

FCC TEST REPORT (15.247)

REPORT NO.: RF121011C15-2

MODEL NO.: GT-I9268

FCC ID: A3LGTI9268

RECEIVED: Oct. 11, 2012

TESTED: Oct. 17 ~ Oct. 19, 2012

ISSUED: Oct. 26, 2012

APPLICANT: SAMSUNG Electronics Co., LTD.

ADDRESS: IT center, 416, Maetan-3dong, Yeongtong-gu,
Suwon-city, Gyeonggi-do, Korea, 443-742

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	5
1. CERTIFICATION.....	6
2. SUMMARY OF TEST RESULTS.....	7
2.1 MEASUREMENT UNCERTAINTY	7
3. GENERAL INFORMATION	8
3.1 GENERAL DESCRIPTION OF EUT.....	8
3.2 DESCRIPTION OF TEST MODES.....	10
3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL.....	11
3.3 DESCRIPTION OF SUPPORT UNITS.....	15
3.3.1 CONFIGURATION OF SYSTEM UNDER TEST	15
3.4 GENERAL DESCRIPTION OF APPLIED STANDARDS.....	15
4. TEST TYPES AND RESULTS (FOR 2.4GHz BAND)	16
4.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT	16
4.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT	16
4.1.2 TEST INSTRUMENTS	17
4.1.3 TEST PROCEDURES.....	18
4.1.4 DEVIATION FROM TEST STANDARD	18
4.1.5 TEST SETUP.....	19
4.1.6 EUT OPERATING CONDITIONS.....	19
4.1.7 TEST RESULTS	20
4.2 CONDUCTED EMISSION MEASUREMENT	30
4.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT	30
4.2.2 TEST INSTRUMENTS	30
4.2.3 TEST PROCEDURES.....	31
4.2.4 DEVIATION FROM TEST STANDARD	31
4.2.5 TEST SETUP.....	32
4.2.6 EUT OPERATING CONDITIONS.....	32
4.2.7 TEST RESULTS	33
4.3 6dB BANDWIDTH MEASUREMENT	35
4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT	35
4.3.2 TEST SETUP.....	35
4.3.3 TEST INSTRUMENTS	35
4.3.4 TEST PROCEDURE.....	35
4.3.5 DEVIATION FROM TEST STANDARD	35
4.3.6 EUT OPERATING CONDITIONS.....	35
4.3.7 TEST RESULTS	36
4.4 CONDUCTED OUTPUT POWER.....	37
4.4.1 LIMITS OF CONDUCTED OUTPUT POWER MEASUREMENT	37
4.4.2 TEST SETUP.....	37
4.4.3 TEST INSTRUMENTS	37
4.4.4 TEST PROCEDURES.....	37
4.4.5 DEVIATION FROM TEST STANDARD	37
4.4.6 EUT OPERATING CONDITIONS.....	37
4.4.7 TEST RESULTS	38
4.5 POWER SPECTRAL DENSITY MEASUREMENT	39
4.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT	39
4.5.2 TEST SETUP.....	39
4.5.3 TEST INSTRUMENTS	39



A D T

4.5.4	TEST PROCEDURE	39
4.5.5	DEVIATION FROM TEST STANDARD	39
4.5.6	EUT OPERATING CONDITION	39
4.5.7	TEST RESULTS	40
4.6	CONDUCTED OUT OF BAND EMISSION MEASUREMENT	41
4.6.1	LIMITS OF CONDUCTED OUT OF BAND EMISSION MEASUREMENT	41
4.6.2	TEST SETUP.....	41
4.6.3	TEST INSTRUMENTS	41
4.6.4	TEST PROCEDURE.....	41
4.6.5	DEVIATION FROM TEST STANDARD	42
4.6.6	EUT OPERATING CONDITION	42
4.6.7	TEST RESULTS	42
5.	TEST TYPES AND RESULTS (FOR 5.0GHz BAND)	46
5.1	RADIATED EMISSION AND BANDEDGE MEASUREMENT	46
5.1.1	LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT	46
5.1.2	TEST INSTRUMENTS	47
5.1.3	TEST PROCEDURES.....	47
5.1.4	DEVIATION FROM TEST STANDARD	47
5.1.5	TEST SETUP.....	47
5.1.6	EUT OPERATING CONDITIONS.....	47
5.1.7	TEST RESULTS	48
5.2	CONDUCTED EMISSION MEASUREMENT	57
5.2.1	LIMITS OF CONDUCTED EMISSION MEASUREMENT	57
5.2.2	TEST INSTRUMENTS	57
5.2.3	TEST PROCEDURES.....	57
5.2.4	DEVIATION FROM TEST STANDARD	57
5.2.5	TEST SETUP.....	57
5.2.6	EUT OPERATING CONDITIONS.....	57
5.2.7	TEST RESULTS	58
5.3	6dB BANDWIDTH MEASUREMENT	60
5.3.1	LIMITS OF 6dB BANDWIDTH MEASUREMENT	60
5.3.2	TEST SETUP.....	60
5.3.3	TEST INSTRUMENTS	60
5.3.4	TEST PROCEDURE.....	60
5.3.5	DEVIATION FROM TEST STANDARD	60
5.3.6	EUT OPERATING CONDITIONS.....	60
5.3.7	TEST RESULTS	61
5.4	MAXIMUM OUTPUT POWER.....	62
5.4.1	LIMITS OF MAXIMUM OUTPUT POWER MEASUREMENT	62
5.4.2	TEST SETUP.....	62
5.4.3	INSTRUMENTS	62
5.4.4	TEST PROCEDURES.....	62
5.4.5	DEVIATION FROM TEST STANDARD	62
5.4.6	EUT OPERATING CONDITIONS.....	62
5.4.7	TEST RESULTS	63
5.5	POWER SPECTRAL DENSITY MEASUREMENT	64
5.5.1	LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT	64
5.5.2	TEST SETUP.....	64
5.5.3	TEST INSTRUMENTS	64
5.5.4	TEST PROCEDURE.....	64
5.5.5	DEVIATION FROM TEST STANDARD	64



A D T

5.5.6	EUT OPERATING CONDITION	64
5.5.7	TEST RESULTS	65
5.6	CONDUCTED OUT OF BAND EMISSION MEASUREMENT	66
5.6.1	LIMITS OF OUT OF BAND EMISSION MEASUREMENT	66
5.6.2	TEST SETUP	66
5.6.3	TEST INSTRUMENTS	66
5.6.4	TEST PROCEDURE	66
5.6.5	DEVIATION FROM TEST STANDARD	66
5.6.6	EUT OPERATING CONDITION	66
5.6.7	TEST RESULTS	66
6.	PHOTOGRAPHS OF THE TEST CONFIGURATION	70
7.	INFORMATION ON THE TESTING LABORATORIES	71
8.	APPENDIX A - MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB	72



A D T

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF121011C15-2	Original release	Oct. 26, 2012

1. CERTIFICATION

PRODUCT: Mobile Phone
MODEL NO.: GT-I9268
BRAND: SAMSUNG
APPLICANT: SAMSUNG Electronics Co., LTD.
TESTED: Oct. 17 ~ Oct. 19, 2012
TEST SAMPLE: Production Unit
STANDARDS: FCC Part 15, Subpart C (Section 15.247)
ANSI C63.10-2009

The above equipment (model: GT-I9268) 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 : Ivy Wu , **DATE** : Oct. 26, 2012
Ivy Wu / Senior Specialist

APPROVED BY : Ken Liu , **DATE** : Oct. 26, 2012
Ken Liu / Manager

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART C (SECTION 15.247)			
STANDARD SECTION	TEST TYPE	RESULT	REMARK
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -3.42dB at 13.55859MHz.
15.247(d) 15.209	Radiated Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -1.4dB at 43.77MHz.
15.247(d)	Band Edge Measurement	PASS	Meet the requirement of limit.
15.247(a)(2)	6dB bandwidth	PASS	Meet the requirement of limit.
15.247(b)	Conducted power	PASS	Meet the requirement of limit.
15.247(e)	Power Spectral Density	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	Mobile Phone
MODEL NO.	GT-I9268
POWER SUPPLY	5.0Vdc (adapter or host equipment) 3.8Vdc (Li-ion battery)
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b: 11.0/ 5.5/ 2.0/ 1.0Mbps 802.11g: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 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	2.4GHz: 2412 ~ 2462MHz 5.0GHz: 5745 ~ 5825MHz
NUMBER OF CHANNEL	2.4GHz: 11 for 802.11b, 802.11g, 802.11n (20MHz) 5.0GHz: 5 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz)
OUTPUT POWER	205.59mW for 2412 ~ 2462MHz 138.04mW for 5745 ~ 5825MHz
ANTENNA TYPE	2.4GHz: PIFA antenna with -3.5dBi gain 5.0GHz: PIFA antenna with -3.5dBi gain
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:

- The EUT has following accessories.

No.	Product	Brand	MODEL	Description
1	Power Adapter	SAMSUNG	ETA0U82CBC	I/P: 100-240Vac, 50-60Hz, 0.15A O/P: 5.0Vdc, 1.0A
2	Battery	SAMSUNG	EB-L1H7LLU	Rating: 3.8 Vdc, 7.98Wh, 2100mAh Type: Li-ion
3	Earphone	SAMSUNG	EHS64AVFWE (GH59-11720)	1.2m non-shielded cable without ferrite core
4	USB Cable	SAMSUNG	ECB-DU5ABC (RT1C730KS E)	1.0m non-shielded cable without ferrite core

- SW version is I9268.01.
- HW version is I9268.01.

