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FCC TEST REPORT

REPORT NO.: RF990501C04

MODEL NO.: AR5B195

RECEIVED: May 01, 2010

TESTED: May 07 ~ May 24, 2010

ISSUED: May 27, 2010

APPLICANT: Atheros Communications, Inc.

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United States

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

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

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1. CERTIFICATION

PRODUCT: 802.11n-BT COMBO CARD

MODEL: AR5B195

APPLICANT: Atheros Communications, Inc.

TEST SAMPLE: ENGINEERING SAMPLE

TESTED: May 07 ~ May 24, 2010

STANDARDS: FCC Part 15, Subpart C (Section 15.247)

ANSI C63.4-2003

The above equipment (Model: AR5B195) 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 : Pettie Chen , **DATE:** May 27, 2010
Pettie Chen / Specialist

TECHNICAL ACCEPTANCE : Long Chen , **DATE:** May 27, 2010
Responsible for RF Long Chen / Senior Engineer

APPROVED BY : Gary Chang , **DATE:** May 27, 2010
Gary Chang / Assistant Manager

NOTE: Test items for radiated emission test were performed for this addendum. Other testing data refer to original report.



2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

For WLAN:

APPLIED STANDARD: FCC PART 15, SUBPART C (SECTION 15.247)			
STANDARD SECTION	TEST TYPE AND LIMIT	RESULT	REMARK
15.207	AC Power Conducted Emission	NA	Refer to Note below
15.247(a)(2)	Spectrum Bandwidth of a Direct Sequence Spread Spectrum System Limit: min. 500kHz	NA	Refer to Note below
15.247(b)	Maximum Output Power Limit: max. 30dBm	PASS	Meet the requirement of limit.
15.247(d)	Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit. Minimum passing margin is -0.4dB at 2483.5MHz
15.247(e)	Power Spectral Density Limit: max. 8dBm	NA	Refer to Note below
15.247(d)	Band Edge Measurement Limit: 20dB less than the peak value of fundamental frequency	NA	Refer to Note below
15.203	Antenna Requirement	PASS	Antenna connector is U.FL-R-SMT not a standard connector.

NOTE: Test item for radiated emission test was performed for this addendum. Other testing data refer to original report.



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For Bluetooth

APPLIED STANDARD: FCC Part 15, Subpart C			
STANDARD SECTION	TEST TYPE AND LIMIT	RESULT	REMARK
15.207	AC Power Conducted Emission	NA	Refer to Note below
15.247(a)(1) (iii)	Number of Hopping Frequency Used Spec.: At least 15 channels	NA	Refer to Note below
15.247(a)(1) (iii)	Dwell Time on Each Channel Spec.: Max. 0.4 second within 31.6 second	NA	Refer to Note below
15.247(a)(1)	1. Hopping Channel Separation Spec.: Min. 25 kHz or 20 dB bandwidth, whichever is greater 2. Spectrum Bandwidth of a Frequency Hopping Sequence Spread Spectrum System	NA	Refer to Note below
15.247(b)	Maximum Peak Output Power Spec.: max. 21dBm	NA	Refer to Note below
15.247(d)	Transmitter Radiated Emissions Spec.: Table 15.209	PASS	Meet the requirement of limit. Minimum passing margin is -6.1dB at 720.12MHz.
15.247(d)	Band Edge Measurement	NA	Refer to Note below
15.203	Antenna Requirement	PASS	Antenna connector is U.FL-R-SMT not a standard connector.

NOTE: Test item for radiated emission test was performed for this addendum. Other testing data refer to original report.

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
Radiated emissions	30MHz ~ 200MHz	2.93 dB
	200MHz ~1000MHz	2.95 dB
	1GHz ~ 18GHz	2.26 dB
	18GHz ~ 40GHz	1.94 dB

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



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3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	802.11n-BT COMBO CARD
MODEL NO.	AR5B195
FCC ID	PPD-AR5B195
POWER SUPPLY	3.3Vdc
MODULATION TYPE	WLAN: CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM Bluetooth: GFSK, $\pi/4$ -DQPSK, 8DPSK
MODULATION TECHNOLOGY	WLAN: DSSS, OFDM Bluetooth: FHSS
TRANSFER RATE	WLAN: 802.11b: 11/5.5/2/1Mbps 802.11g: 54/48/36/24/18/12/9/6Mbps 802.11n: up to 135Mbps Bluetooth: 1/2/3Mbps
OPERATING FREQUENCY	WLAN: 2412 ~ 2462MHz Bluetooth: 2402 ~ 2480MHz
NUMBER OF CHANNEL	WLAN: 11 for 802.11b, 802.11g, 802.11n (20MHz) 7 for 802.11n (40MHz) Bluetooth: 79
ANTENNA TYPE	WLAN: PIFA antenna with -2.89dBi gain (Main antenna) PIFA antenna with -3.88dBi gain (Aux. antenna) Bluetooth: PIFA antenna with -2.89dBi gain
ANTENNA CONNECTOR	U.FL-R-SMT
I/O PORTS	NA
DATA CABLE	NA
ACCESSORY DEVICES	NA

NOTE:

1. This report is prepared for FCC class II permissive change. The differences compared with original report are adding antenna and the platform. Therefore, test item for radiated emission test was performed for this addendum.
2. The EUT were operated with following platform:

PRODUCT	BRAND	MODEL
Tablet PC	Avaya	2010-70D01A-003

3. The EUT provides one completed transmitter and two receivers.

MODULATION MODE	TX FUNCTION
802.11b	1TX
802.11g	1TX
802.11n (20MHz)	1TX
802.11n (40MHz)	1TX

4. 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

For WLAN:

11 channels are provided for 802.11b, 802.11g and 802.11n (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	2412MHz	7	2442MHz
2	2417MHz	8	2447MHz
3	2422MHz	9	2452MHz
4	2427MHz	10	2457MHz
5	2432MHz	11	2462MHz
6	2437MHz		

7 channels are provided for 802.11n (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	2422MHz	5	2442MHz
2	2427MHz	6	2447MHz
3	2432MHz	7	2452MHz
4	2437MHz		

