

FCC TEST REPORT

REPORT NO. : RF940411A13

MODEL NO. : WDR041

RECEIVED : April 12, 2005

TESTED : April 16 ~ May 10, 2005

ISSUED : May 10, 2005

APPLICANT : Quanta Storage Inc.

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ISSUED BY : Advance Data Technology Corporation

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No. 2177-01



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1. CERTIFICATION

PRODUCT : CineTrek(Protable DVD Player)
BRAND NAME : NU
MODEL NO. : WDR041
TEST SAMPLE : R&D SAMPLE
APPLICANT : Quanta Storage Inc.
TESTED : April 16 ~ May 10, 2005
STANDARDS : FCC Part 15, Subpart C (Section 15.249)
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 : Annie Chang , **DATE:** May 10, 2005
(Annie Chang)

TECHNICAL
ACCEPTANCE : Jun Wu , **DATE:** May 10, 2005
Responsible for EMI (Jun Wu)

APPROVED BY : Cody Chang , **DATE:** May 10, 2005
(Cody Chang, Deputy Manager)

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15, Subpart C (Section 15.249)			
STANDARD PARAGRAPH	TEST TYPE	RESULT	REMARK
15.207	Conducted Emission Test	PASS	Minimum passing margin is -8.46dB at 23.387MHz
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 -0.18dB at 436.27MHz

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:

Measurement	Frequency	Uncertainty
Conducted emissions	9kHz ~ 30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	3.86 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

EUT	CineTrek(Protatable DVD Player)
MODEL NO.	WDR041
POWER SUPPLY	12Vdc, 2A (from adapter) 12Vdc (from car charger) 7.4Vdc, 4400mAh (from battery)
MODULATION TYPE	FSK
FREQUENCY RANGE	2410MHz
NUMBER OF CHANNEL	1
ANTENNA TYPE	Printed Antenna with –1dBi Gain
DATA CABLE	Non-Shielded AV cable (1.8m) with one core
I/O PORT	AV port

NOTE:

1. The EUT is a Cine Trek(Portable DVD Player) attached with Battery, Adapter, Car Charger, remote controller and wireless earphone.
2. The EUT was supplied with the following adapter, Car Charger or battery:

ADAPTER	
BRAND NAME	A-POWERTEC
MODEL NO.	SADW030-12U
AC INPUT	100-240V, 1A, 50/60Hz
DC OUTPUT	12V, 2A

CAR CHARGER	
BRAND NAME	FOXLINK
MODEL NO.	FA-0000CA
DC OUTPUT	12V

BATTRY	
BRAND NAME	NU
MODEL NO.	WDR041
DC OUTPUT	7.4V, 4400mAh

3. 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

The EUT was pre-tested with the following condition:

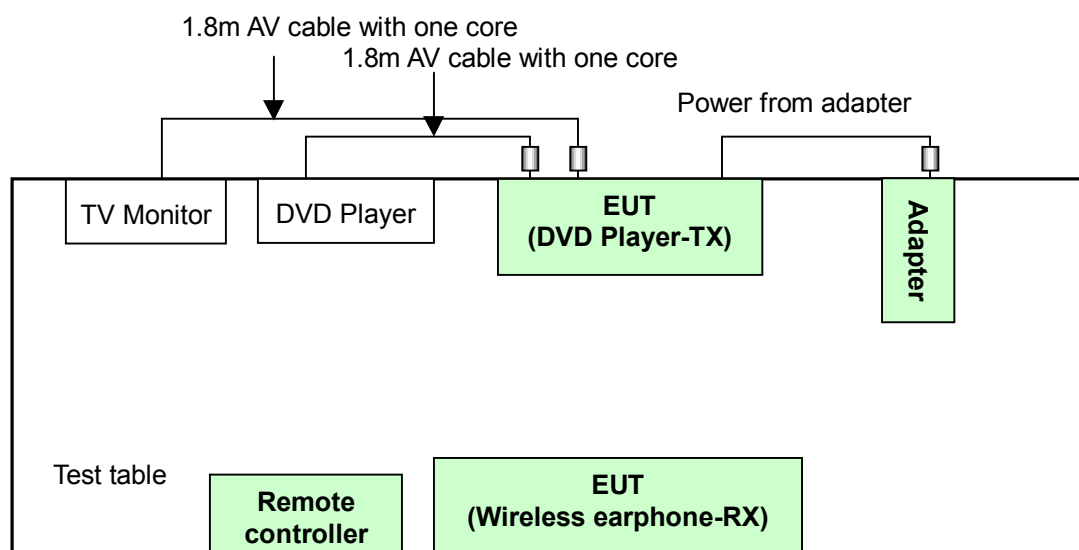
Since the EUT is considered a portable unit, it was pre-tested on the positioned of each 3 axis. The worst case was found when positioned on X-plane. Therefore only the test data of this X-plane was used for this report.

