



FCC TEST REPORT (15.407)

REPORT NO.: RF120423C07A-1
MODEL NO.: HiveAP 141, HiveAP 121
FCC ID: WBV-HIVEAP1X1
RECEIVED: Jun. 08, 2012
TESTED: Jun. 11 ~ Jun. 26, 2012
ISSUED: Jun. 27, 2012

APPLICANT: Aerohive Networks, Inc.

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

LAB ADDRESS: No. 47, 14th Ling, Chia Pau Vil., Lin Kou Dist.,
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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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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF120423C07A-1	Original release	Jun. 27, 2012

1. CERTIFICATION

PRODUCT: AP Router

MODEL: HiveAP 141, HiveAP 121

BRAND: Aerohive

APPLICANT: Aerohive Networks, Inc.

TESTED: Jun. 11 ~ Jun. 26, 2012

TEST SAMPLE: ENGINEERING SAMPLE

STANDARDS: FCC Part 15, Subpart E (Section 15.407)

ANSI C63.10-2009

The above equipment (model: HiveAP 141, HiveAP 121) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY :  , **DATE** : Jun. 27, 2012
Pettie Chen / Specialist

APPROVED BY :  , **DATE** : Jun. 27, 2012
Gary Chang / Technical Manager

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART E (SECTION 15.407)			
STANDARD SECTION	TEST TYPE	RESULT	REMARK
15.407(b)(6)	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -8.22dB at 10.17969MHz.
15.407(b/1/2/3) (b)(6)	Spurious Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -1.1dB at 5150.00MHz.

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	3.19 dB
	200MHz ~1000MHz	3.21 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 $k = 2$.

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	AP Router
MODEL NO.	HiveAP 141, HiveAP 121 (Refer to NOTE for the more details)
POWER SUPPLY	12Vdc (Adapter) 48Vdc (PoE)
MODULATION TYPE	64QAM, 16QAM, QPSK, BPSK
MODULATION TECHNOLOGY	OFDM
TRANSFER RATE	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to 300.0Mbps
OPERATING FREQUENCY	5180.0 ~ 5240.0MHz
NUMBER OF CHANNEL	4 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz)
OUTPUT POWER	29.9mW
ANTENNA TYPE	Refer to Note
ANTENNA CONNECTOR	Refer to Note
DATA CABLE	NA
I/O PORTS	Refer to user's manual
ACCESSORY DEVICES	Adapter

NOTE:

1. This report is prepared for FCC class II permissive change. The differences compared with original report are changing the following items:

- ✧ Add Ceiling Mount and Surface Mount mode.
- ✧ Add aluminum foil on shield case.

After pretesting, the surface mount mode was the worst for final test. So we re-test conducted emission and radiated emission tests.

2. The following models are provided to this EUT.

Brand	Model	Description
Aerohive	HiveAP 141	dipole antenna
	HiveAP 121	PCB dipole antenna

3. The frequency bands used in this EUT are listed as follows:

Frequency Band (MHz)	2412~2462	5180~5240	5745~5825
802.11b	√		
802.11g	√		
802.11a		√	√
802.11n (20MHz)	√	√	√
802.11n (40MHz)		√	√

4. The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers.

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

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

5. The following antennas for the EUT.

	Antenna Type	Antenna Connector	Antenna Gain	
			2.4GHz Band	5GHz Band
HiveAP 141 (external antenna)	dipole antenna	R-SMA	4dBi	3dBi
HiveAP 121 (internal antenna)	PCB dipole antenna	UFL	3dBi	6dBi

6. The EUT consumes power from the following adapter and PoE.

ADAPTER	
BRAND:	Channel Well Technology
MODEL:	CAP018121 US 18.0W
INPUT:	100-240V~47-63Hz 0.6A
OUTPUT:	12.0V / 1.5A
POWER LINE:	1.50m non-shielded cable without core

PoE (Support unit only)	
BRAND:	CISCO
MODEL:	DPSN-35FBA
INPUT:	100-240Vac ~ 0.8A, 50/60Hz
OUTPUT:	48V, 0.55A

7. The above EUT information is 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

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
36	5180MHz	44	5220MHz
40	5200MHz	48	5240MHz

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
38	5190MHz	46	5230MHz

3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO			DESCRIPTION	
	RE \geq 1G	RE $<$ 1G	PLC	Model	Power
A1	√	√	√	HiveAP 141	Power from adapter
A2	-	√	√		Power from PoE
B1	√	√	√	HiveAP 121	Power from adapter
B2	-	√	√		Power from PoE

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

NOTE: “-” means no effect.

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)
A1, B1	802.11a	36 to 48	36, 40, 48	OFDM	BPSK	6.0
A1, B1	802.11n (20MHz)	36 to 48	36, 40, 48	OFDM	BPSK	7.2
A1, B1	802.11n (40MHz)	38 to 46	38, 46	OFDM	BPSK	15.0

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)
A1, A2, B1, B2	802.11a	36 to 48	40	OFDM	BPSK	6.0

POWER LINE CONDUCTED EMISSION TEST:

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A1, A2, B1, B2	802.11a	36 to 48	40	OFDM	BPSK	6.0

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE \geq 1G	25deg. C, 65%RH	120Vac, 60Hz	Alan Wu
RE<1G	24deg. C, 65%RH	120Vac, 60Hz	Chris Lin
PLC	22deg. C, 66%RH	120Vac, 60Hz	Ben Huang

3.3 DUTY CYCLE OF TEST SIGNAL

Duty cycle of test signal is > 98 %

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	NOTEBOOK	DELL	D531	CN-0XM006-48643-8 1U-2610	QDS-BRCM1020
2	USB Flash Drive	Transcend	V85	538455 4488	NA

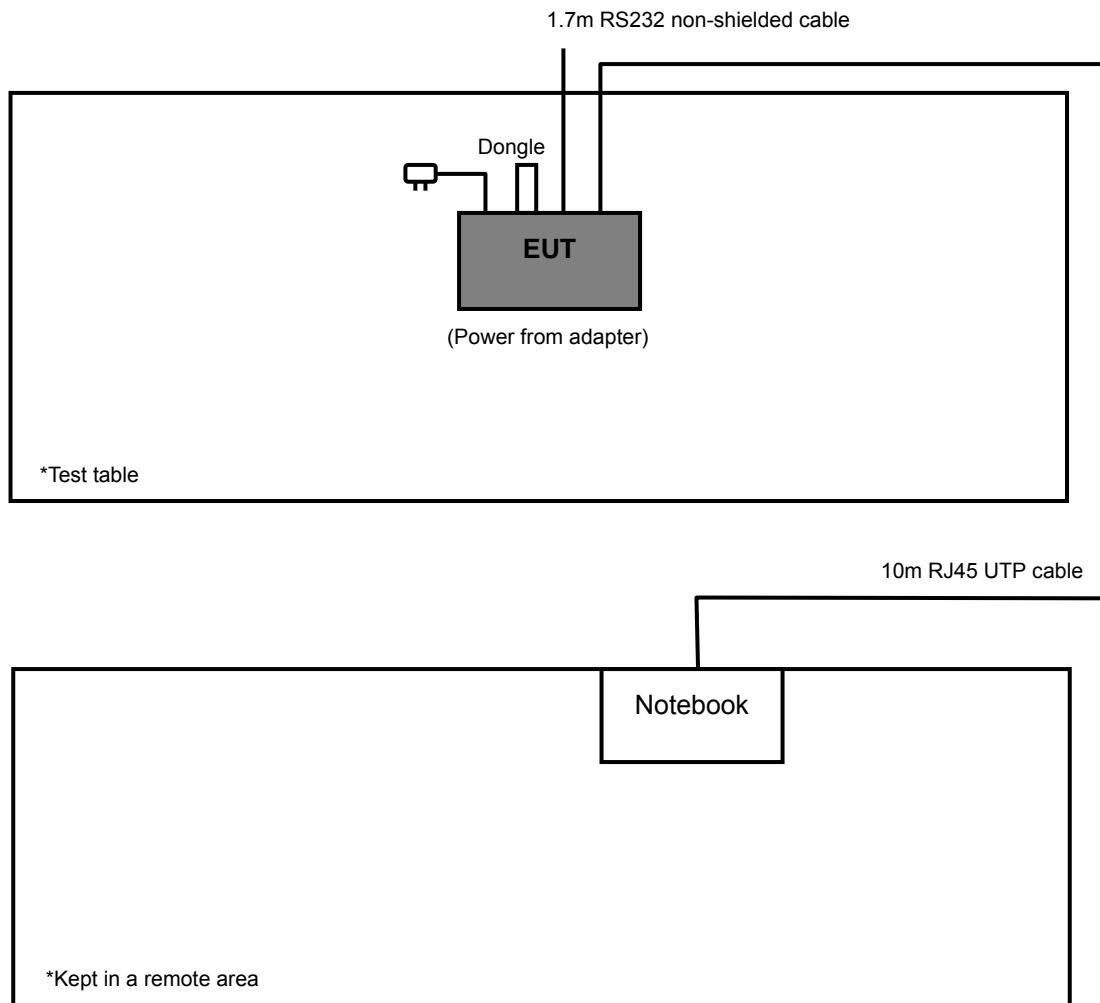
NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	10m RJ45 UTP cable
2	NA