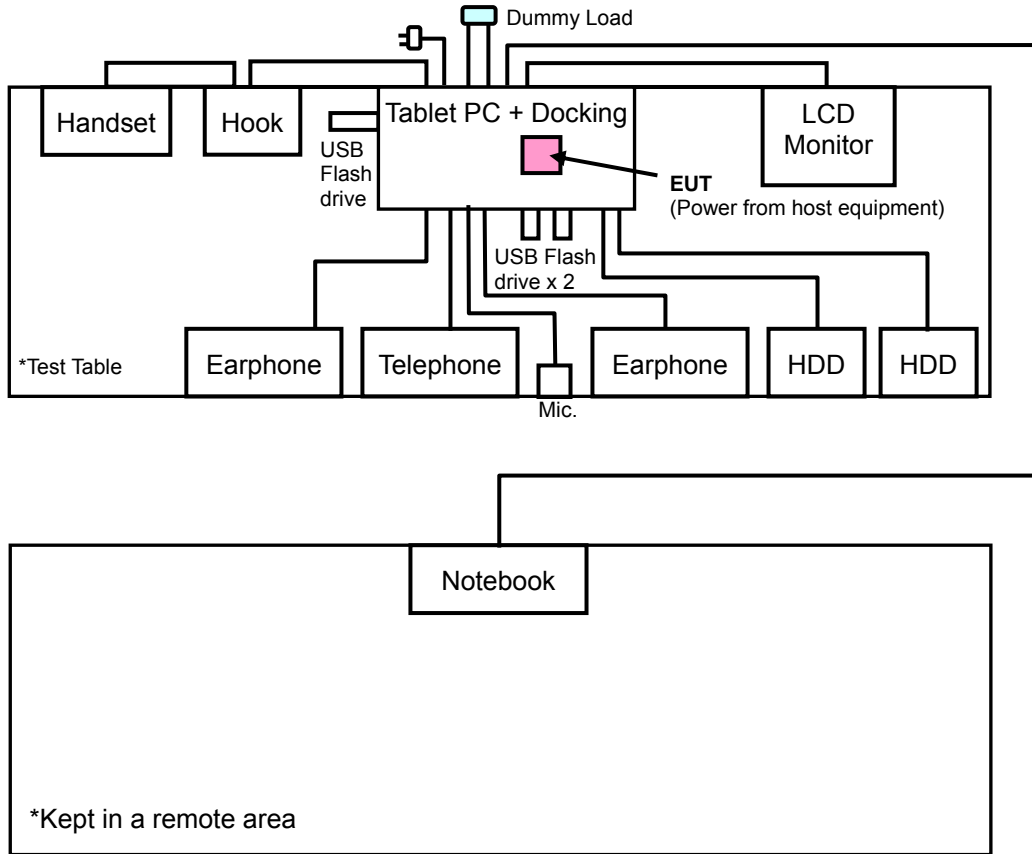


For Bluetooth:

79 channels are provided to this EUT:

CHANNEL	FREQ. (MHz)	CHANNEL	FREQ. (MHz)	CHANNEL	FREQ. (MHz)	CHANNEL	FREQ. (MHz)
0	2402	20	2422	40	2442	60	2462
1	2403	21	2423	41	2443	61	2463
2	2404	22	2424	42	2444	62	2464
3	2405	23	2425	43	2445	63	2465
4	2406	24	2426	44	2446	64	2466
5	2407	25	2427	45	2447	65	2467
6	2408	26	2428	46	2448	66	2468
7	2409	27	2429	47	2449	67	2469
8	2410	28	2430	48	2450	68	2470
9	2411	29	2431	49	2451	69	2471
10	2412	30	2432	50	2452	70	2472
11	2413	31	2433	51	2453	71	2473
12	2414	32	2434	52	2454	72	2474
13	2415	33	2435	53	2455	73	2475
14	2416	34	2436	54	2456	74	2476
15	2417	35	2437	55	2457	75	2477
16	2418	36	2438	56	2458	76	2478
17	2419	37	2439	57	2459	77	2479
18	2420	38	2440	58	2460	78	2480
19	2421	39	2441	59	2461		

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST



3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

For WLAN:

EUT CONFIGURE MODE	APPLICABLE TO			DESCRIPTION
	RE \geq 1G	RE<1G	APCM	
-	√	√	√	-

Where **RE \geq 1G**: Radiated Emission above 1GHz **RE<1G**: Radiated Emission below 1GHz
APCM: Antenna Port Conducted Measurement

RADIATED EMISSION TEST (ABOVE 1GHz):

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ 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	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	AXIS
-	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0	Z
-	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0	Z
-	802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	6.5	Z
-	802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	13.5	Z

RADIATED EMISSION TEST (BELOW 1GHz):

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ 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	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	AXIS
-	802.11n (20MHz)	1 to 11	6	OFDM	BPSK	6.5	Z



ANTENNA PORT CONDUCTED 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.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
-	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
-	802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	6.5
-	802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	13.5

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE≥1G	23deg. C, 70%RH, 1020 hPa	120Vac, 60Hz	Lori Chiu
RE<1G	23deg. C, 70%RH, 1020 hPa	120Vac, 60Hz	Lori Chiu
APCM	23deg. C, 70%RH, 1020 hPa	120Vac, 60Hz	Lori Chiu



For Bluetooth:

EUT CONFIGURE MODE	APPLICABLE TO		DESCRIPTION
	RE≥1G	RE<1G	
-	√	√	-

Where **RE≥1G**: Radiated Emission above 1GHz **RE<1G**: Radiated Emission below 1GHz

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, XYZ axis, antenna ports (if EUT with antenna diversity architecture) and packet type.
- Following channel(s) was (were) selected for the final test as listed below.

AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	PACKET TYPE	AXIS
0 to 78	0, 39, 78	FHSS	GFSK	DH5	Z
0 to 78	0, 39, 78	FHSS	8DPSK	DH5	Z

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, XYZ axis, antenna ports (if EUT with antenna diversity architecture) and packet type.

AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	PACKET TYPE	AXIS
0 to 78	78	FHSS	8DPSK	DH5	Z

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER (SYSTEM)	TESTED BY
RE≥1G	23deg. C, 70%RH, 1020 hPa	120Vac, 60Hz	Lori Chiu
RE<1G	23deg. C, 70%RH, 1020 hPa	120Vac, 60Hz	Lori Chiu



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 (15.247)

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	TABLET PC	Avaya	2010-70D01A-003	NA	NA
2	DOCKING	Avaya	EBS10A-003	NA	NA
3	LCD MONITOR	DELL	2408WFPb	CN-0NN792-742 61-82B-0EFS	FCC DoC Approved
4	USB FLASH DRIVE	Transcend	V85	538455 4488	NA
5	USB FLASH DRIVE	Transcend	V85	538455 4490	NA
6	USB FLASH DRIVE	Transcend	V85	538455 4489	NA
7	EARPHONE	PHILIPS	SBC HL150	NA	NA
8	EARPHONE	PHILIPS	HL145	NA	NA
9	EXTERNAL HARD DISK	Terasys	F12-UF	A0100222 -4A60012	FCC DoC Approved
10	EXTERNAL HARD DISK	Terasys	F12-UF	A0100222 -4860009	FCC DoC Approved
11	HOOK	Avaya	UCACRDL10A-003	NA	NA
12	HANDSET	Avaya	S1K2	NA	NA
13	TELEPHONE	WONDER	WD-303	5C17DA02789	NA
14	MICROPHONE	Labtec	LVA7313	NA	NA
15	NOTEBOOK	DELL	D600	CN-0G5152-486 43-49C-8226	FCC DoC Approved



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NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	NA
3	1.8m HDMI cable
4	NA
5	NA
6	NA
7	1.2m shielded cable
8	1.2m shielded cable
9	1.5m shielded cable, terminated with USB connector, w/o core.
10	1.5m shielded cable, terminated with USB connector, w/o core.
11	0.5m non-shielded MOD cable without core.
12	0.5m non-shielded cable without core.
13	1.8m UTP RJ11 cable
14	1.0m wrapped shielded wire, terminated via drain wire, with 3.5 mm phone plug, w/o core.
15	10m RJ45 UTP cable

- NOTE:** 1. All power cords of the above support units are non shielded (1.8m).
2. Items 1, 2, 11, 12 were provided by client.
3. Items 15 acted as communication partner to transfer data.



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4. TEST TYPES AND RESULTS

4.1 RADIATED EMISSION MEASUREMENT

4.1.1 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.



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4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESIB7	100188	Dec. 21, 2009	Dec. 20, 2010
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Jul. 07, 2009	Jul. 06, 2010
BILOG Antenna SCHWARZBECK	VULB9168	9168-156	Apr. 30, 2010	Apr. 29, 2011
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-563	Aug. 10, 2009	Aug. 09, 2010
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170242	Dec. 25, 2009	Dec. 24, 2010
Preamplifier Agilent	8449B	3008A01910	Sep. 11, 2009	Sep. 10, 2010
Preamplifier Agilent	8447D	2944A10638	Dec. 21, 2009	Dec. 20, 2010
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	218190/4 231241/4	May 14, 2010	May 13, 2011
RF signal cable Worken	8D-FB	Cable-HYCH9-01	Aug. 17, 2009	Aug. 16, 2010
Software	ADT_Radiated_ V7.6.15.9.2	NA	NA	NA
Antenna Tower EMCO	2070/2080	512.835.4684	NA	NA
Turn Table EMCO	2087-2.03	NA	NA	NA
Antenna Tower & Turn Table Controller EMCO	2090	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 Chamber 9.
 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 460141.
 5. The IC Site Registration No. is IC 7450F-4.



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4.1.3 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 lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

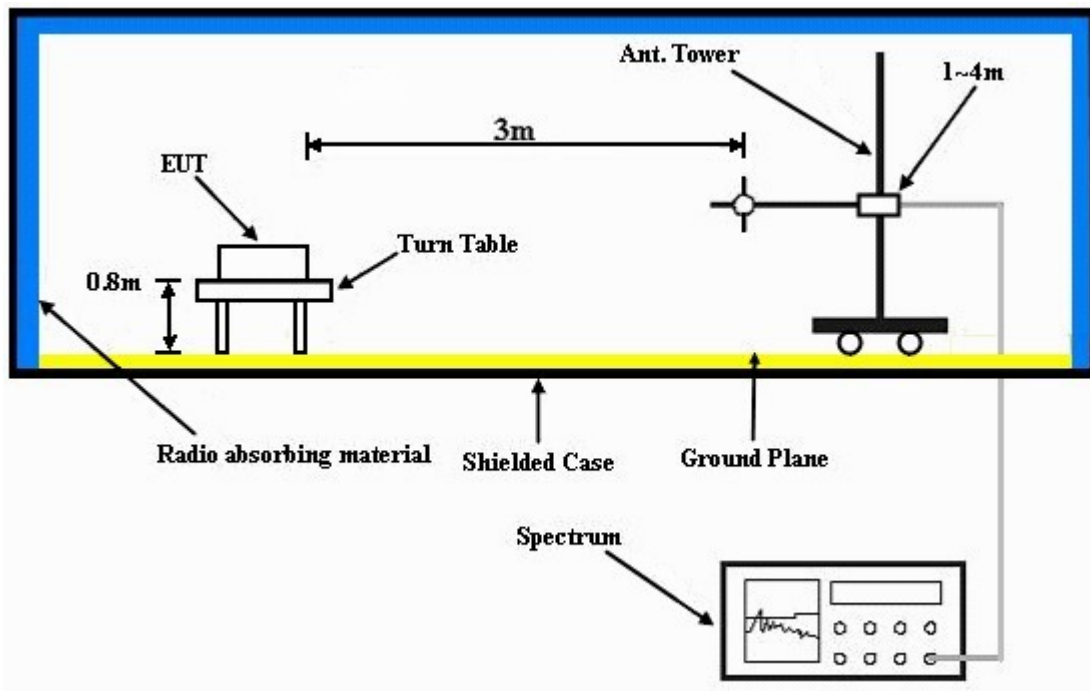
NOTE:

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 of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation.

