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# PARTIAL FCC TEST REPORT (15.247)

**REPORT NO.:** RF131009C16-1

**MODEL NO.:** TP00063A

**FCC ID:** GKR-TP00063AFX

**RECEIVED:** Oct. 09, 2013

**TESTED:** Oct. 23, 2013 ~ Oct. 30, 2013

**ISSUED:** Nov. 05, 2013

**APPLICANT:** Compal Electronics, INC

**ADDRESS:** No. 581, Ruiguang RD., Neihu District, Taipei City 11492,  
Taiwan, R.O.C.

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

**LAB ADDRESS:** No. 47, 14th Ling, Chia Pau Vil., Lin Kou Dist.,  
New Taipei City, Taiwan, R.O.C.

**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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## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF131009C16-1	Original release	Nov. 05, 2013



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## 1. CERTIFICATION

**PRODUCT:** Tablet Computer  
**MODEL NO.:** TP00063A  
**BRAND:** Lenovo  
**APPLICANT:** Compal Electronics, INC  
**TESTED:** Oct. 23, 2013 ~ Oct. 30, 2013  
**TEST SAMPLE:** Identical Prototype  
**STANDARDS:** **FCC Part 15, Subpart C (Section 15.247)**  
ANSI C63.10-2009

The above equipment (model: TP00063A) 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** : Vera Huang , **DATE** : Nov. 05, 2013  
Vera Huang / Specialist

**APPROVED BY** : Sam chen , **DATE** : Nov. 05, 2013  
Sam Chen / Assistant Manager



## 2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART C (SECTION 15.247)			
STANDARD SECTION	TEST TYPE	RESULT	REMARK
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -1.40dB at 0.56406MHz.
15.247(d) 15.209	Radiated Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -2.53dB at 2484MHz.
15.247(d)	Band Edge Measurement	N/A	Refer to NOTE below.
15.247(a)(2)	6dB bandwidth	N/A	Refer to NOTE below.
15.247(b)	Conducted power	N/A	Refer to NOTE below.
15.247(e)	Power Spectral Density	N/A	Refer to NOTE below.
15.203	Antenna Requirement	N/A	Refer to NOTE below.

**NOTE:** Test items for conducted and radiated emission were performed for this report. Other testing data please refer to module (Brand: FOXCONN, Model: T77H506, FCC ID: MCLT77H506) Report No.: RF130723E04

### 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 emissions	9kHz~30MHz	2.44 dB
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

<b>EUT</b>	Tablet Computer
<b>MODEL NO.</b>	TP00063A
<b>POWER SUPPLY</b>	5.2Vdc (Adapter)
<b>MODULATION TYPE</b>	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
<b>MODULATION TECHNOLOGY</b>	DSSS, OFDM
<b>TRANSFER RATE</b>	802.11b: 11.0/ 5.5/ 2.0/ 1.0Mbps 802.11g: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to 300.0Mbps
<b>OPERATING FREQUENCY</b>	<b>2.4GHz:</b> 2412 ~ 2462MHz <b>5.0GHz:</b> 5745 ~ 5825MHz
<b>NUMBER OF CHANNEL</b>	<b>2.4GHz:</b> 11 for 802.11b, 802.11g, 802.11n (20MHz) <b>5.0GHz:</b> 5 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz)
<b>ANTENNA TYPE</b>	Refer to note
<b>ANTENNA CONNECTOR</b>	NA
<b>DATA CABLE</b>	NA
<b>I/O PORTS</b>	Refer to user's manual
<b>ACCESSORY DEVICES</b>	Refer to Note as below



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**NOTE:**

1. The EUT incorporates a MIMO function. Physically, the EUT provides 2 completed transmitters and 2 receivers.

MODULATION MODE	TX FUNCTION
802.11b	1TX
802.11g	1TX
802.11a	1TX
802.11n (20MHz)	2TX
802.11n (40MHz)	2TX

2. The EUT contains the following accessories.

Product	Brand	Model	Description
Adapter 1	Lenovo	PA-1100-17	Input: 100-240Vac, 50/60Hz, 0.3A Output: 5.2Vdc, 2A
Adapter 2	Lenovo	AD897F23	Input: 100-240Vac, 50/60Hz, 0.3A Output: 5.2Vdc, 2A

3. The antenna information is listed as below.

Antenna Type	EUT CONFIG. MODE	Brand Name	Parts Number	Antenna Gain
PIFA	A	High-Tek Electronics Co., Ltd	WLAN Main Antenna: DC33001FM20 WLAN Aux Antenna: DC33001FM30	2.4GHz: -1.32 5GHz: 1.81
	B	TE Connectivity.	WLAN Main Antenna: 1556629 WLAN Aux Antenna: 1556631	2.4GHz: -2.89 5GHz: 0.50

4. 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

#### FOR 2.4GHz:

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		

#### FOR 5.0GHz (5745 ~ 5825MHz):

5 channels are provided for 802.11a, 802.11n (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
149	5745MHz	161	5805MHz
153	5765MHz	165	5825MHz
157	5785MHz		

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
151	5755MHz	159	5795MHz

### 3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

#### FOR 2.4GHz:

EUT CONFIGURE MODE	APPLICABLE TO			DESCRIPTION
	RE $\geq$ 1G	RE<1G	PLC	
A	√	√	√	Manufacturer of Antenna: High-Tek Electronics Co., Ltd
B	√	√	-	Manufacturer of Antenna: TE Connectivity.

Where **RE $\geq$ 1G**: Radiated Emission above 1GHz      **RE<1G**: Radiated Emission below 1GHz  
**PLC**: Power Line Conducted Emission

#### NOTE:

The antenna of the EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **X-plane** for Mode A and **Z-plane** for Mode B.

#### 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 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)
A, B	802.11b	1 to 11	6	DSSS	DBPSK	1.0
A, B	802.11g	1 to 11	1	OFDM	BPSK	6.0
A, B	802.11n (20MHz)	1 to 11	11	OFDM	BPSK	MCS0

#### 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 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)
A	802.11n (20MHz)	1 to 11	11	OFDM	BPSK	MCS0
B	802.11b	1 to 11	6	DSSS	DBPSK	1.0



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**POWER LINE CONDUCTED EMISSION TEST:**

The EUT was tested with the following mode.

