



FCC TEST REPORT (15.407)

REPORT NO.: RF121025C24-4
MODEL NO.: CDMA HTX21
FCC ID: NM8CDMAHTX21
RECEIVED: Oct. 25, 2012
TESTED: Nov. 01 ~ Nov. 14, 2012
ISSUED: Nov. 23, 2012

APPLICANT: HTC Corporation

ADDRESS: No. 23, Xinghua Rd., Taoyuan City, Taiwan

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

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

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

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF121025C24-4	Original release	Nov. 23, 2012

1. CERTIFICATION

PRODUCT: Smartphone
MODEL NO.: CDMA HTX21
BRAND: HTC
APPLICANT: HTC Corporation
TESTED: Nov. 01 ~ Nov. 14, 2012
TEST SAMPLE: Production Unit
STANDARDS: **FCC Part 15, Subpart E (Section 15.407)**
ANSI C63.10-2009

The above equipment (model: CDMA HTX21) 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** : Nov. 23, 2012
Ivonne Wu / Senior Specialist

APPROVED BY : Anderson Chiu , **DATE** : Nov. 23, 2012
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 -12.86dB at 0.84922MHz.
15.407(b/1/2/3) (b)(6)	Spurious Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -0.4dB at 5725MHz.
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.	CDMA HTX21
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 135.0Mbps
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	22.44mW for 5180 ~ 5240MHz 22.91mW for 5260 ~ 5320MHz 21.58mW for 5500 ~ 5700MHz
ANTENNA TYPE	PIFA antenna with -7dBi gain (5180 ~ 5240MHz) PIFA antenna with -6dBi gain (5260 ~ 5320MHz) PIFA antenna with -8dBi 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 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	
-	√	√	√	√	-

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 **Z-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	5260-5320	52 to 64	64	OFDM	BPSK	6.0

POWER LINE CONDUCTED EMISSION TEST:

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

MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	5260-5320	52 to 64	64	OFDM	BPSK	6.0

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	Kay Wu
PLC	25deg. C, 65%RH	120Vac, 60Hz	David Huang
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.

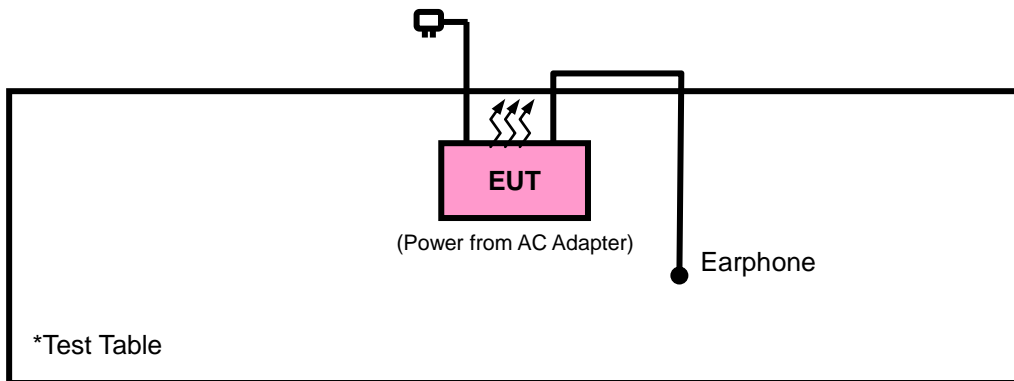
NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Earphone	Cotron	RC E160	NA	NA

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

NOTE:

1. All power cords of the above support units are non shielded (1.8m).
2. Item 1 was provided by client.

3.3.1 CONFIGURATION OF SYSTEM UNDER TEST



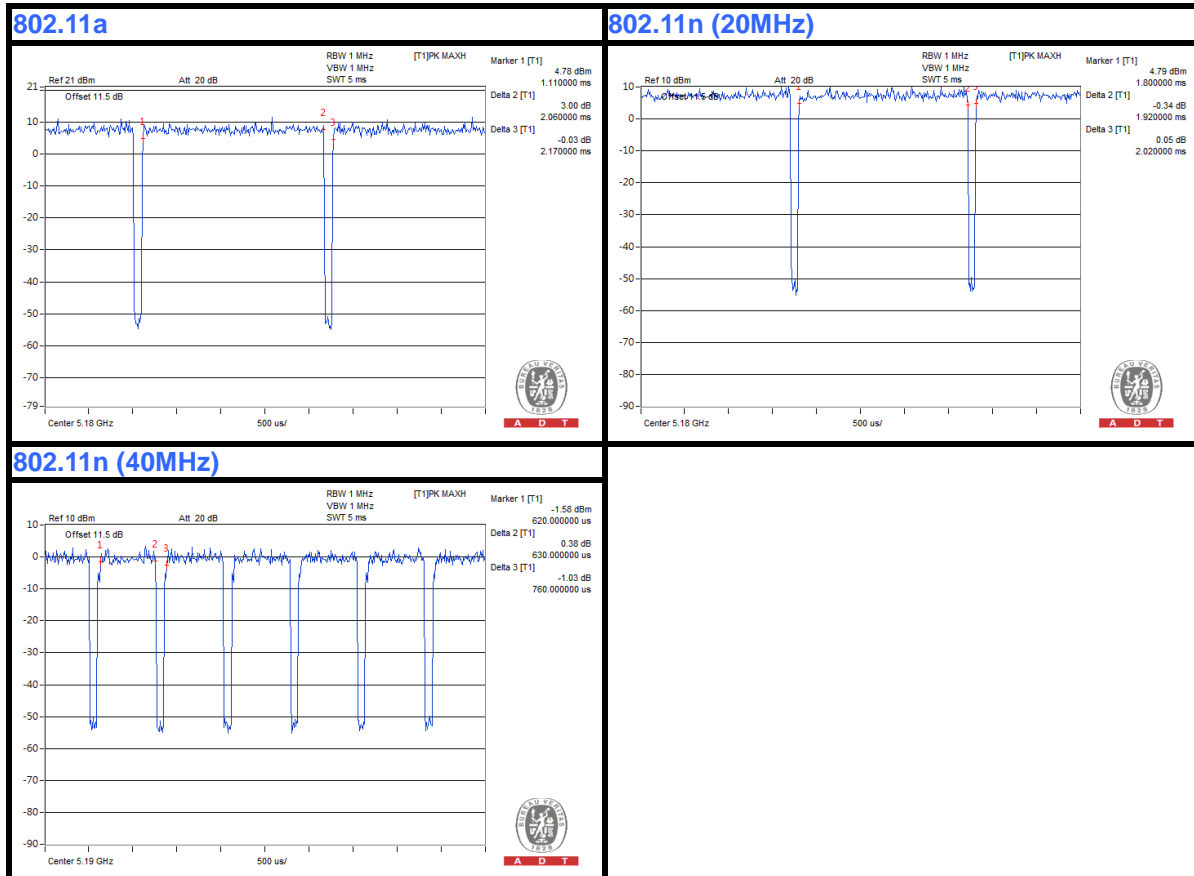
3.4 DUTY CYCLE OF TEST SIGNAL

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 = 1.92/2.02 = 0.951, Duty factor = $10 * \log(1/0.951) = 0.22$

802.11n (40MHz): Duty cycle = 630/760 = 0.829, Duty factor = $10 * \log(1/0.829) = 0.81$



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 v01r01

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 Agilent	N9038A	MY51210203	Dec. 22, 2011	Dec. 21, 2012
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Dec. 21, 2011	Dec. 20, 2012
BILOG Antenna SCHWARZBECK	VULB9168	9168-472	Dec. 20, 2011	Dec. 19, 2012
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-969	Dec. 20, 2011	Dec. 19, 2012
HORN Antenna SCHWARZBECK	BBHA 9170	9170-480	Dec. 20, 2011	Dec. 19, 2012
Loop Antenna	HFH2-Z2	100070	Jan. 31, 2012	Jan. 30, 2014
Preamplifier EMCI	EMC 012645	980115	Dec. 30, 2011	Dec. 29, 2012
Preamplifier EMCI	EMC 330H	980112	Dec. 30, 2011	Dec. 29, 2012
Preamplifier EMCI	EMC 184045	980116	Jan. 02, 2012	Jan. 01, 2013
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	309219/4	Oct. 26, 2012	Oct. 25, 2013
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	250130/4	Jan. 02, 2012	Jan. 01, 2013
RF signal cable Worken	RG-213	NA	Jan. 02, 2012	Jan. 01, 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.

