



FCC TEST REPORT (15.407)

REPORT NO.: RF130805C26-6
MODEL NO.: 0P3P100
FCC ID: NM80P3P100
RECEIVED: Aug. 05, 2013
TESTED: Aug. 19, 2013 ~ Aug. 24, 2013
ISSUED: Sep. 02, 2013

APPLICANT: HTC Corporation

ADDRESS: 23,Xinghua Rd.,Taoyuan 330,Taiwan,R.O.C.

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

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

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

This report should not be used by the client to claim product certification, approval, or endorsement by TAF or any government agencies.



This report is for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents. Unless specific mention, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification

TABLE OF CONTENTS

RELEASE CONTROL RECORD	4
1. CERTIFICATION.....	5
2. SUMMARY OF TEST RESULTS	6
2.1 MEASUREMENT UNCERTAINTY	6
3. GENERAL INFORMATION.....	7
3.1 GENERAL DESCRIPTION OF EUT	7
3.2 DESCRIPTION OF TEST MODES.....	8
3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL	10
3.3 DESCRIPTION OF SUPPORT UNITS	13
3.3.1 CONFIGURATION OF SYSTEM UNDER TEST	13
3.4 DUTY CYCLE OF TEST SIGNAL.....	14
3.5 GENERAL DESCRIPTION OF APPLIED STANDARDS	15
4. TEST TYPES AND RESULTS	16
4.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT	16
4.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT.....	16
4.1.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS	16
4.1.3 TEST INSTRUMENTS.....	17
4.1.4 TEST PROCEDURES	18
4.1.5 DEVIATION FROM TEST STANDARD	18
4.1.6 TEST SETUP.....	19
4.1.7 EUT OPERATING CONDITION	19
4.1.8 TEST RESULTS	20
4.2 CONDUCTED EMISSION MEASUREMENT	51
4.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT	51
4.2.2 TEST INSTRUMENTS.....	51
4.2.3 TEST PROCEDURES	52
4.2.4 DEVIATION FROM TEST STANDARD	52
4.2.5 TEST SETUP.....	52
4.2.6 EUT OPERATING CONDITIONS.....	52
4.2.7 TEST RESULTS	53
4.3 PEAK TRANSMIT POWER MEASUREMENT	55
4.3.1 LIMITS OF PEAK TRANSMIT POWER MEASUREMENT	55
4.3.2 TEST SETUP.....	55
4.3.3 TEST INSTRUMENTS.....	55
4.3.4 TEST PROCEDURE.....	56
4.3.5 DEVIATION FROM TEST STANDARD	56
4.3.6 EUT OPERATING CONDITIONS.....	56
4.3.7 TEST RESULTS	57
4.4 PEAK POWER SPECTRAL DENSITY MEASUREMENT	61
4.4.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT	61
4.4.2 TEST SETUP.....	61
4.4.3 TEST INSTRUMENTS.....	61
4.4.4 TEST PROCEDURES	62
4.4.5 DEVIATION FROM TEST STANDARD	62
4.4.6 EUT OPERATING CONDITIONS.....	62
4.4.7 TEST RESULTS	63
4.5 PEAK POWER EXCURSION MEASUREMENT	66



4.5.1	LIMITS OF PEAK POWER EXCURSION MEASUREMENT	66
4.5.2	TEST SETUP	66
4.5.3	TEST INSTRUMENTS.....	66
4.5.4	TEST PROCEDURE.....	67
4.5.5	DEVIATION FROM TEST STANDARD	67
4.5.6	EUT OPERATING CONDITIONS	67
4.5.7	TEST RESULTS	68
4.6	FREQUENCY STABILITY	69
4.6.1	LIMITS OF FREQUENCY STABILITY MEASUREMENT	69
4.6.2	TEST SETUP	69
4.6.3	TEST INSTRUMENTS.....	69
4.6.4	TEST PROCEDURE.....	70
4.6.5	DEVIATION FROM TEST STANDARD	70
4.6.6	EUT OPERATING CONDITION	70
4.6.7	TEST RESULTS	71
5.	PHOTOGRAPHS OF THE TEST CONFIGURATION	72
6.	INFORMATION ON THE TESTING LABORATORIES.....	73
7.	APPENDIX A - MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB	74



A D T

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF130805C26-6	Original release	Sep. 02, 2013



1. CERTIFICATION

PRODUCT: Smartphone
MODEL NO.: 0P3P100
BRAND: HTC
APPLICANT: HTC Corporation
TESTED: Aug. 19, 2013 ~ Aug. 24, 2013
TEST SAMPLE: PRODUCTION UNIT
STANDARDS: **FCC Part 15, Subpart E (Section 15.407)**
ANSI C63.10-2009

The above equipment (model: 0P3P100) 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** : Sep. 02, 2013
Ivonne Wu / Senior Specialist

APPROVED BY : Sam Chen , **DATE** : Sep. 02, 2013
Sam Chen / Assistant Manager

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART E (SECTION 15.407)			
STANDARD SECTION	TEST TYPE	RESULT	REMARK
15.407(b)(6)	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -0.49dB at 13.56250MHz.
15.407(b/1/2/3) (b)(6)	Spurious Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -1.67dB at 5356MHz.
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.	0P3P100
POWER SUPPLY	5.0Vdc (adapter or host equipment) 3.8Vdc (Li-ion battery)
MODULATION TYPE	256QAM, 64QAM, 16QAM, QPSK, BPSK
MODULATION TECHNOLOGY	OFDM
TRANSFER RATE	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to MCS7 802.11ac: up to V9
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) 1 for 802.11ac (80MHz) 5260 ~ 5320MHz: 4 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz) 1 for 802.11ac (80MHz) 5500 ~ 5700MHz: 8 for 802.11a, 802.11n (20MHz) 3 for 802.11n (40MHz) 1 for 802.11ac (80MHz)
OUTPUT POWER	40.365mW for 5180 ~ 5240MHz 41.495mW for 5260 ~ 5320MHz 38.019mW for 5500 ~ 5700MHz
ANTENNA TYPE	PIFA antenna with -7.3dBi gain (5180 ~ 5240MHz) PIFA antenna with -7.3dBi gain (5260 ~ 5320MHz) PIFA antenna with -6.8dBi 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 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

1 channel is provided for 802.11ac (80MHz):

CHANNEL	FREQUENCY
42	5210MHz

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

1 channel is provided for 802.11ac (80MHz):

CHANNEL	FREQUENCY
58	5290MHz

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		

1 channel is provided for 802.11ac (80MHz):

CHANNEL	FREQUENCY
106	5530MHz

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 **X-plane** for 5180-5240MHz, and on **Y-plane** for 5260-5320MHz and 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.

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	MCS0
802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	MCS0
802.11ac (80MHz)		42	42	OFDM	BPSK	V0
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
802.11ac (80MHz)		58	58	OFDM	BPSK	V0
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
802.11ac (80MHz)		106	106	OFDM	BPSK	V0

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)
802.11n (20MHz)	5180-5240	36 to 48	44	OFDM	BPSK	MCS0
802.11a	5260-5320	52 to 64	64	OFDM	BPSK	6.0
802.11n (20MHz)	5500-5700	100 to 140	100	OFDM	BPSK	MCS0

POWER LINE CONDUCTED EMISSION TEST:

TEST CONDITION
BT Link + WLAN (5G) Link + NFC Link + Earphone + Adapter

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	MCS0
802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	MCS0
802.11ac (80MHz)		42	42	OFDM	BPSK	V0
802.11a	5260-5320	52 to 64	52, 64	OFDM	BPSK	6.0
802.11n (20MHz)		52 to 64	52, 64	OFDM	BPSK	MCS0
802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	MCS0
802.11ac (80MHz)		58	58	OFDM	BPSK	V0
802.11a	5500-5700	100 to 140	100, 140	OFDM	BPSK	6.0
802.11n (20MHz)		100 to 140	100, 140	OFDM	BPSK	MCS0
802.11n (40MHz)		102 to 134	102, 134	OFDM	BPSK	MCS0
802.11ac (80MHz)		106	106	OFDM	BPSK	V0

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	MCS0
802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	MCS0
802.11ac (80MHz)		42	42	OFDM	BPSK	V0
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
802.11ac (80MHz)		58	58	OFDM	BPSK	V0
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
802.11ac (80MHz)		106	106	OFDM	BPSK	V0

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	Johnson Liao
APCM	25deg. C, 65%RH	120Vac, 60Hz	Howard Kao

3.3 DESCRIPTION OF SUPPORT UNITS

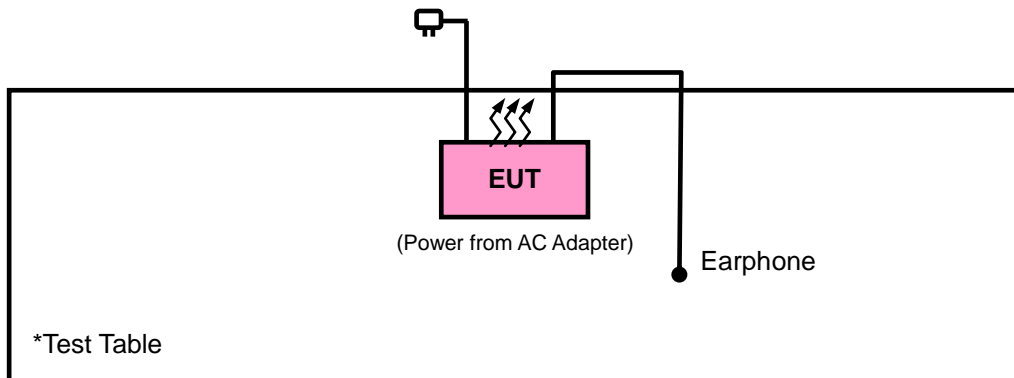
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Earphone	Merry	Max-300	NA	NA

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	1.1m audio cable

- NOTE:** 1. All power cords of the above support units are non shielded (1.8m).
 2. Item 1 was provided by the manufacturer.