EUT CONFIG. MODE	TEST CONDITION
A	BT Link + WLAN (2.4G) Link + USB Cable + Adapter 1 + Earphone

**TEST CONDITION:**

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER (SYSTEM)	TESTED BY
RE $\geq$ 1G	25deg. C, 65%RH	120Vac, 60Hz	David Huang
RE $<$ 1G	25deg. C, 65%RH	120Vac, 60Hz	David Huang
PLC	25deg. C, 65%RH	120Vac, 60Hz	Johnson Liao



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**FOR 5.0GHz (5745 ~ 5825MHz):**

EUT CONFIGURE MODE	APPLICABLE TO			DESCRIPTION
	RE≥1G	RE<1G	PLC	
A	√	√	√	Manufacturer of Antenna: High-Tek Electronics Co., Ltd
B	√	√	-	Manufacturer of Antenna: TE Connectivity.

Where **RE≥1G**: Radiated Emission above 1GHz      **RE<1G**: Radiated Emission below 1GHz  
**PLC**: Power Line Conducted Emission

**NOTE:**

The antenna of the EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Z-plane** for Mode A and **Y-plane** for Mode B.

**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 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)
A, B	802.11a	149 to 165	149	OFDM	BPSK	6.0
A, B	802.11n (20MHz)	149 to 165	157	OFDM	BPSK	MCS0
A, B	802.11n (40MHz)	151 to 159	159	OFDM	BPSK	MCS0

**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 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)
A	802.11a	149 to 165	149	OFDM	BPSK	6.0



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**POWER LINE CONDUCTED EMISSION TEST:**

The EUT was tested with the following mode.

EUT CONFIG. MODE	TEST CONDITION
A	BT Link + WLAN (5G) Link + USB Cable + Adapter 1 + Earphone

**TEST CONDITION:**

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER (SYSTEM)	TESTED BY
RE $\geq$ 1G	25deg. C, 65%RH	120Vac, 60Hz	David Huang
RE<1G	25deg. C, 65%RH	120Vac, 60Hz	David Huang
PLC	25deg. C, 65%RH	120Vac, 60Hz	Johnson Liao

### 3.3 DESCRIPTION OF SUPPORT UNITS

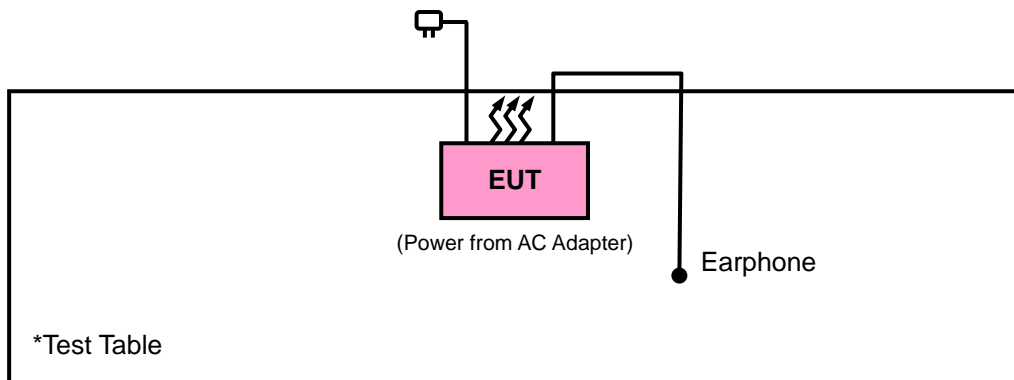
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	EARPHONE	NA	NA	NA	NA

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA

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

#### 3.3.1 CONFIGURATION OF SYSTEM UNDER TEST



### 3.4 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)**

**558074 D01 DTS Meas Guidance v03r01**

**662911 D01 Multiple Transmitter Output v02**

**ANSI C63.10-2009**

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



## 4. TEST TYPES AND RESULTS (FOR 2.4GHz BAND)

### 4.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT

#### 4.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power:

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. 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	ESCI	100744	Apr. 15, 2013	Apr. 14, 2014
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Dec. 17, 2012	Dec. 16, 2013
BILOG Antenna SCHWARZBECK	VULB9168	9168-472	Mar. 25, 2013	Mar. 24, 2014
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-969	Jan. 07, 2013	Jan. 06, 2014
HORN Antenna SCHWARZBECK	BBHA 9170	9170-480	Dec. 25, 2012	Dec. 24, 2013
Loop Antenna	HFH2-Z2	100070	Jan. 31, 2012	Jan. 30, 2014
Preamplifier EMCI	EMC 012645	980115	Dec. 28, 2012	Dec. 27, 2013
Preamplifier EMCI	EMC 184045	980116	Dec. 28, 2012	Dec. 27, 2013
Preamplifier EMCI	EMC 330H	980112	Dec. 28, 2012	Dec. 27, 2013
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	309219/4	Oct. 18, 2013	Oct. 17, 2014
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	250130/4	Oct. 18, 2013	Oct. 17, 2014
RF signal cable Worken	RG-213	NA	Dec. 29, 2012	Dec. 28, 2013
Software BV ADT	E3 6.120103	NA	NA	NA
Antenna Tower MF	MFA-440H	NA	NA	NA
Turn Table MF	MFT-201SS	NA	NA	NA
Antenna Tower & Turn Table Controller MF	MF-7802	NA	NA	NA
Power Meter	ML2495A	1012010	Jul. 31, 2013	Jul. 30, 2014
Power Sensor	MA2411B	1315050	Jul. 31, 2013	Jul. 30, 2014

- 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 calibration interval of the loop antenna is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
  3. The test was performed in HwaYa Chamber 10.
  4. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
  5. The FCC Site Registration No. is 690701.
  6. The IC Site Registration No. is IC 7450F-10.





