

**ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT  
INTENTIONAL RADIATOR CERTIFICATION TO  
FCC PART 15 SUBPART C REQUIREMENT**

*OF*

**9" Headrest Monitor with DVD Player**

**MODEL No.: HRDA0902, AVXMTG9HD**

**FCC ID: ATI9R3HRDA0902**

**Trademark: N/A**

**REPORT NO: ES150804031E**

**ISSUE DATE: August 12, 2015**

*Prepared for*

**ACTION ELECTRONICS CO., LTD.**

**2480, TINGKAT PERUSAHAAN ENAM, PRAI FREE TRADE ZONE, 13600,  
PERAI, PENANG, MALAYSIA**

*Prepared by*

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## VERIFICATION OF COMPLIANCE

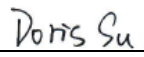
|                      |                                                                                                                                                 |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Applicant:           | ACTION ELECTRONICS CO., LTD.<br>2480, TINGKAT PERUSAHAAN ENAM, PRAI FREE TRADE ZONE, 13600, PERAI, PENANG, MALAYSIA                             |
| Manufacturer1:       | ACTION INDUSTRIES (M) SDN. BHD.<br>2480, TINGKAT PERUSAHAAN ENAM, PRAI FREE TRADE ZONE, 13600, PERAI, PENANG, MALAYSIA                          |
| Manufacturer2:       | ACTION ASIA(SHENZHEN) CO., LTD<br>DeDe industrial Park, Jian'an Road, High-Tech industrial Park, Fuyong Town, Bao'an District, Shenzhen, China. |
| Product Description: | 9" Headrest Monitor with DVD Player                                                                                                             |
| Brand Name:          | N/A                                                                                                                                             |
| Model Number:        | HRDA0902, AVXMTG9HD                                                                                                                             |
| Serial Number:       | N/A                                                                                                                                             |
| File Number:         | ES150804031E                                                                                                                                    |
| Date of Test:        | August 05, 2015 to August 11, 2014                                                                                                              |

### We hereby certify that:

The above equipment was tested by SHENZHEN EMTEK CO., LTD. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10:2013 and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits of FCC Rules Part 15.239.

The test results of this report relate only to the tested sample identified in this report.

Date of Test : August 05, 2015 to August 11, 2014

Prepared by :   
Doris Su/Editor

Reviewer :   
Joe Xia /Supervisor

Approve & Authorized Signer :   
Lisa Wang/Manager

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## **1. GENERAL INFORMATION**

### **1.1 Product Description**

A major technical descriptions of EUT is described as following:

- A). Operation Frequency: 88.1MHz~107.9MHz
- B). Modulation: FM
- C). Number of Channel: 7 channel
- D). Frequency list: 88.1MHz, 88.5MHz, 88.9MHz, 106.7MHz, 107.1MHz, 107.5MHz, 107.9MHz
- C). Antenna Type: Monopole Antenna
- D). Power Supply: DC 12V

### **1.2 Related Submittal(s) / Grant (s)**

This submittal(s) (test report) is intended for FCC ID: ATI9R3HRDA0902 filing to comply with Section 15.239 of the FCC Part 15, Subpart C Rules.

### **1.3 Test Methodology**

Both conducted and radiated testing was performed according to the procedures in ANSI C63.10:2013. Radiated testing was performed at an antenna to EUT distance 3 meters.

### **1.4 Special Accessories**

Not available for this EUT intended for grant.

### **1.5 Equipment Modifications**

Not available for this EUT intended for grant.

## 1.6 Test Facility

|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Site Description<br>EMC Lab. | : Accredited by CNAS, 2013.10.29<br>The certificate is valid until 2016.10.28<br>The Laboratory has been assessed and proved to be in compliance with CNAS-CL01: 2006(identical to ISO/IEC17025: 2005)<br>The Certificate Registration Number is L2291<br><br>Accredited by TUV Rheinland Guangzhou, 2010.10.25<br>The Laboratory has been assessed according to the requirements ISO/IEC 17025<br><br>Accredited by FCC, April 17, 2013<br>The Certificate Registration Number is 406365.<br><br>Accredited by Industry Canada, March 5, 2010<br>The Certificate Registration Number is 4480A-2. |
| Name of Firm                 | : SHENZHEN EMTEK CO., LTD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Site Location                | : Bldg 69, Majialong Industry Zone,<br>Nanshan District, Shenzhen, Guangdong, China                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

## 2. System Test Configuration

### 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 which intends to maximize its emission characteristics in a continuous normal application.

### 2.2 EUT Exercise

The Transmitter was operated in the normal operating mode. The Tx frequency was 88.1MHz~107.9MHz.

### 2.3 Test Procedure

#### 2.3.1 Conducted Emissions (Not apply in the report)

The EUT is placed on a turn table which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.10-2013, Conducted emissions from the EUT measured in the **frequency range between 0.15 MHz and 30MHz** using **CISPR Quasi-Peak and average detector mode**.

#### 2.3.2 Radiated Emissions

Below 30MHz:

The EUT is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna (loop antenna). The Antenna should be positioned with its plane vertical at the specified distance from the EUT and rotated about its vertical axis for maximum response at each azimuth about the EUT. The center of the loop shall be 1 m above the ground. For certain applications, the loop antenna plane may also need to be positioned horizontally at the specified distance from the EUT.

Above 30MHz:

The EUT is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H).

Above 1GHz:

The EUT is placed on a turntable 1.5 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H).

## 2.4 Limitation

### (1) Radiated Emission

- (b) The field strength of any emissions within the permitted 200kHz band shall not exceed 250 microvolts/meter at 3 meters, The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in section 15.35 for limiting peak emissions apply.
- (c) The field strength of any emissions radiated on any frequency outside of the specified 200KHz band shall not exceed the general radiated emission limits in Section 15.209.

Remark: The limit for average field strength dBuv/m for the fundamental frequency=48.0 dBuv/m.  
And the limit for peak field strength dBuv/m for the fundamental frequency=68.0 dBuv/m.

Intentional Radiators general limit).as below.

| Frequency<br>(MHz) | Field strength<br>$\mu\text{V/m}$ | Distance(m) | Field strength at 3m<br>$\text{dB}\mu\text{V/m}$ |
|--------------------|-----------------------------------|-------------|--------------------------------------------------|
| 1.705-30           | 30                                | 30          | 69.54                                            |
| 30-88              | 100                               | 3           | 40                                               |
| 88-216             | 150                               | 3           | 43.5                                             |
| 216-960            | 200                               | 3           | 46                                               |
| Above 960          | 500                               | 3           | 54                                               |

### (2) Occupied Bandwidth

- (a) Emissions from the intentional radiator shall be confined within a band 200kHz wide centered on the operation frequency; The 200kHz band shall lie wholly within the frequency range of 88.1MHz~107.9MHz.

