

FCC Test Report

Report No.: RF150528E05D

FCC ID: 2AH3X-M001

Test Model: M001

Received Date: May 28, 2015

Test Date: June 30 to July 03, 2015 and Apr. 08 to 11, 2016

Issued Date: May 24, 2016

Applicant: Aigale Corporation

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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Release Control Record

Issue No.	Description	Date Issued
RF150528E05D	Original release.	May 24, 2016

1 Certificate of Conformity

Product: IEEE 802.11 b/g/n WLAN Microcontroller Module

Brand: Aigale

Test Model: M001

Sample Status: ENGINEERING SAMPLE

Applicant: Aigale Corporation

Test Date: June 30 to July 03, 2015 and Apr. 08 to 11, 2016

Standards: 47 CFR FCC Part 15, Subpart C (Section 15.247)
ANSI C63.10: 2013

The above equipment 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 :



Date:

May 24, 2016

Claire Kuan / Specialist

Approved by :



Date:

May 24, 2016

May Chen / Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (SECTION 15.247)			
FCC Clause	Test Item	Result	Remarks
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -19.29dB at 0.37266MHz.
15.205 / 15.209 / 15.247(d)	Radiated Emissions and Band Edge Measurement	PASS	Meet the requirement of limit. Minimum passing margin is -2.5dB at 2390.00MHz.
15.247(d)	Antenna Port Emission	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	Antenna connector is I-PEX not a standard connector.

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	Expended Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.86 dB
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	5.43 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	3.72 dB
	6GHz ~ 18GHz	4.00 dB
	18GHz ~ 40GHz	4.11 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	IEEE 802.11 b/g/n WLAN Microcontroller Module
Brand	Aigale
Test Model	M001
Status of EUT	ENGINEERING SAMPLE
Power Supply Rating	3.3Vdc from host equipment
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
Modulation Technology	DSSS, OFDM
Transfer Rate	802.11b: up to 11Mbps 802.11g: up to 54Mbps 802.11n : up to 72.2Mbps
Operating Frequency	2.412 ~ 2.462GHz
Number of Channel	11
Output Power	802.11b: 100.231mW 802.11g: 204.644mW 802.11n (HT20): 162.555mW
Antenna Type	Please see Note
Antenna Connector	Please see Note
Accessory Device	NA
Data Cable Supplied	NA

Note:

1. The antennas provided to the EUT, please refer to the following table:

Antenna No	Brand	Model	Gain (dBi) (Including cable loss)	Antenna Type	Connector Type	Frequency range (GHz to GHz)	Cable Length (mm)
1(Internal)	AzureWave	AW-CU300 ANT	5.12	PCB	NA	2.4~2.4835	NA
2(External)	TAOGLAS	FXP73.07.0100A	3	Monopole	I-PEX	2.4~2.4835	100
3(External)	TAOGLAS	PC11.07.0100A	3	Dipole	I-PEX	2.4~2.4835	100
4(External)	TAOGLAS	FXP74.07.0100A	4	PIFA	I-PEX	2.4~2.4835	100
5(External)	TAOGLAS	GW.17.07.0250E	2.7	Dipole	I-PEX	2.4~2.4835	250
6(External)	TAOGLAS	PC17.07.0070A	0.9	PIFA	I-PEX	2.4~2.4835	70
7(External)	LAIRD	NanoBlue-IP04_MAF94045	2	Monopole	I-PEX	2.4~2.4835	100
8(External)	MAG.LAYERS	EDA_1313_2G4C1-A16	2.39	Dipole	I-PEX	2.4~2.4835	150
9(External)	LAIRD	EBL2400A1-23UFL	2.45	Dipole	I-PEX	2.4~2.4835	230

2. The EUT incorporates a SISO function.

MODULATION MODE	DATA RATE (MCS)	TX & RX CONFIGURATION	
802.11b	1 ~ 11Mbps	1TX	1RX
802.11g	6 ~ 54Mbps	1TX	1RX
802.11n (HT20)	MCS 0~7	1TX	1RX

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

3.2 Description of Test Modes

11 channels are provided for 802.11b, 802.11g and 802.11n (HT20):

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		

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE \geq 1G	RE<1G	PLC	APCM	
1	√	√	√	√	With antenna 1 (PCB)
2	√	√	-	-	With antenna 2 (Monopole)
3	√	√	-	-	With antenna 3 (Dipole)
4	√	√	-	-	With antenna 4 (PIFA)

Where RE \geq 1G: Radiated Emission above 1GHz & Bandedge Measurement
 RE<1G: Radiated Emission below 1GHz
 PLC: Power Line Conducted Emission
 APCM: Antenna Port Conducted Measurement

NOTE: 1. "-" means no effect.

2. Antenna placement had been investigated on the positioned of each 3 axis.
 Following worst case were found as listed below.

Antenna	Below 1GHz Worst position	Above 1GHz Worst position
PCB	Y-plane	Y-plane
Monopole	X-plane	X-plane
PIFA	X-plane	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
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
802.11n (HT20)	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	6	OFDM	BPSK	6

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	6	OFDM	BPSK	6

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.

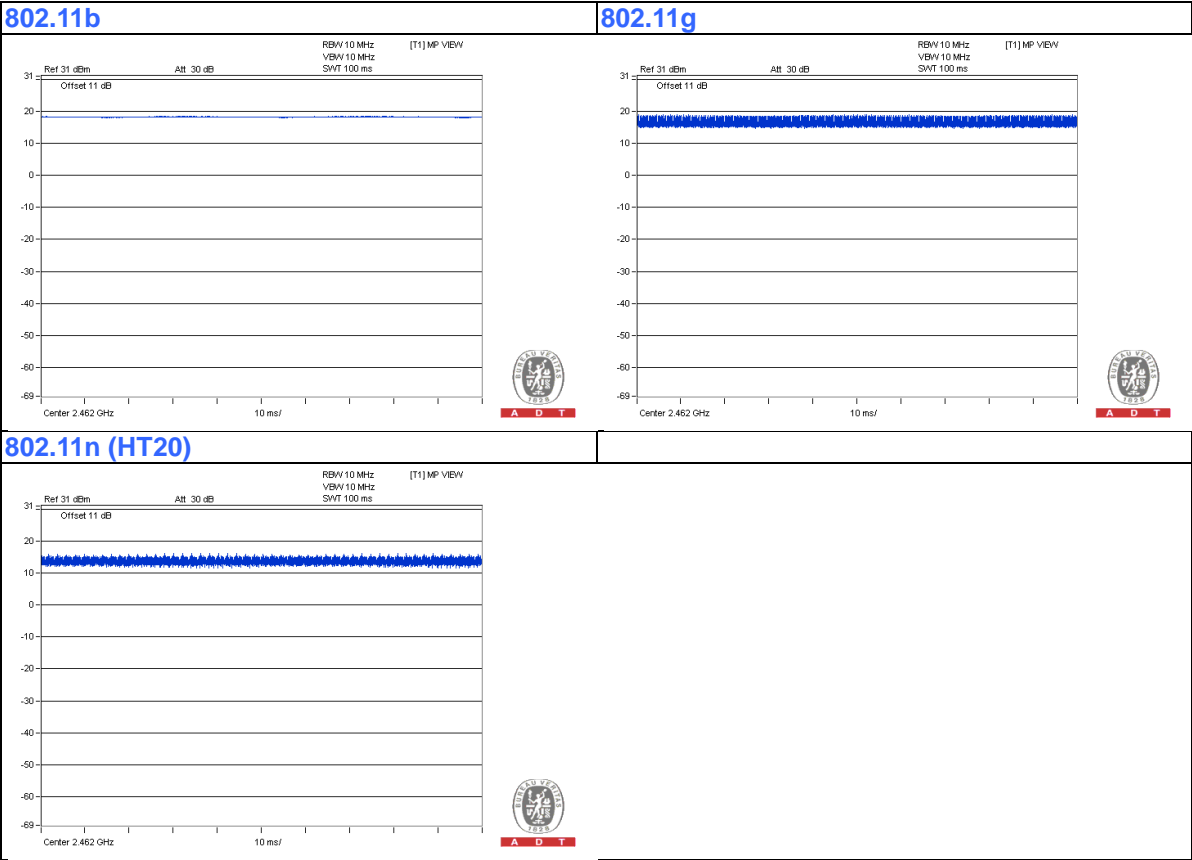
MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	6.5

Test Condition:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER (SYSTEM)	TESTED BY
RE \geq 1G	24deg. C, 68%RH	120Vac, 60Hz	Robert Cheng
RE<1G	21deg. C, 67%RH	120Vac, 60Hz	Gary Cheng
PLC	25deg. C, 65%RH	120Vac, 60Hz	Wythe Lin
APCM	25deg. C, 60%RH	120Vac, 60Hz	Anderson Chen

3.3 Duty Cycle of Test Signal

Duty cycle of test signal is 100 %, duty factor is not required.



3.4 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.

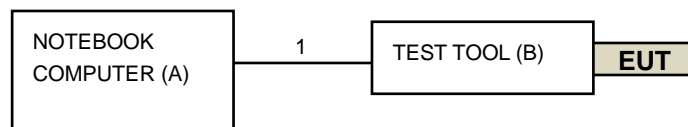
No.	Product	Brand	Model No.	Serial No.	FCC ID	Remark
A	NOTEBOOK COMPUTER	DELL	PP32LA	GSLB32S	FCC DoC	Provided by Lab
B	TEST TOOL	Aigale	NA	NA	NA	Supplied by client

NOTE:

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

No.	Cable	Qty.	Length (m)	Shielded (Yes/ No)	Cores (Number)	Remark
1	USB	1	1.6	Yes	0	Provided by Lab

3.4.1 Configuration of System under Test



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 C (15.247)

558074 D01 DTS Meas Guidance v03r05

ANSI C63.10-2013

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

For below 1GHz test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY51210202	Dec. 16, 2015	Dec. 15, 2016
Pre-Amplifier ^(*) EMCI	EMC001340	980142	Jan. 20, 2016	Jan. 19, 2018
Loop Antenna ^(*) Electro-Metrics	EM-6879	264	Dec. 16, 2014	Dec. 15, 2016
RF Cable	NA	LOOPCAB-001 LOOPCAB-002	Jan. 18, 2016	Jan. 17, 2017
Pre-Amplifier Mini-Circuits	ZFL-1000VH2 B	AMP-ZFL-04	Nov. 11, 2015	Nov. 10, 2016
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-361	Jan. 07, 2016	Jan. 06, 2017
RF Cable	8D-FB	CHHCAB-001-1 CHHCAB-001-2	Oct. 04, 2015	Oct. 03, 2016
	RF-141	CHHCAB-004	Oct. 04, 2015	Oct. 03, 2016
Software	ADT_Radiated _V8.7.07	NA	NA	NA
Antenna Tower & Turn Table CT	NA	NA	NA	NA
Boresight Antenna Fixture	NA	NA	NA	NA

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. *The calibration interval of the above test instruments is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. Loop antenna was used for all emissions below 30 MHz.
4. The test was performed in 966 Chamber No. H.
5. The FCC Site Registration No. is 797305.
6. The CANADA Site Registration No. is IC 7450H-3.
7. Tested Date: Apr. 08, 2016

For above 1GHz test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY50010156	Aug. 11, 2014	Aug. 10, 2015
Horn_Antenna AISI	AIH.8018	0000220091110	Feb. 06, 2015	Feb. 05, 2016
Pre-Amplifier Agilent	8449B	3008A01923	Oct. 28, 2014	Oct. 27, 2015
RF Cable	NA	131206 131213 131215 SNMY23685/4	Jan. 16, 2015	Jan. 15, 2016
Spectrum Analyzer R&S	FSV40	100964	July 05, 2014	July 04, 2015
Pre-Amplifier SPACEK LABS	SLKKa-48-6	9K16	Dec. 12, 2014	Dec. 11, 2015
Horn_Antenna SCHWARZBECK	BBHA 9170	9170-424	Feb. 05, 2015	Feb. 04, 2016
RF Cable	NA	329751/4 RF104-204	Dec. 11, 2014	Dec. 10, 2015
Software	ADT_Radiated _V8.7.07	NA	NA	NA
Antenna Tower & Turn Table CT	NA	NA	NA	NA
Power Meter Anritsu	ML2495A	1014008	Apr. 28, 2015	Apr. 27, 2016
Power Sensor Anritsu	MA2411B	0917122	Apr. 28, 2015	Apr. 27, 2016
Spectrum Analyzer R&S	FSV40	100964	June 26, 2015	June 25, 2016

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 966 Chamber No. H.
3. The FCC Site Registration No. is 797305.
4. The CANADA Site Registration No. is IC 7450H-3.
5. Tested Date: June 30 to July 03, 2015