NOTE:

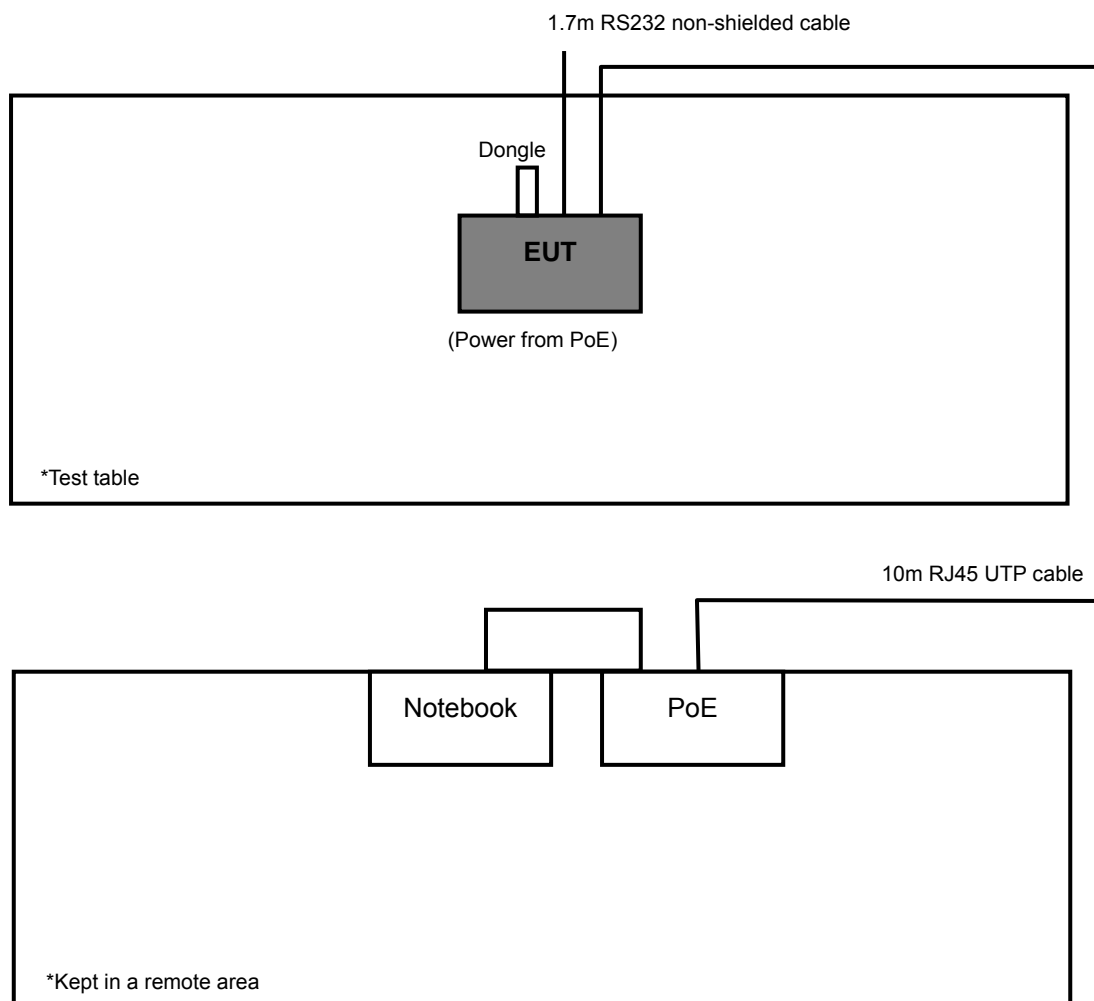
1. All power cords of the above support units are non shielded (1.8m).
2. Item 1 acted as communication partner to transfer data.

3.4.1 CONFIGURATION OF SYSTEM UNDER TEST

Test Mode A1, B1



Test Mode A2, B2



3.5 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 E (15.407)

789033 D01 General UNII Test Procedures v01r01

ANSI C63.10-2009

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.

4. TEST TYPES AND RESULTS

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:

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.

4.1.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

EIRP LIMIT (dBm)	EQUIVALENT FIELD STRENGTH AT 3m (dBµV/m)
PK	PK
-27	68.3

NOTE: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3} \mu\text{V/m, where P is the eirp (Watts).}$$

4.1.3 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESIB7	100212	Aug. 02, 2011	Aug. 01, 2012
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100041	Jul. 21, 2011	Jul. 20, 2012
BILOG Antenna SCHWARZBECK	VULB9168	9168-160	Apr. 06, 2012	Apr. 05, 2013
HORN Antenna SCHWARZBECK	9120D	209	Aug. 25, 2011	Aug. 24, 2012
HORN Antenna SCHWARZBECK	BBHA 9170	148	Jul. 20, 2011	Jul. 19, 2012
Loop Antenna	HFH2-Z2	100070	Jan. 31, 2012	Jan. 30, 2014
Preamplifier Agilent	8447D	2944A10633	Oct. 29, 2011	Oct. 28, 2012
Preamplifier Agilent	8449B	3008A01964	Oct. 29, 2011	Oct. 28, 2012
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	250723/4	Aug. 30, 2011	Aug. 29, 2012
RF signal cable HUBER+SUHNNER	SUCOFLEX 106	12738/6+309224/4	Aug. 30, 2011	Aug. 29, 2012
Software ADT.	ADT_Radiated_ V7.6.15.9.2	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA	NA
Antenna Tower Controller inn-co GmbH	CO2000	017303	NA	NA
Turn Table ADT.	TT100	TT93021703	NA	NA
Turn Table Controller ADT.	SC100	SC93021703	NA	NA
26GHz ~ 40GHz Amplifier	EM26400	815221	Oct. 29, 2011	Oct. 28, 2012

- NOTE:**
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The 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 3.
 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 988962.
 6. The IC Site Registration No. is IC 7450F-3.

