

# FCC TEST REPORT

**REPORT NO.:** 070218FIA01

**MODEL NO.:** SI-03A

**RECEIVED:** Feb. 15, 2007

**TESTED:** Feb. 15 ~ Mar. 14, 2007

**ISSUED:** Mar. 14, 2007

**APPLICANT:** Artchief Industries Ltd

**ADDRESS:** Flat B, 16/F Chinabest International Centre, No.8  
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**ISSUED BY:** ADT (Shanghai) Corporation

**ADDRESS:** 2F, Building C, No.1618, Yishan Rd., 201103,  
Shanghai, China

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**ADT (Shanghai) Corporation.**



V 1.0



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## 1 CERTIFICATION

**PRODUCT :** Wireless Headphone with Transmitter  
**BRAND NAME :** Addicon  
**MODEL NO :** SI-03A  
**TEST ITEM :** Engineering Sample  
**APPLICANT :** Artchief Industries Ltd  
**STANDARDS :** FCC Part 15, Subpart C(15.235)  
ANSI C63.4-2003

We, **ADT (Shanghai) Corporation**, declare that the equipment above has been tested in our facility and found compliance with the requirement limits of applicable standards. The test record, data evaluation and Equipment Under Test (EUT) configurations represented herein are true and accurate under the standards herein specified.

**TECHNICAL  
ACCEPTANCE :**

A handwritten signature in cursive script that reads 'Bright Tong'.

Bright Tong  
Engineering Supervisor

**DATE:** Mar. 14, 2007

**APPROVED BY :**

A handwritten signature in cursive script that reads 'Wallace Pan'.

Wallace Pan  
Director of Operations

**DATE:** Mar. 14, 2007

## 2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

| APPLIED STANDARD: FCC Part 15, Subpart C |                            |        |                                                |
|------------------------------------------|----------------------------|--------|------------------------------------------------|
| STANDARD PARAGRAPH                       | TEST TYPE                  | RESULT | REMARK                                         |
| 15.207                                   | Conducted Emission Test    | PASS   | Minimum passing margin is -28.55dB at 0.277MHz |
| 15.235<br>15.209                         | Radiated Emission Test     | PASS   | Minimum passing margin is -3.45dB at 66.51MHz  |
| 15.235 (b)                               | Band Edge Measurement Test | PASS   | Meet the requirement of limit                  |

### 3 GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

|                                          |                                     |
|------------------------------------------|-------------------------------------|
| <b>PRODUCT</b>                           | Wireless Headphone with Transmitter |
| <b>MODEL NO.</b>                         | SI-03A                              |
| <b>POWER SUPPLY</b>                      | 120Vac, 60Hz                        |
| <b>POWER ADAPTER SUPPLIED</b>            | 2m, non-shielded, non-detachable    |
| <b>CABLE SUPPLIED</b>                    | 1m, non-shielded, non-detachable    |
| <b>MODULATION TYPE</b>                   | FM                                  |
| <b>CARRIER FREQUENCY OF EACH CHANNEL</b> | 49.86MHz                            |
| <b>BANDWIDTH OF EACH CHANNEL</b>         | N/A                                 |
| <b>NUMBER OF CHANNEL</b>                 | 1                                   |
| <b>ANTENNA TYPE</b>                      | Connector                           |
| <b>DATA CABLE</b>                        | N/A                                 |
| <b>I/O PORTS</b>                         | N/A                                 |
| <b>ASSOCIATED DEVICES</b>                | N/A                                 |

**NOTE:**

1. The specifications for the adapter:

| Manufacturer | Model No.       | Input              | Output      |
|--------------|-----------------|--------------------|-------------|
| ktec         | KA120120005022U | 120Vac, 60Hz, 30mA | 12Vdc, 50mA |

2. For more detailed features description of the EUT, please refer to the manufacturer's specifications or the User's Manual.



### 3.2 DESCRIPTION OF TEST MODES

One channel was provided to this EUT.

| Channel | Frequency |
|---------|-----------|
| 1       | 49.86MHz  |

### 3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is the transmitter part of a Wireless Headphone with Transmitter. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

**FCC 47 CFR Part 15, Subpart C (15.235)**

**ANSI C63.4- 2003**

All test items have been performed and recorded as per the above standards.