## 2.5 Configuration of Tested System

**Fig. 2-1 Configuration of Tested System**



**Table 2-1 Equipment Used in Tested System**

| Item | Equipment                          | Mfr/Brand | Model/Type No.      | FCC ID         | Note              |
|------|------------------------------------|-----------|---------------------|----------------|-------------------|
| 1.   | 9" Headrest Monitor with DVD Playe | N/A       | HRDA0902, AVXMTG9HD | ATI9R3HRDA0902 | <i><b>EUT</b></i> |
| 2.   | iPhone                             | Apple     | iPhone 5/A1526      | BCG-E2694A     |                   |

**Note:**

- (1) Unless otherwise denoted as EUT in 『Remark』 column , device(s) used in tested system is a support equipment.

### 3. Summary Of Test Results

| <b>FCC Rules</b> | <b>Description Of Test</b> | <b>Result</b> |
|------------------|----------------------------|---------------|
| § 15.239         | Radiated Emission          | Pass          |
| § 15.209         | Band Edge                  | Pass          |
| § 15.239         | Bandwidth Test             | Pass          |

### 4. Description of test modes

The EUT has been tested under normal operating condition.

Three channels of EUT (the lowest channel, the middle channel and the highest channel) have been chosen for testing under Normal Operating condition. In this report, all the measured datum of the three channels have been reported. No software used to control the EUT for staying in continuous transmitting mode for testing.

1. For lowest channel : 88.1MHz
2. For middle channel : 106.7 MHz
3. For highest channel: 107.9MHz

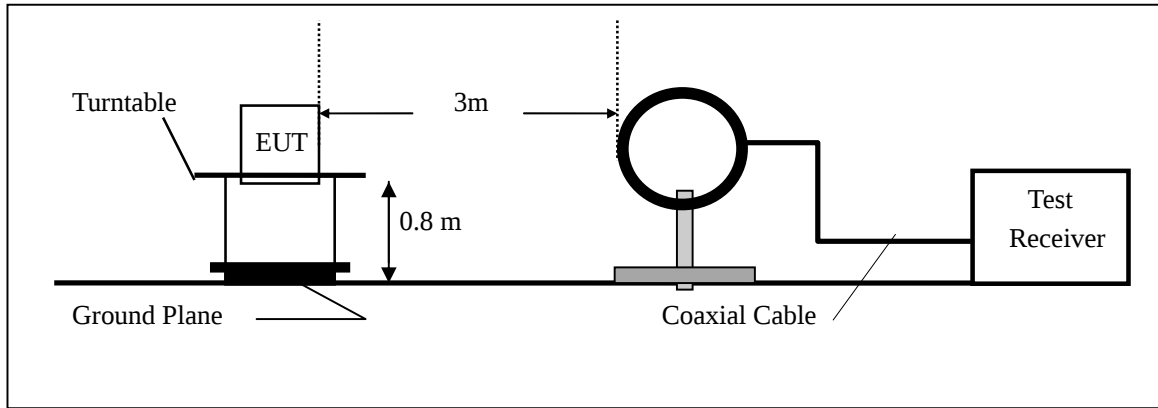
## **5. Radiated Emission and Band Edge Test**

### **5.1 Measurement Procedure**

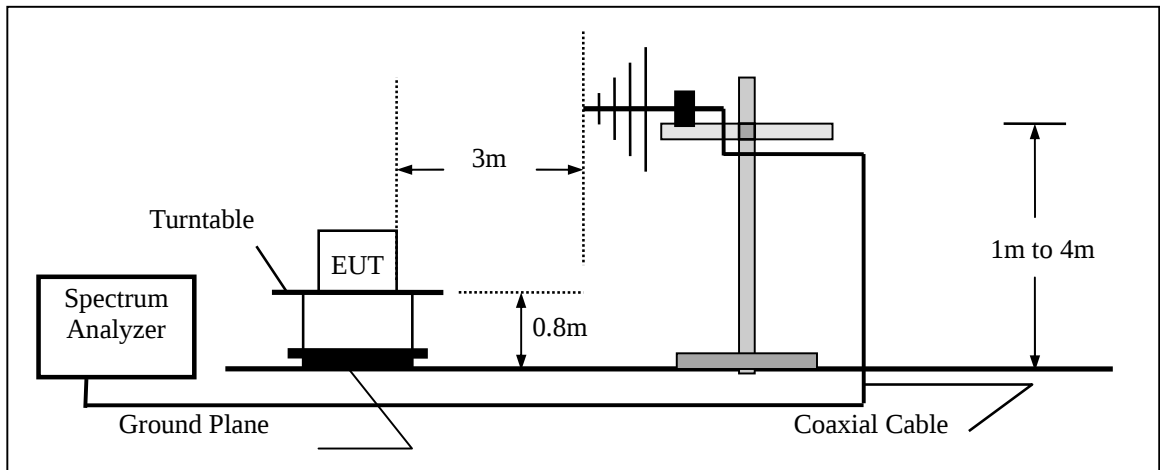
1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
4. Repeat above procedures until all frequency measured were complete.

