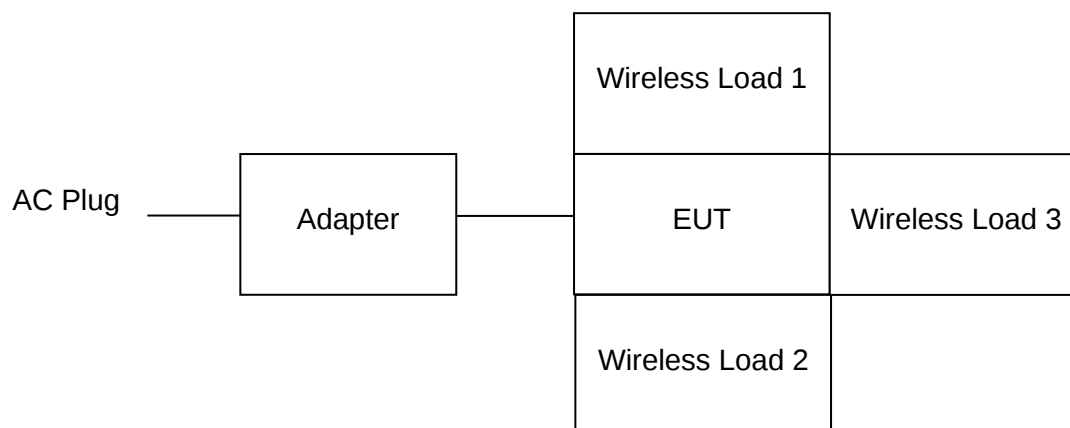
| Test Item                       | Test Mode | Description                                                                                                   |
|---------------------------------|-----------|---------------------------------------------------------------------------------------------------------------|
| Radiated & Conducted Test Cases | Mode 1    | AC/DC Adapter + EUT + Wireless load 1 (Full load) + Wireless load 2 (Full load) + Wireless load 3 (Full load) |
|                                 | Mode 2    | AC/DC Adapter + EUT + Wireless load 1 (Half load) + Wireless load 2 (Half load) + Wireless load 3 (Full load) |
|                                 | Mode 3    | AC/DC Adapter + EUT + Wireless load 1 (Null load) + Wireless load 2 (Null load) + Wireless load 3 (Full load) |
|                                 | Mode 4    | AC/DC Adapter + EUT + Wireless load 1 (Full load) + Wireless load 2 (Full load) + Wireless load 3 (Half load) |
|                                 | Mode 5    | AC/DC Adapter + EUT + Wireless load 1 (Half load) + Wireless load 2 (Half load) + Wireless load 3 (Half load) |
|                                 | Mode 6    | AC/DC Adapter + EUT + Wireless load 1 (Null load) + Wireless load 2 (Null load) + Wireless load 3 (Half load) |
|                                 | Mode 7    | AC/DC Adapter + EUT + Wireless load 1 (Full load) + Wireless load 2 (Full load) + Wireless load 3 (Null load) |
|                                 | Mode 8    | AC/DC Adapter + EUT + Wireless load 1 (Half load) + Wireless load 2 (Half load) + Wireless load 3 (Null load) |
|                                 | Mode 9    | AC/DC Adapter + EUT + Wireless load 1 (Null load) + Wireless load 2 (Null load) + Wireless load 3 (Null load) |
|                                 | Mode 10   | AC/DC Adapter + EUT + Wireless load 1 (Full load)                                                             |
|                                 | Mode 11   | AC/DC Adapter + EUT + Wireless load 1 (Half load)                                                             |
|                                 | Mode 12   | AC/DC Adapter + EUT + Wireless load 1 (Null load)                                                             |
|                                 | Mode 13   | AC/DC Adapter + EUT + Wireless load 2 (Full load)                                                             |
|                                 | Mode 14   | AC/DC Adapter + EUT + Wireless load 2 (Half load)                                                             |
|                                 | Mode 15   | AC/DC Adapter + EUT + Wireless load 2 (Null load)                                                             |
|                                 | Mode 16   | AC/DC Adapter + EUT + Wireless load 3 (Full load)                                                             |
|                                 | Mode 17   | AC/DC Adapter + EUT + Wireless load 3 (Half load)                                                             |
|                                 | Mode 18   | AC/DC Adapter + EUT + Wireless load 3 (Null load)                                                             |
|                                 | Mode 19   | 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 wireless load replaces the Mobile Phone 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                                                                                   | Remark     |
|------|-------------------------------------------|------------|----------------|-------------------------------------------------------------------------------------------------|------------|
| 1    | 3-in-1 Foldable Magnetic Wireless Charger | N/A        | X41            | N/A                                                                                             | EUT        |
| 2    | Adapter                                   | N/A        | 191106C        | Input: AC100-240V, 1.8A, 50/60Hz<br>Output: DC5V/3A, 9V3A, 12V/3A, 15V/3A, 20V/3.25A, (65W Max) | Peripheral |
| 3    | USB Cable                                 | N/A        | N/A            | Length: 1.0m                                                                                    | Peripheral |
| 4    | Wireless Load 1                           | YBZ        | N/A            | Wireless input 15W                                                                              | Peripheral |
| 5    | Wireless Load 2                           | YBZ        | N/A            | Wireless input 5W                                                                               | Peripheral |
| 6    | Wireless Load 3                           | YBZ        | N/A            | Wireless input 5W                                                                               | 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

