

FCC TEST REPORT
for
Flyspeed Technology Limited

WiFi Multimedia Dongle
Model No.: Fly Air Colorful dongle, Fly Air S1

Prepared for : Flyspeed Technology Limited
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Report Number : R011405309E
Date of Test : May 27~ Jun. 15, 2014
Date of Report : Jul. 07, 2014

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Appendix I (3 Pages)

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TEST REPORT

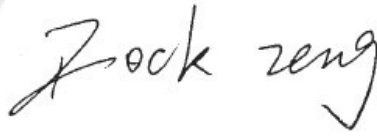
Applicant : Flyspeed Technology Limited
Manufacturer : Flyspeed Technology Limited
EUT : WiFi Multimedia Dongle
Model No. : Fly Air Colorful dongle, Fly Air S1
Serial No. : N.A.
Trade Mark : Flyspeed
Rating : DC 5V

Measurement Procedure Used:
FCC Part15 Subpart C, Paragraph 15.247

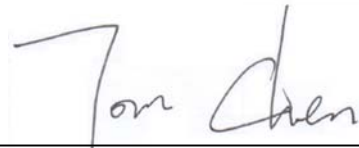
The device described above is tested by Shenzhen Anbotek Compliance Laboratory Limited to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and Shenzhen 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 Shenzhen Anbotek Compliance Laboratory Limited.

Date of Test : May 27~ Jun. 15, 2014

Prepared by : 
(Tested Engineer / Rock Zeng)

Reviewer : 
(Project Manager / Amy Ding)

Approved & Authorized Signer : 
(Manager / Tom Chen)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT	: WiFi Multimedia Dongle
Model Number	: Fly Air Colorful dongle, Fly Air S1
	(Note: All samples are the same except the model number and appearance, so we prepare "Fly Air Colorful dongle" for EMC test only.)
Test Power Supply	: DC 5V via USB Port
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))
Modulation	: 802.11b CCK 802.11g OFDM 802.11n MCS
Antenna Gain:	: 0dBi
Applicant Address	: Flyspeed Technology Limited Room 602, 6/F., No.168 Queen's Road, Central, Hong Kong
Manufacturer Address	: Flyspeed Technology Limited Room 602, 6/F., No.168 Queen's Road, Central, Hong Kong
Factory Address	: Flyspeed Technology Limited Rm.515, 5F., 202 Building East, Tairan Industrial Park, Futian District, Shenzhen, Guangdong, China
Date of receipt	: May 27, 2014
Date of Test	: May 27~ Jun. 15, 2014

1.2. Auxiliary Equipment Used during Test

TV	: Manufacturer: SONY M/N: KDL-26EX550 S/N: 1012240 CE , FCC
Adapter	: Power Supply Model:MX12L3-0502000V Input: AC 100-240V, 50-60Hz, 0.35A Output: DC 5V, 2A CE , FCC

1.3. Description of Test Facility

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

CNAS - LAB Code: L3503

Shenzhen 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

Shenzhen Anbotek Compliance Laboratory Limited, 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 752021, July 10, 2013.

IC-Registration No.: 8058A-1

Shenzhen 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, February 22, 2013.

Test Location

All Emissions tests were performed at
Shenzhen Anbotek Compliance Laboratory Limited. at 1/F., Building 1, SEC Industrial Park, No.0409 Qianhai Road, Nanshan District, Shenzhen, Guangdong, China

1.4. Measurement Uncertainty

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

2. TEST METHODOLOGY

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

2.1. 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

2.2. 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 is programmed.

IEEE802.11b: Channel 1(2412MHz), Channel 6(2437MHz) and Channel 11(2462MHz) with 1 Mbps lowest data rate (worst case) are chosen for the final testing.

IEEE802.11g: Channel 1(2412MHz), Channel 6(2437MHz) and Channel 11(2462MHz) with 6 Mbps lowest 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 MCS 0 Mbps lowest 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 MCS 0 Mbps lowest data rate (the worst case) are chosen for the final testing.

2.3. List of channels:

√ - available

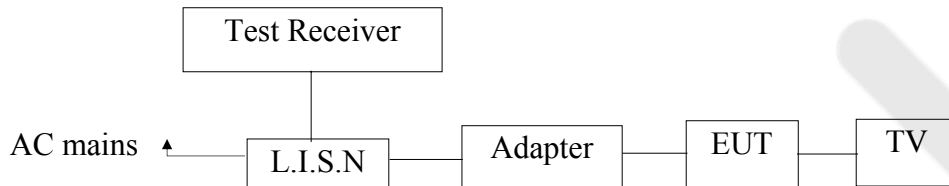
X - tested

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	

3. Conducted Emission Test

3.1. Block Diagram of Test Setup

3.1.1. Block diagram of connection between the EUT and simulators



3.2. 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.

3.3. 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.

3.4. Operating Condition of EUT

- 3.4.1. Setup the EUT and simulator as shown as Section 3.1.
- 3.4.2. Turn on the power of all equipment.
- 3.4.3. Let the EUT work in test mode (On) and measure it.

3.5. 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 3.6.

3.6. Test equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Two-Line V-network	Rohde & Schwarz	ENV216	100055	Apr. 23, 2014	1 Year
2.	EMI Test Receiver	Rohde & Schwarz	ESCI	100627	Apr. 23, 2014	1 Year
3.	RF Switching Unit	Compliance Direction	RSU-M2	38303	Apr. 23, 2014	1 Year

3.7. Power Line Conducted Emission Measurement Results

PASS.

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

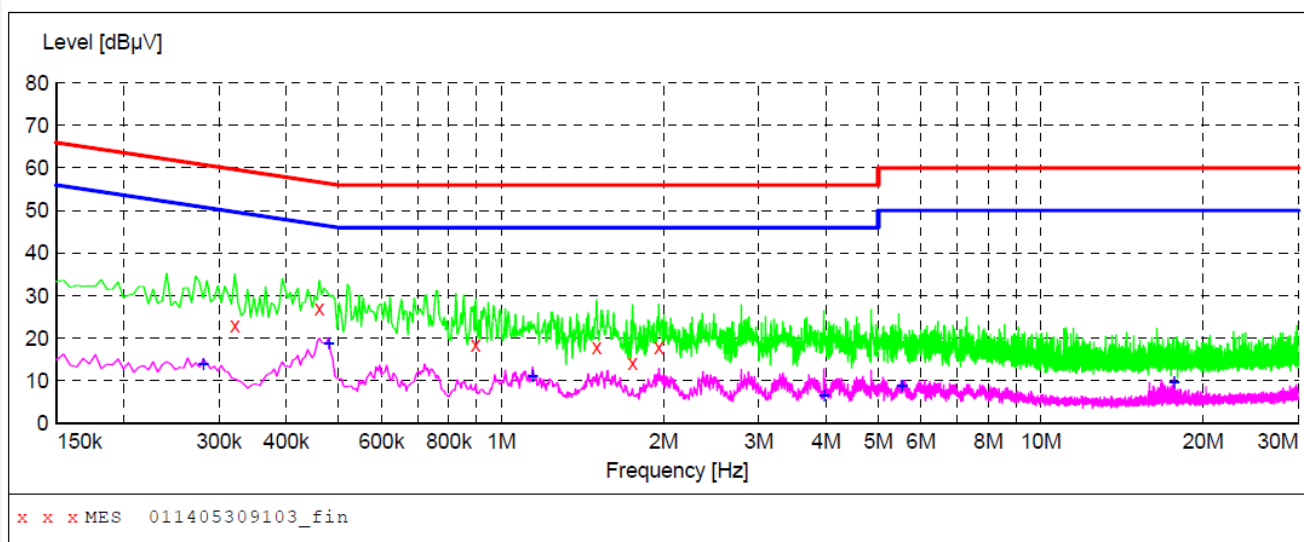
Please refer the following pages.

CONDUCTED EMISSION TEST DATA

Test Site: 1# Shielded Room
Operating Condition: On
Test Specification: DC 5V via USB Port
Comment: Live Line
Tem:25°C Hum:50%

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

Short Description: 150K-30M Disturbance Voltages



MEASUREMENT RESULT: "011405309103_fin"

5/28/2014 8:40PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.321000	22.90	20.1	60	36.8	QP	L1	GND
0.460500	27.10	20.1	57	29.6	QP	L1	GND
0.897000	18.50	20.1	56	37.5	QP	L1	GND
1.504000	17.90	20.3	56	38.1	QP	L1	GND
1.751500	14.30	20.3	56	41.7	QP	L1	GND
1.958500	18.00	20.3	56	38.0	QP	L1	GND

MEASUREMENT RESULT: "011405309103_fin2"

5/28/2014 8:40PM

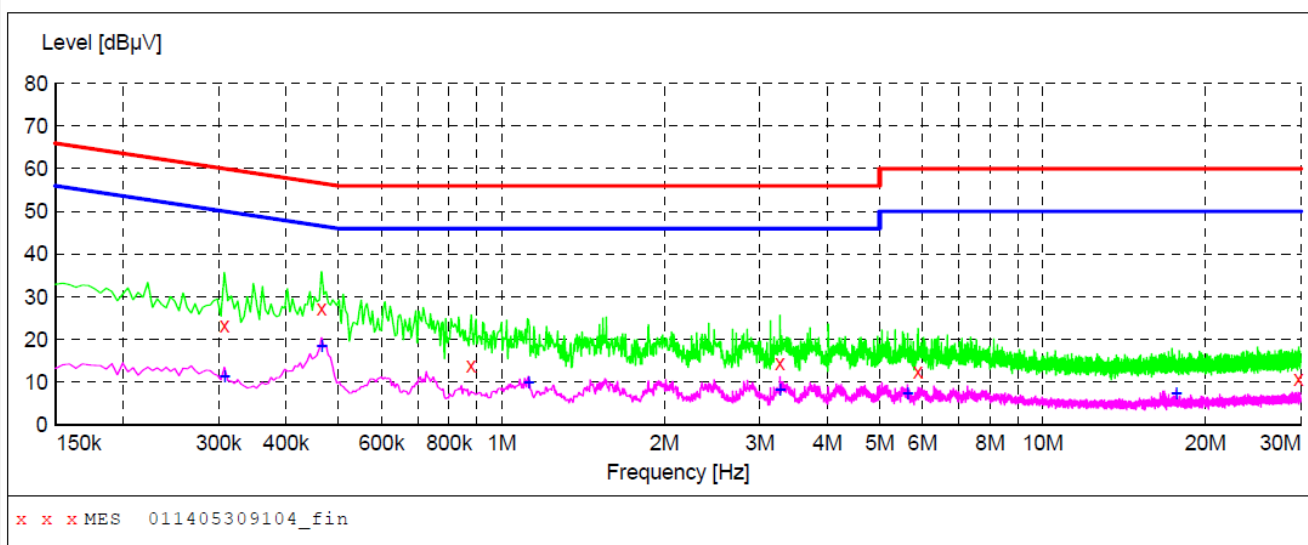
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.280500	13.80	20.1	51	37.0	AV	L1	GND
0.478500	18.80	20.1	46	27.6	AV	L1	GND
1.144000	11.10	20.2	46	34.9	AV	L1	GND
3.965500	6.60	20.4	46	39.4	AV	L1	GND
5.527000	8.90	20.5	50	41.1	AV	L1	GND
17.650000	9.70	20.8	50	40.3	AV	L1	GND

CONDUCTED EMISSION TEST DATA

Test Site: 1# Shielded Room
Operating Condition: On
Test Specification: DC 5V via USB Port
Comment: Neutral Line
Tem:25°C Hum:50%

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

Short Description: 150K-30M Disturbance Voltages



MEASUREMENT RESULT: "011405309104_fin"

5/28/2014 8:43PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.307500	23.40	20.1	60	36.6	QP	N	GND
0.465000	27.20	20.1	57	29.4	QP	N	GND
0.879000	14.00	20.1	56	42.0	QP	N	GND
3.272500	14.40	20.4	56	41.6	QP	N	GND
5.887000	12.40	20.5	60	47.6	QP	N	GND
29.768500	10.80	20.9	60	49.2	QP	N	GND

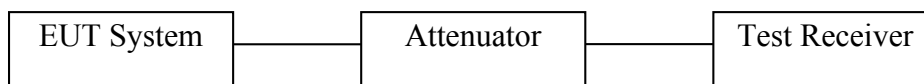
MEASUREMENT RESULT: "011405309104_fin2"

5/28/2014 8:43PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.307500	11.30	20.1	50	38.7	AV	N	GND
0.465000	18.60	20.1	47	28.0	AV	N	GND
1.121500	9.90	20.2	46	36.1	AV	N	GND
3.272500	8.30	20.4	46	37.7	AV	N	GND
5.626000	7.40	20.5	50	42.6	AV	N	GND
17.650000	7.30	20.8	50	42.7	AV	N	GND

4. FCC Part 15.247 Requirements for DSSS & OFDM Modulation

4.1 Test Setup



4.2 6dB Bandwidth

a. Limit

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 = 100kHz, VBW $\geq$ 3*RBW = 300kHz,
Detector= Peak
Trace mode= Max hold.
Sweep- auto couple.
4. Mark the peak frequency and -6dB (upper and lower) frequency.
5. Repeat until all the rest channels are investigated.

c. Test Setup See 4.1

d. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analysis	Agilent	E4407B	US39390582	Aug. 09, 2013	1 Year
2.	Preamplifier	Instruments corporation	EMC011830	980100	Aug. 09, 2013	1 Year
3.	EMI Test Receiver	Rohde & Schwarz	ESPI	101604	Apr. 23, 2014	1 Year
4.	Double Ridged Horn Antenna	Instruments corporation	GTH-0118	351600	Aug. 09, 2013	3 Year
5.	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	9.988	>500	Pass
Mid	2437	10.076		Pass
High	2462	10.076		Pass

Test mode: IEEE 802.11g

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Results
Low	2412	16.456	>500	Pass
Mid	2437	16.588		Pass
High	2462	16.588		Pass

Test mode: IEEE 802.11n (HT20)

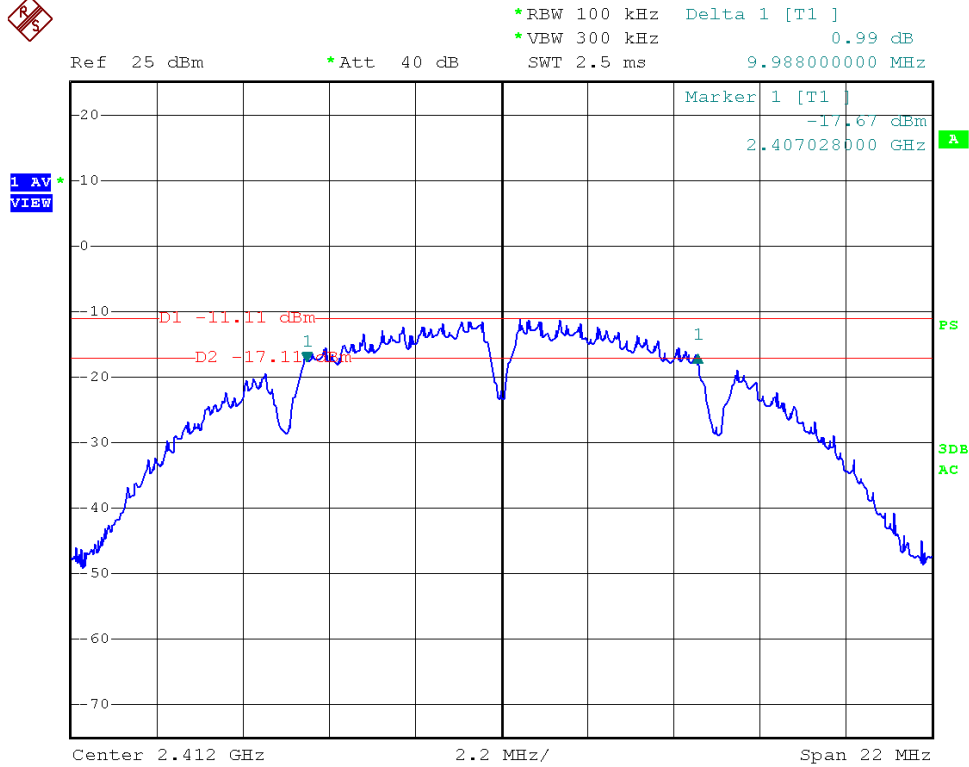
Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Results
Low	2412	17.820	>500	Pass
Mid	2437	17.820		Pass
High	2462	17.776		Pass

Test mode: IEEE 802.11n (HT40)

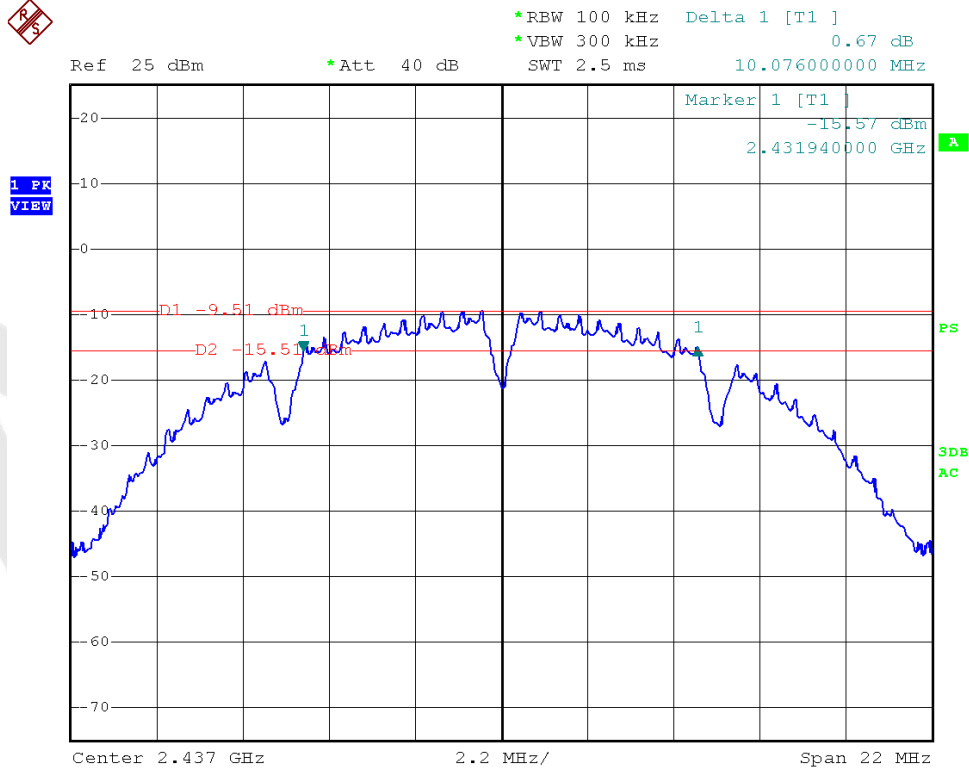
Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Results
Low	2422	35.364	>500	Pass
Mid	2437	36.456		Pass
High	2452	36.540		Pass

Test Plots See the following page.

Test Mode: 802.11b---Low



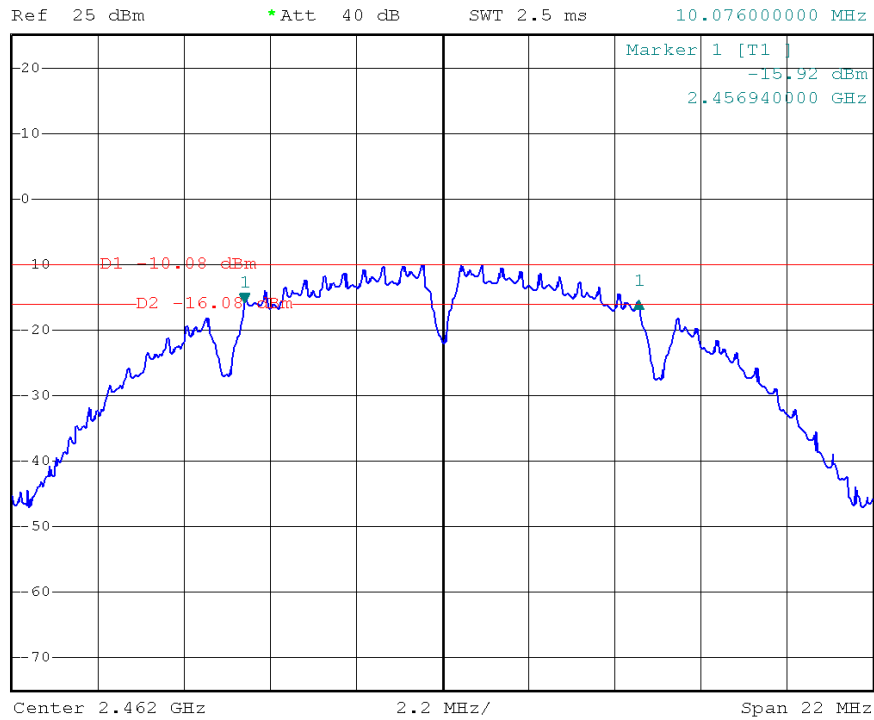
Test Mode: 802.11b---Mid



Test Mode: 802.11b---High



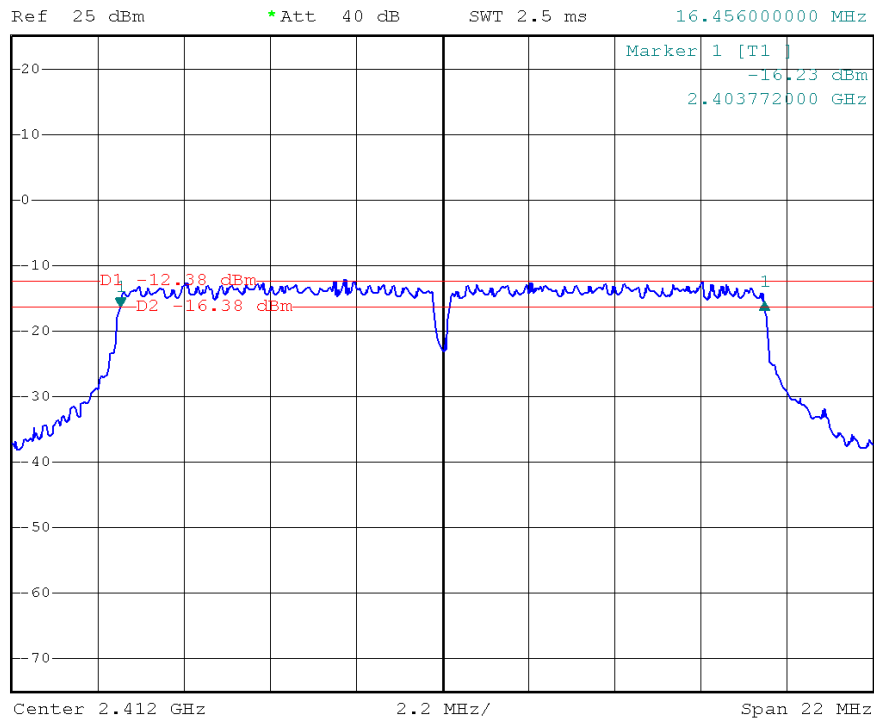
*RBW 100 kHz Delta 1 [T1]
*VBW 300 kHz 0.40 dB
SWT 2.5 ms 10.076000000 MHz



Test Mode: 802.11g---Low



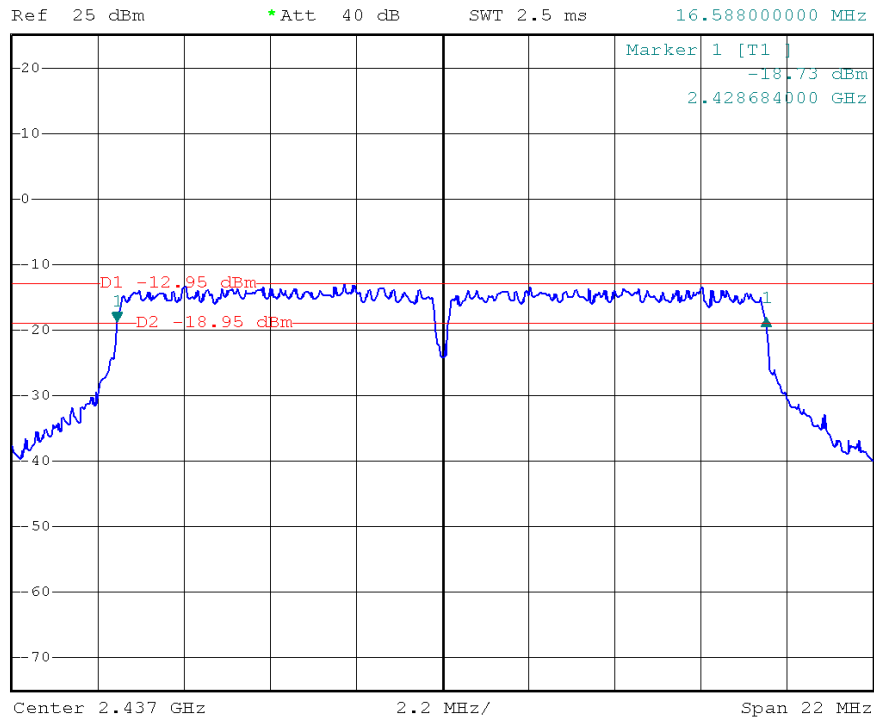
*RBW 100 kHz Delta 1 [T1]
*VBW 300 kHz 0.74 dB
SWT 2.5 ms 16.456000000 MHz



Test Mode: 802.11g---Mid



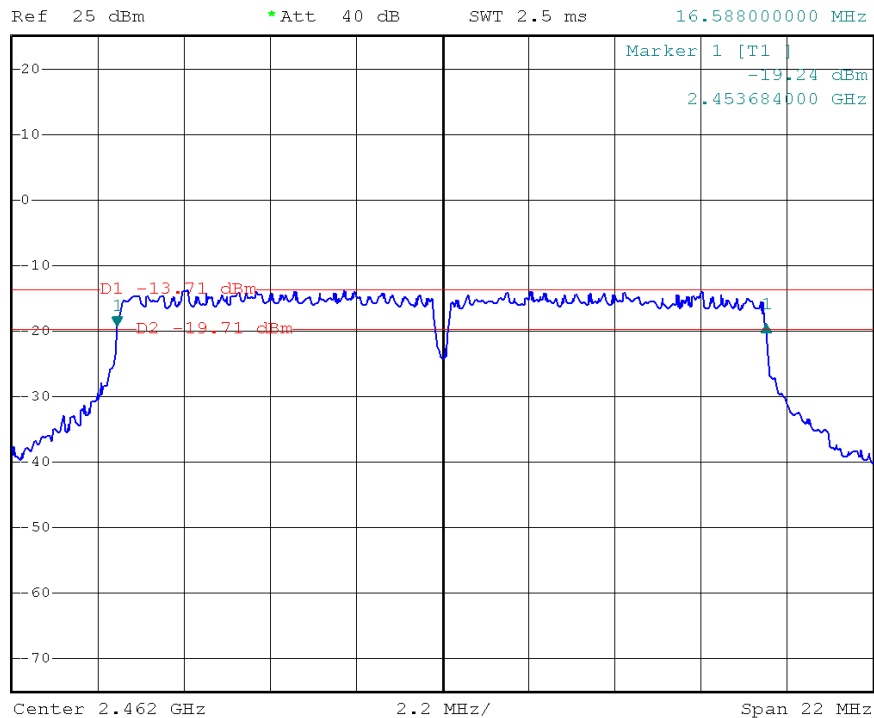
*RBW 100 kHz Delta 1 [T1]
*VBW 300 kHz 0.52 dB
SWT 2.5 ms 16.588000000 MHz



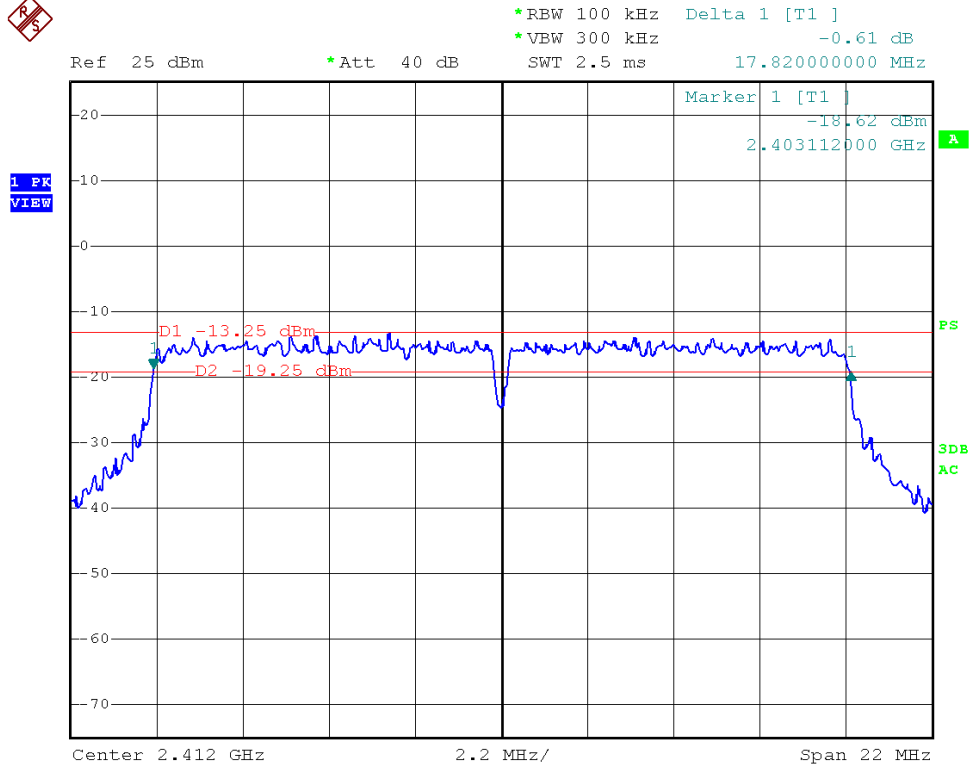
Test Mode: 802.11g---High



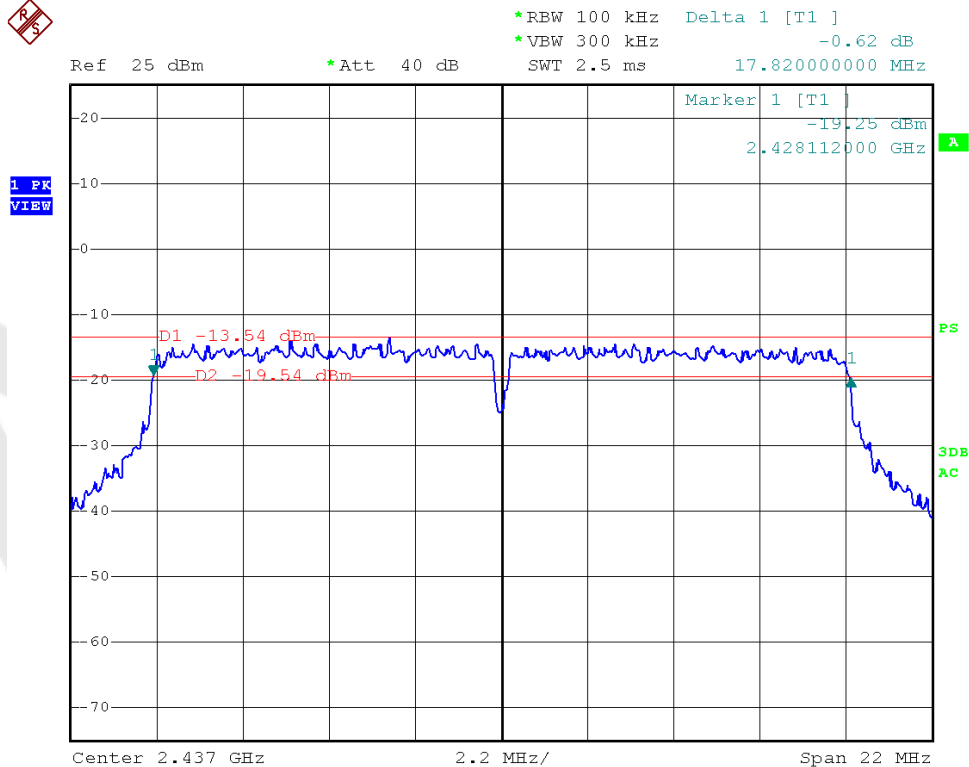
*RBW 100 kHz Delta 1 [T1]
*VBW 300 kHz 0.39 dB
SWT 2.5 ms 16.588000000 MHz



