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FCC TEST REPORT

REPORT NO.: RF120223E04

MODEL NO.: DTK-2200

FCC ID: HV4DTK2200

RECEIVED: Feb. 24, 2012

TESTED: Mar. 09 to 28, 2012

ISSUED: May 10, 2012

APPLICANT: Wacom Co., Ltd.

ADDRESS: 2-510-1 Toyonodai, Kazo-shi Saitama
349-1148 Japan

ISSUED BY: Bureau Veritas Consumer Products Services
(H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory

LAB ADDRESS : No. 81-1, Lu Liao Keng, 9th Ling, Wu Lung Tsuen,
Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan,
R.O.C.

TEST LOCATION (1): No. 81-1, Lu Liao Keng, 9th Ling, Wu Lung Tsuen,
Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan,
R.O.C.

TEST LOCATION (2): No. 49, Ln. 206, Wende Rd., Shangshan Tsuen,
Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan,
R.O.C.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF120223E04	Original release	May 10, 2012

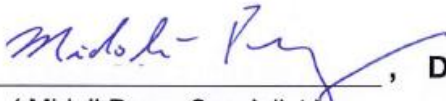


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1. CERTIFICATION

PRODUCT: LCD TABLET
BRAND NAME: Wacom
MODEL NO.: DTK-2200
TEST SAMPLE: ENGINEERING SAMPLE
APPLICANT: Wacom Co., Ltd.
TESTED: Mar. 09 to 28, 2012
STANDARDS: **FCC Part 15, Subpart C (Section 15.209)**
ANSI C63.10-2009

The above equipment (Model: DTK-2200) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, 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 : , **DATE:** May 10, 2012
(Midoli Peng, Specialist)

APPROVED BY : , **DATE:** May 10, 2012
(May Chen, 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 15.209)			
STANDARD SECTION	TEST TYPE	RESULT	REMARK
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -13.20 dB at 21.95703 MHz
15.209	Radiated Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -3.2dB at 132.55MHz
15.203	Antenna Requirement	PASS	No antenna connector is used.



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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	Value
Conducted emissions	2.45 dB
Radiated emissions (9 kHz ~ 30 MHz)	3.81 dB
Radiated emissions (30-1000MHz)	3.89 dB



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3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	LCD TABLET
MODEL NO.	DTK-2200
POWER SUPPLY	DC 12V from power adapter
POWER CORD	DC cable(unshielded, 1.8m with one core)
FREQUENCY RANGE	666.7kHz
NUMBER OF CHANNEL	1
ANTENNA TYPE	Loop antenna
DATA CABLE	USB cable (Unshielded, 2.65m) DVI cable(Shielded, 2.75m with two cores)
I/O PORTS	Refer to user's manual
ASSOCIATED DEVICES	Power Adapter x 1 Pen x 1(Brand : Wacom / Model : KP-501E)

NOTE:

1. The EUT must be assembled a LCD Panel as following table:

Brand	Model No.
LG	LM215WF3-SLC1

2. The EUT must be assembled a Main Board as following table:

Model No.
STDP7028

3. The EUT must be supplied with a power adapter as following table:

BRAND:	EDAC
MODEL NO.:	EA10521C-120
INPUT POWER:	AC 100-240V~, 50-60Hz, 1.8A
OUTPUT POWER:	DC 12V, 5.0A DC output cable(unshielded, 1.2m with one core)



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4. The EUT was pre-tested under the following modes:

Mode	Resolution
Mode A	USB R/W + 800 x 600 with Digital
Mode B	USB R/W + 1280 x 1024 with Digital
Mode C	USB R/W + 1920 x 1080 with Digital

The worst radiated emission was found in **Mode C**. Therefore only the test data of the modes were recorded in this report.

5. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

3.2 DESCRIPTION OF TEST MODES

One channel is provided to this EUT.

Channel	Frequency
1	666.7kHz



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3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO		DESCRIPTION
	PLC	RE	
1	√	√	USB RW + 1920 x 1080 with Digital

Where PLC: Power Line Conducted Emission RE: Radiated Emission below 1GHz

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.

TESTED CHANNEL	FREQUENCY
1	666.7KHZ

RADIATED 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.

TESTED CHANNEL	FREQUENCY
1	666.7KHZ

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
PLC	24deg. C, 71%RH	120Vac, 60Hz	Kyle Huang
RE<1G	23deg. C, 65%RH	120Vac, 60Hz	Frank Liu
	22deg. C, 65%RH	120Vac, 60Hz	Frank Liu

3.3 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 C63.10-2009

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

NOTE: The EUT has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.



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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.

