



FCC TEST REPORT (15.407)

REPORT NO.: RF130412C14-5

MODEL NO.: K009

FCC ID: MSQK009

RECEIVED: Apr. 12, 2013

TESTED: May 10, 2013 ~ May 16, 2013

ISSUED: May 28, 2013

APPLICANT: ASUSTek COMPUTER INC.

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

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF130412C14-5	Original release	May 28, 2013

1. CERTIFICATION

PRODUCT: ASUS Pad
MODEL NO.: K009
BRAND: ASUS
APPLICANT: ASUSTek COMPUTER INC.
TESTED: May 10, 2013 ~ May 16, 2013
TEST SAMPLE: Production Unit
STANDARDS: **FCC Part 15, Subpart E (Section 15.407)**
ANSI C63.10-2009

The above equipment (model: K009) 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** : May 28, 2013

Vera Huang / Specialist

APPROVED BY : Sam chen , **DATE** : May 28, 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 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 -9.46dB at 13.12891MHz.
15.407(b/1/2/3) (b)(6)	Spurious Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -3.14dB at 5150MHz.
15.407(a/1/2)	Peak Transmit Power	PASS	Meet the requirement of limit.
15.407(a)(6)	Peak Power Excursion	PASS	Meet the requirement of limit.
15.407(a/1/2)	Peak Power Spectral Density	PASS	Meet the requirement of limit.
15.407(g)	Frequency Stability	PASS	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	No antenna connector is used.

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 $k = 2$.



3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	ASUS Pad
MODEL NO.	K009
POWER SUPPLY	5.2Vdc (adapter or host equipment) 3.8Vdc (Li-ion battery)
MODULATION TYPE	256QAM, 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 MCS7
OPERATING FREQUENCY	5180 ~ 5240MHz, 5260 ~ 5320MHz & 5500 ~ 5700MHz
NUMBER OF CHANNEL	5180 ~ 5240MHz: 4 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz) 5260 ~ 5320MHz: 4 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz) 5500 ~ 5700MHz: 8 for 802.11a, 802.11n (20MHz) 3 for 802.11n (40MHz)
OUTPUT POWER	28.314mW for 5180 ~ 5240MHz 29.107mW for 5260 ~ 5320MHz 33.037mW for 5500 ~ 5700MHz
ANTENNA TYPE	PCB antenna with 0.84dBi gain (5180 ~ 5240MHz) PCB antenna with 0.88dBi gain (5260 ~ 5320MHz) PCB antenna with 0.68dBi gain (5500 ~ 5700MHz)
ANTENNA CONNECTOR	NA
DATA CABLE	Refer to Note as below
I/O PORTS	Refer to user's manual
ACCESSORY DEVICES	Refer to Note as below

NOTE:

1. The EUT has following accessories.

ITEM	BRAND	MODEL	DESCRIPTION
AC Adapter 1	ASUS	PSM06A-050Q	I/P: 100-240Vac, 50-60Hz, 0.25A O/P: 5.2Vdc, 1.35A
AC Adapter 2	ASUS	PA-1070-07	I/P: 100-240Vac, 50-60Hz, 0.25A O/P: 5.2Vdc, 1.35A
Li-ion Battery	ASUS	C11P1303	Rating: 3.8Vdc, 15Wh
USB cable	ASUS	AA78030	0.9m non-shielded cable w/o ferrite core
LCD Panel	JDI	LT070ME05000	--
Video Camera (Front)	Liteon	12P2SF181	1.2M
Video Camera (Rear)	Chicony	CJAC53220003870LH	5M
WWAN Module	Qualcomm	WTR1605L	--
WLAN Module	Qualcomm	WCN3660	--
CPU	Qualcomm	APQ-8064	1067 NSP (1067 Pin)
eMMC	Hynix	FLASH HYNIX H26M64003DQR 32GB	32G
Mainboard	ASUS	ME571KL MAIN BOARD	--

2. The EUT provides one completed transmitter and one receiver.

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

3. The above EUT information is declared by the manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.



3.2 DESCRIPTION OF TEST MODES

FOR 5180 ~ 5240MHz

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

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

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
38	5190 MHz	46	5230 MHz

FOR 5260 ~ 5320MHz

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
52	5260 MHz	60	5300 MHz
56	5280 MHz	64	5320 MHz

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
54	5270 MHz	62	5310 MHz

FOR 5500 ~ 5700MHz

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
100	5500MHz	116	5580MHz
104	5520MHz	132	5660MHz
108	5540MHz	136	5680MHz
112	5560MHz	140	5700MHz

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
102	5510MHz	134	5670MHz
110	5550MHz		



3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

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

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

NOTE: The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Y-plane**.

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.

MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	5180-5240	36 to 48	36, 44, 48	OFDM	BPSK	6.0
802.11n (20MHz)		36 to 48	36, 44, 48	OFDM	BPSK	6.5
802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	13.5
802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	13.5
802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6.0
802.11n (20MHz)		100 to 140	100, 116, 140	OFDM	BPSK	6.5
802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	13.5

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.

MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	5500-5700	100 to 140	116	OFDM	BPSK	6.5



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.

MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	5500-5700	100 to 140	116	OFDM	BPSK	6.5

BANDEDGE MEASUREMENT:

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

MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	5180-5240	36 to 48	36, 48	OFDM	BPSK	6.0
802.11n (20MHz)		36 to 48	36, 48	OFDM	BPSK	6.5
802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	13.5
802.11a	5260-5320	52 to 64	52, 64	OFDM	BPSK	6.0
802.11n (20MHz)		52 to 64	52, 64	OFDM	BPSK	6.5
802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	13.5
802.11a	5500-5700	100 to 140	100, 140	OFDM	BPSK	6.0
802.11n (20MHz)		100 to 140	100, 140	OFDM	BPSK	6.5
802.11n (40MHz)		102 to 134	102, 134	OFDM	BPSK	13.5



ANTENNA PORT CONDUCTED MEASUREMENT:

- This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- 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.

MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	5180-5240	36 to 48	36, 44, 48	OFDM	BPSK	6.0
802.11n (20MHz)		36 to 48	36, 44, 48	OFDM	BPSK	6.5
802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	13.5
802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	13.5
802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6.0
802.11n (20MHz)		100 to 140	100, 116, 140	OFDM	BPSK	6.5
802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	13.5

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE≥1G	25deg. C, 65%RH	120Vac, 60Hz	Kay Wu
RE<1G	25deg. C, 65%RH	120Vac, 60Hz	Johnson Liao
PLC	25deg. C, 65%RH	120Vac, 60Hz	Anson Lin
APCM	25deg. C, 65%RH	120Vac, 60Hz	Phoenix Chen

3.3 DESCRIPTION OF SUPPORT UNITS

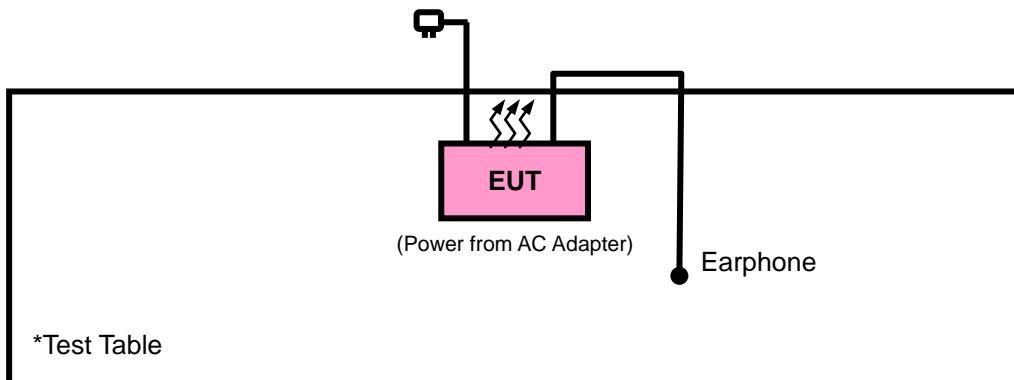
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	EARPHONE	Acon	CW-010M.V	N/A	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	N/A

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

3.3.1 CONFIGURATION OF SYSTEM UNDER TEST



3.4 DUTY CYCLE OF TEST SIGNAL

If duty cycle is < 98%, duty factor shall be considered.