4.1.3 Test Procedures

- a. The EUT was placed on the top of a rotating table 0.8 meters (for below 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. 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 height of 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 quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

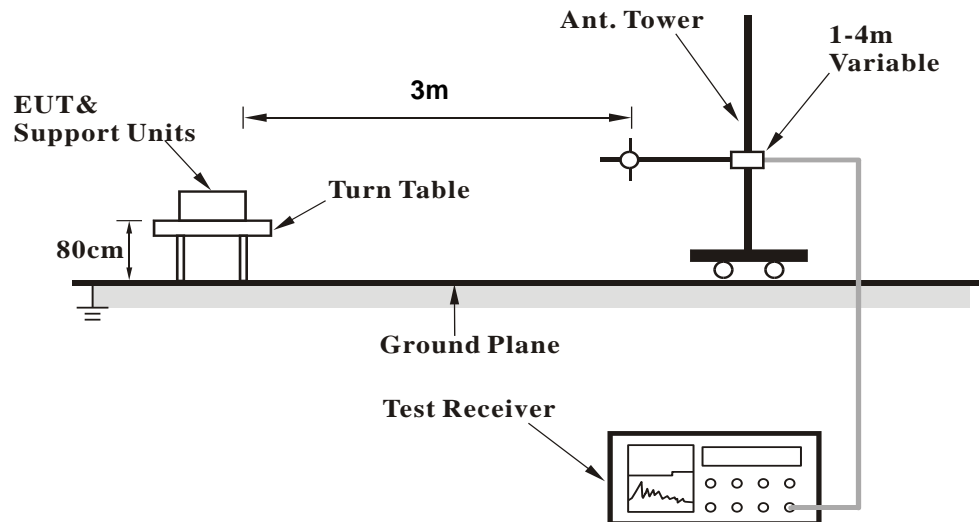
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for RMS Average (Duty cycle < 98%) for Average detection (AV) at frequency above 1GHz, then the measurement results was added to a correction factor ($10 \log(1/\text{duty cycle})$).
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.
5. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

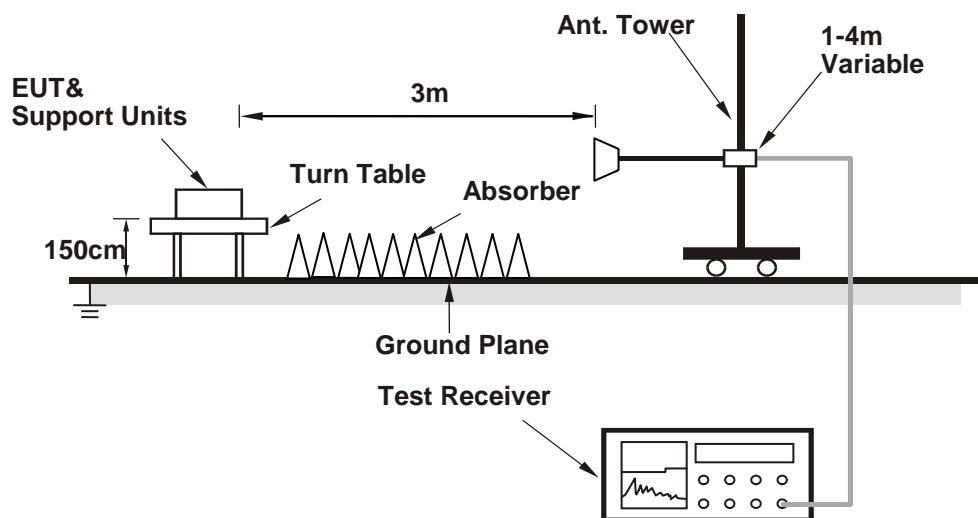
No deviation.

4.1.5 Test Set Up

<Frequency Range below 1GHz>



<Frequency Range above 1GHz>



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

4.1.6 EUT Operating Conditions

1. Connect the EUT with the support unit A (Notebook computer) which is placed on a testing table.
2. The communication partner run test program “DutApiWiFi8845BrdigeUart.exe” to enable EUT under transmission/receiving condition continuously at specific channel frequency.

4.1.7 Test Results (Mode 1)

ABOVE 1GHz DATA

802.11b

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	65.0 PK	74.0	-9.0	1.56 H	209	68.19	-3.19
2	2390.00	51.5 AV	54.0	-2.5	1.56 H	209	54.69	-3.19
3	*2412.00	106.0 PK			1.56 H	209	109.13	-3.13
4	*2412.00	103.2 AV			1.56 H	209	106.33	-3.13
5	4824.00	49.4 PK	74.0	-24.6	1.72 H	13	43.43	5.97
6	4824.00	42.2 AV	54.0	-11.8	1.72 H	13	36.23	5.97
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	57.2 PK	74.0	-16.8	1.15 V	114	60.39	-3.19
2	2390.00	46.1 AV	54.0	-7.9	1.15 V	114	49.29	-3.19
3	*2412.00	98.2 PK			1.15 V	114	101.33	-3.13
4	*2412.00	95.0 AV			1.15 V	114	98.13	-3.13
5	4824.00	51.4 PK	74.0	-22.6	1.43 V	125	45.43	5.97
6	4824.00	45.4 AV	54.0	-8.6	1.43 V	125	39.43	5.97

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	106.0 PK			1.56 H	199	109.04	-3.04
2	*2437.00	103.4 AV			1.56 H	199	106.44	-3.04
3	4874.00	49.3 PK	74.0	-24.7	1.69 H	21	43.25	6.05
4	4874.00	42.2 AV	54.0	-11.8	1.69 H	21	36.15	6.05
5	7311.00	53.6 PK	74.0	-20.4	1.50 H	313	42.66	10.94
6	7311.00	46.8 AV	54.0	-7.2	1.50 H	313	35.86	10.94
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	98.2 PK			1.07 V	101	101.24	-3.04
2	*2437.00	95.2 AV			1.07 V	101	98.24	-3.04
3	4874.00	51.1 PK	74.0	-22.9	1.45 V	113	45.05	6.05
4	4874.00	45.2 AV	54.0	-8.8	1.45 V	113	39.15	6.05
5	7311.00	51.2 PK	74.0	-22.8	1.00 V	125	40.26	10.94
6	7311.00	40.7 AV	54.0	-13.3	1.00 V	125	29.76	10.94

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	104.0 PK			1.64 H	231	106.94	-2.94
2	*2462.00	101.8 AV			1.64 H	231	104.74	-2.94
3	2483.50	61.4 PK	74.0	-12.6	1.64 H	231	64.27	-2.87
4	2483.50	40.2 AV	54.0	-13.8	1.64 H	231	43.07	-2.87
5	4924.00	49.5 PK	74.0	-24.5	1.67 H	24	43.43	6.07
6	4924.00	42.7 AV	54.0	-11.3	1.67 H	24	36.63	6.07
7	7386.00	53.7 PK	74.0	-20.3	1.55 H	306	42.28	11.42
8	7386.00	47.2 AV	54.0	-6.8	1.55 H	306	35.78	11.42
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	96.8 PK			1.10 V	105	99.74	-2.94
2	*2462.00	93.8 AV			1.10 V	105	96.74	-2.94
3	2483.50	53.3 PK	74.0	-20.7	1.10 V	105	56.17	-2.87
4	2483.50	34.1 AV	54.0	-19.9	1.10 V	105	36.97	-2.87
5	4924.00	50.7 PK	74.0	-23.3	1.42 V	127	44.63	6.07
6	4924.00	45.0 AV	54.0	-9.0	1.42 V	127	38.93	6.07
7	7386.00	51.0 PK	74.0	-23.0	1.01 V	115	39.58	11.42
8	7386.00	40.6 AV	54.0	-13.4	1.01 V	115	29.18	11.42

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

802.11g

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	69.9 PK	74.0	-4.1	1.67 H	230	73.09	-3.19
2	2390.00	50.0 AV	54.0	-4.0	1.67 H	230	53.19	-3.19
3	*2412.00	104.7 PK			1.67 H	230	107.83	-3.13
4	*2412.00	93.1 AV			1.67 H	230	96.23	-3.13
5	4824.00	46.9 PK	74.0	-27.1	1.00 H	200	40.93	5.97
6	4824.00	33.7 AV	54.0	-20.3	1.00 H	200	27.73	5.97
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	64.4 PK	74.0	-9.6	1.07 V	114	67.59	-3.19
2	2390.00	46.7 AV	54.0	-7.3	1.07 V	114	49.89	-3.19
3	*2412.00	96.8 PK			1.07 V	114	99.93	-3.13
4	*2412.00	85.2 AV			1.07 V	114	88.33	-3.13
5	4824.00	47.1 PK	74.0	-26.9	1.25 V	86	41.13	5.97
6	4824.00	33.7 AV	54.0	-20.3	1.25 V	86	27.73	5.97

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	106.6 PK			1.20 H	227	109.64	-3.04
2	*2437.00	95.1 AV			1.20 H	227	98.14	-3.04
3	4874.00	46.8 PK	74.0	-27.2	1.00 H	211	40.75	6.05
4	4874.00	33.8 AV	54.0	-20.2	1.00 H	211	27.75	6.05
5	7311.00	51.8 PK	74.0	-22.2	1.20 H	95	40.86	10.94
6	7311.00	38.2 AV	54.0	-15.8	1.20 H	95	27.26	10.94
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	98.2 PK			1.16 V	94	101.24	-3.04
2	*2437.00	87.3 AV			1.16 V	94	90.34	-3.04
3	4874.00	46.9 PK	74.0	-27.1	1.21 V	100	40.85	6.05
4	4874.00	33.7 AV	54.0	-20.3	1.21 V	100	27.65	6.05
5	7311.00	51.6 PK	74.0	-22.4	1.65 V	301	40.66	10.94
6	7311.00	37.8 AV	54.0	-16.2	1.65 V	301	26.86	10.94

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	104.4 PK			1.75 H	238	107.34	-2.94
2	*2462.00	92.7 AV			1.75 H	238	95.64	-2.94
3	2483.50	68.1 PK	74.0	-5.9	1.75 H	238	70.97	-2.87
4	2483.50	49.2 AV	54.0	-4.8	1.75 H	238	52.07	-2.87
5	4924.00	47.2 PK	74.0	-26.8	1.00 H	207	41.13	6.07
6	4924.00	34.3 AV	54.0	-19.7	1.00 H	207	28.23	6.07
7	7386.00	51.5 PK	74.0	-22.5	1.16 H	103	40.08	11.42
8	7386.00	37.7 AV	54.0	-16.3	1.16 H	103	26.28	11.42

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	95.2 PK			1.06 V	91	98.14	-2.94
2	*2462.00	84.4 AV			1.06 V	91	87.34	-2.94
3	2483.50	63.8 PK	74.0	-10.2	1.06 V	91	66.67	-2.87
4	2483.50	46.2 AV	54.0	-7.8	1.06 V	91	49.07	-2.87
5	4924.00	47.2 PK	74.0	-26.8	1.26 V	105	41.13	6.07
6	4924.00	34.0 AV	54.0	-20.0	1.26 V	105	27.93	6.07
7	7386.00	51.6 PK	74.0	-22.4	1.66 V	299	40.18	11.42
8	7386.00	37.9 AV	54.0	-16.1	1.66 V	299	26.48	11.42

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

802.11n (HT20)

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	68.4 PK	74.0	-5.6	1.64 H	227	71.59	-3.19
2	2390.00	48.8 AV	54.0	-5.2	1.64 H	227	51.99	-3.19
3	*2412.00	101.7 PK			1.64 H	227	104.83	-3.13
4	*2412.00	90.6 AV			1.64 H	227	93.73	-3.13
5	4824.00	46.7 PK	74.0	-27.3	1.03 H	204	40.73	5.97
6	4824.00	33.8 AV	54.0	-20.2	1.03 H	204	27.83	5.97
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	63.9 PK	74.0	-10.1	2.26 V	239	67.09	-3.19
2	2390.00	46.3 AV	54.0	-7.7	2.26 V	239	49.49	-3.19
3	*2412.00	93.6 PK			2.26 V	239	96.73	-3.13
4	*2412.00	83.1 AV			2.26 V	239	86.23	-3.13
5	4824.00	46.8 PK	74.0	-27.2	1.16 V	88	40.83	5.97
6	4824.00	33.4 AV	54.0	-20.6	1.16 V	88	27.43	5.97