4.1.5 TEST SETUP



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.1.6 EUT OPERATING CONDITIONS

- a. Plugged the EUT into tablet PC and placed on a testing table.
- b. The tablet PC ran a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.
- c. The tablet PC sent "H" messages to monitor and the monitors displayed "H" patterns.
- d. The tablet PC communicated messages with the external hard disks.
- e. Step c was repeated.



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4.1.7 TEST RESULTS

For WLAN:

ABOVE 1GHz WORST-CASE DATA : 802.11b

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1006 hPa	TESTED BY	Lori Chiu

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	57.8 PK	74.0	-16.2	1.02 H	336	25.50	32.30
2	2390.00	46.9 AV	54.0	-7.1	1.02 H	336	14.60	32.30
3	*2412.00	104.8 PK			1.02 H	336	72.40	32.40
4	*2412.00	100.1 AV			1.02 H	336	67.70	32.40
5	4824.00	46.7 PK	74.0	-27.3	1.10 H	115	8.30	38.40
6	4824.00	33.8 AV	54.0	-20.2	1.10 H	115	-4.60	38.40
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	57.3 PK	74.0	-16.7	1.00 V	159	25.00	32.30
2	2390.00	46.1 AV	54.0	-7.9	1.00 V	159	13.80	32.30
3	*2412.00	101.4 PK			1.00 V	159	69.00	32.40
4	*2412.00	96.8 AV			1.00 V	159	64.40	32.40
5	4824.00	47.8 PK	74.0	-26.2	1.11 V	155	9.40	38.40
6	4824.00	34.2 AV	54.0	-19.8	1.11 V	155	-4.20	38.40

- 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.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1006 hPa	TESTED BY	Lori Chiu

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	*2437.00	106.8 PK			1.01 H	338	74.40	32.40
2	*2437.00	102.0 AV			1.01 H	338	69.60	32.40
3	4874.00	49.2 PK	74.0	-24.8	1.12 H	302	10.70	38.50
4	4874.00	39.8 AV	54.0	-14.2	1.12 H	302	1.30	38.50
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	*2437.00	105.2 PK			1.05 V	260	72.80	32.40
2	*2437.00	100.2 AV			1.05 V	260	67.80	32.40
3	4874.00	52.7 PK	74.0	-21.3	1.00 V	274	14.20	38.50
4	4874.00	48.1 AV	54.0	-5.9	1.00 V	274	9.60	38.50

- 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.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1006 hPa	TESTED BY	Lori Chiu

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	*2462.00	107.0 PK			1.00 H	340	74.50	32.50
2	*2462.00	102.3 AV			1.00 H	340	69.80	32.50
3	2483.50	58.5 PK	74.0	-15.5	1.00 H	340	25.90	32.60
4	2483.50	47.8 AV	54.0	-6.2	1.00 H	340	15.20	32.60
5	4924.00	50.8 PK	74.0	-23.2	1.01 H	306	12.20	38.60
6	4924.00	45.7 AV	54.0	-8.3	1.01 H	306	7.10	38.60
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	*2462.00	105.7 PK			1.04 V	253	73.20	32.50
2	*2462.00	100.9 AV			1.04 V	253	68.40	32.50
3	2483.50	57.7 PK	74.0	-16.3	1.04 V	253	25.10	32.60
4	2483.50	46.3 AV	54.0	-7.7	1.04 V	253	13.70	32.60
5	4924.00	55.5 PK	74.0	-18.5	1.00 V	276	16.90	38.60
6	4924.00	53.4 AV	54.0	-0.6	1.00 V	276	14.80	38.60

- 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.



A D T

802.11g

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1006 hPa	TESTED BY	Lori Chiu

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	71.5 PK	74.0	-2.5	1.04 H	330	39.20	32.30
2	2390.00	53.5 AV	54.0	-0.5	1.04 H	330	21.20	32.30
3	*2412.00	103.0 PK			1.03 H	334	70.60	32.40
4	*2412.00	92.1 AV			1.03 H	334	59.70	32.40
5	4824.00	46.8 PK	74.0	-27.2	1.00 H	116	8.40	38.40
6	4824.00	33.4 AV	54.0	-20.6	1.00 H	116	-5.00	38.40
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	65.3 PK	74.0	-8.7	1.00 V	160	33.00	32.30
2	2390.00	50.5 AV	54.0	-3.5	1.00 V	160	18.20	32.30
3	*2412.00	100.9 PK			1.00 V	159	68.50	32.40
4	*2412.00	89.2 AV			1.00 V	159	56.80	32.40
5	4824.00	46.3 PK	74.0	-27.7	1.10 V	128	7.90	38.40
6	4824.00	33.2 AV	54.0	-20.8	1.10 V	128	-5.20	38.40

- 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.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1006 hPa	TESTED BY	Lori Chiu

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	*2437.00	109.5 PK			1.01 H	340	77.10	32.40
2	*2437.00	97.7 AV			1.01 H	340	65.30	32.40
3	4874.00	48.3 PK	74.0	-25.7	1.00 H	354	9.80	38.50
4	4874.00	35.4 AV	54.0	-18.6	1.00 H	354	-3.10	38.50

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	*2437.00	106.2 PK			1.06 V	258	73.80	32.40
2	*2437.00	95.3 AV			1.06 V	258	62.90	32.40
3	4874.00	55.5 PK	74.0	-18.5	1.00 V	274	17.00	38.50
4	4874.00	40.8 AV	54.0	-13.2	1.00 V	274	2.30	38.50

- 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.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1006 hPa	TESTED BY	Lori Chiu

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	*2462.00	105.1 PK			1.03 H	338	72.60	32.50
2	*2462.00	94.0 AV			1.03 H	338	61.50	32.50
3	2483.50	71.5 PK	74.0	-2.5	1.00 H	343	38.90	32.60
4	2483.50	53.5 AV	54.0	-0.5	1.00 H	343	20.90	32.60
5	4924.00	47.5 PK	74.0	-26.5	1.00 H	2	8.90	38.60
6	4924.00	33.7 AV	54.0	-20.3	1.00 H	2	-4.90	38.60
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	*2462.00	102.7 PK			1.05 V	252	70.20	32.50
2	*2462.00	91.5 AV			1.05 V	252	59.00	32.50
3	2483.50	63.1 PK	74.0	-10.9	1.05 V	252	30.50	32.60
4	2483.50	48.4 AV	54.0	-5.6	1.05 V	252	15.80	32.60
5	4924.00	47.2 PK	74.0	-26.8	1.06 V	349	8.60	38.60
6	4924.00	33.5 AV	54.0	-20.5	1.06 V	349	-5.10	38.60

- 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.



