Test Report

FCC Part15 Subpart C
(Class II permissive change)

Product Name	:	300Mbps Wi-Fi Range Extender with Power Outlet Pass-through
Model No.	:	TL-WA860RE
FCC ID	:	TE7WA860REV4

Applicant	:	TP-Link Technologies Co., Ltd.
Address	:	Building 24 (floors 1,3,4,5) and 28 (floors1-4) Central Science and Technology Park,Shennan Rd, Nanshan, Shenzhen,China

Date of Receipt	:	Sep. 08th, 2017
Test Date	:	Sep. 08th, 2017 ~ Sep. 20th, 2017
Issued Date	:	Oct. 27th, 2017
Report No.	:	1792036R-RF- US-P06V03
Report Version	:	V2.0

Test Report Certification

Issued Date : Oct. 27th, 2017
Report No. : 1792036R-RF-US-P06V03

Product Name	:	300Mbps Wi-Fi Range Extender with Power Outlet Pass-through
Applicant	:	TP-Link Technologies Co., Ltd.
Address	:	Building 24 (floors 1,3,4,5) and 28 (floors1-4) Central Science and Technology Park,Shennan Rd, Nanshan, Shenzhen,China
Manufacturer	:	TP-Link Technologies Co., Ltd.
Address	:	Building 24 (floors 1,3,4,5) and 28 (floors1-4) Central Science and Technology Park,Shennan Rd, Nanshan, Shenzhen,China
Model No.	:	TL-WA860RE
FCC ID	:	TE7WA860REV4
EUT Voltage	:	AC 120V/60Hz
Test Voltage		AC 120V/60Hz
Brand Name	:	tp-link
Applicable Standard	:	FCC CFR Title 47 Part 15 Subpart C 2016 ANSI C63.10:2013; KDB 558074 D01v04 KDB 662911 D01v02r01
Test Result	:	Complied
Performed Location	:	DEKRA Testing and Certification (Suzhou) Co., Ltd. No.99 Hongye Rd., Suzhou Industrial Park, Suzhou, 215006, Jiangsu, China TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098 FCC Designation Number: CN1199

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History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
1792036R-RF-US-P06V03	V1.0	Initial Issued Report	Sep. 28th, 2017
1792036R-RF-US-P06V03	V2.0	1. Modify ANSI C63.4 - 2014 to ANSI C63.10-2013 2. Page 67, adds band edge data.	Oct. 27th, 2017

1. General Information

1.1. EUT Description

Product Name	300Mbps Wi-Fi Range Extender with Power Outlet Pass-through
Brand Name	tp-link
Model No.	TL-WA860RE
EUT Voltage	AC 120V/60Hz
Frequency Range	For 2.4GHz Band 802.11b/g/n(20MHz): 2412~2462MHz 802.11n(40MHz): 2422~2452MHz
Channel Number	For 2.4GHz Band 802.11b/g/n(20MHz): 11 802.11n(40MHz): 7
Type of Modulation	802.11b: DSSS
	802.11g: OFDM
Data Rate	802.11g: 6/9/12/18/24/36/48/54 Mbps
	802.11b: 1/2/5.5/11 Mbps
	802.11n: up to 300 Mbps
Channel Control	Auto

Note: This appendix report was based on DEKRA report No. 1712029R, only change the AC-DC power scheme on the power board, without any change of pin and shell. The Wi-Fi board hasn't been changed, except removed the shield on the Wi-Fi board.

1.2. Channel List:

802.11b/g/n(20MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
01	2412 MHz	02	2417 MHz	03	2422 MHz	04	2427 MHz
05	2432 MHz	06	2437 MHz	07	2442 MHz	08	2447 MHz
09	2452 MHz	10	2457 MHz	11	2462 MHz	N/A	N/A
802.11n(40MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
03	2422 MHz	04	2427 MHz	05	2432 MHz	06	2437 MHz
07	2442 MHz	08	2447 MHz	09	2452 MHz	N/A	N/A

1.3. Test Channel:

802.11b/g/n(20MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
01	2412 MHz	02	2417 MHz	06	2437MHz	10	2457 MHz
11	2462 MHz	N/A	N/A	N/A	N/A	N/A	N/A
802.11n(40MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
03	2422 MHz	04	2427 MHz	06	2437MHz	08	2447 MHz
09	2452 MHz	N/A	N/A	N/A	N/A	N/A	N/A

1.4. Antenna information

Model No.	N/A					
Antenna manufacturer	N/A					
Antenna Delivery	☐	1*TX+1*RX	☒	2*TX+2*RX	☐	3*TX+3*RX
Antenna technology	☐	SISO				
	☒	MIMO	☐	Basic		
			☒	CDD		
			☐	Sectorized		
			☐	Beam-forming		
Antenna Type	☒	External	☒	Dipole		
			☐	Sectorized		
	☐	Internal	☐	PIFA		
			☐	PCB		
			☐	Ceramic Chip Antenna		
			☐	Metal plate type F antenna		

Antenna Technology	Ant Gain (dBi)	Directional Gain (dBi)	
		For Power	For PSD
☒ CDD	Ant 0: 2 Ant 1: 2	2	5

1.5. Mode of Operation

Test Modes List
Mode 1: Transmit by 802.11b
Mode 2: Transmit by 802.11g
Mode 3: Transmit by 802.11n(20MHz)
Mode 4: Transmit by 802.11n(40MHz)

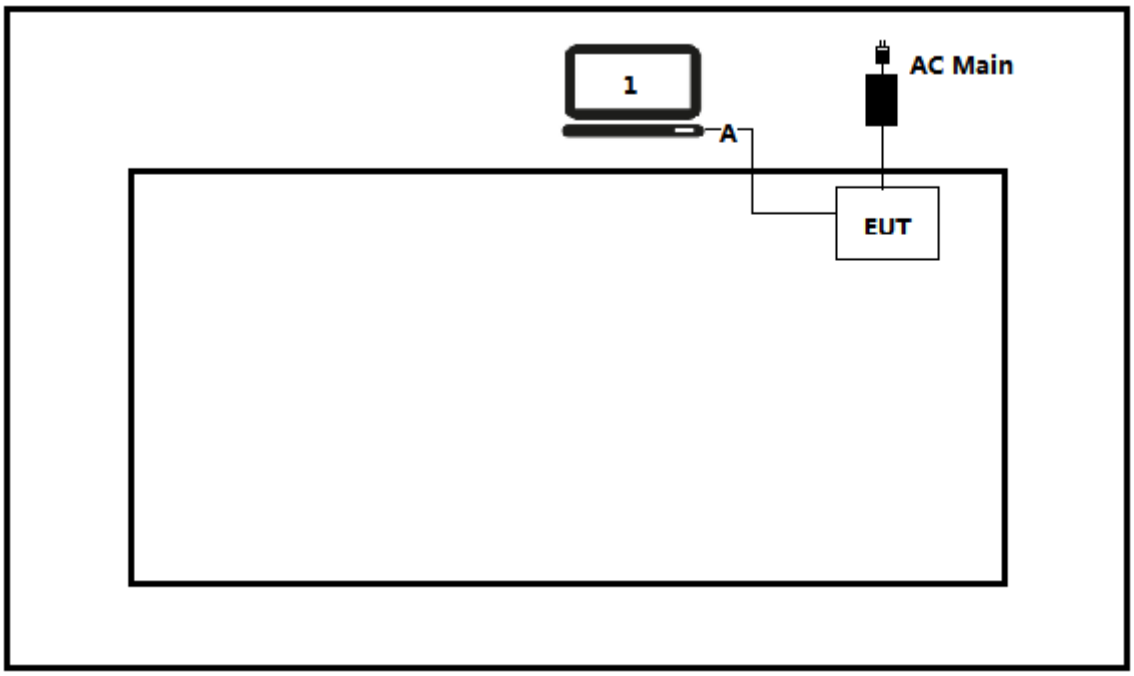
1.6. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

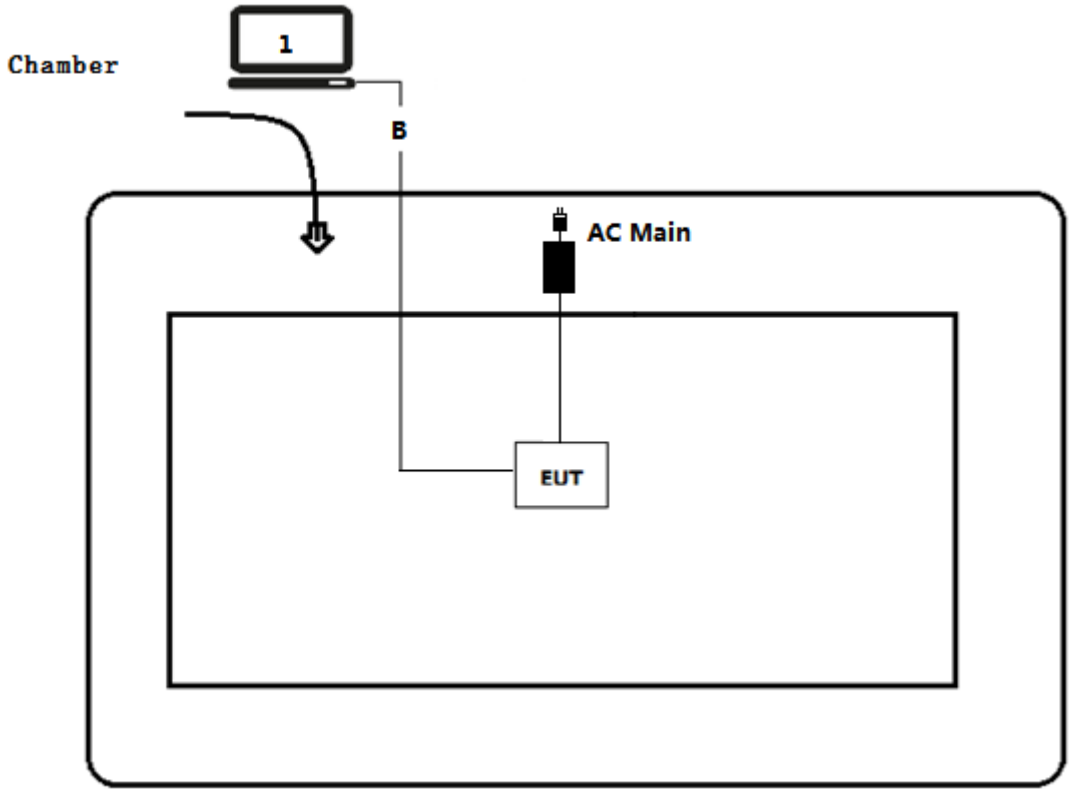
No.	Product	Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook	Lenovo	Think pad x220	SUA0600195	Non-shielded
A	LAN cable	N/A	N/A	N/A	Non-shielded,1.5m
B	LAN cable	N/A	N/A	N/A	Non-shielded,10m

1.7. Configuration of Tested System

Test setup Diagram- AC Line Conducted Emission Test



Test setup Diagram- Radiated Emission



2. Technical Test

2.1. Summary of Test Result

Performed Test Item	Normative References	Limit	Result
AC Power Line Conducted Emission	FCC CFR Title 47 Part 15 Subpart C: 2016 Section 15.207	FCC 15.207	PASS
Emissions in restricted frequency bands	FCC CFR Title 47 Part 15 Subpart C: 2016 Section 15.209	FCC 15.209	PASS
Radiated Emission Band Edge	FCC CFR Title 47 Part 15 Subpart C: 2016 15.247(d)	FCC 15.209	PASS
Fundamental emission output power	FCC CFR Title 47 Part 15 Subpart C: 2016 Section 15.247(b)(3)	≤30dBm	PASS

2.2. Power setting parameter

Test Software	QA Tool			
Modulation Mode	Test Frequency	Ant 0	Ant 1	Ant 0+1
802.11b	2412	N/A	N/A	21
	2417	N/A	N/A	21
	2437	N/A	N/A	25
	2457	N/A	N/A	1F
	2462	N/A	N/A	1F
802.11g	2412	N/A	N/A	1A
	2417	N/A	N/A	1E
	2437	N/A	N/A	28
	2457	N/A	N/A	1B
	2462	N/A	N/A	17
802.11n(20MHz)	2412	N/A	N/A	19
	2417	N/A	N/A	1D
	2437	N/A	N/A	28
	2457	N/A	N/A	1B
	2462	N/A	N/A	16
802.11n(40MHz)	2422	N/A	N/A	14
	2427	N/A	N/A	14
	2437	N/A	N/A	28
	2447	N/A	N/A	10
	2452	N/A	N/A	10

2.3. Power vs Data Rate

MCS Index for 802.11n	Spatial Streams	Data Rate (Mbps)						
		802.11b	802.11g		20MHz Bandwidth		40MHz Bandwidth	
					800ns GI	400ns GI	800ns GI	400ns GI
0	1	1	6	---	6.5	7.2	13.5	15.0
1	1	2	9	---	13.0	14.4	27.0	30.0
2	1	5.5	12	---	19.5	21.7	40.5	45.0
3	1	11	18	---	26.0	28.9	54.0	60.0
4	1	---	24	---	39.0	43.3	81.0	90.0
5	1	---	36	---	52.0	57.8	108.0	120.0
6	1	---	48	---	58.5	65.0	121.5	135.0
7	1	---	54	---	65.0	72.2	135.0	150.0
8	2	---	---	---	13.0	14.4	27.0	30.0
9	2	---	---	---	26.0	28.9	54.0	60.0
10	2	---	---	---	39.0	43.3	81.0	90.0
11	2	---	---	---	52.0	57.8	108.0	120.0
12	2	---	---	---	78.0	86.7	162.0	180.0
13	2	---	---	---	104.0	115.6	216.0	240.0
14	2	---	---	---	117.0	130.0	243.0	270.0
15	2	---	---	---	130.0	144.0	270.0	300.0

Note 1 : The blue form is the maximum power data rate

Note 2 : The EUT has two spatial Streams

2.4. Test Environment

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	21
Humidity (%RH)	25-75	50
Barometric pressure (mbar)	860-1060	950-1000

2.5. Measurement Uncertainty

Test Items	Uncertainty
AC Power Line Conducted Emission	±2.02dB
Radiated Emission	Below 1GHz ±3.8 dB
	Above 1GHz ±3.9 dB
RF Antenna Port Conducted Emission	±1.27dB
Radiated Emission Band Edge	±3.9dB
Occupied Bandwidth	±1kHz
Power Spectral Density	±1.27dB

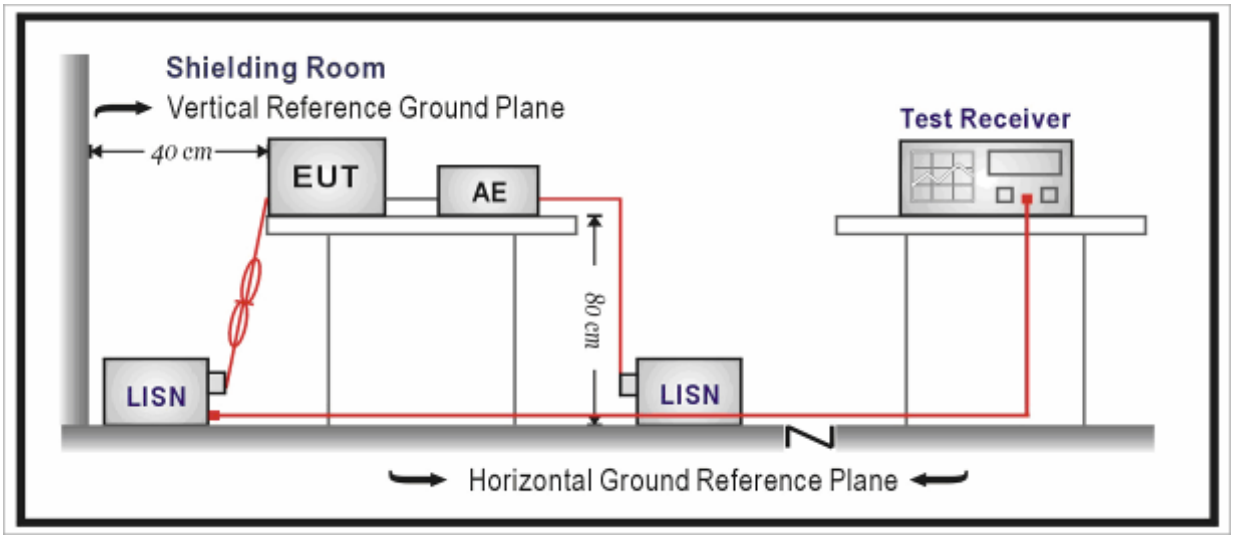
3. AC Power Line Conducted Emission

3.1. Test Equipment

AC Power Line Conducted Emission / TR-1					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Test Receiver	R&S	ESCI	100906	2017.03.05	2018.03.04
Two-Line V-Network	R&S	ENV 216	101189	2017.07.16	2018.07.15
Two-Line V-Network	R&S	ENV 216	101044	2017.09.16	2018.09.15
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	N/A	N/A
50ohm Termination	SHX	TF2	07081402	2017.09.03	2018.09.02
Temperature/Humidity Meter	Zhichen	ZC1-2	TR1-TH	2017.01.04	2018.01.03
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

3.2. Test Setup

AC Power Line Conducted Emission test setup



3.3. Limit

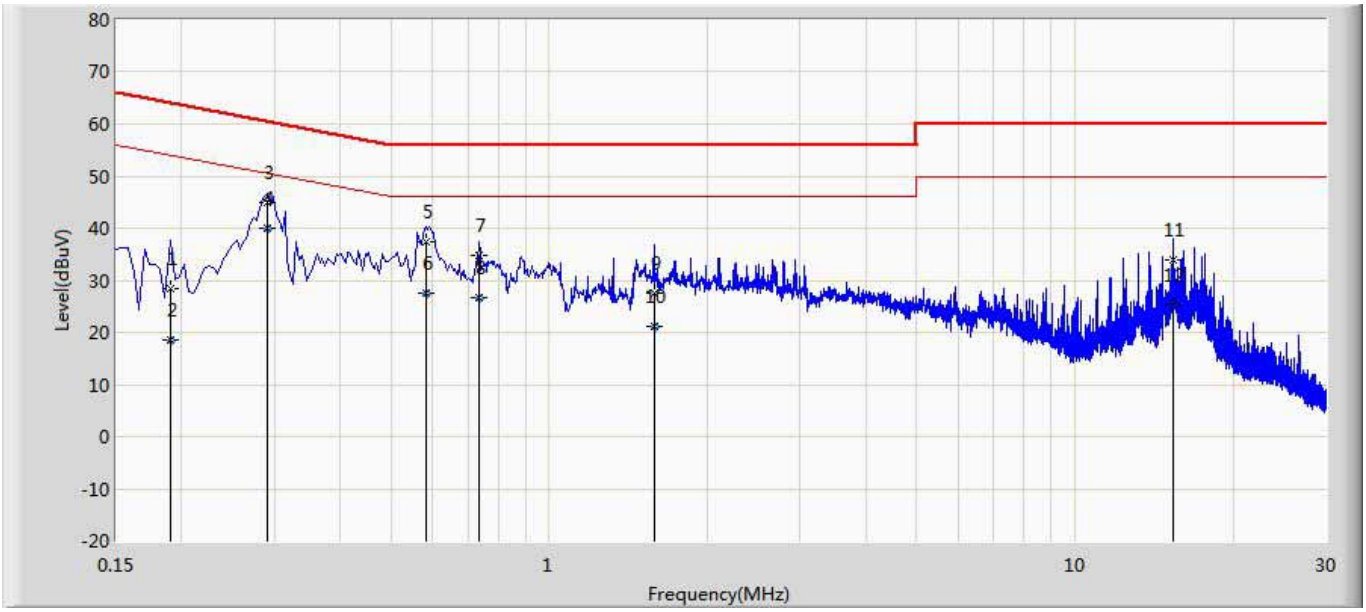
Frequency of Emission (MHz)	Conducted Limit	
	Quasi-peak (dB μ V)	Average(dB μ V)
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50
Note 1: The lower limit shall apply at the transition frequencies. Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.		

3.4. Test Procedure

Test Method			
	References Rule	Chapter	Item
☒	ANSI C63.10-2013	6.2	Standard test method for ac power-line conducted emissions from unlicensed wireless devices
☐	ANSI C63.4-2014	7	AC power-line conducted emission measurements

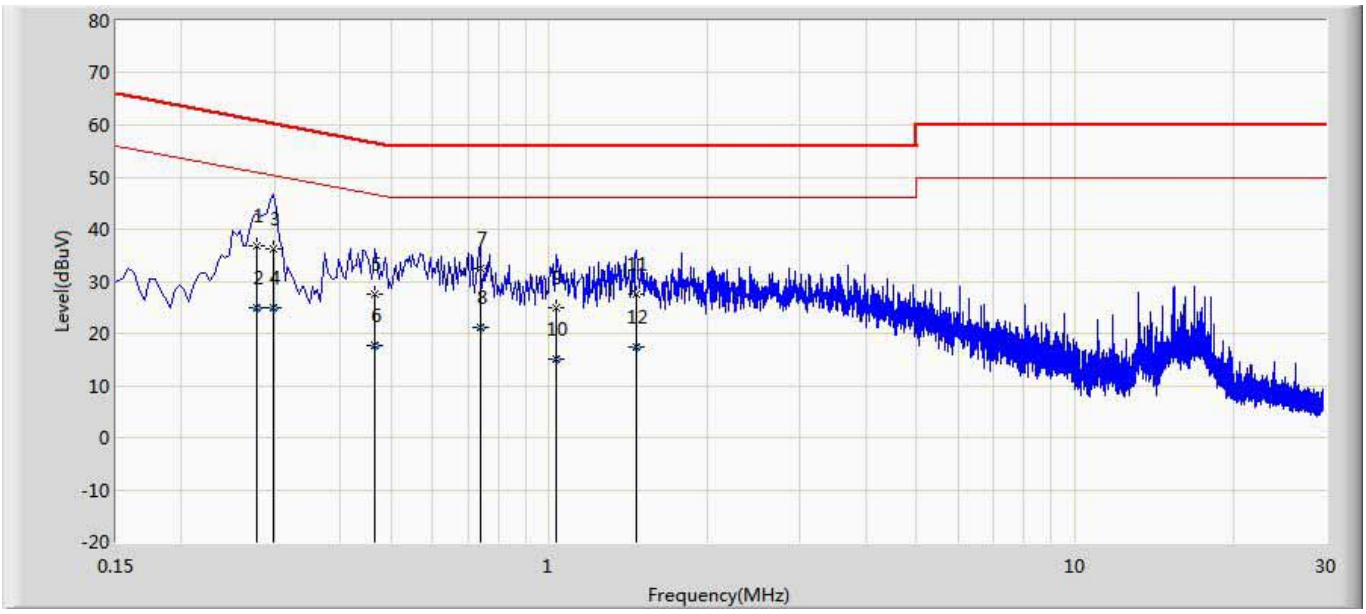
3.5. Test Result

Engineer: Lucas	
Site: TR1	Time: 2017/09/13
Limit: FCC_Part15.207_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Line
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 1: transmit at 2412MHz by 802.11b ant 0+1	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.190	28.365	18.734	-35.672	64.037	9.602	0.028	0.000	QP
2		0.190	18.573	8.943	-35.463	54.037	9.602	0.028	0.000	AV
3		0.290	44.964	35.330	-15.561	60.524	9.600	0.034	0.000	QP
4	*	0.290	40.093	30.460	-10.431	50.524	9.600	0.034	0.000	AV
5		0.582	37.490	27.844	-18.510	56.000	9.600	0.045	0.000	QP
6		0.582	27.537	17.892	-18.463	46.000	9.600	0.045	0.000	AV
7		0.734	34.732	25.080	-21.268	56.000	9.601	0.051	0.000	QP
8		0.734	26.597	16.945	-19.403	46.000	9.601	0.051	0.000	AV
9		1.582	27.447	17.761	-28.553	56.000	9.610	0.076	0.000	QP
10		1.582	21.126	11.440	-24.874	46.000	9.610	0.076	0.000	AV
11		15.414	33.993	23.821	-26.007	60.000	9.920	0.252	0.000	QP
12		15.414	25.301	15.129	-24.699	50.000	9.920	0.252	0.000	AV

Engineer: Lucas	
Site: TR1	Time: 2017/09/13
Limit: FCC_Part15.207_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Neutral
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 1: transmit at 2412MHz by 802.11b ant 0+1	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.278	36.789	27.159	-24.086	60.875	9.597	0.033	0.000	QP
2		0.278	25.008	15.378	-25.867	50.875	9.597	0.033	0.000	AV
3		0.298	36.371	26.741	-23.927	60.298	9.596	0.034	0.000	QP
4		0.298	24.800	15.170	-25.498	50.298	9.596	0.034	0.000	AV
5		0.466	27.631	17.999	-28.954	56.585	9.591	0.041	0.000	QP
6		0.466	17.642	8.010	-28.943	46.585	9.591	0.041	0.000	AV
7	*	0.738	32.539	22.898	-23.461	56.000	9.590	0.051	0.000	QP
8		0.738	21.068	11.427	-24.932	46.000	9.590	0.051	0.000	AV
9		1.034	24.810	15.159	-31.190	56.000	9.591	0.061	0.000	QP
10		1.034	14.980	5.329	-31.020	46.000	9.591	0.061	0.000	AV
11		1.466	27.542	17.869	-28.458	56.000	9.600	0.073	0.000	QP
12		1.466	17.314	7.642	-28.686	46.000	9.600	0.073	0.000	AV

4. Emissions in restricted frequency bands

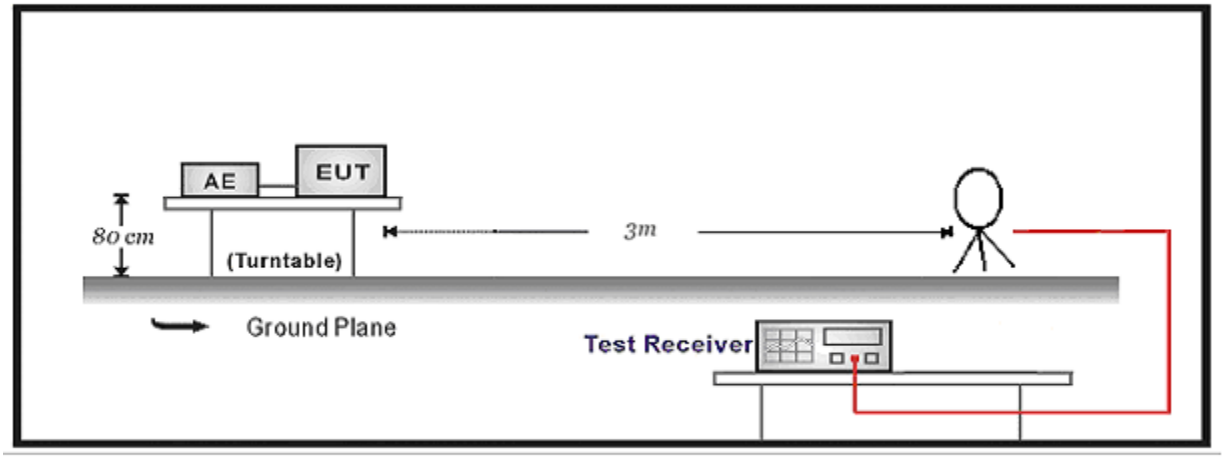
4.1. Test Equipment

Radiated Emission(Below 1GHz) / AC-3					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Test Receiver	R&S	ESCI	100176	2017.09.03	2018.09.02
Loop Antenna	R&S	HFH2-Z2	833799/003	2016.11.16	2017.11.15
Bilog Antenna	Teseq GmbH	CBL6112D	27613	2017.07.15	2018.07.14
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC3-C	2017.02.28	2018.02.27
Temperature/Humidity Meter	Zhichen	ZC1-2	AC3-TH	2017.01.06	2018.01.05
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

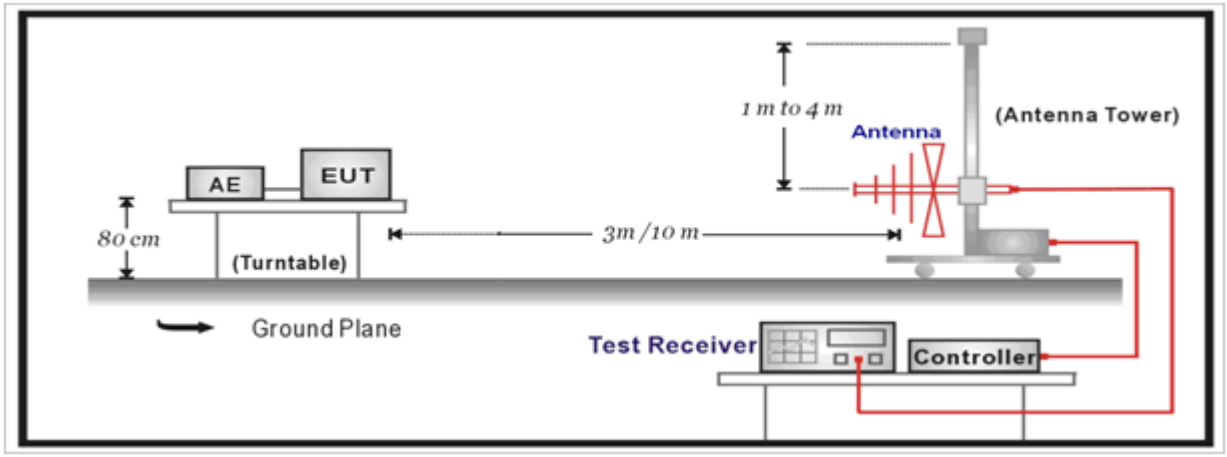
Radiated Emission(Above 1GHz) / AC-5					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2017.01.03	2018.01.02
Preamplifier	Miteq	NSP1800-25	1364185	2017.05.06	2018.05.05
Preamplifier	QTK	AP-040G	CHM-0906001	2017.05.06	2018.05.05
DRG Horn	ETS-Lindgren	3117	00123988	2017.01.22	2018.01.21
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2016.11.25	2017.11.24
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2017.02.28	2018.02.27
EMI Receiver	Agilent	N9038A	MY51210196	2017.07.17	2018.07.16
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2017.01.06	2018.01.05
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

4.2. Test Setup

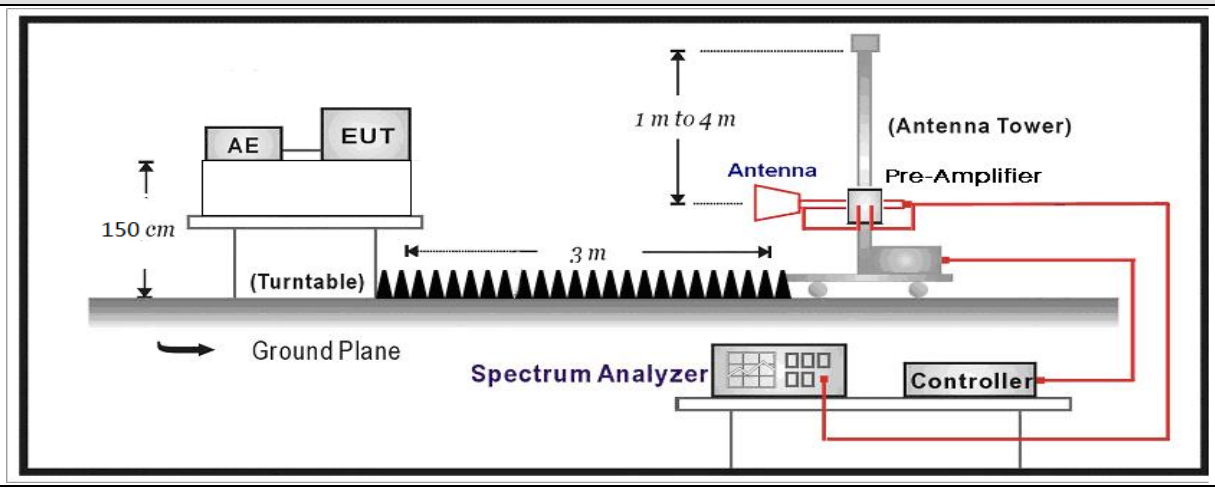
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:



4.3. Limit

Restricted Bands of operation			
Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 – 0.110	16.42 – 16.423	399.9 – 410	4.5 – 5.15
0.495 – 0.505	16.69475 –16.69525	608 – 614	5.35 – 5.46
2.1735 – 2.1905	16.80425 – 16.80475	960 – 1240	7.25 – 7.75
4.125 – 4.128	25.5 – 25.67	1300 – 1427	8.025 – 8.5
4.17725 – 4.17775	37.5 – 38.25	1435 – 1626.5	9.0 – 9.2
4.20725 – 4.20775	73 – 74.6	1645.5 – 1646.5	9.3 – 9.5
6.215 – 6.218	74.8 – 75.2	1660 – 1710	10.6 – 12.7
6.26775 – 6.26825	108 – 121.94	1718.8 – 1722.2	13.25 – 13.4
6.31175 – 6.31225	123 – 138	2200 – 2300	14.47 – 14.5
8.291 – 8.294	149.9 – 150.05	2310 – 2390	15.35 – 16.2
8.362 – 8.366	156.52475 – 156.52525	2483.5 – 2500	17.7 – 21.4
8.37625 – 8.38675	156.7 – 156.9	2690 – 2900	22.01 – 23.12
8.81425 – 8.81475	162.0125 – 167.17	3260 – 3267	23.6 – 24.0
12.29 – 12.293	167.72 – 173.2	3332 – 3339	31.2 – 31.8
12.51975–12.52025	240 – 285	3345.8 – 3358	36.43 – 36.5
12.57675–12.57725	322 – 335.4	3600 – 4400	
13.36 – 13.41			

Restricted Band Emissions Limit			
Frequency (MHz)	Field strength (μ V/m)	Field strength (dB μ V/m)	Measurement distance (m)
0.009 - 0.49	2400/F(kHz)	48.5 – 13.8	300(Note 1)
0.49 - 1.705	24000/F(kHz)	33.8 - 23	30(Note 1)
1.705 - 30	30	29.5	30(Note 1)
30 - 88	100	40	3(Note 2)
88 - 216	150	43.5	3(Note 2)
216 - 960	200	46	3(Note 2)
Above 960	500	54	3(Note 2)

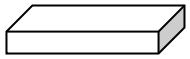
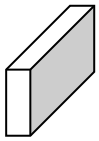
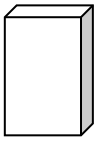
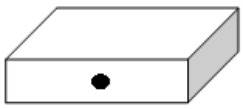
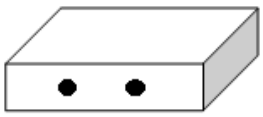
Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade).

Note 2: At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

4.4. Test Procedure

Test Method						
	References Rule				Chapter	Description
☐	ANSI C63.10				11.11	Emissions in non-restricted frequency bands
	☐	ANSI C63.10			11.11.2	Reference level measurement
	☐	ANSI C63.10			11.11.3	Emission level measurement
☒	ANSI C63.10				11.12	Emissions in restricted frequency bands
	☒	ANSI C63.10			11.12.1	Radiated emission measurements
	☒	ANSI C63.10			11.12.2.7	Radiated spurious emission test
		☒	ANSI C63.10		6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
		☒	ANSI C63.10		6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
		☒	ANSI C63.10		6.6	Radiated emissions from unlicensed wireless devices above 1 GHz
		☐	ANSI C63.10		11.12.2.3	Quasi-peak measurement procedure
		☒	ANSI C63.10		11.12.2.4	Peak power measurement procedure
		☒	ANSI C63.10		11.12.2.5	Average power measurement procedures
			☐	ANSI C63.10	11.12.2.5.1	Trace averaging with continuous EUT transmission at full power
			☐	ANSI C63.10	11.12.2.5.2	Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction
			☒	ANSI C63.10	11.12.2.5.3	Reduced VBW averaging across ON and OFF times of the EUT transmissions with max hold

4.5. EUT test Axis definition

<table>
<tr><th>Item</th><th colspan="4">Emissions in restricted frequency bands</th></tr>
<tr><td rowspan="3">Device Category</td><td>☐</td><td colspan="3">Fixed point-to-point</td></tr>
<tr><td>☐</td><td colspan="3">Emit multiple directional beams, simultaneously or sequentially</td></tr>
<tr><td>☒</td><td colspan="3">Other cases</td></tr>
<tr><td>Test mode</td><td colspan="4">Mode 1~4</td></tr>
<tr><td rowspan="12">Test method</td><td>☒</td><td colspan="3">Radiated</td></tr>
<tr><td rowspan="3"></td><td>X Axis</td><td>Y Axis</td><td>Z Axis</td></tr>
<tr><td>  </td><td>  </td><td>  </td></tr>
<tr><td>Worst Axis ☒</td><td>Worst Axis ☐</td><td>Worst Axis ☐</td></tr>
<tr><td>☐</td><td colspan="3">Conducted</td></tr>
<tr><td>☐</td><td colspan="3">Chain 0</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☒</td><td>Chain 0</td><td colspan="2">Chain 1</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☐</td><td>Chain 0</td><td>Chain 1</td><td>Chain 2</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
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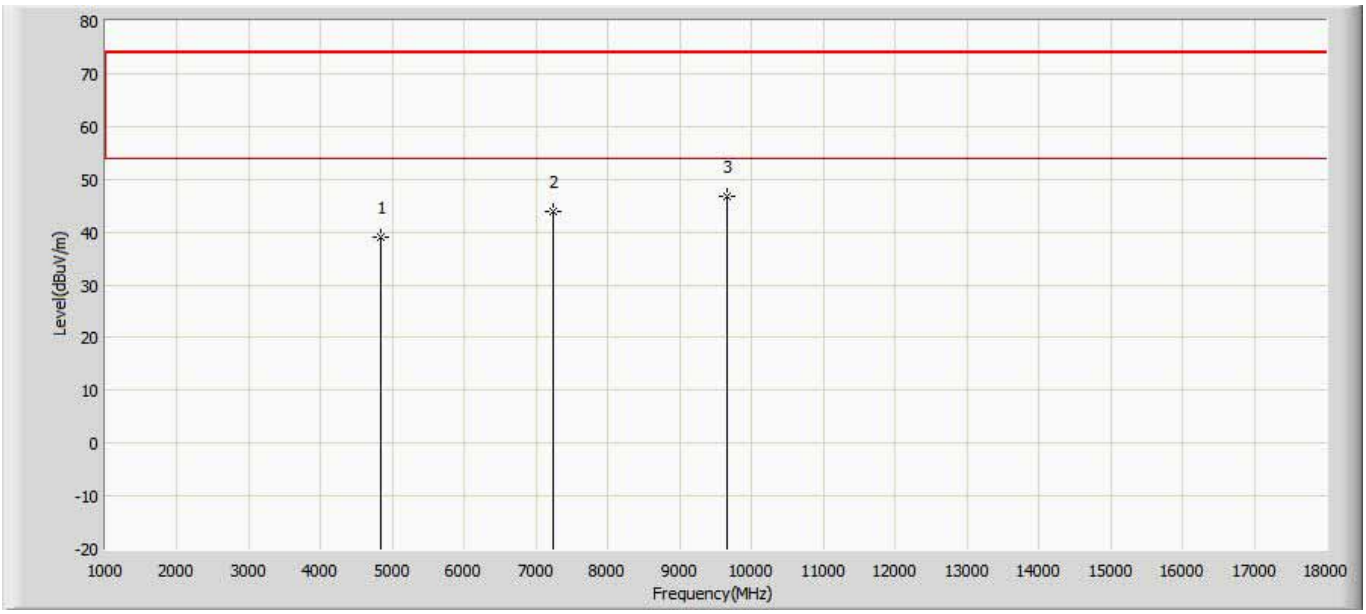
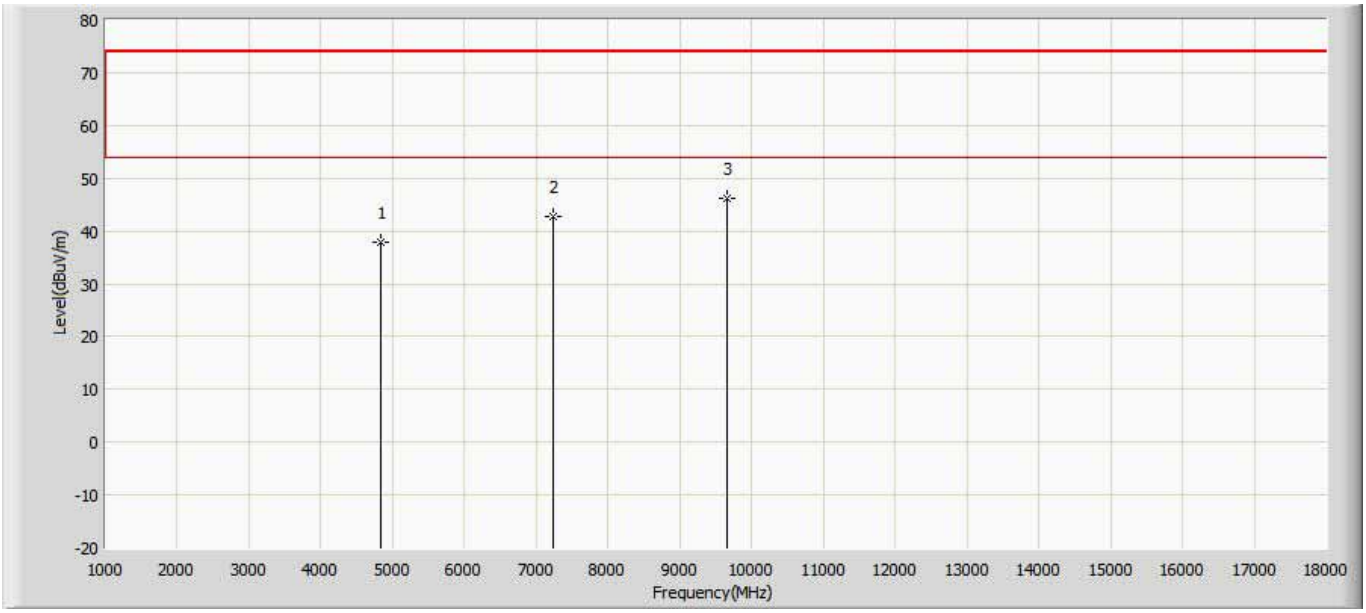
4.6. Test Result

