



# SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

198 Kezhu Road, Sciencetech Park, Guangzhou Economic & Technological

Development District, Guangzhou, China 510663

Telephone: +86 (0) 20 82155555

Fax: +86 (0) 20 82075059

Email: ee.guangzhou@sgs.com

Report No.: GZEM180600323201

Page: 1 of 36

FCC ID: XVMDAC18

## TEST REPORT

**Application No.:** GZEM1806003232CR  
**Applicant:** ACE BAYOU CORPORATION  
**Address of Applicant:** Room1419, Qingjiang Suning Plaza, No.88 Jiangdong North Road, Gulou District, Nanjing, Jiangsu, 210036, China.  
**Manufacturer:** ACE BAYOU CORPORATION  
**Address of Manufacturer:** Room1419, Qingjiang Suning Plaza, No.88 Jiangdong North Road, Gulou District, Nanjing, Jiangsu, 210036, China.  
**Equipment Under Test (EUT):**  
**FCC ID:** XVMDAC18  
**EUT Name:** Transmitter  
**Model No.:** DAC18  
**Trade Mark:** X Rocker  
**Standard(s) :** 47 CFR Part 15, Subpart C 15.249  
**Date of Receipt:** 2018-06-15  
**Date of Test:** 2018-06-25 to 2018-07-20  
**Date of Issue:** 2018-10-24

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

\* In the configuration tested, the EUT complied with the standards specified above.



Kobe Jian  
Lab Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.



**SGS-CSTC Standards Technical Services Co., Ltd.**  
**Guangzhou Branch**

Report No.: GZEM180600323201  
Page: 2 of 36

| Revision Record |         |            |          |          |
|-----------------|---------|------------|----------|----------|
| Version         | Chapter | Date       | Modifier | Remark   |
| 01              |         | 2018-10-24 |          | Original |
|                 |         |            |          |          |
|                 |         |            |          |          |
|                 |         |            |          |          |

|                                 |   |  |                          |
|---------------------------------|---|--|--------------------------|
| <b>Authorized for issue by:</b> |   |  |                          |
| <b>Tested By</b>                |  |  | 2018-06-25 to 2018-07-20 |
|                                 | <b>Curry_Wu /Project Engineer</b>   |  | <b>Date</b>              |
| <b>Checked By</b>               |  |  | 2018-08-09               |
|                                 | <b>Ricky_Liu /Reviewer</b>  |  | <b>Date</b>              |



## 2 Test Summary

| Radio Spectrum Technical Requirement |                                  |        |                                  |        |
|--------------------------------------|----------------------------------|--------|----------------------------------|--------|
| Item                                 | Standard                         | Method | Requirement                      | Result |
| Antenna Requirement                  | 47 CFR Part 15, Subpart C 15.249 | N/A    | 47 CFR Part 15, Subpart C 15.203 | Pass   |

| Radio Spectrum Matter Part                           |                                  |  |   |        |
|--|----------------------------------|--|---|--------|
| Item   | Standard                         | Method                                 | Requirement   | Result |
| Conducted Emissions at AC Power Line (150kHz-30MHz)  | 47 CFR Part 15, Subpart C 15.249 | ANSI C63.10 (2013) Section 6.2         | 47 CFR Part 15, Subpart C 15.207                      | Pass   |
| 20dB Bandwidth                                       | 47 CFR Part 15, Subpart C 15.249 | ANSI C63.10 (2013) Section 6.9         | 47 CFR Part 15, Subpart C 15.215                      | Pass   |
| Field Strength of the Fundamental Signal (15.249(a)) | 47 CFR Part 15, Subpart C 15.249 | ANSI C63.10 (2013) Section 6.5&6.6     | 47 CFR Part 15, Subpart C 15.249(a)                   | Pass   |
| Restricted Band Around Fundamental Frequency         | 47 CFR Part 15, Subpart C 15.249 | ANSI C63.10 (2013) Section 6.4&6.5&6.6 | 47 CFR Part 15, Subpart C 15.205 & 15.249(d) & 15.209 | Pass①  |
| Radiated Emissions                                   | 47 CFR Part 15, Subpart C 15.249 | ANSI C63.10 (2013) Section 6.4&6.5&6.6 | 47 CFR Part 15, Subpart C 15.209 & 15.249 (a),(d)     | Pass②  |

Remark:

①②: The EUT passed: Restricted Band Around Fundamental Frequency, Radiated Emissions tests after modification.



### 3 Contents

|   | Page      |
|---|-----------|
| <b>1 Cover Page</b> .....                                     | <b>1</b>  |
| <b>2 Test Summary</b> .....                                   | <b>3</b>  |
| <b>3 Contents</b> .....                                       | <b>4</b>  |
| <b>4 General Information</b> .....                            | <b>5</b>  |
| 4.1 Details of E.U.T.....                                     | 5         |
| 4.2 Environment Parameter.....                                | 5         |
| 4.3 Description of Support Units.....                         | 6         |
| 4.4 Measurement Uncertainty.....                              | 6         |
| 4.5 Test Location.....  | 6         |
| 4.6 Test Facility.....  | 7         |
| 4.7 Deviation from Standards.....                             | 8         |
| 4.8 Abnormalities from Standard Conditions.....               | 8         |
| <b>5 Equipment List</b> .....                                 | <b>9</b>  |
| <b>6 Radio Spectrum Technical Requirement</b> .....           | <b>11</b> |
| 6.1 Antenna Requirement.....                                  | 11        |
| 6.1.1 Test Requirement:.....                                  | 11        |
| 6.1.2 Conclusion.....   | 11        |
| <b>7 Radio Spectrum Matter Test Results</b> .....             | <b>12</b> |
| 7.1 Conducted Emissions at AC Power Line.....                 | 12        |
| 7.2 (150kHz-30MHz).....                                       | 12        |
| 7.2.1 E.U.T. Operation.....                                   | 12        |
| 7.2.2 Test Setup Diagram.....                                 | 12        |
| 7.2.3 Measurement Procedure and Data.....                     | 13        |
| 7.3 20dB Bandwidth.....                                       | 16        |
| 7.3.1 E.U.T. Operation.....                                   | 16        |
| 7.3.2 Test Setup Diagram.....                                 | 16        |
| 7.3.3 Measurement Procedure and Data.....                     | 17        |
| 7.4 Field Strength of the Fundamental Signal (15.249(a))..... | 20        |
| 7.4.1 E.U.T. Operation.....                                   | 20        |
| 7.4.2 Test Setup Diagram.....                                 | 20        |
| 7.4.3 Measurement Procedure and Data.....                     | 21        |
| 7.5 Restricted Band Around Fundamental Frequency.....         | 25        |
| 7.5.1 E.U.T. Operation.....                                   | 25        |
| 7.5.2 Test Setup Diagram.....                                 | 25        |
| 7.5.3 Measurement Procedure and Data.....                     | 26        |
| 7.6 Radiated Emissions.....                                   | 29        |
| 7.6.1 E.U.T. Operation.....                                   | 29        |
| 7.6.2 Test Setup Diagram.....                                 | 29        |
| 7.6.3 Measurement Procedure and Data.....                     | 30        |



## 4 General Information

### 4.1 Details of E.U.T.

|                     |  |
|---------------------|--|
| Power Supply:       | DC 5V  |
| Test Voltage:       | AC 120V (adaptor supply by SGS)  |
| Cable:              | About 0.8m unscreened Optical cable<br>About 0.5m unscreened USB cable |
| Antenna Type        | Integral   |
| Channel Spacing     | 1MHz   |
| Modulation Type     | FM   |
| Number of Channels  | 3  |
| Operation Frequency | 914MHz,915MHz,916MHz   |

### 4.2 Environment Parameter

| Environment Parameter | Selected Values During Tests |            |
|-----------------------|------------------------------|------------|
| Relative Humidity     | Ambient                      |            |
| Value                 | Temperature(°C)              | Voltage(V) |
| TNVN                  | 25                           | 120        |

Note:

VN: Normal Voltage

TN: Normal Temperature



### 4.3 Description of Support Units

The EUT has been tested as an independent unit.

### 4.4 Measurement Uncertainty

RF

| No. | Item                            | Measurement Uncertainty         |
|-----|---------------------------------|---------------------------------|
| 1   | Radio Frequency                 | $\pm 5.5 \times 10^{-8}$        |
| 2   | Duty cycle                      | $\pm 0.57\%$                    |
| 3   | Occupied Bandwidth              | $\pm 3\%$                       |
| 4   | RF Conducted power              | $\pm 0.68\text{dB}$             |
| 5   | RF Power Density                | $\pm 1.50\text{dB}$             |
| 6   | Conducted Spurious Emissions    | $\pm 1.04\text{dB}$             |
| 7   | RF Radiated Power               | $\pm 4.5\text{dB}$ (below 1GHz) |
|     |                                 | $\pm 4.8\text{dB}$ (above 1GHz) |
| 8   | Radiated Spurious Emission Test | $\pm 4.5\text{dB}$ (30MHz-1GHz) |
|     |                                 | $\pm 4.8\text{dB}$ (1GHz-18GHz) |
| 9   | Temperature                     | $\pm 0.4^\circ\text{C}$         |
| 10  | Humidity                        | $\pm 1.3\%$                     |
| 11  | Supply Voltages                 | $\pm 1.5\%$                     |
| 12  | Time                            | $\pm 3\%$                       |

### 4.5 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou Branch EMC Laboratory,  
198 Kezhu Road, Sciencetech Park, Guangzhou Economic & Technology Development District,  
Guangzhou, China 510663

Tel: +86 20 82155555 Fax: +86 20 82075059

No tests were sub-contracted.



#### 4.6 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

● **NVLAP (Lab Code: 200611-0)**

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 200611-0.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

● **ACMA**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our NVLAP accreditation.

● **SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO**

Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.

● **CNAS (Lab Code: L0167)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been assessed and in compliance with CNAS-CL01:2006 accreditation criteria for testing laboratories (identical to

ISO/IEC 17025:2005 General Requirements) for the Competence of Testing Laboratories.

● **FCC Recognized 2.948 Listed Test Firm(Registration No.: 282399)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 282399, May 31, 2002.

● **FCC Recognized Accredited Test Firm(Registration No.: 486818)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been accredited and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Designation Number: CN5016, Test Firm Registration Number: 486818, Jul 13, 2017.

● **Industry Canada (Registration No.: 4620B-1)**

The 3m/10m Alternate Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd., has been registered by Certification and Engineering of Industry Canada for radio equipment testing with Registration No. 4620B-1.

● **VCCI (Registration No.: R-2460, C-2584, G-449 and T-1179)**

The 10m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-2460, C-2584, G-449 and T-1179 respectively.

● **CBTL (Lab Code: TL129)**

SGS-CSTC Standards Technical Services Co., Ltd., E&E Laboratory has been assessed and fully comply with the requirements of ISO/IEC 17025:2005, the Basic Rules, IECEE 01 and Rules of procedure IECEE 02, and the relevant IECEE CB-Scheme Operational documents.



#### **4.7 Deviation from Standards**

None

#### **4.8 Abnormalities from Standard Conditions**

The EUT passed: Restricted Band Around Fundamental Frequency, Radiated Emissions tests after modification.





