

# FCC TEST REPORT

**REPORT NO. :** RF940107L12

**MODEL NO. :** CC420

**RECEIVED :** Mar. 01, 2005

**TESTED :** Mar. 08 ~ Mar. 11, 2005

**ISSUED :** Mar. 15, 2005

**APPLICANT :** EVERSPRING INDUSTRY CO., LTD

**ADDRESS :** 7 FL., 609 Wan Shou Road Sec. 1, Kweishan,  
Taoyuan Hsien 333, Taiwan, R.O.C.

**ISSUED BY :** Advance Data Technology Corporation

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

**TEST LOCATION :** No. 19, Hwa Ya 2nd Rd., Wen Hwa Tsuen, Kwei  
Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

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0528  
ILAC MRA



No. 2177-01



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## 1. CERTIFICATION

**PRODUCT :** Baby Camera  
**BRAND NAME :** Everspring  
**MODEL NO. :** CC420  
**APPLICANT :** EVERSPRING INDUSTRY CO., LTD  
**TESTED :** Mar. 08 ~ Mar. 11, 2005  
**TEST SAMPLE :** ENGINEERING SAMPLE  
**STANDARDS :** FCC Part 15, Subpart C (Section 15.249)  
ANSI C63.4-2003

The above equipment have 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 :** Suntee Liu, **DATE :** Mar. 15, 2005  
Suntee Liu

**TECHNICAL**  
**ACCEPTANCE :** Gary Chang, **DATE :** Mar. 15, 2005  
Responsible for RF Gary Chang

**APPROVED BY :** Cody Chang, **DATE :** Mar. 15, 2005  
Cody Chang, Deputy Manager

## 2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

<b>APPLIED STANDARD: FCC Part 15, Subpart C (Section 15.249)</b>			
<b>STANDARD PARAGRAPH</b>	<b>TEST TYPE</b>	<b>RESULT</b>	<b>REMARK</b>
15.207	Conducted Emission Test	PASS	Minimum passing margin is -20.87dB at 0.580MHz
15.209 15.249 15.249 (d)	Radiated Emission Test Band Edge Measurement Limit: 50dB less than the peak value of fundamental frequency or meet radiated emission limit in section 12.209	PASS	Minimum passing margin is -1.62dB at 4864.00MHz

### 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:

<b>Chamber</b>	<b>Measurement</b>	<b>Frequency</b>	<b>Uncertainty</b>
Hwa Ya Chamber 1	Conducted emissions	9kHz~30MHz	2.44 dB
	Radiated emissions	30MHz ~ 200MHz	3.73 dB
		200MHz ~1000MHz	3.74 dB
		1GHz ~ 18GHz	2.20 dB
		18GHz ~ 40GHz	1.88 dB

### 3. GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

<b>EUT</b>	Baby Camera
<b>MODEL NO.</b>	CC420
<b>POWER SUPPLY</b>	6Vdc from batteries 6Vdc from power adapter
<b>MODULATION TYPE</b>	FM
<b>FREQUENCY RANGE</b>	2413, 2432, 2451, 2470 MHz
<b>NUMBER OF CHANNEL</b>	4
<b>ANTENNA TYPE</b>	Dipole antenna with 2 dBi gain
<b>DATA CABLE</b>	0.2 m UTP AV cable
<b>I/O PORT</b>	AV input

**NOTE:**

1. The EUT is powered by the following power adapter.

Brand	MAW WOEI
Model	MWD41-0600500R
Input Power	120Vac, 60Hz, 8.2W
Output Power	6Vdc, 500mA
Power Line	DC 1.8m non-shielded cable

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

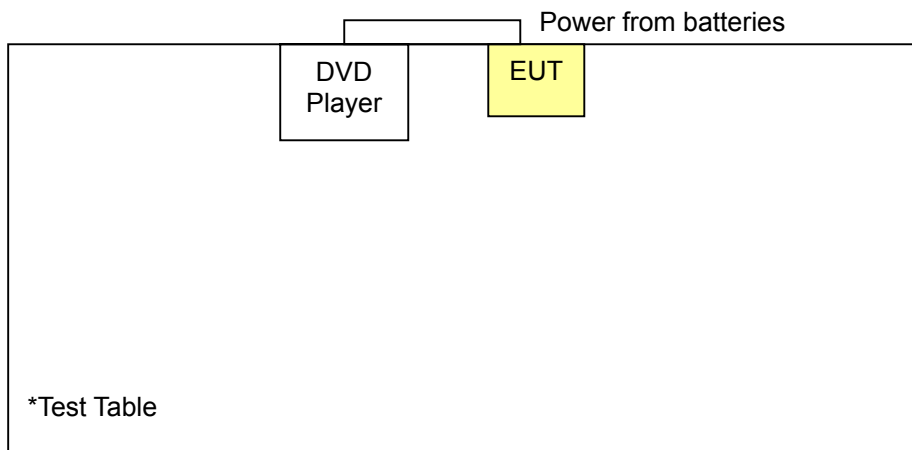
### 3.2 DESCRIPTION OF TEST MODES

4 channels are provided to this EUT.

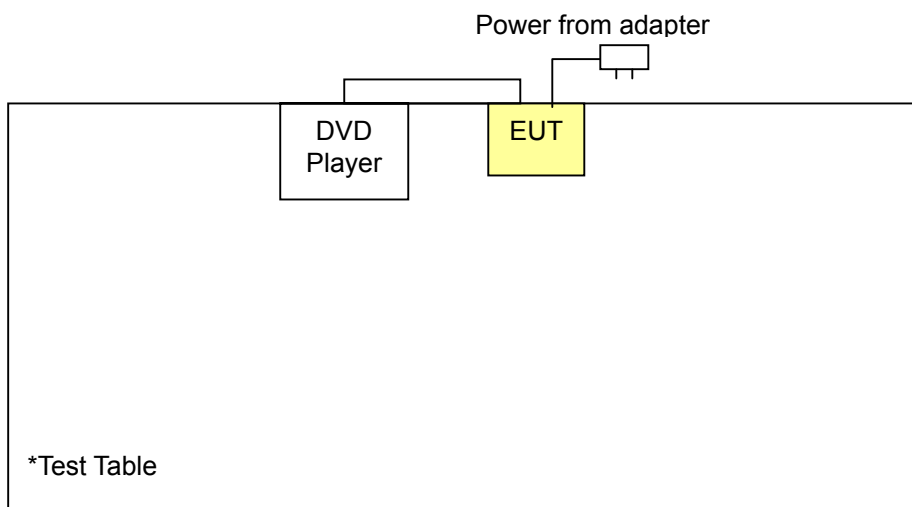
Channel	Frequency
1	2413 MHz
2	2432 MHz
3	2451 MHz
4	2470 MHz

#### 3.2.1 CONFIGURATION OF SYSTEM UNDER TEST

For battery mode



For adapter mode





3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT Configure Mode	Applicable to				Description
	PLC	RE<1G	RE≥1G	APCM	
A	-	x	Note 1	Note 2	Power from the batteries
B	x	x	Note 1	Note 2	Power from the adapter

Where PLC: Power Line Conducted Emission  
 RE<1G: Radiated Emission below 1GHz  
 RE≥1G: Radiated Emission above 1GHz  
 APCM: Antenna Port Conducted Measurement

Note 1: Pre-scan showed adapter and battery were no effect for radiated emission above 1GHz and only the worst case recorded in this report.

Note 2: Conducted RF measurement is independent of adapter.