Engineer: Karl	
Site: AC5	Time: 2017/09/20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2412MHz by 802.11b ant 0+1	



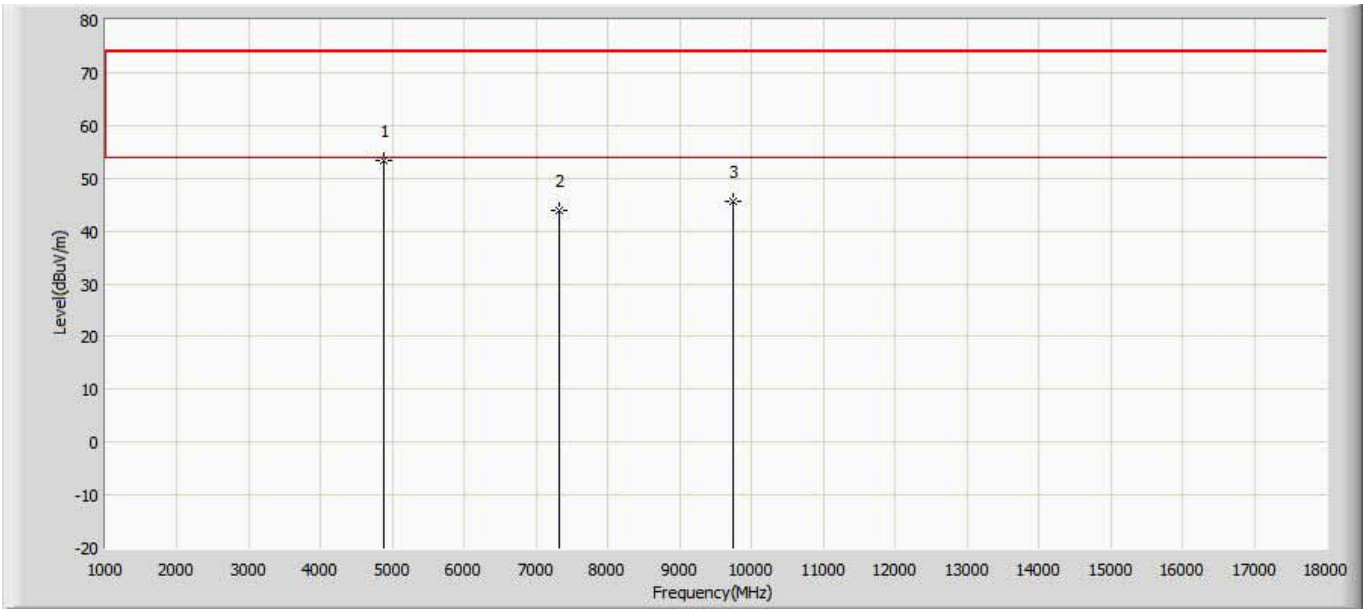
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	39.047	52.057	-34.953	74.000	-13.010	PK
2		7236.000	43.846	51.556	-30.154	74.000	-7.710	PK
3	*	9648.000	46.681	48.271	-27.319	74.000	-1.590	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2412MHz by 802.11b ant 0+1	



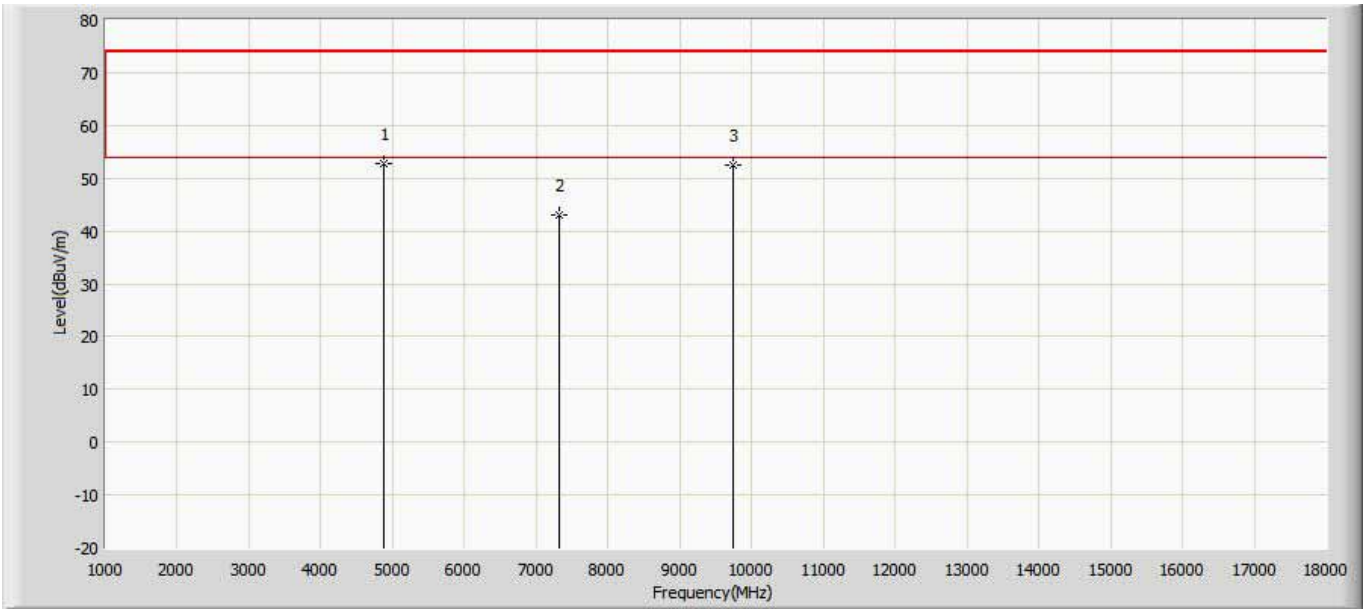
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	37.740	50.750	-36.260	74.000	-13.010	PK
2		7236.000	42.612	50.322	-31.388	74.000	-7.710	PK
3	*	9648.000	46.312	47.902	-27.688	74.000	-1.590	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2437MHz by 802.11b ant 0+1	



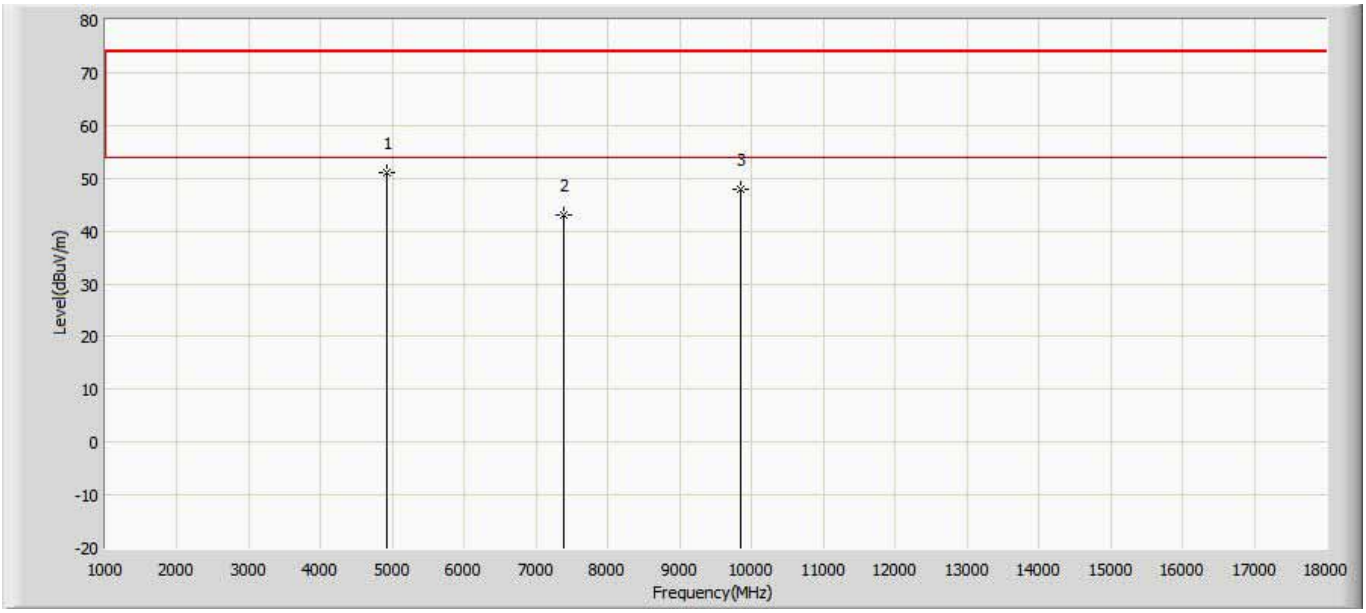
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4876.000	53.468	66.478	-20.532	74.000	-13.010	PK
2		7311.000	43.996	51.706	-30.004	74.000	-7.710	PK
3		9748.000	45.727	47.317	-28.273	74.000	-1.590	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2437MHz by 802.11b ant 0+1	



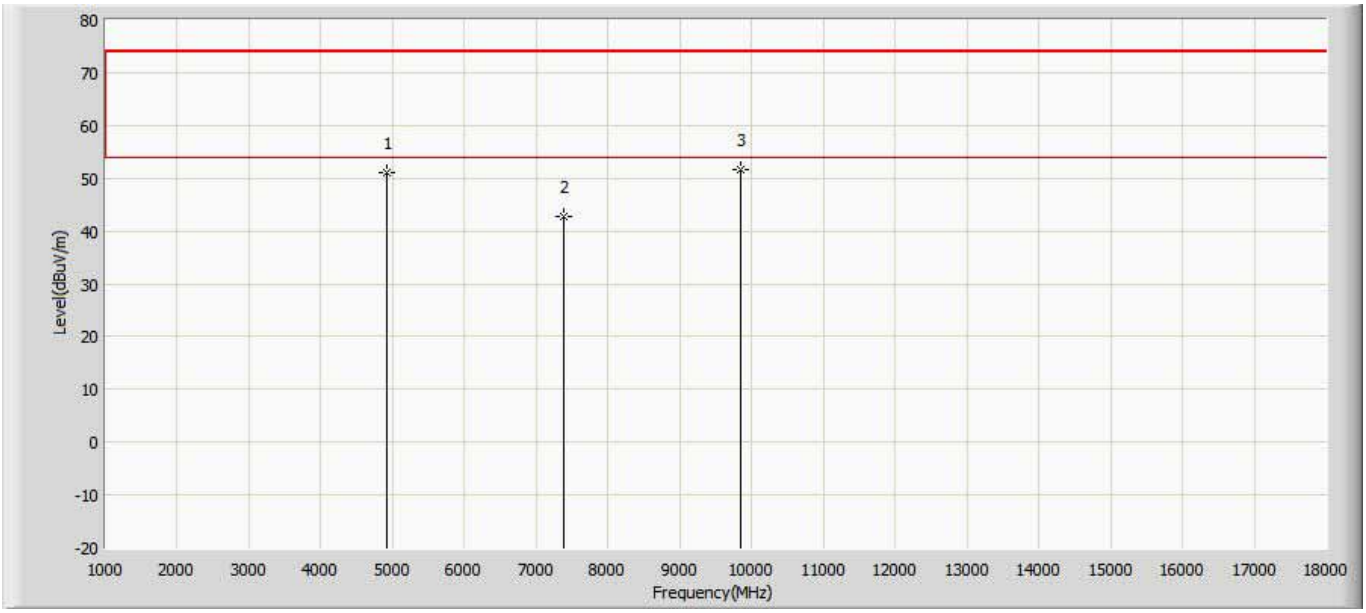
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4876.000	52.855	65.865	-21.145	74.000	-13.010	PK
2		7311.000	43.026	50.736	-30.974	74.000	-7.710	PK
3		9746.500	52.499	54.089	-21.501	74.000	-1.590	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2462MHz by 802.11b ant 0+1	



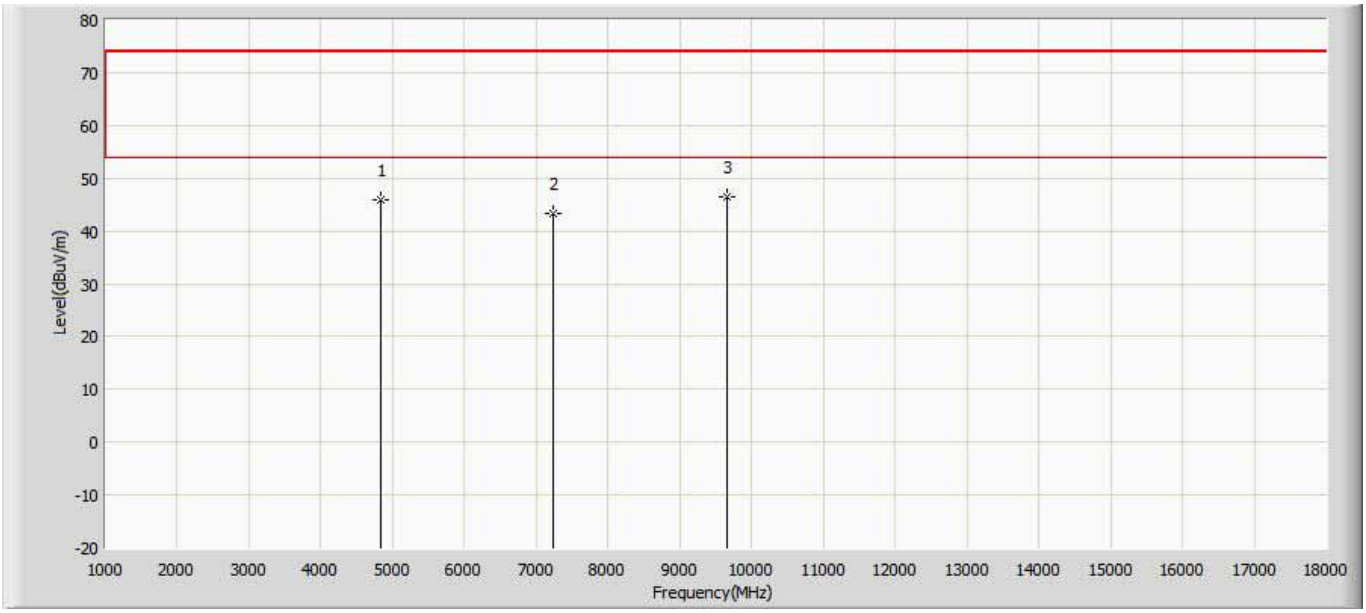
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4927.000	50.930	63.940	-23.070	74.000	-13.010	PK
2		7386.000	43.127	50.837	-30.873	74.000	-7.710	PK
3		9848.000	47.905	49.495	-26.095	74.000	-1.590	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2462MHz by 802.11b ant 0+1	



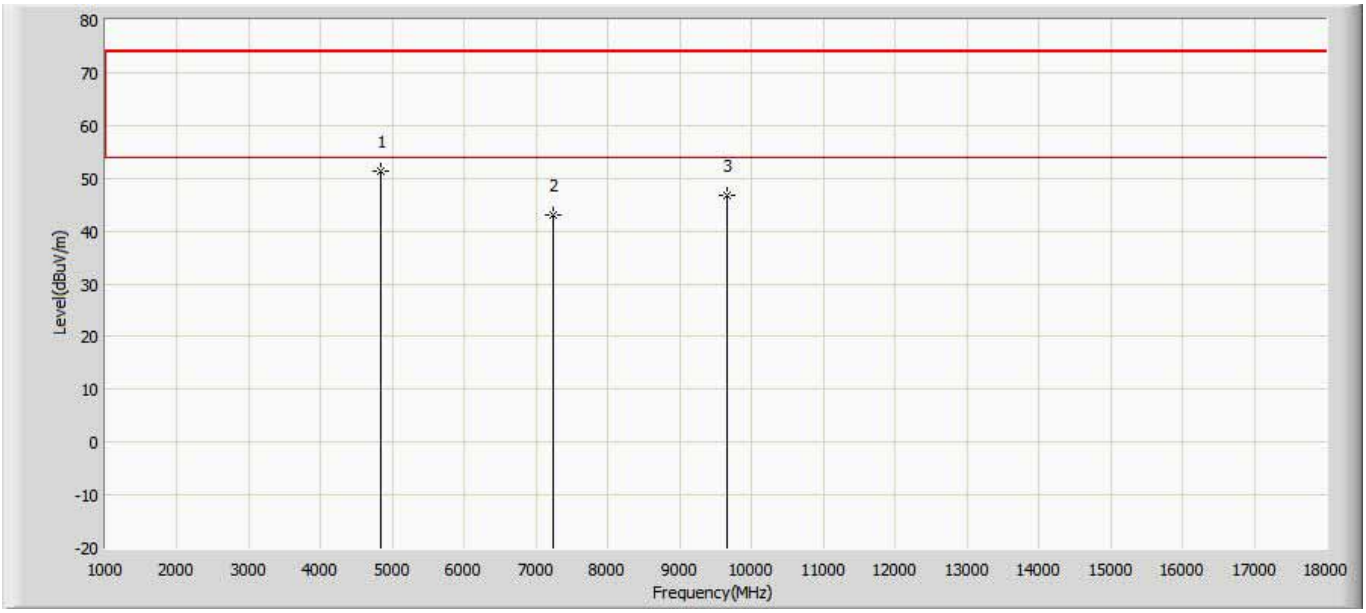
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4927.000	51.128	64.138	-22.872	74.000	-13.010	PK
2		7386.000	42.889	50.599	-31.111	74.000	-7.710	PK
3	*	9848.500	51.562	53.152	-22.438	74.000	-1.590	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2412MHz by 802.11g ant 0+1	



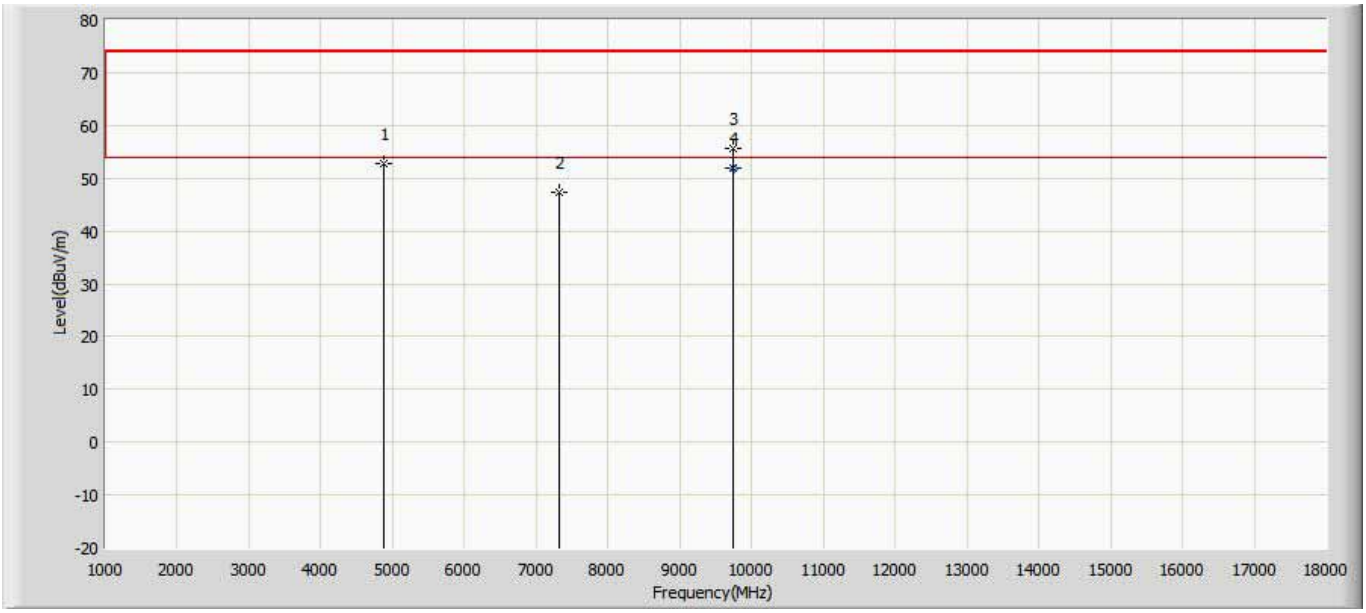
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4825.000	45.807	58.817	-28.193	74.000	-13.010	PK
2		7236.000	43.418	51.128	-30.582	74.000	-7.710	PK
3	*	9648.000	46.409	47.999	-27.591	74.000	-1.590	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2412MHz by 802.11g ant 0+1	



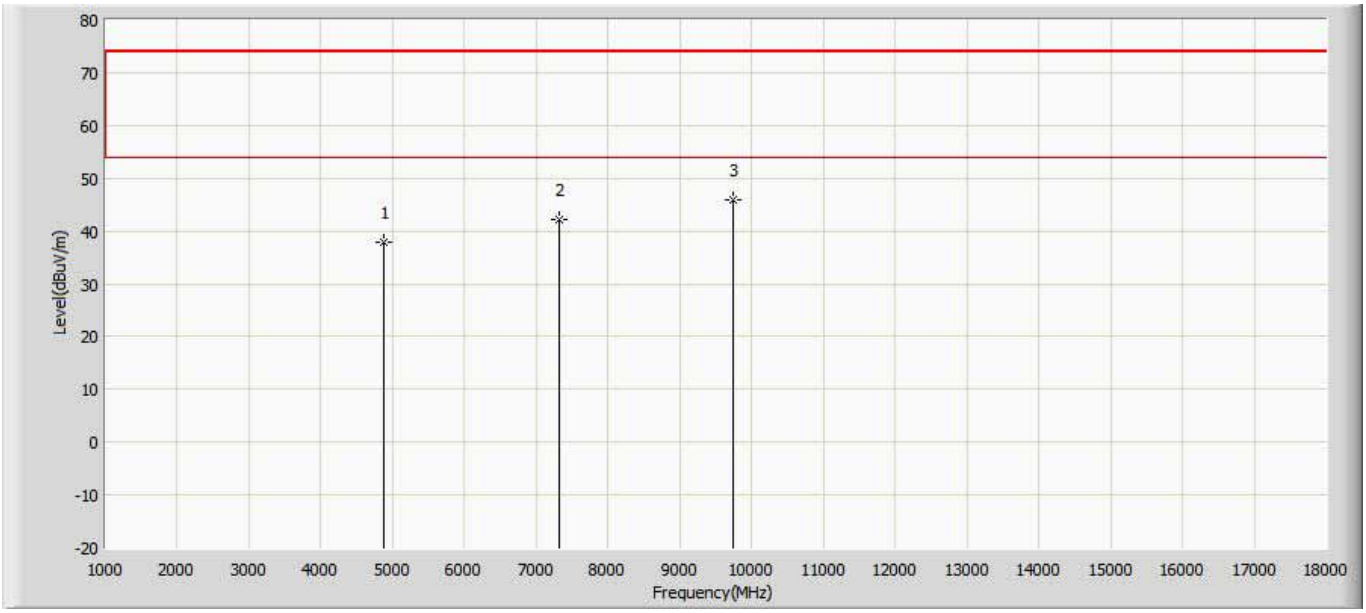
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4825.000	51.414	64.424	-22.586	74.000	-13.010	PK
2		7236.000	42.934	50.644	-31.066	74.000	-7.710	PK
3		9648.000	46.751	48.341	-27.249	74.000	-1.590	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2437MHz by 802.11g ant 0+1	



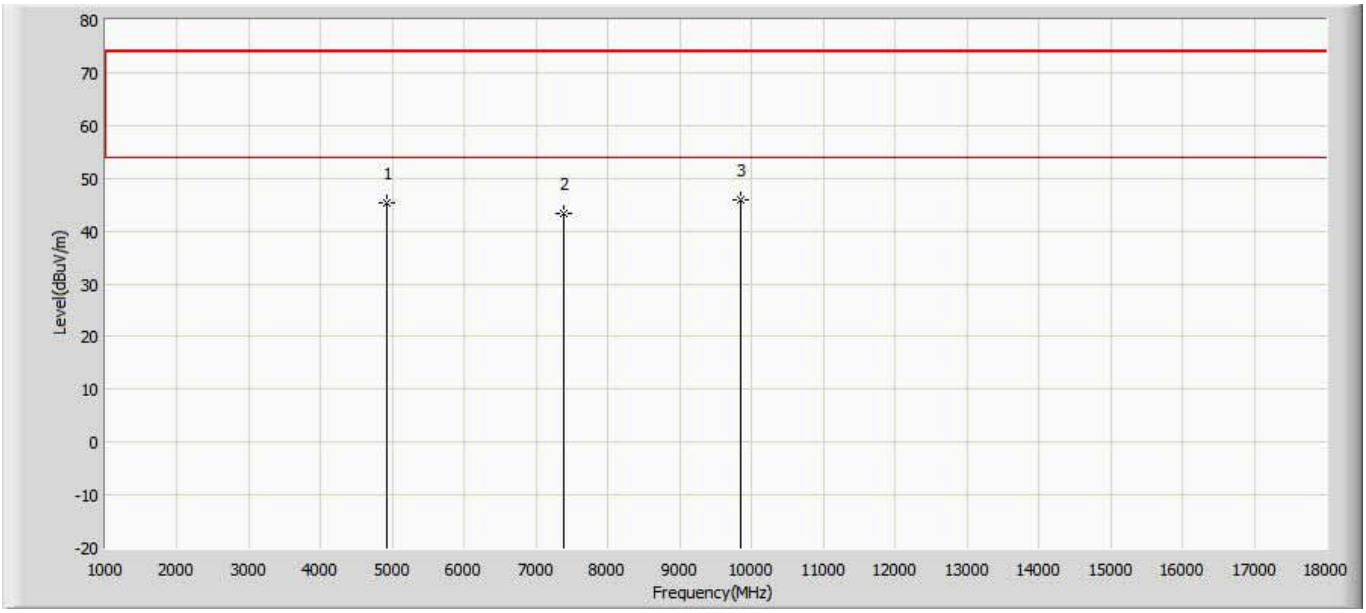
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4876.000	52.763	65.773	-21.237	74.000	-13.010	PK
2		7315.500	47.212	54.922	-26.788	74.000	-7.710	PK
3		9746.500	55.508	57.098	-18.492	74.000	-1.590	PK
4	*	9748.000	51.860	53.450	-2.140	54.000	-1.590	AV

Engineer: Karl	
Site: AC5	Time: 2017/09/20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2437MHz by 802.11g ant 0+1	



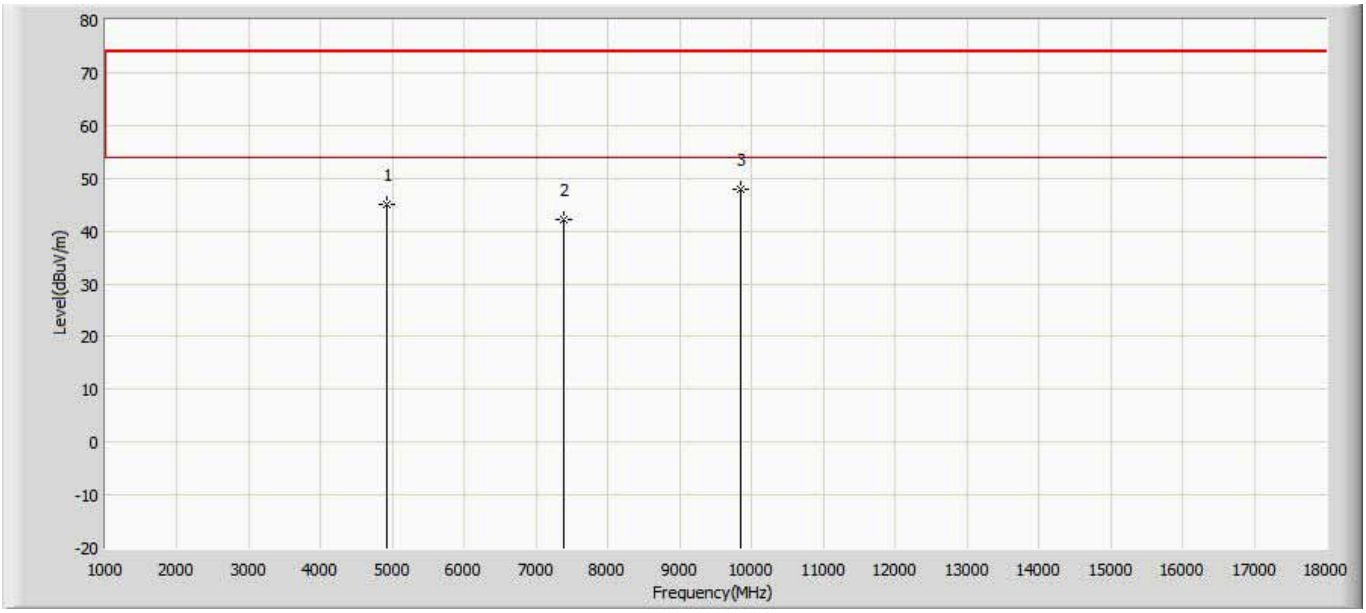
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	37.882	50.892	-36.118	74.000	-13.010	PK
2		7311.000	42.248	49.958	-31.752	74.000	-7.710	PK
3	*	9748.000	45.973	47.563	-28.027	74.000	-1.590	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2462MHz by 802.11g ant 0+1	



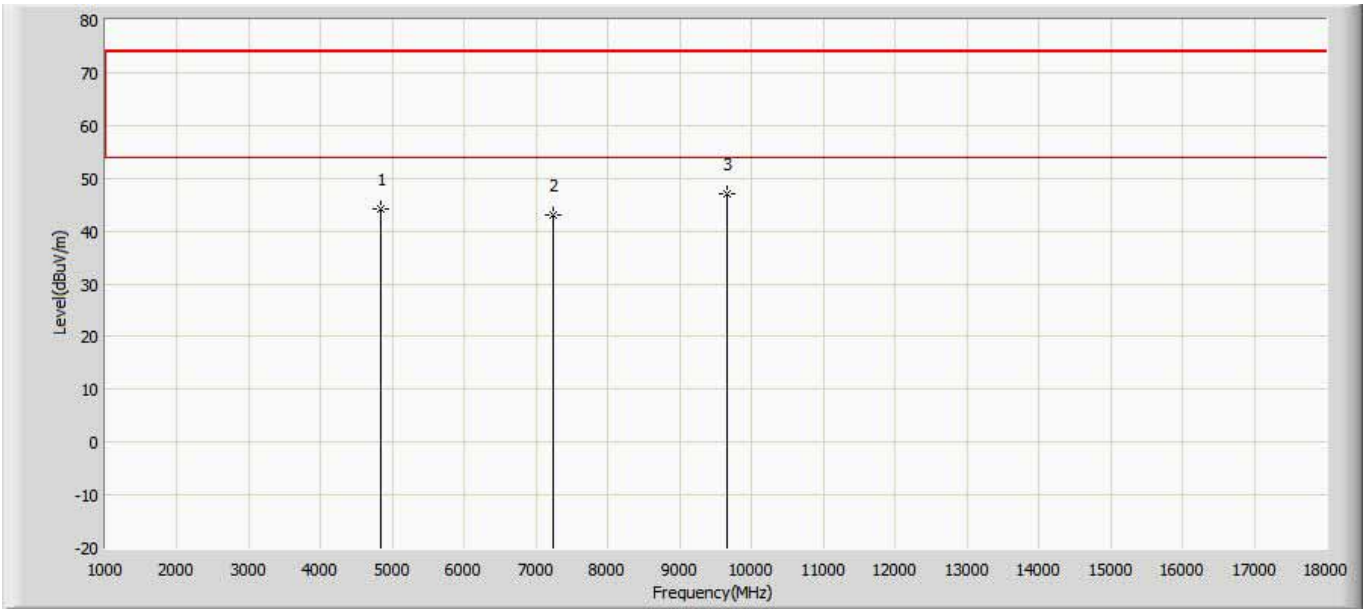
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4927.000	45.205	58.215	-28.795	74.000	-13.010	PK
2		7386.000	43.206	50.916	-30.794	74.000	-7.710	PK
3	*	9848.000	46.018	47.608	-27.982	74.000	-1.590	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2462MHz by 802.11g ant 0+1	



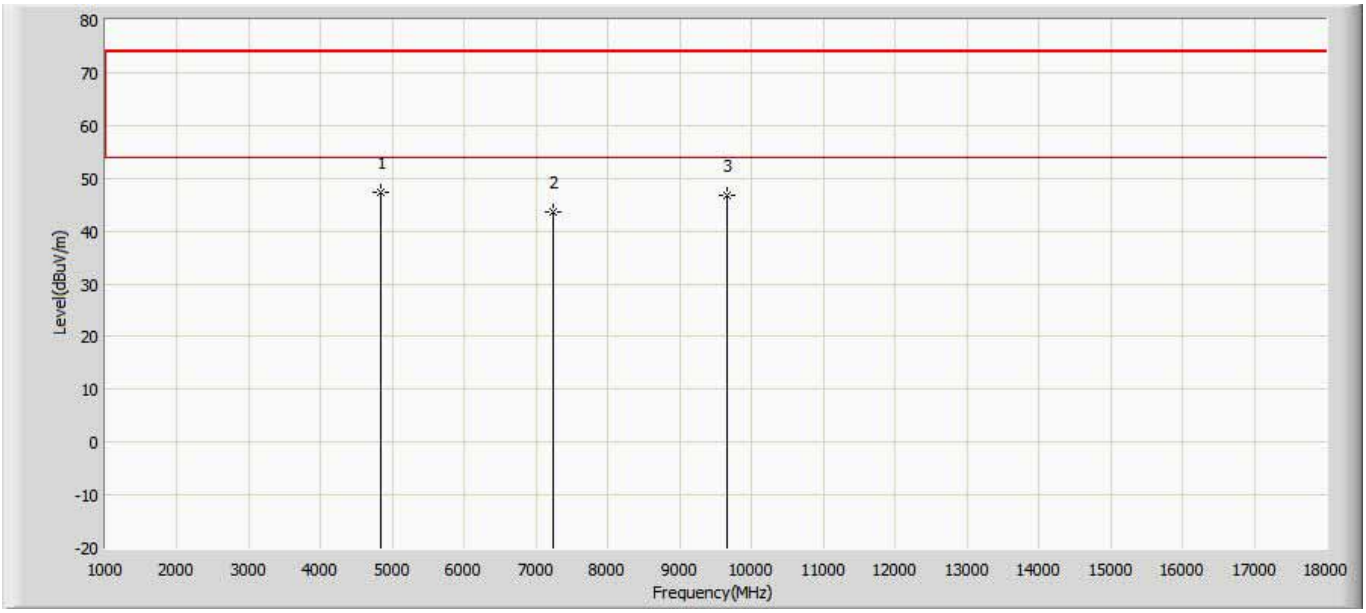
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4927.000	44.913	57.923	-29.087	74.000	-13.010	PK
2		7386.000	42.213	49.923	-31.787	74.000	-7.710	PK
3	*	9848.000	47.998	49.588	-26.002	74.000	-1.590	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2412MHz by 802.11n20 ant 0+1	



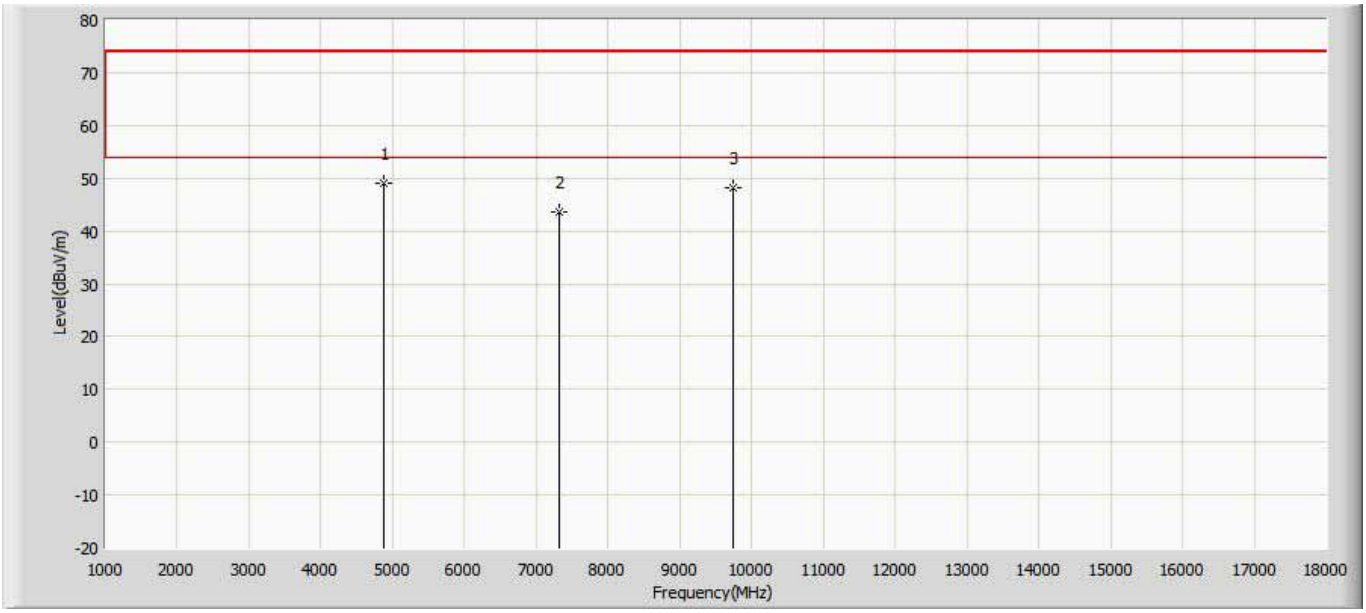
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4825.000	44.146	57.156	-29.854	74.000	-13.010	PK
2		7236.000	43.178	50.888	-30.822	74.000	-7.710	PK
3	*	9648.000	46.957	48.547	-27.043	74.000	-1.590	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2412MHz by 802.11n20 ant 0+1	



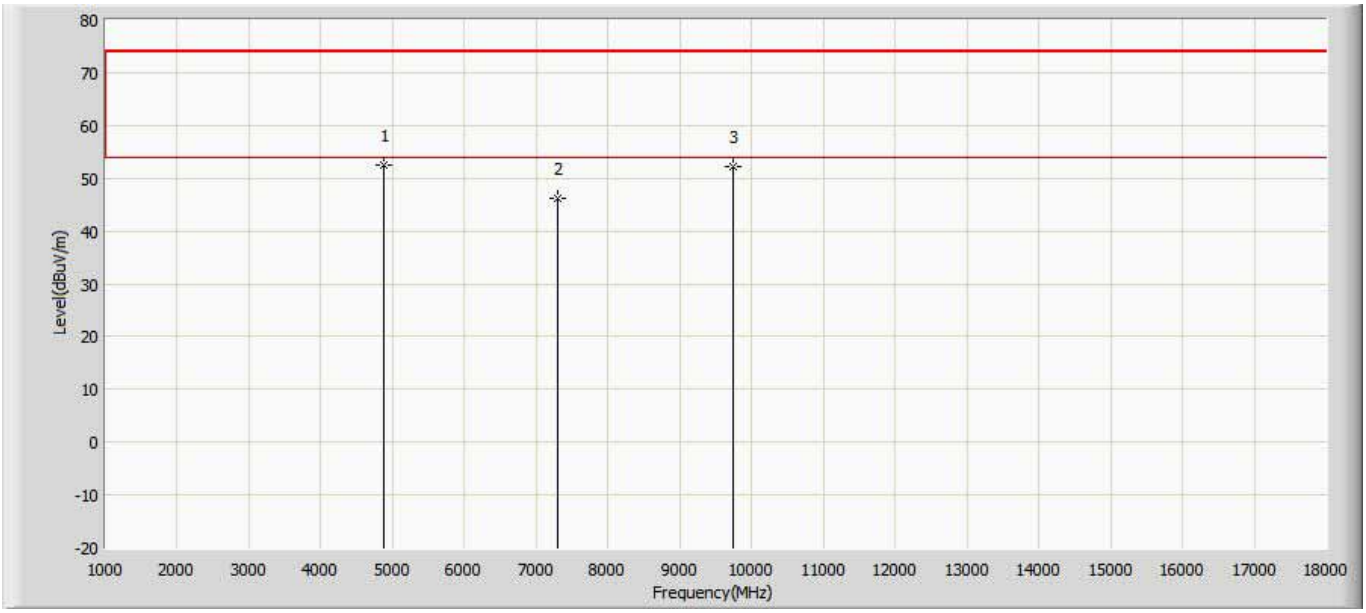
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4825.000	47.317	60.327	-26.683	74.000	-13.010	PK
2		7236.000	43.626	51.336	-30.374	74.000	-7.710	PK
3		9648.000	46.707	48.297	-27.293	74.000	-1.590	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2437MHz by 802.11n20 ant 0+1	



