FCC TEST REPORT
for
Cheng Fong International Limited

Tablet PC
Model No.:TB782B

Prepared for	:	Cheng Fong International Limited
Address	:	Rm 19HG, HangDu Building, HuaFu Road, Fu Tian District Tel: 0755-61627636 Fax: 0755-61627608
Prepared By	:	Anbotek Compliance Laboratory Limited
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Report Number	:	201206798F
Date of Test	:	Jul. 14~31, 2012
Date of Report	:	Jul. 31, 2012

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Test Report

TEST REPORT

Applicant	:	Cheng Fong International Limited
Manufacturer	:	Cheng Fong International Limited
EUT	:	Tablet PC
Model No.	:	TB782B
Serial No.	:	N/A
Rating	:	DC 5V
Trade Mark	:	N/A

Measurement Procedure Used:
FCC Part15 Subpart C, Paragraph 15.247: 2010

The device described above is tested by Anbotek Compliance Laboratory Limited to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and Anbotek Compliance Laboratory Limited is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) is technically compliant with the FCC Part 15 Subpart C requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of Anbotek Compliance Laboratory Limited

Date of Test : Jul. 14~31, 2012

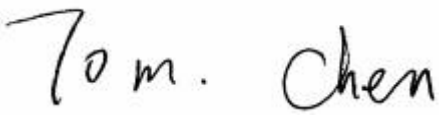
Prepared by :

(Engineer / Andy Chen)

Reviewer :

(Project Manager / Jerry Du)

Approved & Authorized Signer :



(Manager /Tom Chen)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT	:	Tablet PC
Model Number	:	TB782B
Test Power Supply	:	DC 5V
RF Transmission Frequency	:	2412MHz~2462MHz（802.11b/802.11g/802.11n（HT20）） 2422MHz~2452MHz（802.11n（HT40））
Channels	:	11 For （802.11b/802.11g/802.11n（HT20）） 7 For （802.11n（HT40））
Antenna Type	:	Integral
Antenna Gain	:	0 dBi
Applicant	:	Cheng Fong International Limited
Address	:	Rm 19HG, HangDu Building, HuaFu Road, Fu Tian District
Manufacturer	:	Cheng Fong International Limited
Address	:	Rm 19HG, HangDu Building, HuaFu Road, Fu Tian District
Date of receiver	:	Jul. 14, 2012
Date of Test	:	Jul. 14~31, 2012

1.2. Auxiliary Equipment Used during Test

PC	:	Manufacturer: DELL M/N: OPTIPLEX 380 S/N: 1J63X2X CE , FCC: DOC
MONITOR	:	Manufacturer: DELL M/N: E170Sc S/N: CN-00V539-64180-055-0UPS CE , FCC: DOC
KEYBOARD	:	Manufacturer: DELL M/N: SK-8115 S/N: CN-0DJ313-71616-06C-02XN CE , FCC: DOC Cable: 1m, unshielded
MOUSE	:	Manufacturer: DELL M/N: M-UARDEL7 S/N: N/A CE , FCC: DOC Cable: 1m, unshielded
Printer	:	Manufacturer:Brother M/N: MFC-3360C S/N: N/A CE, FCC:DOC
Power Line	:	Non-Shielded, 1.5m
VGA Cable	:	Non-Shielded, 1.5m
Network Cable	:	Non-Shielded, 1.5m

1.3. Description of Test Facility

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

CNAS - LAB Code: L3503
Anbotek Compliance Laboratory Limited., Laboratory has been assessed and in compliance with CNAS/CL01: 2006 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:2005 General Requirements) for the Competence of Testing Laboratories.

FCC-Registration No.: 752021
Anbotek Compliance Laboratory Limited, EMC Laboratory has been registed 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 752021, August 20, 2010.

IC-Registration No.: 8058A-1
Anbotek Compliance Laboratory Limited., EMC Laboratory has been registered and fully described in a report filed with the (IC) Industry Canada. The acceptance letter from the IC is maintained in our files. Registration 8058A, August 30, 2010.

Test Location
All Emissions tests were performed at
Anbotek Compliance Laboratory Limited. at 1/F, 1 /Building, SEC Industrial Park, No.4 Qianhai Road, Nanshan District, Shenzhen, 518054, China

1.4. Measurement Uncertainty

Radiation Uncertainty	:	Ur = 4.3dB
Conduction Uncertainty	:	Uc = 3.4dB

3. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4: 2009 and FCC Part 15, Paragraph 15.247

3.1. Summary of Test Results

The EUT has been tested according to the following specifications:

Standard	Test Type	Result	Notes
FCC Part 15, Paragraph 15.107, 15.207	Conducted Emission Test	PASS	Complies
FCC Part 15, Paragraph 15.247(b)(1)	Peak Output Power	PASS	Complies
FCC Part 15, Paragraph 15.247(a)(2)	6dB Bandwidth	PASS	Complies
FCC Part 15, Paragraph 15.247(c)	100kHz Bandwidth of Frequency Band Edges	PASS	Complies
FCC Part 15, Paragraph 15.209(a)(f)	Spurious Emission	PASS	Complies
FCC Part 15, Paragraph 15.247(a)(1)	Frequency Separation	-	N/A
FCC Part 15, Paragraph 15.247(a)(1)(iii)	Number of Hopping Frequency	-	N/A
FCC Part 15, Paragraph 15.247(a)(1)(iii)	Time of Occupancy	-	N/A
FCC Part 15, Paragraph 15.247(c)	Peak Power Density	PASS	Complies

* The digital circuit porting of the EUT has been tested and verified to comply with FCC Part 15, Subpart B., Class B Digital Devices and the associated Radio Receiver has also been tested and found to comply with FCC Part 15, Subpart B – Radio Receivers.

3.2. Description of Test Modes

The EUT has been tested under operating condition.
Software used to control the EUT for staying in continuous transmitting and receiving mode isprogrammed.
IEEE802.11b: Channel 1(2412MHz), Channel 6(2437MHz) and Channel 11(2462MHz) with 11Mbps data rate (worst case) are chosen for the final testing.
IEEE802.11g: Channel 1(2412MHz), Channel 6(2437MHz) and Channel 11(2462MHz) with 54Mbps data rate (the worst case) are chosen for the final testing.
IEEE802.11n（HT20: Channel 1(2412MHz), Channel 6(2437MHz) and Channel 11(2462MHz) with 7Mbps data rate (the worst case) are chosen for the final testing.
IEEE802.11n（HT40: Channel 3(2422MHz), Channel 6(2437MHz) and Channel 9(2452MHz) with 7Mbps data rate (the worst case) are chosen for the final testing.

3.3. List of channels:

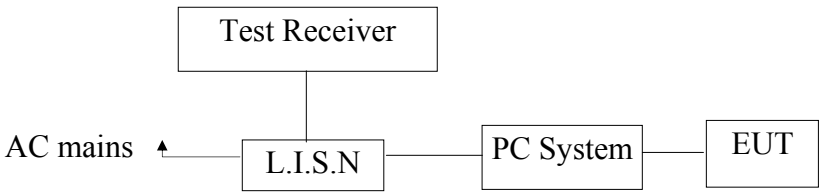
√ - available
X - tested

Number	Frequency(MHz)		802.11 b/g/n （HT20）	802.11 b/g/n （HT40）
1	2412	√	X	
2	2417	√		
3	2422	√		X
4	2427	√		
5	2432	√		
6	2437	√	X	X
7	2442	√		
8	2447	√		
9	2452	√		X
10	2457	√		
11	2462	√	X	

4. Conducted Emission Test

4.1. Block Diagram of Test Setup

4.1.1. Block diagram of connection between the EUT and simulators



(EUT: Tablet PC)

4.2. Power Line Conducted Emission Measurement Limits (15.207)

Frequency MHz	Limits dB(μV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66 ~ 56*	56 ~ 46*
0.50 ~ 5.00	56	46
5.00 ~ 30.00	60	50

Notes: 1. *Decreasing linearly with logarithm of frequency.
2. The lower limit shall apply at the transition frequencies.

4.3. Configuration of EUT on Measurement

The following equipments are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application.

EUT : Tablet PC
Model Number : D707
Applicant : Cheng Fong International Limited

4.4. Operating Condition of EUT

4.4.1. Setup the EUT and simulator as shown as Section 4.1.

4.4.2. Turn on the power of all equipment.

4.4.3. Let the EUT work in test mode (ON) and measure it.

4.5. Test Procedure

The EUT system is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to FCC ANSI C63.4-2003 on Conducted Emission Measurement.

The bandwidth of test receiver (ESCI) set at 9KHz.

The frequency range from 150KHz to 30MHz is checked.

The test results are reported on Section 4.6.

4.6.Test equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMI Receiver	Rohde & Schwarz	ESCI	100627	Nov. 12, 2012	1 Year
2.	LISN	SchwarzBeck	NSLK 8126	8126377	May 19, 2012	1 Year
3.	RF Switching Unit	Compliance Direction	RSU-M2	38303	May 19, 2012	1 Year
4.	EMI Test Software ES-K1	Rohde & Schwarz	N/A	N/A	N/A	N/A

Conduction Uncertainty **:** Uc = 3.4dB

4.7. Power Line Conducted Emission Measurement Results

PASS.

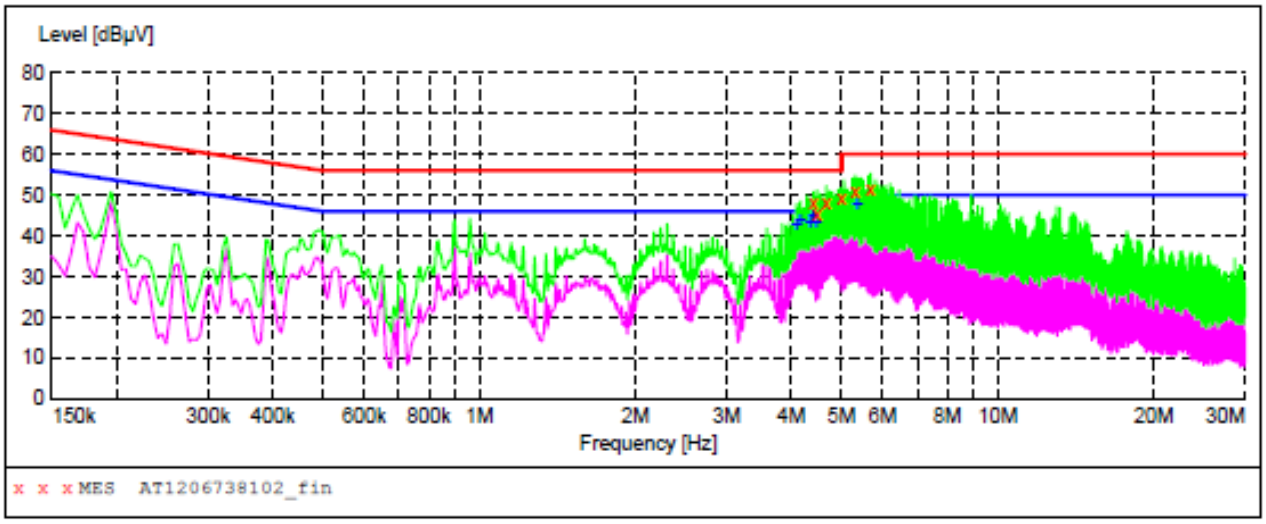
The frequency range from 150KHz to 30 MHz is investigated.

Please refer the following pages.

CONDUCTED EMISSION TEST DATA

EUT:	Tablet PC M/N:TB782B
Operating Condition:	On
Test Site:	1# Shielded Room
Operator:	Andy Chen
Test Specification:	AC 120V/60Hz for USB
Comment:	Live Line
	Tem:25℃ Hum:50%

SCAN TABLE: "Voltage(150K~30M)FIN"
Short Description: 150K-30M Disturbance Voltages



MEASUREMENT RESULT: "AT1206738102_fin"

7/14/2012 3:27PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
4.415500	48.00	10.5	56	8.0	QP	L1	GND
4.483000	45.20	10.5	56	10.8	QP	L1	GND
4.672000	48.00	10.5	56	8.0	QP	L1	GND
4.991500	49.10	10.5	56	6.9	QP	L1	GND
5.311000	51.10	10.5	60	8.9	QP	L1	GND
5.693500	51.30	10.5	60	8.7	QP	L1	GND

MEASUREMENT RESULT: "AT1206738102_fin2"

7/14/2012 3:27PM

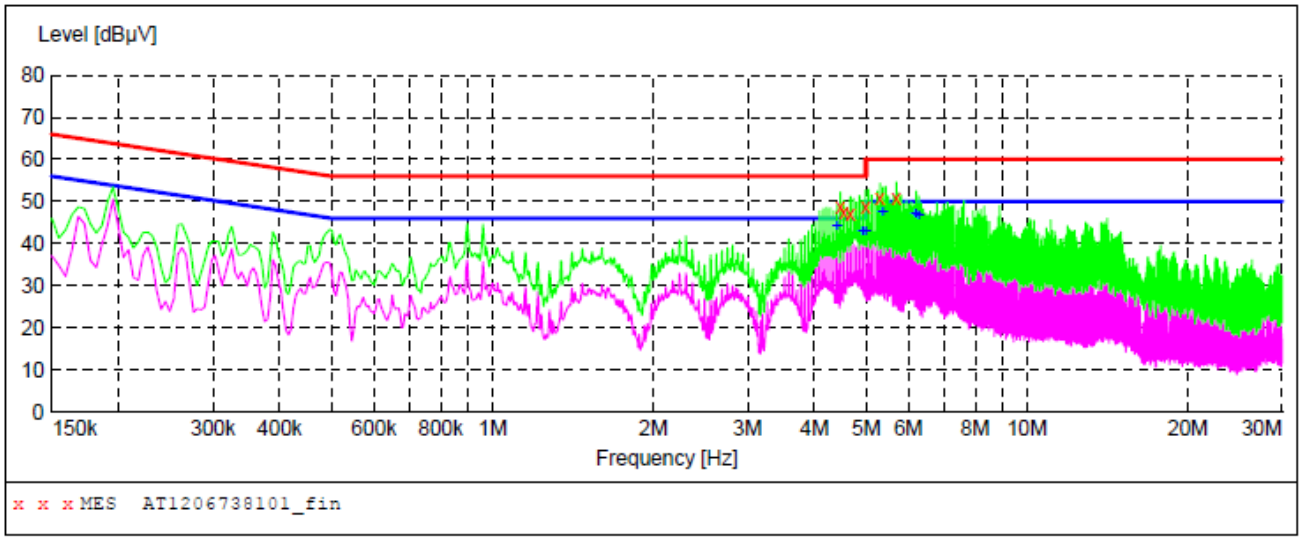
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
4.096000	43.30	10.5	46	2.7	AV	L1	GND
4.159000	44.40	10.5	46	1.6	AV	L1	GND
4.352500	43.80	10.5	46	2.2	AV	L1	GND
4.415500	45.50	10.5	46	0.5	AV	L1	GND
4.478500	43.80	10.5	46	2.2	AV	L1	GND
5.374000	48.00	10.5	50	2.0	AV	L1	GND

CONDUCTED EMISSION TEST DATA

EUT:	Tablet PC M/N:TB782B
Operating Condition:	On
Test Site:	1# Shielded Room
Operator:	Andy Chen
Test Specification:	AC 120V/60Hz for USB
Comment:	Neutral Line
	Tem:25℃ Hum:50%

SCAN TABLE: "Voltage(150K~30M)FIN"

Short Description: 150K-30M Disturbance Voltages



MEASUREMENT RESULT: "AT1206738101_fin"

7/14/2012 3:24PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
4.478500	48.90	10.5	56	7.1	QP	N	GND
4.541500	47.40	10.5	56	8.6	QP	N	GND
4.672000	46.90	10.5	56	9.1	QP	N	GND
4.991500	48.80	10.5	56	7.2	QP	N	GND
5.311000	50.90	10.5	60	9.1	QP	N	GND
5.693500	50.70	10.5	60	9.3	QP	N	GND

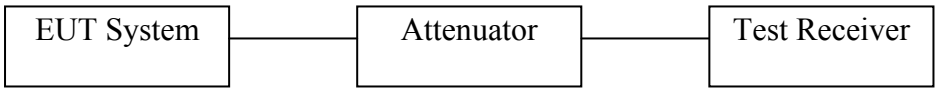
MEASUREMENT RESULT: "AT1206738101_fin2"

7/14/2012 3:24PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
4.415500	44.10	10.5	46	1.9	AV	N	GND
4.928500	42.70	10.5	46	3.3	AV	N	GND
4.991500	42.90	10.5	46	3.1	AV	N	GND
5.374000	47.60	10.5	50	2.4	AV	N	GND
6.206500	46.90	10.5	50	3.1	AV	N	GND
6.269500	46.70	10.5	50	3.3	AV	N	GND

5. FCC Part 15.247 Requirements for DSSS & OFDM Modulation

5.1 Test Setup



5.2 6dB Bandwidth

a. Limt

For the direct sequence systems, the minimum 6dB bandwidth shall be at least 500kHz.

b. Test Procedure

1. Place the EUT on the table and set it in the transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzer as RBW = 200kHz(802.11b/802.11g/802.11n(HT20)), RBW=400kHz, VBW = 3*RBW, Span = 50MHz, Sweep = auto.
4. Mark the peak frequency and –6dB (upper and lower) frequency.
5. Repeat until all the rest channels are investigated.

c. **Test Setup** See 5.1

d. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analysis	Agilent	E4407B	US39390582	July 03, 2012	1 Year
2.	Preamplifier	Instruments corporation	EMC011830	980100	July 03, 2012	1 Year
3.	Double Ridged Horn Antenna	Instruments corporation	GTH-0118	351600	Apr. 07, 2012	1 Year
4.	EMI Test Software EZ-EMC	SHURPLE	N/A	N/A	N/A	N/A

e. Test Results

Pass

f. Test Data

Test mode: IEEE 802.11b

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Results
Low	2412	10.10		Pass
Mid	2437	10.00	>500	Pass
High	2462	10.00		Pass

Test mode: IEEE 802.11g

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Results
Low	2412	16.50		Pass
Mid	2437	17.80	>500	Pass
High	2462	16.60		Pass

Test mode: IEEE 802.11n（HT20）

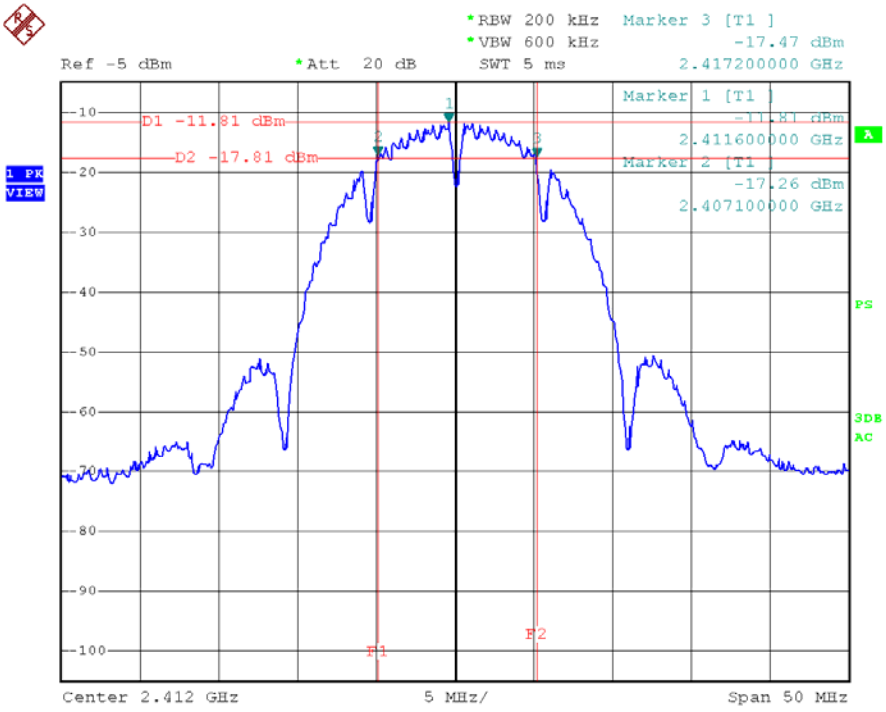
Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Results
Low	2412	16.60		Pass
Mid	2437	17.80	>500	Pass
High	2462	17.80		Pass

Test mode: IEEE 802.11n（HT40）

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Results
Low	2422	40.40		Pass
Mid	2437	46.40	>500	Pass
High	2452	42.40		Pass

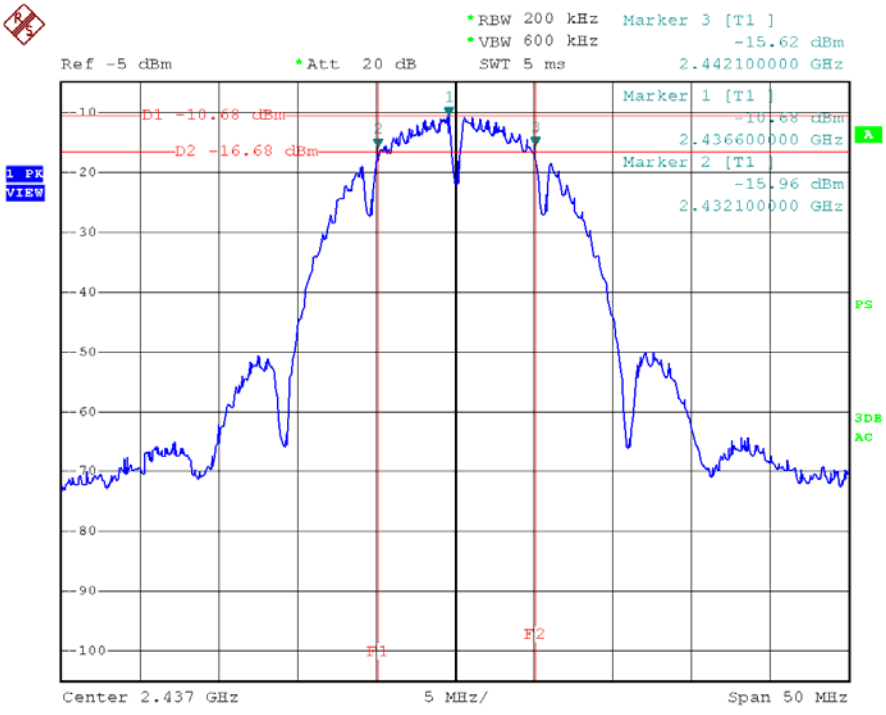
Test Plots See the following page.

