Shenzhen CTL Electromagnetic Technology Co., Ltd.
Tel: +86-755-89486194 Fax: +86-755-89486187

FCC PART 15 SUBPART C TEST REPORT

FCC Part 15.247

Report Reference No.....:	**CTL11068338-S-WF**
Compiled by (position+printed name+signature) .:	File administrators Andy Zhang
Name of the organization performing the tests (position+printed name+signature) .:	Test Engineer Kendy Wang
Approved by (position+printed name+signature) .:	Manager Tracy Qi
Date of issue.....:	June 14, 2011
Representative Laboratory Name.:	**Shenzhen CTL Electromagnetic Technology Co., Ltd.**
Address .....:	Zone B，4/F, Block 20，Guangqian Industrial Park, Longzhu Road,Nanshan,Shenzhen 518055 China.
Test Firm .....:	**Bontek Compliance Testing Laboratory Ltd**
Address .....:	1/F, Block East H-3, OCT Eastern Ind. Zone, Qiaocheng East Road, Nanshan, Shenzhen, China
Applicant's name.....:	**SHENZHEN MTN ELECTRONICS CO.,LTD.**
Address .....:	MTN Industrial Park, No. 3 Fuhua Road, Pingxi Neighborhood, Pingdi Town , Longgang District, Shenzhen
Test specification:	
Standard .....:	FCC Part 15.247: Operation within the bands 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz.
TRF Originator.....:	Shenzhen CTL Electromagnetic Technology Co., Ltd.
Master TRF.....:	Dated 2011-01

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Test item description .....:	**Wireless AP**
FCC ID……..:	**ZBXMTO-WA718N-A1**
Trade Mark .....:	/
Model/Type reference .....:	MTO-WA718N-A1
Listed Models .....:	/
Modulation .....:	DSSS, OFDM
Work Frequency Range……..:	2412~2462MHz
Antenna Type……:	N-SMA connector
Result .....:	**Positive**

TEST REPORT

Test Report No. :	CTL11048239-S-WF	May 05, 2011 Date of issue

Equipment under Test	:	Wireless AP
Model /Type	:	MTO-WA718N-A1
Listed Models	:	/
Applicant	:	SHENZHEN MTN ELECTRONICS CO.,LTD.
Address	:	MTN Industrial Park, No. 3 Fuhua Road, Pingxi Neighborhood,Pingdi Town , Longgang District, Shenzhen
Manufacturer		SHENZHEN MTN ELECTRONICS CO.,LTD.
Address		MTN Industrial Park, No. 3 Fuhua Road, Pingxi Neighborhood,Pingdi Town , Longgang District, Shenzhen

Test Result according to the standards on page 4:	**Positive**

The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Contents

1. TEST STANDARDS

The tests were performed according to following standards:

FCC Part 15.247: Frequency Hopping, Direct Spread Spectrum and Hybrid Systems that are in operation within the bands of 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz.

ANSI C63.4-2003

KDB Publication No. 558074 Guidance on Measurements for Digital Transmission Systems

ANSI C63.10-2009: American National Standard for Testing Unlicensed Wireless Devices.

2 . SUMMARY

2.1. General Remarks

Date of receipt of test sample : June 5, 2011

Testing commenced on : June 7, 2011

Testing concluded on : June 10, 2011

2.2. Equipment Under Test

Power supply system utilised

Power supply voltage : o 120V / 60 Hz o 115V / 60Hz
o 12 V DC o 24 V DC
● Other (specified in blank below)

DC 12V from adapter

Description of the test mode

IEEE 802.11b/g/n: Thirteen channels are provided to the EUT,but only eleventh channels used for USA.

Channel	Frequency(MHz)	Channel	Frequency(MHz)
1	2412	8	2447
2	2417	9	2452
3	2422	10	2457
4	2427	11	2462
5	2432		
6	2437		
7	2442		

2.3. Short description of the Equipment under Test (EUT)

2.4GHz (Wireless AP N)

For more details, refer to the user's manual of the EUT.

Serial number: Prototype

2.4. EUT operation mode

Test Mode:

1. The EUT has been tested under normal operating condition.
2. Test program used to control the EUT for staying in continuous transmitting and receiving mode is programmed. Channel low (2412MHz), mid (2442MHz) and high (2462MHz) with highest data rate are chosen for full testing.

2.5. EUT configuration

The following peripheral devices and interface cables were connected during the measurement:

- - supplied by the manufacturer

- Mouse — Manufacturer : DELL; Model No. : MOC5UO
- Keyboard — Manufacturer : DELL; Model No. : L100

2.6. NOTE

1. The EUT is an 802.11b/g/n Wireless AP,The functions of the EUT listed as below:

	Test Standards	Reference Report
WLAN 802.11b/g, 802.11n	FCC Part 15 Subpart C (Section15.247)	CTL11068338-S-WF

2. The frequency bands used in this EUT are listed as follows:

Frequency Band(MHz)	2400-2483.5	5150-5350	5470-5725	5725-5850
802.11b	√	—	—	—
802.11g	√	—	—	—
802.11n(20MHz)	√	—	—	—
802.11n(40MHz)	√	—	—	—

3. The EUT incorporates a SISO function,Physically,the EUT provides two completed transmitter and two completed receivers.

Modulation Mode	TX Function
802.11b	1TX
802.11g	1TX
802.11n (20MHz)	1TX
802.11n (40MHz)	1TX

2.7. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for FCC ID: **ZBXMTO-WA718N-A1** filing to comply with of the FCC Part 15.247 Rules.

2.8. Modifications

No modifications were implemented to meet testing criteria.

3. TEST ENVIRONMENT

3.1. Address of the test laboratory

Bontek Compliance Testing Laboratory Ltd
1/F, Block East H-3, OCT Eastern Ind. Zone, Qiaocheng East Road, Nanshan, Shenzhen, China

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 (2003) and CISPR Publication 22.

3.2. Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

IC Registration No.: 7631A

The 3m alternate test site of Bontek Compliance Testing Laboratory Ltd EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration NO.: 7631A on March, 2008.

FCC-Registration No.: 338263

Bontek Compliance Testing Laboratory Ltd EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 338263, March 24, 2008.

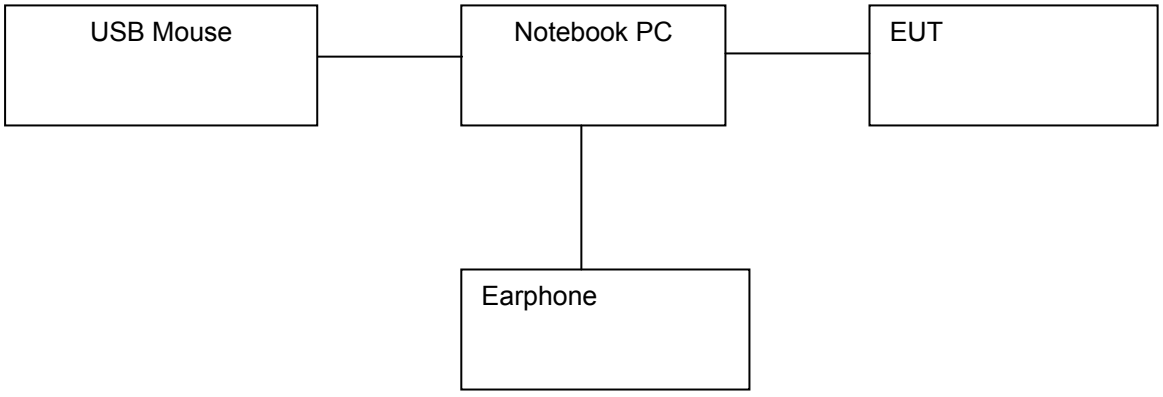
3.3. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15-35 ° C
Humidity:	30-60 %
Atmospheric pressure:	950-1050mbar

3.4. Configuration of Tested System

Fig. 2-1 Configuration of Tested System



3.5. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 „Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements“ and is documented in the Bontek Compliance Testing Laboratory Ltd quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Bontek laboratory is reported:

Test	Range	Measurement Uncertainty	Notes
Radiated Emission	30~1000MHz	4.10dB	(1)
Radiated Emission	1~12.75GHz	4.32dB	(1)
Conducted Disturbance	0.15~30MHz	3.20dB	(1)

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3.6. Equipments Used during the Test

Item	Test Equipment	Manufacturer	Model No.	Last Cal.	Due. Date
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	2011/04/14	2012/04/13
2	Spectrum Analyzer	Agilent	E4402B	2011/04/14	2012/04/13
3	Dual Directional Coupler	Agilent	778D	2011/04/14	2012/04/13
4	10dB attenuator	SCHWARZBECK	MTAIMP-136	2011/04/14	2012/04/13
5	Tunable Bandreject filter	K&L	3TNF-800	2011/04/14	2012/04/13
6	Tunable Bandreject filter	K&L	5TNF-1700	2011/04/14	2012/04/13
7	High-Pass Filter	K&L	9SH10-2700/X12750-O/O	2011/04/14	2012/04/13
8	High-Pass Filter	K&L	41H10-1375/U12750-O/O	2011/04/14	2012/04/13
9	Coaxial Cable	Huber+Suhner	AC4-RF-H	2011/04/14	2012/04/13
10	AC Power Supply	IDRC	CF-500TP	2011/04/14	2012/04/13
11	DC Power Supply	IDRC	CD-035-020PR	2011/04/14	2012/04/13
12	RF Current Probe	FCC	F-33-4	2011/04/14	2012/04/13
13	Temperature /Humidity Meter	zhicheng	ZC1-2	2011/04/14	2012/04/13
14	MICROWAVE AMPLIFIER	HP	8349B	2011/04/14	2012/04/13
15	Amplifier	HP	8447D	2011/04/14	2012/04/13
16	SIGNAL GENERATOR	HP	8647A	2011/04/14	2012/04/13
17	Log Periodic Antenna	ELECTRO-METRICS	EM-6950	2011/04/14	2012/04/13
18	Horn Antenna	Schwarzbeck	BBHA9120A	2011/04/14	2012/04/13
19	EMI Test Receiver	R&S	ESPI	2011/04/14	2012/04/13
20	Spectrum Analyzer	Agilent	E7405A	2011/04/14	2012/04/13
21	Spectrum Analyzer	HP	8593E	2011/04/14	2012/04/13

3.7. Summary of Test Result

FCC PART 15		
FCC Part 15.207	AC Power Conducted Emission	PASS
FCC Part 15.247(a)(2)	6dB Bandwidth	PASS
FCC Part 15.247(d)	Spurious RF Conducted Emission	PASS
FCC Part 15.247(b)	Maximum Peak Output Power	PASS
FCC Part 15.247(e)	Power Spectral Density	PASS
FCC Part 15.109/ 15.205/ 15.209	Radiated Emissions	PASS
FCC Part 15.247(d)	Band Edge Compliance of RF Emission	PASS
FCC Part 15.203/15.247 (b)	Antenna Requirement	PASS
FCC Per 47 CFR 2.1091(b)	MPE Evaluation	PASS

Remark: The measurement uncertainty is not included in the test result.

Preliminary tests were performed in different data rate to find the worst radiated emission. The data rate shown in the table below is the worst-case rate with respect to the specific test item. Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

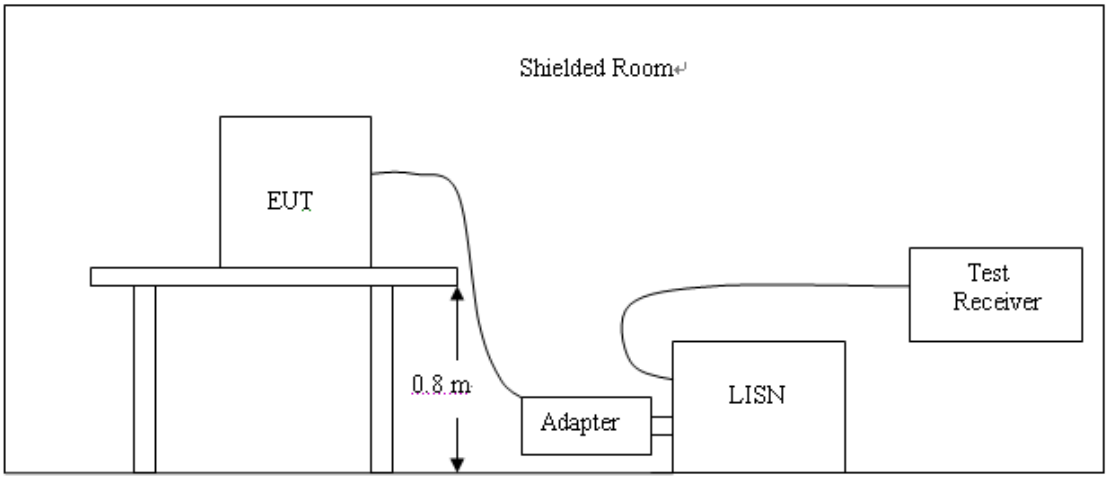
Test Items	Mode	Data Rate	Channel
AC Power Conducted Emission	Normal Link	11 Mbps	1
Maximum Peak Conducted Output Power Power Spectral Density 6dB Bandwidth Spurious RF conducted emission	11b/DSSS	11 Mbps	1/6/11
	11g/OFDM	54 Mbps	1/6/11
	11n(20MHz)/OFDM	65Mbps	1/6/11
	11n(40MHz)/OFDM	135Mbps	3/6/9
Radiated Emission 30MHz~1GHz	11b/DSSS	11 Mbps	1/6/11
	11g/OFDM	54 Mbps	1/6/11
	11n(20MHz)/OFDM	65Mbps	1/6/11
	11n(40MHz)/OFDM	135Mbps	3/6/9
Radiated Emission 1GHz~10th Harmonic	11b/DSSS	11 Mbps	1/6/11
	11g/OFDM	54 Mbps	1/6/11
	11n(20MHz)/OFDM	65Mbps	1/6/11
	11n(40MHz)/OFDM	135Mbps	3/6/9
Band Edge Compliance of RF Emission	11b/DSSS	11 Mbps	1/11
	11g/OFDM	54 Mbps	1/11
	11n(20MHz)/OFDM	65Mbps	1/11
	11n(40MHz)/OFDM	135Mbps	3/9

Note1: According exploratory test, EUT will have maximum output power in those data rate, so those data rate were used for all test.

4. TEST CONDITIONS AND RESULTS

4.1. Conducted Emissions Test

TEST CONFIGURATION



TEST PROCEDURE

For unintentional device, according to § 15.107(a) Line Conducted Emission Limits is as following：

Frequency (MHz)	Maximum RF Line Voltage (dBμv)			
	CLASS A		CLASS B	
	Q.P.	Ave.	Q.P.	Ave.
0.15 - 0.50	79	66	66-56*	56-46*
0.50 - 5.00	73	60	56	46
5.00 - 30.0	73	60	60	50

* Decreasing linearly with the logarithm of the frequency

For intentional device, according to §15.207(a) Line Conducted Emission Limit is same as above table.

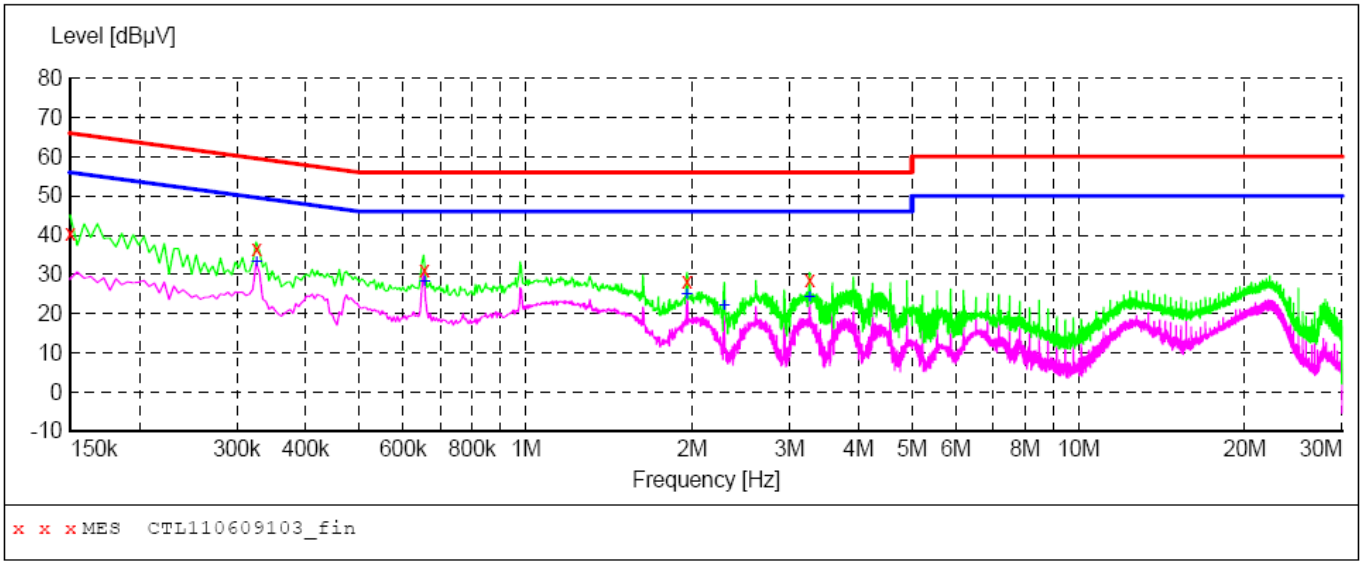
1. Please follow the guidelines in ANSI C63.4-2003.
2. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
3. Connect EUT to the power mains through a line impedance stabilization network (LISN).
4. All the support units are connecting to the other LISN.
5. The LISN provides 50 ohm coupling impedance for the measuring instrument.
6. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
7. Both sides of AC line were checked for maximum conducted interference.
8. The frequency range from 150 kHz to 30 MHz was searched.
9. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

The RBW/VBW for 150KHz to 30MHz: 9KHz

TEST RESULTS

Line 1:

SCAN TABLE: "Voltage (9K-30M)FIN"
Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "CTL110609103_fin"

6/9/2011 3:30PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000	40.30	10.2	66	25.7	QP	N	GND
0.326000	36.30	10.2	60	23.3	QP	N	GND
0.656000	31.10	10.2	56	24.9	QP	N	GND
1.958000	28.20	10.3	56	27.8	QP	N	GND
3.266000	28.70	10.4	56	27.3	QP	N	GND

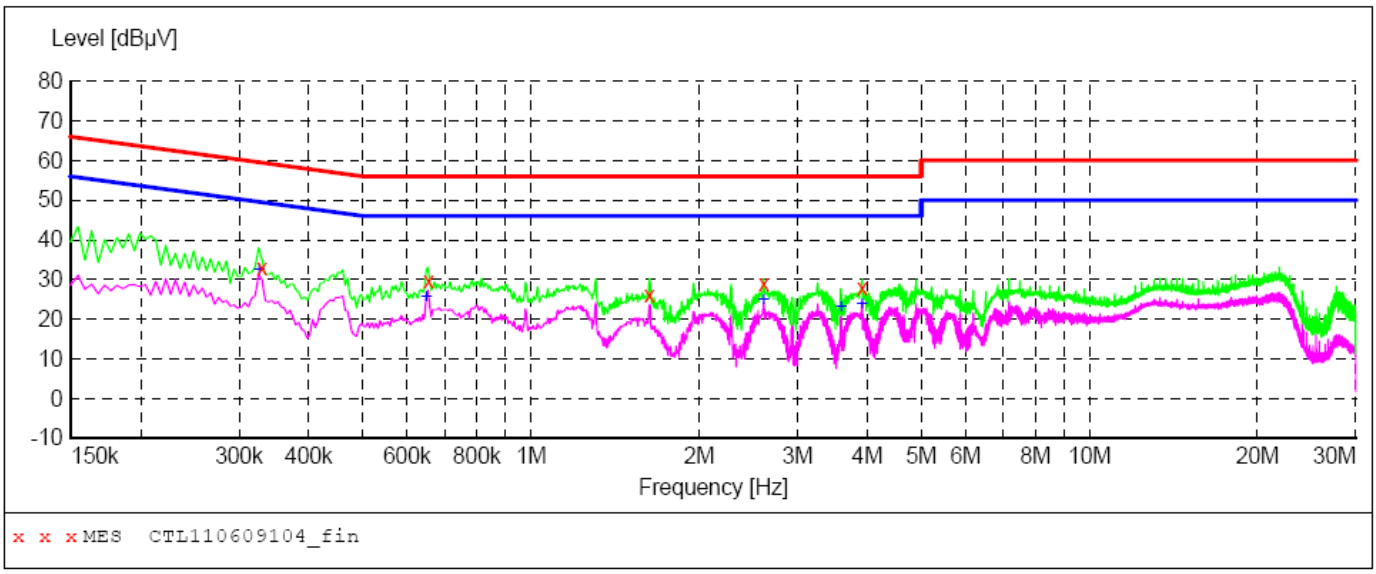
MEASUREMENT RESULT: "CTL110609103_fin2"

6/9/2011 3:30PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.326000	33.20	10.2	50	16.4	AV	N	GND
0.656000	28.40	10.2	46	17.6	AV	N	GND
1.958000	25.00	10.3	46	21.0	AV	N	GND
2.288000	22.20	10.4	46	23.8	AV	N	GND
3.266000	24.40	10.4	46	21.6	AV	N	GND

Line 2:

SCAN TABLE: "Voltage (9K-30M)FIN"
Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "CTL110609104_fin"

6/9/2011 3:33PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.330000	33.00	10.2	60	26.5	QP	L1	GND
0.656000	29.50	10.2	56	26.5	QP	L1	GND
1.628000	26.20	10.3	56	29.8	QP	L1	GND
2.612000	28.80	10.4	56	27.2	QP	L1	GND
3.920000	28.00	10.4	56	28.0	QP	L1	GND

MEASUREMENT RESULT: "CTL110609104_fin2"

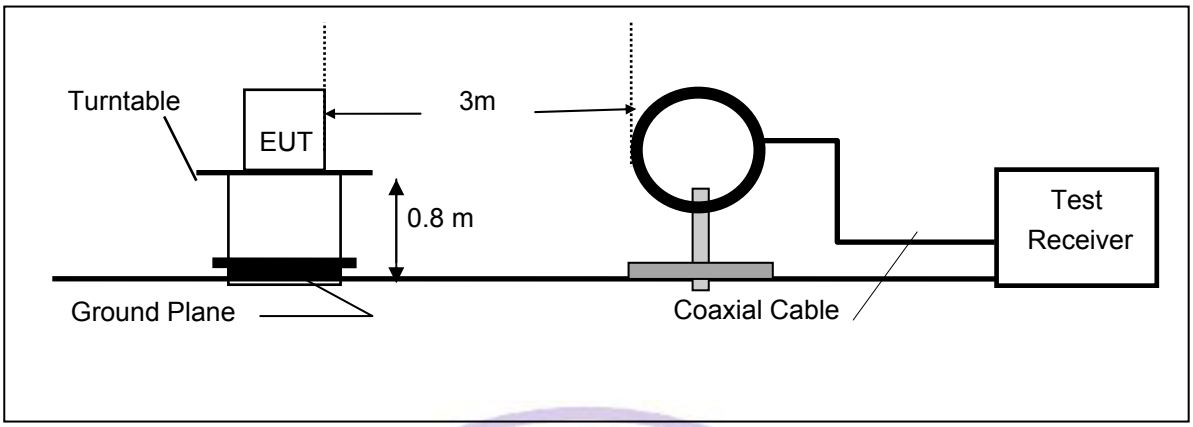
6/9/2011 3:33PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.326000	32.40	10.2	50	17.2	AV	L1	GND
0.650000	25.90	10.2	46	20.1	AV	L1	GND
2.612000	25.00	10.4	46	21.0	AV	L1	GND
3.590000	23.10	10.4	46	22.9	AV	L1	GND
3.920000	24.00	10.4	46	22.0	AV	L1	GND

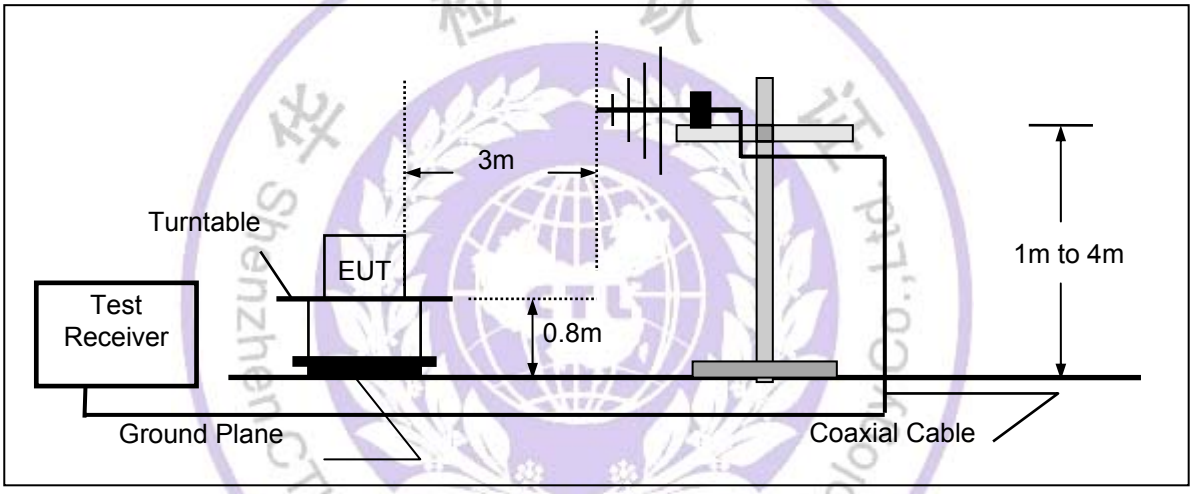
4.2. Radiated Emission Test

TEST CONFIGURATION

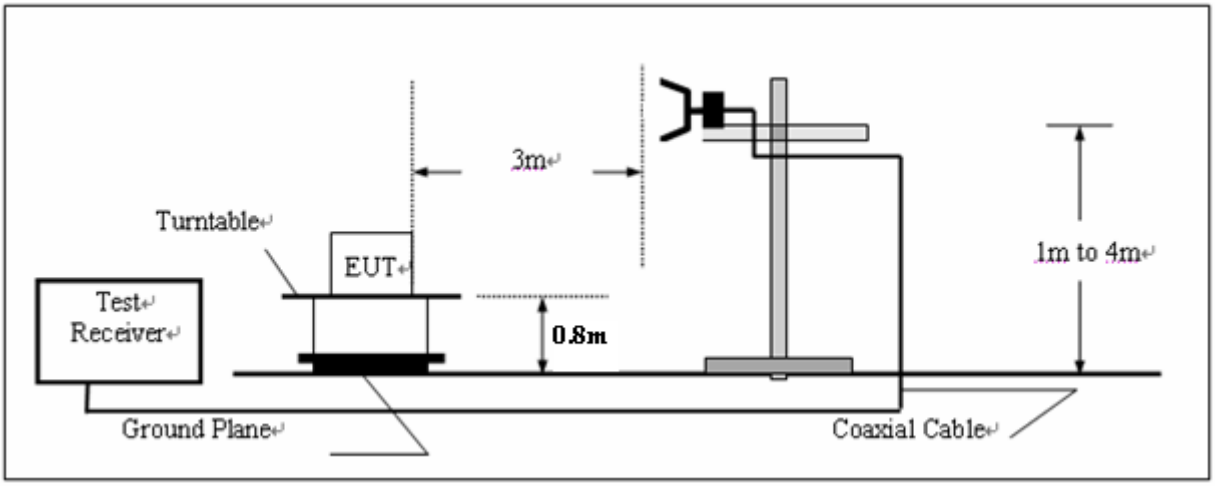
(A) Radiated Emission Test Set-Up, Frequency Below 30MHz



(B) Radiated Emission Test Set-Up, Frequency Below 1000MHz



(C) Radiated Emission Test Set-Up, Frequency above 1000MHz



FIELD STRENGTH CALCULATION

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor(if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CL - AG

Where FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
RA = Reading Amplitude	AG = Amplifier Gain
AF = Antenna Factor	

TEST PROCEDURE

1. The testing follows FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. The EUT was placed on a turn table which is 0.8m above ground plane.
3. Maximum procedure was performed by raising the receiving antenna from 1m to 4m and rotating the turn table from 0℃ to 360℃ to acquire the highest emissions from EUT
4. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
5. Span = wide enough to fully capture the emission being measured; RBW = 1 MHz for f ＞ 1 GHz, 100 kHz for f < 1 GHz; VBW=RBW; Sweep = auto; Detector function = peak; Trace = max hold.
6. Repeat above procedures until all frequency measurements have been completed.

LIMIT

For unintentional device, according to § 15.109(a), except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values：

Frequency (MHz)	Distance (Meters)	Radiated (dBμV/m)	Radiated (μV/m)
30-88	3	40.0	100
88-216	3	43.5	150
216-960	3	46.0	200
Above 960	3	54.0	500

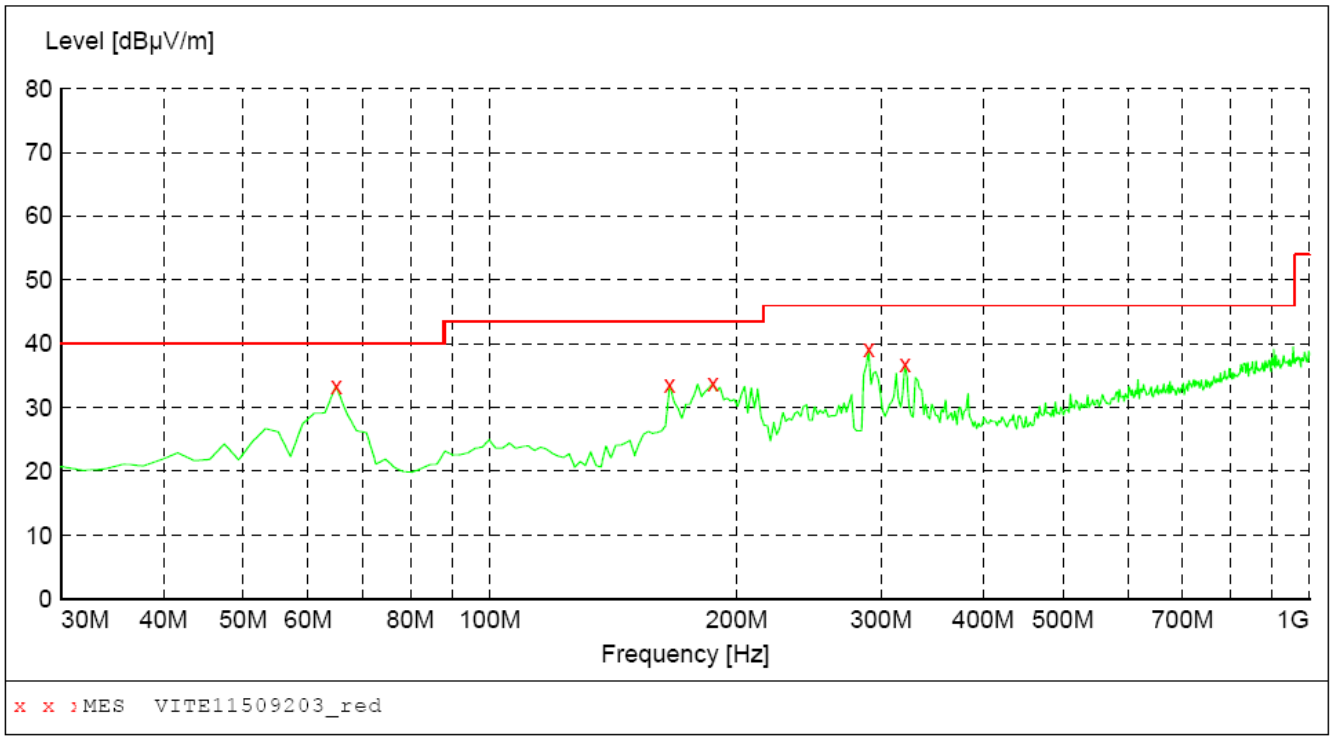
For intentional device, according to § 15.209(a), the general requirement of field strength of radiated emissions from intentional radiators at a distance of 3 meters shall not exceed the above table. According to § 15.247(d), in any 100kHz bandwidth outside the frequency band in which the EUT is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the100kHz bandwidth within the band that contains the highest level of desired power.

TEST RESULTS

Below 1GHz:
The radiated measurement are performed the each test mode (b/g/n) and channel (low/mid/high), the datum recorded below (802.11b mode, the middle channel) is the worst case for all the test mode and channel.