802.11a: Duty cycle = 1.361/1.562 = 0.871, Duty factor = $10 * \log(1/0.871) = 0.60$

802.11n (20MHz): Duty cycle = 1.265/1.474 = 0.859, Duty factor = $10 * \log(1/0.859) = 0.66$

802.11n (40MHz): Duty cycle = 0.617/0.745 = 0.828, Duty factor = $10 * \log(1/0.828) = 0.82$



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)

ANSI C63.10-2009

KDB 789033 D01 General UNII Test Procedures v01r02

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

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

APPLICABLE TO	LIMIT	
	FIELD STRENGTH AT 3m (dB μ V/m)	
	PK	AV
	74	54
√	EIRP LIMIT (dBm)	EQUIVALENT FIELD STRENGTH AT 3m (dB μ V/m)
	PK	PK
	-27	68.3

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

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



4.1.3 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCI	100424	Aug. 21, 2012	Aug. 20, 2013
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. 19, 2012	Oct. 18, 2013
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	250130/4	Oct. 19, 2012	Oct. 18, 2013
RF signal cable Worken	RG-213	NA	Dec. 29, 2012	Dec. 28, 2013
Software	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

- 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.

4.1.4 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.

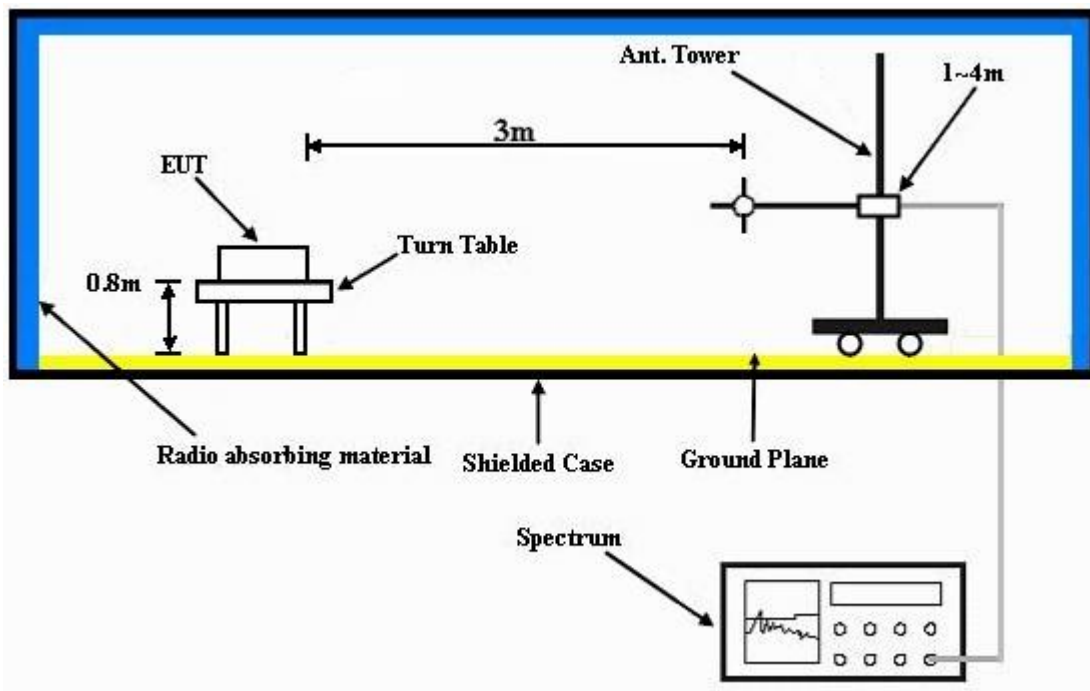
NOTE:

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

- Placed the EUT on a testing table.
- Use the software to control the EUT under transmission condition continuously at specific channel frequency.



4.1.8 TEST RESULTS

ABOVE 1GHz DATA:

802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 36	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
5150	48.54	50.84	54	-5.46	34.46	8.13	44.89	144	81	Average
5150	58.74	61.04	74	-15.26	34.46	8.13	44.89	144	81	Peak
5180	93.39	95.7			34.47	8.16	44.94	144	81	Average
5180	99.69	102			34.47	8.16	44.94	144	81	Peak
5452	36.99	38.99	54	-17.01	34.5	8.51	45.01	144	81	Average
5452	55.6	57.6	74	-18.4	34.5	8.51	45.01	144	81	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
5150	48.68	50.98	54	-5.32	34.46	8.13	44.89	112	283	Average
5150	61.53	63.83	74	-12.47	34.46	8.13	44.89	112	283	Peak
5180	95.45	97.76			34.47	8.16	44.94	112	283	Average
5180	102.2	104.51			34.47	8.16	44.94	112	283	Peak
5366	36.47	38.61	54	-17.53	34.5	8.38	45.02	112	283	Average
5366	55.33	57.47	74	-18.67	34.5	8.38	45.02	112	283	Peak

REMARKS: 5180MHz: Fundamental frequency.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 44	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
5048	36.74	39.21	54	-17.26	34.42	8	44.89	144	82	Average
5048	55.67	58.14	74	-18.33	34.42	8	44.89	144	82	Peak
5220	93.99	96.25			34.49	8.22	44.97	144	82	Average
5220	100.54	102.8			34.49	8.22	44.97	144	82	Peak
5428	36.57	38.62	54	-17.43	34.5	8.48	45.03	144	82	Average
5428	56.17	58.22	74	-17.83	34.5	8.48	45.03	144	82	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
5052	35.89	38.36	54	-18.11	34.42	8	44.89	110	285	Average
5052	55.2	57.67	74	-18.8	34.42	8	44.89	110	285	Peak
5220	96.39	98.65			34.49	8.22	44.97	110	285	Average
5220	103.26	105.52			34.49	8.22	44.97	110	285	Peak
5438	37.07	39.11	54	-16.93	34.5	8.48	45.02	110	285	Average
5438	55.75	57.79	74	-18.25	34.5	8.48	45.02	110	285	Peak

REMARKS: 5220MHz: Fundamental frequency.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 48	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
5062	36.91	39.31	54	-17.09	34.43	8.03	44.86	145	81	Average
5062	55.71	58.11	74	-18.29	34.43	8.03	44.86	145	81	Peak
5240	93.91	96.13			34.49	8.26	44.97	145	81	Average
5240	101.5	103.72			34.49	8.26	44.97	145	81	Peak
5430	36.42	38.46	54	-17.58	34.5	8.48	45.02	145	81	Average
5430	56.18	58.22	74	-17.82	34.5	8.48	45.02	145	81	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
5028	35.82	38.35	54	-18.18	34.41	7.97	44.91	110	283	Average
5028	54.68	57.21	74	-19.32	34.41	7.97	44.91	110	283	Peak
5240	96.49	98.71			34.49	8.26	44.97	110	283	Average
5240	103.42	105.64			34.49	8.26	44.97	110	283	Peak
5456	37.11	39.11	54	-16.89	34.5	8.51	45.01	110	283	Average
5456	55.81	57.81	74	-18.19	34.5	8.51	45.01	110	283	Peak

REMARKS: 5240MHz: Fundamental frequency.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
5138	36.32	38.6	54	-17.68	34.45	8.13	44.86	115	143	Average
5138	56.06	58.34	74	-17.94	34.45	8.13	44.86	115	143	Peak
5260	90.84	93.06			34.5	8.26	44.98	115	143	Average
5260	98.43	100.65			34.5	8.26	44.98	115	143	Peak
5442	36.46	38.5	54	-17.54	34.5	8.48	45.02	115	143	Average
5442	57.11	59.15	74	-16.89	34.5	8.48	45.02	115	143	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
5044	35.96	38.43	54	-18.04	34.42	8	44.89	122	108	Average
5044	55.38	57.85	74	-18.62	34.42	8	44.89	122	108	Peak
5260	96.92	99.14			34.5	8.26	44.98	122	108	Average
5260	104.72	106.94			34.5	8.26	44.98	122	108	Peak
5456	39.29	41.29	54	-14.71	34.5	8.51	45.01	122	108	Average
5456	56.74	58.74	74	-17.26	34.5	8.51	45.01	122	108	Peak

REMARKS: 5260MHz: Fundamental frequency.