4.1.4 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. 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 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

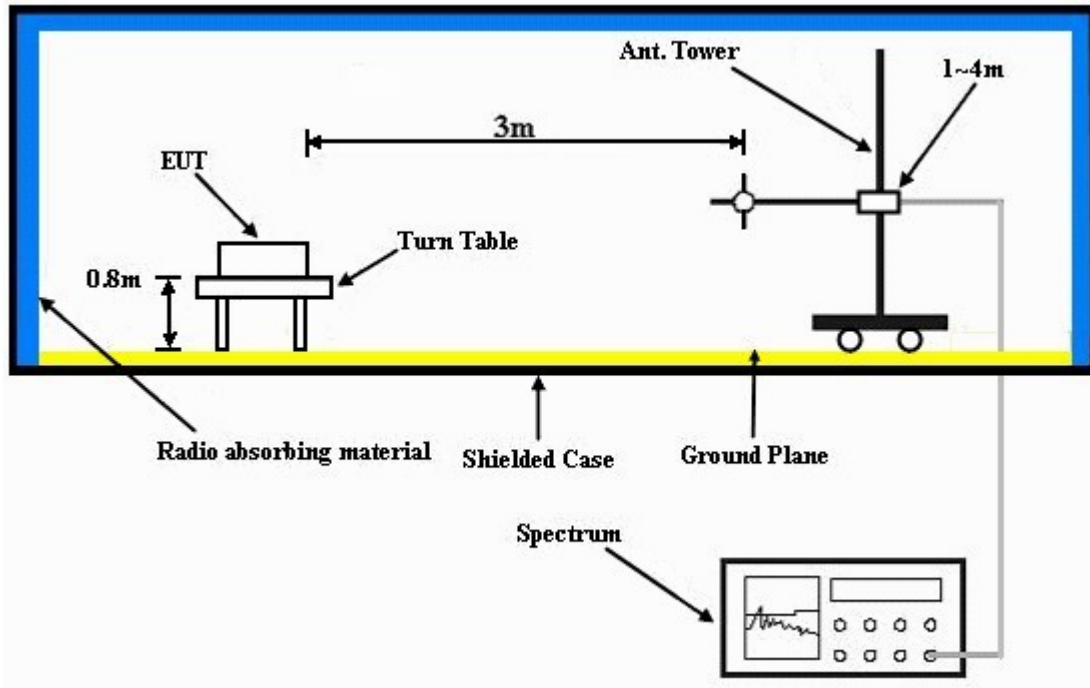
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) 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 for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.5 DEVIATION FROM TEST STANDARD

No deviation.

4.1.6 TEST SETUP



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

4.1.7 EUT OPERATING CONDITION

- a. Placed the EUT on the testing table.
- b. Prepared notebook to act as communication partner and placed it outside of testing area.
- c. The communication partner connected with EUT via a RJ45 cable and run a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.
- d. The communication partner sent data to EUT by command "PING".

4.1.8 TEST RESULTS

802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 36	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	TESTED BY	Alan Wu
TEST MODE	A1		

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	5150.00	64.8 PK	74.0	-9.2	1.00 H	180	26.20	38.60
2	5150.00	44.7 AV	54.0	-9.3	1.00 H	180	6.10	38.60
3	*5180.00	102.7 PK			1.00 H	170	64.10	38.60
4	*5180.00	90.1 AV			1.00 H	170	51.50	38.60
5	#10360.00	58.3 PK	68.3	-10.0	1.00 H	168	8.80	49.50
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	5150.00	72.5 PK	74.0	-1.5	1.06 V	358	33.90	38.60
2	5150.00	52.1 AV	54.0	-1.9	1.06 V	358	13.50	38.60
3	*5180.00	110.3 PK			1.00 V	184	71.70	38.60
4	*5180.00	97.5 AV			1.00 V	184	58.90	38.60
5	#10360.00	57.6 PK	68.3	-10.7	1.00 V	16	8.10	49.50

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 radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 40	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	TESTED BY	Alan Wu
TEST MODE	A1		

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	5000.00	56.0 PK	74.0	-18.0	1.00 H	181	17.70	38.30
2	5000.00	44.7 AV	54.0	-9.3	1.00 H	181	6.40	38.30
3	*5200.00	103.4 PK			1.00 H	171	64.80	38.60
4	*5200.00	90.4 AV			1.00 H	171	51.80	38.60
5	#10400.00	58.5 PK	68.3	-9.8	1.00 H	33	9.00	49.50
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	5000.00	57.0 PK	74.0	-17.0	1.00 V	192	18.70	38.30
2	5000.00	46.1 AV	54.0	-7.9	1.00 V	192	7.80	38.30
3	*5200.00	111.1 PK			1.12 V	11	72.50	38.60
4	*5200.00	98.5 AV			1.12 V	11	59.90	38.60
5	#10400.00	57.8 PK	68.3	-10.5	1.00 V	22	8.30	49.50

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 radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 48	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	TESTED BY	Alan Wu
TEST MODE	A1		

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	*5240.00	104.0 PK			1.00 H	341	65.30	38.70
2	*5240.00	91.0 AV			1.00 H	341	52.30	38.70
3	5350.00	54.4 PK	74.0	-19.6	1.00 H	331	15.60	38.80
4	5350.00	42.8 AV	54.0	-11.2	1.00 H	331	4.00	38.80
5	#10480.00	59.0 PK	68.3	-9.3	1.00 H	98	9.30	49.70

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	*5240.00	110.6 PK			1.00 V	10	71.90	38.70
2	*5240.00	98.3 AV			1.00 V	10	59.60	38.70
3	5350.00	55.9 PK	74.0	-18.1	1.00 V	17	17.10	38.80
4	5350.00	43.5 AV	54.0	-10.5	1.00 V	17	4.70	38.80
5	#10480.00	58.2 PK	68.3	-10.1	1.00 V	28	8.50	49.70

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#": The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 36	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	TESTED BY	Alan Wu
TEST MODE	B1		

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	5150.00	63.5 PK	74.0	-10.5	1.05 H	359	24.90	38.60
2	5150.00	44.6 AV	54.0	-9.4	1.05 H	359	6.00	38.60
3	*5180.00	100.3 PK			1.03 H	355	61.70	38.60
4	*5180.00	87.4 AV			1.03 H	355	48.80	38.60
5	#10360.00	58.6 PK	68.3	-9.7	1.00 H	16	9.10	49.50

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	5150.00	64.1 PK	74.0	-9.9	1.03 V	1	25.50	38.60
2	5150.00	45.1 AV	54.0	-8.9	1.03 V	1	6.50	38.60
3	*5180.00	111.0 PK			1.02 V	354	72.40	38.60
4	*5180.00	98.5 AV			1.02 V	354	59.90	38.60
5	#10360.00	57.9 PK	68.3	-10.4	1.00 V	15	8.40	49.50

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 radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 40	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	TESTED BY	Alan Wu
TEST MODE	B1		

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	*5200.00	100.2 PK			1.00 H	14	61.60	38.60
2	*5200.00	87.7 AV			1.00 H	14	49.10	38.60
3	#6933.00	59.4 PK	68.3	-8.9	1.03 H	169	15.90	43.50
4	#10400.00	59.1 PK	68.3	-9.2	1.54 H	22	9.60	49.50
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	*5200.00	111.8 PK			1.00 V	354	73.20	38.60
2	*5200.00	98.8 AV			1.00 V	354	60.20	38.60
3	#6933.00	60.4 PK	68.3	-7.9	1.00 V	19	16.90	43.50
4	#10400.00	58.3 PK	68.3	-10.0	1.50 V	3	8.80	49.50

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 radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 48	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	TESTED BY	Alan Wu
TEST MODE	B1		

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	*5240.00	99.4 PK			1.00 H	359	60.70	38.70
2	*5240.00	87.2 AV			1.00 H	359	48.50	38.70
3	5350.00	52.6 PK	74.0	-21.4	1.00 H	355	13.80	38.80
4	5350.00	38.7 AV	54.0	-15.3	1.00 H	355	-0.10	38.80
5	#10480.00	59.1 PK	68.3	-9.2	1.00 H	88	9.40	49.70
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	*5240.00	111.5 PK			1.00 V	1	72.80	38.70
2	*5240.00	98.4 AV			1.00 V	1	59.70	38.70
3	5350.00	53.3 PK	74.0	-20.7	1.00 V	359	14.50	38.80
4	5350.00	39.8 AV	54.0	-14.2	1.00 V	359	1.00	38.80
5	#10480.00	58.3 PK	68.3	-10.0	1.00 V	18	8.60	49.70

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. "#": The radiated frequency is out the restricted band.

