

# Test Report of FCC Part 15 C for FCC Certificate

On Behalf of

**KYUNG JIN ELECTRON CO.,LTD**

**Product description:** Wireless Headset

**Model No.:** W-2400

**FCC ID:** XPG-W-2400

**Prepared for:** **KYUNG JIN ELECTRON CO.,LTD**

F/1st blessvill, 200-39, MaJung-Li, GongDo-Eup, AnSung-Si,  
KyungKi-Do, South Korea

**Prepared by:** **Bontek Compliance Testing Laboratory Ltd**

1/F, Block East H-3, OCT Eastern Ind. Zone, Qiaocheng East  
Road, Nanshan, Shenzhen, China

Tel: 86-755-86337020

Fax: 86-755-86337028


**Report No.:** BCT09HR-743E-1

**Issue Date:** August 31, 2009

**Test Date:** August 12~ 25, 2009

**Test by:**

**Reviewed By:**



Kendy Wang



Tony Wu

## TABLE OF CONTENTS

|  |           |
|--|-----------|
| <b>1. GENERAL INFORMATION.....</b>                           | <b>3</b>  |
| 1.1 Product Description for Equipment Under Test (EUT) ..... | 3         |
| 1.2 Related Submittal(s) / Grant (s) .....                   | 3         |
| 1.3 Test Methodology .....                                   | 4         |
| 1.4 Test Facility .....                                      | 4         |
| <b>2. SYSTEM TEST CONFIGURATION .....</b>                    | <b>5</b>  |
| 2.1 EUT Configuration .....                                  | 5         |
| 2.2 EUT Exercise .....                                       | 5         |
| 2.3 General Test Procedures .....                            | 5         |
| 2.4 List of Measuring Equipments Used .....                  | 6         |
| <b>3. SUMMARY OF TEST RESULTS .....</b>                      | <b>7</b>  |
| <b>4. TEST OF CONDUCTED EMISSION .....</b>                   | <b>8</b>  |
| 4.1 Applicable Standard.....                                 | 8         |
| 4.2 Test Setup Diagram .....                                 | 8         |
| 4.3 Test Result.....   | 8         |
| <b>5- BAND EDGES MEASUREMENT .....</b>                       | <b>11</b> |
| 5.1 Limit of Band Edges Measurement.....                     | 11        |
| 5.2 EUT Setup .....  | 11        |
| 5.3 Test Procedure .....                                     | 12        |
| 5.4 Test Result.....   | 12        |
| <b>6- SPURIOUS EMISSIONS.....</b>                            | <b>15</b> |
| 6.1 Limit of Spurious Emissions.....                         | 15        |
| 6.2 EUT Setup .....  | 16        |
| 6.3 Test Procedure .....                                     | 17        |
| 6.4 Spurious Emissions Test Result .....                     | 18        |
| <b>7. ANTENNA REQUIREMENT.....</b>                           | <b>30</b> |
| 7.1 Standard Applicable.....                                 | 30        |
| 7.2 Antenna Connected Construction .....                     | 30        |

# 1. GENERAL INFORMATION

## 1.1 Product Description for Equipment Under Test (EUT)

|                          |  |
|--------------------------|--|
| Applicant:               | <b>KYUNG JIN ELECTRON CO.,LTD</b>  |
| Address of applicant:    | F/1st blessvill, 200-39, MaJung-Li, GongDo-Eup, AnSung-Si, KyungKi-Do, South Korea                     |
| Manufacturer:            | <b>KJ COMMUNICATION(H.K)CO.,LTD</b>  |
| Address of manufacturer: | F/1st blessvill, 200-39, MaJung-Li, GongDo-Eup, AnSung-Si, KyungKi-Do, South Korea                     |
| Product Description:     | Wireless Headset   |
| Trade Name:              | N/A  |
| Model No.:               | W-2400   |
| EUT Description:         | Headset of Wireless Headset  |
| Rated Voltage            | 9 V from inner rechargeable battery and be charged on the base which connect to the adapter            |
| Frequency range          | 2470MHz~2479.75MHz   |
| Number of channels       | 40   |
| Channel Separation       | 250KHz   |
| Product Class:           | Low Power Communication Device Transmitter   |
| Measurement Procedure    | ANSI C63.4-2003  |
| Adaptor Specification:   | AC Adapter :<br>Brand Name: Csec<br>Model No.: CSD0900300U-31<br>Input:AC 120V/60Hz,Output:DC 9V 300mA |

Remark: \* The test data gathered are from the production sample provided by the manufacturer.

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

This submittal(s) is a test report based on the Electromagnetic Interference (EMI) tests performed on the EUT. The EMI measurements were performed according to the measurement procedure described in ANSI C63.4 - 2003.

The tests were performed in order to determine compliance with Section 15.107 and 15.109 under the FCC Rules Part 15 Subpart B and Section 15.207, 15.209,15.249 under the FCC Rules Part 15 Subpart C.

### **1.3 Test Methodology**

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4 - 2003, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz. Radiated testing was performed at an antenna to EUT distance 3 meters.

### **1.4 Test Facility**

All measurement required was performed at laboratory of Bontek Compliance Testing Laboratory Ltd at 1/F, Block East H-3, OCT Eastern Ind. Zone, Qiaocheng East Road, Nanshan, Shenzhen, China.

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

#### **FCC – Registration No.: 338263**

Bontek Compliance Testing Laboratory 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 338263, March 24, 2008.

#### **IC Registration No.: 7631A**

The 3m alternate test site of Bontek Compliance Testing Laboratory Ltd EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration NO.: 7631A on March, 2008.

## **2. SYSTEM TEST CONFIGURATION**

The tests documented in this report were performed in accordance with ANSI C63.4-2003 and FCC CFR 47 Part 15 Subpart C.

### **2.1 EUT Configuration**

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

### **2.2 EUT Exercise**

The calibrated antennas used to sample the radiated field strength are mounted on a non-conductive, motorized antenna mast 3 or 10 meters from the leading edge of the turntable.

### **2.3 General Test Procedures**

**Conducted Emissions** The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 7.1 of ANSI C63.4-2003. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak detector mode.

**Radiated Emissions** The EUT is placed on a turntable, which is 0.8 m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 13.1.4.1 of ANSI C63.4-2003.

## 2.4 List of Measuring Equipments Used

| Items | Equipment                             | Manufacturer        | Model No. | Serial No.     | Last Cal  | Calibration Period |
|-------|---------------------------------------|---------------------|-----------|----------------|-----------|--------------------|
| 1     | EMI Test Receiver                     | R&S                 | ESCI      | 100687         | 2009-2-22 | 1 Year             |
| 2     | EMI Test Receiver                     | R&S                 | ESPI      | 100097         | 2009-2-22 | 1 Year             |
| 3     | Amplifier                             | HP                  | 8447D     | 1937A024<br>92 | 2009-2-22 | 1 Year             |
| 4     | TRILOG<br>Broadband Test-<br>Antenna  | SCHWARZBECK         | VULB9163  | 9163-324       | 2009-2-22 | 1 Year             |
| 5     | 3 phase Artificial<br>Mains (L.I.S.N) | SCHWARZBECK         | NSLK 8128 | 8128247        | 2009-3-31 | 1 Year             |
| 6     | Horn Antenna                          | SCHWARZBECK         | BBHA9120A | D69250         | 2009-2-27 | 1 Year             |
| 7     | High Field Biconical<br>Antenna       | ELECTRO-<br>METRICS | EM-6913   | 166            | 2008-9-04 | 1 Year             |
| 8     | Log Periodic<br>Antenna               | ELECTRO-<br>METRICS | EM-6950   | 811            | 2008-9-04 | 1 Year             |
| 9     | Remote Active<br>Vertical Antenna     | ELECTRO-<br>METRICS | EM-6892   | 304            | 2008-9-04 | 1 Year             |
| 10    | Power Clamp                           | SCHWARZBECK         | MDS-21    | 3812           | 2009-2-22 | 1 Year             |

### 3. SUMMARY OF TEST RESULTS

| EUT<br>Fundamental<br>Frequency | FCC Rules | Description of Test                           | Result |
|---------------------------------|-----------|---|--------|
| 2470MHz-<br>2479.75MHz          | 15.207    | Disturbance Voltage at The Mains<br>Terminals | Pass   |
|                                 | 15.249    | Band Edges Measurement                        | Pass   |
|                                 | 15.249    | Spurious Emission                             | Pass   |
|                                 | 15.203    | Antenna Requirement                           | Pass   |

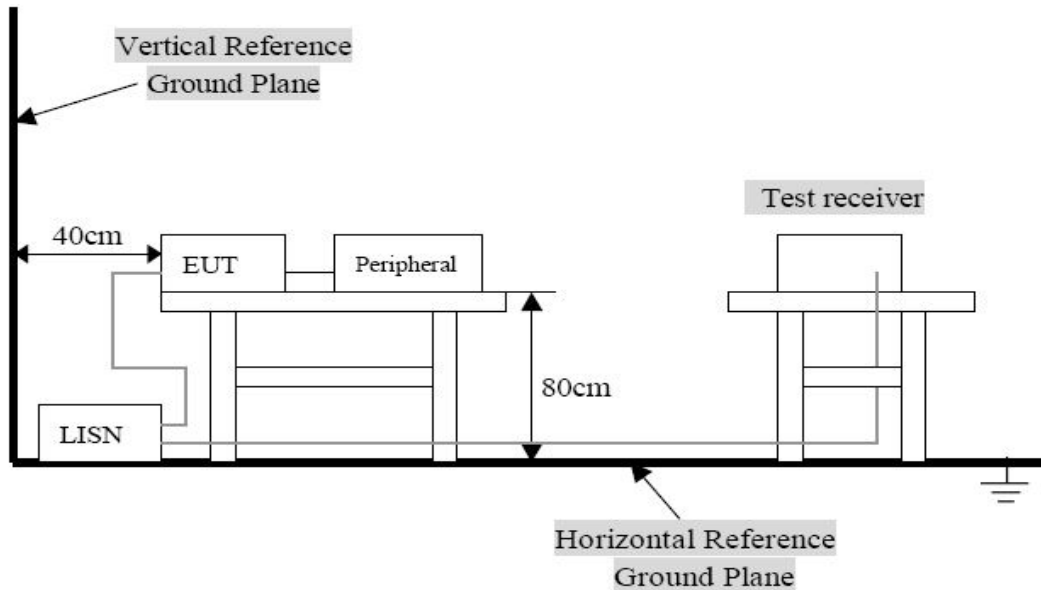
## 4. TEST OF CONDUCTED EMISSION

### 4.1 Applicable Standard

Section 15.207: For a Low-power Radio-frequency Device is designed to be connected to the AC power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed below limits table.

| Frequency Range (MHz) | Limits ( dBuV) |         |
|-----------------------|----------------|---------|
|                       | Quasi-Peak     | Average |
| 0.150~0.500           | 66~56          | 56~46   |
| 0.500~5.000           | 56             | 46      |
| 5.000~30.00           | 60             | 50      |

### 4.2 Test Setup Diagram



Remark: 1. The setup of EUT is according with per ANSI C63.4-2003 measurement procedure. The specification used was with the FCC 15.207 limits.