A D T

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

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
5044	39.07	41.54	54	-14.93	34.42	8	44.89	116	143	Average
5044	55.44	57.91	74	-18.56	34.42	8	44.89	116	143	Peak
5300	91.36	93.52			34.5	8.32	44.98	116	143	Average
5300	98.45	100.61			34.5	8.32	44.98	116	143	Peak
5366	39.18	41.32	54	-14.82	34.5	8.38	45.02	116	143	Average
5366	56.39	58.53	74	-17.61	34.5	8.38	45.02	116	143	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
5116	35.98	38.26	54	-18.02	34.45	8.1	44.83	115	100	Average
5116	55.47	57.75	74	-18.53	34.45	8.1	44.83	115	100	Peak
5300	97.09	99.25			34.5	8.32	44.98	115	100	Average
5300	105.03	107.19			34.5	8.32	44.98	115	100	Peak
5458	44.25	46.25	54	-9.75	34.5	8.51	45.01	115	100	Average
5458	57.22	59.22	74	-16.78	34.5	8.51	45.01	115	100	Peak

REMARKS: 5300MHz: Fundamental frequency.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
5074	35.9	38.27	54	-18.1	34.43	8.03	44.83	116	143	Average
5074	56.24	58.61	74	-17.76	34.43	8.03	44.83	116	143	Peak
5320	90.36	92.5			34.5	8.35	44.99	116	143	Average
5320	97.46	99.6			34.5	8.35	44.99	116	143	Peak
5350	43.41	45.54	54	-10.59	34.5	8.38	45.01	116	143	Average
5350	60.72	62.85	74	-13.28	34.5	8.38	45.01	116	143	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
5078	36.28	38.65	54	-17.72	34.43	8.03	44.83	115	100	Average
5078	55.76	58.13	74	-18.24	34.43	8.03	44.83	115	100	Peak
5320	97.1	99.24			34.5	8.35	44.99	115	100	Average
5320	104.85	106.99			34.5	8.35	44.99	115	100	Peak
5350	49.98	52.11	54	-4.02	34.5	8.38	45.01	115	100	Average
5350	65.23	67.36	74	-8.77	34.5	8.38	45.01	115	100	Peak

REMARKS: 5320MHz: Fundamental frequency.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
5436	40.68	42.72	54	-13.32	34.5	8.48	45.02	112	57	Average
5436	56.52	58.56	74	-17.48	34.5	8.48	45.02	112	57	Peak
5470	59.57	61.56	68.3	-8.73	34.5	8.51	45	112	57	Peak
5500	89.31	91.22			34.5	8.57	44.98	112	57	Average
5500	97.35	99.26			34.5	8.57	44.98	112	57	Peak
5725	55.15	56.6	68.3	-13.15	34.67	8.65	44.77	112	57	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
5460	45.17	47.17	54	-8.83	34.5	8.51	45.01	112	101	Average
5460	59.07	61.07	74	-14.93	34.5	8.51	45.01	112	101	Peak
5470	65.12	67.11	68.3	-3.18	34.5	8.51	45	112	101	Peak
5500	97.41	99.32			34.5	8.57	44.98	112	101	Average
5500	106.04	107.95			34.5	8.57	44.98	112	101	Peak
5725	56.16	57.61	68.3	-12.14	34.67	8.65	44.77	112	101	Peak

REMARKS:

- 5500MHz: Fundamental frequency.
- 5470MHz & 5725MHz: Out of restricted band



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 116	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
5428	36.35	38.4	54	-17.65	34.5	8.48	45.03	112	57	Average
5428	56.96	59.01	74	-17.04	34.5	8.48	45.03	112	57	Peak
5470	55.54	57.53	68.3	-12.76	34.5	8.51	45	112	57	Peak
5580	89.31	91.03			34.57	8.6	44.89	112	57	Average
5580	96.13	97.85			34.57	8.6	44.89	112	57	Peak
5725	54.53	55.98	68.3	-13.77	34.67	8.65	44.77	112	57	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
5454	38.66	40.66	54	-15.34	34.5	8.51	45.01	112	86	Average
5454	56.99	58.99	74	-17.01	34.5	8.51	45.01	112	86	Peak
5470	54.04	56.03	68.3	-14.26	34.5	8.51	45	112	86	Peak
5580	97.58	99.3			34.57	8.6	44.89	112	86	Average
5580	105.24	106.96			34.57	8.6	44.89	112	86	Peak
5725	55.05	56.5	68.3	-13.25	34.67	8.65	44.77	112	86	Peak

REMARKS:

1. 5580MHz: Fundamental frequency.
2. 5470MHz & 5725MHz: Out of restricted band



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
5418	36.02	38.11	54	-17.98	34.5	8.44	45.03	143	85	Average
5418	56.03	58.12	74	-17.97	34.5	8.44	45.03	143	85	Peak
5470	54.76	56.75	68.3	-13.54	34.5	8.51	45	143	85	Peak
5700	88.04	89.53			34.66	8.64	44.79	143	85	Average
5700	95.66	97.15			34.66	8.64	44.79	143	85	Peak
5725	63.57	65.02	68.3	-4.73	34.67	8.65	44.77	143	85	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
5364	35.99	38.13	54	-18.01	34.5	8.38	45.02	135	284	Average
5364	55.93	58.07	74	-18.07	34.5	8.38	45.02	135	284	Peak
5470	54.93	56.92	68.3	-13.37	34.5	8.51	45	135	284	Peak
5700	95.47	96.96			34.66	8.64	44.79	135	284	Average
5700	103.34	104.83			34.66	8.64	44.79	135	284	Peak
5725	64.84	66.29	68.3	-3.46	34.67	8.65	44.77	135	284	Peak

REMARKS:

- 5700MHz: Fundamental frequency.
- 5470MHz & 5725MHz: Out of restricted band



802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 36	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
5148	49.14	51.44	54	-4.86	34.46	8.13	44.89	148	82	Average
5148	62.24	64.54	74	-11.76	34.46	8.13	44.89	148	82	Peak
5180	93.53	95.84			34.47	8.16	44.94	148	82	Average
5180	101.18	103.49			34.47	8.16	44.94	148	82	Peak
5448	35.83	37.83	54	-18.17	34.5	8.51	45.01	148	82	Average
5448	55.97	57.97	74	-18.03	34.5	8.51	45.01	148	82	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
5150	49.79	52.09	54	-4.21	34.46	8.13	44.89	112	284	Average
5150	66.77	69.07	74	-7.23	34.46	8.13	44.89	112	284	Peak
5180	95.25	97.56			34.47	8.16	44.94	112	284	Average
5180	102.09	104.4			34.47	8.16	44.94	112	284	Peak
5458	36.39	38.39	54	-17.61	34.5	8.51	45.01	112	284	Average
5458	56.18	58.18	74	-17.82	34.5	8.51	45.01	112	284	Peak

REMARKS: 5180MHz: Fundamental frequency.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 44	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
5074	36.97	39.34	54	-17.03	34.43	8.03	44.83	144	82	Average
5074	55.41	57.78	74	-18.59	34.43	8.03	44.83	144	82	Peak
5220	93.4	95.66			34.49	8.22	44.97	144	82	Average
5220	99.83	102.09			34.49	8.22	44.97	144	82	Peak
5406	36.31	38.41	54	-17.69	34.5	8.44	45.04	144	82	Average
5406	56.03	58.13	74	-17.97	34.5	8.44	45.04	144	82	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
5078	35.71	38.08	54	-18.29	34.43	8.03	44.83	110	284	Average
5078	56.5	58.87	74	-17.5	34.43	8.03	44.83	110	284	Peak
5220	95.7	97.96			34.49	8.22	44.97	110	284	Average
5220	102.82	105.08			34.49	8.22	44.97	110	284	Peak
5370	38.64	40.75	54	-15.36	34.5	8.41	45.02	110	284	Average
5370	55.75	57.86	74	-18.25	34.5	8.41	45.02	110	284	Peak

REMARKS: 5220MHz: Fundamental frequency.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 48	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
5074	36.7	39.07	54	-17.3	34.43	8.03	44.83	144	82	Average
5074	55.85	58.22	74	-18.15	34.43	8.03	44.83	144	82	Peak
5240	93.55	95.77			34.49	8.26	44.97	144	82	Average
5240	100.83	103.05			34.49	8.26	44.97	144	82	Peak
5444	36.57	38.61	54	-17.43	34.5	8.48	45.02	144	82	Average
5444	56.46	58.5	74	-17.54	34.5	8.48	45.02	144	82	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
5054	35.78	38.24	54	-18.22	34.43	8	44.89	110	284	Average
5054	55.09	57.55	74	-18.91	34.43	8	44.89	110	284	Peak
5240	96.07	98.29			34.49	8.26	44.97	110	284	Average
5240	103.09	105.31			34.49	8.26	44.97	110	284	Peak
5428	36.43	38.48	54	-17.57	34.5	8.48	45.03	110	284	Average
5428	56.09	58.14	74	-17.91	34.5	8.48	45.03	110	284	Peak

REMARKS: 5240MHz: Fundamental frequency.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
5116	36.35	38.63	54	-17.65	34.45	8.1	44.83	116	109	Average
5116	56.6	58.88	74	-17.4	34.45	8.1	44.83	116	109	Peak
5260	90.73	92.95			34.5	8.26	44.98	116	109	Average
5260	98.73	100.95			34.5	8.26	44.98	116	109	Peak
5452	36.42	38.42	54	-17.58	34.5	8.51	45.01	116	109	Average
5452	56.31	58.31	74	-17.69	34.5	8.51	45.01	116	109	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
5030	35.96	38.46	54	-18.04	34.41	8	44.91	115	100	Average
5030	55.96	58.46	74	-18.04	34.41	8	44.91	115	100	Peak
5260	96.51	98.73			34.5	8.26	44.98	115	100	Average
5260	104.37	106.59			34.5	8.26	44.98	115	100	Peak
5394	38.71	40.8	54	-15.29	34.5	8.44	45.03	115	100	Average
5394	56.03	58.12	74	-17.97	34.5	8.44	45.03	115	100	Peak

REMARKS: 5260MHz: Fundamental frequency.