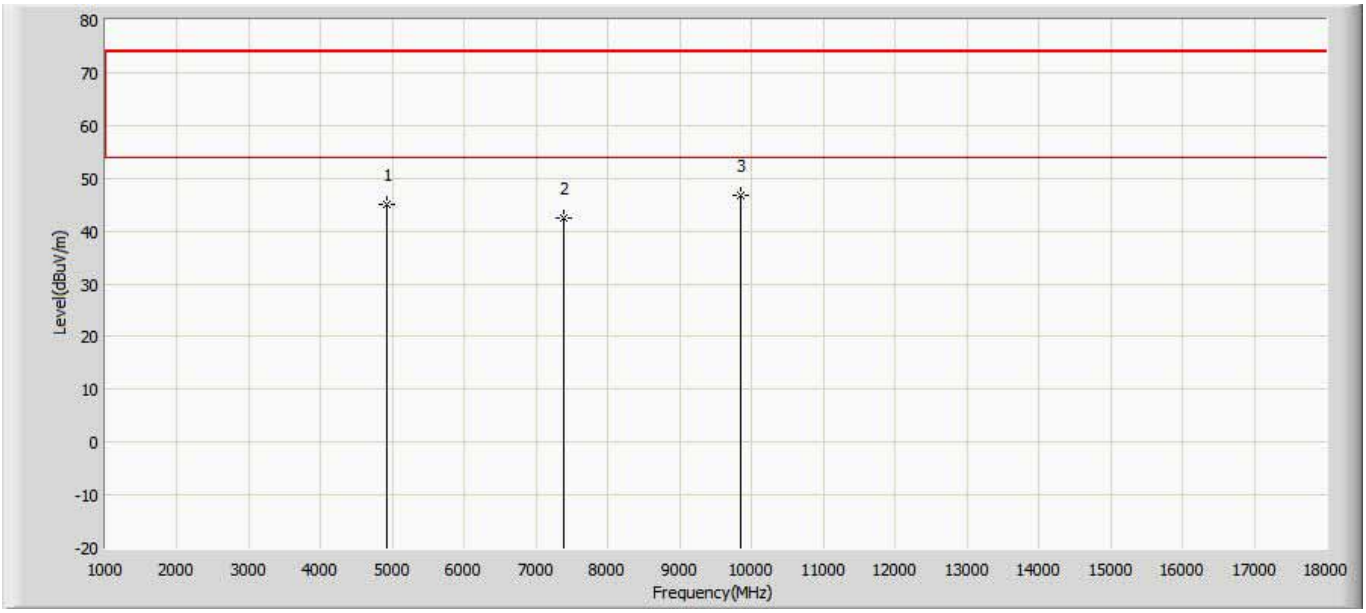
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4876.000	49.147	62.157	-24.853	74.000	-13.010	PK
2		7311.000	43.576	51.286	-30.424	74.000	-7.710	PK
3		9748.000	48.209	49.799	-25.791	74.000	-1.590	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2437MHz by 802.11n20 ant 0+1	



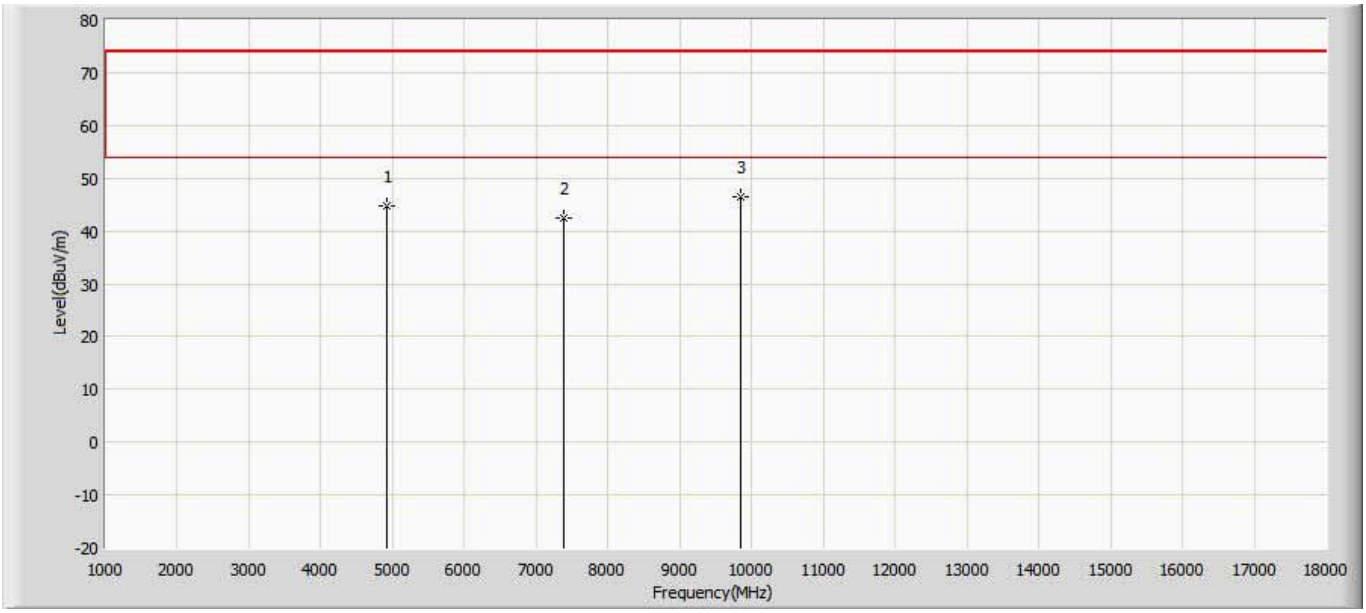
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4876.000	52.542	65.552	-21.458	74.000	-13.010	PK
2		7307.000	46.279	53.989	-27.721	74.000	-7.710	PK
3		9746.500	52.071	53.661	-21.929	74.000	-1.590	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2462MHz by 802.11n20 ant 0+1	



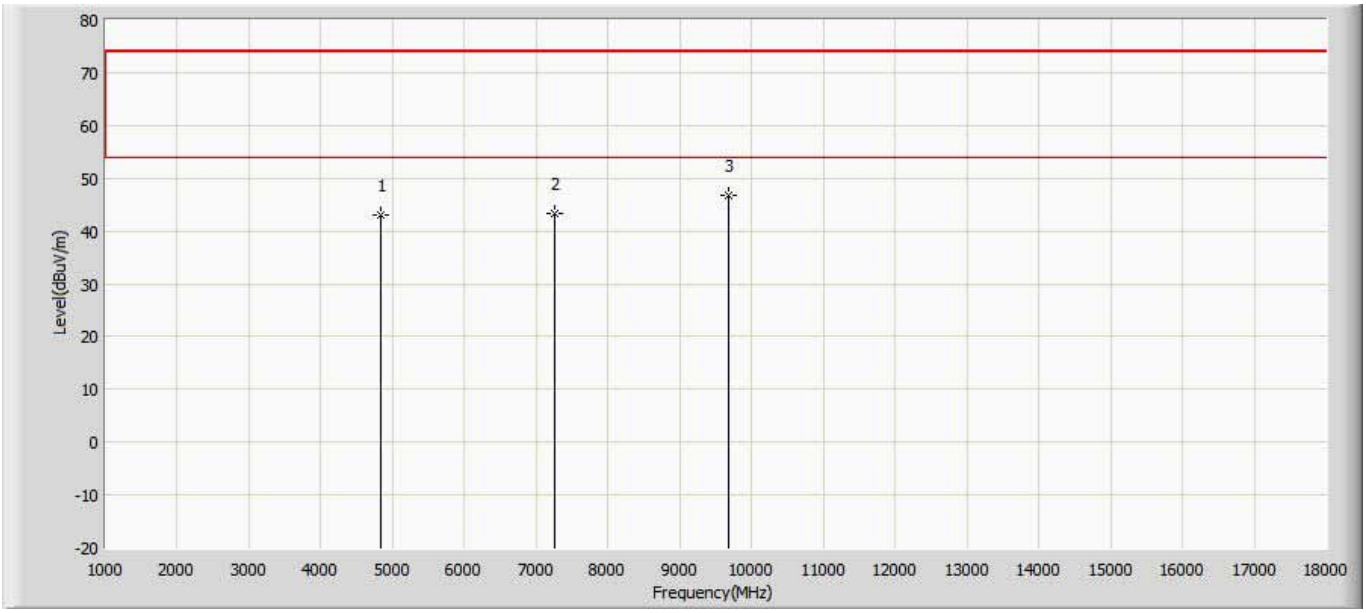
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4918.500	44.913	57.923	-29.087	74.000	-13.010	PK
2		7386.000	42.571	50.281	-31.429	74.000	-7.710	PK
3	*	9848.000	46.709	48.299	-27.291	74.000	-1.590	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2462MHz by 802.11n20 ant 0+1	



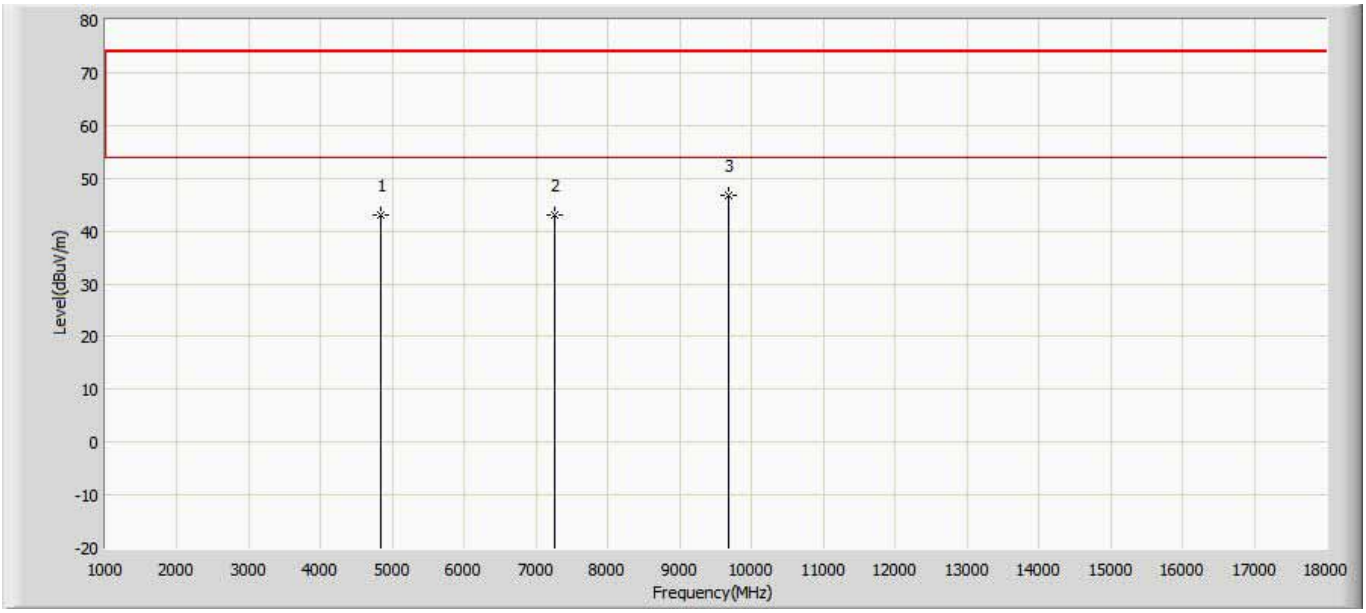
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4918.500	44.643	57.653	-29.357	74.000	-13.010	PK
2		7386.000	42.375	50.085	-31.625	74.000	-7.710	PK
3	*	9848.000	46.368	47.958	-27.632	74.000	-1.590	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2422MHz by 802.11n40 ant 0+1	



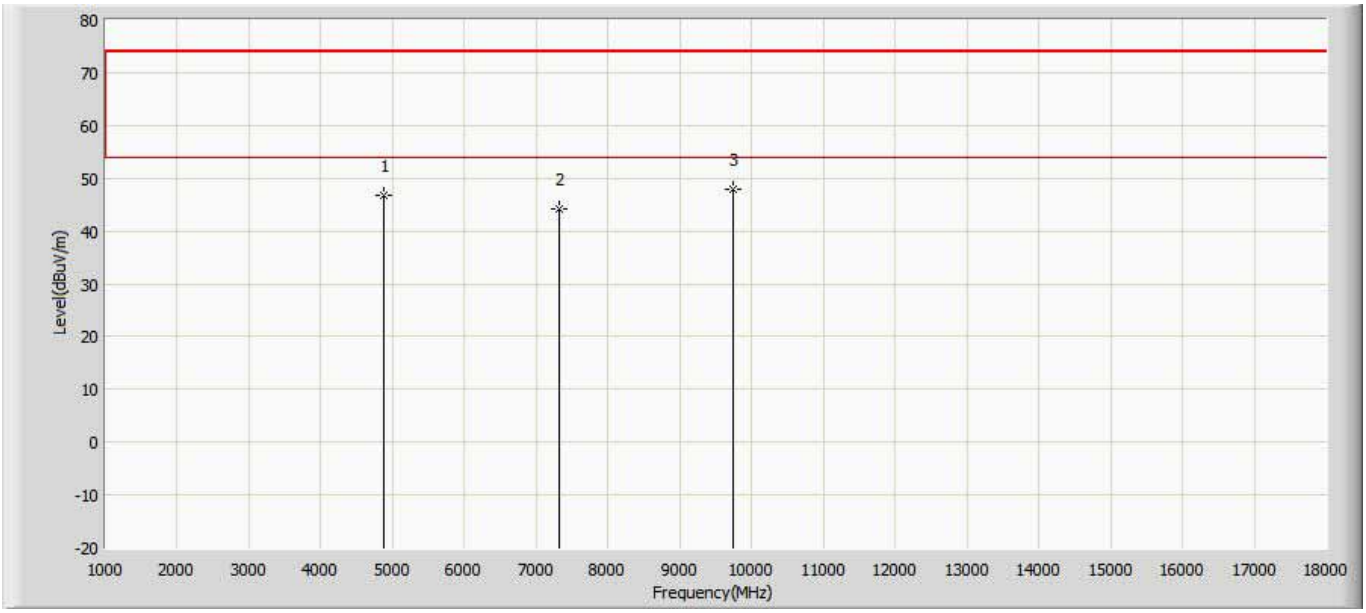
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4842.000	43.126	56.136	-30.874	74.000	-13.010	PK
2		7266.000	43.229	50.939	-30.771	74.000	-7.710	PK
3	*	9688.000	46.661	48.251	-27.339	74.000	-1.590	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2422MHz by 802.11n40 ant 0+1 ant 0+1	



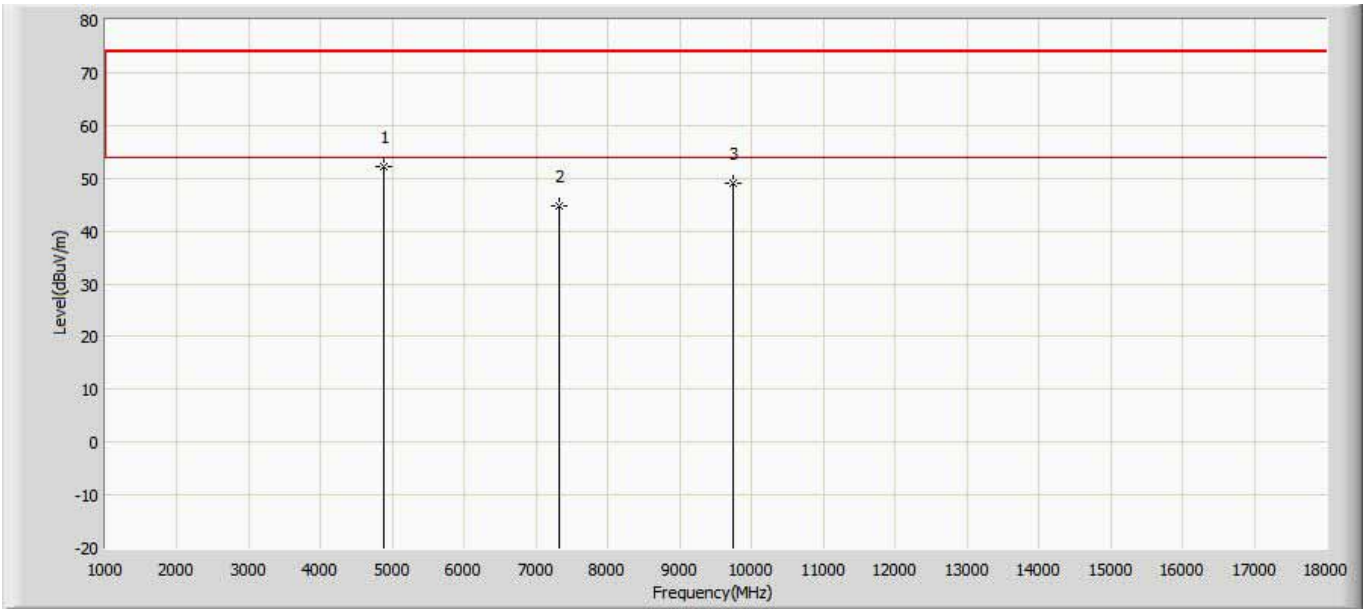
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4842.000	43.140	56.150	-30.860	74.000	-13.010	PK
2		7266.000	42.937	50.647	-31.063	74.000	-7.710	PK
3	*	9688.000	46.620	48.210	-27.380	74.000	-1.590	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2437MHz by 802.11n40 ant 0+1	



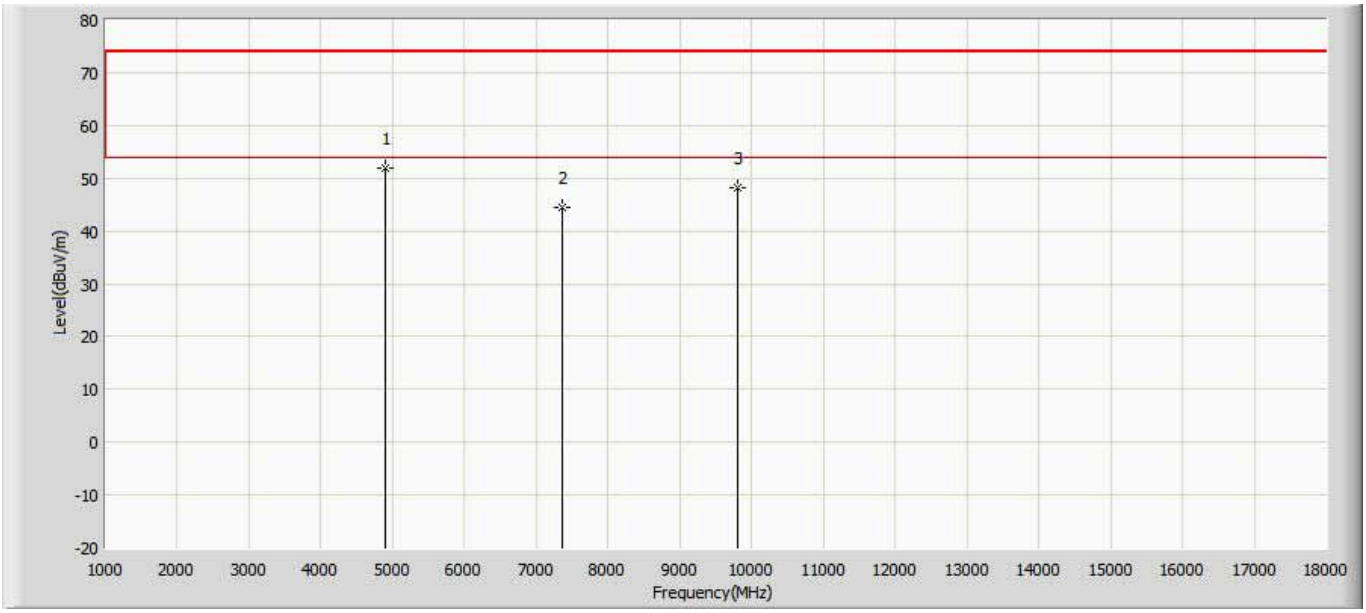
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4876.000	46.854	59.864	-27.146	74.000	-13.010	PK
2		7311.000	44.094	51.804	-29.906	74.000	-7.710	PK
3	*	9748.000	47.932	49.522	-26.068	74.000	-1.590	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2437MHz by 802.11n40 ant 0+1	



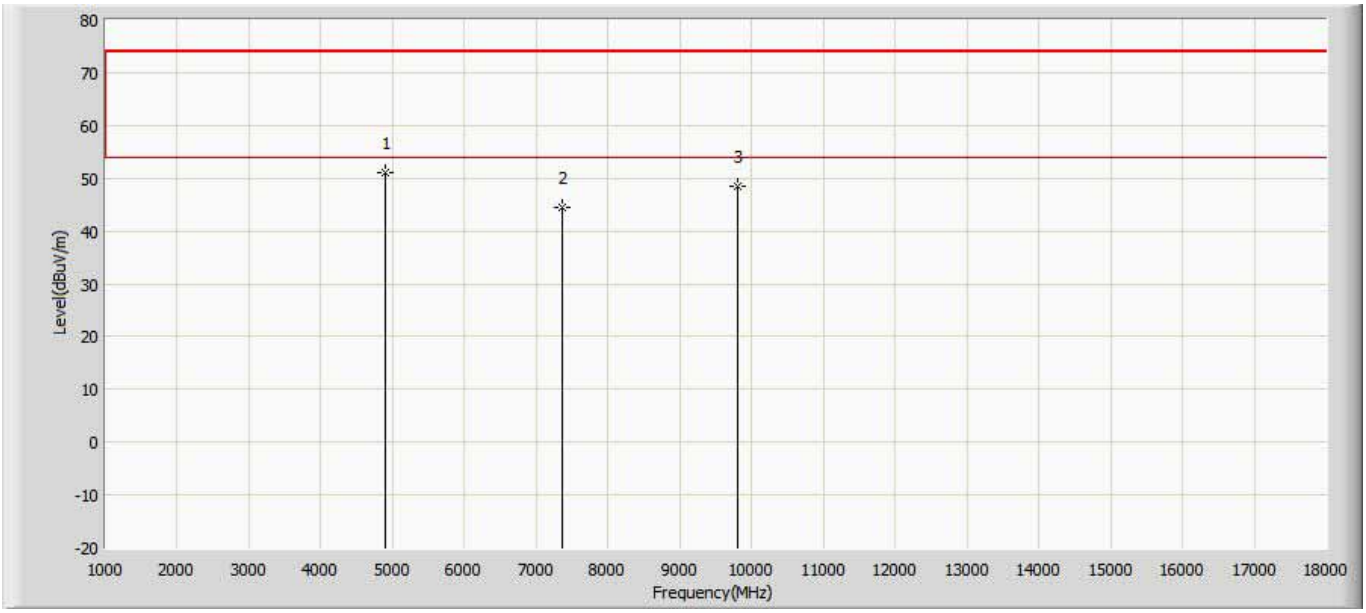
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4876.000	52.232	65.242	-21.768	74.000	-13.010	PK
2		7311.000	44.748	52.458	-29.252	74.000	-7.710	PK
3		9748.000	49.183	50.773	-24.817	74.000	-1.590	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2452MHz by 802.11n40 ant 0+1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4901.500	51.918	64.928	-22.082	74.000	-13.010	PK
2		7356.000	44.488	52.198	-29.512	74.000	-7.710	PK
3		9808.000	48.067	49.657	-25.933	74.000	-1.590	PK

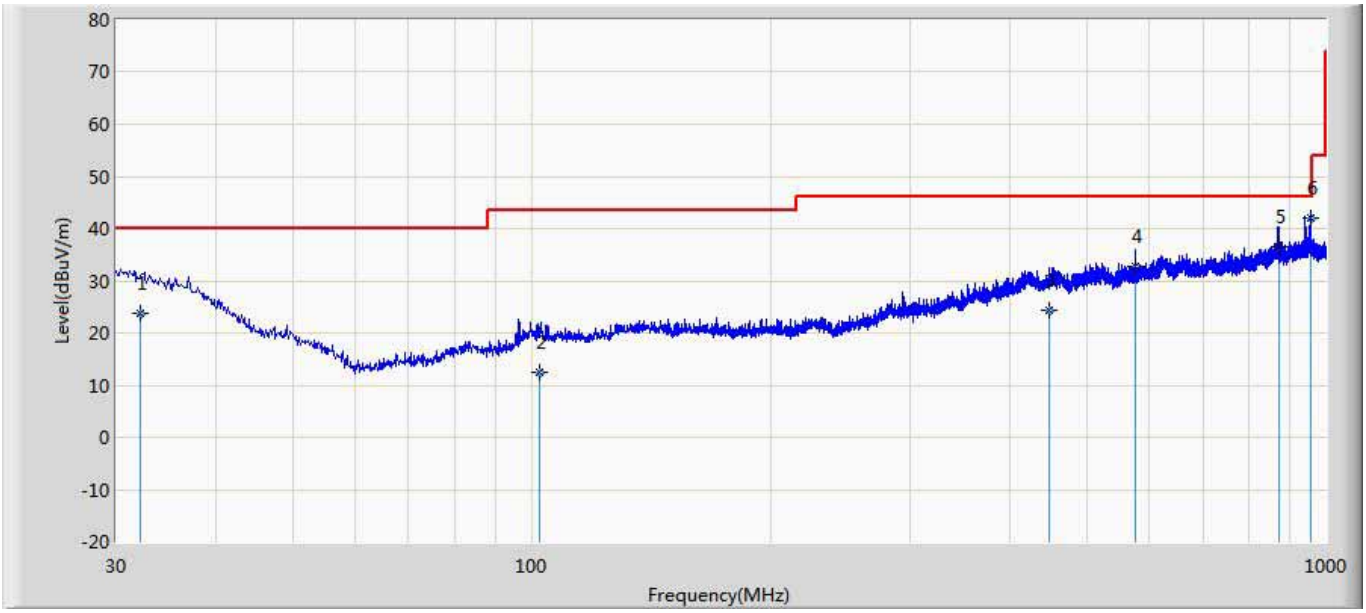
Engineer: Karl	
Site: AC5	Time: 2017/09/20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2452MHz by 802.11n40 ant 0+1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4901.500	51.156	64.166	-22.844	74.000	-13.010	PK
2		7356.000	44.491	52.201	-29.509	74.000	-7.710	PK
3		9808.000	48.499	50.089	-25.501	74.000	-1.590	PK

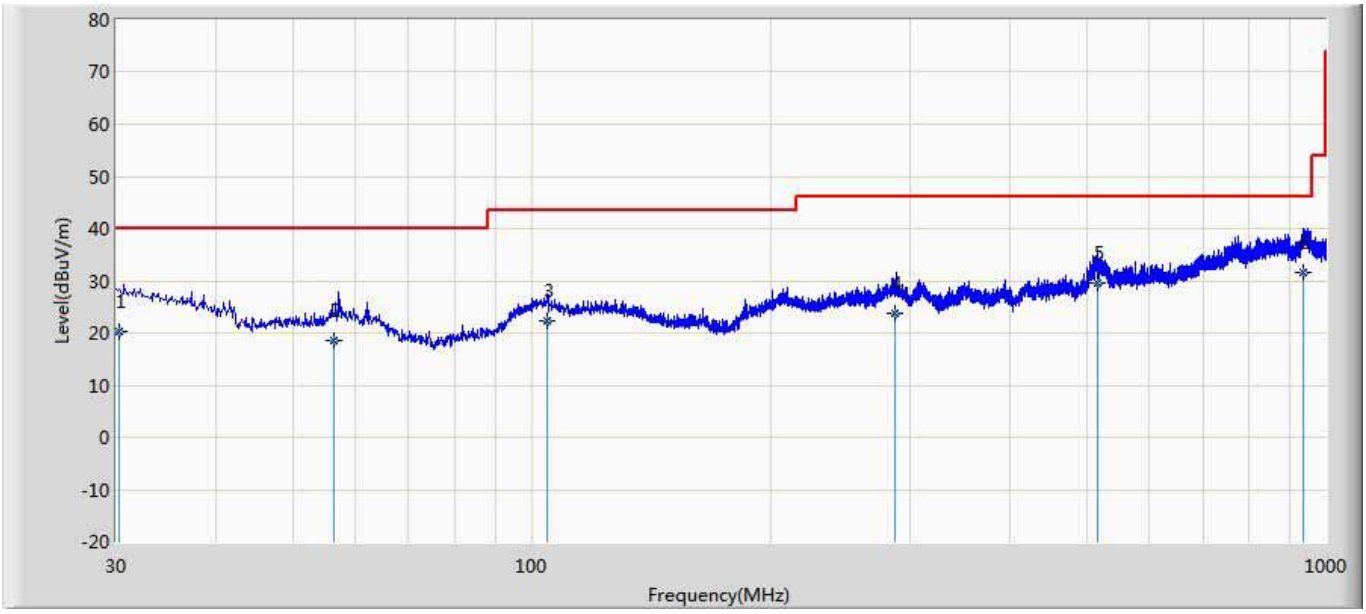
The worst case of Radiated Emission below 1GHz:

Engineer: Nero	
Site: AC3	Time: 2017/09/13
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC3_3m (30-1000MHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 1 Transmit at 2412MHz by 802.11b ant 0+1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		32.150	23.626	-3.100	-16.374	40.000	20.260	6.466	0.000	100	50	QP
2		102.498	12.384	-4.200	-31.116	43.500	9.717	6.867	0.000	200	20	QP
3		448.039	24.278	-2.600	-21.722	46.000	18.845	8.033	0.000	100	286	QP
4		574.962	32.728	5.300	-13.272	46.000	19.063	8.366	0.000	100	275	QP
5		872.595	36.619	5.100	-9.381	46.000	22.474	9.045	0.000	100	53	QP
6	*	956.580	41.968	9.200	-4.032	46.000	23.549	9.220	0.000	100	208	QP

Engineer: Nero	
Site: AC3	Time: 2017/09/13
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC3_3m (30-1000MHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 1 Transmit at 2412MHz by 802.11b ant 0+1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		30.245	20.326	-3.700	-19.674	40.000	17.571	6.455	0.000	100	279	QP
2		56.319	18.595	2.200	-21.405	40.000	9.772	6.624	0.000	100	10	QP
3		104.787	22.314	0.300	-21.186	43.500	15.144	6.870	0.000	100	217	QP
4		286.413	23.856	-0.900	-22.144	46.000	17.179	7.577	0.000	100	18	QP
5		515.028	29.702	4.000	-16.298	46.000	17.503	8.198	0.000	200	17	QP
6	*	934.806	31.506	-2.700	-14.494	46.000	25.036	9.170	0.000	200	34	QP

Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

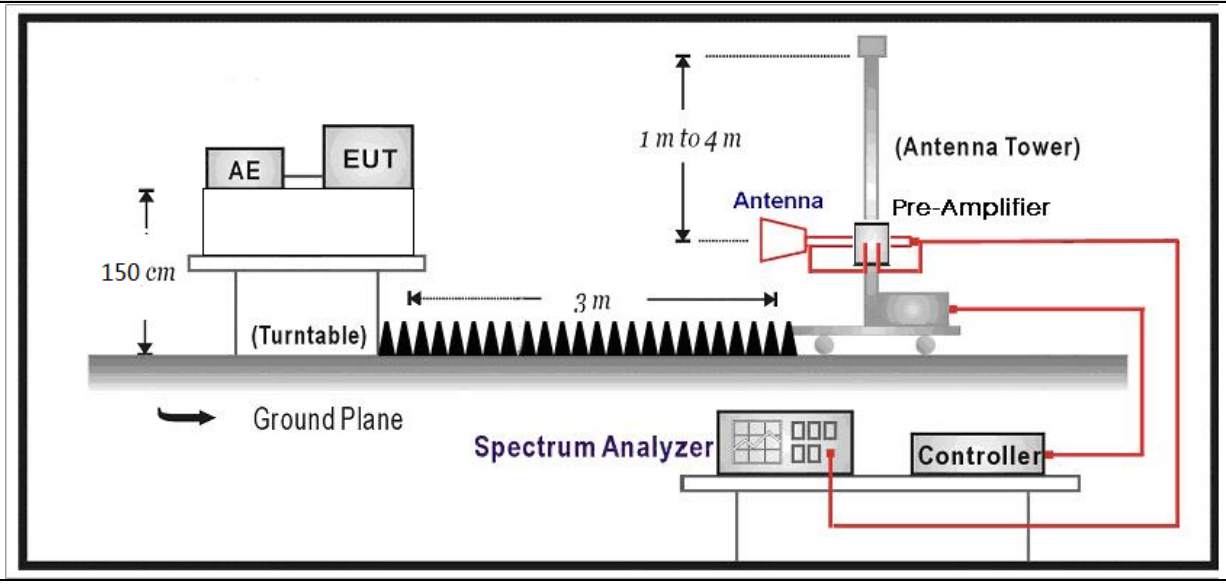
5. Radiated Emission Band Edge

5.1. Test Equipment

Radiated Emission Band Edge/ AC-5					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Receiver	Agilent	N9038A	MY51210196	2017.07.16	2018.07.15
Pre-Amplifier	Miteq	NSP1800-25	1364185	2017.05.03	2018.05.02
DRG Horn Antenna	ETS-Lindgren	3117	00167055	2017.07.12	2018.07.11
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2017.02.23	2018.02.22
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2017.02.28	2018.02.27
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2017.01.06	2018.01.05
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

5.2. Test Setup

Above 1GHz Test Setup:



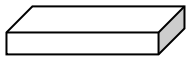
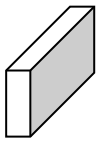
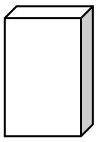
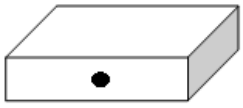
5.3. Limit

Band edge Limit				
Frequency bands (MHz)	Detector	Limit (dB μ V/m)	RBW (MHz)	Distance (m)
2310-2390 2483.5-2500	PK	74	1	3
	AV	54	1	3
Note: The field strength of emissions appearing within these frequency bands shall not exceed the limits.				

5.4. Test Procedure

Test Method						
	References Rule				Chapter	Description
☒	ANSI C63.10				6.10	Band-edge testing
	☒	ANSI C63.10			6.10.5	Restricted-band band-edge measurements
	☐	ANSI C63.10			6.10.6	Marker-delta method
☒	ANSI C63.10				11.12	Emissions in restricted frequency bands
	☒	ANSI C63.10			11.12.1	Radiated emission measurements
	☒	ANSI C63.10			11.12.2.7	Radiated spurious emission test
☐	ANSI C63.10				6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
☐	ANSI C63.10				6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
☒	ANSI C63.10				6.6	Radiated emissions from unlicensed wireless devices above 1 GHz
		☐	ANSI C63.10		11.12.2.3	Quasi-peak measurement procedure
		☒	ANSI C63.10		11.12.2.4	Peak power measurement procedure
		☒	ANSI C63.10		11.12.2.5	Average power measurement procedures
			☐	ANSI C63.10	11.12.2.5.1	Trace averaging with continuous EUT transmission at full power
			☐	ANSI C63.10	11.12.2.5.2	Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction
			☒	ANSI C63.10	11.12.2.5.3	Reduced VBW averaging across ON and OFF times of the EUT transmissions with max hold

5.5. EUT test definition

<table>
<tr><th>Item</th><th colspan="4">Radiated Emission Band Edge</th></tr>
<tr><td rowspan="3">Device Category</td><td>☐</td><td colspan="3">Fixed point-to-point</td></tr>
<tr><td>☐</td><td colspan="3">Emit multiple directional beams, simultaneously or sequentially</td></tr>
<tr><td>☒</td><td colspan="3">Other cases</td></tr>
<tr><td>Test mode</td><td colspan="4">Mode 1~4</td></tr>
<tr><td rowspan="14">Test method</td><td>☒</td><td colspan="3">Radiated</td></tr>
<tr><td rowspan="3"></td><td>X Axis</td><td>Y Axis</td><td>Z Axis</td></tr>
<tr><td>  </td><td>  </td><td>  </td></tr>
<tr><td>Worst Axis ☒</td><td>Worst Axis ☐</td><td>Worst Axis ☐</td></tr>
<tr><td>☐</td><td colspan="3">Conducted</td></tr>
<tr><td>☐</td><td colspan="3">Chain 0</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
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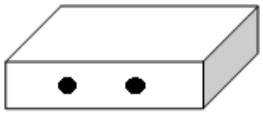
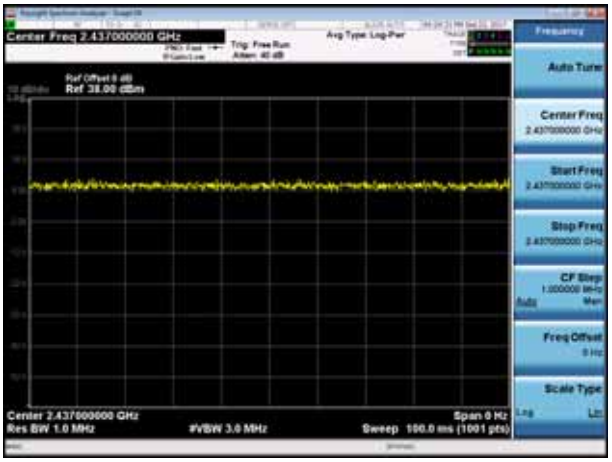
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☐</td><td>Chain 0</td><td>Chain 1</td><td>Chain 2</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
</table>

5.6. Duty Cycle

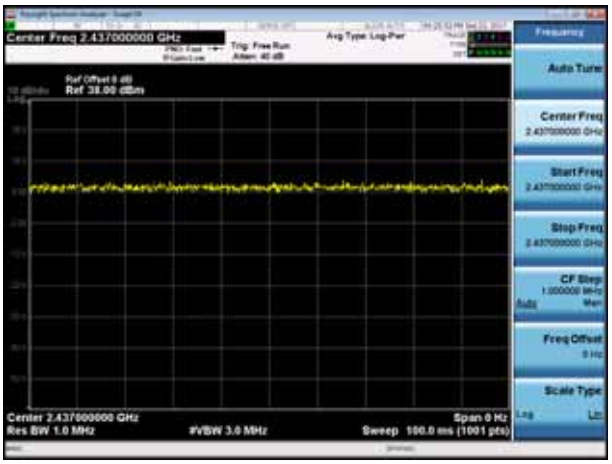
Test Mode	Tx On (ms)	Tx Off (ms)	VBW (Hz)	Tx On + Tx Off (ms)	Duty Cycle (%)
802.11b	-	-	10	-	100%
802.11g	-	-	10	-	100%
802.11n(20MHz)	-	-	10	-	100%
802.11n(40MHz)	-	-	10	-	100%

802.11b

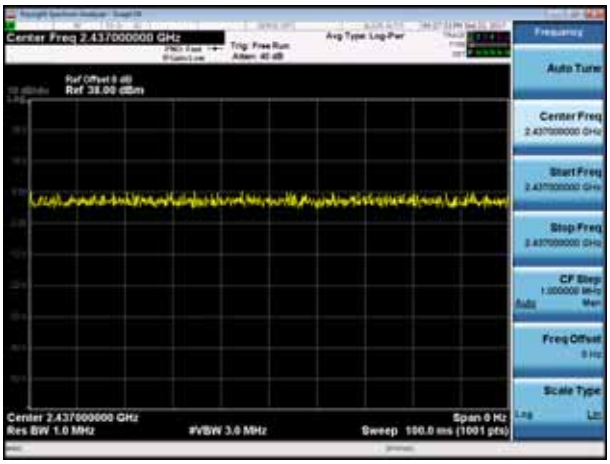
802.11g



802.11n(20MHz)

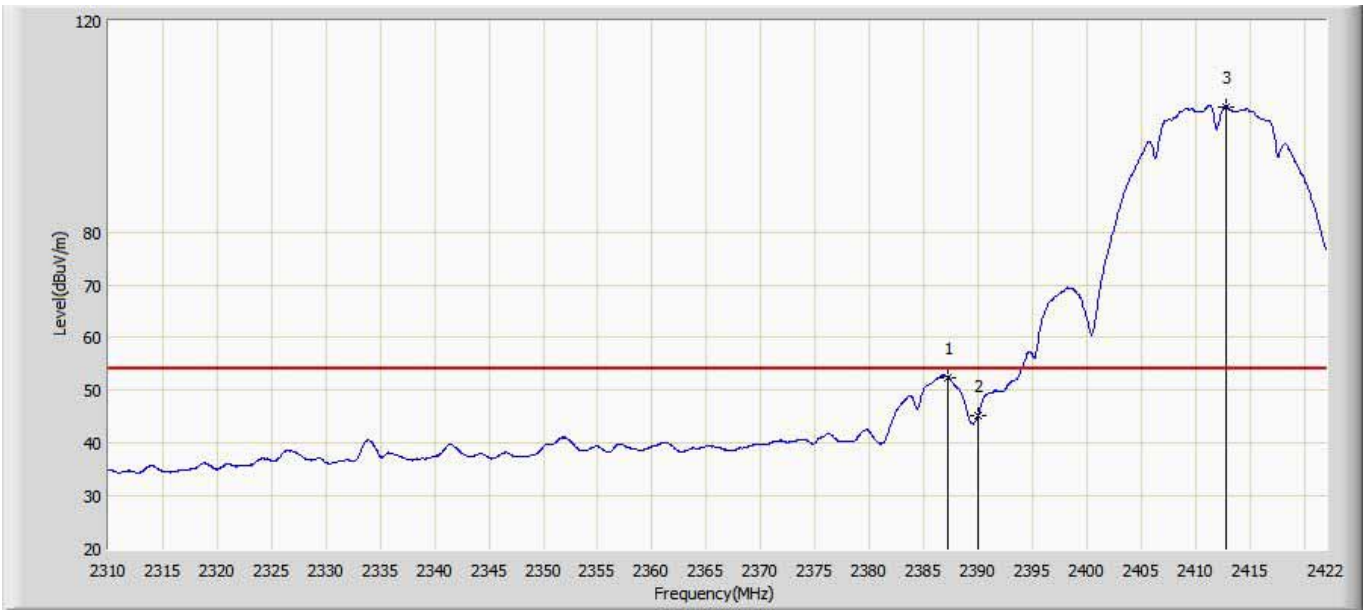


802.11n(40MHz)