### 3.4 DESCRIPTION OF SUPPORT UNITS

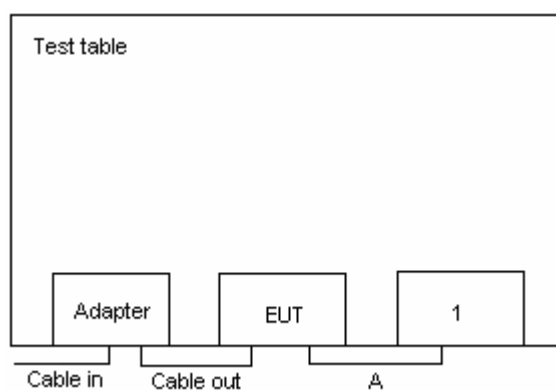
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

| NO. | PRODUCT         | BRAND | MODEL NO. | SERIAL NO.  | FCC ID           |
|-----|-----------------|-------|-----------|-------------|------------------|
| 1   | Ipod MP3 player | Apple | A1137     | 5U621XFCUPR | FCC DoC Approved |

| NO. | SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS |
|-----|-----------------------------------------------------|
| A   | 1m non-shielded audio cable.                        |

**Note:** 2m non-shielded power cable was used during the test which supplied by the lab.

### TEST SETUP



## 4 TEST PROCEDURE AND RESULT

### 4.1 CONDUCTED EMISSION MEASUREMENT

#### 4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

| Frequency (MHz) | Quasi-peak | Average |
|-----------------|------------|---------|
| 0.15 - 0.5      | 66 - 56    | 56 - 46 |
| 0.50 - 5.0      | 56         | 46      |
| 5.0 - 30.0      | 60         | 50      |

**NOTES:** 1. The lower limit shall apply at the transition frequencies.  
 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.

#### 4.1.2 TEST INSTRUMENTS

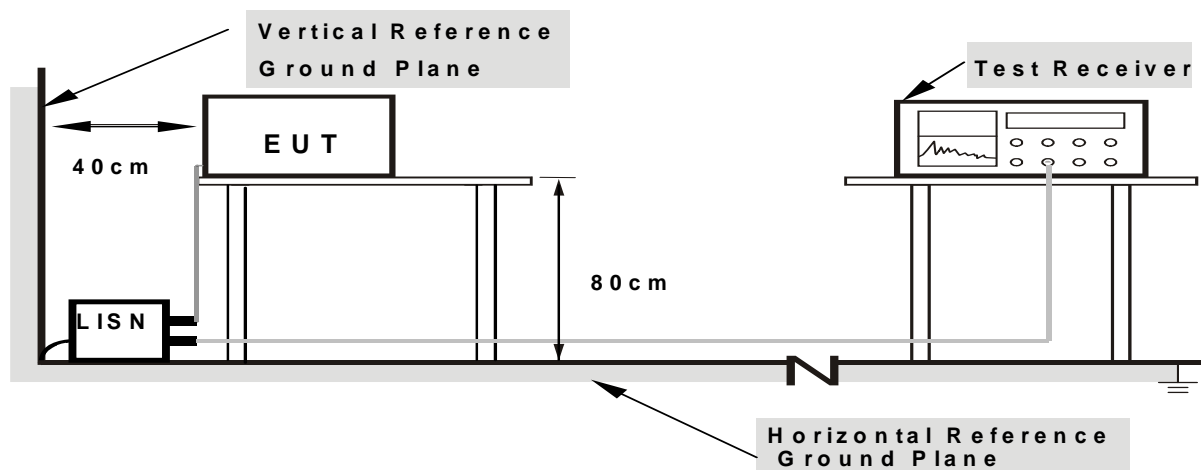
| DESCRIPTION & MANUFACTURER       | MODEL NO.       | SERIAL NO. | CALIBRATED UNTIL |
|----------------------------------|-----------------|------------|------------------|
| Test Receiver<br>ROHDE & SCHWARZ | ESCS30          | E1R1002    | Jun. 12, 2007    |
| LISN<br>ROHDE & SCHWARZ          | NSLK8127        | E1L1001    | Jan. 31, 2008    |
| Software<br>ADT                  | ADT_Cond_V7.3.0 | N/A        | N/A              |

#### 4.1.3 TEST PROCEDURE

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.  
 The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit - 20dB) were not reported.



#### 4.1.4 TEST SETUP



Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

#### 4.1.5 EUT OPERATING CONDITIONS

Set the EUT under transmission condition continuously at specific channel frequency.