802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 36	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	TESTED BY	Alan Wu
TEST MODE	A1		

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	5150.00	61.1 PK	74.0	-12.9	1.00 H	143	22.50	38.60
2	5150.00	41.0 AV	54.0	-13.0	1.00 H	143	2.40	38.60
3	*5180.00	100.3 PK			1.00 H	173	61.70	38.60
4	*5180.00	88.2 AV			1.00 H	173	49.60	38.60
5	5360.00	57.4 PK	74.0	-16.6	1.05 H	33	18.60	38.80
6	5360.00	47.3 AV	54.0	-6.7	1.05 H	33	8.50	38.80
7	#10360.00	59.9 PK	68.3	-8.4	1.00 H	30	10.40	49.50

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	5150.00	62.9 PK	74.0	-11.1	1.00 V	359	24.30	38.60
2	5150.00	42.8 AV	54.0	-11.2	1.00 V	359	4.20	38.60
3	*5180.00	111.0 PK			1.05 V	357	72.40	38.60
4	*5180.00	98.7 AV			1.05 V	357	60.10	38.60
5	5360.00	59.5 PK	74.0	-14.5	1.02 V	3	20.70	38.80
6	5360.00	49.4 AV	54.0	-4.6	1.02 V	3	10.60	38.80
7	#10360.00	58.1 PK	68.3	-10.2	1.00 V	27	8.60	49.50

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 radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 40	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	TESTED BY	Alan Wu
TEST MODE	A1		

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	*5200.00	99.6 PK			1.00 H	174	61.00	38.60
2	*5200.00	87.0 AV			1.00 H	174	48.40	38.60
3	5360.00	57.0 PK	74.0	-17.0	1.00 H	16	18.20	38.80
4	5360.00	45.5 AV	54.0	-8.5	1.00 H	16	6.70	38.80
5	#10400.00	59.1 PK	68.3	-9.2	1.35 H	26	9.60	49.50

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	*5200.00	110.1 PK			1.00 V	185	71.50	38.60
2	*5200.00	97.4 AV			1.00 V	185	58.80	38.60
3	5360.00	59.0 PK	74.0	-15.0	1.00 V	5	20.20	38.80
4	5360.00	47.8 AV	54.0	-6.2	1.00 V	5	9.00	38.80
5	#10400.00	58.3 PK	68.3	-10.0	1.40 V	21	8.80	49.50

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 radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 48	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	TESTED BY	Alan Wu
TEST MODE	A1		

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	*5240.00	99.2 PK			1.00 H	18	60.50	38.70
2	*5240.00	86.9 AV			1.00 H	18	48.20	38.70
3	5350.00	55.0 PK	74.0	-19.0	1.00 H	26	16.20	38.80
4	5350.00	42.8 AV	54.0	-11.2	1.00 H	26	4.00	38.80
5	5360.00	57.5 PK	74.0	-16.5	1.00 H	46	18.70	38.80
6	5360.00	46.6 AV	54.0	-7.4	1.00 H	46	7.80	38.80
7	#10480.00	59.4 PK	68.3	-8.9	1.00 H	38	9.70	49.70
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	*5240.00	109.6 PK			1.05 V	11	70.90	38.70
2	*5240.00	97.2 AV			1.05 V	11	58.50	38.70
3	5350.00	56.4 PK	74.0	-17.6	1.05 V	10	17.60	38.80
4	5350.00	43.5 AV	54.0	-10.5	1.05 V	10	4.70	38.80
5	5360.00	58.7 PK	74.0	-15.3	1.00 V	8	19.90	38.80
6	5360.00	47.9 AV	54.0	-6.1	1.00 V	8	9.10	38.80
7	#10480.00	58.6 PK	68.3	-9.7	1.00 V	27	8.90	49.70

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * “: Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 36	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	TESTED BY	Alan Wu
TEST MODE	B1		

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	5150.00	57.1 PK	74.0	-16.9	1.00 H	330	18.50	38.60
2	5150.00	44.7 AV	54.0	-9.3	1.00 H	330	6.10	38.60
3	*5180.00	103.7 PK			1.05 H	328	65.10	38.60
4	*5180.00	90.5 AV			1.05 H	328	51.90	38.60
5	5360.00	58.0 PK	74.0	-16.0	1.00 H	328	19.20	38.80
6	5360.00	49.3 AV	54.0	-4.7	1.00 H	328	10.50	38.80
7	5400.00	57.4 PK	74.0	-16.6	1.07 H	5	18.50	38.90
8	5400.00	47.4 AV	54.0	-6.6	1.07 H	5	8.50	38.90
9	#10360.00	59.0 PK	68.3	-9.3	1.00 H	27	9.50	49.50
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	5150.00	58.3 PK	74.0	-15.7	1.00 V	17	19.70	38.60
2	5150.00	45.2 AV	54.0	-8.8	1.00 V	17	6.60	38.60
3	*5180.00	111.8 PK			1.00 V	347	73.20	38.60
4	*5180.00	99.3 AV			1.00 V	347	60.70	38.60
5	5360.00	62.6 PK	74.0	-11.4	1.08 V	21	23.80	38.80
6	5360.00	51.6 AV	54.0	-2.4	1.08 V	21	12.80	38.80
7	5400.00	60.4 PK	74.0	-13.6	1.09 V	7	21.50	38.90
8	5400.00	50.4 AV	54.0	-3.6	1.09 V	7	11.50	38.90
9	#10360.00	58.2 PK	68.3	-10.1	1.00 V	10	8.70	49.50

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 radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 40	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	TESTED BY	Alan Wu
TEST MODE	B1		

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	*5200.00	103.0 PK			1.04 H	329	64.40	38.60
2	*5200.00	90.4 AV			1.04 H	329	51.80	38.60
3	5360.00	58.6 PK	74.0	-15.4	1.00 H	328	19.80	38.80
4	5360.00	48.8 AV	54.0	-5.2	1.00 H	328	10.00	38.80
5	5400.00	57.3 PK	74.0	-16.7	1.07 H	5	18.40	38.90
6	5400.00	47.3 AV	54.0	-6.7	1.07 H	5	8.40	38.90
7	#10400.00	59.2 PK	68.3	-9.1	1.26 H	28	9.70	49.50
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	*5200.00	110.9 PK			1.00 V	10	72.30	38.60
2	*5200.00	98.1 AV			1.00 V	10	59.50	38.60
3	5360.00	60.2 PK	74.0	-13.8	1.08 V	21	21.40	38.80
4	5360.00	51.1 AV	54.0	-2.9	1.08 V	21	12.30	38.80
5	5400.00	59.4 PK	74.0	-14.6	1.10 V	10	20.50	38.90
6	5400.00	49.4 AV	54.0	-4.6	1.10 V	10	10.50	38.90
7	#10400.00	58.4 PK	68.3	-9.9	1.45 V	16	8.90	49.50

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 radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 48	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	TESTED BY	Alan Wu
TEST MODE	B1		

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	*5240.00	103.4 PK			1.04 H	330	64.70	38.70
2	*5240.00	90.3 AV			1.04 H	330	51.60	38.70
3	5350.00	52.9 PK	74.0	-21.1	1.02 H	319	14.10	38.80
4	5350.00	39.0 AV	54.0	-15.0	1.02 H	319	0.20	38.80
5	5360.00	58.4 PK	74.0	-15.6	1.00 H	328	19.60	38.80
6	5360.00	48.6 AV	54.0	-5.4	1.00 H	328	9.80	38.80
7	5400.00	57.8 PK	74.0	-16.2	1.07 H	5	18.90	38.90
8	5400.00	48.0 AV	54.0	-6.0	1.07 H	5	9.10	38.90
9	#10480.00	59.5 PK	68.3	-8.8	1.00 H	29	9.80	49.70
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	*5240.00	111.5 PK			1.00 V	10	72.80	38.70
2	*5240.00	98.6 AV			1.00 V	10	59.90	38.70
3	5350.00	53.6 PK	74.0	-20.4	1.00 V	350	14.80	38.80
4	5350.00	40.0 AV	54.0	-14.0	1.00 V	350	1.20	38.80
5	5360.00	60.9 PK	74.0	-13.1	1.08 V	21	22.10	38.80
6	5360.00	51.9 AV	54.0	-2.1	1.08 V	21	13.10	38.80
7	5400.00	59.9 PK	74.0	-14.1	1.09 V	7	21.00	38.90
8	5400.00	50.0 AV	54.0	-4.0	1.09 V	7	11.10	38.90
9	#10480.00	58.7 PK	68.3	-9.6	1.00 V	19	9.00	49.70

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * “: Fundamental frequency.
6. “#”: The radiated frequency is out the restricted band.