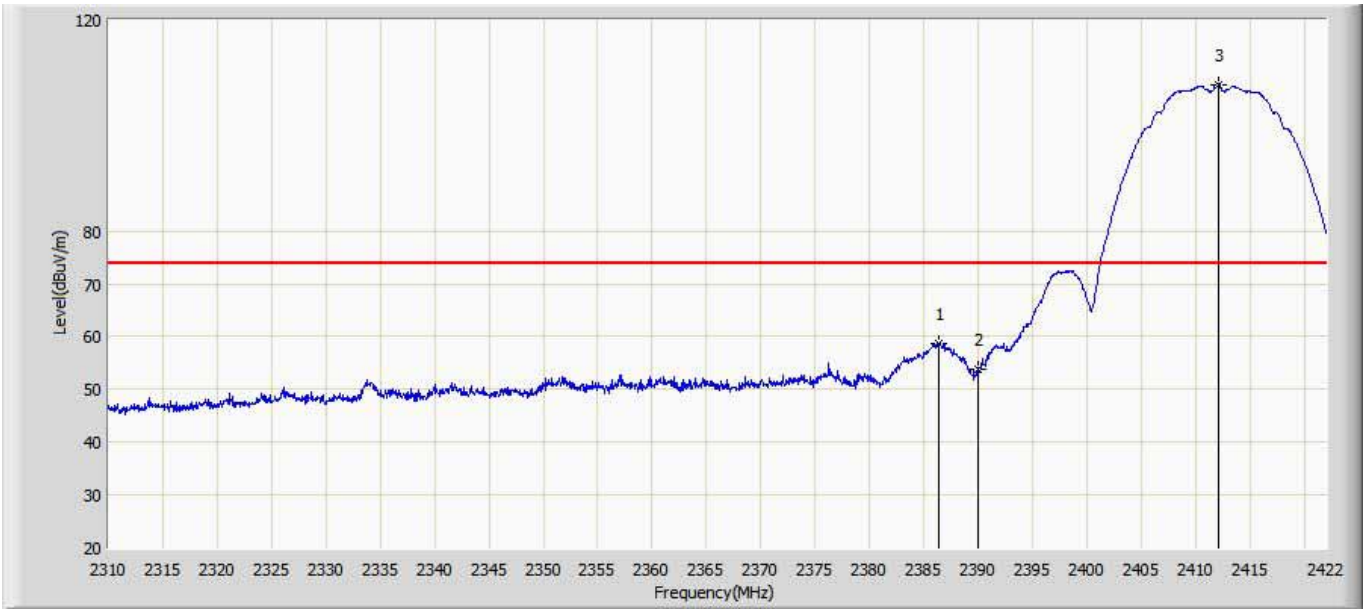
5.7. Test Result

Engineer: Karl	
Site: AC5	Time: 2017/09/18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 1:Transmit at2412MHz by802.11b ant 0+1	



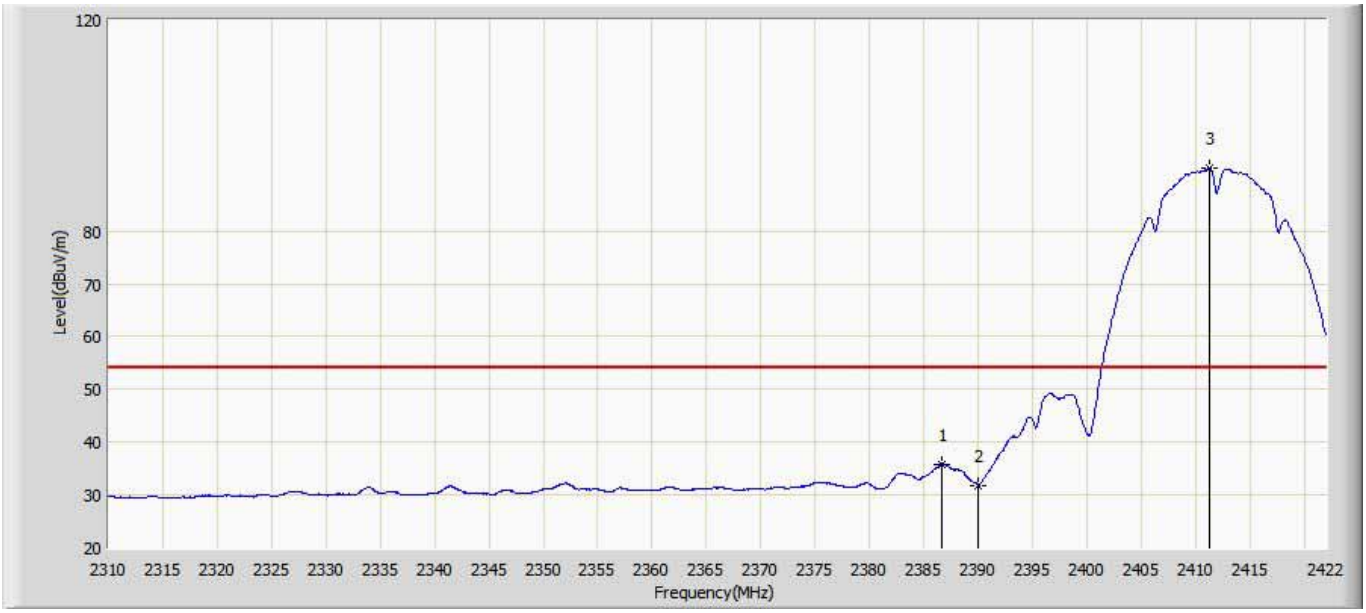
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2387.224	52.500	23.451	-1.500	54.000	29.049	AV
2		2390.000	45.323	16.275	-8.677	54.000	29.048	AV
3	*	2412.816	103.802	74.929	N/A	N/A	28.873	AV

Engineer: Karl	
Site: AC5	Time: 2017/09/18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 1:Transmit at2412MHz by802.11b ant 0+1	



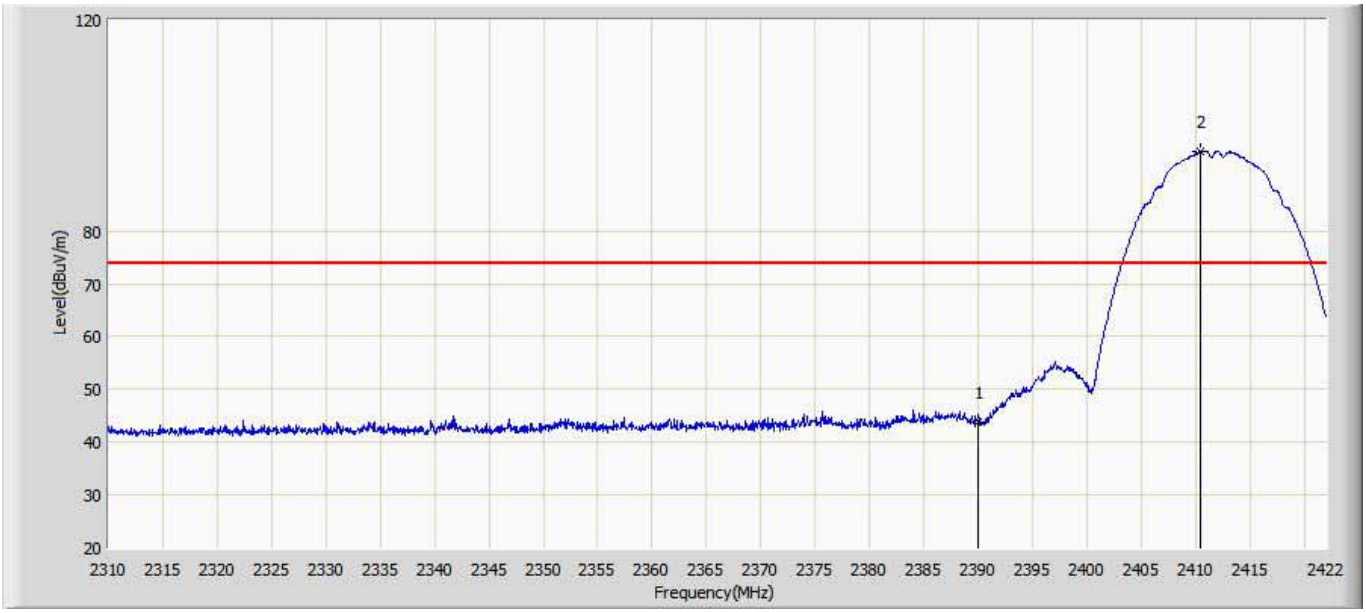
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2386.384	58.636	29.586	-15.364	74.000	29.050	PK
2		2390.000	53.779	24.731	-20.221	74.000	29.048	PK
3	*	2412.144	107.737	78.867	N/A	N/A	28.870	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 1:Transmit at2412MHz by802.11b ant 0+1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2386.720	35.809	6.759	-18.191	54.000	29.050	AV
2		2390.000	31.875	2.827	-22.125	54.000	29.048	AV
3	*	2411.248	91.960	63.096	N/A	N/A	28.864	AV

Engineer: Karl	
Site: AC5	Time: 2017/09/18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 1:Transmit at2412MHz by802.11b ant 0+1	

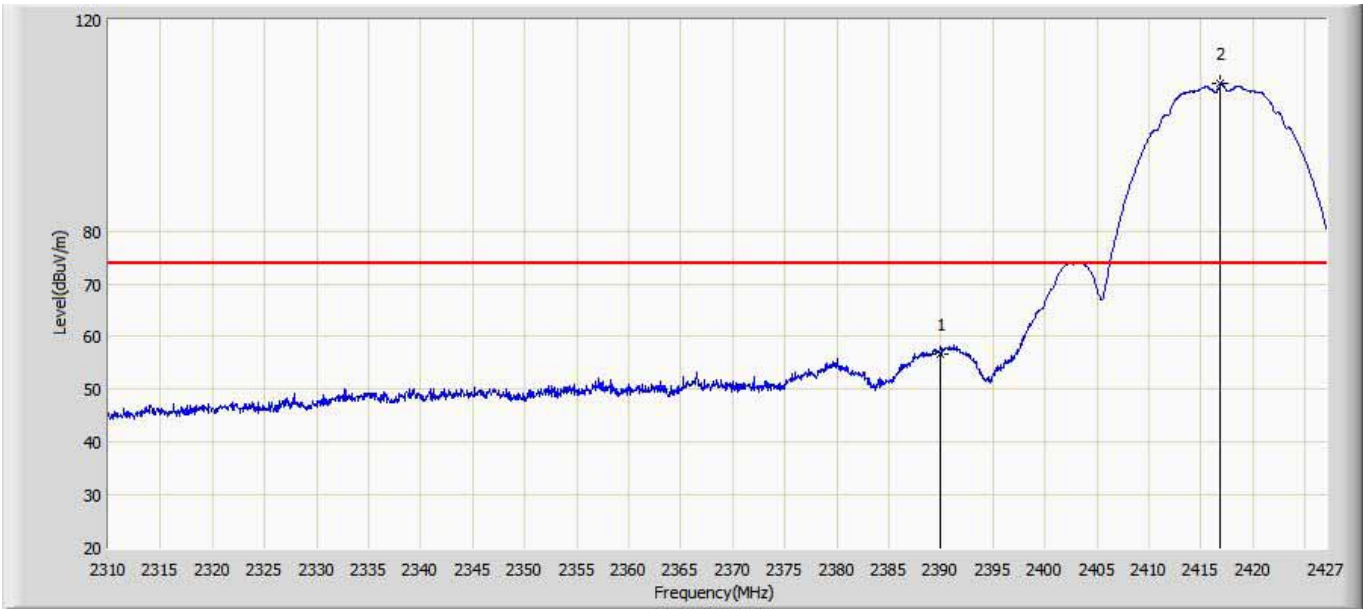


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	43.891	14.843	-30.109	74.000	29.048	PK
2	*	2410.408	95.008	66.139	N/A	N/A	28.869	PK

Engineer: Karl	
Site: AC5	Time: 2017/10/27 - 09:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2417MHz by 802.11b ant 0+1	

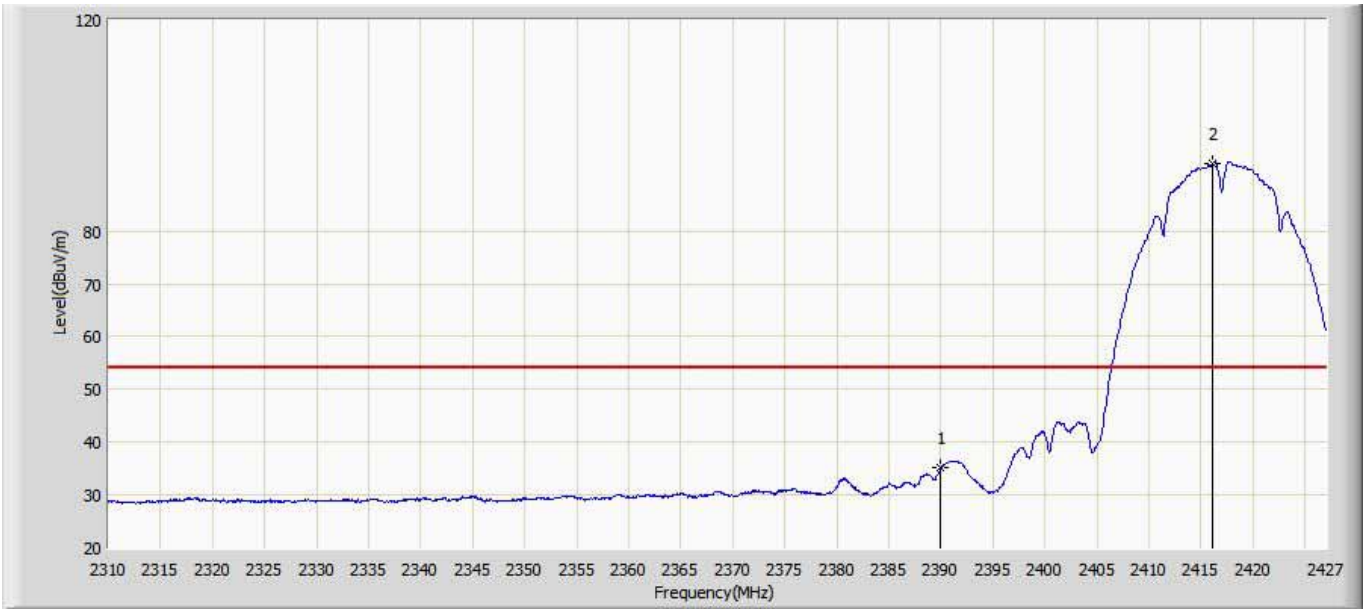
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.592	21.544	-3.408	54.000	29.048	AV
2	*	2416.061	103.440	74.548	N/A	N/A	28.892	AV

Engineer: Karl	
Site: AC5	Time: 2017/10/27 - 10:02
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2417MHz by 802.11b ant 0+1	



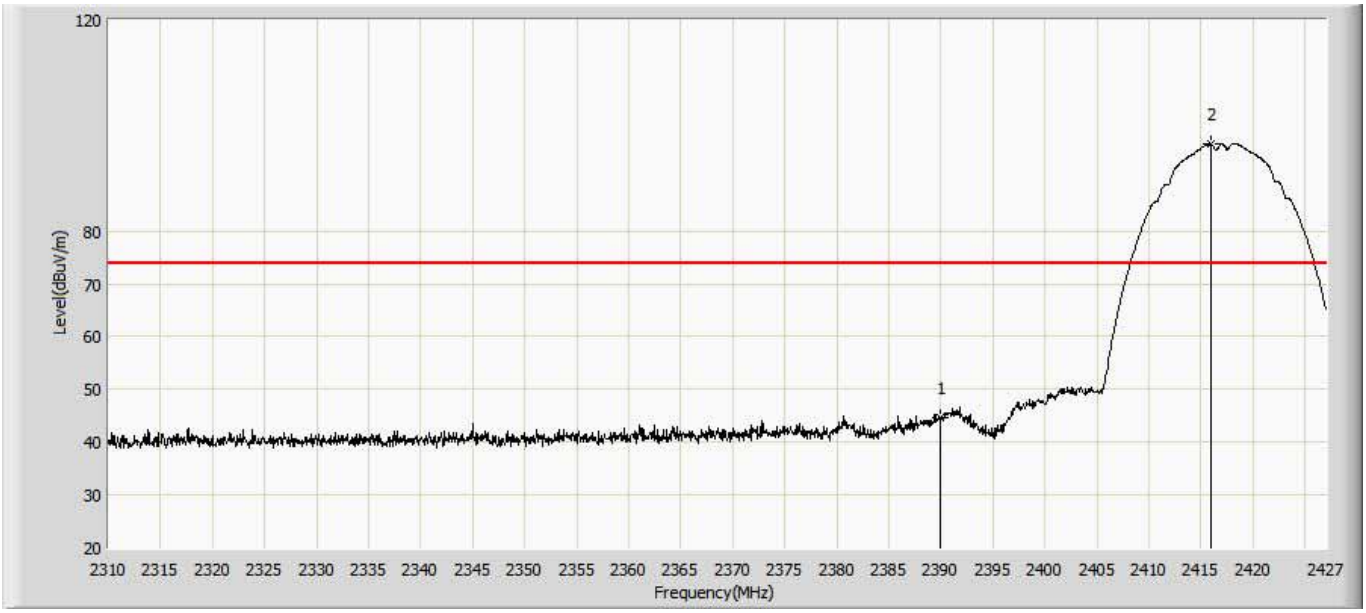
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	56.786	27.738	-17.214	74.000	29.048	PK
2	*	2416.879	107.866	78.969	N/A	N/A	28.897	PK

Engineer: Karl	
Site: AC5	Time: 2017/10/27 - 10:04
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2417MHz by 802.11b ant 0+1	



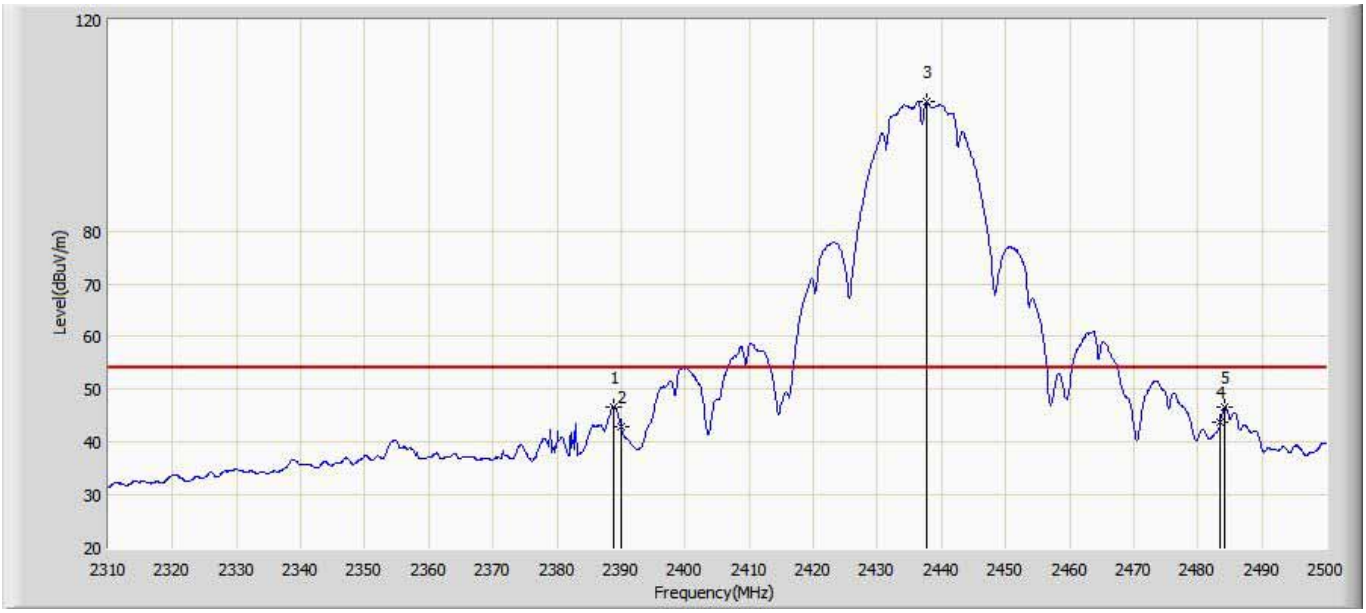
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	35.116	6.068	-18.884	54.000	29.048	AV
2	*	2416.061	92.728	63.836	N/A	N/A	28.892	AV

Engineer: Karl	
Site: AC5	Time: 2017/10/27 - 10:21
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2417MHz by 802.11b ant 0+1	



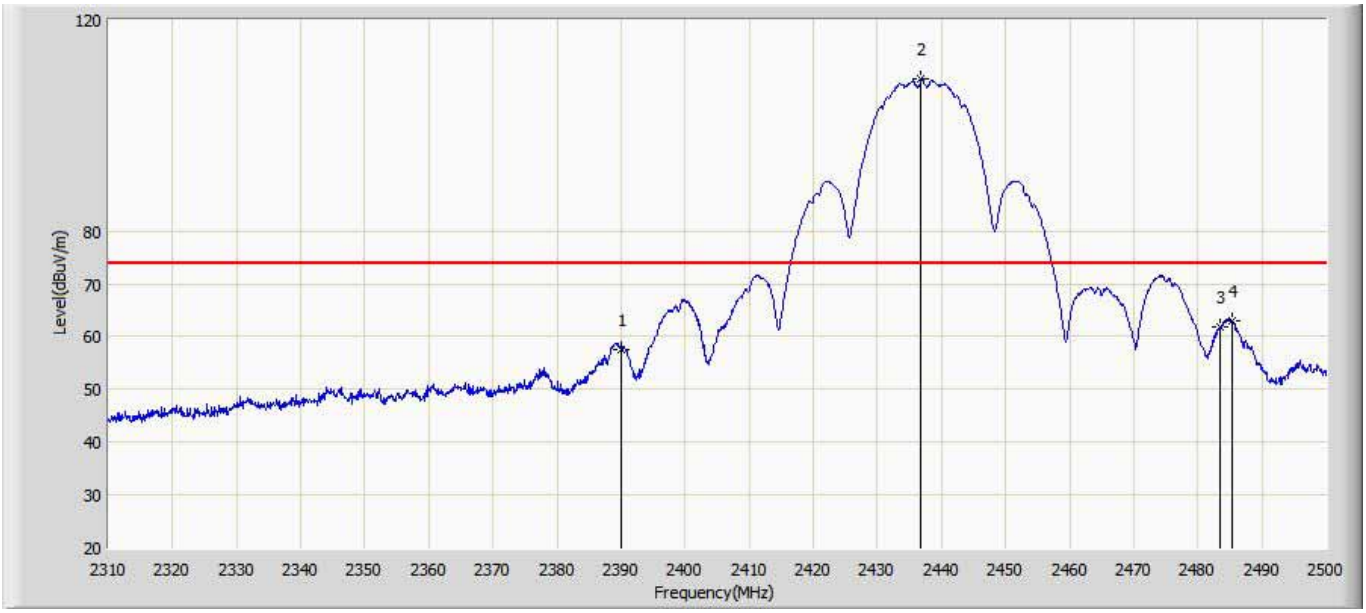
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	44.646	15.598	-29.354	74.000	29.048	PK
2	*	2415.944	96.384	67.493	N/A	N/A	28.891	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 1:Transmit at2437MHz by802.11b ant 0+1	



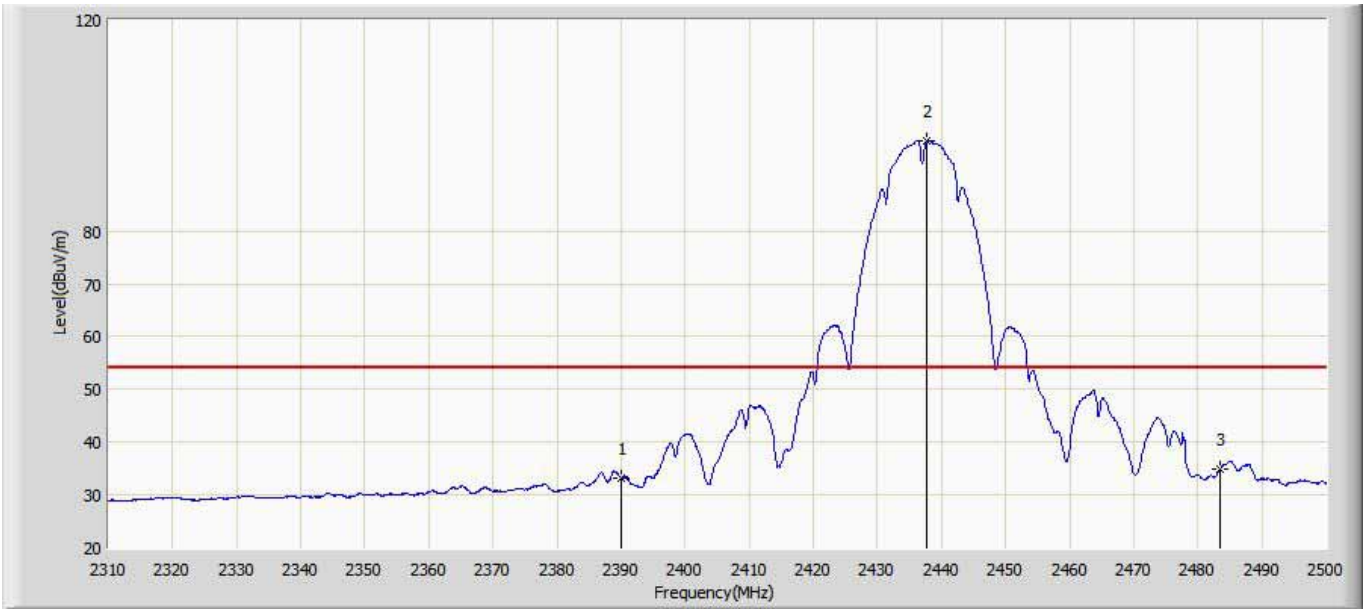
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2388.755	46.688	17.639	-7.312	54.000	29.049	AV
2		2390.000	43.018	13.970	-10.982	54.000	29.048	AV
3	*	2437.775	104.435	75.496	N/A	N/A	28.939	AV
4		2483.500	43.677	13.193	-10.323	54.000	30.484	AV
5		2484.135	46.603	16.124	-7.397	54.000	30.479	AV

Engineer: Karl	
Site: AC5	Time: 2017/09/18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 1:Transmit at2437MHz by802.11b ant 0+1	



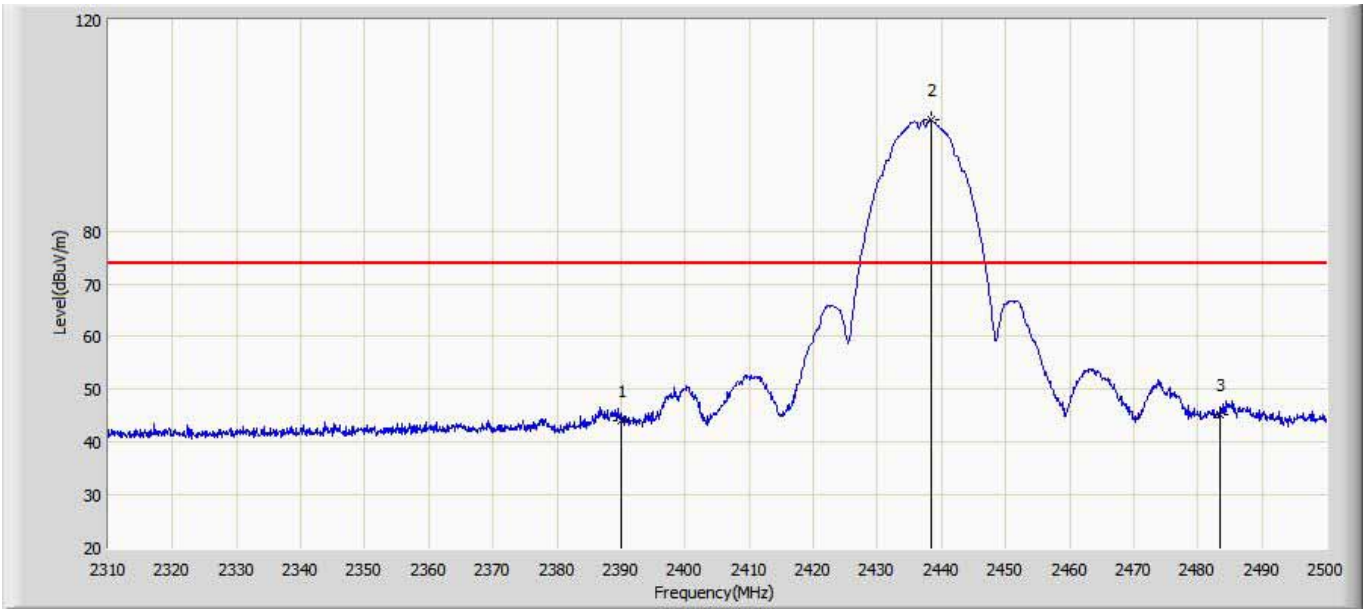
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	57.674	28.626	-16.326	74.000	29.048	PK
2	*	2436.825	108.805	79.864	N/A	N/A	28.941	PK
3		2483.500	61.886	31.402	-12.114	74.000	30.484	PK
4		2485.370	63.049	32.581	-10.951	74.000	30.468	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 1:Transmit at2437MHz by802.11b ant 0+1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	33.163	4.115	-20.837	54.000	29.048	AV
2	*	2437.775	97.196	68.257	N/A	N/A	28.939	AV
3		2483.500	34.954	4.470	-19.046	54.000	30.484	AV

Engineer: Karl	
Site: AC5	Time: 2017/09/18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 1:Transmit at2437MHz by802.11b ant 0+1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	43.949	14.901	-30.051	74.000	29.048	PK
2	*	2438.345	100.974	72.037	N/A	N/A	28.937	PK
3		2483.500	45.328	14.843	-28.672	74.000	30.484	PK

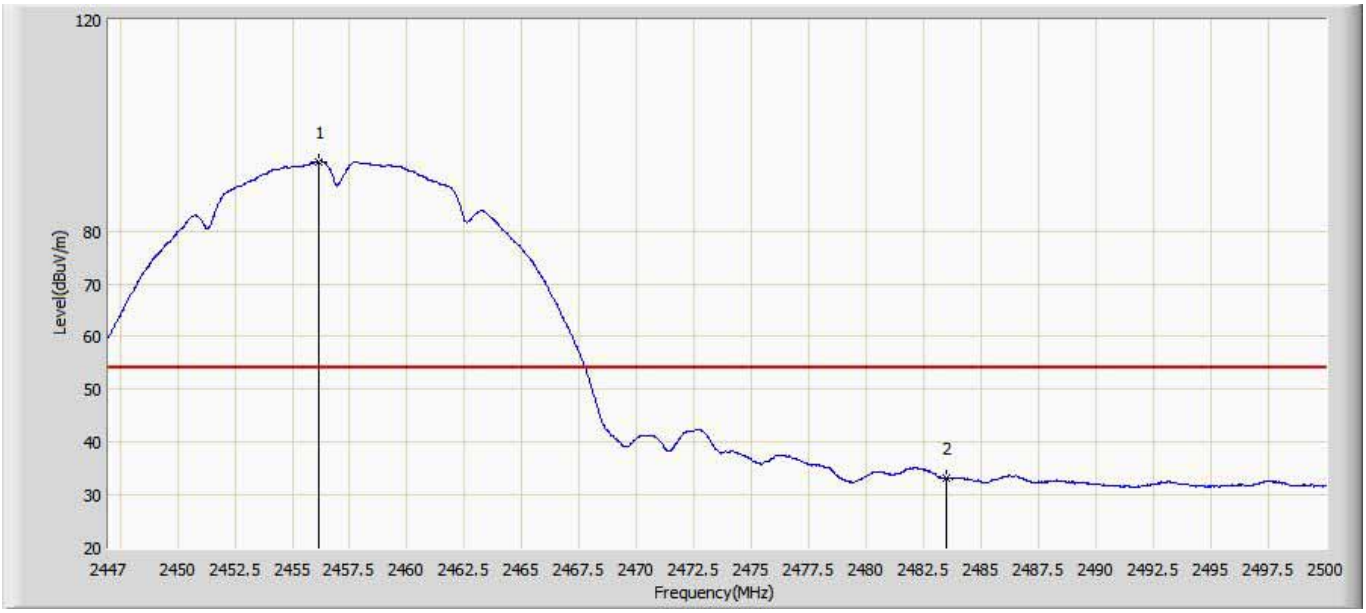
Engineer: Karl	
Site: AC5	Time: 2017/10/27 - 10:25
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2457MHz by 802.11b ant 0+1	

No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2457.838	103.394	74.380	N/A	N/A	29.014	AV
2		2483.500	49.596	19.112	-4.404	54.000	30.484	AV

Engineer: Karl	
Site: AC5	Time: 2017/10/27 - 10:28
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2457MHz by 802.11b ant 0+1	

No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2456.937	107.462	78.454	N/A	N/A	29.008	PK
2		2483.500	55.718	25.233	-18.282	74.000	30.484	PK

Engineer: Karl	
Site: AC5	Time: 2017/10/27 - 10:29
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2457MHz by 802.11b ant 0+1	

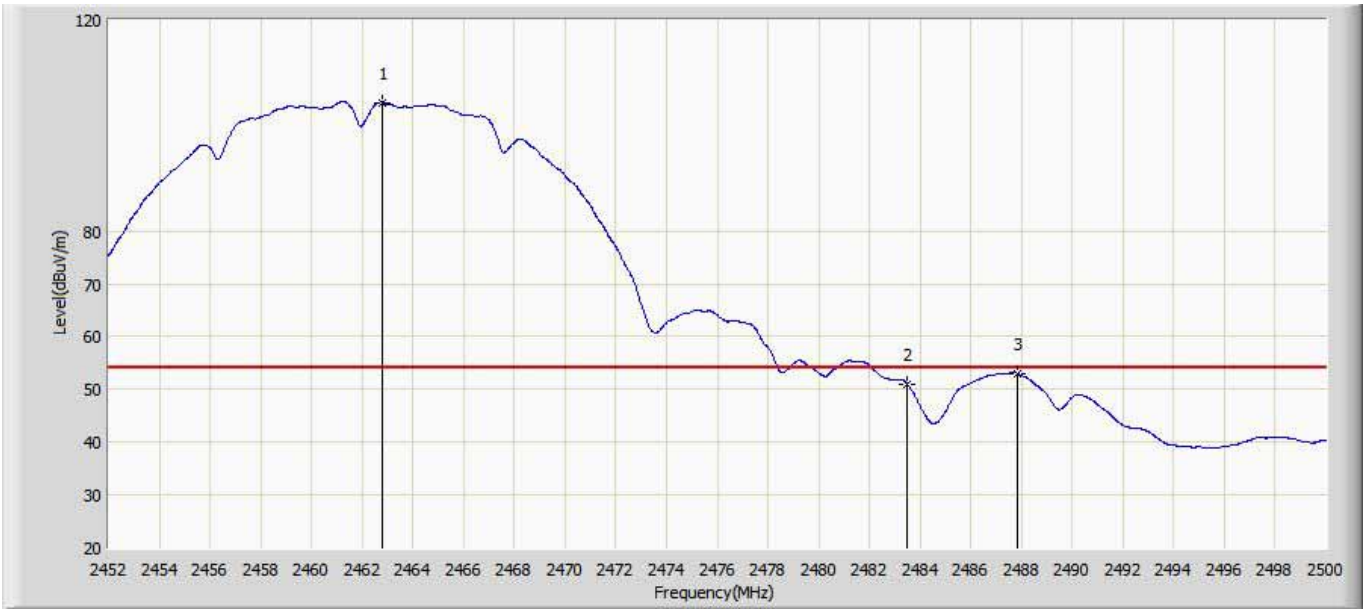


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2456.169	93.203	64.201	N/A	N/A	29.002	AV
2		2483.500	33.171	2.687	-20.829	54.000	30.484	AV

Engineer: Karl	
Site: AC5	Time: 2017/10/27 - 10:31
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2457MHz by 802.11b ant 0+1	

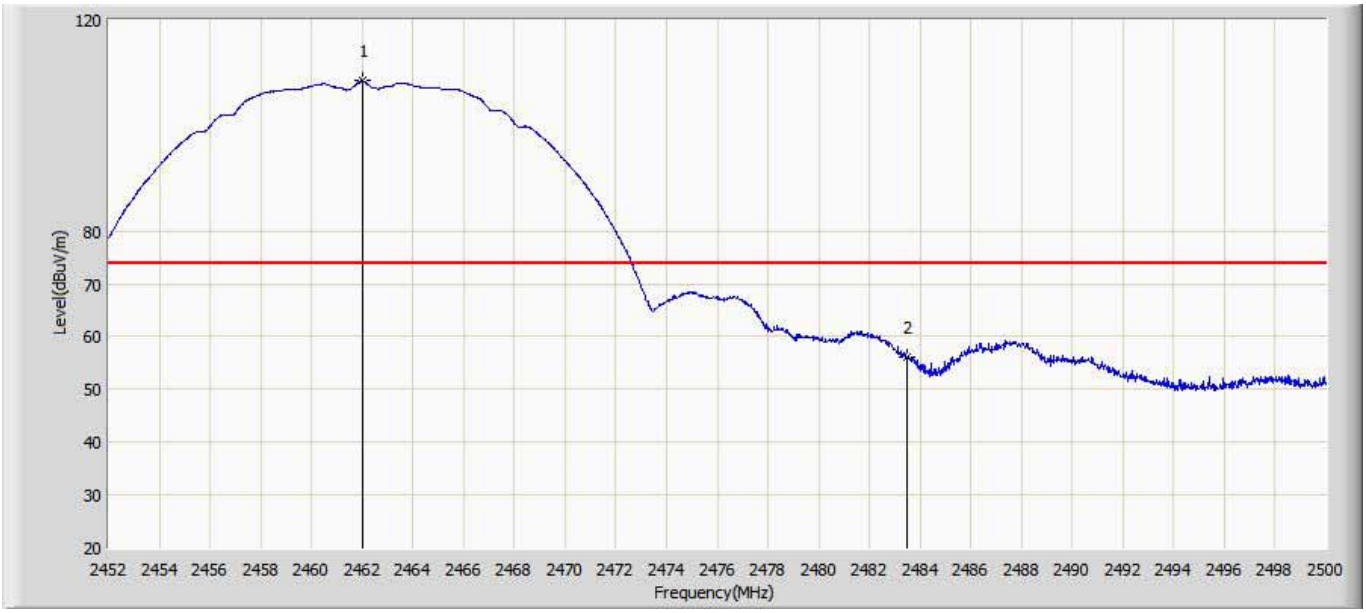
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2456.699	95.666	66.660	N/A	N/A	29.006	PK
2		2483.500	43.706	13.221	-30.294	74.000	30.484	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 1:Transmit at2462MHz by802.11b ant 0+1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2462.800	104.372	75.258	N/A	N/A	29.114	AV
2		2483.500	50.974	20.489	-3.026	54.000	30.484	AV
3		2487.808	53.078	22.632	-0.922	54.000	30.446	AV

Engineer: Karl	
Site: AC5	Time: 2017/09/18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 1:Transmit at2462MHz by802.11b ant 0+1	

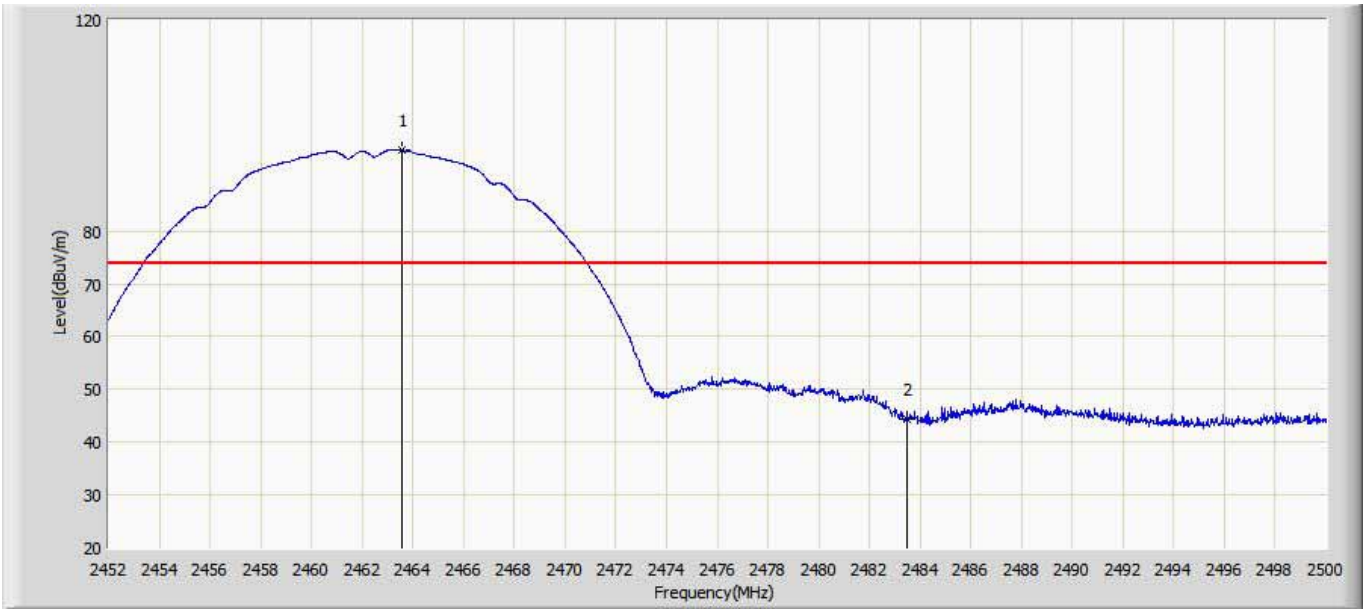


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2462.032	108.434	79.387	N/A	N/A	29.047	PK
2		2483.500	56.011	25.527	-17.989	74.000	30.484	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 1:Transmit at2462MHz by802.11b ant 0+1	