4. 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

5. 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 2.4GHz:

11 channels are provided for 802.11b, 802.11g and 802.11n (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	2412MHz	7	2442MHz
2	2417MHz	8	2447MHz
3	2422MHz	9	2452MHz
4	2427MHz	10	2457MHz
5	2432MHz	11	2462MHz
6	2437MHz		

FOR 5.0GHz (5745 ~ 5805MHz):

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
149	5745MHz	161	5805MHz
153	5765MHz	165	5825MHz
157	5785MHz		

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
151	5755MHz	159	5795MHz

3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

FOR 2.4GHz:

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	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	6.5

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	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11g	1 to 11	1	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	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11g	1 to 11	1	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	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b	1 to 11	1, 11	DSSS	DBPSK	1.0
802.11g	1 to 11	1, 11	OFDM	BPSK	6.0
802.11n (20MHz)	1 to 11	1, 11	OFDM	BPSK	6.5

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	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	6.5

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	Howard Kao

FOR 5.0GHz (5745 ~ 5825MHz):

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

Where **RE≥1G**: Radiated Emission above 1GHz

RE<1G: Radiated Emission below 1GHz

PLC: Power Line Conducted Emission

APCM: Antenna Port Conducted Measurement

NOTE: The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on 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	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0
802.11n (20MHz)	149 to 165	149, 157, 165	OFDM	BPSK	6.5
802.11n (40MHz)	151 to 159	151, 159	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	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11n (40MHz)	151 to 159	151	OFDM	BPSK	13.5

POWER LINE CONDUCTED EMISSION TEST:

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

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11n (40MHz)	151 to 159	151	OFDM	BPSK	13.5

BANDEDGE MEASUREMENT:

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

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	149 to 165	149, 165	OFDM	BPSK	6.0
802.11n (20MHz)	149 to 165	149, 165	OFDM	BPSK	6.5
802.11n (40MHz)	151 to 159	151, 159	OFDM	BPSK	13.5

ANTENNA PORT CONDUCTED 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	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0
802.11n (20MHz)	149 to 165	149, 157, 165	OFDM	BPSK	6.5
802.11n (40MHz)	151 to 159	151, 159	OFDM	BPSK	13.5

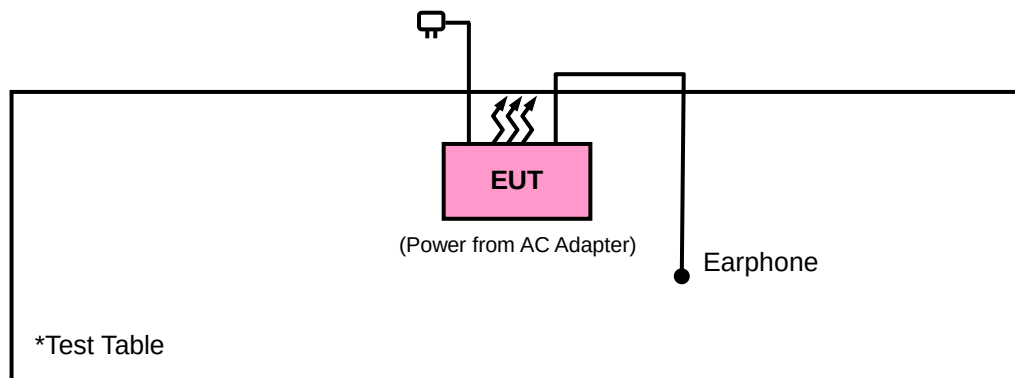
TEST CONDITION:

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	Howard Kao

3.3 DESCRIPTION OF SUPPORT UNITS

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

3.3.1 CONFIGURATION OF SYSTEM UNDER TEST



3.4 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 C (15.247)

ANSI C63.10-2009

KDB 558074 D01 DTS Meas Guidance v01

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 (FOR 2.4GHz BAND)

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. Other emissions shall be at least 20dB below the highest level of the desired power:

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 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
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	309219/4	Oct. 21, 2011	Oct. 20, 2012
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
High Speed Peak Power Meter	ML2495A	0842014	Apr. 28, 2012	Apr. 27, 2013
Power Sensor	MA2411B	0738404	Apr. 28, 2012	Apr. 27, 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.

4.1.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters 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. Height of receiving antenna 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 lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

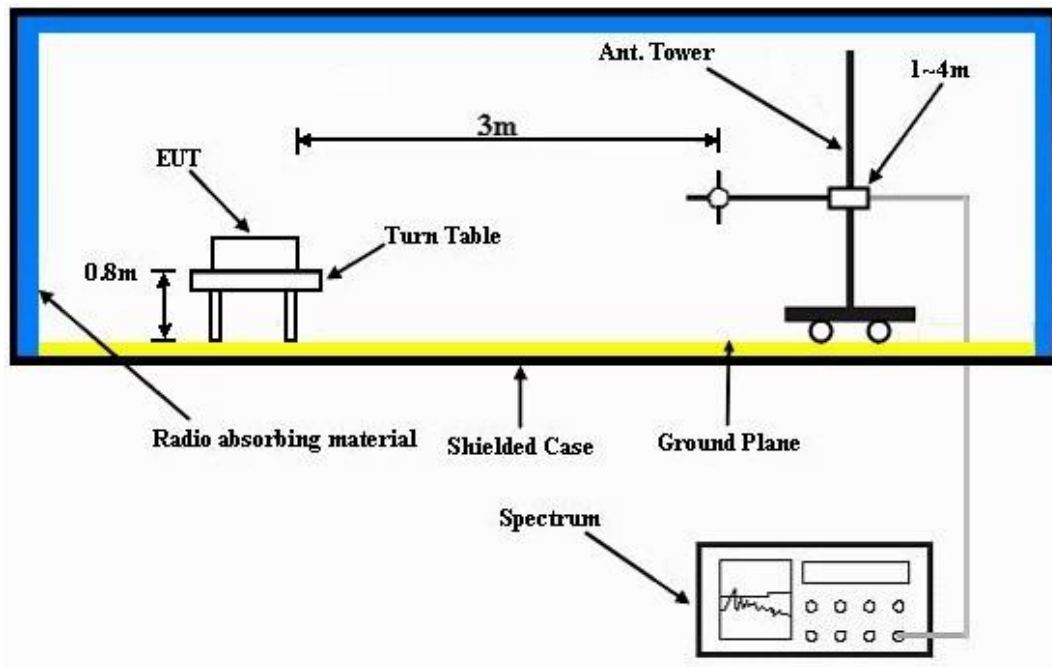
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection 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 10Hz for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation.

4.1.5 TEST SETUP



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

4.1.6 EUT OPERATING CONDITIONS

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

4.1.7 TEST RESULTS

ABOVE 1GHz WORST-CASE DATA

802.11b

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1GHz ~ 25GHz
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
2382	42.72	48.16	54	-11.28	27.21	4.85	37.5	124	0	Average
2382	55.6	61.04	74	-18.4	27.21	4.85	37.5	124	0	Peak
2412	102.8	108.14			27.31	4.87	37.52	124	0	Average
2412	106.69	112.03			27.31	4.87	37.52	124	0	Peak
2483.5	38.11	43.01	54	-15.89	27.5	4.92	37.32	124	0	Average
2483.5	52.47	57.37	74	-21.53	27.5	4.92	37.32	124	0	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
2390	42.44	47.83	54	-11.56	27.26	4.87	37.52	104	269	Average
2390	53.28	58.67	74	-20.72	27.26	4.87	37.52	104	269	Peak
2412	100.86	106.2			27.31	4.87	37.52	104	269	Average
2412	104.52	109.86			27.31	4.87	37.52	104	269	Peak
2483.5	37.55	42.45	54	-16.45	27.5	4.92	37.32	104	269	Average
2483.5	52.21	57.11	74	-21.79	27.5	4.92	37.32	104	269	Peak

REMARKS:

- 2412MHz: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1GHz ~ 25GHz
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
2390	37.87	43.26	54	-16.13	27.26	4.87	37.52	122	0	Average
2390	52.63	58.02	74	-21.37	27.26	4.87	37.52	122	0	Peak
2437	102.49	107.66			27.4	4.89	37.46	122	0	Average
2437	106.47	111.64			27.4	4.89	37.46	122	0	Peak
2483.5	38.74	43.64	54	-15.26	27.5	4.92	37.32	122	0	Average
2483.5	52.29	57.19	74	-21.71	27.5	4.92	37.32	122	0	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
2390	38.52	43.91	54	-15.48	27.26	4.87	37.52	104	269	Average
2390	51.89	57.28	74	-22.11	27.26	4.87	37.52	104	269	Peak
2437	100.82	105.99			27.4	4.89	37.46	104	269	Average
2437	104.87	110.04			27.4	4.89	37.46	104	269	Peak
2483.5	38.66	43.56	54	-15.34	27.5	4.92	37.32	104	269	Average
2483.5	52.39	57.29	74	-21.61	27.5	4.92	37.32	104	269	Peak

REMARKS:

- 2437MHz: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1GHz ~ 25GHz
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
2384	38.41	43.85	54	-15.59	27.21	4.85	37.5	121	0	Average
2384	53.13	58.57	74	-20.87	27.21	4.85	37.5	121	0	Peak
2462	104.21	109.24			27.45	4.91	37.39	121	0	Average
2462	108.28	113.31			27.45	4.91	37.39	121	0	Peak
2483.5	43.49	48.39	54	-10.51	27.5	4.92	37.32	121	0	Average
2483.5	54.66	59.56	74	-19.34	27.5	4.92	37.32	121	0	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
2374	38.01	43.45	54	-15.99	27.21	4.85	37.5	100	257	Average
2374	53.76	59.2	74	-20.24	27.21	4.85	37.5	100	257	Peak
2462	99.72	104.75			27.45	4.91	37.39	100	257	Average
2462	103.73	108.76			27.45	4.91	37.39	100	257	Peak
2483.5	39.16	44.06	54	-14.84	27.5	4.92	37.32	100	257	Average
2483.5	53.17	58.07	74	-20.83	27.5	4.92	37.32	100	257	Peak

REMARKS:

- 2462MHz: Fundamental frequency.