**Power Line Conducted Emission Test:**

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

Available Channel	Tested Channel	Modulation Type
1 ~ 4	1, 2, 4	FM

**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 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 Type
A	1 ~ 4	1	FM
B	1 ~ 4	1	FM

**Radiated Emission Test (Above 1 GHz):**

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates 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 Type
A	1 ~ 4	1, 2, 4	FM





### **Bandedge Measurement:**

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

Available Channel	Tested Channel	Modulation Type
1 ~ 4	1, 4	FM

### **3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS**

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

#### **FCC Part 15, Subpart C (Section 15.249)**

#### **ANSI C63.4-2003**

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

**NOTE:** The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

### **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	DVD PLAYER	SONY	DVP-NS530	1003690	Verification

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA

**NOTE:** All power cords of the above support units are non shielded (1.8m).



## 4. TEST TYPES AND RESULTS

### 4.1 CONDUCTED EMISSION MEASUREMENT

#### 4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB $\mu$ V)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56	56 to 46
0.5 ~ 5	56	46
5 ~ 30	60	50

- NOTE:**
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.
  3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

#### 4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESCS30	100291	Nov. 16, 2005
RF signal cable Woken	5D-FB	Cable-HYC01-01	Jan. 09, 2006
LISN ROHDE & SCHWARZ	ESH3-Z5	100312	Feb. 15, 2006
LISN ROHDE & SCHWARZ	ESH2-Z5	100104	Feb. 15, 2006
Software ADT	ADT_Cond_V3	NA	NA

- 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 test was performed in HwaYa Shielded Room 1.
  3. The VCCI Site Registration No. is C-2040.

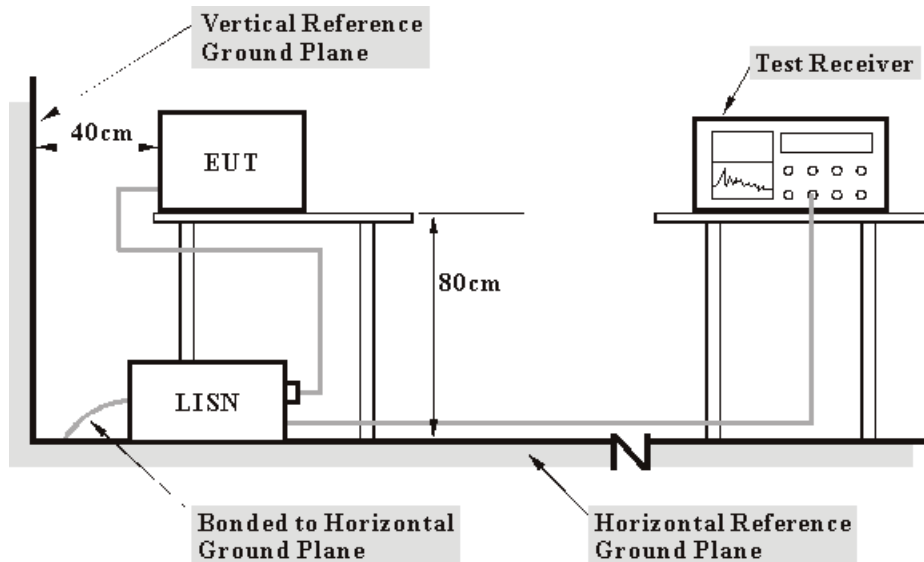
#### 4.1.3 TEST PROCEDURES

- 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.
- c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

#### 4.1.4 DEVIATION FROM TEST STANDARD

No deviation.

#### 4.1.5 TEST SETUP



- Note:**
1. Support units were connected to second LISN.
  2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

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



#### 4.1.6 EUT OPERATING CONDITIONS

- a. The DVD player sent picture signal to the EUT (Baby Camera).
- b. Set the EUT under transmitting condition at specific channel.



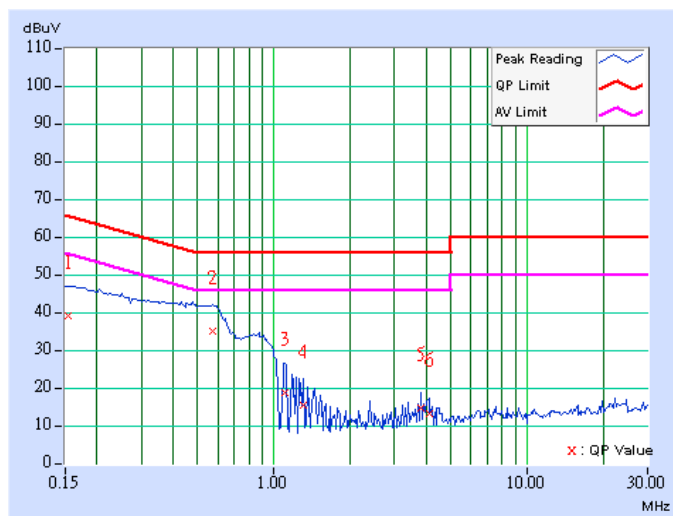
4.1.7 TEST RESULTS

**Conducted Worst-Case Data (Test mode B)**

<b>EUT</b>	Baby Camera	<b>MODEL</b>	CC420
<b>CHANNEL</b>	1	<b>6dB BANDWIDTH</b>	9 kHz
<b>INPUT POWER (SYSTEM)</b>	120 Vac, 60 Hz	<b>MODULATION TYPE</b>	FM
<b>ENVIRONMENTAL CONDITIONS</b>	23 deg. C, 65% RH, 991 hPa	<b>PHASE</b>	Line (L)
<b>TEST MODE</b>	B	<b>TESTED BY</b>	Gary Chang

No	Freq. [MHz]	Corr. Factor (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	0.154	0.10	38.96	-	39.06	-	65.79	55.79	-26.73	-
2	0.576	0.13	34.95	-	35.08	-	56.00	46.00	-20.92	-
3	1.103	0.18	18.43	-	18.61	-	56.00	46.00	-37.39	-
4	1.306	0.19	15.37	-	15.56	-	56.00	46.00	-40.44	-
5	3.814	0.28	14.67	-	14.95	-	56.00	46.00	-41.05	-
6	4.113	0.29	13.11	-	13.40	-	56.00	46.00	-42.60	-

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
  2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
  3. The emission levels of other frequencies were very low against the limit.
  4. Margin value = Emission level - Limit value
  5. Correction factor = Insertion loss + Cable loss
  6. Emission Level = Correction Factor + Reading Value.

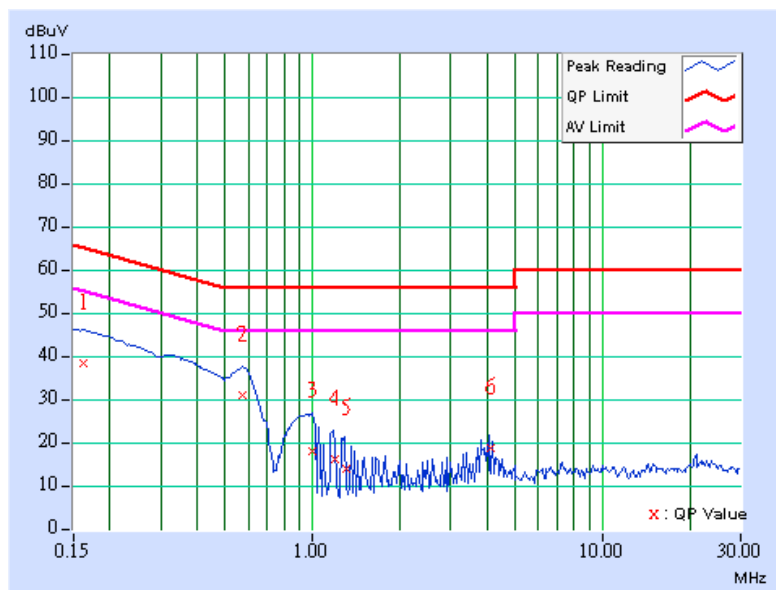




<b>EUT</b>	Baby Camera	<b>MODEL</b>	CC420
<b>CHANNEL</b>	1	<b>6dB BANDWIDTH</b>	9 kHz
<b>INPUT POWER (SYSTEM)</b>	120 Vac, 60 Hz	<b>MODULATION TYPE</b>	FM
<b>ENVIRONMENTAL CONDITIONS</b>	23 deg. C, 65% RH, 991 hPa	<b>PHASE</b>	Neutral (N)
<b>TEST MODE</b>	B	<b>TESTED BY</b>	Gary Chang