2. The EUT was charged on the base, and the base was connected to a 120 VAC/ 60Hz power source.

### 4.3 Test Result

|   |                                    |
|---|------------------------------------|
| Temperature ( °C ) : 22~23              | EUT: Wireless Headset              |
| Humidity (%RH ) : 50~54                 | M/N: W-2400                        |
| Barometric Pressure ( mbar ) : 950~1000 | Operation Condition: Charging Mode |

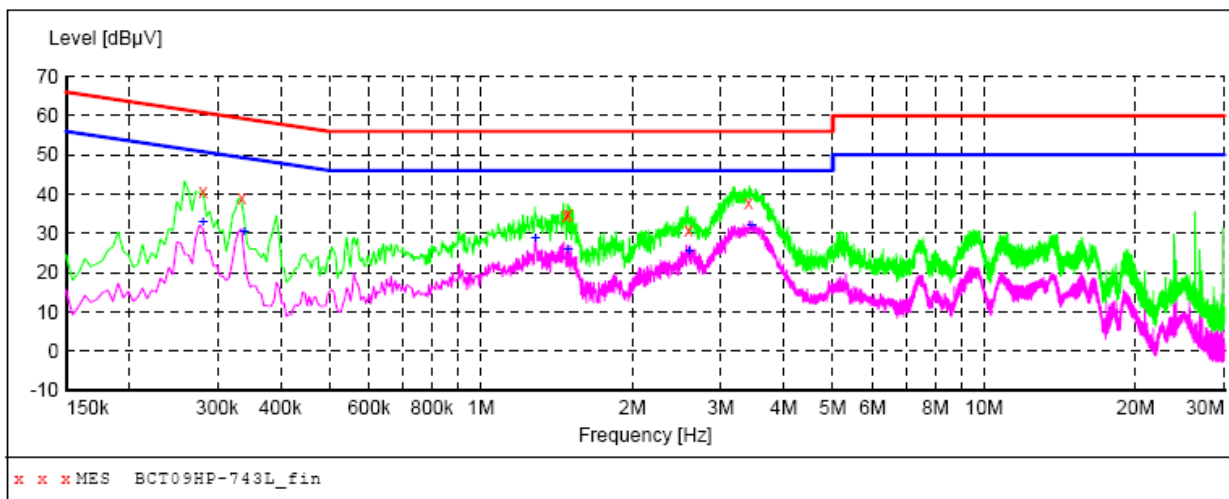
# Bontek Compliance Testing Laboratory Ltd

## Voltage Mains FCC ID

EUT: Wireless Headset  
Manufacturer: BCT  
Operating Condition: CHARGING  
Test Site: SHIELDED ROOM  
Operator: CHEN  
Test Specification: AC 120V/60Hz  
Comment: L LINE  
Temperature:24 Humiuity:60%

### SCAN TABLE: "Voltage (9K-30M)FIN"

Short Description: 150K-30M Voltage



### MEASUREMENT RESULT: "BCT09HP-743L\_fin"

8/12/2009 11:32

| Frequency<br>MHz | Level<br>dBuV | Transd<br>dB | Limit<br>dBuV | Margin<br>dB | Detector | Line | PE  |
|------------------|---------------|--------------|---------------|--------------|----------|------|-----|
| 0.280500         | 40.70         | 10.6         | 61            | 20.1         | QP       | L1   | GND |
| 0.335000         | 39.00         | 10.6         | 61            | 22.0         | QP       | L1   | GND |
| 1.477500         | 34.40         | 10.2         | 56            | 21.6         | QP       | L1   | GND |
| 1.491000         | 34.80         | 10.2         | 56            | 21.2         | QP       | L1   | GND |
| 2.584500         | 31.00         | 10.2         | 56            | 25.0         | QP       | L1   | GND |
| 3.394500         | 38.00         | 10.3         | 56            | 18.0         | QP       | L1   | GND |

### MEASUREMENT RESULT: "BCT09HP-743L\_fin2"

8/12/2009 11:14

| Frequency<br>MHz | Level<br>dBuV | Transd<br>dB | Limit<br>dBuV | Margin<br>dB | Detector | Line | PE  |
|------------------|---------------|--------------|---------------|--------------|----------|------|-----|
| 0.280500         | 33.00         | 10.6         | 51            | 17.8         | AV       | L1   | GND |
| 0.339000         | 30.50         | 10.5         | 49            | 18.7         | AV       | L1   | GND |
| 1.284000         | 28.90         | 10.2         | 46            | 17.1         | AV       | L1   | GND |
| 1.491000         | 25.90         | 10.2         | 46            | 20.1         | AV       | L1   | GND |
| 2.593500         | 25.70         | 10.2         | 46            | 20.3         | AV       | L1   | GND |
| 3.453000         | 32.30         | 10.3         | 46            | 13.7         | AV       | L1   | GND |

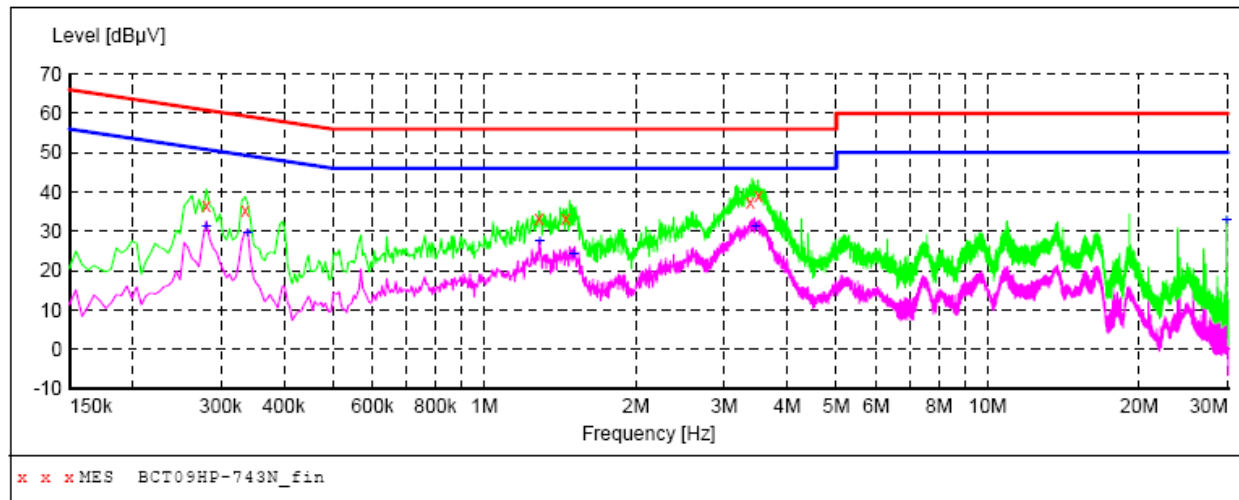
# Bontek Compliance Testing Laboratory Ltd

## Voltage Mains FCC ID

EUT: Wireless Headset  
Manufacturer: BCT  
Operating Condition: CHARGING  
Test Site: SHIELDED ROOM  
Operator: CHEN  
Test Specification: AC 120V/60Hz  
Comment: N LINE  
Temperature:24 Humiuity:60%

### SCAN TABLE: "Voltage (9K-30M)FIN"

Short Description: 150K-30M Voltage



### MEASUREMENT RESULT: "BCT09HP-743N\_fin"

8/12/2009 11:40

| Frequency<br>MHz | Level<br>dBμV | Transd<br>dB | Limit<br>dBμV | Margin<br>dB | Detector | Line | PE  |
|------------------|---------------|--------------|---------------|--------------|----------|------|-----|
| 0.280500         | 36.60         | 10.6         | 61            | 24.2         | QP       | N    | GND |
| 0.334500         | 35.30         | 10.5         | 59            | 24.0         | QP       | N    | GND |
| 1.284000         | 33.30         | 10.2         | 56            | 22.7         | QP       | N    | GND |
| 1.450500         | 33.30         | 10.2         | 56            | 22.7         | QP       | N    | GND |
| 3.372000         | 37.50         | 10.3         | 56            | 18.5         | QP       | N    | GND |
| 3.500000         | 39.00         | 10.3         | 56            | 17.0         | QP       | N    | GND |

### MEASUREMENT RESULT: "BCT09HP-743N\_fin2"

8/12/2009 11:17

| Frequency<br>MHz | Level<br>dBμV | Transd<br>dB | Limit<br>dBμV | Margin<br>dB | Detector | Line | PE  |
|------------------|---------------|--------------|---------------|--------------|----------|------|-----|
| 0.280500         | 31.30         | 10.6         | 51            | 19.5         | AV       | N    | GND |
| 0.339000         | 29.60         | 10.5         | 49            | 19.6         | AV       | N    | GND |
| 1.288500         | 27.70         | 10.2         | 46            | 18.3         | AV       | N    | GND |
| 1.504500         | 24.40         | 10.2         | 46            | 21.6         | AV       | N    | GND |
| 3.457500         | 31.20         | 10.3         | 46            | 14.8         | AV       | N    | GND |
| 29.800500        | 33.00         | 11.1         | 50            | 17.0         | AV       | N    | GND |

## 5- BAND EDGES MEASUREMENT

### 5.1 Limit of Band Edges Measurement

1. In the above emission table, the tighter limit applies at the band edges.
2. As shown in Section 15.35(b), for frequencies above 1000 MHz, the above field strength limits in paragraphs (a) and (b) of this section are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For point-to-point operation under paragraph (b) of this section, the peak field strength shall not exceed 2500 millivolts/meter at 3 meters along the antenna azimuth.

| Frequency (MHz) | Field Strength ( $\mu\text{V/m}$ at 3-meter) | Field Strength ( $\text{dB}\mu\text{V/m}$ at 3-meter) |
|-----------------|--|---|
| 30-88           | 100  | 40  |
| 88-216          | 150  | 43.5  |
| 216-960         | 200  | 46  |
| Above 960       | 500  | 54  |

Note: (1) The tighter limit shall apply at the edge between two frequency bands.

