

FCC Test Report (15.247, WLAN)

Report No.: RF151022E06

FCC ID: 2AD8UFZCWM2A1

Test Model: WM2A-AC210m

Received Date: Oct. 22, 2015

Test Date: Dec. 02 to 16, 2015

Issued Date: Jan. 21, 2016

Applicant: Nokia Solutions and Networks.OY

Address: Karaportti 3, P.O. Box 226, Nokia Group, Finland.

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Hsin Chu Laboratory

Lab Address: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,
Taiwan R.O.C.

Test Location (1): E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,
Taiwan R.O.C.

Test Location (2): No. 49, Ln. 206, Wende Rd., Shangshan Tsuen, Chiung Lin Hsiang, Hsin
Chu Hsien 307, Taiwan R.O.C.



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Table of Contents

Release Control Record	4
1 Certificate of Conformity	5
2 Summary of Test Results	6
2.1 Measurement Uncertainty	6
2.2 Modification Record	6
3 General Information	7
3.1 General Description of EUT (WLAN, 15.247)	7
3.2 Description of Test Modes	9
3.2.1 Test Mode Applicability and Tested Channel Detail	10
3.3 Duty Cycle of Test Signal	13
3.4 Description of Support Units	14
3.4.1 Configuration of System under Test	14
3.5 General Description of Applied Standards	15
4 Test Types and Results	16
4.1 Radiated Emission and Bandedge Measurement	16
4.1.1 Limits of Radiated Emission and Bandedge Measurement	16
4.1.2 Test Instruments	17
4.1.3 Test Procedures	19
4.1.4 Deviation from Test Standard	19
4.1.5 Test Setup	20
4.1.6 EUT Operating Conditions	21
4.1.7 Test Results (Mode 1)	22
4.1.8 Test Results (Mode 2)	34
4.1.9 Test Results (Mode 3)	46
4.2 Conducted Emission Measurement	59
4.2.1 Limits of Conducted Emission Measurement	59
4.2.2 Test Instruments	59
4.2.3 Test Procedures	60
4.2.4 Deviation from Test Standard	60
4.2.5 Test Setup	60
4.2.6 EUT Operating Conditions	60
4.2.7 Test Results	61
4.3 6dB Bandwidth Measurement	63
4.3.1 Limits of 6dB Bandwidth Measurement	63
4.3.2 Test Setup	63
4.3.3 Test Instruments	63
4.3.4 Test Procedure	63
4.3.5 Deviation from Test Standard	63
4.3.6 EUT Operating Conditions	63
4.3.7 Test Result (Mode 1)	64
4.3.8 Test Result (Mode 2)	66
4.3.9 Test Result (Mode 3)	68
4.4 Conducted Output Power Measurement	70
4.4.1 Limits of Conducted Output Power Measurement	70
4.4.2 Test Setup	70
4.4.3 Test Instruments	70
4.4.4 Test Procedures	70
4.4.5 Deviation from Test Standard	70
4.4.6 EUT Operating Conditions	70
4.4.7 Test Results (Mode 1)	71
4.4.8 Test Results (Mode 2)	72
4.4.9 Test Results (Mode 3)	73
4.5 Power Spectral Density Measurement	74

4.5.1 Limits of Power Spectral Density Measurement	74
4.5.2 Test Setup.....	74
4.5.3 Test Instruments	74
4.5.4 Test Procedure	74
4.5.5 Deviation from Test Standard	74
4.5.6 EUT Operating Condition	74
4.5.7 Test Results (Mode 1).....	75
4.5.8 Test Results (Mode 2).....	77
4.5.9 Test Results (Mode 3).....	79
4.6 Conducted Out of Band Emission Measurement.....	81
4.6.1 Limits of Conducted Out of Band Emission Measurement	81
4.6.2 Test Setup.....	81
4.6.3 Test Instruments	81
4.6.4 Test Procedure	81
4.6.5 Deviation from Test Standard	81
4.6.6 EUT Operating Condition	81
4.6.7 Test Results (Overall Spurious Emission Test – Mode 1)	82
4.6.8 Test Results (Overall Spurious Emission Test – Mode 2)	86
4.6.9 Test Results (Overall Spurious Emission Test – Mode 3)	90
4.6.10 Test Results (Band Edge Test – Mode 1)	98
4.6.11 Test Results (Band Edge Test – Mode 2)	100
4.6.12 Test Results (Band Edge Test – Mode 3)	102
5 Pictures of Test Arrangements.....	106
Appendix – Information on the Testing Laboratories	107



A D T

Release Control Record

Issue No.	Description	Date Issued
RF151022E06	Original release.	Jan. 21, 2016

1 Certificate of Conformity

Product: Wi-Fi AP Module 802.11 ac

Brand: Nokia

Test Model: WM2A-AC210m

Sample Status: MASS-PRODUCTION

Applicant: Nokia Solutions and Networks.OY

Test Date: Dec. 02 to 16, 2015

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:** Jan. 21, 2016
Elsie Hsu / Specialist

Approved by :  , **Date:** Jan. 21, 2016
May Chen / Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (SECTION 15.247)				
FCC Clause	FCC KDB 558074	Test Item	Result	Remarks
15.207	-	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -16.68dB at 0.34531MHz.
15.205 / 15.209 / 15.247(d)	Section 11, 12 &13	Radiated Emissions and Band Edge Measurement	PASS	Meet the requirement of limit. Minimum passing margin is -0.1dB at 2483.50MHz.
15.205 / 15.209 / 15.247(d)	Section 11, 12 &13	Conducted Emissions	PASS	Meet the requirement of limit.
15.247(d)	Section 11, 12 &13	Antenna Port Emission	PASS	Meet the requirement of limit.
15.247(a)(2)	Section 8.1	6dB bandwidth	PASS	Meet the requirement of limit.
15.247(b)	Section 9.2.3.2	Conducted power	PASS	Meet the requirement of limit.
15.247(e)	Section 10.5	Power Spectral Density	PASS	Meet the requirement of limit.
15.203	-	Antenna Requirement	PASS	Antenna connector is MMCX 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	5.31 dB
Radiated Emissions above 1 GHz	1GHz ~6GHz	3.40 dB
	6GHz ~ 18GHz	3.73 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 (WLAN, 15.247)

Product	Wi-Fi AP Module 802.11 ac
Brand	Nokia
Test Model	WM2A-AC210m
Test Sample S/N	F3406027
Hardware Version	AM2
Status of EUT	MASS-PRODUCTION
Power Supply Rating	5.1Vdc 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 300Mbps
Operating Frequency	2.412 ~ 2.462GHz
Number of Channel	11 for 802.11b/g, 802.11n (HT20) 7 for 802.11n (HT40)
Output Power	1TX (Chain 0) Mode: 802.11b: 89.536mW 802.11g: 85.507mW 802.11n (HT20): 86.696mW 802.11n (HT40): 87.096mW 1TX (Chain 1) Mode: 802.11b: 89.125mW 802.11g: 86.497mW 802.11n (HT20): 85.704mW 802.11n (HT40): 88.512mW 2TX Mode: 802.11b: 197.709mW 802.11g: 199.467mW 802.11n (HT20): 179.345mW 802.11n (HT40): 178.996mW
Antenna Type	Refer to note as below
Antenna Connector	Refer to note as below
Accessory Device	NA
Data Cable Supplied	NA

Note:

1. 2.4GHz and 5GHz technology can transmit at same time.

The emission of the simultaneous operation (2.4GHz and 5GHz) has been evaluated and no non-compliance was found.

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

WLAN – 2.4GHz Antenna spec.

Antenna No	PCB Chain No.	Brand	Model	Antenna Type	Gain(dBi)	Frequency (GHz to GHz)
1	U20	Galtronics	NA	PIFA	5.17	2.4~2.4835
2	U21	Galtronics	NA	PIFA	4.27	2.4~2.4835

Cable Spec.

Antenna No	Brand	Model	Connector Type	Cable Loss(dB)	Cable Length (cm)
1	NA	NA	MMCX	0	30.6
2	NA	NA	MMCX	0	9.1

3. The EUT incorporates a MIMO function.

2.4GHz Band			
MODULATION MODE	DATA RATE (MCS)	TX & RX CONFIGURATION	
802.11b	1 ~ 11Mbps	2TX	2RX
802.11g	6 ~ 54Mbps	2TX	2RX
802.11n (HT20)	MCS 0~7	2TX	2RX
	MCS 8~15	2TX	2RX
802.11n (HT40)	MCS 0~7	2TX	2RX
	MCS 8~15	2TX	2RX

4. 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, 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		

7 channels are provided for 802.11n (HT40):

Channel	Frequency	Channel	Frequency
3	2422MHz	7	2442MHz
4	2427MHz	8	2447MHz
5	2432MHz	9	2452MHz
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	√	-	√	√	1TX (Chain 0)
2	√	-	√	√	1TX (Chain 1)
3	√	√	√	√	2TX

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. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on Z-plane.

Radiated Emission Test (Above 1GHz):

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
1	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
	802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	13.5
EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
2	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
	802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	13.5
EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
3	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
	802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	13.5

Radiated Emission Test (Below 1GHz):

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
3	802.11g	1 to 11	11	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.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
3	802.11g	1 to 11	11	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.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
1	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
	802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	13.5
EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
2	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
	802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	13.5

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
3	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
	802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	13.5

Test Condition:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER (SYSTEM)	TESTED BY
RE≥1G	23deg. C, 61%RH	120Vac, 60Hz	Gary Cheng
RE<1G	24deg. C, 66%RH	120Vac, 60Hz	Jyunchun Lin
PLC	23deg. C, 67%RH	120Vac, 60Hz	Andy Ho
APCM	25deg. C, 60%RH	120Vac, 60Hz	Anderson Chen

3.3 Duty Cycle of Test Signal

Duty cycle of test signal is $\geq 98\%$, duty factor is not required.

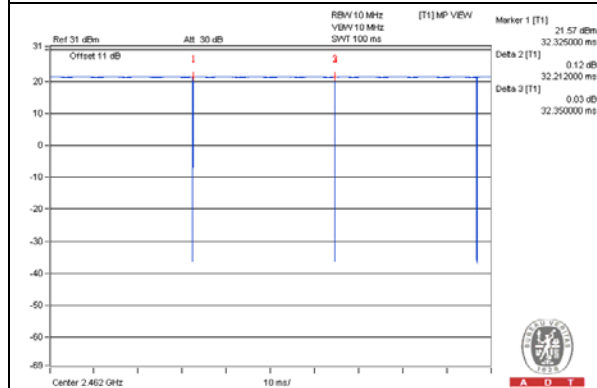
802.11b: Duty cycle = 32.212 ms/32.35 ms = 0.996

802.11g: Duty cycle = 5.348 ms/5.423 ms = 0.986

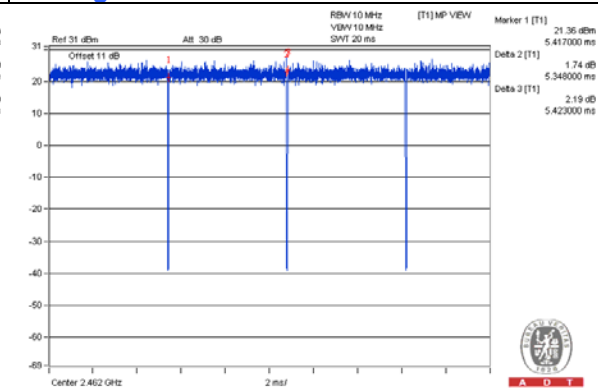
802.11n (HT20): Duty cycle = 4.953 ms/5.016 ms = 0.987

802.11n (HT40): Duty cycle = 2.407 ms/2.456 ms = 0.98

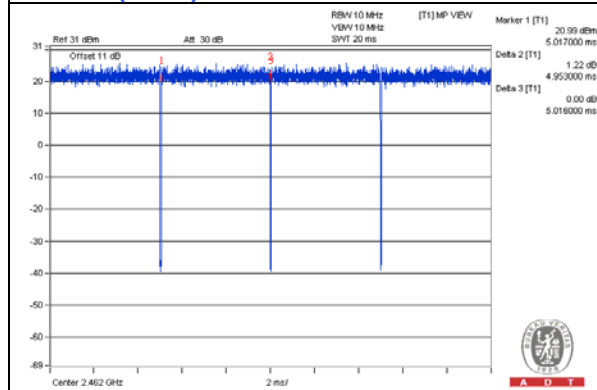
802.11b



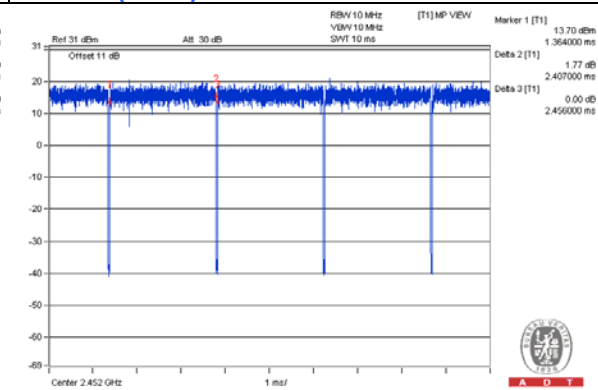
802.11g



802.11n (HT20)



802.11n (HT40)



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.

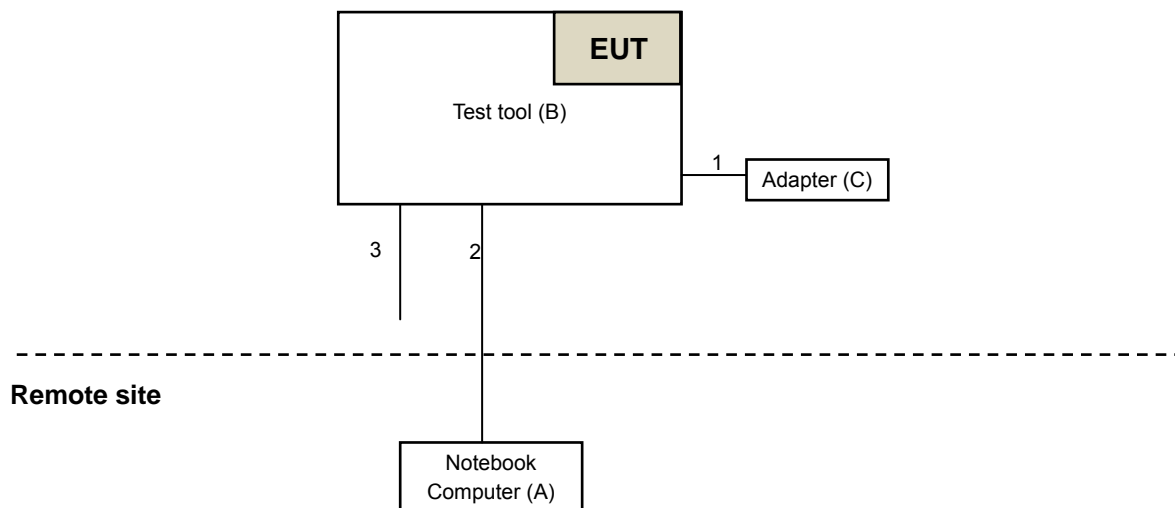
No.	Product	Brand	Model No.	Serial No.	FCC ID	Remark
A	Notebook Computer	DELL	E5430	4YV4VY1	FCC DoC	Provided by Lab
B	Test tool	CIG SHANGHAI	NA	NA	NA	Supplied by Client
C	Adapter	HUAWEI	HW-120150C1W	NA	NA	Supplied by Client

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	DC	1	1.5	No	0	Supplied by Client
2	RJ-45	1	10	No	0	Provided by Lab
3	Console	1	0.7	No	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)

KDB 558074 D01 DTS Meas Guidance v03r04

KDB 662911 D01 Multiple Transmitter Output v02r01

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 30dB below the highest level of the desired power:

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

NOTE:

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

4.1.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY50010156	Aug. 12, 2015	Aug. 11, 2016
Pre-Amplifier ^(*) EMCI	EMC001340	980142	Jan. 13, 2014	Jan. 12, 2016
Loop Antenna ^(*) Electro-Metrics	EM-6879	264	Dec. 16, 2014	Dec. 15, 2016
RF Cable	NA	LOOPCAB-001 LOOPCAB-002	Jan. 18, 2015	Jan. 17, 2016
Pre-Amplifier Mini-Circuits	ZFL-1000VH2 B	AMP-ZFL-07	May 08, 2015	May 07, 2016
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	138	Feb. 03, 2015	Feb. 02, 2016
RF Cable	8D	966-3-1 966-3-2 966-3-3	Apr. 03, 2015	Apr. 02, 2016
Horn_Antenna SCHWARZBECK	BBHA9120-D	9120D-406	Feb. 05, 2015	Feb. 04, 2016
Pre-Amplifier Agilent	8449B	3008A02465	Apr. 06, 2015	Apr. 05, 2016
RF Cable	EMC104-SM- SM-2000 EMC104-SM- SM-5000 EMC104-SM- SM-5000	150317 150321 150322	Mar. 31, 2015	Mar. 30, 2016
Spectrum Analyzer Keysight	N9030A	MY54490520	July 26, 2015	July 25, 2016
Pre-Amplifier EMCI	EMC184045	980143	Jan. 16, 2015	Jan. 15, 2016
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170608	Feb. 05, 2015	Feb. 04, 2016
RF Cable	SUCOFLEX 102	36432/2 36441/2	Jan. 17, 2015	Jan. 16, 2016
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	FSP40	100060	May 08, 2015	May 07, 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 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. 3.
5. The FCC Site Registration No. is 147459
- 6 The CANADA Site Registration No. is 20331-1
- 7 Tested Date: Dec. 02 to 15, 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:

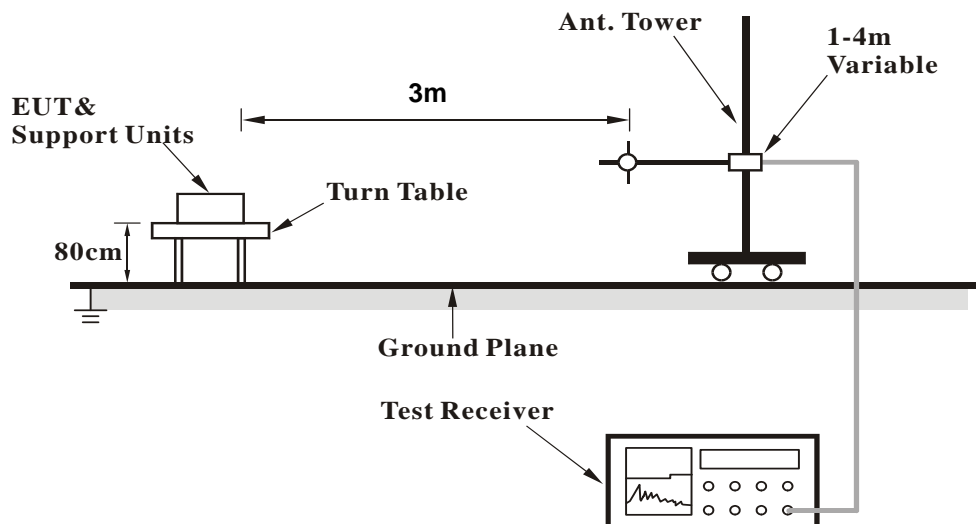
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
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

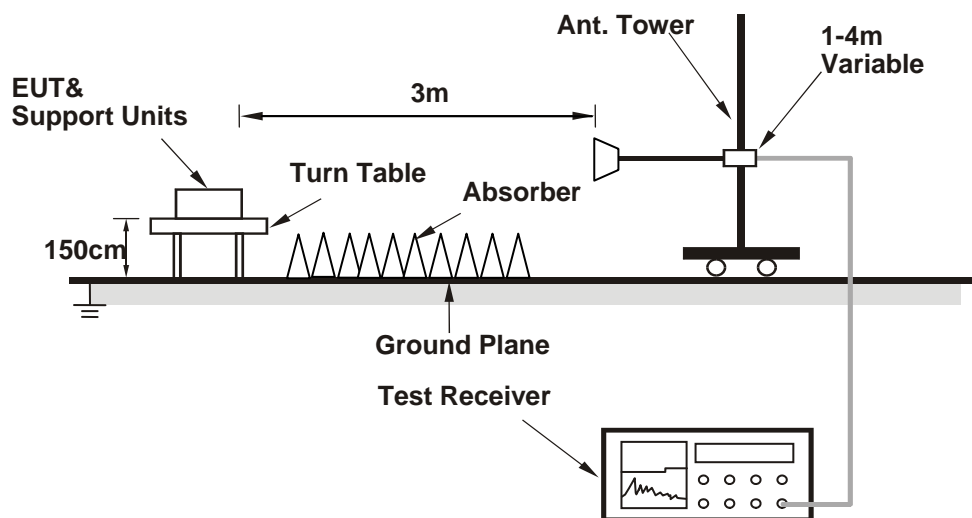
No deviation.