Test Mode: 802.11b---Low



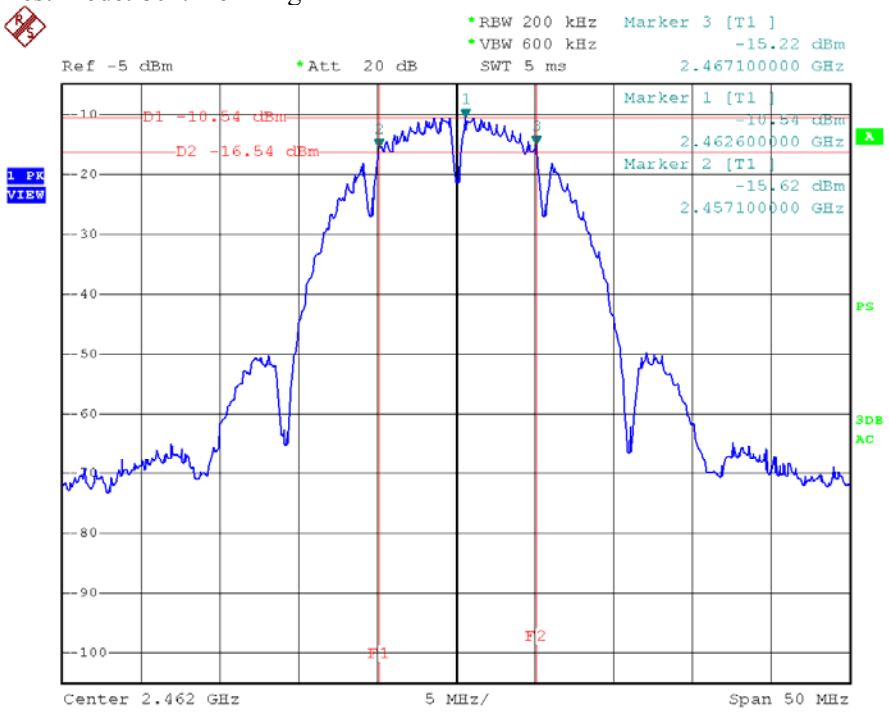
6dB-2412

Test Mode: 802.11b---Mid



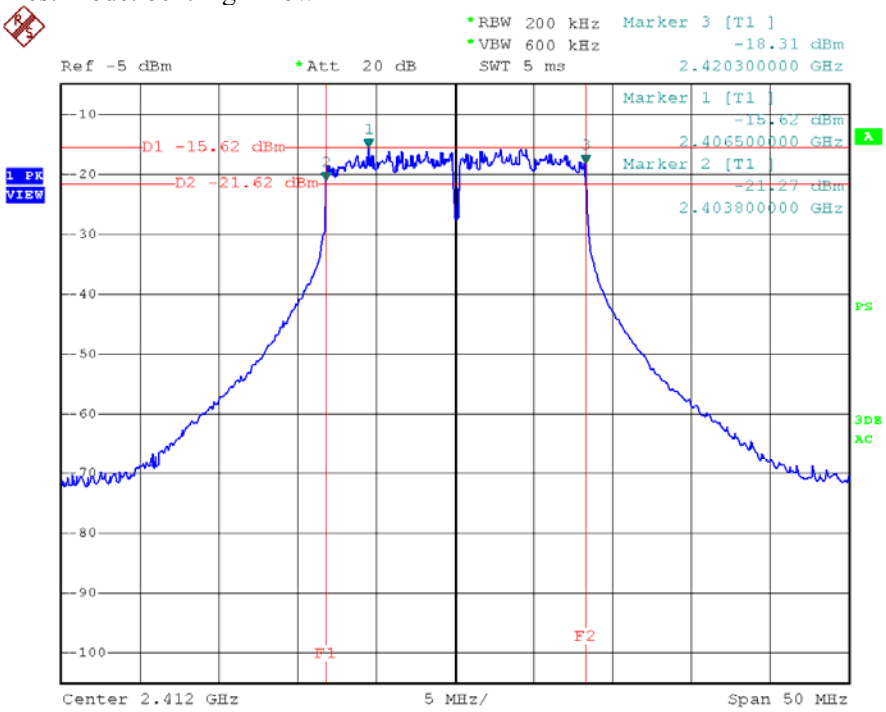
6dB-2437

Test Mode: 802.11b---High



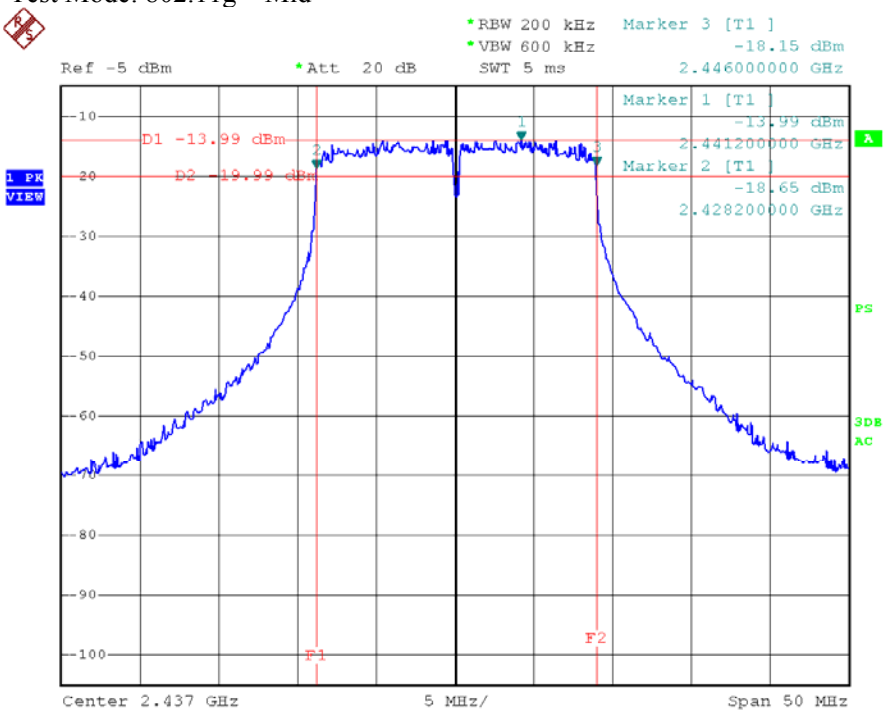
6dB-2462

Test Mode: 802.11g---Low



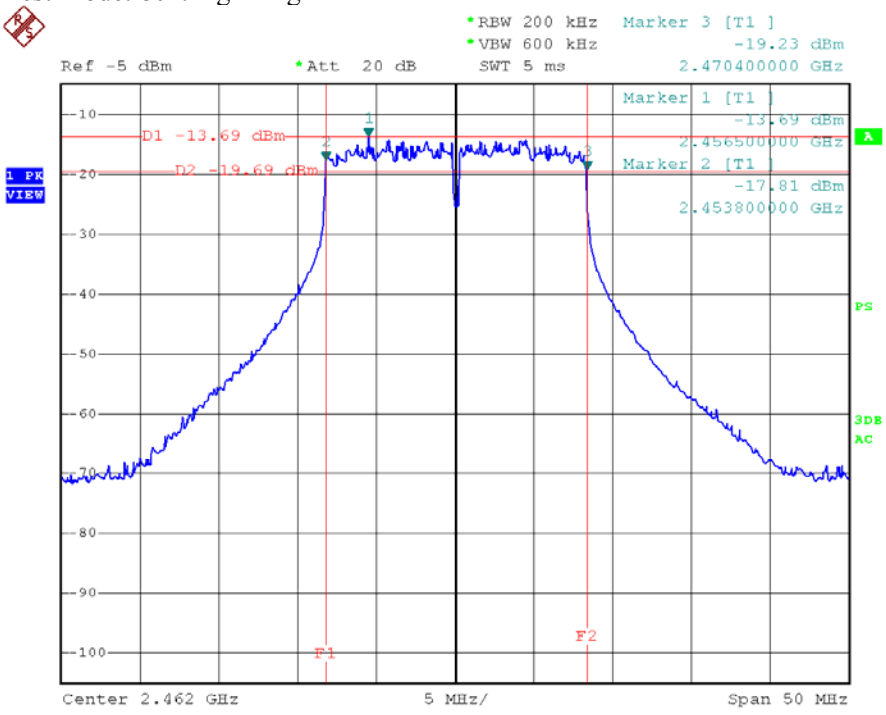
6dB-2412

Test Mode: 802.11g---Mid



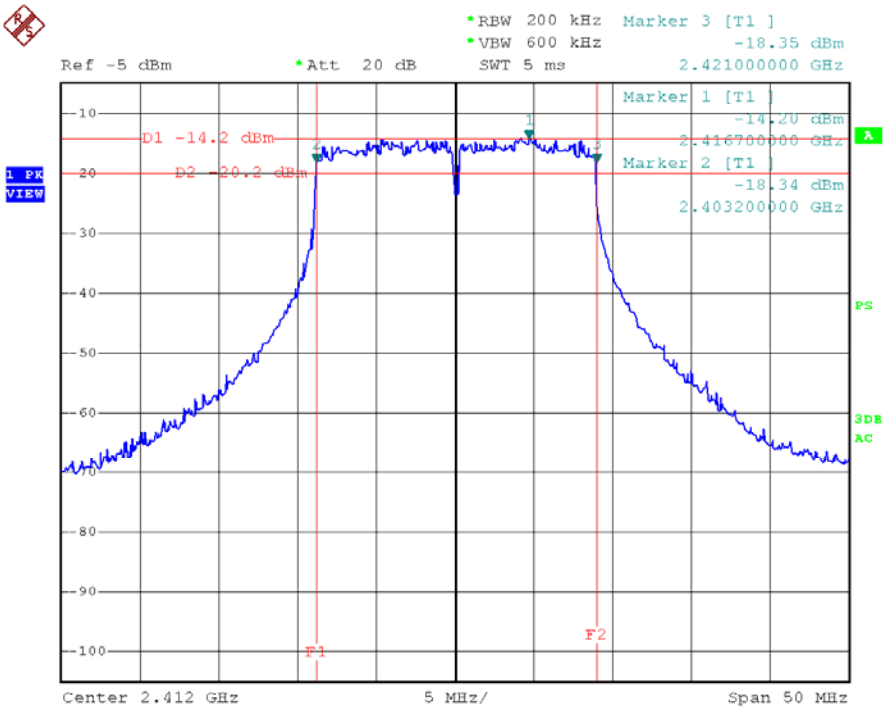
6dB-2437

Test Mode: 802.11g---High



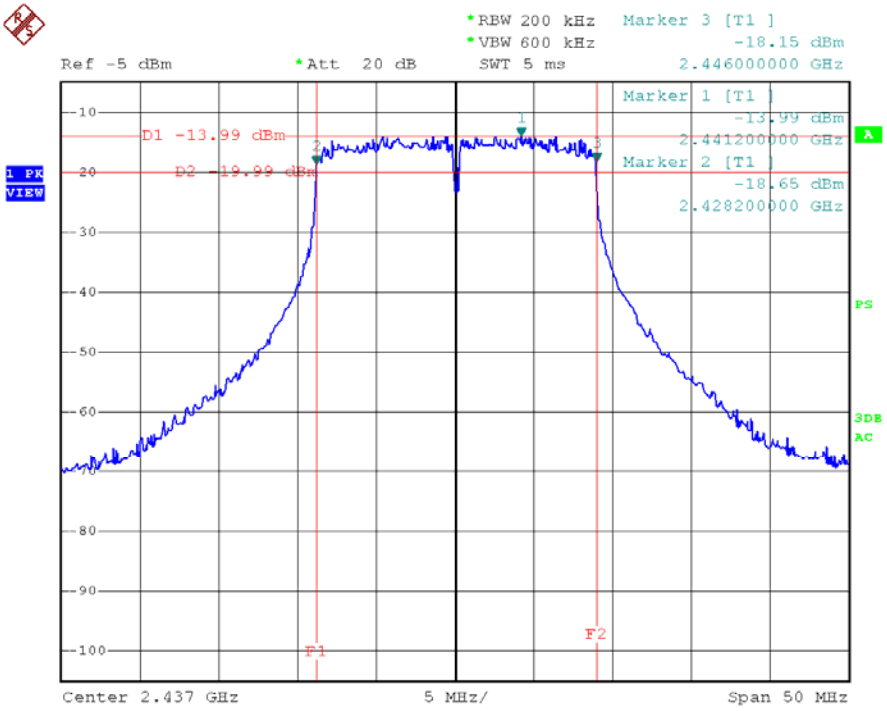
6dB-2462

Test Mode: 802.11n（HT20）---Low



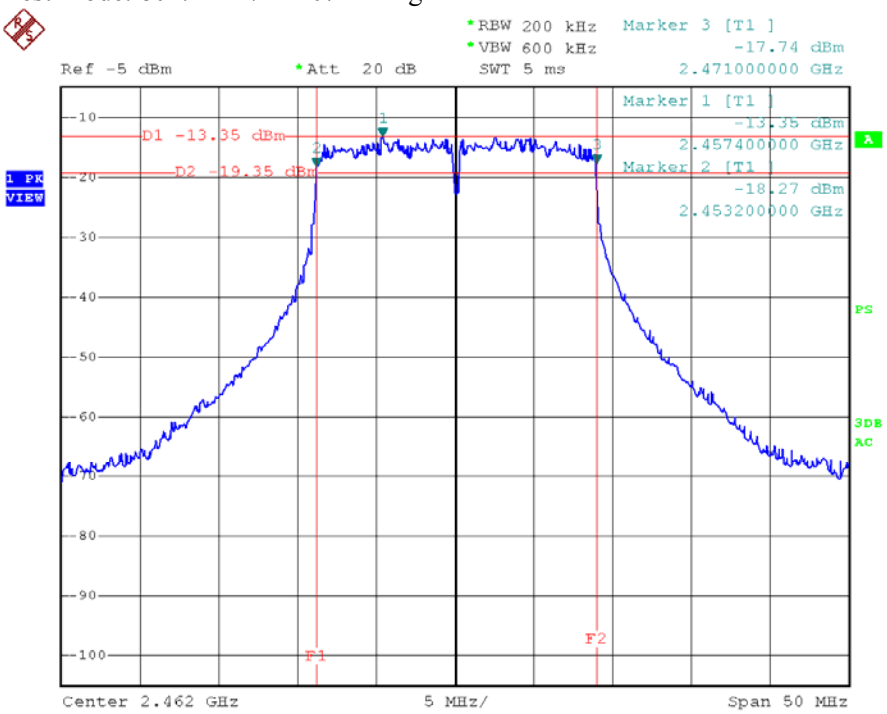
6dB-2412

Test Mode: 802.11n（HT20）---Mid



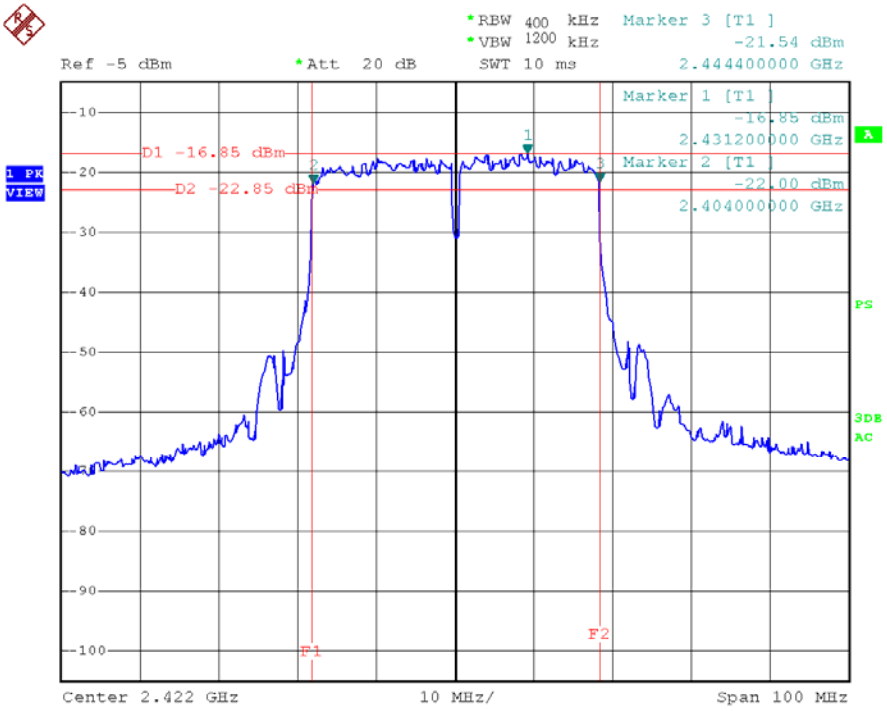
6dB-2437

Test Mode: 802.11n（HT20）---High



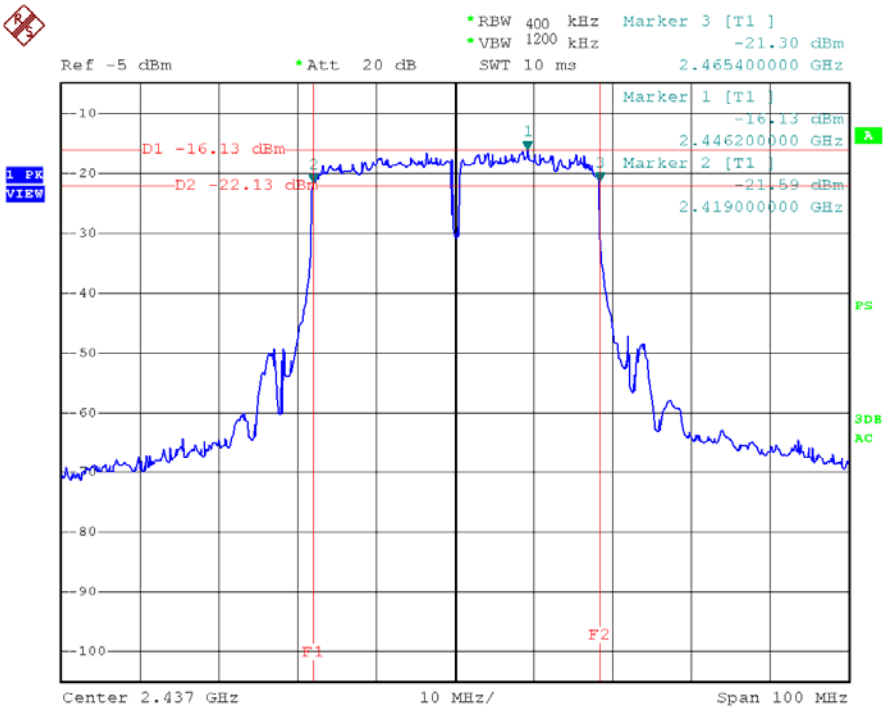
6dB-2462

Test Mode: 802.11n（HT40）---Low



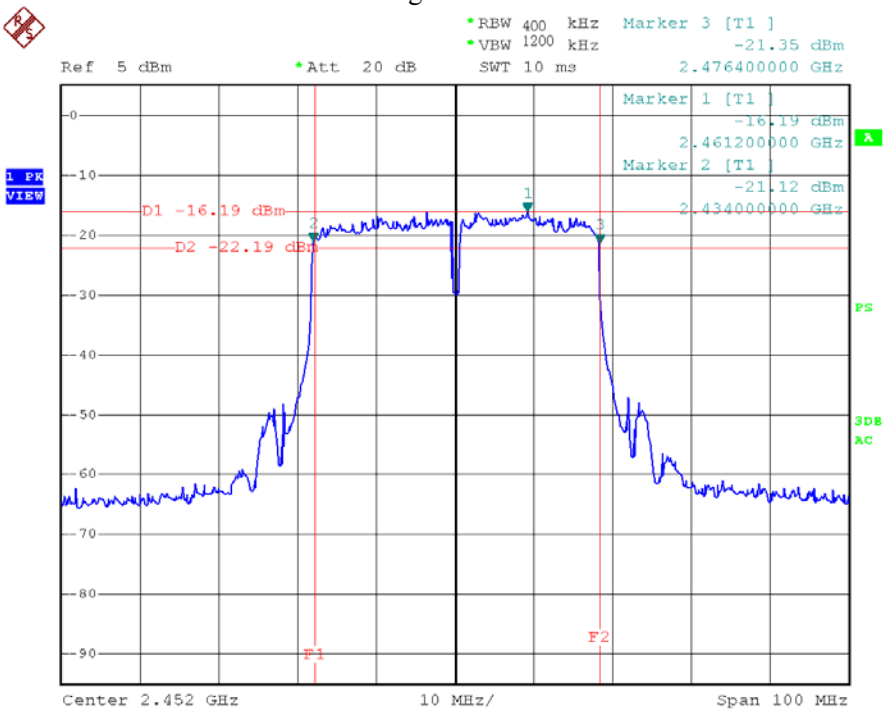
6dB-2422

Test Mode: 802.11n（HT40）---Mid



6dB-2437

Test Mode: 802.11n（HT40）---High



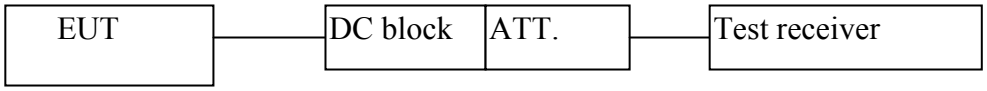
6dB-2452

5.3 Maximum Peak output power test

a. Limt

The maximum peak output power of the intentional radiator shall not exceed the following:
1. For systems using digital modulation in the bands of 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz: 1 watt (30dBm).
2. Except as shown in paragraphs (b)(3) (i), (ii) and (iii) of this section, if transmitting antenna of directional gain greater than 6 dBi are used the peak output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1) or (b)(2) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

b. Configuration of Measurement



c. Data Rates

IEEE802.11b: Channel 1(2412MHz), Channel 6(2437MHz) and Channel 11(2462MHz) with 11Mbps data rate (worst case) are chosen for the final testing.
IEEE802.11g: Channel 1(2412MHz), Channel 6(2437MHz) and Channel 11(2462MHz) with 54Mbps data rate (the worst case) are chosen for the final testing.
IEEE802.11n（HT20: Channel 1(2412MHz), Channel 6(2437MHz) and Channel 11(2462MHz) with 7Mbps data rate (the worst case) are chosen for the final testing.
IEEE802.11n（HT40: Channel 3(2422MHz), Channel 6(2437MHz) and Channel 9(2452MHz) with 7Mbps data rate (the worst case) are chosen for the final testing.

d. Test Procedure

This test was according the kdb 58074 5.2.1.2 Measurement Procedure PK2:

1. This procedure provides an integrated measurement alternative when the maximum available RBW < EBW.
2. Set the RBW = 1 MHz.
3. Set the VBW = 3 MHz.
4. Set the span to a value that is 5-30 % greater than the EBW.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the spectrum analyzer's integrated band power measurement function with band limits set equal to the EBW band edges (for some analyzers, this may require a manual override to ensure use of peak detector). If the spectrum analyzer does not have a band power function, sum the spectrum levels (in linear power units) at 1 MHz intervals extending across the EBW of the spectrum.

Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analysis	Agilent	E4407B	US39390582	July 03, 2012	1 Year
2.	Preamplifier	Instruments corporation	EMC011830	980100	July 03, 2012	1 Year
3.	Double Ridged Horn Antenna	Instruments corporation	GTH-0118	351600	Apr. 07, 2012	1 Year
4.	EMI Test Software EZ-EMC	SHURPLE	N/A	N/A	N/A	N/A

e. Test Results

Pass

f. Test Data

Test mode: IEEE 802.11b

Channel	Frequency (MHz)	Maximum transmit power (dBm)	Limit (dBm)	Limit (watts)	Result
Low	2412	9.36	30	1	Pass
Mid	2437	9.08			Pass
High	2462	8.55			Pass

Test mode: IEEE 802.11g

Channel	Frequency (MHz)	Maximum transmit power (dBm)	Limit (dBm)	Limit (watts)	Result
Low	2412	9.26	30	1	Pass
Mid	2437	9.11			Pass
High	2462	9.62			Pass

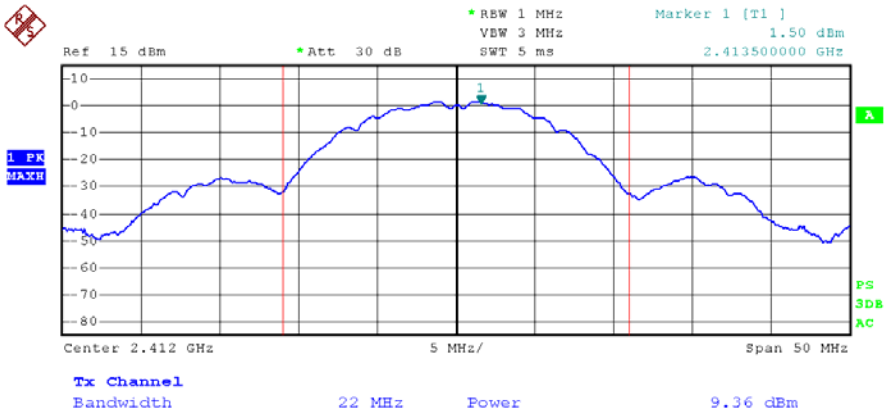
Test mode: IEEE 802.11n（HT20）

Channel	Frequency (MHz)	Maximum transmit power (dBm)	Limit (dBm)	Limit (watts)	Result
Low	2412	9.49	30	1	Pass
Mid	2437	9.68			Pass
High	2462	9.19			Pass

Test mode: IEEE 802.11n（HT40）

Channel	Frequency (MHz)	Maximum transmit power (dBm)	Limit (dBm)	Limit (watts)	Result
Low	2422	9.22	30	1	Pass
Mid	2437	9.10			Pass
High	2452	9.85			Pass

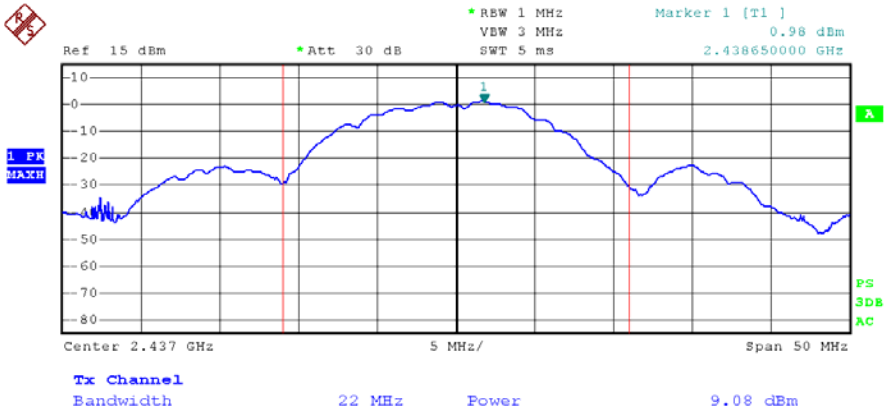
Test Mode: 802.11b ---Low



L

Date: 1.AUG.2012 15:32:16

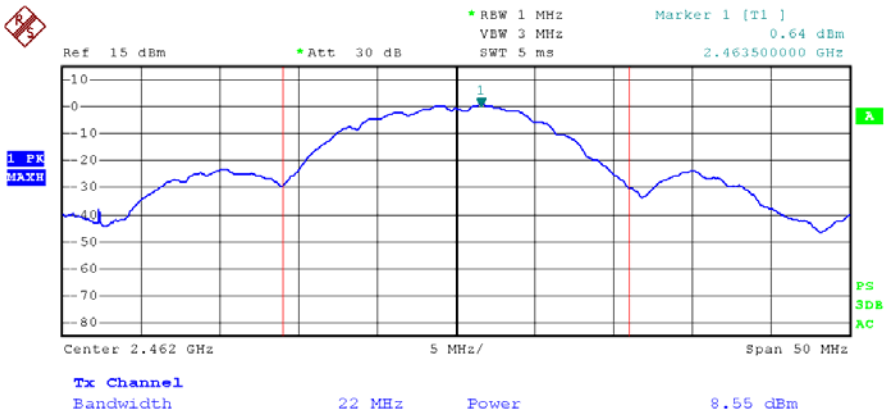
Test Mode: 802.11b---Mid



M

Date: 1.AUG.2012 15:33:05

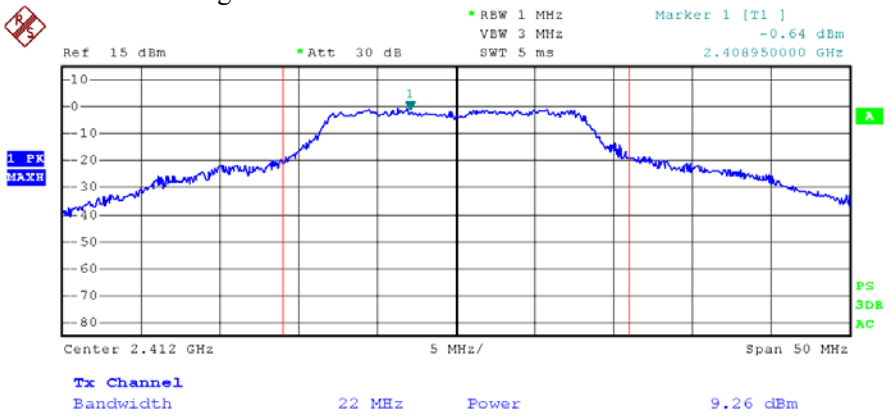
Test Mode: 802.11b---High



L

Date: 1.AUG.2012 15:34:12

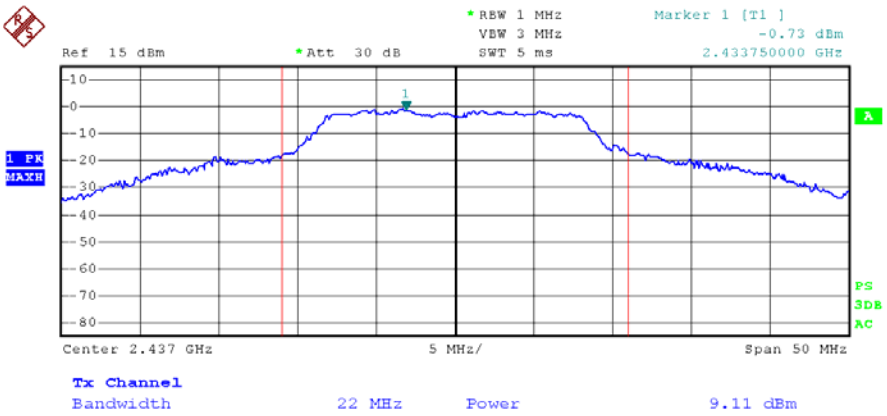
Test Mode: 802.11g ---Low



L

Date: 1.AUG.2012 15:36:30

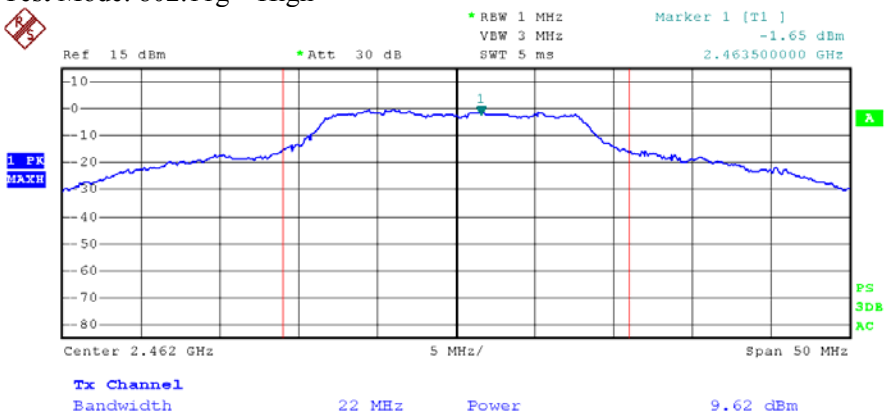
Test Mode: 802.11g---Mid



M

Date: 1.AUG.2012 15:35:54

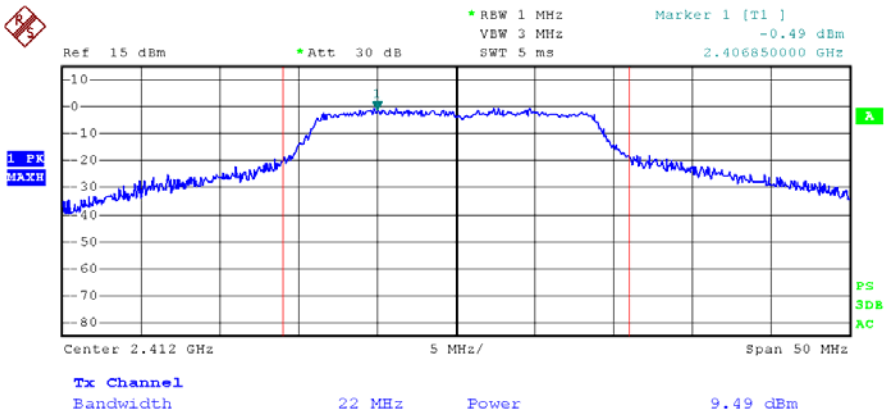
Test Mode: 802.11g---High



H

Date: 1.AUG.2012 15:35:09

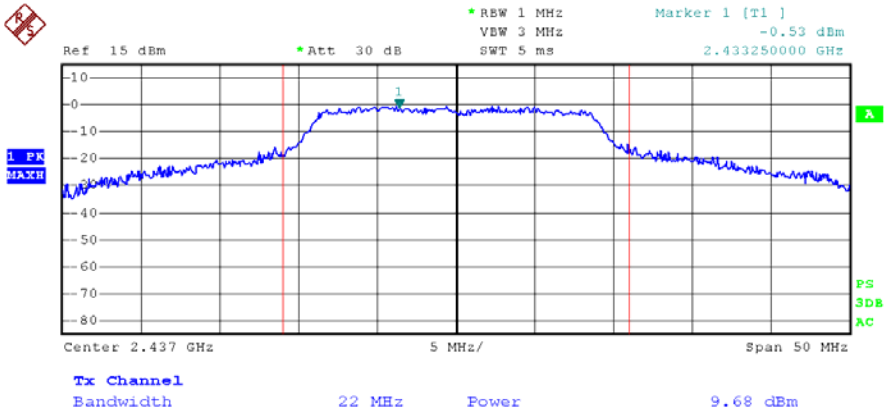
Test Mode: 802.11n（HT20） ---Low



L

Date: 1.AUG.2012 15:37:32

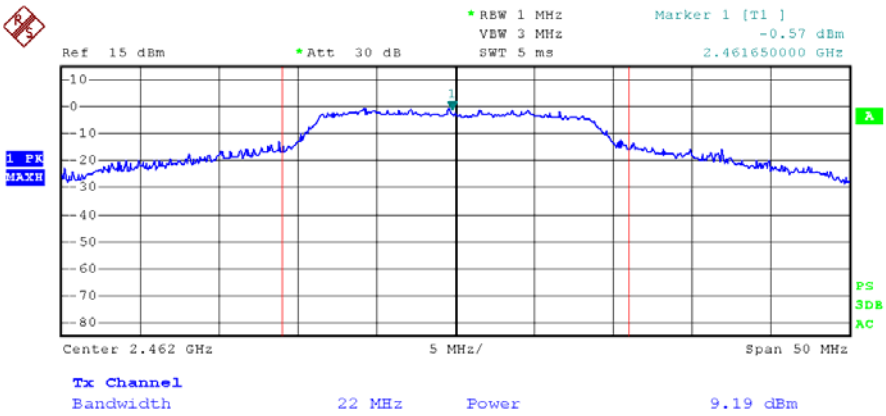
Test Mode: 802.11n （HT20）---Mid



H

Date: 1.AUG.2012 15:38:24

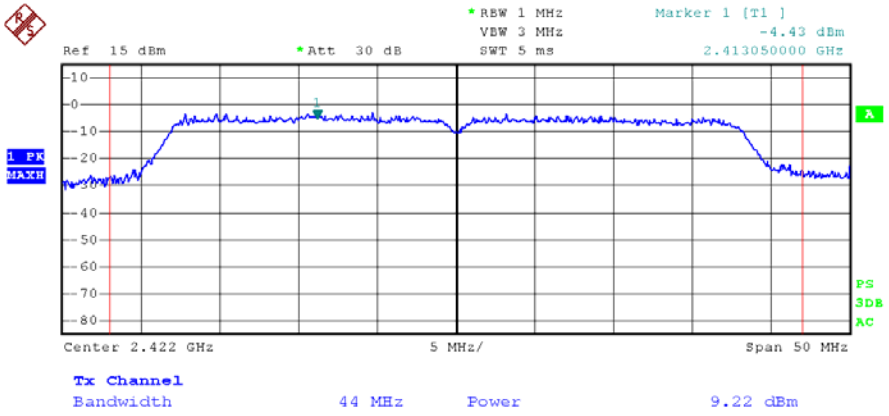
Test Mode: 802.11n（HT20） ---High



H

Date: 1.AUG.2012 15:39:46

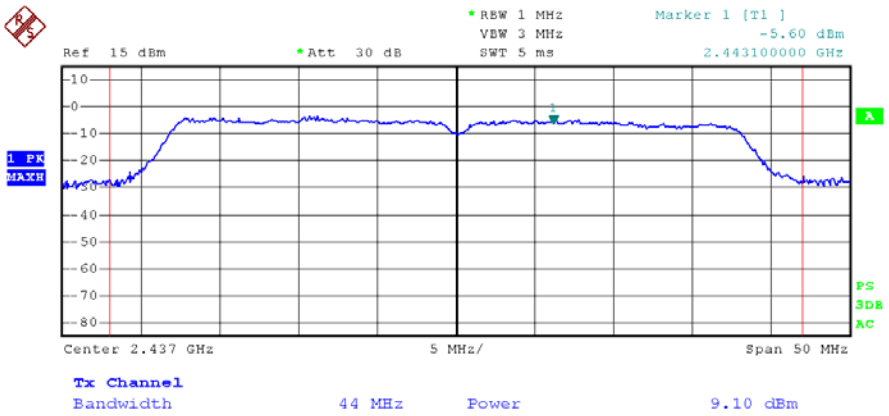
Test Mode: 802.11n（HT40） ---Low



L

Date: 1.AUG.2012 15:42:38

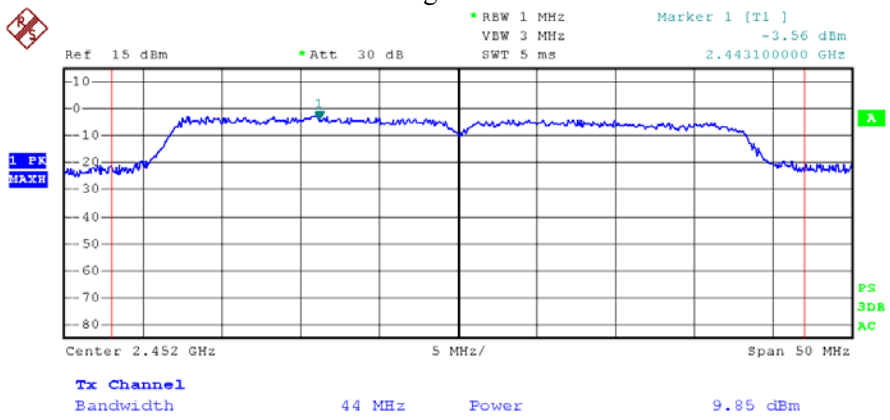
Test Mode: 802.11n（HT40） --- Mid



M

Date: 1.AUG.2012 15:42:01

Test Mode: 802.11n （HT40）---High



H

Date: 1.AUG.2012 15:41:17

5.4 Band Edges Measurement

a. Limt

According to §15.247(c), in any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator in operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in15.209(a).

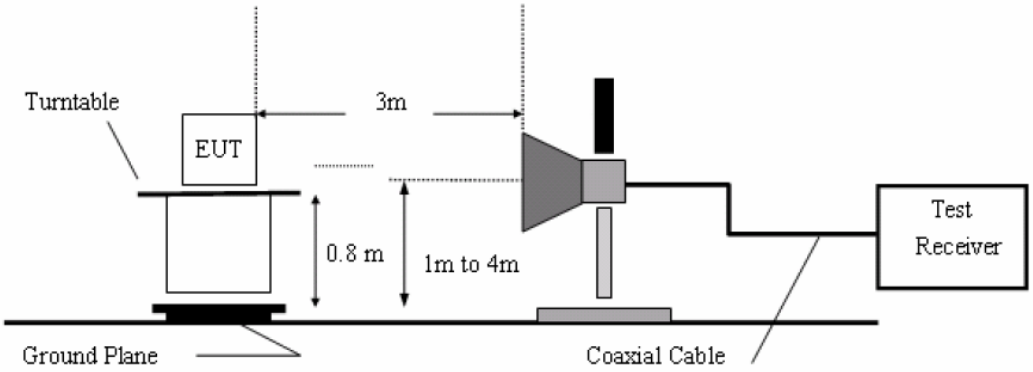
b. Test Procedure

1. The EUT is placed on a turntable, which is 0.8m above the ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
4. Peak detector: RBW=100KHz, VBW=100KHz, SWT=AUTO
   Average detector: RBW=1MHz, VBW=10Hz, SWT=AUTO
   The EUT is tested in 9*6*6 Chamber.
5. Repeat the procedures until all the PEAK and AVERAGE versus POLARIZATION are measured.

Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analysis	Agilent	E4407B	US39390582	July 03, 2012	1 Year
2.	Preamplifier	Instruments corporation	EMC011830	980100	July 03, 2012	1 Year
3.	Double Ridged Horn Antenna	Instruments corporation	GTH-0118	351600	Apr. 07, 2012	1 Year
4.	EMI Test Software EZ-EMC	SHURPLE	N/A	N/A	N/A	N/A

c. Test Setup



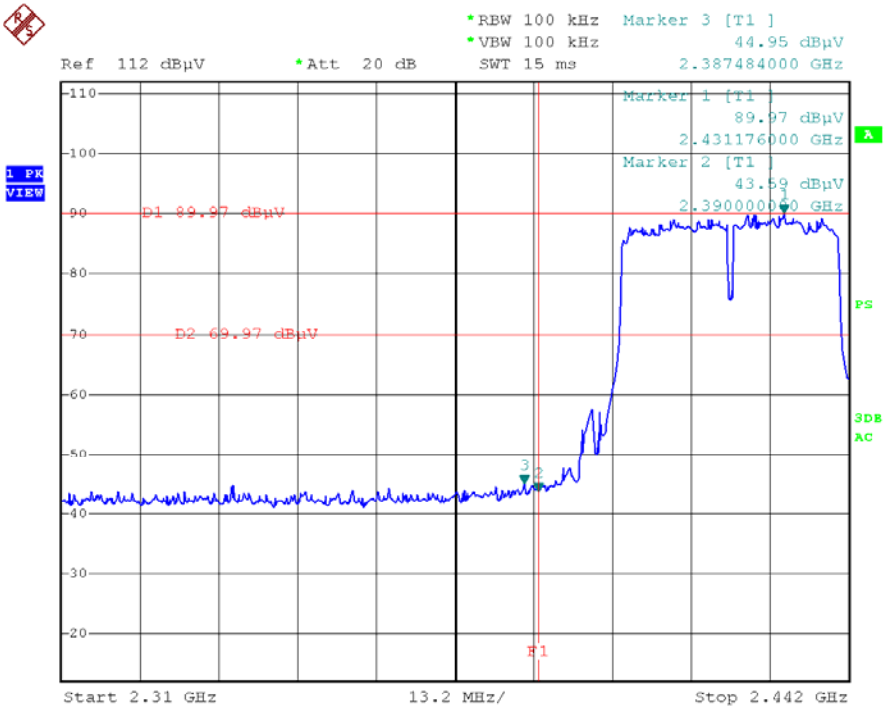
d. Test Results

Pass

e. Test Plots

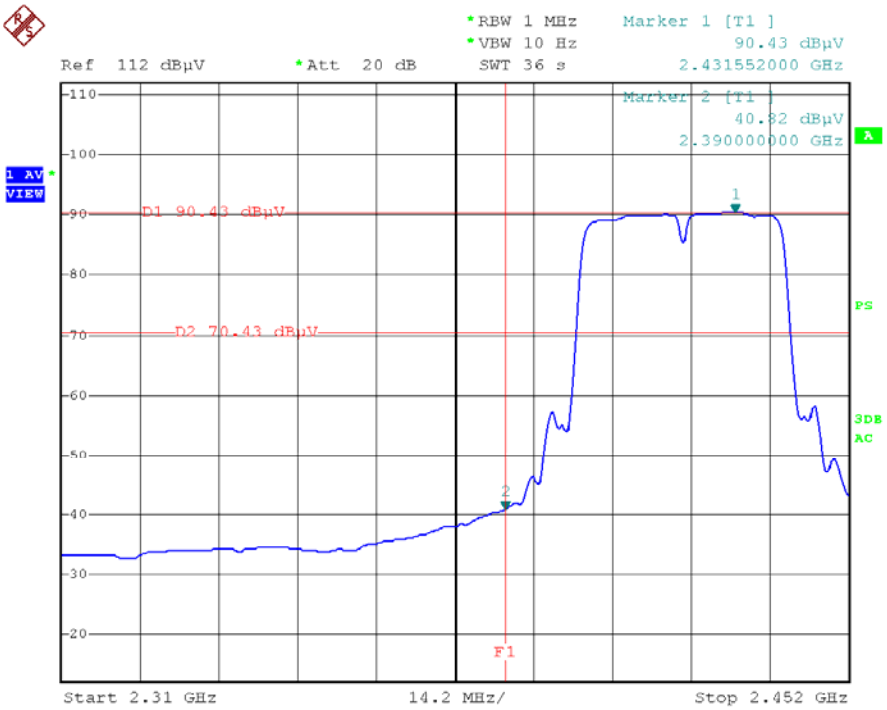
See the following page.

