

FCC TEST REPORT  
for  
Sharx Security, Inc.

Sharx Security VIPcella-IR Network Camera  
Model No.: SCNC3804, SCNC3904

Prepared for : Sharx Security, Inc.  
Address : 8 Stoneleigh Dr, New Hampshire, 03038, United States

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Report Number : R011407274E  
Date of Test : Jul. 21~ Aug. 14, 2014  
Date of Report : Aug. 15, 2014

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## TEST REPORT

Applicant : Sharx Security, Inc.  
Manufacturer : Sharx Security, Inc.  
EUT : Sharx Security VIPcella-IR Network Camera  
Model No. : SCNC3804, SCNC3904  
Serial No. : N.A.  
Trade Mark : Sharx Security, Inc.  
Rating : DC 12V, 1A Via Adapter (AC 100-240V, 50/60Hz, 0.4A Max.)

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 : Jul. 21~ Aug. 14, 2014

Prepared by :



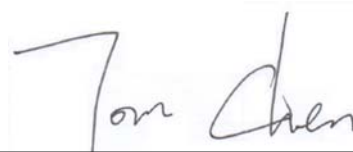
(Tested Engineer / Rock Zeng)

Reviewer :



(Project Manager / Amy Ding)

Approved & Authorized Signer :



(Manager / Tom Chen)

## 1. GENERAL INFORMATION

### 1.1. Description of Device (EUT)

EUT	: Sharx Security VIPcella-IR Network Camera
Model Number	: SCNC3804, SCNC3904
	(Note: All samples are the same except the model number and appearance, so we prepare "SCNC3804" for EMC test only.)
Test Power Supply	: AC 120V/60Hz for adapter
Adapter	: Model: NLB100120W1A Input: 100-240V~, 50/60Hz, 0.4A Max Output: 12V $\overline{\text{---}}$ , 1A
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	: Sharx Security, Inc. 8 Stoneleigh Dr, New Hampshire, 03038, United States
Manufacturer Address	: Sharx Security, Inc. 8 Stoneleigh Dr, New Hampshire, 03038, United States
Factory Address	: Sharx Security, Inc. 8 Stoneleigh Dr, New Hampshire, 03038, United States
Date of receipt	: Jul. 21, 2014
Date of Test	: Jul. 21~ Aug. 14, 2014

## 1.2. Auxiliary Equipment Used during Test

PC	: Manufacturer: DELL M/N: OPTIPLEX 380 S/N: 1J63X2X CE , FCC: DOC
MONITOR	: Manufacturer: DELL M/N: E170Sc S/N: CN-00V539-64180-055-0UPS CE , FCC: DOC
KEYBOARD	: Manufacturer: DELL M/N: SK-8115 S/N: CN-0DJ313-71616-06C-02XN CE , FCC: DOC Cable: 1m, unshielded
MOUSE	: Manufacturer: DELL M/N: M-UARDEL7 S/N: N/A CE , FCC: DOC Cable: 1m, unshielded
Printer	: Manufacturer: Brother M/N: MFC-3360C S/N: N/A CE, FCC: DOC
Router	: Manufacturer: TP-LINK Model: TL-WR841N CE, FCC
Power Line	: Non-Shielded, 1.5m
VGA Cable	: Non-Shielded, 1.5m
Network Cable	: Non-Shielded, 1.5m

### 1.3. Description of Test Facility

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

**CNAS - LAB Code: L3503**

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(e)	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

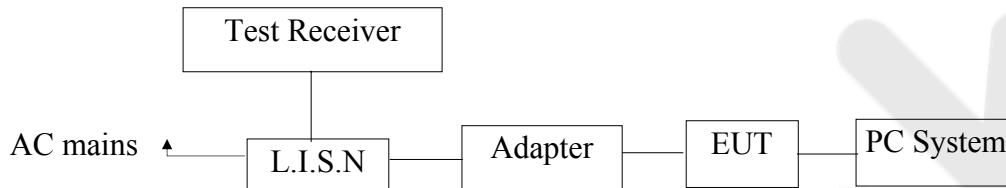
Number	Frequency(MHz)		802.11 b/g/n (HT20)	802.11 b/g/n (HT40)
1	2412	√	X	
2	2417	√		
3	2422	√		X
4	2427	√		
5	2432	√		
6	2437	√	X	X
7	2442	√		
8	2447	√		
9	2452	√		X
10	2457	√		
11	2462	√	X	



### 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 (Internet Connect, WiFi Connect) 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.

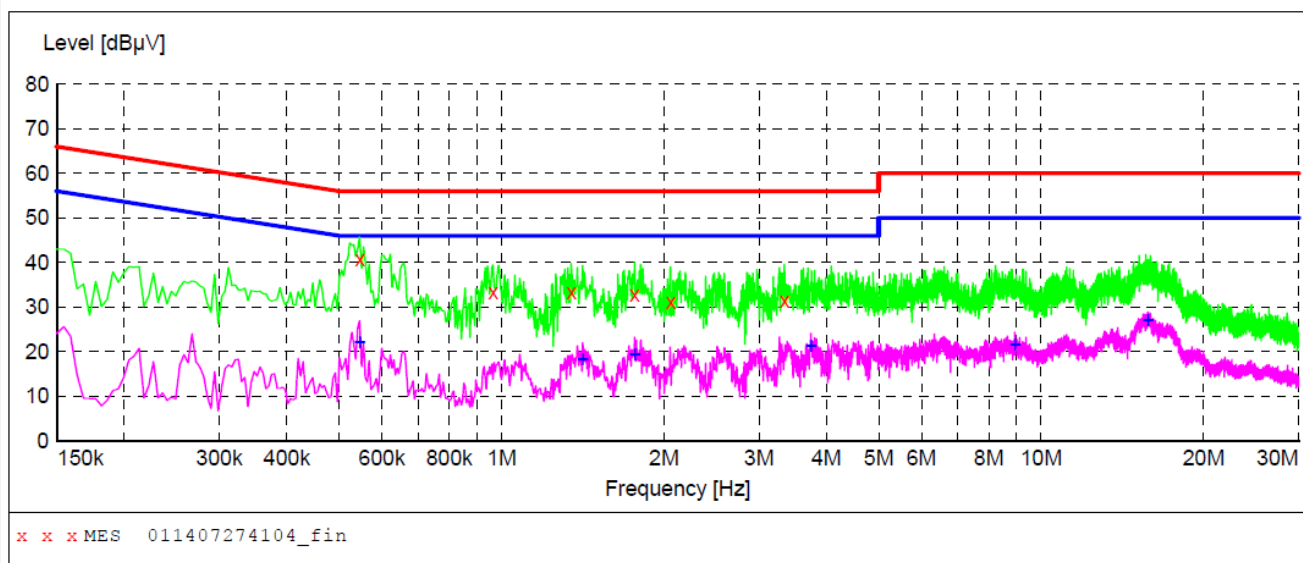
The EUT was tested on (Internet Connect, WiFi Connect) modes, only the worst data of (WiFi Connect) is attached in the following pages.

## CONDUCTED EMISSION TEST DATA

Test Site: 1# Shielded Room  
Operating Condition: WiFi Connect  
Test Specification: AC 120V/60Hz for Adapter  
Comment: Live Line  
Tem:25°C Hum:50%

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

Short Description: 150K-30M Disturbance Voltages



### MEASUREMENT RESULT: "011407274104\_fin"

7/23/2014 11:59AM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.546000	40.80	20.1	56	15.2	QP	L1	GND
0.964500	33.20	20.2	56	22.8	QP	L1	GND
1.346500	33.30	20.2	56	22.7	QP	L1	GND
1.765000	32.80	20.3	56	23.2	QP	L1	GND
2.057500	31.10	20.3	56	24.9	QP	L1	GND
3.344500	31.50	20.4	56	24.5	QP	L1	GND

### MEASUREMENT RESULT: "011407274104\_fin2"

7/23/2014 11:59AM

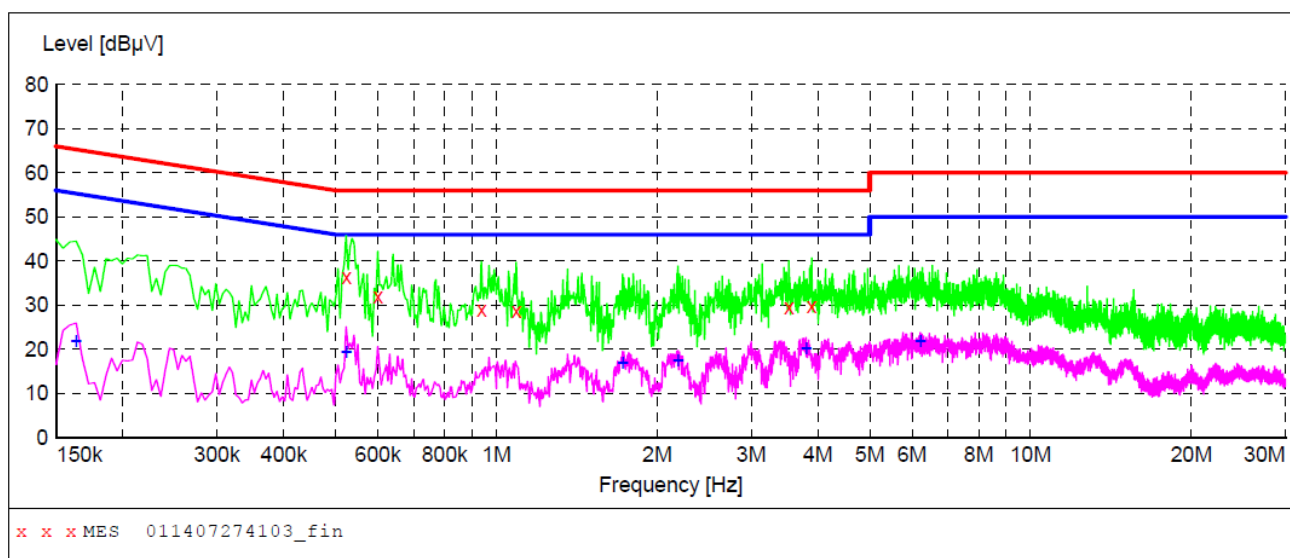
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.546000	22.20	20.1	46	23.8	AV	L1	GND
1.414000	18.40	20.2	46	27.6	AV	L1	GND
1.765000	19.30	20.3	46	26.7	AV	L1	GND
3.745000	21.20	20.4	46	24.8	AV	L1	GND
8.942500	21.70	20.6	50	28.3	AV	L1	GND
15.755500	27.10	20.7	50	22.9	AV	L1	GND

## CONDUCTED EMISSION TEST DATA

Test Site: 1# Shielded Room  
Operating Condition: WiFi Connect  
Test Specification: AC 120V/60Hz for Adapter  
Comment: Neutral Line  
Tem:25°C Hum:50%

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

Short Description: 150K-30M Disturbance Voltages



### MEASUREMENT RESULT: "011407274103\_fin"

7/23/2014 11:56AM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.523500	36.30	20.1	56	19.7	QP	N	GND
0.600000	31.90	20.1	56	24.1	QP	N	GND
0.937500	28.90	20.1	56	27.1	QP	N	GND
1.090000	28.80	20.2	56	27.2	QP	N	GND
3.529000	29.50	20.4	56	26.5	QP	N	GND
3.893500	29.80	20.4	56	26.2	QP	N	GND

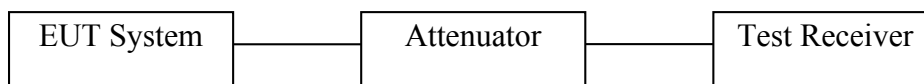
### MEASUREMENT RESULT: "011407274103\_fin2"

7/23/2014 11:56AM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.163500	21.80	20.1	55	33.5	AV	N	GND
0.523500	19.40	20.1	46	26.6	AV	N	GND
1.724500	17.00	20.3	46	29.0	AV	N	GND
2.188000	17.50	20.3	46	28.5	AV	N	GND
3.799000	20.30	20.4	46	25.7	AV	N	GND
6.220000	21.90	20.5	50	28.1	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, 2014	1 Year
2.	Preamplifier	Instruments corporation	EMC011830	980100	Aug. 09, 2014	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	10.076		Pass
Mid	2437	10.076	>500	Pass
High	2462	10.120		Pass

Test mode: IEEE 802.11g

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

Test mode: IEEE 802.11n (HT20)

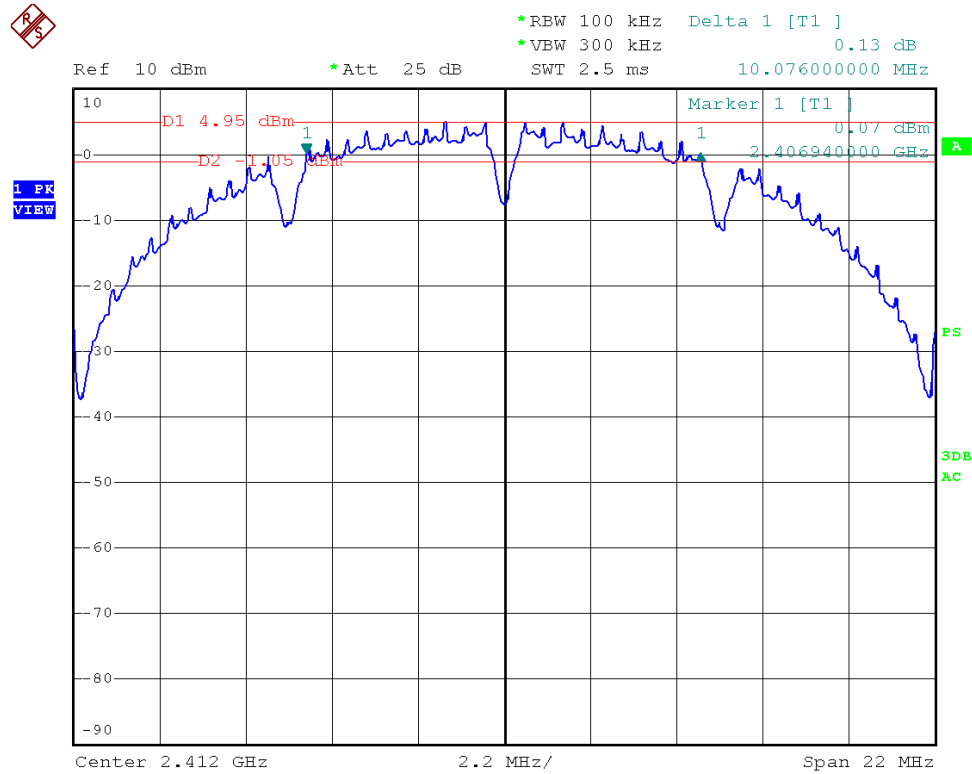
Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Results
Low	2412	17.600		Pass
Mid	2437	17.600	>500	Pass
High	2462	17.600		Pass

Test mode: IEEE 802.11n (HT40)

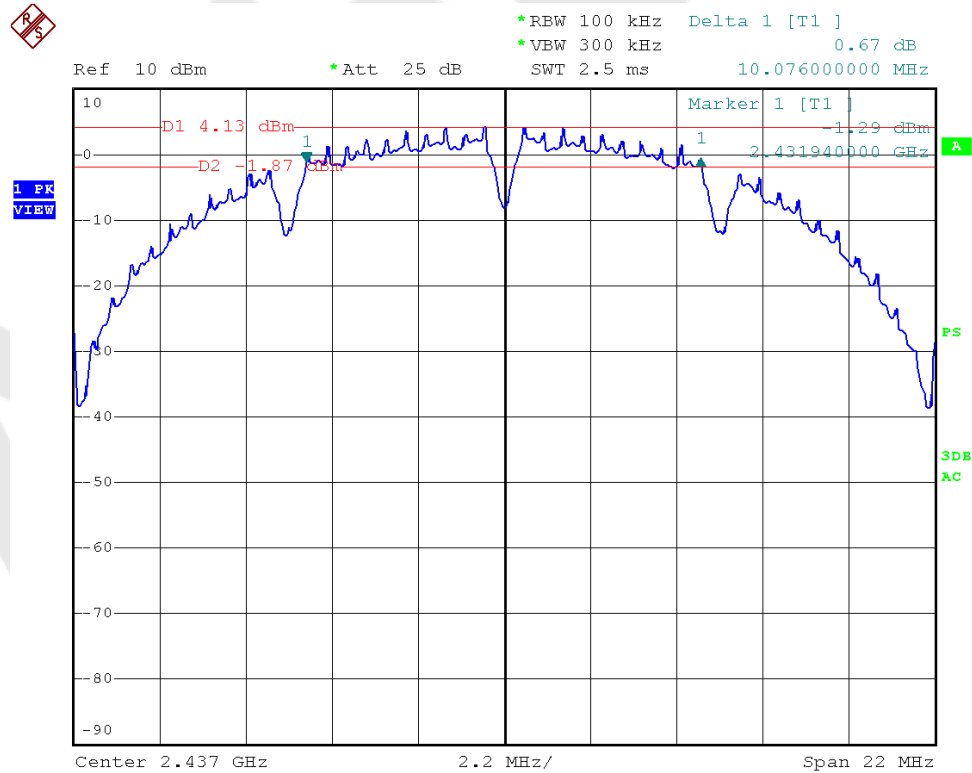
Channel	Frequency (MHz)	Bandwidth (MHz)	Limit (kHz)	Results
Low	2422	36.372		Pass
Mid	2437	36.372	>500	Pass
High	2452	36.372		Pass

Test Plots See the following page.