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    |

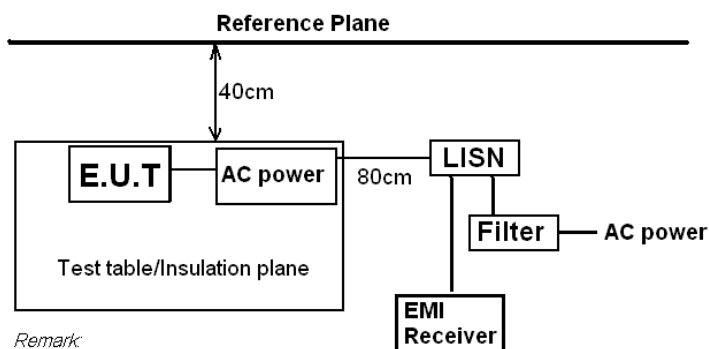
Other

| Item | Name                         | Manufacturer | Model   | Software version |
|------|------------------------------|--------------|---------|------------------|
| 1    | EMC Conduction Test System   | FALA         | EZ_EMCC | EMC-CON 3A1.1    |
| 2    | EMC radiation test system    | FALA         | EZ_EMCC | 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 Impedance Stabilization Network  
Test table height=0.8m

#### 3.2. Conducted Power Line Emission Limit

According to FCC Part 18.307(b)

| Frequency<br>(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.

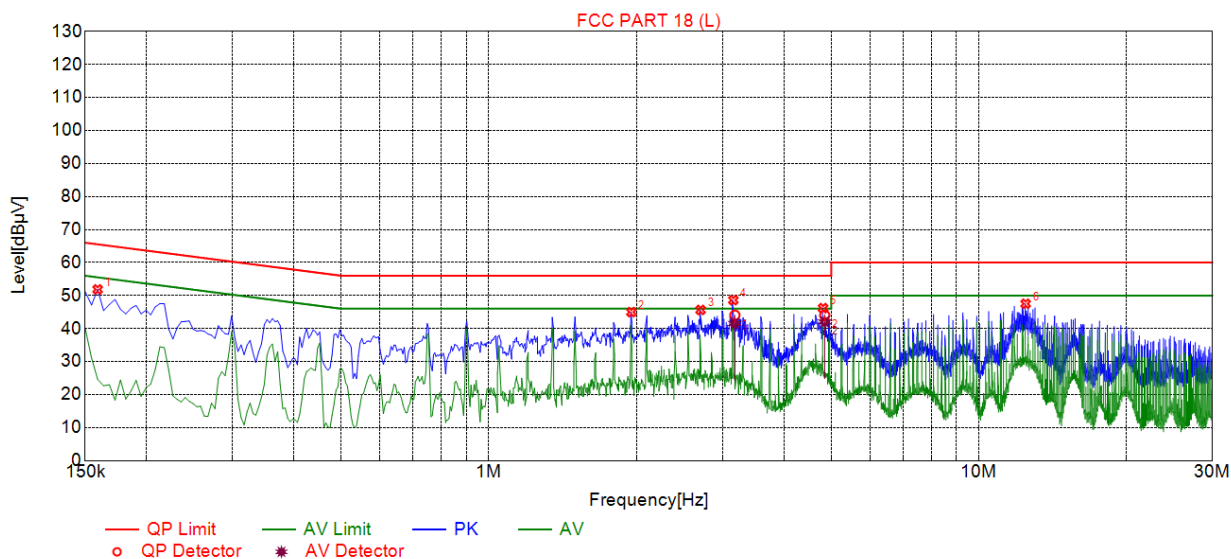


### 3.4. Test Result

PASS

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

Test Specification: Line



### Suspected List

| NO. | Freq.<br>[MHz] | Level<br>[dBμV] | Factor<br>[dB] | Limit<br>[dBμV] | Margin<br>[dB] | Reading<br>[dBμV] | Detector | Type |
|-----|----------------|-----------------|----------------|-----------------|----------------|-------------------|----------|------|
| 1   | 0.1590         | 51.86           | 20.01          | 65.52           | 13.66          | 31.85             | PK       | L    |
| 2   | 1.9545         | 44.99           | 20.14          | 56.00           | 11.01          | 24.85             | PK       | L    |
| 3   | 2.7060         | 45.64           | 20.21          | 56.00           | 10.36          | 25.43             | PK       | L    |
| 4   | 3.1560         | 48.61           | 20.23          | 56.00           | 7.39           | 28.38             | PK       | L    |
| 5   | 4.8120         | 46.19           | 20.26          | 56.00           | 9.81           | 25.93             | PK       | L    |
| 6   | 12.4710        | 47.53           | 19.98          | 60.00           | 12.47          | 27.55             | PK       | L    |