## 5 Equipment List

| 20dB Bandwidth         |                      |          |              |            |              |
|------------------------|----------------------|----------|--------------|------------|--------------|
| Equipment              | Manufacturer         | Model No | Inventory No | Cal Date   | Cal Due Date |
| EXA Signal Analyzer    | Agilent Technologies | N9010A   | EMC2138      | 2017-11-15 | 2018-11-14   |
| 6dB Attenuator         | HP                   | 8491A    | EMC2062      | 2018-04-04 | 2020-04-03   |
| Test Software JS1120-3 | HangTianXing         | V2.6     | GZE100-69    | N/A        | N/A          |

| Radiated Emissions                     |                                |               |              |            |              |
|--|--------------------------------|---------------|--------------|------------|--------------|
| Equipment                              | Manufacturer                   | Model No      | Inventory No | Cal Date   | Cal Due Date |
| EMI Test Receiver                      | Rohde & Schwarz                | ESIB26        | EMC0522      | 2018-01-19 | 2019-01-18   |
| EMI Test Receiver                      | Rohde & Schwarz                | ESCI          | EMC0056      | 2018-01-19 | 2019-01-18   |
| Chamber cable                          | HangTianXing                   | N/A           | EMC0542      | 2017-06-30 | 2019-06-30   |
| Trilog Broadband Antenna<br>30MHz-1GHz | SCHWARZBECK<br>MESS-ELEKTRONIK | VULB 9160     | EMC2025      | 2016-09-08 | 2019-09-07   |
| Bi-log Type Antenna                    | Schaffner -Chase               | CBL6112B      | EMC0524      | 2016-09-08 | 2019-09-07   |
| Bi-log Type Antenna                    | Schaffner -Chase               | CBL6143       | EMC0519      | 2017-05-04 | 2020-05-03   |
| Horn Antenna<br>1GHz-18GHz             | SCHWARZBECK<br>MESS-ELEKTRONIK | BBHA 9120D    | EMC2026      | 2016-09-09 | 2019-09-08   |
| 1GHz-26.5 GHz<br>Pre-Amplifier         | Agilent                        | 8449B         | EMC0521      | 2018-01-08 | 2019-01-07   |
| Amplifier                              | HP                             | 8447F         | EMC2065      | 2018-06-01 | 2019-05-31   |
| Pre-Amplifier MH648A                   | ANRITSU CORP                   | MH648A        | EMC2086      | 2017-11-20 | 2018-11-19   |
| Active Loop Antenna                    | EMCO                           | 6502          | EMC0523      | 2018-02-24 | 2019-02-23   |
| High Pass Filter<br>(915MHz)           | FSY MICROWAVE                  | HM1465-9SS    | EMC2079      | 2018-01-19 | 2019-01-18   |
| 2.4GHz Filter                          | Micro-Tronics                  | BRM 50702     | EMC2069      | 2018-01-08 | 2019-01-07   |
| 10m Semi-Anechoic Chamber              | ETS                            | N/A           | EMC0530      | 2017-06-18 | 2019-06-18   |
| 966 Anechoic Chamber                   | C.R.T                          | 9m x 6m x 6m  | EMC2142      | 2017-11-29 | 2018-11-28   |
| MXE EMI Receiver                       | Keysight                       | N9038A        | EMC2139      | 2017-11-15 | 2018-11-14   |
| EXA Signal Analyzer                    | Keysight                       | N9010A        | EMC2138      | 2017-11-15 | 2018-11-14   |
| Test Software E3                       | Audix                          | Ver.6.120110a | GZE100-61    | N/A        | N/A          |



# SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

Report No.: GZEM180600323201  
Page: 10 of 36

| Conducted Emission |                          |                                    |                            |                   |              |               |
|--------------------|--------------------------|------------------------------------|----------------------------|-------------------|--------------|---------------|
| No.                | Test Equipment           | Manufacturer                       | Model No.                  | Serial No.        | Cal. date    | Cal. Due date |
|                    |                          |                                    |                            |                   | (YYYY-MM-DD) | (YYYY-MM-DD)  |
| EMC0306            | Shielding Room           | Zhong Yu                           | 8 x 3 x 3.8 m <sup>3</sup> | N/A               | 2016-12-27   | 2019-12-26    |
| EMC0118            | Two-line v-netwok        | R&S                                | ENV216                     | 100359            | 2018-01-19   | 2019-01-18    |
| EMC2135            | Two-line v-netwok        | R&S                                | ENV216                     | 102259            | 2017-09-22   | 2018-09-21    |
| EMC0102            | LISN                     | SCHAFFNER<br>CHASE                 | MN2050D/1                  | 1421              | 2017-09-20   | 2018-09-19    |
| EMC0506            | EMI Test Receiver        | Rohde &<br>Schwarz                 | ESCS30                     | 100085            | 2017-11-27   | 2018-11-26    |
| EMC0107            | Coaxial Cable            | SGS                                | 2m                         | N/A               | 2017-07-23   | 2019-07-22    |
| EMC0106            | Voltage Probe            | SGS                                | N/A                        | N/A               | 2018-04-04   | 2020-04-03    |
| EMC2123            | 8 Line ISN Cat 6         | SCHWARZBECK<br>MESS-<br>ELEKTRONIK | NTFM 8158                  | NTFM<br>8158 0151 | 2018-05-29   | 2019-05-29    |
| EMC2124            | 8 Line ISN Cat 5         | SCHWARZBECK<br>MESS-<br>ELEKTRONIK | CAT5 8158                  | CAT5<br>8158-188  | 2018-05-29   | 2019-05-29    |
| EMC2126            | 8 Line ISN Cat 3         | SCHWARZBECK<br>MESS-<br>ELEKTRONIK | CAT3 8158                  | CAT38158-<br>0081 | 2018-05-29   | 2019-05-29    |
| EMC2122            | ISN S8                   | SCHWARZBECK<br>MESS-<br>ELEKTRONIK | ISN S8                     | 57                | 2018-05-29   | 2019-05-29    |
| EMC2121            | ISN S1                   | SCHWARZBECK<br>MESS-<br>ELEKTRONIK | ISN S1                     | 10                | 2018-05-29   | 2019-05-29    |
| EMC2125            | 2 wires ISN              | SCHWARZBECK<br>MESS-<br>ELEKTRONIK | NTFM 8131                  | 8131-198          | 2018-05-29   | 2019-05-29    |
| EMC2047            | CDN                      | Elektronik-<br>Feinmechanik        | L-801:AF2                  | 2793              | 2015-09-19   | 2018-09-18    |
| EMC2048            | CDN                      | Elektronik-<br>Feinmechanik        | L-801:M2/M3                | 2738              | 2015-09-25   | 2018-09-24    |
| EMC2062            | 6dB Attenuator           | HP                                 | 8491A                      | 24487             | 2018-04-04   | 2020-04-03    |
| EMC0167            | Conical metal<br>housing | SGS-EMC                            | N/A                        | N/A               | 2018-04-19   | 2020-04-18    |

| General used equipment |              |          |              |            |              |  |
|------------------------|--------------|----------|--------------|------------|--------------|--|
| Equipment              | Manufacturer | Model No | Inventory No | Cal Date   | Cal Due Date |  |
| DMM                    | Fluke        | 73       | EMC0006      | 2018-07-20 | 2019-07-19   |  |
| DMM                    | Fluke        | 73       | EMC0007      | 2018-07-19 | 2019-07-18   |  |

## 6 Radio Spectrum Technical Requirement

### 6.1 Antenna Requirement

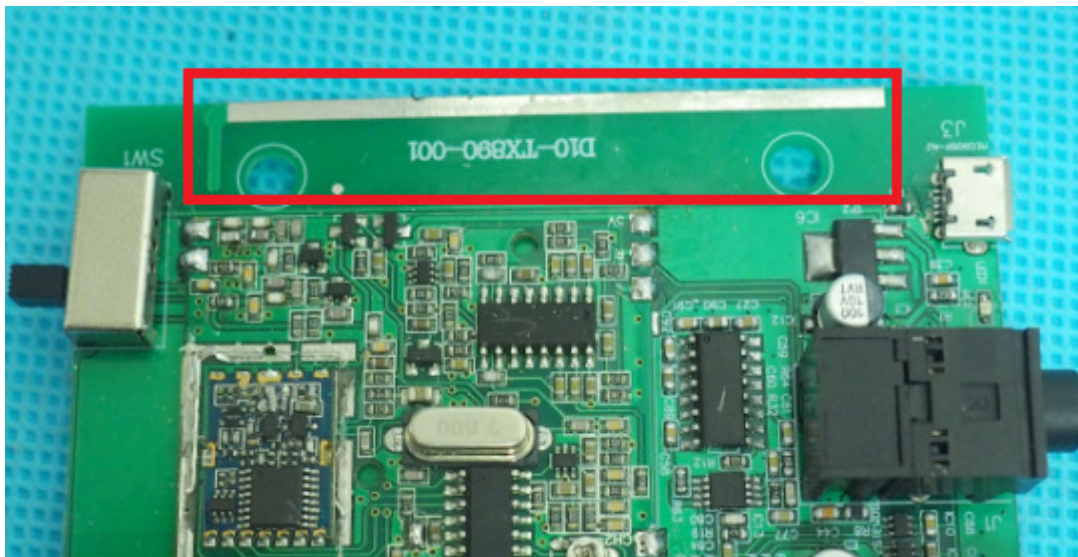
#### 6.1.1 Test Requirement:

47 CFR Part 15, Subpart C 15.203

Limit: 15.203 requirement:

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.

#### 6.1.2 Conclusion



EUT Antenna:

The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 0dBi.

## 7 Radio Spectrum Matter Test Results

### 7.1 Conducted Emissions at AC Power Line

#### 7.2 (150kHz-30MHz)

Test Requirement 47 CFR Part 15, Subpart C 15.207  
 Test Method: ANSI C63.10 (2013) Section 6.2  
 Limit:

| Frequency range (MHz) | Limit (dBuV) |           |
|-----------------------|--------------|-----------|
|                       | Quasi-peak   | Average   |
| 0.15-0.5              | 66 to 56*    | 56 to 46* |
| 0.5-5                 | 56           | 46        |
| 5-30                  | 60           | 50        |

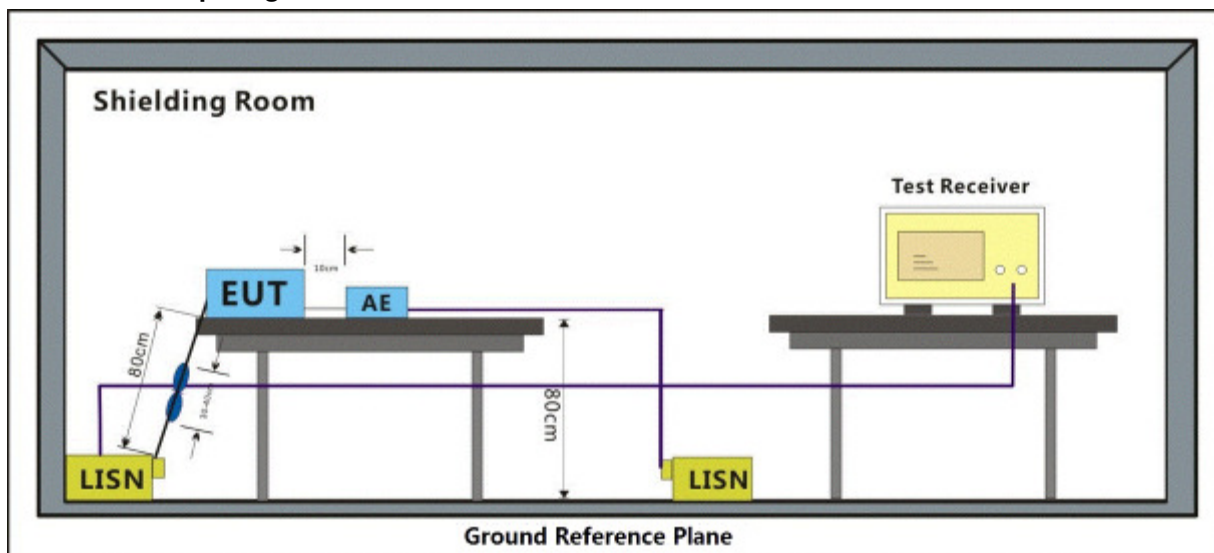
\* Decreases with the logarithm of the frequency.

#### 7.2.1 E.U.T. Operation

Operating Environment:

Temperature: 24 °C Humidity: 56 % RH Atmospheric Pressure: 1020 mbar  
 Test mode a:TX mode\_Keep the EUT in transmitting with modulation mode.