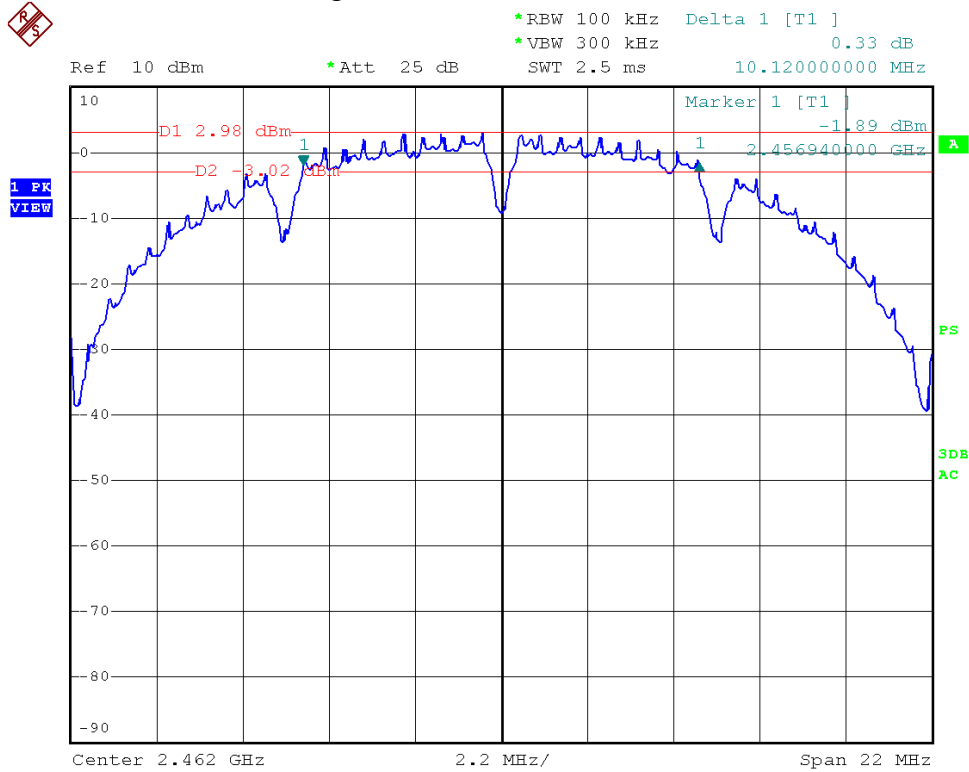
Test Mode: 802.11b---Low



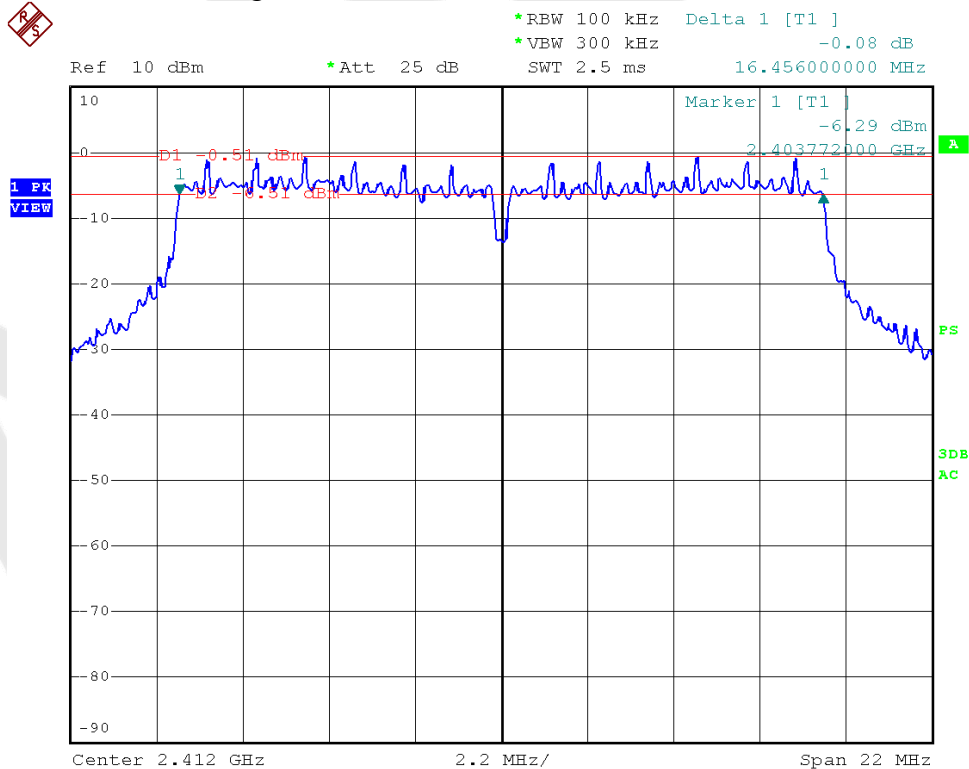
Test Mode: 802.11b---Mid



Test Mode: 802.11b---High

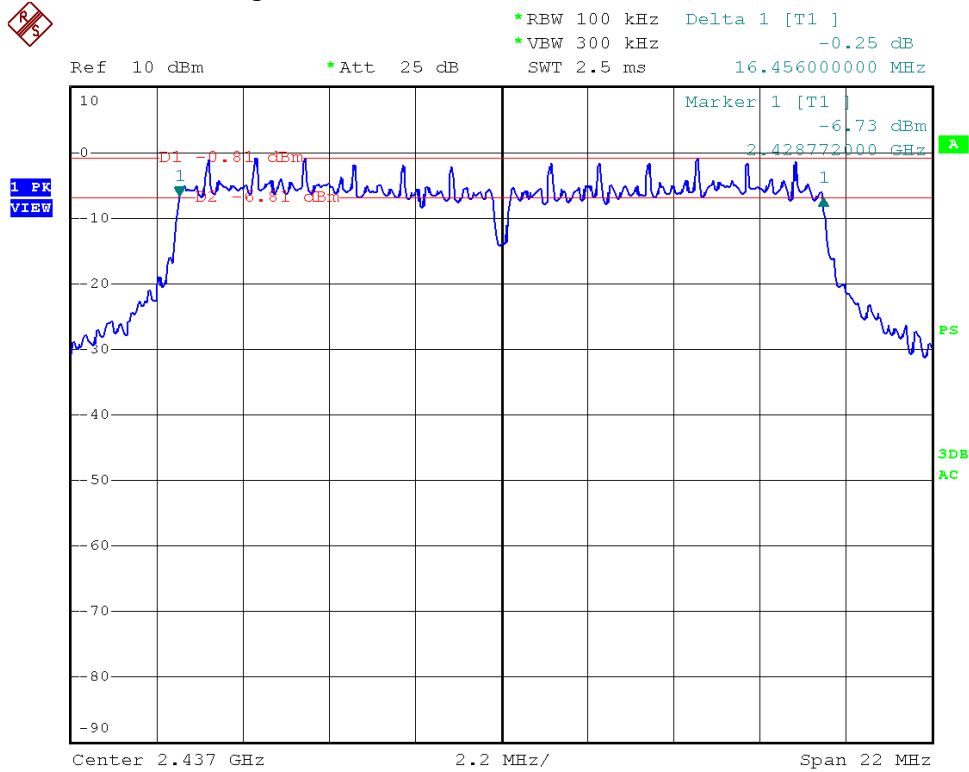


Test Mode: 802.11g---Low

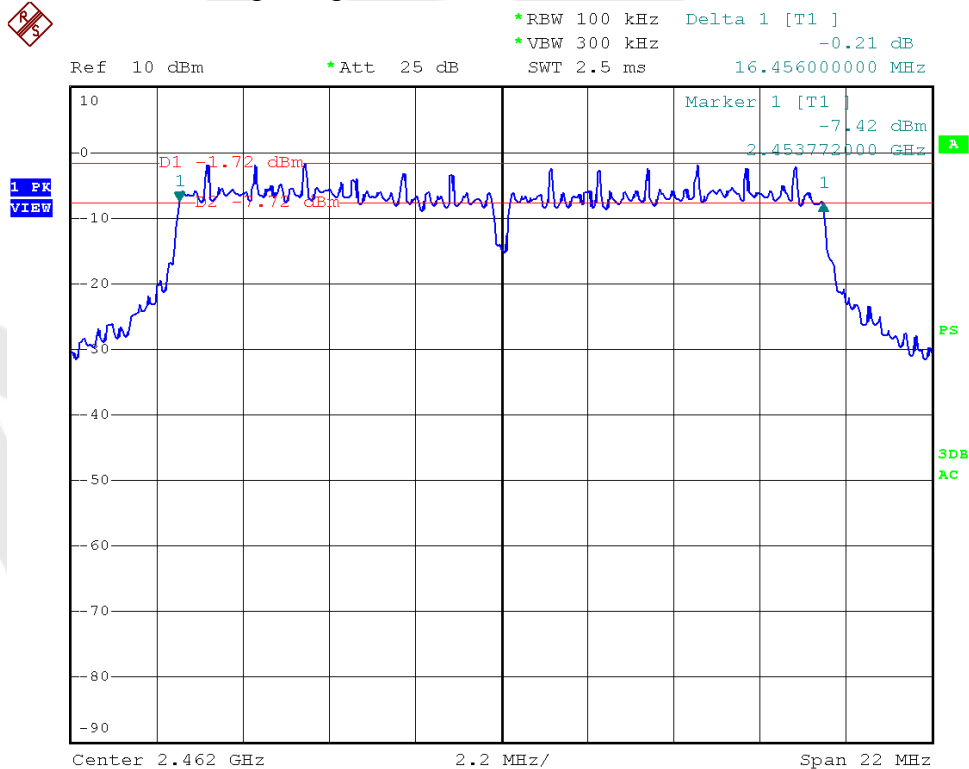




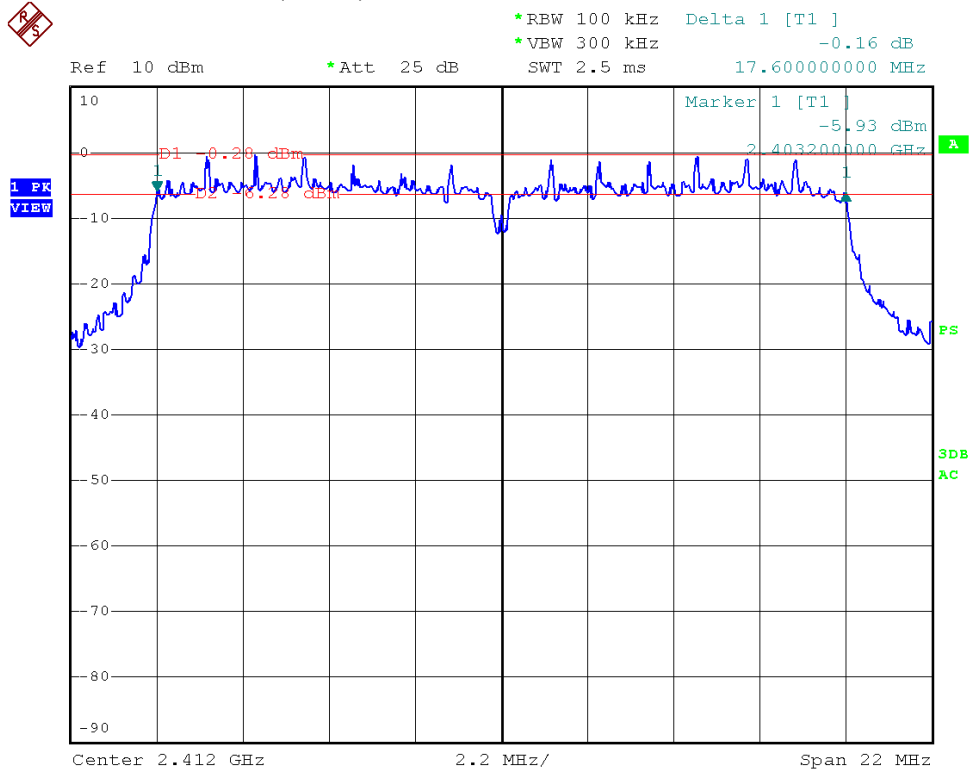
Test Mode: 802.11g---Mid



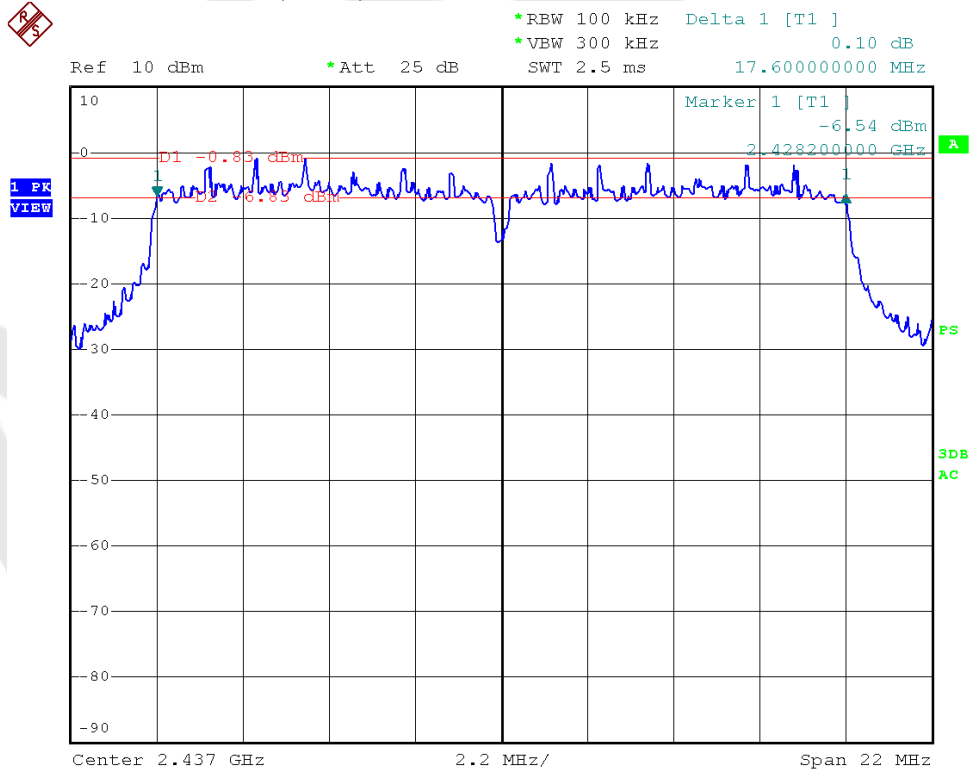
Test Mode: 802.11g---High



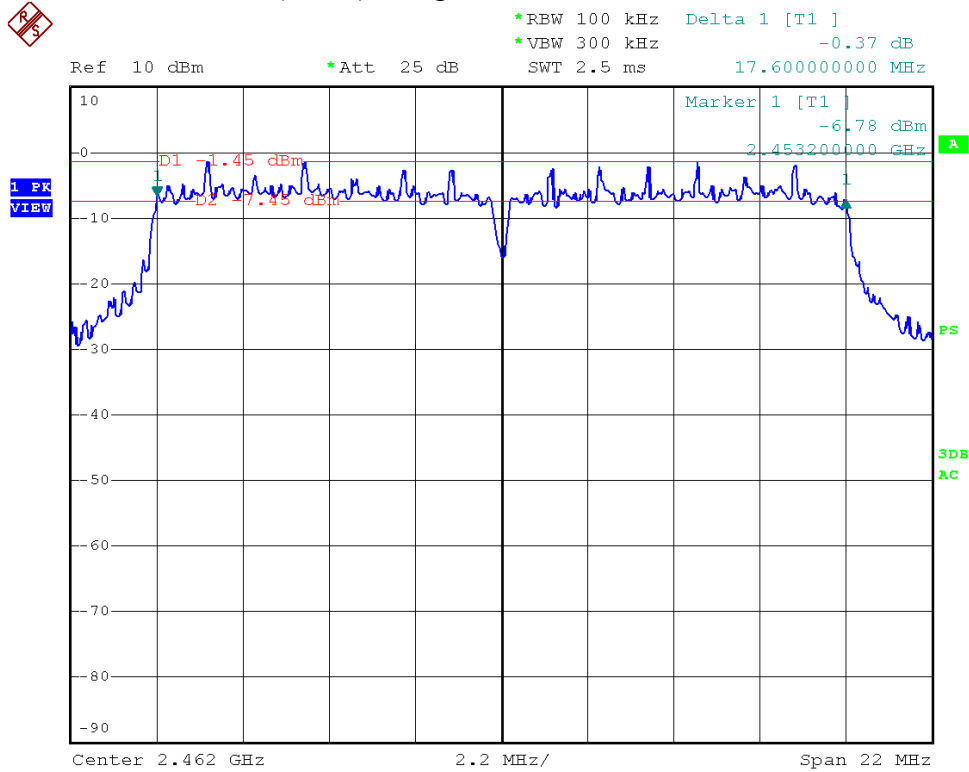
Test Mode: 802.11n (HT20)---Low



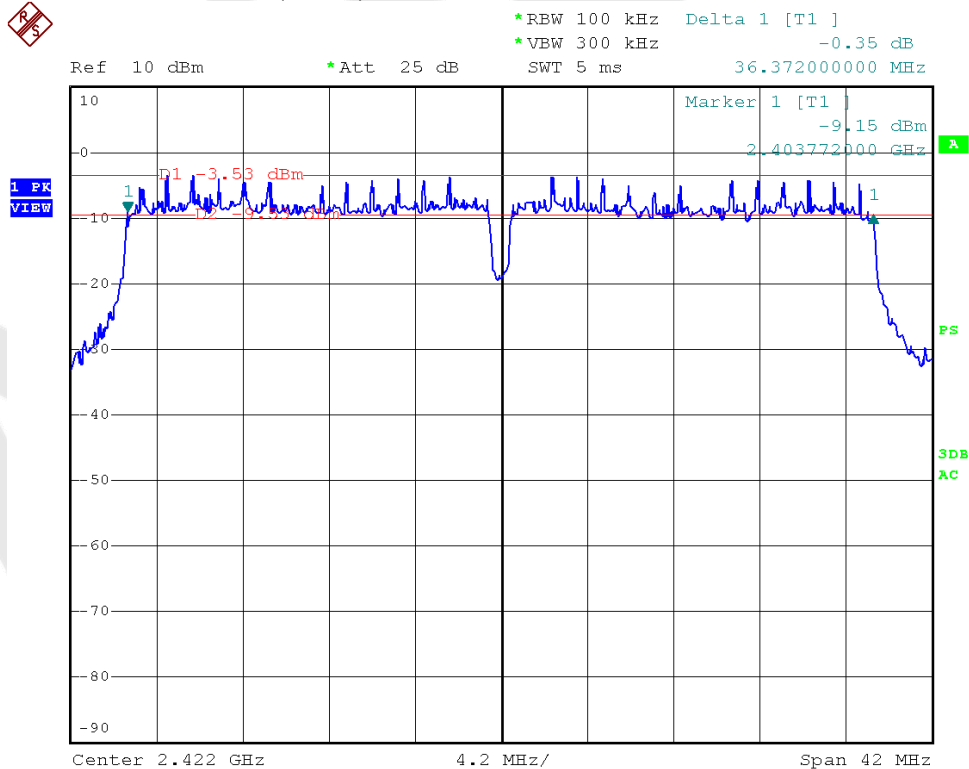
Test Mode: 802.11n (HT20)---Mid



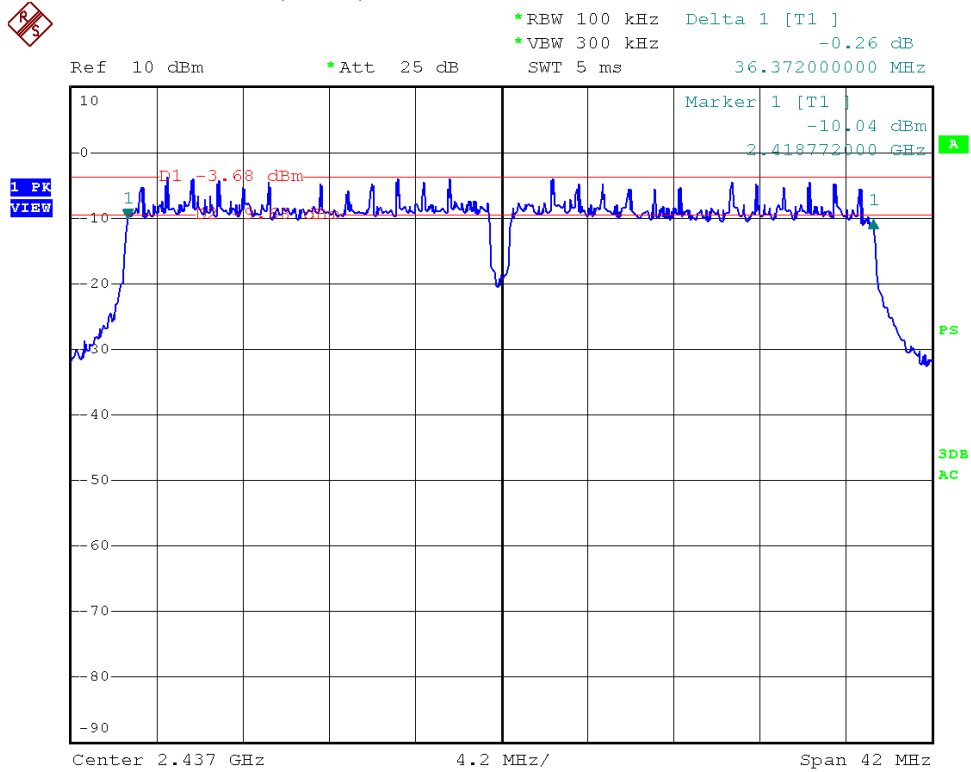
Test Mode: 802.11n (HT20)---High



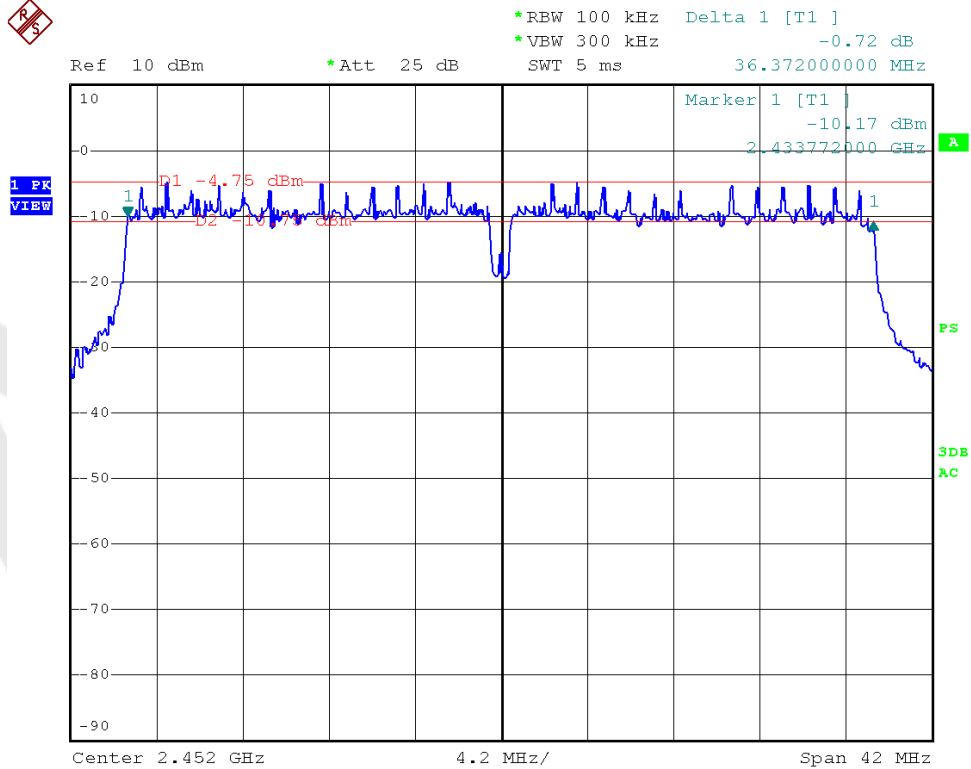
Test Mode: 802.11n (HT40)---Low



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



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



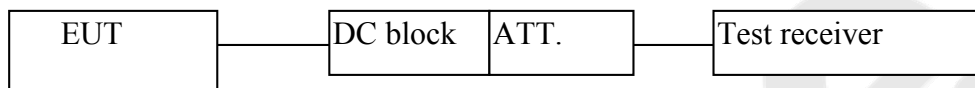
### 4.3. Maximum Peak output power test

#### 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	7.27	30	1	Pass
Mid	2437	7.17			Pass
High	2462	7.13			Pass

Test mode: IEEE 802.11g

Channel	Frequency (MHz)	Maximum transmit power	Limit		Result
		(dBm)	(dBm)	(watts)	
Low	2412	5.59	30	1	Pass
Mid	2437	5.47			Pass
High	2462	5.41			Pass

Test mode: IEEE 802.11n (HT20)

Channel	Frequency (MHz)	Maximum transmit power	Limit		Result
		(dBm)	(dBm)	(watts)	
Low	2412	5.78	30	1	Pass
Mid	2437	5.69			Pass
High	2462	5.62			Pass

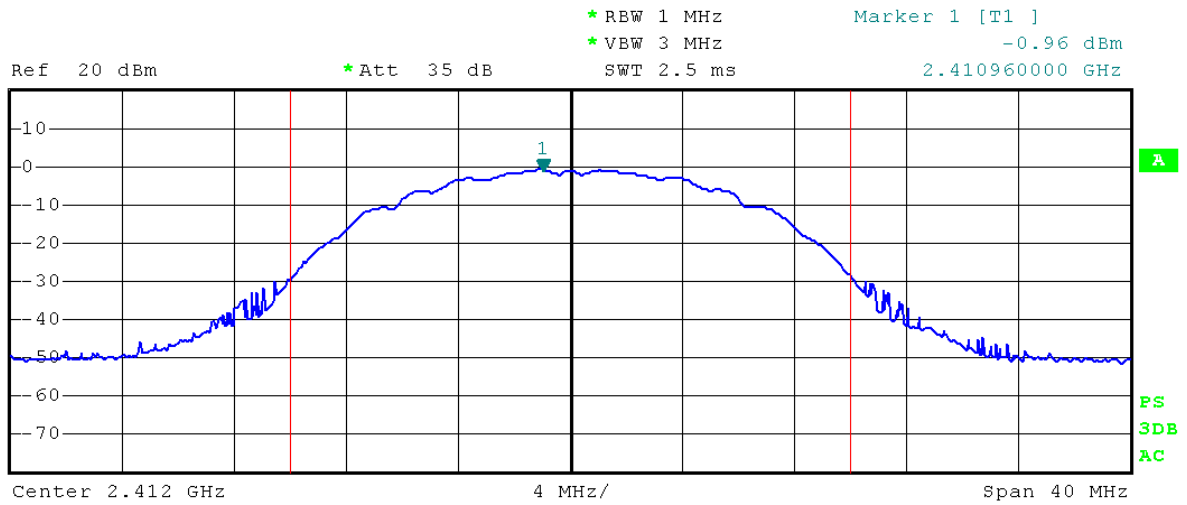
Test mode: IEEE 802.11n (HT40)

Channel	Frequency (MHz)	Maximum transmit power	Limit		Result
		(dBm)	(dBm)	(watts)	
Low	2422	6.28	30	1	Pass
Mid	2437	6.26			Pass
High	2452	6.19			Pass

Test Mode: 802.11b---Low



1 PK  
MAXH

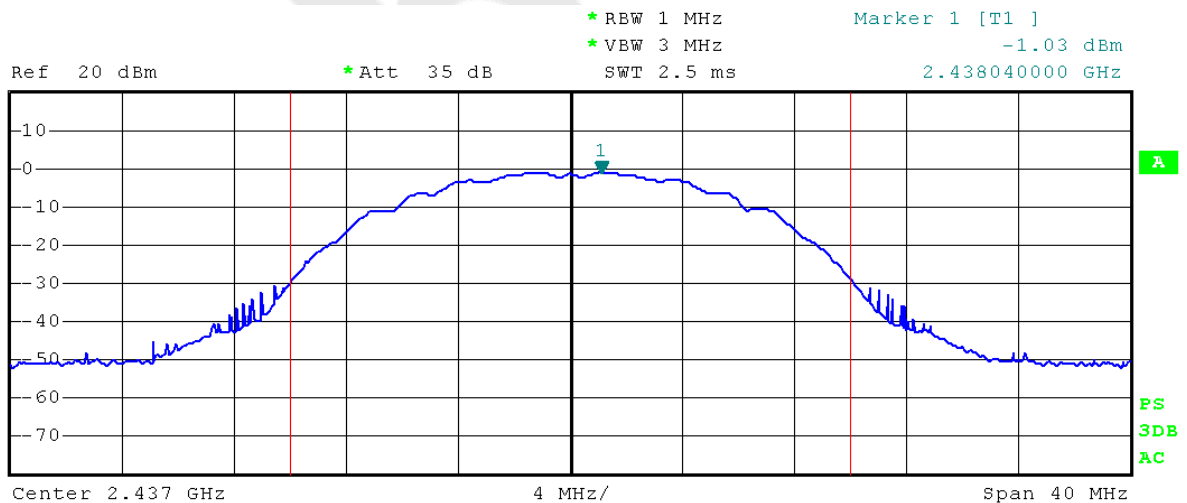


Tx Channel  
Bandwidth 20 MHz Power 7.27 dBm

Test Mode: 802.11b---Mid



1 PK  
MAXH

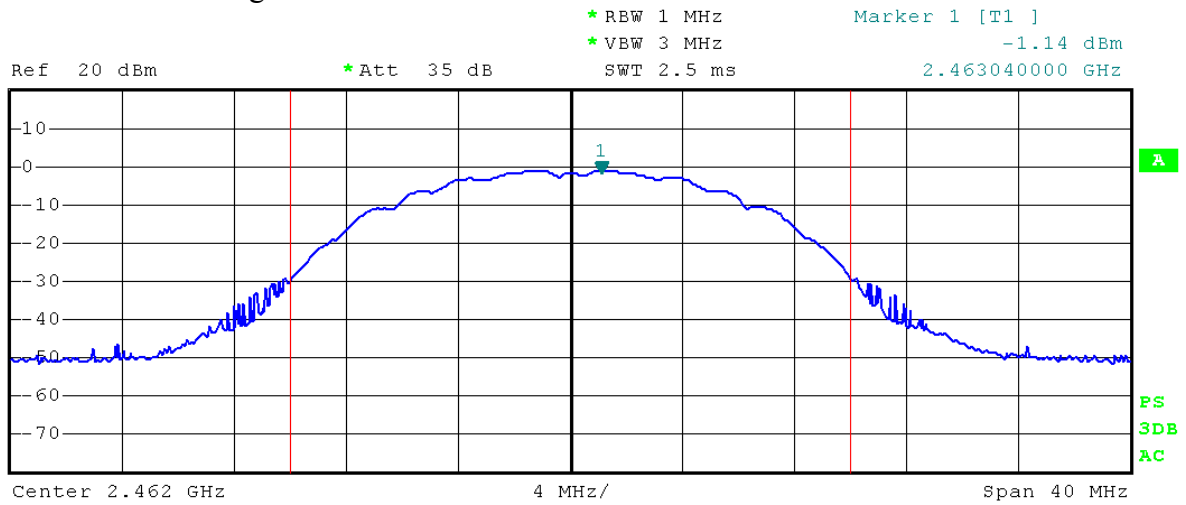


Tx Channel  
Bandwidth 20 MHz Power 7.17 dBm

Test Mode: 802.11b---High



1 PK  
MAXH

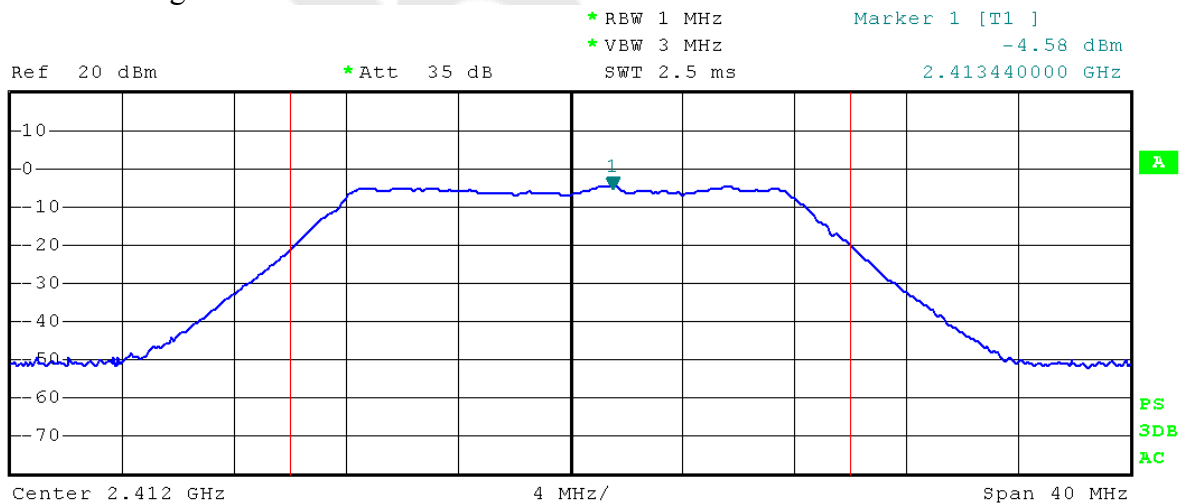


Tx Channel  
Bandwidth 20 MHz Power 7.13 dBm

Test Mode: 802.11g---Low



1 PK  
MAXH



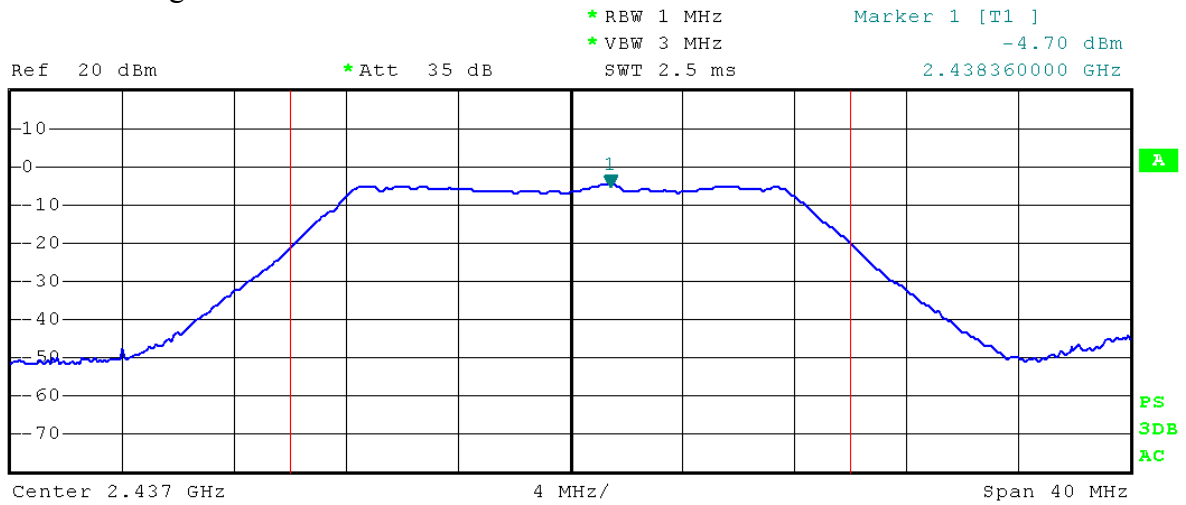
Tx Channel  
Bandwidth 20 MHz Power 5.59 dBm



Test Mode: 802.11g---Mid



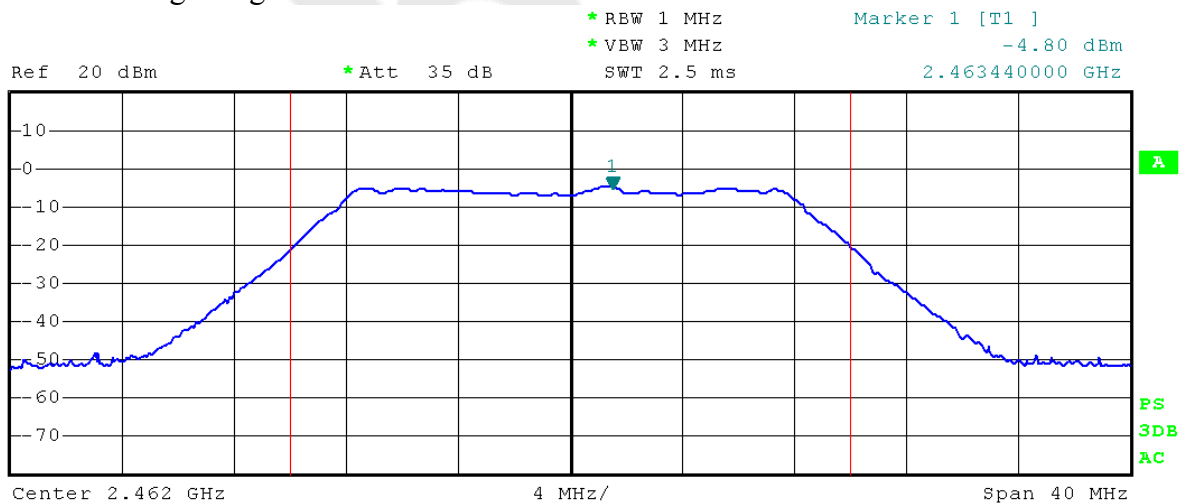
1 PK  
MAXH



Test Mode: 802.11g---High



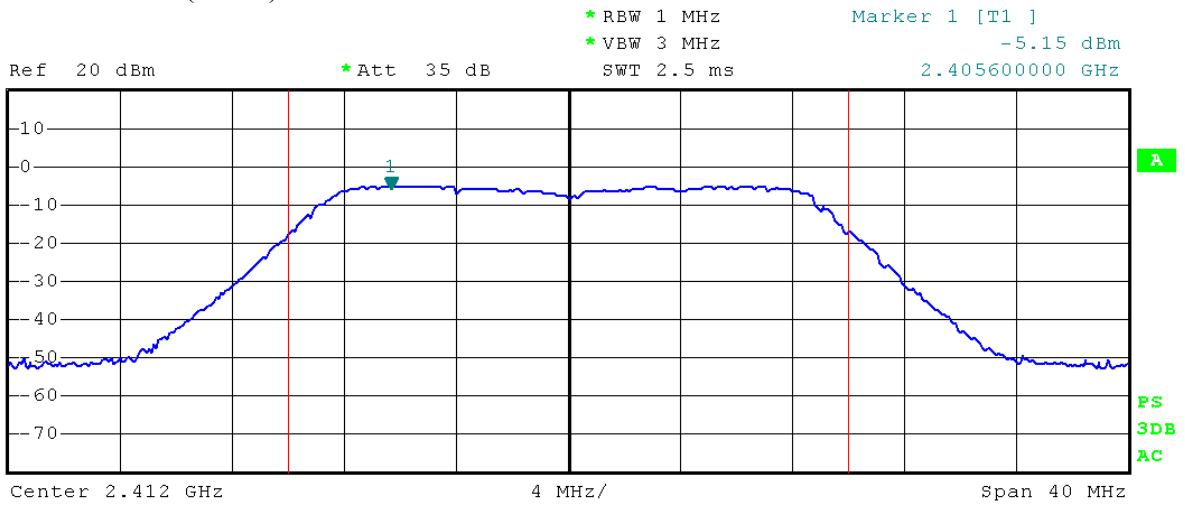
1 PK  
MAXH



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



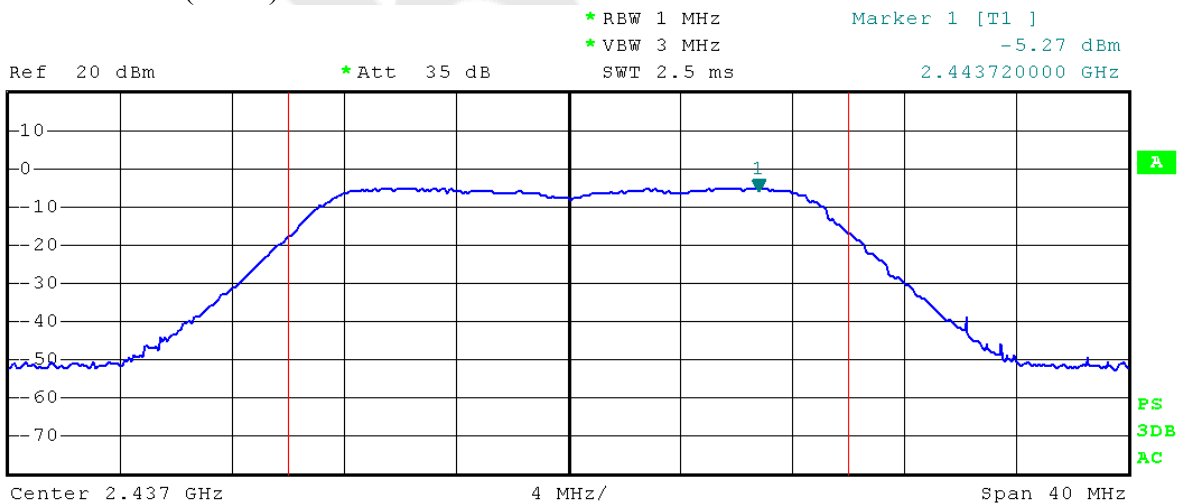
1 PK  
VIEW



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



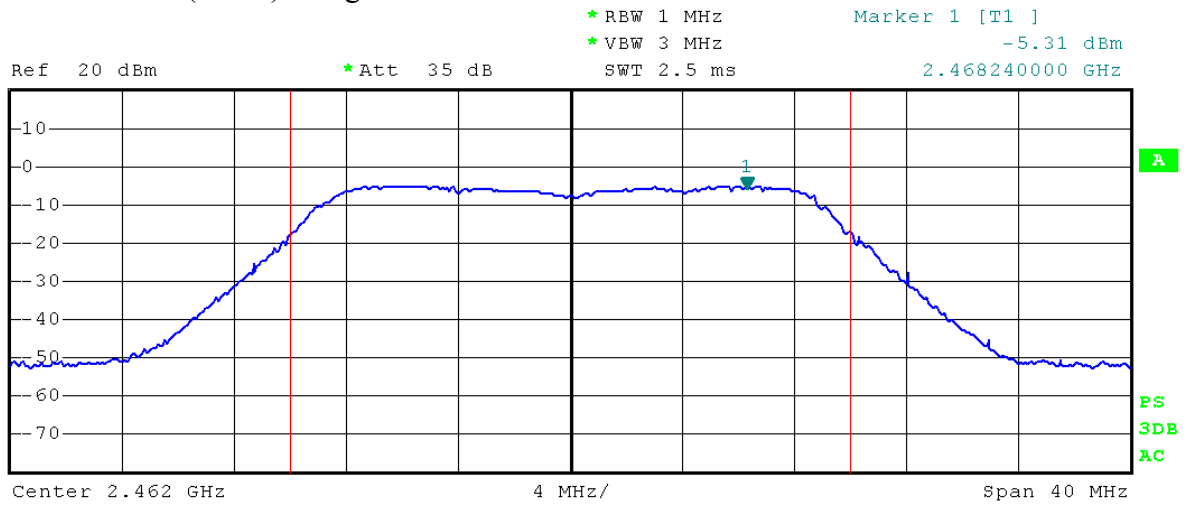
1 PK  
VIEW



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



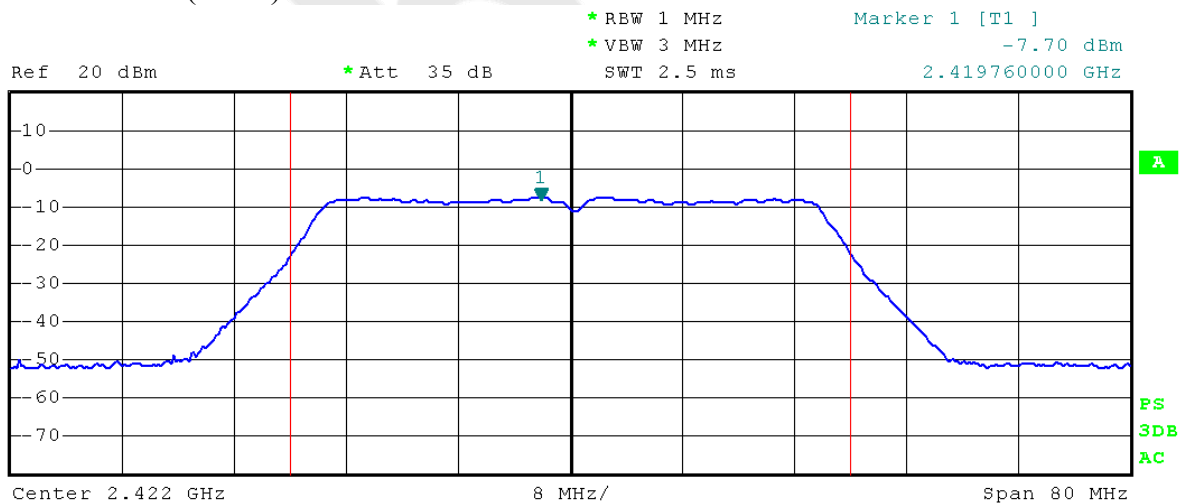
1 PK  
VIEW



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



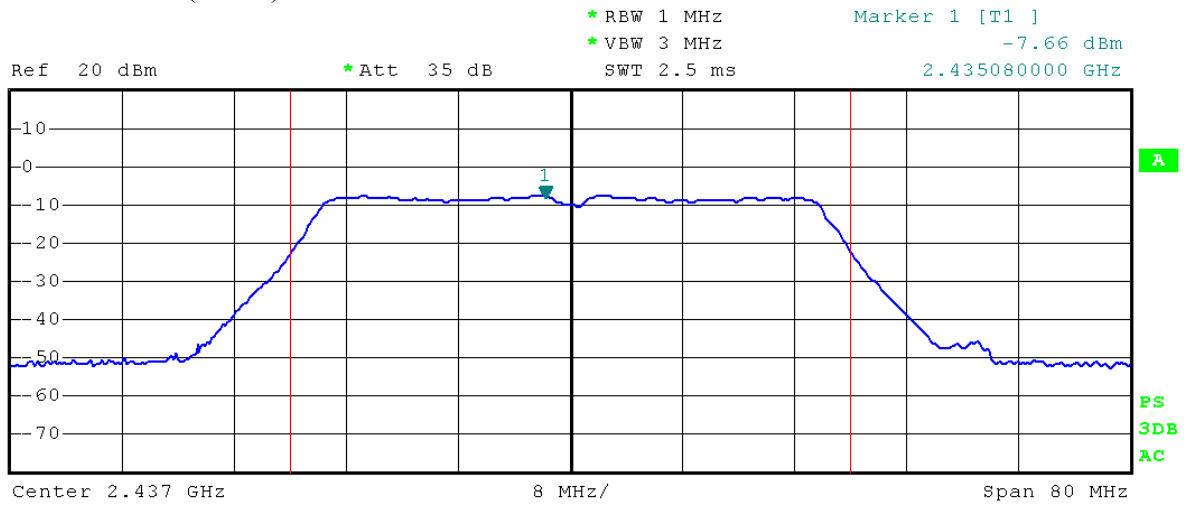
1 PK  
MAXH



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



1 PK  
MAXH

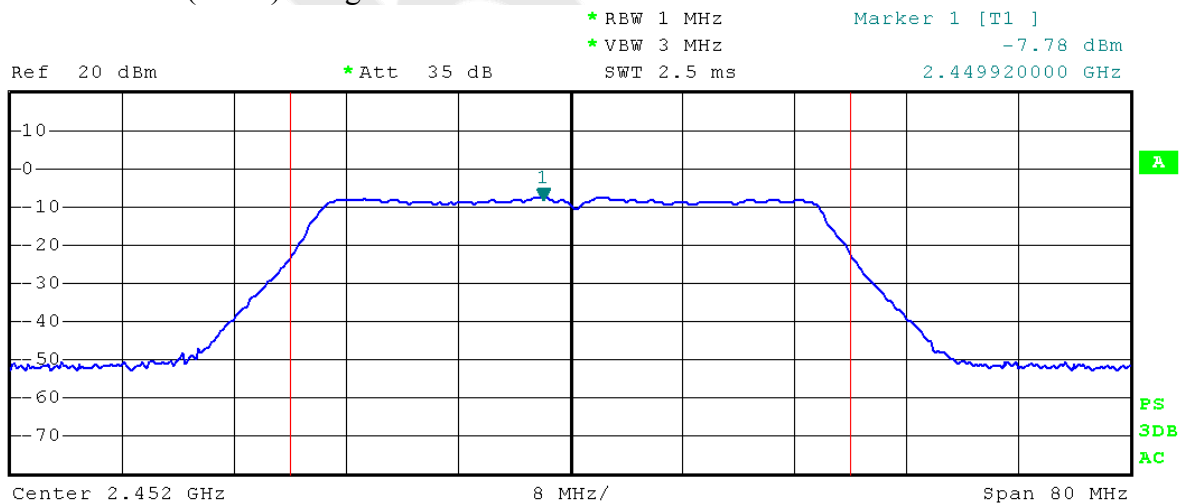


Tx Channel  
Bandwidth 40 MHz Power 6.26 dBm

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



1 PK  
MAXH



Tx Channel  
Bandwidth 40 MHz Power 6.19 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).

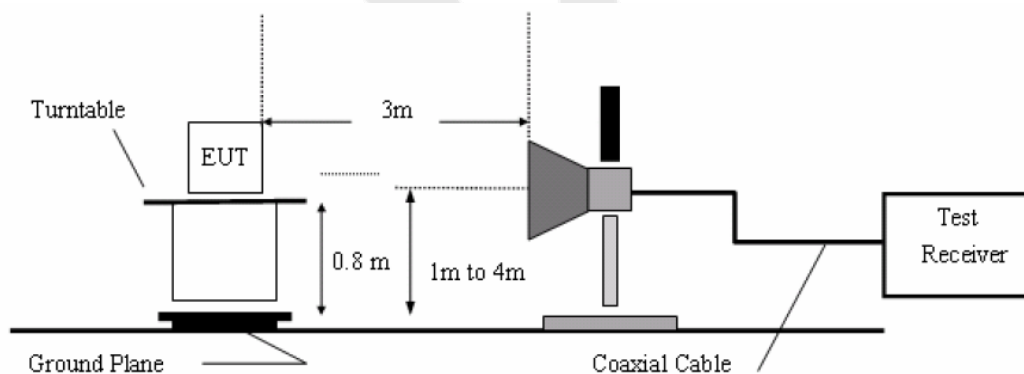
##### b. Test Procedure

###### 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.

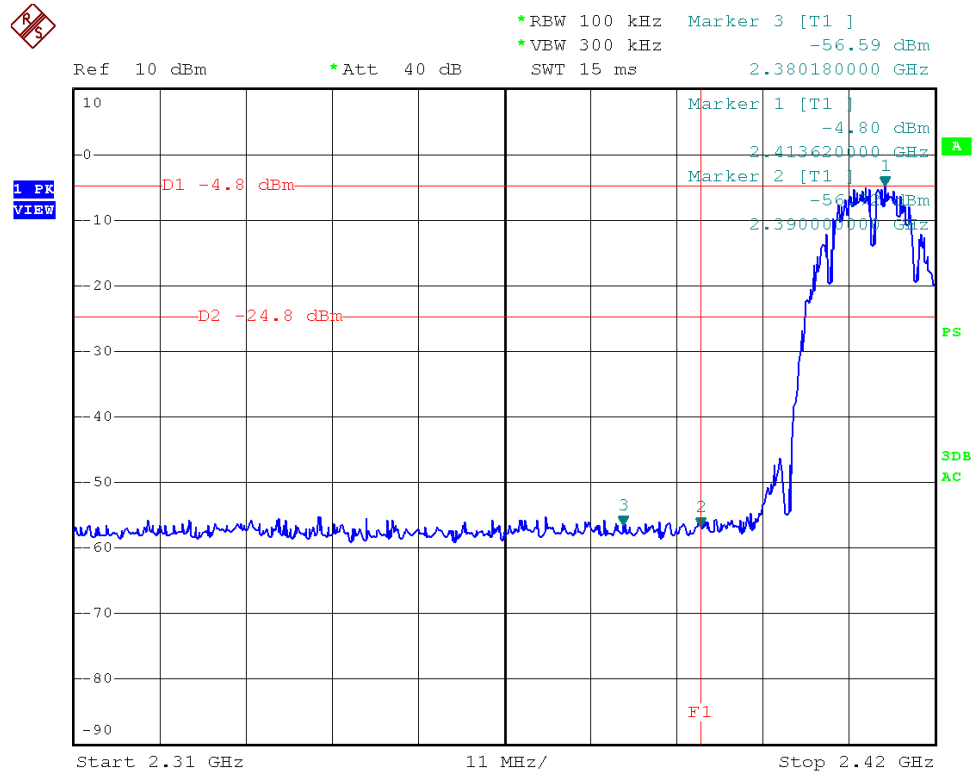
##### d. Test Results

Pass.