### Final Data List

| NO. | Freq.<br>[MHz] | Correction<br>factor[dB] | QP<br>Value<br>[dBμV] | QP<br>Limit<br>[dBμV] | QP<br>Margin<br>[dB] | QP<br>Reading<br>[dBμV] | AV<br>Value<br>[dBμV] | AV<br>Limit<br>[dBμV] | AV<br>Margin<br>[dB] | AV<br>Reading<br>[dBμV] | Type |
|-----|----------------|--------------------------|-----------------------|-----------------------|----------------------|-------------------------|-----------------------|-----------------------|----------------------|-------------------------|------|
| 1   | 3.1781         | 20.23                    | 44.05                 | 56.00                 | 11.95                | 23.82                   | 41.54                 | 46.00                 | 4.46                 | 21.31                   | L    |
| 2   | 4.8478         | 20.26                    | 44.00                 | 56.00                 | 12.00                | 23.74                   | 42.03                 | 46.00                 | 3.97                 | 21.77                   | L    |

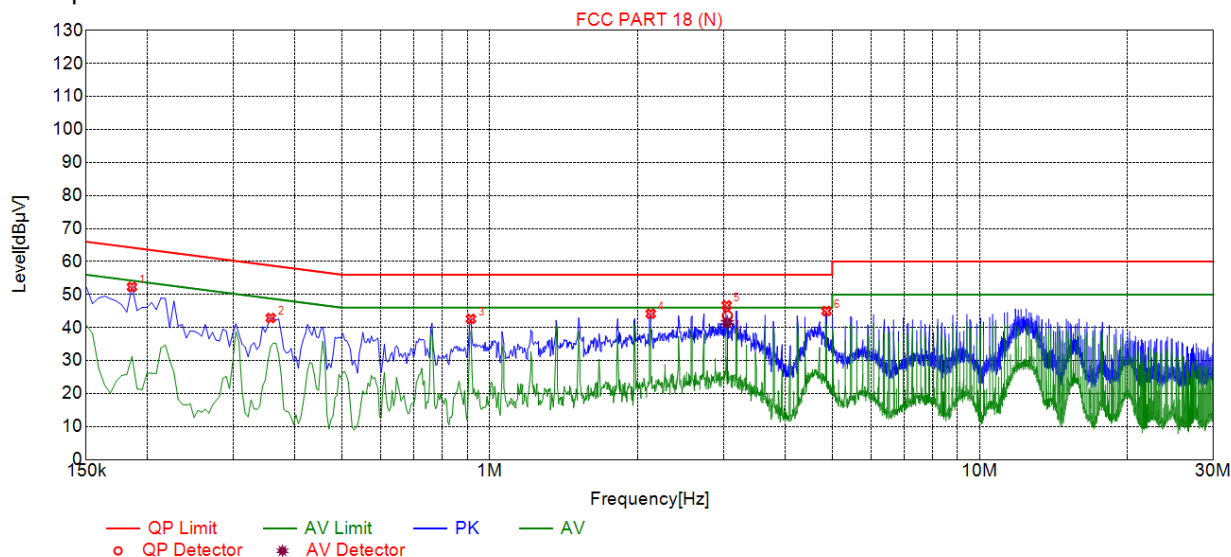
Remark: Margin = Limit – Level

Correction factor = Cable lose + LISN insertion loss

Level=Test receiver reading + correction factor



## Test Specification: Neutral



## Suspected List

| NO. | Freq.<br>[MHz] | Level<br>[dBμV] | Factor<br>[dB] | Limit<br>[dBμV] | Margin<br>[dB] | Reading<br>[dBμV] | Detector | Type |
|-----|----------------|-----------------|----------------|-----------------|----------------|-------------------|----------|------|
| 1   | 0.1860         | 52.31           | 20.05          | 64.21           | 11.90          | 32.26             | PK       | N    |
| 2   | 0.3570         | 42.90           | 20.03          | 58.80           | 15.90          | 22.87             | PK       | N    |
| 3   | 0.9150         | 42.63           | 20.06          | 56.00           | 13.37          | 22.57             | PK       | N    |
| 4   | 2.1300         | 44.19           | 20.16          | 56.00           | 11.81          | 24.03             | PK       | N    |
| 5   | 3.0435         | 46.73           | 20.22          | 56.00           | 9.27           | 26.51             | PK       | N    |
| 6   | 4.8660         | 44.99           | 20.26          | 56.00           | 11.01          | 24.73             | PK       | N    |

## Final Data List

| NO. | Freq.<br>[MHz] | Correction<br>factor [dB] | QP<br>Value<br>[dBμV] | QP<br>Limit<br>[dBμV] | QP<br>Margin<br>[dB] | QP<br>Reading<br>[dBμV] | AV<br>Value<br>[dBμV] | AV<br>Limit<br>[dBμV] | AV<br>Margin<br>[dB] | AV<br>Reading<br>[dBμV] | Type |
|-----|----------------|---------------------------|-----------------------|-----------------------|----------------------|-------------------------|-----------------------|-----------------------|----------------------|-------------------------|------|
| 1   | 3.0538         | 20.22                     | 43.58                 | 56.00                 | 12.42                | 23.36                   | 41.55                 | 46.00                 | 4.45                 | 21.33                   | N    |

