



# FCC TEST REPORT

## FCC ID:2BKVO-DY210

**Report Number**..... : ZKT-240924L12101E

**Date of Test**..... : Aug. 30, 2024 to Sept. 13, 2024

**Date of issue**..... : Sept. 29, 2024

**Total number of pages**..... 23

**Test Result** ..... : PASS

**Testing Laboratory**..... : Shenzhen ZKT Technology Co., Ltd.

**Address** ..... : 1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China

**Applicant's name** ..... : Shenzhen Guangxun Lishen Technology Co.,Ltd. Dongguan Tangxia Branch

**Address** ..... : Building B, 103 Lingnan Avenue, Shigu Community, Tangxia Town, Dongguan City, China

**Manufacturer's name** ..... : Shenzhen Guangxun Lishen Technology Co.,Ltd. Dongguan Tangxia Branch

**Address** ..... : Building B, 103 Lingnan Avenue, Shigu Community, Tangxia Town, Dongguan City, China

### Test specification:

**Standard**..... : FCC CFR Title 47 Part 15 Subpart C

**Test procedure**..... : /

**Non-standard test method** ..... : N/A

**Test Report Form No**..... : TRF-EL-107\_V0

**Test Report Form(s) Originator**..... : ZKT Testing

**Master TRF** ..... : Dated: 2020-01-06

This device described above has been tested by ZKT, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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**Product name**..... : POWER BANK

**Trademark** ..... : /

**Model/Type reference**..... : DY210

**Model difference**..... : The product has different colored shells, and this test used EUT with rose gold shells. the test data of EUT with rose gold shell can represent the remaining colors.

**Ratings**..... : Capacity: DC 3.85 V / 10000 mAh(38.5 Wh)  
Input: Lighting(5 V---2 A), Type-C(5 V---3 A, 9 V---2 A)  
Output: Type-C(5 V---3 A, 9 V---2.22 A, 12 V---1.67 A 20W Max)  
Wireless output: 5 W / 7.5 W / 10 W / 15 W



**Testing procedure and testing location:**

**Testing Laboratory**.....: **Shenzhen ZKT Technology Co., Ltd.**

**Address**.....: 1/F, No. 101, Building B, No. 6, Tangwei Community  
Industrial Avenue, Fuhai Street, Bao'an District,  
Shenzhen, China

**Tested by (name + signature)**.....: Jim Liu

*Jim Liu*

**Reviewer (name + signature)**.....: Tom Zou

*Tom Zou*

**Approved (name + signature)**.....: Lake Xie

*Lake Xie*



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1. VERSION

| Report No.        | Version | Description             | Approved       |
|-------------------|---------|-------------------------|----------------|
| ZKT-240924L12101E | Rev.01  | Initial issue of report | Sept. 29, 2024 |
|                   |         |                         |                |
|                   |         |                         |                |



## 2. TEST SUMMARY

| Test Item                        | Section in CFR 47 | Result |
|----------------------------------|-------------------|--------|
| Antenna requirement              | 15.203            | Pass   |
| AC Power Line Conducted Emission | 15.207            | Pass   |
| Spurious Emission                | 15.209(a)(f)      | Pass   |
| 20dB Bandwidth                   | 15.215            | Pass   |

NOTE:

(1) "N/A" denotes test is not applicable in this Test Report



## 2.1 TEST FACILITY

Shenzhen ZKT Technology Co., Ltd.  
Add. : 1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street,  
Bao'an District, Shenzhen, China

FCC Test Firm Registration Number: 692225  
Designation Number: CN1299  
IC Registered No.: 27033

## 2.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement  $y \pm U$ , where expanded uncertainty  $U$  is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately 95 %.

| No. | Item                                               | Uncertainty              |
|-----|----------------------------------------------------|--------------------------|
| 1   | AC Conducted Emission Test                         | $\pm 1.38\text{dB}$      |
| 2   | 3m chamber Radiated spurious emission(9KHz-30MHz)  | $U=4.5\text{dB}$         |
| 3   | 3m chamber Radiated spurious emission(30MHz-1GHz)  | $U=4.8\text{dB}$         |
| 4   | 3m chamber Radiated spurious emission(1GHz-18GHz)  | $U=4.9\text{dB}$         |
| 5   | 3m chamber Radiated spurious emission(18GHz-40GHz) | $U=5.0\text{dB}$         |
| 6   | Conducted Adjacent channel power                   | $U=1.38\text{dB}$        |
| 7   | Conducted output power uncertainty Above 1G        | $U=1.576\text{dB}$       |
| 8   | Conducted output power uncertainty below 1G        | $U=1.28\text{dB}$        |
| 9   | humidity uncertainty                               | $U=5.3\%$                |
| 10  | Temperature uncertainty                            | $U=0.59^{\circ}\text{C}$ |



### 3. GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

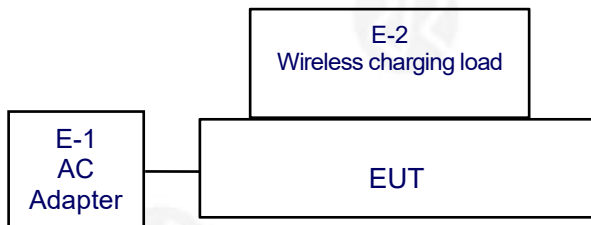
|                      |                                                                                                                                                                                                                      |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name:        | POWER BANK                                                                                                                                                                                                           |
| Test Model No.:      | DY210                                                                                                                                                                                                                |
| Hardware version:    | V1.0                                                                                                                                                                                                                 |
| Software version:    | V1.0                                                                                                                                                                                                                 |
| Operation Frequency: | 115-205KHz                                                                                                                                                                                                           |
| Modulation type:     | MSK                                                                                                                                                                                                                  |
| Antenna Type:        | Inductive loop coil Antenna                                                                                                                                                                                          |
| Antenna gain:        | 0dBi                                                                                                                                                                                                                 |
| Power supply:        | Capacity: DC 3.85 V / 10000 mAh(38.5 Wh)<br>Input: Lighting(5 V---2 A), Type-C(5 V---3 A, 9 V---2 A)<br>Output: Type-C(5 V---3 A, 9 V---2.22 A, 12 V---1.67 A 20W Max)<br>Wireless output: 5 W / 7.5 W / 10 W / 15 W |