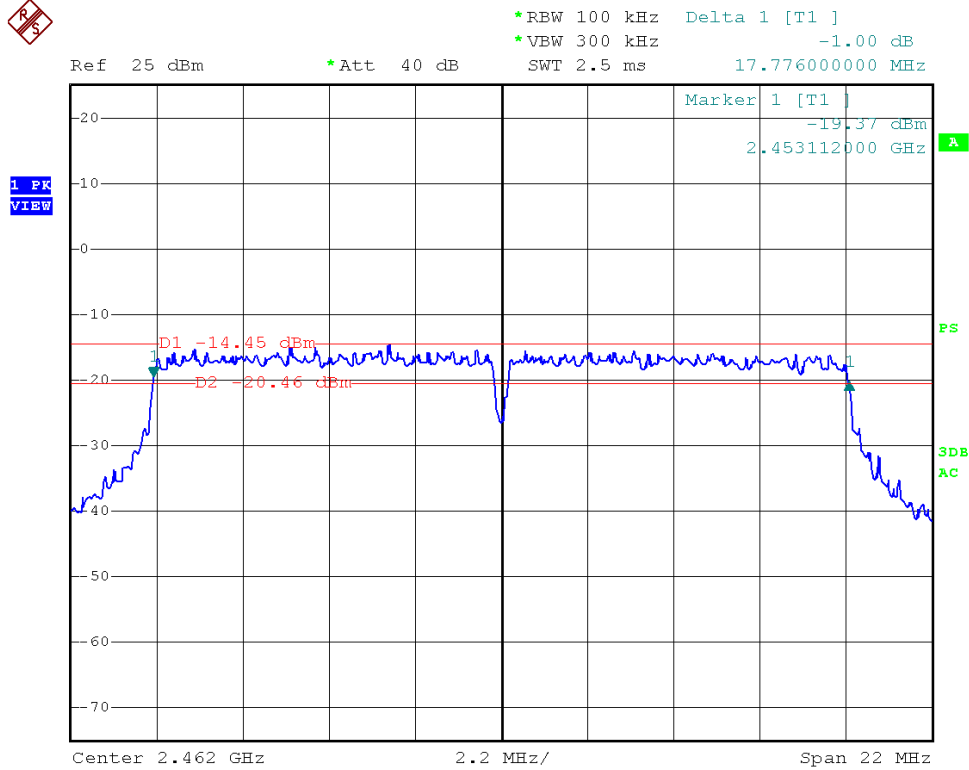
Test Mode: 802.11n (HT20)---Low



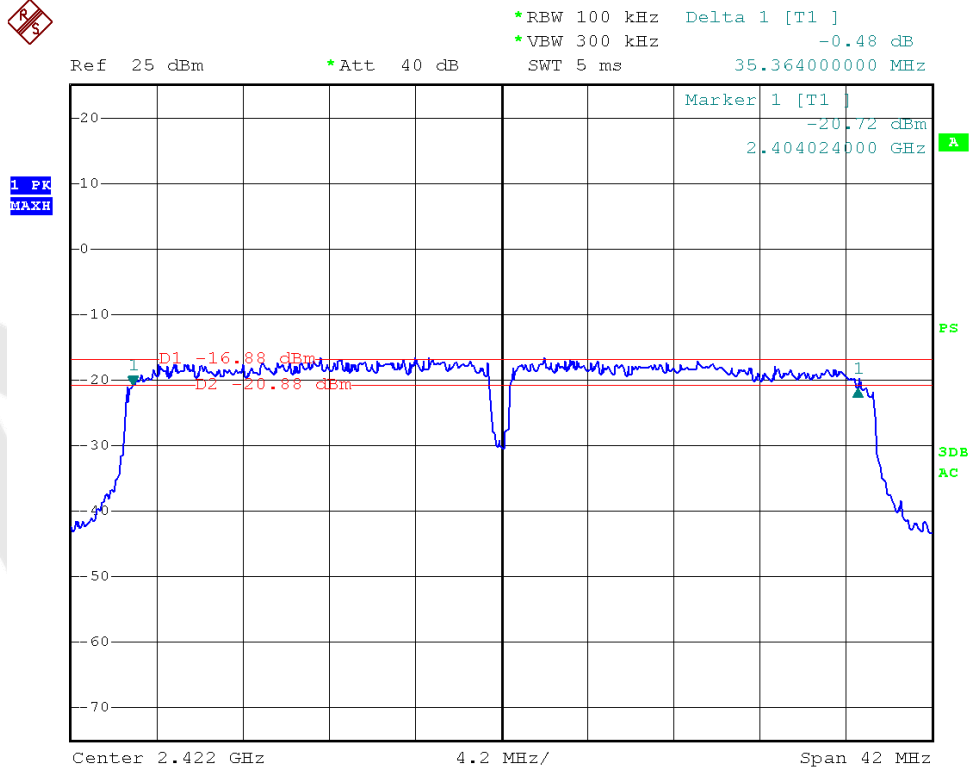
Test Mode: 802.11n (HT20)---Mid



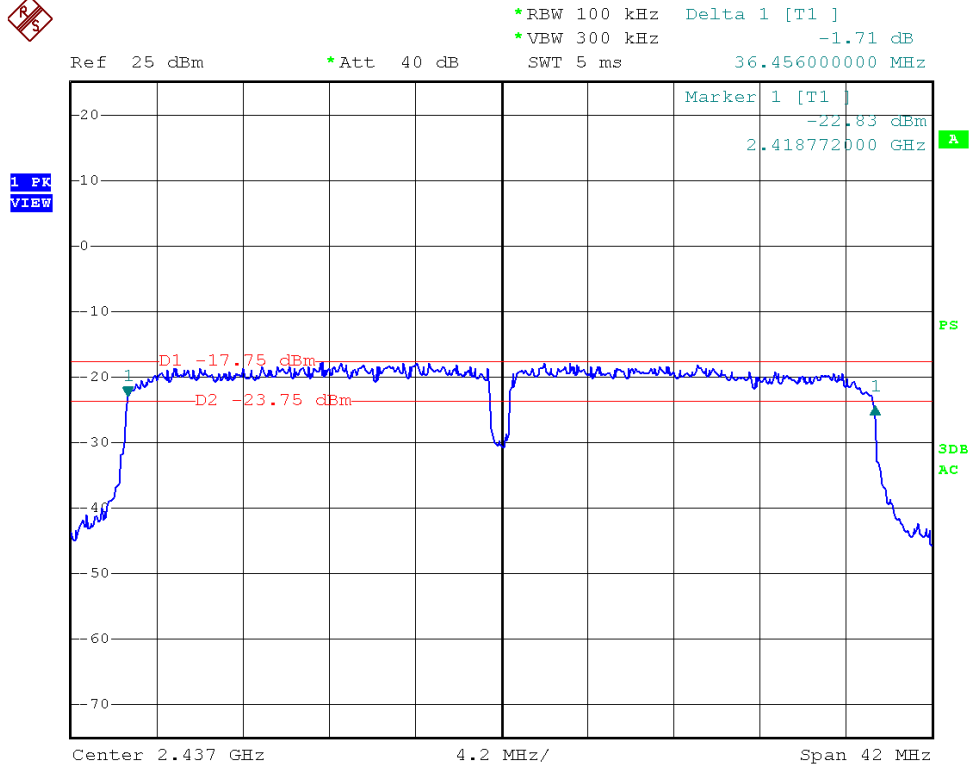
Test Mode: 802.11n (HT20)---High



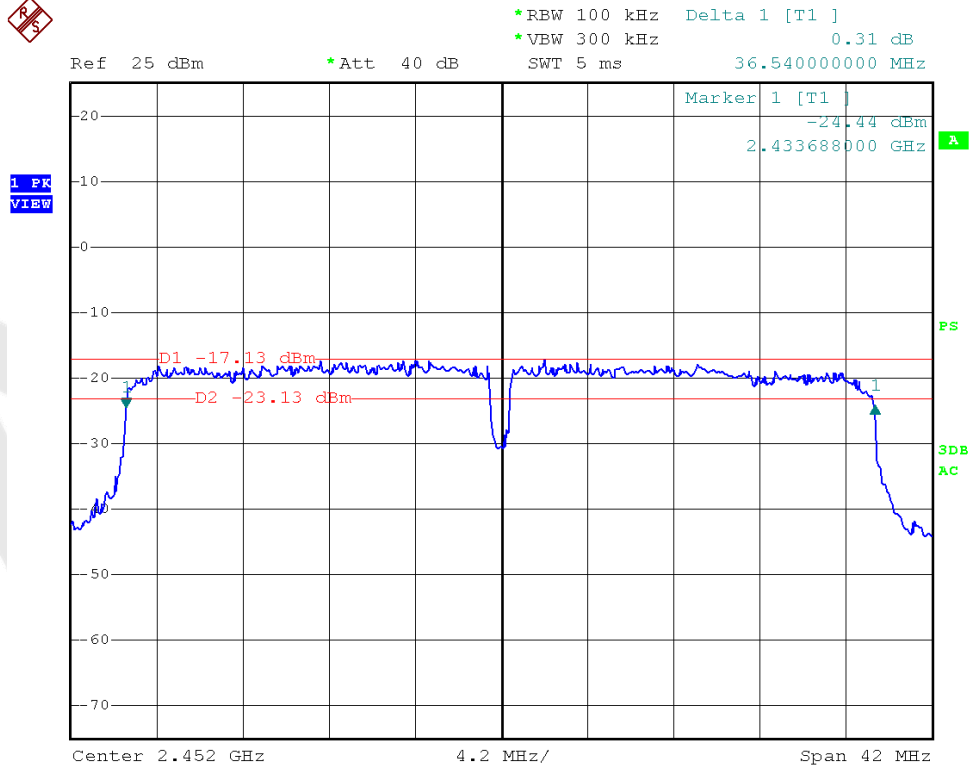
Test Mode: 802.11n (HT40)---Low



Test Mode: 802.11n (HT40)---Mid



Test Mode: 802.11n (HT40)---High



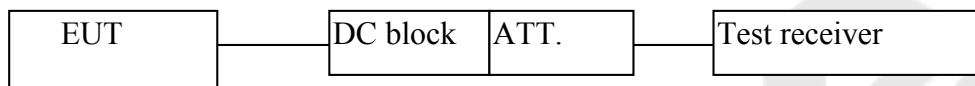
4.3. Maximum Peak output power test

a. Limit

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 1 Mbps data rate (worst case) are chosen for the final testing.

IEEE802.11g: Channel 1(2412MHz), Channel 6(2437MHz) and Channel 11(2462MHz) with 6 Mbps 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 6.5Mbps 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 13.5Mbps data rate (the worst case) are chosen for the final testing.

d. Test Procedure

This test was according the kDB 558074 9.1.2:

1. This procedure may be used when the maximum available RBW of the measurement instrument is less than the DTS bandwidth.
2. Set the RBW = 1 MHz.
3. Set the VBW $\geq 3 \times \text{RBW} = 3 \text{ MHz}$.
4. Set the span $\geq 1.5 \times \text{DTS bandwidth}$.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the instrument's band/channel power measurement function with the band limits set equal to the DTS bandwidth edges (for some instruments, this may require a manual override to select peak detector). If the instrument does not have a band power function, sum the spectrum levels (in linear power units) at intervals equal to the RBW extending across the DTS bandwidth.

e. Test Equipment

Same as the equipment listed in 4.2.

f. Test Results

Pass.

g. Test Data

Test mode: IEEE 802.11b

Channel	Frequency (MHz)	Maximum transmit power	Limit		Result
		(dBm)	(dBm)	(watts)	
Low	2412	9.04	30	1	Pass
Mid	2437	8.41			Pass
High	2462	7.43			Pass

Test mode: IEEE 802.11g

Channel	Frequency (MHz)	Maximum transmit power	Limit		Result
		(dBm)	(dBm)	(watts)	
Low	2412	9.20	30	1	Pass
Mid	2437	8.89			Pass
High	2462	8.07			Pass

Test mode: IEEE 802.11n (HT20)

Channel	Frequency (MHz)	Maximum transmit power	Limit		Result
		(dBm)	(dBm)	(watts)	
Low	2412	8.32	30	1	Pass
Mid	2437	8.08			Pass
High	2462	7.53			Pass

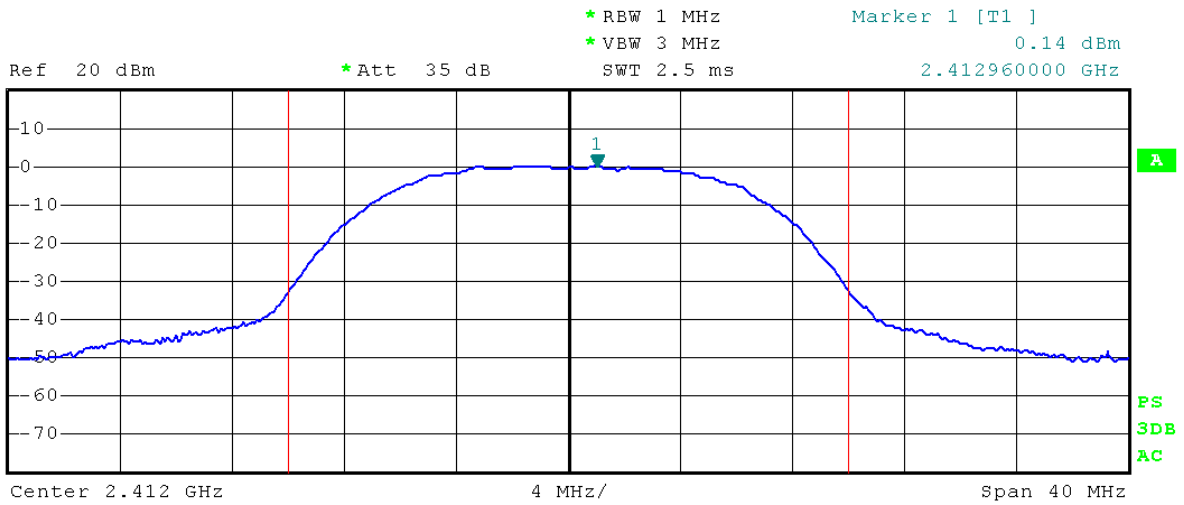
Test mode: IEEE 802.11n (HT40)

Channel	Frequency (MHz)	Maximum transmit power	Limit		Result
		(dBm)	(dBm)	(watts)	
Low	2422	7.50	30	1	Pass
Mid	2437	7.41			Pass
High	2452	7.14			Pass

Test Mode: 802.11b---Low



1 PK
MAXH



Tx Channel

Bandwidth

20 MHz

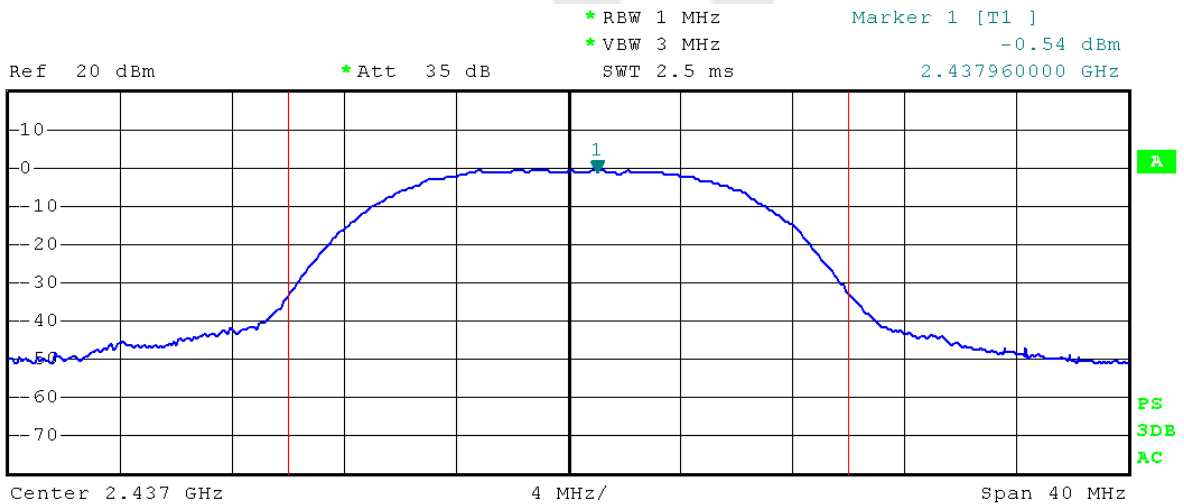
Power

9.04 dBm

Test Mode: 802.11b---Mid



1 PK
MAXH



Tx Channel

Bandwidth

20 MHz

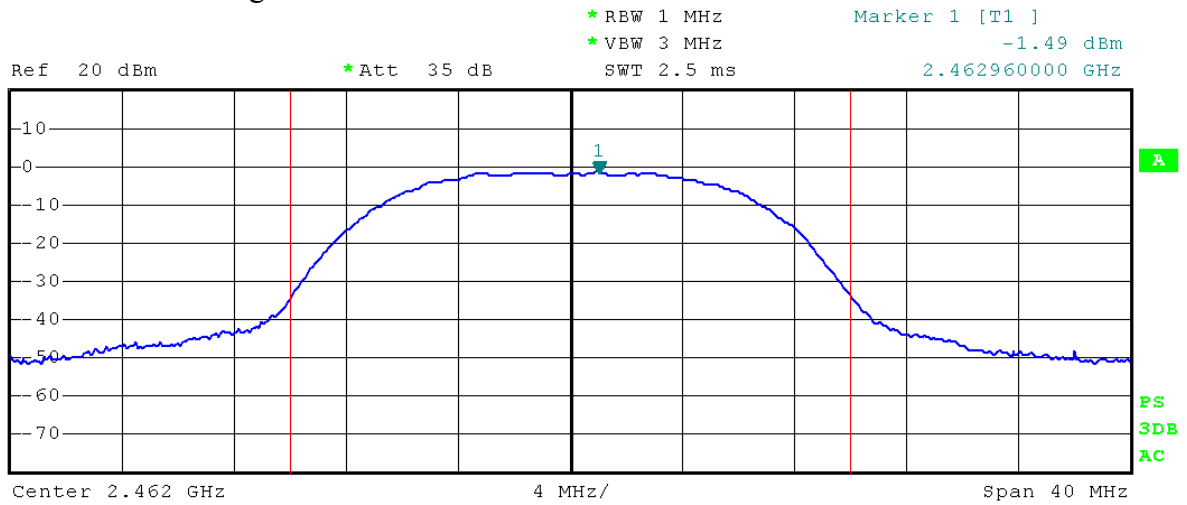
Power

8.41 dBm

Test Mode: 802.11b---High



1 PK
MAXH



Tx Channel

Bandwidth

20 MHz

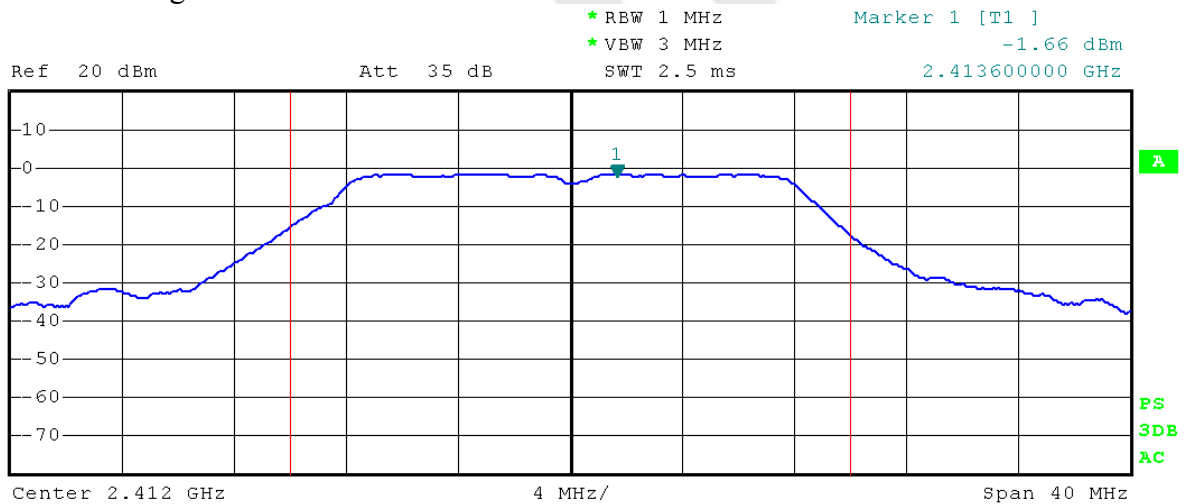
Power

7.43 dBm

Test Mode: 802.11g---Low



1 PK
MAXH



Tx Channel

Bandwidth

20 MHz

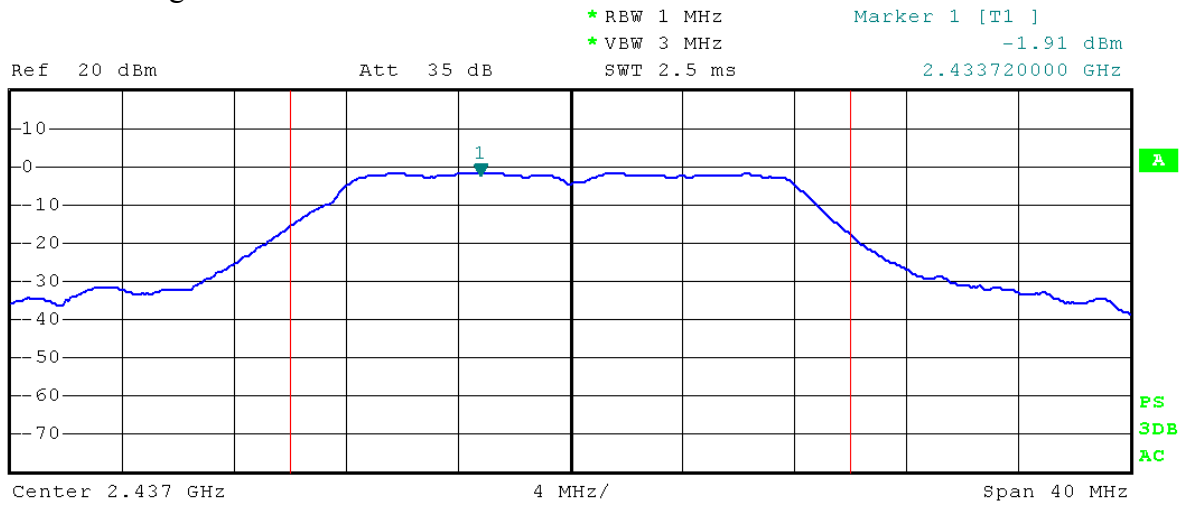
Power

9.20 dBm

Test Mode: 802.11g---Mid



1 PK
MAXH



Tx Channel

Bandwidth

20 MHz

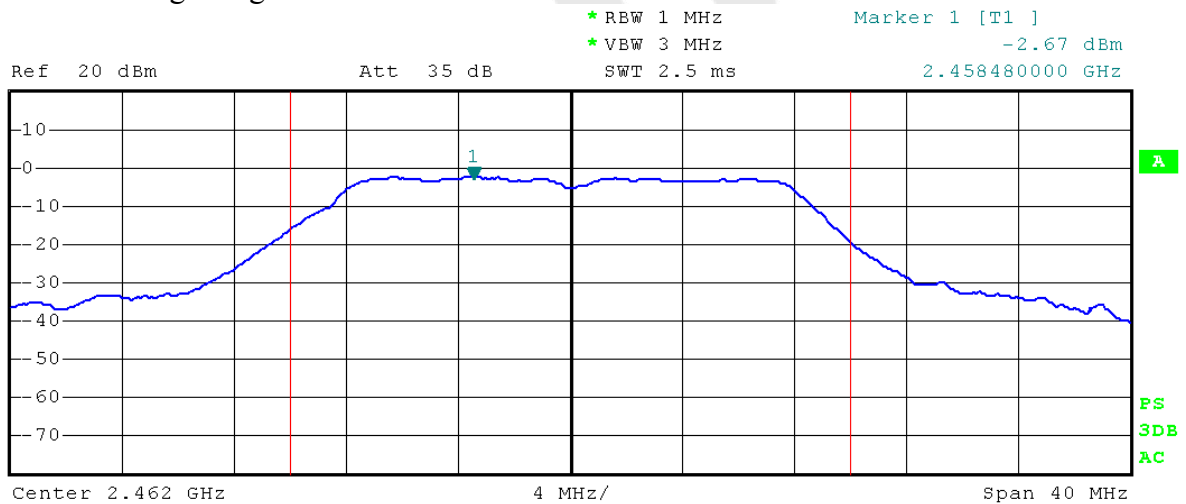
Power

8.89 dBm

Test Mode: 802.11g---High



1 PK
MAXH



Tx Channel

Bandwidth

20 MHz

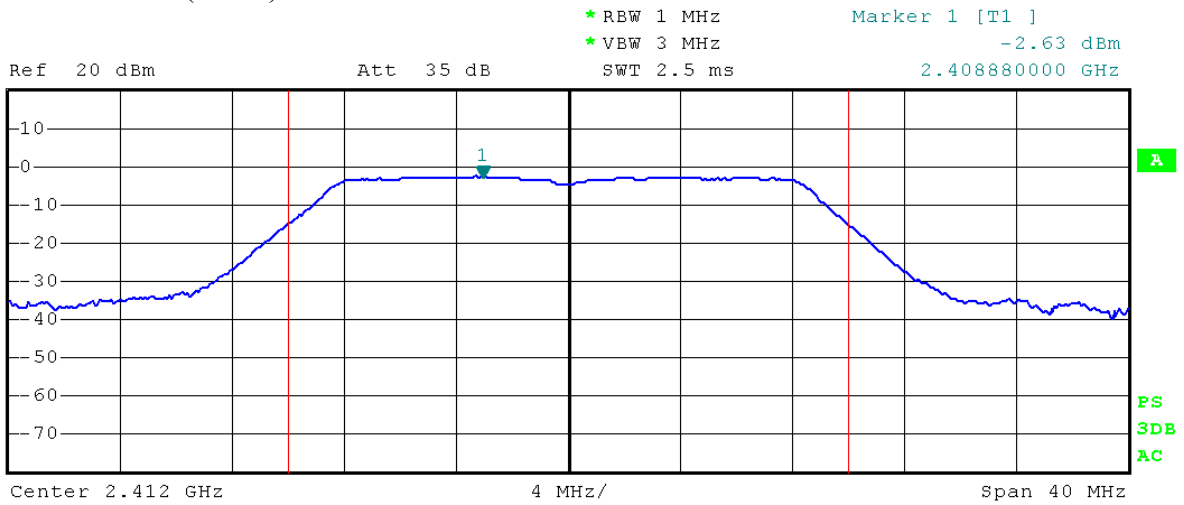
Power

8.07 dBm

Test Mode: 802.11n(HT20)---Low



1 PK
MAXH



Tx Channel

Bandwidth

20 MHz

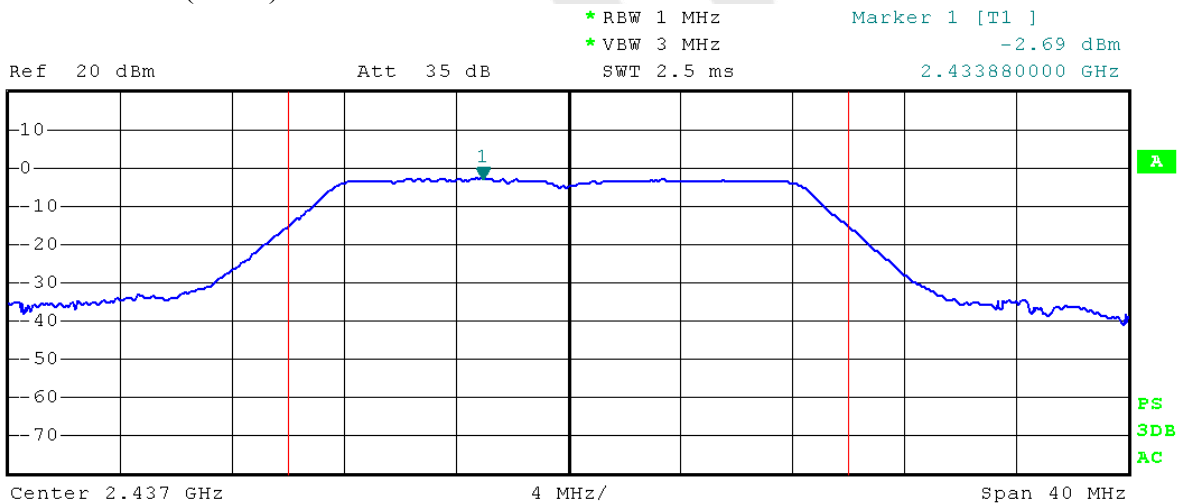
Power

8.32 dBm

Test Mode: 802.11n(HT20)---Mid



1 PK
MAXH



Tx Channel

Bandwidth

20 MHz

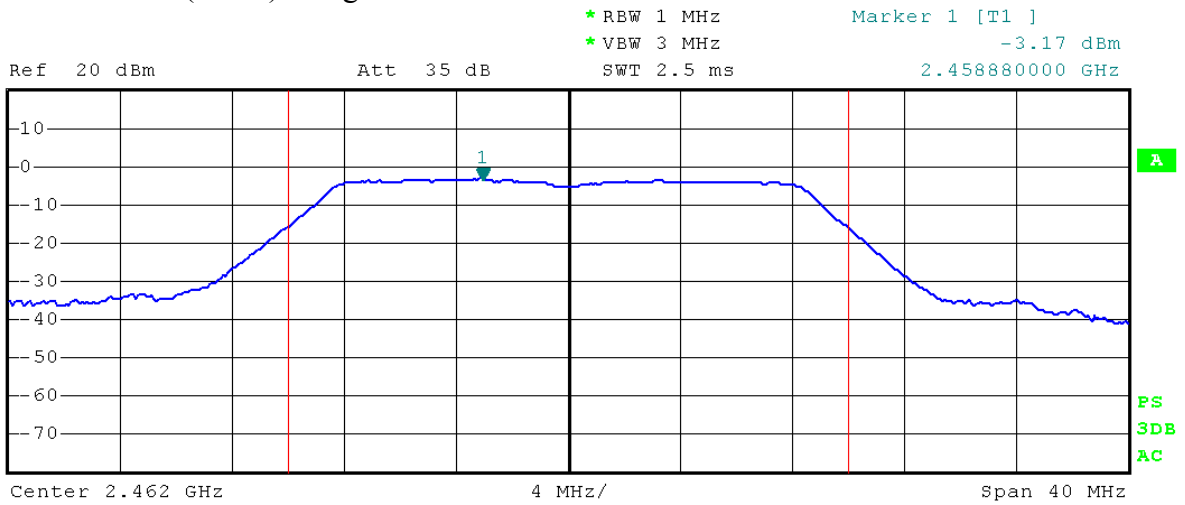
Power

8.08 dBm

Test Mode: 802.11n(HT20)---High



1 PK
MAXH



Tx Channel

Bandwidth

20 MHz

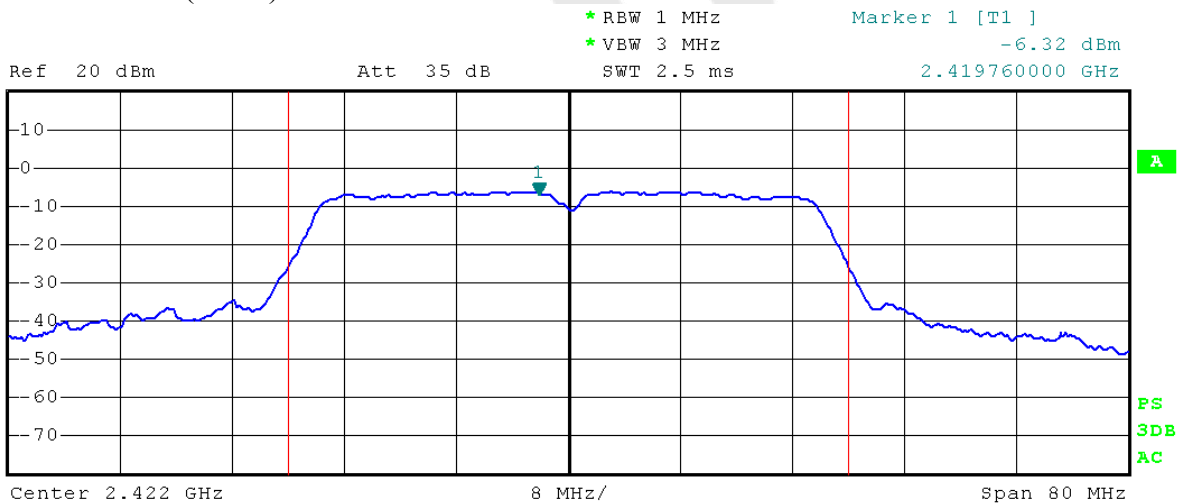
Power

7.53 dBm

Test Mode: 802.11n(HT40)---Low



1 PK
MAXH



Tx Channel

Bandwidth

40 MHz

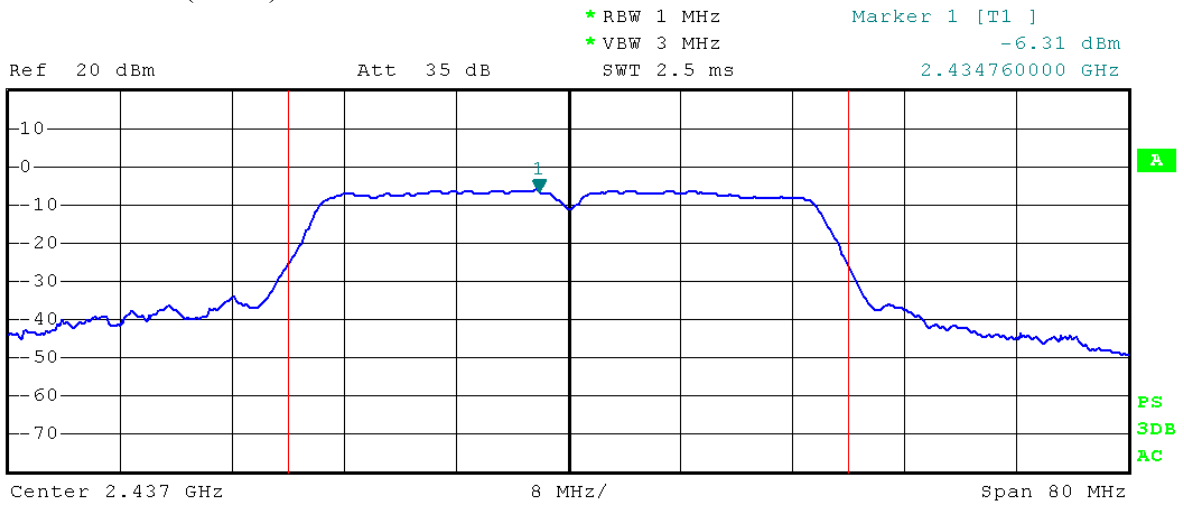
Power

7.50 dBm

Test Mode: 802.11n(HT40)---Mid



1 PK
MAXH



Tx Channel

Bandwidth

40 MHz

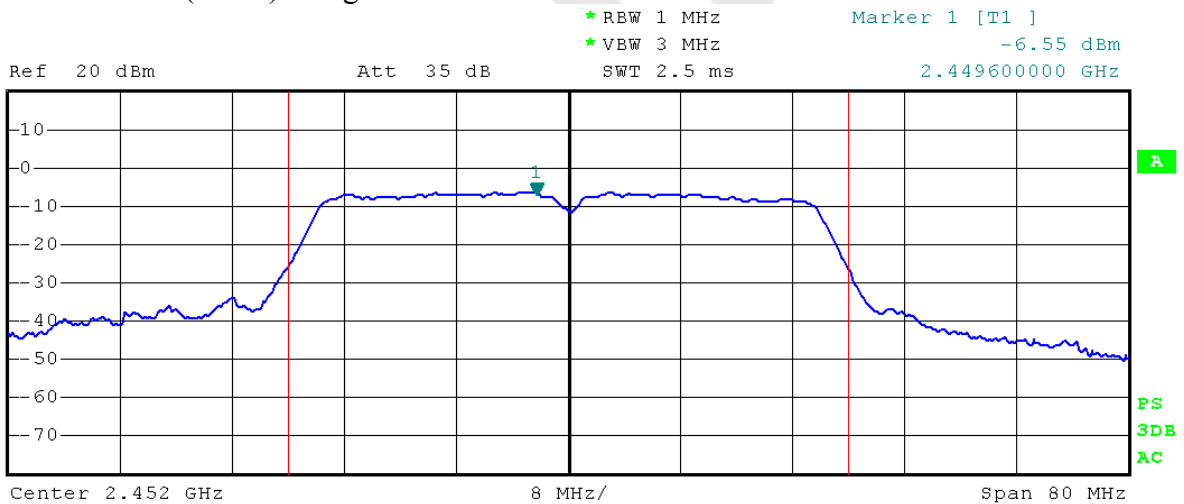
Power

7.41 dBm

Test Mode: 802.11n(HT40)---High



1 PK
MAXH



Tx Channel

Bandwidth

40 MHz

Power

7.14 dBm

4.4. Band Edges Measurement

a. Limit

According to §15.247(c), in any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator is 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 in §15.209(a).