Remark: Margin = Limit – Level

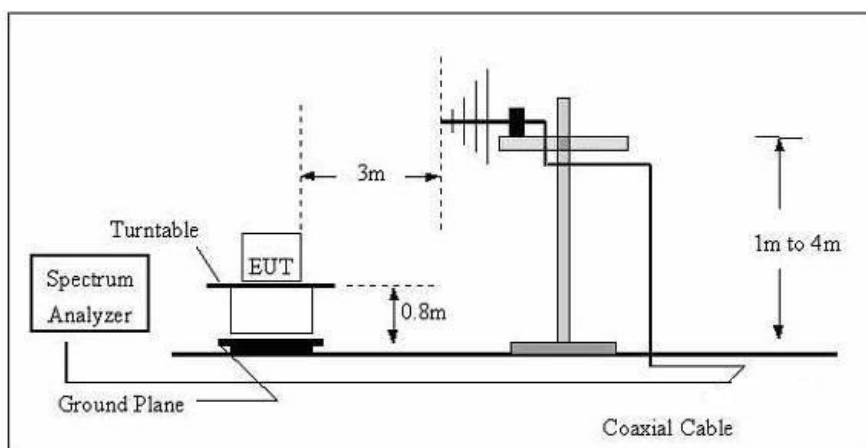
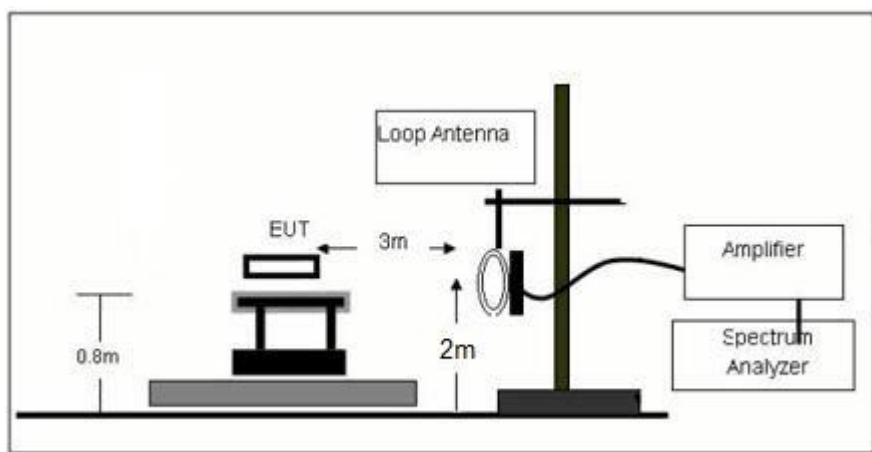
Correction factor = Cable lose + LISN insertion loss

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 (b), 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<br>500 or more                | 15<br>15 ×<br>SQRT(power/500) | 300<br>1300       |

Remark:

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

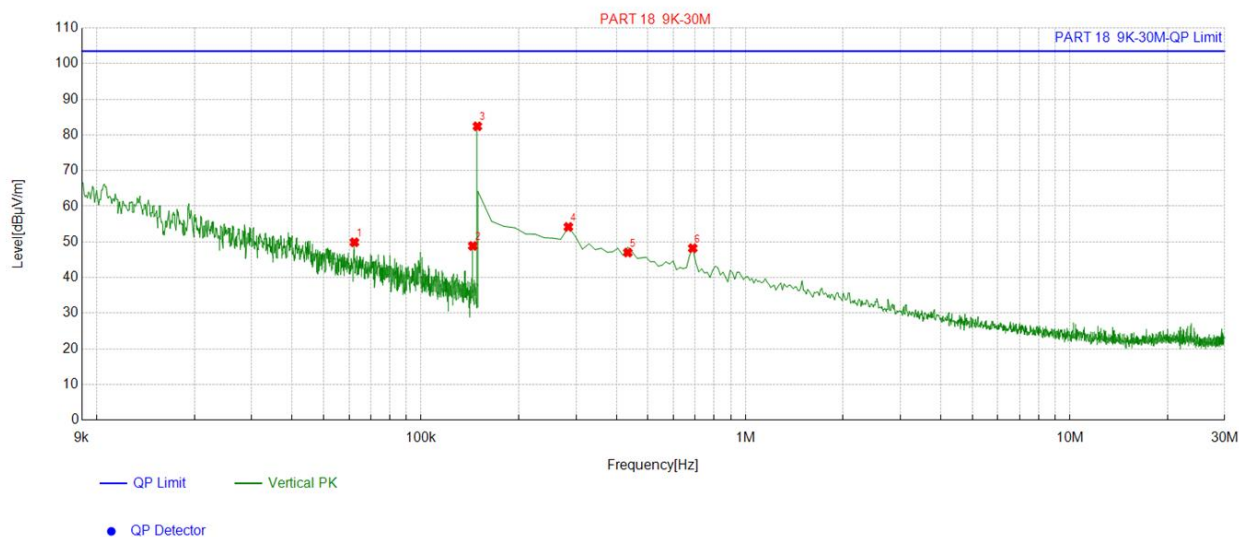
## 4.4. Test Result

PASS



For 9KHz - 30MHz

Mobile phone:

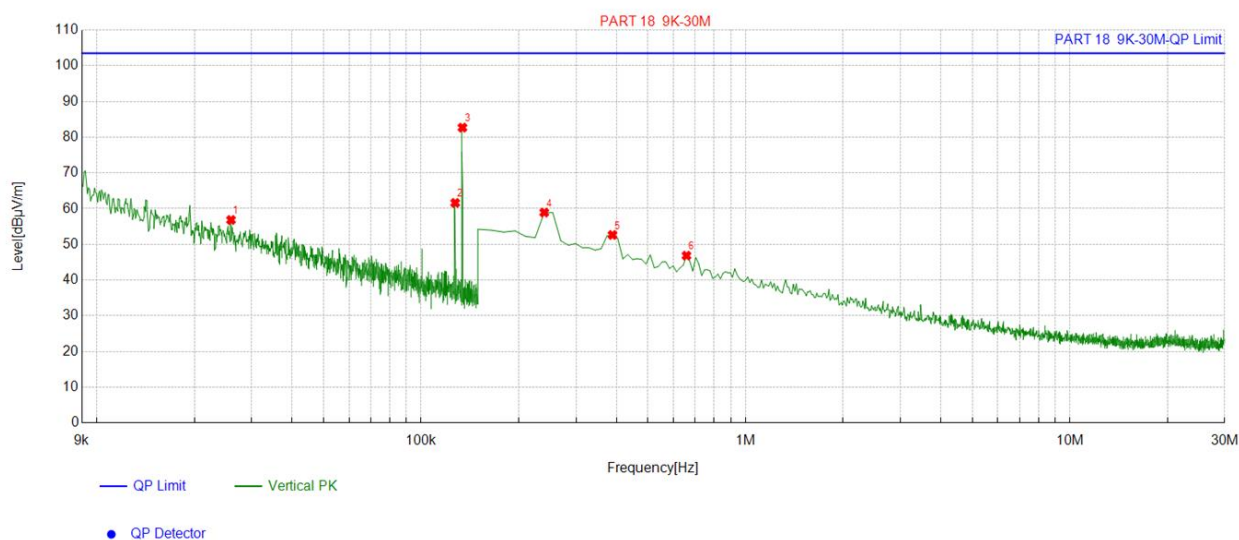
**Suspected List**

| NO. | Freq.<br>[MHz] | Factor<br>[dB] | Reading<br>[dBμV/m] | Level<br>[dBμV/m] | Limit<br>[dBμV/m] | Margin<br>[dB] |
|-----|----------------|----------------|---------------------|-------------------|-------------------|----------------|
| 1   | 0.062254       | 13.97          | 35.92               | 49.89             | 103.50            | 53.61          |
| 2   | 0.144287       | 13.77          | 35.10               | 48.87             | 103.50            | 54.63          |
| 3   | 0.149083       | 13.76          | 68.66               | 82.42             | 103.50            | 21.08          |
| 4   | 0.284392       | 13.69          | 40.51               | 54.20             | 103.50            | 49.30          |
| 5   | 0.433717       | 13.77          | 33.23               | 47.00             | 103.50            | 55.00          |
| 6   | 0.687569       | 13.79          | 34.44               | 48.23             | 103.50            | 55.27          |