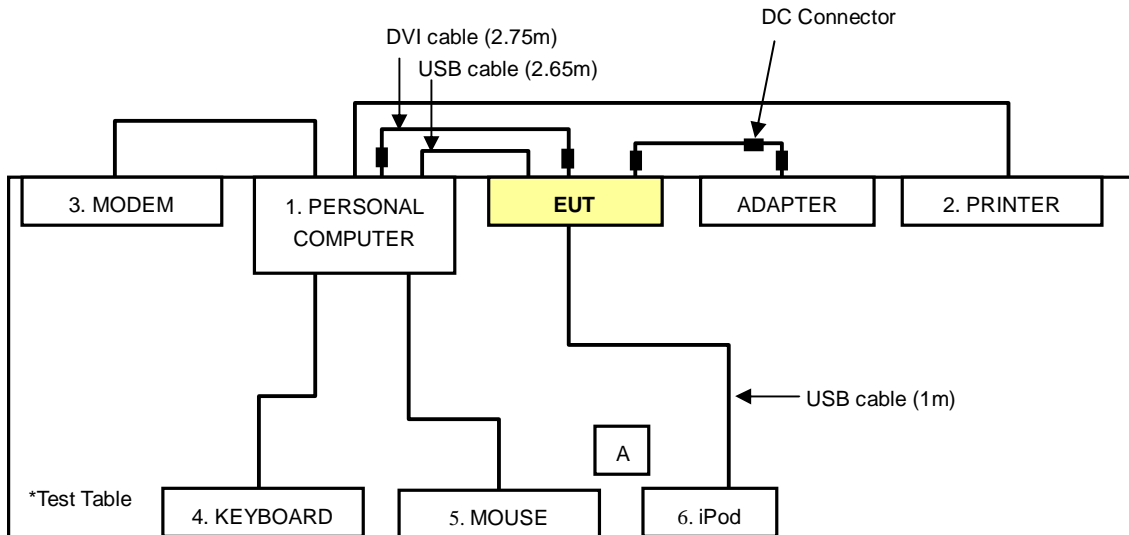
For conducted test					
No.	Product	Brand	Model No.	Serial No.	FCC ID
1	PERSONAL COMPUTER	DELL	DCSM	J84QL1S	FCC DoC
2	PRINTER	EPSON	LQ-300+	DCGY017082	FCC DoC
3	MODEM	ACEEX	1414	0206026772	IFAXDM1414
4	KEYBOARD	DELL	SK-8115	MY-0J4635-71619-67V-0349	FCC DoC
5	MOUSE	DELL	MOC5UO	I1401MMP	FCC DoC
6	iPod	APPLE	A1199	YM712NHUVQ5	FCC DoC
For radiated test					
No.	Product	Brand	Model No.	Serial No.	FCC ID
1	PERSONAL COMPUTER	DELL	DCSM	194QL1S	FCC DoC
2	KEYBOARD	DELL	SK-8115	MY-0J4635-71619-67V-0350	FCC DoC
3	MOUSE	DELL	MO71KC	345011086	FCC DoC
4	iPod	APPLE	A1199	YM712NHUVQ5	FCC DoC

For conducted test	
No.	Signal cable description
1	DVI cable(2.75m with two cores) / (USB cable 2.65m)
2	Printer cable(1.8m)
3	RS232 cable(1.2m)
4	USB cable(1.8m)
5	USB cable(1.8m)
6	USB cable(1m)
For radiated test	
No.	Signal cable description
1	DVI cable(2.75m with two cores) / (USB cable 2.65m)
2	USB cable(1.8m with one core)
3	USB cable(1.8m)
4	USB cable(1m)