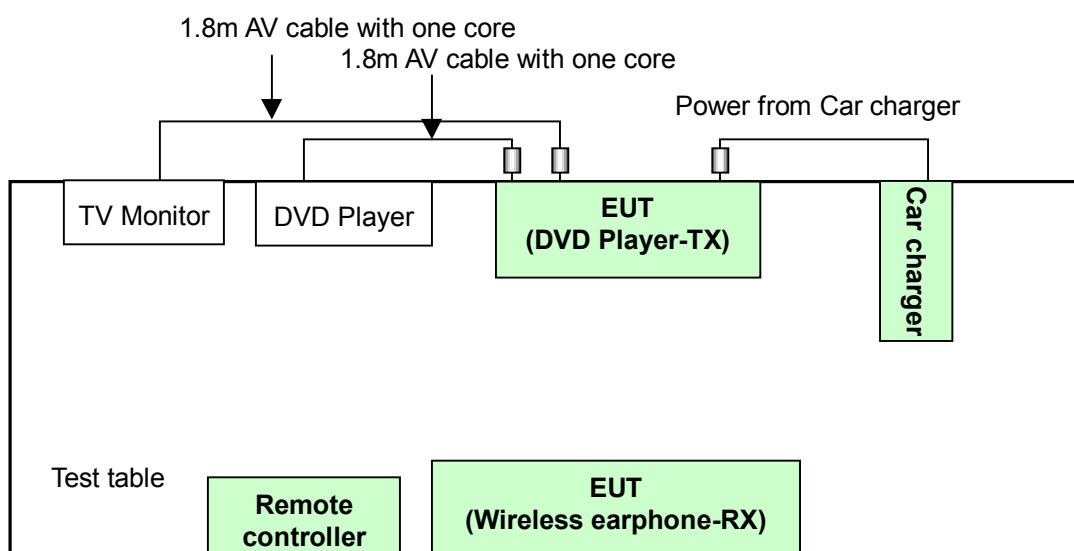
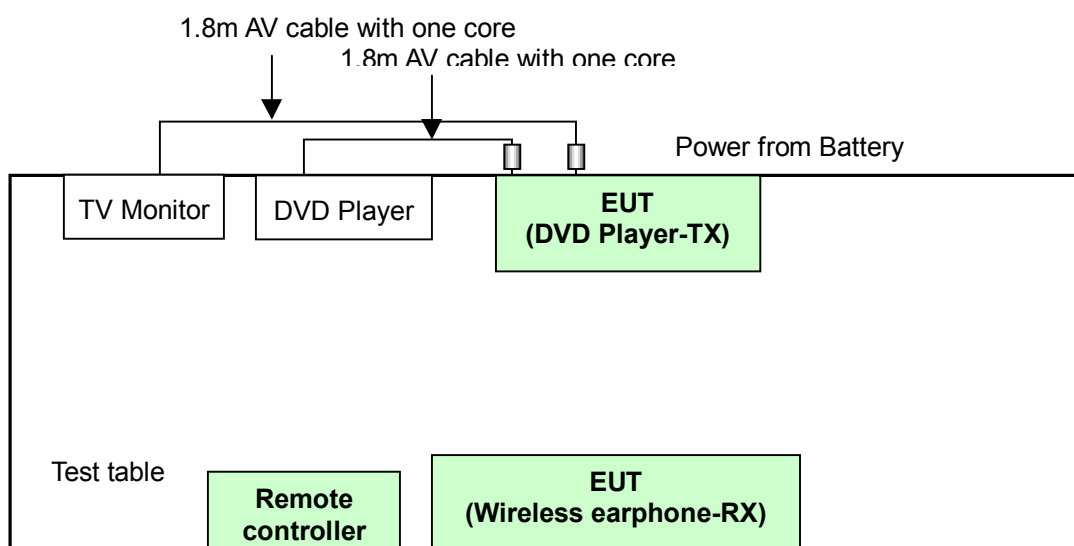
One channel is provided to this EUT :

Channel	Freq. (MHz)
1	2410

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST

Test mode A:



Test mode B:**Test mode C:**

3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

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

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 power supply.

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.

EUT Configure Mode	Available Channel	Tested Channel	Modulation Type
A	1	1	FSK

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, X, Y, Z 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 Type	Axis
A	1	1	FSK	X
B	1	1	FSK	X
C	1	1	FSK	X

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	Axis
A	1	1	FSK	X

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	1	FSK

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a CineTrek(Portable DVD Player). 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	TV MONITOR	Matsushita	BT-H1390Y	EM9642286	VERIFICATION
2	DVD player	SONY	DVP-NS530	1003088	VERIFICATION

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	1.8m AV cable with one core
2	1.8m AV cable with one core

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 (dBμV)	
	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
ROHDE & SCHWARZ Test Receiver	ESCS 30	838251/021	Dec. 5, 2005
ROHDE & SCHWARZ Artificial Mains Network (for EUT)	ESH3-Z5	100218	Dec. 1, 2005
LISN With Adapter (for EUT)	AD10	C10Ada-001	Dec. 1, 2005
ROHDE & SCHWARZ Artificial Mains Network (for peripherals)	ESH3-Z5	100219	Dec. 1, 2005
ROHDE & SCHWARZ Artificial Mains Network (for peripherals)	ESH3-Z5	100220	Dec. 1, 2005
Software	ADT_Conf_V7.3.2	NA	NA
Software	ADT_ISN_V7.3.2	NA	NA
RF cable (JYEBAO)	5D-FB	Cable-C10.01	Apr. 05, 2006
SUHNTER Terminator (For ROHDE & SCHWARZ LISN)	65BNC-5001	E1-010773	Mar. 04, 2006

- 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 ADT Shielded Room No. 10.
 3. The VCCI Site Registration No. C-1852.