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



## Earphone:



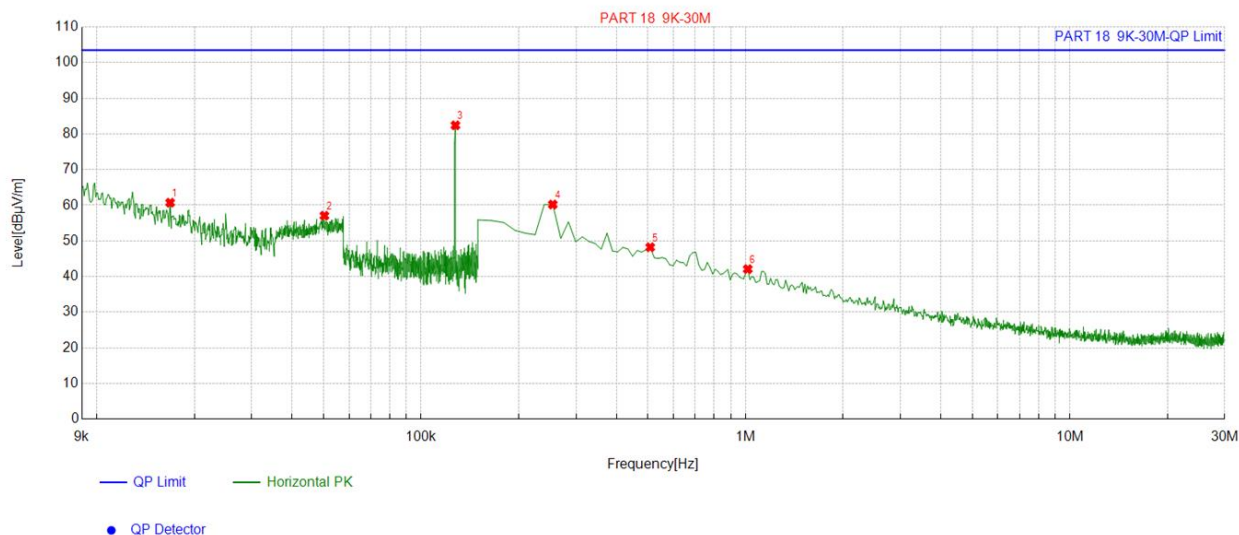
## Suspected List

| NO. | Freq.<br>[MHz] | Factor<br>[dB] | Reading<br>[dBμV/m] | Level<br>[dBμV/m] | Limit<br>[dBμV/m] | Margin<br>[dB] |
|-----|----------------|----------------|---------------------|-------------------|-------------------|----------------|
| 1   | 0.025928       | 14.66          | 42.17               | 56.83             | 103.50            | 46.67          |
| 2   | 0.127358       | 13.79          | 47.81               | 61.60             | 103.50            | 41.90          |
| 3   | 0.134059       | 13.78          | 68.90               | 82.68             | 103.50            | 20.82          |
| 4   | 0.239595       | 13.68          | 45.24               | 58.92             | 103.50            | 44.58          |
| 5   | 0.388919       | 13.77          | 38.86               | 52.63             | 103.50            | 50.87          |
| 6   | 0.657704       | 13.76          | 33.08               | 46.84             | 103.50            | 56.66          |

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



Watch:

**Suspected List**

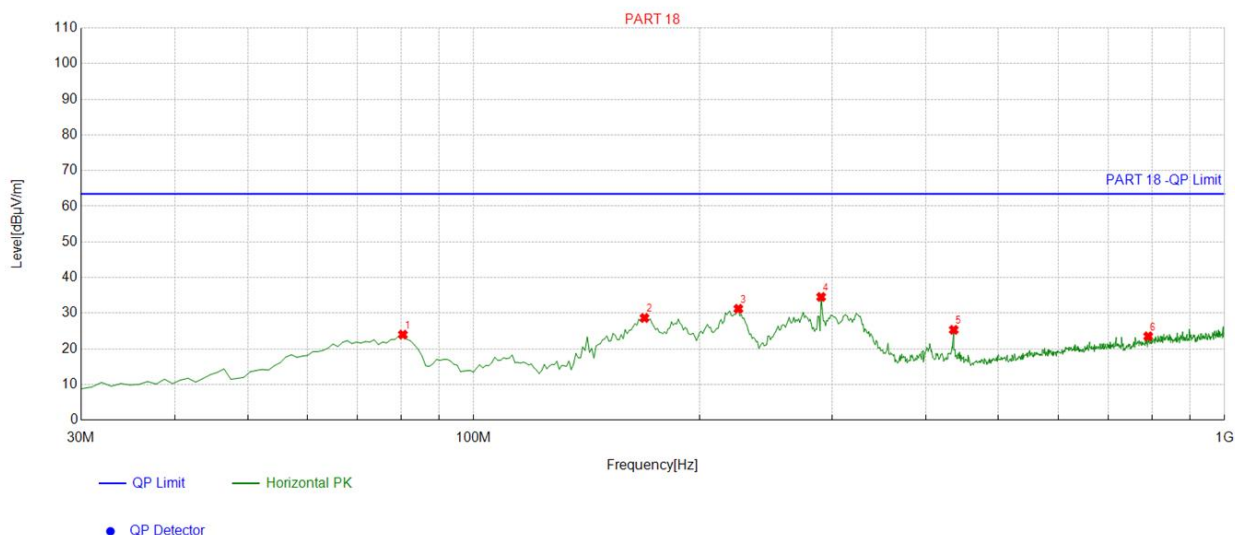
| NO. | Freq.<br>[MHz] | Factor<br>[dB] | Reading<br>[dBμV/m] | Level<br>[dBμV/m] | Limit<br>[dBμV/m] | Margin<br>[dB] |
|-----|----------------|----------------|---------------------|-------------------|-------------------|----------------|
| 1   | 0.016829       | 15.22          | 45.50               | 60.72             | 103.50            | 42.78          |
| 2   | 0.050334       | 13.91          | 43.16               | 57.07             | 103.50            | 46.43          |
| 3   | 0.12757        | 13.78          | 68.64               | 82.42             | 103.50            | 21.08          |
| 4   | 0.254527       | 13.68          | 46.53               | 60.21             | 103.50            | 43.29          |
| 5   | 0.508379       | 13.73          | 34.49               | 48.22             | 103.50            | 55.28          |
| 6   | 1.016083       | 14.12          | 27.97               | 42.09             | 103.50            | 61.41          |