802.11g

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1GHz ~ 25GHz
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
2390	45.46	50.85	54	-8.54	27.26	4.87	37.52	123	0	Average
2390	64.71	70.1	74	-9.29	27.26	4.87	37.52	123	0	Peak
2412	96.07	101.41			27.31	4.87	37.52	123	0	Average
2412	105.48	110.82			27.31	4.87	37.52	123	0	Peak
2483.5	41.84	46.74	54	-12.16	27.5	4.92	37.32	123	0	Average
2483.5	52.88	57.78	74	-21.12	27.5	4.92	37.32	123	0	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
2390	43.74	49.13	54	-10.26	27.26	4.87	37.52	105	270	Average
2390	60.5	65.89	74	-13.5	27.26	4.87	37.52	105	270	Peak
2412	93.64	98.98			27.31	4.87	37.52	105	270	Average
2412	103.04	108.38			27.31	4.87	37.52	105	270	Peak
2483.5	41.22	46.12	54	-12.78	27.5	4.92	37.32	105	270	Average
2483.5	53.01	57.91	74	-20.99	27.5	4.92	37.32	105	270	Peak

REMARKS:

- 2412MHz: Fundamental frequency.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1GHz ~ 25GHz
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
2382	38.56	44	54	-15.44	27.21	4.85	37.5	122	355	Average
2382	53.27	58.71	74	-20.73	27.21	4.85	37.5	122	355	Peak
2437	95.63	100.8			27.4	4.89	37.46	122	355	Average
2437	106.54	111.71			27.4	4.89	37.46	122	355	Peak
2498	38.68	43.44	54	-15.32	27.55	4.94	37.25	122	355	Average
2498	53.18	57.94	74	-20.82	27.55	4.94	37.25	122	355	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
2376	37.61	43.05	54	-16.39	27.21	4.85	37.5	103	270	Average
2376	53.2	58.64	74	-20.8	27.21	4.85	37.5	103	270	Peak
2437	93.36	98.53			27.4	4.89	37.46	103	270	Average
2437	102.98	108.15			27.4	4.89	37.46	103	270	Peak
2490	37.62	42.47	54	-16.38	27.55	4.92	37.32	103	270	Average
2490	52.04	56.89	74	-21.96	27.55	4.92	37.32	103	270	Peak

REMARKS:

1. 2437MHz: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1GHz ~ 25GHz
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
2360	38.76	44.27	54	-15.24	27.16	4.82	37.49	121	355	Average
2360	54.24	59.75	74	-19.76	27.16	4.82	37.49	121	355	Peak
2462	97.29	102.32			27.45	4.91	37.39	121	355	Average
2462	107.15	112.18			27.45	4.91	37.39	121	355	Peak
2483.5	44.58	49.48	54	-9.42	27.5	4.92	37.32	121	355	Average
2483.5	66.63	71.53	74	-7.37	27.5	4.92	37.32	121	355	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
2374	36.73	42.17	54	-17.27	27.21	4.85	37.5	100	270	Average
2374	51.55	56.99	74	-22.45	27.21	4.85	37.5	100	270	Peak
2462	94.37	99.4			27.45	4.91	37.39	100	270	Average
2462	104.02	109.05			27.45	4.91	37.39	100	270	Peak
2483.5	43.31	48.21	54	-10.69	27.5	4.92	37.32	100	270	Average
2483.5	63.49	68.39	74	-10.51	27.5	4.92	37.32	100	270	Peak

REMARKS:

1. 2462MHz: Fundamental frequency.

802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1GHz ~ 25GHz
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
2390	44.16	49.55	54	-9.84	27.26	4.87	37.52	122	0	Average
2390	58.44	63.83	74	-15.56	27.26	4.87	37.52	122	0	Peak
2412	94.29	99.63			27.31	4.87	37.52	122	0	Average
2412	103.93	109.27			27.31	4.87	37.52	122	0	Peak
2483.5	41.63	46.53	54	-12.37	27.5	4.92	37.32	122	0	Average
2483.5	52.76	57.66	74	-21.24	27.5	4.92	37.32	122	0	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
2390	42.35	47.74	54	-11.65	27.26	4.87	37.52	103	270	Average
2390	60.66	66.05	74	-13.34	27.26	4.87	37.52	103	270	Peak
2412	92.19	97.53			27.31	4.87	37.52	103	270	Average
2412	102.08	107.42			27.31	4.87	37.52	103	270	Peak
2483.5	41.51	46.41	54	-12.49	27.5	4.92	37.32	103	270	Average
2483.5	53.71	58.61	74	-20.29	27.5	4.92	37.32	103	270	Peak

REMARKS:

- 2412MHz: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1GHz ~ 25GHz
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
2390	41.71	47.1	54	-12.29	27.26	4.87	37.52	122	0	Average
2390	52.59	57.98	74	-21.41	27.26	4.87	37.52	122	0	Peak
2437	94.47	99.64			27.4	4.89	37.46	122	0	Average
2437	103.65	108.82			27.4	4.89	37.46	122	0	Peak
2483.5	41.11	46.01	54	-12.89	27.5	4.92	37.32	122	0	Average
2483.5	51	55.9	74	-23	27.5	4.92	37.32	122	0	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
2390	40.6	45.99	54	-13.4	27.26	4.87	37.52	102	270	Average
2390	51.49	56.88	74	-22.51	27.26	4.87	37.52	102	270	Peak
2437	92.75	97.92			27.4	4.89	37.46	102	270	Average
2437	102.23	107.4			27.4	4.89	37.46	102	270	Peak
2483.5	40.78	45.68	54	-13.22	27.5	4.92	37.32	102	270	Average
2483.5	50.88	55.78	74	-23.12	27.5	4.92	37.32	102	270	Peak

REMARKS:

- 2437MHz: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1GHz ~ 25GHz
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
2390	40.64	46.03	54	-13.36	27.26	4.87	37.52	119	0	Average
2390	51.87	57.26	74	-22.13	27.26	4.87	37.52	119	0	Peak
2462	93.36	98.39			27.45	4.91	37.39	119	0	Average
2462	104.35	109.38			27.45	4.91	37.39	119	0	Peak
2483.5	43.88	48.78	54	-10.12	27.5	4.92	37.32	119	0	Average
2483.5	62.14	67.04	74	-11.86	27.5	4.92	37.32	119	0	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
2390	40.3	45.69	54	-13.7	27.26	4.87	37.52	100	271	Average
2390	52.38	57.77	74	-21.62	27.26	4.87	37.52	100	271	Peak
2462	94.08	99.11			27.45	4.91	37.39	100	271	Average
2462	103.76	108.79			27.45	4.91	37.39	100	271	Peak
2483.5	42.49	47.39	54	-11.51	27.5	4.92	37.32	100	271	Average
2483.5	65.86	70.76	74	-8.14	27.5	4.92	37.32	100	271	Peak

REMARKS:

1. 2462MHz: Fundamental frequency.



A D T

BELOW 1GHz WORST-CASE DATA: 802.11g

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
43.77	31.92	48.73	40	-8.08	13.59	0.71	31.11	100	252	Peak
151.5	34.2	51.78	43.5	-9.3	12.71	1.35	31.64	133	287	Peak
209.28	34.19	54.39	43.5	-9.31	9.77	1.64	31.61	152	274	Peak
307	28.9	45.61	46	-17.1	13.13	2.08	31.92	100	331	Peak
395.9	31.73	46.17	46	-14.27	15.24	2.41	32.09	100	174	Peak
609.4	28.12	37.38	46	-17.88	19.72	3.12	32.1	133	274	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
36.21	35.74	53.24	40	-4.26	12.94	0.61	31.05	100	274	Peak
43.77	38.6	55.41	40	-1.4	13.59	0.71	31.11	100	244	QP
164.73	32.84	50.98	43.5	-10.66	12.25	1.42	31.81	100	222	Peak
392.4	24.45	38.95	46	-21.55	15.17	2.4	32.07	100	220	Peak
500.2	28.58	40.09	46	-17.42	17.33	2.78	31.62	100	331	Peak
681.5	25.9	33.78	46	-20.1	20.6	3.36	31.84	142	331	Peak

4.2 CONDUCTED EMISSION MEASUREMENT

4.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBμV)	
	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

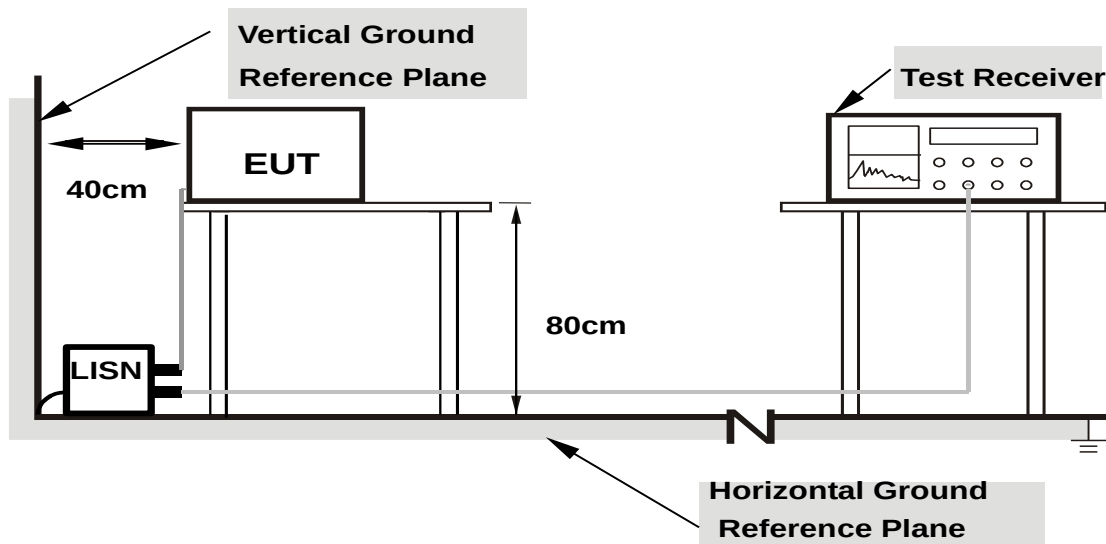
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling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

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

4.2.4 DEVIATION FROM TEST STANDARD

No deviation.

4.2.5 TEST SETUP



Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

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

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6.

4.2.7 TEST RESULTS

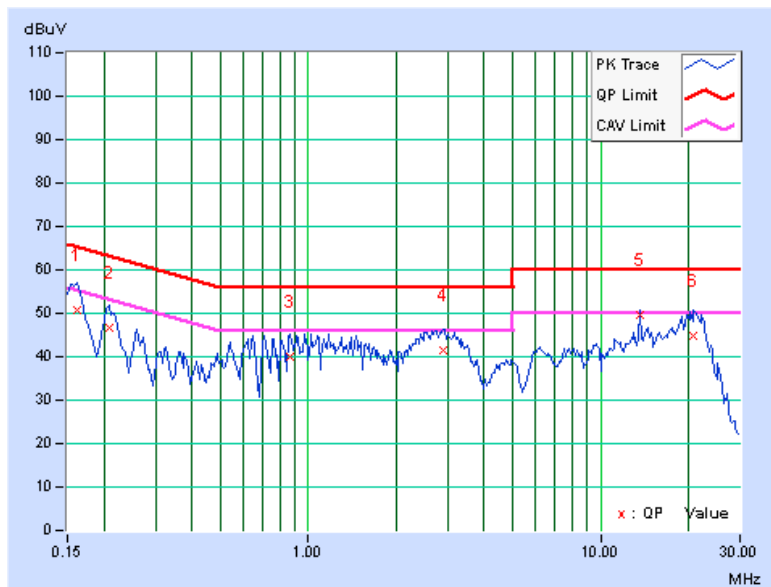
CONDUCTED WORST-CASE DATA : 802.11g

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	0.16172	0.15	50.61	39.96	50.76	40.11	65.38	55.38	-14.62	-15.27
2	0.20859	0.15	46.55	36.58	46.70	36.73	63.26	53.26	-16.56	-16.53
3	0.86875	0.19	39.93	30.33	40.12	30.52	56.00	46.00	-15.88	-15.48
4	2.89453	0.30	41.28	33.03	41.58	33.33	56.00	46.00	-14.42	-12.67
5	13.56250	0.50	48.95	45.95	49.45	46.45	60.00	50.00	-10.55	-3.55
6	20.86719	0.62	44.32	35.92	44.94	36.54	60.00	50.00	-15.06	-13.46

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.

