FCC CERTIFICATION REPORT

REPORT NO.:	FD120723C24
MODEL NO.:	Quattro 4.5 HD
RECEIVED:	Jul. 23, 2012
TESTED:	Aug. 01 ~ Aug. 04, 2012
ISSUED:	Aug. 31, 2012

APPLICANT:	CT Asia
ADDRESS:	Unit 01, 15/F, Seaview Centre,139-141 Hoi bun road, Kwun Tong, Kowloon,Hongkong

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, R.O.C.

This report should not be used by the client to claim product certification, approval, or endorsement by TAF, NVLAP, NIST or any government agencies.

LAB CODE: 200837-0

Testing Laboratory 2021

Table of Contents

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FD120723C24	Original release	Aug. 31, 2012

1 CERTIFICATION

PRODUCT:	GSM/WCDMA mobile
MODEL NO.:	Quattro 4.5 HD
BRAND:	BLU
APPLICANT:	CT Asia
TESTED:	Aug. 01 ~ Aug. 04, 2012
TEST SAMPLE:	ENGINEERING SAMPLE
STANDARD:	**FCC Part 15, Subpart B, Class B**
	ICES-003:2004, Class B
	ANSI C63.4:2009

The above equipment (Model: Quattro 4.5 HD) 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 :** Aug. 31, 2012
Ivonne Wu / Senior Specialist

APPROVED BY : _____ **, DATE :** Aug. 31, 2012
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 ICES-003:2004, Class B	Conducted emission test	PASS	Meet the requirement of limit. Minimum passing margin is -2.91dB at 0.18253MHz.
	Radiated emission test (30MHz~40GHz)	PASS	Meet the requirement of limit. Minimum passing margin is -1.56dB at 201.55MHz.

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	Frequency	Uncertainty
Conducted emission	150kHz ~ 30MHz	2.44 dB
Radiated emission	30MHz ~ 1GHz	4.12 dB
	Above 1GHz	2.26 dB

The listed uncertainties are the worst case uncertainty for the entire range of measurement. Please note that the uncertainty values are provided for informational purposes only and are not used in determining the PASS/FAIL results.

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	GSM/WCDMA mobile
MODEL NO.	Quattro 4.5 HD
POWER SUPPLY	5.0Vdc (adapter or host equipment) 3.7Vdc (battery)
I/O PORT	Refer to users' manual
DATA CABLE	Refer to Note as below
ACCESSORY DEVICE	Refer to Note as below

NOTE:

1. The EUT contains the following accessories.

ITEM	BRAND	MODEL	SPECIFICATION
Adapter	BLU	US-02-001	Input: 100-240Vac, 150mA Output: 5Vdc, 800mA
Battery	BLU	NA	Rating: 3.7Vdc, 1820mAh Type: Li-ion
Earphone	BLU	NA	1.1 m non-shielded cable w/o core
USB Cable	BLU	NA	0.9 m non-shielded cable w/o core

2. 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 Mode	Test Condition
	Conducted Emission
1	GSM850 Idle + WLAN Idle (2.4G) + BT Idle + Camera + Earphone + Adapter + USB Cable
2	PCS1900 Idle + WLAN Idle (5G) + BT Idle + MPEG4 + Earphone + Adapter + USB Cable
3	WCDMA850 Idle + WLAN Idle (2.4G) + BT Idle + GPS Rx + Earphone + Adapter + USB Cable
4	WCDMA1900 Idle + WLAN Idle (5G) + BT Idle + MPEG4 + Earphone + Adapter + USB Cable
5	WCDMA1700 Idle + WLAN Idle (2.4G) + BT Idle + USB Link + USB Cable
	Radiated Emission
1	GSM850 Idle + WLAN Idle (2.4G) + BT Idle + Camera + Earphone + Adapter + USB Cable
2	PCS1900 Idle + WLAN Idle (5G) + BT Idle + MPEG4 + Earphone + Adapter + USB Cable
3	WCDMA850 Idle + WLAN Idle (2.4G) + BT Idle + GPS Rx + Earphone + Adapter + USB Cable
4	WCDMA1900 Idle + WLAN Idle (5G) + BT Idle + Camera + Earphone + Adapter + USB Cable
5	WCDMA1700 Idle + WLAN Idle (2.4G) + BT Idle + USB Link + USB Cable

Remark:

1. For conducted emission test, test mode 2 was the worst case and only this mode was presented in this report.
2. For radiated emission test, test mode 5 was the worst case and only this mode was presented in this report.

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.