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

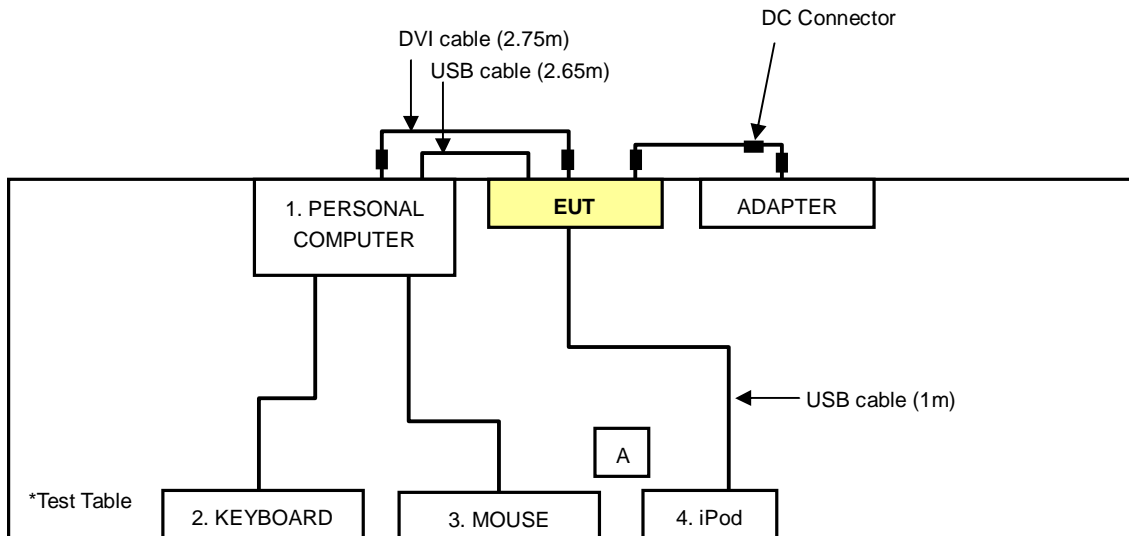
3.5 CONFIGURATION OF SYSTEM UNDER TEST

For conducted test :



NOTE: Item A is the Pen of the EUT.

For radiated test :



NOTE: Item A is the Pen of the EUT.



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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 μ 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.

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
ROHDE & SCHWARZ Test Receiver	ESCS 30	100287	Feb. 29, 2012	Feb. 28, 2013
Line-Impedance Stabilization Network (for EUT)	NSLK 8127	8127-523	Sep. 20, 2011	Sep. 19, 2012
Line-Impedance Stabilization Network (for Peripheral)	ENV-216	100072	June 10, 2011	June 09, 2012
RF Cable (JYEBAO)	5DFB	CONCAB-003	Aug. 05, 2011	Aug. 04, 2012
50 ohms Terminator	50	3	Nov. 02, 2011	Nov. 01, 2012
Software	BV ADT_Cond_V7.3.7	NA	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 Shielded Room No. A.
3. The VCCI Con A Registration No. is C-817.
4. Tested date: Mar. 09, 2012

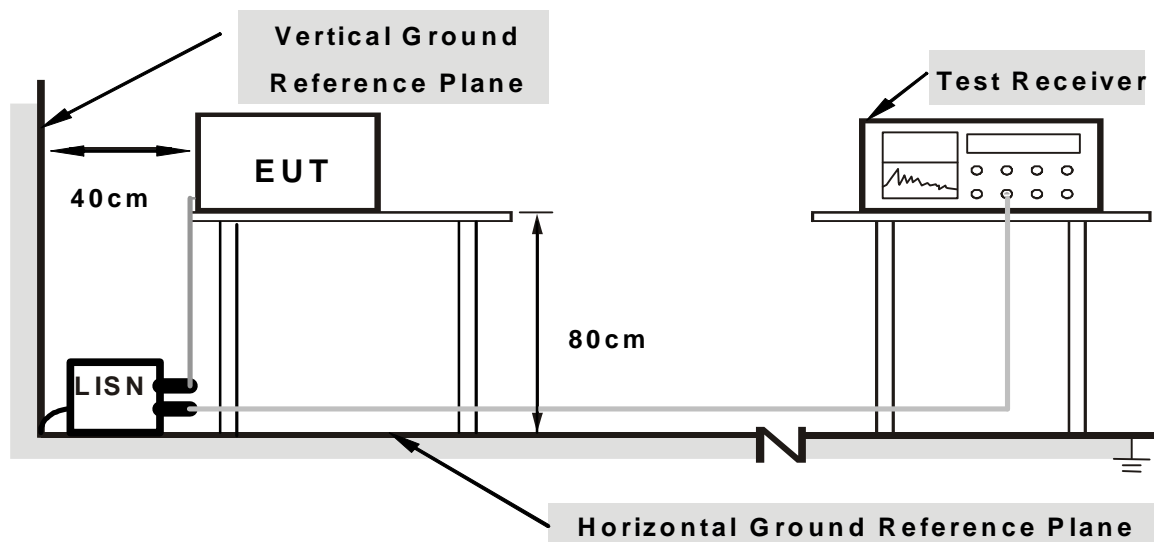
4.1.3 TEST PROCEDURES

- 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) were 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

1. Turn on the power of all equipment.
2. PC (support unit 1) runs "EMCTEST.exe" then sends "H" messages to EUT. And EUT scrolling "H" messages on its screen.
3. PC (support unit 1) sends "H" messages to modem.
4. PC (support unit 1) sends "H" messages to printer, and the printer prints them on paper.
5. PC (support unit 1) runs a test program "EMI.bat" to enable iPod (support unit 6) under "Read – Write – Erase mode" continually via EUT by one USB cable.
6. Repeat steps 2-5.