#### 3.2 Test mode

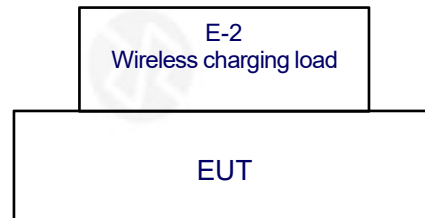
| Test Modes:                                                                                                                                                                                                                            |                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| Mode 1                                                                                                                                                                                                                                 | Charging mode + Wireless charging mode(5W)   |
| Mode 2                                                                                                                                                                                                                                 | Charging mode + Wireless charging mode(7.5W) |
| Mode 3                                                                                                                                                                                                                                 | Wireless charging(5W)                        |
| Mode 4                                                                                                                                                                                                                                 | Wireless charging(7.5W)                      |
| Mode 5                                                                                                                                                                                                                                 | Wireless charging(10W)                       |
| Mode 6                                                                                                                                                                                                                                 | Wireless charging(15W)                       |
| Note:<br>1.All modes were tested, only the worst-case was recorded in the report. Mode 1 is the worst mode.<br>2.EUT support charging and discharging at the same time, Charging and discharging at the same time can only reach 7.5W. |                                              |

#### 3.3 Block Diagram of EUT Configuration

Mode 1 & Mode 2:



Mode 3 & Mode 4 & Mode 5 & Mode6:



#### 3.4 Test Conditions

Temperature: 23~26℃

Relative Humidity: 54~63 %



### 3.5 Description Of Support Units (Conducted Mode)

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              | Mfr/Brand | Model/Type No. | Series No. | Note |
|------|------------------------|-----------|----------------|------------|------|
| E-1  | AC Adapter             | N/A       | HW-059200CHQ   | N/A        | AE   |
| E-2  | Wireless charging load | /         | EESON          | N/A        | AE   |
| E-3  | AC Adapter             | Xiaomi    | MDY-12-ED      | N/A        | AE   |

| Item | Shielded Type | Ferrite Core | Length | Note |
|------|---------------|--------------|--------|------|
|      |               |              |        |      |
|      |               |              |        |      |
|      |               |              |        |      |

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.
- (3) “YES” is means “shielded” “with core”; “NO” is means “unshielded” “without core”.



### 3.6 EQUIPMENTS LIST FOR ALL TEST ITEMS

#### Radiation emissions& Radio Test equipment

| Item | Equipment                            | Manufacturer   | Type No.        | Serial No.         | Firmware Version | Last calibration | Calibrated until |
|------|--------------------------------------|----------------|-----------------|--------------------|------------------|------------------|------------------|
| 1    | Spectrum Analyzer<br>(9kHz-26.5GHz)  | KEYSIGHT       | 9020A           | MY55370835         | A.17.05          | Nov. 02, 2023    | Nov. 01, 2024    |
| 2    | Spectrum Analyzer<br>(10kHz-39.9GHz) | R&S            | FSV40-N         | 100363             | 1.71 SP2         | Nov. 02, 2023    | Nov. 01, 2024    |
| 3    | EMI Test Receiver<br>(9kHz-7GHz)     | R&S            | ESCI7           | 100969             | 4.32             | Nov. 02, 2023    | Nov. 01, 2024    |
| 4    | Bilog Antenna<br>(30MHz-1500MHz)     | Schwarzbeck    | VULB9168        | N/A                | N/A              | Nov. 13, 2023    | Nov. 12, 2024    |
| 5    | Horn Antenna<br>(1GHz-18GHz)         | Agilent        | AH-118          | 071145             | N/A              | Nov. 13, 2023    | Nov. 12, 2024    |
| 6    | Horn Antenna<br>(15GHz-40GHz)        | A.H.System     | SAS-574         | 588                | N/A              | Nov. 13, 2023    | Nov. 12, 2024    |
| 7    | Loop Antenna                         | TESEQ          | HLA6121         | 58357              | N/A              | Nov. 16, 2023    | Nov. 15, 2024    |
| 8    | Amplifier<br>(30-1000MHz)            | EM Electronics | EM330 Amplifier | 60747              | N/A              | Nov. 02, 2023    | Nov. 01, 2024    |
| 9    | Amplifier<br>(1GHz-26.5GHz)          | HuiPu          | 8449B           | 3008A00315         | N/A              | Nov. 02, 2023    | Nov. 01, 2024    |
| 10   | Amplifier<br>(500MHz-40GHz)          | QuanJuDa       | DLE-161         | 097                | N/A              | Nov. 02, 2023    | Nov. 01, 2024    |
| 11   | Test Cable                           | N/A            | R-01            | N/A                | N/A              | Nov. 02, 2023    | Nov. 01, 2024    |
| 12   | Test Cable                           | N/A            | R-02            | N/A                | N/A              | Nov. 02, 2023    | Nov. 01, 2024    |
| 13   | Test Cable                           | N/A            | R-03            | N/A                | N/A              | Nov. 02, 2023    | Nov. 01, 2024    |
| 14   | Test Cable                           | N/A            | RF-01           | N/A                | N/A              | Nov. 02, 2023    | Nov. 01, 2024    |
| 15   | Test Cable                           | N/A            | RF-02           | N/A                | N/A              | Nov. 02, 2023    | Nov. 01, 2024    |
| 16   | Test Cable                           | N/A            | RF-03           | N/A                | N/A              | Nov. 02, 2023    | Nov. 01, 2024    |
| 17   | ESG Signal Generator                 | Agilent        | E4421B          | N/A                | B.03.84          | Nov. 02, 2023    | Nov. 01, 2024    |
| 18   | Signal Generator                     | Agilent        | N5182A          | N/A                | A.01.87          | Nov. 02, 2023    | Nov. 01, 2024    |
| 19   | Magnetic Field Probe Tester          | Narda          | ELT-400         | 0-0344             | N/A              | Nov. 16, 2023    | Nov. 15, 2024    |
| 20   | Wideband Radio Communication Test    | R&S            | CMW500          | 106504             | V 3.7.22         | Nov. 02, 2023    | Nov. 01, 2024    |
| 21   | MWRF Power Meter Test system         | MW             | MW100-RF CB     | N/A                | N/A              | Nov. 02, 2023    | Nov. 01, 2024    |
| 22   | D.C. Power Supply                    | LongWei        | TPR-6405D       | N/A                | N/A              | \                | \                |
| 23   | EMC Software                         | Frad           | EZ-EMC          | Ver.EMC-CO N 3A1.1 | N/A              | \                | \                |
| 24   | RF Software                          | MW             | MTS8310         | V2.0.0.0           | N/A              | \                | \                |
| 25   | Turntable                            | MF             | MF-7802BS       | N/A                | N/A              | \                | \                |
| 26   | Antenna tower                        | MF             | MF-7802BS       | N/A                | N/A              | \                | \                |



