

**FCC 15.247& RSS-247  
2.4 GHz Report  
for**

**Lite-On Technology Corporation**

**22F, No. 392, Ruey Kuang Road,  
Neihu, Taipei 11492, Taiwan**

**Product Name : Wi-Fi DVD/CD DRIVE  
Brand : LITEON  
Model Name : DN-8A6WH01B  
FCC ID : 2AI6TDN8A6WH  
IC : 21755-DN8A6WH**

**Prepared by: : AUDIX Technology Corporation,  
EMC Department**



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APPENDIX A TEST PHOTOGRAPHS  
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## TEST REPORT CERTIFICATION

Applicant : Lite-On Technology Corporation  
Product Name : Wi-Fi DVD/CD DRIVE  
Model No. : DN-8A6WH01B  
Serial No. : N/A  
Brand Name : LITEON

Applicable Standards:

47 CFR FCC Part 15 Subpart C: 2015  
RSS-Gen (Issue 4), November 2014  
RSS-247 (Issue 1), May 2015  
ANSI C63.10:2013  
KDB 558074 D01 DTS Meas Guidance v03r05

**AUDIX Technology Corp.** tested the equipment mentioned in accordance with the requirements set forth in the above standards. Test results indicate that the equipment tested is capable of demonstrating compliance with the requirements as documented within this report. **AUDIX Technology Corp.** does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens and samples.

Date of Test: 2016. 07. 11 ~ 09. 12

Date of Report: 2016. 09. 12

Producer: Sabrina Wang  
(Sabrina Wang/Administrator)

Signatory: Ben Cheng  
(Ben Cheng/Manager)

## 1. REPORT HISTORY

Revision	Date	Revision Summary	Report Number
0	2016. 08. 30	Original Report.	EM-F160479

## 2. SUMMARY OF TEST RESULTS

Rule		Description	Results
FCC	IC		
15.207	RSS-Gen §8.8	Conducted Emission	<b>PASS</b>
15.247(d)/ 15.205	RSS-Gen §8.9 RSS-247 §5.5	Radiated Band Edge and Radiated Spurious Emission	<b>PASS</b>
15.247(a)(2)	RSS-247 §5.2(1)	6dB Bandwidth	<b>PASS</b>
15.247(b)(3)	RSS-247 §5.4(4)	Maximum Peak Output	<b>PASS</b>
15.247(d)	RSS-247 §5.5	Conducted Band Edges and Conducted Spurious Emission	<b>PASS</b>
15.247 (e)	RSS-247 §5.2(2)	Peak Power Spectral Density	<b>PASS</b>
15.203	----	Antenna Requirement	<b>PASS</b>

### 3. GENERAL INFORMATION

#### 3.1. Description of EUT

Product	Wi-Fi DVD/CD DRIVE								
Model Number	DN-8A6WH01B								
Serial Number	N/A								
Brand	LITEON								
Applicant	Lite-On Technology Corporation 22F, No. 392, Ruey Kuang Road, Neihu, Taipei 11492, Taiwan								
RF Features	802.11/b/g/n								
Transmit Type	<table border="1"><tr><td>802.11b</td><td>1T1R</td></tr><tr><td>802.11g</td><td>1T1R</td></tr><tr><td>802.11n-HT20</td><td>1T1R</td></tr><tr><td>802.11n-HT40</td><td>1T1R</td></tr></table>	802.11b	1T1R	802.11g	1T1R	802.11n-HT20	1T1R	802.11n-HT40	1T1R
802.11b	1T1R								
802.11g	1T1R								
802.11n-HT20	1T1R								
802.11n-HT40	1T1R								
Switch Power Supply (Wall-mount, 2C)	PHIHONG, M/N: PSAF10A-050Q I/P: AC 100-240V, 50/60Hz, 0.28A O/P: DC 12V, 2A Max. DC (USB) Power Cord: Unshielded, Undetachable, 1.0m								
Date of Receipt of Sample	2016. 06. 29								

#### 3.2. Antenna Information

Antenna Part Number	Brand	Antenna Type	Frequency	Max Gain (dBi)
MW0118MT	PSA	Printed Antenna	2400-2500MHz	2.99dBi

### 3.3. EUT Specifications Assessed in Current Report

Mode	Fundamental Range (MHz)	Channel Number	Modulation	Data Rate (Mbps)
802.11b	2412-2462	11	DSSS (DBPSK/DQPSK/CCK)	Up to 11
802.11g		11	OFDM (BPSK/QPSK/16QAM/64QAM)	Up to 54
802.11n-HT20				Up to 150
802.11n-HT40	2412-2452	7		

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

RMS Output Power(dBm)				
Channel	802.11b	802.11g	802.11n-HT20	802.11n-HT40
1	18	14.5		
2	18	14.5		
3	18	14.5	14	11.0
4	18	14.5	14	11.0
5	18	14.5	14	11.0
6	18	17.0	15	14.0
7	18	12.5	13.5	11.5
8	18	12.5	13.5	11.5
9	18	12.5	13.5	11.5
10	18	12.5		
11	18	12.5		



### 3.4. Data Rate Relative to Output Power

802.11b							
Channel	Modulation		Date Rate (Mbps)	Power (dBm)			
1	DBPSK		1	<b>18.30</b>			
1	DQPSK		2	<b>18.18</b>			
1	CCK		5.5	<b>18.05</b>			
1	CCK		11	<b>18.23</b>			
802.11g							
Channel	Modulation		Date Rate (Mbps)	Power (dBm)			
1	BPSK		6	<b>14.32</b>			
1	BPSK		9	<b>14.11</b>			
1	QPSK		12	<b>14.08</b>			
1	QPSK		18	<b>14.22</b>			
1	16-QAM		24	<b>14.03</b>			
1	16-QAM		36	<b>14.15</b>			
1	64-QAM		48	<b>14.28</b>			
1	64-QAM		54	<b>14.09</b>			
802.11n-HT20				802.11n-HT40			
Channel	Modulation	Date Rate	Power (dBm)	Channel	Modulation	Date Rate	Power (dBm)
1	BPSK	MCS0	<b>14.15</b>	3	BPSK	MCS0	<b>11.65</b>
1	QPSK	MCS1	<b>14.03</b>	3	QPSK	MCS1	<b>11.58</b>
1	QPSK	MCS2	<b>13.96</b>	3	QPSK	MCS2	<b>11.49</b>
1	16-QAM	MCS3	<b>14.08</b>	3	16-QAM	MCS3	<b>11.61</b>
1	16-QAM	MCS4	<b>14.02</b>	3	16-QAM	MCS4	<b>11.52</b>
1	64-QAM	MCS5	<b>13.94</b>	3	64-QAM	MCS5	<b>11.42</b>
1	64-QAM	MCS6	<b>14.12</b>	3	64-QAM	MCS6	<b>11.37</b>
1	64-QAM	MCS7	<b>14.07</b>	3	64-QAM	MCS7	<b>11.50</b>

Note: Above results are assessed in Average power.

### 3.5. Test Configuration

Mode	Duty Cycle (x)	T (ms)	Duty Cycle Factor (dB)
802.11b	0.98	8.4	0.09
802.11g	0.95	1.4	0.20
802.11n-HT20	0.93	1.3	0.30
802.11n-HT40	0.85	0.6083	0.71

Note: When duty cycle is less than 98% (0.98) that duty cycle factor  $10\log(1/x)$  is needed to add in conducted test items measured in average detector.

AC Conduction	
Test Case	Normal operation

Item	Mode	Data Rate	Test Channel	
Radiated Test Case	Radiated Band Edge <small>Note1</small>	802.11b	1Mbps	1/11
		802.11g	6Mbps	1/2/10/11
		802.11n-HT20	MCS0	1/2/10/11
		802.11n-HT40	MCS0	3/4/8/9
	Radiated Spurious Emission <small>Note1 &amp; 2</small>	802.11b	1Mbps	1/6/11
		802.11g	6Mbps	1/6/11
		802.11n-HT20	MCS0	1/6/11
		802.11n-HT40	MCS0	3/6/9
Conducted Test Case	6dB Bandwidth	802.11b	1Mbps	1/6/11
		802.11g	6Mbps	1/6/11
		802.11n-HT20	MCS0	1/6/11
		802.11n-HT40	MCS0	3/6/9
	Peak Power Spectral Density	802.11b	1Mbps	1/6/11
		802.11g	6Mbps	1/6/11
		802.11n-HT20	MCS0	1/6/11
		802.11n-HT40	MCS0	3/6/9
	Peak Output Power	802.11b	1Mbps	1/2/10/11
		802.11g	6Mbps	1/2/10/11
		802.11n-HT20	MCS0	1/2/10/11
		802.11n-HT40	MCS0	3/4/8/9
	Band Edge	802.11b	1Mbps	1/11
		802.11g	6Mbps	1/11
		802.11n-HT20	MCS0	1/11
		802.11n-HT40	MCS0	3/9
	Spurious Emission	802.11b	1Mbps	1/6/11
		802.11g	6Mbps	1/6/11
		802.11n-HT20	MCS0	1/6/11
		802.11n-HT40	MCS0	3/6/9

Note 1:

Mobile Device

Portable Device, and 3 axis were assessed. The worst scenario for Radiated Spurious Emission as follow:

Lie

Side

Stand

Note 2: Low, mid, and high channels were measured, only the worst channel of each modulation was presented in this report.

### 3.6. Tested Supporting System List

#### 3.6.1. Support Peripheral Unit

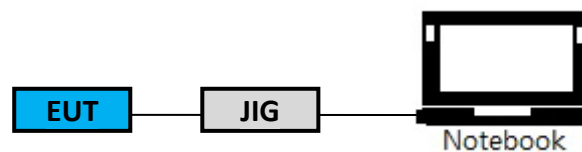
No.	Product	Brand	Model No.	Serial No.	FCC ID
1.	Notebook PC	ASUS	X5502E	N/A	PPD-AAR5B225
2.	Test Jig	N/A	N/A	N/A	N/A

#### 3.6.2. Cable Lists

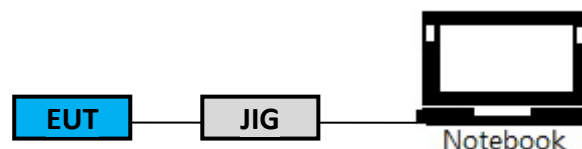
No.	Cable Description Of The Above Support Units
1.	USB Cable: Unshielded, Detachable, 1.0m Adapter: Enerironix, M/N M/N EXA1208UH, DC Power Cord: Unshielded, Detachable, 1.8m AC Power Cord: Shielded, Undetachable, 1.8m, Bonded a ferrite core
2.	USB Cable: Non-Shielded, Detachable, 1.0m

### 3.7. Setup Configuration

#### 3.7.1. EUT Configuration for Power Line & Radiated Emission



#### 3.7.2. EUT Configuration for Conducted Test Items



### 3.8. Operating Condition of EUT

Test program “QA Tool” is used for enabling EUT WLAN function under continues transmitting and choosing data rate/ channel.

### 3.9. Description of Test Facility

Test Firm Name	:	<b>AUDIX Technology Corporation</b> <b>EMC Department</b> No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan
Test Location & Facility	:	<b>No. 8 Shielded Room</b> No. 67-4, Dingfu, Linkou Dist., New Taipei City 244, Taiwan  <b>Semi-Anechoic Chamber</b> No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan IC Test Site Registration No.: 5183B-1 Renewal on September 17, 2014  <b>Fully Anechoic Chamber</b> No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan IC Test Site Registration No.: 5183B-4 Renewal on August 31, 2015
NVLAP Lab. Code	:	200077-0
TAF Accreditation No	:	1724
FCC OET Designation	:	TW1004 & TW1090

### 3.10. Measurement Uncertainty

Test Item	Frequency Range	Uncertainty
Conduction Test	150kHz~30MHz	±3.5dB
Radiation Test (Distance: 3m)	30MHz~1000MHz	± 3.68dB
	Above 1GHz	± 5.82dB

Remark : Uncertainty =  $k_{uc}(y)$

Test Item	Uncertainty
6dB Bandwidth	± 0.05kHz
Maximum peak output power	± 0.33dB
Power spectral density	± 0.13dB
Conducted Emission Limitations	± 0.13dB

## 4. MEASUREMENT EQUIPMENT LIST

### 4.1. Conducted Emission Measurement

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Test Receiver	R&S	ESR3	101774	2016. 02. 04	1 Year
2.	A.M.N.	R&S	ENV4200	825358/003	2016. 04. 21	1 Year
3.	Pulse Limiter	R&S	ESH3-Z2	100354	2016. 01. 17	1 Year
4.	Test Software	Audix	e3	V.6.120424	N.C.R.	N.C.R.

### 4.2. Radiated Emission Measurement

#### 4.2.1. Frequency Range 9kHz~1000MHz (Semi-Anechoic Chamber)

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Spectrum Analyzer	Agilent	N9010A-526	MY53400071	2015. 09. 14	1 Year
2.	Test Receiver	R & S	ESCS30	100338	2016. 06. 22	1 Year
3.	Amplifier	HP	8447D	2944A06305	2016. 02. 23	1 Year
4.	Bilog Antenna	CHASE	CBL6112D	33821	2016. 01. 30	1 Year
5.	Loop Antenna	R&S	HFH2-Z2	891847/27	2015. 12. 24	1 Year
6.	Test Software	Audix	e3	V.6.110601	N.C.R.	N.C.R.

#### 4.2.2. Frequency Range Above 1GHz (Fully Anechoic Chamber)

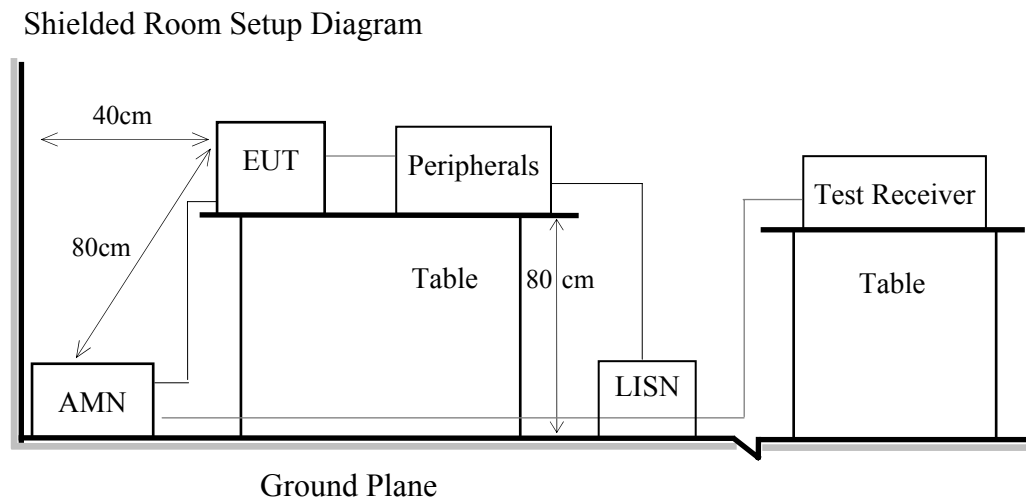
Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300366	2015. 08. 20	1 Year
2.	Amplifier	Sonoma	310N	187161	2016. 06. 14	1 Year
3.	2.4GHz Notch Filter	K&L	7NSL10-2441.5E130.5-00	1	2015. 07. 28	1 Year
4.	Horn Antenna	ETS-Lindgren	3117	00135902	2016. 03. 05	1 Year
5.	Horn Antenna	EMCO	3116	2653	2015. 10. 20	1 Year
6.	Test Software	Audix	e3	V.6.110601	N.C.R.	N.C.R.

### 4.3. RF Conducted Measurement

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Spectrum Analyzer	Agilent	N9010A-507	MY52220264	2015. 08. 20	1 Year
2.	Power Meter	Anritsu	ML2495A	1145008	2015. 10. 23	1 Year
3.	Power Sensor	Anritsu	MA2411B	1126096	2015. 10. 23	1 Year

## 5. CONDUCTED EMISSION MEASUREMENT

### 5.1. Block Diagram of Test Setup



### 5.2. Power Line Conducted Emission Limit

Frequency	Conducted Limit	
	Quasi-Peak Level	Average Level
150kHz ~ 500kHz	66 ~ 56 dB $\mu$ V	56 ~ 46 dB $\mu$ V
500kHz ~ 5MHz	56 dB $\mu$ V	46 dB $\mu$ V
5MHz ~ 30MHz	60 dB $\mu$ V	50 dB $\mu$ V

Remark 1.: If the average limit is met when using a Quasi-Peak detector, the measurement using the average detector is not required.

2.: The lower limit applies to the band edges.

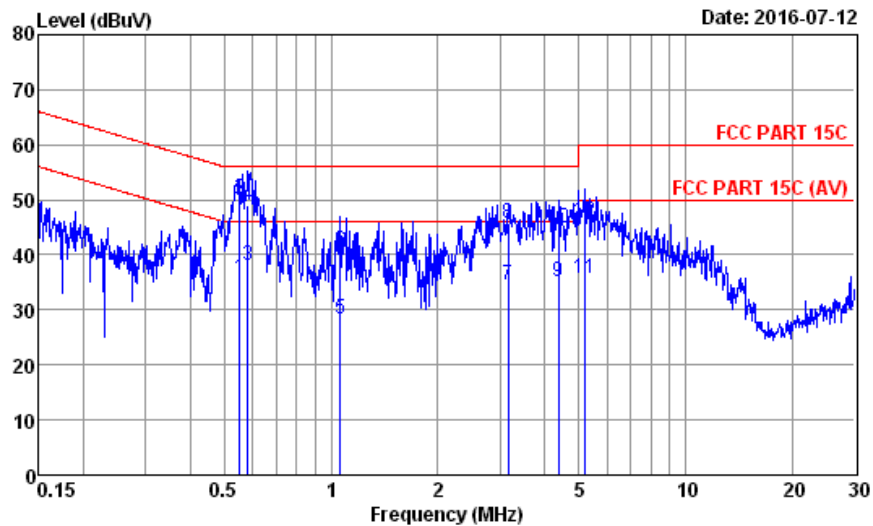
### 5.3. Test Procedure

- 5.3.1. To set up the EUT as indicated in ANSI C 63.10. The EUT was placed on the table which has 80 cm height to the ground and 40 cm distance to the conducting wall.
- 5.3.2. Power supplier of the EUT was connected to the AC mains through an Artificial Mains Network (A.M.N.).
- 5.3.3. The AC power supplies to all peripheral devices must be provided through line impedance stabilization network (L.I.S.N.)
- 5.3.4. Checking frequency range from 150 kHz to 30 MHz and record the emission which does not have 20 dB below limit.

### 5.4. Conducted Emission Measurement Results

PASSED.

Test Date	2016/07/12	Temp./Hum.	27°C/55%
Test Voltage	AC 120V, 60Hz (Via Switch Power Supply)		

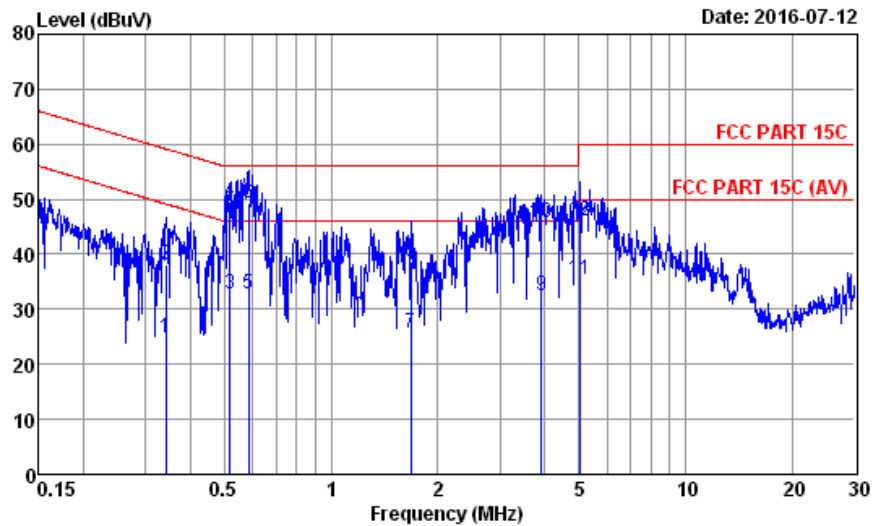


Site no. : No.8 Shielded Room      Data no. : 3  
 Condition : ENV4200 100169      Phase : LINE  
 Limit : FCC PART 15C  
 Env. / Ins. : 27°C / 55% ESR3 (1774)      Engineer : Jemy  
 EUT : DN-8A6WH01B  
 Power Rating : 120Vac/60Hz  
 Test Mode : Operating

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Pulse Att. (dB)	Reading (dBμV)	Emission Level (dBμV)	Limits (dBμV)	Margin (dB)	Remark
1	0.552	10.62	0.04	9.86	15.20	35.72	46.00	10.28	Average
2	0.552	10.62	0.04	9.86	29.56	50.08	56.00	5.92	QP
3	0.582	10.62	0.04	9.86	17.48	38.00	46.00	8.00	Average
4	0.582	10.62	0.04	9.86	28.50	49.02	56.00	6.98	QP
5	1.060	10.61	0.05	9.86	7.96	28.48	46.00	17.52	Average
6	1.060	10.61	0.05	9.86	20.18	40.70	56.00	15.30	QP
7	3.156	10.67	0.10	9.87	13.88	34.52	46.00	11.48	Average
8	3.156	10.67	0.10	9.87	25.04	45.68	56.00	10.32	QP
9	4.384	10.77	0.12	9.87	14.46	35.22	46.00	10.78	Average
10	4.384	10.77	0.12	9.87	24.11	44.87	56.00	11.13	QP
11	5.166	10.87	0.13	9.87	14.98	35.85	50.00	14.15	Average
12	5.166	10.87	0.13	9.87	25.10	45.97	60.00	14.03	QP

Remarks: 1. Emission Level= AMN Factor + Cable Loss + Pulse Att. + Reading.

Test Date	2016/07/12	Temp./Hum.	27°C/55%
Test Voltage	AC 120V, 60Hz (Via Switch Power Supply)		



Site no. : No.8 Shielded Room      Data no. : 4  
 Condition : ENV4200 100169      Phase : NEUTRAL  
 Limit : FCC PART 15C  
 Env. / Ins. : 27°C / 55% ESR3 (1774)      Engineer : Jemy  
 EUT : DN-8A6WH01B  
 Power Rating : 120Vac/60Hz  
 Test Mode : Operating

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Pulse Att. (dB)	Reading (dBμV)	Emission Level (dBμV)	Limits (dBμV)	Margin (dB)	Remark
1	0.343	11.10	0.03	9.86	3.79	24.78	49.13	24.35	Average
2	0.343	11.10	0.03	9.86	17.02	38.01	59.13	21.12	QP
3	0.518	11.04	0.03	9.86	11.93	32.86	46.00	13.14	Average
4	0.518	11.04	0.03	9.86	28.53	49.46	56.00	6.54	QP
5	0.585	11.04	0.04	9.86	11.79	32.73	46.00	13.27	Average
6	0.585	11.04	0.04	9.86	28.41	49.35	56.00	6.65	QP
7	1.680	11.05	0.07	9.86	4.68	25.66	46.00	20.34	Average
8	1.680	11.05	0.07	9.86	17.61	38.59	56.00	17.41	QP
9	3.922	11.20	0.11	9.87	11.43	32.61	46.00	13.39	Average
10	3.922	11.20	0.11	9.87	24.71	45.89	56.00	10.11	QP
11	5.058	11.44	0.13	9.87	14.00	35.44	50.00	14.56	Average
12	5.058	11.44	0.13	9.87	24.64	46.08	60.00	13.92	QP

Remarks: 1. Emission Level= AMN Factor + Cable Loss + Pulse Att. + Reading.



## 6. RADIATED EMISSION MEASUREMENT

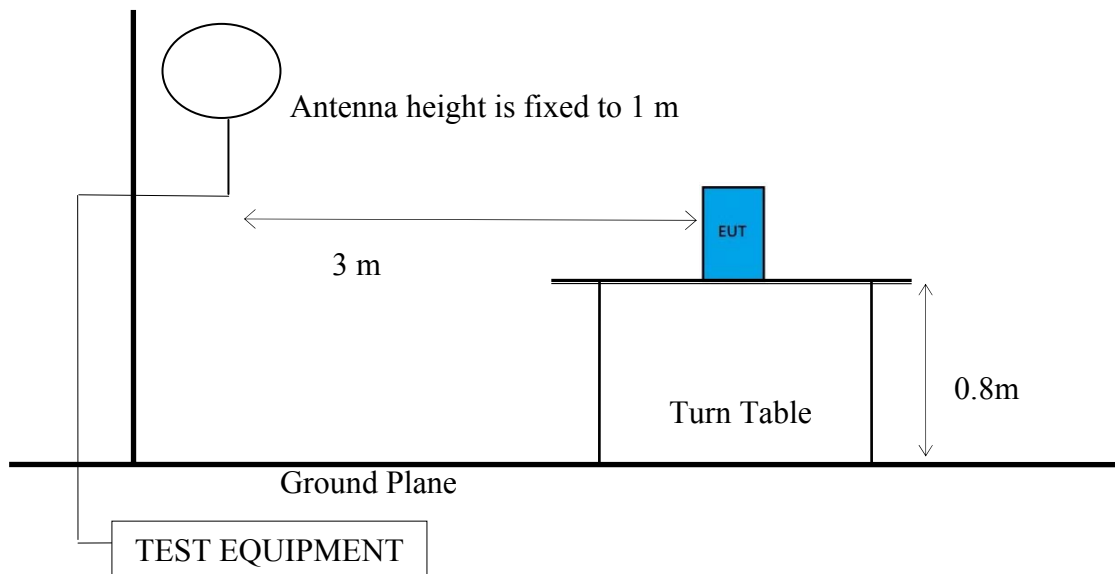
### 6.1. Block Diagram of Test Setup

#### 6.1.1. Block Diagram of connection between EUT and simulators

Indicated as section 3.7

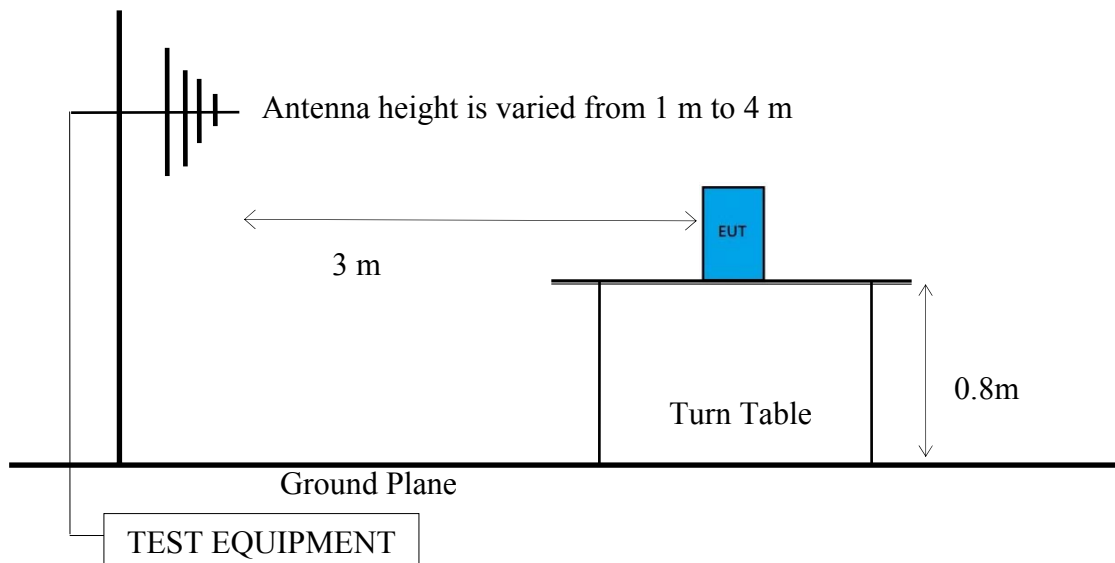
#### 6.1.2. Semi Anechoic Chamber (3m) Setup Diagram for 9kHz-30MHz

Antenna Tower

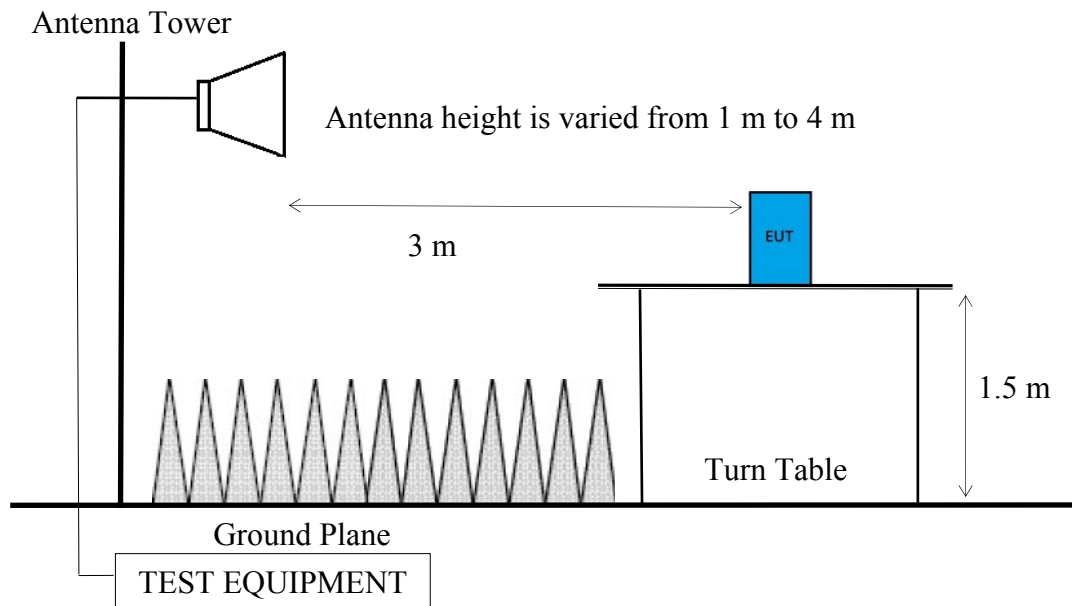


#### 6.1.3. Semi Anechoic Chamber (3m) Setup Diagram for 30-1000 MHz

Antenna Tower



### 6.1.4. Fully Anechoic Chamber (3m) Setup Diagram for above 1GHz



## 6.2. Radiated Emission Limits

In any 100kHz bandwidth outside the frequency band, the radio frequency power produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level. In addition, radiated emissions which fall in restricted bands, as defined in Section 15.205/RSS-Gen Section 8.10 table 6, must also comply with the radiated emission limits specified as below.