#### 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.

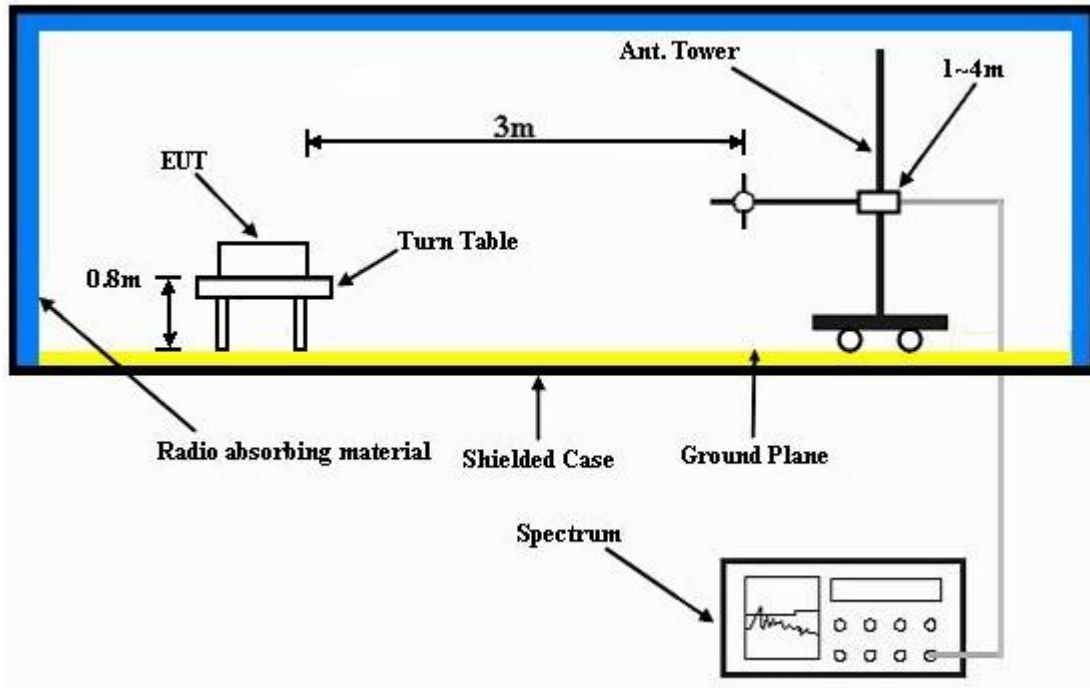
**NOTE:**

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 1kHz(Duty cycle < 98%) or 10Hz(Duty cycle > 98%) 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

- Plugged the EUT into a notebook through a convertible board and placed on a test table.
- The notebook ran a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.



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#### 4.1.7 TEST RESULTS

#### MODE A

#### ABOVE 1GHz WORST-CASE DATA

#### 802.11b

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1GHz ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	David Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2376	36.7	43.82	54	-17.3	26.86	3.52	37.5	160	36	Average
2376	51.14	58.26	74	-22.86	26.86	3.52	37.5	160	36	Peak
2437	100.91	107.75			27.06	3.56	37.46	160	36	Average
2437	104.3	111.14			27.06	3.56	37.46	160	36	Peak
2484	37.76	44.33	54	-16.24	27.15	3.6	37.32	160	36	Average
2484	52.39	58.96	74	-21.61	27.15	3.6	37.32	160	36	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2372	36.23	43.35	54	-17.77	26.86	3.52	37.5	125	159	Average
2372	52.05	59.17	74	-21.95	26.86	3.52	37.5	125	159	Peak
2437	99.69	106.53			27.06	3.56	37.46	125	159	Average
2437	103.08	109.92			27.06	3.56	37.46	125	159	Peak
2484	37.05	43.62	54	-16.95	27.15	3.6	37.32	125	159	Average
2484	51.34	57.91	74	-22.66	27.15	3.6	37.32	125	159	Peak
4874	45.84	62.03	54	-8.16	31.06	5.8	53.05	100	261	Average
4874	49.09	65.28	74	-24.91	31.06	5.8	53.05	100	261	Peak

#### REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin Value = Emission Level - Limit Value
- 2437MHz: Fundamental frequency.



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802.11g

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1GHz ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	David Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	49.88	56.95	54	-4.12	26.91	3.54	37.52	131	69	Average
2390	68.45	75.52	74	-5.55	26.91	3.54	37.52	131	69	Peak
2412	97.49	104.51			26.96	3.54	37.52	131	69	Average
2412	107.39	114.41			26.96	3.54	37.52	131	69	Peak
2484	36.55	43.12	54	-17.45	27.15	3.6	37.32	131	69	Average
2484	56.57	63.14	74	-17.43	27.15	3.6	37.32	131	69	Peak
4824	34.55	50.87	54	-19.45	30.99	5.77	53.08	113	359	Average
4824	47.84	64.16	74	-26.16	30.99	5.77	53.08	113	359	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	48.48	54.55	54	-5.52	26.91	4.54	37.52	103	92	Average
2390	68.33	74.4	74	-5.67	26.91	4.54	37.52	103	92	Peak
2412	95.43	101.45			26.96	4.54	37.52	103	92	Average
2412	104.64	110.66			26.96	4.54	37.52	103	92	Peak
2494	36.67	42.1	54	-17.33	27.2	4.62	37.25	103	92	Average
2494	58.44	63.87	74	-15.56	27.2	4.62	37.25	103	92	Peak
4824	38.77	55.09	54	-15.23	30.99	5.77	53.08	100	64	Average
4824	47.87	64.19	74	-26.13	30.99	5.77	53.08	100	64	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin Value = Emission Level - Limit Value
- 2412MHz: Fundamental frequency.



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### 802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1GHz ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	David Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2376	36.47	43.59	54	-17.53	26.86	3.52	37.5	104	41	Average
2376	50.77	57.89	74	-23.23	26.86	3.52	37.5	104	41	Peak
2462	97.2	103.91			27.1	3.58	37.39	104	41	Average
2462	108.59	115.3			27.1	3.58	37.39	104	41	Peak
2484	47.65	54.22	54	-6.35	27.15	3.6	37.32	104	41	Average
2484	71.47	78.04	74	-2.53	27.15	3.6	37.32	104	41	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2372	36	43.12	54	-18	26.86	3.52	37.5	121	160	Average
2372	51.13	58.25	74	-22.87	26.86	3.52	37.5	121	160	Peak
2462	95.99	102.7			27.1	3.58	37.39	121	160	Average
2462	106.62	113.33			27.1	3.58	37.39	121	160	Peak
2484	46.53	53.1	54	-7.47	27.15	3.6	37.32	121	160	Average
2484	66.77	73.34	74	-7.23	27.15	3.6	37.32	121	160	Peak
4924	37.52	53.6	54	-16.48	31.12	5.83	53.03	100	26	Average
4924	50.65	66.73	74	-23.35	31.12	5.83	53.03	100	26	Peak

#### REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin Value = Emission Level - Limit Value
2. 2462MHz: Fundamental frequency.