SWEEP TABLE: "test (30M-1G)"

Short Description:			Field Strength		
Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	VULB9163 NEW



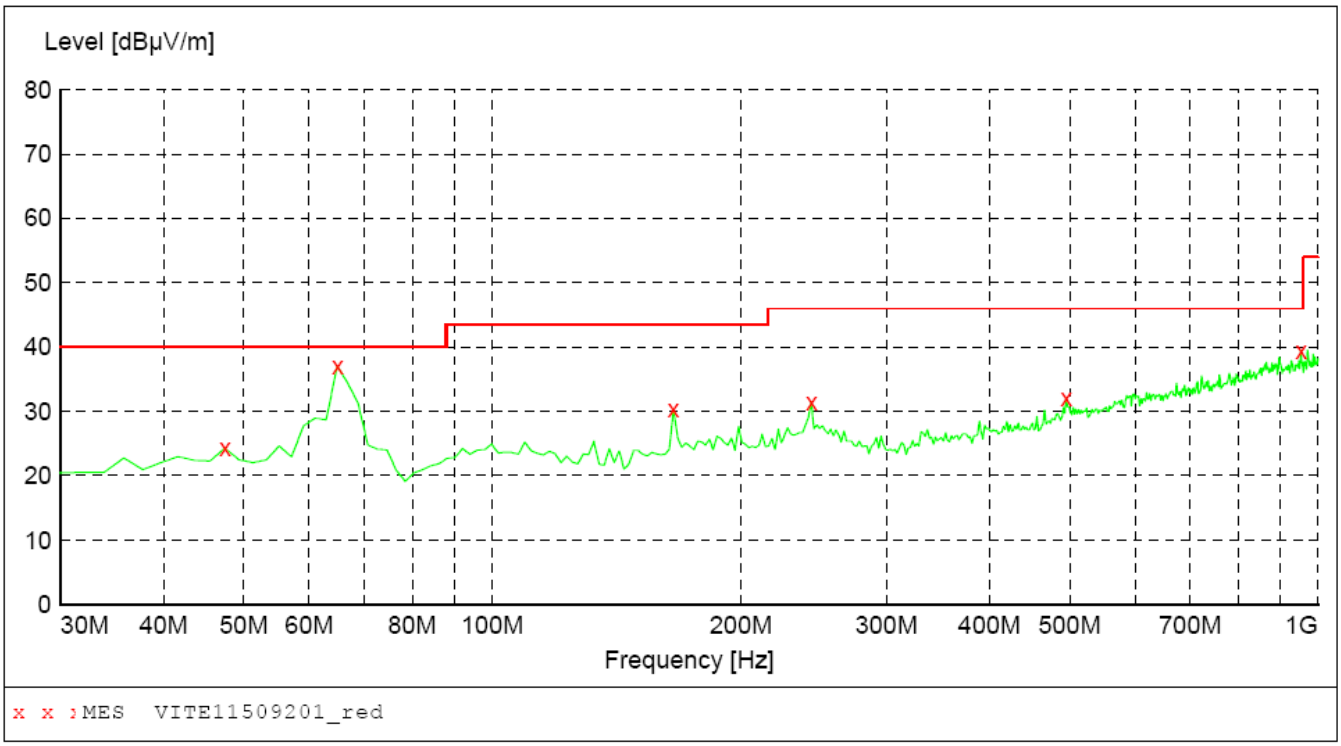
MEASUREMENT RESULT: "VITE11509203_red"

5/9/2011 19:26

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
64.920000	33.40	13.5	40.0	6.6	---	100.0	0.00	HORIZONTAL
165.800000	33.60	14.1	43.5	9.9	---	100.0	0.00	HORIZONTAL
187.140000	33.80	15.8	43.5	9.7	---	100.0	0.00	HORIZONTAL
289.960000	39.10	18.4	46.0	6.9	---	100.0	0.00	HORIZONTAL
321.000000	36.70	19.2	46.0	9.3	---	100.0	0.00	HORIZONTAL

SWEEP TABLE: "test (30M-1G)"

Short Description:			Field Strength		
Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	VULB9163 NEW



MEASUREMENT RESULT: "VITE11509201_red"

5/9/2011 19:20

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
47.460000	24.30	15.8	40.0	15.7	---	100.0	0.00	VERTICAL
64.920000	37.10	13.5	40.0	2.9	---	100.0	0.00	VERTICAL
165.800000	30.40	14.1	43.5	13.1	---	100.0	0.00	VERTICAL
243.400000	31.50	17.2	46.0	14.5	---	100.0	0.00	VERTICAL
495.600000	32.10	23.7	46.0	13.9	---	100.0	0.00	VERTICAL
953.440000	39.50	31.8	46.0	6.5	---	100.0	0.00	VERTICAL

Above 1GHz:
802.11b CH1

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M												
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	2390.00	51.83	PK	74.00	22.17	1.00 H	200	55.23	28.3	4.90	36.6	-3.40
1	2390.00	44.11	AV	54.00	9.89	1.00 H	200	47.41	28.3	4.90	36.6	-3.40
2	*2412.00	107.46	PK			1.00 H	333	110.86	28.3	4.90	36.6	-3.40
2	*2412.00	92.10	AV			1.00 H	333	95.50	28.3	4.90	36.6	-3.40
3	4824.00	48.23	PK	74.00	25.77	1.00 H	125	45.03	32.7	7.00	36.5	3.20
3	4824.00	41.00	AV	54.00	13.00	1.00 H	125	37.80	32.7	7.00	36.5	3.20
4	7236.00	57.21	PK	74.00	16.79	1.00 H	66	47.81	35.8	8.90	35.3	9.40
4	7236.00	44.35	AV	54.00	9.65	1.00 H	66	34.95	35.8	8.90	35.3	9.40
5	9648.00	54.23	PK	74.00	19.77	1.00 H	264	41.63	37.2	10.20	34.8	12.60
5	9648.00	45.00	AV	54.00	9.00	1.00 H	264	32.40	037.2	10.20	34.8	12.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M												
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	2390.00	51.89	PK	74.00	22.11	1.0	236	55.29	28.3	4.90	36.6	-3.40
1	2390.00	45.49	AV	54.00	8.51	1.0	236	48.89	28.3	4.90	36.6	-3.40
2	*2412.00	108.96	PK			1.0	100	112.36	28.3	4.90	36.6	-3.40
2	*2412.00	92.21	AV			1.0	100	95.55	28.3	4.90	36.6	-3.40
3	4824.00	58.23	PK	74.00	15.77	1.0	312	55.03	32.7	7.00	36.5	3.20
3	4824.00	43.00	AV	54.00	11.00	1.0	312	39.80	32.7	7.00	36.5	3.20
4	7236.00	61.12	PK	74.00	12.88	1.0	46	51.72	35.8	8.90	35.3	9.40
4	7236.00	44.17	AV	54.00	9.83	1.0	46	34.77	35.8	8.90	35.3	9.40
5	9648.00	55.64	PK	74.00	18.36	1.0	108	43.04	37.2	10.20	34.8	12.60
5	9648.00	45.57	AV	54.00	8.43	1.0	108	32.97	37.2	10.20	34.8	12.60

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
3. The other emission levels were very low against the limit.
4. Margin value = Limit value- Emission level.
5. The limit value is defined as per 15.247
6. "* ": Fundamental frequency
7. For Wireless 802.11b mode at 11Mbps.

802.11b CH6

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M											
No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	*2437.00	104.30 PK			1.00 H	153	107.50	28.3	5.10	-36.6	-3.20
1	*2437.00	94.30 AV			1.00 H	153	97.50	28.3	5.10	-36.6	-3.20
2	4874.00	45.40 PK	74.00	28.60	1.00 H	202	42.20	32.3	7.60	-36.5	3.40
2	4874.00	36.00 AV	54.00	18.00	1.00 H	202	32.60	32.3	7.60	-36.5	3.40
3	7311.00	53.10 PK	74.00	20.90	1.00 H	355	43.70	36.1	8.60	-35.3	9.40
3	7311.00	42.00 AV	54.00	12.00	1.00 H	355	32.60	36.1	8.60	-35.3	9.40
4	9748.00	56.20 PK	74.00	17.80	1.00 H	28	43.60	37.2	10.20	-34.8	12.60
4	9748.00	46.20 AV	54.00	7.80	1.00 H	28	33.60	37.2	10.20	-34.8	12.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M											
No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	*2437.00	106.70 PK			1.00 V	121	109.90	28.3	5.10	-36.6	-3.20
1	*2437.00	92.20 AV			1.00 V	121	94.40	28.3	5.10	-36.6	-3.20
2	4874.00	47.00 PK	74.00	27.00	1.00 V	97	43.60	32.3	7.60	-36.5	3.40
2	4874.00	36.10 AV	54.00	17.90	1.00 V	97	33.10	32.3	7.60	-36.5	3.40
3	7311.00	55.10 PK	74.00	22.90	1.00 V	288	45.70	36.1	8.60	-35.3	9.40
3	7311.00	42.10 AV	54.00	11.90	1.00 V	288	32.70	36.1	8.60	-35.3	9.40
4	9748.00	55.30 PK	74.00	18.70	1.00 V	89	42.70	37.2	10.20	-34.8	12.60
4	9748.00	47.20 AV	54.00	6.80	1.00 V	89	34.60	37.2	10.20	-34.8	12.60

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
3. The other emission levels were very low against the limit.
4. Margin value = Limit value- Emission level.
5. The limit value is defined as per 15.247
6. "* ": Fundamental frequency
7. For Wireless 802.11b mode at 11Mbps.

802.11b CH11

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M											
No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	*2462.00	105.90 PK			1.00 H	154	109.20	28.6	4.70	-36.6	-3.30
1	*2462.00	93.70 AV			1.00 H	154	97.00	28.6	4.70	-36.6	-3.30
2	2483.50	38.70 PK	74.00	35.30	1.00 H	146	42.00	28.6	4.70	-36.6	-3.30
2	2483.50	28.10 AV	54.00	25.90	1.00 H	146	31.40	28.6	4.70	-36.6	-3.30
3	4022.04	45.20 PK	74.00	28.80	1.00 H	341	43.30	32.2	6.20	-36.5	1.90
3	4022.04	33.30 AV	54.00	20.70	1.00 H	341	31.40	32.2	6.20	-36.5	1.90
4	4924.00	46.10 PK	74.00	27.90	1.00 H	100	42.30	33.0	7.00	-36.2	3.80
4	4924.00	35.10 AV	54.00	18.90	1.00 H	100	31.30	33.0	7.00	-36.2	3.80
5	7386.00	55.40 PK	74.00	18.60	1.00 H	190	46.00	36.2	8.50	-35.3	9.40
5	7386.00	42.30 AV	54.00	11.70	1.00 H	190	32.90	36.2	8.50	-35.3	9.40
6	9848.00	59.00 PK	74.00	15.00	1.00 H	113	46.40	37.2	10.20	-34.8	12.60
6	9848.00	48.40 AV	54.00	5.60	1.00 H	113	35.80	37.2	10.20	-34.8	12.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M											
No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	*2462.00	106.90 PK			1.00 V	247	110.20	28.6	4.70	-36.6	-3.30
1	*2462.00	96.60 AV			1.00 V	247	99.90	28.6	4.70	-36.6	-3.30
2	2483.50	53.40 PK	74.00	20.60	1.00 V	150	56.70	28.6	4.70	-36.6	-3.30
2	2483.50	42.80 AV	54.00	11.20	1.00 V	150	46.10	28.6	4.70	-36.6	-3.30
3	4022.04	45.10 PK	74.00	28.90	1.00 V	299	43.20	32.2	6.20	-36.5	1.90
3	4022.04	35.30 AV	54.00	18.70	1.00 V	299	32.40	32.2	6.20	-36.5	1.90
4	4924.00	46.40 PK	74.00	27.60	1.00 V	90	42.60	33.0	7.00	-36.2	3.80
4	4924.00	37.10 AV	54.00	16.90	1.00 V	90	33.30	33.0	7.00	-36.2	3.80
5	7386.00	55.00 PK	74.00	19.00	1.00 V	29	45.60	36.2	8.50	-35.3	9.40
5	7386.00	44.60 AV	54.00	9.40	1.00 V	29	35.20	36.2	8.50	-35.3	9.40
6	9848.00	58.30 PK	74.00	15.70	1.00 V	222	45.70	37.2	10.20	-34.8	12.60
6	9848.00	49.10 AV	54.00	4.90	1.00 V	222	36.50	37.2	10.20	-34.8	12.60

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
3. The other emission levels were very low against the limit.
4. Margin value = Limit value- Emission level.
5. The limit value is defined as per 15.247
6. "* ": Fundamental frequency
7. For Wireless 802.11b mode at 11Mbps.

802.11g CH1

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M												
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	2390.00	60.83	PK	74.00	13.17	1.00 H	247	64.13	28.3	5.00	36.6	-3.30
1	2390.00	41.22	AV	54.00	12.78	1.00 H	247	44.52	28.3	5.00	36.6	-3.30
2	*2412.00	104.36	PK			1.00 H	100	107.66	28.3	5.00	36.6	-3.30
2	*2412.00	90.53	AV			1.00 H	100	93.83	28.3	5.00	36.6	-3.30
3	4824.00	51.23	PK	74.00	22.77	1.00 H	89	47.43	32.7	7.30	36.2	3.80
3	4824.00	37.88	AV	54.00	16.12	1.00 H	89	34.08	32.7	7.30	36.2	3.80
4	7236.00	57.00	PK	74.00	17.00	1.00 H	345	47.60	35.8	8.90	35.3	9.40
4	7236.00	40.13	AV	54.00	13.87	1.00 H	345	30.73	35.8	8.90	35.3	9.40
5	9648.00	52.55	PK	74.00	21.45	1.00 H	121	39.95	37.2	10.20	34.8	12.60
5	9648.00	39.78	AV	54.00	14.22	1.00 H	121	27.18	37.2	10.20	34.8	12.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M												
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	2390.00	67.55	PK	74.00	6.450	1.00 V	288	70.85	28.3	5.00	36.6	-3.30
1	2390.00	40.25	AV	54.00	13.75	1.00 V	288	43.55	28.3	5.00	36.6	-3.30
2	*2412.00	103.29	PK			1.00 V	69	106.59	28.3	5.00	36.6	-3.30
2	*2412.00	91.24	AV			1.00 V	69	94.54	28.3	5.00	36.6	-3.30
3	4824.00	53.54	PK	74.00	20.46	1.00 V	291	49.74	32.7	7.30	36.2	3.80
3	4824.00	40.12	AV	54.00	13.88	1.00 V	291	36.32	32.7	7.30	36.2	3.80
4	7236.00	62.45	PK	74.00	11.55	1.00 V	360	53.05	35.8	8.90	35.3	9.40
4	7236.00	42.77	AV	54.00	11.23	1.00 V	360	33.37	35.8	8.90	35.3	9.40
5	9648.00	55.68	PK	74.00	18.32	1.00 V	155	43.08	37.2	10.20	34.8	12.60
5	9648.00	40.44	AV	54.00	13.56	1.00 V	155	27.84	37.2	10.20	34.8	12.60

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
3. The other emission levels were very low against the limit.
4. Margin value = Limit value- Emission level.
5. The limit value is defined as per 15.247
6. "* ": Fundamental frequency
7. For Wireless 802.11g mode at 54Mbps.

802.11g CH6

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M											
No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	*2437.00	107.40 PK			1.00 H	100	109.60	28.3	5.10	-36.6	-3.20
1	*2437.00	89.00 AV			1.00 H	100	92.20	28.3	5.10	-36.6	-3.20
2	4874.00	45.40 PK	74.00	28.60	1.00 H	214	42.00	32.8	7.10	-36.5	3.40
2	4874.00	37.10 AV	54.00	17.90	1.00 H	214	32.70	32.8	7.10	-36.5	3.40
3	7311.00	52.70 PK	74.00	21.30	1.00 H	0	43.30	36.1	8.60	-35.3	9.40
3	7311.00	45.30 AV	54.00	8.70	1.00 H	0	35.90	36.1	8.60	-35.3	9.40
4	9748.00	55.80 PK	74.00	18.20	1.00 H	163	43.20	37.2	10.20	-34.8	12.60
4	9748.00	46.30 AV	54.00	7.70	1.00 H	163	33.70	37.2	10.20	-34.8	12.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M											
No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	*2437.00	105.50 PK			1.00 V	122	108.70	28.3	5.10	-36.6	-3.20
1	*2437.00	95.80 AV			1.00 V	122	99.00	28.3	5.10	-36.6	-3.20
2	4874.00	45.10 PK	74.00	28.90	1.00 V	100	41.70	32.8	7.10	-36.5	3.40
2	4874.00	37.10 AV	54.00	16.90	1.00 V	100	33.70	32.8	7.10	-36.5	3.40
3	7311.00	54.90 PK	74.00	19.10	1.00 V	356	45.50	36.1	8.60	-35.3	9.40
3	7311.00	45.40 AV	54.00	8.60	1.00 V	356	36.00	36.1	8.60	-35.3	9.40
4	9748.00	56.60 PK	74.00	17.40	1.00 V	26	44.00	37.2	10.20	-34.8	12.60
4	9748.00	48.20 AV	54.00	7.80	1.00 V	26	35.60	37.2	10.20	-34.8	12.60

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
3. The other emission levels were very low against the limit.
4. Margin value = Limit value- Emission level.
5. The limit value is defined as per 15.247
6. "* ": Fundamental frequency
7. For Wireless 802.11g mode at 54Mbps.

802.11g CH11

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M											
No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	*2462.00	97.50 PK			1.00 H	156	100.80	28.2	5.10	-36.6	-3.30
1	*2462.00	82.80 AV			1.00 H	156	86.10	28.2	5.10	-36.6	-3.30
2	2483.50	46.70 PK	74.00	27.30	1.00 H	191	50.00	28.2	5.10	-36.6	-3.30
2	2483.50	37.10 AV	54.00	16.90	1.00 H	191	40.40	28.2	5.10	-36.6	-3.30
3	4924.00	46.90 PK	74.00	27.10	1.00 H	198	43.10	33.0	7.00	-36.2	3.80
3	4924.00	36.90 AV	54.00	17.10	1.00 H	198	33.10	33.0	7.00	-36.2	3.80
4	7386.00	54.70 PK	74.00	19.30	1.00 H	90	45.30	36.2	8.50	-35.3	9.40
4	7386.00	48.30 AV	54.00	6.70	1.00 H	90	37.90	36.2	8.50	-35.3	9.40
5	9848.00	55.60 PK	74.00	18.40	1.00 H	124	43.00	37.3	10.10	-34.8	12.60
5	9848.00	45.20 AV	54.00	8.80	1.00 H	124	32.60	37.3	10.10	-34.8	12.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M											
No.	Frequency (MHz)	Emssion Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	*2462.00	101.50 PK			1.00 V	125	105.80	28.2	5.10	-36.6	-3.30
1	*2462.00	89.10 AV			1.00 V	125	94.40	28.2	5.10	-36.6	-3.30
2	2483.50	66.70 PK	74.00	8.30	1.00 V	348	69.00	28.2	5.10	-36.6	-3.30
2	2483.50	50.90 AV	54.00	3.10	1.00 V	348	54.20	28.2	5.10	-36.6	-3.30
3	4924.00	45.10 PK	74.00	28.90	1.00 V	96	41.30	33.0	7.00	-36.2	3.80
3	4924.00	35.80 AV	54.00	18.20	1.00 V	96	32.00	33.0	7.00	-36.2	3.80
4	7386.00	56.40 PK	74.00	17.60	1.00 V	35	47.00	36.2	8.50	-35.3	9.40
4	7386.00	42.30 AV	54.00	11.70	1.00 V	35	32.90	36.2	8.50	-35.3	9.40
5	9848.00	53.60 PK	74.00	20.40	1.00 V	37	45.00	37.3	10.10	-34.8	12.60
5	9848.00	46.20 AV	54.00	7.80	1.00 V	37	33.60	37.3	10.10	-34.8	12.60

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
3. The other emission levels were very low against the limit.
4. Margin value = Limit value- Emission level.
5. The limit value is defined as per 15.247
6. " * " : Fundamental frequency
7. For Wireless 802.11g mode at 54Mbps.

802.11n (20MHz) Channel 1

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M												
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	2390.00	65.10	PK	74.00	8.90	1.00 H	144	68.40	28.3	5.00	36.6	-3.30
1	2390.00	35.50	AV	54.00	18.50	1.00 H	144	38.80	28.3	5.00	36.6	-3.30
2	*2412.00	101.43	PK			1.00 H	256	104.73	28.3	5.00	36.6	-3.30
2	*2412.00	81.00	AV			1.00 H	256	84.30	28.3	5.00	36.6	-3.30
3	4824.00	54.23	PK	74.00	19.77	1.00 H	88	50.43	32.7	7.30	36.2	3.80
3	4824.00	44.47	AV	54.00	9.53	1.00 H	88	40.67	32.7	7.30	36.2	3.80
4	7236.00	55.88	PK	74.00	18.12	1.00 H	331	46.48	35.8	8.90	35.3	9.40
4	7236.00	45.26	AV	54.00	8.74	1.00 H	331	35.86	35.8	8.90	35.3	9.40
5	9648.00	55.14	PK	74.00	18.86	1.00 H	105	42.54	37.2	10.20	34.8	12.60
5	9648.00	43.69	AV	54.00	10.31	1.00 H	105	31.09	37.2	10.20	34.8	12.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M												
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	2390.00	66.01	PK	74.00	7.99	1.00 V	125	69.31	28.3	5.00	36.6	-3.30
1	2390.00	45.27	AV	54.00	8.73	1.00 V	125	48.57	28.3	5.00	36.6	-3.30
2	*2412.00	101.40	PK			1.00 V	236	104.70	28.3	5.00	36.6	-3.30
2	*2412.00	82.72	AV			1.00 V	236	85.02	28.3	5.00	36.6	-3.30
3	4824.00	54.39	PK	74.00	19.61	1.00 V	179	50.59	32.7	7.30	36.2	3.80
3	4824.00	44.07	AV	54.00	9.93	1.00 V	179	40.27	32.7	7.30	36.2	3.80
4	7236.00	54.51	PK	74.00	19.49	1.00 V	313	45.11	35.8	8.90	35.3	9.40
4	7236.00	45.56	AV	54.00	8.44	1.00 V	313	36.16	35.8	8.90	35.3	9.40
5	9648.00	56.71	PK	74.00	17.29	1.00 V	5	44.11	37.2	10.20	34.8	12.60
5	9648.00	41.25	AV	54.00	12.75	1.00 V	5	28.65	37.2	10.20	34.8	12.60

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
3. The other emission levels were very low against the limit.
4. Margin value = Limit value- Emission level.
5. The limit value is defined as per 15.247
6. "* ": Fundamental frequency

802.11n (20MHz) Channel 6

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M												
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	*2437.00	100.88	PK			1.00 H	223	104.08	28.3	5.10	36.6	-3.20
1	*2437.00	86.07	AV			1.00 H	122	89.27	28.3	5.10	36.6	-3.20
2	4874.00	47.56	PK	74.00	26.44	1.00 H	5	44.16	32.8	7.10	36.5	3.40
2	4874.00	36.91	AV	54.00	17.09	1.00 H	5	33.51	32.8	7.10	36.5	3.40
3	7311.00	53.72	PK	74.00	20.28	1.00 H	124	44.32	36.1	8.60	35.3	9.40
3	7311.00	40.66	AV	54.00	13.34	1.00 H	124	31.26	36.1	8.60	35.3	9.40
4	9748.00	53.78	PK	74.00	20.22	1.00 H	325	41.18	37.2	10.20	34.8	12.60
4	9748.00	42.04	AV	54.00	11.96	1.00 H	325	29.44	37.2	10.20	34.8	12.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M												
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	*2437.00	100.97	PK			1.00 V	125	104.17	28.3	5.10	36.6	-3.20
1	*2437.00	82.11	AV			1.00 V	125	85.31	28.3	5.10	36.6	-3.20
2	4874.00	48.23	PK	74.00	25.77	1.00 V	289	44.83	32.8	7.10	36.5	3.40
2	4874.00	36.97	AV	54.00	17.03	1.00 V	289	33.57	32.8	7.10	36.5	3.40
3	7311.00	52.46	PK	74.00	21.54	1.00 V	0	43.06	36.1	8.60	35.3	9.40
3	7311.00	40.57	AV	54.00	13.43	1.00 V	0	31.17	36.1	8.60	35.3	9.40
4	9748.00	52.36	PK	74.00	21.64	1.00 V	180	39.76	37.2	10.20	34.8	12.60
4	9748.00	42.89	AV	54.00	11.11	1.00 V	180	30.29	37.2	10.20	34.8	12.60

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
3. The other emission levels were very low against the limit.
4. Margin value = Limit value- Emission level.
5. The limit value is defined as per 15.247
6. "* ": Fundamental frequency

802.11n (20MHz) Channel 11

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M												
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	*2462.00	95.84	PK			1.00 H	122	99.14	28.2	5.10	36.6	-3.30
1	*2462.00	85.73	AV			1.00 H	122	89.03	28.2	5.10	36.6	-3.30
2	2483.50	47.50	PK	74.00	26.50	1.00 H	300	50.80	28.2	5.10	36.6	-3.30
2	2483.50	38.65	AV	54.00	15.35	1.00 H	300	41.95	28.2	5.10	36.6	-3.30
3	4924.00	49.28	PK	74.00	24.72	1.00 H	156	45.48	33.0	7.00	36.2	3.80
3	4924.00	37.00	AV	54.00	17.00	1.00 H	156	33.20	33.0	7.00	36.2	3.80
4	7386.00	50.36	PK	74.00	23.64	1.00 H	334	40.96	36.2	8.50	35.3	9.40
4	7386.00	42.12	AV	54.00	11.88	1.00 H	334	32.72	36.2	8.50	35.3	9.40
5	9848.00	54.17	PK	74.00	19.83	1.00 H	278	41.57	37.3	10.10	34.8	12.60
5	9848.00	40.23	AV	54.00	13.77	1.00 H	278	27.63	37.3	10.10	34.8	12.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M												
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	*2462.00	100.54	PK			1.00 V	125	103.84	28.2	5.10	36.6	-3.30
1	*2462.00	85.32	AV			1.00 V	125	88.62	28.2	5.10	36.6	-3.30
2	2483.50	58.08	PK	74.00	15.92	1.00 V	189	61.38	28.2	5.10	36.6	-3.30
2	2483.50	40.91	AV	54.00	13.09	1.00 V	189	44.21	28.2	5.10	36.6	-3.30
3	4924.00	54.12	PK	74.00	19.88	1.00 V	347	50.32	33.0	7.00	36.2	3.80
3	4924.00	36.17	AV	54.00	17.83	1.00 V	347	32.37	33.0	7.00	36.2	3.80
4	7386.00	54.12	PK	74.00	19.88	1.00 V	12	44.72	36.2	8.50	35.3	9.40
4	7386.00	40.54	AV	54.00	13.46	1.00 V	12	31.14	36.2	8.50	35.3	9.40
5	9848.00	54.10	PK	74.00	19.90	1.00 V	208	41.50	37.3	10.10	34.8	12.60
5	9848.00	41.23	AV	54.00	12.77	1.00 V	208	28.63	37.3	10.10	34.8	12.60

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
3. The other emission levels were very low against the limit.
4. Margin value = Limit value- Emission level.
5. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

802.11n (40MHz) Channel 3

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M												
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	2390.00	66.16	PK	74.00	7.84	1.00 H	236	69.46	28.3	5.00	36.6	-3.30
1	2390.00	39.13	AV	54.00	14.87	1.00 H	236	42.43	28.3	5.00	36.6	-3.30
2	*2422.00	101.03	PK			1.00 H	100	104.33	28.3	5.00	36.6	-3.30
2	*2422.00	84.21	AV			1.00 H	100	87.51	28.3	5.00	36.6	-3.30
3	4844.00	50.88	PK	74.00	23.12	1.00 H	197	47.08	32.7	7.30	36.2	3.80
3	4844.00	42.26	AV	54.00	11.74	1.00 H	197	38.46	32.7	7.30	36.2	3.80
4	7266.00	53.00	PK	74.00	21.00	1.00 H	306	43.60	35.8	8.90	35.3	9.40
4	7266.00	41.08	AV	54.00	12.92	1.00 H	306	31.68	35.8	8.90	35.3	9.40
5	9688.00	55.72	PK	74.00	18.28	1.00 H	17	43.12	37.2	10.20	34.8	12.60
5	9688.00	42.25	AV	54.00	11.75	1.00 H	17	29.65	37.2	10.20	34.8	12.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M												
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	2390.00	65.89	PK	74.00	8.11	1.00 V	122	69.19	28.3	5.00	36.6	-3.30
1	2390.00	40.06	AV	54.00	13.94	1.00 V	122	43.36	28.3	5.00	36.6	-3.30
2	*2422.00	101.44	PK			1.00 V	189	104.74	28.3	5.00	36.6	-3.30
2	*2422.00	83.93	AV			1.00 V	189	87.23	28.3	5.00	36.6	-3.30
3	4844.00	52.77	PK	74.00	21.23	1.00 V	257	48.97	32.7	7.30	36.2	3.80
3	4844.00	40.03	AV	54.00	13.97	1.00 V	257	36.23	32.7	7.30	36.2	3.80
4	7266.00	53.89	PK	74.00	20.11	1.00 V	155	44.49	35.8	8.90	35.3	9.40
4	7266.00	41.56	AV	54.00	12.44	1.00 V	155	32.16	35.8	8.90	35.3	9.40
5	9688.00	55.99	PK	74.00	18.01	1.00 V	334	43.39	37.2	10.20	34.8	12.60
5	9688.00	43.14	AV	54.00	10.86	1.00 V	334	30.54	37.2	10.20	34.8	12.60

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
3. The other emission levels were very low against the limit.
4. Margin value = Limit value- Emission level.
5. The limit value is defined as per 15.247
6. "* ": Fundamental frequency

802.11n (40MHz) Channel 6

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M												
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	*2437.00	99.15	PK			1.00 H	100	102.35	28.3	5.10	36.6	-3.20
1	*2437.00	84.36	AV			1.00 H	100	87.56	28.3	5.10	36.6	-3.20
2	4874.00	49.11	PK	74.00	24.89	1.00 H	198	45.71	32.3	7.60	36.5	3.40
2	4874.00	38.82	AV	54.00	15.18	1.00 H	198	35.42	32.3	7.60	36.5	3.40
3	7311.00	52.22	PK	74.00	21.78	1.00 H	203	42.82	36.1	8.60	35.3	9.40
3	7311.00	41.00	AV	54.00	13.00	1.00 H	203	31.60	36.1	8.60	35.3	9.40
4	9748.00	53.91	PK	74.00	20.09	1.00 H	56	41.31	37.2	10.20	34.8	12.60
4	9748.00	42.17	AV	54.00	11.83	1.00 H	56	29.57	37.2	10.20	34.8	12.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M												
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	*2437.00	101.14	PK			1.00 V	122	104.34	28.3	5.10	36.6	-3.20
1	*2437.00	86.51	AV			1.00 V	122	89.71	28.3	5.10	36.6	-3.20
2	4874.00	49.99	PK	74.00	24.01	1.00 V	96	46.59	32.3	7.60	36.5	3.40
2	4874.00	38.97	AV	54.00	15.03	1.00 V	96	35.57	32.3	7.60	36.5	3.40
3	7311.00	54.36	PK	74.00	19.64	1.00 V	26	44.96	36.1	8.60	35.3	9.40
3	7311.00	40.57	AV	54.00	13.43	1.00 V	26	31.17	36.1	8.60	35.3	9.40
4	9748.00	52.79	PK	74.00	21.21	1.00 V	299	40.19	37.2	10.20	34.8	12.60
4	9748.00	42.07	AV	54.00	11.93	1.00 V	299	29.47	37.2	10.20	34.8	12.60

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
3. The other emission levels were very low against the limit.
4. Margin value = Limit value- Emission level.
5. The limit value is defined as per 15.247
6. "* ": Fundamental frequency

802.11n (40MHz) Channel 9

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M												
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	*2452.00	95.09	PK			1.00 H	125	98.29	28.2	5.20	36.6	-3.20
1	*2452.00	83.71	AV			1.00 H	125	85.91	28.2	5.20	36.6	-3.20
2	2483.50	54.61	PK	74.00	19.39	1.00 H	312	57.91	28.2	5.10	36.6	-3.30
2	2483.50	39.24	AV	54.00	14.76	1.00 H	312	42.54	28.2	5.10	36.6	-3.30
3	4904.00	49.97	PK	74.00	24.03	1.00 H	258	46.17	33.0	7.00	36.2	3.80
3	4904.00	35.67	AV	54.00	18.33	1.00 H	258	31.87	33.0	7.00	36.2	3.80
4	7356.00	51.12	PK	74.00	22.88	1.00 H	12	41.72	36.2	8.50	35.3	9.40
4	7356.00	39.99	AV	54.00	14.01	1.00 H	12	30.59	36.2	8.50	35.3	9.40
5	9808.00	52.72	PK	74.00	21.28	1.00 H	100	40.12	37.3	10.10	34.8	12.60
5	9808.00	41.23	AV	54.00	12.77	1.00 H	100	28.63	37.3	10.10	34.8	12.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M												
No.	Frequency (MHz)	Emssion Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
1	*2452.00	100.99	PK			1.00 V	125	104.19	28.2	5.20	36.6	-3.20
1	*2452.00	84.50	AV			1.00 V	125	87.70	28.2	5.20	36.6	-3.20
2	2483.50	61.38	PK	74.00	12.62	1.00 V	300	64.68	28.2	5.10	36.6	-3.30
2	2483.50	39.63	AV	54.00	14.37	1.00 V	300	42.93	28.2	5.10	36.6	-3.30
3	4904.00	53.56	PK	74.00	20.44	1.00 V	346	49.76	33.0	7.00	36.2	3.80
3	4904.00	37.15	AV	54.00	16.85	1.00 V	346	33.35	33.0	7.00	36.2	3.80
4	7356.00	54.99	PK	74.00	19.01	1.00 V	157	45.59	36.2	8.50	35.3	9.40
4	7356.00	41.47	AV	54.00	12.53	1.00 V	157	32.07	36.2	8.50	35.3	9.40
5	9808.00	55.51	PK	74.00	18.49	1.00 V	287	42.91	37.3	10.10	34.8	12.60
5	9808.00	42.12	AV	54.00	11.88	1.00 V	287	29.52	37.3	10.10	34.8	12.60

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
3. The other emission levels were very low against the limit.
4. Margin value = Limit value- Emission level.
5. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

Note:

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor –Preamplifier Factor.

Remark: No any other emissions level which are attenuated less than 20dB below the limit

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.

Hence there no other emissions have been reported.

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.

Hence there no other emissions have been reported.

Remark:

1). As shown in Section, for frequencies above 1000 MHz. the above field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

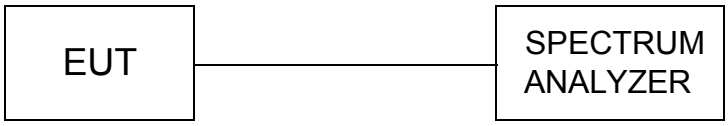
2). The test only perform the EUT in transmitting status since the test frequencies were over 1GHz only required transmitting status.

3) Pre-Scan has been conducted to determine the worst-case mode from all possible Combinations between available modulations, data rates and antenna ports, and found the EUT worse case mode: 802.11b (11MHz), 802.11g (54MHz)

4）For this intentional radiator operates below 25 GHz. The spectrum shall be investigated to the tenth harmonic of the highest fundamental frequency. And above the 4th harmonic of this intentional radiator, the disturbance is very low. So the test result only displays to 4th harmonic.

4.3. 6dB Bandwidth Measurement

TEST CONFIGURATION



TEST PROCEDURE

1. The testing follows FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
3. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. In order to make an accurate measurement, set the span greater than RBW. The 6 dB bandwidth must be greater than 500 kHz.
4. The marker-delta reading at this point is the 6 dB bandwidth of the emission.