Conducted emissions Test

| Item | Kind of Equipment   | Manufacturer | Type No. | Serial No.        | Firmware Version | Last calibration | Calibrated until |
|------|---------------------|--------------|----------|-------------------|------------------|------------------|------------------|
| 1    | LISN                | R&S          | ENV216   | 101471            | N/A              | Nov. 14, 2023    | Nov. 13, 2024    |
| 2    | LISN                | CYBERTEK     | EM5040A  | E1850400149       | N/A              | Nov. 02, 2023    | Nov. 01, 2024    |
| 3    | Test Cable          | N/A          | C-01     | N/A               | N/A              | Nov. 02, 2023    | Nov. 01, 2024    |
| 4    | Test Cable          | N/A          | C-02     | N/A               | N/A              | Nov. 02, 2023    | Nov. 01, 2024    |
| 5    | Test Cable          | N/A          | C-03     | N/A               | N/A              | Nov. 02, 2023    | Nov. 01, 2024    |
| 6    | EMI Test Receiver   | R&S          | ESCI3    | 101393            | 4.42 SP3         | Nov. 02, 2023    | Nov. 01, 2024    |
| 7    | Triple-Loop Antenna | N/A          | RF300    | N/A               | N/A              | Nov. 02, 2023    | Nov. 01, 2024    |
| 8    | Absorbing Clamp     | DZ           | ZN23201  | 15034             | N/A              | Nov. 07, 2023    | Nov. 06, 2024    |
| 9    | EMC Software        | Frad         | EZ-EMC   | Ver.EMC-CON 3A1.1 | N/A              | \                | \                |



#### 4. CONDUCTED EMISSION TEST

##### 4.1 CONDUCTED EMISSION MEASUREMENT

|                       |                                      |
|-----------------------|--------------------------------------|
| Test Requirement:     | FCC Part15 C Section 15.207          |
| Test Method:          | ANSI C63.10:2013                     |
| Test Frequency Range: | 150KHz to 30MHz                      |
| Receiver setup:       | RBW=9KHz, VBW=30KHz, Sweep time=auto |

##### 4.1.1 POWER LINE CONDUCTED EMISSION Limits

| FREQUENCY (MHz) | Limit (dBuV) |           | Standard |
|-----------------|--------------|-----------|----------|
|                 | Quas-peak    | Average   |          |
| 0.15 -0.5       | 66 - 56 *    | 56 - 46 * | FCC      |
| 0.50 -5.0       | 56.00        | 46.00     | FCC      |
| 5.0 -30.0       | 60.00        | 50.00     | FCC      |

Note:

(1) \*Decreases with the logarithm of the frequency.

##### 4.1.2 TEST PROCEDURE

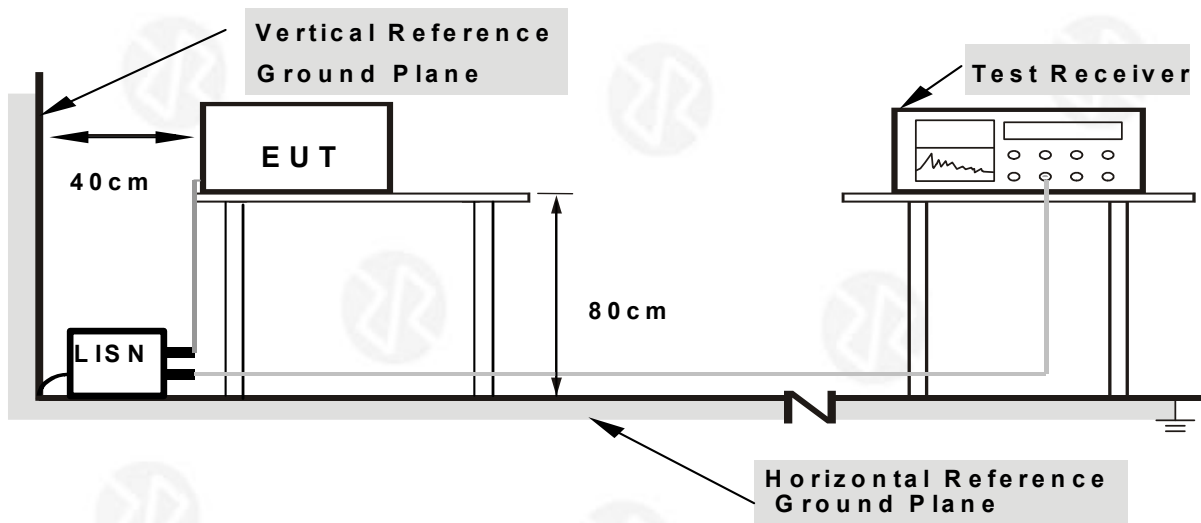
- The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- LISN at least 80 cm from nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

##### 4.1.3 DEVIATION FROM TEST STANDARD

No deviation



#### 4.1.4 TEST SETUP



- Note:**
- 1.Support units were connected to second LISN.
  - 2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

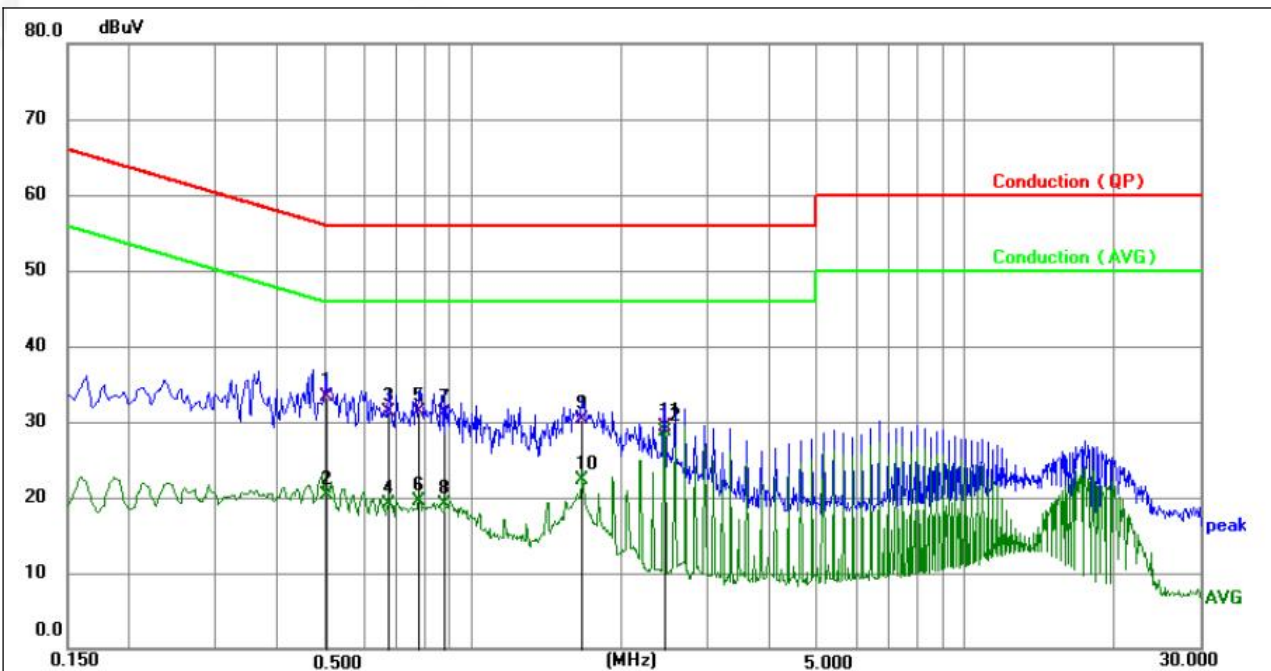
#### 4.1.5 EUT OPERATING CONDITIONS

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.