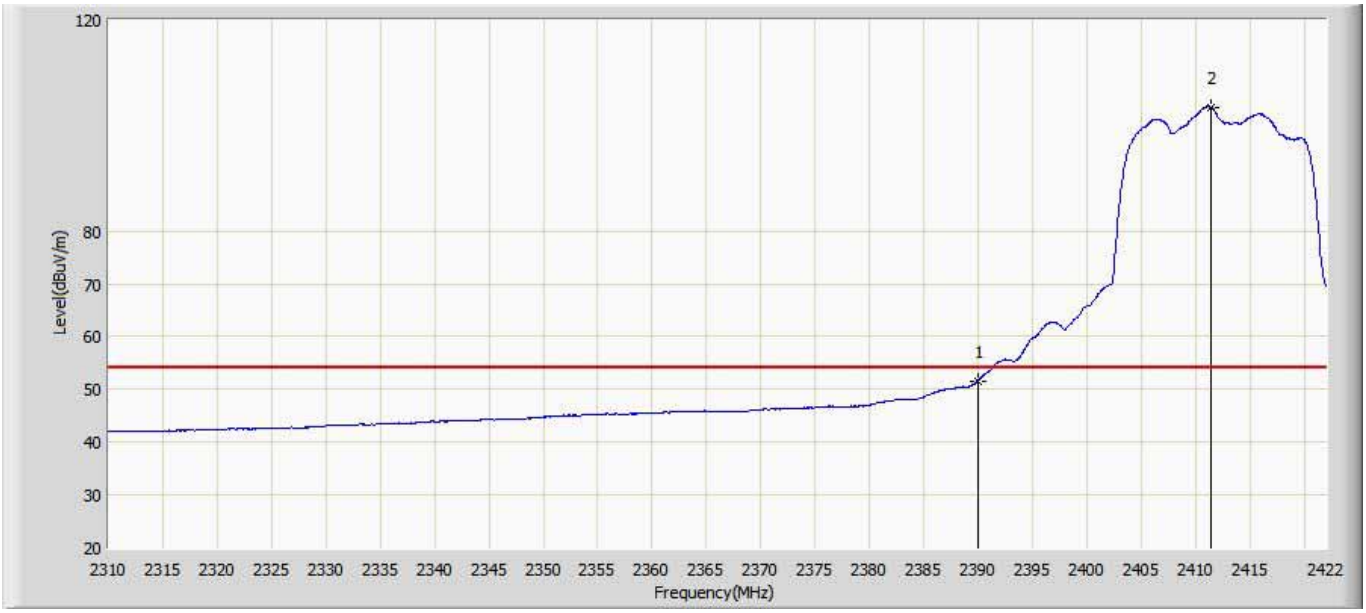
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2462.800	92.375	63.261	N/A	N/A	29.114	AV
2		2483.500	34.549	4.065	-19.451	54.000	30.484	AV
3		2487.880	38.844	8.399	-15.156	54.000	30.445	AV

Engineer: Karl	
Site: AC5	Time: 2017/09/18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 1:Transmit at2462MHz by802.11b ant 0+1	



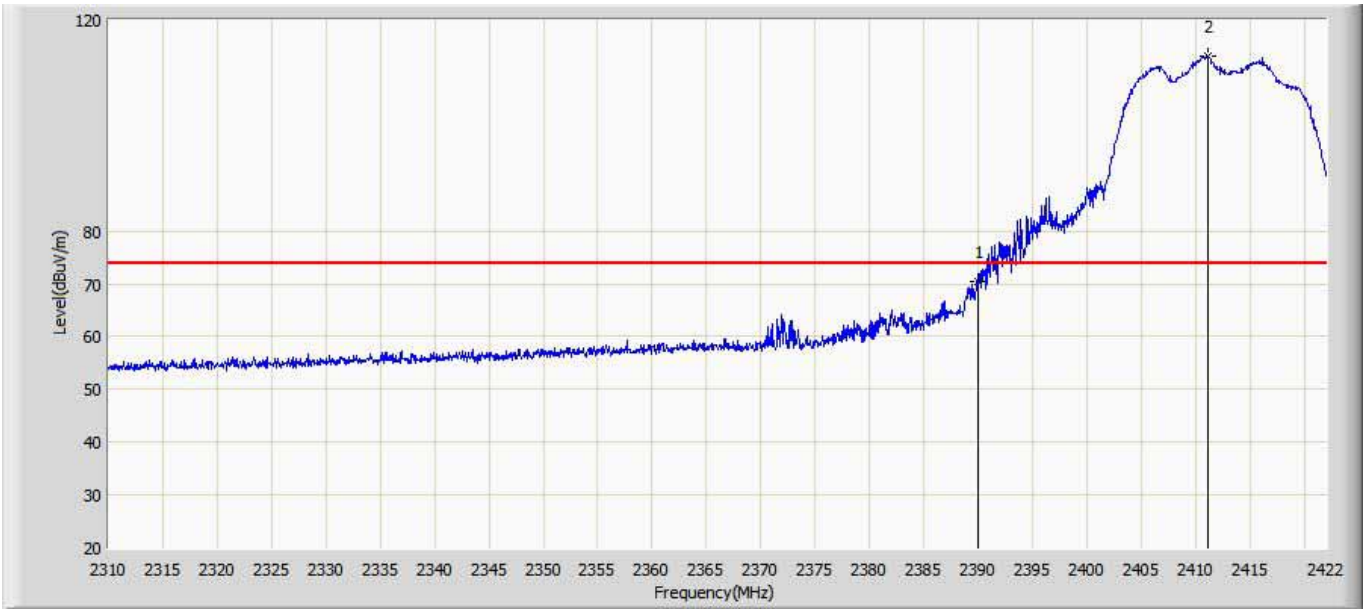
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2463.544	95.259	66.080	N/A	N/A	29.179	PK
2		2483.500	44.340	13.856	-29.660	74.000	30.484	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 2:Transmit at2412MHz by802.11g ant 0+1	



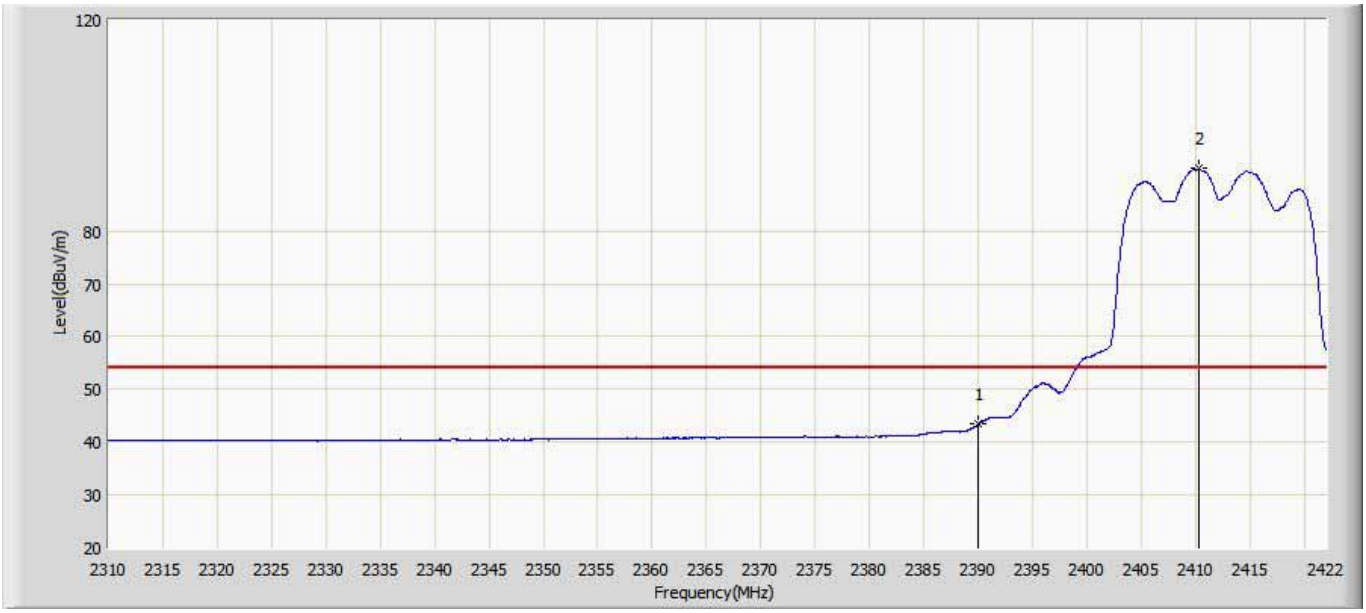
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	51.647	22.599	-2.353	54.000	29.048	AV
2	*	2411.416	103.429	74.564	N/A	N/A	28.865	AV

Engineer: Karl	
Site: AC5	Time: 2017/09/18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 2:Transmit at2412MHz by802.11g ant 0+1	



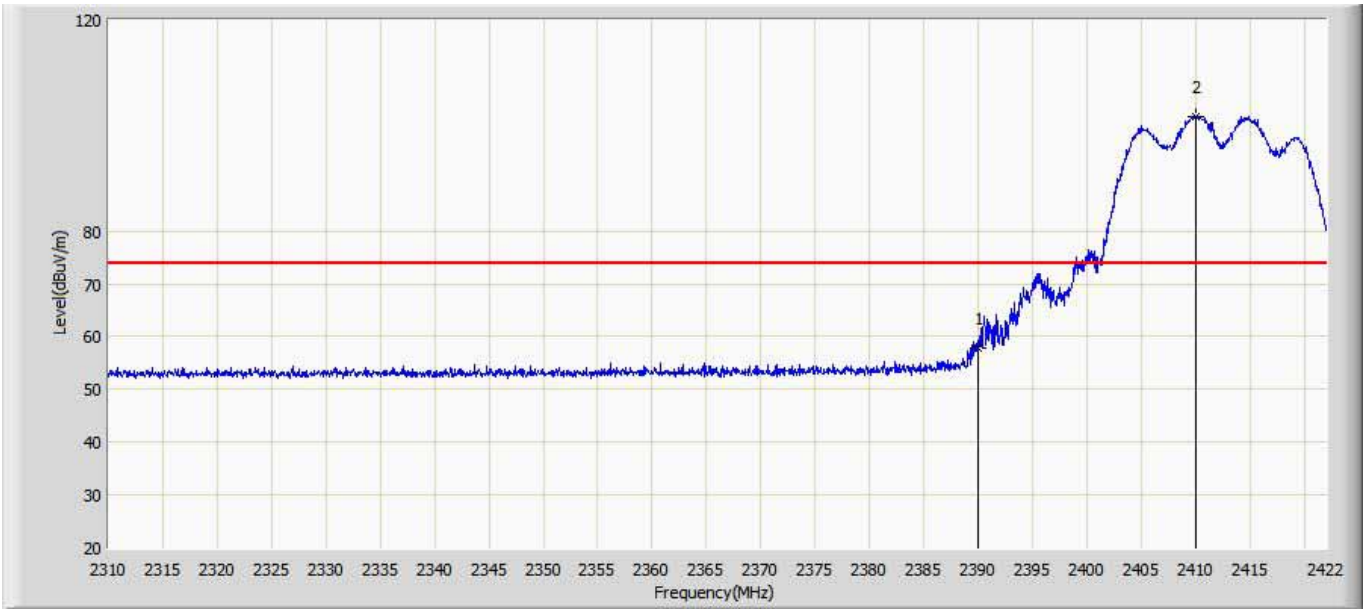
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	70.398	41.350	-3.602	74.000	29.048	PK
2	*	2411.080	113.219	84.356	N/A	N/A	28.863	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 2:Transmit at2412MHz by802.11g ant 0+1	



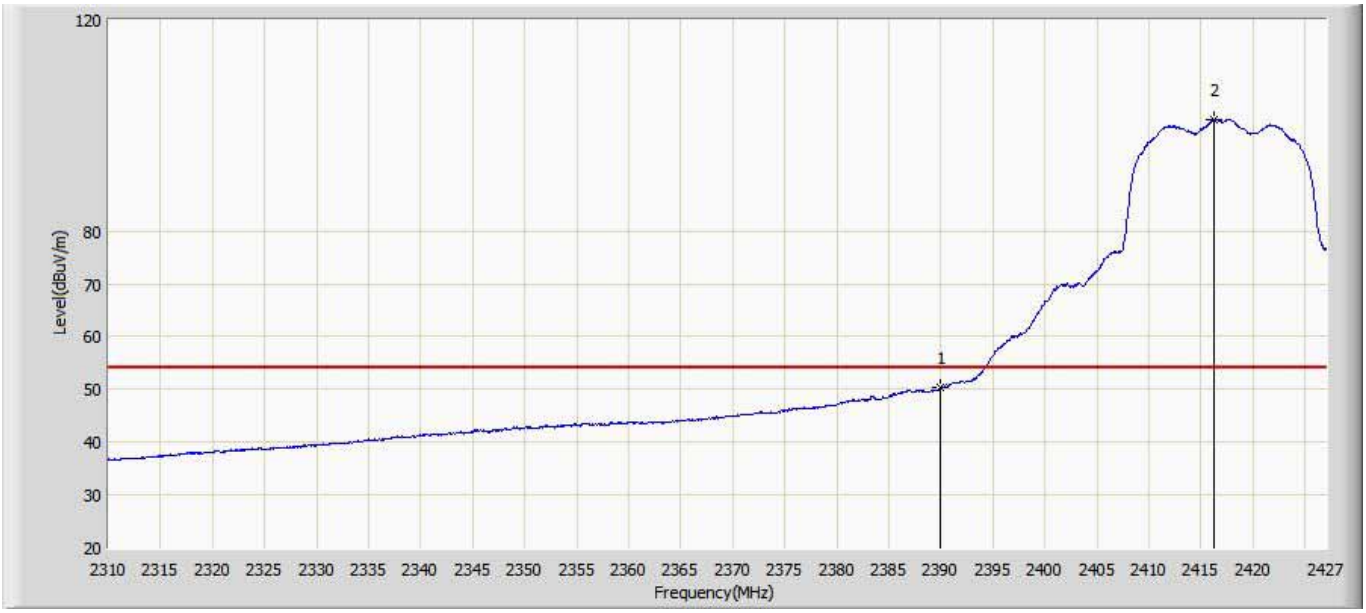
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	43.494	14.446	-10.506	54.000	29.048	AV
2	*	2410.352	91.779	62.909	N/A	N/A	28.870	AV

Engineer: Karl	
Site: AC5	Time: 2017/09/18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 2:Transmit at2412MHz by802.11g ant 0+1	



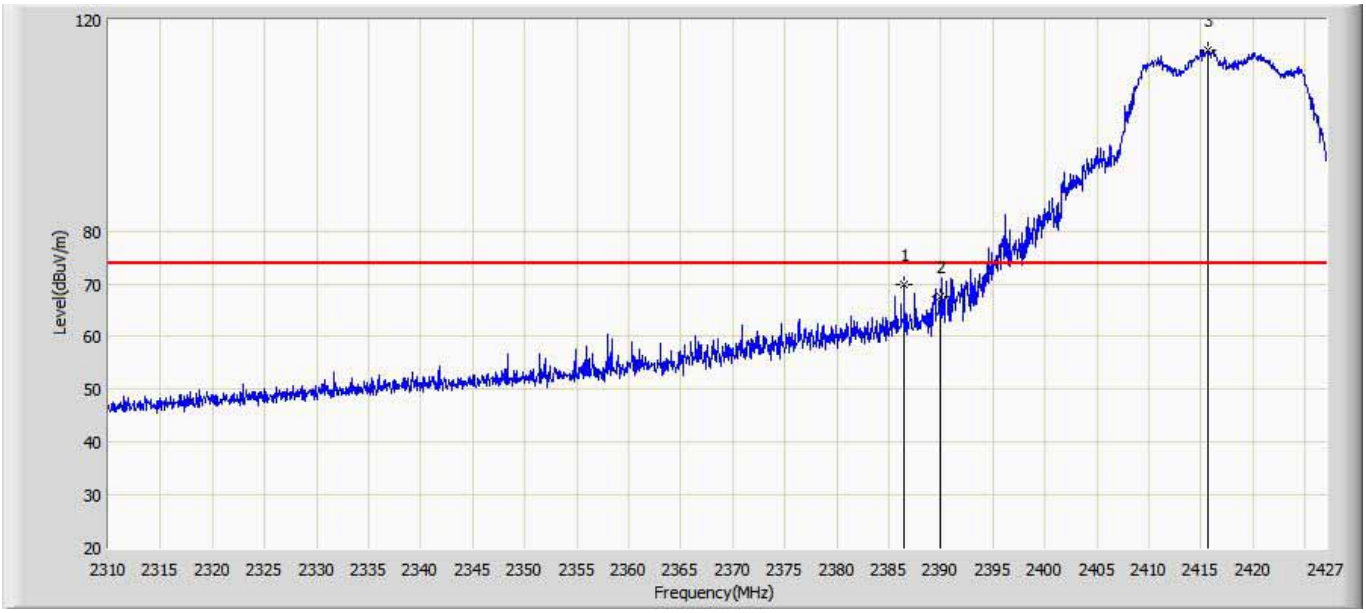
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	57.800	28.752	-16.200	74.000	29.048	PK
2	*	2410.016	101.692	72.818	N/A	N/A	28.874	PK

Engineer: Karl	
Site: AC5	Time: 2017/10/27 - 10:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2417MHz by 802.11g ant 0+1	



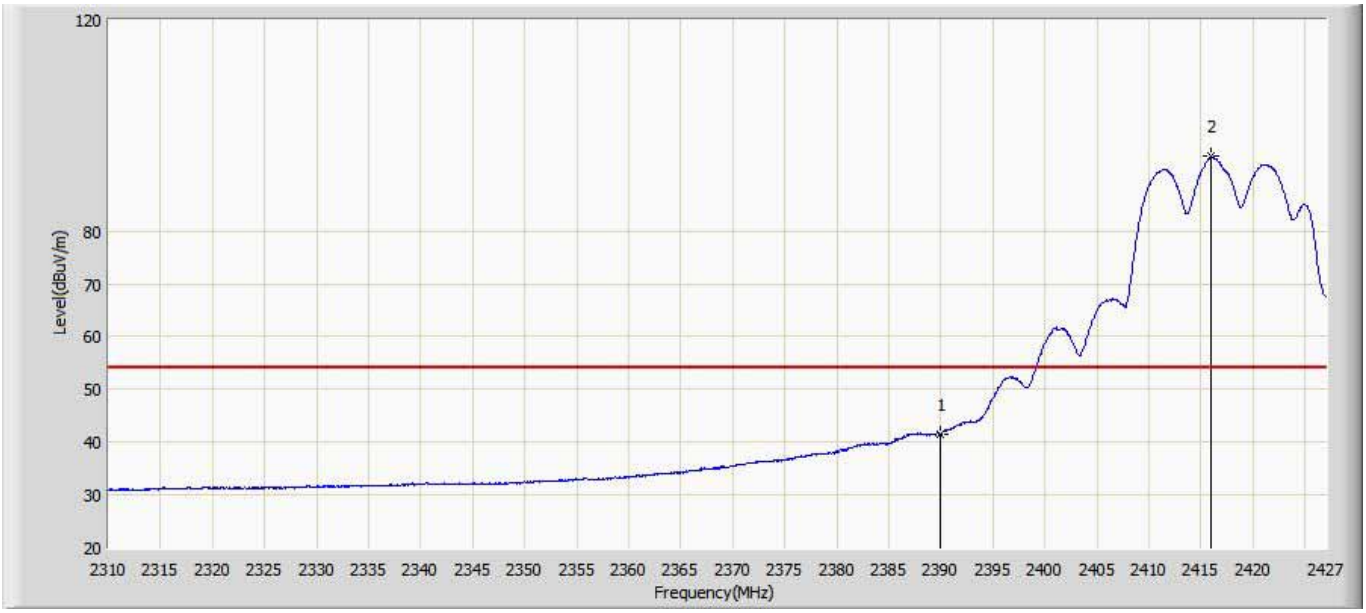
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.279	21.231	-3.721	54.000	29.048	AV
2	*	2416.294	101.039	72.146	N/A	N/A	28.893	AV

Engineer: Karl	
Site: AC5	Time: 2017/10/27 - 10:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2417MHz by 802.11g ant 0+1	



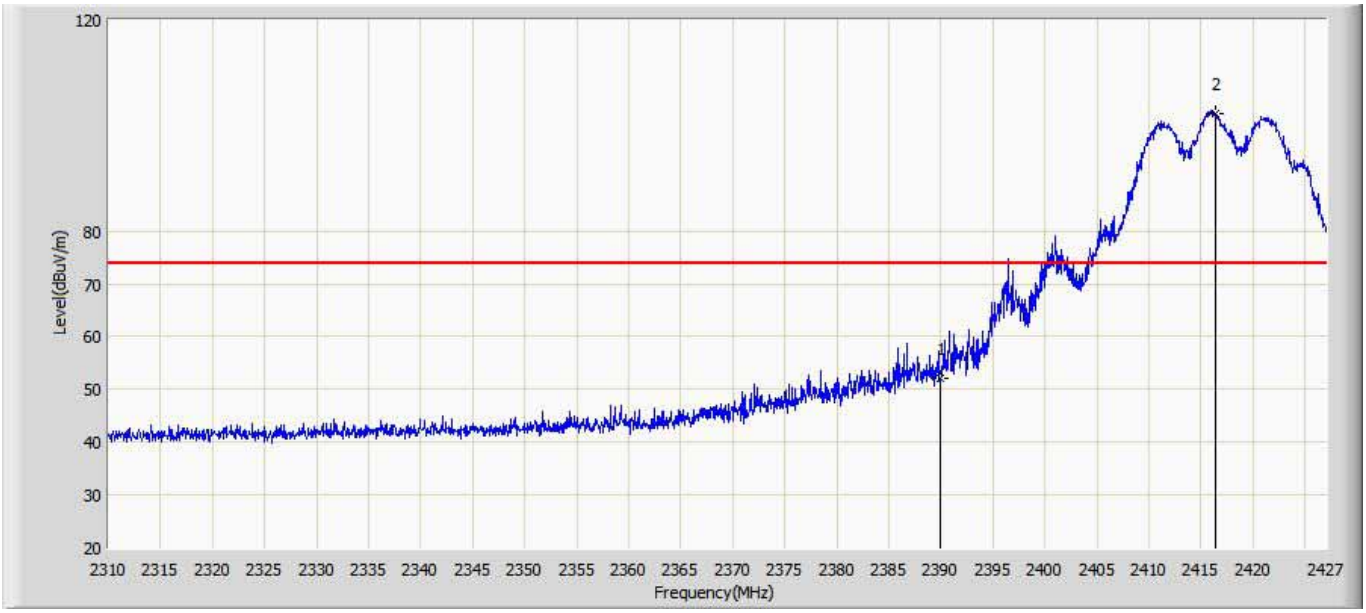
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2386.459	69.878	40.828	-4.122	74.000	29.050	PK
2		2390.000	67.456	38.408	-6.544	74.000	29.048	PK
3	*	2415.593	114.255	85.366	N/A	N/A	28.889	PK

Engineer: Karl	
Site: AC5	Time: 2017/10/27 - 10:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2417MHz by 802.11g ant 0+1	



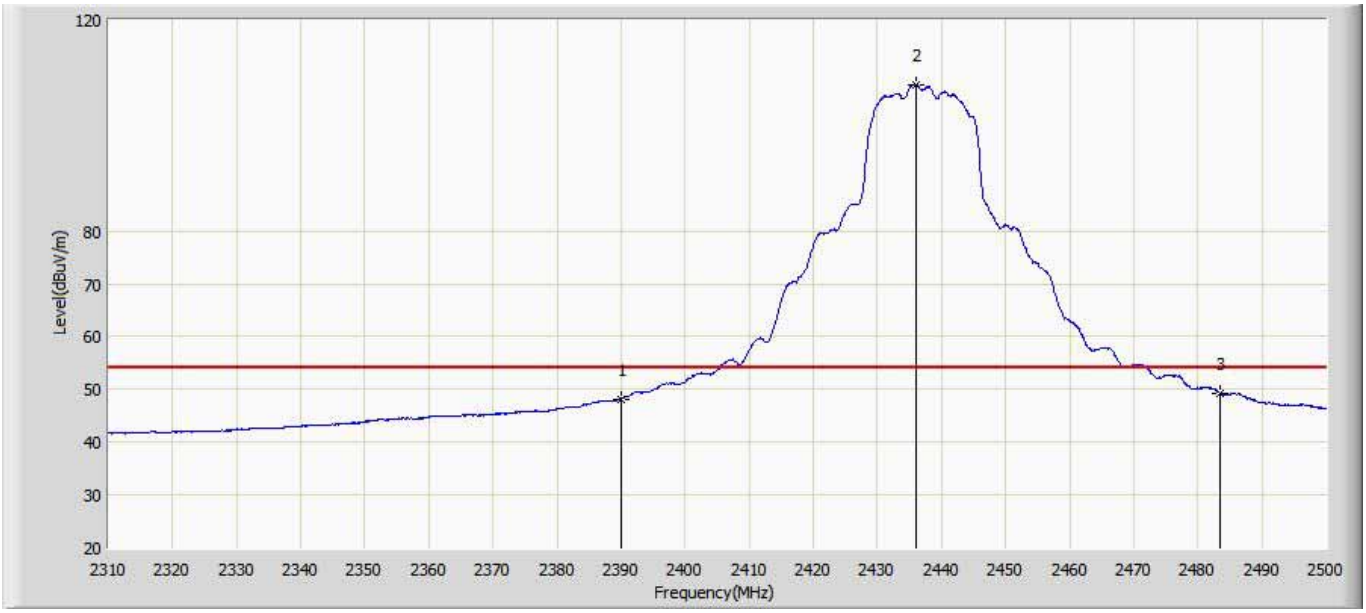
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	41.591	12.543	-12.409	54.000	29.048	AV
2	*	2416.002	94.101	65.209	N/A	N/A	28.892	AV

Engineer: Karl	
Site: AC5	Time: 2017/10/27 - 10:45
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2417MHz by 802.11g ant 0+1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	52.131	23.083	-21.869	74.000	29.048	PK
2	*	2416.353	102.211	73.317	N/A	N/A	28.894	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 2:Transmit at2437MHz by802.11g ant 0+1	

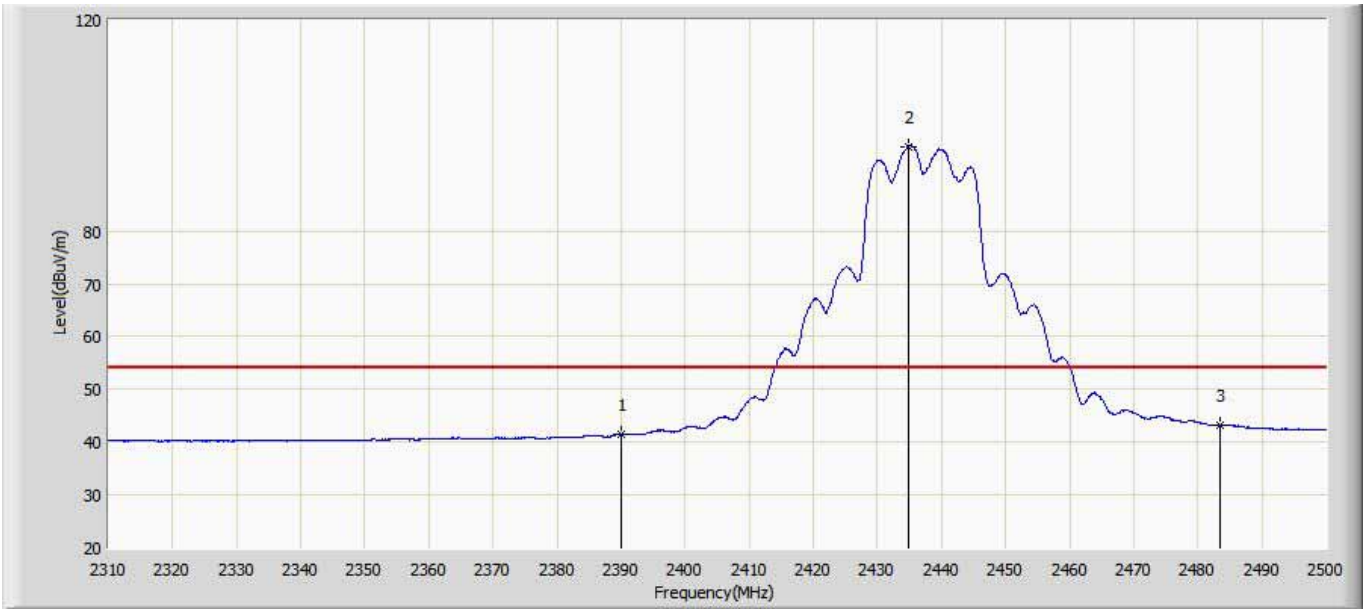


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	48.178	19.130	-5.822	54.000	29.048	AV
2	*	2435.970	107.813	78.870	N/A	N/A	28.943	AV
3		2483.500	49.284	18.800	-4.716	54.000	30.484	AV

Engineer: Karl	
Site: AC5	Time: 2017/09/18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 2:Transmit at2437MHz by802.11g ant 0+1	

No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	65.481	36.433	-8.519	74.000	29.048	PK
2	*	2435.495	117.849	88.905	N/A	N/A	28.944	PK
3		2483.500	65.697	35.212	-8.303	74.000	30.484	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 2:Transmit at2437MHz by802.11g ant 0+1	

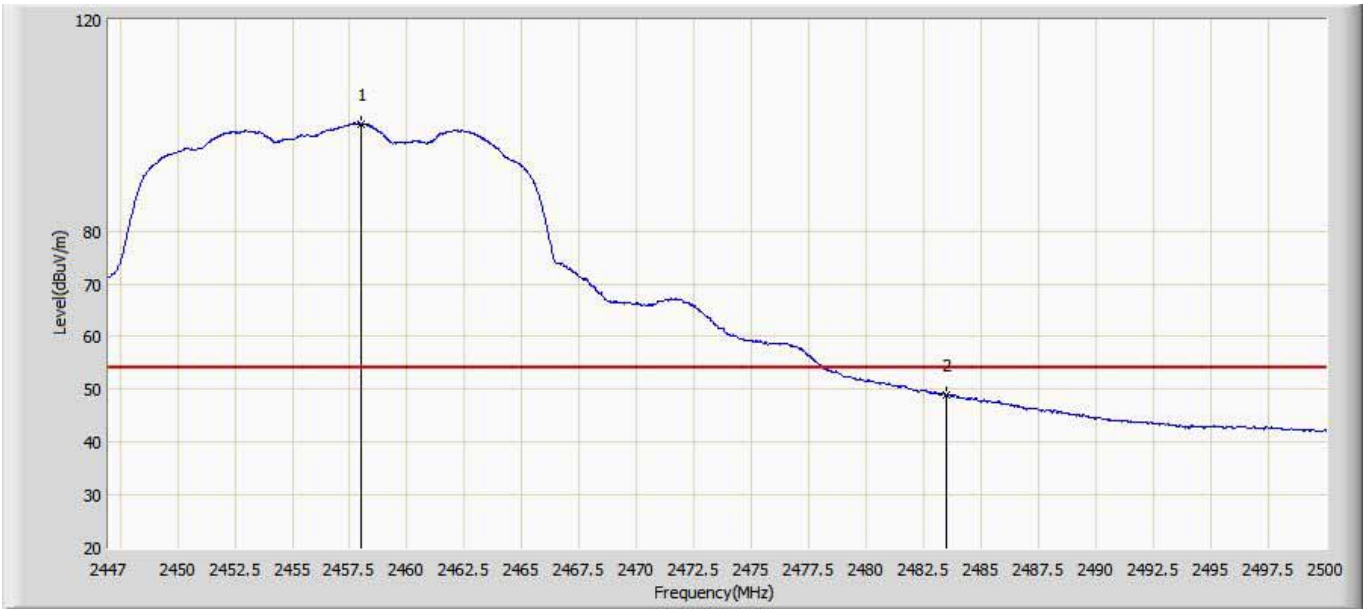


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	41.378	12.330	-12.622	54.000	29.048	AV
2	*	2434.830	96.072	67.127	N/A	N/A	28.945	AV
3		2483.500	43.228	12.744	-10.772	54.000	30.484	AV

Engineer: Karl	
Site: AC5	Time: 2017/09/18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 2:Transmit at2437MHz by802.11g ant 0+1	

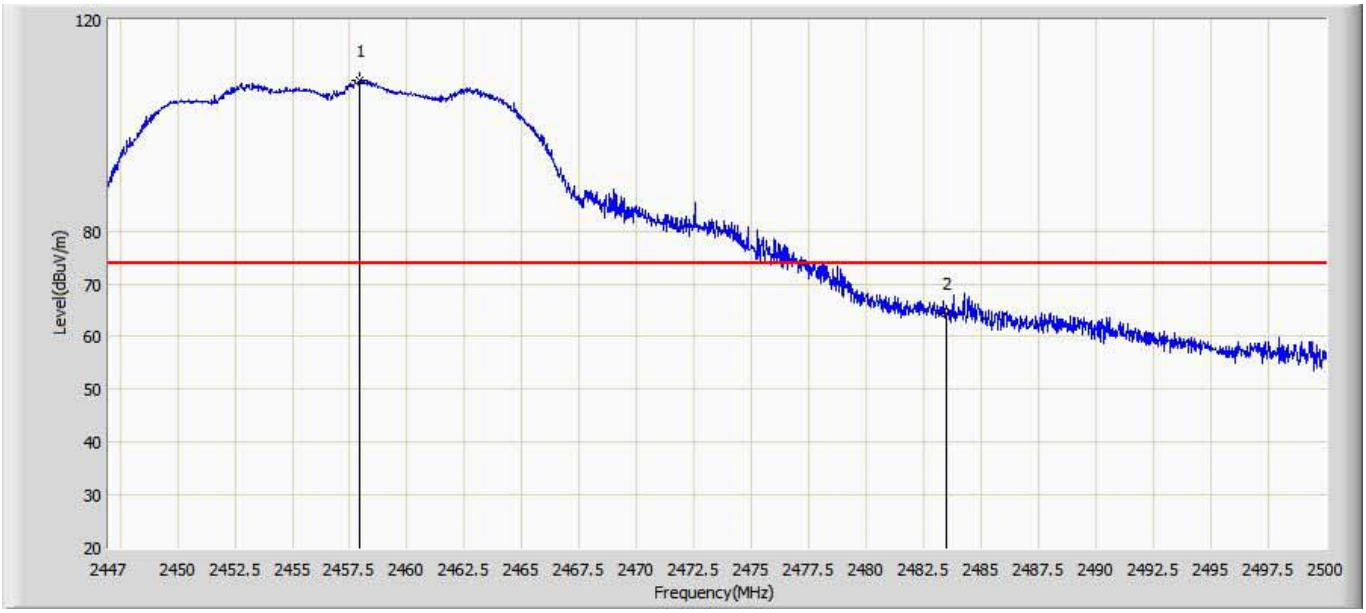
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	53.616	24.568	-20.384	74.000	29.048	PK
2	*	2434.640	106.513	77.567	N/A	N/A	28.946	PK
3		2483.500	57.380	26.896	-16.620	74.000	30.484	PK

Engineer: Karl	
Site: AC5	Time: 2017/10/27 - 10:45
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2457MHz by 802.11g ant 0+1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2457.998	100.308	71.292	N/A	N/A	29.016	AV
2		2483.500	48.954	18.470	-5.046	54.000	30.484	AV

Engineer: Karl	
Site: AC5	Time: 2017/10/27 - 10:48
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2457MHz by 802.11g ant 0+1	

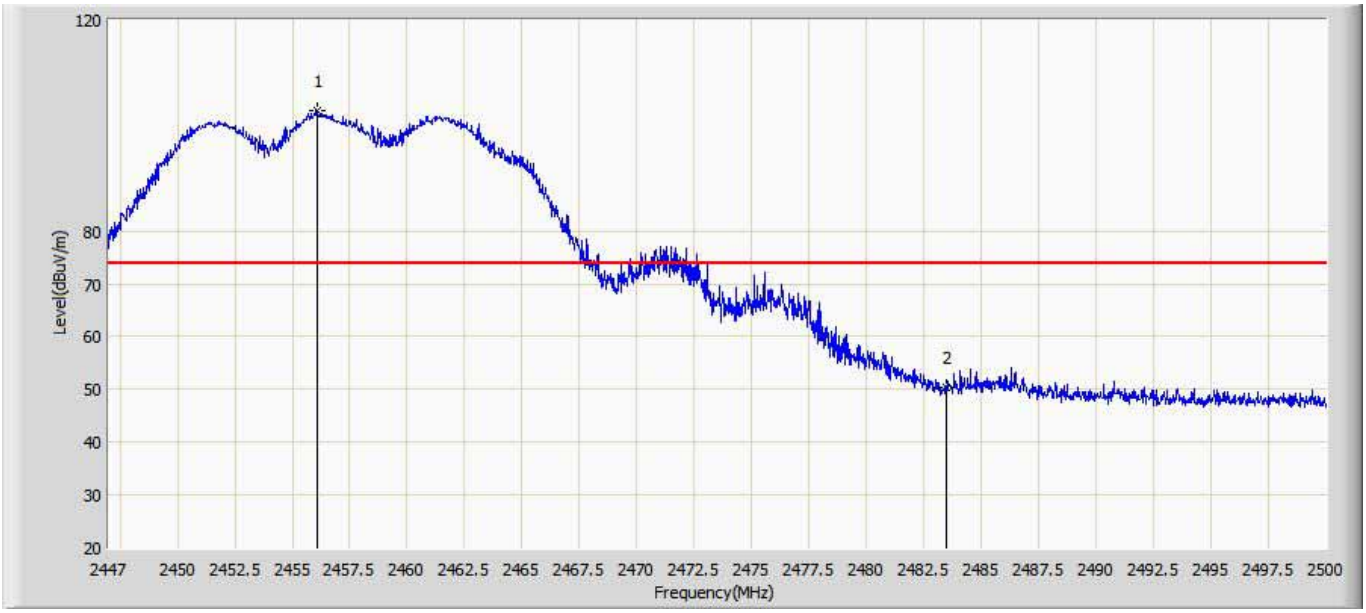


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2457.945	108.571	79.556	N/A	N/A	29.015	PK
2		2483.500	64.278	33.794	-9.722	74.000	30.484	PK

Engineer: Karl	
Site: AC5	Time: 2017/10/27 - 10:50
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2457MHz by 802.11g ant 0+1	

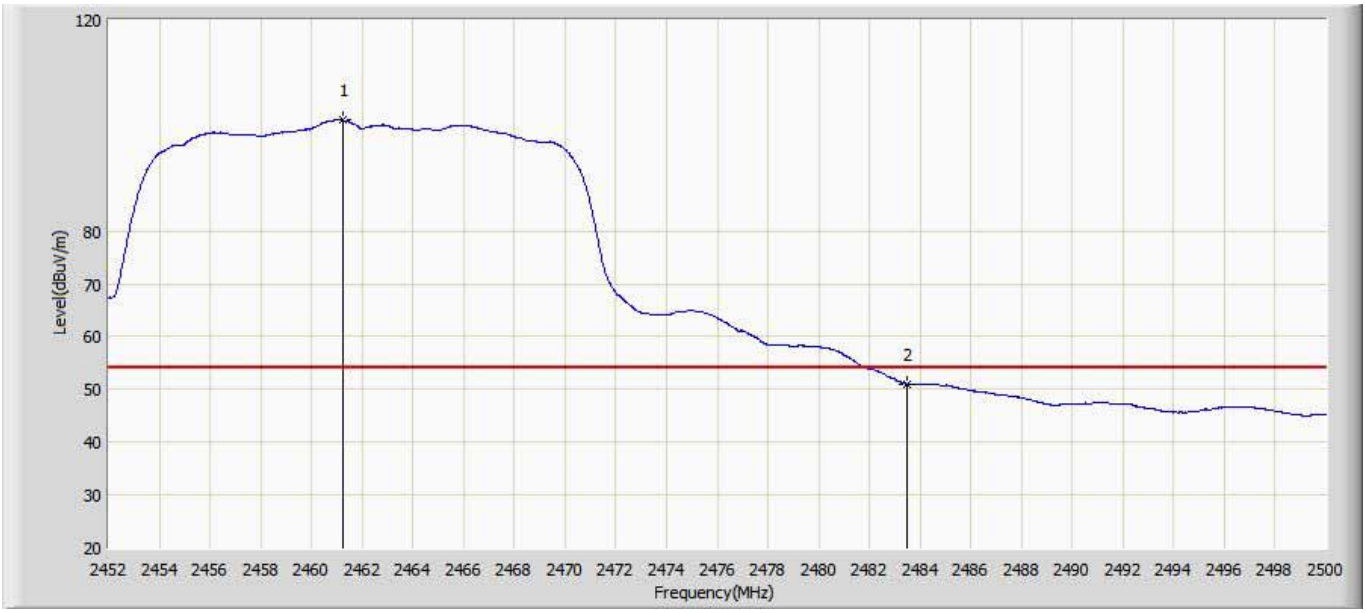
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2456.063	93.155	64.153	N/A	N/A	29.002	AV
2		2483.500	39.091	8.607	-14.909	54.000	30.484	AV

Engineer: Karl	
Site: AC5	Time: 2017/10/27 - 10:50
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2457MHz by 802.11g ant 0+1	