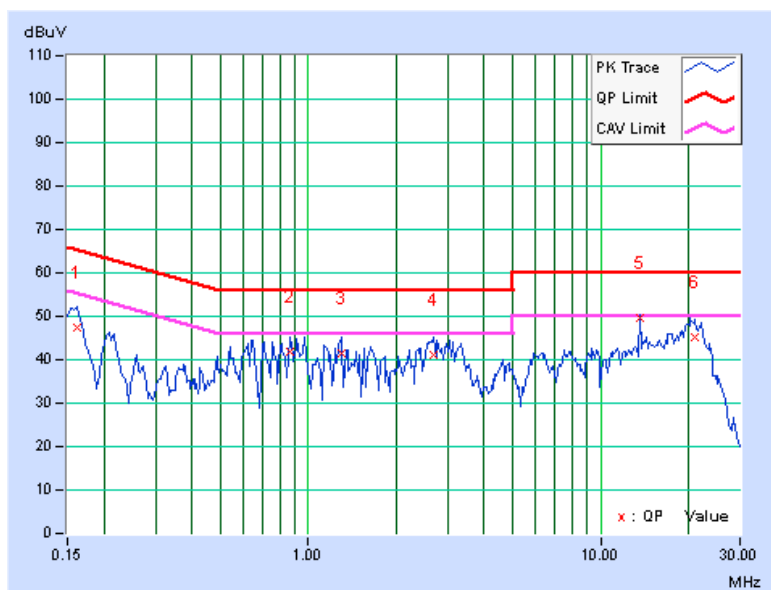


PHASE	Line 2	6dB BANDWIDTH	9kHz
-------	--------	---------------	------

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	0.16172	0.13	47.43	36.88	47.56	37.01	65.38	55.38	-17.81	-18.36
2	0.86484	0.18	41.56	31.30	41.74	31.48	56.00	46.00	-14.26	-14.52
3	1.29688	0.21	41.11	34.12	41.32	34.33	56.00	46.00	-14.68	-11.67
4	2.67188	0.29	40.98	31.37	41.27	31.66	56.00	46.00	-14.73	-14.34
5	13.56250	0.57	48.97	45.91	49.54	46.48	60.00	50.00	-10.46	-3.52
6	21.10938	0.70	44.39	35.89	45.09	36.59	60.00	50.00	-14.91	-13.41

REMARKS:

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

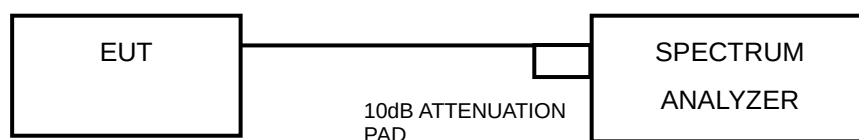


4.3 6dB BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 TEST SETUP



4.3.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

4.3.4 TEST PROCEDURE

- Set resolution bandwidth (RBW) = approximately 1% of the emission bandwidth
- Set the video bandwidth (VBW) $\geq 3 \times$ RBW, Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.
- Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission

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 lowest, middle and highest channel frequencies individually.

4.3.7 TEST RESULTS

802.11b

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	8.13	0.5	PASS
6	2437	9.08	0.5	PASS
11	2462	8.13	0.5	PASS

802.11g

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	16.07	0.5	PASS
6	2437	16.01	0.5	PASS
11	2462	15.87	0.5	PASS

802.11n (20MHz)

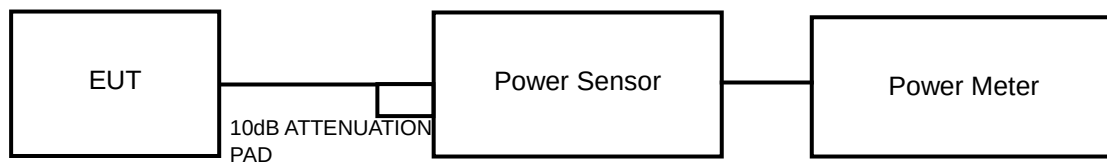
CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	17.25	0.5	PASS
6	2437	17.48	0.5	PASS
11	2462	17.36	0.5	PASS

4.4 CONDUCTED OUTPUT POWER

4.4.1 LIMITS OF CONDUCTED OUTPUT POWER MEASUREMENT

For systems using digital modulation in the 2400–2483.5 MHz bands: 1 Watt (30dBm)

4.4.2 TEST SETUP



4.4.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

4.4.4 TEST PROCEDURES

A peak power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak power sensor. Record the peak power level.

4.4.5 DEVIATION FROM TEST STANDARD

No deviation.

4.4.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6.

4.4.7 TEST RESULTS

802.11b

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2412	97.72	19.9	30	PASS
6	2437	92.04	19.64	30	PASS
11	2462	86.10	19.35	30	PASS

802.11g

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2412	205.59	23.13	30	PASS
6	2437	196.34	22.93	30	PASS
11	2462	195.43	22.91	30	PASS

802.11n (20MHz)

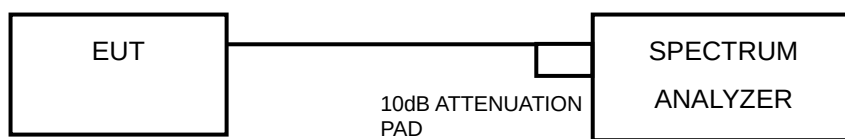
CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
1	2412	175.79	22.45	30	PASS
6	2437	171.79	22.35	30	PASS
11	2462	159.22	22.02	30	PASS

4.5 POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

4.5.2 TEST SETUP



4.5.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

4.5.4 TEST PROCEDURE

- Set the RBW = 100 kHz, VBW = 300 kHz, Detector = peak.
- Sweep time = auto couple, Trace mode = max hold, allow trace to fully stabilize.
- Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.
- Scale the observed power level to an equivalent value in 3 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where $BWCF = 10\log(3 \text{ kHz}/100\text{kHz})$

4.5.5 DEVIATION FROM TEST STANDARD

No deviation.

4.5.6 EUT OPERATING CONDITION

Same as Item 4.3.6

4.5.7 TEST RESULTS

802.11b

Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2412	9.11	-6.09	8	PASS
6	2437	8.89	-6.31	8	PASS
11	2462	8.80	-6.40	8	PASS

802.11g

Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2412	3.53	-11.67	8	PASS
6	2437	3.35	-11.85	8	PASS
11	2462	2.43	-12.77	8	PASS

802.11n (20MHz)

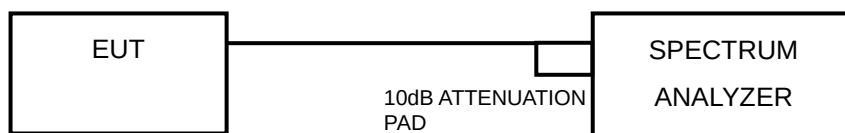
Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
1	2412	2.18	-13.02	8	PASS
6	2437	2.12	-13.08	8	PASS
11	2462	1.69	-13.51	8	PASS

4.6 CONDUCTED OUT OF BAND EMISSION MEASUREMENT

4.6.1 LIMITS OF CONDUCTED OUT OF BAND EMISSION MEASUREMENT

Below -20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

4.6.2 TEST SETUP



4.6.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

4.6.4 TEST PROCEDURE

MEASUREMENT PROCEDURE REF

1. Set the RBW = 100 kHz.
2. Set the VBW $\geq$ 300 kHz.
3. Detector = peak.
4. Sweep time = auto couple.
5. Trace mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

MEASUREMENT PROCEDURE OOB

1. Set RBW = 100 kHz.
2. Set VBW $\geq$ 300 kHz.
3. Set span to encompass the spectrum to be examined.
4. Detector = peak.
5. Trace Mode = max hold.
6. Sweep = auto couple.

4.6.5 DEVIATION FROM TEST STANDARD

No deviation.

4.6.6 EUT OPERATING CONDITION

Same as Item 4.3.6

4.6.7 TEST RESULTS

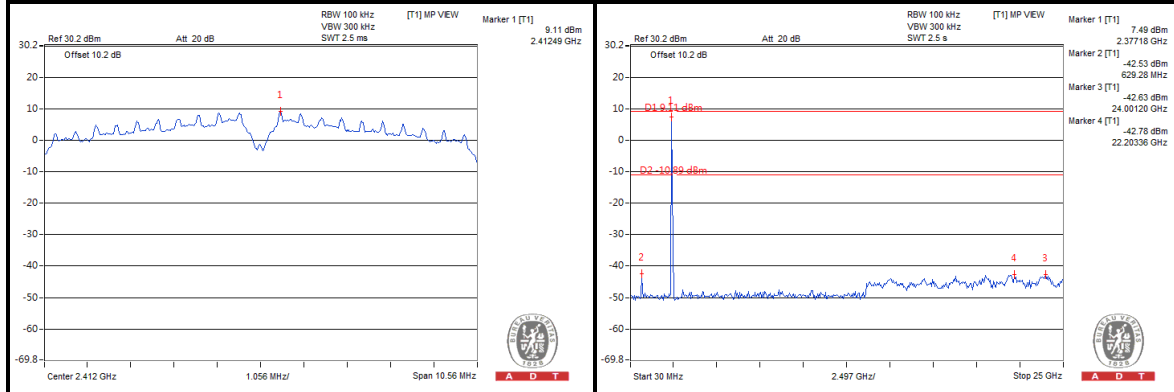
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement.