A D T

802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1006 hPa	TESTED BY	Lori Chiu

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	70.5 PK	74.0	-3.5	1.03 H	335	38.20	32.30
2	2390.00	53.5 AV	54.0	-0.5	1.03 H	335	21.20	32.30
3	*2412.00	101.7 PK			1.06 H	335	69.30	32.40
4	*2412.00	90.5 AV			1.06 H	335	58.10	32.40
5	4824.00	46.2 PK	74.0	-27.8	1.01 H	1	7.80	38.40
6	4824.00	34.0 AV	54.0	-20.0	1.01 H	1	-4.40	38.40
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	65.8 PK	74.0	-8.2	1.01 V	173	33.50	32.30
2	2390.00	50.9 AV	54.0	-3.1	1.01 V	173	18.60	32.30
3	*2412.00	98.2 PK			1.01 V	173	65.80	32.40
4	*2412.00	86.7 AV			1.01 V	173	54.30	32.40
5	4824.00	46.8 PK	74.0	-27.2	1.10 V	153	8.40	38.40
6	4824.00	34.5 AV	54.0	-19.5	1.10 V	153	-3.90	38.40

- 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.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1006 hPa	TESTED BY	Lori Chiu

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	*2437.00	109.2 PK			1.02 H	337	76.80	32.40
2	*2437.00	97.3 AV			1.02 H	337	64.90	32.40
3	4874.00	50.1 PK	74.0	-23.9	1.11 H	298	11.60	38.50
4	4874.00	35.5 AV	54.0	-18.5	1.11 H	298	-3.00	38.50
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	*2437.00	106.0 PK			1.05 V	262	73.60	32.40
2	*2437.00	95.1 AV			1.05 V	262	62.70	32.40
3	4874.00	55.3 PK	74.0	-18.7	1.27 V	288	16.80	38.50
4	4874.00	40.5 AV	54.0	-13.5	1.27 V	288	2.00	38.50

- 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.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1006 hPa	TESTED BY	Lori Chiu

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	*2462.00	104.9 PK			1.02 H	336	72.40	32.50
2	*2462.00	93.3 AV			1.02 H	336	60.80	32.50
3	2483.50	68.7 PK	74.0	-5.3	1.01 H	344	36.10	32.60
4	2483.50	53.6 AV	54.0	-0.4	1.01 H	344	21.00	32.60
5	4924.00	46.9 PK	74.0	-27.1	1.10 H	118	8.30	38.60
6	4924.00	34.5 AV	54.0	-19.5	1.10 H	118	-4.10	38.60
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	*2462.00	101.1 PK			1.02 V	179	68.60	32.50
2	*2462.00	89.7 AV			1.02 V	179	57.20	32.50
3	2483.50	65.9 PK	74.0	-8.1	1.02 V	179	33.30	32.60
4	2483.50	51.0 AV	54.0	-3.0	1.02 V	179	18.40	32.60
5	4924.00	47.3 PK	74.0	-26.7	1.23 V	63	8.70	38.60
6	4924.00	34.9 AV	54.0	-19.1	1.23 V	63	-3.70	38.60

- 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.



A D T

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1006 hPa	TESTED BY	Lori Chiu

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	65.7 PK	74.0	-8.3	1.06 H	334	33.40	32.30
2	2390.00	52.3 AV	54.0	-1.7	1.06 H	334	20.00	32.30
3	*2422.00	95.5 PK			1.06 H	339	63.10	32.40
4	*2422.00	83.6 AV			1.06 H	339	51.20	32.40
5	4844.00	46.3 PK	74.0	-27.7	1.01 H	99	7.90	38.40
6	4844.00	33.3 AV	54.0	-20.7	1.01 H	99	-5.10	38.40
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	59.5 PK	74.0	-14.5	1.06 V	265	27.20	32.30
2	2390.00	47.0 AV	54.0	-7.0	1.06 V	265	14.70	32.30
3	*2422.00	92.4 PK			1.06 V	265	60.00	32.40
4	*2422.00	80.8 AV			1.06 V	265	48.40	32.40
5	4844.00	46.8 PK	74.0	-27.2	1.10 V	250	8.40	38.40
6	4844.00	33.6 AV	54.0	-20.4	1.10 V	250	-4.80	38.40

- 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.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 4	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1006 hPa	TESTED BY	Lori Chiu

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	70.2 PK	74.0	-3.8	1.04 H	331	37.90	32.30
2	2390.00	52.2 AV	54.0	-1.8	1.04 H	331	19.90	32.30
3	*2437.00	102.0 PK			1.04 H	338	69.60	32.40
4	*2437.00	89.7 AV			1.04 H	338	57.30	32.40
5	4874.00	47.5 PK	74.0	-26.5	1.00 H	155	9.00	38.50
6	4874.00	34.1 AV	54.0	-19.9	1.00 H	155	-4.40	38.50
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	61.8 PK	74.0	-12.2	1.05 V	265	29.50	32.30
2	2390.00	47.7 AV	54.0	-6.3	1.05 V	265	15.40	32.30
3	*2437.00	99.1 PK			1.05 V	265	66.70	32.40
4	*2437.00	87.7 AV			1.05 V	265	55.30	32.40
5	4874.00	47.7 PK	74.0	-26.3	1.20 V	15	9.20	38.50
6	4874.00	34.3 AV	54.0	-19.7	1.20 V	15	-4.20	38.50

- 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.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 7	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1006 hPa	TESTED BY	Lori Chiu

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	*2452.00	99.5 PK			1.00 H	337	67.00	32.50
2	*2452.00	87.7 AV			1.00 H	337	55.20	32.50
3	2483.50	68.7 PK	74.0	-5.3	1.00 H	341	36.10	32.60
4	2483.50	52.5 AV	54.0	-1.5	1.00 H	341	19.90	32.60
5	4904.00	46.9 PK	74.0	-27.1	1.02 H	116	8.40	38.50
6	4904.00	33.7 AV	54.0	-20.3	1.02 H	116	-4.80	38.50
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	*2452.00	96.2 PK			1.23 V	222	63.70	32.50
2	*2452.00	84.0 AV			1.23 V	222	51.50	32.50
3	2483.50	60.3 PK	74.0	-13.7	1.23 V	222	27.70	32.60
4	2483.50	47.2 AV	54.0	-6.8	1.23 V	222	14.60	32.60
5	4904.00	47.2 PK	74.0	-26.8	1.20 V	308	8.70	38.50
6	4904.00	34.1 AV	54.0	-19.9	1.20 V	308	-4.40	38.50

- 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.