## 5.2 Test SET-UP (Block Diagram of Configuration)

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



(B) Radiated Emission Test Set-Up, Frequency Below 1000MHz

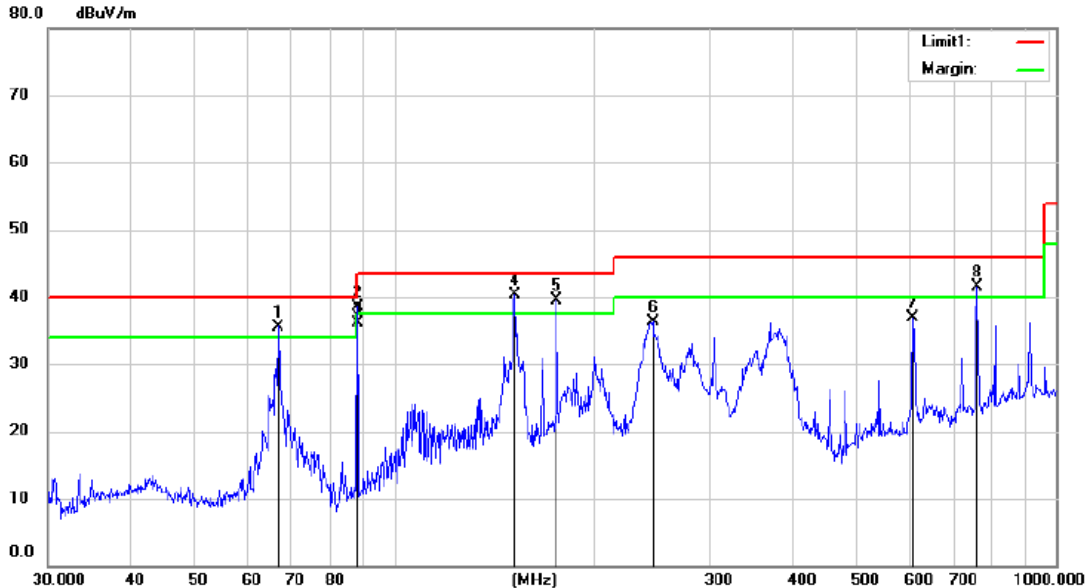


## 5.3 Measurement Equipment Used:

| Test Site # 1     |                 |              |               |           |           |
|-------------------|-----------------|--------------|---------------|-----------|-----------|
| EQUIPMENT TYPE    | MFR             | MODEL NUMBER | SERIAL NUMBER | LAST CAL. | CAL DUE.  |
| EMI Test Receiver | Rohde & Schwarz | ESU          | 1302.6005.26  | 5/16/2015 | 5/16/2016 |
| Pre-Amplifier     | HP              | 8447D        | 2944A07999    | 5/16/2015 | 5/16/2016 |
| Bilog Antenna     | Schwarzbeck     | VULB9163     | 142           | 5/16/2015 | 5/16/2016 |
| Loop Antenna      | ARA             | PLA-1030/B   | 1029          | 5/16/2015 | 5/16/2016 |

## 5.4 Measurement Result

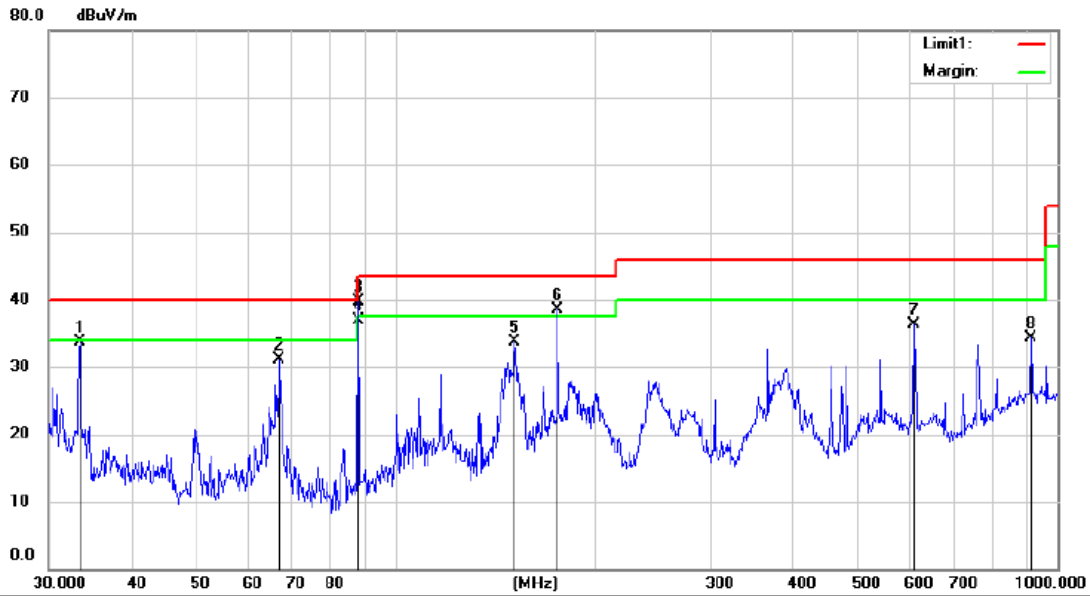
### A. Fundamental and Harmonics Radiated Emission Data



| 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 | Antenna<br>Height<br>cm | Table<br>Degree<br>degree | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|------------|-------------------------|---------------------------|---------|
| 1   | !   | 66.9670      | 53.20                    | -17.60                  | 35.60                      | 40.00           | -4.40      | QP                      |                           |         |
| 2   | !   | 88.0930      | 56.12                    | -17.53                  | 38.59                      | 68.00           | -29.41     | QP                      |                           |         |
| 3   |     | 88.0930      | 53.69                    | -17.53                  | 36.16                      | 48.00           | -11.84     | AVG                     |                           |         |
| 4   | *   | 152.1297     | 58.50                    | -18.24                  | 40.26                      | 43.50           | -3.24      | QP                      |                           |         |
| 5   | !   | 176.2686     | 58.74                    | -19.15                  | 39.59                      | 43.50           | -3.91      | QP                      |                           |         |
| 6   |     | 245.9510     | 49.80                    | -13.52                  | 36.28                      | 46.00           | -9.72      | QP                      |                           |         |
| 7   |     | 607.7866     | 43.80                    | -6.91                   | 36.89                      | 46.00           | -9.11      | QP                      |                           |         |
| 8   | !   | 760.7035     | 45.67                    | -4.09                   | 41.58                      | 46.00           | -4.42      | QP                      |                           |         |

\*:Maximum data x:Over limit !:over margin

Operator: H



Site 3m Chamber #3

Polarization: **Vertical**

Temperature: 24 C

Limit: (RE)FCC PART 15 CLASS C

Power: DC 12V

Humidity: 53 %

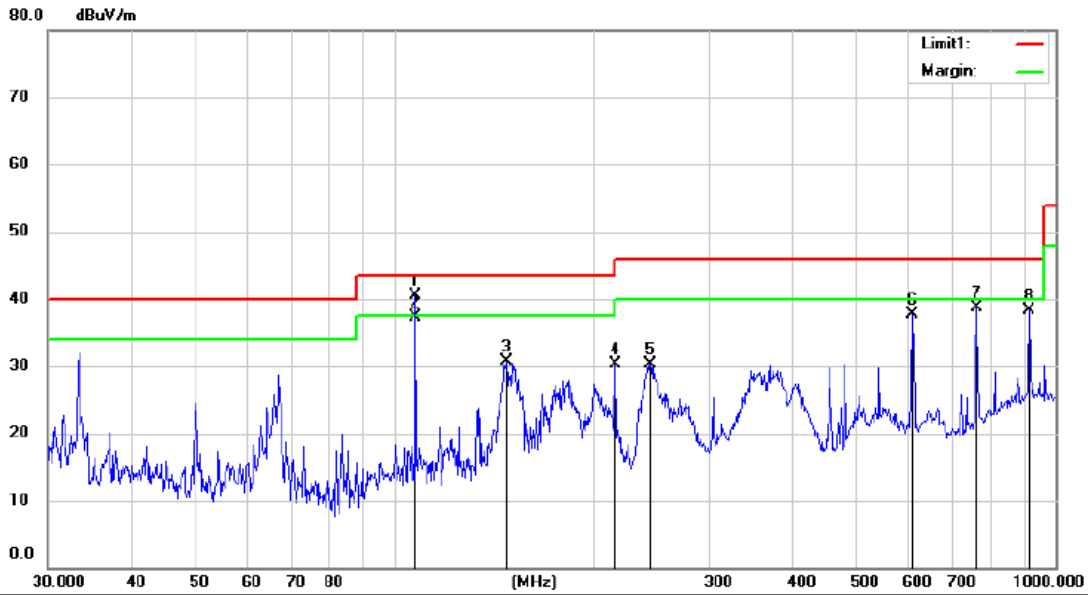
Mode:FM 88.1MHZ

Note:

| 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 | Antenna<br>Height<br>cm | Table<br>Degree<br>degree | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|------------|----------|-------------------------|---------------------------|---------|
| 1   |     | 33.4450      | 48.96                    | -15.31                  | 33.65                      | 40.00           | -6.35      | QP       |                         |                           |         |
| 2   |     | 66.9670      | 48.71                    | -17.60                  | 31.11                      | 40.00           | -8.89      | QP       |                         |                           |         |
| 3   | *   | 88.0330      | 57.26                    | -17.53                  | 39.73                      | 68.00           | -28.27     | QP       |                         |                           |         |
| 4   |     | 88.0330      | 54.48                    | -17.53                  | 36.95                      | 48.00           | -11.05     | AVG      |                         |                           |         |
| 5   |     | 151.5972     | 51.84                    | -18.21                  | 33.63                      | 43.50           | -9.87      | QP       |                         |                           |         |
| 6   | !   | 176.2686     | 57.71                    | -19.15                  | 38.56                      | 43.50           | -4.94      | QP       |                         |                           |         |
| 7   |     | 607.7867     | 43.25                    | -6.91                   | 36.34                      | 46.00           | -9.66      | QP       |                         |                           |         |
| 8   |     | 912.8620     | 34.92                    | -0.64                   | 34.28                      | 46.00           | -11.72     | QP       |                         |                           |         |

\*:Maximum data x:Over limit !:over margin

Operator: H



Site 3m Chamber #3

Polarization: **Vertical**

Temperature: 24 C

Limit: (RE)FCC PART 15 CLASS C

Power: DC 12V

Humidity: 53 %

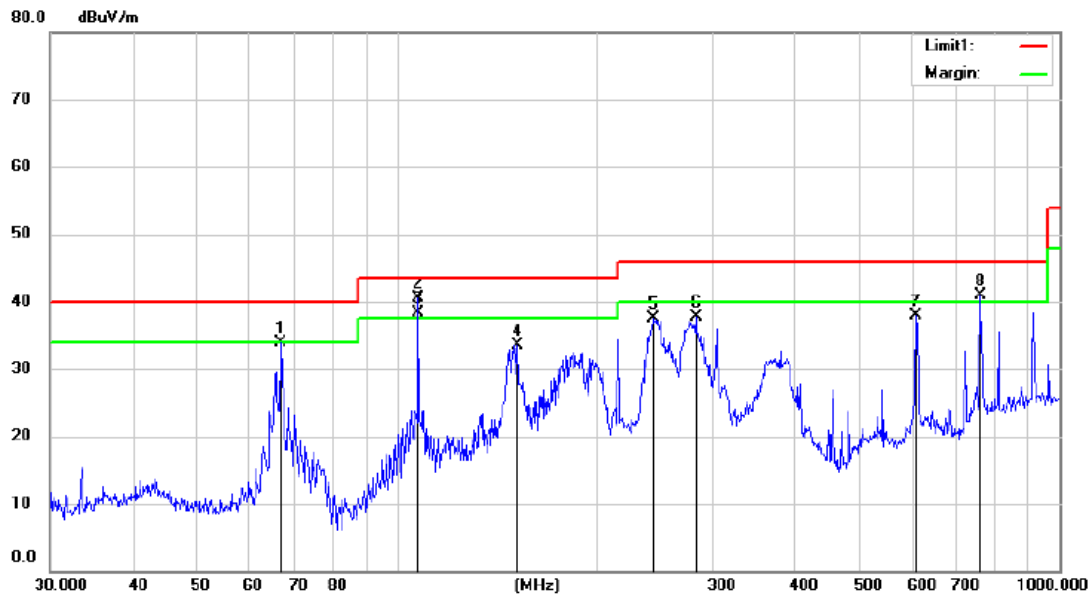
Mode:FM 107.9MHZ

Note:

| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measure-ment | Limit  | Over   | Antenna Height | Table Degree |         |
|-----|-----|----------|---------------|----------------|--------------|--------|--------|----------------|--------------|---------|
|     |     | MHz      | dBuV          | dB             | dBuV/m       | dBuV/m | dB     | cm             | degree       | Comment |
| 1   | *   | 107.8876 | 54.66         | -14.17         | 40.49        | 68.00  | -27.51 | QP             |              |         |
| 2   |     | 107.8877 | 51.41         | -14.17         | 37.24        | 48.00  | -10.76 | AVG            |              |         |
| 3   |     | 147.9214 | 48.80         | -18.03         | 30.77        | 43.50  | -12.73 | QP             |              |         |
| 4   |     | 216.0240 | 46.72         | -16.38         | 30.34        | 46.00  | -15.66 | QP             |              |         |
| 5   |     | 244.2321 | 43.93         | -13.62         | 30.31        | 46.00  | -15.69 | QP             |              |         |
| 6   |     | 607.7867 | 44.69         | -6.91          | 37.78        | 46.00  | -8.22  | QP             |              |         |
| 7   |     | 760.7035 | 42.71         | -4.09          | 38.62        | 46.00  | -7.38  | QP             |              |         |
| 8   |     | 912.8620 | 38.92         | -0.64          | 38.28        | 46.00  | -7.72  | QP             |              |         |