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**BELOW 1GHz WORST-CASE DATA:**

**802.11n (20MHz)**

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) QP
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	David Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
79.14	25.79	47.99	40	-14.21	8.37	0.97	31.54	100	135	Peak
143.94	33.14	50.99	43.5	-10.36	12.47	1.31	31.63	100	120	Peak
292.71	20.74	37.7	46	-25.26	12.74	2.02	31.72	100	192	Peak
388.2	20.53	35.12	46	-25.47	15.05	2.38	32.02	100	193	Peak
649.3	25.15	33.74	46	-20.85	20.2	3.24	32.03	100	256	Peak
904.8	28.53	33.04	46	-17.47	23.54	3.98	32.03	100	252	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
36.75	31.91	49.23	40	-8.09	13.09	0.62	31.03	100	209	QP
150.96	23.81	41.39	43.5	-19.69	12.71	1.35	31.64	100	124	Peak
274.35	18.01	35.81	46	-27.99	12.2	1.93	31.93	100	226	Peak
426.7	20.35	33.97	46	-25.65	15.87	2.53	32.02	100	291	Peak
655.6	25.02	33.46	46	-20.98	20.28	3.26	31.98	100	187	Peak
895	27.87	32.47	46	-18.13	23.45	3.95	32	100	228	Peak

**REMARKS:**

Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor

Margin Value = Emission Level - Limit Value



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**MODE B**

**ABOVE 1GHz WORST-CASE DATA**

**802.11b**

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1GHz ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	David Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	37.24	44.31	54	-16.76	26.91	3.54	37.52	105	329	Average
2390	50.56	57.63	74	-23.44	26.91	3.54	37.52	105	329	Peak
2437	100.22	107.06			27.06	3.56	37.46	105	329	Average
2437	104.04	110.88			27.06	3.56	37.46	105	329	Peak
2484	36.3	42.87	54	-17.7	27.15	3.6	37.32	105	329	Average
2484	50.58	57.15	74	-23.42	27.15	3.6	37.32	105	329	Peak
4874	48.27	64.46	54	-5.73	31.06	5.8	53.05	106	146	Average
4874	50.22	66.41	74	-23.78	31.06	5.8	53.05	106	146	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	35.3	42.37	54	-18.7	26.91	3.54	37.52	120	212	Average
2390	49.97	57.04	74	-24.03	26.91	3.54	37.52	120	212	Peak
2437	98.02	104.86			27.06	3.56	37.46	120	212	Average
2437	101.61	108.45			27.06	3.56	37.46	120	212	Peak
2484	35.57	42.14	54	-18.43	27.15	3.6	37.32	120	212	Average
2484	49.34	55.91	74	-24.66	27.15	3.6	37.32	120	212	Peak
4874	45.02	61.21	54	-8.98	31.06	5.8	53.05	100	125	Average
4874	47.14	63.33	74	-26.86	31.06	5.8	53.05	100	125	Peak

**REMARKS:**

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin Value = Emission Level - Limit Value
- 2437MHz: Fundamental frequency.



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802.11g

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1GHz ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	David Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	45.11	52.18	54	-8.89	26.91	3.54	37.52	105	324	Average
2390	63.31	70.38	74	-10.69	26.91	3.54	37.52	105	324	Peak
2412	94.9	101.92			26.96	3.54	37.52	105	324	Average
2412	104.47	111.49			26.96	3.54	37.52	105	324	Peak
2500	35.98	42.41	54	-18.02	27.2	3.62	37.25	105	324	Average
2500	51.47	57.9	74	-22.53	27.2	3.62	37.25	105	324	Peak
4824	41.73	58.05	54	-12.27	30.99	5.77	53.08	121	65	Average
4824	52.8	69.12	74	-21.2	30.99	5.77	53.08	121	65	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	42.57	49.64	54	-11.43	26.91	3.54	37.52	124	197	Average
2390	59.35	66.42	74	-14.65	26.91	3.54	37.52	124	197	Peak
2412	93.65	100.67			26.96	3.54	37.52	124	197	Average
2412	103	110.02			26.96	3.54	37.52	124	197	Peak
2486	36.23	42.8	54	-17.77	27.15	3.6	37.32	124	197	Average
2486	50.95	57.52	74	-23.05	27.15	3.6	37.32	124	197	Peak
4824	39.71	56.03	54	-14.29	30.99	5.77	53.08	111	46	Average
4824	51.44	67.76	74	-22.56	30.99	5.77	53.08	111	46	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin Value = Emission Level - Limit Value
- 2412MHz: Fundamental frequency.





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802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1GHz ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	David Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2376	38.11	45.23	54	-15.89	26.86	3.52	37.5	100	226	Average
2376	52	59.12	74	-22	26.86	3.52	37.5	100	226	Peak
2462	96.6	103.31			27.1	3.58	37.39	100	226	Average
2462	107.39	114.1			27.1	3.58	37.39	100	226	Peak
2484	46.96	53.53	54	-7.04	27.15	3.6	37.32	100	226	Average
2484	67.68	74.25	74	-6.32	27.15	3.6	37.32	100	226	Peak
4924	35.76	51.84	54	-18.24	31.12	5.83	53.03	100	2	Average
4924	45.41	61.49	74	-28.59	31.12	5.83	53.03	100	2	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	35.54	42.61	54	-18.46	26.91	3.54	37.52	102	70	Average
2390	50.27	57.34	74	-23.73	26.91	3.54	37.52	102	70	Peak
2462	94.17	100.88			27.1	3.58	37.39	102	70	Average
2462	104.81	111.52			27.1	3.58	37.39	102	70	Peak
2484	46.03	52.6	54	-7.97	27.15	3.6	37.32	102	70	Average
2484	64.83	71.4	74	-9.17	27.15	3.6	37.32	102	70	Peak
4924	36.7	52.78	54	-17.3	31.12	5.83	53.03	120	356	Average
4924	47.69	63.77	74	-26.31	31.12	5.83	53.03	120	356	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin Value = Emission Level - Limit Value
- 2462MHz: Fundamental frequency.



