

## FCC TEST REPORT

For

Shenzhen Shuo Yu Technology co.,LTD

Multi-functional Makeup Mirror

Test Model: SY-W02254

Prepared for : Shenzhen Shuo Yu Technology co.,LTD  
Address : 302, No. 1, Gankeng Tongfuyu Industrial Zone, Gankeng  
Community, Jihua Street, Longgang District, Shenzhen,  
Guangdong

Prepared by : Guangzhou LCS Compliance Testing Laboratory Ltd.  
Address : No.44-1, Qianfeng North Road, Shiqi, Panyu District, Guangzhou,  
Guangdong, China  
Tel : (+86) 020-39166689  
Fax : (+86) 020-39166619  
Web : www.LCS-cert.com  
Mail : webmaster@LCS-cert.com

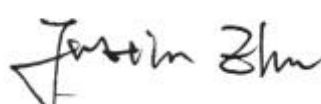
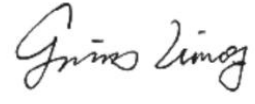
Date of receipt of test sample : June 24, 2026  
Number of tested samples : 2  
Sample No. : C260624014-1, C260624014-2  
Serial number : Prototype  
Date of Test : June 24, 2026 ~ September 03, 2026  
Date of Report : September 04, 2026

## FCC TEST REPORT FCC CFR 47 PART 15C

**Report Reference No. .... : LCSC06156018EB**
**Date Of Issue..... : September 04, 2026**
**Testing Laboratory Name..... : Guangzhou LCS Compliance Testing Laboratory Ltd.**
**Address..... : No.44-1, Qianfeng North Road, Shiqi, Panyu District, Guangzhou, Guangdong, China**
**Testing Location/ Procedure..... : Full application of Harmonised standards ☒**  
**Partial application of Harmonised standards ☐**  
**Other standard testing method ☐**
**Applicant's Name..... : Shenzhen Shuo Yu Technology co.,LTD**
**Address..... : 302, No. 1, Gankeng Tongfuyu Industrial Zone, Gankeng Community, Jihua Street, Longgang District, Shenzhen, Guangdong**
**Test Specification**
**Standard..... : FCC CFR 47 PART 15C**
**TRF Originator..... : Guangzhou LCS Compliance Testing Laboratory Ltd.**
**Master TRF..... : Dated 2011-03**
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**Test Item Description..... : Multi-functional Makeup Mirror**
**Trade Mark..... : Pointuch**
**Test Model..... : SY-W02254**
**Ratings..... : Please Refer to Page 6**
**Result ..... : Pass**
**Compiled by:**

**Lifeng Le / Administrator**
**Reviewed by:**

**Justin Zhu/ Technique Director**
**Approved by:**

**Gavin Liang/ Manager**
**TRF-4-E-168 A/0**

Guangzhou LCS Compliance Testing Laboratory Ltd.

Add: No.44-1, Qianfeng North Road, Shiqi, Panyu District, Guangzhou, Guangdong, China

Tel: +(86) 020-39166689 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

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**FCC TEST REPORT**

|                                         |                                                   |
|-----------------------------------------|---------------------------------------------------|
| <b>Test Report No. :</b> LCSC06156018EB | <u>September 04, 2026</u><br><u>Date of issue</u> |
|-----------------------------------------|---------------------------------------------------|

Test Model..... : SY-W02254

EUT..... : Multi-functional Makeup Mirror

**Applicant..... : Shenzhen Shuo Yu Technology co.,LTD**

Address..... : 302, No. 1, Gankeng Tongfuyu Industrial Zone, Gankeng Community, Jihua Street, Longgang District, Shenzhen, Guangdong

Telephone..... : /

Fax..... : /

**Manufacturer..... : Shenzhen Shuo Yu Technology co.,LTD**

Address..... : 302, No. 1, Gankeng Tongfuyu Industrial Zone, Gankeng Community, Jihua Street, Longgang District, Shenzhen, Guangdong

Telephone..... : /

Fax..... : /

**Factory..... : Shenzhen Shuo Yu Technology co.,LTD**

Address..... : 302, No. 1, Gankeng Tongfuyu Industrial Zone, Gankeng Community, Jihua Street, Longgang District, Shenzhen, Guangdong

Telephone..... : /

Fax..... : /

|                    |             |
|--------------------|-------------|
| <b>Test Result</b> | <b>Pass</b> |
|--------------------|-------------|

The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Revision History

| Report Version | Issue Date            | Revision Content | Revised By |
|----------------|-----------------------|------------------|------------|
| 000            | September 04,<br>2026 | Initial Issue    | --         |
|                |                       |                  |            |
|                |                       |                  |            |

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## 1. GENERAL INFORMATION

### 1.1 Description of Device (EUT)

|                     |                                                                                                                                                                         |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EUT                 | : Multi-functional Makeup Mirror                                                                                                                                        |
| Test Model          | : SY-W02254                                                                                                                                                             |
| Ratings             | : Input: 9V $\overline{=}$ 4A, 12V $\overline{=}$ 3A<br>Wireless Output: 15W/10W/7.5W/5W (Phone); 5W (Earbuds); 2.5W (Watch)<br>USB-C Output: 5V $\overline{=}$ 1A(MAX) |
| Hardware Version    | : /                                                                                                                                                                     |
| Software Version    | : /                                                                                                                                                                     |
| Bluetooth           | :                                                                                                                                                                       |
| Frequency Range     | : 2402MHz~2480MHz                                                                                                                                                       |
| Channel Number      | : 79 channels for Bluetooth V5.4 (DSS)                                                                                                                                  |
| Channel Spacing     | : 1MHz for Bluetooth V5.4 (DSS)                                                                                                                                         |
| Modulation Type     | : GFSK, $\pi/4$ -DQPSK, 8-DPSK for Bluetooth V5.4 (DSS)                                                                                                                 |
| Bluetooth Version   | : V5.4                                                                                                                                                                  |
| Antenna Description | : PCB Antenna, 2.50dBi(Max.)                                                                                                                                            |
| Wireless Charging   | :                                                                                                                                                                       |
| Operating Frequency | : 110~205KHz                                                                                                                                                            |
| Modulation Type     | : ASK                                                                                                                                                                   |
| Antenna Type        | : Coil Antenna                                                                                                                                                          |

Note: For a more detailed antenna description, please refer to the antenna specifications or the antenna report provided by the customer.