\*:Maximum data x:Over limit !:over margin

Operator: H



Site 3m Chamber #3

Polarization: **Horizontal**

Temperature: 24 C

Limit: (RE)FCC PART 15 CLASS C

Power: DC 12V

Humidity: 53 %

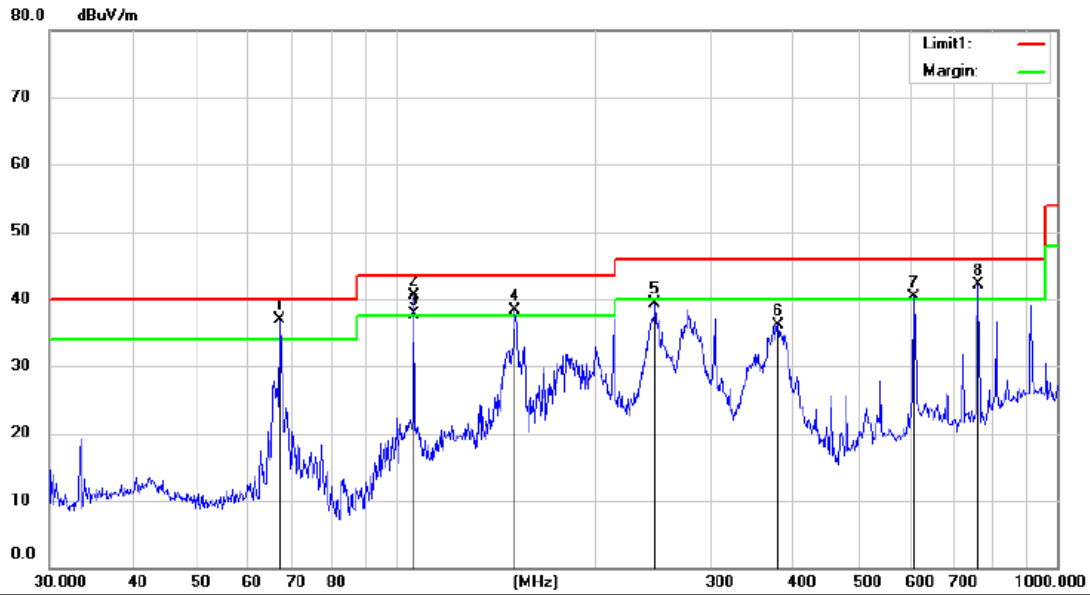
Mode:FM 107.9MHZ

Note:

| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measure-ment | Limit  | Over   | Antenna Height | Table Degree |         |
|-----|-----|----------|---------------|----------------|--------------|--------|--------|----------------|--------------|---------|
|     |     | MHz      | dBuV          | dB             | dBuV/m       | dBuV/m | dB     | cm             | degree       | Comment |
| 1   |     | 66.9670  | 51.43         | -17.60         | 33.83        | 40.00  | -6.17  | QP             |              |         |
| 2   | *   | 107.8877 | 54.61         | -14.17         | 40.44        | 68.00  | -27.56 | QP             |              |         |
| 3   |     | 107.8877 | 52.51         | -14.17         | 38.34        | 48.00  | -9.66  | AVG            |              |         |
| 4   |     | 152.1297 | 51.78         | -18.24         | 33.54        | 43.50  | -9.96  | QP             |              |         |
| 5   |     | 244.2321 | 51.16         | -13.62         | 37.54        | 46.00  | -8.46  | QP             |              |         |
| 6   |     | 282.9852 | 50.50         | -12.76         | 37.74        | 46.00  | -8.26  | QP             |              |         |
| 7   |     | 607.7867 | 44.81         | -6.91          | 37.90        | 46.00  | -8.10  | QP             |              |         |
| 8   | !   | 760.7036 | 44.93         | -4.09          | 40.84        | 46.00  | -5.16  | QP             |              |         |

\*:Maximum data x:Over limit !:over margin

Operator: H



Site 3m Chamber #3

Polarization: **Horizontal**

Temperature: 24 C

Limit: (RE)FCC PART 15 CLASS C

Power: DC 12V

Humidity: 53 %

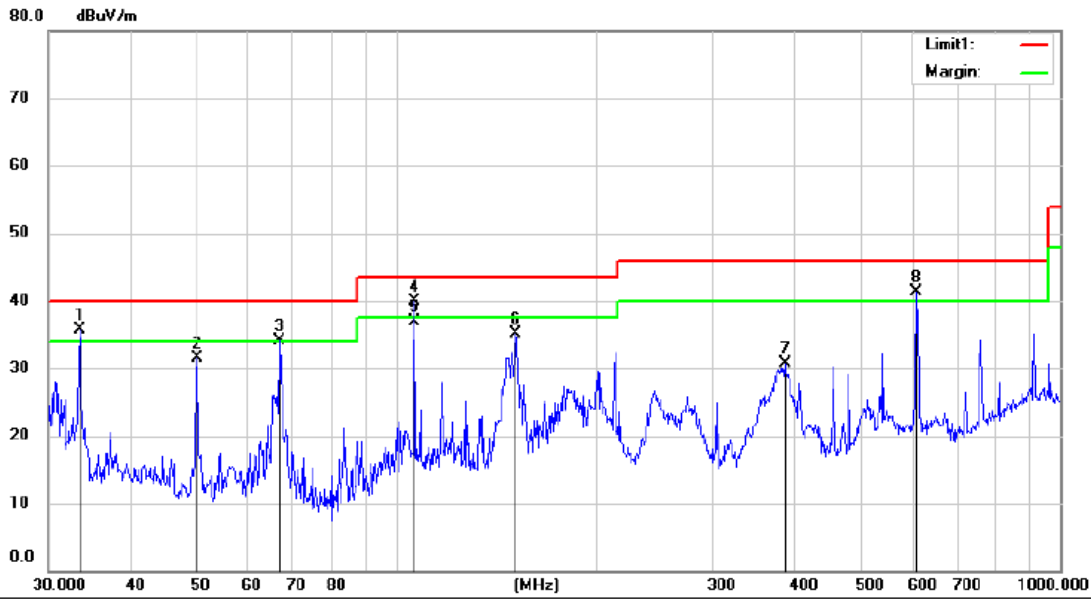
Mode:FM 106.7MHZ

Note:

| 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 | Antenna<br>Height<br>cm | Table<br>Degree | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|------------|----------|-------------------------|-----------------|---------|
| 1   | !   | 66.9670      | 54.46                    | -17.60                  | 36.86                      | 40.00           | -3.14      | QP       |                         |                 |         |
| 2   | *   | 106.7587     | 54.76                    | -14.16                  | 40.60                      | 68.00           | -27.40     | QP       |                         |                 |         |
| 3   |     | 106.7587     | 51.85                    | -14.16                  | 37.69                      | 48.00           | -10.31     | AVG      |                         |                 |         |
| 4   | !   | 151.5972     | 56.60                    | -18.21                  | 38.39                      | 43.50           | -5.11      | QP       |                         |                 |         |
| 5   |     | 246.8150     | 52.72                    | -13.48                  | 39.24                      | 46.00           | -6.76      | QP       |                         |                 |         |
| 6   |     | 378.5842     | 46.07                    | -10.05                  | 36.02                      | 46.00           | -9.98      | QP       |                         |                 |         |
| 7   | !   | 607.7867     | 47.12                    | -6.91                   | 40.21                      | 46.00           | -5.79      | QP       |                         |                 |         |
| 8   | !   | 760.7035     | 46.12                    | -4.09                   | 42.03                      | 46.00           | -3.97      | QP       |                         |                 |         |