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BELOW 1GHz WORST-CASE DATA : 802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1006 hPa	TESTED BY	Lori Chiu

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	96.01	36.2 QP	43.5	-7.3	2.00 H	115	26.90	9.30
2	134.89	37.2 QP	43.5	-6.3	2.00 H	142	24.80	12.40
3	385.70	37.6 QP	46.0	-8.4	2.00 H	10	21.80	15.80
4	720.12	37.8 QP	46.0	-8.2	1.00 H	133	14.50	23.30
5	751.23	37.4 QP	46.0	-8.6	1.50 H	241	13.40	24.00
6	799.84	39.3 QP	46.0	-6.7	1.25 H	178	13.90	25.40
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	31.10	33.7 QP	40.0	-6.3	1.00 V	346	21.40	12.30
2	115.19	36.7 QP	43.5	-6.8	1.00 V	199	25.50	11.20
3	132.95	37.2 QP	43.5	-6.3	1.25 V	202	24.90	12.30
4	479.03	38.5 QP	46.0	-7.5	1.25 V	355	19.80	18.70
5	500.42	39.9 QP	46.0	-6.1	1.00 V	178	20.60	19.30
6	797.89	39.7 QP	46.0	-6.3	1.00 V	172	14.40	25.30

- 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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For Bluetooth:

GFSK

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 0	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1006 hPa	TESTED BY	Lori Chiu

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	49.7 PK	74.0	-24.3	1.06 H	160	17.40	32.30
2	2390.00	36.4 AV	54.0	-17.6	1.06 H	160	4.10	32.30
3	2397.50	65.0 PK	74.0	-9.0	1.06 H	160	32.70	32.30
4	2397.50	39.2 AV	54.0	-14.8	1.06 H	160	6.90	32.30
5	2400.00	54.9 PK	74.0	-19.1	1.06 H	160	22.60	32.30
6	2400.00	14.8 AV	54.0	-39.2	1.06 H	160	-17.50	32.30
7	*2402.00	98.4 PK			1.06 H	160	66.10	32.30
8	*2402.00	68.3 AV			1.06 H	160	36.00	32.30
9	4804.00	51.0 PK	74.0	-23.0	1.08 H	113	12.70	38.30
10	4804.00	20.9 AV	54.0	-33.1	1.08 H	113	-17.40	38.30

- 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.
 6. The DH5 packet was the worse case duty cycle for a transmit dwell time on a channel, based upon bluetooth theory the transmitter is on 0.625 * 5 per 296.25 ms per channel. Therefore, the duty cycle correlation factor be equal to: $20\log(3.125 / 100) = -30.1$ dB.
 7. Average value = peak reading + $20\log(\text{duty cycle})$.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 0	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1006 hPa	TESTED BY	Lori Chiu

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	42.8 PK	74.0	-31.2	1.05 V	318	10.50	32.30
2	2390.00	29.3 AV	54.0	-24.7	1.05 V	318	-3.00	32.30
3	2397.50	54.8 PK	74.0	-19.2	1.05 V	318	22.50	32.30
4	2397.50	31.6 AV	54.0	-22.4	1.05 V	318	-0.70	32.30
5	2400.00	46.7 PK	74.0	-27.3	1.55 V	200	14.40	32.30
6	2400.00	16.6 AV	54.0	-37.4	1.55 V	200	-15.70	32.30
7	*2402.00	90.2 PK			1.55 V	200	57.90	32.30
8	*2402.00	60.1 AV			1.55 V	200	27.80	32.30
9	4804.00	55.7 PK	74.0	-18.3	1.09 V	7	17.40	38.30
10	4804.00	25.6 AV	54.0	-28.4	1.09 V	7	-12.70	38.30

- 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.
 6. The DH5 packet was the worse case duty cycle for a transmit dwell time on a channel, based upon bluetooth theory the transmitter is on 0.625 * 5 per 296.25 ms per channel. Therefore, the duty cycle correlation factor be equal to: $20\log(3.125 / 100) = -30.1$ dB.
 7. Average value = peak reading + $20\log(\text{duty cycle})$.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 39	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1006 hPa	TESTED BY	Lori Chiu

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	*2441.00	98.9 PK			1.11 H	147	66.40	32.50
2	*2441.00	68.8 AV			1.11 H	147	36.30	32.50
3	4882.00	52.4 PK	74.0	-21.6	1.00 H	14	13.90	38.50
4	4882.00	22.3 AV	54.0	-31.7	1.00 H	14	-16.20	38.50
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	*2441.00	91.0 PK			1.03 V	100	58.50	32.50
2	*2441.00	60.9 AV			1.03 V	100	28.40	32.50
3	4882.00	56.6 PK	74.0	-17.4	1.37 V	218	18.10	38.50
4	4882.00	26.5 AV	54.0	-27.5	1.37 V	218	-12.00	38.50

- 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.
 6. The DH5 packet was the worse case duty cycle for a transmit dwell time on a channel, based upon bluetooth theory the transmitter is on 0.625 * 5 per 296.25 ms per channel. Therefore, the duty cycle correlation factor be equal to: $20\log(3.125 / 100) = -30.1$ dB.
 7. Average value = peak reading + $20\log(\text{duty cycle})$.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 78	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1006 hPa	TESTED BY	Lori Chiu