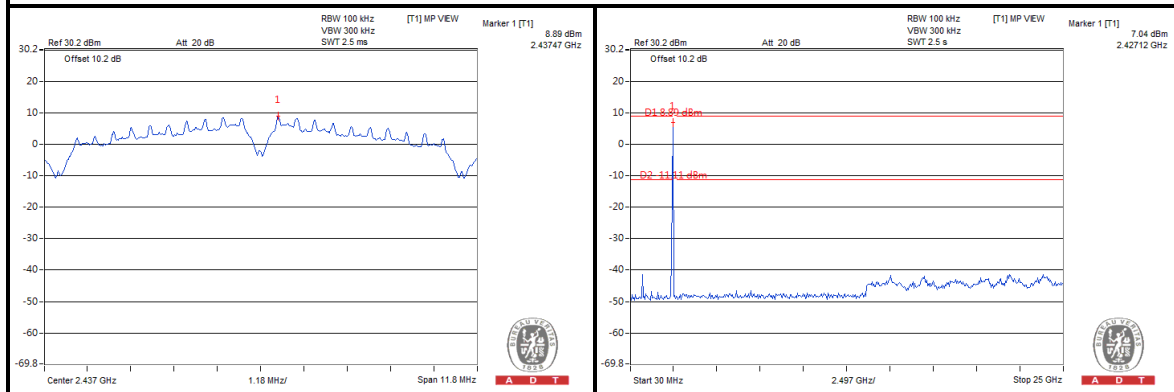
A D T

802.11b

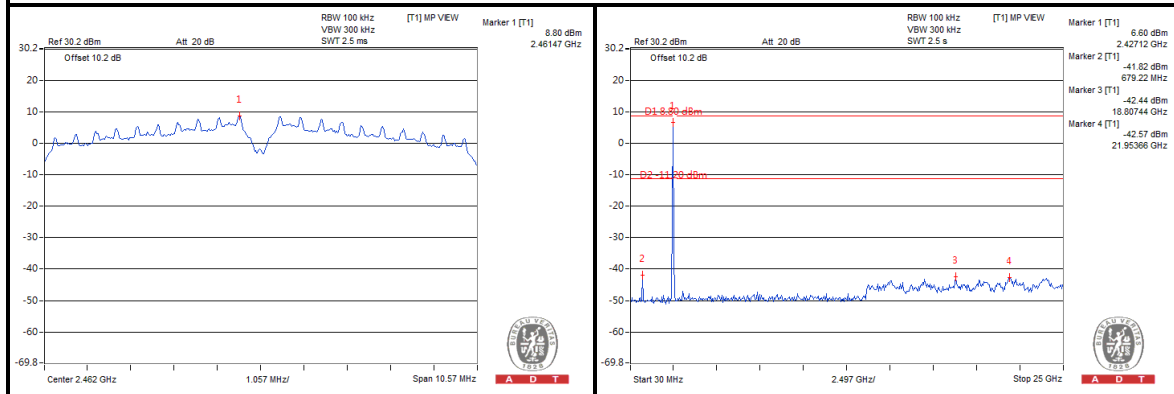
CH 1



CH 6



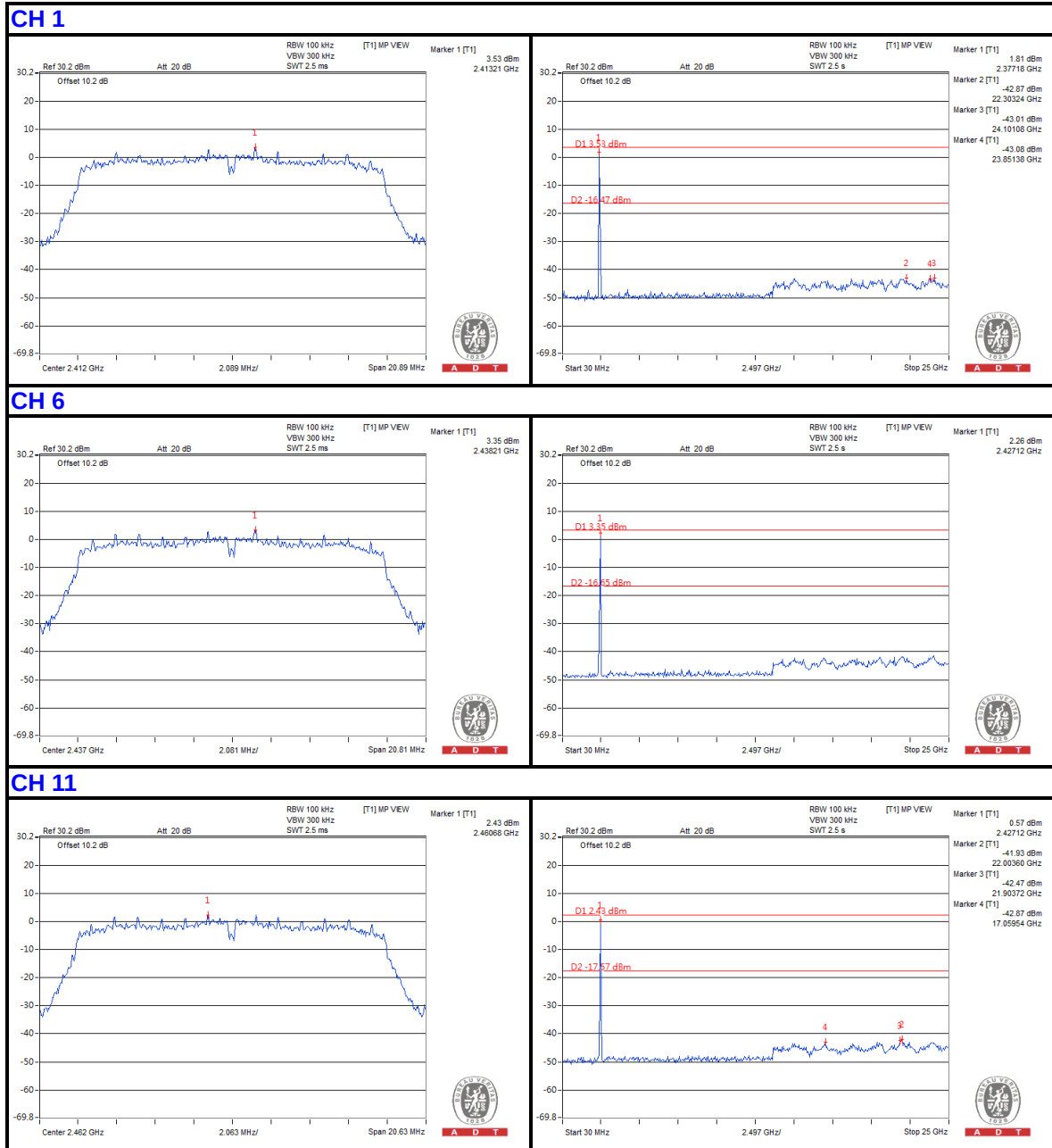
CH 11





A D T

802.11g

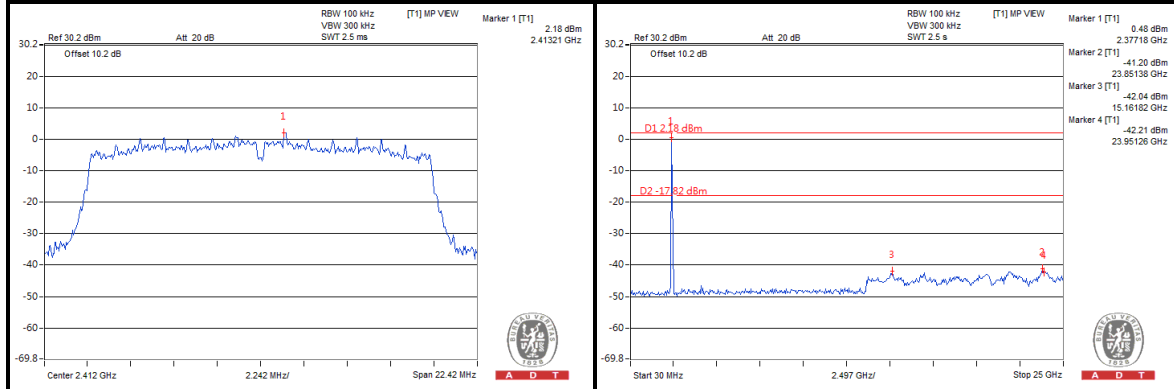




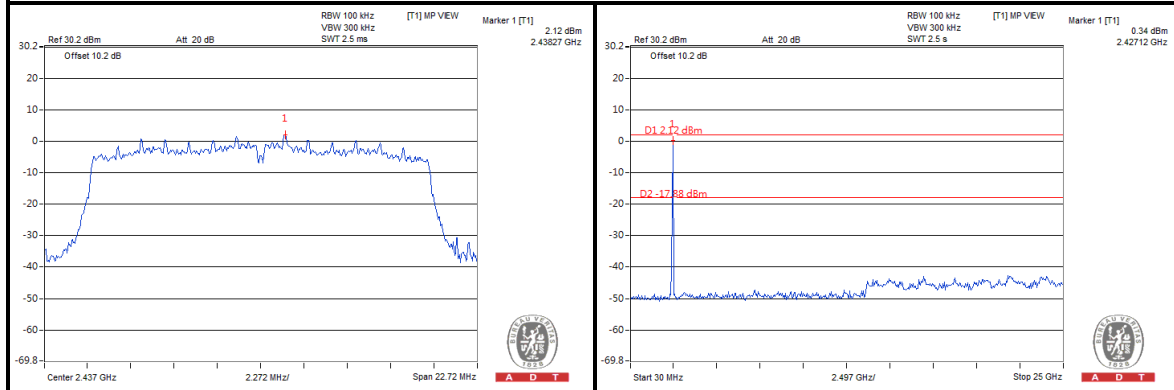
A D T

802.11n (20MHz)

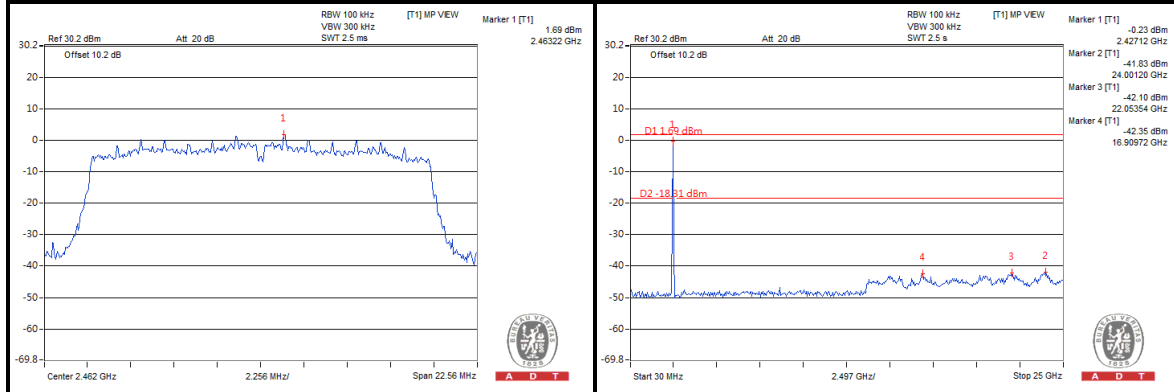
CH 1



CH 6



CH 11



5. TEST TYPES AND RESULTS (FOR 5.0GHz BAND)

5.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT

5.1.1 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. Other emissions shall be at least 20dB below the highest level of the desired power:

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.