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

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
5076	36.04	38.41	54	-17.96	34.43	8.03	44.83	116	128	Average
5076	56.07	58.44	74	-17.93	34.43	8.03	44.83	116	128	Peak
5300	90.03	92.19			34.5	8.32	44.98	116	128	Average
5300	97.45	99.61			34.5	8.32	44.98	116	128	Peak
5444	39.35	41.39	54	-14.65	34.5	8.48	45.02	116	128	Average
5444	56.87	58.91	74	-17.13	34.5	8.48	45.02	116	128	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
5088	35.99	38.32	54	-18.01	34.43	8.07	44.83	116	123	Average
5088	56.04	58.37	74	-17.96	34.43	8.07	44.83	116	123	Peak
5300	96.63	98.79			34.5	8.32	44.98	116	123	Average
5300	104.34	106.5			34.5	8.32	44.98	116	123	Peak
5354	44.62	46.75	54	-9.38	34.5	8.38	45.01	116	123	Average
5354	56.49	58.62	74	-17.51	34.5	8.38	45.01	116	123	Peak

REMARKS: 5300MHz: Fundamental frequency.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
5116	36.03	38.31	54	-17.97	34.45	8.1	44.83	116	102	Average
5116	56.65	58.93	74	-17.35	34.45	8.1	44.83	116	102	Peak
5320	89.49	91.63			34.5	8.35	44.99	116	102	Average
5320	96.82	98.96			34.5	8.35	44.99	116	102	Peak
5350	43.22	45.35	54	-10.78	34.5	8.38	45.01	116	102	Average
5350	59.33	61.46	74	-14.67	34.5	8.38	45.01	116	102	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
5142	36.81	39.11	54	-17.19	34.46	8.13	44.89	115	106	Average
5142	56.02	58.32	74	-17.98	34.46	8.13	44.89	115	106	Peak
5320	96.73	98.87			34.5	8.35	44.99	115	106	Average
5320	104.14	106.28			34.5	8.35	44.99	115	106	Peak
5350	50.42	52.55	54	-3.58	34.5	8.38	45.01	115	106	Average
5350	67.61	69.74	74	-6.39	34.5	8.38	45.01	115	106	Peak

REMARKS: 5320MHz: Fundamental frequency.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
5440	39.52	41.56	54	-14.48	34.5	8.48	45.02	112	57	Average
5440	56.81	58.85	74	-17.19	34.5	8.48	45.02	112	57	Peak
5470	57.84	59.83	68.3	-10.46	34.5	8.51	45	112	57	Peak
5500	88.29	90.2			34.5	8.57	44.98	112	57	Average
5500	96.86	98.77			34.5	8.57	44.98	112	57	Peak
5725	55.05	56.5	68.3	-13.25	34.67	8.65	44.77	112	57	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
5458	45.39	47.39	54	-8.61	34.5	8.51	45.01	112	101	Average
5458	58.74	60.74	74	-15.26	34.5	8.51	45.01	112	101	Peak
5470	63.94	65.93	68.3	-4.36	34.5	8.51	45	112	101	Peak
5500	96.51	98.42			34.5	8.57	44.98	112	101	Average
5500	104.65	106.56			34.5	8.57	44.98	112	101	Peak
5725	54.18	55.63	68.3	-14.12	34.67	8.65	44.77	112	101	Peak

REMARKS:

- 5500MHz: Fundamental frequency.
- 5470MHz & 5725MHz: Out of restricted band



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 116	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
5394	36.27	38.36	54	-17.73	34.5	8.44	45.03	112	57	Average
5394	56.54	58.63	74	-17.46	34.5	8.44	45.03	112	57	Peak
5470	54.42	56.41	68.3	-13.88	34.5	8.51	45	112	57	Peak
5580	88.14	89.86			34.57	8.6	44.89	112	57	Average
5580	95.85	97.57			34.57	8.6	44.89	112	57	Peak
5725	53.95	55.4	68.3	-14.35	34.67	8.65	44.77	112	57	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
5382	38.55	40.67	54	-15.45	34.5	8.41	45.03	112	101	Average
5382	56.21	58.33	74	-17.79	34.5	8.41	45.03	112	101	Peak
5470	55.19	57.18	68.3	-13.11	34.5	8.51	45	112	101	Peak
5580	96.22	97.94			34.57	8.6	44.89	112	101	Average
5580	105.05	106.77			34.57	8.6	44.89	112	101	Peak
5725	55.91	57.36	68.3	-12.39	34.67	8.65	44.77	112	101	Peak

REMARKS:

- 5580MHz: Fundamental frequency.
- 5470MHz & 5725MHz: Out of restricted band



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
5372	35.96	38.07	54	-18.04	34.5	8.41	45.02	100	93	Average
5372	56.53	58.64	74	-17.47	34.5	8.41	45.02	100	93	Peak
5470	54.47	56.46	68.3	-13.83	34.5	8.51	45	100	93	Peak
5700	86.96	88.45			34.66	8.64	44.79	100	93	Average
5700	94.39	95.88			34.66	8.64	44.79	100	93	Peak
5725	63.17	64.62	68.3	-5.13	34.67	8.65	44.77	100	93	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
5452	36.27	38.27	54	-17.73	34.5	8.51	45.01	135	284	Average
5452	56.43	58.43	74	-17.57	34.5	8.51	45.01	135	284	Peak
5470	55.14	57.13	68.3	-13.16	34.5	8.51	45	135	284	Peak
5700	94.94	96.43			34.66	8.64	44.79	135	284	Average
5700	102.29	103.78			34.66	8.64	44.79	135	284	Peak
5725	65.12	66.57	68.3	-3.18	34.67	8.65	44.77	135	284	Peak

REMARKS:

- 5700MHz: Fundamental frequency.
- 5470MHz & 5725MHz: Out of restricted band



802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 38	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
5150	48.75	51.05	54	-5.25	34.46	8.13	44.89	109	298	Average
5150	63.86	66.16	74	-10.14	34.46	8.13	44.89	109	298	Peak
5190	84.42	86.7			34.47	8.19	44.94	109	298	Average
5190	91.09	93.37			34.47	8.19	44.94	109	298	Peak
5428	36.32	38.37	54	-17.68	34.5	8.48	45.03	109	298	Average
5428	57.1	59.15	74	-16.9	34.5	8.48	45.03	109	298	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
5150	50.86	53.16	54	-3.14	34.46	8.13	44.89	100	72	Average
5150	66.01	68.31	74	-7.99	34.46	8.13	44.89	100	72	Peak
5190	89.13	91.41			34.47	8.19	44.94	100	72	Average
5190	96.31	98.59			34.47	8.19	44.94	100	72	Peak
5382	39.48	41.6	54	-14.52	34.5	8.41	45.03	100	72	Average
5382	56.73	58.85	74	-17.27	34.5	8.41	45.03	100	72	Peak

REMARKS: 5190MHz: Fundamental frequency.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 46	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
5056	36.7	39.1	54	-17.3	34.43	8.03	44.86	109	298	Average
5056	56.46	58.86	74	-17.54	34.43	8.03	44.86	109	298	Peak
5230	83.89	86.15			34.49	8.22	44.97	109	298	Average
5230	91.86	94.12			34.49	8.22	44.97	109	298	Peak
5364	36.46	38.6	54	-17.54	34.5	8.38	45.02	109	298	Average
5364	56.09	58.23	74	-17.91	34.5	8.38	45.02	109	298	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
5092	39.84	42.13	54	-14.16	34.44	8.07	44.8	100	72	Average
5092	56.4	58.69	74	-17.6	34.44	8.07	44.8	100	72	Peak
5230	88.58	90.84			34.49	8.22	44.97	100	72	Average
5230	95.88	98.14			34.49	8.22	44.97	100	72	Peak
5356	35.98	38.11	54	-18.02	34.5	8.38	45.01	100	72	Average
5356	55.99	58.12	74	-18.01	34.5	8.38	45.01	100	72	Peak