Frequency (MHz)	Distance (m)	Limits	
		dB $\mu$ V/m	$\mu$ V/m
0.009 - 0.490	300	67.6	2400/kHz
0.490 - 1.705	30	87.6	24000/kHz
1.705 - 30	30	29.5	30
30 - 88	3	40.0	100
88- 216	3	43.5	150
216- 960	3	46.0	200
Above 960	3	54.0	500
Above 1000	3	74.0 dB $\mu$ V/m (Peak) 54.0 dB $\mu$ V/m (Average)	

Remark : (1) dB $\mu$ V/m = 20 log ( $\mu$ V/m)

- (2) The tighter limit applies to the edge between two frequency bands.
- (3) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
- (4) Fundamental and emission fall within operation band are exempted from this section.
- (5) Pursuant to ANSI C63.10: 6.6.4.3, if the maximized peak measured value complies with the average limit, then it is unnecessary to perform an average measurement.

### 6.3. Test Procedure

#### Frequency Range 9kHz~30MHz:

The EUT setup on the turn table which has 0.8 m height to the ground. The turn table rotated 360 degrees and antenna fixed to 1 m to find the maximum emission level. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10-2013 regulation.

- (1) RBW = 9kHz with peak and average detector.
- (2) Detector: average and peak (9kHz-490kHz)  
Q.P. (490kHz-30MHz)

#### Frequency Range 30MHz ~ 40GHz:

The EUT setup on the turn find table which has 80 cm (for 30-1000 MHz) and 1.5m (for above 1GHz) height to the ground. The turn table rotated 360 degrees and antenna varied from 1 m to 4 m to find the maximum emission level. Both horizontal and vertical polarization are required. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10-2013 regulation.

#### Frequency below 1 GHz:

Spectrum Analyzer is used for pre-testing with following setting:

- (1) RBW = 120KHz
- (2) VBW  $\geq$  3 x RBW.
- (3) Detector = Peak.
- (4) Sweep time = auto.
- (5) Trace mode = max hold.
- (6) Allow sweeps to continue until the trace stabilizes.
- (7) When peak-detected value is lower than limit that the measurement using the Q.P. detector is not required. Otherwise using Q.P. for finally measurement.

**Frequency above 1GHz to 10th harmonic:****Peak Detector:**

- (1) RBW = 1MHz
- (2) VBW  $\geq 3 \times$  RBW.
- (3) Detector = Peak.
- (4) Sweep time = auto.
- (5) Trace mode = max hold.
- (6) Allow sweeps to continue until the trace stabilizes.
- (7) When peak-detected value is lower than limit that the measurement using the average detector is not required. Otherwise using average for finally measurement.

**Average Detector:****■ Option 1:**

- (1) RBW = 1MHz
- (2) VBW  $\geq 1/ T$ .

Modulation Type	T (ms)	1/ T (kHz)	VBW Setting(kHz)
802.11b	8.4	0.119	0.119
802.11g	1.4	0.714285	0.714285
802.11n-HT20	1.3	0.76923	0.76923
802.11n-HT40	0.6083	1.64393	1.64393

N/A: 1/ T is not implemented when duty cycle presented in section 3.5 is  $\geq 98$  %.

- (1) Detector = Peak.
- (2) Sweep time = auto.
- (3) Trace mode = max hold.
- (4) Allow sweeps to continue until the trace stabilizes.

**□ Option 2:**

Average Emission Level= Peak Emission Level+ D.C.C.F.

**6.4. Measurement Result Explanation**

- Peak Emission Level=Antenna Factor + Cable Loss + Meter Reading
- Average Emission Level=Antenna Factor + Cable Loss + Meter Reading
- Average Emission Level= Peak Emission Level+ DCCF  
 Duty Cycle Correction Factor (DCCF)=  $20\log (TX_{on}/TX_{on+off})$  presented in section 3.5
- EPR= Peak Emission Level-95.2dB-2.14dB

## 6.5. Test Results

### PASSED.

Test Date	2016/07/12	Temp./Hum.	26°C/42%
	2016/08/29		25°C/40%
	2016/09/12		25°C/40%
Test Voltage	AC 120V, 60Hz (Via Switch Power Supply)		

### 6.5.1. Emissions within Restricted Frequency Bands

#### 6.5.1.1. Frequency 9kHz~30MHz

**The emissions (9kHz~30MHz) not reported for there is no emission be found.**

#### 6.5.1.2. Frequency Below 1 GHz

Mode	802.11b	Frequency	TX 2437MHz
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#### Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
167.74	9.58	3.74	28.38	41.70	43.50	1.80	Peak
263.77	12.61	4.43	27.55	44.59	46.00	1.41	Peak
971.87	20.95	7.96	11.69	40.60	54.00	13.40	Peak

#### Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
56.19	7.02	2.69	28.37	38.08	43.50	5.42	Peak
95.96	10.23	3.19	26.15	39.57	46.00	6.43	Peak
433.52	16.07	5.94	15.67	37.68	46.00	8.32	Peak

Mode	802.11g	Frequency	TX 2437MHz
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**Antenna at Horizontal Polarization**

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)	Detector
107.60	11.47	3.28	25.52	40.27	43.50	3.23	Peak
227.88	11.08	4.18	28.61	43.87	46.00	2.13	Peak
359.80	14.64	5.28	23.55	43.47	46.00	2.53	Peak

**Antenna at Vertical Polarization**

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)	Detector
30.97	18.07	2.34	16.96	37.37	40.00	2.63	Peak
95.96	10.23	3.19	27.45	40.87	43.50	2.63	Peak
579.99	18.08	6.49	14.93	39.50	46.00	6.50	Peak

Mode	802.11n-HT20	Frequency	TX 2437MHz
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#### Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)	Detector
95.96	10.23	3.19	28.83	42.25	43.50	1.25	Peak
239.52	11.76	4.26	28.21	44.23	46.00	1.77	Peak
947.62	20.83	7.82	11.23	39.88	46.00	6.12	Peak

#### Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)	Detector
56.19	7.02	2.69	28.16	37.87	40.00	2.13	Peak
167.74	9.58	3.74	23.24	36.56	43.50	6.94	Peak
579.99	18.08	6.49	14.51	39.08	46.00	6.92	Peak

Mode	802.11n-HT40	Frequency	TX 2437MHz
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#### Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)	Detector
95.96	10.23	3.19	27.95	41.37	43.50	2.13	Peak
239.52	11.76	4.26	28.14	44.16	46.00	1.84	Peak
359.80	14.64	5.28	24.38	44.30	46.00	1.70	Peak

#### Antenna at Vertical Polarization

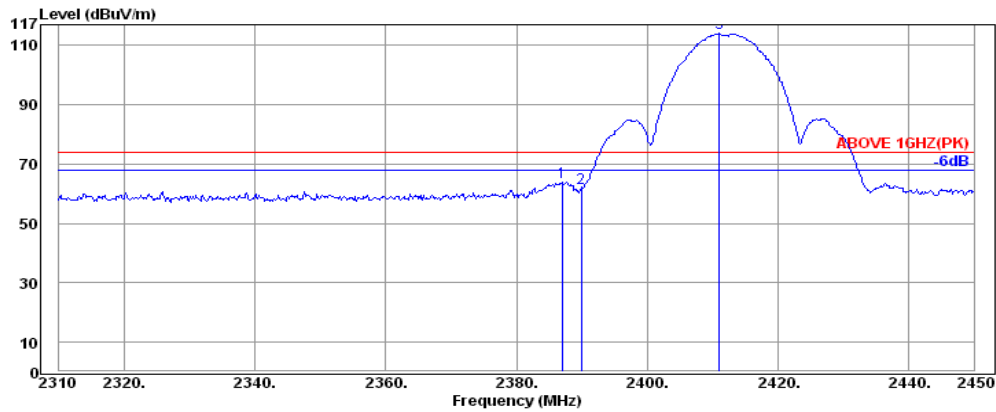
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)	Detector
60.07	6.25	2.72	28.44	37.41	40.00	2.59	Peak
95.96	10.23	3.19	25.15	38.57	43.50	4.93	Peak
399.57	15.53	5.65	15.11	36.29	46.00	9.71	Peak



6.5.2. Frequency Above 1 GHz to 10<sup>th</sup> harmonics

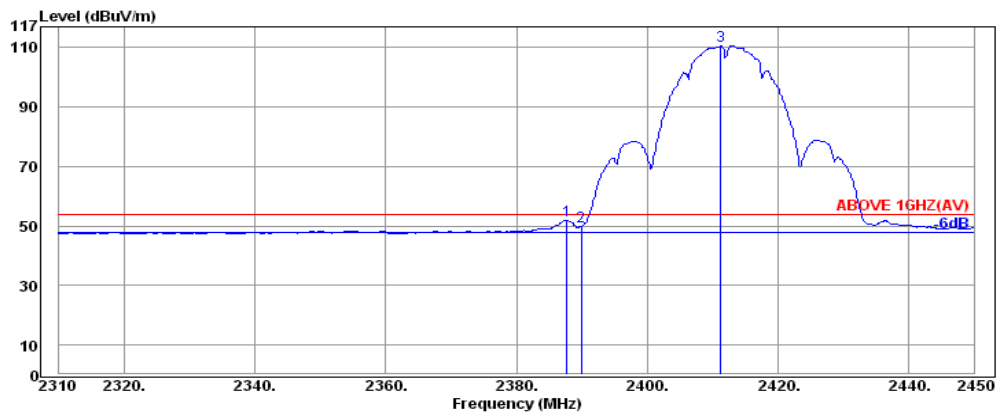
**Band Edge:**

Mode	802.11b	Frequency	TX 2412MHz
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**Antenna at Horizontal Polarization**

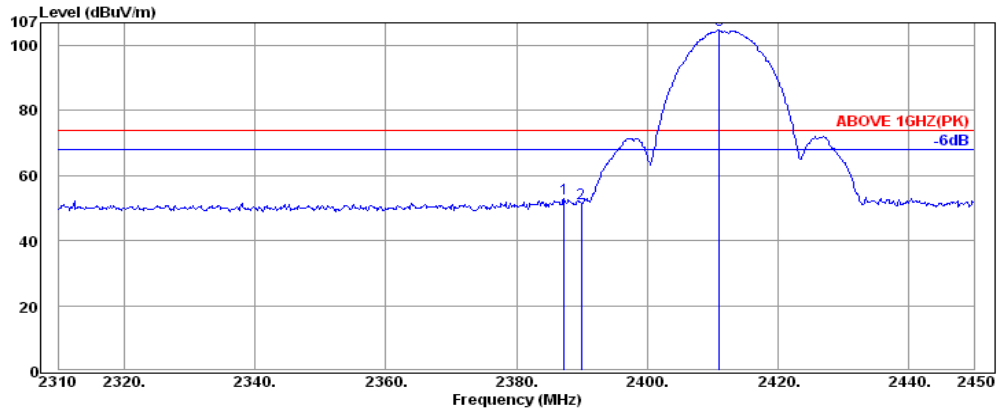
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2387.00	32.16	6.07	25.71	63.94	74.00	10.06	Peak
2389.94	32.16	6.08	23.51	61.75	74.00	12.25	Peak
2411.08	32.18	6.11	75.76	114.05	---	---	Peak



**Antenna at Horizontal Polarization**

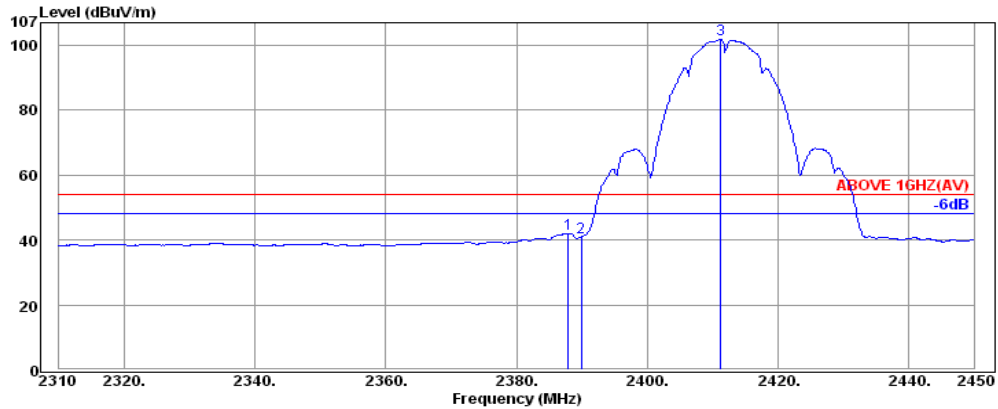
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2387.70	32.16	6.08	13.51	51.75	54.00	2.25	Average
2389.94	32.16	6.08	11.57	49.81	54.00	4.19	Average
2411.22	32.18	6.11	72.22	110.51	---	---	Average

Mode	802.11b	Frequency	TX 2412MHz
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**Antenna at Vertical Polarization**

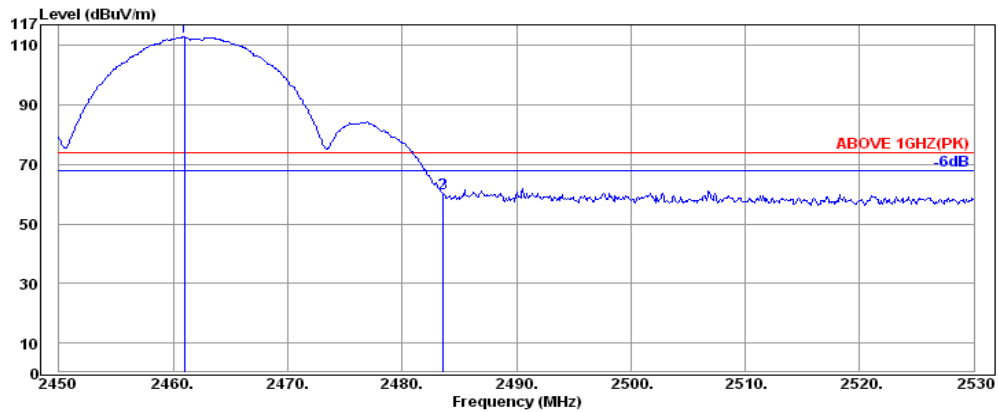
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	imits (dBμV/m)	Margin (dB)	Detector
2387.28	32.16	6.08	14.87	53.11	74.00	20.89	Peak
2389.94	32.16	6.08	13.24	51.48	74.00	22.52	Peak
2411.08	32.18	6.11	66.41	104.70	---	---	Peak



**Antenna at Vertical Polarization**

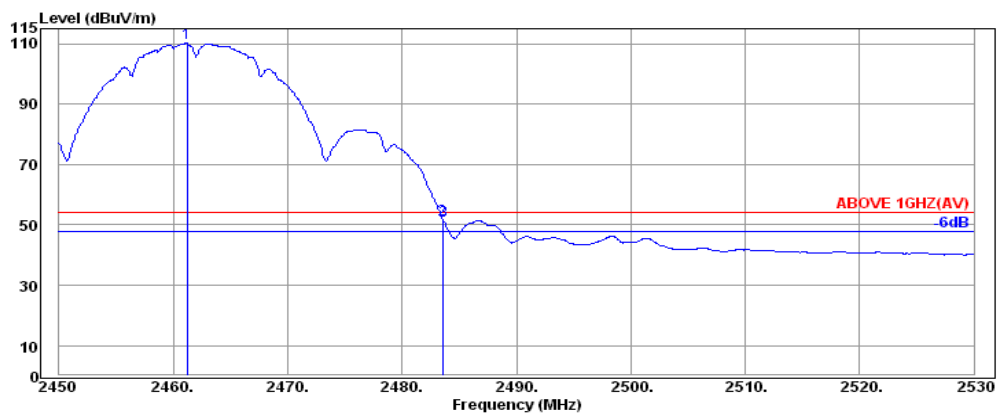
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2387.98	32.16	6.08	3.85	42.09	54.00	11.91	Average
2389.94	32.16	6.08	2.74	40.98	54.00	13.02	Average
2411.22	32.18	6.11	63.67	101.96	---	---	Average

Mode	802.11b	Frequency	TX 2462MHz
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**Antenna at Horizontal Polarization**

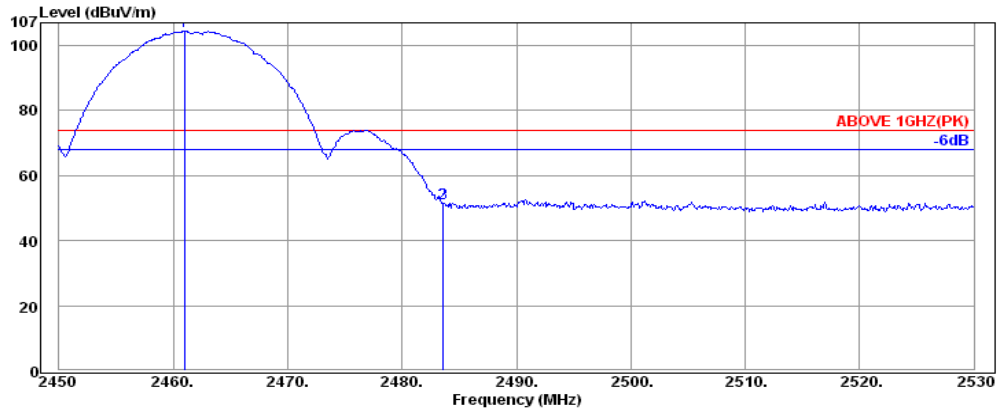
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2460.96	32.25	6.16	74.42	112.83	---	---	Peak
2483.52	32.28	6.19	22.04	60.51	74.00	13.49	Peak
2483.60	32.28	6.19	21.75	60.22	74.00	13.78	Peak



**Antenna at Horizontal Polarization**

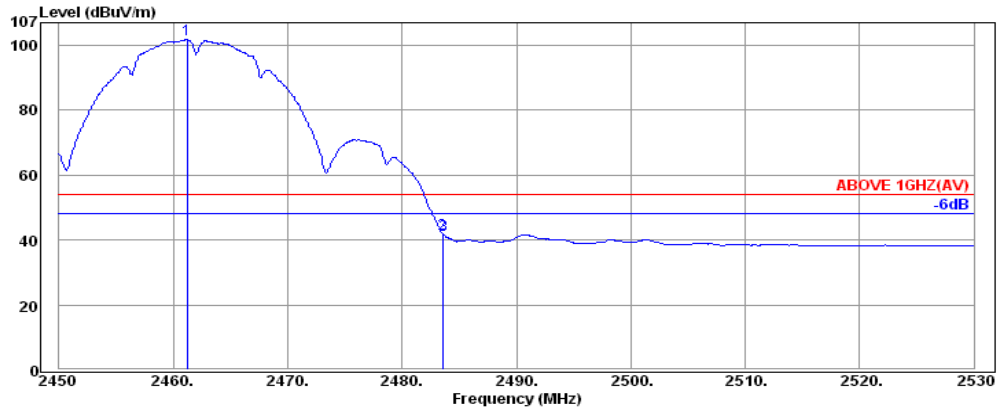
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2461.20	32.25	6.16	71.81	110.22	---	---	Average
2483.52	32.28	6.19	13.34	51.81	54.00	2.19	Average
2483.60	32.28	6.19	13.01	51.48	54.00	2.52	Average

Mode	802.11b	Frequency	TX 2462MHz
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**Antenna at Vertical Polarization**

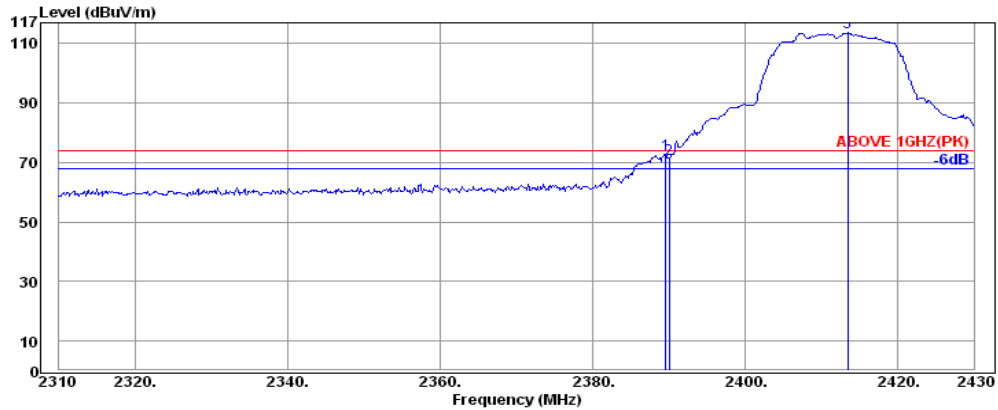
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2460.96	32.25	6.16	66.04	104.45	---	---	Peak
2483.52	32.28	6.19	13.08	51.55	74.00	22.45	Peak
2483.60	32.28	6.19	13.07	51.54	74.00	22.46	Peak



**Antenna at Vertical Polarization**

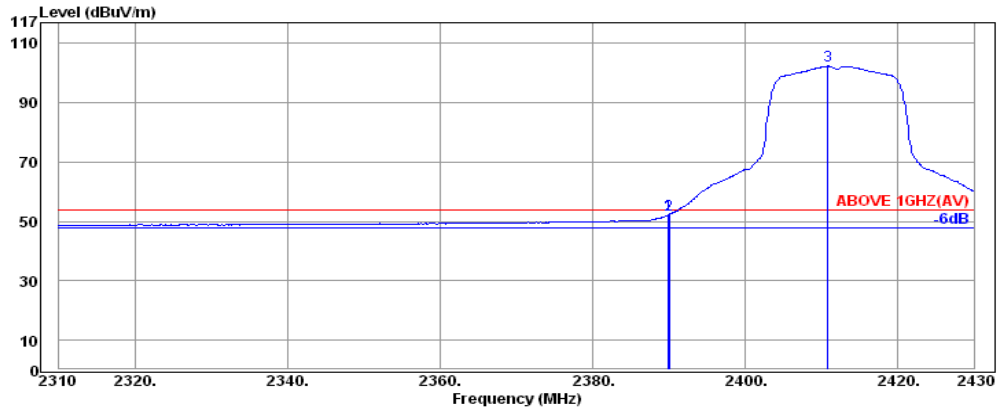
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2461.20	32.25	6.16	63.40	101.81	---	---	Average
2483.52	32.28	6.19	3.55	42.02	54.00	11.98	Average
2483.60	32.28	6.19	3.19	41.66	54.00	12.34	Average

Mode	802.11g	Frequency	TX 2412MHz
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**Antenna at Horizontal Polarization**

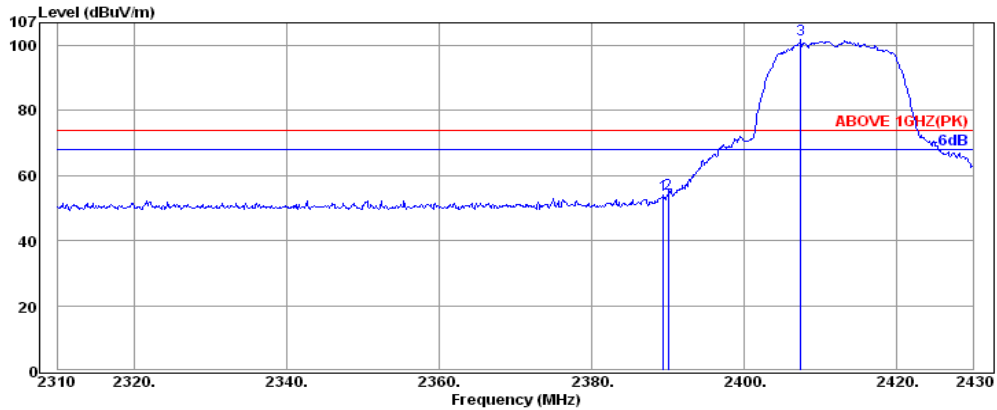
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.56	32.16	6.08	34.69	72.93	74.00	1.07	Peak
2390.04	32.16	6.08	32.97	71.21	74.00	2.79	Peak
2413.44	32.18	6.11	75.48	113.77	---	---	Peak



**Antenna at Horizontal Polarization**

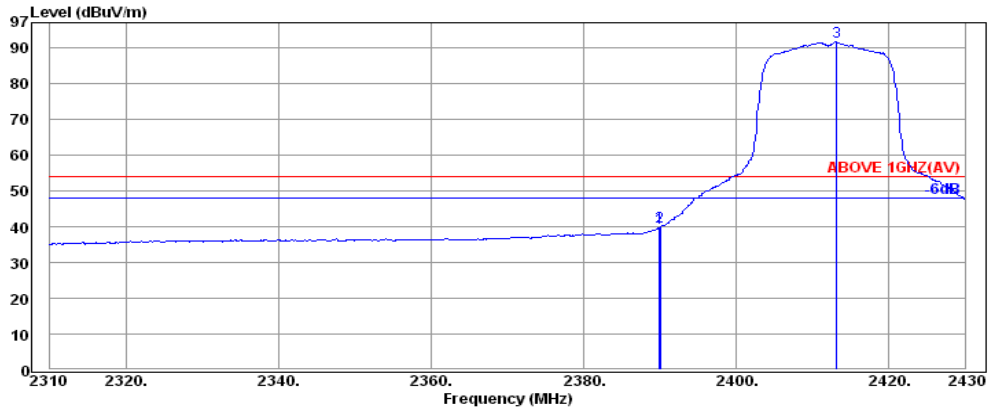
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.92	32.16	6.08	14.01	52.25	54.00	1.75	Average
2390.04	32.16	6.08	14.22	52.46	54.00	1.54	Average
2410.80	32.18	6.11	64.06	102.35	---	---	Average

Mode	802.11g	Frequency	TX 2412MHz
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**Antenna at Vertical Polarization**

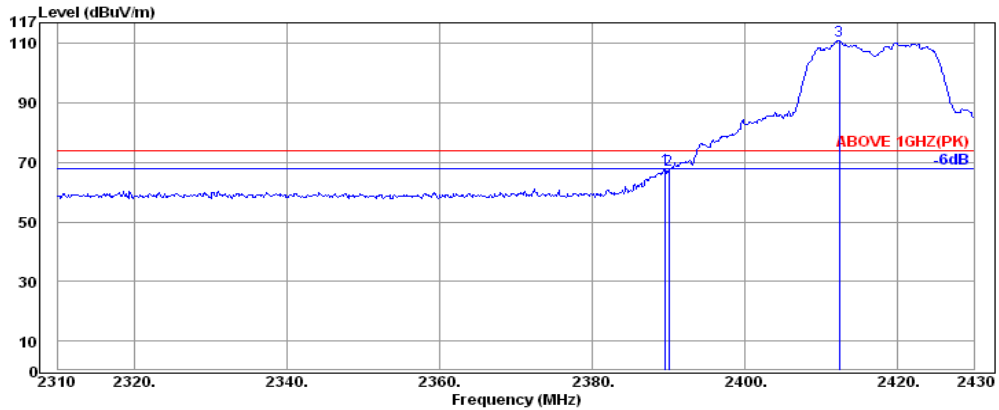
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.44	32.16	6.08	15.86	54.10	74.00	19.90	Peak
2390.04	32.16	6.08	16.20	54.44	74.00	19.56	Peak
2407.44	32.18	6.10	63.62	101.90	---	---	Peak



**Antenna at Vertical Polarization**

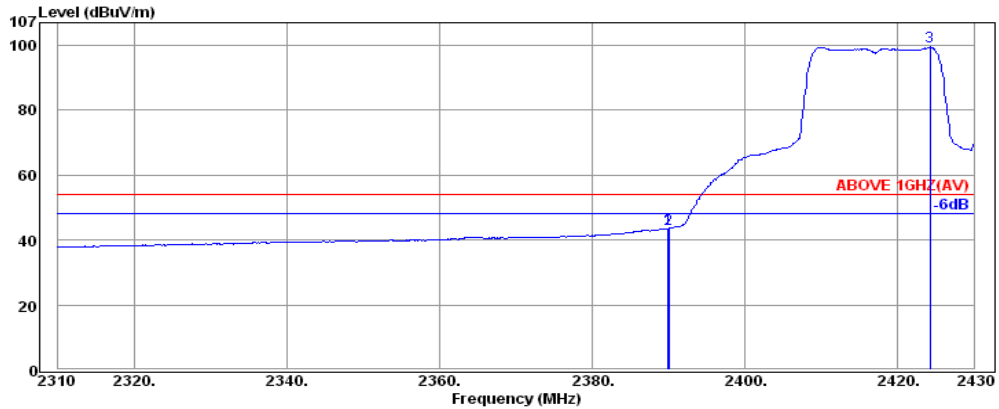
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.92	32.16	6.08	1.54	39.78	54.00	14.22	Average
2390.04	32.16	6.08	1.69	39.93	54.00	14.07	Average
2413.20	32.18	6.11	53.24	91.53	---	---	Average