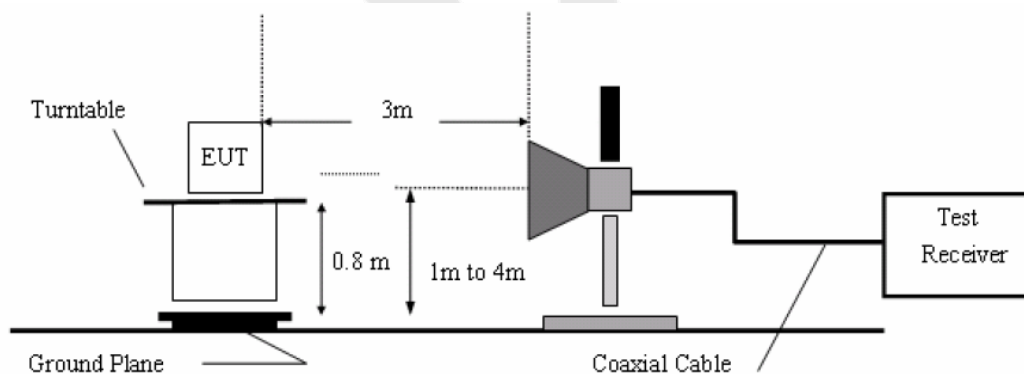
b. Test Procedure

1. Conducted Method:

- 1) Set RBW=100KHz, VBW=300KHz
- 2) Detector=peak
- 3) Sweep time= auto
- 4) Trace mode=max hold.

2. Radiated Method:

- 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=1MHz, VBW=3MHz, 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.



c. Test Equipment

Same as the equipment listed in 4.2.

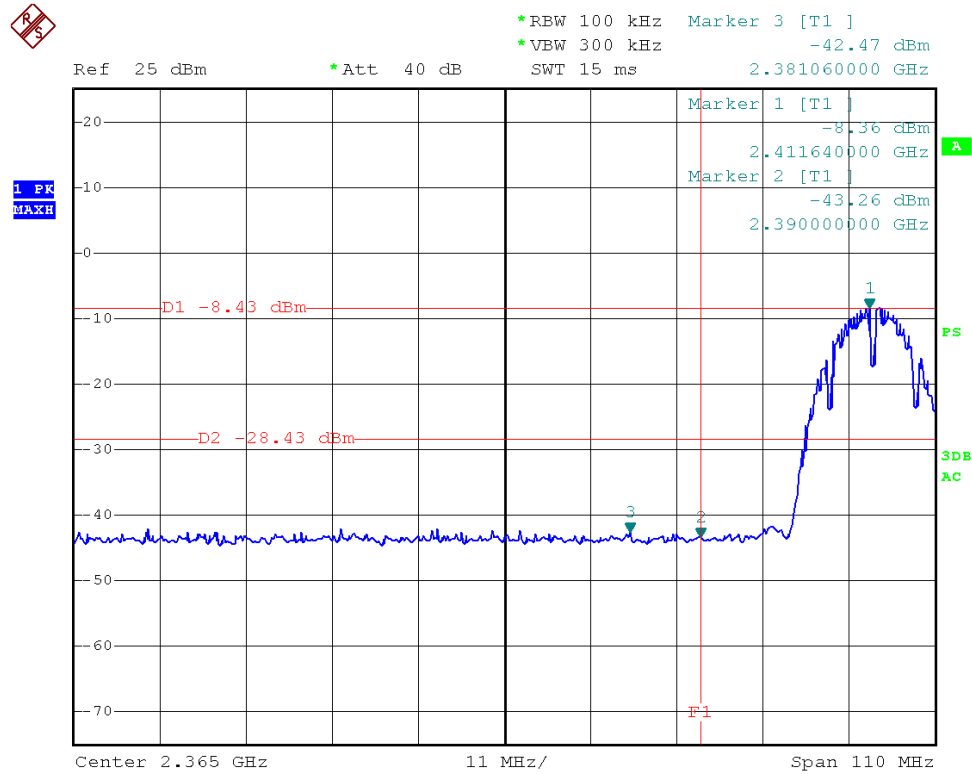
d. Test Results

Pass.

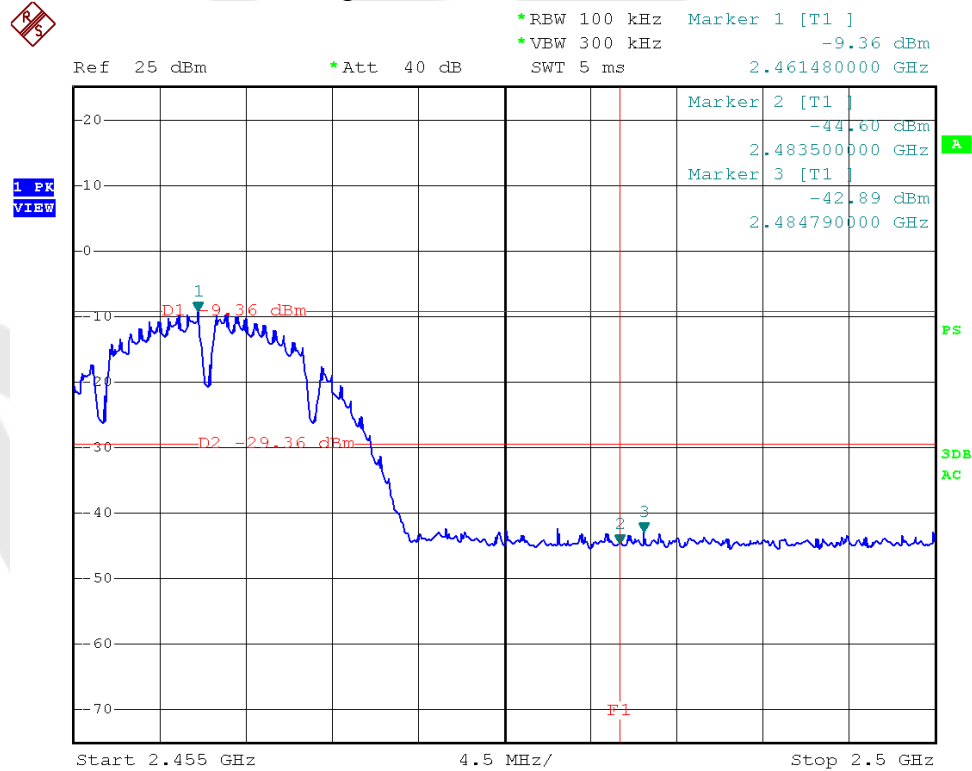
e. Test Plots

See the following page.

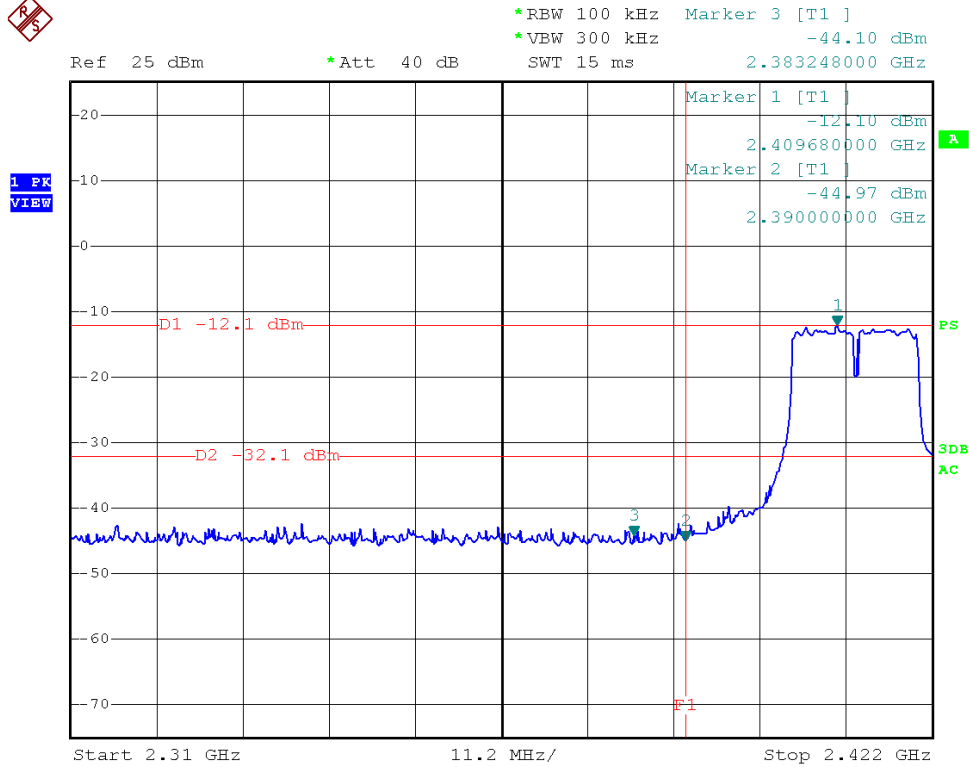
Test Mode: 802.11b ---Low



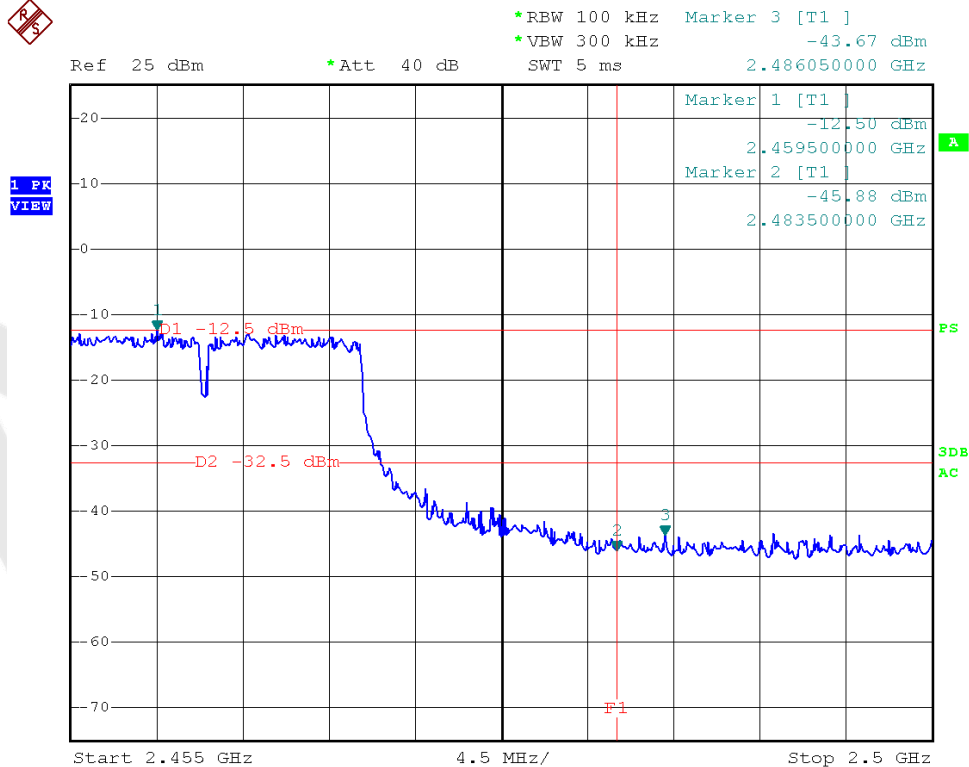
Test Mode: 802.11b ---High



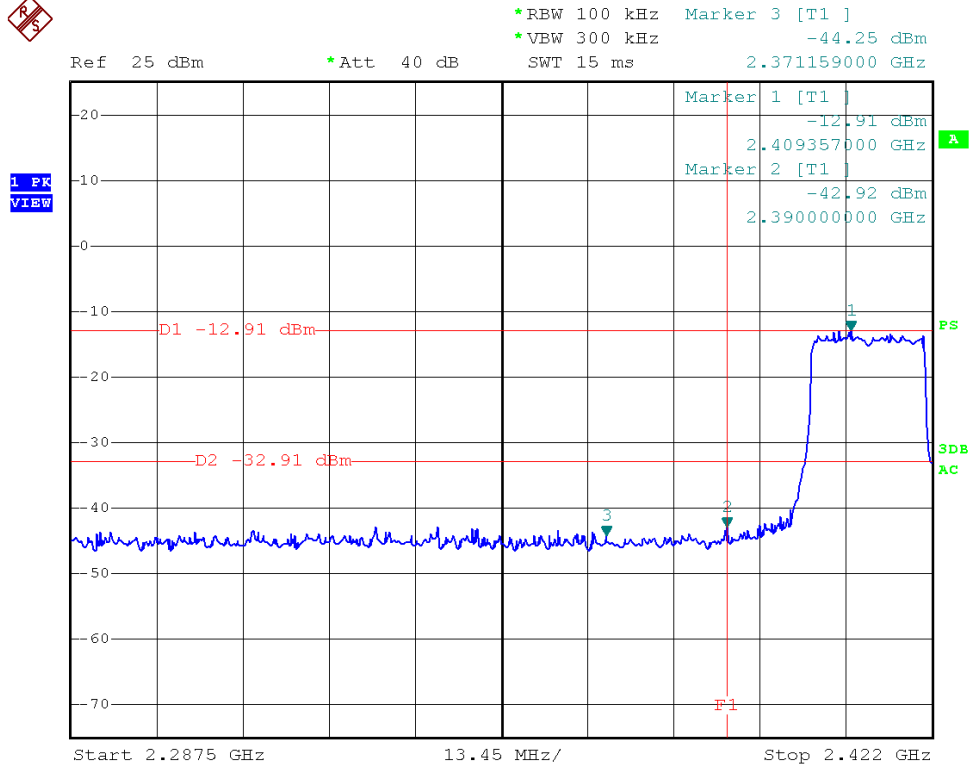
Test Mode: 802.11g ---Low



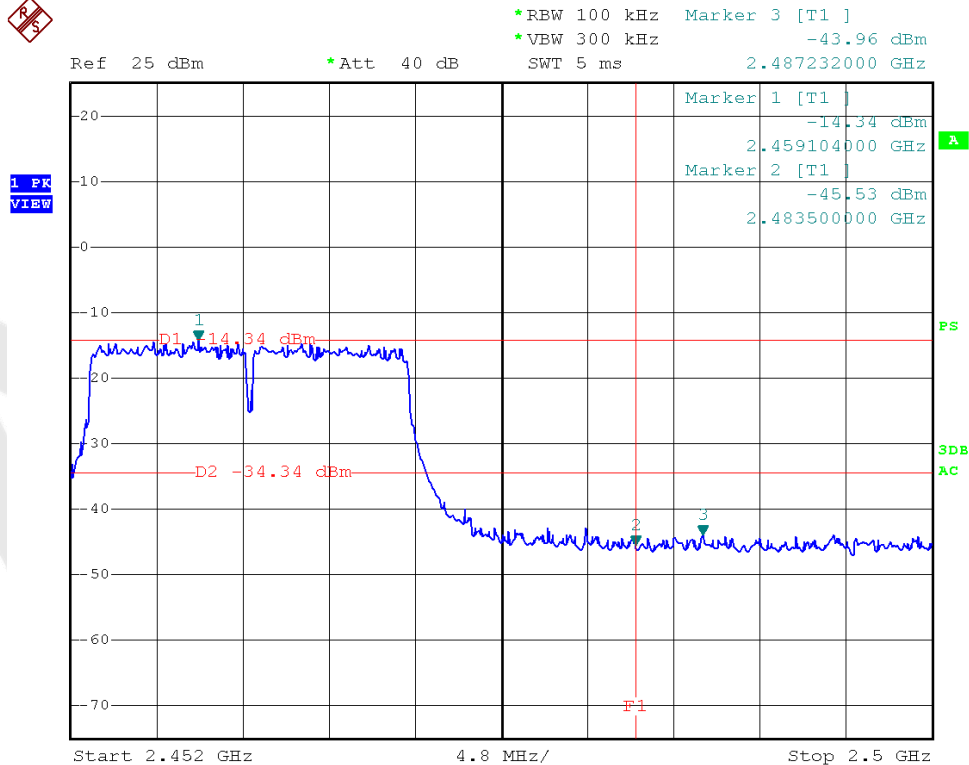
Test Mode: 802.11g ---High



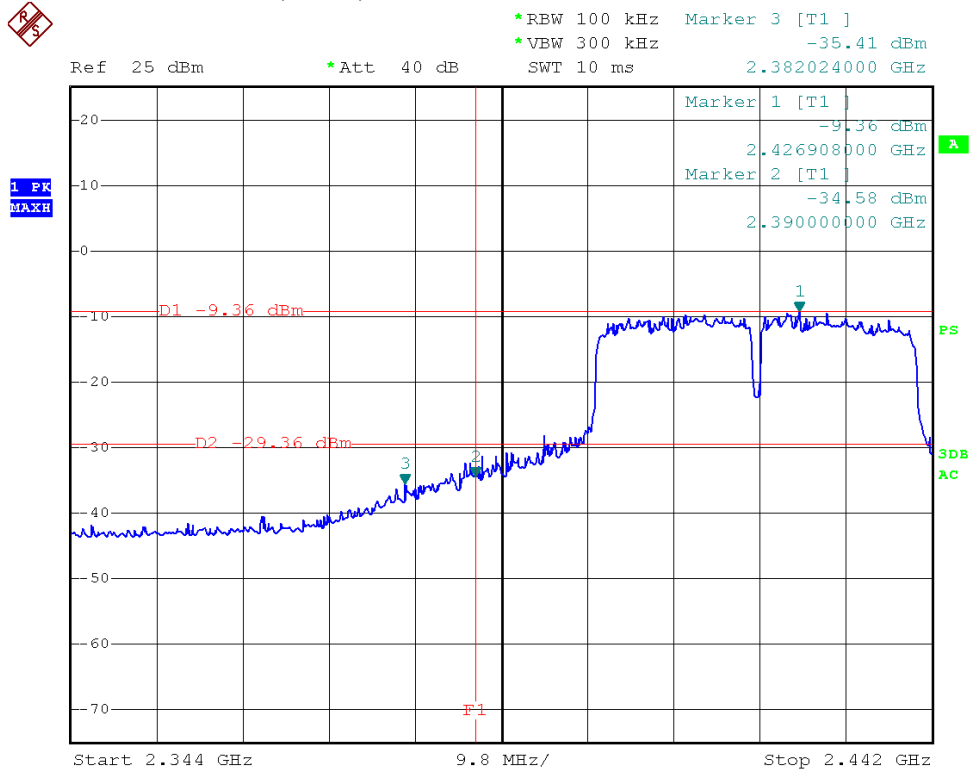
Test Mode: 802.11n (HT20) ---Low



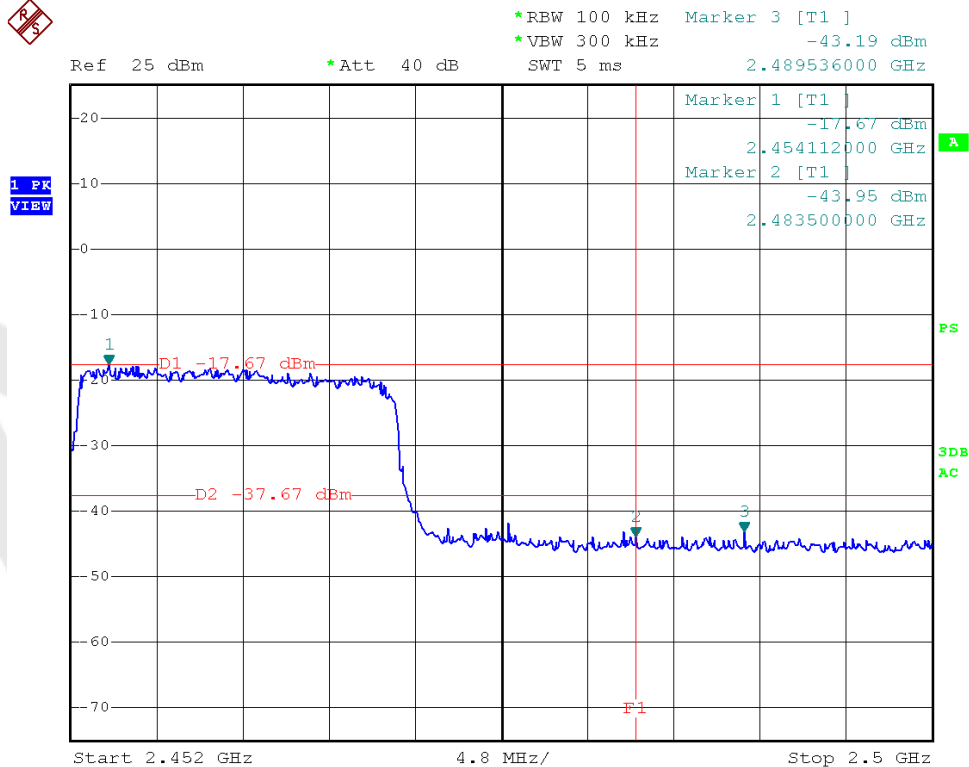
Test Mode: 802.11n (HT20)---High



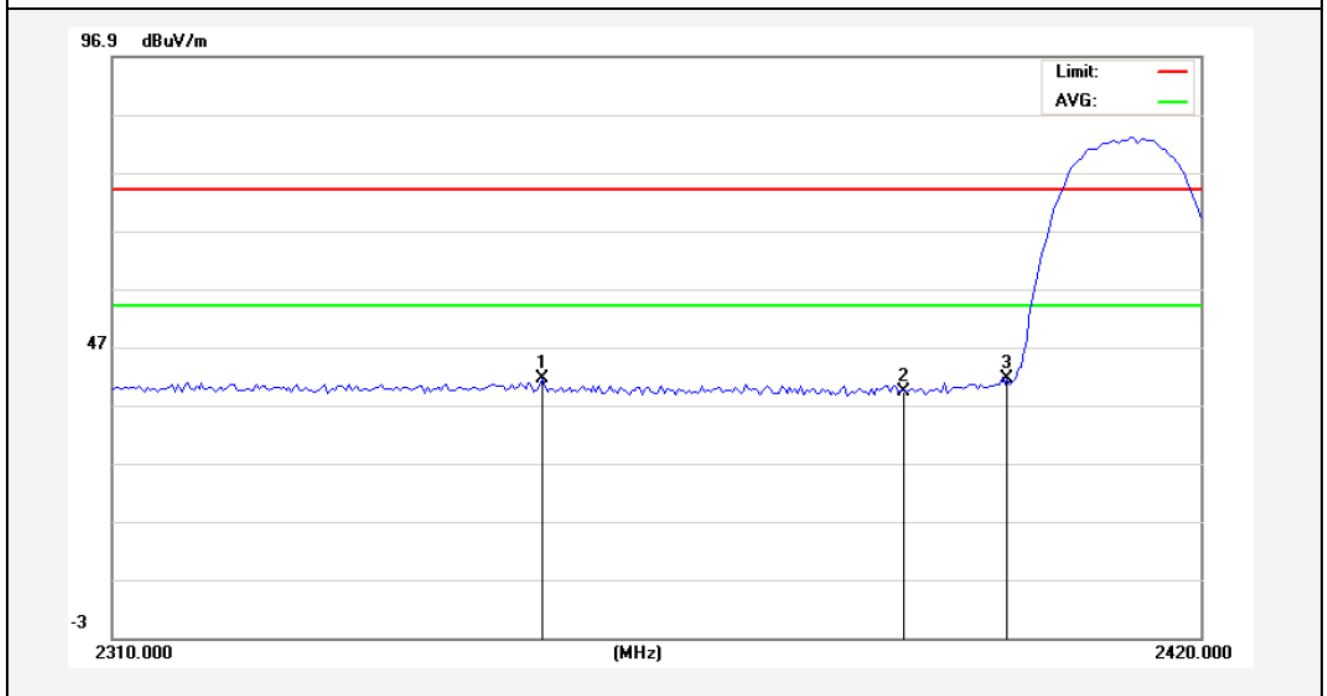
Test Mode: 802.11n (HT40) ---Low



Test Mode: 802.11n (HT40) ---High

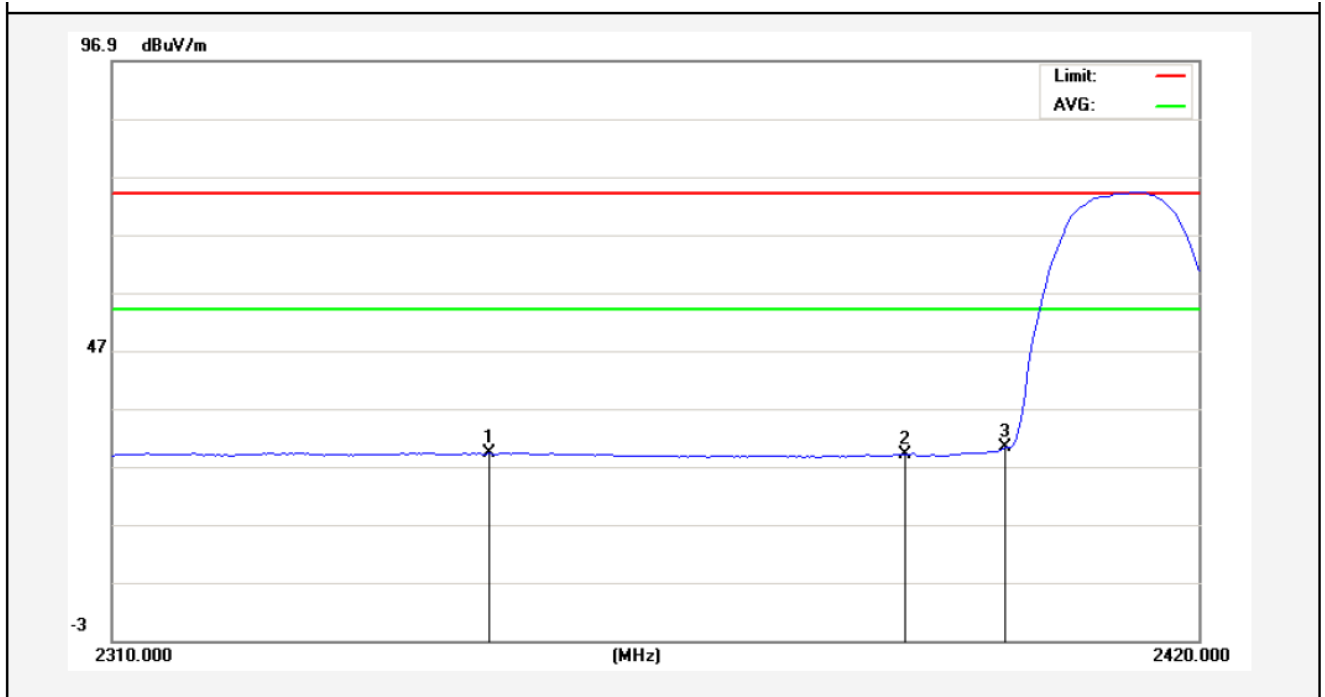


Test Mode: 802.11b
2412MHz
Horizontal-PEAK:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2352.900	44.13	-2.60	41.53	74.00	-32.47	peak			
2	2390.000	41.79	-2.51	39.28	74.00	-34.72	peak			
3	2400.000	43.99	-2.49	41.50	74.00	-32.50	peak			

Horizontal-AV:

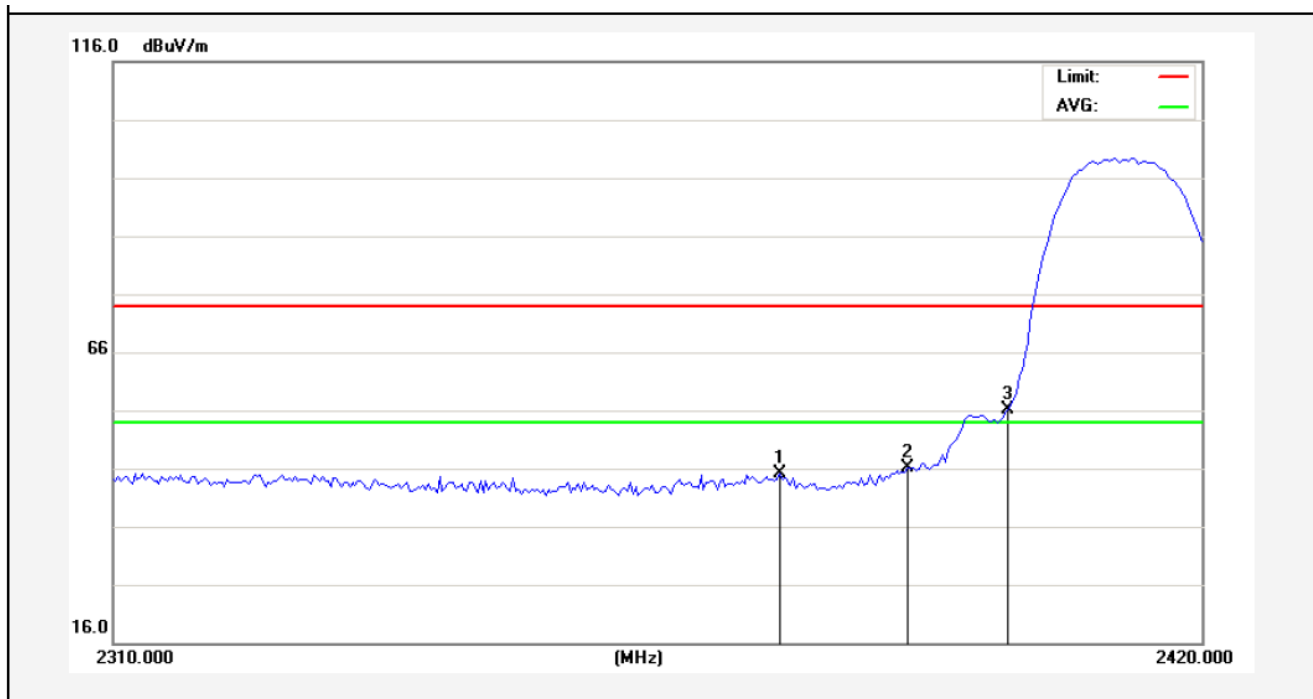


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2347.675	31.93	-2.61	29.32	54.00	-24.68	AVG			
2	2390.000	31.54	-2.51	29.03	54.00	-24.97	AVG			
3	2400.000	32.65	-2.49	30.16	54.00	-23.84	AVG			

