# FCC TEST REPORT

**REPORT NO. :** RF960119A01A

**MODEL NO. :** HS-100W

**VERSION:** HW:0.4B, SW:1.0, MV:0.8

**RECEIVED:** July 27, 2007

**ISSUED:** Aug. 17, 2007

**APPLICANT:** NOKIA CORPORATION

**ADDRESS:** Joensuunkatu 7E, FIN-24100 Salo, Finland

**ISSUED BY :** Advance Data Technology Corporation

**LAB LOCATION :** No. 47, 14th Ling, Chia Pau Tsuen, Lin Kou Hsiang 244, Taipei Hsien, Taiwan, R.O.C.

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# 1. CERTIFICATION

**PRODUCT:** Bluetooth Headset
**BRAND NAME:** NOKIA
**MODEL NO.:** HS-100W
**TEST ITEM:** ENGINEERING SAMPLE
**APPLICANT:** NOKIA CORPORATION
**TESTED:** Aug. 15, 2007
**STANDARDS:** FCC Part 15, Subpart C (Section 15.209),
ANSI C63.4-2003

The above equipment has been tested by **Advance Data Technology Corporation**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

**PREPARED BY** : Jessica Cheng , **DATE:** Aug. 17, 2007
( Jessica Cheng / Specialist )

**TECHNICAL ACCEPTANCE** : Jamison Chan , **DATE:** Aug. 17, 2007
Responsible for RF
( Jamison Chan / Senior Engineer )

**APPROVED BY** : Ken Liu , **DATE:** Aug. 17, 2007
( Ken Liu / Deputy Manager )

## 2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

| APPLIED STANDARD: FCC Part 15, Subpart C | | | |
|---|---|---|---|
| **STANDARD SECTION** | **TEST TYPE AND LIMIT** | **RESULT** | **REMARK** |
| 15.209 | Transmitter Radiated Emissions<br>Spec.: Table 15.209 | PASS | Meet the requirement of limit.<br>Minimum passing margin is –7.38dB at 37.776MHz. |

## 2.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

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

| MEASUREMENT | UNCERTAINTY |
|---|---|
| Radiated emissions | 3.55 dB |

# 3. GENERAL INFORMATION

## 3.1 GENERAL DESCRIPTION OF EUT

| | |
|---|---|
| **PRODUCT** | Bluetooth Headset |
| **MODEL NO.** | HS-100W |
| **FCC ID** | PYAHS-74W |
| **POWER SUPPLY** | 3.7Vdc from battery<br>5.0Vdc from AC adapter |
| **MODULATION TYPE** | GFSK,π/4-DQPSK, 8DPSK |
| **RADIO TECHNOLOGY** | FHSS |
| **TRANSFER RATE** | 1/2/3Mbps |
| **OPERATING FREQUENCY** | 2402~2480 MHz |
| **NUMBER OF CHANNEL** | 79 |
| **OUTPUT POWER** | 3.819mW |
| **ANTENNA TYPE** | PIFA antenna with 0dBi gain |
| **DATA CABLE** | NA |
| **I/O PORTS** | NA |

**NOTE:**

1. This report is a supplementary report of the original one (ADT report No.: RF960119A01) issued on Jan. 29, 2007. This report is issued for the addition of new model for new outer appearance as follows:

| **Brand** | **Model No.** | **Outer Appearance Description** | | |
|---|---|---|---|---|
| | | **B-Cover** | **Ear Hook shape** | **Hinge Structure** |
| NOKIA | HS-74W<br>*(Original approved)* | White | Circle | Circle |
| NOKIA | HS-100W<br>*(Additional model)* | Brown | Semicircle | Semicircle |

2. The EUT was powered by the following adapter:

| | |
|---|---|
| **Brand:** | NOKIA |
| **Model:** | AC-4U |
| **Input Power:** | 100-240V, 50-60Hz, 125mA |
| **Output Power:** | 5V, 890mA |
| **Power Cord:** | Non-shielded DC (1.8m), AC 2-pin |