## 1.2 Support equipment List

| Manufacturer | Description  | Model        | Serial Number | Certificate |
|--------------|--------------|--------------|---------------|-------------|
| Huawei       | Adapter      | HW-200500C02 | --            | FCC         |
| HONOR        | Phone        | V30Pro       | ---           | FCC         |
| Huawei       | TWS Earphone | --           | ---           | FCC         |

Note: Auxiliary equipment is provided by the laboratory and only use tested.

## 1.3 External I/O Cable

| I/O Port Description | Quantity | Cable |
|----------------------|----------|-------|
| Type-C USB Port      | 3        | N/A   |

## 1.4 Description of Test Facility

### Site Description

EMC Lab. : CNAS Registration Number is L11555  
A2LA Certificate Number: 5099.01  
FCC Designation Number is CN1379  
Test Firm Registration Number: 729882

The 3m-Semi anechoic test site fulfils CISPR 16-1-4 according to ANSI C63.30-2021 and CISPR 16-1-4:2010 SVSWR requirement for radiated emission above 1GHz.

## 1.5 Statement of the Measurement Uncertainty

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

## 1.6 Measurement Uncertainty

| Test Item              | Frequency Range | Uncertainty | Note |
|------------------------|-----------------|-------------|------|
| Radiation Uncertainty  | 9KHz~30MHz      | 3.10dB      | (1)  |
|                        | 30MHz~200MHz    | 2.96dB      | (1)  |
|                        | 200MHz~1000MHz  | 3.10dB      | (1)  |
|                        | 1GHz~26.5GHz    | 3.80dB      | (1)  |
|                        | 26.5GHz~40GHz   | 3.90dB      | (1)  |
| Conduction Uncertainty | 150kHz~30MHz    | 1.63dB      | (1)  |
| Power disturbance      | 30MHz~300MHz    | 1.60dB      | (1)  |

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

## 1.7 Description of Test Modes

Equipment under test was operated during the measurement under the following conditions:

☒ Charging and communication mode

Modulation Type: (ASK)

| Test Modes                                                                                |                                                                                                        |            |
|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|------------|
| Mode 1                                                                                    | AC/DC Adapter(12V/3A) + EUT + Mobile phone+ Earphone (Battery Status: <1%, Wireless output: 15W Max )  | Record     |
| Mode 2                                                                                    | AC/DC Adapter (12V/3A)+ EUT + Mobile phone+ Earphone (Battery Status: <50%, Wireless output: 15W Max)  | Pre-tested |
| Mode 3                                                                                    | AC/DC Adapter (12V/3A) + EUT + Mobile phone+ Earphone (Battery Status: 100%, Wireless output: 15W Max) | Pre-tested |
| Mode 4                                                                                    | AC/DC Adapter(9V/4A) + EUT + Mobile phone+ Earphone (Battery Status: <1%, Wireless output: 15W Max )   | Pre-tested |
| Mode 5                                                                                    | AC/DC Adapter (9V/4A)+ EUT + Mobile phone+ Earphone (Battery Status: <50%, Wireless output: 15W Max)   | Pre-tested |
| Mode 6                                                                                    | AC/DC Adapter (9V/4A) + EUT + Mobile phone+ Earphone (Battery Status: 100%, Wireless output: 15W Max)  | Pre-tested |
| Note: All test modes were pre-tested, but we only recorded the worst case in this report. |                                                                                                        |            |

## 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.30-2021, FCC CFR PART 15C 15.207.

### 2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

### 2.2 EUT Exercise

The EUT was operated in the normal operating mode and a continuous transmits mode for other tests.

According to its specifications, the EUT must comply with the requirements of the Section 15.207 under the FCC Rules Part 15 Subpart C.

### 2.3 General Test Procedures

#### 2.3.1 Conducted Emissions

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 6.2.1 of ANSI C63.30-2021 Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using Quasi-peak and average detector modes.

#### 2.3.2 Radiated Emissions

The EUT is placed on a turn table, which is 0.8 m above ground plane below 1GHz and 1.5 m above ground plane above 1GHz. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 6.3 of ANSI C63.30-2021.

### 2.4. Test Sample

The application provides 2 samples to meet requirement;

| Sample Number          | Description                           |
|------------------------|---------------------------------------|
| Sample 1(C260624014-1) | Engineer sample – continuous transmit |
| Sample 2(C260624014-2) | Normal sample – Intermittent transmit |

### 3. SYSTEM TEST CONFIGURATION

#### 3.1 Justification

The system was configured for testing in a normal condition.

#### 3.2 EUT Exercise Software

N/A.

#### 3.3 Special Accessories

| No. | Equipment | Manufacturer | Model No. | Serial No. | Length | shielded/<br>unshielded | Notes |
|-----|-----------|--------------|-----------|------------|--------|-------------------------|-------|
| /   | /         | /            | /         | /          | /      | /                       | /     |

#### 3.4 Block Diagram/Schematics

Please refer to the related document.

#### 3.5 Equipment Modifications

Guangzhou LCS Compliance Testing Laboratory Ltd. has not done any modification on the EUT.

#### 3.6 Test Setup

Please refer to the test setup photo.

