

# FCC VERIFICATION TEST REPORT

**REPORT NO.:** FV111206C14

**MODEL NO.:** MO6717

**RECEIVED:** Dec. 06, 2011

**TESTED:** Dec. 20, 2011

**ISSUED:** Dec. 22, 2011

**APPLICANT:** Option nv

**ADDRESS:** Gaston Geenslaan 14, 3001 Leuven, Belgium

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

**LAB ADDRESS:** No. 19, Hwa Ya 2nd Rd., Wen Hwa Tsuen, Kwei  
Shan Hsiang, Taoyuan Hsien 333, Taiwan

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

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## Table of Contents

RELEASE CONTROL RECORD .....	3
1 CERTIFICATION .....	4
2 SUMMARY OF TEST RESULTS .....	5
2.1 MEASUREMENT UNCERTAINTY .....	5
3 GENERAL INFORMATION.....	6
3.1 GENERAL DESCRIPTION OF EUT .....	6
3.2 DESCRIPTION OF TEST MODES.....	7
3.3 DESCRIPTION OF SUPPORT UNITS.....	7
3.4 CONFIGURATION OF SYSTEM UNDER TEST .....	8
4 TEST TYPES AND RESULTS .....	9
4.1 CONDUCTED EMISSION MEASUREMENT .....	9
4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT .....	9
4.1.2 TEST INSTRUMENTS .....	9
4.1.3 TEST PROCEDURES .....	10
4.1.4 DEVIATION FROM TEST STANDARD .....	10
4.1.5 TEST SETUP .....	11
4.1.6 EUT OPERATING CONDITIONS .....	11
4.1.7 TEST RESULTS .....	12
4.2 RADIATED EMISSION MEASUREMENT .....	14
4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT.....	14
4.2.2 TEST INSTRUMENTS .....	15
4.2.3 TEST PROCEDURES .....	17
4.2.4 DEVIATION FROM TEST STANDARD .....	18
4.2.5 TEST SETUP .....	19
4.2.6 EUT OPERATING CONDITIONS .....	19
4.2.7 TEST RESULTS .....	20
5 PHOTOGRAPHS OF THE TEST CONFIGURATION.....	24
6 INFORMATION ON THE TESTING LABORATORIES .....	27
7 APPENDIX A – MODIFICATION RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB .....	28




## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
Original release	N/A	Dec. 22, 2011

## 1 CERTIFICATION

**PRODUCT:** GTM671WFS  
**MODEL:** MO6717  
**BRAND:** Option  
**APPLICANT:** Option nv  
**TESTED:** Dec. 20, 2011  
**TEST SAMPLE:** ENGINEERING SAMPLE  
**STANDARD:** **FCC Part 15, Subpart B, Class B**  
**CISPR 22:1997, Class B**  
**ICES-003:2004, Class B**  
**ANSI C63.4:2003**

This report is issued as a supplementary report of **FD0N2627 Rev. 01** (Issued on Apr. 20, 2011). This report shall be used combined together with its original report.

**PREPARED BY :**  , **DATE :** Dec. 22, 2011  
Pettie Chen / Specialist

**APPROVED BY :**  , **DATE :** Dec. 22, 2011  
David Liu / Senior Engineer

## 2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications.

EMISSION			
Standard	Test Type	Result	Remarks
FCC Part 15, Subpart B, Class B	Conducted emission test	PASS	Meet the requirement of limit. Minimum passing margin is -7.67dB at 0.232MHz.
CISPR 22:1997, Class B ICES-003:2004, Class B	Radiated emission test (30MHz~18GHz)	PASS	Meet the requirement of limit. Minimum passing margin is -3.05dB at 426.55MHz.

**Note:** The limit for radiated test for 30-1000 MHz was performed according to CISPR 22: 1997, which was specified in FCC PART 15 Subpart B 15.109(g). Also the limits of ICES-003: 2004 and CISPR 22: 1997 are same.

### 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:

Measurement	Frequency	Uncertainty
Conducted emission	150kHz ~ 30MHz	2.44 dB
Radiated emission	30MHz ~ 200MHz	4.12 dB
	200MHz ~1000MHz	4.12 dB
	1GHz ~ 18GHz	2.26 dB

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

### 3 GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

<b>PRODUCT</b>	GTM671WFS
<b>MODEL NO.</b>	MO6717
<b>POWER SUPPLY</b>	3.3Vdc
<b>DATA CABLE</b>	NA
<b>ACCESSORY DEVICE</b>	NA

**NOTE:**

1. This report is a supplementary report of FD0N2627 Rev. 01 (Issued on Apr. 20, 2011). This report is prepared for FCC class II change. The difference compared with original report is as following.
  - ◆ The MO6717 has a Full Size PCI Express Minicard Form Factor, while the MO6712 has a Half Size PCI Express Minicard Form Factor.
  - ◆ The MO6717 additionally has a (U)SIM interface and MicroSD interface.
2. The EUT's highest operating frequency is 2.462GHz.
3. The above EUT information is declared by manufacturer and for more detailed feature description, please refer to the manufacturer's specifications or user's manual.