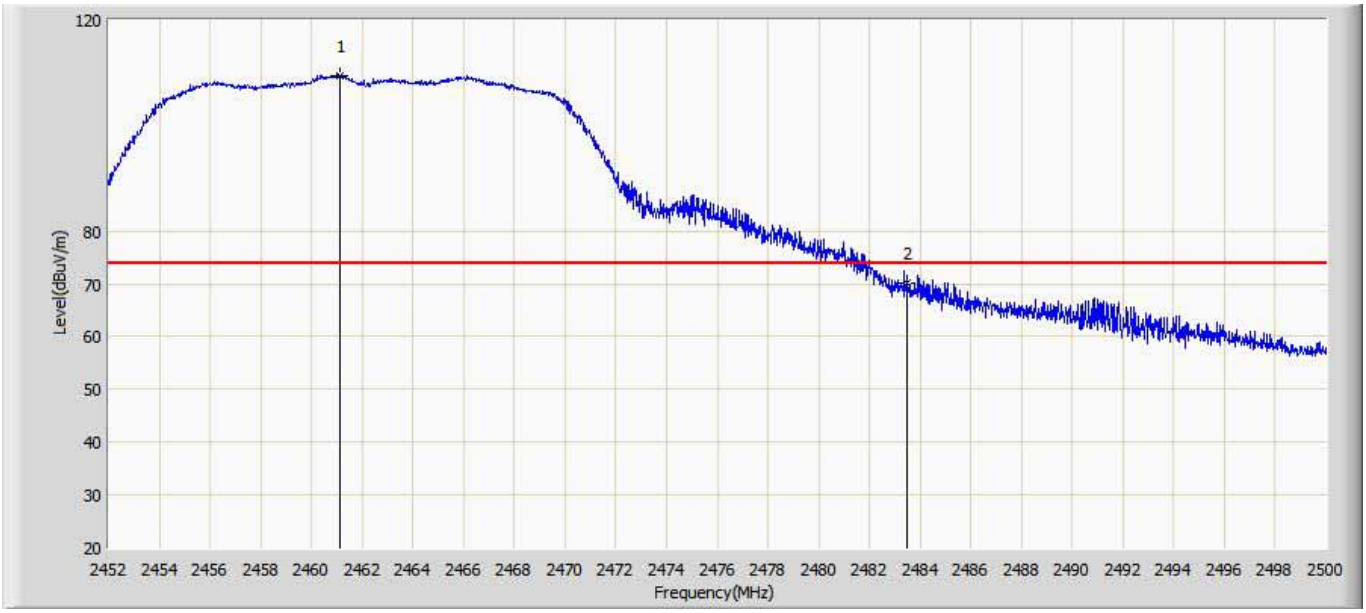
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2456.116	102.800	73.798	N/A	N/A	29.002	PK
2		2483.500	50.306	19.822	-23.694	74.000	30.484	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 2:Transmit at2462MHz by802.11g ant 0+1	



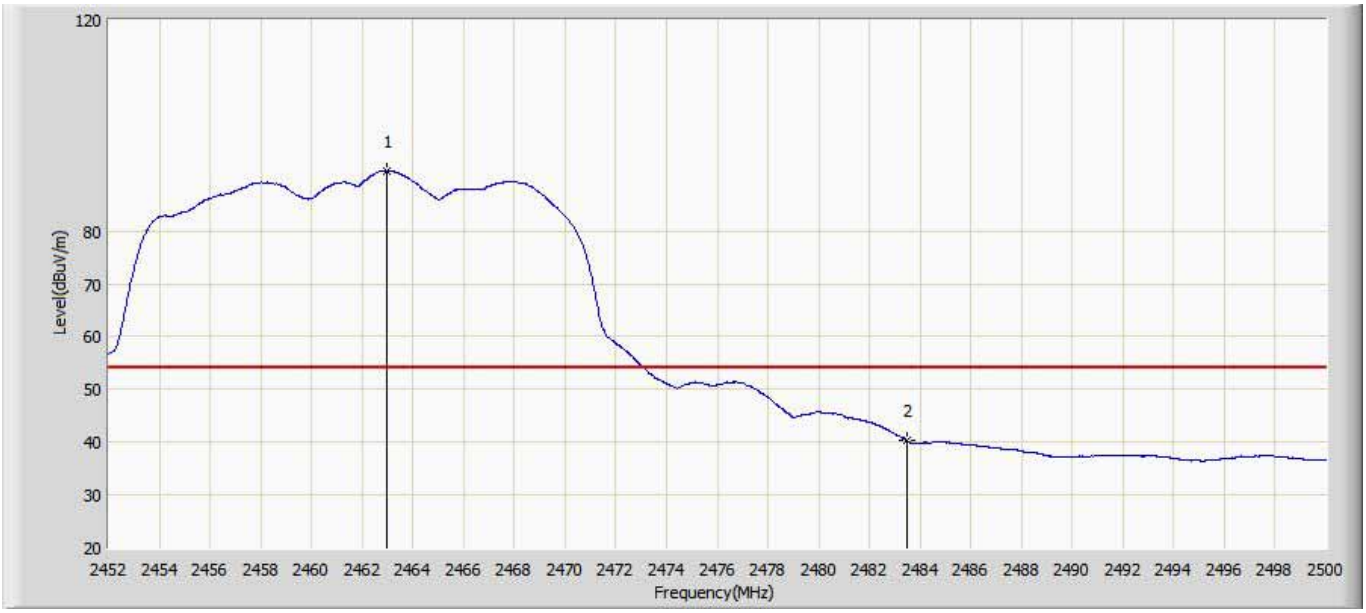
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2461.216	100.985	71.947	N/A	N/A	29.038	AV
2		2483.500	51.024	20.540	-2.976	54.000	30.484	AV

Engineer: Karl	
Site: AC5	Time: 2017/09/19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 2:Transmit at2462MHz by802.11g ant 0+1	



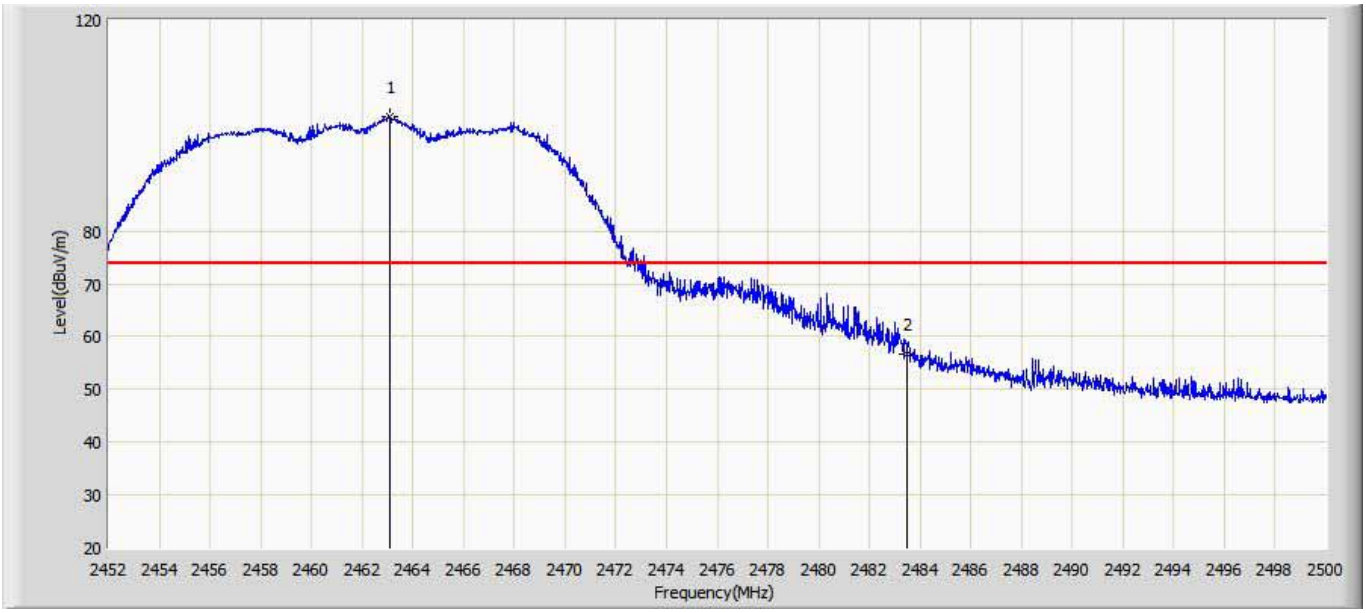
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2461.144	109.294	80.256	N/A	N/A	29.038	PK
2		2483.500	70.011	39.526	-3.989	74.000	30.484	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 2:Transmit at2462MHz by802.11g ant 0+1	



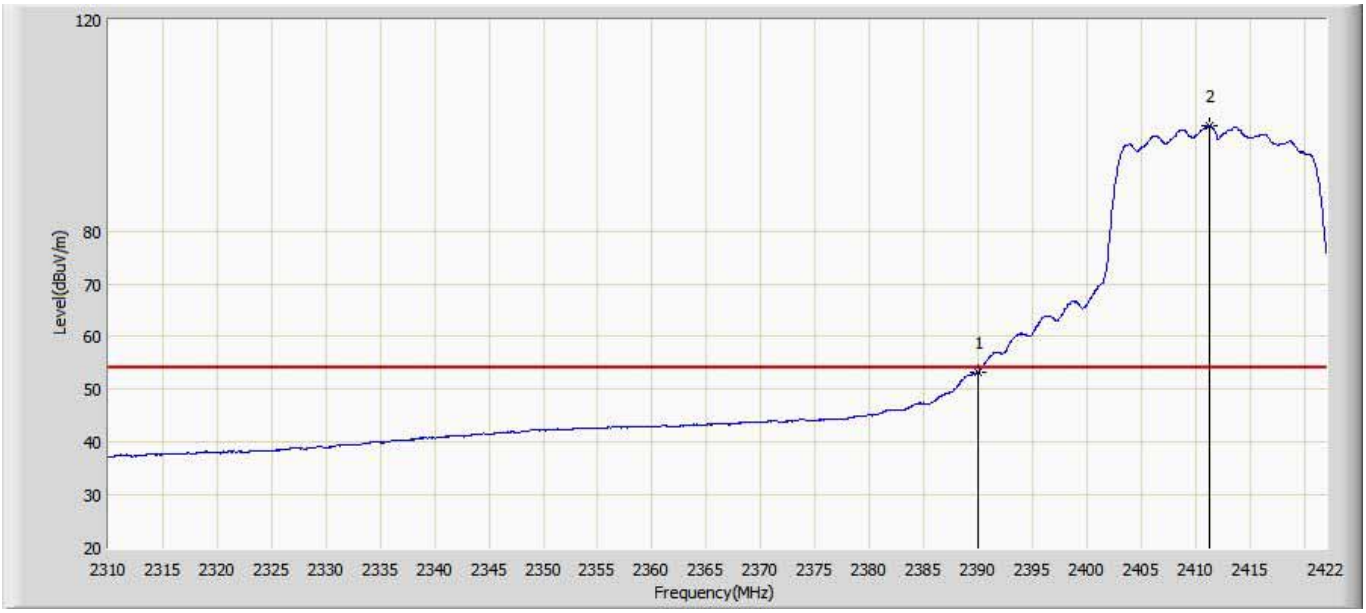
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2462.944	91.382	62.256	N/A	N/A	29.126	AV
2		2483.500	40.274	9.790	-13.726	54.000	30.484	AV

Engineer: Karl	
Site: AC5	Time: 2017/09/19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 2:Transmit at2462MHz by802.11g ant 0+1	



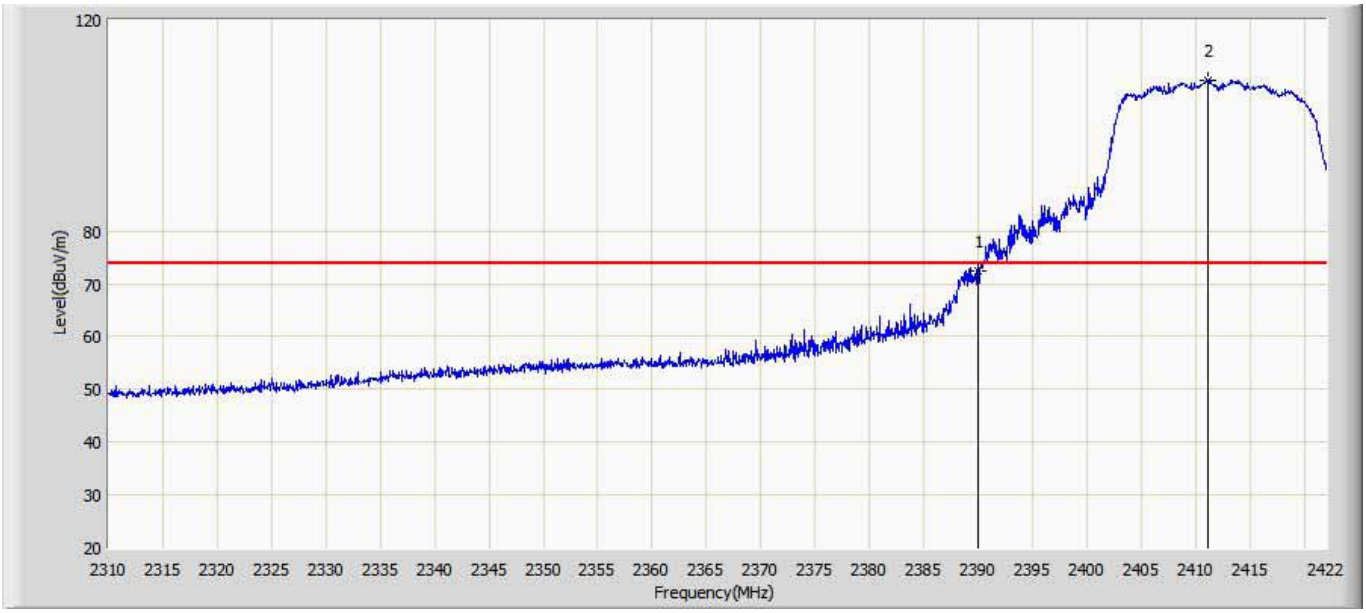
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2463.112	101.633	72.492	N/A	N/A	29.141	PK
2		2483.500	56.572	26.088	-17.428	74.000	30.484	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 3:Transmit at2412MHz by802.11n20 ant 0+1	



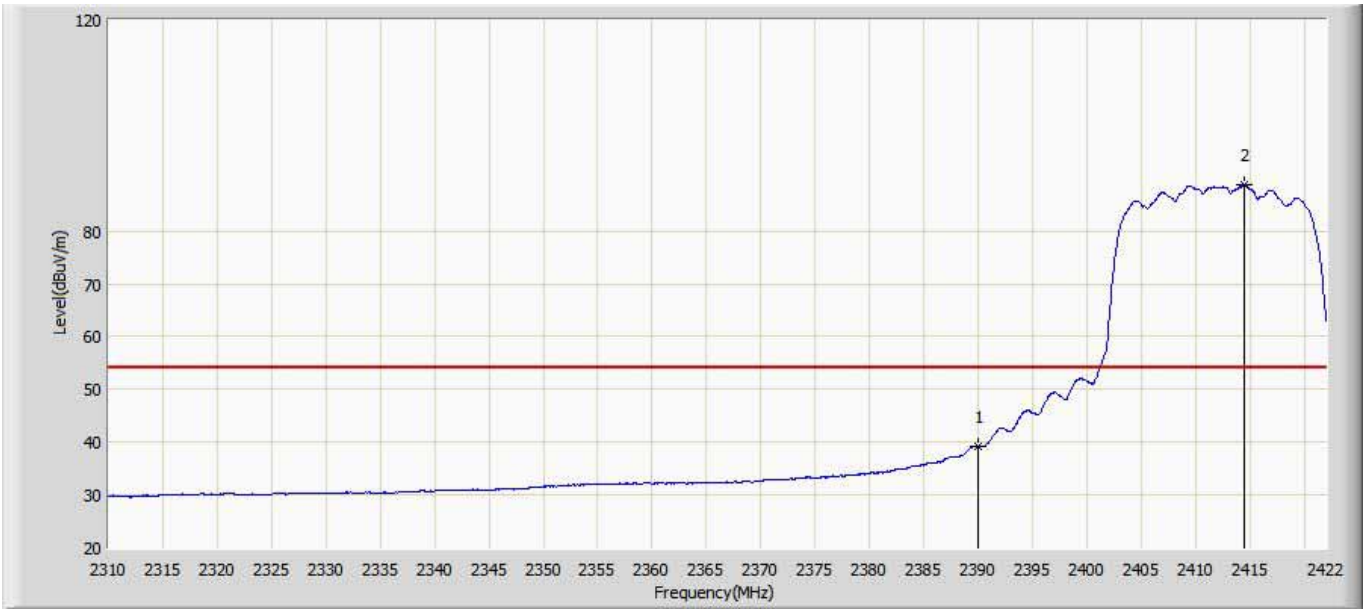
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	53.266	24.218	-0.734	54.000	29.048	AV
2	*	2411.248	100.019	71.155	N/A	N/A	28.864	AV

Engineer: Karl	
Site: AC5	Time: 2017/09/19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 3:Transmit at2412MHz by802.11n20 ant 0+1	



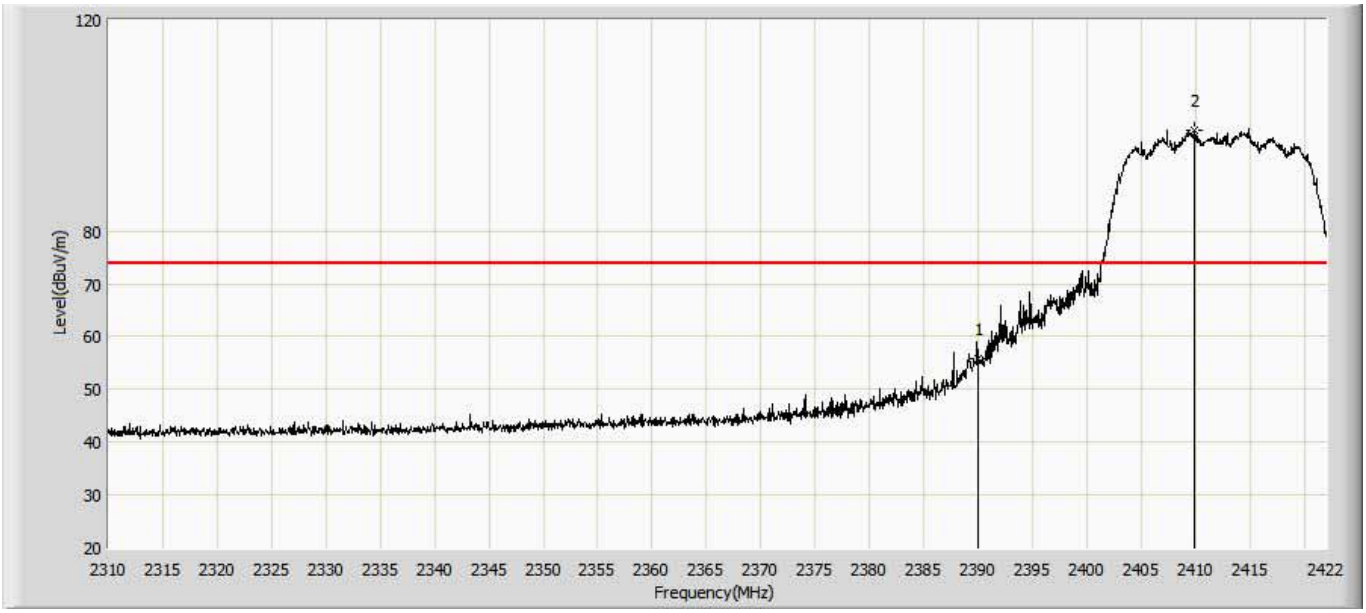
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	72.417	43.369	-1.583	74.000	29.048	PK
2	*	2411.080	108.585	79.722	N/A	N/A	28.863	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 3:Transmit at2412MHz by802.11n20 ant 0+1	



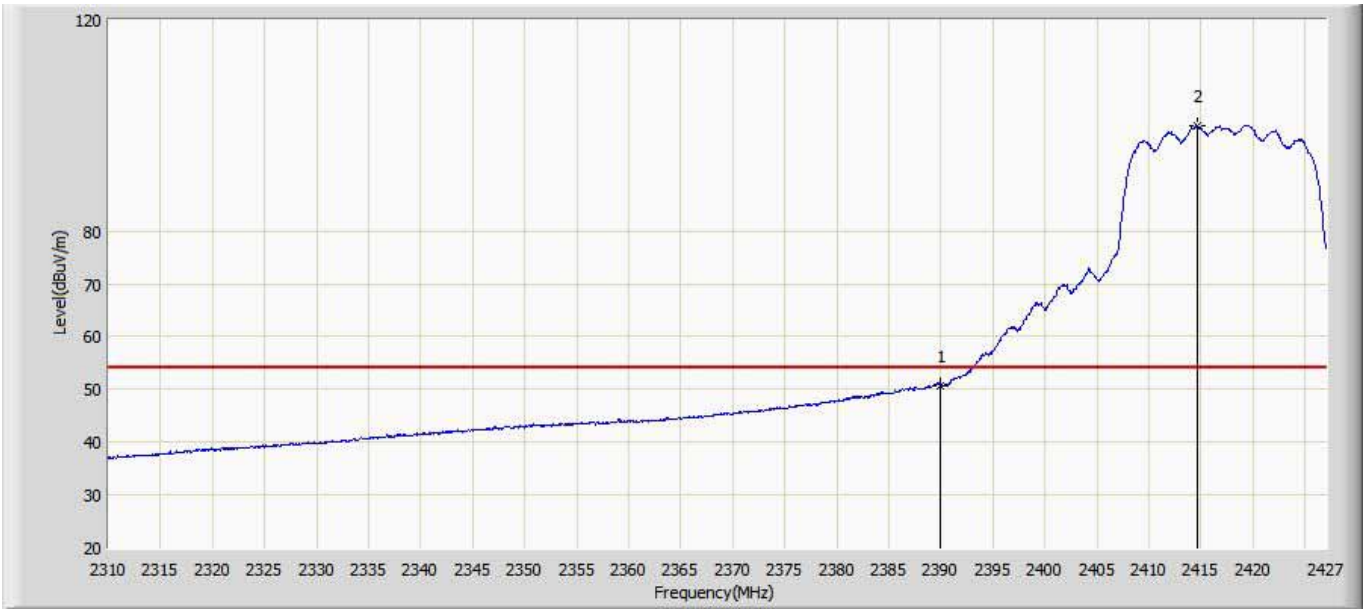
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	39.296	10.248	-14.704	54.000	29.048	AV
2	*	2414.552	88.801	59.918	N/A	N/A	28.883	AV

Engineer: Karl	
Site: AC5	Time: 2017/09/19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 3:Transmit at2412MHz by802.11n20 ant 0+1	



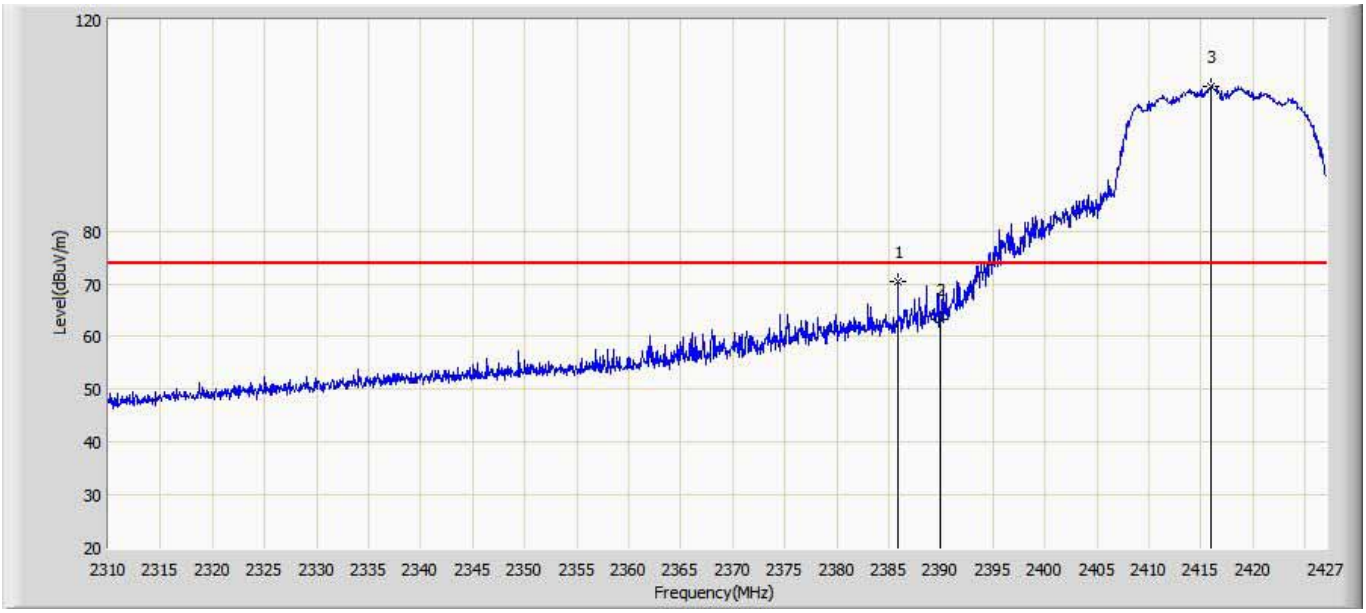
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	55.937	26.889	-18.063	74.000	29.048	PK
2	*	2409.960	98.965	70.091	N/A	N/A	28.874	PK

Engineer: Karl	
Site: AC5	Time: 2017/10/27 - 10:51
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2417MHz by 802.11N20 ant 0+1	



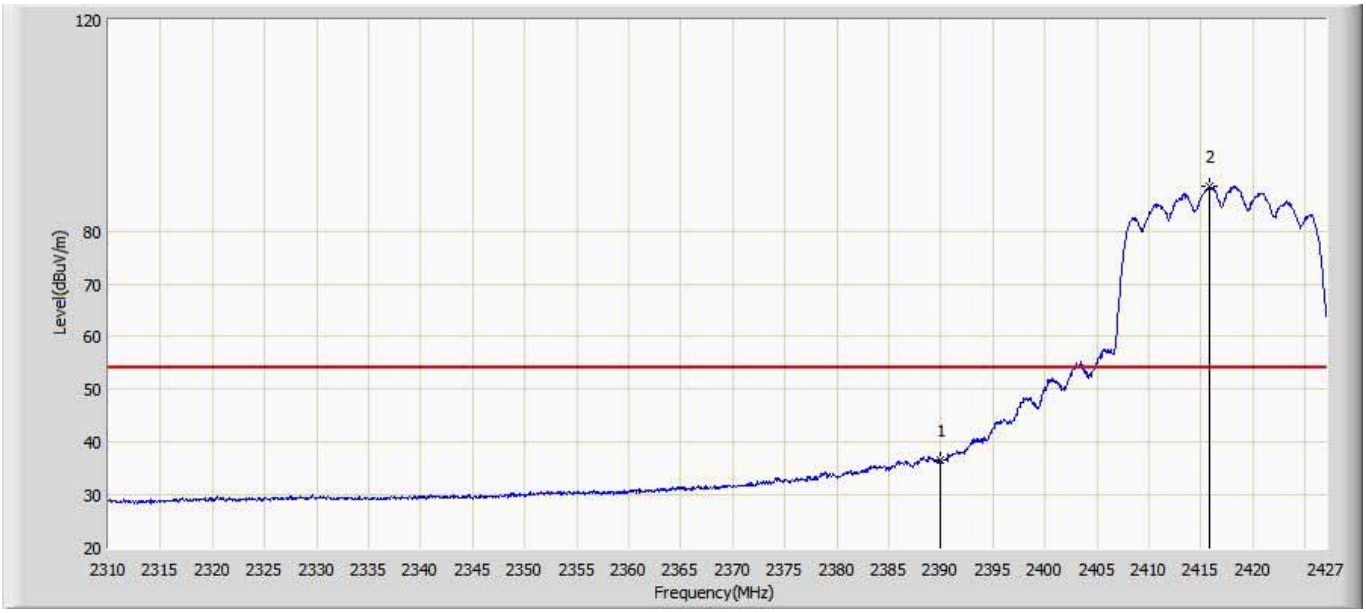
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.704	21.656	-3.296	54.000	29.048	AV
2	*	2414.656	99.977	71.093	N/A	N/A	28.884	AV

Engineer: Karl	
Site: AC5	Time: 2017/10/27 - 10:55
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2417MHz by 802.11N20 ant 0+1	



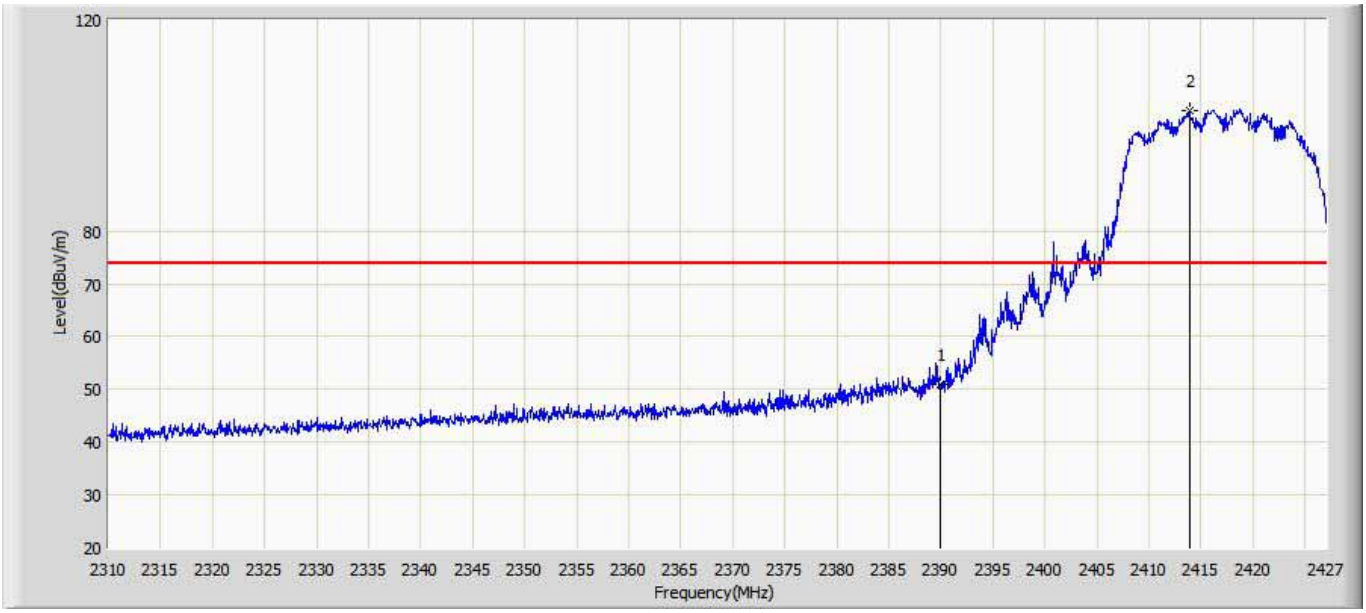
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2385.875	70.452	41.402	-3.548	74.000	29.050	PK
2		2390.000	63.224	34.176	-10.776	74.000	29.048	PK
3	*	2415.944	107.494	78.603	N/A	N/A	28.891	PK

Engineer: Karl	
Site: AC5	Time: 2017/10/27 - 10:56
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2417MHz by 802.11N20 ant 0+1	



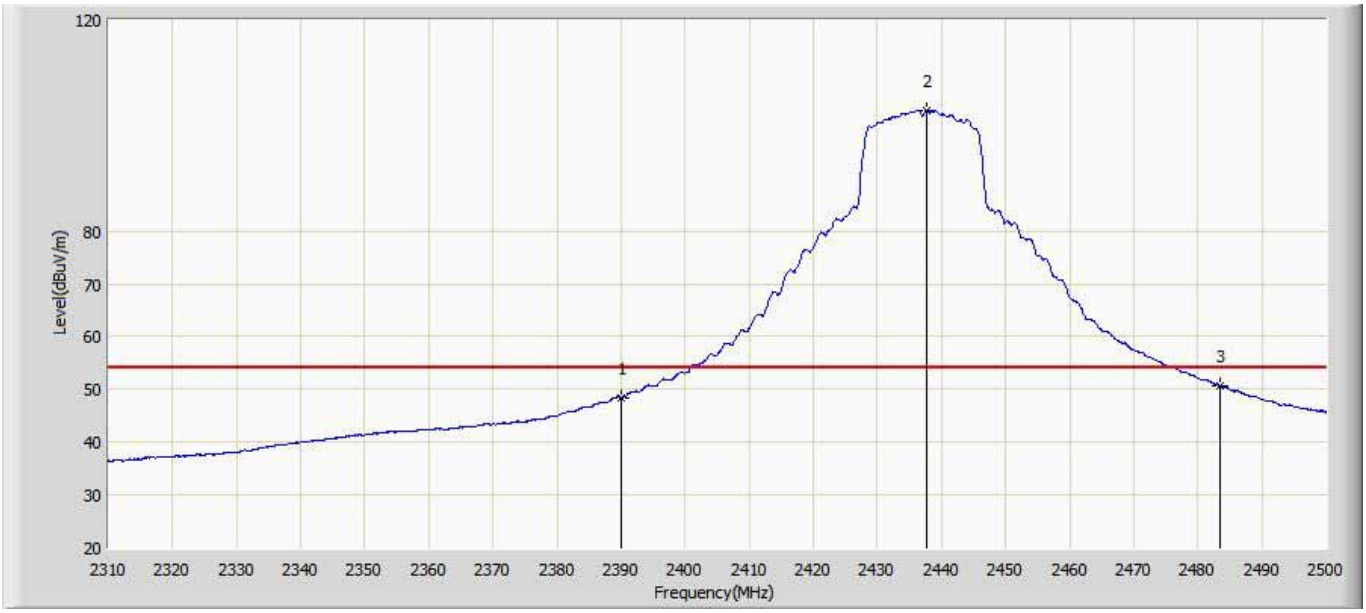
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	36.515	7.467	-17.485	54.000	29.048	AV
2	*	2415.768	88.501	59.611	N/A	N/A	28.890	AV

Engineer: Karl	
Site: AC5	Time: 2017/10/27 - 10:59
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2417MHz by 802.11N20 ant 0+1	



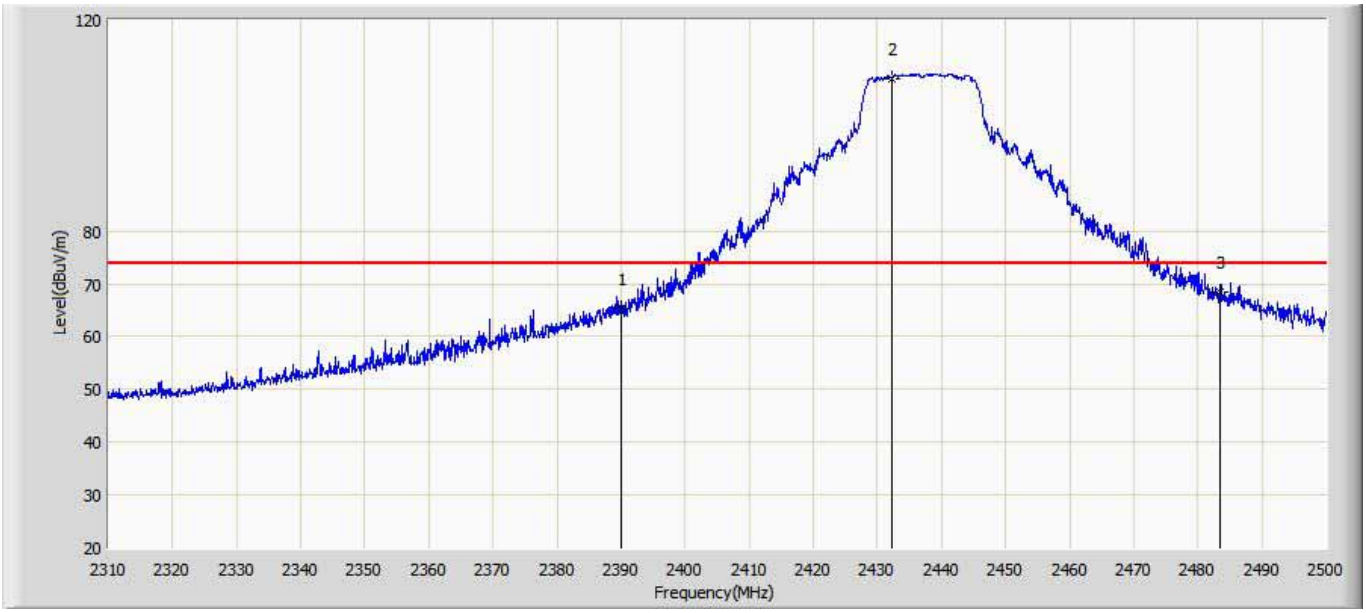
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.991	21.943	-23.009	74.000	29.048	PK
2	*	2413.896	102.768	73.888	N/A	N/A	28.880	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 3:Transmit at2437MHz by802.11n20 ant 0+1	



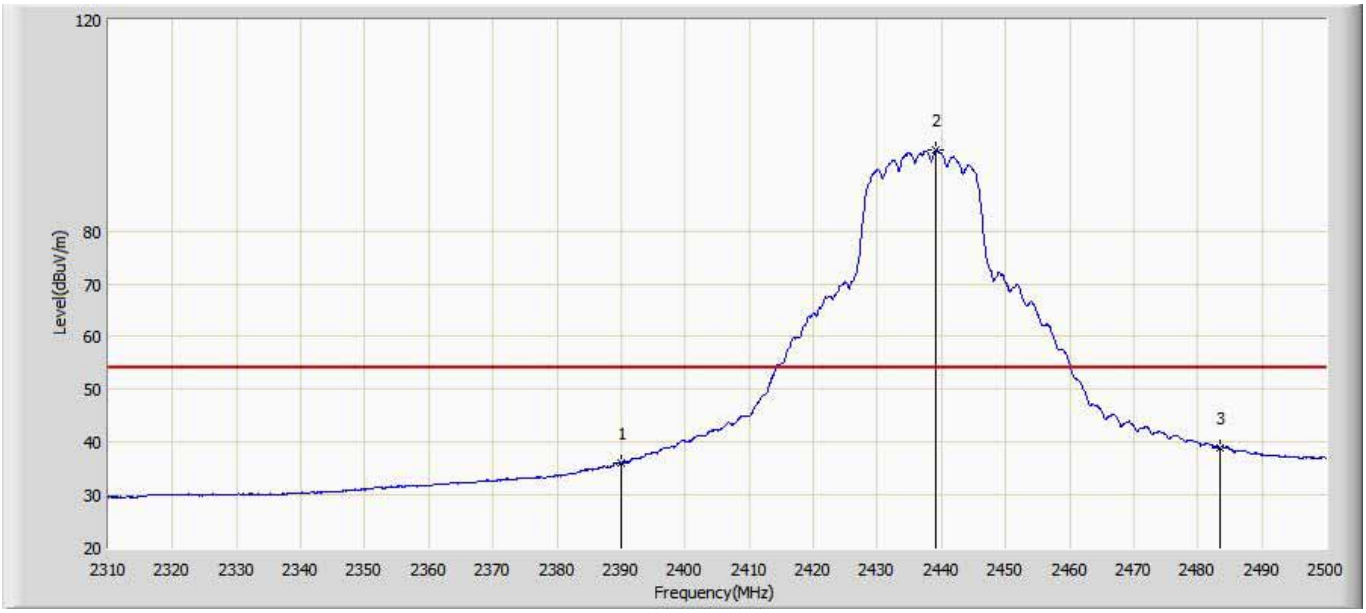
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	48.462	19.414	-5.538	54.000	29.048	AV
2	*	2437.775	102.892	73.953	N/A	N/A	28.939	AV
3		2483.500	50.742	20.257	-3.258	54.000	30.484	AV

Engineer: Karl	
Site: AC5	Time: 2017/09/19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 3:Transmit at2437MHz by802.11n20 ant 0+1	



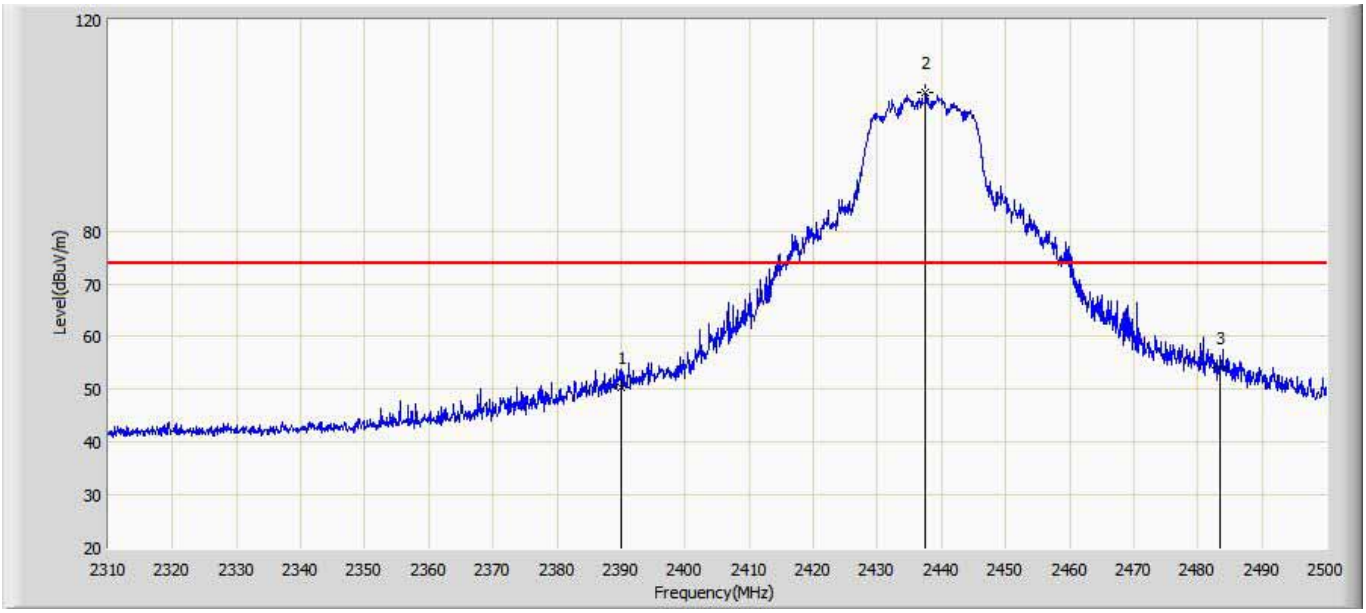
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	65.357	36.309	-8.643	74.000	29.048	PK
2	*	2432.360	108.944	79.993	N/A	N/A	28.951	PK
3		2483.500	68.543	38.059	-5.457	74.000	30.484	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 3:Transmit at2437MHz by802.11n20 ant 0+1	