**Note:** the device was at maximum level on iPod and the audio input signal was from iPod.

#### 4.1.6 TEST RESULTS

|                                 |                                     |                           |           |
|---------------------------------|-------------------------------------|---------------------------|-----------|
| <b>EUT</b>                      | Wireless Headphone with Transmitter | <b>MODEL NO.</b>          | SI-03A    |
| <b>TEST MODE</b>                | Mode A                              | <b>6dB BANDWIDTH</b>      | 9kHz      |
| <b>INPUT POWER</b>              | 120Vac, 60Hz                        | <b>PHASE</b>              | Line (L1) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 20deg. C, 50% RH, 1012hPa           | <b>TESTED BY:</b> Rebecca |           |

| No | Freq.<br>[MHz] | Corr.<br>Factor<br>(dB) | Reading Value |        | Emission Level |        | Limit     |       | Margin |        |
|----|----------------|-------------------------|---------------|--------|----------------|--------|-----------|-------|--------|--------|
|    |                |                         | [dB (uV)]     |        | [dB (uV)]      |        | [dB (uV)] |       | (dB)   |        |
|    |                |                         | Q.P.          | AV.    | Q.P.           | AV.    | Q.P.      | AV.   | Q.P.   | AV.    |
| 1  | 0.181          | 1.21                    | 7.65          | 6.86   | 8.86           | 8.07   | 64.43     | 54.43 | -55.57 | -46.36 |
| 2  | 0.277          | 0.74                    | 13.60         | 10.70  | 14.34          | 11.44  | 60.89     | 50.89 | -46.55 | -39.45 |
| 3  | 0.744          | 0.44                    | -7.76         | -12.63 | -7.32          | -12.19 | 56.00     | 46.00 | -63.32 | -58.19 |
| 4  | 8.738          | 0.59                    | -5.70         | -10.58 | -5.11          | -9.99  | 60.00     | 50.00 | -65.11 | -59.99 |
| 5  | 14.438         | 0.66                    | -1.06         | -8.03  | -0.40          | -7.37  | 60.00     | 50.00 | -60.40 | -57.37 |
| 6  | 27.786         | 0.94                    | 13.22         | 8.47   | 14.16          | 9.41   | 60.00     | 50.00 | -45.84 | -40.59 |

**REMARKS:** 1. Margin value = Emission level - Limit value  
 2. Correction factor = Insertion loss + Cable loss  
 3. Emission Level = Correction Factor + Reading Value.

|                                 |                                     |                           |             |
|---------------------------------|-------------------------------------|---------------------------|-------------|
| <b>EUT</b>                      | Wireless Headphone with Transmitter | <b>MODEL NO.</b>          | SI-03A      |
| <b>TEST MODE</b>                | Mode A                              | <b>6dB BANDWIDTH</b>      | 9kHz        |
| <b>INPUT POWER</b>              | 120Vac, 60Hz                        | <b>PHASE</b>              | Neutral (N) |
| <b>ENVIRONMENTAL CONDITIONS</b> | 20deg. C, 50% RH,<br>1012hPa        | <b>TESTED BY:</b> Rebecca |             |

| No       | Freq.<br>[MHz] | Corr.<br>Factor<br>(dB) | Reading Value |              | Emission Level |              | Limit        |              | Margin        |               |
|----------|----------------|-------------------------|---------------|--------------|----------------|--------------|--------------|--------------|---------------|---------------|
|          |                |                         | [dB (uV)]     |              | [dB (uV)]      |              | [dB (uV)]    |              | (dB)          |               |
|          |                |                         | Q.P.          | AV.          | Q.P.           | AV.          | Q.P.         | AV.          | Q.P.          | AV.           |
| 1        | 0.242          | 0.79                    | 18.37         | 16.82        | 19.16          | 17.61        | 62.01        | 52.01        | -42.85        | -34.40        |
| <b>2</b> | <b>0.277</b>   | <b>0.75</b>             | <b>24.49</b>  | <b>21.59</b> | <b>25.24</b>   | <b>22.34</b> | <b>60.89</b> | <b>50.89</b> | <b>-35.65</b> | <b>-28.55</b> |
| 3        | 0.314          | 0.70                    | 16.00         | 11.61        | 16.70          | 12.31        | 59.87        | 49.87        | -43.16        | -37.55        |
| 4        | 1.020          | 0.55                    | -7.30         | -11.84       | -6.75          | -11.29       | 56.00        | 46.00        | -62.75        | -57.29        |
| 5        | 7.752          | 0.53                    | -4.90         | -9.84        | -4.37          | -9.31        | 60.00        | 50.00        | -64.37        | -59.31        |
| 6        | 22.578         | 0.86                    | 4.15          | -0.60        | 5.01           | 0.26         | 60.00        | 50.00        | -54.99        | -49.74        |

**REMARKS:** 1. Margin value = Emission level - Limit value  
2. Correction factor = Insertion loss + Cable loss  
3. Emission Level = Correction Factor + Reading Value.