4.1.5 Test Setup

<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 in remote site.
2. The communication partner run test program "art2_v_4_9_815" 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	2387.20	47.8 PK	74.0	-26.2	1.04 H	157	47.98	-0.18
2	2387.20	36.2 AV	54.0	-17.8	1.04 H	157	36.38	-0.18
3	*2412.00	109.7 PK			1.04 H	157	109.80	-0.10
4	*2412.00	107.0 AV			1.04 H	157	107.10	-0.10
5	4824.00	41.5 PK	74.0	-32.5	3.59 H	149	32.74	8.76
6	4824.00	33.2 AV	54.0	-20.8	3.59 H	149	24.44	8.76
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	2387.20	45.6 PK	74.0	-28.4	3.23 V	104	45.78	-0.18
2	2387.20	35.4 AV	54.0	-18.6	3.23 V	104	35.58	-0.18
3	*2412.00	105.8 PK			3.23 V	104	105.90	-0.10
4	*2412.00	103.1 AV			3.23 V	104	103.20	-0.10
5	4824.00	40.6 PK	74.0	-33.4	1.82 V	40	31.84	8.76
6	4824.00	32.5 AV	54.0	-21.5	1.82 V	40	23.74	8.76

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	109.7 PK			1.04 H	143	109.73	-0.03
2	*2437.00	107.0 AV			1.04 H	143	107.03	-0.03
3	4874.00	41.2 PK	74.0	-32.8	3.63 H	139	32.29	8.91
4	4874.00	32.9 AV	54.0	-21.1	3.63 H	139	23.99	8.91
5	7311.00	45.0 PK	74.0	-29.0	1.65 H	162	28.55	16.45
6	7311.00	32.6 AV	54.0	-21.4	1.65 H	162	16.15	16.45
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	*2437.00	105.8 PK			3.29 V	99	105.83	-0.03
2	*2437.00	103.0 AV			3.29 V	99	103.03	-0.03
3	4874.00	40.6 PK	74.0	-33.4	1.86 V	29	31.69	8.91
4	4874.00	32.7 AV	54.0	-21.3	1.86 V	29	23.79	8.91
5	7311.00	45.6 PK	74.0	-28.4	1.55 V	300	29.15	16.45
6	7311.00	32.0 AV	54.0	-22.0	1.55 V	300	15.55	16.45

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	110.4 PK			1.01 H	165	110.35	0.05
2	*2462.00	108.2 AV			1.01 H	165	108.15	0.05
3	2483.50	54.9 PK	74.0	-19.1	1.01 H	165	54.79	0.11
4	2483.50	46.2 AV	54.0	-7.8	1.01 H	165	46.09	0.11
5	4924.00	41.1 PK	74.0	-32.9	3.61 H	142	32.01	9.09
6	4924.00	32.9 AV	54.0	-21.1	3.61 H	142	23.81	9.09
7	7386.00	45.6 PK	74.0	-28.4	1.62 H	165	29.00	16.60
8	7386.00	32.9 AV	54.0	-21.1	1.62 H	165	16.30	16.60
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	106.2 PK			3.19 V	109	106.15	0.05
2	*2462.00	103.3 AV			3.19 V	109	103.25	0.05
3	2483.50	52.7 PK	74.0	-21.3	3.19 V	109	52.59	0.11
4	2483.50	45.0 AV	54.0	-9.0	3.19 V	109	44.89	0.11
5	4924.00	40.3 PK	74.0	-33.7	1.89 V	34	31.21	9.09
6	4924.00	32.6 AV	54.0	-21.4	1.89 V	34	23.51	9.09
7	7386.00	46.2 PK	74.0	-27.8	1.60 V	308	29.60	16.60
8	7386.00	32.5 AV	54.0	-21.5	1.60 V	308	15.90	16.60

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	66.9 PK	74.0	-7.1	1.04 H	158	67.06	-0.16
2	2390.00	49.0 AV	54.0	-5.0	1.04 H	158	49.16	-0.16
3	*2412.00	113.8 PK			1.04 H	158	113.90	-0.10
4	*2412.00	102.2 AV			1.04 H	158	102.30	-0.10
5	4824.00	41.4 PK	74.0	-32.6	3.58 H	163	32.64	8.76
6	4824.00	32.9 AV	54.0	-21.1	3.58 H	163	24.14	8.76
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	67.5 PK	74.0	-6.5	3.10 V	96	67.66	-0.16
2	2390.00	47.6 AV	54.0	-6.4	3.10 V	96	47.76	-0.16
3	*2412.00	109.7 PK			3.10 V	96	109.80	-0.10
4	*2412.00	97.3 AV			3.10 V	96	97.40	-0.10
5	4824.00	40.5 PK	74.0	-33.5	1.78 V	28	31.74	8.76
6	4824.00	32.4 AV	54.0	-21.6	1.78 V	28	23.64	8.76

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	2390.00	49.6 PK	74.0	-24.4	1.15 H	172	49.76	-0.16
2	2390.00	35.8 AV	54.0	-18.2	1.15 H	172	35.96	-0.16
3	*2437.00	110.1 PK			1.15 H	172	110.13	-0.03
4	*2437.00	103.5 AV			1.15 H	172	103.53	-0.03
5	2483.50	52.0 PK	74.0	-22.0	1.15 H	172	51.89	0.11
6	2483.50	38.6 AV	54.0	-15.4	1.15 H	172	38.49	0.11
7	4874.00	40.5 PK	74.0	-33.5	3.67 H	130	31.59	8.91
8	4874.00	32.5 AV	54.0	-21.5	3.67 H	130	23.59	8.91
9	7311.00	45.3 PK	74.0	-28.7	1.60 H	152	28.85	16.45
10	7311.00	32.9 AV	54.0	-21.1	1.60 H	152	16.45	16.45

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	2390.00	47.3 PK	74.0	-26.7	3.00 V	115	47.46	-0.16
2	2390.00	34.4 AV	54.0	-19.6	3.00 V	115	34.56	-0.16
3	*2437.00	106.0 PK			3.00 V	115	106.03	-0.03
4	*2437.00	98.6 AV			3.00 V	115	98.63	-0.03
5	2483.50	49.9 PK	74.0	-24.1	3.00 V	115	49.79	0.11
6	2483.50	37.1 AV	54.0	-16.9	3.00 V	115	36.99	0.11
7	4874.00	40.6 PK	74.0	-33.4	1.85 V	17	31.69	8.91
8	4874.00	32.6 AV	54.0	-21.4	1.85 V	17	23.69	8.91
9	7311.00	45.0 PK	74.0	-29.0	1.53 V	288	28.55	16.45
10	7311.00	31.5 AV	54.0	-22.5	1.53 V	288	15.05	16.45

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	112.7 PK			1.02 H	179	112.65	0.05
2	*2462.00	102.1 AV			1.02 H	179	102.05	0.05
3	2483.50	71.4 PK	74.0	-2.6	1.02 H	179	71.29	0.11
4	2483.50	52.2 AV	54.0	-1.8	1.02 H	179	52.09	0.11
5	4924.00	41.0 PK	74.0	-33.0	3.65 H	146	31.91	9.09
6	4924.00	32.7 AV	54.0	-21.3	3.65 H	146	23.61	9.09
7	7386.00	44.9 PK	74.0	-29.1	1.60 H	155	28.30	16.60
8	7386.00	32.6 AV	54.0	-21.4	1.60 H	155	16.00	16.60
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	108.6 PK			3.03 V	105	108.55	0.05
2	*2462.00	97.2 AV			3.03 V	105	97.15	0.05
3	2483.50	69.2 PK	74.0	-4.8	3.03 V	105	69.09	0.11
4	2483.50	51.0 AV	54.0	-3.0	3.03 V	105	50.89	0.11
5	4924.00	40.6 PK	74.0	-33.4	1.80 V	19	31.51	9.09
6	4924.00	32.8 AV	54.0	-21.2	1.80 V	19	23.71	9.09
7	7386.00	45.5 PK	74.0	-28.5	1.51 V	312	28.90	16.60
8	7386.00	32.1 AV	54.0	-21.9	1.51 V	312	15.50	16.60

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	66.3 PK	74.0	-7.7	1.00 H	155	66.46	-0.16
2	2390.00	48.7 AV	54.0	-5.3	1.00 H	155	48.86	-0.16
3	*2412.00	112.6 PK			1.00 H	155	112.70	-0.10
4	*2412.00	102.1 AV			1.00 H	155	102.20	-0.10
5	4824.00	41.2 PK	74.0	-32.8	3.63 H	149	32.44	8.76
6	4824.00	32.8 AV	54.0	-21.2	3.63 H	149	24.04	8.76

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	64.1 PK	74.0	-9.9	3.09 V	113	64.26	-0.16
2	2390.00	47.2 AV	54.0	-6.8	3.09 V	113	47.36	-0.16
3	*2412.00	108.4 PK			3.09 V	113	108.50	-0.10
4	*2412.00	96.9 AV			3.09 V	113	97.00	-0.10
5	4824.00	40.7 PK	74.0	-33.3	1.79 V	44	31.94	8.76
6	4824.00	32.8 AV	54.0	-21.2	1.79 V	44	24.04	8.76

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	2390.00	50.4 PK	74.0	-23.6	1.05 H	177	50.56	-0.16
2	2390.00	36.2 AV	54.0	-17.8	1.05 H	177	36.36	-0.16
3	*2437.00	113.9 PK			1.05 H	177	113.93	-0.03
4	*2437.00	102.8 AV			1.05 H	177	102.83	-0.03
5	2483.50	57.7 PK	74.0	-16.3	1.05 H	177	57.59	0.11
6	2483.50	39.2 AV	54.0	-14.8	1.05 H	177	39.09	0.11
7	4874.00	41.2 PK	74.0	-32.8	3.58 H	126	32.29	8.91
8	4874.00	33.2 AV	54.0	-20.8	3.58 H	126	24.29	8.91
9	7311.00	45.0 PK	74.0	-29.0	1.63 H	169	28.55	16.45
10	7311.00	32.7 AV	54.0	-21.3	1.63 H	169	16.25	16.45

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	2390.00	47.7 PK	74.0	-26.3	3.12 V	125	47.86	-0.16
2	2390.00	34.9 AV	54.0	-19.1	3.12 V	125	35.06	-0.16
3	*2437.00	109.8 PK			3.12 V	125	109.83	-0.03
4	*2437.00	97.6 AV			3.12 V	125	97.63	-0.03
5	2483.50	55.2 PK	74.0	-18.8	3.12 V	125	55.09	0.11
6	2483.50	37.4 AV	54.0	-16.6	3.12 V	125	37.29	0.11
7	4874.00	40.4 PK	74.0	-33.6	1.92 V	17	31.49	8.91
8	4874.00	32.7 AV	54.0	-21.3	1.92 V	17	23.79	8.91
9	7311.00	45.2 PK	74.0	-28.8	1.57 V	314	28.75	16.45
10	7311.00	31.7 AV	54.0	-22.3	1.57 V	314	15.25	16.45

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	114.4 PK			1.06 H	174	114.35	0.05
2	*2462.00	103.3 AV			1.06 H	174	103.25	0.05
3	2483.50	72.1 PK	74.0	-1.9	1.06 H	174	71.99	0.11
4	2483.50	53.0 AV	54.0	-1.0	1.06 H	174	52.89	0.11
5	4924.00	41.0 PK	74.0	-33.0	3.67 H	140	31.91	9.09
6	4924.00	32.5 AV	54.0	-21.5	3.67 H	140	23.41	9.09
7	7386.00	44.7 PK	74.0	-29.3	1.67 H	177	28.10	16.60
8	7386.00	32.3 AV	54.0	-21.7	1.67 H	177	15.70	16.60

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	110.3 PK			3.13 V	130	110.25	0.05
2	*2462.00	98.1 AV			3.13 V	130	98.05	0.05
3	2483.50	69.8 PK	74.0	-4.2	3.13 V	130	69.69	0.11
4	2483.50	51.7 AV	54.0	-2.3	3.13 V	130	51.59	0.11
5	4924.00	41.3 PK	74.0	-32.7	1.83 V	36	32.21	9.09
6	4924.00	33.1 AV	54.0	-20.9	1.83 V	36	24.01	9.09
7	7386.00	45.6 PK	74.0	-28.4	1.55 V	304	29.00	16.60
8	7386.00	31.8 AV	54.0	-22.2	1.55 V	304	15.20	16.60

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 (HT40)

CHANNEL	TX Channel 3	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	68.2 PK	74.0	-5.8	1.12 H	164	68.36	-0.16
2	2390.00	53.8 AV	54.0	-0.2	1.12 H	164	53.96	-0.16
3	*2422.00	110.4 PK			1.12 H	164	110.48	-0.08
4	*2422.00	99.1 AV			1.12 H	164	99.18	-0.08
5	4844.00	41.2 PK	74.0	-32.8	3.69 H	145	32.38	8.82
6	4844.00	33.0 AV	54.0	-21.0	3.69 H	145	24.18	8.82
7	7266.00	45.1 PK	74.0	-28.9	1.66 H	163	28.49	16.61
8	7266.00	32.9 AV	54.0	-21.1	1.66 H	163	16.29	16.61
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	66.0 PK	74.0	-8.0	3.12 V	141	66.16	-0.16
2	2390.00	52.1 AV	54.0	-1.9	3.12 V	141	52.26	-0.16
3	*2422.00	106.3 PK			3.12 V	141	106.38	-0.08
4	*2422.00	93.9 AV			3.12 V	141	93.98	-0.08
5	4844.00	40.6 PK	74.0	-33.4	1.85 V	15	31.78	8.82
6	4844.00	32.8 AV	54.0	-21.2	1.85 V	15	23.98	8.82
7	7266.00	46.0 PK	74.0	-28.0	1.58 V	298	29.39	16.61
8	7266.00	32.2 AV	54.0	-21.8	1.58 V	298	15.59	16.61

REMARKS:

- Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
- The other emission levels were very low against the limit.
- Margin value = Emission Level – Limit value
- " * ": 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	2390.00	61.3 PK	74.0	-12.7	1.18 H	170	61.46	-0.16
2	2390.00	45.9 AV	54.0	-8.1	1.18 H	170	46.06	-0.16
3	*2437.00	111.6 PK			1.18 H	170	111.63	-0.03
4	*2437.00	100.3 AV			1.18 H	170	100.33	-0.03
5	2483.50	65.0 PK	74.0	-9.0	1.18 H	170	64.89	0.11
6	2483.50	46.7 AV	54.0	-7.3	1.18 H	170	46.59	0.11
7	4874.00	41.5 PK	74.0	-32.5	3.59 H	130	32.59	8.91
8	4874.00	33.1 AV	54.0	-20.9	3.59 H	130	24.19	8.91
9	7311.00	44.9 PK	74.0	-29.1	1.66 H	172	28.45	16.45
10	7311.00	32.7 AV	54.0	-21.3	1.66 H	172	16.25	16.45

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	2390.00	58.7 PK	74.0	-15.3	3.11 V	130	58.86	-0.16
2	2390.00	44.1 AV	54.0	-9.9	3.11 V	130	44.26	-0.16
3	*2437.00	107.5 PK			3.11 V	130	107.53	-0.03
4	*2437.00	95.1 AV			3.11 V	130	95.13	-0.03
5	2483.50	62.5 PK	74.0	-11.5	3.11 V	130	62.39	0.11
6	2483.50	45.1 AV	54.0	-8.9	3.11 V	130	44.99	0.11
7	4874.00	41.0 PK	74.0	-33.0	1.85 V	19	32.09	8.91
8	4874.00	33.1 AV	54.0	-20.9	1.85 V	19	24.19	8.91
9	7311.00	46.0 PK	74.0	-28.0	1.49 V	290	29.55	16.45
10	7311.00	32.4 AV	54.0	-21.6	1.49 V	290	15.95	16.45

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 9	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	*2452.00	111.1 PK			1.18 H	171	111.08	0.02
2	*2452.00	100.1 AV			1.18 H	171	100.08	0.02
3	2483.50	73.5 PK	74.0	-0.5	1.18 H	171	73.39	0.11
4	2483.50	52.0 AV	54.0	-2.0	1.18 H	171	51.89	0.11
5	4904.00	41.0 PK	74.0	-33.0	3.65 H	150	31.99	9.01
6	4904.00	32.7 AV	54.0	-21.3	3.65 H	150	23.69	9.01
7	7356.00	44.8 PK	74.0	-29.2	1.70 H	147	28.25	16.55
8	7356.00	32.1 AV	54.0	-21.9	1.70 H	147	15.55	16.55

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	*2452.00	107.0 PK			3.16 V	141	106.98	0.02
2	*2452.00	94.7 AV			3.16 V	141	94.68	0.02
3	2483.50	71.6 PK	74.0	-2.4	3.16 V	141	71.49	0.11
4	2483.50	50.3 AV	54.0	-3.7	3.16 V	141	50.19	0.11
5	4904.00	40.7 PK	74.0	-33.3	1.90 V	31	31.69	9.01
6	4904.00	32.6 AV	54.0	-21.4	1.90 V	31	23.59	9.01
7	7356.00	45.4 PK	74.0	-28.6	1.55 V	297	28.85	16.55
8	7356.00	31.9 AV	54.0	-22.1	1.55 V	297	15.35	16.55

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.

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	2387.20	49.4 PK	74.0	-24.6	2.39 H	356	49.58	-0.18
2	2387.20	39.2 AV	54.0	-14.8	2.39 H	356	39.38	-0.18
3	*2412.00	110.1 PK			2.39 H	356	110.20	-0.10
4	*2412.00	107.7 AV			2.39 H	356	107.80	-0.10
5	4824.00	41.2 PK	74.0	-32.8	3.63 H	159	32.44	8.76
6	4824.00	33.1 AV	54.0	-20.9	3.63 H	159	24.34	8.76
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	2387.20	47.2 PK	74.0	-26.8	3.98 V	106	47.38	-0.18
2	2387.20	37.1 AV	54.0	-16.9	3.98 V	106	37.28	-0.18
3	*2412.00	106.4 PK			3.98 V	106	106.50	-0.10
4	*2412.00	104.1 AV			3.98 V	106	104.20	-0.10
5	4824.00	40.3 PK	74.0	-33.7	1.87 V	27	31.54	8.76
6	4824.00	32.1 AV	54.0	-21.9	1.87 V	27	23.34	8.76

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	109.7 PK			2.43 H	352	109.73	-0.03
2	*2437.00	107.5 AV			2.43 H	352	107.53	-0.03
3	4874.00	40.7 PK	74.0	-33.3	3.65 H	146	31.79	8.91
4	4874.00	32.6 AV	54.0	-21.4	3.65 H	146	23.69	8.91
5	7311.00	45.0 PK	74.0	-29.0	1.68 H	150	28.55	16.45
6	7311.00	32.9 AV	54.0	-21.1	1.68 H	150	16.45	16.45
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	*2437.00	105.9 PK			3.92 V	93	105.93	-0.03
2	*2437.00	103.8 AV			3.92 V	93	103.83	-0.03
3	4874.00	40.3 PK	74.0	-33.7	1.86 V	45	31.39	8.91
4	4874.00	32.5 AV	54.0	-21.5	1.86 V	45	23.59	8.91
5	7311.00	45.4 PK	74.0	-28.6	1.57 V	288	28.95	16.45
6	7311.00	31.8 AV	54.0	-22.2	1.57 V	288	15.35	16.45

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	111.4 PK			2.62 H	360	111.35	0.05
2	*2462.00	109.0 AV			2.62 H	360	108.95	0.05
3	2483.50	53.2 PK	74.0	-20.8	2.62 H	360	53.09	0.11
4	2483.50	42.6 AV	54.0	-11.4	2.62 H	360	42.49	0.11
5	4924.00	41.0 PK	74.0	-33.0	3.65 H	149	31.91	9.09
6	4924.00	32.7 AV	54.0	-21.3	3.65 H	149	23.61	9.09
7	7386.00	45.2 PK	74.0	-28.8	1.74 H	148	28.60	16.60
8	7386.00	33.2 AV	54.0	-20.8	1.74 H	148	16.60	16.60
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	107.0 PK			3.23 V	98	106.95	0.05
2	*2462.00	103.3 AV			3.23 V	98	103.25	0.05
3	2483.50	50.9 PK	74.0	-23.1	3.23 V	98	50.79	0.11
4	2483.50	41.1 AV	54.0	-12.9	3.23 V	98	40.99	0.11
5	4924.00	40.7 PK	74.0	-33.3	1.95 V	45	31.61	9.09
6	4924.00	32.8 AV	54.0	-21.2	1.95 V	45	23.71	9.09
7	7386.00	45.9 PK	74.0	-28.1	1.58 V	295	29.30	16.60
8	7386.00	32.3 AV	54.0	-21.7	1.58 V	295	15.70	16.60

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	69.1 PK	74.0	-4.9	2.34 H	356	69.26	-0.16
2	2390.00	49.3 AV	54.0	-4.7	2.34 H	356	49.46	-0.16
3	*2412.00	114.7 PK			2.34 H	356	114.80	-0.10
4	*2412.00	103.4 AV			2.34 H	356	103.50	-0.10
5	4824.00	40.6 PK	74.0	-33.4	3.66 H	165	31.84	8.76
6	4824.00	32.7 AV	54.0	-21.3	3.66 H	165	23.94	8.76
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	66.8 PK	74.0	-7.2	3.20 V	101	66.96	-0.16
2	2390.00	47.9 AV	54.0	-6.1	3.20 V	101	48.06	-0.16
3	*2412.00	110.3 PK			3.20 V	101	110.40	-0.10
4	*2412.00	97.7 AV			3.20 V	101	97.80	-0.10
5	4824.00	39.9 PK	74.0	-34.1	1.86 V	28	31.14	8.76
6	4824.00	31.9 AV	54.0	-22.1	1.86 V	28	23.14	8.76

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	2312.00	53.8 PK	74.0	-20.2	2.72 H	360	54.25	-0.45
2	2312.00	38.4 AV	54.0	-15.6	2.72 H	360	38.85	-0.45
3	*2437.00	115.4 PK			2.72 H	360	115.43	-0.03
4	*2437.00	104.2 AV			2.72 H	360	104.23	-0.03
5	2483.50	52.6 PK	74.0	-21.4	2.72 H	360	52.49	0.11
6	2483.50	37.9 AV	54.0	-16.1	2.72 H	360	37.79	0.11
7	4874.00	40.4 PK	74.0	-33.6	3.66 H	152	31.49	8.91
8	4874.00	32.4 AV	54.0	-21.6	3.66 H	152	23.49	8.91
9	7311.00	45.4 PK	74.0	-28.6	1.71 H	160	28.95	16.45
10	7311.00	33.1 AV	54.0	-20.9	1.71 H	160	16.65	16.45

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	2312.00	51.4 PK	74.0	-22.6	3.11 V	89	51.85	-0.45
2	2312.00	37.0 AV	54.0	-17.0	3.11 V	89	37.45	-0.45
3	*2437.00	110.9 PK			3.11 V	89	110.93	-0.03
4	*2437.00	98.5 AV			3.11 V	89	98.53	-0.03
5	2483.50	50.1 PK	74.0	-23.9	1.00 V	0	49.99	0.11
6	2483.50	36.2 AV	54.0	-17.8	1.00 V	0	36.09	0.11
7	4874.00	40.2 PK	74.0	-33.8	1.82 V	29	31.29	8.91
8	4874.00	32.2 AV	54.0	-21.8	1.82 V	29	23.29	8.91
9	7311.00	46.0 PK	74.0	-28.0	1.51 V	295	29.55	16.45
10	7311.00	32.2 AV	54.0	-21.8	1.51 V	295	15.75	16.45

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	115.2 PK			2.67 H	23	115.15	0.05
2	*2462.00	103.3 AV			2.67 H	23	103.25	0.05
3	2483.50	72.4 PK	74.0	-1.6	2.67 H	23	72.29	0.11
4	2483.50	51.2 AV	54.0	-2.8	2.67 H	23	51.09	0.11
5	4924.00	40.5 PK	74.0	-33.5	3.63 H	148	31.41	9.09
6	4924.00	32.2 AV	54.0	-21.8	3.63 H	148	23.11	9.09
7	7386.00	44.8 PK	74.0	-29.2	1.64 H	159	28.20	16.60
8	7386.00	32.7 AV	54.0	-21.3	1.64 H	159	16.10	16.60
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	110.7 PK			3.17 V	86	110.65	0.05
2	*2462.00	97.8 AV			3.17 V	86	97.75	0.05
3	2483.50	70.0 PK	74.0	-4.0	3.17 V	86	69.89	0.11
4	2483.50	49.8 AV	54.0	-4.2	3.17 V	86	49.69	0.11
5	4924.00	40.2 PK	74.0	-33.8	1.86 V	38	31.11	9.09
6	4924.00	32.4 AV	54.0	-21.6	1.86 V	38	23.31	9.09
7	7386.00	45.9 PK	74.0	-28.1	1.52 V	282	29.30	16.60
8	7386.00	32.1 AV	54.0	-21.9	1.52 V	282	15.50	16.60