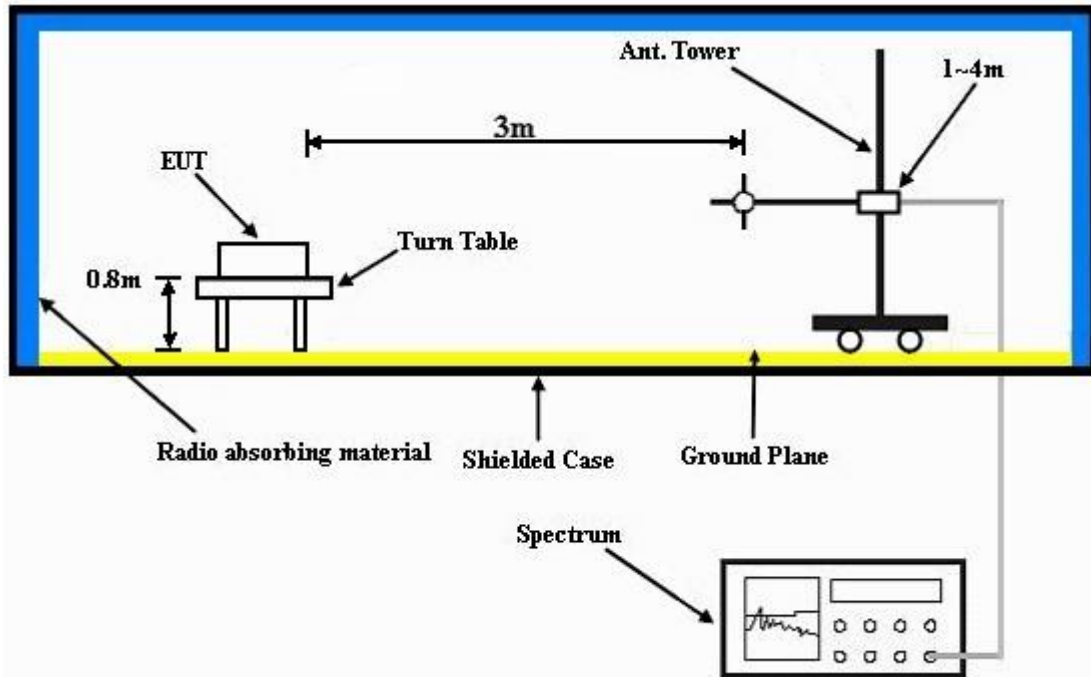
NOTE:

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

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	45.7	43.82	54	-8.3	31.87	7.33	37.32	100	154	Average
5150	61.58	59.7	74	-12.42	31.87	7.33	37.32	100	154	Peak
5180	94.31	92.45			31.88	7.32	37.34	100	154	Average
5180	104.41	102.55			31.88	7.32	37.34	100	154	Peak
5432	40.9	38.55	54	-13.1	32.01	7.47	37.13	100	154	Average
5432	55.85	53.5	74	-18.15	32.01	7.47	37.13	100	154	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	43.15	41.27	54	-10.85	31.87	7.33	37.32	100	261	Average
5150	59.2	57.32	74	-14.8	31.87	7.33	37.32	100	261	Peak
5180	91.38	89.52			31.88	7.32	37.34	100	261	Average
5180	101.42	99.56			31.88	7.32	37.34	100	261	Peak
5394	39.72	37.52	54	-14.28	31.98	7.4	37.18	100	261	Average
5394	55.74	53.54	74	-18.26	31.98	7.4	37.18	100	261	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
5132	41.16	39.26	54	-12.84	31.86	7.34	37.3	100	137	Average
5132	55.91	54.01	74	-18.09	31.86	7.34	37.3	100	137	Peak
5220	94.75	92.89			31.9	7.32	37.36	100	137	Average
5220	104.21	102.35			31.9	7.32	37.36	100	137	Peak
5440	42.09	39.74	54	-11.91	32.01	7.47	37.13	100	137	Average
5440	56.69	54.34	74	-17.31	32.01	7.47	37.13	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
5058	40.05	38.23	54	-13.95	31.82	7.25	37.25	100	263	Average
5058	57.06	55.24	74	-16.94	31.82	7.25	37.25	100	263	Peak
5220	91.86	90			31.9	7.32	37.36	100	263	Average
5220	101.59	99.73			31.9	7.32	37.36	100	263	Peak
5404	39.56	37.35	54	-14.44	31.99	7.4	37.18	100	263	Average
5404	56.04	53.83	74	-17.96	31.99	7.4	37.18	100	263	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
5122	41.29	39.4	54	-12.71	31.85	7.34	37.3	100	138	Average
5122	57.5	55.61	74	-16.5	31.85	7.34	37.3	100	138	Peak
5240	94.94	93.01			31.91	7.34	37.32	100	138	Average
5240	104.71	102.78			31.91	7.34	37.32	100	138	Peak
5444	41.68	39.33	54	-12.32	32.01	7.47	37.13	100	138	Average
5444	56.65	54.3	74	-17.35	32.01	7.47	37.13	100	138	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5128	39.91	38.01	54	-14.09	31.86	7.34	37.3	123	234	Average
5128	56.45	54.55	74	-17.55	31.86	7.34	37.3	123	234	Peak
5240	93.2	91.27			31.91	7.34	37.32	123	234	Average
5240	102.79	100.86			31.91	7.34	37.32	123	234	Peak
5450	40.18	37.72	54	-13.82	32.01	7.53	37.08	123	234	Average
5450	55.82	53.36	74	-18.18	32.01	7.53	37.08	123	234	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
5122	40.6	38.71	54	-13.4	31.85	7.34	37.3	100	144	Average
5122	56.07	54.18	74	-17.93	31.85	7.34	37.3	100	144	Peak
5260	95.08	93.07			31.92	7.36	37.27	100	144	Average
5260	104.27	102.26			31.92	7.36	37.27	100	144	Peak
5458	40.21	37.75	54	-13.79	32.01	7.53	37.08	100	144	Average
5458	56.5	54.04	74	-17.5	32.01	7.53	37.08	100	144	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
5106	39.64	37.72	54	-14.36	31.85	7.35	37.28	115	168	Average
5106	56.7	54.78	74	-17.3	31.85	7.35	37.28	115	168	Peak
5260	93.97	91.96			31.92	7.36	37.27	115	168	Average
5260	103.54	101.53			31.92	7.36	37.27	115	168	Peak
5420	40.31	38.09	54	-13.69	32	7.4	37.18	115	168	Average
5420	56.95	54.73	74	-17.05	32	7.4	37.18	115	168	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
5080	40.13	38.27	54	-13.87	31.83	7.3	37.27	100	139	Average
5080	56.28	54.42	74	-17.72	31.83	7.3	37.27	100	139	Peak
5300	94.85	92.7			31.94	7.4	37.19	100	139	Average
5300	104.37	102.22			31.94	7.4	37.19	100	139	Peak
5348	42.14	39.95	54	-11.86	31.97	7.4	37.18	100	139	Average
5348	56.86	54.67	74	-17.14	31.97	7.4	37.18	100	139	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	39.38	37.5	54	-14.62	31.87	7.33	37.32	102	171	Average
5150	56.43	54.55	74	-17.57	31.87	7.33	37.32	102	171	Peak
5300	96.33	94.18			31.94	7.4	37.19	102	171	Average
5300	105.43	103.28			31.94	7.4	37.19	102	171	Peak
5454	43.66	41.2	54	-10.34	32.01	7.53	37.08	102	171	Average
5454	57.02	54.56	74	-16.98	32.01	7.53	37.08	102	171	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
5098	41.94	40.03	54	-12.06	31.84	7.35	37.28	100	139	Average
5098	56.8	54.89	74	-17.2	31.84	7.35	37.28	100	139	Peak
5320	94.81	92.65			31.95	7.4	37.19	100	139	Average
5320	104.17	102.01			31.95	7.4	37.19	100	139	Peak
5348	44.15	41.96	54	-9.85	31.97	7.4	37.18	100	139	Average
5348	60.12	57.93	74	-13.88	31.97	7.4	37.18	100	139	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
5128	40.53	38.63	54	-13.47	31.86	7.34	37.3	148	205	Average
5128	56.22	54.32	74	-17.78	31.86	7.34	37.3	148	205	Peak
5320	93.56	91.4			31.95	7.4	37.19	148	205	Average
5320	102.93	100.77			31.95	7.4	37.19	148	205	Peak
5350	44.18	41.99	54	-9.82	31.97	7.4	37.18	148	205	Average
5350	59.09	56.9	74	-14.91	31.97	7.4	37.18	148	205	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
5460	44.43	41.97	54	-9.57	32.01	7.53	37.08	100	97	Average
5460	58.62	56.16	74	-15.38	32.01	7.53	37.08	100	97	Peak
5470	63.95	61.48	68.3	-4.35	32.02	7.53	37.08	100	97	Peak
5500	95.62	93.02			32.04	7.59	37.03	100	97	Average
5500	106.29	103.69			32.04	7.59	37.03	100	97	Peak
5725	55.49	52.85	68.3	-12.81	32.36	7.71	37.43	100	97	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	45.51	43.05	54	-8.49	32.01	7.53	37.08	100	165	Average
5460	61.26	58.8	74	-12.74	32.01	7.53	37.08	100	165	Peak
5470	63.15	60.68	68.3	-5.15	32.02	7.53	37.08	100	165	Peak
5500	96.54	93.94			32.04	7.59	37.03	100	165	Average
5500	105.99	103.39			32.04	7.59	37.03	100	165	Peak
5725	53.1	50.46	68.3	-15.2	32.36	7.71	37.43	100	165	Peak