Test Mode: 802.11b ---Low



Bandedges-L

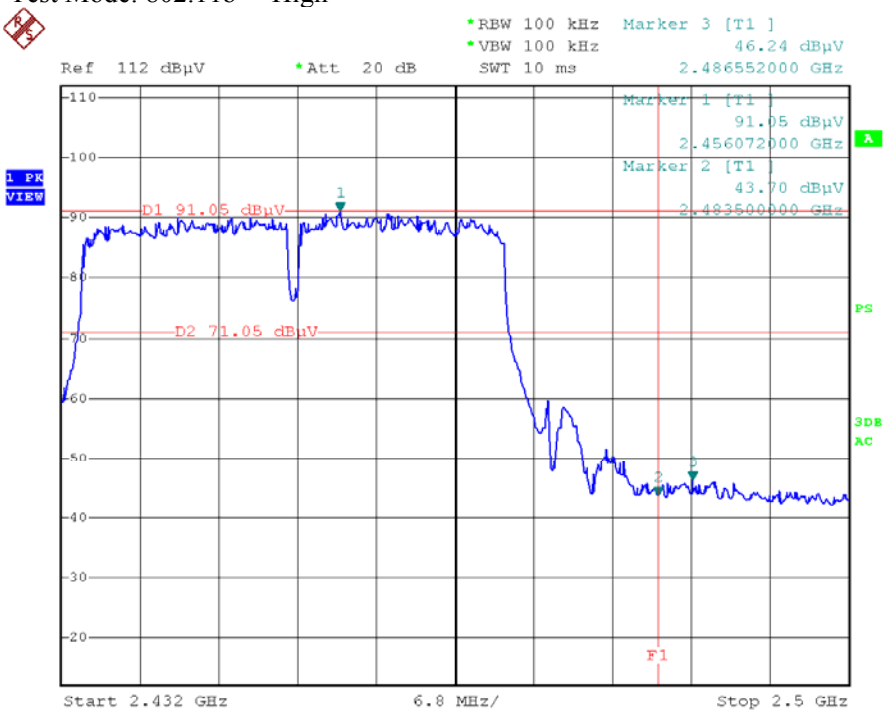
Date: 19.JUL.2012 22:19:44



Bandedges-L-AV

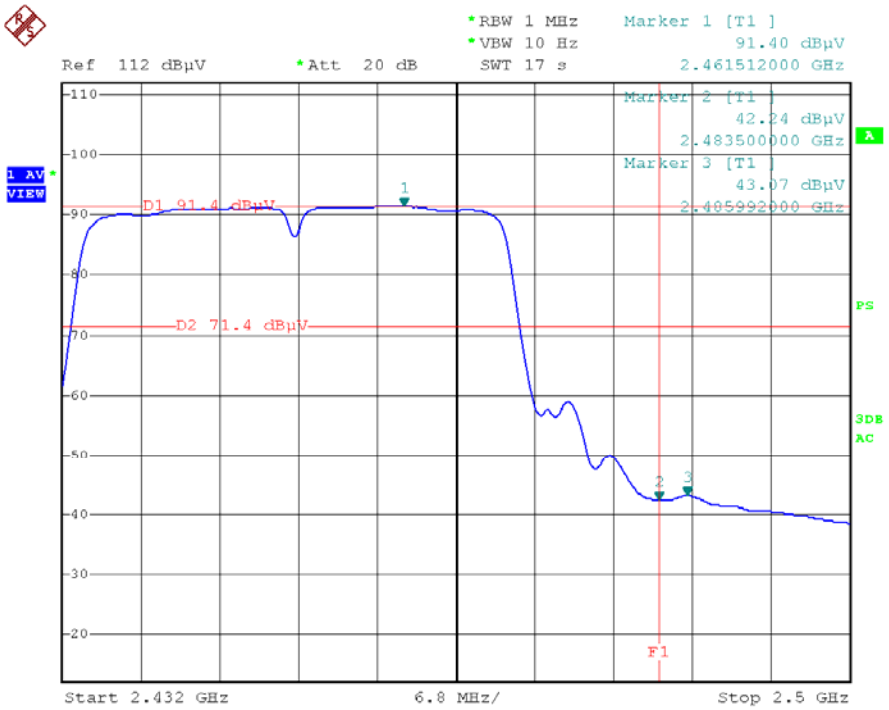
Date: 19.JUL.2012 22:39:43

Test Mode: 802.11b ---High



Bandedges-H

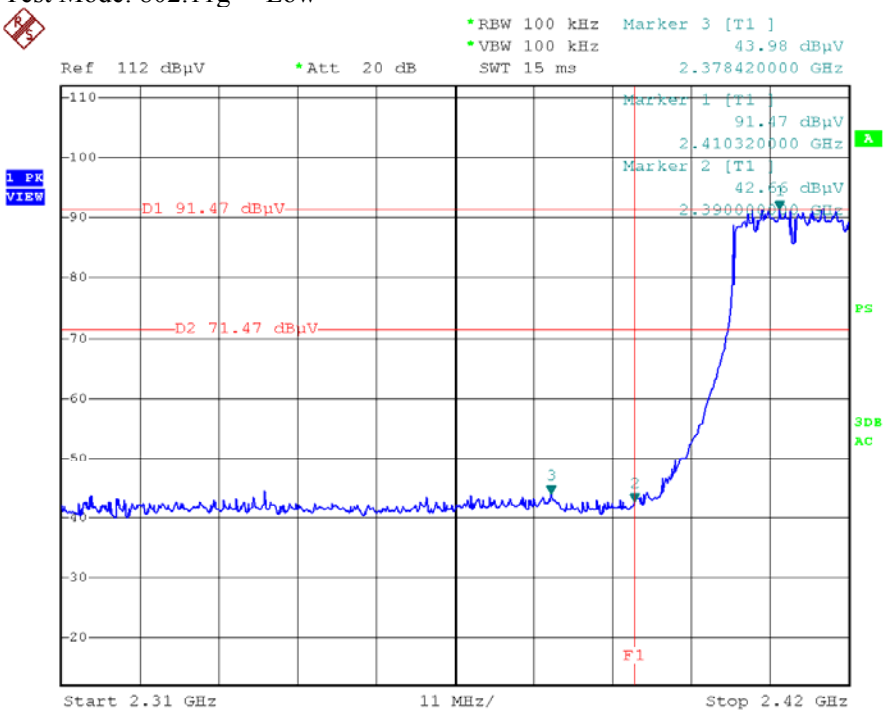
Date: 19.JUL.2012 22:22:06



Bandedges-H-AV

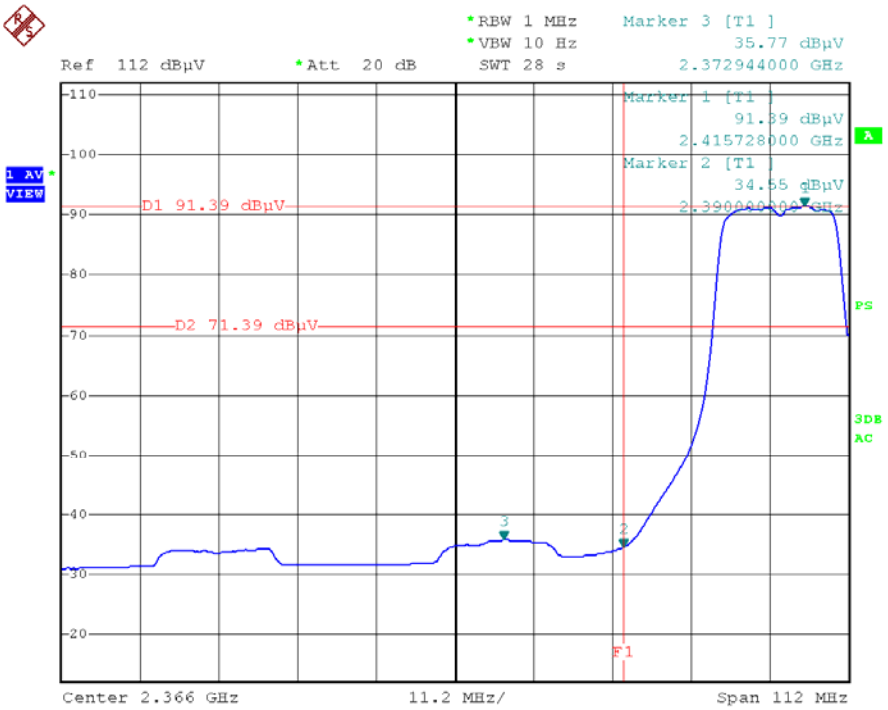
Date: 19.JUL.2012 22:37:05

Test Mode: 802.11g ---Low



Bandedges-L

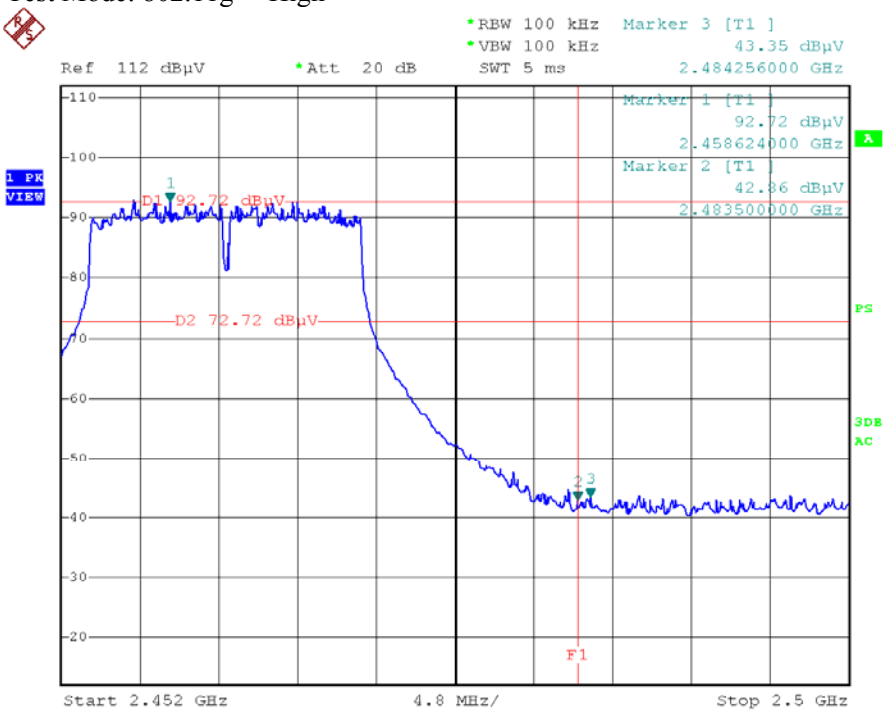
Date: 19.JUL.2012 22:14:28



Bandedges-L-AV

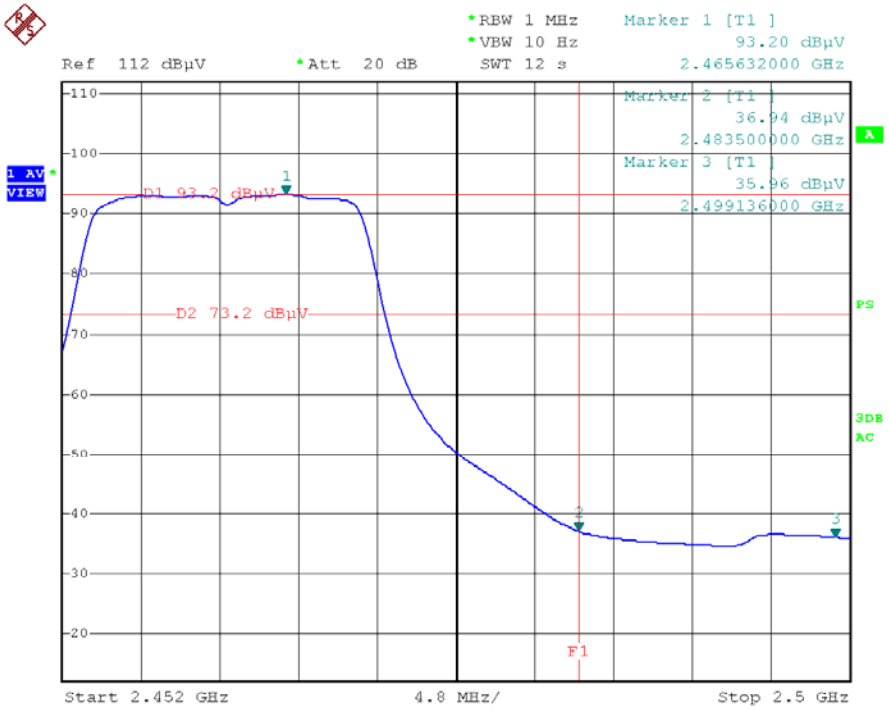
Date: 19.JUL.2012 22:44:13

Test Mode: 802.11g ---High



Bandedges-H

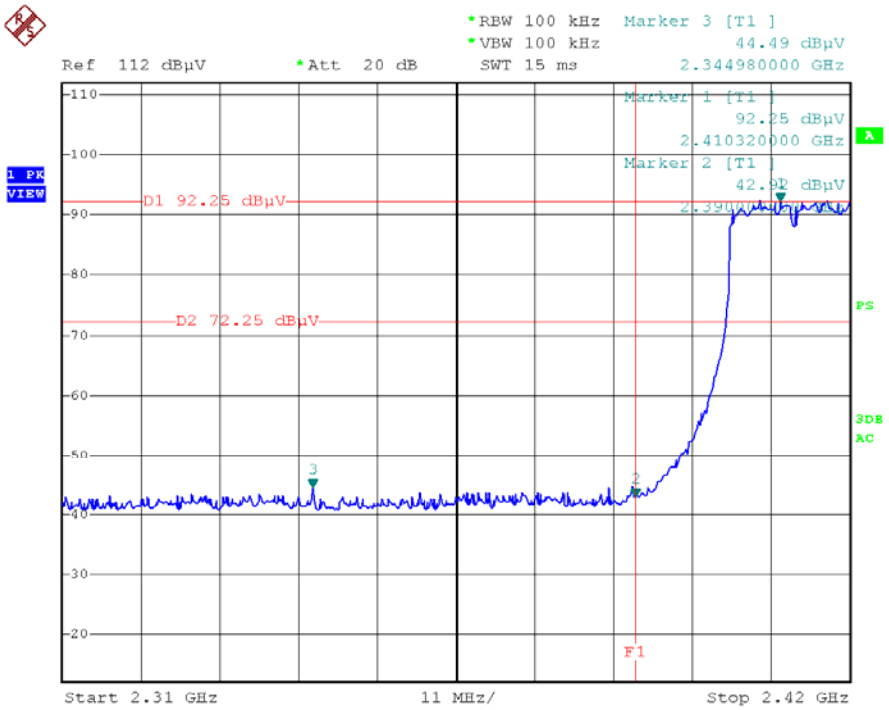
Date: 19.JUL.2012 22:26:36



Bandedges-H-AV

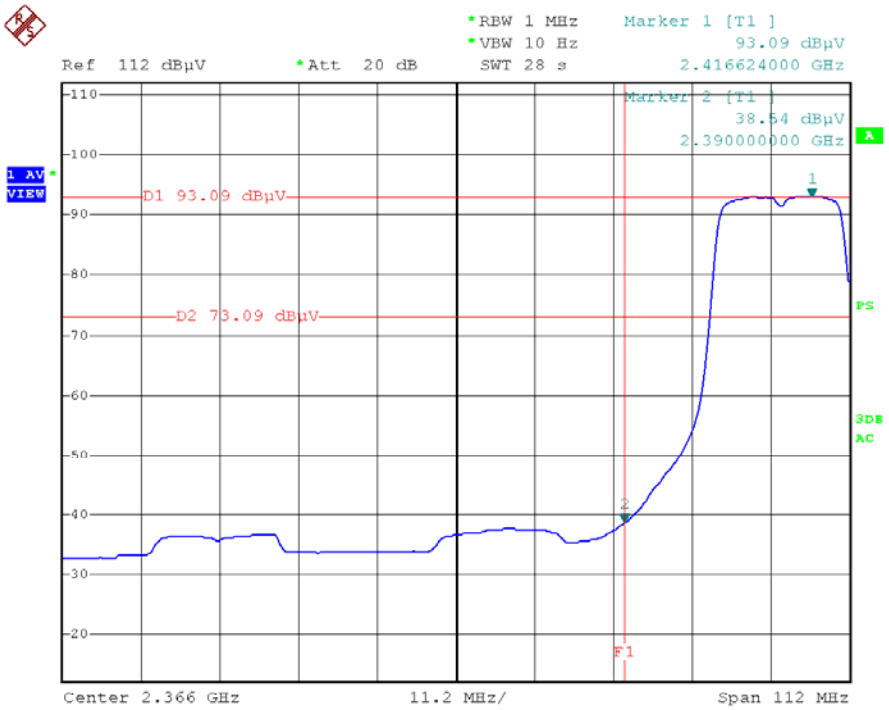
Date: 19.JUL.2012 22:33:20

Test Mode: 802.11n（HT20） ---Low



Bandedges-L

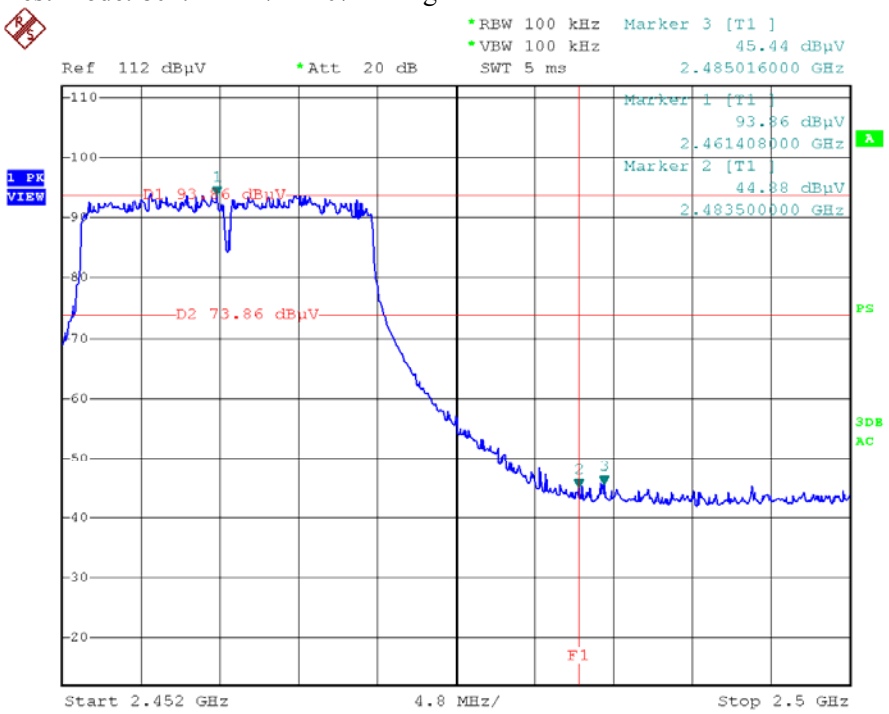
Date: 19.JUL.2012 22:16:20



Bandedges-L-AV

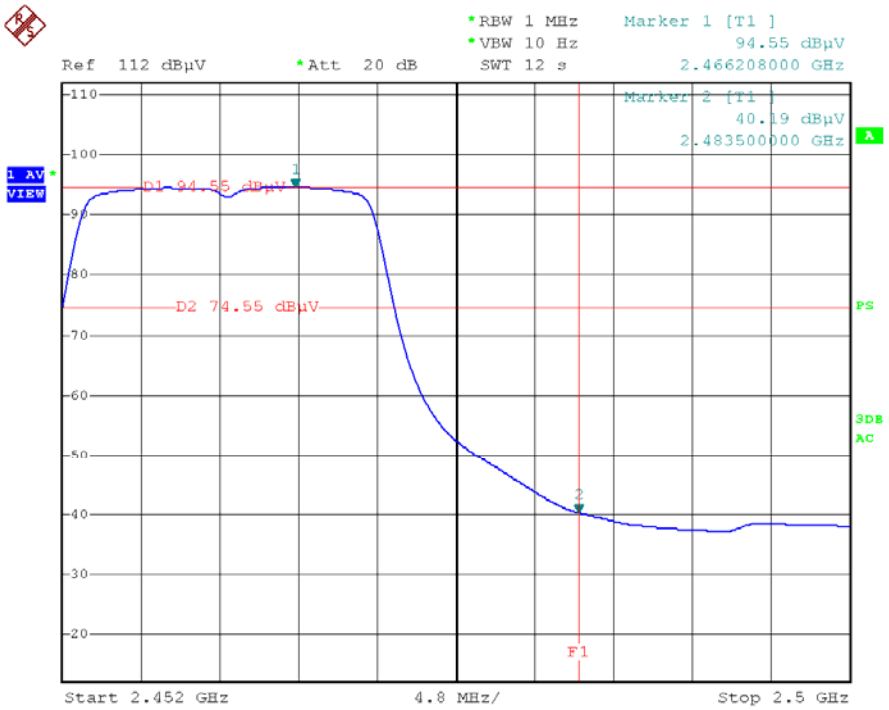
Date: 19.JUL.2012 22:41:49

Test Mode: 802.11n （HT20）---High



Bandedges-H

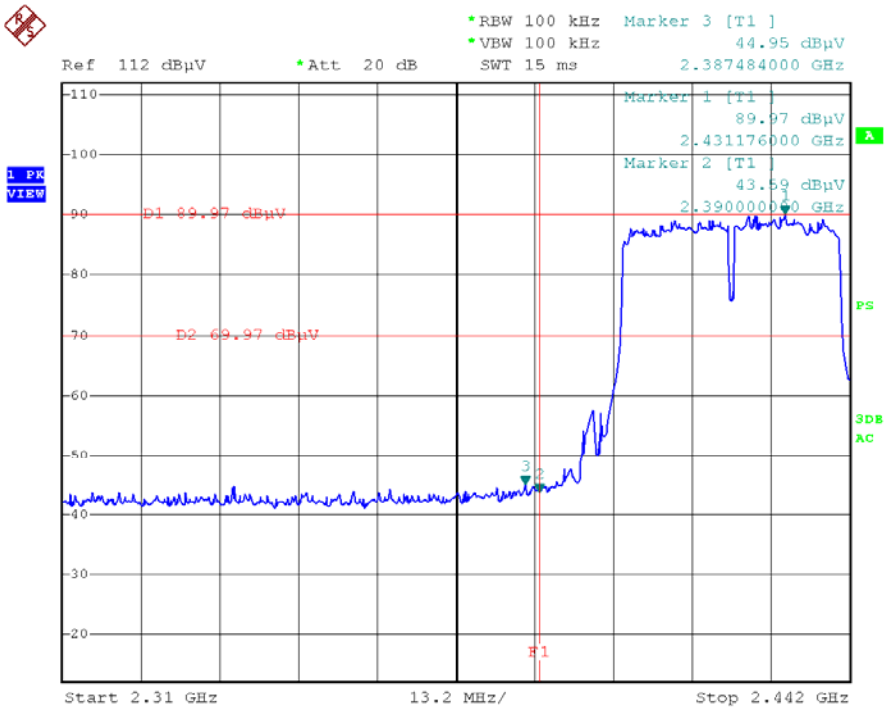
Date: 19.JUL.2012 22:24:54



Bandedges-H-AV

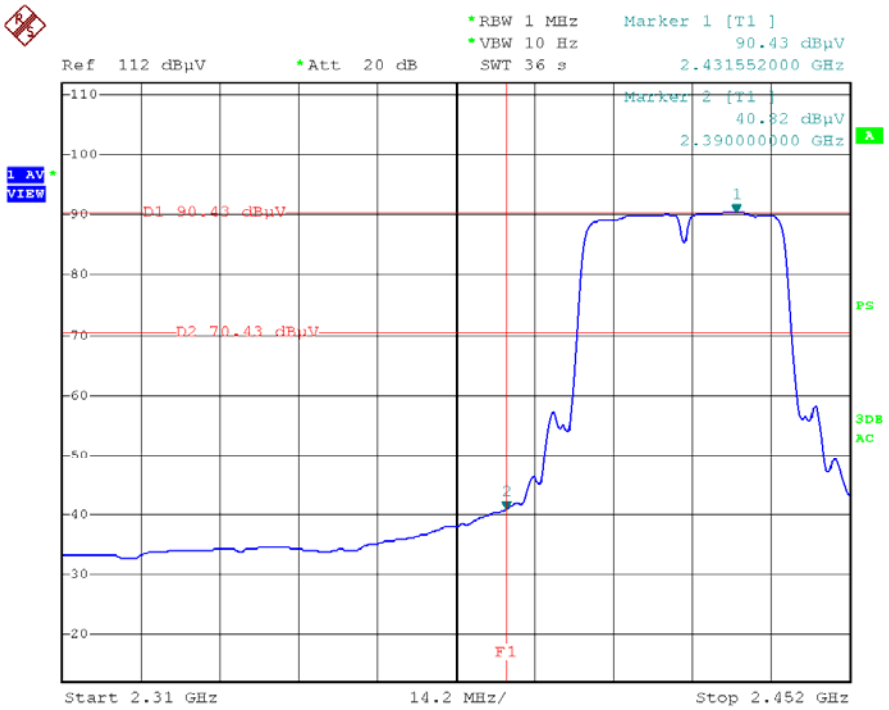
Date: 19.JUL.2012 22:35:16

Test Mode: 802.11n（HT40） ---Low



Bandedges-L

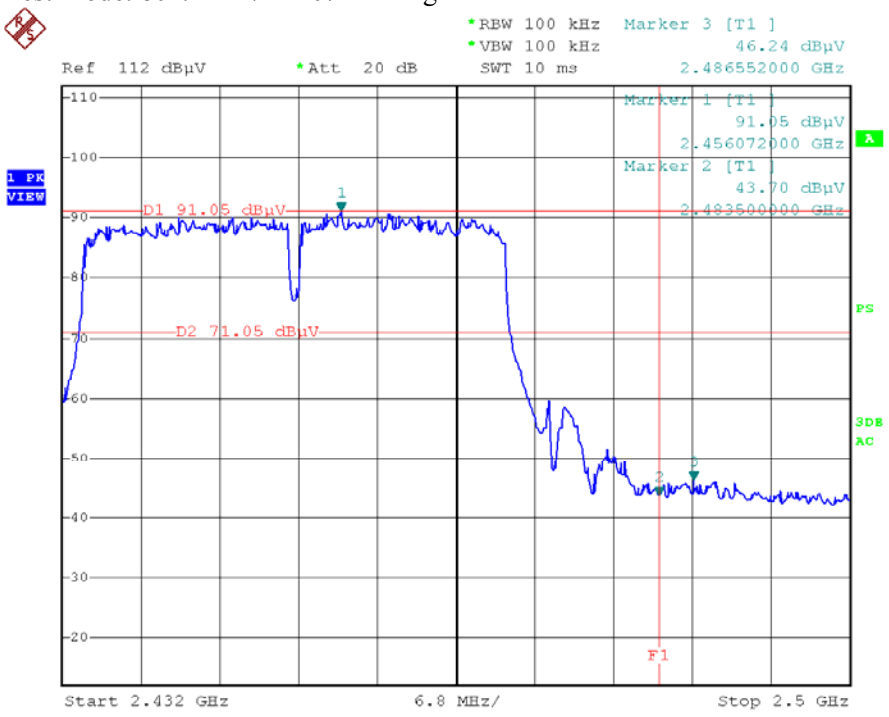
Date: 19.JUL.2012 22:19:44



Bandedges-L-AV

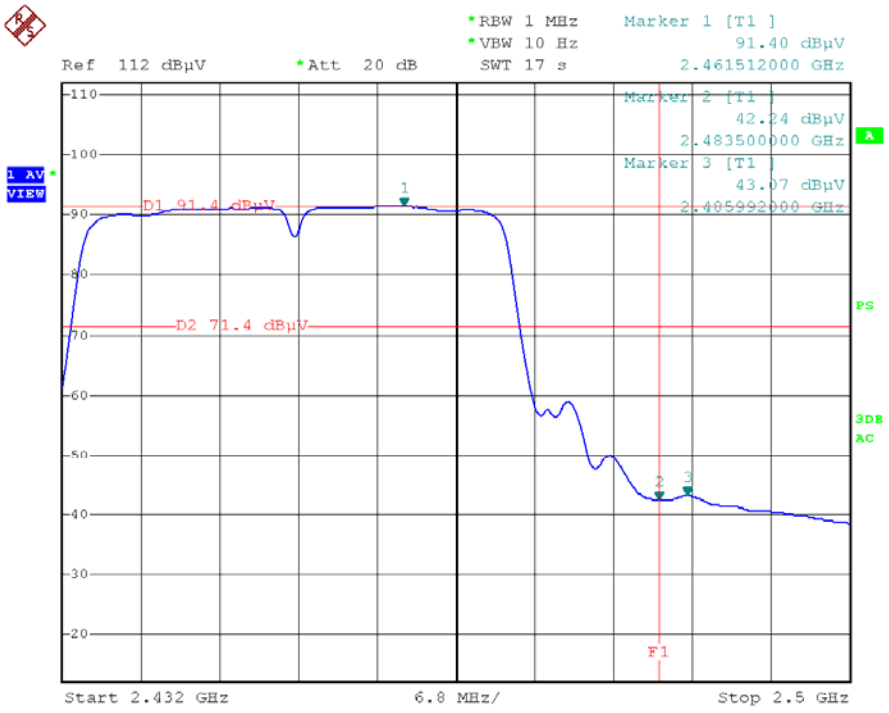
Date: 19.JUL.2012 22:39:43

Test Mode: 802.11n（HT40） ---High



Bandedges-H

Date: 19.JUL.2012 22:22:06



Bandedges-H-AV

Date: 19.JUL.2012 22:37:05

5.5 Peak Power Spectral Density

a. Limt

1. For direct sequence systems, the peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmission.