- (2) The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

### 5.2 EUT Setup

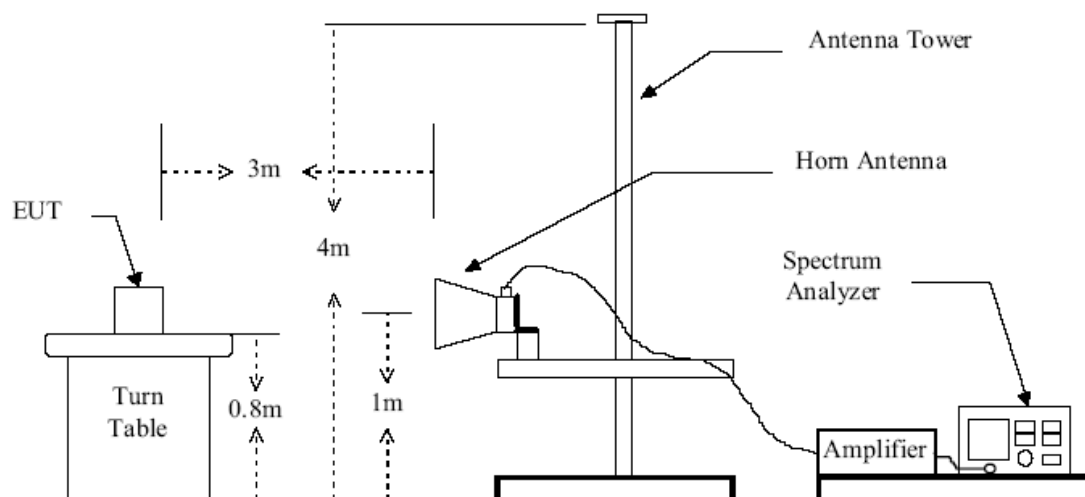


Figure 2 : Frequencies measured above 1 GHz configuration

### 5.3 Test Procedure

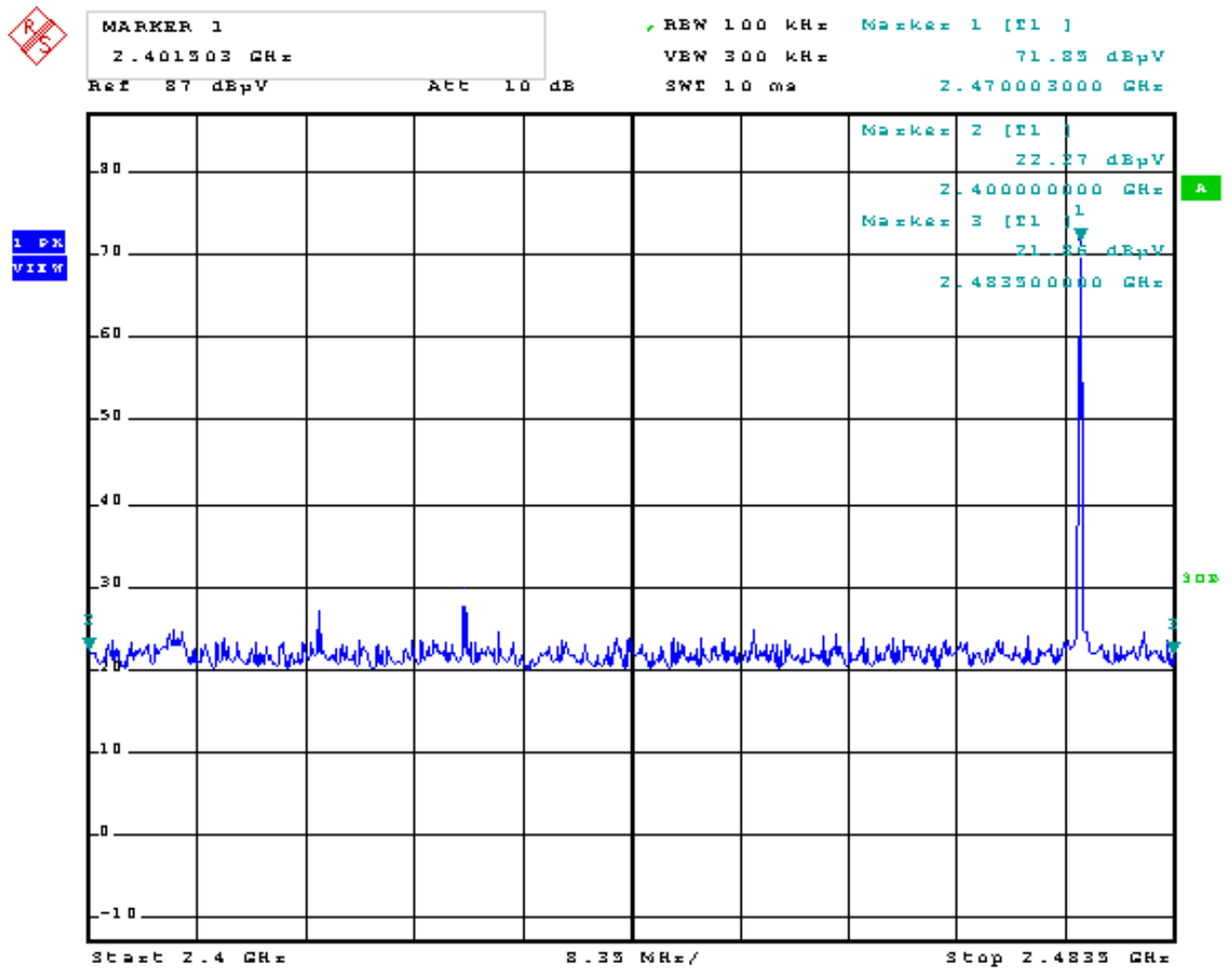
Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

- 1). Configure the EUT according to ANSI C63.4:2003.
- 2). The EUT was placed on the top of the turntable 0.8 meter above ground.
- 3). The receiving antenna was placed 3 meters far away from the turntable.
- 4). The turntable was rotated by 360 degrees to determine the position of the highest radiation.
- 5). The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emission field strength of both horizontal and vertical polarization. For each suspected emission, the antenna tower was scanned (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.

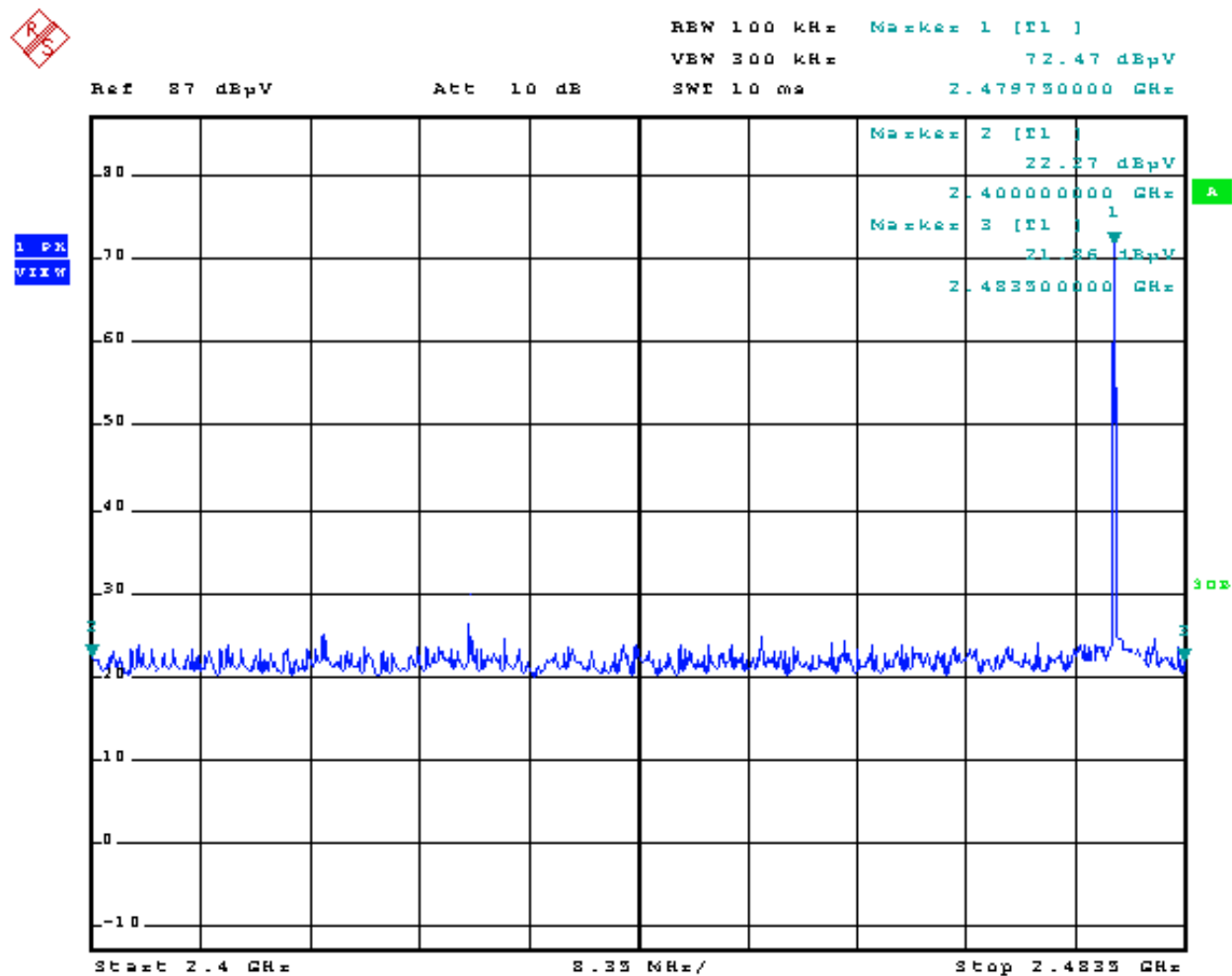
### 5.4 Test Result

|   |  |
|---|--|
| Temperature ( °C ) : 22~23              | EUT: Wireless Headset                        |
| Humidity (%RH ) : 50~54                 | M/N: W-2400                                  |
| Barometric Pressure ( mbar ) : 950~1000 | Operation Condition: Continuous Transmitting |