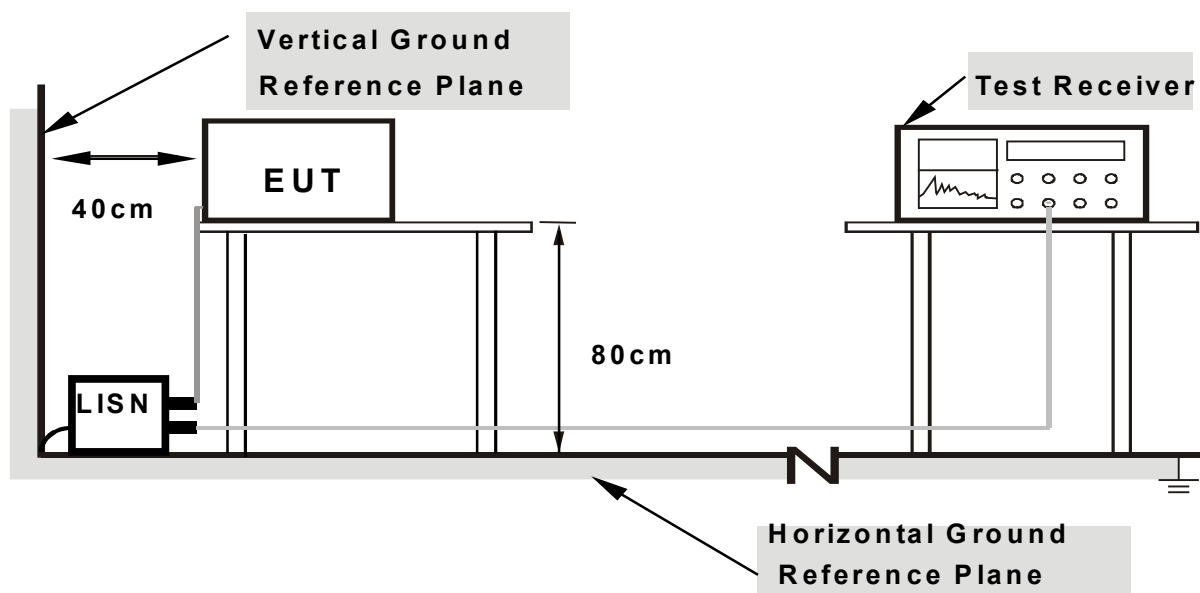
4.1.3 TEST PROCEDURES

- 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) are 80 cm from EUT and at least 80 from other units and other metal planes

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

4.1.6 EUT OPERATING CONDITIONS

- The DVD player sent picture signal to the EUT (CineTrek(Protable DVD Player)).
- Set the EUT under continuous transmitting condition at specific channel.

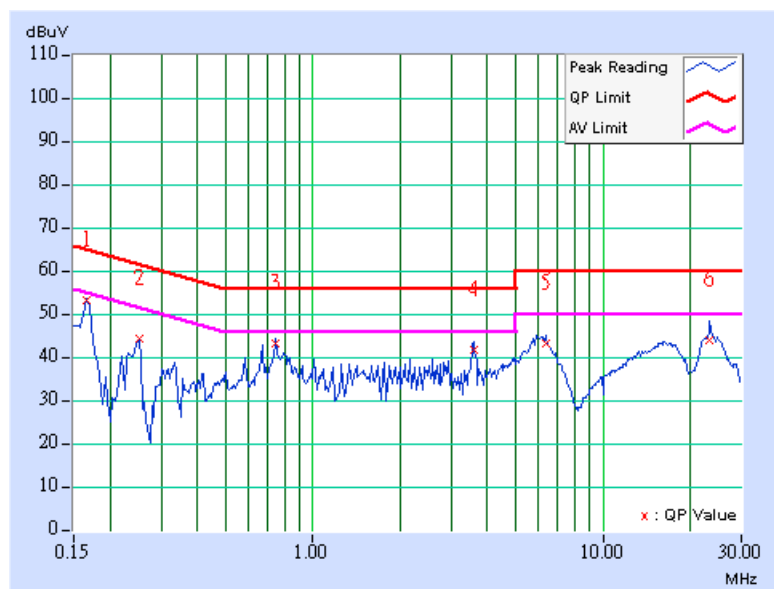
4.1.7 TEST RESULTS

Conducted Worst-Case Data (Test mode A)

EUT	CineTrek(Protable DVD Player)	MEASUREMENT DETAIL	
MODEL NO.	WDR041	PHASE	Line 1
CHANNEL	1	6dB BANDWIDTH	9 kHz
MODULATION TYPE	FSK	ENVIRONMENTAL CONDITIONS	22 deg. C, 75% RH, 1004 hPa
TESTED BY	Jamison Chan	INPUT POWER (SYSTEM)	120 Vac, 60 Hz

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	0.20	51.68	39.71	51.88	39.91	65.18	55.18	-13.30	-15.27
2	0.252	0.20	42.68	33.81	42.88	34.01	61.71	51.71	-18.83	-17.70
3	0.748	0.20	41.67	34.27	41.87	34.47	56.00	46.00	-14.13	-11.53
4	3.594	0.38	40.31	36.28	40.69	36.66	56.00	46.00	-15.31	-9.34
5	6.352	0.52	41.75	35.69	42.27	36.21	60.00	50.00	-17.73	-13.79
6	23.387	1.64	42.48	39.78	44.12	41.42	60.00	50.00	-15.88	-8.58

