



FCC TEST REPORT (15.407)

REPORT NO.: RF121225C13-5
MODEL NO.: PM33100
FCC ID: NM8PM33100
RECEIVED: Dec. 25, 2012
TESTED: Jan. 09, 2013 ~ Jan. 31, 2013
ISSUED: Feb. 08, 2013

APPLICANT: HTC Corporation

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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
RF121225C13-5	Original release	Feb. 08, 2013



1. CERTIFICATION

PRODUCT: Smartphone
MODEL NO.: PM33100
BRAND: HTC
APPLICANT: HTC Corporation
TESTED: Jan. 09, 2013 ~ Jan. 31, 2013
TEST SAMPLE: Production Unit
STANDARDS: **FCC Part 15, Subpart E (Section 15.407)**
ANSI C63.10-2009

The above equipment (model: PM33100) 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 : Ivonne Wu , **DATE** : Feb. 08, 2013
Ivonne Wu / Senior Specialist

APPROVED BY : Anderson Chiu , **DATE** : Feb. 08, 2013
Anderson Chiu / Senior Engineer

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 -7.46dB at 13.56250MHz.
15.407(b/1/2/3) (b)(6)	Spurious Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -3.85dB at 43.23MHz.
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	Smartphone
MODEL NO.	PM33100
POWER SUPPLY	5.0Vdc (adapter or host equipment) 3.8Vdc (Li-ion battery)
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 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	22.284mW for 5180 ~ 5240MHz 22.439mW for 5260 ~ 5320MHz 25.527mW for 5500 ~ 5700MHz
ANTENNA TYPE	PIFA antenna with -1.18dBi gain (5180 ~ 5240MHz) PIFA antenna with -1.07dBi gain (5260 ~ 5320MHz) PIFA antenna with -0.98dBi 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's accessories list refers to Ext. Pho.
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 device has 2 configurations as below.
Main Sample (A): Battery 1 + Photo Camera 1
2nd Sample (B): Battery 2 + Photo Camera 2
4. 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 \geq 1G	RE<1G	PLC	APCM	
A	√	√	√	√	Main Sample
B	√	-	-	-	2nd Sample

Where **RE \geq 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** for 5180-5240MHz & 5260-5320MHz and **Z-plane** for 5500-5700MHz.

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	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	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	MCS0
	802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	MCS0
	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	MCS0
	802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	MCS0
	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	MCS0
	802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	MCS0
B	802.11n (40MHz)	5180-5240	38 to 46	38	OFDM	BPSK	MCS0
		5260-5320	54 to 62	62	OFDM	BPSK	MCS0
	802.11n (20MHz)	5500-5700	100 to 140	140	OFDM	BPSK	MCS0

RADIATED EMISSION TEST (BELOW 1GHz):

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

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11n (40MHz)	5500-5700	102 to 134	134	OFDM	BPSK	MCS0

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	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11n (40MHz)	5500-5700	102 to 134	134	OFDM	BPSK	MCS0

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.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	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	MCS0
	802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	MCS0
	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	MCS0
	802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	MCS0
	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	MCS0
	802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	MCS0



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.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	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	MCS0
	802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	MCS0
	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	MCS0
	802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	MCS0
	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	MCS0
	802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	MCS0

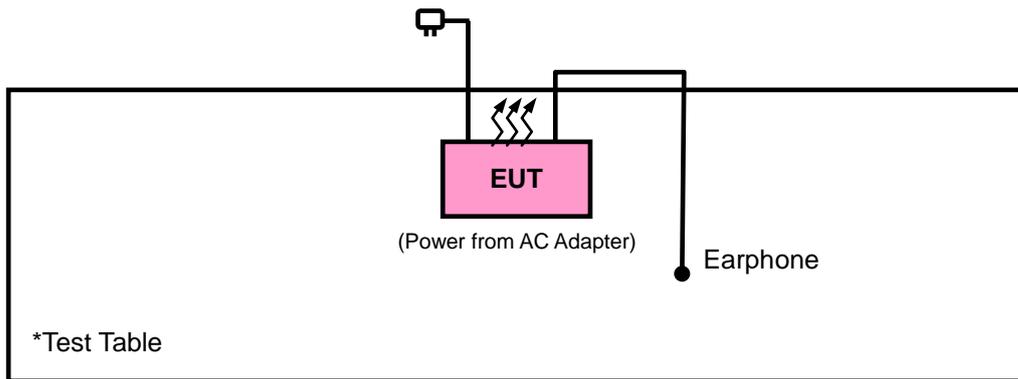
TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE \geq 1G	25deg. C, 65%RH	120Vac, 60Hz	Kay Wu
RE<1G	25deg. C, 65%RH	120Vac, 60Hz	Kay Wu
PLC	25deg. C, 65%RH	120Vac, 60Hz	David Huang
APCM	25deg. C, 65%RH	120Vac, 60Hz	Howard Kao

3.3 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units.

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 = $2.06/2.17 = 0.949$, Duty factor = $10 * \log(1/0.949) = 0.23$

802.11n (20MHz): Duty cycle = $1.907/2.019 = 0.945$, Duty factor = $10 * \log(1/0.945) = 0.25$

802.11n (40MHz): Duty cycle = $0.905/1.042 = 0.869$, Duty factor = $10 * \log(1/0.869) = 0.61$



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

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	ESCI	100744	Apr. 19, 2012	Apr. 18, 2013
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Dec. 17, 2012	Dec. 16, 2013
BILOG Antenna SCHWARZBECK	VULB9168	9168-472	Apr. 03, 2012	Apr. 02, 2013
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
Test Receiver ROHDE & SCHWARZ	ESCI	100744	Apr. 19, 2012	Apr. 18, 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
Power Meter	ML2495A	1232002	Aug. 10, 2012	Aug. 09, 2013
Power Sensor	MA2411B	1207325	Aug. 15, 2012	Aug. 14, 2013

- 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 9.
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 460141.
6. The IC Site Registration No. is IC 7450F-4.

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.

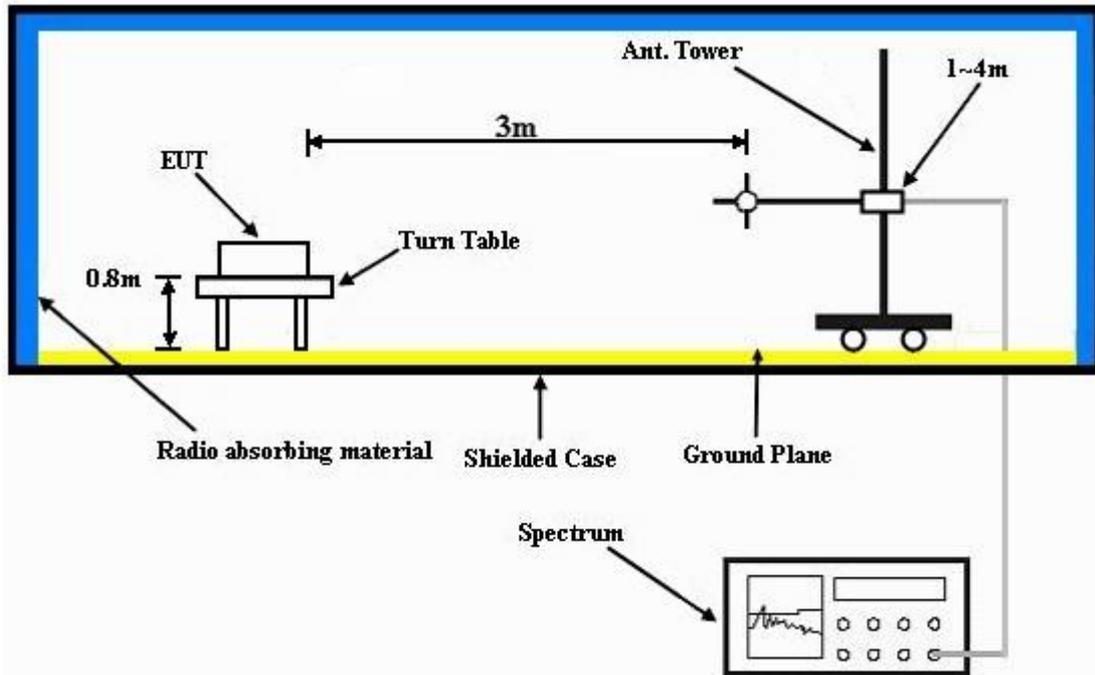
NOTE:

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



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4.1.8 TEST RESULTS

ABOVE 1GHz DATA: 802.11a

TEST MODE A

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	40.15	37.79	54	-13.85	32.35	7.33	37.32	100	137	Average
5150	50.26	47.90	74	-23.74	32.35	7.33	37.32	100	137	Peak
5180	82.54	80.18			32.38	7.32	37.34	100	137	Average
5180	91.83	89.47			32.38	7.32	37.34	100	137	Peak
5350	40.53	37.76	54	-13.47	32.55	7.40	37.18	100	137	Average
5350	49.89	47.12	74	-24.11	32.55	7.40	37.18	100	137	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	43.21	40.85	54	-10.79	32.35	7.33	37.32	100	357	Average
5150	53.44	51.08	74	-20.56	32.35	7.33	37.32	100	357	Peak
5180	93.15	90.79			32.38	7.32	37.34	100	357	Average
5180	101.92	99.56			32.38	7.32	37.34	100	357	Peak
5350	40.64	37.87	54	-13.36	32.55	7.40	37.18	100	357	Average
5350	50.60	47.83	74	-23.40	32.55	7.40	37.18	100	357	Peak

REMARKS: 5180MHz: Fundamental frequency.



A D T

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
5150	40.42	38.06	54	-13.58	32.35	7.33	37.32	100	296	Average
5150	48.75	46.39	74	-25.25	32.35	7.33	37.32	100	296	Peak
5220	84.25	81.87			32.42	7.32	37.36	100	296	Average
5220	93.20	90.82			32.42	7.32	37.36	100	296	Peak
5350	40.76	37.99	54	-13.24	32.55	7.40	37.18	100	296	Average
5350	50.42	47.65	74	-23.58	32.55	7.40	37.18	100	296	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	40.66	38.30	54	-13.34	32.35	7.33	37.32	100	360	Average
5150	49.88	47.52	74	-24.12	32.35	7.33	37.32	100	360	Peak
5220	93.49	91.11			32.42	7.32	37.36	100	360	Average
5220	102.18	99.80			32.42	7.32	37.36	100	360	Peak
5350	40.70	37.93	54	-13.30	32.55	7.40	37.18	100	360	Average
5350	51.62	48.85	74	-22.38	32.55	7.40	37.18	100	360	Peak

REMARKS: 5220MHz: Fundamental frequency.



A D T

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
5150	40.44	38.08	54	-13.56	32.35	7.33	37.32	100	297	Average
5150	49.41	47.05	74	-24.59	32.35	7.33	37.32	100	297	Peak
5240	85.34	82.89	54			7.34	37.32	100	297	Average
5240	94.74	92.29	74			7.34	37.32	100	297	Peak
5350	40.88	38.11	54	-13.12	32.55	7.40	37.18	100	297	Average
5350	51.09	48.32	74	-22.91	32.55	7.40	37.18	100	297	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	40.53	38.17	54	-13.47	32.35	7.33	37.32	100	1	Average
5150	50.49	48.13	74	-23.51	32.35	7.33	37.32	100	1	Peak
5240	93.73	91.28	54			7.34	37.32	100	1	Average
5240	103.04	100.59	74			7.34	37.32	100	1	Peak
5350	40.70	37.93	54	-13.30	32.55	7.40	37.18	100	1	Average
5350	53.00	50.23	74	-21.00	32.55	7.40	37.18	100	1	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
5150	40.31	37.95	54	-13.69	32.35	7.33	37.32	100	294	Average
5150	59.06	56.70	74	-14.94	32.35	7.33	37.32	100	294	Peak
5260	85.47	82.91			32.47	7.36	37.27	100	294	Average
5260	94.72	92.16			32.47	7.36	37.27	100	294	Peak
5350	40.68	37.91	54	-13.32	32.55	7.40	37.18	100	294	Average
5350	60.49	57.72	74	-13.51	32.55	7.40	37.18	100	294	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	40.36	38.00	54	-13.64	32.35	7.33	37.32	100	360	Average
5150	60.45	58.09	74	-13.55	32.35	7.33	37.32	100	360	Peak
5260	93.04	90.48			32.47	7.36	37.27	100	360	Average
5260	101.82	99.26			32.47	7.36	37.27	100	360	Peak
5350	40.67	37.90	54	-13.33	32.55	7.40	37.18	100	360	Average
5350	61.16	58.39	74	-12.84	32.55	7.40	37.18	100	360	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
5150	40.37	38.01	54	-13.63	32.35	7.33	37.32	100	296	Average
5150	50.89	48.53	74	-23.11	32.35	7.33	37.32	100	296	Peak
5300	84.26	81.55	54			7.40	37.19	100	296	Average
5300	93.27	90.56	74			7.40	37.19	100	296	Peak
5350	40.52	37.75	54	-13.48	32.55	7.40	37.18	100	296	Average
5350	49.29	46.52	74	-24.71	32.55	7.40	37.18	100	296	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	40.43	38.07	54	-13.57	32.35	7.33	37.32	100	351	Average
5150	50.58	48.22	74	-23.42	32.35	7.33	37.32	100	351	Peak
5300	92.71	90.00	54			7.40	37.19	100	351	Average
5300	102.8	100.09	74			7.40	37.19	100	351	Peak
5350	41.16	38.39	54	-12.84	32.55	7.40	37.18	100	351	Average
5350	50.78	48.01	74	-23.22	32.55	7.40	37.18	100	351	Peak

REMARKS: 5300MHz: Fundamental frequency.



A D T

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
5062	40.31	39.06	54	-13.69	31.25	7.25	37.25	100	296	Average
5062	51.29	50.04	74	-22.71	31.25	7.25	37.25	100	296	Peak
5320	85.81	84.15			31.45	7.40	37.19	100	296	Average
5320	94.38	92.72			31.45	7.40	37.19	100	296	Peak
5422	40.91	39.16	54	-13.09	31.53	7.40	37.18	100	296	Average
5422	53.76	52.01	74	-20.24	31.53	7.40	37.18	100	296	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	40.53	38.17	54	-13.47	32.35	7.33	37.32	100	356	Average
5150	50.31	47.95	74	-23.69	32.35	7.33	37.32	100	356	Peak
5320	92.31	89.58			32.52	7.40	37.19	100	356	Average
5320	101.03	98.30			32.52	7.40	37.19	100	356	Peak
5350	42.52	39.75	54	-11.48	32.55	7.40	37.18	100	356	Average
5350	52.47	49.70	74	-21.53	32.55	7.40	37.18	100	356	Peak

REMARKS: 5320MHz: Fundamental frequency.



A D T

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
5458	42.16	39.06	54.0	-11.84	32.65	7.53	37.08	104	14	Average
5458	53.38	50.28	74.0	-20.62	32.65	7.53	37.08	104	14	Peak
5470	52.38	49.26	68.3	-15.92	32.67	7.53	37.08	104	14	Peak
5500	89.10	85.84			32.70	7.59	37.03	104	14	Average
5500	99.60	96.34			32.70	7.59	37.03	104	14	Peak
5725	52.69	49.44	68.3	-15.61	32.97	7.71	37.43	104	14	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	40.80	37.70	54.0	-13.20	32.65	7.53	37.08	100	246	Average
5460	53.47	50.37	74.0	-20.53	32.65	7.53	37.08	100	246	Peak
5470	51.82	48.70	68.3	-16.48	32.67	7.53	37.08	100	246	Peak
5500	83.73	80.47			32.70	7.59	37.03	100	246	Average
5500	93.25	89.99			32.70	7.59	37.03	100	246	Peak
5725	51.75	48.50	68.3	-16.55	32.97	7.71	37.43	100	246	Peak

REMARKS:

1. 5500MHz: Fundamental frequency.
2. 5470MHz & 5725MHz: Out of restricted band



A D T

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
5352	40.67	37.90	54.0	-13.33	32.55	7.40	37.18	100	18	Average
5352	53.16	50.39	74.0	-20.84	32.55	7.40	37.18	100	18	Peak
5470	52.70	49.58	68.3	-15.60	32.67	7.53	37.08	100	18	Peak
5580	89.30	86.11			32.78	7.57	37.16	100	18	Average
5580	99.41	96.22			32.78	7.57	37.16	100	18	Peak
5725	52.78	49.53	68.3	-15.52	32.97	7.71	37.43	100	18	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
5358	40.60	37.83	54.0	-13.40	32.55	7.40	37.18	100	83	Average
5358	52.53	49.76	74.0	-21.47	32.55	7.40	37.18	100	83	Peak
5470	50.66	47.54	68.3	-17.64	32.67	7.53	37.08	100	83	Peak
5580	82.77	79.58			32.78	7.57	37.16	100	83	Average
5580	92.21	89.02			32.78	7.57	37.16	100	83	Peak
5725	51.62	48.37	68.3	-16.68	32.97	7.71	37.43	100	83	Peak

REMARKS:

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



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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
5460	40.76	37.66	54.0	-13.24	32.65	7.53	37.08	100	49	Average
5460	52.84	49.74	74.0	-21.16	32.65	7.53	37.08	100	49	Peak
5470	51.60	48.48	68.3	-16.70	32.67	7.53	37.08	100	49	Peak
5700	88.77	85.55			32.93	7.69	37.40	100	49	Average
5700	98.46	95.24			32.93	7.69	37.40	100	49	Peak
5725	55.30	52.05	68.3	-13.00	32.97	7.71	37.43	100	49	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
5426	40.69	37.73	54.0	-13.31	32.62	7.47	37.13	100	212	Average
5426	52.65	49.69	74.0	-21.35	32.62	7.47	37.13	100	212	Peak
5470	50.83	47.71	68.3	-17.47	32.67	7.53	37.08	100	212	Peak
5700	83.47	80.25			32.93	7.69	37.40	100	212	Average
5700	93.64	90.42			32.93	7.69	37.40	100	212	Peak
5725	52.07	48.82	68.3	-16.23	32.97	7.71	37.43	100	212	Peak

REMARKS:

1. 5700MHz: Fundamental frequency.
2. 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
5136	40.09	37.72	54	-13.91	32.33	7.34	37.30	100	289	Average
5136	53.06	50.69	74	-20.94	32.33	7.34	37.30	100	289	Peak
5180	83.09	80.73			32.38	7.32	37.34	100	289	Average
5180	92.92	90.56			32.38	7.32	37.34	100	289	Peak
5440	40.77	37.80	54	-13.23	32.63	7.47	37.13	100	289	Average
5440	53.23	50.26	74	-20.77	32.63	7.47	37.13	100	289	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5146	43.00	40.64	54	-11.00	32.35	7.33	37.32	100	348	Average
5146	56.26	53.90	74	-17.74	32.35	7.33	37.32	100	348	Peak
5180	92.25	89.89			32.38	7.32	37.34	100	348	Average
5180	102.08	99.72			32.38	7.32	37.34	100	348	Peak
5384	41.26	38.46	54	-12.74	32.58	7.40	37.18	100	348	Average
5384	53.76	50.96	74	-20.24	32.58	7.40	37.18	100	348	Peak

REMARKS: 5180MHz: Fundamental frequency.



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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
5140	40.36	37.97	54	-13.64	32.35	7.34	37.30	103	307	Average
5140	51.30	48.91	74	-22.70	32.35	7.34	37.30	103	307	Peak
5220	83.12	80.74			32.42	7.32	37.36	103	307	Average
5220	92.85	90.47			32.42	7.32	37.36	103	307	Peak
5368	40.64	37.85	54	-13.36	32.57	7.40	37.18	103	307	Average
5368	52.37	49.58	74	-21.63	32.57	7.40	37.18	103	307	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
5144	40.65	38.29	54	-13.35	32.35	7.33	37.32	100	346	Average
5144	52.37	50.01	74	-21.63	32.35	7.33	37.32	100	346	Peak
5220	92.60	90.22			32.42	7.32	37.36	100	346	Average
5220	102.23	99.85			32.42	7.32	37.36	100	346	Peak
5460	41.13	38.03	54	-12.87	32.65	7.53	37.08	100	346	Average
5460	53.80	50.70	74	-20.20	32.65	7.53	37.08	100	346	Peak

REMARKS: 5220MHz: Fundamental frequency.



A D T

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
5050	39.83	37.58	54	-14.17	32.25	7.25	37.25	100	280	Average
5050	52.25	50.00	74	-21.75	32.25	7.25	37.25	100	280	Peak
5240	83.67	81.22			32.43	7.34	37.32	100	280	Average
5240	92.98	90.53			32.43	7.34	37.32	100	280	Peak
5460	40.79	37.69	54	-13.21	32.65	7.53	37.08	100	280	Average
5460	53.70	50.60	74	-20.30	32.65	7.53	37.08	100	280	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	40.13	37.86	54	-13.87	32.27	7.25	37.25	100	344	Average
5064	52.31	50.04	74	-21.69	32.27	7.25	37.25	100	344	Peak
5240	92.95	90.50			32.43	7.34	37.32	100	344	Average
5240	102.82	100.37			32.43	7.34	37.32	100	344	Peak
5442	41.83	38.86	54	-12.17	32.63	7.47	37.13	100	344	Average
5442	53.40	50.43	74	-20.60	32.63	7.47	37.13	100	344	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
5050	39.92	37.67	54	-14.08	32.25	7.25	37.25	100	281	Average
5050	53.04	50.79	74	-20.96	32.25	7.25	37.25	100	281	Peak
5260	83.02	80.46			32.47	7.36	37.27	100	281	Average
5260	93.94	91.38			32.47	7.36	37.27	100	281	Peak
5356	40.67	37.90	54	-13.33	32.55	7.40	37.18	100	281	Average
5356	53.42	50.65	74	-20.58	32.55	7.40	37.18	100	281	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
5136	40.05	37.68	54	-13.95	32.33	7.34	37.30	100	346	Average
5136	52.31	49.94	74	-21.69	32.33	7.34	37.30	100	346	Peak
5260	92.20	89.64			32.47	7.36	37.27	100	346	Average
5260	101.53	98.97			32.47	7.36	37.27	100	346	Peak
5392	41.30	38.50	54	-12.70	32.58	7.40	37.18	100	346	Average
5392	53.26	50.46	74	-20.74	32.58	7.40	37.18	100	346	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
5118	40.06	37.67	54	-13.94	32.32	7.35	37.28	100	282	Average
5118	53.14	50.75	74	-20.86	32.32	7.35	37.28	100	282	Peak
5300	83.64	80.93			32.50	7.40	37.19	100	282	Average
5300	93.54	90.83			32.50	7.40	37.19	100	282	Peak
5358	40.76	37.99	54	-13.24	32.55	7.40	37.18	100	282	Average
5358	54.01	51.24	74	-19.99	32.55	7.40	37.18	100	282	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
5146	40.15	37.79	54	-13.85	32.35	7.33	37.32	100	352	Average
5146	52.40	50.04	74	-21.60	32.35	7.33	37.32	100	352	Peak
5300	91.99	89.28			32.50	7.40	37.19	100	352	Average
5300	101.41	98.70			32.50	7.40	37.19	100	352	Peak
5350	41.85	39.08	54	-12.15	32.55	7.40	37.18	100	352	Average
5350	54.11	51.34	74	-19.89	32.55	7.40	37.18	100	352	Peak

REMARKS: 5300MHz: Fundamental frequency.