#### 4.1.6 Test Result

|               |              |                    |        |
|---------------|--------------|--------------------|--------|
| Temperature:  | 26℃          | Relative Humidity: | 54%    |
| Pressure:     | 101kPa       | Phase :            | L      |
| Test Voltage: | AC 120V/60Hz | Test mode          | Mode 1 |



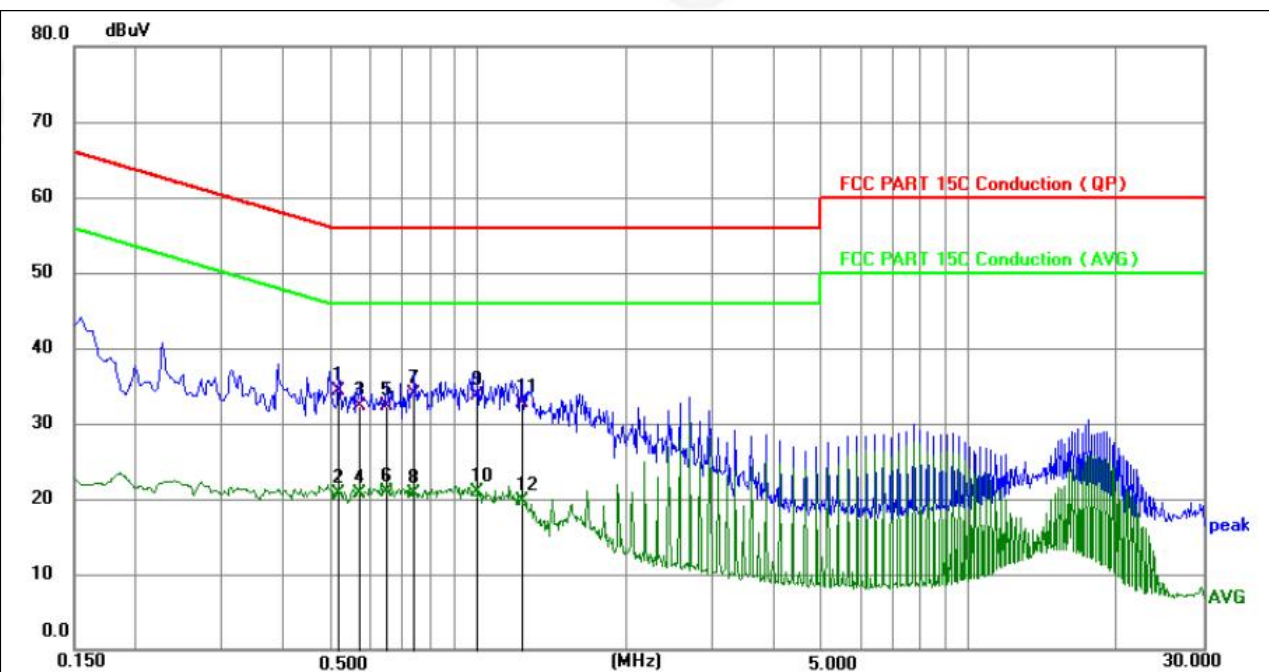
| No.  | Frequency (MHz) | Reading (dBuV) | Factor (dB) | Level (dBuV) | Limit (dBuV) | Margin (dB) | Detector | P/F | Remark |
|------|-----------------|----------------|-------------|--------------|--------------|-------------|----------|-----|--------|
| 1    | 0.5010          | 23.38          | 10.02       | 33.40        | 56.00        | -22.60      | QP       | P   |        |
| 2    | 0.5010          | 10.30          | 10.02       | 20.32        | 46.00        | -25.68      | AVG      | P   |        |
| 3    | 0.6720          | 21.28          | 10.03       | 31.31        | 56.00        | -24.69      | QP       | P   |        |
| 4    | 0.6720          | 9.05           | 10.03       | 19.08        | 46.00        | -26.92      | AVG      | P   |        |
| 5    | 0.7799          | 21.19          | 10.04       | 31.23        | 56.00        | -24.77      | QP       | P   |        |
| 6    | 0.7799          | 9.51           | 10.04       | 19.55        | 46.00        | -26.45      | AVG      | P   |        |
| 7    | 0.8790          | 20.97          | 10.05       | 31.02        | 56.00        | -24.98      | QP       | P   |        |
| 8    | 0.8790          | 8.96           | 10.05       | 19.01        | 46.00        | -26.99      | AVG      | P   |        |
| 9    | 1.6710          | 20.25          | 10.06       | 30.31        | 56.00        | -25.69      | QP       | P   |        |
| 10   | 1.6710          | 12.25          | 10.06       | 22.31        | 46.00        | -23.69      | AVG      | P   |        |
| 11   | 2.4495          | 19.28          | 10.07       | 29.35        | 56.00        | -26.65      | QP       | P   |        |
| 12 * | 2.4495          | 18.68          | 10.07       | 28.75        | 46.00        | -17.25      | AVG      | P   |        |

#### Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Measurement Level = Reading level + Correct Factor



|               |              |                    |        |
|---------------|--------------|--------------------|--------|
| Temperature:  | 26℃          | Relative Humidity: | 54%    |
| Pressure:     | 101kPa       | Phase :            | N      |
| Test Voltage: | AC 120V/60Hz | Test mode          | Mode 1 |



