

Test Report

FCC Part15 Subpart C

Product Name : 300Mbps Wireless N Mini Router
Model No. : TL-WR810N
FCC ID : TE7WR810NV2

Applicant : TP-LINK TECHNOLOGIES CO., LTD.
Address : Building 24(floors1,3,4,5) and 28(floors1-4) Central
Science and Technology Park, Shennan Rd, Nanshan,
Shenzhen, China

Date of Receipt : May. 17, 2016
Test Date : May. 17, 2016~ Jul. 01, 2016
Issued Date : Oct. 26, 2016
Report No. : 1652060R-RF-US-P06V01
Report Version : V2.2

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

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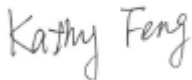
Test Report Certification

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Manufacturer : TP-LINK TECHNOLOGIES CO., LTD.
Address : Building 24(floors1,3,4,5) and 28(floors1-4) Central Science
and Technology Park, Shennan Rd, Nanshan, Shenzhen,
China
Model No. : TL-WR810N
FCC ID : TE7WR810NV2
EUT Voltage : 100-240V~50/60Hz 0.15A
Brand Name : TP-LINK
Applicable Standard : FCC CFR Title 47 Part 15 Subpart C
ANSI C63.4:2014; ANSI C63.10:2013;
KDB 558074 D01v03r05
KDB 662911 D01 Multiple Transmitter Output v02r01
Test Result : Complied
Performed Location : Quietek Corporation - Suzhou EMC Laboratory
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FCC Registration Number: 800392

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Laboratory Information

We, **Quietek Corporation**, are an independent EMC and safety consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted(audited or listed) by the following related bodies in compliance with ISO 17025, EN 45001 and specified testing scope:

Taiwan R.O.C.	:	BSMI, NCC, TAF
USA	:	FCC
Japan	:	VCCI
China	:	CNAS

The related certificate for our laboratories about the test site and management system can be downloaded from Quietek Corporation's Web Site : <http://www.quietek.com/english/about/certificates.aspx?bval=5>
The address and introduction of Quietek Corporation's laboratories can be founded in our Web site : http://www.quietek.com/index_en.aspx

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History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
1652060R-RF-US-P06V01	V1.0	Initial Issued Report	Jul. 22, 2016
1652060R-RF-US-P06V01	V1.1	Modify the data of VBW on page 46 and FCC ID.	Aug. 25, 2016
1652060R-RF-US-P06V01	V2.1	Add the data of adjacent low and high channel for Band Edge & power	Sep. 21, 2016
1652060R-RF-US-P06V01	V2.2	Update 802.11b CH2 power	Oct. 26, 2016

1. General Information

1.1. EUT Description

Product Name	300Mbps Wireless N Mini Router
Brand Name	TP-LINK
Model No.	TL-WR810N
EUT Voltage	100-240V~50/60Hz 0.15A
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

1.2. Working Frequency of Each 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	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. Antenna information

Model No.	N/A					
Antenna manufacturer	TP-LINK					
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	Ant0:1 Ant1: 1			1	4	

1.4. 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)

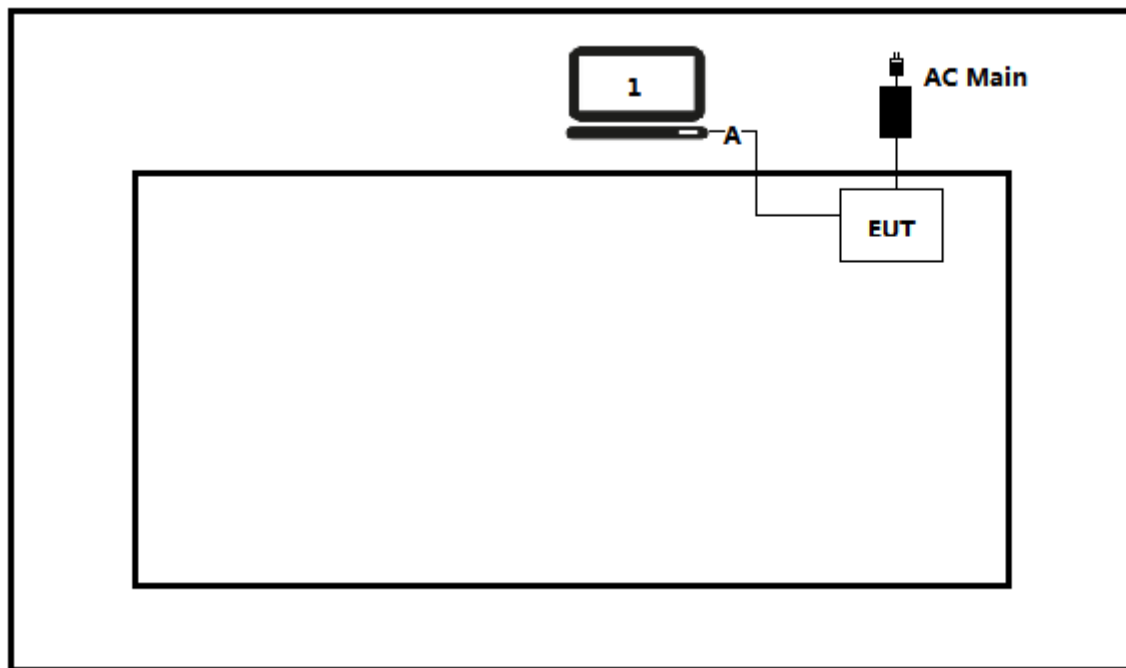
1.5. Tested System Details

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

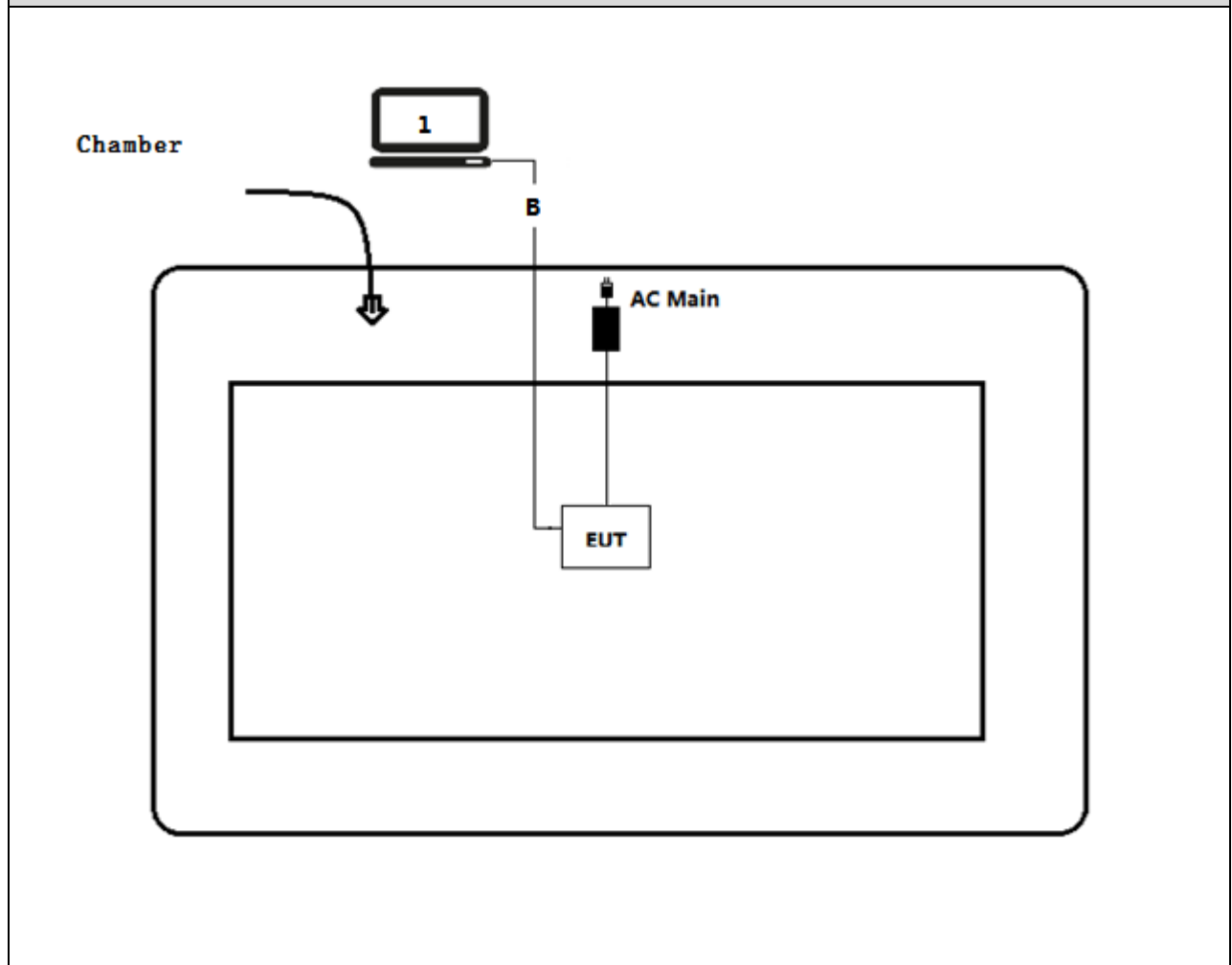
No.	Product	Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook	Lenovo	Think pad x220	SUA0600195	Non-shielded
A	LAN cable	N/A	N/A	N/A	Non-shielded, 1.5m
B	LAN cable	N/A	N/A	N/A	Non-shielded, 10m