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**BELOW 1GHz WORST-CASE DATA:**

**802.11b**

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) QP
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	David Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
57	30.84	49.13	40	-9.16	12.25	0.81	31.35	100	108	Peak
123.42	36.08	55.55	43.5	-7.42	11.22	1.2	31.89	100	112	Peak
226.83	20.95	40.54	46	-25.05	10.5	1.73	31.82	100	250	Peak
360.9	21.95	37.25	46	-24.05	14.4	2.27	31.97	100	129	Peak
626.2	22.91	31.96	46	-23.09	19.93	3.17	32.15	100	227	Peak
776.7	32.89	38.74	46	-13.11	21.9	3.64	31.39	100	138	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
36.75	31.23	48.55	40	-8.77	13.09	0.62	31.03	100	318	QP
123.69	32.65	52.05	43.5	-10.85	11.28	1.21	31.89	100	216	Peak
224.94	15.09	34.73	46	-30.91	10.42	1.72	31.78	100	297	Peak
381.2	18.43	33.15	46	-27.57	14.89	2.35	31.96	100	146	Peak
631.8	23.27	32.23	46	-22.73	19.99	3.18	32.13	100	252	Peak
869.1	27.09	32.1	46	-18.91	23.11	3.88	32	100	132	Peak

**REMARKS:**

Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor

Margin Value = Emission Level - Limit Value



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## 4.2 CONDUCTED EMISSION MEASUREMENT

### 4.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB $\mu$ V)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56	56 to 46
0.5 ~ 5	56	46
5 ~ 30	60	50

- NOTE:** 1. The lower limit shall apply at the transition frequencies.  
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.  
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.

### 4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCS30	100288	Nov. 09, 2012	Nov. 08, 2013
RF signal cable Woken	5D-FB	Cable-HYCO2-01	Dec. 28, 2012	Dec. 27, 2013
LISN ROHDE & SCHWARZ (EUT)	ESH2-Z5	100100	Dec. 21, 2012	Dec. 20, 2013
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100312	Jul. 02, 2013	Jul. 01, 2014
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 2.  
3. The VCCI Site Registration No. is C-2047.



#### 4.2.3 TEST PROCEDURES

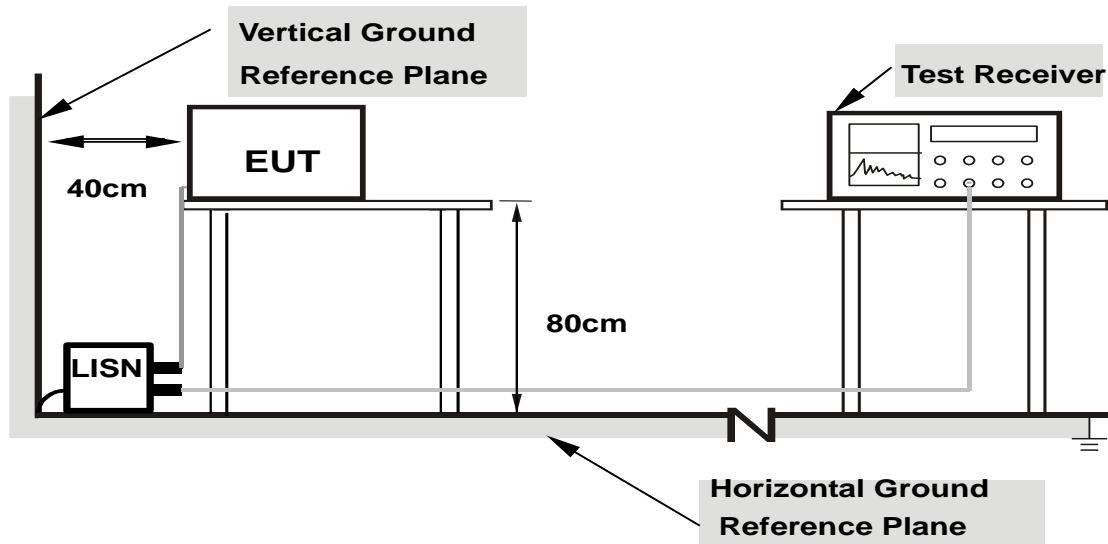
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

**NOTE:** All modes of operation were investigated and the worst-case emissions are reported.

#### 4.2.4 DEVIATION FROM TEST STANDARD

No deviation.

#### 4.2.5 TEST SETUP



**Note: 1.Support units were connected to second LISN.**

**2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes**

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

#### 4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6.

### 4.2.7 TEST RESULTS

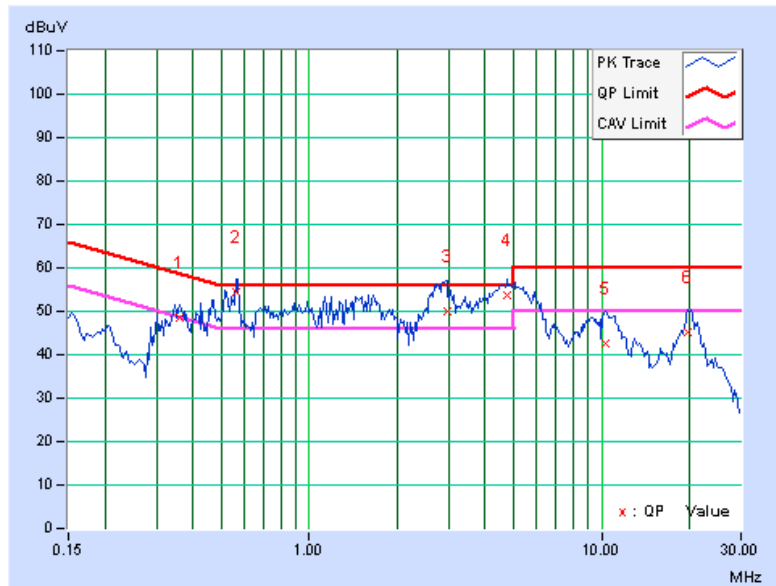
**CONDUCTED WORST-CASE DATA :**

<b>PHASE</b>	Line 1	<b>6dB BANDWIDTH</b>	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.36094	0.20	48.14	38.47	48.34	38.67	58.71
2	0.56406	0.23	54.09	43.93	54.32	44.16	56.00	46.00	-1.68	-1.84
3	2.95313	0.32	49.83	40.30	50.15	40.62	56.00	46.00	-5.85	-5.38
4	4.77734	0.38	53.31	43.15	53.69	43.53	56.00	46.00	-2.31	-2.47
5	10.31641	0.44	42.19	32.25	42.63	32.69	60.00	50.00	-17.37	-17.31
6	19.83203	0.64	44.38	31.97	45.02	32.61	60.00	50.00	-14.98	-17.39