## 4.2 RADIATED EMISSION MEASUREMENT

### 4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

According to 15.235 the field strength of emissions from intentional radiators operated under these frequencies bands shall not exceed the following:

| Fundamental Frequency (MHz) | Field Strength of Fundamental (dBuV/m) |         |
|-----------------------------|----------------------------------------|---------|
|                             | Peak                                   | Average |
| 49.82 - 49.90               | 100                                    | 80      |

According to 15.235(b), the field strength of any emissions appearing between the band edges and up to 10 kHz above and below the band edges shall be attenuated at least 26 dB below the level of the unmodulated carrier or to the general limits in 15.209, whichever permits the higher emission levels.

Field strength limits are at the distance of 3 meters, the field strength of any emissions removed by more than 10kHz from band edges shall not exceed the general radiated emission limits in 15.209 as following:

| Other Frequencies (MHz) | Field Strength of Fundamental |            |
|-------------------------|-------------------------------|------------|
|                         | uV/meter                      | dBuV/meter |
| 30-88                   | 100                           | 40.0       |
| 88-216                  | 150                           | 43.5       |
| 216-960                 | 200                           | 46.0       |
| Above 960               | 500                           | 54.0       |

As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.



#### 4.2.2 TEST INSTRUMENT

| DESCRIPTION & MANUFACTURER                             | MODEL NO.         | SERIAL NO. | CALIBRATED UNTIL |
|--------------------------------------------------------|-------------------|------------|------------------|
| Test Receiver<br>ROHDE & SCHWARZ                       | ESCS30            | E1R1001    | Apr. 19, 2007    |
| BILOG Antenna<br>SCHWARZBECK                           | VULB9168          | E1A1001    | Sept. 26, 2007   |
| Preamplifier<br>Agilent                                | 8447D             | E1A2001    | Jan. 27, 2008    |
| Preamplifier<br>Agilent                                | 8449B             | E1A2002    | Jan. 27, 2008    |
| Double Ridged Broadband<br>Horn Antenna<br>Schwarzbeck | BBHA 9120D        | E1A1002    | Feb. 15, 2008    |
| Spectrum Analyzer<br>Agilent                           | E4403B            | E1S1001    | Jan. 13, 2008    |
| Signal Analyzer<br>ROHDE & SCHWARZ                     | FSP               | E1S1002    | May. 16, 2007    |
| Software<br>ADT                                        | ADT_Radiated_V7.5 | N/A        | N/A              |

- NOTE:**
1. The calibration interval of the above test instruments is 12 months.
  2. “\*” = These equipment are used for the final measurement.
  3. The horn antenna and Agilent preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
  4. The Spectrum Analyzer (model: FSP) and RF signal cable (SERIAL: E1CBH16&E1CBH20) are used only for the measurement of emission frequency above 1GHz if tested.