Test Mode: 802.11b

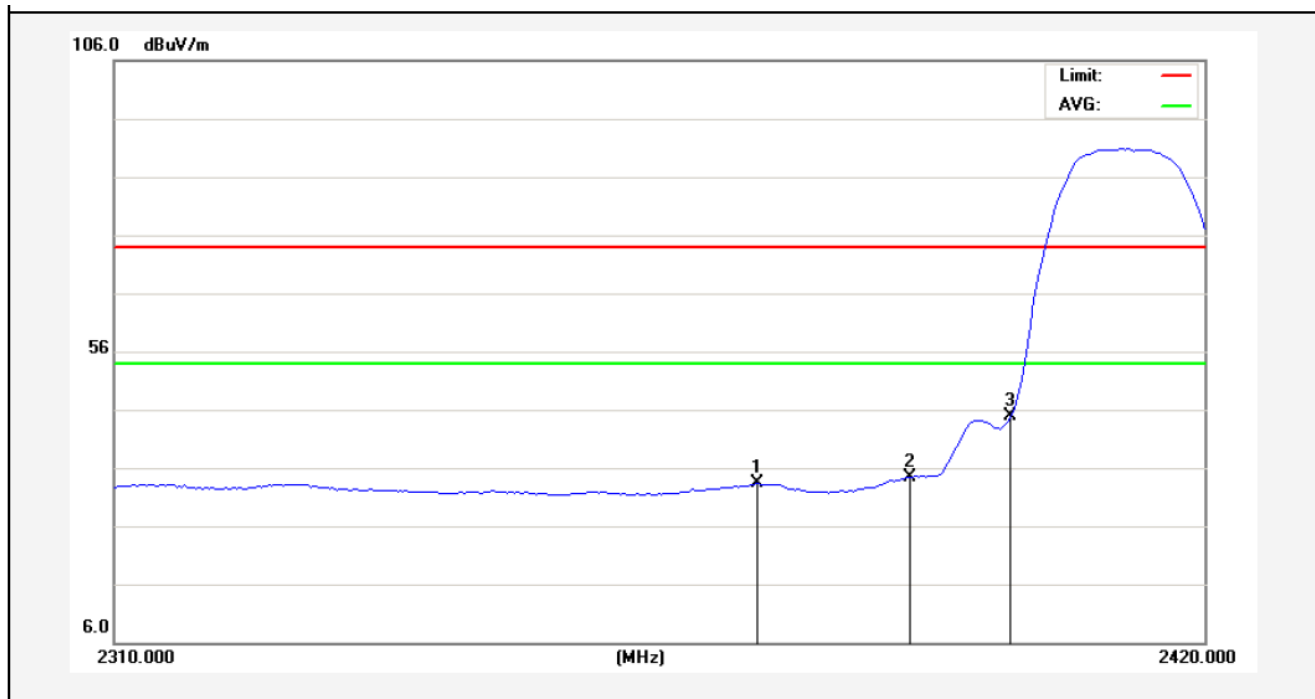
2412MHz

Vertical-PEAK:



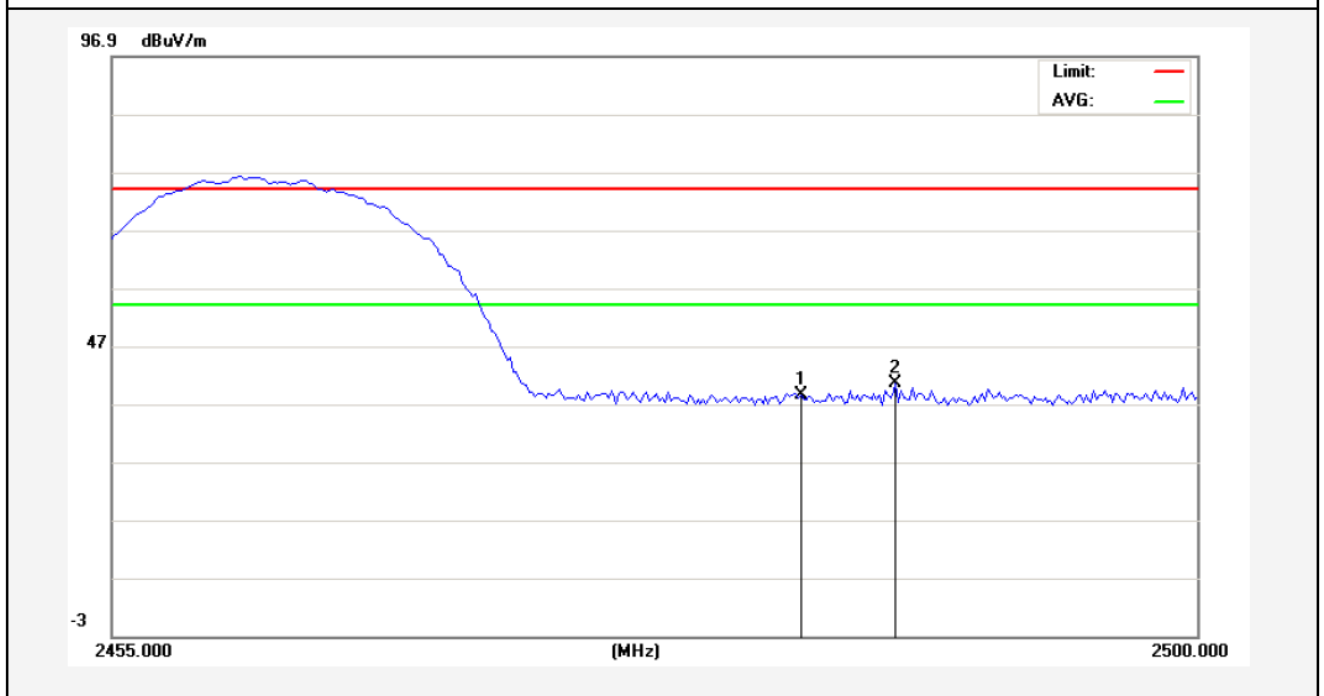
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2376.825	47.74	-2.54	45.20	74.00	-28.80	peak			
2	2390.000	48.52	-2.51	46.01	74.00	-27.99	peak			
3	2400.000	58.72	-2.49	56.23	74.00	-17.77	peak			

Vertical-AV:



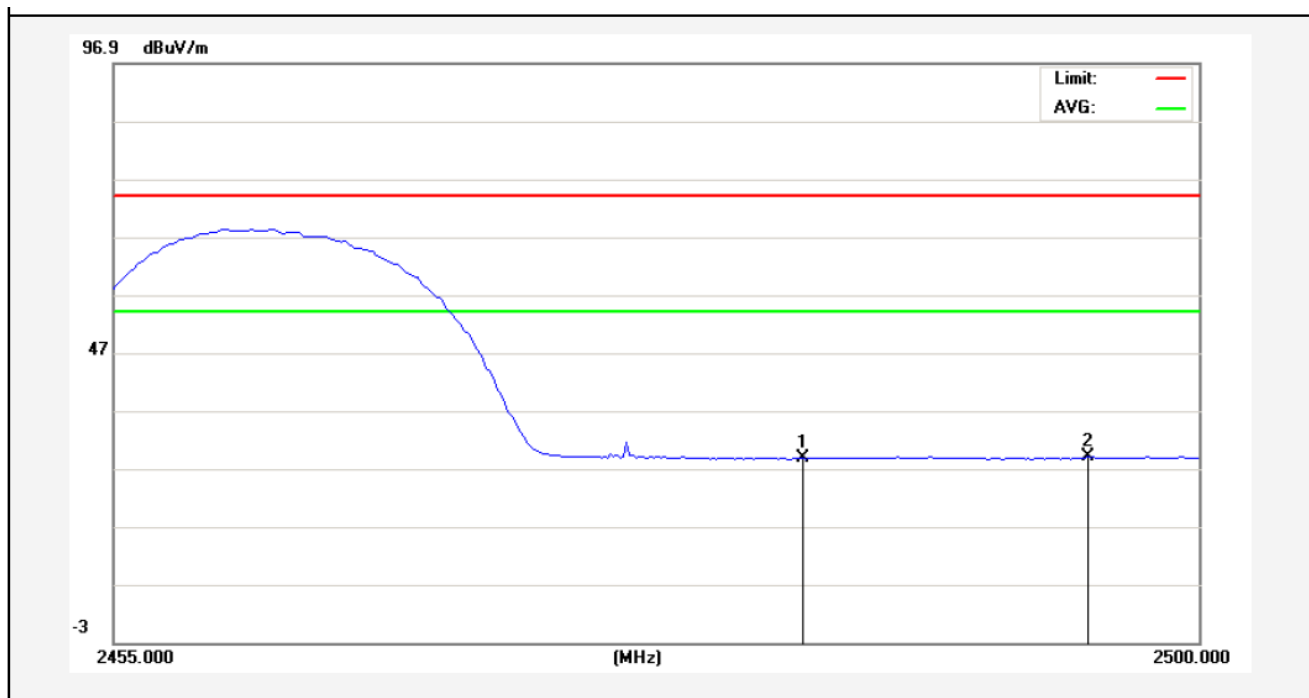
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2374.350	35.85	-2.55	33.30	54.00	-20.70	AVG			
2	2390.000	36.96	-2.51	34.45	54.00	-19.55	AVG			
3	2400.000	47.38	-2.49	44.89	54.00	-9.11	AVG			

Test Mode: 802.11b
2462MHz
Horizontal-PEAK:



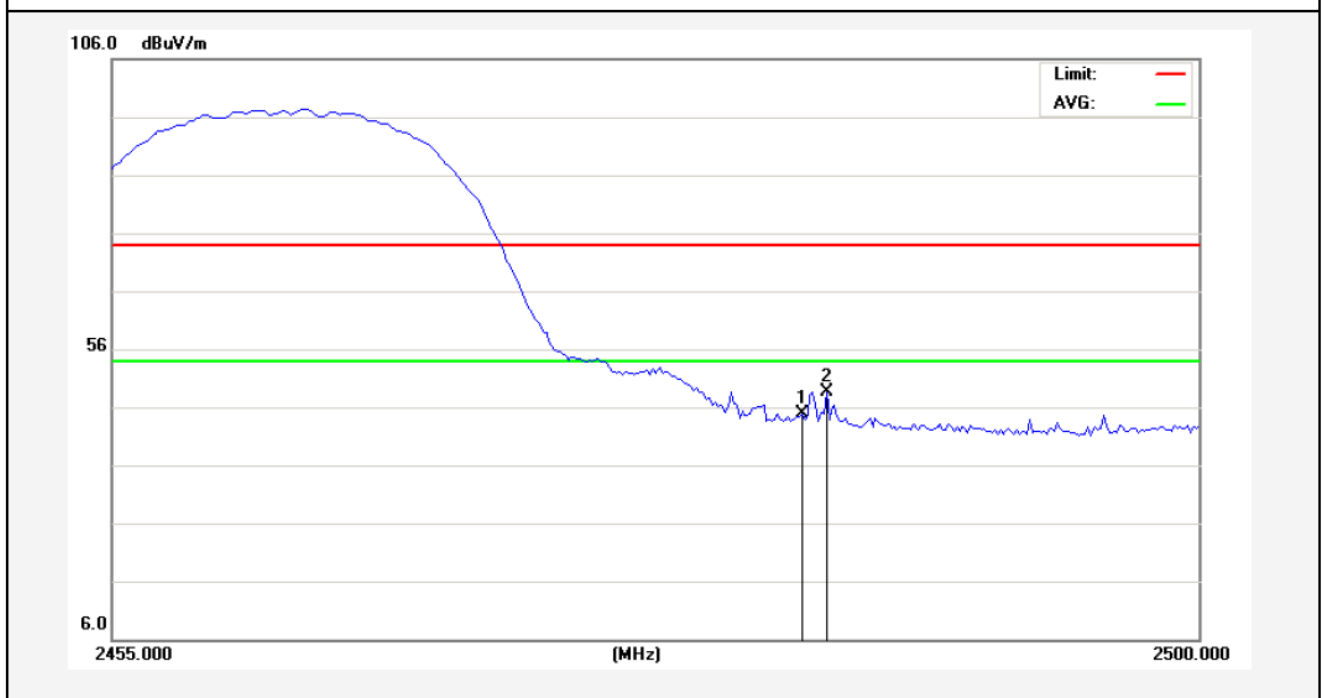
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2483.500	40.75	-2.31	38.44	74.00	-35.56	peak			
2	2487.512	42.91	-2.30	40.61	74.00	-33.39	peak			

Horizontal-AV:



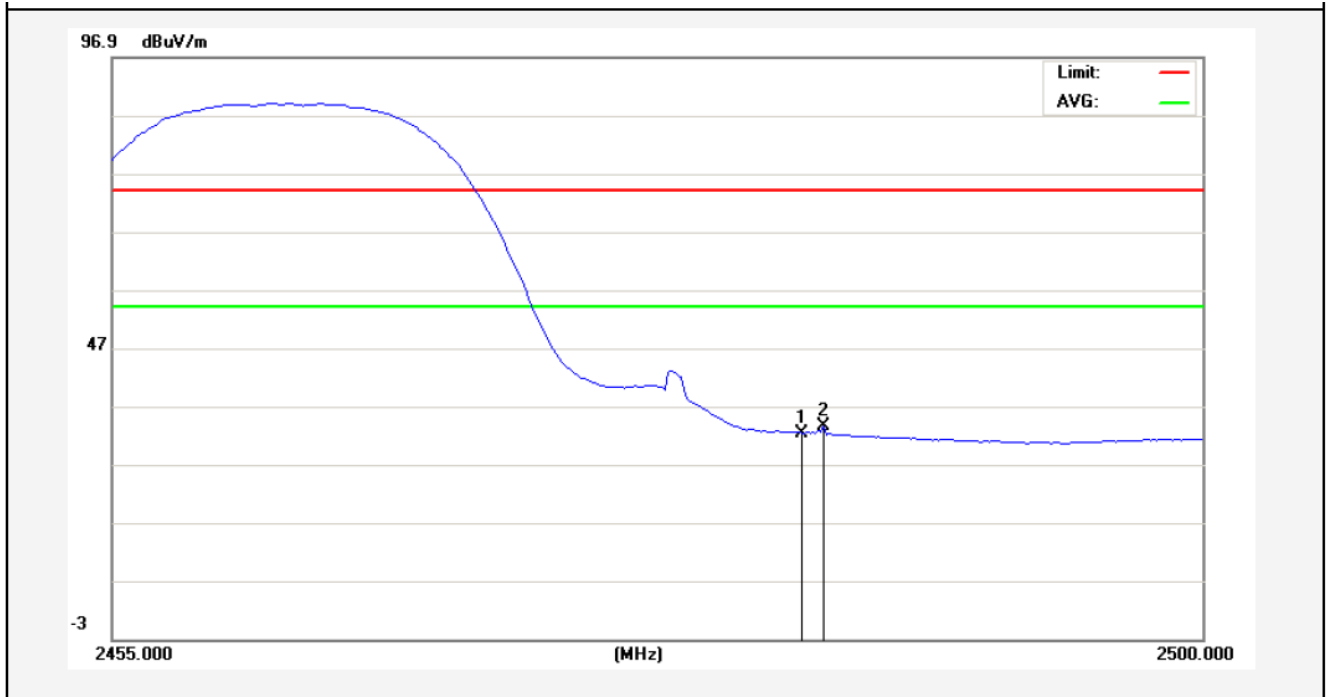
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2483.500	31.00	-2.31	28.69	54.00	-25.31	AVG			
2	2495.387	31.30	-2.28	29.02	54.00	-24.98	AVG			

Test Mode: 802.11b
2462MHz
Vertical-PEAK:



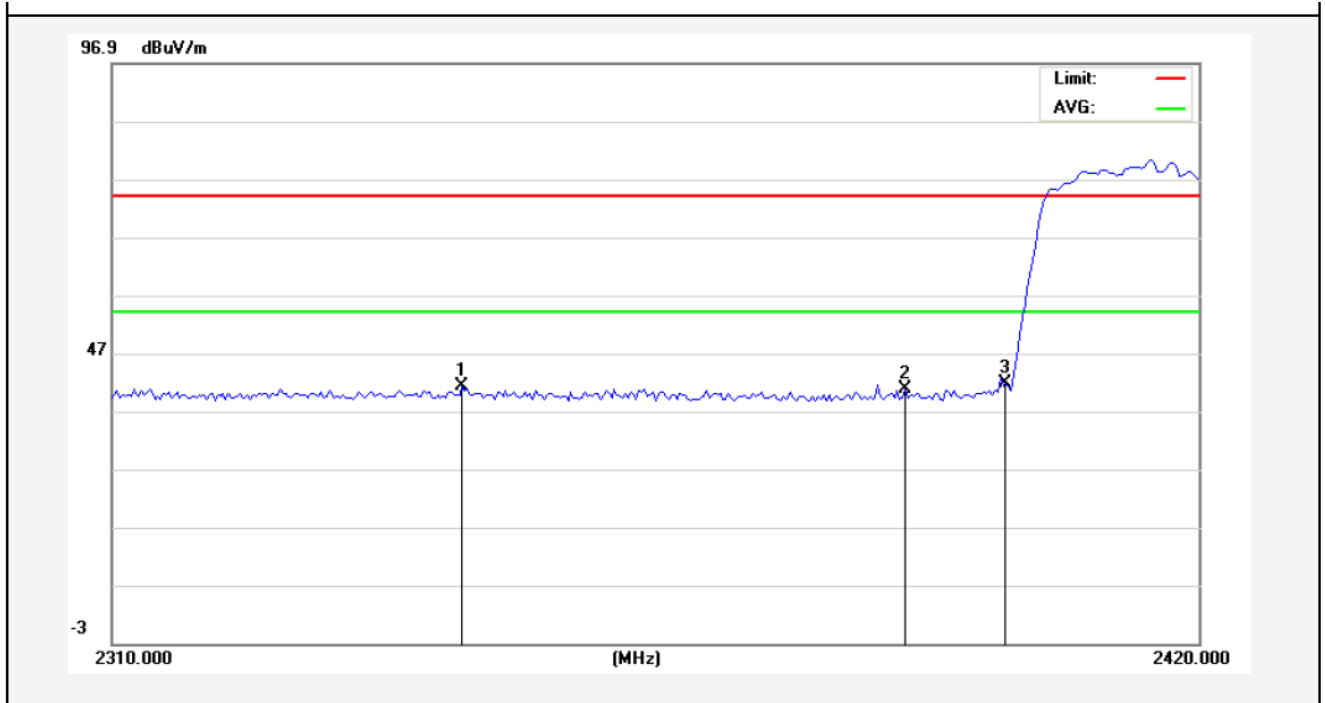
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2483.500	47.12	-2.31	44.81	74.00	-29.19	peak			
2	2484.588	50.91	-2.30	48.61	74.00	-25.39	peak			

Vertical-AV:



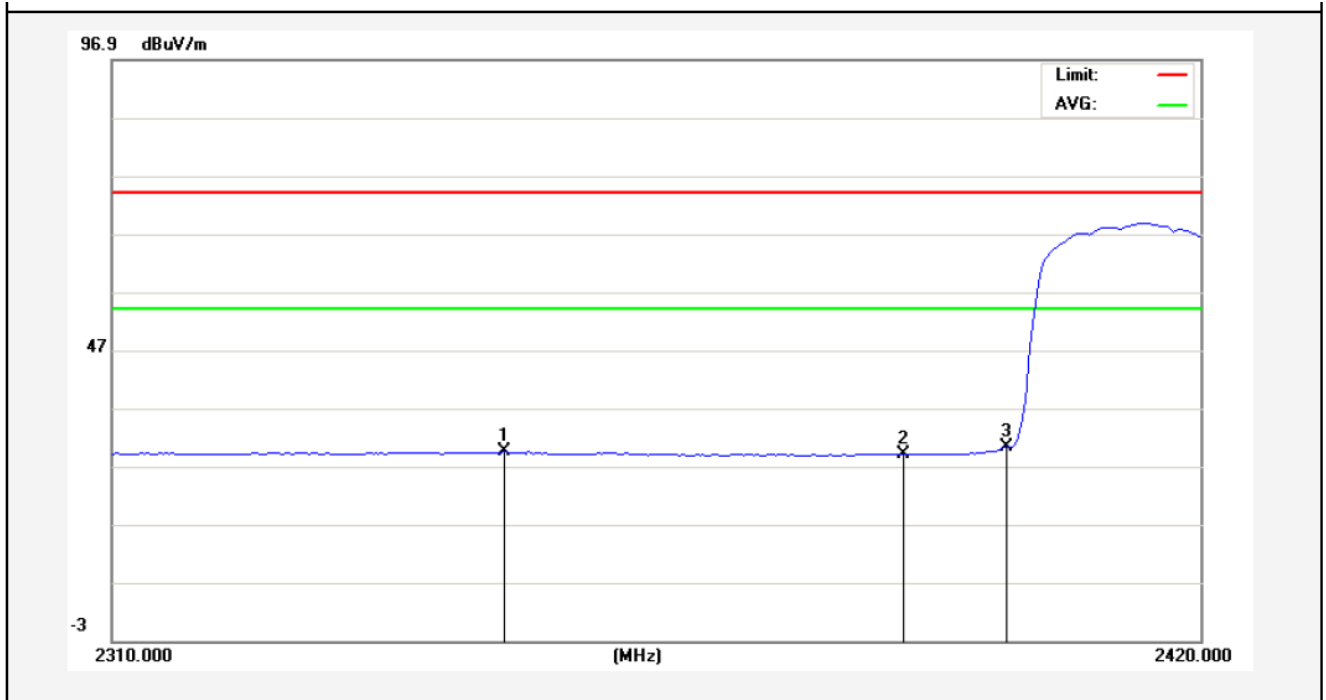
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2483.500	34.70	-2.31	32.39	54.00	-21.61	AVG			
2	2484.363	35.89	-2.30	33.59	54.00	-20.41	AVG			

Test Mode: 802.11g
2412MHz
Horizontal-PEAK:



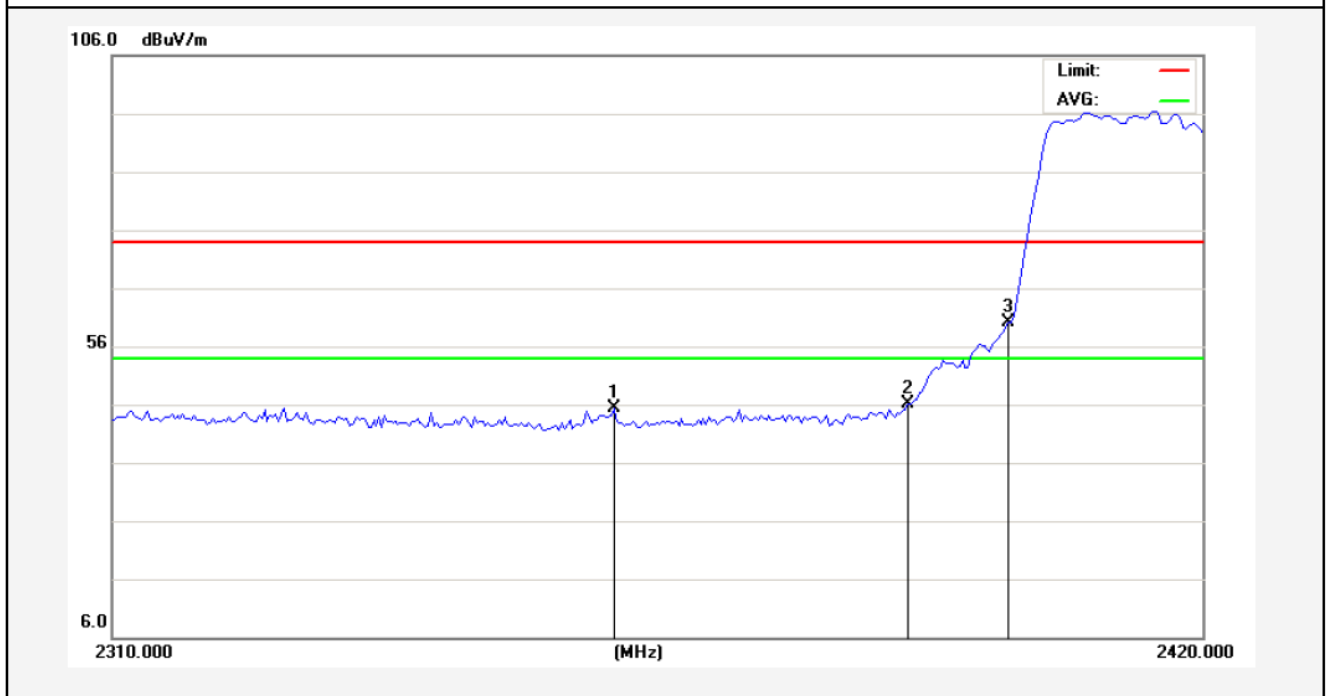
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2344.925	43.98	-2.61	41.37	74.00	-32.63	peak			
2	2390.000	43.34	-2.51	40.83	74.00	-33.17	peak			
3	2400.000	44.29	-2.49	41.80	74.00	-32.20	peak			

Horizontal-AV:



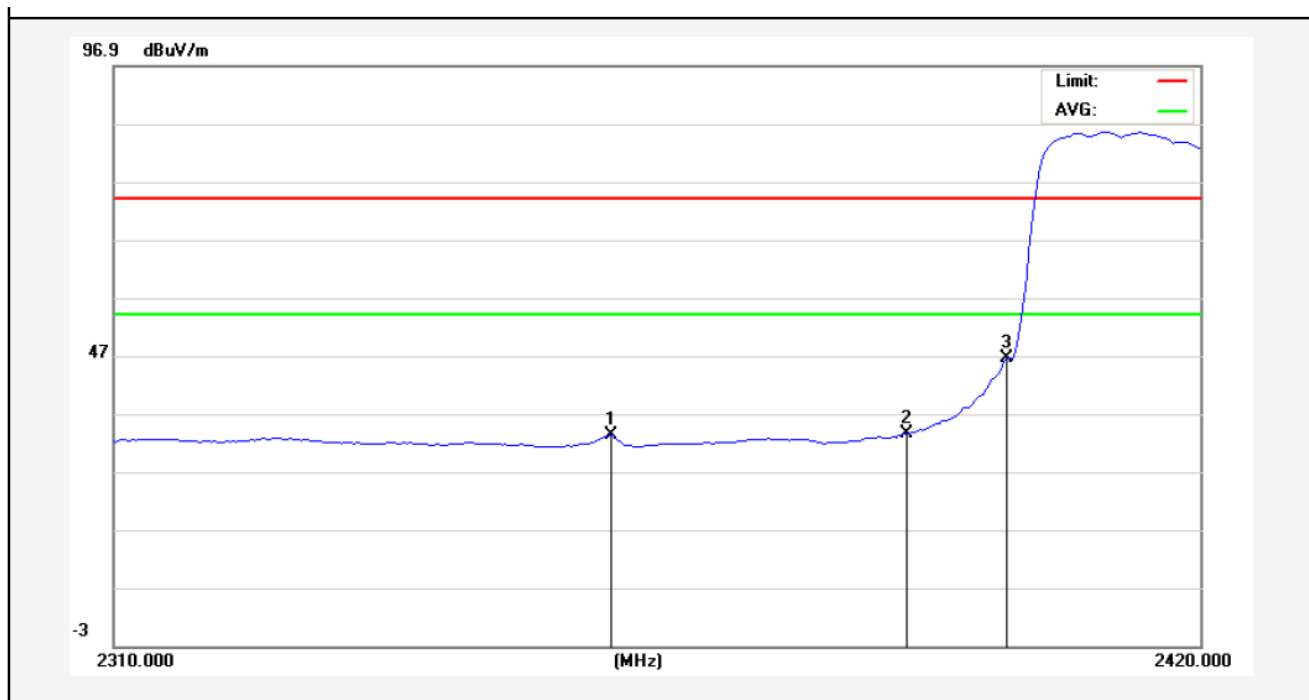
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2349.050	32.09	-2.61	29.48	54.00	-24.52	AVG			
2	2390.000	31.54	-2.51	29.03	54.00	-24.97	AVG			
3	2400.000	32.80	-2.49	30.31	54.00	-23.69	AVG			

Test Mode: 802.11g
2412MHz
Vertical-PEAK:



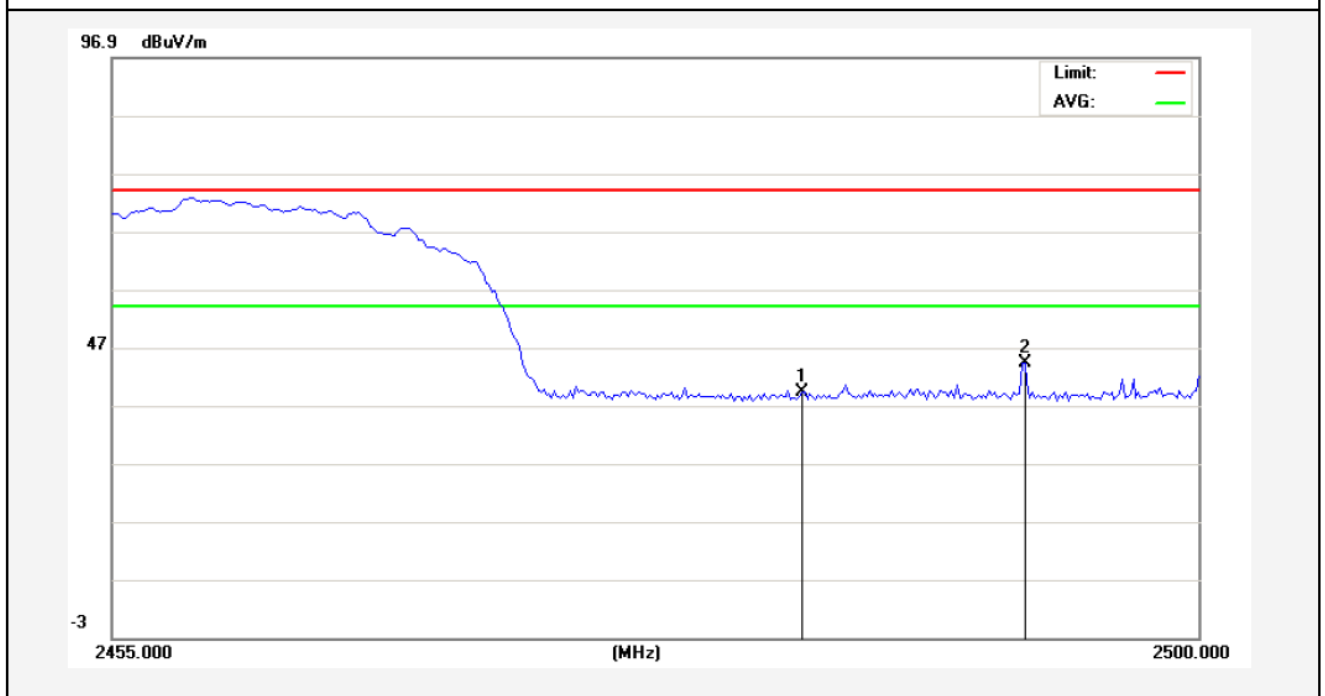
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2360.050	47.97	-2.58	45.39	74.00	-28.61	peak			
2	2390.000	48.72	-2.51	46.21	74.00	-27.79	peak			
3	2400.000	62.62	-2.49	60.13	74.00	-13.87	peak			

Vertical-AV:



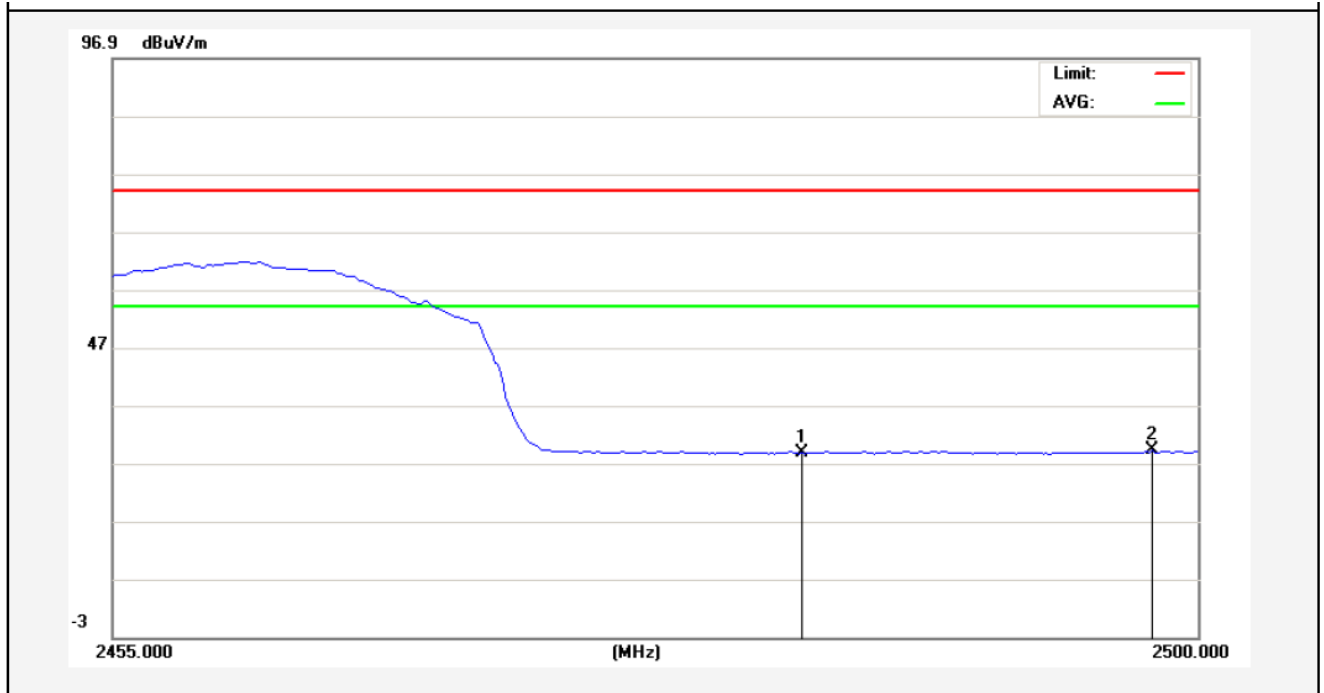
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2359.775	35.88	-2.58	33.30	54.00	-20.70	AVG			
2	2390.000	36.15	-2.51	33.64	54.00	-20.36	AVG			
3	2400.000	48.98	-2.49	46.49	54.00	-7.51	AVG			