A D T

5.1.2 TEST INSTRUMENTS

Same as item 4.1.2.

5.1.3 TEST PROCEDURES

Same as item 4.1.3.

5.1.4 DEVIATION FROM TEST STANDARD

No deviation.

5.1.5 TEST SETUP

Same as item 4.1.5.

5.1.6 EUT OPERATING CONDITIONS

Same as 4.1.6.

5.1.7 TEST RESULTS

ABOVE 1GHz WORST-CASE DATA : 802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	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
5725	47.08	44.44	71.19	-24.11	32.36	7.71	37.43	100	285	Average
5725	62.58	59.94	80.48	-17.9	32.36	7.71	37.43	100	285	Peak
5745	91.19	88.54			32.38	7.74	37.47	100	285	Average
5745	100.48	97.83			32.38	7.74	37.47	100	285	Peak
5850	40.78	37.93	71.19	-30.41	32.53	7.83	37.51	100	285	Average
5850	54.74	51.89	80.48	-25.74	32.53	7.83	37.51	100	285	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
5725	48.46	45.82	74.07	-25.61	32.36	7.71	37.43	100	16	Average
5725	62.87	60.23	82.58	-19.71	32.36	7.71	37.43	100	16	Peak
5745	94.07	91.42			32.38	7.74	37.47	100	16	Average
5745	102.58	99.93			32.38	7.74	37.47	100	16	Peak
5850	40.69	37.84	74.07	-33.38	32.53	7.83	37.51	100	16	Average
5850	55.14	52.29	82.58	-27.44	32.53	7.83	37.51	100	16	Peak

REMARKS:

- 5745MHz: Fundamental frequency.
- 5725MHz & 5850MHz: Out of restricted band



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	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
5725	40.77	38.13	72.62	-31.85	32.36	7.71	37.43	103	291	Average
5725	54.28	51.64	81.79	-27.51	32.36	7.71	37.43	103	291	Peak
5785	92.62	89.93			32.43	7.8	37.54	103	291	Average
5785	101.79	99.1			32.43	7.8	37.54	103	291	Peak
5850	40.61	37.76	72.62	-32.01	32.53	7.83	37.51	103	291	Average
5850	53.5	50.65	81.79	-28.29	32.53	7.83	37.51	103	291	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5725	40.8	38.16	73.21	-32.41	32.36	7.71	37.43	100	17	Average
5725	55.35	52.71	82.86	-27.51	32.36	7.71	37.43	100	17	Peak
5785	93.21	90.52			32.43	7.8	37.54	100	17	Average
5785	102.86	100.17			32.43	7.8	37.54	100	17	Peak
5850	41.14	38.29	73.21	-32.07	32.53	7.83	37.51	100	17	Average
5850	55.77	52.92	82.86	-27.09	32.53	7.83	37.51	100	17	Peak

REMARKS:

1. 5785MHz: Fundamental frequency.
2. 5725MHz & 5850MHz: Out of restricted band



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 165	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
5725	40.3	37.66	71.55	-31.25	32.36	7.71	37.43	111	290	Average
5725	53.13	50.49	81.05	-27.92	32.36	7.71	37.43	111	290	Peak
5825	91.55	88.75			32.51	7.82	37.53	111	290	Average
5825	101.05	98.25			32.51	7.82	37.53	111	290	Peak
5850	42.18	39.33	71.55	-29.37	32.53	7.83	37.51	111	290	Average
5850	58.83	55.98	81.05	-22.22	32.53	7.83	37.51	111	290	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
5725	40.44	37.8	72.67	-32.23	32.36	7.71	37.43	110	16	Average
5725	54.05	51.41	81.82	-27.77	32.36	7.71	37.43	110	16	Peak
5825	92.67	89.87			32.51	7.82	37.53	110	16	Average
5825	101.82	99.02			32.51	7.82	37.53	110	16	Peak
5850	42.19	39.34	72.67	-30.48	32.53	7.83	37.51	110	16	Average
5850	59.84	56.99	81.82	-21.98	32.53	7.83	37.51	110	16	Peak

REMARKS:

1. 5805MHz: Fundamental frequency.
2. 5725MHz & 5850MHz: Out of restricted band

802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	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
5725	49.82	47.18	72.57	-22.75	32.36	7.71	37.43	104	288	Average
5725	66.08	63.44	81.89	-15.81	32.36	7.71	37.43	104	288	Peak
5745	92.57	89.92			32.38	7.74	37.47	104	288	Average
5745	101.89	99.24			32.38	7.74	37.47	104	288	Peak
5850	40.63	37.78	72.57	-31.94	32.53	7.83	37.51	104	288	Average
5850	54.35	51.5	81.89	-27.54	32.53	7.83	37.51	104	288	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
5725	50.64	48	72.75	-22.11	32.36	7.71	37.43	111	16	Average
5725	65.62	62.98	83.65	-18.03	32.36	7.71	37.43	111	16	Peak
5745	92.75	90.1			32.38	7.74	37.47	111	16	Average
5745	103.65	101			32.38	7.74	37.47	111	16	Peak
5850	40.9	38.05	72.75	-31.85	32.53	7.83	37.51	111	16	Average
5850	54.52	51.67	83.65	-29.13	32.53	7.83	37.51	111	16	Peak

REMARKS:

- 5745MHz: Fundamental frequency.
- 5725MHz & 5850MHz: Out of restricted band



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	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
5725	40.41	37.77	72.37	-31.96	32.36	7.71	37.43	104	290	Average
5725	55.09	52.45	82.02	-26.93	32.36	7.71	37.43	104	290	Peak
5785	92.37	89.68			32.43	7.8	37.54	104	290	Average
5785	102.02	99.33			32.43	7.8	37.54	104	290	Peak
5850	40.88	38.03	72.37	-31.49	32.53	7.83	37.51	104	290	Average
5850	55.14	52.29	82.02	-26.88	32.53	7.83	37.51	104	290	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
5725	40.53	37.89	73.02	-32.49	32.36	7.71	37.43	100	18	Average
5725	56.36	53.72	82.42	-26.06	32.36	7.71	37.43	100	18	Peak
5785	93.02	90.33			32.43	7.8	37.54	100	18	Average
5785	102.42	99.73			32.43	7.8	37.54	100	18	Peak
5850	40.89	38.04	73.02	-32.13	32.53	7.83	37.51	100	18	Average
5850	55.01	52.16	82.42	-27.41	32.53	7.83	37.51	100	18	Peak

REMARKS:

1. 5785MHz: Fundamental frequency.
2. 5725MHz & 5850MHz: Out of restricted band



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 165	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
5725	40.43	37.79	71	-30.57	32.36	7.71	37.43	100	290	Average
5725	53.52	50.88	80.17	-26.65	32.36	7.71	37.43	100	290	Peak
5825	91	88.2			32.51	7.82	37.53	100	290	Average
5825	100.17	97.37			32.51	7.82	37.53	100	290	Peak
5850	44.48	41.63	71	-26.52	32.53	7.83	37.51	100	290	Average
5850	60.42	57.57	80.17	-19.75	32.53	7.83	37.51	100	290	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
5725	40.53	37.89	72.5	-31.97	32.36	7.71	37.43	109	16	Average
5725	55.49	52.85	81.72	-26.23	32.36	7.71	37.43	109	16	Peak
5825	92.5	89.7			32.51	7.82	37.53	109	16	Average
5825	101.72	98.92			32.51	7.82	37.53	109	16	Peak
5850	44.3	41.45	72.5	-28.2	32.53	7.83	37.51	109	16	Average
5850	59.91	57.06	81.72	-21.81	32.53	7.83	37.51	109	16	Peak

REMARKS:

1. 5805MHz: Fundamental frequency.
2. 5725MHz & 5850MHz: Out of restricted band



A D T

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 151	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
5725	48.06	45.42	68.95	-20.89	32.36	7.71	37.43	100	231	Average
5725	63.19	60.55	78.4	-15.21	32.36	7.71	37.43	100	231	Peak
5755	88.95	86.27			32.41	7.74	37.47	100	231	Average
5755	98.4	95.72			32.41	7.74	37.47	100	231	Peak
5850	40.86	38.01	68.95	-28.09	32.53	7.83	37.51	100	231	Average
5850	50.82	47.97	78.4	-27.58	32.53	7.83	37.51	100	231	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
5725	47.91	45.27	69.08	-21.17	32.36	7.71	37.43	100	27	Average
5725	65.55	62.91	78.65	-13.1	32.36	7.71	37.43	100	27	Peak
5755	89.08	86.4			32.41	7.74	37.47	100	27	Average
5755	98.65	95.97			32.41	7.74	37.47	100	27	Peak
5850	40.63	37.78	69.08	-28.45	32.53	7.83	37.51	100	27	Average
5850	50.63	47.78	78.65	-28.02	32.53	7.83	37.51	100	27	Peak

REMARKS:

- 5755MHz: Fundamental frequency.
- 5725MHz & 5850MHz: Out of restricted band



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 159	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
5725	40.89	38.25	68.3	-27.41	32.36	7.71	37.43	103	292	Average
5725	51.39	48.75	78.14	-26.75	32.36	7.71	37.43	103	292	Peak
5795	88.3	85.58			32.46	7.8	37.54	103	292	Average
5795	98.14	95.42			32.46	7.8	37.54	103	292	Peak
5850	40.96	38.11	68.3	-27.34	32.53	7.83	37.51	103	292	Average
5850	52.26	49.41	78.14	-25.88	32.53	7.83	37.51	103	292	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
5725	40.65	38.01	67.91	-27.26	32.36	7.71	37.43	100	26	Average
5725	51.19	48.55	77.3	-26.11	32.36	7.71	37.43	100	26	Peak
5795	87.91	85.19			32.46	7.8	37.54	100	26	Average
5795	97.3	94.58			32.46	7.8	37.54	100	26	Peak
5850	40.83	37.98	67.91	-27.08	32.53	7.83	37.51	100	26	Average
5850	51.47	48.62	77.3	-25.83	32.53	7.83	37.51	100	26	Peak

REMARKS:

1. 5795MHz: Fundamental frequency.
2. 5725MHz & 5850MHz: Out of restricted band



A D T

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 151	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
103.17	31.61	53.11	43.5	-11.89	9.34	1.08	31.92	102	252	Peak
152.58	35.18	52.78	43.5	-8.32	12.71	1.35	31.66	122	332	Peak
203.34	33.84	54.41	43.5	-9.66	9.52	1.61	31.7	198	57	Peak
307	26.99	43.7	46	-19.01	13.13	2.08	31.92	105	222	Peak
400.1	31.68	46.02	46	-14.32	15.35	2.43	32.12	120	27	Peak
513.5	28.16	39.3	46	-17.84	17.62	2.82	31.58	196	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
36.21	35.14	52.64	40	-4.86	12.94	0.61	31.05	100	220	Peak
43.77	37.5	54.31	40	-2.5	13.59	0.71	31.11	100	250	QP
157.17	32	49.7	43.5	-11.5	12.72	1.38	31.8	400	0	Peak
307.7	22.03	38.74	46	-23.97	13.13	2.08	31.92	100	331	Peak
395.9	24.72	39.16	46	-21.28	15.24	2.41	32.09	100	202	Peak
500.2	28.29	39.8	46	-17.71	17.33	2.78	31.62	100	307	Peak

5.2 CONDUCTED EMISSION MEASUREMENT

5.2.1 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.