Mode	802.11g	Frequency	TX 2417MHz
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**Antenna at Horizontal Polarization**

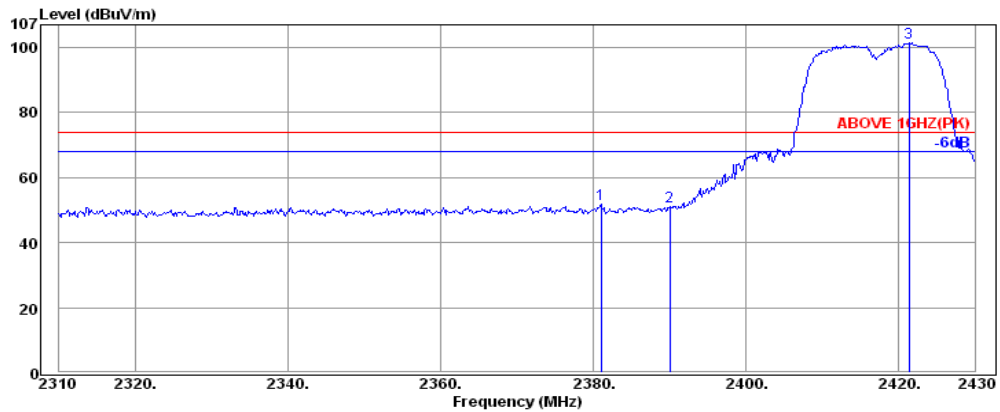
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.56	32.16	6.08	29.64	67.88	74.00	6.12	Peak
2390.04	32.16	6.08	29.11	67.35	74.00	6.65	Peak
2412.36	32.18	6.11	72.80	111.09	---	---	Peak



**Antenna at Horizontal Polarization**

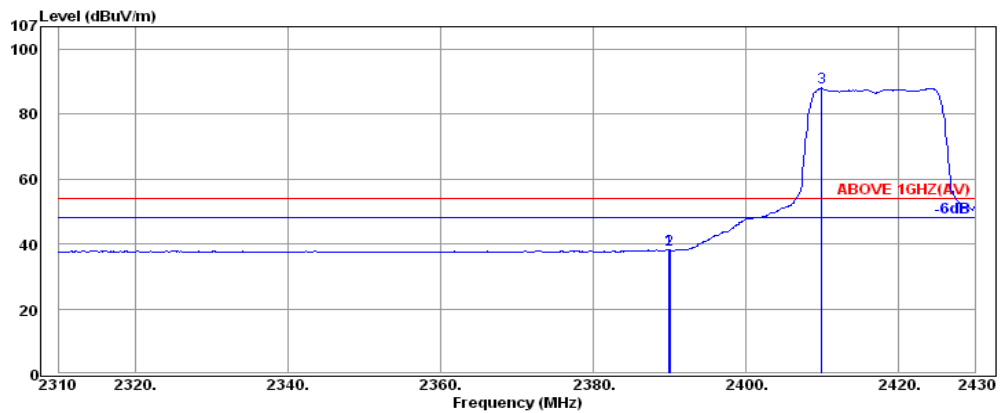
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.92	32.16	6.08	5.24	43.48	54.00	10.52	Average
2390.04	32.16	6.08	5.32	43.56	54.00	10.44	Average
2424.24	32.20	6.12	61.15	99.47	---	---	Average

Mode	802.11g	Frequency	TX 2417MHz
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**Antenna at Vertical Polarization**

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2381.04	32.13	6.07	13.48	51.68	74.00	22.32	Peak
2390.04	32.16	6.08	12.83	51.07	74.00	22.93	Peak
2421.36	32.20	6.12	63.21	101.53	---	---	Peak

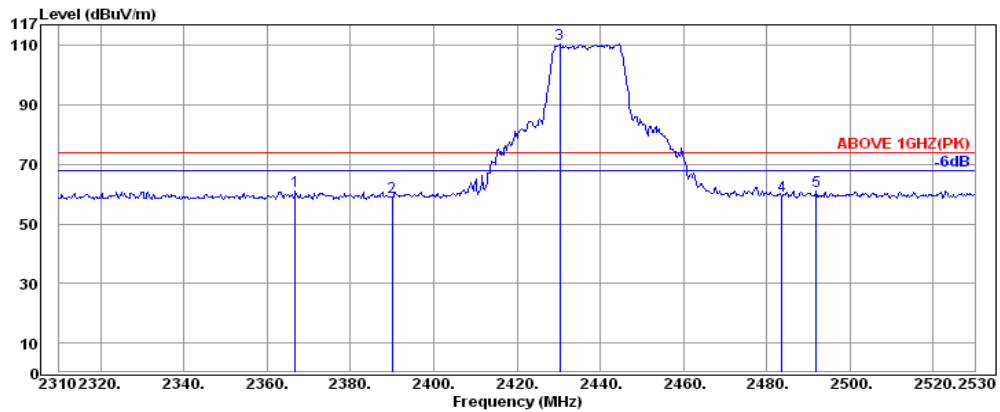


**Antenna at Vertical Polarization**

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.92	32.16	6.08	-0.02	38.22	54.00	15.78	Average
2390.04	32.16	6.08	-0.04	38.20	54.00	15.80	Average
2409.96	32.18	6.10	49.81	88.09	---	---	Average

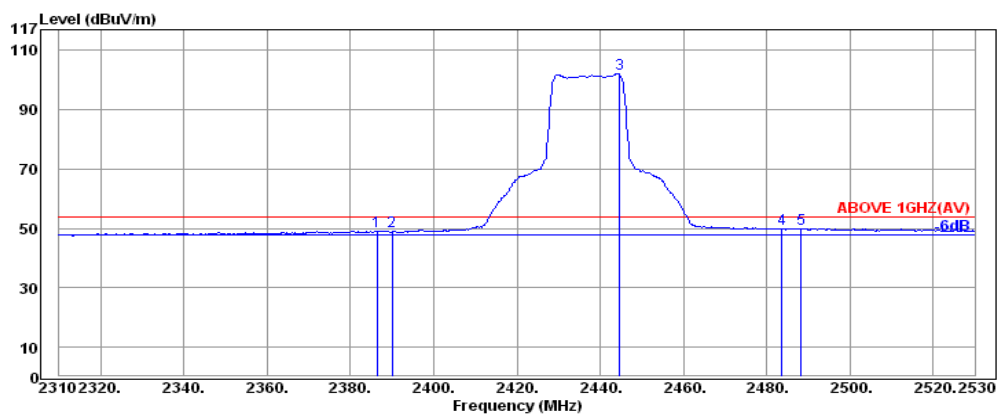


Mode	802.11g	Frequency	TX 2437MHz
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**Antenna at Horizontal Polarization**

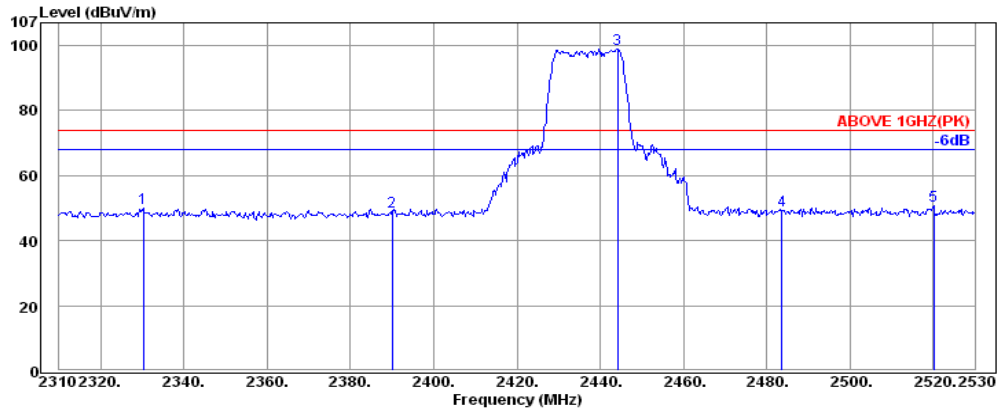
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2366.76	32.11	6.05	22.92	61.08	74.00	12.92	Peak
2390.08	32.16	6.08	20.88	59.12	74.00	14.88	Peak
2430.34	32.20	6.13	72.21	110.54	---	---	Peak
2483.58	32.28	6.19	21.21	59.68	74.00	14.32	Peak
2491.94	32.30	6.20	22.63	61.13	74.00	12.87	Peak



**Antenna at Horizontal Polarization**

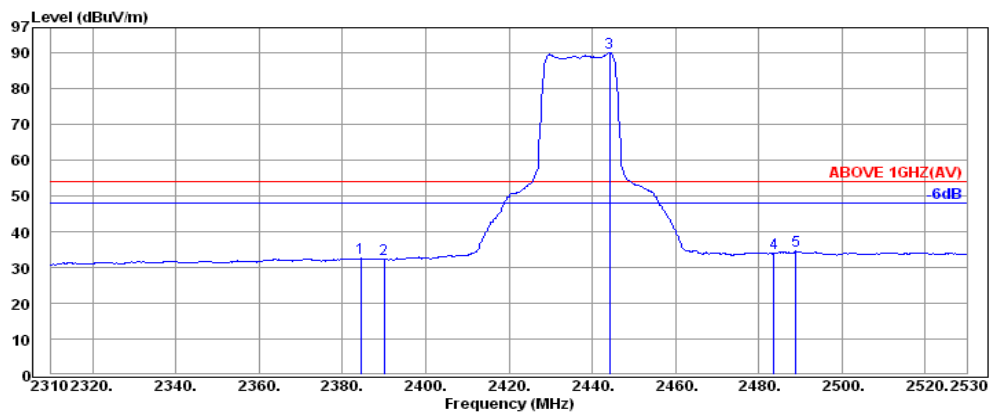
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2386.34	32.16	6.07	10.86	49.09	54.00	4.91	Average
2390.08	32.16	6.08	10.64	48.88	54.00	5.12	Average
2444.64	32.23	6.14	63.91	102.28	---	---	Average
2483.58	32.28	6.19	11.35	49.82	54.00	4.18	Average
2488.20	32.30	6.19	11.55	50.04	54.00	3.96	Average

Mode	802.11g	Frequency	TX 2437MHz
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**Antenna at Vertical Polarization**

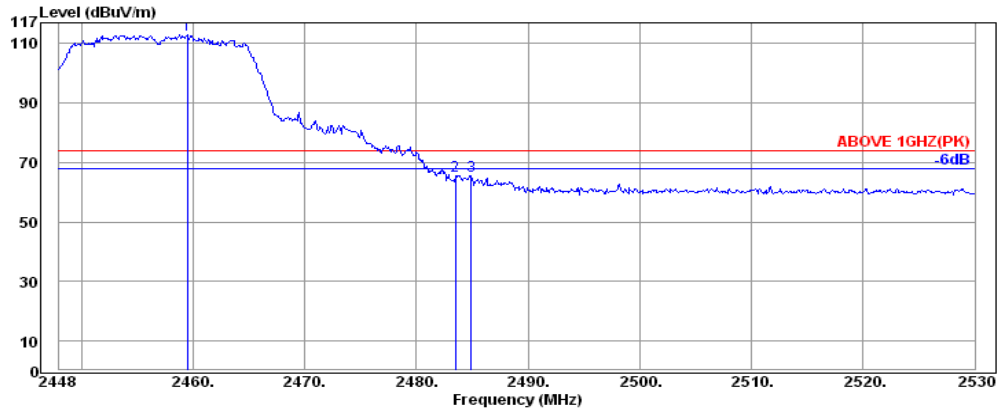
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2330.24	32.06	6.00	11.87	49.93	74.00	24.07	Peak
2390.08	32.16	6.08	10.74	48.98	74.00	25.02	Peak
2444.20	32.23	6.14	60.70	99.07	---	---	Peak
2483.58	32.28	6.19	10.95	49.42	74.00	24.58	Peak
2520.10	32.32	6.23	12.17	50.72	74.00	23.28	Peak



**Antenna at Vertical Polarization**

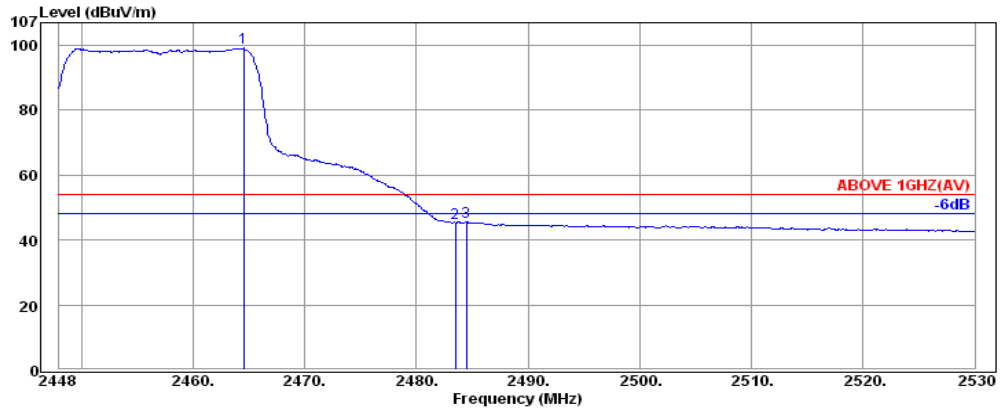
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2384.36	32.13	6.07	-5.69	32.51	54.00	21.49	Average
2390.08	32.16	6.08	-5.95	32.29	54.00	21.71	Average
2444.20	32.23	6.14	51.61	89.98	---	---	Average
2483.58	32.28	6.19	-4.42	34.05	54.00	19.95	Average
2488.86	32.30	6.19	-3.98	34.51	54.00	19.49	Average

Mode	802.11g	Frequency	TX 2457MHz
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**Antenna at Horizontal Polarization**

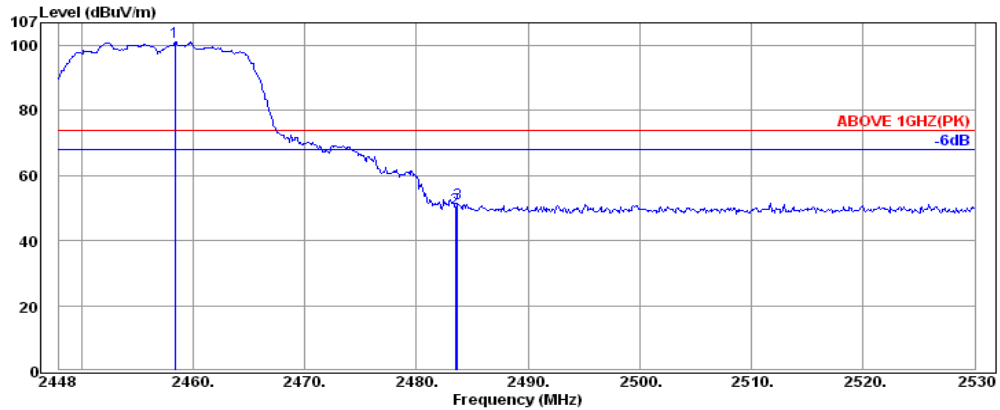
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2459.48	32.25	6.16	74.57	112.98	---	---	Peak
2483.51	32.28	6.19	27.05	65.52	74.00	8.48	Peak
2484.90	32.28	6.19	27.17	65.64	74.00	8.36	Peak



**Antenna at Horizontal Polarization**

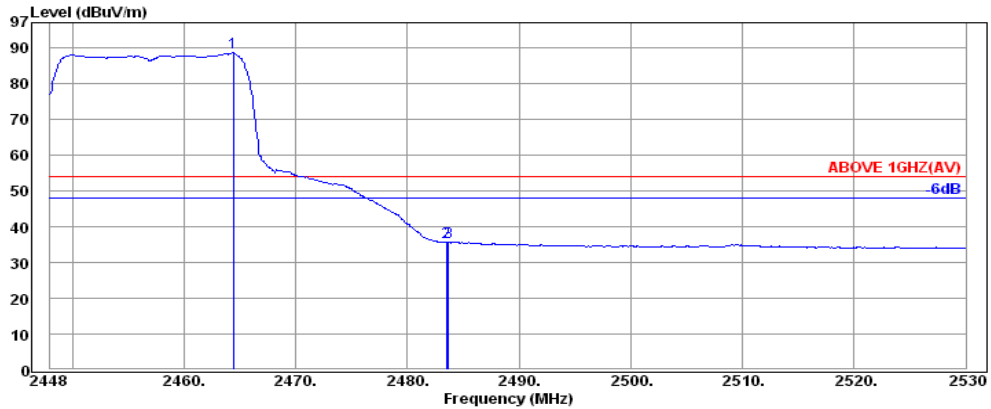
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2464.56	32.25	6.16	60.69	99.10	---	---	Average
2483.51	32.28	6.19	6.87	45.34	54.00	8.66	Average
2484.49	32.28	6.19	7.09	45.56	54.00	8.44	Average

Mode	802.11g	Frequency	TX 2457MHz
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**Antenna at Vertical Polarization**

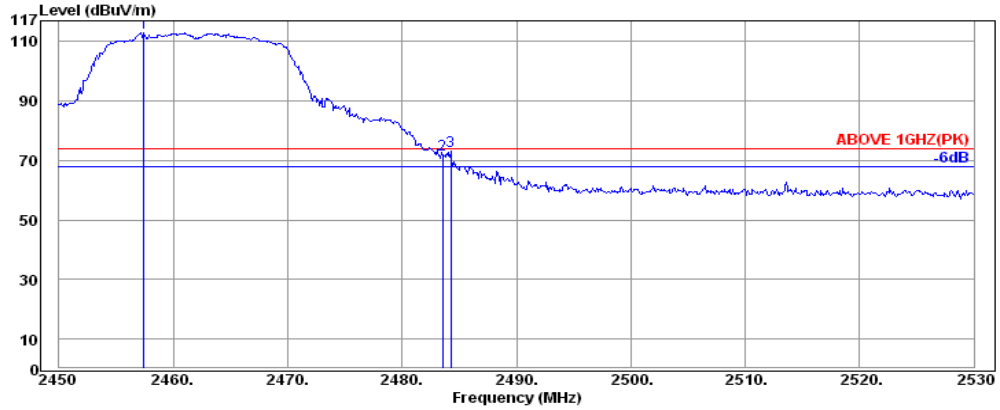
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2458.41	32.25	6.15	62.82	101.22	---	---	Peak
2483.51	32.28	6.19	11.71	50.18	74.00	23.82	Peak
2483.67	32.28	6.19	13.11	51.58	74.00	22.42	Peak



**Antenna at Vertical Polarization**

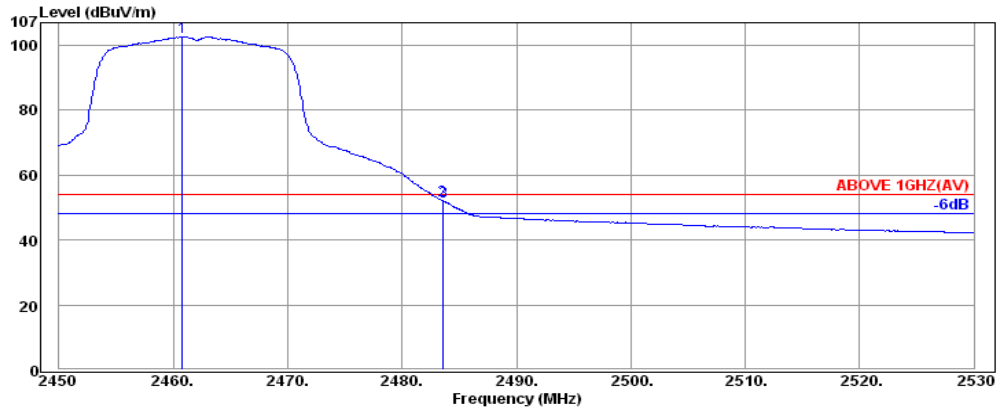
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2464.40	32.25	6.16	50.14	88.55	---	---	Average
2483.51	32.28	6.19	-2.83	35.64	54.00	18.36	Average
2483.67	32.28	6.19	-2.75	35.72	54.00	18.28	Average

Mode	802.11g	Frequency	TX 2462MHz
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**Antenna at Horizontal Polarization**

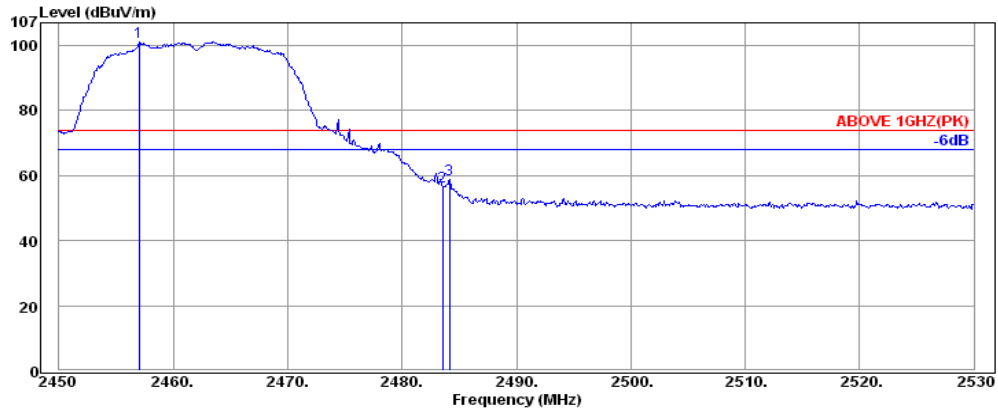
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2457.44	32.25	6.15	74.57	112.97	---	---	Peak
2483.52	32.28	6.19	33.39	71.86	74.00	2.14	Peak
2484.24	32.28	6.19	34.82	73.29	74.00	0.71	Peak



**Antenna at Horizontal Polarization**

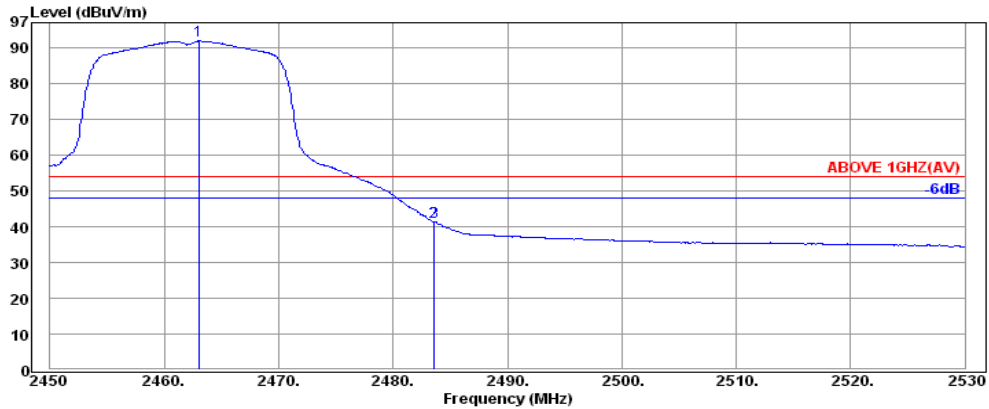
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2460.80	32.25	6.16	64.25	102.66	---	---	Average
2483.52	32.28	6.19	13.60	52.07	54.00	1.93	Average
2483.60	32.28	6.19	13.41	51.88	54.00	2.12	Average

Mode	802.11g	Frequency	TX 2462MHz
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**Antenna at Vertical Polarization**

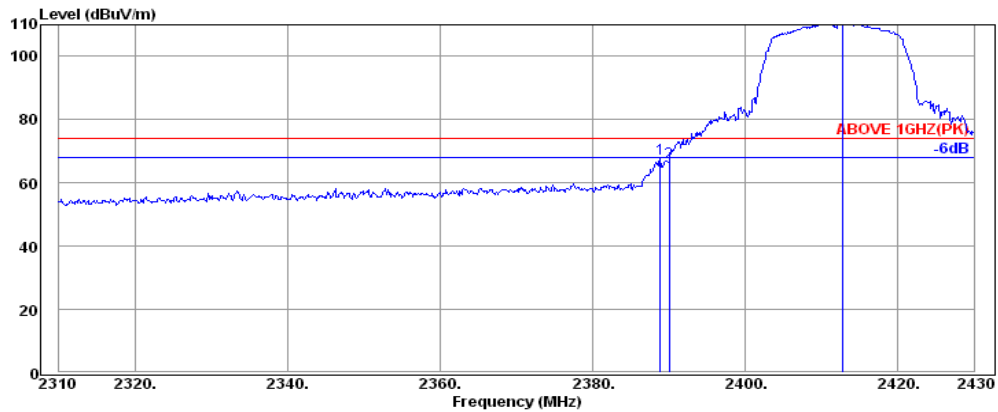
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2457.04	32.25	6.15	62.63	101.03	---	---	Peak
2483.52	32.28	6.19	18.28	56.75	74.00	17.25	Peak
2484.16	32.28	6.19	20.27	58.74	74.00	15.26	Peak



**Antenna at Vertical Polarization**

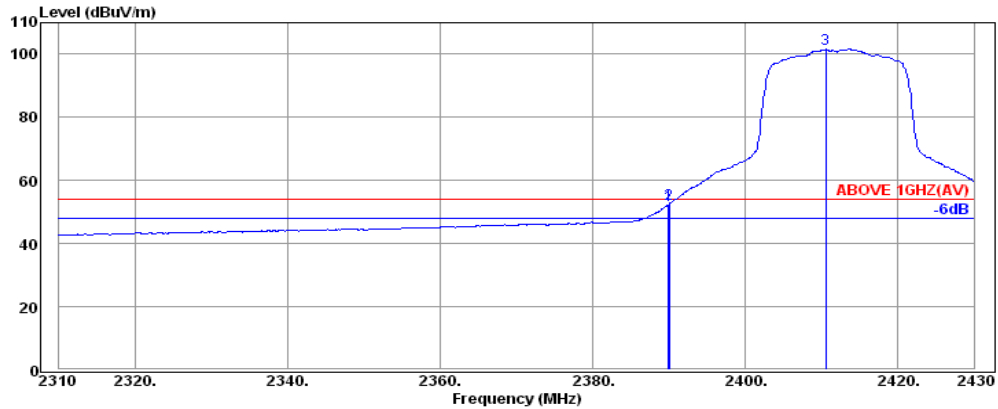
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2463.04	32.25	6.16	53.54	91.95	---	---	Average
2483.52	32.28	6.19	2.91	41.38	54.00	12.62	Average
2483.60	32.28	6.19	2.81	41.28	54.00	12.72	Average

Mode	802.11n-HT20	Frequency	TX 2412MHz
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**Antenna at Horizontal Polarization**

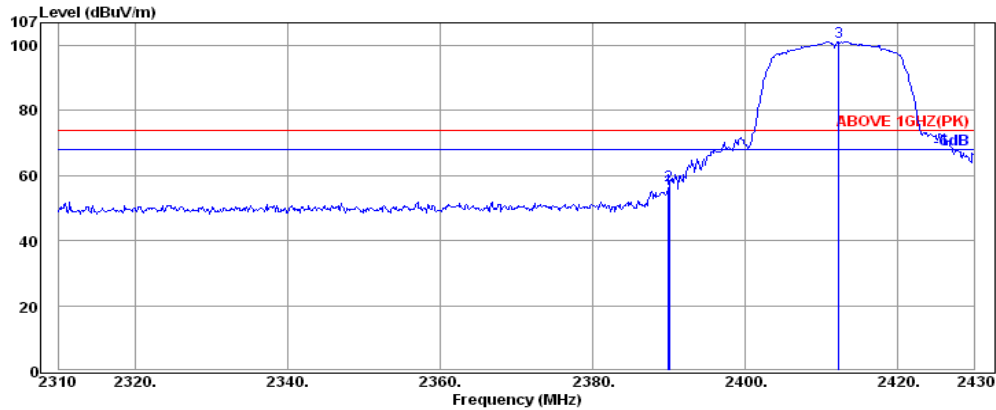
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2388.84	32.16	6.08	29.44	67.68	74.00	6.32	Peak
2390.04	32.16	6.08	28.15	66.39	74.00	7.61	Peak
2412.84	32.18	6.11	72.53	110.82	---	---	Peak