A D T

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
5148	39.95	37.59	54	-14.05	32.35	7.33	37.32	100	46	Average
5148	52.58	50.22	74	-21.42	32.35	7.33	37.32	100	46	Peak
5320	83.57	80.84			32.52	7.40	37.19	100	46	Average
5320	94.26	91.53			32.52	7.40	37.19	100	46	Peak
5444	41.10	38.13	54	-12.90	32.63	7.47	37.13	100	46	Average
5444	52.77	49.80	74	-21.23	32.63	7.47	37.13	100	46	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
5120	39.98	37.62	54	-14.02	32.32	7.34	37.30	100	346	Average
5120	51.84	49.48	74	-22.16	32.32	7.34	37.30	100	346	Peak
5320	91.52	88.79			32.52	7.40	37.19	100	346	Average
5320	100.74	98.01			32.52	7.40	37.19	100	346	Peak
5354	42.69	39.92	54	-11.31	32.55	7.40	37.18	100	346	Average
5354	54.24	51.47	74	-19.76	32.55	7.40	37.18	100	346	Peak

REMARKS: 5320MHz: Fundamental frequency.



A D T

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
5438	41.27	38.30	54.0	-12.73	32.63	7.47	37.13	100	40	Average
5438	53.59	50.62	74.0	-20.41	32.63	7.47	37.13	100	40	Peak
5470	52.96	49.84	68.3	-15.34	32.67	7.53	37.08	100	40	Peak
5500	87.04	83.78			32.70	7.59	37.03	100	40	Average
5500	97.72	94.46			32.70	7.59	37.03	100	40	Peak
5725	53.12	49.87	68.3	-15.18	32.97	7.71	37.43	100	40	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
5444	40.66	38.77	54.0	-13.34	31.55	7.47	37.13	100	38	Average
5444	53.09	51.20	74.0	-20.91	31.55	7.47	37.13	100	38	Peak
5470	52.04	50.02	68.3	-16.26	31.57	7.53	37.08	100	38	Peak
5500	82.62	80.46			31.60	7.59	37.03	100	38	Average
5500	92.22	90.06			31.60	7.59	37.03	100	38	Peak
5725	51.23	48.99	68.3	-17.07	31.96	7.71	37.43	100	38	Peak

REMARKS:

1. 5500MHz: Fundamental frequency.
2. 5470MHz & 5725MHz: Out of restricted band



A D T

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
5460	40.88	37.78	54.0	-13.12	32.65	7.53	37.08	100	20	Average
5460	50.55	47.45	74.0	-23.45	32.65	7.53	37.08	100	20	Peak
5470	51.07	47.95	68.3	-17.23	32.67	7.53	37.08	100	20	Peak
5580	89.19	86.00			32.78	7.57	37.16	100	20	Average
5580	97.75	94.56			32.78	7.57	37.16	100	20	Peak
5725	50.47	47.22	68.3	-17.83	32.97	7.71	37.43	100	20	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	40.81	37.71	54.0	-13.19	32.65	7.53	37.08	100	89	Average
5460	50.58	47.48	74.0	-23.42	32.65	7.53	37.08	100	89	Peak
5470	49.66	46.54	68.3	-18.64	32.67	7.53	37.08	100	89	Peak
5580	83.62	80.43			32.78	7.57	37.16	100	89	Average
5580	92.77	89.58			32.78	7.57	37.16	100	89	Peak
5725	51.27	48.02	68.3	-17.03	32.97	7.71	37.43	100	89	Peak

REMARKS:

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



A D T

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
5460	40.90	37.80	54.0	-13.10	32.65	7.53	37.08	100	24	Average
5460	49.70	46.60	74.0	-24.30	32.65	7.53	37.08	100	24	Peak
5470	49.78	46.66	68.3	-18.52	32.67	7.53	37.08	100	24	Peak
5700	89.11	85.89			32.93	7.69	37.40	100	24	Average
5700	97.52	94.30			32.93	7.69	37.40	100	24	Peak
5725	56.76	53.51	68.3	-11.54	32.97	7.71	37.43	100	24	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	40.85	37.75	54.0	-13.15	32.65	7.53	37.08	100	219	Average
5460	49.30	46.20	74.0	-24.70	32.65	7.53	37.08	100	219	Peak
5470	51.31	48.19	68.3	-16.99	32.67	7.53	37.08	100	219	Peak
5700	82.90	79.68			32.93	7.69	37.40	100	219	Average
5700	91.68	88.46			32.93	7.69	37.40	100	219	Peak
5725	53.98	50.73	68.3	-14.32	32.97	7.71	37.43	100	219	Peak

REMARKS:

1. 5700MHz: Fundamental frequency.
2. 5470MHz & 5725MHz: Out of restricted band



A D T

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	43.43	41.07	54	-10.57	32.35	7.33	37.32	103	203	Average
5150	51.79	49.43	74	-22.21	32.35	7.33	37.32	103	203	Peak
5190	80.79	78.43			32.38	7.32	37.34	103	203	Average
5190	88.33	85.97			32.38	7.32	37.34	103	203	Peak
5350	40.71	37.94	54	-13.29	32.55	7.40	37.18	103	203	Average
5350	50.40	47.63	74	-23.60	32.55	7.40	37.18	103	203	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	49.38	47.02	54	-4.62	32.35	7.33	37.32	100	0	Average
5150	63.44	61.08	74	-10.56	32.35	7.33	37.32	100	0	Peak
5190	88.07	85.71			32.38	7.32	37.34	100	0	Average
5190	97.78	95.42			32.38	7.32	37.34	100	0	Peak
5350	40.68	37.91	54	-13.32	32.55	7.40	37.18	100	0	Average
5350	51.28	48.51	74	-22.72	32.55	7.40	37.18	100	0	Peak

REMARKS: 5190MHz: Fundamental frequency.



A D T

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
5150	40.40	38.04	54	-13.60	32.35	7.33	37.32	100	291	Average
5150	49.09	46.73	74	-24.91	32.35	7.33	37.32	100	291	Peak
5230	79.89	77.44			32.43	7.34	37.32	100	291	Average
5230	88.83	86.38			32.43	7.34	37.32	100	291	Peak
5350	40.78	38.01	54	-13.22	32.55	7.40	37.18	100	291	Average
5350	50.71	47.94	74	-23.29	32.55	7.40	37.18	100	291	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	40.53	38.17	54	-13.47	32.35	7.33	37.32	100	0	Average
5150	49.78	47.42	74	-24.22	32.35	7.33	37.32	100	0	Peak
5230	89.07	86.62			32.43	7.34	37.32	100	0	Average
5230	98.07	95.62			32.43	7.34	37.32	100	0	Peak
5350	40.97	38.20	54	-13.03	32.55	7.40	37.18	100	0	Average
5350	50.20	47.43	74	-23.80	32.55	7.40	37.18	100	0	Peak

REMARKS: 5230MHz: Fundamental frequency.



A D T

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
5150	40.41	38.05	54	-13.59	32.35	7.33	37.32	100	291	Average
5150	48.60	46.24	74	-25.40	32.35	7.33	37.32	100	291	Peak
5270	79.87	77.31			32.47	7.36	37.27	100	291	Average
5270	88.80	86.24			32.47	7.36	37.27	100	291	Peak
5350	40.74	37.97	54	-13.26	32.55	7.40	37.18	100	291	Average
5350	50.46	47.69	74	-23.54	32.55	7.40	37.18	100	291	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	40.69	38.33	54	-13.31	32.35	7.33	37.32	100	0	Average
5150	49.76	47.40	74	-24.24	32.35	7.33	37.32	100	0	Peak
5270	88.64	86.08			32.47	7.36	37.27	100	0	Average
5270	98.17	95.61			32.47	7.36	37.27	100	0	Peak
5350	41.08	38.31	54	-12.92	32.55	7.40	37.18	100	0	Average
5350	51.89	49.12	74	-22.11	32.55	7.40	37.18	100	0	Peak

REMARKS: 5270MHz: Fundamental frequency.



A D T

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
5150	40.41	38.05	54	-13.59	32.35	7.33	37.32	100	281	Average
5150	50.55	48.19	74	-23.45	32.35	7.33	37.32	100	281	Peak
5310	79.82	77.09			32.52	7.40	37.19	100	281	Average
5310	89.24	86.51			32.52	7.40	37.19	100	281	Peak
5350	41.57	38.80	54	-12.43	32.55	7.40	37.18	100	281	Average
5350	50.72	47.95	74	-23.28	32.55	7.40	37.18	100	281	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	40.78	38.42	54	-13.22	32.35	7.33	37.32	100	0	Average
5150	49.82	47.46	74	-24.18	32.35	7.33	37.32	100	0	Peak
5310	88.49	85.76			32.52	7.40	37.19	100	0	Average
5310	98.52	95.79			32.52	7.40	37.19	100	0	Peak
5350	45.26	42.49	54	-8.74	32.55	7.40	37.18	100	0	Average
5350	56.32	53.55	74	-17.68	32.55	7.40	37.18	100	0	Peak

REMARKS: 5310MHz: Fundamental frequency.