5.2.2 TEST INSTRUMENTS

Same as item 4.2.2.

5.2.3 TEST PROCEDURES

Same as item 4.2.3.

5.2.4 DEVIATION FROM TEST STANDARD

No deviation.

5.2.5 TEST SETUP

Same as item 4.2.5.

5.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6

5.2.7 TEST RESULTS

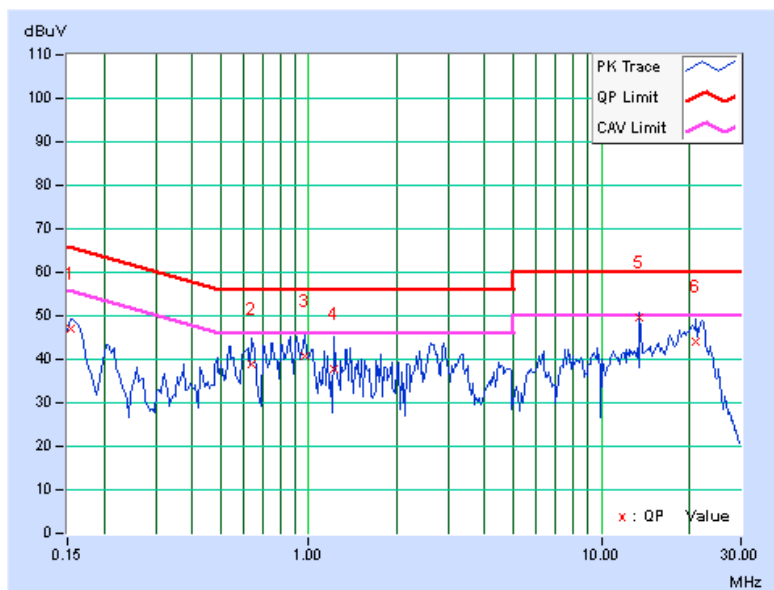
CONDUCTED WORST-CASE DATA : 802.11n (40MHz)

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

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	0.15	46.89	36.73	47.04	36.88	65.79	55.79	-18.75	-18.91
2	0.64219	0.18	38.61	26.10	38.79	26.28	56.00	46.00	-17.21	-19.72
3	0.96641	0.19	40.52	31.04	40.71	31.23	56.00	46.00	-15.29	-14.77
4	1.22656	0.21	37.39	29.57	37.60	29.78	56.00	46.00	-18.40	-16.22
5	13.55859	0.50	49.05	45.99	49.55	46.49	60.00	50.00	-10.45	-3.51
6	21.09375	0.62	43.29	34.95	43.91	35.57	60.00	50.00	-16.09	-14.43

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.

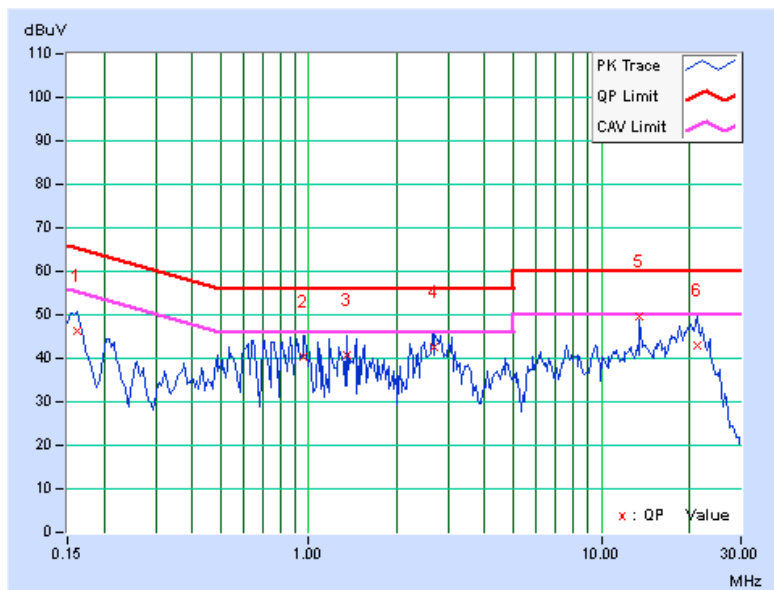


PHASE	Line 2	6dB BANDWIDTH	9kHz
-------	--------	---------------	------

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	0.16172	0.13	46.13	35.70	46.26	35.83	65.38	55.38	-19.11	-19.54
2	0.96250	0.19	40.03	29.91	40.22	30.10	56.00	46.00	-15.78	-15.90
3	1.34375	0.21	40.51	33.71	40.72	33.92	56.00	46.00	-15.28	-12.08
4	2.69922	0.29	42.47	33.30	42.76	33.59	56.00	46.00	-13.24	-12.41
5	13.55859	0.57	49.09	46.01	49.66	46.58	60.00	50.00	-10.34	-3.42
6	21.41016	0.70	42.41	34.22	43.11	34.92	60.00	50.00	-16.89	-15.08

REMARKS:

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



5.3 6dB BANDWIDTH MEASUREMENT

5.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

5.3.2 TEST SETUP

Same as item 4.3.2.

5.3.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

5.3.4 TEST PROCEDURE

Same as item 4.3.4.

5.3.5 DEVIATION FROM TEST STANDARD

No deviation.

5.3.6 EUT OPERATING CONDITIONS

Same as item 4.3.6.

5.3.7 TEST RESULTS

802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
149	5745	16.69	0.5	PASS
157	5785	16.72	0.5	PASS
165	5825	16.67	0.5	PASS

802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
149	5745	17.91	0.5	PASS
157	5785	17.97	0.5	PASS
165	5825	17.96	0.5	PASS

802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
151	5755	35.53	0.5	PASS
159	5795	35.21	0.5	PASS

5.4 MAXIMUM OUTPUT POWER

5.4.1 LIMITS OF MAXIMUM OUTPUT POWER MEASUREMENT

For systems using digital modulation in the 5725–5850 MHz bands: 1 Watt (30dBm)

5.4.2 TEST SETUP

Same as Item 4.4.2.

5.4.3 INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

5.4.4 TEST PROCEDURES

Same as Item 4.4.4.

5.4.5 DEVIATION FROM TEST STANDARD

No deviation.

5.4.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6.

5.4.7 TEST RESULTS

802.11a

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
149	5745	118.03	20.72	30	PASS
157	5785	116.14	20.65	30	PASS
165	5825	112.72	20.52	30	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
149	5745	113.76	20.56	30	PASS
157	5785	111.43	20.47	30	PASS
165	5825	105.20	20.22	30	PASS

802.11n (40MHz)

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
151	5755	138.04	21.4	30	PASS
159	5795	133.66	21.26	30	PASS

5.5 POWER SPECTRAL DENSITY MEASUREMENT

5.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

5.5.2 TEST SETUP

Same as item 4.5.2.

5.5.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

5.5.4 TEST PROCEDURE.

Same as item 4.5.4.

5.5.5 DEVIATION FROM TEST STANDARD

No deviation.

5.5.6 EUT OPERATING CONDITION

Same as item 4.3.6.

5.5.7 TEST RESULTS

802.11a

Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
149	5745	2.75	-12.45	8	PASS
157	5785	2.51	-12.69	8	PASS
165	5825	2.46	-12.74	8	PASS

802.11n (20MHz)

Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
149	5745	2.79	-12.41	8	PASS
157	5785	2.65	-12.55	8	PASS
165	5825	2.35	-12.85	8	PASS

802.11n (40MHz)

Channel	FREQ. (MHz)	PSD (dBm/100kHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
151	5755	-0.64	-15.84	8	PASS
159	5795	-0.74	-15.94	8	PASS

5.6 CONDUCTED OUT OF BAND EMISSION MEASUREMENT

5.6.1 LIMITS OF OUT OF BAND EMISSION MEASUREMENT

Below –20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

5.6.2 TEST SETUP

Same as Item 4.6.2

5.6.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

5.6.4 TEST PROCEDURE

Same as Item 4.6.4

5.6.5 DEVIATION FROM TEST STANDARD

No deviation.

5.6.6 EUT OPERATING CONDITION

Same as Item 4.3.6

5.6.7 TEST RESULTS

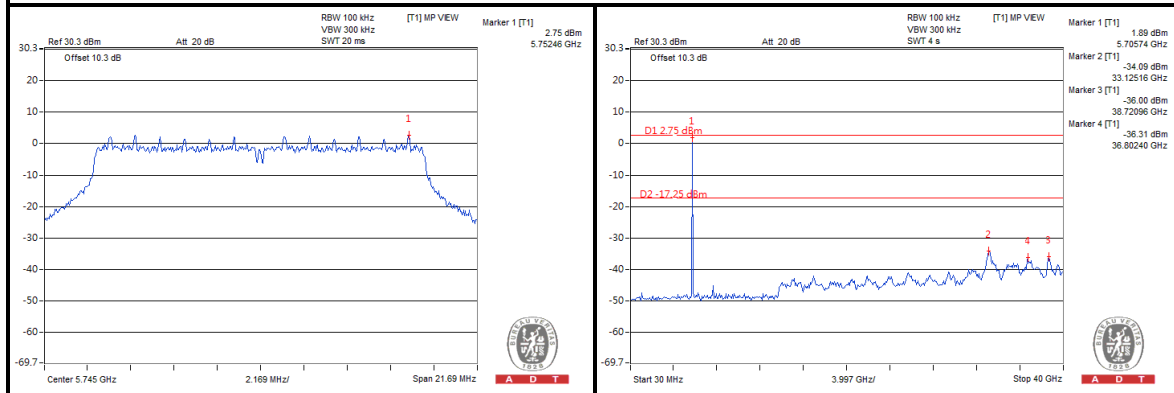
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement.