3.3.1 CONFIGURATION OF SYSTEM UNDER TEST



3.4 DUTY CYCLE OF TEST SIGNAL

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

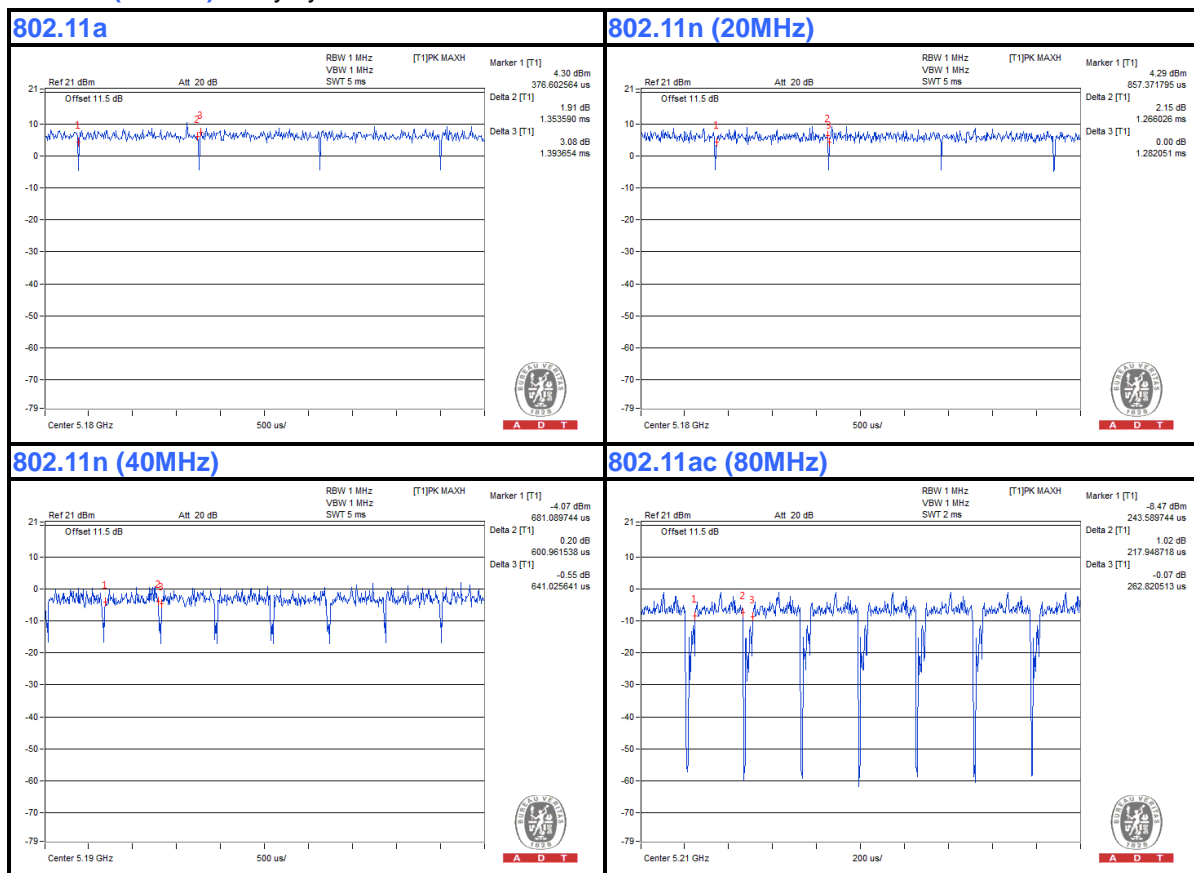
802.11a: Duty cycle = $1.354/1.394 = 0.971$, Duty factor = $10 * \log(1/0.971) = 0.13$

802.11n (40MHz): Duty cycle = $600.962/641.025 = 0.938$, Duty factor = $10 * \log(1/0.938) = 0.28$

802.11ac (80MHz): Duty cycle = $217.949/262.821 = 0.829$, Duty factor = $10 * \log(1/0.829) = 0.81$

Duty cycle of test signal is > 98 %, duty factor is not required.

802.11n (20MHz): Duty cycle = $1.266/1.282 = 0.988$



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 v01r03

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

NOTE: The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

4. TEST TYPES AND RESULTS

4.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT

4.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table:

FREQUENCIES (MHz)	FIELD STRENGTH (microvolts/meter)	MEASUREMENT DISTANCE (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

4.1.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

APPLICABLE TO	LIMIT	
		FIELD STRENGTH AT 3m (dBµV/m)
	PK	AV
	74	54
√	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. 15, 2013	Apr. 14, 2014
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Dec. 17, 2012	Dec. 16, 2013
BILOG Antenna SCHWARZBECK	VULB9168	9168-472	Mar. 25, 2013	Mar. 24, 2014
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-969	Jan. 07, 2013	Jan. 06, 2014
HORN Antenna SCHWARZBECK	BBHA 9170	9170-480	Dec. 25, 2012	Dec. 24, 2013
Loop Antenna	HFH2-Z2	100070	Jan. 31, 2012	Jan. 30, 2014
Preamplifier EMCI	EMC 012645	980115	Dec. 28, 2012	Dec. 27, 2013
Preamplifier EMCI	EMC 184045	980116	Dec. 28, 2012	Dec. 27, 2013
Preamplifier EMCI	EMC 330H	980112	Dec. 28, 2012	Dec. 27, 2013
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	309219/4	Oct. 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	1012010	Jul. 31, 2013	Jul. 30, 2014
Power Sensor	MA2411B	1315050	Jul. 31, 2013	Jul. 30, 2014

- NOTE:**
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The calibration interval of the loop antenna is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
 3. The test was performed in HwaYa Chamber 10.
 4. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
 5. The FCC Site Registration No. is 690701.
 6. The IC Site Registration No. is IC 7450F-10.

4.1.4 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.

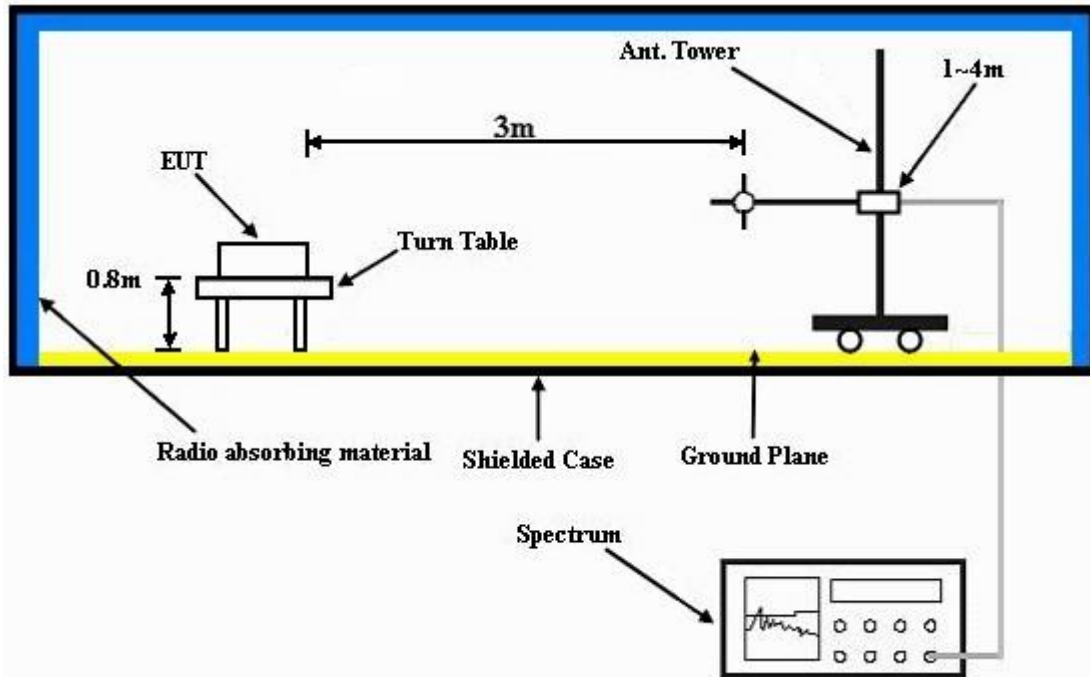
NOTE:

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 (Duty cycle < 98%) or 10Hz (Duty cycle > 98%) for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.5 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.