2. The direct sequence operating of the hybrid system, with the frequency hopping operation turned off, shall comply with the power density requirements of paragraph (d) of this section.

b. Test Procedure

1. Place the EUT on the table and set it in transmitting mode. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
2. Set the spectrum analyzer as RBW = 3kHz, VBW = 10kHz, Span = 1.5MHz, Sweep=500s
3. Record the max. reading.
4. Repeat the above procedure until the measurements for all frequencies are completed.

Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMI Test Receiver	Rohde & Schwarz	ESCI	100627	July 03, 2012	1 Year
2.	Preamplifier	Instruments corporation	EMC011830	980100	July 03, 2012	1 Year
3.	Double Ridged Horn Antenna	Instruments corporation	GTH-0118	351600	Apr. 07, 2012	1 Year
4.	EMI Test Software EZ-EMC	SHURPLE	N/A	N/A	N/A	N/A

c. Test Setup

See 5.1

d. Test Results

Pass

e. Test Data

Test mode: IEEE 802.11b

Channel	Frequency (MHz)	PPSD (dBm/3KHz)	ΣPPSD (dBm/3KHz)	Limit (dBm)	Result
Low	2412	-27.12	-		Pass
Mid	2437	-25.63	-	8.00	Pass
High	2462	-25.16	-		Pass

Test mode: IEEE 802.11g

Channel	Frequency (MHz)	PPSD (dBm)	ΣPPSD (dBm)	Limit (dBm)	Result
Low	2412	-25.90	-		Pass
Mid	2437	-27.26	-	8.00	Pass
High	2462	-28.26	-		Pass

Test mode: IEEE 802.11n（HT20）

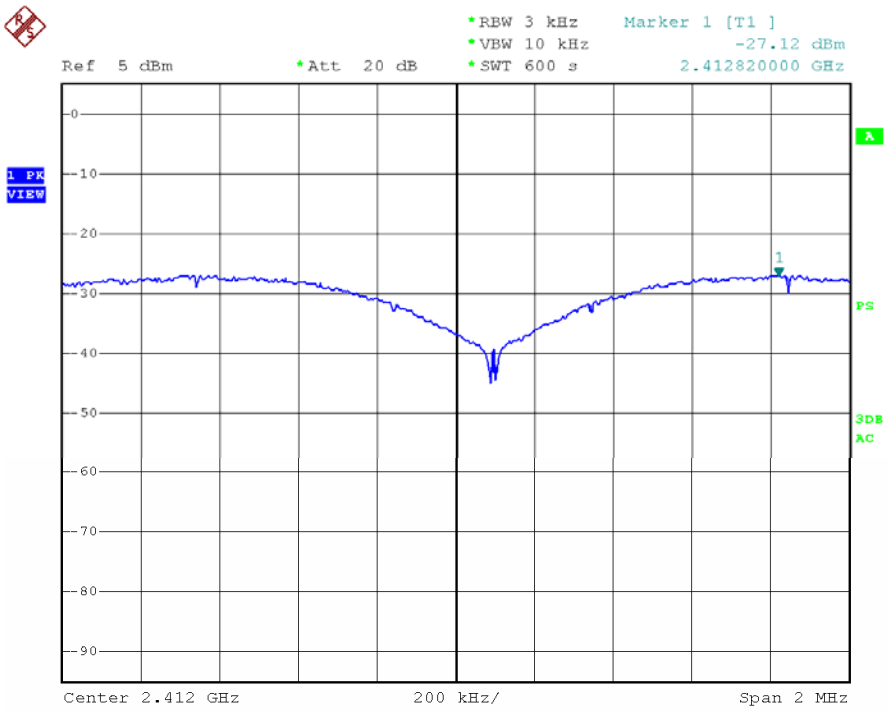
Channel	Frequency (MHz)	PPSD (dBm/3KHz)	ΣPPSD (dBm/3KHz)	Limit (dBm)	Result
Low	2412	-28.91	-		Pass
Mid	2437	-28.47	-	8.00	Pass
High	2462	-27.46	-		Pass

Test mode: IEEE 802.11n（HT40）

Channel	Frequency (MHz)	PPSD (dBm/3KHz)	ΣPPSD (dBm/3KHz)	Limit (dBm)	Result
Low	2422	-30.15	-		Pass
Mid	2437	-28.95	-	8.00	Pass
High	2452	-29.13	-		Pass