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB) | Level (dBuV) | Limit (dBuV) | Margin (dB) | Detector | P/F | Remark |
|-----|-----------------|----------------|-------------|--------------|--------------|-------------|----------|-----|--------|
| 1 * | 0.5190          | 24.29          | 10.02       | 34.31        | 56.00        | -21.69      | QP       | P   |        |
| 2   | 0.5190          | 10.68          | 10.02       | 20.70        | 46.00        | -25.30      | AVG      | P   |        |
| 3   | 0.5730          | 22.35          | 10.03       | 32.38        | 56.00        | -23.62      | QP       | P   |        |
| 4   | 0.5730          | 10.62          | 10.03       | 20.65        | 46.00        | -25.35      | AVG      | P   |        |
| 5   | 0.6493          | 22.36          | 10.03       | 32.39        | 56.00        | -23.61      | QP       | P   |        |
| 6   | 0.6493          | 10.87          | 10.03       | 20.90        | 46.00        | -25.10      | AVG      | P   |        |
| 7   | 0.7395          | 23.94          | 10.04       | 33.98        | 56.00        | -22.02      | QP       | P   |        |
| 8   | 0.7395          | 10.71          | 10.04       | 20.75        | 46.00        | -25.25      | AVG      | P   |        |
| 9   | 0.9960          | 23.74          | 10.06       | 33.80        | 56.00        | -22.20      | QP       | P   |        |
| 10  | 0.9960          | 10.94          | 10.06       | 21.00        | 46.00        | -25.00      | AVG      | P   |        |
| 11  | 1.2344          | 22.71          | 10.06       | 32.77        | 56.00        | -23.23      | QP       | P   |        |
| 12  | 1.2344          | 9.62           | 10.06       | 19.68        | 46.00        | -26.32      | AVG      | P   |        |

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Measurement Level = Reading level + Correct Factor



## 5. RADIATED EMISSION MEASUREMENT

|                       |                             |            |        |        |            |
|-----------------------|-----------------------------|------------|--------|--------|------------|
| Test Requirement:     | FCC Part15 C Section 15.209 |            |        |        |            |
| Test Method:          | ANSI C63.10:2013            |            |        |        |            |
| Test Frequency Range: | 9kHz to 1GHz                |            |        |        |            |
| Test site:            | Measurement Distance: 3m    |            |        |        |            |
| Receiver setup:       | Frequency                   | Detector   | RBW    | VBW    | Value      |
|                       | 9KHz-150KHz                 | Quasi-peak | 200Hz  | 600Hz  | Quasi-peak |
|                       | 150KHz-30MHz                | Quasi-peak | 9KHz   | 30KHz  | Quasi-peak |
|                       | 30MHz-1GHz                  | Quasi-peak | 100KHz | 300KHz | Quasi-peak |
|                       | Above 1GHz                  | Peak       | 1MHz   | 3MHz   | Peak       |
|                       |                             | Peak       | 1MHz   | 10Hz   | Average    |

### 5.1 Radiated Emission Limits

#### Limits for frequency below 30MHz

| Frequency   | Limit (uV/m) | Measurement Distance(m) | Remark           |
|-------------|--------------|-------------------------|------------------|
| 0.009-0.490 | 2400/F(kHz)  | 300                     | Quasi-peak Value |
| 0.490-1.705 | 24000/F(kHz) | 30                      | Quasi-peak Value |
| 1.705-30    | 30           | 30                      | Quasi-peak Value |

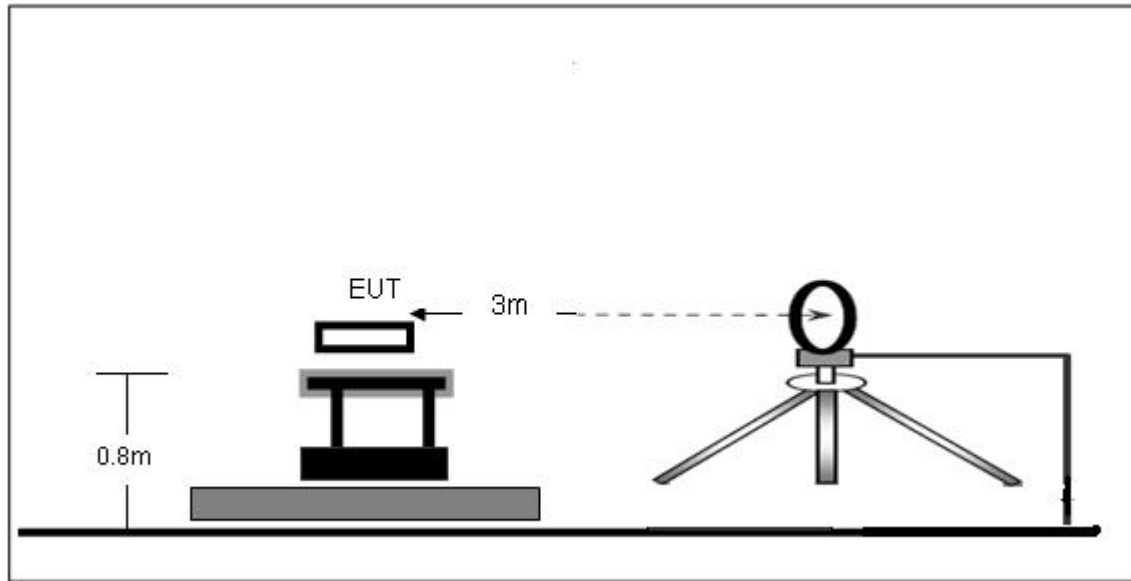
#### Limits for frequency Above 30MHz

| Frequency     | Limit (dBuV/m @3m) | Remark           |
|---------------|--------------------|------------------|
| 30MHz-88MHz   | 40.00              | Quasi-peak Value |
| 88MHz-216MHz  | 43.50              | Quasi-peak Value |
| 216MHz-960MHz | 46.00              | Quasi-peak Value |
| 960MHz-1GHz   | 54.00              | Quasi-peak Value |
| Above 1GHz    | 54.00              | Average Value    |
|               | 74.00              | Peak Value       |