REMARKS: 5230MHz: Fundamental frequency.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 54	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
5036	36.44	38.94	54	-17.56	34.41	8	44.91	101	271	Average
5036	55.72	58.22	74	-18.28	34.41	8	44.91	101	271	Peak
5270	80.75	82.94			34.5	8.29	44.98	101	271	Average
5270	87.79	89.98			34.5	8.29	44.98	101	271	Peak
5454	36.79	38.79	54	-17.21	34.5	8.51	45.01	101	271	Average
5454	55.83	57.83	74	-18.17	34.5	8.51	45.01	101	271	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
5064	36.45	38.85	54	-17.55	34.43	8.03	44.86	100	129	Average
5064	55.99	58.39	74	-18.01	34.43	8.03	44.86	100	129	Peak
5270	88.31	90.5			34.5	8.29	44.98	100	129	Average
5270	95.22	97.41			34.5	8.29	44.98	100	129	Peak
5460	36.7	38.7	54	-17.3	34.5	8.51	45.01	100	129	Average
5460	56.36	58.36	74	-17.64	34.5	8.51	45.01	100	129	Peak

REMARKS: 5270MHz: Fundamental frequency.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 62	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
5118	36.67	38.95	54	-17.33	34.45	8.1	44.83	100	261	Average
5118	56.66	58.94	74	-17.34	34.45	8.1	44.83	100	261	Peak
5310	80.59	82.76			34.5	8.32	44.99	100	261	Average
5310	88.38	90.55			34.5	8.32	44.99	100	261	Peak
5350	44.88	47.01	54	-9.12	34.5	8.38	45.01	100	261	Average
5350	61.52	63.65	74	-12.48	34.5	8.38	45.01	100	261	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
5016	38.92	41.48	54	-15.08	34.41	7.97	44.94	100	120	Average
5016	55.91	58.47	74	-18.09	34.41	7.97	44.94	100	120	Peak
5310	89.21	91.38			34.5	8.32	44.99	100	120	Average
5310	95.96	98.13			34.5	8.32	44.99	100	120	Peak
5350	44.31	46.44	54	-9.69	34.5	8.38	45.01	100	120	Average
5350	59.48	61.61	74	-14.52	34.5	8.38	45.01	100	120	Peak

REMARKS: 5310MHz: Fundamental frequency.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 102	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
5460	43.28	45.28	54	-10.72	34.5	8.51	45.01	100	199	Average
5460	56.95	58.95	74	-17.05	34.5	8.51	45.01	100	199	Peak
5470	61.15	63.14	68.3	-7.15	34.5	8.51	45	100	199	Peak
5510	83.16	85.06			34.51	8.57	44.98	100	199	Average
5510	90.83	92.73			34.51	8.57	44.98	100	199	Peak
5725	53.76	55.21	68.3	-14.54	34.67	8.65	44.77	100	199	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
5460	43.09	45.09	54	-10.91	34.5	8.51	45.01	109	293	Average
5460	56.6	58.6	74	-17.4	34.5	8.51	45.01	109	293	Peak
5470	64.49	66.48	68.3	-3.81	34.5	8.51	45	109	293	Peak
5510	88.42	90.32			34.51	8.57	44.98	109	293	Average
5510	96.68	98.58			34.51	8.57	44.98	109	293	Peak
5725	54.81	56.26	68.3	-13.49	34.67	8.65	44.77	109	293	Peak

REMARKS:

1. 5510MHz: Fundamental frequency.
2. 5470MHz & 5725MHz: Out of restricted band



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 110	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
5438	36.85	38.89	54	-17.15	34.5	8.48	45.02	122	305	Average
5438	56.34	58.38	74	-17.66	34.5	8.48	45.02	122	305	Peak
5470	54.6	56.59	68.3	-13.7	34.5	8.51	45	122	305	Peak
5550	83.18	84.96			34.54	8.59	44.91	122	305	Average
5550	90.74	92.52			34.54	8.59	44.91	122	305	Peak
5725	54.49	55.94	68.3	-13.81	34.67	8.65	44.77	122	305	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
5454	37.02	39.02	54	-16.98	34.5	8.51	45.01	109	293	Average
5454	55.99	57.99	74	-18.01	34.5	8.51	45.01	109	293	Peak
5470	56.72	58.71	68.3	-11.58	34.5	8.51	45	109	293	Peak
5550	89.24	91.02			34.54	8.59	44.91	109	293	Average
5550	96.33	98.11			34.54	8.59	44.91	109	293	Peak
5725	54.45	55.9	68.3	-13.85	34.67	8.65	44.77	109	293	Peak

REMARKS:

- 5550MHz: Fundamental frequency.
- 5470MHz & 5725MHz: Out of restricted band



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 134	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
5404	36.09	38.19	54	-17.91	34.5	8.44	45.04	100	199	Average
5404	56.11	58.21	74	-17.89	34.5	8.44	45.04	100	199	Peak
5470	54.69	56.68	68.3	-13.61	34.5	8.51	45	100	199	Peak
5670	85.01	86.55			34.63	8.63	44.8	100	199	Average
5670	92.76	94.3			34.63	8.63	44.8	100	199	Peak
5725	53.77	55.22	68.3	-14.53	34.67	8.65	44.77	100	199	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
5366	36.18	38.32	54	-17.82	34.5	8.38	45.02	109	293	Average
5366	56.46	58.6	74	-17.54	34.5	8.38	45.02	109	293	Peak
5470	55.75	57.74	68.3	-12.55	34.5	8.51	45	109	293	Peak
5670	87.37	88.91			34.63	8.63	44.8	109	293	Average
5670	94.76	96.3			34.63	8.63	44.8	109	293	Peak
5725	57.89	59.34	68.3	-10.41	34.67	8.65	44.77	109	293	Peak

REMARKS:

- 5670MHz: Fundamental frequency.
- 5470MHz & 5725MHz: Out of restricted band



A D T

BELOW 1GHz WORST-CASE DATA : 802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 116	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Johnson Liao

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
50.25	25.18	42.75	40	-14.82	12.97	0.77	31.31	108	194	Peak
158.52	29.92	47.64	43.5	-13.58	12.73	1.38	31.83	103	133	Peak
232.23	24.46	43.84	46	-21.54	10.71	1.75	31.84	110	210	Peak
465.9	28.01	40.64	46	-17.99	16.64	2.67	31.94	105	173	Peak
786.5	27.27	32.98	46	-18.73	22.04	3.66	31.41	104	88	Peak
899.2	40.22	44.76	46	-5.78	23.5	3.97	32.01	102	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
42.42	28.77	45.57	40	-11.23	13.58	0.7	31.08	106	331	Peak
117.75	21.49	41.46	43.5	-22.01	10.74	1.17	31.88	104	184	Peak
220.35	18.98	38.78	46	-27.02	10.22	1.69	31.71	100	77	Peak
469.4	28.27	40.78	46	-17.73	16.71	2.68	31.9	101	160	Peak
708.1	25.13	32.5	46	-20.87	20.93	3.45	31.75	102	141	Peak
822.2	28.71	34.07	46	-17.29	22.52	3.75	31.63	112	138	Peak



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	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	100311	Jul. 06, 2012	Jul. 05, 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 2.
3. The VCCI Site Registration No. is C-2047.

4.2.3 TEST PROCEDURES

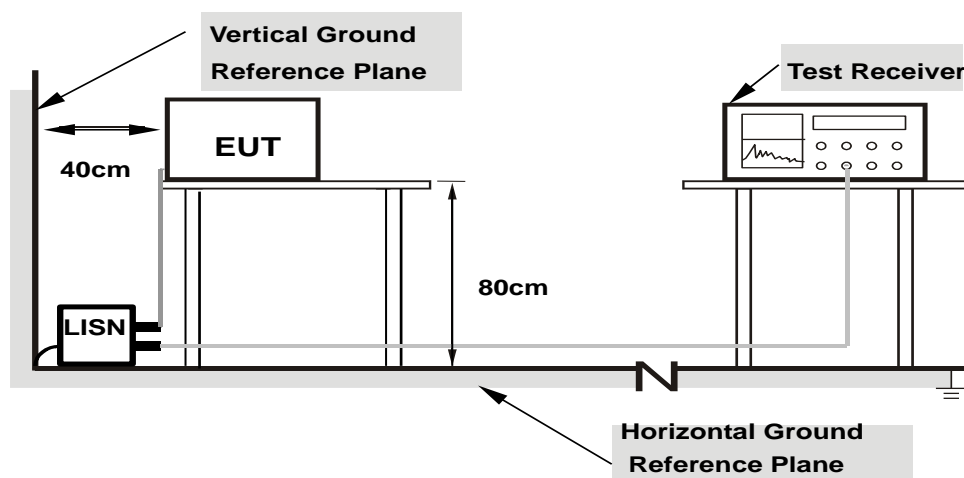
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- 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:**
- Support units were connected to second LISN.
 - 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