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.162	0.10	38.21	-	38.31	-	65.38
2	0.572	0.12	30.80	-	30.92	-	56.00	46.00	-25.08	-
3	0.998	0.18	17.96	-	18.14	-	56.00	46.00	-37.86	-
4	1.202	0.19	16.14	-	16.33	-	56.00	46.00	-39.67	-
5	1.303	0.19	13.82	-	14.01	-	56.00	46.00	-41.99	-
6	4.107	0.28	18.76	-	19.04	-	56.00	46.00	-36.96	-

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
  2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
  3. The emission levels of other frequencies were very low against the limit.
  4. Margin value = Emission level - Limit value
  5. Correction factor = Insertion loss + Cable loss
  6. Emission Level = Correction Factor + Reading Value.

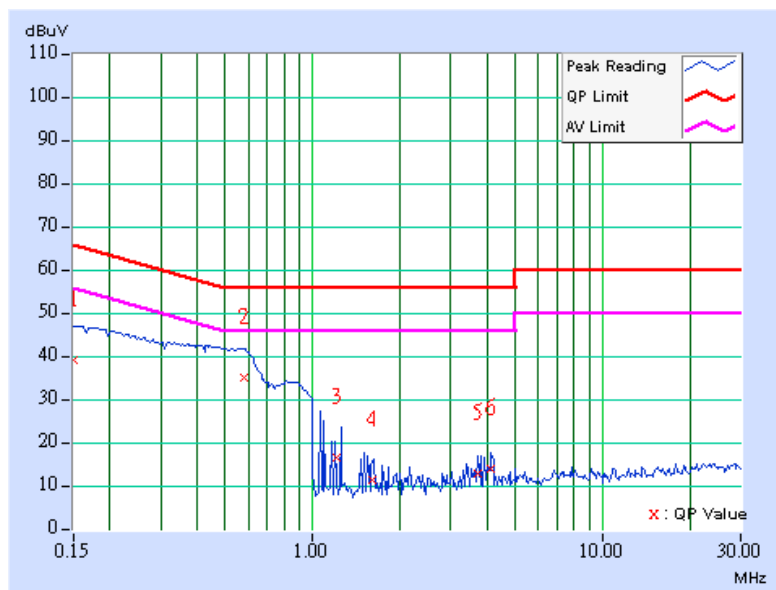




<b>EUT</b>	Baby Camera	<b>MODEL</b>	CC420
<b>CHANNEL</b>	2	<b>6dB BANDWIDTH</b>	9 kHz
<b>INPUT POWER (SYSTEM)</b>	120 Vac, 60 Hz	<b>MODULATION TYPE</b>	FM
<b>ENVIRONMENTAL CONDITIONS</b>	23 deg. C, 65% RH, 991 hPa	<b>PHASE</b>	Line (L)
<b>TEST MODE</b>	B	<b>TESTED BY</b>	Gary Chang

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.150	0.10	39.03	-	39.13	-	66.00
2	<b>0.580</b>	<b>0.13</b>	<b>35.00</b>	-	<b>35.13</b>	-	<b>56.00</b>	<b>46.00</b>	<b>-20.87</b>	-
3	1.204	0.19	16.30	-	16.49	-	56.00	46.00	-39.51	-
4	1.608	0.20	11.03	-	11.23	-	56.00	46.00	-44.77	-
5	3.715	0.28	12.58	-	12.86	-	56.00	46.00	-43.14	-
6	4.117	0.29	13.68	-	13.97	-	56.00	46.00	-42.03	-

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
  2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
  3. The emission levels of other frequencies were very low against the limit.
  4. Margin value = Emission level - Limit value
  5. Correction factor = Insertion loss + Cable loss
  6. Emission Level = Correction Factor + Reading Value.

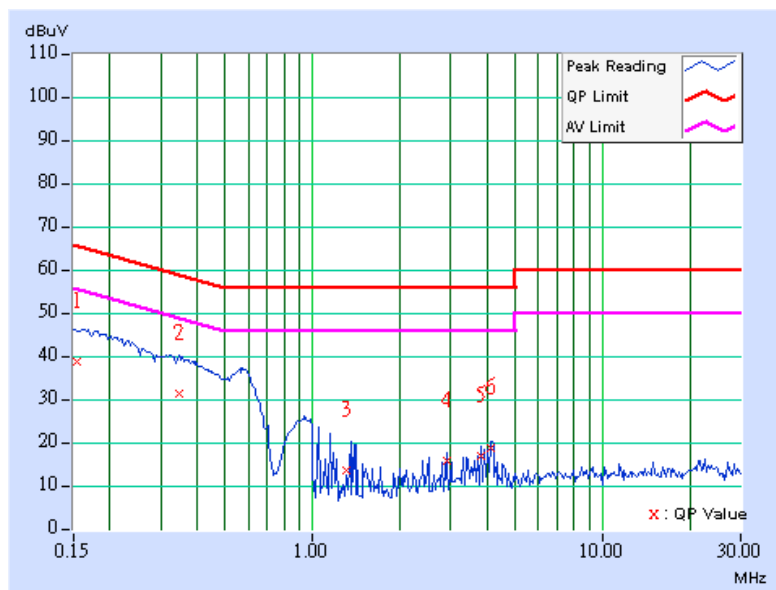




<b>EUT</b>	Baby Camera	<b>MODEL</b>	CC420
<b>CHANNEL</b>	2	<b>6dB BANDWIDTH</b>	9 kHz
<b>INPUT POWER (SYSTEM)</b>	120 Vac, 60 Hz	<b>MODULATION TYPE</b>	FM
<b>ENVIRONMENTAL CONDITIONS</b>	23 deg. C, 65% RH, 991 hPa	<b>PHASE</b>	Neutral (N)
<b>TEST MODE</b>	B	<b>TESTED BY</b>	Gary Chang

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.154	0.10	38.58	-	38.68	-	65.79
2	0.345	0.10	31.22	-	31.32	-	59.07	49.07	-27.75	-
3	1.304	0.19	13.56	-	13.75	-	56.00	46.00	-42.25	-
4	2.914	0.24	15.55	-	15.79	-	56.00	46.00	-40.21	-
5	3.816	0.27	16.72	-	16.99	-	56.00	46.00	-39.01	-
6	4.121	0.28	18.66	-	18.94	-	56.00	46.00	-37.06	-

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
  2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
  3. The emission levels of other frequencies were very low against the limit.
  4. Margin value = Emission level - Limit value
  5. Correction factor = Insertion loss + Cable loss
  6. Emission Level = Correction Factor + Reading Value.