## Channel 1:



# Channel 40:



## 6- SPURIOUS EMISSIONS

### 6.1 Limit of Spurious Emissions

1. In the section 15.249(a): Except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:
2. Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

| Fundamental Frequency (MHz) | Field Strength of Fundamental Field Strength (mV/m) | Field Strength of Harmonics (µV/m) |
|-----------------------------|---|------------------------------------|
| 902-928 MHz                 | 50  | 500                                |
| 2400 - 2483.5 MHz           | 50  | 500                                |
| 5725 - 5875 MHz             | 50  | 500                                |
| 24.0 - 24.25 GHz            | 250   | 2500                               |

| Frequency (MHz) | Field Strength (µV/m) | Measurement Distance (m) |
|-----------------|-----------------------|--------------------------|
| 30-88           | 100*                  | 3                        |
| 88-216          | 150*                  | 3                        |
| 216-960         | 200*                  | 3                        |
| Above 960       | 500                   | 3                        |

Remark: Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

3. In the above emission table, the tighter limit applies at the band edges.

| Frequency (MHz) | Field Strength (µV/m at 3-meter) | Field Strength (dBµV/m at 3-meter) |
|-----------------|----------------------------------|------------------------------------|
| 30-88           | 100                              | 40                                 |
| 88-216          | 150                              | 43.5                               |
| 216-960         | 200                              | 46                                 |
| Above 960       | 500                              | 54                                 |

## 6.2 EUT Setup

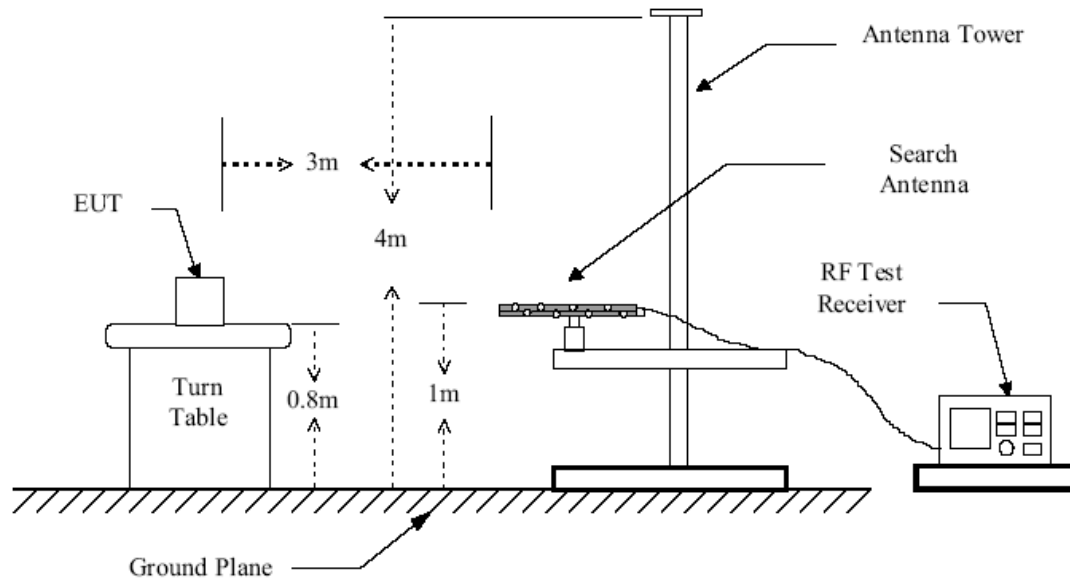


Figure 1 : Frequencies measured below 1 GHz configuration

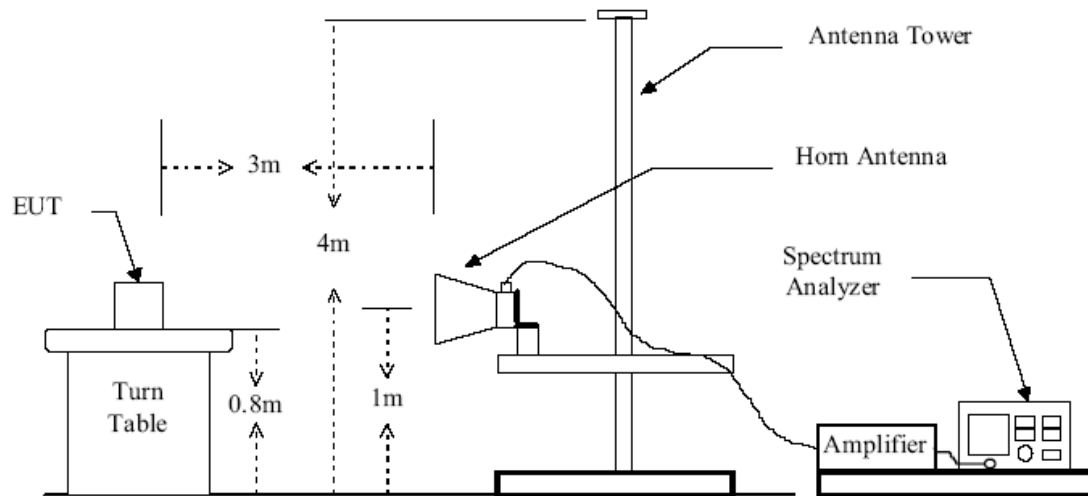


Figure 2 : Frequencies measured above 1 GHz configuration

### **6.3 Test Procedure**

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

- 1). Configure the EUT according to ANSI C63.4:2003.
- 2). The EUT was placed on the top of the turntable 0.8 meter above ground.
- 3). The receiving antenna was placed 3 meters far away from the turntable.
- 4). The turntable was rotated by 360 degrees to determine the position of the highest radiation.
- 5). The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emission field strength of both horizontal and vertical polarization. For each suspected emission, the antenna tower was scanned (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.

## 6.4 Spurious Emissions Test Result

|   |  |
|---|--|
| Temperature ( °C ) : 22~23              | EUT: Wireless Headset                        |
| Humidity (%RH ) : 50~54                 | M/N: W-2400                                  |
| Barometric Pressure ( mbar ) : 950~1000 | Operation Condition: Continuous Transmitting |

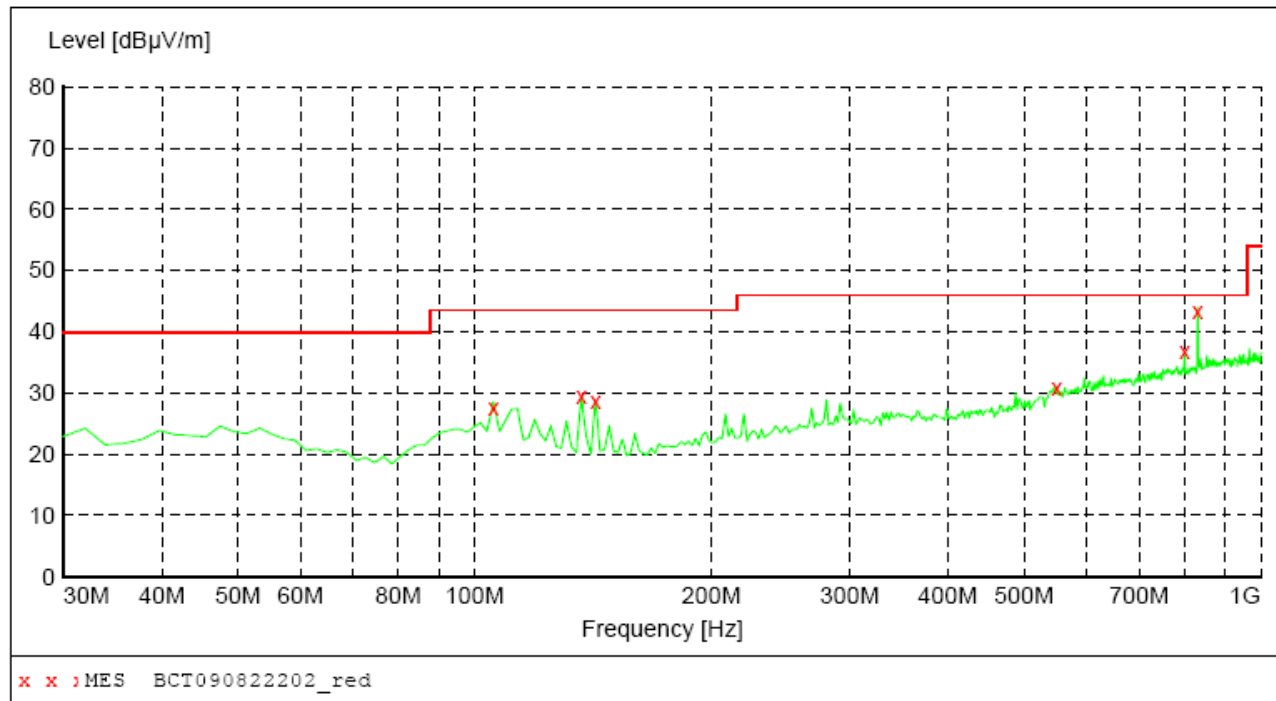
## Spurious Emissions Below 1 GHz

### CHANNEL 1:

EUT: Wireless Headset  
M/N: W-2400  
Operating Condition: Continuous Transmitting  
Test Site: Shielded Room  
Operator: Chen  
Test Specification: AC120V/60Hz

#### ***SWEEP TABLE: "test (30M-1G)"***

| Short Description: |           | Field Strength |            |           |            |
|--------------------|-----------|----------------|------------|-----------|------------|
| Start              | Stop      | Detector       | Meas. Time | IF Bandw. | Transducer |
| Frequency          | Frequency |                |            |           |            |