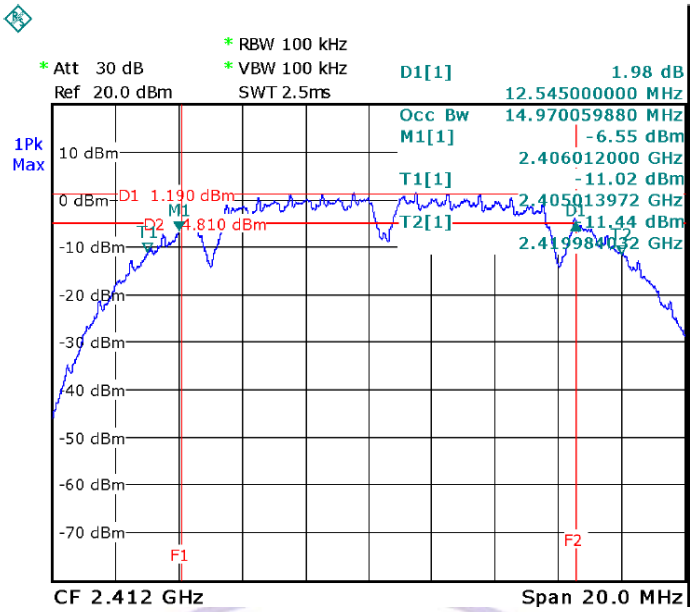
LIMIT

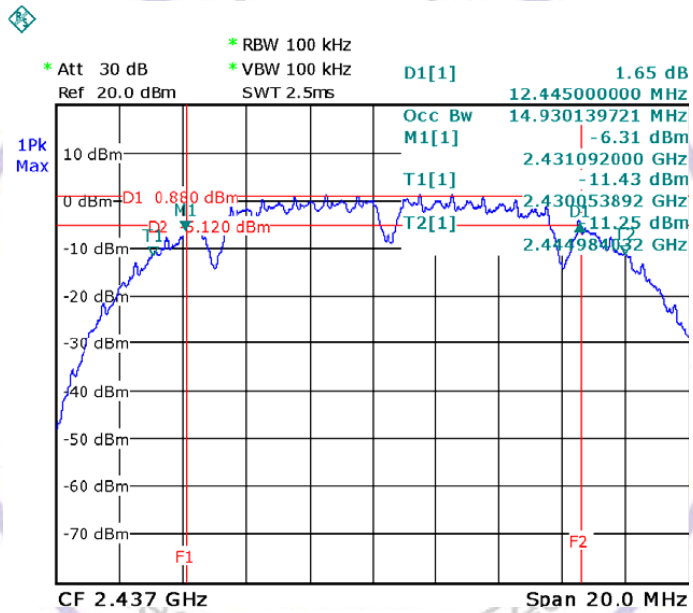
For digital modulation systems, the minimum 6 dB bandwidth shall be at least 500 kHz.

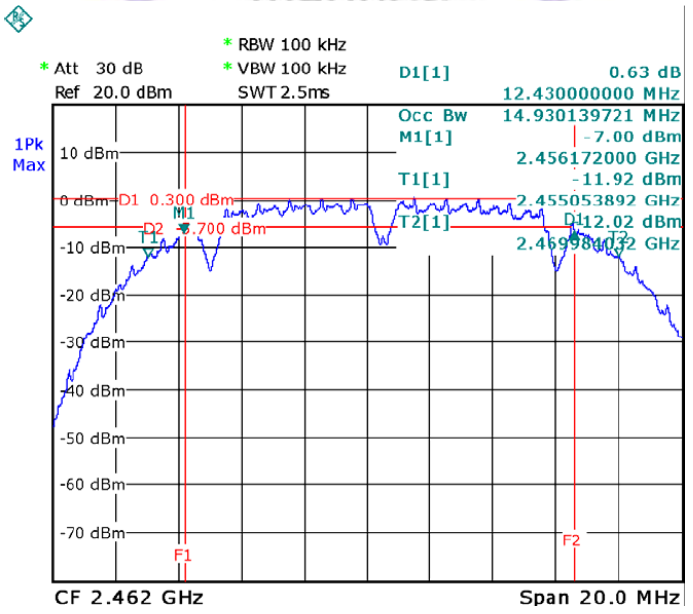
TEST RESULTS

Mode	CHANNEL	6 dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
802.11b	1	12.55	0.5	PASS
	6	12.46	0.5	PASS
	11	12.43	0.5	PASS
802.11g	1	16.57	0.5	PASS
	6	16.62	0.5	PASS
	11	16.19	0.5	PASS
802.11n HT20	1	17.17	0.5	PASS
	6	17.63	0.5	PASS
	11	17.62	0.5	PASS
802.11n HT40	3	36.35	0.5	PASS
	6	36.41	0.5	PASS
	9	36.35	0.5	PASS

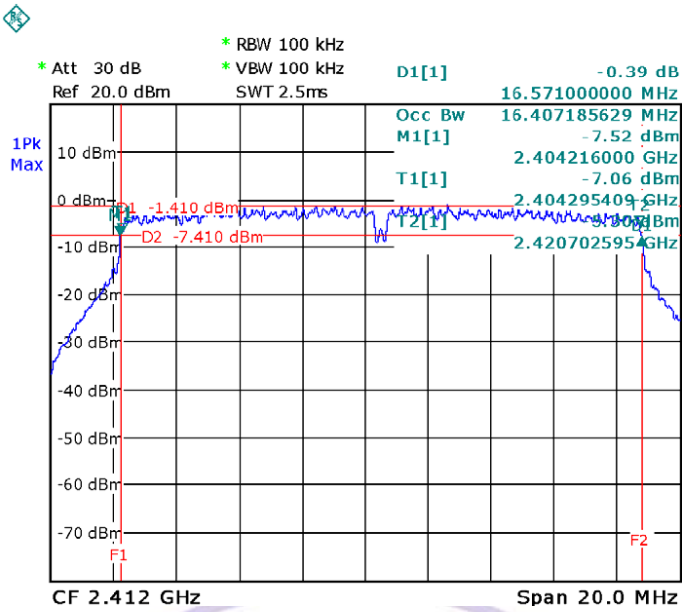
802.11b:

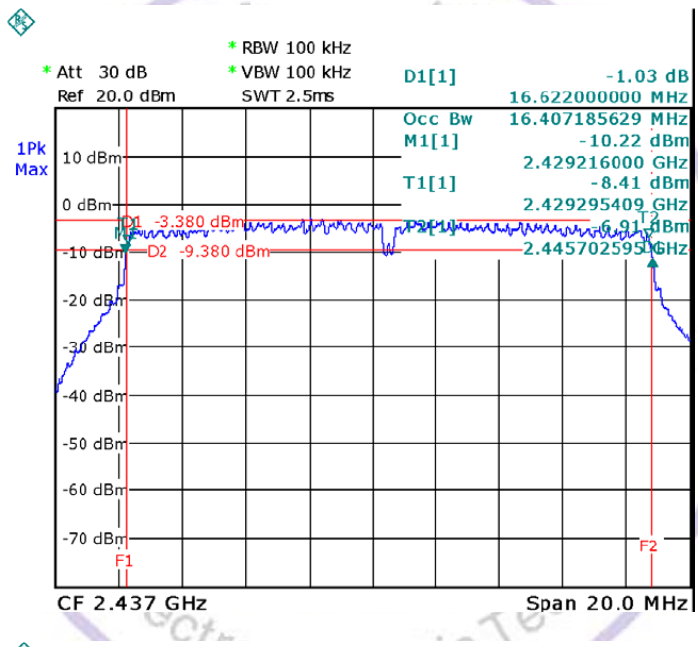

* RBW 100 kHz
* Att 30 dB
* VBW 100 kHz
Ref 20.0 dBm
SWT 2.5ms
D1[1] 1.98 dB
12.545000000 MHz
Occ Bw 14.970059880 MHz
M1[1] -6.55 dBm
2.406012000 GHz
T1[1] -11.02 dBm
2.405013972 GHz
T2[1] -11.44 dBm
2.419984032 GHz
1Pk
Max
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
D1 1.190 dBm
D2 -4.810 dBm
M1
T1
T2
D1
D2
F1
F2
CF 2.412 GHz
Span 20.0 MHz

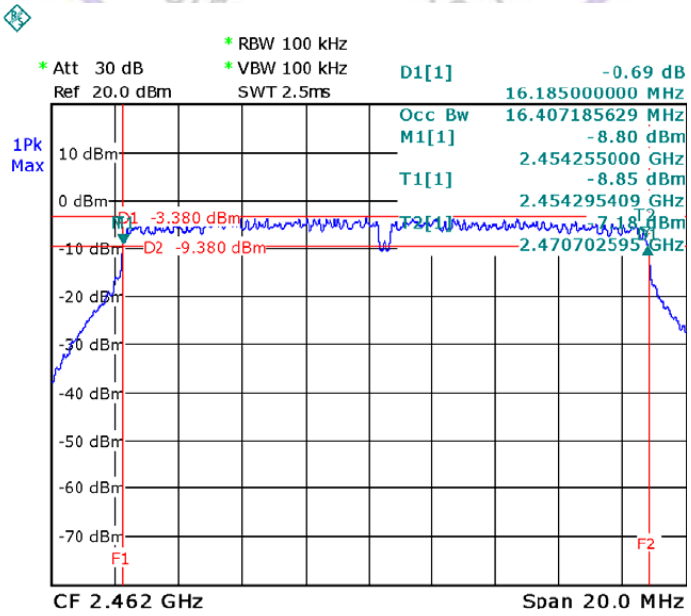

* RBW 100 kHz
* Att 30 dB
* VBW 100 kHz
Ref 20.0 dBm
SWT 2.5ms
D1[1] 1.65 dB
12.445000000 MHz
Occ Bw 14.930139721 MHz
M1[1] -6.31 dBm
2.431092000 GHz
T1[1] -11.43 dBm
2.430053892 GHz
T2[1] -11.25 dBm
2.444984032 GHz
1Pk
Max
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
D1 0.850 dBm
D2 -5.120 dBm
M1
T1
T2
D1
D2
F1
F2
CF 2.437 GHz
Span 20.0 MHz


* RBW 100 kHz
* Att 30 dB
* VBW 100 kHz
Ref 20.0 dBm
SWT 2.5ms
D1[1] 0.63 dB
12.430000000 MHz
Occ Bw 14.930139721 MHz
M1[1] -7.00 dBm
2.456172000 GHz
T1[1] -11.92 dBm
2.455053892 GHz
T2[1] -12.02 dBm
2.469984032 GHz
1Pk
Max
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
D1 0.300 dBm
D2 -5.700 dBm
M1
T1
T2
D1
D2
F1
F2
CF 2.462 GHz
Span 20.0 MHz

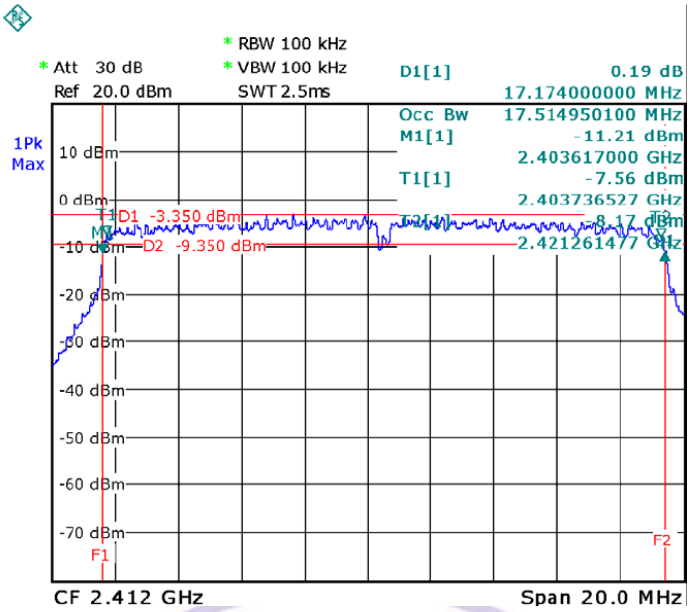
802.11g:

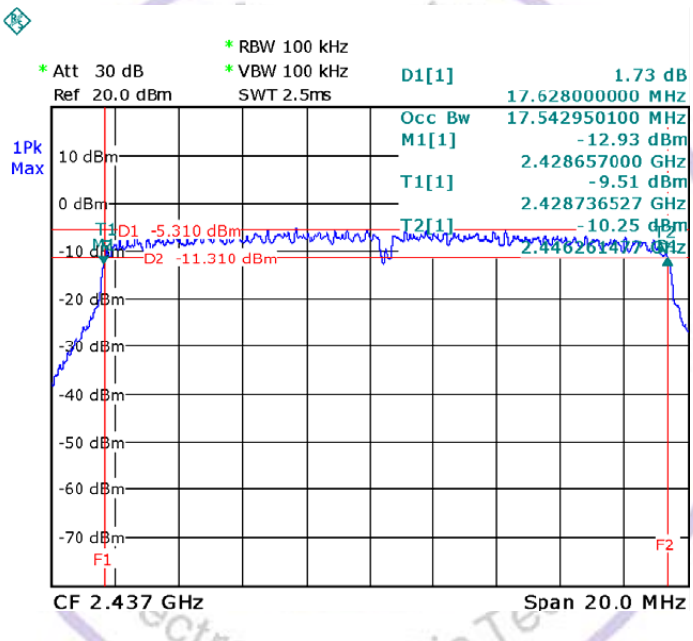

RBW 100 kHz
Att 30 dB
VBW 100 kHz
Ref 20.0 dBm
SWT 2.5ms
D1[1] -0.39 dB
16.571000000 MHz
Occ Bw 16.407185629 MHz
M1[1] -7.52 dBm
2.404216000 GHz
T1[1] -7.06 dBm
2.404295409 GHz
T2[1] -7.08 dBm
2.420702595 GHz
1Pk
Max
10 dBm
0 dBm
D1 -1.410 dBm
D2 -7.410 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
F1
F2
CF 2.412 GHz
Span 20.0 MHz

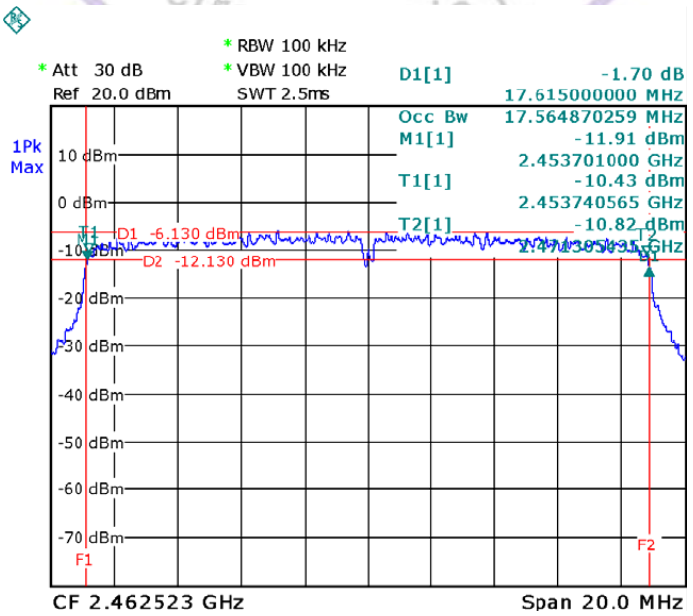

RBW 100 kHz
Att 30 dB
VBW 100 kHz
Ref 20.0 dBm
SWT 2.5ms
D1[1] -1.03 dB
16.622000000 MHz
Occ Bw 16.407185629 MHz
M1[1] -10.22 dBm
2.429216000 GHz
T1[1] -8.41 dBm
2.429295409 GHz
T2[1] -6.91 dBm
2.445702595 GHz
1Pk
Max
10 dBm
0 dBm
D1 -3.380 dBm
D2 -9.380 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
F1
F2
CF 2.437 GHz
Span 20.0 MHz


RBW 100 kHz
Att 30 dB
VBW 100 kHz
Ref 20.0 dBm
SWT 2.5ms
D1[1] -0.69 dB
16.185000000 MHz
Occ Bw 16.407185629 MHz
M1[1] -8.80 dBm
2.454255000 GHz
T1[1] -8.85 dBm
2.454295409 GHz
T2[1] -7.18 dBm
2.470702595 GHz
1Pk
Max
10 dBm
0 dBm
D1 -3.380 dBm
D2 -9.380 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
F1
F2
CF 2.462 GHz
Span 20.0 MHz

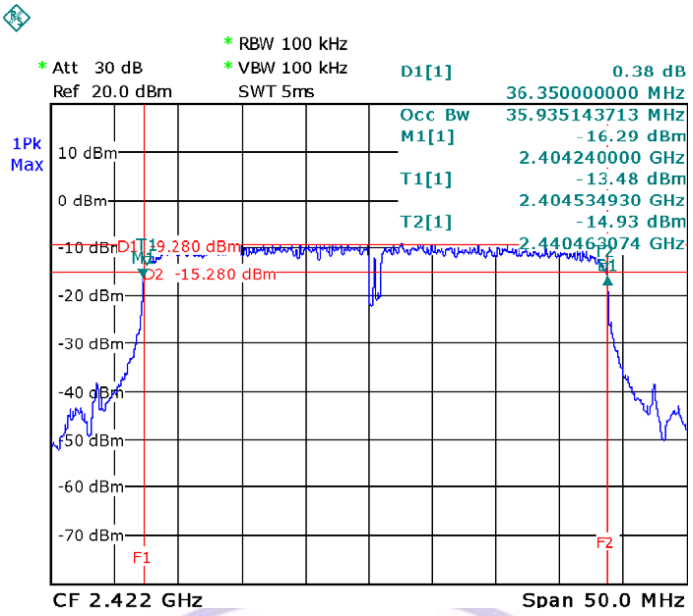
802.11n HT20:

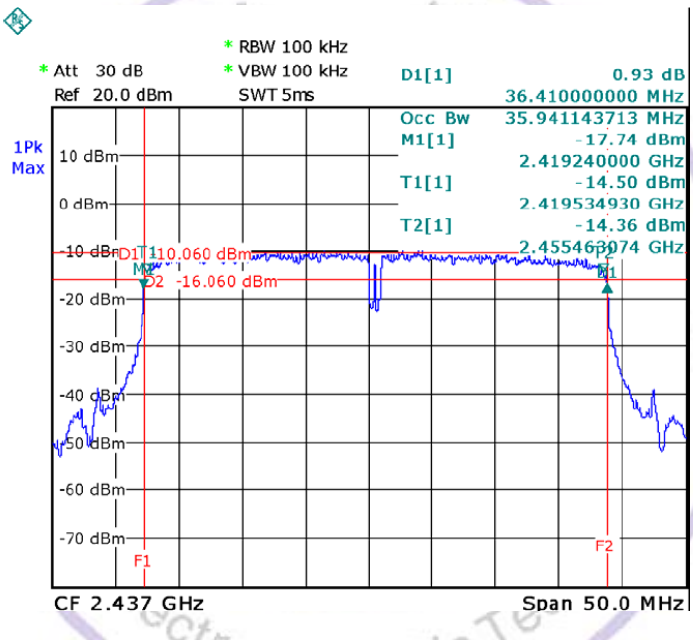

* RBW 100 kHz
* Att 30 dB
* VBW 100 kHz
Ref 20.0 dBm
SWT 2.5ms
D1[1] 0.19 dB
17.174000000 MHz
Occ Bw 17.514950100 MHz
M1[1] -11.21 dBm
2.403617000 GHz
T1[1] -7.56 dBm
2.403736527 GHz
T2[1] -8.17 dBm
2.421261477 GHz
1Pk
Max
10 dBm
0 dBm
D1 -3.350 dBm
D2 -9.350 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
F1
F2
CF 2.412 GHz
Span 20.0 MHz

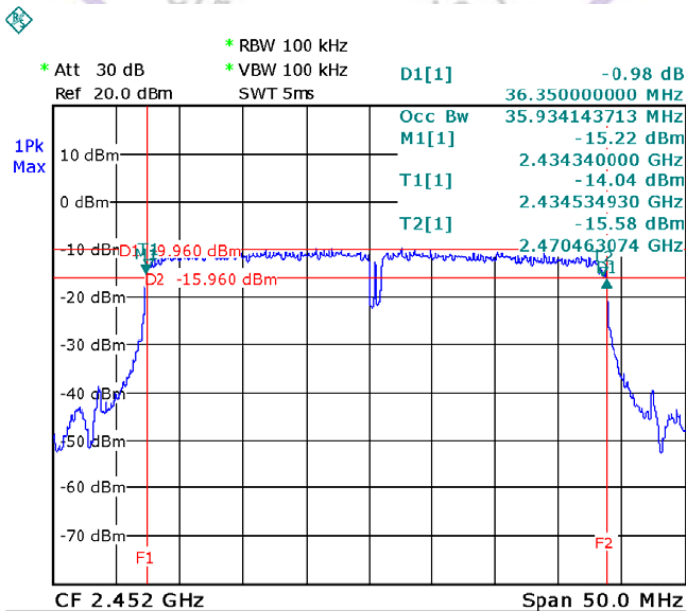

* RBW 100 kHz
* Att 30 dB
* VBW 100 kHz
Ref 20.0 dBm
SWT 2.5ms
D1[1] 1.73 dB
17.628000000 MHz
Occ Bw 17.542950100 MHz
M1[1] -12.93 dBm
2.428657000 GHz
T1[1] -9.51 dBm
2.428736527 GHz
T2[1] -10.25 dBm
1Pk
Max
10 dBm
0 dBm
D1 -5.310 dBm
D2 -11.310 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
F1
F2
CF 2.437 GHz
Span 20.0 MHz


* RBW 100 kHz
* Att 30 dB
* VBW 100 kHz
Ref 20.0 dBm
SWT 2.5ms
D1[1] -1.70 dB
17.615000000 MHz
Occ Bw 17.564870259 MHz
M1[1] -11.91 dBm
2.453701000 GHz
T1[1] -10.43 dBm
2.453740565 GHz
T2[1] -10.82 dBm
1Pk
Max
10 dBm
0 dBm
D1 -6.130 dBm
D2 -12.130 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
F1
F2
CF 2.462523 GHz
Span 20.0 MHz

802.11n HT40:

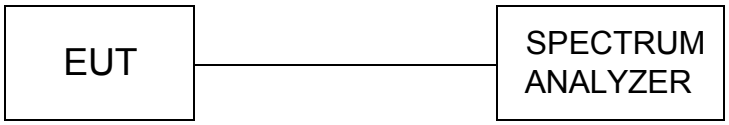

RBW 100 kHz
Att 30 dB
VBW 100 kHz
Ref 20.0 dBm
SWT 5ms
D1[1] 0.38 dB
36.350000000 MHz
Occ Bw 35.935143713 MHz
M1[1] -16.29 dBm
2.404240000 GHz
T1[1] -13.48 dBm
2.404534930 GHz
T2[1] -14.93 dBm
2.440463074 GHz
1Pk
Max
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
D1 19.280 dBm
D2 -15.280 dBm
F1
F2
CF 2.422 GHz
Span 50.0 MHz


RBW 100 kHz
Att 30 dB
VBW 100 kHz
Ref 20.0 dBm
SWT 5ms
D1[1] 0.93 dB
36.410000000 MHz
Occ Bw 35.941143713 MHz
M1[1] -17.74 dBm
2.419240000 GHz
T1[1] -14.50 dBm
2.419534930 GHz
T2[1] -14.36 dBm
2.455463074 GHz
1Pk
Max
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
D1 10.060 dBm
D2 -16.060 dBm
F1
F2
CF 2.437 GHz
Span 50.0 MHz


RBW 100 kHz
Att 30 dB
VBW 100 kHz
Ref 20.0 dBm
SWT 5ms
D1[1] -0.98 dB
36.350000000 MHz
Occ Bw 35.934143713 MHz
M1[1] -15.22 dBm
2.434340000 GHz
T1[1] -14.04 dBm
2.434534930 GHz
T2[1] -15.58 dBm
2.470463074 GHz
1Pk
Max
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
D1 9.960 dBm
D2 -15.960 dBm
F1
F2
CF 2.452 GHz
Span 50.0 MHz

4.4. Maximum Peak Output Power

TEST CONFIGURATION



TEST PROCEDURE

According to C63.10 -2009,The EUT was directly connected to the power meter / spectrum analyzer and antenna output port as show in the block diagram as TEST CONFIGURATION shows.

1. For IEEE 802.11b/g and IEEE802.11n HT20, HT40 mode, use a PK power meter which's bandwidth is above 26dB bandwidth of signal to measure out each test modes' PK output power.

LIMIT

The Peak Output Power Measurement limits are 30dBm.

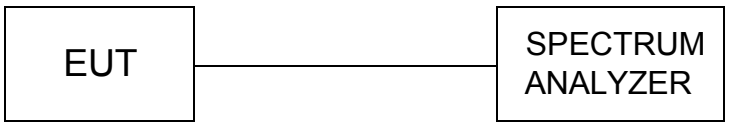
TEST RESULTS

Mode	Channel	Peak Power Output (dBm)	Peak Power Limit (dBm)	PASS / FAIL
802.11b	1	16.21	30	PASS
	6	16.18	30	PASS
	11	16.35	30	PASS
802.11g	1	15.03	30	PASS
	6	15.16	30	PASS
	11	15.22	30	PASS
802.11n HT20	1	14.56	30	PASS
	6	14.41	30	PASS
	11	14.63	30	PASS
802.11n HT40	3	12.45	30	PASS
	6	12.36	30	PASS
	9	12.58	30	PASS

Note: The test results including the cable lose.

4.5. Band Edge Measurement

TEST CONFIGURATION



TEST PROCEDURE

The band edge compliance of RF radiated emission should be measured by following the guidance in ANSI C63.4 and FCC KDB Publication No. 558074 (Measurement Guidelines of DTS) with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization etc. Set RBW=100kHz and VBM= 300KHz to measure the peak field strength and set RBW to 1MHz and VBW to 10Hz to measure the average radiated field strength.

The conducted RF band edge was measured by using a spectrum analyzer. Set span wide enough to capture the highest in-band emission and the emission at the band edge. Set RBW and VBW to 100 kHz, to measure the conducted peak band edge.

Connect the spectrum analyzer to the EUT using an appropriate RF cable connected to the EUT output. Configure the spectrum analyzer settings as described below (be sure to enter all losses between the unlicensed wireless device output and the spectrum analyzer).

- Span: Set Span for minimum 50 MHz - Reference Level: 110 dBμV (corrected for gains and losses of test antenna factor, preamp gain and cable loss) - Attenuation: 10 dB

- Sweep Time: Coupled - Resolution Bandwidth: Up to and including 1 GHz = ⩾ 100 kHz

- Resolution Bandwidth: Above 1 GHz = 1 MHz - Video Bandwidth: Below 1 GHz = 300 kHz

- Video Bandwidth: Up to and including 1 GHz =⩾ 3 MHz for peak and10 Hz for average

- Detector: Peak

Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands. Save the spectrum analyzer plot. Repeat for each power and modulation for lowest and highest channel.

LIMIT

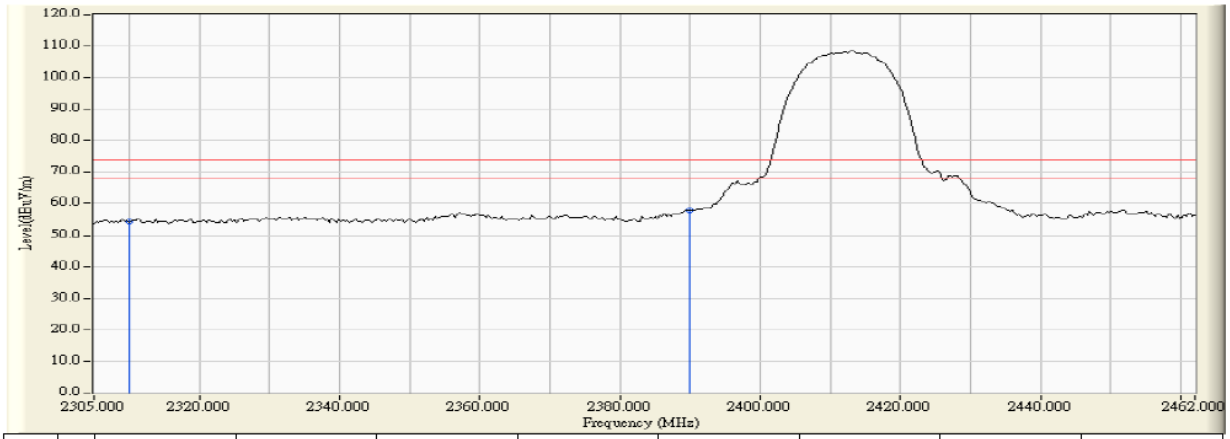
1. Below -20dB of the highest emission level in operating band.

2. Fall in the restricted bands listed in section 15.205. The maximum permitted average field strength is listed in section 15.209(see Section 15.205(c)).

Frequency (MHz)	Limit Average (dBuv/m)	Limit Peak (dBuv/m)
Below 2390 or Above 2483.5	54	74

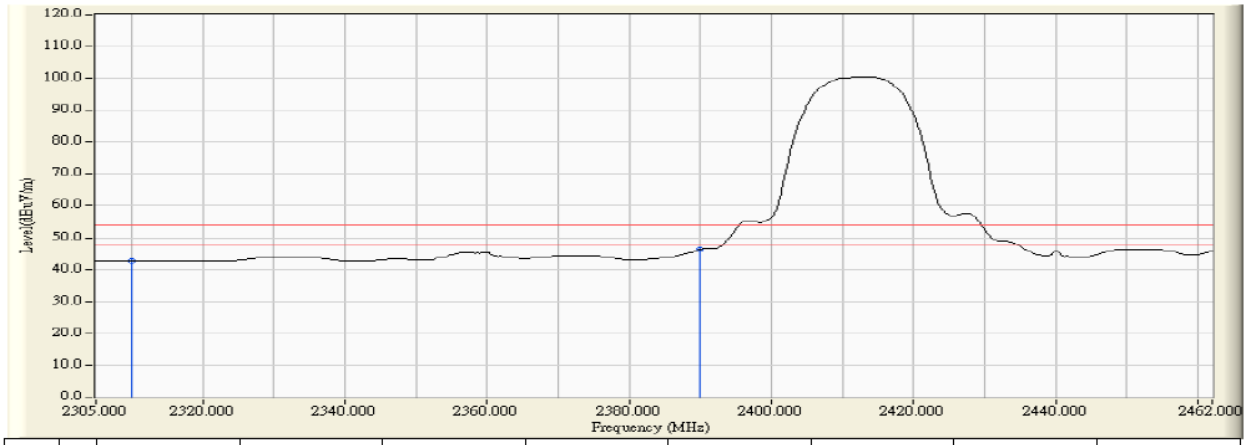
TEST RESULTS

Transmitting mode: 802.11b



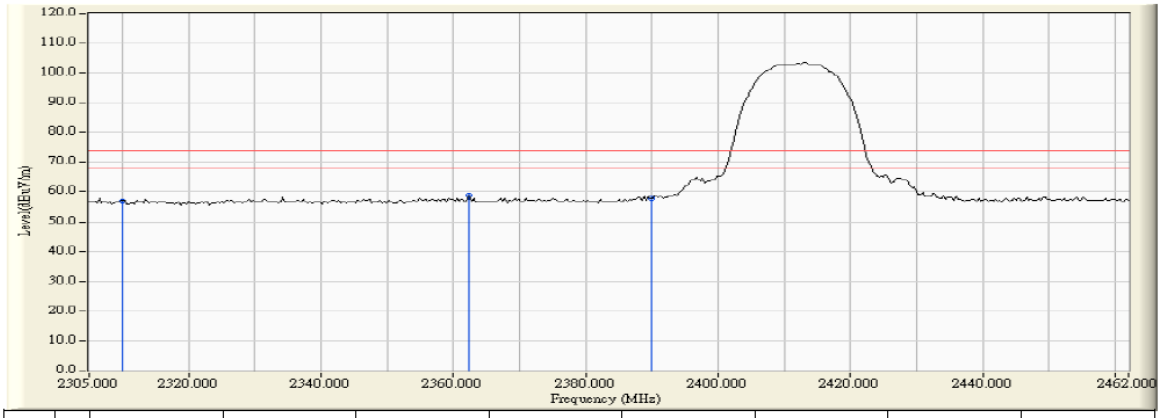
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1		2310.000	28.738	25.476	54.213	-19.787	74.000	54.000	PEAK
2	*	2390.000	28.470	29.431	57.901	-16.099	74.000	54.000	PEAK

Note:
1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209, the peak radiated field strength shall blow 74dBμv/m.
2. Antenna Polarization vertical.



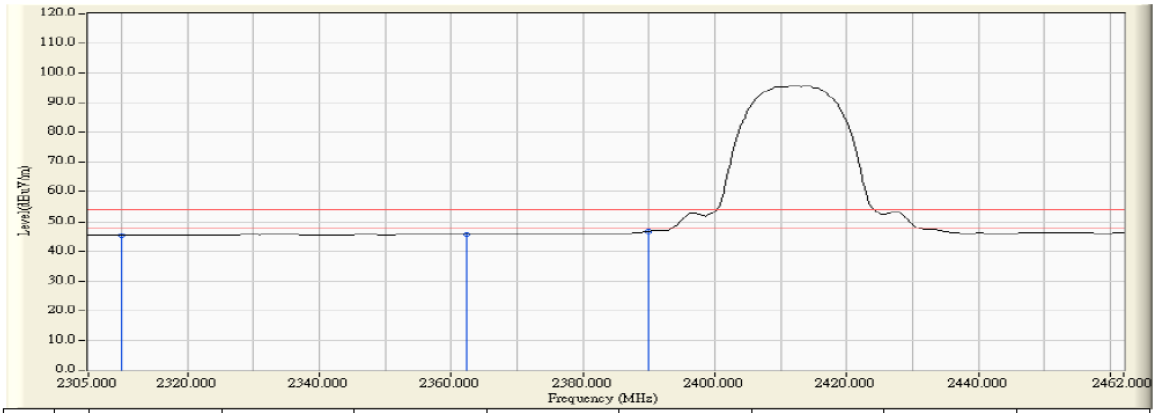
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1		2310.000	28.738	14.020	42.757	-11.243	74.000	54.000	AVERAGE
2	*	2390.000	28.470	17.904	46.374	-7.626	74.000	54.000	AVERAGE

Note:
1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209, the average radiated field strength shall blow 54dBμv/m.
2. Antenna Polarization vertical.