### 3.2 DESCRIPTION OF TEST MODES

Test modes are defined by the applicant as below. After pre-testing, the mode 2 was the worst case for final test.

Test Mode	Test Condition
1	GSM850 idle, WiFi idle, GPS Rx, USB & HDMI link
2	WCDMA 1900 idle, WiFi idle, GPS Rx, USB & HDMI link

### 3.3 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.

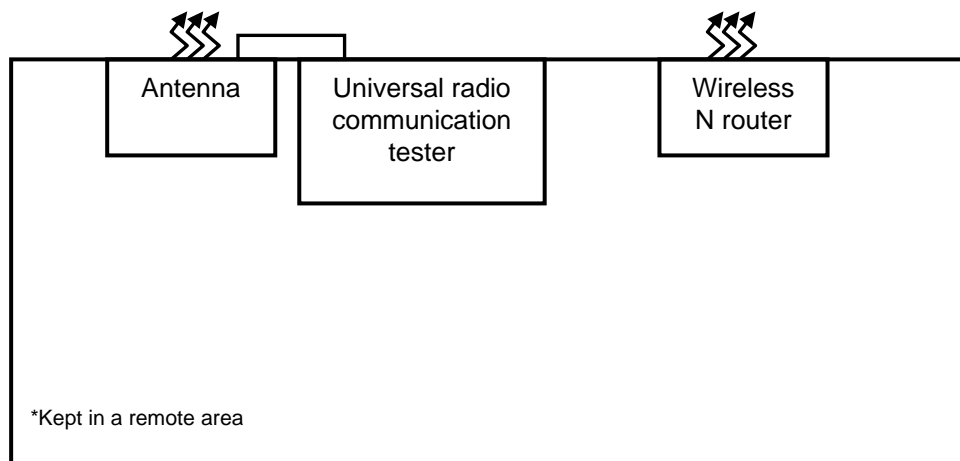
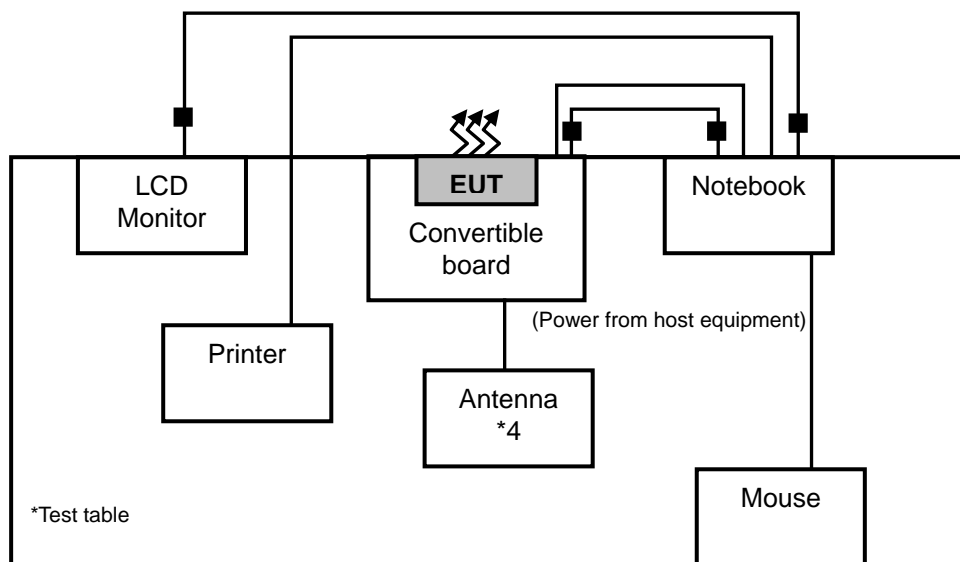
NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK	Lenove	T500	NA	FCC DoC Approved
2	CONVERTIBLE BOARD	NA	NA	NA	NA
3	LCD MONITOR	DELL	U2410	CN082WXD-72872-0 CR-06DL	FCC DoC Approved
4	PRINTER	EPSON	B241A	FAPY139300	FCC DoC Approved
5	MOUSE	DELL	M056U0	349007043	FCC DoC Approved
6	UNIVERSAL RADIO COMMUNICATION TESTER	R&S	CMU200	117260	NA
7	DOUBLE RIDGE GUIDE HORN ANTENNA	EMCO	3115	5623	NA
8	WIRELESS N ROUTER	D-Link	DIR-615	F3O8188007995	NA