f. Test Plot See the following pages

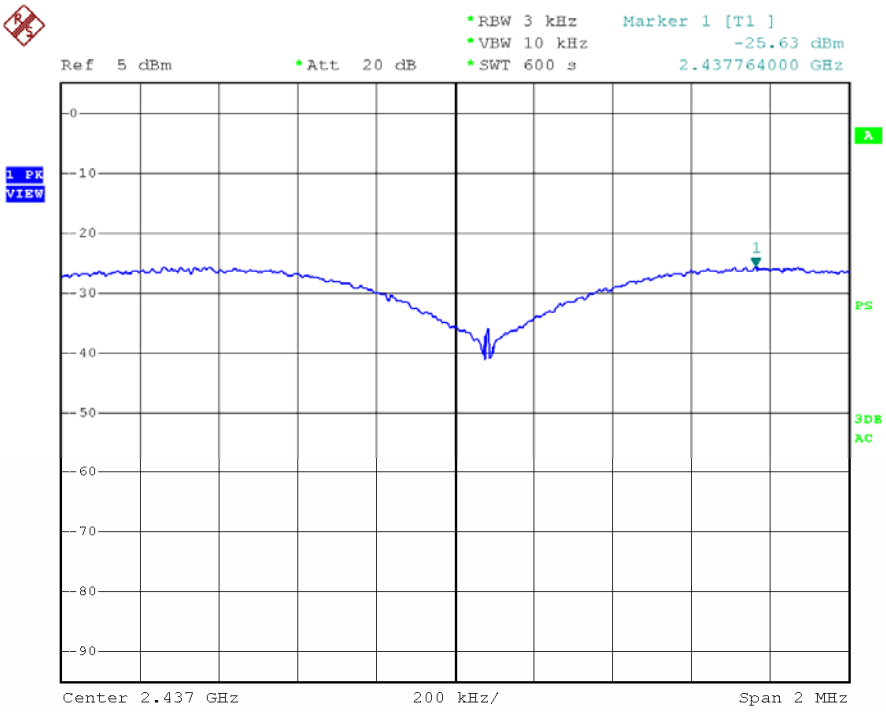
802.11 b CH--Low



Power density-2412

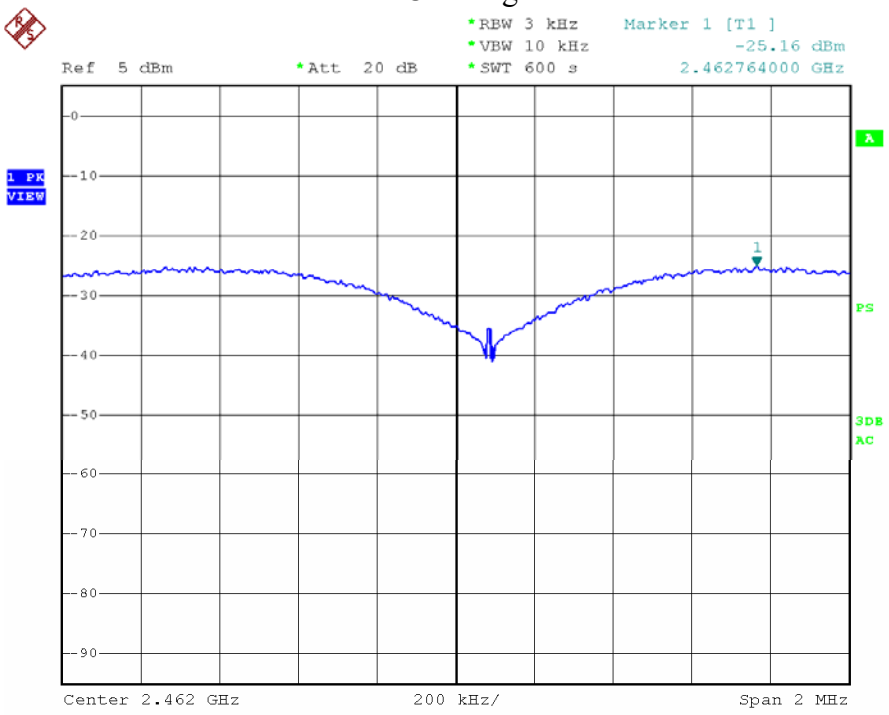
I

CH--Mid



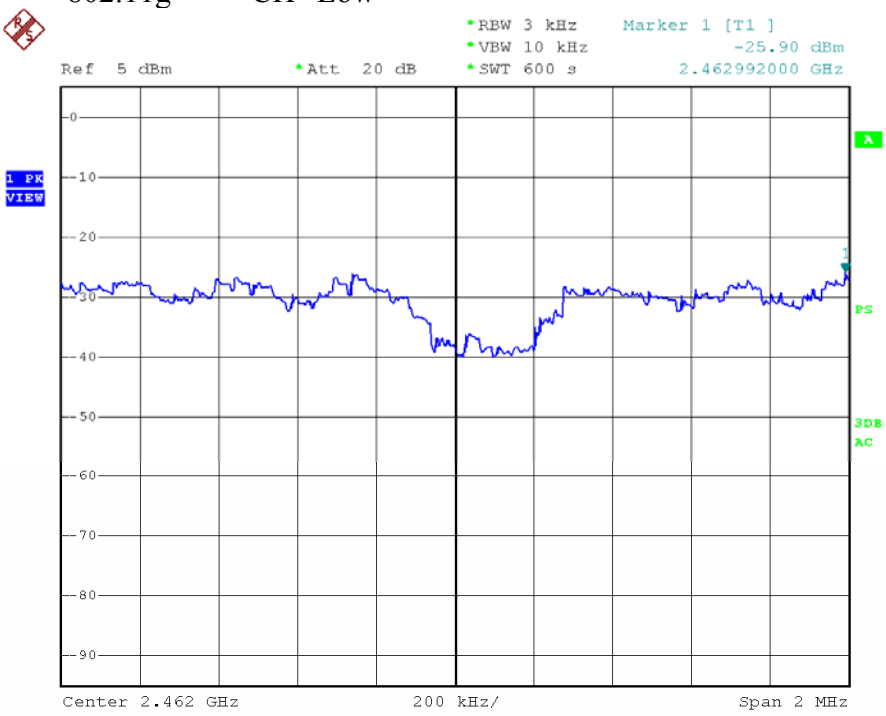
Power density-2437

CH--High



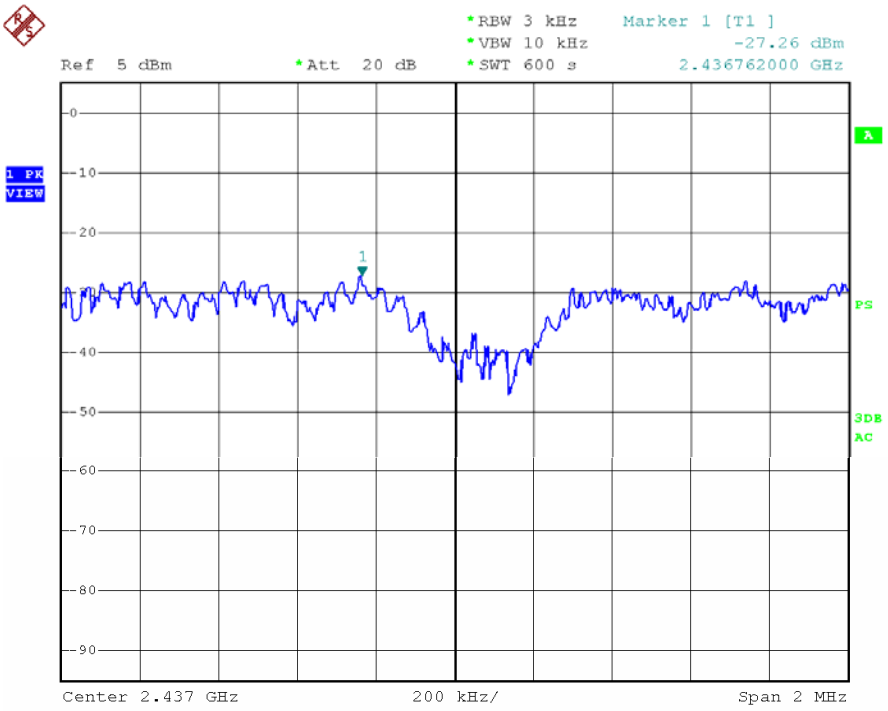
Power density-2462

802.11g CH--Low



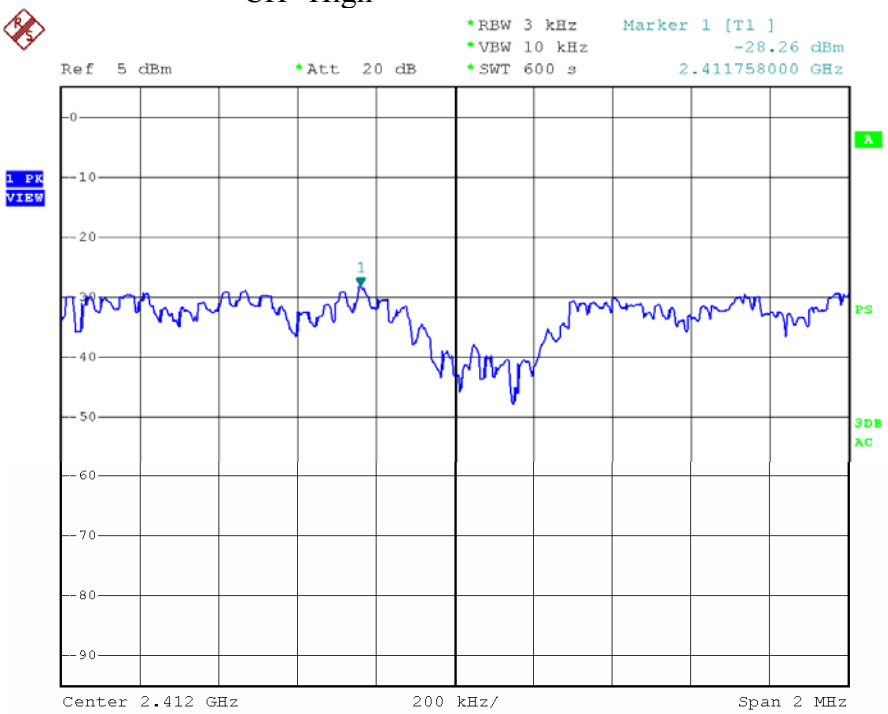
Power density-2462

CH--Mid



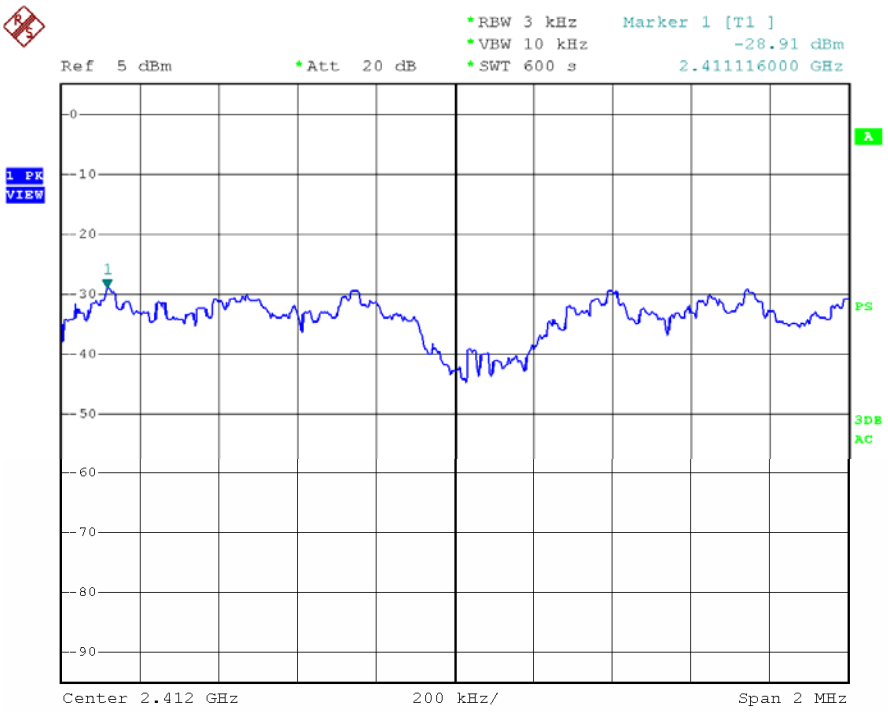
Power density-2437

CH--High



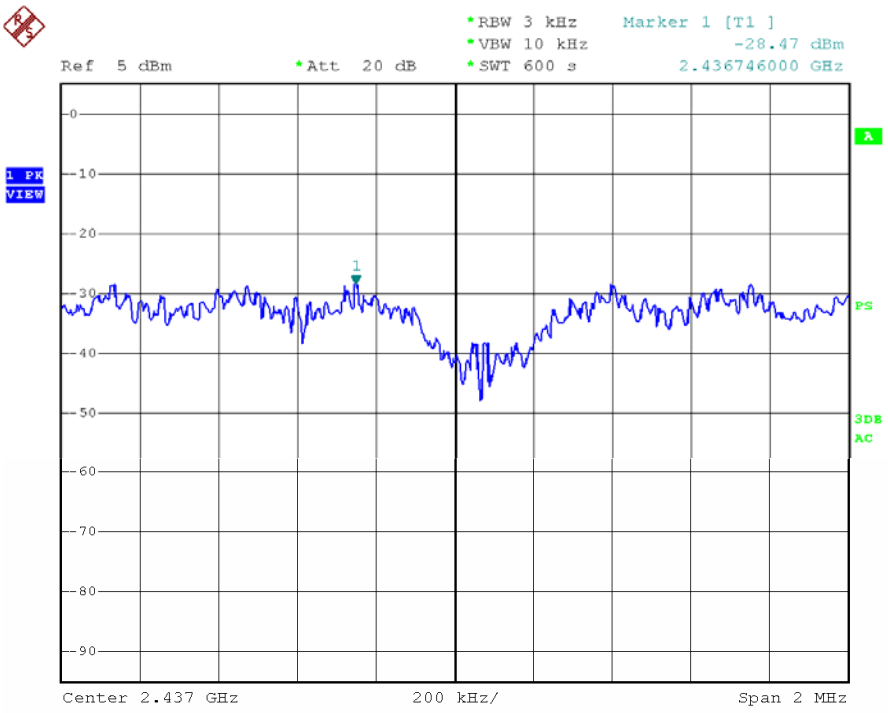
Power density-2412

802.11n（HT20）CH—Low



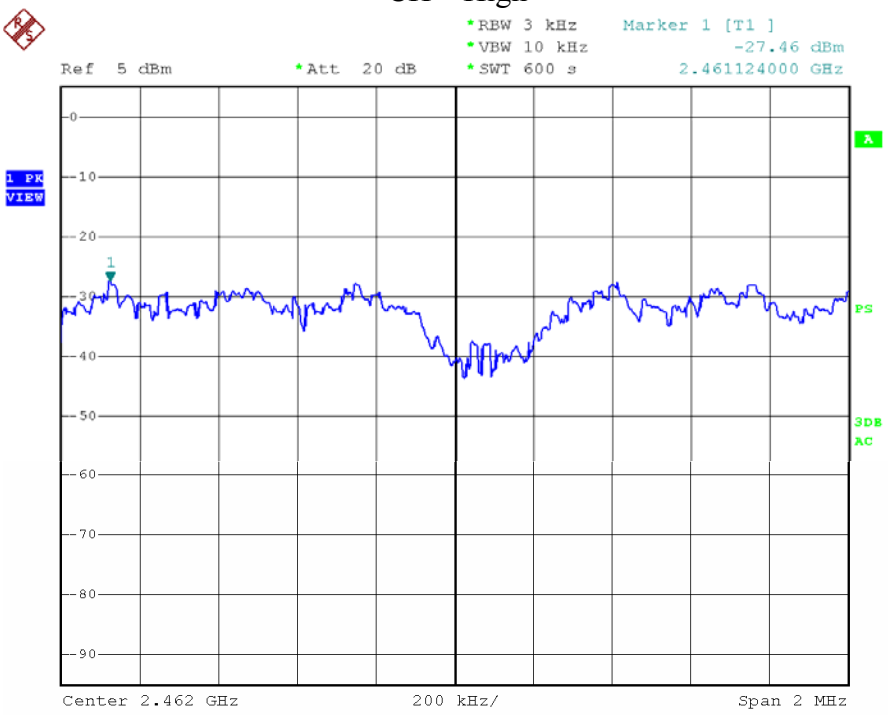
Power density-2412

CH—Mid



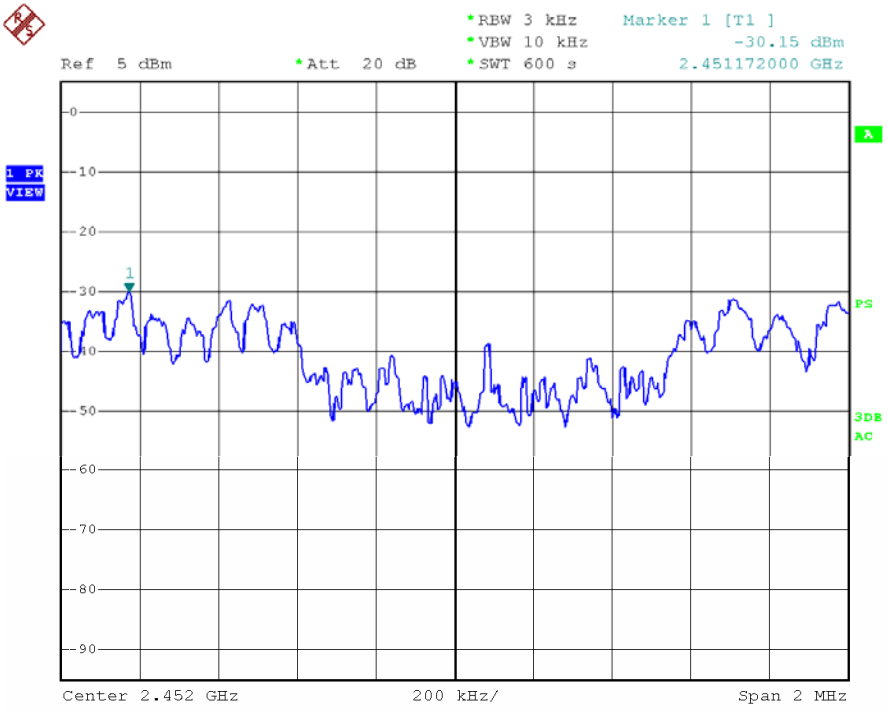
Power density-2437

CH—High



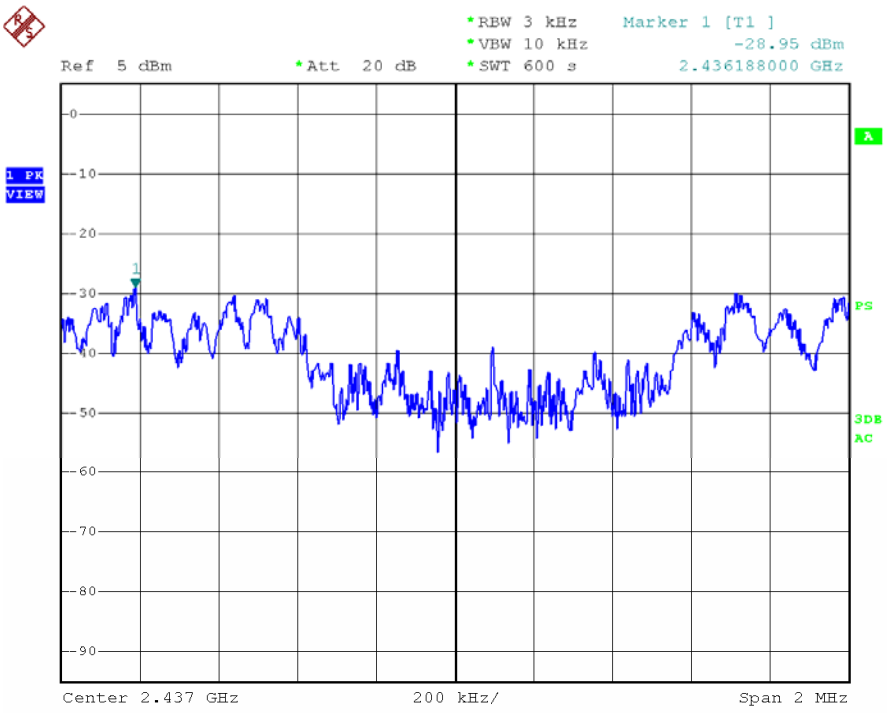
Power density-2462

802.11n（HT20）CH—Low



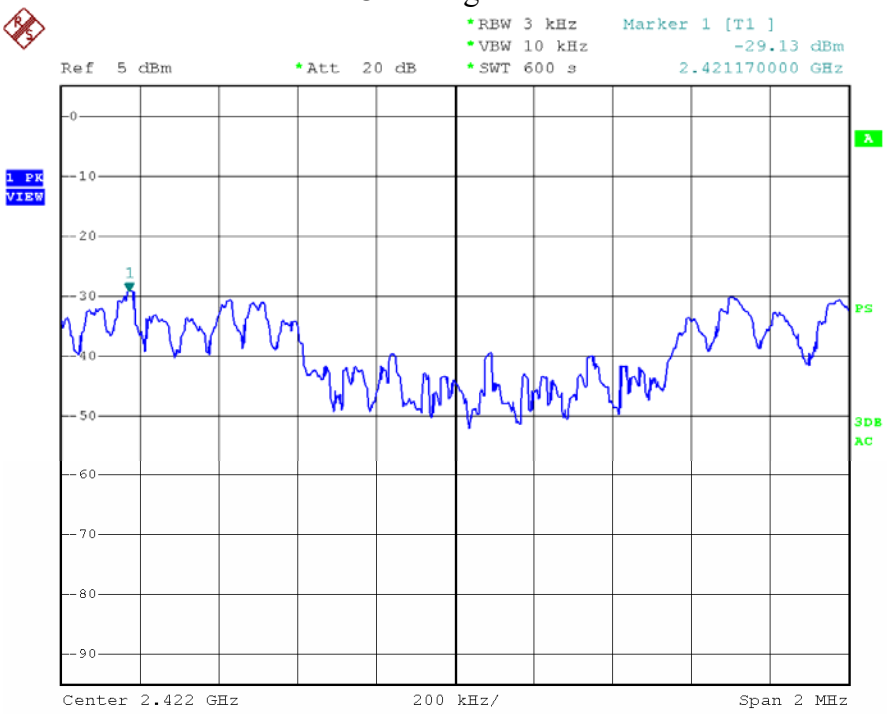
Power density-2452

CH—Mid



Power density-2437

CH—High



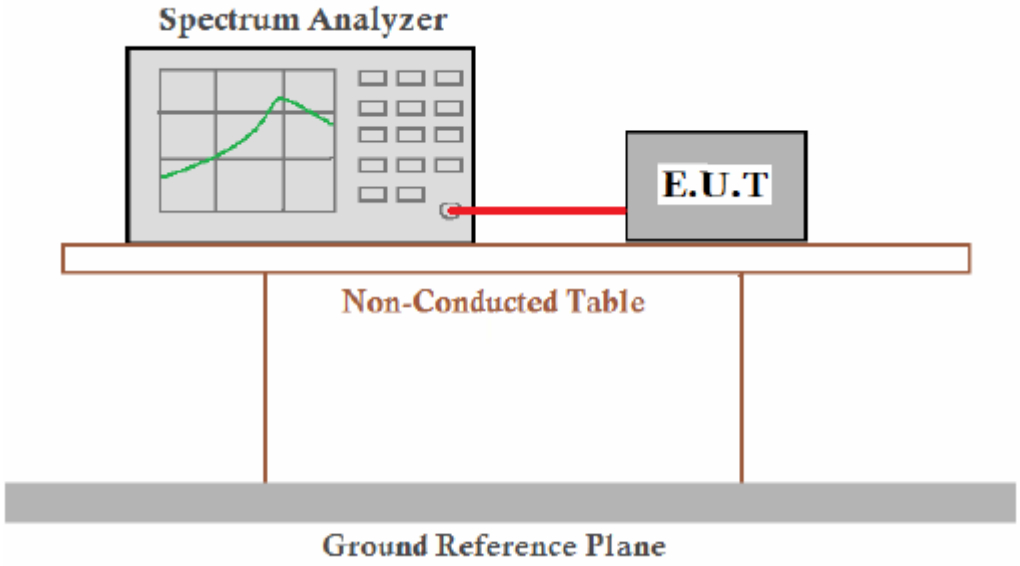
Power density-2422

5.6 Spurious Emission Test

5.6.1 Test Requirement: FCC Part15 Section 15.247(d)
5.6.2 Test method: ANSI C63.4: 2003 and KDB5508074 D01 meas guidance
5.6.3 limit:

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum 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.

5.6.4 Test Setup:

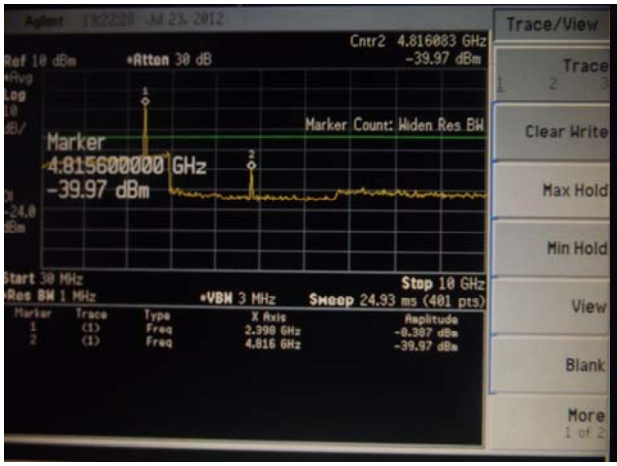


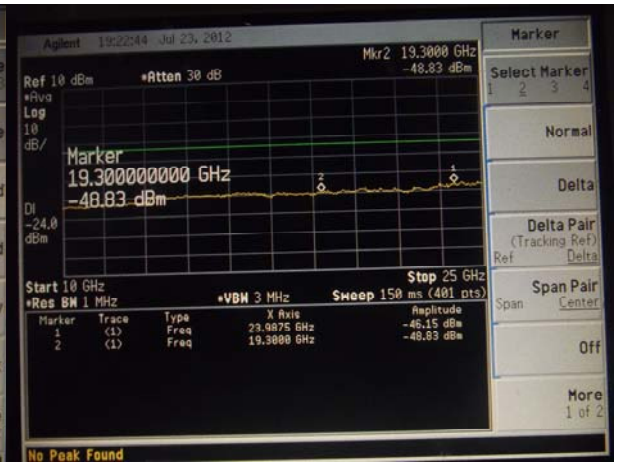
Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analysis	Agilent	E4407B	US39390582	July 03, 2012	1 Year
2.	Preamplifier	Instruments corporation	EMC011830	980100	July 03, 2012	1 Year
3.	Double Ridged Horn Antenna	Instruments corporation	GTH-0118	351600	Apr. 07, 2012	1 Year
4.	EMI Test Software EZ-EMC	SHURPLE	N/A	N/A	N/A	N/A