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	46.35	37.76	54	-7.65	34.46	8.13	34	126	121	Average
5150	60.73	52.14	74	-13.27	34.46	8.13	34	126	121	Peak
5180	98.42	89.79			34.47	8.16	34	126	121	Average
5180	105.2	96.57			34.47	8.16	34	126	121	Peak
5362	43.74	34.89	54	-10.26	34.5	8.38	34.03	126	121	Average
5362	57.93	49.08	74	-16.07	34.5	8.38	34.03	126	121	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	46.97	38.38	54	-7.03	34.46	8.13	34	115	99	Average
5150	62.84	54.25	74	-11.16	34.46	8.13	34	115	99	Peak
5180	99.17	90.54			34.47	8.16	34	115	99	Average
5180	106.38	97.75			34.47	8.16	34	115	99	Peak
5358	43.86	35.01	54	-10.14	34.5	8.38	34.03	115	99	Average
5358	58.46	49.61	74	-15.54	34.5	8.38	34.03	115	99	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 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
5134	43.36	34.77	54	-10.64	34.45	8.13	33.99	124	120	Average
5134	57.19	48.6	74	-16.81	34.45	8.13	33.99	124	120	Peak
5220	98.58	89.87			34.49	8.22	34	124	120	Average
5220	105.72	97.01			34.49	8.22	34	124	120	Peak
5356	43.45	34.6	54	-10.55	34.5	8.38	34.03	124	120	Average
5356	57.62	48.77	74	-16.38	34.5	8.38	34.03	124	120	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
5126	43.13	34.57	54	-10.87	34.45	8.1	33.99	114	98	Average
5126	58.06	49.5	74	-15.94	34.45	8.1	33.99	114	98	Peak
5220	99.27	90.56			34.49	8.22	34	114	98	Average
5220	106.73	98.02			34.49	8.22	34	114	98	Peak
5460	43.57	34.61	54	-10.43	34.5	8.51	34.05	114	98	Average
5460	58.62	49.66	74	-15.38	34.5	8.51	34.05	114	98	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 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
5058	43.3	34.82	54	-10.7	34.43	8.03	33.98	123	120	Average
5058	57.97	49.49	74	-16.03	34.43	8.03	33.98	123	120	Peak
5240	98.56	89.82			34.49	8.26	34.01	123	120	Average
5240	105.71	96.97			34.49	8.26	34.01	123	120	Peak
5374	43.46	34.59	54	-10.54	34.5	8.41	34.04	123	120	Average
5374	58.24	49.37	74	-15.76	34.5	8.41	34.04	123	120	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	43.48	34.89	54	-10.52	34.46	8.13	34	114	98	Average
5150	57.35	48.76	74	-16.65	34.46	8.13	34	114	98	Peak
5240	99.14	90.4			34.49	8.26	34.01	114	98	Average
5240	106.38	97.64			34.49	8.26	34.01	114	98	Peak
5438	43.17	34.23	54	-10.83	34.5	8.48	34.04	114	98	Average
5438	58.23	49.29	74	-15.77	34.5	8.48	34.04	114	98	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 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
5094	43.27	34.75	54	-10.73	34.44	8.07	33.99	156	41	Average
5094	57.79	49.27	74	-16.21	34.44	8.07	33.99	156	41	Peak
5260	100.86	92.11			34.5	8.26	34.01	156	41	Average
5260	108.01	99.26			34.5	8.26	34.01	156	41	Peak
5426	43.51	34.57	54	-10.49	34.5	8.48	34.04	156	41	Average
5426	57.81	48.87	74	-16.19	34.5	8.48	34.04	156	41	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5120	43.23	34.67	54	-10.77	34.45	8.1	33.99	134	4	Average
5120	57.61	49.05	74	-16.39	34.45	8.1	33.99	134	4	Peak
5260	98.89	90.14			34.5	8.26	34.01	134	4	Average
5260	106.42	97.67			34.5	8.26	34.01	134	4	Peak
5362	43.35	34.5	54	-10.65	34.5	8.38	34.03	134	4	Average
5362	58.2	49.35	74	-15.8	34.5	8.38	34.03	134	4	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 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
5110	43.4	34.84	54	-10.6	34.45	8.1	33.99	155	35	Average
5110	56.94	48.38	74	-17.06	34.45	8.1	33.99	155	35	Peak
5300	100.44	91.64			34.5	8.32	34.02	155	35	Average
5300	108.89	100.09			34.5	8.32	34.02	155	35	Peak
5354	44.4	35.55	54	-9.6	34.5	8.38	34.03	155	35	Average
5354	58.04	49.19	74	-15.96	34.5	8.38	34.03	155	35	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
5110	43.23	34.67	54	-10.77	34.45	8.1	33.99	135	4	Average
5110	57.65	49.09	74	-16.35	34.45	8.1	33.99	135	4	Peak
5300	99.5	90.7			34.5	8.32	34.02	135	4	Average
5300	107.33	98.53			34.5	8.32	34.02	135	4	Peak
5440	44.24	35.3	54	-9.76	34.5	8.48	34.04	135	4	Average
5440	57.99	49.05	74	-16.01	34.5	8.48	34.04	135	4	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 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
5042	42.46	34.02	54	-11.54	34.42	8	33.98	151	31	Average
5042	62.89	54.45	74	-11.11	34.42	8	33.98	151	31	Peak
5320	99.99	91.16			34.5	8.35	34.02	151	31	Average
5320	108.44	99.61			34.5	8.35	34.02	151	31	Peak
5350	46.35	37.5	54	-7.65	34.5	8.38	34.03	151	31	Average
5350	64.55	55.7	74	-9.45	34.5	8.38	34.03	151	31	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
5060	42.39	33.91	54	-11.61	34.43	8.03	33.98	133	5	Average
5060	61.36	52.88	74	-12.64	34.43	8.03	33.98	133	5	Peak
5320	99.26	90.43			34.5	8.35	34.02	133	5	Average
5320	107.67	98.84			34.5	8.35	34.02	133	5	Peak
5350	46.49	37.64	54	-7.51	34.5	8.38	34.03	133	5	Average
5350	62.54	53.69	74	-11.46	34.5	8.38	34.03	133	5	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 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
5444	47.25	38.31	54	-6.75	34.5	8.48	34.04	135	347	Average
5444	59.28	50.34	74	-14.72	34.5	8.48	34.04	135	347	Peak
5470	59.95	50.99	68.3	-8.35	34.5	8.51	34.05	135	347	Peak
5500	98.73	89.71			34.5	8.57	34.05	135	347	Average
5500	106.61	97.59			34.5	8.57	34.05	135	347	Peak
5725	55.84	46.63	68.3	-12.46	34.67	8.65	34.11	135	347	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
5448	46.52	37.55	54	-7.48	34.5	8.51	34.04	107	111	Average
5448	57.91	48.94	74	-16.09	34.5	8.51	34.04	107	111	Peak
5470	59.3	50.34	68.3	-9	34.5	8.51	34.05	107	111	Peak
5500	97.61	88.59			34.5	8.57	34.05	107	111	Average
5500	106.05	97.03			34.5	8.57	34.05	107	111	Peak
5725	55.65	46.44	68.3	-12.65	34.67	8.65	34.11	107	111	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5500MHz: Fundamental frequency.
- 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
5432	43.51	34.57	54	-10.49	34.5	8.48	34.04	144	18	Average
5432	57.57	48.63	74	-16.43	34.5	8.48	34.04	144	18	Peak
5470	56.29	47.33	68.3	-12.01	34.5	8.51	34.05	144	18	Peak
5580	97.92	88.83			34.57	8.6	34.08	144	18	Average
5580	105.63	96.54			34.57	8.6	34.08	144	18	Peak
5725	57.24	48.03	68.3	-11.06	34.67	8.65	34.11	144	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
5422	43.81	34.87	54	-10.19	34.5	8.48	34.04	105	114	Average
5422	57.45	48.51	74	-16.55	34.5	8.48	34.04	105	114	Peak
5470	57.36	48.4	68.3	-10.94	34.5	8.51	34.05	105	114	Peak
5580	97.55	88.46			34.57	8.6	34.08	105	114	Average
5580	105.28	96.19			34.57	8.6	34.08	105	114	Peak
5725	55.48	46.27	68.3	-12.82	34.67	8.65	34.11	105	114	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5580MHz: Fundamental frequency.
- 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
5422	43.73	34.79	54	-10.27	34.5	8.48	34.04	135	152	Average
5422	58.16	49.22	74	-15.84	34.5	8.48	34.04	135	152	Peak
5470	55.65	46.69	68.3	-12.65	34.5	8.51	34.05	135	152	Peak
5700	96.58	87.38			34.66	8.64	34.1	135	152	Average
5700	104.54	95.34			34.66	8.64	34.1	135	152	Peak
5725	63.6	54.39	68.3	-4.7	34.67	8.65	34.11	135	152	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	43.61	34.65	54	-10.39	34.5	8.51	34.05	114	112	Average
5458	58.04	49.08	74	-15.96	34.5	8.51	34.05	114	112	Peak
5470	55.83	46.87	68.3	-12.47	34.5	8.51	34.05	114	112	Peak
5700	96.32	87.12			34.66	8.64	34.1	114	112	Average
5700	104.2	95			34.66	8.64	34.1	114	112	Peak
5725	61.84	52.63	68.3	-6.46	34.67	8.65	34.11	114	112	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
2. 5700MHz: Fundamental frequency.
3. 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
5150	46.04	37.45	54	-7.96	34.46	8.13	34	125	121	Average
5150	59.52	50.93	74	-14.48	34.46	8.13	34	125	121	Peak
5180	97.74	89.11			34.47	8.16	34	125	121	Average
5180	105.24	96.61			34.47	8.16	34	125	121	Peak
5386	43.9	35.03	54	-10.1	34.5	8.41	34.04	125	121	Average
5386	57.77	48.9	74	-16.23	34.5	8.41	34.04	125	121	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	46.38	37.79	54	-7.62	34.46	8.13	34	116	99	Average
5150	59.86	51.27	74	-14.14	34.46	8.13	34	116	99	Peak
5180	98.73	90.1			34.47	8.16	34	116	99	Average
5180	106.37	97.74			34.47	8.16	34	116	99	Peak
5456	44.02	35.06	54	-9.98	34.5	8.51	34.05	116	99	Average
5456	57.88	48.92	74	-16.12	34.5	8.51	34.05	116	99	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 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
5122	43.3	34.74	54	-10.7	34.45	8.1	33.99	124	119	Average
5122	56.54	47.98	74	-17.46	34.45	8.1	33.99	124	119	Peak
5220	98.59	89.88			34.49	8.22	34	124	119	Average
5220	105.36	96.65			34.49	8.22	34	124	119	Peak
5414	43.4	34.5	54	-10.6	34.5	8.44	34.04	124	119	Average
5414	57.27	48.37	74	-16.73	34.5	8.44	34.04	124	119	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
5042	43.24	34.8	54	-10.76	34.42	8	33.98	113	98	Average
5042	57.53	49.09	74	-16.47	34.42	8	33.98	113	98	Peak
5220	99.12	90.41			34.49	8.22	34	113	98	Average
5220	106.04	97.33			34.49	8.22	34	113	98	Peak
5442	43.93	34.99	54	-10.07	34.5	8.48	34.04	113	98	Average
5442	58.07	49.13	74	-15.93	34.5	8.48	34.04	113	98	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 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
5038	43.28	34.83	54	-10.72	34.42	8	33.97	123	119	Average
5038	57.09	48.64	74	-16.91	34.42	8	33.97	123	119	Peak
5240	98.5	89.76			34.49	8.26	34.01	123	119	Average
5240	105.08	96.34			34.49	8.26	34.01	123	119	Peak
5436	43.76	34.82	54	-10.24	34.5	8.48	34.04	123	119	Average
5436	57.32	48.38	74	-16.68	34.5	8.48	34.04	123	119	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
5038	42.94	34.49	54	-11.06	34.42	8	33.97	113	98	Average
5038	57.54	49.09	74	-16.46	34.42	8	33.97	113	98	Peak
5240	99.16	90.42			34.49	8.26	34.01	113	98	Average
5240	106.22	97.48			34.49	8.26	34.01	113	98	Peak
5410	43.09	34.19	54	-10.91	34.5	8.44	34.04	113	98	Average
5410	57.35	48.45	74	-16.65	34.5	8.44	34.04	113	98	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 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
5104	43.16	34.64	54	-10.84	34.44	8.07	33.99	155	40	Average
5104	57.56	49.04	74	-16.44	34.44	8.07	33.99	155	40	Peak
5260	100.98	92.23			34.5	8.26	34.01	155	40	Average
5260	107.87	99.12			34.5	8.26	34.01	155	40	Peak
5450	43.37	34.41	54	-10.63	34.5	8.51	34.05	155	40	Average
5450	58.9	49.94	74	-15.1	34.5	8.51	34.05	155	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
5060	43	34.52	54	-11	34.43	8.03	33.98	137	4	Average
5060	57.25	48.77	74	-16.75	34.43	8.03	33.98	137	4	Peak
5260	100.37	91.62			34.5	8.26	34.01	137	4	Average
5260	107	98.25			34.5	8.26	34.01	137	4	Peak
5446	43.22	34.25	54	-10.78	34.5	8.51	34.04	137	4	Average
5446	58.16	49.19	74	-15.84	34.5	8.51	34.04	137	4	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 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
5132	43.5	34.94	54	-10.5	34.45	8.1	33.99	154	36	Average
5132	57.92	49.36	74	-16.08	34.45	8.1	33.99	154	36	Peak
5300	101.02	92.22			34.5	8.32	34.02	154	36	Average
5300	107.66	98.86			34.5	8.32	34.02	154	36	Peak
5354	44.47	35.62	54	-9.53	34.5	8.38	34.03	154	36	Average
5354	58.6	49.75	74	-15.4	34.5	8.38	34.03	154	36	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5148	43.42	34.83	54	-10.58	34.46	8.13	34	135	2	Average
5148	58.44	49.85	74	-15.56	34.46	8.13	34	135	2	Peak
5300	99.58	90.78			34.5	8.32	34.02	135	2	Average
5300	106.66	97.86			34.5	8.32	34.02	135	2	Peak
5352	46.03	37.18	54	-7.97	34.5	8.38	34.03	135	2	Average
5352	58.19	49.34	74	-15.81	34.5	8.38	34.03	135	2	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 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
5116	43.46	34.9	54	-10.54	34.45	8.1	33.99	154	42	Average
5116	57.87	49.31	74	-16.13	34.45	8.1	33.99	154	42	Peak
5320	101.28	92.45			34.5	8.35	34.02	154	42	Average
5320	108.08	99.25			34.5	8.35	34.02	154	42	Peak
5348	47.07	38.22	54	-6.93	34.5	8.38	34.03	154	42	Average
5348	63.09	54.24	74	-10.91	34.5	8.38	34.03	154	42	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
5096	43.34	34.82	54	-10.66	34.44	8.07	33.99	134	3	Average
5096	57.07	48.55	74	-16.93	34.44	8.07	33.99	134	3	Peak
5320	100.12	91.29			34.5	8.35	34.02	134	3	Average
5320	107.01	98.18			34.5	8.35	34.02	134	3	Peak
5350	47.07	38.22	54	-6.93	34.5	8.38	34.03	134	3	Average
5350	62.08	53.23	74	-11.92	34.5	8.38	34.03	134	3	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 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
5446	45.84	36.87	54	-8.16	34.5	8.51	34.04	135	70	Average
5446	57.92	48.95	74	-16.08	34.5	8.51	34.04	135	70	Peak
5470	60.5	51.54	68.3	-7.8	34.5	8.51	34.05	135	70	Peak
5500	98.06	89.04			34.5	8.57	34.05	135	70	Average
5500	105.76	96.74			34.5	8.57	34.05	135	70	Peak
5725	56.3	47.09	68.3	-12	34.67	8.65	34.11	135	70	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	46.39	37.45	54	-7.61	34.5	8.48	34.04	118	110	Average
5444	57.34	48.4	74	-16.66	34.5	8.48	34.04	118	110	Peak
5470	58.54	49.58	68.3	-9.76	34.5	8.51	34.05	118	110	Peak
5500	97.35	88.33			34.5	8.57	34.05	118	110	Average
5500	105.75	96.73			34.5	8.57	34.05	118	110	Peak
5725	57.57	48.36	68.3	-10.73	34.67	8.65	34.11	118	110	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5500MHz: Fundamental frequency.
- 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
5434	43.74	34.8	54	-10.26	34.5	8.48	34.04	145	351	Average
5434	57.96	49.02	74	-16.04	34.5	8.48	34.04	145	351	Peak
5470	55.53	46.57	68.3	-12.77	34.5	8.51	34.05	145	351	Peak
5580	97.7	88.61			34.57	8.6	34.08	145	351	Average
5580	105.93	96.84			34.57	8.6	34.08	145	351	Peak
5725	56.2	46.99	68.3	-12.1	34.67	8.65	34.11	145	351	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
5422	43.81	34.87	54	-10.19	34.5	8.48	34.04	106	113	Average
5422	58.07	49.13	74	-15.93	34.5	8.48	34.04	106	113	Peak
5470	54.92	45.96	68.3	-13.38	34.5	8.51	34.05	106	113	Peak
5580	97.48	88.39			34.57	8.6	34.08	106	113	Average
5580	105.18	96.09			34.57	8.6	34.08	106	113	Peak
5725	56.54	47.33	68.3	-11.76	34.67	8.65	34.11	106	113	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5580MHz: Fundamental frequency.
- 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
5424	43.81	34.87	54	-10.19	34.5	8.48	34.04	149	159	Average
5424	59.11	50.17	74	-14.89	34.5	8.48	34.04	149	159	Peak
5470	57.5	48.54	68.3	-10.8	34.5	8.51	34.05	149	159	Peak
5700	96.45	87.25			34.66	8.64	34.1	149	159	Average
5700	104.89	95.69			34.66	8.64	34.1	149	159	Peak
5725	61.68	52.47	68.3	-6.62	34.67	8.65	34.11	149	159	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
5448	43.39	34.42	54	-10.61	34.5	8.51	34.04	115	112	Average
5448	57.53	48.56	74	-16.47	34.5	8.51	34.04	115	112	Peak
5470	57.29	48.33	68.3	-11.01	34.5	8.51	34.05	115	112	Peak
5700	96.4	87.2			34.66	8.64	34.1	115	112	Average
5700	104.62	95.42			34.66	8.64	34.1	115	112	Peak
5725	62.24	53.03	68.3	-6.06	34.67	8.65	34.11	115	112	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5700MHz: Fundamental frequency.
- 5470MHz & 5725MHz: Out of restricted band

