

FCC TEST REPORT
for
Shanghai Nine Eagles Electronic Technology Co., Ltd.

WIFI CAMERA
Model No.: NE-OT017, NE-OT019, NE-OT020, NE-OT021,
NE-OT022, NE-OT023, NE-OT024, NE-OT025, NE-OT026,
NE-OT027, NE-OT028, NE-OT029, NE-OT030, NE-OT15M

Prepared for : Shanghai Nine Eagles Electronic Technology Co., Ltd.
Address : Room 1104, Huaxiang Building, No. 80 Moling Road, Shanghai,
200070, China

Prepared By : Shenzhen Anbotek Compliance Laboratory Limited
Address : 1/F., Building 1, SEC Industrial Park, No.0409 Qianhai Road,
Nanshan District, Shenzhen, Guangdong, China
Tel: (86) 755-26066544
Fax: (86) 755-26014772

Report Number : R011504791V
Date of Test : May 04~ Jun. 11, 2015
Date of Report : Jun. 12, 2015

TABLE OF CONTENT

Description

Page

Test Report

1. GENERAL INFORMATION.....	4
1.1. Description of Device (EUT).....	4
1.2. Auxiliary Equipment Used during Test.....	5
1.3. Description of Test Facility.....	5
1.4. Measurement Uncertainty.....	5
2. TEST METHODOLOGY.....	6
2.1. Summary of Test Results.....	6
2.2. Description of Test Modes.....	6
2.3. List of channels:.....	7
3. FCC PART 15.247 REQUIREMENTS FOR DSSS & OFDM MODULATION.....	8
3.1 Test Setup.....	8
3.2 6dB Bandwidth.....	8
3.3. Maximum Output Power Test.....	24
3.4. Band Edges Measurement.....	32
3.5. Peak Power Spectral Density.....	70
3.6. Spurious Emissions.....	78
4. ANTENNA APPLICATION.....	95
4.1. Antenna requirement.....	95
4.2. Result.....	95
5. PHOTOGRAPH.....	96
5.1. Photo of Radiation Emission Test.....	96
APPENDIX I (EXTERNAL PHOTOS).....	97
APPENDIX II (INTERNAL PHOTOS).....	100

TEST REPORT

Applicant : Shanghai Nine Eagles Electronic Technology Co., Ltd.
Manufacturer : Shanghai Nine Eagles Electronic Technology Co., Ltd.
EUT : WIFI CAMERA
Model No. : NE-OT017, NE-OT019, NE-OT020, NE-OT021, NE-OT022,
NE-OT023, NE-OT024, NE-OT025, NE-OT026, NE-OT027,
NE-OT028, NE-OT029, NE-OT030, NE-OT15M
Serial No. : N.A.
Trade Mark : N.A.
Rating : DC 3.7V, 350mAh

Measurement Procedure Used:
FCC Part15 Subpart C 2014, 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 04~ Jun. 11, 2015

Prepared by :

Kebo Zhang

(Tested Engineer / Kebo Zhang)

Reviewer :

Amy Ding

(Project Manager / Amy Ding)

Approved & Authorized Signer :

Tom Chen

(Manager / Tom Chen)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT	: WIFI CAMERA
Model Number	: NE-OT017, NE-OT019, NE-OT020, NE-OT021, NE-OT022, NE-OT023, NE-OT024, NE-OT025, NE-OT026, NE-OT027, NE-OT028, NE-OT029, NE-OT030, NE-OT15M (Note: All samples are the same except the model number and colour, so we prepare "NE-OT017" for test only.)
Test Power Supply	: DC 3.7V Via Battery
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:	: 2dBi
Applicant Address	: Shanghai Nine Eagles Electronic Technology Co., Ltd. Room 1104, Huaxiang Building, No. 80 Moling Road, Shanghai, 200070, China
Manufacturer Address	: Shanghai Nine Eagles Electronic Technology Co., Ltd. Room 1104, Huaxiang Building, No. 80 Moling Road, Shanghai, 200070, China
Factory Address	: Shanghai Nine Eagles Electronic Technology Co., Ltd. Room 1104, Huaxiang Building, No. 80 Moling Road, Shanghai, 200070, China
Date of receipt	: May 04, 2015
Date of Test	: May 04~ Jun. 11, 2015

1.2. Auxiliary Equipment Used during Test

N/A

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 = 4.1 dB (Horizontal)
Ur = 4.3 dB (Vertical)

Conduction Uncertainty : Uc = 3.4dB

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10: 2013 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	-	N/A
FCC Part 15, Paragraph 15.247(b)(1)	Maximum 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:

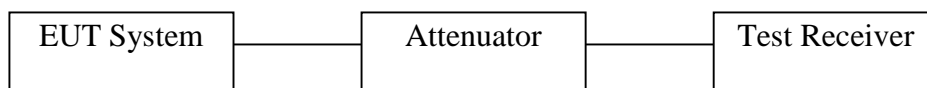
√ - available

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. FCC Part 15.247 Requirements for DSSS & OFDM Modulation

3.1 Test Setup



3.2 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 $\geq 3 \times$ 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.

20dB Bandwidth:

C63.10

Occupied Bandwidth (OBW=20dB Bandwidth)

1. Set RBW=1%~5% OBW
2. Set the VBW $\geq 3 \times$ RBW
3. Set the span range between 2 times and 5 times of the OBW
4. Sweep Time= Auto
Detector= Peak
Trace= Max hold
5. Once the reference level is established, the equipment is conditioned with typical modulating signals to produce the worst case (i.e. the widest) bandwidth. Unless otherwise specified for an unlicensed wireless device, measure the bandwidth at the -20dB levels with respect to the reference level.

c. Test Setup See 3.1**d. Test Equipment**

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analysis	Agilent	E4407B	US39390582	Apr. 17, 2015	1 Year
2.	Preamplifier	Instruments corporation	EMC011830	980100	Apr. 17, 2015	1 Year
3.	EMI Test Receiver	Rohde & Schwarz	ESPI	101604	Apr. 17, 2015	1 Year
4.	Double Ridged Horn Antenna	Instruments corporation	GTH-0118	351600	Apr. 20, 2015	1 Year
5.	Bilog Broadband Antenna	Schwarzbeck	VULB9163	VULB 9163-289	Apr. 20, 2015	1 Year
6.	Pre-amplifier	SONOMA	310N	186860	Apr. 17, 2015	1 Year
7.	EMI Test Software EZ-EMC	SHURPLE	N/A	N/A	N/A	N/A

e. Test Results

Pass.

f. Test Data
6dB Bandwidth

Test mode: IEEE 802.11b

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Results
Low	2412	10.04	>500	Pass
Mid	2437	10.04		Pass
High	2462	10.04		Pass

Test mode: IEEE 802.11g

Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Results
Low	2412	16.52	>500	Pass
Mid	2437	16.52		Pass
High	2462	16.52		Pass

Test mode: IEEE 802.11n (HT20)

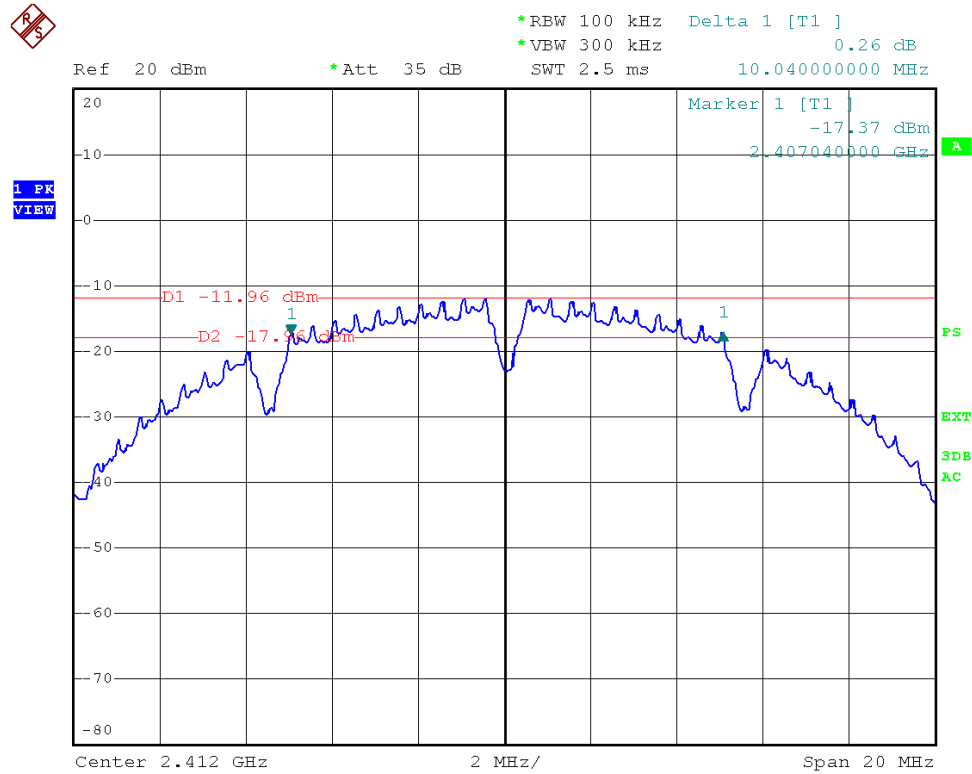
Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Results
Low	2412	17.84	>500	Pass
Mid	2437	17.84		Pass
High	2462	17.84		Pass

Test mode: IEEE 802.11n (HT40)

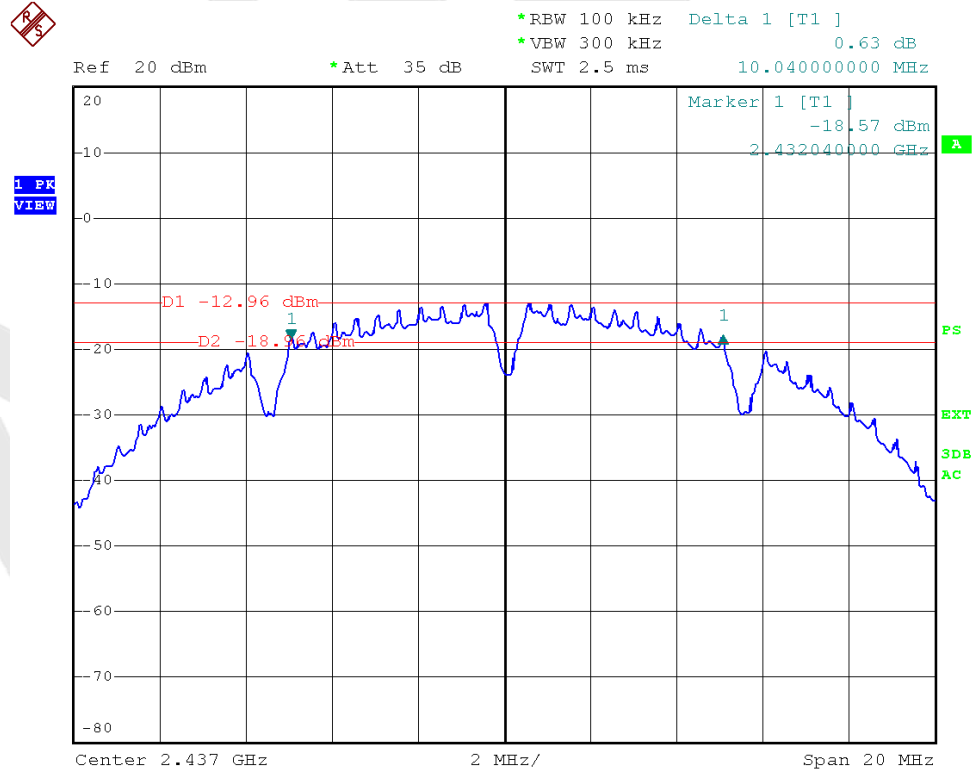
Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Results
Low	2422	36.48	>500	Pass
Mid	2437	36.64		Pass
High	2452	36.64		Pass

Test Plots See the following page.

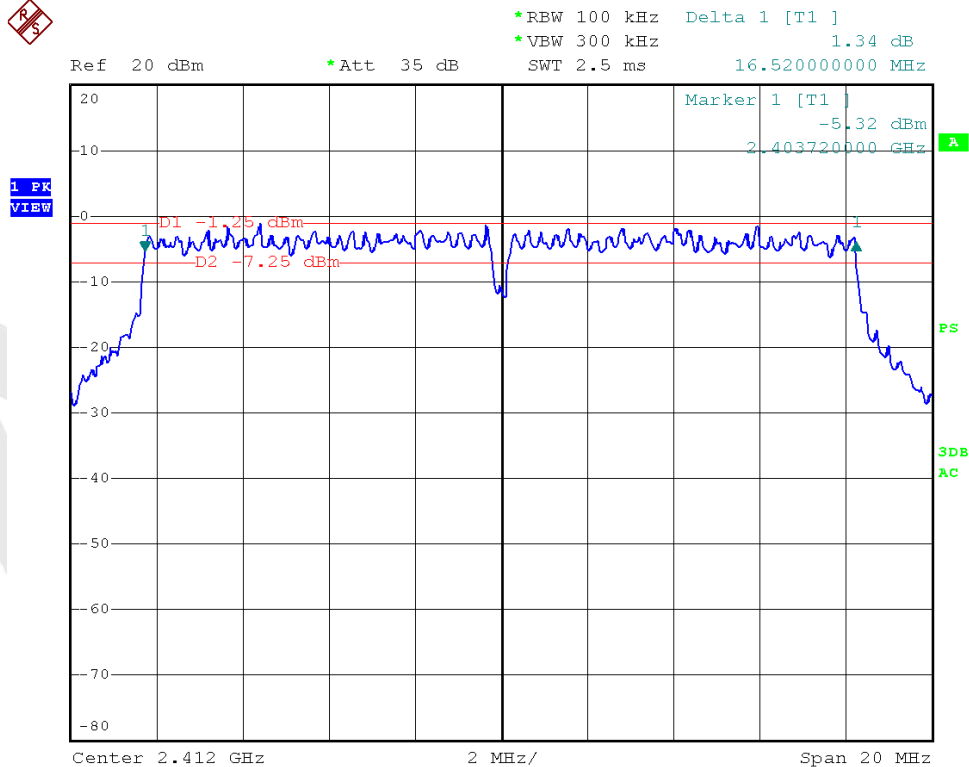
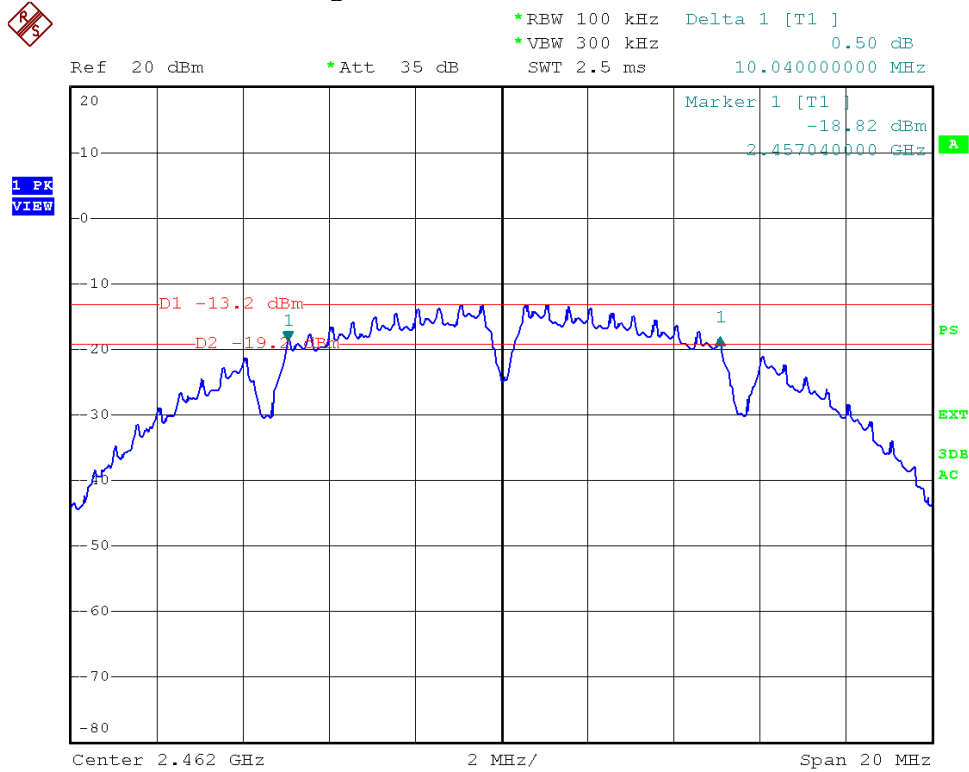
Test Mode: 802.11b---Low



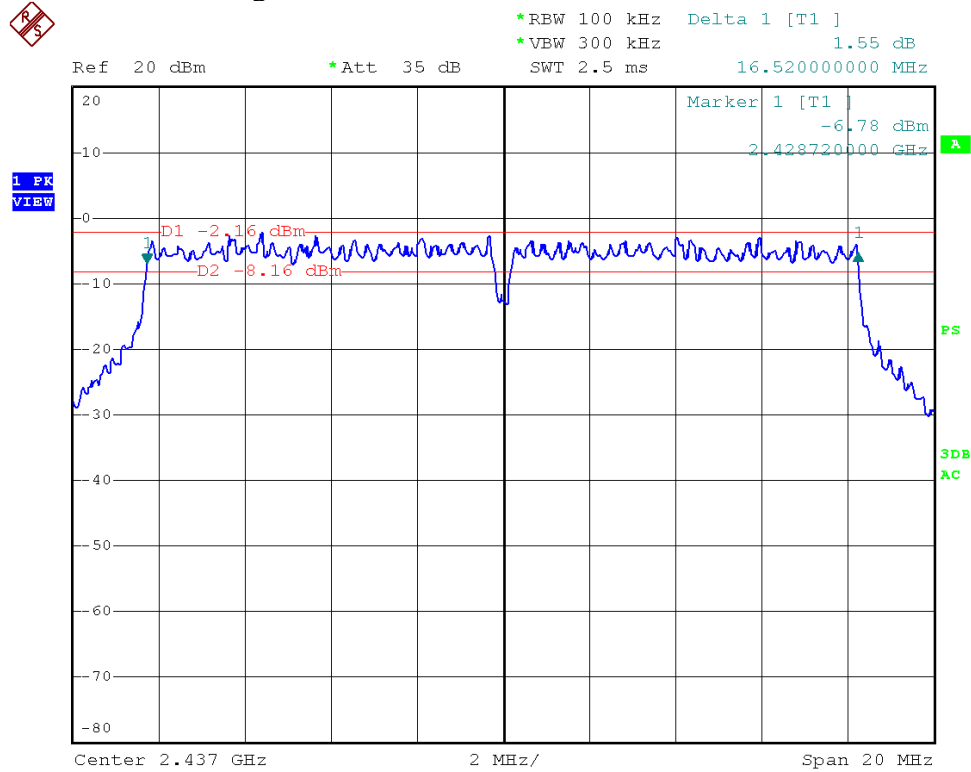
Test Mode: 802.11b---Mid



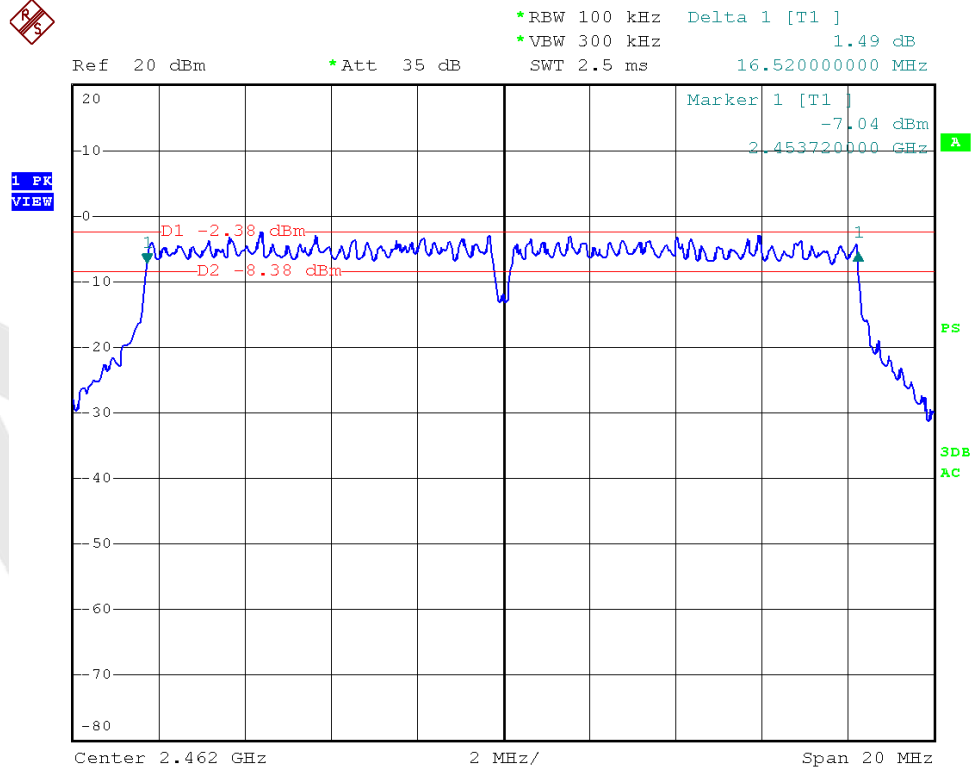
Test Mode: 802.11b---High



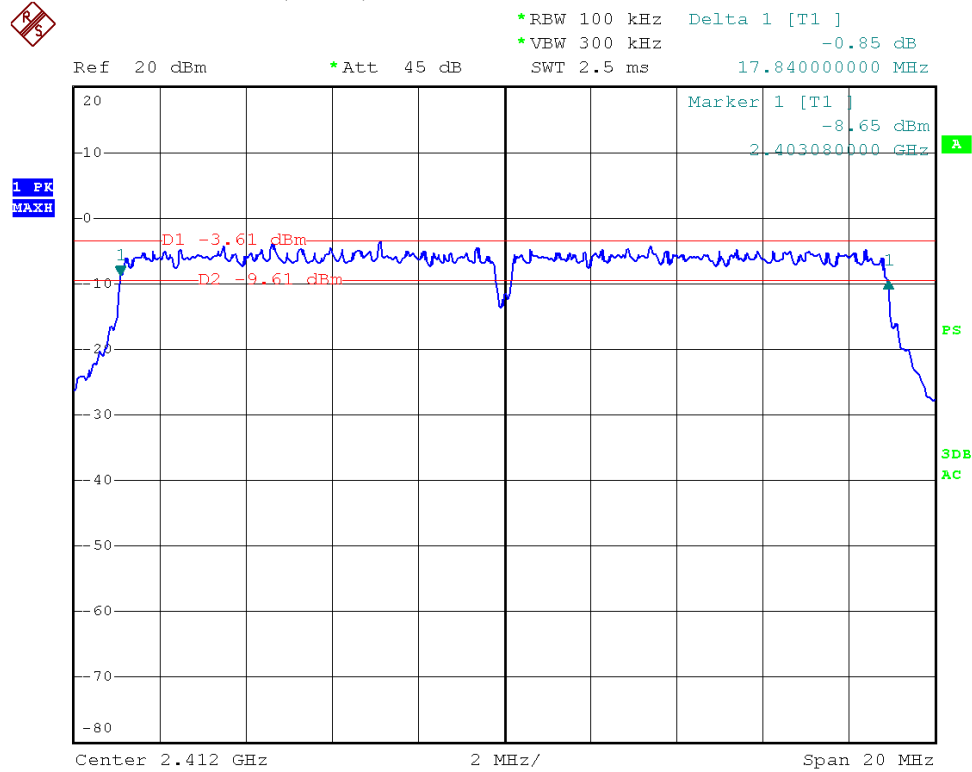
Test Mode: 802.11g---Mid



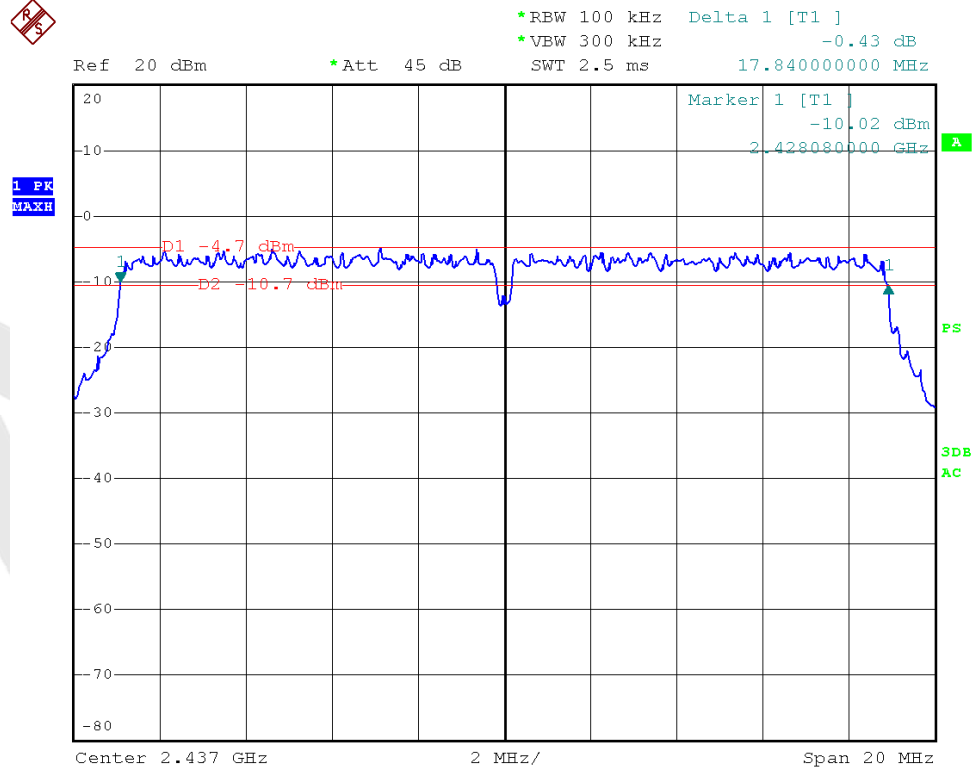
Test Mode: 802.11g---High



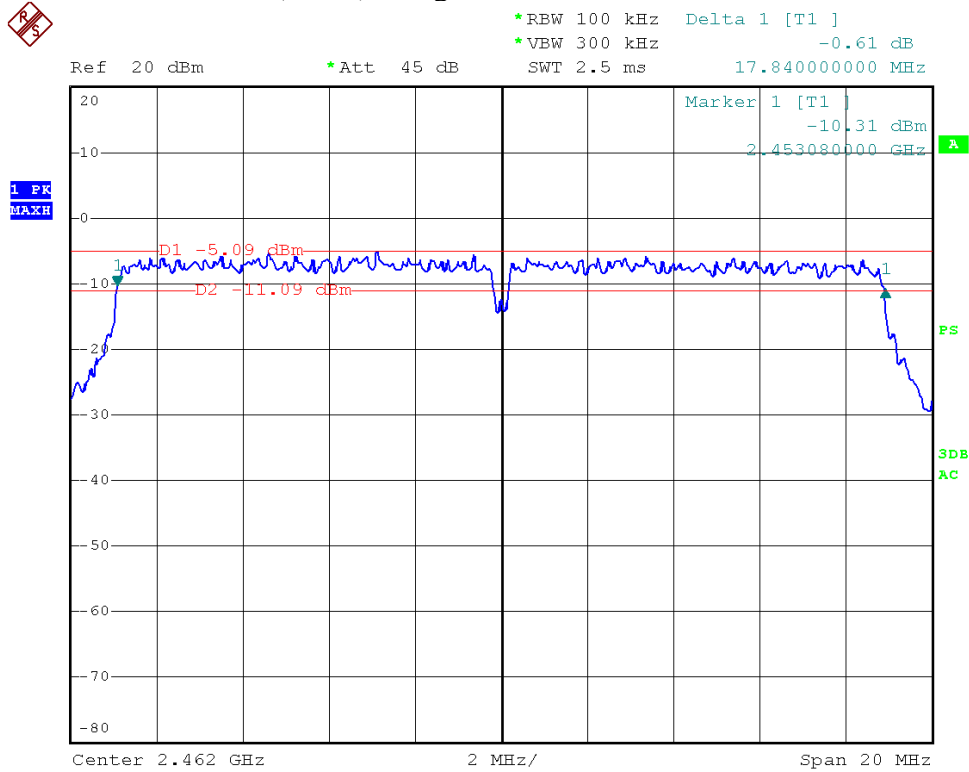
Test Mode: 802.11n (HT20)---Low



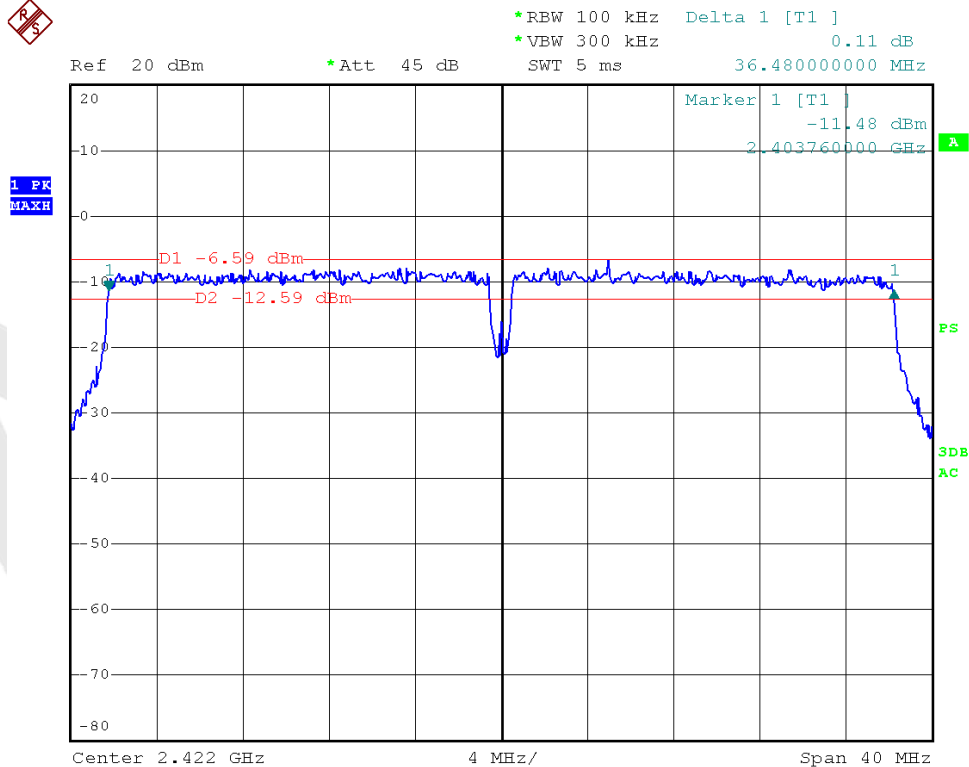
Test Mode: 802.11n (HT20)---Mid



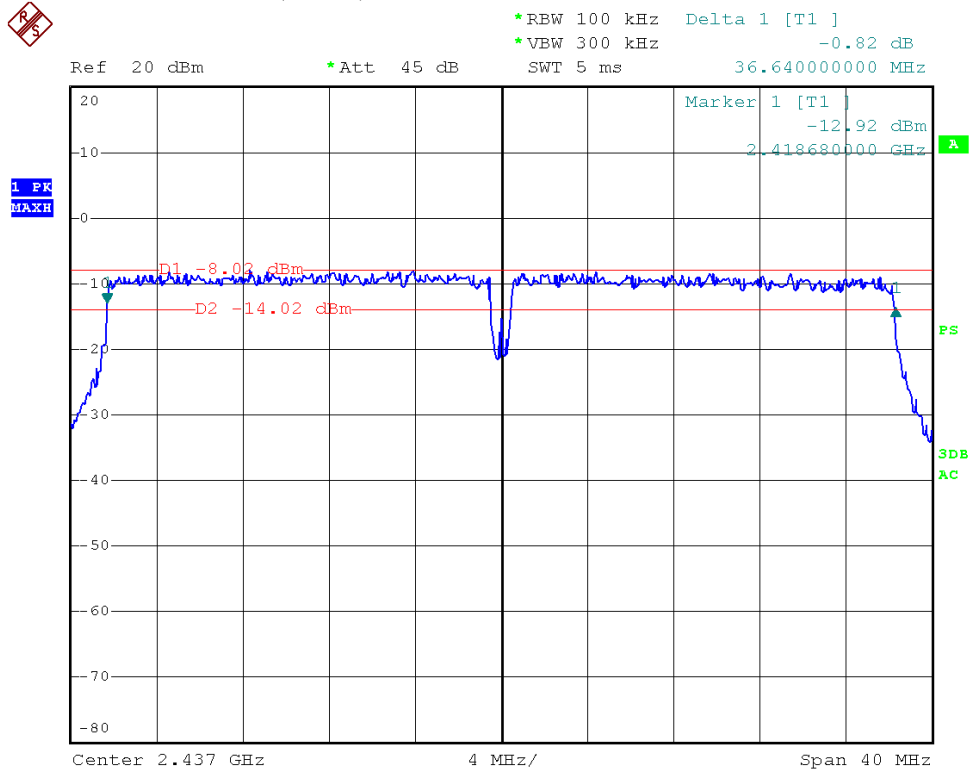
Test Mode: 802.11n (HT20)---High



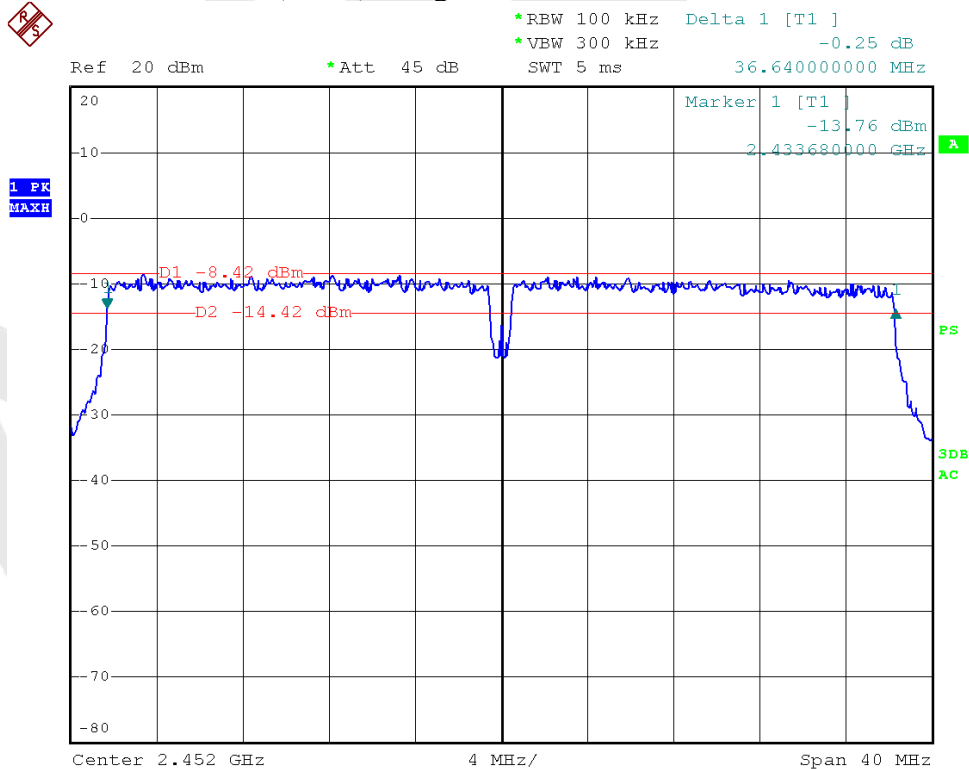
Test Mode: 802.11n (HT40)---Low



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



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



20dB Bandwidth

Test mode: IEEE 802.11b

Channel	Frequency (MHz)	Bandwidth (MHz)	Results
Low	2412	18.48	Pass
Mid	2437	18.40	Pass
High	2462	18.40	Pass

Test mode: IEEE 802.11g

Channel	Frequency (MHz)	Bandwidth (MHz)	Results
Low	2412	22.40	Pass
Mid	2437	22.40	Pass
High	2462	22.32	Pass

Test mode: IEEE 802.11n (HT20)

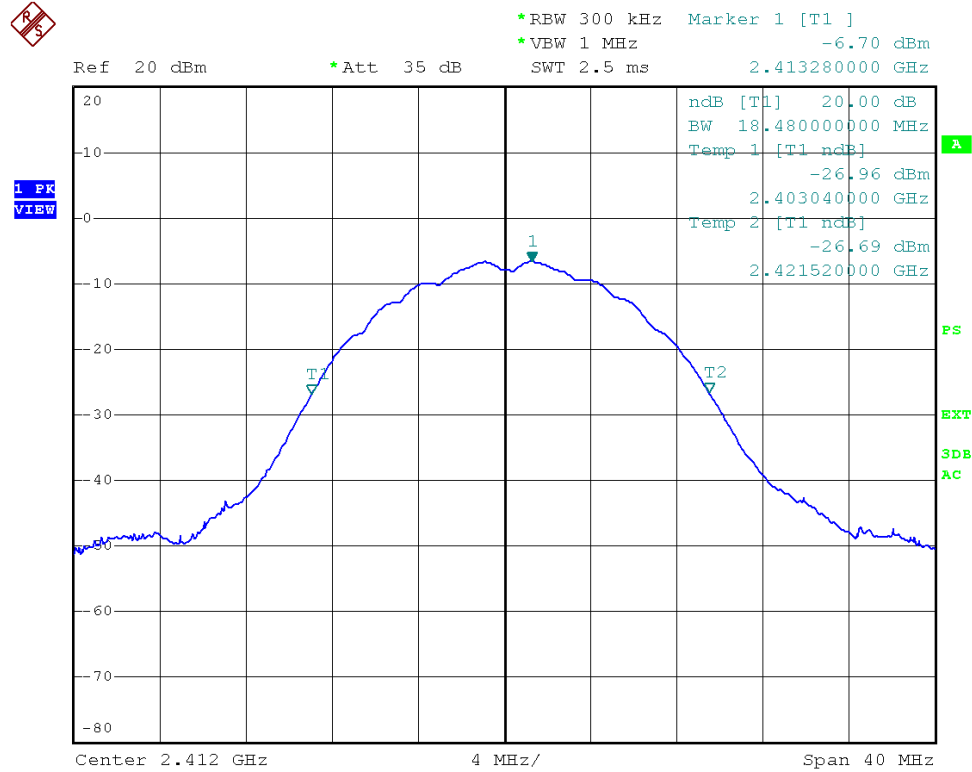
Channel	Frequency (MHz)	Bandwidth (MHz)	Results
Low	2412	22.40	Pass
Mid	2437	22.28	Pass
High	2462	22.32	Pass

Test mode: IEEE 802.11n (HT40)

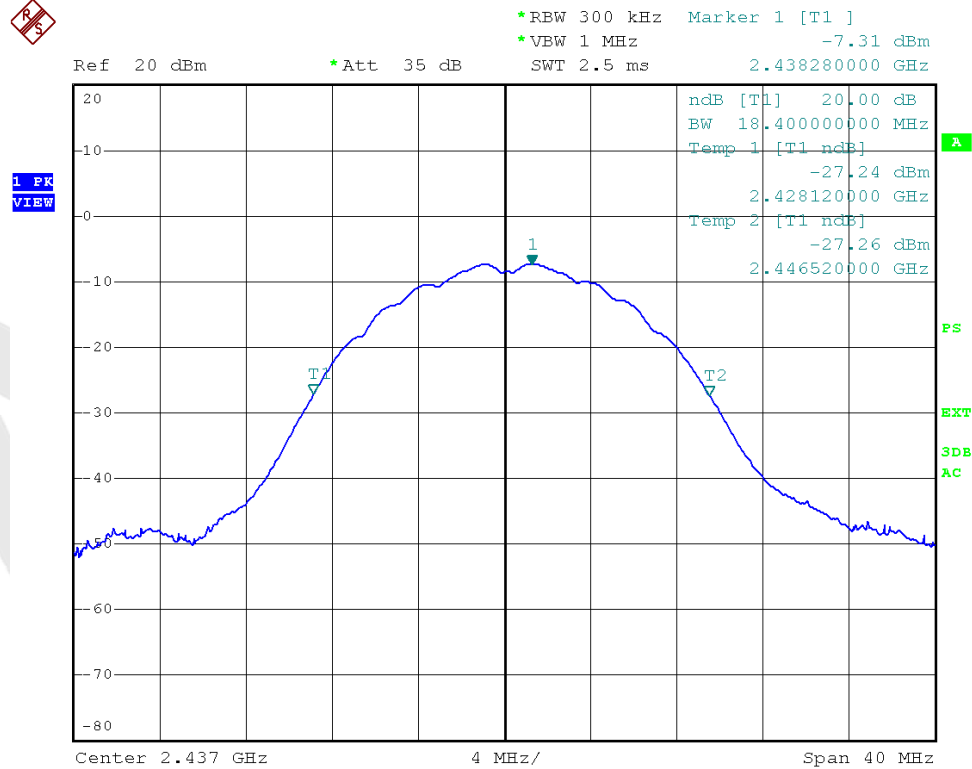
Channel	Frequency (MHz)	Bandwidth (MHz)	Results
Low	2422	43.20	Pass
Mid	2437	42.88	Pass
High	2452	42.88	Pass

Test Plots See the following page.