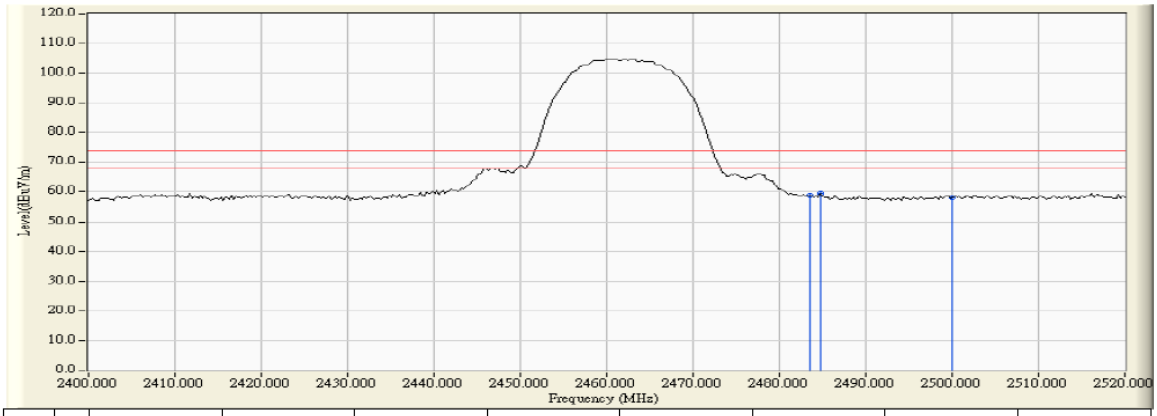
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1		2310.000	31.658	25.442	57.099	-16.901	74.000	54.000	PEAK
2	*	2362.462	31.902	26.990	58.892	-15.108	74.000	54.000	PEAK
3		2390.000	32.036	25.928	57.964	-16.036	74.000	54.000	PEAK

Note:
1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209, the peak radiated field strength shall blow 74dBμv/m.
2. Antenna Polarization horizontal.



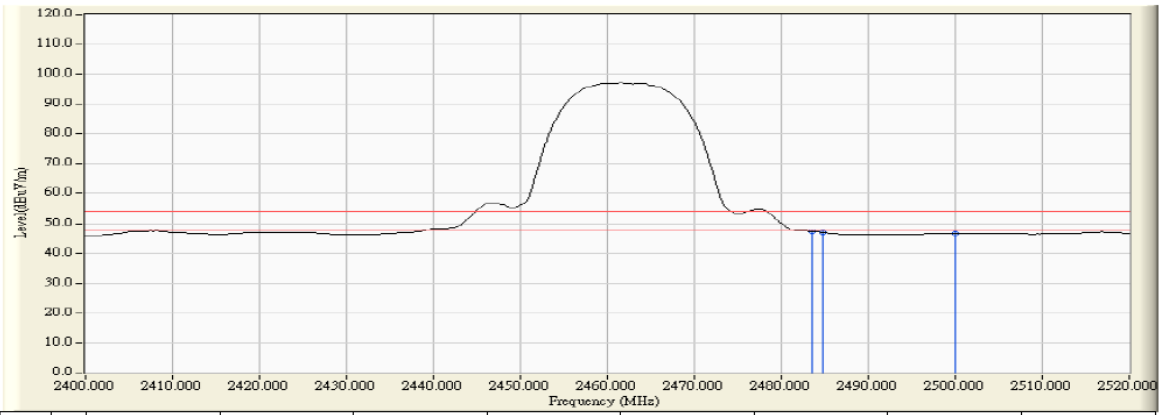
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1		2310.000	31.658	13.641	45.298	-8.702	74.000	54.000	AVERAGE
2	*	2362.462	31.902	13.860	45.762	-8.238	74.000	54.000	AVERAGE
3		2390.000	32.036	14.749	46.785	-7.215	74.000	54.000	AVERAGE

Note:
1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209, the average radiated field strength shall blow 54dBμv/m.
2. Antenna Polarization horizontal.



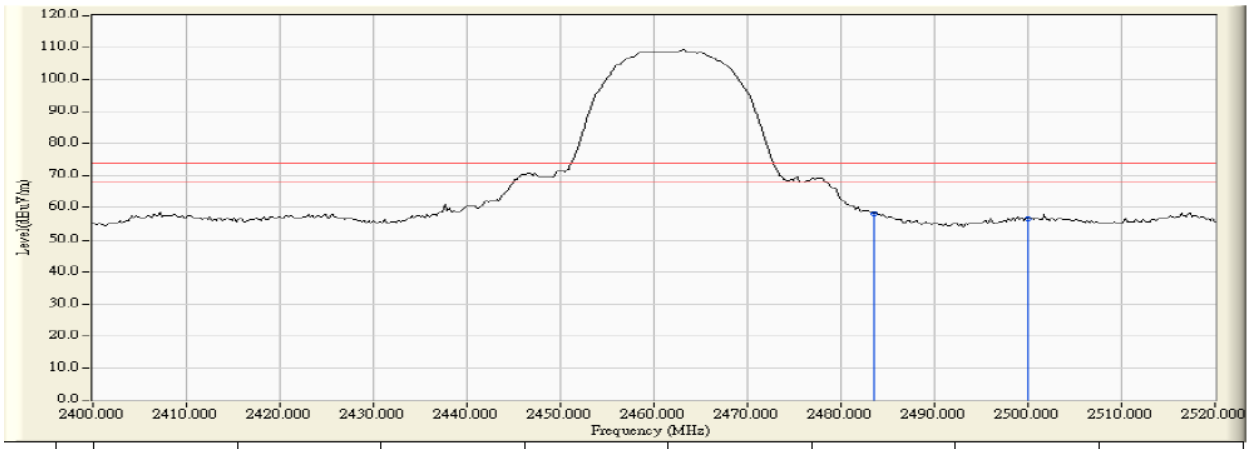
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1		2483.500	32.480	26.288	58.768	-15.232	74.000	54.000	PEAK
2	*	2484.720	32.485	27.086	59.572	-14.428	74.000	54.000	PEAK
3		2500.000	32.557	25.527	58.085	-15.915	74.000	54.000	PEAK

Note:
1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209, the peak radiated field strength shall blow 74dBμv/m.
2. Antenna Polarization horizontal.



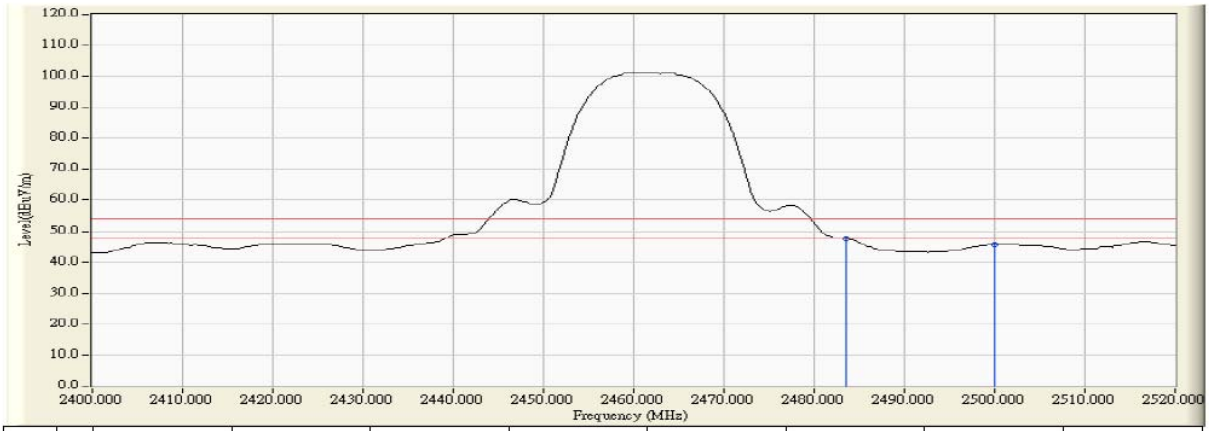
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1		2483.500	32.480	14.858	47.338	-6.662	74.000	54.000	AVERAGE
2	*	2484.720	32.485	14.490	46.976	-7.024	74.000	54.000	AVERAGE
3		2500.000	32.557	14.234	46.792	-7.208	74.000	54.000	AVERAGE

Note:
1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209, the average radiated field strength shall blow 54dBμv/m.
2. Antenna Polarization horizontal.



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1	*	2483.500	28.156	29.975	58.130	-15.870	74.000	54.000	PEAK
2		2500.000	28.142	28.573	56.715	-17.285	74.000	54.000	PEAK

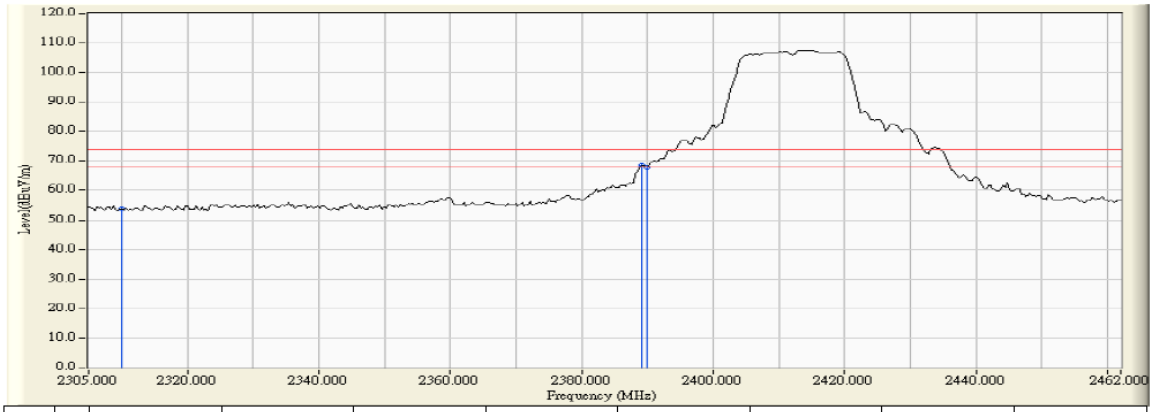
Note:
1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209, the peak radiated field strength shall blow 74dBμv/m.
2. Antenna Polarization vertical.



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1	*	2483.500	28.156	19.527	47.682	-6.318	74.000	54.000	AVERAGE
2		2500.000	28.142	17.468	45.610	-8.390	74.000	54.000	AVERAGE

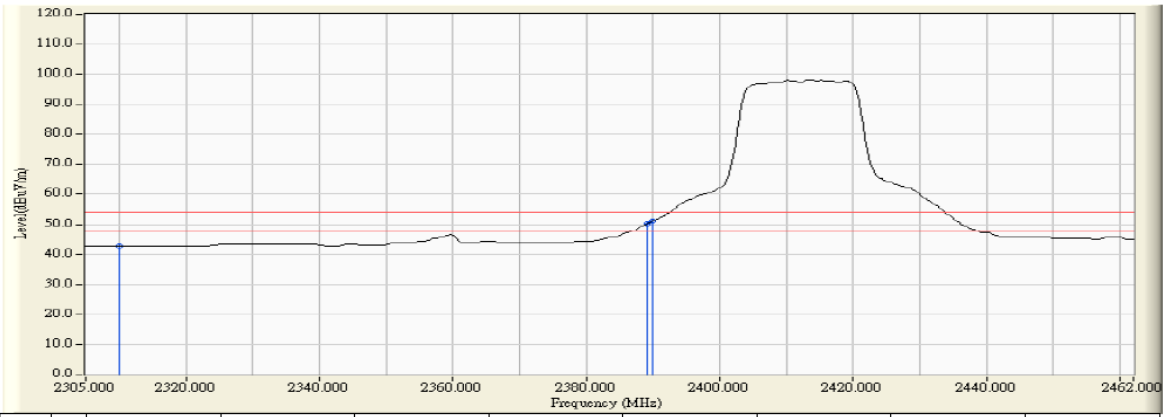
Note:
1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209, the average radiated field strength shall blow 54dBμv/m.
2. Antenna Polarization vertical.

Note : For 802.11g Mode:



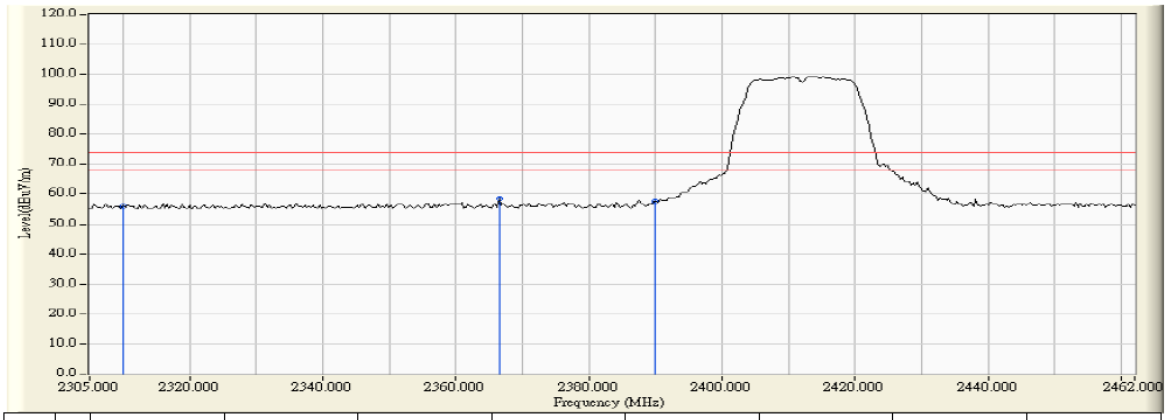
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1		2310.000	28.738	24.843	53.580	-20.420	74.000	54.000	PEAK
2	*	2389.152	28.472	40.036	68.508	-5.492	74.000	54.000	PEAK
3		2390.000	28.470	39.496	67.966	-6.034	74.000	54.000	PEAK

Note:
1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209, the peak radiated field strength shall blow 74dBμv/m.
2. Antenna Polarization vertical.



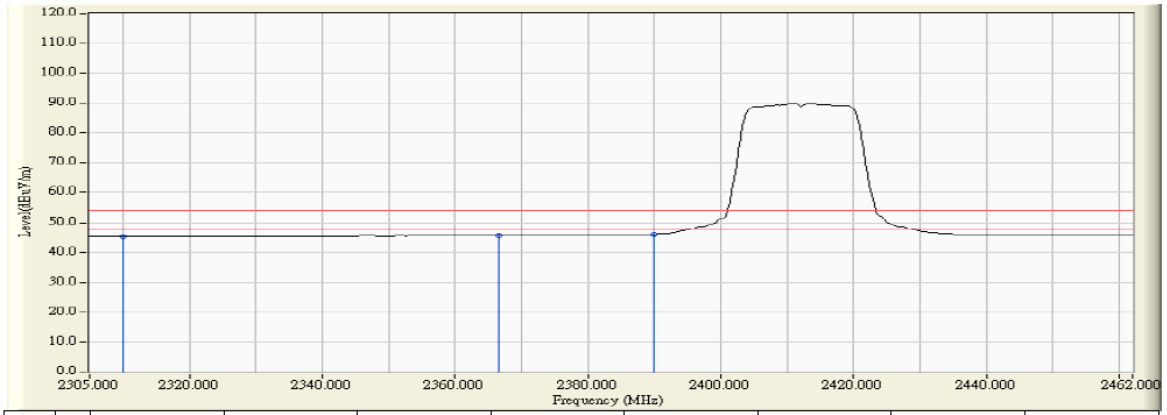
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1		2310.000	28.738	14.000	42.737	-11.263	74.000	54.000	AVERAGE
2	*	2389.152	28.472	21.562	50.034	-3.966	74.000	54.000	AVERAGE
3		2390.000	28.470	22.588	51.058	-2.942	74.000	54.000	AVERAGE

Note:
1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209, the average radiated field strength shall blow 54dBμv/m.
2. Antenna Polarization vertical.



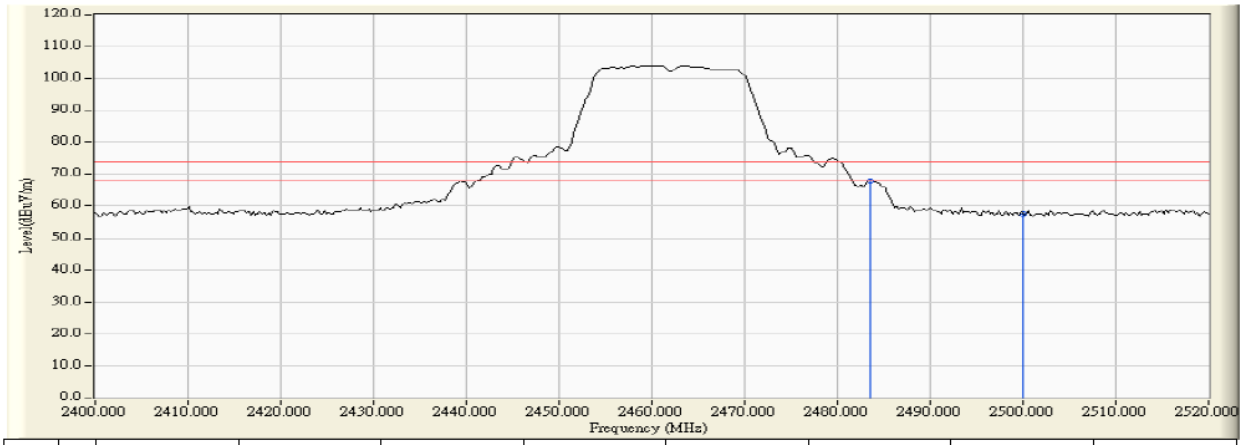
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1		2310.000	31.658	24.414	56.071	-17.929	74.000	54.000	PEAK
2	*	2366.544	31.922	26.594	58.516	-15.484	74.000	54.000	PEAK
3		2390.000	32.036	25.456	57.492	-16.508	74.000	54.000	PEAK

Note:
1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209, the peak radiated field strength shall blow 74dBμv/m.
2. Antenna Polarization horizontal.



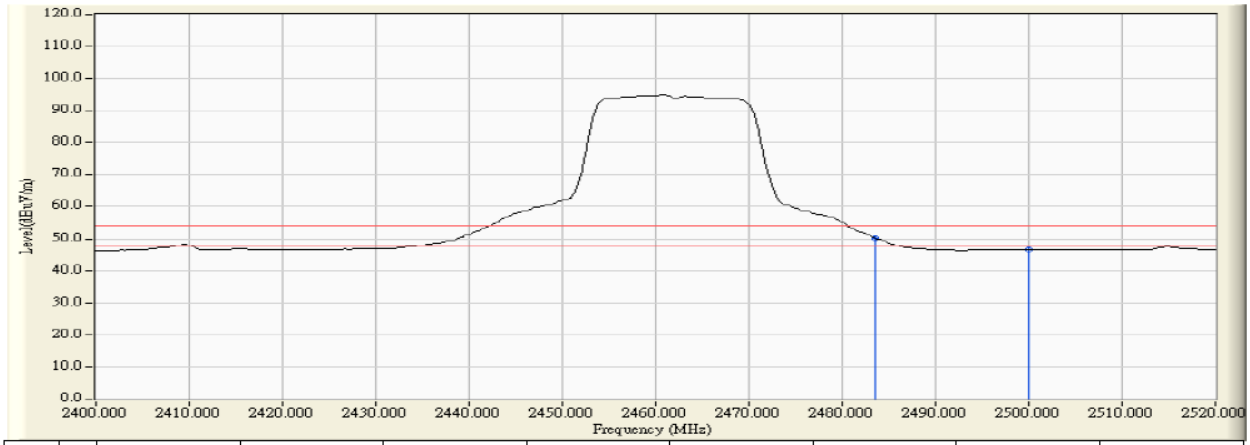
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1		2310.000	31.658	13.642	45.299	-8.701	74.000	54.000	AVERAGE
2	*	2366.544	31.922	13.752	45.674	-8.326	74.000	54.000	AVERAGE
3		2390.000	32.036	14.081	46.117	-7.883	74.000	54.000	AVERAGE

Note:
1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209, the average radiated field strength shall blow 54dBμv/m.
2. Antenna Polarization horizontal.



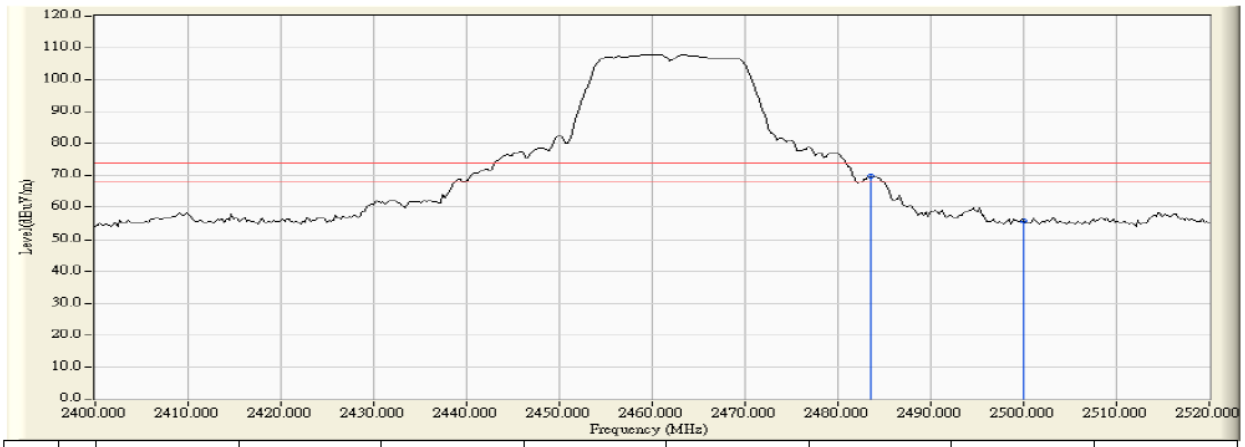
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1	*	2483.500	32.480	35.430	67.910	-6.090	74.000	54.000	PEAK
2		2500.000	32.557	25.077	57.635	-16.365	74.000	54.000	PEAK

Note:
1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209, the peak radiated field strength shall blow 74dBμv/m.
2. Antenna Polarization horizontal.



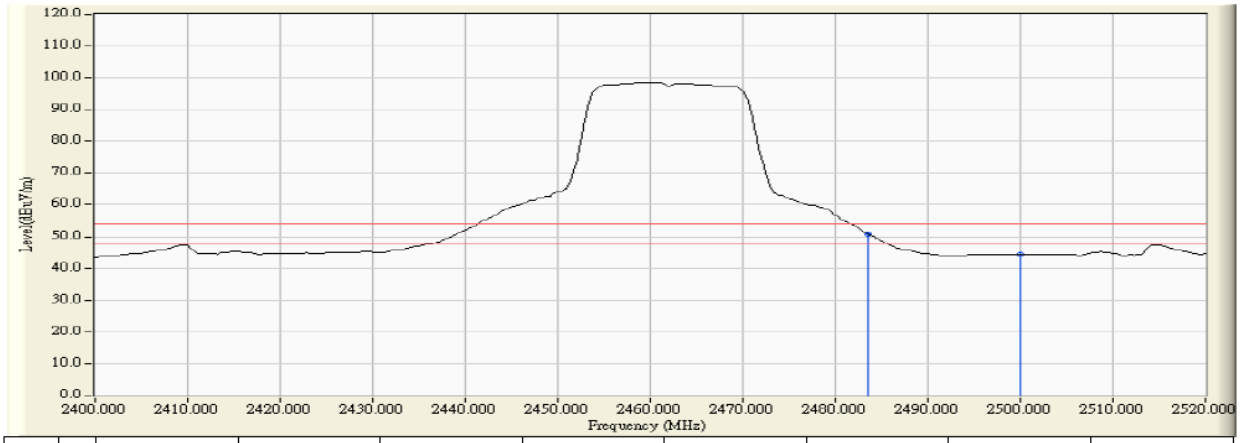
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1	*	2483.500	32.480	17.686	50.166	-3.834	74.000	54.000	AVERAGE
2		2500.000	32.557	14.016	46.574	-7.426	74.000	54.000	AVERAGE

Note:
1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209, the average radiated field strength shall blow 54dBμv/m.
2. Antenna Polarization horizontal.



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1	*	2483.500	28.156	41.705	69.860	-4.140	74.000	54.000	PEAK
2		2500.000	28.142	27.541	55.683	-18.317	74.000	54.000	PEAK

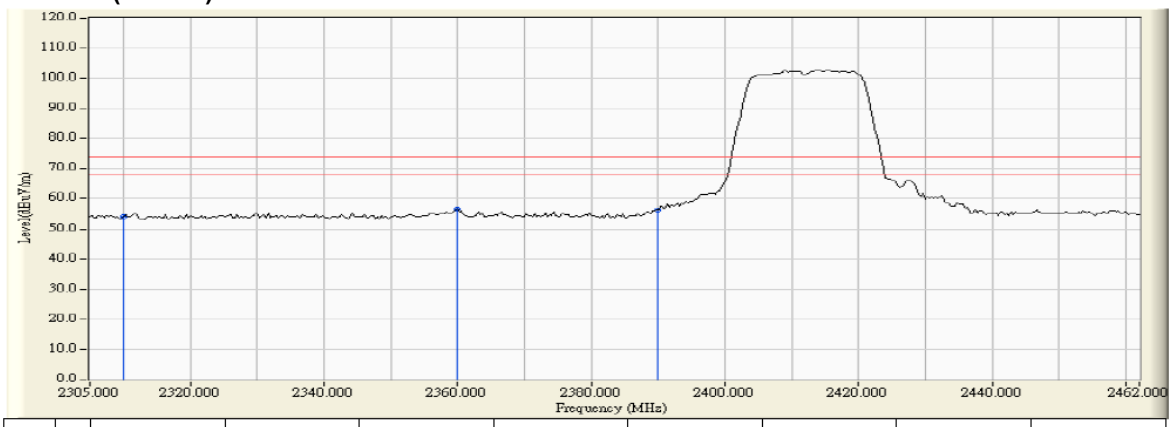
Note:
1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209, the peak radiated field strength shall blow 74dBμv/m.
2. Antenna Polarization vertical.



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1	*	2483.500	28.156	22.661	50.816	-3.184	74.000	54.000	AVERAGE
2		2500.000	28.142	16.290	44.432	-9.568	74.000	54.000	AVERAGE

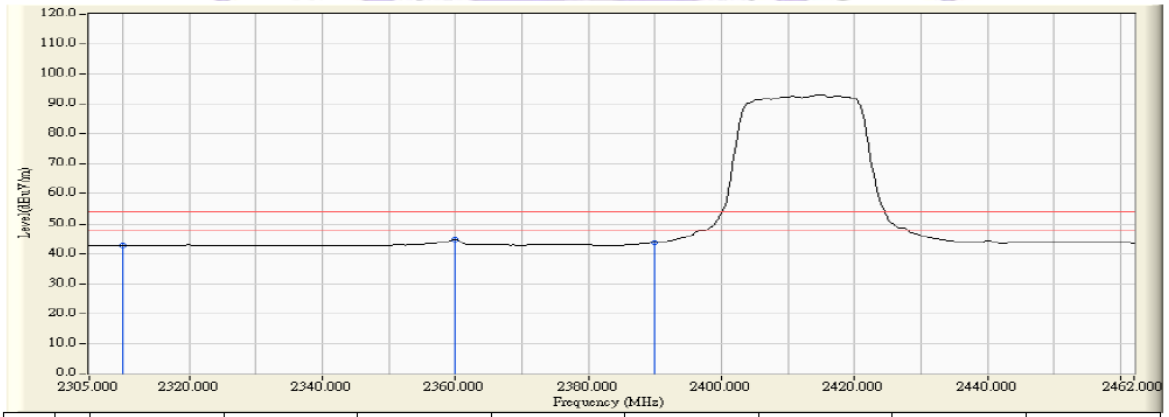
Note:
1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209, the average radiated field strength shall blow 54dBμv/m.
2. Antenna Polarization vertical.

Note : For 802.11n (20MHz) Mode:



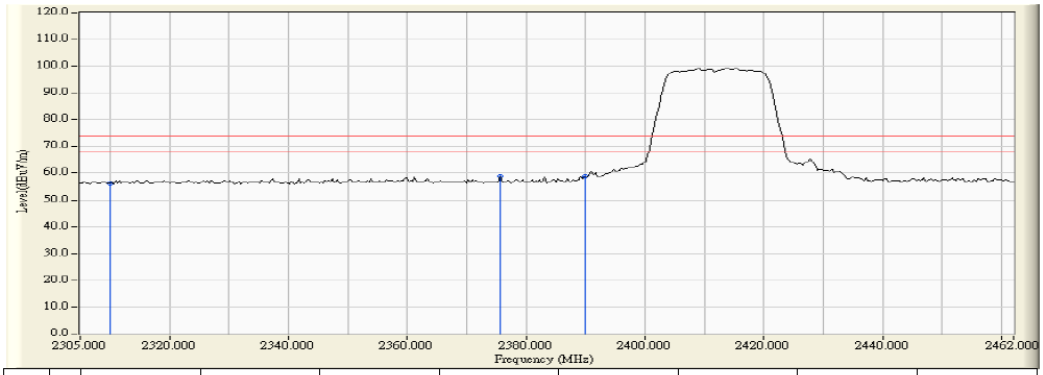
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1		2310.000	28.738	25.154	53.891	-20.109	74.000	54.000	PEAK
2	*	2359.950	28.567	28.126	56.693	-17.307	74.000	54.000	PEAK
3		2390.000	28.470	27.740	56.210	-17.790	74.000	54.000	PEAK

Note:
1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209, the peak radiated field strength shall blow 74dBμv/m.
2. Antenna Polarization vertical.



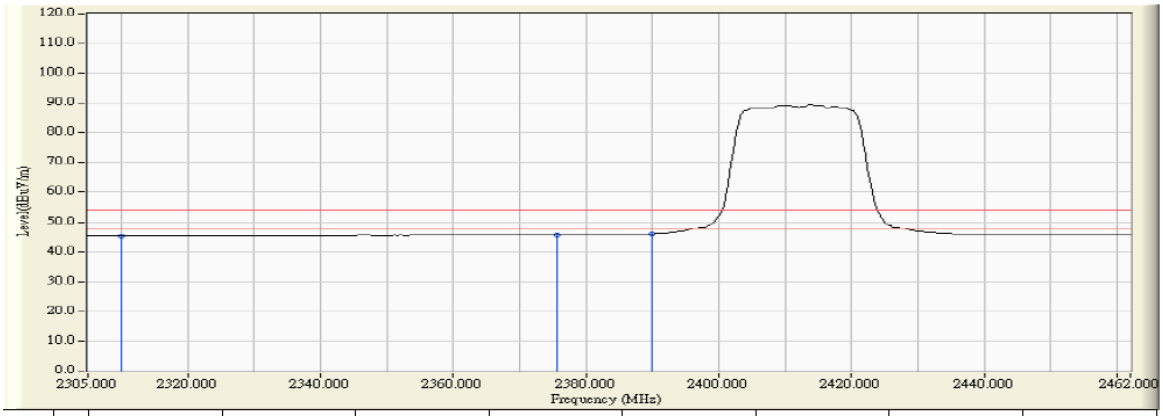
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1		2310.000	28.738	13.957	42.694	-11.306	74.000	54.000	AVERAGE
2	*	2359.950	28.567	16.080	44.647	-9.353	74.000	54.000	AVERAGE
3		2390.000	28.470	15.324	43.794	-10.206	74.000	54.000	AVERAGE

Note:
1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209, the average radiated field strength shall blow 54dBμv/m.
2. Antenna Polarization vertical.



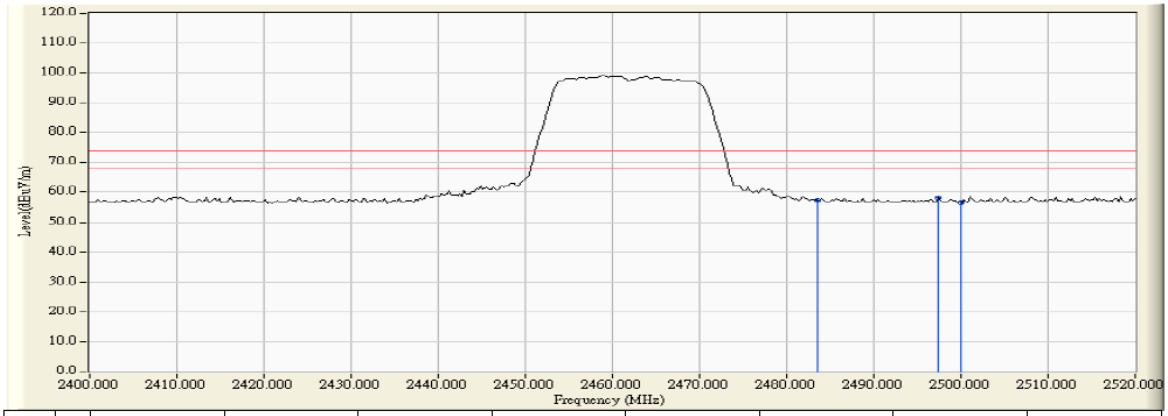
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1		2310.000	31.658	24.606	56.263	-17.737	74.000	54.000	PEAK
2	*	2375.650	31.966	26.768	58.734	-15.266	74.000	54.000	PEAK
3		2390.000	32.036	26.679	58.715	-15.285	74.000	54.000	PEAK

Note:
1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209, the peak radiated field strength shall blow 74dBμv/m.
2. Antenna Polarization horizontal.



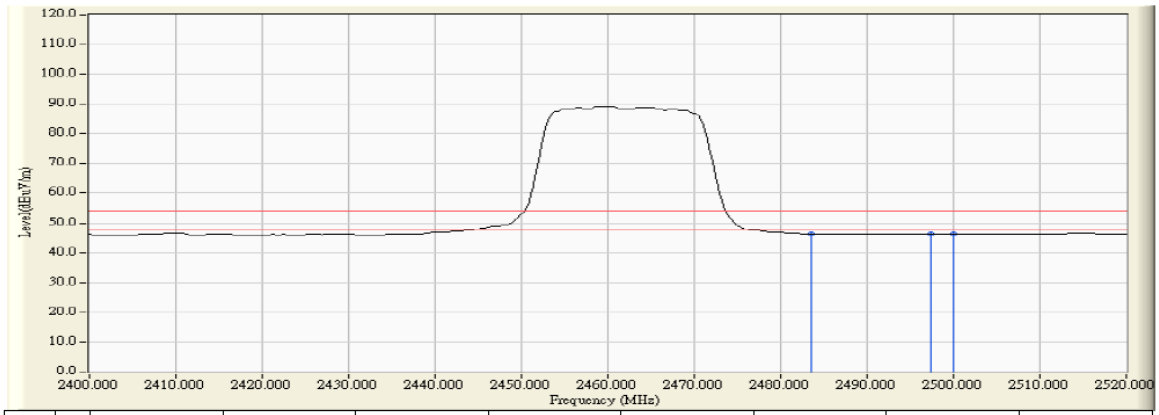
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1		2310.000	31.658	13.642	45.299	-8.701	74.000	54.000	AV
2	*	2375.650	31.966	13.701	45.667	-8.333	74.000	54.000	AV
3		2390.000	32.036	14.109	46.145	-7.855	74.000	54.000	AV

Note:
1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209, the average radiated field strength shall blow 54dBμv/m.
2. Antenna Polarization horizontal.