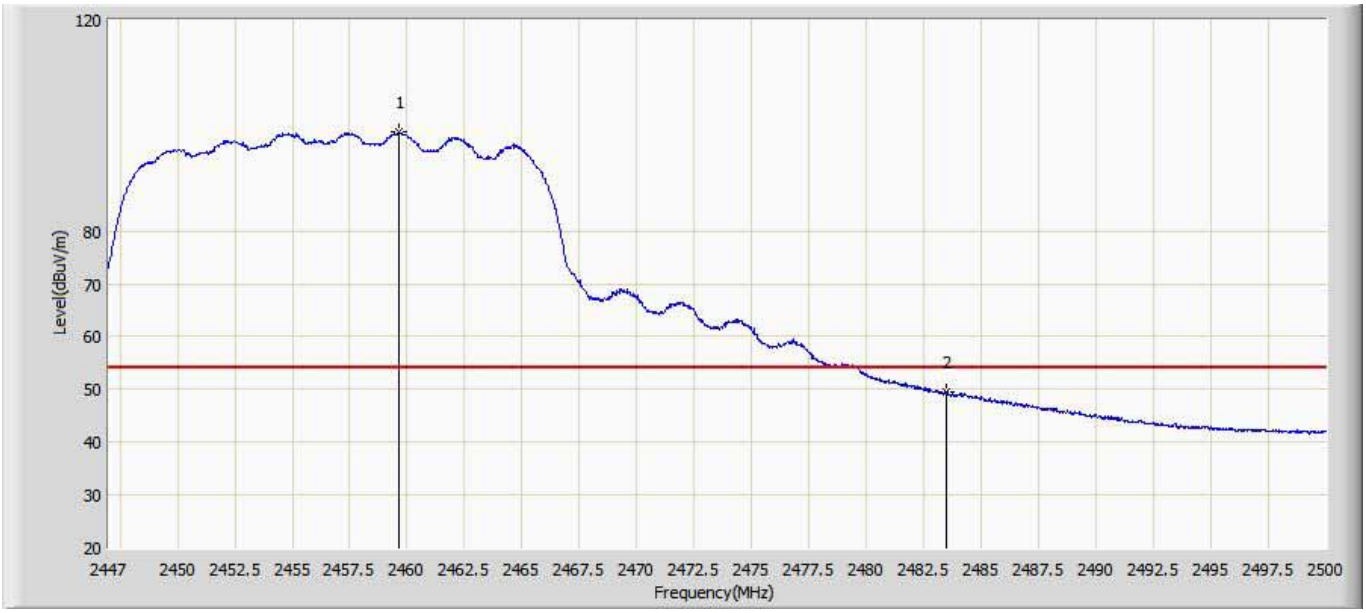
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	35.932	6.884	-18.068	54.000	29.048	AV
2	*	2439.200	95.381	66.445	N/A	N/A	28.936	AV
3		2483.500	38.965	8.481	-15.035	54.000	30.484	AV

Engineer: Karl	
Site: AC5	Time: 2017/09/19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 3:Transmit at2437MHz by802.11n20 ant 0+1	



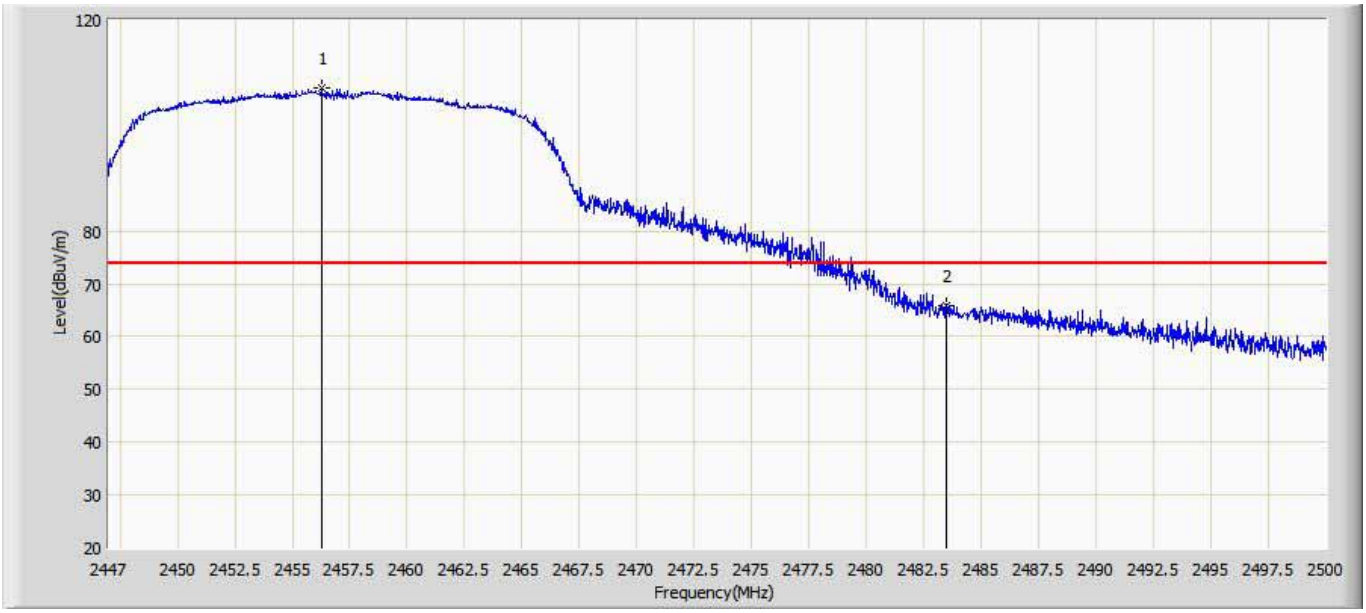
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.361	21.313	-23.639	74.000	29.048	PK
2	*	2437.490	106.231	77.292	N/A	N/A	28.939	PK
3		2483.500	54.188	23.704	-19.812	74.000	30.484	PK

Engineer: Karl	
Site: AC5	Time: 2017/10/27 - 11:00
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2457MHz by 802.11N20 ant 0+1	



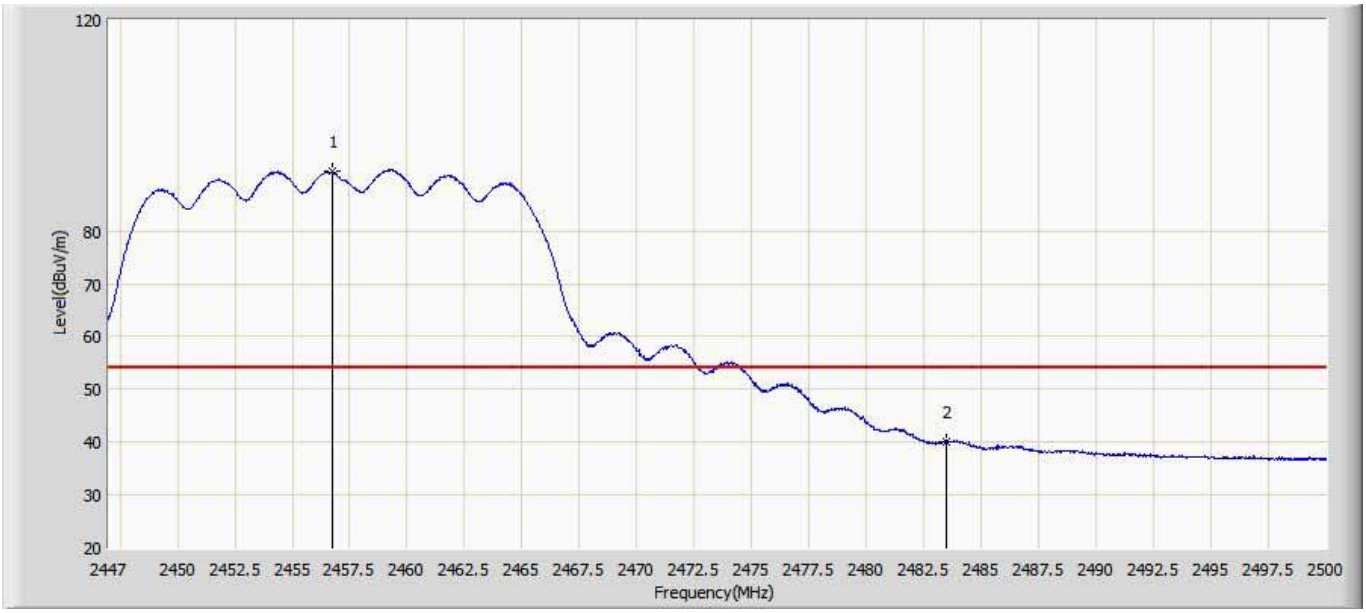
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2459.667	98.752	69.725	N/A	N/A	29.027	AV
2		2483.500	49.420	18.936	-4.580	54.000	30.484	AV

Engineer: Karl	
Site: AC5	Time: 2017/10/27 - 11:02
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2457MHz by 802.11N20 ant 0+1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2456.275	107.030	78.027	N/A	N/A	29.003	PK
2		2483.500	65.847	35.363	-8.153	74.000	30.484	PK

Engineer: Karl	
Site: AC5	Time: 2017/10/27 - 11:03
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2457MHz by 802.11N20 ant 0+1	

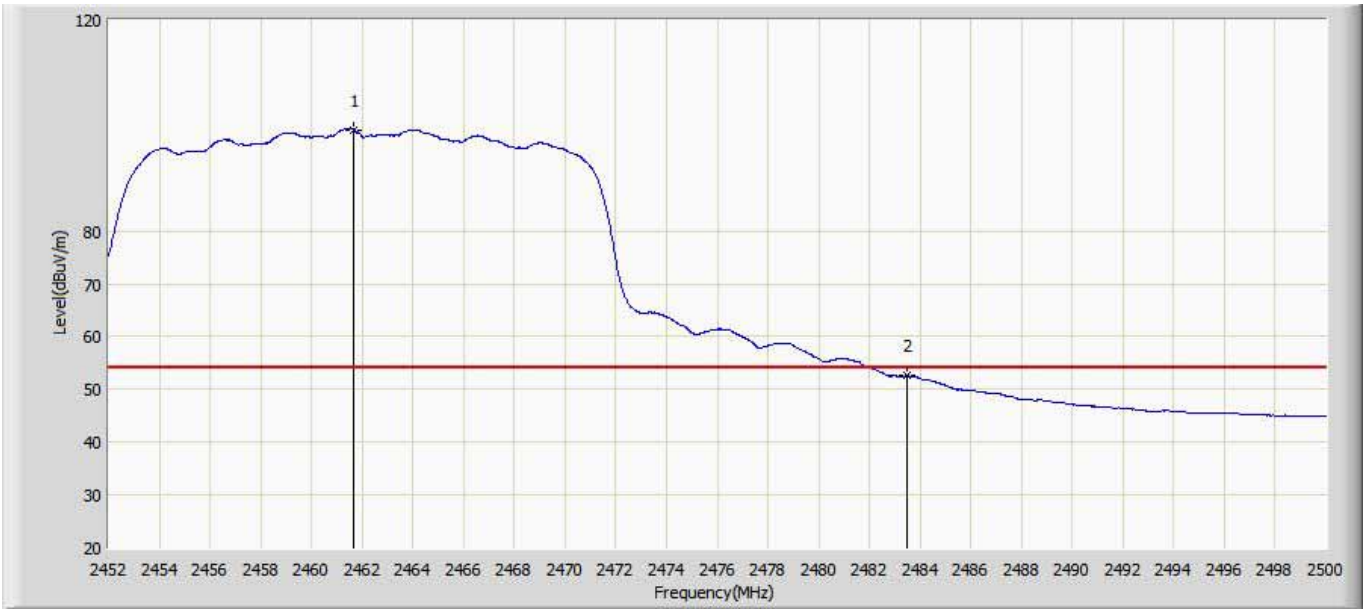


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2456.752	91.275	62.268	N/A	N/A	29.007	AV
2		2483.500	40.103	9.619	-13.897	54.000	30.484	AV

Engineer: Karl	
Site: AC5	Time: 2017/10/27 - 11:04
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2457MHz by 802.11N20 ant 0+1	

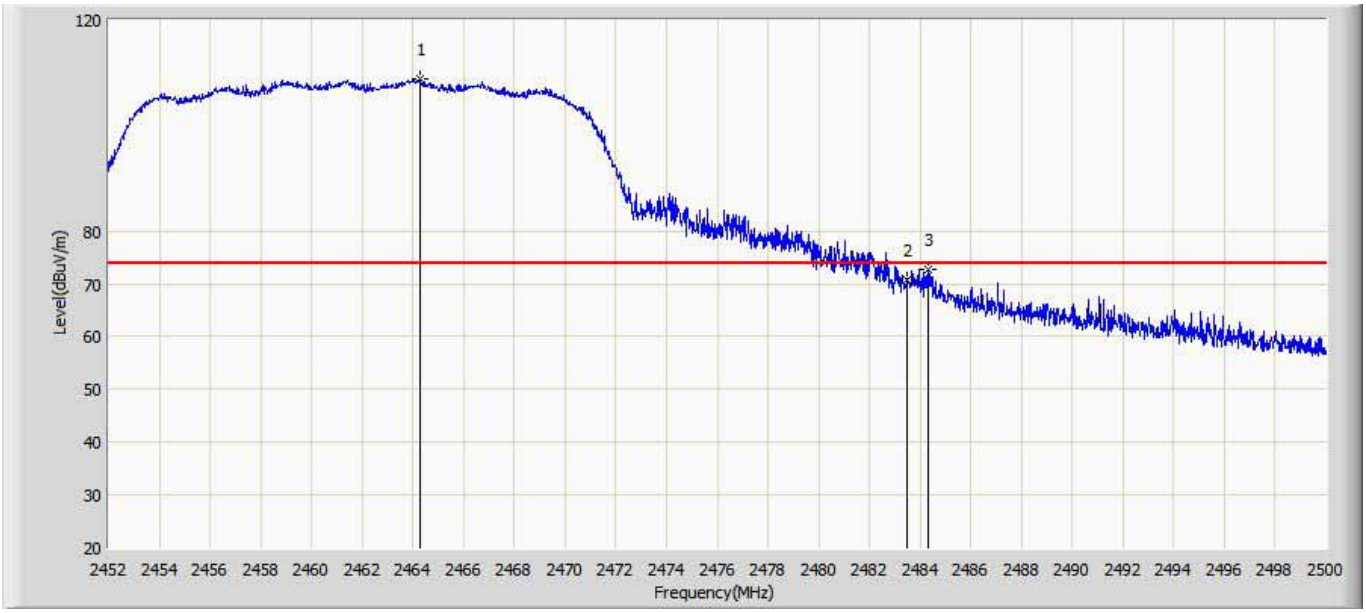
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2456.275	101.529	72.526	N/A	N/A	29.003	PK
2		2483.500	52.008	21.524	-21.992	74.000	30.484	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 3:Transmit at2462MHz by802.11n20 ant 0+1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2461.672	99.180	70.138	N/A	N/A	29.042	AV
2		2483.500	52.558	22.074	-1.442	54.000	30.484	AV

Engineer: Karl	
Site: AC5	Time: 2017/09/19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 3:Transmit at2462MHz by802.11n20 ant 0+1	

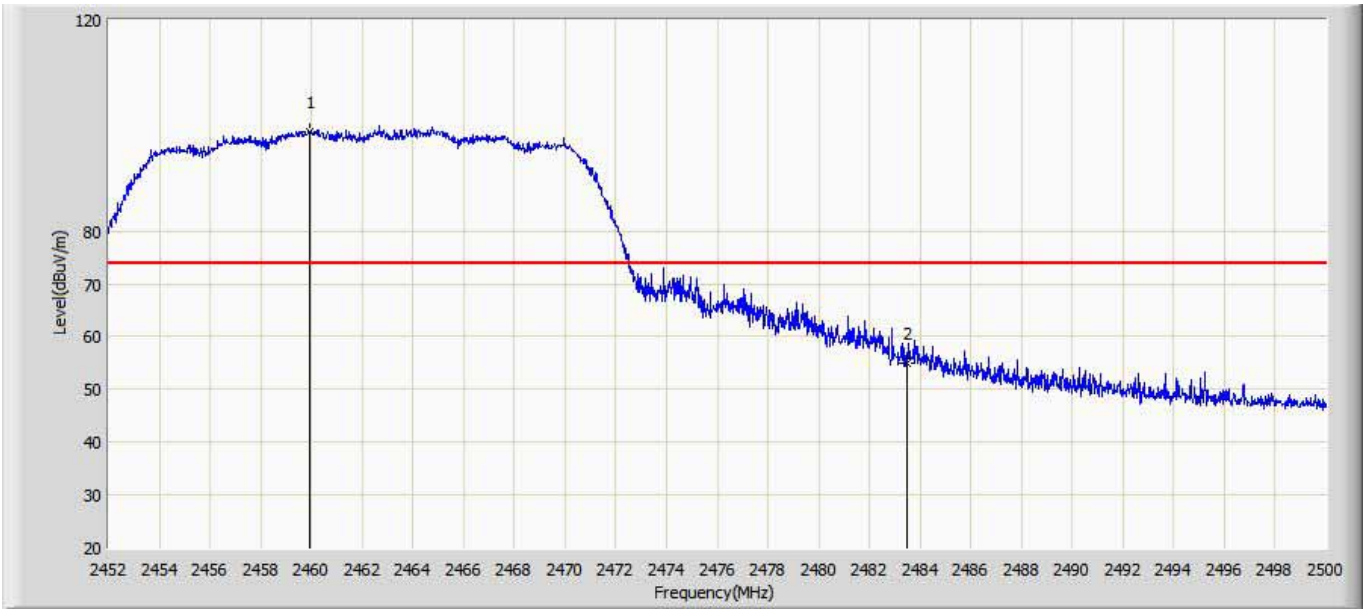


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2464.264	108.711	79.470	N/A	N/A	29.241	PK
2		2483.500	70.649	40.165	-3.351	74.000	30.484	PK
3		2484.328	72.729	42.252	-1.271	74.000	30.477	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 3:Transmit at2462MHz by802.11n20 ant 0+1	

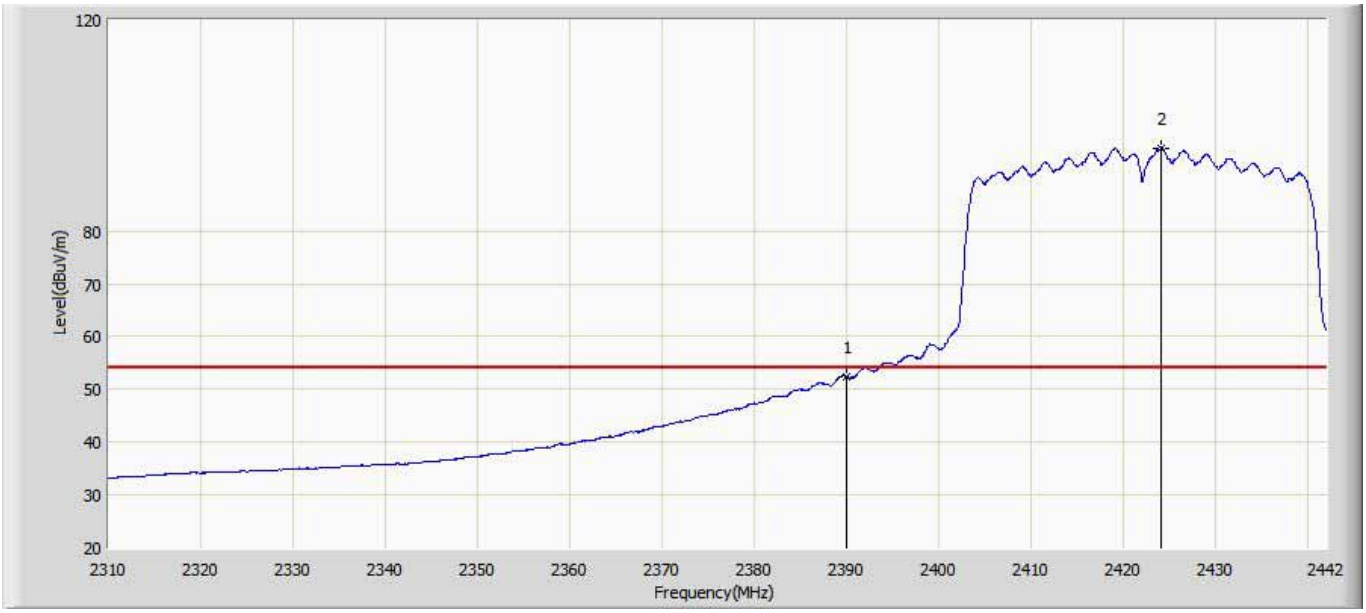
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2462.416	89.484	60.404	N/A	N/A	29.080	AV
2		2483.500	41.681	11.197	-12.319	54.000	30.484	AV

Engineer: Karl	
Site: AC5	Time: 2017/09/19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 3:Transmit at2462MHz by802.11n20 ant 0+1	



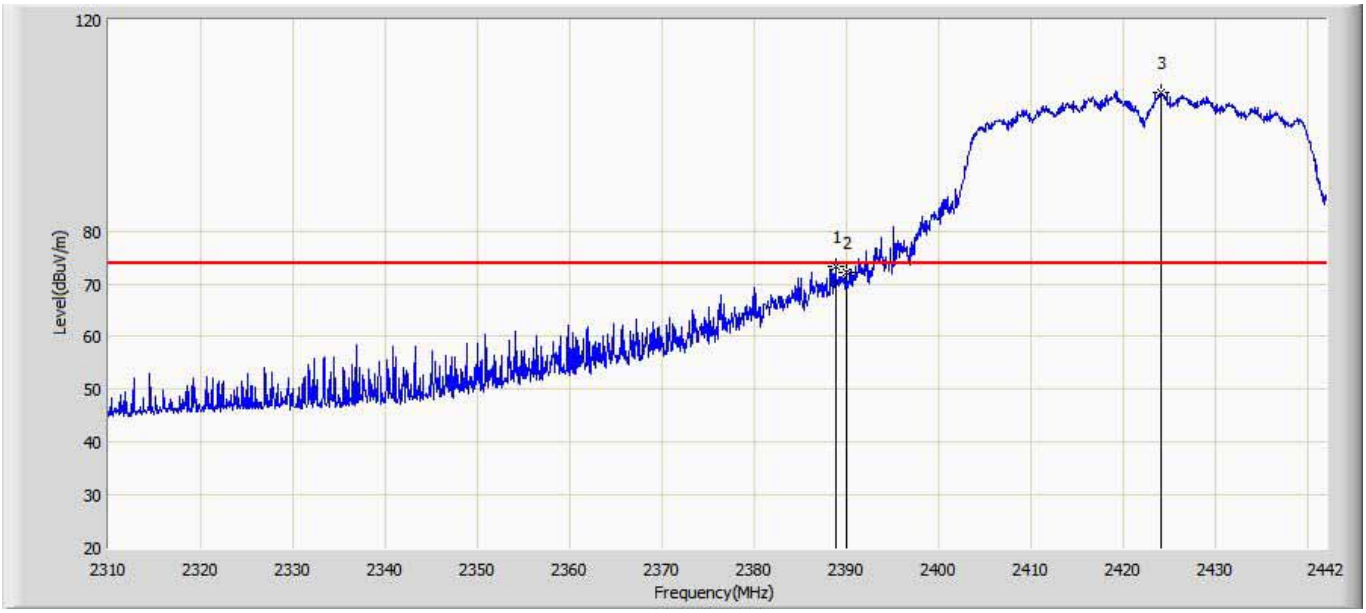
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2459.944	98.833	69.804	N/A	N/A	29.029	PK
2		2483.500	54.890	24.406	-19.110	74.000	30.484	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/1
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 4:Transmit at2422MHz by802.11n40 ant 0+1	



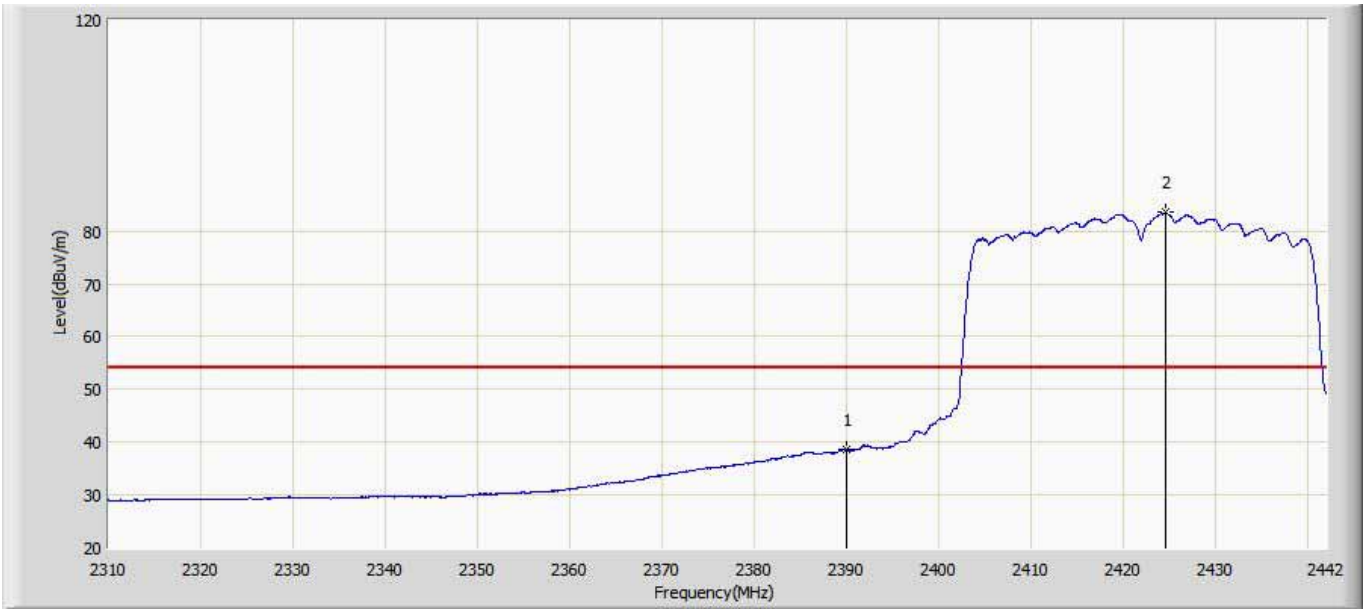
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	52.405	23.357	-1.595	54.000	29.048	AV
2	*	2424.180	95.676	66.738	N/A	N/A	28.938	AV

Engineer: Karl	
Site: AC5	Time: 2017/09/19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 4:Transmit at2422MHz by802.11n40 ant 0+1	



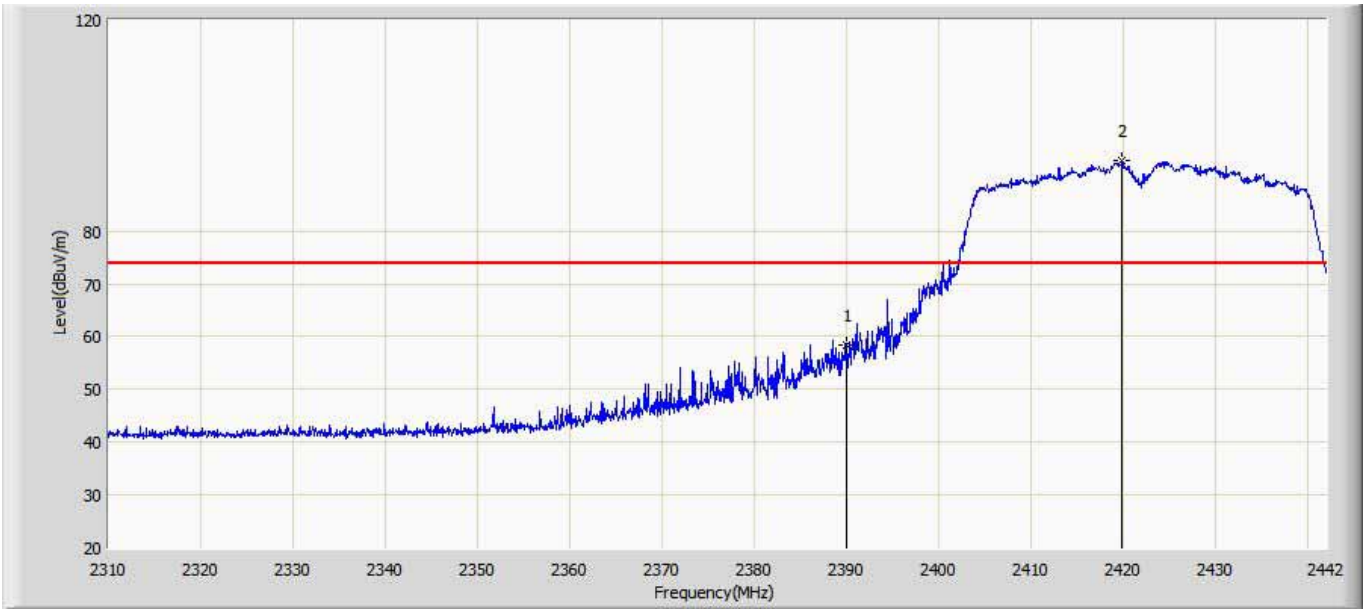
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2388.870	73.399	44.350	-0.601	74.000	29.049	PK
2		2390.000	72.184	43.136	-1.816	74.000	29.048	PK
3	*	2424.048	106.220	77.283	N/A	N/A	28.937	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 4:Transmit at2422MHz by802.11n40 ant 0+1	



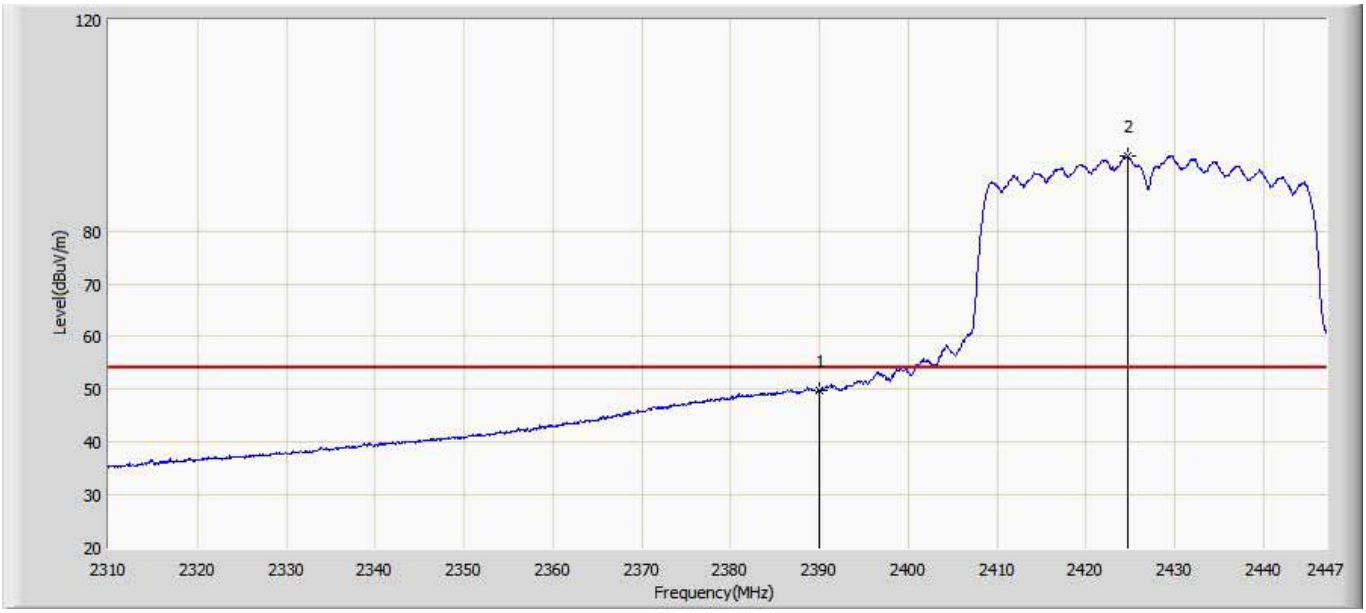
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	38.533	9.485	-15.467	54.000	29.048	AV
2	*	2424.576	83.484	54.544	N/A	N/A	28.940	AV

Engineer: Karl	
Site: AC5	Time: 2017/09/19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 4:Transmit at2422MHz by802.11n40 ant 0+1	



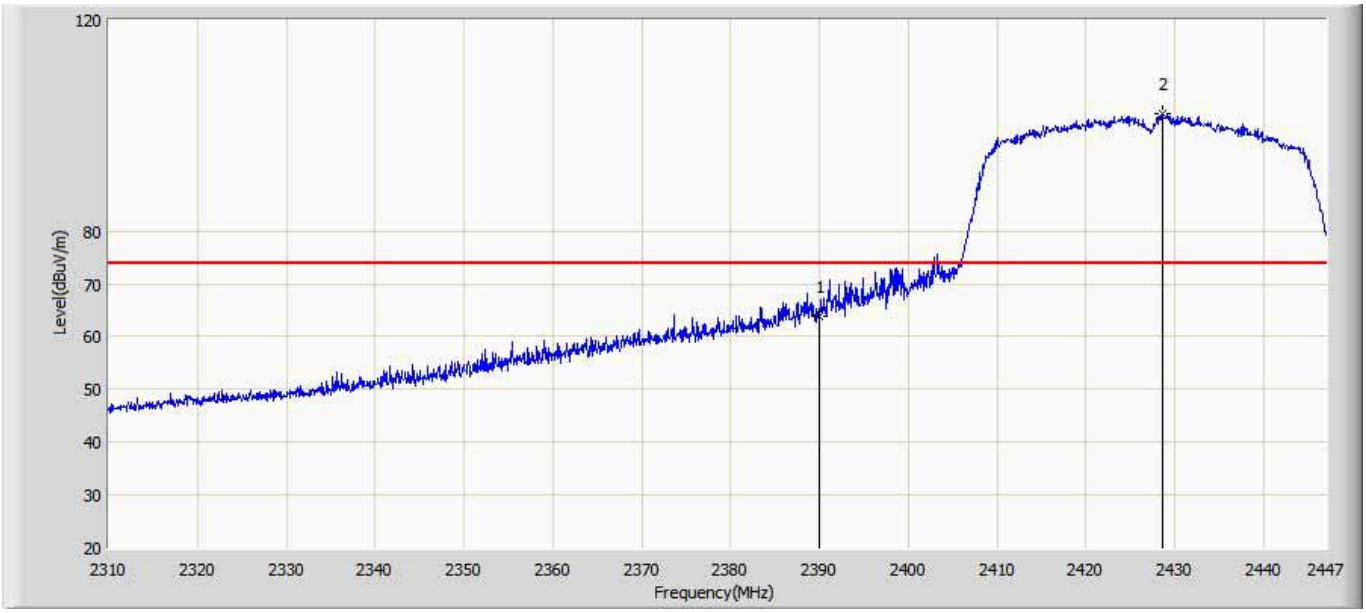
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	58.419	29.371	-15.581	74.000	29.048	PK
2	*	2419.890	93.480	64.566	N/A	N/A	28.914	PK

Engineer: Karl	
Site: AC5	Time: 2017/10/27 - 11:06
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2427MHz by 802.11N40 ant 0+1	



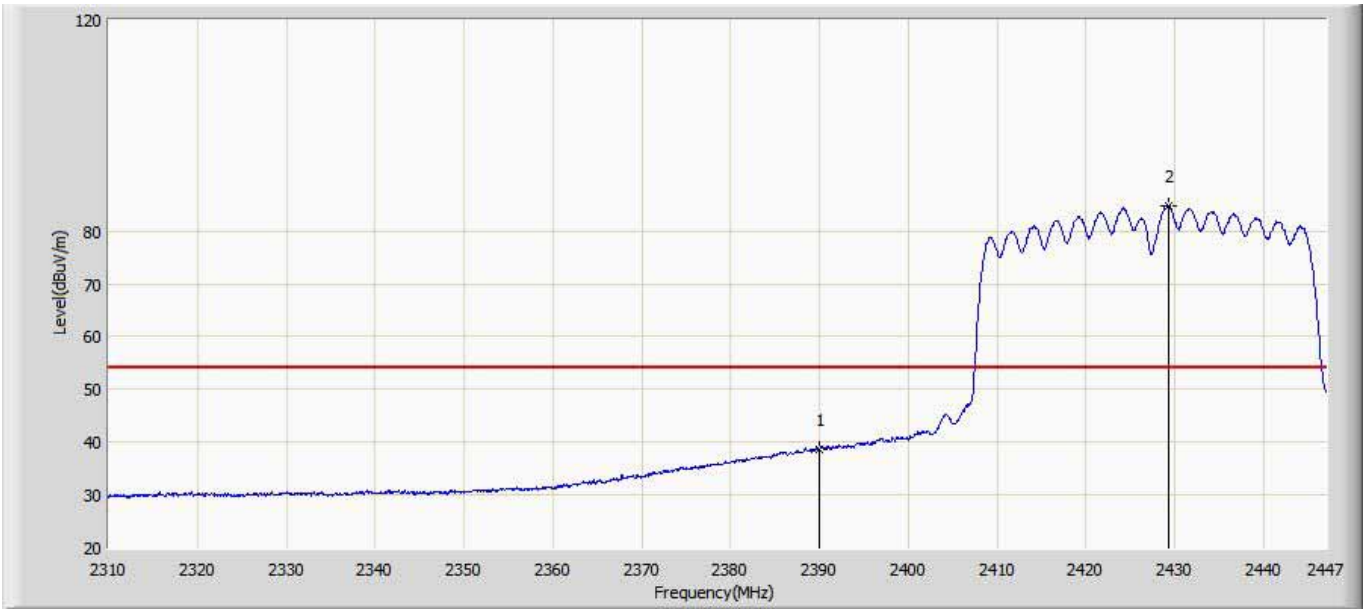
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	49.681	20.633	-4.319	54.000	29.048	AV
2	*	2424.738	94.158	65.217	N/A	N/A	28.941	AV

Engineer: Karl	
Site: AC5	Time: 2017/10/27 - 11:12
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2427MHz by 802.11N40 ant 0+1	



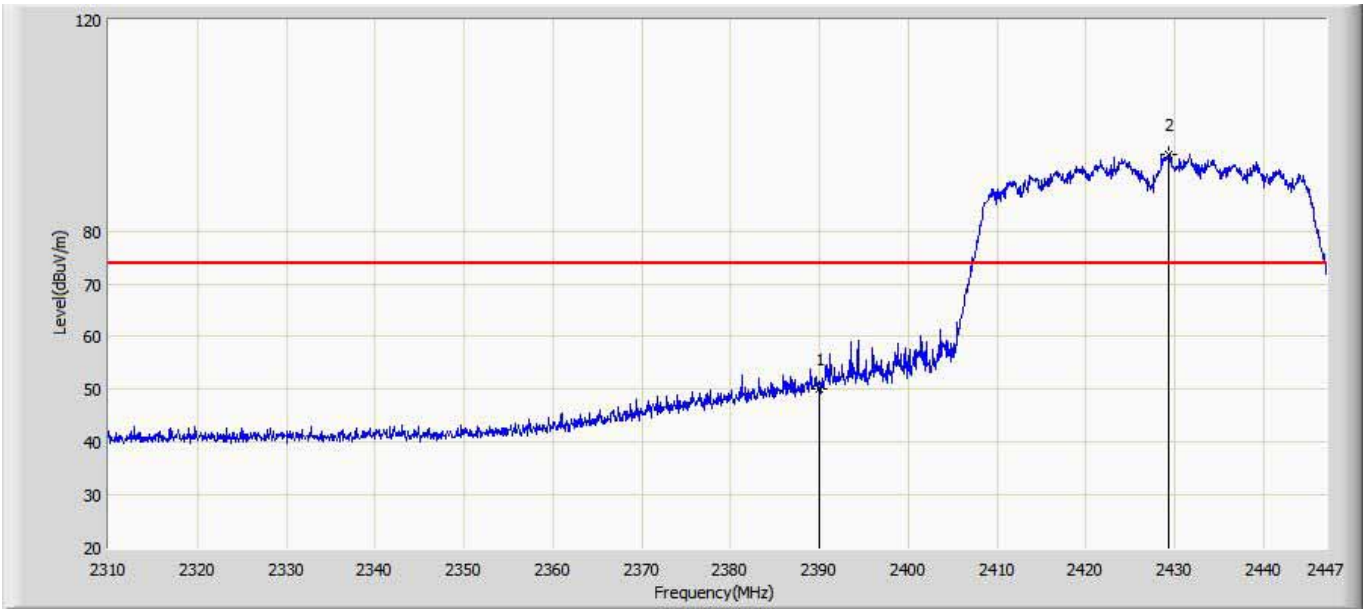
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	63.867	34.819	-10.133	74.000	29.048	PK
2	*	2428.573	102.236	73.277	N/A	N/A	28.959	PK