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 38	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	TESTED BY	Alan Wu
TEST MODE	A1		

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	5150.00	60.2 PK	74.0	-13.8	1.00 H	12	21.60	38.60
2	5150.00	45.1 AV	54.0	-8.9	1.00 H	12	6.50	38.60
3	*5190.00	98.9 PK			1.00 H	18	60.30	38.60
4	*5190.00	88.3 AV			1.00 H	18	49.70	38.60
5	5360.00	56.7 PK	74.0	-17.3	1.00 H	40	17.90	38.80
6	5360.00	47.2 AV	54.0	-6.8	1.00 H	40	8.40	38.80
7	#10380.00	59.0 PK	68.3	-9.3	1.00 H	56	9.50	49.50

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	5150.00	69.7 PK	74.0	-4.3	1.05 V	359	31.10	38.60
2	5150.00	52.9 AV	54.0	-1.1	1.05 V	359	14.30	38.60
3	*5190.00	108.0 PK			1.00 V	183	69.40	38.60
4	*5190.00	98.4 AV			1.00 V	183	59.80	38.60
5	5360.00	58.9 PK	74.0	-15.1	1.00 V	8	20.10	38.80
6	5360.00	49.3 AV	54.0	-4.7	1.00 V	8	10.50	38.80
7	#10380.00	58.2 PK	68.3	-10.1	1.00 V	48	8.70	49.50

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 radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 46	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	TESTED BY	Alan Wu
TEST MODE	A1		

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	5150.00	56.5 PK	74.0	-17.5	1.00 H	40	17.90	38.60
2	5150.00	43.3 AV	54.0	-10.7	1.00 H	40	4.70	38.60
3	*5230.00	99.7 PK			1.01 H	49	61.10	38.60
4	*5230.00	89.3 AV			1.01 H	49	50.70	38.60
5	5360.00	57.7 PK	74.0	-16.3	1.00 H	9	18.90	38.80
6	5360.00	46.2 AV	54.0	-7.8	1.00 H	9	7.40	38.80
7	#10460.00	59.5 PK	68.3	-8.8	1.00 H	58	9.90	49.60
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	5150.00	57.8 PK	74.0	-16.2	1.05 V	359	19.20	38.60
2	5150.00	44.9 AV	54.0	-9.1	1.05 V	359	6.30	38.60
3	*5230.00	109.3 PK			1.12 V	1	70.70	38.60
4	*5230.00	99.3 AV			1.12 V	1	60.70	38.60
5	5360.00	58.9 PK	74.0	-15.1	1.00 V	8	20.10	38.80
6	5360.00	47.5 AV	54.0	-6.5	1.00 V	8	8.70	38.80
7	#10460.00	58.7 PK	68.3	-9.6	1.00 V	49	9.10	49.60

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.
6. "#": The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 38	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	TESTED BY	Alan Wu
TEST MODE	B1		

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	5150.00	63.2 PK	74.0	-10.8	1.06 H	330	24.60	38.60
2	5150.00	46.6 AV	54.0	-7.4	1.06 H	330	8.00	38.60
3	*5190.00	99.9 PK			1.05 H	330	61.30	38.60
4	*5190.00	89.1 AV			1.05 H	330	50.50	38.60
5	5360.00	57.7 PK	74.0	-16.3	1.00 H	328	18.90	38.80
6	5360.00	49.8 AV	54.0	-4.2	1.00 H	328	11.00	38.80
7	5400.00	58.5 PK	74.0	-15.5	1.07 H	5	19.60	38.90
8	5400.00	48.6 AV	54.0	-5.4	1.07 H	5	9.70	38.90
9	#10380.00	59.2 PK	68.3	-9.1	1.00 H	70	9.70	49.50

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	5150.00	71.7 PK	74.0	-2.3	1.00 V	20	33.10	38.60
2	5150.00	52.4 AV	54.0	-1.6	1.00 V	20	13.80	38.60
3	*5190.00	112.0 PK			1.00 V	10	73.40	38.60
4	*5190.00	100.6 AV			1.00 V	10	62.00	38.60
5	5360.00	61.7 PK	74.0	-12.3	1.08 V	21	22.90	38.80
6	5360.00	52.1 AV	54.0	-1.9	1.08 V	21	13.30	38.80
7	5400.00	60.5 PK	74.0	-13.5	1.09 V	3	21.60	38.90
8	5400.00	50.6 AV	54.0	-3.4	1.09 V	3	11.70	38.90
9	#10380.00	58.4 PK	68.3	-9.9	1.00 V	40	8.90	49.50

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 radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 46	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	TESTED BY	Alan Wu
TEST MODE	B1		

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	5150.00	55.4 PK	74.0	-18.6	1.20 H	18	16.80	38.60
2	5150.00	42.6 AV	54.0	-11.4	1.20 H	18	4.00	38.60
3	*5230.00	100.6 PK			1.20 H	18	62.00	38.60
4	*5230.00	89.8 AV			1.20 H	18	51.20	38.60
5	5360.00	57.5 PK	74.0	-16.5	1.00 H	328	18.70	38.80
6	5360.00	49.4 AV	54.0	-4.6	1.00 H	328	10.60	38.80
7	5400.00	56.2 PK	74.0	-17.8	1.07 H	5	17.30	38.90
8	5400.00	48.3 AV	54.0	-5.7	1.07 H	5	9.40	38.90
9	#10460.00	59.7 PK	68.3	-8.6	1.00 H	91	10.10	49.60
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	5150.00	58.6 PK	74.0	-15.4	1.00 V	347	20.00	38.60
2	5150.00	46.4 AV	54.0	-7.6	1.00 V	347	7.80	38.60
3	*5230.00	112.5 PK			1.00 V	347	73.90	38.60
4	*5230.00	101.4 AV			1.00 V	347	62.80	38.60
5	5360.00	61.8 PK	74.0	-12.2	1.08 V	21	23.00	38.80
6	5360.00	52.4 AV	54.0	-1.6	1.08 V	21	13.60	38.80
7	5400.00	59.8 PK	74.0	-14.2	1.09 V	6	20.90	38.90
8	5400.00	51.0 AV	54.0	-3.0	1.09 V	6	12.10	38.90
9	#10460.00	58.9 PK	68.3	-9.4	1.00 V	61	9.30	49.60

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.
6. “#”: The radiated frequency is out the restricted band.



A D T

BELOW 1GHz WORST-CASE DATA : 802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 40	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Wu
TEST MODE	A1		

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	208.77	35.0 QP	43.5	-8.5	1.24 H	148	23.70	11.30
2	374.04	34.9 QP	46.0	-11.1	1.00 H	6	18.00	16.90
3	424.59	31.7 QP	46.0	-14.3	1.99 H	327	13.60	18.10
4	570.41	27.9 QP	46.0	-18.1	1.24 H	0	6.40	21.50
5	624.85	31.6 QP	46.0	-14.4	1.24 H	15	9.30	22.30
6	961.21	39.4 QP	54.0	-14.6	1.24 H	303	12.00	27.40

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	33.79	32.6 QP	40.0	-7.4	1.50 V	327	19.90	12.70
2	208.77	30.4 QP	43.5	-13.1	1.00 V	179	19.10	11.30
3	374.04	34.4 QP	46.0	-11.6	1.50 V	179	17.50	16.90
4	414.87	34.3 QP	46.0	-11.7	1.24 V	191	16.40	17.90
5	500.42	34.3 QP	46.0	-11.7	1.00 V	147	14.30	20.00
6	624.85	31.6 QP	46.0	-14.4	1.24 V	51	9.30	22.30

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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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 40	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Wu
TEST MODE	A2		

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	107.67	31.6 QP	43.5	-11.9	1.74 H	245	21.20	10.40
2	274.88	31.7 QP	46.0	-14.3	1.00 H	120	17.70	14.00
3	395.43	31.4 QP	46.0	-14.6	1.99 H	201	14.00	17.40
4	550.97	32.4 QP	46.0	-13.6	1.24 H	213	11.40	21.00
5	675.40	30.5 QP	46.0	-15.5	1.00 H	155	7.70	22.80
6	799.84	31.5 QP	46.0	-14.5	1.49 H	15	5.90	25.60