802.11n (40MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	46.03	37.44	54	-7.97	34.46	8.13	34	126	121	Average
5150	62.69	54.1	74	-11.31	34.46	8.13	34	126	121	Peak
5190	92.81	84.15			34.47	8.19	34	126	121	Average
5190	100.3	91.64			34.47	8.19	34	126	121	Peak
5460	43.66	34.7	54	-10.34	34.5	8.51	34.05	126	121	Average
5460	57.53	48.57	74	-16.47	34.5	8.51	34.05	126	121	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	46.21	37.62	54	-7.79	34.46	8.13	34	115	98	Average
5150	62.85	54.26	74	-11.15	34.46	8.13	34	115	98	Peak
5190	93.4	84.74			34.47	8.19	34	115	98	Average
5190	100.81	92.15			34.47	8.19	34	115	98	Peak
5446	43.56	34.59	54	-10.44	34.5	8.51	34.04	115	98	Average
5446	57.53	48.56	74	-16.47	34.5	8.51	34.04	115	98	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 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
5096	44.1	35.58	54	-9.9	34.44	8.07	33.99	124	120	Average
5096	57.37	48.85	74	-16.63	34.44	8.07	33.99	124	120	Peak
5230	92.17	83.47			34.49	8.22	34.01	124	120	Average
5230	99.02	90.32			34.49	8.22	34.01	124	120	Peak
5430	43.83	34.89	54	-10.17	34.5	8.48	34.04	124	120	Average
5430	58.19	49.25	74	-15.81	34.5	8.48	34.04	124	120	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	43.55	35.07	54	-10.45	34.43	8.03	33.98	113	98	Average
5066	57.91	49.43	74	-16.09	34.43	8.03	33.98	113	98	Peak
5230	93.12	84.42			34.49	8.22	34.01	113	98	Average
5230	100.01	91.31			34.49	8.22	34.01	113	98	Peak
5348	43.5	34.65	54	-10.5	34.5	8.38	34.03	113	98	Average
5348	57.81	48.96	74	-16.19	34.5	8.38	34.03	113	98	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 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
5052	43.96	35.52	54	-10.04	34.42	8	33.98	154	37	Average
5052	57.76	49.32	74	-16.24	34.42	8	33.98	154	37	Peak
5270	95.5	86.72			34.5	8.29	34.01	154	37	Average
5270	102.89	94.11			34.5	8.29	34.01	154	37	Peak
5390	43.96	35.09	54	-10.04	34.5	8.41	34.04	154	37	Average
5390	57.58	48.71	74	-16.42	34.5	8.41	34.04	154	37	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5030	43.53	35.09	54	-10.47	34.41	8	33.97	136	4	Average
5030	57.66	49.22	74	-16.34	34.41	8	33.97	136	4	Peak
5270	94.35	85.57			34.5	8.29	34.01	136	4	Average
5270	101.58	92.8			34.5	8.29	34.01	136	4	Peak
5370	43.89	35.01	54	-10.11	34.5	8.41	34.03	136	4	Average
5370	58.03	49.15	74	-15.97	34.5	8.41	34.03	136	4	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 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
5120	43.54	34.98	54	-10.46	34.45	8.1	33.99	154	41	Average
5120	58.55	49.99	74	-15.45	34.45	8.1	33.99	154	41	Peak
5310	95.29	86.49			34.5	8.32	34.02	154	41	Average
5310	102.69	93.89			34.5	8.32	34.02	154	41	Peak
5348	45.68	36.83	54	-8.32	34.5	8.38	34.03	154	41	Average
5348	60.61	51.76	74	-13.39	34.5	8.38	34.03	154	41	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5090	43.38	34.85	54	-10.62	34.44	8.07	33.98	133	4	Average
5090	57.56	49.03	74	-16.44	34.44	8.07	33.98	133	4	Peak
5310	93.94	85.14			34.5	8.32	34.02	133	4	Average
5310	101.73	92.93			34.5	8.32	34.02	133	4	Peak
5348	45.21	36.36	54	-8.79	34.5	8.38	34.03	133	4	Average
5348	61.44	52.59	74	-12.56	34.5	8.38	34.03	133	4	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
2. 5310MHz: Fundamental frequency.