#### ***MEASUREMENT RESULT: "BCT090822202\_red"***

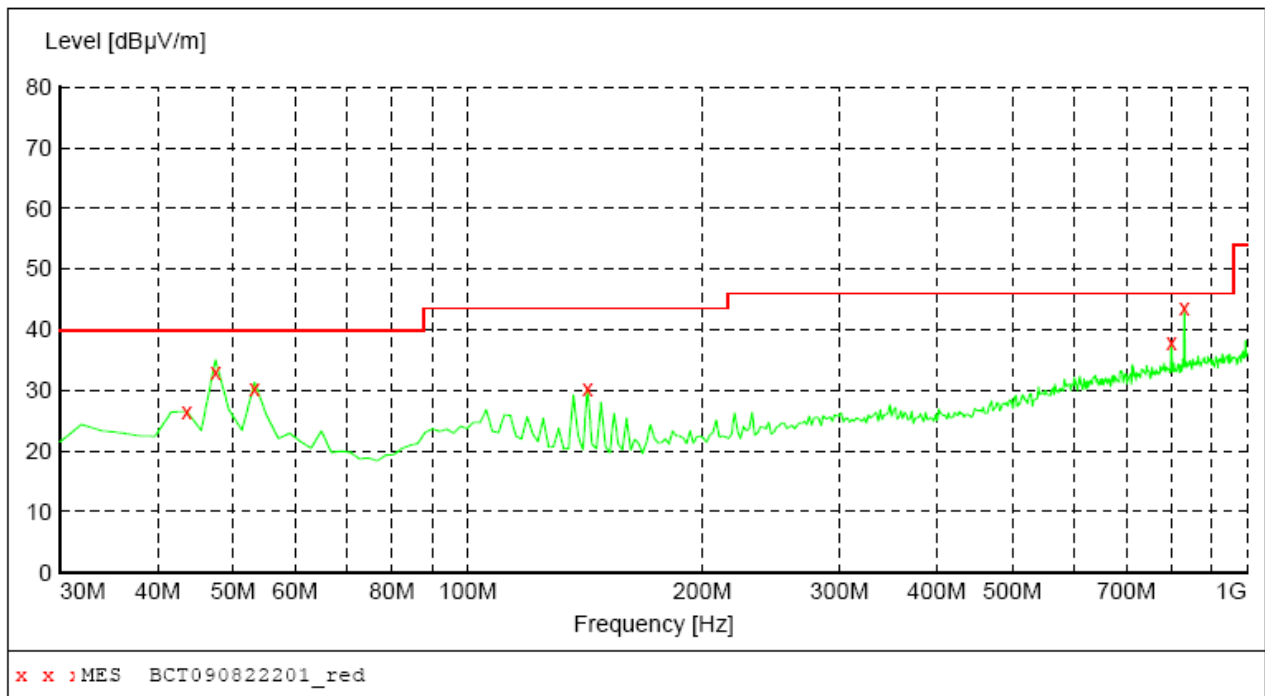
8/22/2009 22:49

| Frequency<br>MHz | Level<br>dBμV/m | Transd<br>dB | Limit<br>dBμV/m | Margin<br>dB | Det. | Height<br>cm | Azimuth<br>deg | Polarization |
|------------------|-----------------|--------------|-----------------|--------------|------|--------------|----------------|--------------|
| 105.660000       | 27.60           | 17.9         | 43.5            | 15.9         | QP   | 300.0        | 0.00           | HORIZONTAL   |
| 136.700000       | 29.50           | 14.1         | 43.5            | 14.0         | QP   | 300.0        | 0.00           | HORIZONTAL   |
| 142.520000       | 28.80           | 14.0         | 43.5            | 14.7         | QP   | 300.0        | 0.00           | HORIZONTAL   |
| 549.920000       | 31.00           | 24.0         | 46.0            | 15.0         | QP   | 100.0        | 0.00           | HORIZONTAL   |
| 800.180000       | 36.80           | 28.0         | 46.0            | 9.2          | QP   | 100.0        | 0.00           | HORIZONTAL   |
| 831.220000       | 43.0            | 28.4         | 46.0            | 3.0          | QP   | 100.0        | 0.00           | HORIZONTAL   |

EUT: Wireless Headset  
M/N: W-2400  
Operating Condition: Continuous Transmitting  
Test Site: Shielded Room  
Operator: Chen  
Test Specification: AC120V/60Hz

**SWEEP TABLE: "test (30M-1G)"**

|                    |           |                |       |        |            |
|--------------------|-----------|----------------|-------|--------|------------|
| Short Description: |           | Field Strength |       |        |            |
| Start              | Stop      | Detector       | Meas. | IF     | Transducer |
| Frequency          | Frequency |                | Time  | Bandw. |            |



**MEASUREMENT RESULT: "BCT090822201\_red"**

8/22/2009 22:43

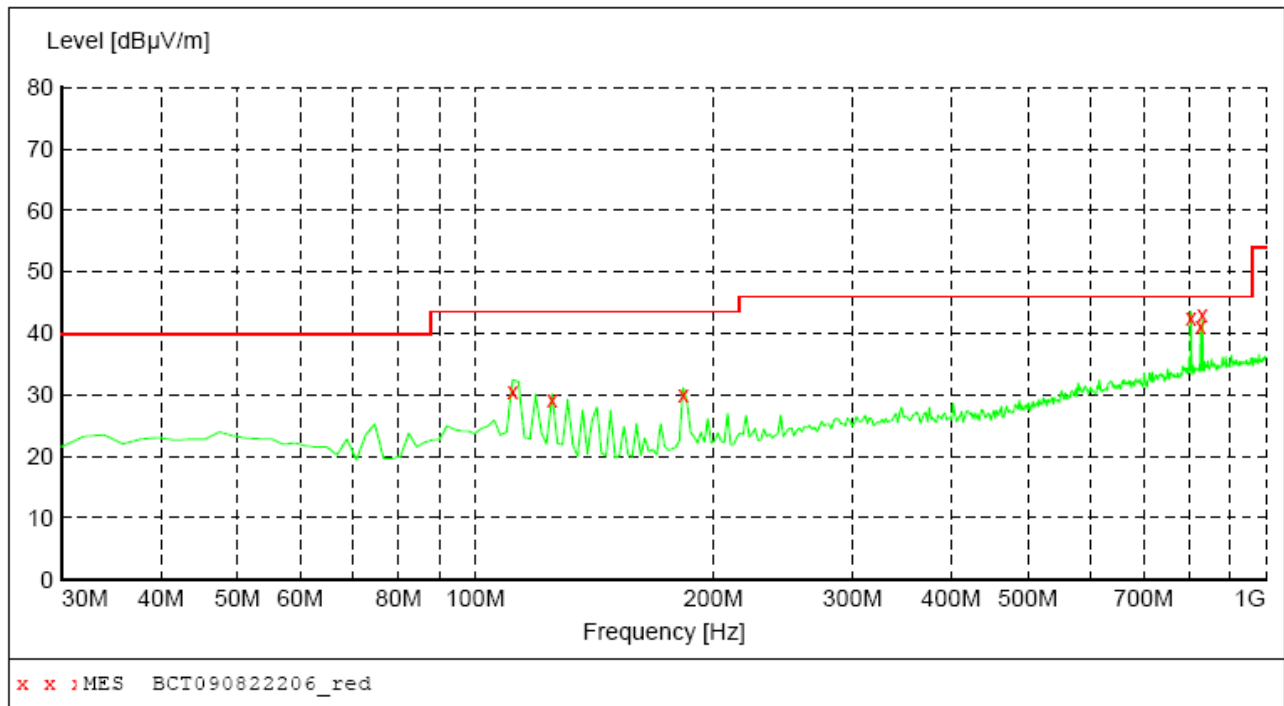
| Frequency<br>MHz | Level<br>dBµV/m | Transd<br>dB | Limit<br>dBµV/m | Margin<br>dB | Det. | Height<br>cm | Azimuth<br>deg | Polarization |
|------------------|-----------------|--------------|-----------------|--------------|------|--------------|----------------|--------------|
| 43.580000        | 26.60           | 16.8         | 40.0            | 13.4         | QP   | 100.0        | 0.00           | VERTICAL     |
| 47.460000        | 33.10           | 16.7         | 40.0            | 6.9          | QP   | 100.0        | 0.00           | VERTICAL     |
| 53.280000        | 30.30           | 16.6         | 40.0            | 9.7          | QP   | 100.0        | 0.00           | VERTICAL     |
| 142.520000       | 30.40           | 14.0         | 43.5            | 13.1         | QP   | 100.0        | 0.00           | VERTICAL     |
| 800.180000       | 37.80           | 28.0         | 46.0            | 8.2          | QP   | 100.0        | 0.00           | VERTICAL     |
| 831.220000       | 42.90           | 28.4         | 46.0            | 3.1          | QP   | 100.0        | 0.00           | VERTICAL     |

**CHANNEL 21:**

EUT: Wireless Headset  
M/N: W-2400  
Operating Condition: Continuous Transmitting  
Test Site: Shielded Room  
Operator: Chen  
Test Specification: AC120V/60Hz

***SWEEP TABLE: "test (30M-1G)"***

| Short Description: |           | Field Strength |       |        |            |
|--------------------|-----------|----------------|-------|--------|------------|
| Start              | Stop      | Detector       | Meas. | IF     | Transducer |
| Frequency          | Frequency |                | Time  | Bandw. |            |