**Antenna at Horizontal Polarization**

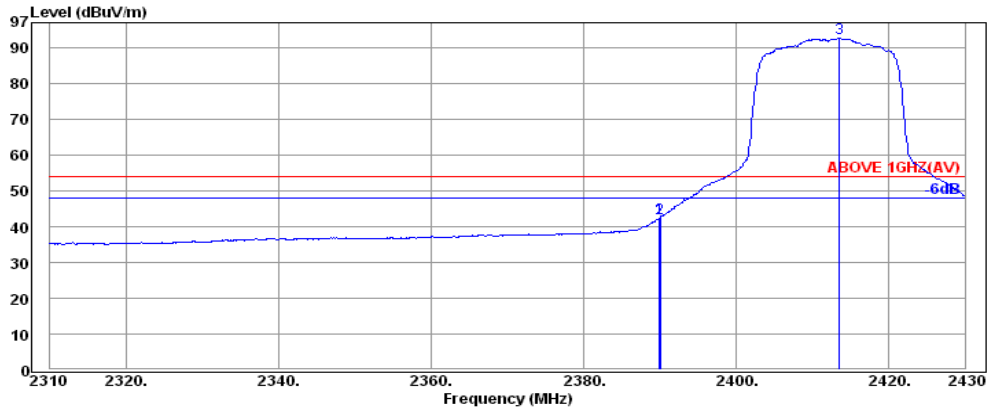
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.92	32.16	6.08	14.00	52.24	54.00	1.76	Average
2390.04	32.16	6.08	14.20	52.44	54.00	1.56	Average
2410.56	32.18	6.10	63.28	101.56	---	---	Average

Mode	802.11n-HT20	Frequency	TX 2412MHz
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**Antenna at Vertical Polarization**

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Detector
2389.92	32.16	6.08	17.63	55.87	74.00	18.13	Peak
2390.04	32.16	6.08	18.66	56.90	74.00	17.10	Peak
2412.24	32.18	6.11	62.98	101.27	---	---	Peak

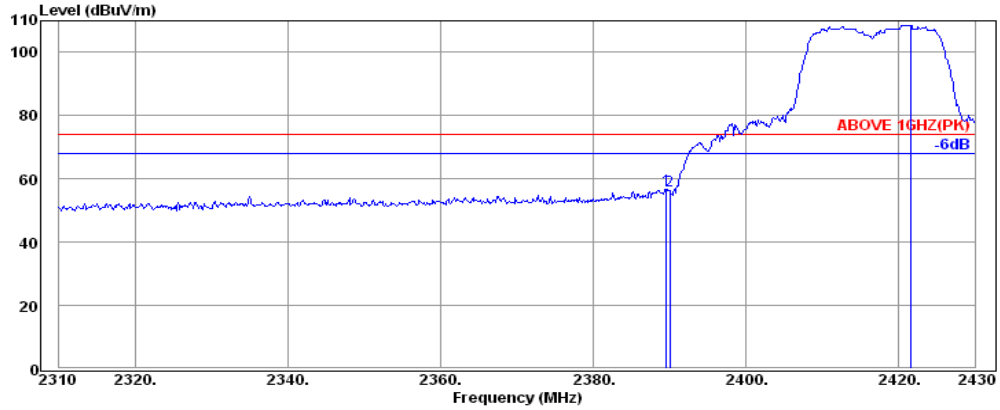


**Antenna at Vertical Polarization**

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Detector
2389.92	32.16	6.08	4.07	42.31	54.00	11.69	Average
2390.04	32.16	6.08	4.25	42.49	54.00	11.51	Average
2413.56	32.18	6.11	54.41	92.70	---	---	Average

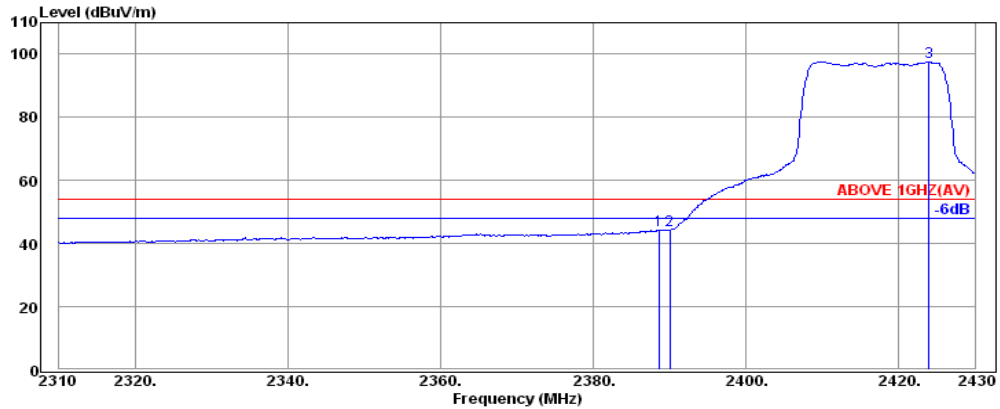


Mode	802.11n-HT20	Frequency	TX 2417MHz
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**Antenna at Horizontal Polarization**

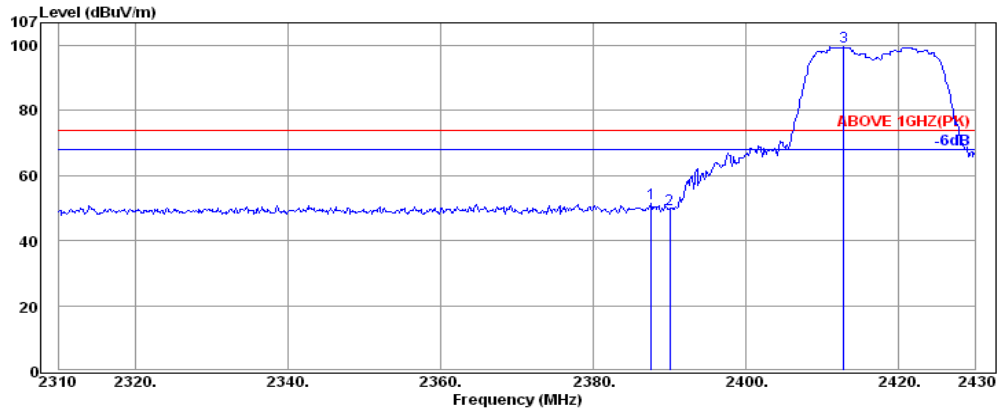
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.56	32.16	6.08	18.41	56.65	74.00	17.35	Peak
2390.04	32.16	6.08	17.92	56.16	74.00	17.84	Peak
2421.60	32.20	6.12	70.32	108.64	---	---	Peak



**Antenna at Horizontal Polarization**

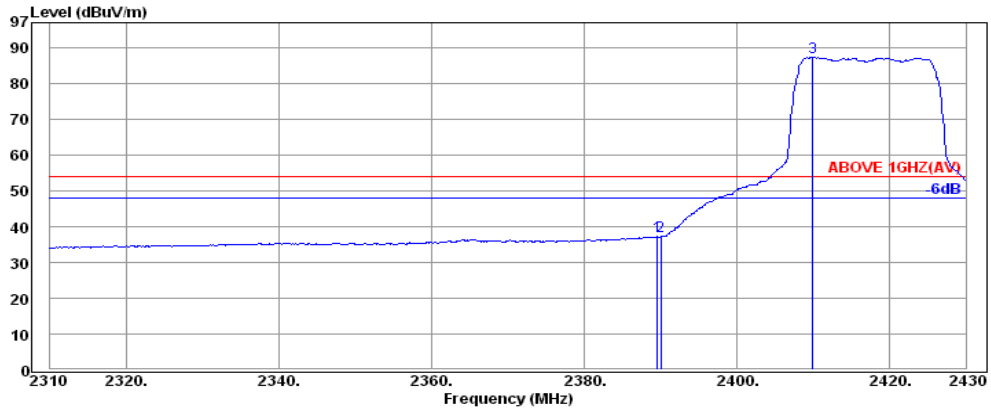
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2388.60	32.16	6.08	6.04	44.28	54.00	9.72	Average
2390.04	32.16	6.08	6.10	44.34	54.00	9.66	Average
2424.00	32.20	6.12	59.32	97.64	---	---	Average

Mode	802.11n-HT20	Frequency	TX 2417MHz
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**Antenna at Vertical Polarization**

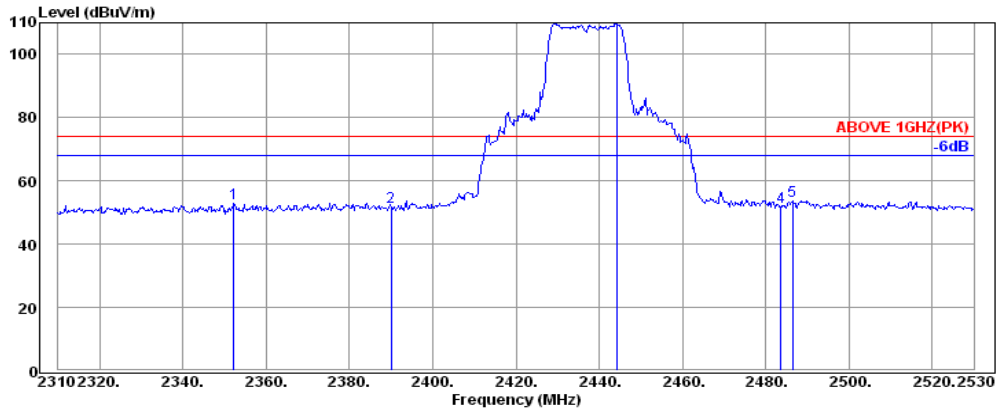
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2387.64	32.16	6.08	13.26	51.50	74.00	22.50	Peak
2390.04	32.16	6.08	11.23	49.47	74.00	24.53	Peak
2412.84	32.18	6.11	61.35	99.64	---	---	Peak



**Antenna at Vertical Polarization**

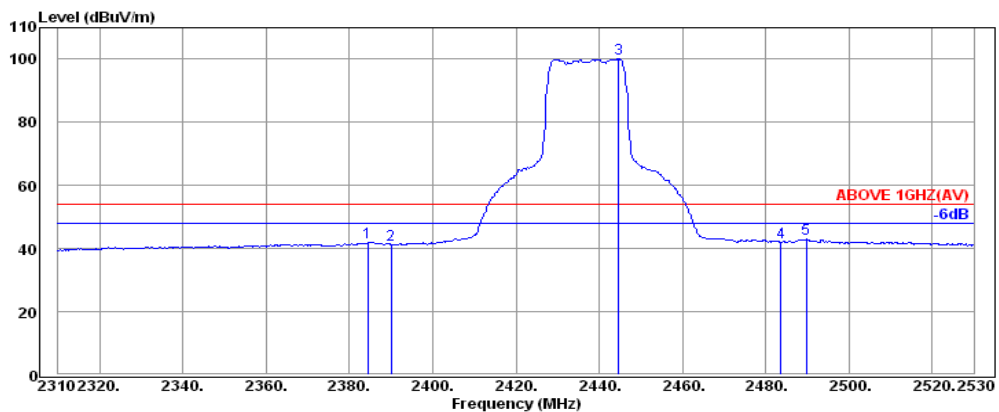
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.56	32.16	6.08	-0.99	37.25	54.00	16.75	Average
2390.04	32.16	6.08	-1.07	37.17	54.00	16.83	Average
2409.96	32.18	6.10	49.21	87.49	---	---	Average

Mode	802.11n-HT20	Frequency	TX 2437MHz
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**Antenna at Horizontal Polarization**

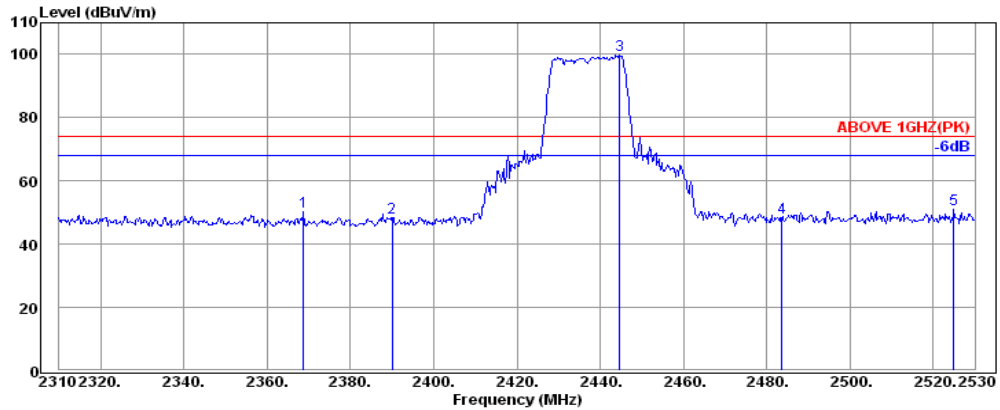
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2352.24	32.11	6.03	14.92	53.06	74.00	20.94	Peak
2390.08	32.16	6.08	13.63	51.87	74.00	22.13	Peak
2444.20	32.23	6.14	71.61	109.98	---	---	Peak
2483.58	32.28	6.19	13.37	51.84	74.00	22.16	Peak
2486.44	32.28	6.19	15.30	53.77	74.00	20.23	Peak



**Antenna at Horizontal Polarization**

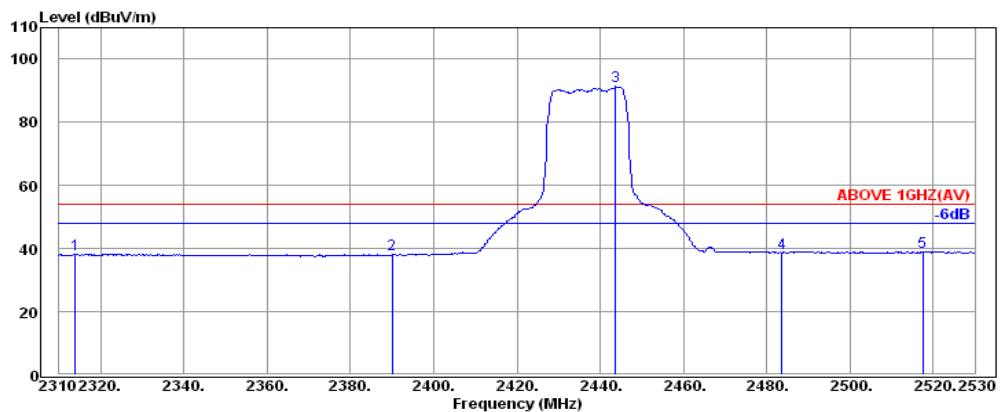
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2384.36	32.13	6.07	3.73	41.93	54.00	12.07	Average
2390.08	32.16	6.08	3.02	41.26	54.00	12.74	Average
2444.64	32.23	6.14	61.82	100.19	---	---	Average
2483.58	32.28	6.19	3.64	42.11	54.00	11.89	Average
2489.74	32.30	6.19	4.44	42.93	54.00	11.07	Average

Mode	802.11n-HT20	Frequency	TX 2437MHz
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**Antenna at Vertical Polarization**

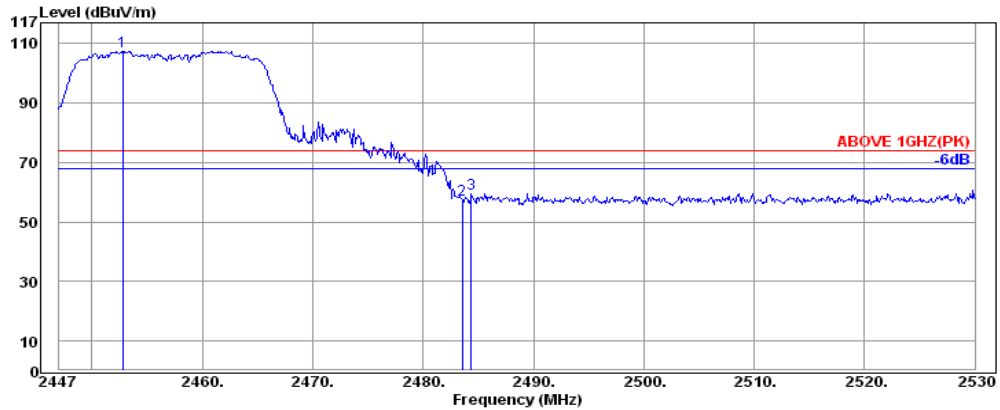
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2368.74	32.13	6.05	12.25	50.43	74.00	23.57	Peak
2390.08	32.16	6.08	10.23	48.47	74.00	25.53	Peak
2444.64	32.23	6.14	61.36	99.73	---	---	Peak
2483.58	32.28	6.19	10.10	48.57	74.00	25.43	Peak
2524.94	32.34	6.25	12.46	51.05	74.00	22.95	Peak



**Antenna at Vertical Polarization**

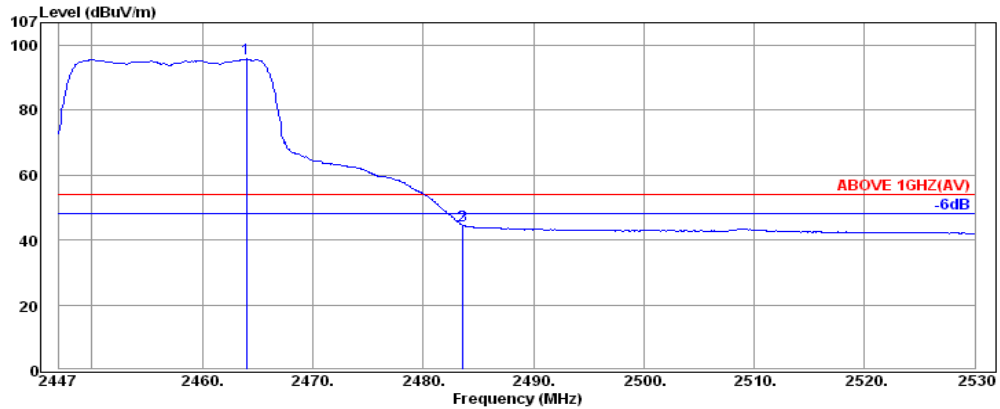
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2313.96	32.03	5.98	0.21	38.22	54.00	15.78	Average
2390.08	32.16	6.08	-0.22	38.02	54.00	15.98	Average
2443.76	32.23	6.14	52.96	91.33	---	---	Average
2483.58	32.28	6.19	0.25	38.72	54.00	15.28	Average
2517.46	32.32	6.23	0.43	38.98	54.00	15.02	Average

Mode	802.11n-HT20	Frequency	TX 2457MHz
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**Antenna at Horizontal Polarization**

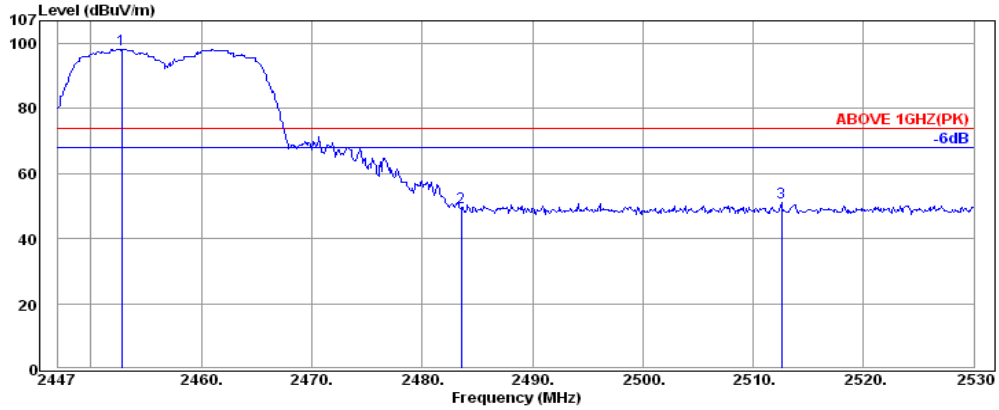
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2452.81	32.23	6.15	69.08	107.46	---	---	Peak
2483.52	32.28	6.19	18.92	57.39	74.00	16.61	Peak
2484.35	32.28	6.19	21.23	59.70	74.00	14.30	Peak



**Antenna at Horizontal Polarization**

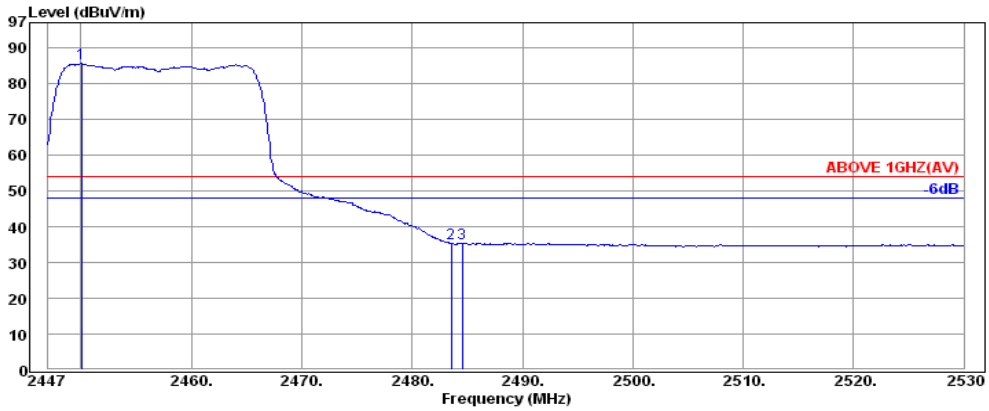
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2464.02	32.25	6.16	57.41	95.82	---	---	Average
2483.52	32.28	6.19	6.20	44.67	54.00	9.33	Average
2483.60	32.28	6.19	6.08	44.55	54.00	9.45	Average

Mode	802.11n-HT20	Frequency	TX 2457MHz
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**Antenna at Vertical Polarization**

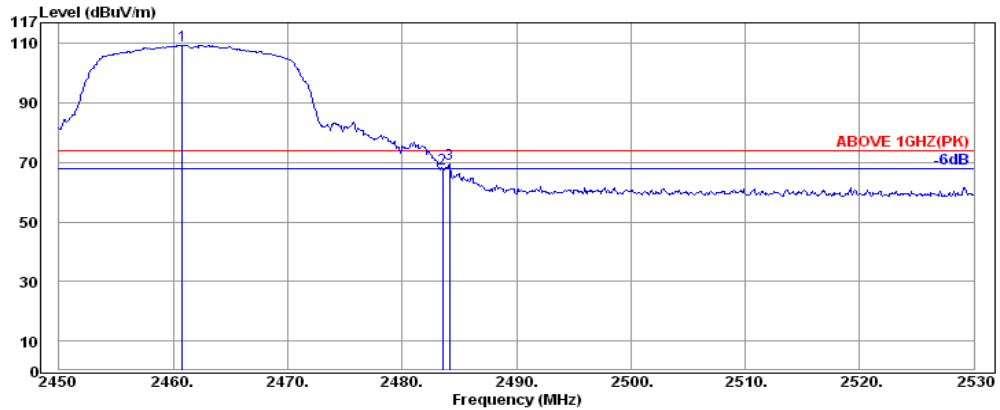
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2452.81	32.23	6.15	59.85	98.23	---	---	Peak
2483.52	32.28	6.19	11.13	49.60	74.00	24.40	Peak
2512.57	32.32	6.22	12.63	51.17	74.00	22.83	Peak



**Antenna at Vertical Polarization**

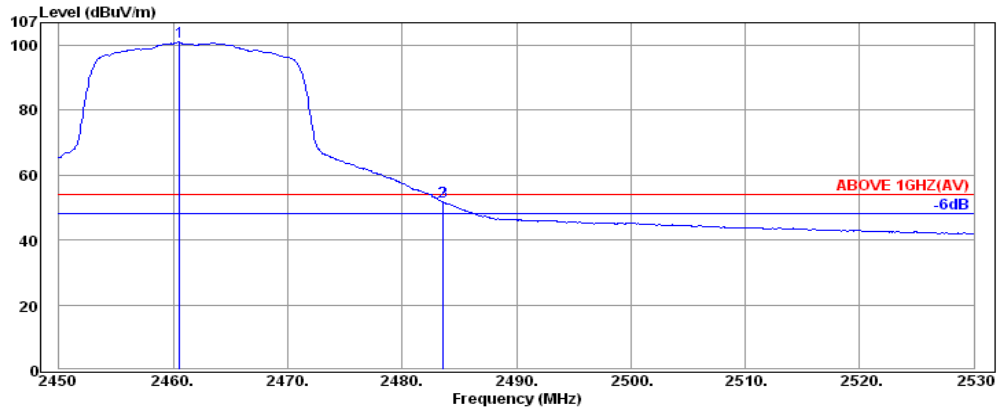
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2450.07	32.23	6.14	47.19	85.56	---	---	Average
2483.52	32.28	6.19	-3.13	35.34	54.00	18.66	Average
2484.52	32.28	6.19	-3.00	35.47	54.00	18.53	Average

Mode	802.11n-HT20	Frequency	TX 2462MHz
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**Antenna at Horizontal Polarization**

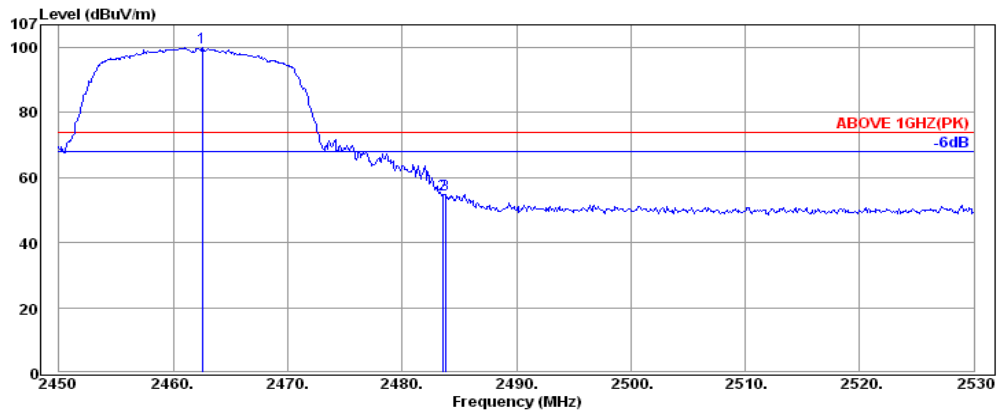
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2460.80	32.25	6.16	70.97	109.38	---	---	Peak
2483.52	32.28	6.19	29.42	67.89	74.00	6.11	Peak
2484.16	32.28	6.19	31.10	69.57	74.00	4.43	Peak



**Antenna at Horizontal Polarization**

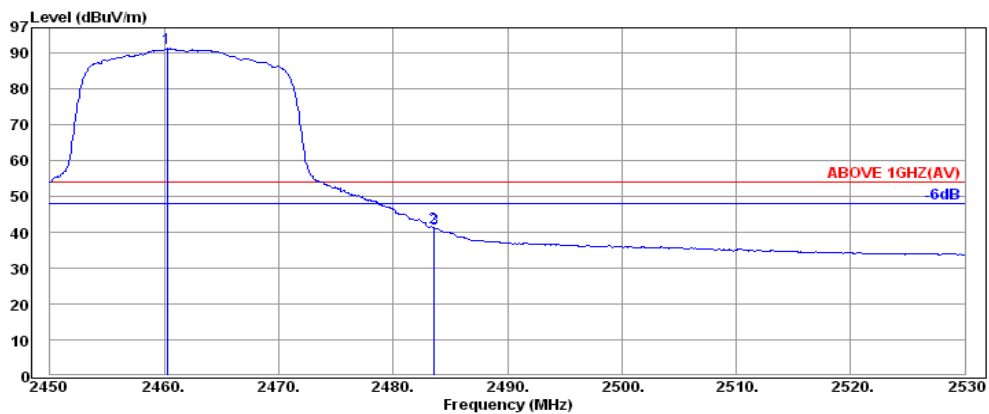
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2460.56	32.25	6.16	62.54	100.95	---	---	Average
2483.52	32.28	6.19	13.38	51.85	54.00	2.15	Average
2483.60	32.28	6.19	13.23	51.70	54.00	2.30	Average

Mode	802.11n-HT20	Frequency	TX 2462MHz
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**Antenna at Vertical Polarization**

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2462.56	32.25	6.16	61.46	99.87	---	---	Peak
2483.52	32.28	6.19	16.20	54.67	74.00	19.33	Peak
2483.76	32.28	6.19	16.47	54.94	74.00	19.06	Peak

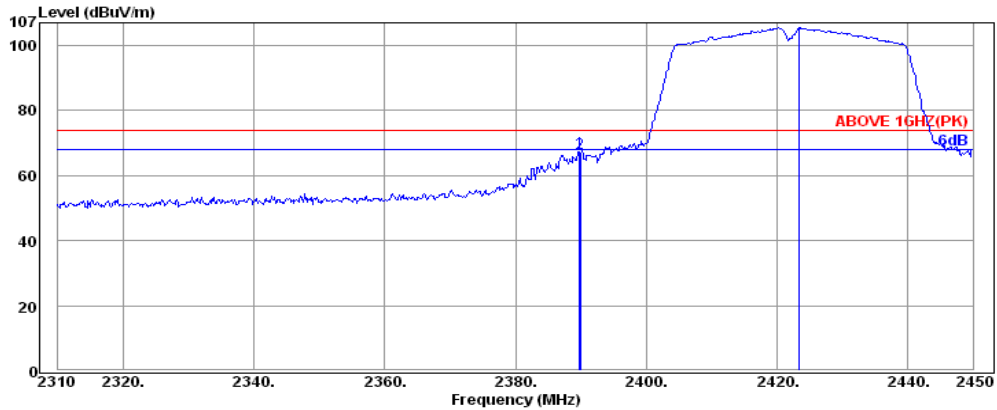


**Antenna at Vertical Polarization**

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2460.24	32.25	6.16	52.78	91.19	---	---	Average
2483.52	32.28	6.19	2.84	41.31	54.00	12.69	Average
2483.60	32.28	6.19	2.69	41.16	54.00	12.84	Average