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	68.7 PK	74.0	-5.3	2.37 H	358	68.86	-0.16
2	2390.00	52.2 AV	54.0	-1.8	2.37 H	358	52.36	-0.16
3	*2412.00	114.8 PK			2.37 H	358	114.90	-0.10
4	*2412.00	102.9 AV			2.37 H	358	103.00	-0.10
5	4824.00	41.1 PK	74.0	-32.9	3.65 H	151	32.34	8.76
6	4824.00	33.2 AV	54.0	-20.8	3.65 H	151	24.44	8.76
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	66.2 PK	74.0	-7.8	3.09 V	101	66.36	-0.16
2	2390.00	50.8 AV	54.0	-3.2	3.09 V	101	50.96	-0.16
3	*2412.00	110.3 PK			3.09 V	101	110.40	-0.10
4	*2412.00	97.2 AV			3.09 V	101	97.30	-0.10
5	4824.00	40.7 PK	74.0	-33.3	1.88 V	42	31.94	8.76
6	4824.00	32.4 AV	54.0	-21.6	1.88 V	42	23.64	8.76

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	2390.00	51.1 PK	74.0	-22.9	2.40 H	360	51.26	-0.16
2	2390.00	36.4 AV	54.0	-17.6	2.40 H	360	36.56	-0.16
3	*2437.00	115.8 PK			2.40 H	360	115.83	-0.03
4	*2437.00	104.1 AV			2.40 H	360	104.13	-0.03
5	2483.50	55.6 PK	74.0	-18.4	2.40 H	360	55.49	0.11
6	2483.50	38.4 AV	54.0	-15.6	2.40 H	360	38.29	0.11
7	4874.00	40.3 PK	74.0	-33.7	3.65 H	147	31.39	8.91
8	4874.00	32.1 AV	54.0	-21.9	3.65 H	147	23.19	8.91
9	7311.00	44.9 PK	74.0	-29.1	1.68 H	152	28.45	16.45
10	7311.00	32.9 AV	54.0	-21.1	1.68 H	152	16.45	16.45

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	2390.00	48.6 PK	74.0	-25.4	2.98 V	121	48.76	-0.16
2	2390.00	34.0 AV	54.0	-20.0	2.98 V	121	34.16	-0.16
3	*2437.00	111.4 PK			2.98 V	121	111.43	-0.03
4	*2437.00	98.5 AV			2.98 V	121	98.53	-0.03
5	2483.50	53.1 PK	74.0	-20.9	2.98 V	121	52.99	0.11
6	2483.50	36.1 AV	54.0	-17.9	2.98 V	121	35.99	0.11
7	4874.00	40.8 PK	74.0	-33.2	1.81 V	53	31.89	8.91
8	4874.00	32.9 AV	54.0	-21.1	1.81 V	53	23.99	8.91
9	7311.00	45.8 PK	74.0	-28.2	1.58 V	297	29.35	16.45
10	7311.00	32.1 AV	54.0	-21.9	1.58 V	297	15.65	16.45

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	115.1 PK			2.60 H	360	115.05	0.05
2	*2462.00	103.6 AV			2.60 H	360	103.55	0.05
3	2483.50	73.2 PK	74.0	-0.8	2.60 H	360	73.09	0.11
4	2483.50	52.8 AV	54.0	-1.2	2.60 H	360	52.69	0.11
5	4924.00	41.0 PK	74.0	-33.0	3.64 H	152	31.91	9.09
6	4924.00	33.1 AV	54.0	-20.9	3.64 H	152	24.01	9.09
7	7386.00	45.0 PK	74.0	-29.0	1.65 H	151	28.40	16.60
8	7386.00	32.9 AV	54.0	-21.1	1.65 H	151	16.30	16.60
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	110.7 PK			3.00 V	99	110.65	0.05
2	*2462.00	98.0 AV			3.00 V	99	97.95	0.05
3	2483.50	70.7 PK	74.0	-3.3	3.00 V	99	70.59	0.11
4	2483.50	51.2 AV	54.0	-2.8	3.00 V	99	51.09	0.11
5	4924.00	40.8 PK	74.0	-33.2	1.88 V	36	31.71	9.09
6	4924.00	32.8 AV	54.0	-21.2	1.88 V	36	23.71	9.09
7	7386.00	45.0 PK	74.0	-29.0	1.53 V	290	28.40	16.60
8	7386.00	31.6 AV	54.0	-22.4	1.53 V	290	15.00	16.60

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 (HT40)

CHANNEL	TX Channel 3	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	65.4 PK	74.0	-8.6	2.36 H	360	65.56	-0.16
2	2390.00	50.2 AV	54.0	-3.8	2.36 H	360	50.36	-0.16
3	*2422.00	113.9 PK			2.36 H	360	113.98	-0.08
4	*2422.00	101.8 AV			2.36 H	360	101.88	-0.08
5	4844.00	40.8 PK	74.0	-33.2	3.64 H	152	31.98	8.82
6	4844.00	32.9 AV	54.0	-21.1	3.64 H	152	24.08	8.82
7	7266.00	44.6 PK	74.0	-29.4	1.68 H	142	27.99	16.61
8	7266.00	32.5 AV	54.0	-21.5	1.68 H	142	15.89	16.61
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	62.7 PK	74.0	-11.3	3.06 V	88	62.86	-0.16
2	2390.00	48.8 AV	54.0	-5.2	3.06 V	88	48.96	-0.16
3	*2422.00	108.5 PK			3.06 V	88	108.58	-0.08
4	*2422.00	96.4 AV			3.06 V	88	96.48	-0.08
5	4844.00	40.1 PK	74.0	-33.9	1.87 V	58	31.28	8.82
6	4844.00	32.2 AV	54.0	-21.8	1.87 V	58	23.38	8.82
7	7266.00	45.7 PK	74.0	-28.3	1.55 V	295	29.09	16.61
8	7266.00	32.0 AV	54.0	-22.0	1.55 V	295	15.39	16.61

REMARKS:

- Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
- The other emission levels were very low against the limit.
- Margin value = Emission Level – Limit value
- " * ": 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	2390.00	57.4 PK	74.0	-16.6	2.35 H	360	57.56	-0.16
2	2390.00	43.1 AV	54.0	-10.9	2.35 H	360	43.26	-0.16
3	*2437.00	112.9 PK			2.35 H	360	112.93	-0.03
4	*2437.00	100.6 AV			2.35 H	360	100.63	-0.03
5	2483.50	69.3 PK	74.0	-4.7	2.35 H	360	69.19	0.11
6	2483.50	48.5 AV	54.0	-5.5	2.35 H	360	48.39	0.11
7	4874.00	41.1 PK	74.0	-32.9	3.69 H	155	32.19	8.91
8	4874.00	32.7 AV	54.0	-21.3	3.69 H	155	23.79	8.91
9	7311.00	44.5 PK	74.0	-29.5	1.66 H	166	28.05	16.45
10	7311.00	32.6 AV	54.0	-21.4	1.66 H	166	16.15	16.45

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	2390.00	55.1 PK	74.0	-18.9	3.01 V	97	55.26	-0.16
2	2390.00	40.4 AV	54.0	-13.6	3.01 V	97	40.56	-0.16
3	*2437.00	107.6 PK			3.01 V	97	107.63	-0.03
4	*2437.00	95.2 AV			3.01 V	97	95.23	-0.03
5	2483.50	66.7 PK	74.0	-7.3	3.01 V	97	66.59	0.11
6	2483.50	46.8 AV	54.0	-7.2	3.01 V	97	46.69	0.11
7	4874.00	40.6 PK	74.0	-33.4	1.84 V	44	31.69	8.91
8	4874.00	32.8 AV	54.0	-21.2	1.84 V	44	23.89	8.91
9	7311.00	45.3 PK	74.0	-28.7	1.53 V	282	28.85	16.45
10	7311.00	31.8 AV	54.0	-22.2	1.53 V	282	15.35	16.45

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 9	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	*2452.00	112.3 PK			2.55 H	360	112.28	0.02
2	*2452.00	100.4 AV			2.55 H	360	100.38	0.02
3	2483.50	73.9 PK	74.0	-0.1	2.55 H	360	73.79	0.11
4	2483.50	53.9 AV	54.0	-0.1	2.55 H	360	53.79	0.11
5	4904.00	40.5 PK	74.0	-33.5	3.65 H	130	31.49	9.01
6	4904.00	32.4 AV	54.0	-21.6	3.65 H	130	23.39	9.01
7	7356.00	44.6 PK	74.0	-29.4	1.73 H	136	28.05	16.55
8	7356.00	32.5 AV	54.0	-21.5	1.73 H	136	15.95	16.55
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	*2452.00	107.0 PK			2.88 V	105	106.98	0.02
2	*2452.00	95.0 AV			2.88 V	105	94.98	0.02
3	2483.50	71.4 PK	74.0	-2.6	2.88 V	105	71.29	0.11
4	2483.50	52.2 AV	54.0	-1.8	2.88 V	105	52.09	0.11
5	4904.00	40.2 PK	74.0	-33.8	1.82 V	59	31.19	9.01
6	4904.00	32.2 AV	54.0	-21.8	1.82 V	59	23.19	9.01
7	7356.00	44.8 PK	74.0	-29.2	1.57 V	275	28.25	16.55
8	7356.00	31.5 AV	54.0	-22.5	1.57 V	275	14.95	16.55

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.

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	2387.20	59.5 PK	74.0	-14.5	1.31 H	67	59.68	-0.18
2	2387.20	51.7 AV	54.0	-2.3	1.31 H	67	51.88	-0.18
3	*2412.00	119.6 PK			1.31 H	67	119.70	-0.10
4	*2412.00	116.9 AV			1.31 H	67	117.00	-0.10
5	4824.00	49.4 PK	74.0	-24.6	1.29 H	313	40.64	8.76
6	4824.00	36.9 AV	54.0	-17.1	1.29 H	313	28.14	8.76
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	53.7 PK	74.0	-20.3	1.13 V	270	53.86	-0.16
2	2390.00	46.5 AV	54.0	-7.5	1.13 V	270	46.66	-0.16
3	*2412.00	112.3 PK			1.13 V	270	112.40	-0.10
4	*2412.00	110.1 AV			1.13 V	270	110.20	-0.10
5	4824.00	54.8 PK	74.0	-19.2	1.36 V	24	46.04	8.76
6	4824.00	46.4 AV	54.0	-7.6	1.36 V	24	37.64	8.76

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	118.6 PK			1.50 H	214	118.63	-0.03
2	*2437.00	116.6 AV			1.50 H	214	116.63	-0.03
3	4874.00	49.6 PK	74.0	-24.4	1.30 H	340	40.69	8.91
4	4874.00	37.0 AV	54.0	-17.0	1.30 H	340	28.09	8.91
5	7311.00	44.6 PK	74.0	-29.4	1.35 H	56	28.15	16.45
6	7311.00	31.8 AV	54.0	-22.2	1.35 H	56	15.35	16.45
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	*2437.00	111.3 PK			1.15 V	281	111.33	-0.03
2	*2437.00	109.7 AV			1.15 V	281	109.73	-0.03
3	4874.00	54.4 PK	74.0	-19.6	1.37 V	25	45.49	8.91
4	4874.00	46.5 AV	54.0	-7.5	1.37 V	25	37.59	8.91
5	7311.00	46.2 PK	74.0	-27.8	1.67 V	308	29.75	16.45
6	7311.00	32.5 AV	54.0	-21.5	1.67 V	308	16.05	16.45

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	119.2 PK			2.91 H	360	119.15	0.05
2	*2462.00	117.1 AV			2.91 H	360	117.05	0.05
3	2483.50	58.0 PK	74.0	-16.0	2.91 H	360	57.89	0.11
4	2483.50	50.5 AV	54.0	-3.5	2.91 H	360	50.39	0.11
5	4924.00	49.4 PK	74.0	-24.6	1.27 H	326	40.31	9.09
6	4924.00	36.8 AV	54.0	-17.2	1.27 H	326	27.71	9.09
7	7386.00	45.2 PK	74.0	-28.8	1.40 H	54	28.60	16.60
8	7386.00	32.3 AV	54.0	-21.7	1.40 H	54	15.70	16.60
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	111.8 PK			1.12 V	284	111.75	0.05
2	*2462.00	109.8 AV			1.12 V	284	109.75	0.05
3	2483.50	52.2 PK	74.0	-21.8	1.12 V	284	52.09	0.11
4	2483.50	45.3 AV	54.0	-8.7	1.12 V	284	45.19	0.11
5	4924.00	54.3 PK	74.0	-19.7	1.39 V	18	45.21	9.09
6	4924.00	46.2 AV	54.0	-7.8	1.39 V	18	37.11	9.09
7	7386.00	45.7 PK	74.0	-28.3	1.63 V	317	29.10	16.60
8	7386.00	32.2 AV	54.0	-21.8	1.63 V	317	15.60	16.60

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	71.6 PK	74.0	-2.4	2.51 H	161	71.76	-0.16
2	2390.00	53.5 AV	54.0	-0.5	2.51 H	161	53.66	-0.16
3	*2412.00	114.5 PK			2.51 H	161	114.60	-0.10
4	*2412.00	105.0 AV			2.51 H	161	105.10	-0.10
5	4824.00	48.6 PK	74.0	-25.4	1.26 H	317	39.84	8.76
6	4824.00	36.3 AV	54.0	-17.7	1.26 H	317	27.54	8.76
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	65.8 PK	74.0	-8.2	1.20 V	279	65.96	-0.16
2	2390.00	48.1 AV	54.0	-5.9	1.20 V	279	48.26	-0.16
3	*2412.00	107.1 PK			1.20 V	279	107.20	-0.10
4	*2412.00	97.7 AV			1.20 V	279	97.80	-0.10
5	4824.00	54.6 PK	74.0	-19.4	1.45 V	35	45.84	8.76
6	4824.00	46.6 AV	54.0	-7.4	1.45 V	35	37.84	8.76

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	2390.00	65.1 PK	74.0	-8.9	1.44 H	160	65.26	-0.16
2	2390.00	50.1 AV	54.0	-3.9	1.44 H	160	50.26	-0.16
3	*2437.00	126.5 PK			1.44 H	160	126.53	-0.03
4	*2437.00	116.0 AV			1.44 H	160	116.03	-0.03
5	4874.00	49.3 PK	74.0	-24.7	1.23 H	330	40.39	8.91
6	4874.00	36.6 AV	54.0	-17.4	1.23 H	330	27.69	8.91
7	7311.00	44.5 PK	74.0	-29.5	1.39 H	63	28.05	16.45
8	7311.00	31.9 AV	54.0	-22.1	1.39 H	63	15.45	16.45
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	2390.00	59.3 PK	74.0	-14.7	1.16 V	281	59.46	-0.16
2	2390.00	44.9 AV	54.0	-9.1	1.16 V	281	45.06	-0.16
3	*2437.00	119.1 PK			1.16 V	281	119.13	-0.03
4	*2437.00	108.7 AV			1.16 V	281	108.73	-0.03
5	4874.00	54.7 PK	74.0	-19.3	1.45 V	15	45.79	8.91
6	4874.00	46.5 AV	54.0	-7.5	1.45 V	15	37.59	8.91
7	7311.00	45.9 PK	74.0	-28.1	1.60 V	332	29.45	16.45
8	7311.00	32.3 AV	54.0	-21.7	1.60 V	332	15.85	16.45

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	114.3 PK			2.62 H	161	114.25	0.05
2	*2462.00	104.0 AV			2.62 H	161	103.95	0.05
3	2483.50	73.5 PK	74.0	-0.5	2.62 H	161	73.39	0.11
4	2483.50	52.4 AV	54.0	-1.6	2.62 H	161	52.29	0.11
5	4924.00	49.4 PK	74.0	-24.6	1.27 H	338	40.31	9.09
6	4924.00	37.0 AV	54.0	-17.0	1.27 H	338	27.91	9.09
7	7386.00	45.3 PK	74.0	-28.7	1.42 H	53	28.70	16.60
8	7386.00	32.1 AV	54.0	-21.9	1.42 H	53	15.50	16.60
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	106.9 PK			1.15 V	285	106.85	0.05
2	*2462.00	96.8 AV			1.15 V	285	96.75	0.05
3	2483.50	67.6 PK	74.0	-6.4	1.15 V	285	67.49	0.11
4	2483.50	47.3 AV	54.0	-6.7	1.15 V	285	47.19	0.11
5	4924.00	54.2 PK	74.0	-19.8	1.33 V	30	45.11	9.09
6	4924.00	46.1 AV	54.0	-7.9	1.33 V	30	37.01	9.09
7	7386.00	45.5 PK	74.0	-28.5	1.58 V	321	28.90	16.60
8	7386.00	32.0 AV	54.0	-22.0	1.58 V	321	15.40	16.60

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	70.5 PK	74.0	-3.5	2.51 H	155	70.66	-0.16
2	2390.00	53.3 AV	54.0	-0.7	2.51 H	155	53.46	-0.16
3	*2412.00	114.5 PK			2.51 H	155	114.60	-0.10
4	*2412.00	103.9 AV			2.51 H	155	104.00	-0.10
5	4824.00	49.3 PK	74.0	-24.7	1.27 H	338	40.54	8.76
6	4824.00	36.9 AV	54.0	-17.1	1.27 H	338	28.14	8.76
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	65.2 PK	74.0	-8.8	1.10 V	274	65.36	-0.16
2	2390.00	48.1 AV	54.0	-5.9	1.10 V	274	48.26	-0.16
3	*2412.00	107.2 PK			1.10 V	274	107.30	-0.10
4	*2412.00	96.6 AV			1.10 V	274	96.70	-0.10
5	4824.00	54.0 PK	74.0	-20.0	1.27 V	27	45.24	8.76
6	4824.00	45.8 AV	54.0	-8.2	1.27 V	27	37.04	8.76

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	2390.00	66.3 PK	74.0	-7.7	1.63 H	155	66.46	-0.16
2	2390.00	48.9 AV	54.0	-5.1	1.63 H	155	49.06	-0.16
3	*2437.00	126.0 PK			1.63 H	155	126.03	-0.03
4	*2437.00	114.8 AV			1.63 H	155	114.83	-0.03
5	2483.50	64.3 PK	74.0	-9.7	1.63 H	155	64.19	0.11
6	2483.50	47.9 AV	54.0	-6.1	1.63 H	155	47.79	0.11
7	4874.00	49.8 PK	74.0	-24.2	1.24 H	327	40.89	8.91
8	4874.00	37.1 AV	54.0	-16.9	1.24 H	327	28.19	8.91
9	7311.00	45.9 PK	74.0	-28.1	1.37 H	41	29.45	16.45
10	7311.00	32.8 AV	54.0	-21.2	1.37 H	41	16.35	16.45

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	2390.00	61.2 PK	74.0	-12.8	1.16 V	270	61.36	-0.16
2	2390.00	43.6 AV	54.0	-10.4	1.16 V	270	43.76	-0.16
3	*2437.00	118.7 PK			1.16 V	270	118.73	-0.03
4	*2437.00	97.6 AV			1.16 V	270	97.63	-0.03
5	2483.50	59.2 PK	74.0	-14.8	1.16 V	270	59.09	0.11
6	2483.50	42.6 AV	54.0	-11.4	1.16 V	270	42.49	0.11
7	4874.00	54.0 PK	74.0	-20.0	1.40 V	31	45.09	8.91
8	4874.00	45.8 AV	54.0	-8.2	1.40 V	31	36.89	8.91
9	7311.00	46.3 PK	74.0	-27.7	1.57 V	310	29.85	16.45
10	7311.00	32.6 AV	54.0	-21.4	1.57 V	310	16.15	16.45

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	115.7 PK			2.72 H	186	115.65	0.05
2	*2462.00	105.2 AV			2.72 H	186	105.15	0.05
3	2483.50	73.5 PK	74.0	-0.5	2.72 H	186	73.39	0.11
4	2483.50	51.8 AV	54.0	-2.2	2.72 H	186	51.69	0.11
5	4924.00	50.0 PK	74.0	-24.0	1.26 H	320	40.91	9.09
6	4924.00	37.3 AV	54.0	-16.7	1.26 H	320	28.21	9.09
7	7386.00	44.7 PK	74.0	-29.3	1.44 H	59	28.10	16.60
8	7386.00	31.8 AV	54.0	-22.2	1.44 H	59	15.20	16.60
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	108.4 PK			1.22 V	284	108.35	0.05
2	*2462.00	88.0 AV			1.22 V	284	87.95	0.05
3	2483.50	68.3 PK	74.0	-5.7	1.22 V	284	68.19	0.11
4	2483.50	46.7 AV	54.0	-7.3	1.22 V	284	46.59	0.11
5	4924.00	54.1 PK	74.0	-19.9	1.40 V	22	45.01	9.09
6	4924.00	46.2 AV	54.0	-7.8	1.40 V	22	37.11	9.09
7	7386.00	46.1 PK	74.0	-27.9	1.59 V	326	29.50	16.60
8	7386.00	32.4 AV	54.0	-21.6	1.59 V	326	15.80	16.60

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 (HT40)

CHANNEL	TX Channel 3	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	2.75 H	26	70.76	-0.16
2	2390.00	53.3 AV	54.0	-0.7	2.75 H	26	53.46	-0.16
3	*2422.00	112.4 PK			2.75 H	26	112.48	-0.08
4	*2422.00	100.8 AV			2.75 H	26	100.88	-0.08
5	4844.00	49.7 PK	74.0	-24.3	1.24 H	314	40.88	8.82
6	4844.00	36.9 AV	54.0	-17.1	1.24 H	314	28.08	8.82
7	7266.00	45.5 PK	74.0	-28.5	1.42 H	69	28.89	16.61
8	7266.00	32.5 AV	54.0	-21.5	1.42 H	69	15.89	16.61
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	65.2 PK	74.0	-8.8	1.19 V	268	65.36	-0.16
2	2390.00	48.1 AV	54.0	-5.9	1.19 V	268	48.26	-0.16
3	*2422.00	105.1 PK			1.19 V	268	105.18	-0.08
4	*2422.00	83.6 AV			1.19 V	268	83.68	-0.08
5	4844.00	55.0 PK	74.0	-19.0	1.38 V	13	46.18	8.82
6	4844.00	46.7 AV	54.0	-7.3	1.38 V	13	37.88	8.82
7	7266.00	45.6 PK	74.0	-28.4	1.63 V	324	28.99	16.61
8	7266.00	32.1 AV	54.0	-21.9	1.63 V	324	15.49	16.61