#### 7.2.2 Test Setup Diagram



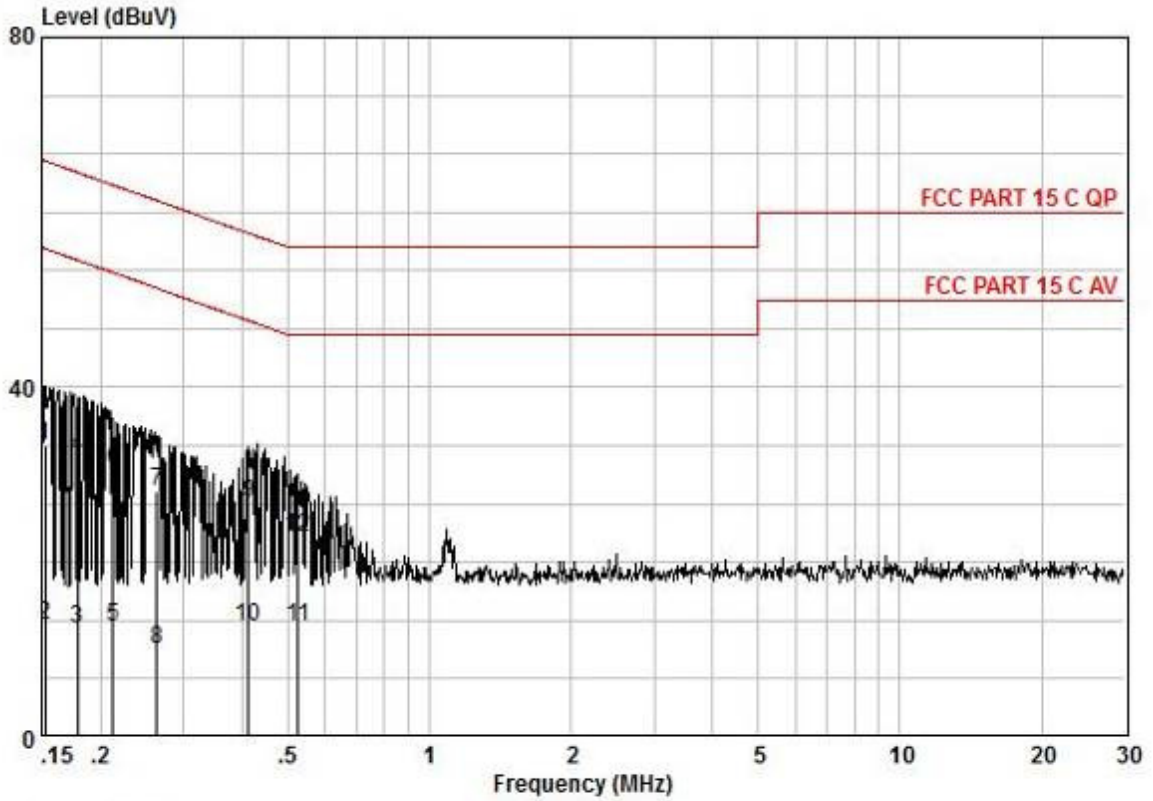


### **7.2.3 Measurement Procedure and Data**

- 1) The mains terminal disturbance voltage test was conducted in a shielded room.
- 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50ohm/50μH + 5ohm linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.
- 3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane,
- 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.
- 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.

Remark: LISN=Read Level+ Cable Loss+ LISN Factor

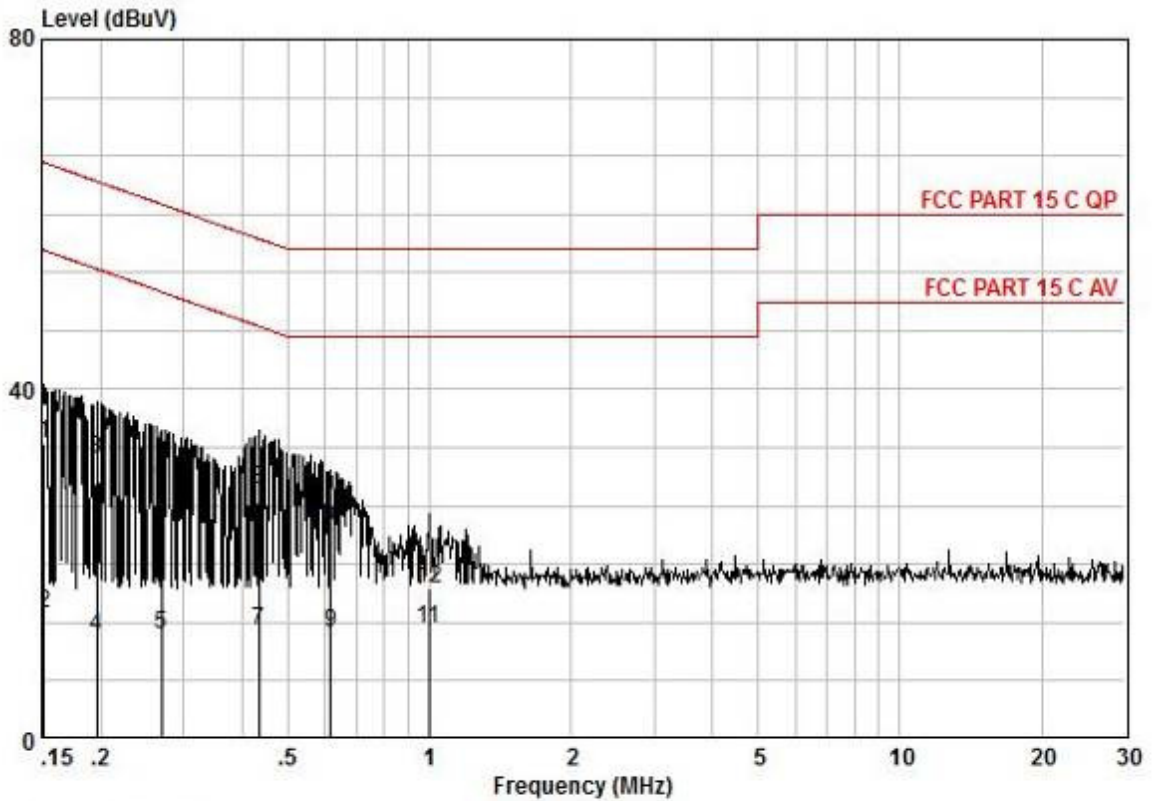
Mode:a; Line:Live Line



Pol :LIVE  
 No :  
 Model :

| Frequency MHz | read level dBuV | Cable Loss dB | LISN Factor dB | Measured level dBuV | Limit Line dBuV | Over limit dB | Remark  |
|---------------|-----------------|---------------|----------------|---------------------|-----------------|---------------|---------|
| 0,15          | 23,84           | 0,10          | 9,47           | 33,41               | 65,87           | -32,46        | QP      |
| 0,15          | 3,40            | 0,10          | 9,47           | 12,97               | 55,87           | -42,90        | AVERAGE |
| 0,18          | 2,83            | 0,10          | 9,56           | 12,49               | 54,55           | -42,06        | AVERAGE |
| 0,18          | 22,46           | 0,10          | 9,56           | 32,12               | 64,55           | -32,43        | QP      |
| 0,21          | 2,89            | 0,11          | 9,62           | 12,62               | 53,10           | -40,48        | AVERAGE |
| 0,21          | 20,72           | 0,11          | 9,62           | 30,45               | 63,10           | -32,65        | QP      |
| 0,26          | 18,44           | 0,13          | 9,63           | 28,20               | 61,34           | -33,14        | QP      |
| 0,26          | 0,37            | 0,13          | 9,63           | 10,13               | 51,34           | -41,21        | AVERAGE |
| 0,41          | 16,96           | 0,18          | 9,64           | 26,78               | 57,59           | -30,81        | QP      |
| 0,41          | 2,89            | 0,18          | 9,64           | 12,71               | 47,59           | -34,88        | AVERAGE |
| 0,53          | 2,85            | 0,21          | 9,64           | 12,70               | 46,00           | -33,30        | AVERAGE |
| 0,53          | 13,08           | 0,21          | 9,64           | 22,93               | 56,00           | -33,07        | QP      |

Mode:a; Line:Neutral Line



Pol : NEUTRAL  
No :  
Model :

| Frequency MHz | read level dBuV | Cable Loss dB | LISN Factor dB | Measured level dBuV | Limit Line dBuV | Over limit dB | Remark  |
|---------------|-----------------|---------------|----------------|---------------------|-----------------|---------------|---------|
| 0,15          | 24,20           | 0,10          | 9,39           | 33,69               | 65,91           | -32,23        | QP      |
| 0,15          | 4,93            | 0,10          | 9,39           | 14,42               | 55,91           | -41,50        | AVERAGE |
| 0,20          | 22,30           | 0,10          | 9,58           | 31,98               | 63,76           | -31,78        | QP      |
| 0,20          | 2,08            | 0,10          | 9,58           | 11,76               | 53,76           | -42,00        | AVERAGE |
| 0,27          | 2,37            | 0,13          | 9,58           | 12,08               | 51,12           | -39,04        | AVERAGE |
| 0,27          | 19,34           | 0,13          | 9,58           | 29,05               | 61,12           | -32,07        | QP      |
| 0,44          | 2,77            | 0,18          | 9,56           | 12,51               | 47,15           | -34,64        | AVERAGE |
| 0,44          | 18,80           | 0,18          | 9,56           | 28,54               | 57,15           | -28,61        | QP      |
| 0,62          | 2,45            | 0,23          | 9,57           | 12,26               | 46,00           | -33,75        | AVERAGE |
| 0,62          | 14,36           | 0,23          | 9,57           | 24,17               | 56,00           | -31,84        | QP      |
| 1,00          | 2,67            | 0,30          | 9,59           | 12,56               | 46,00           | -33,44        | AVERAGE |
| 1,00          | 7,38            | 0,30          | 9,59           | 17,27               | 56,00           | -38,73        | QP      |

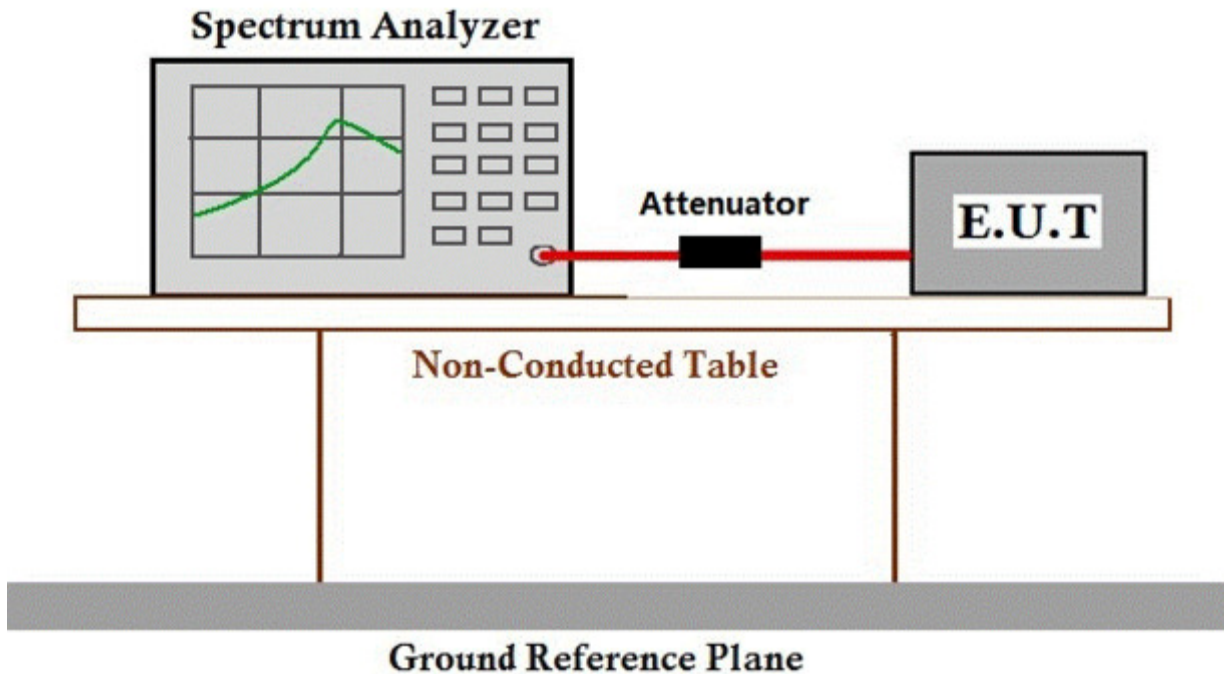
**7.3 20dB Bandwidth**

Test Requirement 47 CFR Part 15, Subpart C 15.215  
 Test Method: ANSI C63.10 (2013) Section 6.9  
 Limit: N/A

**7.3.1 E.U.T. Operation**

Operating Environment:  
 Temperature: 24.2 °C Humidity: 58.8 % RH Atmospheric Pressure: 1020 mbar  
 Test mode a:TX mode\_Keep the EUT in transmitting with modulation mode.