\*:Maximum data x:Over limit !:over margin

Operator: H



Site 3m Chamber #3

Polarization: **Vertical**

Temperature: 24 C

Limit: (RE)FCC PART 15 CLASS C

Power: DC 12V

Humidity: 53 %

Mode:FM 106.7MHZ

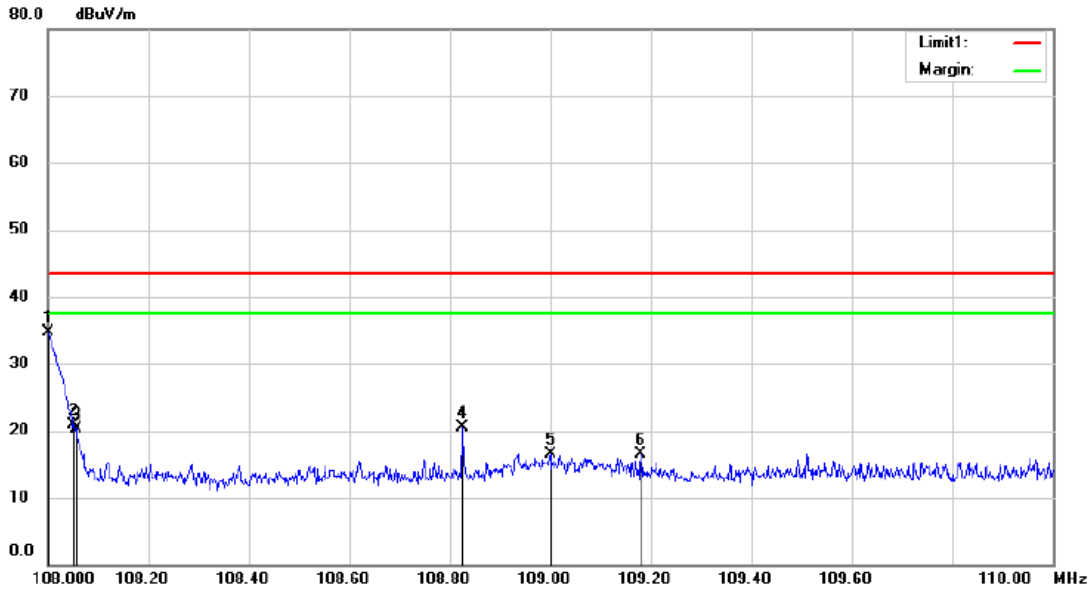
Note:

| 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 | Antenna<br>Height<br>cm | Table<br>Degree<br>degree | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|------------|-------------------------|---------------------------|---------|
| 1   | !   | 33.4450      | 50.97                    | -15.31                  | 35.66                      | 40.00           | -4.34      | QP                      |                           |         |
| 2   |     | 50.2324      | 47.34                    | -15.82                  | 31.52                      | 40.00           | -8.48      | QP                      |                           |         |
| 3   | !   | 66.9670      | 51.72                    | -17.60                  | 34.12                      | 40.00           | -5.88      | QP                      |                           |         |
| 4   | *   | 106.7587     | 54.03                    | -14.16                  | 39.87                      | 68.00           | -28.13     | QP                      |                           |         |
| 5   |     | 106.7587     | 50.99                    | -14.16                  | 36.83                      | 48.00           | -11.17     | AVG                     |                           |         |
| 6   |     | 151.5972     | 53.33                    | -18.21                  | 35.12                      | 43.50           | -8.38      | QP                      |                           |         |
| 7   |     | 385.2804     | 40.48                    | -9.70                   | 30.78                      | 46.00           | -15.22     | QP                      |                           |         |
| 8   | !   | 607.7867     | 48.19                    | -6.91                   | 41.28                      | 46.00           | -4.72      | QP                      |                           |         |

\*:Maximum data x:Over limit !:over margin

Operator: H

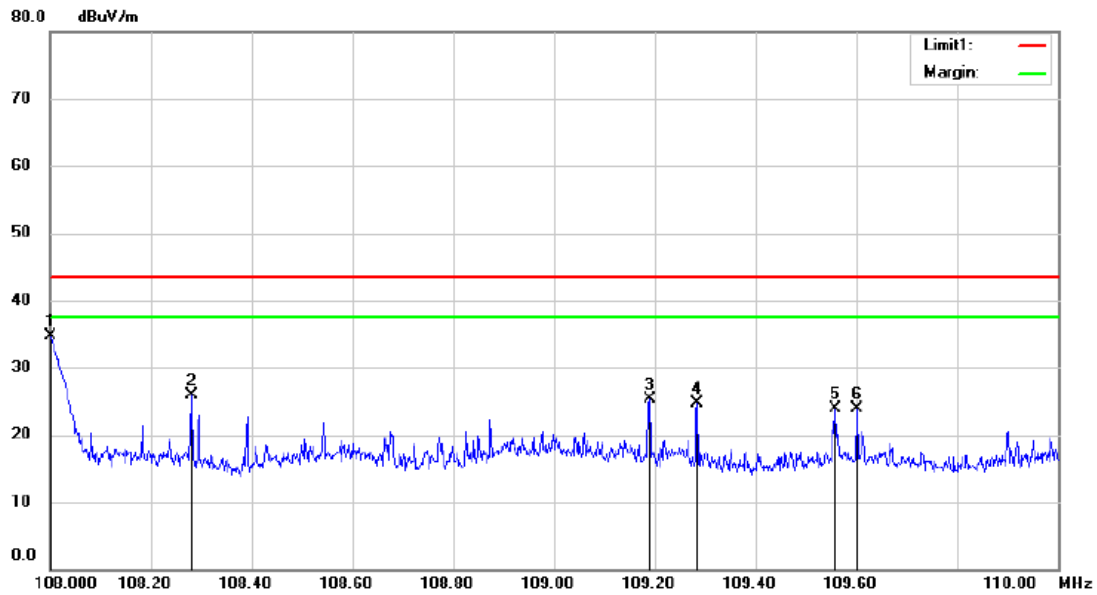
## B. Band Edge Data



| 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 | Antenna<br>Height<br>cm | Table<br>Degree | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|------------|----------|-------------------------|-----------------|---------|
| 1   | *   | 108.0000     | 48.90                    | -14.17                  | 34.73                      | 43.50           | -8.77      | QP       |                         |                 |         |
| 2   |     | 108.0520     | 35.12                    | -14.17                  | 20.95                      | 43.50           | -22.55     | QP       |                         |                 |         |
| 3   |     | 108.0560     | 34.57                    | -14.17                  | 20.40                      | 43.50           | -23.10     | QP       |                         |                 |         |
| 4   |     | 108.8260     | 34.68                    | -14.20                  | 20.48                      | 43.50           | -23.02     | QP       |                         |                 |         |
| 5   |     | 109.0000     | 30.76                    | -14.20                  | 16.56                      | 43.50           | -26.94     | QP       |                         |                 |         |
| 6   |     | 109.1800     | 30.79                    | -14.20                  | 16.59                      | 43.50           | -26.91     | QP       |                         |                 |         |