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	2390.00	65.4 PK	74.0	-8.6	2.73 H	31	65.56	-0.16
2	2390.00	49.0 AV	54.0	-5.0	2.73 H	31	49.16	-0.16
3	*2437.00	116.4 PK			2.73 H	31	116.43	-0.03
4	*2437.00	105.1 AV			2.73 H	31	105.13	-0.03
5	2483.50	73.2 PK	74.0	-0.8	2.73 H	31	73.09	0.11
6	2483.50	53.1 AV	54.0	-0.9	2.73 H	31	52.99	0.11
7	4874.00	50.1 PK	74.0	-23.9	1.21 H	322	41.19	8.91
8	4874.00	37.2 AV	54.0	-16.8	1.21 H	322	28.29	8.91
9	7311.00	45.9 PK	74.0	-28.1	1.37 H	66	29.45	16.45
10	7311.00	32.8 AV	54.0	-21.2	1.37 H	66	16.35	16.45

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	2390.00	60.2 PK	74.0	-13.8	1.26 V	294	60.36	-0.16
2	2390.00	44.7 AV	54.0	-9.3	1.26 V	294	44.86	-0.16
3	*2437.00	109.1 PK			1.26 V	294	109.13	-0.03
4	*2437.00	87.9 AV			1.26 V	294	87.93	-0.03
5	2483.50	68.0 PK	74.0	-6.0	1.26 V	294	67.89	0.11
6	2483.50	47.9 AV	54.0	-6.1	1.26 V	294	47.79	0.11
7	4874.00	54.4 PK	74.0	-19.6	1.39 V	20	45.49	8.91
8	4874.00	46.5 AV	54.0	-7.5	1.39 V	20	37.59	8.91
9	7311.00	45.3 PK	74.0	-28.7	1.57 V	310	28.85	16.45
10	7311.00	31.9 AV	54.0	-22.1	1.57 V	310	15.45	16.45

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 9	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	*2452.00	114.1 PK			2.69 H	27	114.08	0.02
2	*2452.00	103.5 AV			2.69 H	27	103.48	0.02
3	2483.50	73.2 PK	74.0	-0.8	2.69 H	27	73.09	0.11
4	2483.50	53.2 AV	54.0	-0.8	2.69 H	27	53.09	0.11
5	4904.00	49.8 PK	74.0	-24.2	1.31 H	341	40.79	9.01
6	4904.00	37.1 AV	54.0	-16.9	1.31 H	341	28.09	9.01
7	7356.00	44.5 PK	74.0	-29.5	1.35 H	62	27.95	16.55
8	7356.00	31.9 AV	54.0	-22.1	1.35 H	62	15.35	16.55
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	*2452.00	106.8 PK			1.18 V	306	106.78	0.02
2	*2452.00	86.3 AV			1.18 V	306	86.28	0.02
3	2483.50	67.9 PK	74.0	-6.1	1.18 V	306	67.79	0.11
4	2483.50	48.0 AV	54.0	-6.0	1.18 V	306	47.89	0.11
5	4904.00	54.1 PK	74.0	-19.9	1.43 V	14	45.09	9.01
6	4904.00	46.1 AV	54.0	-7.9	1.43 V	14	37.09	9.01
7	7356.00	46.1 PK	74.0	-27.9	1.63 V	305	29.55	16.55
8	7356.00	32.4 AV	54.0	-21.6	1.63 V	305	15.85	16.55

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 Data:

802.11g

CHANNEL	TX Channel 11	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	39.51	32.3 QP	40.0	-7.7	1.50 H	274	41.23	-8.91
2	68.07	27.9 QP	40.0	-12.1	1.00 H	178	37.83	-9.92
3	250.00	32.9 QP	46.0	-13.1	1.50 H	265	42.18	-9.27
4	375.03	37.3 QP	46.0	-8.7	1.00 H	124	42.71	-5.45
5	500.01	28.5 QP	46.0	-17.5	1.00 H	120	31.17	-2.70
6	750.03	34.1 QP	46.0	-11.9	1.00 H	360	31.61	2.49
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	68.80	35.8 QP	40.0	-4.2	1.00 V	85	45.63	-9.86
2	88.30	28.6 QP	43.5	-15.0	1.00 V	22	42.53	-13.98
3	250.00	30.0 QP	46.0	-16.0	1.00 V	2	39.24	-9.27
4	375.03	33.8 QP	46.0	-12.2	1.00 V	18	39.24	-5.45
5	500.01	28.6 QP	46.0	-17.5	1.00 V	327	31.25	-2.70
6	750.03	31.5 QP	46.0	-14.5	1.50 V	173	29.02	2.49

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. 09, 2015	Mar. 08, 2016
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
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: Dec. 16, 2015

4.2.3 Test Procedures

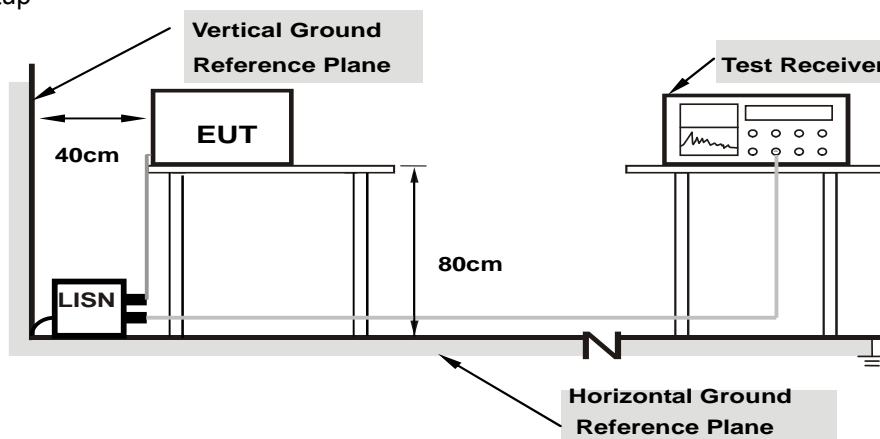
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

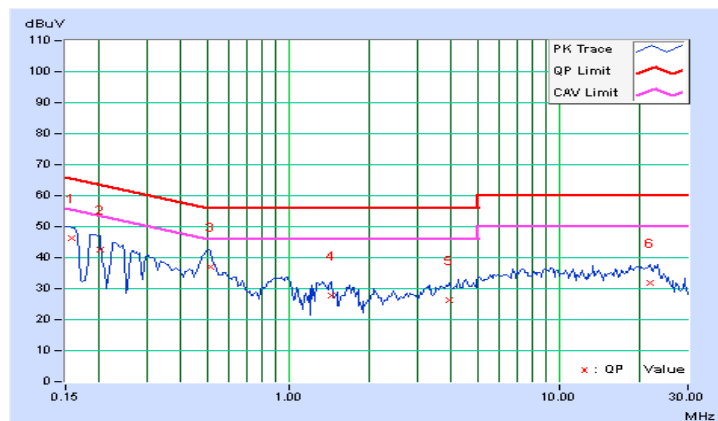
4.2.7 Test Results

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
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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	0.15878	10.37	35.87	23.50	46.24	33.87	65.53	55.53	-19.28	-21.65
2	0.20078	10.34	32.33	18.08	42.67	28.42	63.58	53.58	-20.91	-25.16
3	0.51719	10.36	26.77	16.26	37.13	26.62	56.00	46.00	-18.87	-19.38
4	1.43359	10.35	17.46	6.96	27.81	17.31	56.00	46.00	-28.19	-28.69
5	3.92578	10.57	15.90	8.42	26.47	18.99	56.00	46.00	-29.53	-27.01
6	21.78125	11.50	20.20	13.60	31.70	25.10	60.00	50.00	-28.30	-24.90

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

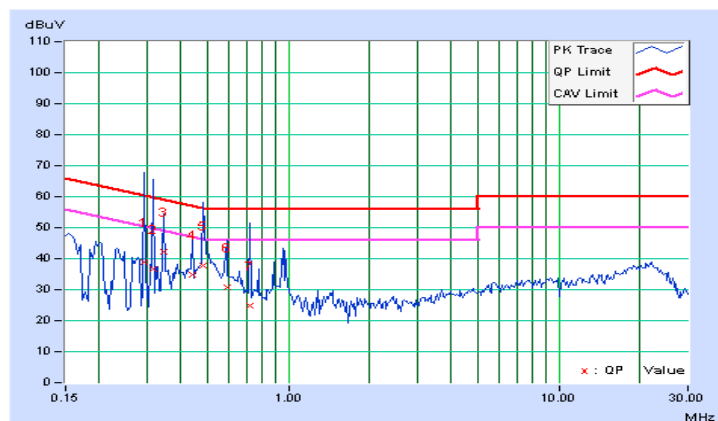


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
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Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.29453	10.40	28.46	4.02	38.86	14.42	60.40	50.40	-21.53	-35.97
2	0.31797	10.41	26.26	10.75	36.67	21.16	59.76	49.76	-23.09	-28.60
3	0.34531	10.41	31.98	10.44	42.39	20.85	59.07	49.07	-16.68	-28.22
4	0.43906	10.42	24.34	11.78	34.76	22.20	57.08	47.08	-22.32	-24.88
5	0.48594	10.41	27.45	14.55	37.86	24.96	56.24	46.24	-18.37	-21.27
6	0.59141	10.40	20.44	9.89	30.84	20.29	56.00	46.00	-25.16	-25.71
7	0.71641	10.39	14.34	1.89	24.73	12.28	56.00	46.00	-31.27	-33.72

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

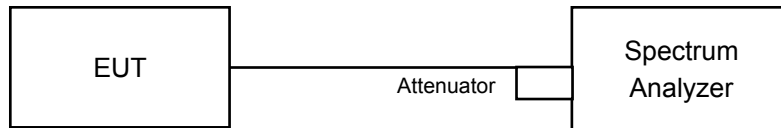


4.3 6dB Bandwidth Measurement

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 (Mode 1)

802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	9.13	0.5	Pass
6	2437	10.10	0.5	Pass
11	2462	11.06	0.5	Pass

802.11g

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	15.75	0.5	Pass
6	2437	16.15	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	16.32	0.5	Pass
6	2437	17.23	0.5	Pass
11	2462	17.41	0.5	Pass

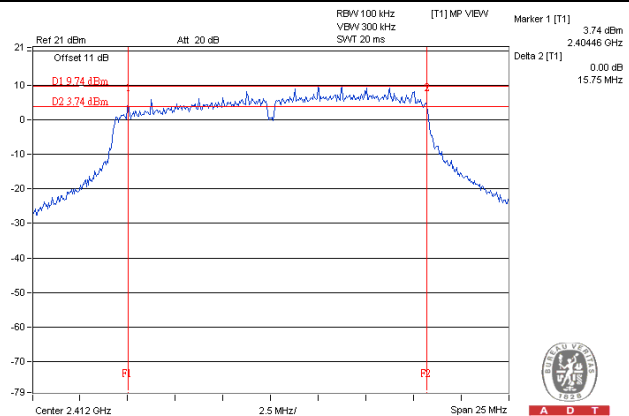
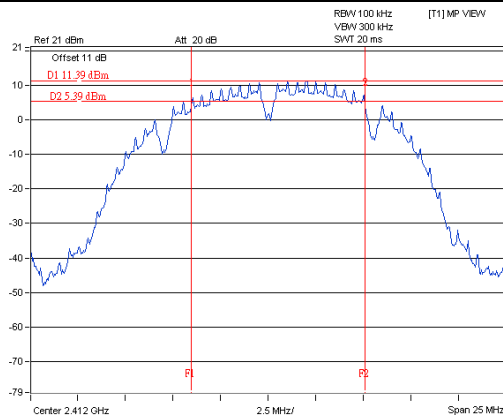
802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
3	2422	35.48	0.5	Pass
6	2437	35.85	0.5	Pass
9	2452	35.27	0.5	Pass

Spectrum Plot of Worst Value

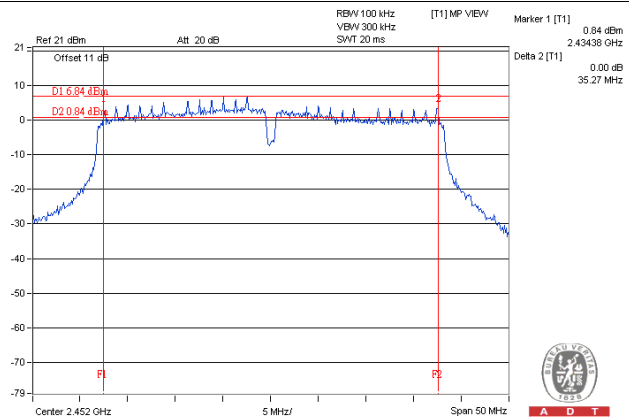
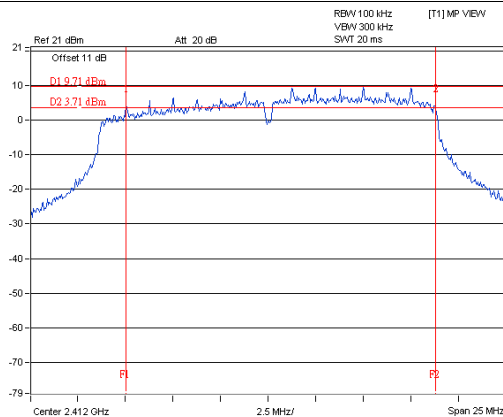
802.11b – CH 1

802.11g – CH 1



802.11n (HT20) – CH 1

802.11n (HT40) – CH 9



4.3.8 Test Result (Mode 2)

802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	9.63	0.5	Pass
6	2437	10.11	0.5	Pass
11	2462	10.10	0.5	Pass

802.11g

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	15.80	0.5	Pass
6	2437	16.40	0.5	Pass
11	2462	16.38	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	16.37	0.5	Pass
6	2437	17.59	0.5	Pass
11	2462	17.14	0.5	Pass

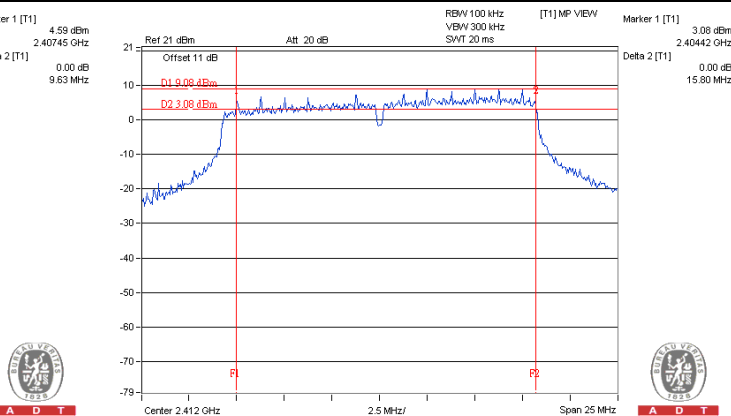
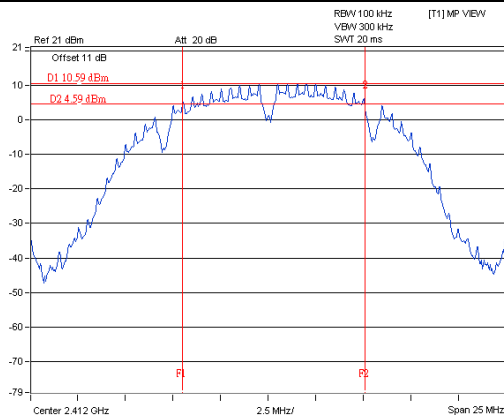
802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
3	2422	34.53	0.5	Pass
6	2437	35.29	0.5	Pass
9	2452	36.16	0.5	Pass

Spectrum Plot of Worst Value

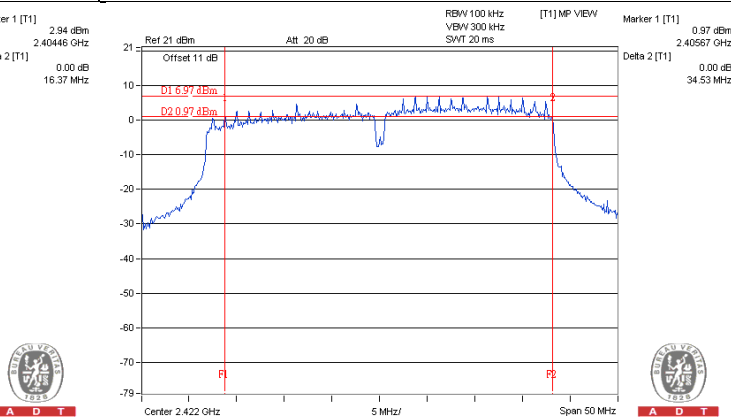
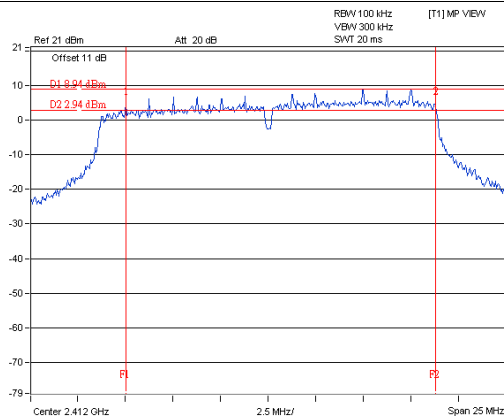
802.11b – CH 1

802.11g – CH 1



802.11n (HT20) – CH 1

802.11n (HT40) – CH 3



4.3.9 Test Result (Mode 3)

802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	9.13	10.09	0.5	Pass
6	2437	10.13	10.12	0.5	Pass
11	2462	10.08	10.10	0.5	Pass

802.11g

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	15.79	15.81	0.5	Pass
6	2437	16.42	16.41	0.5	Pass
11	2462	16.39	16.38	0.5	Pass

802.11n (HT20)

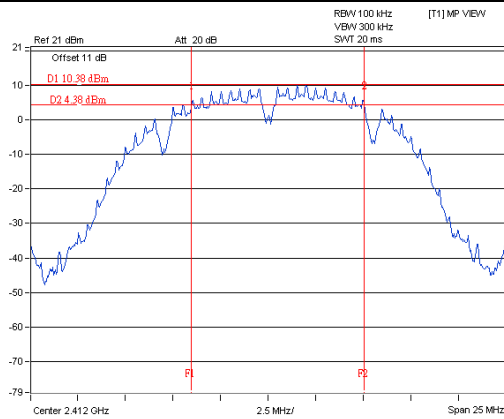
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	16.42	16.40	0.5	Pass
6	2437	17.64	17.39	0.5	Pass
11	2462	17.61	17.22	0.5	Pass

802.11n (HT40)

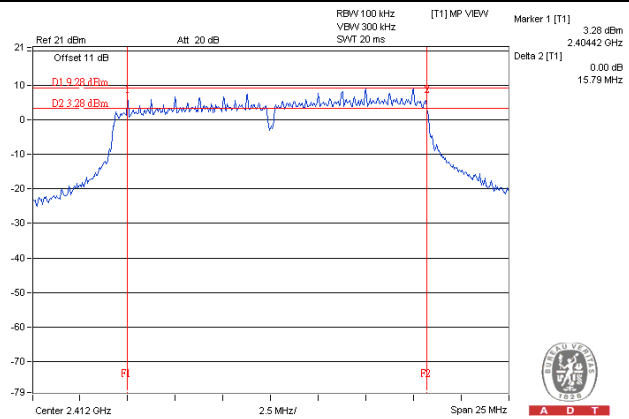
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
3	2422	35.78	35.82	0.5	Pass
6	2437	35.54	35.79	0.5	Pass
9	2452	35.91	36.18	0.5	Pass

Spectrum Plot of Worst Value

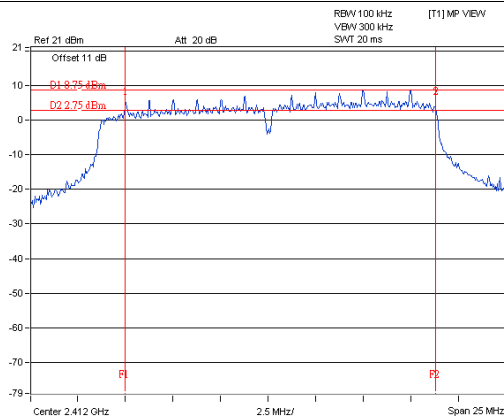
802.11b – Chain 0: CH 1



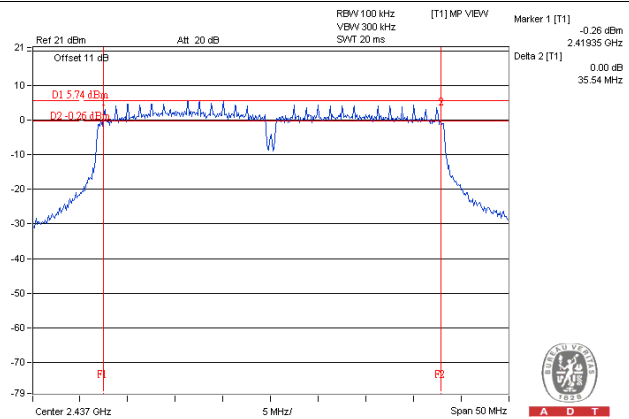
802.11g – Chain 0: CH 1



802.11n (HT20) – Chain 1: CH 1



802.11n (HT40) – Chain 0: CH 6



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)

Per KDB 662911 D01 Multiple Transmitter Output Method of conducted output power measurement on IEEE 802.11 devices,

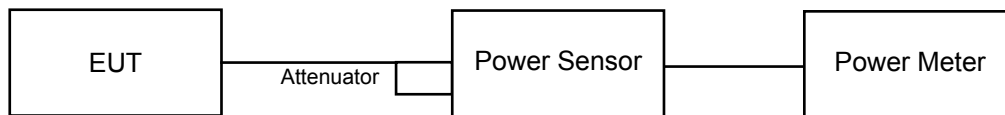
Array Gain = 0 dB (i.e., no array gain) for $NANT \leq 4$;

Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any NANT;

Array Gain = $5 \log(NANT/NSS)$ dB or 3 dB, whichever is less for 20-MHz channel widths with $NANT \geq 5$.

For power measurements on all other devices: Array Gain = $10 \log(NANT/NSS)$ dB.