1.6. 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: 2015 Section 15.207	FCC 15.207	PASS
Emissions in restricted frequency bands	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.209	FCC 15.209	PASS
Emissions in non-restricted frequency bands	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(d)	$\geq 30\text{dBc}$	PASS
Radiated Emission Band Edge	FCC CFR Title 47 Part 15 Subpart C: 2015 15.247(d)	FCC 15.209	PASS
Occupied Bandwidth	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(a)(2)	$\geq 500\text{kHz}$	PASS
Fundamental emission output power	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(b)(3)	$\leq 30\text{dBm}$	PASS
Power Spectral Density	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(e)	$\leq 8\text{dBm/3kHz}$	PASS

2.2. Test Frequency configuration:

Modulation Mode	Channel	Frequency	Channel	Frequency	Channel	Frequency
802.11b	01	2412 MHz	06	2437 MHz	11	2462MHz
802.11g	01	2412 MHz	06	2437 MHz	11	2462MHz
802.11n(20MHz)	01	2412 MHz	06	2437 MHz	11	2462MHz
802.11n(40MHz)	03	2422 MHz	06	2437 MHz	09	2452MHz

2.3. Power setting parameter

Test Software	ART 2		
Modulation Mode	Test Frequency	Ant 0	Ant 1
802.11b	2412	18	18
	2417	20	20
	2437	20	20
	2457	20	20
	2462	19	19
802.11g	2412	16.5	16.5
	2417	20	20
	2437	23	23
	2457	19	19
	2462	17	17
802.11n(20MHz)	2412	17	17
	2417	19	19
	2437	23	23
	2457	19	19
	2462	16	16
802.11n(40MHz)	2422	13	13
	2427	15	15
	2437	17	17
	2447	14	14
	2452	13	13

2.4. 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

2.5. 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

2.6. Measurement Uncertainty

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

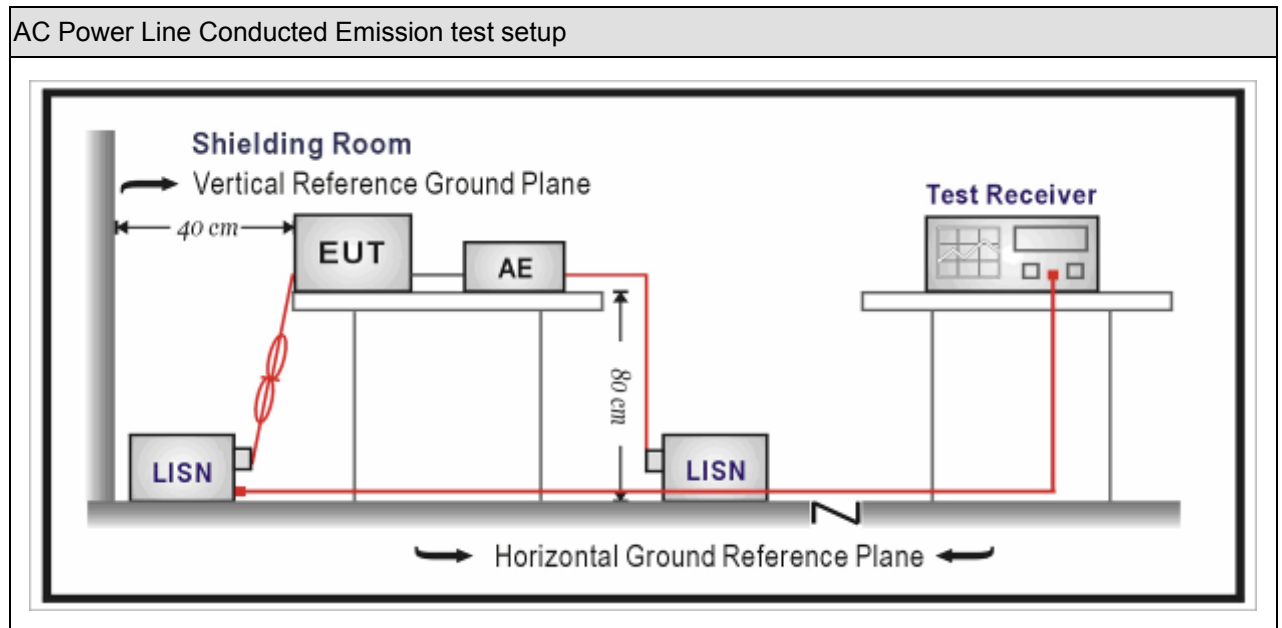
3. AC Power Line Conducted Emission

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	100726	2016.03.29	2017.03.28
Two-Line V-Network	R&S	ENV216	100043	2016.03.29	2017.03.28
Two-Line V-Network	R&S	ENV216	100044	2015.09.17	2016.09.16
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	2016.03.02	2017.03.01
50ohm Termination	SHX	TF2	07081401	2015.09.17	2016.09.16
Temperature/Humidity Meter	zhichen	ZC1-2	TR1-TH	2016.01.04	2017.01.03

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

3.2. Test Setup



3.3. Limit

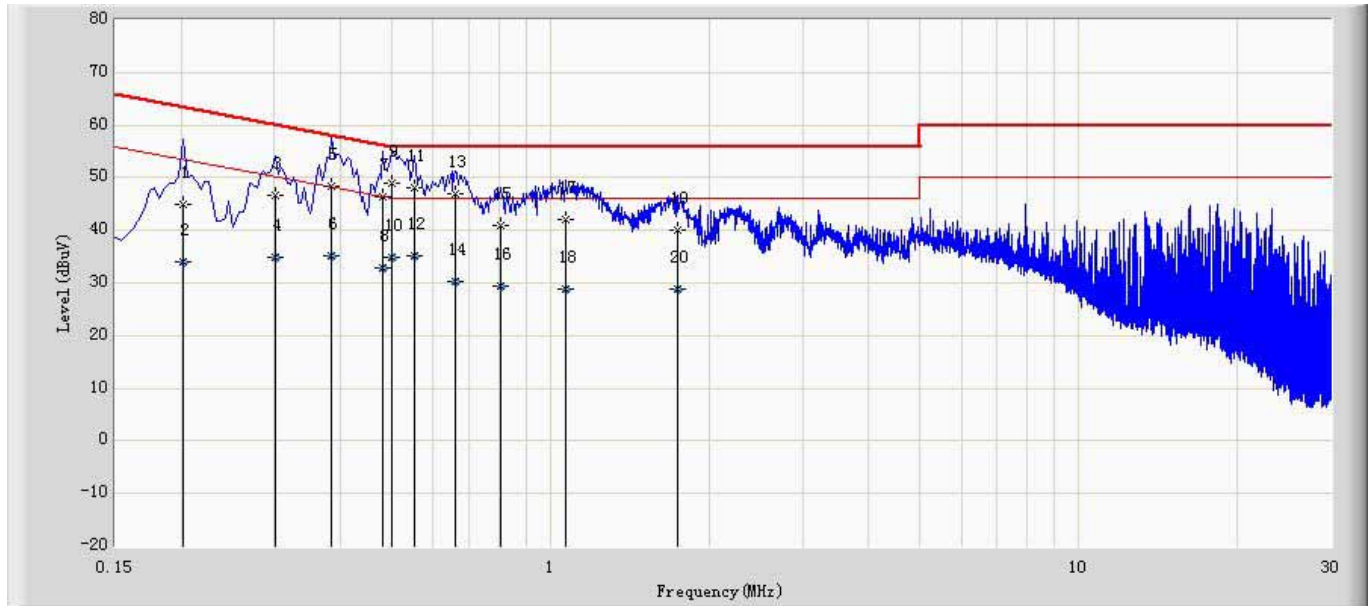
Frequency of Emission (MHz)	Conducted Limit	
	Quasi-peak (dB μ V)	Average (dB μ V)
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50
Note 1: The lower limit shall apply at the transition frequencies.		
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5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

Site: SR8	Time: 2016/07/09
Limit: FCC_Part15.107_CE_AC Power_ClassB	Margin: 0
Probe: ENV216-L1	Polarity: Line
EUT: 300Mbps Wireless N Mini Router	Power: AC 120V/60Hz
Note: Mode 1	