REMARKS:

1. 5550MHz: 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
5444	40	37.65	54	-14	32.01	7.47	37.13	102	135	Average
5444	55.72	53.37	74	-18.28	32.01	7.47	37.13	102	135	Peak
5470	54.07	51.6	68.3	-14.23	32.02	7.53	37.08	102	135	Peak
5580	97.6	95.05			32.14	7.57	37.16	102	135	Average
5580	106.63	104.08			32.14	7.57	37.16	102	135	Peak
5725	54.04	51.4	68.3	-14.26	32.36	7.71	37.43	102	135	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	40.32	37.86	54	-13.68	32.01	7.53	37.08	108	172	Average
5460	56.57	54.11	74	-17.43	32.01	7.53	37.08	108	172	Peak
5470	55.57	53.1	68.3	-12.73	32.02	7.53	37.08	108	172	Peak
5580	97.79	95.24			32.14	7.57	37.16	108	172	Average
5580	107.25	104.7			32.14	7.57	37.16	108	172	Peak
5725	53.84	51.2	68.3	-14.46	32.36	7.71	37.43	108	172	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	39.82	37.36	54	-14.18	32.01	7.53	37.08	100	142	Average
5460	56.51	54.05	74	-17.49	32.01	7.53	37.08	100	142	Peak
5470	55.42	52.95	68.3	-12.88	32.02	7.53	37.08	100	142	Peak
5700	97.86	95.26			32.31	7.69	37.4	100	142	Average
5700	106.6	104			32.31	7.69	37.4	100	142	Peak
5725	67.48	64.84	68.3	-0.82	32.36	7.71	37.43	100	142	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
5378	39.54	37.34	54	-14.46	31.98	7.4	37.18	108	260	Average
5378	55.89	53.69	74	-18.11	31.98	7.4	37.18	108	260	Peak
5470	54.25	51.78	68.3	-14.05	32.02	7.53	37.08	108	260	Peak
5700	94.75	92.15			32.31	7.69	37.4	108	260	Average
5700	103.91	101.31			32.31	7.69	37.4	108	260	Peak
5725	64.09	61.45	68.3	-4.21	32.36	7.71	37.43	108	260	Peak

REMARKS:

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



A D T

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
5150	47.48	45.6	54	-6.52	31.87	7.33	37.32	100	141	Average
5150	63.76	61.88	74	-10.24	31.87	7.33	37.32	100	141	Peak
5180	95.68	93.82			31.88	7.32	37.34	100	141	Average
5180	104.6	102.74			31.88	7.32	37.34	100	141	Peak
5350	39.74	37.55	54	-14.26	31.97	7.4	37.18	100	141	Average
5350	59.39	57.2	74	-14.61	31.97	7.4	37.18	100	141	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	44.47	42.59	54	-9.53	31.87	7.33	37.32	100	261	Average
5150	62.8	60.92	74	-11.2	31.87	7.33	37.32	100	261	Peak
5180	91.46	89.6			31.88	7.32	37.34	100	261	Average
5180	100.41	98.55			31.88	7.32	37.34	100	261	Peak
5350	39.58	37.39	54	-14.42	31.97	7.4	37.18	100	261	Average
5350	60.83	58.64	74	-13.17	31.97	7.4	37.18	100	261	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	41.66	39.78	54	-12.34	31.87	7.33	37.32	100	144	Average
5150	60.08	58.2	74	-13.92	31.87	7.33	37.32	100	144	Peak
5220	95.68	93.82			31.9	7.32	37.36	100	144	Average
5220	104.39	102.53			31.9	7.32	37.36	100	144	Peak
5350	39.79	37.6	54	-14.21	31.97	7.4	37.18	100	144	Average
5350	59.7	57.51	74	-14.3	31.97	7.4	37.18	100	144	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	40.52	38.64	54	-13.48	31.87	7.33	37.32	100	259	Average
5150	58.81	56.93	74	-15.19	31.87	7.33	37.32	100	259	Peak
5220	91.85	89.99			31.9	7.32	37.36	100	259	Average
5220	101.49	99.63			31.9	7.32	37.36	100	259	Peak
5350	39.53	37.34	54	-14.47	31.97	7.4	37.18	100	259	Average
5350	59.36	57.17	74	-14.64	31.97	7.4	37.18	100	259	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	40.53	38.65	54	-13.47	31.87	7.33	37.32	100	142	Average
5150	59.7	57.82	74	-14.3	31.87	7.33	37.32	100	142	Peak
5240	95.94	94.01			31.91	7.34	37.32	100	142	Average
5240	105.47	103.54			31.91	7.34	37.32	100	142	Peak
5350	40.12	37.93	54	-13.88	31.97	7.4	37.18	100	142	Average
5350	58.14	55.95	74	-15.86	31.97	7.4	37.18	100	142	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	40.4	38.52	54	-13.6	31.87	7.33	37.32	110	262	Average
5150	60.05	58.17	74	-13.95	31.87	7.33	37.32	110	262	Peak
5240	92.53	90.6			31.91	7.34	37.32	110	262	Average
5240	101.71	99.78			31.91	7.34	37.32	110	262	Peak
5350	39.88	37.69	54	-14.12	31.97	7.4	37.18	110	262	Average
5350	60.92	58.73	74	-13.08	31.97	7.4	37.18	110	262	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	40.36	38.48	54	-13.64	31.87	7.33	37.32	100	141	Average
5150	60.02	58.14	74	-13.98	31.87	7.33	37.32	100	141	Peak
5260	96.38	94.37			31.92	7.36	37.27	100	141	Average
5260	105.09	103.08			31.92	7.36	37.27	100	141	Peak
5350	40.2	38.01	54	-13.8	31.97	7.4	37.18	100	141	Average
5350	60.33	58.14	74	-13.67	31.97	7.4	37.18	100	141	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	40.33	38.45	54	-13.67	31.87	7.33	37.32	135	236	Average
5150	60.09	58.21	74	-13.91	31.87	7.33	37.32	135	236	Peak
5260	91.74	89.73			31.92	7.36	37.27	135	236	Average
5260	100.64	98.63			31.92	7.36	37.27	135	236	Peak
5350	39.85	37.66	54	-14.15	31.97	7.4	37.18	135	236	Average
5350	58.77	56.58	74	-15.23	31.97	7.4	37.18	135	236	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	40.46	38.58	54	-13.54	31.87	7.33	37.32	100	143	Average
5150	59.79	57.91	74	-14.21	31.87	7.33	37.32	100	143	Peak
5300	94.14	91.99			31.94	7.4	37.19	100	143	Average
5300	102.95	100.8			31.94	7.4	37.19	100	143	Peak
5350	40.06	37.87	54	-13.94	31.97	7.4	37.18	100	143	Average
5350	60.41	58.22	74	-13.59	31.97	7.4	37.18	100	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
5150	40.34	38.46	54	-13.66	31.87	7.33	37.32	100	224	Average
5150	59.43	57.55	74	-14.57	31.87	7.33	37.32	100	224	Peak
5300	92.45	90.3			31.94	7.4	37.19	100	224	Average
5300	101.5	99.35			31.94	7.4	37.19	100	224	Peak
5350	39.79	37.6	54	-14.21	31.97	7.4	37.18	100	224	Average
5350	59.29	57.1	74	-14.71	31.97	7.4	37.18	100	224	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
5150	40.57	38.69	54	-13.43	31.87	7.33	37.32	106	138	Average
5150	60.1	58.22	74	-13.9	31.87	7.33	37.32	106	138	Peak
5320	94.05	91.89			31.95	7.4	37.19	106	138	Average
5320	103.18	101.02			31.95	7.4	37.19	106	138	Peak
5350	47.26	45.07	54	-6.74	31.97	7.4	37.18	106	138	Average
5350	65.67	63.48	74	-8.33	31.97	7.4	37.18	106	138	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	40.48	38.6	54	-13.52	31.87	7.33	37.32	100	206	Average
5150	59.45	57.57	74	-14.55	31.87	7.33	37.32	100	206	Peak
5320	93.65	91.49			31.95	7.4	37.19	100	206	Average
5320	102.93	100.77			31.95	7.4	37.19	100	206	Peak
5350	46.49	44.3	54	-7.51	31.97	7.4	37.18	100	206	Average
5350	62.98	60.79	74	-11.02	31.97	7.4	37.18	100	206	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
5460	41.68	39.22	54	-12.32	32.01	7.53	37.08	100	128	Average
5460	61	58.54	74	-13	32.01	7.53	37.08	100	128	Peak
5470	64.23	61.76	68.3	-4.07	32.02	7.53	37.08	100	128	Peak
5500	96.71	94.11			32.04	7.59	37.03	100	128	Average
5500	105.72	103.12			32.04	7.59	37.03	100	128	Peak
5725	60.42	57.78	68.3	-7.88	32.36	7.71	37.43	100	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
5460	41.81	39.35	54	-12.19	32.01	7.53	37.08	100	171	Average
5460	62.62	60.16	74	-11.38	32.01	7.53	37.08	100	171	Peak
5470	66.01	63.54	68.3	-2.29	32.02	7.53	37.08	100	171	Peak
5500	96.66	94.06			32.04	7.59	37.03	100	171	Average
5500	107.26	104.66			32.04	7.59	37.03	100	171	Peak
5725	60.11	57.47	68.3	-8.19	32.36	7.71	37.43	100	171	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	40.68	38.22	54	-13.32	32.01	7.53	37.08	100	132	Average
5460	60.27	57.81	74	-13.73	32.01	7.53	37.08	100	132	Peak
5470	60.94	58.47	68.3	-7.36	32.02	7.53	37.08	100	132	Peak
5580	97.83	95.28			32.14	7.57	37.16	100	132	Average
5580	106.78	104.23			32.14	7.57	37.16	100	132	Peak
5725	60.15	57.51	68.3	-8.15	32.36	7.71	37.43	100	132	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	41.24	38.78	54	-12.76	32.01	7.53	37.08	108	179	Average
5460	59.39	56.93	74	-14.61	32.01	7.53	37.08	108	179	Peak
5470	60.16	57.69	68.3	-8.14	32.02	7.53	37.08	108	179	Peak
5580	98.51	95.96			32.14	7.57	37.16	108	179	Average
5580	107.99	105.44			32.14	7.57	37.16	108	179	Peak
5725	58.95	56.31	68.3	-9.35	32.36	7.71	37.43	108	179	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	40.72	38.26	54	-13.28	32.01	7.53	37.08	100	134	Average
5460	58.13	55.67	74	-15.87	32.01	7.53	37.08	100	134	Peak
5470	59.36	56.89	68.3	-8.94	32.02	7.53	37.08	100	134	Peak
5700	97.93	95.33			32.31	7.69	37.4	100	134	Average
5700	107.13	104.53			32.31	7.69	37.4	100	134	Peak
5725	67.9	65.26	68.3	-0.4	32.36	7.71	37.43	100	134	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	40.61	38.15	54	-13.39	32.01	7.53	37.08	109	261	Average
5460	58.79	56.33	74	-15.21	32.01	7.53	37.08	109	261	Peak
5470	59.68	57.21	68.3	-8.62	32.02	7.53	37.08	109	261	Peak
5700	94.57	91.97			32.31	7.69	37.4	109	261	Average
5700	103.52	100.92			32.31	7.69	37.4	109	261	Peak
5725	65.32	62.68	68.3	-2.98	32.36	7.71	37.43	109	261	Peak

REMARKS:

- 5700MHz: Fundamental frequency.
- 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
5148	50.63	48.75	54	-3.37	31.87	7.33	37.32	100	143	Average
5148	69.96	68.08	74	-4.04	31.87	7.33	37.32	100	143	Peak
5190	90.07	88.21			31.88	7.32	37.34	100	143	Average
5190	100.58	98.72			31.88	7.32	37.34	100	143	Peak
5414	39.66	37.44	54	-14.34	32	7.4	37.18	100	143	Average
5414	62.72	60.5	74	-11.28	32	7.4	37.18	100	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
5148	46.94	45.06	54	-7.06	31.87	7.33	37.32	100	259	Average
5148	65.28	63.4	74	-8.72	31.87	7.33	37.32	100	259	Peak
5190	85.82	83.96			31.88	7.32	37.34	100	259	Average
5190	96	94.14			31.88	7.32	37.34	100	259	Peak
5416	39.37	37.15	54	-14.63	32	7.4	37.18	100	259	Average
5416	61.77	59.55	74	-12.23	32	7.4	37.18	100	259	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
5078	40.56	38.7	54	-13.44	31.83	7.3	37.27	100	138	Average
5078	62.2	60.34	74	-11.8	31.83	7.3	37.27	100	138	Peak
5230	89.53	87.6			31.91	7.34	37.32	100	138	Average
5230	99.66	97.73			31.91	7.34	37.32	100	138	Peak
5428	40.1	37.76	54	-13.9	32	7.47	37.13	100	138	Average
5428	62.77	60.43	74	-11.23	32	7.47	37.13	100	138	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5066	39.89	38.07	54	-14.11	31.82	7.25	37.25	100	259	Average
5066	62.4	60.58	74	-11.6	31.82	7.25	37.25	100	259	Peak
5230	86.17	84.24			31.91	7.34	37.32	100	259	Average
5230	96.57	94.64			31.91	7.34	37.32	100	259	Peak
5402	39.37	37.16	54	-14.63	31.99	7.4	37.18	100	259	Average
5402	62.36	60.15	74	-11.64	31.99	7.4	37.18	100	259	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
5072	40.23	38.37	54	-13.77	31.83	7.3	37.27	100	140	Average
5072	62.24	60.38	74	-11.76	31.83	7.3	37.27	100	140	Peak
5270	89.52	87.51			31.92	7.36	37.27	100	140	Average
5270	100.05	98.04			31.92	7.36	37.27	100	140	Peak
5366	40.32	38.13	54	-13.68	31.97	7.4	37.18	100	140	Average
5366	62.17	59.98	74	-11.83	31.97	7.4	37.18	100	140	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	39.46	37.64	54	-14.54	31.82	7.25	37.25	102	175	Average
5064	62.54	60.72	74	-11.46	31.82	7.25	37.25	102	175	Peak
5270	89.68	87.67			31.92	7.36	37.27	102	175	Average
5270	99.5	97.49			31.92	7.36	37.27	102	175	Peak
5372	40.91	38.72	54	-13.09	31.97	7.4	37.18	102	175	Average
5372	61.84	59.65	74	-12.16	31.97	7.4	37.18	102	175	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
5140	39.88	37.97	54	-14.12	31.87	7.34	37.3	100	139	Average
5140	61.72	59.81	74	-12.28	31.87	7.34	37.3	100	139	Peak
5310	89.31	87.15			31.95	7.4	37.19	100	139	Average
5310	98.92	96.76			31.95	7.4	37.19	100	139	Peak
5348	46.04	43.85	54	-7.96	31.97	7.4	37.18	100	139	Average
5348	67.43	65.24	74	-6.57	31.97	7.4	37.18	100	139	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
5138	39.41	37.51	54	-14.59	31.86	7.34	37.3	113	163	Average
5138	62.29	60.39	74	-11.71	31.86	7.34	37.3	113	163	Peak
5310	90.15	87.99			31.95	7.4	37.19	113	163	Average
5310	100.59	98.43			31.95	7.4	37.19	113	163	Peak
5348	47.68	45.49	54	-6.32	31.97	7.4	37.18	113	163	Average
5348	69.69	67.5	74	-4.31	31.97	7.4	37.18	113	163	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
5402	43.98	41.77	54	-10.02	31.99	7.4	37.18	100	128	Average
5402	62.86	60.65	74	-11.14	31.99	7.4	37.18	100	128	Peak
5470	65.33	62.86	68.3	-2.97	32.02	7.53	37.08	100	128	Peak
5510	89.85	87.28			32.04	7.59	37.06	100	128	Average
5510	99.76	97.19			32.04	7.59	37.06	100	128	Peak
5725	60.72	58.08	68.3	-7.58	32.36	7.71	37.43	100	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
5458	46.03	43.57	54	-7.97	32.01	7.53	37.08	108	166	Average
5458	63.98	61.52	74	-10.02	32.01	7.53	37.08	108	166	Peak
5470	67.21	64.74	68.3	-1.09	32.02	7.53	37.08	108	166	Peak
5510	92.74	90.17			32.04	7.59	37.06	108	166	Average
5510	103.36	100.79			32.04	7.59	37.06	108	166	Peak
5725	60.66	58.02	68.3	-7.64	32.36	7.71	37.43	108	166	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
5420	41.38	39.16	54	-12.62	32	7.4	37.18	100	134	Average
5420	62.18	59.96	74	-11.82	32	7.4	37.18	100	134	Peak
5470	60.96	58.49	68.3	-7.34	32.02	7.53	37.08	100	134	Peak
5550	92.72	90.12			32.11	7.58	37.09	100	134	Average
5550	102.8	100.2			32.11	7.58	37.09	100	134	Peak
5725	61.72	59.08	68.3	-6.58	32.36	7.71	37.43	100	134	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
5424	41.18	38.96	54	-12.82	32	7.4	37.18	119	164	Average
5424	62.66	60.44	74	-11.34	32	7.4	37.18	119	164	Peak
5470	60.71	58.24	68.3	-7.59	32.02	7.53	37.08	119	164	Peak
5550	93.28	90.68			32.11	7.58	37.09	119	164	Average
5550	103.67	101.07			32.11	7.58	37.09	119	164	Peak
5725	60.51	57.87	68.3	-7.79	32.36	7.71	37.43	119	164	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
5434	41.15	38.8	54	-12.85	32.01	7.47	37.13	100	132	Average
5434	61.89	59.54	74	-12.11	32.01	7.47	37.13	100	132	Peak
5470	60.32	57.85	68.3	-7.98	32.02	7.53	37.08	100	132	Peak
5670	92.43	89.83			32.28	7.66	37.34	100	132	Average
5670	102.31	99.71			32.28	7.66	37.34	100	132	Peak
5725	63.28	60.64	68.3	-5.02	32.36	7.71	37.43	100	132	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
5348	39.42	37.23	54	-14.58	31.97	7.4	37.18	100	259	Average
5348	61.76	59.57	74	-12.24	31.97	7.4	37.18	100	259	Peak
5470	61.03	58.56	68.3	-7.27	32.02	7.53	37.08	100	259	Peak
5670	90.09	87.49			32.28	7.66	37.34	100	259	Average
5670	99.67	97.07			32.28	7.66	37.34	100	259	Peak
5725	61.38	58.74	68.3	-6.92	32.36	7.71	37.43	100	259	Peak

REMARKS:

1. 5670MHz: Fundamental frequency.
2. 5470MHz & 5725MHz: Out of restricted band



A D T

BELOW 1GHz WORST-CASE DATA : 802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 62	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
42.42	22.47	39.27	40	-17.53	13.58	0.7	31.08	113	208	Peak
172.29	23.05	41.88	43.5	-20.45	11.47	1.46	31.76	102	301	Peak
230.34	25.2	44.65	46	-20.8	10.66	1.74	31.85	118	240	Peak
309.1	25.59	42.28	46	-20.41	13.17	2.08	31.94	113	213	Peak
638.8	24.18	32.99	46	-21.82	20.08	3.21	32.1	102	310	Peak
743.1	26.7	33.16	46	-19.3	21.42	3.55	31.43	107	100	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
42.15	31.64	48.44	40	-8.36	13.58	0.7	31.08	104	221	Peak
157.98	26.15	43.87	43.5	-17.35	12.73	1.38	31.83	124	35	Peak
230.34	23.09	42.54	46	-22.91	10.66	1.74	31.85	103	271	Peak
401.5	20.94	35.24	46	-25.06	15.37	2.43	32.1	111	252	Peak
592.6	23.05	32.72	46	-22.95	19.43	3.07	32.17	100	131	Peak
692.7	25.04	32.74	46	-20.96	20.73	3.4	31.83	134	331	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	100289	Nov. 19, 2011	Nov. 18, 2012
RF signal cable Woken	5D-FB	Cable-HYCO2-01	Dec. 29, 2011	Dec. 28, 2012
LISN ROHDE & SCHWARZ (EUT)	ESH2-Z5	100100	Dec. 30, 2011	Dec. 29, 2012
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

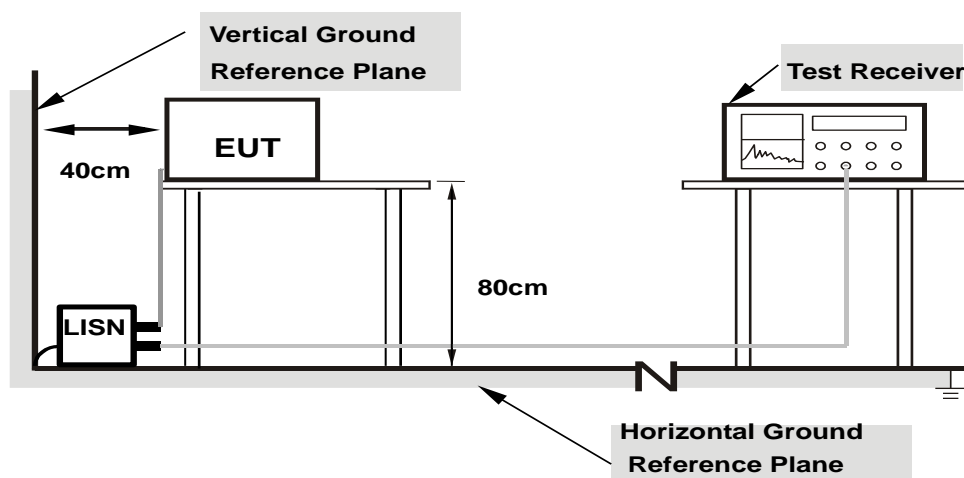
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