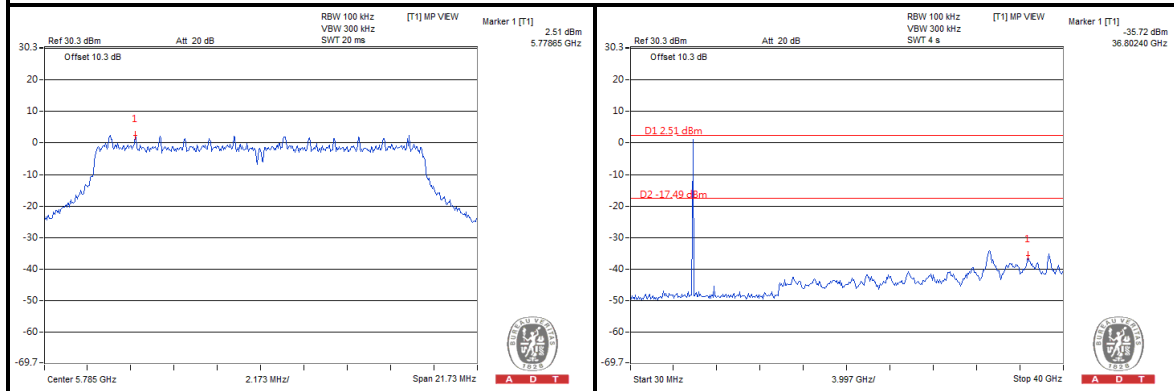
A D T

802.11a

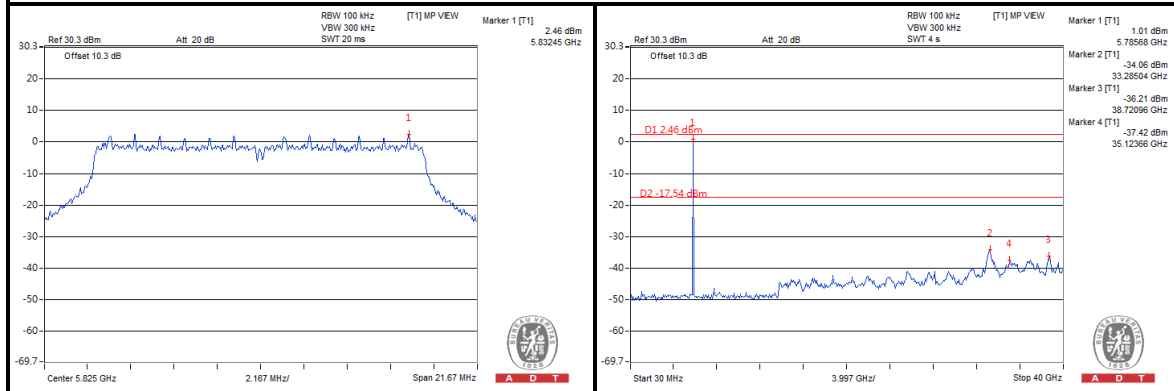
CH 149



CH 157



CH 165

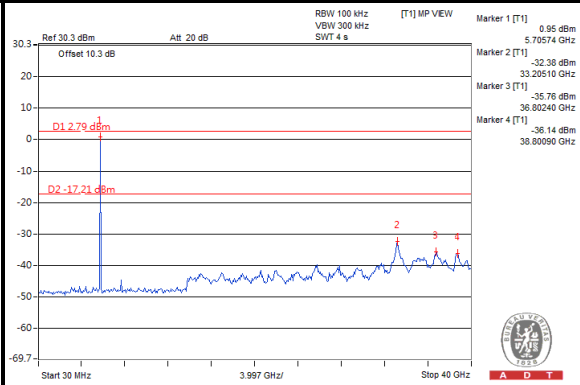
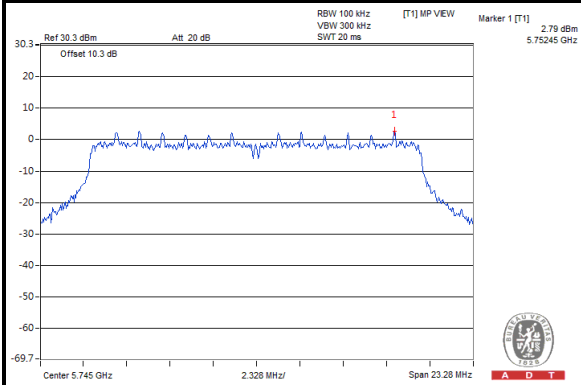




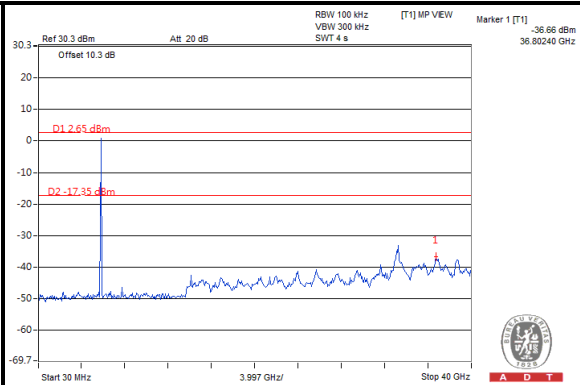
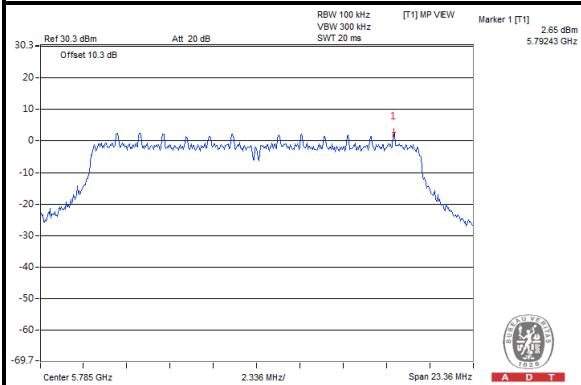
A D T

802.11n(20MHz)

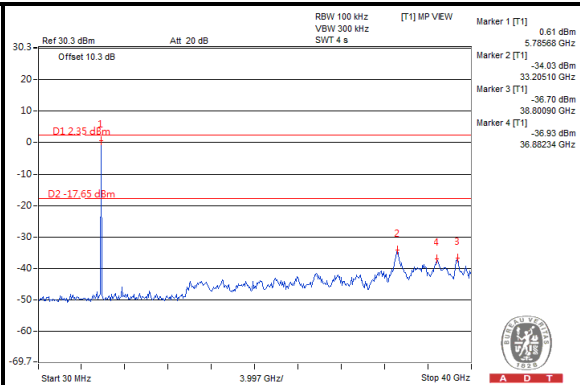
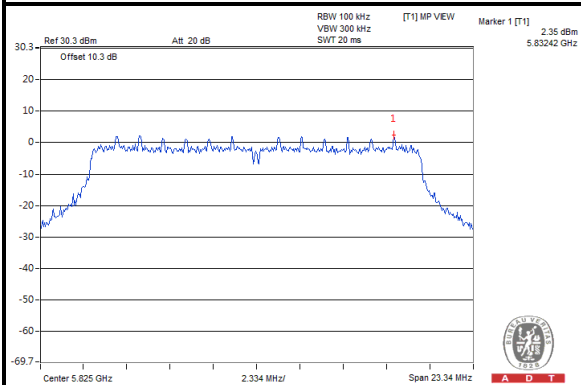
CH 149



CH 157



CH 165

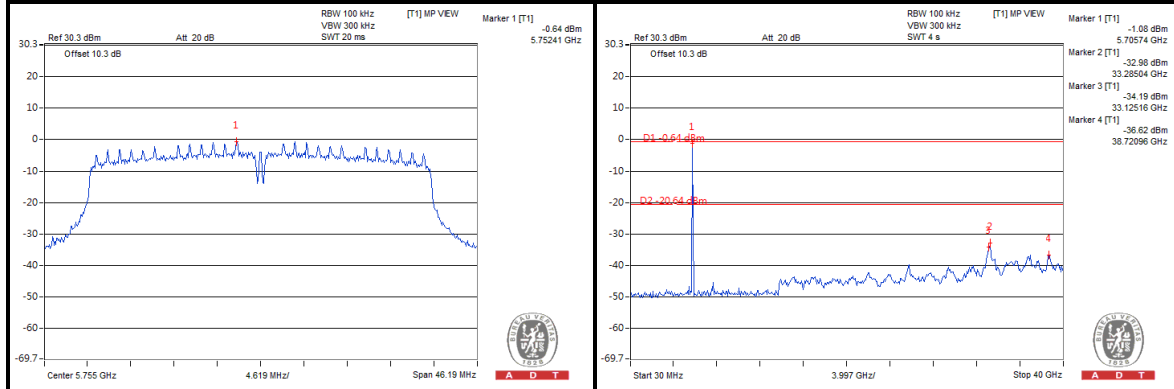




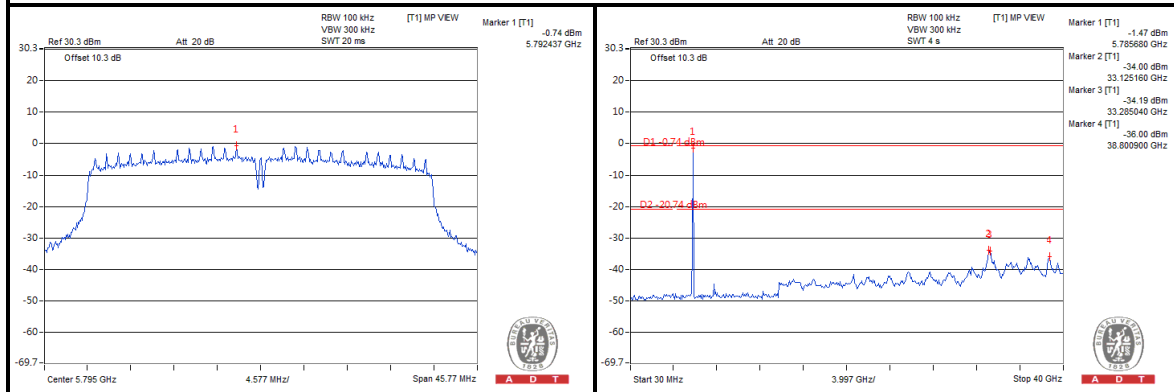
A D T

802.11n(40MHz)

CH 151



CH 159



6. PHOTOGRAPHS OF THE TEST CONFIGURATION

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

7. 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.



A D T

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

No any modifications are made to the EUT by the lab during the test.

---END---