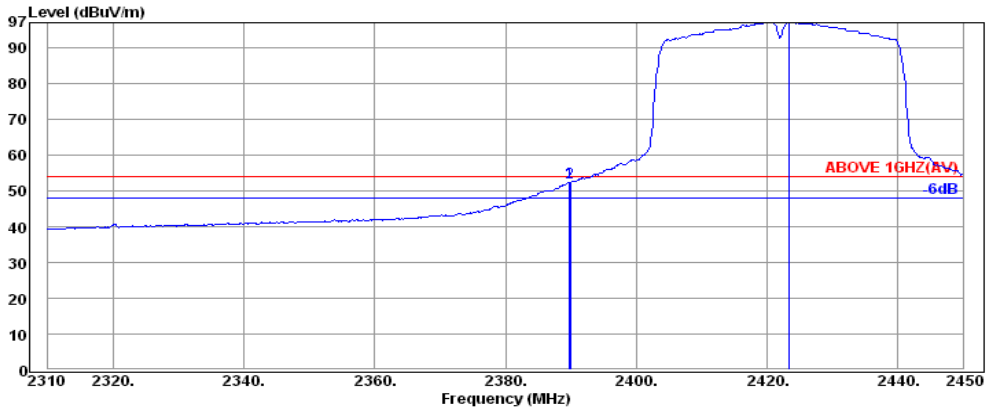


Mode	802.11n-HT40	Frequency	TX 2422MHz
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**Antenna at Horizontal Polarization**

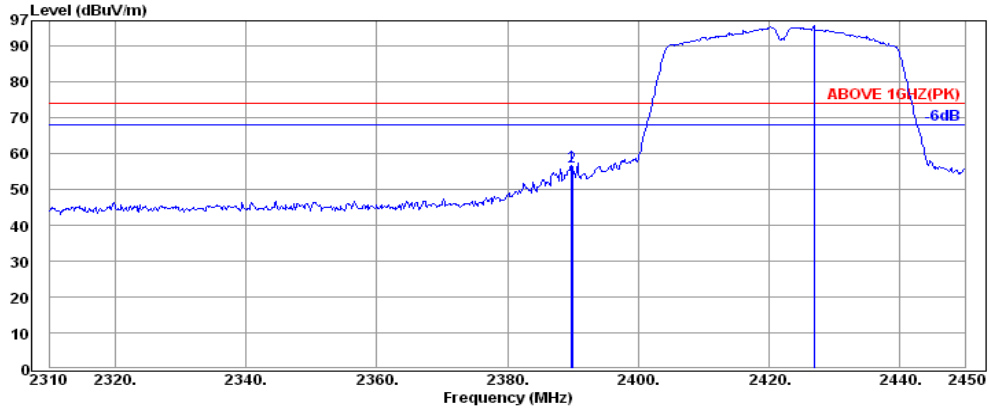
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.80	32.16	6.08	29.00	67.24	74.00	6.76	Peak
2389.94	32.16	6.08	28.53	66.77	74.00	7.23	Peak
2423.40	32.20	6.12	67.34	105.66	---	---	Peak



**Antenna at Horizontal Polarization**

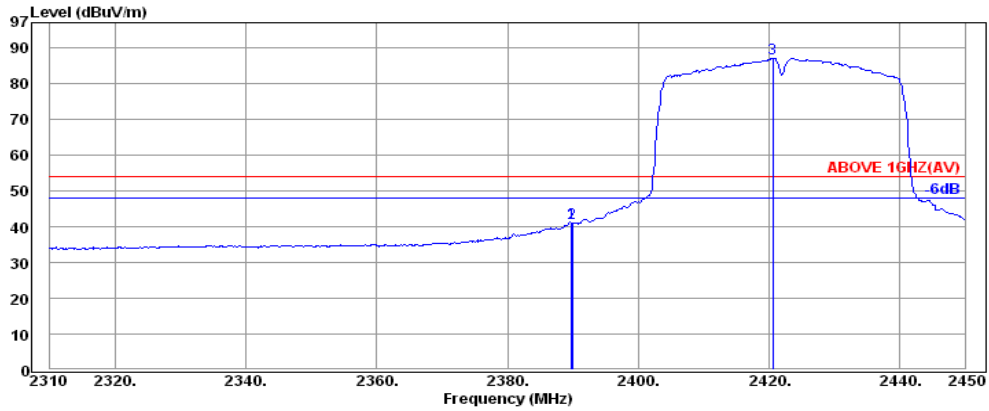
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.80	32.16	6.08	14.00	52.24	54.00	1.76	Average
2389.94	32.16	6.08	14.13	52.37	54.00	1.63	Average
2423.40	32.20	6.12	59.18	97.50	---	---	Average

Mode	802.11n-HT40	Frequency	TX 2422MHz
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**Antenna at Vertical Polarization**

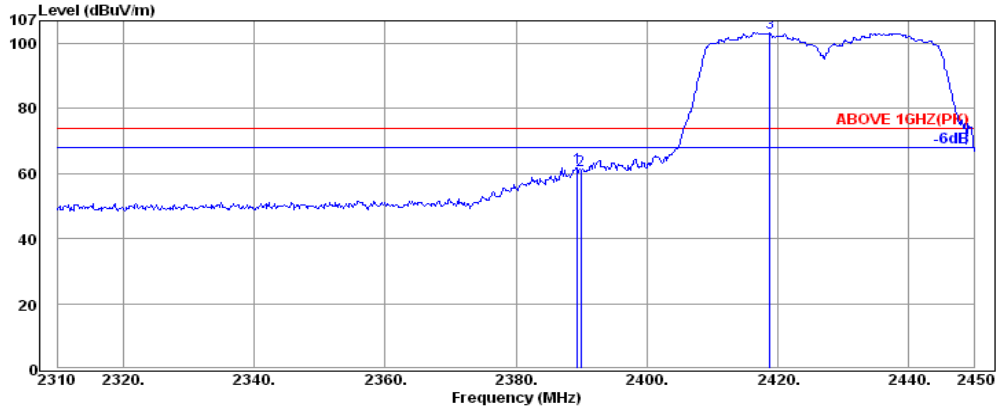
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.80	32.16	6.08	18.27	56.51	74.00	17.49	Peak
2389.94	32.16	6.08	18.13	56.37	74.00	17.63	Peak
2426.90	32.20	6.13	57.39	95.72	---	---	Peak



**Antenna at Vertical Polarization**

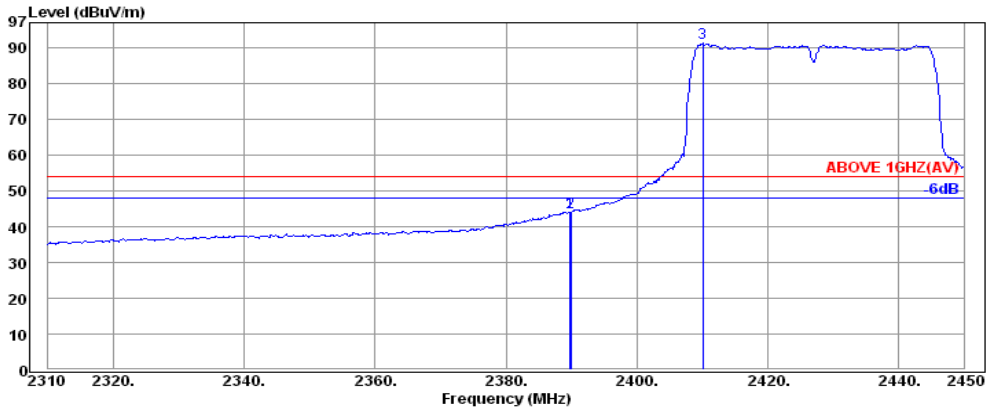
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.80	32.16	6.08	2.92	41.16	54.00	12.84	Average
2389.94	32.16	6.08	2.87	41.11	54.00	12.89	Average
2420.60	32.20	6.12	48.71	87.03	---	---	Average

Mode	802.11n-HT40	Frequency	TX 2427MHz
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**Antenna at Horizontal Polarization**

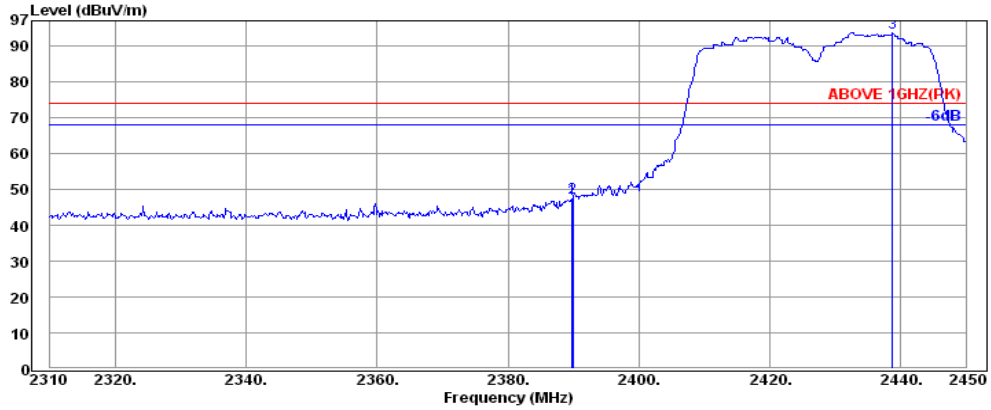
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.38	32.16	6.08	23.68	61.92	74.00	12.08	Peak
2389.94	32.16	6.08	22.89	61.13	74.00	12.87	Peak
2418.78	32.18	6.12	65.17	103.47	---	---	Peak



**Antenna at Horizontal Polarization**

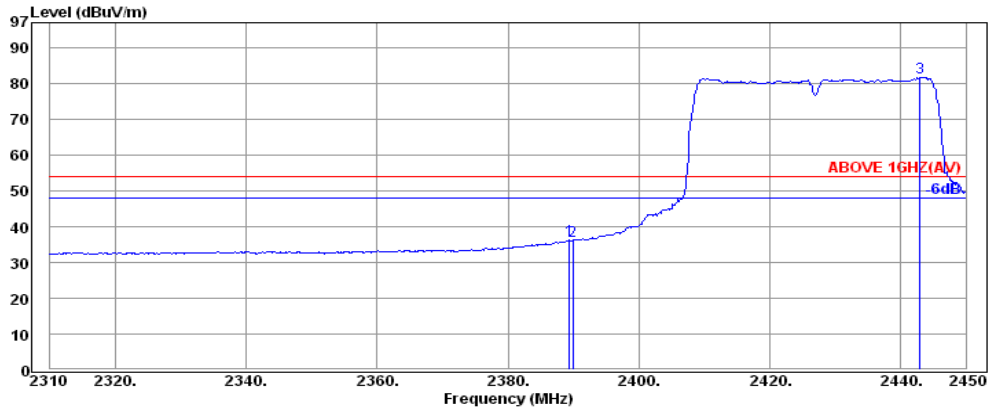
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.80	32.16	6.08	5.69	43.93	54.00	10.07	Average
2389.94	32.16	6.08	5.81	44.05	54.00	9.95	Average
2410.10	32.18	6.10	53.01	91.29	---	---	Average

Mode	802.11n-HT40	Frequency	TX 2427MHz
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**Antenna at Vertical Polarization**

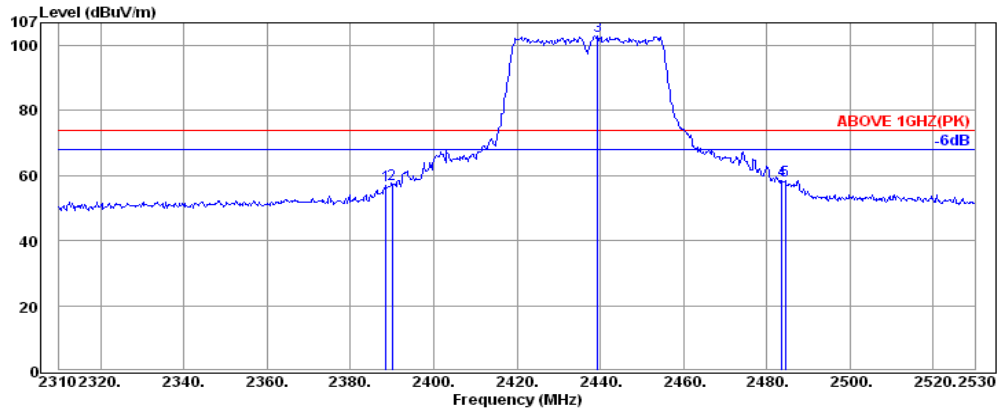
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.80	32.16	6.08	9.25	47.49	74.00	26.51	Peak
2389.94	32.16	6.08	9.49	47.73	74.00	26.27	Peak
2438.80	32.23	6.13	55.23	93.59	---	---	Peak



**Antenna at Vertical Polarization**

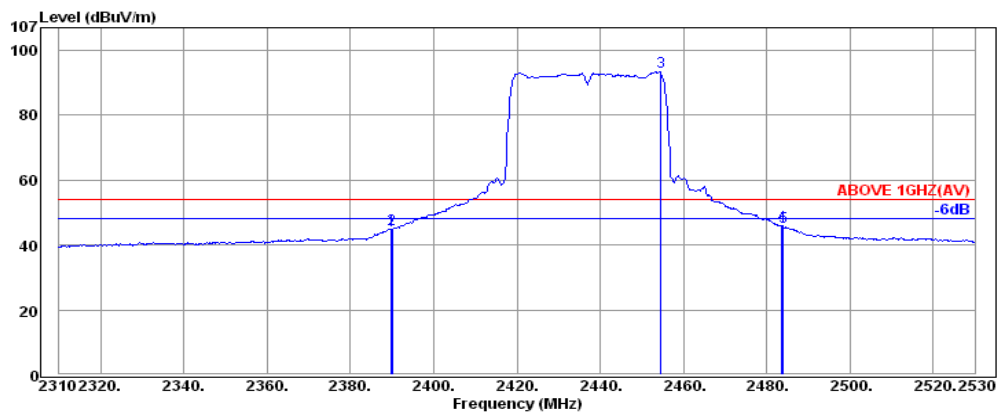
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.38	32.16	6.08	-2.05	36.19	54.00	17.81	Average
2389.94	32.16	6.08	-2.17	36.07	54.00	17.93	Average
2443.00	32.23	6.14	43.27	81.64	---	---	Average

Mode	802.11n-HT40	Frequency	TX 2437MHz
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**Antenna at Horizontal Polarization**

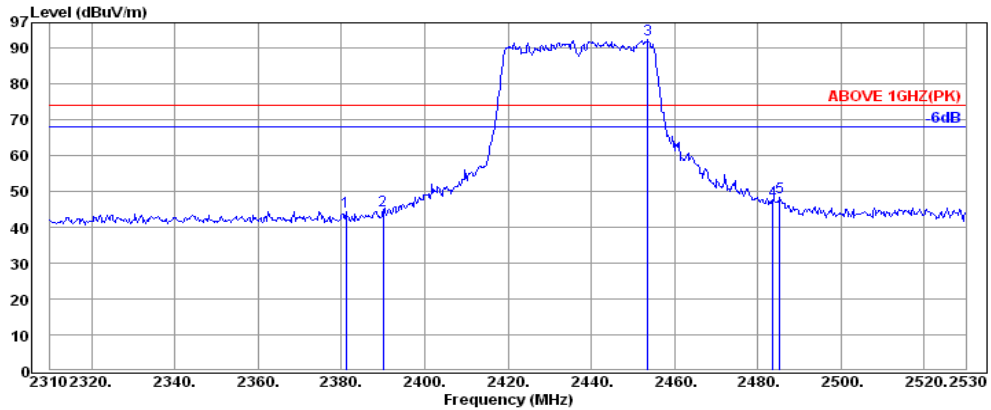
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2388.54	32.16	6.08	18.81	57.05	74.00	16.95	Peak
2390.08	32.16	6.08	19.25	57.49	74.00	16.51	Peak
2439.36	32.23	6.13	64.49	102.85	---	---	Peak
2483.58	32.28	6.19	19.85	58.32	74.00	15.68	Peak
2484.46	32.28	6.19	19.99	58.46	74.00	15.54	Peak



**Antenna at Horizontal Polarization**

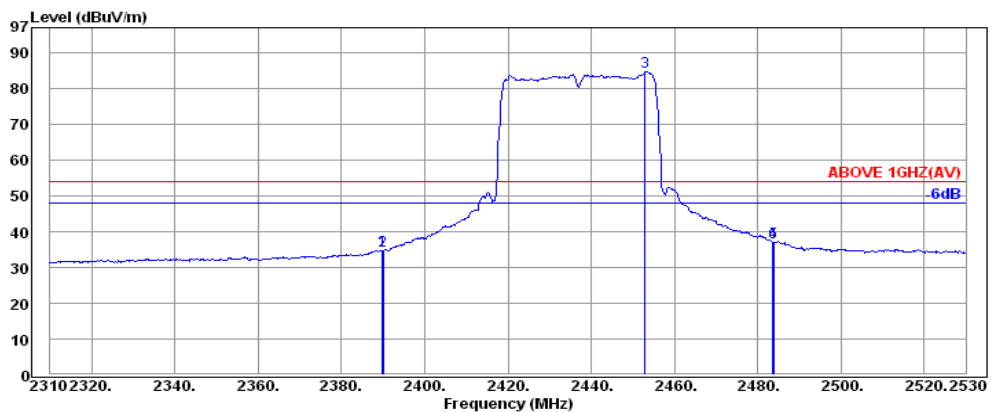
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.86	32.16	6.08	6.25	44.49	54.00	9.51	Average
2390.08	32.16	6.08	6.59	44.83	54.00	9.17	Average
2454.54	32.25	6.15	55.00	93.40	---	---	Average
2483.58	32.28	6.19	7.52	45.99	54.00	8.01	Average
2484.02	32.28	6.19	7.19	45.66	54.00	8.34	Average

Mode	802.11n-HT40	Frequency	TX 2437MHz
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**Antenna at Vertical Polarization**

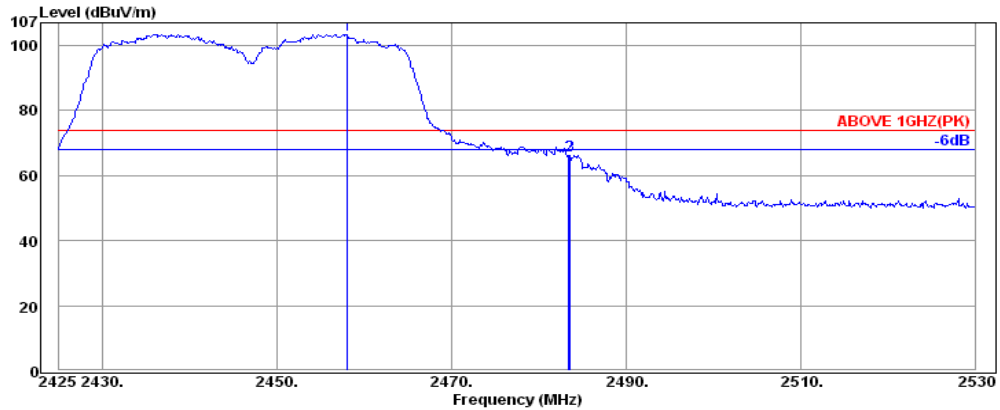
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2381.06	32.13	6.07	6.27	44.47	74.00	29.53	Peak
2390.08	32.16	6.08	6.32	44.56	74.00	29.44	Peak
2453.66	32.25	6.15	54.02	92.42	---	---	Peak
2483.58	32.28	6.19	9.02	47.49	74.00	26.51	Peak
2485.34	32.28	6.19	9.80	48.27	74.00	25.73	Peak



**Antenna at Vertical Polarization**

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.86	32.16	6.08	-3.60	34.64	54.00	19.36	Average
2390.08	32.16	6.08	-3.50	34.74	54.00	19.26	Average
2453.00	32.23	6.15	46.32	84.70	---	---	Average
2483.58	32.28	6.19	-1.33	37.14	54.00	16.86	Average
2483.80	32.28	6.19	-1.40	37.07	54.00	16.93	Average

Mode	802.11n-HT40	Frequency	TX 2447MHz
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**Antenna at Horizontal Polarization**

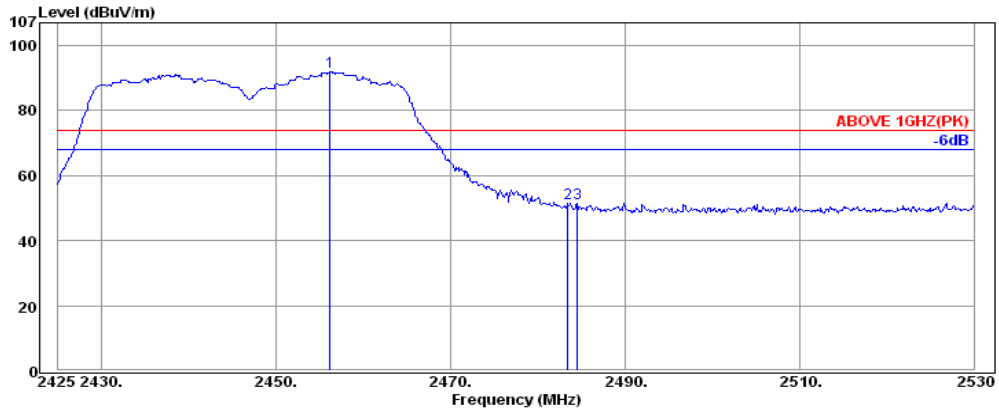
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2458.08	32.25	6.15	65.03	103.43	---	---	Peak
2483.49	32.28	6.19	27.83	66.30	74.00	7.70	Peak
2483.59	32.28	6.19	27.68	66.15	74.00	7.85	Peak



**Antenna at Horizontal Polarization**

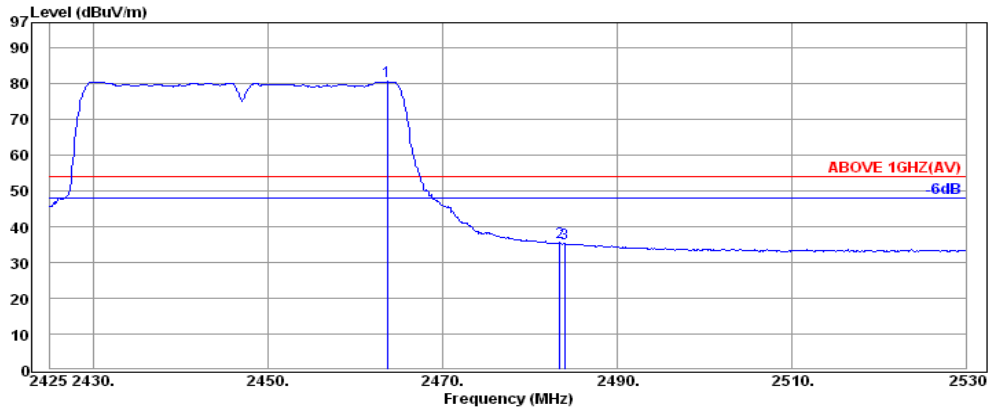
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2429.94	32.20	6.13	52.10	90.43	---	---	Average
2483.49	32.28	6.19	4.29	42.76	54.00	11.24	Average
2483.59	32.28	6.19	4.51	42.98	54.00	11.02	Average

Mode	802.11n-HT40	Frequency	TX 2447MHz
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**Antenna at Vertical Polarization**

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2456.19	32.25	6.15	53.52	91.92	---	---	Peak
2483.49	32.28	6.19	12.93	51.40	74.00	22.60	Peak
2484.54	32.28	6.19	13.17	51.64	74.00	22.36	Peak

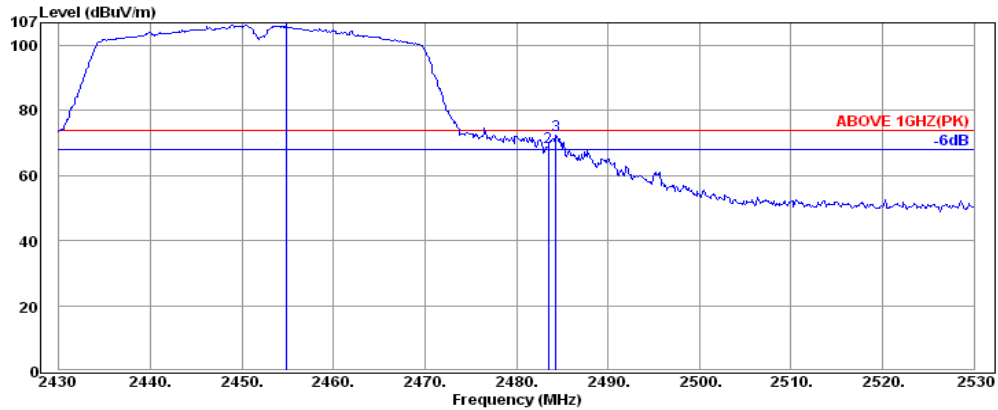


**Antenna at Vertical Polarization**

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2463.64	32.25	6.16	42.12	80.53	---	---	Average
2483.49	32.28	6.19	-2.97	35.50	54.00	18.50	Average
2484.01	32.28	6.19	-3.01	35.46	54.00	18.54	Average

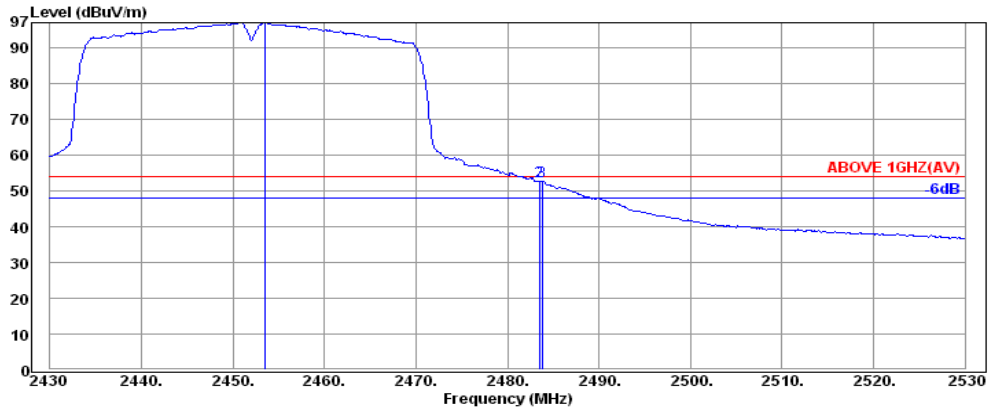


Mode	802.11n-HT40	Frequency	TX 2452MHz
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**Antenna at Horizontal Polarization**

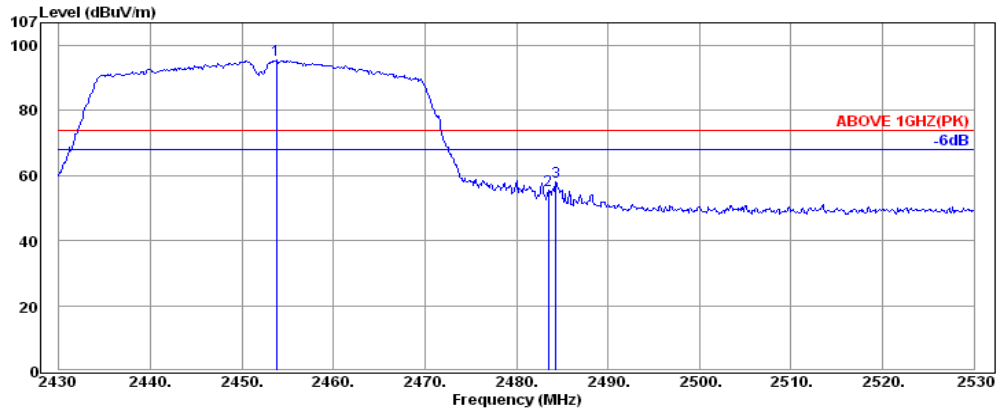
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2454.80	32.25	6.15	68.26	106.66	---	---	Peak
2483.50	32.28	6.19	30.22	68.69	74.00	5.31	Peak
2484.30	32.28	6.19	33.84	72.31	74.00	1.69	Peak



**Antenna at Horizontal Polarization**

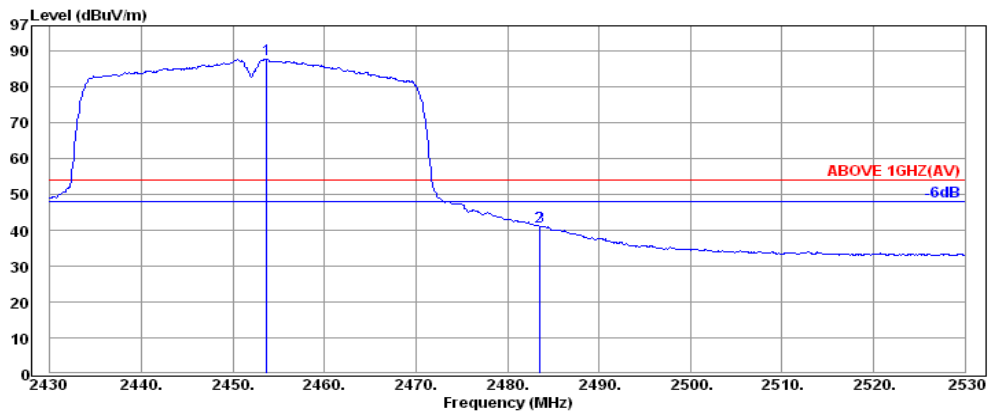
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2453.50	32.25	6.15	58.82	97.22	---	---	Average
2483.50	32.28	6.19	14.27	52.74	54.00	1.26	Average
2483.80	32.28	6.19	14.28	52.75	54.00	1.25	Average

Mode	802.11n-HT40	Frequency	TX 2452MHz
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**Antenna at Vertical Polarization**

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2453.80	32.25	6.15	57.04	95.44	---	---	Peak
2483.50	32.28	6.19	17.09	55.56	74.00	18.44	Peak
2484.30	32.28	6.19	19.73	58.20	74.00	15.80	Peak



**Antenna at Vertical Polarization**

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2453.70	32.25	6.15	49.29	87.69	---	---	Average
2483.50	32.28	6.19	2.63	41.10	54.00	12.90	Average
2483.60	32.28	6.19	2.59	41.06	54.00	12.94	Average

6.5.3. Emissions outside the frequency band:

The emissions (up to 25GHz) not reported for there is no emission be found.