#### 4. SUMMARY OF TEST EQUIPMENT

| Item | Equipment                           | Manufacturer       | Model No.               | Equipment No. | Cal Date                 | Due Date                 |
|------|-------------------------------------|--------------------|-------------------------|---------------|--------------------------|--------------------------|
| 1    | Power Meter                         | Keysight           | E4417A                  | GLCS-E-279    | 2026-04-07               | 2027-04-06               |
| 2    | Power Sensor                        | Keysight           | E9304A                  | GLCS-E-280    | 2026-04-07               | 2027-04-06               |
| 3    | Power Sensor                        | Keysight           | E9304A                  | GLCS-E-281    | 2026-04-07               | 2027-04-06               |
| 4    | Spread Spectrum Unit                | Tonscend           | TS-WF7U2                | GLCS-E-364    | N/A                      | N/A                      |
| 5    | Test Software                       | Tonscend           | JS1120-3                | GLCS-E-366    | N/A                      | N/A                      |
| 6    | RF Control Unit                     | Tonscend           | JS0806-2                | GLCS-E-365    | 2025-09-01<br>2026-07-15 | 2026-08-31<br>2027-07-14 |
| 7    | MXA Signal Analyzer                 | Keysight           | N9020A                  | GLCS-E-356    | 2025-08-18<br>2026-07-15 | 2026-08-17<br>2027-07-14 |
| 8    | DC Power Supply                     | Keysight           | E3642A                  | GLCS-E-357    | 2025-08-18<br>2026-07-15 | 2026-08-17<br>2027-07-14 |
| 9    | Signal Analyzer                     | Keysight           | N5172B                  | GLCS-E-353    | 2025-08-18<br>2026-07-15 | 2026-08-17<br>2027-07-14 |
| 10   | Signal Analyzer                     | Keysight           | N5181A                  | GLCS-E-354    | 2025-08-18<br>2026-07-15 | 2026-08-17<br>2027-07-14 |
| 11   | WIDEBAND RADIO COMMUNICATION TESTER | Rohde & Schwarz    | CMW500                  | GLCS-E-355    | 2025-08-18<br>2026-07-15 | 2026-08-17<br>2027-07-14 |
| 12   | EMI Test Software                   | Farad              | EZ-EMC(Ver.FA-03A2 RE+) | GLCS-E-012    | N/A                      | N/A                      |
| 13   | Semi Anechoic Chamber#1             | Maorui             | 966                     | GLCS-E-001    | 2024-04-21               | 2027-04-20               |
| 14   | Positioning Controller              | Max-Full           | MF-7802                 | GLCS-E-015    | N/A                      | N/A                      |
| 15   | Active Loop Antenna                 | TESEQ              | HLA 6121                | GLCS-E-155    | 2025-07-19<br>2026-07-17 | 2026-07-18<br>2027-07-16 |
| 16   | By-log Antenna                      | SCHWARZBECK        | VULB9163                | GLCS-E-352    | 2025-08-16               | 2028-08-15               |
| 17   | Low-frequency amplifier             | Sonoma             | 310N                    | GLCS-E-036    | 2026-04-07               | 2027-04-06               |
| 18   | Horn Antenna                        | SCHWARZBECK        | BBHA 9120D              | GLCS-E-060    | 2025-07-19<br>2026-07-17 | 2026-07-18<br>2027-07-16 |
| 19   | Broadband Horn Antenna              | SCHWARZBECK        | BBHA 9170               | GLCS-E-348    | 2025-08-18               | 2028-08-17               |
| 20   | Broadband Preamplifier              | Cesheng Technology | LNPA_30M06G-40(18GHz)   | GLCS-E-286    | 2026-04-07               | 2027-04-06               |
| 21   | Broadband Preamplifier              | Cesheng Technology | LNPA 30M06G-40(40GHz)   | GLCS-E-287    | 2026-04-10               | 2027-04-09               |
| 22   | EMI Test Receiver                   | R&S                | ESR 7                   | GLCS-E-192    | 2026-04-07               | 2027-04-06               |
| 23   | RS SPECTRUM ANALYZER                | R&S                | FSP40                   | GLCS-E-213    | 2025-08-16<br>2026-08-05 | 2026-08-15<br>2027-08-04 |
| 24   | 6dB Attenuator                      | /                  | 100W/6dB                | GLCS-E-350    | 2025-08-13<br>2026-07-15 | 2026-08-12<br>2027-07-14 |
| 25   | 3dB Attenuator                      | /                  | 2N-3dB                  | GLCS-E-351    | 2025-08-13<br>2026-07-09 | 2026-08-12<br>2027-07-08 |
| 26   | EMI Test Receiver                   | ROHDE & SCHWARZ    | ESR7                    | GLCS-E-158    | 2026-04-07               | 2027-04-06               |
| 27   | Artificial Mains Network            | ROHDE & SCHWARZ    | ESH2-Z5                 | GLCS-E-011    | 2026-01-14               | 2027-01-13               |
| 28   | EMI Test Software                   | Farad              | EZ-EMC(Ver.FA-03A2 RE+) | GLCS-E-017    | N/A                      | N/A                      |
| 29   | Antenna Mast                        | Maorui             | BK-4AT-BS               | GLCS-E-249    | N/A                      | N/A                      |
| 30   | Pulse Limiter                       | SCHWARZBECK        | VTSD 9561-F             | GLCS-E-080    | 2026-04-07               | 2027-04-06               |

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Guangzhou LCS Compliance Testing Laboratory Ltd.  
 Add: No.44-1, Qianfeng North Road, Shiqi, Panyu District, Guangzhou, Guangdong, China  
 Tel: +(86) 020-39166689 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com  
 Scan code to check authenticity

## 5. SUMMARY OF TEST RESULT

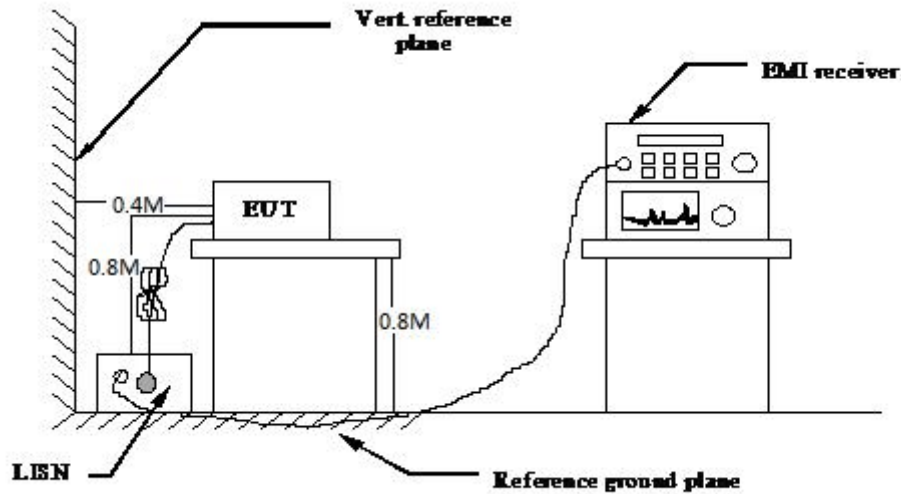
| FCC Rules  | Description of Test         | Test Sample | Result    |
|------------|-----------------------------|-------------|-----------|
| §15.207(a) | AC Conducted Emissions      | Sample 1    | Compliant |
| §15.209    | Radiated Spurious Emissions | Sample 1    | Compliant |
| §15.215    | 20 dB Bandwidth             | Sample 1    | Compliant |

*Remark: The measurement uncertainty is not included in the test result.*

*N/A – Not Applicable!!!*

## 6. POWER LINE CONDUCTED MEASUREMENT

### 6.1. Block Diagram of Test Setup



### 6.2. Standard Applicable

According to §15.207: For all the consumer devices which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed 250 microvolts (The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz). The limits at specific frequency range are listed as follows:

| Frequency Range (MHz) | Limits (dBμV) |          |
|-----------------------|---------------|----------|
|                       | Quasi-peak    | Average  |
| 0.15 to 0.50          | 66 to 56      | 56 to 46 |
| 0.50 to 5             | 56            | 46       |
| 5 to 30               | 60            | 50       |