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



## For 30MHz-1GHz

Antenna polarity: H

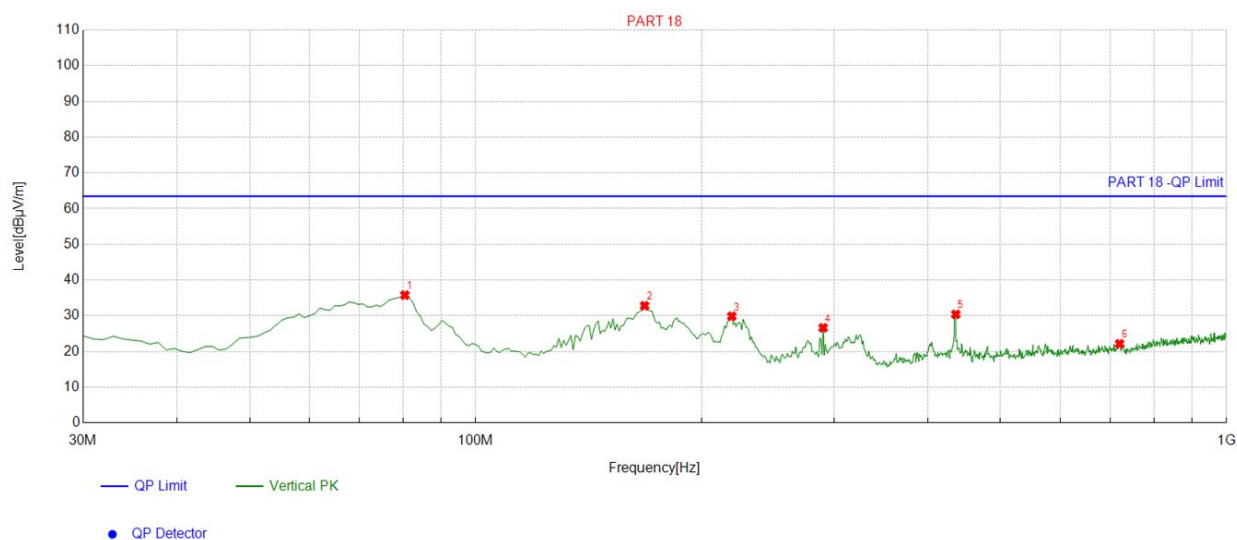


| Suspected List |                |                |                     |                   |                   |                |                |              |            |
|----------------|----------------|----------------|---------------------|-------------------|-------------------|----------------|----------------|--------------|------------|
| NO.            | Freq.<br>[MHz] | Factor<br>[dB] | Reading<br>[dBμV/m] | Level<br>[dBμV/m] | Limit<br>[dBμV/m] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] | Polarity   |
| 1              | 80.49049       | -17.44         | 41.43               | 23.99             | 63.50             | 39.51          | 100            | 208          | Horizontal |
| 2              | 168.84884      | -17.09         | 45.76               | 28.67             | 63.50             | 34.83          | 100            | 115          | Horizontal |
| 3              | 225.16516      | -14.01         | 45.25               | 31.24             | 63.50             | 32.26          | 100            | 299          | Horizontal |
| 4              | 290.22022      | -12.32         | 46.88               | 34.56             | 63.50             | 28.94          | 100            | 285          | Horizontal |
| 5              | 435.86586      | -8.21          | 33.54               | 25.33             | 63.50             | 38.17          | 100            | 285          | Horizontal |
| 6              | 791.24124      | -2.12          | 25.64               | 23.52             | 63.50             | 39.98          | 100            | 277          | Horizontal |

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



Antenna polarity: V



| Suspected List |                |                |                     |                   |                   |                |                |              |          |
|----------------|----------------|----------------|---------------------|-------------------|-------------------|----------------|----------------|--------------|----------|
| NO.            | Freq.<br>[MHz] | Factor<br>[dB] | Reading<br>[dBμV/m] | Level<br>[dBμV/m] | Limit<br>[dBμV/m] | Margin<br>[dB] | Height<br>[cm] | Angle<br>[°] | Polarity |
| 1              | 80.49049       | -17.44         | 53.23               | 35.79             | 63.50             | 27.71          | 100            | 320          | Vertical |
| 2              | 167.87787      | -16.99         | 49.79               | 32.80             | 63.50             | 30.70          | 100            | 146          | Vertical |
| 3              | 219.33933      | -14.30         | 44.17               | 29.87             | 63.50             | 33.63          | 100            | 14           | Vertical |
| 4              | 290.22022      | -12.32         | 38.96               | 26.64             | 63.50             | 36.86          | 100            | 1            | Vertical |
| 5              | 435.86586      | -8.21          | 38.61               | 30.40             | 63.50             | 33.10          | 100            | 127          | Vertical |
| 6              | 720.36036      | -3.56          | 25.73               | 22.17             | 63.50             | 41.33          | 100            | 337          | Vertical |

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



## 5. Antenna Requirement

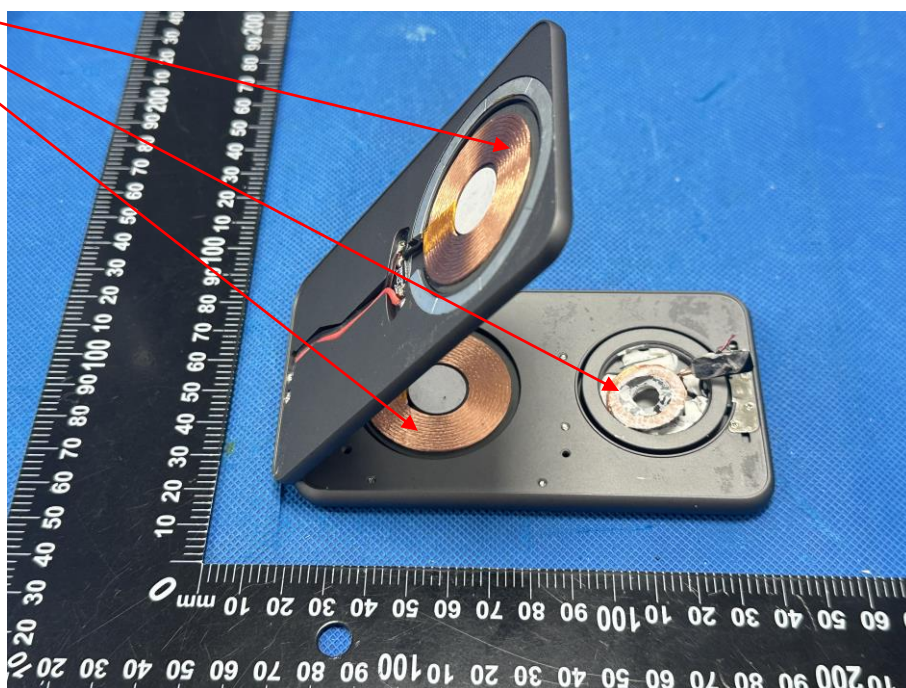
### Refer to statement below for compliance.