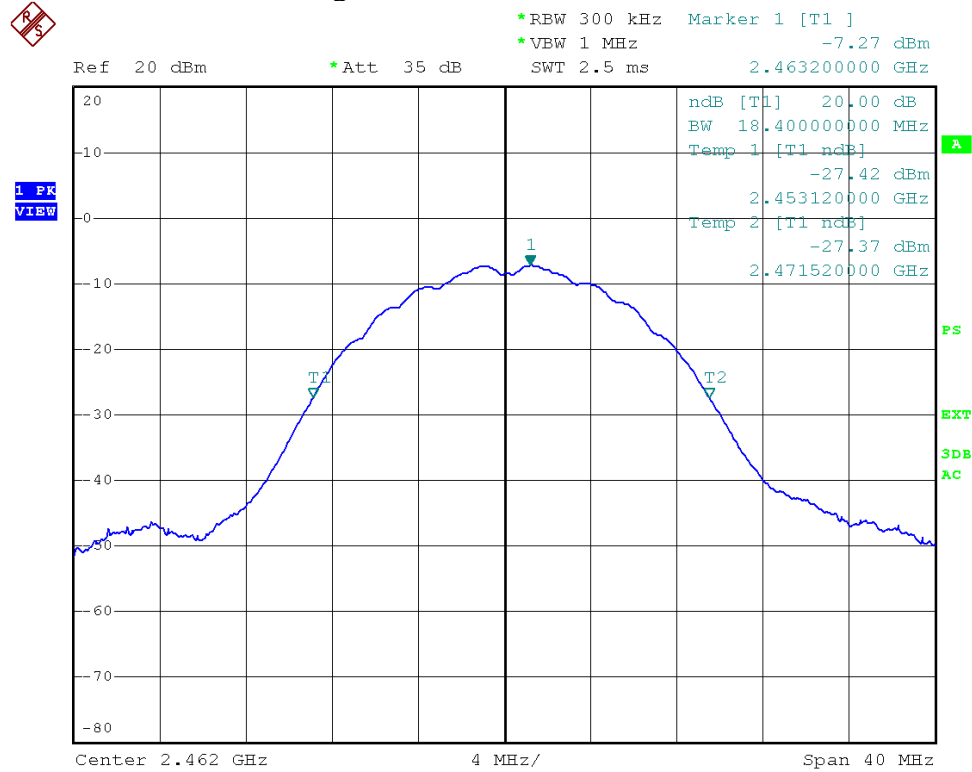
Test Mode: 802.11b---Low



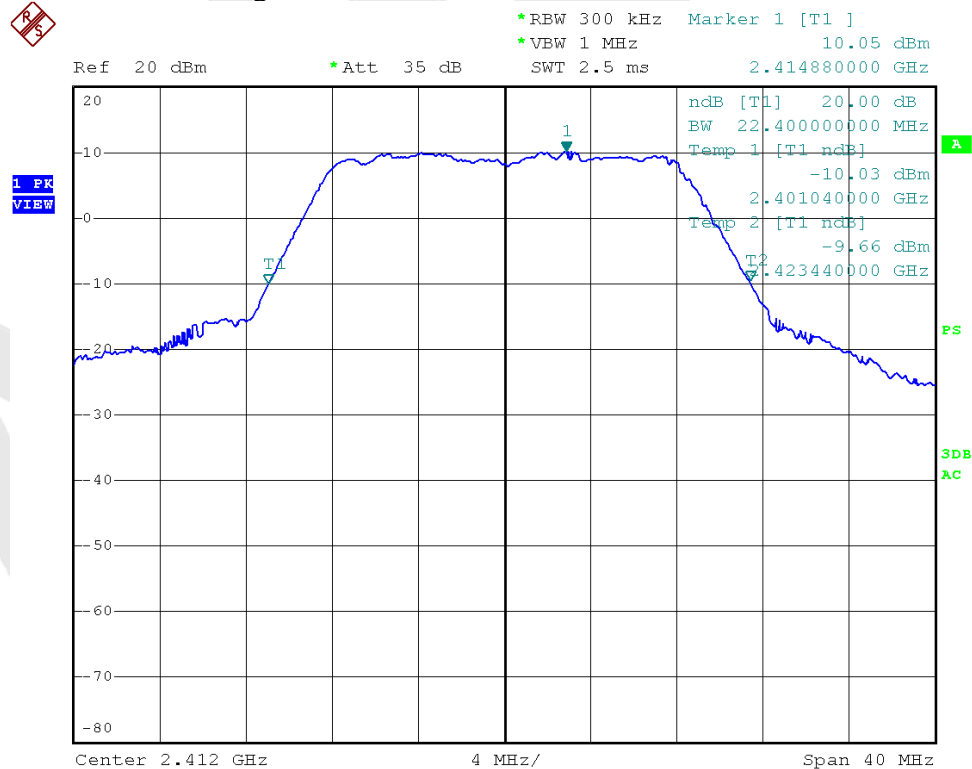
Test Mode: 802.11b---Mid



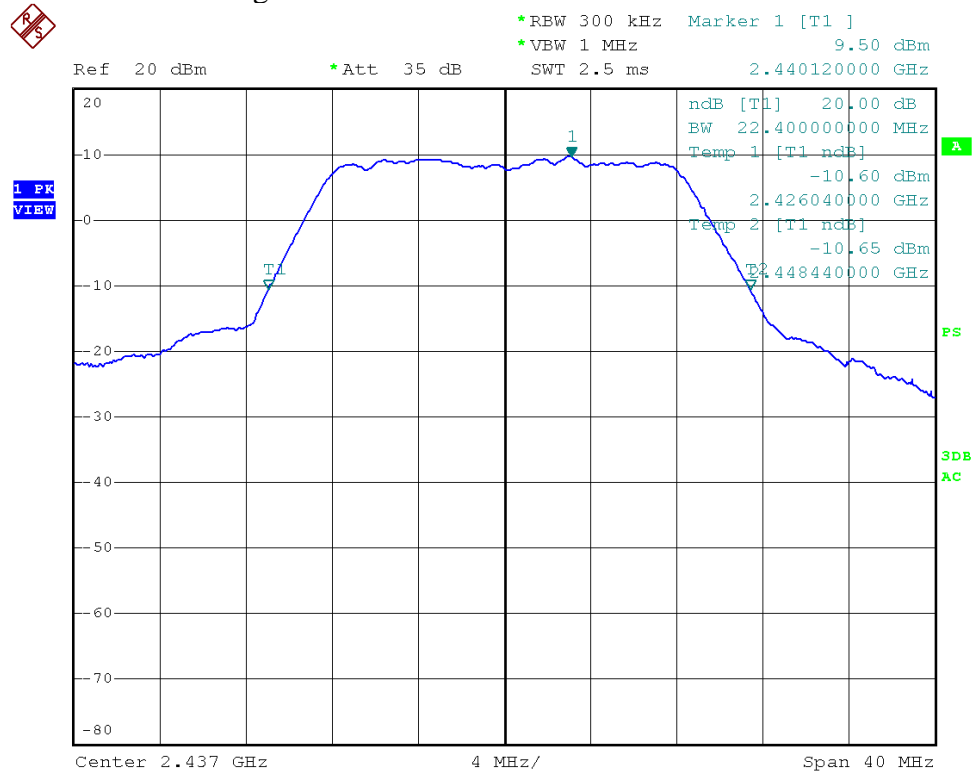
Test Mode: 802.11b---High



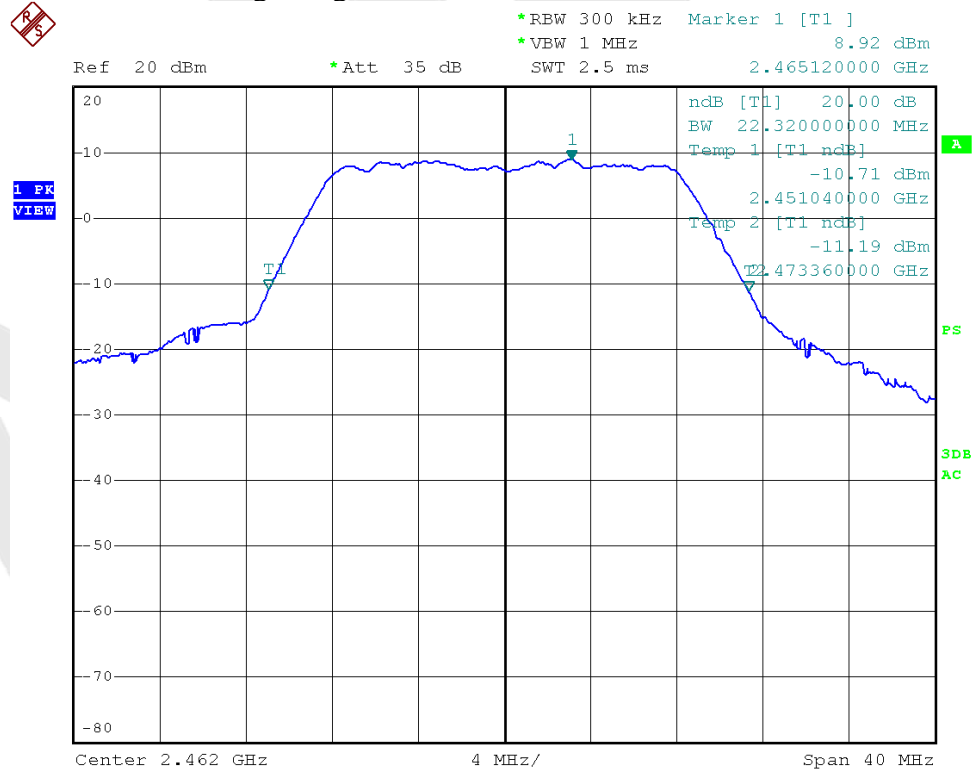
Test Mode: 802.11g---Low



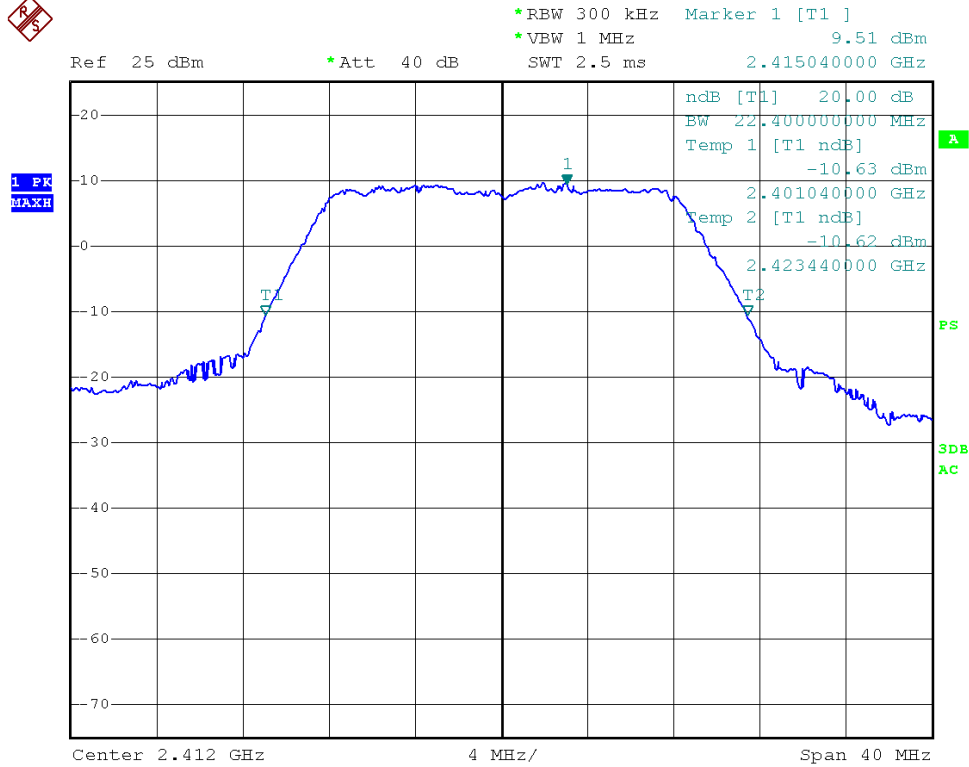
Test Mode: 802.11g---Mid



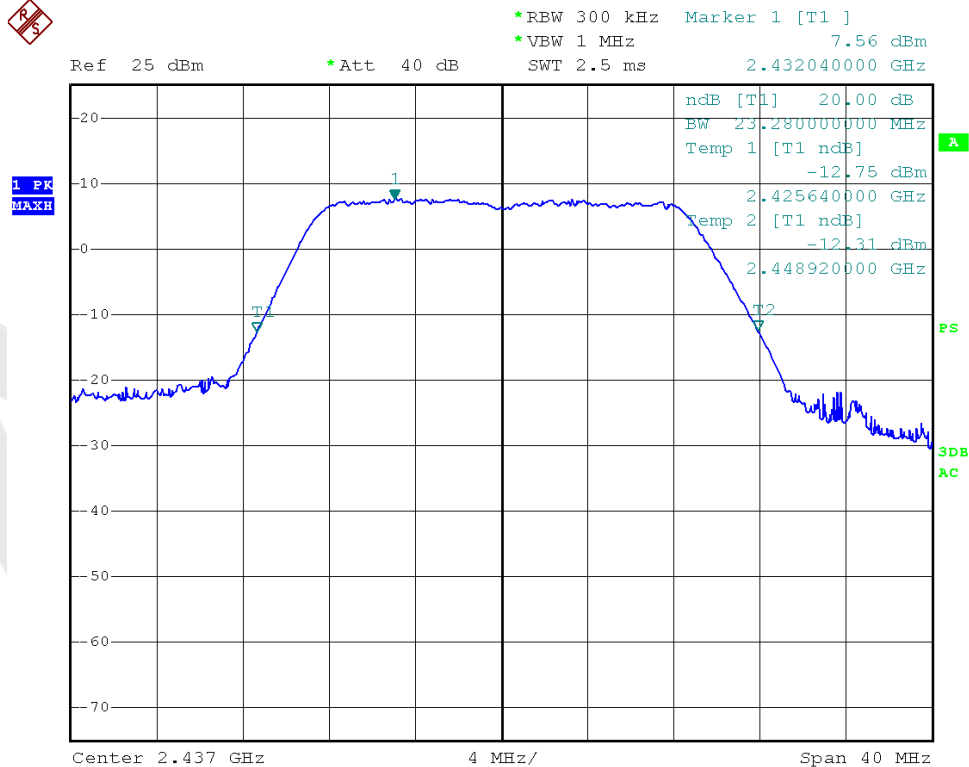
Test Mode: 802.11g---High



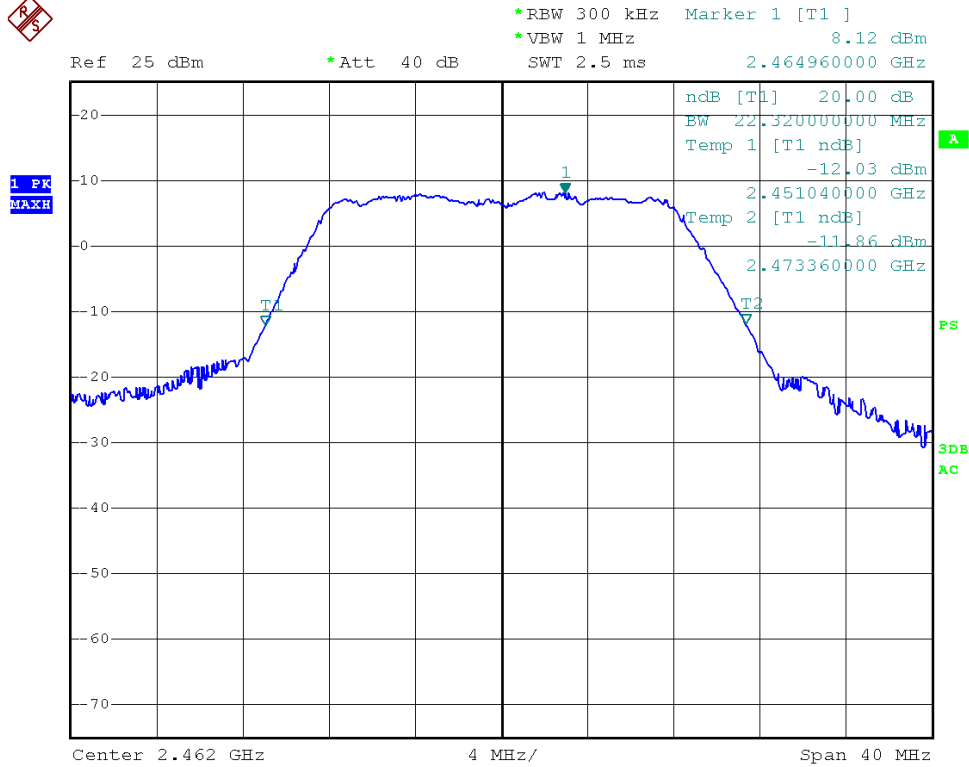
Test Mode: 802.11n (HT20)---Low



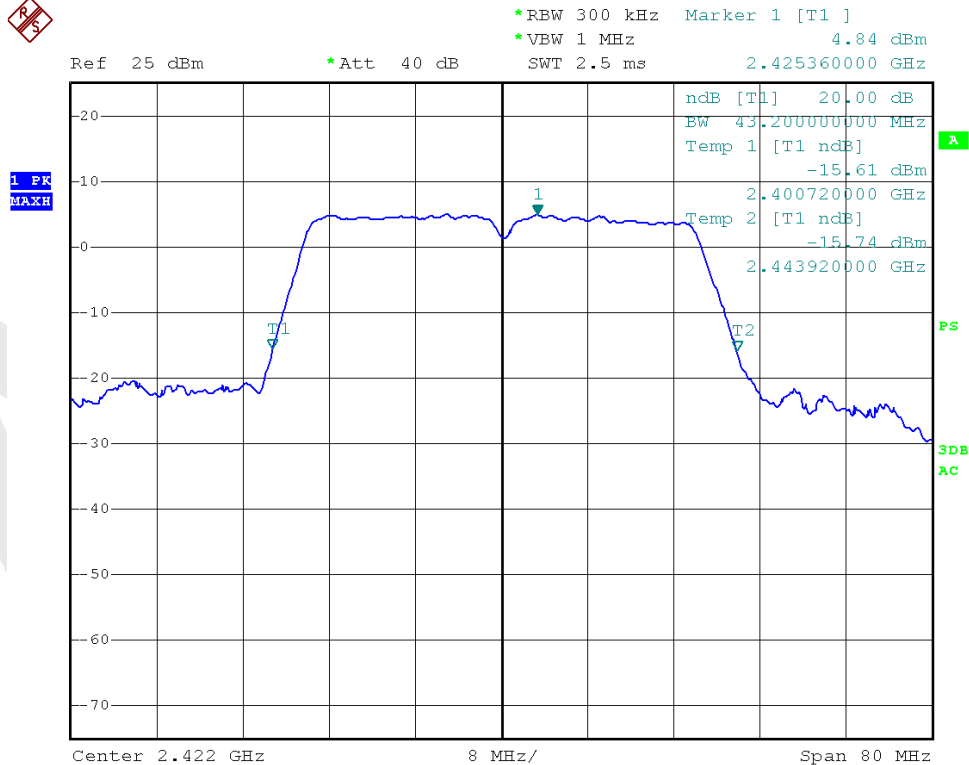
Test Mode: 802.11n (HT20)---Mid



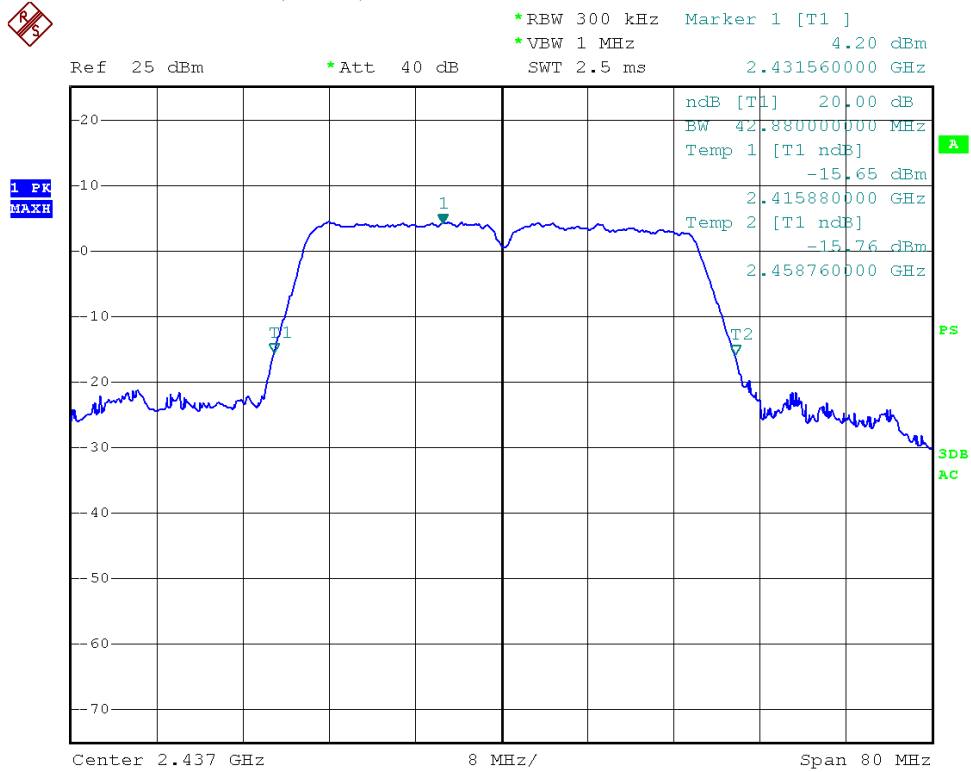
Test Mode: 802.11n (HT20)---High



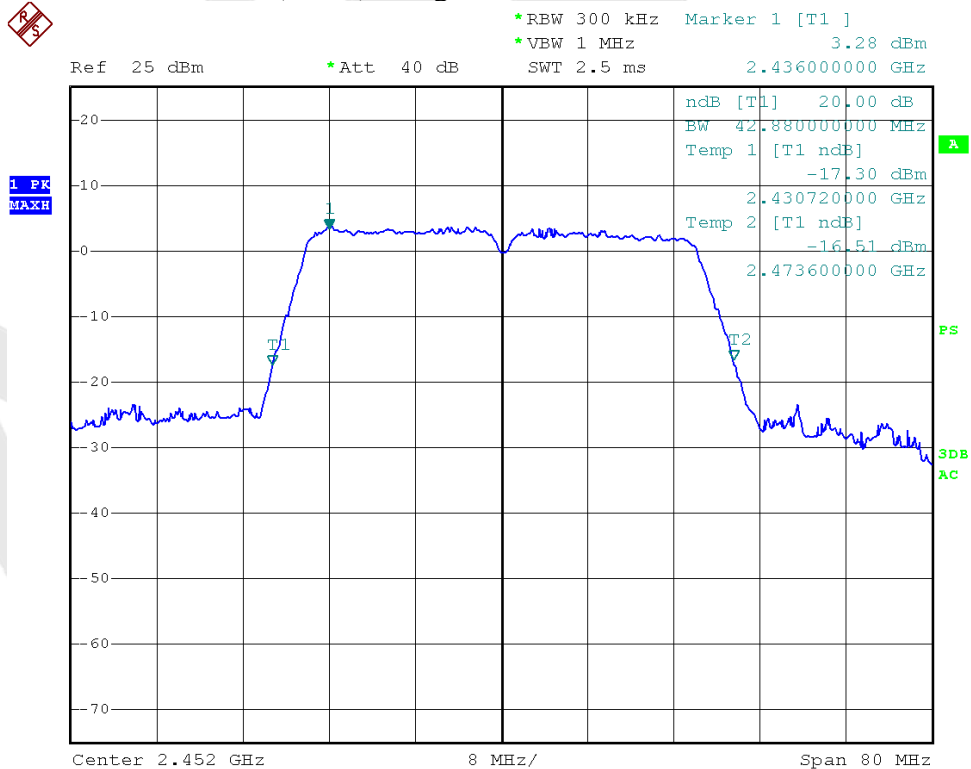
Test Mode: 802.11n (HT40)---Low



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



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



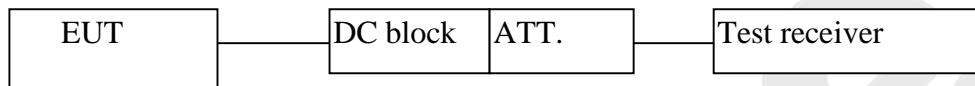
3.3. Maximum Output Power Test

a. Limit

The maximum 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 9.2.2:

1. Set span to at least 1.5 times the OBW.
2. Set the RBW =1~5% of the OBW, not to exceed 1MHz.
3. Set VBW $\geq 3 \times$ RBW.
4. Detector = Average.
5. Sweep time = auto couple.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.

e. Test Equipment

Same as the equipment listed in 3.2.

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	9.36	30	1	Pass
Mid	2437	8.77			Pass
High	2462	7.81			Pass

Test mode: IEEE 802.11g

Channel	Frequency (MHz)	Maximum transmit power	Limit		Result
		(dBm)	(dBm)	(watts)	
Low	2412	13.27	30	1	Pass
Mid	2437	13.31			Pass
High	2462	13.56			Pass

Test mode: IEEE 802.11n (HT20)

Channel	Frequency (MHz)	Maximum transmit power	Limit		Result
		(dBm)	(dBm)	(watts)	
Low	2412	14.50	30	1	Pass
Mid	2437	14.77			Pass
High	2462	14.33			Pass

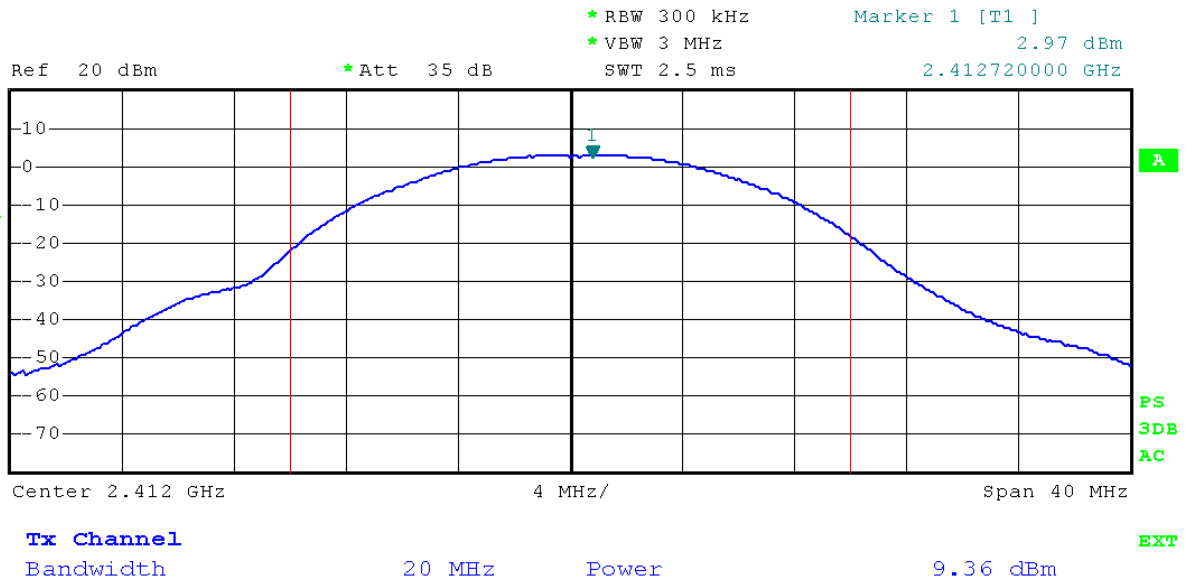
Test mode: IEEE 802.11n (HT40)

Channel	Frequency (MHz)	Maximum transmit power	Limit		Result
		(dBm)	(dBm)	(watts)	
Low	2422	14.95	30	1	Pass
Mid	2437	14.41			Pass
High	2452	14.43			Pass