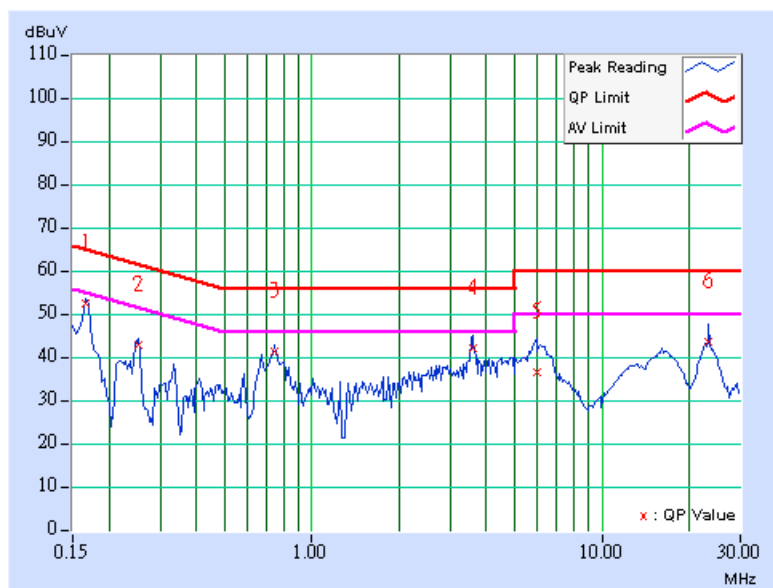
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT	CineTrek(Protable DVD Player)	MEASUREMENT DETAIL	
MODEL NO.	WDR041	PHASE	Line 2
CHANNEL	1	6dB BANDWIDTH	9 kHz
MODULATION TYPE	FSK	ENVIRONMENTAL CONDITIONS	22 deg. C, 75% RH, 1004 hPa
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	TESTED BY	Jamison Chan

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	0.166	0.20	51.31	37.76	51.51	37.96	65.18	55.18	-13.67	-17.22
2	0.252	0.20	42.00	29.48	42.20	29.68	61.71	51.71	-19.51	-22.03
3	0.744	0.20	40.37	28.27	40.57	28.47	56.00	46.00	-15.43	-17.53
4	3.594	0.46	41.19	36.99	41.65	37.45	56.00	46.00	-14.35	-8.55
5	5.945	0.56	35.50	29.56	36.06	30.12	60.00	50.00	-23.94	-19.88
6	23.387	1.14	42.64	40.40	43.78	41.54	60.00	50.00	-16.22	-8.46

- 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
HP Preamplifier	8447D	2432A03504	Jun. 3, 2005
HP Preamplifier	8449B	3008A01924	Sep. 19, 2005
HP Preamplifier	8449B	3008A01638	Sep. 30, 2005
SCHWARZBECK Tunable Dipole Antenna	VHA 9103	NA	Oct. 29, 2005
SCHWARZBECK Tunable Dipole Antenna	UHA 9105	977	
ROHDE & SCHWARZ TEST RECEIVER	ESI7	836697/012	Nov. 05, 2005
Schwarzbeck Antenna	VULB 9168	137	Feb. 27, 2006
Schwarzbeck Antenna	VHBA 9123	480	Apr. 11, 2006
EMCO Horn Antenna	3115	6714	Oct. 28, 2005
EMCO Horn Antenna	3115	9312-4192	Feb. 28, 2006
ADT. Turn Table	TT100	0306	NA
ADT. Tower	AT100	0306	NA
Software	ADT_Radiated_V6	NA	NA
TIMES RF cable	LL142	CABLE-CH6-01	Dec. 19, 2005

- 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.

4.2.3 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.

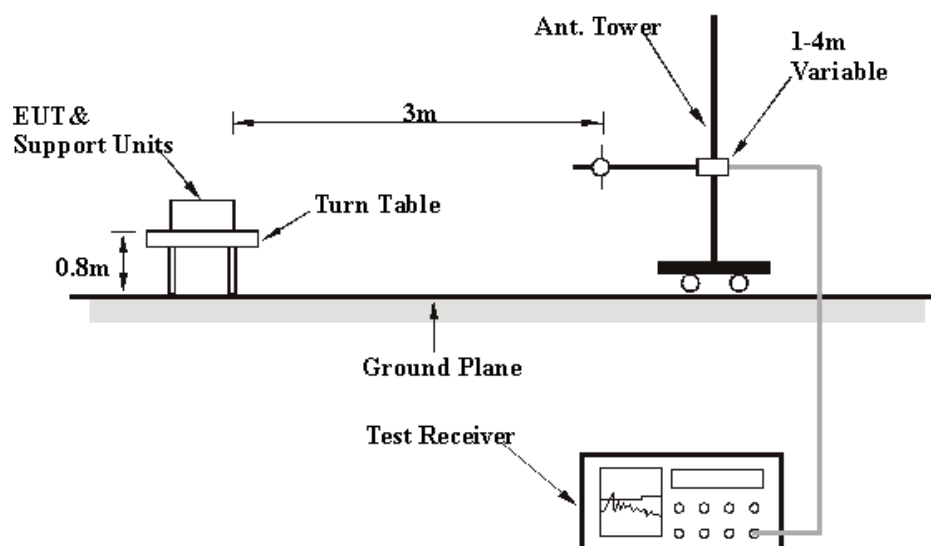
NOTE:

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 (Adapter Mode)