Mode	802.11b	Frequency	TX 2437MHz
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**Antenna at Horizontal Polarization**

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)	Detector
3075.00	32.89	6.96	5.41	45.26	54.00	8.74	Peak

Remark: The Vertical Polarization emissions not reported for there is no emission be found.

Mode	802.11g	Frequency	TX 2437MHz
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**Antenna at Horizontal Polarization**

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)	Detector
2356.00	32.11	6.03	51.20	54.78	74.00	19.22	Peak
2356.00	32.11	6.03	40.29	43.87	54.00	10.13	Average
3065.00	32.89	6.93	5.75	45.57	54.00	8.43	Peak

**Antenna at Vertical Polarization**

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)	Detector
3075.00	32.89	6.96	7.13	46.98	54.00	7.02	Peak

Mode	802.11n-HT20	Frequency	TX 2437MHz
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**Antenna at Horizontal Polarization**

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
3075.00	32.89	6.96	6.03	45.88	54.00	8.12	Peak

**Antenna at Vertical Polarization**

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
3065.00	32.89	6.93	6.58	46.40	54.00	7.60	Peak

Mode	802.11n-HT40	Frequency	TX 2437MHz
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**Antenna at Horizontal Polarization**

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
3065.00	32.89	6.93	5.93	45.75	54.00	8.25	Peak

**Antenna at Vertical Polarization**

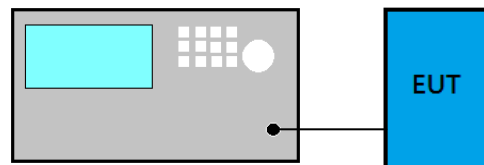
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
3065.00	32.89	6.93	5.51	45.33	54.00	8.67	Peak

6.5.4. Emissions in Non-restricted Frequency Bands

Pursuant to KDB 558074 D01 v03r05 that emission levels below the 15.209/RSS-Gen Section 8.9 table 4 general radiated emissions limits is not required.

## 7. 6dB BANDWIDTH MEASUREMENT

### 7.1. Block Diagram of Test Setup



### 7.2. Specification Limits

The minimum 6dB bandwidth shall be at least 500kHz.

### 7.3. Test Procedure

Following measurement procedure is reference to KDB 558074 D01 DTS Meas Guidance v03r05:

■ Option 2

- (1) Set RBW = 100 kHz.
- (2) Set the video bandwidth (VBW)  $\geq 3 \times$  RBW.
- (3) Detector = Peak.
- (4) Trace mode = max hold.
- (5) Sweep = auto couple.
- (6) Allow the trace to stabilize.
- (7) Setting channel bandwidth function x dB to -6 dB to record the final bandwidth.

### 7.4. Test Results

Please refer to Appendix A

## 8. MAXIMUM PEAK OUTPUT POWER MEASUREMENT

### 8.1. Block Diagram of Test Setup



### 8.2. Specification Limits

The Limits of maximum Peak Output Power for digital modulation in 2400-2483.5MHz is : 1Watt. (30dBm), and E.I.R.P.: 4Watt (36dBm)

### 8.3. Test Procedure

Following measurement procedure is reference to KDB 558074 D01 DTS Meas Guidance v03r05:

#### PKPM1 Peak power meter method:

EUT is connected to power sensor and record the maximum output power.

#### Method AVGPM (Measurement using an RF average power meter):

EUT is connected to power sensor and record the maximum average output power and duty cycle factor is added when duty cycle presented in section 3.5 is < 98%.

#### Method AVGSA-2 (Spectrum channel power)

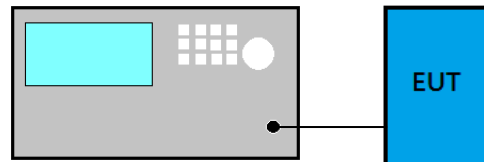
- (1) Set span to at least 1.5 times the OBW
- (2) Set RBW = 1 -5% of OBW
- (3) Set the video bandwidth (VBW)  $\geq 3 \times$  RBW.
- (4) Detector = RMS.
- (5) Trace mode = trace average at least 100 traces
- (6) Sweep = auto couple.
- (7) Compute power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function with band limits set equal to the OBW band edges.
- (8) Duty cycle factor is added when duty cycle presented in section 3.5 is < 98%.

### 8.4. Test Results

Please refer to Appendix A

## 9. EMISSION LIMITATIONS MEASUREMENT

### 9.1. Block Diagram of Test Setup



### 9.2. Specification Limits

In any 100kHz 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 20dB below that in the 100kHz 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)/RSS-Gen Section 8.9 table 4 is not required. In addition, radiated emissions which fall in restricted bands, as defined in Section 15.205(a)/RSS-Gen Section 8.10 table 6, must also comply with the radiated emission limits specified in Section 15.209(a)/RSS-Gen Section 8.9 table 4 (See Section 15.205(c)).

### 9.3. Test Procedure

Following measurement procedure is reference to KDB 558074 D01 DTS Meas Guidance v03r05:

#### ■ Reference Level

- (1) Set analyzer center frequency to DTS channel center frequency.
- (2) Set the span to 1.5 times the DTS bandwidth.
- (3) Set the RBW to: 100 kHz.
- (4) Set the VBW  $\geq 3 \times$  RBW.
- (5) Detector = peak.
- (6) Sweep time = auto couple.
- (7) Trace mode = max hold.
- (8) Allow trace to fully stabilize to find the max PSD as reference level.

#### ■ Emission Level Measurement

- (1) Set analyzer center frequency to DTS channel center frequency.
- (2) Set the span to 1.5 times the DTS bandwidth.
- (3) Set the RBW to: 100 kHz.
- (4) Set the VBW  $\geq 3 \times$  RBW.
- (5) Detector = peak.
- (6) Sweep time = auto couple.
- (7) Trace mode = max hold.
- (8) Allow trace to fully stabilize to find the max level.

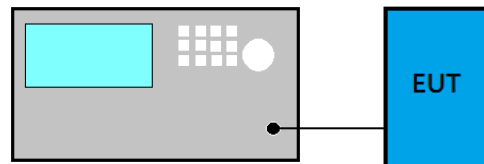
#### 9.4. Test Results

Please refer to Appendix A



## 10. POWER SPECTRAL DENSITY

### 10.1. Block Diagram of Test Setup



### 10.2. Specification Limits

The peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band.

### 10.3. Test Procedure

Following measurement procedure is reference to KDB 558074 D01 DTS Meas Guidance v03r05:

#### Method PKPSD (peak PSD)

- (1) Set analyzer center frequency to DTS channel center frequency.
- (2) Set the span to 1.5 times the DTS bandwidth.
- (3) Set the RBW to:  $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$ .
- (4) Set the VBW  $\geq 3 \times \text{RBW}$ .
- (5) Detector = peak.
- (6) Sweep time = auto couple.
- (7) Trace mode = max hold.
- (8) Allow trace to fully stabilize.
- (9) Use the peak marker function to determine the maximum amplitude level.
- (10) If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

#### Method AVGPSD-2

- (1) Using peak PSD procedure step 1 to step 4.
- (2) Detector = RMS detector
- (3) Sweep time = auto couple
- (4) Trace mode = trace averaging over a minimum of 100 traces
- (5) Use the peak marker function to determine the maximum amplitude level.
- (6) Duty cycle factor is added when duty cycle presented in section 3.5 < 98%.
- (7) If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

### 10.4. Test Results

Please refer to Appendix A

## **11.DEVIATION TO TEST SPECIFICATIONS**

**【NONE】**



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---

# APPENDIX A

## TEST PLOTS

(Model: DN-8A6WH01B)

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*File Number: C1M1606319*

*Report Number: EM-F160479*

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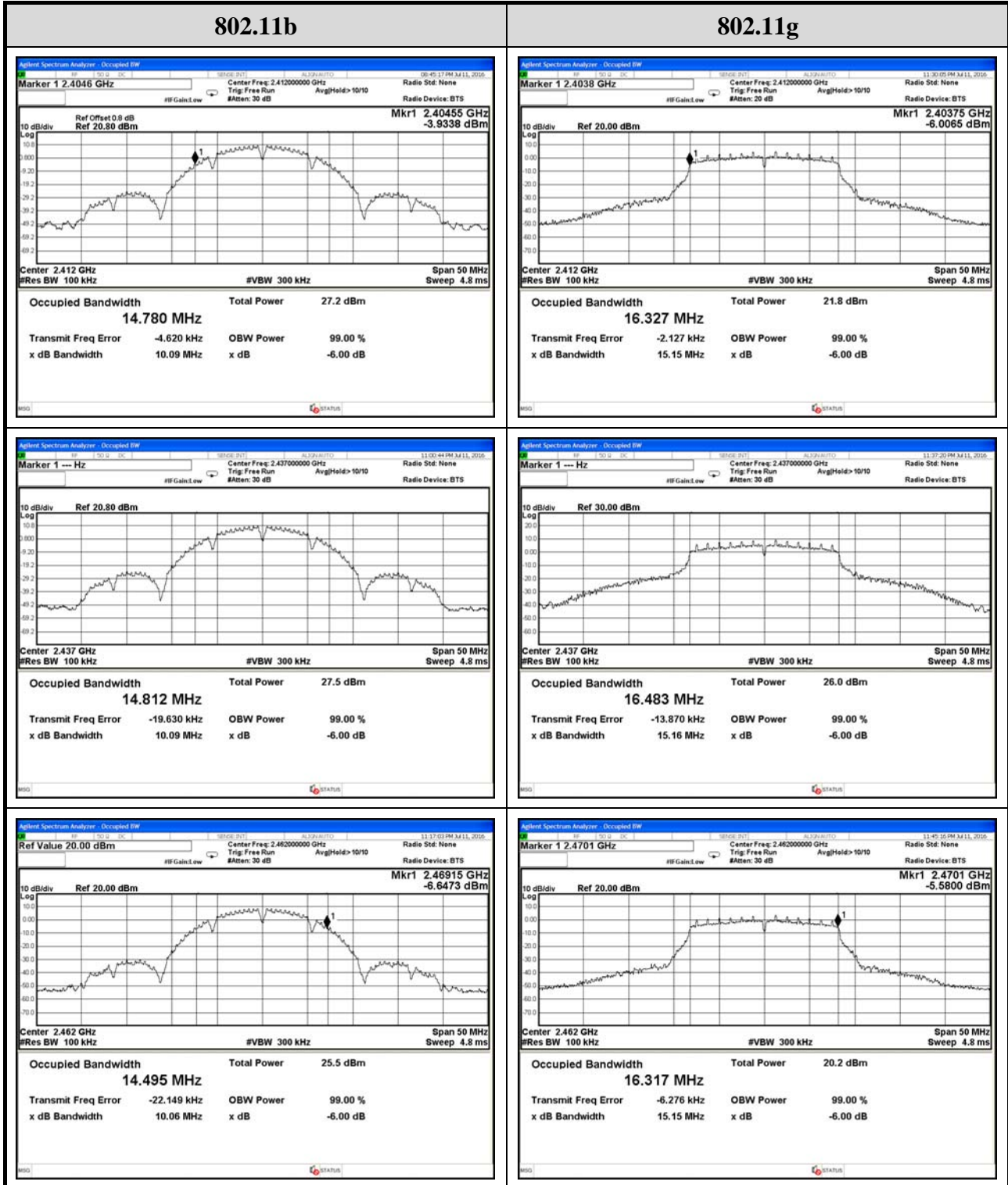
## A.1 6dB BANDWIDTH MEASUREMENT

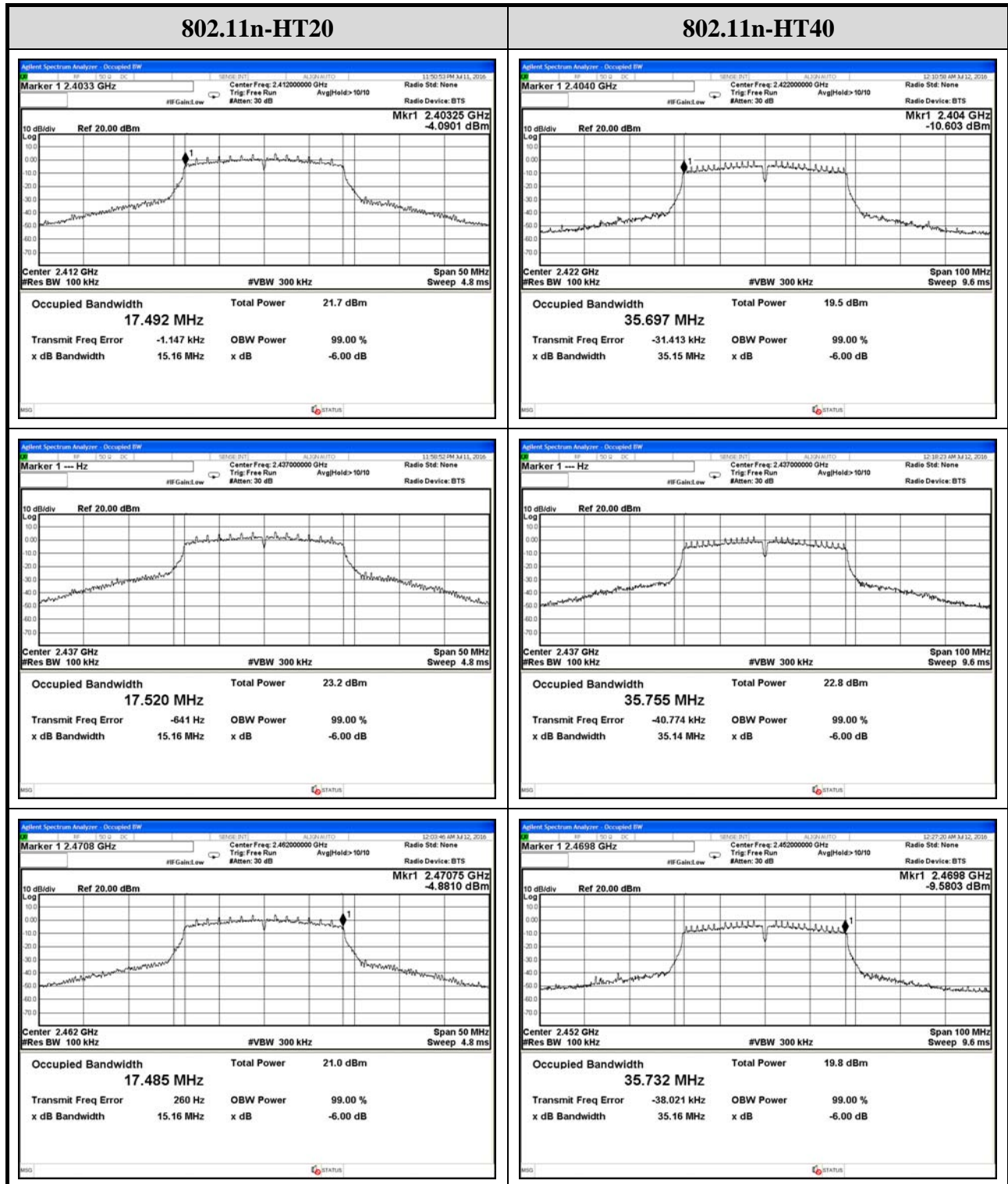
Test Date	2015/07/11	Temp./Hum.	26°C/58%
Cable Loss	---	Test Voltage	AC 120V, 60Hz

### A.1.1 6dB Bandwidth Result

Modulation Type	Centre Frequency (MHz)	6 dB Bandwidth (MHz)	Limit
802.11b	2412	<b>10.09</b>	>500kHz
	2437	<b>10.09</b>	
	2462	<b>10.06</b>	
802.11g	2412	<b>15.15</b>	
	2437	<b>15.16</b>	
	2462	<b>15.15</b>	
802.11n-HT20	2412	<b>15.16</b>	
	2437	<b>15.16</b>	
	2462	<b>15.16</b>	
802.11n-HT40	2422	<b>35.15</b>	
	2437	<b>35.14</b>	
	2452	<b>35.16</b>	

A.1.2 Measurement Plots





## A.2 MAXIMUM PEAK OUTPUT POWER MEASUREMENT

Test Date	2015/07/11	Temp./Hum.	26°C/58%
Cable Loss	---	Test Voltage	AC 120V, 60Hz

### A.2.1 Peak Output Power

Modulation Type	Centre Frequency (MHz)	Maximum Output Power		Antenna Gain (dBi)	Output Power (E.I.R.P.)		Limit
		(dBm)	(W)		(dBm)	(W)	
802.11b	2412	20.22	0.105196	2.99	23.21	0.209411	< 30dBm (1W) (Maximum Output Power)  < 36dBm (4W) (E.I.R.P)
	2417	20.09	0.102094		23.08	0.203236	
	2437	20.14	0.103276		23.13	0.205589	
	2457	19.90	0.097724		22.89	0.194536	
	2462	19.94	0.098628		22.93	0.196336	
802.11g	2412	23.11	0.204644		26.10	0.407380	
	2417	23.03	0.200909		26.02	0.399945	
	2437	24.24	0.265461		27.23	0.528445	
	2457	21.67	0.146893		24.66	0.292415	
	2462	21.73	0.148936		24.72	0.296483	
802.11n-HT20	2412	23.06	0.202302		26.05	0.402717	
	2417	23.08	0.203236		26.07	0.404576	
	2437	23.73	0.236048		26.72	0.469894	
	2457	22.79	0.190108		25.78	0.378443	
	2462	22.61	0.182390		25.60	0.363078	
802.11n-HT40	2422	20.73	0.118304	23.72	0.235505		
	2427	20.81	0.120504	23.80	0.239883		
	2437	23.01	0.199986	26.00	0.398107		
	2447	21.05	0.127350	24.04	0.253513		
	2452	20.98	0.125314	23.97	0.249459		

Note: The results have been included cable loss.



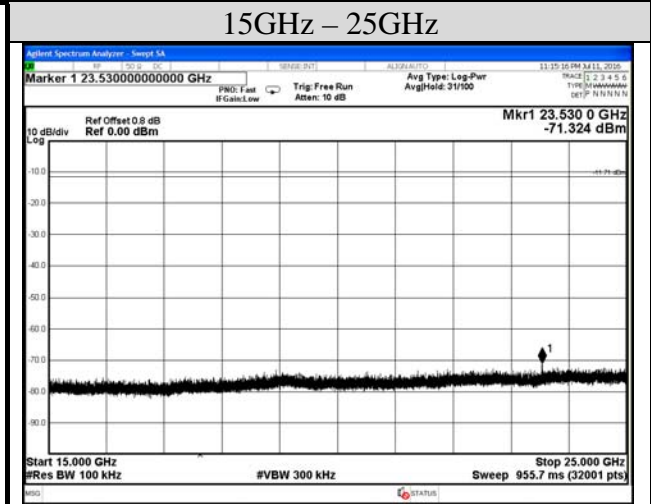
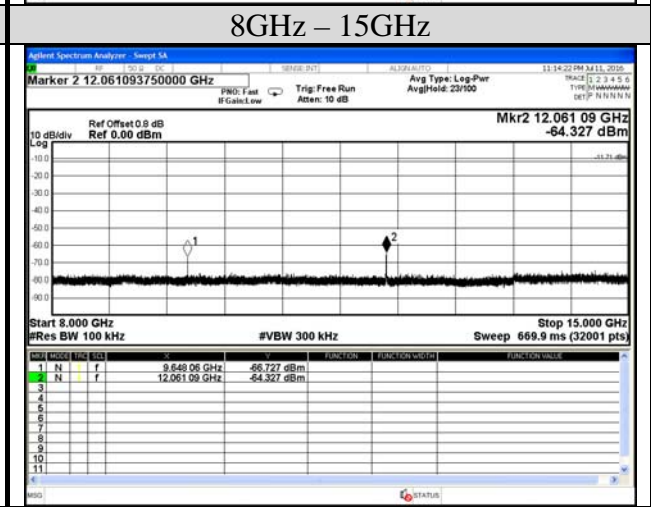
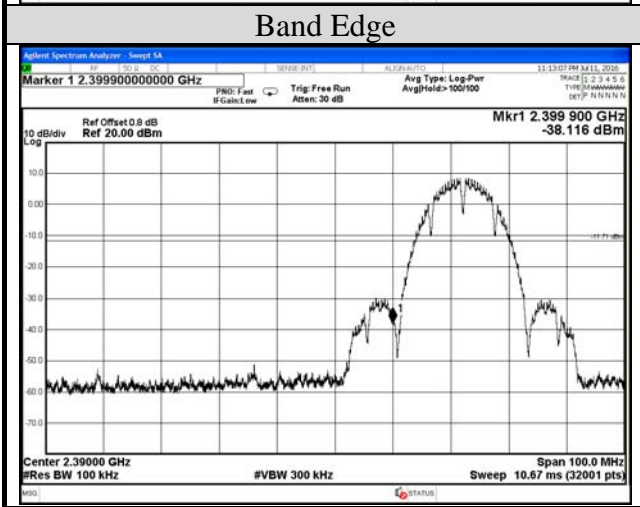
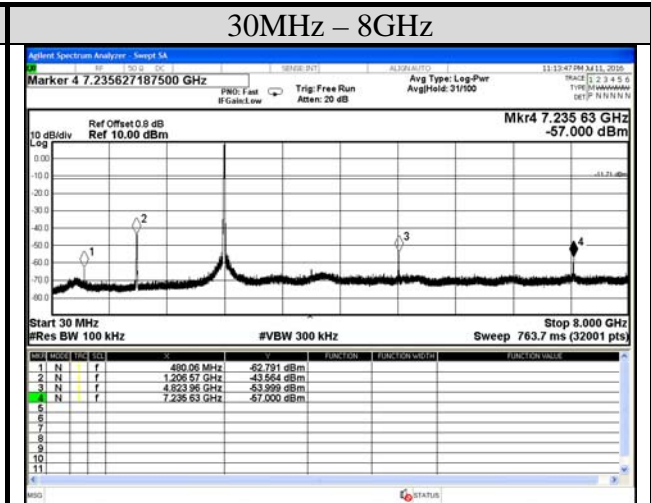
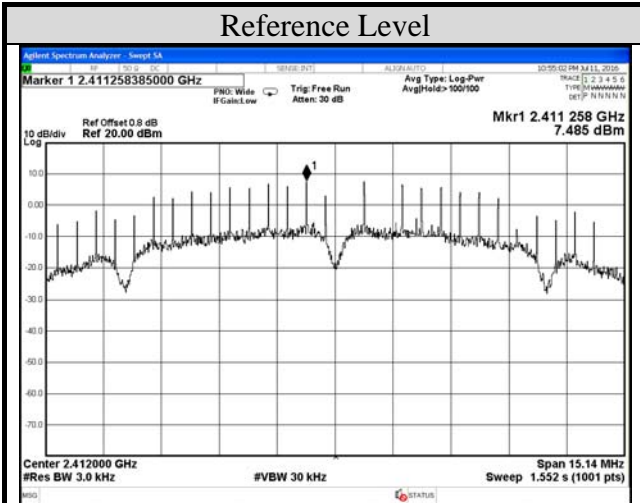
A.2.2 Average Output Power (Reporting only)

Modulation Type	Centre Frequency (MHz)	Output Power		Maximum Output Power		Antenna Gain (dBi)	Output Power (E.I.R.P.)		Limit
		(dBm)	10log (1/X)	(dBm)	(W)		(dBm)	(W)	
802.11b	2412	18.21	0.09	18.30	0.067608	2.99	21.29	0.134586	< 30dBm (1W) (Maximum Output Power)  < 36dBm (4W) (E.I.R.P)
	2417	18.11		18.20	0.066069		21.19	0.131522	
	2437	18.13		18.22	0.066374		21.21	0.132130	
	2457	18.02		18.11	0.064714		21.10	0.128825	
	2462	17.90		17.99	0.062951		20.98	0.125314	
802.11g	2412	14.12	0.20	14.32	0.027040		17.31	0.053827	
	2417	14.06		14.26	0.026669		17.25	0.053088	
	2437	16.92		17.12	0.051523		20.11	0.102565	
	2457	12.52		12.72	0.018707		15.71	0.037239	
	2462	12.41		12.61	0.018239		15.60	0.036308	
802.11n-HT20	2412	13.85	0.30	13.85	0.024266		16.84	0.048306	
	2417	13.76		13.76	0.023768		16.75	0.047315	
	2437	15.34		15.34	0.034198		18.33	0.068077	
	2457	13.15		13.15	0.020654		16.14	0.041115	
	2462	13.21		13.76	0.023768		16.75	0.047315	
802.11n-HT40	2422	10.94	0.71	10.94	0.012417	13.93	0.024717		
	2427	11.03		11.03	0.012677	14.02	0.025235		
	2437	14.28		14.28	0.026792	17.27	0.053333		
	2447	11.48		11.48	0.014060	14.47	0.027990		
	2452	11.35		11.35	0.013646	14.34	0.027164		

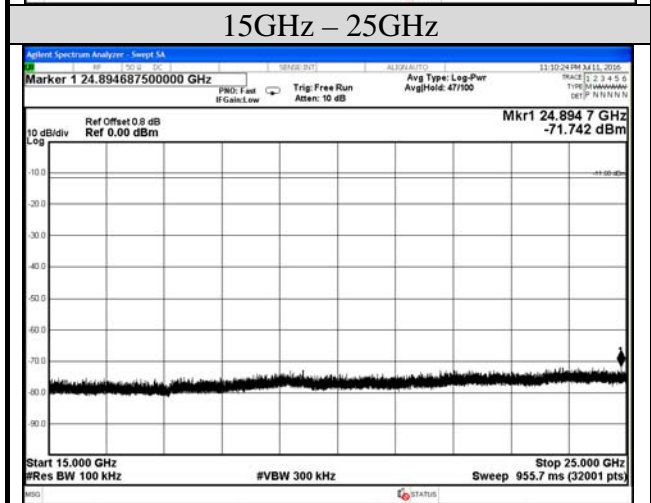
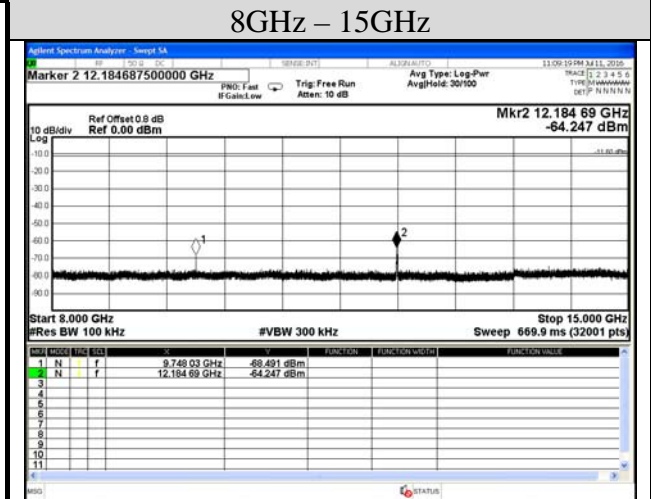
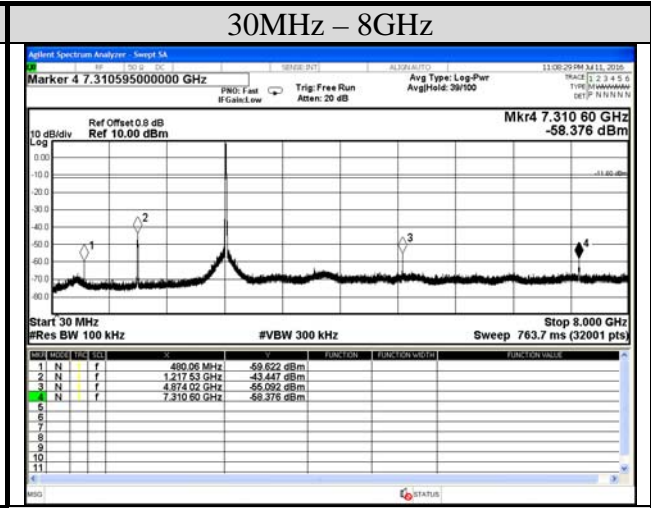
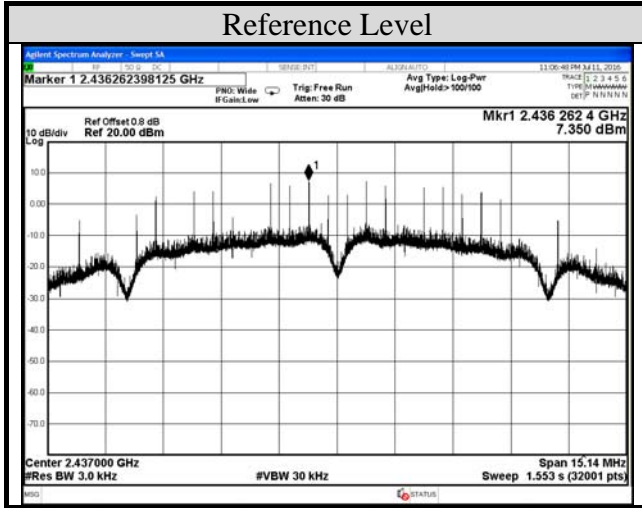
Note: The results have been included cable loss.