Test Mode: 802.11b---Low



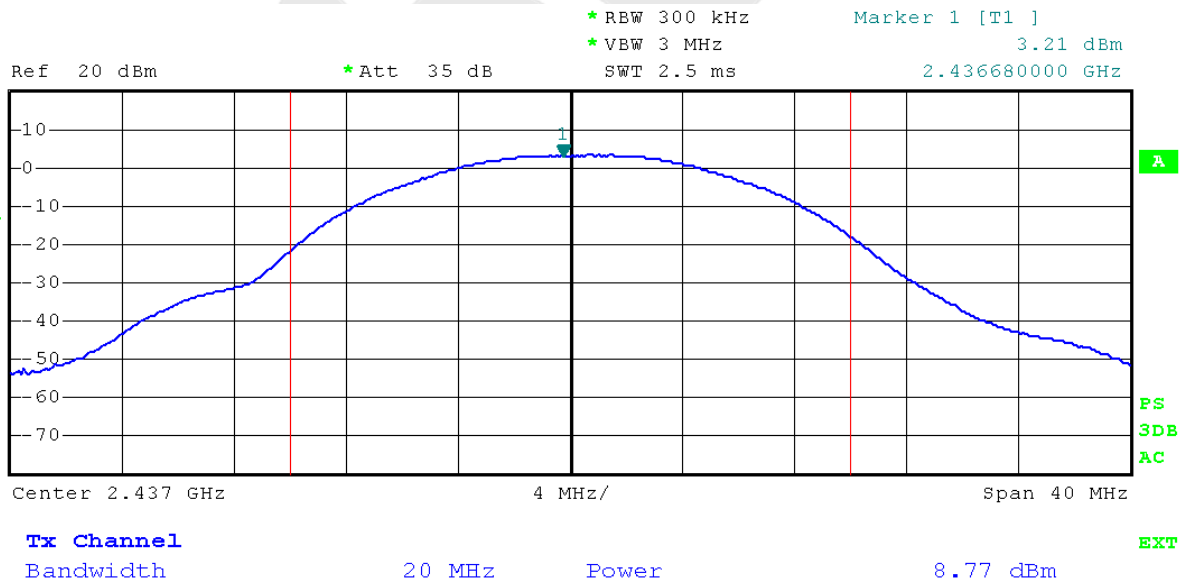
1 RM
MAXH



Test Mode: 802.11b---Mid



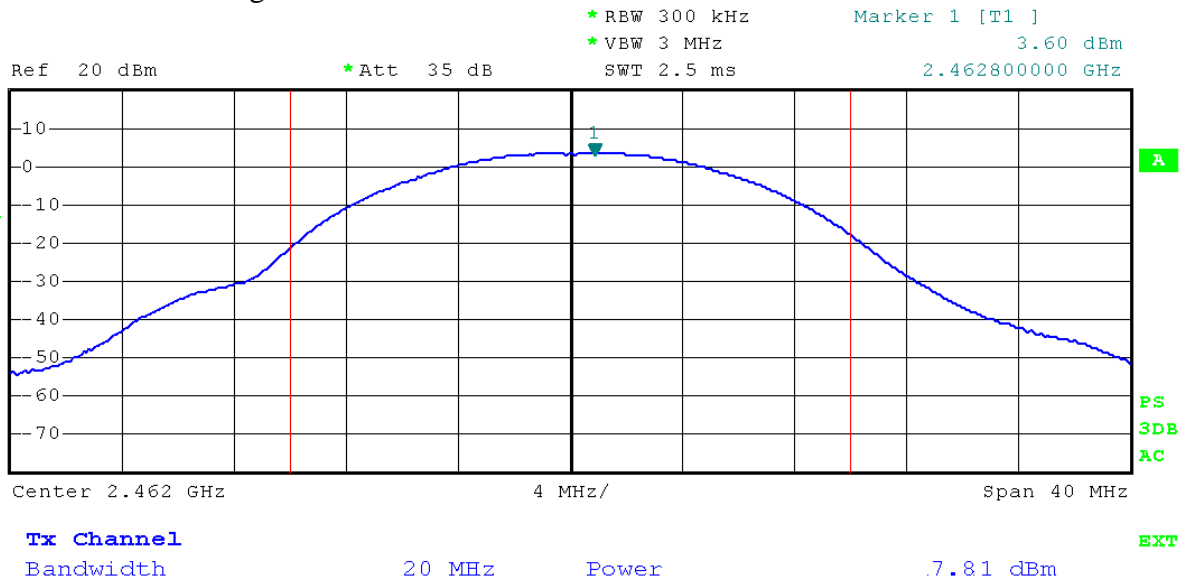
1 RM
MAXH



Test Mode: 802.11b---High



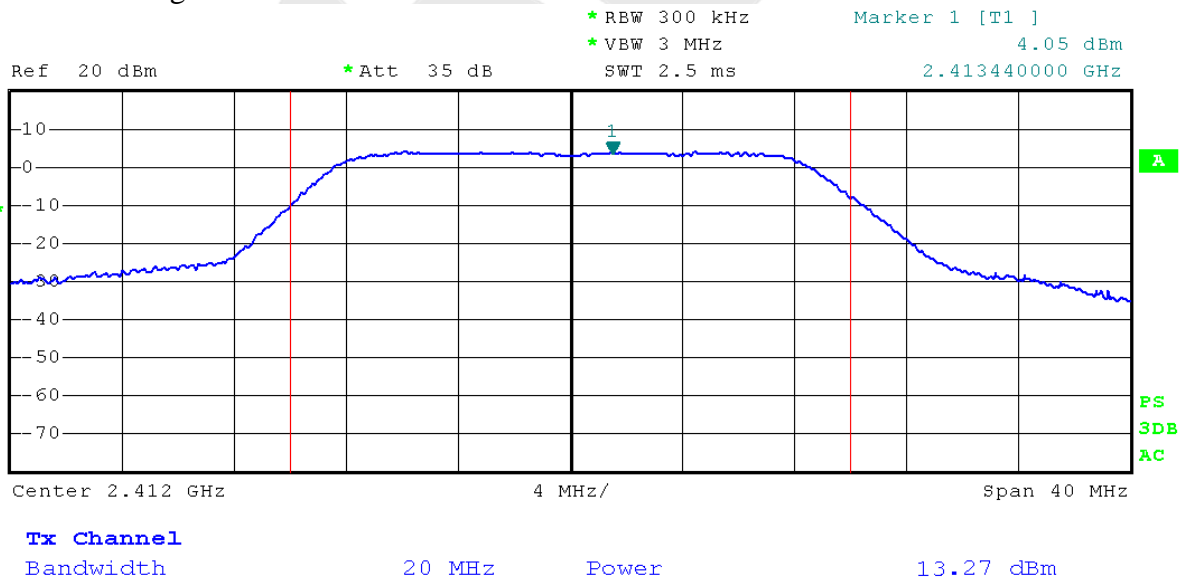
1 RM
MAXH



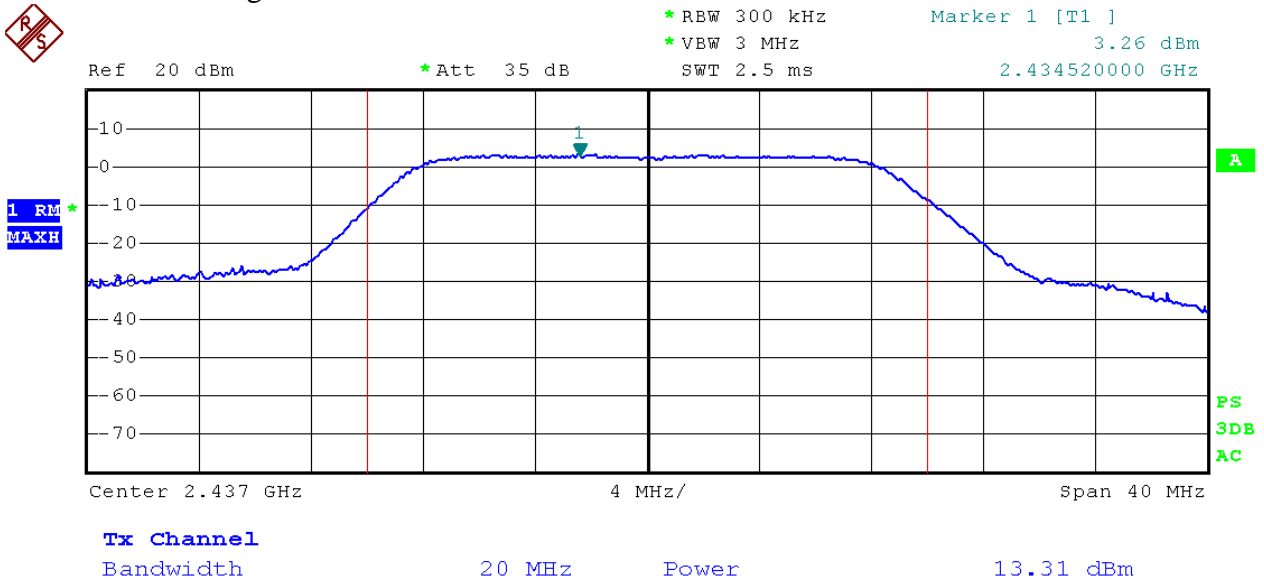
Test Mode: 802.11g---Low



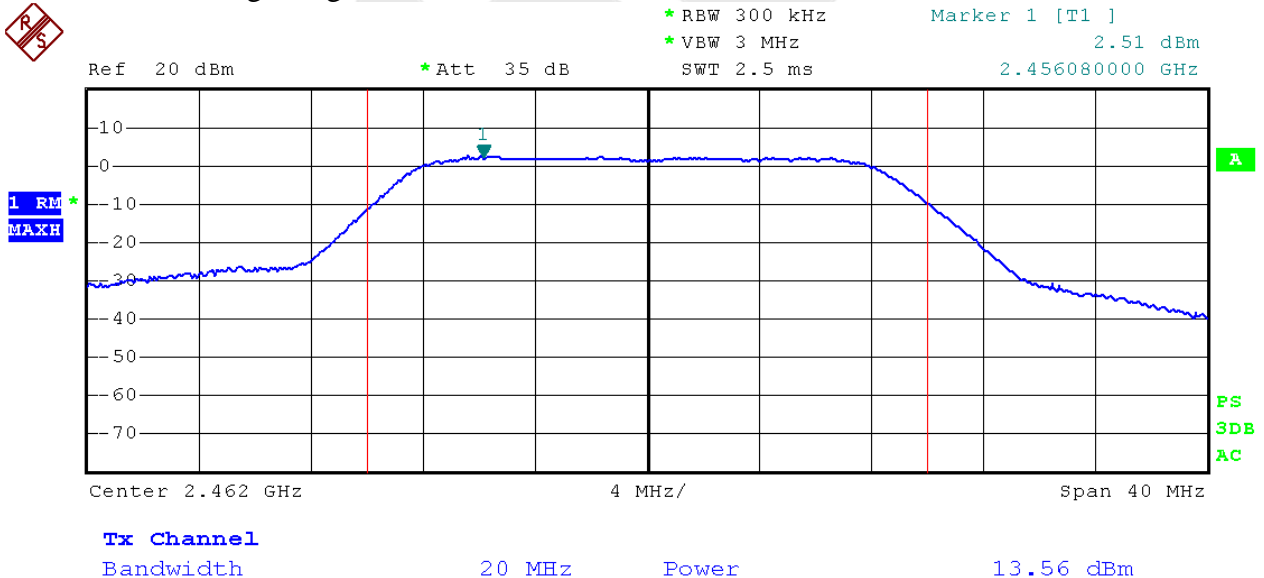
1 RM
MAXH



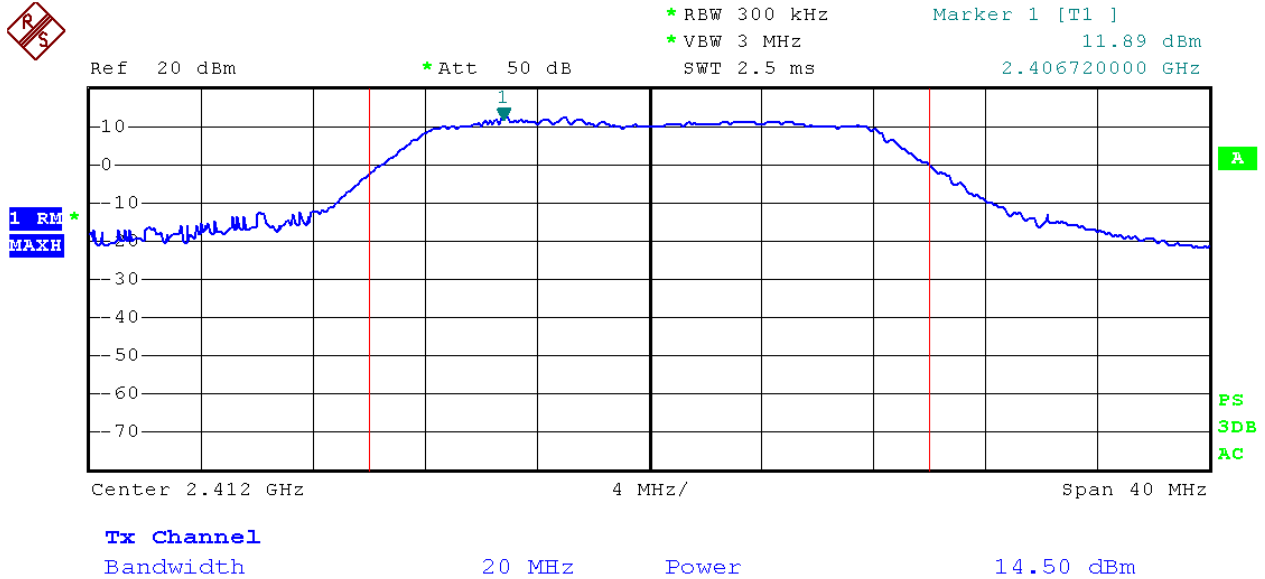
Test Mode: 802.11g---Mid



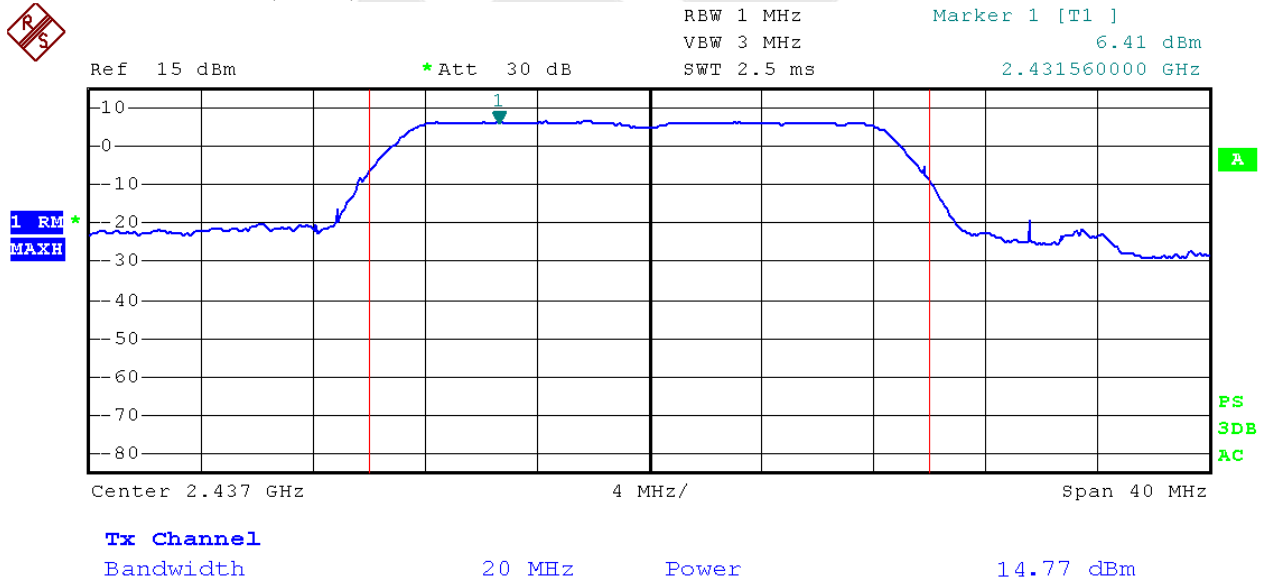
Test Mode: 802.11g---High



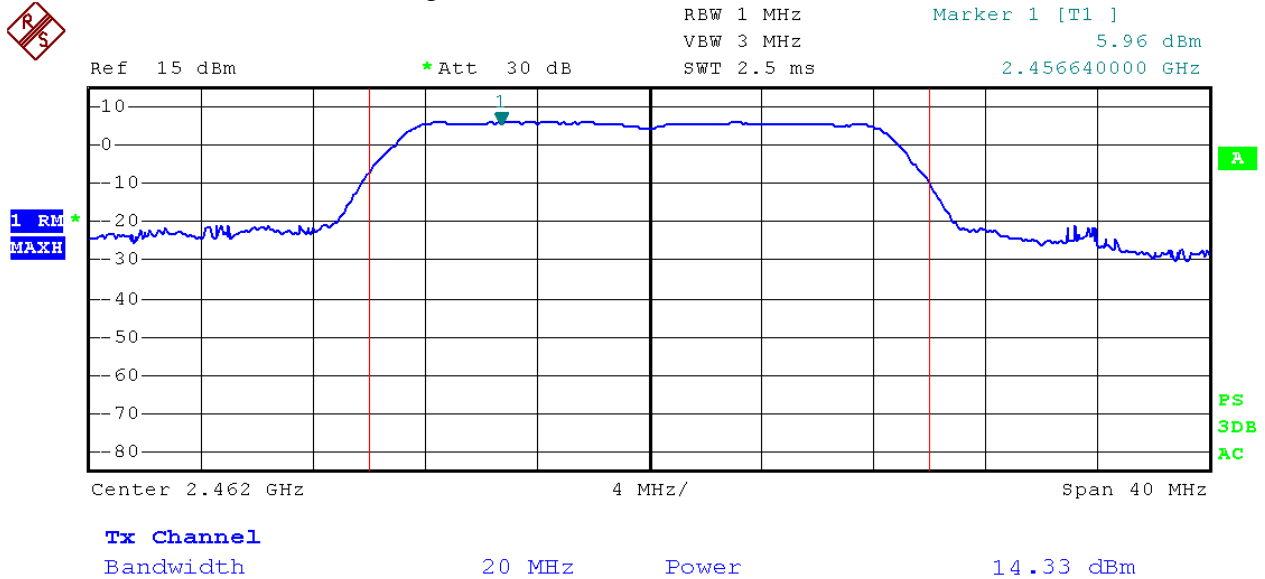
Test Mode: 802.11n(HT20)---Low



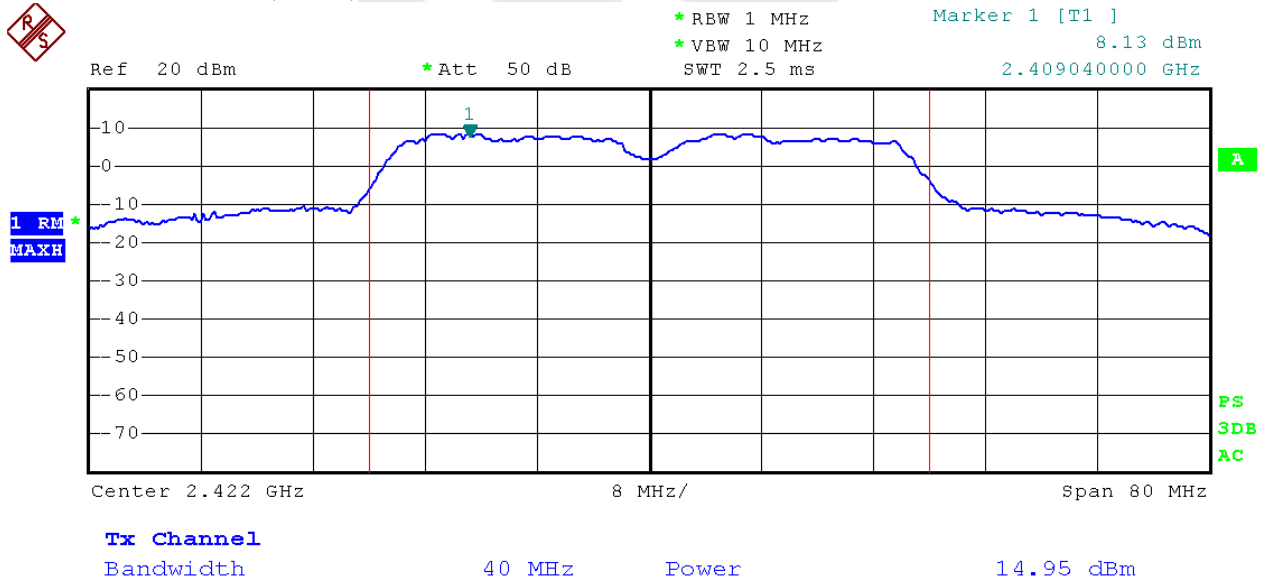
Test Mode: 802.11n(HT20)---Mid



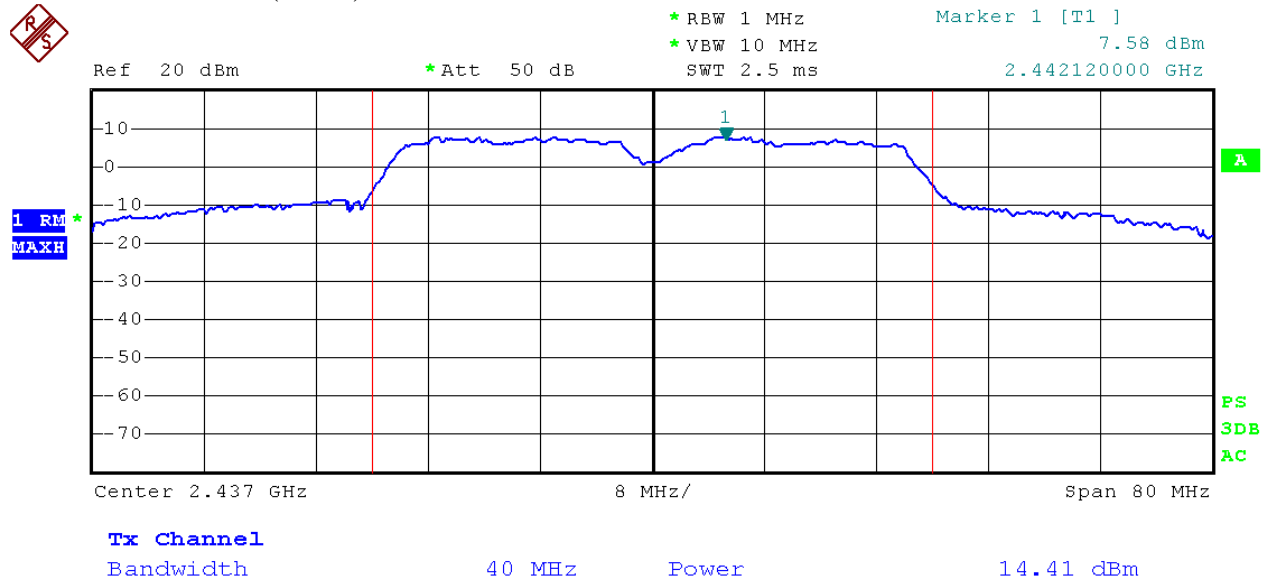
Test Mode: 802.11n(HT20)---High



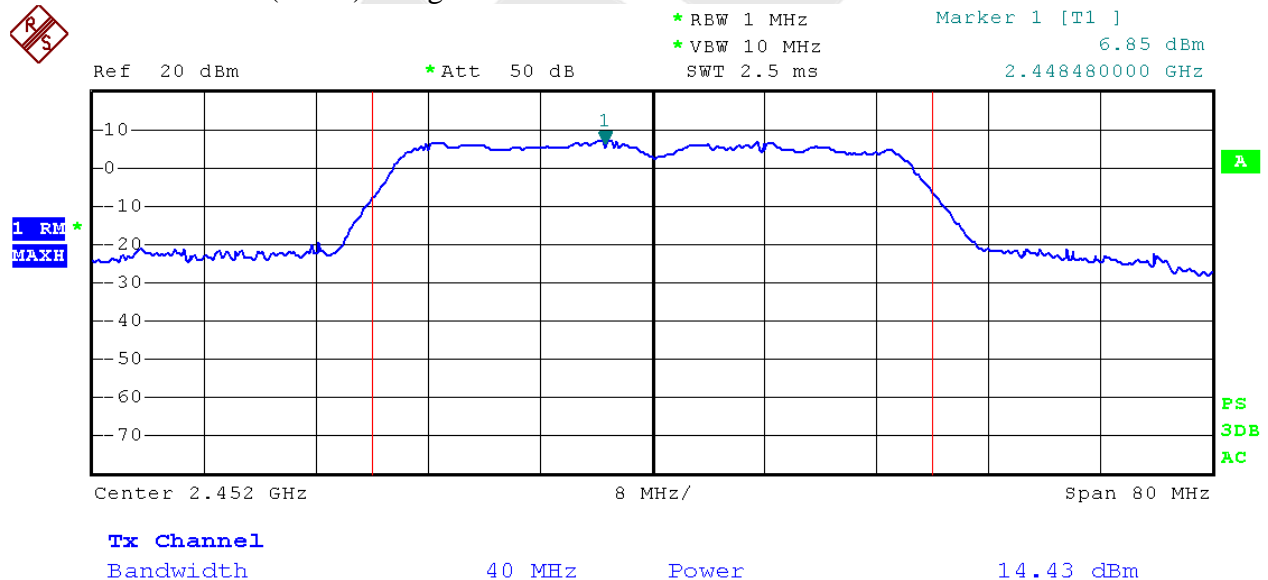
Test Mode: 802.11n(HT40)---Low



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



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



3.4. 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

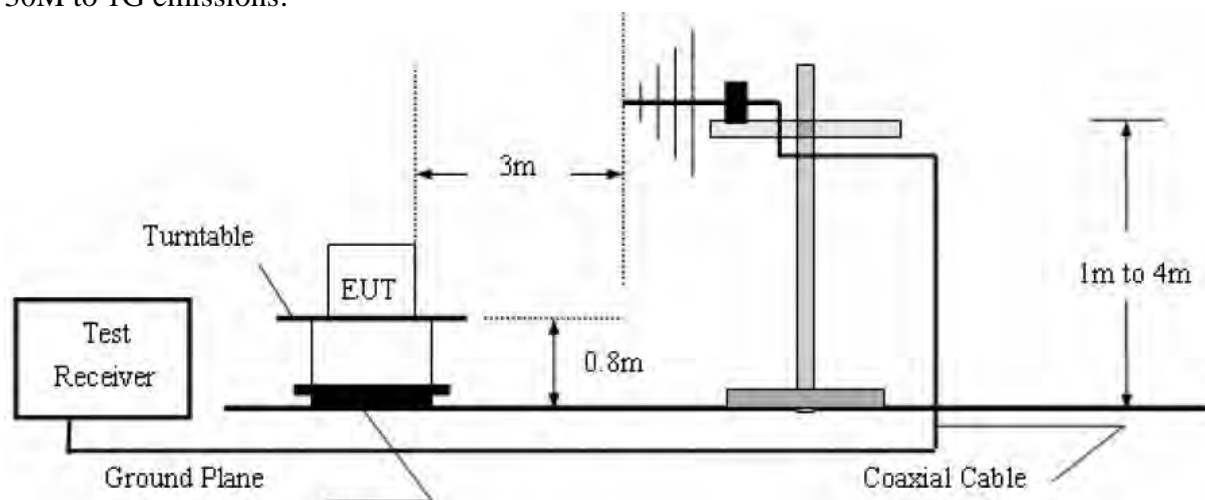
1. Conducted Method:

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

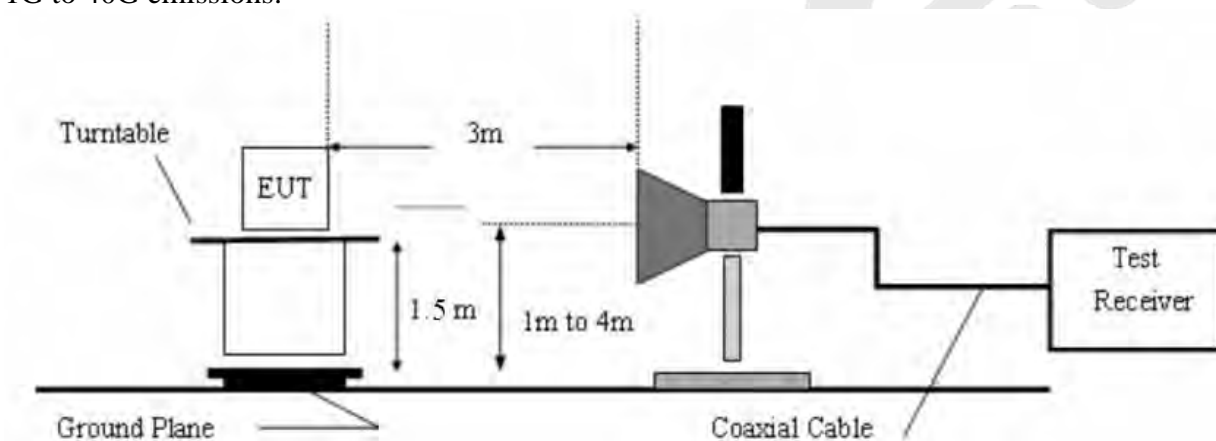
2. Radiated Method:

- 1) For below 1GHz: The EUT is placed on a turntable, which is 0.8m above the ground plane. The EUT is tested in 9*6*6 Chamber.
For above 1GHz: The EUT is placed on a turntable, which is 1.5m above the ground plane. The EUT is tested in 9*6*6 Chamber.
- 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.

30M to 1G emissions:



1G to 40G emissions:



c. Test Equipment

Same as the equipment listed in 4.2.

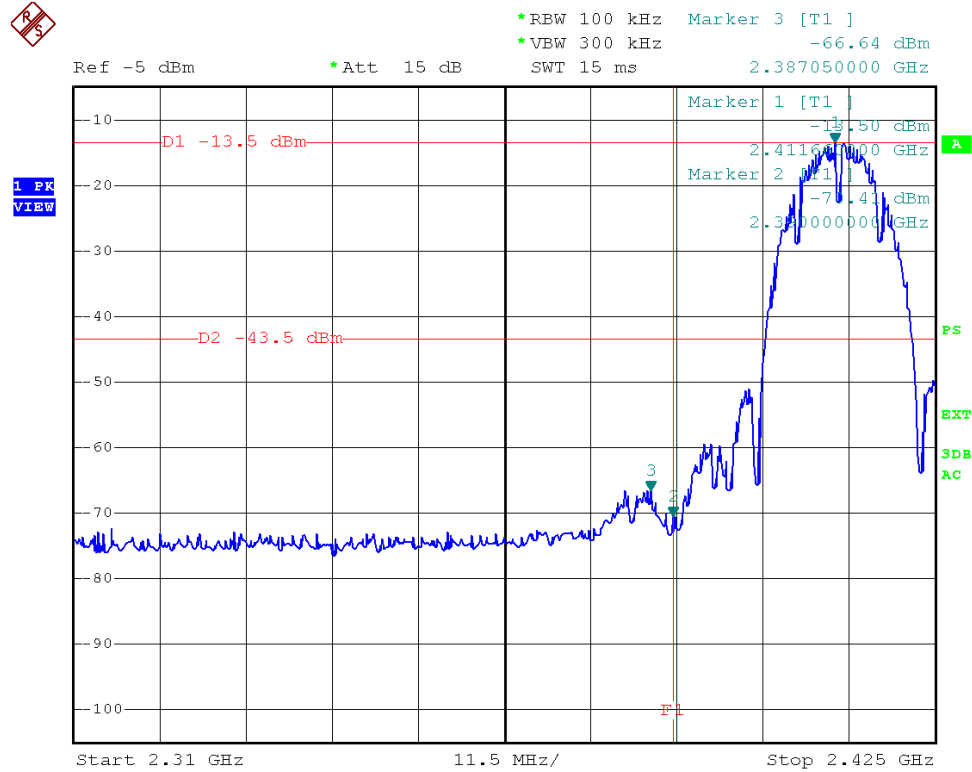
d. Test Results

Pass.

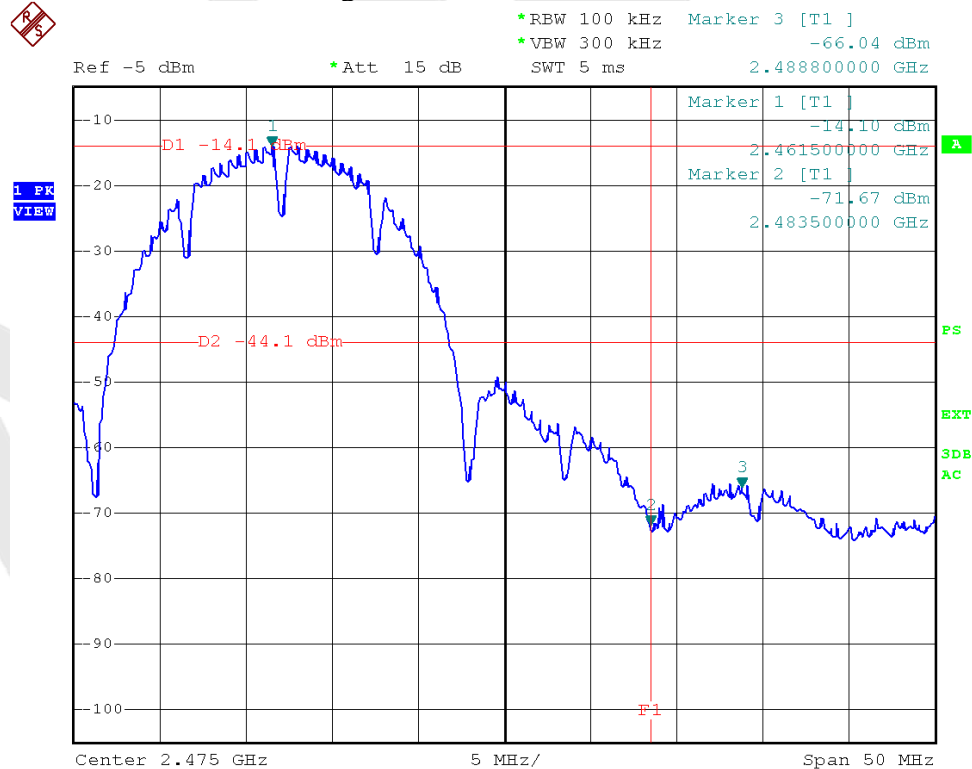
e. Test Plots

See the following page.