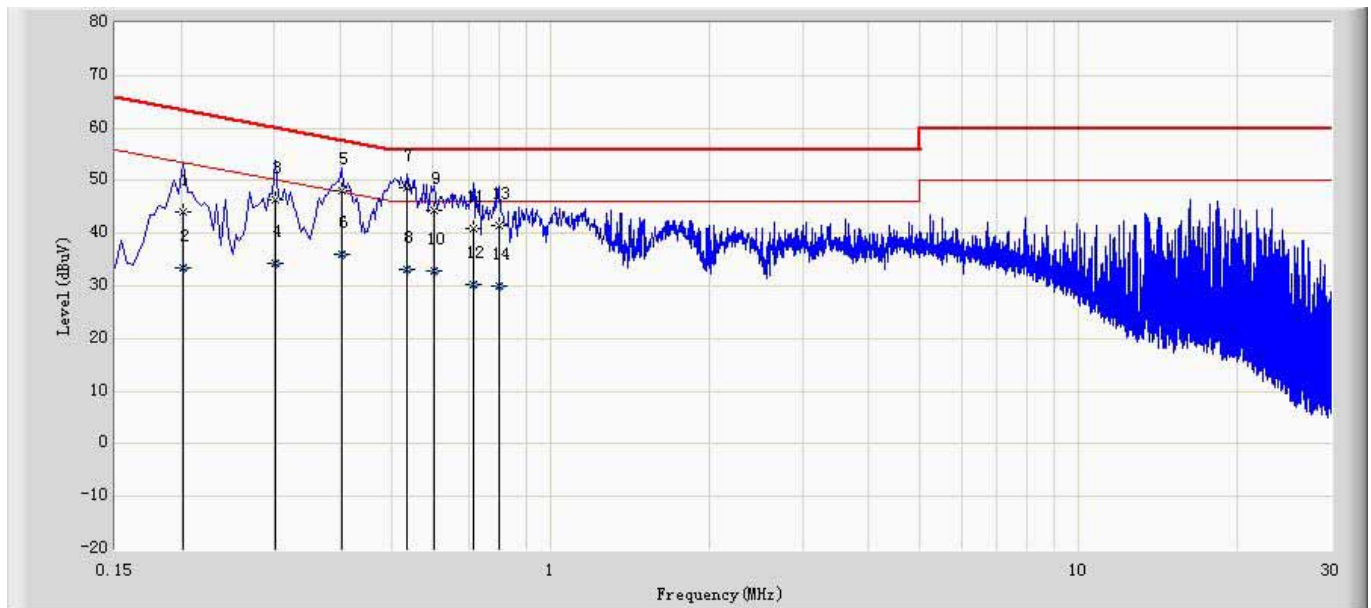
No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.202	44.886	35.176	-18.642	63.528	9.650	0.060	0.000	QP
2		0.202	33.949	24.239	-19.579	53.528	9.650	0.060	0.000	AV
3		0.302	46.769	37.069	-13.419	60.188	9.640	0.060	0.000	QP
4		0.302	34.765	25.065	-15.423	50.188	9.640	0.060	0.000	AV
5		0.386	48.401	38.701	-9.748	58.149	9.640	0.060	0.000	QP
6		0.386	35.069	25.369	-13.080	48.149	9.640	0.060	0.000	AV
7		0.482	46.478	36.778	-9.827	56.305	9.630	0.070	0.000	QP
8		0.482	32.802	23.102	-13.503	46.305	9.630	0.070	0.000	AV
9	*	0.502	48.867	39.167	-7.133	56.000	9.630	0.070	0.000	QP
10		0.502	34.971	25.271	-11.029	46.000	9.630	0.070	0.000	AV
11		0.554	48.177	38.477	-7.823	56.000	9.630	0.070	0.000	QP
12		0.554	35.184	25.484	-10.816	46.000	9.630	0.070	0.000	AV
13		0.662	46.990	37.300	-9.010	56.000	9.620	0.070	0.000	QP
14		0.662	30.158	20.468	-15.842	46.000	9.620	0.070	0.000	AV
15		0.806	41.007	31.317	-14.993	56.000	9.620	0.070	0.000	QP
16		0.806	29.369	19.679	-16.631	46.000	9.620	0.070	0.000	AV

17		1.066	42.141	32.431	-13.859	56.000	9.630	0.080	0.000	QP
18		1.066	28.991	19.281	-17.009	46.000	9.630	0.080	0.000	AV
19		1.746	40.020	30.290	-15.980	56.000	9.640	0.090	0.000	QP
20		1.746	28.976	19.246	-17.024	46.000	9.640	0.090	0.000	AV

Note:

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

Site:SR8	Time: 2016/07/09
Limit: FCC_Part15.107_CE_AC Power_ClassB	Margin: 0
Probe: ENV216-N	Polarity: Neutral
EUT: 300Mbps Wireless N Mini Router	Power: AC 120V/60Hz
Note: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.202	44.029	34.309	-19.499	63.528	9.660	0.060	0.000	QP
2		0.202	33.386	23.666	-20.142	53.528	9.660	0.060	0.000	AV
3		0.302	46.328	36.618	-13.860	60.188	9.650	0.060	0.000	QP
4		0.302	34.244	24.534	-15.944	50.188	9.650	0.060	0.000	AV
5		0.402	48.199	38.495	-9.613	57.812	9.640	0.064	0.000	QP
6		0.402	35.921	26.217	-11.891	47.812	9.640	0.064	0.000	AV
7	*	0.534	48.636	38.936	-7.364	56.000	9.630	0.070	0.000	QP
8		0.534	33.100	23.400	-12.900	46.000	9.630	0.070	0.000	AV
9		0.602	44.438	34.730	-11.562	56.000	9.638	0.070	0.000	QP
10		0.602	32.731	23.023	-13.269	46.000	9.638	0.070	0.000	AV
11		0.714	41.030	31.320	-14.970	56.000	9.640	0.070	0.000	QP
12		0.714	30.173	20.463	-15.827	46.000	9.640	0.070	0.000	AV
13		0.802	41.371	31.661	-14.629	56.000	9.640	0.070	0.000	QP
14		0.802	29.964	20.254	-16.036	46.000	9.640	0.070	0.000	AV

Note:

1. " * ", means this data is the worst emission level.

2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp)

4. Emissions in restricted frequency bands

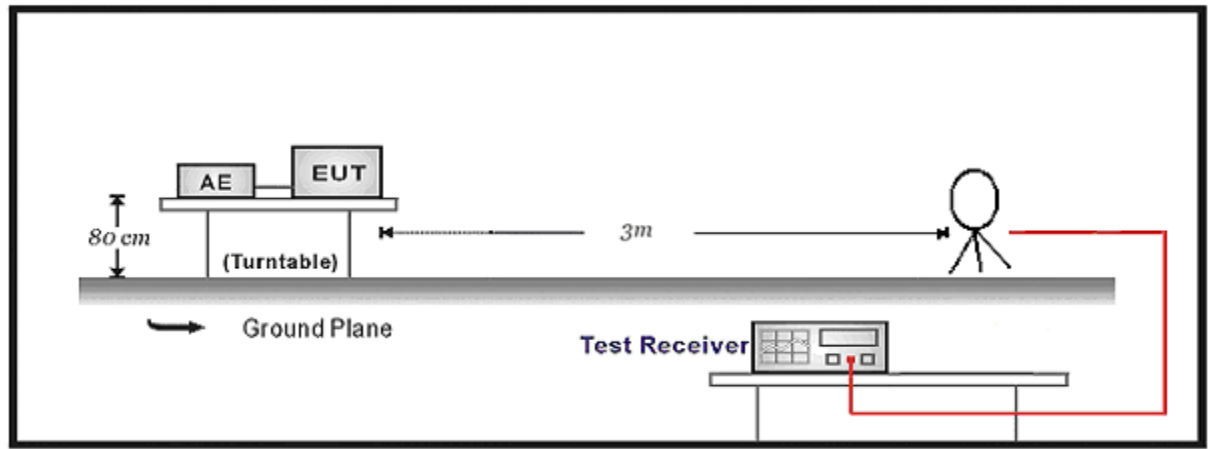
4.1. Test Equipment

Radiated Emission(Below 1GHz) / AC-2					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Test Receiver	R&S	ESCI	100573	2016.03.29	2017.03.28
Loop Antenna	R&S	HFH2-Z2	833799/003	2015.11.16	2016.11.17
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2015.10.16	2016.10.15
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC2-C	2016.03.02	2017.03.01
Temperature/Humidity Meter	Zhichen	ZC1-2	AC2-TH	2016.01.04	2017.01.03
Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