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 Coil Antenna, which permanently attached. It conforms to the standard requirements.

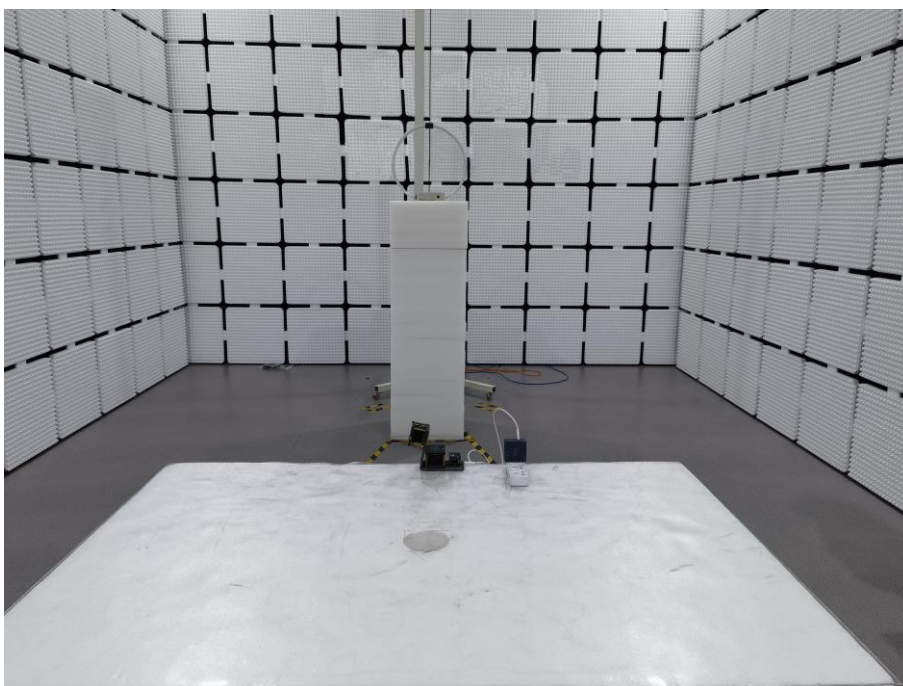
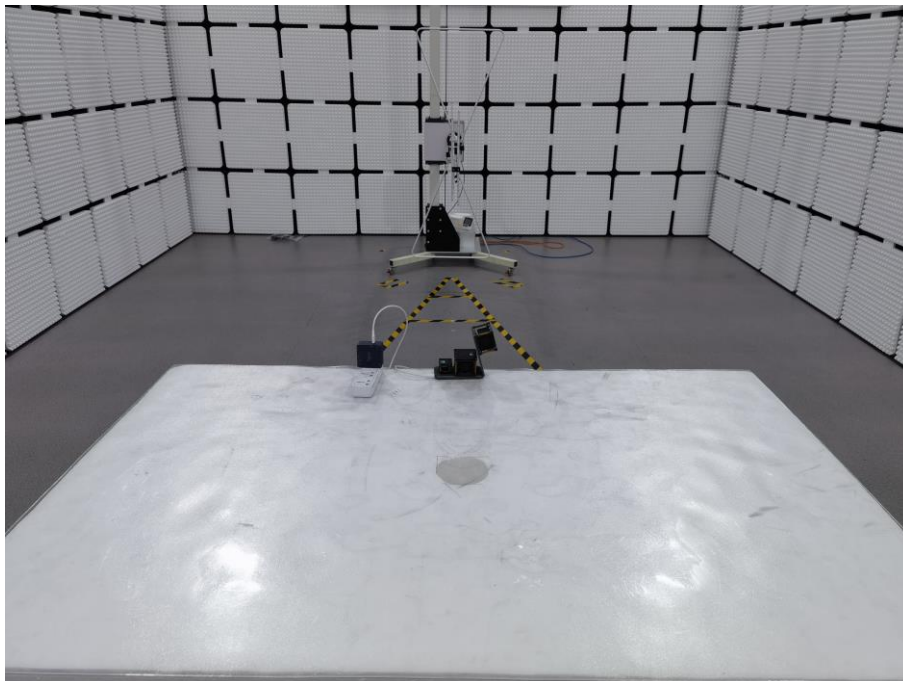
### Antenna





## 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-----