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 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 (Mode 1)

802.11b

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	85.704	19.33	30	Pass
6	2437	89.536	19.52	30	Pass
11	2462	84.918	19.29	30	Pass

802.11g

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	85.507	19.32	30	Pass
6	2437	83.176	19.20	30	Pass
11	2462	84.723	19.28	30	Pass

802.11n (HT20)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	84.723	19.28	30	Pass
6	2437	83.176	19.20	30	Pass
11	2462	86.696	19.38	30	Pass

802.11n (HT40)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
3	2422	80.168	19.04	30	Pass
6	2437	87.096	19.40	30	Pass
9	2452	87.096	19.40	30	Pass

4.4.8 Test Results (Mode 2)

802.11b

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	80.168	19.04	30	Pass
6	2437	89.125	19.50	30	Pass
11	2462	89.125	19.50	30	Pass

802.11g

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	81.658	19.12	30	Pass
6	2437	86.497	19.37	30	Pass
11	2462	80.168	19.04	30	Pass

802.11n (HT20)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	81.846	19.13	30	Pass
6	2437	85.704	19.33	30	Pass
11	2462	80.538	19.06	30	Pass

802.11n (HT40)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
3	2422	88.512	19.47	30	Pass
6	2437	80.538	19.06	30	Pass
9	2452	81.283	19.10	30	Pass

4.4.9 Test Results (Mode 3)

802.11b

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	20.20	19.25	188.853	22.76	30	Pass
6	2437	19.24	19.00	163.379	22.13	30	Pass
11	2462	19.24	20.56	197.709	22.96	30	Pass

802.11g

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	20.40	19.39	196.544	22.93	30	Pass
6	2437	19.10	19.36	167.581	22.24	30	Pass
11	2462	19.33	20.56	199.467	23.00	30	Pass

802.11n (HT20)

Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	19.13	19.89	179.345	22.54	30	Pass
6	2437	19.85	19.03	176.588	22.47	30	Pass
11	2462	19.46	18.55	159.922	22.04	30	Pass

802.11n (HT40)

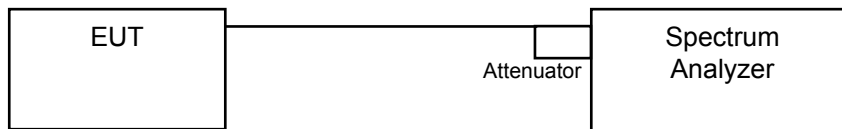
Channel	Frequency (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
3	2422	16.62	15.78	83.764	19.23	30	Pass
6	2437	19.35	19.68	178.996	22.53	30	Pass
9	2452	17.95	18.14	127.536	21.06	30	Pass

4.5 Power Spectral Density Measurement

4.5.1 Limits of Power Spectral Density Measurement

The Maximum of Power Spectral Density Measurement is 8dBm.

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedure

- Set instrument center frequency to DTS channel center frequency.
- Set span to at least 1.5 times the OBW.
- Set RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- Set VBW $\geq 3 \times \text{RBW}$.
- Detector = power averaging (RMS) or sample detector (when RMS not available).
- Ensure that the number of measurement points in the sweep $\geq 2 \times \text{span}/\text{RBW}$.
- Sweep time = auto couple.
- Employ trace averaging (RMS) mode over a minimum of 100 traces.
- Use the peak marker function to determine the maximum amplitude level.

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 (Mode 1)

802.11b

Channel	Frequency (MHz)	PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-8.18	8	Pass
6	2437	-9.36	8	Pass
11	2462	-9.71	8	Pass

802.11g

Channel	Frequency (MHz)	PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-7.94	8	Pass
6	2437	-10.02	8	Pass
11	2462	-9.07	8	Pass

802.11n (HT20)

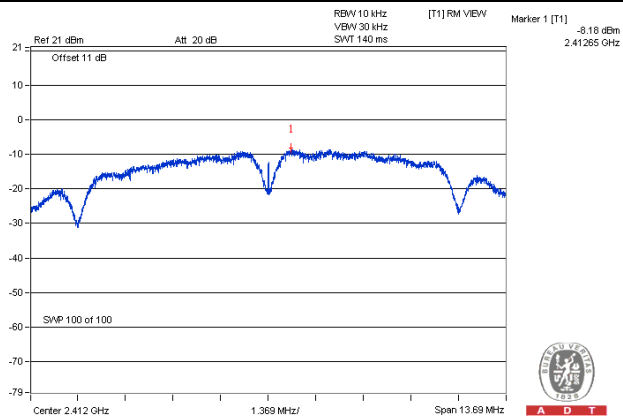
Channel	Frequency (MHz)	PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-9.60	8	Pass
6	2437	-10.35	8	Pass
11	2462	-9.68	8	Pass

802.11n (HT40)

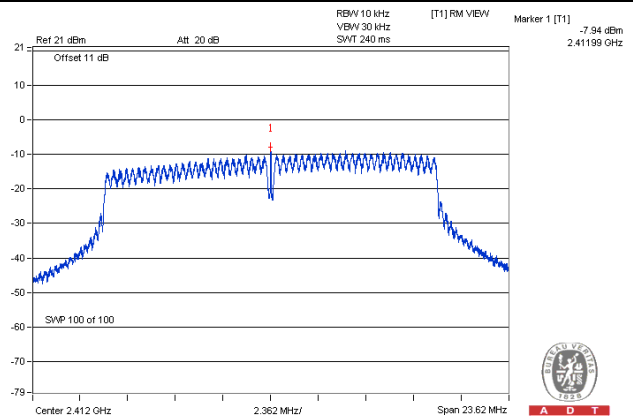
Channel	Frequency (MHz)	PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass /Fail
3	2422	-12.35	8	Pass
6	2437	-11.96	8	Pass
9	2452	-12.16	8	Pass

Spectrum Plot of Worst Value

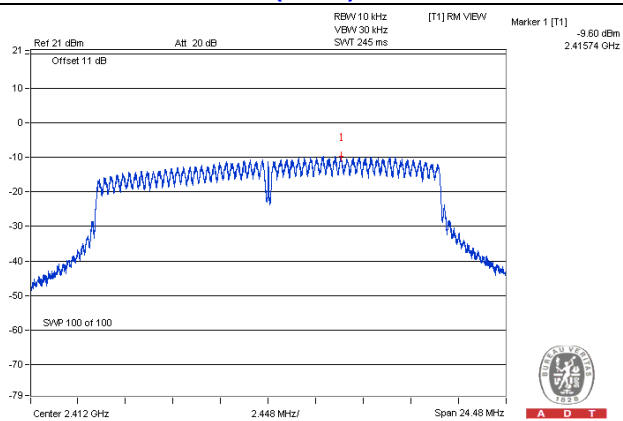
802.11b – CH 1



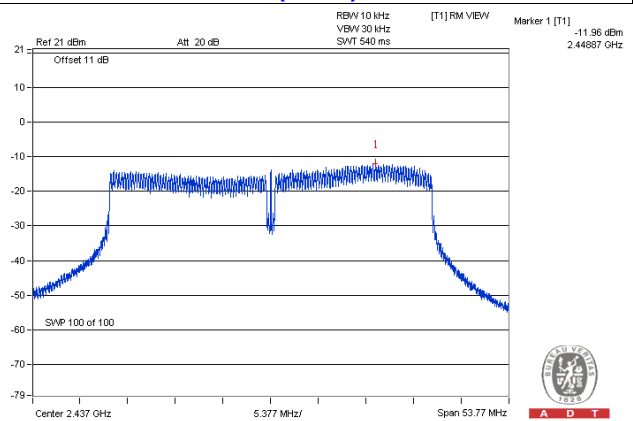
802.11g – CH 1



802.11n (HT20) – CH 1



802.11n (HT40) – CH 6



4.5.8 Test Results (Mode 2)

802.11b

Channel	Frequency (MHz)	PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-8.54	8	Pass
6	2437	-9.01	8	Pass
11	2462	-8.55	8	Pass

802.11g

Channel	Frequency (MHz)	PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-9.62	8	Pass
6	2437	-10.29	8	Pass
11	2462	-9.99	8	Pass

802.11n (HT20)

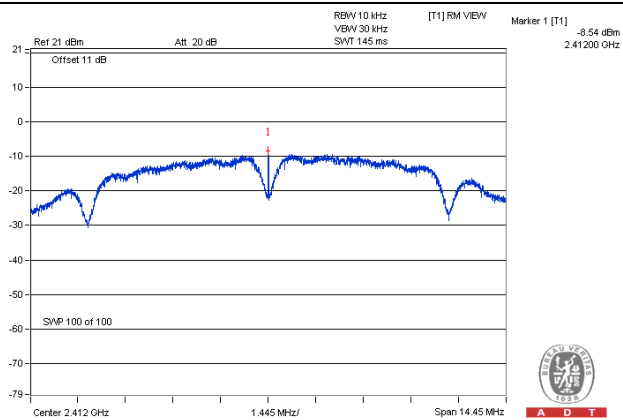
Channel	Frequency (MHz)	PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-10.10	8	Pass
6	2437	-10.29	8	Pass
11	2462	-10.25	8	Pass

802.11n (HT40)

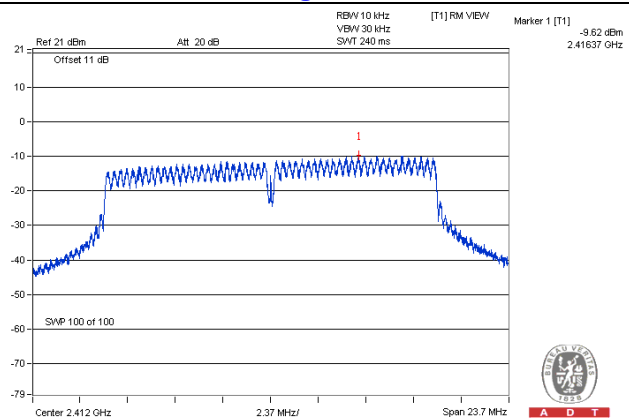
Channel	Frequency (MHz)	PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass /Fail
3	2422	-11.33	8	Pass
6	2437	-12.64	8	Pass
9	2452	-12.75	8	Pass

Spectrum Plot of Worst Value

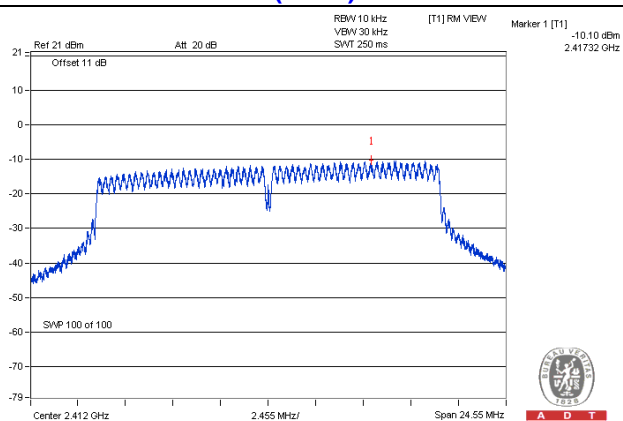
802.11b – CH 1



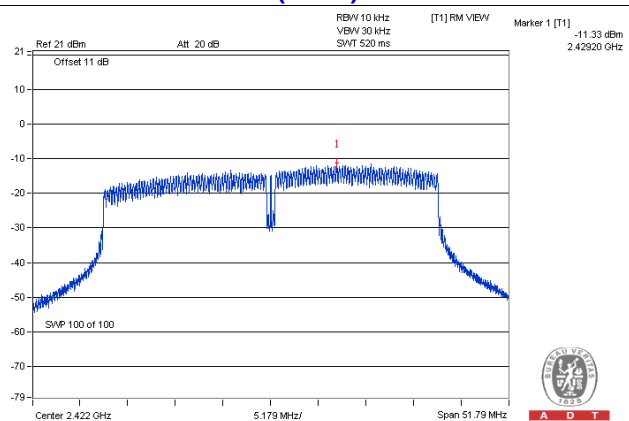
802.11g – CH 1



802.11n (HT20) – CH 1



802.11n (HT40) – CH 3



4.5.9 Test Results (Mode 3)

802.11b

TX chain	Channel	Freq. (MHz)	PSD (dBm)	10 log (N=2) dB	Total PSD (dBm)	Limit (dBm)	Pass /Fail
0	1	2412	-9.17	3.01	-6.16	6.26	Pass
	6	2437	-9.82	3.01	-6.81	6.26	Pass
	11	2462	-8.85	3.01	-5.84	6.26	Pass
1	1	2412	-10.58	3.01	-7.57	6.26	Pass
	6	2437	-9.73	3.01	-6.72	6.26	Pass
	11	2462	-11.05	3.01	-8.04	6.26	Pass

Note: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 / 2] = 7.74\text{dBi} > 6\text{dBi}$, so the power limit shall be reduced to $8-(7.74-6) = 6.26\text{dBm}$.

802.11g

TX chain	Channel	Freq. (MHz)	PSD (dBm)	10 log (N=2) dB	Total PSD (dBm)	Limit (dBm)	Pass /Fail
0	1	2412	-9.69	3.01	-6.68	6.26	Pass
	6	2437	-10.51	3.01	-7.50	6.26	Pass
	11	2462	-10.85	3.01	-7.84	6.26	Pass
1	1	2412	-10.25	3.01	-7.24	6.26	Pass
	6	2437	-11.19	3.01	-8.18	6.26	Pass
	11	2462	-11.14	3.01	-8.13	6.26	Pass

Note: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 / 2] = 7.74\text{dBi} > 6\text{dBi}$, so the power limit shall be reduced to $8-(7.74-6) = 6.26\text{dBm}$.

802.11n (HT20)

TX chain	Channel	Freq. (MHz)	PSD (dBm)	10 log (N=2) dB	Total PSD (dBm)	Limit (dBm)	Pass /Fail
0	1	2412	-10.00	3.01	-6.99	6.26	Pass
	6	2437	-11.38	3.01	-8.37	6.26	Pass
	11	2462	-11.10	3.01	-8.09	6.26	Pass
1	1	2412	-10.92	3.01	-7.91	6.26	Pass
	6	2437	-10.80	3.01	-7.79	6.26	Pass
	11	2462	-10.44	3.01	-7.43	6.26	Pass

Note: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 / 2] = 7.74\text{dBi} > 6\text{dBi}$, so the power limit shall be reduced to $8-(7.74-6) = 6.26\text{dBm}$.

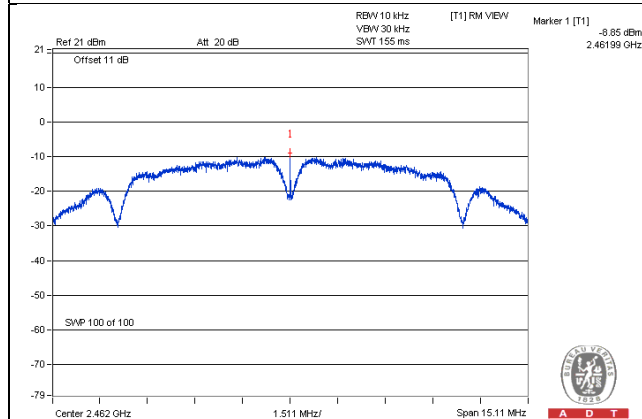
802.11n (HT40)

TX chain	Channel	Freq. (MHz)	PSD (dBm)	10 log (N=2) dB	Total PSD (dBm)	Limit (dBm)	Pass /Fail
0	3	2422	-14.57	3.01	-11.56	6.26	Pass
	6	2437	-10.70	3.01	-7.69	6.26	Pass
	9	2452	-14.58	3.01	-11.57	6.26	Pass
1	3	2422	-14.59	3.01	-11.58	6.26	Pass
	6	2437	-13.48	3.01	-10.47	6.26	Pass
	9	2452	-14.45	3.01	-11.44	6.26	Pass

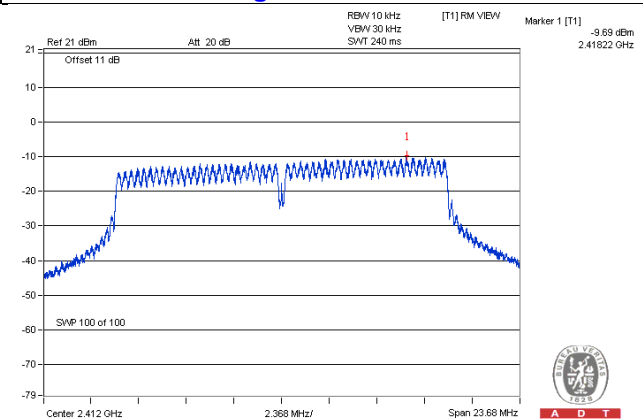
Note: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 / 2] = 7.74\text{dBi} > 6\text{dBi}$, so the power limit shall be reduced to $8 - (7.74 - 6) = 6.26\text{dBm}$.

Spectrum Plot of Worst Value

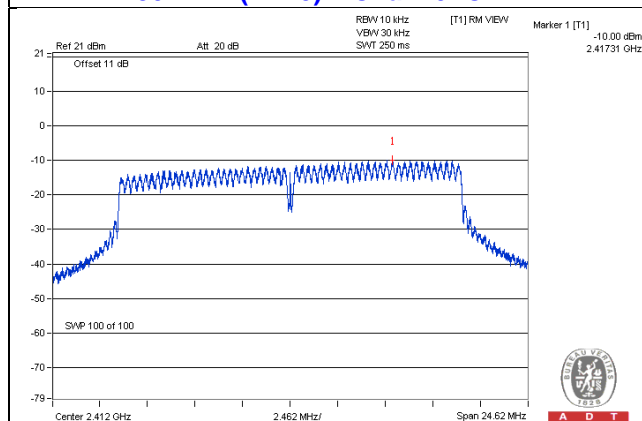
802.11b – Chain 0: CH 11



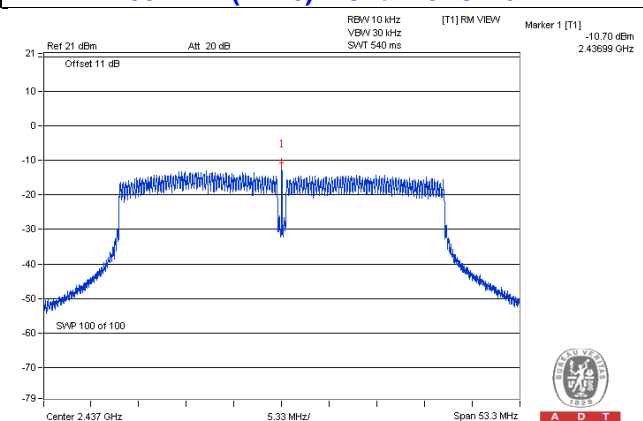
802.11g – Chain 0: CH 1



802.11n (HT20) – Chain 0: CH 1



802.11n (HT40) – Chain 0: CH 6

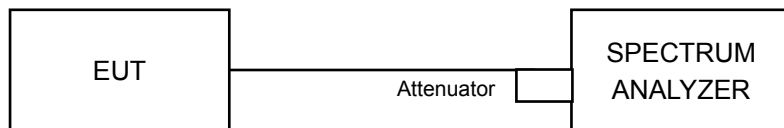


4.6 Conducted Out of Band Emission Measurement

4.6.1 Limits of Conducted Out of Band Emission Measurement

Below 30dB 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.

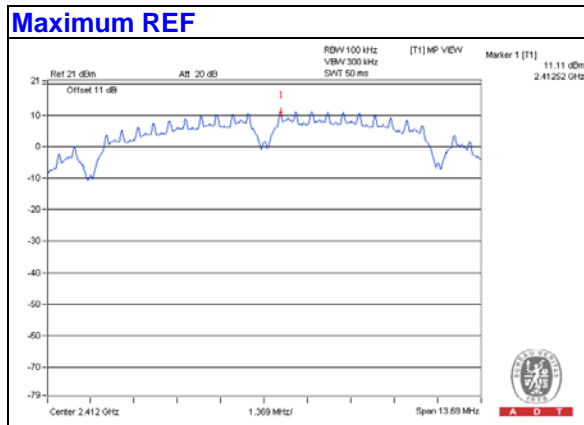
4.6.6 EUT Operating Condition

Same as Item 4.3.6

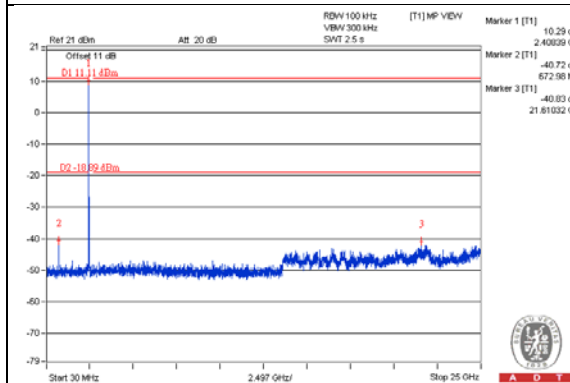
4.6.7 Test Results (Overall Spurious Emission Test – Mode 1)

The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 30dB offset below D1. It shows compliance with the requirement.