EUT	CineTrek(Protable DVD Player)	MEASUREMENT DETAIL	
MODEL NO.	WDR041	FREQUENCY RANGE	Below 1000MHz
CHANNEL	1	MODULATION TYPE	FSK
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
TEST MODE	A	ENVIRONMENTAL CONDITIONS	22 deg. C, 60% RH, 1007 hPa
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	399.34	35.14 QP	46.00	-10.86	1.07 H	156	17.59	17.55
2	436.27	45.82 QP	46.00	-0.18	1.92 H	154	27.54	18.28
3	479.04	37.58 QP	46.00	-8.42	1.71 H	154	18.23	19.35
4	519.86	36.75 QP	46.00	-9.25	1.54 H	137	16.48	20.27
5	599.56	35.99 QP	46.00	-10.01	1.28 H	151	13.85	22.14
6	681.20	36.38 QP	46.00	-9.62	1.03 H	139	13.54	22.84

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	64.99	38.79 QP	40.00	-1.21	1.23 V	292	26.65	12.14
2	133.03	37.80 QP	43.50	-5.70	1.01 V	28	25.26	12.55
3	183.57	42.25 QP	43.50	-1.25	1.33 V	211	29.90	12.34
4	405.17	41.48 QP	46.00	-4.52	1.06 V	218	23.81	17.67
5	438.22	41.87 QP	46.00	-4.13	1.12 V	187	23.56	18.32
6	599.56	36.02 QP	46.00	-9.98	1.43 V	136	13.89	22.14

- 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.

4.2.8 TEST RESULTS (B)

Below 1GHz Worst-Case Data (Car Charger Mode)

EUT	CineTrek(Protable DVD Player)	MEASUREMENT DETAIL	
MODEL NO.	WDR041	FREQUENCY RANGE	Below 1000MHz
CHANNEL	1	MODULATION TYPE	FSK
INPUT POWER (SYSTEM)	12Vdc	DETECTOR FUNCTION	Quasi-Peak
TEST MODE	B	ENVIRONMENTAL CONDITIONS	22 deg. C, 60% RH, 1007 hPa
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	123.31	34.26 QP	43.50	-9.24	1.50 H	94	22.39	11.87
2	436.27	44.58 QP	46.00	-1.42	1.75 H	142	26.29	18.28
3	479.04	37.24 QP	46.00	-8.76	1.25 H	151	17.89	19.35
4	519.86	34.86 QP	46.00	-11.14	1.75 H	112	14.59	20.27
5	681.20	35.18 QP	46.00	-10.82	1.25 H	127	12.34	22.84
6	875.59	36.90 QP	46.00	-9.10	1.25 H	13	11.23	25.66

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	63.05	32.84 QP	40.00	-7.16	1.00 V	265	20.32	12.52
2	121.36	32.21 QP	43.50	-11.29	1.50 V	163	20.48	11.73
3	416.83	38.08 QP	46.00	-7.92	1.25 V	343	20.18	17.90
4	479.04	37.63 QP	46.00	-8.37	1.00 V	172	18.28	19.35
5	519.86	37.27 QP	46.00	-8.73	1.00 V	142	17.00	20.27
6	858.10	35.48 QP	46.00	-10.52	1.50 V	160	9.86	25.61

- 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.

4.2.9 TEST RESULTS (C)

Below 1GHz Worst-Case Data (Battery Mode)

EUT	CineTrek(Protable DVD Player)	MEASUREMENT DETAIL	
MODEL NO.	WDR041	FREQUENCY RANGE	Below 1000MHz
CHANNEL	1	MODULATION TYPE	FSK
INPUT POWER (SYSTEM)	7.4Vdc	DETECTOR FUNCTION	Quasi-Peak
TEST MODE	C	ENVIRONMENTAL CONDITIONS	22 deg. C, 60% RH, 1007 hPa
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	399.34	36.17 QP	46.00	-9.83	1.00 H	352	18.62	17.55
2	436.27	41.53 QP	46.00	-4.47	2.00 H	181	23.25	18.28
3	479.04	37.27 QP	46.00	-8.73	1.75 H	151	17.91	19.35
4	599.56	37.17 QP	46.00	-8.83	1.25 H	163	15.03	22.14
5	681.20	35.14 QP	46.00	-10.86	1.25 H	139	12.31	22.84
6	873.65	37.95 QP	46.00	-8.05	1.00 H	307	12.29	25.66

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	64.99	33.60 QP	40.00	-6.40	1.25 V	97	21.46	12.14
2	123.31	31.83 QP	43.50	-11.67	1.25 V	211	19.96	11.87
3	436.27	40.65 QP	46.00	-5.35	1.00 V	187	22.37	18.28
4	479.04	32.66 QP	46.00	-13.34	1.25 V	172	13.31	19.35
5	519.86	33.45 QP	46.00	-12.55	1.00 V	160	13.18	20.27
6	856.15	34.42 QP	46.00	-11.58	1.50 V	181	8.81	25.61

- 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 (Adapter Mode)

EUT	CineTrek(Protable DVD Player)	MEASUREMENT DETAIL	
MODEL	WDR041	FREQUENCY RANGE	1 ~ 25 GHz
CHANNEL	1	DETECTOR FUNCTION	Peak (PK) Average (AV)
MODULATION TYPE	FSK	ENVIRONMENTAL CONDITIONS	22 deg. C, 80% RH, 1004 hPa
INPUT POWER (SYSTEM)	120 Vac, 60 Hz	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	2390.00	39.72 PK	74.00	-34.28	1.18 H	219	8.98	30.75
1	2390.00	28.61 AV	54.00	-25.39	1.18 H	219	-2.13	30.75
2	*2410.00	97.77 PK	114.00	-16.23	1.18 H	219	66.94	30.83
2	*2410.00	93.55 AV	94.00	-0.45	1.18 H	219	62.72	30.83
3	2483.50	41.04 PK	74.00	-32.96	1.18 H	219	9.90	31.15
3	2483.50	28.53 AV	54.00	-25.47	1.18 H	219	-2.61	31.15
4	4820.00	54.79 PK	74.00	-19.21	1.00 H	158	18.54	36.25
4	4820.00	45.12 AV	54.00	-8.88	1.00 H	158	8.87	36.25
5	7230.00	58.75 PK	74.00	-15.25	1.00 H	212	16.51	42.24
5	7230.00	49.23 AV	54.00	-4.77	1.00 H	212	6.99	42.24