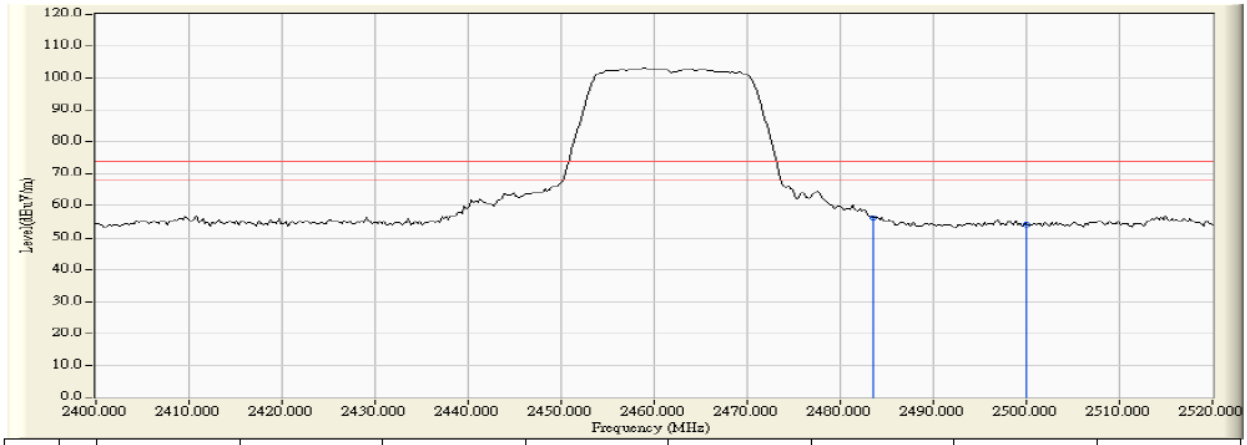
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1		2483.500	32.480	24.729	57.209	-16.791	74.000	54.000	PEAK
2	*	2497.440	32.547	25.843	58.390	-15.610	74.000	54.000	PEAK
3		2500.000	32.557	23.975	56.533	-17.467	74.000	54.000	PEAK

Note:
1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209, the peak radiated field strength shall blow 74dBμv/m.
2. Antenna Polarization horizontal.



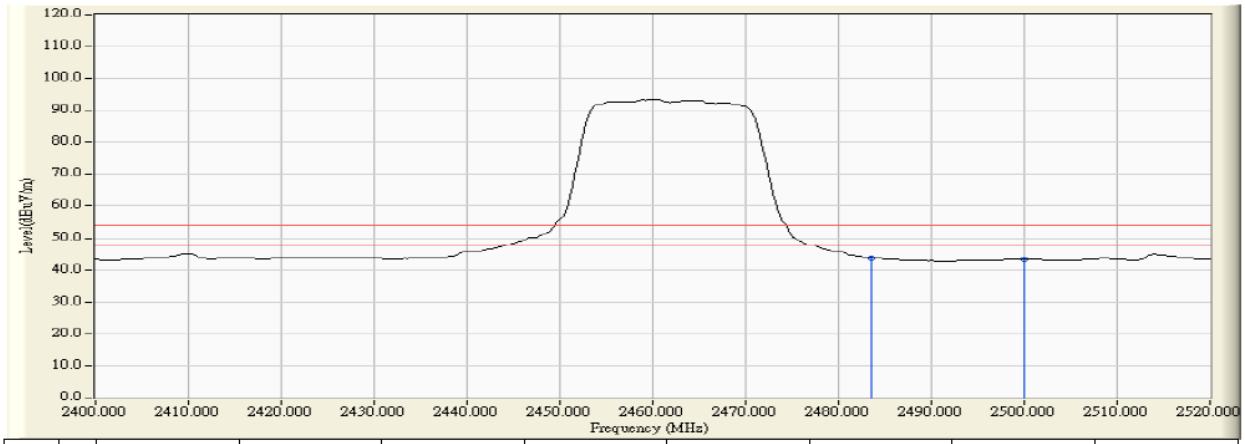
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1		2483.500	32.480	13.875	46.355	-7.645	74.000	54.000	AVERAGE
2	*	2497.440	32.547	13.747	46.294	-7.706	74.000	54.000	AVERAGE
3		2500.000	32.557	13.735	46.293	-7.707	74.000	54.000	AVERAGE

Note:
1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209, the average radiated field strength shall blow 54dBμv/m.
2. Antenna Polarization horizontal.



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1	*	2483.500	28.156	28.280	56.435	-17.565	74.000	54.000	PEAK
2		2500.000	28.142	25.923	54.065	-19.935	74.000	54.000	PEAK

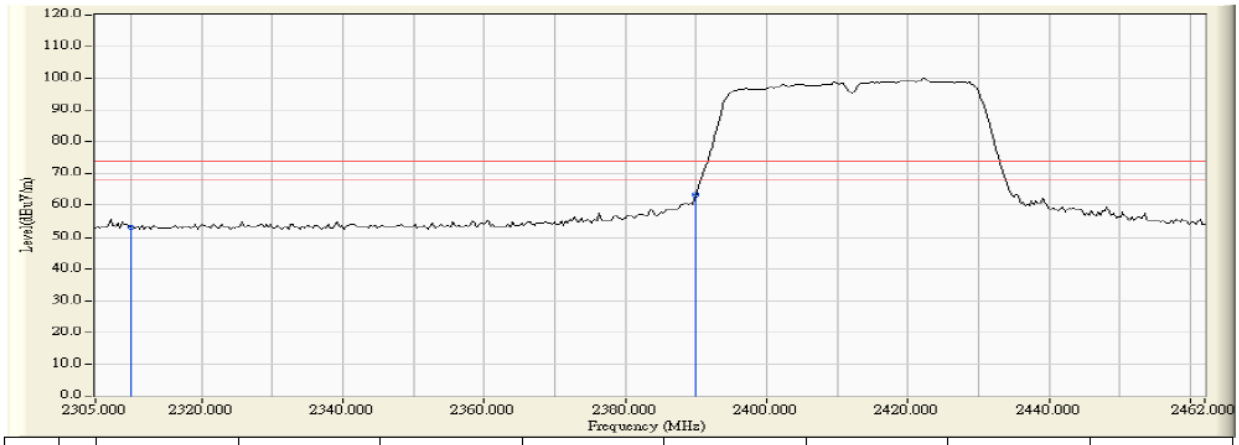
Note:
1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209, the peak radiated field strength shall blow 74dBμv/m.
2. Antenna Polarization verticall.



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1	*	2483.500	28.156	15.720	43.875	-10.125	74.000	54.000	AVERAGE
2		2500.000	28.142	15.149	43.291	-10.709	74.000	54.000	AVERAGE

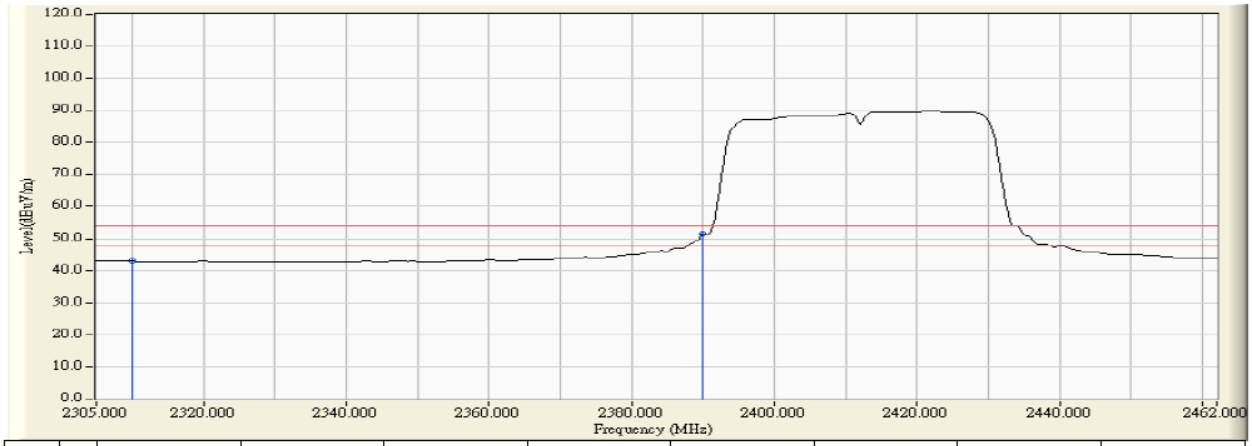
Note:
1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209, the average radiated field strength shall blow 54dBμv/m.
2. Antenna Polarization vertical.

Note : For 802.11n (40MHz) Mode:



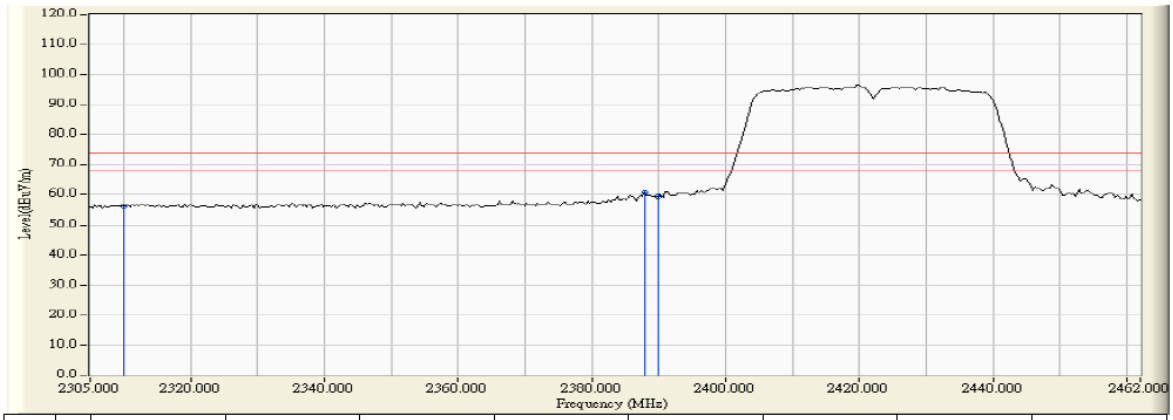
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1		2310.000	28.738	24.502	53.239	-20.761	74.000	54.000	PEAK
2	*	2390.000	28.470	34.748	63.218	-10.782	74.000	54.000	PEAK

Note:
1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209, the peak radiated field strength shall blow 74dBμv/m.
2. Antenna Polarization vertical.



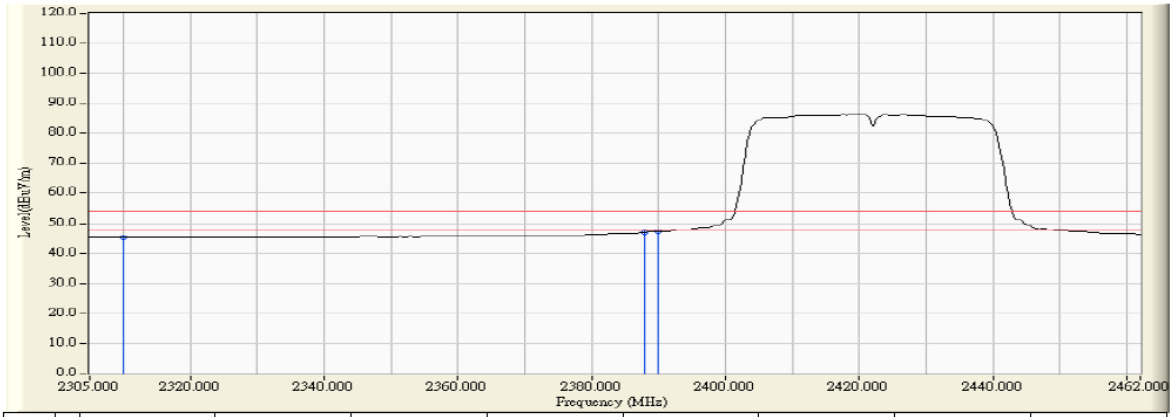
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1		2310.000	28.738	14.293	43.030	-10.970	74.000	54.000	AVERAGE
2	*	2390.000	28.470	22.864	51.334	-2.666	74.000	54.000	AVERAGE

Note:
1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209, the average radiated field strength shall blow 54dBμv/m.
2. Antenna Polarization vertical.



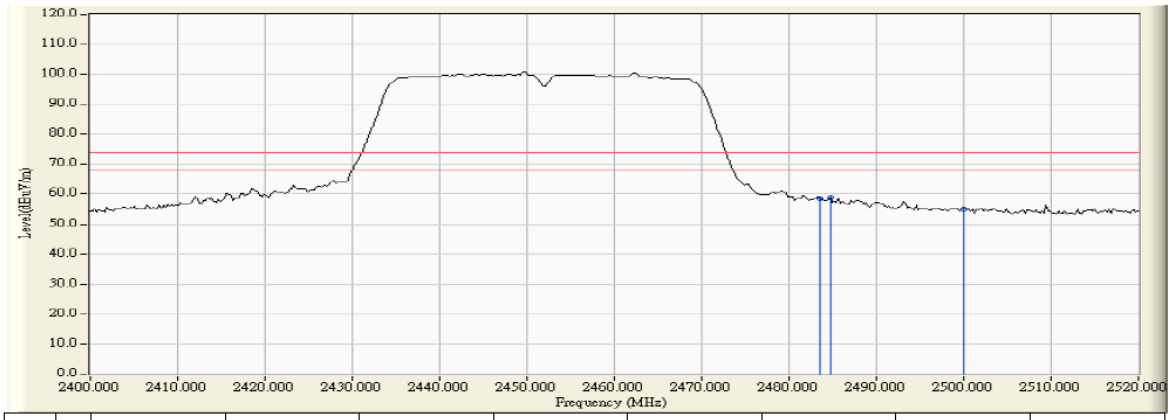
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1		2310.000	31.658	24.571	56.228	-17.772	74.000	54.000	PEAK
2	*	2387.896	32.025	28.809	60.835	-13.165	74.000	54.000	PEAK
3		2390.000	32.036	27.534	59.570	-14.430	74.000	54.000	PEAK

Note:
1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209, the peak radiated field strength shall blow 74dBμv/m.
2. Antenna Polarization horizontal.



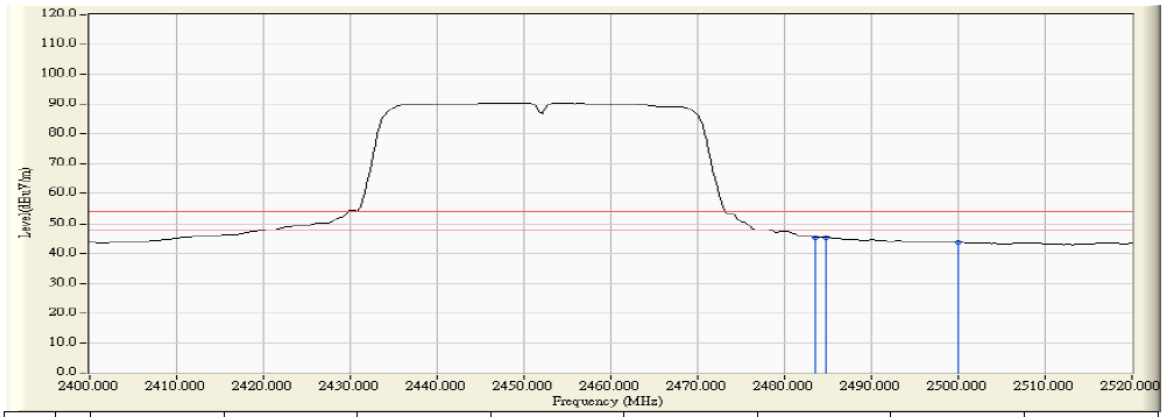
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1		2310.000	31.658	13.656	45.313	-8.687	74.000	54.000	AVERAGE
2	*	2387.896	32.025	14.949	46.975	-7.025	74.000	54.000	AVERAGE
3		2390.000	32.036	15.232	47.268	-6.732	74.000	54.000	AVERAGE

Note:
1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209, the average radiated field strength shall blow 54dBμv/m.
2. Antenna Polarization horizontal.



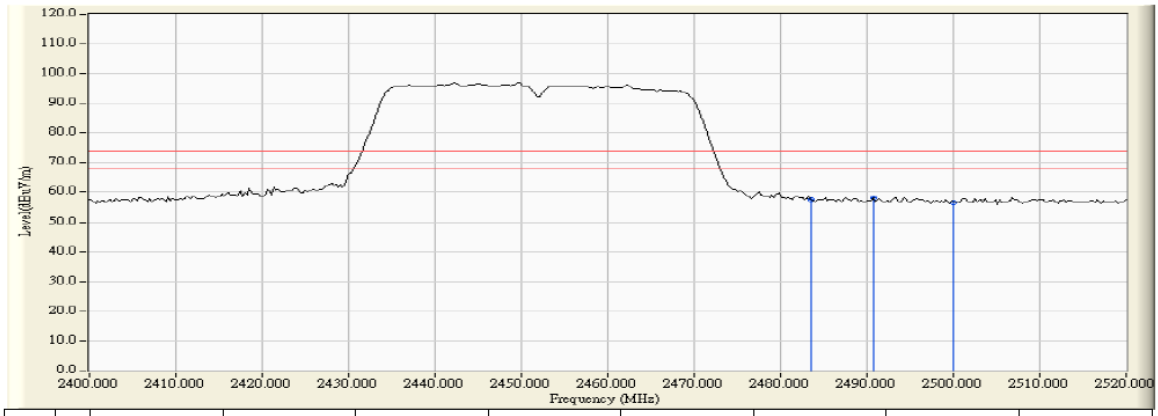
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1		2483.500	28.156	30.521	58.676	-15.324	74.000	54.000	PEAK
2	*	2484.720	28.150	30.637	58.788	-15.212	74.000	54.000	PEAK
3		2500.000	28.142	26.818	54.960	-19.040	74.000	54.000	PEAK

Note:
1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209, the peak radiated field strength shall blow 74dBμv/m.
2. Antenna Polarization vertical.



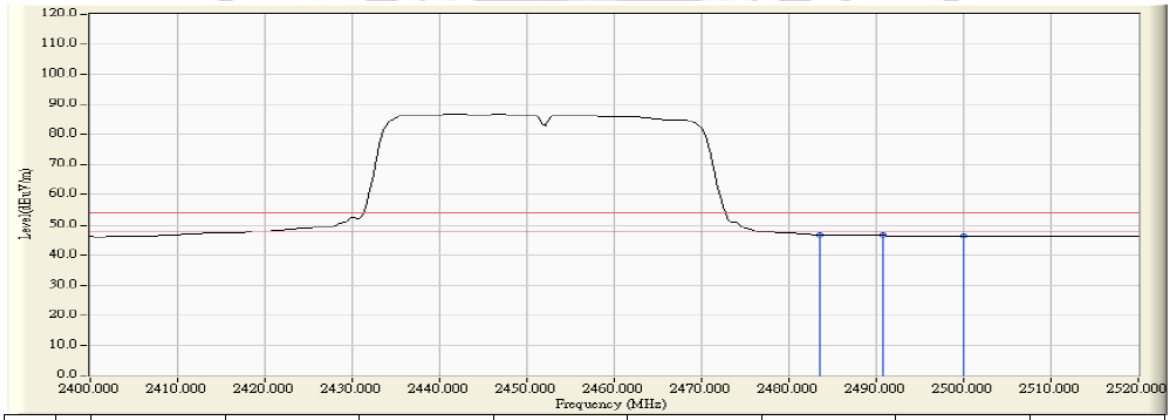
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1		2483.500	28.156	17.291	45.446	-8.554	74.000	54.000	AVERAGE
2	*	2484.720	28.150	17.108	45.259	-8.741	74.000	54.000	AVERAGE
3		2500.000	28.142	15.505	43.647	-10.353	74.000	54.000	AVERAGE

Note:
1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209, the average radiated field strength shall blow 54dBμv/m.
2. Antenna Polarization vertical.



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1		2483.500	32.480	25.186	57.666	-16.334	74.000	54.000	PEAK
2	*	2490.720	32.515	25.788	58.303	-15.697	74.000	54.000	PEAK
3		2500.000	32.557	24.139	56.697	-17.303	74.000	54.000	PEAK

Note:
1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209, the peak radiated field strength shall blow 74dBμv/m.
2. Antenna Polarization horizontal.

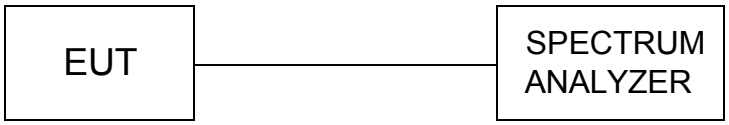


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Detector Type
1		2483.500	32.480	14.264	46.744	-7.256	74.000	54.000	AVERAGE
2	*	2490.720	32.515	13.995	46.510	-7.490	74.000	54.000	AVERAGE
3		2500.000	32.557	13.803	46.361	-7.639	74.000	54.000	AVERAGE

Note:
1. The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209, the average radiated field strength shall blow 54dBμv/m.
2. Antenna Polarization horizontal.

4.6. Power Spectral Density Measurement

TEST CONFIGURATION



TEST PROCEDURE

1. The testing follows the FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. Set SPAN = 20 MHz (For devices with a nominal 40 MHz BW, 50 MHz span will be needed)
3. Set REFERENCE LEVEL = 20 dBm
4. Set ATTENUATION = 0 dB (add internal attenuation, if necessary)
5. Set SWEEP TIME = Coupled
6. Set RBW = 3 kHz
7. Set VBW = 10 kHz
8. Set DETECTOR = Peak
9. Set MKR = Center Frequency
10. Set TRACE = CLEAR WRITE

Place the radio in continuous transmit mode. Set the TRACE to MAX HOLD, and after the trace stabilizes, the TRACE to VIEW. Set the marker on the peak of the signal and then adjust the center frequency of the spectrum analyzer to the marker frequency. After viewing the EUT waveform on the spectrum analyzer, perform the following spectrum analyzer functions to capture the trace:

11. Set SPAN = 300 kHz
12. Set SWEEP TIME = 100 s
13. Set TRACE = MAX HOLD
14. Set MKR = PEAK SEARCH
15. Record the marker level for the particular mode. Repeat these steps for other device modes.

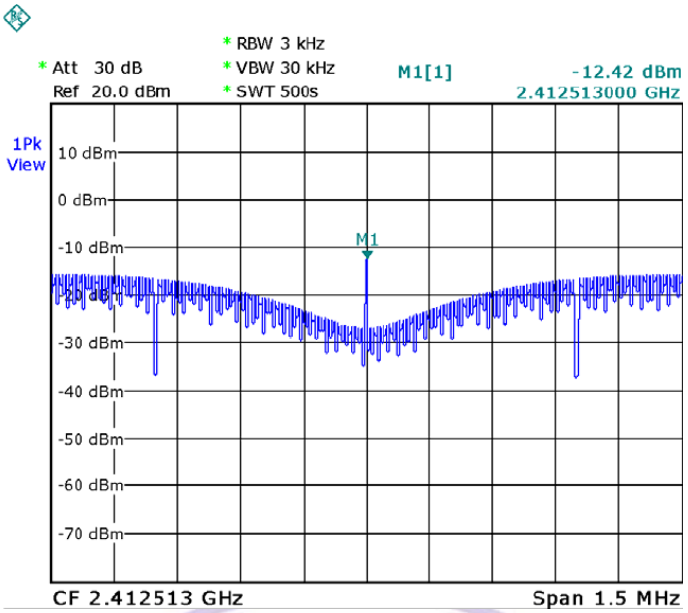
LIMIT

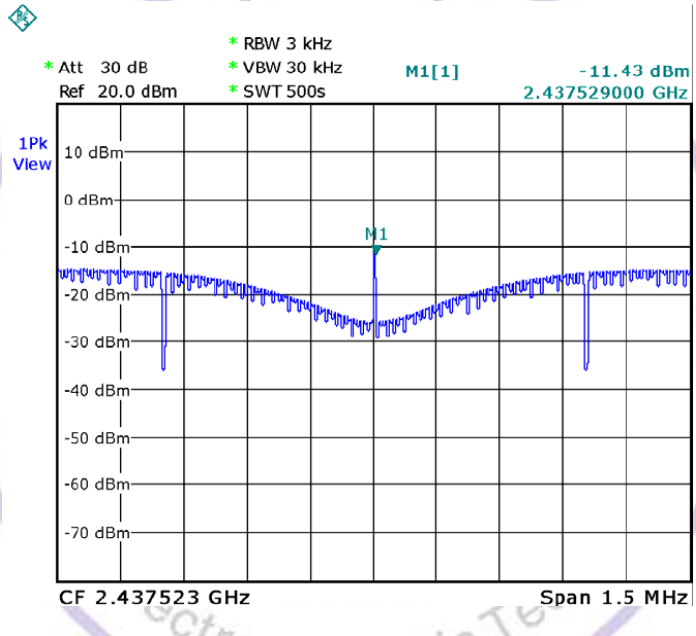
For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

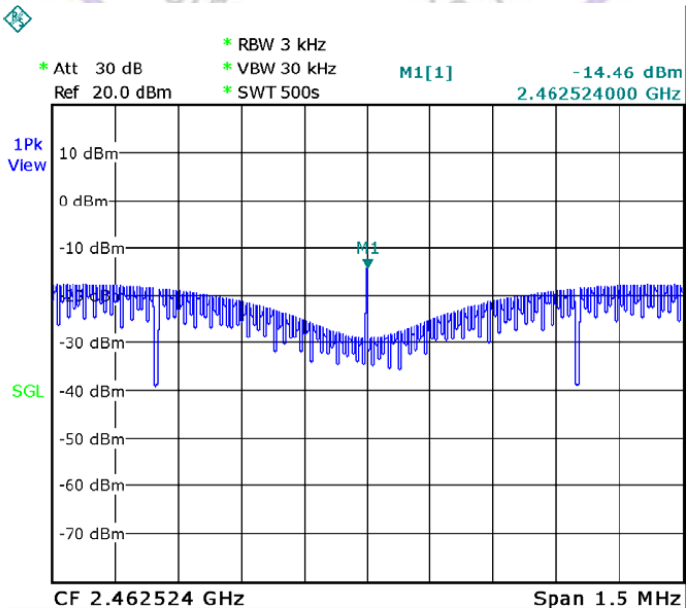
TEST RESULTS

Channel	RF power level in 3 KHz BW (dBm)	Maximum limit (dBm)	PASS / FAIL
802.11b CH1	-12.42	8	PASS
802.11b CH 6	-11.43	8	PASS
802.11b CH 11	-14.46	8	PASS
802.11g CH1	-13.41	8	PASS
802.11g CH6	-14.37	8	PASS
802.11g CH11	-15.23	8	PASS
HT20 CH1	-13.41	8	PASS
HT20 CH 6	-14.75	8	PASS
HT20 CH 11	-15.23	8	PASS
HT40 CH 3	-14.22	8	PASS
HT40 CH 6	-14.43	8	PASS
HT40 CH 9	-15.25	8	PASS

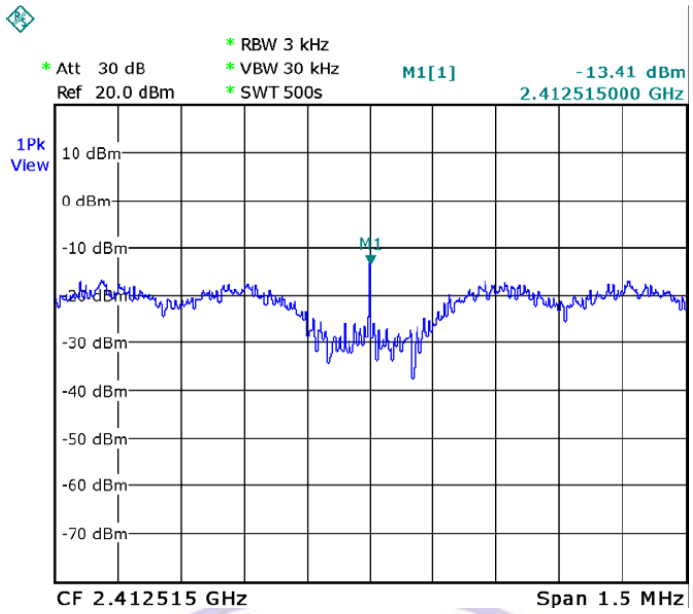
802.11b:

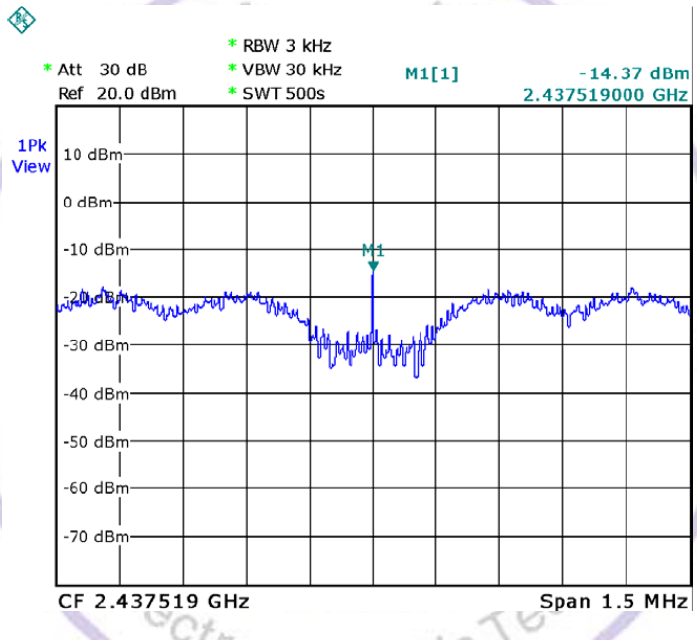

* RBW 3 kHz
* Att 30 dB
* VBW 30 kHz
M1[1]
-12.42 dBm
Ref 20.0 dBm
* SWT 500s
2.412513000 GHz
1Pk
View
10 dBm
0 dBm
-10 dBm
M1
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
CF 2.412513 GHz
Span 1.5 MHz

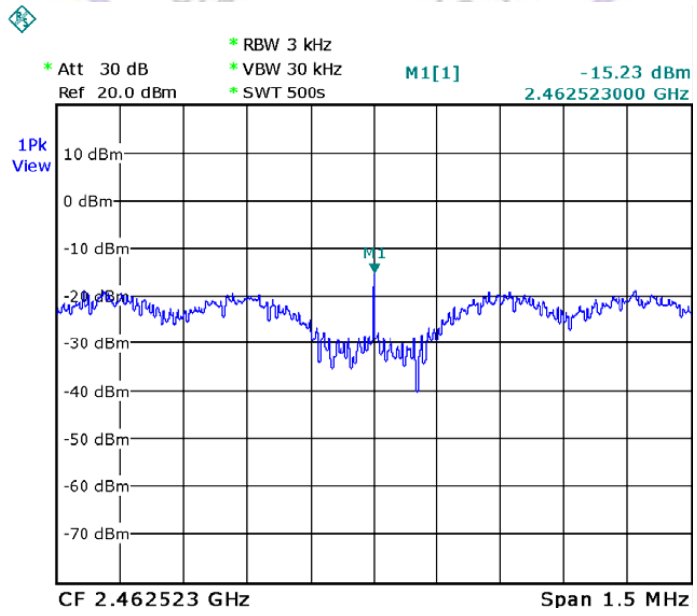

* RBW 3 kHz
* Att 30 dB
* VBW 30 kHz
M1[1]
-11.43 dBm
Ref 20.0 dBm
* SWT 500s
2.437529000 GHz
1Pk
View
10 dBm
0 dBm
-10 dBm
M1
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
CF 2.437523 GHz
Span 1.5 MHz


* RBW 3 kHz
* Att 30 dB
* VBW 30 kHz
M1[1]
-14.46 dBm
Ref 20.0 dBm
* SWT 500s
2.462524000 GHz
1Pk
View
10 dBm
0 dBm
-10 dBm
M1
-20 dBm
-30 dBm
SGL
-40 dBm
-50 dBm
-60 dBm
-70 dBm
CF 2.462524 GHz
Span 1.5 MHz

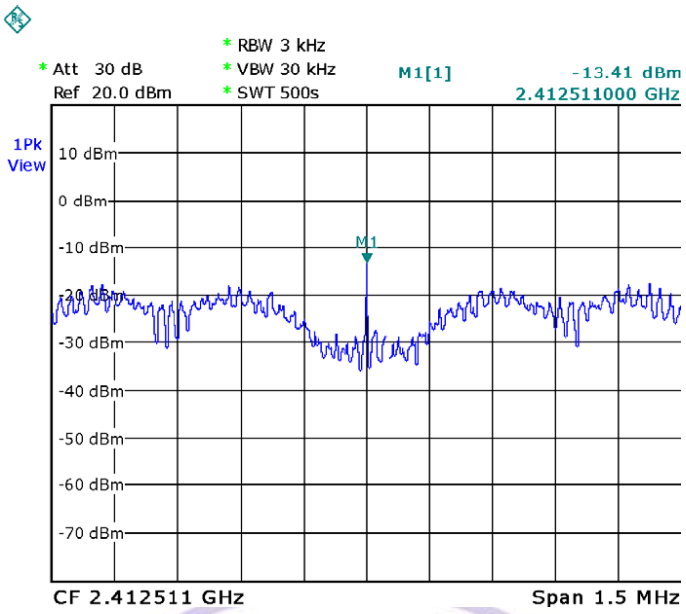
802.11g:

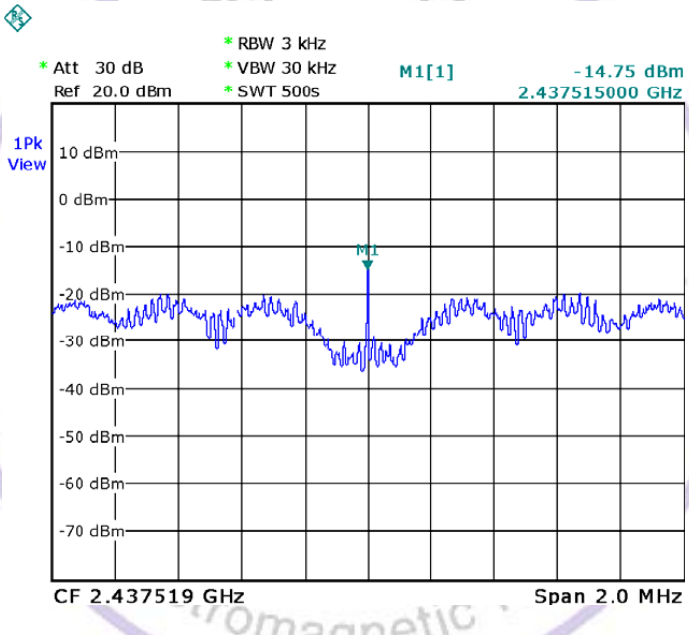

RBW 3 kHz
Att 30 dB
VBW 30 kHz
M1[1]
-13.41 dBm
Ref 20.0 dBm
SWT 500s
2.412515000 GHz
1Pk
View
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
CF 2.412515 GHz
Span 1.5 MHz