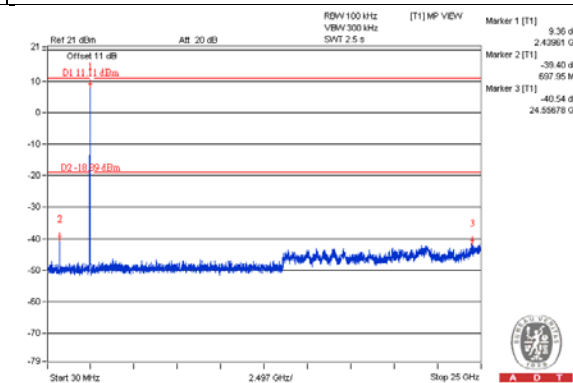
802.11b



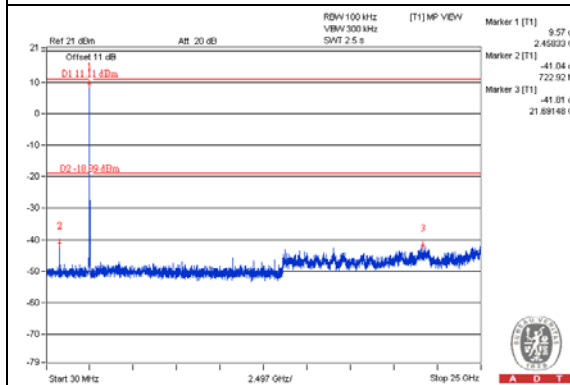
CH 1



CH 6

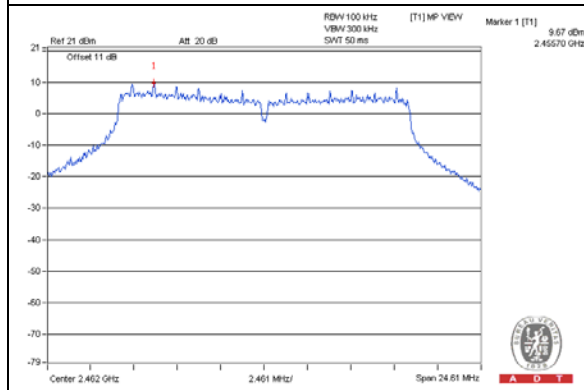


CH 11

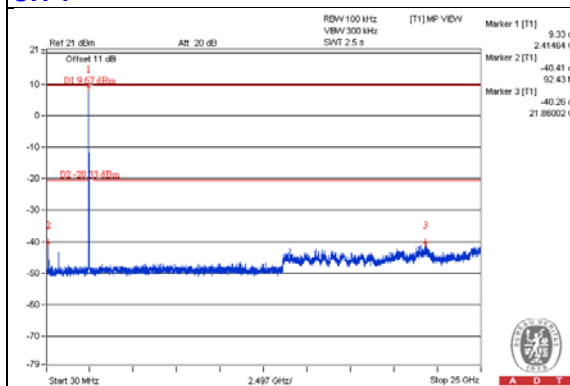


802.11g

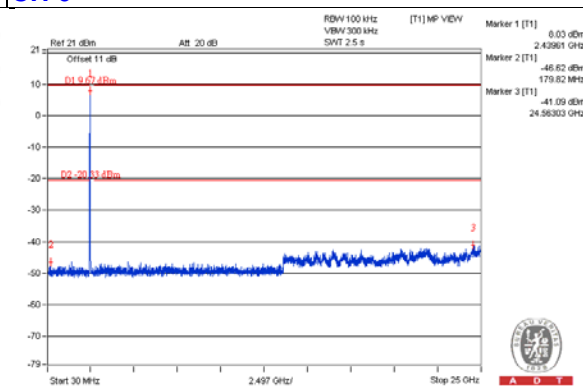
Maximum REF



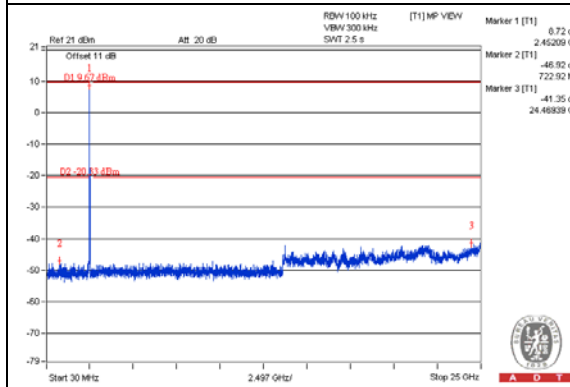
CH 1



CH 6

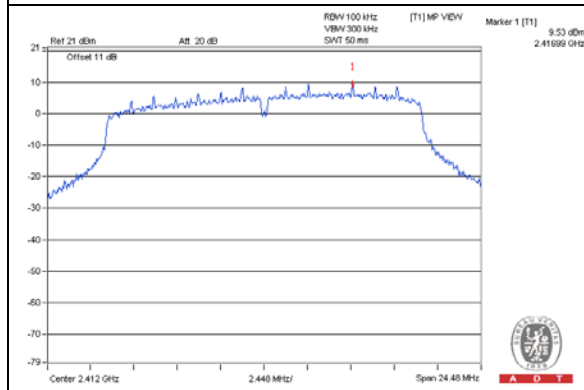


CH 11

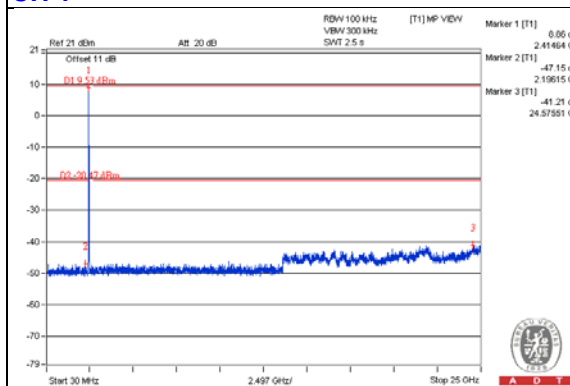


802.11n (HT20)

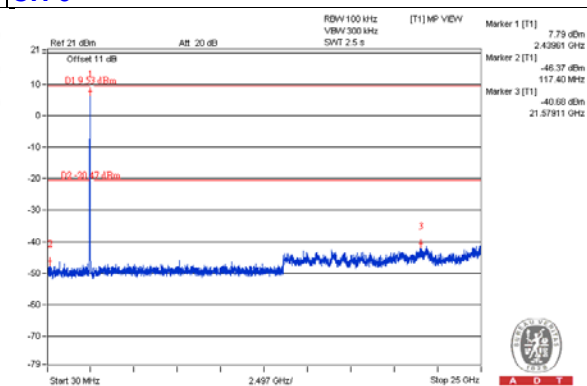
Maximum REF



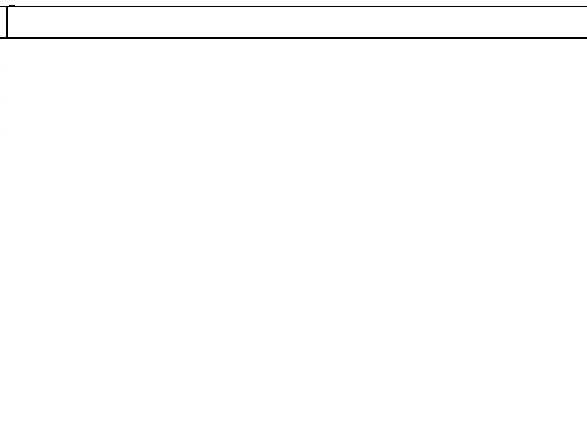
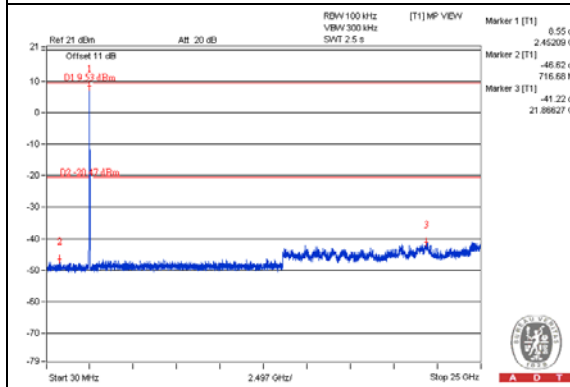
CH 1



CH 6

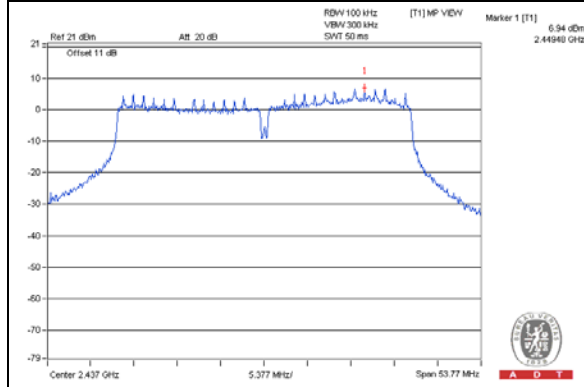


CH 11

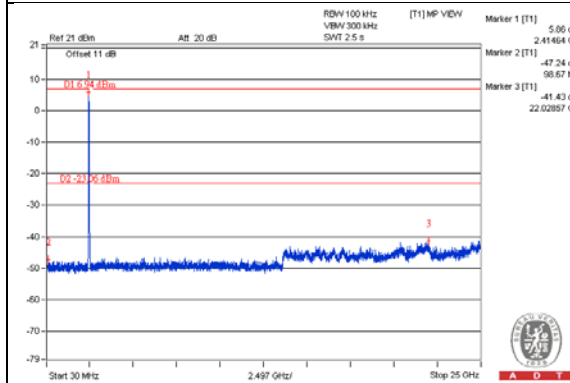


802.11n (HT40)

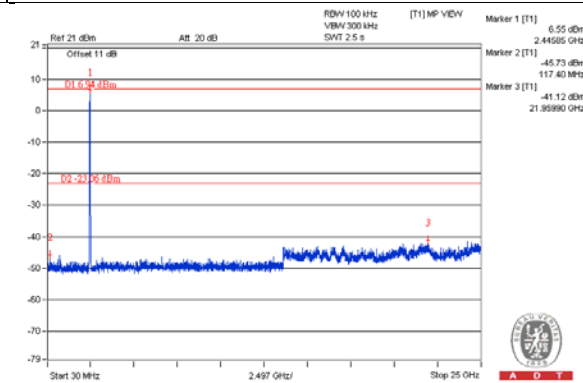
Maximum REF



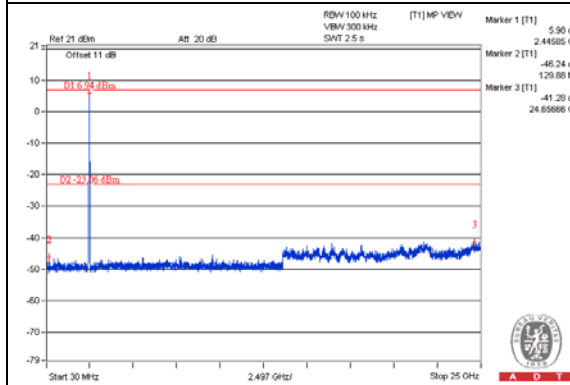
CH 3



CH 6



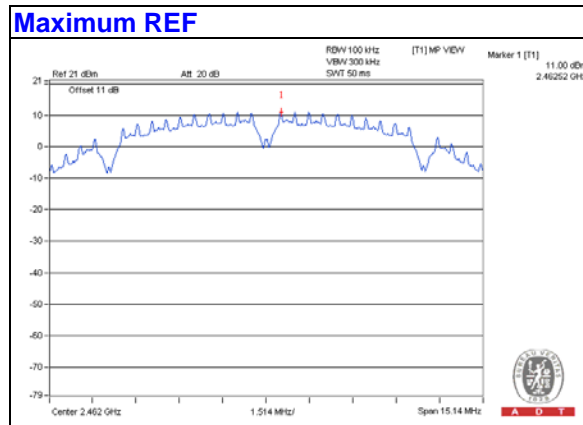
CH 9



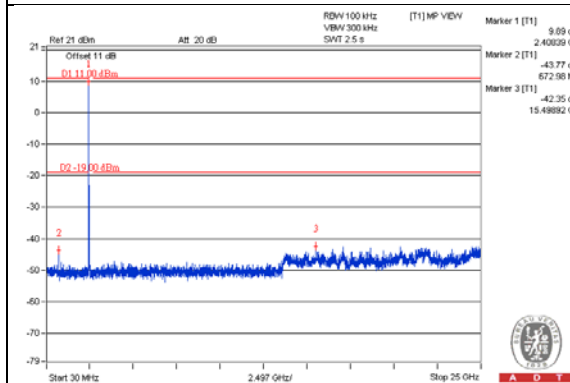
4.6.8 Test Results (Overall Spurious Emission Test – Mode 2)

The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 30dB offset below D1. It shows compliance with the requirement.

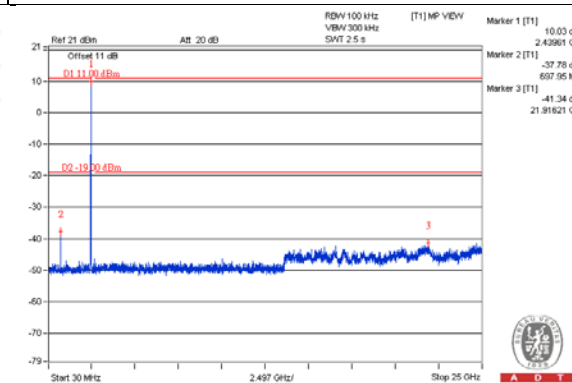
802.11b



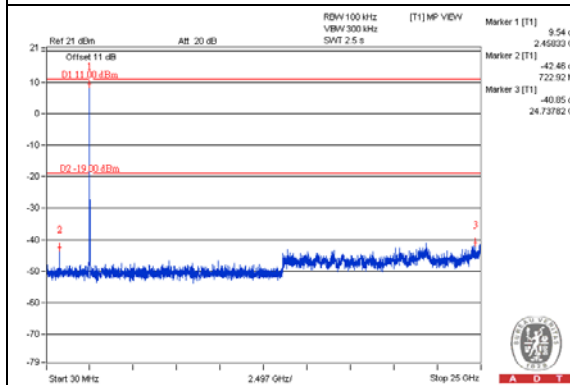
CH 1



CH 6

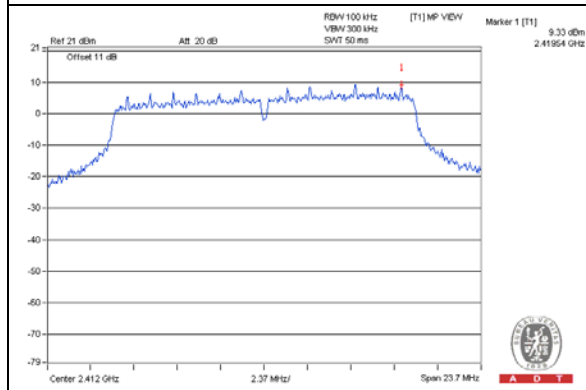


CH 11

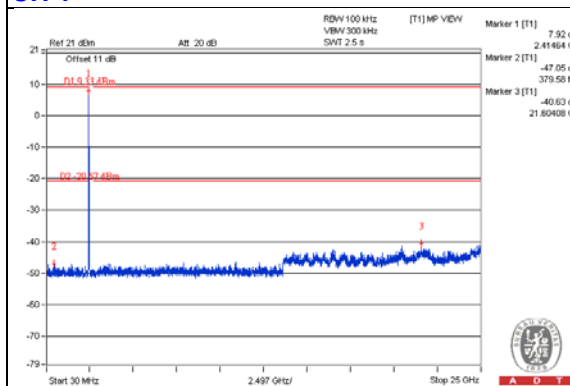


802.11g

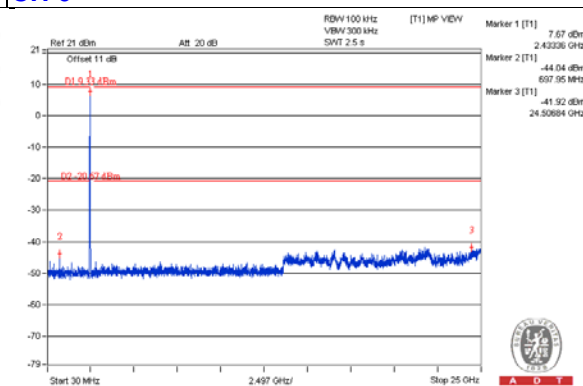
Maximum REF



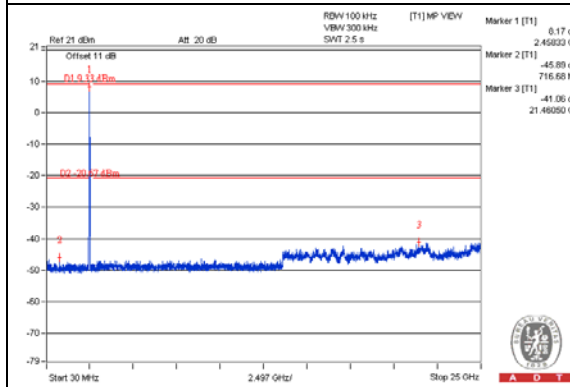
CH 1



CH 6

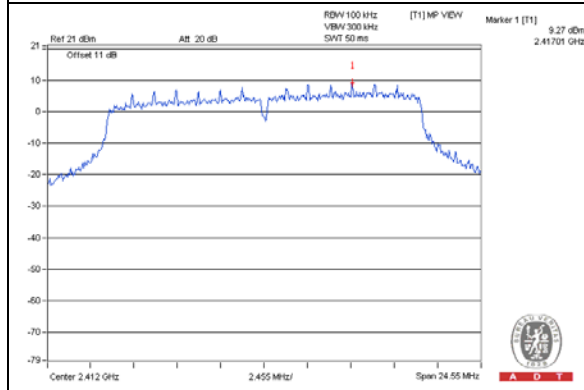


CH 11

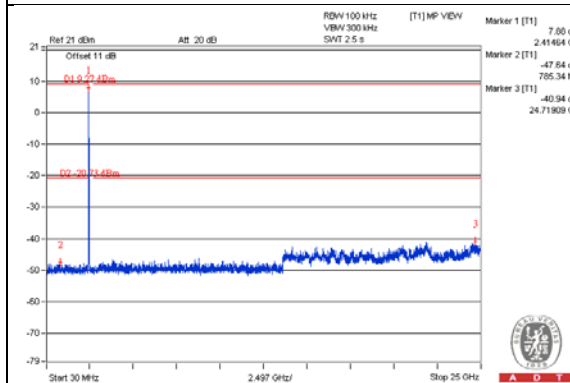


802.11n (HT20)

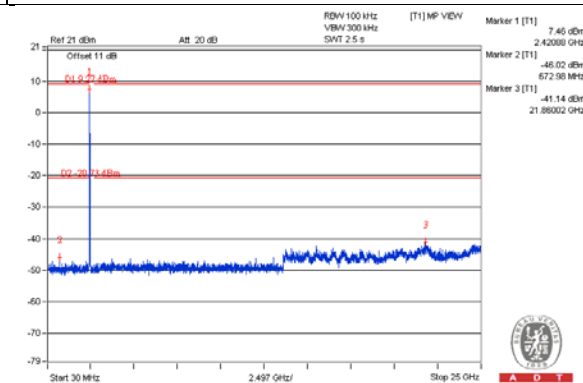
Maximum REF



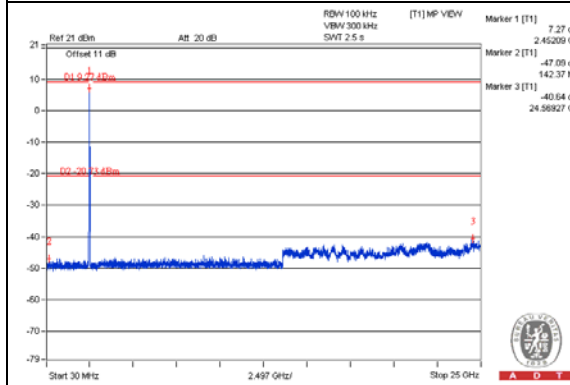
CH 1



CH 6

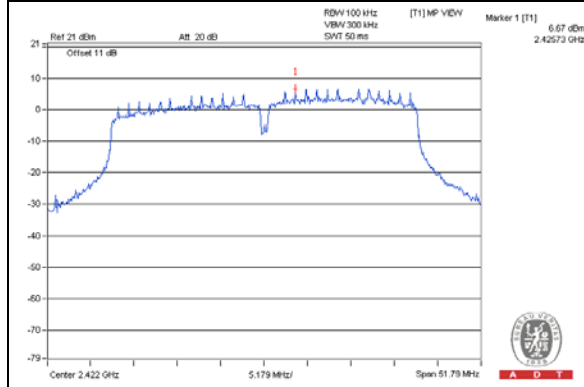


CH 11

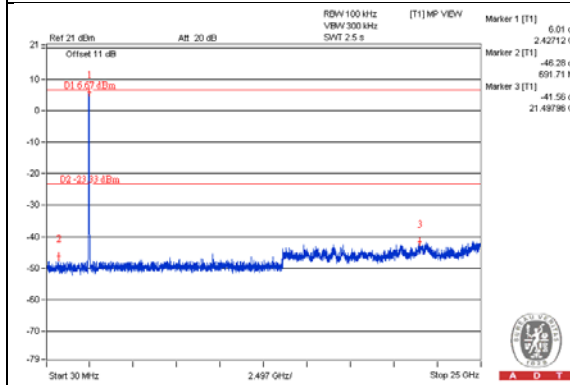


802.11n (HT40)

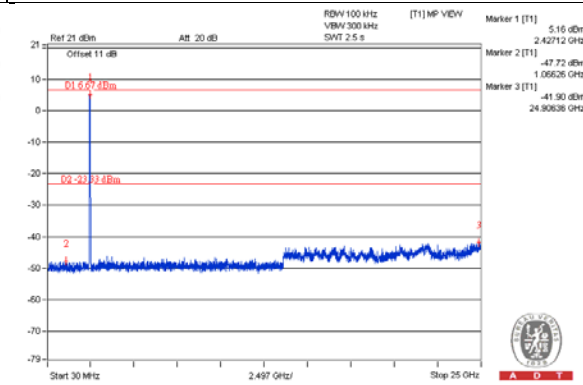
Maximum REF



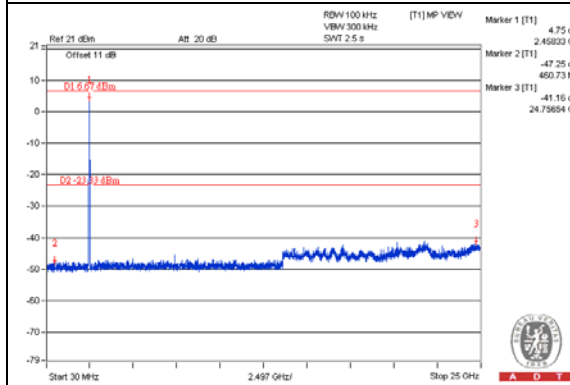
CH 3



CH 6



CH 9

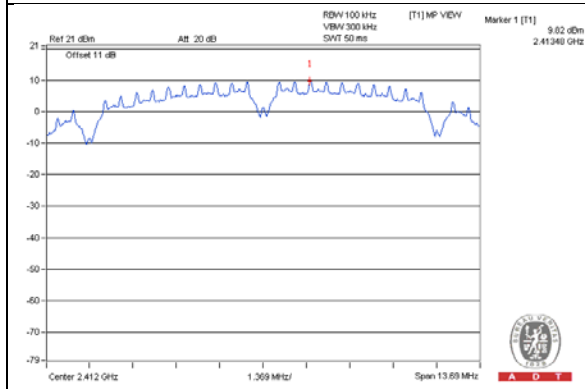


4.6.9 Test Results (Overall Spurious Emission Test – Mode 3)

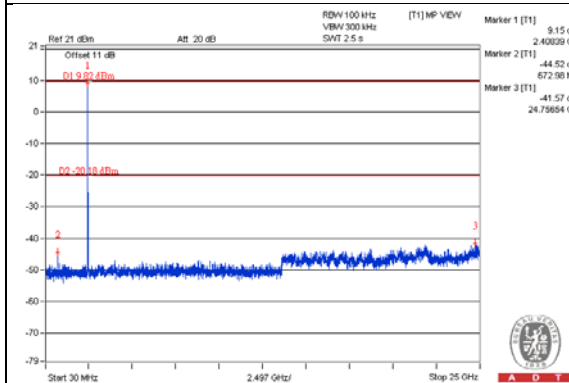
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement.