Test Mode: 802.11g
2462MHz
Horizontal-PEAK:



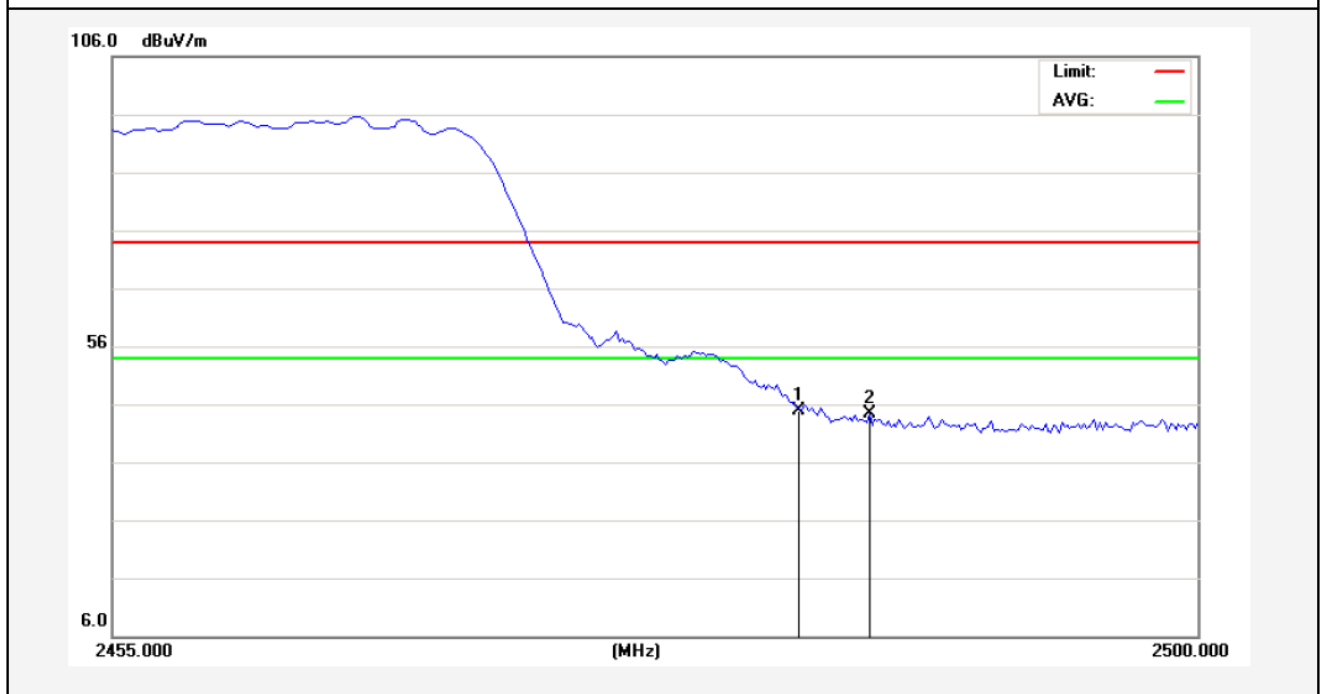
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2483.500	41.56	-2.31	39.25	74.00	-34.75	peak			
2	2492.800	46.65	-2.29	44.36	74.00	-29.64	peak			

Horizontal-AV:



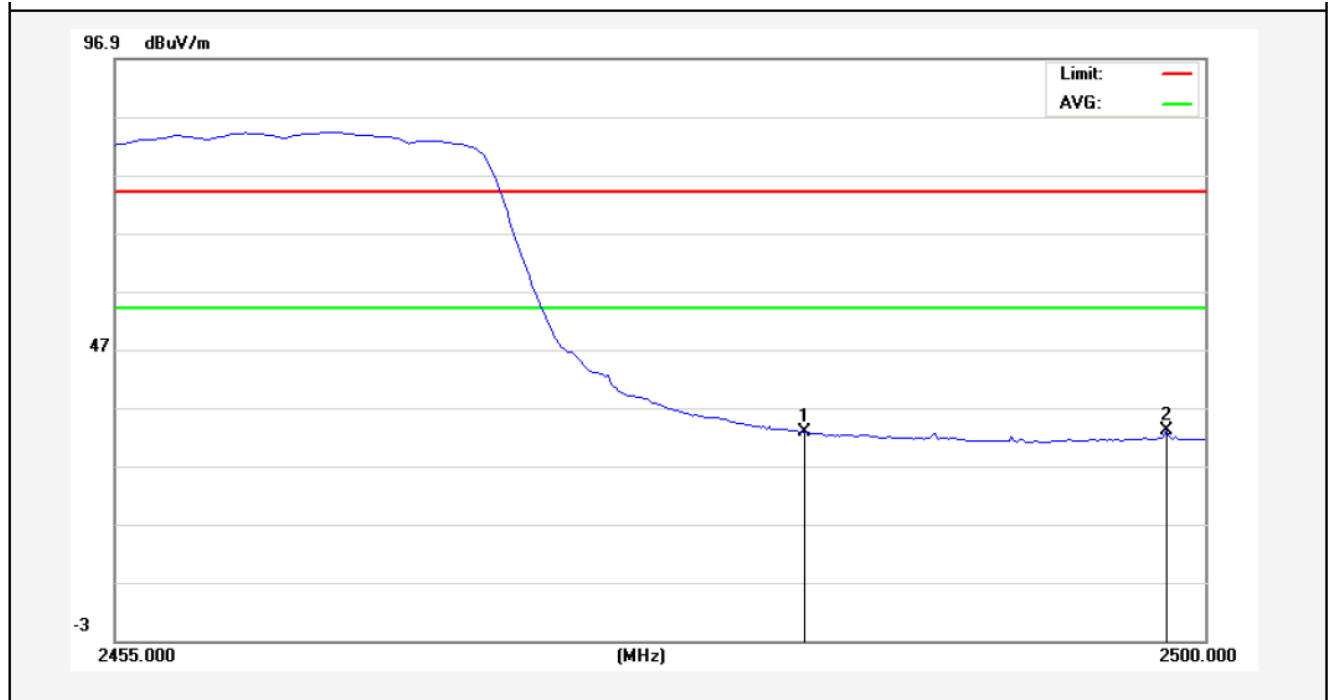
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2483.500	31.10	-2.31	28.79	54.00	-25.21	AVG			
2	2498.088	31.49	-2.27	29.22	54.00	-24.78	AVG			

Test Mode: 802.11g
2462MHz
Vertical-PEAK:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2483.500	47.22	-2.31	44.91	74.00	-29.09	peak			
2	2486.387	46.59	-2.30	44.29	74.00	-29.71	peak			

Vertical-AV:

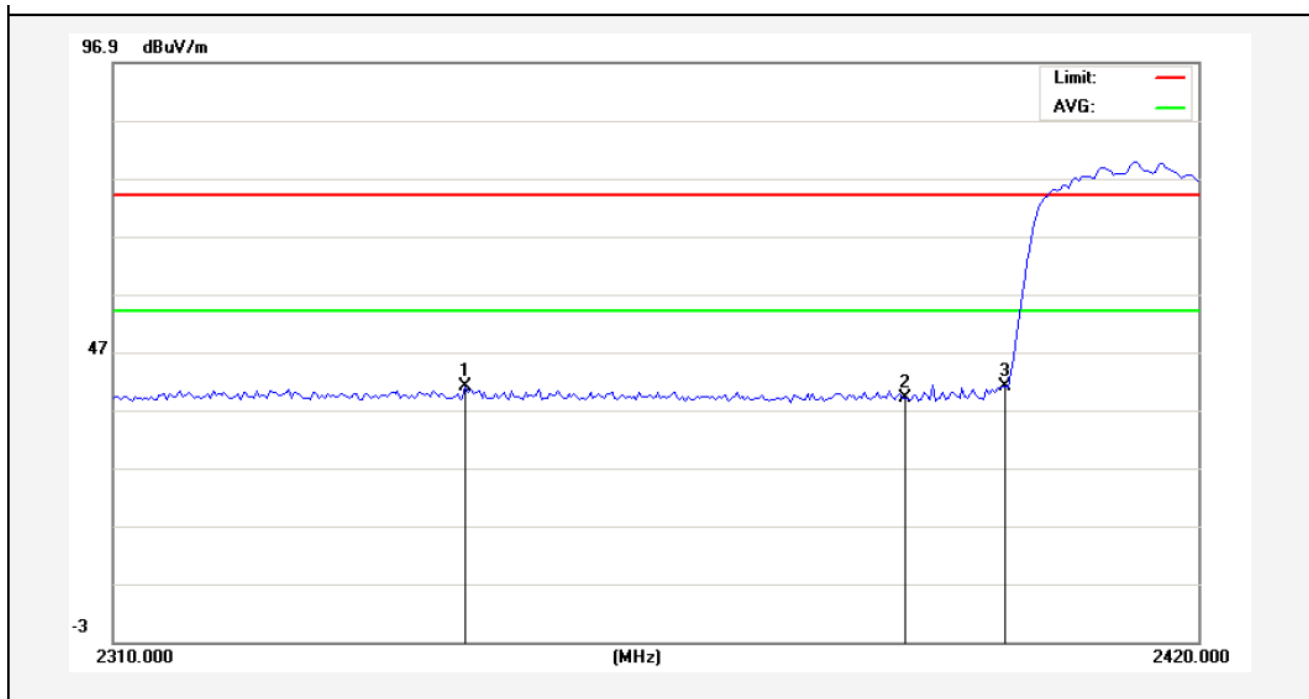


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2483.500	35.03	-2.31	32.72	54.00	-21.28	AVG			
2	2498.425	35.32	-2.27	33.05	54.00	-20.95	AVG			

Test Mode: 802.11n (HT20)

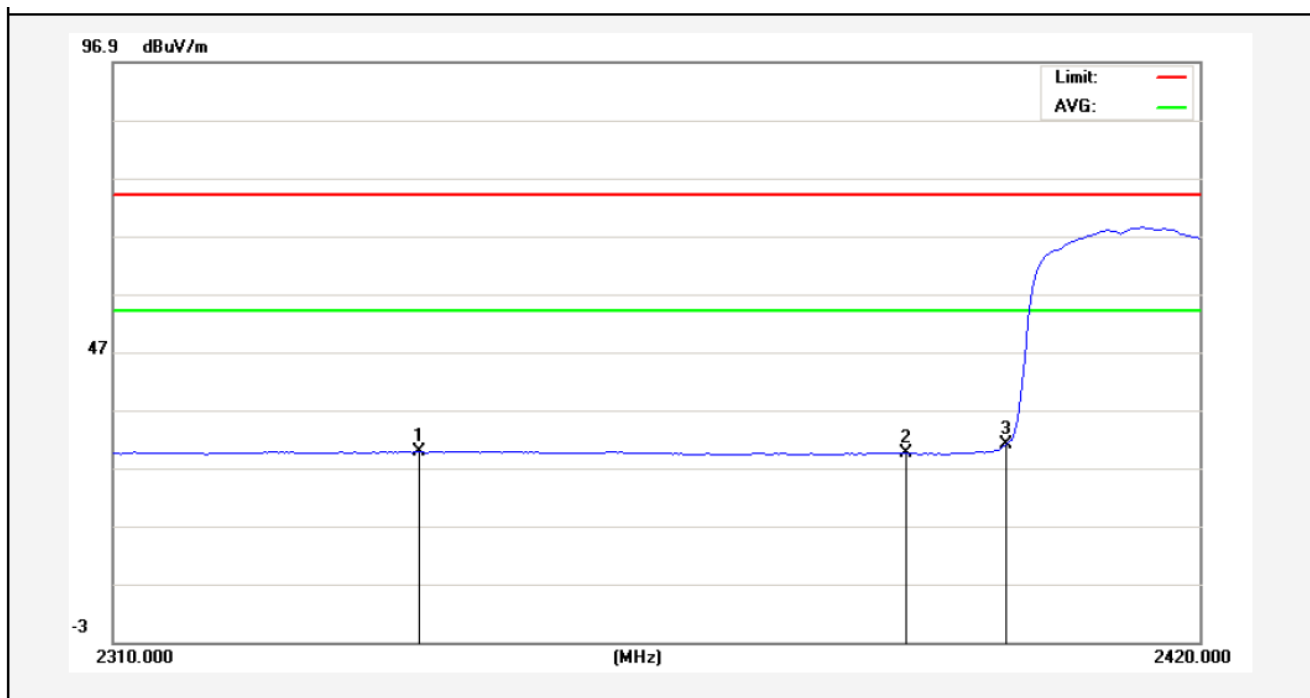
2412MHz

Horizontal-PEAK:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2345.200	43.52	-2.61	40.91	74.00	-33.09	peak			
2	2390.000	41.66	-2.51	39.15	74.00	-34.85	peak			
3	2400.000	43.57	-2.49	41.08	74.00	-32.92	peak			

Horizontal-AV:

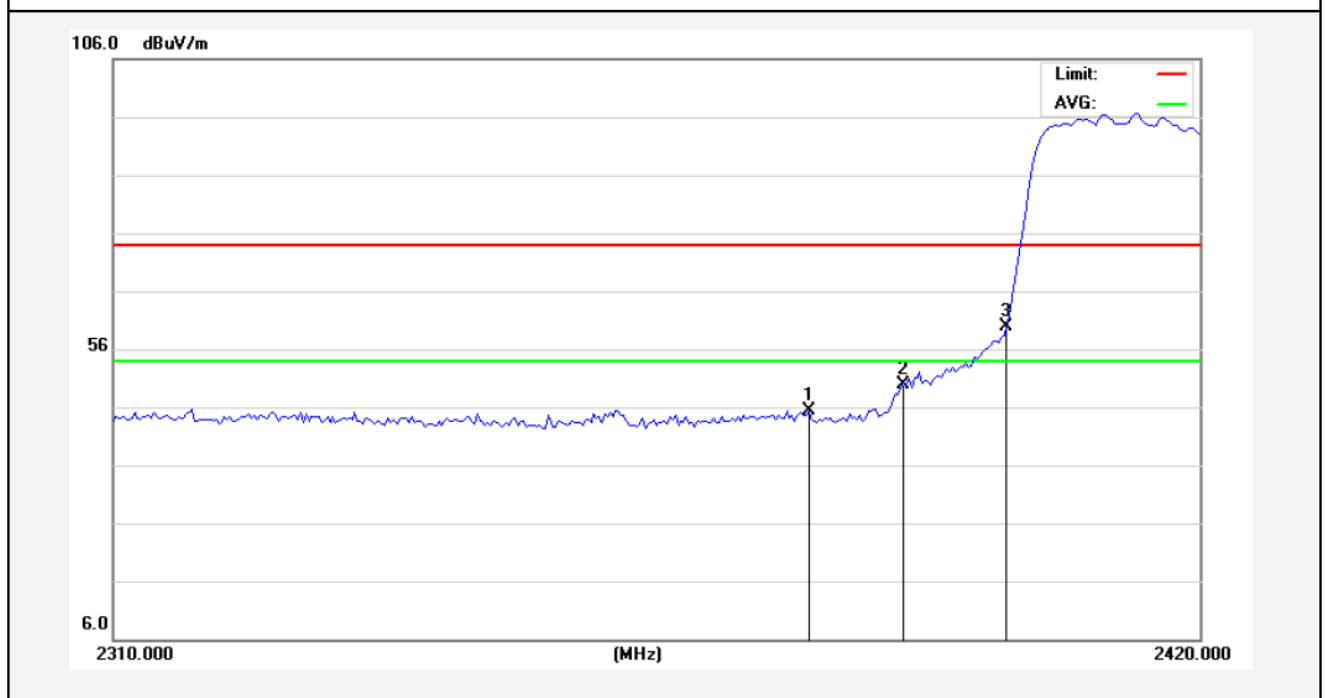


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2340.800	32.45	-2.62	29.83	54.00	-24.17	AVG			
2	2390.000	32.00	-2.51	29.49	54.00	-24.51	AVG			
3	2400.000	33.59	-2.49	31.10	54.00	-22.90	AVG			

Test Mode: 802.11n (HT20)

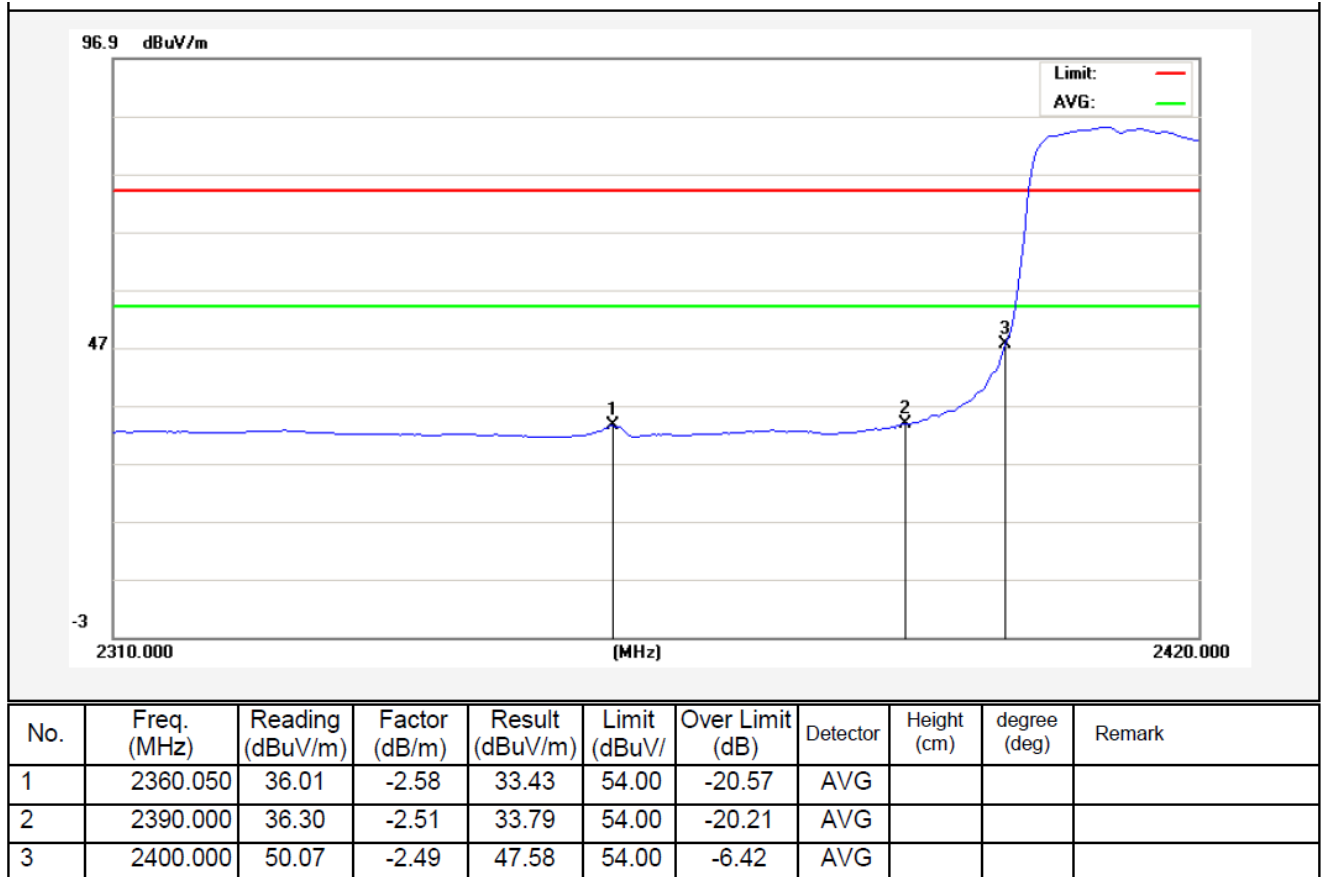
2412MHz

Vertical-PEAK:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2379.850	48.00	-2.54	45.46	74.00	-28.54	peak			
2	2390.000	52.42	-2.51	49.91	74.00	-24.09	peak			
3	2400.000	62.26	-2.49	59.77	74.00	-14.23	peak			

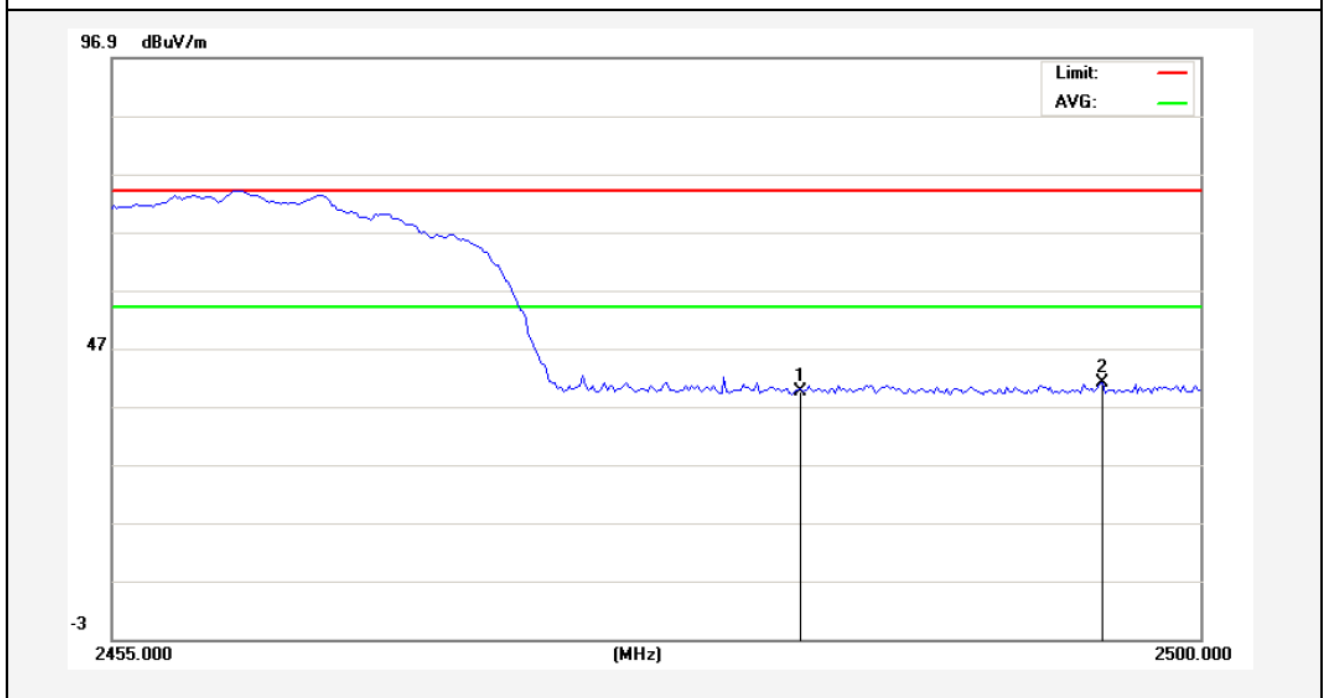
Vertical-AV:



Test Mode: 802.11n (HT20)

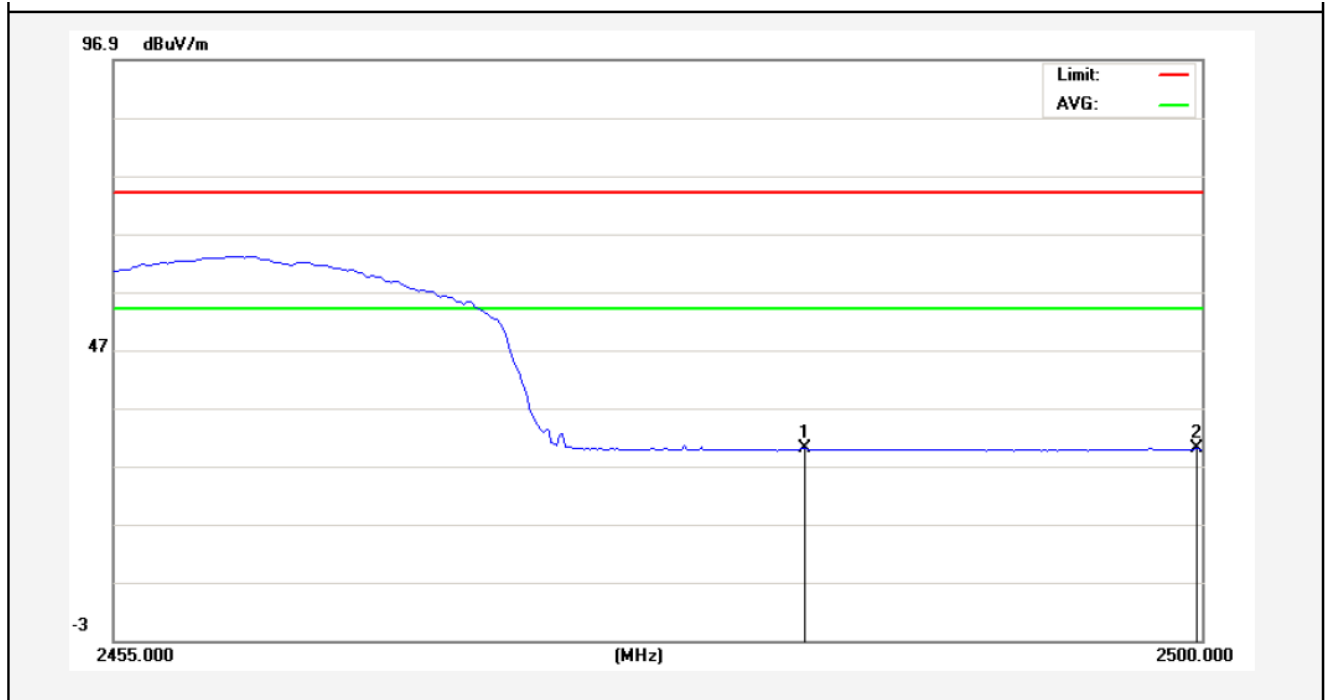
2462MHz

Horizontal-PEAK:



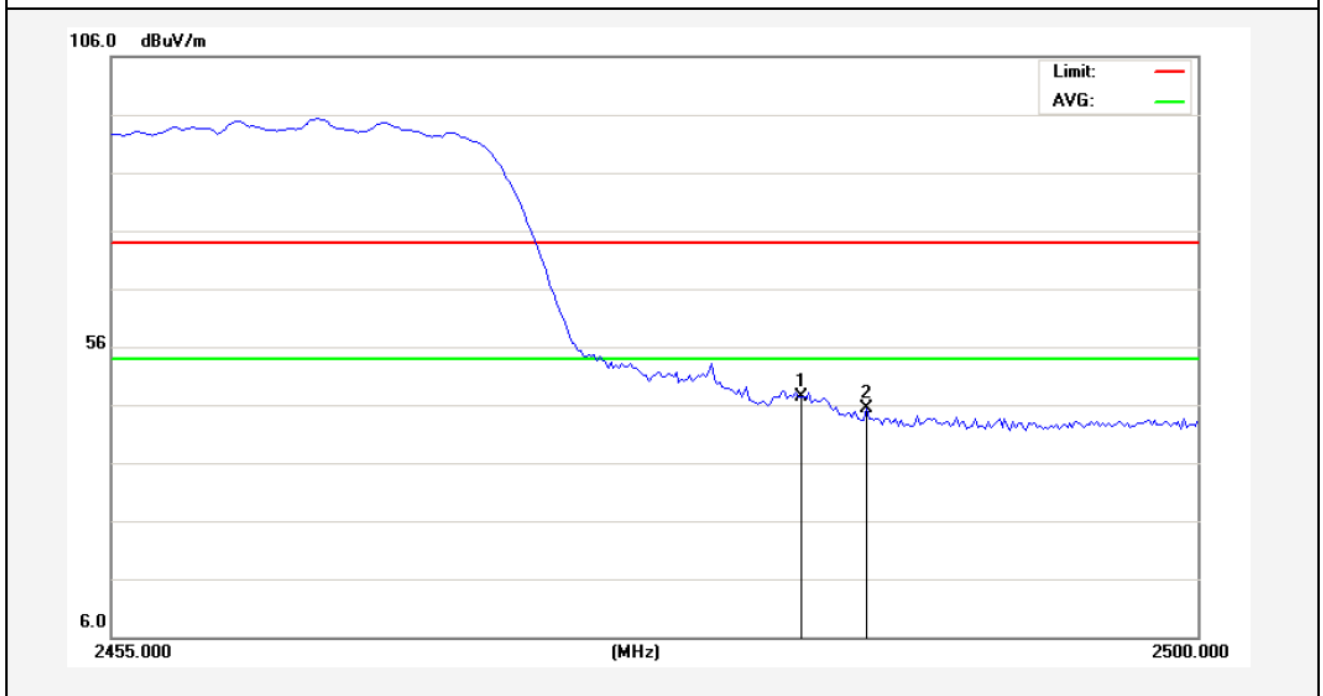
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2483.500	41.92	-2.31	39.61	74.00	-34.39	peak			
2	2495.950	43.31	-2.28	41.03	74.00	-32.97	peak			

Horizontal-AV:



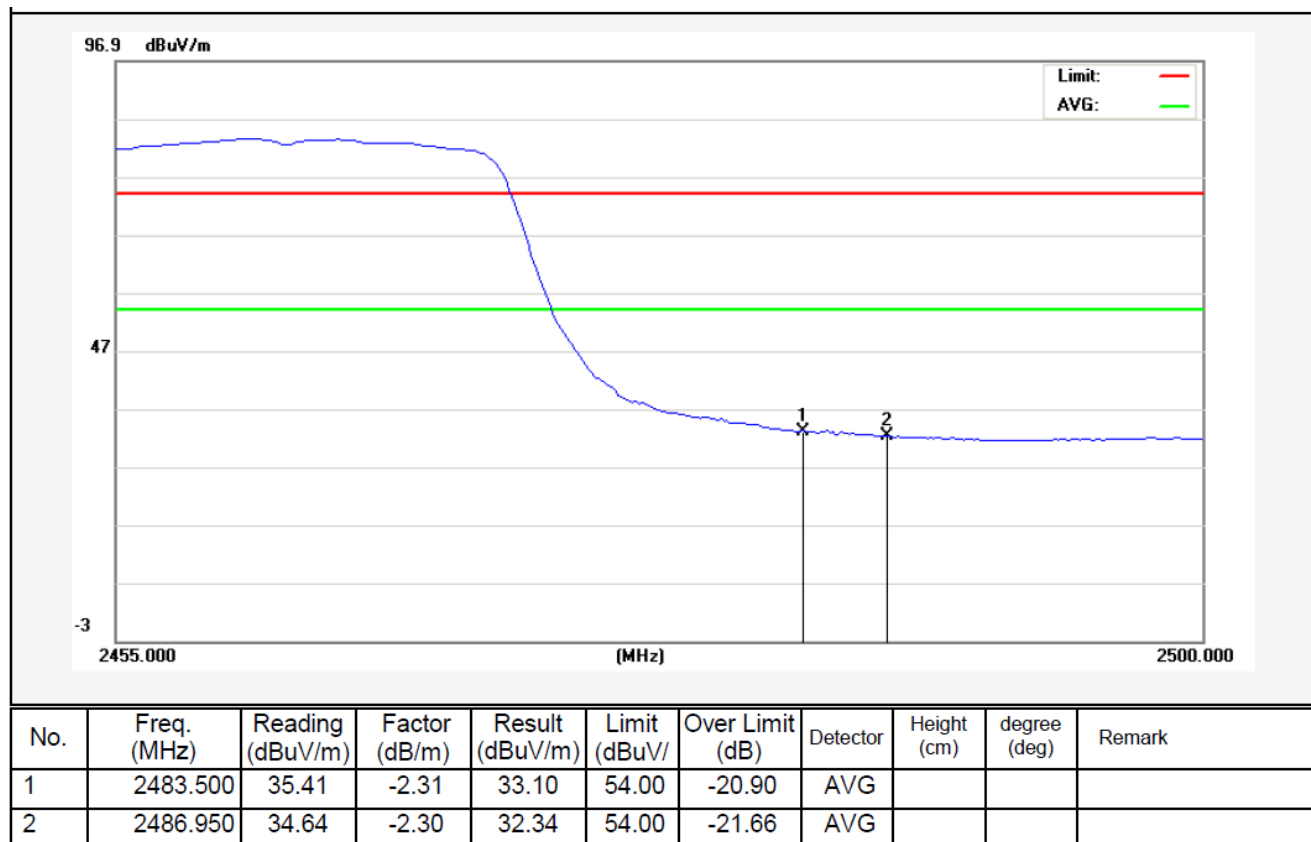
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2483.500	32.23	-2.31	29.92	54.00	-24.08	AVG			
2	2499.775	32.18	-2.27	29.91	54.00	-24.09	AVG			