3. The above EUT information was declared by the manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

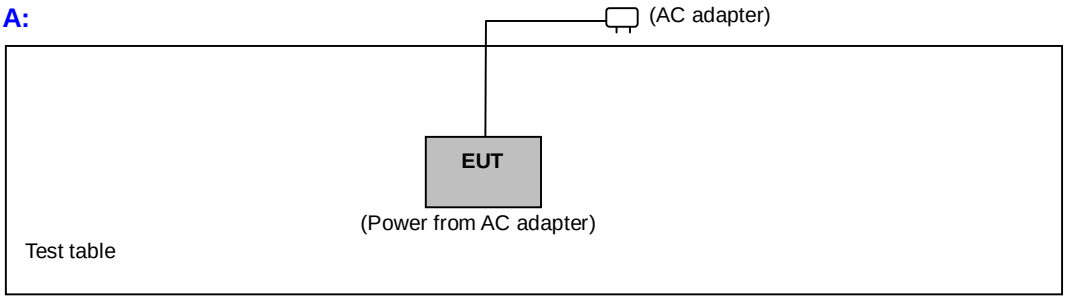
## 3.2 DESCRIPTION OF TEST MODES

79 channels are provided to this EUT:

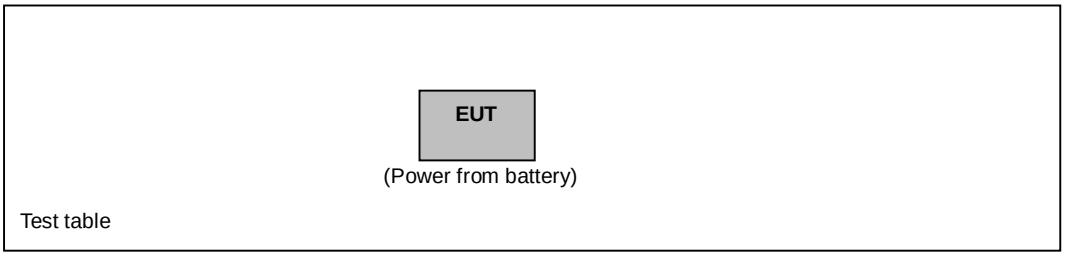
| CHANNEL | FREQ. (MHz) | CHANNEL | FREQ. (MHz) | CHANNEL | FREQ. (MHz) | CHANNEL | FREQ. (MHz) |
|---|---|---|---|---|---|---|---|
| 0 | 2402 | 20 | 2422 | 40 | 2442 | 60 | 2462 |
| 1 | 2403 | 21 | 2423 | 41 | 2443 | 61 | 2463 |
| 2 | 2404 | 22 | 2424 | 42 | 2444 | 62 | 2464 |
| 3 | 2405 | 23 | 2425 | 43 | 2445 | 63 | 2465 |
| 4 | 2406 | 24 | 2426 | 44 | 2446 | 64 | 2466 |
| 5 | 2407 | 25 | 2427 | 45 | 2447 | 65 | 2467 |
| 6 | 2408 | 26 | 2428 | 46 | 2448 | 66 | 2468 |
| 7 | 2409 | 27 | 2429 | 47 | 2449 | 67 | 2469 |
| 8 | 2410 | 28 | 2430 | 48 | 2450 | 68 | 2470 |
| 9 | 2411 | 29 | 2431 | 49 | 2451 | 69 | 2471 |
| 10 | 2412 | 30 | 2432 | 50 | 2452 | 70 | 2472 |
| 11 | 2413 | 31 | 2433 | 51 | 2453 | 71 | 2473 |
| 12 | 2414 | 32 | 2434 | 52 | 2454 | 72 | 2474 |
| 13 | 2415 | 33 | 2435 | 53 | 2455 | 73 | 2475 |
| 14 | 2416 | 34 | 2436 | 54 | 2456 | 74 | 2476 |
| 15 | 2417 | 35 | 2437 | 55 | 2457 | 75 | 2477 |
| 16 | 2418 | 36 | 2438 | 56 | 2458 | 76 | 2478 |
| 17 | 2419 | 37 | 2439 | 57 | 2459 | 77 | 2479 |
| 18 | 2420 | 38 | 2440 | 58 | 2460 | 78 | 2480 |
| 19 | 2421 | 39 | 2441 | 59 | 2461 | | |