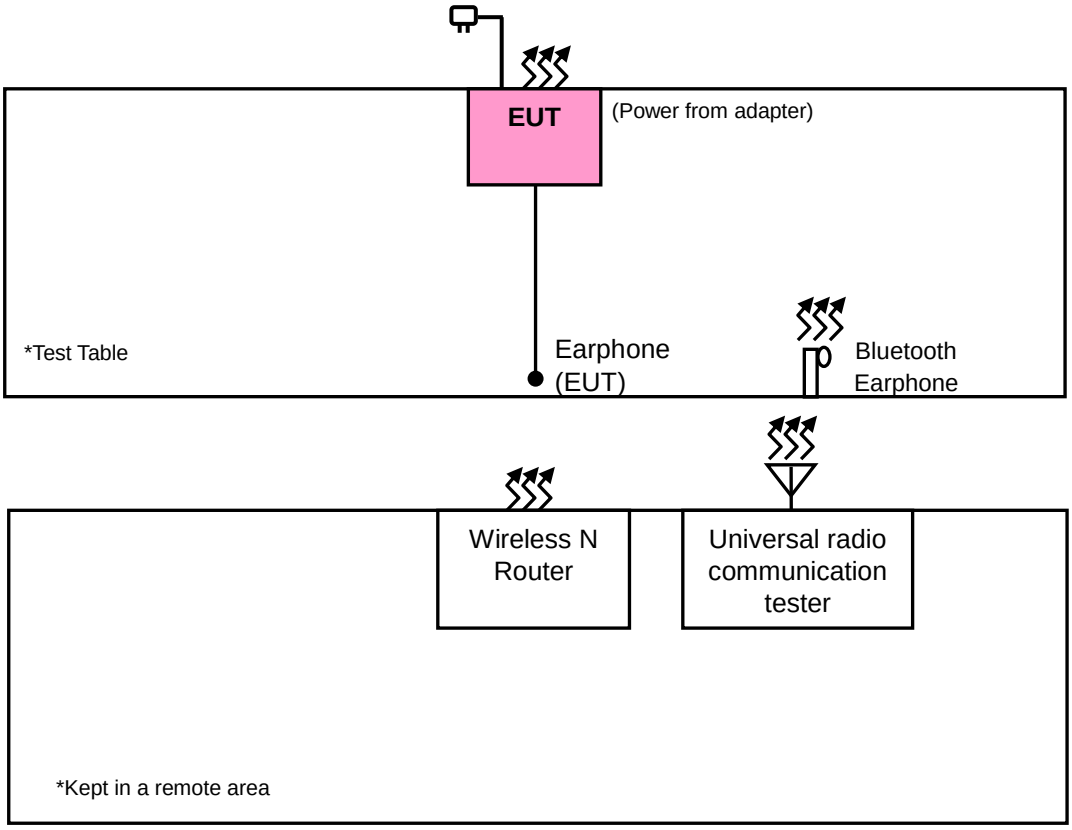
NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	24" LCD MONITOR	DELL	U2410	CN082WXD-72872-0 CR-06FL	FCC DoC Approved
2	PC	DELL	Precision 490	99G7N1S	NA
3	KEYBOARD	DELL	SK-8115	MY-OJ4635-71619-5 48-0467	FCC DoC Approved
4	Mouse	DELL	MOA8BO	H0G00889	NA
5	PRINTER	EPSON	LQ-300+	DCGY054009	FCC DoC Approved
6	MODEM	ACEEX	1414V/3	0401008252	IFAXDM1414
7	Universal Radio Communication Tester	R&S	CMU200	123121	NA
8	Wireless N Router	D-Link	DIR-615	F3O8188007995	NA
9	BLUETOOTH EARPHONE	ELECOM	LBT-MPHS400	NA	NA

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	2 m shielded D-Sub cable
2	NA
3	2m foil shielded wire, USB Connector, with core.
4	NA
5	1.8m braid shielded wire , DB25 connector , w/o core.
6	1.2m braid shielded wire , DB25 & DB9 connector , w/o core.
7	NA
8	NA
9	NA