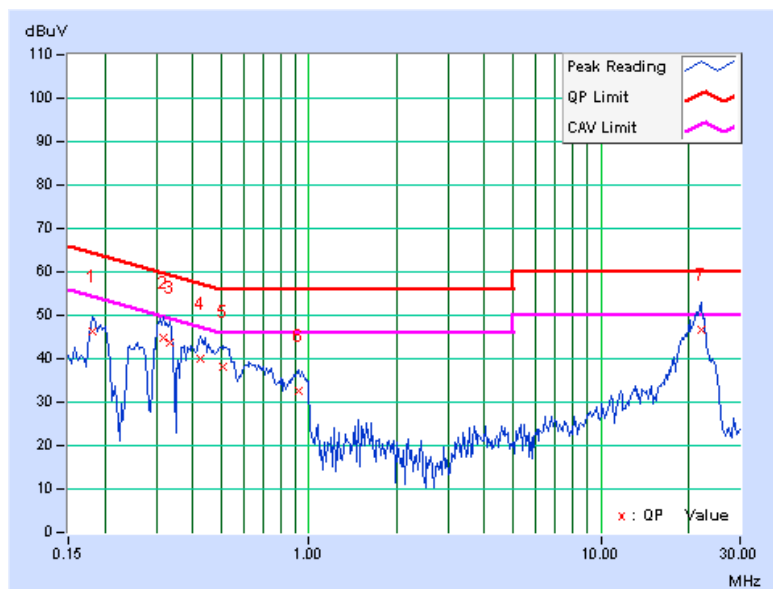
4.1.7 TEST RESULTS

PHASE	Line (L)	6dB BANDWIDTH	9 kHz
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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	0.18125	0.06	46.07	31.51	46.13	31.57	64.43
2	0.31797	0.07	44.80	30.77	44.87	30.84	59.76	49.76	-14.89	-18.92
3	0.33359	0.07	43.66	27.34	43.73	27.41	59.36	49.36	-15.63	-21.95
4	0.42344	0.07	39.84	21.91	39.91	21.98	57.38	47.38	-17.47	-25.40
5	0.50938	0.07	38.06	21.40	38.13	21.47	56.00	46.00	-17.87	-24.53
6	0.92344	0.09	32.66	17.82	32.75	17.91	56.00	46.00	-23.25	-28.09
7	22.05859	0.71	45.94	33.61	46.65	34.32	60.00	50.00	-13.35	-15.68

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

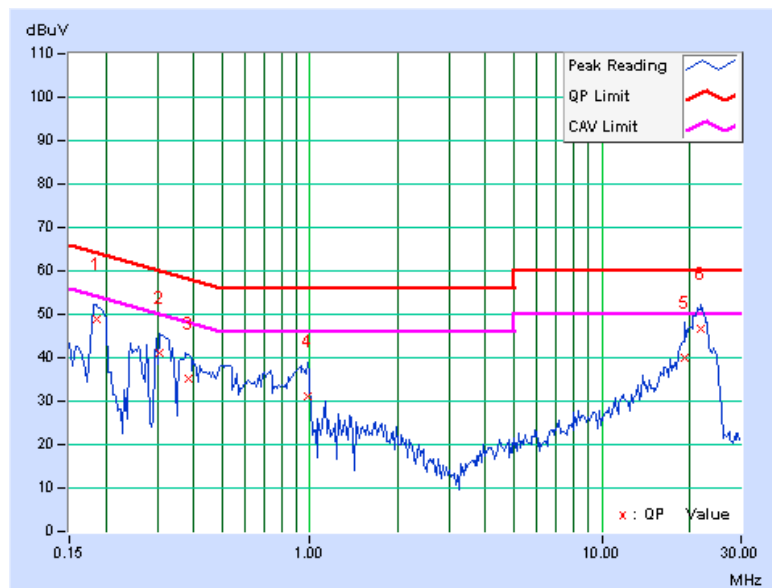


PHASE	Neutral (N)	6dB BANDWIDTH	9 kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.18516	0.07	48.81	31.38	48.88	31.45	64.25
2	0.30625	0.08	40.85	25.60	40.93	25.68	60.07	50.07	-19.15	-24.40
3	0.38438	0.08	35.10	20.42	35.18	20.50	58.18	48.18	-23.01	-27.69
4	0.98203	0.09	30.93	17.64	31.02	17.73	56.00	46.00	-24.98	-28.27
5	19.14453	0.63	39.31	28.56	39.94	29.19	60.00	50.00	-20.06	-20.81
6	21.95703	0.69	46.11	33.94	46.80	34.63	60.00	50.00	-13.20	-15.37

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.