Test Mode: 802.11n (HT20)
2462MHz
Vertical-PEAK:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2483.500	49.80	-2.31	47.49	74.00	-26.51	peak			
2	2486.275	47.72	-2.30	45.42	74.00	-28.58	peak			

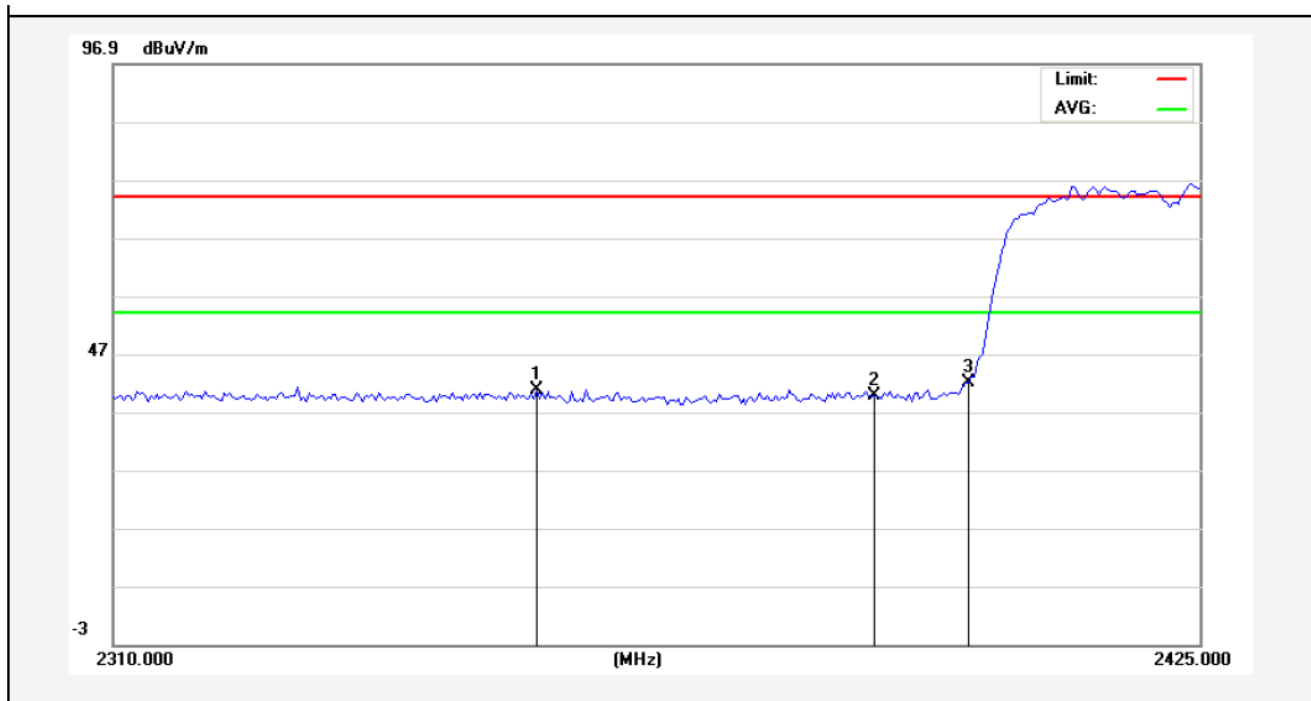
Vertical-AV:



Test Mode: 802.11n (HT40)

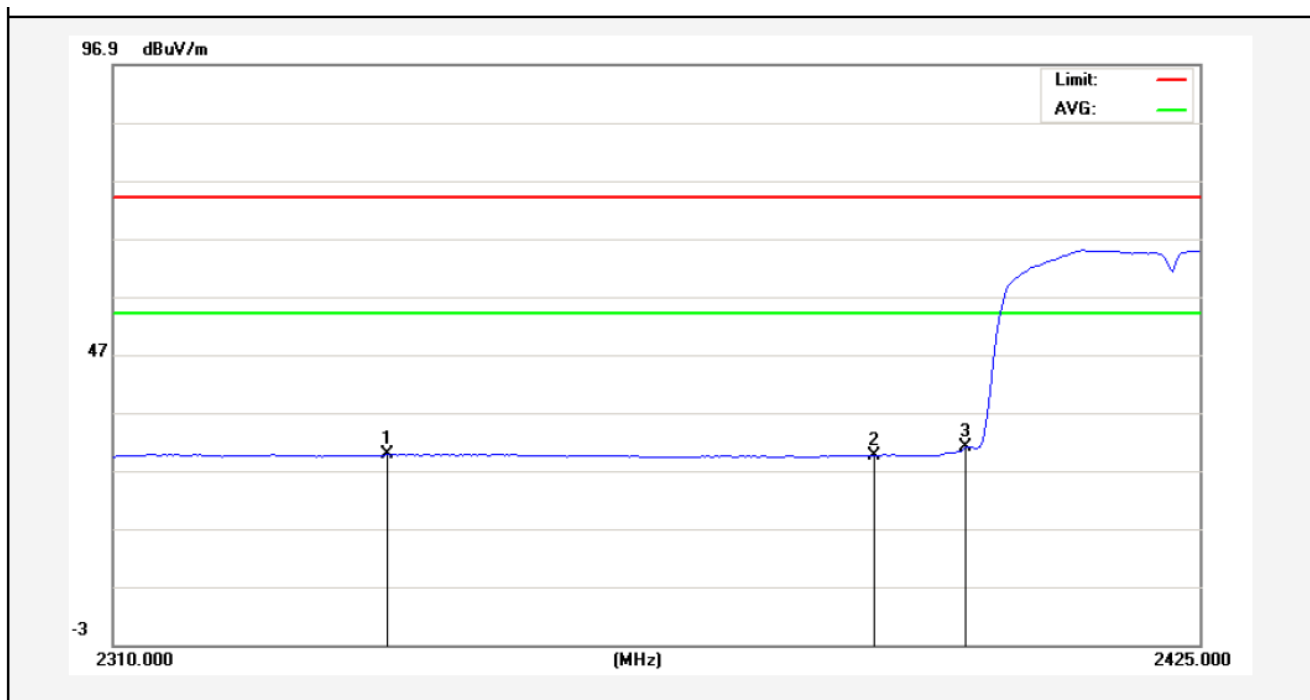
2422MHz

Horizontal-PEAK:



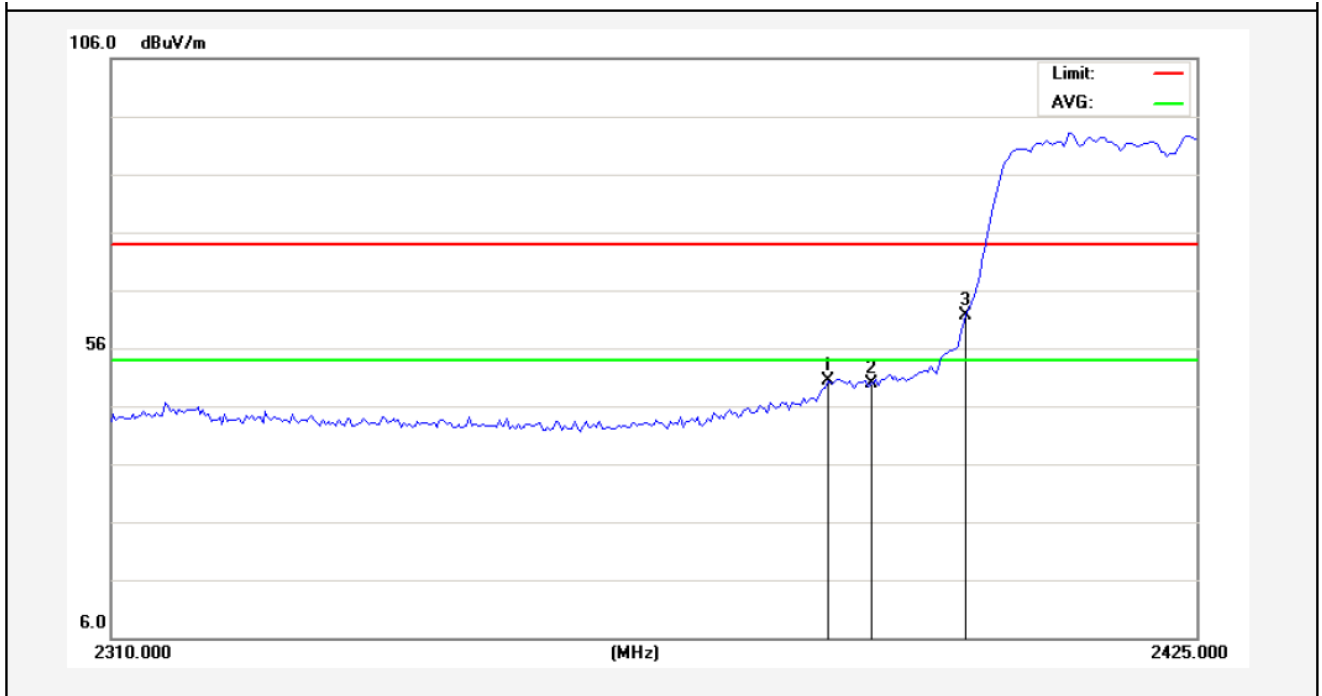
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2354.275	43.40	-2.59	40.81	74.00	-33.19	peak			
2	2390.000	42.24	-2.51	39.73	74.00	-34.27	peak			
3	2400.000	44.58	-2.49	42.09	74.00	-31.91	peak			

Horizontal-AV:



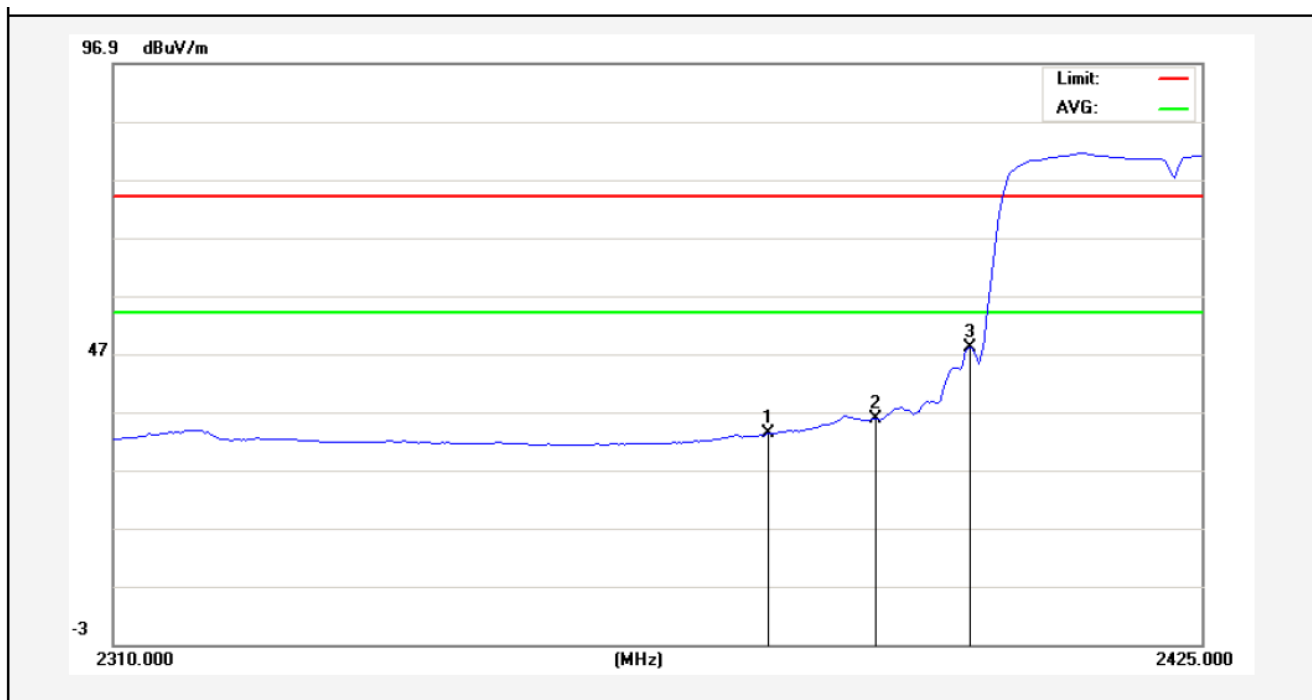
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2338.750	32.39	-2.63	29.76	54.00	-24.24	AVG			
2	2390.000	32.09	-2.51	29.58	54.00	-24.42	AVG			
3	2400.000	33.59	-2.49	31.10	54.00	-22.90	AVG			

Test Mode: 802.11n (HT40)
2422MHz
Vertical-PEAK:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2385.325	53.01	-2.52	50.49	74.00	-23.51	peak			
2	2390.000	52.45	-2.51	49.94	74.00	-24.06	peak			
3	2400.000	64.06	-2.49	61.57	74.00	-12.43	peak			

Vertical-AV:

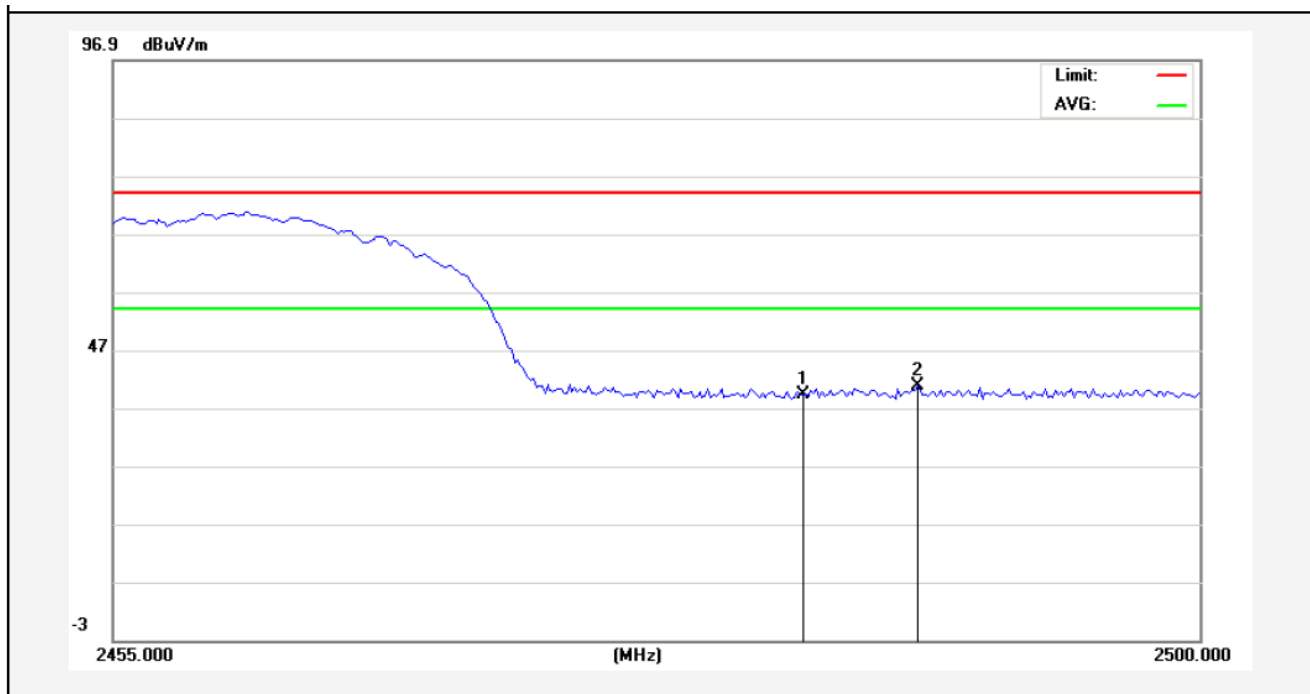


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2378.713	35.86	-2.54	33.32	54.00	-20.68	AVG			
2	2390.000	38.20	-2.51	35.69	54.00	-18.31	AVG			
3	2400.000	50.64	-2.49	48.15	54.00	-5.85	AVG			

Test Mode: 802.11n (HT40)

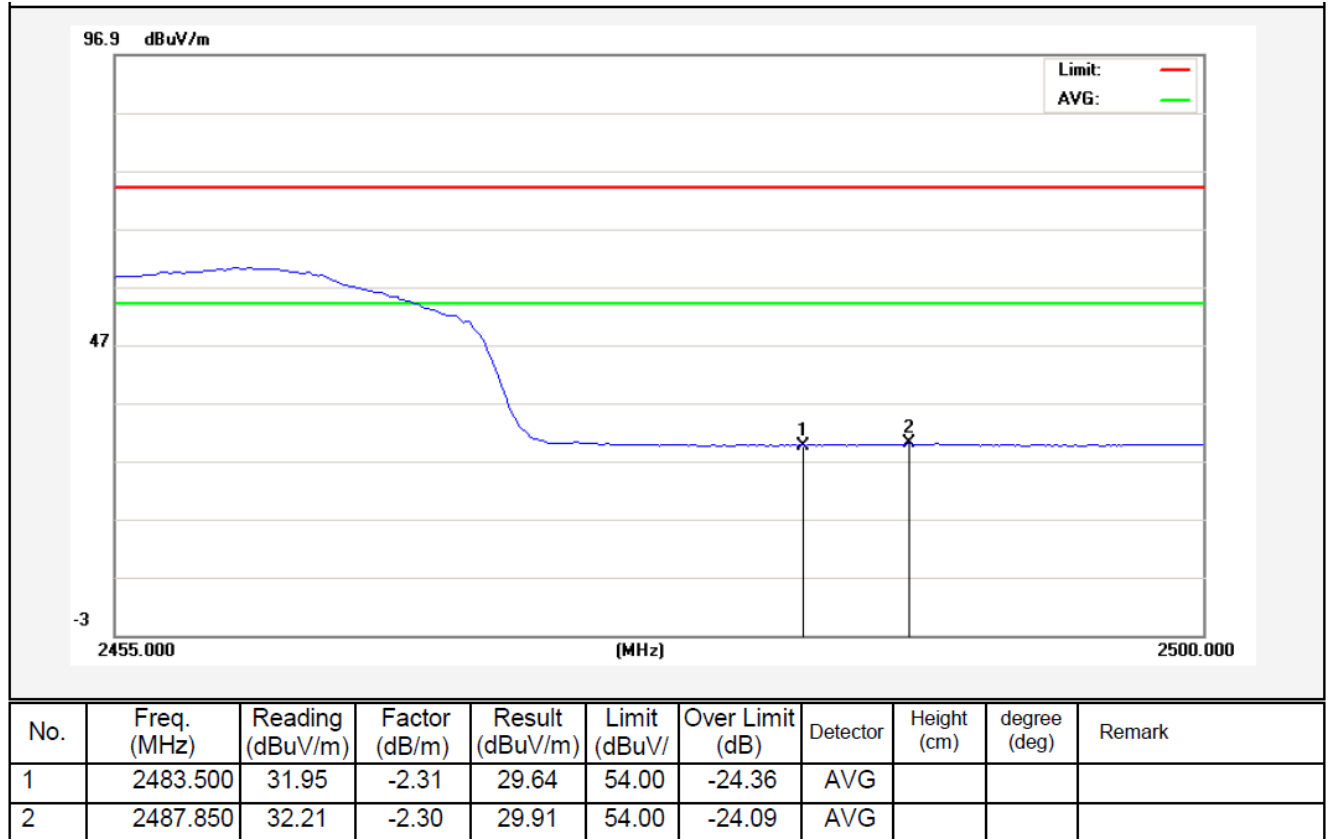
2452MHz

Horizontal-PEAK:

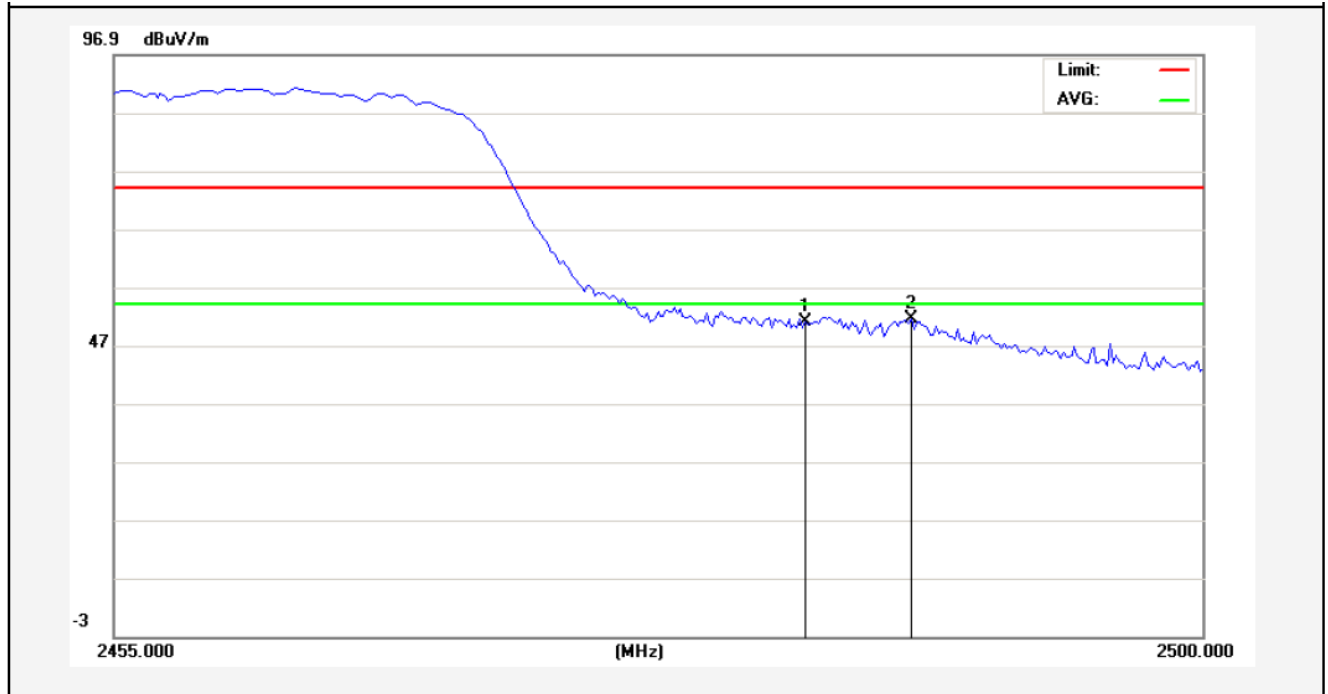


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2483.500	41.53	-2.31	39.22	74.00	-34.78	peak			
2	2488.300	43.03	-2.30	40.73	74.00	-33.27	peak			

Horizontal-AV:

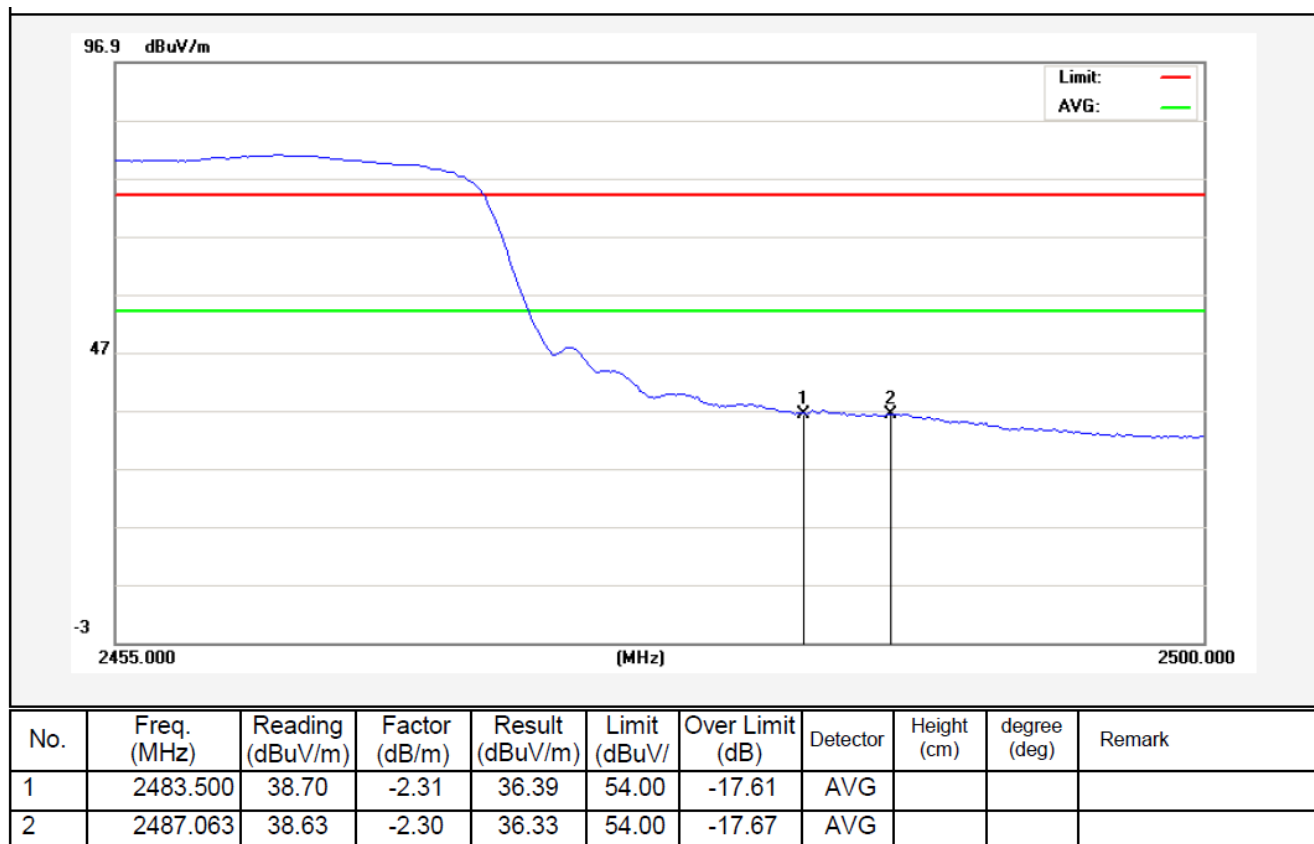


Test Mode: 802.11n (HT40)
2452MHz
Vertical-PEAK:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2483.500	53.32	-2.31	51.01	74.00	-22.99	peak			
2	2487.963	53.72	-2.30	51.42	74.00	-22.58	peak			

Vertical-AV:



4.5. Peak Power Spectral Density

a. Limit

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.

c. Test Equipment

Same as the equipment listed in 4.2.

d. Test Setup

See 4.1

e. Test Results

Pass

f. Test Data

Please refer to the following data.

g. Test Plot

 See the following pages

Test mode: IEEE 802.11b

Channel	Frequency (MHz)	PPSD (dBm/3KHz)	ΣPPSD (dBm/3KHz)	Limit (dBm)	Result
Low	2412	-28.93	-	8.00	Pass
Mid	2437	-29.46	-		Pass
High	2462	-30.25	-		Pass

Test mode: IEEE 802.11g

Channel	Frequency (MHz)	PPSD (dBm)	ΣPPSD (dBm)	Limit (dBm)	Result
Low	2412	-27.09	-	8.00	Pass
Mid	2437	-27.39	-		Pass
High	2462	-28.05	-		Pass

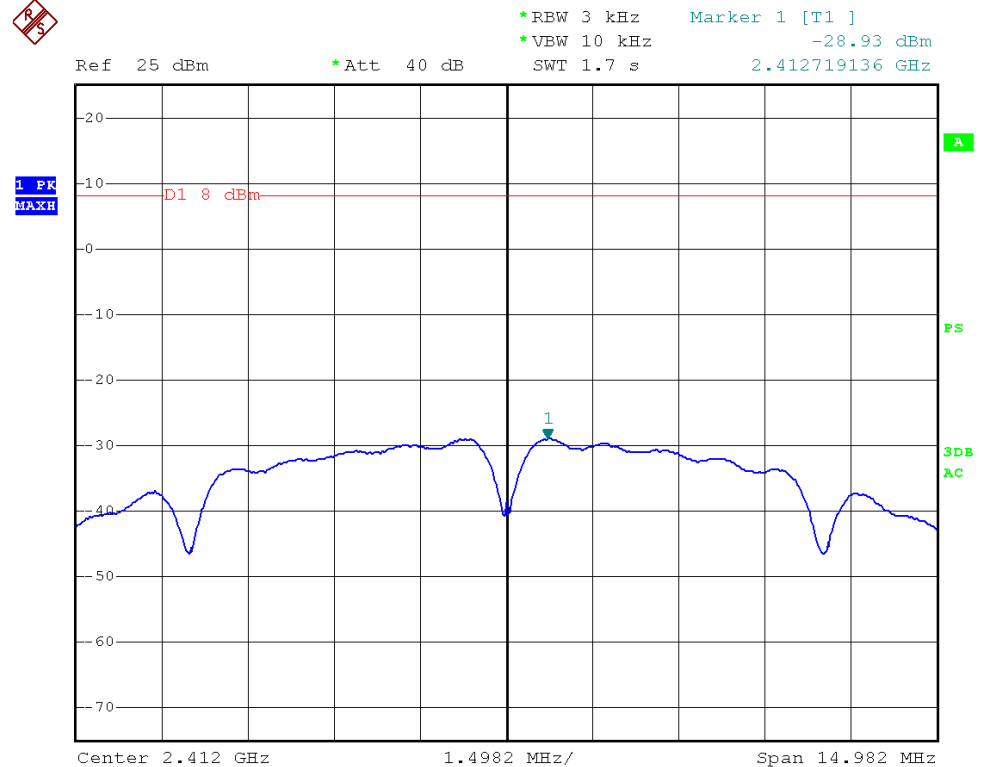
Test mode: IEEE 802.11n (HT20)

Channel	Frequency (MHz)	PPSD (dBm/3KHz)	ΣPPSD (dBm/3KHz)	Limit (dBm)	Result
Low	2412	-27.16	-	8.00	Pass
Mid	2437	-28.04	-		Pass
High	2462	-29.95	-		Pass

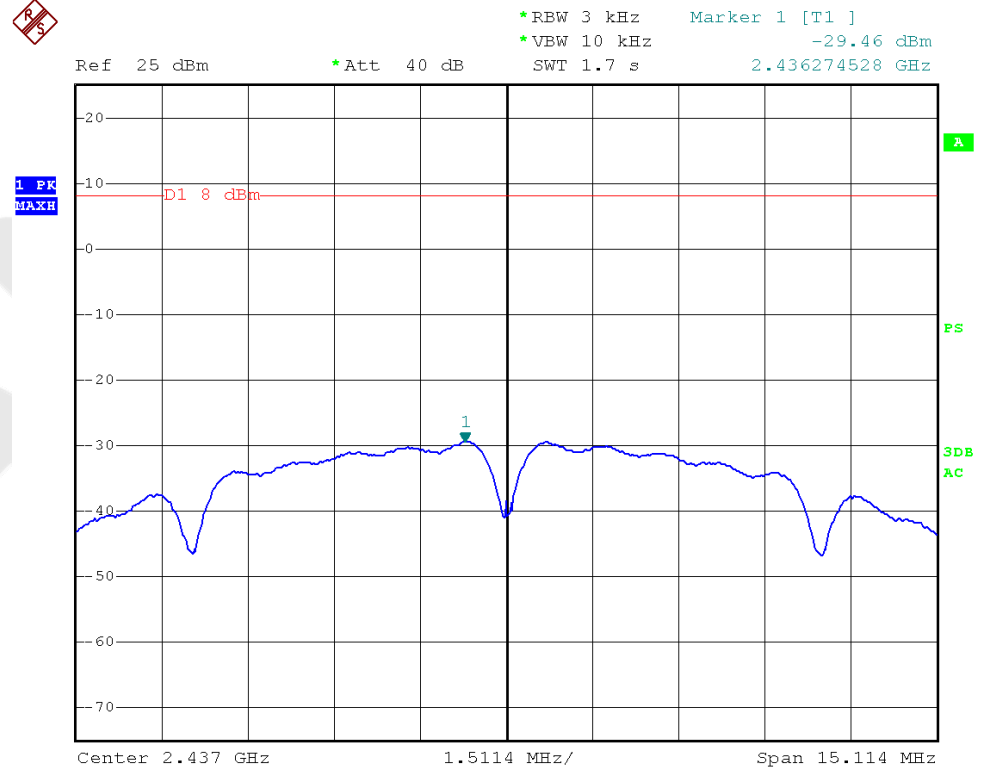
Test mode: IEEE 802.11n (HT40)

Channel	Frequency (MHz)	PPSD (dBm/3KHz)	ΣPPSD (dBm/3KHz)	Limit (dBm)	Result
Low	2422	-40.21	-	8.00	Pass
Mid	2437	-30.45	-		Pass
High	2452	-40.66	-		Pass