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	1.8m HDMI cable with two cores. 1.8m USB cable
2	NA
3	1.8m D-Sub cable with two cores.
4	1.8 m shielded cable, terminated with USB connector, w/o core.
5	1.8m foil shielded wire, USB Connector, w/o core.
6	3.0m RF cable
7	NA
8	NA

**NOTE:**

1. All power cords of the above support units are non-shielded (1.8m).
2. Items 6-8 acted as communication partners to transfer data.

### 3.4 CONFIGURATION OF SYSTEM UNDER TEST



## 4 TEST TYPES AND RESULTS

### 4.1 CONDUCTED EMISSION MEASUREMENT

#### 4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

##### TEST STANDARD:

FCC Part 15, Subpart B (section: 15.107)

CISPR 22: 1997 (section 5)

ICES-003: 2004 (Class A: section 5.2)  
(Class B: section 5.3)

Frequency (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15-0.5	79	66	66-56	56-46
0.5-5	73	60	56	46
5-30	73	60	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.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCS30	100289	Nov. 19, 2011	Nov. 18, 2012
RF signal cable Woken	5D-FB	Cable-HYCO2-01	Dec. 22, 2011	Dec. 21, 2012
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Jan. 06, 2011	Jan. 05, 2012
LISN ROHDE & SCHWARZ	ESH3-Z5	100312	Jul. 07, 2011	Jul. 06, 2012
V-LISN SCHWARZBECK	NNBL 8226-2	8226-142	Jun. 30, 2011	Jun. 29, 2012
LISN ROHDE & SCHWARZ	ENV216	100072	Jun. 10, 2011	Jun. 09, 2012
Software ADT	ADT_Conc_ 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 HwaYa Shielded Room 2.
  3. The VCCI Site Registration No. is C-2047.

#### **4.1.3 TEST PROCEDURES**

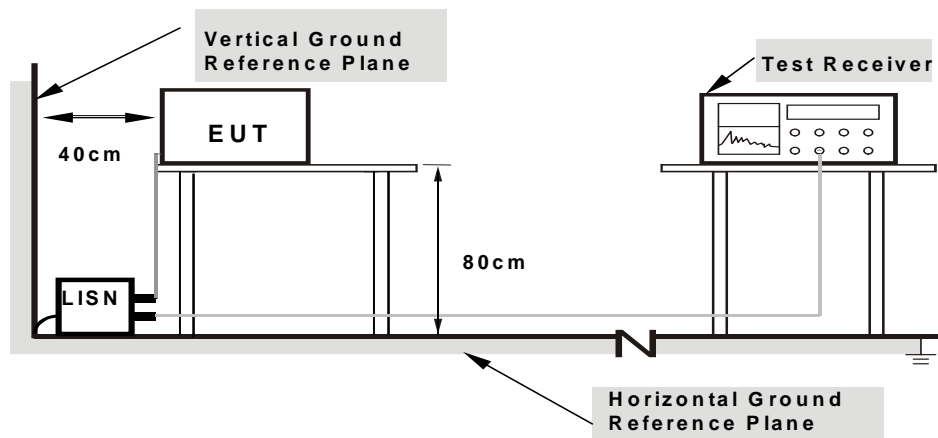
The basic test procedure was in accordance with ANSI C63.4: 2003 (section 7) and CISPR 22 (section 9).

- 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 150 kHz to 30 MHz 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 cm from other units and other metal planes