\* Decreasing linearly with the logarithm of the frequency

### 6.3 Field Strength Calculation

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

$$FS \text{ (dBuV/m)} = RA \text{ (dBuV)} + AF \text{ (dB/m)} + CL \text{ (dB)} - AG \text{ (dB)}$$

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

### 6.4 Test Results

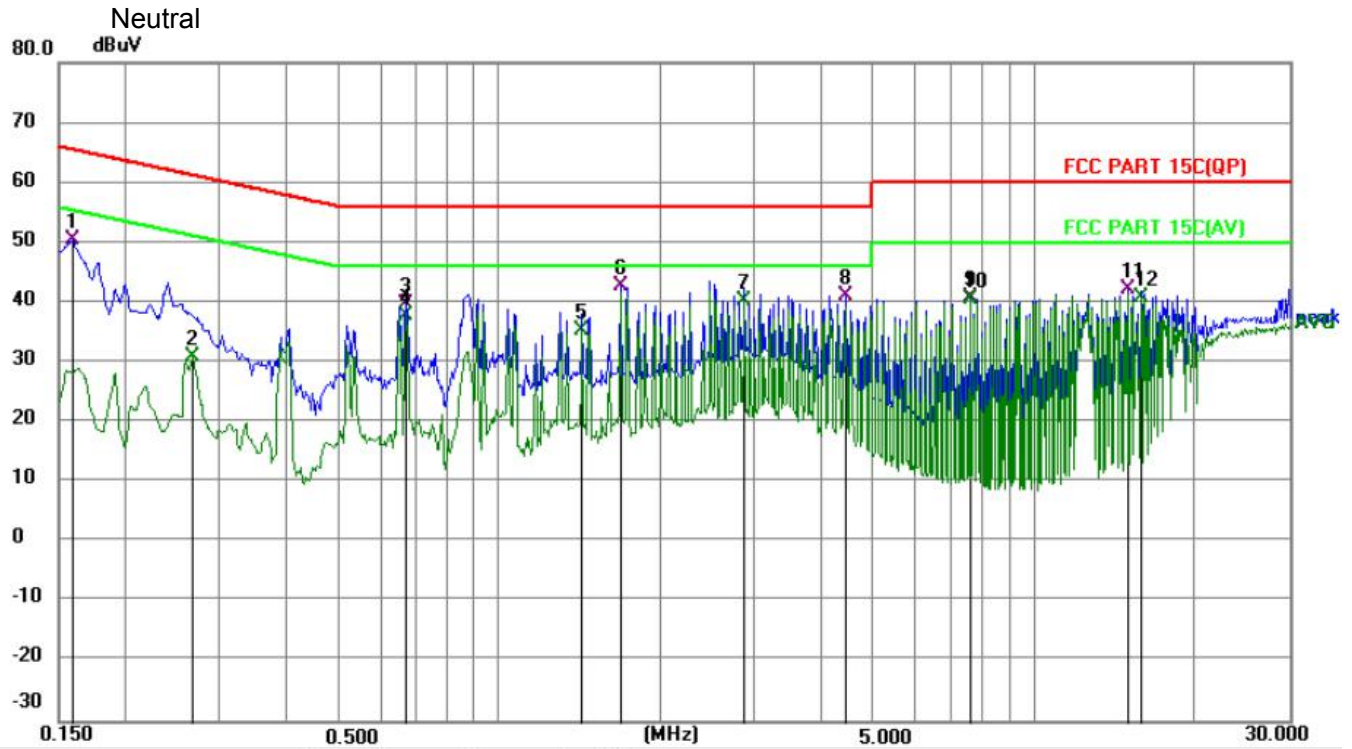
**PASS**

The test data please refer to following page.

|               |           |                |          |
|---------------|-----------|----------------|----------|
| Temperature   | 24.2°C    | Humidity       | 55.1%    |
| Test Engineer | Zhang Hai | Configurations | Transmit |

**AC Power Line Conducted Emission (Power input to adapter @ AC 120V/60Hz (Worst Case))**

| No. | Mk. | Freq.<br>MHz | Reading<br>Level | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV | Limit<br>dBuV | Over<br>dB | Detector | Comment |
|-----|-----|--------------|------------------|-------------------------|--------------------------|---------------|------------|----------|---------|
| 1   |     | 0.1635       | 40.96            | 10.15                   | 51.11                    | 65.28         | -14.17     | QP       |         |
| 2   |     | 0.2983       | 23.78            | 10.16                   | 33.94                    | 50.29         | -16.35     | AVG      |         |
| 3   |     | 0.4470       | 28.43            | 10.08                   | 38.51                    | 56.93         | -18.42     | QP       |         |
| 4   |     | 0.7485       | 29.19            | 10.14                   | 39.33                    | 46.00         | -6.67      | AVG      |         |
| 5   |     | 1.3513       | 32.18            | 10.22                   | 42.40                    | 56.00         | -13.60     | QP       |         |
| 6   |     | 1.9500       | 30.57            | 10.24                   | 40.81                    | 46.00         | -5.19      | AVG      |         |
| 7   |     | 2.8500       | 32.31            | 10.19                   | 42.50                    | 56.00         | -13.50     | QP       |         |
| 8   | *   | 4.6814       | 31.14            | 10.24                   | 41.38                    | 46.00         | -4.62      | AVG      |         |
| 9   |     | 8.9430       | 33.36            | 10.34                   | 43.70                    | 60.00         | -16.30     | QP       |         |
| 10  |     | 11.8275      | 33.50            | 10.39                   | 43.89                    | 50.00         | -6.11      | AVG      |         |
| 11  |     | 16.1565      | 34.12            | 10.40                   | 44.52                    | 60.00         | -15.48     | QP       |         |
| 12  |     | 17.5963      | 30.96            | 10.40                   | 41.36                    | 50.00         | -8.64      | AVG      |         |