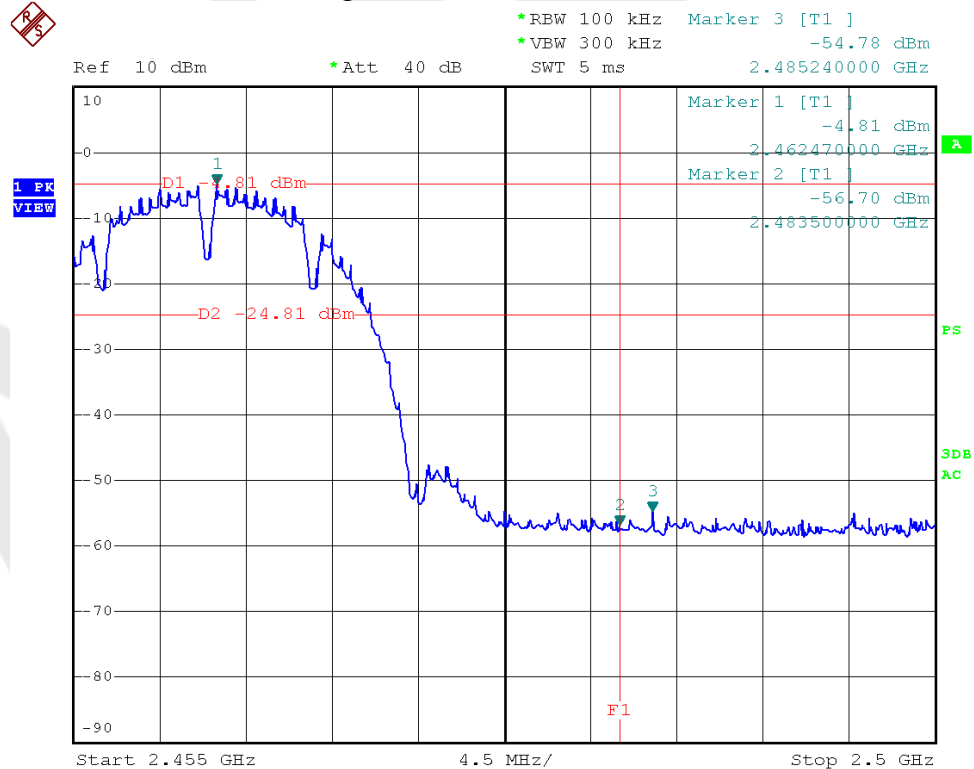
##### e. Test Plots

See the following page.

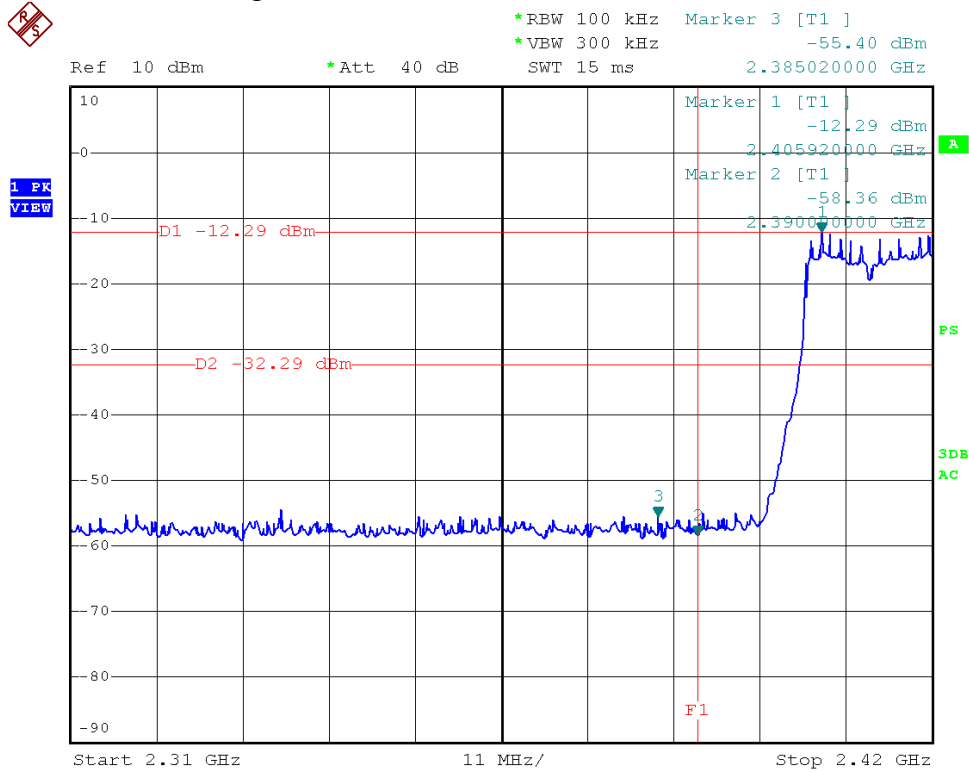
Test Mode: 802.11b ---Low



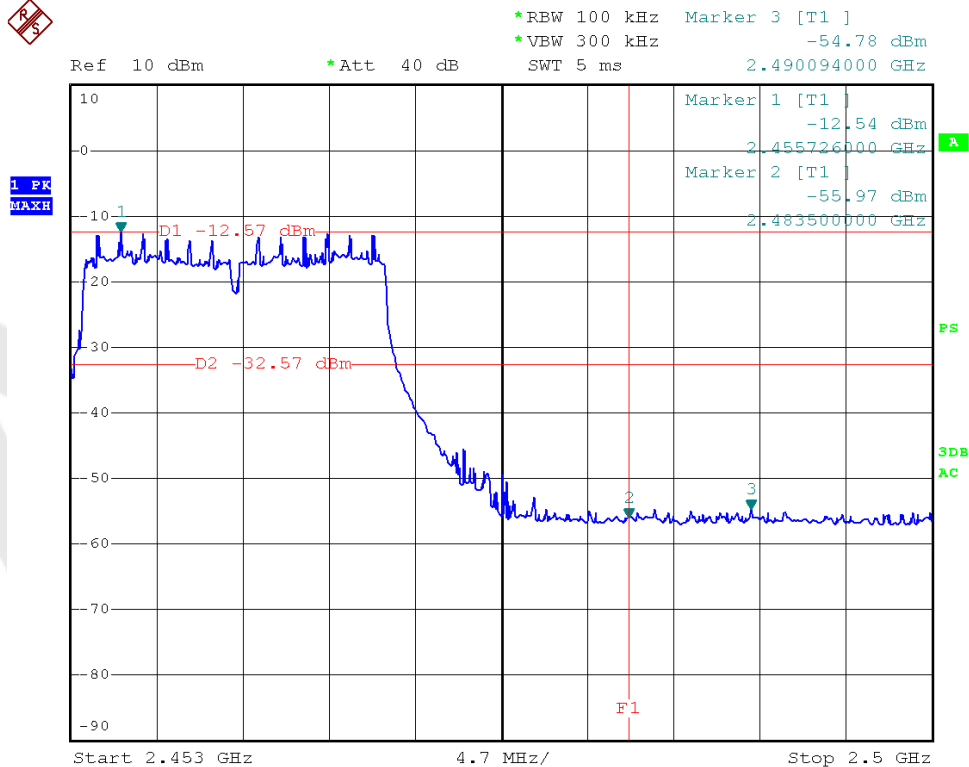
Test Mode: 802.11b ---High



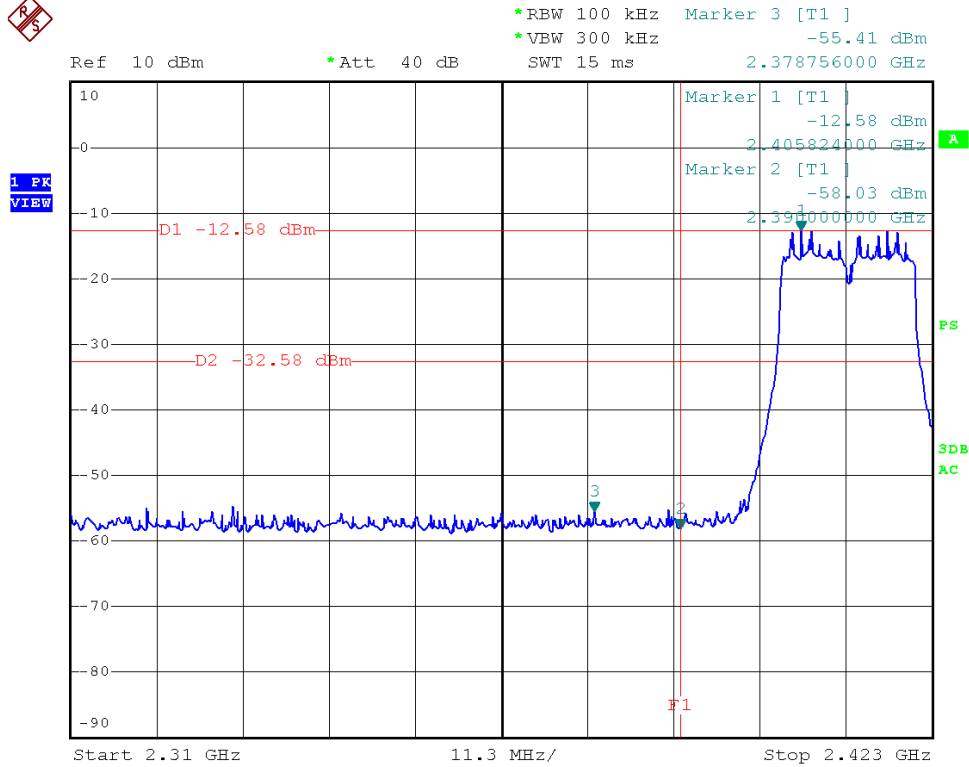
Test Mode: 802.11g ---Low



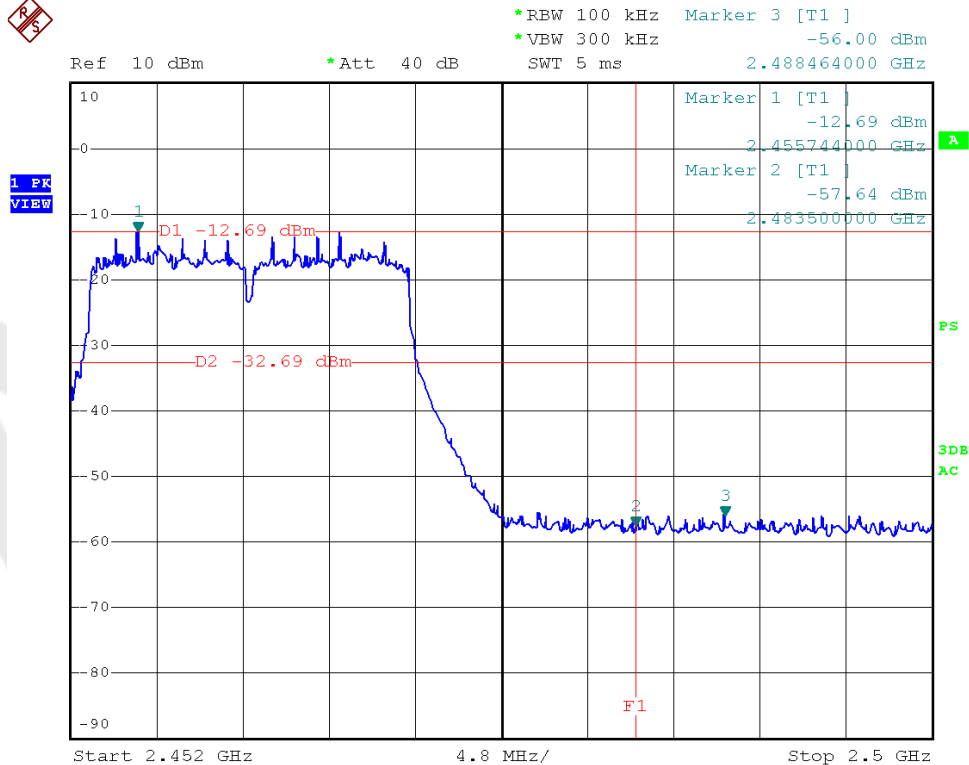
Test Mode: 802.11g ---High



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

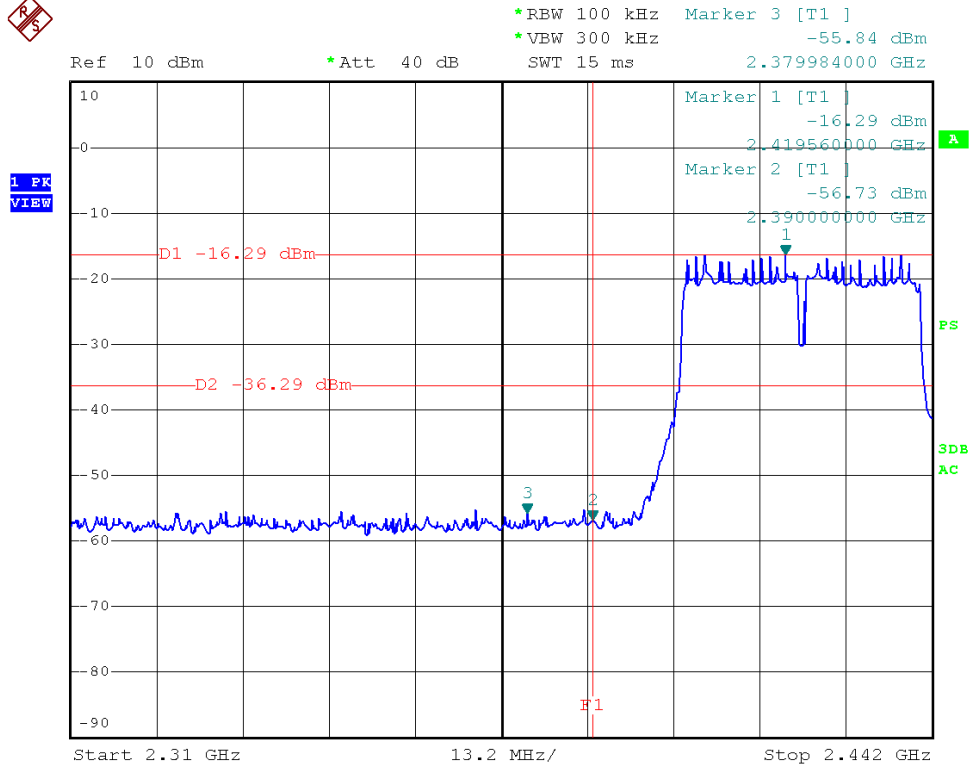


Test Mode: 802.11n (HT20)---High

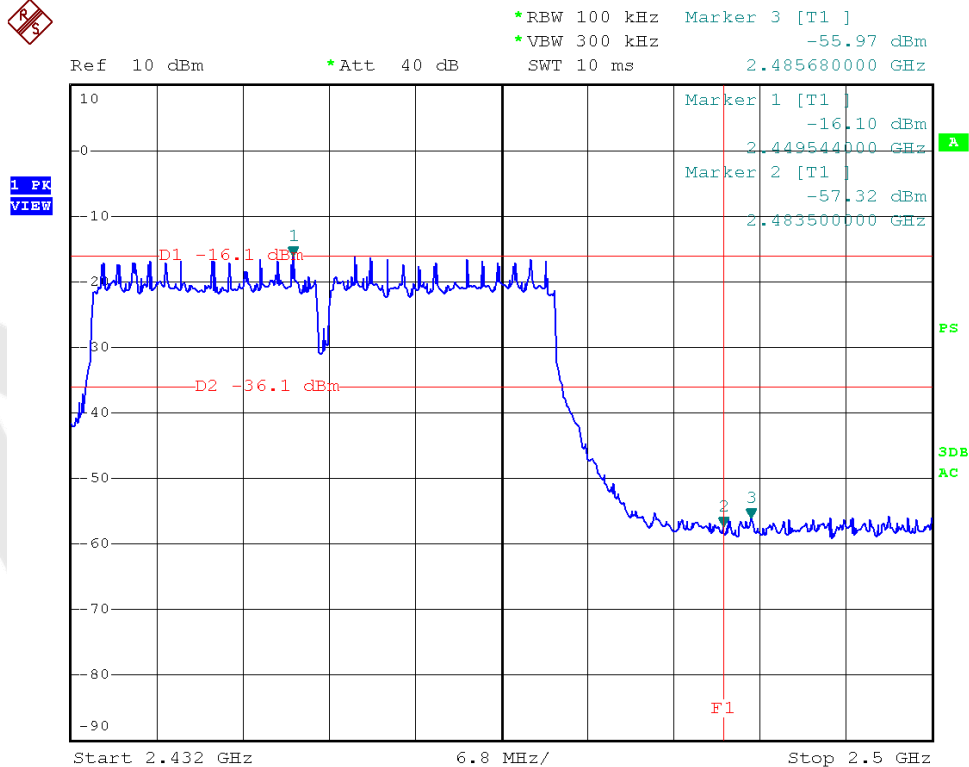




Test Mode: 802.11n (HT40) ---Low



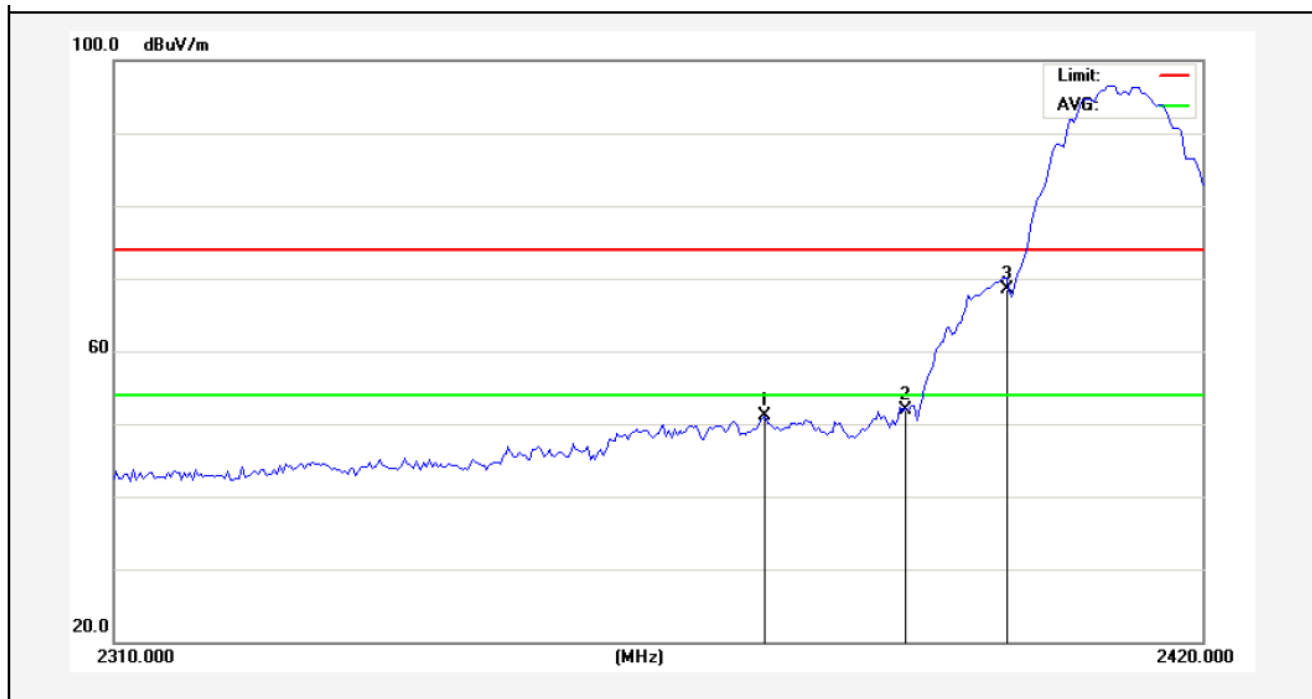
Test Mode: 802.11n (HT40) ---High



Test Mode: 802.11b

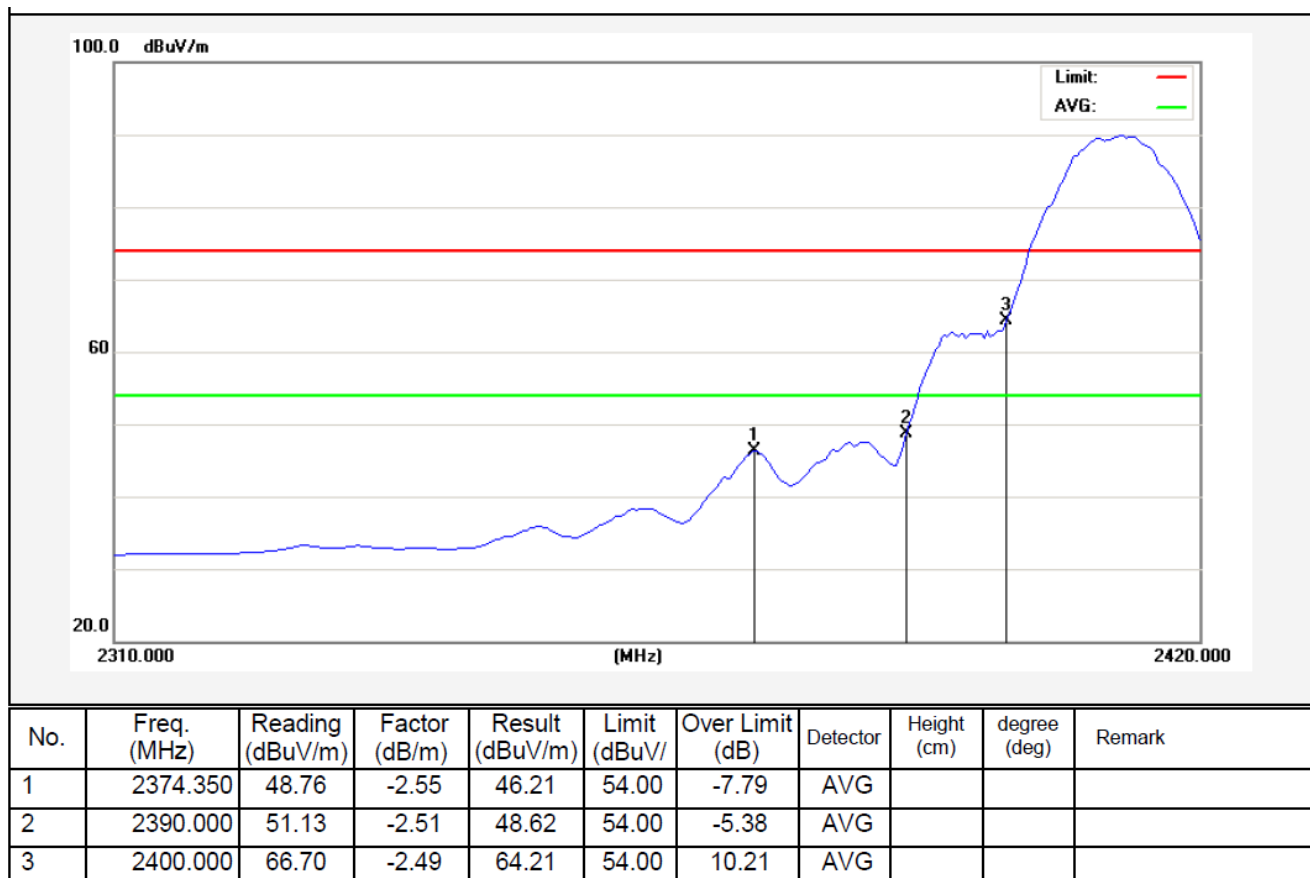
2412MHz

Horizontal-PEAK:

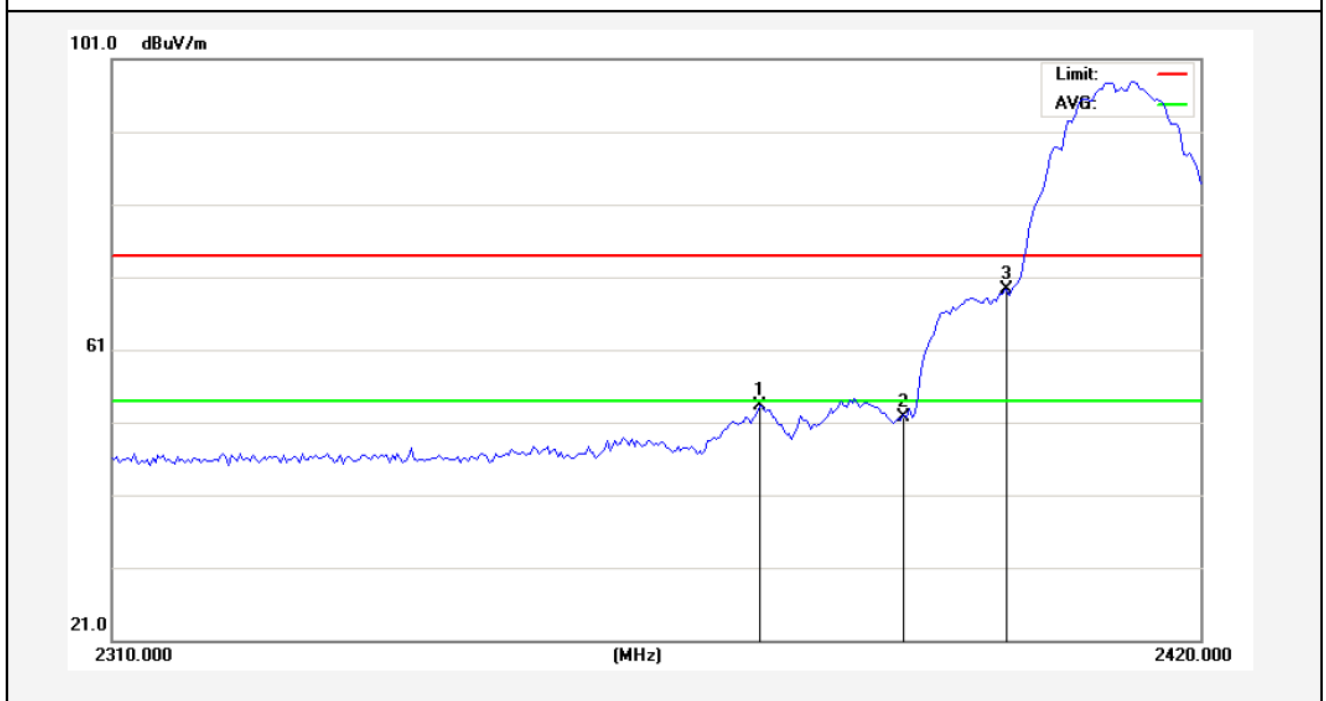


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2375.175	53.60	-2.55	51.05	74.00	-22.95	peak			
2	2390.000	54.43	-2.51	51.92	74.00	-22.08	peak			
3	2400.000	70.99	-2.49	68.50	74.00	-5.50	peak			

Horizontal-AV:

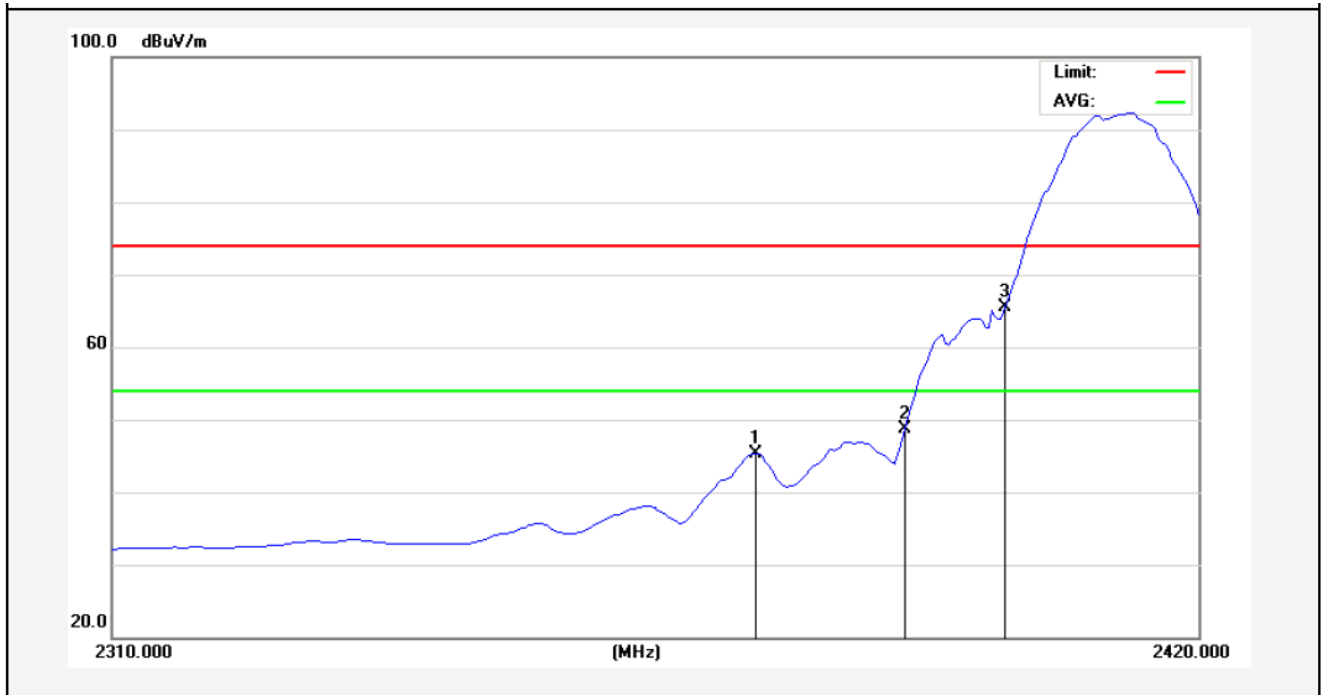


Test Mode: 802.11b  
2412MHz  
Vertical-PEAK:



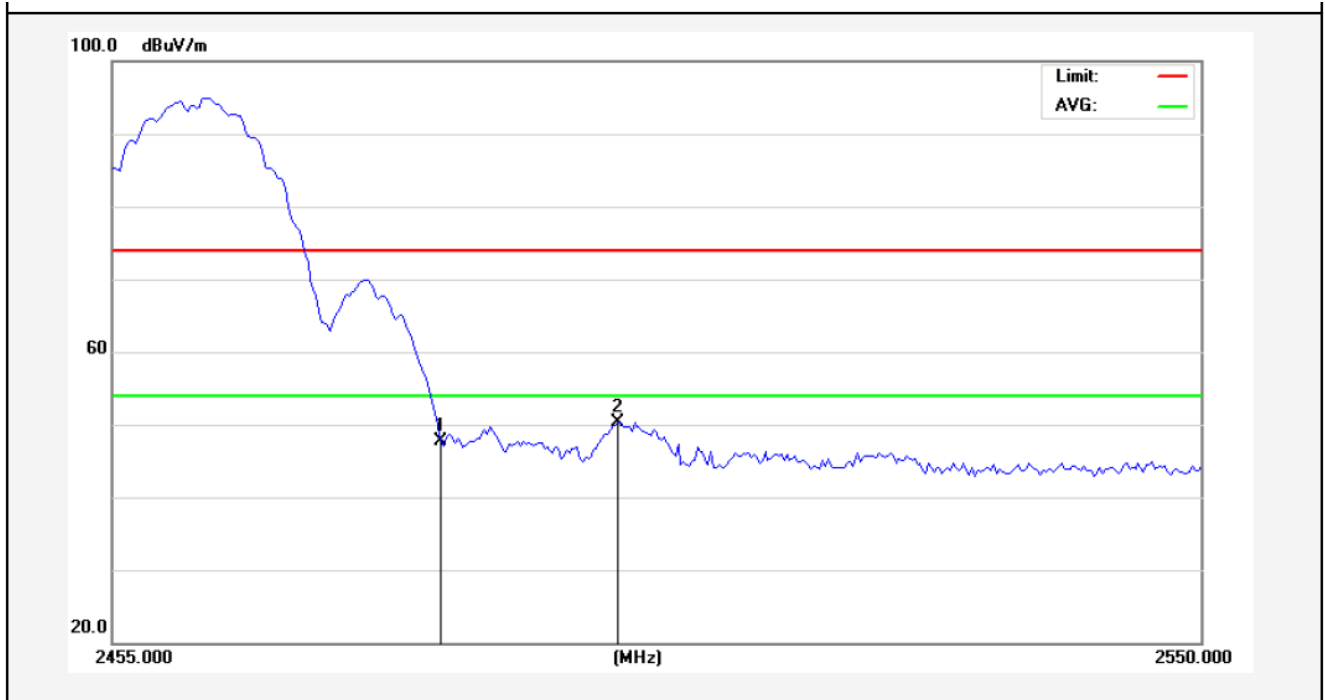
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2374.900	55.76	-2.55	53.21	74.00	-20.79	peak			
2	2390.000	54.25	-2.51	51.74	74.00	-22.26	peak			
3	2400.000	71.88	-2.49	69.39	74.00	-4.61	peak			

Vertical-AV:



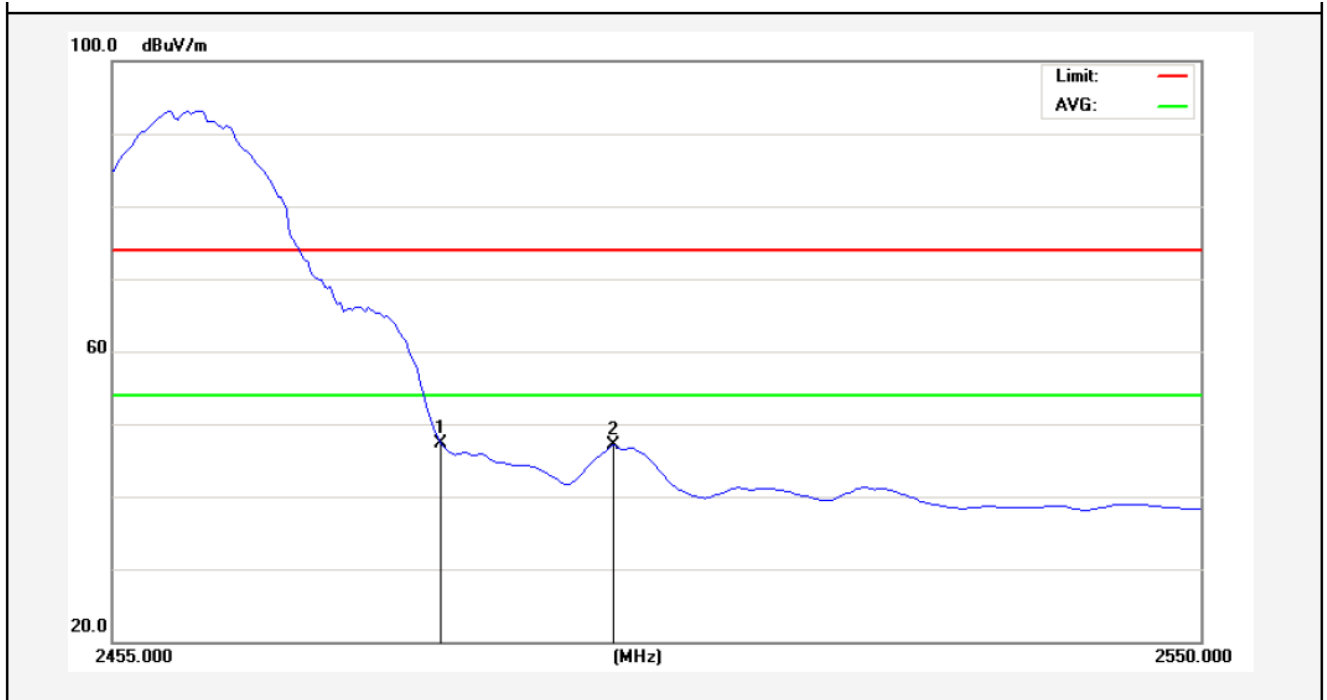
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2374.625	47.86	-2.55	45.31	54.00	-8.69	AVG			
2	2390.000	51.29	-2.51	48.78	54.00	-5.22	AVG			
3	2400.000	67.91	-2.49	65.42	54.00	11.42	AVG			

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	50.08	-2.31	47.77	74.00	-26.23	peak			
2	2498.938	52.66	-2.27	50.39	74.00	-23.61	peak			

Horizontal-AV:

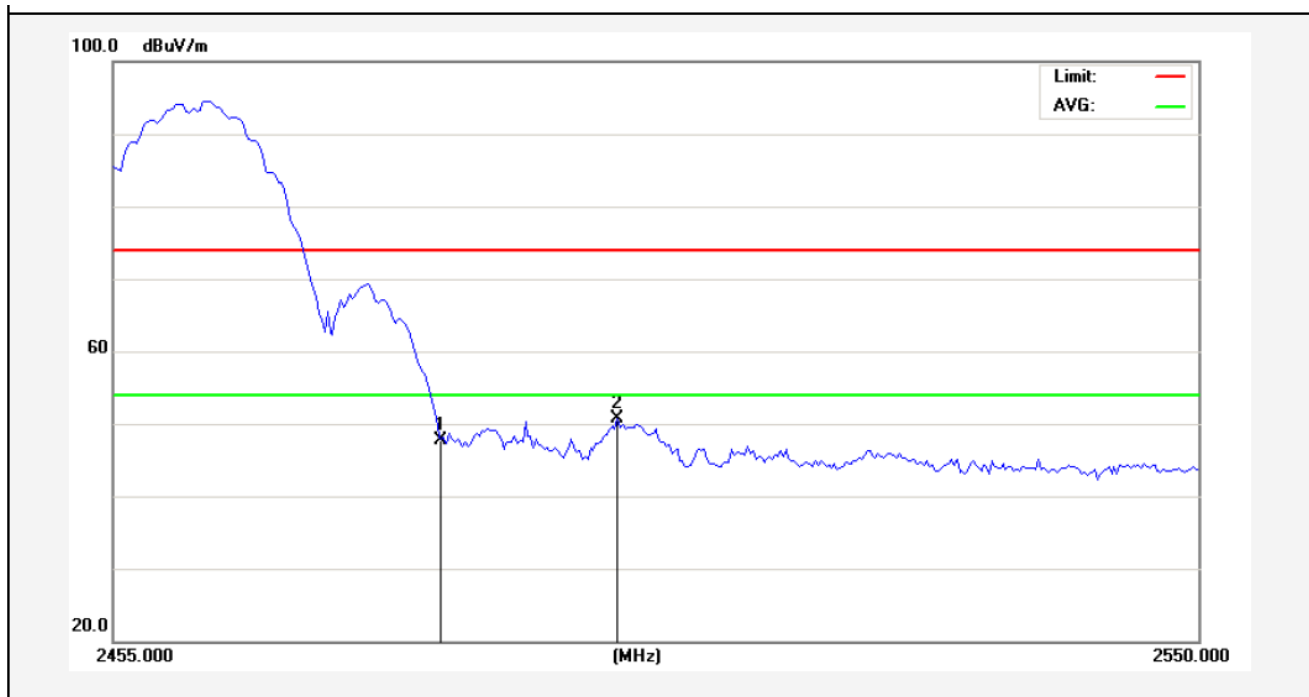


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2483.500	49.67	-2.31	47.36	54.00	-6.64	AVG			
2	2498.463	49.39	-2.27	47.12	54.00	-6.88	AVG			

Test Mode: 802.11b

2462MHz

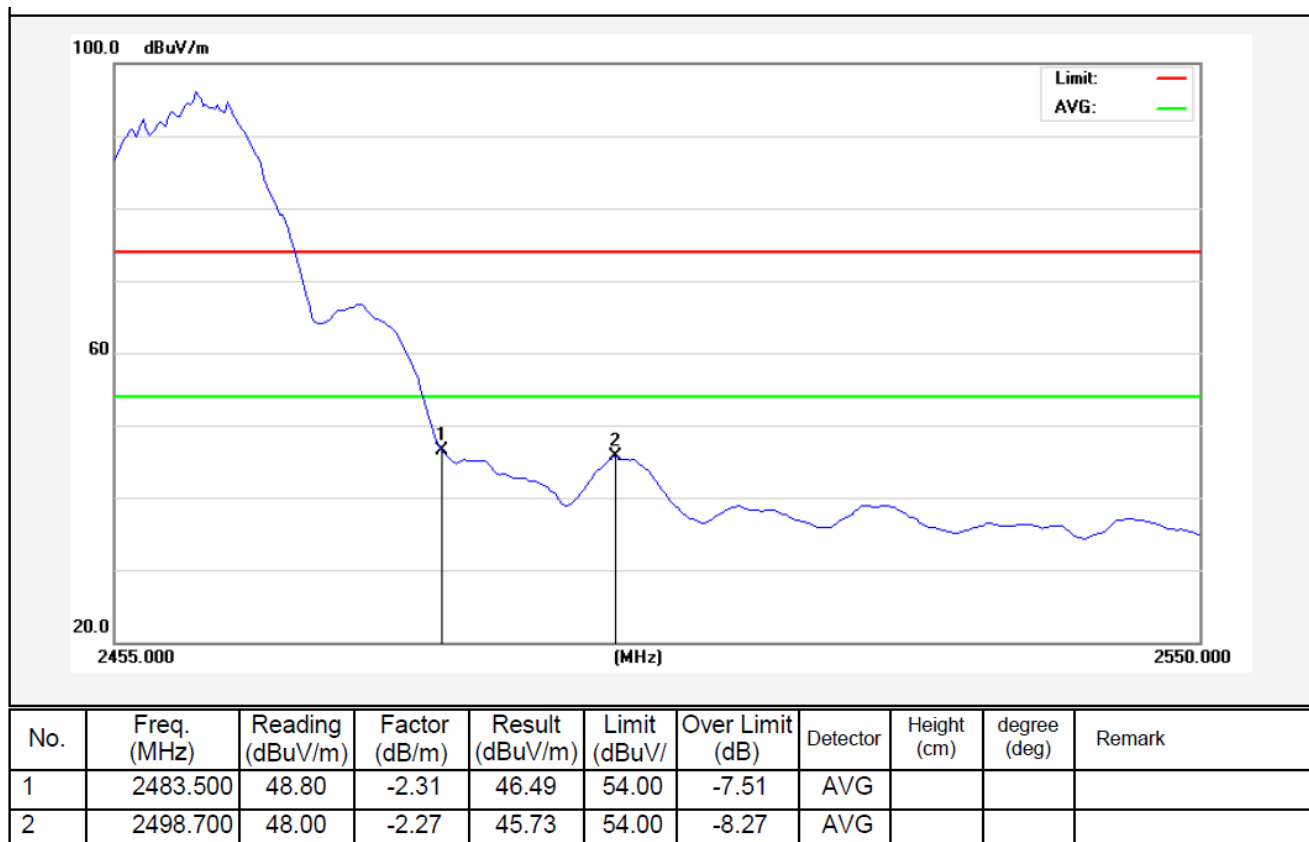
Vertical-PEAK:



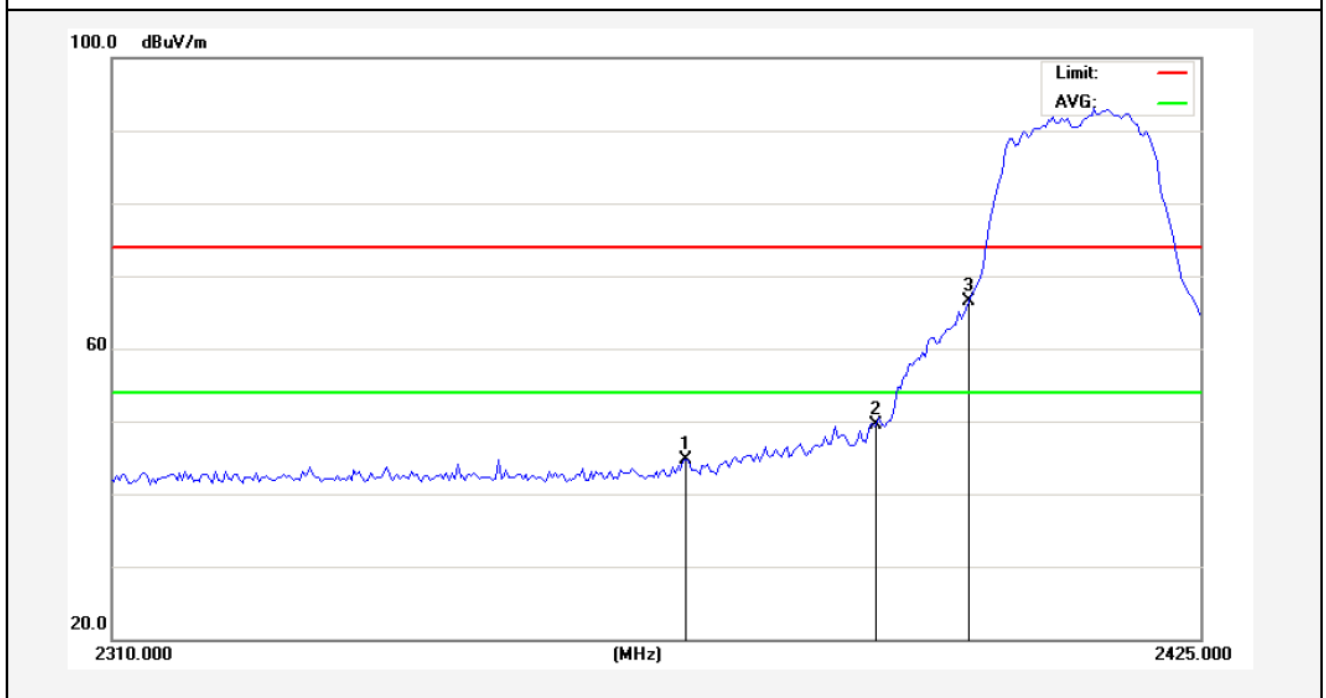
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2483.500	50.11	-2.31	47.80	74.00	-26.20	peak			
2	2498.938	52.95	-2.27	50.68	74.00	-23.32	peak			



Vertical-AV:

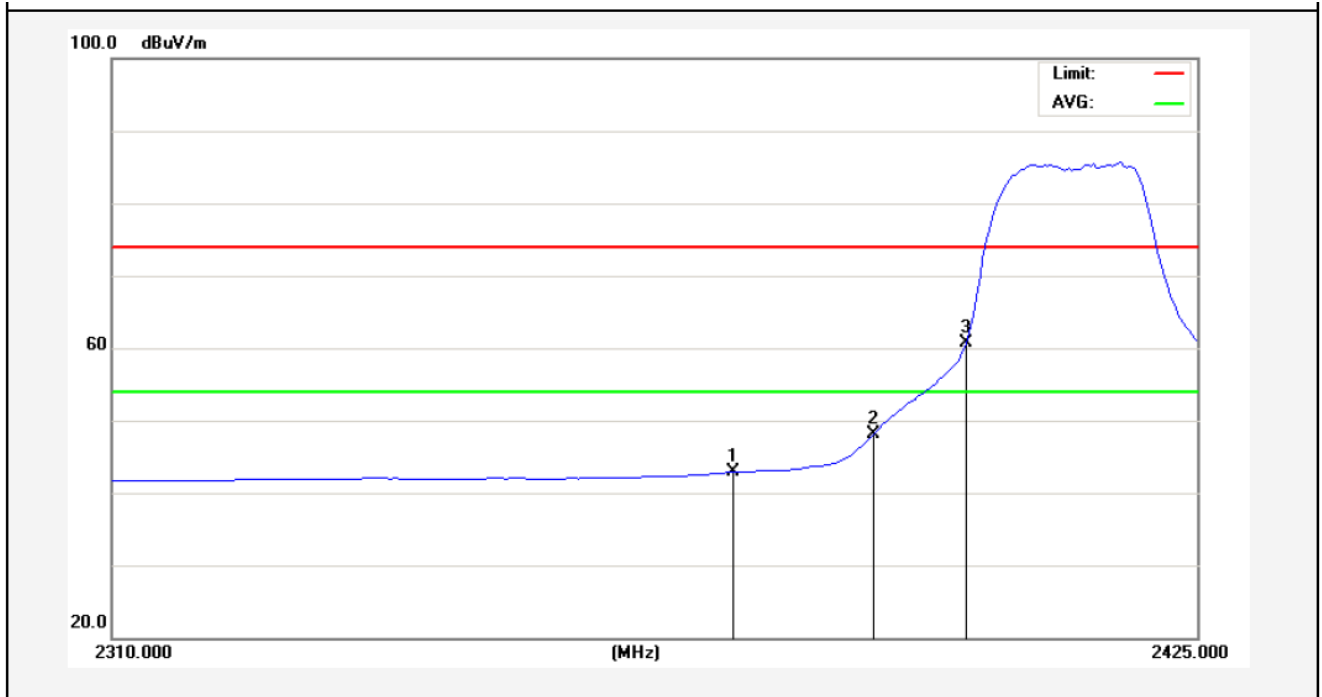


Test Mode: 802.11g  
2412MHz  
Horizontal-PEAK:



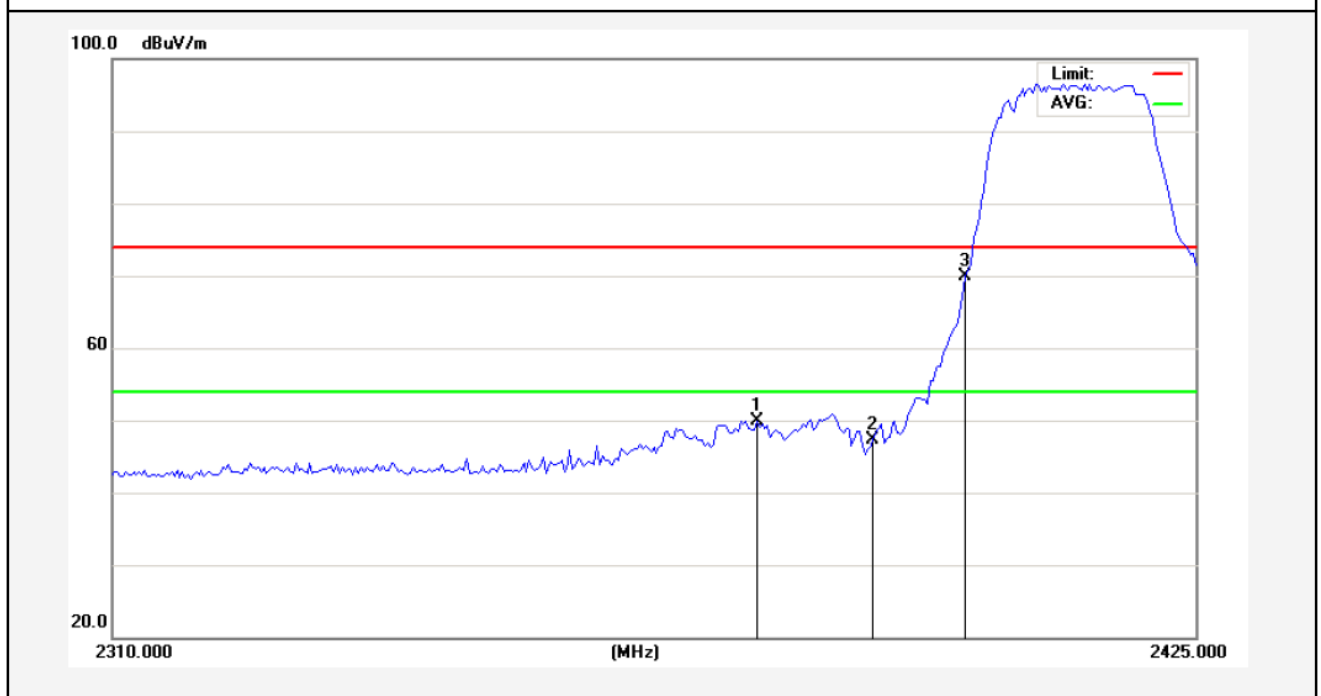
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2370.088	47.25	-2.56	44.69	74.00	-29.31	peak			
2	2390.000	52.08	-2.51	49.57	74.00	-24.43	peak			
3	2400.000	69.02	-2.49	66.53	74.00	-7.47	peak			

Horizontal-AV:



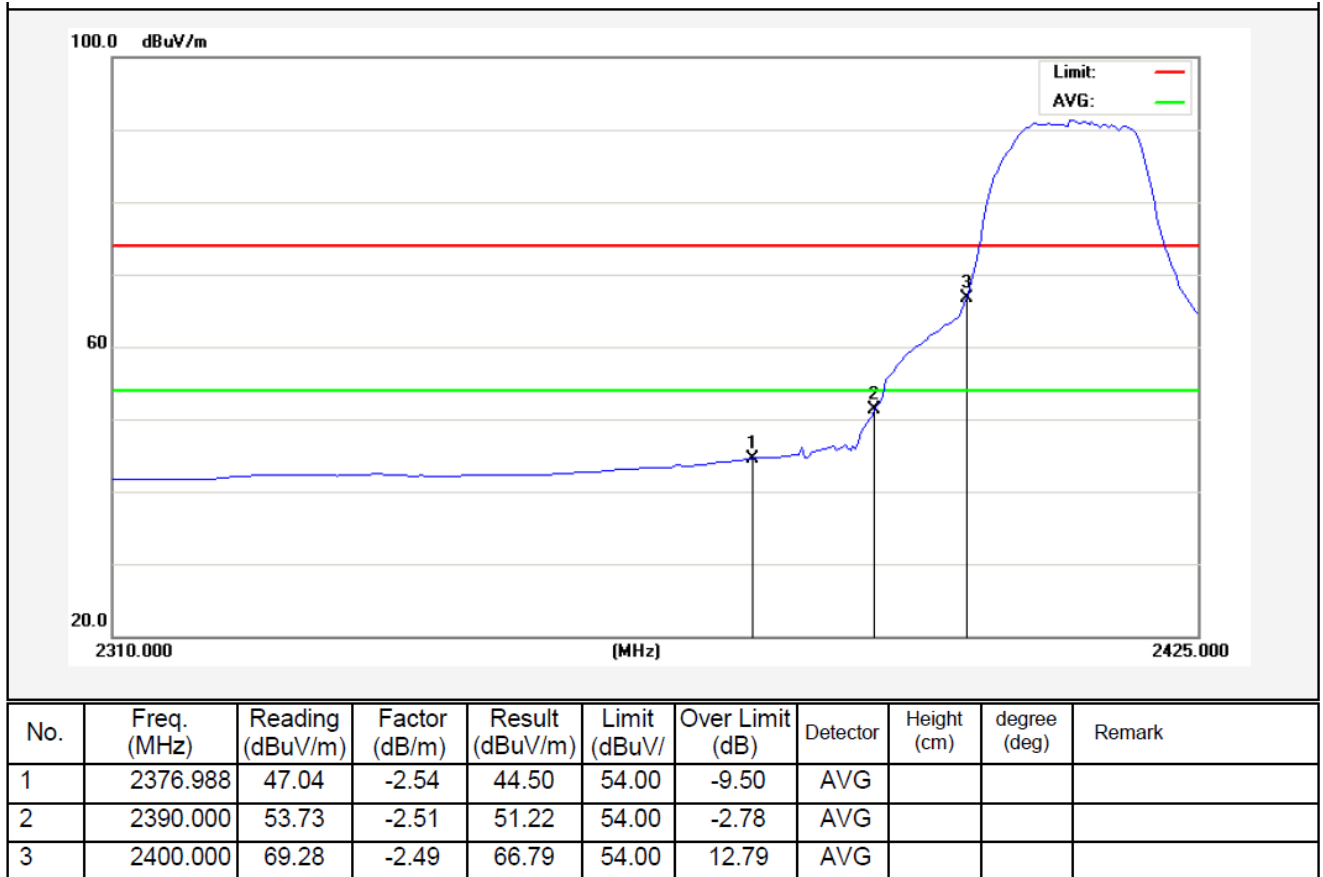
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2375.262	45.40	-2.55	42.85	54.00	-11.15	AVG			
2	2390.000	50.62	-2.51	48.11	54.00	-5.89	AVG			
3	2400.000	63.14	-2.49	60.65	54.00	6.65	AVG			

Test Mode: 802.11g  
2412MHz  
Vertical-PEAK:

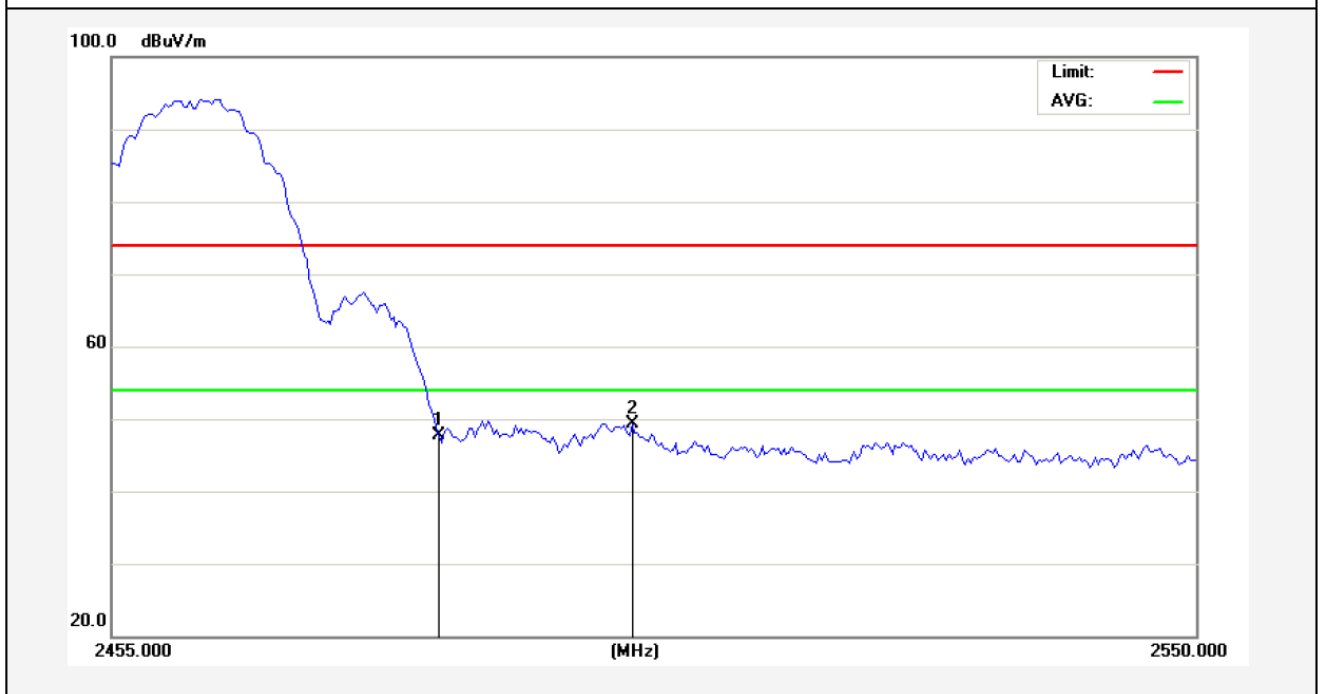


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2377.850	52.37	-2.54	49.83	74.00	-24.17	peak			
2	2390.000	49.82	-2.51	47.31	74.00	-26.69	peak			
3	2400.000	72.36	-2.49	69.87	74.00	-4.13	peak			

Vertical-AV:

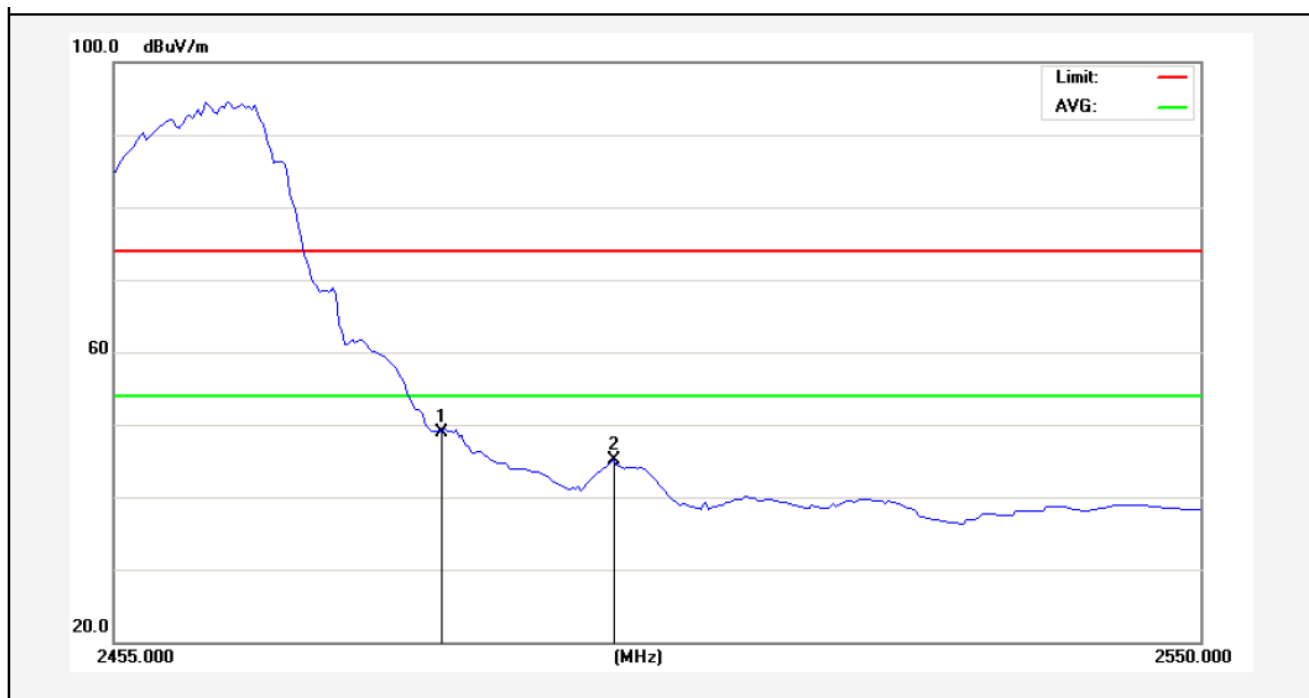


Test Mode: 802.11g  
2462MHz  
Horizontal-PEAK:



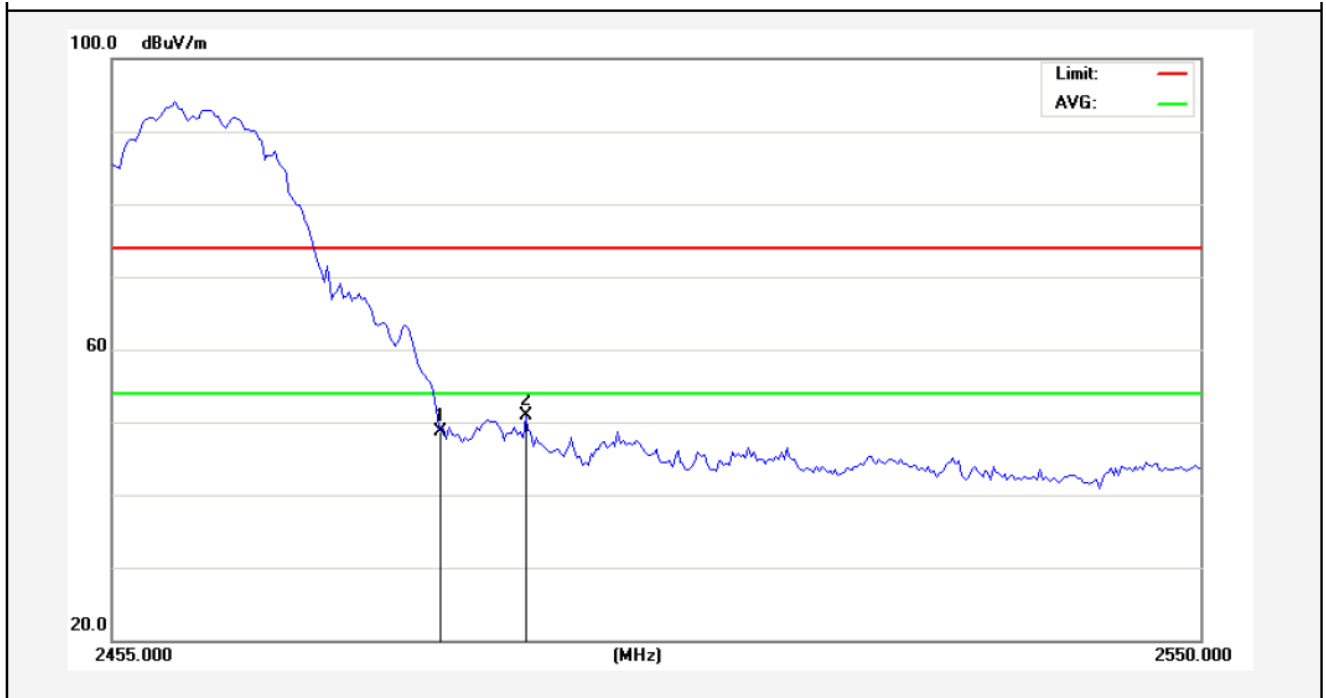
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2483.500	50.08	-2.31	47.77	74.00	-26.23	peak			
2	2500.363	51.54	-2.27	49.27	74.00	-24.73	peak			

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	51.17	-2.31	48.86	54.00	-5.14	AVG			
2	2498.463	47.39	-2.27	45.12	54.00	-8.88	AVG			

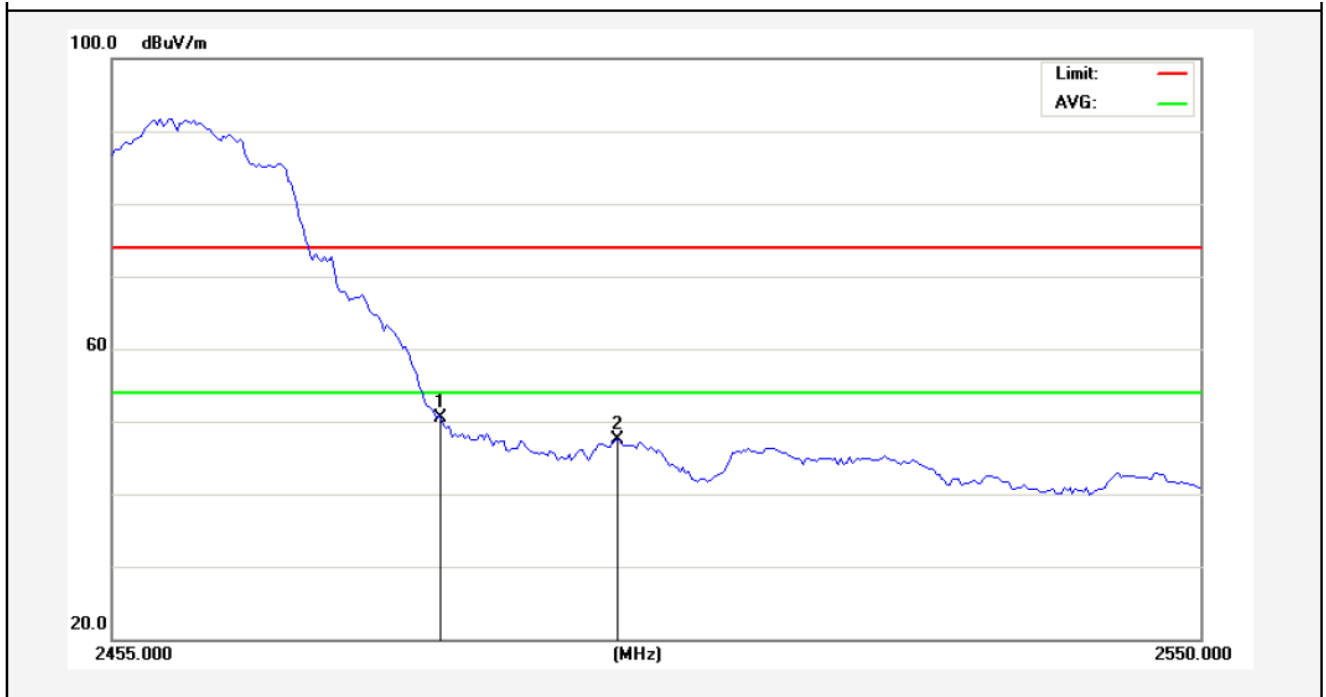
Test Mode: 802.11g  
2462MHz  
Vertical-PEAK:



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	51.11	-2.31	48.80	74.00	-25.20	peak			
2	2490.863	53.13	-2.29	50.84	74.00	-23.16	peak			



Vertical-AV:

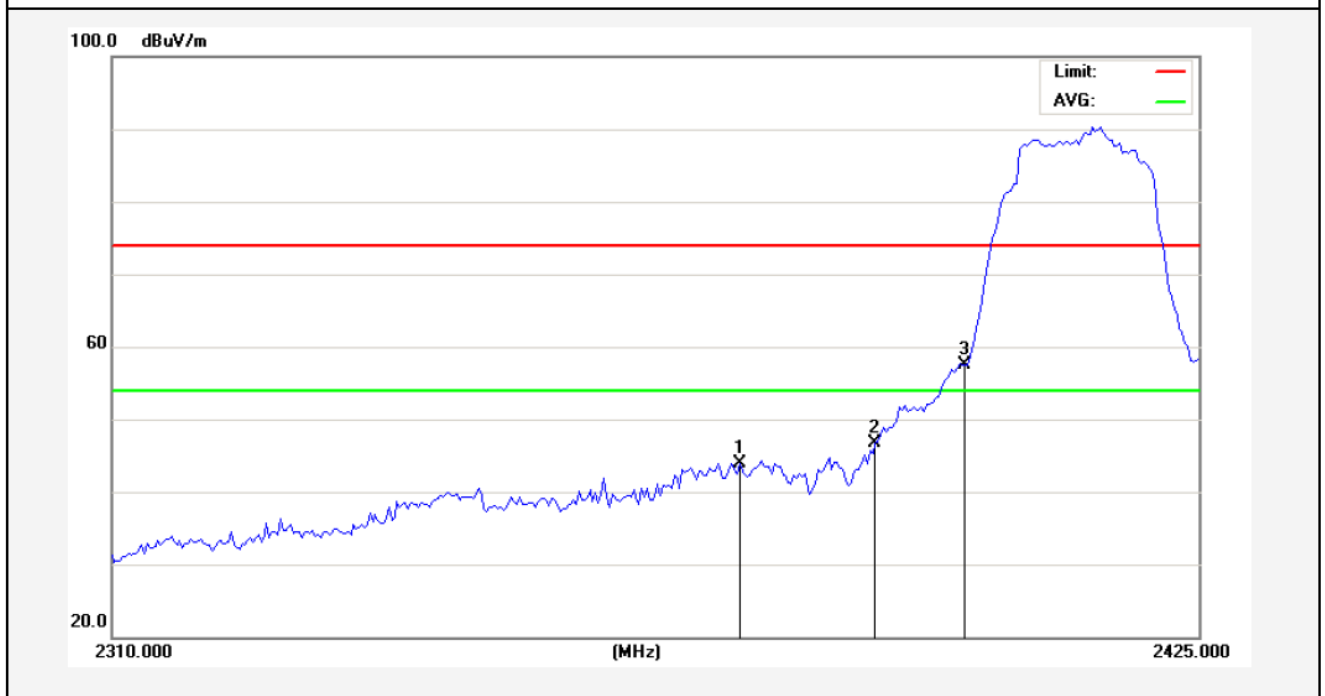


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2483.500	52.80	-2.31	50.49	54.00	-3.51	AVG			
2	2498.938	49.73	-2.27	47.46	54.00	-6.54	AVG			

Test Mode: 802.11n (HT20)

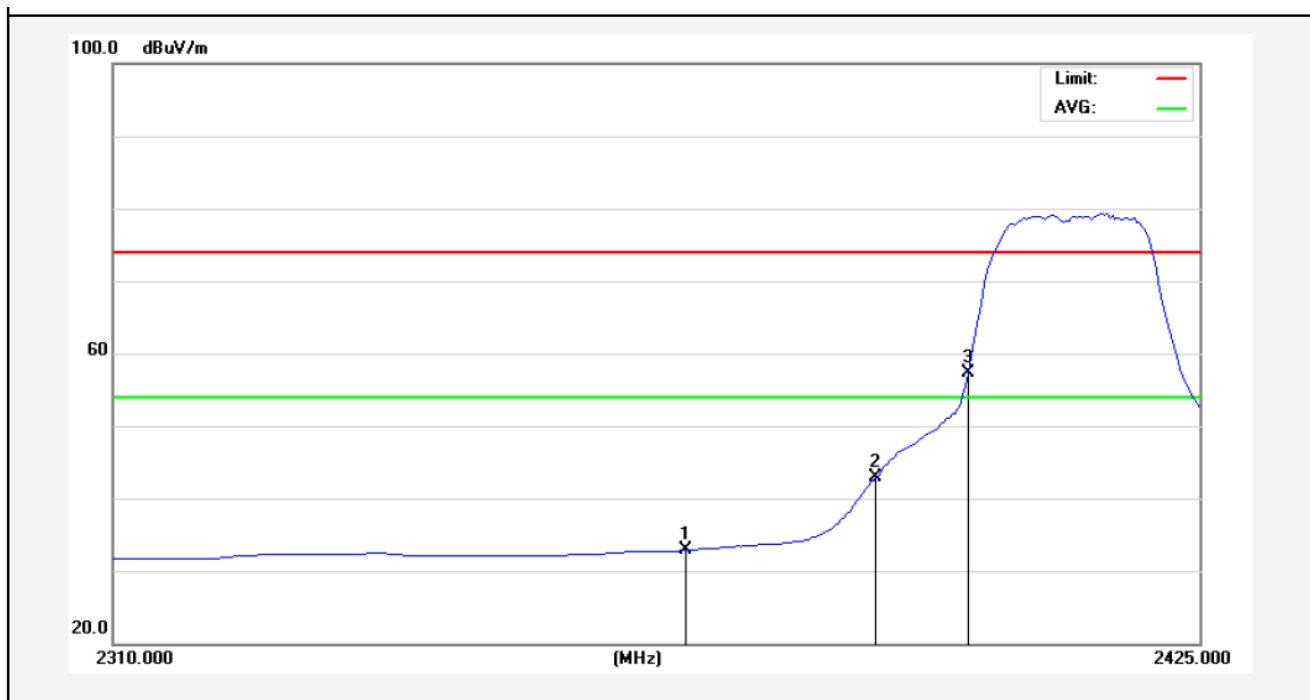
2412MHz

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	2375.838	46.39	-2.55	43.84	74.00	-30.16	peak			
2	2390.000	49.24	-2.51	46.73	74.00	-27.27	peak			
3	2400.000	59.92	-2.49	57.43	74.00	-16.57	peak			

Horizontal-AV:

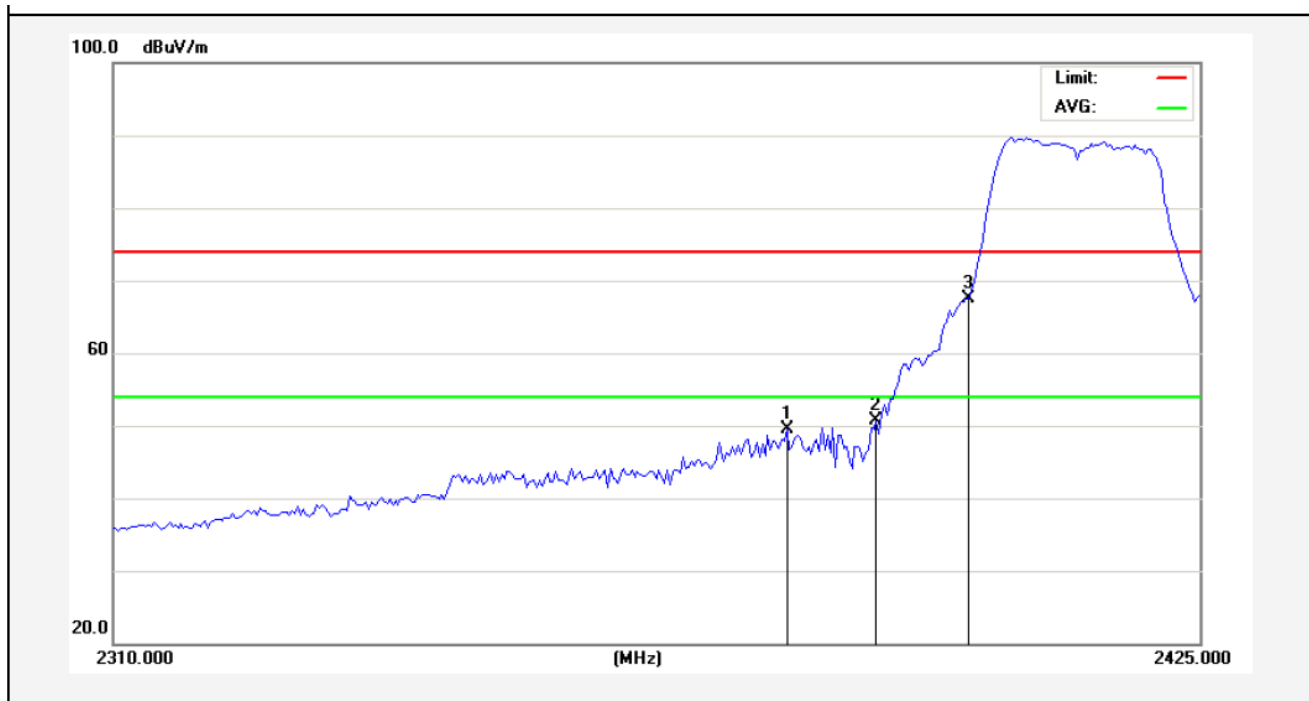


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2370.088	35.43	-2.56	32.87	54.00	-21.13	AVG			
2	2390.000	45.44	-2.51	42.93	54.00	-11.07	AVG			
3	2400.000	59.82	-2.49	57.33	54.00	3.33	AVG			

Test Mode: 802.11n (HT20)

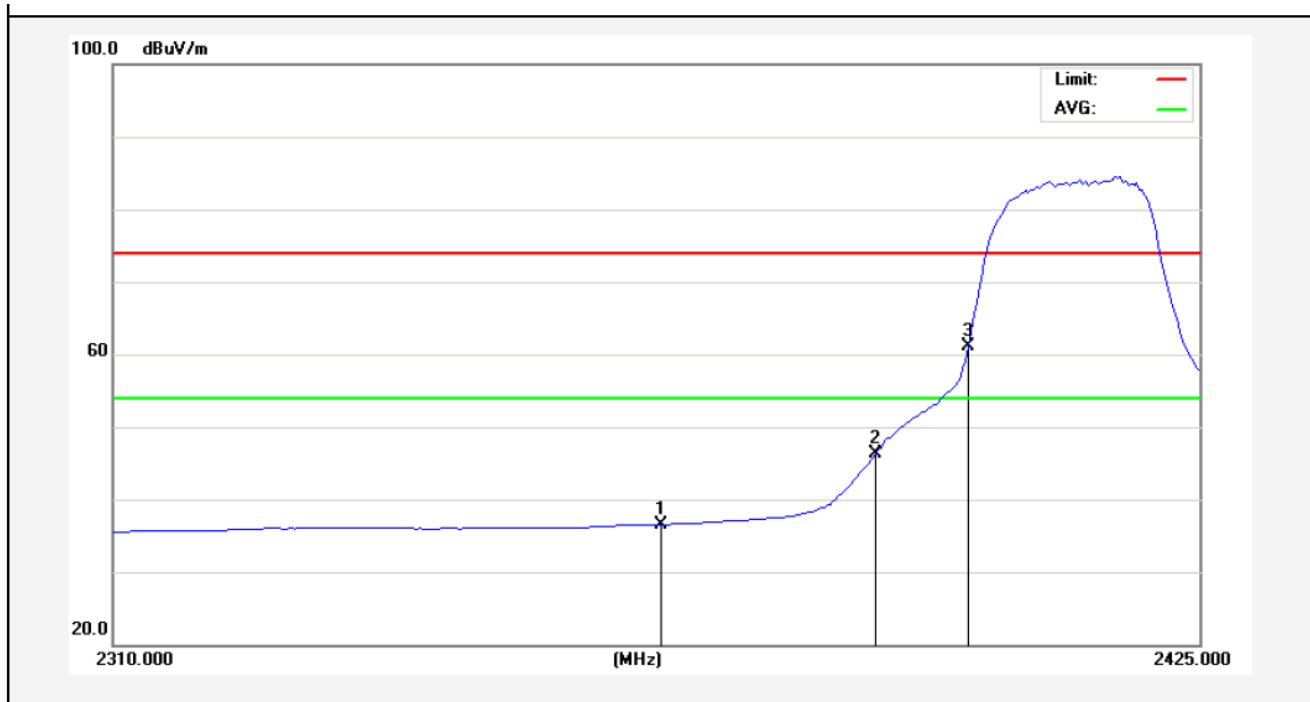
2412MHz

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	2380.725	52.05	-2.53	49.52	74.00	-24.48	peak			
2	2390.000	53.26	-2.51	50.75	74.00	-23.25	peak			
3	2400.000	70.04	-2.49	67.55	74.00	-6.45	peak			

Vertical-AV:

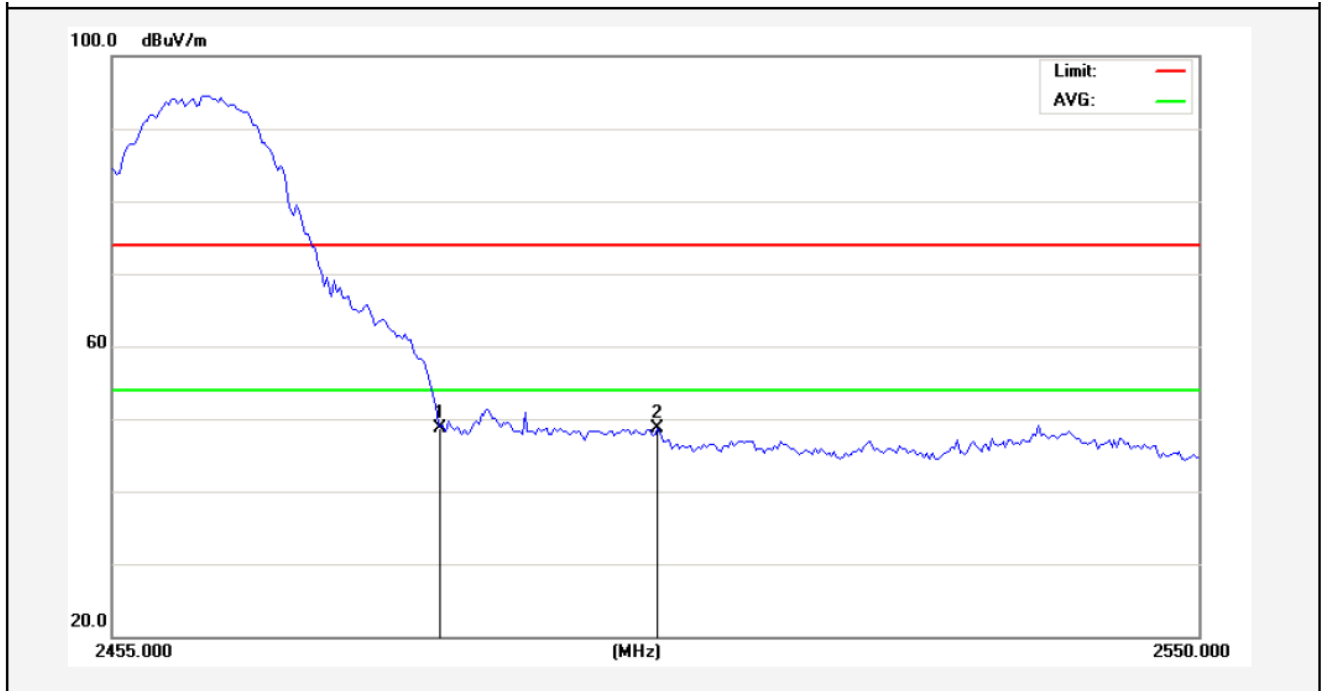


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2367.500	39.11	-2.56	36.55	54.00	-17.45	AVG			
2	2390.000	48.81	-2.51	46.30	54.00	-7.70	AVG			
3	2400.000	63.51	-2.49	61.02	54.00	7.02	AVG			

Test Mode: 802.11n (HT20)

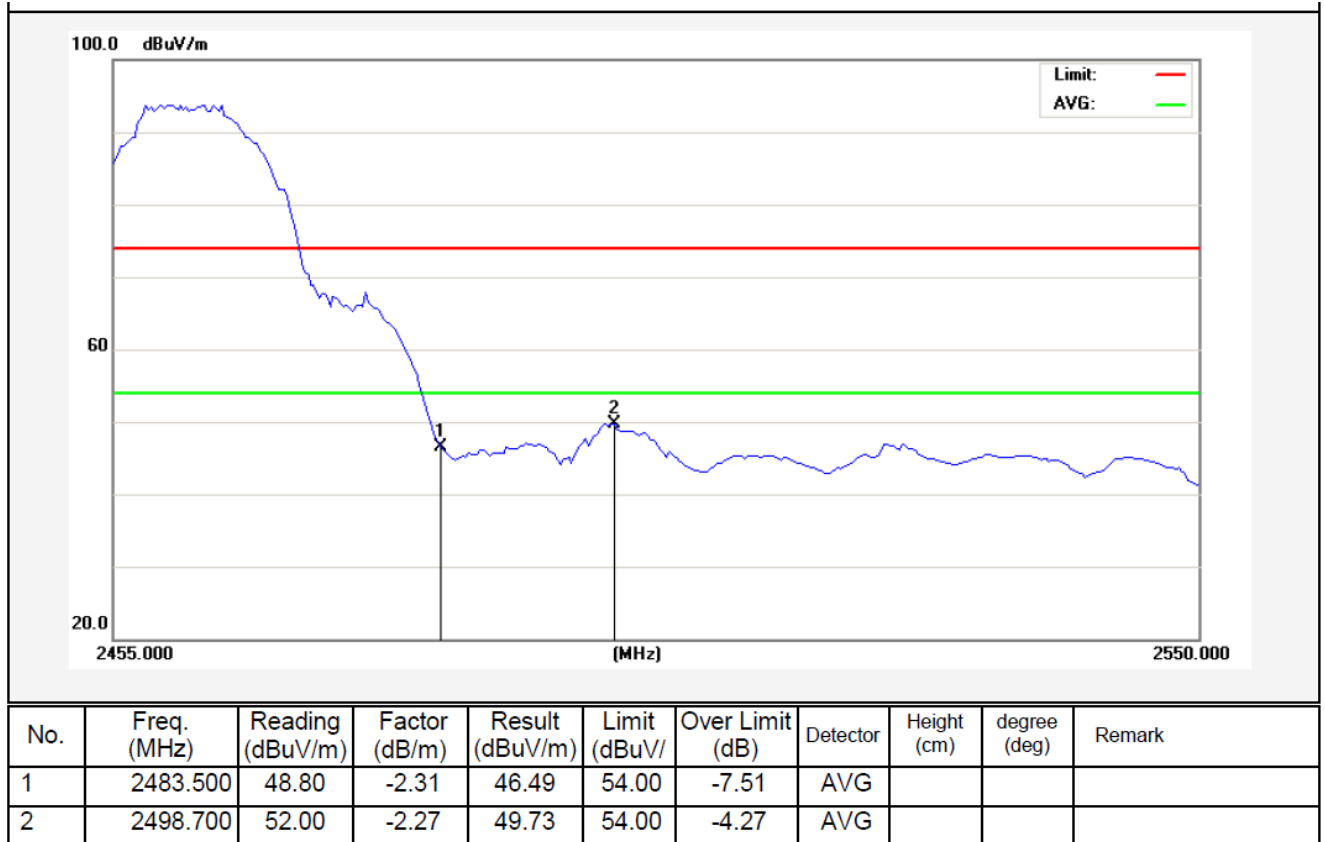
2462MHz

Horizontal-PEAK:

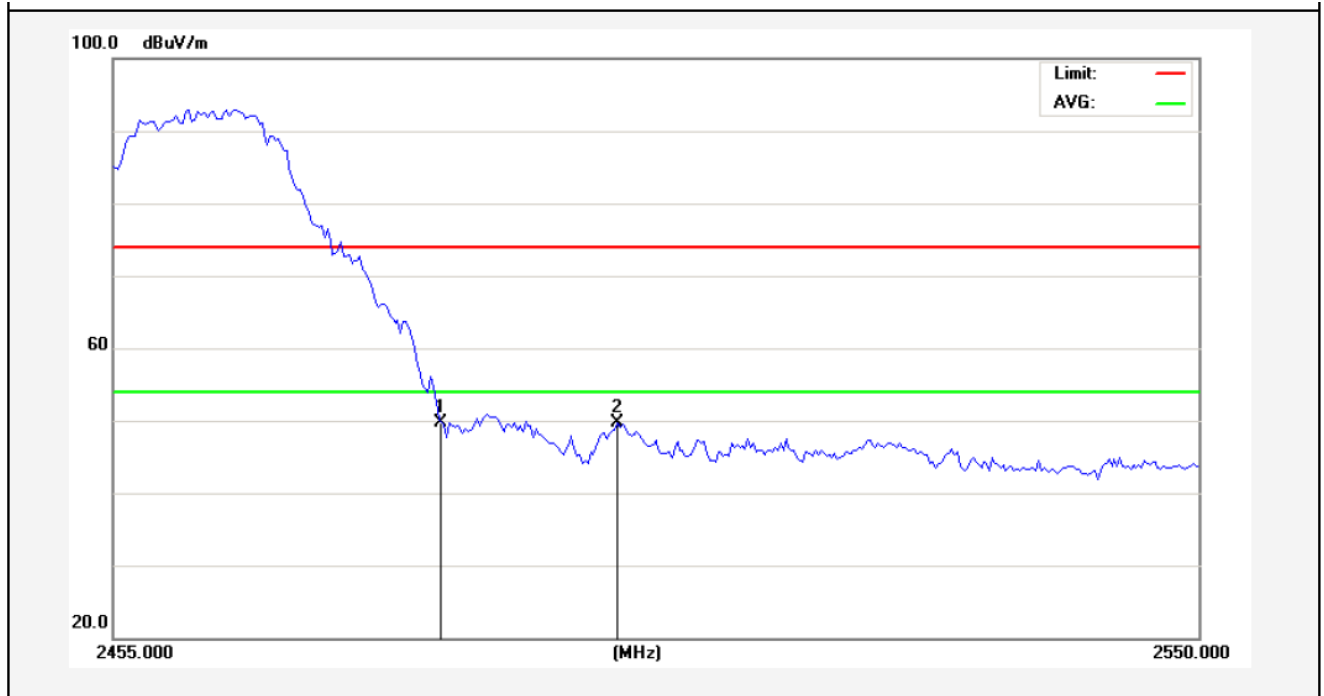


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2483.500	51.11	-2.31	48.80	74.00	-25.20	peak			
2	2502.500	50.88	-2.26	48.62	74.00	-25.38	peak			

Horizontal-AV:



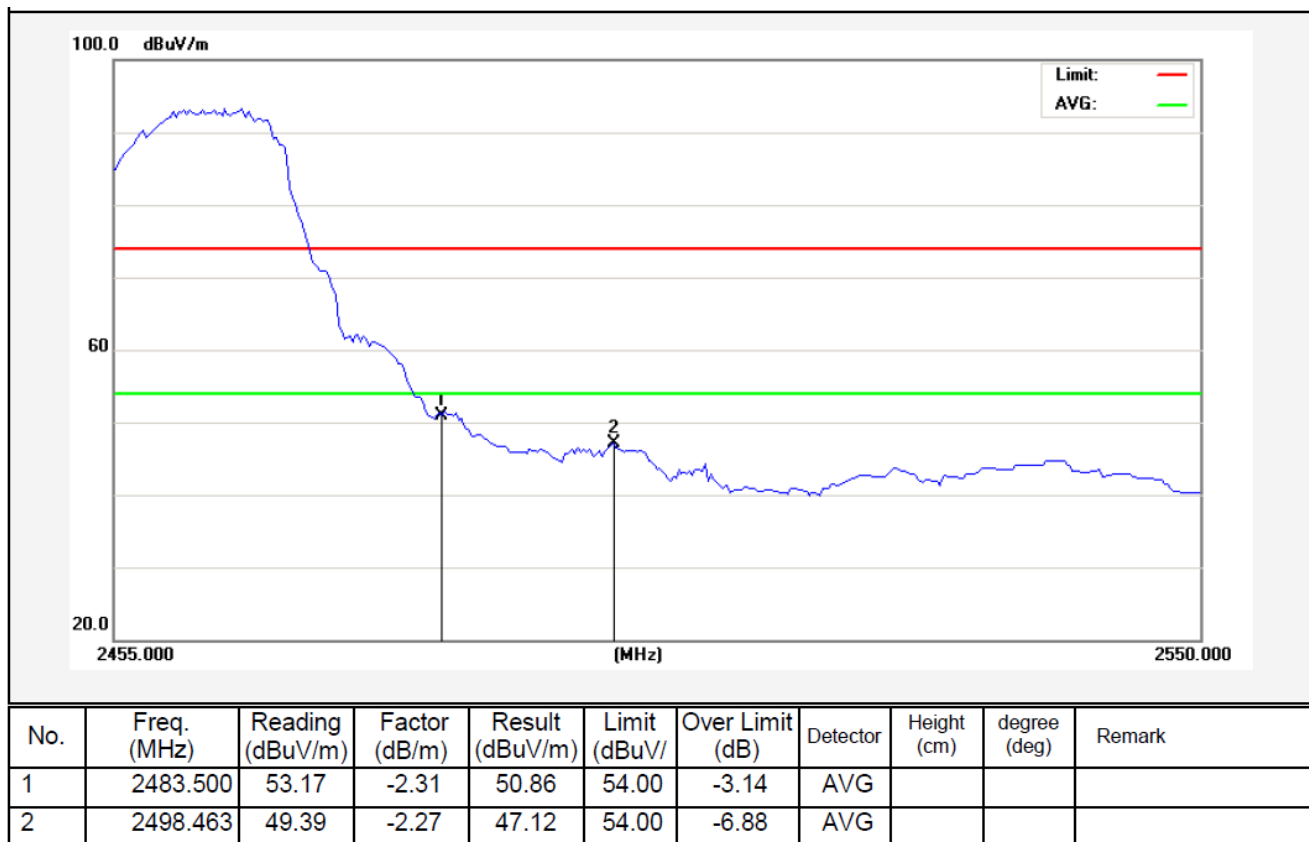
Test Mode: 802.11n (HT20)  
2462MHz  
Vertical-PEAK:



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	52.11	-2.31	49.80	74.00	-24.20	peak			
2	2498.938	51.95	-2.27	49.68	74.00	-24.32	peak			



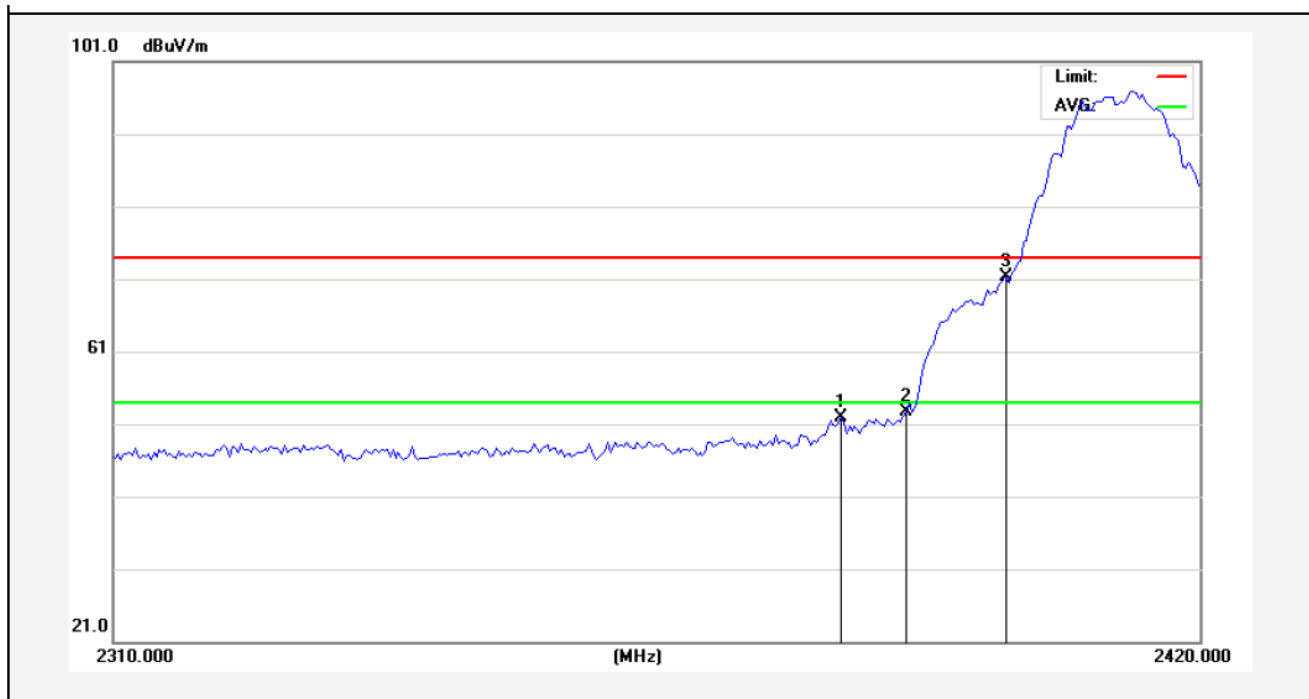
Vertical-AV:



Test Mode: 802.11n (HT40)

2422MHz

Horizontal-PEAK:



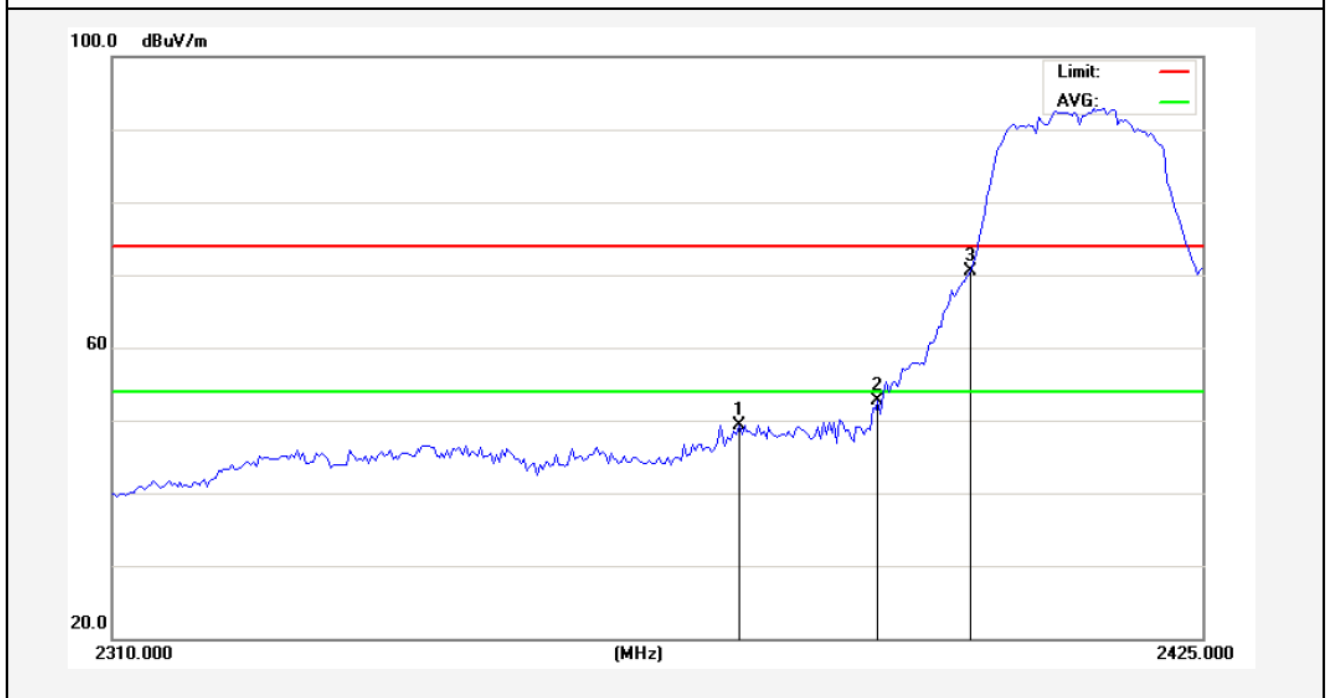
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2383.150	54.47	-2.53	51.94	74.00	-22.06	peak			
2	2390.000	55.25	-2.51	52.74	74.00	-21.26	peak			
3	2400.000	73.88	-2.49	71.39	74.00	-2.61	peak			

Horizontal-AV:



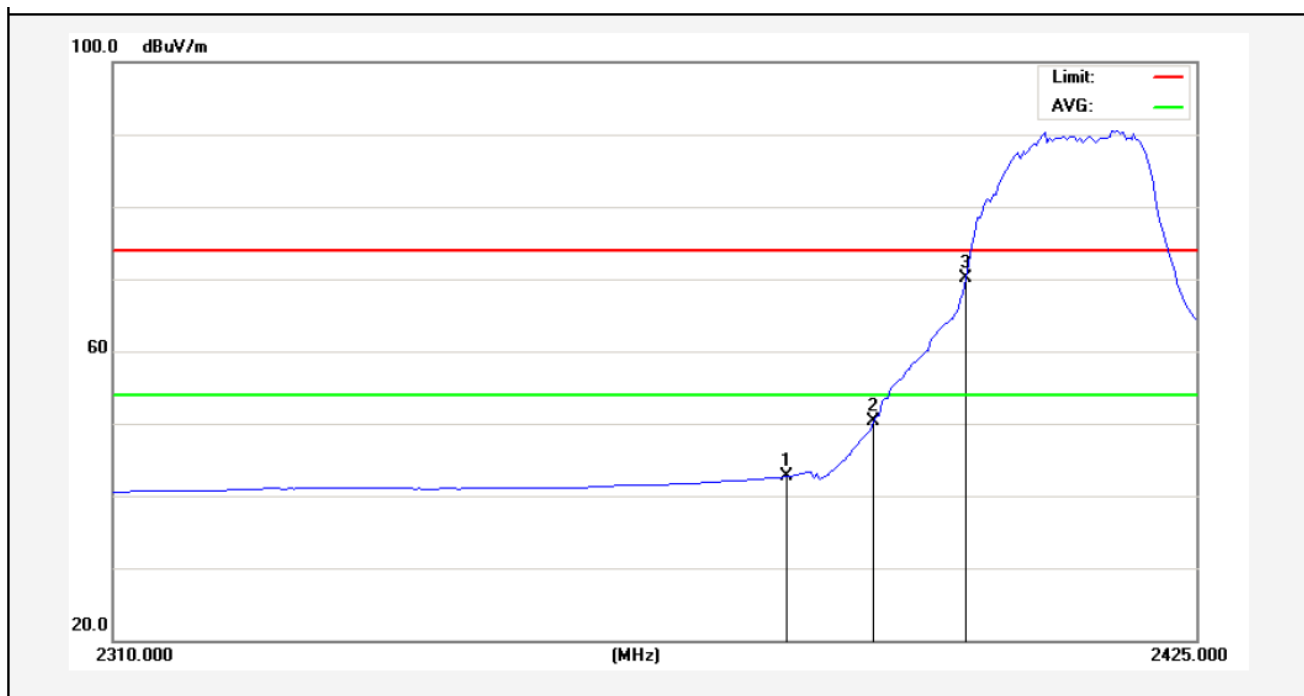
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2374.625	47.86	-2.55	45.31	54.00	-8.69	AVG			
2	2390.000	50.79	-2.51	48.28	54.00	-5.72	AVG			
3	2400.000	71.41	-2.49	68.92	54.00	14.92	AVG			