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

#### 4.1.6 EUT OPERATING CONDITIONS

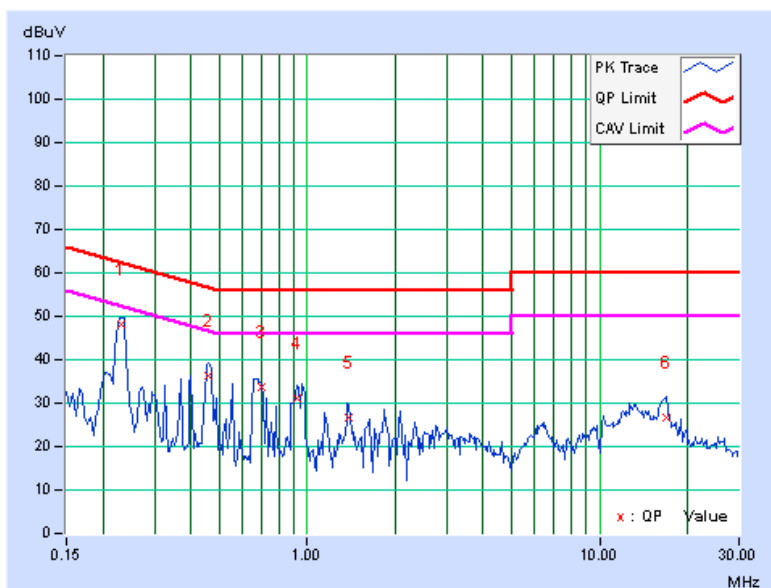
- Connected the EUT with notebook and placed them on a testing table.
- The notebook sent “H” patterns to the monitor and the monitor displayed “H” patterns.
- The notebook sent “H” patterns to the printer and the printer displayed “H” patterns.
- Prepared the universal radio communication tester and wireless N router to act as communication partners and placed it outside of testing area.
- The notebook communicated with communication partner by command "PING" via EUT.
- The necessary accessories enable the system in full functions.

#### 4.1.7 TEST RESULTS

INPUT POWER	120 Vac, 60 Hz	6dB BANDWIDTH	9 kHz
ENVIRONMENTAL CONDITIONS	23 deg. C, 65% RH	PHASE	Line 1
TESTED BY	Whisky 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	0.232	0.17	47.88	44.53	48.05	44.70	62.38	52.38	-14.32	-7.67
2	0.459	0.20	36.08	32.58	36.28	32.78	56.72	46.72	-20.44	-13.94
3	0.696	0.21	33.60	29.19	33.81	29.40	56.00	46.00	-22.19	-16.60
4	0.926	0.23	30.74	24.87	30.97	25.10	56.00	46.00	-25.03	-20.90
5	1.378	0.24	26.43	21.84	26.67	22.08	56.00	46.00	-29.33	-23.92
6	16.918	1.06	25.69	18.36	26.75	19.42	60.00	50.00	-33.25	-30.58

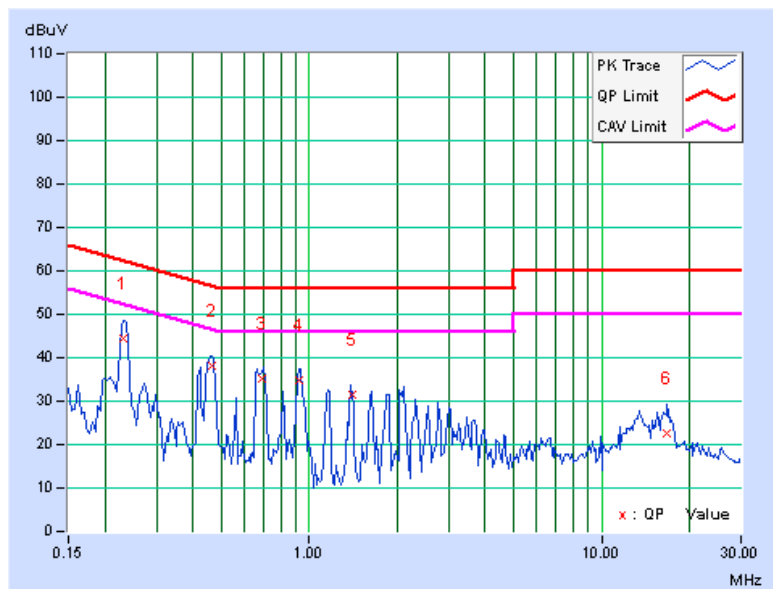
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
  2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
  3. The emission levels of other frequencies were very low against the limit.
  4. Margin value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



INPUT POWER	120 Vac, 60 Hz	6dB BANDWIDTH	9 kHz
ENVIRONMENTAL CONDITIONS	23 deg. C, 65% RH	PHASE	Line 2
TESTED BY	Whisky Chang		

No	Freq.	Corr. Factor	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	0.232	0.18	44.24	40.81	44.42	40.99	62.38	52.38	-17.95	-11.38
2	0.465	0.21	38.05	36.56	38.26	36.77	56.60	46.60	-18.34	-9.83
3	0.693	0.21	35.03	29.31	35.24	29.52	56.00	46.00	-20.76	-16.48
4	0.925	0.21	34.75	31.17	34.96	31.38	56.00	46.00	-21.04	-14.62
5	1.396	0.22	31.18	26.43	31.40	26.65	56.00	46.00	-24.60	-19.35
6	16.797	0.90	21.67	12.61	22.57	13.51	60.00	50.00	-37.43	-36.49