**7.3.2 Test Setup Diagram**

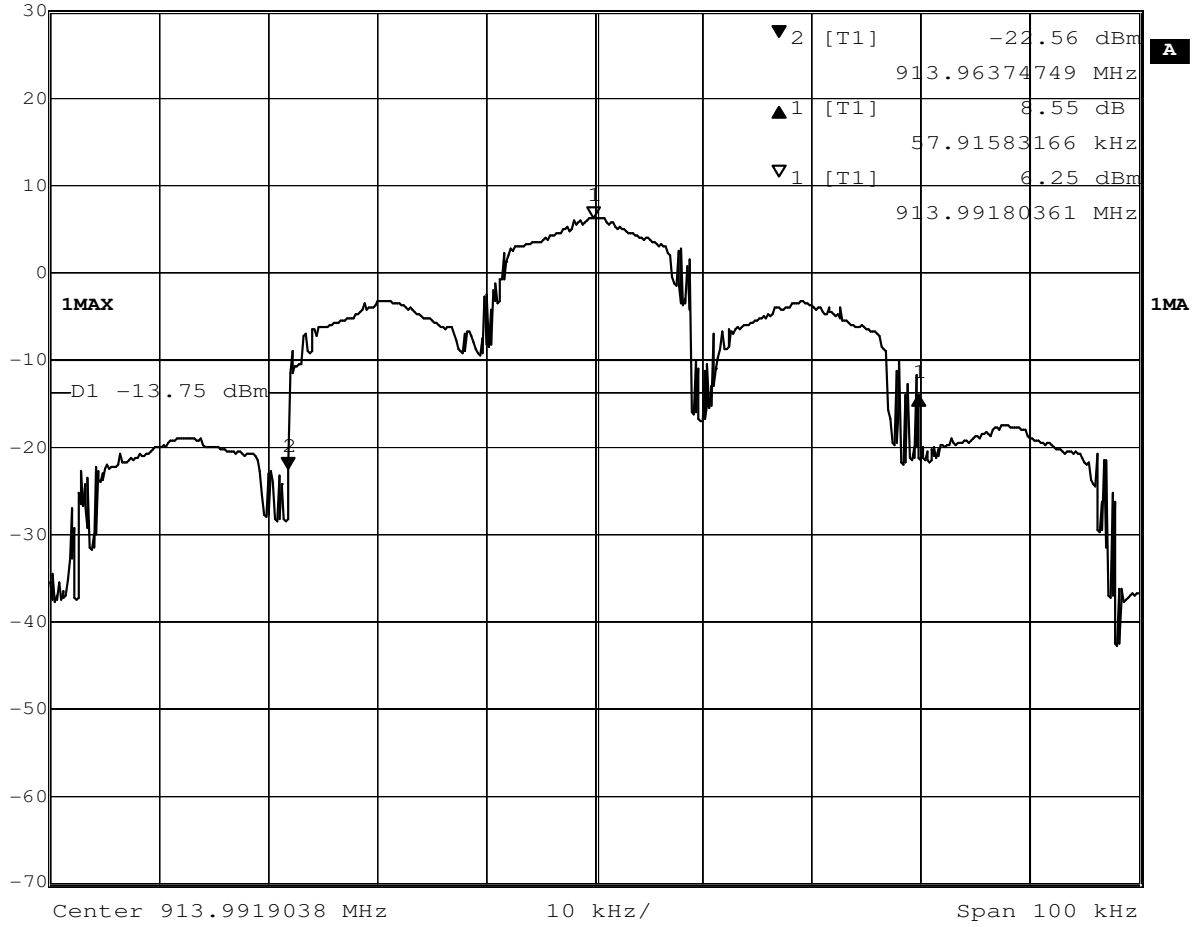




7.3.3 Measurement Procedure and Data

Mode:a; ; ; Channel:Low

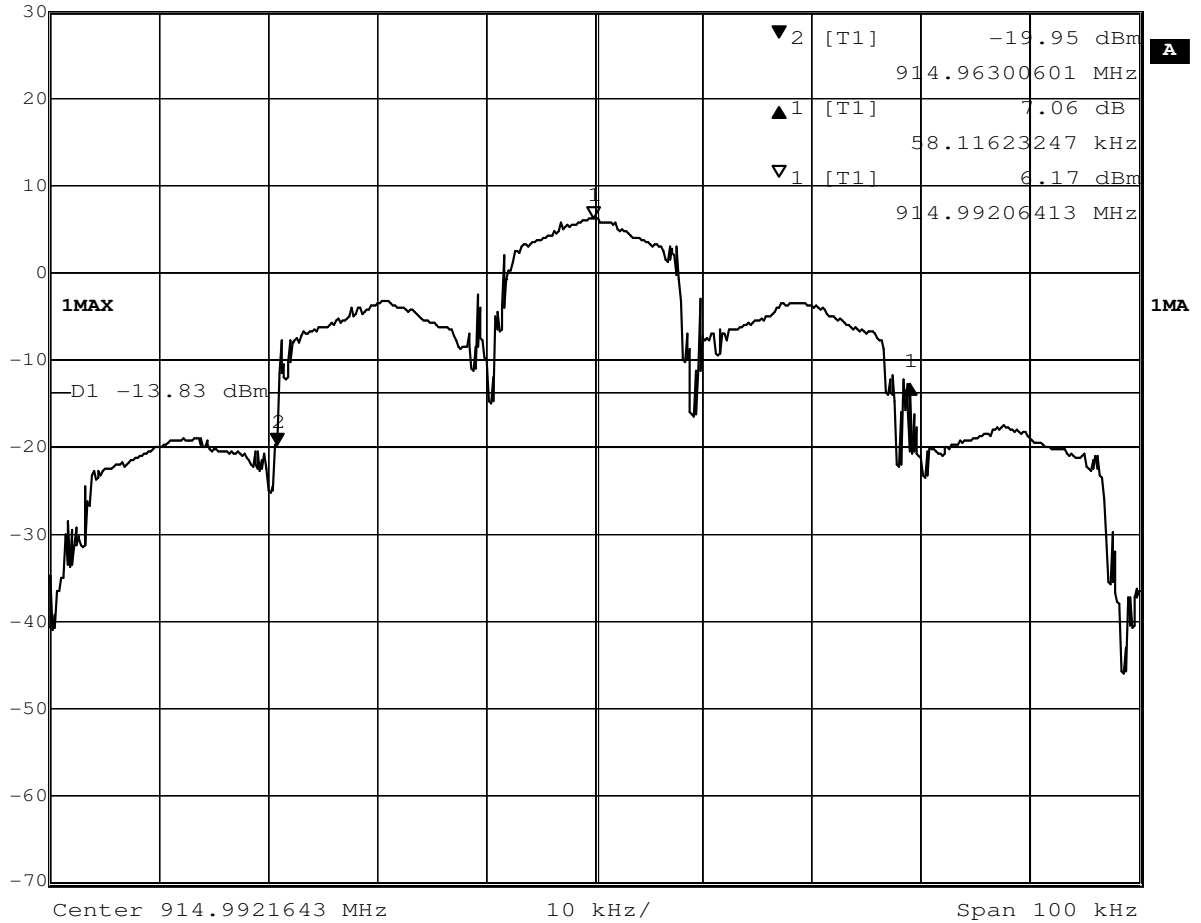
|  |              |                 |       |        |          |
|--|--------------|-----------------|-------|--------|----------|
|  | Delta 1 [T1] | RBW             | 1 kHz | RF Att | 40 dB    |
|  | Ref Lvl      | 8.55 dB         | VBW   | 3 kHz  |          |
|  | 30 dBm       | 57.91583166 kHz | SWT   | 250 ms | Unit dBm |





Mode:a; ; ; Channel:middle

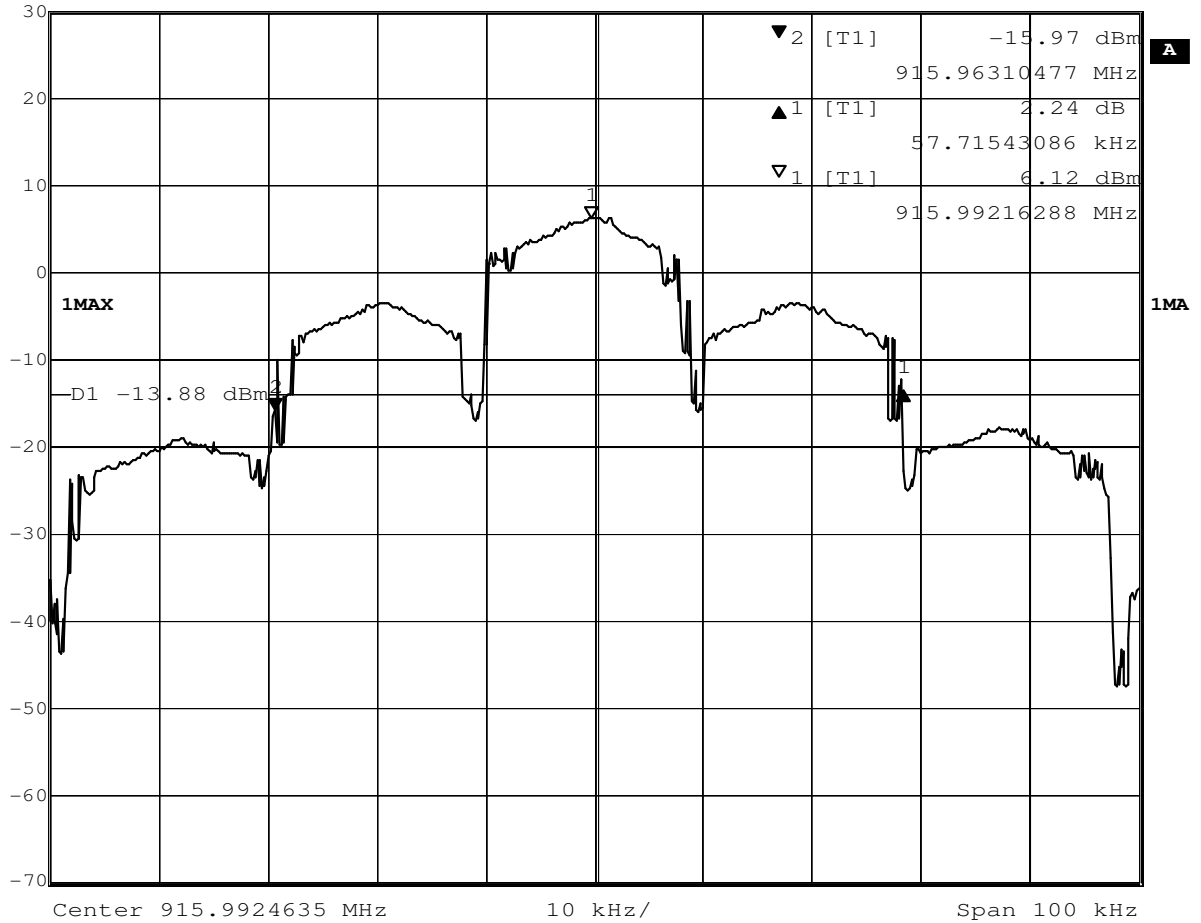
|         |                 |     |        |        |       |
|---------|-----------------|-----|--------|--------|-------|
|         | Delta 1 [T1]    | RBW | 1 kHz  | RF Att | 40 dB |
| Ref Lvl | 7.06 dB         | VBW | 3 kHz  |        |       |
| 30 dBm  | 58.11623247 kHz | SWT | 250 ms | Unit   | dBm   |





Mode:a; ; ; Channel:High

|         |                 |     |        |        |       |
|---------|-----------------|-----|--------|--------|-------|
|         | Delta 1 [T1]    | RBW | 1 kHz  | RF Att | 40 dB |
| Ref Lvl | 2.24 dB         | VBW | 3 kHz  |        |       |
| 30 dBm  | 57.71543086 kHz | SWT | 250 ms | Unit   | dBm   |