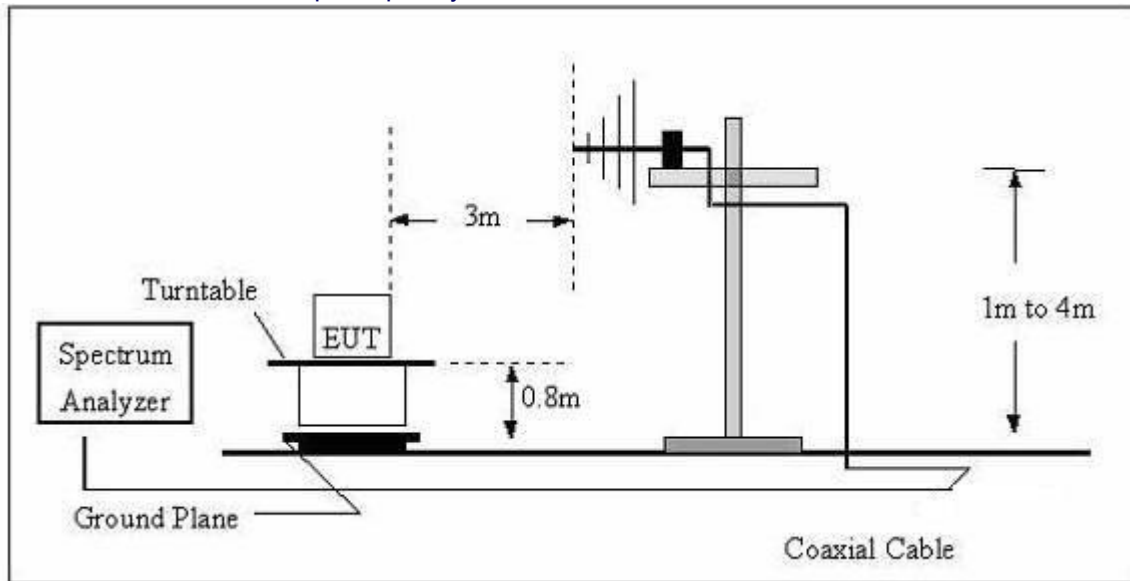


## 5.2 Anechoic Chamber Test Setup Diagram

### (A) Radiated Emission Test-Up Frequency Below 30MHz



### (B) Radiated Emission Test-Up Frequency 30MHz~1GHz



The radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209 and FCC 15.205 limits.

## 5.3 Test Procedure

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna which is mounted on a antenna tower. The antenna can move up and down between 1 to 4 meters to find out the maximum emission level. Broadband antenna (calibrated by dipole antenna) are used as a receiving antenna. Both horizontal and vertical polarization of the antenna are set on measurement.

## 5.4 DEVIATION FROM TEST STANDARD

No deviation



## 5.5 Test Result

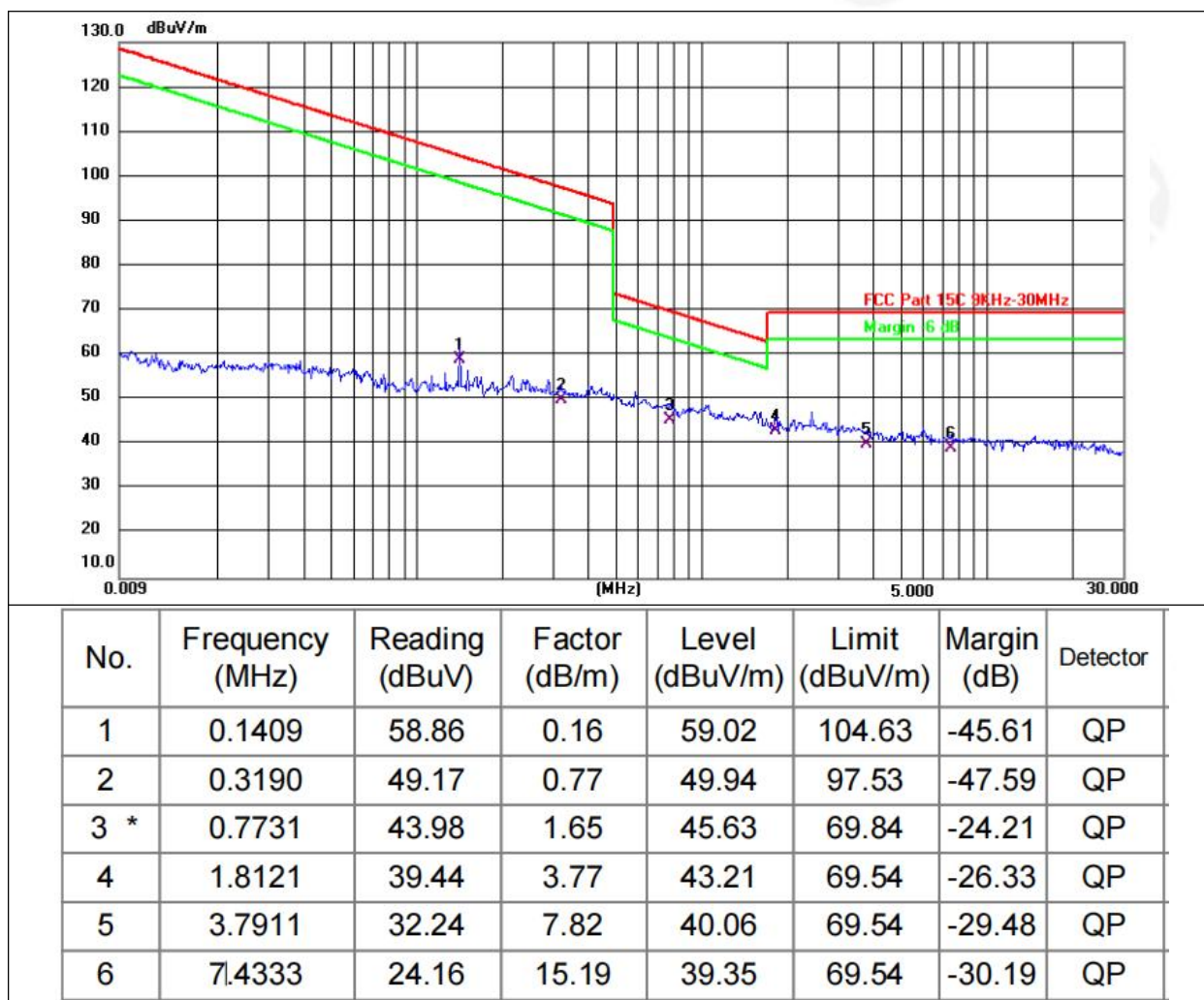
Measurement data:

Note: Limit dBuV/m @3m = Limit dBuV/m @300m+ 80

Limit dBuV/m @3m = Limit dBuV/m @30m + 40

9 kHz~30 MHz

|               |              |                    |         |
|---------------|--------------|--------------------|---------|
| Temperature:  | 26℃          | Relative Humidity: | 54%     |
| Pressure:     | 101kPa       | Polarization:      | coaxial |
| Test Voltage: | AC 120V/60Hz | Test Modes:        | Mode 1  |



### Remarks:

Pre-scan in the all of mode, the worst case in of was recorded.

Factor = antenna factor + cable loss – pre-amplifier.