**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





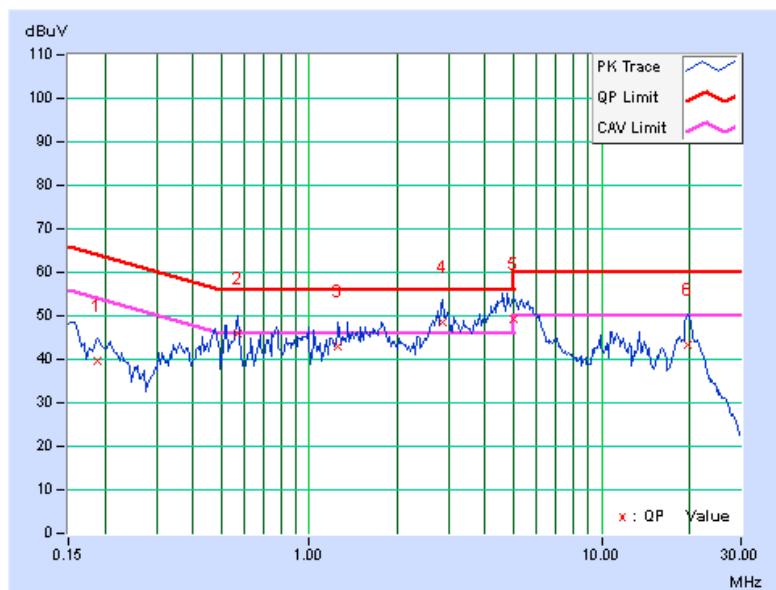
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PHASE	Line 2	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.18906	0.18	39.56	28.79	39.74	28.97	64.08
2	0.57188	0.24	45.76	40.28	46.00	40.52	56.00	46.00	-10.00	-5.48
3	1.25000	0.24	42.78	31.26	43.02	31.50	56.00	46.00	-12.98	-14.50
4	2.85547	0.33	48.17	36.90	48.50	37.23	56.00	46.00	-7.50	-8.77
5	5.00000	0.40	49.02	37.48	49.42	37.88	56.00	46.00	-6.58	-8.12
6	19.61719	0.72	42.76	29.77	43.48	30.49	60.00	50.00	-16.52	-19.51

**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



## 5. TEST TYPES AND RESULTS (FOR 5.0GHz BAND)

### 5.1 RADIATED EMISSION MEASUREMENT

#### 5.1.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power:

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. 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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#### 5.1.2 TEST INSTRUMENTS

Same as item 4.1.2.

#### 5.1.3 TEST PROCEDURES

Same as item 4.1.3.

#### 5.1.4 DEVIATION FROM TEST STANDARD

No deviation.

#### 5.1.5 TEST SETUP

Same as item 4.1.5.

#### 5.1.6 EUT OPERATING CONDITIONS

Same as item 4.1.6.



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### 5.1.7 TEST RESULTS

#### MODE A

#### ABOVE 1GHz WORST-CASE DATA :

#### 802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	David Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	46.76	46.64	70.93	-24.17	31.96	5.59	37.43	124	84	Average
5725	65.5	65.38	79.99	-14.49	31.96	5.59	37.43	124	84	Peak
5745	90.93	90.81			31.99	5.6	37.47	124	84	Average
5745	99.99	99.87			31.99	5.6	37.47	124	84	Peak
5850	38.22	37.92	70.93	-32.71	32.15	5.66	37.51	124	84	Average
5850	58.96	58.66	79.99	-21.03	32.15	5.66	37.51	124	84	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	54.83	54.71	80.06	-25.23	31.96	5.59	37.43	103	15	Average
5725	71.32	71.2	89.15	-17.83	31.96	5.59	37.43	103	15	Peak
5745	100.06	99.94			31.99	5.6	37.47	103	15	Average
5745	109.15	109.03			31.99	5.6	37.47	103	15	Peak
5850	39.64	39.34	80.06	-40.42	32.15	5.66	37.51	103	15	Average
5850	59.22	58.92	89.15	-29.93	32.15	5.66	37.51	103	15	Peak

#### REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin Value = Emission Level - Limit Value
2. 5745MHz: Fundamental frequency.
3. 5725MHz & 5850MHz: Out of restricted band



A D T

802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	David Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	39.92	39.8	78.34	-38.42	31.96	5.59	37.43	104	285	Average
5725	59.51	59.39	87.05	-27.54	31.96	5.59	37.43	104	285	Peak
5785	98.34	98.22			32.04	5.62	37.54	104	285	Average
5785	107.05	106.93			32.04	5.62	37.54	104	285	Peak
5850	40.06	39.76	78.34	-38.28	32.15	5.66	37.51	104	285	Average
5850	58.44	58.14	87.05	-28.61	32.15	5.66	37.51	104	285	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	38.99	38.87	74.01	-35.02	31.96	5.59	37.43	118	52	Average
5725	59.4	59.28	82.93	-23.53	31.96	5.59	37.43	118	52	Peak
5785	94.01	93.89			32.04	5.62	37.54	118	52	Average
5785	102.93	102.81			32.04	5.62	37.54	118	52	Peak
5850	38.93	38.63	74.01	-35.08	32.15	5.66	37.51	118	52	Average
5850	59.53	59.23	82.93	-23.4	32.15	5.66	37.51	118	52	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin Value = Emission Level - Limit Value
2. 5785MHz: Fundamental frequency.
3. 5725MHz & 5850MHz: Out of restricted band



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## 802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 159	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	David Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	41.96	41.84	76.38	-34.42	31.96	5.59	37.43	100	337	Average
5725	58.84	58.72	86.26	-27.42	31.96	5.59	37.43	100	337	Peak
5795	96.38	96.22			32.07	5.63	37.54	100	337	Average
5795	106.26	106.1			32.07	5.63	37.54	100	337	Peak
5850	42.31	42.01	76.38	-34.07	32.15	5.66	37.51	100	337	Average
5850	59.34	59.04	86.26	-26.92	32.15	5.66	37.51	100	337	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	40.69	40.57	74.93	-34.24	31.96	5.59	37.43	100	24	Average
5725	59.05	58.93	83.88	-24.83	31.96	5.59	37.43	100	24	Peak
5795	94.93	94.77			32.07	5.63	37.54	100	24	Average
5795	103.88	103.72			32.07	5.63	37.54	100	24	Peak
5850	41.98	41.68	74.93	-32.95	32.15	5.66	37.51	100	24	Average
5850	59.78	59.48	83.88	-24.1	32.15	5.66	37.51	100	24	Peak

## REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin Value = Emission Level - Limit Value
2. 5795MHz: Fundamental frequency.
3. 5725MHz & 5850MHz: Out of restricted band



A D T

**BELOW 1GHz WORST-CASE DATA :**

**802.11a**

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) QP
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	David Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
42.96	28.2	45	40	-11.8	13.58	0.7	31.08	100	135	Peak
124.77	36.07	55.4	43.5	-7.43	11.35	1.21	31.89	100	265	Peak
277.59	27.88	45.53	46	-18.12	12.28	1.95	31.88	100	154	Peak
416.2	21.2	35.08	46	-24.8	15.66	2.49	32.03	100	233	Peak
666.1	29.03	37.18	46	-16.97	20.41	3.3	31.86	100	204	Peak
944	29.2	33.28	46	-16.8	23.75	4.06	31.89	100	162	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
36.48	31.88	49.2	40	-8.12	13.09	0.62	31.03	100	295	QP
150.42	23.49	41.05	43.5	-20.01	12.71	1.34	31.61	100	314	Peak
277.59	21.72	39.37	46	-24.28	12.28	1.95	31.88	100	226	Peak
427.4	20.24	33.84	46	-25.76	15.89	2.53	32.02	100	190	Peak
672.4	25.35	33.36	46	-20.65	20.48	3.33	31.82	100	251	Peak
923	28.33	32.67	46	-17.67	23.64	4.02	32	100	123	Peak

**REMARKS:**

Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor

Margin Value = Emission Level - Limit Value



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**MODE B**

**ABOVE 1GHz WORST-CASE DATA :**

**802.11a**

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	David Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	51.13	51.01	79.5	-28.37	31.96	5.59	37.43	112	289	Average
5725	70.33	70.21	88.74	-18.41	31.96	5.59	37.43	112	289	Peak
5745	99.5	99.38			31.99	5.6	37.47	112	289	Average
5745	108.74	108.62			31.99	5.6	37.47	112	289	Peak
5850	39.54	39.24	79.5	-39.96	32.15	5.66	37.51	112	289	Average
5850	59.25	58.95	88.74	-29.49	32.15	5.66	37.51	112	289	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5724	49.57	49.45	78.1	-28.53	31.96	5.59	37.43	100	27	Average
5724	66.31	66.19	87.93	-21.62	31.96	5.59	37.43	100	27	Peak
5745	98.1	97.98			31.99	5.6	37.47	100	27	Average
5745	107.93	107.81			31.99	5.6	37.47	100	27	Peak
5850	39.63	39.33	78.1	-38.47	32.15	5.66	37.51	100	27	Average
5850	59.98	59.68	87.93	-27.95	32.15	5.66	37.51	100	27	Peak

**REMARKS:**

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin Value = Emission Level - Limit Value
2. 5745MHz: Fundamental frequency.
3. 5725MHz & 5850MHz: Out of restricted band



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802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	David Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	40.43	40.31	79.4	-38.97	31.96	5.59	37.43	109	288	Average
5725	58.92	58.8	88.29	-29.37	31.96	5.59	37.43	109	288	Peak
5785	99.4	99.28			32.04	5.62	37.54	109	288	Average
5785	108.29	108.17			32.04	5.62	37.54	109	288	Peak
5850	40.22	39.92	79.4	-39.18	32.15	5.66	37.51	109	288	Average
5850	58.55	58.25	88.29	-29.74	32.15	5.66	37.51	109	288	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	40.15	40.03	80.43	-40.28	31.96	5.59	37.43	100	27	Average
5725	58.3	58.18	89.96	-31.66	31.96	5.59	37.43	100	27	Peak
5785	100.43	100.31			32.04	5.62	37.54	100	27	Average
5785	109.96	109.84			32.04	5.62	37.54	100	27	Peak
5850	40.98	40.68	80.43	-39.45	32.15	5.66	37.51	100	27	Average
5850	58.53	58.23	89.96	-31.43	32.15	5.66	37.51	100	27	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin Value = Emission Level - Limit Value
2. 5785MHz: Fundamental frequency.
3. 5725MHz & 5850MHz: Out of restricted band



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802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 159	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	David Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	43.59	42.47	77.82	-34.23	31.96	6.59	37.43	111	287	Average
5725	61.06	59.94	86.44	-25.38	31.96	6.59	37.43	111	287	Peak
5795	97.82	96.66			32.07	6.63	37.54	111	287	Average
5795	106.44	105.28			32.07	6.63	37.54	111	287	Peak
5850	43.49	42.19	77.82	-34.33	32.15	6.66	37.51	111	287	Average
5850	60.92	59.62	86.44	-25.52	32.15	6.66	37.51	111	287	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	42.39	41.27	78.38	-35.99	31.96	6.59	37.43	100	25	Average
5725	59.95	58.83	87.98	-28.03	31.96	6.59	37.43	100	25	Peak
5795	98.38	97.22			32.07	6.63	37.54	100	25	Average
5795	107.98	106.82			32.07	6.63	37.54	100	25	Peak
5850	44.15	42.85	78.38	-34.23	32.15	6.66	37.51	100	25	Average
5850	60.16	58.86	87.98	-27.82	32.15	6.66	37.51	100	25	Peak

**REMARKS:**

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin Value = Emission Level - Limit Value
2. 5795MHz: Fundamental frequency.
3. 5725MHz & 5850MHz: Out of restricted band





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**BELOW 1GHz WORST-CASE DATA :**