- 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

#### TEST STANDARD:

FCC Part 15, Subpart B (section: 15.109)

CISPR 22: 1997 (section 6)

ICES-003: 2004 (Class A: section 5.4)  
(Class B: section 5.5)

Frequency (MHz)	Class A (at 10m)	Class B (at 10m)
	Quasi-peak (dBuV/m)	Quasi-peak (dBuV/m)
30-230	40	30
230-1000	47	37

**NOTE:** The limit for radiated test was performed according to CISPR 22:1997, which was specified in FCC PART 15B 15.109(g). Also the limits of CISPR 22:1997 is same.

Frequency (MHz)	Class A (at 3m)		Class B (at 3m)	
	Peak (dBuV/m)	Average (dBuV/m)	Peak (dBuV/m)	Average (dBuV/m)
Above 1000	80	60	74	54

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

#### FREQUENCY RANGE OF RADIATED MEASUREMENT (For unintentional radiators)

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.705	30
1.705-108	1000
108-500	2000
500-1000	5000
Above 1000	5th harmonic of the highest frequency or 40 GHz, whichever is lower

## 4.2.2 TEST INSTRUMENTS

### Frequency range 30MHz~1GHz

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESIB7	100187	Feb. 14, 2011	Feb. 13, 2012
Test Receiver ROHDE & SCHWARZ	ESIB7	100188	May. 12, 2011	May. 11, 2012
Spectrum Analyzer Agilent	E4446A	MY48250266	Aug. 24, 2011	Aug. 23, 2012
BILOG Antenna SCHWARZBECK	VULB9168	9168-148	Apr. 13, 2011	Apr. 12, 2012
BILOG Antenna SCHWARZBECK	VULB9168	9168-149	Apr. 13, 2011	Apr. 12, 2012
Preamplifier Agilent	8447D	2944A10636	Oct. 29, 2011	Oct. 28, 2012
Preamplifier Agilent	8447D	2944A10637	Oct. 29, 2011	Oct. 28, 2012
Preamplifier Agilent	8449B	3008A01959	Oct. 29, 2011	Oct. 28, 2012
RF signal cable Woken	8D-FB	Cable-Hych1-01	Oct. 29, 2011	Oct. 28, 2012
RF signal cable Woken	8D-FB	Cable-Hych1-02	Oct. 29, 2011	Oct. 28, 2012
Software ADT	ADT_Radiated_ V 7.7.03.6	NA	NA	NA
Antenna Tower(V)	MFA-440	9707	NA	NA
Antenna Tower(H)	MFA-440	970705	NA	NA
Turn Table	DS430	50303	NA	NA
Controller	MF7802	074	NA	NA
Controller	MF7802	08093	NA	NA
RF signal cable EAST COST Microwave	HP 160S-29	NA	Oct. 29, 2011	Oct. 28, 2012

**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 FCC Site Registration No. is 477732.
4. The IC Site Registration No. is IC 7450F-1.
5. The VCCI Site Registration No. is R-1893, G-113.

### Frequency range above 1GHz

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESIB7	100188	May. 12, 2011	May. 11, 2012
Spectrum Analyzer ROHDE & SCHWARZ	FSP 40	100041	Jul. 21, 2011	Jul. 20, 2012
BILOG Antenna SCHWARZBECK	VULB9168	9168-157	Apr. 14, 2011	Apr. 13, 2012
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-405	Feb. 08, 2011	Feb. 07, 2012
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170242	Jan. 04, 2011	Jan. 03, 2012
Preamplifier Agilent	8447D	2944A10629	Oct. 29, 2011	Oct. 28, 2012
Preamplifier Agilent	8449B	3008A01959	Oct. 29, 2011	Oct. 28, 2012
RF signal cable HUBER+SUHNER	SUCOFLEX 104	23636/6	Aug. 19, 2011	Aug. 18, 2012
RF signal cable HUBER+SUHNER	SUCOFLEX 104	283402/4	Aug. 19, 2011	Aug. 18, 2012
Software ADT.	ADT_Radiated_ V7.6.15.9.2	NA	NA	NA
Antenna Tower ADT.	AT100	AT93021702	NA	NA
Turn Table ADT.	TT100.	TT93021702	NA	NA
Controller ADT.	SC100.	SC93021702	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 Chamber 2.
3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The FCC Site Registration No. is 686814.
5. The IC Site Registration No. is IC 7450F-2.
6. The VCCI Site Registration No. is G-18.