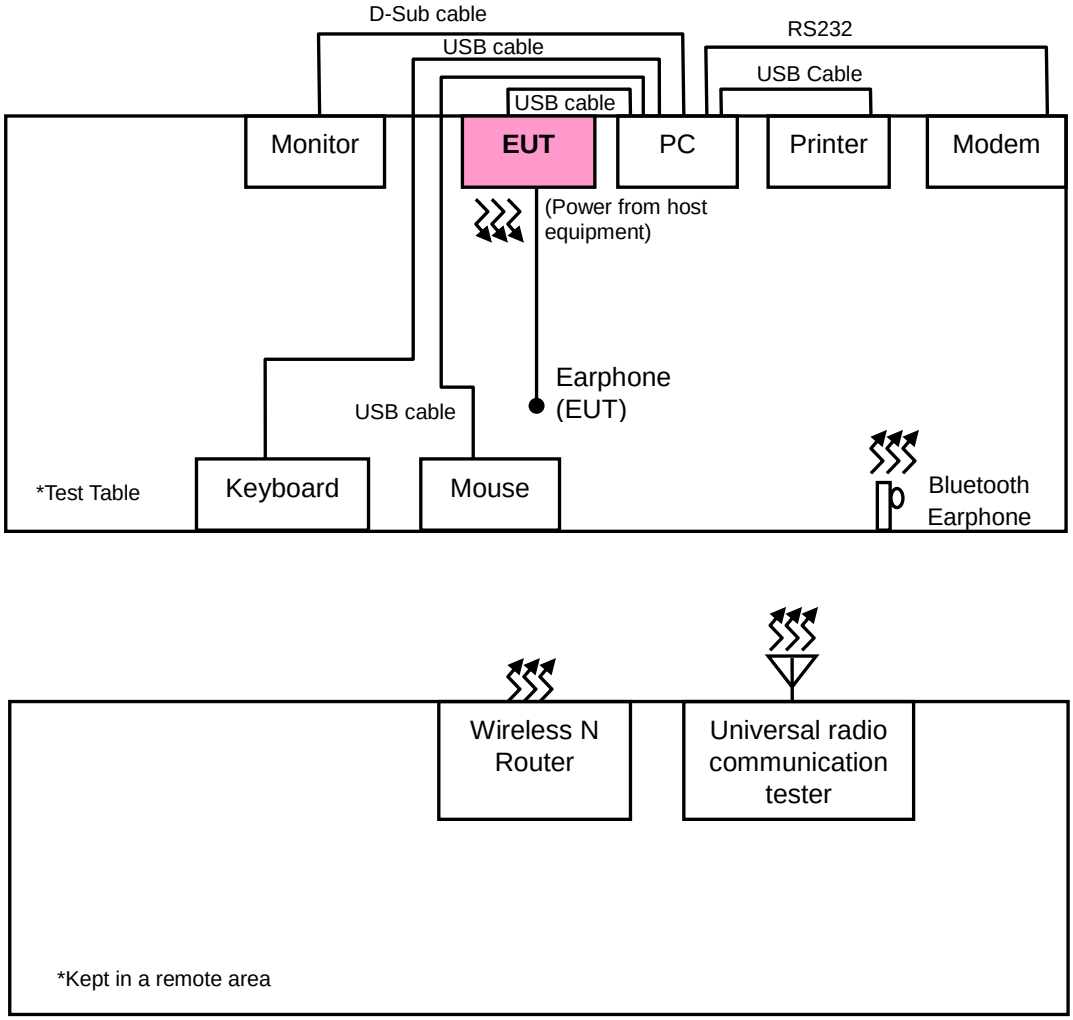
NOTE:
1. All power cords of the above support units are non shielded (1.8m).
2. Items 7-8 acted as communication partners.

3.4 CONFIGURATION OF SYSTEM UNDER TEST

For conducted emission test



For radiated emission 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)
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	100291	Nov. 23, 2011	Nov. 22, 2012
RF signal cable Woken	5D-FB	Cable-HYC01-01	Dec. 29, 2011	Dec. 28, 2012
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100312	Jul. 02, 2012	Jul. 01, 2013
LISN ROHDE & SCHWARZ (EUT)	ESH3-Z5	835239/001	Feb. 07, 2012	Feb. 06, 2013
Software ADT	BV ADT_Cond_ V7.3.7.3	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 1.
3. The VCCI Site Registration No. is C-2047.

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.

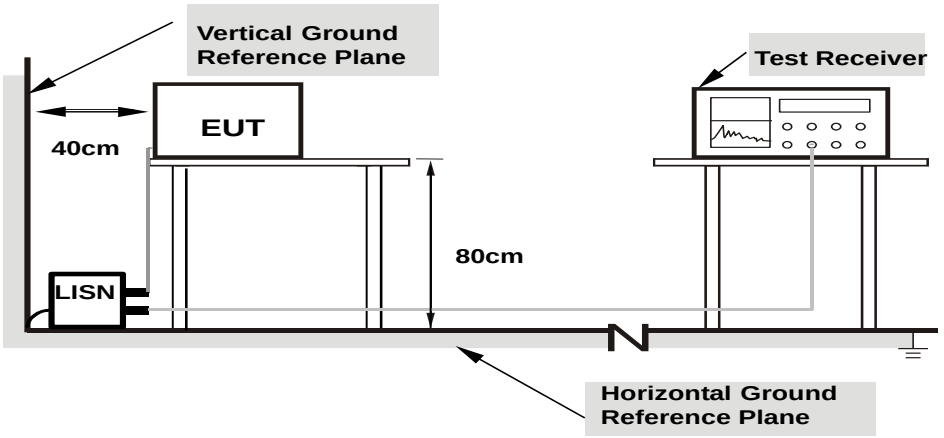
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

c. The frequency range from 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

a. Placed the EUT and Bluetooth earphone on a testing table.