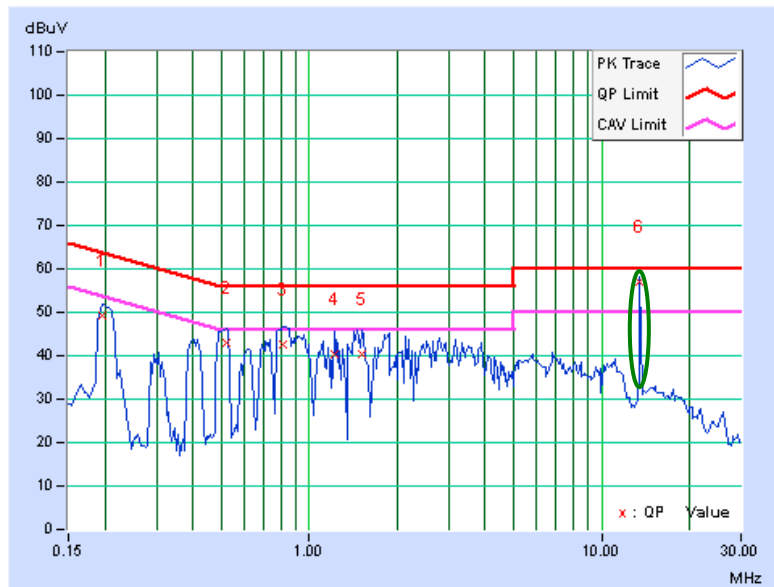
802.11a

PHASE	Line 1	6dB BANDWIDTH	9kHz
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No	Freq. [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	0.19687	0.15	49.12	39.94	49.27	40.09	63.74
2	0.52109	0.17	42.96	30.29	43.13	30.46	56.00	46.00	-12.87	-15.54
3	0.81016	0.18	42.38	26.62	42.56	26.80	56.00	46.00	-13.44	-19.20
4	1.22656	0.21	40.01	23.16	40.22	23.37	56.00	46.00	-15.78	-22.63
5	1.51563	0.23	39.97	23.12	40.20	23.35	56.00	46.00	-15.80	-22.65
6	13.55859	0.50	56.71	55.97	57.21	56.47	60.00	50.00	-2.79	6.47

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.
6. This is NFC signal inductive with measurement system. Please check P47-48 to see test result for EUT with a suitable dummy load.

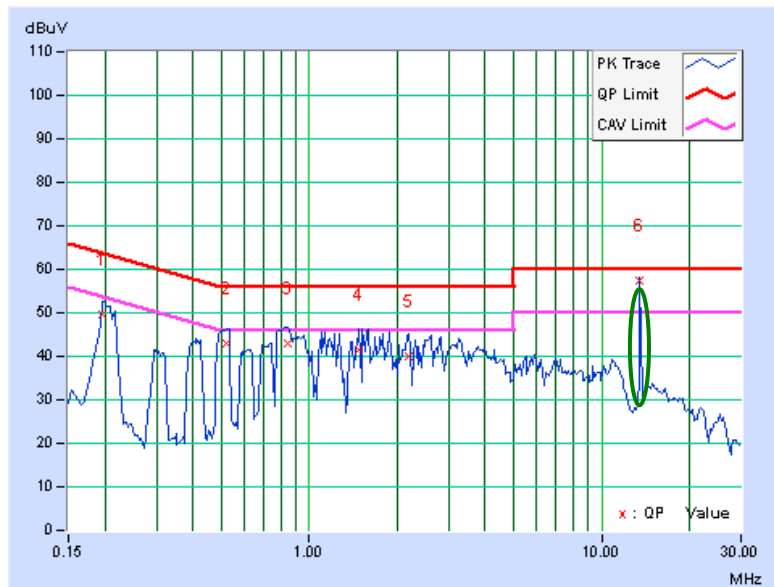


PHASE	Line 2	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.19687	0.14	49.50	39.90	49.64	40.04	63.74
2	0.52109	0.17	42.90	30.23	43.07	30.40	56.00	46.00	-12.93	-15.60
3	0.84922	0.18	42.96	25.74	43.14	25.92	56.00	46.00	-12.86	-20.08
4	1.48438	0.22	41.31	27.47	41.53	27.69	56.00	46.00	-14.47	-18.31
5	2.18750	0.27	39.65	24.89	39.92	25.16	56.00	46.00	-16.08	-20.84
6	13.55859	0.57	56.71	55.97	57.28	56.54	60.00	50.00	-2.72	6.54

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.
6. This is NFC signal inductive with measurement system. Please check P47-48 to see test result for EUT with a suitable dummy load.



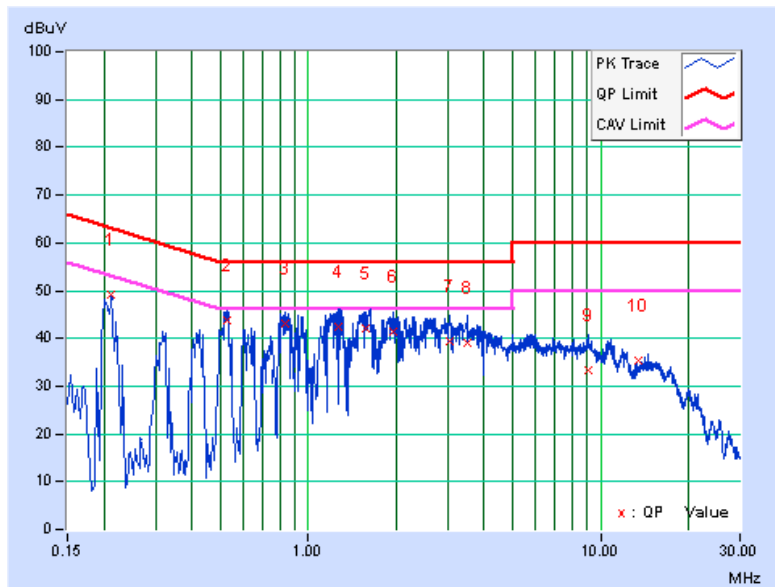
Test with suitable dummy load

PHASE	Line 1	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.21256	0.23	49.07	40.18	49.30	40.41	63.10	53.10	-13.81	-12.70
2	0.52544	0.17	43.68	28.62	43.85	28.79	56.00	46.00	-12.15	-17.21
3	0.83425	0.20	43.00	25.05	43.20	25.25	56.00	46.00	-12.80	-20.75
4	1.27217	0.22	42.32	23.10	42.54	23.32	56.00	46.00	-13.46	-22.68
5	1.58068	0.23	41.84	24.21	42.07	24.44	56.00	46.00	-13.93	-21.56
6	1.96033	0.24	41.34	25.27	41.58	25.51	56.00	46.00	-14.42	-20.49
7	3.05904	0.29	39.08	23.90	39.37	24.19	56.00	46.00	-16.63	-21.81
8	3.49305	0.31	38.66	24.08	38.97	24.39	56.00	46.00	-17.03	-21.61
9	9.03352	0.53	32.82	26.26	33.35	26.79	60.00	50.00	-26.65	-23.21
10	13.55000	0.68	34.51	27.20	35.19	27.88	60.00	50.00	-24.81	-22.12

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.

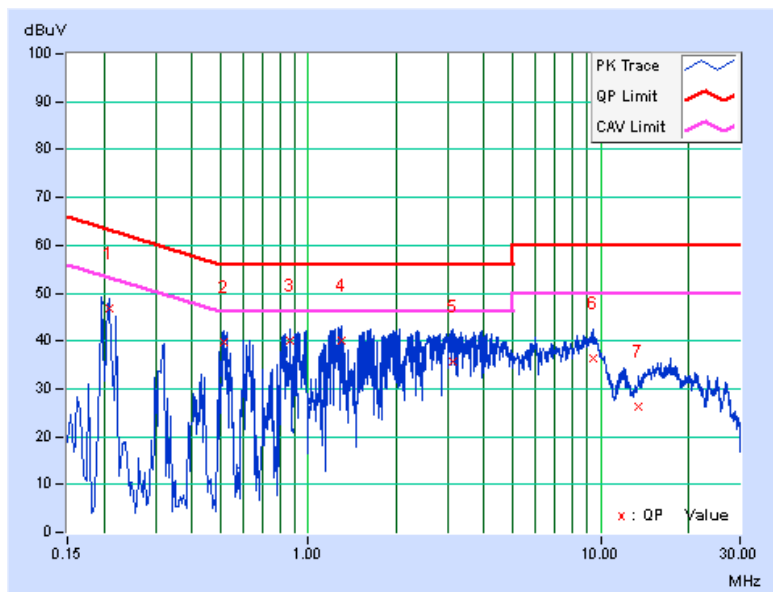


PHASE	Line 2	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.20865	0.31	46.49	35.23	46.80	35.54	63.26
2	0.51719	0.26	39.46	23.57	39.72	23.83	56.00	46.00	-16.28	-22.17
3	0.86553	0.29	39.71	20.77	40.00	21.06	56.00	46.00	-16.00	-24.94
4	1.30345	0.31	39.68	21.66	39.99	21.97	56.00	46.00	-16.01	-24.03
5	3.14115	0.40	35.42	20.31	35.82	20.71	56.00	46.00	-20.18	-25.29
6	9.39715	0.63	35.80	29.93	36.43	30.56	60.00	50.00	-23.57	-19.44
7	13.55000	0.77	25.56	21.18	26.33	21.95	60.00	50.00	-33.67	-28.05