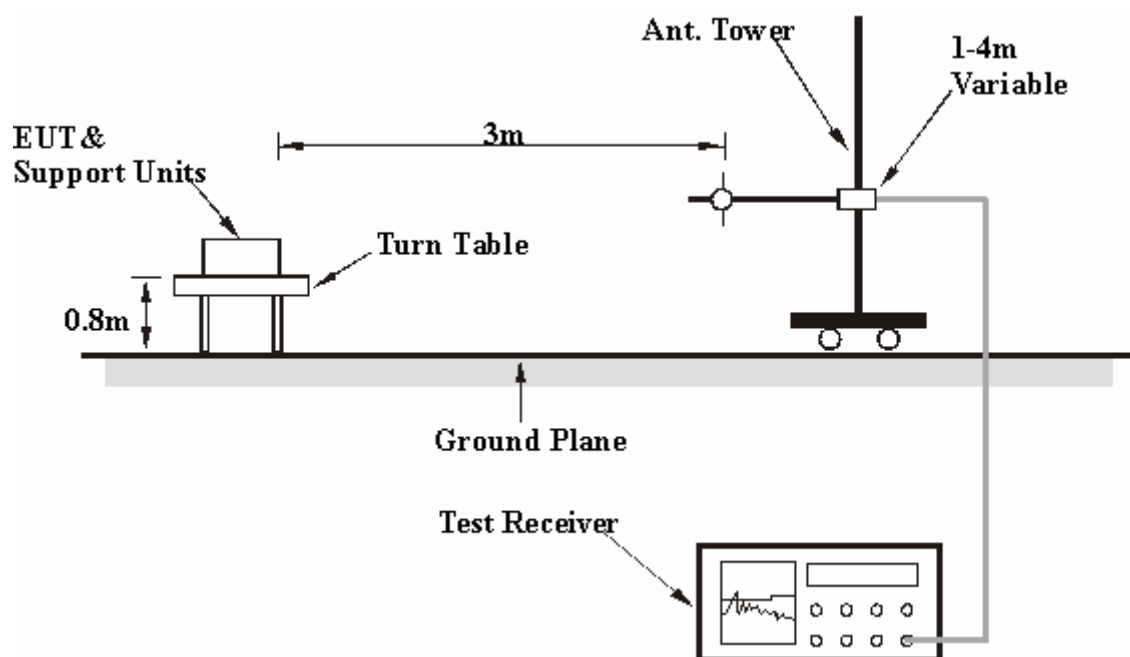
#### 4.2.3 TEST PROCEDURE

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its 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.
- d. 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 and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10 dB 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 10 dB margin would be re-tested one by one using the quasi-peak method or average method as specified and then reported in Data sheet peak mode and QP mode.

**NOTE:**

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz for Average detection (AV) at frequency above 1GHz. The RBW is 120kHz and the VBW is 300kHz for Average detection (AV) at fundamental frequency.

#### 4.2.4 TEST SETUP



For the actual test configuration, please refer to the related item in this test report - Photographs of the Test Configuration.

#### 4.2.5 EUT OPERATING CONDITION

Set the transmitter part of EUT under transmission condition continuously at specific channel frequency.