### 4.2.3 TEST PROCEDURES

The basic test procedure was in accordance with ANSI C63.4: 2003 (section 8) and CISPR 22 (section 10).

#### Frequency range 30MHz~1GHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter semi-anechoic 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, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from 1 meter to 4 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 when the test frequency is below 1GHz.

**NOTE:** The resolution bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-Peak (QP) detection at frequency below 1GHz.

### Frequency range above 1GHz

- 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 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 can be varied from 1 meter to 4 meters, the height of adjustment depends on the EUT height and the antenna 3dB beamwidth both, to detect 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 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 and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1GHz.

**NOTE:**

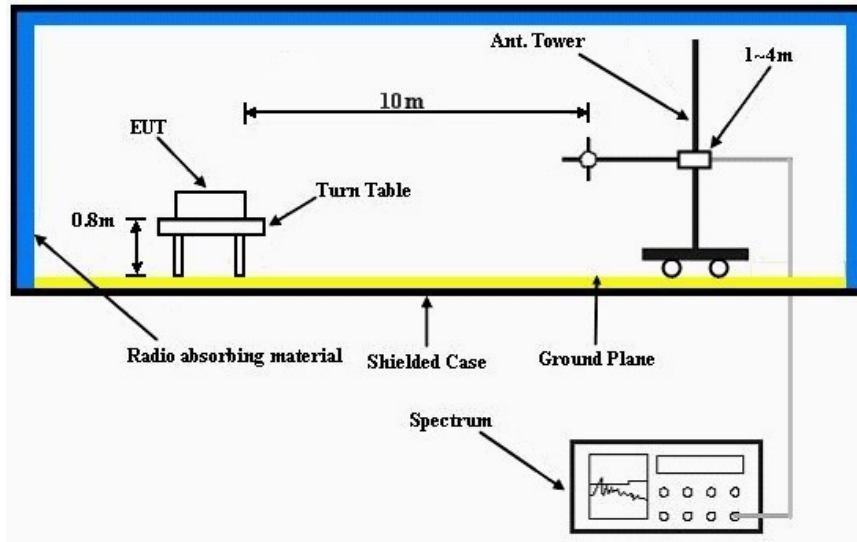
1. The resolution bandwidth is 1MHz and video bandwidth of test receiver/spectrum analyzer is 3MHz for Peak (PK) detection at frequency above 1GHz. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz for Average (AV) detection at frequency above 1GHz.
2. For measurement of frequency above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

### 4.2.4 DEVIATION FROM TEST STANDARD

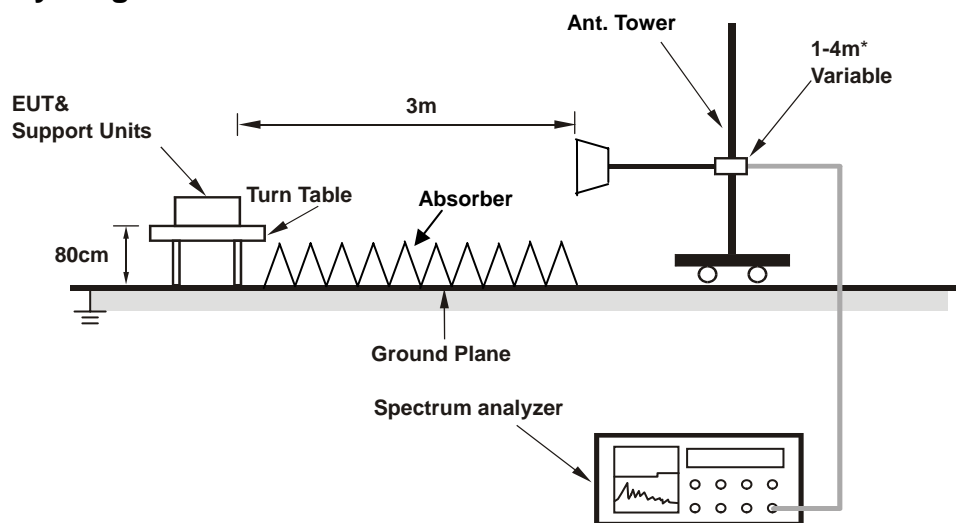
No deviation.

## 4.2.5 TEST SETUP

### Frequency range 30MHz~1GHz



### Frequency range above 1GHz



\* : depends on the EUT height and the antenna 3dB beamwidth both, refer to section 8.3.1.2 of ANSI C63.4: 2003.