A D T

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
5436	42.02	40.13	54.0	-11.98	31.55	7.47	37.13	104	14	Average
5436	52.93	51.04	74.0	-21.07	31.55	7.47	37.13	104	14	Peak
5470	54.59	52.57	68.3	-13.71	31.57	7.53	37.08	104	14	Peak
5510	86.58	84.45			31.60	7.59	37.06	104	14	Average
5510	95.36	93.23			31.60	7.59	37.06	104	14	Peak
5725	50.47	48.23	68.3	-17.83	31.96	7.71	37.43	104	14	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	40.86	37.76	54.0	-13.14	32.65	7.53	37.08	100	249	Average
5460	51.08	47.98	74.0	-22.92	32.65	7.53	37.08	100	249	Peak
5470	52.45	49.33	68.3	-15.85	32.67	7.53	37.08	100	249	Peak
5510	82.37	79.14			32.70	7.59	37.06	100	249	Average
5510	91.84	88.61			32.70	7.59	37.06	100	249	Peak
5725	50.56	47.31	68.3	-17.74	32.97	7.71	37.43	100	249	Peak

REMARKS:

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



A D T

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
5460	41.28	38.18	54.0	-12.72	32.65	7.53	37.08	100	18	Average
5460	51.11	48.01	74.0	-22.89	32.65	7.53	37.08	100	18	Peak
5470	51.35	48.23	68.3	-16.95	32.67	7.53	37.08	100	18	Peak
5550	86.25	83.00			32.76	7.58	37.09	100	18	Average
5550	95.75	92.50			32.76	7.58	37.09	100	18	Peak
5725	51.51	48.26	68.3	-16.79	32.97	7.71	37.43	100	18	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	40.96	37.86	54.0	-13.04	32.65	7.53	37.08	100	248	Average
5460	50.63	47.53	74.0	-23.37	32.65	7.53	37.08	100	248	Peak
5470	48.76	45.64	68.3	-19.54	32.67	7.53	37.08	100	248	Peak
5550	81.83	78.58			32.76	7.58	37.09	100	248	Average
5550	91.36	88.11			32.76	7.58	37.09	100	248	Peak
5725	50.37	47.12	68.3	-17.93	32.97	7.71	37.43	100	248	Peak

REMARKS:

1. 5550MHz: Fundamental frequency.
2. 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
5460	40.92	37.82	54.0	-13.08	32.65	7.53	37.08	100	28	Average
5460	49.63	46.53	74.0	-24.37	32.65	7.53	37.08	100	28	Peak
5470	50.91	47.79	68.3	-17.39	32.67	7.53	37.08	100	28	Peak
5670	86.28	83.05			32.91	7.66	37.34	100	28	Average
5670	95.92	92.69			32.91	7.66	37.34	100	28	Peak
5725	51.75	48.50	68.3	-16.55	32.97	7.71	37.43	100	28	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	40.86	37.76	54.0	-13.14	32.65	7.53	37.08	100	215	Average
5460	50.08	46.98	74.0	-23.92	32.65	7.53	37.08	100	215	Peak
5470	49.91	46.79	68.3	-18.39	32.67	7.53	37.08	100	215	Peak
5670	81.21	77.98			32.91	7.66	37.34	100	215	Average
5670	90.40	87.17			32.91	7.66	37.34	100	215	Peak
5725	52.32	49.07	68.3	-15.98	32.97	7.71	37.43	100	215	Peak

REMARKS:

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

TEST MODE B

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
5054	40.15	38.91	54	-13.85	31.24	7.25	37.25	102	308	Average
5054	51.64	50.40	74	-22.36	31.24	7.25	37.25	102	308	Peak
5190	79.42	78.09			31.35	7.32	37.34	102	308	Average
5190	88.50	87.17			31.35	7.32	37.34	102	308	Peak
5420	40.16	38.41	54	-13.84	31.53	7.40	37.18	102	308	Average
5420	52.17	50.42	74	-21.83	31.53	7.40	37.18	102	308	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	41.76	40.43	54	-12.24	31.32	7.33	37.32	100	357	Average
5150	53.27	51.94	74	-20.73	31.32	7.33	37.32	100	357	Peak
5190	83.29	81.96			31.35	7.32	37.34	100	357	Average
5190	92.80	91.47			31.35	7.32	37.34	100	357	Peak
5434	40.31	38.42	54	-13.69	31.55	7.47	37.13	100	357	Average
5434	51.82	49.93	74	-22.18	31.55	7.47	37.13	100	357	Peak

REMARKS: 5190MHz: Fundamental frequency.



A D T

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
5138	40.05	38.70	54	-13.95	31.31	7.34	37.30	100	311	Average
5138	52.28	50.93	74	-21.72	31.31	7.34	37.30	100	311	Peak
5310	78.69	77.03			31.45	7.40	37.19	100	311	Average
5310	88.93	87.27			31.45	7.40	37.19	100	311	Peak
5352	40.51	38.81	54	-13.49	31.48	7.40	37.18	100	311	Average
5352	52.74	51.04	74	-21.26	31.48	7.40	37.18	100	311	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
5102	39.86	38.51	54	-14.14	31.28	7.35	37.28	100	8	Average
5102	51.39	50.04	74	-22.61	31.28	7.35	37.28	100	8	Peak
5310	83.45	81.79			31.45	7.40	37.19	100	8	Average
5310	92.55	90.89			31.45	7.40	37.19	100	8	Peak
5350	41.47	39.77	54	-12.53	31.48	7.40	37.18	100	8	Average
5350	53.99	52.29	74	-20.01	31.48	7.40	37.18	100	8	Peak

REMARKS: 5310MHz: Fundamental frequency.



A D T

802.11n (20MHz)

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
5454	39.84	37.83	54.0	-14.16	31.56	7.53	37.08	100	313	Average
5454	52.26	50.25	74.0	-21.74	31.56	7.53	37.08	100	313	Peak
5470	50.77	48.75	68.3	-17.53	31.57	7.53	37.08	100	313	Peak
5700	86.07	83.88			31.90	7.69	37.40	100	313	Average
5700	96.90	94.71			31.90	7.69	37.40	100	313	Peak
5725	53.07	50.83	68.3	-15.23	31.96	7.71	37.43	100	313	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
5418	39.65	37.90	54.0	-14.35	31.53	7.40	37.18	100	338	Average
5418	52.63	50.88	74.0	-21.37	31.53	7.40	37.18	100	338	Peak
5470	50.74	48.72	68.3	-17.56	31.57	7.53	37.08	100	338	Peak
5700	84.31	82.12			31.90	7.69	37.40	100	338	Average
5700	93.85	91.66			31.90	7.69	37.40	100	338	Peak
5725	53.90	51.66	68.3	-14.40	31.96	7.71	37.43	100	338	Peak

REMARKS:

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

BELOW 1GHz WORST-CASE DATA : 802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 134	FREQUENCY RANGE	30MHz ~ 1GHz
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
43.23	26.54	43.35	40.0	-13.46	13.59	0.71	31.11	103	166	Peak
109.38	27.76	48.49	43.5	-15.74	9.99	1.12	31.84	112	194	Peak
173.10	21.15	40.08	43.5	-22.35	11.38	1.46	31.77	102	213	Peak
612.20	24.80	34.03	46.0	-21.20	19.75	3.12	32.10	113	162	Peak
765.50	27.11	33.14	46.0	-18.89	21.74	3.61	31.38	102	155	Peak
885.90	28.01	32.76	46.0	-17.99	23.32	3.92	31.99	113	167	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
43.23	36.15	52.96	40.0	-3.85	13.59	0.71	31.11	106	159	Peak
62.40	32.89	51.79	40.0	-7.11	11.71	0.84	31.45	113	168	Peak
106.14	22.81	43.98	43.5	-20.69	9.62	1.10	31.89	112	265	Peak
605.20	25.23	34.63	46.0	-20.77	19.67	3.10	32.17	123	346	Peak
797.00	27.06	32.60	46.0	-18.94	22.19	3.69	31.42	106	263	Peak
890.80	28.40	33.06	46.0	-17.60	23.39	3.94	31.99	121	249	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