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

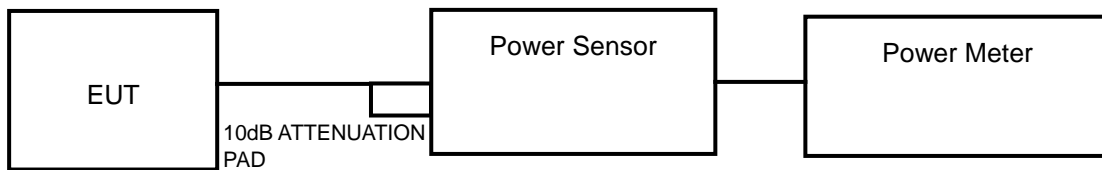
4.3.1 LIMITS OF PEAK TRANSMIT POWER MEASUREMENT

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

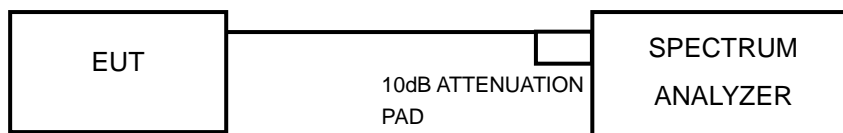
NOTE: Where B is the 26dB emission bandwidth in MHz.

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	22.44	13.51	17	PASS
44	5220	21.53	13.33	17	PASS
48	5240	21.58	13.34	17	PASS
52	5260	21.48	13.32	24	PASS
60	5300	22.44	13.51	24	PASS
64	5320	22.91	13.60	24	PASS
100	5500	18.97	12.78	24	PASS
116	5580	21.58	13.34	24	PASS
140	5700	18.66	12.71	24	PASS

802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	22.44	13.51	17	PASS
44	5220	21.09	13.24	17	PASS
48	5240	21.63	13.35	17	PASS
52	5260	21.63	13.35	24	PASS
60	5300	22.49	13.52	24	PASS
64	5320	22.59	13.54	24	PASS
100	5500	19.54	12.91	24	PASS
116	5580	21.38	13.30	24	PASS
140	5700	18.84	12.75	24	PASS

802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
38	5190	19.54	12.91	17	PASS
46	5230	20.18	13.05	17	PASS
54	5270	20.37	13.09	24	PASS
62	5310	19.63	12.93	24	PASS
102	5510	20.80	13.18	24	PASS
110	5550	20.46	13.11	24	PASS
134	5670	20.00	13.01	24	PASS



26dB BANDWIDTH: 802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
36	5180	23.93	PASS
44	5220	23.59	PASS
48	5240	23.71	PASS
52	5260	23.62	PASS
60	5300	23.53	PASS
64	5320	23.71	PASS
100	5500	23.72	PASS
116	5580	23.89	PASS
140	5700	24.05	PASS

802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
36	5180	24.37	PASS
44	5220	24.39	PASS
48	5240	24.79	PASS
52	5260	25.13	PASS
60	5300	24.60	PASS
64	5320	24.17	PASS
100	5500	24.01	PASS
116	5580	24.33	PASS
140	5700	24.25	PASS

802.11n (40MHz)

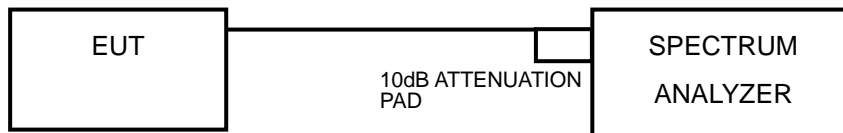
CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
38	5190	53.58	PASS
46	5230	53.55	PASS
54	5270	52.74	PASS
62	5310	52.88	PASS
102	5510	54.24	PASS
110	5550	52.46	PASS
134	5670	54.93	PASS

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	3.18	0.23	3.41	4	PASS
44	5220	3.19	0.23	3.42	4	PASS
48	5240	2.94	0.23	3.17	4	PASS
52	5260	4.73	0.23	4.96	11	PASS
60	5300	4.35	0.23	4.58	11	PASS
64	5320	4.15	0.23	4.38	11	PASS
100	5500	3.82	0.23	4.05	11	PASS
116	5580	3.68	0.23	3.91	11	PASS
140	5700	2.52	0.23	2.75	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	2.81	0.22	3.03	4	PASS
44	5220	2.85	0.22	3.07	4	PASS
48	5240	2.72	0.22	2.94	4	PASS
52	5260	4.53	0.22	4.75	11	PASS
60	5300	4.21	0.22	4.43	11	PASS
64	5320	4.14	0.22	4.36	11	PASS
100	5500	3.52	0.22	3.74	11	PASS
116	5580	3.44	0.22	3.66	11	PASS
140	5700	2.30	0.22	2.52	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	-1.31	0.81	-0.50	4	PASS
46	5230	-1.21	0.81	-0.40	4	PASS
54	5270	-1.41	0.81	-0.60	11	PASS
62	5310	-1.55	0.81	-0.74	11	PASS
102	5510	-1.34	0.81	-0.53	11	PASS
110	5550	-1.59	0.81	-0.78	11	PASS
134	5670	-1.77	0.81	-0.96	11	PASS

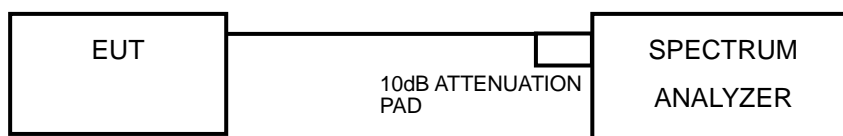
NOTE: Refer to section 3.3 for duty cycle spectrum plot.

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

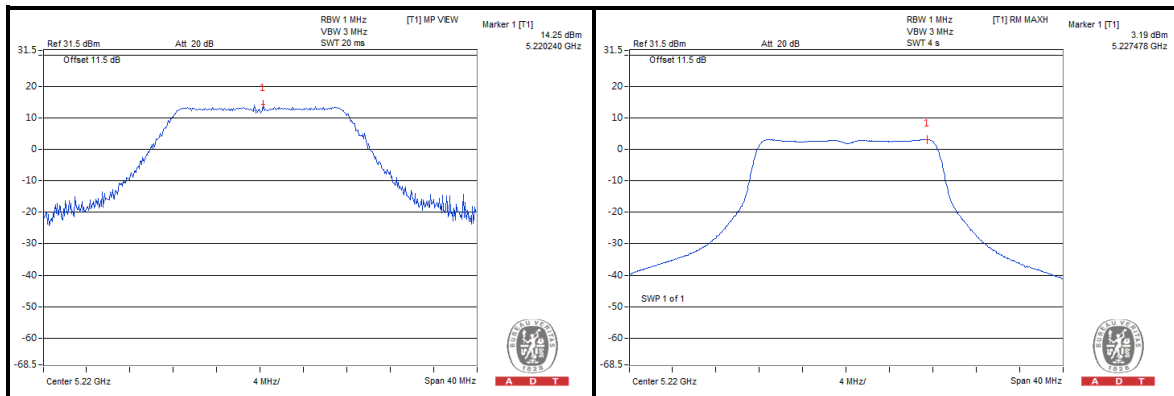
Same as 4.2.6

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	13.59	3.18	3.41	10.18	13	PASS
44	5220	14.25	3.19	3.42	10.83	13	PASS
48	5240	13.66	2.94	3.17	10.49	13	PASS
52	5260	14.20	4.73	4.96	9.24	13	PASS
60	5300	13.77	4.35	4.58	9.19	13	PASS
64	5320	13.21	4.15	4.38	8.83	13	PASS
100	5500	13.96	3.82	4.05	9.91	13	PASS
116	5580	12.87	3.68	3.91	8.96	13	PASS
140	5700	11.81	2.52	2.75	9.06	13	PASS