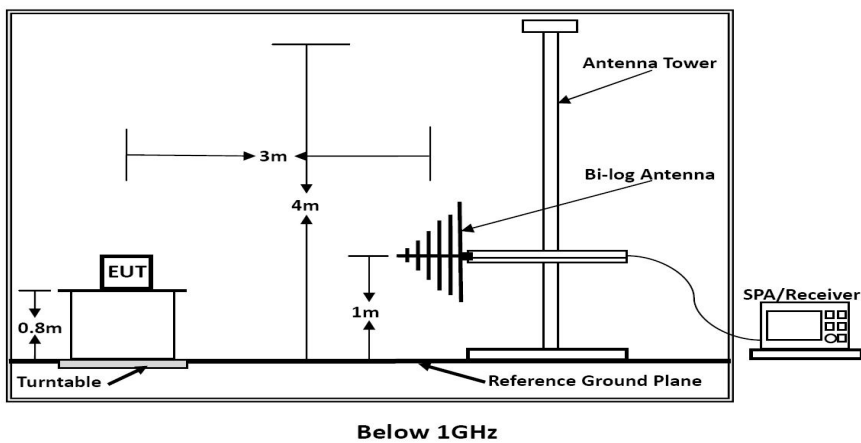
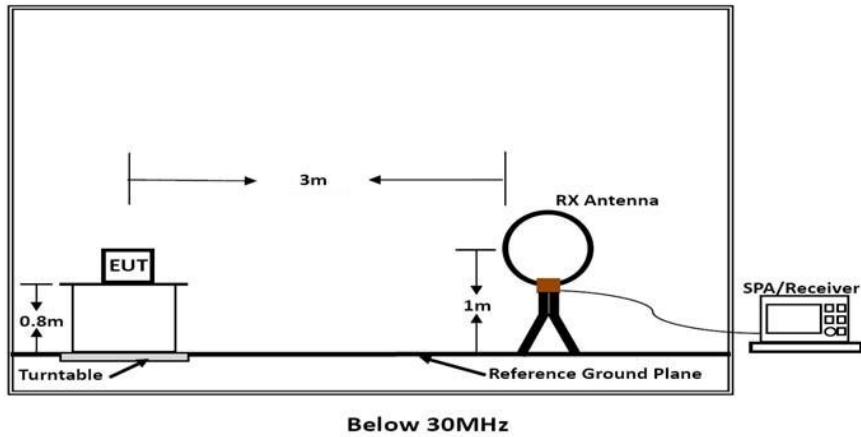
| No. | Mk. | Freq.<br>MHz | Reading<br>Level | Correct<br>Factor | Measure-<br>ment | Limit | Over   | Detector | Comment |
|-----|-----|--------------|------------------|-------------------|------------------|-------|--------|----------|---------|
| 1   |     | 0.1590       | 40.36            | 10.13             | 50.49            | 65.52 | -15.03 | QP       |         |
| 2   |     | 0.2670       | 20.87            | 10.08             | 30.95            | 51.21 | -20.26 | AVG      |         |
| 3   |     | 0.6673       | 29.63            | 10.12             | 39.75            | 56.00 | -16.25 | QP       |         |
| 4   |     | 0.6673       | 27.80            | 10.12             | 37.92            | 46.00 | -8.08  | AVG      |         |
| 5   |     | 1.4280       | 25.14            | 10.20             | 35.34            | 46.00 | -10.66 | AVG      |         |
| 6   |     | 1.6890       | 32.58            | 10.21             | 42.79            | 56.00 | -13.21 | QP       |         |
| 7   | *   | 2.8725       | 30.14            | 10.23             | 40.37            | 46.00 | -5.63  | AVG      |         |
| 8   |     | 4.4430       | 30.75            | 10.23             | 40.98            | 56.00 | -15.02 | QP       |         |
| 9   |     | 7.5795       | 30.66            | 10.24             | 40.90            | 60.00 | -19.10 | QP       |         |
| 10  |     | 7.5795       | 30.21            | 10.24             | 40.45            | 50.00 | -9.55  | AVG      |         |
| 11  |     | 15.0270      | 31.82            | 10.39             | 42.21            | 60.00 | -17.79 | QP       |         |
| 12  |     | 15.8190      | 30.32            | 10.38             | 40.70            | 50.00 | -9.30  | AVG      |         |

\*\*\*Note:

1. Pre-scan all modes and recorded the worst case results in this report (Mode 1).
2. Margin = Reading level + Correct - Limit
3. Correct Factor = Lism Factor + Cable Factor + Insertion loss of Pulse Limiter

## 7. RADIATED EMISSION MEASUREMENT

### 7.1. Block Diagram of Test Setup



## 7.2. Radiated Emission Limit

15.205 (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

| MHz               | MHz                 | MHz           | GHz         |
|-------------------|---------------------|---------------|-------------|
| 0.090-0.110       | 16.42-16.423        | 399.9-410     | 4.5-5.15    |
| \1\ 0.495-0.505   | 16.69475-16.69525   | 608-614       | 5.35-5.46   |
| 2.1735-2.1905     | 16.80425-16.80475   | 960-1240      | 7.25-7.75   |
| 4.125-4.128       | 25.5-25.67          | 1300-1427     | 8.025-8.5   |
| 4.17725-4.17775   | 37.5-38.25          | 1435-1626     | 9.0-9.2     |
| 4.20725-4.20775   | 73-74.6             | 1645.5-1646.5 | 9.3-9.5     |
| 6.215-6.218       | 74.8-75.2           | 1660-1710     | 10.6-12.7   |
| 6.26775-6.26825   | 108-121.94          | 1718.8-1722.2 | 13.25-13.4  |
| 6.31175-6.31225   | TF1560B-138         | 2200-2300     | 14.47-14.5  |
| 8.291-8.294       | 149.9-150.05        | 2310-2390     | 15.35-16.2  |
| 8.362-8.366       | 156.52475-156.52525 | 2483.5-2500   | 17.7-21.4   |
| 8.37625-8.38675   | 156.7-156.9         | 2690-2900     | 22.01-23.12 |
| 8.41425-8.41475   | 162.0125-167.17     | 3260-3267     | 23.6-24.0   |
| 12.29-12.293.     | 167.72-173.2        | 3332-3339     | 31.2-31.8   |
| 12.51975-12.52025 | 240-285             | 3345.8-3358   | 36.43-36.5  |
| 12.57675-12.57725 | 322-335.4           | 3600-4400     | (\2\)       |
| 13.36-13.41       |                     |               |             |

\1\ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

\2\ Above 38.6

According to §15.247 (d): 20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

| Frequencies (MHz) | Field Strength (microvolts/meter) | Measurement Distance (meters) |
|-------------------|-----------------------------------|-------------------------------|
| 0.009~0.490       | 2400/F(KHz)                       | 300                           |
| 0.490~1.705       | 24000/F(KHz)                      | 30                            |
| 1.705~30.0        | 30                                | 30                            |
| 30~88             | 100                               | 3                             |
| 88~216            | 150                               | 3                             |
| 216~960           | 200                               | 3                             |
| Above 960         | 500                               | 3                             |

## 7.3. EUT Configuration on Measurement

The following equipment are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

#### 7.4. Field Strength Calculation

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

$$\text{FS (dBuV/m)} = \text{RA (dBuV)} + \text{AF (dB/m)} + \text{CL (dB)} - \text{AG (dB)}$$

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

#### 7.5. Operating Condition of EUT

(1) Setup the EUT as shown in Section 7.1.