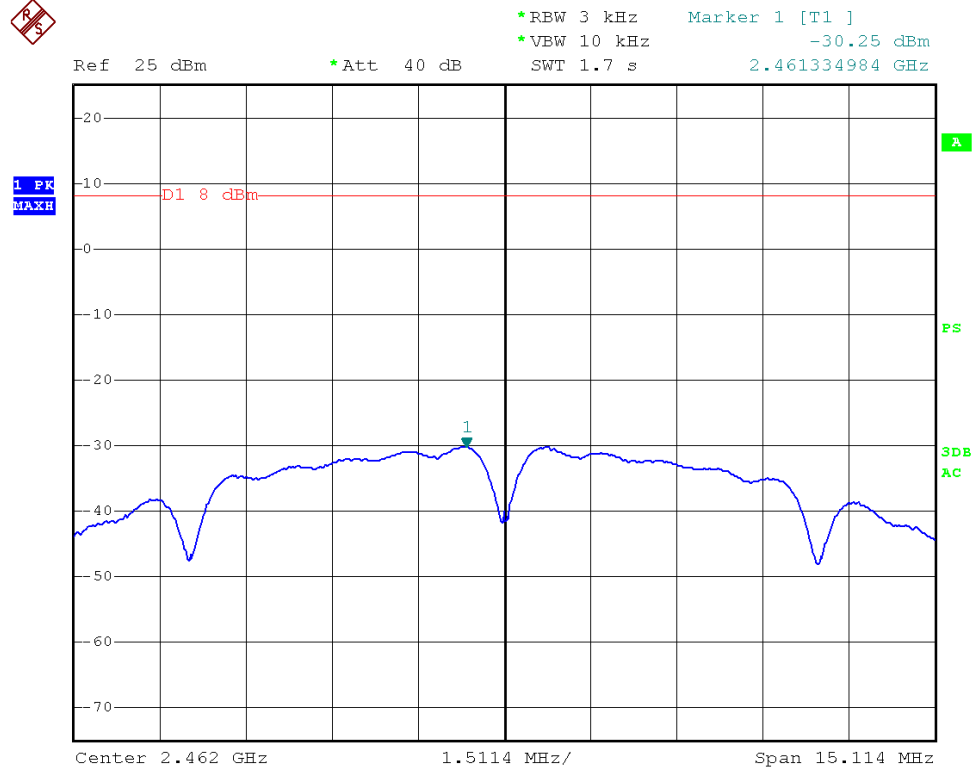
802.11 b CH--Low



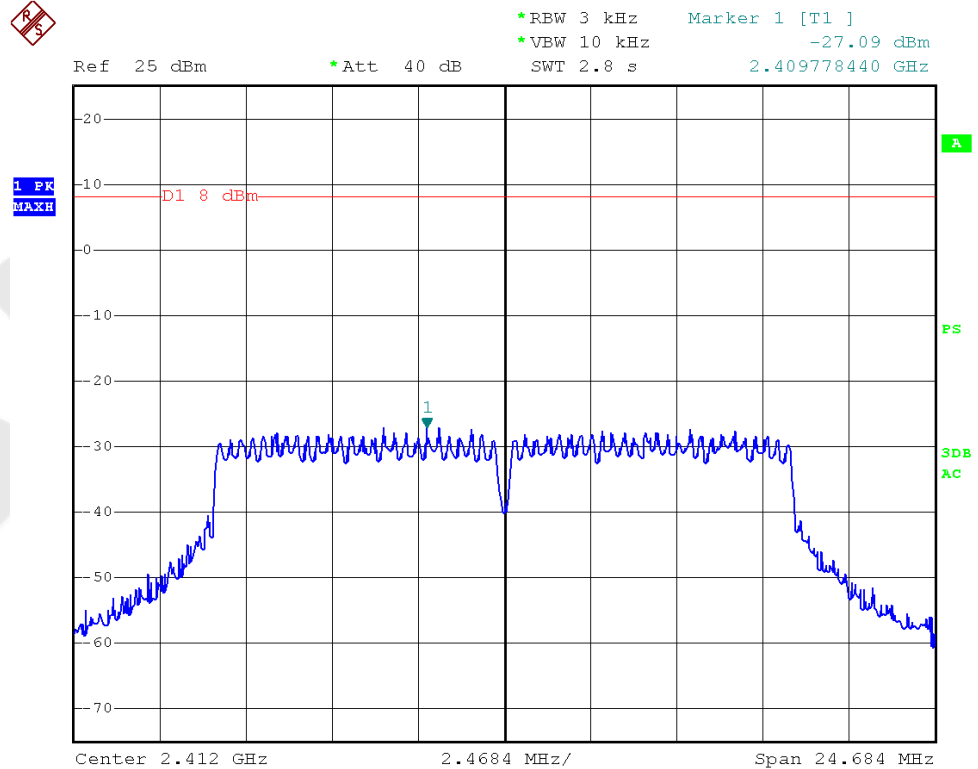
802.11 b CH--Mid



802.11 b CH--High

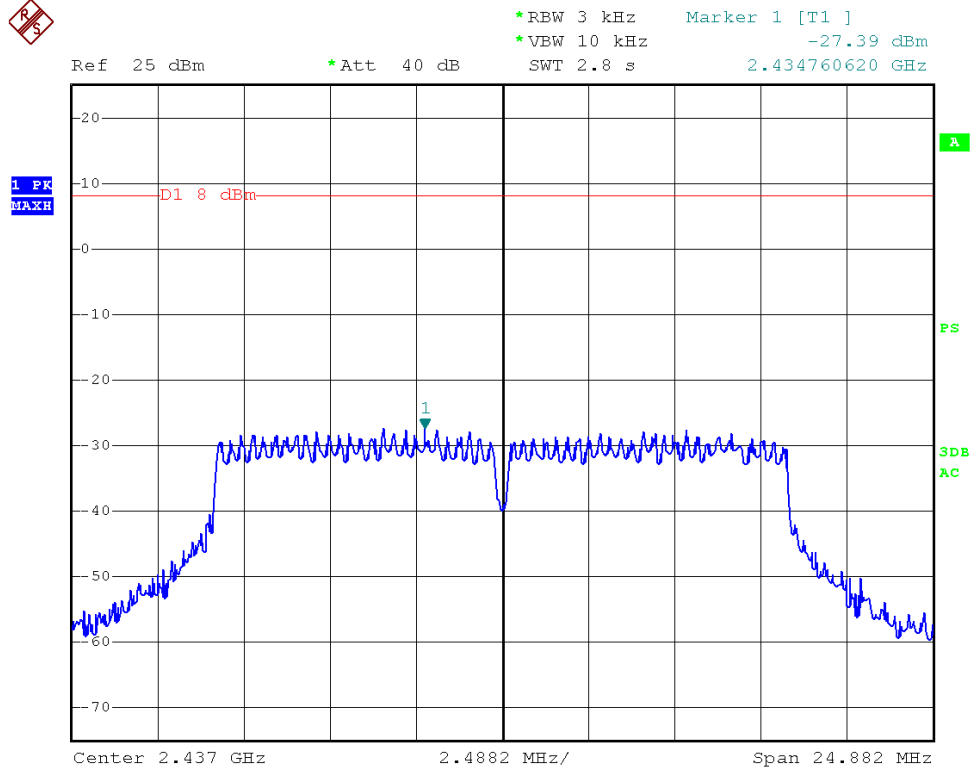


802.11g CH--Low



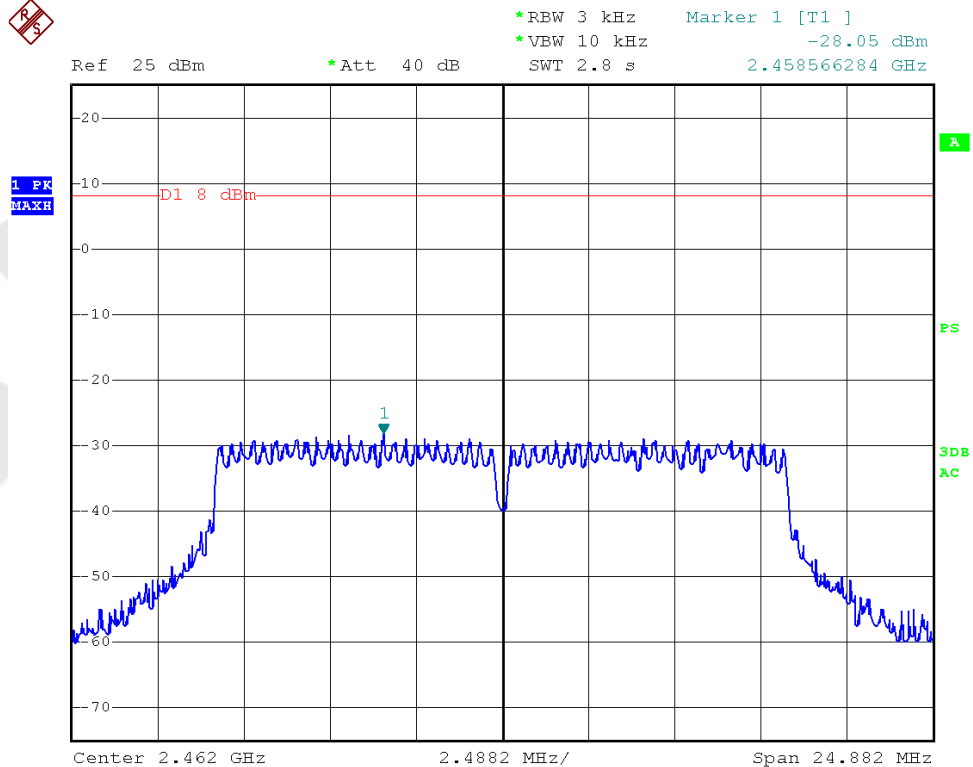
802.11g

CH--Mid

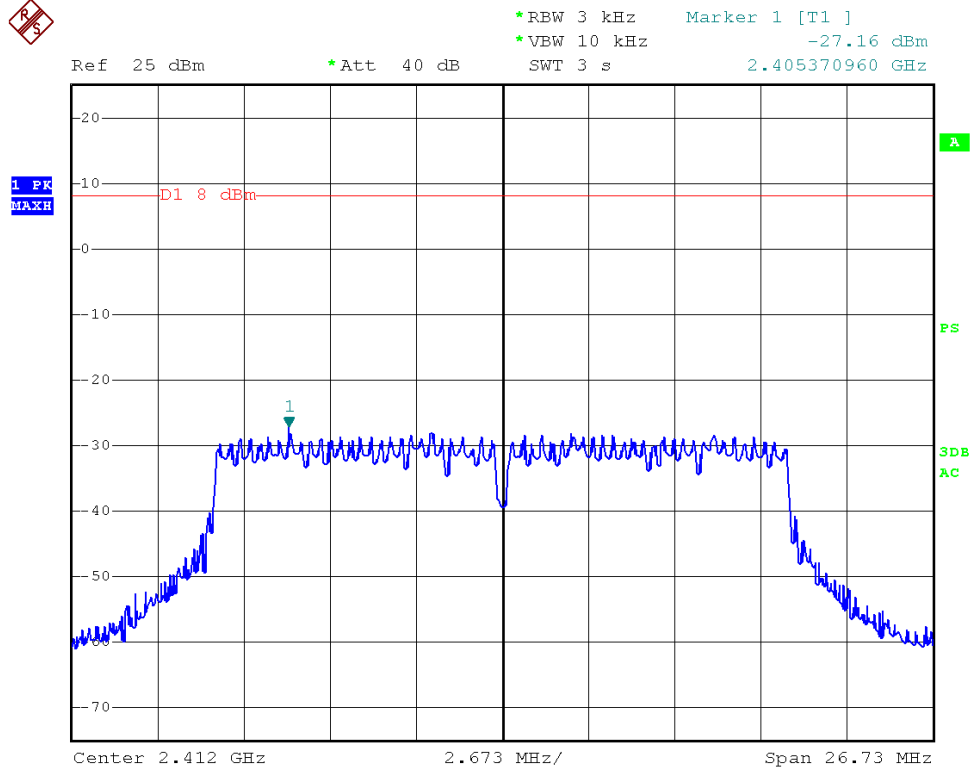


802.11g

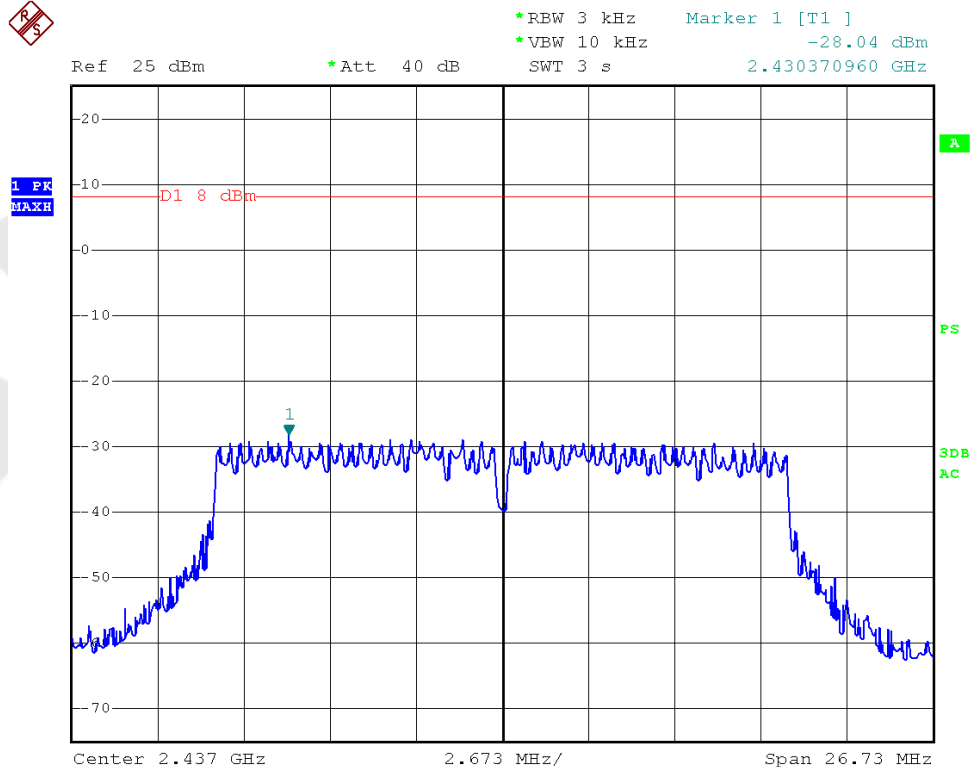
CH--High



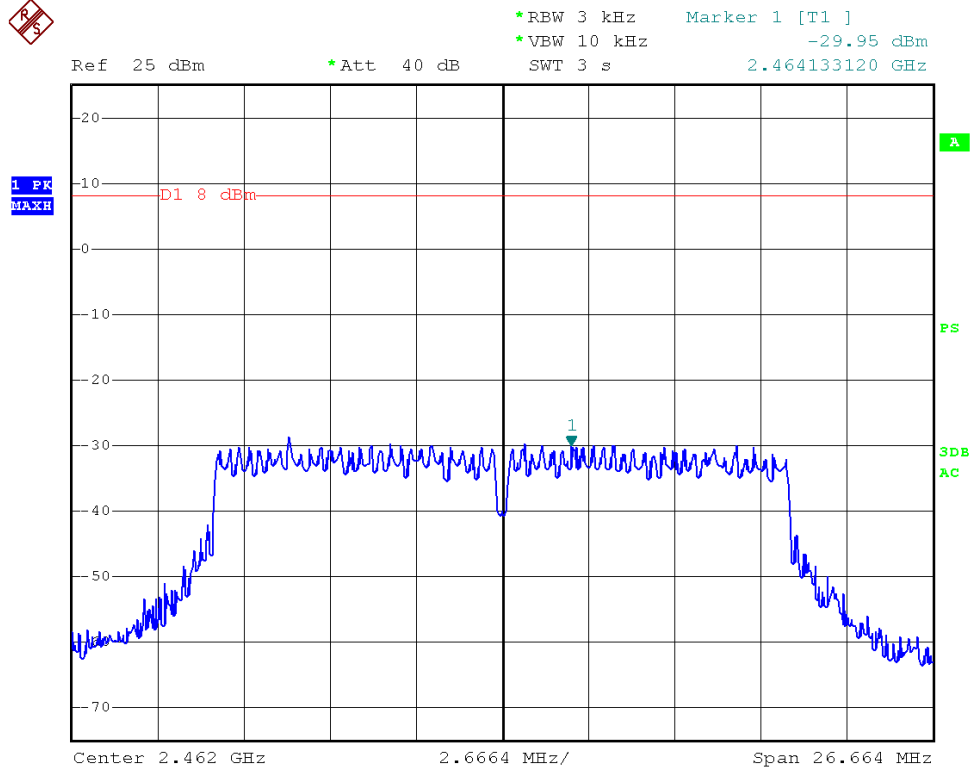
802.11n (HT20) CH—Low



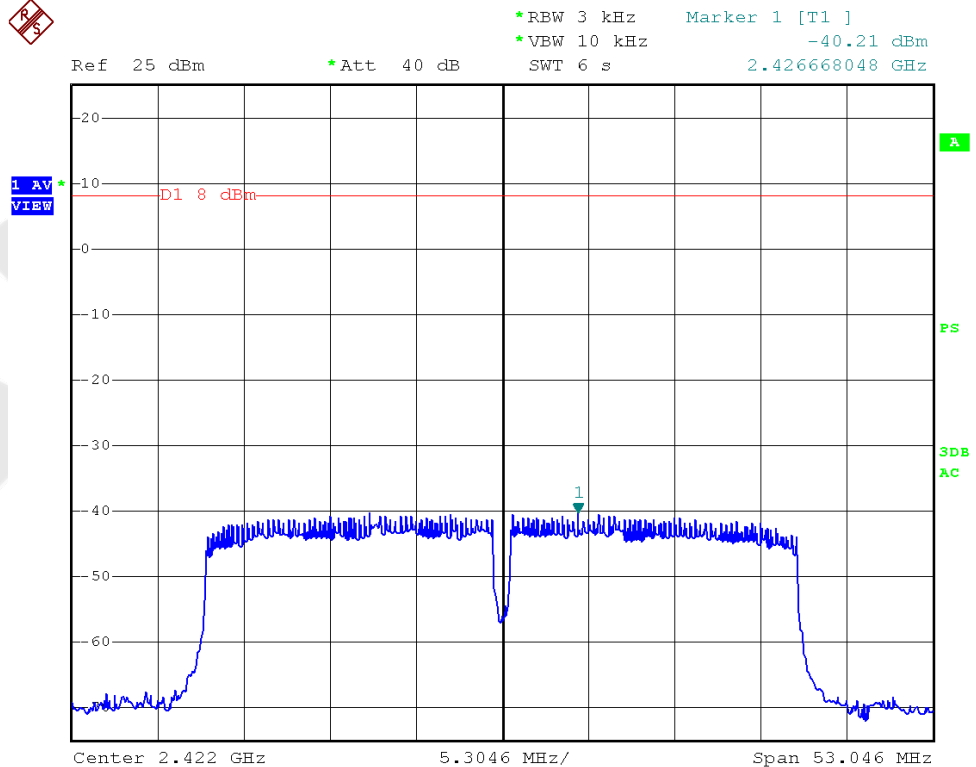
802.11n (HT20) CH—Mid



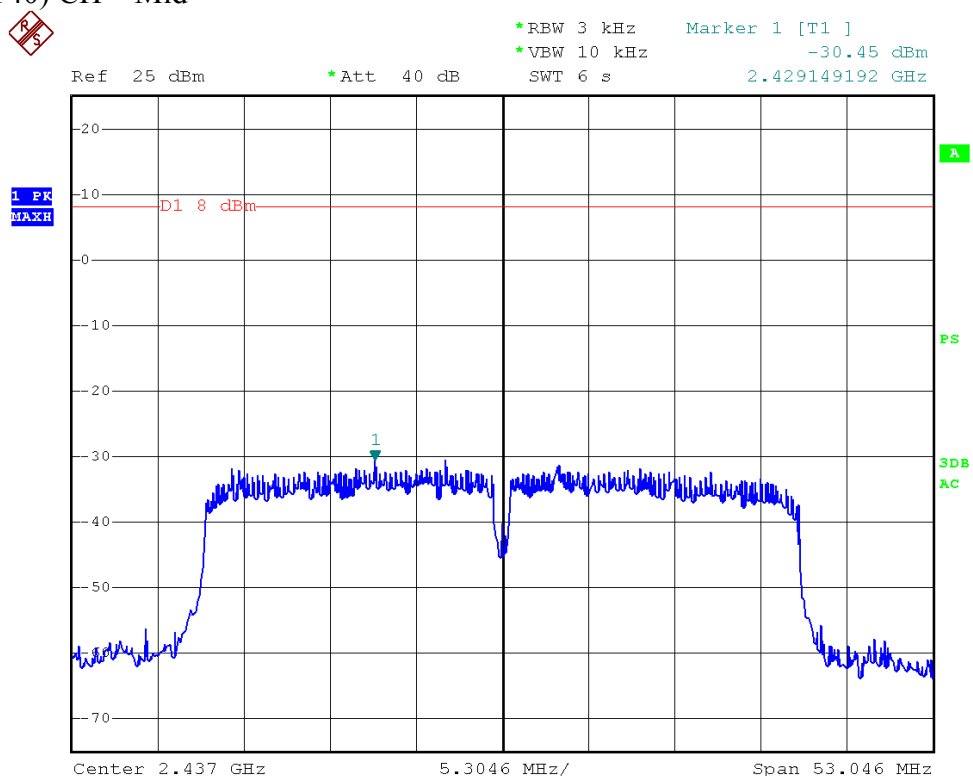
802.11n (HT20) CH—High



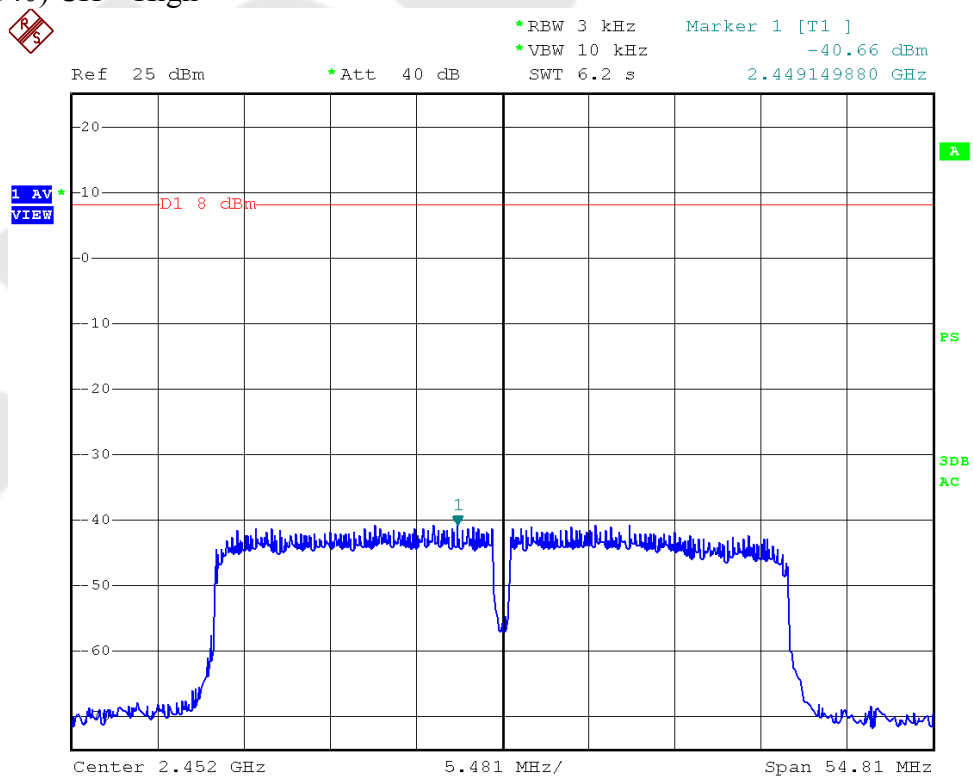
802.11n (HT40) CH—Low



802.11n (HT40) CH—Mid



802.11n (HT40) CH—High



4.6. Radiated Emissions

4.6.1.1. 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

4.6.1.2. Test Limits ($\geq$ 30 MHZ)

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

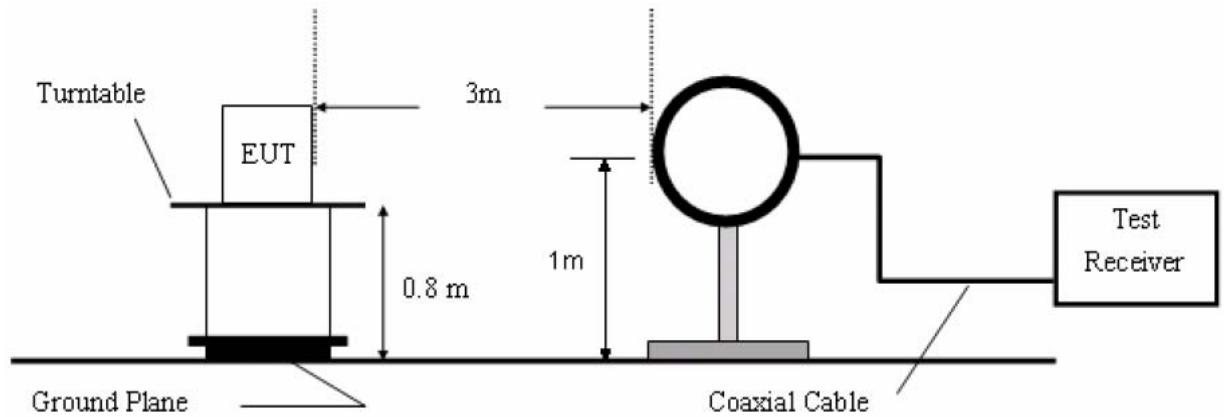
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the 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 15.209(a) (see Section 15.205(c)).

Test Equipment

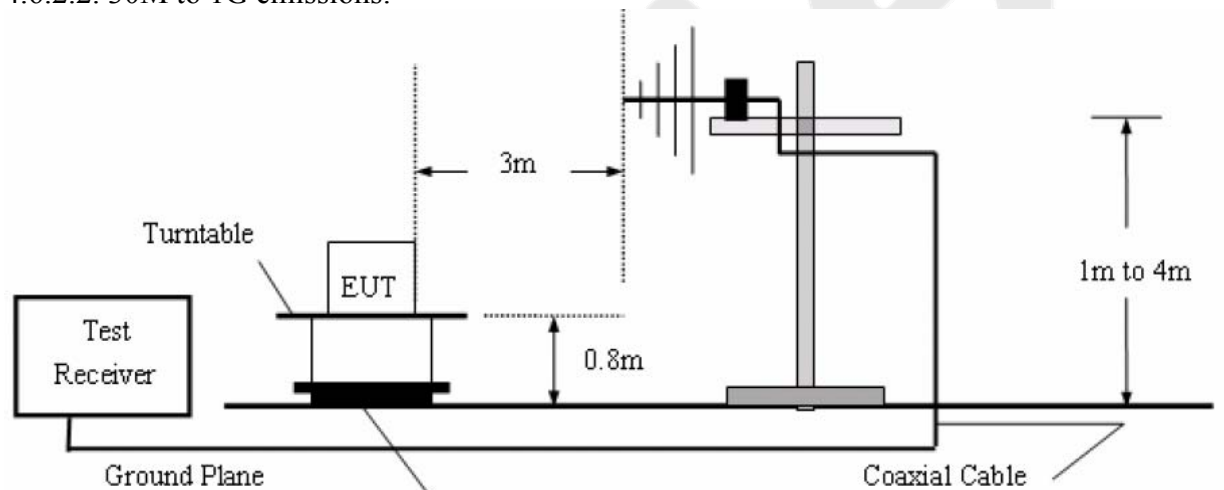
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Preamplifier	Instruments corporation	EMC011830	980100	Aug. 09, 2013	1 Year
2.	EMI Test Receiver	Rohde & Schwarz	ESPI	101604	Apr. 23, 2014	1 Year
3.	Double Ridged Horn Antenna	Instruments corporation	GTH-0118	351600	Aug. 09, 2013	3 Year
4.	Bilog Broadband Antenna	Schwarzbeck	VULB9163	VULB 9163-289	Apr. 23, 2013	3 Year
5.	Pre-amplifier	SONOMA	310N	186860	Apr. 23, 2014	1 Year
6.	EMI Test Software EZ-EMC	SHURPLE	N/A	N/A	N/A	N/A

4.6.2. Test Configuration:

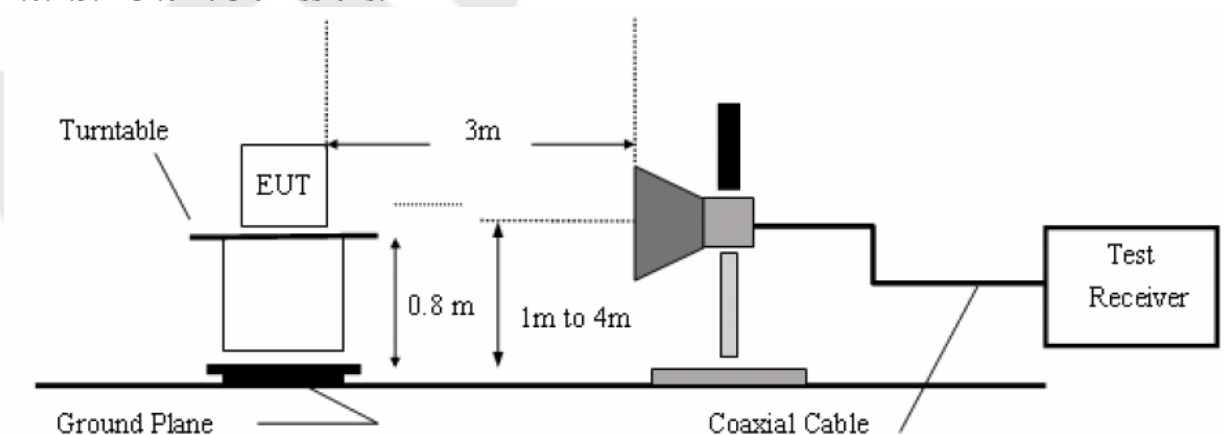
4.6.2.1. 9k to 30MHz emissions:



4.6.2.2. 30M to 1G emissions:



4.6.2.3. 1G to 40G emissions:



4.6.3. 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.

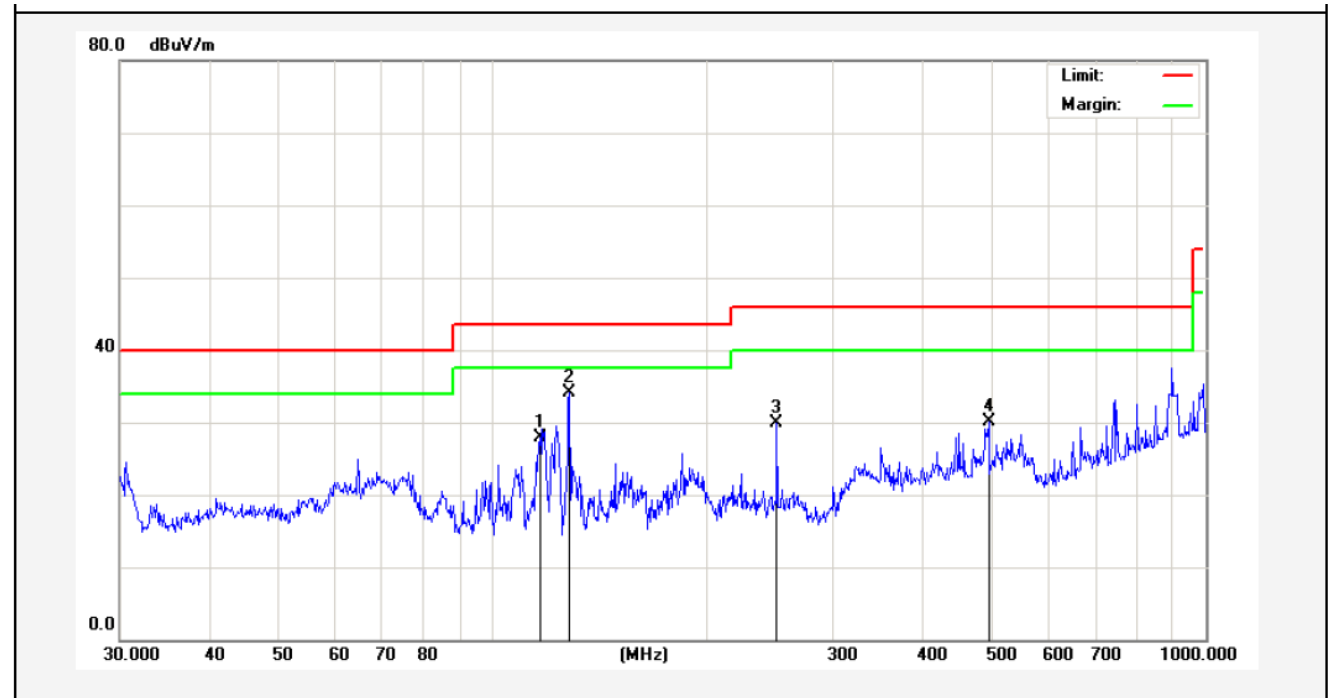
The EUT is tested in 9*6*6 Chamber.

The test results are listed in Section 4.6.4.