b. The EUT link with Bluetooth earphone in idle mode.

c. The EUT sent audio signal to the earphone.

d. The EUT ran MPEG4.

e. The EUT communicated data with the wireless AP and Universal Radio Communication Tester, which acted as communication partners.

f. The communication partner connected with EUT via PCS1900 and WLAN function and run a test program (provided by manufacturer) to enable EUT under receiving condition continuously at specific channel frequency.

g. The necessary accessories enable the system in full functions.

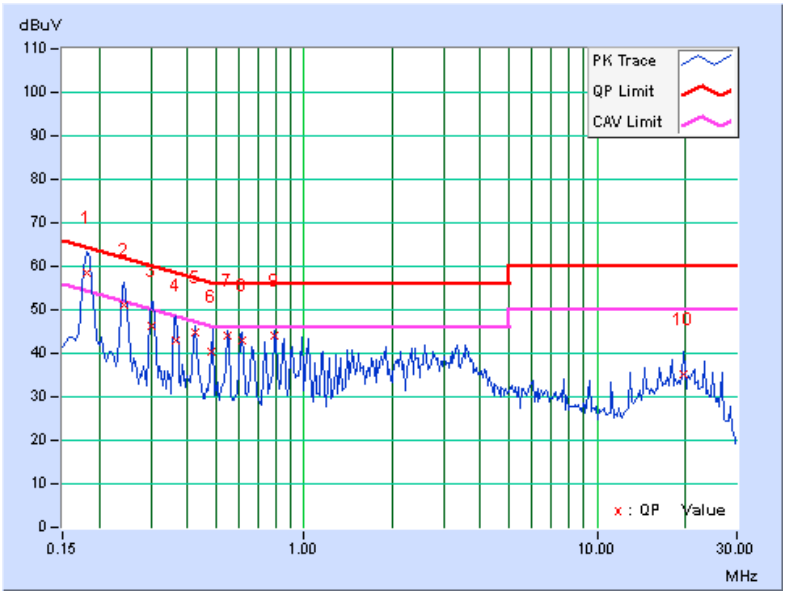
4.1.7 TEST RESULTS

INPUT POWER	120 Vac, 60 Hz	**6dB BANDWIDTH**	9 kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 63% RH	**PHASE**	Line 1
TESTED BY	Jones Chang		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.18253**	**0.20**	**58.50**	**51.26**	**58.70**	**51.46**	**64.37**	**54.37**	**-5.67**	**-2.91**
2	0.24375	0.21	50.84	43.71	51.05	43.92	61.97	51.97	-10.91	-8.04
3	0.30354	0.19	46.23	41.41	46.42	41.60	60.15	50.15	-13.72	-8.54
4	0.36484	0.17	42.76	35.32	42.93	35.49	58.62	48.62	-15.69	-13.13
5	0.42492	0.16	44.67	38.34	44.83	38.50	57.35	47.35	-12.52	-8.85
6	0.48562	0.17	40.30	32.93	40.47	33.10	56.24	46.24	-15.78	-13.15
7	0.54844	0.17	43.80	34.62	43.97	34.79	56.00	46.00	-12.03	-11.21
8	0.61094	0.18	42.96	33.41	43.14	33.59	56.00	46.00	-12.86	-12.41
9	0.79334	0.19	43.75	33.39	43.94	33.58	56.00	46.00	-12.06	-12.42
10	19.76681	0.87	34.46	26.88	35.33	27.75	60.00	50.00	-24.67	-22.25

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.