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5456	44.44	35.48	54	-9.56	34.5	8.51	34.05	131	49	Average
5456	60.1	51.14	74	-13.9	34.5	8.51	34.05	131	49	Peak
5470	61.44	52.48	68.3	-6.86	34.5	8.51	34.05	131	49	Peak
5510	93.51	84.49			34.51	8.57	34.06	131	49	Average
5510	100.7	91.68			34.51	8.57	34.06	131	49	Peak
5725	55.78	46.57	68.3	-12.52	34.67	8.65	34.11	131	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
5450	44.51	35.55	54	-9.49	34.5	8.51	34.05	120	112	Average
5450	57.67	48.71	74	-16.33	34.5	8.51	34.05	120	112	Peak
5470	58.79	49.83	68.3	-9.51	34.5	8.51	34.05	120	112	Peak
5510	90.67	81.65			34.51	8.57	34.06	120	112	Average
5510	97.29	88.27			34.51	8.57	34.06	120	112	Peak
5725	56.64	47.43	68.3	-11.66	34.67	8.65	34.11	120	112	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5510MHz: Fundamental frequency.
- 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
5444	43.73	34.79	54	-10.27	34.5	8.48	34.04	131	49	Average
5444	57.79	48.85	74	-16.21	34.5	8.48	34.04	131	49	Peak
5470	55.63	46.67	68.3	-12.67	34.5	8.51	34.05	131	49	Peak
5550	92.66	83.6			34.54	8.59	34.07	131	49	Average
5550	100.15	91.09			34.54	8.59	34.07	131	49	Peak
5725	55.43	46.22	68.3	-12.87	34.67	8.65	34.11	131	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
5414	43.78	34.88	54	-10.22	34.5	8.44	34.04	106	113	Average
5414	57.24	48.34	74	-16.76	34.5	8.44	34.04	106	113	Peak
5470	56.8	47.84	68.3	-11.5	34.5	8.51	34.05	106	113	Peak
5550	89.91	80.85			34.54	8.59	34.07	106	113	Average
5550	97.46	88.4			34.54	8.59	34.07	106	113	Peak
5725	55.35	46.14	68.3	-12.95	34.67	8.65	34.11	106	113	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 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
5354	43.72	34.87	54	-10.28	34.5	8.38	34.03	140	67	Average
5354	57.93	49.08	74	-16.07	34.5	8.38	34.03	140	67	Peak
5470	56.24	47.28	68.3	-12.06	34.5	8.51	34.05	140	67	Peak
5670	90.35	81.19			34.63	8.63	34.1	140	67	Average
5670	99.04	89.88			34.63	8.63	34.1	140	67	Peak
5725	55.71	46.5	68.3	-12.59	34.67	8.65	34.11	140	67	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
5350	43.45	34.6	54	-10.55	34.5	8.38	34.03	105	111	Average
5350	57.75	48.9	74	-16.25	34.5	8.38	34.03	105	111	Peak
5470	56.46	47.5	68.3	-11.84	34.5	8.51	34.05	105	111	Peak
5670	88.84	79.68			34.63	8.63	34.1	105	111	Average
5670	96.25	87.09			34.63	8.63	34.1	105	111	Peak
5725	54.98	45.77	68.3	-13.32	34.67	8.65	34.11	105	111	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5670MHz: Fundamental frequency.
- 5470MHz & 5725MHz: Out of restricted band

802.11ac (80MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 42	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	48.11	39.52	54	-5.89	34.46	8.13	34	123	121	Average
5150	62.2	53.61	74	-11.8	34.46	8.13	34	123	121	Peak
5210	90.87	82.19			34.49	8.19	34	123	121	Average
5210	97.27	88.59			34.49	8.19	34	123	121	Peak
5432	44.73	35.79	54	-9.27	34.5	8.48	34.04	123	121	Average
5432	57.19	48.25	74	-16.81	34.5	8.48	34.04	123	121	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	49.15	40.56	54	-4.85	34.46	8.13	34	115	97	Average
5148	62.27	53.68	74	-11.73	34.46	8.13	34	115	97	Peak
5210	91.61	82.93			34.49	8.19	34	115	97	Average
5210	98.86	90.18			34.49	8.19	34	115	97	Peak
5354	44.81	35.96	54	-9.19	34.5	8.38	34.03	115	97	Average
5354	58.02	49.17	74	-15.98	34.5	8.38	34.03	115	97	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5210MHz: Fundamental frequency.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 58	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
5018	39.11	30.7	54	-14.89	34.41	7.97	33.97	100	44	Average
5018	60.14	51.73	74	-13.86	34.41	7.97	33.97	100	44	Peak
5290	91.26	82.46			34.5	8.32	34.02	100	44	Average
5290	99.99	91.19			34.5	8.32	34.02	100	44	Peak
5356	52.33	43.48	54	-1.67	34.5	8.38	34.03	100	44	Average
5356	68.07	59.22	74	-5.93	34.5	8.38	34.03	100	44	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
5034	38.89	30.45	54	-15.11	34.41	8	33.97	100	64	Average
5034	59.68	51.24	74	-14.32	34.41	8	33.97	100	64	Peak
5290	84.21	75.41			34.5	8.32	34.02	100	64	Average
5290	93.52	84.72			34.5	8.32	34.02	100	64	Peak
5354	47.06	38.21	54	-6.94	34.5	8.38	34.03	100	64	Average
5354	62.38	53.53	74	-11.62	34.5	8.38	34.03	100	64	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5290MHz: Fundamental frequency.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 106	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	48.42	39.46	54	-5.58	34.5	8.51	34.05	144	44	Average
5454	60.73	51.77	74	-13.27	34.5	8.51	34.05	144	44	Peak
5470	59.9	50.94	68.3	-8.4	34.5	8.51	34.05	144	44	Peak
5530	90.3	81.26			34.53	8.58	34.07	144	44	Average
5530	97.91	88.87			34.53	8.58	34.07	144	44	Peak
5725	57.16	47.95	68.3	-11.14	34.67	8.65	34.11	144	44	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	46.12	37.16	54	-7.88	34.5	8.51	34.05	105	113	Average
5458	58.63	49.67	74	-15.37	34.5	8.51	34.05	105	113	Peak
5470	58.45	49.49	68.3	-9.85	34.5	8.51	34.05	105	113	Peak
5530	87.31	78.27			34.53	8.58	34.07	105	113	Average
5530	94.01	84.97			34.53	8.58	34.07	105	113	Peak
5725	55.85	46.64	68.3	-12.45	34.67	8.65	34.11	105	113	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5530MHz: Fundamental frequency.
- 5470MHz & 5725MHz: Out of restricted band

BELOW 1GHz WORST-CASE DATA :

802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 44	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK)
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
64.56	26.37	47.02	40	-13.63	10.67	0.9	32.22	100	123	Peak
170.4	23.88	42.06	43.5	-19.62	12.54	1.52	32.24	198	220	Peak
218.19	27.38	44.38	46	-18.62	13.57	1.65	32.22	133	221	Peak
321.7	20.09	33.78	46	-25.91	16.31	2.11	32.11	100	157	Peak
547.8	22.78	31.45	46	-23.22	20.77	2.76	32.2	100	57	Peak
815.9	25.3	30.45	46	-20.7	23.5	3.32	31.97	100	312	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
30.27	27.15	39.31	40	-12.85	19.37	0.74	32.27	100	322	Peak
64.02	29.67	50.41	40	-10.33	10.59	0.9	32.23	100	123	Peak
146.91	20.84	38.7	43.5	-22.66	12.89	1.52	32.27	100	177	Peak
427.4	18.87	29.99	46	-27.13	18.65	2.41	32.18	100	57	Peak
601.7	26.68	34.2	46	-19.32	21.8	2.87	32.19	100	133	Peak
738.9	29.27	35.44	46	-16.73	22.8	3.16	32.13	100	114	Peak

REMARKS: Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value

802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK)
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
64.56	25.67	46.32	40	-14.33	10.67	0.9	32.22	100	255	Peak
149.34	21.98	39.61	43.5	-21.52	13.12	1.52	32.27	132	274	Peak
203.07	24.87	42	43.5	-18.63	13.51	1.65	32.29	100	174	Peak
453.3	18.96	30.07	46	-27.04	18.54	2.49	32.14	100	142	Peak
638.8	23.48	30.71	46	-22.52	22	2.93	32.16	100	221	Peak
763.4	25.19	30.89	46	-20.81	23.2	3.22	32.12	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
30	25.32	37.25	40	-14.68	19.6	0.74	32.27	210	221	Peak
63.75	28.83	49.66	40	-11.17	10.5	0.9	32.23	100	235	Peak
192.27	20.57	38.26	43.5	-22.93	12.96	1.61	32.26	200	244	Peak
450.5	20.88	32.13	46	-25.12	18.4	2.49	32.14	100	231	Peak
603.1	24.73	32.25	46	-21.27	21.8	2.87	32.19	100	333	Peak
787.2	25.89	31.3	46	-20.11	23.4	3.27	32.08	100	142	Peak