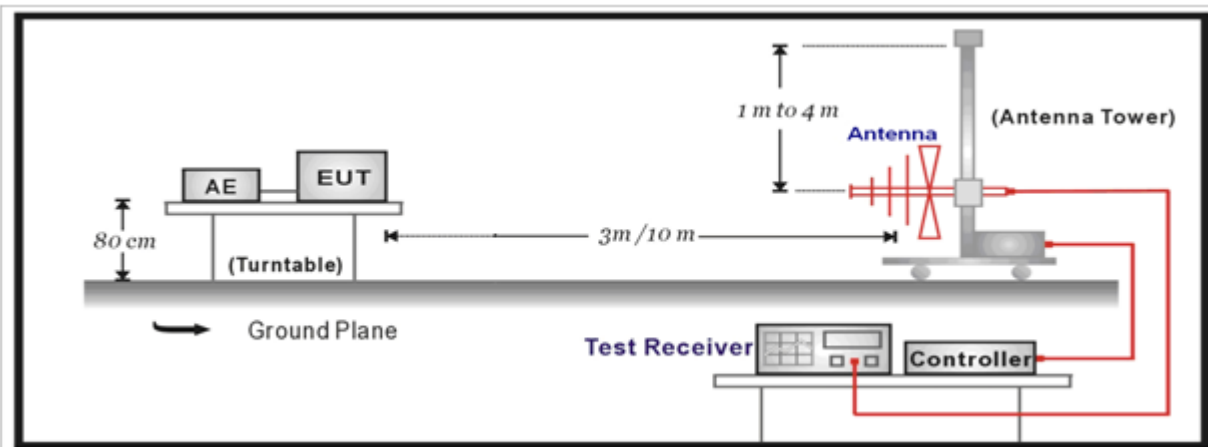
Radiated Emission(Above 1GHz) / AC-5					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2016.01.04	2017.01.03
Preamplifier	Miteq	NSP1800-25	1364185	2016.05.06	2017.05.05
Preamplifier	Quietek	AP-040G	CHM-0906001	2016.05.06	2017.05.05
DRG Horn	ETS-Lindgren	3117	00123988	2016.01.22	2017.01.21
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2015.11.25	2016.11.24
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2016.03.02	2017.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2016.03.02	2017.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	AC5-C3	2016.03.02	2017.03.01
EMI Receiver	Agilent	N9038A	MY51210196	2016.06.10	2017.06.09
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2016.01.04	2017.01.03
Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

4.2. Test Setup

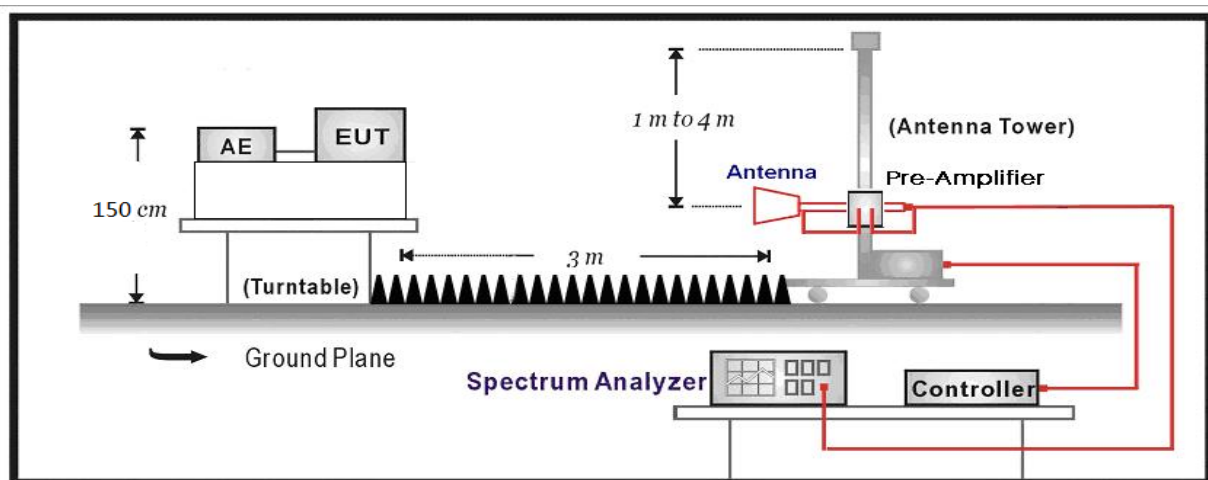
Below 30MHz Test Setup:



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 ($\mu\text{V/m}$)	Field strength (dB $\mu\text{V/m}$)	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)

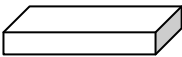
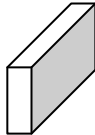
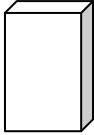
Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed 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	Antenna-port conducted measurements		
		☒	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

Item	Emissions in restricted frequency bands			
Device Category	☒	Fixed position use		
	☐	Mobile position use		
Test mode	Mode 1~4			
Test method	☒	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis ☐	Worst Axis ☐	Worst Axis ☒
	☐	Conducted		
	☐	Chain 1		
				
	☐	Chain 1	Chain 2	
				
	☐	Chain 1	Chain 2	Chain 3
				

4.6. Test Result

Product Name	:	300Mbps Wireless N Mini Router	Power	:	AC 120V/60Hz
Test Mode	:	Mode 1	Test Site	:	AC-5

Chain	CH	Antenna Polarity	Frequency (MHz)	Reading Level (dB μ V)	Factor (dB)	Measured Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector
Ant 0+1	1	H	4824.15	57.5	-5.1	52.3	54	-1.7	AV
		H	4825	62.0	-5.1	56.9	74	-17.1	PK
		H	7206	47.1	-0.9	46.3	54(note3)	-7.8	PK
		H	9644.5	50.7	3.0	53.8	54(note3)	-0.2	PK
		V	4824.76	56.2	-5.1	51.0	54	-3.0	AV
		V	4825	61.8	-5.1	56.6	74	-17.4	PK
		V	7206	47.0	-0.9	46.2	54(note3)	-7.8	PK
		V	9644.34	47.5	3.0	50.5	54	-3.5	AV
		V	9644.5	54.0	3.0	57.1	74	-16.9	PK
	6	H	4875.12	54.9	-5.1	49.8	54	-4.2	AV
		H	4876	62.6	-5.1	57.5	74	-16.5	PK
		H	7315.5	52.4	-0.9	51.5	54(note3)	-2.5	PK
		H	9746.5	48.6	2.7	51.3	54(note3)	-2.7	PK
		V	4875.34	53.8	-5.1	48.8	54	-5.3	AV
		V	4876	62.8	-5.1	57.7	74	-16.3	PK
		V	7188	48.8	-0.5	48.2	54(note3)	-5.8	PK
		V	9745.18	50.2	2.7	52.9	54	-1.1	AV
		V	9746.5	55.0	2.7	57.7	74	-16.3	PK
	11	H	4925.46	53.1	-5.1	48.0	54	-6.0	AV
		H	4927	59.9	-5.1	54.8	74	-19.2	PK
		H	7383.5	51.2	-0.2	51.0	54(note3)	-3.0	PK
		H	9848.5	47.8	2.9	50.6	54(note3)	-3.4	PK
		V	4927	59.3	-5.1	54.2	74	-19.8	PK
		V	4927.18	53.5	-5.1	48.4	54	-5.6	AV
		V	7383.5	49.4	-0.2	49.2	54(note3)	-4.8	PK
		V	9848.04	49.2	2.9	52.0	54	-2.0	AV
		V	9848.5	51.8	2.9	54.6	74	-19.4	PK

Note: 1. Measure Level = Reading Level + Factor.

Note: 2. The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 6dB below the limits, therefore no data appear in the report.

Note: 3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

Note: 4. The VBW setting, see Clause 6.6.

Product Name	:	300Mbps Wireless N Mini Router	Power	:	AC 120V/60Hz
Test Site	:	Mode 2	Test Site	:	AC-5

Chain	CH	Antenna Polarity	Frequency (MHz)	Reading Level (dB μ V)	Factor (dB)	Measured Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector
Ant 0+1	1	H	4825	56.4	-5.1	51.3	54(note3)	-2.7	PK
		H	7247.5	50.8	-0.8	50.0	54(note3)	-4.0	PK
		H	9653	47.6	3.2	50.8	54(note3)	-3.2	PK
		V	4825	58.5	-5.1	53.4	54(note3)	-0.6	PK
		V	7206	46.4	-0.8	45.5	54(note3)	-8.5	PK
		V	9642.83	38.2	3.1	41.2	54	-12.8	AV
		V	9644.5	51.5	3.0	54.5	74	-19.5	PK
	6	H	4876	57.5	-5.1	52.4	54(note3)	-1.6	PK
		H	7298.5	56.0	-0.6	55.4	74	-18.6	PK
		H	7308.44	42.6	-0.8	41.8	54	-12.2	AV
		H	9746.5	51.6	2.7	54.4	74	-19.6	PK
		H	9746.5	35.0	2.7	37.7	54	-16.3	AV
		H	13452.5	52.2	7.6	59.8	74	-14.2	PK
		H	13461.94	30.3	8.1	38.4	54	-15.6	AV
		V	4867.5	59.9	-5.2	54.7	74	-19.3	PK
		V	4873.4	48.9	-5.1	43.7	54	-10.3	AV
		V	7298.5	50.8	-0.6	50.2	54(note3)	-3.8	PK
		V	9746.5	55.0	2.7	57.7	74	-16.3	PK
		V	9747.81	41.4	2.7	44.1	54	-9.9	AV
		V	13444	51.2	7.2	58.3	74	-15.7	PK
		V	13445.31	28.5	7.2	35.7	54	-18.3	AV
	11	H	4935.5	54.3	-5.1	49.1	54(note3)	-4.9	PK
		H	7383.5	52.4	-0.2	52.2	54(note3)	-1.8	PK
		H	9848.5	46.1	2.9	48.9	54(note3)	-5.1	PK
		V	4927	55.3	-5.1	50.2	54(note3)	-3.8	PK
		V	7383.5	49.9	-0.29	49.6	54(note3)	-4.4	PK
		V	9840	48.1	2.99	51.0	54(note3)	-3.0	PK

Note: 1. Measure Level = Reading Level + Factor.