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



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	2375.550	51.95	-2.55	49.40	74.00	-24.60	peak			
2	2390.000	55.26	-2.51	52.75	74.00	-21.25	peak			
3	2400.000	73.04	-2.49	70.55	74.00	-3.45	peak			

Vertical-AV:

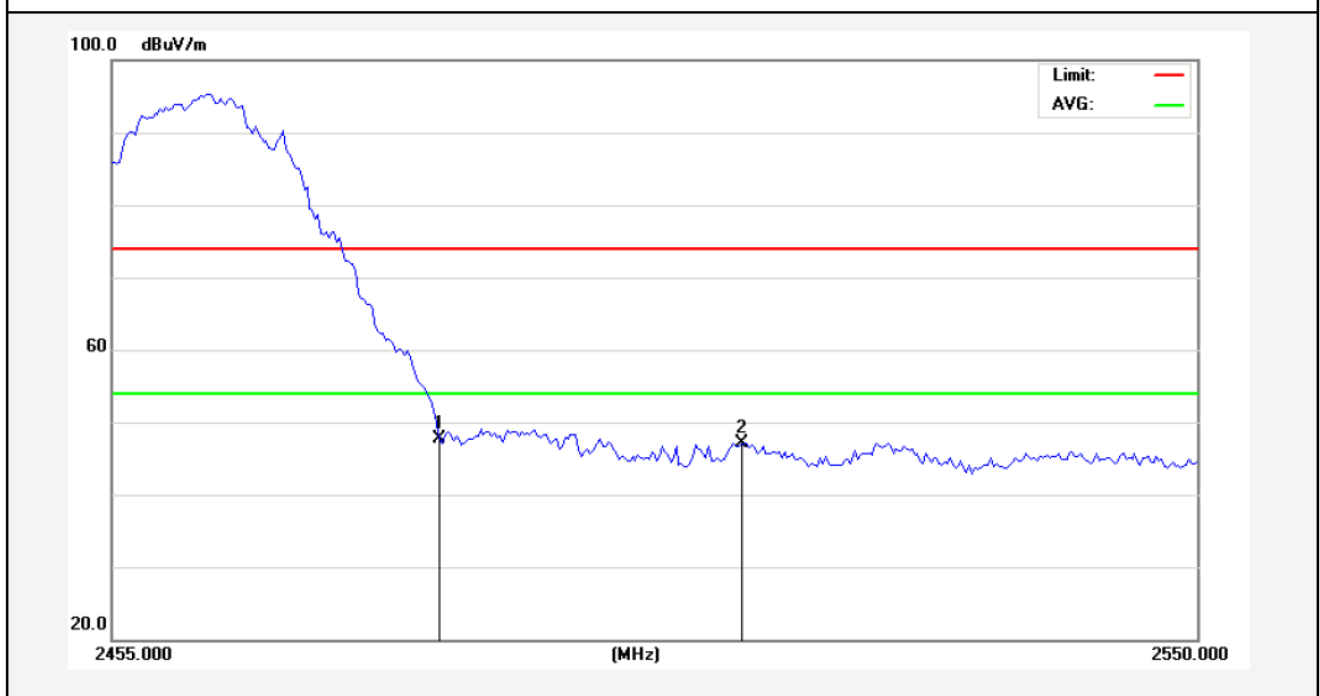


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2380.725	45.16	-2.53	42.63	54.00	-11.37	AVG			
2	2390.000	52.81	-2.51	50.30	54.00	-3.70	AVG			
3	2400.000	72.51	-2.49	70.02	54.00	16.02	AVG			

Test Mode: 802.11n (HT40)

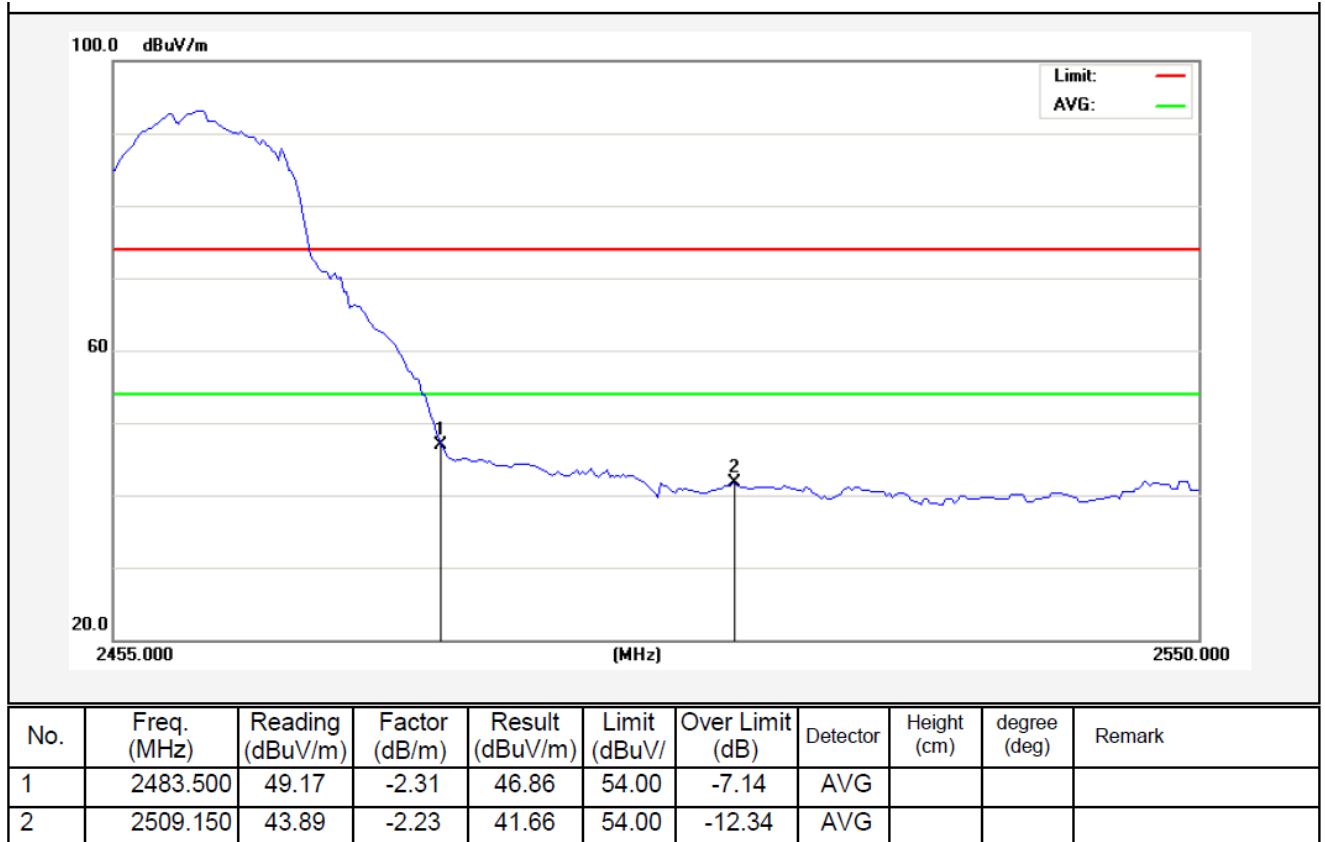
2452MHz

Horizontal-PEAK:

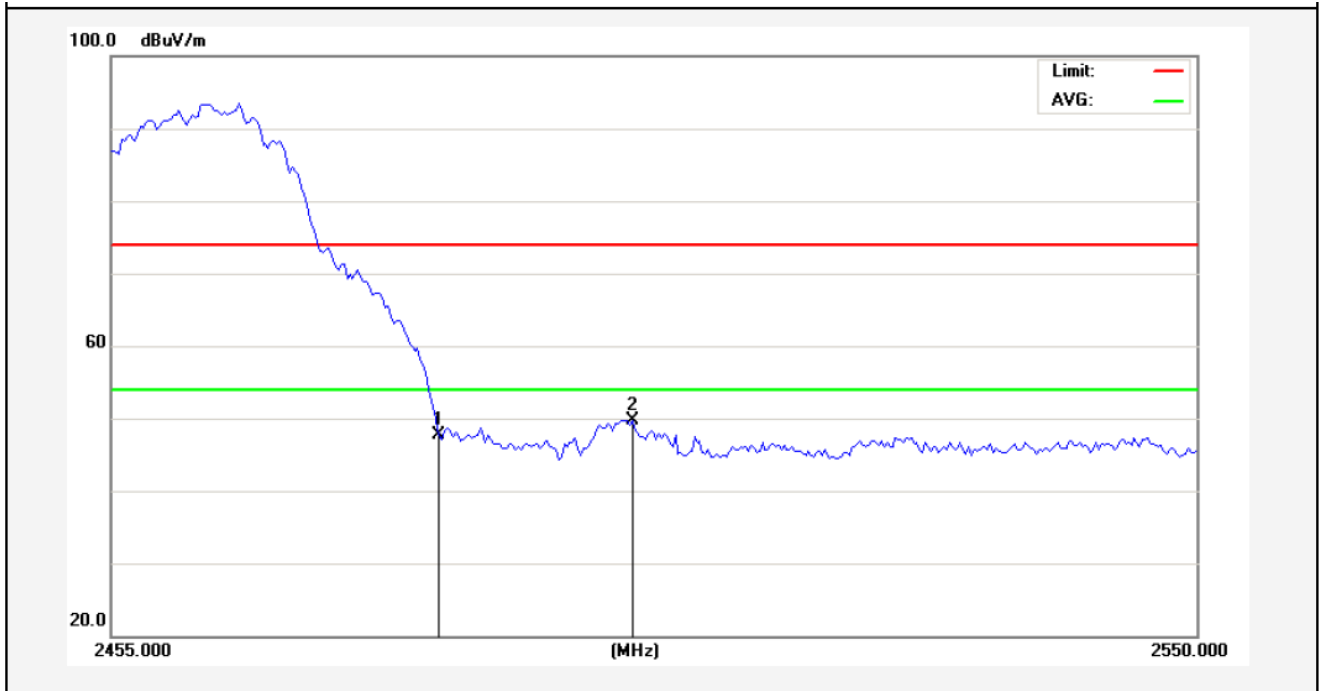


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	2483.500	50.08	-2.31	47.77	74.00	-26.23	peak			
2	2509.863	49.37	-2.22	47.15	74.00	-26.85	peak			

Horizontal-AV:



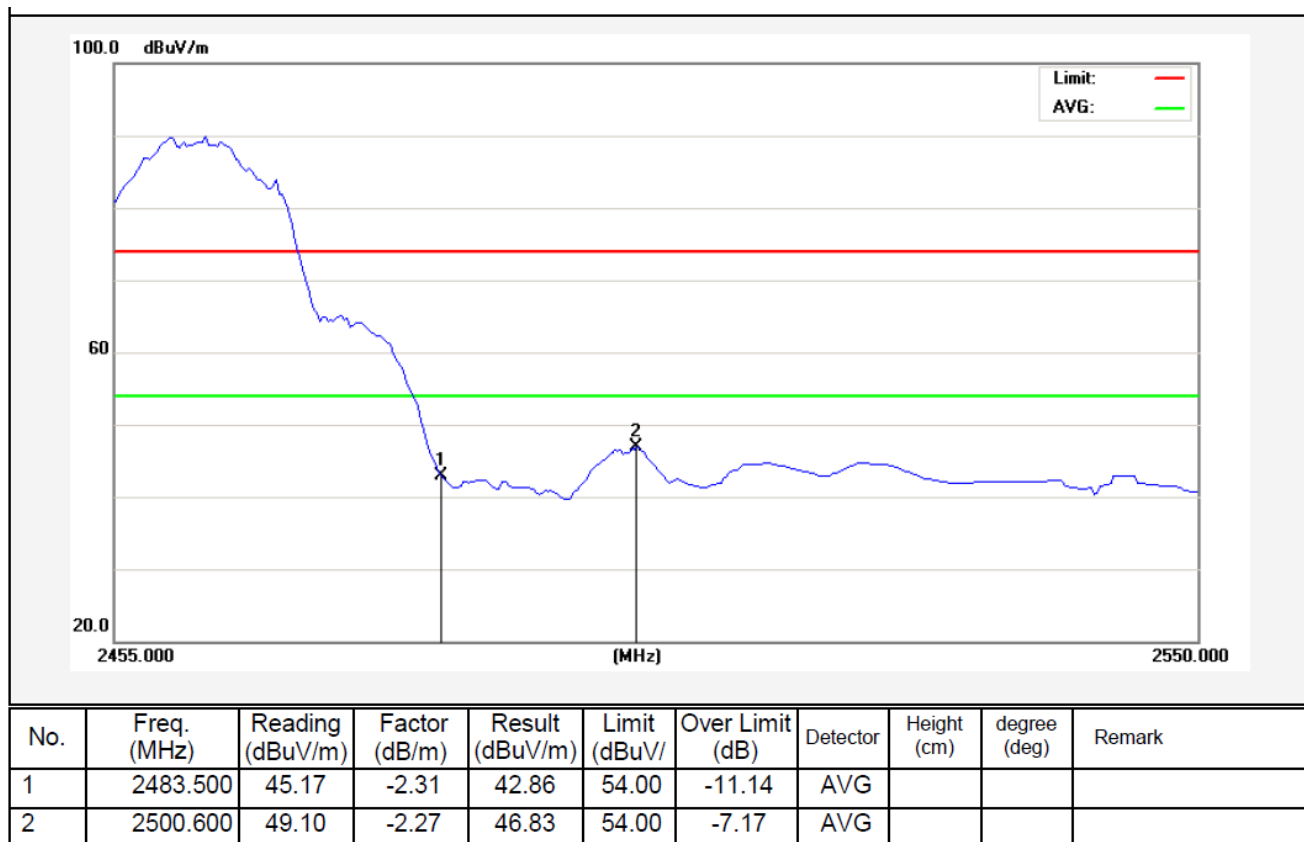
Test Mode: 802.11n (HT40)  
2452MHz  
Vertical-PEAK:



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	50.08	-2.31	47.77	74.00	-26.23	peak			
2	2500.363	52.04	-2.27	49.77	74.00	-24.23	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	-7.58	-	8.00	Pass
Mid	2437	-5.69	-		Pass
High	2462	-4.25	-		Pass

Test mode: IEEE 802.11g

Channel	Frequency (MHz)	PPSD (dBm)	ΣPPSD (dBm)	Limit (dBm)	Result
Low	2412	-16.30	-	8.00	Pass
Mid	2437	-16.89	-		Pass
High	2462	-17.50	-		Pass

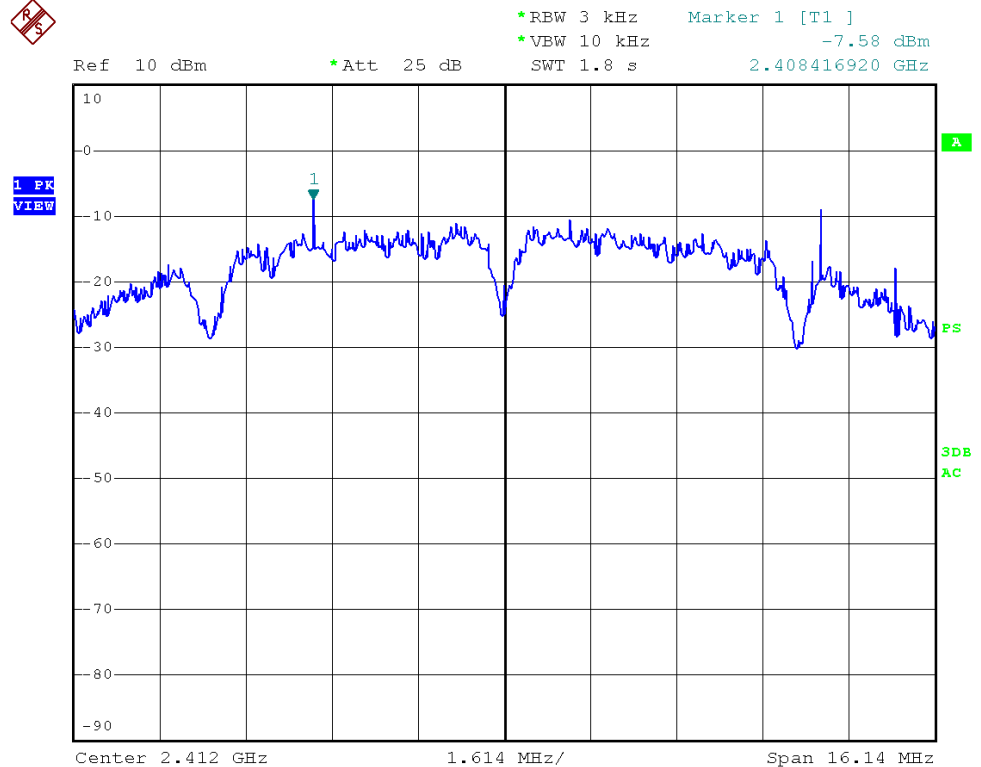
Test mode: IEEE 802.11n (HT20)

Channel	Frequency (MHz)	PPSD (dBm/3KHz)	ΣPPSD (dBm/3KHz)	Limit (dBm)	Result
Low	2412	-15.71	-	8.00	Pass
Mid	2437	-16.69	-		Pass
High	2462	-17.26	-		Pass

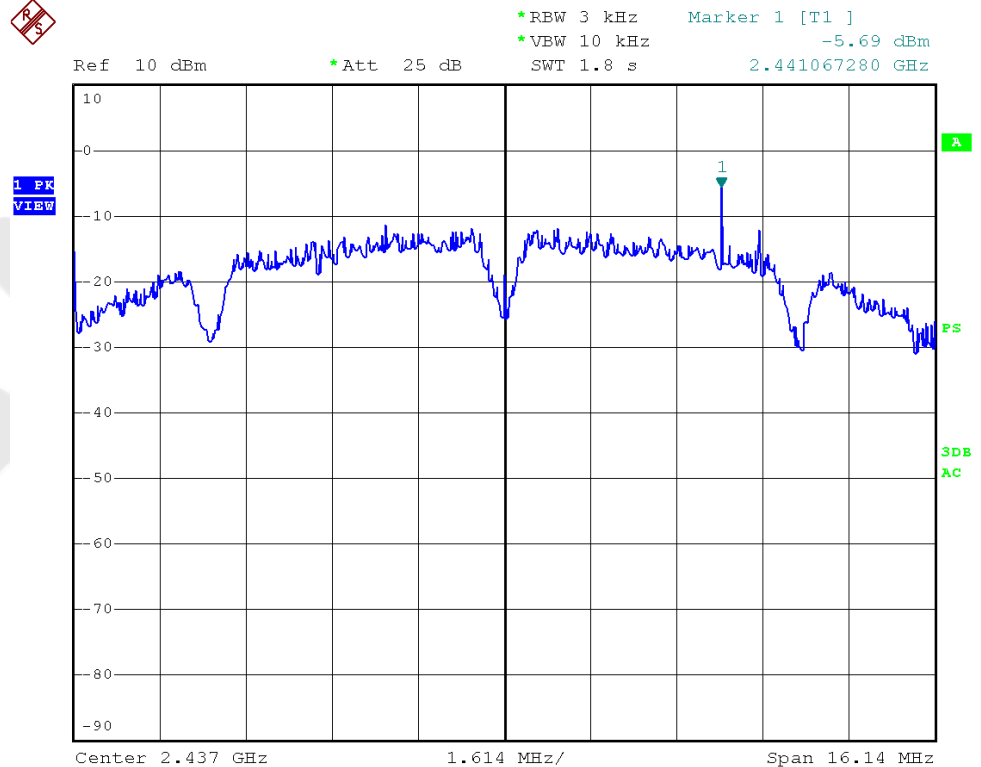
Test mode: IEEE 802.11n (HT40)

Channel	Frequency (MHz)	PPSD (dBm/3KHz)	ΣPPSD (dBm/3KHz)	Limit (dBm)	Result
Low	2422	-16.97	-	8.00	Pass
Mid	2437	-17.24	-		Pass
High	2452	-17.48	-		Pass