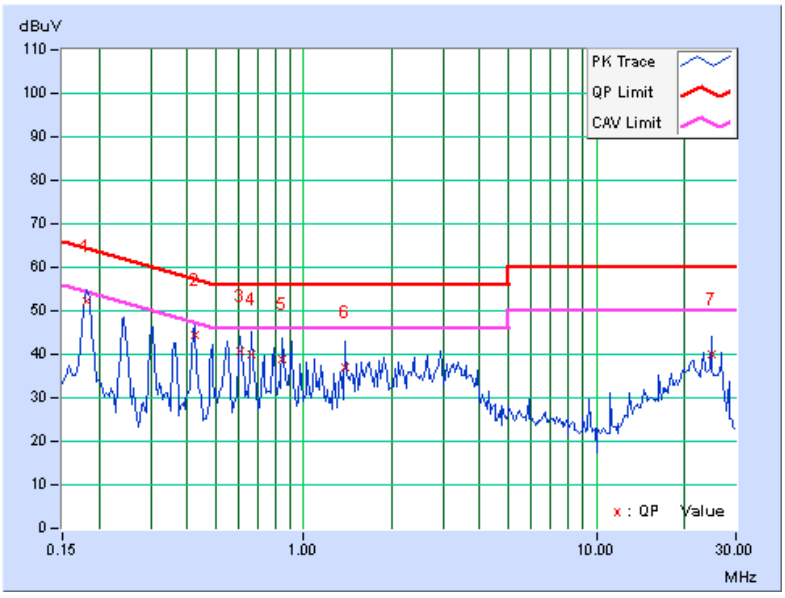


INPUT POWER	120 Vac, 60 Hz	**6dB BANDWIDTH**	9 kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 63% RH	**PHASE**	Line 2
TESTED BY	Jones Chang		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.18125	0.28	51.93	44.53	52.21	44.81	64.43	54.43	-12.22	-9.62
2	0.42344	0.25	44.02	37.06	44.27	37.31	57.38	47.38	-13.11	-10.07
3	0.60506	0.27	40.33	34.02	40.60	34.29	56.00	46.00	-15.40	-11.71
4	0.66563	0.27	39.77	33.09	40.04	33.36	56.00	46.00	-15.96	-12.64
5	0.84531	0.29	38.72	32.20	39.01	32.49	56.00	46.00	-16.99	-13.51
6	1.38672	0.32	36.81	26.47	37.13	26.79	56.00	46.00	-18.87	-19.21
7	24.92044	1.15	38.87	28.76	40.02	29.91	60.00	50.00	-19.98	-20.09

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 MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

TEST STANDARD:
FCC Part 15, Subpart B (section: 15.109)
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, which was specified in FCC PART 15B 15.109(g). Also the limits of ICES-003 and CISPR 22 are 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 40GHz, 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 (V)	ESIB7	100187	Jan. 30, 2012	Jan. 29, 2013
Test Receiver ROHDE & SCHWARZ (H)	ESIB7	100186	Nov. 29, 2011	Nov. 28, 2012
Spectrum Analyzer Agilent	E4446A	MY48250266	Aug. 24, 2011	Aug. 23, 2012
BILOG Antenna SCHWARZBECK (V)	VULB9168	9168-148	Apr. 02, 2012	Apr. 01, 2013
BILOG Antenna SCHWARZBECK (H)	VULB9168	9168-149	Apr. 06, 2012	Apr. 05, 2013
Preamplifier Agilent (V)	8447D	2944A10636	Oct. 29, 2011	Oct. 28, 2012
Preamplifier Agilent (H)	8447D	2944A10637	Oct. 29, 2011	Oct. 28, 2012
Preamplifier Agilent	8449B	3008A01959	Oct. 29, 2011	Oct. 28, 2012
RF signal cable Woken (V)	8D-FB	Cable-Hych1-01	Oct. 29, 2011	Oct. 28, 2012
RF signal cable Woken (H)	8D-FB	Cable-Hych1-02	Oct. 29, 2011	Oct. 28, 2012
Software ADT	BV ADT_Radiated_ V 7.7.03.7	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 (V)	MF7802	074	NA	NA
Controller (H)	MF7802	08093	NA	NA
Fix tool for Boresight antenna tower	BAF-01	1	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.

Frequency range above 1GHz

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESIB7	100188	May 11, 2012	May 10, 2013
Spectrum Analyzer Agilent	E4446A	MY48250266	Aug. 24, 2011	Aug. 23, 2012
BILOG Antenna SCHWARZBECK	VULB9168	9168-157	Apr. 02, 2012	Apr. 01, 2013
RF signal cable Woken	8D-FB	N/A	Mar. 24, 2012	Mar. 23, 2013
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-405	Feb. 03, 2012	Feb. 02, 2013
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170243	Jan. 03, 2012	Jan. 02, 2013
Preamplifier Agilent (Below 1GHz)	8447D	2944A10629	Oct. 29, 2011	Oct. 28, 2012
Preamplifier Agilent (Above 1GHz)	8449B	3008A01959	Oct. 29, 2011	Oct. 28, 2012
RF signal cable HUBER+SUHNER	SUCOFLEX 104	230132/4	Nov. 03, 2011	Nov. 02, 2012
RF signal cable HUBER+SUHNER	SUCOFLEX 104	309223/4+309 218/4	Nov. 03, 2011	Nov. 02, 2012
Software ADT	BV ADT_Radiated_ V7.6.15.9.3	NA	NA	NA
Antenna Tower ADT	AT100	AT93021702	NA	NA
Turn Table ADT	TT100	TT93021702	NA	NA
Controller ADT	SC100	SC93021702	NA	NA
Fix tool for Boresight antenna tower	BAF-01	2	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