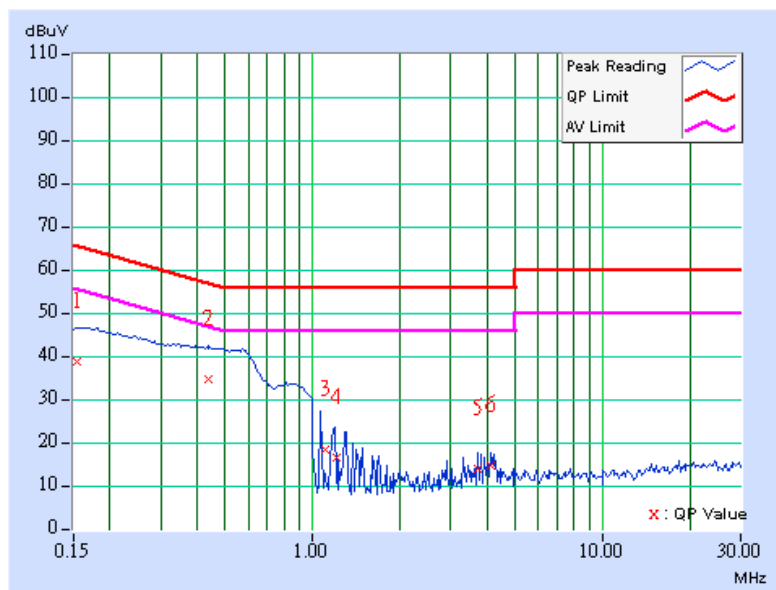




<b>EUT</b>	Baby Camera	<b>MODEL</b>	CC420
<b>CHANNEL</b>	4	<b>6dB BANDWIDTH</b>	9 kHz
<b>INPUT POWER (SYSTEM)</b>	120 Vac, 60 Hz	<b>MODULATION TYPE</b>	FM
<b>ENVIRONMENTAL CONDITIONS</b>	23 deg. C, 65% RH, 991 hPa	<b>PHASE</b>	Line (L)
<b>TEST MODE</b>	B	<b>TESTED BY</b>	Gary Chang

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.154	0.10	38.78	-	38.88	-	65.79
2	0.439	0.12	34.56	-	34.68	-	57.08	47.08	-22.40	-
3	1.107	0.18	18.27	-	18.45	-	56.00	46.00	-37.55	-
4	1.208	0.19	16.34	-	16.53	-	56.00	46.00	-39.47	-
5	3.723	0.28	13.82	-	14.10	-	56.00	46.00	-41.90	-
6	4.125	0.29	14.43	-	14.72	-	56.00	46.00	-41.28	-

- REMARKS:**
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  2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
  3. The emission levels of other frequencies were very low against the limit.
  4. Margin value = Emission level - Limit value
  5. Correction factor = Insertion loss + Cable loss
  6. Emission Level = Correction Factor + Reading Value.

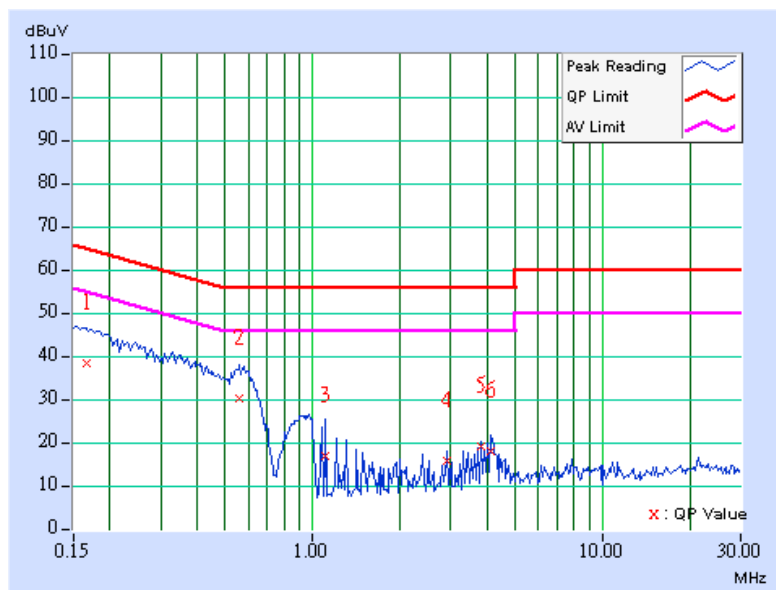




<b>EUT</b>	Baby Camera	<b>MODEL</b>	CC420
<b>CHANNEL</b>	4	<b>6dB BANDWIDTH</b>	9 kHz
<b>INPUT POWER (SYSTEM)</b>	120 Vac, 60 Hz	<b>MODULATION TYPE</b>	FM
<b>ENVIRONMENTAL CONDITIONS</b>	23 deg. C, 65% RH, 991 hPa	<b>PHASE</b>	Neutral (N)
<b>TEST MODE</b>	B	<b>TESTED BY</b>	Gary Chang

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.166	0.10	38.15	-	38.25	-	65.18
2	0.560	0.12	30.23	-	30.35	-	56.00	46.00	-25.65	-
3	1.107	0.18	16.79	-	16.97	-	56.00	46.00	-39.03	-
4	2.918	0.24	15.61	-	15.85	-	56.00	46.00	-40.15	-
5	3.820	0.27	19.08	-	19.35	-	56.00	46.00	-36.65	-
6	4.121	0.28	18.02	-	18.30	-	56.00	46.00	-37.70	-

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
  2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
  3. The emission levels of other frequencies were very low against the limit.
  4. Margin value = Emission level - Limit value
  5. Correction factor = Insertion loss + Cable loss
  6. Emission Level = Correction Factor + Reading Value.





## 4.2 RADIATED EMISSION MEASUREMENT

### 4.2.1 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.



## 4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESIB7	100188	Dec. 19, 2005
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Nov. 21, 2005
BILOG Antenna SCHWARZBECK	VULB9168	9168-157	Jan. 22, 2006
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-407	Jan. 16, 2006
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA 9170241	Feb. 23, 2006
Preamplifier Agilent	8449B	3008A01961	Nov. 09, 2005
Preamplifier Agilent	8447D	2944A10629	Nov. 09, 2005
RF signal cable HUBER+SUHNER	SUCOFLEX 104	218182/4	Feb. 17, 2006
RF signal cable HUBER+SUHNER	SUCOFLEX 104	218194/4	Feb. 17, 2006
Software ADT.	ADT_Radiated_V5.14	NA	NA
Antenna Tower ADT.	AT100	AT93021702	NA
Turn Table ADT.	TT100.	TT93021702	NA
Controller ADT.	SC100.	SC93021702	NA

- 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 test was performed in HwaYa Chamber 1.
3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The IC Site Registration No. is IC4924-2.

#### 4.2.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters 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.

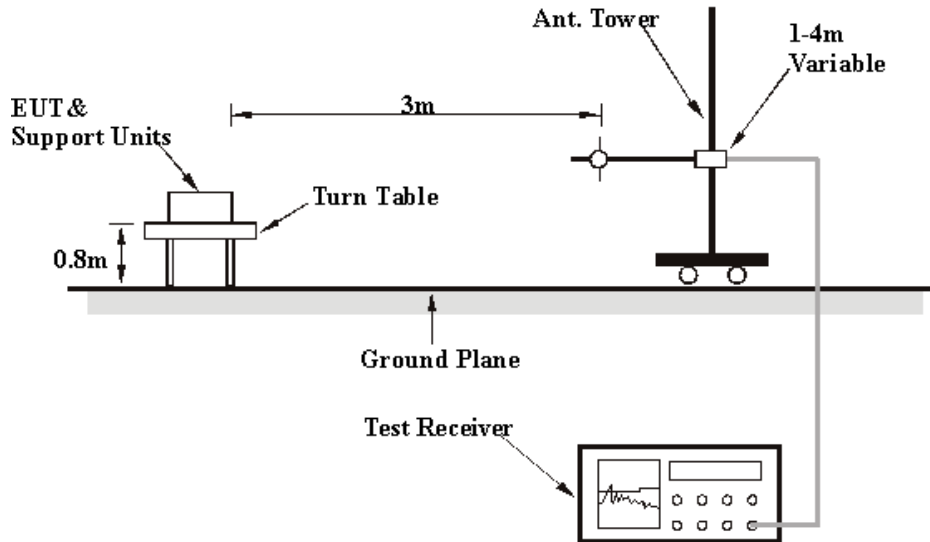
**NOTE:**

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection (PK) at frequency above 1GHz.