REMARKS: Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value



802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK)
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
64.83	25.73	46.3	40	-14.27	10.75	0.9	32.22	100	211	Peak
154.2	22.23	39.74	43.5	-21.27	13.24	1.52	32.27	100	55	Peak
201.18	24.74	41.88	43.5	-18.76	13.5	1.65	32.29	100	332	Peak
426	19.03	30.13	46	-26.97	18.67	2.41	32.18	100	164	Peak
519.8	21.71	30.16	46	-24.29	20.99	2.7	32.14	100	233	Peak
778.8	25.26	30.75	46	-20.74	23.33	3.27	32.09	123	244	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
30.27	24.77	36.93	40	-15.23	19.37	0.74	32.27	400	165	Peak
64.29	28.87	49.61	40	-11.13	10.59	0.9	32.23	321	278	Peak
147.18	19.2	36.98	43.5	-24.3	12.97	1.52	32.27	265	103	Peak
460.3	19.66	30.27	46	-26.34	18.96	2.56	32.13	164	233	Peak
660.5	23.86	30.81	46	-22.14	22.2	2.99	32.14	145	244	Peak
792.1	25.37	30.74	46	-20.63	23.43	3.27	32.07	112	164	Peak

REMARKS: Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
 Margin value = Emission level – Limit value

4.2 CONDUCTED EMISSION MEASUREMENT

4.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

- NOTE:** 1. The lower limit shall apply at the transition frequencies.
 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.
 3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCS30	100288	Nov. 09, 2012	Nov. 08, 2013
RF signal cable Woken	5D-FB	Cable-HYCO2-01	Dec. 28, 2012	Dec. 27, 2013
LISN ROHDE & SCHWARZ (EUT)	ESH2-Z5	100100	Dec. 21, 2012	Dec. 20, 2013
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100312	Jul. 02, 2013	Jul. 01, 2014
Software ADT	BV ADT_Cond_ V7.3.7.3	NA	NA	NA

- NOTE:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The test was performed in HwaYa Shielded Room 2.
 3. The VCCI Site Registration No. is C-2047.

4.2.3 TEST PROCEDURES

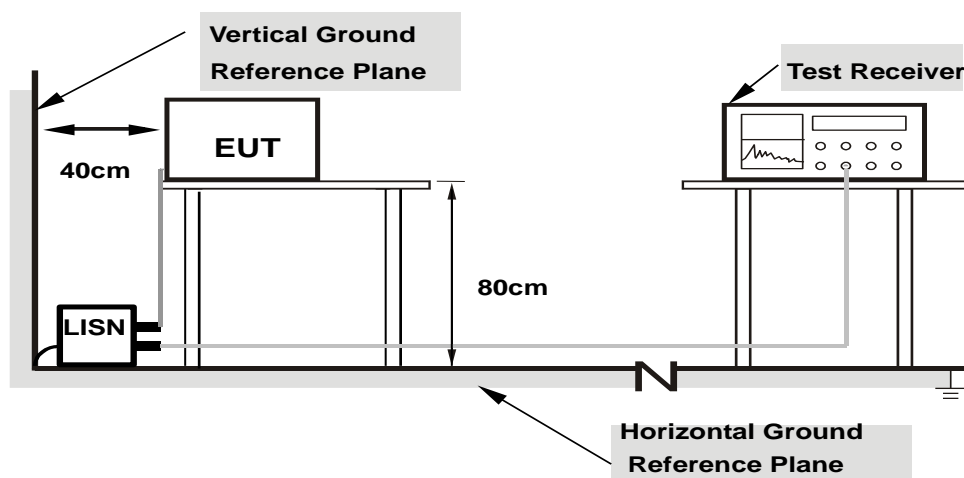
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling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

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

4.2.4 DEVIATION FROM TEST STANDARD

No deviation.

4.2.5 TEST SETUP



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

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

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6.

4.2.7 TEST RESULTS

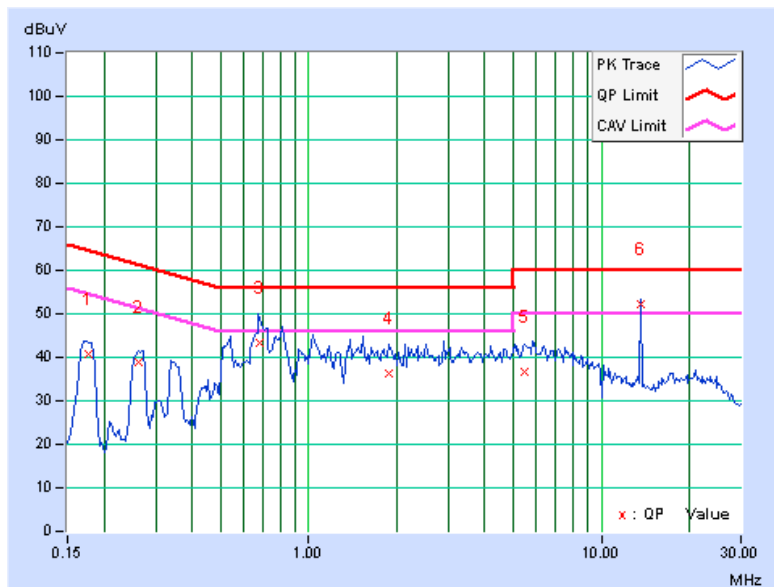
CONDUCTED WORST-CASE DATA :

PHASE	Line 1	6dB BANDWIDTH	9kHz
--------------	--------	----------------------	------

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	0.17734	0.17	40.66	32.78	40.83	32.95	64.61	54.61	-23.78	-21.66
2	0.26328	0.18	38.74	31.36	38.92	31.54	61.33	51.33	-22.40	-19.78
3	0.68125	0.24	43.10	29.54	43.34	29.78	56.00	46.00	-12.66	-16.22
4	1.89063	0.28	36.19	25.52	36.47	25.80	56.00	46.00	-19.53	-20.20
5	5.48828	0.38	36.19	25.28	36.57	25.66	60.00	50.00	-23.43	-24.34
6	13.56250	0.50	51.64	49.01	52.14	49.51	60.00	50.00	-7.86	-0.49

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

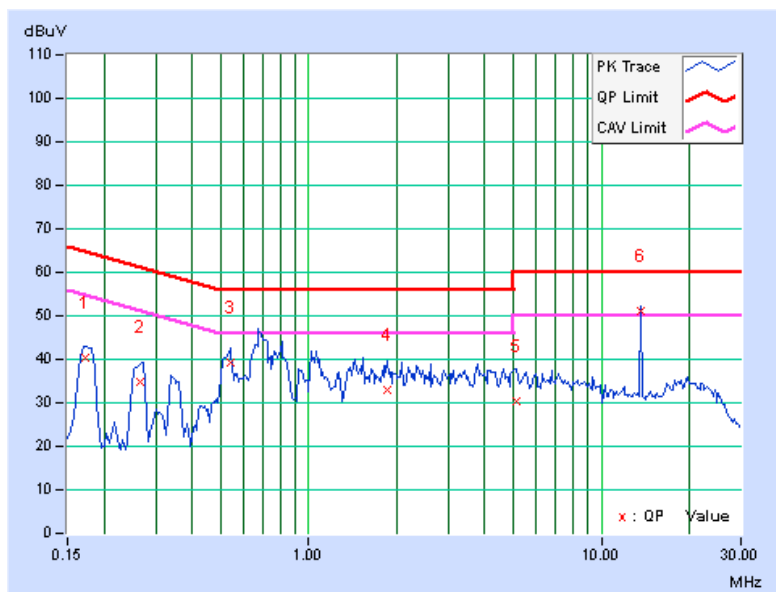


PHASE	Line 2	6dB BANDWIDTH	9kHz
-------	--------	---------------	------

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	0.17344	0.18	40.31	34.84	40.49	35.02	64.79
2	0.26719	0.20	34.73	27.95	34.93	28.15	61.20	51.20	-26.27	-23.05
3	0.54063	0.25	39.08	24.20	39.33	24.45	56.00	46.00	-16.67	-21.55
4	1.85156	0.27	32.59	23.98	32.86	24.25	56.00	46.00	-23.14	-21.75
5	5.14453	0.41	30.10	23.41	30.51	23.82	60.00	50.00	-29.49	-26.18
6	13.56250	0.57	50.39	46.75	50.96	47.32	60.00	50.00	-9.04	-2.68

REMARKS:

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



4.3 PEAK TRANSMIT POWER MEASUREMENT

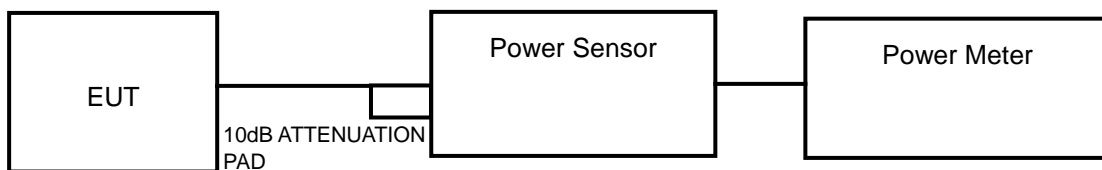
4.3.1 LIMITS OF PEAK TRANSMIT POWER MEASUREMENT

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

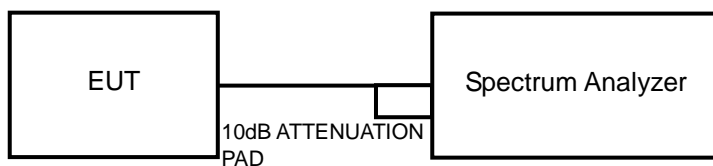
NOTE: Where B is the 26dB emission bandwidth in MHz.