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

## 4.2.6 EUT OPERATING CONDITIONS

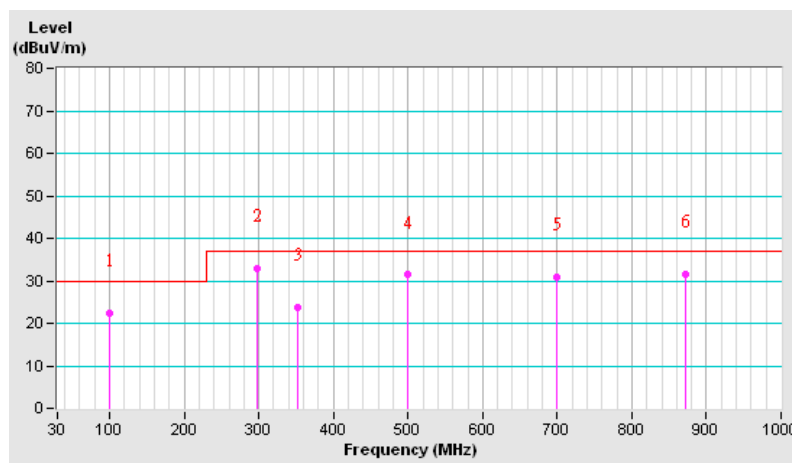
Same as 4.1.6.

## 4.2.7 TEST RESULTS

INPUT POWER	120 Vac, 60 Hz	FREQUENCY RANGE	30-1000 MHz
DETECTOR FUNCTION & BANDWIDTH	Quasi-Peak, 120 kHz	ENVIRONMENTAL CONDITIONS	22 deg. C, 67% RH
TESTED BY	Whisky Chang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL 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	99.98	22.32 QP	30.00	-7.68	4.00 H	210	12.35	9.97
2	298.26	32.81 QP	37.00	-4.19	3.50 H	121	17.02	15.79
3	352.69	23.72 QP	37.00	-13.28	3.00 H	286	6.33	17.39
4	500.42	31.40 QP	37.00	-5.60	1.50 H	117	10.28	21.12
5	698.70	30.99 QP	37.00	-6.01	1.00 H	194	6.66	24.33
6	871.70	31.64 QP	37.00	-5.36	2.50 H	157	4.01	27.63

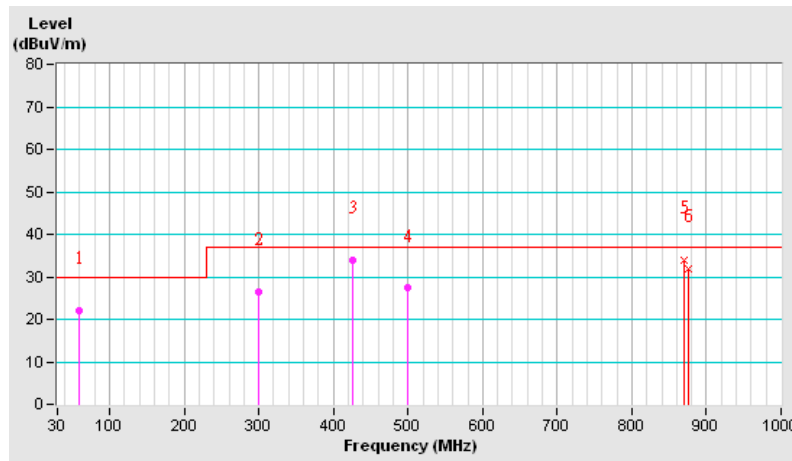
- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
  2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
  3. The other emission levels were very low against the limit.
  4. Margin value = Emission level – Limit value.



INPUT POWER	120 Vac, 60 Hz	FREQUENCY RANGE	30-1000 MHz
DETECTOR FUNCTION & BANDWIDTH	Quasi-Peak, 120 kHz	ENVIRONMENTAL CONDITIONS	22 deg. C, 67% RH
TESTED BY	Whisky Chang		

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	59.16	21.96 QP	30.00	-8.04	1.50 V	150	8.17	13.79
2	300.20	26.54 QP	37.00	-10.46	1.00 V	166	10.54	16.00
3	426.55	33.95 QP	37.00	-3.05	2.50 V	112	14.38	19.58
4	500.42	27.30 QP	37.00	-9.70	1.00 V	187	5.91	21.39
5	870.80	33.92 QP	37.00	-3.08	2.00 V	78	5.79	28.13
6	876.33	31.94 QP	37.00	-5.06	2.00 V	151	3.75	28.19