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	105.1 PK			1.67 H	226	108.14	-3.04
2	*2437.00	93.9 AV			1.67 H	226	96.94	-3.04
3	4874.00	46.6 PK	74.0	-27.4	1.00 H	198	40.55	6.05
4	4874.00	33.8 AV	54.0	-20.2	1.00 H	198	27.75	6.05
5	7311.00	51.6 PK	74.0	-22.4	1.24 H	90	40.66	10.94
6	7311.00	38.1 AV	54.0	-15.9	1.24 H	90	27.16	10.94
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	97.1 PK			1.16 V	118	100.14	-3.04
2	*2437.00	86.0 AV			1.16 V	118	89.04	-3.04
3	4874.00	46.7 PK	74.0	-27.3	1.17 V	85	40.65	6.05
4	4874.00	33.6 AV	54.0	-20.4	1.17 V	85	27.55	6.05
5	7311.00	52.0 PK	74.0	-22.0	1.68 V	309	41.06	10.94
6	7311.00	37.9 AV	54.0	-16.1	1.68 V	309	26.96	10.94

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	104.2 PK			1.33 H	209	107.14	-2.94
2	*2462.00	93.6 AV			1.33 H	209	96.54	-2.94
3	2483.50	68.7 PK	74.0	-5.3	1.67 H	229	71.57	-2.87
4	2483.50	49.4 AV	54.0	-4.6	1.67 H	229	52.27	-2.87
5	4924.00	46.2 PK	74.0	-27.8	1.00 H	205	40.13	6.07
6	4924.00	33.5 AV	54.0	-20.5	1.00 H	205	27.43	6.07
7	7386.00	51.0 PK	74.0	-23.0	1.17 H	111	39.58	11.42
8	7386.00	37.7 AV	54.0	-16.3	1.17 H	111	26.28	11.42
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	96.1 PK			1.05 V	107	99.04	-2.94
2	*2462.00	85.2 AV			1.05 V	107	88.14	-2.94
3	2483.50	63.4 PK	74.0	-10.6	1.05 V	107	66.27	-2.87
4	2483.50	46.0 AV	54.0	-8.0	1.05 V	107	48.87	-2.87
5	4924.00	47.1 PK	74.0	-26.9	1.25 V	87	41.03	6.07
6	4924.00	33.9 AV	54.0	-20.1	1.25 V	87	27.83	6.07
7	7386.00	50.9 PK	74.0	-23.1	1.66 V	296	39.48	11.42
8	7386.00	37.3 AV	54.0	-16.7	1.66 V	296	25.88	11.42

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

BELOW 1GHz WORST-CASE DATA

802.11g

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	Below 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	48.80	26.7 QP	40.0	-13.3	1.10 H	109	39.94	-13.24
2	150.14	34.8 QP	43.5	-8.7	1.10 H	204	47.60	-12.82
3	216.00	35.2 QP	43.5	-8.3	1.00 H	74	51.27	-16.09
4	295.77	40.5 QP	46.0	-5.5	1.10 H	109	52.57	-12.08
5	321.16	39.2 QP	46.0	-6.8	1.10 H	306	50.26	-11.06
6	609.40	33.4 QP	46.0	-12.6	1.20 H	178	37.83	-4.45
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	33.60	33.2 QP	40.0	-6.8	1.20 V	102	47.67	-14.47
2	48.90	36.1 QP	40.0	-3.9	1.10 V	102	49.37	-13.24
3	146.80	35.8 QP	43.5	-7.7	1.20 V	170	48.65	-12.88
4	199.99	34.8 QP	43.5	-8.7	1.10 V	300	50.77	-15.98
5	302.40	42.2 QP	46.0	-3.8	1.10 V	128	54.04	-11.80
6	322.80	37.8 QP	46.0	-8.2	1.10 V	114	48.79	-11.00

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

4.1.8 Test Results (Mode 2)

ABOVE 1GHz DATA

802.11b

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2385.00	61.9 PK	74.0	-12.1	1.56 H	209	65.11	-3.21
2	2385.00	48.7 AV	54.0	-5.3	1.56 H	209	51.91	-3.21
3	*2412.00	105.5 PK			1.56 H	209	108.63	-3.13
4	*2412.00	102.9 AV			1.56 H	209	106.03	-3.13
5	4824.00	49.6 PK	74.0	-24.4	1.62 H	8	43.63	5.97
6	4824.00	42.5 AV	54.0	-11.5	1.62 H	8	36.53	5.97
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2385.00	56.5 PK	74.0	-17.5	1.00 V	186	59.71	-3.21
2	2385.00	41.3 AV	54.0	-12.7	1.00 V	186	44.51	-3.21
3	*2412.00	100.7 PK			1.00 V	186	103.83	-3.13
4	*2412.00	97.5 AV			1.00 V	186	100.63	-3.13
5	4824.00	51.2 PK	74.0	-22.8	1.36 V	139	45.23	5.97
6	4824.00	45.3 AV	54.0	-8.7	1.36 V	139	39.33	5.97

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	106.3 PK			1.51 H	210	109.34	-3.04
2	*2437.00	103.2 AV			1.51 H	210	106.24	-3.04
3	4874.00	50.1 PK	74.0	-23.9	1.64 H	20	44.05	6.05
4	4874.00	43.1 AV	54.0	-10.9	1.64 H	20	37.05	6.05
5	7311.00	54.0 PK	74.0	-20.0	1.60 H	321	43.06	10.94
6	7311.00	47.5 AV	54.0	-6.5	1.60 H	321	36.56	10.94
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	100.8 PK			1.00 V	182	103.84	-3.04
2	*2437.00	97.4 AV			1.00 V	182	100.44	-3.04
3	4874.00	50.9 PK	74.0	-23.1	1.48 V	131	44.85	6.05
4	4874.00	45.4 AV	54.0	-8.6	1.48 V	131	39.35	6.05
5	7311.00	51.0 PK	74.0	-23.0	1.00 V	125	40.06	10.94
6	7311.00	40.7 AV	54.0	-13.3	1.00 V	125	29.76	10.94

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	105.1 PK			1.56 H	209	108.04	-2.94
2	*2462.00	102.7 AV			1.56 H	209	105.64	-2.94
3	2483.50	64.5 PK	74.0	-9.5	1.56 H	209	67.37	-2.87
4	2483.50	47.2 AV	54.0	-6.8	1.56 H	209	50.07	-2.87
5	4924.00	49.2 PK	74.0	-24.8	1.62 H	24	43.13	6.07
6	4924.00	42.4 AV	54.0	-11.6	1.62 H	24	36.33	6.07
7	7386.00	53.2 PK	74.0	-20.8	1.55 H	301	41.78	11.42
8	7386.00	46.9 AV	54.0	-7.1	1.55 H	301	35.48	11.42
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	100.9 PK			1.00 V	174	103.84	-2.94
2	*2462.00	97.5 AV			1.00 V	174	100.44	-2.94
3	2483.50	56.5 PK	74.0	-17.5	1.00 V	174	59.37	-2.87
4	2483.50	41.4 AV	54.0	-12.6	1.00 V	174	44.27	-2.87
5	4924.00	50.4 PK	74.0	-23.6	1.43 V	135	44.33	6.07
6	4924.00	44.7 AV	54.0	-9.3	1.43 V	135	38.63	6.07
7	7386.00	51.1 PK	74.0	-22.9	1.00 V	124	39.68	11.42
8	7386.00	40.4 AV	54.0	-13.6	1.00 V	124	28.98	11.42

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

802.11g

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	71.2 PK	74.0	-2.8	1.55 H	164	74.39	-3.19
2	2390.00	51.5 AV	54.0	-2.5	1.55 H	164	54.69	-3.19
3	*2412.00	103.2 PK			1.55 H	164	106.33	-3.13
4	*2412.00	93.1 AV			1.55 H	164	96.23	-3.13
5	4824.00	46.8 PK	74.0	-27.2	1.00 H	200	40.83	5.97
6	4824.00	33.7 AV	54.0	-20.3	1.00 H	200	27.73	5.97
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.2 PK	74.0	-6.8	1.05 V	198	70.39	-3.19
2	2390.00	45.2 AV	54.0	-8.8	1.05 V	198	48.39	-3.19
3	*2412.00	97.9 PK			1.05 V	198	101.03	-3.13
4	*2412.00	88.1 AV			1.05 V	198	91.23	-3.13
5	4824.00	47.2 PK	74.0	-26.8	1.25 V	90	41.23	5.97
6	4824.00	34.0 AV	54.0	-20.0	1.25 V	90	28.03	5.97

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	106.7 PK			1.41 H	165	109.74	-3.04
2	*2437.00	95.1 AV			1.41 H	165	98.14	-3.04
3	4874.00	47.1 PK	74.0	-26.9	1.00 H	212	41.05	6.05
4	4874.00	34.2 AV	54.0	-19.8	1.00 H	212	28.15	6.05
5	7311.00	52.2 PK	74.0	-21.8	1.25 H	94	41.26	10.94
6	7311.00	38.4 AV	54.0	-15.6	1.25 H	94	27.46	10.94
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	100.8 PK			1.00 V	196	103.84	-3.04
2	*2437.00	90.1 AV			1.00 V	196	93.14	-3.04
3	4874.00	47.2 PK	74.0	-26.8	1.30 V	101	41.15	6.05
4	4874.00	33.8 AV	54.0	-20.2	1.30 V	101	27.75	6.05
5	7311.00	51.1 PK	74.0	-22.9	1.63 V	282	40.16	10.94
6	7311.00	37.3 AV	54.0	-16.7	1.63 V	282	26.36	10.94

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	103.9 PK			1.61 H	159	106.84	-2.94
2	*2462.00	92.6 AV			1.61 H	159	95.54	-2.94
3	2483.50	68.4 PK	74.0	-5.6	1.61 H	159	71.27	-2.87
4	2483.50	50.0 AV	54.0	-4.0	1.61 H	159	52.87	-2.87
5	4924.00	47.5 PK	74.0	-26.5	1.00 H	204	41.43	6.07
6	4924.00	34.2 AV	54.0	-19.8	1.00 H	204	28.13	6.07
7	7386.00	52.1 PK	74.0	-21.9	1.21 H	100	40.68	11.42
8	7386.00	38.4 AV	54.0	-15.6	1.21 H	100	26.98	11.42
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	98.1 PK			1.04 V	185	101.04	-2.94
2	*2462.00	87.5 AV			1.04 V	185	90.44	-2.94
3	2483.50	67.6 PK	74.0	-6.4	1.04 V	185	70.47	-2.87
4	2483.50	45.4 AV	54.0	-8.6	1.04 V	185	48.27	-2.87
5	4924.00	47.0 PK	74.0	-27.0	1.22 V	80	40.93	6.07
6	4924.00	34.0 AV	54.0	-20.0	1.22 V	80	27.93	6.07
7	7386.00	50.3 PK	74.0	-23.7	1.66 V	290	38.88	11.42
8	7386.00	36.9 AV	54.0	-17.1	1.66 V	290	25.48	11.42

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

802.11n (HT20)

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	71.2 PK	74.0	-2.8	1.60 H	158	74.39	-3.19
2	2390.00	50.4 AV	54.0	-3.6	1.60 H	158	53.59	-3.19
3	*2412.00	102.4 PK			1.60 H	158	105.53	-3.13
4	*2412.00	91.3 AV			1.60 H	158	94.43	-3.13
5	4824.00	46.5 PK	74.0	-27.5	1.05 H	201	40.53	5.97
6	4824.00	33.7 AV	54.0	-20.3	1.05 H	201	27.73	5.97
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.9 PK	74.0	-7.1	1.00 V	183	70.09	-3.19
2	2390.00	45.0 AV	54.0	-9.0	1.00 V	183	48.19	-3.19
3	*2412.00	98.0 PK			1.00 V	183	101.13	-3.13
4	*2412.00	86.6 AV			1.00 V	183	89.73	-3.13
5	4824.00	47.5 PK	74.0	-26.5	1.30 V	102	41.53	5.97
6	4824.00	34.2 AV	54.0	-19.8	1.30 V	102	28.23	5.97

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	104.3 PK			1.60 H	165	107.34	-3.04
2	*2437.00	93.9 AV			1.60 H	165	96.94	-3.04
3	4874.00	46.2 PK	74.0	-27.8	1.00 H	204	40.15	6.05
4	4874.00	33.3 AV	54.0	-20.7	1.00 H	204	27.25	6.05
5	7311.00	52.1 PK	74.0	-21.9	1.25 H	96	41.16	10.94
6	7311.00	38.2 AV	54.0	-15.8	1.25 H	96	27.26	10.94
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	99.4 PK			1.05 V	189	102.44	-3.04
2	*2437.00	88.6 AV			1.05 V	189	91.64	-3.04
3	4874.00	47.1 PK	74.0	-26.9	1.21 V	103	41.05	6.05
4	4874.00	34.0 AV	54.0	-20.0	1.21 V	103	27.95	6.05
5	7311.00	50.6 PK	74.0	-23.4	1.63 V	281	39.66	10.94
6	7311.00	37.2 AV	54.0	-16.8	1.63 V	281	26.26	10.94