**7.4 Field Strength of the Fundamental Signal (15.249(a))**

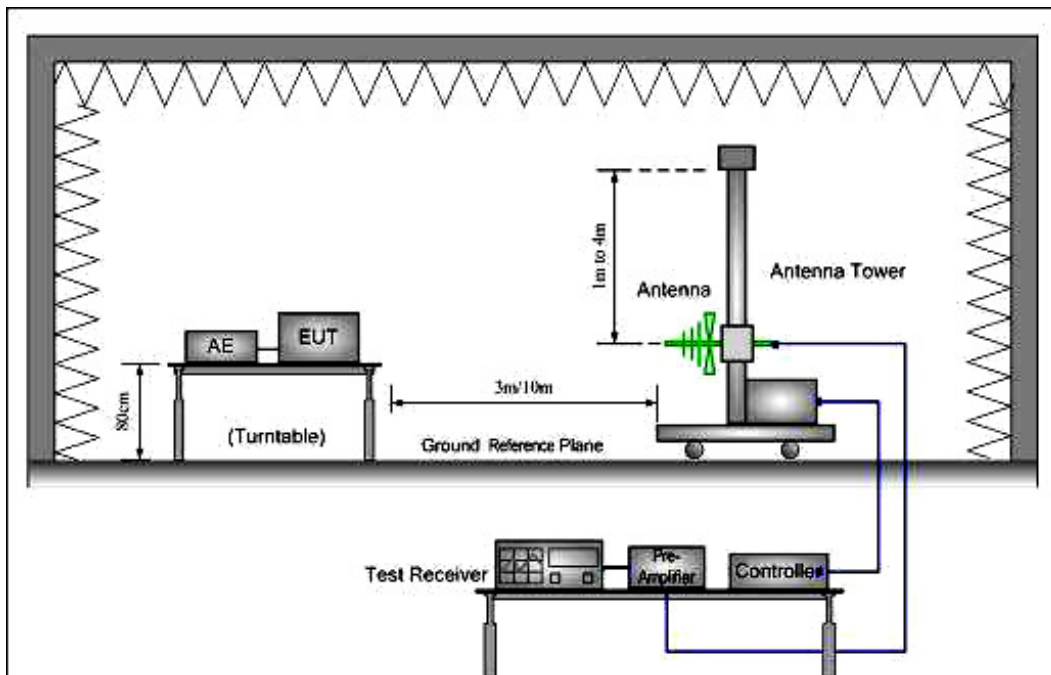
Test Requirement 47 CFR Part 15, Subpart C 15.249(a)  
 Test Method: ANSI C63.10 (2013) Section 6.5&6.6  
 Measurement Distance: 3m  
 Limit:

| Frequency     | Limit (dBuV/m @3m) | Remark        |
|---------------|--------------------|---------------|
| 902MHz-928MHz | 94.0               | Average Value |
|               | 114.0              | Peak Value    |

**7.4.1 E.U.T. Operation**

Operating Environment:  
 Temperature: 24.2 °C Humidity: 58.8 % RH Atmospheric Pressure: 1020 mbar  
 Test mode a:TX mode\_Keep the EUT in transmitting with modulation mode.

**7.4.2 Test Setup Diagram**





#### **7.4.3 Measurement Procedure and Data**

- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- h. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- j. Repeat above procedures until all frequencies measured was complete.

Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor



**SGS-CSTC Standards Technical Services Co., Ltd.**  
**Guangzhou Branch**

Report No.: GZEM180600323201  
Page: 22 of 36

Mode:a; Polarization:Horizontal; Modulation:FM; ; Channel:Low

|   | Freq    | ReadAntenna<br>Level | Factor | Cable<br>Loss | Preamp<br>Factor | Level  | Limit<br>Line | Over<br>Limit | Pol/Phase  | Remark  |
|---|---------|----------------------|--------|---------------|------------------|--------|---------------|---------------|------------|---------|
|   | MHz     | dBuV                 | dB/m   | dB            | dB               | dBuV/m | dBuV/m        | dB            |            |         |
| 1 | 914.010 | 76.38                | 23.51  | 3.13          | 27.62            | 75.40  | 94.00         | -18.60        | HORIZONTAL | Average |
| 2 | 914.010 | 88.19                | 23.51  | 3.13          | 27.62            | 87.21  | 114.00        | -26.79        | HORIZONTAL | Peak    |

Mode:a; Polarization:Vertical; Modulation:FM; ; Channel:Low

|   | Freq    | ReadAntenna<br>Level | Factor | Cable<br>Loss | Preamp<br>Factor | Level  | Limit<br>Line | Over<br>Limit | Pol/Phase | Remark  |
|---|---------|----------------------|--------|---------------|------------------|--------|---------------|---------------|-----------|---------|
|   | MHz     | dBuV                 | dB/m   | dB            | dB               | dBuV/m | dBuV/m        | dB            |           |         |
| 1 | 914.010 | 78.58                | 23.51  | 3.13          | 27.62            | 77.60  | 94.00         | -16.40        | VERTICAL  | Average |
| 2 | 914.010 | 88.30                | 23.51  | 3.13          | 27.62            | 87.32  | 114.00        | -26.68        | VERTICAL  | Peak    |



**SGS-CSTC Standards Technical Services Co., Ltd.**  
**Guangzhou Branch**

Report No.: GZEM180600323201  
Page: 23 of 36

Mode:a; Polarization:Horizontal; Modulation:FM; ; Channel:middle

|   | Freq    | ReadAntenna<br>Level | Antenna<br>Factor | Cable<br>Loss | Preamp<br>Factor | Level  | Limit<br>Line | Over<br>Limit | Pol/Phase  | Remark  |
|---|---------|----------------------|-------------------|---------------|------------------|--------|---------------|---------------|------------|---------|
|   | MHz     | dBuV                 | dB/m              | dB            | dB               | dBuV/m | dBuV/m        | dB            |            |         |
| 1 | 915.012 | 73.18                | 23.55             | 3.13          | 27.62            | 72.24  | 94.00         | -21.76        | HORIZONTAL | Average |
| 2 | 915.012 | 88.19                | 23.55             | 3.13          | 27.62            | 87.25  | 114.00        | -26.75        | HORIZONTAL | Peak    |

Mode:a; Polarization:Vertical; Modulation:FM; ; Channel:middle

|   | Freq    | ReadAntenna<br>Level | Antenna<br>Factor | Cable<br>Loss | Preamp<br>Factor | Level  | Limit<br>Line | Over<br>Limit | Pol/Phase | Remark  |
|---|---------|----------------------|-------------------|---------------|------------------|--------|---------------|---------------|-----------|---------|
|   | MHz     | dBuV                 | dB/m              | dB            | dB               | dBuV/m | dBuV/m        | dB            |           |         |
| 1 | 915.012 | 74.21                | 23.55             | 3.13          | 27.62            | 73.27  | 94.00         | -20.73        | VERTICAL  | Average |
| 2 | 915.012 | 88.28                | 23.55             | 3.13          | 27.62            | 87.34  | 114.00        | -26.66        | VERTICAL  | Peak    |



**SGS-CSTC Standards Technical Services Co., Ltd.**  
**Guangzhou Branch**

Report No.: GZEM180600323201  
Page: 24 of 36

Mode:a; Polarization:Horizontal; Modulation:FM; ; Channel:High

|   | Freq    | ReadAntenna<br>Level | Antenna<br>Factor | Cable<br>Loss | Preamp<br>Factor | Level  | Limit<br>Line | Over<br>Limit | Pol/Phase  | Remark  |
|---|---------|----------------------|-------------------|---------------|------------------|--------|---------------|---------------|------------|---------|
|   | MHz     | dBuV                 | dB/m              | dB            | dB               | dBuV/m | dBuV/m        | dB            |            |         |
| 1 | 916.014 | 74.57                | 23.55             | 3.13          | 27.62            | 73.63  | 94.00         | -20.37        | HORIZONTAL | Average |
| 2 | 916.014 | 88.25                | 23.55             | 3.13          | 27.62            | 87.31  | 114.00        | -26.69        | HORIZONTAL | Peak    |

Mode:a; Polarization:Vertical; Modulation:FM; ; Channel:High

|   | Freq    | ReadAntenna<br>Level | Antenna<br>Factor | Cable<br>Loss | Preamp<br>Factor | Level  | Limit<br>Line | Over<br>Limit | Pol/Phase | Remark  |
|---|---------|----------------------|-------------------|---------------|------------------|--------|---------------|---------------|-----------|---------|
|   | MHz     | dBuV                 | dB/m              | dB            | dB               | dBuV/m | dBuV/m        | dB            |           |         |
| 1 | 916.014 | 74.75                | 23.55             | 3.13          | 27.62            | 73.81  | 94.00         | -20.19        | VERTICAL  | Average |
| 2 | 916.014 | 88.24                | 23.55             | 3.13          | 27.62            | 87.30  | 114.00        | -26.70        | VERTICAL  | Peak    |



### 7.5 Restricted Band Around Fundamental Frequency

Test Requirement: 47 CFR Part 15, Subpart C 15.205 & 15.249(d) & 15.209  
 Test Method: ANSI C63.10 (2013) Section 6.4&6.5&6.6  
 Measurement Distance: 3m  
 Limit:

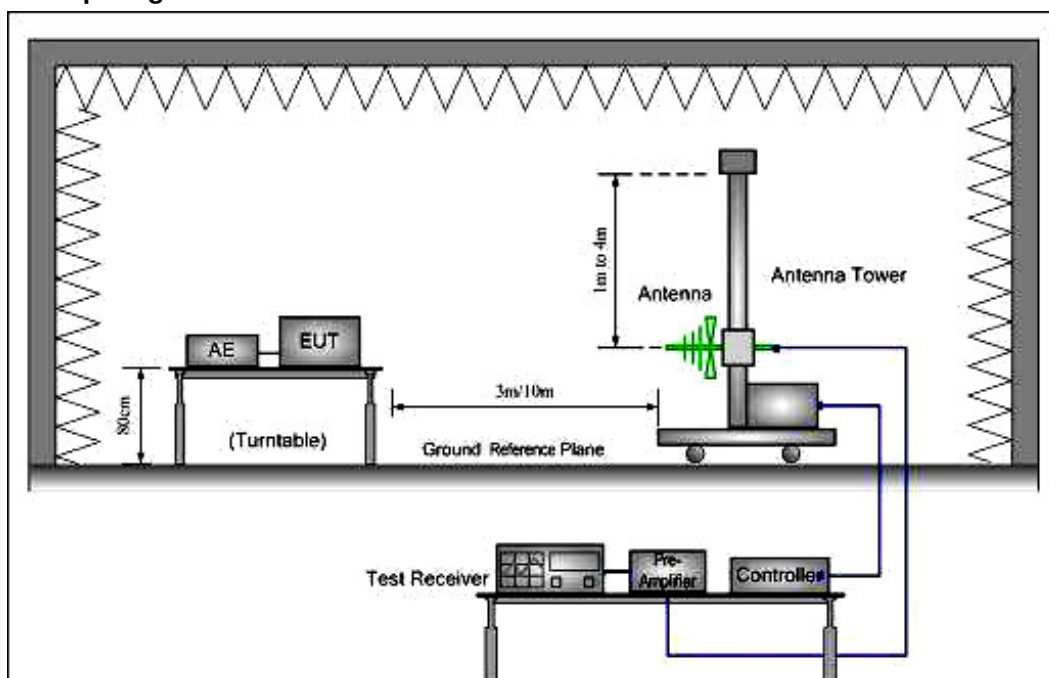
| Frequency     | Limit (dBuV/m @3m) | Remark           |
|---------------|--------------------|------------------|
| 30MHz-88MHz   | 40.0               | Quasi-peak Value |
| 88MHz-216MHz  | 43.5               | Quasi-peak Value |
| 216MHz-960MHz | 46.0               | Quasi-peak Value |
| 960MHz-1GHz   | 54.0               | Quasi-peak Value |
| Above 1GHz    | 54.0               | Average Value    |
| Above 1GHz    | 74.0               | Peak Value       |