Note: 2. The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 6dB below the limits, therefore no data appear in the report.

Note: 3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

Note: 4. The VBW setting, see Clause 6.6.

Product Name	:	300Mbps Wireless N Mini Router	Power	:	AC 120V/60Hz
Test Site	:	Mode 3	Test Site	:	AC-5

Chain	CH	Antenna Polarity	Frequency (MHz)	Reading Level (dB μ V)	Factor (dB)	Measured Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector
Ant 0+1	1	H	4825	58.8	-5.1	53.7	54(note3)	-0.3	PK
		H	7239	50.7	-0.8	49.9	54(note3)	-4.1	PK
		H	9636	47.9	3.0	50.9	54(note3)	-3.1	PK
		V	4825	57.6	-5.1	52.4	54(note3)	-1.6	PK
		V	7206	46.4	-0.9	45.5	54(note3)	-8.5	PK
		V	9653	48.7	3.2	51.9	54(note3)	-2.1	PK
	6	H	4867.5	55.2	-5.2	50.0	54(note3)	-3.9	PK
		H	7324	53.9	-1.0	52.9	54(note3)	-1.1	PK
		H	9754.31	40.6	2.6	43.2	54	-10.8	AV
		H	9755	53.0	2.6	55.6	74	-18.4	PK
		V	4867.5	58.4	-5.2	53.2	54(note3)	-0.8	PK
		V	7315.5	53.2	-0.9	52.3	54(note3)	-1.7	PK
	11	V	9746.5	53.8	2.7	56.5	74	-17.5	PK
		V	9746.5	41.3	2.7	44.0	54	-10.0	AV
		H	4927	55.0	-5.1	49.9	54(note3)	-4.1	PK
		H	7383.5	49.2	-0.2	49.0	54(note3)	-5.0	PK
		H	9857	46.6	2.9	49.5	54(note3)	-4.5	PK
		V	4927	55.2	-5.1	50.1	54(note3)	-3.9	PK

Note: 1. Measure Level = Reading Level + Factor.

Note: 2. The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 6dB below the limits, therefore no data appear in the report.

Note: 3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

Note: 4. The VBW setting, see Clause 6.6.

Product Name	:	300Mbps Wireless N Mini Router	Power	:	AC 120V/60Hz
Test Site	:	Mode 4	Test Site	:	AC-5

Chain	CH	Antenna Polarity	Frequency (MHz)	Reading Level (dB μ V)	Factor (dB)	Measured Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector
Ant 0+1	3	H	4844	51.2	-5.1	46.1	54(note3)	-7.9	PK
		H	7266	46.7	-0.7	46.0	54(note3)	-8.0	PK
		H	9688	44.4	2.9	47.4	54(note3)	-6.6	PK
		V	4844	51.5	-5.1	46.3	54(note3)	-7.7	PK
		V	7266	46.7	-0.7	46.0	54(note3)	-8.0	PK
		V	9688	45.3	2.9	48.2	54(note3)	-5.8	PK
	6	H	4867.5	52.6	-5.2	47.4	54(note3)	-6.6	PK
		H	7311	47.3	-0.8	46.4	54(note3)	-7.6	PK
		H	9748	44.2	2.7	46.9	54(note3)	-7.2	PK
		V	4876	54.2	-5.1	49.0	54(note3)	-5.0	PK
		V	7311	47.0	-0.8	46.2	54(note3)	-7.8	PK
		V	9748	45.2	2.7	47.9	54(note3)	-6.1	PK
	9	H	4904	49.5	-5.1	44.4	54(note3)	-9.6	PK
		H	7356	47.4	-0.6	46.8	54(note3)	-7.2	PK
		H	9808	44.0	3.3	47.4	54(note3)	-6.6	PK
		H	4844	51.2	-5.1	46.1	54(note3)	-7.9	PK
		H	7266	46.7	-0.7	46.0	54(note3)	-8.0	PK
		H	9688	44.4	2.9	47.4	54(note3)	-6.7	PK

Note: 1. Measure Level = Reading Level + Factor.

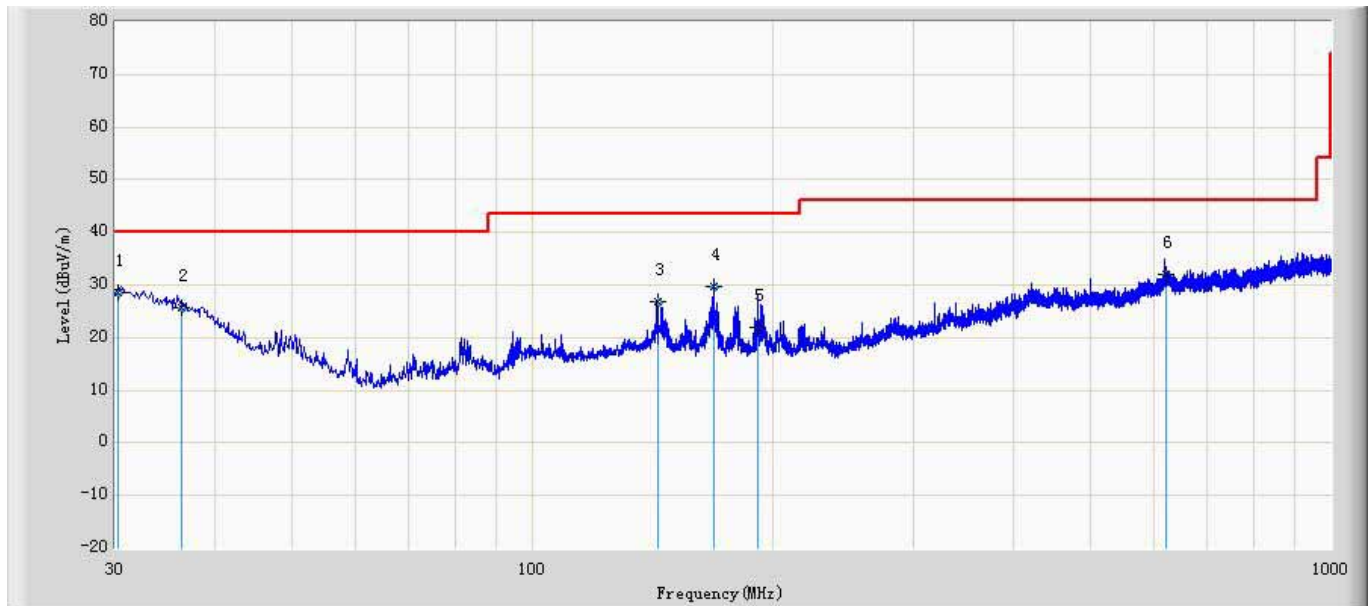
Note: 2. The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 6dB below the limits, therefore no data appear in the report.

Note: 3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

Note: 4. The VBW setting, see Clause 6.6.

The worst case of Radiated Emission below 1GHz:

Site: CB7	Time: 2016/07/09
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: CB7_CBL6112_0726	Polarity: Horizontal
EUT: 300Mbps Wireless N Mini Router	Power: AC 120V/60Hz
Note: Mode 1	