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	102.1 PK			1.67 H	165	105.04	-2.94
2	*2462.00	91.4 AV			1.67 H	165	94.34	-2.94
3	2483.50	70.1 PK	74.0	-3.9	1.67 H	165	72.97	-2.87
4	2483.50	50.9 AV	54.0	-3.1	1.67 H	165	53.77	-2.87
5	4924.00	46.5 PK	74.0	-27.5	1.03 H	198	40.43	6.07
6	4924.00	33.6 AV	54.0	-20.4	1.03 H	198	27.53	6.07
7	7386.00	51.5 PK	74.0	-22.5	1.22 H	108	40.08	11.42
8	7386.00	38.1 AV	54.0	-15.9	1.22 H	108	26.68	11.42

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	97.4 PK			1.00 V	170	100.34	-2.94
2	*2462.00	86.1 AV			1.00 V	170	89.04	-2.94
3	2483.50	67.6 PK	74.0	-6.4	1.00 V	170	70.47	-2.87
4	2483.50	45.6 AV	54.0	-8.4	1.00 V	170	48.47	-2.87
5	4924.00	46.4 PK	74.0	-27.6	1.29 V	89	40.33	6.07
6	4924.00	33.4 AV	54.0	-20.6	1.29 V	89	27.33	6.07
7	7386.00	51.0 PK	74.0	-23.0	1.65 V	308	39.58	11.42
8	7386.00	37.6 AV	54.0	-16.4	1.65 V	308	26.18	11.42

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

BELOW 1GHz WORST-CASE DATA

802.11g

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	Below 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	146.90	34.4 QP	43.5	-9.1	1.10 H	207	47.25	-12.87
2	261.10	35.4 QP	46.0	-10.6	1.20 H	100	49.02	-13.58
3	293.42	39.8 QP	46.0	-6.2	1.10 H	101	51.96	-12.19
4	323.44	38.3 QP	46.0	-7.7	1.10 H	195	49.25	-10.97
5	604.60	32.4 QP	46.0	-13.6	1.10 H	10	36.95	-4.57
6	699.78	31.4 QP	46.0	-14.6	1.10 H	100	34.79	-3.37
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	48.14	35.0 QP	40.0	-5.0	1.10 V	107	48.20	-13.22
2	146.41	35.1 QP	43.5	-8.4	1.10 V	106	48.02	-12.91
3	199.02	34.7 QP	43.5	-8.8	1.10 V	317	50.68	-16.00
4	217.50	33.4 QP	46.0	-12.6	1.10 V	106	49.46	-16.09
5	304.29	41.8 QP	46.0	-4.2	1.10 V	41	53.51	-11.74
6	475.44	34.7 QP	46.0	-11.3	1.20 V	110	42.43	-7.73

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

4.1.9 Test Results (Mode 3)

ABOVE 1GHz DATA

802.11b

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	60.3 PK	74.0	-13.7	1.56 H	101	63.49	-3.19
2	2390.00	44.3 AV	54.0	-9.7	1.56 H	101	47.49	-3.19
3	*2412.00	100.1 PK			1.56 H	101	103.23	-3.13
4	*2412.00	97.2 AV			1.56 H	101	100.33	-3.13
5	4824.00	41.7 PK	74.0	-32.3	1.68 H	37	35.73	5.97
6	4824.00	36.4 AV	54.0	-17.6	1.68 H	37	30.43	5.97
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	63.5 PK	74.0	-10.5	2.47 V	113	66.69	-3.19
2	2390.00	47.3 AV	54.0	-6.7	2.47 V	113	50.49	-3.19
3	*2412.00	104.8 PK			2.47 V	113	107.93	-3.13
4	*2412.00	102.1 AV			2.47 V	113	105.23	-3.13
5	4824.00	51.4 PK	74.0	-22.6	1.48 V	115	45.43	5.97
6	4824.00	45.4 AV	54.0	-8.6	1.48 V	115	39.43	5.97

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	100.9 PK			1.93 H	136	103.94	-3.04
2	*2437.00	97.9 AV			1.93 H	136	100.94	-3.04
3	4874.00	41.2 PK	74.0	-32.8	1.74 H	35	35.15	6.05
4	4874.00	36.2 AV	54.0	-17.8	1.74 H	35	30.15	6.05
5	7311.00	51.7 PK	74.0	-22.3	1.18 H	79	40.76	10.94
6	7311.00	38.1 AV	54.0	-15.9	1.18 H	79	27.16	10.94
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	105.7 PK			1.76 V	248	108.74	-3.04
2	*2437.00	103.0 AV			1.76 V	248	106.04	-3.04
3	4874.00	51.0 PK	74.0	-23.0	1.45 V	129	44.95	6.05
4	4874.00	45.2 AV	54.0	-8.8	1.45 V	129	39.15	6.05
5	7311.00	53.9 PK	74.0	-20.1	1.53 V	312	42.96	10.94
6	7311.00	46.9 AV	54.0	-7.1	1.53 V	312	35.96	10.94

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	100.1 PK			1.51 H	94	103.04	-2.94
2	*2462.00	97.4 AV			1.51 H	94	100.34	-2.94
3	2483.50	59.8 PK	74.0	-14.2	1.52 H	88	62.67	-2.87
4	2483.50	44.0 AV	54.0	-10.0	1.52 H	88	46.87	-2.87
5	4924.00	41.5 PK	74.0	-32.5	1.73 H	29	35.43	6.07
6	4924.00	36.5 AV	54.0	-17.5	1.73 H	29	30.43	6.07
7	7386.00	52.3 PK	74.0	-21.7	1.14 H	69	40.88	11.42
8	7386.00	38.5 AV	54.0	-15.5	1.14 H	69	27.08	11.42
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	104.3 PK			2.51 V	129	107.24	-2.94
2	*2462.00	101.7 AV			2.51 V	129	104.64	-2.94
3	2483.50	63.2 PK	74.0	-10.8	2.51 V	129	66.07	-2.87
4	2483.50	47.3 AV	54.0	-6.7	2.51 V	129	50.17	-2.87
5	4924.00	50.6 PK	74.0	-23.4	1.45 V	131	44.53	6.07
6	4924.00	44.7 AV	54.0	-9.3	1.45 V	131	38.63	6.07
7	7386.00	54.4 PK	74.0	-19.6	1.51 V	321	42.98	11.42
8	7386.00	47.3 AV	54.0	-6.7	1.51 V	321	35.88	11.42

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

802.11g

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	60.2 PK	74.0	-13.8	1.96 H	130	63.39	-3.19
2	2390.00	44.2 AV	54.0	-9.8	1.96 H	130	47.39	-3.19
3	*2412.00	99.6 PK			1.96 H	130	102.73	-3.13
4	*2412.00	88.7 AV			1.96 H	130	91.83	-3.13
5	4824.00	46.6 PK	74.0	-27.4	1.00 H	211	40.63	5.97
6	4824.00	33.7 AV	54.0	-20.3	1.00 H	211	27.73	5.97
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.2 PK	74.0	-6.8	2.49 V	116	70.39	-3.19
2	2390.00	47.5 AV	54.0	-6.5	2.49 V	116	50.69	-3.19
3	*2412.00	104.3 PK			2.49 V	116	107.43	-3.13
4	*2412.00	93.1 AV			2.49 V	116	96.23	-3.13
5	4824.00	46.9 PK	74.0	-27.1	1.24 V	94	40.93	5.97
6	4824.00	33.8 AV	54.0	-20.2	1.24 V	94	27.83	5.97

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	100.7 PK			1.94 H	141	103.74	-3.04
2	*2437.00	89.9 AV			1.94 H	141	92.94	-3.04
3	4874.00	46.6 PK	74.0	-27.4	1.00 H	210	40.55	6.05
4	4874.00	33.7 AV	54.0	-20.3	1.00 H	210	27.65	6.05
5	7311.00	51.6 PK	74.0	-22.4	1.24 H	85	40.66	10.94
6	7311.00	38.3 AV	54.0	-15.7	1.24 H	85	27.36	10.94
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	105.5 PK			2.03 V	193	108.54	-3.04
2	*2437.00	94.0 AV			2.03 V	193	97.04	-3.04
3	4874.00	46.8 PK	74.0	-27.2	1.23 V	89	40.75	6.05
4	4874.00	33.8 AV	54.0	-20.2	1.23 V	89	27.75	6.05
5	7311.00	50.4 PK	74.0	-23.6	1.61 V	292	39.46	10.94
6	7311.00	36.9 AV	54.0	-17.1	1.61 V	292	25.96	10.94

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	99.6 PK			1.96 H	144	102.54	-2.94
2	*2462.00	88.6 AV			1.96 H	144	91.54	-2.94
3	2483.50	60.1 PK	74.0	-13.9	1.96 H	144	62.97	-2.87
4	2483.50	44.1 AV	54.0	-9.9	1.96 H	144	46.97	-2.87
5	4924.00	47.2 PK	74.0	-26.8	1.00 H	223	41.13	6.07
6	4924.00	34.0 AV	54.0	-20.0	1.00 H	223	27.93	6.07
7	7386.00	51.3 PK	74.0	-22.7	1.25 H	110	39.88	11.42
8	7386.00	37.7 AV	54.0	-16.3	1.25 H	110	26.28	11.42
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	104.2 PK			2.46 V	102	107.14	-2.94
2	*2462.00	92.9 AV			2.46 V	102	95.84	-2.94
3	2483.50	67.4 PK	74.0	-6.6	2.46 V	102	70.27	-2.87
4	2483.50	47.9 AV	54.0	-6.1	2.46 V	102	50.77	-2.87
5	4924.00	46.7 PK	74.0	-27.3	1.20 V	103	40.63	6.07
6	4924.00	33.5 AV	54.0	-20.5	1.20 V	103	27.43	6.07
7	7386.00	50.9 PK	74.0	-23.1	1.67 V	303	39.48	11.42
8	7386.00	37.5 AV	54.0	-16.5	1.67 V	303	26.08	11.42

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

802.11n (HT20)

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	60.1 PK	74.0	-13.9	1.88 H	128	63.29	-3.19
2	2390.00	43.9 AV	54.0	-10.1	1.88 H	128	47.09	-3.19
3	*2412.00	98.7 PK			1.88 H	128	101.83	-3.13
4	*2412.00	87.8 AV			1.88 H	128	90.93	-3.13
5	4824.00	47.1 PK	74.0	-26.9	1.00 H	198	41.13	5.97
6	4824.00	34.2 AV	54.0	-19.8	1.00 H	198	28.23	5.97
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	69.9 PK	74.0	-4.1	2.43 V	103	73.09	-3.19
2	2390.00	50.2 AV	54.0	-3.8	2.43 V	103	53.39	-3.19
3	*2412.00	103.2 PK			2.43 V	103	106.33	-3.13
4	*2412.00	92.1 AV			2.43 V	103	95.23	-3.13
5	4824.00	46.8 PK	74.0	-27.2	1.23 V	101	40.83	5.97
6	4824.00	33.7 AV	54.0	-20.3	1.23 V	101	27.73	5.97

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	99.1 PK			1.88 H	131	102.14	-3.04
2	*2437.00	88.5 AV			1.88 H	131	91.54	-3.04
3	4874.00	46.9 PK	74.0	-27.1	1.05 H	205	40.85	6.05
4	4874.00	33.8 AV	54.0	-20.2	1.05 H	205	27.75	6.05
5	7311.00	52.2 PK	74.0	-21.8	1.16 H	93	41.26	10.94
6	7311.00	38.5 AV	54.0	-15.5	1.16 H	93	27.56	10.94
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	104.8 PK			2.49 V	107	107.84	-3.04
2	*2437.00	93.3 AV			2.49 V	107	96.34	-3.04
3	4874.00	47.7 PK	74.0	-26.3	1.27 V	98	41.65	6.05
4	4874.00	34.3 AV	54.0	-19.7	1.27 V	98	28.25	6.05
5	7311.00	50.4 PK	74.0	-23.6	1.64 V	299	39.46	10.94
6	7311.00	37.0 AV	54.0	-17.0	1.64 V	299	26.06	10.94

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	98.2 PK			1.98 H	149	101.14	-2.94
2	*2462.00	87.6 AV			1.98 H	149	90.54	-2.94
3	2483.50	60.3 PK	74.0	-13.7	1.98 H	149	63.17	-2.87
4	2483.50	44.1 AV	54.0	-9.9	1.98 H	149	46.97	-2.87
5	4924.00	47.0 PK	74.0	-27.0	1.00 H	203	40.93	6.07
6	4924.00	34.3 AV	54.0	-19.7	1.00 H	203	28.23	6.07
7	7386.00	51.5 PK	74.0	-22.5	1.23 H	111	40.08	11.42
8	7386.00	38.0 AV	54.0	-16.0	1.23 H	111	26.58	11.42