#### 4.2.4 DEVIATION FROM TEST STANDARD

No deviation.

### 4.2.5 TEST SETUP



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

### 4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6.

## 4.2.7 TEST RESULTS (A)

**Below 1GHz Worst-Case Data – Battery Mode**

<b>EUT</b>	Baby Camera	<b>MODEL</b>	CC420
<b>CHANNEL</b>	1	<b>FREQUENCY RANGE</b>	Below 1000MHz
<b>INPUT POWER (SYSTEM)</b>	120 Vac, 60 Hz	<b>MODULATION TYPE</b>	FM
<b>ENVIRONMENTAL CONDITIONS</b>	25 deg. C, 51% RH, 991 hPa	<b>DETECTOR FUNCTION</b>	Quasi-Peak
<b>TEST MODE</b>	A	<b>TESTED BY</b>	Match Tsui

**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	131.08	23.08 QP	43.50	-20.42	2.00 H	124	9.49	13.58
2	241.88	27.16 QP	46.00	-18.84	1.00 H	355	14.21	12.95
3	296.31	34.99 QP	46.00	-11.01	1.00 H	271	20.72	14.28
4	383.79	29.06 QP	46.00	-16.94	1.00 H	193	12.81	16.26
5	428.50	32.37 QP	46.00	-13.63	1.00 H	238	15.01	17.36
6	473.21	30.18 QP	46.00	-15.82	2.00 H	58	11.96	18.22
7	519.86	28.68 QP	46.00	-17.32	1.50 H	52	9.68	18.99
8	564.57	26.43 QP	46.00	-19.57	1.00 H	337	6.44	19.98
9	792.00	28.96 QP	46.00	-17.04	1.00 H	133	5.31	23.66
10	902.81	38.69 QP	46.00	-7.31	2.00 H	226	13.56	25.13

**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	61.10	24.05 QP	40.00	-15.95	1.00 V	358	10.72	13.33
2	123.31	23.13 QP	43.50	-20.37	1.00 V	241	10.10	13.03
3	189.40	23.68 QP	43.50	-19.82	1.00 V	337	11.71	11.97
4	296.31	33.79 QP	46.00	-12.21	1.50 V	16	19.51	14.28
5	377.96	28.80 QP	46.00	-17.20	1.50 V	1	12.68	16.12
6	428.50	34.97 QP	46.00	-11.03	1.50 V	157	17.61	17.36
7	473.21	31.82 QP	46.00	-14.18	1.00 V	16	13.59	18.22
8	519.86	32.40 QP	46.00	-13.60	1.00 V	352	13.40	18.99
9	593.73	28.90 QP	46.00	-17.10	1.00 V	133	8.16	20.73
10	757.01	30.97 QP	46.00	-15.03	1.50 V	163	7.51	23.46

- 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.

## 4.2.8 TEST RESULTS (B)

**Below 1GHz Worst-Case Data – Adapter Mode**

<b>EUT</b>	Baby Camera	<b>MODEL</b>	CC420
<b>CHANNEL</b>	1	<b>FREQUENCY RANGE</b>	Below 1000MHz
<b>INPUT POWER (SYSTEM)</b>	120 Vac, 60 Hz	<b>MODULATION TYPE</b>	FM
<b>ENVIRONMENTAL CONDITIONS</b>	25 deg. C, 51% RH, 991 hPa	<b>DETECTOR FUNCTION</b>	Quasi-Peak
<b>TEST MODE</b>	B	<b>TESTED BY</b>	Match Tsui

**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	94.15	24.21 QP	43.50	-19.29	2.00 H	40	13.93	10.28
2	131.08	23.84 QP	43.50	-19.66	3.00 H	25	10.25	13.58
3	241.88	26.87 QP	46.00	-19.13	1.00 H	349	13.92	12.95
4	296.31	33.97 QP	46.00	-12.03	1.00 H	280	19.70	14.28
5	395.45	28.59 QP	46.00	-17.41	1.00 H	232	12.06	16.53
6	428.50	33.93 QP	46.00	-12.07	1.00 H	247	16.56	17.36
7	473.21	30.24 QP	46.00	-15.76	2.00 H	55	12.01	18.22
8	519.86	28.93 QP	46.00	-17.07	1.50 H	46	9.94	18.99
9	792.00	29.30 QP	46.00	-16.70	1.00 H	136	5.64	23.66

**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	61.10	23.73 QP	40.00	-16.27	1.00 V	31	10.40	13.33
2	296.31	32.64 QP	46.00	-13.36	1.50 V	355	18.36	14.28
3	323.53	28.23 QP	46.00	-17.77	1.50 V	352	13.37	14.86
4	383.79	29.78 QP	46.00	-16.22	1.50 V	172	13.52	16.26
5	428.50	34.96 QP	46.00	-11.04	1.50 V	151	17.60	17.36
6	473.21	33.05 QP	46.00	-12.95	1.00 V	16	14.83	18.22
7	519.86	33.18 QP	46.00	-12.82	1.00 V	358	14.19	18.99
8	593.73	29.96 QP	46.00	-16.04	1.00 V	124	9.23	20.73
9	757.01	30.74 QP	46.00	-15.26	1.50 V	175	7.28	23.46
10	904.75	30.15 QP	46.00	-15.85	2.00 V	151	4.99	25.15

- 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.



**Above 1GHz Worst-Case Data**

<b>EUT</b>	Baby Camera	<b>MODEL</b>	CC420
<b>CHANNEL</b>	1	<b>FREQUENCY RANGE</b>	1 ~ 25 GHz
<b>INPUT POWER (SYSTEM)</b>	120 Vac, 60 Hz	<b>MODULATION TYPE</b>	FM
<b>ENVIRONMENTAL CONDITIONS</b>	25 deg. C, 68% RH, 991 hPa	<b>DETECTOR FUNCTION</b>	Peak (PK) Average (AV)
<b>TEST MODE</b>	A	<b>TESTED BY</b>	Brad Wu

**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	*2413.00	88.75 PK	114.00	-25.25	1.05 H	346	56.79	31.96
1	*2413.00	82.05 AV	94.00	-11.95	1.05 H	346	50.09	31.96
2	4826.00	63.10 PK	74.00	-10.90	1.07 H	168	25.26	37.84
2	4826.00	48.51 AV	54.00	-5.49	1.07 H	168	10.67	37.84
3	7239.00	56.17 PK	74.00	-17.83	1.00 H	116	11.87	44.29
3	7239.00	42.82 AV	54.00	-11.18	1.00 H	116	-1.48	44.29
4	9652.00	62.63 PK	74.00	-11.37	1.09 H	206	14.84	47.79
4	9652.00	47.81 AV	54.00	-6.19	1.09 H	206	0.02	47.79