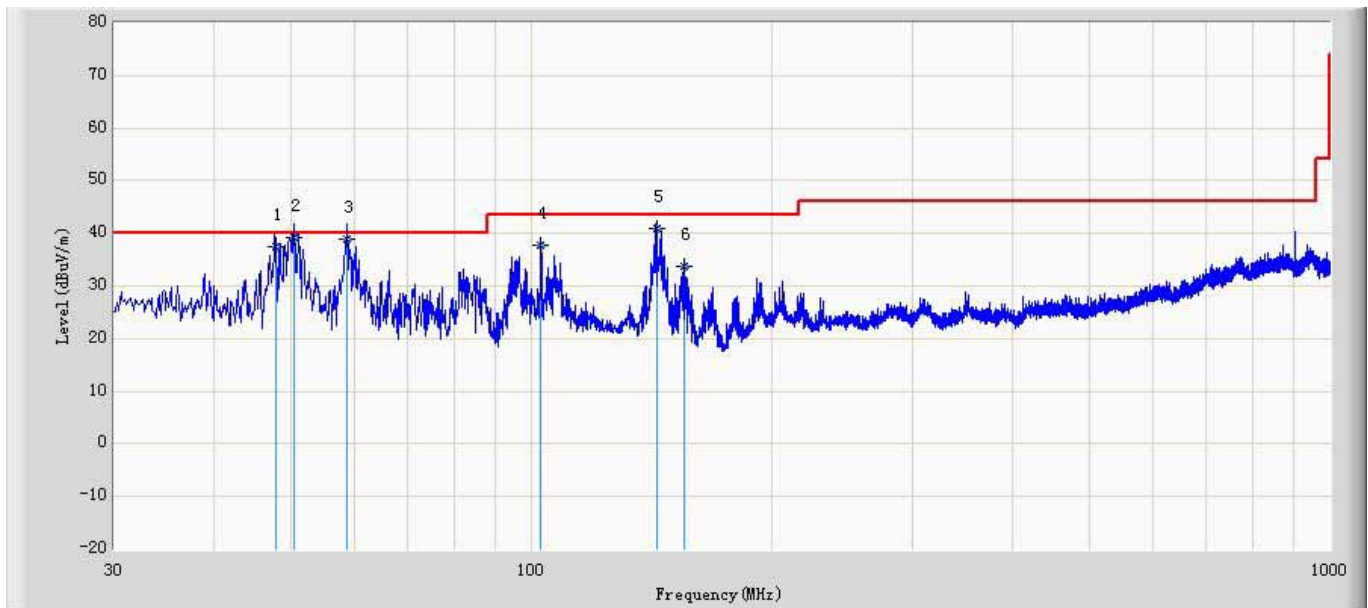


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1	*	30.313	28.589	32.454	-11.411	40.000	18.618	0.603	23.086	200	76	QP
2		36.355	25.612	33.033	-14.388	40.000	15.114	0.656	23.191	133	360	QP
3		143.394	26.970	37.804	-16.530	43.500	10.897	1.299	23.030	200	252	QP
4		168.742	29.640	41.652	-13.860	43.500	9.638	1.410	23.060	200	153	QP
5		191.314	21.892	34.295	-21.608	43.500	9.240	1.500	23.143	200	141	QP
6		620.484	32.134	32.997	-13.866	46.000	19.000	2.730	22.593	100	146	QP

Note:

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

Site: CB7	Time: 2016/07/09
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: CB7_CBL6112_0726	Polarity: Vertical
EUT: 300Mbps Wireless N Mini Router	Power: AC 120V/60Hz
Note: Mode 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		47.880	37.391	50.716	-2.609	40.000	9.048	0.754	23.127	300	6	QP
2	*	50.503	39.119	53.271	-0.881	40.000	8.114	0.780	23.046	100	46	QP
3		58.678	38.774	54.254	-1.226	40.000	6.725	0.826	23.030	200	76	QP
4		102.815	37.630	48.308	-5.870	43.500	11.382	1.100	23.160	100	178	QP
5		143.287	41.050	51.879	-2.450	43.500	10.903	1.298	23.030	100	188	QP
6		155.641	33.783	45.287	-9.717	43.500	10.161	1.350	23.015	100	174	QP

Note:

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

5. Emissions in non-restricted frequency bands

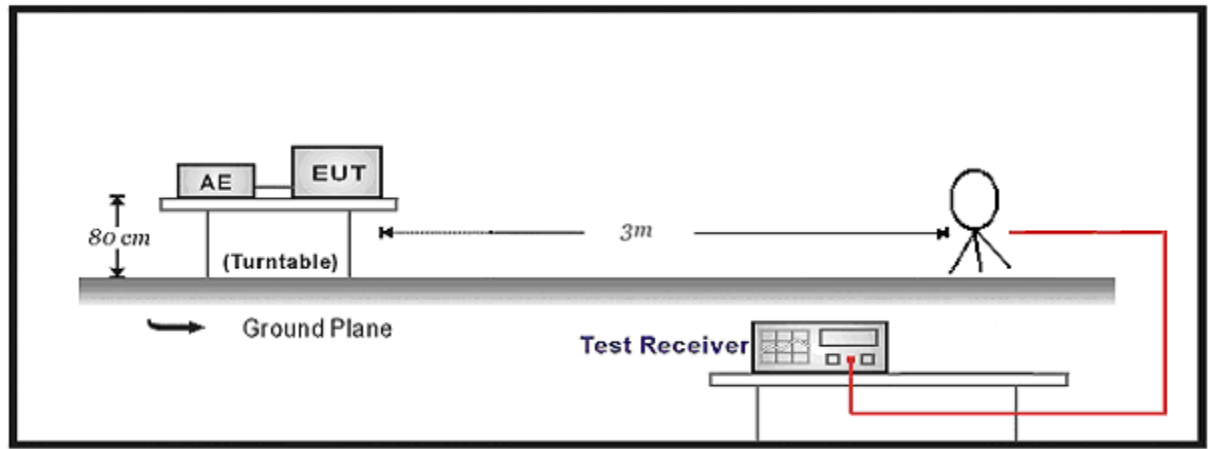
5.1. Test Equipment

Radiated Emission(Below 1GHz) / AC-2					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Test Receiver	R&S	ESCI	100573	2016.03.29	2017.03.28
Loop Antenna	R&S	HFH2-Z2	833799/003	2015.11.16	2016.11.17
Bilog Chainenna	Teseq GmbH	CBL6112D	27611	2015.10.16	2016.10.15
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC2-C	2016.03.02	2017.03.01
Temperature/Humidity Meter	Zhichen	ZC1-2	AC2-TH	2016.01.04	2017.01.03
Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

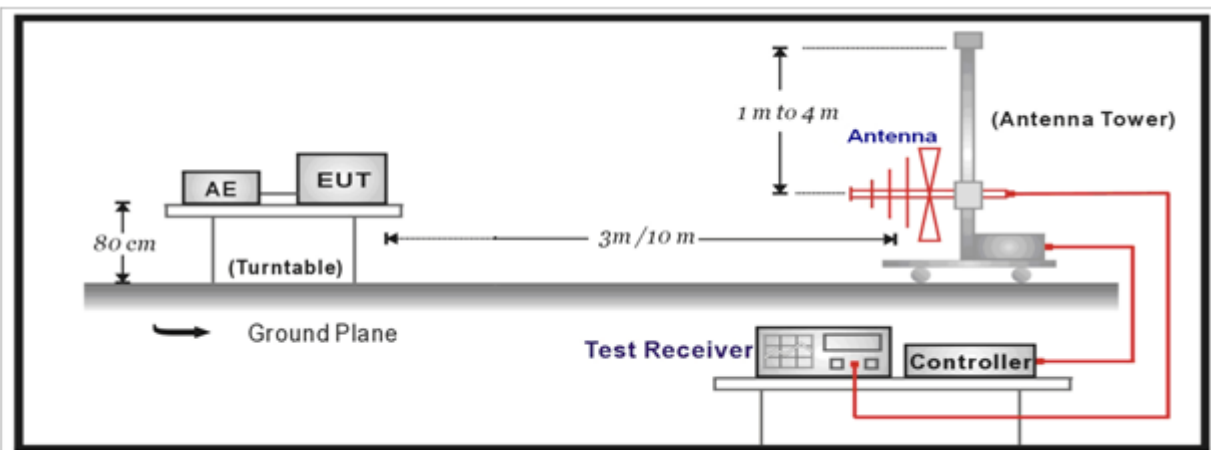
Radiated Emission(Above 1GHz) / AC-5					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9020A	MY49100159	2016.03.29	2017.03.28
Spectrum Analyzer	Agilent	E4446A	MY45300103	2016.01.04	2017.01.03
Preamplifier	Miteq	NSP1800-25	1364185	2016.05.06	2017.05.05
Preamplifier	QuieTek	AP-040G	CHM-0906001	2016.05.06	2017.05.05
DRG Horn	ETS-Lindgren	3117	00123988	2016.01.22	2017.01.21
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2015.11.25	2016.11.24
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2016.03.02	2017.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2016.03.02	2017.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	AC5-C3	2016.03.02	2017.03.01
EMI Receiver	Agilent	N9038A	MY51210196	2016.06.10	2017.06.09
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2016.01.04	2017.01.03
Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

5.2. Test Setup

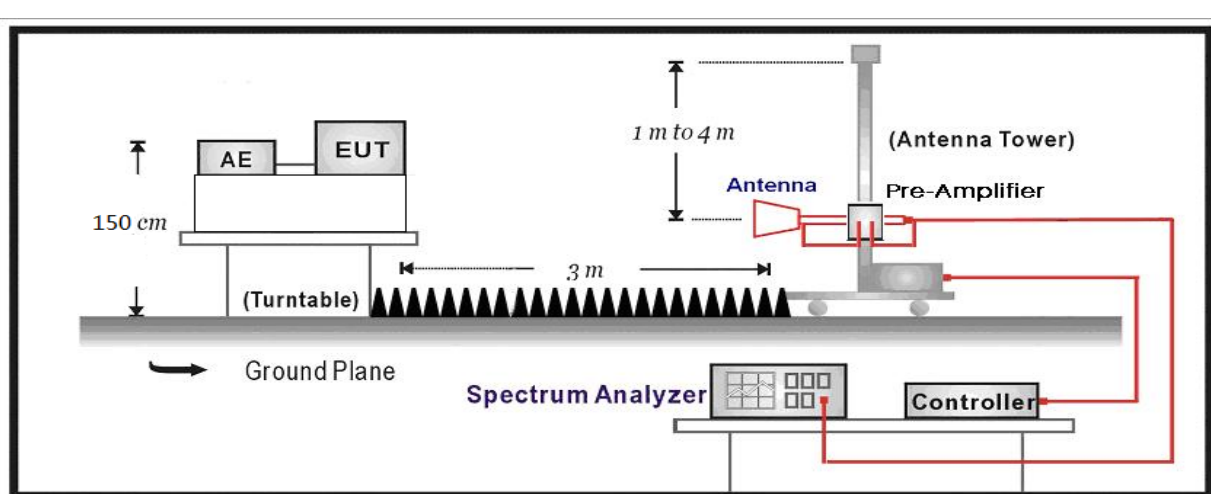
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:



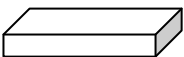
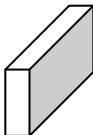
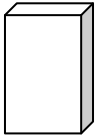
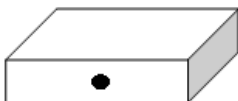
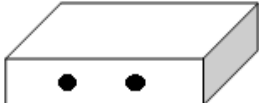
5.3. Limit

Un-Restricted Band Emissions Limit	
RF Output power (Detection methods)	Limit(dB)
RF Output power(Average detector)	30c(Note1)
RF Output power(PK detector)	20c(Note2)
Note 1: If maximum conducted (average) output power was used to demonstrate compliance as described in 9.2, then the peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 30 dBc). Note 2: If the maximum peak conducted output power procedure was used, then the peak output power measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 20 dBc).	