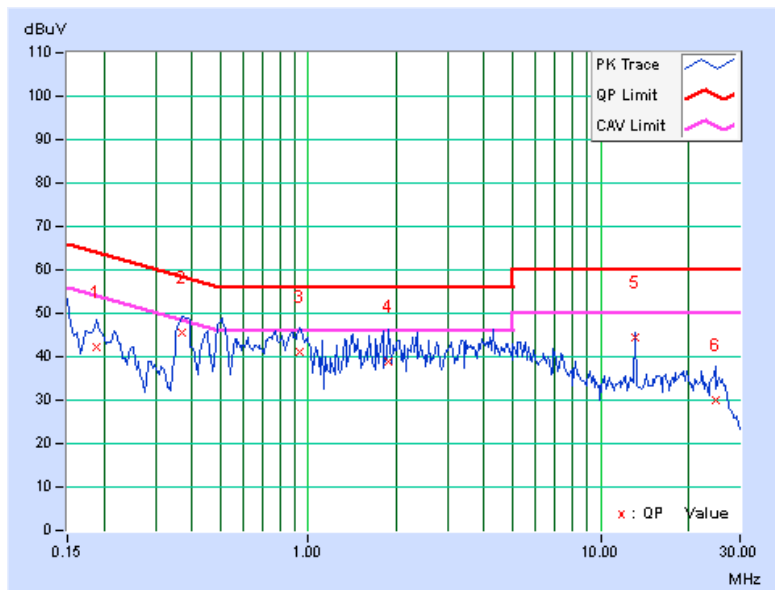
CONDUCTED WORST-CASE DATA : 802.11a

PHASE	Line 1	6dB BANDWIDTH	9kHz
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No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
	[MHz]		[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.18906	0.12	42.15	29.56	42.27	29.68	64.08	54.08	-21.81	-24.40
2	0.36875	0.15	45.38	32.54	45.53	32.69	58.53	48.53	-13.00	-15.84
3	0.93906	0.20	40.89	28.17	41.09	28.37	56.00	46.00	-14.91	-17.63
4	1.89063	0.23	38.70	27.33	38.93	27.56	56.00	46.00	-17.07	-18.44
5	13.12891	0.83	43.46	39.71	44.29	40.54	60.00	50.00	-15.71	-9.46
6	24.66406	1.38	28.64	18.94	30.02	20.32	60.00	50.00	-29.98	-29.68

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.

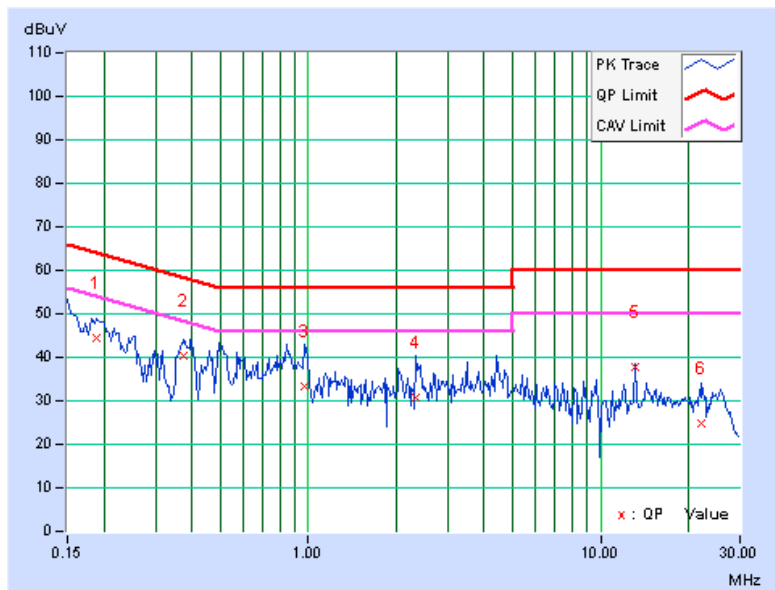


PHASE	Line 2	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.18906	0.17	44.23	30.50	44.40	30.67	64.08
2	0.37656	0.21	40.06	32.04	40.27	32.25	58.35	48.35	-18.09	-16.11
3	0.97422	0.25	33.12	21.77	33.37	22.02	56.00	46.00	-22.63	-23.98
4	2.33984	0.30	30.41	20.51	30.71	20.81	56.00	46.00	-25.29	-25.19
5	13.13281	0.70	37.07	33.92	37.77	34.62	60.00	50.00	-22.23	-15.38
6	22.14844	0.98	23.69	13.09	24.67	14.07	60.00	50.00	-35.33	-35.93

REMARKS:

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



4.3 PEAK TRANSMIT POWER MEASUREMENT

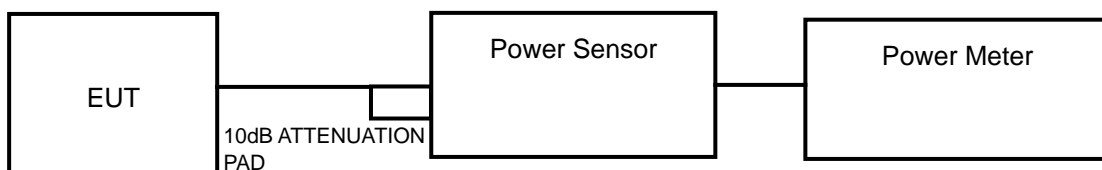
4.3.1 LIMITS OF PEAK TRANSMIT POWER MEASUREMENT

FREQUENCY BAND	LIMIT
5.150 ~ 5.250GHz	The lesser of 50mW (17dBm) or 4dBm + 10logB
5.250 ~ 5.350GHz	The lesser of 250mW (24dBm) or 11dBm + 10logB
5.470 ~ 5.725GHz	The lesser of 250mW (24dBm) or 11dBm + 10logB

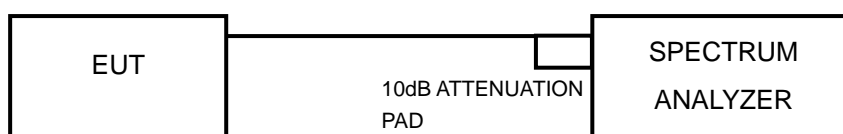
NOTE: Where B is the 26dB emission bandwidth in MHz.

4.3.2 TEST SETUP

FOR POWER OUTPUT MEASUREMENT



FOR 26dB BANDWIDTH



4.3.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

4.3.4 TEST PROCEDURE

FOR AVERAGE POWER MEASUREMENT

Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

FOR 26dB BANDWIDTH

- 1) Set RBW = approximately 1% of the emission bandwidth.
- 2) Set the VBW > RBW.
- 3) Detector = Peak.
- 4) Trace mode = max hold.
- 5) Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

4.3.5 DEVIATION FROM TEST STANDARD

No deviation.

4.3.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.



4.3.7 TEST RESULTS

POWER OUTPUT: 802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	28.314	14.52	17	PASS
44	5220	27.164	14.34	17	PASS
48	5240	27.861	14.45	17	PASS
52	5260	27.797	14.44	24	PASS
60	5300	29.107	14.64	24	PASS
64	5320	27.733	14.43	24	PASS
100	5500	31.405	14.97	24	PASS
116	5580	33.037	15.19	24	PASS
140	5700	31.117	14.93	24	PASS

802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	26.853	14.29	17	PASS
44	5220	25.177	14.01	17	PASS
48	5240	25.882	14.13	17	PASS
52	5260	25.942	14.14	24	PASS
60	5300	25.645	14.09	24	PASS
64	5320	25.763	14.11	24	PASS
100	5500	28.907	14.61	24	PASS
116	5580	30.479	14.84	24	PASS
140	5700	28.576	14.56	24	PASS

802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
38	5190	26.002	14.15	17	PASS
46	5230	23.988	13.80	17	PASS
54	5270	24.889	13.96	24	PASS
62	5310	24.547	13.90	24	PASS
102	5510	27.797	14.44	24	PASS
110	5550	29.174	14.65	24	PASS
134	5670	27.925	14.46	24	PASS

**26dB BANDWIDTH:****802.11a**

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
36	5180	42.81	PASS
44	5220	43.70	PASS
48	5240	43.44	PASS
52	5260	42.24	PASS
60	5300	42.25	PASS
64	5320	43.38	PASS
100	5500	44.18	PASS
116	5580	43.60	PASS
140	5700	43.97	PASS