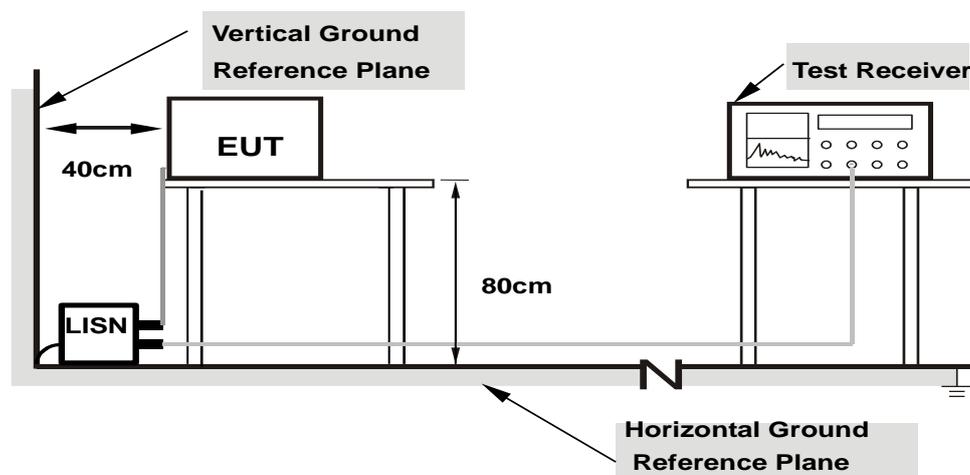
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling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

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

4.2.4 DEVIATION FROM TEST STANDARD

No deviation.

4.2.5 TEST SETUP



- Note:**
1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

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

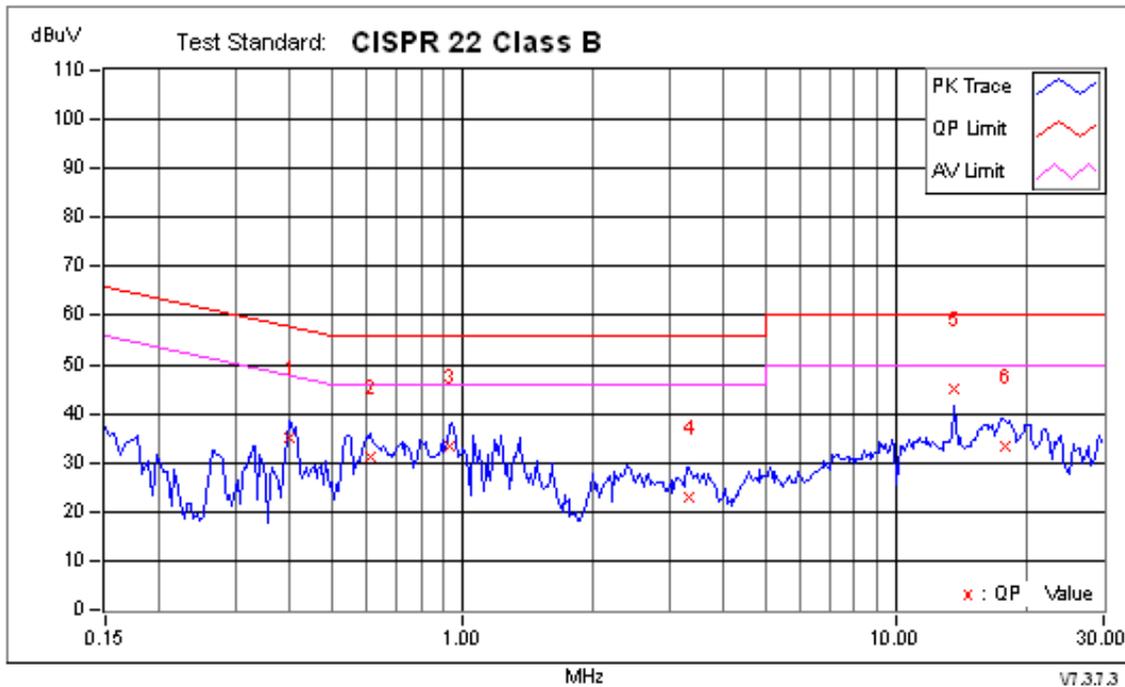
4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6.

4.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA : 802.11n (40MHz)

PHASE	Line 1	6dB BANDWIDTH	9kHz
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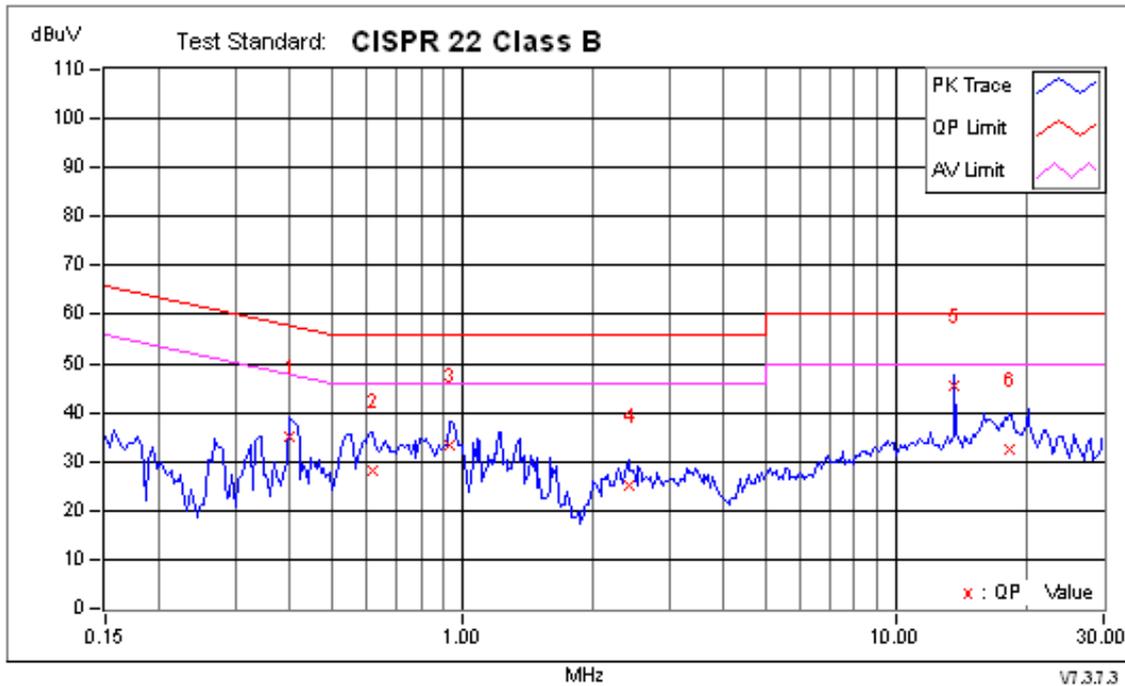


No.	Frequency MHz	Corr. Factor dB	Reading dBuV		Emission dBuV		Limit dBuV		Margins dB		Notes
			QP	AV	QP	AV	QP	AV	QP	AV	
1	0.39609	0.21	34.77	18.44	34.98	18.65	57.93	47.93	-22.96	-29.29	
2	0.61094	0.23	30.74	20.94	30.97	21.17	56.00	46.00	-25.03	-24.83	
3	0.92734	0.26	32.98	18.19	33.24	18.45	56.00	46.00	-22.76	-27.55	
4	3.32813	0.34	22.63	13.90	22.97	14.24	56.00	46.00	-33.03	-31.76	
+5	13.55859	0.50	44.67	41.59	45.17	42.09	60.00	50.00	-14.83	-7.91	
6	17.87109	0.60	32.60	24.71	33.20	25.31	60.00	50.00	-26.80	-24.69	