#### 4.2.6 TEST RESULT

|                                 |                                |                           |                             |
|---------------------------------|--------------------------------|---------------------------|-----------------------------|
| <b>FREQUENCY RANGE</b>          | 30-1000 MHz                    |                           |                             |
| <b>INPUT POWER</b>              | 120Vac, 60Hz                   | <b>DETECTOR FUNCTION</b>  | Peak / Quasi-Peak / Average |
| <b>ENVIRONMENTAL CONDITIONS</b> | 22 deg. C, 60 % RH,<br>991 hPa | <b>TESTED BY:</b> Rebecca |                             |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |               |           |                |                 |              |           |          |           |
|-----------------------------------------------------|---------------|-----------|----------------|-----------------|--------------|-----------|----------|-----------|
| No.                                                 | Frequency MHz | Factor dB | Reading dBuV/m | Emission dBuV/m | Limit dBuV/m | Margin dB | Tower cm | Table deg |
| 1                                                   | 35.00 QP      | 15.26     | 14.99          | 30.25           | 40.00        | -9.75     | 212.00   | 23.00     |
| 2                                                   | 49.86 PK      | 15.47     | 48.46          | 63.93           | 100.00       | -36.07    | 255.00   | 219.00    |
| 2                                                   | 49.86 AV      | 15.47     | 47.97          | 63.44           | 80.00        | -16.56    | 255.00   | 219.00    |
| 3                                                   | 66.00 QP      | 13.70     | 15.05          | 28.75           | 40.00        | -11.25    | 210.00   | 48.00     |
| 4                                                   | 99.72 QP      | 13.08     | 2.48           | 15.56           | 43.50        | -27.94    | 100.00   | 27.00     |
| 5                                                   | 149.58 QP     | 13.65     | 3.06           | 16.71           | 43.50        | -26.79    | 100.00   | 36.00     |
| 6                                                   | 199.44 QP     | 13.21     | 4.03           | 17.24           | 43.50        | -26.26    | 100.00   | 48.00     |
| 7                                                   | 205.00 QP     | 13.04     | 15.21          | 28.25           | 43.50        | -15.25    | 156.00   | 221.00    |
| 8                                                   | 249.3QP       | 14.36     | 2.36           | 16.72           | 46.00        | -29.28    | 100.00   | 168.00    |
| 9                                                   | 270.00 QP     | 15.50     | 15.72          | 31.22           | 46.00        | -14.78    | 100.00   | 16.00     |
| 10                                                  | 299.16 QP     | 16.24     | 2.13           | 18.37           | 46.00        | -27.63    | 100.00   | 221.00    |
| 11                                                  | 336.00 QP     | 17.29     | 16.79          | 34.08           | 46.00        | -11.92    | 144.00   | 197.00    |
| 12                                                  | 349.02 QP     | 17.34     | 2.16           | 19.50           | 46.00        | -26.50    | 100.00   | 345.00    |
| 13                                                  | 360.00 QP     | 17.75     | 19.79          | 37.54           | 46.00        | -8.46     | 123.00   | 114.00    |
| 14                                                  | 365.00 QP     | 17.89     | 18.51          | 36.40           | 46.00        | -9.60     | 111.00   | 116.00    |
| 15                                                  | 384.00 QP     | 18.34     | 14.04          | 32.37           | 46.00        | -13.63    | 100.00   | 246.00    |
| 16                                                  | 398.88 QP     | 18.54     | 1.03           | 19.57           | 46.00        | -26.43    | 100.00   | 216.00    |
| 17                                                  | 408.00 QP     | 18.91     | 10.92          | 29.83           | 46.00        | -16.17    | 168.00   | 37.00     |
| 18                                                  | 433.00 QP     | 19.68     | 13.77          | 33.45           | 46.00        | -12.55    | 134.00   | 49.00     |
| 19                                                  | 448.74 QP     | 19.73     | 0.02           | 19.75           | 46.00        | -26.25    | 100.00   | 168.00    |
| 20                                                  | 457.00 QP     | 20.23     | 13.29          | 33.52           | 46.00        | -12.48    | 100.00   | 6.00      |
| 21                                                  | 498.6.00 QP   | 20.48     | -0.57          | 19.91           | 46.00        | -26.09    | 100.00   | 154.00    |
| 22                                                  | 505.00 QP     | 20.98     | 10.19          | 31.17           | 46.00        | -14.83    | 100.00   | 78.00     |
| 23                                                  | 517.00 QP     | 21.23     | 8.87           | 30.10           | 46.00        | -15.90    | 100.00   | 68.00     |
| 24                                                  | 588.00 QP     | 22.89     | 11.59          | 34.47           | 46.00        | -11.53    | 100.00   | 17.00     |
| 25                                                  | 636.00 QP     | 23.73     | 8.08           | 31.80           | 46.00        | -14.20    | 100.00   | 19.00     |
| 26                                                  | 661.00 QP     | 24.02     | 6.55           | 30.56           | 46.00        | -15.44    | 100.00   | 114.00    |
| 27                                                  | 888.00 QP     | 26.90     | 6.83           | 33.73           | 46.00        | -12.27    | 100.00   | 168.00    |



| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M |                 |              |                |                 |              |              |               |               |
|---------------------------------------------------|-----------------|--------------|----------------|-----------------|--------------|--------------|---------------|---------------|
| No.                                               | Frequency MHz   | Factor dB    | Reading dBuV/m | Emission dBuV/m | Limit dBuV/m | Margin dB    | Tower cm      | Table deg     |
| 1                                                 | 35.00 QP        | 15.26        | 13.60          | 28.86           | 40.00        | -11.14       | 100.00        | 112.00        |
| 2                                                 | 49.86 PK        | 15.47        | 60.80          | 76.27           | 100.00       | -23.73       | 100.00        | 256.00        |
| <b>2</b>                                          | <b>49.86 AV</b> | <b>15.47</b> | <b>60.38</b>   | <b>75.85</b>    | <b>80.00</b> | <b>-4.15</b> | <b>100.00</b> | <b>256.00</b> |
| 3                                                 | 66.00 QP        | 13.70        | 12.46          | 26.16           | 40.00        | -13.84       | 100.00        | 265.00        |
| 4                                                 | 99.72 QP        | 13.08        | 2.03           | 15.11           | 43.50        | -28.39       | 100.00        | 114.00        |
| 5                                                 | 100.00 QP       | 12.56        | 8.10           | 20.66           | 43.50        | -22.84       | 100.00        | 210.00        |
| 6                                                 | 149.58 QP       | 13.65        | 2.89           | 16.54           | 43.50        | -26.96       | 100.00        | 136.00        |
| 7                                                 | 176.00 QP       | 15.23        | 9.13           | 24.36           | 43.50        | -19.14       | 100.00        | 16.00         |
| 8                                                 | 199.44 QP       | 13.21        | 3.21           | 16.42           | 43.50        | -27.08       | 100.00        | 79.00         |
| 9                                                 | 205.00 QP       | 13.04        | 10.24          | 23.27           | 43.50        | -20.23       | 100.00        | 16.00         |
| 10                                                | 229.00 QP       | 14.46        | 6.25           | 20.71           | 46.00        | -25.29       | 100.00        | 34.00         |
| 11                                                | 249.30 QP       | 14.36        | 3.03           | 17.39           | 46.00        | -28.61       | 100.00        | 189.00        |
| 12                                                | 270.00 QP       | 15.50        | 13.03          | 28.53           | 46.00        | -17.47       | 100.00        | 34.00         |
| 13                                                | 277.00 QP       | 15.72        | 5.53           | 21.25           | 46.00        | -24.75       | 100.00        | 78.00         |
| 14                                                | 289.00 QP       | 16.18        | 6.85           | 23.03           | 46.00        | -22.97       | 100.00        | 111.00        |
| 15                                                | 299.16 QP       | 16.24        | 3.16           | 19.40           | 46.00        | -26.60       | 100.00        | 203.00        |
| 16                                                | 311.00 QP       | 16.80        | 5.53           | 22.33           | 46.00        | -23.67       | 100.00        | 111.00        |
| 17                                                | 323.00 QP       | 17.09        | 4.50           | 21.60           | 46.00        | -24.40       | 100.00        | 236.00        |
| 18                                                | 336.00 QP       | 17.29        | 10.19          | 27.48           | 46.00        | -18.52       | 100.00        | 236.00        |
| 19                                                | 349.02 QP       | 17.34        | 1.59           | 18.93           | 46.00        | -27.07       | 100.00        | 345.00        |
| 20                                                | 360.00 QP       | 17.75        | 12.41          | 30.16           | 46.00        | -15.84       | 100.00        | 198.00        |
| 21                                                | 384.00 QP       | 18.34        | 9.04           | 27.38           | 46.00        | -18.62       | 100.00        | 198.00        |
| 22                                                | 398.88 QP       | 18.54        | 1.26           | 19.80           | 46.00        | -26.20       | 100.00        | 216.00        |
| 23                                                | 408.00 QP       | 18.91        | 8.03           | 26.94           | 46.00        | -19.06       | 100.00        | 68.00         |
| 24                                                | 420.00 QP       | 19.31        | 4.00           | 23.31           | 46.00        | -22.69       | 100.00        | 68.00         |
| 25                                                | 433.00 QP       | 19.68        | 8.85           | 28.54           | 46.00        | -17.46       | 100.00        | 246.00        |
| 26                                                | 445.00 QP       | 19.99        | 2.33           | 22.32           | 46.00        | -23.68       | 100.00        | 246.00        |
| 27                                                | 448.74 QP       | 19.73        | -0.23          | 19.50           | 46.00        | -26.50       | 100.00        | 187.00        |
| 28                                                | 457.00 QP       | 20.23        | 2.79           | 23.02           | 46.00        | -22.98       | 100.00        | 349.00        |
| 29                                                | 498.60 QP       | 20.48        | -0.69          | 19.79           | 46.00        | -26.21       | 100.00        | 111.00        |
| 30                                                | 505.00 QP       | 20.98        | 2.73           | 23.71           | 46.00        | -22.29       | 100.00        | 349.00        |
| 31                                                | 588.00 QP       | 22.89        | 1.92           | 24.81           | 46.00        | -21.19       | 100.00        | 168.00        |
| 32                                                | 636.00 QP       | 23.73        | 2.37           | 26.10           | 46.00        | -19.90       | 100.00        | 168.00        |

**REMARKS:**

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

## 4.3 BAND EDGES MEASUREMENT

### 4.3.1 LIMITS OF BAND EDGES MEASUREMENT

The field strength of any emissions appearing between the band edges and up to 10 kHz above and below the band edges shall be attenuated at least 26 dB below the level of the unmodulated carrier or to the general limits in 15.209, whichever permits the higher emission levels.

### 4.3.2 TEST INSTRUMENTS

| Description & Manufacturer           | Model No. | Serial No. | Calibrated Until |
|--------------------------------------|-----------|------------|------------------|
| Spectrum Analyzer<br>ROHDE & SCHWARZ | FSP       | E1S1002    | May. 15, 2007    |

**NOTE:** The calibration interval of the above test instruments is 12 months.

### 4.3.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer via a low loss cable. Set RBW to 10kHz and VBW to 30kHz of spectrum analyzer with suitable frequency span including 100kHz bandwidth from band edge. The band edges was measured and recorded.