Emission radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

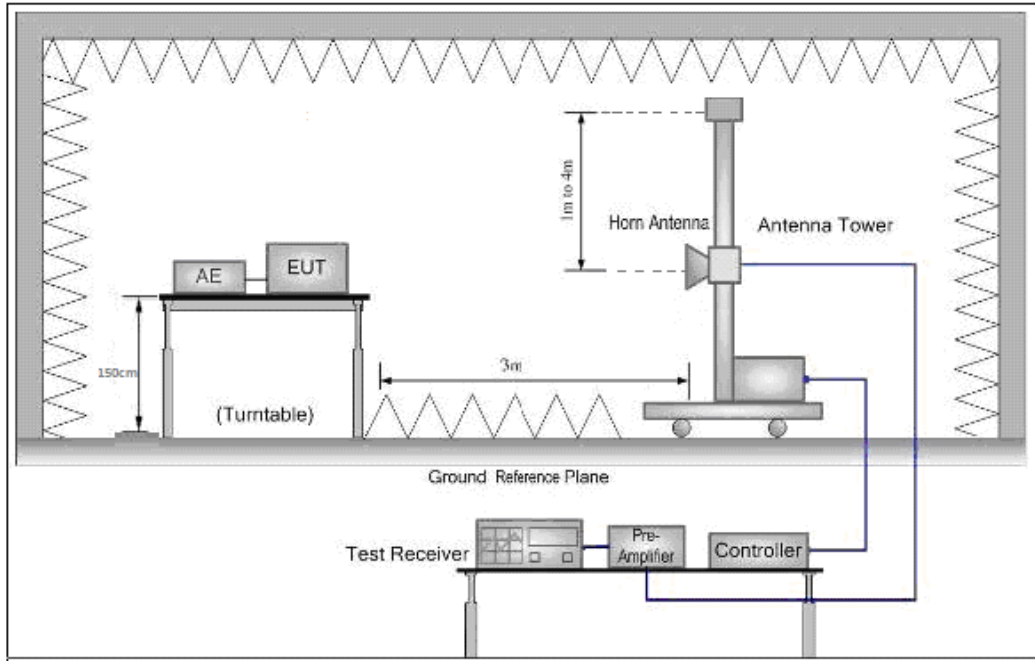
#### 7.5.1 E.U.T. Operation

Operating Environment:  
 Temperature: 23 °C Humidity: 55 % RH Atmospheric Pressure: 1020 mbar  
 Test mode: a:TX mode\_Keep the EUT in transmitting with modulation mode.

#### 7.5.2 Test Setup Diagram



Above 1GHz



### 7.5.3 Measurement Procedure and Data

- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- h. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- j. Repeat above procedures until all frequencies measured was complete.

Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor



**SGS-CSTC Standards Technical Services Co., Ltd.**  
**Guangzhou Branch**

Report No.: GZEM180600323201  
Page: 27 of 36

Mode:a; Polarization:Horizontal; Modulation:FM; ; Channel:Low

|   | Freq    | ReadAntenna<br>Level Factor | Cable<br>Loss | Preamp<br>Factor | Level | Limit<br>Line | Over<br>Limit | Pol/Phase | Remark        |
|---|---------|-----------------------------|---------------|------------------|-------|---------------|---------------|-----------|---------------|
|   | MHz     | dBuV                        | dB/m          | dB               | dB    | dBuV/m        | dBuV/m        | dB        |               |
| 1 | 614.000 | 25.82                       | 20.41         | 2.65             | 28.03 | 20.85         | 46.00         | -25.15    | HORIZONTAL QP |
| 2 | 960.000 | 25.94                       | 24.17         | 3.20             | 27.60 | 25.71         | 46.00         | -20.29    | HORIZONTAL QP |

Mode:a; Polarization:Vertical; Modulation:FM; ; Channel:Low

|   | Freq    | ReadAntenna<br>Level Factor | Cable<br>Loss | Preamp<br>Factor | Level | Limit<br>Line | Over<br>Limit | Pol/Phase | Remark      |
|---|---------|-----------------------------|---------------|------------------|-------|---------------|---------------|-----------|-------------|
|   | MHz     | dBuV                        | dB/m          | dB               | dB    | dBuV/m        | dBuV/m        | dB        |             |
| 1 | 614.000 | 27.70                       | 20.41         | 2.65             | 28.03 | 22.73         | 46.00         | -23.27    | VERTICAL QP |
| 2 | 960.000 | 26.62                       | 24.17         | 3.20             | 27.60 | 26.39         | 46.00         | -19.61    | VERTICAL QP |



**SGS-CSTC Standards Technical Services Co., Ltd.**  
**Guangzhou Branch**

Report No.: GZEM180600323201  
Page: 28 of 36

Mode:a; Polarization:Horizontal; Modulation:FM; ; Channel:High

|   | Freq    | ReadAntenna<br>Level Factor | Cable<br>Loss | Preamp<br>Factor | Level | Limit<br>Line | Over<br>Limit | Pol/Phase | Remark        |
|---|---------|-----------------------------|---------------|------------------|-------|---------------|---------------|-----------|---------------|
|   | MHz     | dBuV                        | dB/m          | dB               | dB    | dBuV/m        | dBuV/m        | dB        |               |
| 1 | 614.000 | 26.50                       | 20.41         | 2.65             | 28.03 | 21.53         | 46.00         | -24.47    | HORIZONTAL QP |
| 2 | 960.000 | 26.91                       | 24.17         | 3.20             | 27.60 | 26.68         | 46.00         | -19.32    | HORIZONTAL QP |

Mode:a; Polarization:Vertical; Modulation:FM; ; Channel:High

|   | Freq    | ReadAntenna<br>Level Factor | Cable<br>Loss | Preamp<br>Factor | Level | Limit<br>Line | Over<br>Limit | Pol/Phase | Remark      |
|---|---------|-----------------------------|---------------|------------------|-------|---------------|---------------|-----------|-------------|
|   | MHz     | dBuV                        | dB/m          | dB               | dB    | dBuV/m        | dBuV/m        | dB        |             |
| 1 | 614.000 | 26.19                       | 20.41         | 2.65             | 28.03 | 21.22         | 46.00         | -24.78    | VERTICAL QP |
| 2 | 960.000 | 26.45                       | 24.17         | 3.20             | 27.60 | 26.22         | 46.00         | -19.78    | VERTICAL QP |

## 7.6 Radiated Emissions

Test Requirement 47 CFR Part 15, Subpart C 15.209 & 15.249 (a),(d)  
 Test Method: ANSI C63.10 (2013) Section 6.4&6.5&6.6  
 Measurement Distance: 3m  
 Limit:

| Frequency(MHz) | Field strength (microvolts/meter) | Limit (dBuV/m) | Detector | Measurement Distance (meters) |
|----------------|-----------------------------------|----------------|----------|-------------------------------|
| 0.009-0.490    | 2400/F(kHz)                       | -              | -        | 300                           |
| 0.490-1.705    | 24000/F(kHz)                      | -              | -        | 30                            |
| 1.705-30       | 30                                | -              | -        | 30                            |
| 30-88          | 100                               | 40.0           | QP       | 3                             |
| 88-216         | 150                               | 43.5           | QP       | 3                             |
| 216-960        | 200                               | 46.0           | QP       | 3                             |
| 960-1000       | 500                               | 54.0           | QP       | 3                             |
| Above 1000     | 500                               | 54.0           | AV       | 3                             |

### 7.6.1 E.U.T. Operation

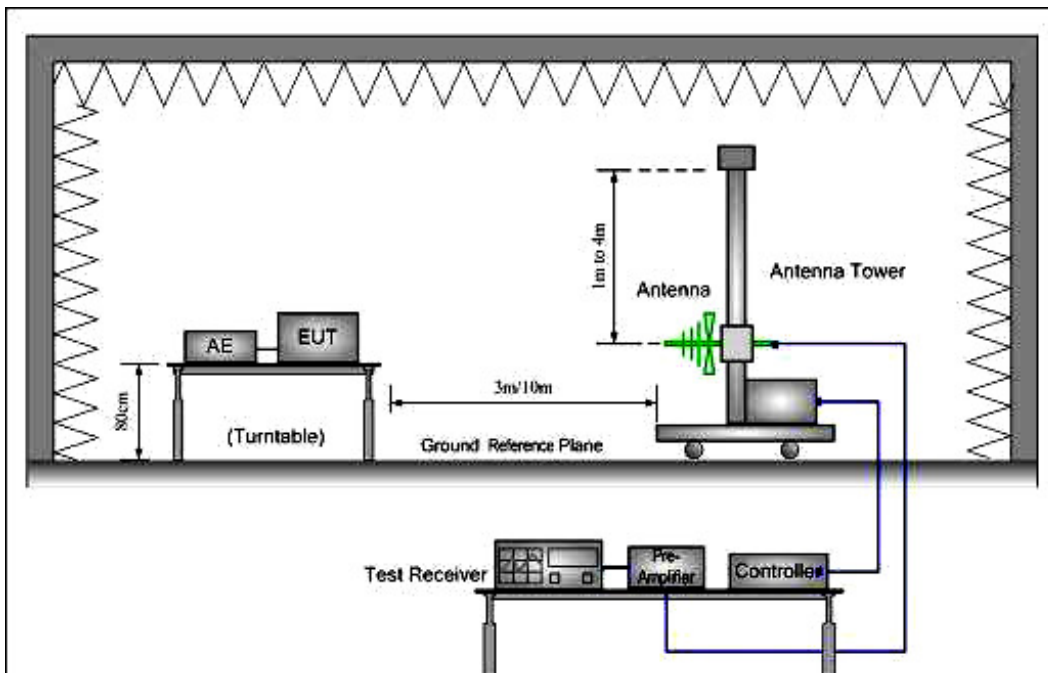
Operating Environment:

Temperature: 23 °C Humidity: 55 % RH Atmospheric Pressure: 1020 mbar

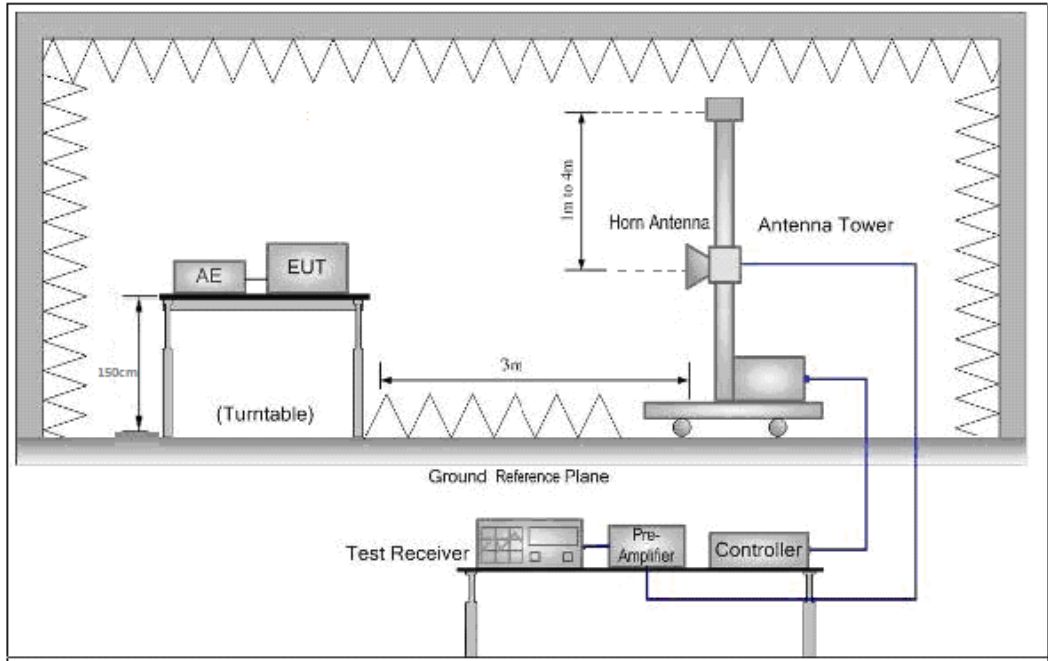
Test mode a:TX mode\_Keep the EUT in transmitting with modulation mode.

### 7.6.2 Test Setup Diagram

30MHz-1GHz



Above 1GHz



### 7.6.3 Measurement Procedure and Data

For testing performed with the loop antenna, the center of the loop was positioned 1 m above the ground and positioned with its plane vertical at the specified distance from the EUT. During testing the loop was rotated about its vertical axis for maximum response at each azimuth and also investigated with the loop positioned in the horizontal plane. Only the worst position of vertical was shown in the report.