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	2390.00	37.62 PK	74.00	-36.38	1.00 V	101	6.87	30.75
1	2390.00	27.62 AV	54.00	-26.38	1.00 V	101	-3.13	30.75
2	*2410.00	95.67 PK	114.00	-18.33	1.00 V	101	64.84	30.83
2	*2410.00	92.56 AV	94.00	-1.44	1.00 V	101	61.73	30.83
3	2483.50	32.53 PK	74.00	-41.47	1.00 V	101	1.39	31.15
3	2483.50	21.13 AV	54.00	-32.87	1.00 V	101	-10.01	31.15
4	4820.00	46.48 PK	74.00	-27.52	1.23 V	114	10.23	36.25
4	4820.00	36.38 AV	54.00	-17.62	1.23 V	114	0.13	36.25
5	7230.00	62.47 PK	74.00	-11.53	1.03 V	182	20.23	42.24
5	7230.00	52.39 AV	54.00	-1.61	1.03 V	182	10.15	42.24

- 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
SPECTRUM ANALYZER	FSP 40	100036	Mar. 20, 2006

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 loss 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

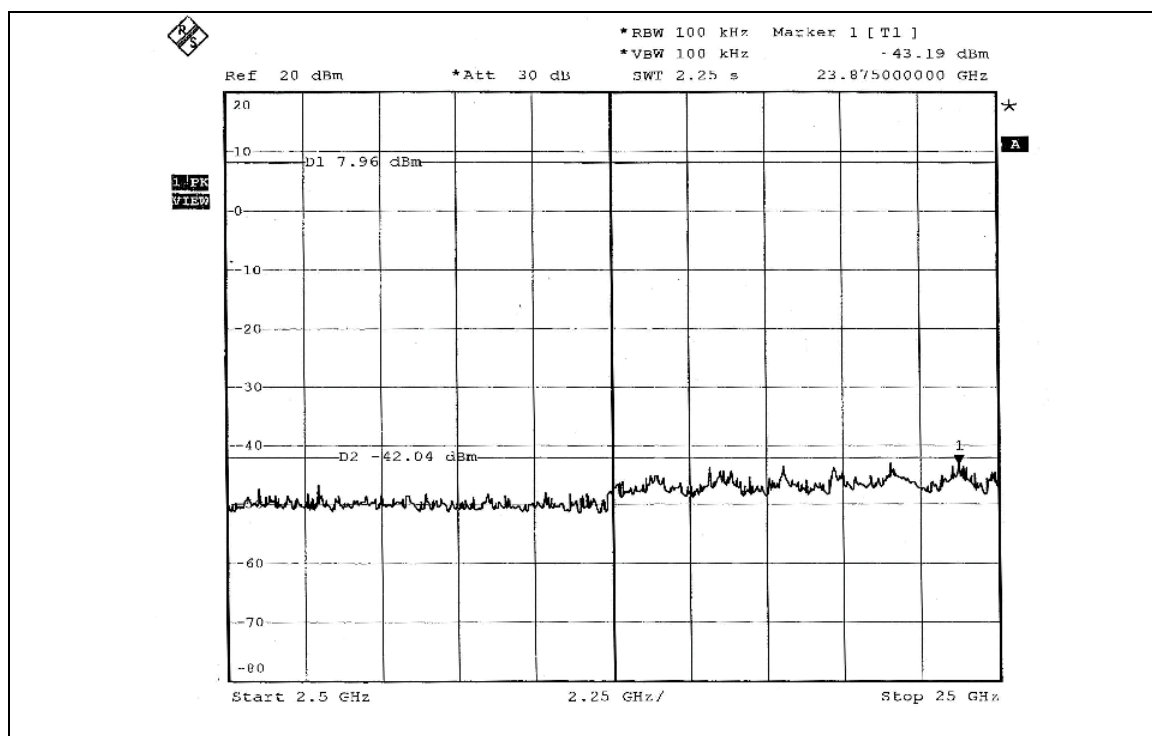
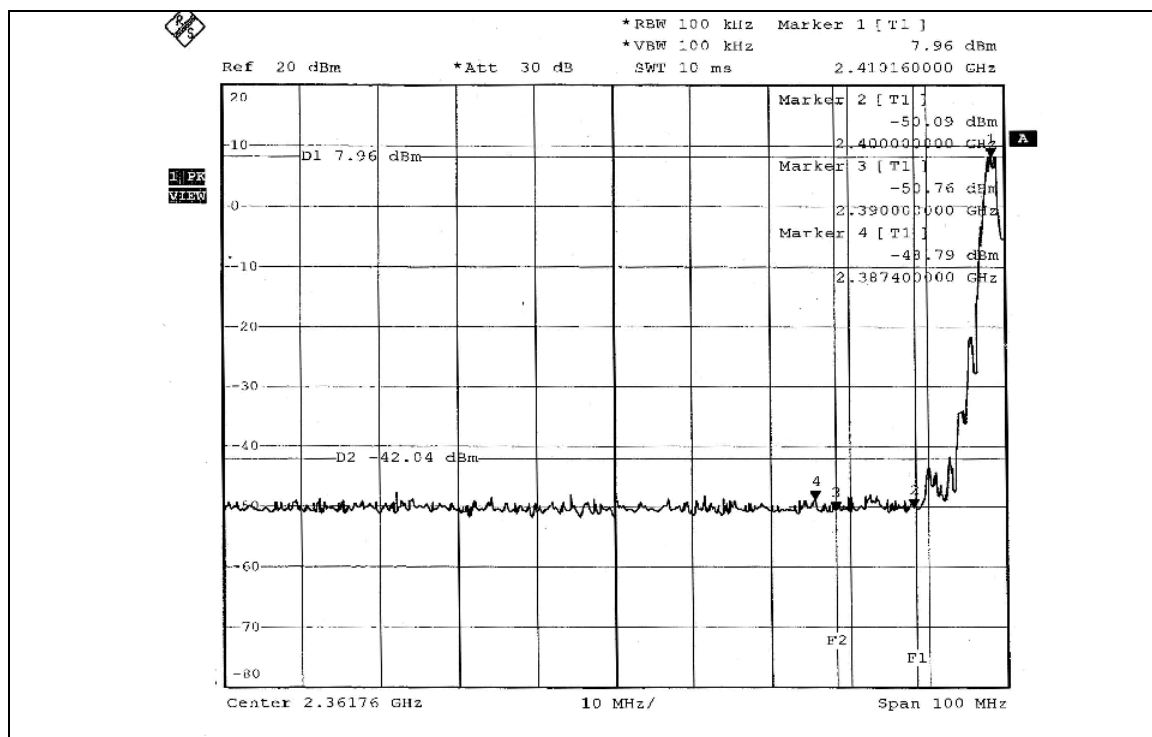
No deviation.