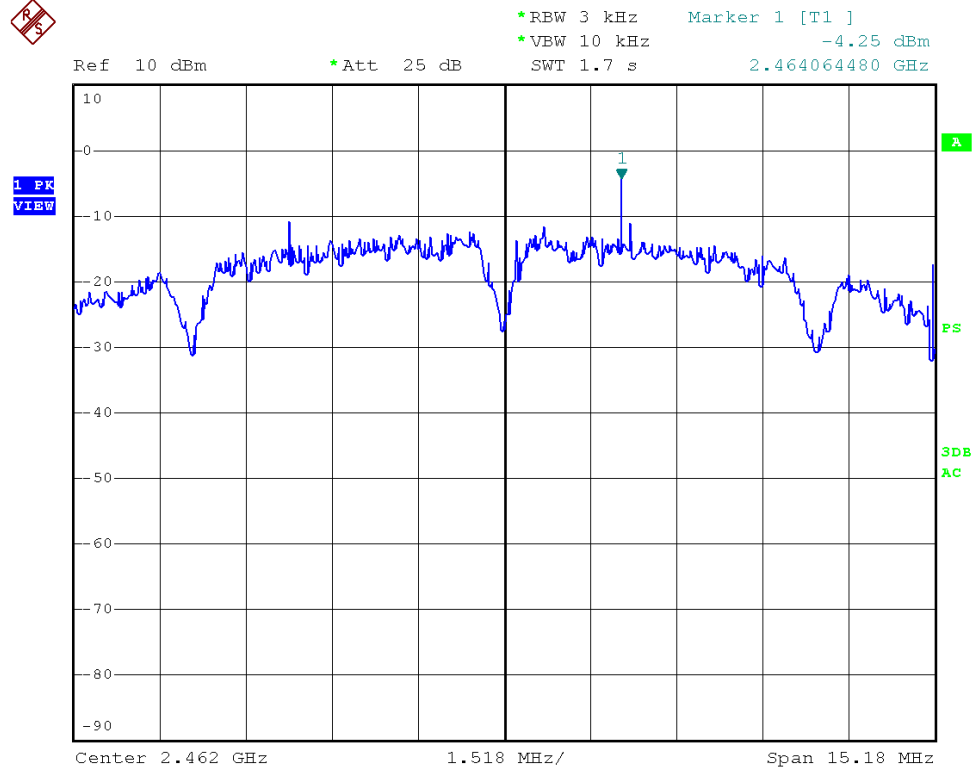
802.11 b CH--Low



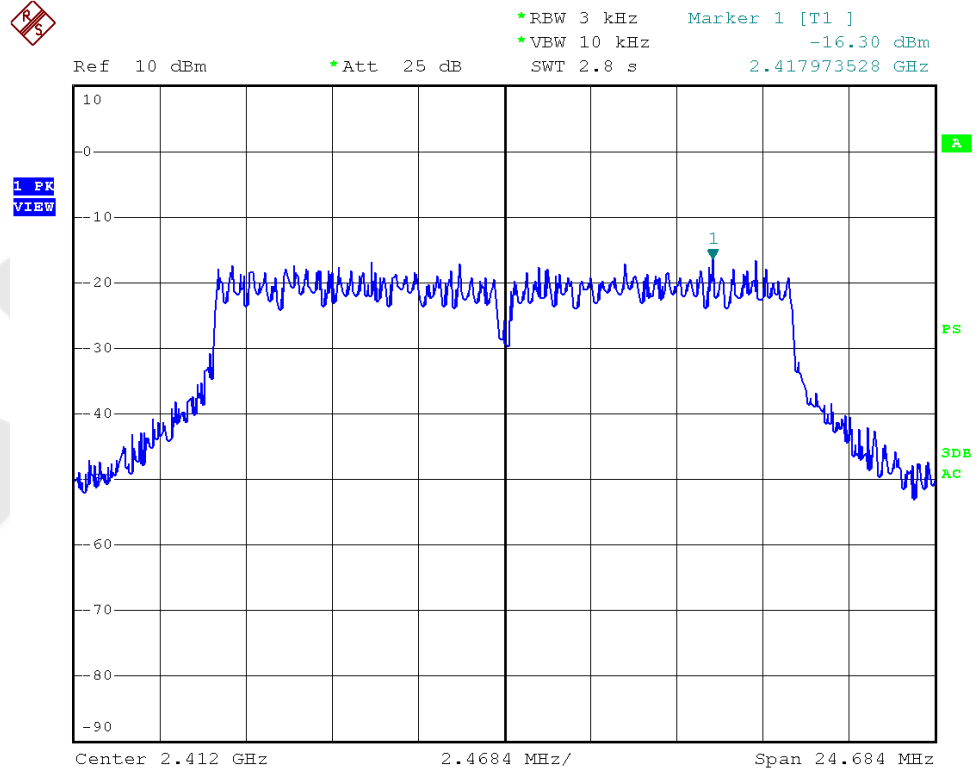
802.11 b CH--Mid



802.11 b CH--High

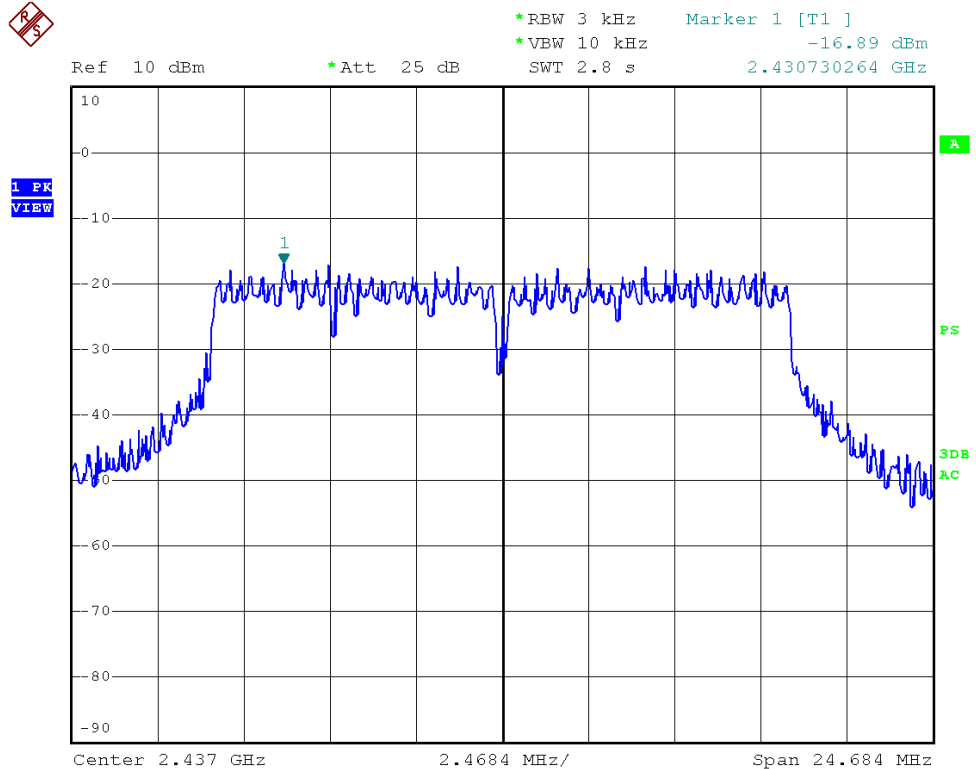


802.11g CH--Low



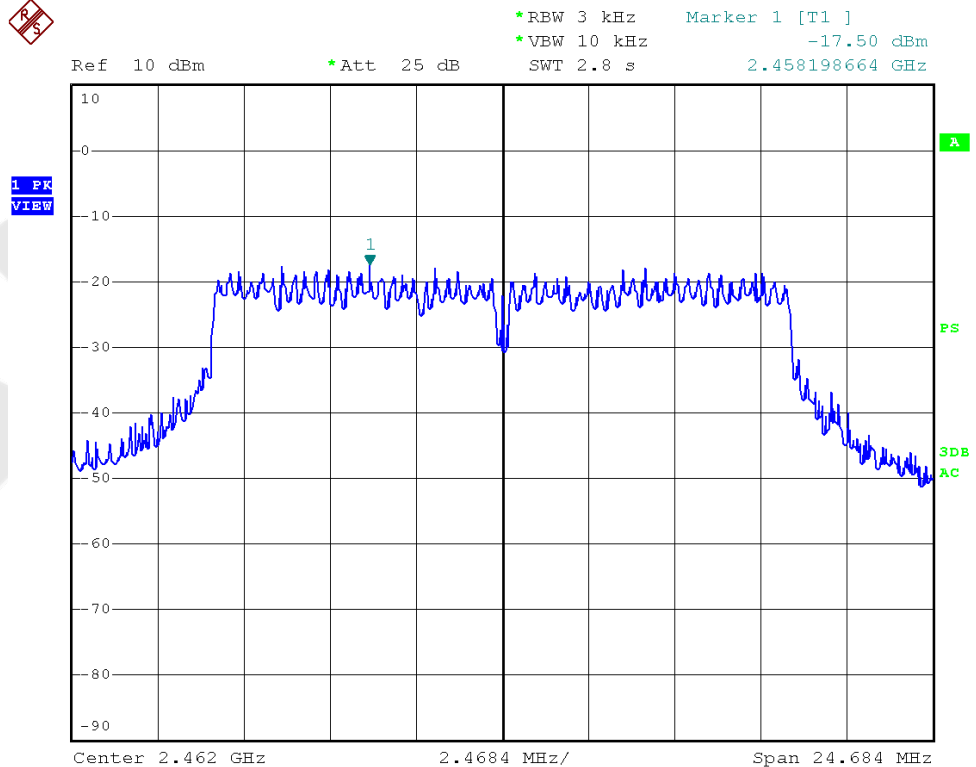
802.11g

CH--Mid

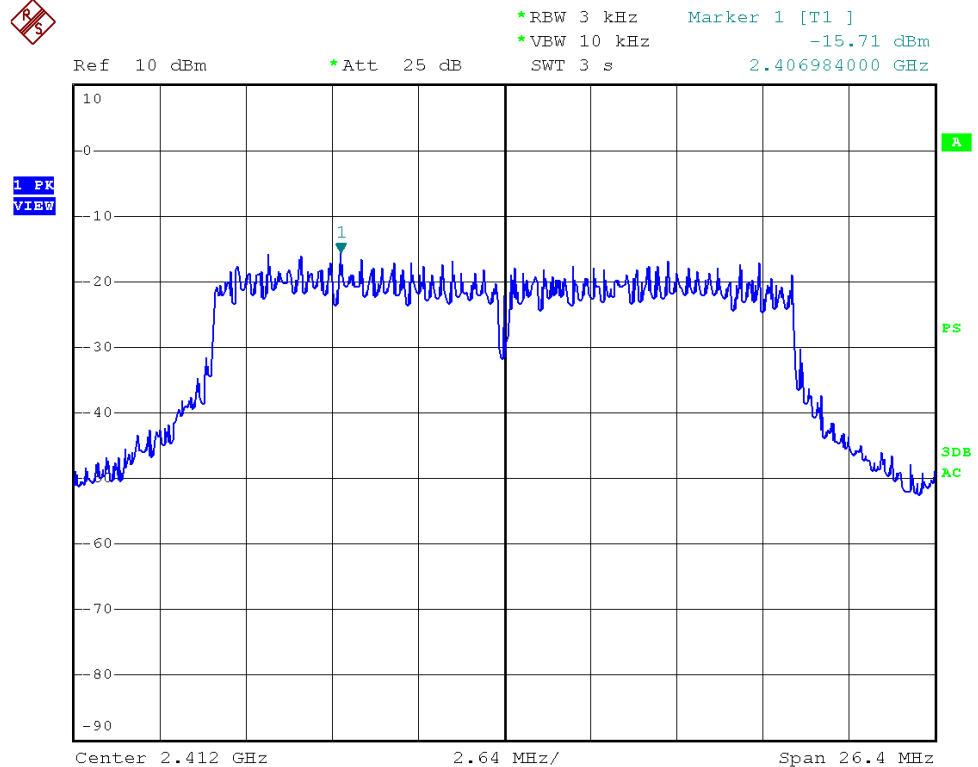


802.11g

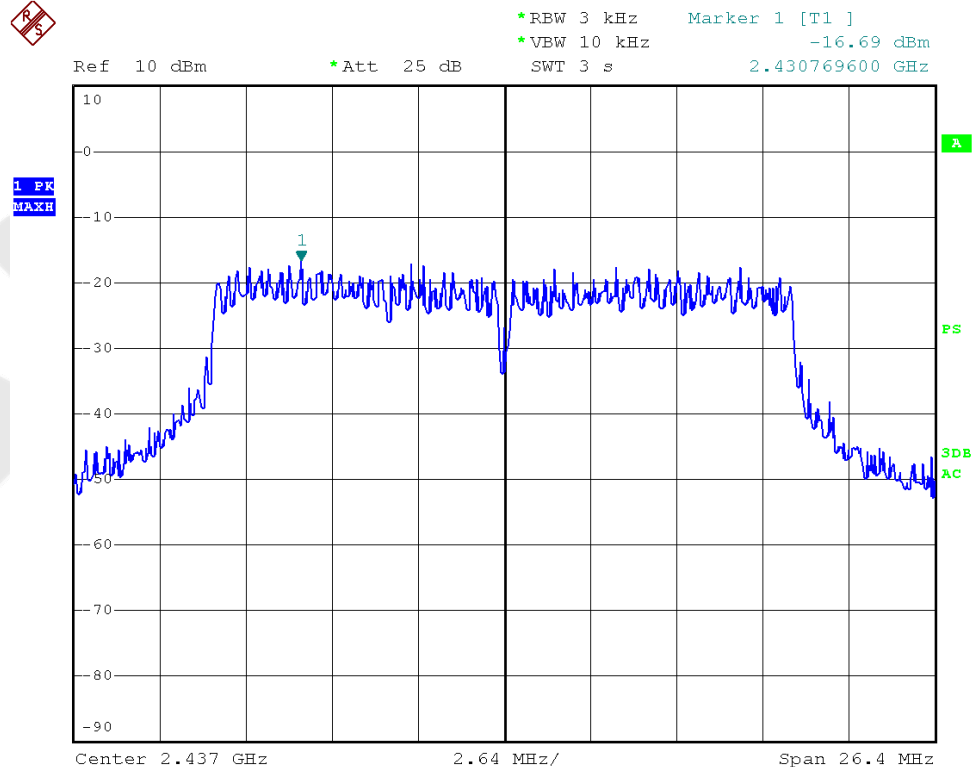
CH--High



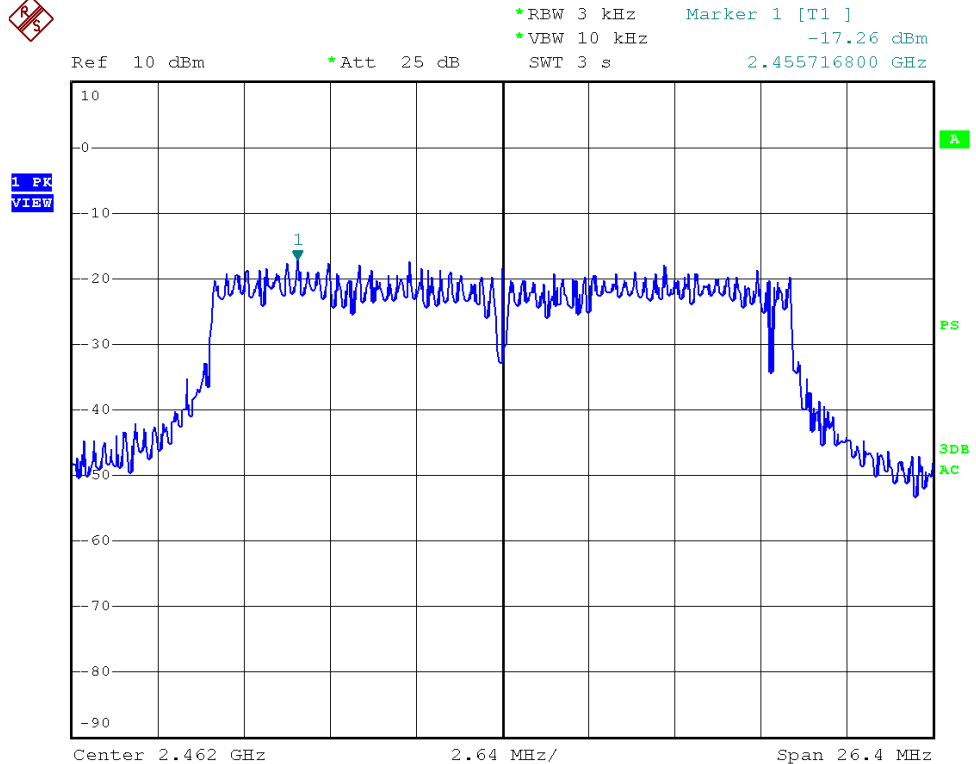
802.11n (HT20) CH—Low



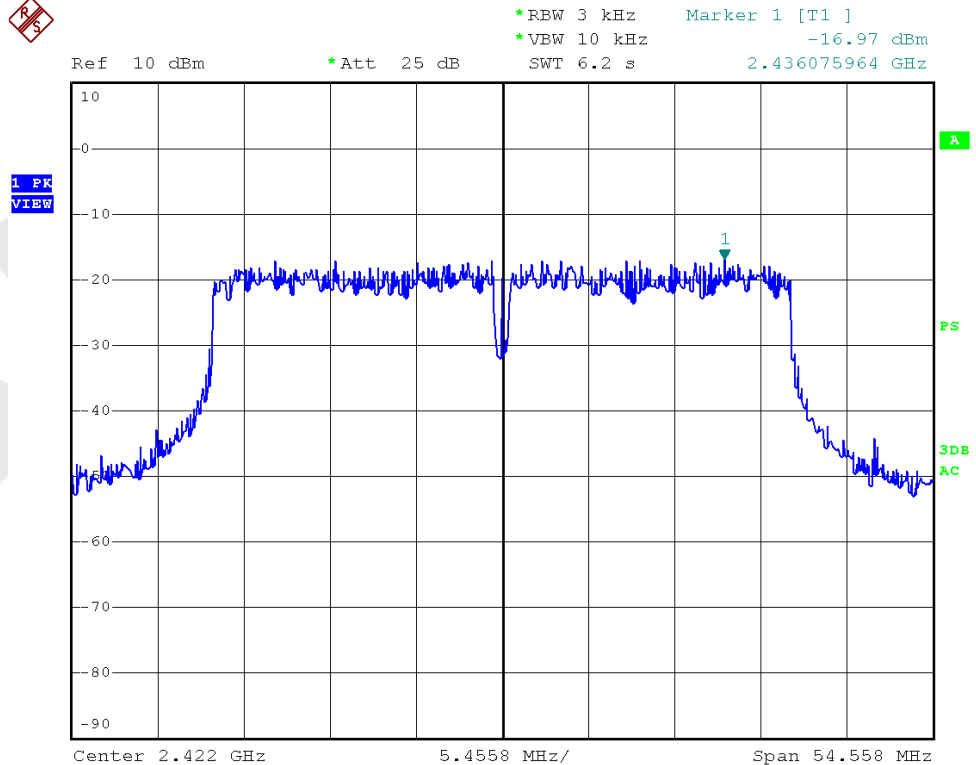
802.11n (HT20) CH—Mid



802.11n (HT20) CH—High

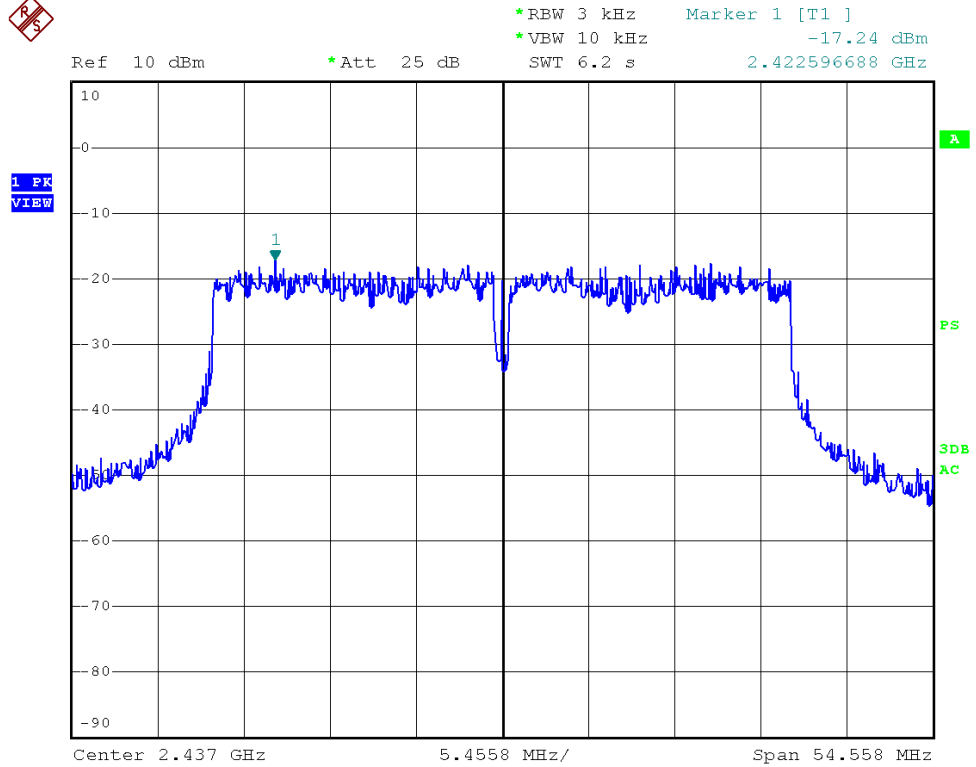


802.11n (HT40) CH—Low

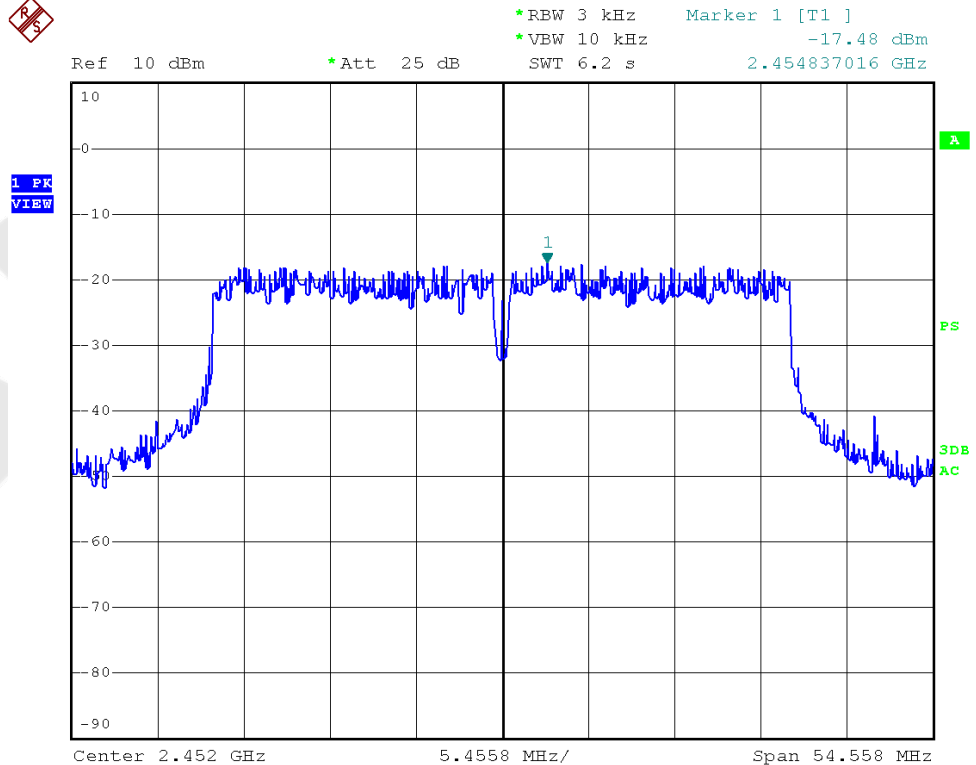




802.11n (HT40) CH—Mid



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

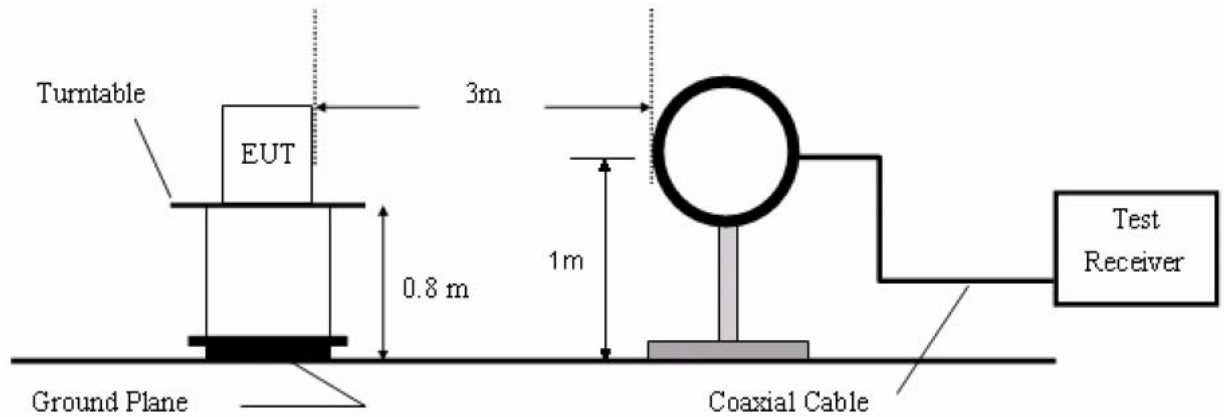
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the 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

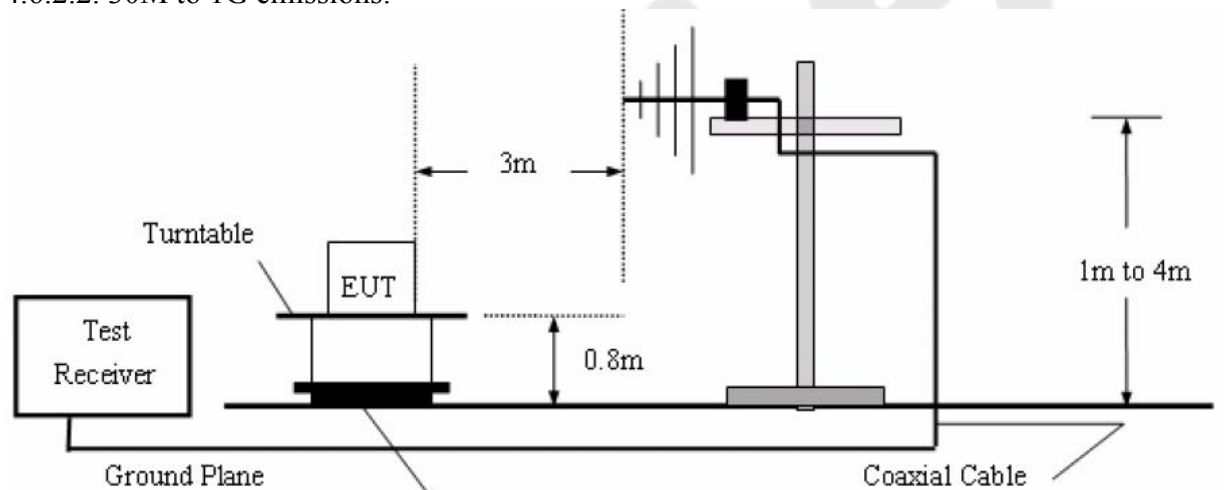
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Preamplifier	Instruments corporation	EMC011830	980100	Aug. 09, 2014	1 Year
2.	EMI Test Receiver	Rohde & Schwarz	ESPI	101604	Apr. 23, 2014	1 Year
3.	Double Ridged Horn Antenna	Instruments corporation	GTH-0118	351600	Aug. 09, 2013	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:

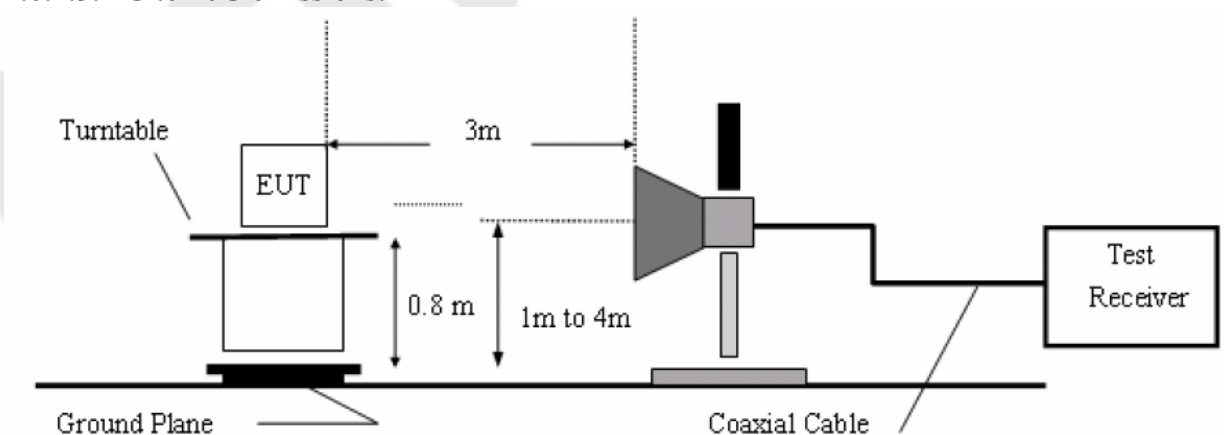
##### 4.6.2.1. 9k to 30MHz emissions:



##### 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.

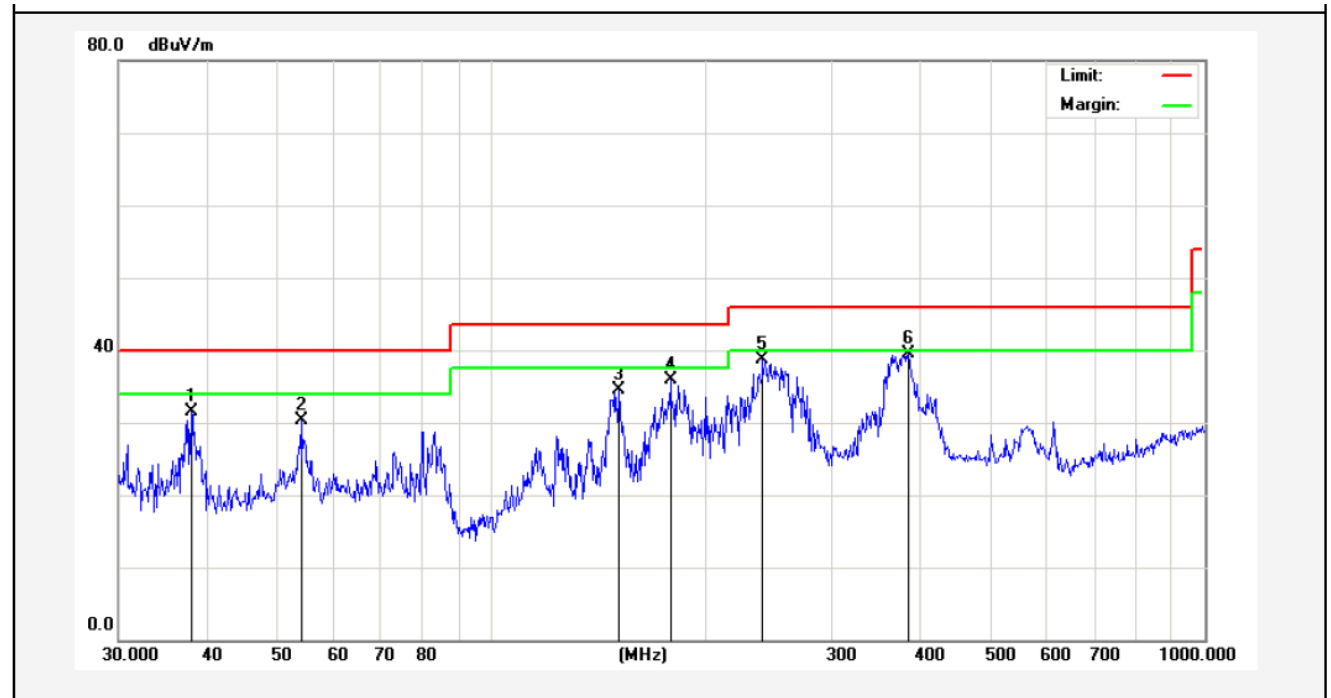
The EUT is tested in 9\*6\*6 Chamber.

The test results are listed in Section 4.6.4.

#### 4.6.4. Test Results

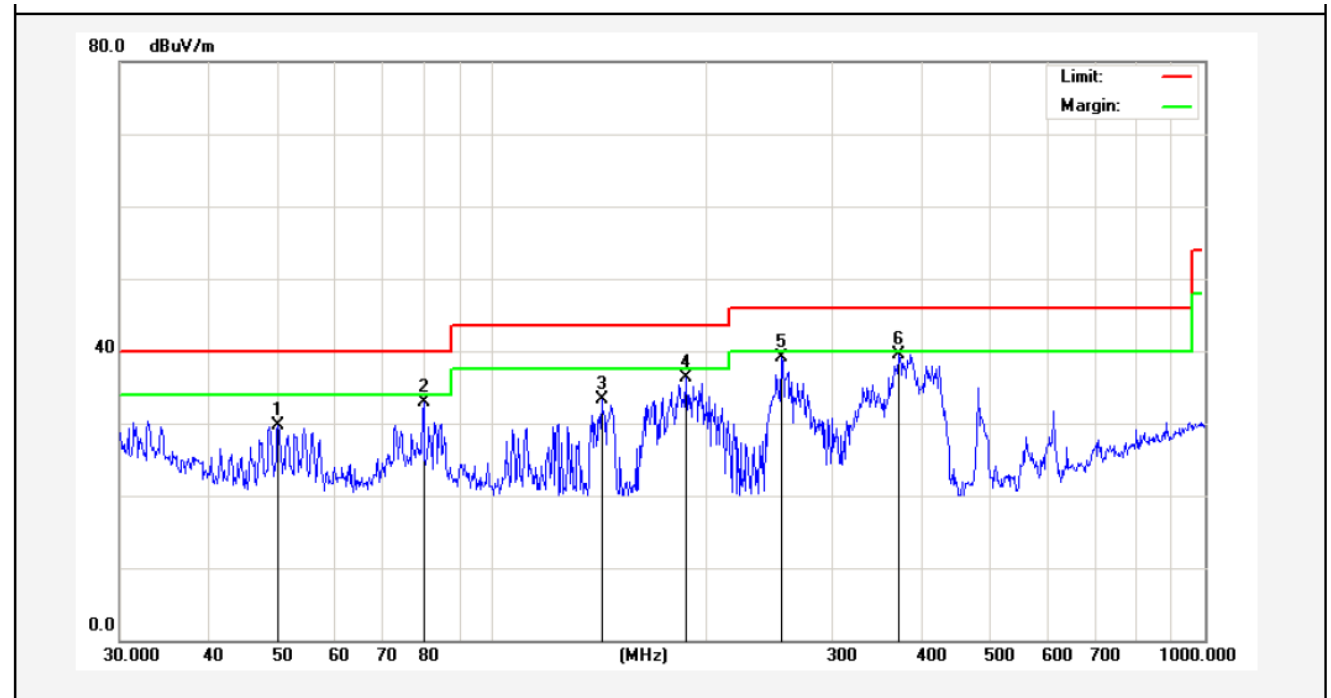
The EUT was tested on (Internet Connect, WiFi Connect) modes, only the worst data of (WiFi Connect) is attached in the following pages.

Job No.:	011407274E	Polarization:	Horizontal
Standard:	(RE)FCC PART15 C _3m	Power Source:	AC 120V/60Hz for Adapter
Test item:	Radiation Test	Temp.(C)/Hum.(%RH):	24.3(C)/55%RH
Test Mode:	WiFi Connect	Distance:	3m



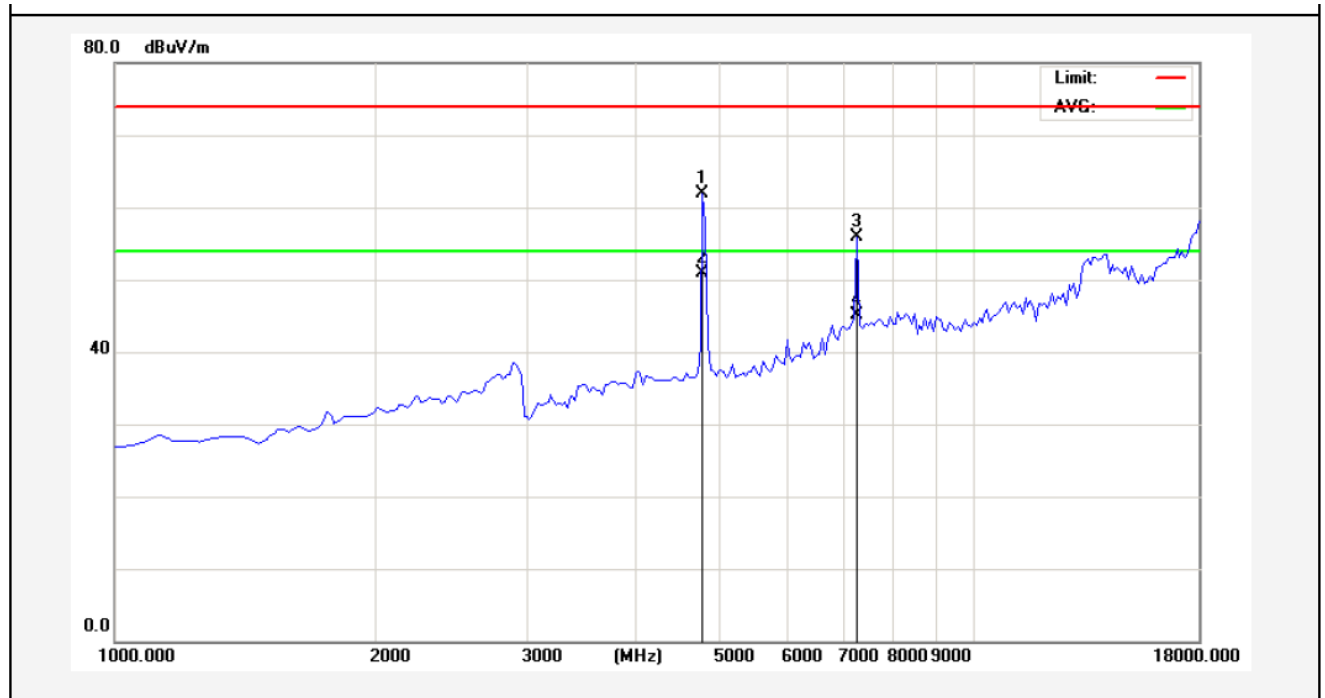
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	37.9450	46.67	-15.17	31.50	40.00	-8.50	peak			
2	54.0711	45.24	-14.87	30.37	40.00	-9.63	peak			
3	151.0665	57.80	-23.30	34.50	43.50	-9.00	peak			
4	178.1325	57.83	-21.98	35.85	43.50	-7.65	peak			
5	239.9874	56.83	-18.09	38.74	46.00	-7.26	peak			
6	383.9318	52.69	-13.19	39.50	46.00	-6.50	peak			

<b>Job No.:</b>	<b>011407274E</b>	<b>Polarization:</b>	<b>Vertical</b>
<b>Standard:</b>	<b>(RE)FCC PART15 C _3m</b>	<b>Power Source:</b>	<b>AC 120V/60Hz for Adapter</b>
<b>Test item:</b>	<b>Radiation Test</b>	<b>Temp.(C)/Hum.(%RH):</b>	<b>24.3(C)/55%RH</b>
<b>Test Mode:</b>	<b>WiFi Connect</b>	<b>Distance:</b>	<b>3m</b>



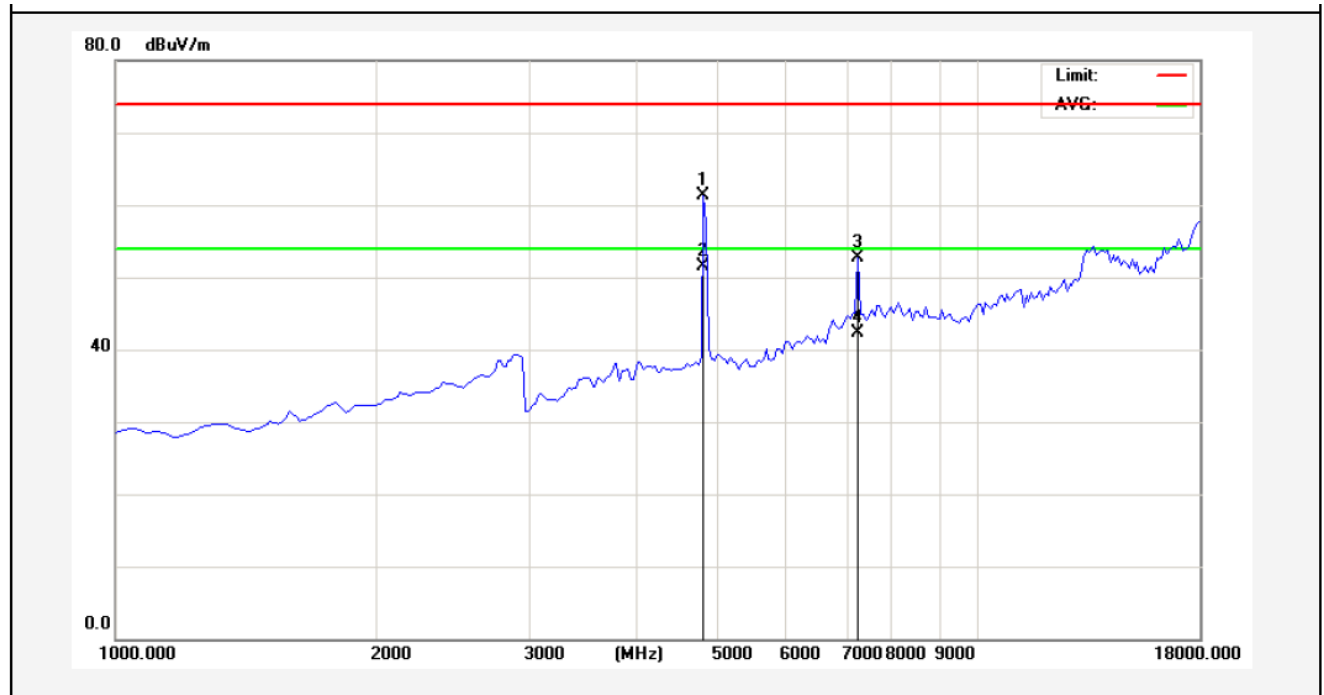
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	50.0566	44.19	-14.57	29.62	40.00	-10.38	peak			
2	80.0806	52.88	-19.95	32.93	40.00	-7.07	peak			
3	142.3242	51.74	-18.45	33.29	43.50	-10.21	peak			
4	187.0956	52.55	-16.20	36.35	43.50	-7.15	peak			
5	254.7283	53.14	-14.02	39.12	46.00	-6.88	peak			
6	372.0045	51.93	-12.43	39.50	46.00	-6.50	peak			

Job No.:	011407274E	Polarization:	Horizontal
Standard:	(RE)FCC PART15 C _3m	Power Source:	AC 120V/60Hz for Adapter
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	58.63	3.34	61.97	74.00	-12.03	peak			
2	4825.000	47.50	3.34	50.84	54.00	-3.16	AVG			
3	7247.500	47.37	8.48	55.85	74.00	-18.15	peak			
4	7247.500	36.67	8.48	45.15	54.00	-8.85	AVG			

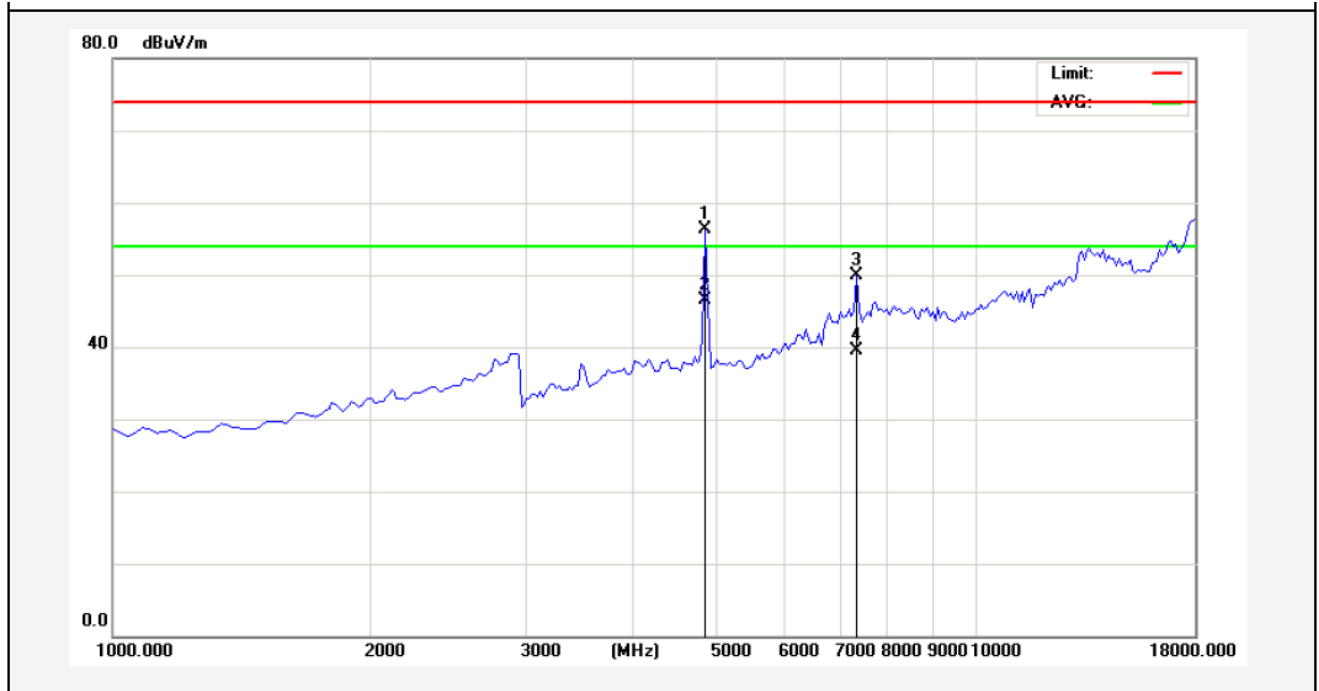
Job No.:	011407274E	Polarization:	Vertical
Standard:	(RE)FCC PART15 C_3m	Power Source:	AC 120V/60Hz for Adapter
Test item:	Radiation Test	Temp.(C)/Hum.(%RH):	24.3(C)/55%RH
Note:	802.11b(2412MHz)	Distance:	3m



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	58.03	3.34	61.37	74.00	-12.63	peak			
2	4825.000	48.20	3.34	51.54	54.00	-2.46	AVG			
3	7247.500	44.24	8.48	52.72	74.00	-21.28	peak			
4	7247.500	33.87	8.48	42.35	54.00	-11.65	AVG			

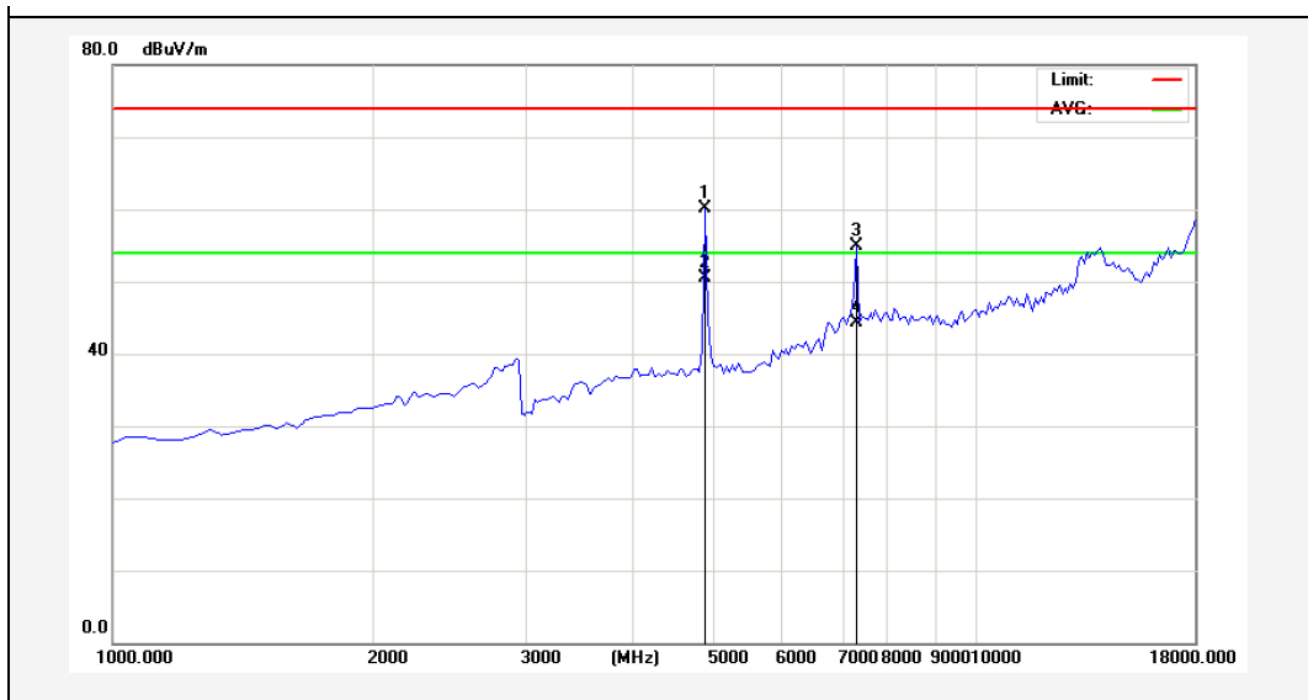


Job No.:	011407274E	Polarization:	Horizontal
Standard:	(RE)FCC PART15 C _3m	Power Source:	AC 120V/60Hz for Adapter
Test item:	Radiation Test	Temp.(C)/Hum.(%RH):	24.3(C)/55%RH
Note:	802.11b(2437MHz)	Distance:	3m