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	37.69	35.5 QP	40.0	-4.5	1.77 V	24	22.20	13.30
2	70.73	30.8 QP	40.0	-9.2	1.25 V	188	18.70	12.10
3	107.67	29.5 QP	43.5	-14.0	1.00 V	77	19.10	10.40
4	360.43	30.6 QP	46.0	-15.4	1.50 V	80	14.10	16.50
5	599.58	32.0 QP	46.0	-14.0	1.50 V	80	9.90	22.10
6	799.84	31.6 QP	46.0	-14.4	1.00 V	117	6.00	25.60

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.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 40	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Wu
TEST MODE	B1		

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	125.17	32.5 QP	43.5	-11.0	1.99 H	241	20.20	12.30
2	249.60	33.9 QP	46.0	-12.1	1.00 H	226	20.90	13.00
3	374.04	39.9 QP	46.0	-6.1	1.00 H	299	23.00	16.90
4	624.85	42.5 QP	46.0	-3.5	1.24 H	341	20.20	22.30
5	751.23	34.1 QP	46.0	-11.9	1.00 H	300	9.70	24.40
6	961.21	41.6 QP	54.0	-12.4	1.24 H	298	14.20	27.40

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	107.67	30.1 QP	43.5	-13.4	1.00 V	86	19.70	10.40
2	249.60	29.7 QP	46.0	-16.3	1.99 V	133	16.70	13.00
3	374.04	40.6 QP	46.0	-5.4	1.00 V	228	23.70	16.90
4	624.85	37.8 QP	46.0	-8.2	1.00 V	250	15.50	22.30
5	751.23	33.3 QP	46.0	-12.7	1.00 V	208	8.90	24.40
6	961.21	45.2 QP	54.0	-8.8	1.00 V	284	17.80	27.40

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.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 40	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Wu
TEST MODE	B2		

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	125.17	37.7 QP	43.5	-5.8	1.49 H	256	25.40	12.30
2	249.60	31.6 QP	46.0	-14.4	1.00 H	226	18.60	13.00
3	374.04	34.5 QP	46.0	-11.5	1.00 H	147	17.60	16.90
4	625.01	42.7 QP	46.0	-3.3	1.24 H	173	20.30	22.40
5	751.23	38.0 QP	46.0	-8.0	1.00 H	145	13.60	24.40
6	875.67	37.7 QP	46.0	-8.3	1.49 H	194	11.20	26.50
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	64.90	33.6 QP	40.0	-6.4	1.00 V	5	20.70	12.90
2	125.17	36.2 QP	43.5	-7.3	1.00 V	61	23.90	12.30
3	374.04	36.6 QP	46.0	-9.4	1.00 V	164	19.70	16.90
4	624.85	37.2 QP	46.0	-8.8	1.50 V	84	14.90	22.30
5	751.23	33.0 QP	46.0	-13.0	1.25 V	111	8.60	24.40
6	875.67	37.9 QP	46.0	-8.1	1.00 V	54	11.40	26.50

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.

4.2 CONDUCTED EMISSION MEASUREMENT

4.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

- NOTE:**
1. The lower limit shall apply at the transition frequencies.
 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.
 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	100291	Nov. 23, 2011	Nov. 22, 2012
RF signal cable Woken	5D-FB	Cable-HYC01-01	Dec. 29, 2011	Dec. 28, 2012
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100312	Jul. 07, 2011	Jul. 06, 2012
LISN ROHDE & SCHWARZ (EUT)	ESH3-Z5	835239/001	Feb. 07, 2012	Feb. 06, 2013
Software ADT	BV ADT_Cond_ V7.3.7.3	NA	NA	NA

- NOTE:**
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The test was performed in HwaYa Shielded Room 1.
 3. The VCCI Site Registration No. is C-2040.

4.2.3 TEST PROCEDURES

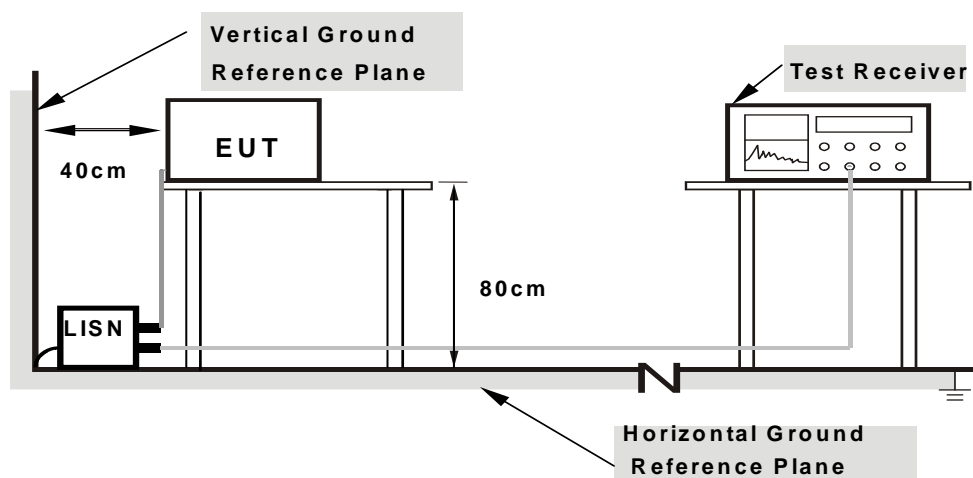
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling 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 cm 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

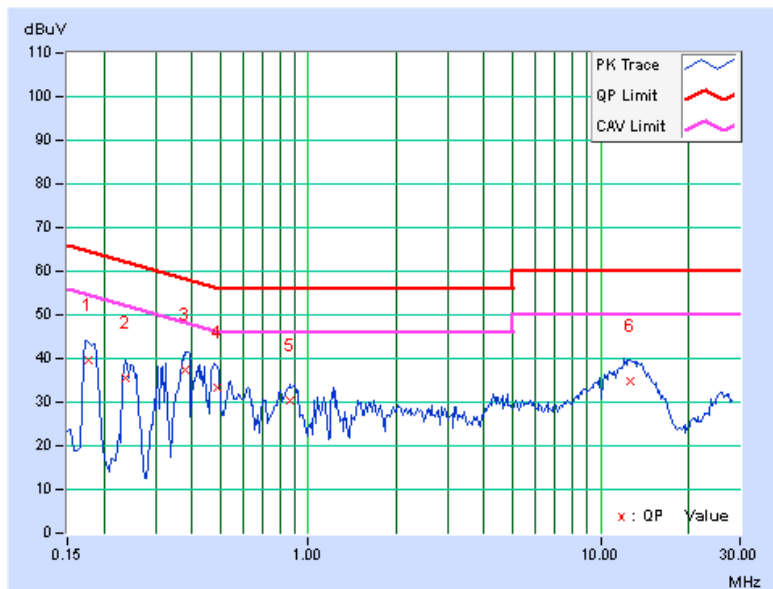
CONDUCTED WORST-CASE DATA : 802.11a

PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	A1		

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	0.17734	0.19	39.60	26.11	39.79	26.30	64.61	54.61	-24.82	-28.31
2	0.23594	0.22	35.50	19.89	35.72	20.11	62.24	52.24	-26.52	-32.13
3	0.38047	0.17	37.29	24.37	37.46	24.54	58.27	48.27	-20.81	-23.73
4	0.48594	0.17	33.07	19.21	33.24	19.38	56.24	46.24	-23.00	-26.86
5	0.86875	0.20	30.28	16.69	30.48	16.89	56.00	46.00	-25.52	-29.11
6	12.56641	0.65	34.35	27.20	35.00	27.85	60.00	50.00	-25.00	-22.15

REMARKS:

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

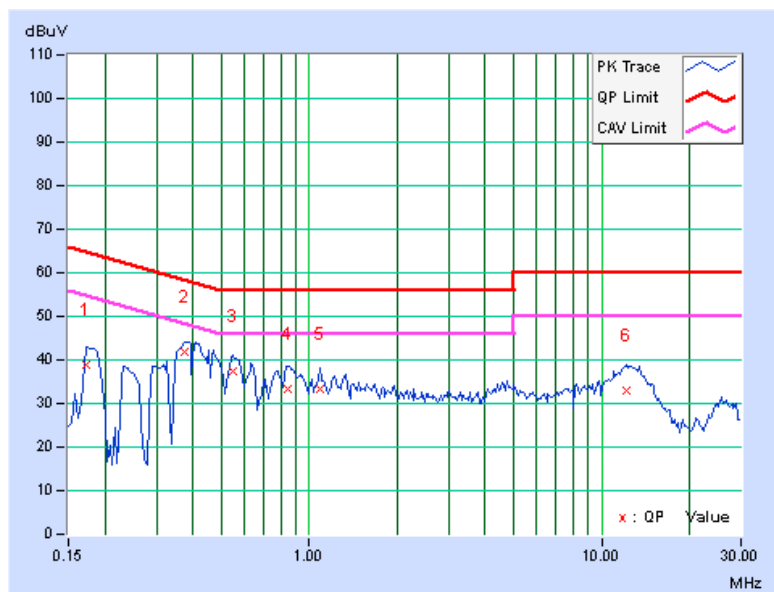


PHASE	Line 2	6dB BANDWIDTH	9kHz
TEST MODE	A1		

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	0.17344	0.27	38.74	24.95	39.01	25.22	64.79	54.79	-25.78	-29.57
2	0.37266	0.26	41.48	31.52	41.74	31.78	58.44	48.44	-16.70	-16.66
3	0.54844	0.26	37.20	25.75	37.46	26.01	56.00	46.00	-18.54	-19.99
4	0.84922	0.29	33.08	20.78	33.37	21.07	56.00	46.00	-22.63	-24.93
5	1.09375	0.30	33.14	21.94	33.44	22.24	56.00	46.00	-22.56	-23.76
6	12.18750	0.72	32.08	24.37	32.80	25.09	60.00	50.00	-27.20	-24.91

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.





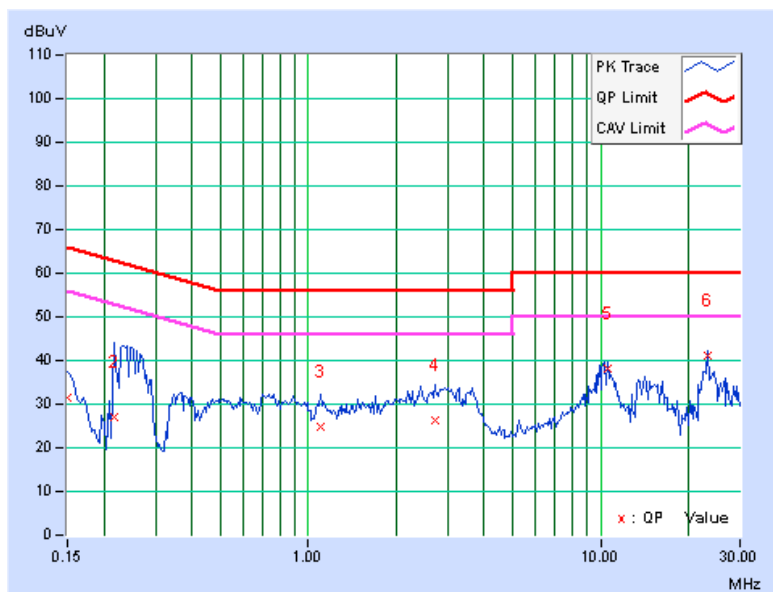
A D T

PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	A2		

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	0.15000	0.11	31.47	20.48	31.58	20.59	66.00	56.00	-34.42	-35.41
2	0.21641	0.13	26.88	8.38	27.01	8.51	62.96	52.96	-35.95	-44.45
3	1.10156	0.19	24.57	17.74	24.76	17.93	56.00	46.00	-31.24	-28.07
4	2.70703	0.26	25.96	19.63	26.22	19.89	56.00	46.00	-29.78	-26.11
5	10.60938	0.67	37.47	35.20	38.14	35.87	60.00	50.00	-21.86	-14.13
6	23.12891	1.32	39.95	37.89	41.27	39.21	60.00	50.00	-18.73	-10.79

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.





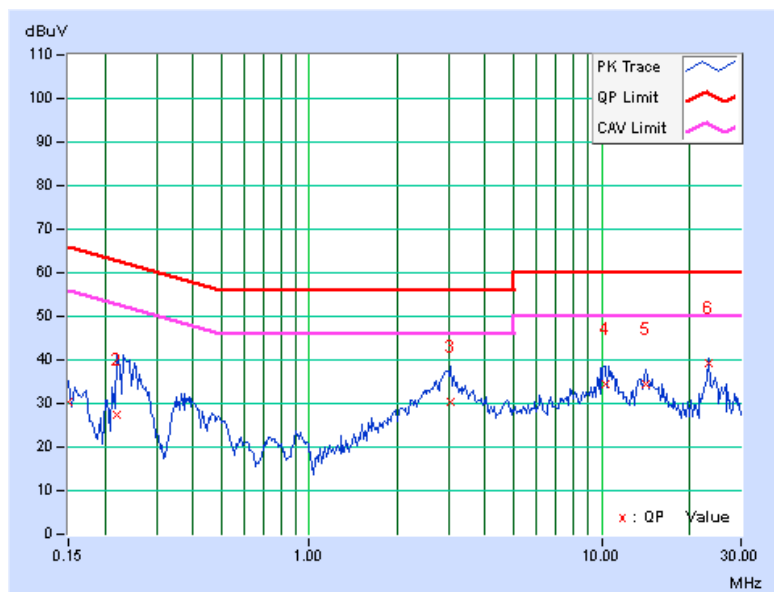
A D T

PHASE	Line 2	6dB BANDWIDTH	9kHz
TEST MODE	A2		

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	0.15000	0.12	30.25	20.10	30.37	20.22	66.00	56.00	-35.63	-35.78
2	0.22031	0.14	27.11	12.14	27.25	12.28	62.81	52.81	-35.56	-40.53
3	3.03906	0.29	30.18	22.62	30.47	22.91	56.00	46.00	-25.53	-23.09
4	10.36719	0.60	34.02	32.54	34.62	33.14	60.00	50.00	-25.38	-16.86
5	14.15234	0.75	33.59	30.68	34.34	31.43	60.00	50.00	-25.66	-18.57
6	23.12891	1.08	38.22	36.16	39.30	37.24	60.00	50.00	-20.70	-12.76

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.





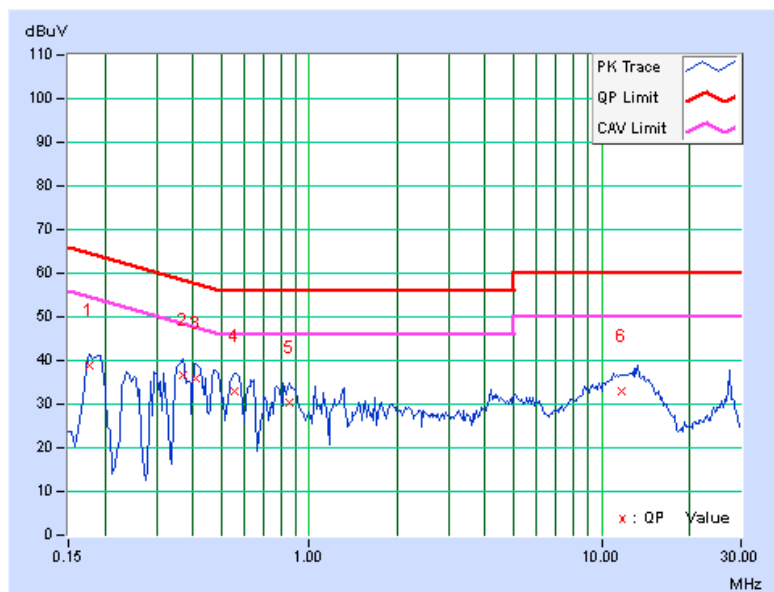
A D T

PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	B1		

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	0.17734	0.19	38.70	25.21	38.89	25.40	64.61	54.61	-25.72	-29.21
2	0.36875	0.17	36.50	23.66	36.67	23.83	58.53	48.53	-21.86	-24.70
3	0.40781	0.16	35.88	20.56	36.04	20.72	57.69	47.69	-21.65	-26.97
4	0.55234	0.17	32.80	17.93	32.97	18.10	56.00	46.00	-23.03	-27.90
5	0.85703	0.20	30.02	15.57	30.22	15.77	56.00	46.00	-25.78	-30.23
6	11.68750	0.62	32.17	24.53	32.79	25.15	60.00	50.00	-27.21	-24.85

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.