## 3.2.1 CONFIGURATION OF SYSTEM UNDER TEST

**Mode A:**




**Mode B:**



## 3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

| EUT Configure Mode | Applicable to | Description |
|---|---|---|
| | RE<1G | |
| A | √ | EUT w. AC adapter (Power from AC adapter) |
| B | √ | EUT only (Power from 3.7V DC battery) |

Where **RE<1G** RE: Radiated Emission below 1GHz

**RADIATED EMISSION TEST (BELOW 1 GHz):**

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, packet types data rate, XYZ axis and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

| EUT CONFIGURE MODE | AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION TECHNOLOGY | MODULATION TYPE | PACKET TYPE | DATE RATE | AXIS |
|---|---|---|---|---|---|---|---|
| A | 0 to 78 | 78 | FHSS | GFSK | DH5 | 1 | X |
| A | 0 to 78 | 78 | FHSS | 8DPSK | DH5 | 3 | X |
| B | 0 to 78 | 78 | FHSS | GFSK | DH5 | 1 | X |
| B | 0 to 78 | 78 | FHSS | 8DPSK | DH5 | 3 | X |

## 3.2.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

**FCC Part 15, Subpart C. (15.209)**
**ANSI C63.4- 2003**

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

## 3.2.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with its adapter.

# 4. TEST TYPES AND RESULTS

## 4.1 RADIATED EMISSION MEASUREMENT

## 4.1.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 as following:

| FREQUENCIES (MHz) | FIELD STRENGTH (microvolts/meter) | MEASUREMENT DISTANCE (meters) |
|---|---|---|
| 0.009 ~ 0.490 | 2400/F(kHz) | 300 |
| 0.490 ~ 1.705 | 24000/F(kHz) | 30 |
| 1.705 ~ 30.0 | 30 | 30 |
| 30 ~ 88 | 100 | 3 |
| 88 ~ 216 | 150 | 3 |
| 216 ~ 960 | 200 | 3 |
| Above 960 | 500 | 3 |

**NOTE**:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. 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.

## 4.1.2 TEST INSTRUMENTS

| DESCRIPTION & MANUFACTURER | MODEL NO. | SERIAL NO. | CALIBRATED UNTIL |
|---|---|---|---|
| HP Preamplifier | 8447D | 2432A03504 | May 09, 2008 |
| HP Preamplifier | 8449B | 3008A01924 | Sep. 05, 2007 |
| HP Preamplifier | 8449B | 3008A01638 | Sep. 17, 2007 |
| ROHDE & SCHWARZ TEST RECEIVER | ESI7 | 836697/012 | Oct. 24, 2007 |
| Schwarzbeck Antenna | VULB 9168 | 137 | Oct. 01, 2007 |
| Schwarzbeck Antenna | VHBA 9123 | 480 | Apr. 18, 2008 |
| EMCO Horn Antenna | 3115 | 6714 | Oct. 24, 2007 |
| EMCO Horn Antenna | 3115 | 9312-4192 | Apr. 19, 2008 |
| ADT. Turn Table | TT100 | 0306 | NA |
| ADT. Tower | AT100 | 0306 | NA |
| Software | ADT_Radiated_V7.6.15 | NA | NA |
| SUHNER RF cable | SF104-26.5 | CABLE-CH6-17m-01 | Dec. 11, 2007 |
| ROHDE & SCHWARZ Spectrum Analyzer | FSP 40 | 100036 | Mar. 13, 2008 |

**NOTE:** 1. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to NML/ROC and NIST/USA.
2. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in ADT Chamber No. 6.
4. The Industry Canada Reference No. IC 3789-6.

## 4.1.3 TEST PROCEDURES

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 lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