Emission Level = Meter Reading - Factor

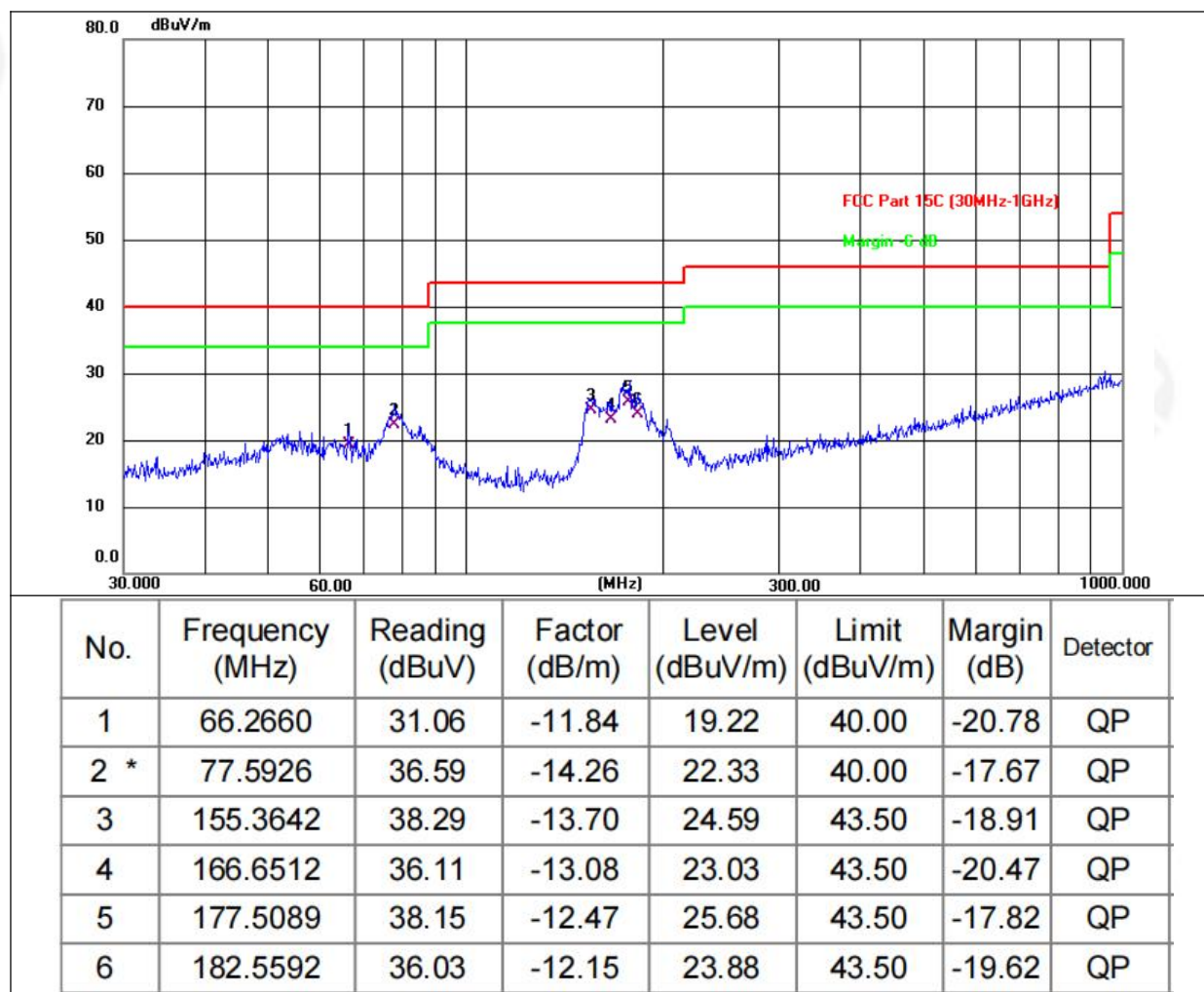
Margin = Emission Level- Limit.

The amplitude of emissions which are attenuated by more than 20db below the permissible value has no need to be reported.