4.2 RADIATED EMISSION AND BANDEGE MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION AND BANDEGE MEASUREMENT

FOR FREQUENCY BELOW 30MHz

FREQUENCY (MHz)	FIELD STRENGTH (dBuV/m)		MEASUREMENT DISTANCE (meters)
	uV/m	dBuV/m	
0.009 – 0.490	2400 / F (kHz)	48.52-13.80	300
0.490 – 1.705	24000 / F (kHz)	33.80-22.97	30
1.705 – 30.0	30	29.54	30

FOR FREQUENCY ABOVE 30MHz

FREQUENCY (MHz)	FIELD STRENGTH (dBuV/m)		MEASUREMENT DISTANCE (meters)
	uV/m	dBuV/m	
30-88	100	40.0	3
88-216	150	43.5	3
216-960	200	46.0	3
Above 960	500	54.0	3



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4.2.2 TEST INSTRUMENTS

For frequency range: 9 kHz ~ 30 MHz

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Agilent Spectrum Analyzer	E4443A	MY48250349	July 28, 2011	July 27, 2012
	E4443A	MY49420002	Aug. 10, 2011	Aug. 09, 2012
Agilent Pre-Selector	N9039A	MY46520331	Aug. 10, 2011	Aug. 09, 2012
	N9039A	MY46520309	July 26, 2011	July 27, 2012
Agilent Signal Generator	N5181A	MY49060520	Aug. 11, 2011	Aug. 10, 2012
Mini-Circuits Pre-Amplifier	ZFL-1000VH2B	AMP-ZFL-01	Nov. 15, 2011	Nov. 14, 2012
	ZFL-1000VH2B	AMP-ZFL-02	Nov. 15, 2011	Nov. 14, 2012
Mini-Circuits Pre_Amplifier (1~18GHz)	ZVA-183-S+	AMP-ZVA-01	Nov. 15, 2011	Nov. 14, 2012
SPACEK LABS (18~40GHz)	SLKKa-48-6	9K16	Nov. 15, 2011	Nov. 14, 2012
SCHWARZBECK Trilog Broadband Antenna	VULB 9168	9168-359	April 13, 2011	April 12, 2012
	VULB 9168	9168-358	April 13, 2011	April 12, 2012
SCHWARZBECK Horn Antenna	BBHA 9120	9120D-783	Oct. 07, 2011	Oct. 06, 2012
R&S Loop Antenna	HFH2-Z2	100070	Feb. 03, 2012	Feb. 02, 2013
RF CABLE	NA	RF104-110 RF104-206 RF104-209	Dec. 19, 2011	Dec. 20, 2012
RF Cable	8DFB	CHFCAB-001 CHFCAB-002 CHFCAB-003	Nov. 15, 2011	Nov. 14, 2012
Software	ADT_Radiated_ V8.7.05	NA	NA	NA
CT Antenna Tower & Turn Table	NA	NA	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 10m Chamber No. F.
3. The FCC Site Registration No. is 928149.
4. The VCCI Site Registration No. is R-3252 & G-136.
5. The CANADA Site Registration No. is IC 7450H-1.
6. Loop antenna was used for all emissions below 30 MHz.
7. Tested Date: Mar. 28, 2012



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For frequency range: 30-1000MHz

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Agilent Spectrum Analyzer	E4446A	MY48250253	Aug. 29, 2011	Aug. 28, 2012
Agilent Pre-Selector	N9039A	MY46520310	Aug. 29, 2011	Aug. 28, 2012
Agilent Signal Generator	N5181A	MY49060347	July 25, 2011	July 24, 2012
Mini-Circuits Pre-Amplifier	ZFL-1000VH2B	AMP-ZFL-04	Nov. 15, 2011	Nov. 14, 2012
Agilent Pre-Amplifier	8449B	3008A02465	Feb. 27, 2012	Feb. 26, 2013
SPACEK LABS	SLKKa-48-6	9K16	Nov. 15, 2011	Nov. 14, 2012
SCHWARZBECK Trilog Broadband Antenna	VULB 9168	9168-361	Apr. 14, 2011	Apr. 13, 2012
AISI Horn_Antenna	AIH.8018	0000220091110	Nov. 23, 2011	Nov. 22, 2012
SCHWARZBECK Horn_Antenna	BBHA 9170	9170-424	Oct. 07, 2011	Oct. 06, 2012
RF CABLE	NA	RF104-205 RF104-207 RF104-202	Dec. 27, 2011	Dec. 26, 2012
RF Cable	NA	CHHCAB_001	Oct. 08, 2011	Oct. 07, 2012
Software	ADT_Radiated_V8.7.05	NA	NA	NA
CT Antenna Tower & Turn Table	NA	NA	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 horn antenna, preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in 966 Chamber No. H.
4. The FCC Site Registration No. is 797305.
5. The CANADA Site Registration No. is IC 7450H-3.
6. Tested Date: Mar. 26, 2012