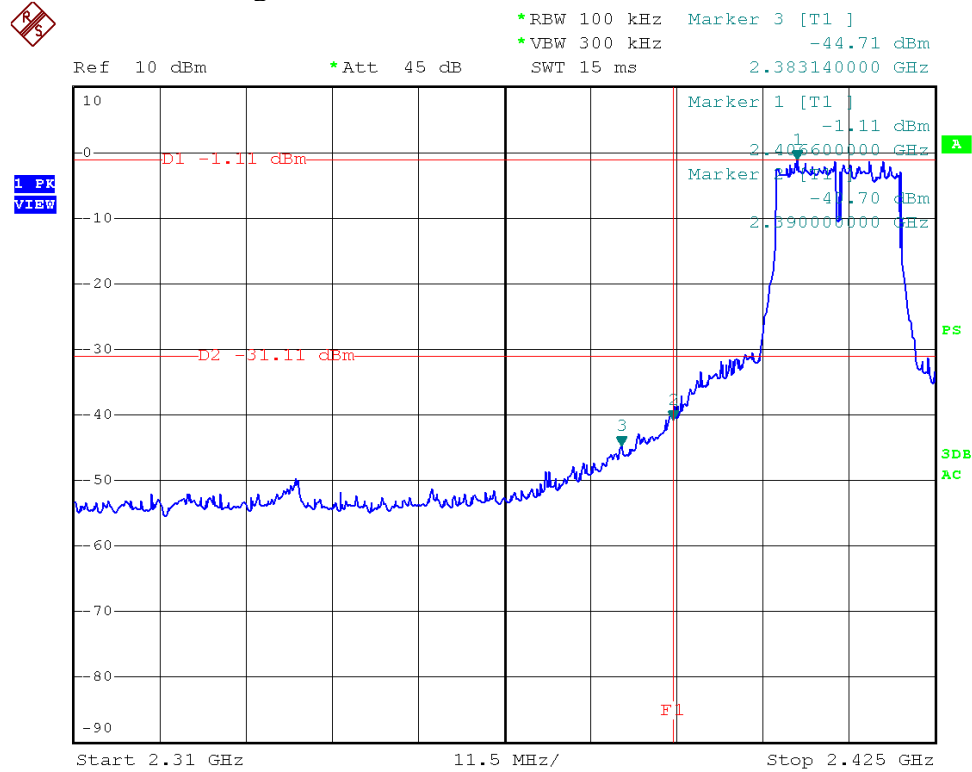
Test Mode: 802.11b ---Low



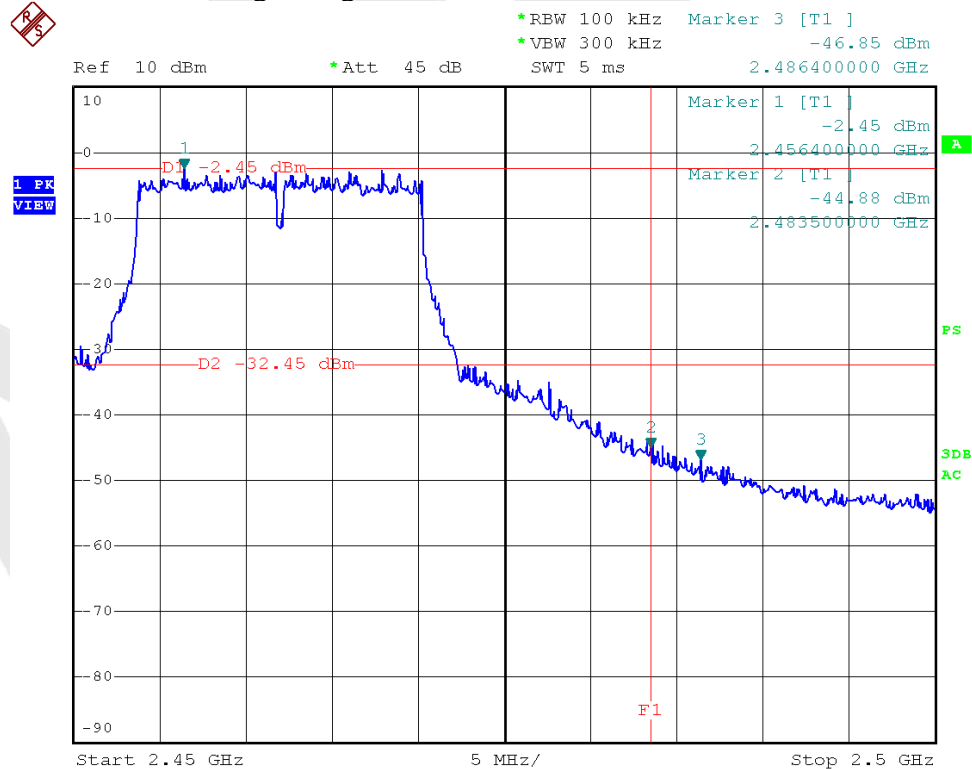
Test Mode: 802.11b ---High



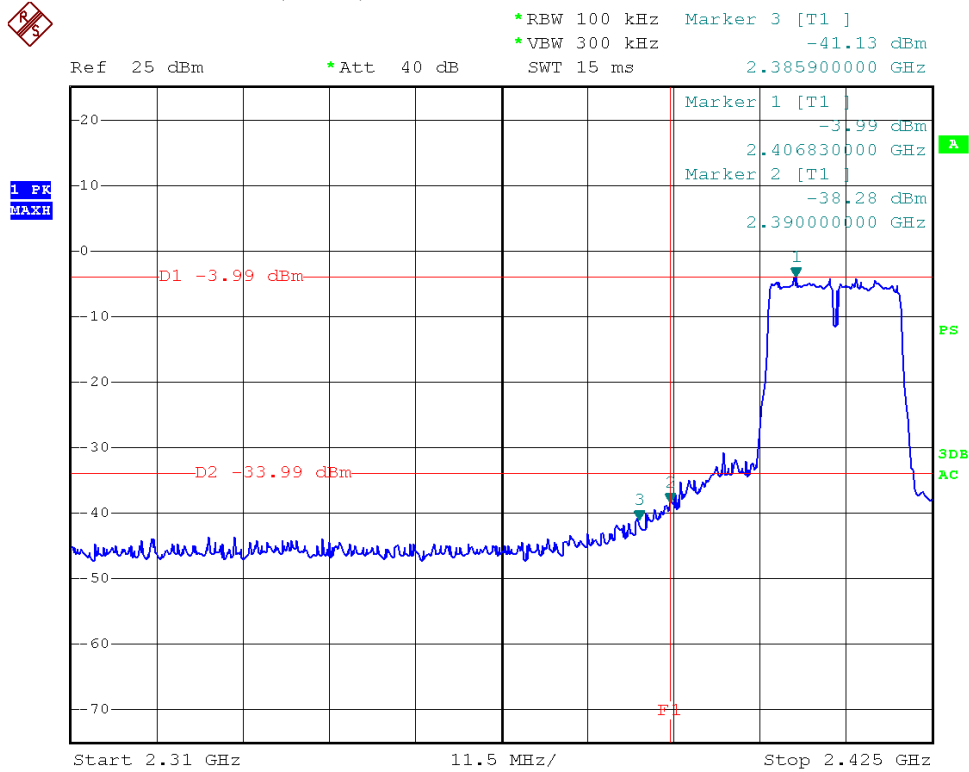
Test Mode: 802.11g ---Low



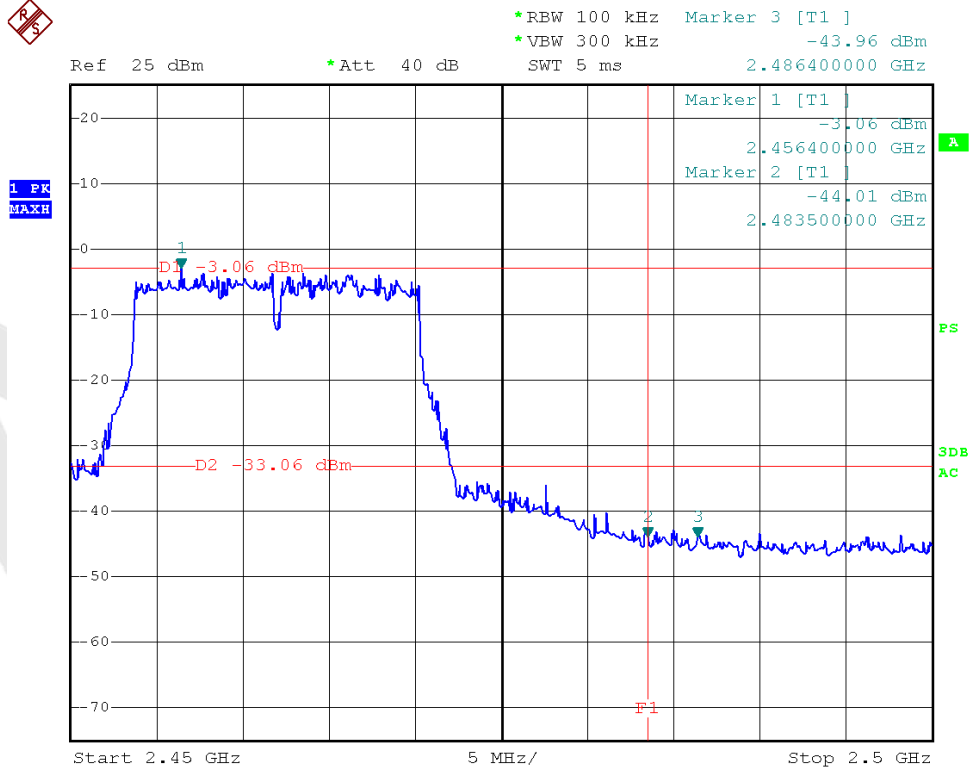
Test Mode: 802.11g ---High



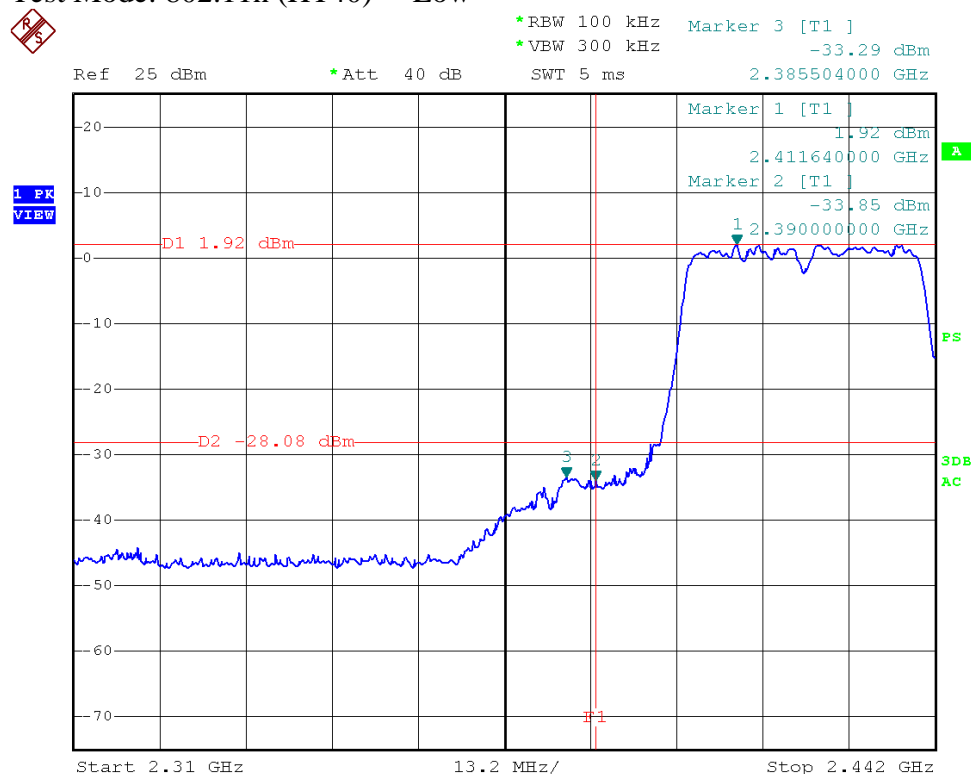
Test Mode: 802.11n (HT20) ---Low



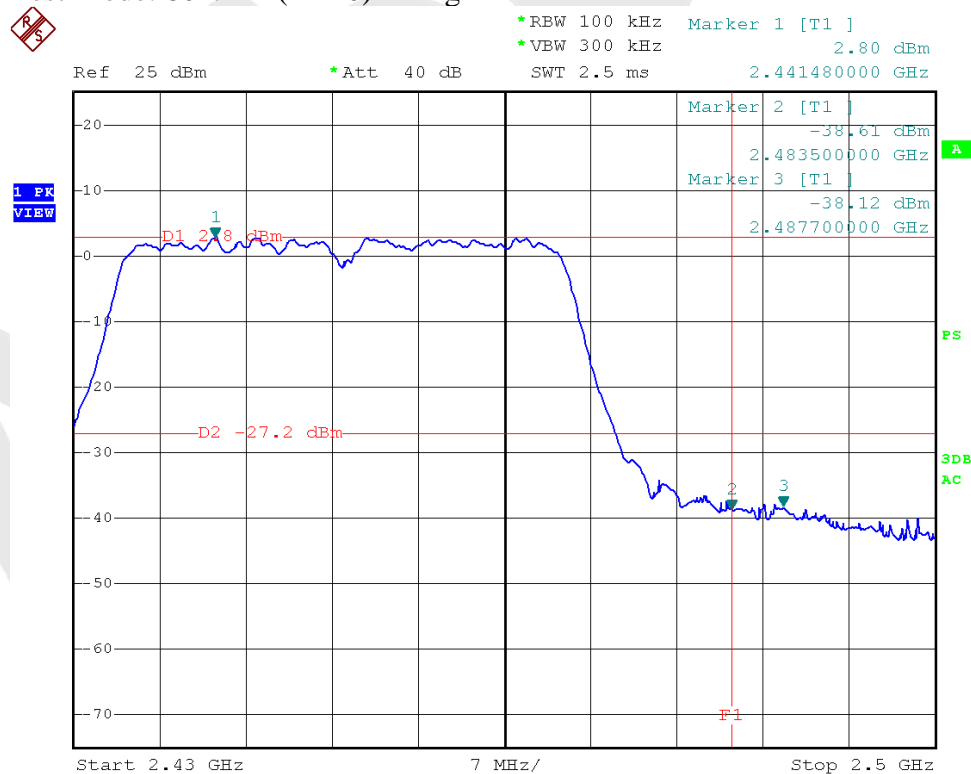
Test Mode: 802.11n (HT20)---High



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



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

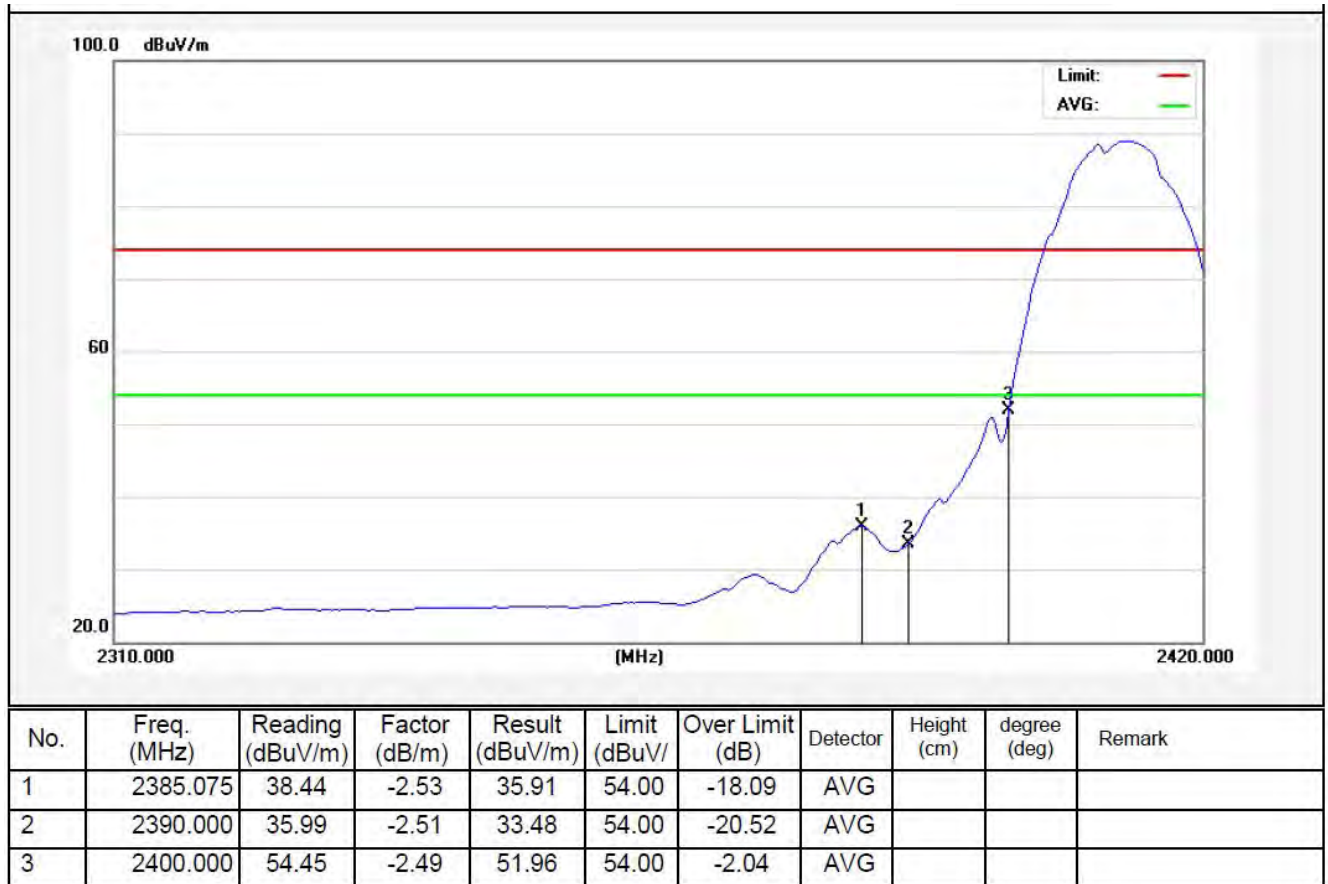


Test Mode: 802.11b
2412MHz
Horizontal-PEAK:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2386.450	46.94	-2.52	44.42	74.00	-29.58	peak			
2	2390.000	42.73	-2.51	40.22	74.00	-33.78	peak			
3	2400.000	61.67	-2.49	59.18	74.00	-14.82	peak			

Horizontal-AV:



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	2386.725	42.79	-2.52	40.27	74.00	-33.73	peak			
2	2390.000	38.84	-2.51	36.33	74.00	-37.67	peak			
3	2400.000	55.81	-2.49	53.32	74.00	-20.68	peak			

Vertical-AV:

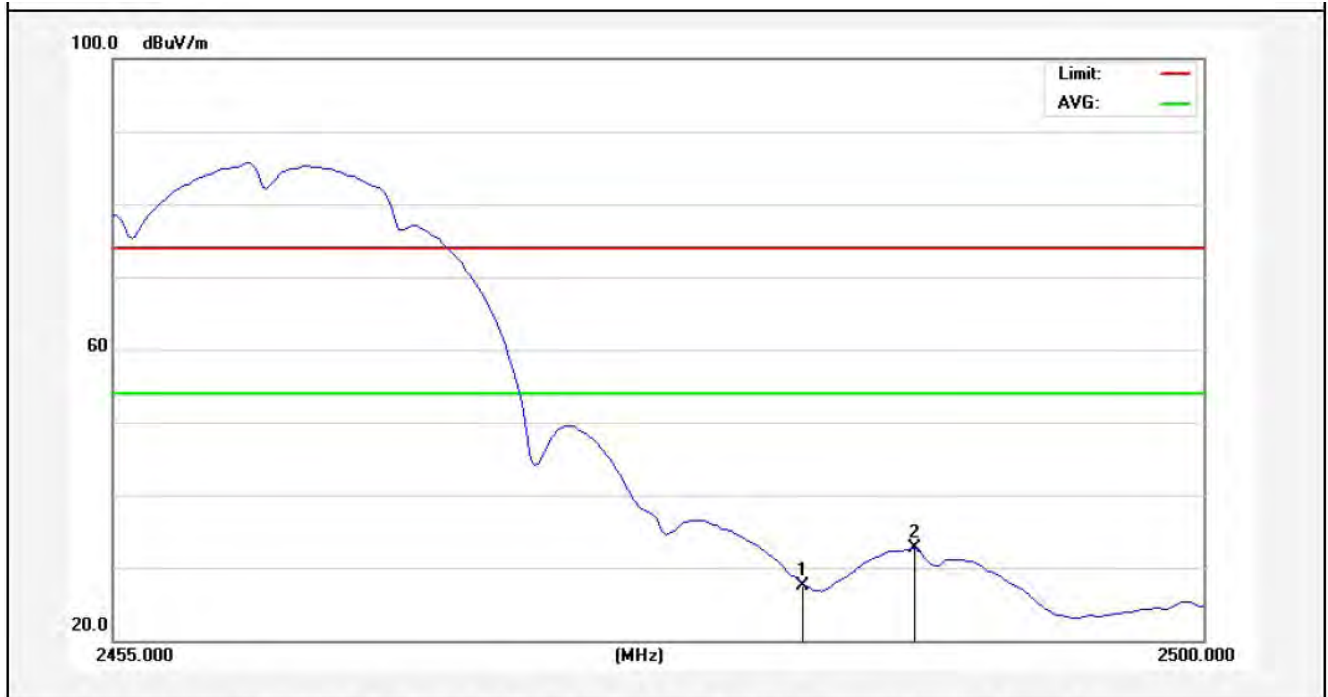


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2385.350	34.68	-2.52	32.16	54.00	-21.84	AVG			
2	2390.000	33.45	-2.51	30.94	54.00	-23.06	AVG			
3	2400.000	47.39	-2.49	44.90	54.00	-9.10	AVG			

Test Mode: 802.11b
2462MHz
Horizontal-PEAK:



Horizontal-AV:



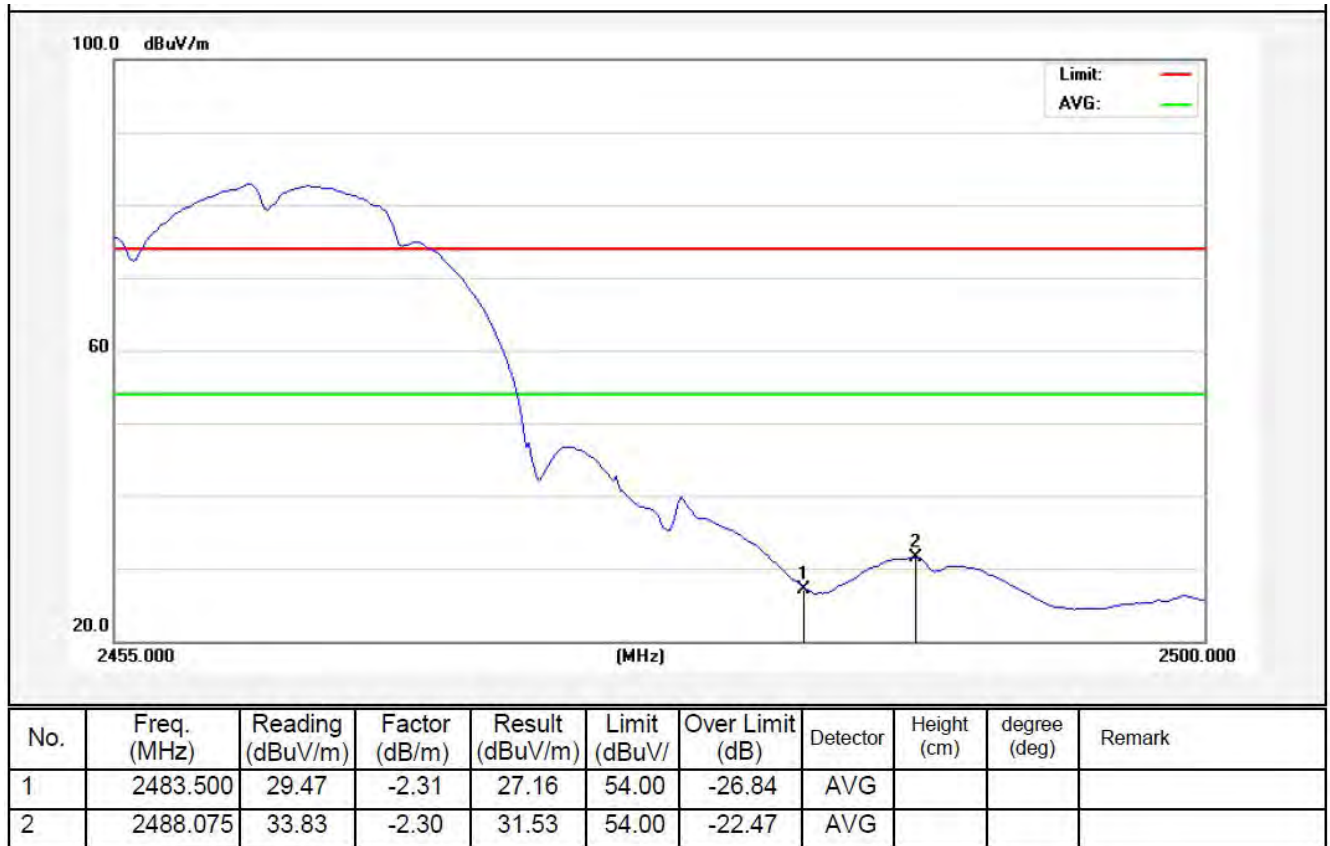
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2483.500	29.90	-2.31	27.59	54.00	-26.41	AVG			
2	2488.075	34.91	-2.30	32.61	54.00	-21.39	AVG			

Test Mode: 802.11b
2462MHz
Vertical-PEAK:

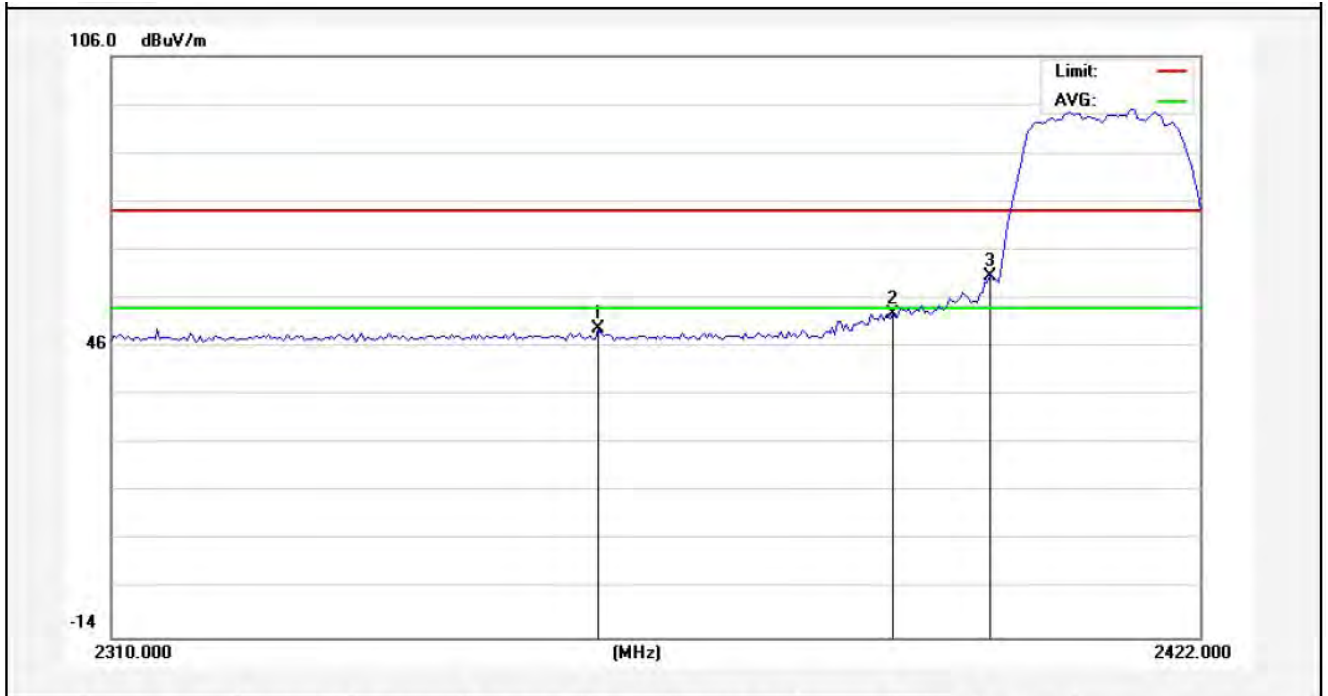


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2483.500	35.59	-2.31	33.28	74.00	-40.72	peak			
2	2487.850	41.29	-2.30	38.99	74.00	-35.01	peak			

Vertical-AV:

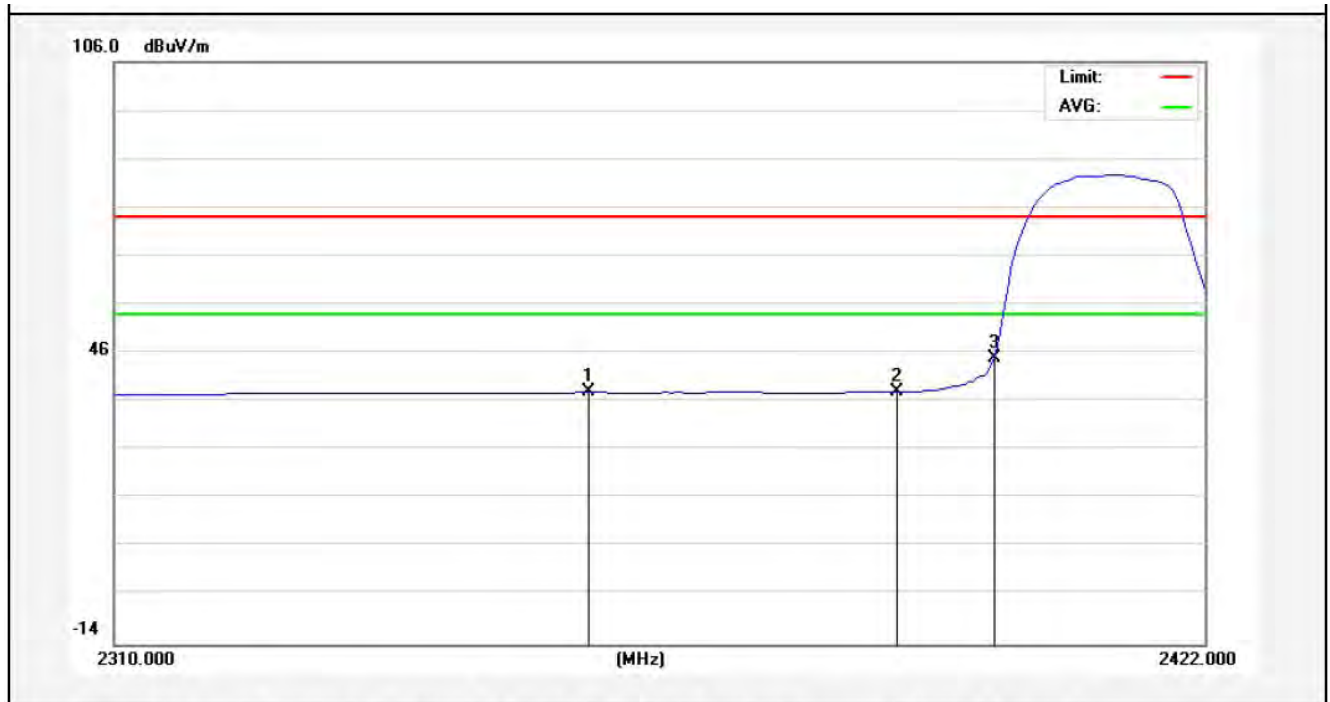


Test Mode: 802.11g
2412MHz
Horizontal-PEAK:



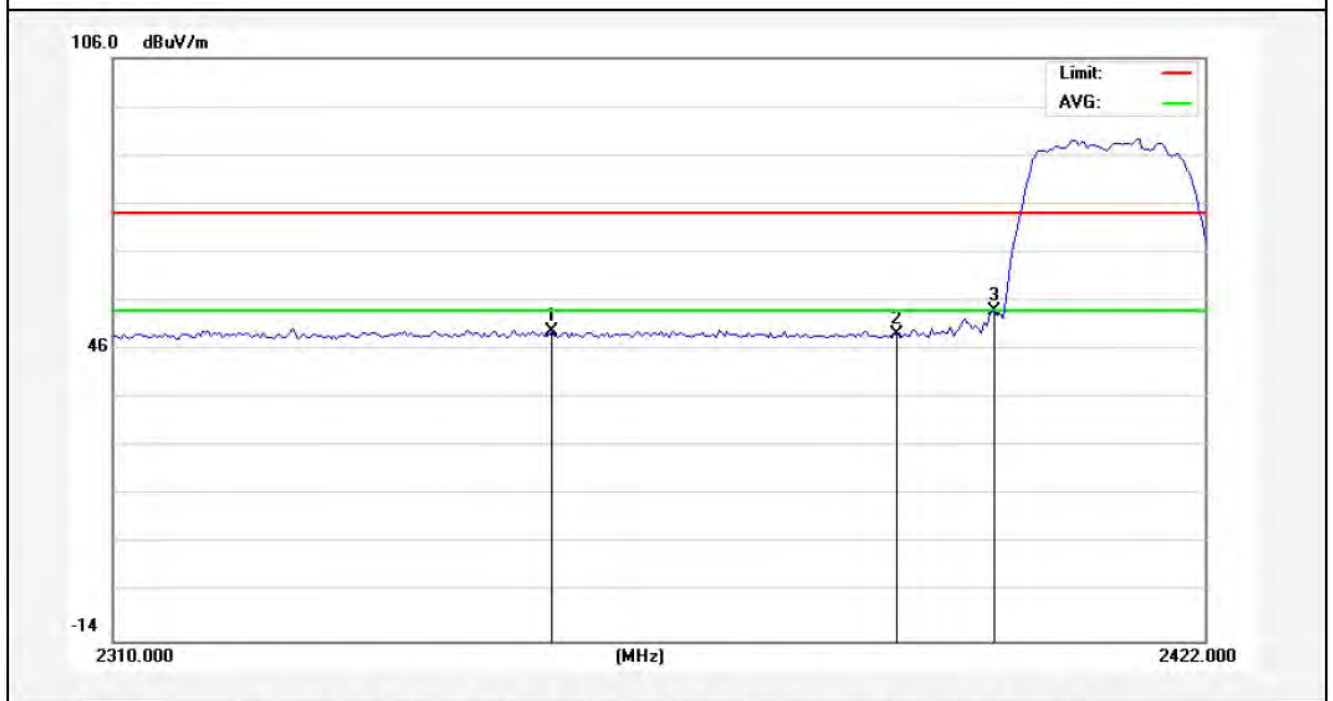
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2359.560	52.29	-2.58	49.71	74.00	-24.29	peak			
2	2390.000	55.29	-2.51	52.78	74.00	-21.22	peak			
3	2400.000	62.90	-2.49	60.41	74.00	-13.59	peak			

Horizontal-AV:



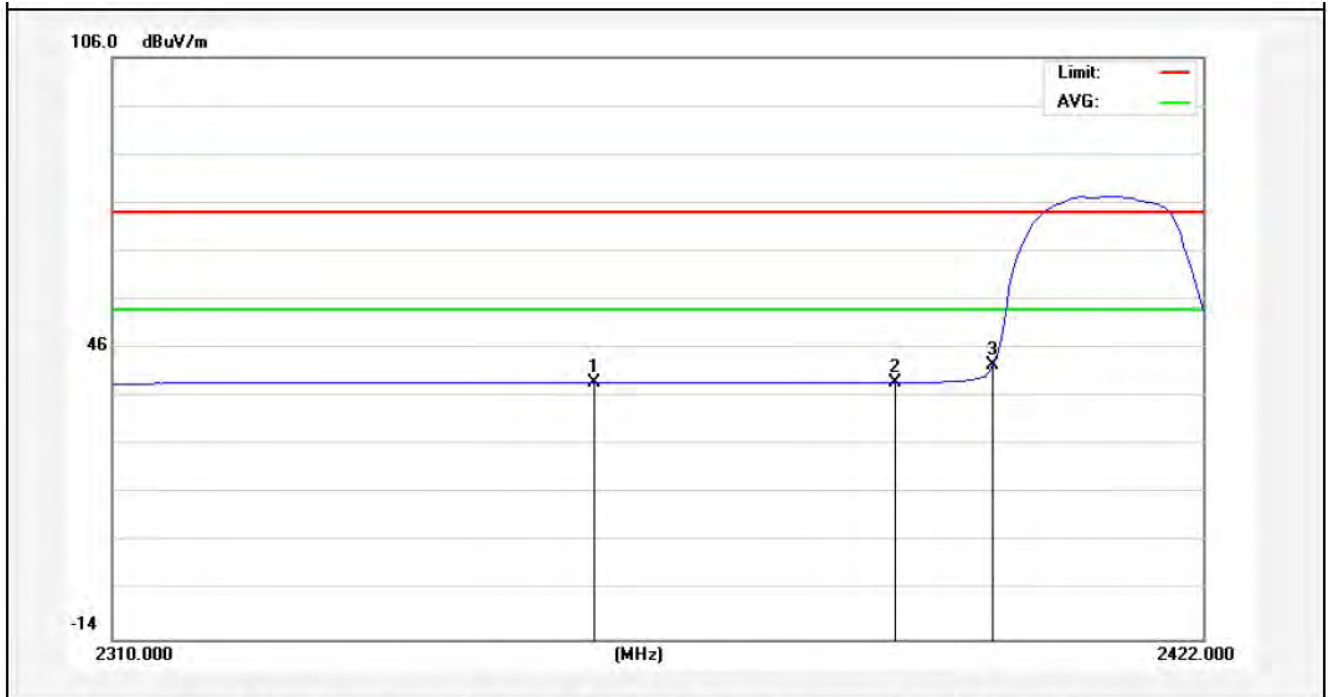
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2358.160	40.61	-2.58	38.03	54.00	-15.97	AVG			
2	2390.000	40.43	-2.51	37.92	54.00	-16.08	AVG			
3	2400.000	47.56	-2.49	45.07	54.00	-8.93	AVG			

Test Mode: 802.11g
2412MHz
Vertical-PEAK:



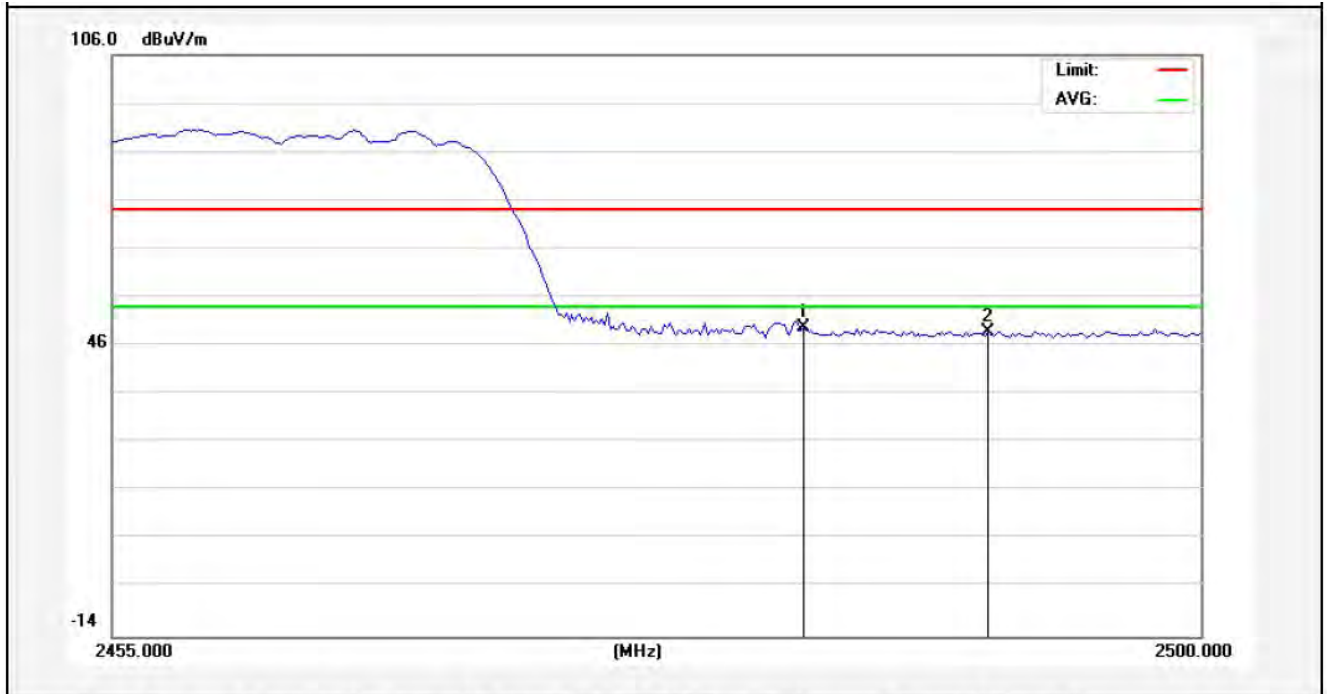
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2354.520	52.38	-2.59	49.79	74.00	-24.21	peak			
2	2390.000	51.77	-2.51	49.26	74.00	-24.74	peak			
3	2400.000	56.54	-2.49	54.05	74.00	-19.95	peak			

Vertical-AV:



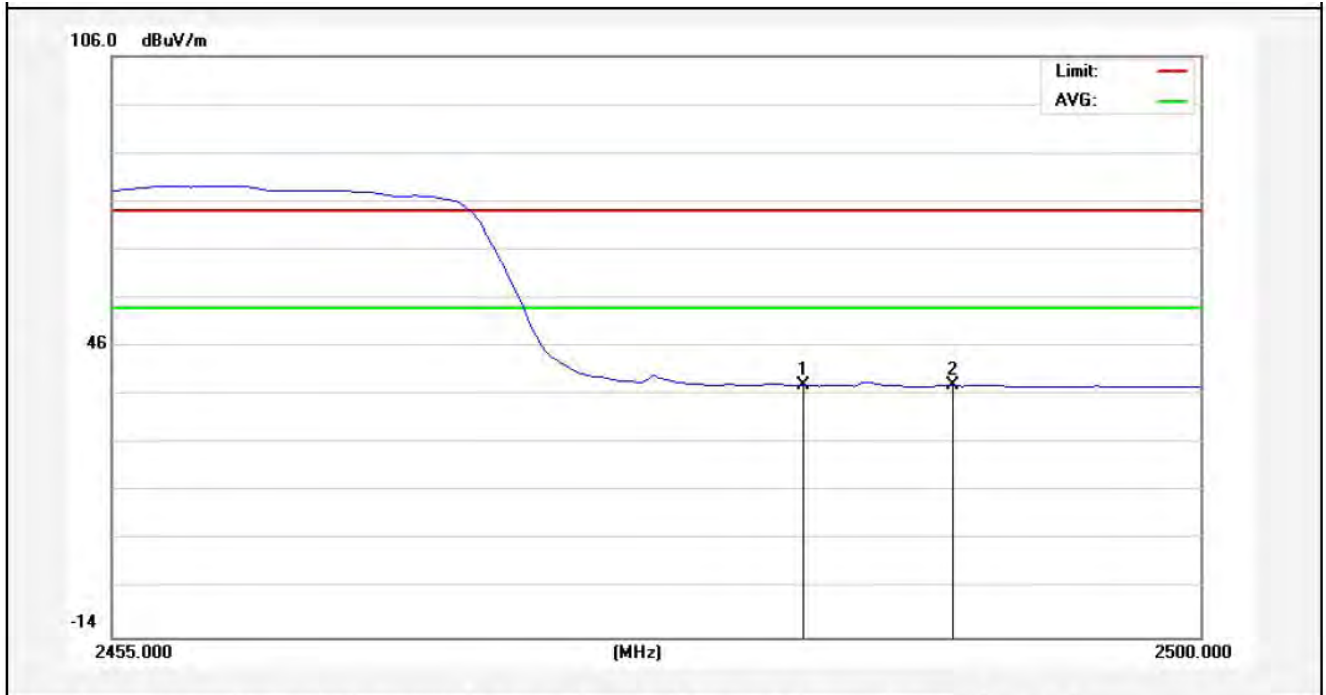
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2358.720	41.66	-2.58	39.08	54.00	-14.92	AVG			
2	2390.000	41.49	-2.51	38.98	54.00	-15.02	AVG			
3	2400.000	44.96	-2.49	42.47	54.00	-11.53	AVG			

Test Mode: 802.11g
2462MHz
Horizontal-PEAK:



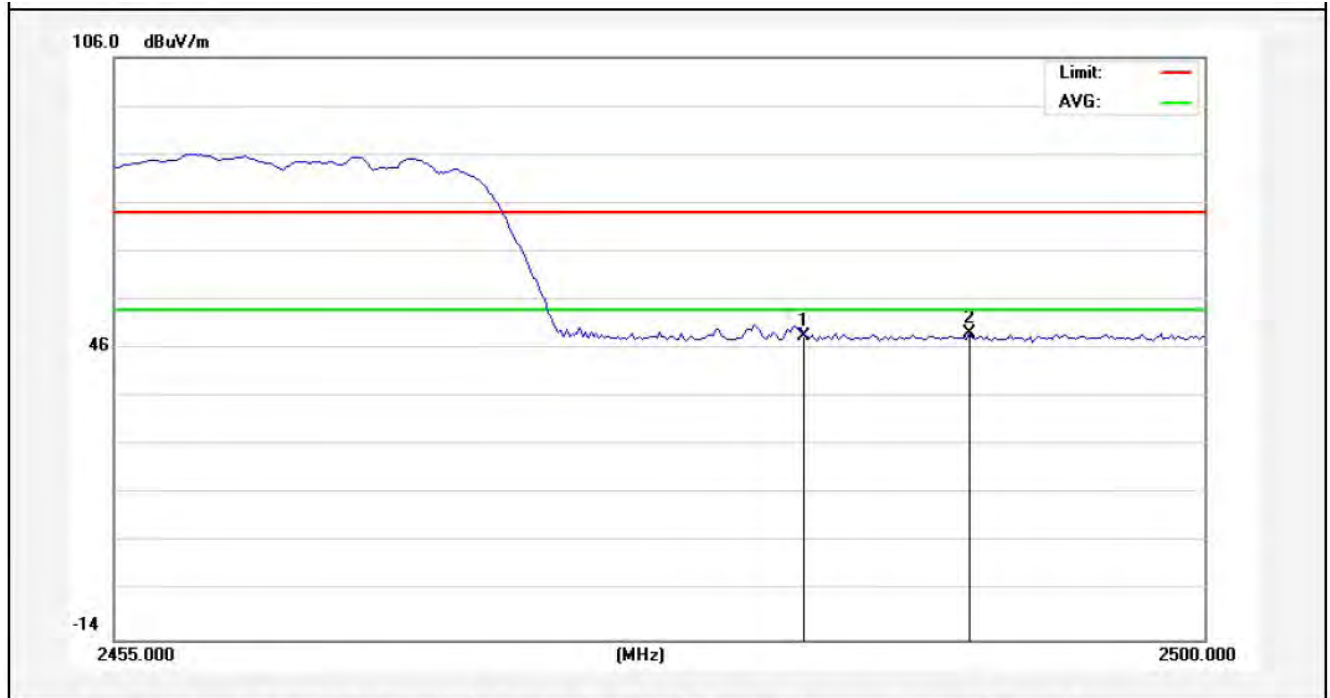
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2483.500	52.07	-2.31	49.76	74.00	-24.24	peak			
2	2491.225	51.28	-2.29	48.99	74.00	-25.01	peak			

Horizontal-AV:



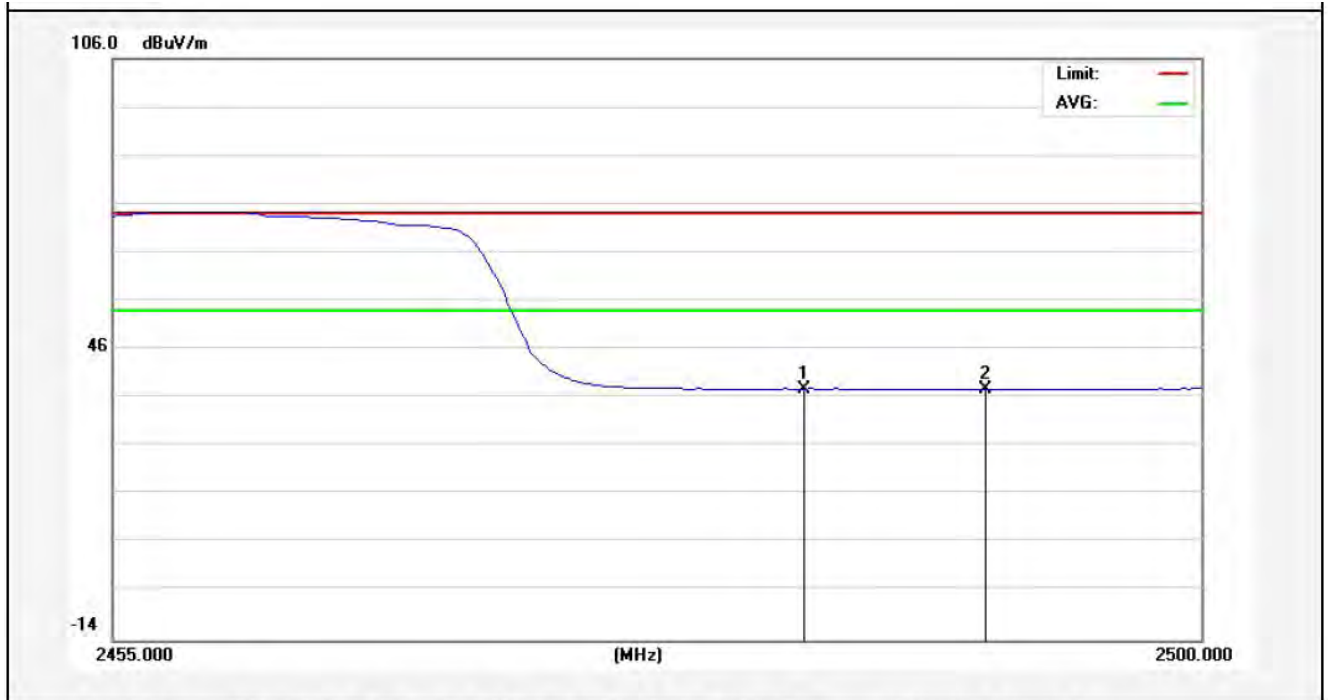
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2483.500	40.26	-2.31	37.95	54.00	-16.05	AVG			
2	2489.762	40.22	-2.29	37.93	54.00	-16.07	AVG			

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	50.74	-2.31	48.43	74.00	-25.57	peak			
2	2490.325	51.43	-2.29	49.14	74.00	-24.86	peak			

Vertical-AV:

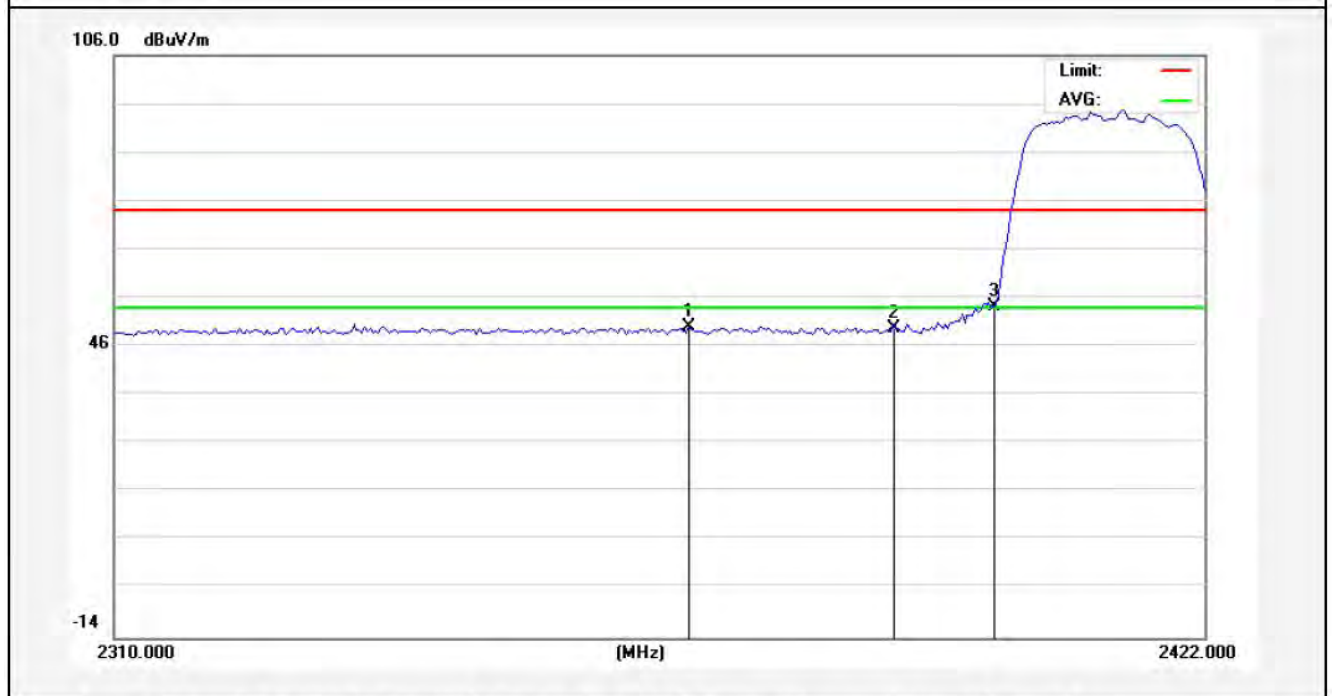


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2483.500	40.19	-2.31	37.88	54.00	-16.12	AVG			
2	2491.113	40.17	-2.29	37.88	54.00	-16.12	AVG			

Test Mode: 802.11n (HT20)

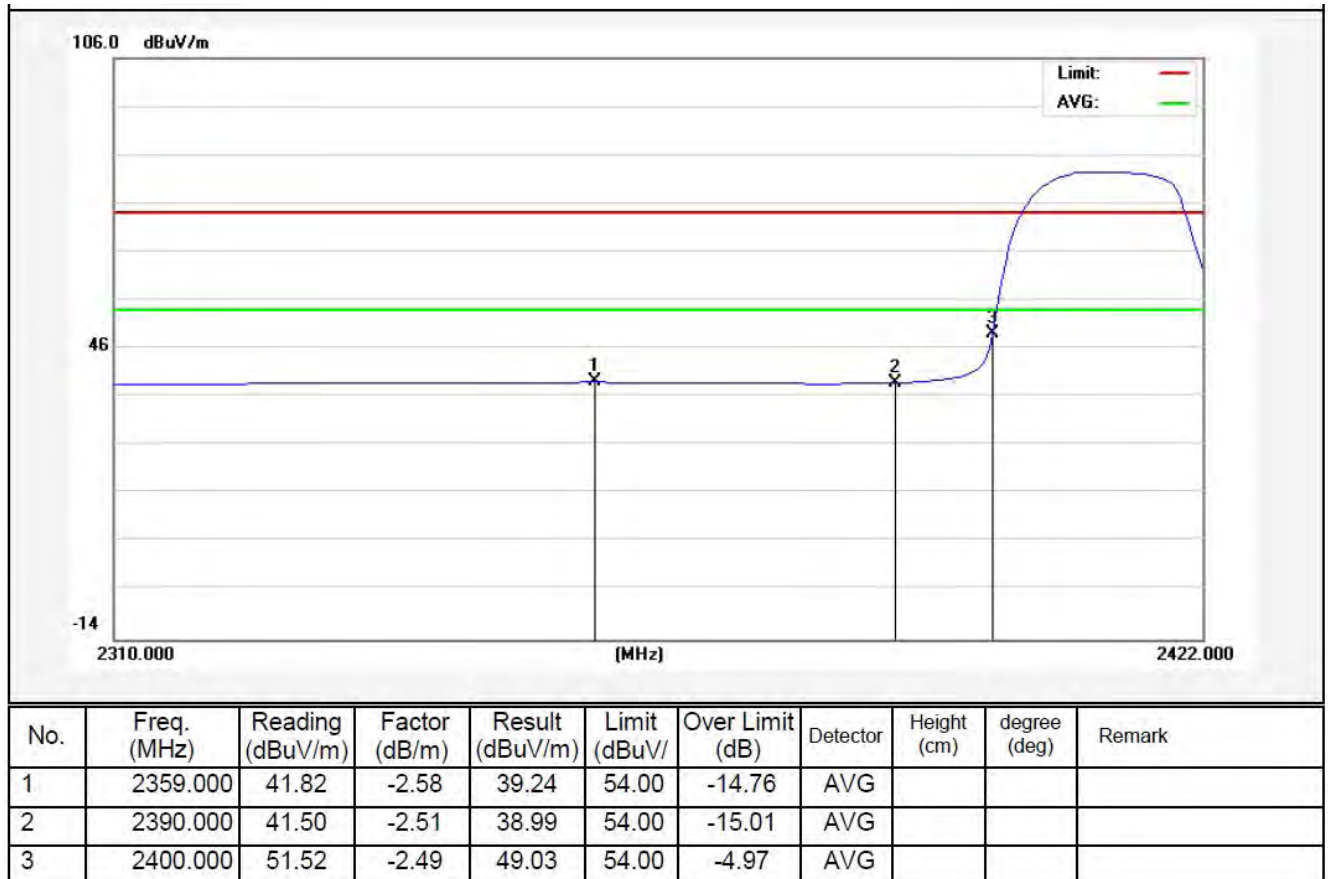
2412MHz

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	2368.520	52.66	-2.56	50.10	74.00	-23.90	peak			
2	2390.000	52.29	-2.51	49.78	74.00	-24.22	peak			
3	2400.000	56.80	-2.49	54.31	74.00	-19.69	peak			

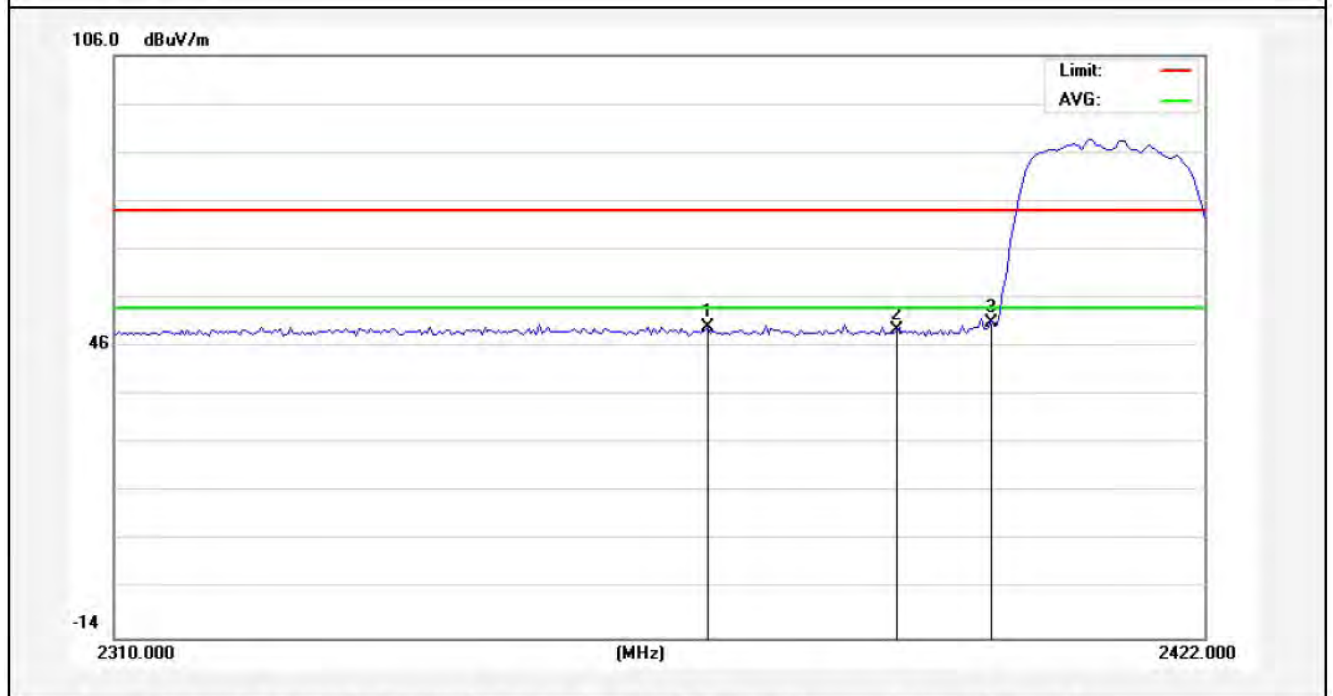
Horizontal-AV:



Test Mode: 802.11n (HT20)

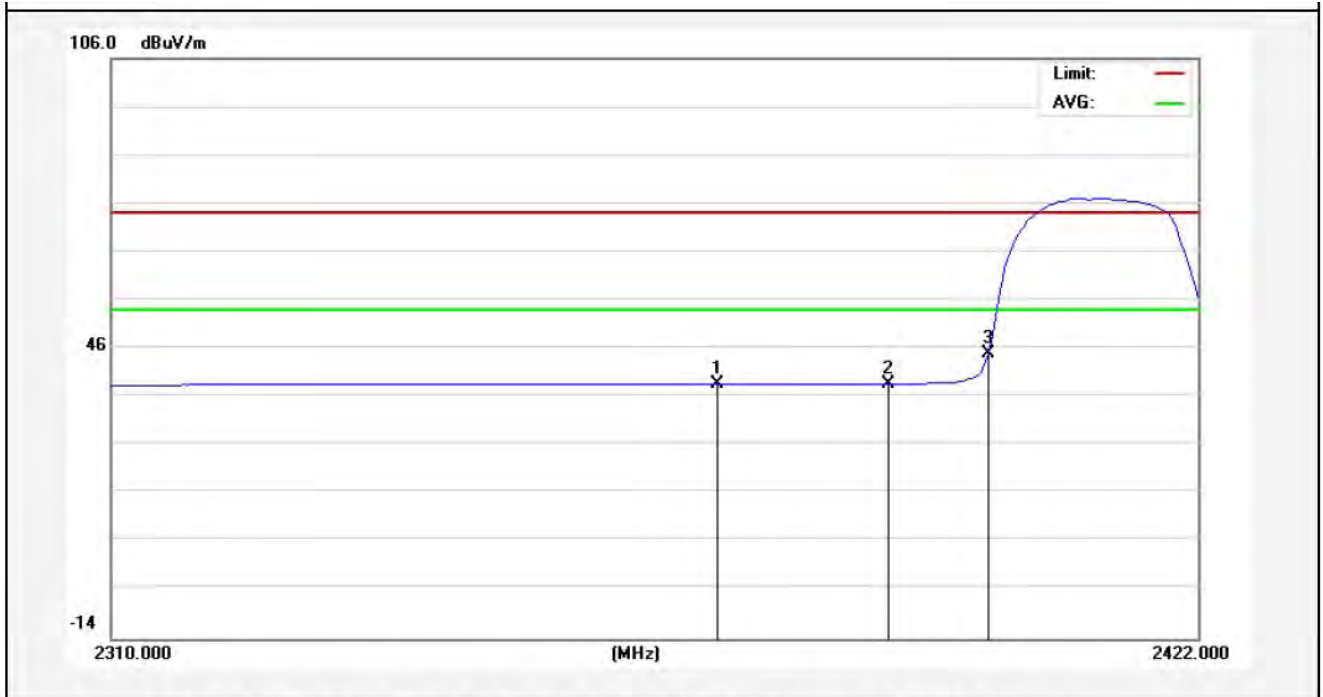
2412MHz

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	2370.480	52.70	-2.56	50.14	74.00	-23.86	peak			
2	2390.000	52.10	-2.51	49.59	74.00	-24.41	peak			
3	2400.000	53.58	-2.49	51.09	74.00	-22.91	peak			

Vertical-AV:

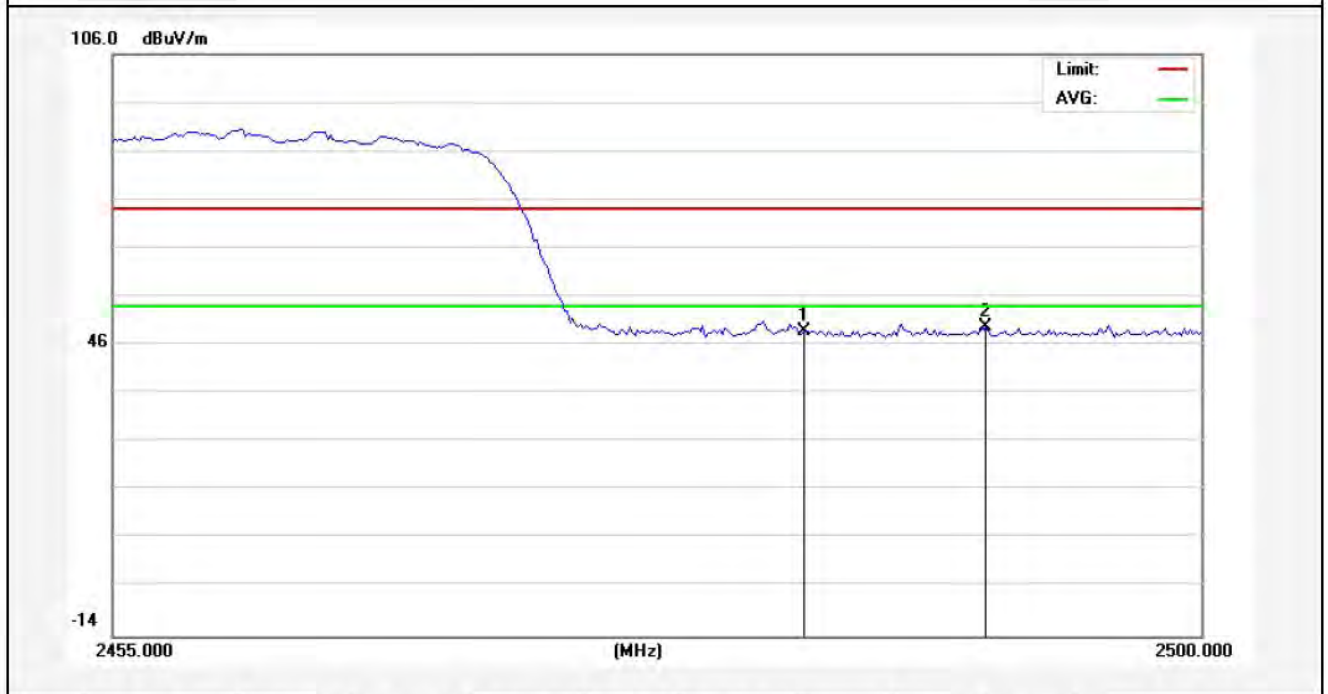


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2371.880	41.28	-2.55	38.73	54.00	-15.27	AVG			
2	2390.000	41.15	-2.51	38.64	54.00	-15.36	AVG			
3	2400.000	47.47	-2.49	44.98	54.00	-9.02	AVG			

Test Mode: 802.11n (HT20)

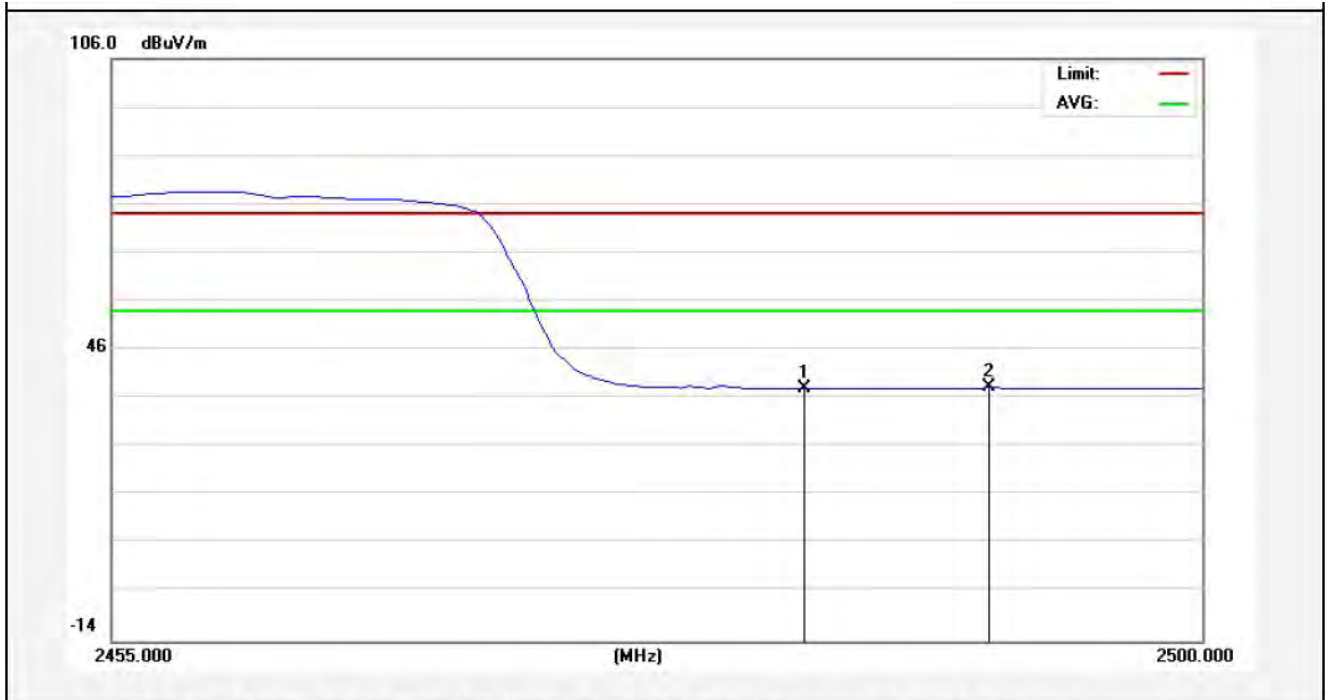
2462MHz

Horizontal-PEAK:



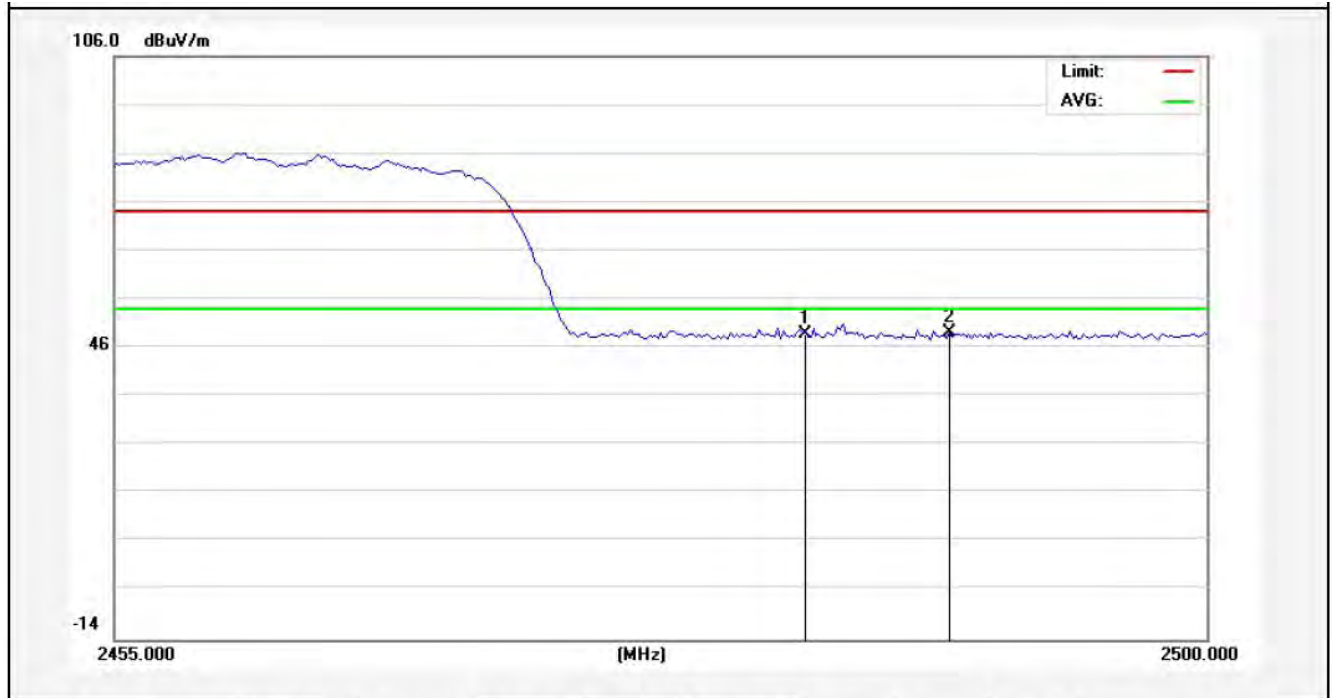
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2483.500	51.11	-2.31	48.80	74.00	-25.20	peak			
2	2491.113	52.00	-2.29	49.71	74.00	-24.29	peak			

Horizontal-AV:



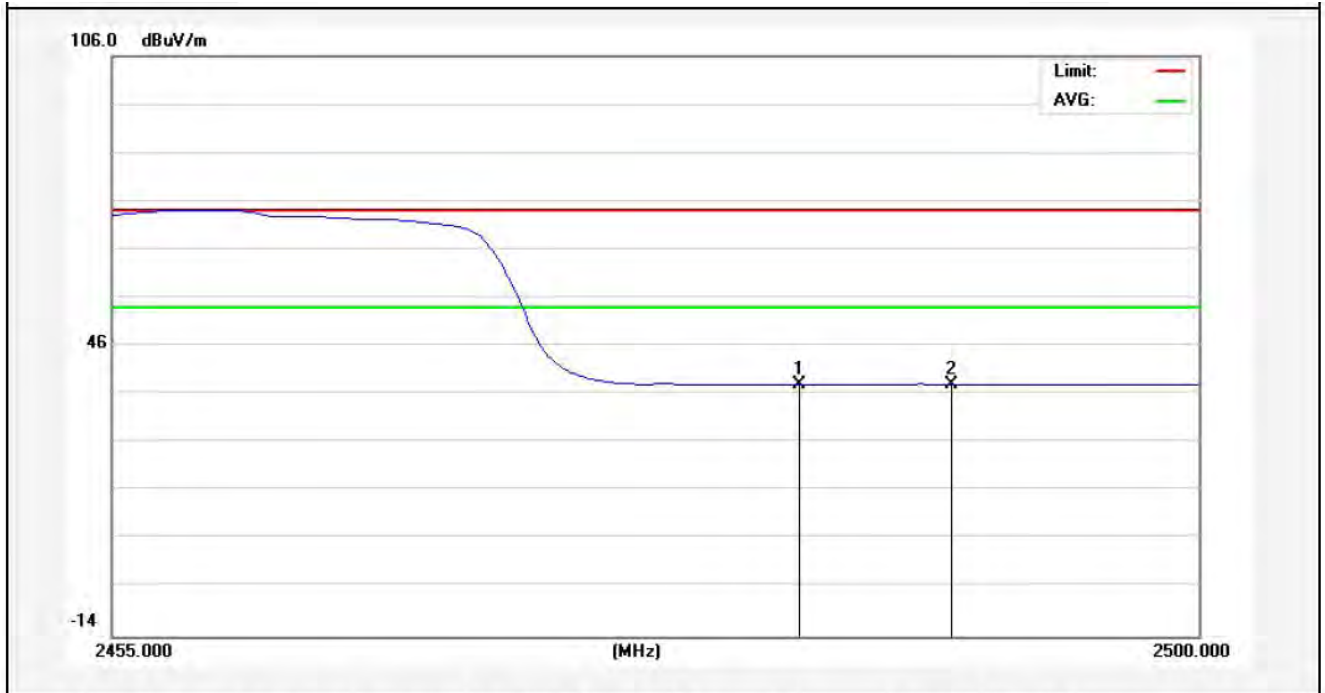
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2483.500	40.29	-2.31	37.98	54.00	-16.02	AVG			
2	2491.225	40.70	-2.29	38.41	54.00	-15.59	AVG			

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	51.14	-2.31	48.83	74.00	-25.17	peak			
2	2489.425	51.35	-2.29	49.06	74.00	-24.94	peak			

Vertical-AV:

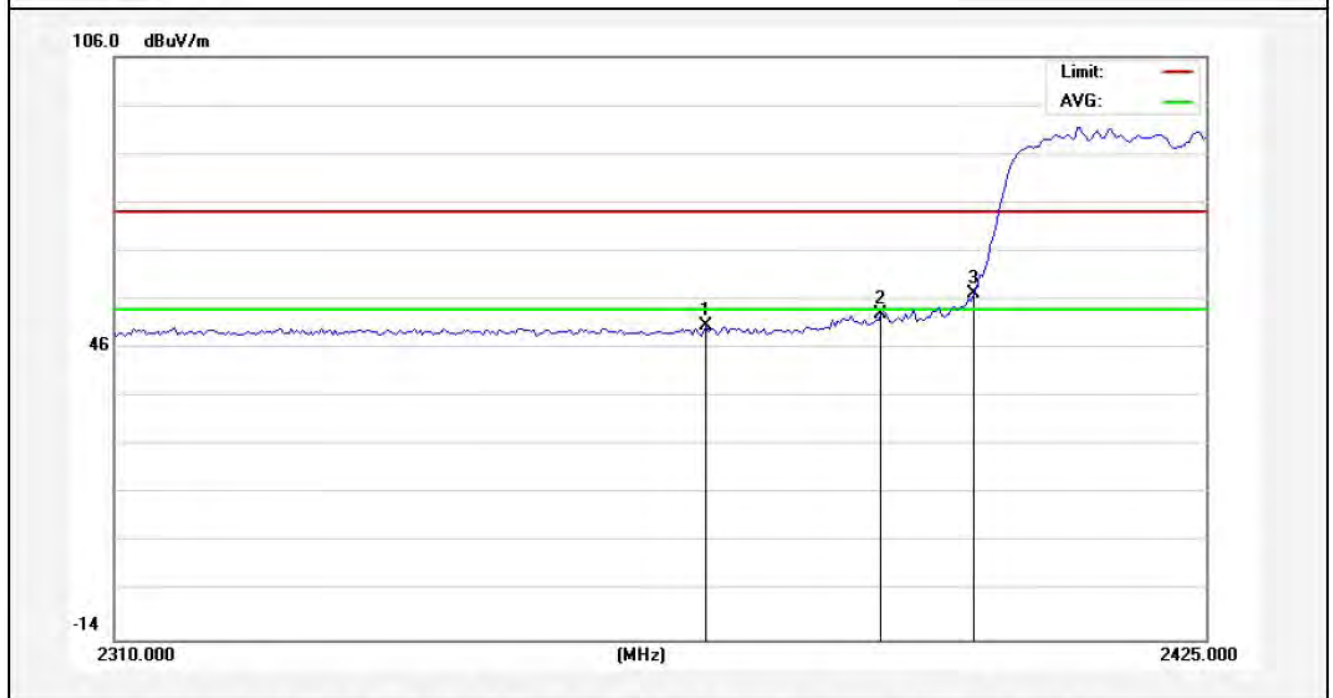


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2483.500	40.27	-2.31	37.96	54.00	-16.04	AVG			
2	2489.762	40.28	-2.29	37.99	54.00	-16.01	AVG			

Test Mode: 802.11n (HT40)

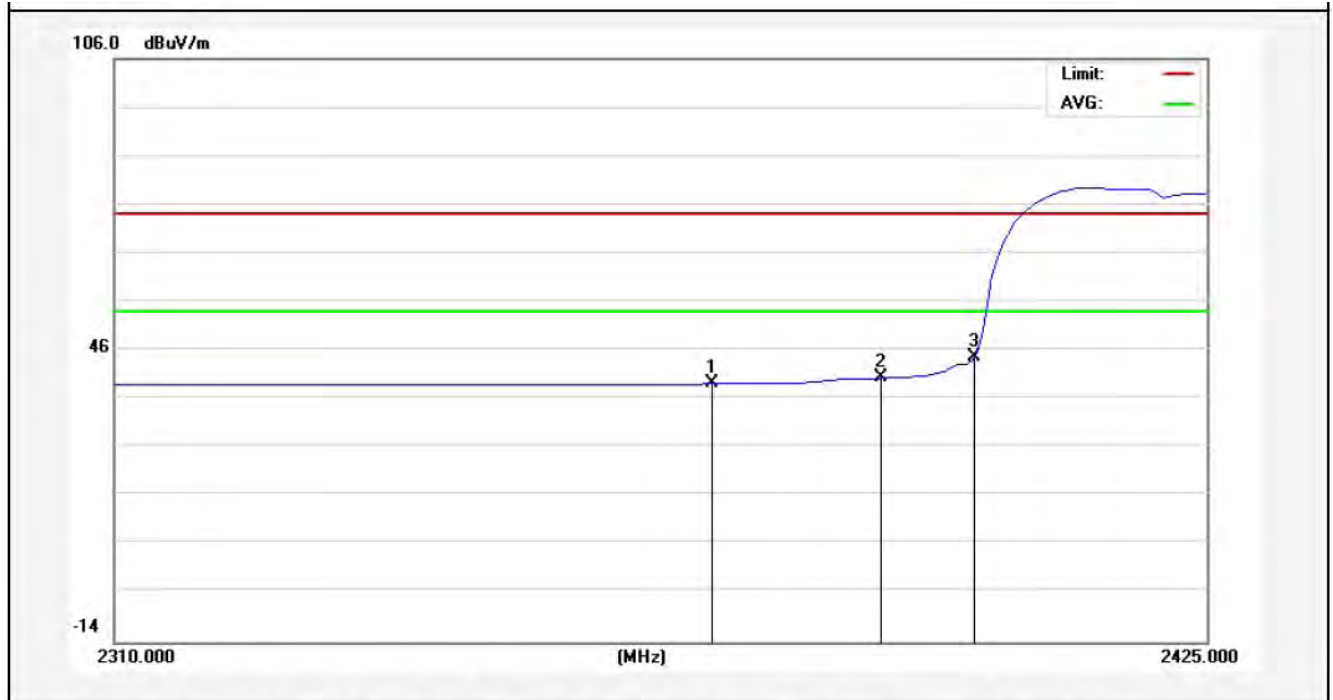
2422MHz

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	2371.813	53.31	-2.55	50.76	74.00	-23.24	peak			
2	2390.000	55.57	-2.51	53.06	74.00	-20.94	peak			
3	2400.000	59.70	-2.49	57.21	74.00	-16.79	peak			

Horizontal-AV:

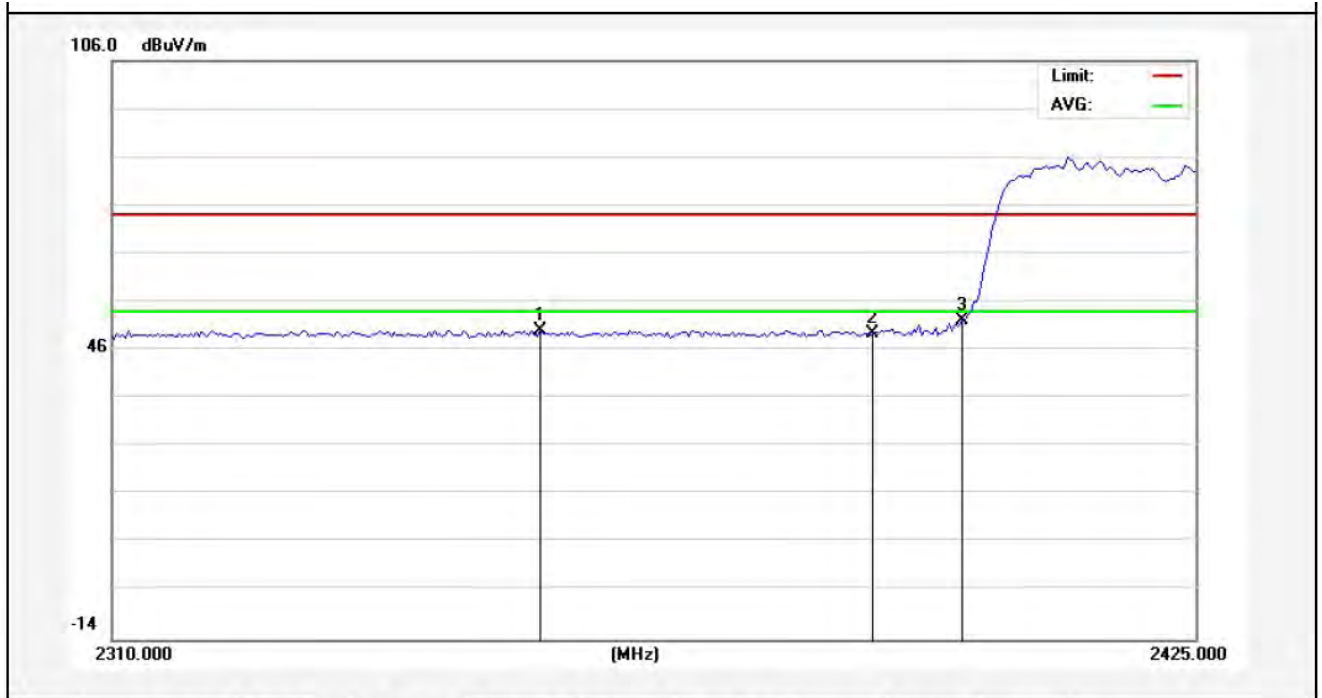


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2372.387	41.67	-2.55	39.12	54.00	-14.88	AVG			
2	2390.000	42.82	-2.51	40.31	54.00	-13.69	AVG			
3	2400.000	47.12	-2.49	44.63	54.00	-9.37	AVG			

Test Mode: 802.11n (HT40)

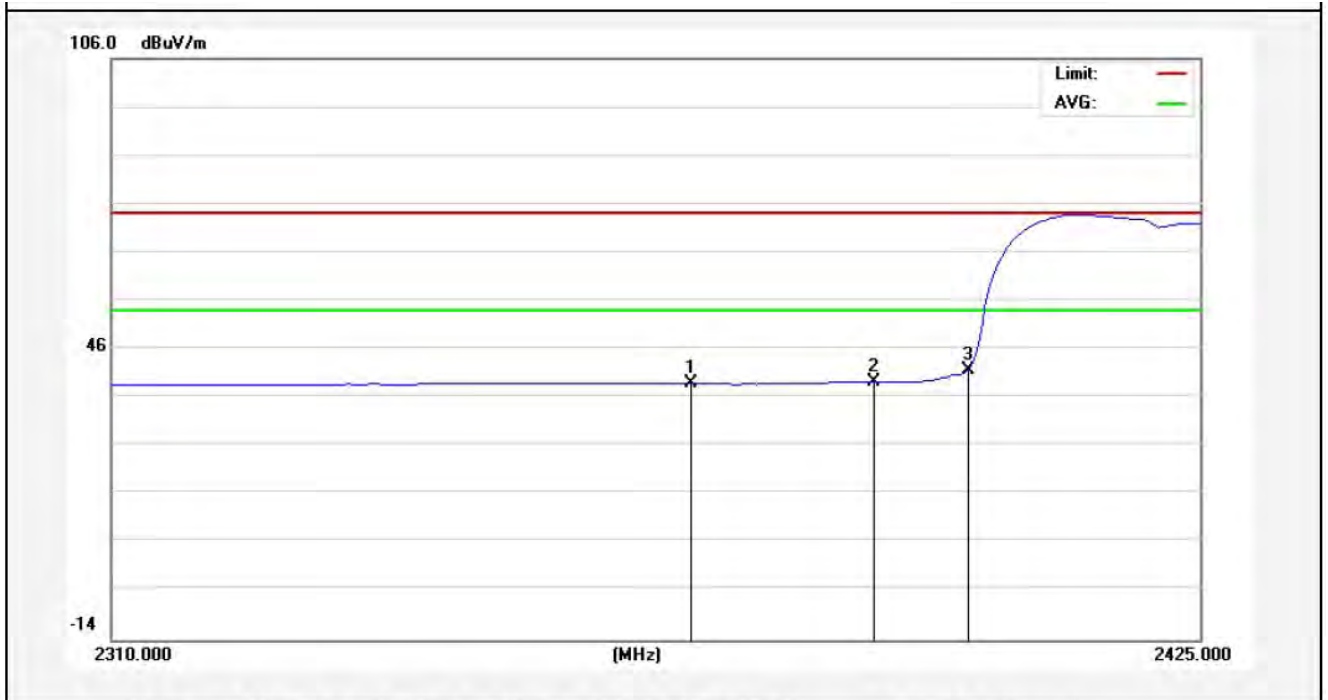
2422MHz

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	2354.850	52.69	-2.59	50.10	74.00	-23.90	peak			
2	2390.000	52.08	-2.51	49.57	74.00	-24.43	peak			
3	2400.000	54.53	-2.49	52.04	74.00	-21.96	peak			

Vertical-AV:

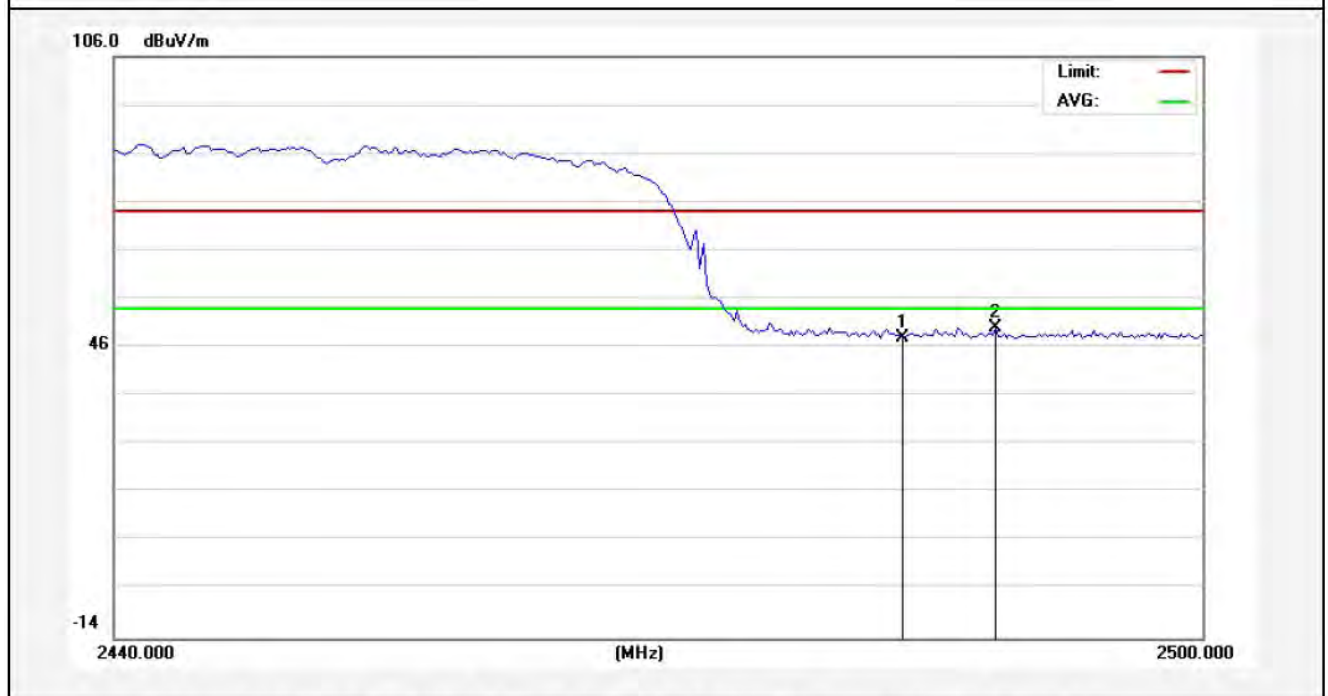


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2370.662	41.42	-2.56	38.86	54.00	-15.14	AVG			
2	2390.000	41.73	-2.51	39.22	54.00	-14.78	AVG			
3	2400.000	44.24	-2.49	41.75	54.00	-12.25	AVG			

Test Mode: 802.11n (HT40)

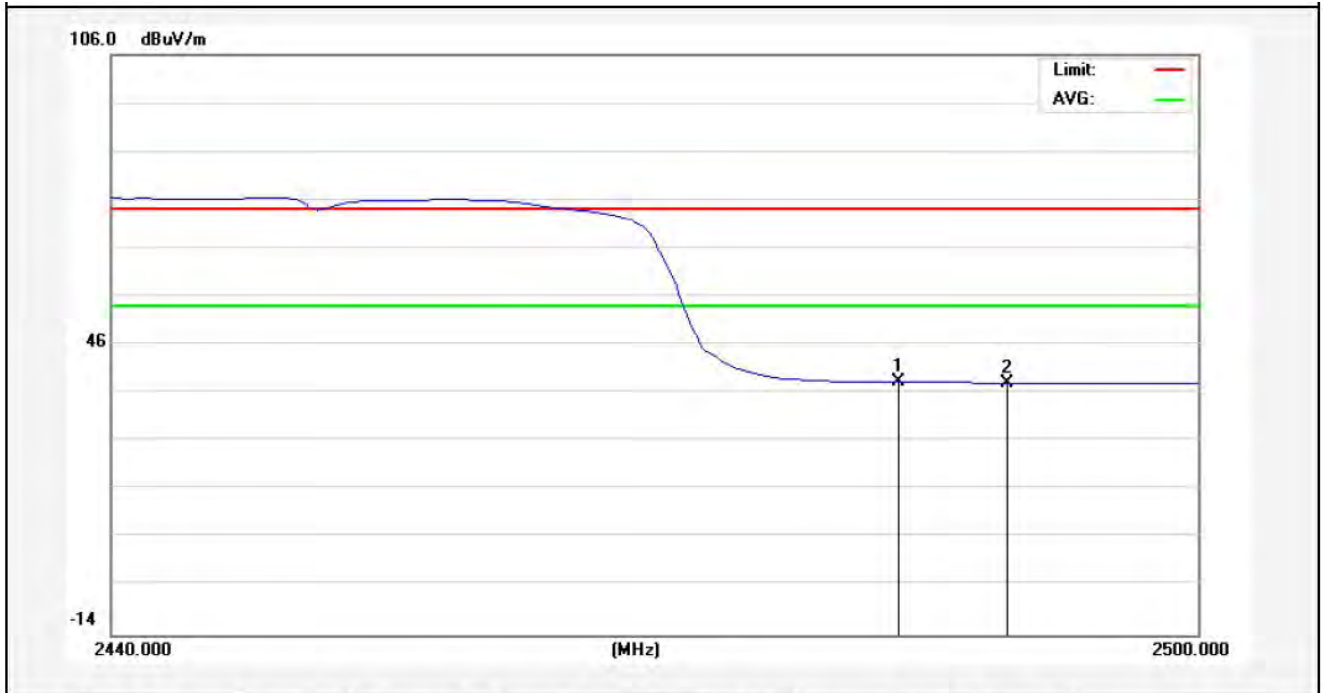
2452MHz

Horizontal-PEAK:



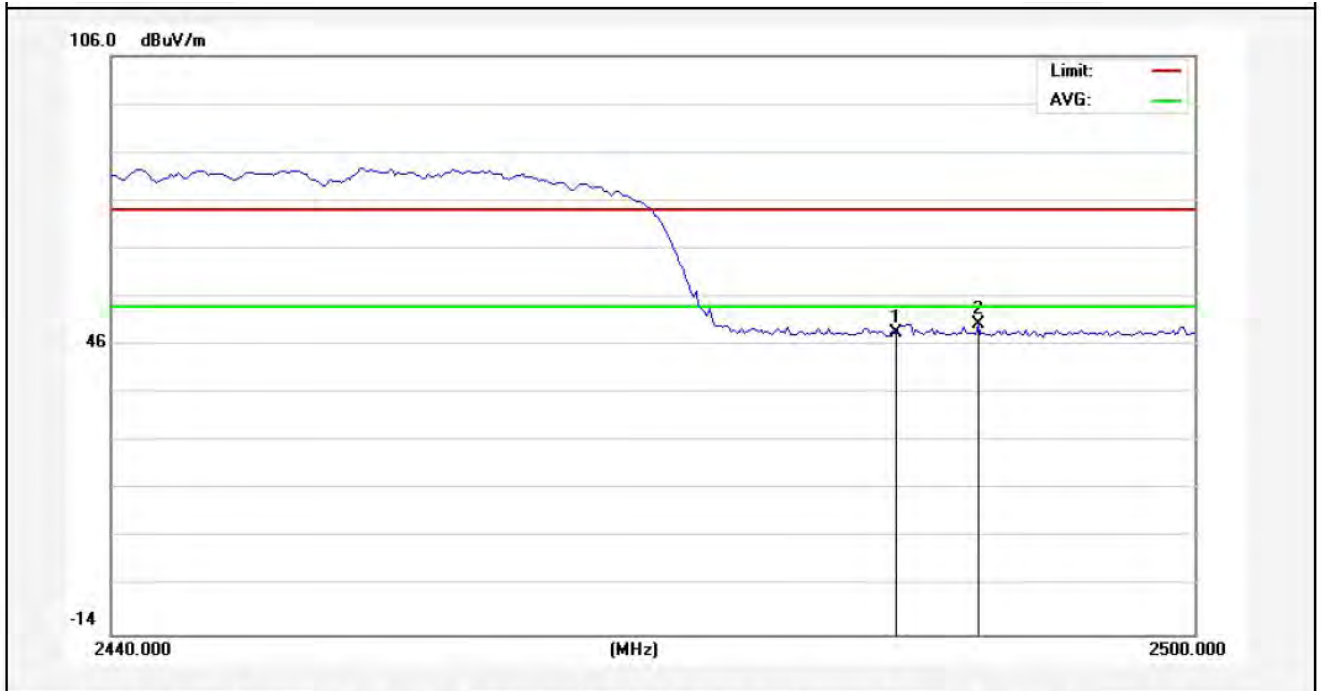
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2483.500	50.38	-2.31	48.07	74.00	-25.93	peak			
2	2488.600	52.37	-2.30	50.07	74.00	-23.93	peak			

Horizontal-AV:



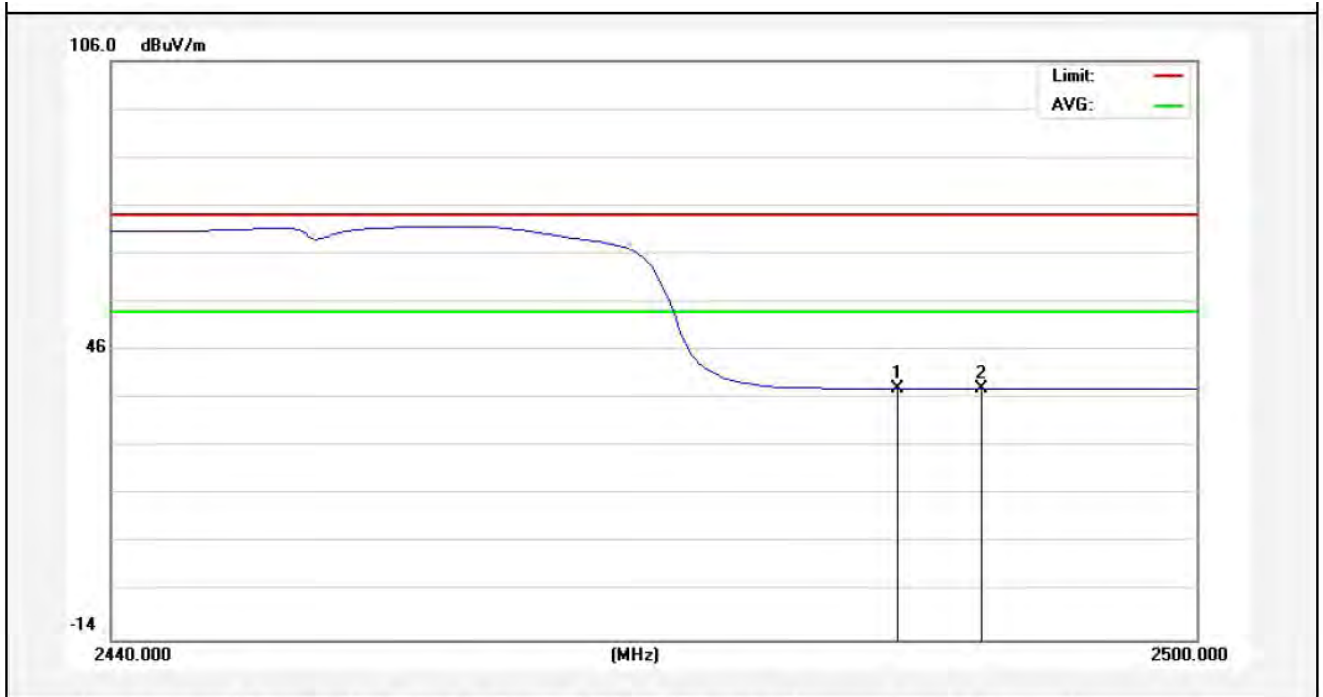
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2483.500	40.62	-2.31	38.31	54.00	-15.69	AVG			
2	2489.500	40.42	-2.29	38.13	54.00	-15.87	AVG			

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	50.85	-2.31	48.54	74.00	-25.46	peak			
2	2488.000	52.72	-2.30	50.42	74.00	-23.58	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	40.35	-2.31	38.04	54.00	-15.96	AVG			
2	2488.150	40.29	-2.30	37.99	54.00	-16.01	AVG			

3.5. 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 = 1.5 times DTS BW, 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 3.2.

d. Test Setup

See 3.1

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	-34.54	-	8.00	Pass
Mid	2437	-35.14	-		Pass
High	2462	-34.97	-		Pass

Test mode: IEEE 802.11g

Channel	Frequency (MHz)	PPSD (dBm)	ΣPPSD (dBm)	Limit (dBm)	Result
Low	2412	-14.68	-	8.00	Pass
Mid	2437	-16.33	-		Pass
High	2462	-16.54	-		Pass

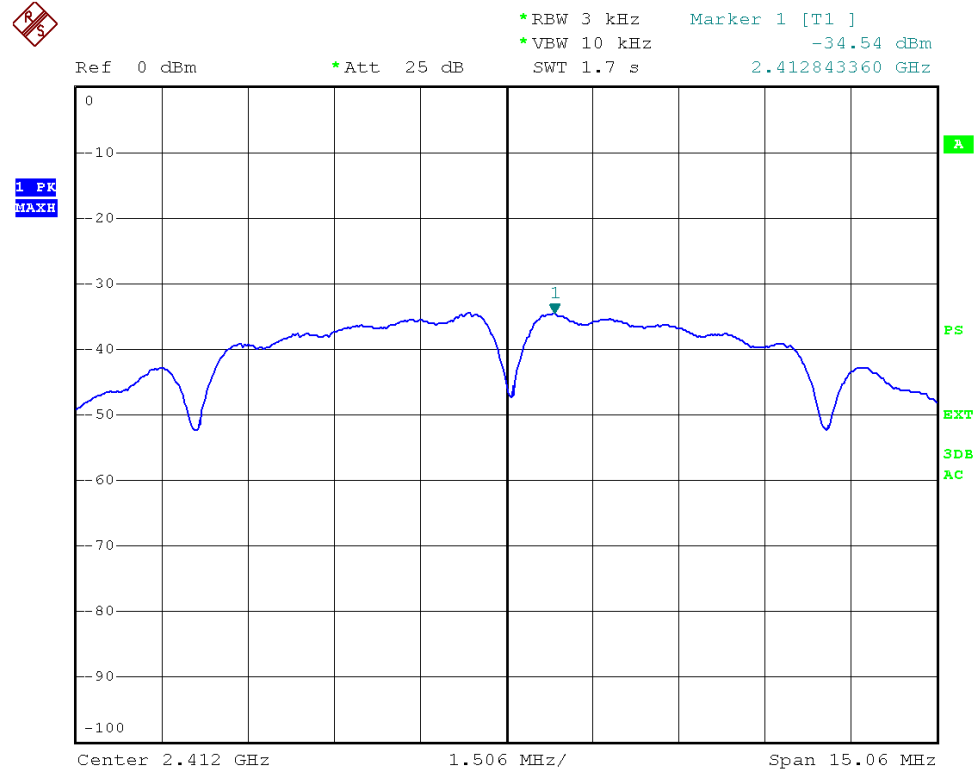
Test mode: IEEE 802.11n (HT20)

Channel	Frequency (MHz)	PPSD (dBm/3KHz)	ΣPPSD (dBm/3KHz)	Limit (dBm)	Result
Low	2412	-17.05	-	8.00	Pass
Mid	2437	-17.44	-		Pass
High	2462	-18.58	-		Pass

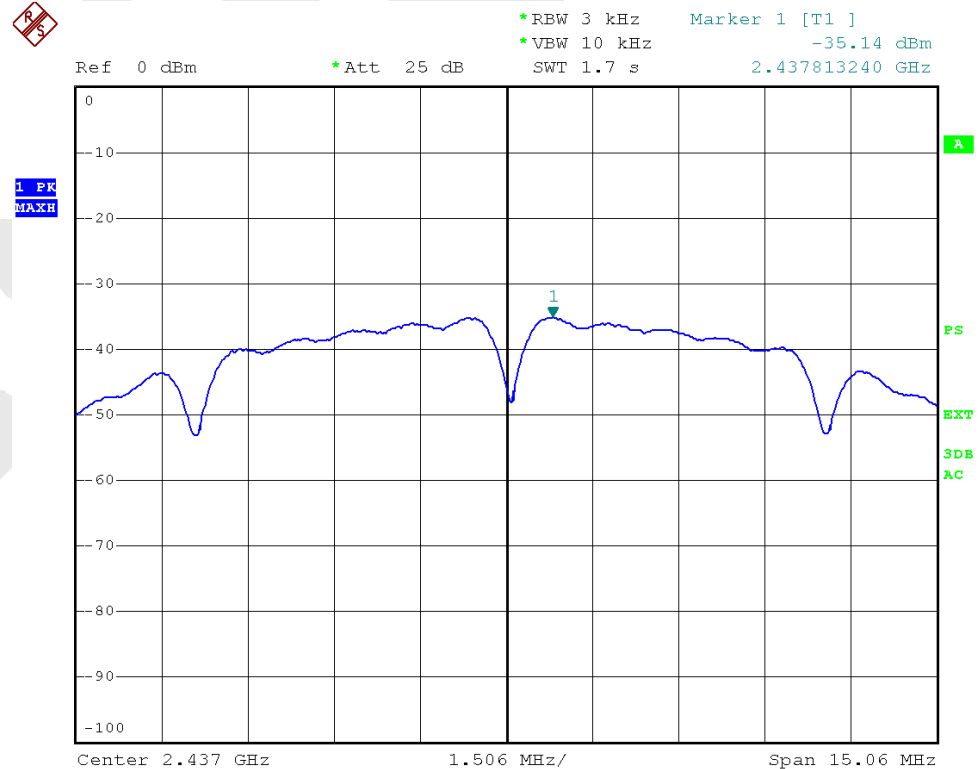
Test mode: IEEE 802.11n (HT40)

Channel	Frequency (MHz)	PPSD (dBm/3KHz)	ΣPPSD (dBm/3KHz)	Limit (dBm)	Result
Low	2422	-21.22	-	8.00	Pass
Mid	2437	-20.50	-		Pass
High	2452	-20.56	-		Pass