### A.3 EMISSION LIMITATIONS MEASUREMENT

Test Date	2016/07/11	Temp./Hum.	26°C/58%
Cable Loss	0.8dB	Test Voltage	AC 120V, 60Hz
Mode	802.11b	Frequency	TX 2412MHz
Simultaneous Factor10 log(n) (Note: "n" is antenna number)			N/A



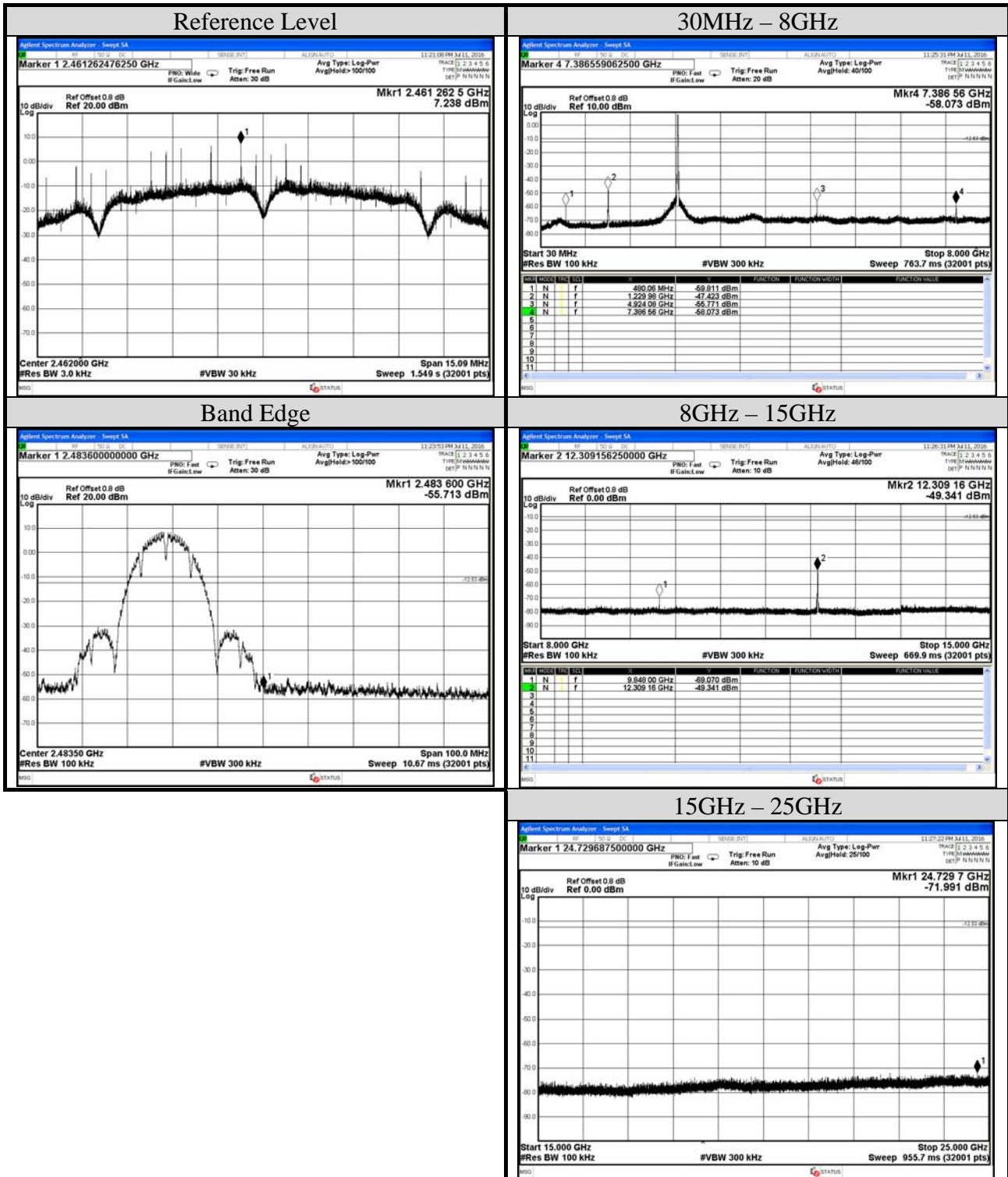
Test Date	2016/07/11	Temp./Hum.	26°C/58%
Cable Loss	0.8dB	Test Voltage	AC 120V, 60Hz
Mode	802.11b	Frequency	TX 2437MHz
Simultaneous Factor10 log(n) (Note: "n" is antenna number)			N/A



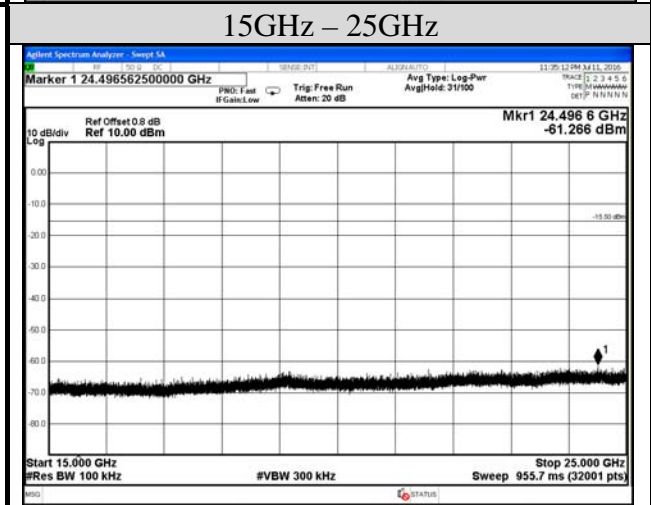
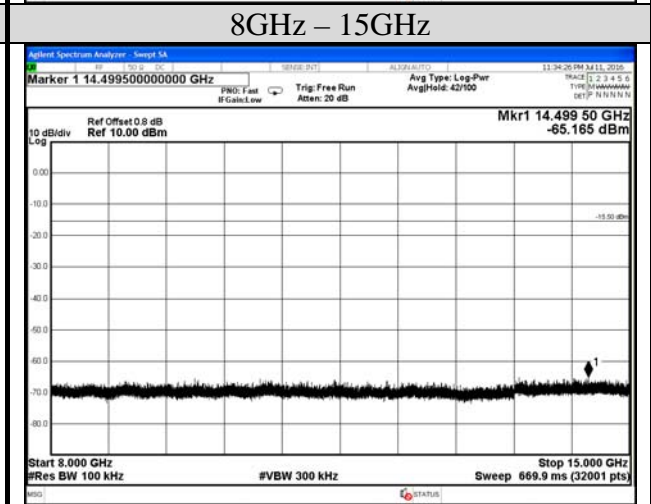
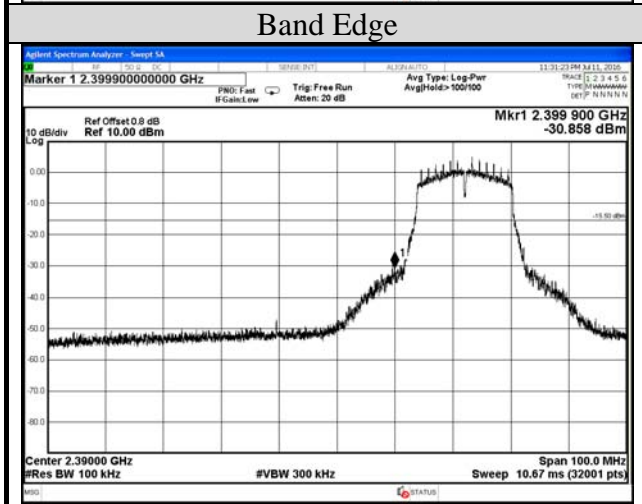
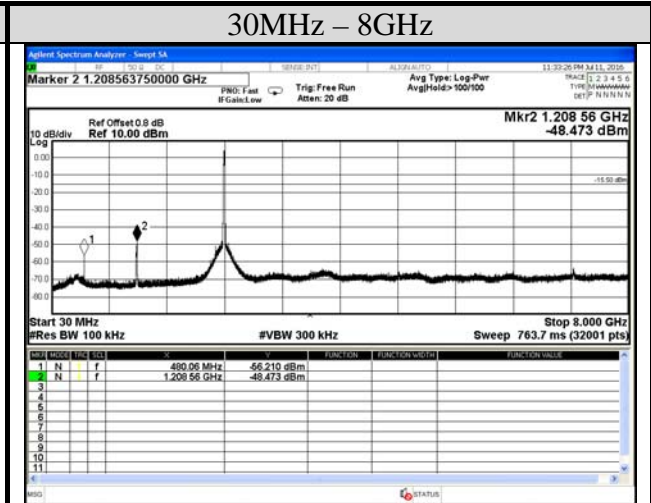
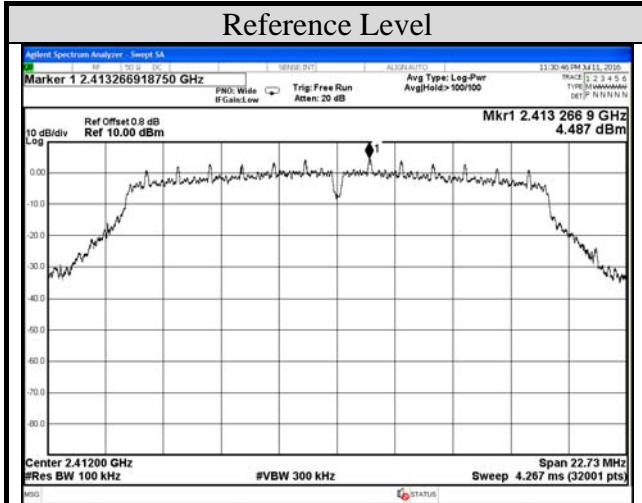
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Test Date	2016/07/11	Temp./Hum.	26°C/58%
Cable Loss	0.8dB	Test Voltage	AC 120V, 60Hz
Mode	802.11b	Frequency	TX 2462MHz
Simultaneous Factor	10 log(n) (Note: "n" is antenna number)		N/A



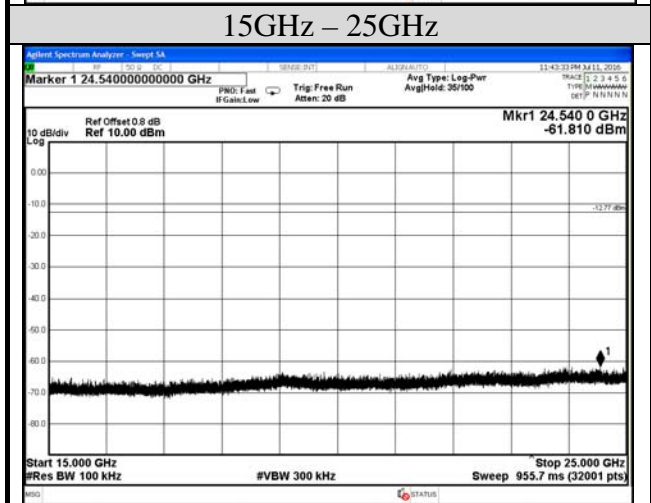
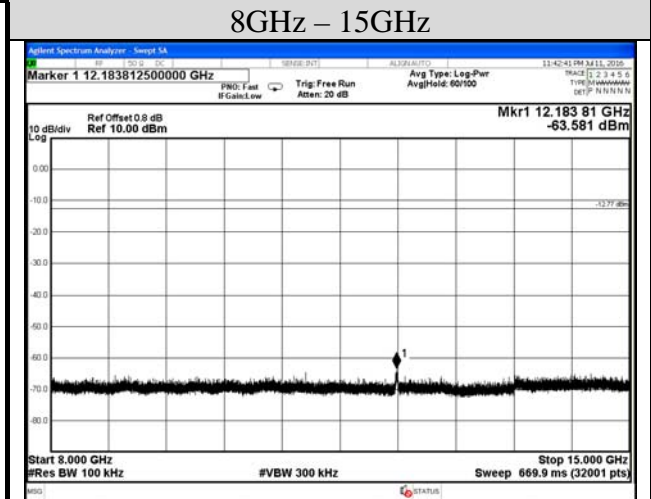
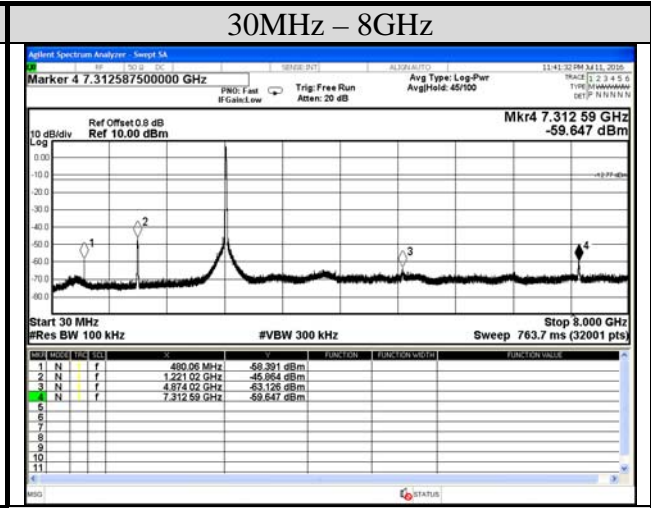
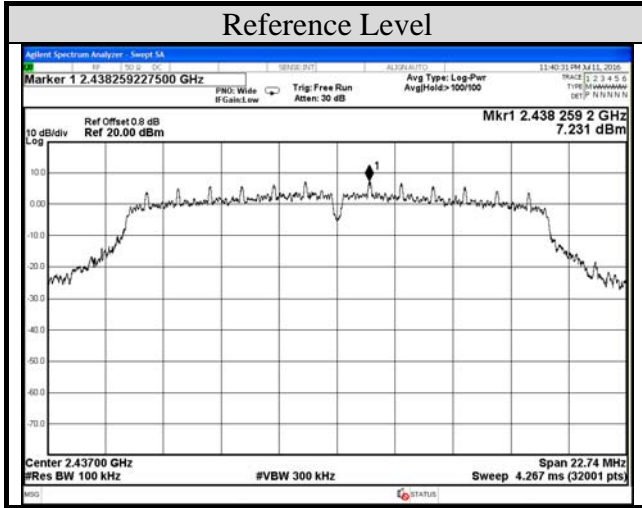
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Cable Loss	0.8dB	Test Voltage	AC 120V, 60Hz
Mode	802.11g	Frequency	TX 2412MHz
Simultaneous Factor10 log(n) (Note: "n" is antenna number)			N/A



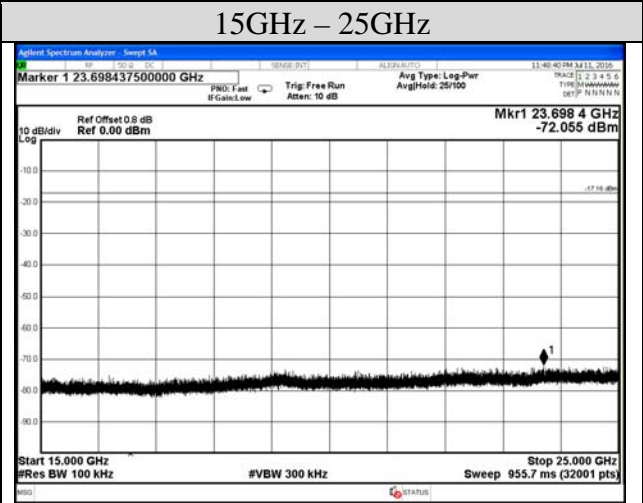
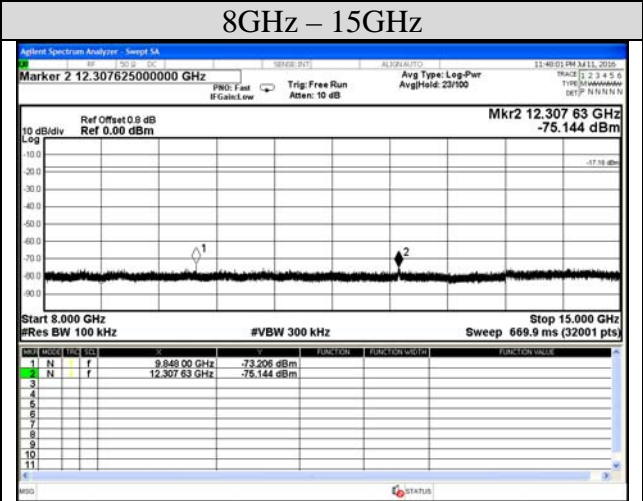
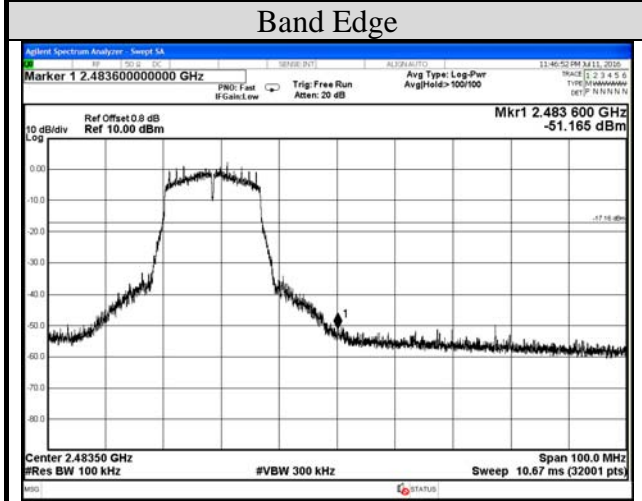
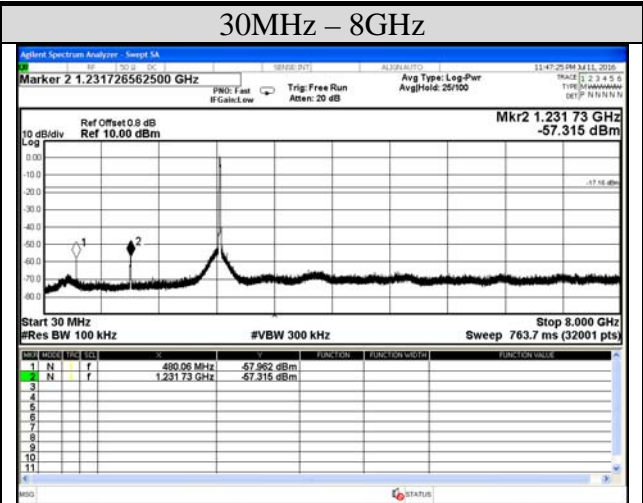
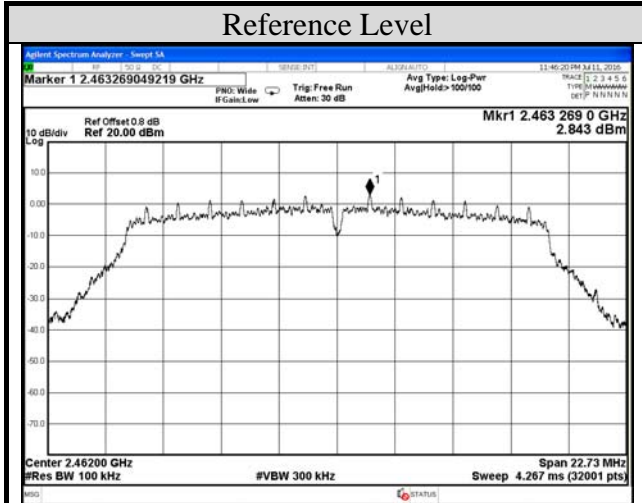
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Test Date	2016/06/03	Temp./Hum.	26°C/58%
Cable Loss	0.8dB	Test Voltage	AC 120V, 60Hz
Mode	802.11g	Frequency	TX 2437MHz
Simultaneous Factor10 log(n) (Note: "n" is antenna number)			N/A



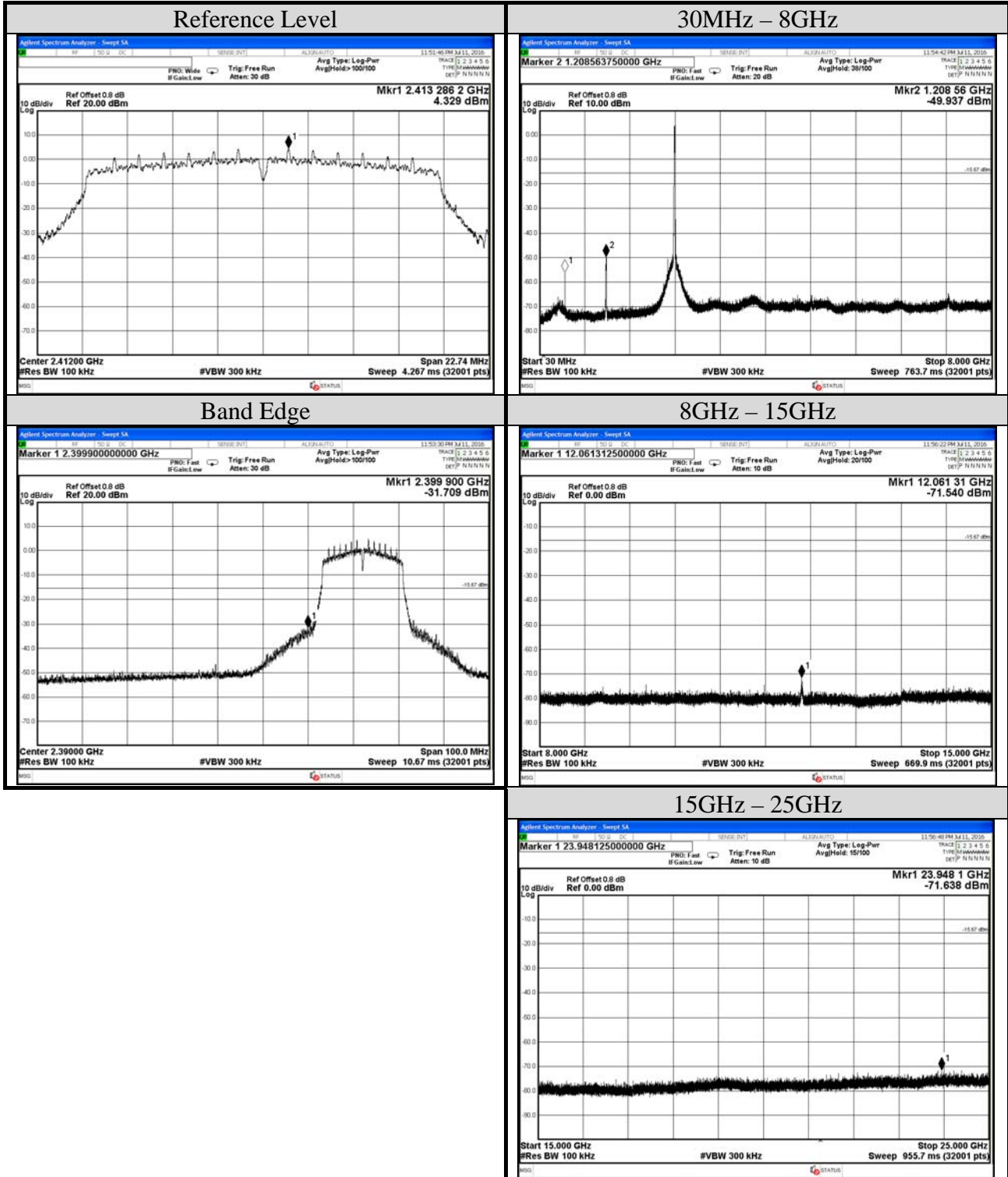
Test Date	2016/07/11	Temp./Hum.	26°C/58%
Cable Loss	0.8dB	Test Voltage	AC 120V, 60Hz
Mode	802.11g	Frequency	TX 2462MHz
Simultaneous Factor10 log(n) (Note: "n" is antenna number)			N/A



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Test Date	2016/07/11	Temp./Hum.	26°C/58%
Cable Loss	0.8dB	Test Voltage	AC 120V, 60Hz
Mode	802.11n-HT20	Frequency	TX 2412MHz
Simultaneous Factor 10 log(n) (Note: "n" is antenna number)			N/A

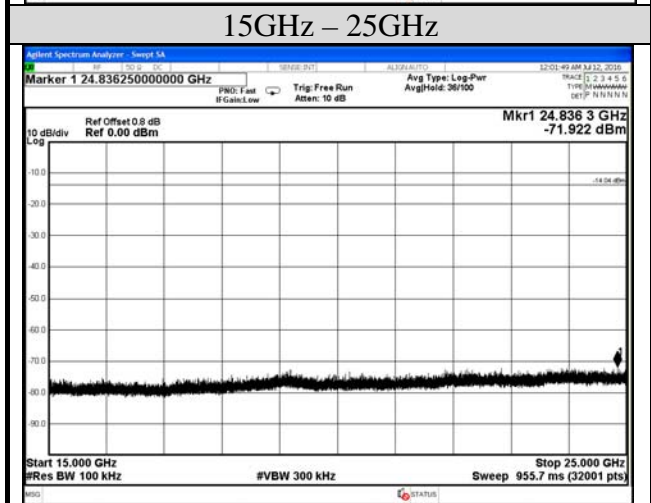
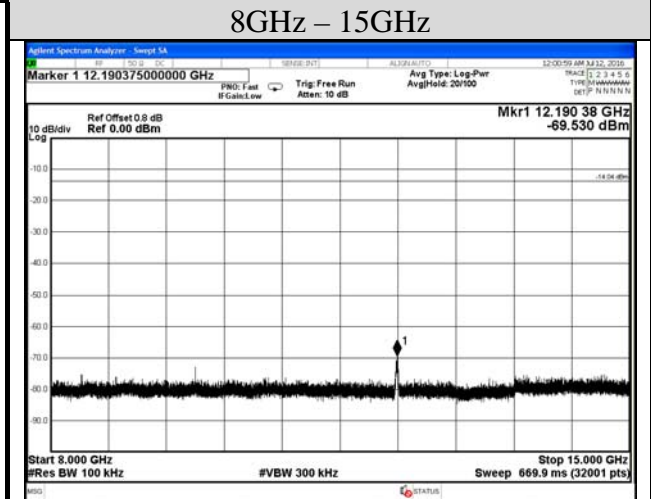
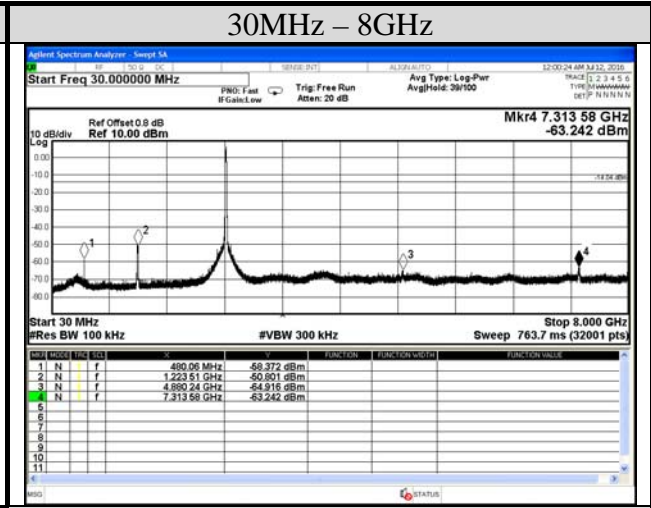
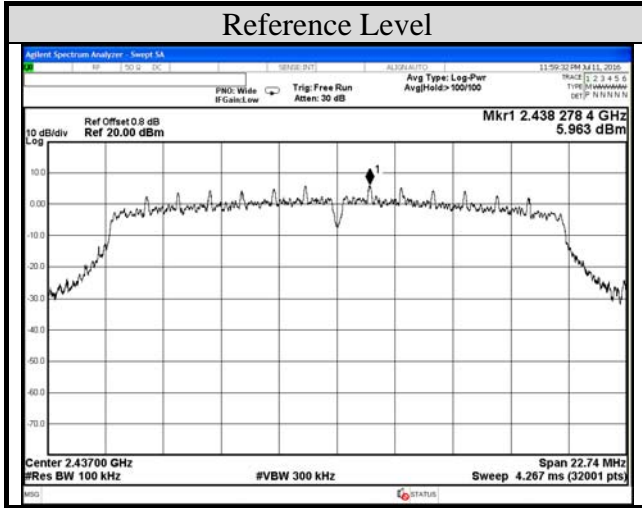