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	*2480.00	99.2 PK			1.02 H	37	66.60	32.60
2	*2480.00	69.1 AV			1.02 H	37	36.50	32.60
3	2483.50	51.2 PK	74.0	-22.8	1.02 H	37	18.60	32.60
4	2483.50	21.1 AV	54.0	-32.9	1.02 H	37	-11.50	32.60
5	2485.50	63.0 PK	74.0	-11.0	1.02 H	37	30.40	32.60
6	2485.50	39.4 AV	54.0	-14.6	1.02 H	37	6.80	32.60
7	4960.00	53.8 PK	74.0	-20.2	1.08 H	109	15.10	38.70
8	4960.00	23.7 AV	54.0	-30.3	1.08 H	109	-15.00	38.70
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	*2480.00	91.3 PK			1.58 V	310	58.70	32.60
2	*2480.00	61.2 AV			1.58 V	310	28.60	32.60
3	2483.50	43.3 PK	74.0	-30.7	1.58 V	310	10.70	32.60
4	2483.50	13.2 AV	54.0	-40.8	1.58 V	310	-19.40	32.60
5	2485.50	58.4 PK	74.0	-15.6	1.58 V	310	25.80	32.60
6	2485.50	31.7 AV	54.0	-22.3	1.58 V	310	-0.90	32.60
7	4960.00	57.8 PK	74.0	-16.2	1.12 V	300	19.10	38.70
8	4960.00	27.7 AV	54.0	-26.3	1.12 V	300	-11.00	38.70

- REMARKS:**
- Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 - Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 - The other emission levels were very low against the limit.
 - Margin value = Emission level – Limit value.
 - * * *: Fundamental frequency.
 - The DH5 packet was the worse case duty cycle for a transmit dwell time on a channel, based upon bluetooth theory the transmitter is on 0.625 * 5 per 296.25 ms per channel. Therefore, the duty cycle correlation factor be equal to: $20\log(3.125 / 100) = -30.1$ dB.
 - Average value = peak reading + $20\log(\text{duty cycle})$.



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8DPSK

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 0	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1006 hPa	TESTED BY	Lori Chiu

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	49.1 PK	74.0	-24.9	1.03 H	161	16.80	32.30
2	2390.00	35.3 AV	54.0	-18.7	1.03 H	161	3.00	32.30
3	2398.50	67.2 PK	74.0	-6.8	1.03 H	161	34.90	32.30
4	2398.50	44.8 AV	54.0	-9.2	1.03 H	161	12.50	32.30
5	2400.00	55.3 PK	74.0	-18.7	1.03 H	161	23.00	32.30
6	2400.00	25.2 AV	54.0	-28.8	1.03 H	161	-7.10	32.30
7	*2402.00	99.2 PK			1.03 H	161	66.90	32.30
8	*2402.00	69.1 AV			1.03 H	161	36.80	32.30
9	4804.00	51.0 PK	74.0	-23.0	1.04 H	19	12.70	38.30
10	4804.00	20.9 AV	54.0	-33.1	1.04 H	19	-17.40	38.30

- 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.
 6. The DH5 packet was the worse case duty cycle for a transmit dwell time on a channel, based upon bluetooth theory the transmitter is on 0.625 * 5 per 296.25 ms per channel. Therefore, the duty cycle correlation factor be equal to: $20\log(3.125 / 100) = -30.1$ dB.
 7. Average value = peak reading + $20\log(\text{duty cycle})$.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 0	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1006 hPa	TESTED BY	Lori Chiu

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	40.9 PK	74.0	-33.1	1.01 V	311	8.60	32.30
2	2390.00	28.9 AV	54.0	-25.1	1.01 V	311	-3.40	32.30
3	2390.50	57.1 PK	74.0	-16.9	1.01 V	311	24.80	32.30
4	2390.50	36.5 AV	54.0	-17.5	1.01 V	311	4.20	32.30
5	2400.00	45.3 PK	74.0	-28.7	1.01 V	311	13.00	32.30
6	2400.00	15.2 AV	54.0	-38.8	1.01 V	311	-17.10	32.30
7	*2402.00	89.2 PK			1.01 V	311	56.90	32.30
8	*2402.00	59.1 AV			1.01 V	311	26.80	32.30
9	4804.00	56.1 PK	74.0	-17.9	1.01 V	206	17.80	38.30
10	4804.00	26.0 AV	54.0	-28.0	1.01 V	206	-12.30	38.30

- 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.
 6. The DH5 packet was the worse case duty cycle for a transmit dwell time on a channel, based upon bluetooth theory the transmitter is on 0.625 * 5 per 296.25 ms per channel. Therefore, the duty cycle correlation factor be equal to: $20\log(3.125 / 100) = -30.1$ dB.
 7. Average value = peak reading + $20\log(\text{duty cycle})$.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 39	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1006 hPa	TESTED BY	Lori Chiu

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	*2441.00	99.7 PK			1.11 H	200	67.20	32.50
2	*2441.00	69.6 AV			1.11 H	200	37.10	32.50
3	4882.00	52.5 PK	74.0	-21.5	1.00 H	197	14.00	38.50
4	4882.00	22.4 AV	54.0	-31.6	1.00 H	197	-16.10	38.50
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	*2441.00	90.5 PK			1.52 V	89	58.00	32.50
2	*2441.00	60.4 AV			1.52 V	89	27.90	32.50
3	4882.00	57.7 PK	74.0	-16.3	1.31 V	264	19.20	38.50
4	4882.00	27.6 AV	54.0	-26.4	1.31 V	264	-10.90	38.50

- 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.
 6. The DH5 packet was the worse case duty cycle for a transmit dwell time on a channel, based upon bluetooth theory the transmitter is on 0.625 * 5 per 296.25 ms per channel. Therefore, the duty cycle correlation factor be equal to: $20\log(3.125 / 100) = -30.1$ dB.
 7. Average value = peak reading + $20\log(\text{duty cycle})$.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 78	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1006 hPa	TESTED BY	Lori Chiu