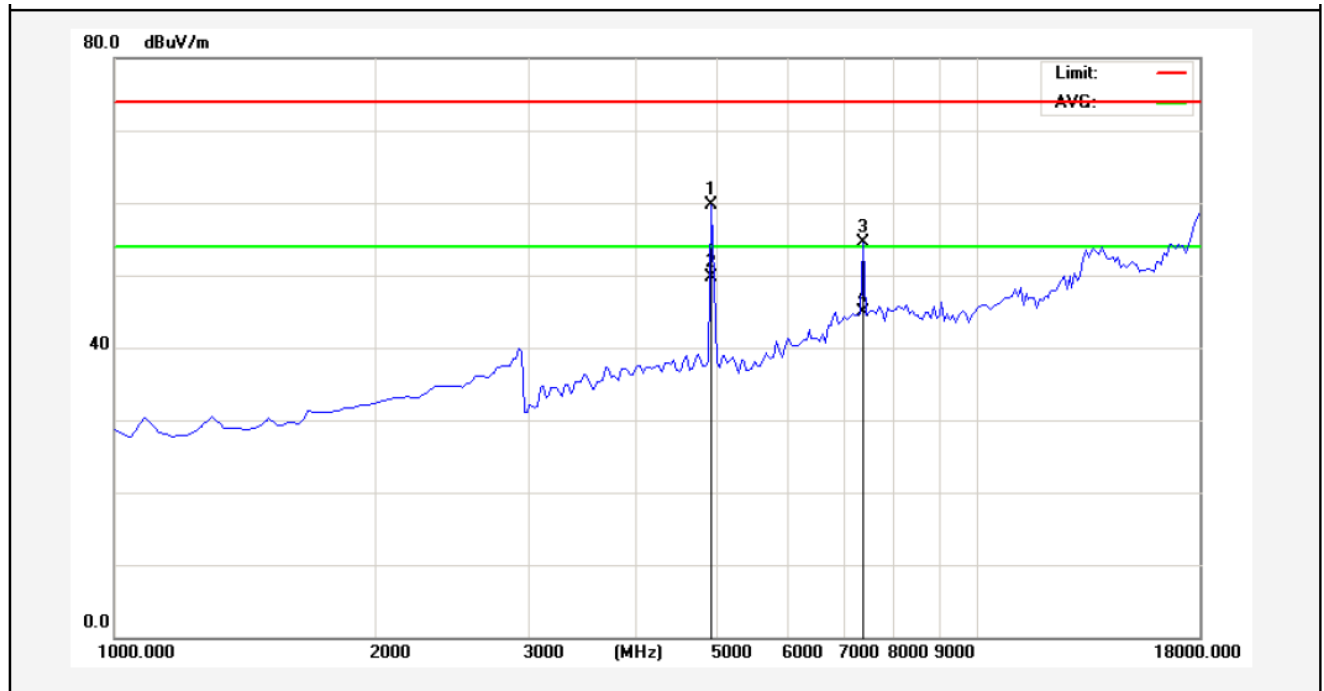
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	4867.500	52.90	3.41	56.31	74.00	-17.69	peak			
2	4867.500	43.17	3.41	46.58	54.00	-7.42	AVG			
3	7332.500	41.26	8.58	49.84	74.00	-24.16	peak			
4	7332.500	30.87	8.58	39.45	54.00	-14.55	AVG			

Job No.:	011407274E	Polarization:	Vertical
Standard:	(RE)FCC PART15 C _3m	Power Source:	AC 120V/60Hz for Adapter
Test item:	Radiation Test	Temp.(C)/Hum.(%RH):	24.3(C)/55%RH
Note:	802.11b(2437MHz)	Distance:	3m



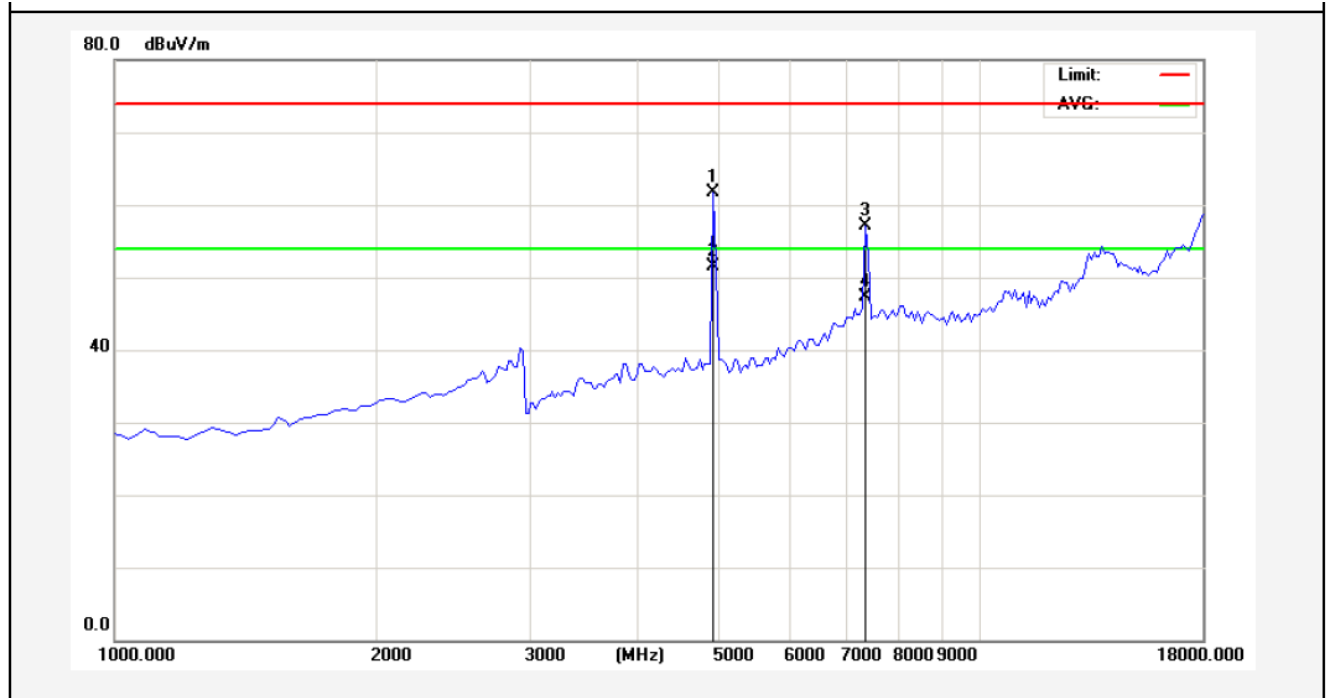
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	4867.500	56.79	3.41	60.20	74.00	-13.80	peak			
2	4867.500	47.13	3.41	50.54	54.00	-3.46	AVG			
3	7332.500	46.24	8.58	54.82	74.00	-19.18	peak			
4	7332.500	35.67	8.58	44.25	54.00	-9.75	AVG			

<b>Job No.:</b>	<b>011407274E</b>	<b>Polarization:</b>	<b>Horizontal</b>
<b>Standard:</b>	<b>(RE)FCC PART15 C_3m</b>	<b>Power Source:</b>	<b>AC 120V/60Hz for Adapter</b>
<b>Test item:</b>	<b>Radiation Test</b>	<b>Temp.(C)/Hum.(%RH):</b>	<b>24.3(C)/55%RH</b>
<b>Note:</b>	<b>802.11b(2462MHz)</b>	<b>Distance:</b>	<b>3m</b>



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	56.15	3.49	59.64	74.00	-14.36	peak			
2	4910.000	46.25	3.49	49.74	54.00	-4.26	AVG			
3	7375.000	45.79	8.63	54.42	74.00	-19.58	peak			
4	7375.000	36.22	8.63	44.85	54.00	-9.15	AVG			

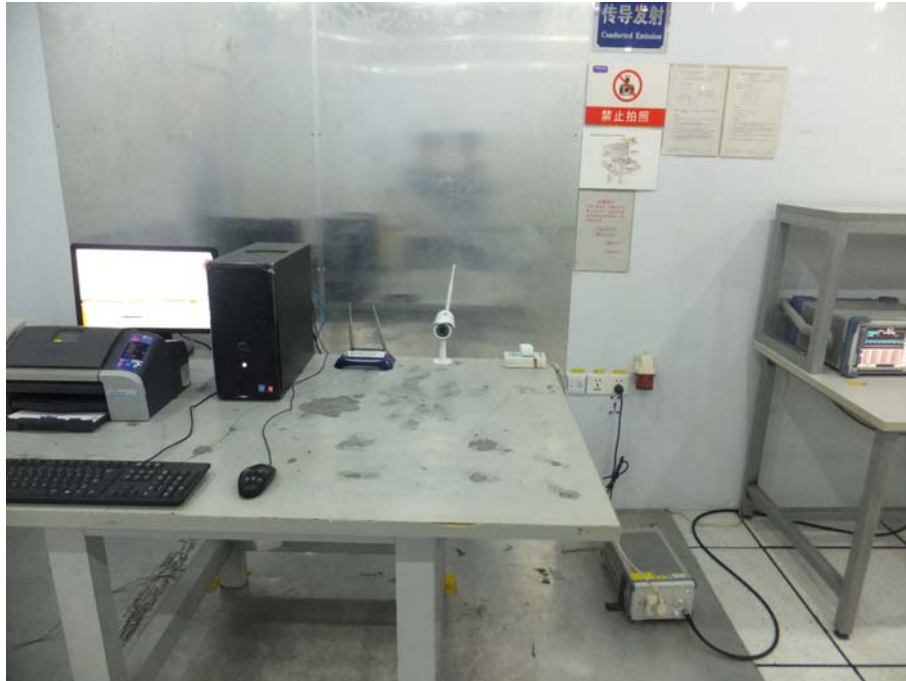
Job No.:	011407274E	Polarization:	Vertical
Standard:	(RE)FCC PART15 C _3m	Power Source:	AC 120V/60Hz for Adapter
Test item:	Radiation Test	Temp.(C)/Hum.(%RH):	24.3(C)/55%RH
Note:	802.11b(2462MHz)	Distance:	3m



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	58.28	3.49	61.77	74.00	-12.23	peak			
2	4910.000	47.98	3.49	51.47	54.00	-2.53	AVG			
3	7375.000	48.44	8.63	57.07	74.00	-16.93	peak			
4	7375.000	38.72	8.63	47.35	54.00	-6.65	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-Overall View



Figure 2  
The EUT-Front View





Figure 3  
The EUT- Back View



Figure 4  
The EUT- Top View





Figure 5  
The EUT- Bottom View



Figure 6  
The EUT- Left Side View



Figure 7  
The EUT- Right Side View



## APPENDIX II (INTERNAL PHOTOS)

Figure 8  
The EUT-Inside View

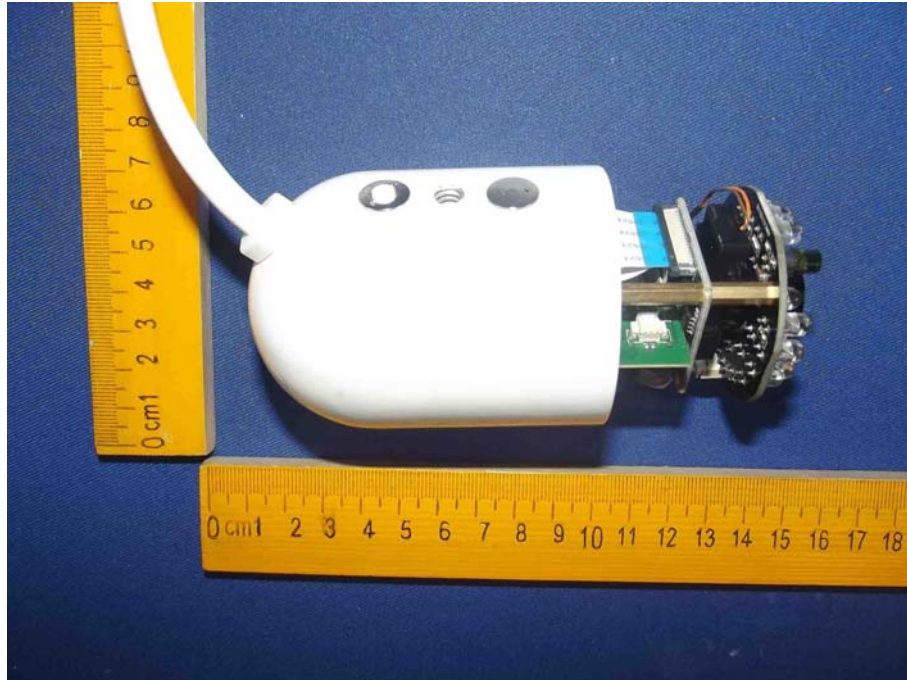


Figure 9  
The EUT-Inside View

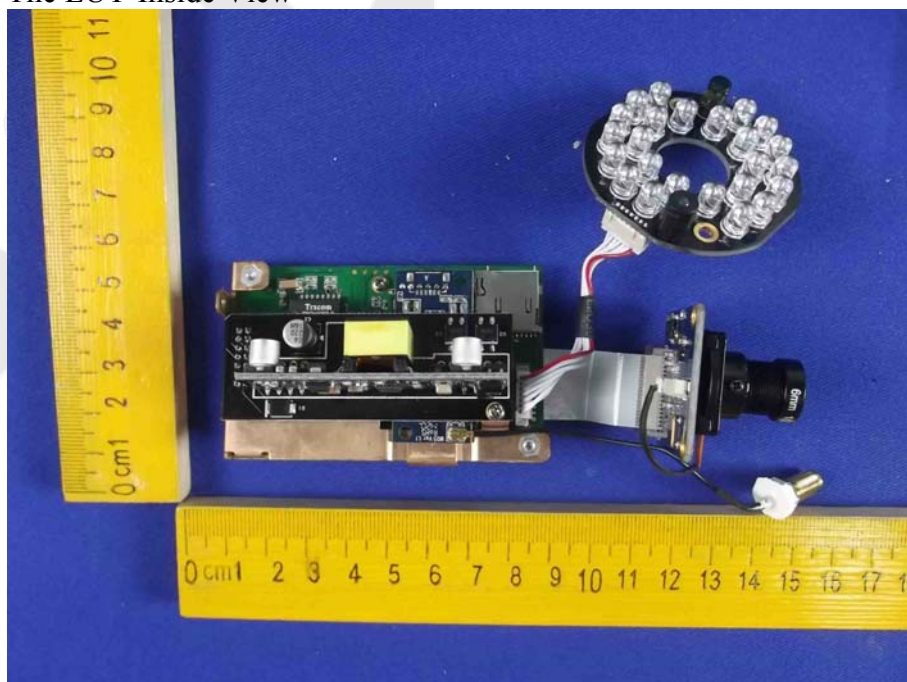




Figure 10  
PCB of the EUT-Front View

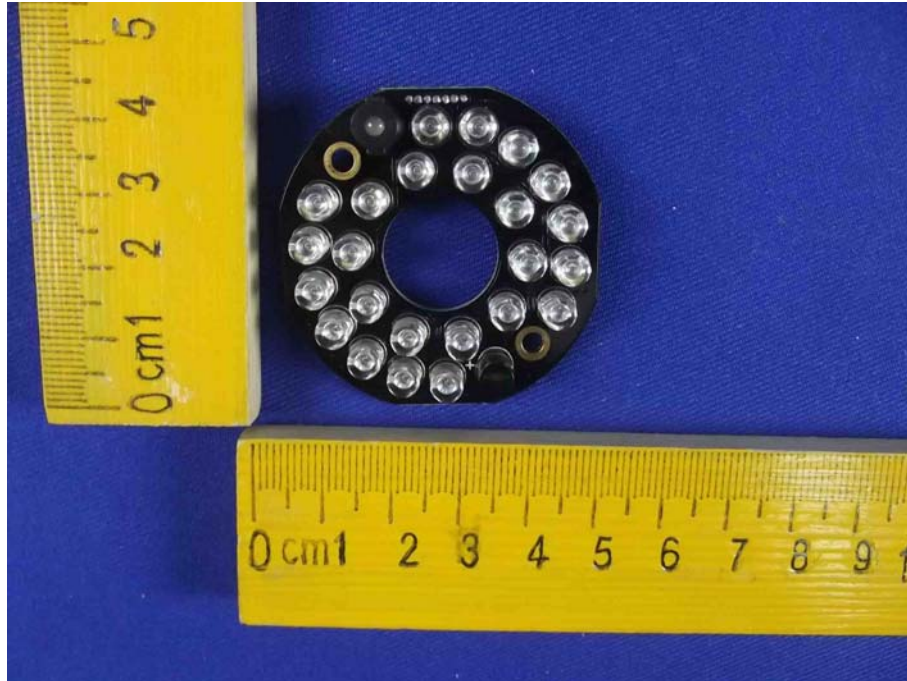


Figure 11  
PCB of the EUT-Back View

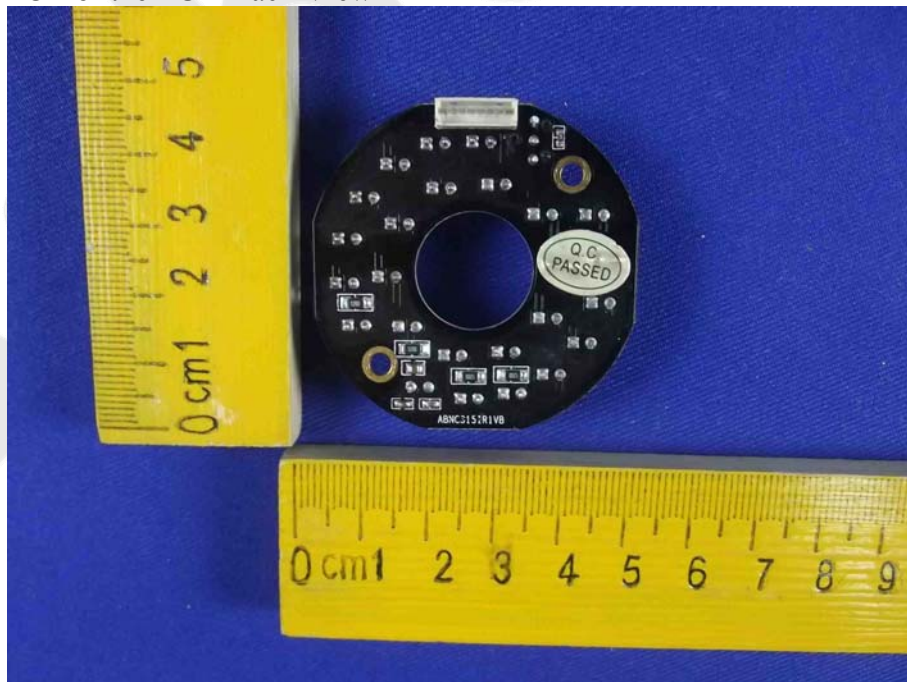


Figure 12  
PCB of the EUT-Front View

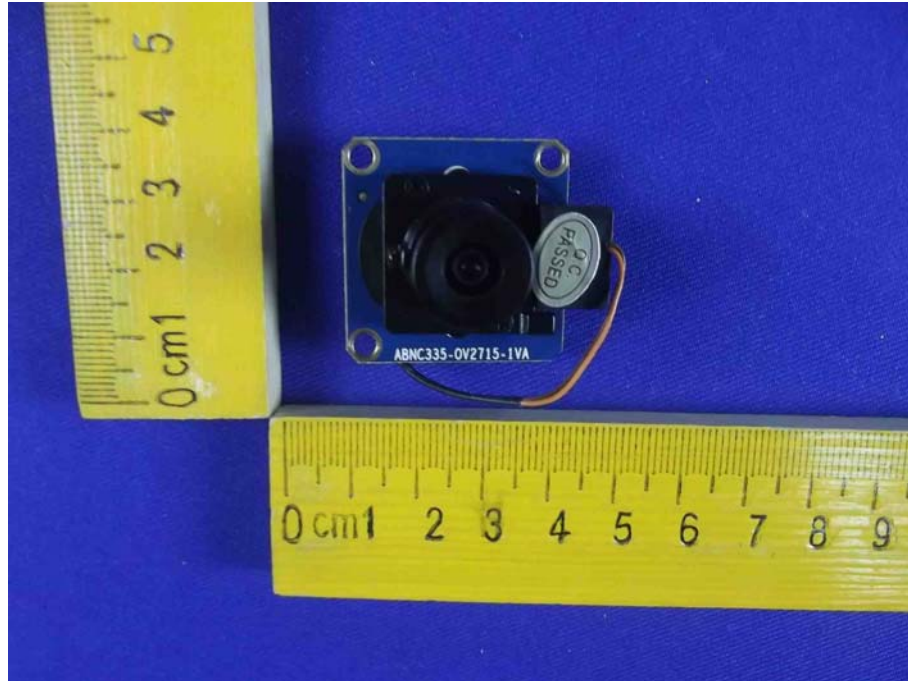


Figure 13  
PCB of the EUT-Back View

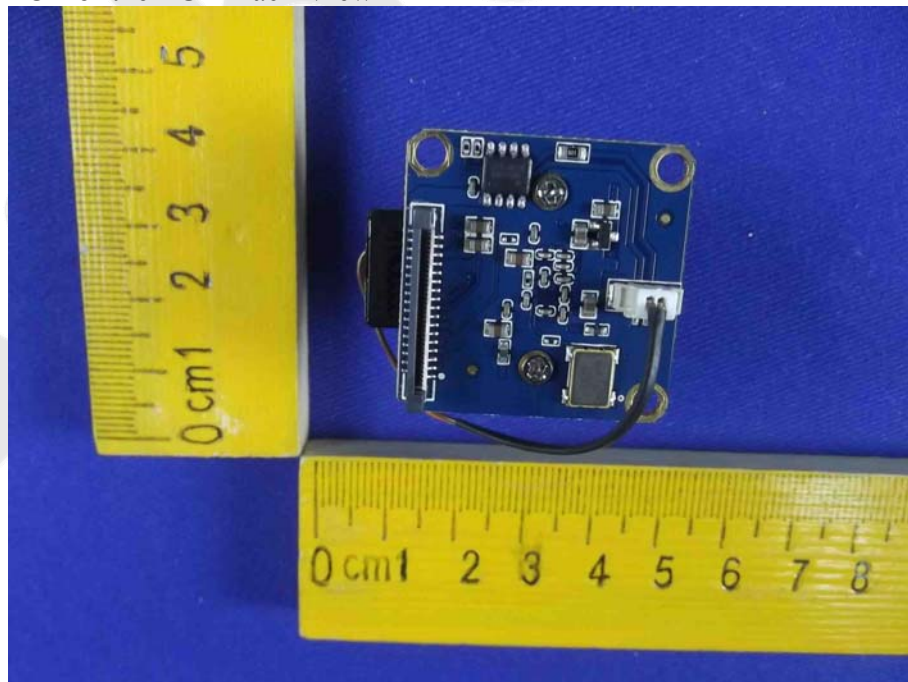




Figure 14  
PCB of the EUT-Front View



Figure 15  
PCB of the EUT-Back View



Figure 16  
PCB of the EUT-Front View

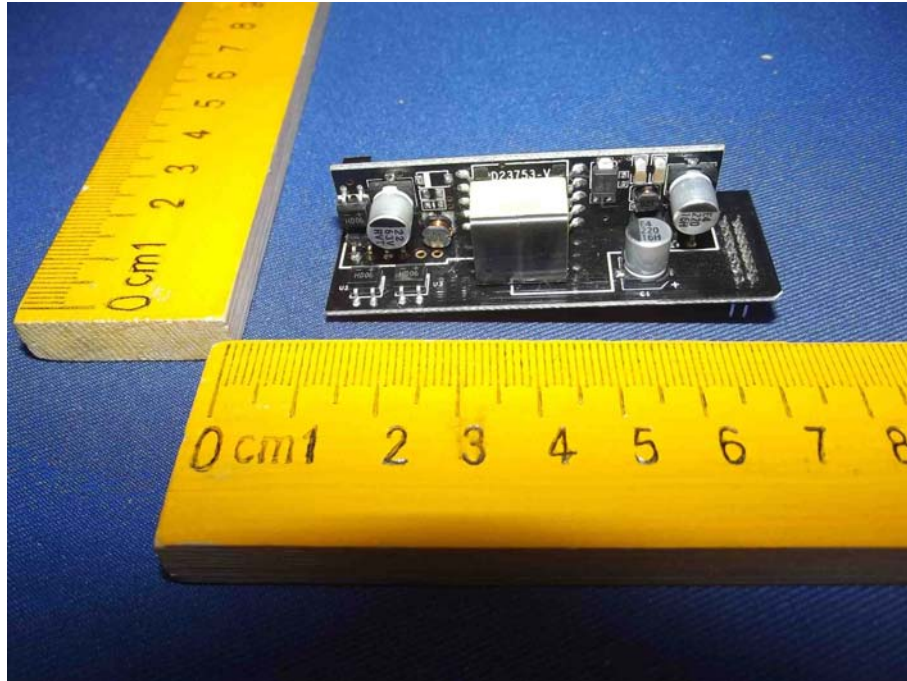


Figure 17  
PCB of the EUT-Back View

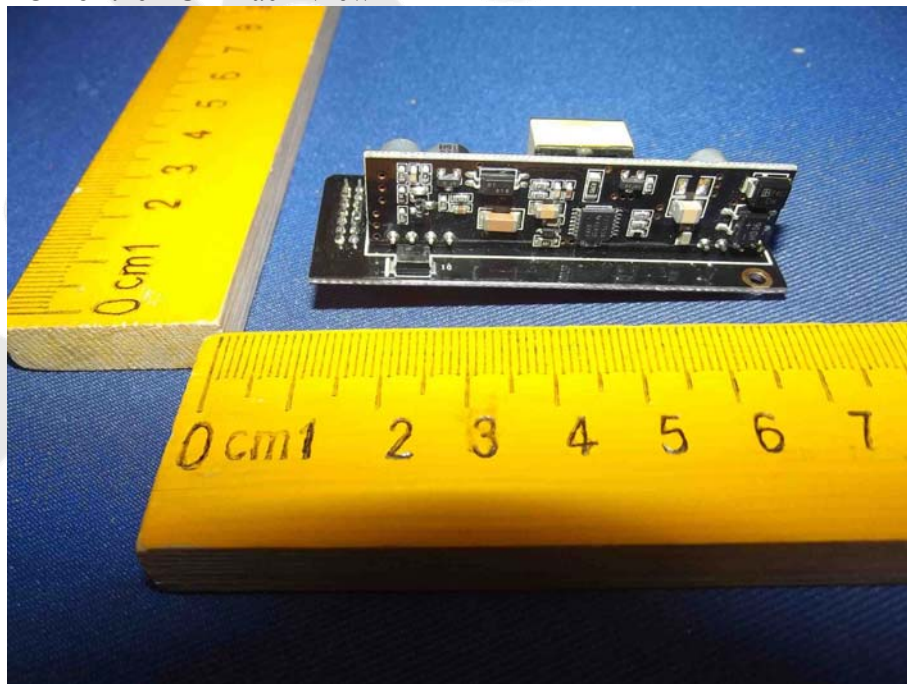




Figure 18  
PCB of the EUT-Front View

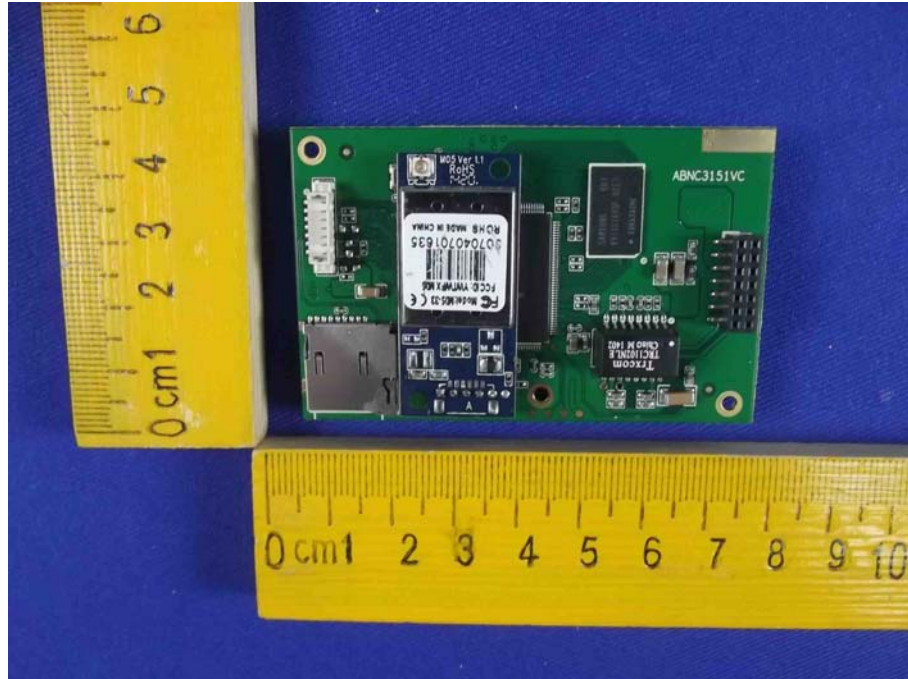


Figure 19  
PCB of the EUT-Front View

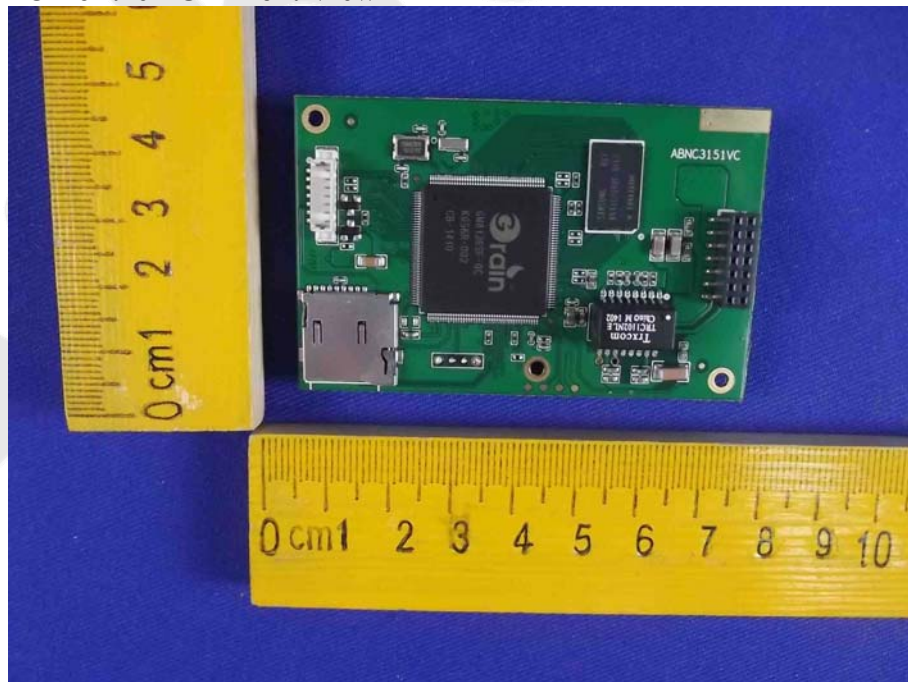




Figure 20  
PCB of the EUT-Back View

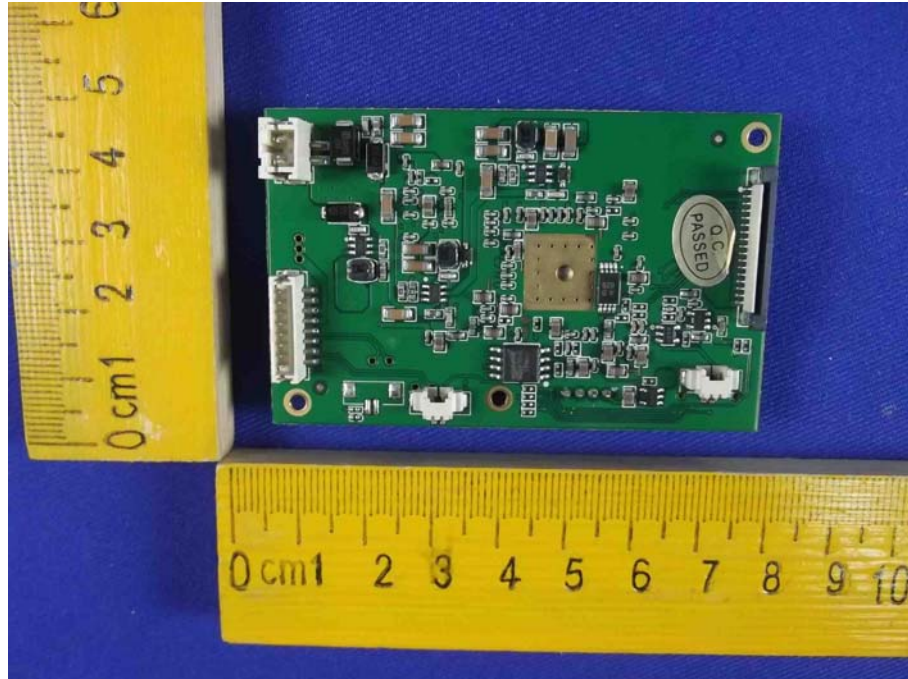


Figure 21  
PCB of the EUT-Front View (With Shielding)



Figure 22  
PCB of the EUT-Front View (Without Shielding)



Figure 23  
PCB of the EUT-Back View