4.3.2 TEST SETUP

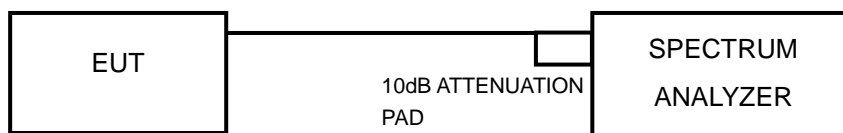
FOR POWER OUTPUT MEASUREMENT



or



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

<802.11a, 802.11n (40MHz)>

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 added to measured value.

<802.11n (20MHz)>

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.

<802.11 ac (80MHz)>

Method SA-1 is used to perform output power measurement, trigger and gating function of spectrum analyzer 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	40.179	16.04	17	PASS
44	5220	39.719	15.99	17	PASS
48	5240	36.898	15.67	17	PASS
52	5260	37.497	15.74	24	PASS
60	5300	37.411	15.73	24	PASS
64	5320	41.495	16.18	24	PASS
100	5500	37.497	15.74	24	PASS
116	5580	36.898	15.67	24	PASS
140	5700	36.559	15.63	24	PASS

802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	39.994	16.02	17	PASS
44	5220	40.365	16.06	17	PASS
48	5240	37.584	15.75	17	PASS
52	5260	38.194	15.82	24	PASS
60	5300	39.902	16.01	24	PASS
64	5320	40.458	16.07	24	PASS
100	5500	38.019	15.80	24	PASS
116	5580	37.154	15.70	24	PASS
140	5700	36.224	15.59	24	PASS

802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
38	5190	20.941	13.21	17	PASS
46	5230	17.906	12.53	17	PASS
54	5270	18.450	12.66	24	PASS
62	5310	21.038	13.23	24	PASS
102	5510	17.906	12.53	24	PASS
110	5550	18.793	12.74	24	PASS
134	5670	18.408	12.65	24	PASS



A D T

802.11ac (80MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
42	5210	20.989	13.22	17	PASS
58	5290	19.724	12.95	24	PASS
106	5530	21.727	13.37	24	PASS

**26dB BANDWIDTH: 802.11a**

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
36	5180	22.77	PASS
44	5220	22.82	PASS
48	5240	22.34	PASS
52	5260	22.73	PASS
60	5300	22.49	PASS
64	5320	22.51	PASS
100	5500	22.64	PASS
116	5580	22.53	PASS
140	5700	22.46	PASS

802.11n (20MHz)

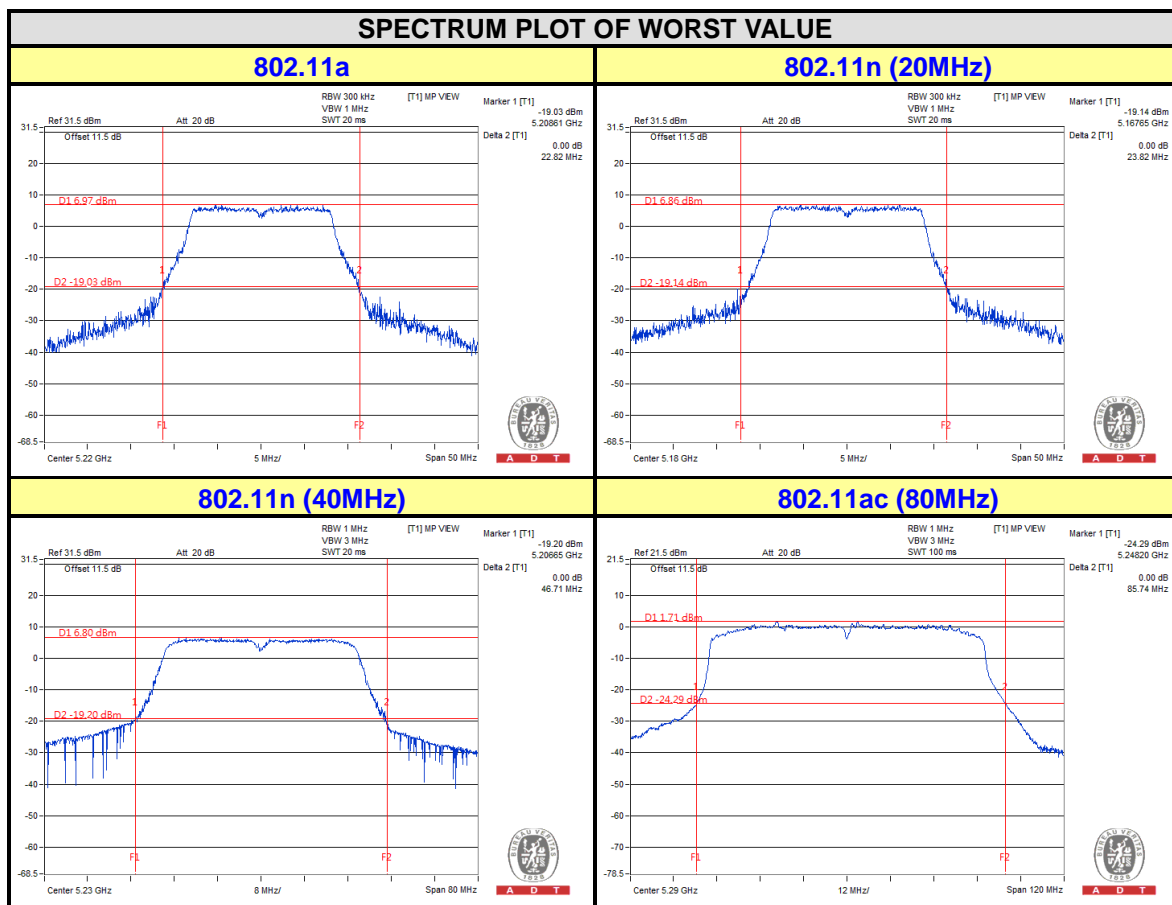
CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
36	5180	23.82	PASS
44	5220	23.04	PASS
48	5240	23.02	PASS
52	5260	22.91	PASS
60	5300	22.80	PASS
64	5320	22.88	PASS
100	5500	25.01	PASS
116	5580	23.16	PASS
140	5700	23.07	PASS

802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
38	5190	46.07	PASS
46	5230	46.71	PASS
54	5270	46.01	PASS
62	5310	45.96	PASS
102	5510	46.24	PASS
110	5550	45.91	PASS
134	5670	46.05	PASS

802.11ac (80MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
42	5210	85.57	PASS
58	5290	85.74	PASS
106	5530	85.55	PASS

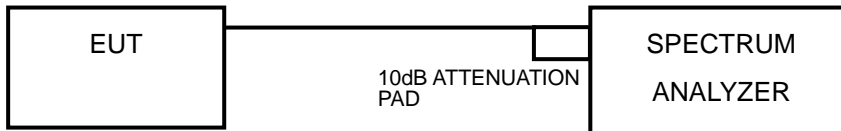


4.4 PEAK POWER SPECTRAL DENSITY MEASUREMENT

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

<802.11a, 802.11n (40MHz), 802.11ac (80MHz)>

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).

<802.11n (20MHz) >

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.

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	3.10	0.13	3.23	4	PASS
44	5220	3.48	0.13	3.61	4	PASS
48	5240	3.66	0.13	3.79	4	PASS
52	5260	3.87	0.13	4.00	11	PASS
60	5300	4.20	0.13	4.33	11	PASS
64	5320	4.39	0.13	4.52	11	PASS
100	5500	4.57	0.13	4.70	11	PASS
116	5580	4.32	0.13	4.45	11	PASS
140	5700	3.64	0.13	3.77	11	PASS

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

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
36	5180	3.66	4	PASS
44	5220	3.96	4	PASS
48	5240	3.39	4	PASS
52	5260	3.61	11	PASS
60	5300	4.01	11	PASS
64	5320	4.09	11	PASS
100	5500	4.29	11	PASS
116	5580	4.05	11	PASS
140	5700	3.40	11	PASS



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	-1.74	0.28	-1.46	4	PASS
46	5230	-2.69	0.28	-2.41	4	PASS
54	5270	-2.15	0.28	-1.87	11	PASS
62	5310	-1.55	0.28	-1.27	11	PASS
102	5510	-1.70	0.28	-1.42	11	PASS
110	5550	-1.81	0.28	-1.53	11	PASS
134	5670	-2.33	0.28	-2.05	11	PASS

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

802.11ac (80MHz)

CHANNEL	FREQUENCY (MHz)	PSD W/O DUTY FACTOR (dBm)	DUTY FACTOR	PSD WITH DUTY FACTOR (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
42	5210	-6.42	0.81	-5.61	4	PASS
58	5290	-6.59	0.81	-5.78	11	PASS
106	5530	-6.25	0.81	-5.44	11	PASS

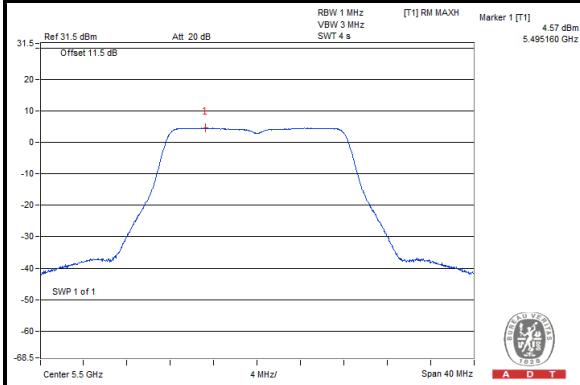
NOTE: Refer to section 3.3 for duty cycle spectrum plot.