Measured Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor

Mode:a; Polarization:Horizontal; Modulation:FM; ; Channel:Low

|   | Freq    | ReadAntenna<br>Level | Factor | Cable<br>Loss | Preamp<br>Factor | Level  | Limit<br>Line | Over<br>Limit | Pol/Phase  | Remark |
|---|---------|----------------------|--------|---------------|------------------|--------|---------------|---------------|------------|--------|
|   | MHz     | dBuV                 | dB/m   | dB            | dB               | dBuV/m | dBuV/m        | dB            |            |        |
| 1 | 37.285  | 25.12                | 13.76  | 0.70          | 27.00            | 12.58  | 40.00         | -27.42        | HORIZONTAL | QP     |
| 2 | 50.409  | 23.92                | 14.49  | 0.71          | 27.00            | 12.12  | 40.00         | -27.88        | HORIZONTAL | QP     |
| 3 | 96.436  | 30.48                | 8.73   | 1.10          | 26.91            | 13.40  | 43.50         | -30.10        | HORIZONTAL | QP     |
| 4 | 193.095 | 32.16                | 11.62  | 1.48          | 26.64            | 18.62  | 43.50         | -24.88        | HORIZONTAL | QP     |
| 5 | 287.990 | 34.44                | 13.71  | 1.76          | 26.40            | 23.51  | 46.00         | -22.49        | HORIZONTAL | QP     |
| 6 | 675.208 | 34.32                | 21.14  | 2.78          | 28.04            | 30.20  | 46.00         | -15.80        | HORIZONTAL | QP     |

Mode:a; Polarization:Horizontal; Modulation:FM; ; Channel:Low

|    | Freq     | ReadAntenna<br>Level | Factor | Cable<br>Loss | Preamp<br>Factor | Level  | Limit<br>Line | Over<br>Limit | Pol/Phase  | Remark  |
|----|----------|----------------------|--------|---------------|------------------|--------|---------------|---------------|------------|---------|
|    | MHz      | dBuV                 | dB/m   | dB            | dB               | dBuV/m | dBuV/m        | dB            |            |         |
| 1  | 1828.098 | 45.40                | 25.16  | 5.75          | 37.54            | 38.77  | 54.00         | -15.23        | HORIZONTAL | Average |
| 2  | 1828.098 | 48.80                | 25.16  | 5.75          | 37.54            | 42.17  | 74.00         | -31.83        | HORIZONTAL | Peak    |
| 3  | 2099.687 | 37.32                | 25.40  | 9.03          | 37.48            | 34.27  | 54.00         | -19.73        | HORIZONTAL | Average |
| 4  | 2099.687 | 45.20                | 25.40  | 9.03          | 37.48            | 42.15  | 74.00         | -31.85        | HORIZONTAL | Peak    |
| 5  | 2742.200 | 48.14                | 27.29  | 4.78          | 37.28            | 42.93  | 54.00         | -11.07        | HORIZONTAL | Average |
| 6  | 2742.200 | 50.78                | 27.29  | 4.78          | 37.28            | 45.57  | 74.00         | -28.43        | HORIZONTAL | Peak    |
| 7  | 3655.950 | 51.46                | 28.34  | 6.83          | 36.93            | 49.70  | 54.00         | -4.30         | HORIZONTAL | Average |
| 8  | 3655.950 | 53.84                | 28.34  | 6.83          | 36.93            | 52.08  | 74.00         | -21.92        | HORIZONTAL | Peak    |
| 9  | 4570.774 | 32.84                | 30.22  | 6.92          | 36.92            | 33.06  | 54.00         | -20.94        | HORIZONTAL | Average |
| 10 | 4570.774 | 40.87                | 30.22  | 6.92          | 36.92            | 41.09  | 74.00         | -32.91        | HORIZONTAL | Peak    |
| 11 | 5484.286 | 33.62                | 31.88  | 7.84          | 36.99            | 36.35  | 54.00         | -17.65        | HORIZONTAL | Average |
| 12 | 5484.286 | 42.83                | 31.88  | 7.84          | 36.99            | 45.56  | 74.00         | -28.44        | HORIZONTAL | Peak    |



**SGS-CSTC Standards Technical Services Co., Ltd.**  
**Guangzhou Branch**

Report No.: GZEM180600323201  
 Page: 32 of 36

Mode:a; Polarization:Vertical; Modulation:FM; ; Channel:Low

|   | Freq    | ReadAntenna<br>Level | Factor | Cable<br>Loss | Preamp<br>Factor | Level  | Limit<br>Line | Over<br>Limit | Pol/Phase | Remark |
|---|---------|----------------------|--------|---------------|------------------|--------|---------------|---------------|-----------|--------|
|   | MHz     | dBuV                 | dB/m   | dB            | dB               | dBuV/m | dBuV/m        | dB            |           |        |
| 1 | 39.994  | 27.13                | 13.70  | 0.60          | 27.00            | 14.43  | 40.00         | -25.57        | VERTICAL  | QP     |
| 2 | 96.436  | 41.23                | 8.73   | 1.10          | 26.91            | 24.15  | 43.50         | -19.35        | VERTICAL  | QP     |
| 3 | 193.095 | 38.58                | 11.62  | 1.48          | 26.64            | 25.04  | 43.50         | -18.46        | VERTICAL  | QP     |
| 4 | 210.048 | 33.27                | 11.20  | 1.53          | 26.53            | 19.47  | 43.50         | -24.03        | VERTICAL  | QP     |
| 5 | 287.990 | 37.70                | 13.71  | 1.76          | 26.40            | 26.77  | 46.00         | -19.23        | VERTICAL  | QP     |
| 6 | 675.208 | 28.80                | 21.14  | 2.78          | 28.04            | 24.68  | 46.00         | -21.32        | VERTICAL  | QP     |

Mode:a; Polarization:Vertical; Modulation:FM; ; Channel:Low

|    | Freq     | ReadAntenna<br>Level | Factor | Cable<br>Loss | Preamp<br>Factor | Level  | Limit<br>Line | Over<br>Limit | Pol/Phase | Remark  |
|----|----------|----------------------|--------|---------------|------------------|--------|---------------|---------------|-----------|---------|
|    | MHz      | dBuV                 | dB/m   | dB            | dB               | dBuV/m | dBuV/m        | dB            |           |         |
| 1  | 1828.098 | 46.01                | 25.16  | 5.75          | 37.54            | 39.38  | 54.00         | -14.62        | VERTICAL  | Average |
| 2  | 1828.098 | 49.50                | 25.16  | 5.75          | 37.54            | 42.87  | 74.00         | -31.13        | VERTICAL  | Peak    |
| 3  | 2160.753 | 37.09                | 25.57  | 7.80          | 37.47            | 32.99  | 54.00         | -21.01        | VERTICAL  | Average |
| 4  | 2160.753 | 45.47                | 25.57  | 7.80          | 37.47            | 41.37  | 74.00         | -32.63        | VERTICAL  | Peak    |
| 5  | 2742.200 | 49.00                | 27.29  | 4.78          | 37.28            | 43.79  | 54.00         | -10.21        | VERTICAL  | Average |
| 6  | 2742.200 | 50.74                | 27.29  | 4.78          | 37.28            | 45.53  | 74.00         | -28.47        | VERTICAL  | Peak    |
| 7  | 3655.950 | 52.36                | 28.34  | 6.83          | 36.93            | 50.60  | 54.00         | -3.40         | VERTICAL  | Average |
| 8  | 3655.950 | 55.91                | 28.34  | 6.83          | 36.93            | 54.15  | 74.00         | -19.85        | VERTICAL  | Peak    |
| 9  | 4570.538 | 39.64                | 30.22  | 6.92          | 36.92            | 39.86  | 54.00         | -14.14        | VERTICAL  | Average |
| 10 | 4570.538 | 44.39                | 30.22  | 6.92          | 36.92            | 44.61  | 74.00         | -29.39        | VERTICAL  | Peak    |
| 11 | 5484.141 | 34.06                | 31.88  | 7.84          | 36.99            | 36.79  | 54.00         | -17.21        | VERTICAL  | Average |
| 12 | 5484.141 | 42.53                | 31.88  | 7.84          | 36.99            | 45.26  | 74.00         | -28.74        | VERTICAL  | Peak    |



Mode:a; Polarization:Horizontal; Modulation:FM; ; Channel:middle

|   | Freq    | ReadAntenna<br>Level | Factor | Cable<br>Loss | Preamp<br>Factor | Level  | Limit<br>Line | Over<br>Limit | Pol/Phase  | Remark |
|---|---------|----------------------|--------|---------------|------------------|--------|---------------|---------------|------------|--------|
|   | MHz     | dBuV                 | dB/m   | dB            | dB               | dBuV/m | dBuV/m        | dB            |            |        |
| 1 | 44.743  | 25.09                | 14.10  | 0.70          | 27.00            | 12.89  | 40.00         | -27.11        | HORIZONTAL | QP     |
| 2 | 53.693  | 25.13                | 14.37  | 0.78          | 27.00            | 13.28  | 40.00         | -26.72        | HORIZONTAL | QP     |
| 3 | 96.436  | 29.98                | 8.73   | 1.10          | 26.91            | 12.90  | 43.50         | -30.60        | HORIZONTAL | QP     |
| 4 | 193.095 | 31.66                | 11.62  | 1.48          | 26.64            | 18.12  | 43.50         | -25.38        | HORIZONTAL | QP     |
| 5 | 287.990 | 32.78                | 13.71  | 1.76          | 26.40            | 21.85  | 46.00         | -24.15        | HORIZONTAL | QP     |
| 6 | 675.208 | 36.10                | 21.14  | 2.78          | 28.04            | 31.98  | 46.00         | -14.02        | HORIZONTAL | QP     |

Mode:a; Polarization:Horizontal; Modulation:FM; ; Channel:middle

|    | Freq     | ReadAntenna<br>Level | Factor | Cable<br>Loss | Preamp<br>Factor | Level  | Limit<br>Line | Over<br>Limit | Pol/Phase  | Remark  |
|----|----------|----------------------|--------|---------------|------------------|--------|---------------|---------------|------------|---------|
|    | MHz      | dBuV                 | dB/m   | dB            | dB               | dBuV/m | dBuV/m        | dB            |            |         |
| 1  | 1830.098 | 47.89                | 25.16  | 5.75          | 37.54            | 41.26  | 54.00         | -12.74        | HORIZONTAL | Average |
| 2  | 1830.098 | 49.61                | 25.16  | 5.75          | 37.54            | 42.98  | 74.00         | -31.02        | HORIZONTAL | Peak    |
| 3  | 2164.628 | 40.19                | 25.57  | 7.80          | 37.47            | 36.09  | 54.00         | -17.91        | HORIZONTAL | Average |
| 4  | 2164.628 | 45.30                | 25.57  | 7.80          | 37.47            | 41.20  | 74.00         | -32.80        | HORIZONTAL | Peak    |
| 5  | 2745.118 | 48.73                | 27.29  | 4.78          | 37.28            | 43.52  | 54.00         | -10.48        | HORIZONTAL | Average |
| 6  | 2745.118 | 51.13                | 27.29  | 4.78          | 37.28            | 45.92  | 74.00         | -28.08        | HORIZONTAL | Peak    |
| 7  | 3659.950 | 51.52                | 28.34  | 6.83          | 36.93            | 49.76  | 54.00         | -4.24         | HORIZONTAL | Average |
| 8  | 3659.950 | 54.40                | 28.34  | 6.83          | 36.93            | 52.64  | 74.00         | -21.36        | HORIZONTAL | Peak    |
| 9  | 4575.537 | 35.63                | 30.22  | 6.92          | 36.92            | 35.85  | 54.00         | -18.15        | HORIZONTAL | Average |
| 10 | 4575.537 | 43.41                | 30.22  | 6.92          | 36.92            | 43.63  | 74.00         | -30.37        | HORIZONTAL | Peak    |
| 11 | 5490.026 | 35.17                | 31.88  | 7.84          | 36.99            | 37.90  | 54.00         | -16.10        | HORIZONTAL | Average |
| 12 | 5490.026 | 43.10                | 31.88  | 7.84          | 36.99            | 45.83  | 74.00         | -28.17        | HORIZONTAL | Peak    |