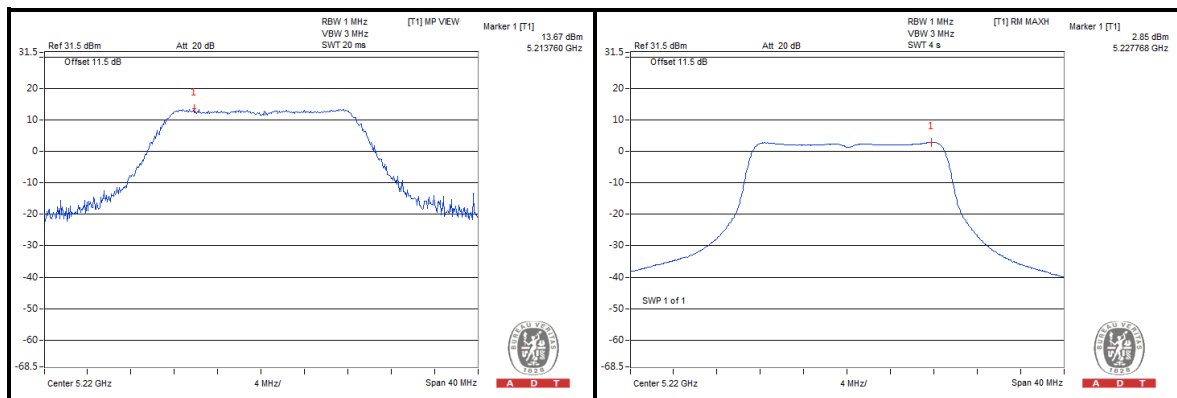
NOTE: Refer to section 3.3 for duty cycle spectrum plot.



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	13.52	2.81	3.03	10.49	13	PASS
44	5220	13.67	2.85	3.07	10.60	13	PASS
48	5240	13.43	2.72	2.94	10.49	13	PASS
52	5260	13.89	4.53	4.75	9.14	13	PASS
60	5300	13.73	4.21	4.43	9.30	13	PASS
64	5320	13.09	4.14	4.36	8.73	13	PASS
100	5500	12.30	3.52	3.74	8.56	13	PASS
116	5580	13.04	3.44	3.66	9.38	13	PASS
140	5700	11.17	2.30	2.52	8.65	13	PASS

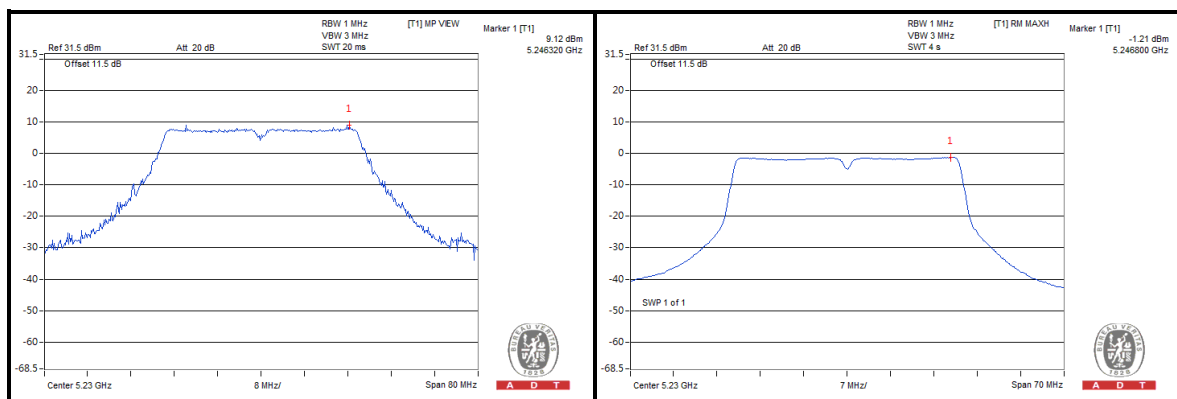
NOTE: Refer to section 3.3 for duty cycle spectrum plot.



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	8.16	-1.31	-0.50	8.66	13	PASS
46	5230	9.12	-1.21	-0.40	9.52	13	PASS
54	5270	8.82	-1.41	-0.60	9.42	13	PASS
62	5310	8.28	-1.55	-0.74	9.02	13	PASS
102	5510	7.81	-1.34	-0.53	8.34	13	PASS
110	5550	7.98	-1.59	-0.78	8.76	13	PASS
134	5670	8.18	-1.77	-0.96	9.14	13	PASS

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

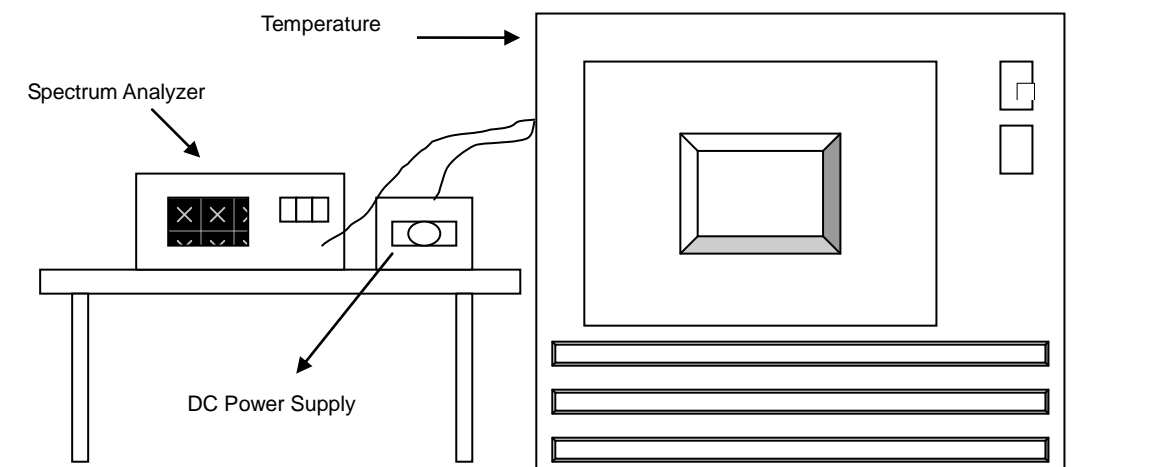


4.6 FREQUENCY STABILITY

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: 5300MHz									
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)
60	3.8	5300.014221	2.683	5300.014180	2.675	5300.014464	2.729	5300.013824	2.608
50	3.8	5300.015040	2.838	5300.014963	2.823	5300.014882	2.808	5300.014888	2.809
40	3.8	5300.016123	3.042	5300.016672	3.146	5300.016142	3.046	5300.016243	3.065
30	3.8	5300.017549	3.311	5300.017442	3.291	5300.017412	3.285	5300.017819	3.362
20	3.8	5300.017593	3.319	5300.017965	3.390	5300.017548	3.311	5300.017354	3.274
10	3.8	5300.017823	3.363	5300.017776	3.354	5300.017599	3.321	5300.017359	3.275
0	3.8	5300.015342	2.895	5300.015613	2.946	5300.015968	3.013	5300.015591	2.942
-10	3.8	5300.014657	2.765	5300.014793	2.791	5300.014802	2.793	5300.015149	2.858
-20	3.8	5300.013965	2.635	5300.014050	2.651	5300.013945	2.631	5300.014018	2.645

FREQUENCY STABILITY VERSUS VOLTAGE									
OPERATING FREQUENCY: 5300MHz									
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	5300.016066	3.031	5300.016391	3.093	5300.016574	3.127	5300.016086	3.035
	3.8	5300.017593	3.319	5300.017965	3.390	5300.017548	3.311	5300.017354	3.274
	4.35	5300.018963	3.578	5300.018630	3.515	5300.018873	3.561	5300.018505	3.492

5. PHOTOGRAPHS OF THE TEST CONFIGURATION

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



6. INFORMATION ON THE TESTING LABORATORIES

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

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

Linko EMC/RF Lab:

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF Lab:

Tel: 886-3-5935343

Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety Telecom Lab:

Tel: 886-3-3183232

Fax: 886-3-3270892

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---