#### 7.6. Measuring Setting

The following table is the setting of spectrum analyzer and receiver.

| Receiver Parameter     | Setting                               |
|------------------------|---------------------------------------|
| Attenuation            | Auto                                  |
| Start ~ Stop Frequency | 9kHz~150kHz / RB 200Hz for QP/Average |
| Start ~ Stop Frequency | 150kHz~30MHz / RB 9kHz for QP/Average |
| Start ~ Stop Frequency | 30MHz~1000MHz / RB 100kHz for QP      |

#### 7.7. Test Procedure

##### 1) Sequence of testing 9 kHz to 30 MHz

###### Setup:

- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.
- If the EUT is a tabletop system, a rotatable table with 0.8 m height is used.
- If the EUT is a floor standing device, it is placed on the ground.
- Auxiliary equipment and cables were positioned to simulate normal operation conditions.
- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
- The measurement distance is 3 meter.
- The EUT was set into operation.

###### Premeasurement:

- The turntable rotates from 0° to 315° using 45° steps.
- The antenna height is 1.0 meter.
- At each turntable position the analyzer sweeps with peak detection to find the maximum of all emissions

###### Final measurement:

- Identified emissions during the premeasurement the software maximizes by rotating the turntable position (0° to 360°) and by rotating the elevation axes (0° to 360°).
- The final measurement will be done in the position (turntable and elevation) causing the highest

emissions with QPK detector.

--- The final levels, frequency, measuring time, bandwidth, turntable position, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement and the limit will be stored.

## 2) Sequence of testing 30 MHz to 1 GHz

### Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a table with 0.8 m height is used, which is placed on the ground plane.

--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 3 meter.

--- The EUT was set into operation.

### Premeasurement:

--- The turntable rotates from 0° to 315° using 45° steps.

--- The antenna is polarized vertical and horizontal.

--- The antenna height changes from 1 to 3 meter.

--- At each turntable position, antenna polarization and height the analyzer sweeps three times in peak to find the maximum of all emissions.

### Final measurement:

--- The final measurement will be performed with minimum the six highest peaks.

--- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable position ( $\pm 45^\circ$ ) and antenna movement between 1 and 4 meter.

--- The final measurement will be done with QP detector with an EMI receiver.

--- The final levels, frequency, measuring time, bandwidth, antenna height, antenna polarization, turntable angle, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement with marked maximum final measurements and the limit will be stored.

## 7.8. Test Results

PASS.

Both AC and DC modes were tested, only AC mode was recorded

Only report the worst test data (Mode 1) in test report;

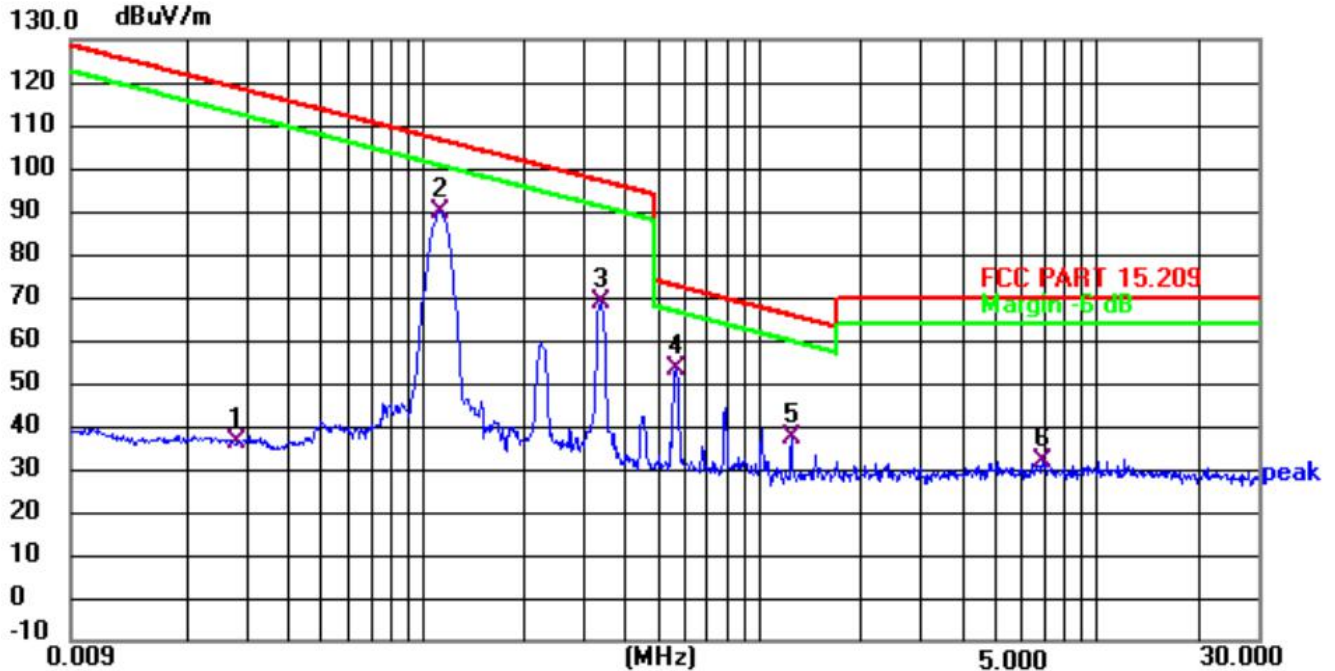
The test data please refer to following page:

|               |           |                |          |
|---------------|-----------|----------------|----------|
| Temperature   | 23.3°C    | Humidity       | 52.3%    |
| Test Engineer | Zhang Hai | Configurations | Transmit |