802.11b Chain 0

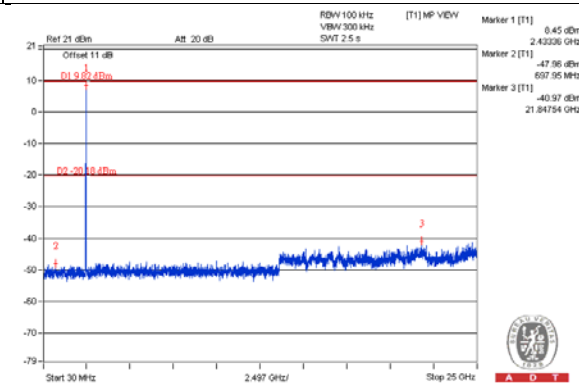
Maximum REF



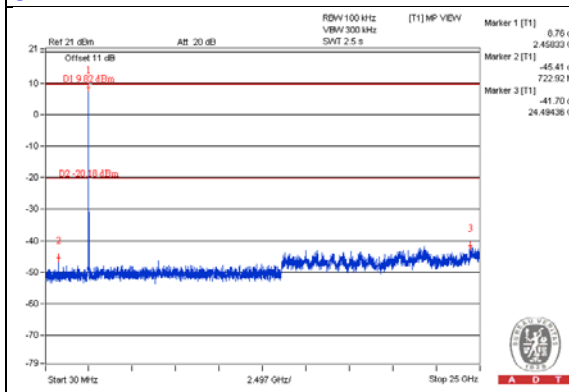
CH 1



CH 6

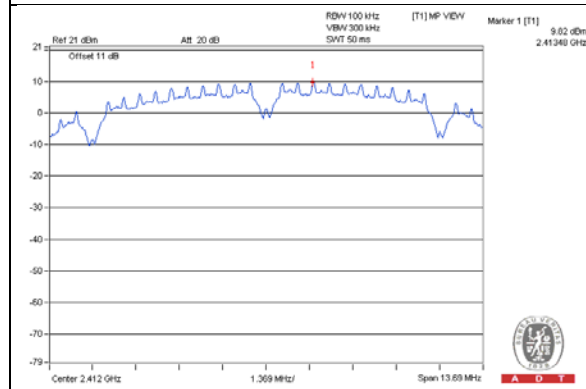


CH 11

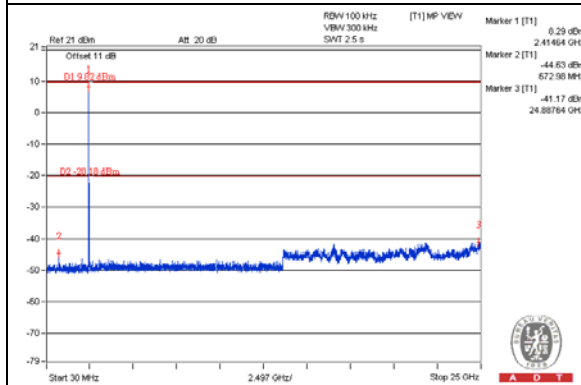


Chain 1

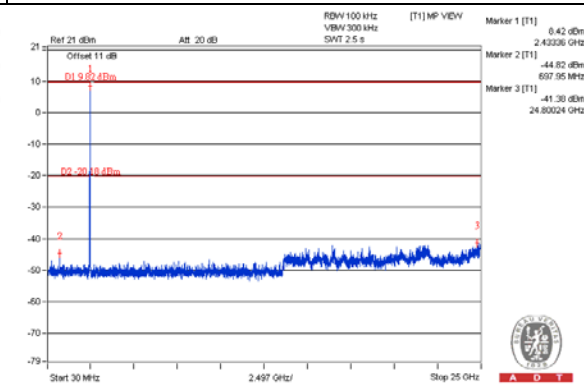
Maximum REF



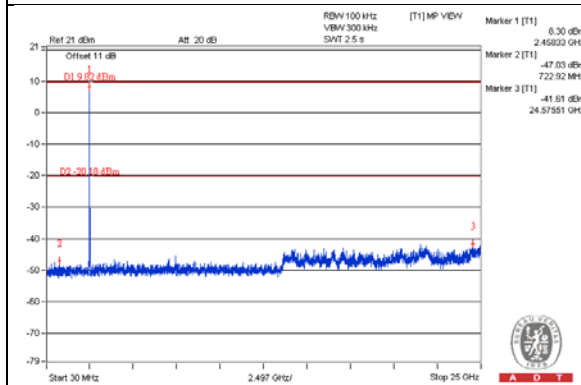
CH 1



CH 6

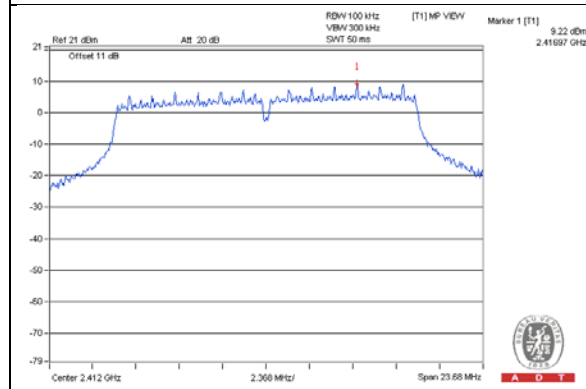


CH 11

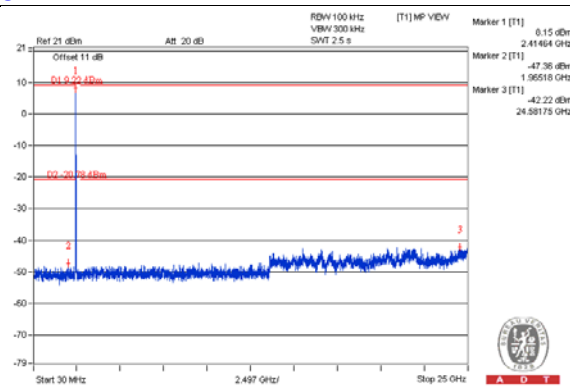


802.11g Chain 0

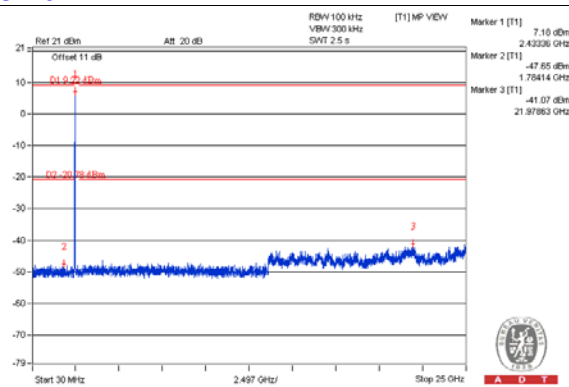
Maximum REF



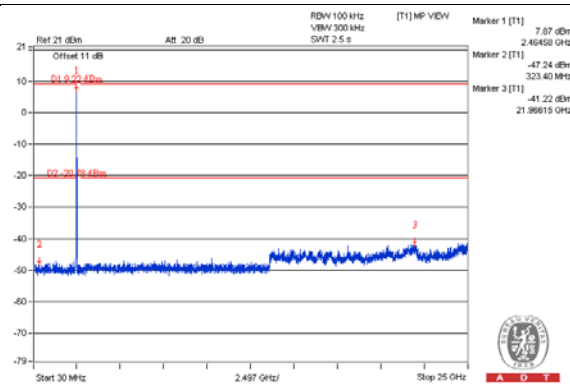
CH 1



CH 6

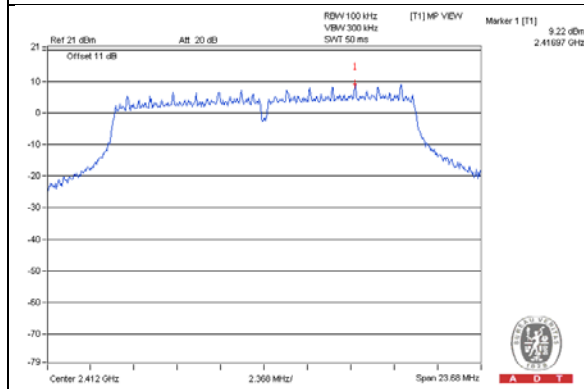


CH 11

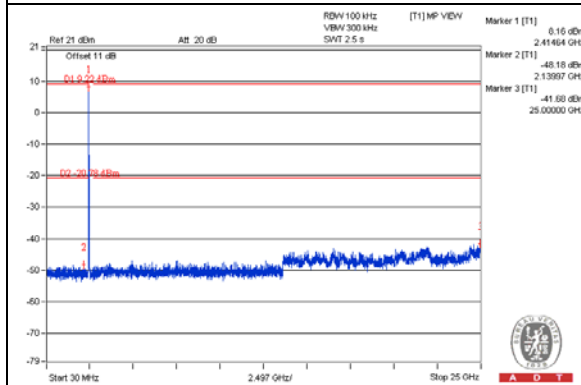


Chain 1

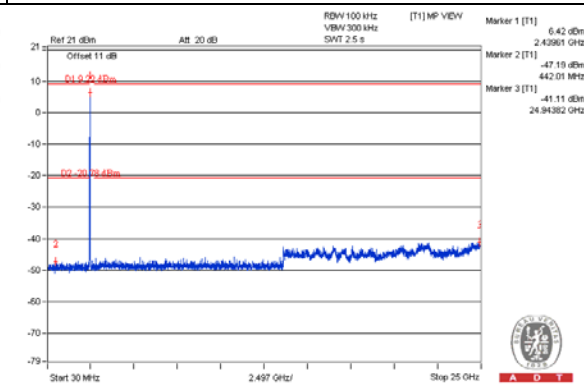
Maximum REF



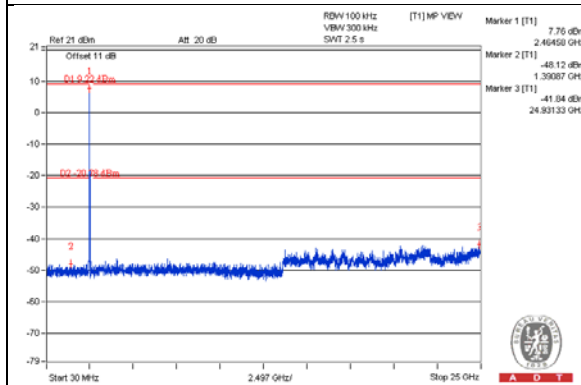
CH 1



CH 6

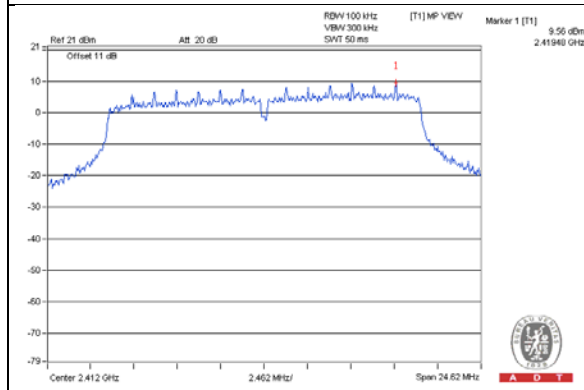


CH 11

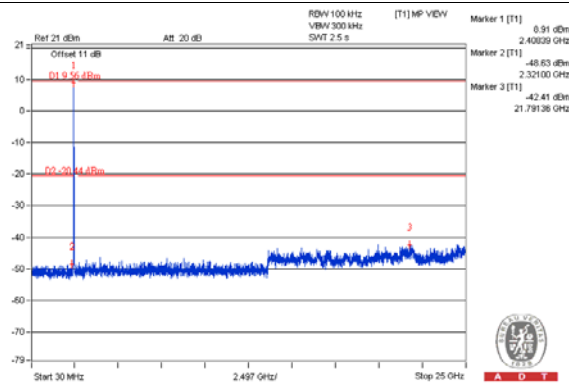


802.11n (HT20) Chain 0

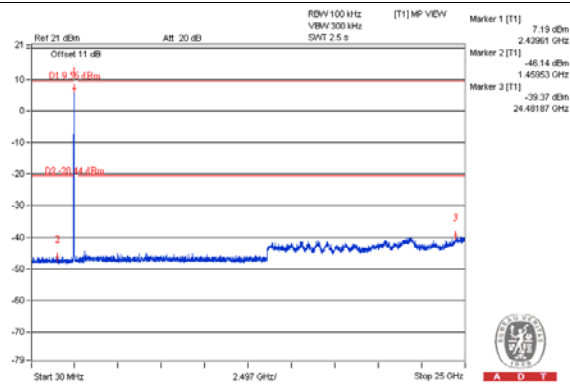
Maximum REF



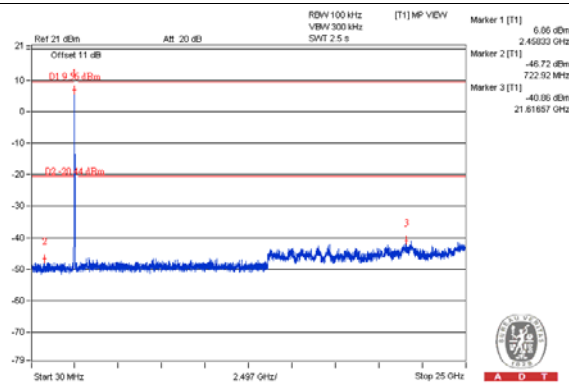
CH 1



CH 6

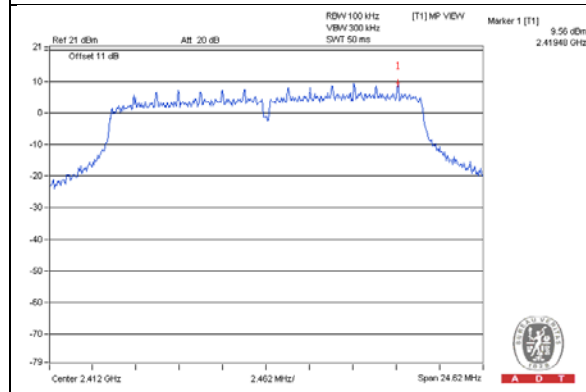


CH 11

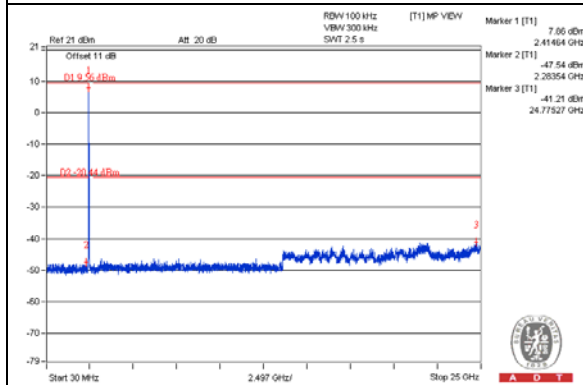


Chain 1

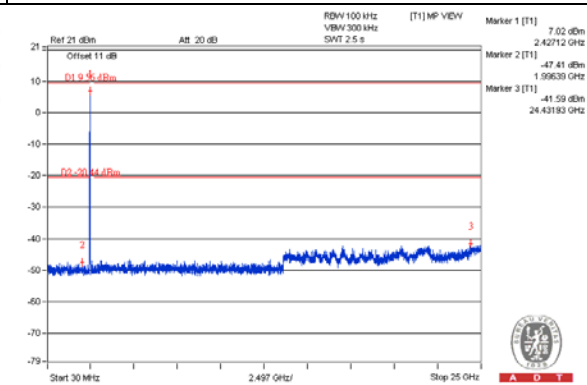
Maximum REF



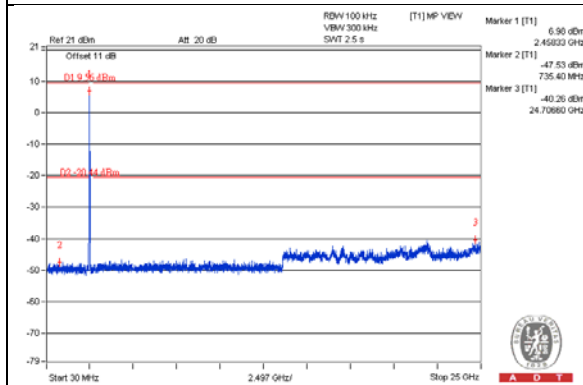
CH 1



CH 6

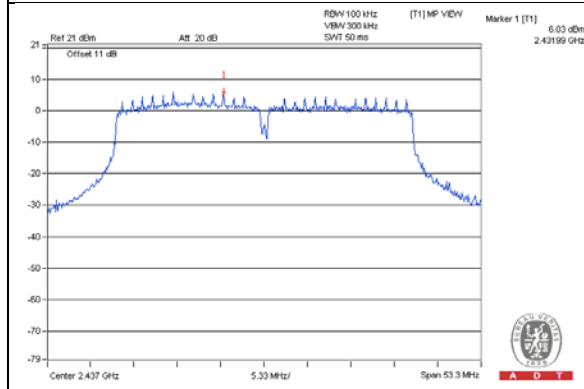


CH 11

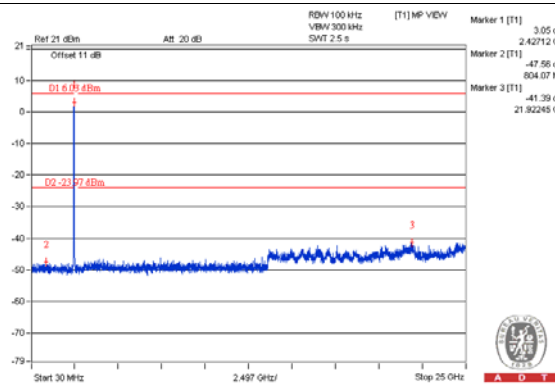


802.11n (HT40) Chain 0

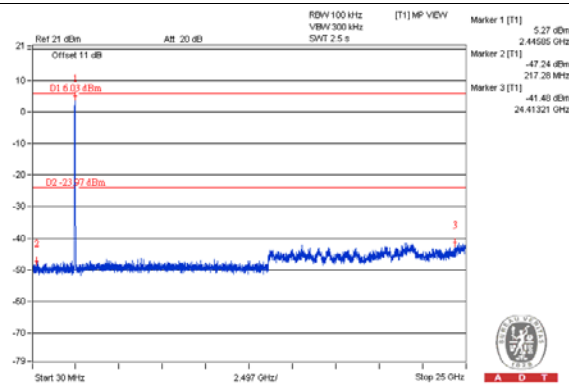
Maximum REF



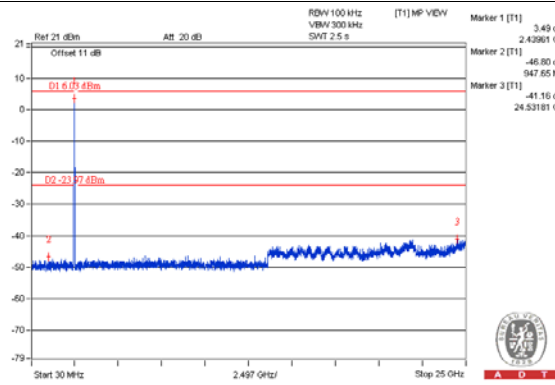
CH 3



CH 6

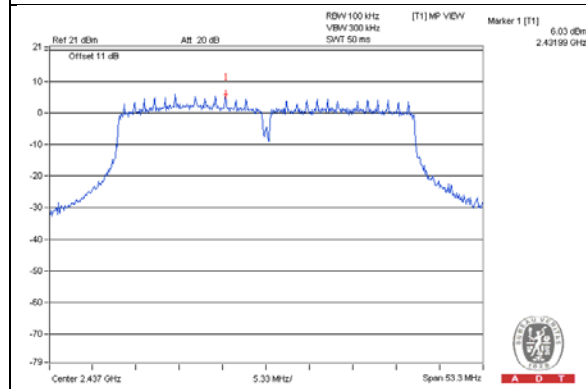


CH 9

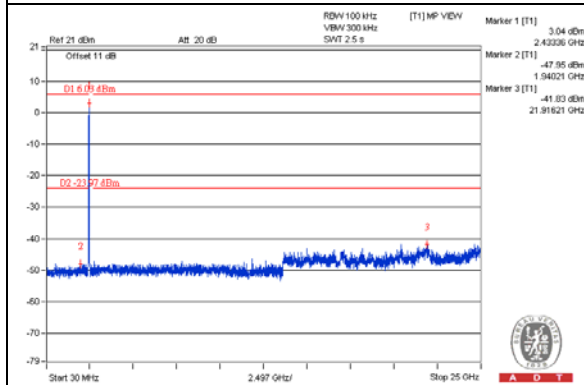


Chain 1

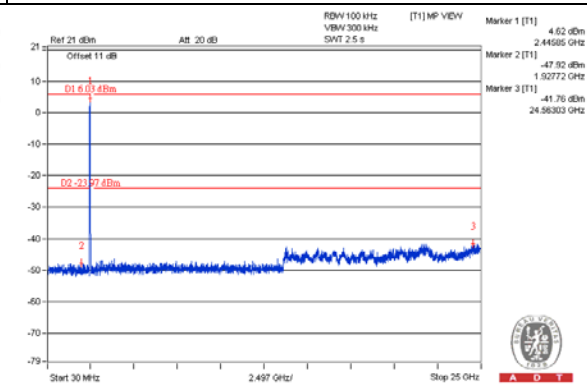
Maximum REF



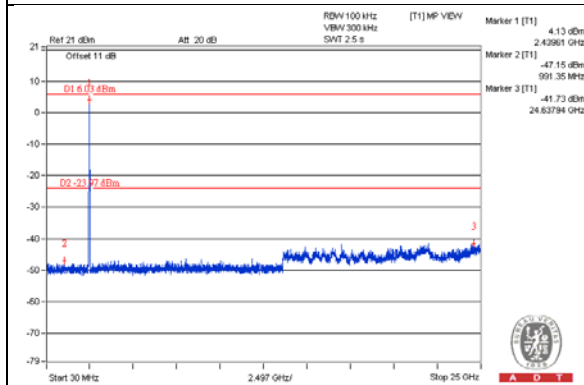
CH 3



CH 6



CH 9

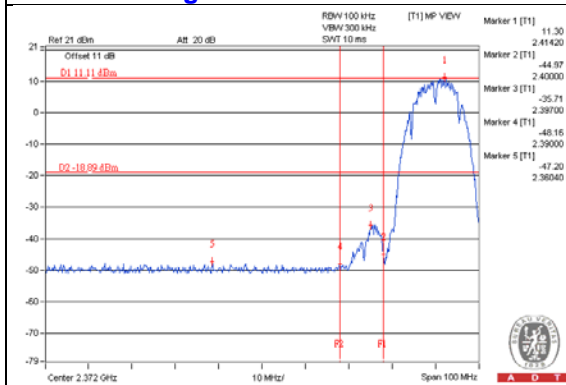


4.6.10 Test Results (Band Edge Test – Mode 1)

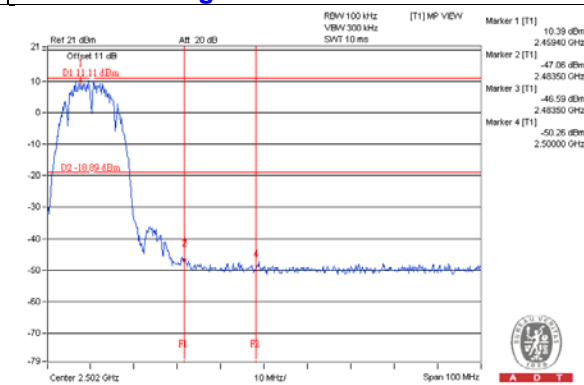
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 30dB offset below D1. It shows compliance with the requirement.