5.6.5 Test Plot as follows:

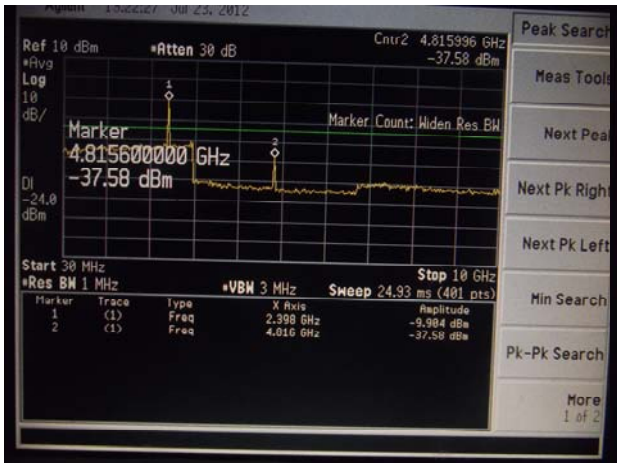
802.11b
Low Channe

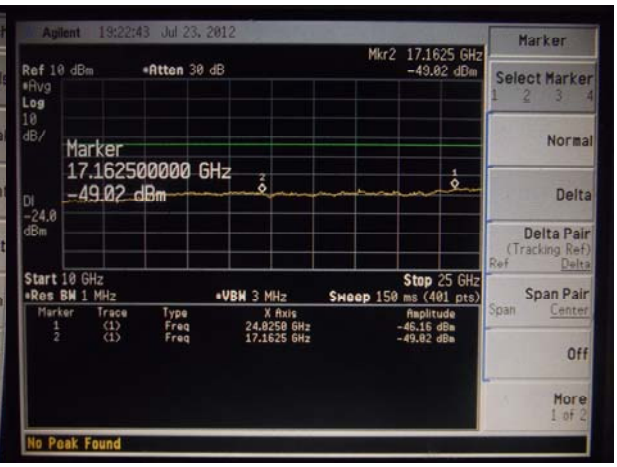




30M-10G 10G-25G

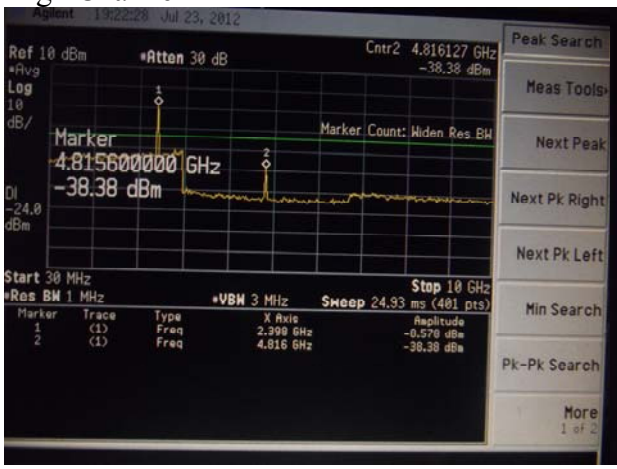
Middle Channel

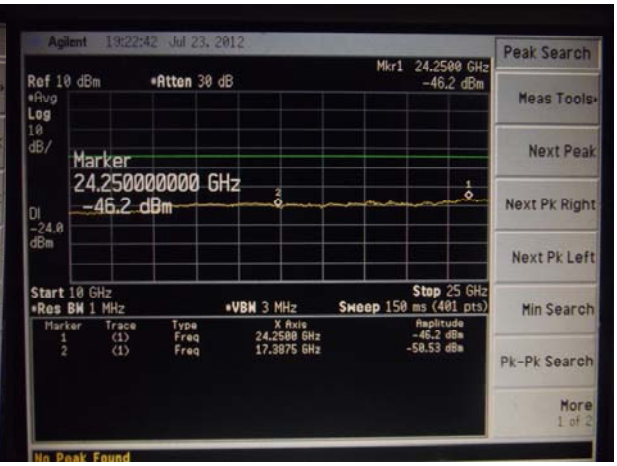




30M-10G 10G-25G

High Channel





30M-10G 10G-25G

802.11g
Low Channe

30M-10G 10G-25G

Middle Channel

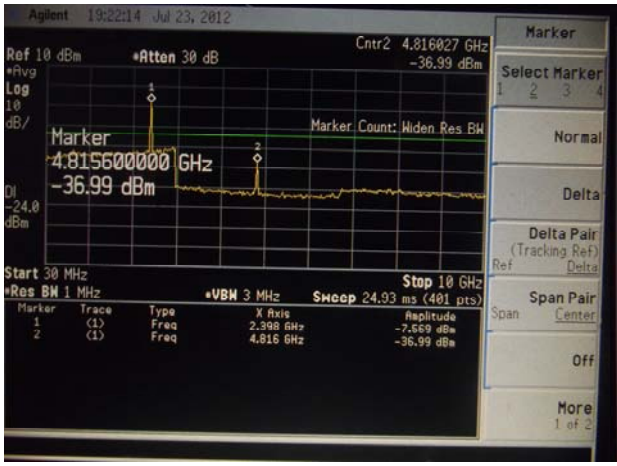
30M-10G 10G-25G

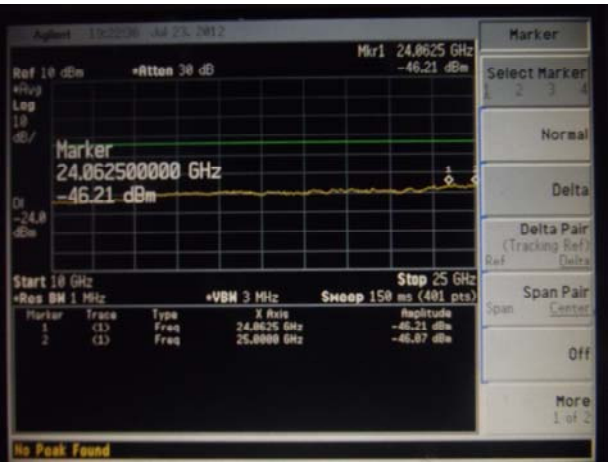
High Channel

30M-10G 10G-25G

802.11n（HT20）

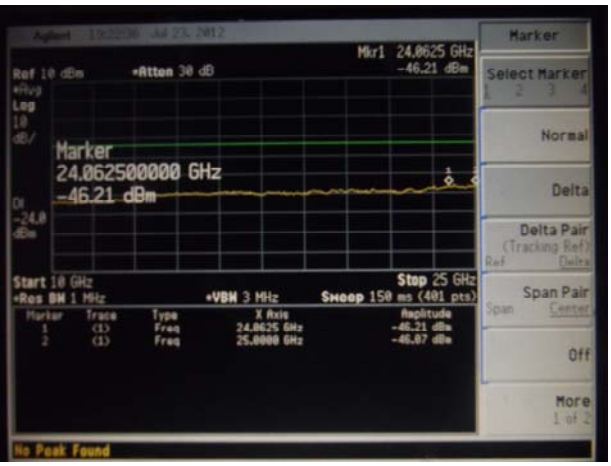
Low Channe





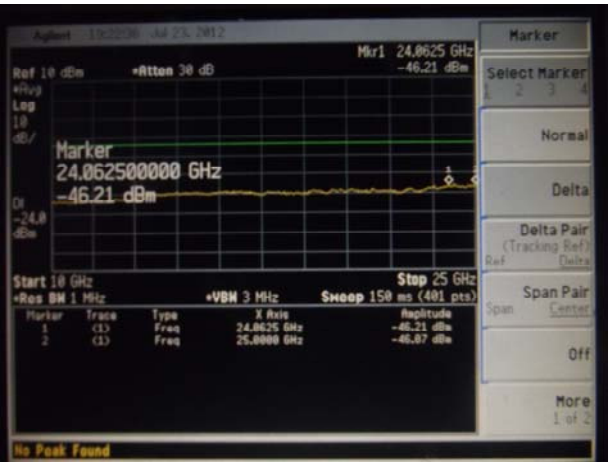
30M-10G 10G-25G

Middle Channel



30M-10G 10G-25G

High Channel



30M-10G 10G-25G

802.11n（HT40）

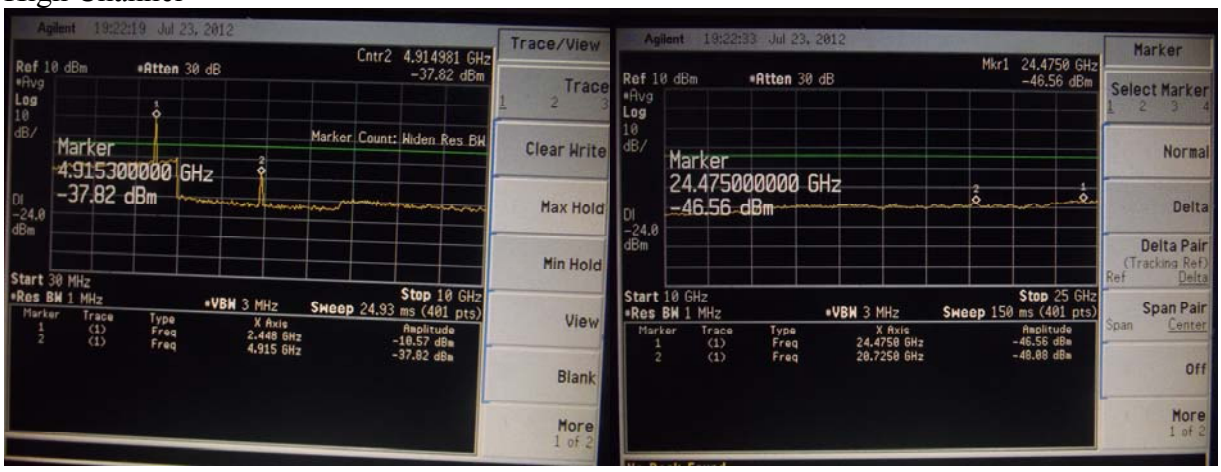
Low Channe

30M-10G 10G-25G

Middle Channel

30M-10G 10G-25G

High Channel



30M-10G 10G-25G

5.7 Radiated Emissions

5.7.1.1. Test Limits (< 30 MHZ)

Frequency （MHz）	Field Strength （microvolts/meter）	Measurement Distance （meter）
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30

5.7.1.2. Test Limits (≥ 30 MHZ)

FIELD STRENGTH of Fundamental:	FIELD STRENGTH of Harmonics	S15.209	
902-928 MHZ		30 - 88 MHz	40 dBuV/m @3M
2.4-2.4835 GHz		88 - 216 MHz	43.5
94 dBμV/m @3m	54 dBμV/m @3m	216 - 960 MHz	46
		ABOVE 960 MHz	54dBuV/m

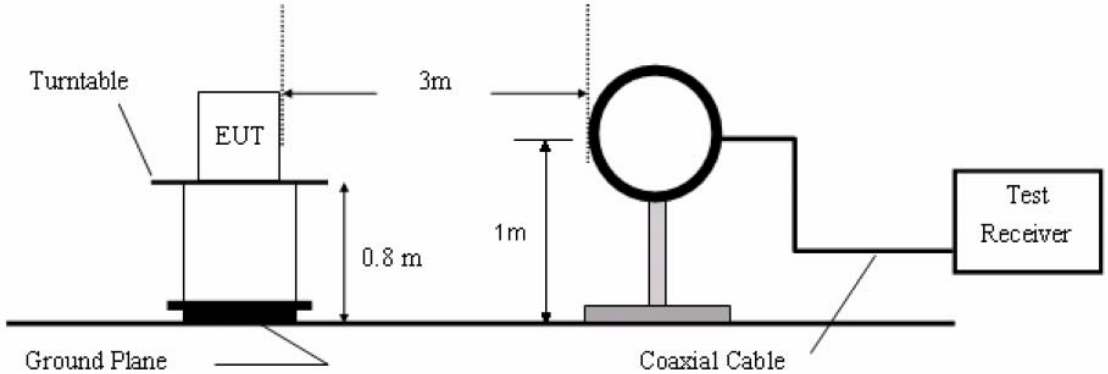
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.205(c)).

Test Equipment

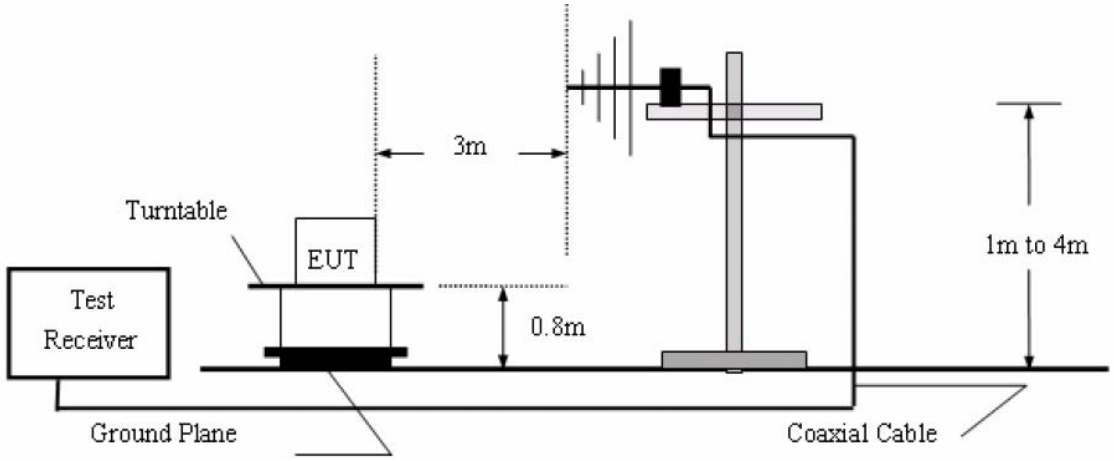
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analysis	Agilent	E4407B	US39390582	July 03, 2012	1 Year
2.	Preamplifier	Instruments corporation	EMC011830	980100	July 03, 2012	1 Year
3.	Double Ridged Horn Antenna	Instruments corporation	GTH-0118	351600	Apr. 07, 2012	1 Year
4.	EMI Test Software EZ-EMC	SHURPLE	N/A	N/A	N/A	N/A

5.7.2. Test Configuration:

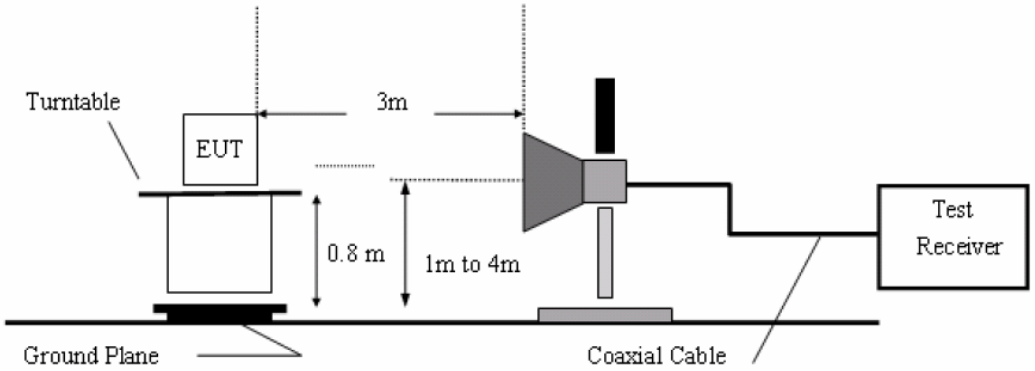
5.7.2.1. 9k to 30MHz emissions:



5.7.2.2. 30M to 1G emissions:



5.7.2.3. 1G to 40G emissions:



5.7.3. Test Procedure

The EUT is placed on a turn table which is 0.8 meter high above the ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna which is mounted on a antenna tower. The antenna can be moved up and down from 1 to 4 meters to find out the maximum emission level. Both horizontal and vertical polarization of the antenna are set on test.

Measurements are made on 9KHz to 30MHz and 30MHz to 26GHz range with the transmitter set to the lowest, middle, and highest channels.

All readings from 30MHz to 1GHz are quasi-peak values with a resolution bandwidth of 120kHz.
All reading are above 1GHz, peak & average values with a resolution bandwidth of 1MHz.
The EUT is tested in 9*6*6 Chamber.

The test results are listed in Section 5.6.4.

g. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analysis	Agilent	E4407B	US39390582	July 03, 2012	1 Year
2.	Preamplifier	Instruments corporation	EMC011830	980100	July 03, 2012	1 Year
3.	Double Ridged Horn Antenna	Instruments corporation	GTH-0118	351600	Apr. 07, 2012	1 Year
4.	EMI Test Software EZ-EMC	SHURPLE	N/A	N/A	N/A	N/A

5.7.4.Test Results

Below 30MHz

There is no emissions were detected below 30MHz

From 30MHz to 1 GHz

Operation Mode: Normal link Test Date:Jul.23 2012

Temperature: 25°C Tested by: Andy Chen

Humidity: 70 % RH Polarity: Ver. / Hor.

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Detector Mode (PK/QP)	Factor (dB)	Actual FS (dBuV/m)	Limit 3m (dBuV/m)	Safe Margin (dB)
60.0690	V	Peak	61.00	-25.23	35.77	40.00	-4.23
125.0066	V	Peak	64.63	-25.20	39.43	43.50	-4.07
159.7844	V	Peak	64.33	-26.49	37.84	43.50	-5.66
250.3011	V	Peak	63.83	-22.54	41.29	46.00	-4.71
480.5276	V	Peak	58.56	-19.63	38.89	46.00	-7.11
801.7862	V	Peak	53.24	-12.59	40.65	46.00	-5.35
125.0066	H	Peak	64.81	-30.00	34.81	43.50	-8.69
159.7844	H	Peak	71.35	-31.49	39.86	43.50	-3.64
250.3011	H	Peak	69.22	-26.27	42.95	46.00	-3.05
375.9384	H	Peak	60.96	-21.90	39.06	46.00	-6.94
480.5276	H	Peak	62.34	-19.90	42.44	46.00	-3.56
801.7862	H	Peak	55.41	-13.58	41.83	46.00	-4.17

Notes:

1. Measuring frequencies from 30 MHz to the 1GHz and the IF bandwidth of SPA between 30MHz to 1GHz was 100kHz.
2. Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/Quasi-peak detector mode.
3. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

Above 1 GHz

■ Above 1GHz

Test mode:	802.11b	Test channel:	Lowest

Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4824.00	29.01	31.79	8.61	24.17	45.24	74.00	-28.76	Vertical
7236.00	29.39	36.19	11.68	26.52	50.74	74.00	-23.26	Vertical
9648.00	29.94	38.07	14.16	25.44	56.73	74.00	-17.27	Vertical
12060.00	*					74.00		Vertical
14472.00	*					74.00		Vertical
16884.00	*					74.00		Vertical
4824.00	26.93	31.81	8.62	24.17	43.19	74.00	-30.81	Horizontal
7236.00	27.98	36.19	11.68	26.52	49.33	74.00	-24.67	Horizontal
9648.00	28.29	38.07	14.16	25.44	55.08	74.00	-18.92	Horizontal
12060.00	*					74.00		Horizontal
14472.00	*					74.00		Horizontal
16884.00	*					74.00		Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4824.00	19.24	31.79	8.61	24.17	35.47	54.00	-18.53	Vertical
7236.00	20.15	36.19	11.68	26.52	41.50	54.00	-12.50	Vertical
9648.00	21.48	38.07	14.16	25.44	48.27	54.00	-5.73	Vertical
12060.00	*					54.00		Vertical
14472.00	*					54.00		Vertical
16884.00	*					54.00		Vertical
4824.00	21.43	31.81	8.62	24.17	37.69	54.00	-16.31	Horizontal
7236.00	21.78	36.19	11.68	26.52	43.13	54.00	-10.87	Horizontal
9648.00	17.19	38.07	14.16	25.44	43.98	54.00	-10.02	Horizontal
12060.00	*					54.00		Horizontal
14472.00	*					54.00		Horizontal
16884.00	*					54.00		Horizontal

Test mode:	802.11b	Test channel:	Middle

Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4874.00	29.63	31.85	8.66	24.12	46.02	74.00	-27.98	Vertical
7311.00	29.22	36.37	11.71	26.71	50.59	74.00	-23.41	Vertical
9748.00	30.93	38.27	14.25	25.38	58.07	74.00	-15.93	Vertical
12185.00	*					74.00		Vertical
14682.00	*					74.00		Vertical
17179.00	*					74.00		Vertical
4874.00	27.26	31.85	8.66	24.10	43.67	74.00	-30.33	Horizontal
7311.00	28.15	36.37	11.71	26.71	49.52	74.00	-24.48	Horizontal
9748.00	27.73	38.27	14.25	25.38	54.87	74.00	-19.13	Horizontal
12185.00	*					74.00		Horizontal
14682.00	*					74.00		Horizontal
17179.00	*					74.00		Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4874.00	20.13	31.85	8.66	24.12	36.52	54.00	-17.48	Vertical
7311.00	20.16	36.37	11.71	26.71	41.53	54.00	-12.47	Vertical
9748.00	21.35	38.27	14.25	25.38	48.49	54.00	-5.51	Vertical
12185.00	*					54.00		Vertical
14682.00	*					54.00		Vertical
17179.00	*					54.00		Vertical
4874.00	22.06	31.85	8.66	24.10	38.47	54.00	-15.53	Horizontal
7311.00	21.75	36.37	11.71	26.71	43.12	54.00	-10.88	Horizontal
9748.00	16.33	38.27	14.25	25.38	43.47	54.00	-10.53	Horizontal
12185.00	*					54.00		Horizontal
14682.00	*					54.00		Horizontal
17179.00	*					54.00		Horizontal

Test mode:	802.11b	Test channel:	Highest

Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4924.00	28.99	31.89	8.70	24.05	45.53	74.00	-28.47	Vertical
7386.00	29.36	36.49	11.76	26.90	50.71	74.00	-23.29	Vertical
9848.00	27.95	38.62	14.31	25.30	55.58	74.00	-18.42	Vertical
12310.00	*					74.00		Vertical
14772.00	*					74.00		Vertical
17234.00	*					74.00		Vertical
4924.00	27.70	31.89	8.70	24.05	44.24	74.00	-29.76	Horizontal
7386.00	28.07	36.49	11.76	26.90	49.42	74.00	-24.58	Horizontal
9848.00	27.41	38.62	14.31	25.30	55.04	74.00	-18.96	Horizontal
12310.00	*					74.00		Horizontal
14772.00	*					74.00		Horizontal
17234.00	*					74.00		Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4924.00	19.54	31.89	8.70	24.05	36.08	54.00	-17.92	Vertical
7386.00	20.34	36.49	11.76	26.90	41.69	54.00	-12.31	Vertical
9848.00	18.67	38.62	14.31	25.30	46.30	54.00	-7.70	Vertical
12310.00	*					54.00		Vertical
14772.00	*					54.00		Vertical
17234.00	*					54.00		Vertical
4924.00	22.10	31.89	8.70	24.05	38.64	54.00	-15.36	Horizontal
7386.00	21.27	36.49	11.76	26.90	42.62	54.00	-11.38	Horizontal
9848.00	15.11	38.62	14.31	25.30	42.74	54.00	-11.26	Horizontal
12310.00	*					54.00		Horizontal
14772.00	*					54.00		Horizontal
17234.00	*					54.00		Horizontal

Remark:

Test mode:	802.11g	Test channel:	lowest

Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4824.00	28.82	31.79	8.61	24.17	45.05	74.00	-28.95	Vertical
7236.00	28.47	36.19	11.68	26.52	49.82	74.00	-24.18	Vertical
9648.00	30.96	38.07	14.16	25.44	57.75	74.00	-16.25	Vertical
12060.00	*					74.00		Vertical
14472.00	*					74.00		Vertical
16884.00	*					74.00		Vertical
4824.00	28.23	31.81	8.62	24.17	44.49	74.00	-29.51	Horizontal
7236.00	29.50	36.19	11.68	26.52	50.85	74.00	-23.15	Horizontal
9648.00	28.17	38.07	14.16	25.44	54.96	74.00	-19.04	Horizontal
12060.00	*					74.00		Horizontal
14472.00	*					74.00		Horizontal
16884.00	*					74.00		Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4824.00	24.22	31.79	8.61	24.17	40.45	54.00	-13.55	Vertical
7236.00	22.07	36.19	11.68	26.52	43.42	54.00	-10.58	Vertical
9648.00	16.46	38.07	14.16	25.44	43.25	54.00	-10.75	Vertical
12060.00	*					54.00		Vertical
14472.00	*					54.00		Vertical
16884.00	*					54.00		Vertica
4824.00	24.03	31.81	8.62	24.17	40.29	54.00	-13.71	Horizontal
7236.00	22.80	36.19	11.68	26.52	44.15	54.00	-9.85	Horizontal
9648.00	16.97	38.07	14.16	25.44	43.76	54.00	-10.24	Horizontal
12060.00	*					54.00		Horizontal
14472.00	*					54.00		Horizontal
16884.00	*					54.00		Horizontal