\*:Maximum data    x:Over limit    !:over margin

Operator: KK



Site 3m Chamber #3

Polarization: **Vertical**

Temperature: 24 C

Limit: (RE)FCC PART 15 CLASS C

Power:

Humidity: 53 %

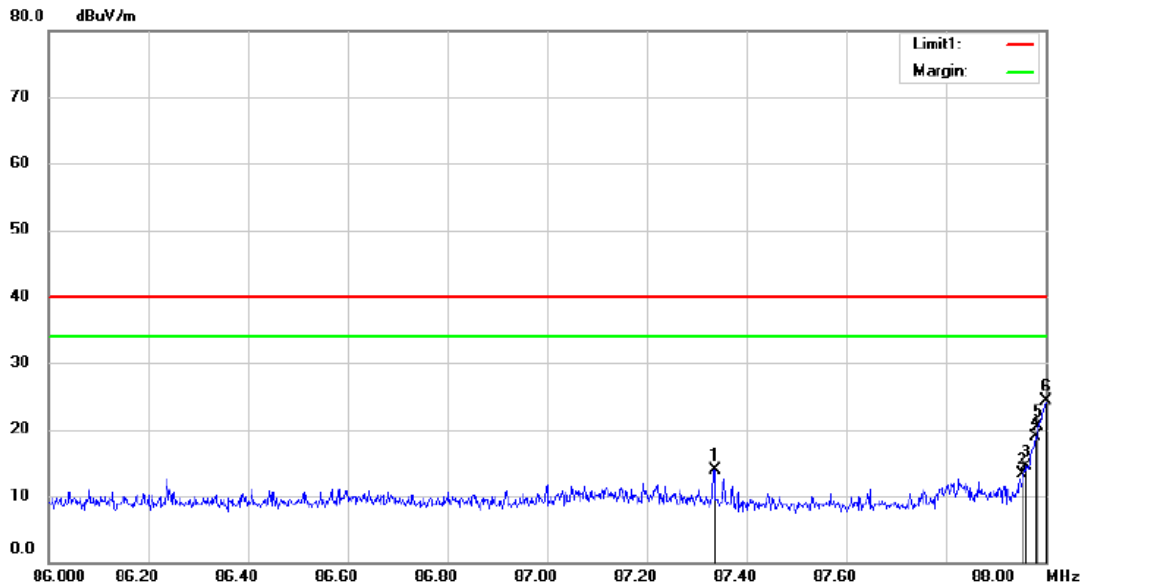
Mode:FM 107.9MHz

Note:

| 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 | Antenna<br>Height<br>cm | Table<br>Degree<br>degree | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|------------|-------------------------|---------------------------|---------|
| 1   | *   | 108.0000     | 48.90                    | -14.17                  | 34.73                      | 43.50           | -8.77      | QP                      |                           |         |
| 2   |     | 108.2800     | 40.06                    | -14.18                  | 25.88                      | 43.50           | -17.62     | QP                      |                           |         |
| 3   |     | 109.1900     | 39.56                    | -14.20                  | 25.36                      | 43.50           | -18.14     | QP                      |                           |         |
| 4   |     | 109.2840     | 38.89                    | -14.21                  | 24.68                      | 43.50           | -18.82     | QP                      |                           |         |
| 5   |     | 109.5580     | 38.17                    | -14.21                  | 23.96                      | 43.50           | -19.54     | QP                      |                           |         |
| 6   |     | 109.6020     | 38.11                    | -14.21                  | 23.90                      | 43.50           | -19.60     | QP                      |                           |         |

\*:Maximum data    x:Over limit    !:over margin

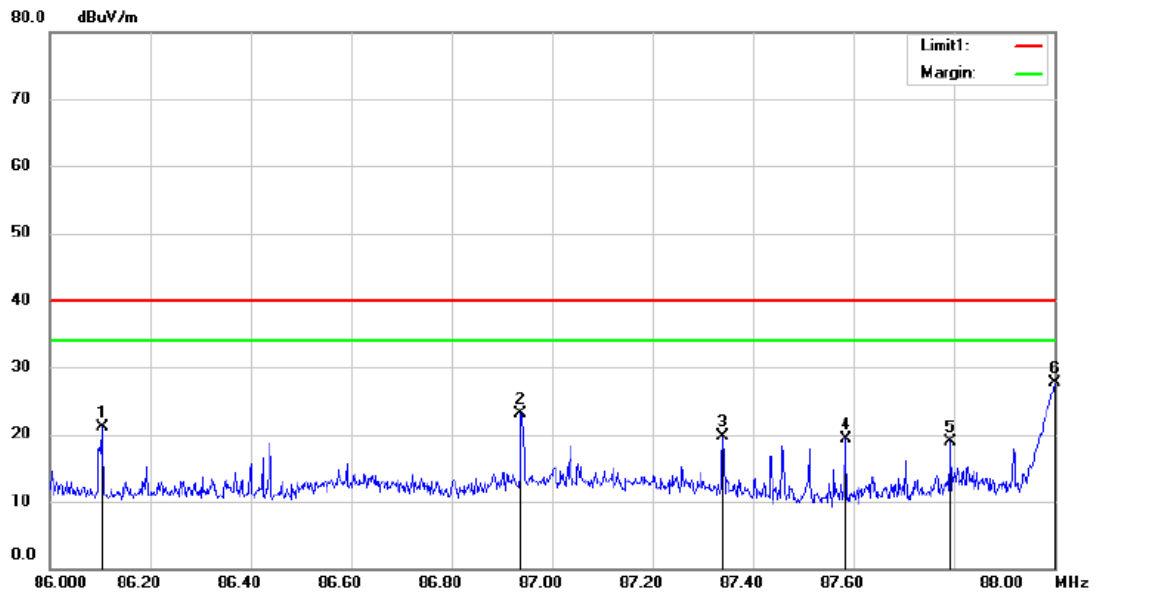
Operator: KK



| 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 | Antenna<br>Height<br>cm | Table<br>Degree<br>degree | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|------------|-------------------------|---------------------------|---------|
| 1   |     | 87.3360      | 31.62                    | -17.76                  | 13.86                      | 40.00           | -26.14     | QP                      |                           |         |
| 2   |     | 87.9540      | 30.79                    | -17.55                  | 13.24                      | 40.00           | -26.76     | QP                      |                           |         |
| 3   |     | 87.9620      | 32.13                    | -17.55                  | 14.58                      | 40.00           | -25.42     | QP                      |                           |         |
| 4   |     | 87.9800      | 36.50                    | -17.55                  | 18.95                      | 40.00           | -21.05     | QP                      |                           |         |
| 5   |     | 87.9860      | 38.12                    | -17.54                  | 20.58                      | 40.00           | -19.42     | QP                      |                           |         |
| 6   | *   | 88.0000      | 41.86                    | -17.54                  | 24.32                      | 40.00           | -15.68     | QP                      |                           |         |