***MEASUREMENT RESULT: "BCT090822206\_red"***

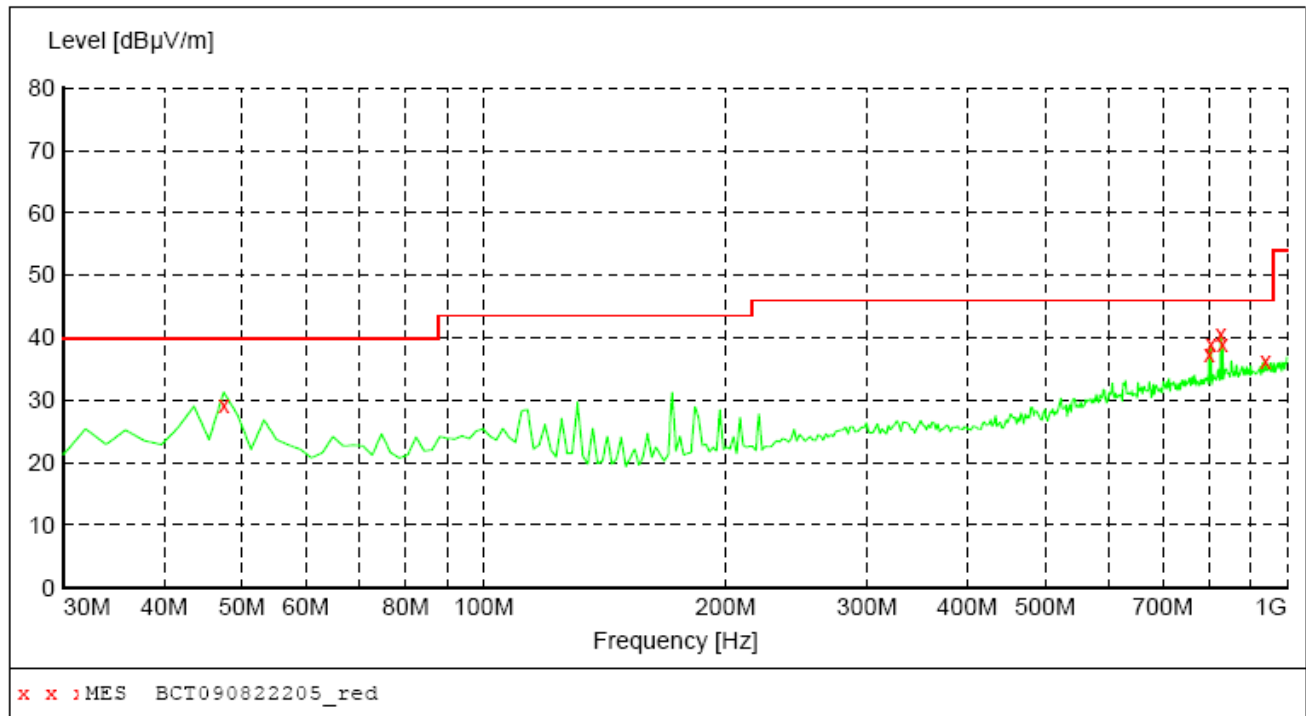
8/22/2009 23:04

| Frequency<br>MHz | Level<br>dBμV/m | Transd<br>dB | Limit<br>dBμV/m | Margin<br>dB | Det. | Height<br>cm | Azimuth<br>deg | Polarization |
|------------------|-----------------|--------------|-----------------|--------------|------|--------------|----------------|--------------|
| 111.480000       | 30.50           | 17.3         | 43.5            | 13.0         | QP   | 300.0        | 0.00           | HORIZONTAL   |
| 125.060000       | 29.20           | 15.2         | 43.5            | 14.3         | QP   | 300.0        | 0.00           | HORIZONTAL   |
| 183.260000       | 30.20           | 16.1         | 43.5            | 13.3         | QP   | 100.0        | 0.00           | HORIZONTAL   |
| 804.060000       | 42.50           | 28.1         | 46.0            | 3.5          | QP   | 100.0        | 0.00           | HORIZONTAL   |
| 827.340000       | 41.20           | 28.4         | 46.0            | 4.8          | QP   | 100.0        | 0.00           | HORIZONTAL   |
| 831.220000       | 43.00           | 28.4         | 46.0            | 3.0          | QP   | 100.0        | 0.00           | HORIZONTAL   |

EUT: Wireless Headset  
 M/N: W-2400  
 Operating Condition: Continuous Transmitting  
 Test Site: Shielded Room  
 Operator: Chen  
 Test Specification: AC120V/60Hz

***SWEEP TABLE: "test (30M-1G)"***

| Short Description: |           | Field Strength |            |           | Transducer |
|--------------------|-----------|----------------|------------|-----------|------------|
| Start              | Stop      | Detector       | Meas. Time | IF Bandw. |            |
| Frequency          | Frequency |                |            |           |            |



***MEASUREMENT RESULT: "BCT090822205\_red"***

8/22/2009 22:50

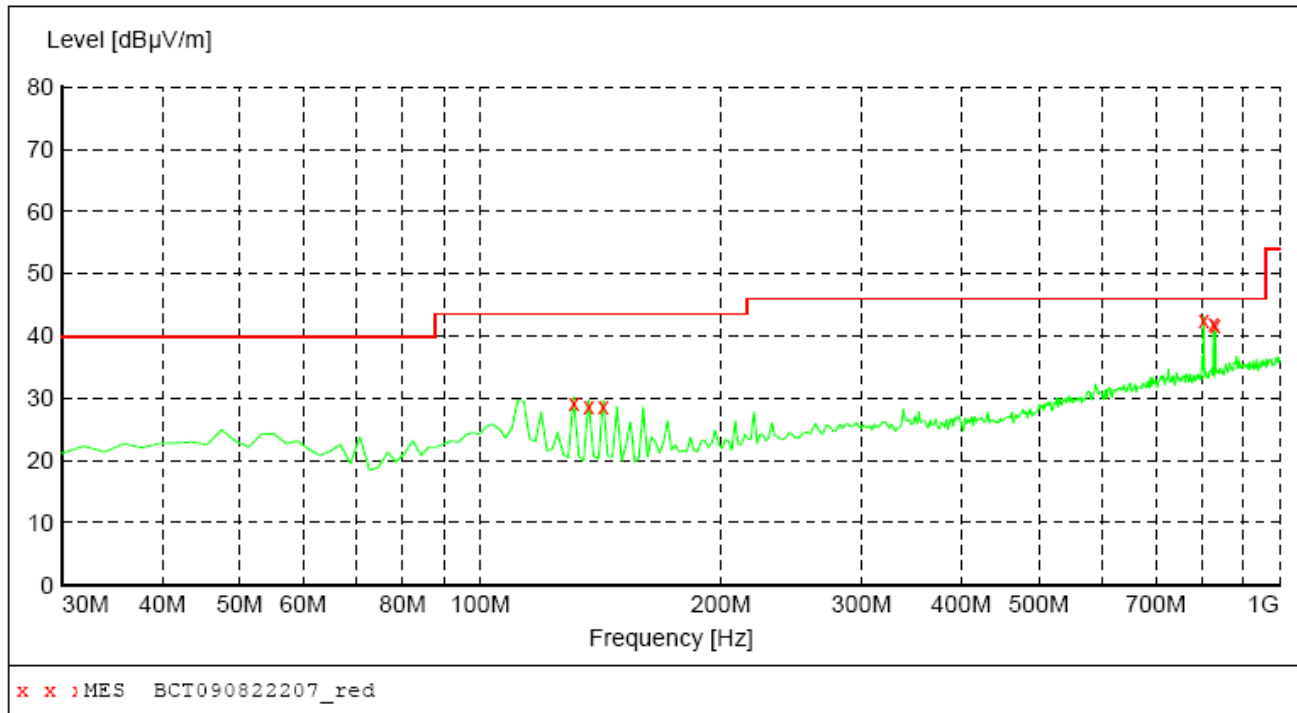
| Frequency<br>MHz | Level<br>dBµV/m | Transd<br>dB | Limit<br>dBµV/m | Margin<br>dB | Det. | Height<br>cm | Azimuth<br>deg | Polarization |
|------------------|-----------------|--------------|-----------------|--------------|------|--------------|----------------|--------------|
| 47.460000        | 29.30           | 16.7         | 40.0            | 10.7         | QP   | 100.0        | 0.00           | VERTICAL     |
| 800.180000       | 37.40           | 28.0         | 46.0            | 8.6          | QP   | 100.0        | 0.00           | VERTICAL     |
| 804.060000       | 39.00           | 28.1         | 46.0            | 7.0          | QP   | 100.0        | 0.00           | VERTICAL     |
| 827.340000       | 40.60           | 28.4         | 46.0            | 5.4          | QP   | 100.0        | 0.00           | VERTICAL     |
| 831.220000       | 39.00           | 28.4         | 46.0            | 7.0          | QP   | 100.0        | 0.00           | VERTICAL     |
| 939.860000       | 36.40           | 29.6         | 46.0            | 9.6          | QP   | 100.0        | 0.00           | VERTICAL     |

**CHANNEL 40:**

EUT: Wireless Headset  
M/N: W-2400  
Operating Condition: Continuous Transmitting  
Test Site: Shielded Room  
Operator: Chen  
Test Specification: AC120V/60Hz

***SWEEP TABLE: "test (30M-1G)"***

| Short Description: |           | Field Strength |       |        |            |  |
|--------------------|-----------|----------------|-------|--------|------------|--|
| Start              | Stop      | Detector       | Meas. | IF     | Transducer |  |
| Frequency          | Frequency |                | Time  | Bandw. |            |  |