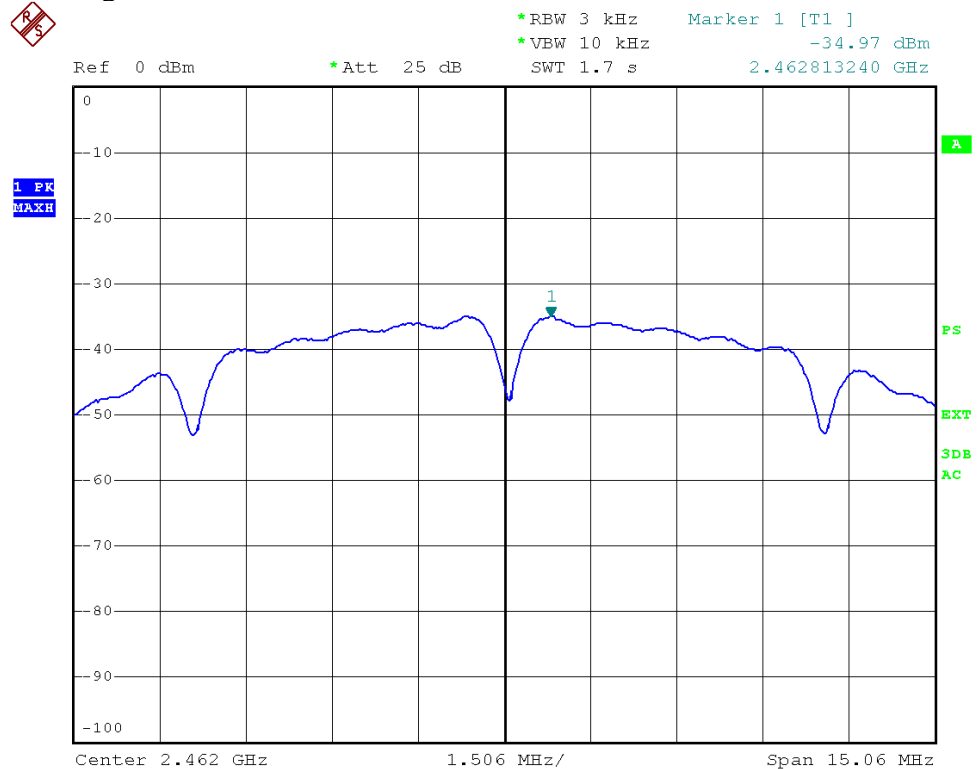
802.11 b CH--Low



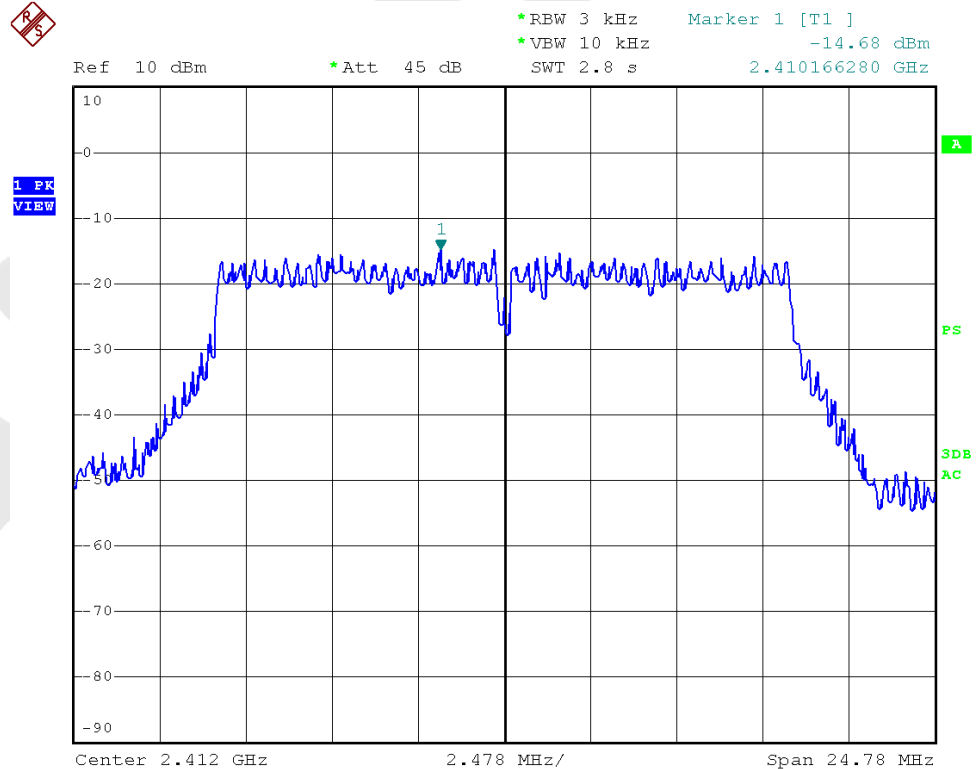
802.11 b CH--Mid



802.11 b CH--High

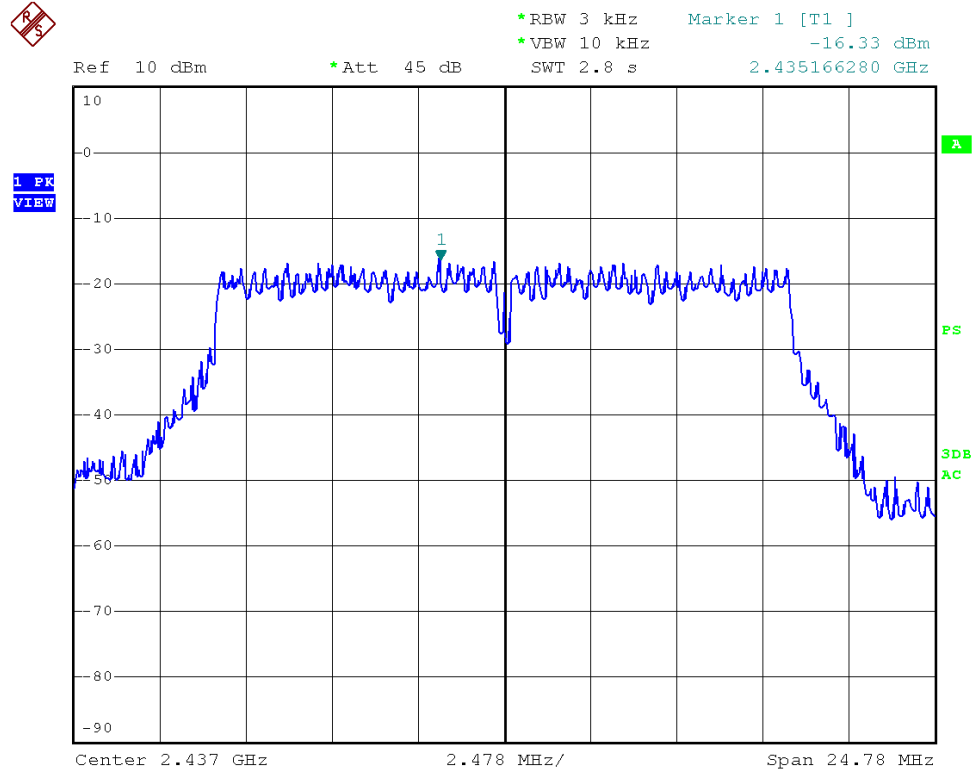


802.11g CH--Low



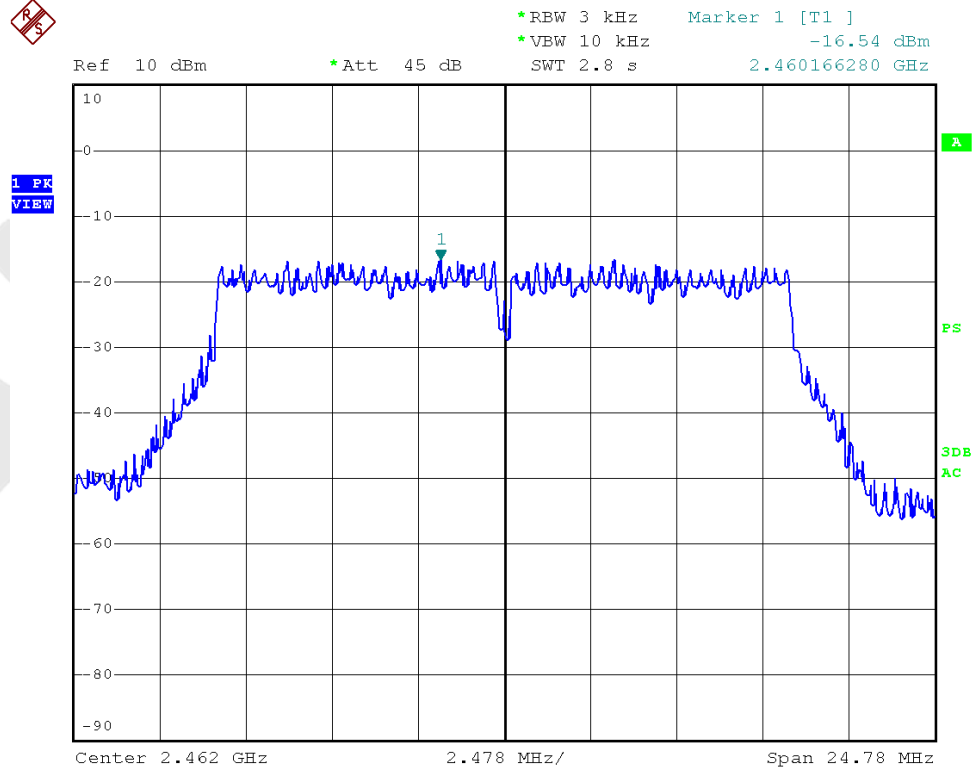
802.11g

CH--Mid

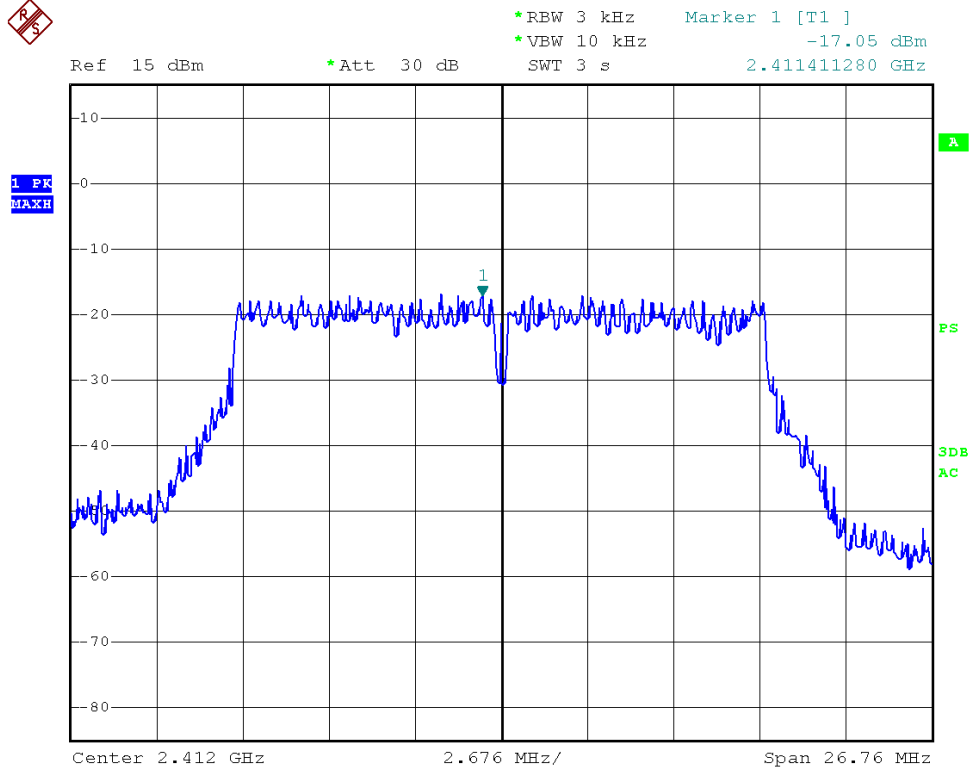


802.11g

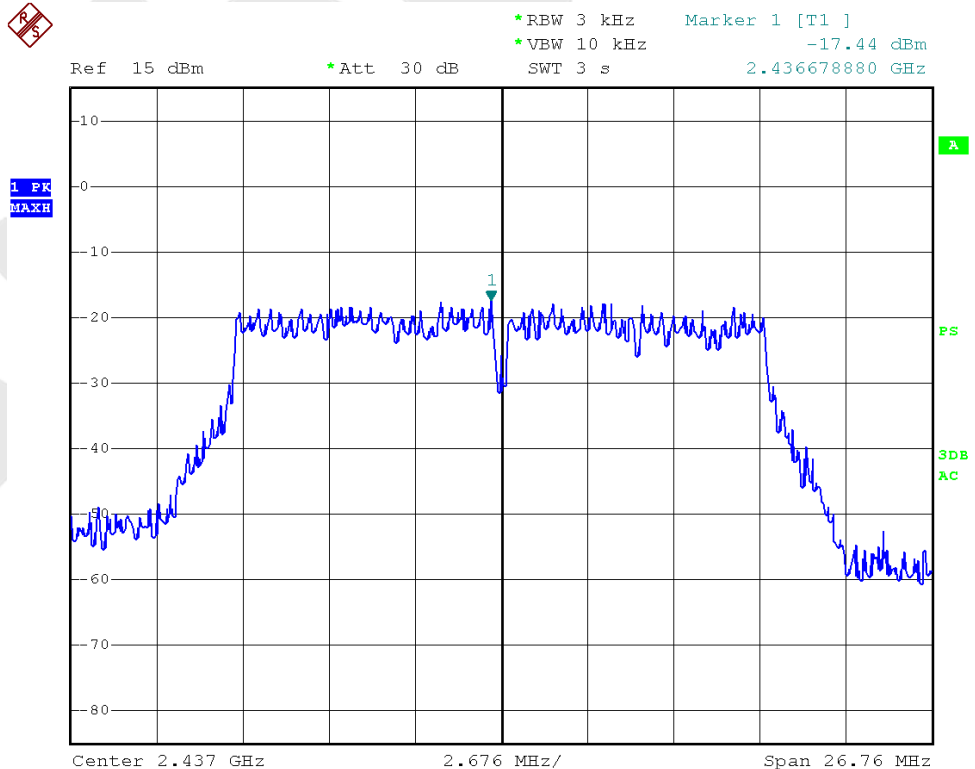
CH--High



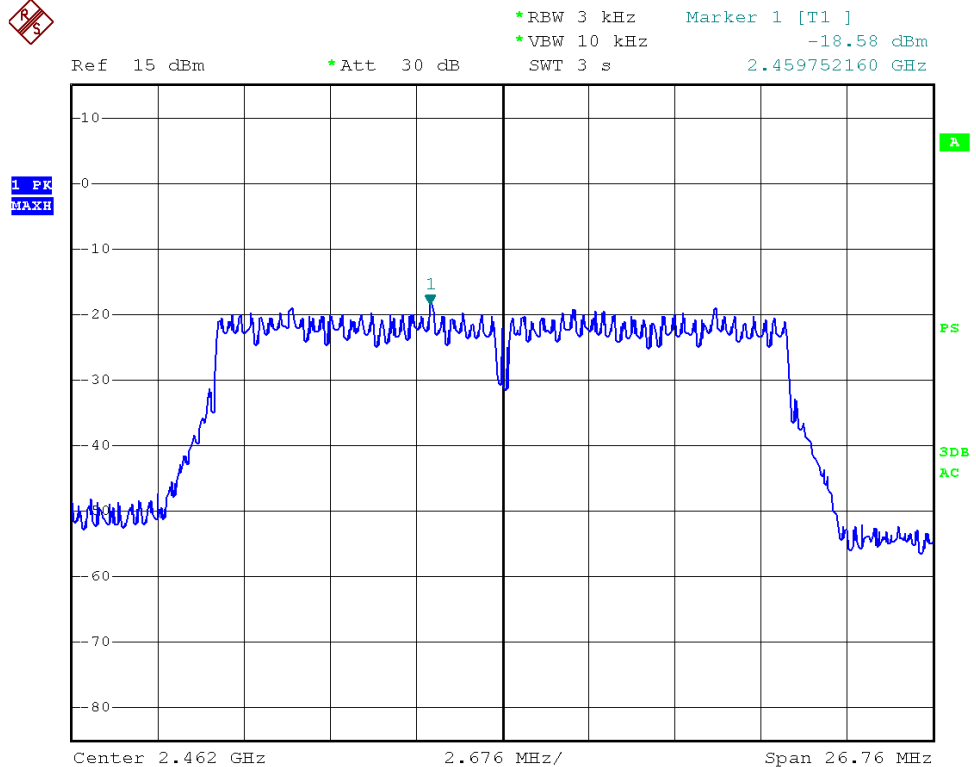
802.11n (HT20) CH—Low



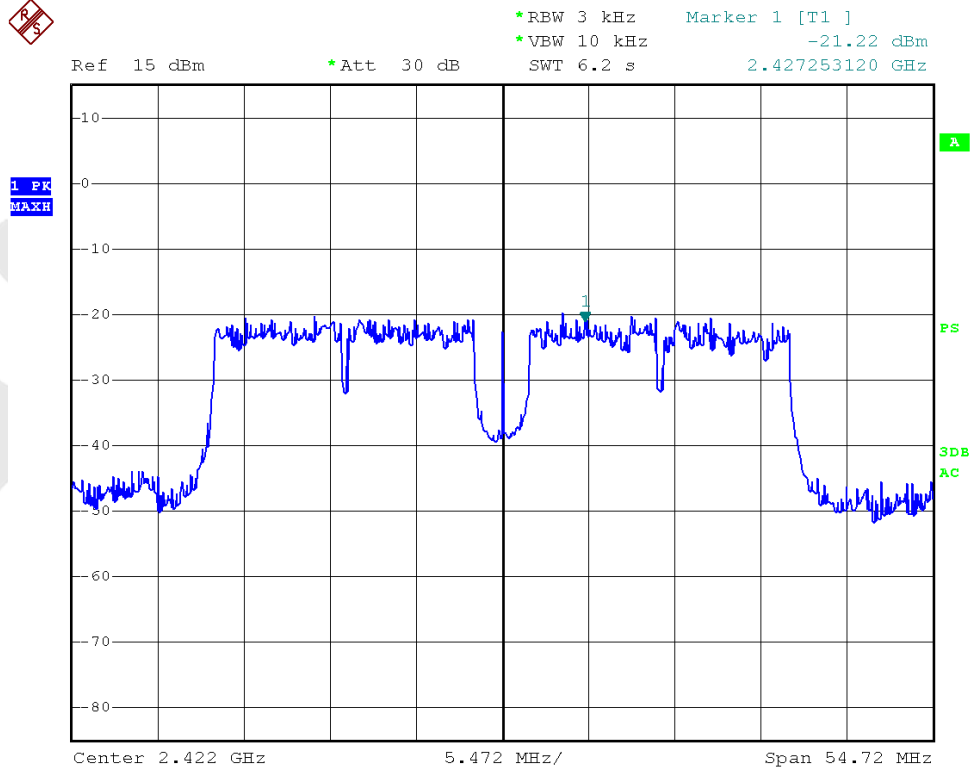
802.11n (HT20) CH—Mid



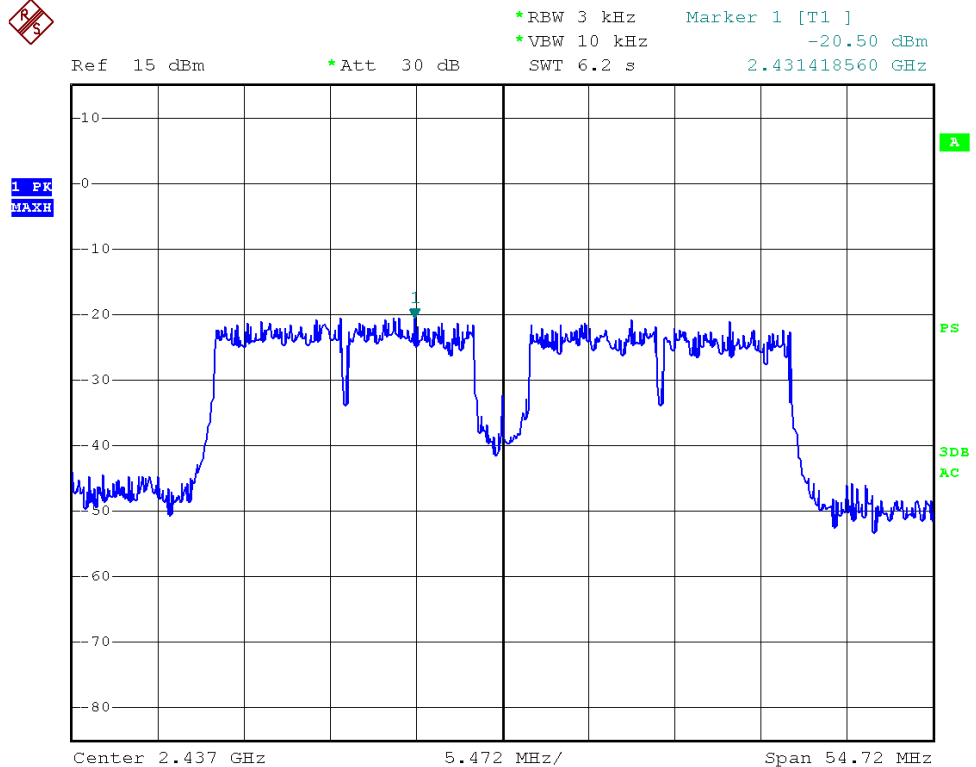
802.11n (HT20) CH—High



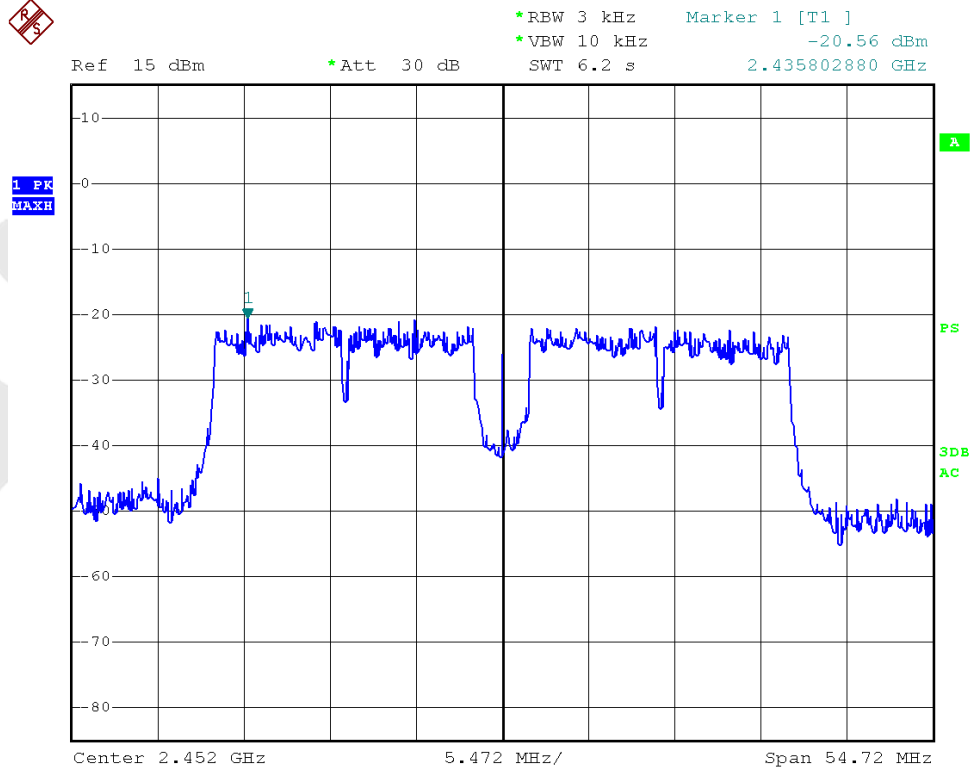
802.11n (HT40) CH—Low



802.11n (HT40) CH—Mid



802.11n (HT40) CH—High



3.6. Spurious Emissions

a. Test Limit

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

Test Limits (\geq 30 MHz)

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

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:

For below 1GHz: The EUT is placed on a turntable, which is 0.8m above the ground plane. The EUT is tested in 9*6*6 Chamber.

For above 1GHz: The EUT is placed on a turntable, which is 1.5m above the ground plane. The EUT is tested in 9*6*6 Chamber.

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.

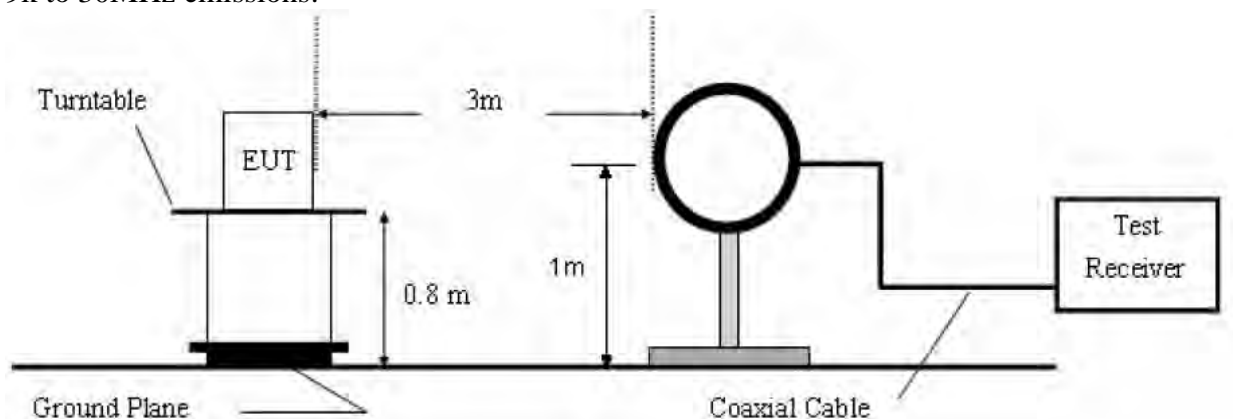
4) Peak detector: RBW=1MHz, VBW=3MHz, SWT=AUTO

Average detector: RBW=1MHz, VBW=10Hz, SWT=AUTO

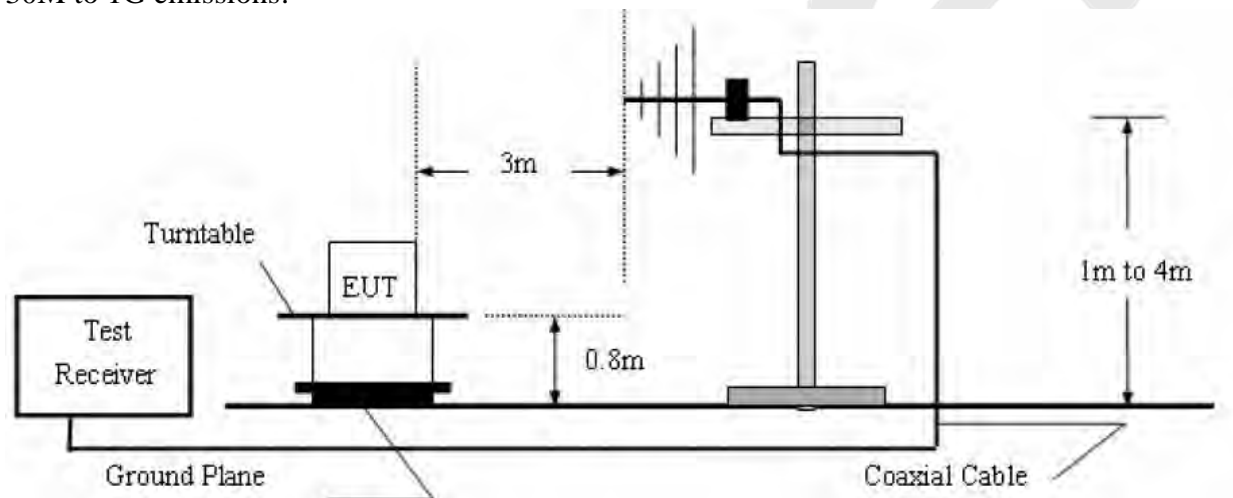
The EUT is tested in 9*6*6 Chamber.

5) Repeat the procedures until all the PEAK and AVERAGE versus POLARIZATION are measured.

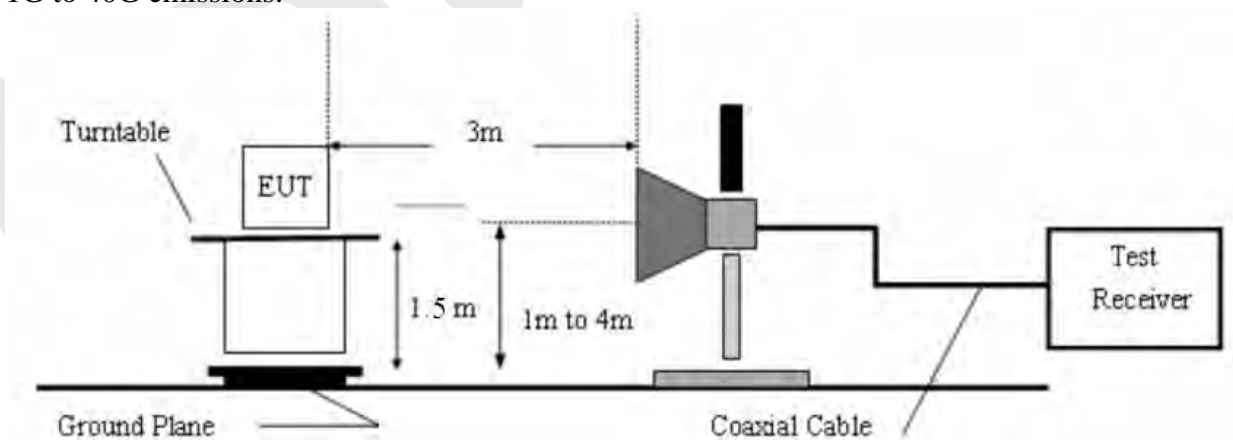
9k to 30MHz emissions:



30M to 1G emissions:



1G to 40G emissions:



c. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analysis	Agilent	E4407B	US39390582	Apr. 17, 2015	1 Year
2.	Preamplifier	Instruments corporation	EMC011830	980100	Apr. 17, 2015	1 Year
3.	EMI Test Receiver	Rohde & Schwarz	ESPI	101604	Apr. 17, 2015	1 Year
4.	Double Ridged Horn Antenna	Instruments corporation	GTH-0118	351600	Apr. 20, 2015	1 Year
5.	Bilog Broadband Antenna	Schwarzbeck	VULB9163	VULB 9163-289	Apr. 20, 2015	1 Year
6.	Pre-amplifier	SONOMA	310N	186860	Apr. 17, 2015	1 Year
7.	EMI Test Software EZ-EMC	SHURPLE	N/A	N/A	N/A	N/A

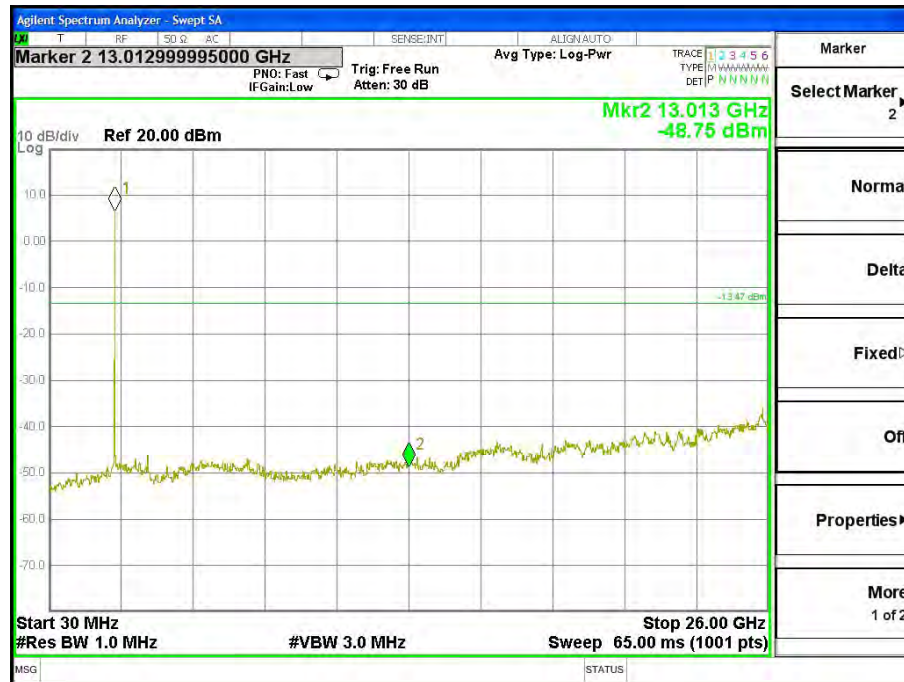
d. Test Results

Pass. Only the worst case (x orientation).

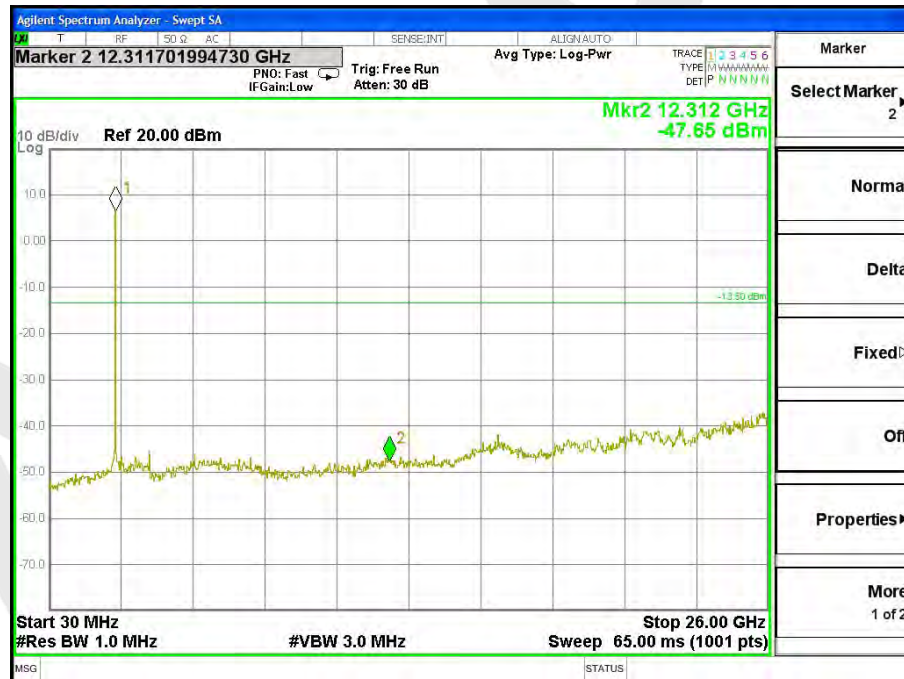
e. Test Plots

See the following page.

Test Mode: 802.11b---Low



Test Mode: 802.11b---Mid



Agilent Spectrum Analyzer - Swept SA

Display Line -13.18 dBm

PNO: Fast IF Gain: Low Trig: Free Run Atten: 30 dB Avg Type: Log-Pwr

TRACE 1 2 3 4 5 6
TYPE [M] [W] [S] [P]
DET [P] [N] [R] [S]

10 dB/div Ref 20.00 dBm

Mkr1 2.468 GHz 6.816 dBm

-13.18 dBm

Start 30 MHz Stop 26.00 GHz
#Res BW 1.0 MHz #VBW 3.0 MHz Sweep 65.00 ms (1001 pts)

Agilent Spectrum Analyzer - Swept SA

Marker 2 12.311701994730 GHz

PN0: Fast IF Gain: Low Trig: Free Run Atten: 30 dB

Avg Type: Log-Pwr

TRACE TYPE: M 3 4 5 6 DET: P N N N N N

10 dB/div Log Ref 20.00 dBm

Mkr2 12.312 GHz -48.12 dBm

Start 30 MHz Stop 26.00 GHz

#Res BW 1.0 MHz #VBW 3.0 MHz Sweep 65.00 ms (1001 pts)

MSG STATUS

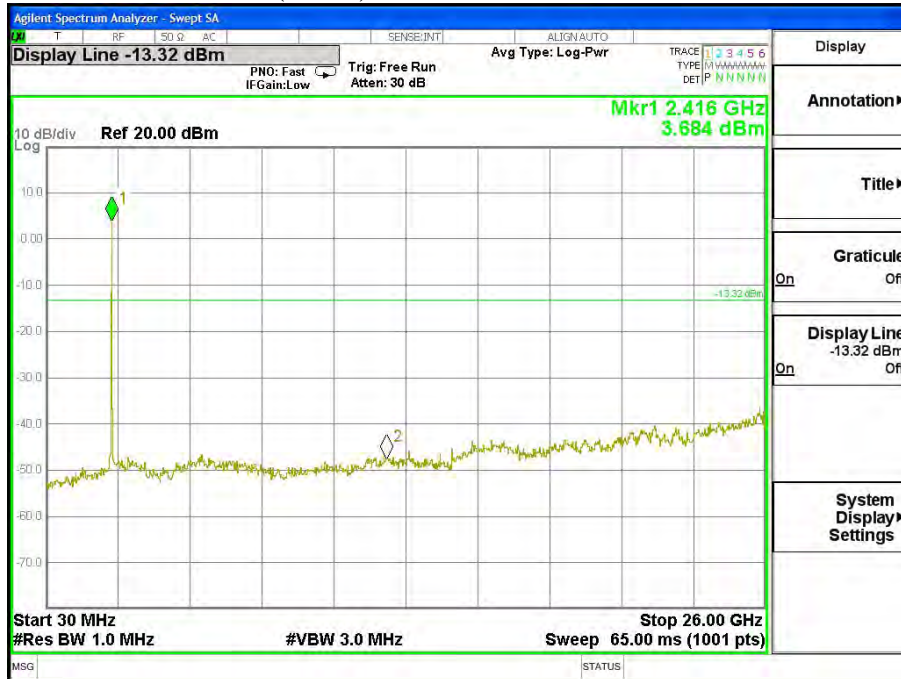
Test Mode: 802.11g---Mid



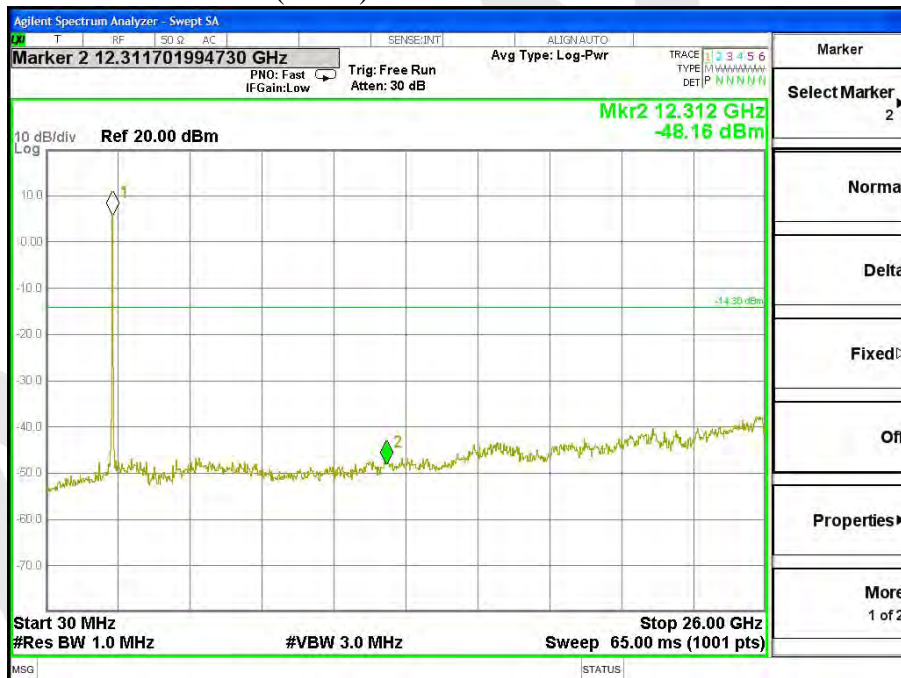
Test Mode: 802.11g---High



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



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



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



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



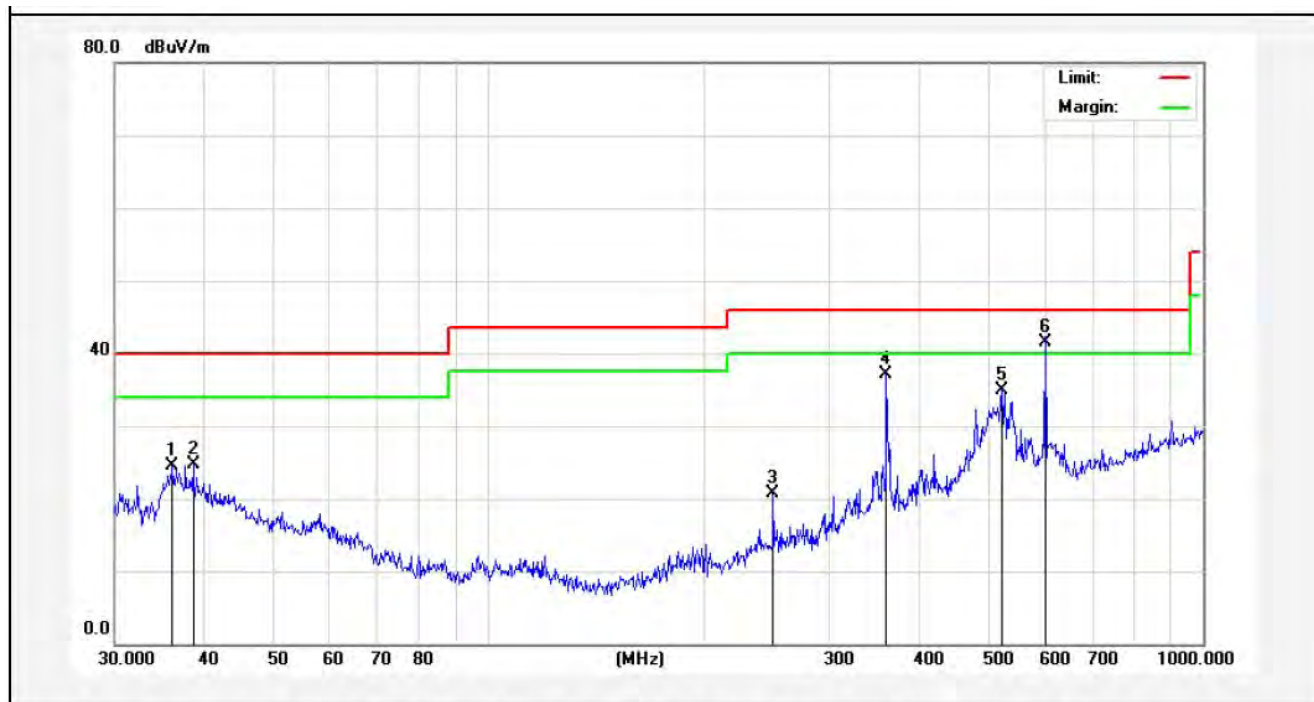
Test Mode: 802.11n (HT40)---Mid



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

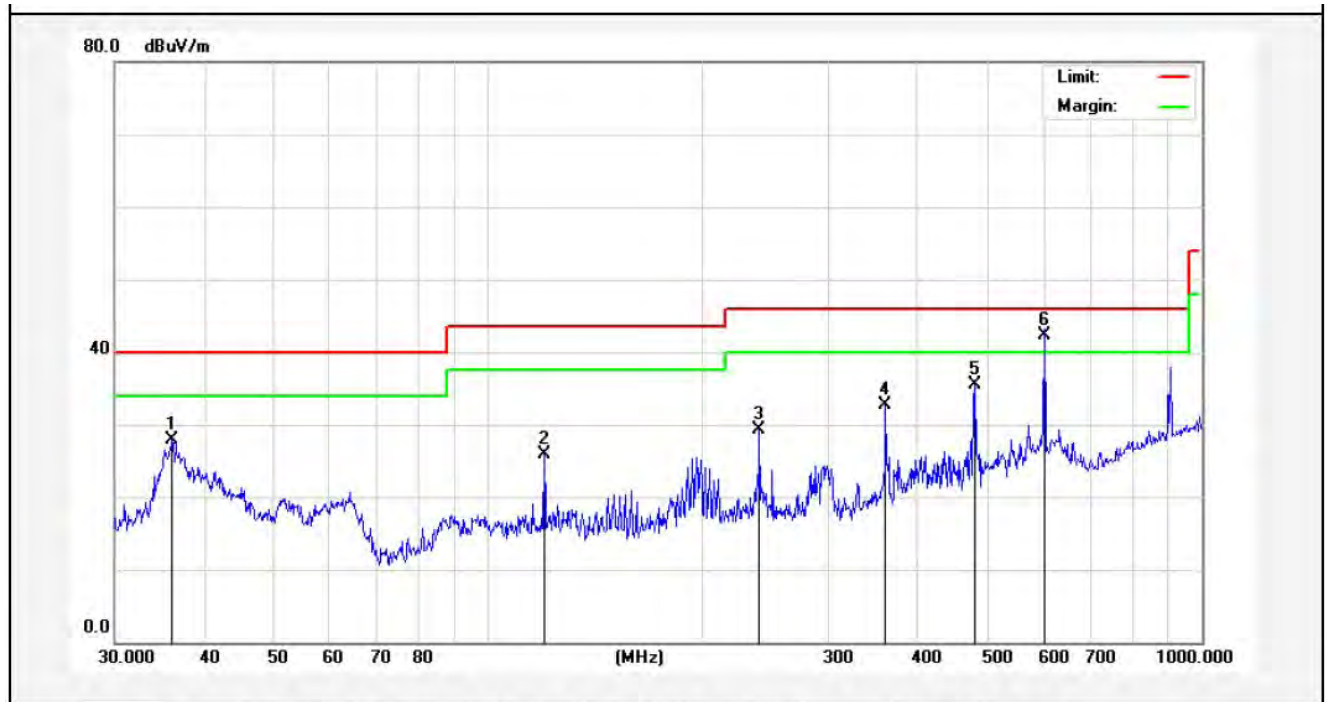


Job No.:	011504791I	Polarization:	Horizontal
Standard:	(RE)FCC PART15 C _3m	Power Source:	DC 3.7V
Test item:	Radiation Test	Temp.(C)/Hum.(%RH):	24.3(C)/55%RH
Test Mode:	On	Distance:	3m



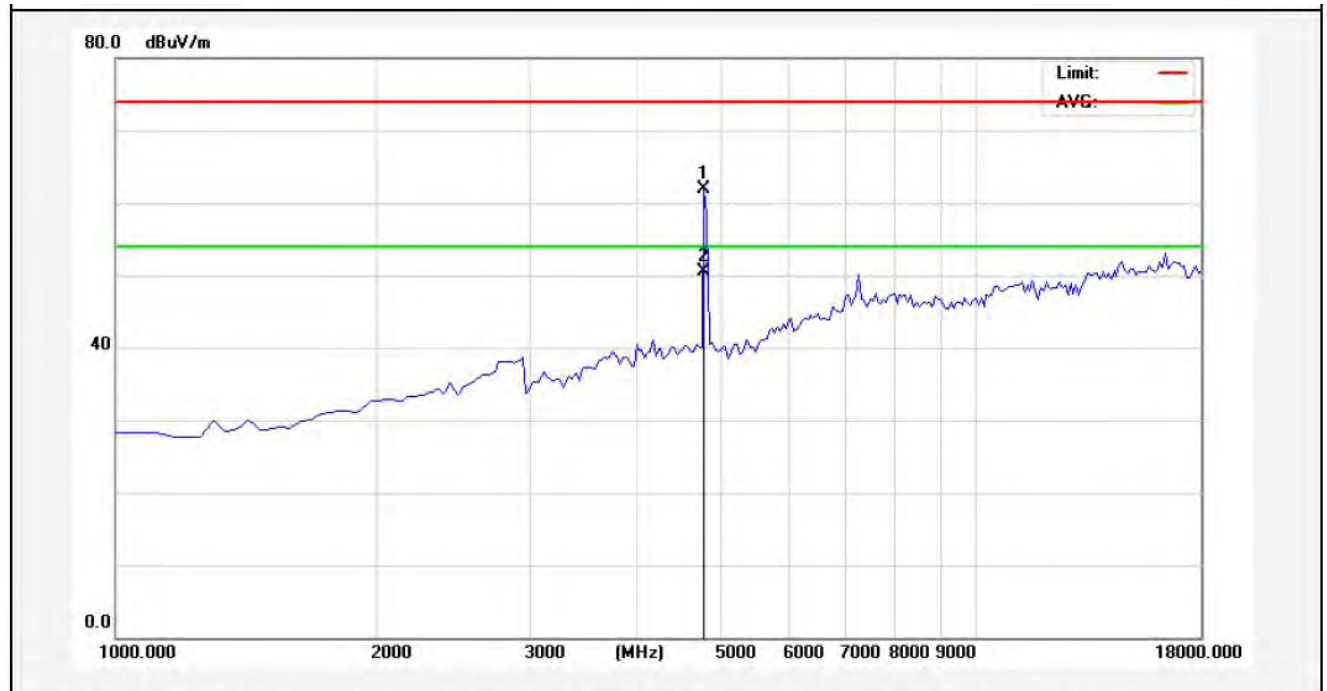
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	36.1272	37.97	-13.40	24.57	40.00	-15.43	peak			
2	38.6160	36.06	-11.45	24.61	40.00	-15.39	peak			
3	250.3012	39.24	-18.56	20.68	46.00	-25.32	peak			
4	360.4476	50.81	-13.65	37.16	46.00	-8.84	peak			
5	522.7180	45.99	-11.02	34.97	46.00	-11.03	peak			
6	601.4265	52.79	-11.20	41.59	46.00	-4.41	QP	300	0	

Job No.:	011504791I	Polarization:	Vertical
Standard:	(RE)FCC PART15 C _3m	Power Source:	DC 3.7V
Test item:	Radiation Test	Temp.(C)/Hum.(%RH):	24.3(C)/55%RH
Test Mode:	On	Distance:	3m