802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
36	5180	44.58	PASS
44	5220	46.03	PASS
48	5240	44.87	PASS
52	5260	45.75	PASS
60	5300	47.15	PASS
64	5320	45.82	PASS
100	5500	47.06	PASS
116	5580	47.48	PASS
140	5700	46.83	PASS

802.11n (40MHz)

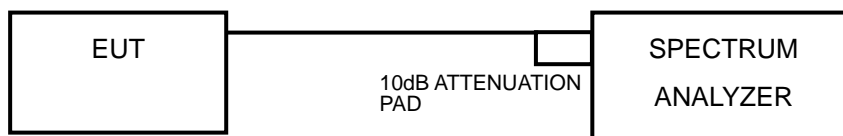
CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
38	5190	79.33	PASS
46	5230	77.21	PASS
54	5270	79.83	PASS
62	5310	77.18	PASS
102	5510	79.56	PASS
110	5550	80.00	PASS
134	5670	79.68	PASS

4.4 PEAK POWER SPECTRAL DENSITY MEASUREMENT

4.4.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT

FREQUENCY BAND	LIMIT
5.150 ~ 5.250GHz	4dBm
5.250 ~ 5.350GHz	11dBm
5.470 ~ 5.725GHz	11dBm

4.4.2 TEST SETUP



4.4.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

4.4.4 TEST PROCEDURES

Using method SA-2 alternative

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 1 MHz, Set VBW \geq 3 MHz, Detector = RMS
- 3) Sweep time = 4second.
- 4) Perform a single sweep.
- 5) Record the max value and add $10 \log (1/\text{duty cycle})$



4.4.5 DEVIATION FROM TEST STANDARD

No deviation.

4.4.6 EUT OPERATING CONDITIONS

Same as 4.3.6.

4.4.7 TEST RESULTS

802.11a

CHANNEL	FREQUENCY (MHz)	PSD W/O DUTY FACTOR (dBm)	DUTY FACTOR	PSD WITH DUTY FACTOR (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
36	5180	2.45	0.60	3.05	4	PASS
44	5220	1.84	0.60	2.44	4	PASS
48	5240	1.97	0.60	2.57	4	PASS
52	5260	2.05	0.60	2.65	11	PASS
60	5300	2.21	0.60	2.81	11	PASS
64	5320	2.25	0.60	2.85	11	PASS
100	5500	2.99	0.60	3.59	11	PASS
116	5580	3.28	0.60	3.88	11	PASS
140	5700	2.60	0.60	3.20	11	PASS

NOTE: Refer to section 3.3 for duty cycle spectrum plot.



802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	PSD W/O DUTY FACTOR (dBm)	DUTY FACTOR	PSD WITH DUTY FACTOR (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
36	5180	0.88	0.66	1.54	4	PASS
44	5220	1.07	0.66	1.73	4	PASS
48	5240	1.26	0.66	1.92	4	PASS
52	5260	1.41	0.66	2.07	11	PASS
60	5300	1.49	0.66	2.15	11	PASS
64	5320	1.57	0.66	2.23	11	PASS
100	5500	2.23	0.66	2.89	11	PASS
116	5580	2.57	0.66	3.23	11	PASS
140	5700	1.97	0.66	2.63	11	PASS

NOTE: Refer to section 3.3 for duty cycle spectrum plot.

802.11n (40MHz)

CHANNEL	FREQUENCY (MHz)	PSD W/O DUTY FACTOR (dBm)	DUTY FACTOR	PSD WITH DUTY FACTOR (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
38	5190	-1.67	0.82	-0.85	4	PASS
46	5230	-1.83	0.82	-1.01	4	PASS
54	5270	-1.44	0.82	-0.62	11	PASS
62	5310	-1.35	0.82	-0.53	11	PASS
102	5510	-0.64	0.82	0.18	11	PASS
110	5550	-0.51	0.82	0.31	11	PASS
134	5670	-0.71	0.82	0.11	11	PASS

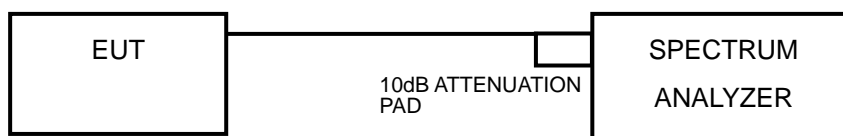
NOTE: Refer to section 3.3 for duty cycle spectrum plot.

4.5 PEAK POWER EXCURSION MEASUREMENT

4.5.1 LIMITS OF PEAK POWER EXCURSION MEASUREMENT

Shall not exceed 13 dB.

4.5.2 TEST SETUP



4.5.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

4.5.4 TEST PROCEDURE

- 1) Set RBW = 1 MHz, VBW \geq 3 MHz, Detector = peak.
- 2) Trace mode = max-hold. Allow the sweeps to continue until the trace stabilizes.
- 3) Use the peak search function to find the peak of the spectrum.
- 4) Measure the PPSD.
- 5) Compute the ratio of the maximum of the peak-max-hold spectrum to the PPSD.

4.5.5 DEVIATION FROM TEST STANDARD

No deviation.

4.5.6 EUT OPERATING CONDITIONS

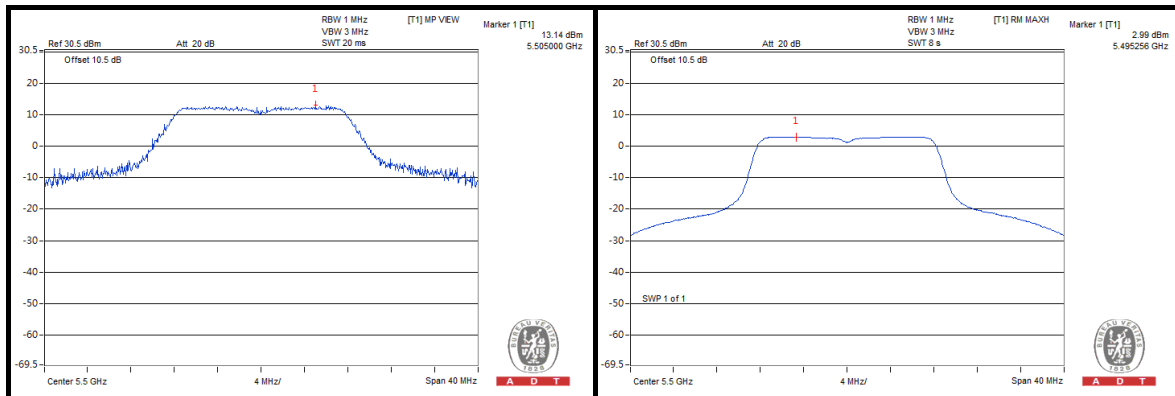
Same as 4.2.6

4.5.7 TEST RESULTS

802.11a

CHAN.	CHANNEL FREQUENCY (MHz)	PEAK VALUE (dBm)	PPSD WITHOUT DUTY FACTOR (dBm)	PPSD WITH DUTY FACTOR (dBm)	PEAK POWER EXCURSION (dB)	PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS /FAIL
36	5180	12.48	2.45	3.05	9.43	13	PASS
44	5220	11.66	1.84	2.44	9.22	13	PASS
48	5240	11.96	1.97	2.57	9.39	13	PASS
52	5260	11.94	2.05	2.65	9.29	13	PASS
60	5300	12.03	2.21	2.81	9.22	13	PASS
64	5320	12.40	2.25	2.85	9.55	13	PASS
100	5500	13.14	2.99	3.59	9.55	13	PASS
116	5580	13.03	3.28	3.88	9.15	13	PASS
140	5700	12.40	2.60	3.20	9.20	13	PASS

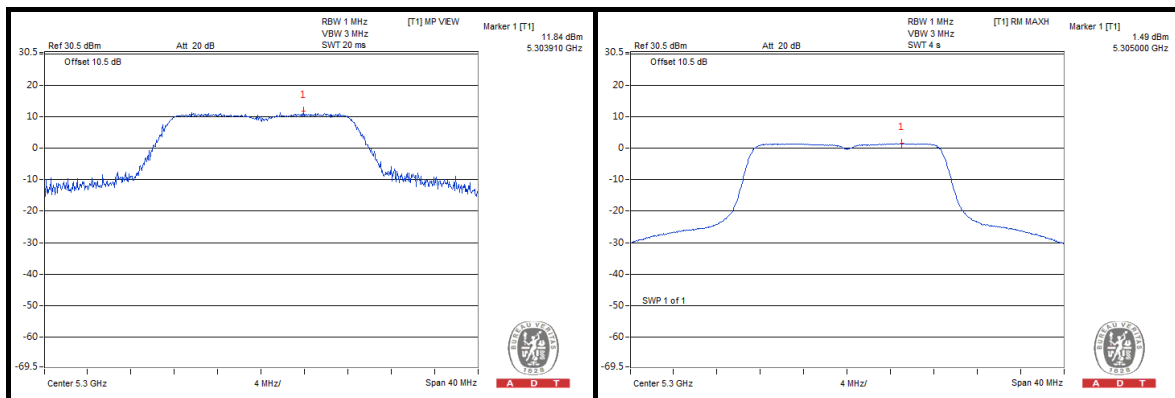
NOTE: Refer to section 3.3 for duty cycle spectrum plot.