0.009 MHz – 30 MHz

0 degree

110-205 kHz:



| No. | Mk. | Freq.  | Reading Level | Correct Factor | Measurement | Limit  | Over   | Detector | Comment |
|-----|-----|--------|---------------|----------------|-------------|--------|--------|----------|---------|
|     |     | MHz    | dBuV          | dB             | dBuV/m      | dBuV/m | dB     |          |         |
| 1   |     | 0.0277 | 15.24         | 21.26          | 36.50       | 118.75 | -82.25 | QP       |         |
| 2   | *   | 0.1131 | 68.16         | 21.59          | 89.75       | 106.53 | -16.78 | QP       |         |
| 3   |     | 0.3353 | 47.20         | 21.44          | 68.64       | 97.10  | -28.46 | QP       |         |
| 4   |     | 0.5635 | 31.62         | 21.49          | 53.11       | 72.59  | -19.48 | QP       |         |
| 5   |     | 1.2377 | 16.23         | 20.97          | 37.20       | 65.75  | -28.55 | QP       |         |
| 6   |     | 6.8542 | 10.97         | 20.99          | 31.96       | 69.54  | -37.58 | QP       |         |

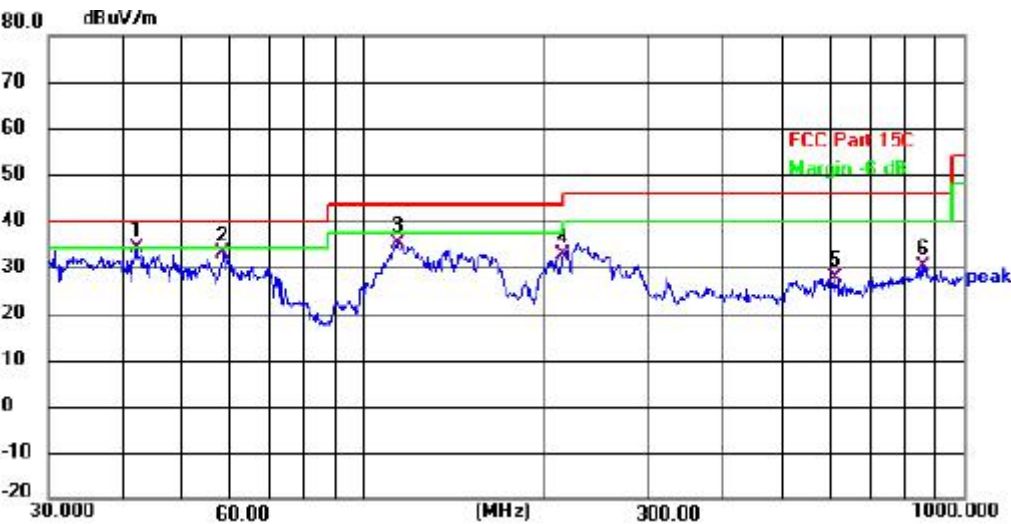
**Remark:**

- 1). Measured at antenna position 0 degree and 90 degree, recorded worst case at 0 degree.
- 2). Margin=Reading level + Factor- Limit.
- 3). Pre-scan all modes and recorded the worst case results in this report.

|               |           |                |          |
|---------------|-----------|----------------|----------|
| Temperature   | 24.2°C    | Humidity       | 52.0%    |
| Test Engineer | Zhang Hai | Configurations | Transmit |

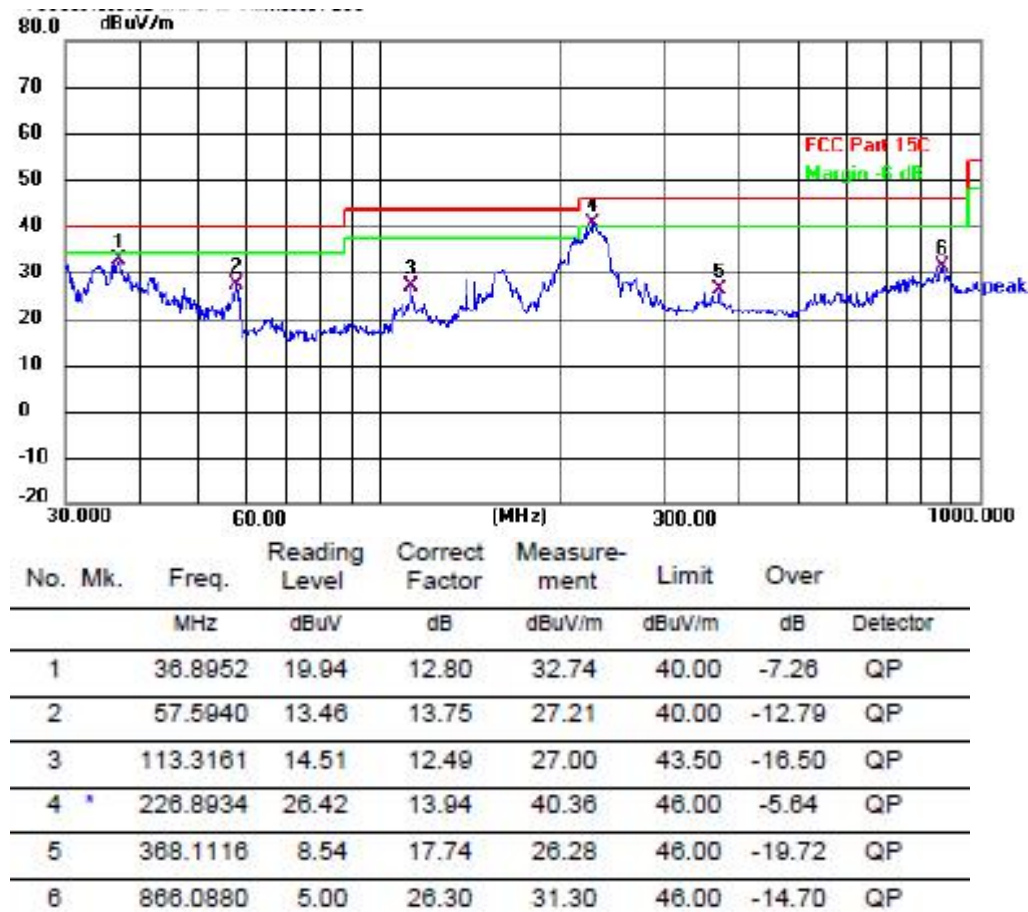
Below 1GHz

Horizontal



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Over<br>dB | Detector |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|------------|----------|
| 1   | *   | 42.0065      | 19.69                    | 14.50                   | 34.19                      | 40.00           | -5.81      | QP       |
| 2   |     | 58.6128      | 19.56                    | 13.49                   | 33.05                      | 40.00           | -6.95      | QP       |
| 3   |     | 114.1138     | 22.60                    | 12.54                   | 35.14                      | 43.50           | -8.36      | QP       |
| 4   |     | 215.2675     | 19.46                    | 13.27                   | 32.73                      | 43.50           | -10.77     | QP       |
| 5   |     | 612.0841     | 4.72                     | 22.99                   | 27.71                      | 46.00           | -18.29     | QP       |
| 6   |     | 854.0247     | 4.43                     | 25.90                   | 30.33                      | 46.00           | -15.67     | QP       |

Vertical



Note:

1). Emission level (dBuV/m) = 20 log Emission level (uV/m).