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	103.7 PK			2.50 V	92	106.64	-2.94
2	*2462.00	92.2 AV			2.50 V	92	95.14	-2.94
3	2483.50	70.3 PK	74.0	-3.7	2.50 V	92	73.17	-2.87
4	2483.50	50.4 AV	54.0	-3.6	2.50 V	92	53.27	-2.87
5	4924.00	47.4 PK	74.0	-26.6	1.23 V	96	41.33	6.07
6	4924.00	34.0 AV	54.0	-20.0	1.23 V	96	27.93	6.07
7	7386.00	51.2 PK	74.0	-22.8	1.63 V	287	39.78	11.42
8	7386.00	37.7 AV	54.0	-16.3	1.63 V	287	26.28	11.42

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

BELOW 1GHz WORST-CASE DATA

802.11g

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	Below 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	147.32	35.0 QP	43.5	-8.5	1.10 H	218	47.85	-12.83
2	216.14	34.8 QP	46.0	-11.2	1.10 H	70	50.86	-16.09
3	289.14	39.9 QP	46.0	-6.1	1.10 H	142	52.25	-12.35
4	324.80	39.2 QP	46.0	-6.8	1.10 H	309	50.14	-10.94
5	604.60	35.0 QP	46.0	-11.0	1.10 H	105	39.59	-4.57
6	698.80	35.5 QP	46.0	-10.5	1.10 H	107	38.91	-3.37
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	147.22	34.0 QP	43.5	-9.5	1.00 V	210	46.86	-12.84
2	216.01	36.6 QP	46.0	-9.5	1.00 V	200	52.64	-16.09
3	291.77	40.5 QP	46.0	-5.5	1.10 V	115	52.76	-12.26
4	324.25	39.1 QP	46.0	-6.9	1.10 V	104	50.07	-10.95
5	609.28	34.3 QP	46.0	-11.7	1.00 V	110	38.73	-4.45
6	713.11	34.2 QP	46.0	-11.8	1.00 V	112	37.45	-3.25

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

4.1.10 Test Results (Mode 4)

ABOVE 1GHz DATA

802.11b

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.6 PK	74.0	-7.4	1.71 H	100	69.79	-3.19
2	2390.00	45.5 AV	54.0	-8.5	1.71 H	100	48.69	-3.19
3	*2412.00	107.2 PK			1.71 H	100	110.33	-3.13
4	*2412.00	104.8 AV			1.71 H	100	107.93	-3.13
5	4824.00	49.7 PK	74.0	-24.3	1.70 H	34	43.73	5.97
6	4824.00	42.3 AV	54.0	-11.7	1.70 H	34	36.33	5.97
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	62.1 PK	74.0	-11.9	1.01 V	190	65.29	-3.19
2	2390.00	41.9 AV	54.0	-12.1	1.01 V	190	45.09	-3.19
3	*2412.00	103.9 PK			1.01 V	190	107.03	-3.13
4	*2412.00	101.0 AV			1.01 V	190	104.13	-3.13
5	4824.00	51.7 PK	74.0	-22.3	1.39 V	115	45.73	5.97
6	4824.00	45.6 AV	54.0	-8.4	1.39 V	115	39.63	5.97

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	107.6 PK			1.70 H	117	110.64	-3.04
2	*2437.00	104.8 AV			1.70 H	117	107.84	-3.04
3	4874.00	49.0 PK	74.0	-25.0	1.64 H	14	42.95	6.05
4	4874.00	42.1 AV	54.0	-11.9	1.64 H	14	36.05	6.05
5	7311.00	52.9 PK	74.0	-21.1	1.51 H	312	41.96	10.94
6	7311.00	46.4 AV	54.0	-7.6	1.51 H	312	35.46	10.94
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	103.6 PK			1.00 V	184	106.64	-3.04
2	*2437.00	101.0 AV			1.00 V	184	104.04	-3.04
3	4874.00	50.6 PK	74.0	-23.4	1.47 V	128	44.55	6.05
4	4874.00	44.7 AV	54.0	-9.3	1.47 V	128	38.65	6.05
5	7311.00	51.3 PK	74.0	-22.7	1.03 V	129	40.36	10.94
6	7311.00	40.8 AV	54.0	-13.2	1.03 V	129	29.86	10.94

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	107.1 PK			1.66 H	115	110.04	-2.94
2	*2462.00	104.6 AV			1.66 H	115	107.54	-2.94
3	2483.50	66.2 PK	74.0	-7.8	1.66 H	115	69.07	-2.87
4	2483.50	45.3 AV	54.0	-8.7	1.66 H	115	48.17	-2.87
5	4924.00	49.4 PK	74.0	-24.6	1.65 H	25	43.33	6.07
6	4924.00	42.5 AV	54.0	-11.5	1.65 H	25	36.43	6.07
7	7386.00	54.1 PK	74.0	-19.9	1.51 H	312	42.68	11.42
8	7386.00	47.2 AV	54.0	-6.8	1.51 H	312	35.78	11.42
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	103.7 PK			1.00 V	182	106.64	-2.94
2	*2462.00	101.0 AV			1.00 V	182	103.94	-2.94
3	2483.50	61.7 PK	74.0	-12.3	1.00 V	182	64.57	-2.87
4	2483.50	41.6 AV	54.0	-12.4	1.00 V	182	44.47	-2.87
5	4924.00	50.7 PK	74.0	-23.3	1.48 V	107	44.63	6.07
6	4924.00	45.0 AV	54.0	-9.0	1.48 V	107	38.93	6.07
7	7386.00	51.0 PK	74.0	-23.0	1.00 V	123	39.58	11.42
8	7386.00	40.8 AV	54.0	-13.2	1.00 V	123	29.38	11.42

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

802.11g

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	70.8 PK	74.0	-3.2	1.65 H	113	73.99	-3.19
2	2390.00	50.1 AV	54.0	-3.9	1.65 H	113	53.29	-3.19
3	*2412.00	105.5 PK			1.65 H	113	108.63	-3.13
4	*2412.00	94.1 AV			1.65 H	113	97.23	-3.13
5	4824.00	47.0 PK	74.0	-27.0	1.00 H	224	41.03	5.97
6	4824.00	33.8 AV	54.0	-20.2	1.00 H	224	27.83	5.97
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.2 PK	74.0	-6.8	1.00 V	184	70.39	-3.19
2	2390.00	47.8 AV	54.0	-6.2	1.00 V	184	50.99	-3.19
3	*2412.00	102.1 PK			1.00 V	185	105.23	-3.13
4	*2412.00	90.5 AV			1.00 V	185	93.63	-3.13
5	4824.00	46.7 PK	74.0	-27.3	1.28 V	77	40.73	5.97
6	4824.00	33.5 AV	54.0	-20.5	1.28 V	77	27.53	5.97

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	107.9 PK			1.70 H	117	110.94	-3.04
2	*2437.00	95.9 AV			1.70 H	117	98.94	-3.04
3	4874.00	46.6 PK	74.0	-27.4	1.02 H	214	40.55	6.05
4	4874.00	33.3 AV	54.0	-20.7	1.02 H	214	27.25	6.05
5	7311.00	51.7 PK	74.0	-22.3	1.21 H	80	40.76	10.94
6	7311.00	37.8 AV	54.0	-16.2	1.21 H	80	26.86	10.94
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	104.5 PK			1.00 V	180	107.54	-3.04
2	*2437.00	92.3 AV			1.00 V	180	95.34	-3.04
3	4874.00	46.9 PK	74.0	-27.1	1.25 V	99	40.85	6.05
4	4874.00	33.8 AV	54.0	-20.2	1.25 V	99	27.75	6.05
5	7311.00	51.1 PK	74.0	-22.9	1.72 V	287	40.16	10.94
6	7311.00	37.3 AV	54.0	-16.7	1.72 V	287	26.36	10.94

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	106.1 PK			1.69 H	113	109.04	-2.94
2	*2462.00	94.5 AV			1.69 H	113	97.44	-2.94
3	2483.50	70.1 PK	74.0	-3.9	1.69 H	112	72.97	-2.87
4	2483.50	49.9 AV	54.0	-4.1	1.69 H	112	52.77	-2.87
5	4924.00	47.2 PK	74.0	-26.8	1.03 H	208	41.13	6.07
6	4924.00	34.1 AV	54.0	-19.9	1.03 H	208	28.03	6.07
7	7386.00	51.5 PK	74.0	-22.5	1.19 H	100	40.08	11.42
8	7386.00	37.9 AV	54.0	-16.1	1.19 H	100	26.48	11.42
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	101.6 PK			1.04 V	175	104.54	-2.94
2	*2462.00	90.1 AV			1.04 V	175	93.04	-2.94
3	2483.50	66.5 PK	74.0	-7.5	1.05 V	174	69.37	-2.87
4	2483.50	47.3 AV	54.0	-6.7	1.05 V	174	50.17	-2.87
5	4924.00	46.7 PK	74.0	-27.3	1.28 V	72	40.63	6.07
6	4924.00	33.4 AV	54.0	-20.6	1.28 V	72	27.33	6.07
7	7386.00	50.5 PK	74.0	-23.5	1.70 V	291	39.08	11.42
8	7386.00	36.9 AV	54.0	-17.1	1.70 V	291	25.48	11.42

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

802.11n (HT20)

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	70.6 PK	74.0	-3.4	1.60 H	127	73.79	-3.19
2	2390.00	49.8 AV	54.0	-4.2	1.60 H	127	52.99	-3.19
3	*2412.00	103.2 PK			1.60 H	127	106.33	-3.13
4	*2412.00	92.1 AV			1.60 H	127	95.23	-3.13
5	4824.00	46.3 PK	74.0	-27.7	1.01 H	200	40.33	5.97
6	4824.00	33.4 AV	54.0	-20.6	1.01 H	200	27.43	5.97
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.6 PK	74.0	-6.4	1.00 V	178	70.79	-3.19
2	2390.00	48.3 AV	54.0	-5.7	1.00 V	178	51.49	-3.19
3	*2412.00	99.8 PK			1.00 V	178	102.93	-3.13
4	*2412.00	88.3 AV			1.00 V	178	91.43	-3.13
5	4824.00	46.8 PK	74.0	-27.2	1.21 V	77	40.83	5.97
6	4824.00	33.7 AV	54.0	-20.3	1.21 V	77	27.73	5.97

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	106.8 PK			1.69 H	116	109.84	-3.04
2	*2437.00	94.8 AV			1.69 H	116	97.84	-3.04
3	4874.00	46.5 PK	74.0	-27.5	1.04 H	212	40.45	6.05
4	4874.00	33.7 AV	54.0	-20.3	1.04 H	212	27.65	6.05
5	7311.00	51.2 PK	74.0	-22.8	1.18 H	109	40.26	10.94
6	7311.00	37.8 AV	54.0	-16.2	1.18 H	109	26.86	10.94
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	103.4 PK			1.00 V	179	106.44	-3.04
2	*2437.00	91.2 AV			1.00 V	179	94.24	-3.04
3	4874.00	47.1 PK	74.0	-26.9	1.24 V	95	41.05	6.05
4	4874.00	34.1 AV	54.0	-19.9	1.24 V	95	28.05	6.05
5	7311.00	51.1 PK	74.0	-22.9	1.69 V	304	40.16	10.94
6	7311.00	37.6 AV	54.0	-16.4	1.69 V	304	26.66	10.94

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	104.5 PK			1.66 H	116	107.44	-2.94
2	*2462.00	93.5 AV			1.66 H	116	96.44	-2.94
3	2483.50	71.1 PK	74.0	-2.9	1.66 H	116	73.97	-2.87
4	2483.50	51.1 AV	54.0	-2.9	1.66 H	116	53.97	-2.87
5	4924.00	47.1 PK	74.0	-26.9	1.00 H	225	41.03	6.07
6	4924.00	34.3 AV	54.0	-19.7	1.00 H	225	28.23	6.07
7	7386.00	52.0 PK	74.0	-22.0	1.21 H	110	40.58	11.42
8	7386.00	38.5 AV	54.0	-15.5	1.21 H	110	27.08	11.42
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	101.0 PK			1.00 V	171	103.94	-2.94
2	*2462.00	89.9 AV			1.00 V	171	92.84	-2.94
3	2483.50	68.3 PK	74.0	-5.7	1.00 V	171	71.17	-2.87
4	2483.50	49.4 AV	54.0	-4.6	1.00 V	171	52.27	-2.87
5	4924.00	46.8 PK	74.0	-27.2	1.19 V	87	40.73	6.07
6	4924.00	33.7 AV	54.0	-20.3	1.19 V	87	27.63	6.07
7	7386.00	51.2 PK	74.0	-22.8	1.66 V	298	39.78	11.42
8	7386.00	37.5 AV	54.0	-16.5	1.66 V	298	26.08	11.42

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

BELOW 1GHz WORST-CASE DATA

802.11g

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	Below 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	143.90	33.8 QP	43.5	-9.7	1.60 H	209	46.76	-12.99
2	232.38	34.4 QP	46.0	-11.6	1.10 H	151	49.26	-14.86
3	285.90	39.4 QP	46.0	-6.6	1.10 H	106	51.81	-12.43
4	335.90	39.6 QP	46.0	-6.4	1.10 H	110	50.41	-10.77
5	609.02	33.3 QP	46.0	-12.7	1.10 H	105	37.75	-4.46
6	699.38	36.1 QP	46.0	-9.9	1.10 H	104	39.48	-3.37
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	33.93	27.8 QP	40.0	-12.2	1.00 V	18	42.20	-14.39
2	47.14	35.8 QP	40.0	-4.2	1.10 V	101	49.11	-13.33
3	147.20	34.8 QP	43.5	-8.7	1.10 V	191	47.62	-12.84
4	199.99	32.9 QP	43.5	-10.6	1.00 V	343	48.89	-15.98
5	304.60	41.9 QP	46.0	-4.1	1.10 V	100	53.59	-11.73
6	329.43	37.4 QP	46.0	-8.6	1.20 V	109	48.24	-10.80

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	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.