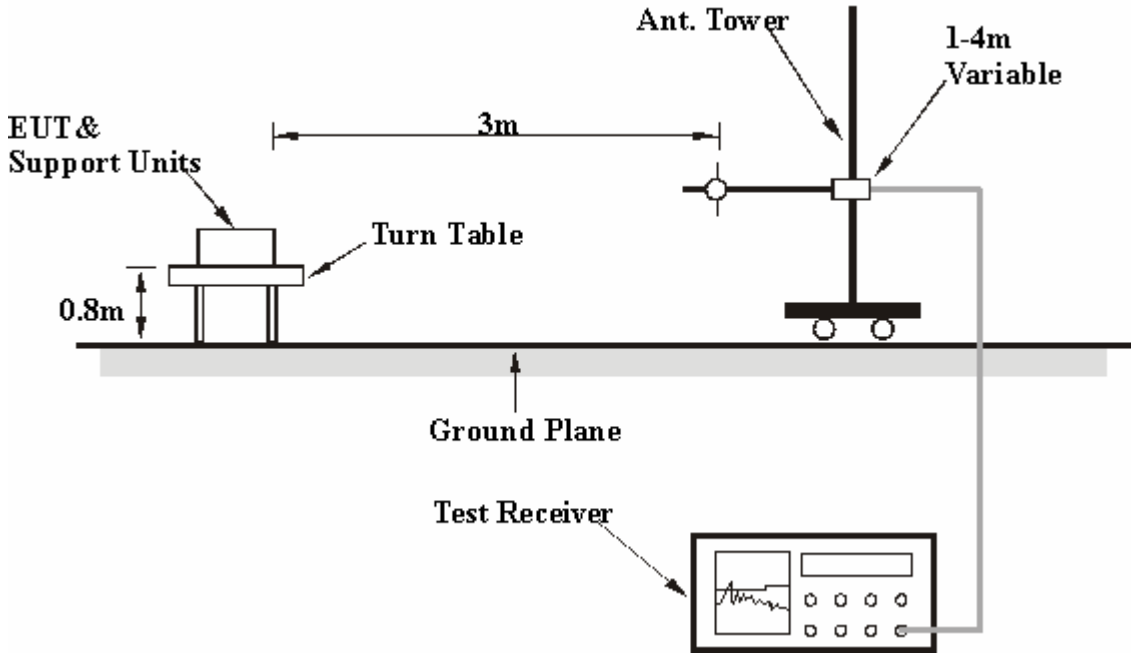
**NOTE:**

1. The resolution bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth is 1MHz and video bandwidth of test receiver/spectrum analyzer is 3MHz for Peak detection at frequency above 1GHz. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz for Average detection (AV) at frequency above 1GHz.
3. For measurement of frequency above 1000 MHz, the EUT was set 3 meters away from the interference-receiving antenna.

## 4.1.4 DEVIATION FROM TEST STANDARD

No deviation

## 4.1.5 TEST SETUP




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

## 4.1.6 EUT OPERATING CONDITIONS

Same as item 4.1.6.

## 4.1.7 TEST RESULTS

### RADIATED WORST CASE DATA: FOR GFSK (BELOW 1GHz)

| | | | |
|---|---|---|---|
| **TEST MODE** | A | | |
| **MODULATION TYPE** | GFSK | **CHANNEL** | 78 |
| **INPUT POWER** | 120Vac, 60 Hz | **FREQUENCY RANGE** | Below 1000MHz |
| **ENVIRONMENTAL CONDITIONS** | 26deg. C, 58%RH, 992Pa | **DETECTOR FUNCTION** | Quasi-Peak |
| **TESTED BY** | Jamison Chan | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 43.607 | 21.18 QP | 40.00 | -18.82 | 2.88 H | 271 | 5.82 | 15.36 |
| 2 | 68.878 | 22.78 QP | 40.00 | -17.22 | 1.79 H | 184 | 10.03 | 12.75 |
| 3 | 86.373 | 18.93 QP | 40.00 | -21.07 | 1.73 H | 337 | 8.83 | 10.10 |
| 4 | 780.341 | 25.09 QP | 46.00 | -20.91 | 2.11 H | 28 | -2.86 | 27.95 |
| 5 | 867.816 | 25.82 QP | 46.00 | -20.18 | 2.41 H | 334 | -3.02 | 28.84 |
| 6 | 945.571 | 27.47 QP | 46.00 | -18.53 | 1.82 H | 58 | -3.11 | 30.58 |

| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| **1** | **37.776** | **32.62 QP** | **40.00** | **-7.38** | **1.00 V** | **70** | **18.65** | **13.96** |
| 2 | 47.495 | 26.62 QP | 40.00 | -13.38 | 1.00 V | 40 | 11.44 | 15.19 |
| 3 | 70.822 | 28.07 QP | 40.00 | -11.93 | 1.14 V | 241 | 15.58 | 12.49 |
| 4 | 751.182 | 24.00 QP | 46.00 | -22.00 | 1.00 V | 211 | -3.80 | 27.81 |
| 5 | 811.443 | 24.76 QP | 46.00 | -21.24 | 1.20 V | 265 | -3.38 | 28.14 |
| 6 | 879.479 | 26.94 QP | 46.00 | -19.06 | 1.11 V | 4 | -2.16 | 29.10 |