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.	Frequency	Corr. Factor	Reading dBuV		Emission dBuV		Limit dBuV		Margins dB		Notes
	MHz		QP	AV	QP	AV	QP	AV	QP	AV	
1	0.39609	0.25	35.04	18.73	35.29	18.98	57.93	47.93	-22.65	-28.96	
2	0.62266	0.24	28.03	17.94	28.27	18.18	56.00	46.00	-27.73	-27.82	
3	0.93125	0.23	33.06	18.11	33.29	18.34	56.00	46.00	-22.71	-27.66	
4	2.41797	0.30	25.01	14.24	25.31	14.54	56.00	46.00	-30.69	-31.46	
+5	13.56250	0.57	44.97	41.97	45.54	42.54	60.00	50.00	-14.46	-7.46	
6	18.29297	0.69	31.65	23.90	32.34	24.59	60.00	50.00	-27.66	-25.41	

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

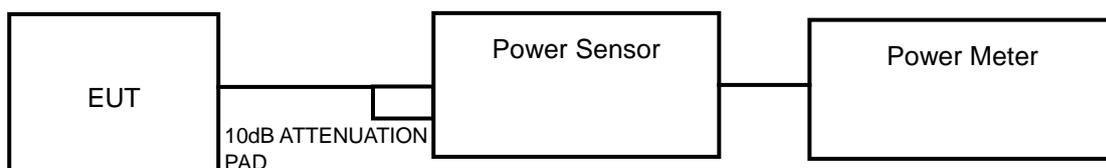
4.3.1 LIMITS OF PEAK TRANSMIT POWER MEASUREMENT

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

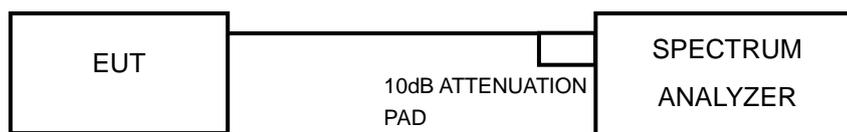
NOTE: Where B is the 26dB emission bandwidth in MHz.

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	22.284	13.48	17	PASS
44	5220	22.182	13.46	17	PASS
48	5240	21.380	13.30	17	PASS
52	5260	21.380	13.30	24	PASS
60	5300	21.928	13.41	24	PASS
64	5320	21.979	13.42	24	PASS
100	5500	19.861	12.98	24	PASS
116	5580	20.230	13.06	24	PASS
140	5700	21.038	13.23	24	PASS

802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	22.284	13.48	17	PASS
44	5220	22.131	13.45	17	PASS
48	5240	21.777	13.38	17	PASS
52	5260	21.727	13.37	24	PASS
60	5300	21.928	13.41	24	PASS
64	5320	22.439	13.51	24	PASS
100	5500	20.324	13.08	24	PASS
116	5580	20.749	13.17	24	PASS
140	5700	21.184	13.26	24	PASS

802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
38	5190	21.928	13.41	17	PASS
46	5230	21.777	13.38	17	PASS
54	5270	21.429	13.31	24	PASS
62	5310	21.979	13.42	24	PASS
102	5510	24.831	13.95	24	PASS
110	5550	25.119	14.00	24	PASS
134	5670	25.527	14.07	24	PASS



26dB BANDWIDTH: 802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
36	5180	23.61	PASS
44	5220	23.29	PASS
48	5240	24.03	PASS
52	5260	23.67	PASS
60	5300	23.73	PASS
64	5320	23.57	PASS
100	5500	23.57	PASS
116	5580	24.05	PASS
140	5700	23.66	PASS

802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
36	5180	24.34	PASS
44	5220	24.17	PASS
48	5240	23.62	PASS
52	5260	24.42	PASS
60	5300	23.98	PASS
64	5320	24.62	PASS
100	5500	24.12	PASS
116	5580	23.67	PASS
140	5700	24.94	PASS

802.11n (40MHz)

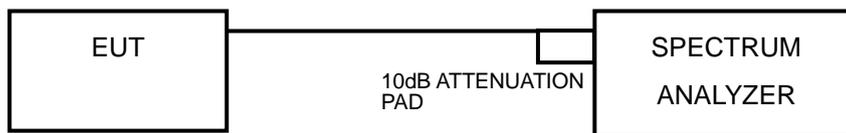
CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
38	5190	53.47	PASS
46	5230	52.70	PASS
54	5270	52.38	PASS
62	5310	52.27	PASS
102	5510	53.78	PASS
110	5550	52.96	PASS
134	5670	52.52	PASS

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/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	-0.38	0.23	-0.15	4	PASS
44	5220	-0.73	0.23	-0.50	4	PASS
48	5240	-0.72	0.23	-0.49	4	PASS
52	5260	-1.07	0.23	-0.84	11	PASS
60	5300	-1.03	0.23	-0.80	11	PASS
64	5320	-1.26	0.23	-1.03	11	PASS
100	5500	-0.49	0.23	-0.26	11	PASS
116	5580	-0.56	0.23	-0.33	11	PASS
140	5700	-0.82	0.23	-0.59	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	-0.47	0.25	-0.22	4	PASS
44	5220	-0.76	0.25	-0.51	4	PASS
48	5240	-0.93	0.25	-0.68	4	PASS
52	5260	-1.14	0.25	-0.89	11	PASS
60	5300	-1.32	0.25	-1.07	11	PASS
64	5320	-1.35	0.25	-1.10	11	PASS
100	5500	-0.65	0.25	-0.40	11	PASS
116	5580	-0.70	0.25	-0.45	11	PASS
140	5700	-1.03	0.25	-0.78	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	-4.34	0.61	-3.73	4	PASS
46	5230	-4.73	0.61	-4.12	4	PASS
54	5270	-4.91	0.61	-4.30	11	PASS
62	5310	-5.04	0.61	-4.43	11	PASS
102	5510	-3.23	0.61	-2.62	11	PASS
110	5550	-3.43	0.61	-2.82	11	PASS
134	5670	-3.79	0.61	-3.18	11	PASS

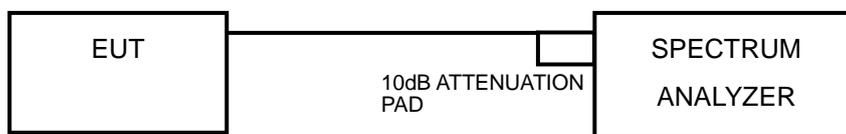
NOTE: Refer to section 3.3 for duty cycle spectrum plot.

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

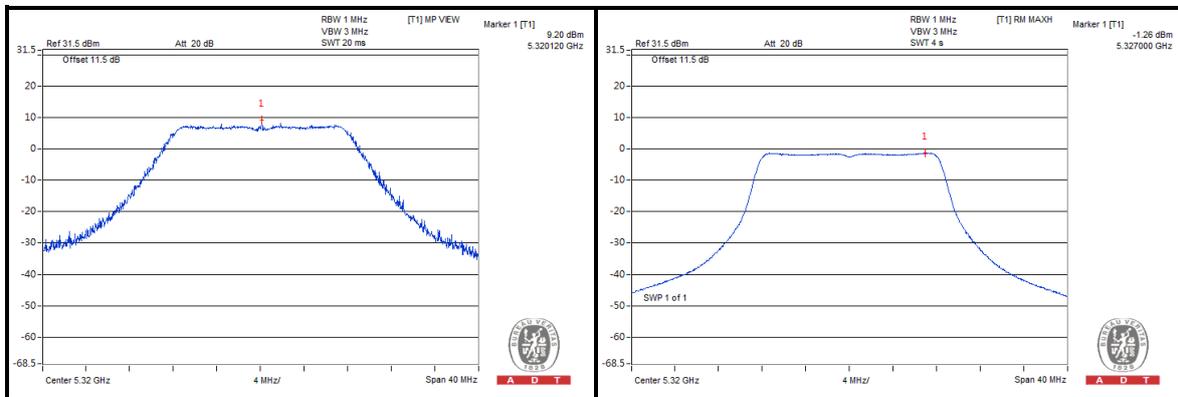
Same as 4.2.6

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	9.56	-0.38	-0.15	9.71	13	PASS
44	5220	8.44	-0.73	-0.50	8.94	13	PASS
48	5240	8.43	-0.72	-0.49	8.92	13	PASS
52	5260	8.04	-1.07	-0.84	8.88	13	PASS
60	5300	8.69	-1.03	-0.80	9.49	13	PASS
64	5320	9.20	-1.26	-1.03	10.23	13	PASS
100	5500	9.14	-0.49	-0.26	9.40	13	PASS
116	5580	8.89	-0.56	-0.33	9.22	13	PASS
140	5700	9.13	-0.82	-0.59	9.72	13	PASS