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	*2480.00	100.3 PK			1.00 H	40	67.70	32.60
2	*2480.00	70.2 AV			1.00 H	40	37.60	32.60
3	2483.50	52.4 PK	74.0	-21.6	1.00 H	40	19.80	32.60
4	2483.50	22.3 AV	54.0	-31.7	1.00 H	40	-10.30	32.60
5	2485.50	63.4 PK	74.0	-10.6	1.00 H	40	30.80	32.60
6	2485.50	40.6 AV	54.0	-13.4	1.00 H	40	8.00	32.60
7	4960.00	53.7 PK	74.0	-20.3	1.23 H	60	15.00	38.70
8	4960.00	23.6 AV	54.0	-30.4	1.23 H	60	-15.10	38.70
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	*2480.00	91.1 PK			1.00 V	148	58.50	32.60
2	*2480.00	61.0 AV			1.00 V	148	28.40	32.60
3	2483.50	43.2 PK	74.0	-30.8	1.00 V	148	10.60	32.60
4	2483.50	13.1 AV	54.0	-40.9	1.00 V	148	-19.50	32.60
5	2485.50	58.2 PK	74.0	-15.8	1.00 V	148	25.60	32.60
6	2485.50	32.0 AV	54.0	-22.0	1.00 V	148	-0.60	32.60
7	4960.00	58.7 PK	74.0	-15.3	1.63 V	180	20.00	38.70
8	4960.00	28.6 AV	54.0	-25.4	1.63 V	180	-10.10	38.70

- REMARKS:**
- Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 - Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 - The other emission levels were very low against the limit.
 - Margin value = Emission level – Limit value.
 - * *: Fundamental frequency.
 - The DH5 packet was the worse case duty cycle for a transmit dwell time on a channel, based upon bluetooth theory the transmitter is on 0.625 * 5 per 296.25 ms per channel. Therefore, the duty cycle correlation factor be equal to: $20\log(3.125 / 100) = -30.1$ dB.
 - Average value = peak reading + $20\log(\text{duty cycle})$.



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BELOW 1GHz WORST-CASE DATA : 8DPSK

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 78	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1006 hPa	TESTED BY	Lori Chiu

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	115.45	37.3 QP	43.5	-6.2	1.25 H	220	26.10	11.20
2	152.39	36.0 QP	43.5	-7.5	1.00 H	247	22.10	13.90
3	210.72	34.6 QP	43.5	-8.9	1.00 H	70	23.50	11.10
4	385.70	39.0 QP	46.0	-7.0	1.00 H	10	23.20	15.80
5	720.12	39.9 QP	46.0	-6.1	1.00 H	124	16.60	23.30
6	797.89	39.0 QP	46.0	-7.0	2.00 H	190	13.70	25.30

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	31.10	33.5 QP	40.0	-6.5	1.00 V	91	21.20	12.30
2	115.45	36.4 QP	43.5	-7.1	1.00 V	55	25.20	11.20
3	134.89	37.3 QP	43.5	-6.2	1.00 V	58	24.90	12.40
4	479.03	38.7 QP	46.0	-7.3	1.00 V	55	20.00	18.70
5	500.42	39.8 QP	46.0	-6.2	1.25 V	208	20.50	19.30
6	799.84	39.1 QP	46.0	-6.9	1.75 V	178	13.70	25.40

- 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 MAXIMUM OUTPUT POWER

4.2.1 LIMITS OF MAXIMUM OUTPUT POWER MEASUREMENT

The Maximum Output Power Measurement is 30dBm.

4.2.2 INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
High Speed Peak Power Meter	ML2495A	0824012	Aug. 10, 2009	Aug. 09, 2010
Power Sensor	MA2411B	0738138	Aug. 10, 2009	Aug. 09, 2010

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. Measurement Bandwidth of ML2495A is 65MHz greater than 6dB bandwidth of emission.

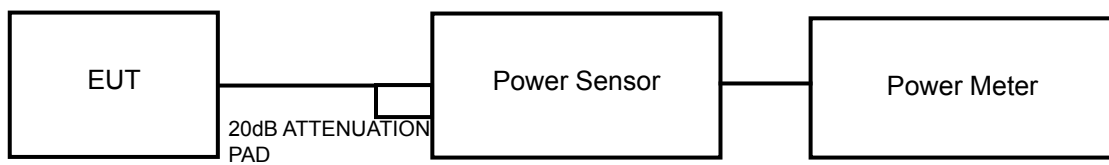
4.2.3 TEST PROCEDURES

A power sensor was used on the output port of the EUT. A power meter was used to read the response of the power sensor. Record the power level.

4.2.4 DEVIATION FROM TEST STANDARD

No deviation.

4.2.5 TEST SETUP



4.2.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.



4.2.7 TEST RESULTS

802.11b

CHAN.	CHANNEL FREQUENCY (MHz)	POWER OUTPUT (mW)	POWER OUTPUT (dBm)	POWER LIMIT (dBm)	PASS/FAIL
1	2412	85.1	19.3	30	PASS
6	2437	107.2	20.3	30	PASS
11	2462	75.9	18.8	30	PASS

802.11g

CHAN.	CHANNEL FREQUENCY (MHz)	POWER OUTPUT (mW)	POWER OUTPUT (dBm)	POWER LIMIT (dBm)	PASS/FAIL
1	2412	144.5	21.6	30	PASS
6	2437	338.8	25.3	30	PASS
11	2462	87.1	19.4	30	PASS

802.11n (20MHz)

CHAN.	CHANNEL FREQUENCY (MHz)	POWER OUTPUT (mW)	POWER OUTPUT (dBm)	POWER LIMIT (dBm)	PASS/FAIL
1	2412	128.8	21.1	30	PASS
6	2437	338.8	25.3	30	PASS
11	2462	83.2	19.2	30	PASS

802.11n (40MHz)

CHAN.	CHANNEL FREQUENCY (MHz)	POWER OUTPUT (mW)	POWER OUTPUT (dBm)	POWER LIMIT (dBm)	PASS/FAIL
1	2422	38.9	15.9	30	PASS
4	2437	134.9	21.3	30	PASS
7	2452	57.5	17.6	30	PASS



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5. PHOTOGRAPHS OF THE TEST CONFIGURATION

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



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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 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: 886-2-26051924

Hsin Chu EMC/RF Lab:

Tel: 886-3-5935343

Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety/TPCI Lab:

Tel: 886-3-3183232

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.



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

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

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