4.2.3 TEST PROCEDURES

For Radiated emission below 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 10 meters away from the interference-receiving antenna. The height of antenna is 1 meter above the ground.
- c. Both X and Y axes of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case 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 Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

For Radiated emission 30~1000MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. 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 height of antenna 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 Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

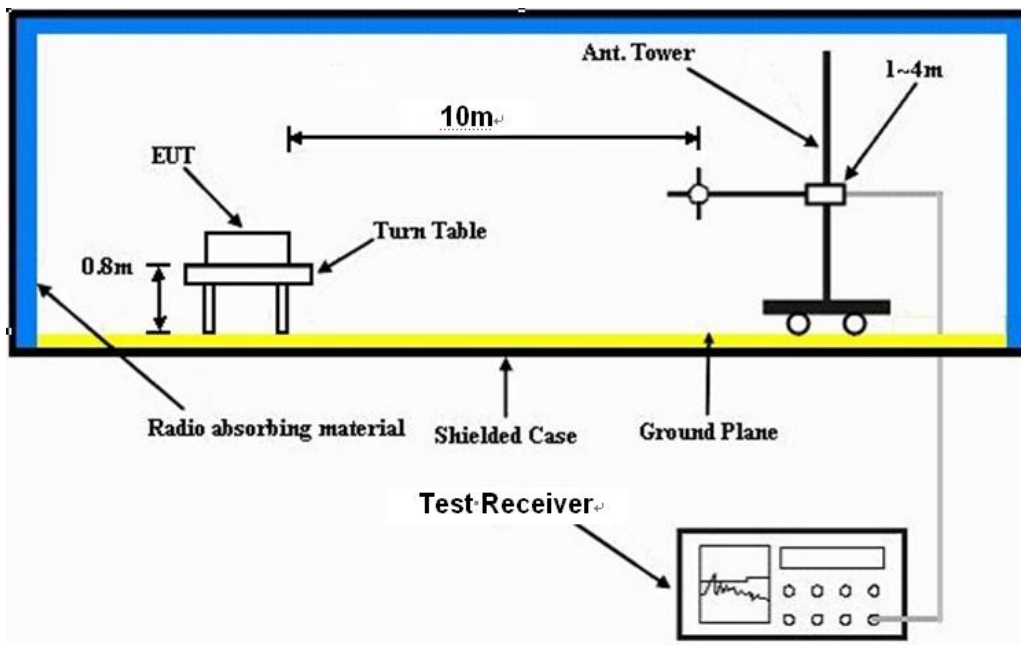
NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency 30MHz ~ 1GHz.

4.2.4 DEVIATION FROM TEST STANDARD

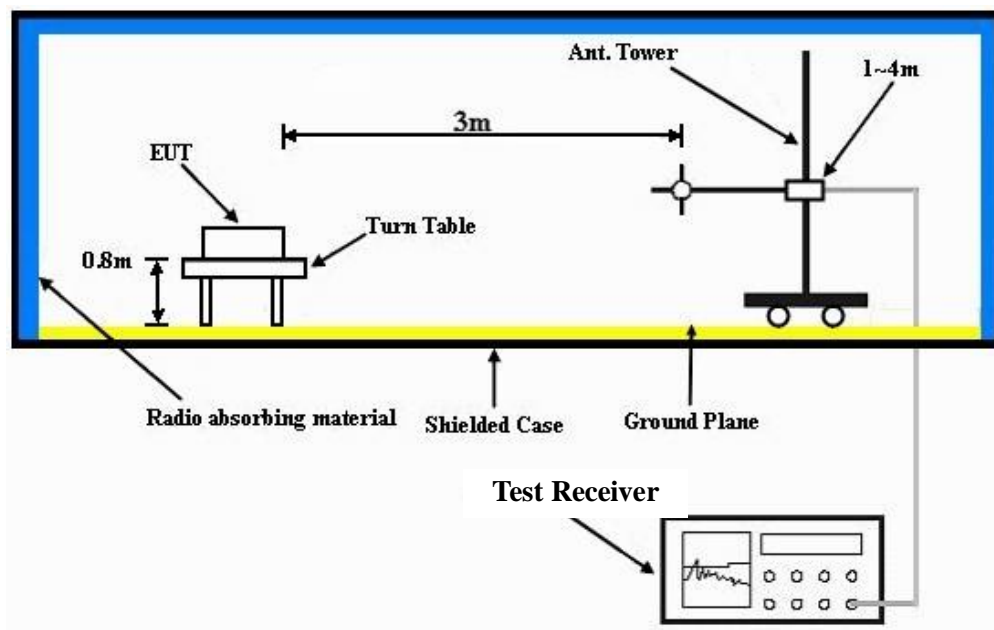
No deviation

4.2.5 TEST SETUP

< Frequency range: 9 kHz ~ 30 MHz >



< Frequency range: 30-1000MHz >



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

4.2.6 EUT OPERATING CONDITIONS

1. Turn on the power of all equipment.
2. PC (support unit 1) runs "EMCTEST.exe" then sends "H" messages to EUT.
And EUT scrolling "H" messages on its screen.
3. PC (support unit 1) runs a test program "EMI.bat" to enable iPod (support unit 4) under "Read – Write – Erase mode" continually via EUT by one USB cable.
4. Repeat steps 2-3.