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

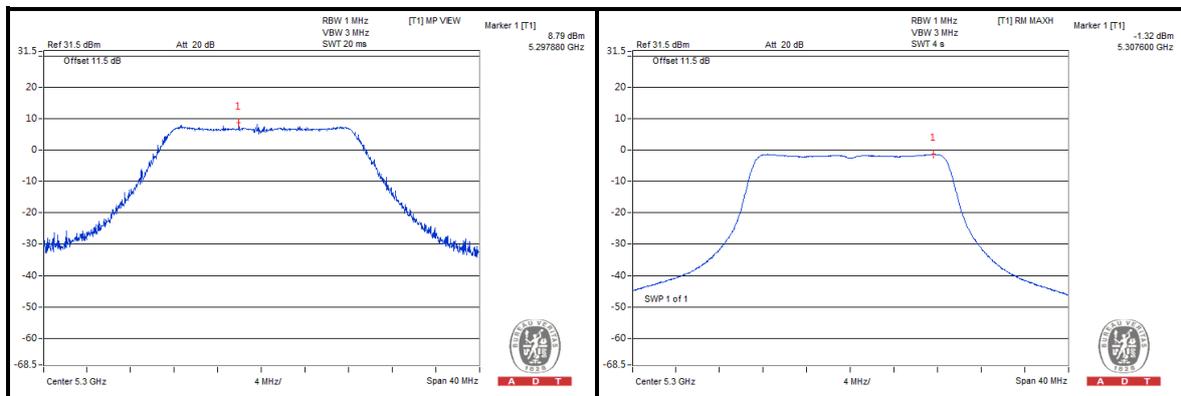




802.11n (20MHz)

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	9.01	-0.47	-0.22	9.23	13	PASS
44	5220	8.84	-0.76	-0.51	9.35	13	PASS
48	5240	8.10	-0.93	-0.68	8.78	13	PASS
52	5260	7.84	-1.14	-0.89	8.73	13	PASS
60	5300	8.79	-1.32	-1.07	9.86	13	PASS
64	5320	8.08	-1.35	-1.10	9.18	13	PASS
100	5500	8.78	-0.65	-0.40	9.18	13	PASS
116	5580	8.59	-0.70	-0.45	9.04	13	PASS
140	5700	8.20	-1.03	-0.78	8.98	13	PASS

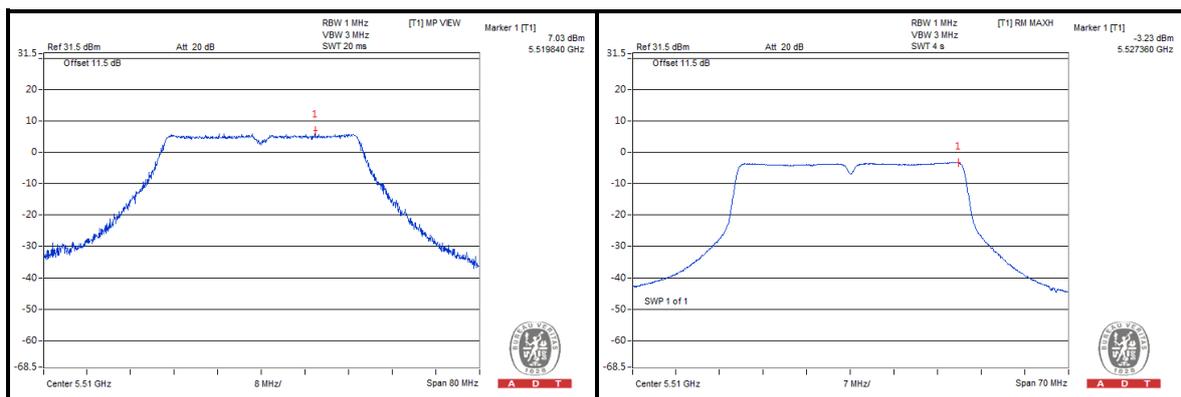
NOTE: Refer to section 3.3 for duty cycle spectrum plot.



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	5.92	-4.34	-3.73	9.65	13	PASS
46	5230	5.04	-4.73	-4.12	9.16	13	PASS
54	5270	4.87	-4.91	-4.30	9.17	13	PASS
62	5310	5.06	-5.04	-4.43	9.49	13	PASS
102	5510	7.03	-3.23	-2.62	9.65	13	PASS
110	5550	6.72	-3.43	-2.82	9.54	13	PASS
134	5670	5.39	-3.79	-3.18	8.57	13	PASS

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

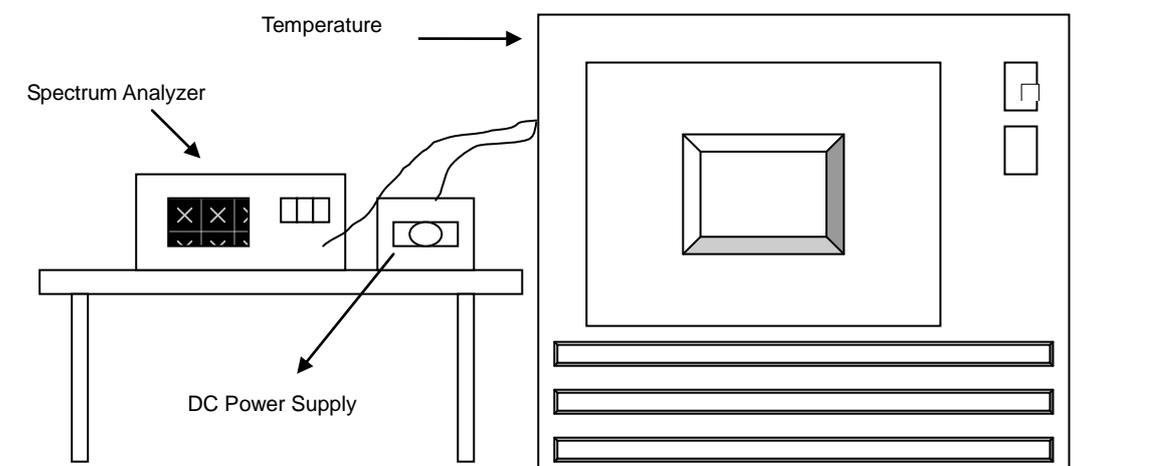


4.6 FREQUENCY STABILITY

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	5320.013857	2.605	5320.014070	2.645	5320.014035	2.638	5320.014099	2.650
50	3.8	5320.014731	2.769	5320.014715	2.766	5320.014663	2.756	5320.014469	2.720
40	3.8	5320.015760	2.962	5320.015958	3.000	5320.015848	2.979	5320.015771	2.964
30	3.8	5320.017218	3.236	5320.017470	3.284	5320.017364	3.264	5320.017619	3.312
20	3.8	5320.017036	3.202	5320.017067	3.208	5320.017462	3.282	5320.017537	3.296
10	3.8	5320.016985	3.193	5320.017141	3.222	5320.017051	3.205	5320.016979	3.192
0	3.8	5320.015614	2.935	5320.015564	2.926	5320.015701	2.951	5320.015919	2.992
-10	3.8	5320.014037	2.639	5320.013644	2.565	5320.014068	2.644	5320.014095	2.649

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	5320.015900	2.989	5320.016152	3.036	5320.016120	3.030	5320.016266	3.058
	3.8	5320.017036	3.202	5320.017067	3.208	5320.017462	3.282	5320.017537	3.296
	4.35	5320.018348	3.449	5320.018476	3.473	5320.018346	3.448	5320.018391	3.457



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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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Fax: 886-2-26051924

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Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

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---