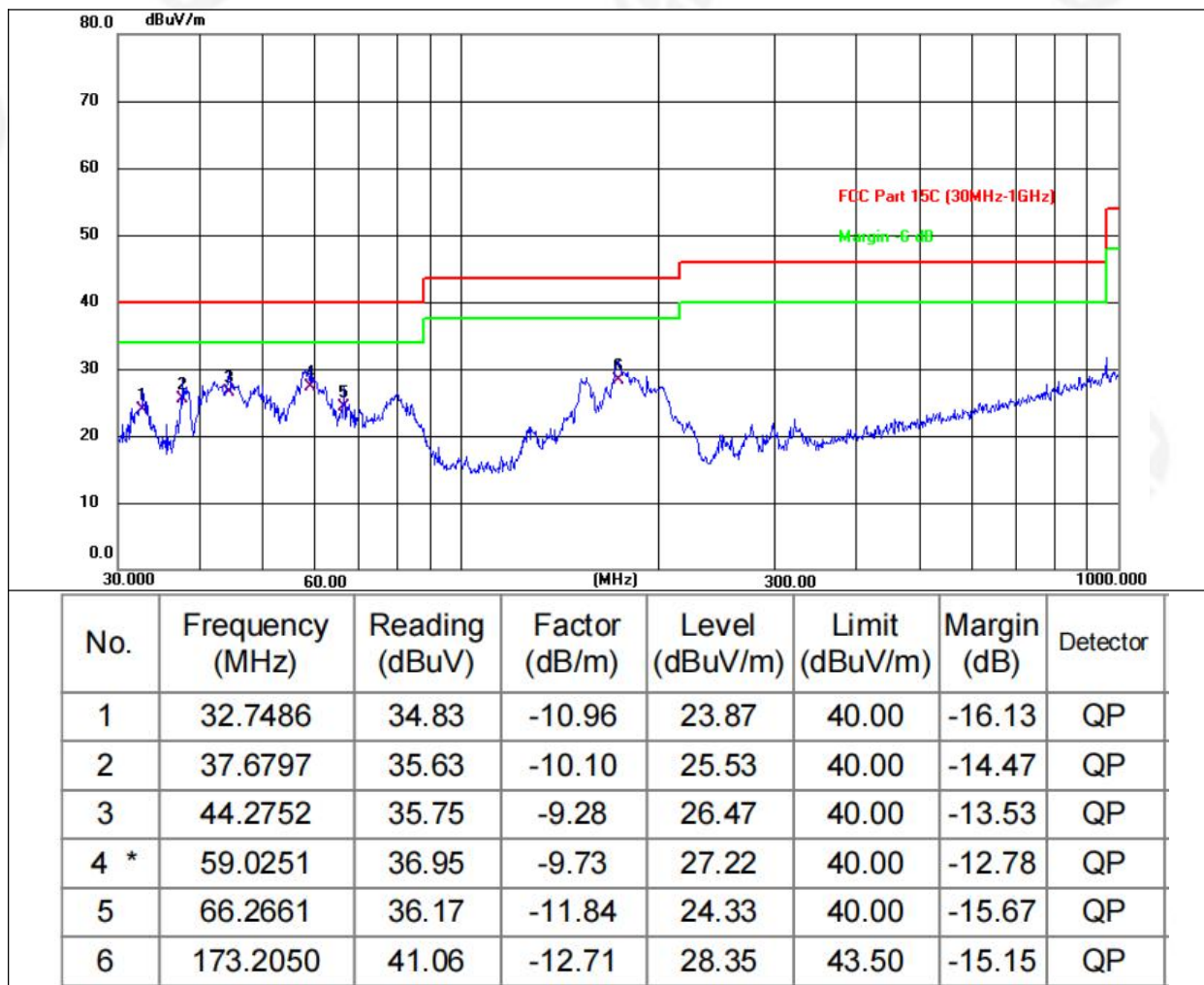
30MHz-1GHz

|               |              |                    |            |
|---------------|--------------|--------------------|------------|
| Temperature:  | 26℃          | Relative Humidity: | 54%        |
| Pressure:     | 101 kPa      | Polarization:      | Horizontal |
| Test Voltage: | AC 120V/60Hz | Test Modes:        | Mode 1     |





|               |              |                    |          |
|---------------|--------------|--------------------|----------|
| Temperature:  | 26℃          | Relative Humidity: | 54%      |
| Pressure:     | 101kPa       | Polarization:      | Vertical |
| Test Voltage: | AC 120V/60Hz | Test Modes:        | Mode 1   |



Remarks:

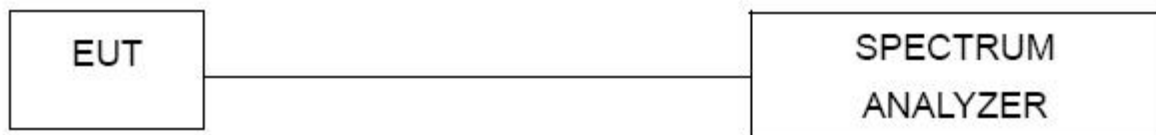
- 1.Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
- 2.The emission levels of other frequencies are very lower than the limit and not show in test report.



## 6. BANDWIDTH TEST

1. Set RBW = 10 Hz.
2. Set the video bandwidth (VBW)  $\geq 3 \times$  RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 20 dB relative to the maximum level measured in the fundamental emission.

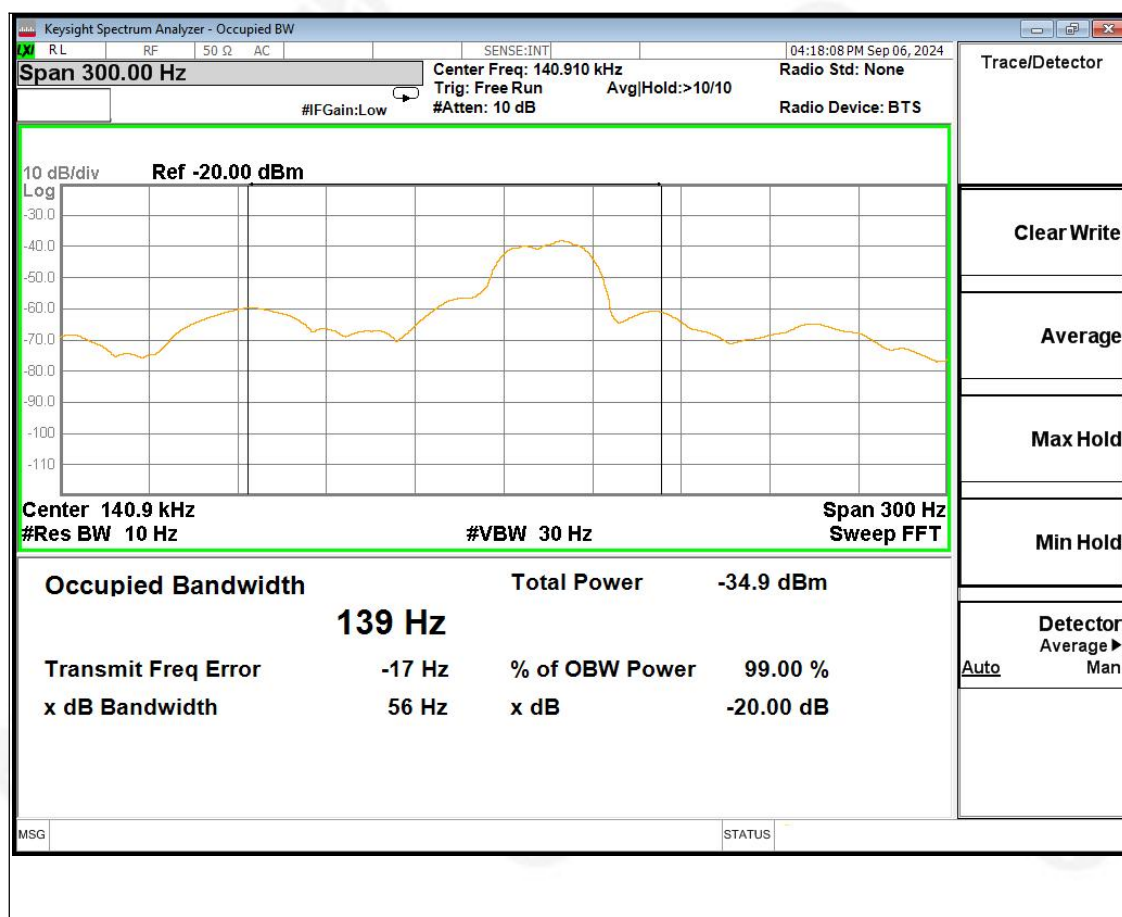
### TEST SETUP





|              |         |                    |     |
|--------------|---------|--------------------|-----|
| Temperature: | 25.3 °C | Relative Humidity: | 56% |
| Pressure:    | 101kPa  |                    |     |

| Frequency (KHz) | 20dB bandwidth (KHz) | Result |
|-----------------|----------------------|--------|
| 140.9           | 0.056                | Pass   |





## 7. ANTENNA REQUIREMENT

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| Standard requirement:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | FCC Part15 C Section 15.203 /247(b)(4) |
| 15.203 requirement:<br>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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.                                                                                                          |                                        |
| 15.247(b) (4) requirement:<br>(4) The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi. |                                        |
| EUT Antenna:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                        |
| The antenna is Inductive loop coil Antenna, the best case gain of the antennas is 0dBi, reference to the appendix II for details                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                        |



## 8. TEST SETUP PHOTO

Reference to the appendix I for details.

## 9. EUT CONSTRUCTIONAL DETAILS

Reference to the appendix II for details.

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