Test mode:	802.11g	Test channel:	Middle

Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4874.00	29.35	31.79	8.61	24.17	45.58	74.00	-28.42	Vertical
7311.00	27.71	36.37	11.71	26.71	49.08	74.00	-24.92	Vertical
9748.00	28.16	38.27	14.25	25.38	55.30	74.00	-18.70	Vertical
12185.00	*					74.00		Vertical
14472.00	*					74.00		Vertical
16884.00	*					74.00		Vertical
4874.00	30.35	31.85	8.66	24.10	46.76	74.00	-27.24	Horizontal
7311.00	28.39	36.37	11.71	26.71	49.76	74.00	-24.24	Horizontal
9748.00	27.75	38.27	14.25	25.38	54.89	74.00	-19.11	Horizontal
12185.00	*					74.00		Horizontal
14472.00	*					74.00		Horizontal
16884.00	*					74.00		Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4874.00	24.65	31.79	8.61	24.17	40.88	54.00	-13.12	Vertical
7311.00	21.21	36.37	11.71	26.71	42.58	54.00	-11.42	Vertical
9748.00	14.76	38.27	14.25	25.38	41.90	54.00	-12.10	Vertical
12185.00	*					54.00		Vertical
14472.00	*					54.00		Vertical
16884.00	*					54.00		Vertical
4874.00	26.25	31.85	8.66	24.10	42.66	54.00	-11.34	Horizontal
7311.00	19.99	36.37	11.71	26.71	41.36	54.00	-12.64	Horizontal
9748.00	15.65	38.27	14.25	25.38	42.79	54.00	-11.21	Horizontal
12185.00	*					54.00		Horizontal
14472.00	*					54.00		Horizontal
16884.00	*					54.00		Horizontal

Test mode:	802.11g	Test channel:	Highest

Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4924.00	28.07	31.85	8.66	24.12	44.46	74.00	-29.54	Vertical
7386.00	27.76	36.49	11.76	26.90	49.11	74.00	-24.89	Vertical
9848.00	27.00	38.62	14.31	25.30	54.63	74.00	-19.37	Vertical
12310.00	*					74.00		Vertical
14772.00	*					74.00		Vertical
17234.00	*					74.00		Vertical
4924.00	29.07	31.89	8.70	24.05	45.61	74.00	-28.39	Horizontal
7386.00	29.62	36.49	11.76	26.90	50.97	74.00	-23.03	Horizontal
9848.00	28.47	38.62	14.31	25.30	56.10	74.00	-17.90	Horizontal
12310.00	*					74.00		Horizontal
14772.00	*					74.00		Horizontal
17234.00	*					74.00		Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4924.00	23.57	31.85	8.66	24.12	39.96	54.00	-14.04	Vertical
7386.00	21.06	36.49	11.76	26.90	42.41	54.00	-11.59	Vertical
9848.00	15.10	38.62	14.31	25.30	42.73	54.00	-11.27	Vertical
12310.00	*					54.00		Vertical
14772.00	*					54.00		Vertical
17234.00	*					54.00		Vertical
4924.00	24.57	31.89	8.70	24.05	41.11	54.00	-12.89	Horizontal
7386.00	20.72	36.49	11.76	26.90	42.07	54.00	-11.93	Horizontal
9848.00	15.07	38.62	14.31	25.30	42.70	54.00	-11.30	Horizontal
12310.00	*					54.00		Horizontal
14772.00	*					54.00		Horizontal
17234.00	*					54.00		Horizontal

Test mode:	802.11n(HT20)	Test channel:	Lowest

Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4824.00	29.17	31.81	8.62	24.17	45.43	74.00	-28.57	Vertical
7236.00	28.92	36.19	11.68	26.52	50.27	74.00	-23.73	Vertical
9648.00	29.08	38.07	14.16	25.44	55.87	74.00	-18.13	Vertical
12060.00	*					74.00		Vertical
14472.00	*					74.00		Vertical
16884.00	*					74.00		Vertical
4824.00	26.83	31.81	8.62	24.17	43.09	74.00	-30.91	Horizontal
7236.00	27.33	36.19	11.68	26.52	48.68	74.00	-25.32	Horizontal
9648.00	27.18	38.07	14.16	25.44	53.97	74.00	-20.03	Horizontal
12060.00	*					74.00		Horizontal
14472.00	*					74.00		Horizontal
16884.00	*					74.00		Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4824.00	25.07	31.81	8.62	24.17	41.33	54.00	-12.67	Vertical
7236.00	21.02	36.19	11.68	26.52	42.37	54.00	-11.63	Vertical
9648.00	16.68	38.07	14.16	25.44	43.47	54.00	-10.53	Vertical
12060.00	*					54.00		Vertical
14472.00	*					54.00		Vertical
16884.00	*					54.00		Vertical
4824.00	26.83	31.81	8.62	24.17	43.09	54.00	-10.91	Horizontal
7236.00	21.10	36.19	11.68	26.52	42.45	54.00	-11.55	Horizontal
9648.00	17.48	38.07	14.16	25.44	44.27	54.00	-9.73	Horizontal
12060.00	*					54.00		Horizontal
14472.00	*					54.00		Horizontal
16884.00	*					54.00		Horizontal

Test mode:	802.11n(HT20)	Test channel:	Middle

Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4874.00	30.30	31.85	8.66	24.10	46.71	74.00	-27.29	Vertical
7311.00	28.54	36.37	11.71	26.71	49.91	74.00	-24.09	Vertical
9748.00	28.67	38.27	14.25	25.38	55.81	74.00	-18.19	Vertical
12185.00	*					74.00		Vertical
14682.00	*					74.00		Vertical
17179.00	*					74.00		Vertical
4874.00	28.63	31.85	8.66	24.10	45.04	74.00	-28.96	Horizontal
7311.00	27.79	36.37	11.71	26.71	49.16	74.00	-24.84	Horizontal
9748.00	28.46	38.27	14.25	25.38	55.60	74.00	-18.40	Horizontal
12185.00	*					74.00		Horizontal
14682.00	*					74.00		Horizontal
17179.00	*					74.00		Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4874.00	26.30	31.85	8.66	24.10	42.71	54.00	-11.29	Vertical
7311.00	21.74	36.37	11.71	26.71	43.11	54.00	-10.89	Vertical
9748.00	15.27	38.27	14.25	25.38	42.41	54.00	-11.59	Vertical
12185.00	*					54.00		Vertical
14682.00	*					54.00		Vertical
17179.00	*					54.00		Vertical
4874.00	26.14	31.85	8.66	24.10	42.55	54.00	-11.45	Horizontal
7311.00	20.36	36.37	11.71	26.71	41.73	54.00	-12.27	Horizontal
9748.00	17.68	38.27	14.25	25.38	44.82	54.00	-9.18	Horizontal
12185.00	*					54.00		Horizontal
14682.00	*					54.00		Horizontal
17179.00	*					54.00		Horizontal

Test mode:	802.11n(HT20)	Test channel:	Highest

Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4924.00	28.96	31.89	8.70	24.05	45.50	74.00	-28.50	Vertical
7386.00	28.20	36.49	11.76	26.90	49.55	74.00	-24.45	Vertical
9848.00	28.03	38.62	14.31	25.30	55.66	74.00	-18.34	Vertical
12310.00	*					74.00		Vertical
14772.00	*					74.00		Vertical
17234.00	*					74.00		Vertical
4924.00	28.29	31.89	8.70	24.05	44.83	74.00	-29.17	Horizontal
7386.00	28.08	36.49	11.76	26.90	49.43	74.00	-24.57	Horizontal
9848.00	27.79	38.62	14.31	25.30	55.42	74.00	-18.58	Horizontal
12310.00	*					74.00		Horizontal
14772.00	*					74.00		Horizontal
17234.00	*					74.00		Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4924.00	25.56	31.89	8.70	24.05	42.10	54.00	-11.90	Vertical
7386.00	21.50	36.49	11.76	26.90	42.85	54.00	-11.15	Vertical
9848.00	14.63	38.62	14.31	25.30	42.26	54.00	-11.74	Vertical
12310.00	*					54.00		Vertical
14772.00	*					54.00		Vertical
17234.00	*					54.00		Vertical
4924.00	25.47	31.89	8.70	24.05	42.01	54.00	-11.99	Horizontal
7386.00	22.54	36.49	11.76	26.90	43.89	54.00	-10.11	Horizontal
9848.00	16.87	38.62	14.31	25.30	44.50	54.00	-9.50	Horizontal
12310.00	*					54.00		Horizontal
14772.00	*					54.00		Horizontal
17234.00	*					54.00		Horizontal

Test mode:	802.11n(HT40)	Test channel:	Lowest

Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4844.00	28.91	31.82	8.63	24.15	45.21	74.00	-28.79	Vertical
7266.00	29.98	36.28	11.69	26.58	51.37	74.00	-22.63	Vertical
9688.00	29.97	38.13	14.21	25.41	56.90	74.00	-17.10	Vertical
12060.00	*					74.00		Vertical
14472.00	*					74.00		Vertical
16884.00	*					74.00		Vertical
4844.00	28.95	31.82	8.63	24.15	45.25	74.00	-28.75	Horizontal
7266.00	29.79	36.28	11.69	26.58	51.18	74.00	-22.82	Horizontal
9688.00	30.11	38.13	14.21	25.41	57.04	74.00	-16.96	Horizontal
12060.00	*					74.00		Horizontal
14472.00	*					74.00		Horizontal
16884.00	*					74.00		Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4844.00	24.41	31.82	8.63	24.15	40.71	54.00	-13.29	Vertical
7266.00	20.28	36.28	11.69	26.58	41.67	54.00	-12.33	Vertical
9688.00	16.57	38.13	14.21	25.41	43.50	54.00	-10.50	Vertical
12060.00	*					54.00		Vertical
14472.00	*					54.00		Vertical
16884.00	*					54.00		Vertical
4844.00	24.45	31.82	8.63	24.15	40.75	54.00	-13.25	Horizontal
7266.00	20.89	36.28	11.69	26.58	42.28	54.00	-11.72	Horizontal
9688.00	16.21	38.13	14.21	25.41	43.14	54.00	-10.86	Horizontal
12060.00	*					54.00		Horizontal
14472.00	*					54.00		Horizontal
16884.00	*					54.00		Horizontal

Test mode:	802.11n(HT40)	Test channel:	Middle

Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4874.00	30.30	31.85	8.66	24.10	46.71	74.00	-27.29	Vertical
7311.00	28.54	36.37	11.71	26.71	49.91	74.00	-24.09	Vertical
9748.00	28.67	38.27	14.25	25.38	55.81	74.00	-18.19	Vertical
12185.00	*					74.00		Vertical
14682.00	*					74.00		Vertical
17179.00	*					74.00		Vertical
4874.00	30.46	31.85	8.66	24.10	46.87	74.00	-27.13	Horizontal
7311.00	29.56	36.37	11.71	26.71	50.93	74.00	-23.07	Horizontal
9748.00	29.26	38.27	14.25	25.38	56.40	74.00	-17.60	Horizontal
12185.00	*					74.00		Horizontal
14682.00	*					74.00		Horizontal
17179.00	*					74.00		Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4874.00	26.10	31.85	8.66	24.10	42.51	54.00	-11.49	Vertical
7311.00	21.84	36.37	11.71	26.71	43.21	54.00	-10.79	Vertical
9748.00	16.97	38.27	14.25	25.38	44.11	54.00	-9.89	Vertical
12185.00	*					54.00		Vertical
14682.00	*					54.00		Vertical
17179.00	*					54.00		Vertical
4874.00	25.06	31.85	8.66	24.10	41.47	54.00	-12.53	Horizontal
7311.00	21.16	36.37	11.71	26.71	42.53	54.00	-11.47	Horizontal
9748.00	15.06	38.27	14.25	25.38	42.20	54.00	-11.80	Horizontal
12185.00	*					54.00		Horizontal
14682.00	*					54.00		Horizontal
17179.00	*					54.00		Horizontal

Test mode:	802.11n(HT40)	Test channel:	Highest

Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4904.00	28.15	31.88	8.68	24.08	44.63	74.00	-29.37	Vertical
7356.00	28.56	36.45	11.74	26.84	49.91	74.00	-24.09	Vertical
9808.00	28.80	38.52	14.29	25.33	56.28	74.00	-17.72	Vertical
12310.00	*					74.00		Vertical
14772.00	*					74.00		Vertical
17234.00	*					74.00		Vertical
4904.00	29.10	31.88	8.68	24.08	45.58	74.00	-28.42	Horizontal
7356.00	28.66	36.45	11.74	26.84	50.01	74.00	-23.99	Horizontal
9808.00	29.16	38.52	14.29	25.33	56.64	74.00	-17.36	Horizontal
12310.00	*					74.00		Horizontal
14772.00	*					74.00		Horizontal
17234.00	*					74.00		Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4904.00	24.55	31.88	8.68	24.08	41.03	54.00	-12.97	Vertical
7356.00	22.06	36.45	11.74	26.84	43.41	54.00	-10.59	Vertical
9808.00	15.60	38.52	14.29	25.33	43.08	54.00	-10.92	Vertical
12310.00	*					54.00		Vertical
14772.00	*					54.00		Vertical
17234.00	*					54.00		Vertical
4904.00	24.80	31.88	8.68	24.08	41.28	54.00	-12.72	Horizontal
7356.00	19.56	36.45	11.74	26.84	40.91	54.00	-13.09	Horizontal
9808.00	16.86	38.52	14.29	25.33	44.34	54.00	-9.66	Horizontal
12310.00	*					54.00		Horizontal
14772.00	*					54.00		Horizontal
17234.00	*					54.00		Horizontal

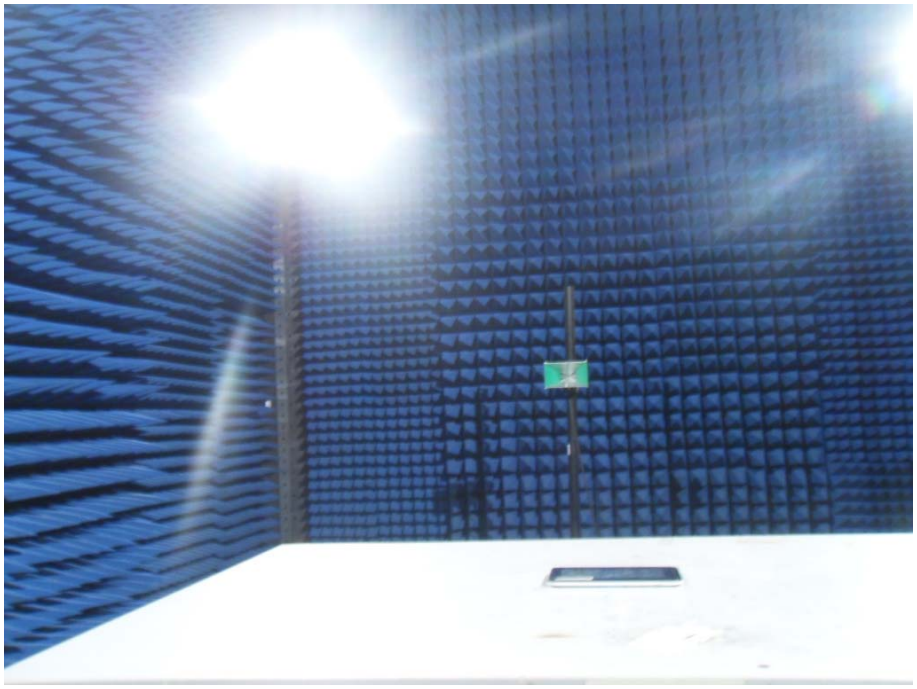
6. PHOTOGRAPH

6.1. Photo of Conducted Emission Measurement

6.2. Photo of Radiation Emission Test

Below 1G

Above 1G



Appendix Ⅰ (External Photos)

Figure 1
The EUT-Overall View

Figure 2
The EUT-Back View

Figure 3
The EUT-Side View

Figure 4
The EUT-Side View

Appendix Ⅱ (Internal Photos)

Figure 5
The EUT-Inside View

Figure 6
PCB of the EUT-Front View

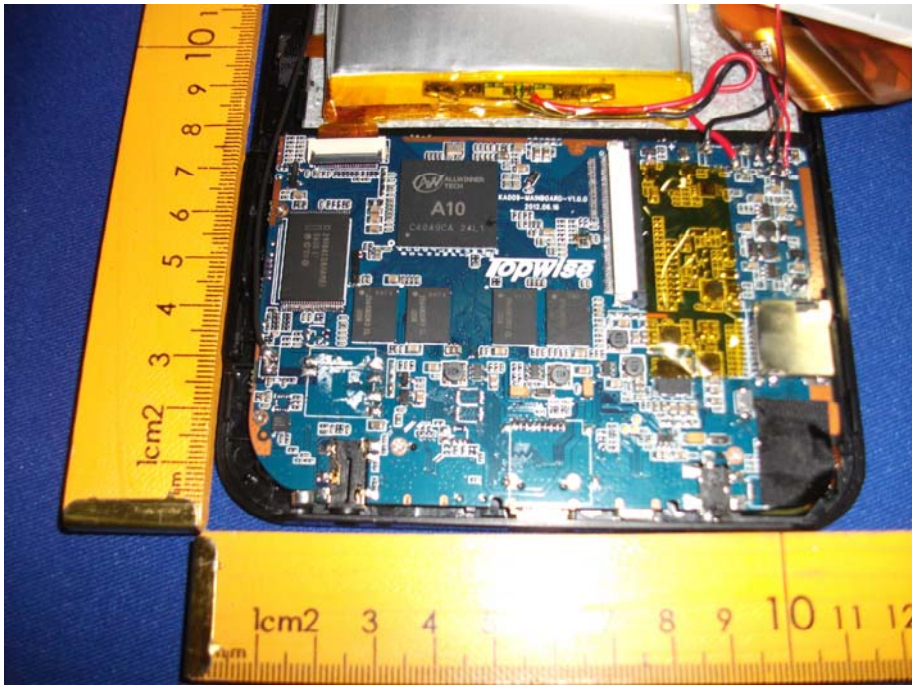


Figure 7
PCB of the EUT-Back View

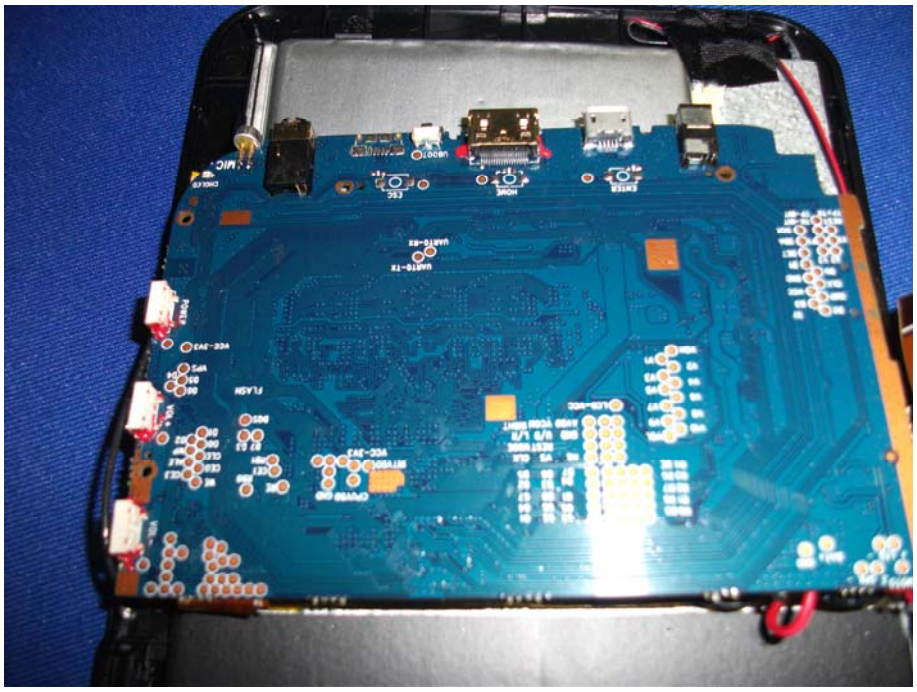


Figure 8
PCB of the WIFI Moudel FrontView

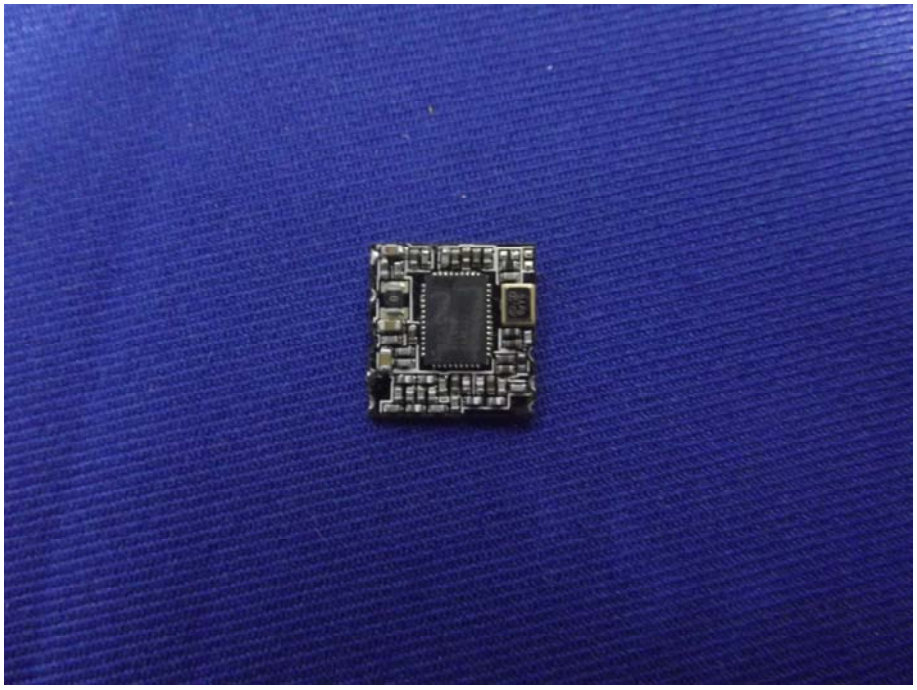


Figure 9
PCB of the WIFI Moudel Back View