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 10 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	*2413.00	90.78 PK	114.00	-23.22	1.08 V	159	58.82	31.96
1	*2413.00	84.49 AV	94.00	-9.51	1.08 V	159	52.53	31.96
2	4826.00	64.55 PK	74.00	-9.45	1.70 V	74	26.71	37.84
2	4826.00	49.81 AV	54.00	-4.19	1.70 V	74	11.97	37.84
3	7239.00	57.23 PK	74.00	-16.77	1.03 V	163	12.94	44.29
3	7239.00	43.96 AV	54.00	-10.04	1.03 V	163	-0.33	44.29
4	9652.00	64.53 PK	74.00	-9.47	1.07 V	200	16.74	47.79
4	9652.00	49.86 AV	54.00	-4.14	1.07 V	200	2.07	47.79

- 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. “ \* “ : Fundamental frequency



<b>EUT</b>	Baby Camera	<b>MODEL</b>	CC420
<b>CHANNEL</b>	2	<b>FREQUENCY RANGE</b>	1 ~ 25 GHz
<b>INPUT POWER (SYSTEM)</b>	120 Vac, 60 Hz	<b>MODULATION TYPE</b>	FM
<b>ENVIRONMENTAL CONDITIONS</b>	25 deg. C, 68% RH, 991 hPa	<b>DETECTOR FUNCTION</b>	Peak (PK) Average (AV)
<b>TEST MODE</b>	A	<b>TESTED BY</b>	Brad Wu

**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	*2432.00	87.49 PK	114.00	-26.51	1.27 H	20	55.45	32.04
1	*2432.00	80.44 AV	94.00	-13.56	1.27 H	20	48.40	32.04
2	4864.00	62.10 PK	74.00	-11.90	1.06 H	233	24.15	37.95
2	4864.00	51.06 AV	54.00	-2.94	1.06 H	233	13.11	37.95
3	7296.00	57.75 PK	74.00	-16.25	1.03 H	252	13.27	44.48
3	7296.00	44.01 AV	54.00	-9.99	1.03 H	252	-0.47	44.48
4	9782.00	63.31 PK	74.00	-10.69	1.09 H	211	15.19	48.12
4	9782.00	47.69 AV	54.00	-6.31	1.09 H	211	-0.43	48.12

**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	*2432.00	91.09 PK	114.00	-22.91	1.00 V	135	59.05	32.04
1	*2432.00	84.87 AV	94.00	-9.13	1.00 V	135	52.83	32.04
2	4864.00	63.31 PK	74.00	-10.69	1.02 V	143	25.36	37.95
<b>2</b>	<b>4864.00</b>	<b>52.38 AV</b>	<b>54.00</b>	<b>-1.62</b>	<b>1.02 V</b>	<b>143</b>	<b>14.43</b>	<b>37.95</b>
3	7296.00	58.63 PK	74.00	-15.37	1.07 V	231	14.15	44.48
3	7296.00	45.21 AV	54.00	-8.79	1.07 V	231	0.73	44.48
4	9782.00	63.39 PK	74.00	-10.61	1.06 V	234	15.27	48.12
4	9782.00	48.06 AV	54.00	-5.94	1.06 V	234	-0.06	48.12

- 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. “ \* “ : Fundamental frequency



<b>EUT</b>	Baby Camera	<b>MODEL</b>	CC420
<b>CHANNEL</b>	4	<b>FREQUENCY RANGE</b>	1 ~ 25 GHz
<b>INPUT POWER (SYSTEM)</b>	120 Vac, 60 Hz	<b>MODULATION TYPE</b>	FM
<b>ENVIRONMENTAL CONDITIONS</b>	21 deg. C, 62% RH, 991 hPa	<b>DETECTOR FUNCTION</b>	Peak (PK) Average (AV)
<b>TEST MODE</b>	A	<b>TESTED BY</b>	Brad Wu

**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	*2470.00	86.85 PK	114.00	-27.15	1.92 H	4	54.66	32.19
1	*2470.00	80.26 AV	94.00	-13.74	1.92 H	4	48.07	32.19
2	4940.00	63.91 PK	74.00	-10.09	1.31 H	343	25.72	38.19
2	4940.00	50.83 AV	54.00	-3.17	1.31 H	343	12.64	38.19
3	7410.00	56.41 PK	74.00	-17.59	1.24 H	134	11.67	44.74
3	7410.00	42.69 AV	54.00	-11.31	1.24 H	134	-2.05	44.74
4	9880.00	63.75 PK	74.00	-10.25	1.58 H	20	15.33	48.42
4	9880.00	48.96 AV	54.00	-5.04	1.58 H	20	0.54	48.42

**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	*2470.00	89.51 PK	114.00	-24.49	1.16 V	341	57.32	32.19
1	*2470.00	81.83 AV	94.00	-12.07	1.16 V	341	49.64	32.19
2	4940.00	63.42 PK	74.00	-10.58	1.37 V	331	25.23	38.19
2	4940.00	52.31 AV	54.00	-1.69	1.37 V	331	14.12	38.19
3	7410.00	56.95 PK	74.00	-17.05	1.41 V	360	12.21	44.74
3	7410.00	43.66 AV	54.00	-10.34	1.41 V	360	-1.08	44.74
4	9880.00	65.52 PK	74.00	-8.48	1.04 V	186	17.10	48.42
4	9880.00	50.58 AV	54.00	-3.42	1.04 V	186	2.16	48.42

- 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. “ \* “ : Fundamental frequency



### 4.3 BAND EDGES MEASUREMENT

#### 4.3.1 LIMITS OF BAND EDGES MEASUREMENT

Below -50dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

#### 4.3.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2005

**NOTE:** The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

#### 4.3.3 TEST PROCEDURE

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

The spectrum plots are attached on the following pages.