4.6.4. Test Results

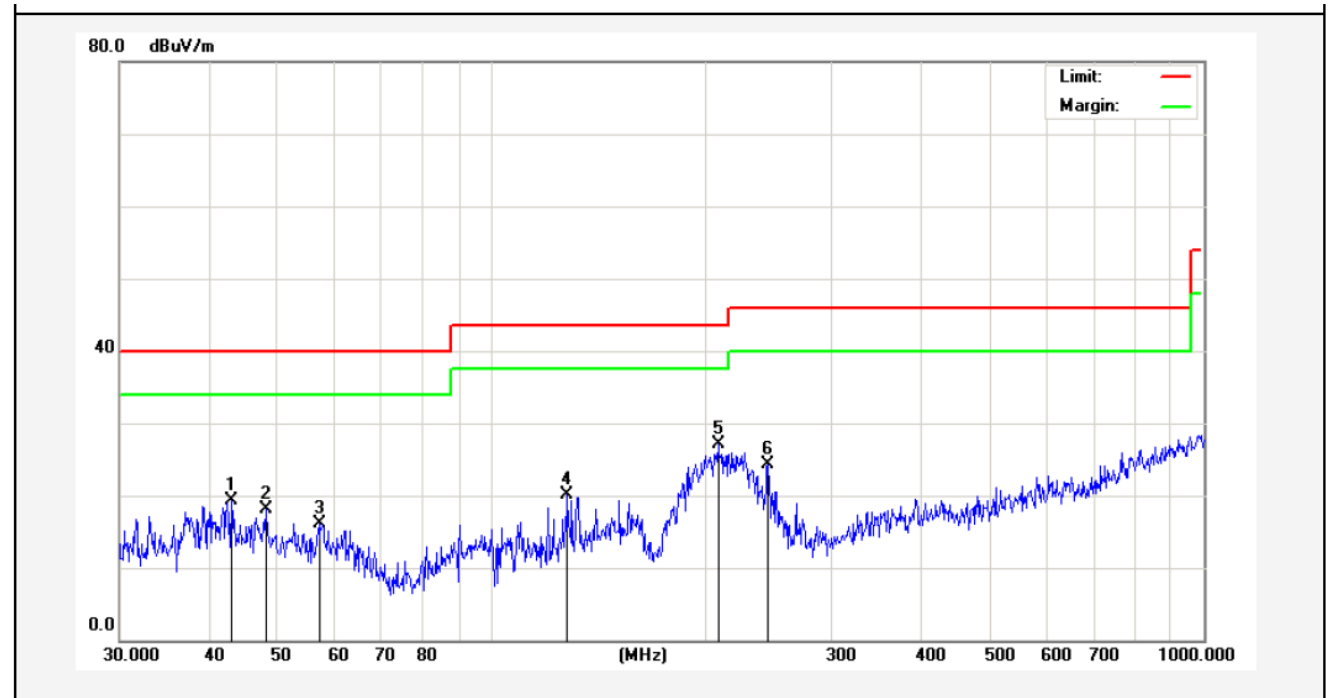
Please refer to the following pages.

Job No.:	011405309E	Polarization:	Horizontal
Standard:	(RE)FCC PART15 C _3m	Power Source:	DC 5V via USB Port
Test item:	Radiation Test	Temp.(C)/Hum.(%RH):	24.3(C)/55%RH
Test Mode:	On	Distance:	3m



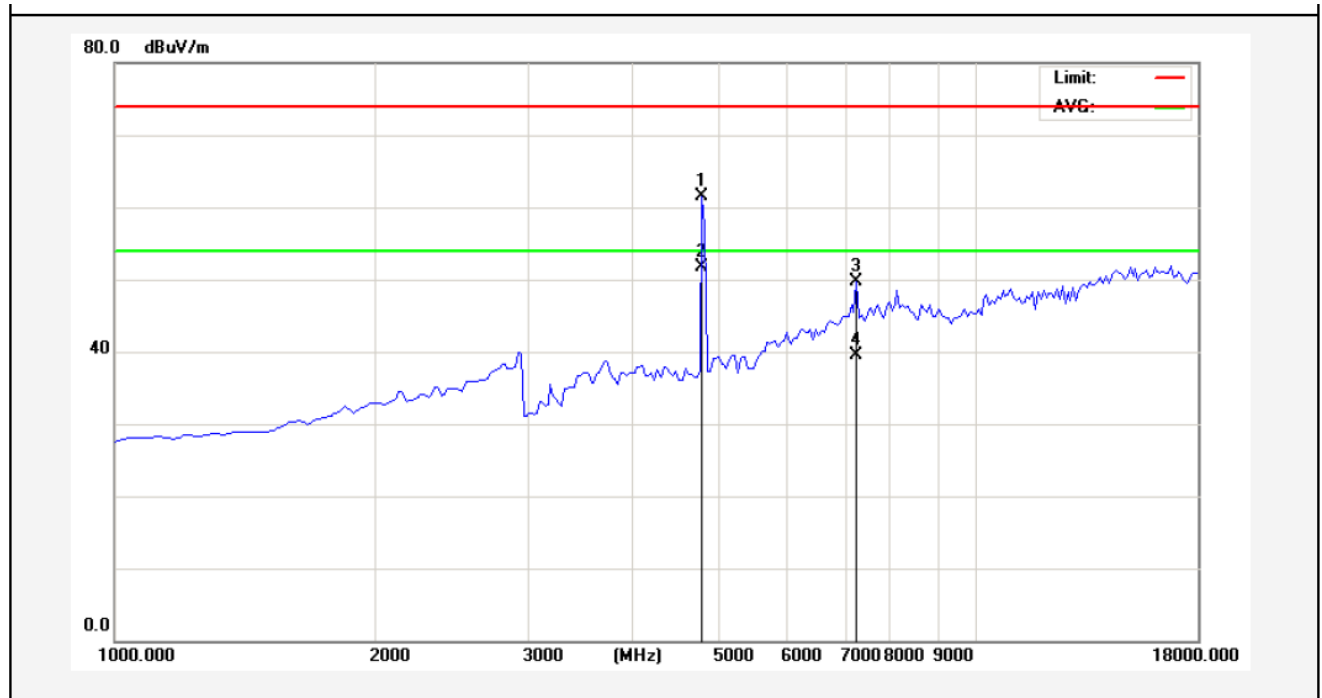
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	116.5401	48.90	-21.09	27.81	43.50	-15.69	peak			
2	128.1130	56.63	-22.54	34.09	43.50	-9.41	peak			
3	250.3012	48.47	-18.56	29.91	46.00	-16.09	peak			
4	495.9344	41.11	-11.06	30.05	46.00	-15.95	peak			

Job No.:	011405309E	Polarization:	Vertical
Standard:	(RE)FCC PART15 C _3m	Power Source:	DC 5V via USB Port
Test item:	Radiation Test	Temp.(C)/Hum.(%RH):	24.3(C)/55%RH
Test Mode:	On	Distance:	3m



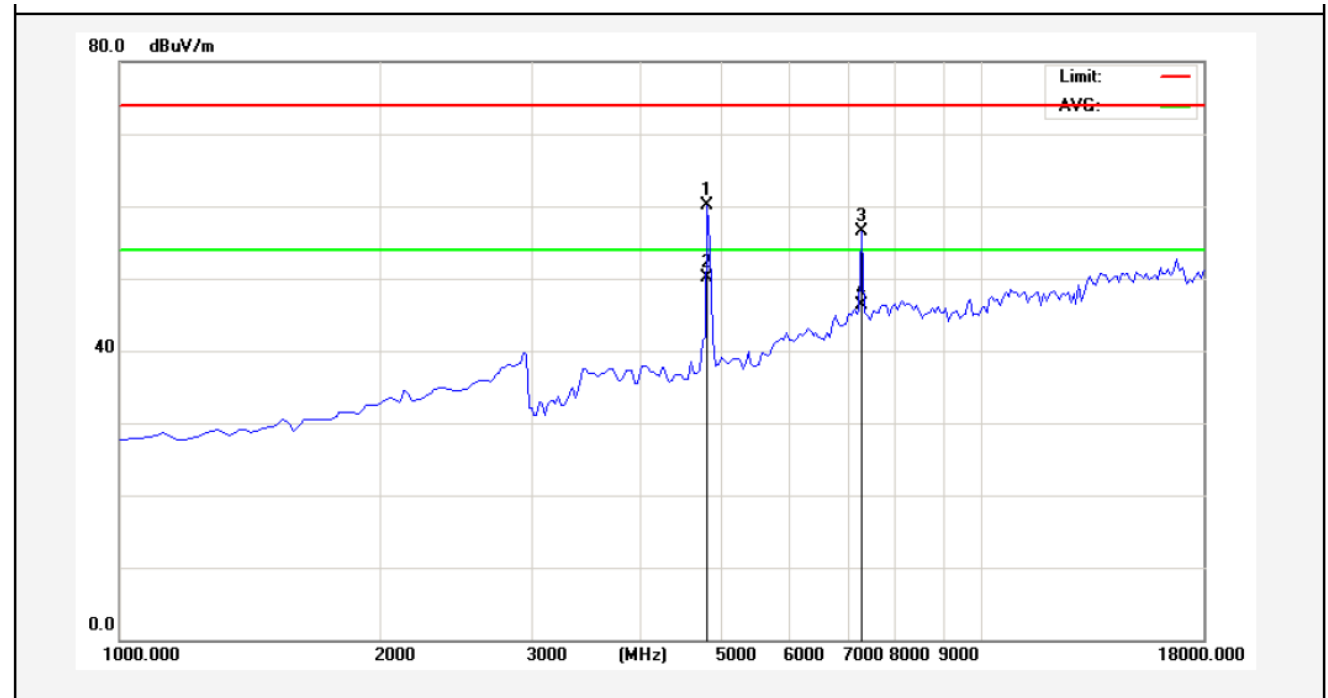
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	43.0504	33.57	-14.35	19.22	40.00	-20.78	peak			
2	48.1625	32.52	-14.48	18.04	40.00	-21.96	peak			
3	57.3922	31.28	-15.15	16.13	40.00	-23.87	peak			
4	127.6645	37.52	-17.47	20.05	43.50	-23.45	peak			
5	207.8500	42.69	-15.57	27.12	43.50	-16.38	peak			
6	244.2321	38.38	-14.07	24.31	46.00	-21.69	peak			

Job No.:	011405309E	Polarization:	Horizontal
Standard:	(RE)FCC PART15 C _3m	Power Source:	DC 5V via USB Port
Test item:	Radiation Test	Temp.(C)/Hum.(%RH):	24.3(C)/55%RH
Note:	802.11b(2412MHz)	Distance:	3m



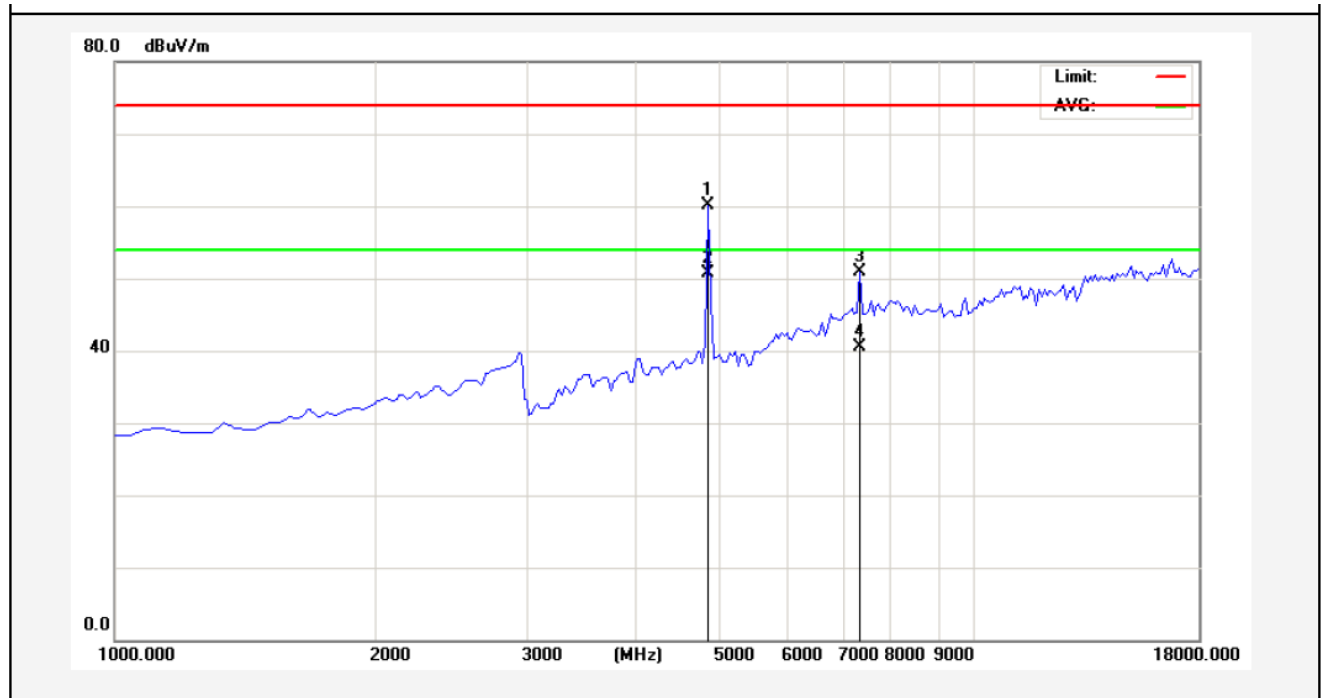
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	4825.000	58.22	3.34	61.56	74.00	-12.44	peak			
2	4825.000	48.40	3.34	51.74	54.00	-2.26	AVG			
3	7247.500	41.19	8.48	49.67	74.00	-24.33	peak			
4	7247.500	30.97	8.48	39.45	54.00	-14.55	AVG			

Job No.:	011405309E	Polarization:	Vertical
Standard:	(RE)FCC PART15 C_3m	Power Source:	DC 5V via USB Port
Test item:	Radiation Test	Temp.(C)/Hum.(%RH):	24.3(C)/55%RH
Note:	802.11b(2412MHz)	Distance:	3m



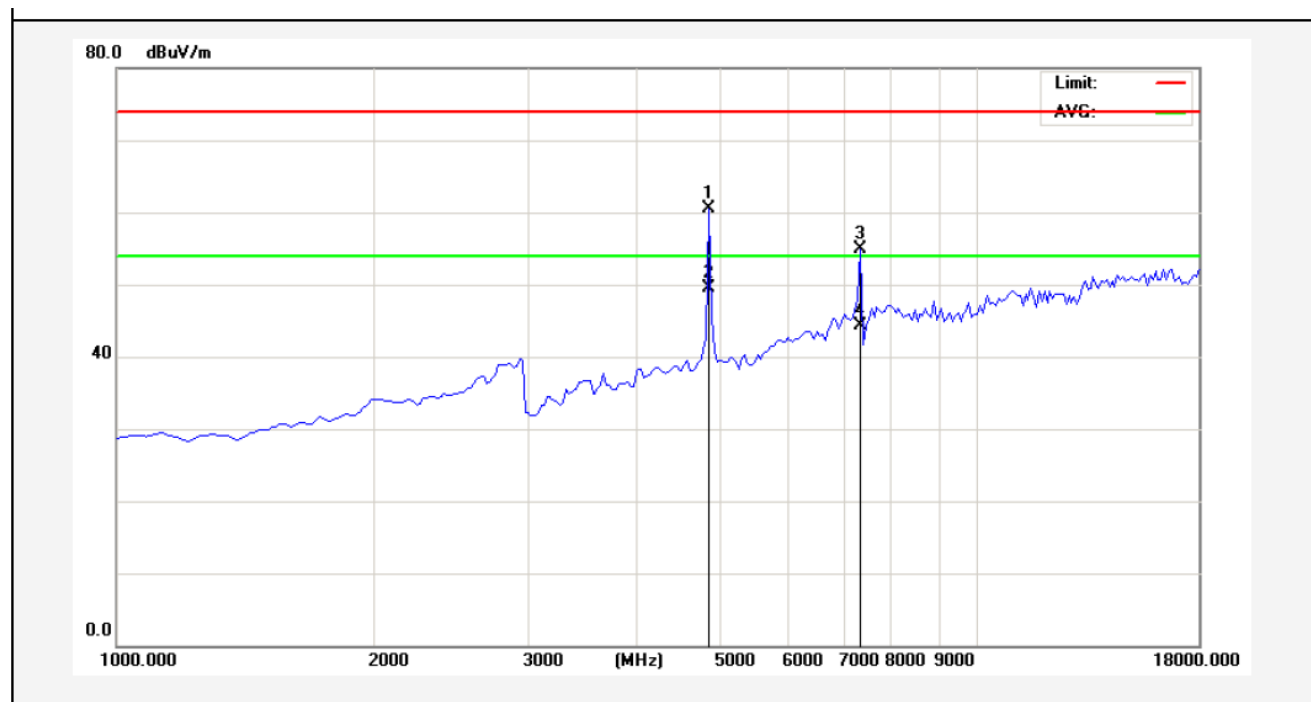
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	4825.000	56.70	3.34	60.04	74.00	-13.96	peak			
2	4825.000	46.78	3.34	50.12	54.00	-3.88	AVG			
3	7247.500	48.06	8.48	56.54	74.00	-17.46	peak			
4	7247.500	37.77	8.48	46.25	54.00	-7.75	AVG			

Job No.:	011405309E	Polarization:	Horizontal
Standard:	(RE)FCC PART15 C _3m	Power Source:	DC 5V via USB Port
Test item:	Radiation Test	Temp.(C)/Hum.(%RH):	24.3(C)/55%RH
Note:	802.11b(2437MHz)	Distance:	3m



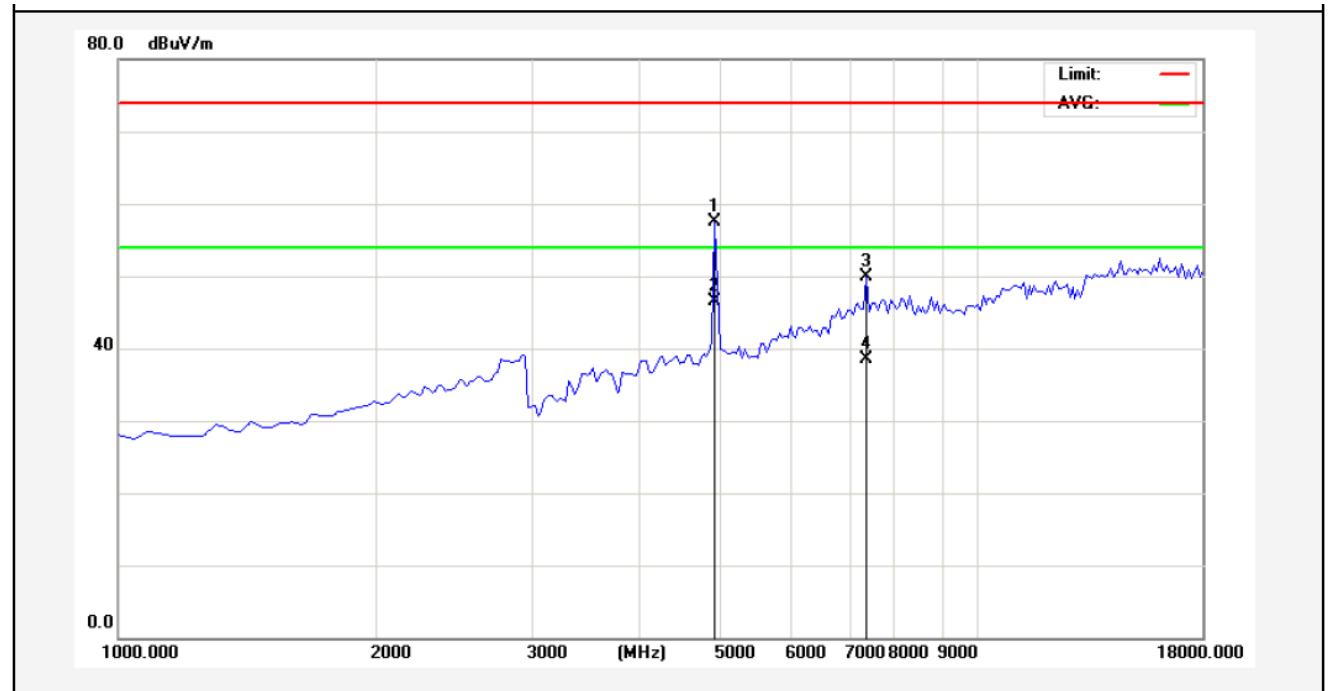
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	4867.500	56.69	3.41	60.10	74.00	-13.90	peak			
2	4867.500	47.33	3.41	50.74	54.00	-3.26	AVG			
3	7332.500	42.29	8.58	50.87	74.00	-23.13	peak			
4	7332.500	31.98	8.58	40.56	54.00	-13.44	AVG			

Job No.:	011405309E	Polarization:	Vertical
Standard:	(RE)FCC PART15 C _3m	Power Source:	DC 5V via USB Port
Test item:	Radiation Test	Temp.(C)/Hum.(%RH):	24.3(C)/55 %RH
Note:	802.11b(2437MHz)	Distance:	3m



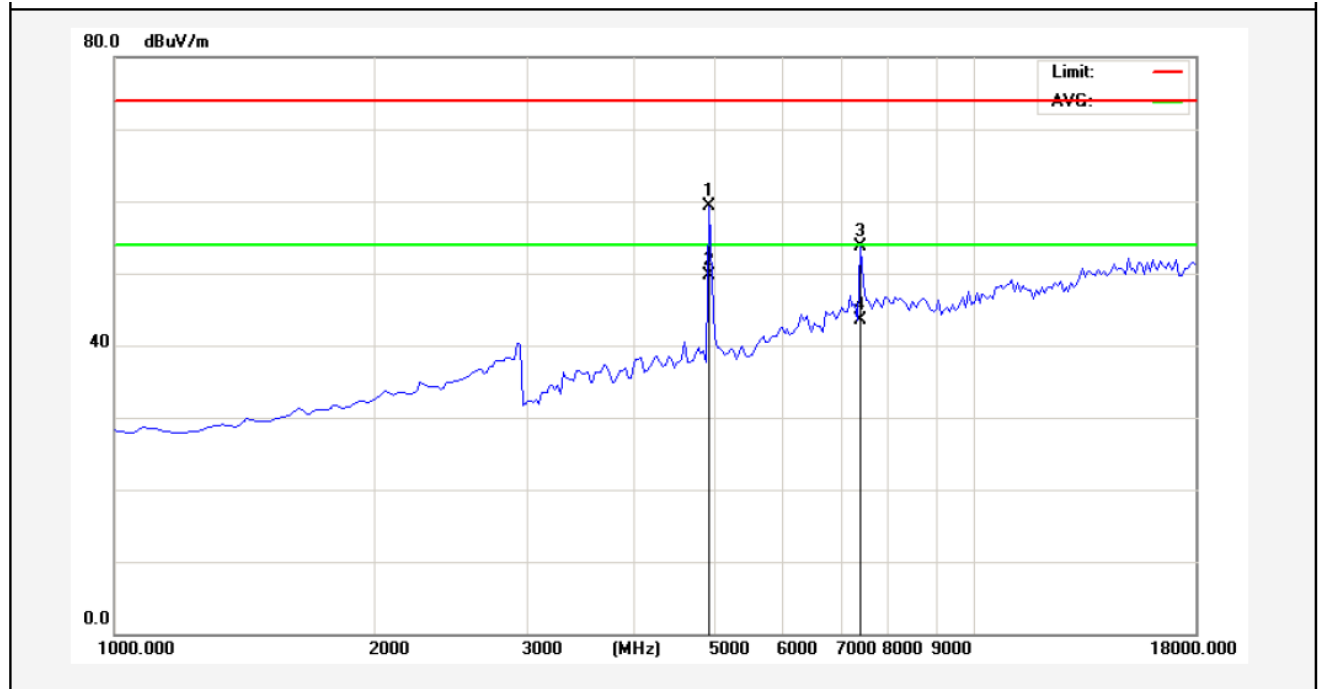
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	4867.500	57.14	3.41	60.55	74.00	-13.45	peak			
2	4867.500	46.17	3.41	49.58	54.00	-4.42	AVG			
3	7332.500	46.26	8.58	54.84	74.00	-19.16	peak			
4	7332.500	35.70	8.58	44.28	54.00	-9.72	AVG			

Job No.:	011405309E	Polarization:	Horizontal
Standard:	(RE)FCC PART15 C _3m	Power Source:	DC 5V via USB Port
Test item:	Radiation Test	Temp.(C)/Hum.(%RH):	24.3(C)/55%RH
Note:	802.11b(2462MHz)	Distance:	3m



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	4910.000	54.08	3.49	57.57	74.00	-16.43	peak			
2	4910.000	43.03	3.49	46.52	54.00	-7.48	AVG			
3	7375.000	41.25	8.63	49.88	74.00	-24.12	peak			
4	7375.000	29.82	8.63	38.45	54.00	-15.55	AVG			

Job No.:	011405309E	Polarization:	Vertical
Standard:	(RE)FCC PART15 C _3m	Power Source:	DC 5V via USB Port
Test item:	Radiation Test	Temp.(C)/Hum.(%RH):	24.3(C)/55%RH
Note:	802.11b(2462MHz)	Distance:	3m



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	4910.000	55.91	3.49	59.40	74.00	-14.60	peak			
2	4910.000	46.15	3.49	49.64	54.00	-4.36	AVG			
3	7375.000	45.10	8.63	53.73	74.00	-20.27	peak			
4	7375.000	34.95	8.63	43.58	54.00	-10.42	AVG			

5. PHOTOGRAPH

5.1. Photo of Conducted Emission Measurement



5.2. Photo of Radiation Emission Test



APPENDIX I (EXTERNAL PHOTOS)

Figure 1
The EUT-Series View

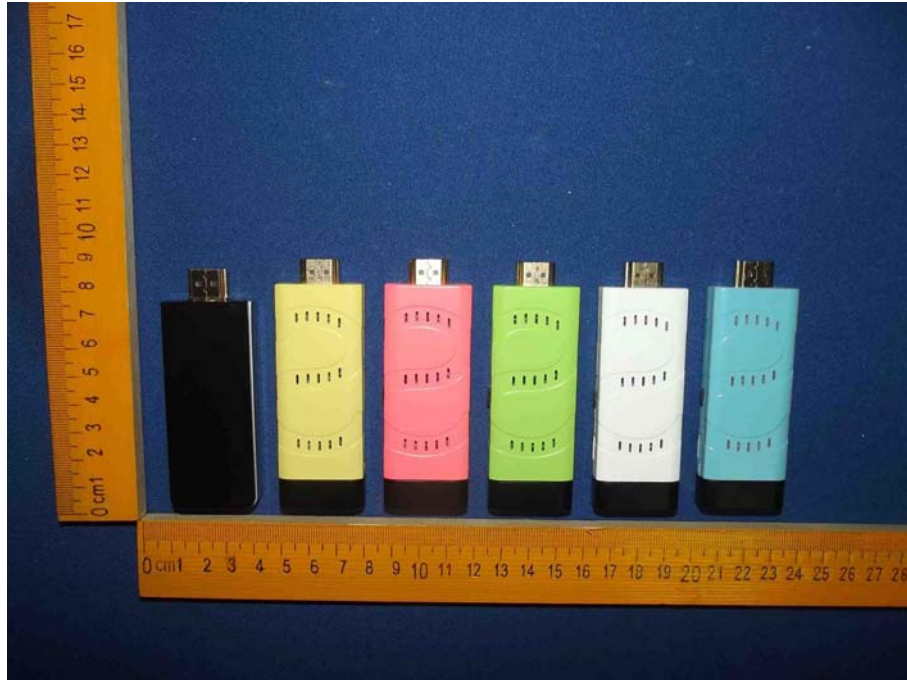


Figure 2
The EUT-Overall View



Figure 3
The EUT-Front View



Figure 4
The EUT-Back View



Figure 5
The EUT-Side View



APPENDIX II (INTERNAL PHOTOS)

Figure 6
The EUT-Inside View

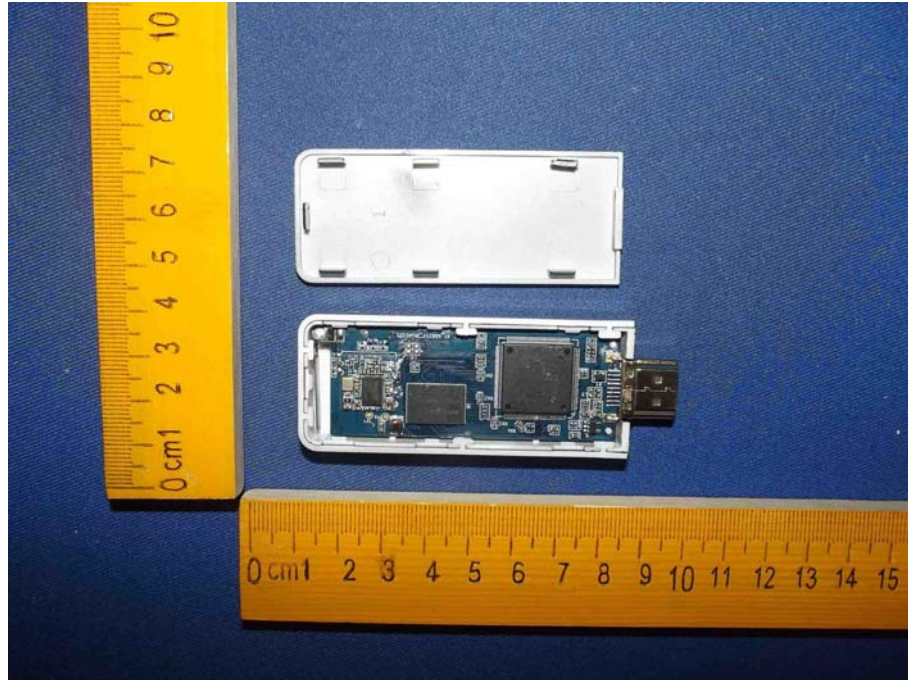


Figure 7
PCB of the EUT-Front View

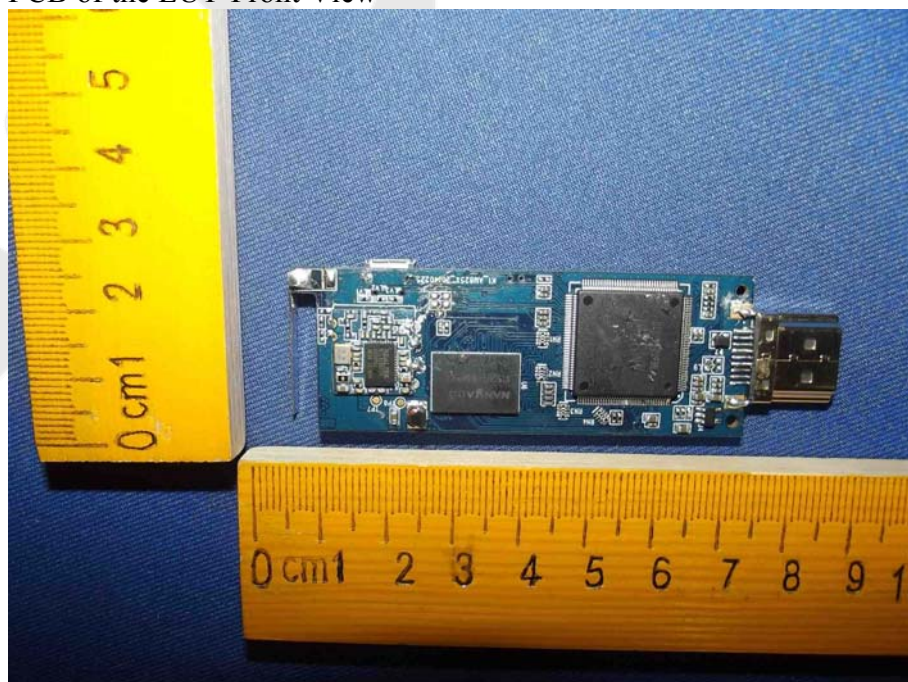


Figure 8
PCB of the EUT-Back View



Figure 9
PCB of the EUT-Front View

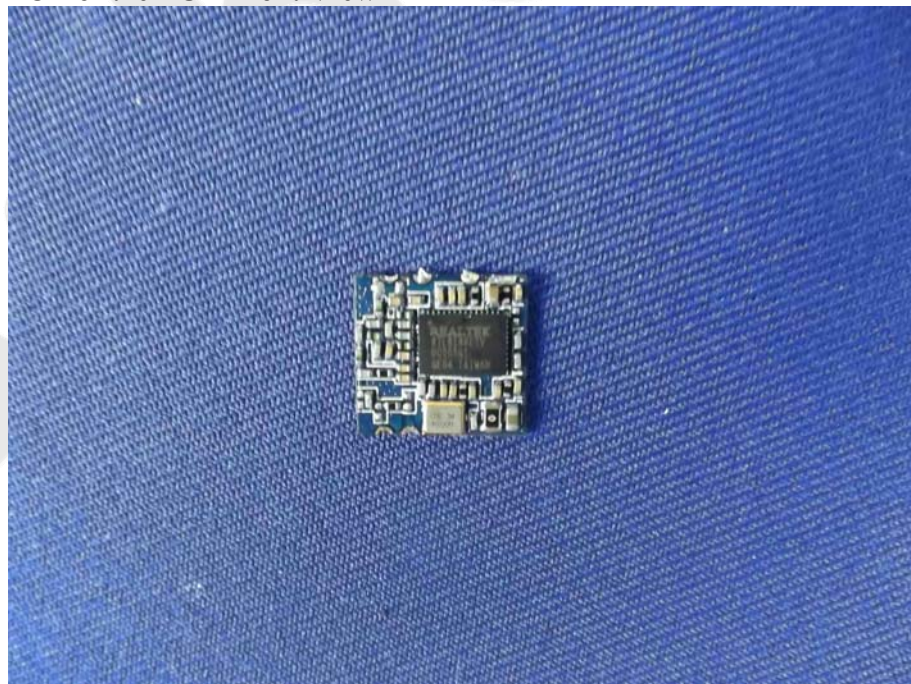


Figure 10
PCB of the EUT-Back View