***MEASUREMENT RESULT: "BCT090822207\_red"***

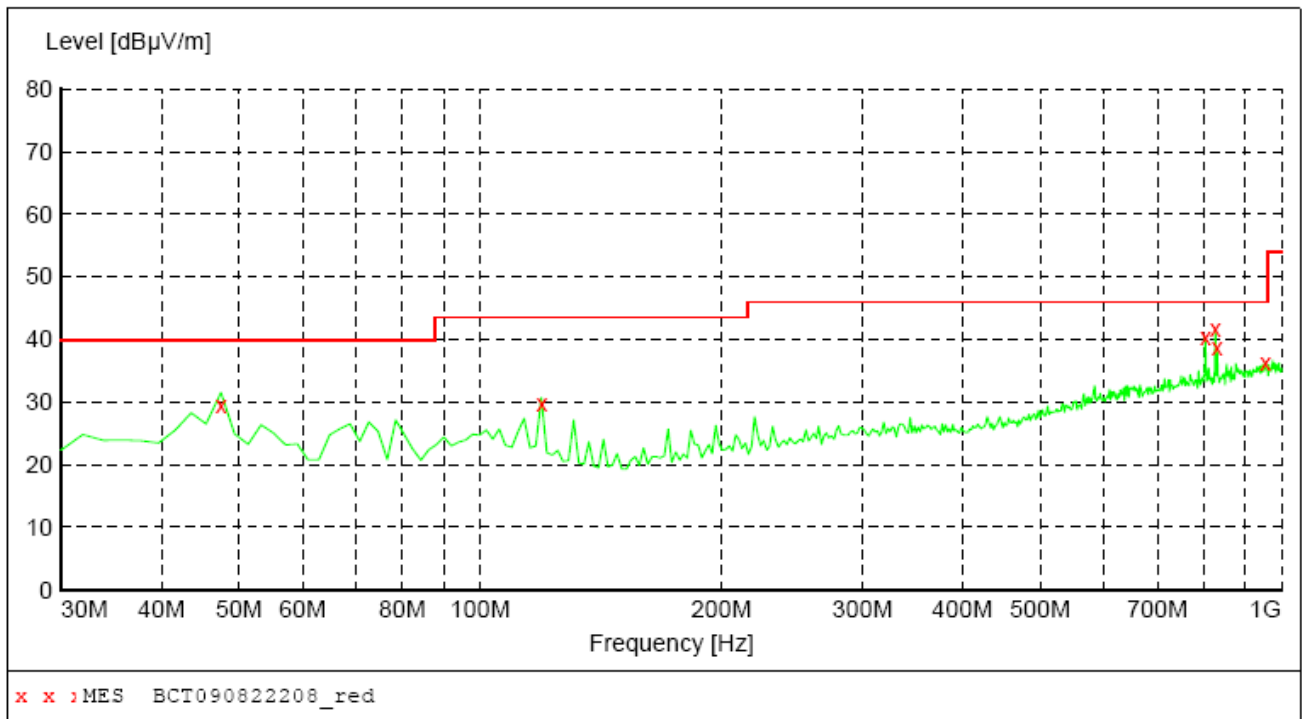
8/22/2009 23:06

| Frequency<br>MHz | Level<br>dBµV/m | Transd<br>dB | Limit<br>dBµV/m | Margin<br>dB | Det. | Height<br>cm | Azimuth<br>deg | Polarization |
|------------------|-----------------|--------------|-----------------|--------------|------|--------------|----------------|--------------|
| 130.880000       | 29.20           | 14.5         | 43.5            | 14.3         | QP   | 300.0        | 0.00           | HORIZONTAL   |
| 136.700000       | 28.70           | 14.1         | 43.5            | 14.8         | QP   | 300.0        | 0.00           | HORIZONTAL   |
| 142.520000       | 28.70           | 14.0         | 43.5            | 14.8         | QP   | 300.0        | 0.00           | HORIZONTAL   |
| 804.060000       | 42.60           | 28.1         | 46.0            | 3.4          | QP   | 100.0        | 0.00           | HORIZONTAL   |
| 827.340000       | 41.90           | 28.4         | 46.0            | 4.1          | QP   | 100.0        | 0.00           | HORIZONTAL   |
| 831.220000       | 41.70           | 28.4         | 46.0            | 4.3          | QP   | 100.0        | 0.00           | HORIZONTAL   |

EUT: Wireless Headset  
M/N: W-2400  
Operating Condition: Continuous Transmitting  
Test Site: Shielded Room  
Operator: Chen  
Test Specification: AC120V/60Hz

**SWEEP TABLE: "test (30M-1G)"**

|                    |           |                |       |        |            |
|--------------------|-----------|----------------|-------|--------|------------|
| Short Description: |           | Field Strength |       |        |            |
| Start              | Stop      | Detector       | Meas. | IF     | Transducer |
| Frequency          | Frequency |                | Time  | Bandw. |            |



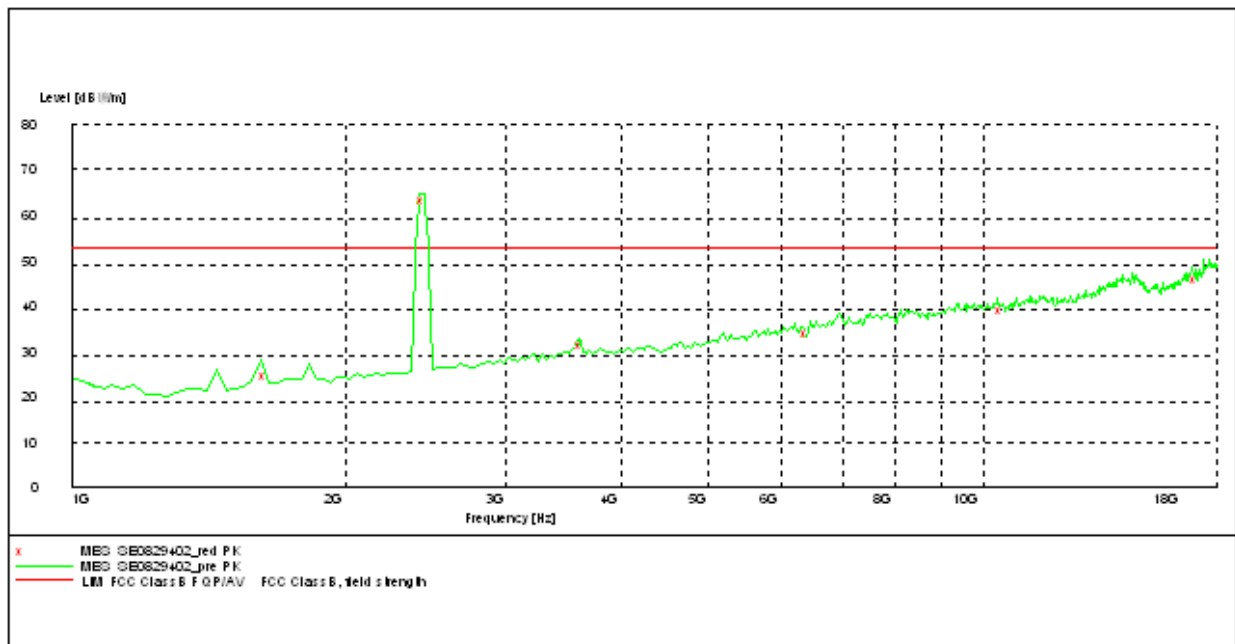
**MEASUREMENT RESULT: "BCT090822208\_red"**

8/22/2009 23:08

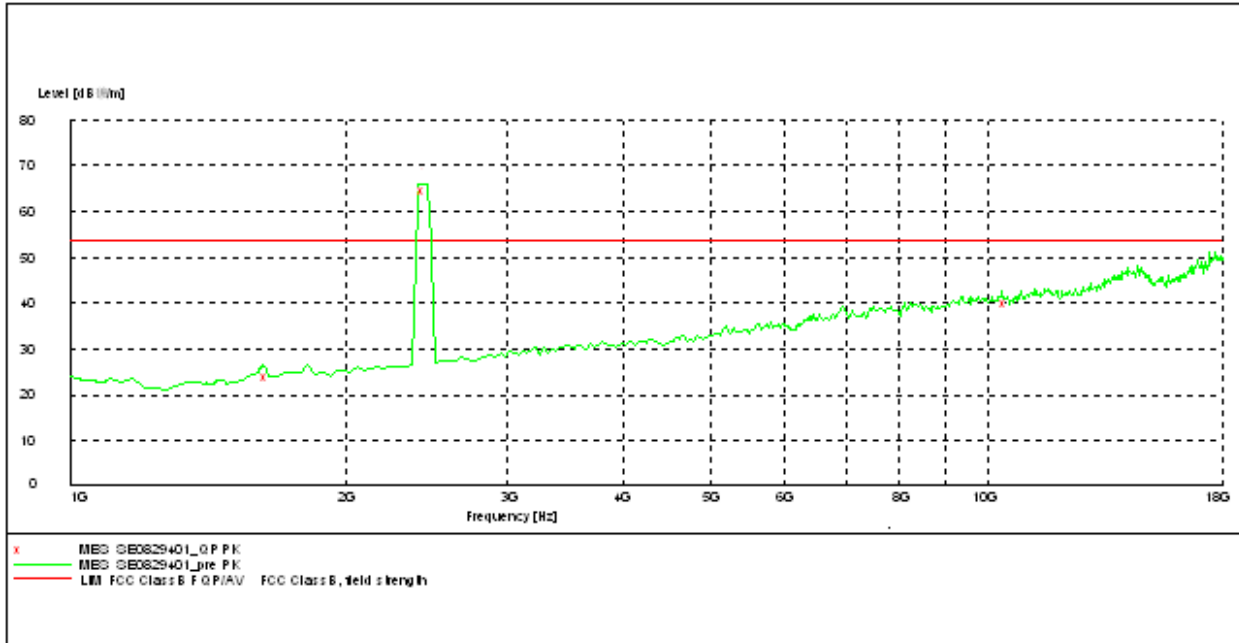
| Frequency<br>MHz | Level<br>dBμV/m | Transd<br>dB | Limit<br>dBμV/m | Margin<br>dB | Det. | Height<br>cm | Azimuth<br>deg | Polarization |
|------------------|-----------------|--------------|-----------------|--------------|------|--------------|----------------|--------------|
| 47.460000        | 29.50           | 16.7         | 40.0            | 10.5         | QP   | 100.0        | 0.00           | VERTICAL     |
| 119.240000       | 29.70           | 16.1         | 43.5            | 13.8         | QP   | 100.0        | 0.00           | VERTICAL     |
| 804.060000       | 40.30           | 28.1         | 46.0            | 5.7          | QP   | 100.0        | 0.00           | VERTICAL     |
| 827.340000       | 41.60           | 28.4         | 46.0            | 4.4          | QP   | 100.0        | 0.00           | VERTICAL     |
| 831.220000       | 38.70           | 28.4         | 46.0            | 7.3          | QP   | 100.0        | 0.00           | VERTICAL     |
| 955.380000       | 36.40           | 29.7         | 46.0            | 9.6          | QP   | 100.0        | 0.00           | VERTICAL     |

## Spurious Emissions above 1GHz

EUT: Wireless Headset  
M/N: W-2400  
Operating Condition: Continuous Transmitting  
Test Site: Shielded Room  
Operator: Chen  
Test Specification: AC120V/60Hz / Vertical Polarization