4.2.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver R&S	ESCS 30	100375	May 06, 2015	May 05, 2016
Line-Impedance Stabilization Network (for EUT) SCHWARZBECK	NSLK-8127	8127-522	Sep. 01, 2015	Aug. 31, 2016
Line-Impedance Stabilization Network (for Peripheral) R&S	ENV216	100072	June 11, 2015	June 10, 2016
RF Cable	5D-FB	COCCAB-001	Mar. 08, 2016	Mar. 07, 2017
50 ohms Terminator	N/A	EMC-03	Sep. 23, 2015	Sep. 22, 2016
50 ohms Terminator	N/A	EMC-02	Oct. 01, 2015	Sep. 30, 2016
50 ohms Terminator	E1-011315	13	Dec. 11 2015	Dec. 10 2016
Software BVADT	BVADT_Cond_ V7.3.7.3	NA	NA	NA

Note:

1. The calibration interval of the above test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Shielded Room No. C.
3. The VCCI Con C Registration No. is C-3611.
4. Tested Date: Apr. 11, 2016

4.2.3 Test Procedures

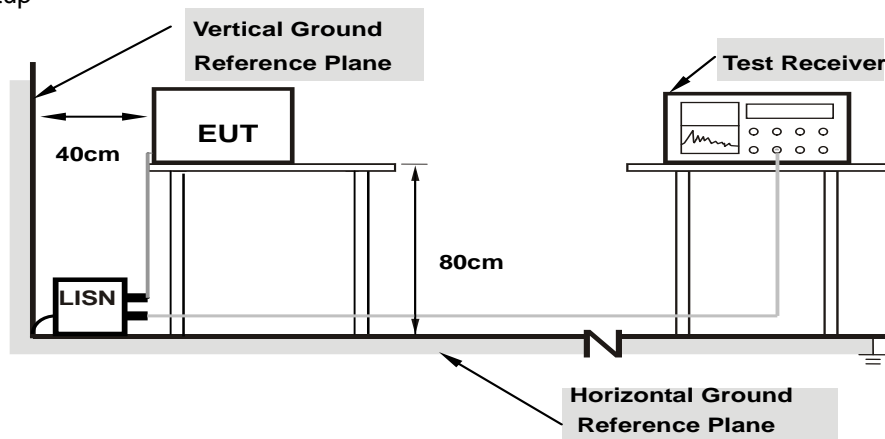
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

NOTE: The resolution bandwidth and video bandwidth of test receiver is 9kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15MHz-30MHz.

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



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

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.

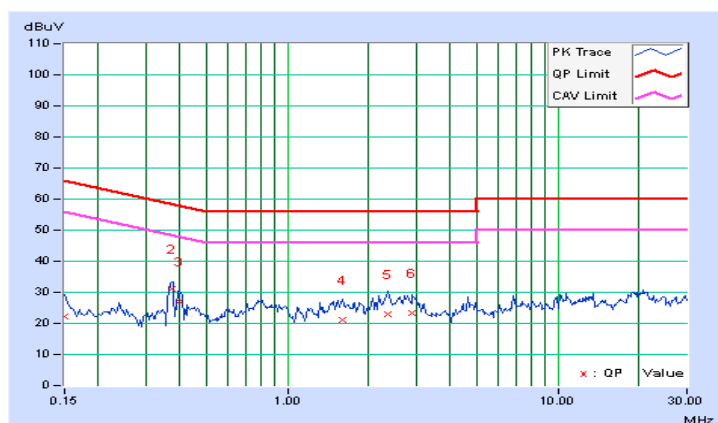
4.2.7 Test Results

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
-------	----------	-------------------	--------------------------------

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.32	11.94	4.57	22.26	14.89	66.00	56.00	-43.74	-41.11
2	0.37266	10.30	20.68	18.85	30.98	29.15	58.44	48.44	-27.46	-19.29
3	0.39916	10.30	16.71	15.78	27.01	26.08	57.87	47.87	-30.86	-21.79
4	1.59766	10.25	11.04	5.72	21.29	15.97	56.00	46.00	-34.71	-30.03
5	2.35156	10.29	12.82	7.94	23.11	18.23	56.00	46.00	-32.89	-27.77
6	2.87891	10.33	12.96	8.29	23.29	18.62	56.00	46.00	-32.71	-27.38

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

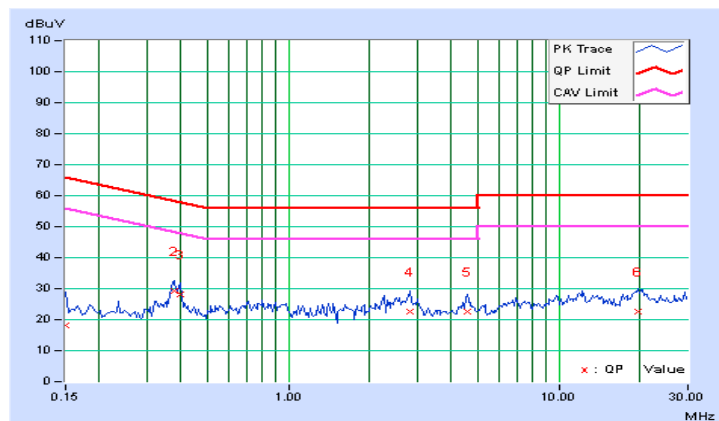


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
-------	-------------	-------------------	--------------------------------

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.30	7.97	5.07	18.27	15.37	66.00	56.00	-47.73	-40.63
2	0.37866	10.28	19.15	15.02	29.43	25.30	58.31	48.31	-28.88	-23.01
3	0.39866	10.28	17.80	16.06	28.08	26.34	57.88	47.88	-29.80	-21.54
4	2.82422	10.33	12.39	6.31	22.72	16.64	56.00	46.00	-33.28	-29.36
5	4.58984	10.45	12.11	7.90	22.56	18.35	56.00	46.00	-33.44	-27.65
6	19.51953	10.96	11.54	6.31	22.50	17.27	60.00	50.00	-37.50	-32.73

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

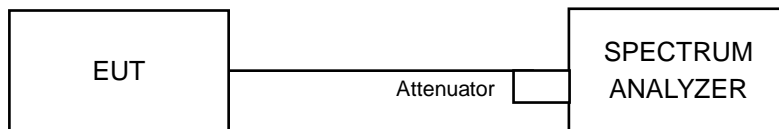


4.3 6dB Bandwidth Measurement

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) = 100kHz
- 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 Result

802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	10.14	0.5	PASS
6	2437	10.14	0.5	PASS
11	2462	10.13	0.5	PASS

802.11g

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	16.40	0.5	PASS
6	2437	16.41	0.5	PASS
11	2462	16.41	0.5	PASS

802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	17.64	0.5	PASS
6	2437	17.63	0.5	PASS
11	2462	17.64	0.5	PASS

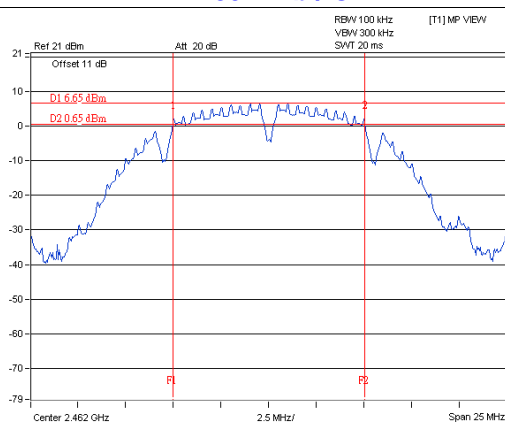


A D T

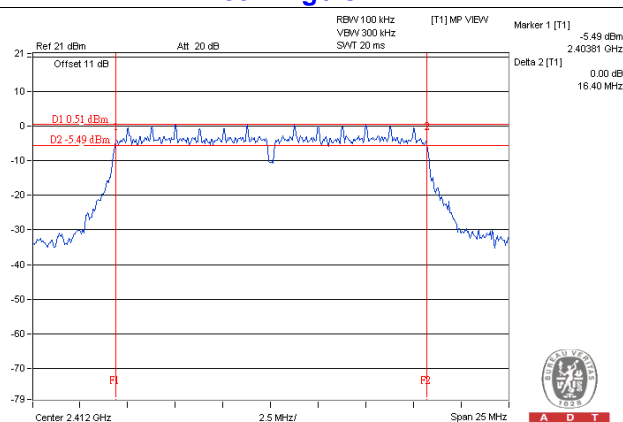
Spectrum Plot of Worst Value

802.11b / CH 11

802.11g / CH 1

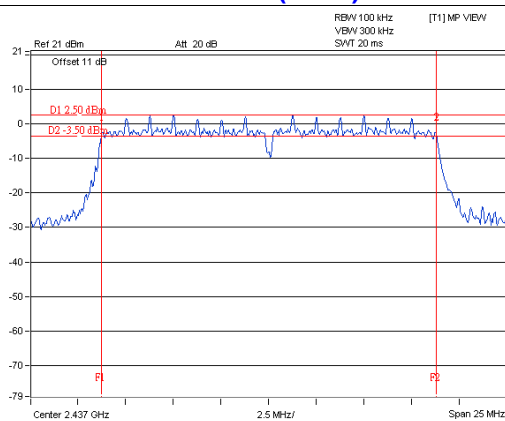


A D T



A D T

802.11n(HT20): CH 6



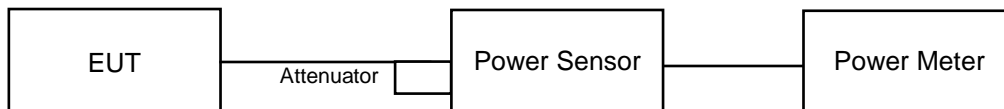
A D T

4.4 Conducted Output Power Measurement

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

FOR PEAK POWER

802.11b

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass/Fail
1	2412	68.707	18.37	30	Pass
6	2437	100.231	20.01	30	Pass
11	2462	81.283	19.10	30	Pass

802.11g

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass/Fail
1	2412	154.525	21.89	30	Pass
6	2437	204.644	23.11	30	Pass
11	2462	172.584	22.37	30	Pass

802.11n (HT20)

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass/Fail
1	2412	79.616	19.01	30	Pass
6	2437	162.555	22.11	30	Pass
11	2462	116.681	20.67	30	Pass

FOR AVERAGE POWER

802.11b

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	39.902	16.01
6	2437	58.076	17.64
11	2462	45.290	16.56

802.11g

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	16.749	12.24
6	2437	31.189	14.94
11	2462	19.320	12.86

802.11n (HT20)

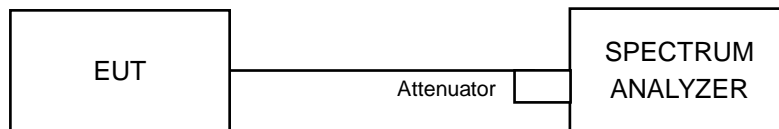
Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	10.740	10.31
6	2437	22.803	13.58
11	2462	14.723	11.68

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 analyzer center frequency to DTS channel center frequency.
- Set the span to 1.5 times the DTS bandwidth.
- Set the RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- Set the VBW $\geq 3 \times \text{RBW}$.
- Detector = peak.
- Sweep time = auto couple.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum amplitude level within the RBW.