\*:Maximum data x:Over limit l:over margin

Operator: KK



Site 3m Chamber #3

Polarization: **Vertical**

Temperature: 24 C

Limit: (RE)FCC PART 15 CLASS C

Power:

Humidity: 53 %

Mode:FM 88.1MHz

Note:

| 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 | Antenna<br>Height<br>cm | Table<br>Degree<br>degree | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|------------|-------------------------|---------------------------|---------|
| 1   |     | 86.1040      | 39.32                    | -18.15                  | 21.17                      | 40.00           | -18.83     | QP                      |                           |         |
| 2   |     | 86.9380      | 40.97                    | -17.89                  | 23.08                      | 40.00           | -16.92     | QP                      |                           |         |
| 3   |     | 87.3400      | 37.48                    | -17.76                  | 19.72                      | 40.00           | -20.28     | QP                      |                           |         |
| 4   |     | 87.5840      | 36.98                    | -17.67                  | 19.31                      | 40.00           | -20.69     | QP                      |                           |         |
| 5   |     | 87.7940      | 36.45                    | -17.61                  | 18.84                      | 40.00           | -21.16     | QP                      |                           |         |
| 6   | *   | 88.0000      | 45.20                    | -17.54                  | 27.66                      | 40.00           | -12.34     | QP                      |                           |         |

\*:Maximum data    x:Over limit    !:over margin

Operator: KK

## **6. Occupied Bandwidth**

### **6.1 Measurement Procedure**

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Set EUT as normal operation
3. Set SPA Center Frequency = fundamental frequency , RBW = 10KHz, VBW= 30KHz
4. Set SPA Max hold. Mark peak.

Note: The EUT can be connected to iPod Player. The input signal of EUT is controlled by iPod Player. So the volume control of iPod Player was set to maximum during the test. It means that the test was performed with the maximum audio input.

### **6.2 Test SET-UP (Block Diagram of Configuration)**

Same as 5.2 Radiated Emission Measurement.

### **6.3 Measurement Equipment Used:**

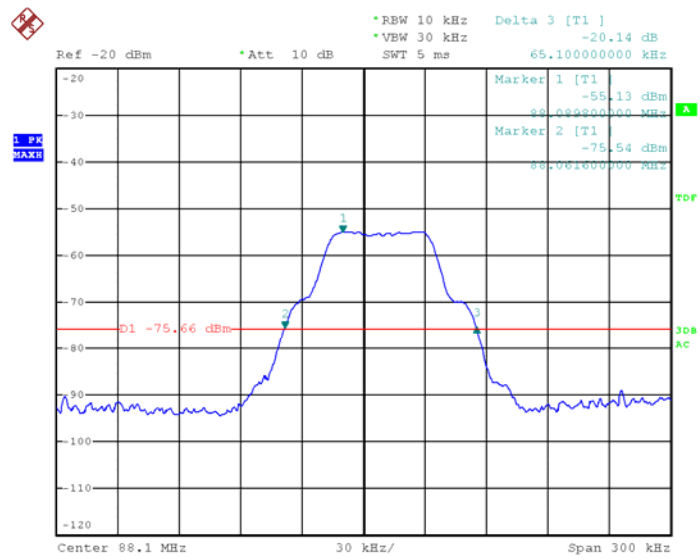
Same as 5.2 Radiated Emission Measurement.

### **6.4 Measurement Results:**

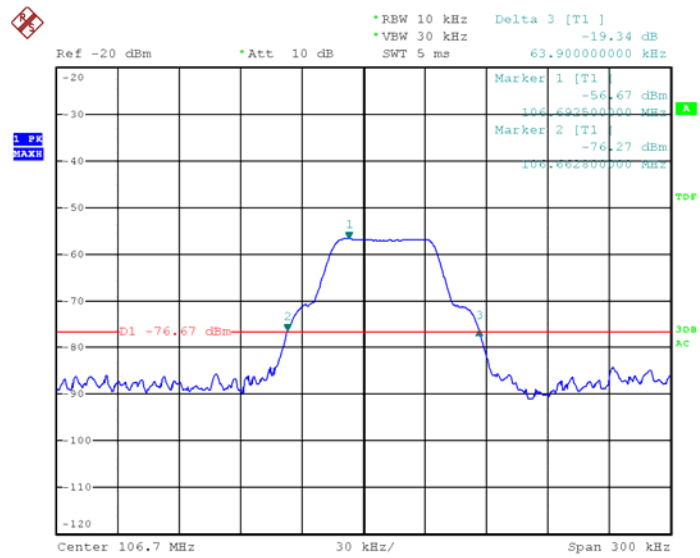
The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in section 15.209.

Refer to attached data chart.

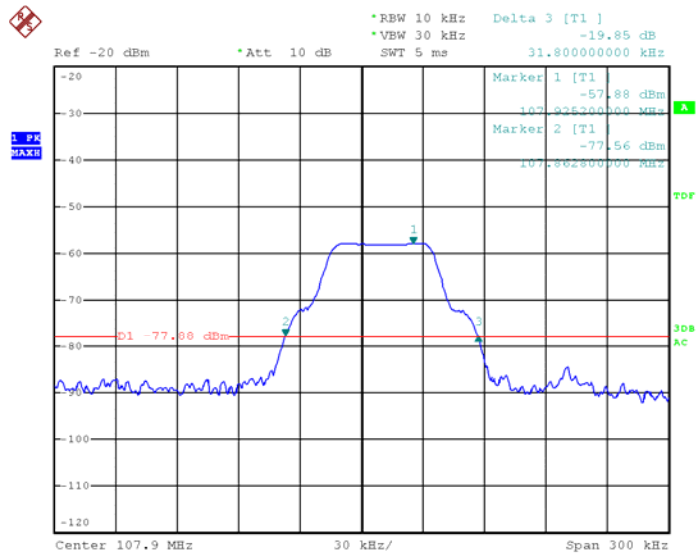
**Band Width Test Data**



Date: 12.AUG.2015 09:46:47



Date: 12.AUG.2015 09:48:59



Date: 12.AUG.2015 09:51:25

## **7. Antenna Application**

### **7.1 Antenna requirement**

The EUT's antenna used a monopole antenna, The EUT'S antenna is met the requirement of FCC part 15C section 15.203

### **7.2 Result**

Monopole Antenna is for FM, the antenna meets the requirement.