**SGS-CSTC Standards Technical Services Co., Ltd.**  
**Guangzhou Branch**

Report No.: GZEM180600323201  
 Page: 34 of 36

Mode:a; Polarization:Vertical; Modulation:FM; ; Channel:middle

|   | Freq    | ReadAntenna<br>Level | Factor | Cable<br>Loss | Preamp<br>Factor | Level  | Limit<br>Line | Over<br>Limit | Pol/Phase | Remark |
|---|---------|----------------------|--------|---------------|------------------|--------|---------------|---------------|-----------|--------|
|   | MHz     | dBuV                 | dB/m   | dB            | dB               | dBuV/m | dBuV/m        | dB            |           |        |
| 1 | 38.346  | 28.22                | 13.73  | 0.70          | 27.00            | 15.65  | 40.00         | -24.35        | VERTICAL  | QP     |
| 2 | 42.007  | 27.97                | 13.81  | 0.64          | 27.00            | 15.42  | 40.00         | -24.58        | VERTICAL  | QP     |
| 3 | 96.436  | 41.51                | 8.73   | 1.10          | 26.91            | 24.43  | 43.50         | -19.07        | VERTICAL  | QP     |
| 4 | 193.095 | 39.71                | 11.62  | 1.48          | 26.64            | 26.17  | 43.50         | -17.33        | VERTICAL  | QP     |
| 5 | 287.990 | 36.84                | 13.71  | 1.76          | 26.40            | 25.91  | 46.00         | -20.09        | VERTICAL  | QP     |
| 6 | 675.208 | 29.94                | 21.14  | 2.78          | 28.04            | 25.82  | 46.00         | -20.18        | VERTICAL  | QP     |

Mode:a; Polarization:Vertical; Modulation:FM; ; Channel:middle

|    | Freq     | ReadAntenna<br>Level | Factor | Cable<br>Loss | Preamp<br>Factor | Level  | Limit<br>Line | Over<br>Limit | Pol/Phase | Remark  |
|----|----------|----------------------|--------|---------------|------------------|--------|---------------|---------------|-----------|---------|
|    | MHz      | dBuV                 | dB/m   | dB            | dB               | dBuV/m | dBuV/m        | dB            |           |         |
| 1  | 1830.098 | 46.55                | 25.16  | 5.75          | 37.54            | 39.92  | 54.00         | -14.08        | VERTICAL  | Average |
| 2  | 1830.098 | 50.60                | 25.16  | 5.75          | 37.54            | 43.97  | 74.00         | -30.03        | VERTICAL  | Peak    |
| 3  | 2176.294 | 37.17                | 25.61  | 7.63          | 37.47            | 32.94  | 54.00         | -21.06        | VERTICAL  | Average |
| 4  | 2176.294 | 45.64                | 25.61  | 7.63          | 37.47            | 41.41  | 74.00         | -32.59        | VERTICAL  | Peak    |
| 5  | 2745.118 | 49.70                | 27.29  | 4.78          | 37.28            | 44.49  | 54.00         | -9.51         | VERTICAL  | Average |
| 6  | 2745.118 | 52.30                | 27.29  | 4.78          | 37.28            | 47.09  | 74.00         | -26.91        | VERTICAL  | Peak    |
| 7  | 3659.950 | 52.31                | 28.34  | 6.83          | 36.93            | 50.55  | 54.00         | -3.45         | VERTICAL  | Average |
| 8  | 3659.950 | 54.69                | 28.34  | 6.83          | 36.93            | 52.93  | 74.00         | -21.07        | VERTICAL  | Peak    |
| 9  | 4575.019 | 36.76                | 30.22  | 6.92          | 36.92            | 36.98  | 54.00         | -17.02        | VERTICAL  | Average |
| 10 | 4575.019 | 42.74                | 30.22  | 6.92          | 36.92            | 42.96  | 74.00         | -31.04        | VERTICAL  | Peak    |
| 11 | 5490.796 | 34.06                | 31.88  | 7.84          | 36.99            | 36.79  | 54.00         | -17.21        | VERTICAL  | Average |
| 12 | 5490.796 | 43.25                | 31.88  | 7.84          | 36.99            | 45.98  | 74.00         | -28.02        | VERTICAL  | Peak    |



**SGS-CSTC Standards Technical Services Co., Ltd.**  
**Guangzhou Branch**

Report No.: GZEM180600323201  
 Page: 35 of 36

Mode:a; Polarization:Horizontal; Modulation:FM; ; Channel:High

|   | Freq    | ReadAntenna<br>Level | Factor | Cable<br>Loss | Preamp<br>Factor | Level  | Limit<br>Line | Over<br>Limit | Pol/Phase  | Remark |
|---|---------|----------------------|--------|---------------|------------------|--------|---------------|---------------|------------|--------|
|   | MHz     | dBuV                 | dB/m   | dB            | dB               | dBuV/m | dBuV/m        | dB            |            |        |
| 1 | 31.071  | 23.75                | 14.07  | 0.60          | 27.00            | 11.42  | 40.00         | -28.58        | HORIZONTAL | QP     |
| 2 | 56.792  | 22.92                | 14.19  | 0.80          | 27.00            | 10.91  | 40.00         | -29.09        | HORIZONTAL | QP     |
| 3 | 96.436  | 31.23                | 8.73   | 1.10          | 26.91            | 14.15  | 43.50         | -29.35        | HORIZONTAL | QP     |
| 4 | 193.095 | 32.82                | 11.62  | 1.48          | 26.64            | 19.28  | 43.50         | -24.22        | HORIZONTAL | QP     |
| 5 | 287.990 | 34.09                | 13.71  | 1.76          | 26.40            | 23.16  | 46.00         | -22.84        | HORIZONTAL | QP     |
| 6 | 675.208 | 38.00                | 21.14  | 2.78          | 28.04            | 33.88  | 46.00         | -12.12        | HORIZONTAL | QP     |

Mode:a; Polarization:Horizontal; Modulation:FM; ; Channel:High

|    | Freq     | ReadAntenna<br>Level | Factor | Cable<br>Loss | Preamp<br>Factor | Level  | Limit<br>Line | Over<br>Limit | Pol/Phase  | Remark  |
|----|----------|----------------------|--------|---------------|------------------|--------|---------------|---------------|------------|---------|
|    | MHz      | dBuV                 | dB/m   | dB            | dB               | dBuV/m | dBuV/m        | dB            |            |         |
| 1  | 1306.004 | 41.86                | 24.80  | 2.91          | 38.10            | 31.47  | 54.00         | -22.53        | HORIZONTAL | Average |
| 2  | 1306.004 | 47.16                | 24.80  | 2.91          | 38.10            | 36.77  | 74.00         | -37.23        | HORIZONTAL | Peak    |
| 3  | 1832.098 | 47.94                | 25.16  | 5.75          | 37.54            | 41.31  | 54.00         | -12.69        | HORIZONTAL | Average |
| 4  | 1832.098 | 50.64                | 25.16  | 5.75          | 37.54            | 44.01  | 74.00         | -29.99        | HORIZONTAL | Peak    |
| 5  | 2748.044 | 51.88                | 27.33  | 4.77          | 37.28            | 46.70  | 54.00         | -7.30         | HORIZONTAL | Average |
| 6  | 2748.044 | 53.62                | 27.33  | 4.77          | 37.28            | 48.44  | 74.00         | -25.56        | HORIZONTAL | Peak    |
| 7  | 3664.723 | 49.43                | 28.34  | 6.83          | 36.93            | 47.67  | 54.00         | -6.33         | HORIZONTAL | Average |
| 8  | 3664.723 | 52.20                | 28.34  | 6.83          | 36.93            | 50.44  | 74.00         | -23.56        | HORIZONTAL | Peak    |
| 9  | 4580.357 | 36.70                | 30.22  | 6.92          | 36.92            | 36.92  | 54.00         | -17.08        | HORIZONTAL | Average |
| 10 | 4580.357 | 43.54                | 30.22  | 6.92          | 36.92            | 43.76  | 74.00         | -30.24        | HORIZONTAL | Peak    |
| 11 | 5496.026 | 37.92                | 31.90  | 7.89          | 36.99            | 40.72  | 54.00         | -13.28        | HORIZONTAL | Average |
| 12 | 5496.026 | 43.11                | 31.90  | 7.89          | 36.99            | 45.91  | 74.00         | -28.09        | HORIZONTAL | Peak    |



**SGS-CSTC Standards Technical Services Co., Ltd.**  
**Guangzhou Branch**

Report No.: GZEM180600323201  
Page: 36 of 36

Mode:a; Polarization:Vertical; Modulation:FM; ; Channel:High

|   | Freq    | ReadAntenna<br>Level | Factor | Cable<br>Loss | Preamp<br>Factor | Level  | Limit<br>Line | Over<br>Limit | Pol/Phase | Remark |
|---|---------|----------------------|--------|---------------|------------------|--------|---------------|---------------|-----------|--------|
|   | MHz     | dBuV                 | dB/m   | dB            | dB               | dBuV/m | dBuV/m        | dB            |           |        |
| 1 | 53.318  | 24.46                | 14.39  | 0.78          | 27.00            | 12.63  | 40.00         | -27.37        | VERTICAL  | QP     |
| 2 | 96.436  | 42.53                | 8.73   | 1.10          | 26.91            | 25.45  | 43.50         | -18.05        | VERTICAL  | QP     |
| 3 | 166.651 | 33.36                | 13.40  | 1.37          | 26.72            | 21.41  | 43.50         | -22.09        | VERTICAL  | QP     |
| 4 | 193.095 | 40.46                | 11.62  | 1.48          | 26.64            | 26.92  | 43.50         | -16.58        | VERTICAL  | QP     |
| 5 | 287.990 | 38.50                | 13.71  | 1.76          | 26.40            | 27.57  | 46.00         | -18.43        | VERTICAL  | QP     |
| 6 | 675.208 | 33.17                | 21.14  | 2.78          | 28.04            | 29.05  | 46.00         | -16.95        | VERTICAL  | QP     |

Mode:a; Polarization:Vertical; Modulation:FM; ; Channel:High

|    | Freq     | ReadAntenna<br>Level | Factor | Cable<br>Loss | Preamp<br>Factor | Level  | Limit<br>Line | Over<br>Limit | Pol/Phase | Remark  |
|----|----------|----------------------|--------|---------------|------------------|--------|---------------|---------------|-----------|---------|
|    | MHz      | dBuV                 | dB/m   | dB            | dB               | dBuV/m | dBuV/m        | dB            |           |         |
| 1  | 1343.987 | 41.06                | 24.86  | 3.07          | 38.05            | 30.94  | 54.00         | -23.06        | VERTICAL  | Average |
| 2  | 1343.987 | 47.81                | 24.86  | 3.07          | 38.05            | 37.69  | 74.00         | -36.31        | VERTICAL  | Peak    |
| 3  | 1832.098 | 46.14                | 25.16  | 5.75          | 37.54            | 39.51  | 54.00         | -14.49        | VERTICAL  | Average |
| 4  | 1832.098 | 49.43                | 25.16  | 5.75          | 37.54            | 42.80  | 74.00         | -31.20        | VERTICAL  | Peak    |
| 5  | 2748.044 | 51.79                | 27.33  | 4.77          | 37.28            | 46.61  | 54.00         | -7.39         | VERTICAL  | Average |
| 6  | 2748.044 | 53.64                | 27.33  | 4.77          | 37.28            | 48.46  | 74.00         | -25.54        | VERTICAL  | Peak    |
| 7  | 3663.950 | 52.73                | 28.34  | 6.83          | 36.93            | 50.97  | 54.00         | -3.03         | VERTICAL  | Average |
| 8  | 3663.950 | 53.62                | 28.34  | 6.83          | 36.93            | 51.86  | 74.00         | -22.14        | VERTICAL  | Peak    |
| 9  | 4580.864 | 36.11                | 30.24  | 6.96          | 36.92            | 36.39  | 54.00         | -17.61        | VERTICAL  | Average |
| 10 | 4580.864 | 42.46                | 30.24  | 6.96          | 36.92            | 42.74  | 74.00         | -31.26        | VERTICAL  | Peak    |
| 11 | 5496.763 | 34.25                | 31.90  | 7.89          | 36.99            | 37.05  | 54.00         | -16.95        | VERTICAL  | Average |
| 12 | 5496.763 | 42.54                | 31.90  | 7.89          | 36.99            | 45.34  | 74.00         | -28.66        | VERTICAL  | Peak    |

--End of Report--