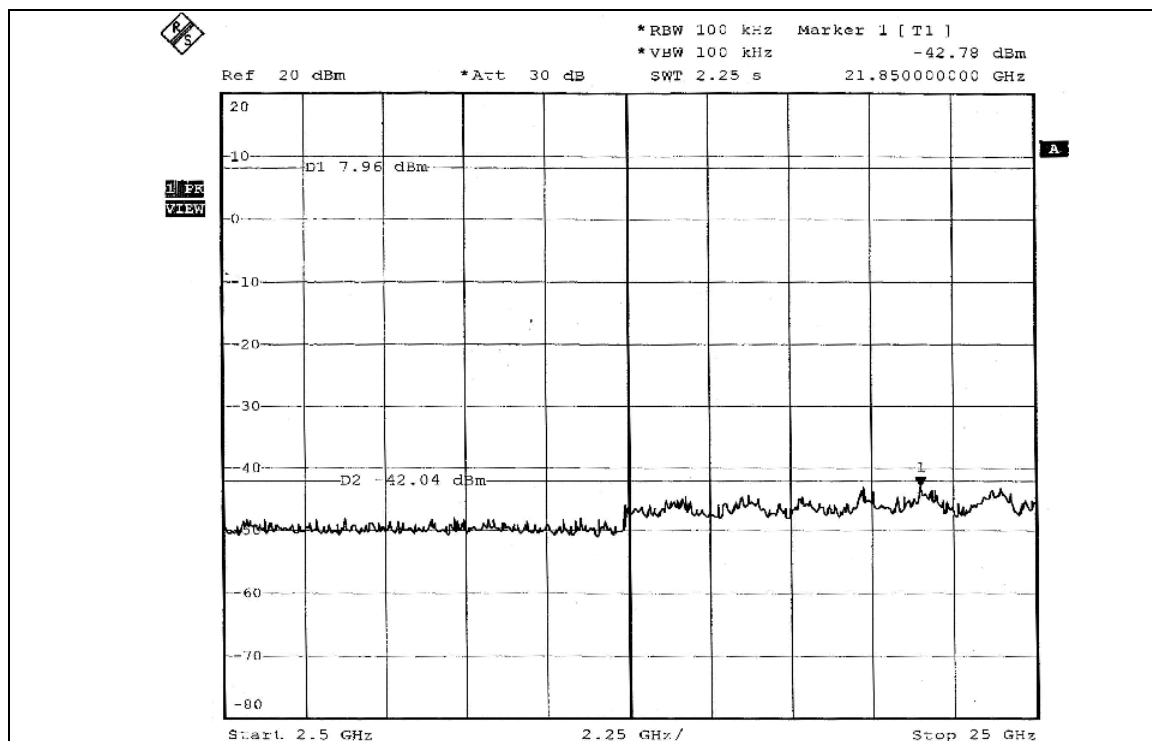
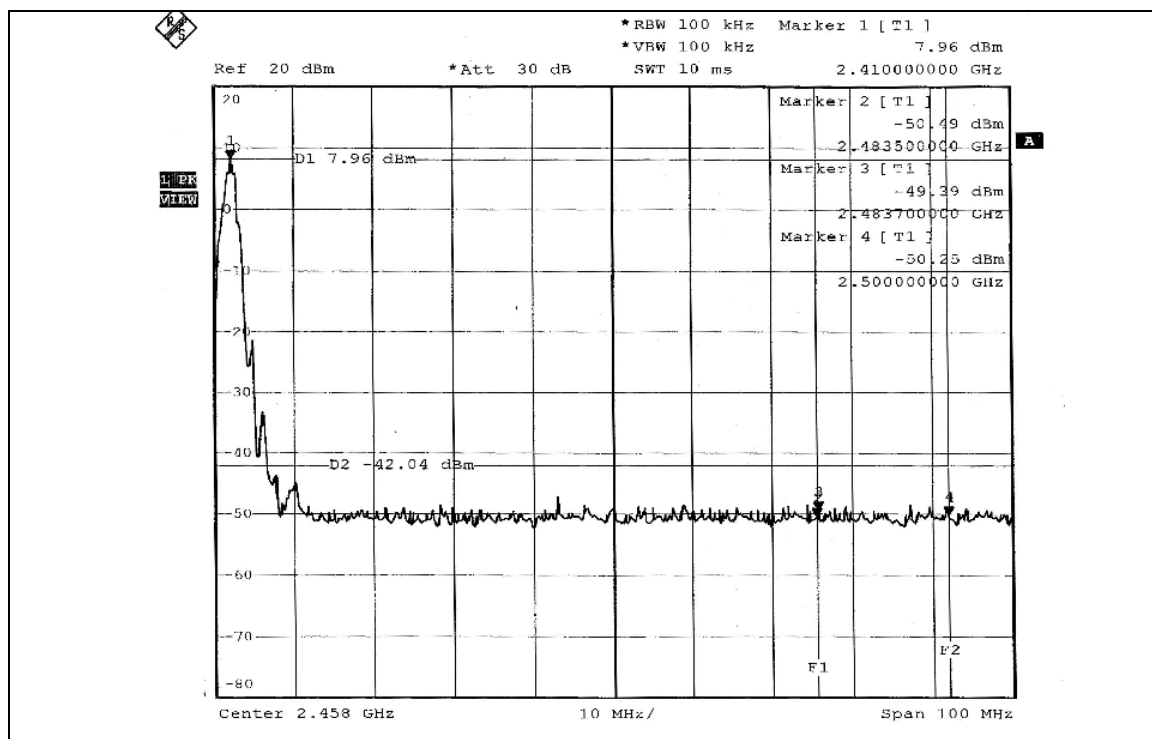
4.3.5 EUT OPERATING CONDITION