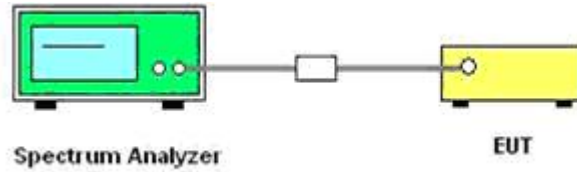
2). Margin=Reading level + Factor- Limit.

Correct Factor=Antenna Factor+Cable Factor- Pre-amplifier Factor

3). Pre-scan all modes and recorded the worst case results in this report(Mode 1).

## 8. 20 dB Bandwidth Measurement

### 8.1. Block Diagram of Test Setup



### 8.2. Test Procedure

Use the following spectrum analyzer settings:

RBW = 1~5% of the XdB Bandwidth

VBW = RBW\*3

Sweep = auto

Detector function = peak

Trace = max hold

The EUT should be transmitting at its maximum data rate. Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. Use the marker-delta function to measure 20 dB down one side of the emission. Reset the marker-delta function, and move the marker to the other side of the emission, until it is (as close as possible to) even with the reference marker level. The marker-delta reading at this point is the 20 dB bandwidth of the emission. If this value varies with different modes of operation (e.g., data rate, modulation format, etc.), repeat this test for each variation. The limit is specified in one of the subparagraphs of this Section. Submit this plot(s).

### 8.3. Test Results

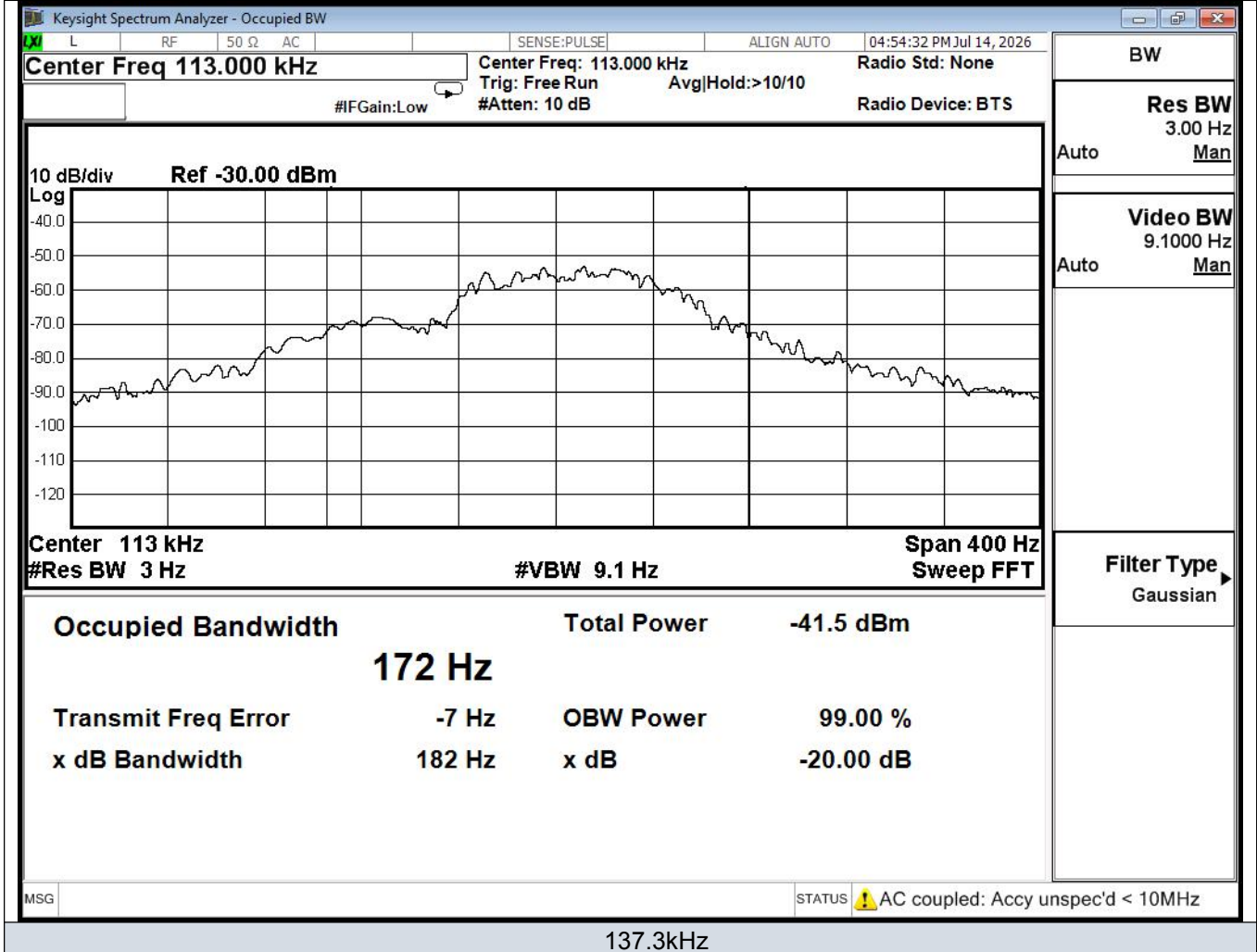
#### Test Result Of 20dB Bandwidth Measurement

| Test Mode | Test Frequency (kHz) | 20dB Bandwidth (kHz) | Limit (kHz)   |
|-----------|----------------------|----------------------|---------------|
| 110-205   | 113                  | 0.182                | Non-Specified |

Result: Pass

Please refer to the following page for test plot.

#### Test plot of 20 dB Bandwidth Measurement



## 9. PHOTOGRAPHS OF TEST SETUP

Please refer to separated files for Test Setup Photos of the EUT.

## 10. EXTERNAL PHOTOGRAPHS OF THE EUT

Please refer to separated files for External Photos of the EUT.

## 11. INTERNAL PHOTOGRAPHS OF THE EUT

Please refer to separated files for Internal Photos of the EUT.

-----THE END OF REPORT-----