Engineer: Karl	
Site: AC5	Time: 2017/10/27 - 11:14
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2427MHz by 802.11N40 ant 0+1	



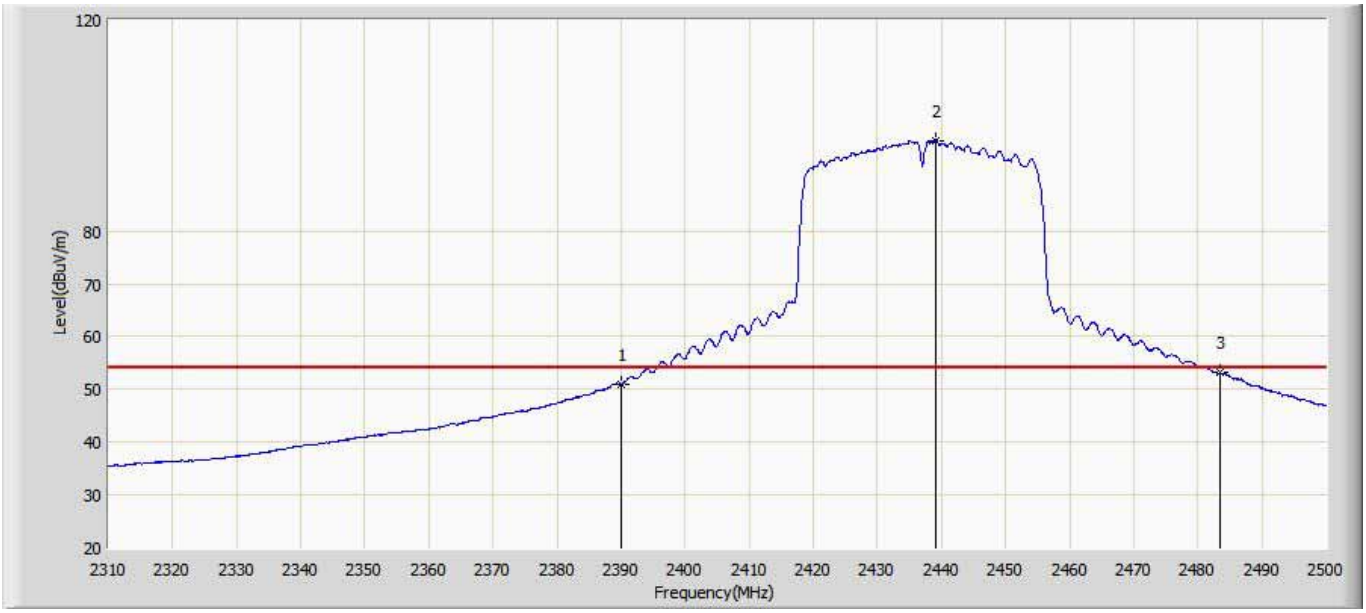
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	38.691	9.643	-15.309	54.000	29.048	AV
2	*	2429.327	84.831	55.874	N/A	N/A	28.957	AV

Engineer: Karl	
Site: AC5	Time: 2017/10/27 - 11:20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2427MHz by 802.11N40 ant 0+1	



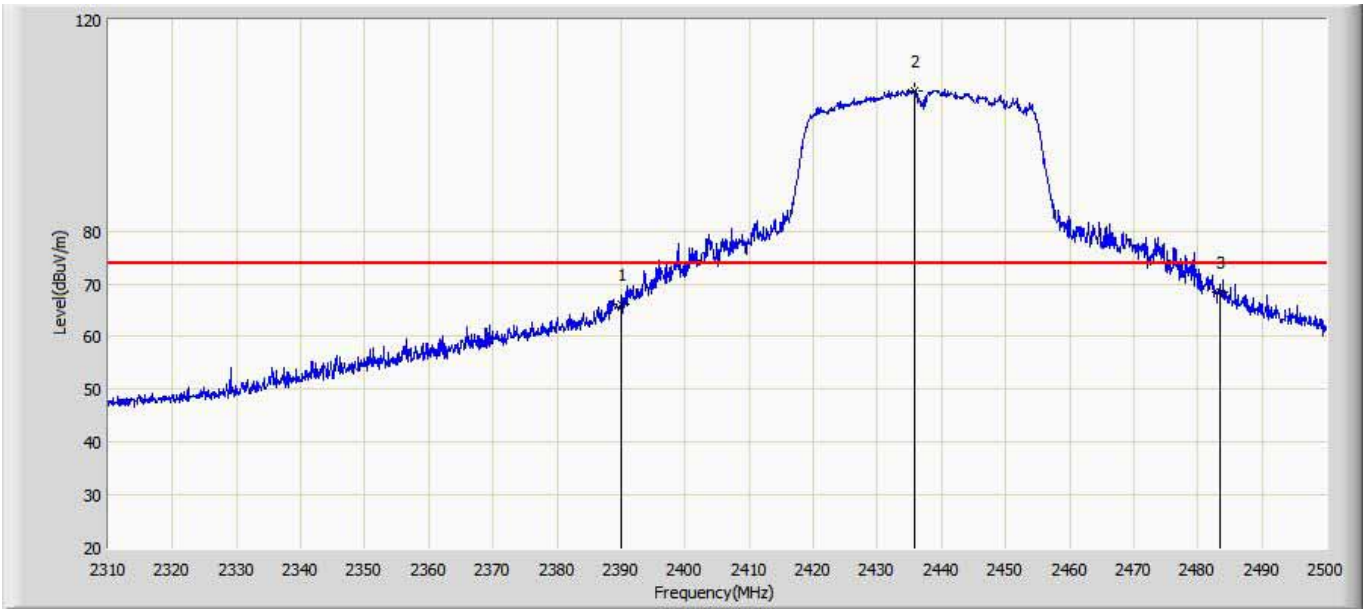
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.202	21.154	-23.798	74.000	29.048	PK
2	*	2429.259	94.533	65.576	N/A	N/A	28.957	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 4:Transmit at2437MHz by802.11n40 ant 0+1	



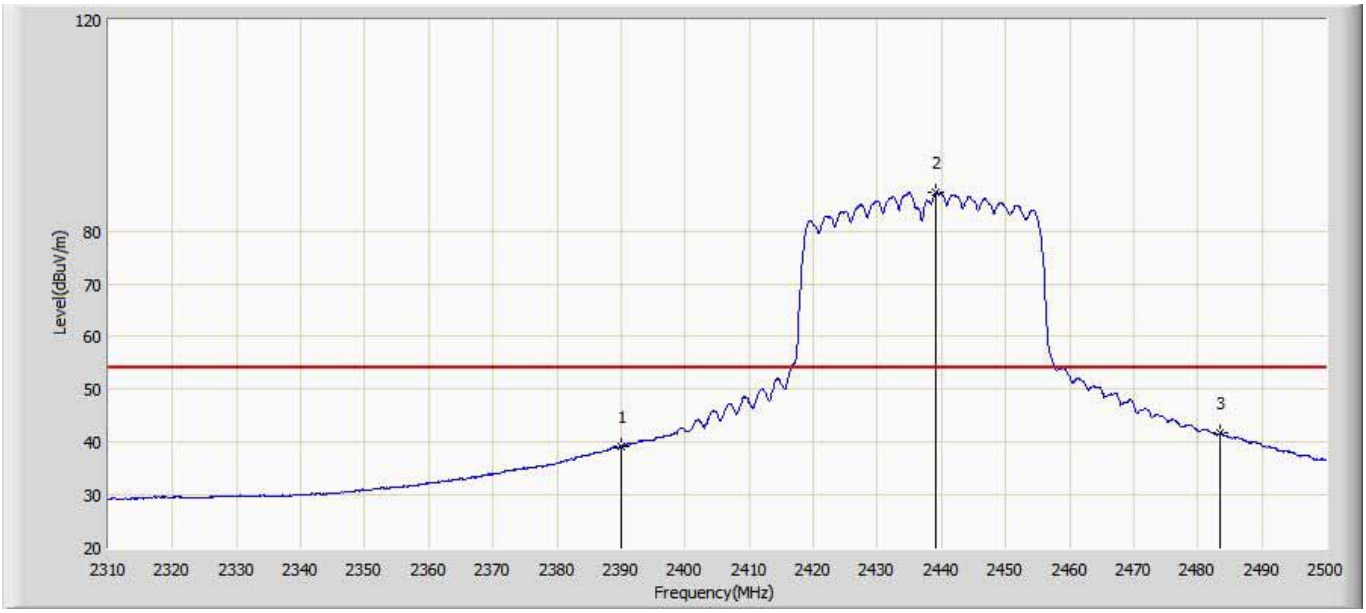
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.973	21.925	-3.027	54.000	29.048	AV
2	*	2439.200	97.159	68.223	N/A	N/A	28.936	AV
3		2483.500	53.132	22.648	-0.868	54.000	30.484	AV

Engineer: Karl	
Site: AC5	Time: 2017/09/19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 4:Transmit at2437MHz by802.11n40 ant 0+1	



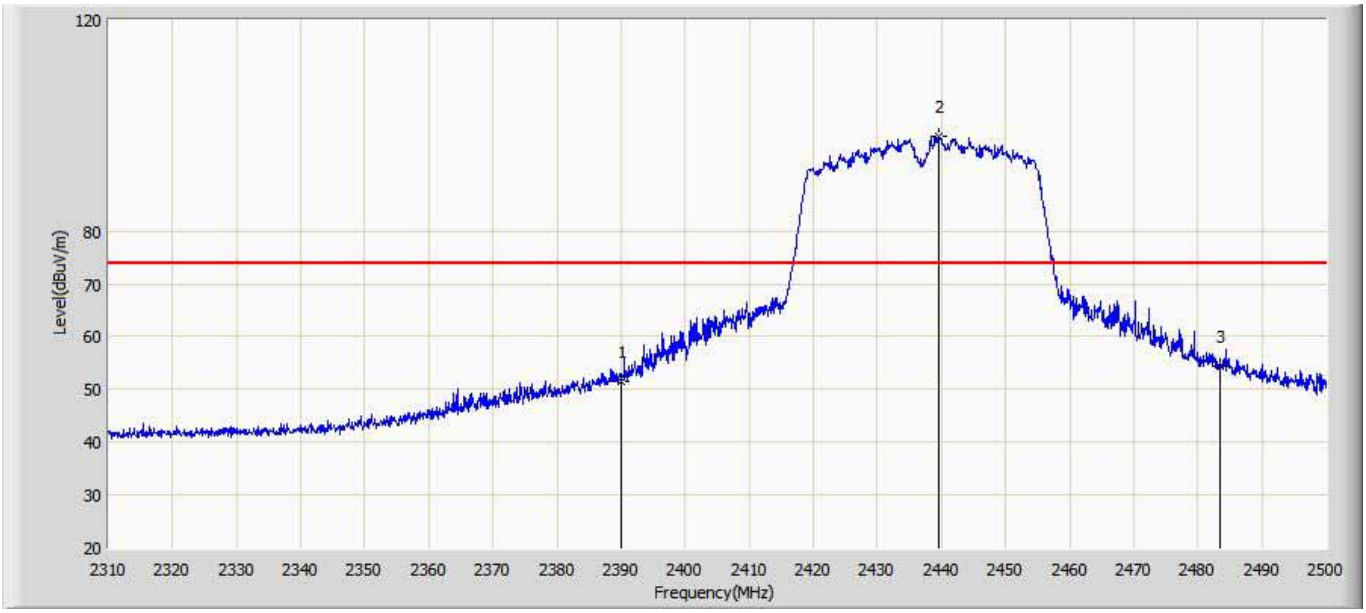
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	66.146	37.098	-7.854	74.000	29.048	PK
2	*	2435.685	106.639	77.696	N/A	N/A	28.943	PK
3		2483.500	68.403	37.918	-5.597	74.000	30.484	PK

Engineer: Karl	
Site: AC6	Time: 2017/09/19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 4:Transmit at2437MHz by802.11n40 ant 0+1	



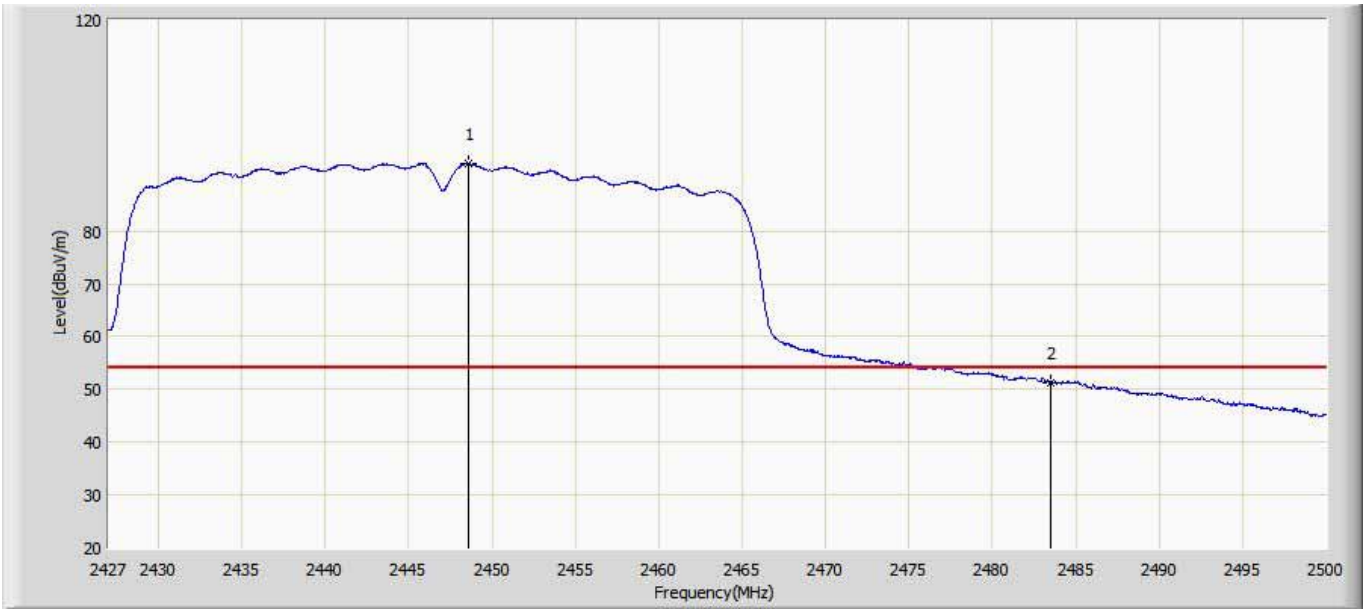
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	39.131	10.083	-14.869	54.000	29.048	AV
2	*	2439.200	87.316	58.380	N/A	N/A	28.936	AV
3		2483.500	41.656	11.172	-12.344	54.000	30.484	AV

Engineer: Karl	
Site: AC5	Time: 2017/09/19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 4:Transmit at2437MHz by802.11n40 ant 0+1	



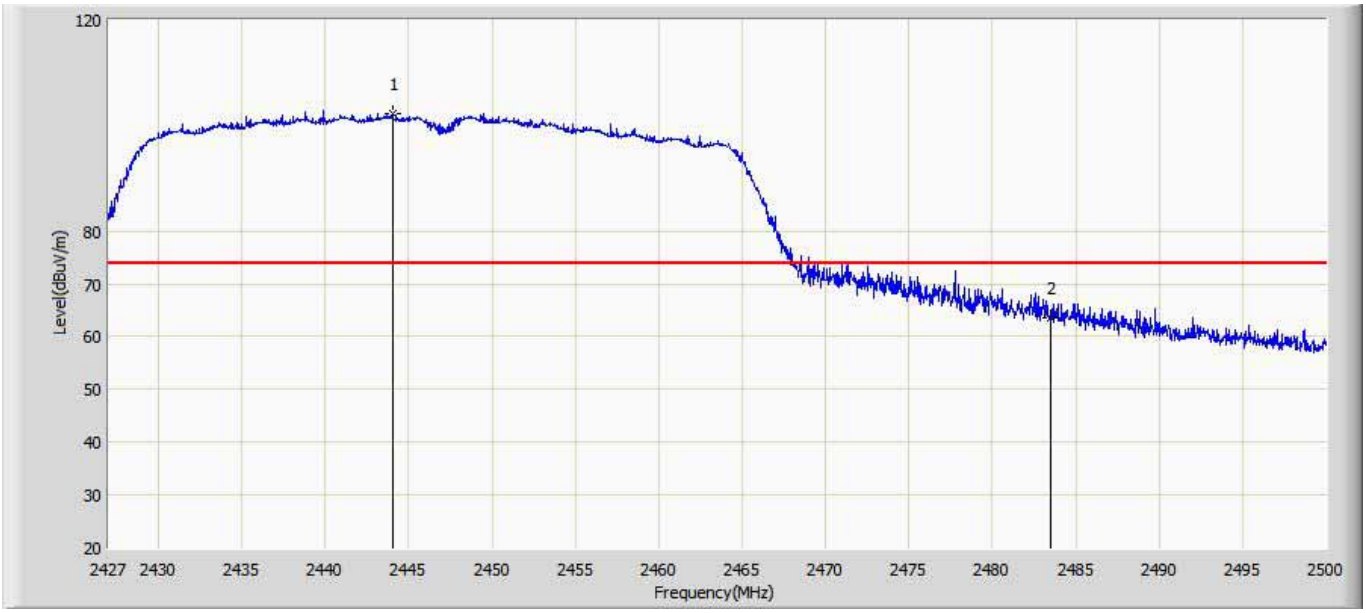
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	51.648	22.600	-22.352	74.000	29.048	PK
2	*	2439.485	97.997	69.062	N/A	N/A	28.935	PK
3		2483.500	54.313	23.829	-19.687	74.000	30.484	PK

Engineer: Karl	
Site: AC5	Time: 2017/10/27 - 11:20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2447MHz by 802.11N40 ant 0+1	



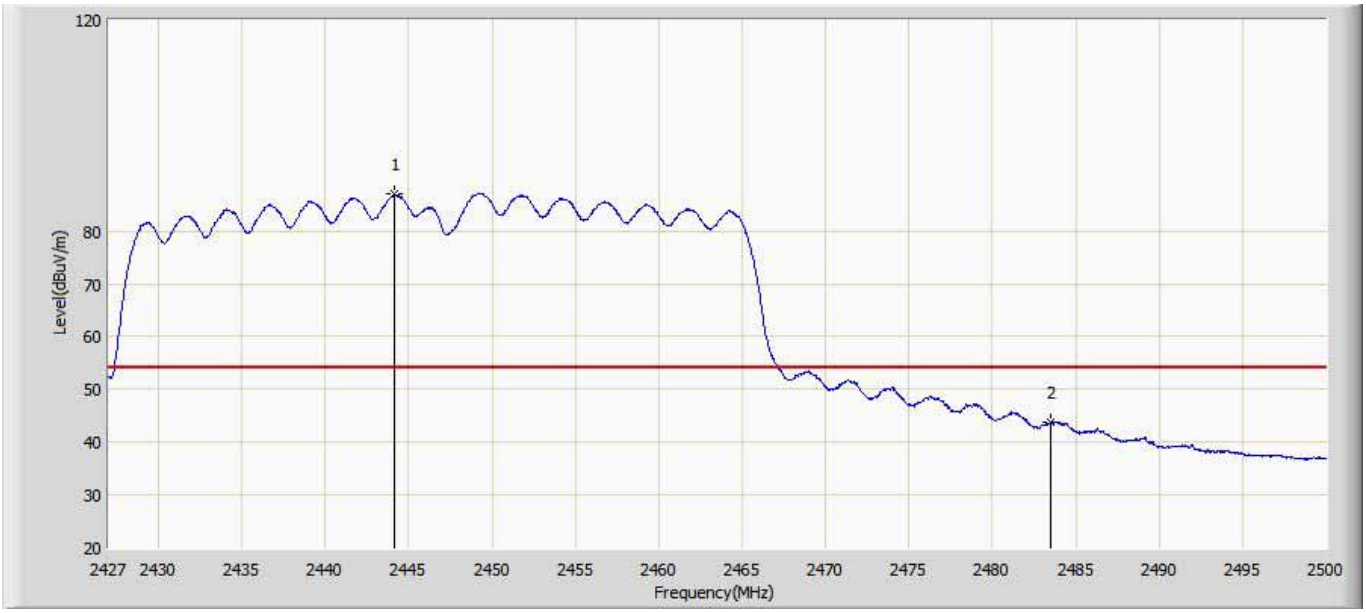
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2448.608	92.903	63.954	N/A	N/A	28.949	AV
2		2483.500	51.212	20.727	-2.788	54.000	30.484	AV

Engineer: Karl	
Site: AC5	Time: 2017/10/27 - 11:23
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2447MHz by 802.11N40 ant 0+1	



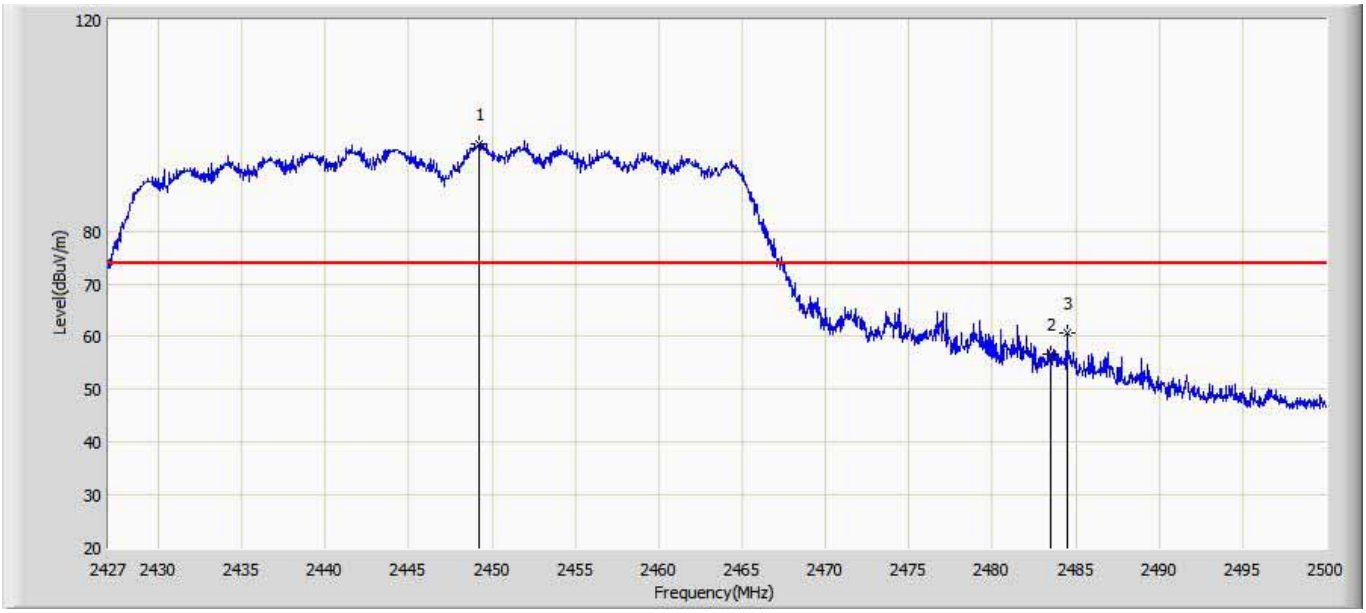
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2444.009	102.202	73.277	N/A	N/A	28.925	PK
2		2483.500	63.462	32.978	-10.538	74.000	30.484	PK

Engineer: Karl	
Site: AC5	Time: 2017/10/27 - 11:26
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2447MHz by 802.11N40 ant 0+1	



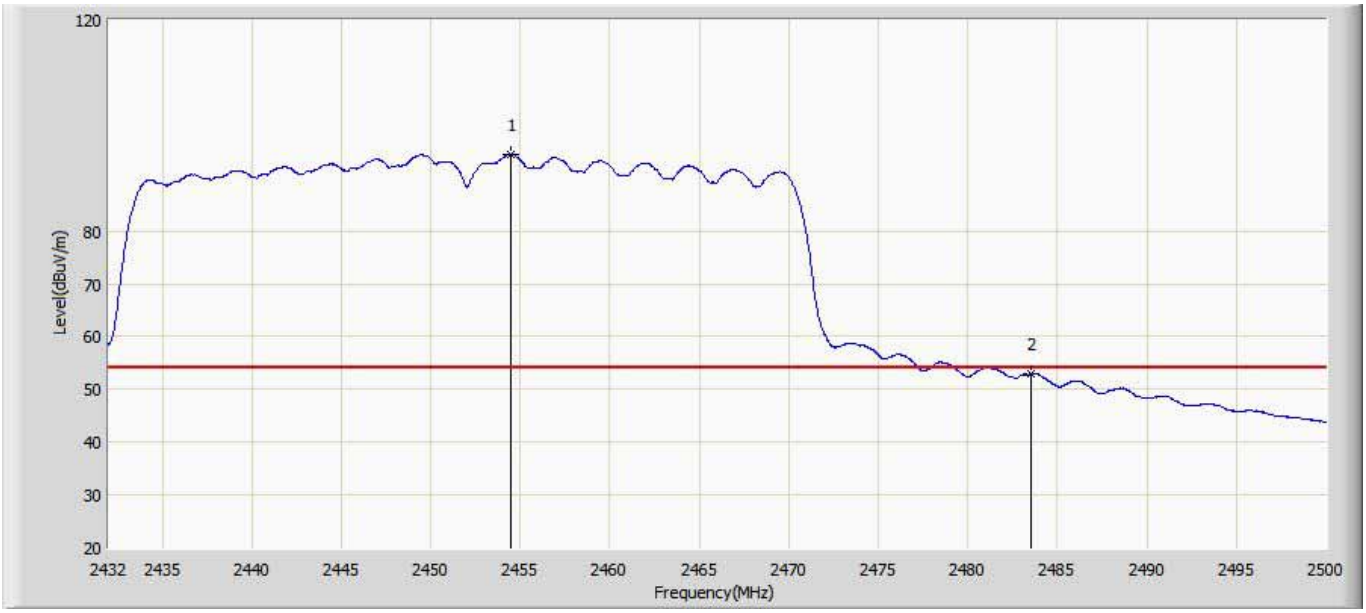
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2444.155	86.971	58.046	N/A	N/A	28.925	AV
2		2483.500	43.728	13.244	-10.272	54.000	30.484	AV

Engineer: Karl	
Site: AC5	Time: 2017/10/27 - 11:27
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2447MHz by 802.11N40 ant 0+1	



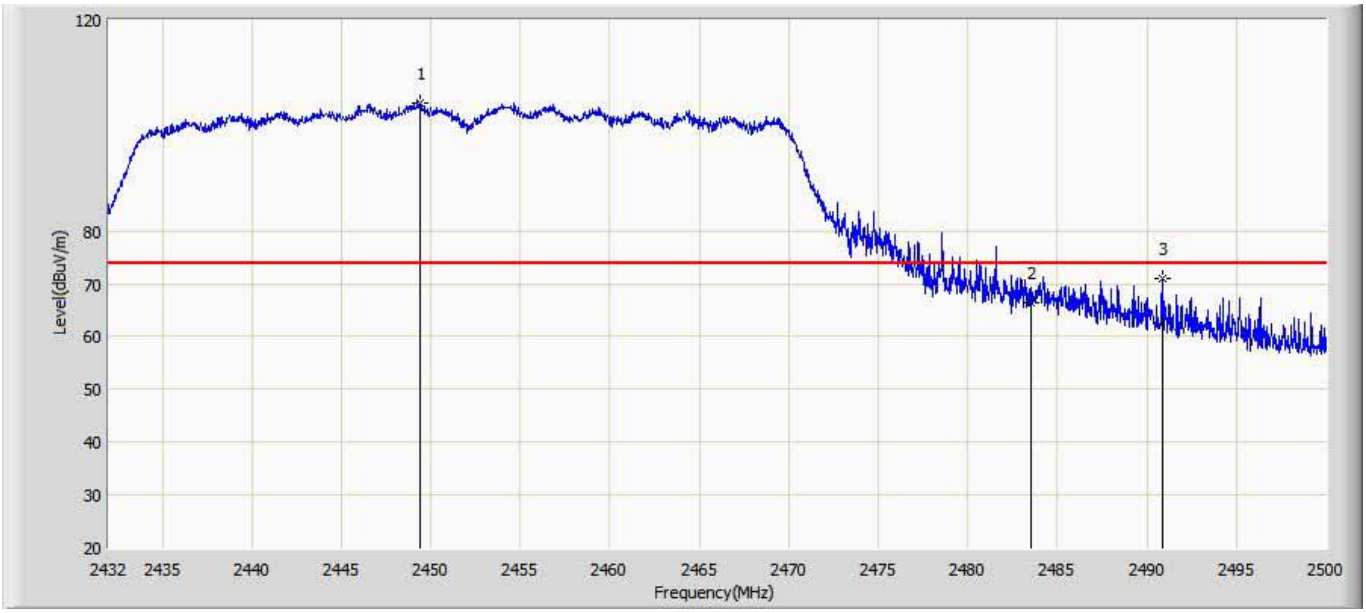
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2449.192	96.591	67.638	N/A	N/A	28.953	PK
2		2483.500	56.700	26.216	-17.300	74.000	30.484	PK
3		2484.451	60.695	30.219	-13.305	74.000	30.476	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 4:Transmit at2452MHz by802.11n40 ant 0+1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2454.508	94.410	65.419	N/A	N/A	28.991	AV
2		2483.500	52.929	22.445	-1.071	54.000	30.484	AV

Engineer: Karl	
Site: AC5	Time: 2017/09/19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 4:Transmit at2452MHz by802.11n40 ant 0+1	

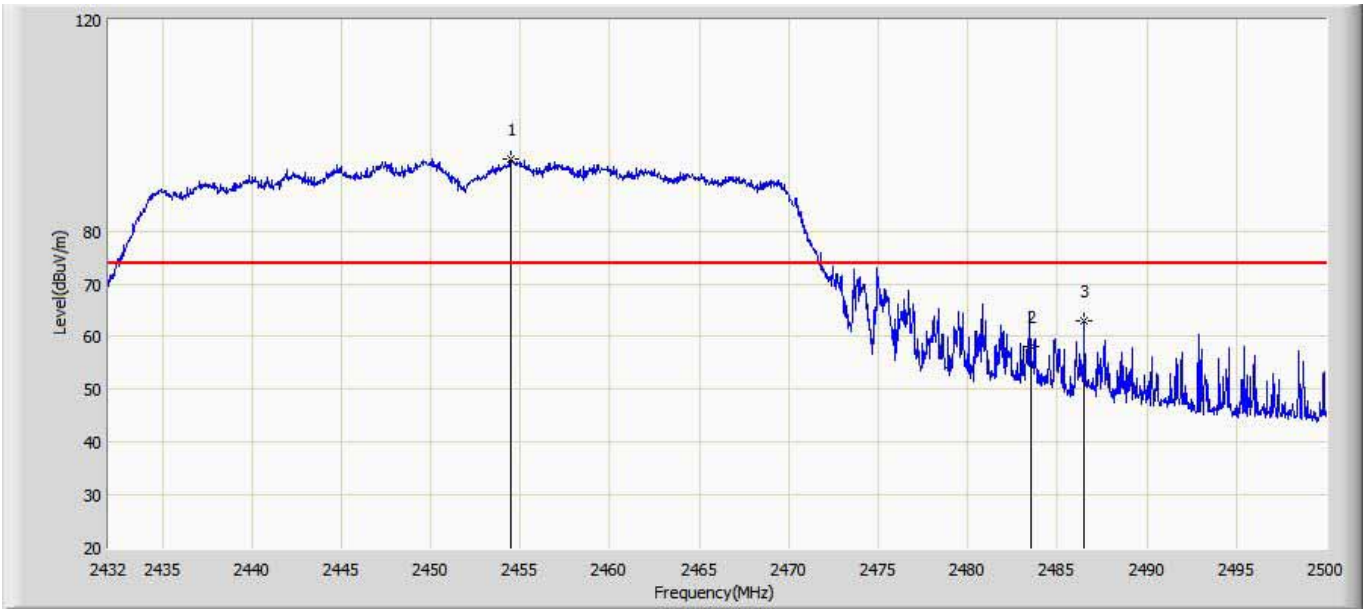


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2449.442	104.341	75.386	N/A	N/A	28.955	PK
2		2483.500	66.465	35.981	-7.535	74.000	30.484	PK
3		2490.854	70.989	40.571	-3.011	74.000	30.418	PK

Engineer: Karl	
Site: AC5	Time: 2017/09/19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 4:Transmit at2452MHz by802.11n40 ant 0+1	

No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2449.850	82.438	53.480	N/A	N/A	28.958	AV
2		2483.500	40.280	9.796	-13.720	54.000	30.484	AV

Engineer: Karl	
Site: AC5	Time: 2017/09/19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power: AC 120V/60Hz
Note: Mode 4:Transmit at2452MHz by802.11n40 ant 0+1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2454.440	93.553	64.563	N/A	N/A	28.990	PK
2		2483.500	58.078	27.593	-15.922	74.000	30.484	PK
3		2486.502	62.876	32.419	-11.124	74.000	30.457	PK

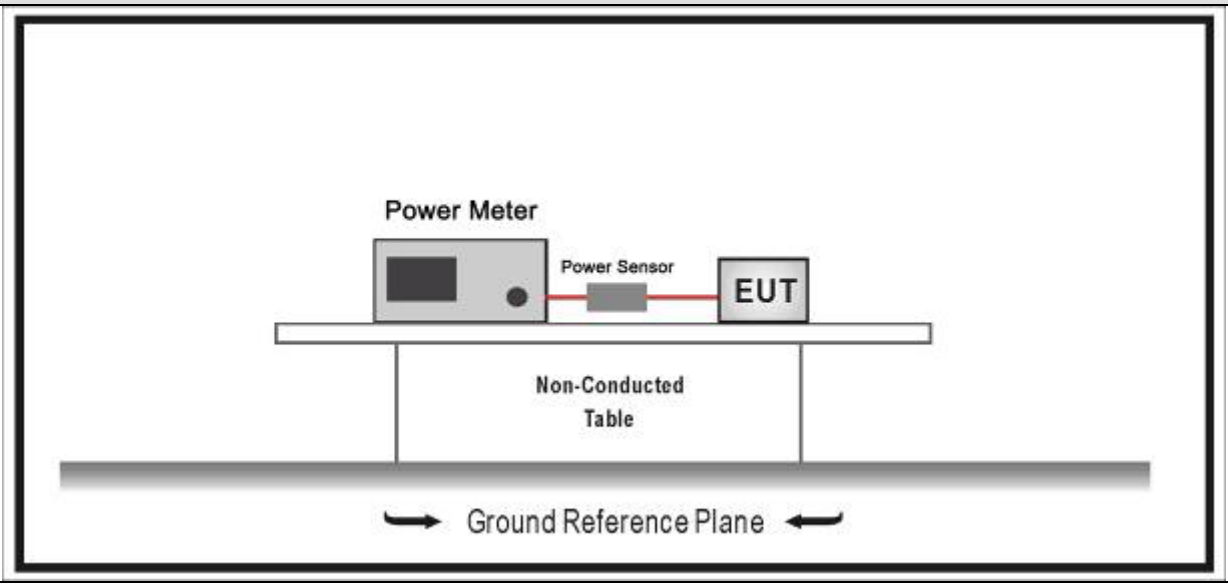
6. Fundamental emission output power

6.1. Test Equipment

Fundamental emission output power/ TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2017.01.03	2018.01.02
Spectrum Analyzer	Agilent	N9010A	MY48030494	2017.02.04	2018.02.03
Wideband Peak Power Meter	Anritsu	ML2495A	0905006	2016.10.14	2017.10.13
Power Sensor	Anritsu	MA2411B	0846014	2016.10.14	2017.10.13
Temperature/Humidity Meter	zhicheng	ZC1-2	TR8-TH	2017.04.10	2018.04.09
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

6.2. Test Setup

Fundamental emission output power test setup



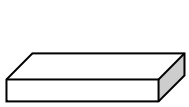
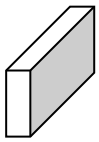
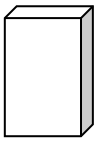
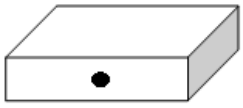
6.3. Limit

Fundamental emission output power Limit			
☒	G_{TX} ＜6dBi		P_{out}≤30dBm
☐	G_{TX} ＞6dBi		
	☐	Non-Fix point-point	P_{out}≤30-(G_{TX} -6)
	☐	Fix point-point	P_{out}≤30-[(G_{TX}-6)]/3
	☐	emits multiple directional beams but does not do emit multiple directional beams simultaneously	P_{out}≤30-[(G_{TX}-6)]/3
	☐	operates simultaneously on multiple directional beams using the same or different frequency channels	P_{out}≤30-[(G_{TX}-6)]/3+8dB
	☐	single directional beam	P_{out}≤30-[(G_{TX}-6)]/3
Note 1 : G_{TX} directional gain of transmitting antennas. Note 2 : P_{out} is maximum peak conducted output power .			

6.4. Test Procedure

Fundamental emission output power Test Method						
	References Rule				Chapter	Description
☒	ANSI C63.10				11.9	Fundamental emission output power
	☒	ANSI C63.10			11.9.1	Maximum peak conducted output power
		☐	ANSI C63.10		11.9.1.1	RBW ≥ DTS bandwidth
		☐	ANSI C63.10		11.9.1.2	Integrated band power method
		☒	ANSI C63.10		11.9.1.3	PKPM1 Peak power meter method
	☐	ANSI C63.10			11.9.2	Maximum conducted (average) output power
		☐	ANSI C63.10		11.9.2.2	Measurement using a spectrum analyzer (SA)
			☐	ANSI C63.10	11.9.2.2.2	Method AVGSA-1(Duty cycle≥98%)
			☐	ANSI C63.10	11.9.2.2.3	Method AVGSA-1A(Duty cycle≥98%)
			☐	ANSI C63.10	11.9.2.2.4	Method AVGSA-2(Duty cycle≤98%)
			☐	ANSI C63.10	11.9.2.2.5	Method AVGSA-2A(Duty cycle≤98%)
			☐	ANSI C63.10	11.9.2.2.4	Method AVGSA-3
			☐	ANSI C63.10	11.9.2.2.5	Method AVGSA-3A
		☐	ANSI C63.10		11.9.2.3	Measurement using a power meter (PM)
			☐	ANSI C63.10	11.9.2.3.1	Method AVGPM
			☐	ANSI C63.10	11.9.2.3.2	Method AVGPM-G

6.5. EUT test definition

<table>
<tr><th>Item</th><th colspan="4">Fundamental emission output power</th></tr>
<tr><td rowspan="3">Device Category</td><td>☐</td><td colspan="3">Fixed point-to-point</td></tr>
<tr><td>☐</td><td colspan="3">Emit multiple directional beams, simultaneously or sequentially</td></tr>
<tr><td>☒</td><td colspan="3">Other cases</td></tr>
<tr><td>Test mode</td><td colspan="4">Mode 1~4</td></tr>
<tr><td rowspan="12">Test method</td><td>☐</td><td colspan="3">Radiated</td></tr>
<tr><td rowspan="3"></td><td>X Axis</td><td>Y Axis</td><td>Z Axis</td></tr>
<tr><td>  </td><td>  </td><td>  </td></tr>
<tr><td>Worst Axis ☐</td><td>Worst Axis ☐</td><td>Worst Axis ☐</td></tr>
<tr><td>☒</td><td colspan="3">Conducted</td></tr>
<tr><td>☐</td><td colspan="3">Chain 0</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
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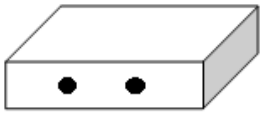
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☐</td><td>Chain 0</td><td>Chain 1</td><td>Chain 2</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
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6.6. Test Result

Product Name	:	300Mbps Wi-Fi Range Extender with Power Outlet Pass-through	Power	:	AC 120V/60Hz
Test Mode	:	Mode1~4	Test Site	:	TR8
Test Date	:	2017.09.18			

Mode	Channel	Test Frequency (MHz)	Average Power Output (dBm)		Total Power (dBm)	Directional Gain (dBi)	Limit (dBm)	Result
			Ant 0	Ant 1				
1	01	2412	20.11	20.53	23.33	2	30	Pass
1	02	2417	20.21	20.81	23.53	2	30	Pass
1	06	2437	22.26	22.03	25.16	2	30	Pass
1	10	2457	19.26	19.44	22.36	2	30	Pass
1	11	2462	19.74	19.83	22.80	2	30	Pass
2	01	2412	16.67	16.97	19.83	2	30	Pass
2	02	2417	18.42	19.09	21.78	2	30	Pass
2	06	2437	21.99	21.88	24.95	2	30	Pass
2	10	2457	16.96	17.36	20.18	2	30	Pass
2	11	2462	15.52	15.77	18.66	2	30	Pass
3	01	2412	15.94	15.78	18.87	2	30	Pass
3	02	2417	18.45	18.92	21.70	2	30	Pass
3	06	2437	21.71	21.73	24.73	2	30	Pass
3	10	2457	17.15	17.63	20.41	2	30	Pass
3	11	2462	15.05	15.60	18.34	2	30	Pass
4	03	2422	13.14	13.75	16.46	2	30	Pass
4	04	2427	13.06	13.41	16.25	2	30	Pass
4	06	2437	21.53	21.13	24.34	2	30	Pass
4	08	2447	13.49	13.40	14.13	2	30	Pass
4	09	2452	10.83	10.92	13.89	2	30	Pass

The End