5.4. 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	Antenna-port conducted measurements
		☐	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 Axis definition

Item	Emissions in non-restricted frequency bands			
Device Category	☒	Fixed position use		
	☐	Mobile position use		
Test mode	Mode 1 ~ Mode 4			
Test method	☐	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis ☐	Worst Axis ☐	Worst Axis ☐
	☒	Conducted		
	☐	Chain 0		
				
	☒	Chain 0	Chain 1	
				
	☐	Chain 0	Chain 1	Chain 2
				

5.6. Test Result

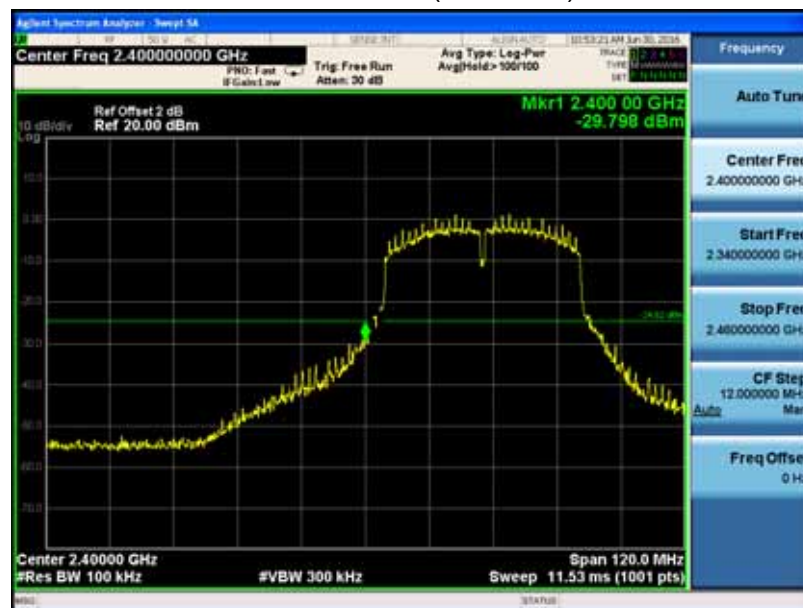
Product Name	:	300Mbps Wireless N Mini Router	Test Power	:	AC 120V/60Hz
Test Site	:	TR8			

Antenna #0

Mode	Channel	Test Frequency (MHz)	In-Band PSD[a] (dBm/100kHz)	Frequency (MHz)	Out-Band PSD[b] (dBm/100kHz)	[a]-[b] (dB)	Limit (dB)	Result
1	01	2412	11.54	2400	-45.686	57.226	>30	Pass
1	11	2462	11.54	2483.5	-44.693	56.233	>30	Pass
2	01	2412	10.481	2400	-25.471	35.952	>30	Pass
2	11	2462	10.481	2483.5	-38.848	49.329	>30	Pass
3	01	2412	12.781	2400	-26.697	39.478	>30	Pass
3	11	2462	12.781	2483.5	-36.306	49.087	>30	Pass
4	03	2422	5.389	2400	-29.798	35.187	>30	Pass
4	09	2452	5.389	2483.5	-43.614	49.003	>30	Pass

Note: The worst case of emissions in non-restricted frequency bands as below:

Mode 4 CH03(2422MHz)

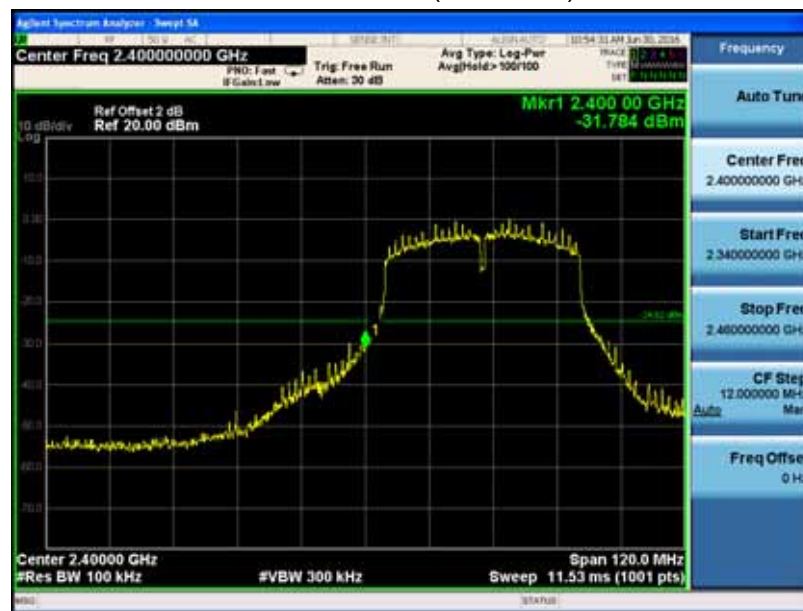


Antenna #1

Mode	Channel	Test Frequency (MHz)	In-Band PSD[a] (dBm/100kHz)	Frequency (MHz)	Out-Band PSD[b] (dBm/100kHz)	[a]-[b] (dB)	Limit (dB)	Result
1	01	2412	11.54	2400	-45.89	57.43	>30	Pass
1	11	2462	11.54	2483.5	-44.348	55.888	>30	Pass
2	01	2412	10.481	2400	-28.348	38.829	>30	Pass
2	11	2462	10.481	2483.5	-40.947	51.428	>30	Pass
3	01	2412	12.781	2400	-32.202	44.983	>30	Pass
3	11	2462	12.781	2483.5	-38.268	51.049	>30	Pass
4	03	2422	5.389	2400	-31.784	37.173	>30	Pass
4	09	2452	5.389	2483.5	-42.562	47.951	>30	Pass

Note: The worst case of emissions in non-restricted frequency bands as below:

Mode 4 CH03(2422MHz)



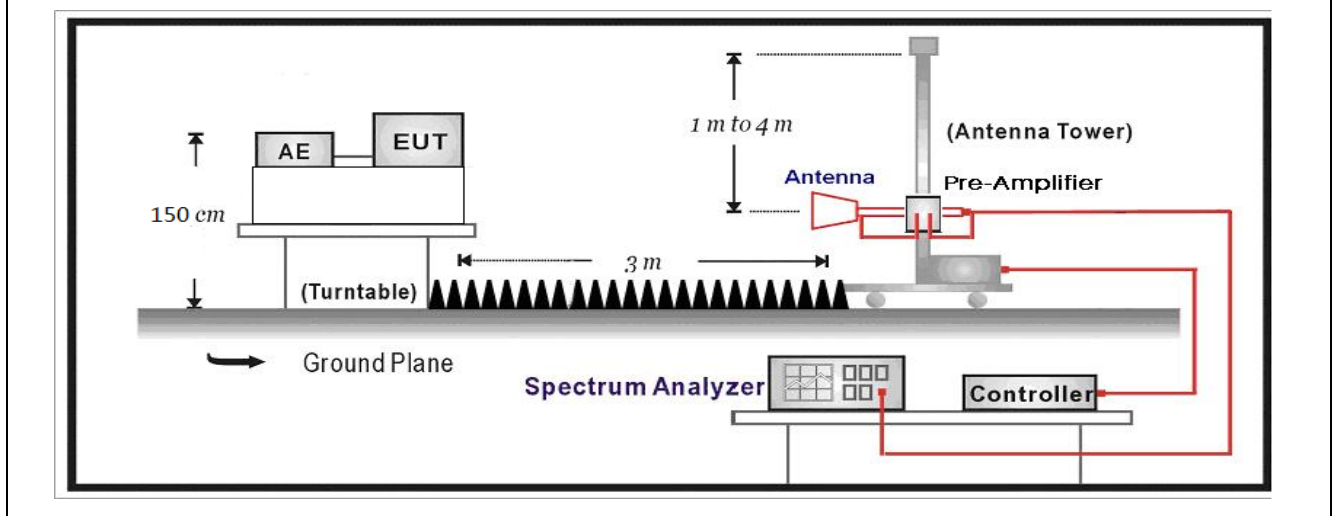
6. Radiated Emission Band Edge

6.1. Test Equipment

Radiated Emission(Above 1GHz) / AC-5					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2016.01.04	2017.01.03
Preamplifier	Miteq	NSP1800-25	1364185	2016.05.06	2017.05.05
Preamplifier	Quietek	AP-040G	CHM-0906001	2016.05.06	2017.05.05
DRG Horn	ETS-Lindgren	3117	00123988	2016.01.22	2017.01.21
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2015.11.25	2016.11.24
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2016.03.02	2017.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2016.03.02	2017.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	AC5-C3	2016.03.02	2017.03.01
EMI Receiver	Agilent	N9038A	MY51210196	2016.06.10	2017.06.09
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2016.01.04	2017.01.03
Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