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:

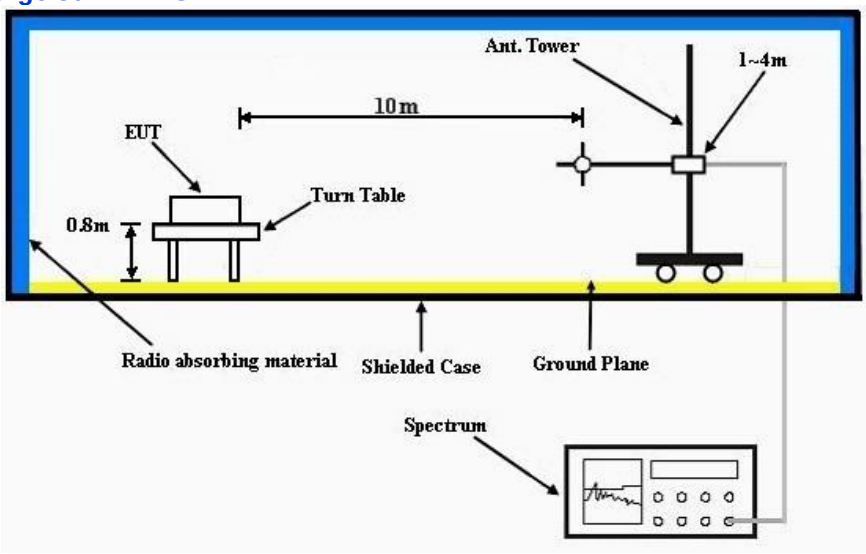
1. The resolution bandwidth is 1MHz and video bandwidth of test receiver/spectrum analyzer is 3MHz for Peak (PK) detection at frequency above 1GHz. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz for Average (AV) detection at frequency above 1GHz.
2. For measurement of frequency above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

4.2.4 DEVIATION FROM TEST STANDARD

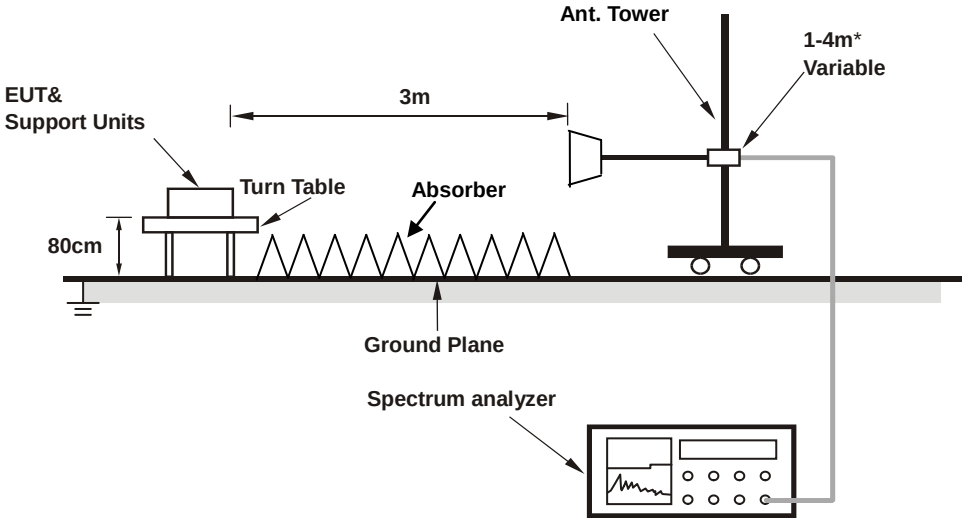
No deviation.

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 C63.4:2009.

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

4.2.6 EUT OPERATING CONDITIONS

a. Placed the EUT and Bluetooth earphone on a testing table.

b. The EUT link with Bluetooth earphone in idle mode.

c. The EUT sent audio signal to the earphone.

d. The EUT communicated data with PC.

e. The PC sent “H” patterns to the monitor, and the monitor displayed them.

f. The PC sent “H” patterns to the printer, and the printer printed them.

g. The PC sent “H” patterns to the modem.

h. The EUT communicated data with the wireless AP and Universal Radio Communication Tester, which acted as communication partners.

i. The communication partner connected with EUT via WCDMA1700 and WLAN and run a test program (provided by manufacturer) to enable EUT under receiving condition continuously at specific channel frequency.