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	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-10.40	8	Pass
6	2437	-9.24	8	Pass
11	2462	-10.43	8	Pass

802.11g

Channel	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-15.50	8	Pass
6	2437	-13.07	8	Pass
11	2462	-15.49	8	Pass

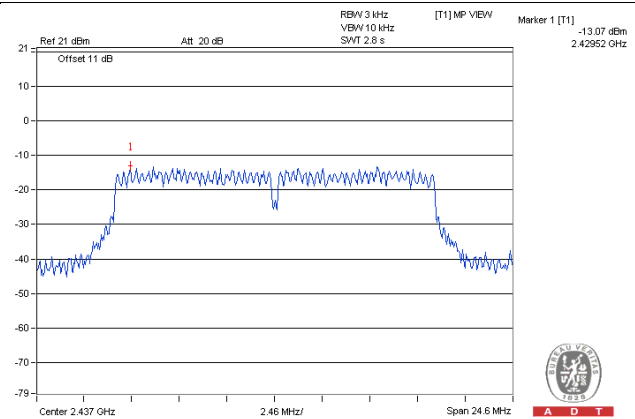
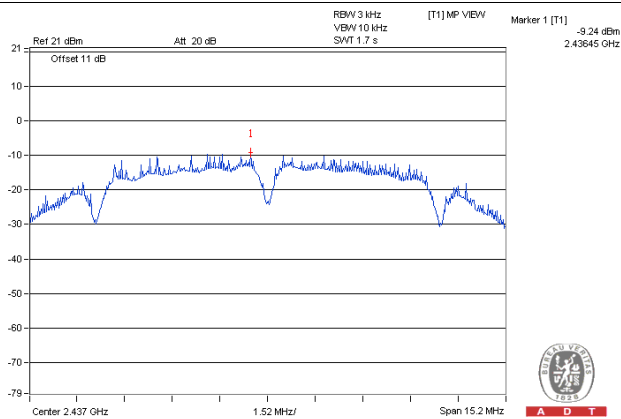
802.11n (HT20)

Channel	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-17.21	8	Pass
6	2437	-13.74	8	Pass
11	2462	-15.24	8	Pass

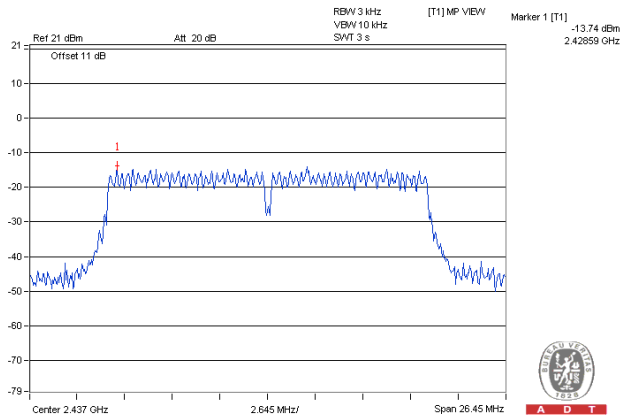
Spectrum Plot of Worst Value

802.11b / CH6

802.11g / CH6



802.11n (HT20) / CH6

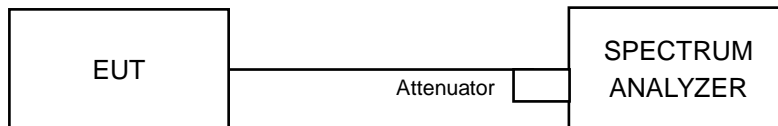


4.6 Conducted Out of Band Emission Measurement

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. Detector = peak.
4. Sweep = auto couple.
5. Trace Mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum amplitude level.

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

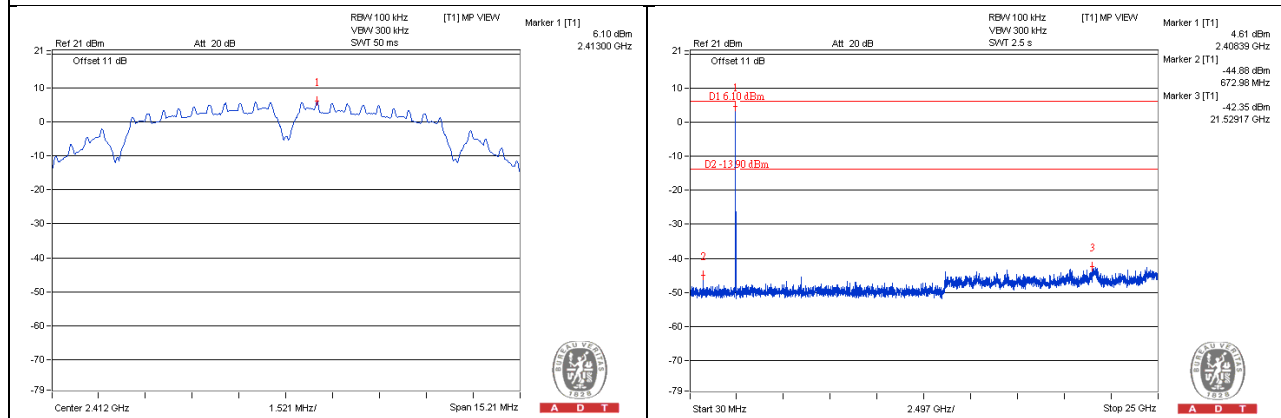
Same as Item 4.3.6

4.6.7 Test Results

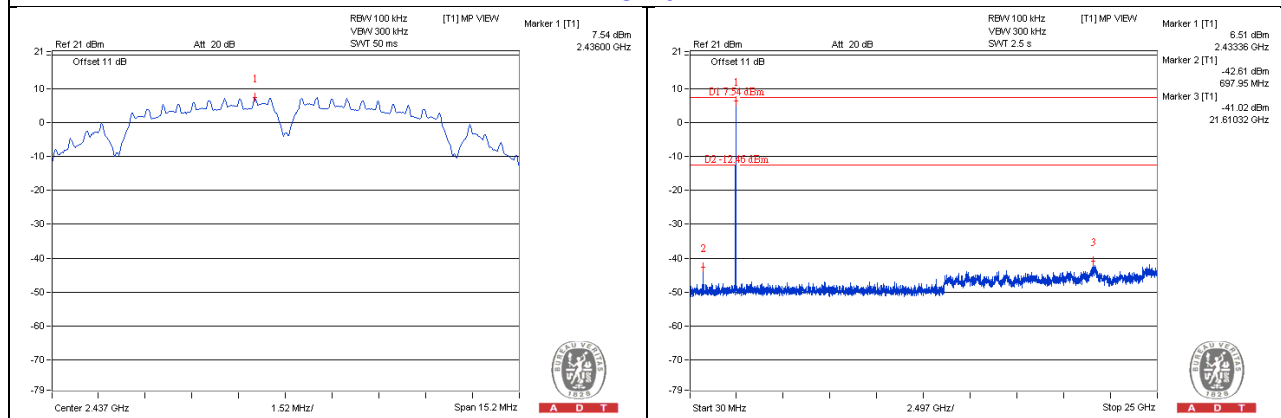
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement.