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4.2.7 TEST RESULTS

CHANNEL	Channel 1	DETECTOR FUNCTION	Quasi-Peak
FREQUENCY RANGE	9 kHz ~ 30 MHz		

LOOP ANTENNA TEST DISTANCE: AT 10 M (X AXIS)

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	0.20	44.1 QP	80.7	-36.5	1.00 V	83	17.13	27.01
2	0.46	32.8 QP	73.5	-40.6	1.00 V	69	5.83	27.01
3	0.67	44.1 QP	50.2	-6.1	1.00 V	12	17.13	27.01
4	0.93	27.9 QP	47.4	-19.4	1.00 V	166	0.93	27.01
5	1.33	19.9 QP	44.2	-24.3	1.00 V	27	-7.07	27.01
6	2.00	19.4 QP	48.6	-29.2	1.00 V	67	-7.57	27.01
7	2.67	16.7 QP	48.6	-31.9	1.00 V	81	-10.27	27.01
8	3.33	14.8 QP	48.6	-33.8	1.00 V	133	-12.17	27.01
9	4.00	14.0 QP	48.6	-34.6	1.00 V	183	-12.97	27.01
10	4.67	14.1 QP	48.6	-34.5	1.00 V	266	-12.87	27.01
11	5.33	13.7 QP	48.6	-34.9	1.00 V	106	-13.27	27.01
12	6.00	13.9 QP	48.6	-34.7	1.00 V	95	-13.07	27.01
13	25.23	22.3 QP	48.6	-26.3	1.00 V	73	-4.67	27.01

LOOP ANTENNA TEST DISTANCE: AT 10 M (Y AXIS)

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	0.46	29.3 QP	73.5	-44.1	1.00 H	84	2.33	27.01
2	0.67	39.1 QP	50.2	-11.1	1.00 H	241	12.13	27.01
3	0.93	22.5 QP	47.4	-24.8	1.00 H	13	-4.47	27.01
4	1.33	18.4 QP	44.3	-25.8	1.00 H	153	-8.57	27.01
5	2.00	14.9 QP	48.6	-33.7	1.00 H	122	-12.07	27.01
6	2.67	14.8 QP	48.6	-33.8	1.00 H	213	-12.17	27.01
7	3.33	13.7 QP	48.6	-34.9	1.00 H	106	-13.27	27.01
8	4.00	13.9 QP	48.6	-34.7	1.00 H	126	-13.07	27.01
9	4.67	14.6 QP	48.6	-34.0	1.00 H	271	-12.37	27.01
10	5.33	13.8 QP	48.6	-34.8	1.00 H	184	-13.17	27.01
11	6.00	14.1 QP	48.6	-34.5	1.00 H	123	-12.87	27.01
12	25.23	19.0 QP	48.6	-29.6	1.00 H	87	-7.97	27.01

- 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. Above limits have been translated by the formula



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The measured field strength was extrapolated to distance 30 meters, using the formula that the limit of field strength varies as the inverse distance square (40dB per decade of distance)

Example:

$$\begin{aligned} 24000/666.7\text{KHz} &= 36 \text{ uV/m} && 30\text{m} \\ &= 31.12 \text{ dBuV/m} && 30\text{m} \\ &= 31.12 + 20\log(30/10)^2 && 10\text{m} \\ &= 50.2 \text{ dBuV/m} \end{aligned}$$



CHANNEL	Channel 1	DETECTOR FUNCTION	Quasi-Peak
FREQUENCY RANGE	30-1000MHz		

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	132.55	40.3 QP	43.5	-3.2	1.50 H	0	26.66	13.61
2	146.53	36.4 QP	43.5	-7.1	1.50 H	76	21.92	14.51
3	417.36	36.2 QP	46.0	-9.8	1.50 H	55	18.09	18.10
4	516.24	37.3 QP	46.0	-8.8	2.00 H	360	16.83	20.42
5	587.65	40.6 QP	46.0	-5.4	1.00 H	311	18.63	21.98
6	895.67	41.2 QP	46.0	-4.9	2.00 H	298	14.25	26.90