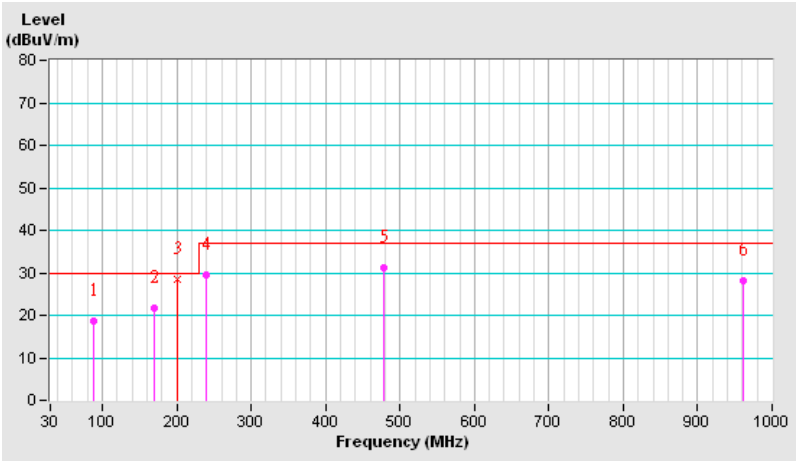
j. The necessary accessories enable the system in full functions.

4.2.7 TEST RESULTS

INPUT POWER	120 Vac, 60 Hz	**FREQUENCY RANGE**	30-1000 MHz
ENVIRONMENTAL CONDITIONS	24 deg. C, 65% RH	**DETECTOR FUNCTION & BANDWIDTH**	Quasi-Peak , 120 kHz
TESTED BY	Hero Su		

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	88.32	18.67 QP	30.00	-11.33	3.50 H	290	9.92	8.75
2	169.96	21.62 QP	30.00	-8.38	3.50 H	133	7.65	13.97
3	**201.55**	**28.44 QP**	**30.00**	**-1.56**	**4.00 H**	**98**	**16.79**	**11.65**
4	239.94	29.52 QP	37.00	-7.48	2.50 H	126	16.16	13.36
5	479.04	31.34 QP	37.00	-5.66	2.00 H	330	10.67	20.67
6	961.12	28.24 QP	37.00	-8.76	1.50 H	16	-0.65	28.89

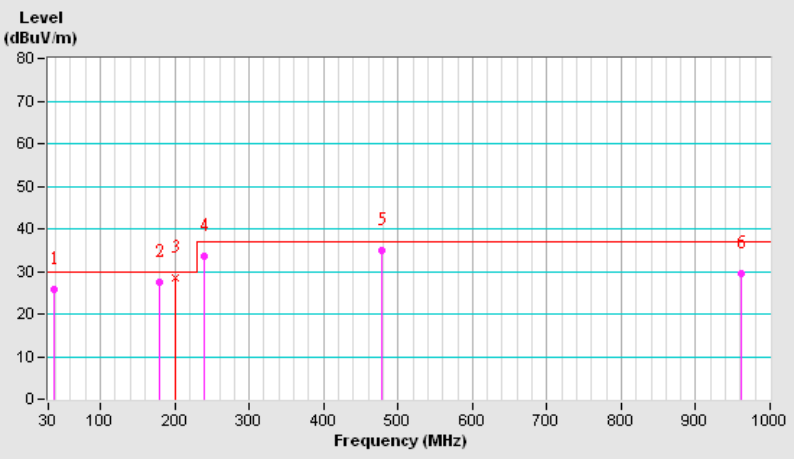
REMARKS: 1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.



INPUT POWER	120 Vac, 60 Hz	**FREQUENCY RANGE**	30-1000 MHz
ENVIRONMENTAL CONDITIONS	24 deg. C, 65% RH	**DETECTOR FUNCTION & BANDWIDTH**	Quasi-Peak , 120 kHz
TESTED BY	Hero Su		

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	37.78	25.74 QP	30.00	-4.26	1.50 V	243	12.59	13.15
2	179.68	27.56 QP	30.00	-2.44	1.00 V	44	14.08	13.48
3	201.56	28.40 QP	30.00	-1.60	2.00 V	0	16.87	11.53
4	239.94	33.41 QP	37.00	-3.59	1.50 V	175	20.04	13.37
5	479.04	34.84 QP	37.00	-2.16	3.50 V	141	14.14	20.70
6	961.12	29.62 QP	37.00	-7.38	4.00 V	0	0.60	29.02