802.11b

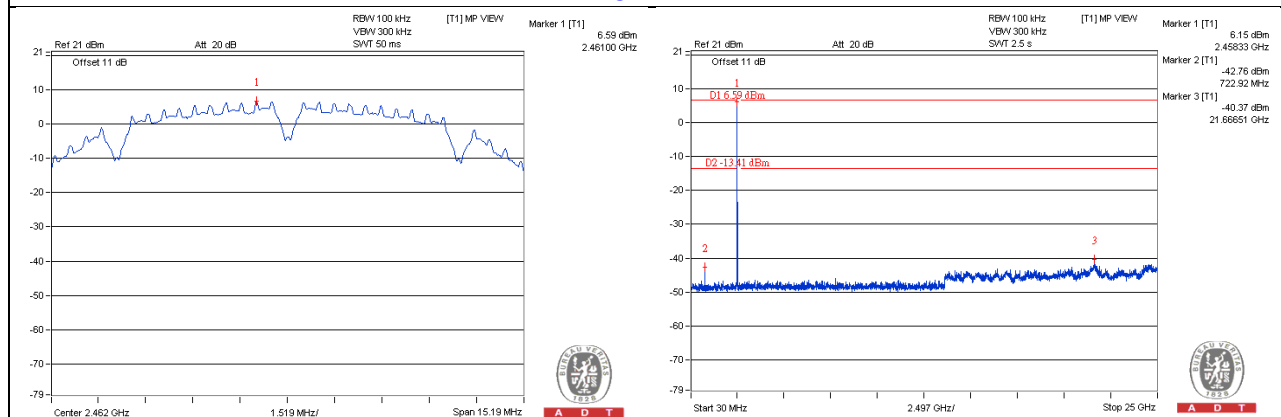
CH 1



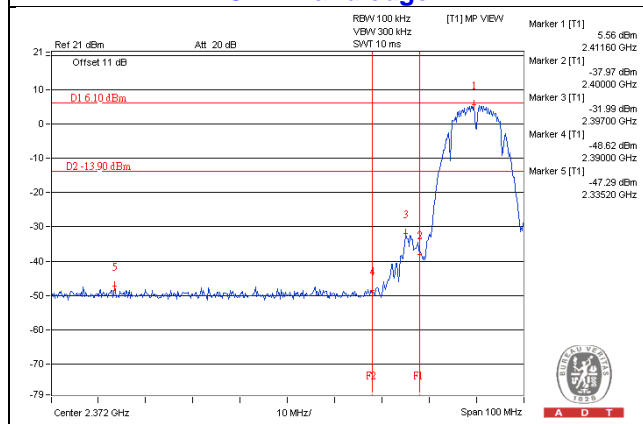
CH 6



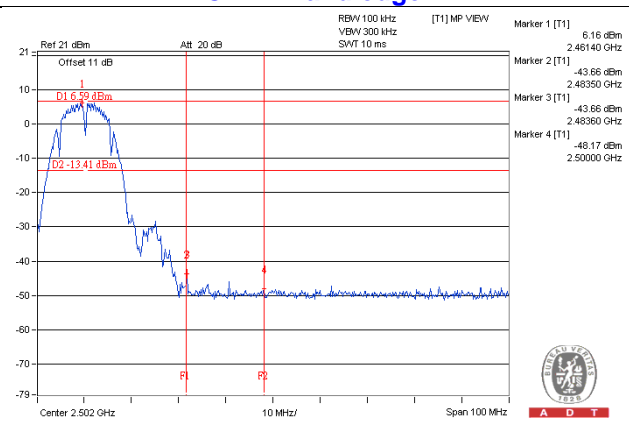
CH 11



CH 1 Band edge

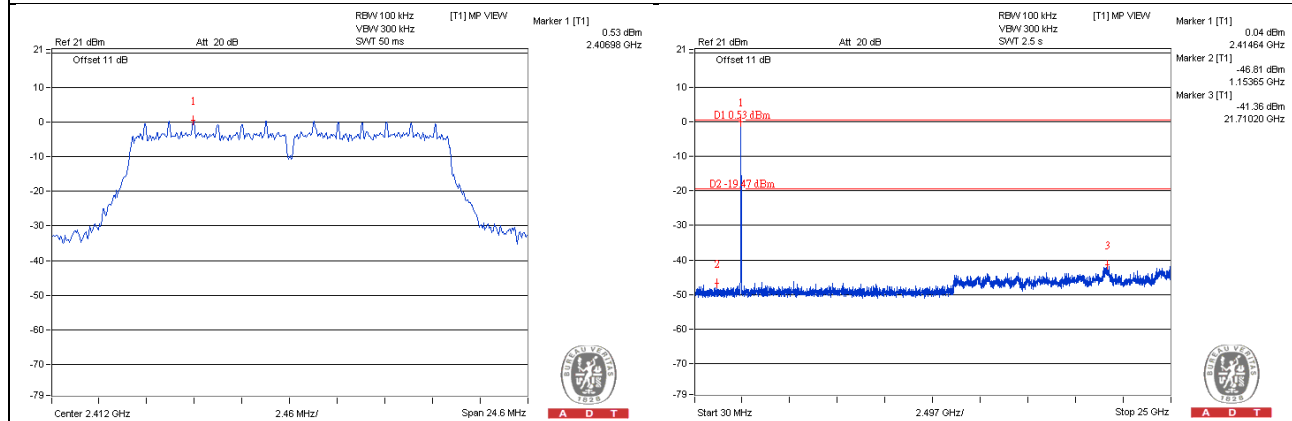


CH 11 Band edge

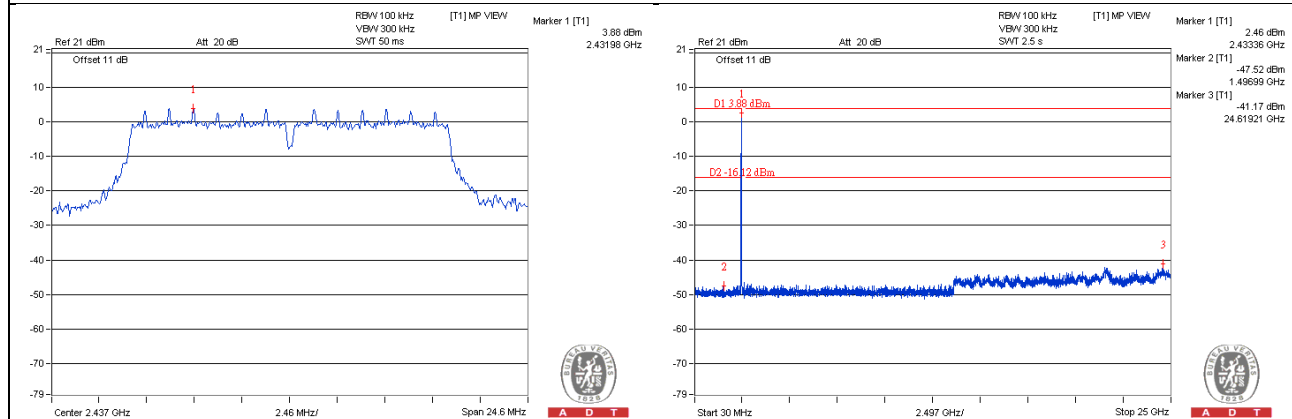


802.11g

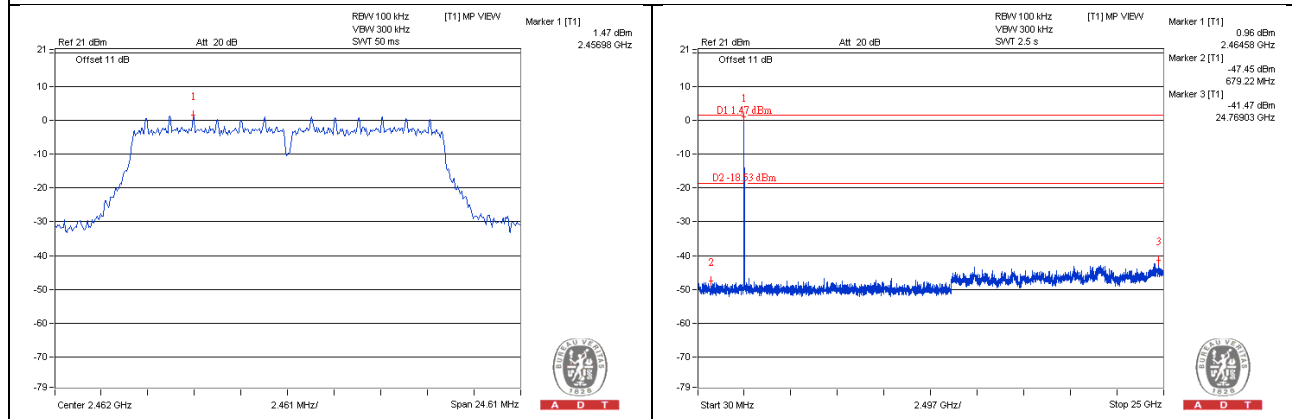
CH 1



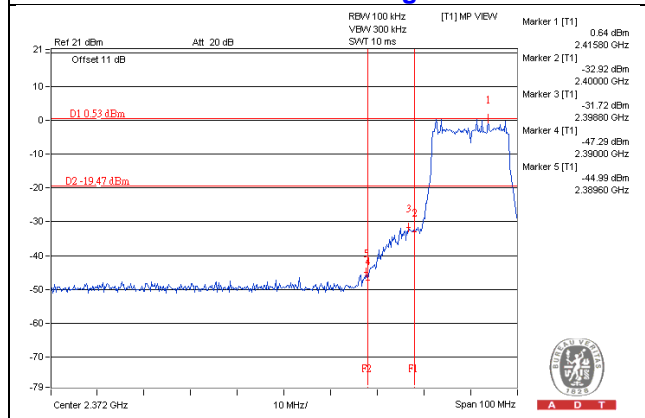
CH 6



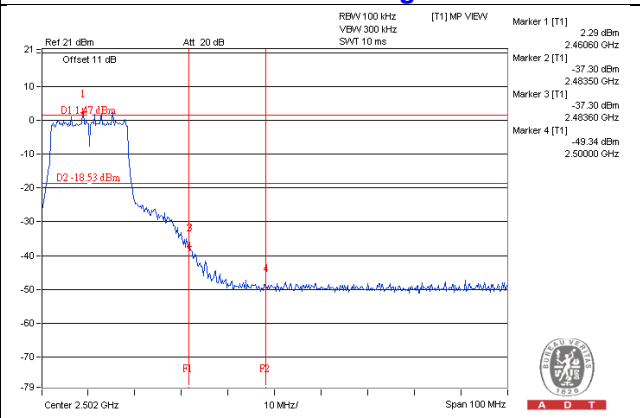
CH 11



CH 1 Band edge

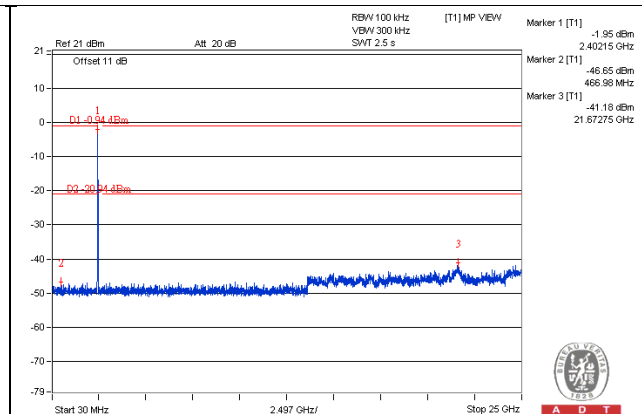
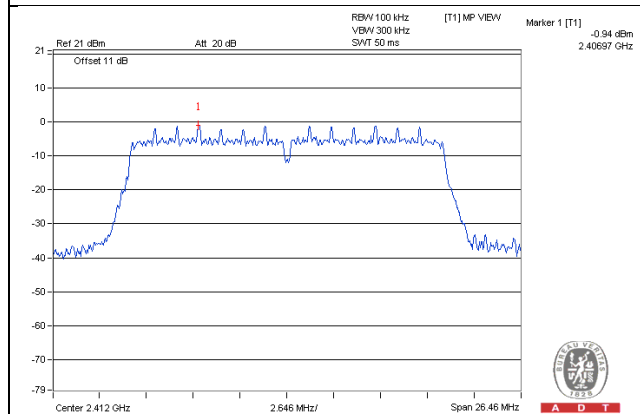


CH 11 Band edge

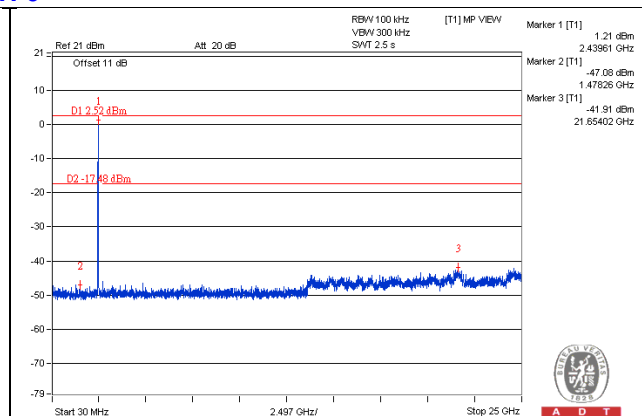
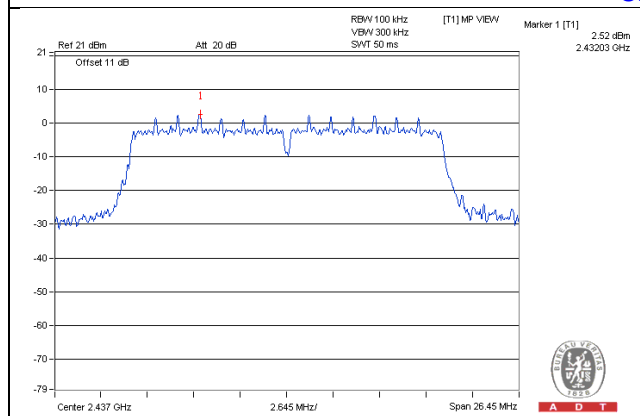


802.11n (HT20)

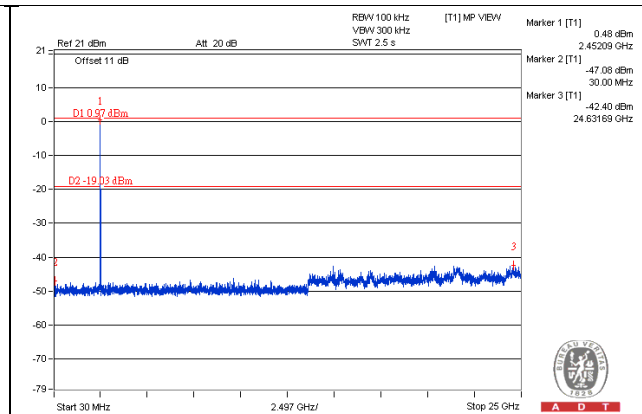
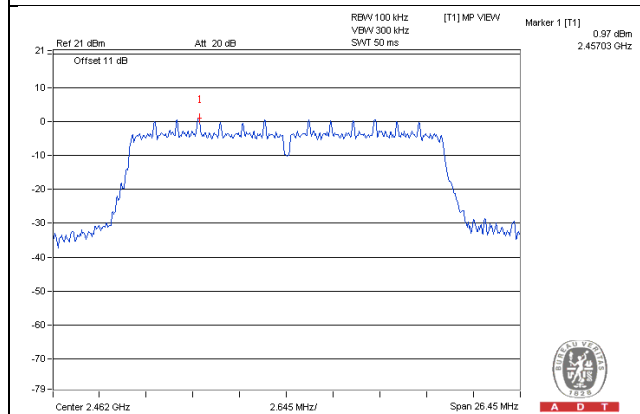
CH 1



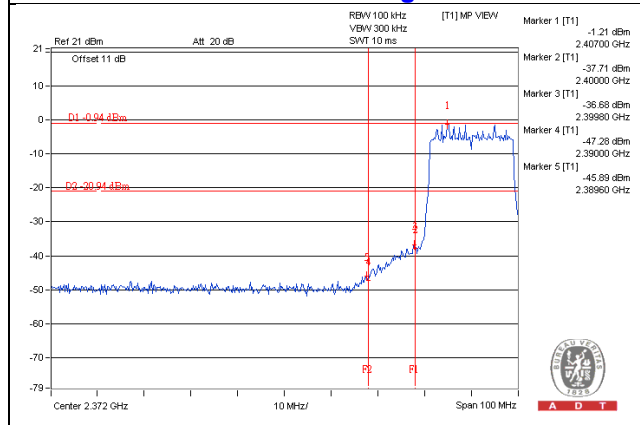
CH 6



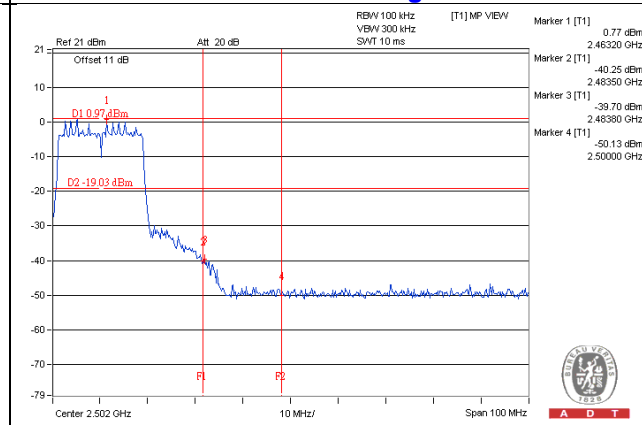
CH 11



CH 1 Band edge



CH 11 Band edge



5 Pictures of Test Arrangements

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

Appendix – 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

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Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab

Tel: 886-3-6668565

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Hwa Ya EMC/RF/Safety Lab

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Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

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

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