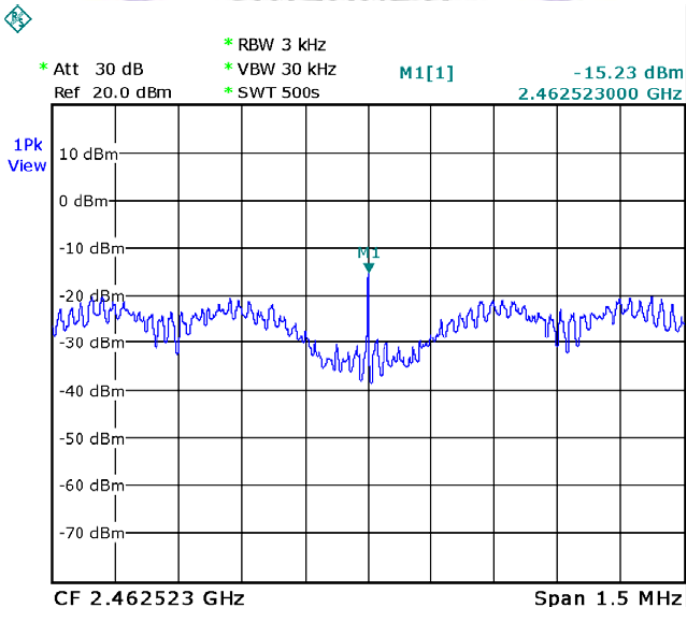

RBW 3 kHz
Att 30 dB
VBW 30 kHz
M1[1]
-14.37 dBm
Ref 20.0 dBm
SWT 500s
2.437519000 GHz
1Pk
View
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
CF 2.437519 GHz
Span 1.5 MHz


RBW 3 kHz
Att 30 dB
VBW 30 kHz
M1[1]
-15.23 dBm
Ref 20.0 dBm
SWT 500s
2.462523000 GHz
1Pk
View
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
CF 2.462523 GHz
Span 1.5 MHz

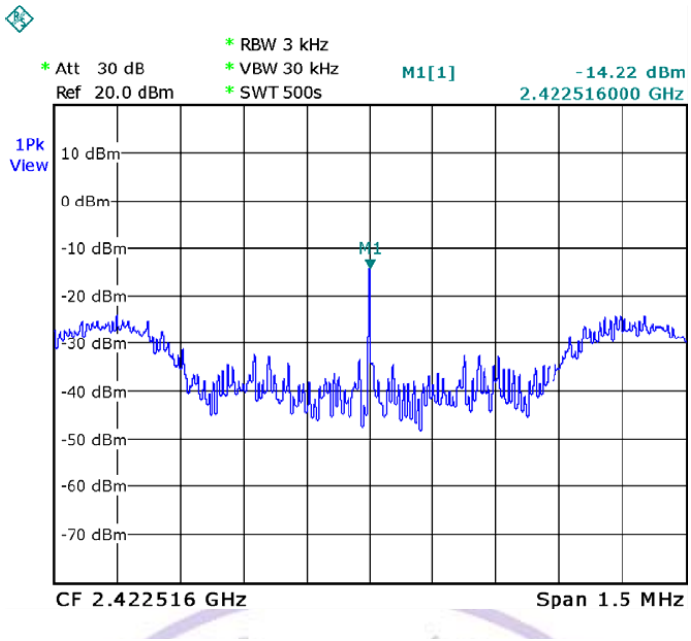
802.11n HT20:

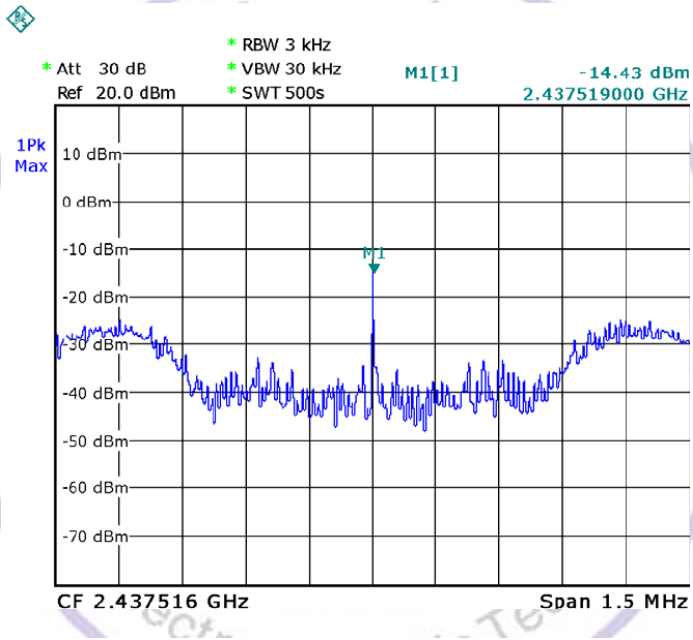

RBW 3 kHz
Att 30 dB
VBW 30 kHz
M1[1]
-13.41 dBm
Ref 20.0 dBm
SWT 500s
2.412511000 GHz
1Pk
View
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
CF 2.412511 GHz
Span 1.5 MHz

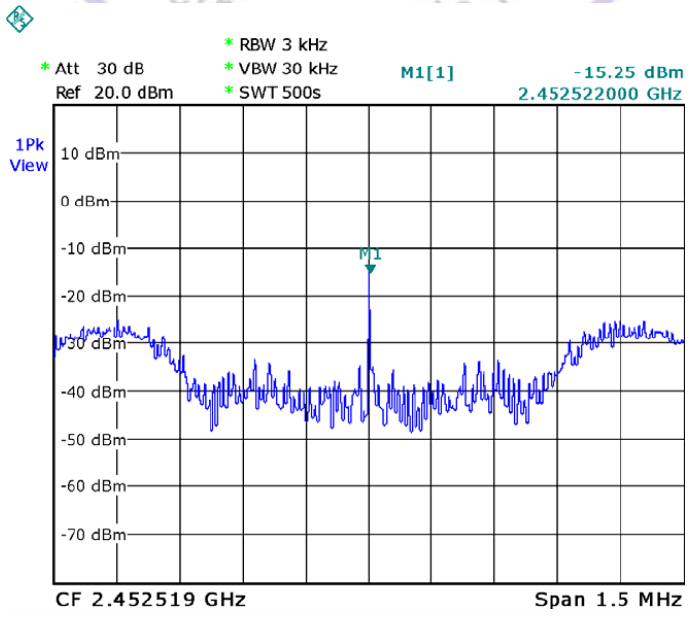

RBW 3 kHz
Att 30 dB
VBW 30 kHz
M1[1]
-14.75 dBm
Ref 20.0 dBm
SWT 500s
2.437515000 GHz
1Pk
View
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
CF 2.437519 GHz
Span 2.0 MHz


RBW 3 kHz
Att 30 dB
VBW 30 kHz
M1[1]
-15.23 dBm
Ref 20.0 dBm
SWT 500s
2.462523000 GHz
1Pk
View
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
CF 2.462523 GHz
Span 1.5 MHz

802.11n 40HT:

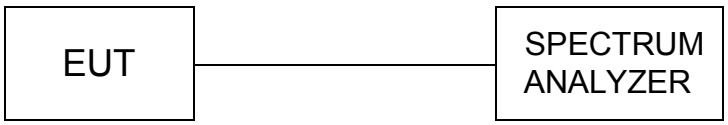

RBW 3 kHz
Att 30 dB
VBW 30 kHz
M1[1]
-14.22 dBm
Ref 20.0 dBm
SWT 500s
2.422516000 GHz
1Pk
View
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
CF 2.422516 GHz
Span 1.5 MHz


RBW 3 kHz
Att 30 dB
VBW 30 kHz
M1[1]
-14.43 dBm
Ref 20.0 dBm
SWT 500s
2.437519000 GHz
1Pk
Max
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
CF 2.437516 GHz
Span 1.5 MHz


RBW 3 kHz
Att 30 dB
VBW 30 kHz
M1[1]
-15.25 dBm
Ref 20.0 dBm
SWT 500s
2.452522000 GHz
1Pk
View
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
CF 2.452519 GHz
Span 1.5 MHz

4.7. Spurious RF Conducted Emission

TEST CONFIGURATION



TEST PROCEDURE

The Spurious RF conducted emissions compliance of RF radiated emission should be measured by following the guidance in ANSI C63.10-2009 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization etc. Set RBW=100kHz and VBM= 300KHz to measure the peak field strength , and measure frequeny range from 30MHz to 26.5GHz.

LIMIT

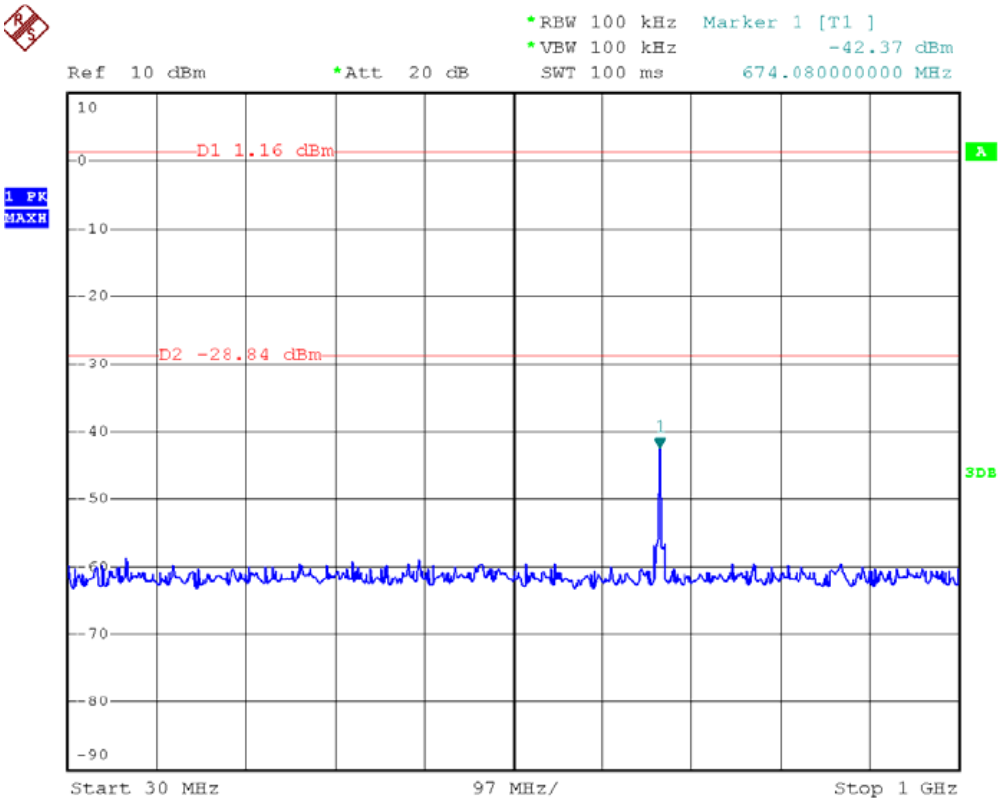
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

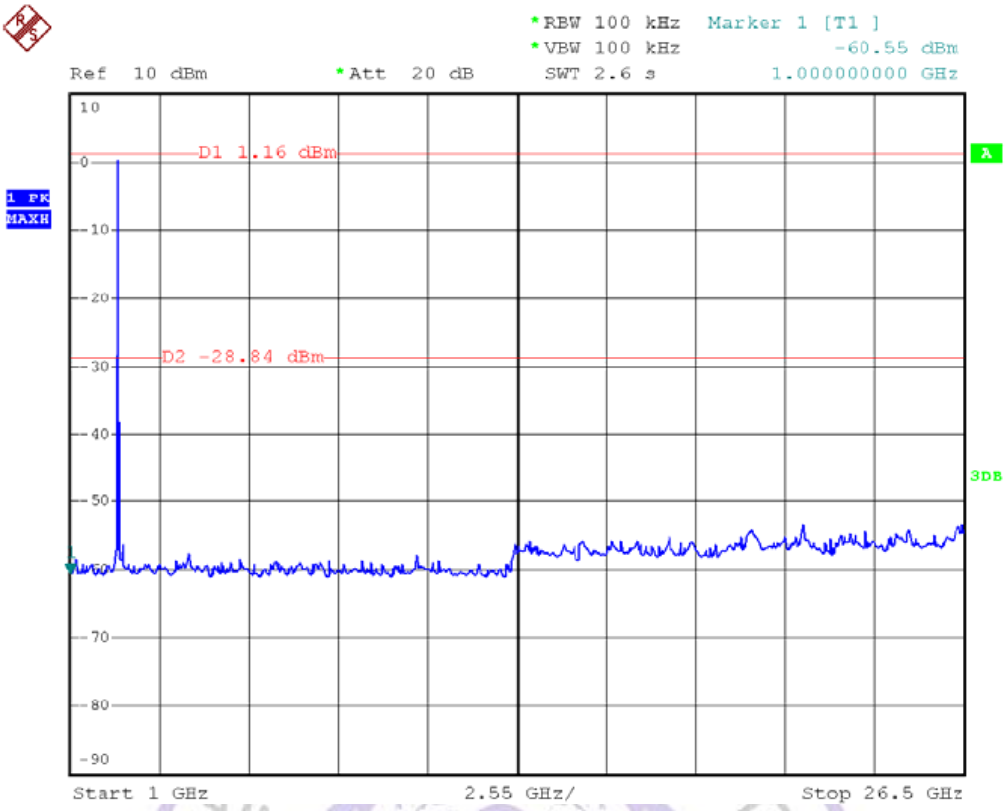
TEST RESULTS

Photos of Spurious RF Conducted Emission Measurement

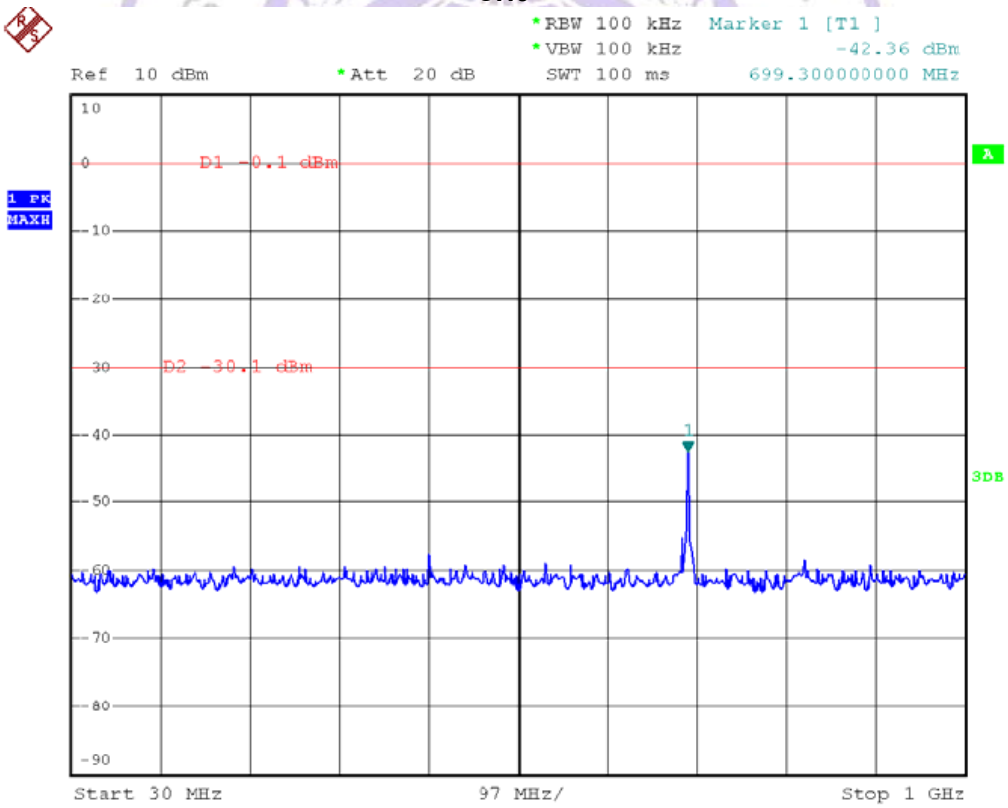
For 802.11b Mode:

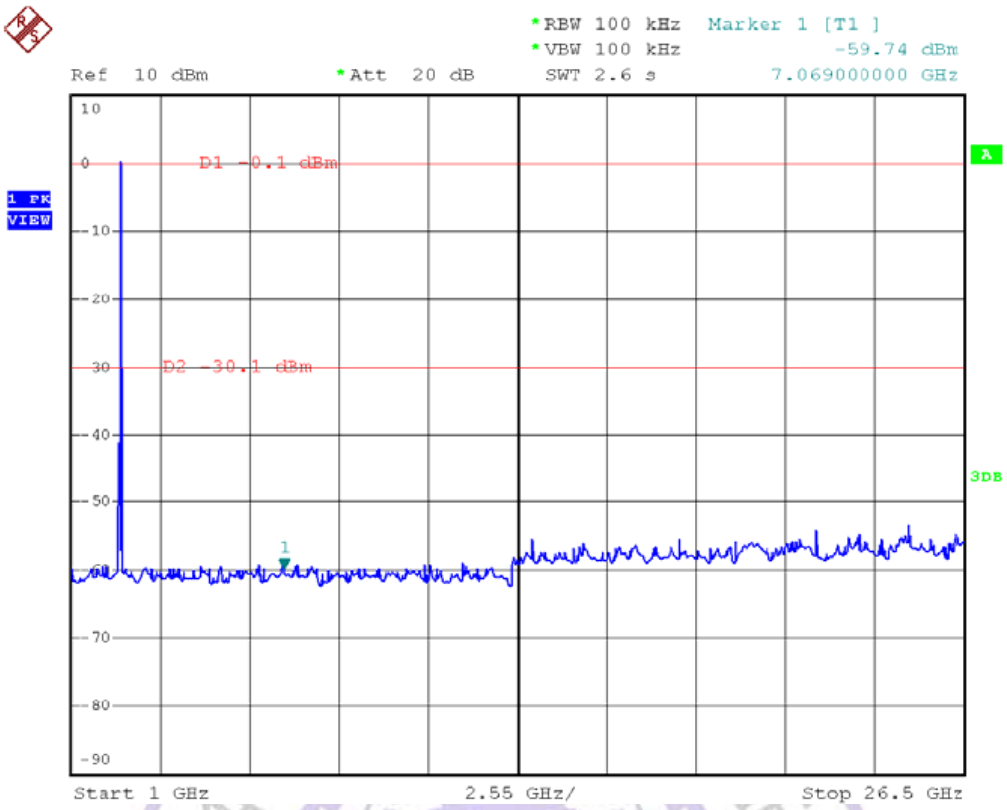
CH1



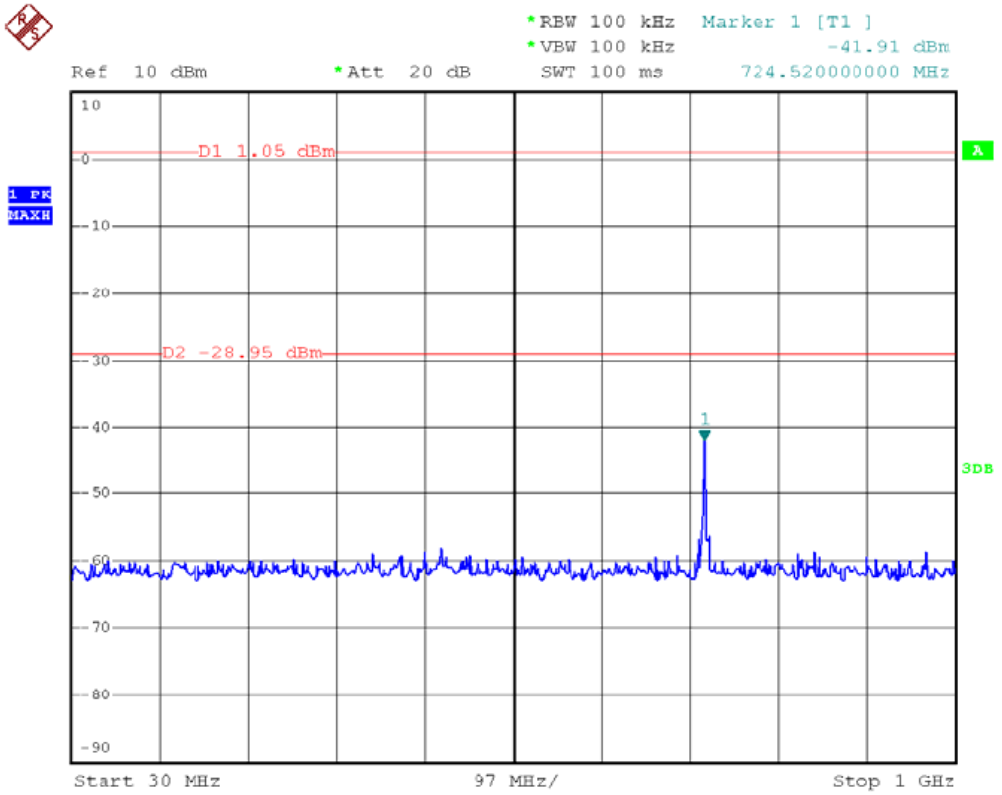

*RBW 100 kHz
Marker 1 [T1]
*VBW 100 kHz
-60.55 dBm
Ref 10 dBm
*Att 20 dB
SWT 2.6 s
1.000000000 GHz
D1 1.16 dBm
D2 -28.84 dBm
1 PK MAXH
A
3DB
Start 1 GHz
2.55 GHz/
Stop 26.5 GHz

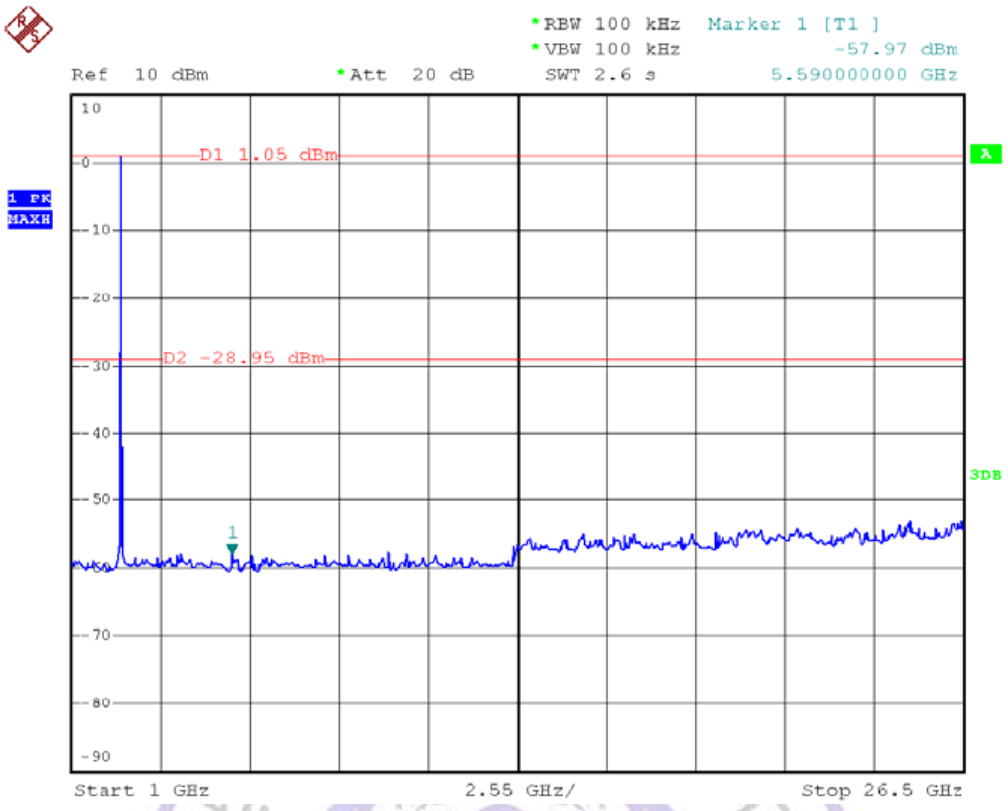
CH6


*RBW 100 kHz
Marker 1 [T1]
*VBW 100 kHz
-42.36 dBm
Ref 10 dBm
*Att 20 dB
SWT 100 ms
699.300000000 MHz
D1 -0.1 dBm
D2 -30.1 dBm
1 PK MAXH
A
3DB
Start 30 MHz
97 MHz/
Stop 1 GHz


*RBW 100 kHz
Marker 1 [T1]
*VBW 100 kHz
-59.74 dBm
Ref 10 dBm
*Att 20 dB
SWT 2.6 s
7.069000000 GHz
1 PK
VIEW
D1 -0.1 dBm
D2 -30.1 dBm
A
3DB
Start 1 GHz
2.55 GHz/
Stop 26.5 GHz

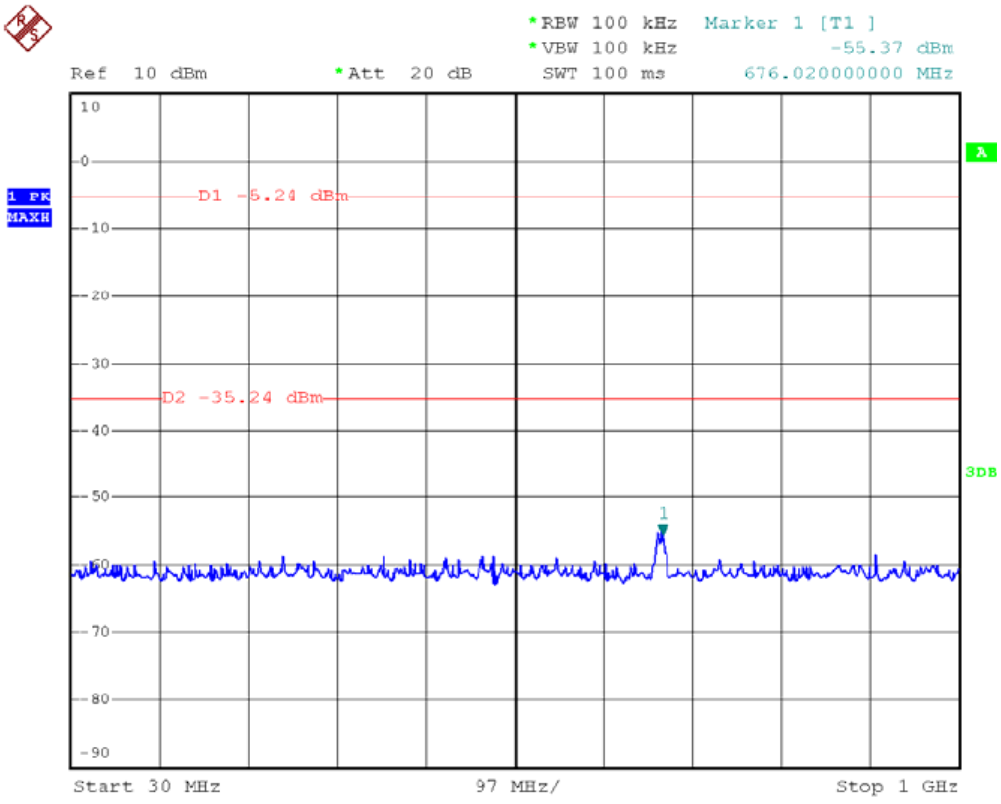
CH11

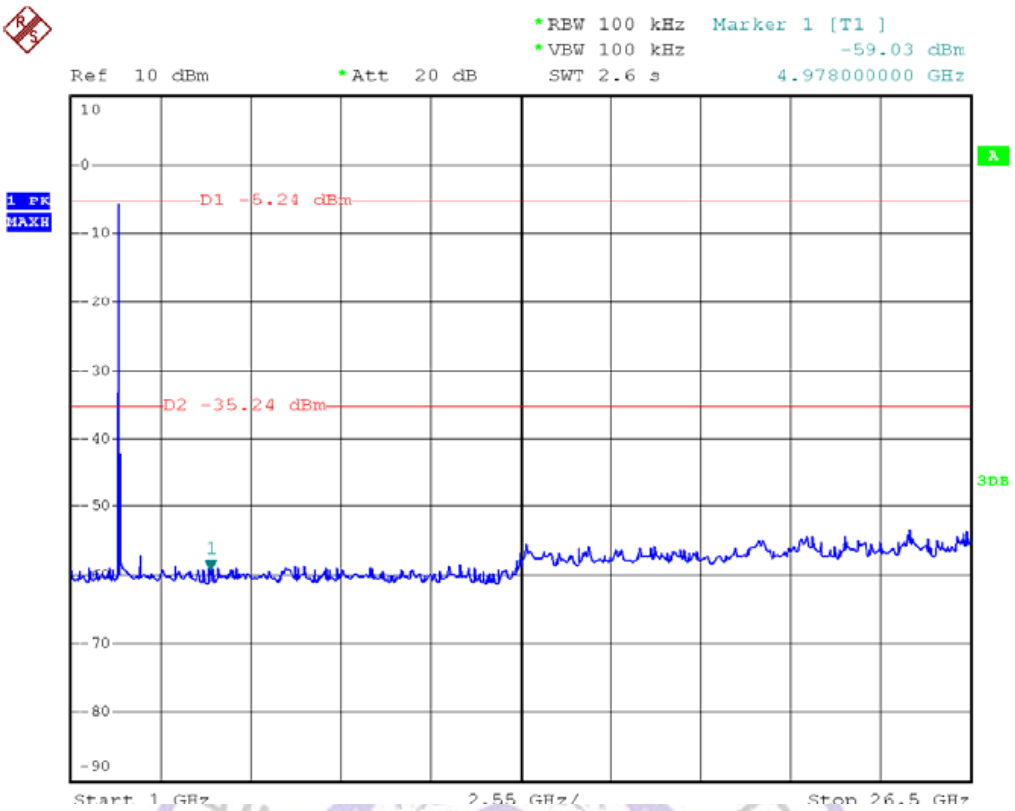

*RBW 100 kHz
Marker 1 [T1]
*VBW 100 kHz
-41.91 dBm
Ref 10 dBm
*Att 20 dB
SWT 100 ms
724.520000000 MHz
1 PK
MAXH
D1 1.05 dBm
D2 -28.95 dBm
A
3DB
Start 30 MHz
97 MHz/
Stop 1 GHz



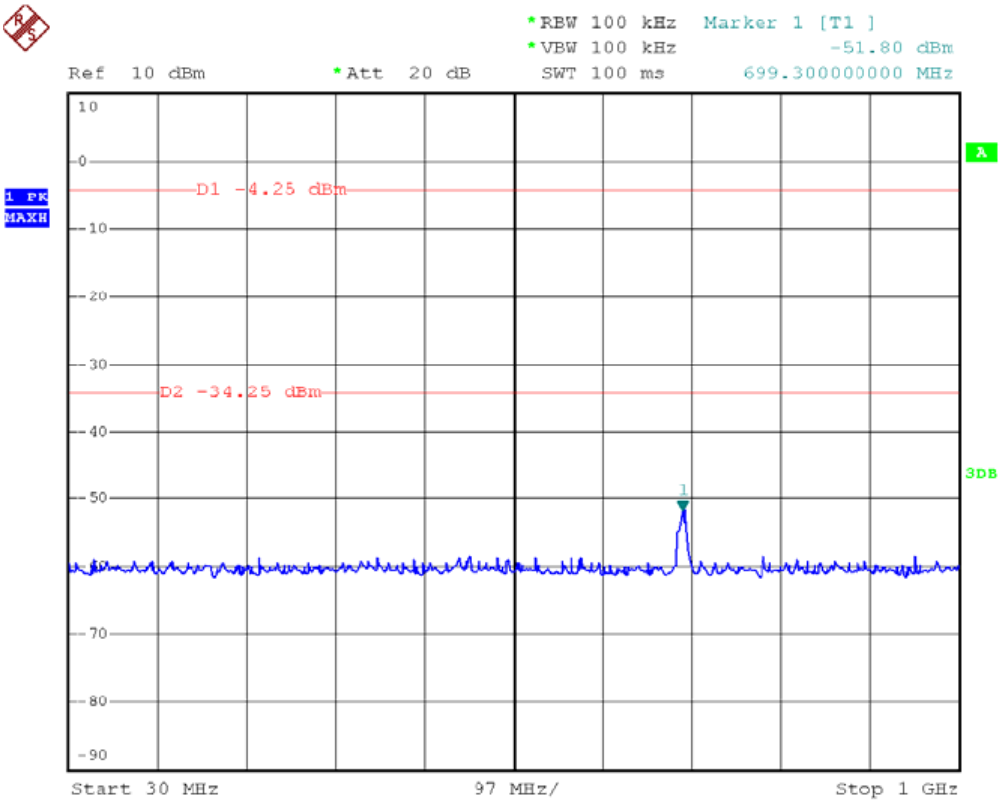
For 802.11g Mode:

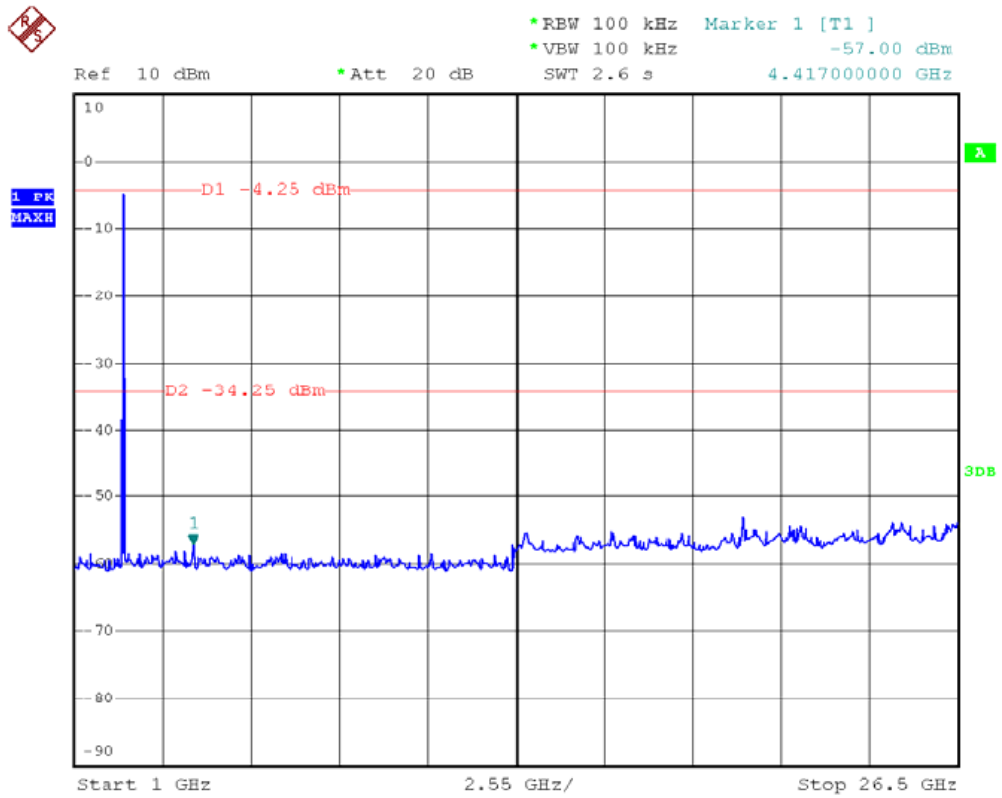
CH1



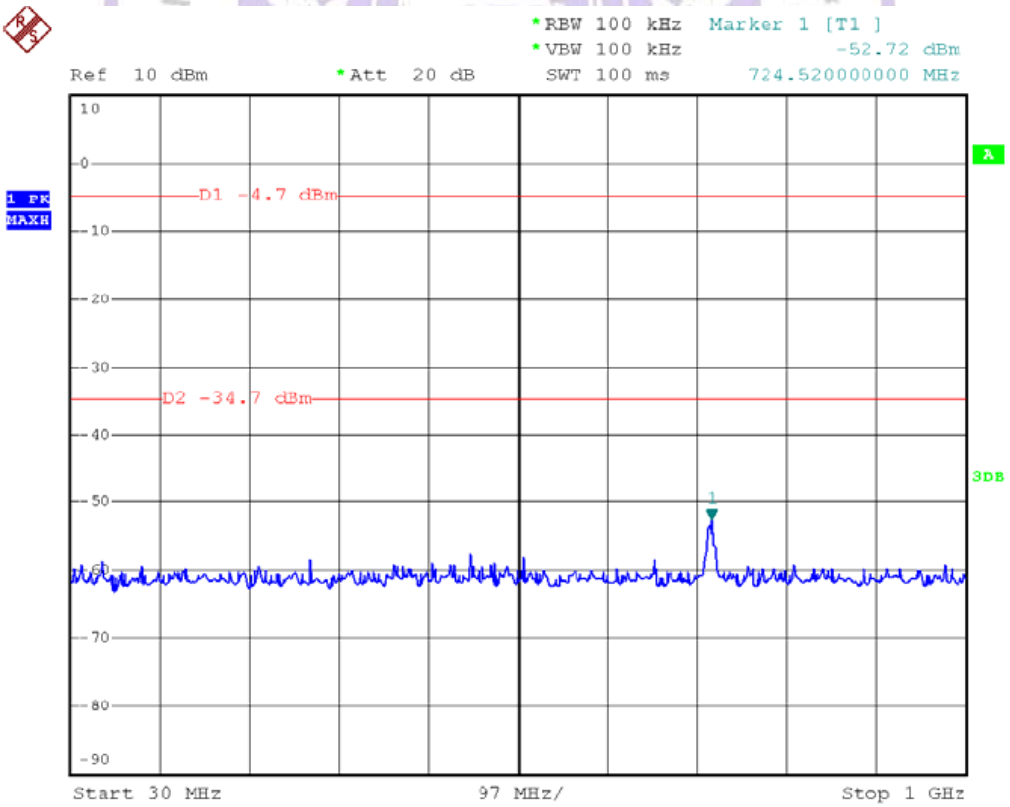

*RBW 100 kHz
Marker 1 [T1]
*VBW 100 kHz
-59.03 dBm
Ref 10 dBm
*Att 20 dB
SWT 2.6 s
4.978000000 GHz
1 PK MAXH
D1 -5.24 dBm
D2 -35.24 dBm
A
3DB
Start 1 GHz
2.55 GHz/
Stop 26.5 GHz

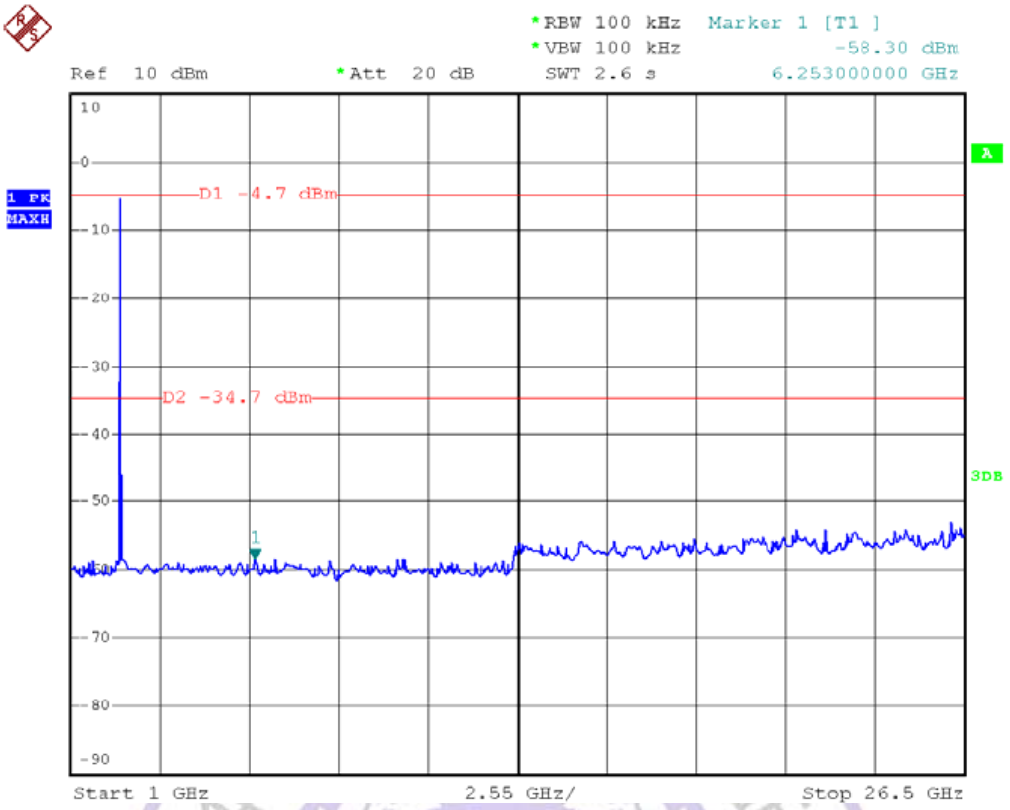
CH6


*RBW 100 kHz
Marker 1 [T1]
*VBW 100 kHz
-51.80 dBm
Ref 10 dBm
*Att 20 dB
SWT 100 ms
699.300000000 MHz
1 PK MAXH
D1 -4.25 dBm
D2 -34.25 dBm
A
3DB
Start 30 MHz
97 MHz/
Stop 1 GHz


*RBW 100 kHz
Marker 1 [T1]
*VBW 100 kHz
-57.00 dBm
Ref 10 dBm
*Att 20 dB
SWT 2.6 s
4.417000000 GHz
D1 -4.25 dBm
D2 -34.25 dBm
1 PK MAXH
A
3DB
Start 1 GHz
2.55 GHz/
Stop 26.5 GHz

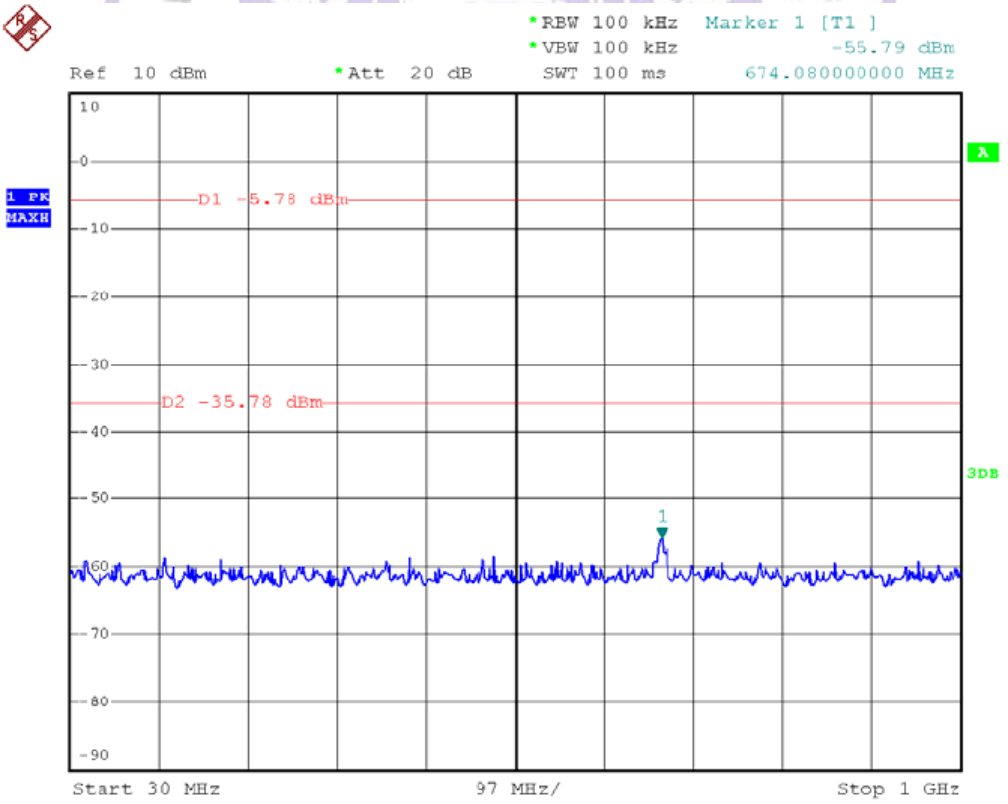
CH11

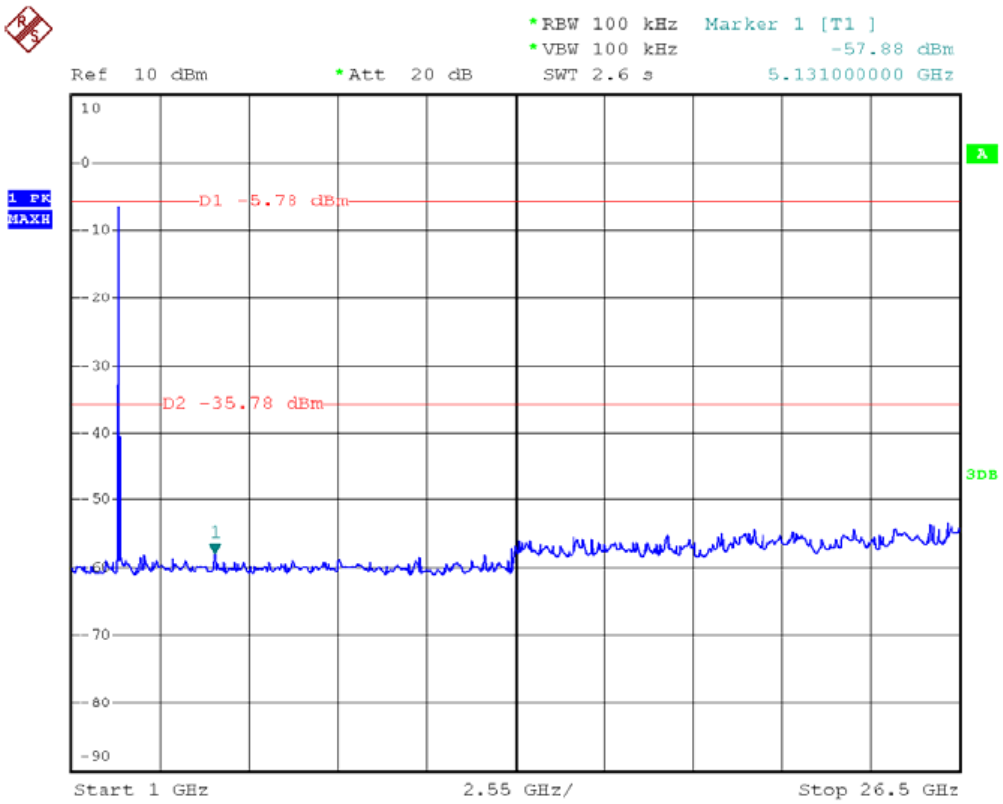

*RBW 100 kHz
Marker 1 [T1]
*VBW 100 kHz
-52.72 dBm
Ref 10 dBm
*Att 20 dB
SWT 100 ms
724.520000000 MHz
D1 -4.7 dBm
D2 -34.7 dBm
1 PK MAXH
A
3DB
Start 30 MHz
97 MHz/
Stop 1 GHz



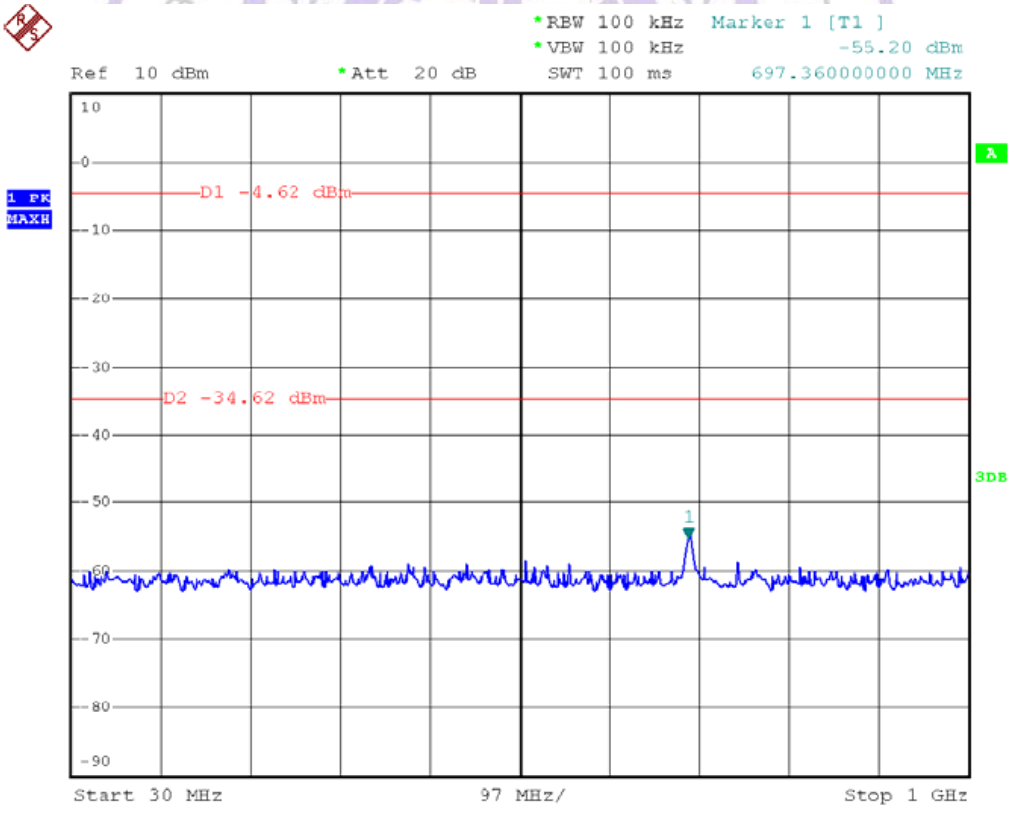
For 802.11n (20MHz) Mode:

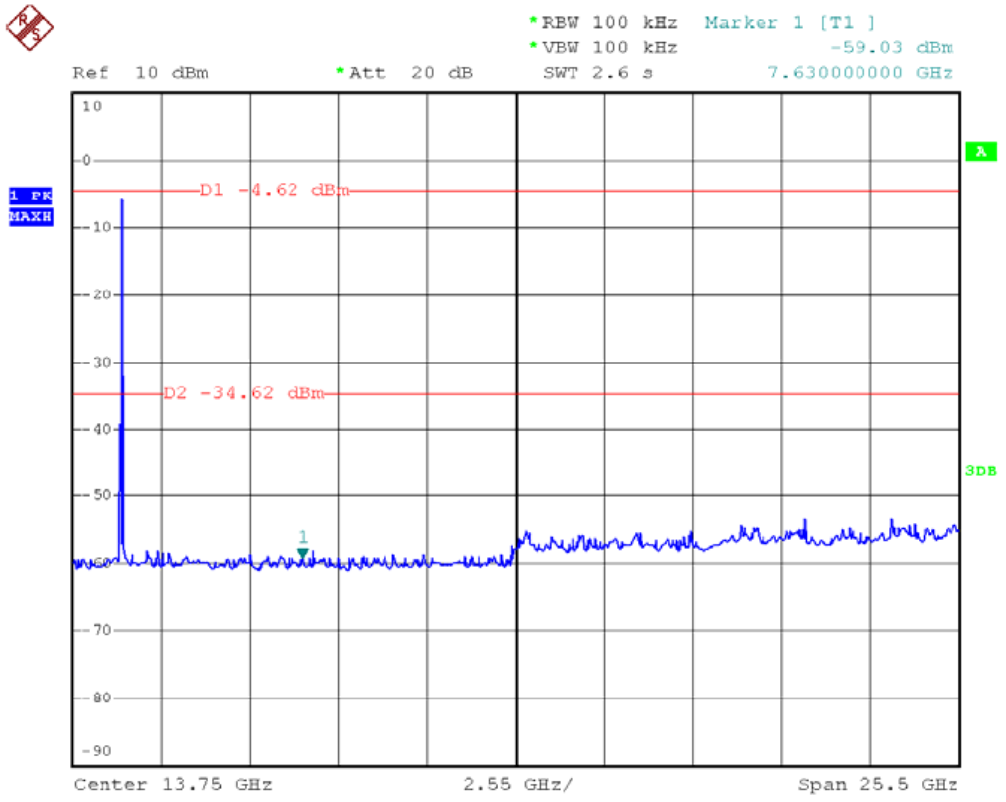
CH1



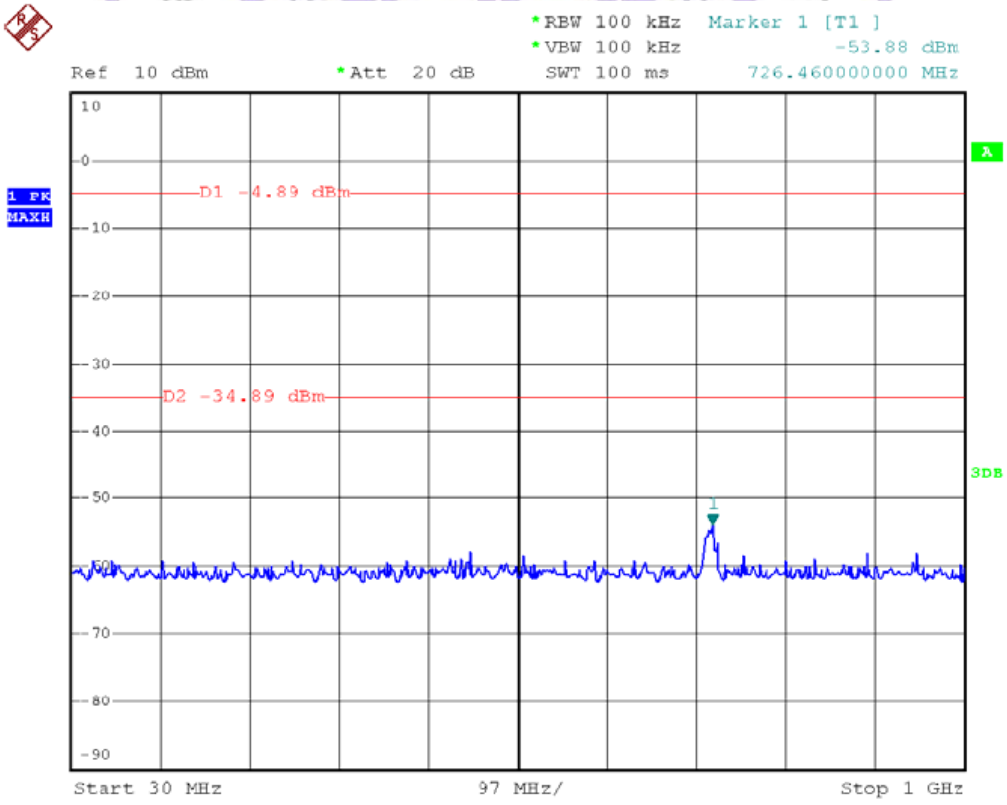

*RBW 100 kHz
Marker 1 [T1]
*VBW 100 kHz
-57.88 dBm
Ref 10 dBm
*Att 20 dB
SWT 2.6 s
5.131000000 GHz
1 PK MAXH
D1 -5.78 dBm
D2 -35.78 dBm
A
3DB
Start 1 GHz
2.55 GHz/
Stop 26.5 GHz

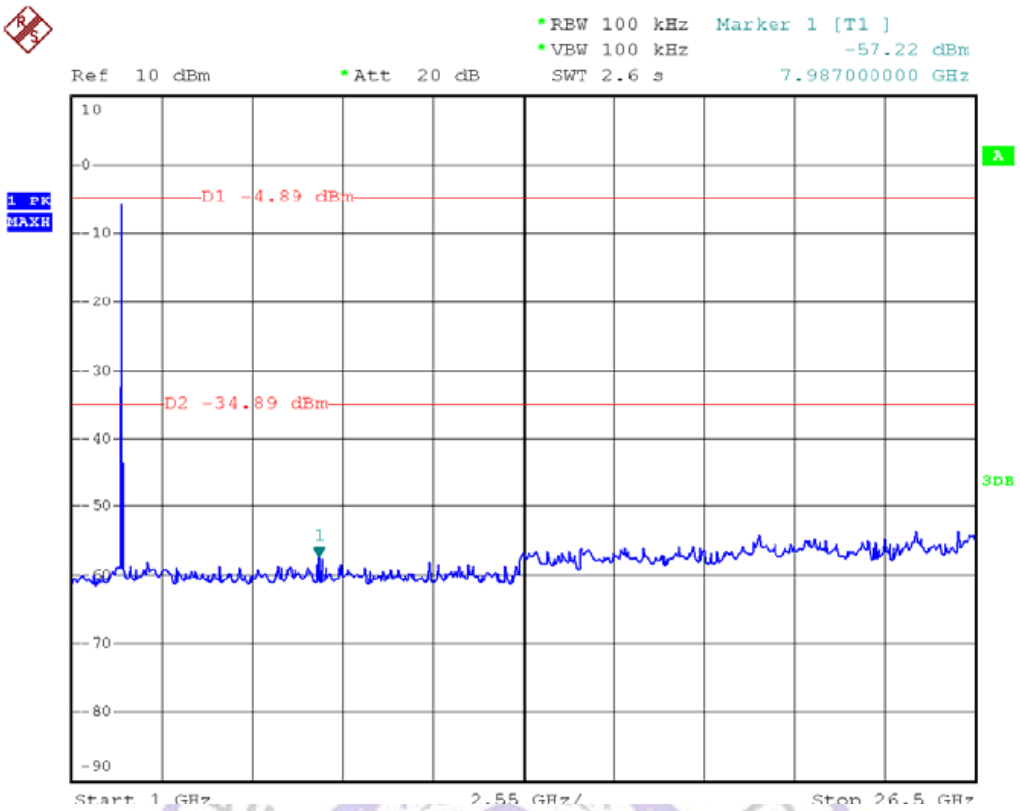
CH6


*RBW 100 kHz
Marker 1 [T1]
*VBW 100 kHz
-55.20 dBm
Ref 10 dBm
*Att 20 dB
SWT 100 ms
697.360000000 MHz
1 PK MAXH
D1 -4.62 dBm
D2 -34.62 dBm
A
3DB
Start 30 MHz
97 MHz/
Stop 1 GHz


*RBW 100 kHz
Marker 1 [T1]
*VBW 100 kHz
-59.03 dBm
Ref 10 dBm
*Att 20 dB
SWT 2.6 s
7.630000000 GHz
D1 -4.62 dBm
D2 -34.62 dBm
1 PK MAXH
A
3DB
Center 13.75 GHz
2.55 GHz/
Span 25.5 GHz

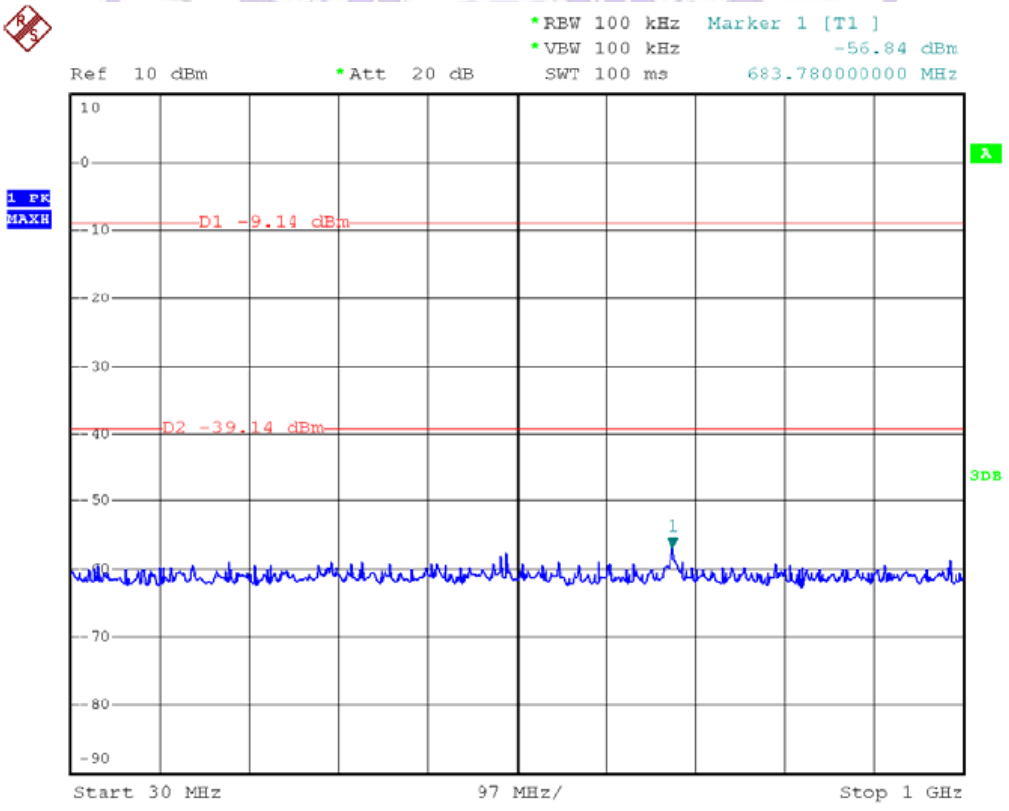
CH11

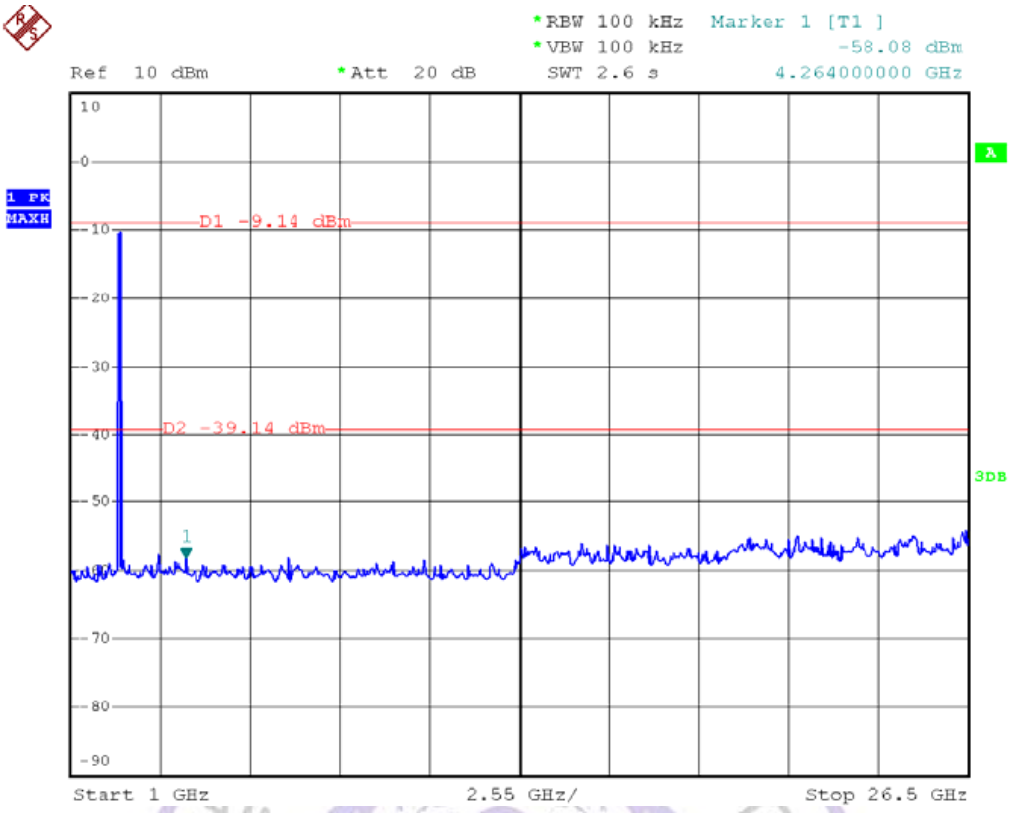

*RBW 100 kHz
Marker 1 [T1]
*VBW 100 kHz
-53.88 dBm
Ref 10 dBm
*Att 20 dB
SWT 100 ms
726.460000000 MHz
D1 -4.89 dBm
D2 -34.89 dBm
1 PK MAXH
A
3DB
Start 30 MHz
97 MHz/
Stop 1 GHz



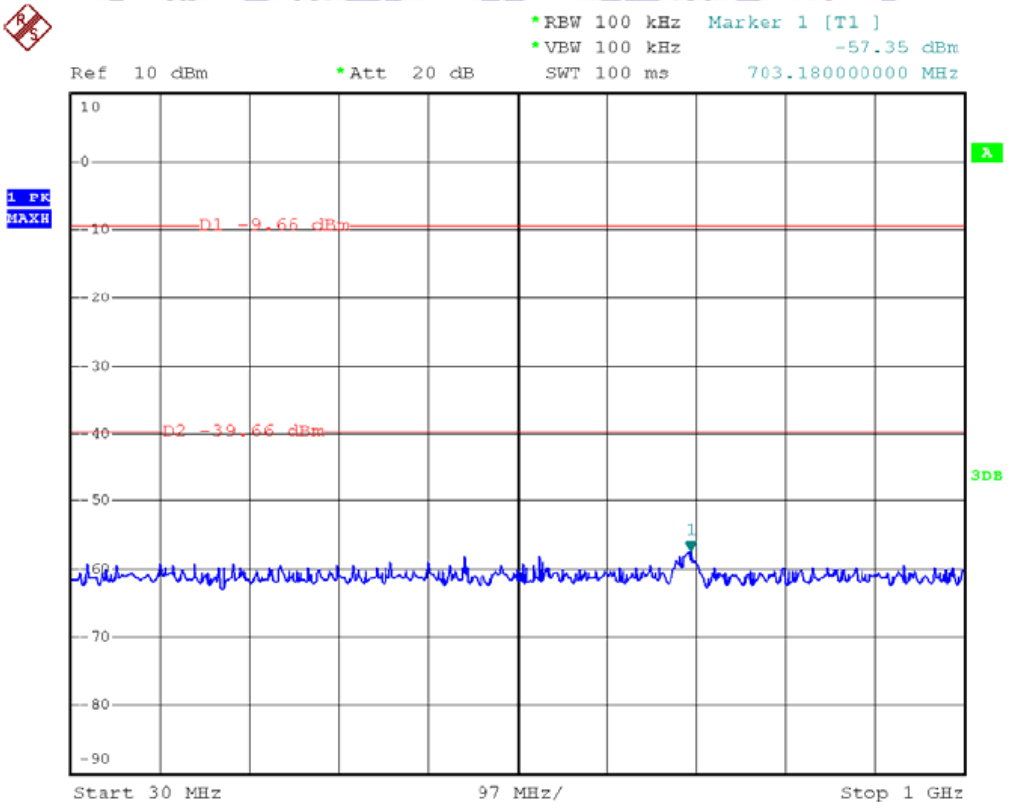
For 802.11n (40MHz) Mode:

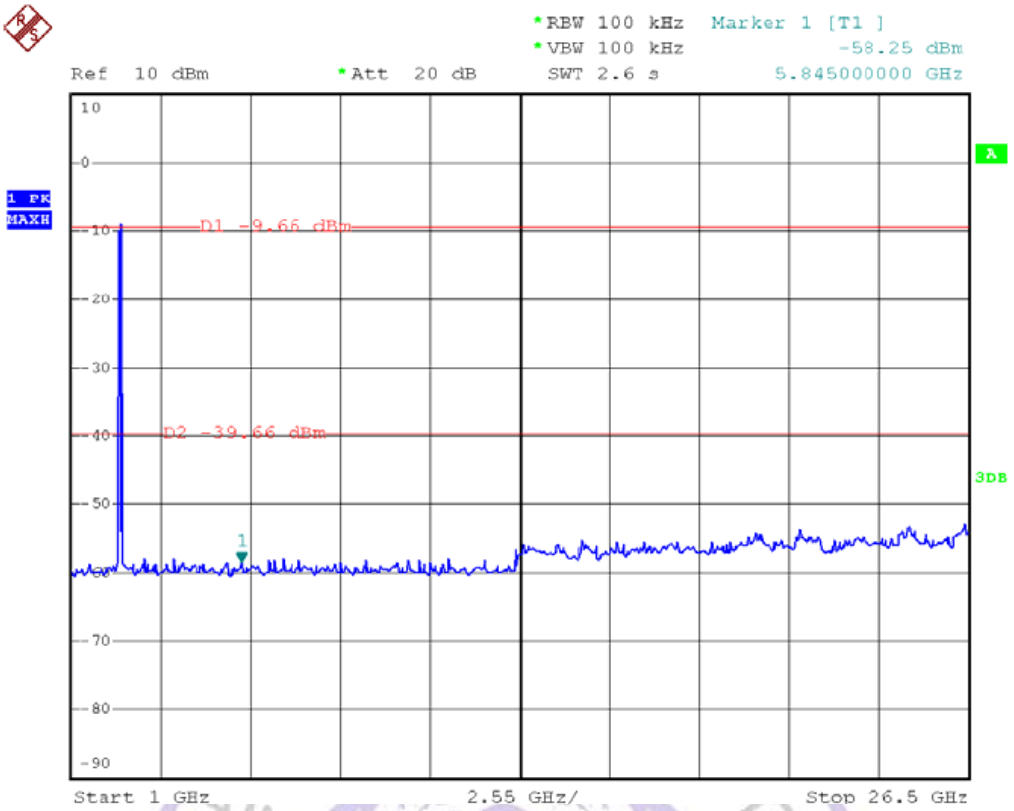
CH3



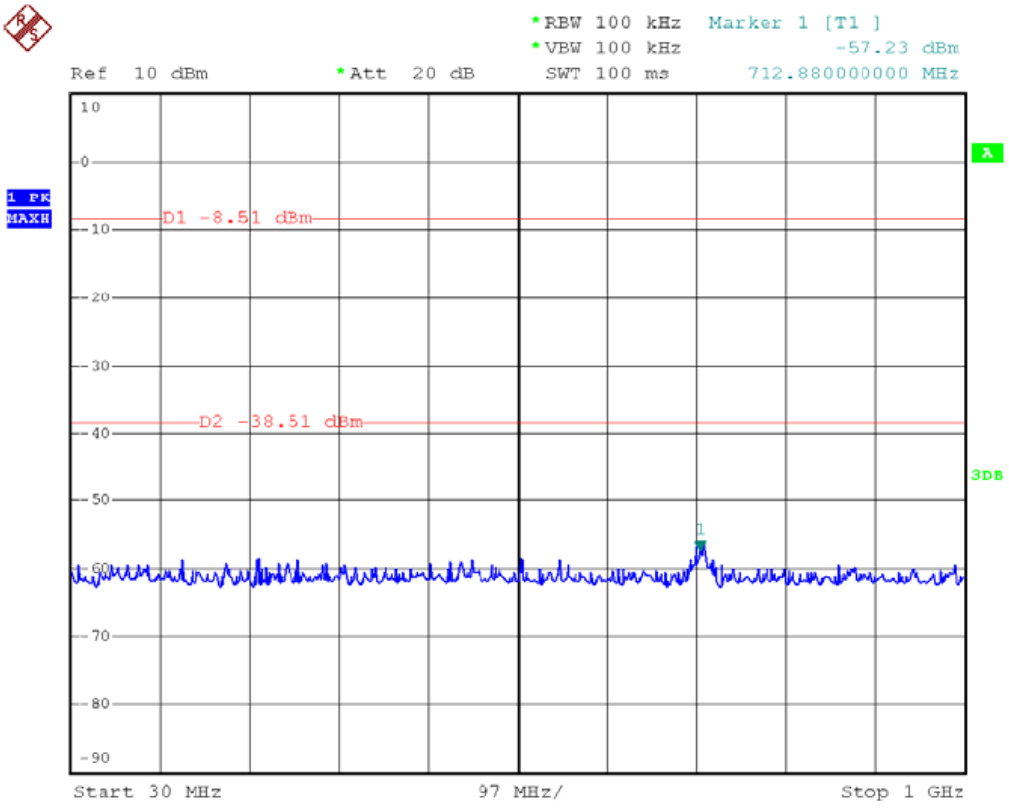

*RBW 100 kHz
Marker 1 [T1]
*VBW 100 kHz
-58.08 dBm
Ref 10 dBm
*Att 20 dB
SWT 2.6 s
4.264000000 GHz
1 PK
MAXH
D1 -9.14 dBm
D2 -39.14 dBm
A
3DB
Start 1 GHz
2.55 GHz/
Stop 26.5 GHz

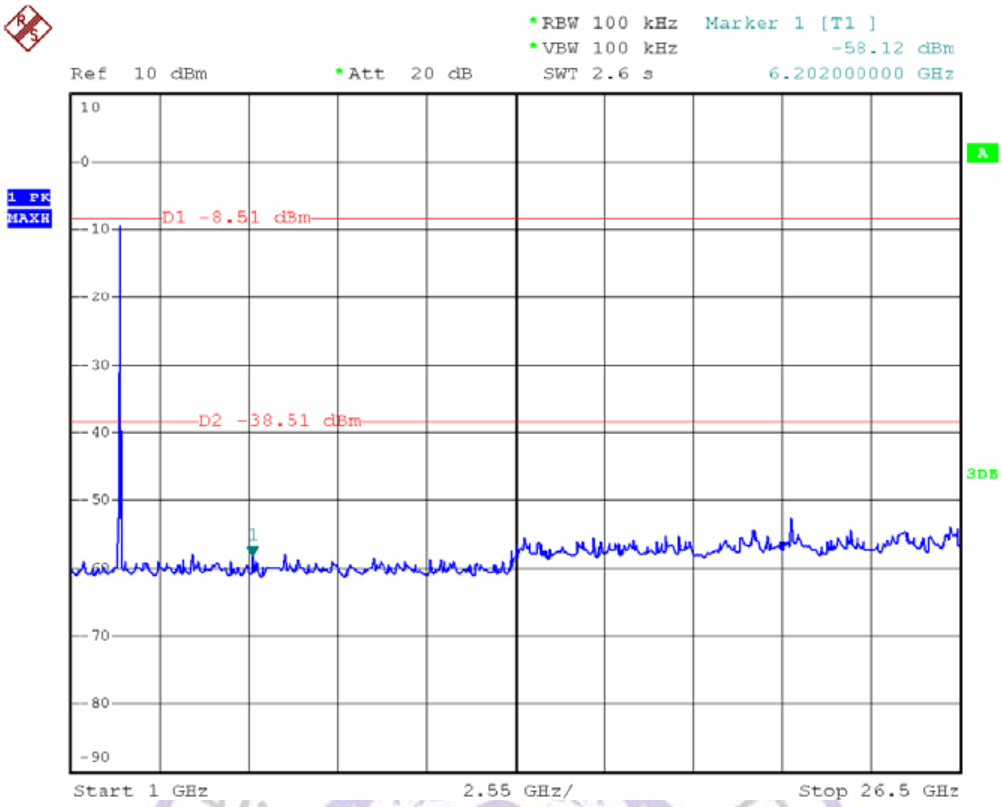
CH6


*RBW 100 kHz
Marker 1 [T1]
*VBW 100 kHz
-57.35 dBm
Ref 10 dBm
*Att 20 dB
SWT 100 ms
703.180000000 MHz
1 PK
MAXH
D1 -9.66 dBm
D2 -39.66 dBm
A
3DB
Start 30 MHz
97 MHz/
Stop 1 GHz


*RBW 100 kHz
Marker 1 [T1]
*VBW 100 kHz
-58.25 dBm
Ref 10 dBm
*Att 20 dB
SWT 2.6 s
5.845000000 GHz
1 PK MAXH
D1 -9.66 dBm
D2 -39.66 dBm
A
3DB
Start 1 GHz
2.55 GHz/
Stop 26.5 GHz

CH9


*RBW 100 kHz
Marker 1 [T1]
*VBW 100 kHz
-57.23 dBm
Ref 10 dBm
*Att 20 dB
SWT 100 ms
712.880000000 MHz
1 PK MAXH
D1 -8.51 dBm
D2 -38.51 dBm
A
3DB
Start 30 MHz
97 MHz/
Stop 1 GHz



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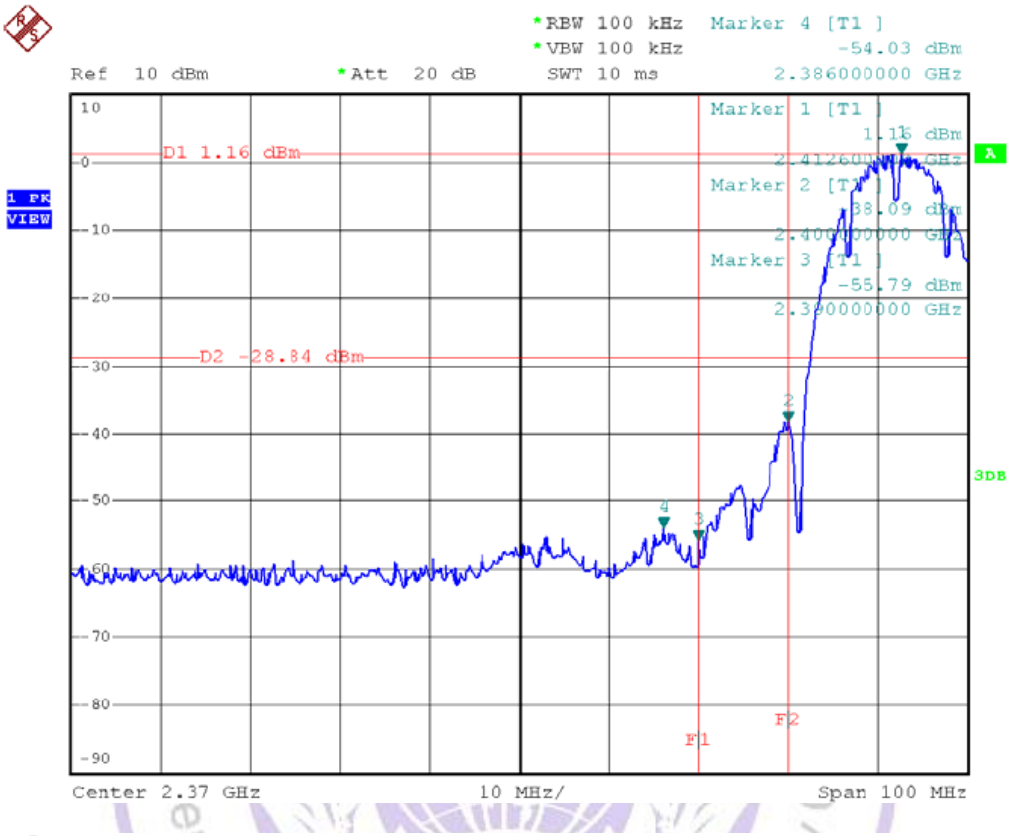
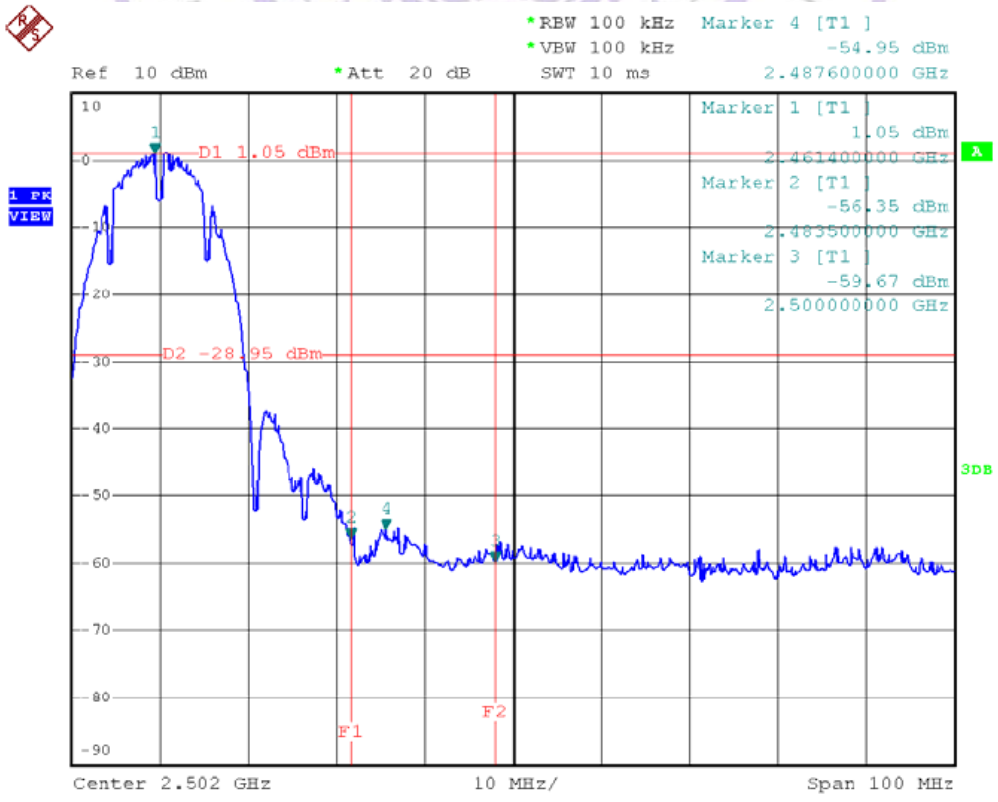
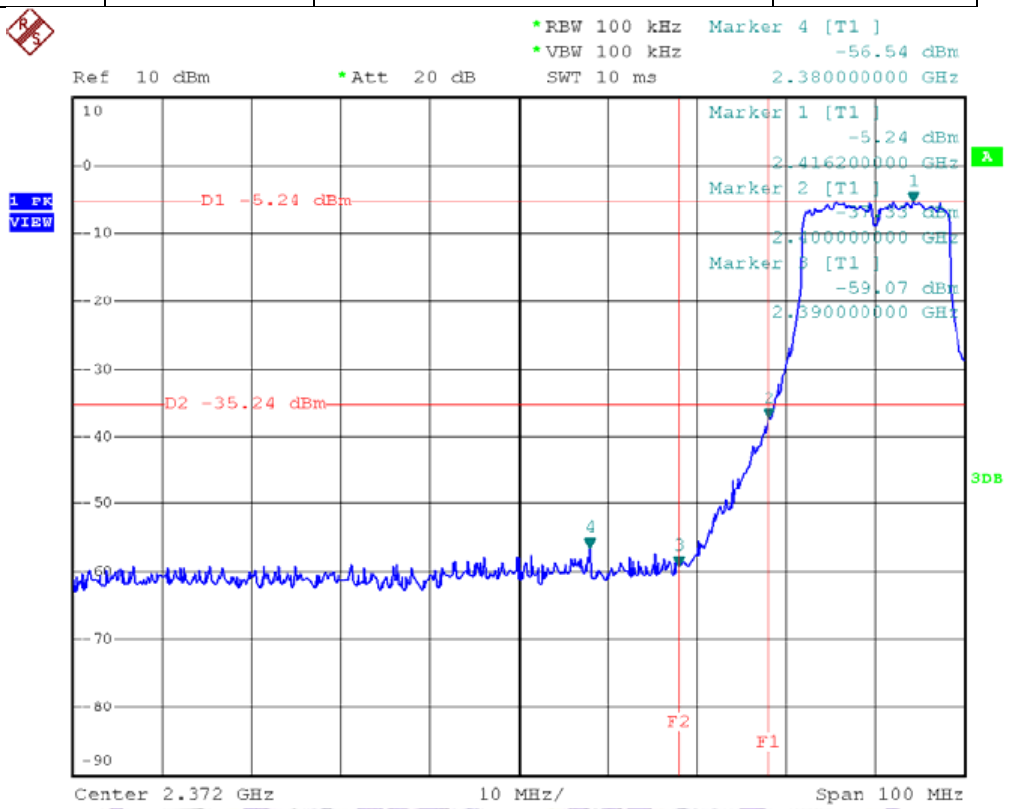
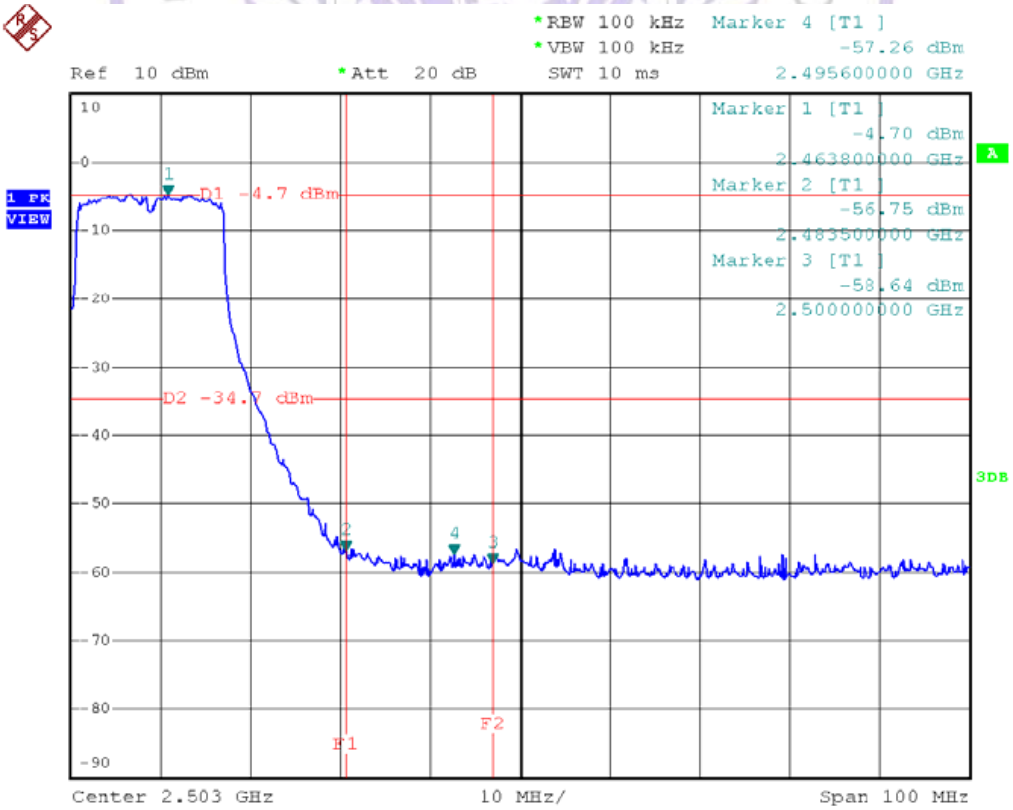
Test mode	Frequency	Delta peak to band emission	Limit(dBc)
802.11b	2400MHz	38.09	20
	2483.5MHz	56.35	20



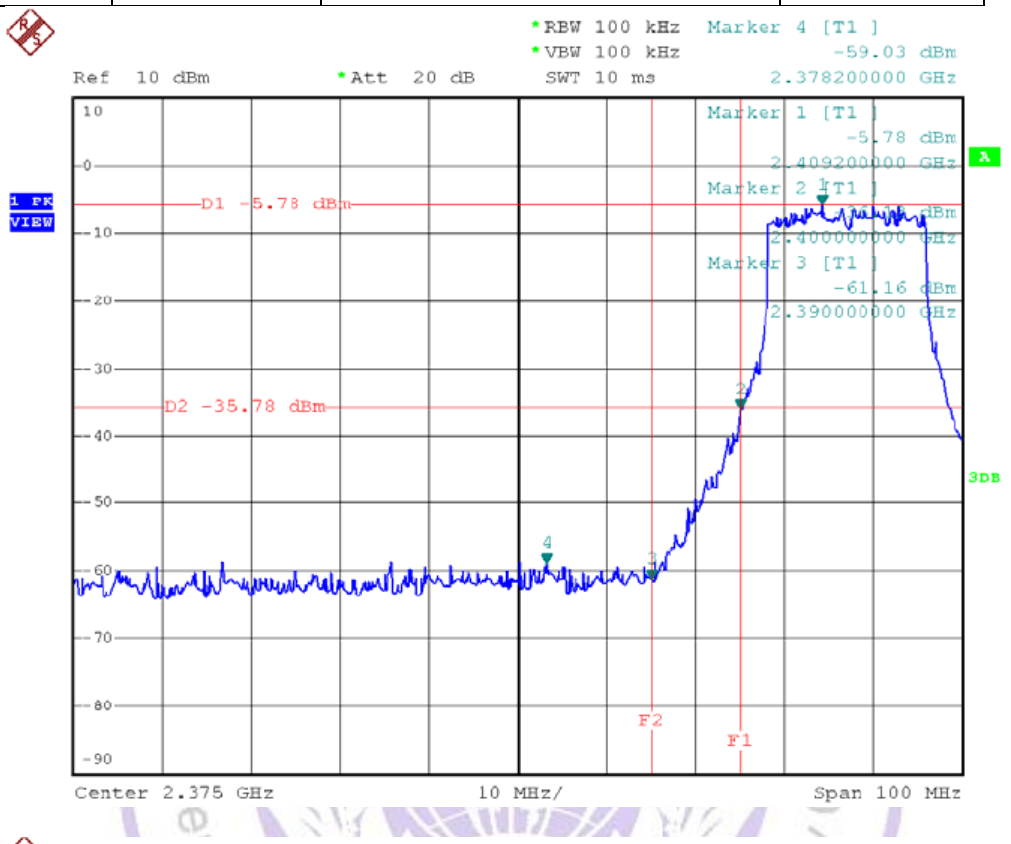


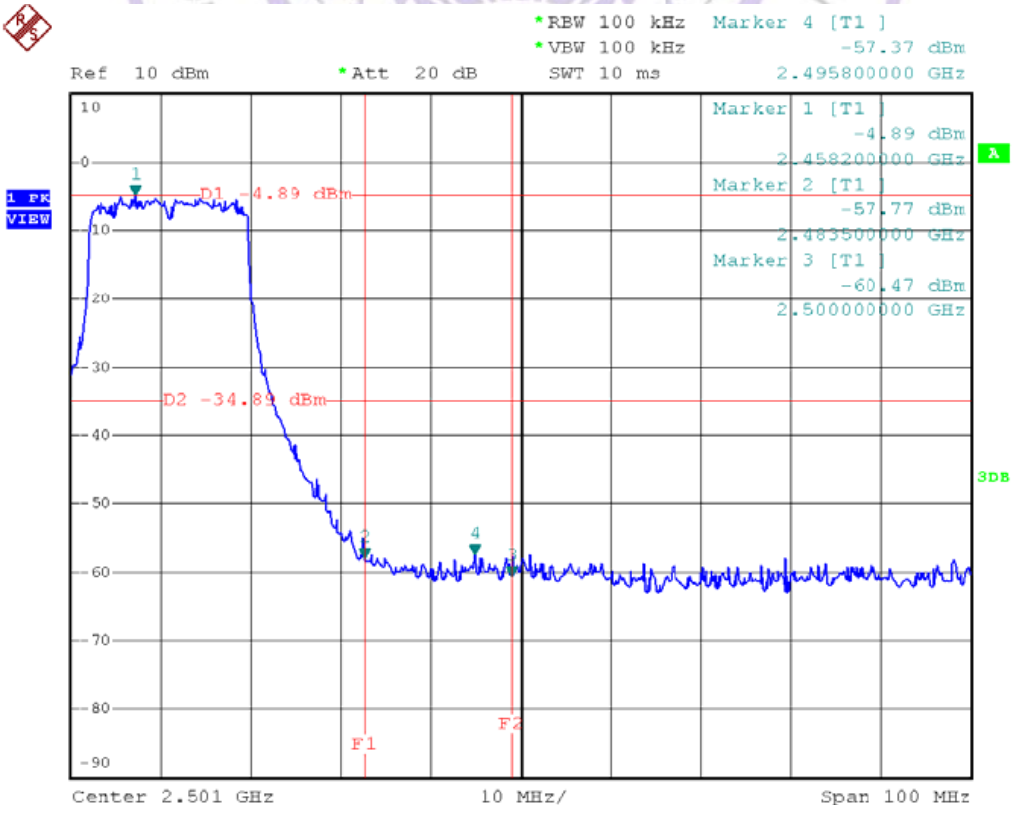
Test mode	Frequency	Delta peak to band emission	Limit(dBc)
802.11g	2400MHz	37.33	20
	2483.5MHz	56.75	20



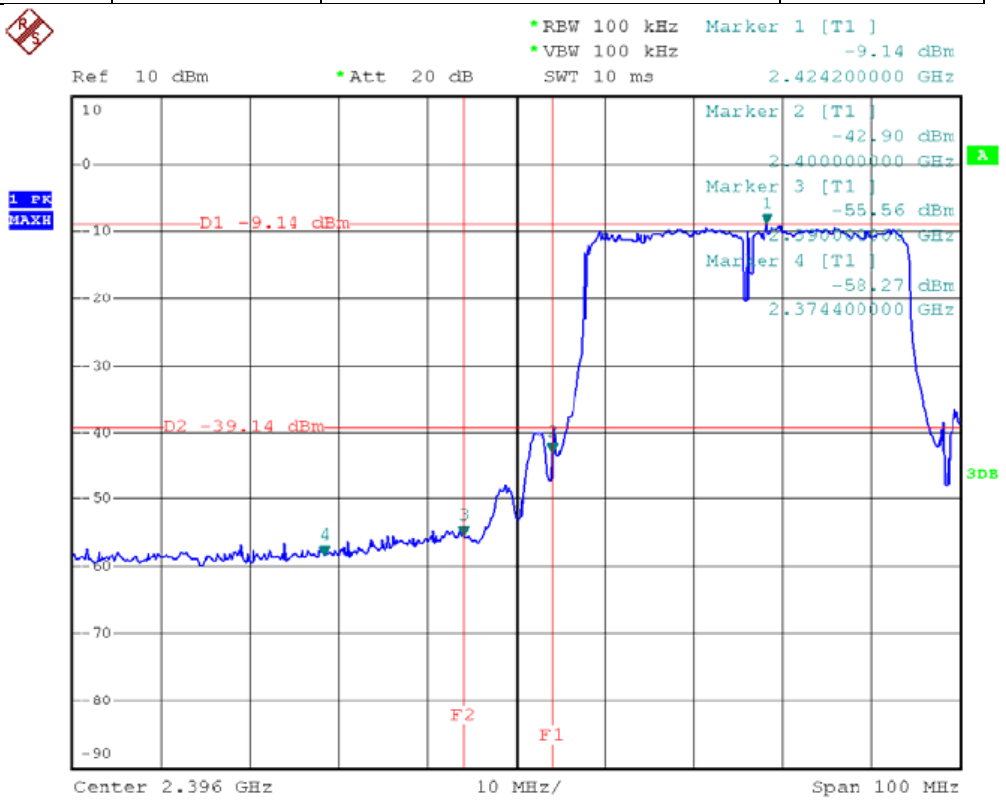


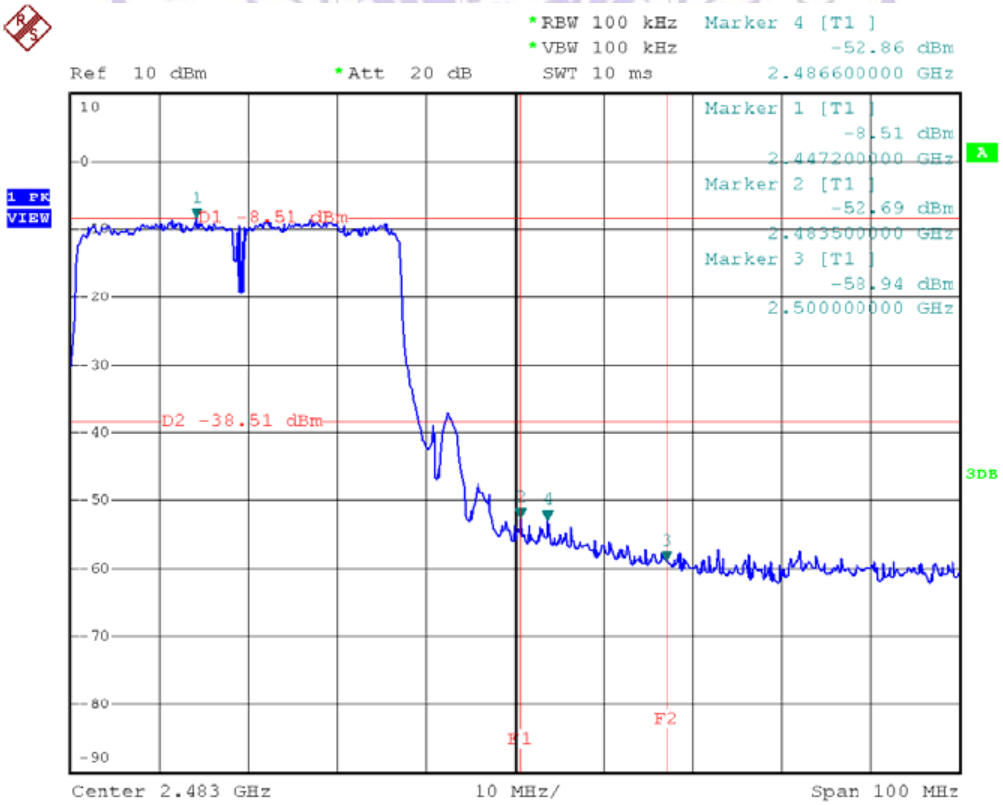
Test mode	Frequency	Delta peak to band emission	Limit(dBc)
802.11N HT20M	2400MHz	36.18	20
	2483.5MHz	57.77	20





Test mode	Frequency	Delta peak to band emission	Limit(dBc)
802.11N HT40M	2400MHz	42.90	20
	2483.5MHz	52.69	20





4.8. Antenna Requirement

STANDARD APPLICABLE

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.247 (c), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

Refer to statement below for compliance.

The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

ANTENNA CONNECTED CONSTRUCTION

The directional gains of antenna used for transmitting is 2.0 dBi, and the antenna is designed with a N-SMA connector and no consideration of replacement. Please see EUT photo for details.

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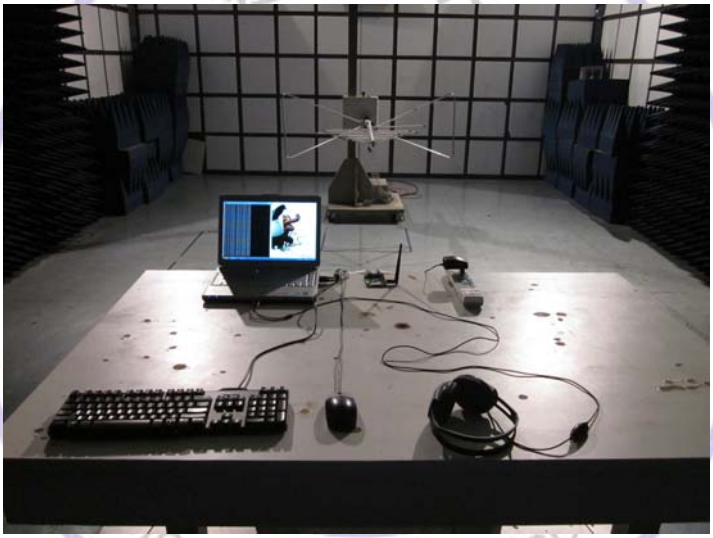
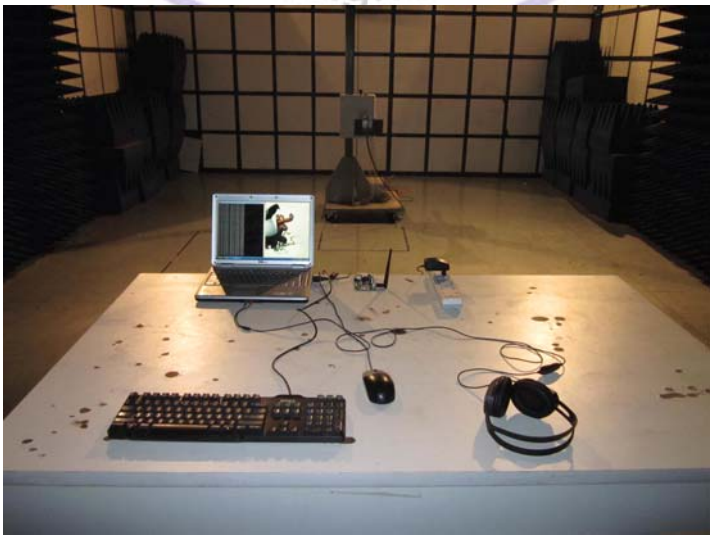
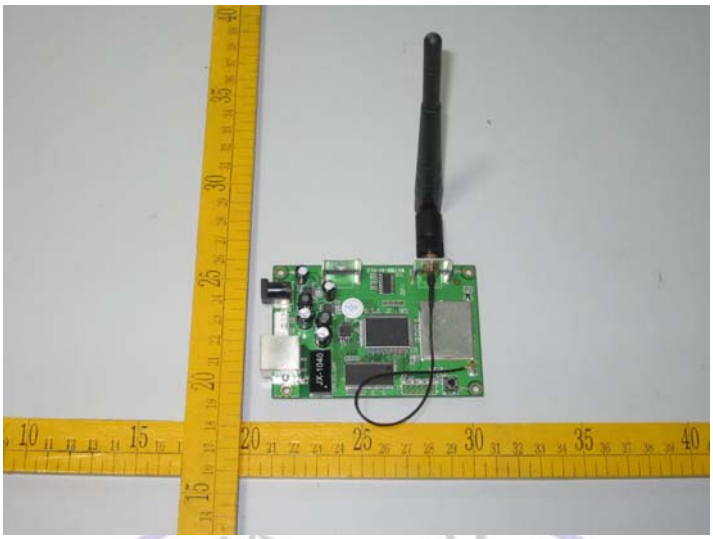
5. Test Setup Photos of the EUT





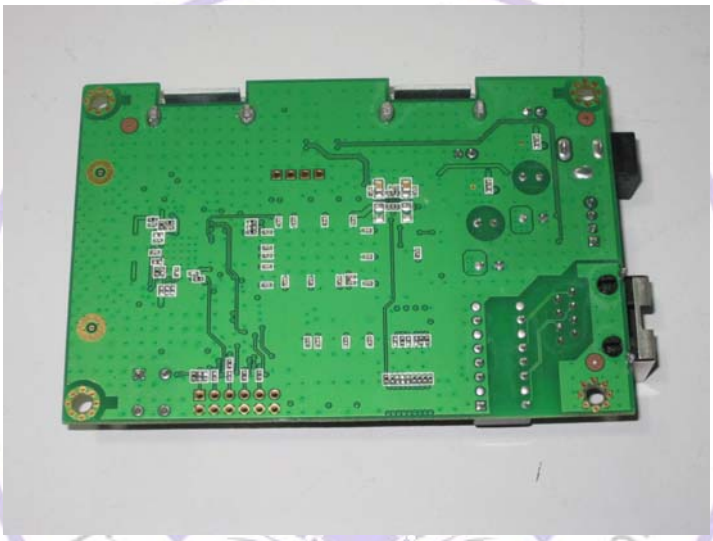
6. External and Internal Photos of the EUT

External Photos



N-SMA connector

Internal Photos



.....End of Report.....