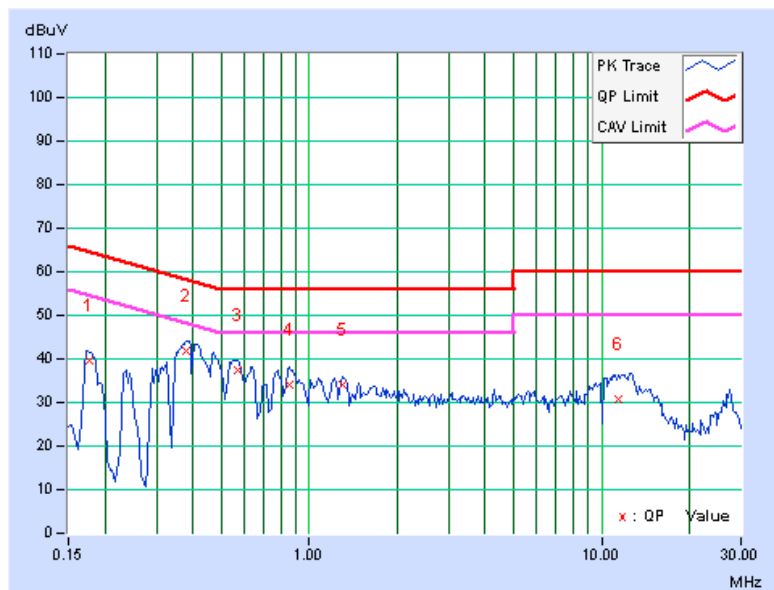
A D T

PHASE	Line 2	6dB BANDWIDTH	9kHz
TEST MODE	B1		

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	0.17734	0.28	39.17	28.75	39.45	29.03	64.61	54.61	-25.16	-25.58
2	0.38047	0.26	41.72	31.40	41.98	31.66	58.27	48.27	-16.29	-16.61
3	0.56797	0.26	37.25	24.64	37.51	24.90	56.00	46.00	-18.49	-21.10
4	0.85313	0.29	33.74	20.83	34.03	21.12	56.00	46.00	-21.97	-24.88
5	1.30469	0.31	33.61	22.38	33.92	22.69	56.00	46.00	-22.08	-23.31
6	11.47656	0.70	29.98	21.94	30.68	22.64	60.00	50.00	-29.32	-27.36

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.





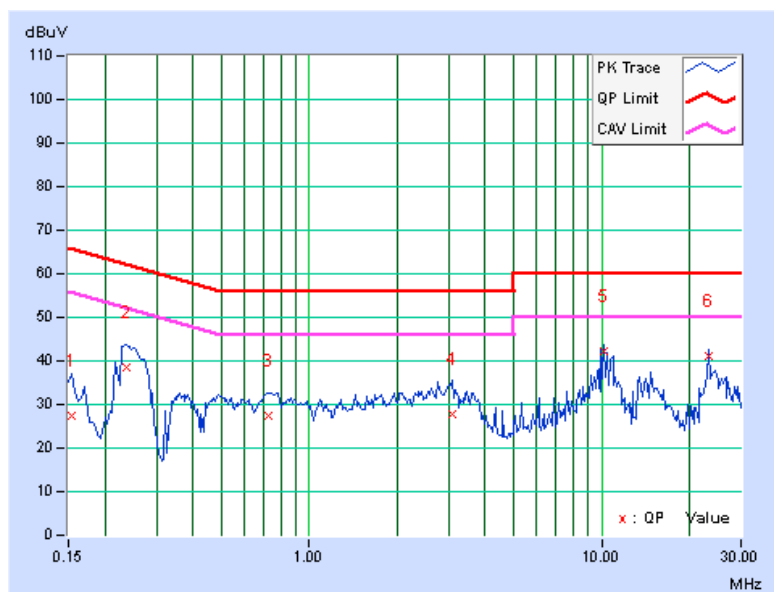
A D T

PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	B2		

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	0.15391	0.12	27.22	21.50	27.34	21.62	65.79	55.79	-38.45	-34.17
2	0.23594	0.13	38.24	24.85	38.37	24.98	62.24	52.24	-23.87	-27.26
3	0.72813	0.16	27.16	20.11	27.32	20.27	56.00	46.00	-28.68	-25.73
4	3.08203	0.28	27.58	20.78	27.86	21.06	56.00	46.00	-28.14	-24.94
5	10.17969	0.65	41.61	41.13	42.26	41.78	60.00	50.00	-17.74	-8.22
6	23.12891	1.32	39.80	37.78	41.12	39.10	60.00	50.00	-18.88	-10.90

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.





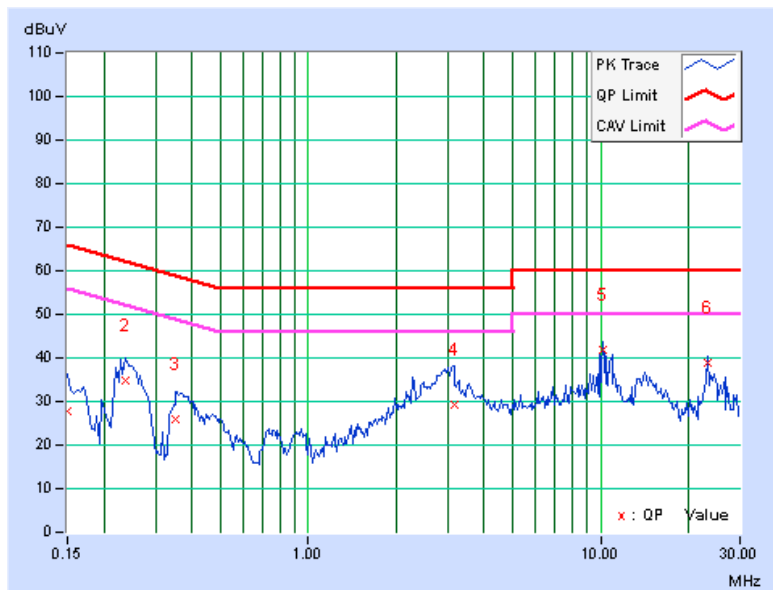
A D T

PHASE	Line 2	6dB BANDWIDTH	9kHz
TEST MODE	B2		

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	0.15000	0.12	27.78	20.73	27.90	20.85	66.00	56.00	-38.10	-35.15
2	0.23594	0.14	34.72	23.97	34.86	24.11	62.24	52.24	-27.38	-28.13
3	0.35313	0.15	25.71	16.41	25.86	16.56	58.89	48.89	-33.03	-32.33
4	3.14844	0.30	28.83	21.92	29.13	22.22	56.00	46.00	-26.87	-23.78
5	10.18359	0.60	41.12	40.84	41.72	41.44	60.00	50.00	-18.28	-8.56
6	23.12891	1.08	37.94	35.98	39.02	37.06	60.00	50.00	-20.98	-12.94

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. PHOTOGRAPHS OF THE TEST CONFIGURATION

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



6. INFORMATION ON THE TESTING LABORATORIES

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

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

Linko EMC/RF Lab:

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF Lab:

Tel: 886-3-5935343

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Tel: 886-3-3183232

Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com

Web Site: www.adt.com.tw

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

7. APPENDIX A - 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---