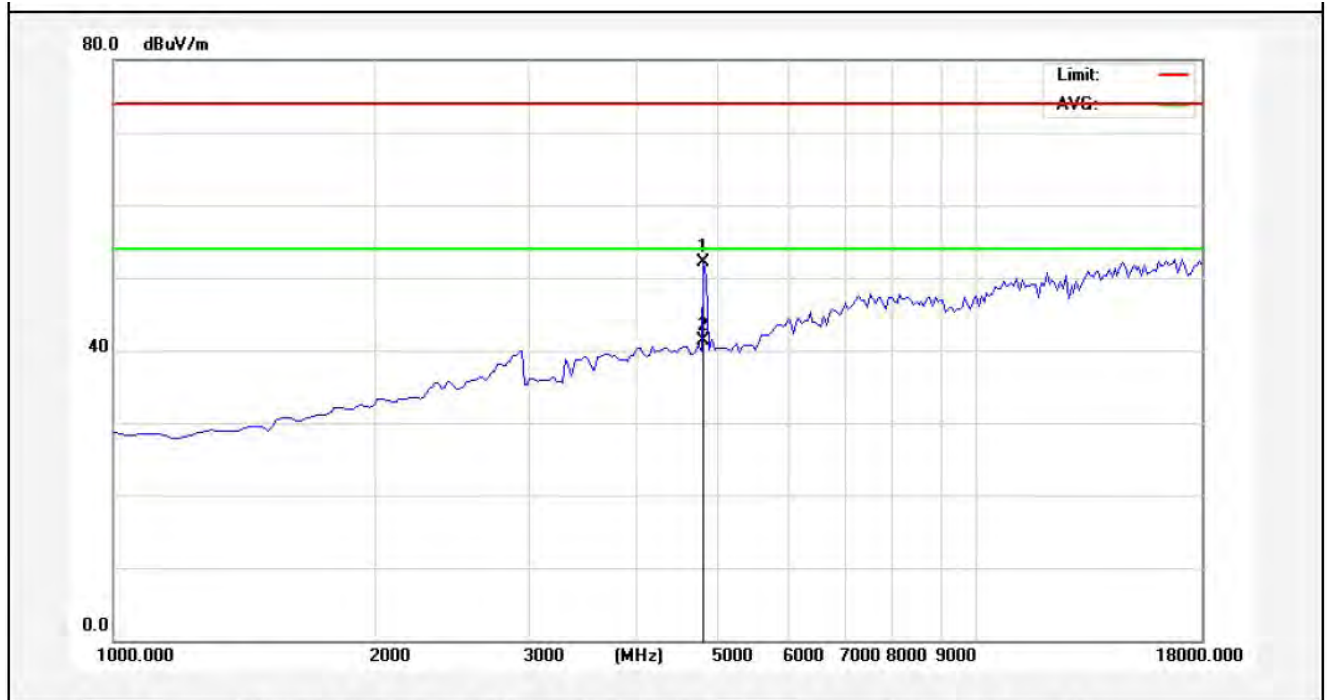
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	36.1272	41.21	-13.40	27.81	40.00	-12.19	peak			
2	119.8556	42.26	-16.32	25.94	43.50	-17.56	peak			
3	239.9874	43.43	-14.09	29.34	46.00	-16.66	peak			
4	360.4476	45.40	-12.65	32.75	46.00	-13.25	peak			
5	480.5276	47.05	-11.53	35.52	46.00	-10.48	peak			
6	599.9965	51.63	-9.24	42.39	46.00	-3.61	QP	100	0	

Job No.:	011504791I	Polarization:	Horizontal
Standard:	(RE)FCC PART15 C _3m	Power Source:	DC 3.7V
Test item:	Radiation Test	Temp.(C)/Hum.(%RH):	24.3(C)/55%RH
Note:	802.11b(2412MHz)	Distance:	3m



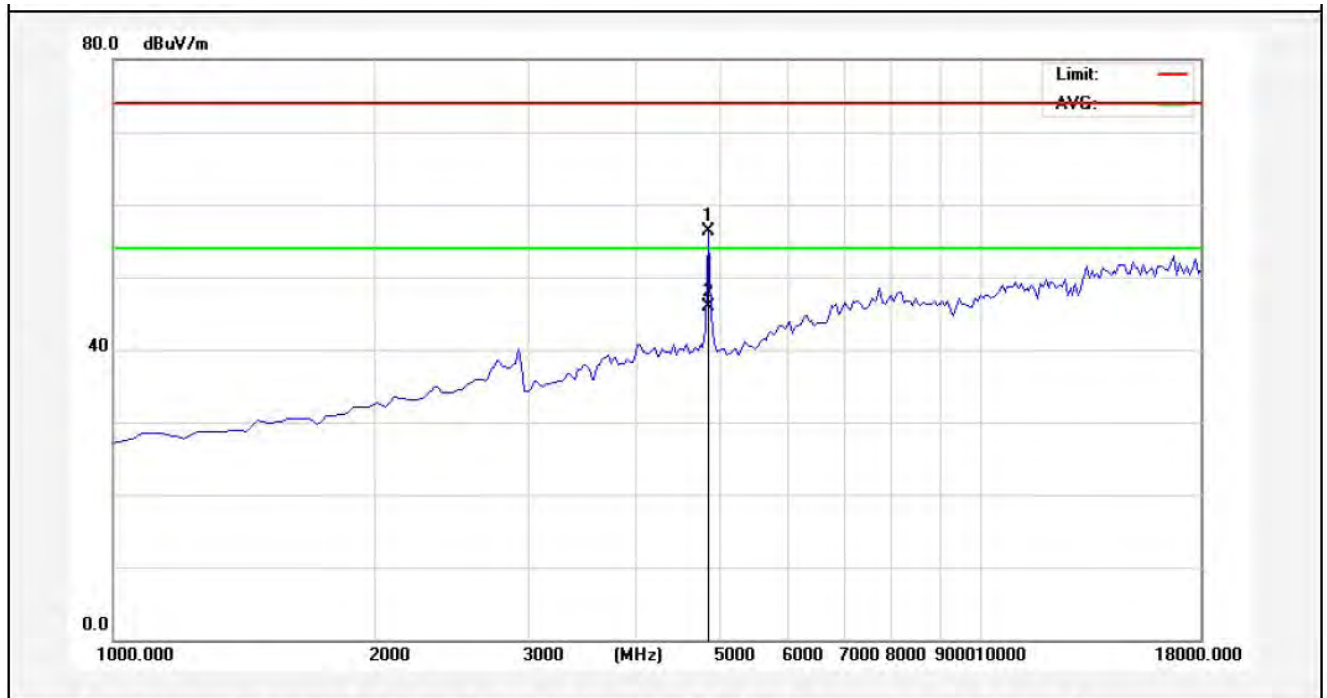
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	4825.000	58.51	3.34	61.85	74.00	-12.15	peak			
2	4825.000	47.20	3.34	50.54	54.00	-3.46	AVG			

Job No.:	011504791I	Polarization:	Vertical
Standard:	(RE)FCC PART15 C _3m	Power Source:	DC 3.7V
Test item:	Radiation Test	Temp.(C)/Hum.(%RH):	24.3(C)/55%RH
Note:	802.11b(2412MHz)	Distance:	3m



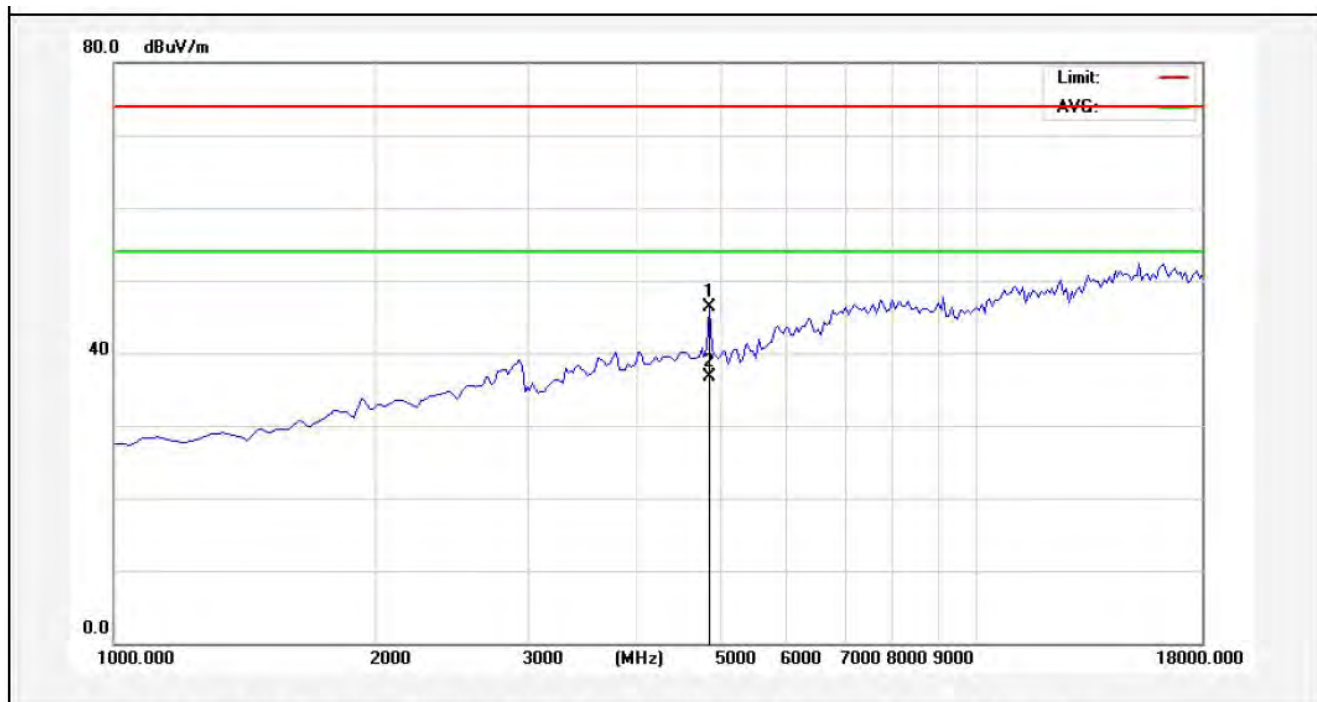
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	4825.000	48.75	3.34	52.09	74.00	-21.91	peak			
2	4825.000	37.89	3.34	41.23	54.00	-12.77	AVG			

Job No.:	011504791I	Polarization:	Horizontal
Standard:	(RE)FCC PART15 C _3m	Power Source:	DC 3.7V
Test item:	Radiation Test	Temp.(C)/Hum.(%RH):	24.3(C)/55%RH
Note:	802.11b(2437MHz)	Distance:	3m



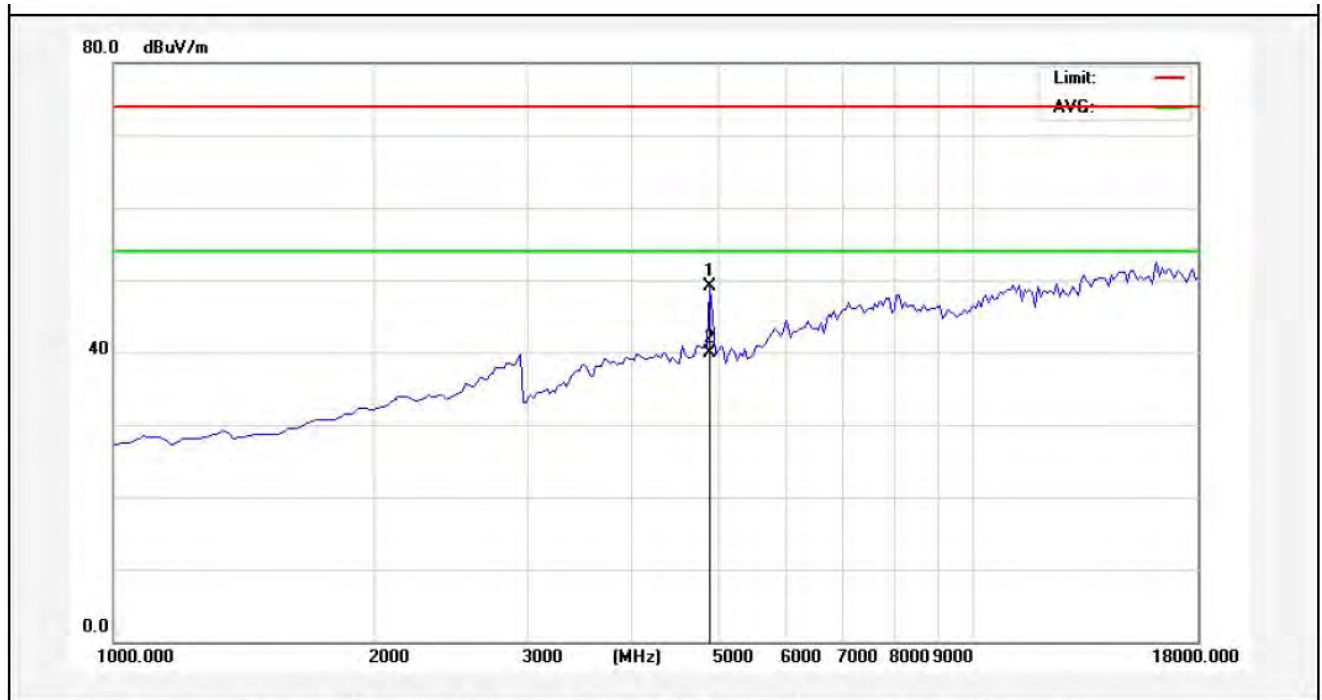
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	4867.500	52.84	3.41	56.25	74.00	-17.75	peak			
2	4867.500	42.44	3.41	45.85	54.00	-8.15	AVG			

Job No.:	011504791I	Polarization:	Vertical
Standard:	(RE)FCC PART15 C _3m	Power Source:	DC 3.7V
Test item:	Radiation Test	Temp.(C)/Hum.(%RH):	24.3(C)/55%RH
Note:	802.11b(2437MHz)	Distance:	3m



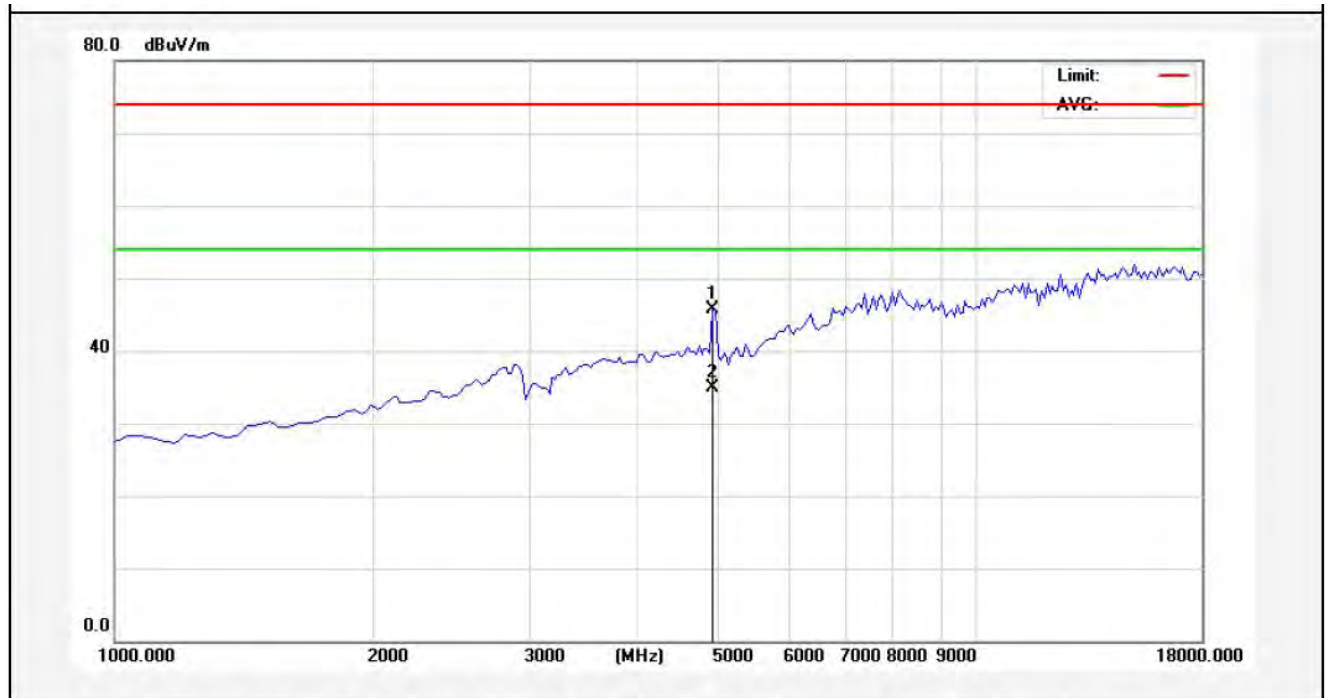
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	4867.500	42.80	3.41	46.21	74.00	-27.79	peak			
2	4867.500	33.33	3.41	36.74	54.00	-17.26	AVG			

Job No.:	011504791I	Polarization:	Horizontal
Standard:	(RE)FCC PART15 C_3m	Power Source:	DC 3.7V
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	45.65	3.49	49.14	74.00	-24.86	peak			
2	4910.000	36.48	3.49	39.97	54.00	-14.03	AVG			

Job No.:	011504791I	Polarization:	Vertical
Standard:	(RE)FCC PART15 C _3m	Power Source:	DC 3.7V
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	42.27	3.49	45.76	74.00	-28.24	peak			
2	4910.000	31.36	3.49	34.85	54.00	-19.15	AVG			

4. ANTENNA APPLICATION

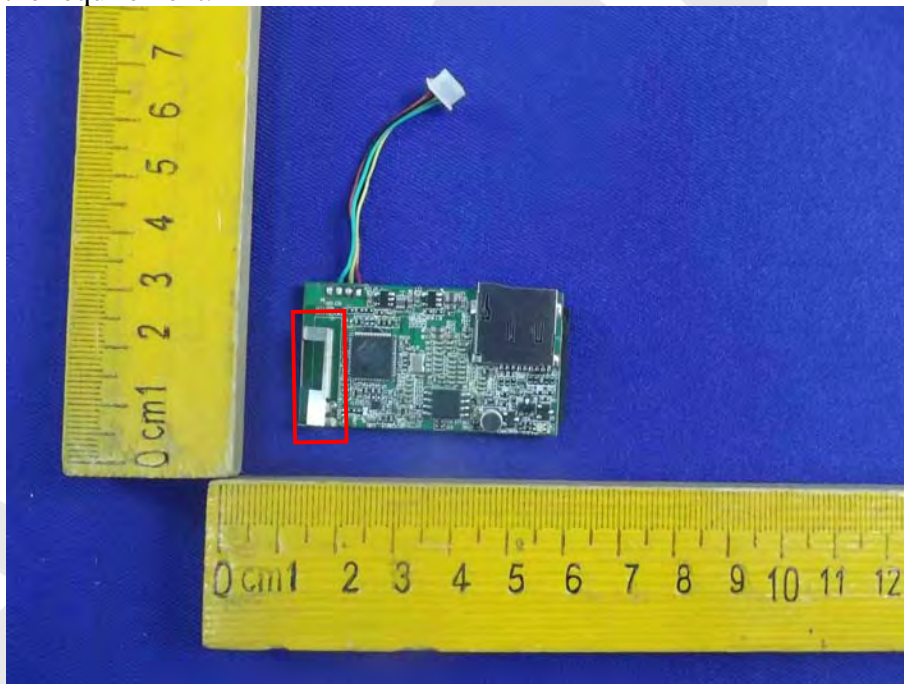
4.1. Antenna requirement

The EUT'S antenna is met the requirement of FCC part 15C section 15.203.

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

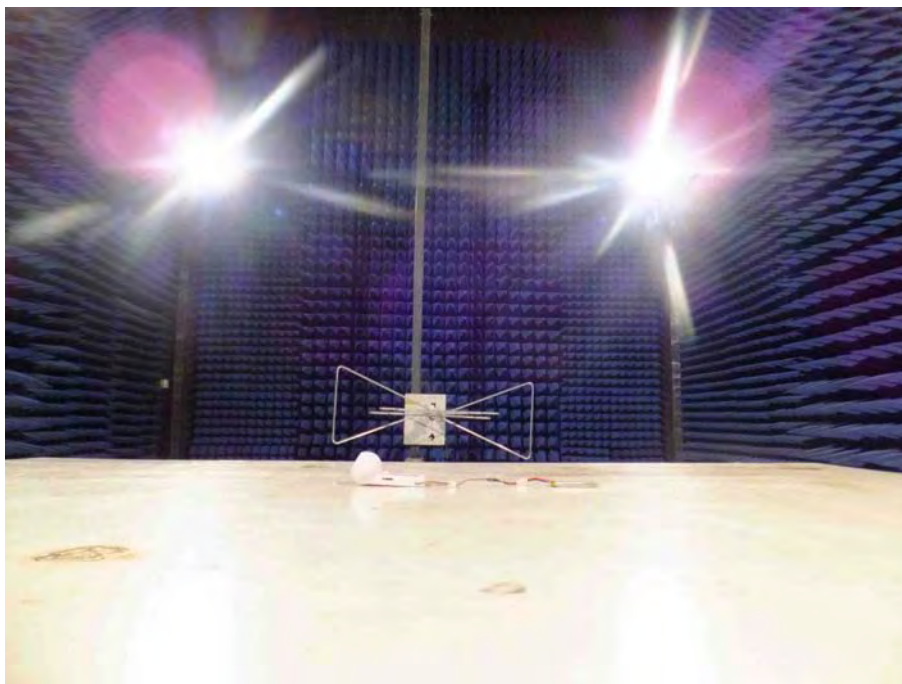
4.2. Result

The EUT's antenna used a integrated antenna which is permanently attached, The antenna's gain is 2dBi and meets the requirement.



5. PHOTOGRAPH

5.1. Photo of Radiation Emission Test



APPENDIX I (EXTERNAL PHOTOS)

Figure 1
The EUT-Top View

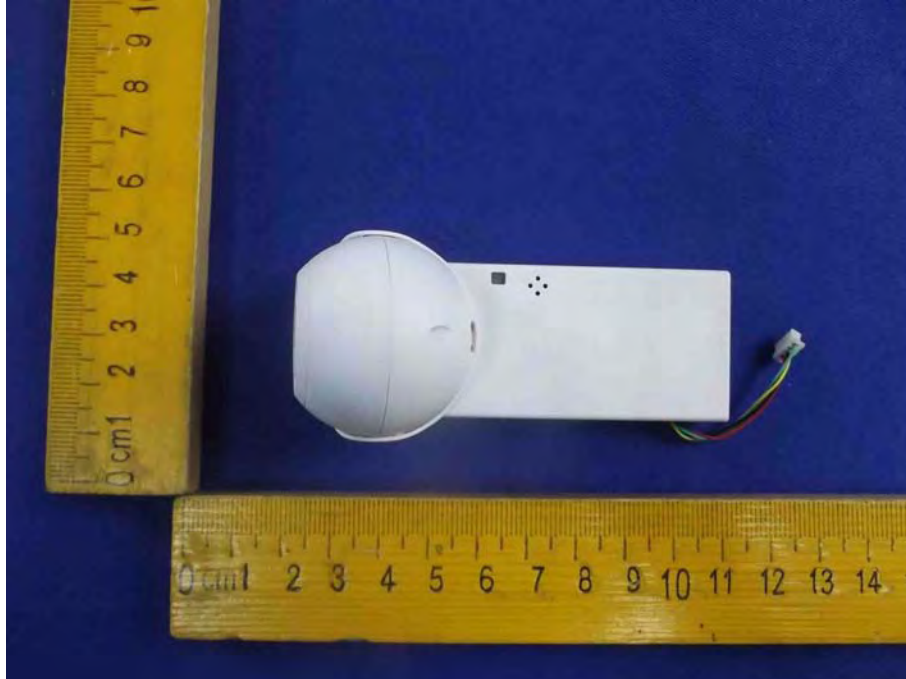


Figure 2
The EUT-Bottom View



Figure 3
The EUT-Right View



Figure 4
The EUT-Left View

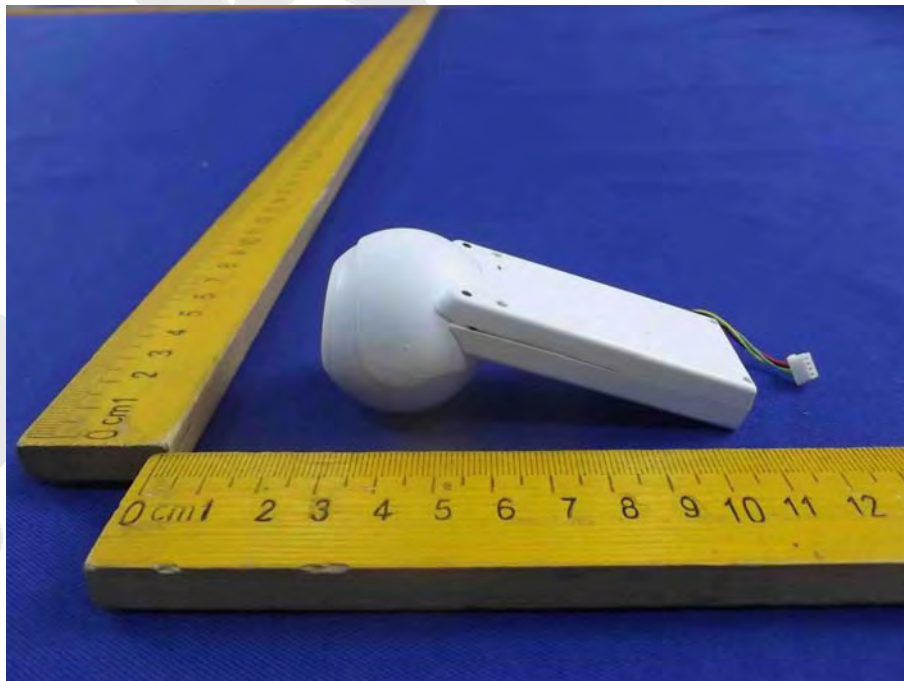


Figure 5
The EUT-Front View

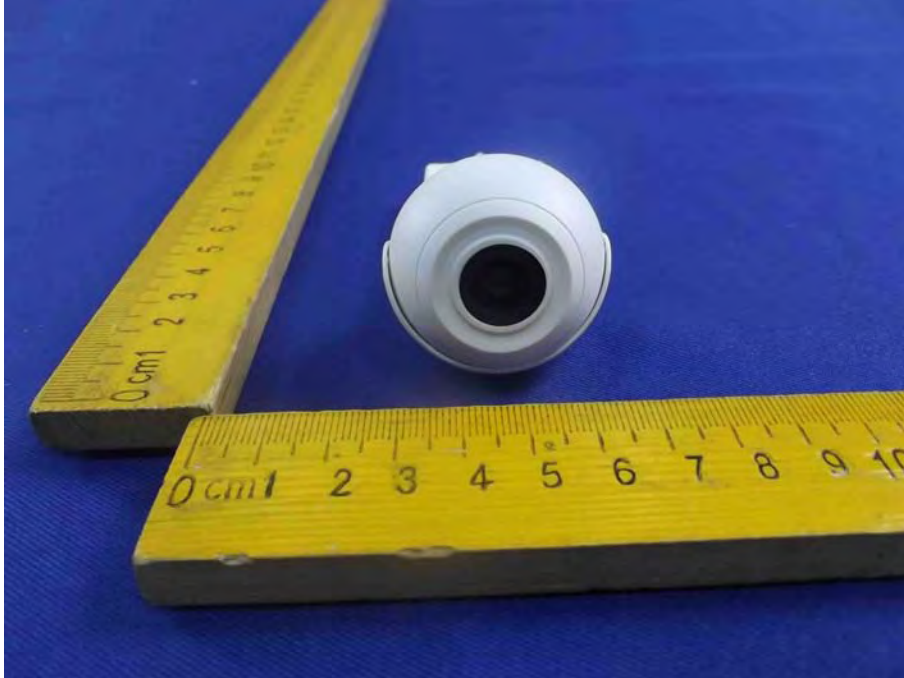
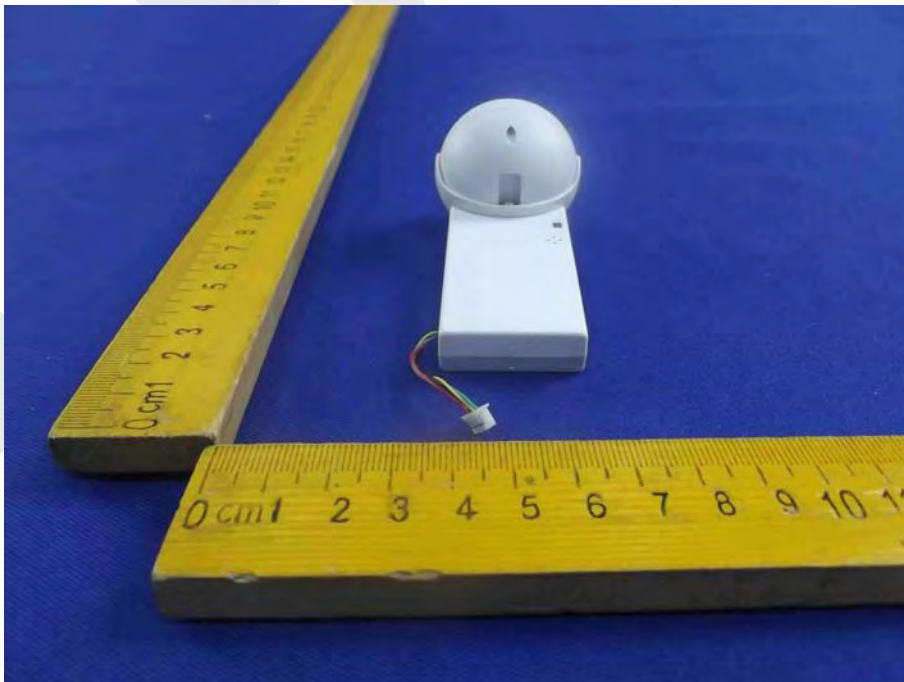


Figure 6
The EUT-Back View



APPENDIX II (INTERNAL PHOTOS)

Figure 7
The EUT-Inside View

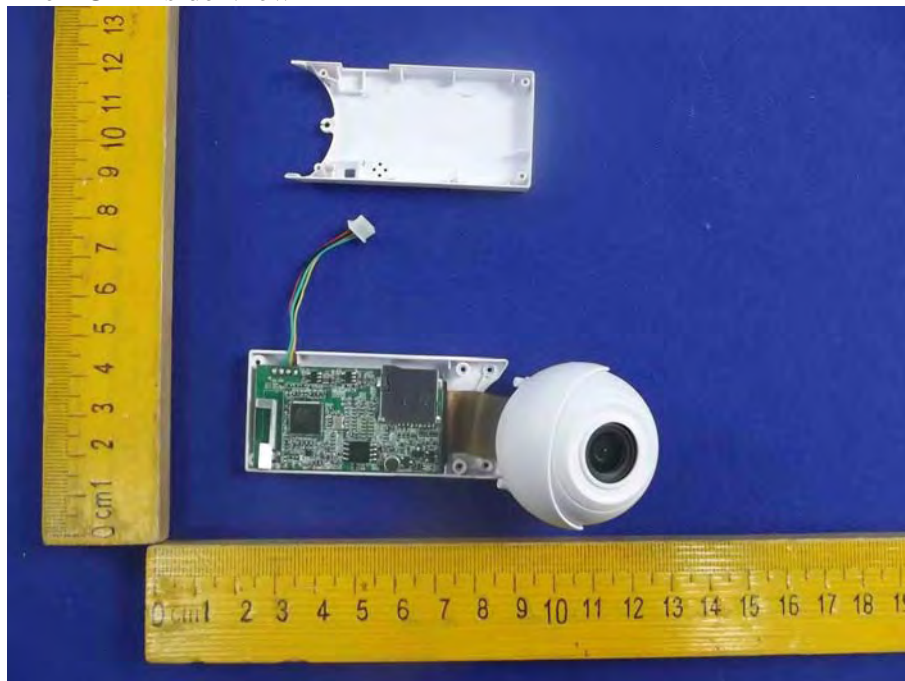


Figure 8
The EUT-Inside View



Figure 9
PCB of the EUT-Front View

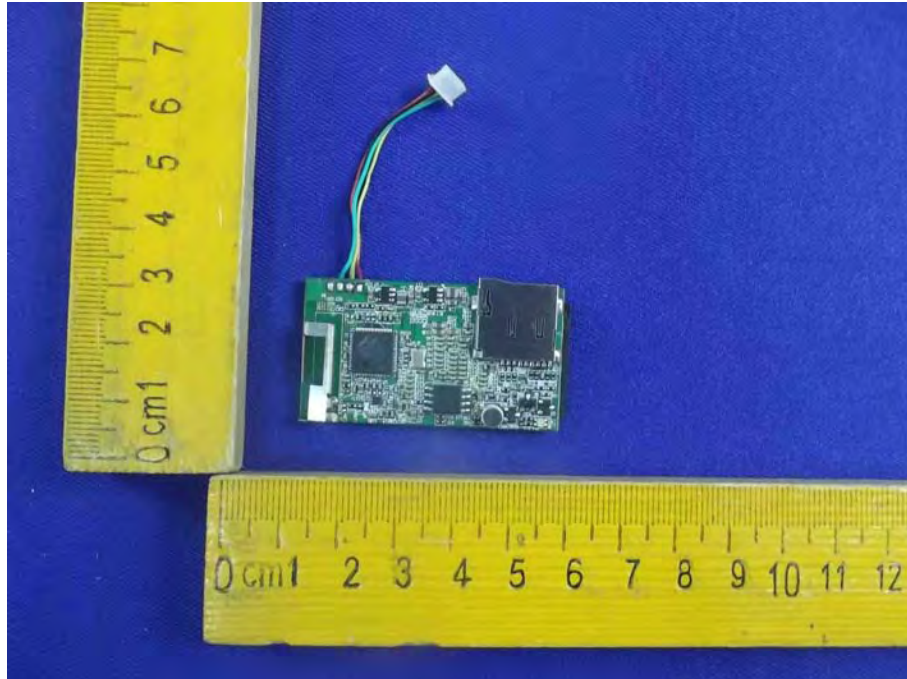


Figure 10
PCB of the EUT-Back View

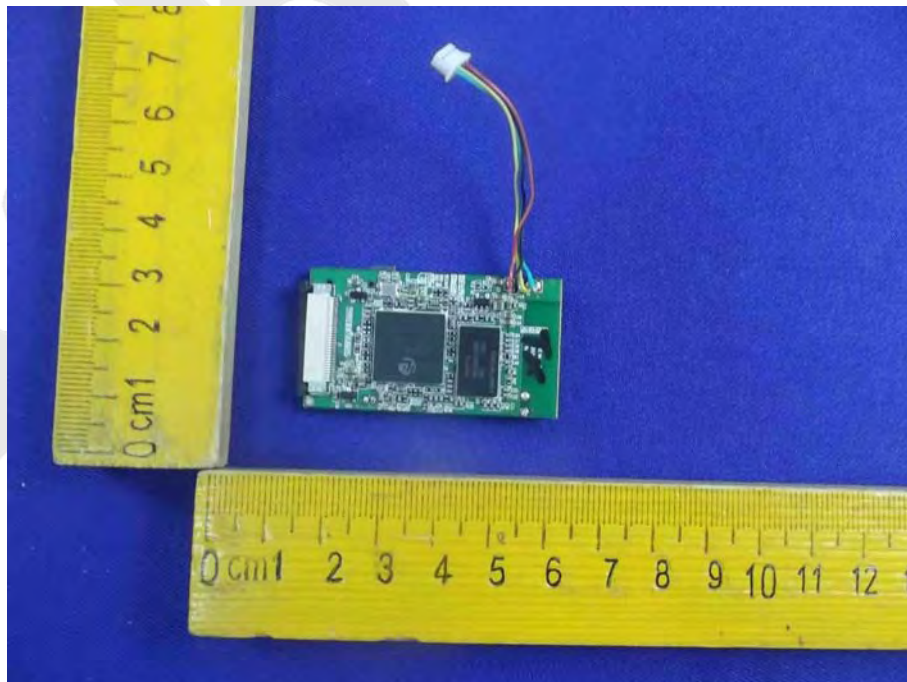


Figure 11
PCB of the EUT-Front View

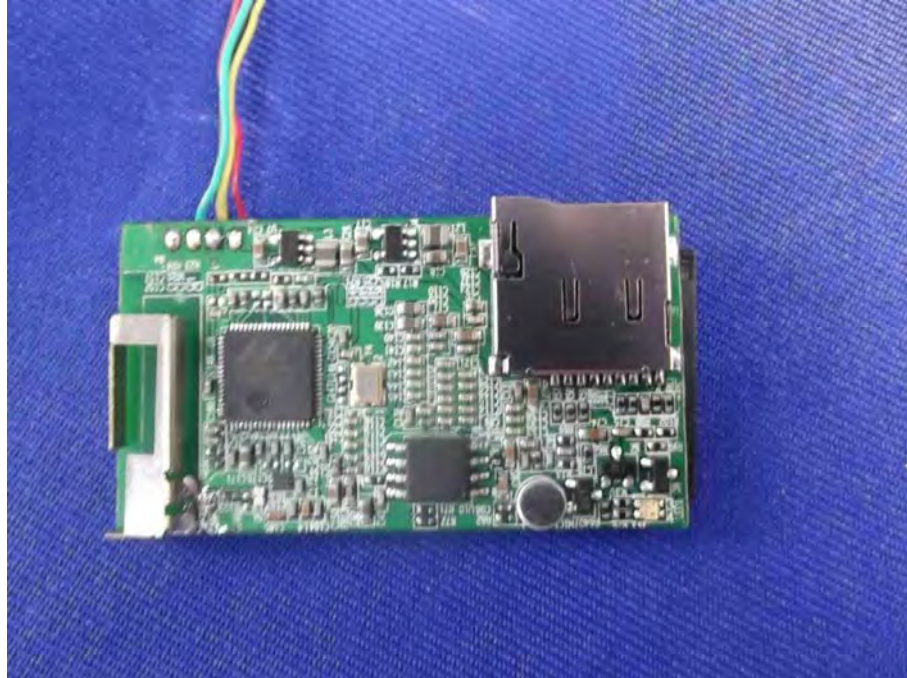


Figure 12
PCB of the EUT-Back View