**REMARKS**: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
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.

## RADIATED WORST CASE DATA: FOR 8DPSK (BELOW 1GHz)

| | | | |
|---|---|---|---|
| **TEST MODE** | A | | |
| **MODULATION TYPE** | GFSK | **CHANNEL** | 78 |
| **INPUT POWER** | 120Vac, 60 Hz | **FREQUENCY RANGE** | Below 1000MHz |
| **ENVIRONMENTAL CONDITIONS** | 26deg. C, 58%RH, 992Pa | **DETECTOR FUNCTION** | Quasi-Peak |
| **TESTED BY** | Jamison Chan | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 41.663 | 20.15 QP | 40.00 | -19.85 | 2.47 H | 271 | 5.25 | 14.90 |
| 2 | 66.934 | 22.75 QP | 40.00 | -17.25 | 1.69 H | 157 | 9.77 | 12.98 |
| 3 | 92.204 | 17.32 QP | 43.50 | -26.18 | 1.88 H | 160 | 7.80 | 9.52 |
| 4 | 731.743 | 24.11 QP | 46.00 | -21.89 | 2.12 H | 232 | -2.90 | 27.01 |
| 5 | 815.331 | 24.67 QP | 46.00 | -21.33 | 1.98 H | 13 | -3.50 | 28.17 |
| 6 | 867.816 | 26.02 QP | 46.00 | -19.98 | 2.71 H | 73 | -2.82 | 28.84 |

| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 43.607 | 32.41 QP | 40.00 | -7.59 | 1.00 V | 67 | 17.04 | 15.36 |
| 2 | 59.158 | 29.58 QP | 40.00 | -10.42 | 1.00 V | 40 | 15.71 | 13.87 |
| 3 | 78.597 | 26.63 QP | 40.00 | -13.37 | 1.00 V | 70 | 15.35 | 11.28 |
| 4 | 720.080 | 24.19 QP | 46.00 | -21.81 | 1.34 V | 262 | -2.32 | 26.51 |
| 5 | 825.050 | 25.95 QP | 46.00 | -20.05 | 1.12 V | 1 | -2.30 | 28.25 |
| 6 | 889.198 | 26.48 QP | 46.00 | -19.52 | 1.08 V | 220 | -2.83 | 29.31 |

**REMARKS**: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
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.

## RADIATED WORST CASE DATA: FOR GFSK (BELOW 1GHz)

| | | | |
|---|---|---|---|
| **TEST MODE** | B | | |
| **MODULATION TYPE** | GFSK | **CHANNEL** | 78 |
| **INPUT POWER** | 3.7Vdc | **FREQUENCY RANGE** | Below 1000MHz |
| **ENVIRONMENTAL CONDITIONS** | 26deg. C, 58%RH, 992Pa | **DETECTOR FUNCTION** | Quasi-Peak |
| **TESTED BY** | Jamison Chan | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 51.383 | 28.60 QP | 40.00 | -11.40 | 1.87 H | 25 | 14.04 | 14.56 |
| 2 | 64.990 | 28.36 QP | 40.00 | -11.64 | 2.71 H | 46 | 15.15 | 13.21 |
| 3 | 82.485 | 27.17 QP | 40.00 | -12.83 | 1.83 H | 37 | 16.49 | 10.68 |
| 4 | 723.968 | 23.03 QP | 46.00 | -22.97 | 1.99 H | 283 | -3.65 | 26.68 |
| 5 | 795.892 | 24.69 QP | 46.00 | -21.31 | 2.25 H | 25 | -3.33 | 28.02 |
| 6 | 875.591 | 25.90 QP | 46.00 | -20.10 | 2.02 H | 358 | -3.11 | 29.01 |

| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 45.551 | 27.53 QP | 40.00 | -12.47 | 1.00 V | 130 | 11.95 | 15.58 |
| 2 | 63.046 | 28.51 QP | 40.00 | -11.49 | 1.00 V | 232 | 15.07 | 13.44 |
| 3 | 78.597 | 25.33 QP | 40.00 | -14.67 | 1.00 V | 340 | 14.05 | 11.28 |
| 4 | 778.397 | 25.60 QP | 46.00 | -20.40 | 1.13 V | 115 | -2.34 | 27.94 |
| 5 | 869.760 | 25.78 QP | 46.00 | -20.22 | 1.20 V | 211 | -3.11 | 28.89 |
| 6 | 926.132 | 26.97 QP | 46.00 | -19.03 | 1.00 V | 19 | -3.17 | 30.14 |

**REMARKS**:
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
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.

## RADIATED WORST CASE DATA: FOR 8DPSK (BELOW 1GHz)

| | | | |
|---|---|---|---|
| **TEST MODE** | A | | |
| **MODULATION TYPE** | GFSK | **CHANNEL** | 78 |
| **INPUT POWER** | 3.7Vdc | **FREQUENCY RANGE** | Below 1000MHz |
| **ENVIRONMENTAL CONDITIONS** | 26deg. C, 58%RH, 992Pa | **DETECTOR FUNCTION** | Quasi-Peak |
| **TESTED BY** | Jamison Chan | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 41.663 | 15.82 QP | 40.00 | -24.18 | 1.97 H | 238 | 0.92 | 14.90 |
| 2 | 57.214 | 16.24 QP | 40.00 | -23.76 | 2.08 H | 298 | 2.19 | 14.05 |
| 3 | 84.429 | 17.95 QP | 40.00 | -22.05 | 2.97 H | 163 | 7.56 | 10.39 |
| 4 | 757.014 | 24.54 QP | 46.00 | -21.46 | 1.62 H | 49 | -3.29 | 27.83 |
| 5 | 797.836 | 25.00 QP | 46.00 | -21.00 | 2.44 H | 76 | -3.03 | 28.03 |
| 6 | 860.040 | 25.68 QP | 46.00 | -20.32 | 3.10 H | 154 | -3.00 | 28.68 |

| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No. | Freq. (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 37.776 | 29.34 QP | 40.00 | -10.66 | 1.00 V | 82 | 15.37 | 13.96 |
| 2 | 64.990 | 30.83 QP | 40.00 | -9.17 | 1.00 V | 43 | 17.61 | 13.21 |
| 3 | 80.541 | 26.23 QP | 40.00 | -13.77 | 1.00 V | 37 | 15.25 | 10.98 |
| 4 | 797.836 | 24.02 QP | 46.00 | -21.98 | 1.15 V | 46 | -4.01 | 28.03 |
| 5 | 852.265 | 25.69 QP | 46.00 | -20.31 | 1.21 V | 247 | -2.82 | 28.51 |
| 6 | 885.311 | 26.06 QP | 46.00 | -19.94 | 1.36 V | 199 | -3.16 | 29.22 |

**REMARKS**:
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
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.

# 5. PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).

# 6. INFORMATION ON THE TESTING LABORATORIES

We, ADT Corp., were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

| | |
|---|---|
| **USA** | FCC, UL, A2LA |
| **Germany** | TUV Rheinland |
| **Japan** | VCCI |
| **Norway** | NEMKO |
| **Canada** | INDUSTRY CANADA , CSA |
| **R.O.C.** | TAF, BSMI, NCC |
| **Netherlands** | Telefication |
| **Singapore** | PSB , GOST-ASIA(MOU) |
| **Russia** | CERTIS(MOU) |

Copies of accreditation certificates of our laboratories obtained from approval agencies can be downloaded from our web site: www.adt.com.tw/index.5/phtml. If you have any comments, please feel free to contact us at the following:

**Linko EMC/RF Lab**:
Tel: 886-2-26052180
Fax: 886-2-26051924

**Hsin Chu EMC/RF Lab**:
Tel: 886-3-5935343
Fax: 886-3-5935342

**Hwa Ya EMC/RF/Safety Telecom Lab**:
Tel: 886-3-3183232
Fax: 886-3-3185050

**Web Site**: www.adt.com.tw

The address and road map of all our labs can be found in our web site also.

# 7. APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.