Same as Item 4.1.6.

4.3.6 TEST RESULTS

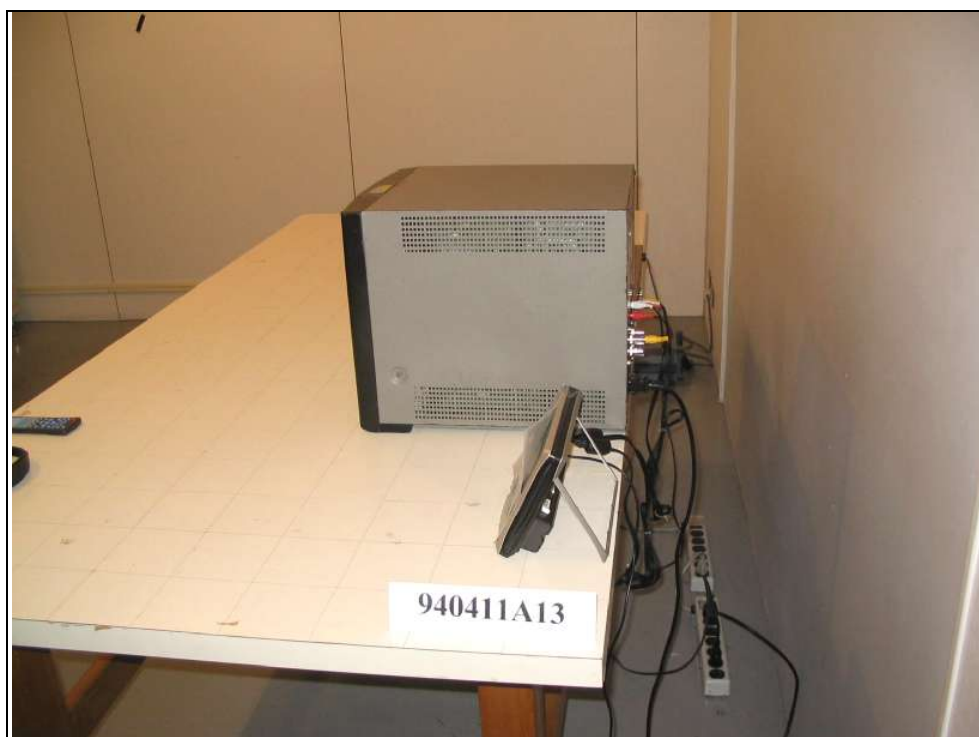
The spectrum plots are attached on the following 12 images. D2 line indicates the highest level, and D1 line indicates the 50dB offset below D2. It shows compliance with the requirement in part 15.249 (d).





5. PHOTOGRAPHS OF THE TEST CONFIGURATION

Conducted Emission Test



Radiated Emission Test (Adapter Mode)



Radiated Emission Test (Car Charger Mode)



Radiated Emission Test (Battery 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.

USA	FCC, NVLAP, UL, A2LA
Germany	TUV Rheinland
Japan	VCCI
Norway	NEMKO
Canada	INDUSTRY CANADA , CSA
R.O.C.	CNLA, BSMI, DGT
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: 886-2-26052943

Hsin Chu EMC/RF Lab

Tel: 886-3-5935343

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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