**802.11a**

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) QP
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	David Huang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
79.14	25.79	47.99	40	-14.21	8.37	0.97	31.54	100	184	Peak
124.5	36.18	55.58	43.5	-7.32	11.28	1.21	31.89	100	294	Peak
205.23	28.02	48.47	43.5	-15.48	9.6	1.62	31.67	100	244	Peak
422.5	19.74	33.48	46	-26.26	15.79	2.51	32.04	100	152	Peak
685	24.5	32.34	46	-21.5	20.63	3.37	31.84	100	168	Peak
923.7	28.01	32.35	46	-17.99	23.64	4.02	32	100	314	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
36.75	31.78	49.1	40	-8.22	13.09	0.62	31.03	100	253	QP
68.61	32.26	52.25	40	-7.74	10.89	0.89	31.77	100	109	Peak
228.72	15.92	35.46	46	-30.08	10.58	1.73	31.85	100	154	Peak
398.7	19.36	33.75	46	-26.64	15.31	2.42	32.12	100	294	Peak
731.2	25.43	32.23	46	-20.57	21.26	3.52	31.58	100	284	Peak
960.1	27.9	31.89	54	-26.1	23.85	4.09	31.93	100	160	Peak

**REMARKS:**

Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor

Margin Value = Emission Level - Limit Value



## 5.2 CONDUCTED EMISSION MEASUREMENT

### 5.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB $\mu$ V)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56	56 to 46
0.5 ~ 5	56	46
5 ~ 30	60	50

- NOTE:**
1. The lower limit shall apply at the transition frequencies.
  2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.
  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.

### 5.2.2 TEST INSTRUMENTS

Same as item 4.2.2.

### 5.2.3 TEST PROCEDURES

Same as item 4.2.3.

### 5.2.4 DEVIATION FROM TEST STANDARD

No deviation.

### 5.2.5 TEST SETUP

Same as item 4.2.5.

### 5.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6



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## 5.2.7 TEST RESULTS

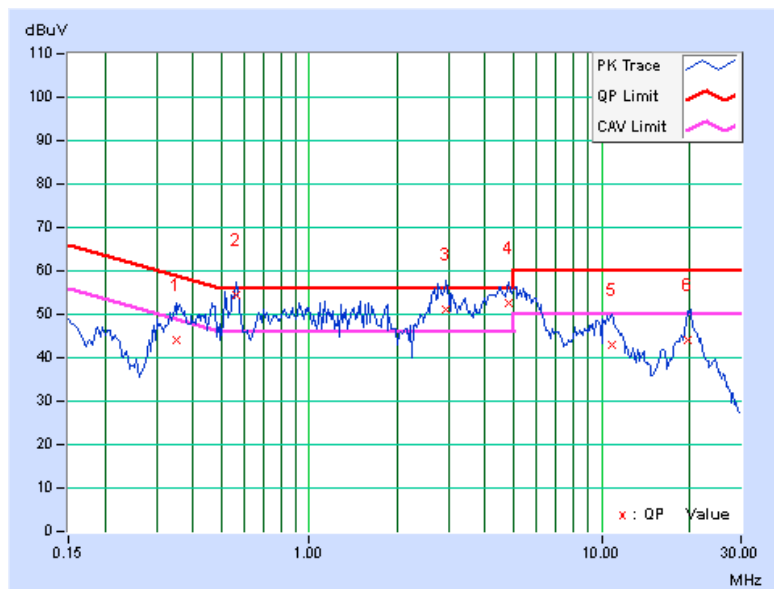
### CONDUCTED WORST-CASE DATA :

PHASE	Line 1	6dB BANDWIDTH	9kHz
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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	0.34922	0.20	43.82	32.20	44.02	32.40	58.98	48.98	-14.96	-16.58
2	<b>0.56406</b>	<b>0.23</b>	<b>54.18</b>	<b>44.37</b>	<b>54.41</b>	<b>44.60</b>	<b>56.00</b>	<b>46.00</b>	<b>-1.59</b>	<b>-1.40</b>
3	2.94141	0.32	50.63	40.14	50.95	40.46	56.00	46.00	-5.05	-5.54
4	4.79297	0.38	52.36	42.50	52.74	42.88	56.00	46.00	-3.26	-3.12
5	10.79297	0.45	42.37	32.90	42.82	33.35	60.00	50.00	-17.18	-16.65
6	19.62891	0.63	43.59	31.56	44.22	32.19	60.00	50.00	-15.78	-17.81

### 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





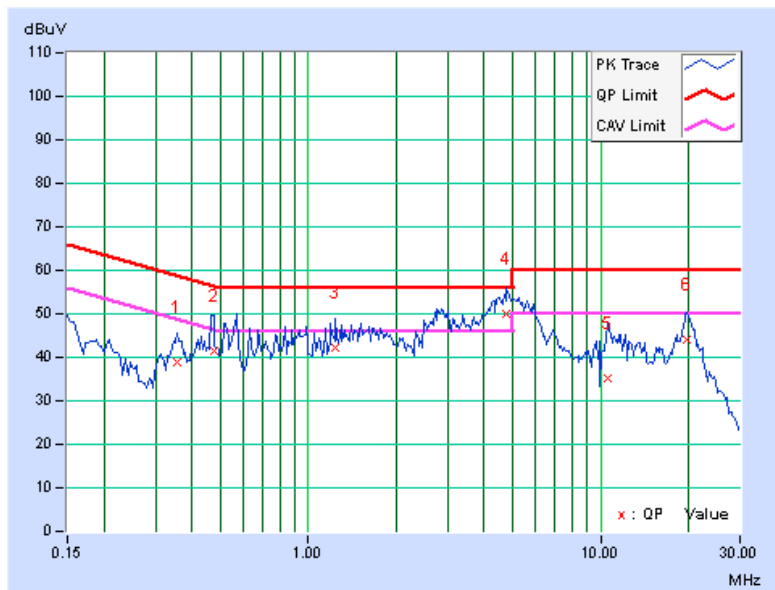
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PHASE	Line 2	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.35703	0.23	38.83	31.56	39.06	31.79	58.80
2	0.47422	0.25	41.38	31.91	41.63	32.16	56.44	46.44	-14.81	-14.28
3	1.23438	0.24	41.86	31.30	42.10	31.54	56.00	46.00	-13.90	-14.46
4	4.78125	0.40	49.68	39.08	50.08	39.48	56.00	46.00	-5.92	-6.52
5	10.59766	0.49	34.58	26.15	35.07	26.64	60.00	50.00	-24.93	-23.36
6	19.67578	0.72	43.37	31.58	44.09	32.30	60.00	50.00	-15.91	-17.70

**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





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## 6. PHOTOGRAPHS OF THE TEST CONFIGURATION

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



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## 7. 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:

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



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## **8. APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB**

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

**---END---**