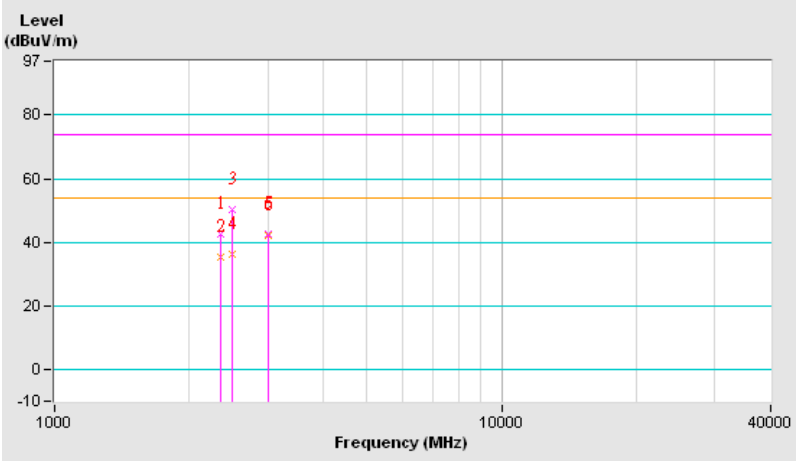
REMARKS: 1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.



INPUT POWER	120 Vac, 60 Hz	**FREQUENCY RANGE**	1-40 GHz
ENVIRONMENTAL CONDITIONS	23deg. C, 68% RH	**DETECTOR FUNCTION & BANDWIDTH**	Peak/Average, 1 MHz
TESTED BY	Ben Huang		

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	2358.72	42.59 PK	74.00	-31.41	1.50 H	285	10.39	32.20
2	2358.72	35.48 AV	54.00	-18.52	1.50 H	285	3.28	32.20
3	2503.01	50.36 PK	74.00	-23.64	1.49 H	185	17.55	32.81
4	2503.01	36.13 AV	54.00	-17.87	1.49 H	185	3.32	32.81
5	2999.99	42.58 PK	74.00	-31.42	1.50 H	54	8.43	34.15
6	2999.99	41.99 AV	54.00	-12.01	1.50 H	54	7.84	34.15

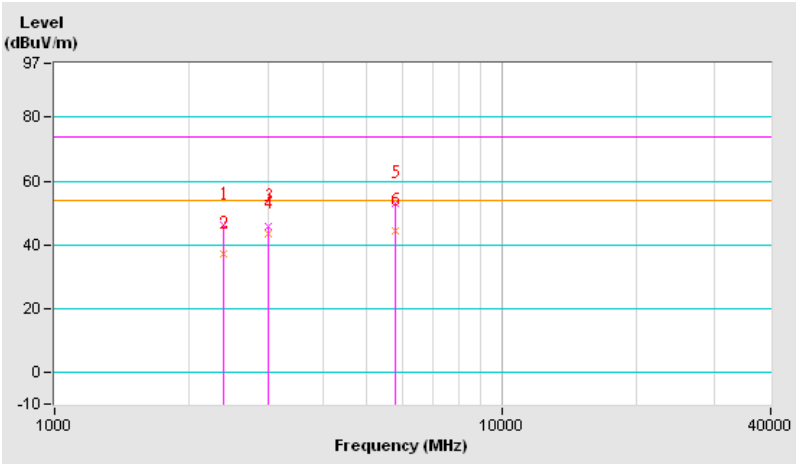
REMARKS: 1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.



INPUT POWER	120 Vac, 60 Hz	**FREQUENCY RANGE**	1-40 GHz
ENVIRONMENTAL CONDITIONS	23deg. C, 68% RH	**DETECTOR FUNCTION & BANDWIDTH**	Peak/Average, 1 MHz
TESTED BY	Ben Huang		

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	2382.77	46.12 PK	74.00	-27.88	1.25 V	182	13.81	32.31
2	2382.77	37.29 AV	54.00	-16.71	1.25 V	182	4.98	32.31
3	2999.95	45.98 PK	74.00	-28.02	1.00 V	321	11.83	34.15
4	2999.95	43.34 AV	54.00	-10.66	1.00 V	321	9.19	34.15
5	5789.58	52.97 PK	74.00	-21.03	1.25 V	167	12.09	40.88
6	5789.58	44.41 AV	54.00	-9.59	1.25 V	167	3.53	40.88

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



5 PHOTOGRAPHS OF THE TEST CONFIGURATION

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

6 INFORMATION ON THE TESTING LABORATORIES

We, 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.

If you have any comments, please feel free to contact us at the following:

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

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

Hwa Ya EMC/RF/Safety/Telecom Lab
Tel: 886-3-3183232
Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com
Web Site: www.adt.com.tw

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

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

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

--- END ---