#### 4.3.4 DEVIATION FROM TEST STANDARD

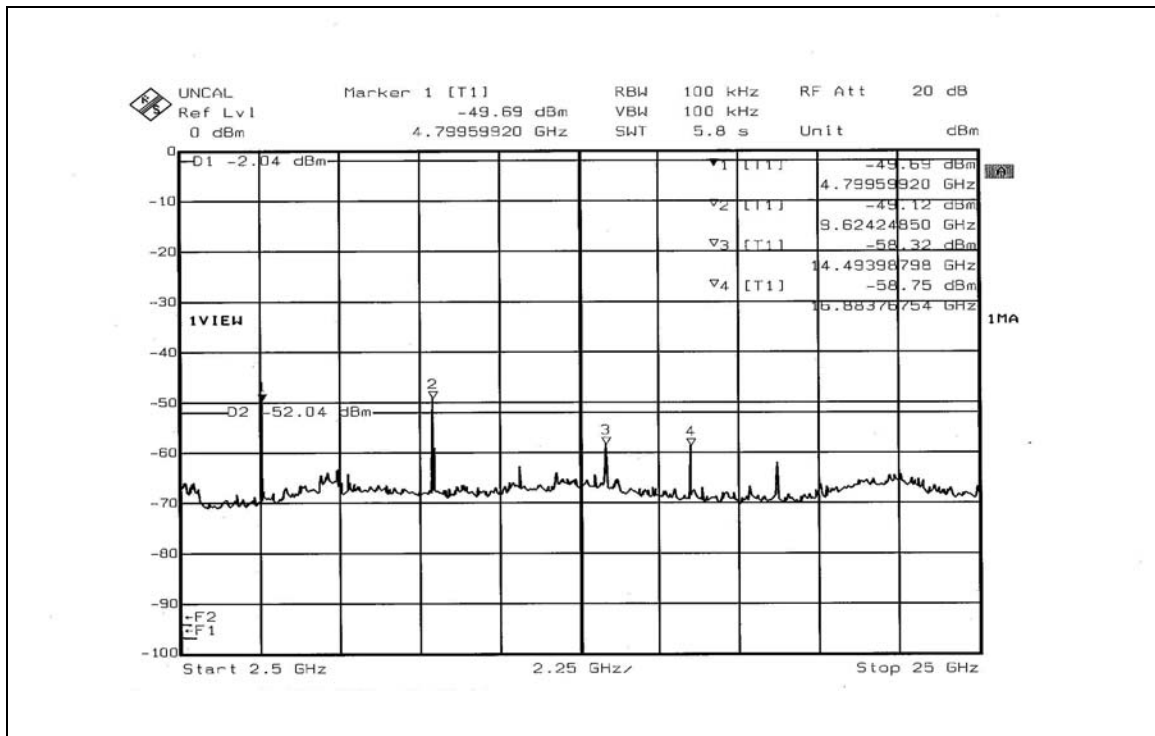
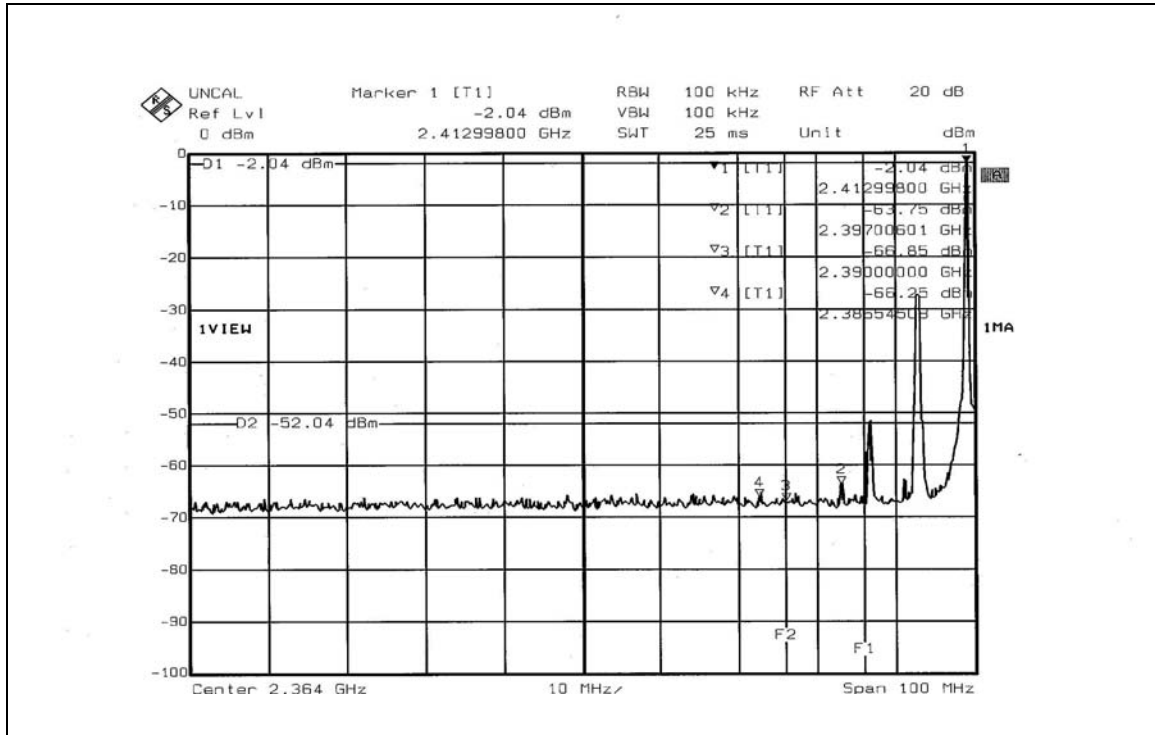
No deviation.

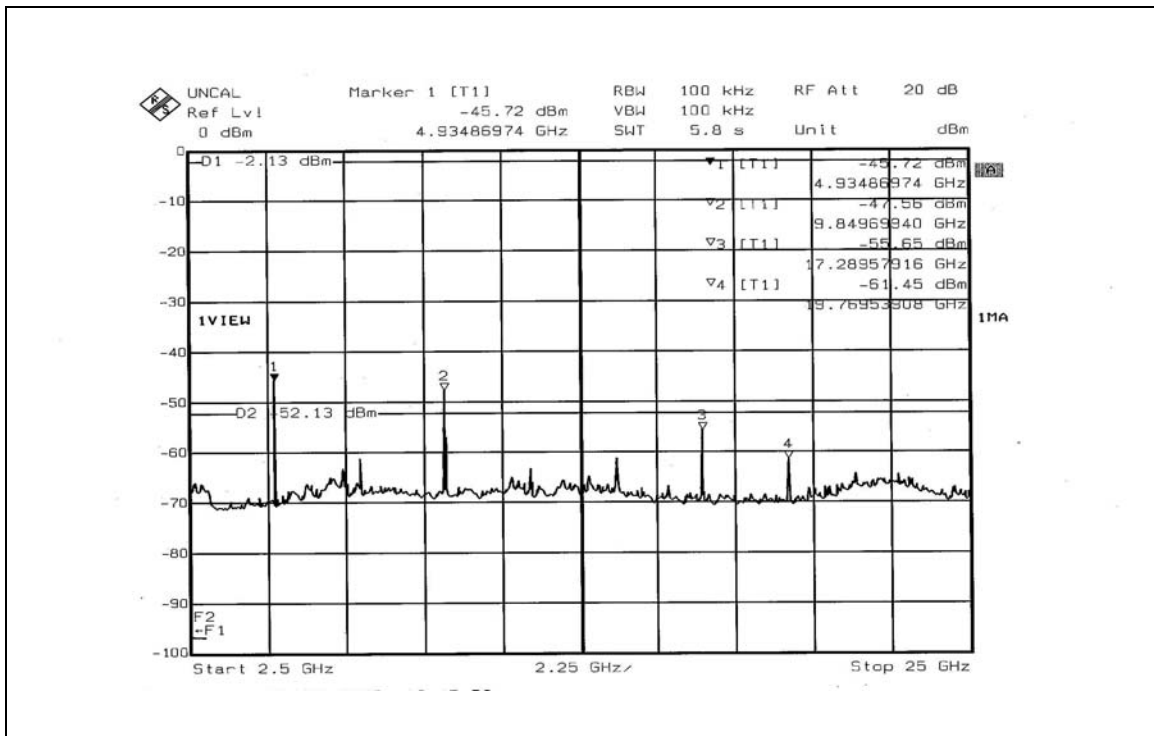
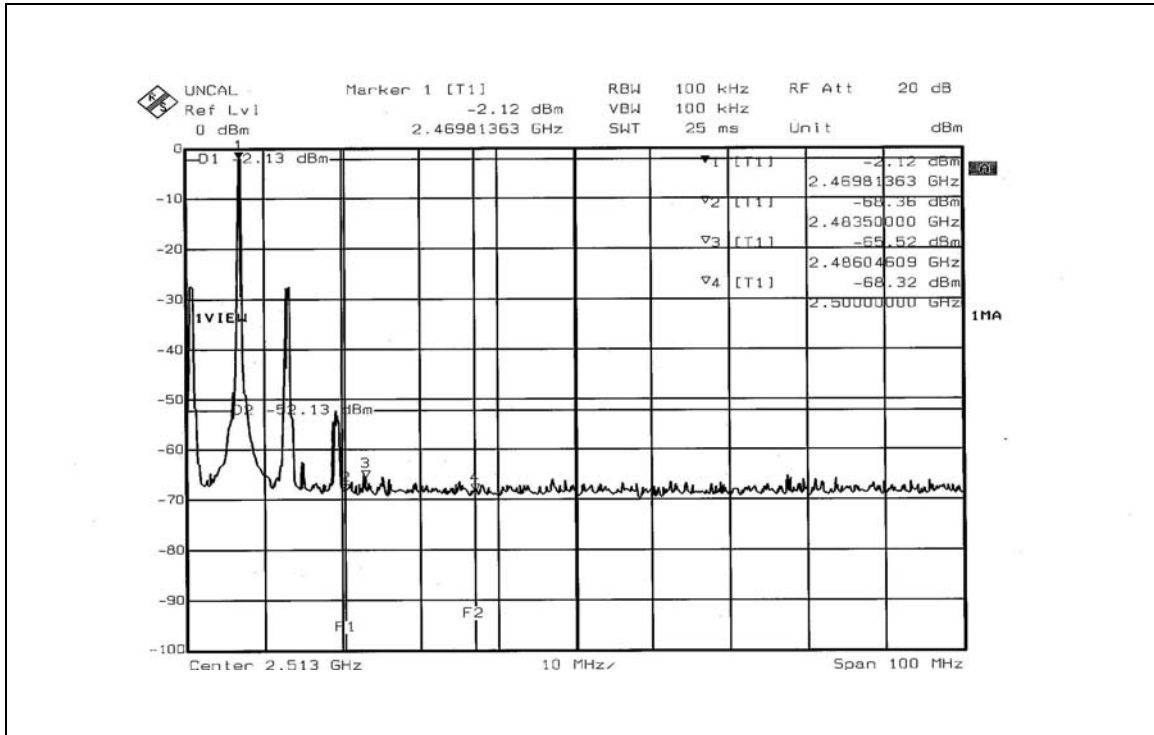
#### 4.3.5 EUT OPERATING CONDITION