802.11n (20MHz)

CHAN.	CHANNEL FREQUENCY (MHz)	PEAK VALUE (dBm)	PPSD WITHOUT DUTY FACTOR (dBm)	PPSD WITH DUTY FACTOR (dBm)	PEAK POWER EXCURSION (dB)	PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS /FAIL
36	5180	11.21	0.88	1.54	9.67	13	PASS
44	5220	11.13	1.07	1.73	9.40	13	PASS
48	5240	11.43	1.26	1.92	9.51	13	PASS
52	5260	11.68	1.41	2.07	9.61	13	PASS
60	5300	11.84	1.49	2.15	9.69	13	PASS
64	5320	11.45	1.57	2.23	9.22	13	PASS
100	5500	11.99	2.23	2.89	9.10	13	PASS
116	5580	12.27	2.57	3.23	9.04	13	PASS
140	5700	11.68	1.97	2.63	9.05	13	PASS

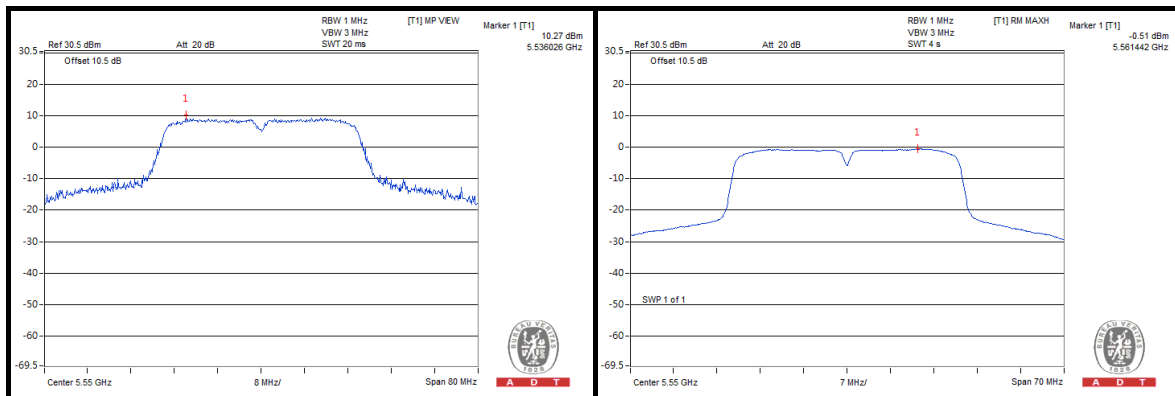
NOTE: Refer to section 3.3 for duty cycle spectrum plot.



802.11n (40MHz)

CHAN.	CHANNEL FREQUENCY (MHz)	PEAK VALUE (dBm)	PPSD WITHOUT DUTY FACTOR (dBm)	PPSD WITH DUTY FACTOR (dBm)	PEAK POWER EXCURSION (dB)	PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS /FAIL
38	5190	8.77	-1.67	-0.85	9.62	13	PASS
46	5230	8.10	-1.83	-1.01	9.11	13	PASS
54	5270	8.39	-1.44	-0.62	9.01	13	PASS
62	5310	9.19	-1.35	-0.53	9.72	13	PASS
102	5510	9.66	-0.64	0.18	9.48	13	PASS
110	5550	10.27	-0.51	0.31	9.96	13	PASS
134	5670	9.41	-0.71	0.11	9.30	13	PASS

NOTE: Refer to section 3.3 for duty cycle spectrum plot.

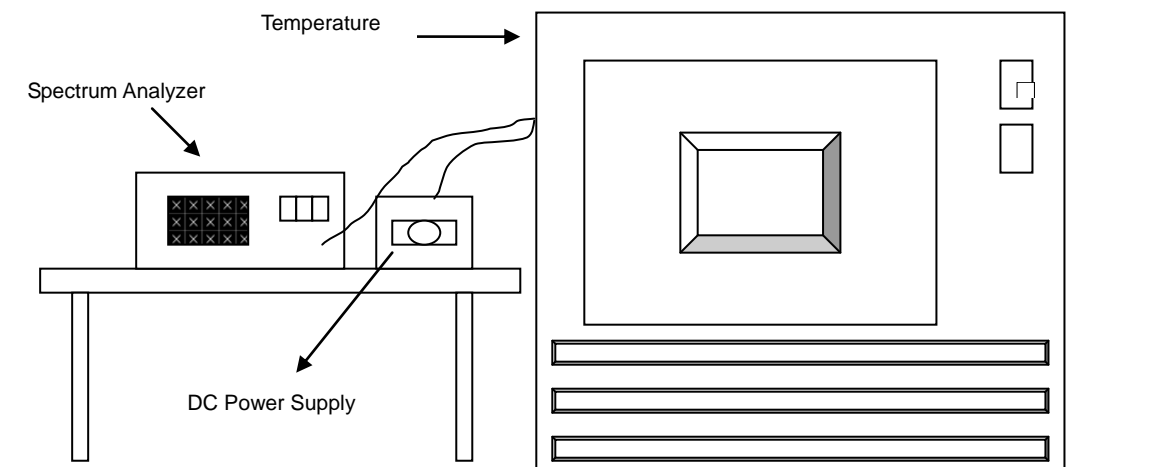


4.6 FREQUENCY STABILITY

4.6.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

The frequency of the carrier signal shall be maintained within band of operation

4.6.2 TEST SETUP



4.6.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

4.6.4 TEST PROCEDURE

- a. To ensure emission at the band edge is maintained within the authorized band, those values shall be measured by radiation emissions at upper and lower frequency points, and finally compensated by frequency deviation as procedures below.
- b. The EUT was operated at the maximum output power, and connected to the spectrum analyzer, which is set to maximum hold function and peak detector. The peak value of the power envelope was measured and noted. The upper and lower frequency points were respectively measured relatively 10dB lower than the measured peak value.
- c. The frequency deviation was calculated by adding the upper frequency point and the lower frequency point divided by two. Those detailed values of frequency deviation are provided in table below.

4.6.5 DEVIATION FROM TEST STANDARD

No deviation.

4.6.6 EUT OPERATING CONDITION

Set the EUT transmit at un-modulation mode to test frequency stability.



4.6.7 TEST RESULTS

FREQUENCY STABILITY VERSUS TEMP.									
OPERATING FREQUENCY: 5320MHz									
TEMP. (°C)	POWER SUPPLY (Vdc)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)
55	3.8	5320.015722	2.955	5320.015393	2.893	5320.015308	2.877	5320.015923	2.993
50	3.8	5320.016504	3.102	5320.015761	2.963	5320.016320	3.068	5320.016328	3.069
40	3.8	5320.017846	3.355	5320.017584	3.305	5320.017069	3.208	5320.017450	3.280
30	3.8	5320.018551	3.487	5320.018552	3.487	5320.018372	3.453	5320.018790	3.532
20	3.8	5320.019715	3.706	5320.019584	3.681	5320.019742	3.711	5320.020040	3.767
10	3.8	5320.018210	3.423	5320.018092	3.401	5320.018481	3.474	5320.018059	3.395
0	3.8	5320.016515	3.104	5320.016594	3.119	5320.016558	3.112	5320.016688	3.137
-10	3.8	5320.016096	3.026	5320.016571	3.115	5320.016384	3.080	5320.016328	3.069

FREQUENCY STABILITY VERSUS VOLTAGE									
OPERATING FREQUENCY: 5320MHz									
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)
20	3.6	5320.044272	8.322	5320.044802	8.421	5320.044594	8.382	5320.044953	8.450
	3.8	5320.045193	8.495	5320.045403	8.534	5320.044842	8.429	5320.044802	8.421
	4.35	5320.046483	8.737	5320.046624	8.764	5320.046448	8.731	5320.046303	8.704



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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:

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Web Site: www.bureauveritas-adt.com

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



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

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

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