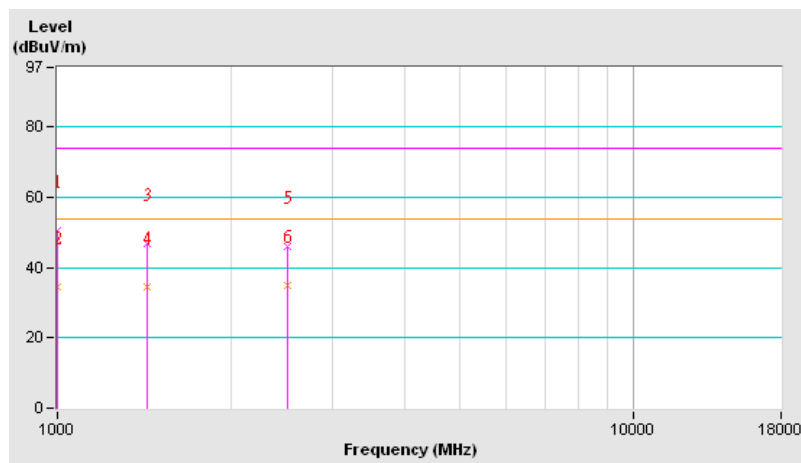
- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
  2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
  3. The other emission levels were very low against the limit.
  4. Margin value = Emission level – Limit value.



INPUT POWER	120 Vac, 60 Hz	FREQUENCY RANGE	1-18 GHz
ENVIRONMENTAL CONDITIONS	23 deg. C, 65% RH	DETECTOR FUNCTION & BANDWIDTH	Peak/Average, 1 MHz
TESTED BY	Scott Yang		

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	1000.00	50.61 PK	74.00	-23.39	1.15 H	211	22.73	27.88
2	1000.00	34.51 AV	54.00	-19.49	1.15 H	211	6.63	27.88
3	1430.86	46.70 PK	74.00	-27.30	1.00 H	223	17.35	29.35
4	1430.86	34.48 AV	54.00	-19.52	1.00 H	223	5.13	29.35
5	2513.26	45.87 PK	74.00	-28.13	1.00 H	59	13.16	32.70
6	2513.26	35.06 AV	54.00	-18.94	1.00 H	59	2.35	32.70

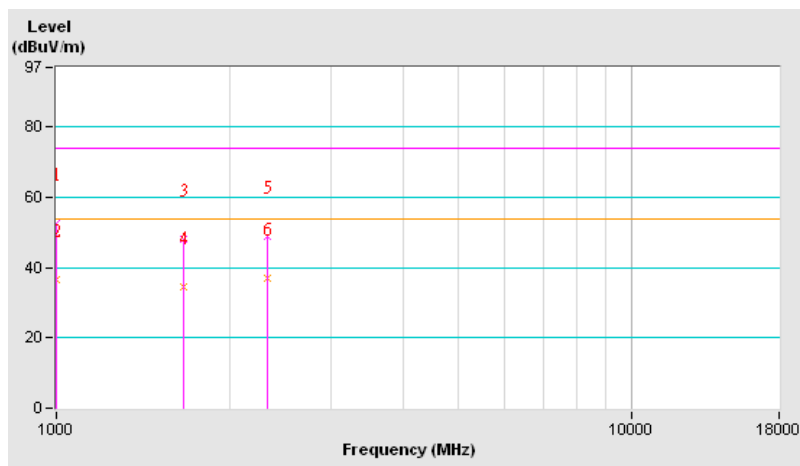
- REMARKS:**
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
  2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
  3. The other emission levels were very low against the limit.
  4. Margin value = Emission level – Limit value.



INPUT POWER	120 Vac, 60 Hz	FREQUENCY RANGE	1-18 GHz
ENVIRONMENTAL CONDITIONS	23 deg. C, 65% RH	DETECTOR FUNCTION & BANDWIDTH	Peak/Average, 1 MHz
TESTED BY	Scott Yang		

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	1000.00	52.62 PK	74.00	-21.38	1.00 V	163	24.74	27.88
2	1000.00	36.64 AV	54.00	-17.36	1.00 V	163	8.76	27.88
3	1661.32	48.09 PK	74.00	-25.91	1.13 V	218	18.15	29.94
4	1661.32	34.60 AV	54.00	-19.40	1.13 V	218	4.66	29.94
5	2322.64	48.74 PK	74.00	-25.26	1.00 V	158	16.76	31.98
6	2322.64	36.87 AV	54.00	-17.13	1.00 V	158	4.89	31.98

- 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.



## 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](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

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**Hsin Chu EMC/RF Lab**

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

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

## **7 APPENDIX A – MODIFICATION RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB**

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

**--- END ---**