Same as Item 4.3.6.

#### 4.3.6 TEST RESULTS

The spectrum plots are attached on the following 12 images. D2 line indicates the highest level, and D1 line indicates the 50dB offset below D2. It shows compliance with the requirement in part 15.249 (d).



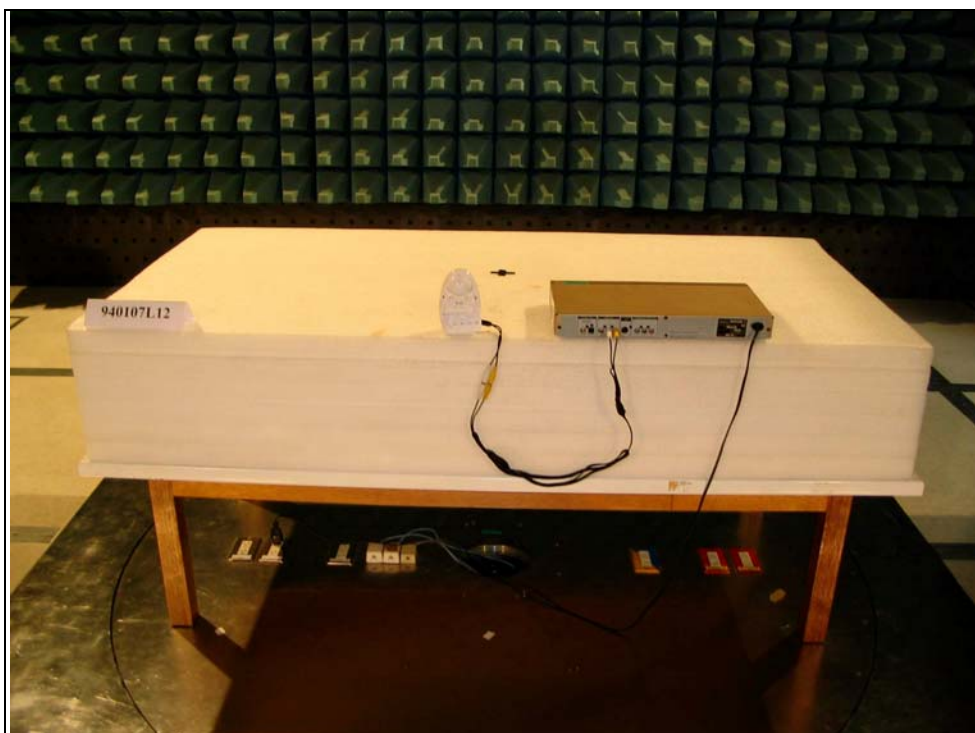


## 5. PHOTOGRAPHS OF THE TEST CONFIGURATION

### Conducted Emission Test

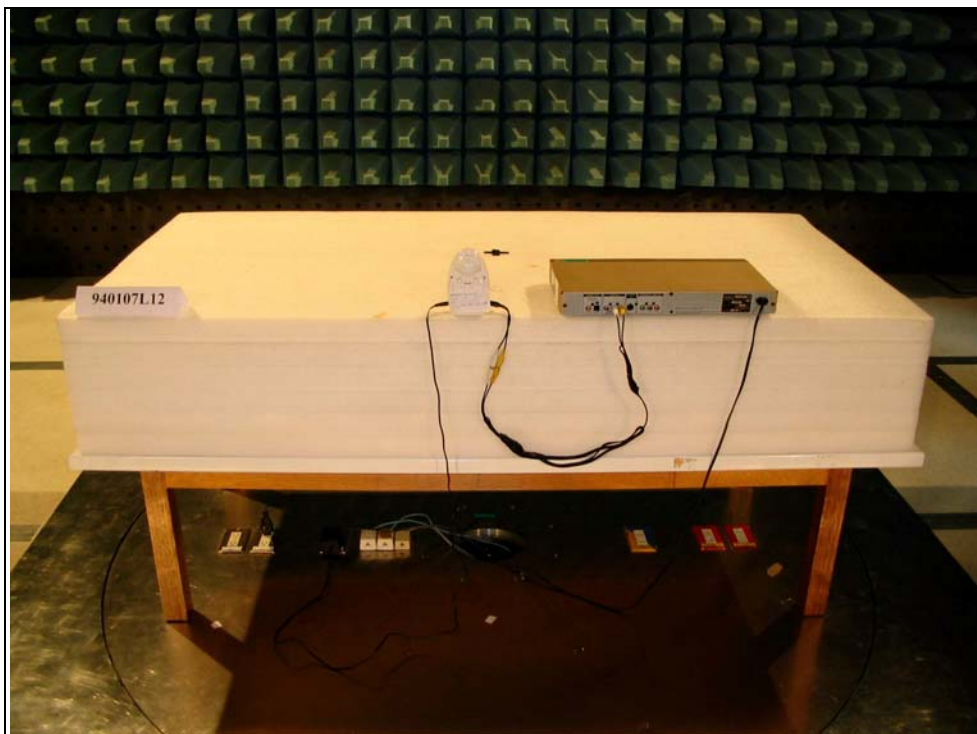


### Radiated Emission Test (Battery mode)





Radiated Emission Test  
(Adapter mode)





## 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.

<b>USA</b>	FCC, NVLAP, UL, A2LA
<b>Germany</b>	TUV Rheinland
<b>Japan</b>	VCCI
<b>Norway</b>	NEMKO
<b>Canada</b>	INDUSTRY CANADA , CSA
<b>R.O.C.</b>	CNLA, BSMI, DGT
<b>Netherlands</b>	Telefication
<b>Singapore</b>	PSB , GOST-ASIA(MOU)
<b>Russia</b>	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](http://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: 886-2-26052943

### **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

### **Linko RF Lab**

Tel: 886-3-3270910  
Fax: 886-3-3270892

**Web Site:** [www.adt.com.tw](http://www.adt.com.tw)

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