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	64.93	35.9 QP	40.0	-4.1	1.00 V	147	22.97	12.89
2	293.85	41.9 QP	46.0	-4.1	1.50 V	223	26.78	15.14
3	417.36	38.9 QP	46.0	-7.2	2.00 V	160	20.75	18.10
4	585.99	37.0 QP	46.0	-9.0	1.50 V	329	15.02	21.94
5	659.18	35.9 QP	46.0	-10.1	1.00 V	92	13.25	22.69
6	877.20	41.6 QP	46.0	-4.5	1.00 V	160	14.93	26.62

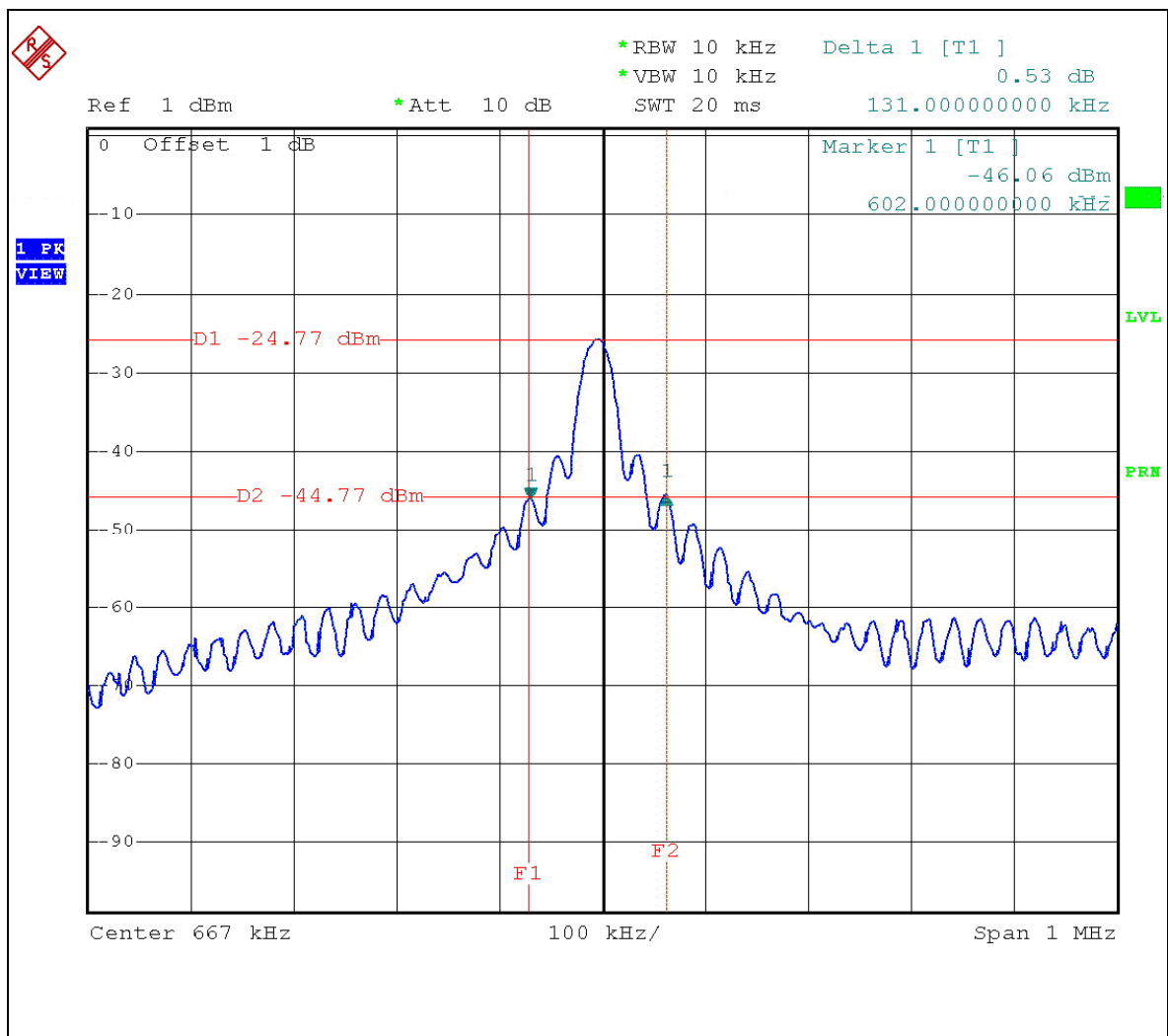
- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.



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4.2.8 TEST RESULTS (SPECTRUM BANDWIDTH)

131kHz





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5. PHOTOGRAPHS OF THE TEST CONFIGURATION

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



6. INFORMATION ON THE TESTING LABORATORIES

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

Copies of accreditation and authorization 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:

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Web Site: www.adt.com.tw

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



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

No modifications were made to the EUT by the lab during the test.

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