802.11b

CH 1 Band edge

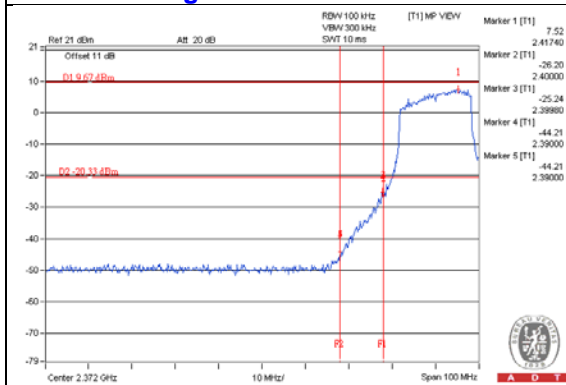


CH 11 Band edge

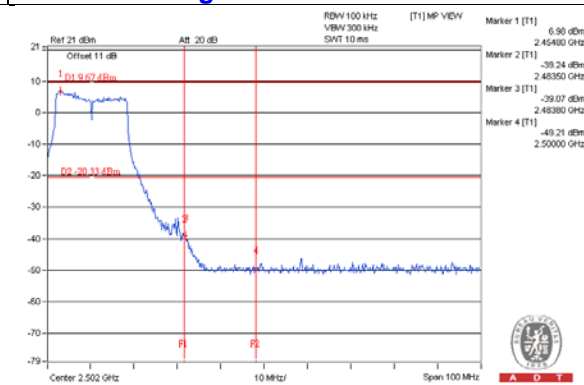


802.11g

CH 1 Band edge

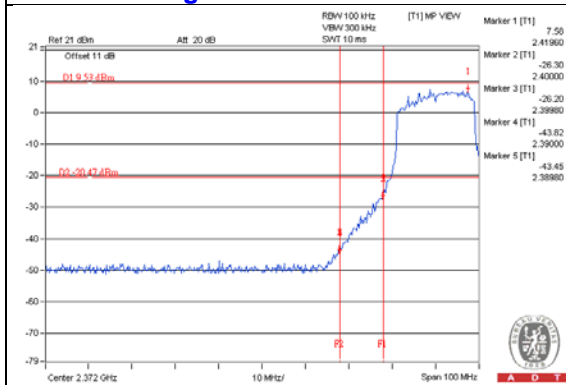


CH 11 Band edge

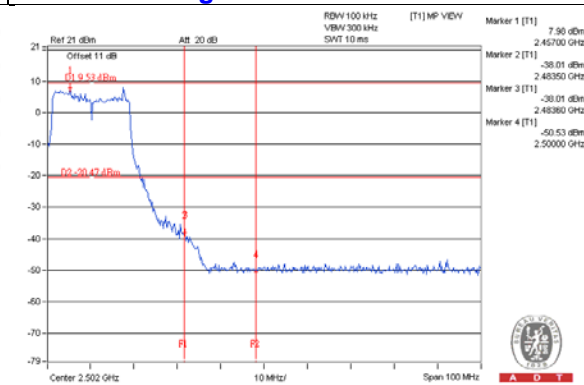


802.11n (HT20)

CH 1 Band edge



CH 11 Band edge



CH 3 Band edge

CH 9 Band edge

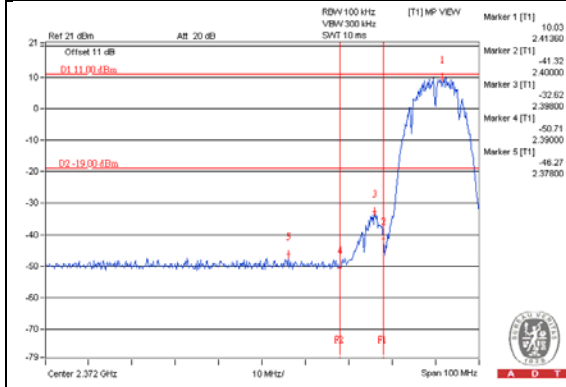


4.6.11 Test Results (Band Edge Test – Mode 2)

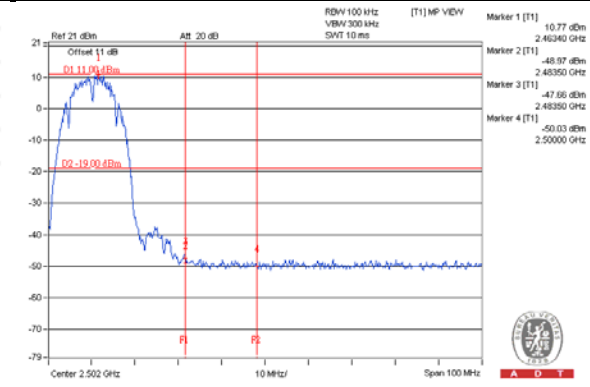
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 30dB offset below D1. It shows compliance with the requirement.

802.11b

CH 1 Band edge

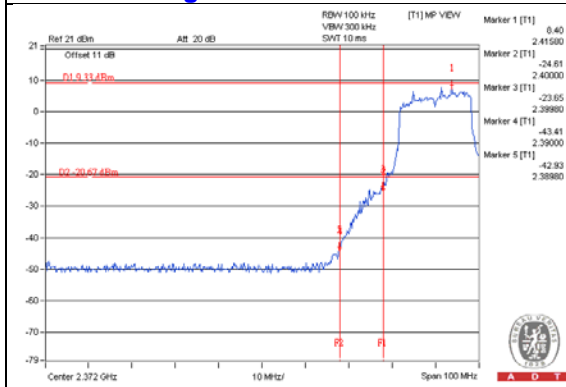


CH 11 Band edge

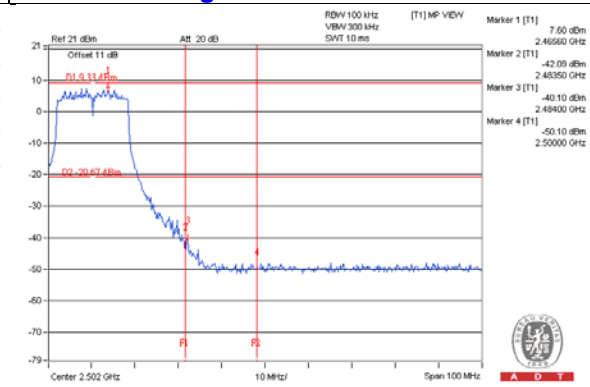


802.11g

CH 1 Band edge

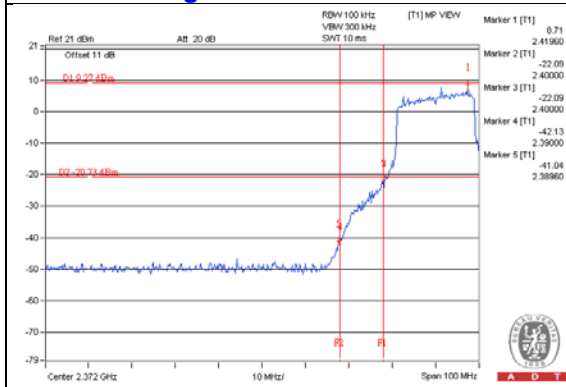


CH 11 Band edge

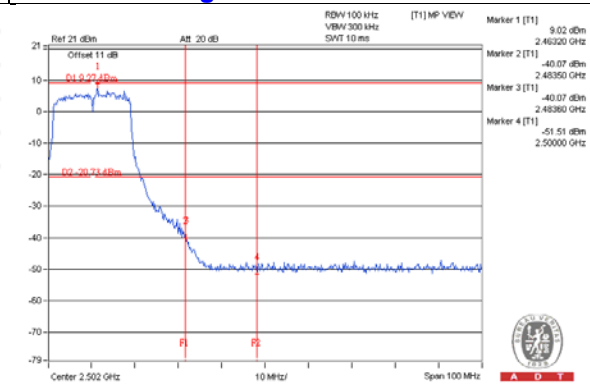


802.11n (HT20)

CH 1 Band edge

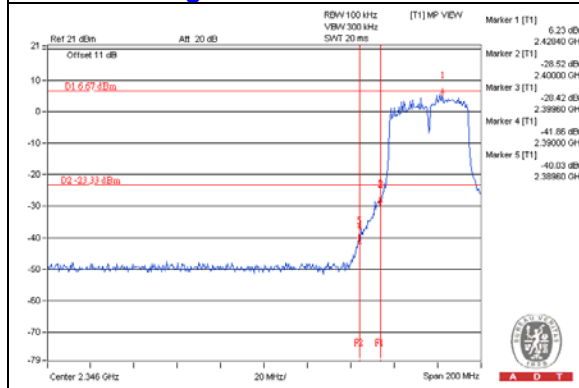


CH 11 Band edge

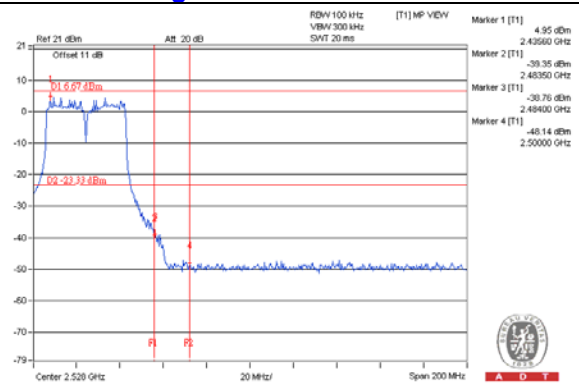


802.11n (HT40)

CH 3 Band edge



CH 9 Band edge



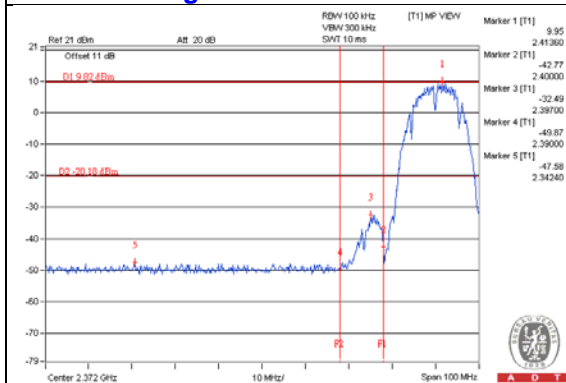
4.6.12 Test Results (Band Edge Test – Mode 3)

The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 30dB offset below D1. It shows compliance with the requirement.

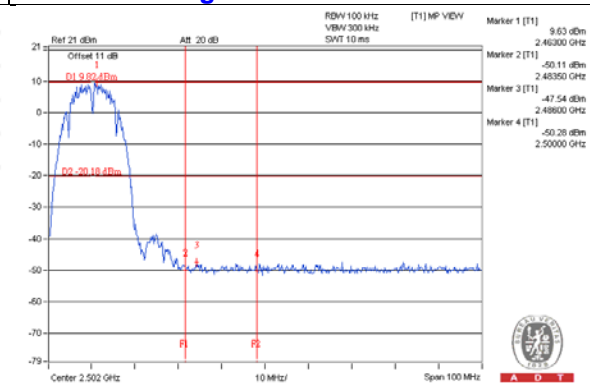
802.11b

Chain 0

CH 1 Band edge

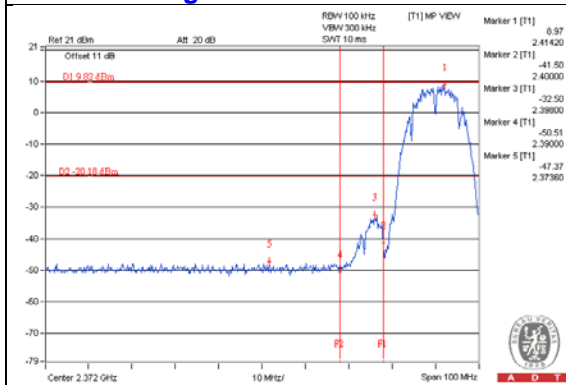


CH 11 Band edge

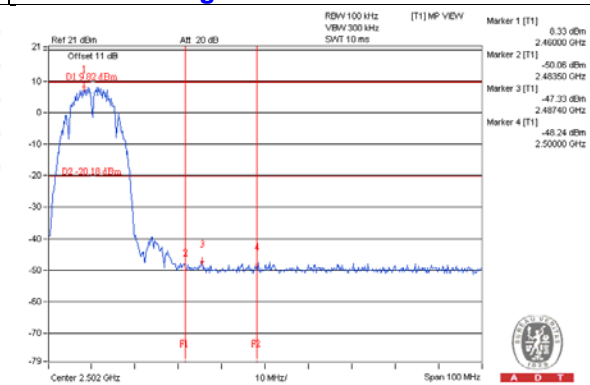


Chain 1

CH 1 Band edge



CH 11 Band edge

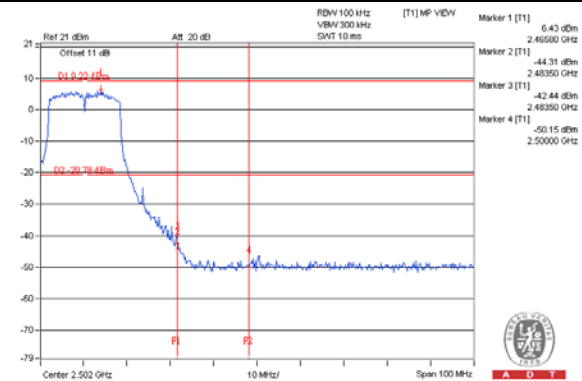
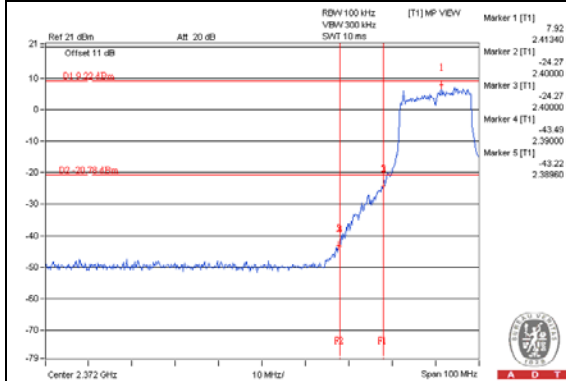


802.11g

Chain 0

CH 1 Band edge

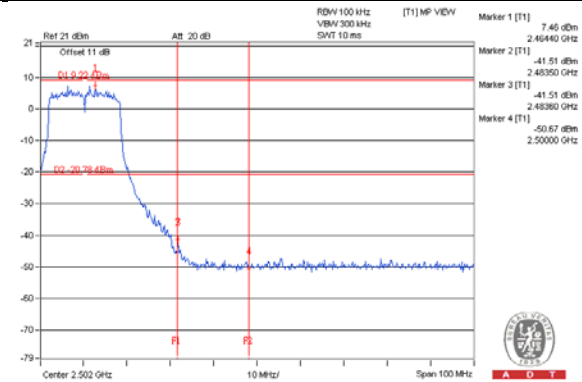
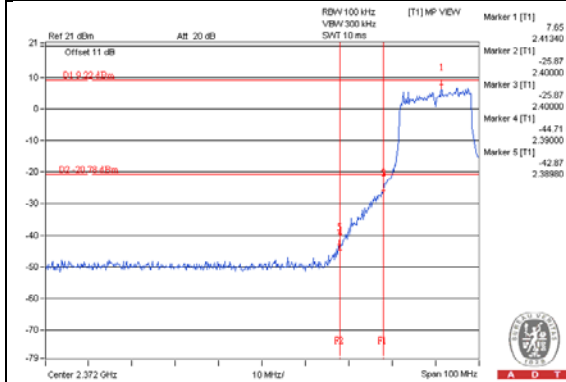
CH 11 Band edge



Chain 1

CH 1 Band edge

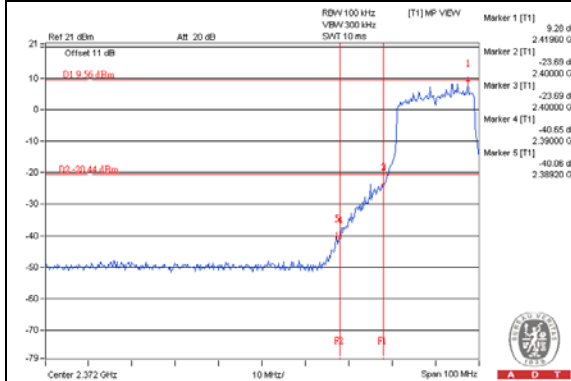
CH 11 Band edge



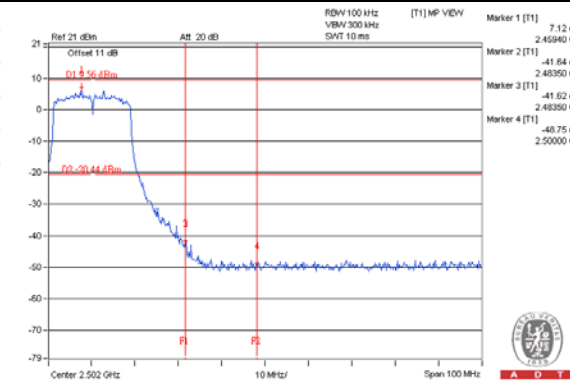
802.11n (HT20)

Chain 0

CH 1 Band edge

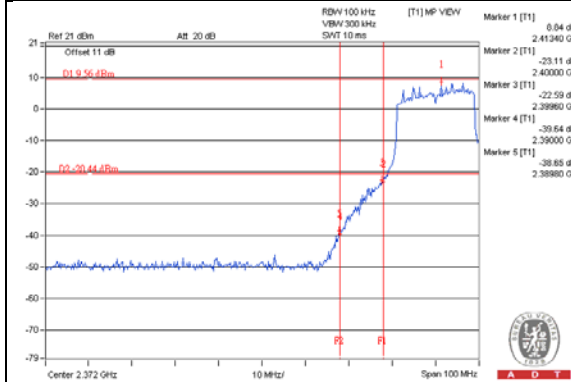


CH 11 Band edge

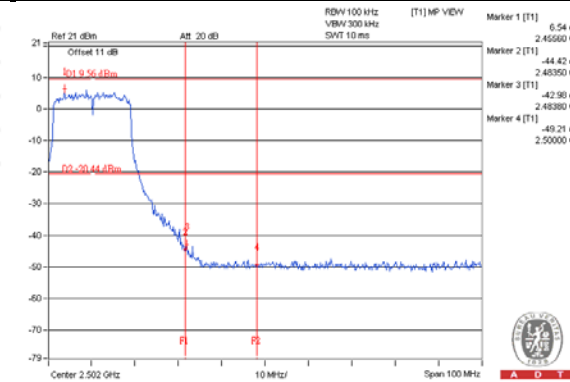


Chain 1

CH 1 Band edge



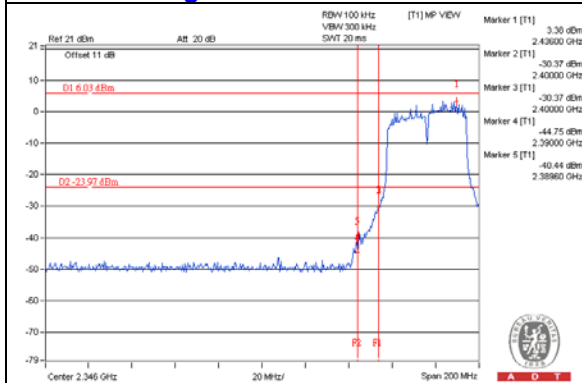
CH 11 Band edge



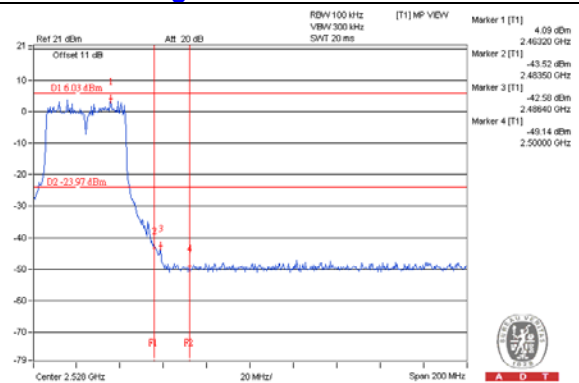
802.11n (HT40)

Chain 0

CH 3 Band edge

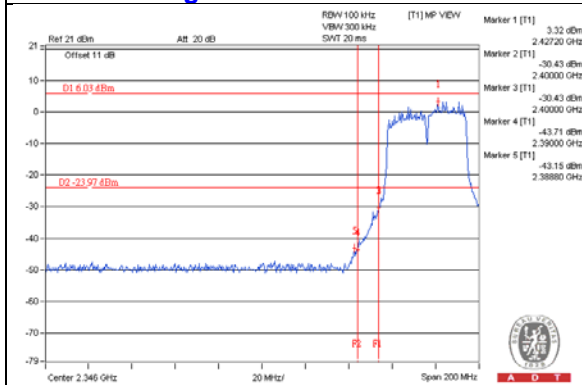


CH 9 Band edge

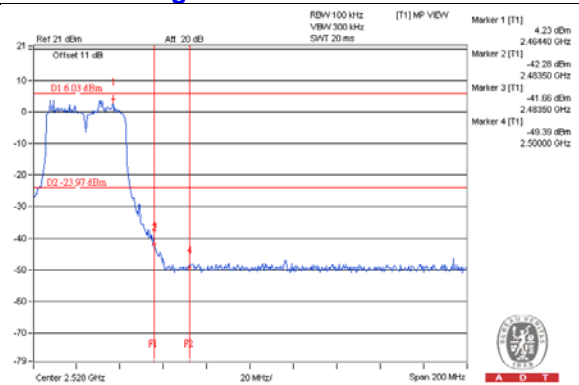


Chain 1

CH 3 Band edge



CH 9 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

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab

Tel: 886-3-6668565

Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab

Tel: 886-3-3183232

Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

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

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