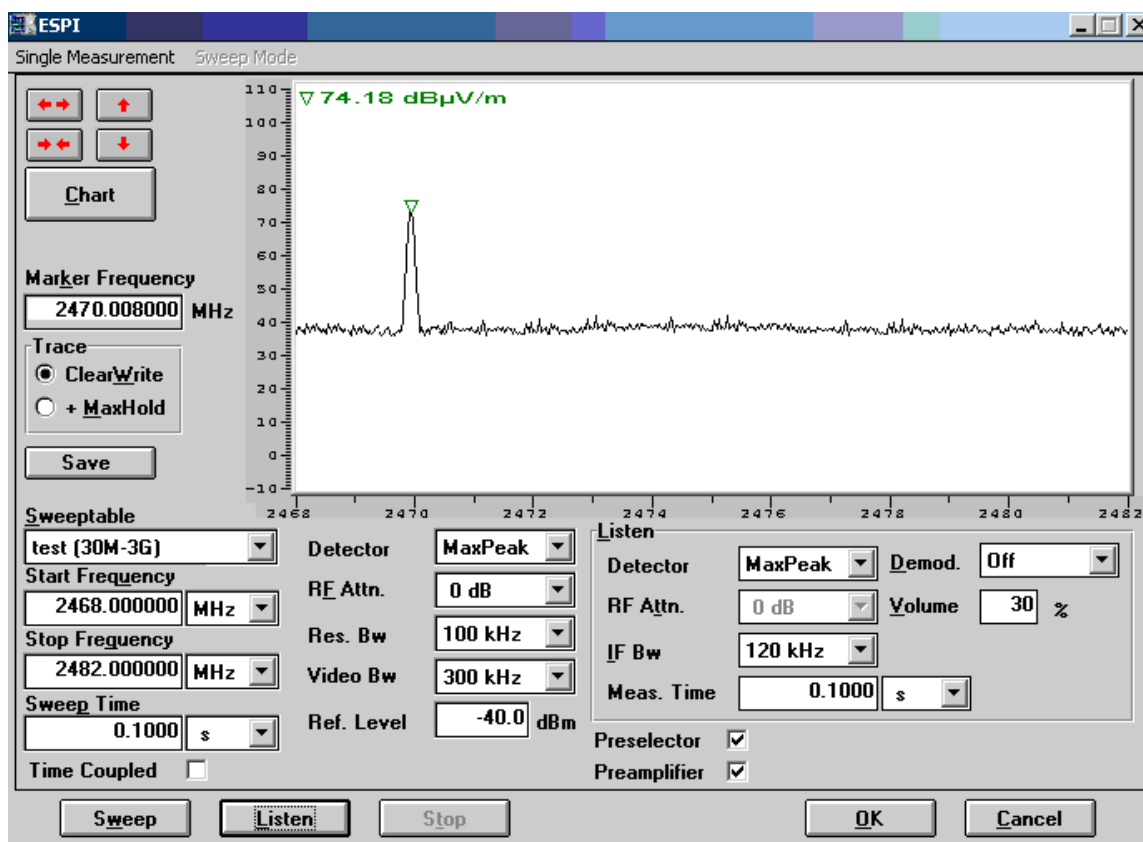


EUT: Wireless Headset  
M/N: W-2400  
Operating Condition: Continuous Transmitting  
Test Site: Shielded Room  
Operator: Chen  
Test Specification: AC120V/60Hz / Horizontal Polarization



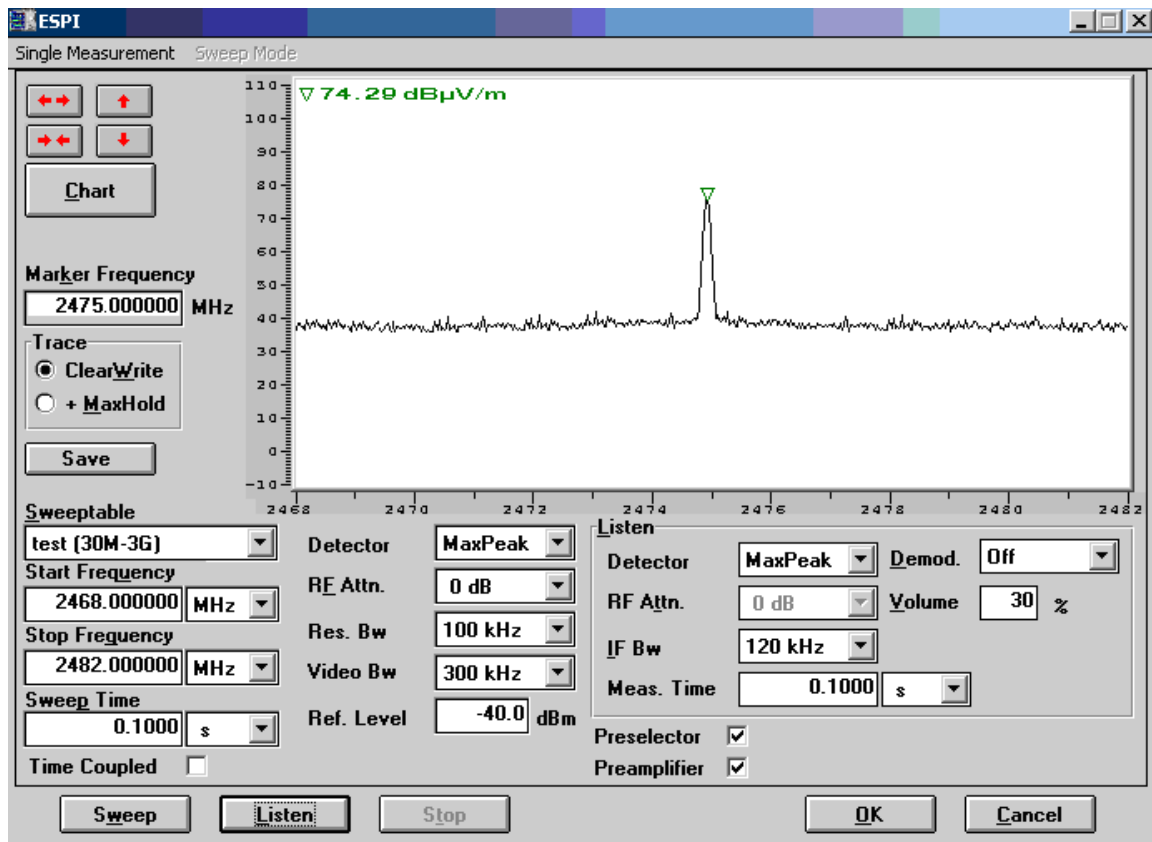
## The result of Field Strength of Fundamental Field Strength

### Channel 1:



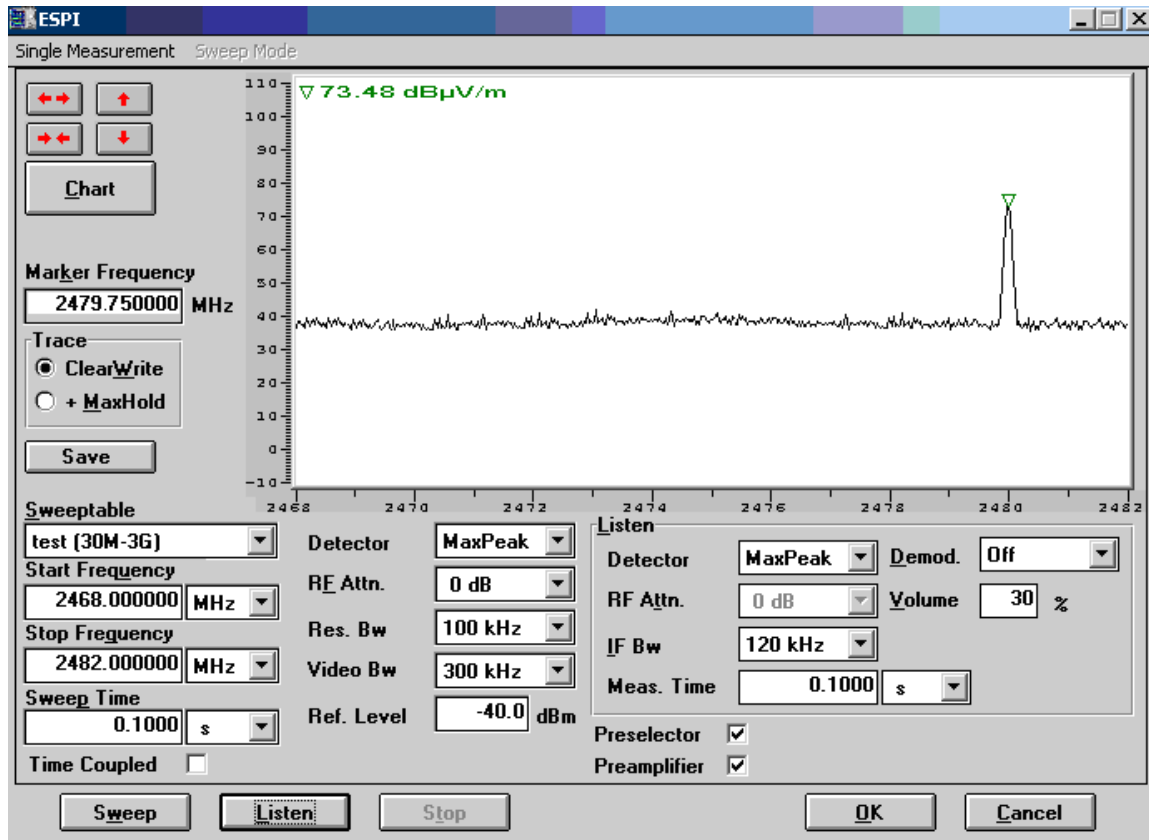
Remark:: Field Strength of Fundamental Field Strength of channel 1 is 74.18dBμV/m , is lower than 50mv/m(94 dBμV/m), complies with limit of section 15.249(a) ,and the result is pass.

## Channel 21:



Remark:: Field Strength of Fundamental Field Strength of channel 21 is 74.29dBμV/m , is lower than 50mv/m(94 dBμV/m), complies with limit of section 15.249(a) ,and the result is pass.

## Channel 40:



Remark:: Field Strength of Fundamental Field Strength of channel 40 is 73.48dBμV/m , is lower than 50mv/m(94 dBμV/m), complies with limit of section 15.249(a) ,and the result is pass.

## **7. ANTENNA REQUIREMENT**

### **7.1 Standard Applicable**

Section 15.203:

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 shall be considered sufficient to comply with the provisions of this Section. 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.

### **7.2 Antenna Connected Construction**

The antenna connector is designed with permanent attachment and no consideration of replacement.