### 4.3.4 DEVIATION FROM TEST STANDARD

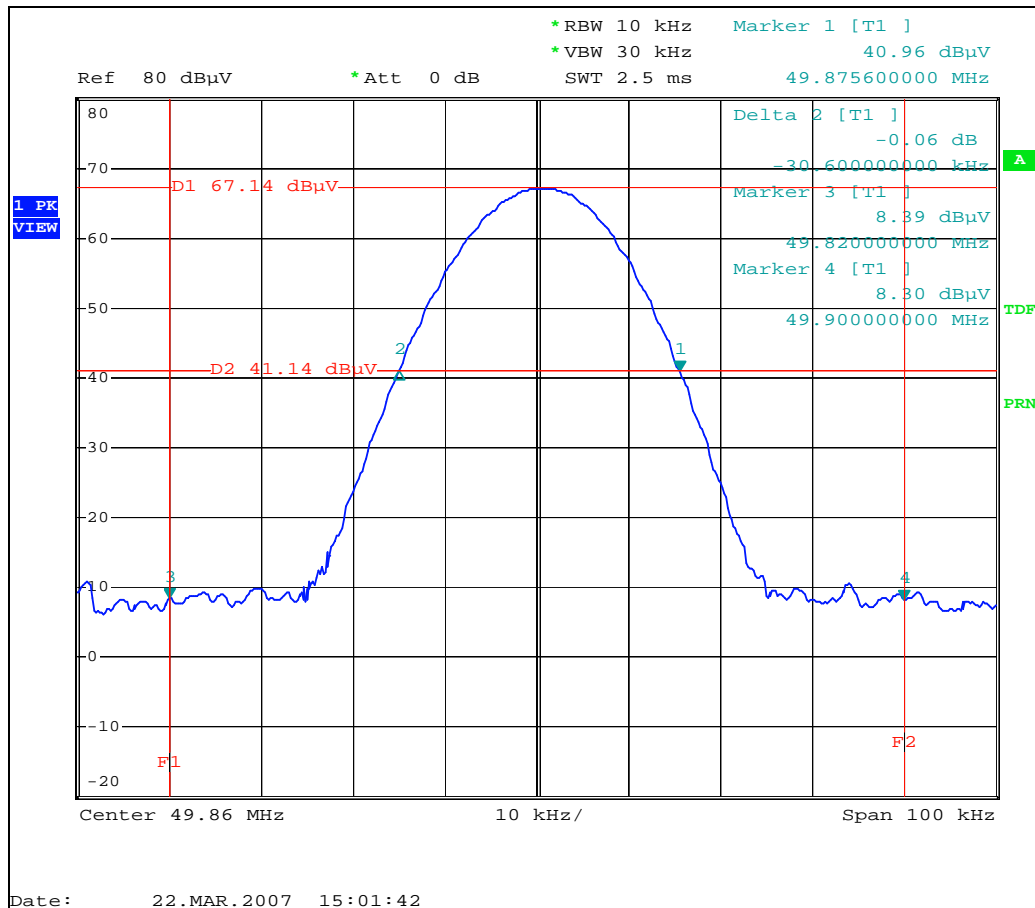
No deviation.

### 4.3.5 EUT OPERATING CONDITION

Same as Item 4.2.5

### 4.3.6 TEST RESULTS

The spectrum plot is attached as the following. D1 line indicates the highest level, D2 line indicates the 26dB offset below D1. It shows compliance with the requirement in part 15.235(b).



## 5 INFORMATION ON THE TESTING LABORATORY

We, ADT (Shanghai) Corp., was founded in 2003 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratory is accredited and approved by the following approval agencies according to ISO / IEC 17025 (2005).

The client should not use it to claim product endorsement by CNLS, A2LA, or any government agency.

|               |           |
|---------------|-----------|
| <b>Japan</b>  | VCCI      |
| <b>USA</b>    | FCC, A2LA |
| <b>Norway</b> | DNV       |
| <b>China</b>  | CNAS      |



Copies of accreditation certificates of our laboratory obtained from approval agencies can be downloaded from our web site: [www.cnadt.com](http://www.cnadt.com)

If you have any comments, please feel free to contact us at the following:

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