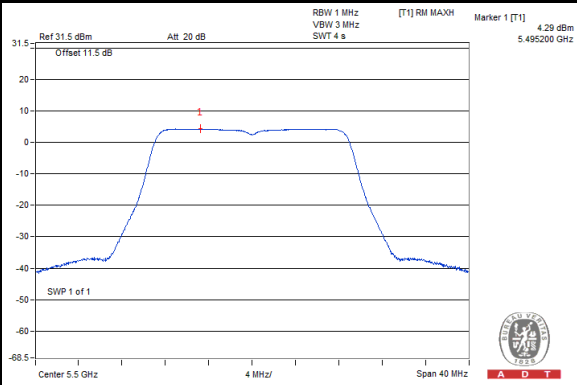
A D T

SPECTRUM PLOT OF WORST VALUE

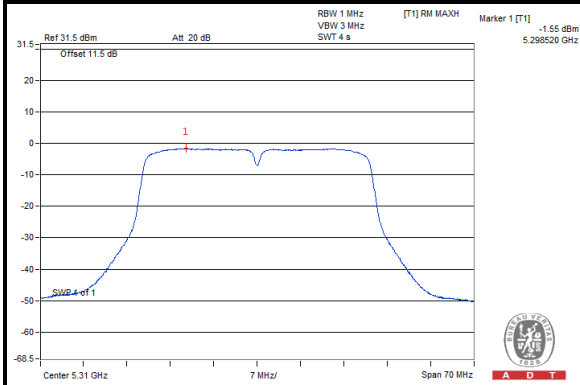
802.11a



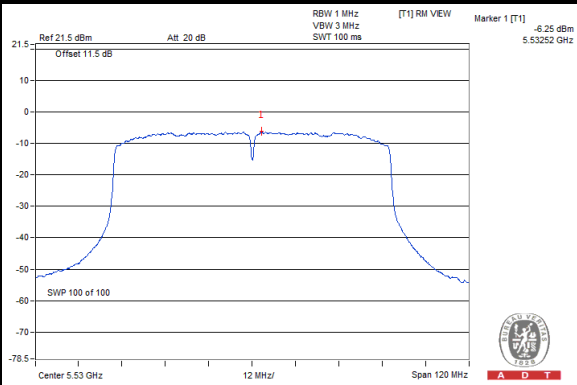
802.11n (20MHz)



802.11n (40MHz)



802.11ac (80MHz)

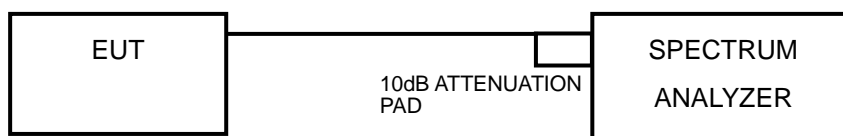


4.5 PEAK POWER EXCURSION MEASUREMENT

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.

Find the worst channel and modulation mode as above test procedure, and follow KDB 789033 D01 General UNII Test Procedures v01r03 and repeat step 1 to 5 for final testing of each modulation mode on a single channel (all modulation types) in a single operating band to compliance with the peak excursion requirement.

4.5.5 DEVIATION FROM TEST STANDARD

No deviation.

4.5.6 EUT OPERATING CONDITIONS

Same as 4.2.6



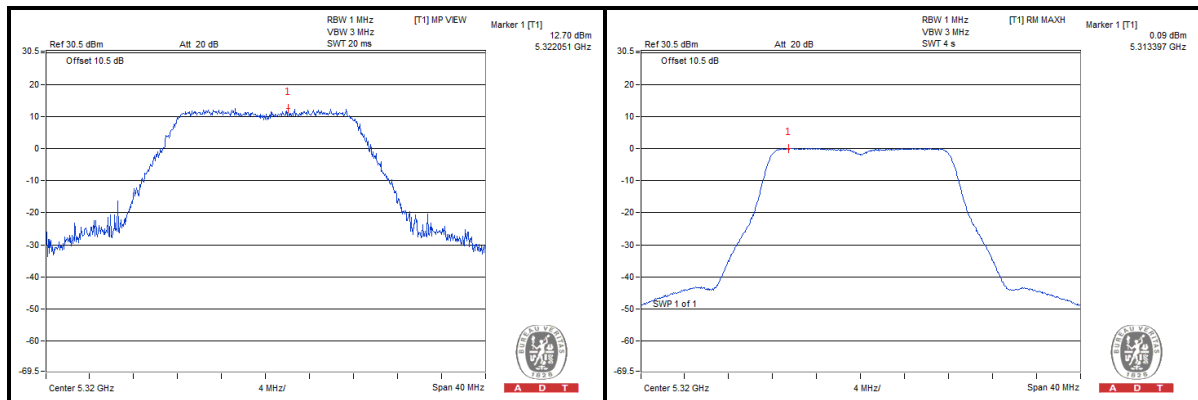
4.5.7 TEST RESULTS

802.11a

MODULATION MODE	MODULATION TYPE	CHAN. FREQ. (MHz)	PEAK VALUE (dBm)	PPSD WITHOUT DUTY FACTOR (dBm)	PPSD WITH DUTY FACTOR (dBm)	PEAK EXCURSION (dB)	LIMIT (dB)	PASS /FAIL
802.11a	BPSK	5320	13.45	4.39	4.52	8.93	13	PASS
	QPSK		13.45	2.76	2.89	10.56	13	PASS
	16QAM		13.76	1.18	1.31	12.45	13	PASS
	64QAM		12.70	0.09	0.22	12.48	13	PASS
802.11n (40MHz)	BPSK	5510	8.19	-1.55	-1.27	9.46	13	PASS
	QPSK		8.32	-2.60	-2.32	10.64	13	PASS
	16QAM		8.95	-3.27	-2.99	11.94	13	PASS
	64QAM		8.18	-3.97	-3.69	11.87	13	PASS
802.11ac (80MHz)	BPSK	5530	2.31	-6.25	-5.44	7.75	13	PASS
	QPSK		2.42	-7.32	-6.51	4.09	13	PASS
	16QAM		2.30	-7.32	-6.51	8.81	13	PASS
	64QAM		2.18	-7.46	-6.65	8.83	13	PASS
	256QAM		1.25	-9.66	-8.85	10.10	13	PASS

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

MODULATION MODE	MODULATION TYPE	CHANNEL FREQUENCY (MHz)	PEAK VALUE (dBm)	PPSD (dBm)	PEAK EXCURSION (dB)	LIMIT (dB)	PASS/ FAIL
802.11n (20MHz)	BPSK	5320	14.13	4.09	10.04	13	PASS
	QPSK		13.03	3.42	9.61	13	PASS
	16QAM		12.72	1.70	11.02	13	PASS
	64QAM		12.54	0.71	11.83	13	PASS

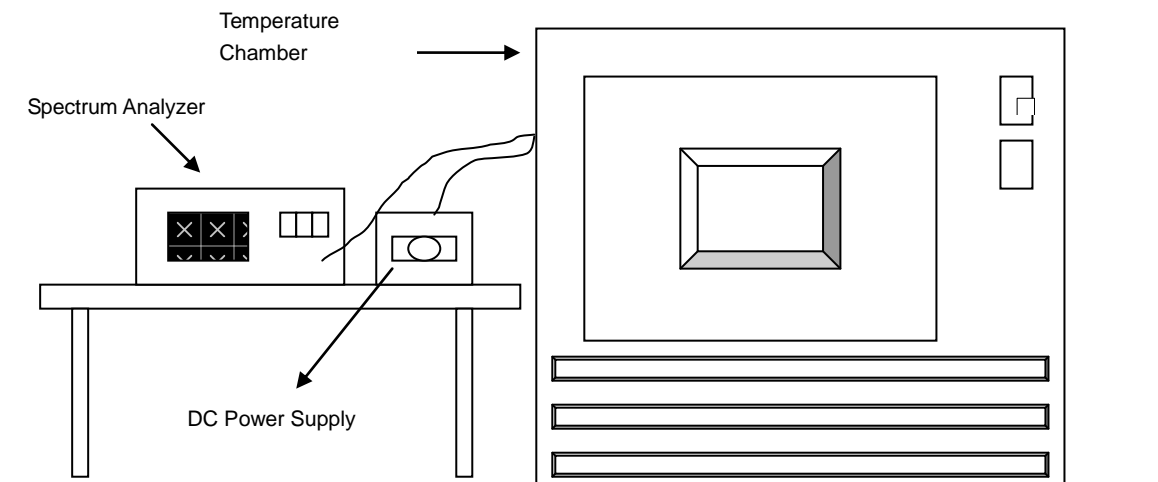


4.6 FREQUENCY STABILITY

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)
60	3.8	5320.014380	2.703	5320.016125	3.031	5320.014287	2.686	5320.015391	2.893
50	3.8	5320.015084	2.835	5320.014935	2.807	5320.015311	2.878	5320.015107	2.840
40	3.8	5320.015866	2.982	5320.016204	3.046	5320.015668	2.945	5320.016125	3.031
30	3.8	5320.016971	3.190	5320.017270	3.246	5320.017329	3.257	5320.017223	3.237
20	3.8	5320.017678	3.323	5320.017813	3.348	5320.018240	3.429	5320.018019	3.387
10	3.8	5320.019764	3.715	5320.019593	3.683	5320.019430	3.652	5320.019261	3.620
0	3.8	5320.018048	3.392	5320.017952	3.374	5320.018384	3.456	5320.018234	3.427
-10	3.8	5320.016436	3.089	5320.016752	3.149	5320.016553	3.111	5320.016298	3.064
-20	3.8	5320.016190	3.043	5320.016138	3.033	5320.015685	2.948	5320.016237	3.052
-30	3.8	5320.014859	2.793	5320.015212	2.859	5320.014589	2.742	5320.015310	2.878

FREQUENCY STABILITY VERSUS VOLTAGE									
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)
20	3.55	5320.017508	3.291	5320.017903	3.365	5320.017644	3.317	5320.017662	3.320
	3.8	5320.017678	3.323	5320.017813	3.348	5320.018240	3.429	5320.018019	3.387
	4.35	5320.019343	3.636	5320.018926	3.558	5320.019077	3.586	5320.019354	3.638

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---