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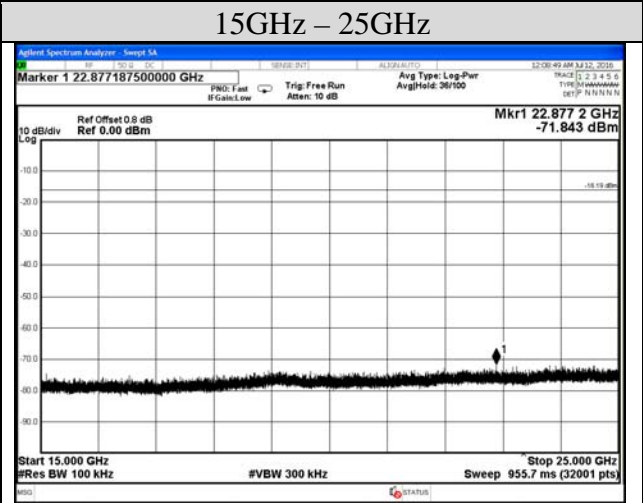
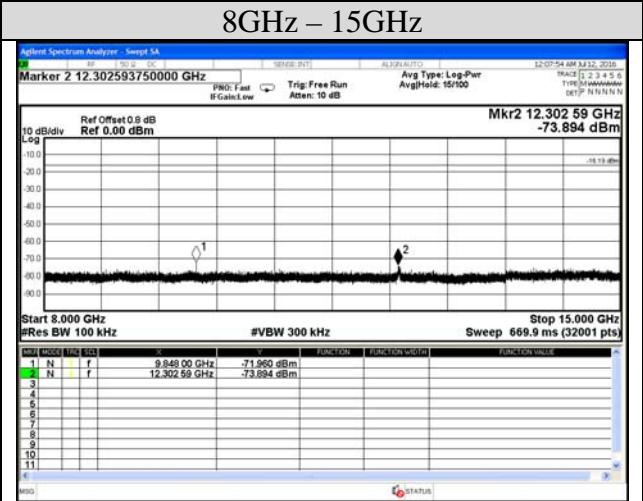
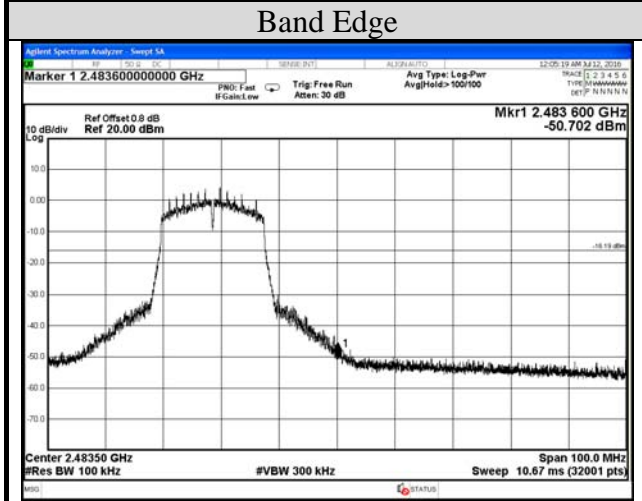
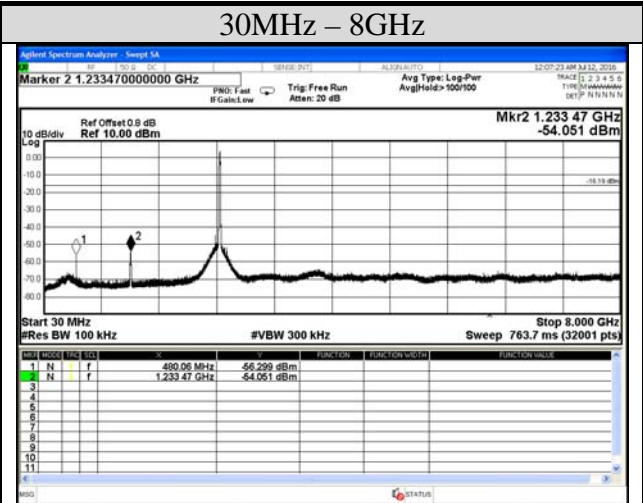
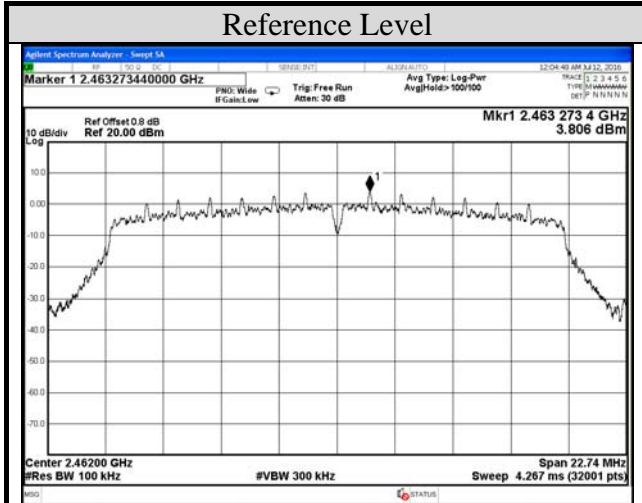
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Cable Loss	0.8dB	Test Voltage	AC 120V, 60Hz
Mode	802.11n-HT20	Frequency	TX 2437MHz
Simultaneous Factor10 log(n) (Note: "n" is antenna number)			N/A



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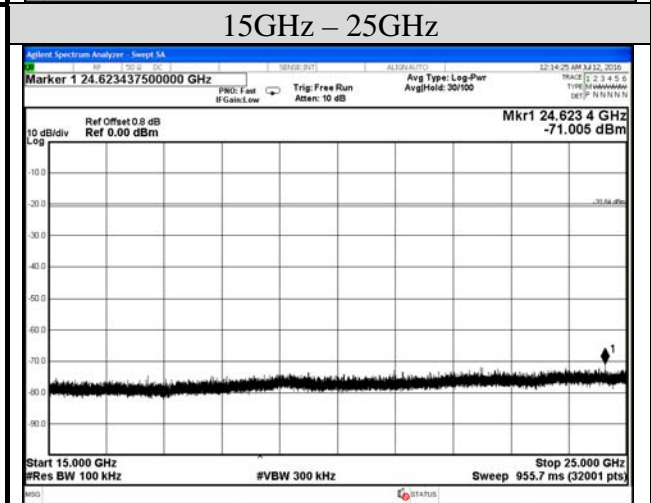
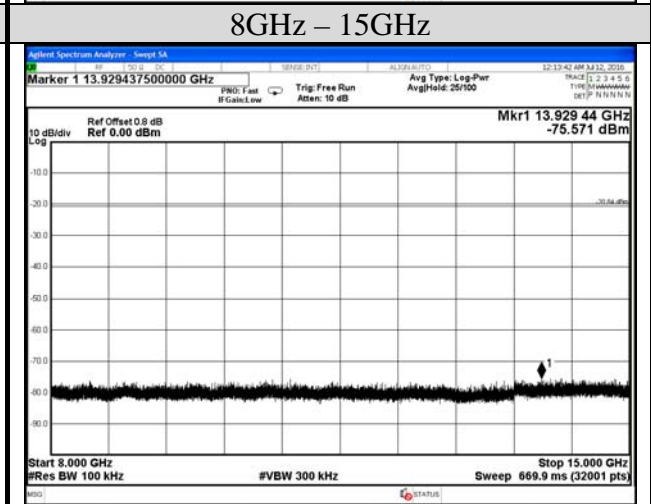
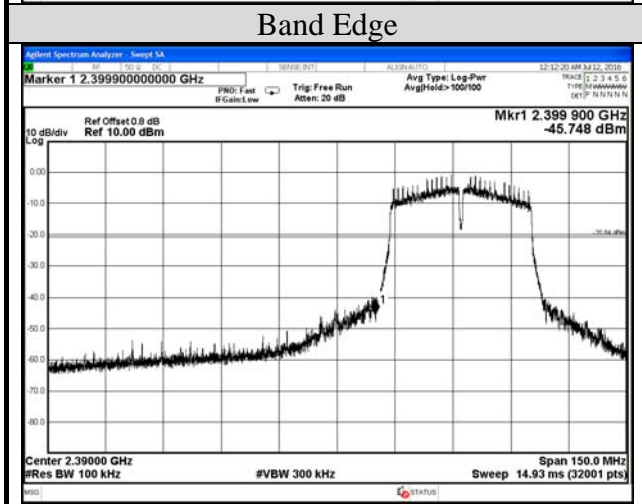
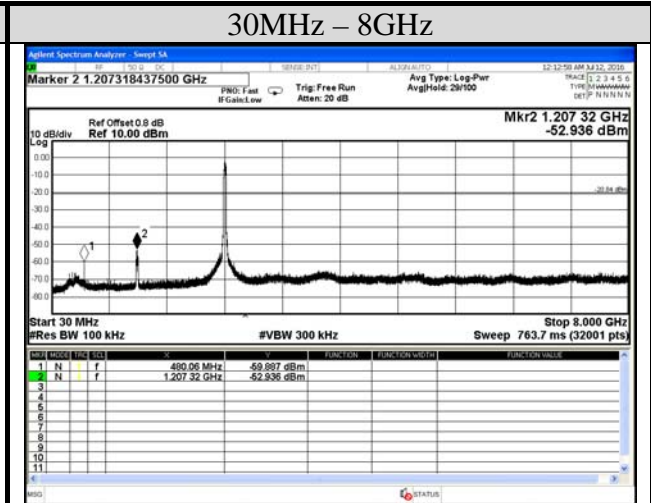
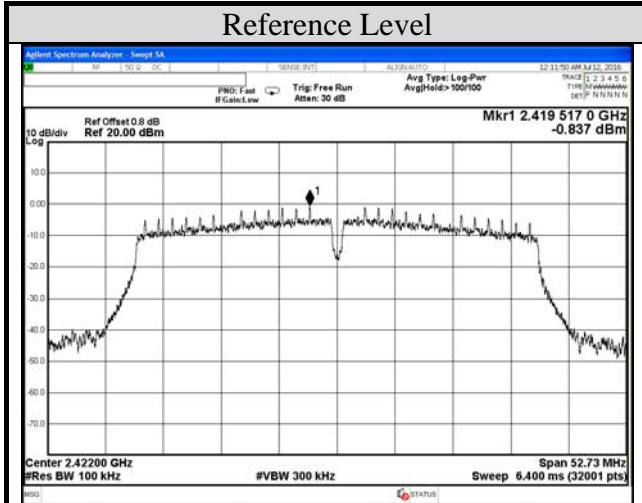
Test Date	2016/07/11	Temp./Hum.	26°C/58%
Cable Loss	0.8dB	Test Voltage	AC 120V, 60Hz
Mode	802.11n-HT20	Frequency	TX 2462MHz
Simultaneous Factor10 log(n) (Note: "n" is antenna number)			N/A



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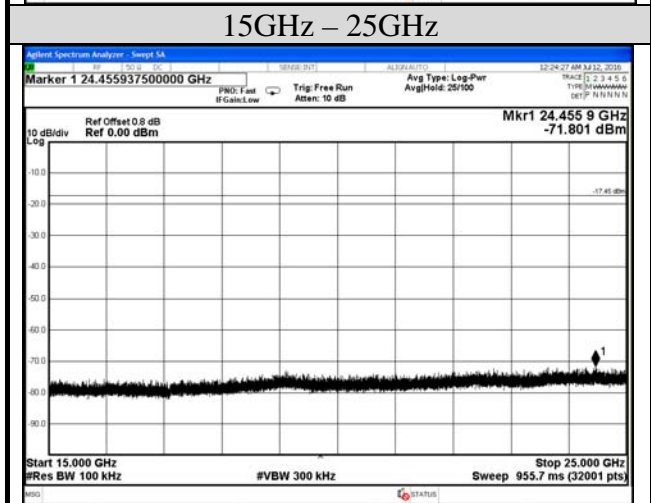
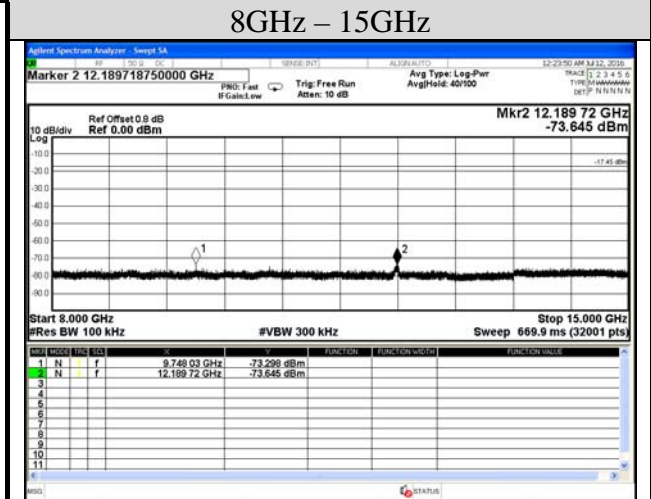
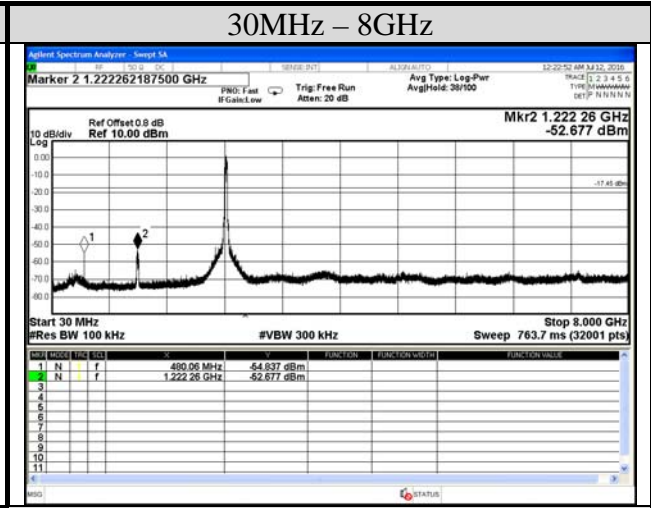
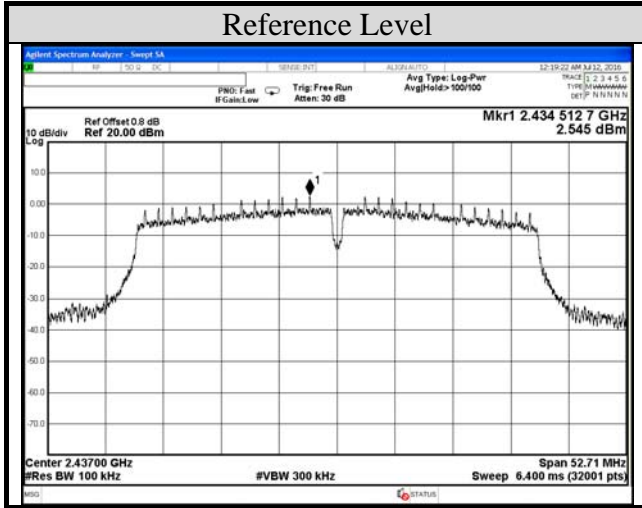
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Cable Loss	0.8dB	Test Voltage	AC 120V, 60Hz
Mode	802.11n-HT40	Frequency	TX 2422MHz
Simultaneous Factor 10 log(n) (Note: "n" is antenna number)			N/A



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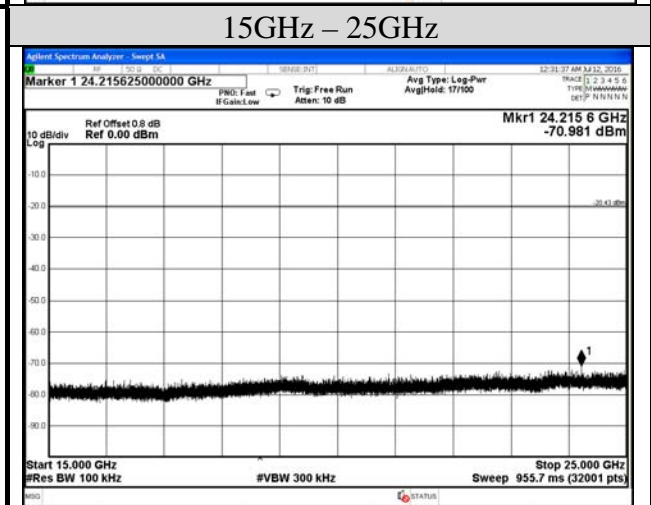
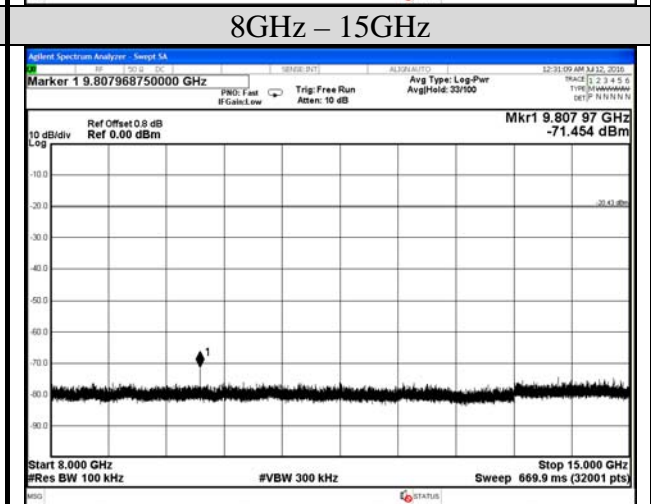
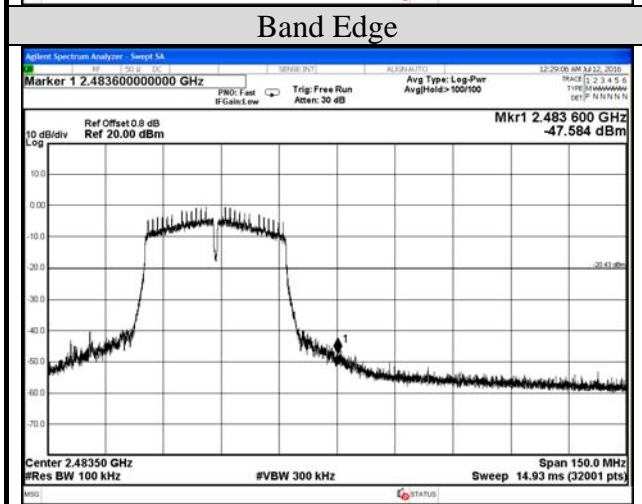
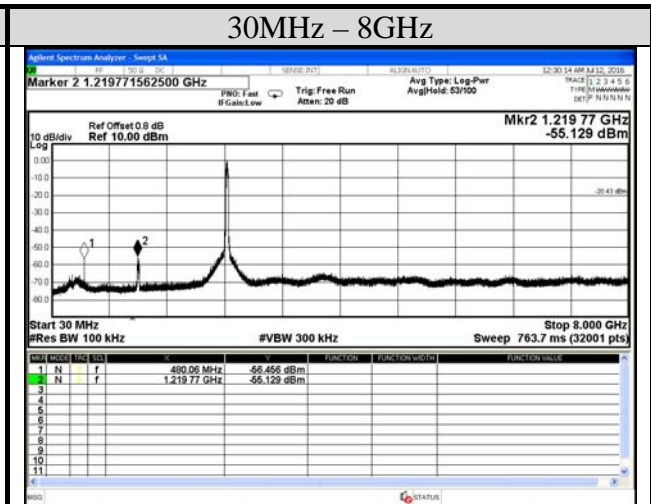
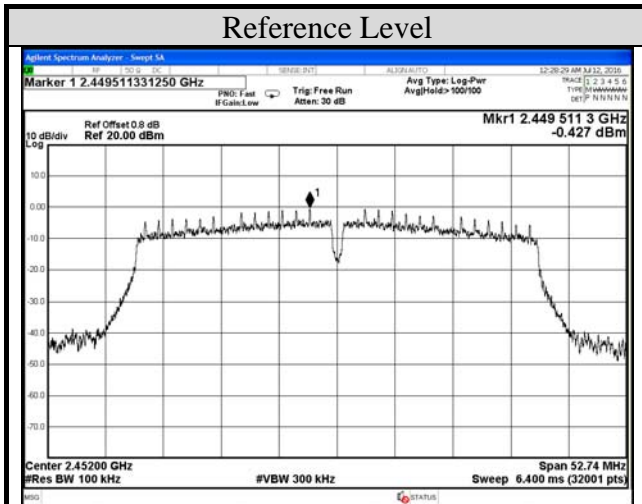
Test Date	2016/07/11~12	Temp./Hum.	26°C/58%
Cable Loss	0.8dB	Test Voltage	AC 120V, 60Hz
Mode	802.11n-HT40	Frequency	TX 2437MHz
Simultaneous Factor10 log(n) (Note: "n" is antenna number)			N/A



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Test Date	2016/07/11~12	Temp./Hum.	26°C/58%
Cable Loss	0.8dB	Test Voltage	AC 120V, 60Hz
Mode	802.11n-HT40	Frequency	TX 2452MHz
Simultaneous Factor 10 log(n) (Note: "n" is antenna number)			N/A



## A.4 POWER SPECTRAL DENSITY

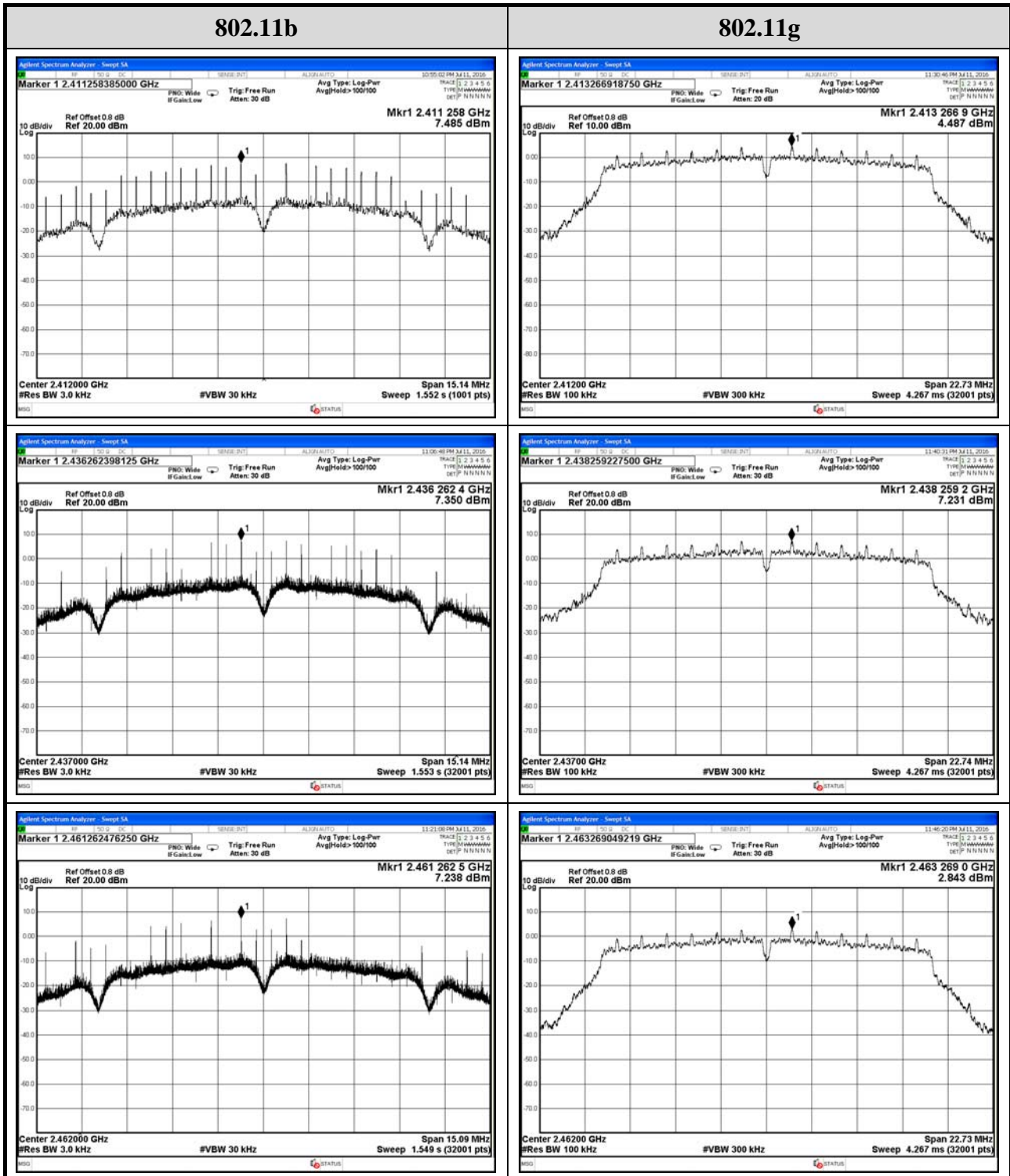
Test Date	2016/07/11~12	Temp./Hum.	26°C/58%
Cable Loss	0.8dB	Test Voltage	AC 120V, 60Hz
Simultaneous Factor	10 log(n) (Note: "n" is antenna number)		N/A

### A.4.1 Power Spectral Density Result

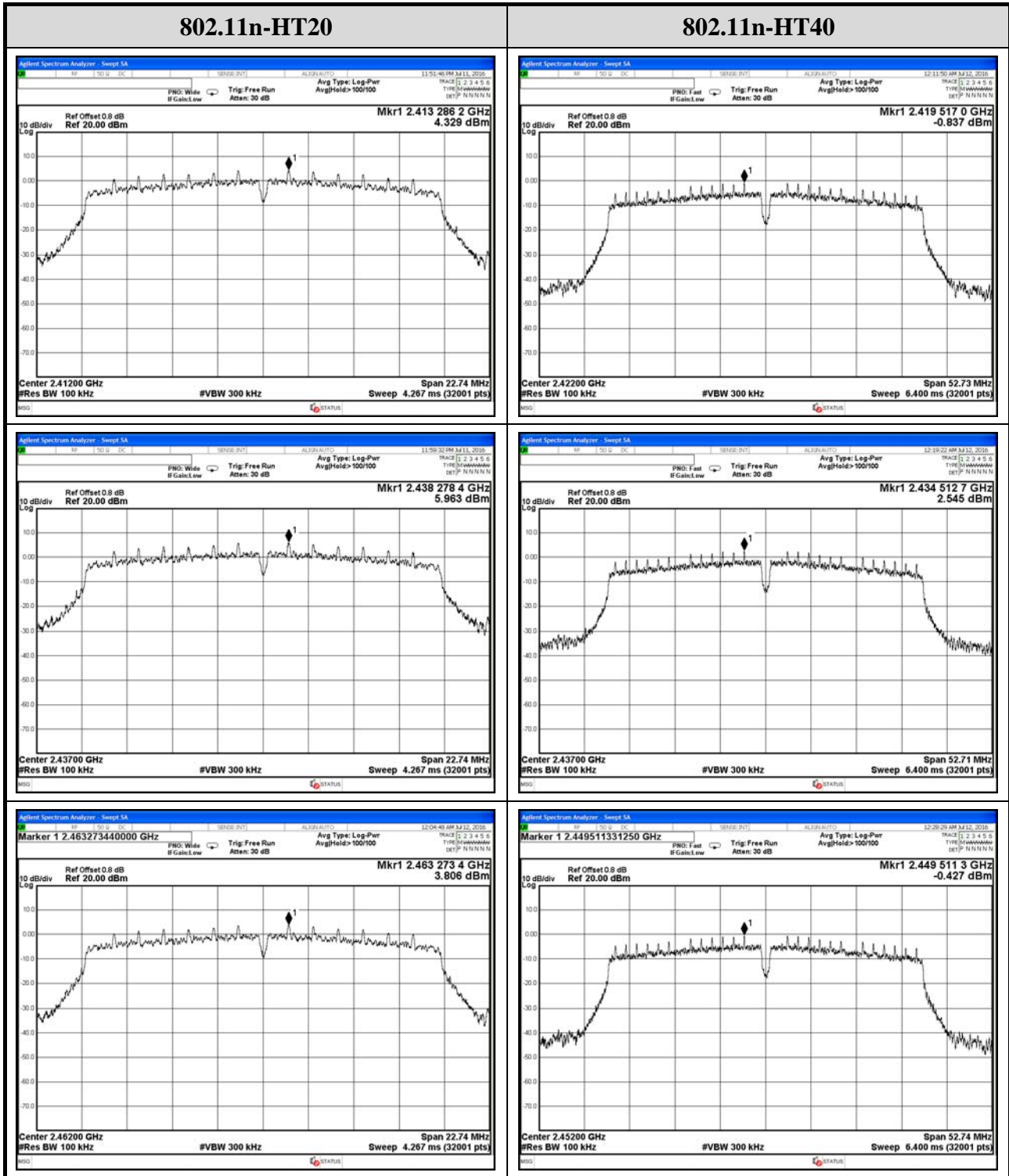
Modulation Type	Centre Frequency (MHz)	Power Spectral Density (dBm)	Limit
802.11b	2412	<b>7.485</b>	< 8 dBm/3kHz
	2437	<b>7.350</b>	
	2462	<b>7.238</b>	
802.11g	2412	<b>4.487</b>	
	2437	<b>7.231</b>	
	2462	<b>2.843</b>	
802.11n-HT20	2412	<b>4.329</b>	
	2437	<b>5.963</b>	
	2462	<b>3.806</b>	
802.11n-HT40	2422	<b>-0.837</b>	
	2437	<b>2.545</b>	
	2452	<b>-0.427</b>	

Note: All results have been included cable loss and Simultaneous Factor.

A.4.2 Measurement Plots



Note: All results have been included cable loss and Simultaneous Factor.



Note: All results have been included cable loss and Simultaneous Factor.