6.2. Test Setup

Above 1GHz Test Setup:



6.3. Limit

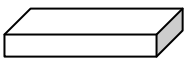
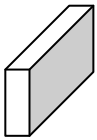
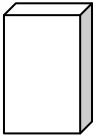
Band edge Limit				
Frequency bands (MHz)	Detector	Limit (dB μ V/m)	RBW (MHz)	Distance (m)
2310-2390	PK	74	1	3
2483.5-2500	AV	54	1	3

Note: The field strength of emissions appearing within these frequency bands shall not exceed the limits.

6.4. Test Procedure

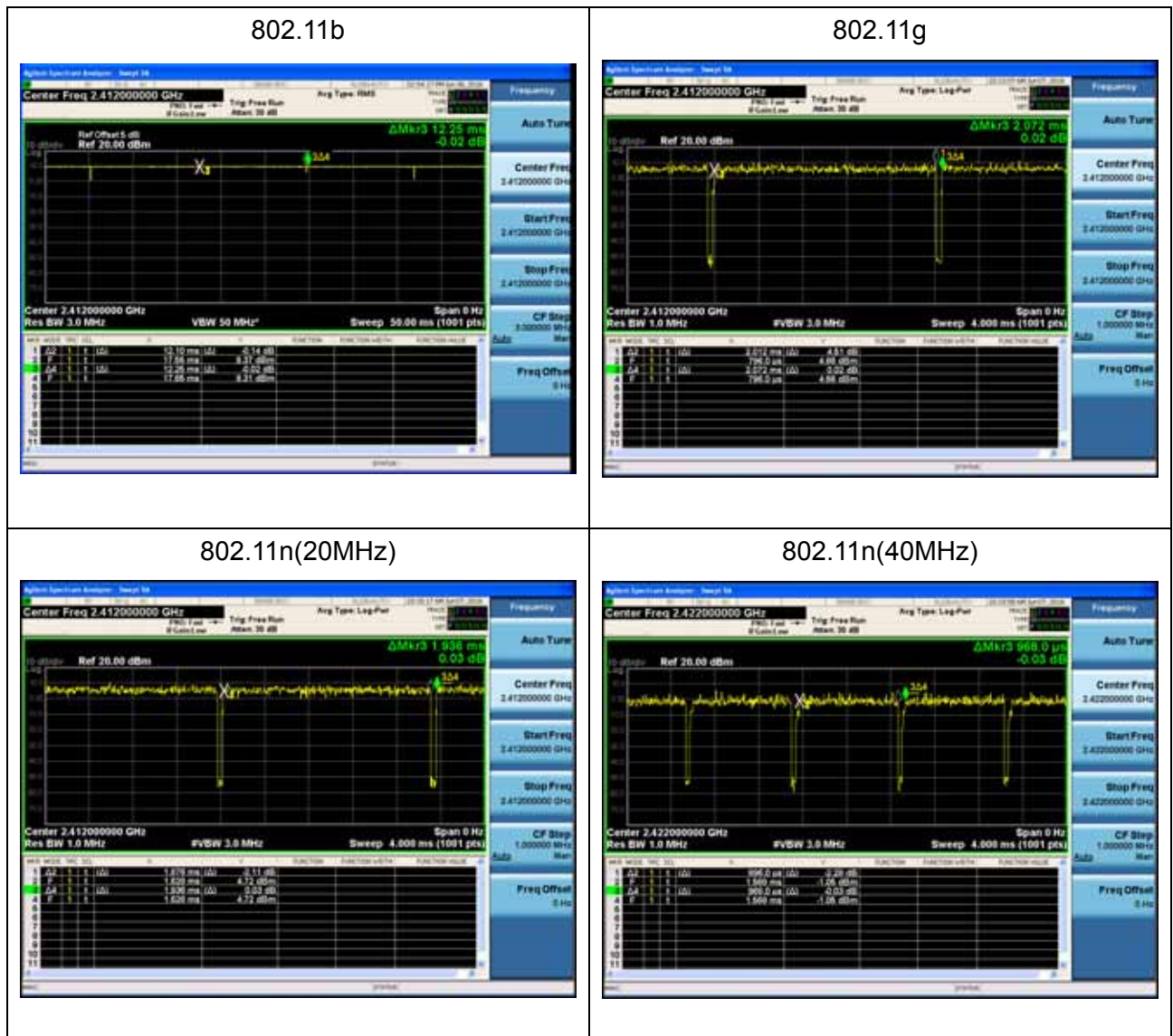
Test Method					
	References Rule		Chapter	Description	
☒	ANSI C63.10		6.10	Band-edge testing	
	☒	ANSI C63.10	6.10.5	Restricted-band band-edge measurements	
	☐	ANSI C63.10	6.10.6	Marker-delta method	
☒	ANSI C63.10		11.12	Emissions in restricted frequency bands	
	☒	ANSI C63.10	11.12.1	Radiated emission 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	Antenna-port conducted measurements
		☐	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

6.5. EUT test definition

Item	Emissions in non-restricted frequency bands			
Device Category	☒	Fixed position use		
	☐	Mobile position use		
Test mode	Mode 1~4			
Test method	☒	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis ☐	Worst Axis ☐	Worst Axis ☒
	☐	Conducted		
	☐	Chain 0		
				
	☐	Chain 0	Chain 1	
				
	☐	Chain 0	Chain 1	Chain 2
				

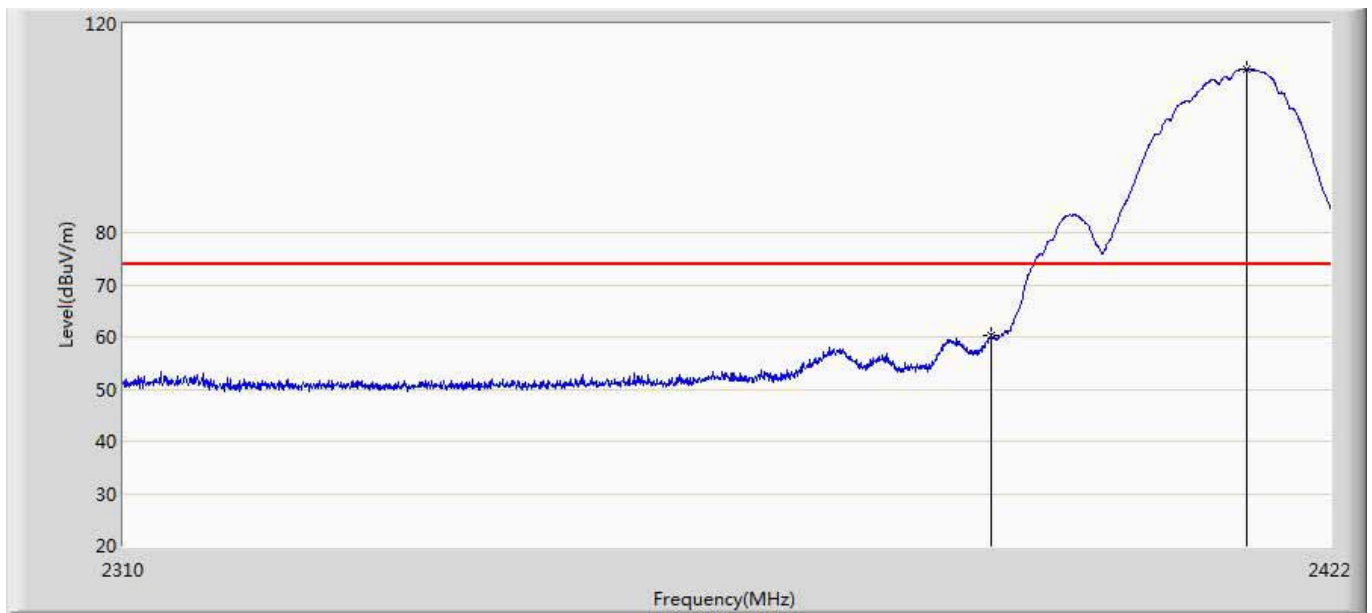
6.6. Duty Cycle

Test Mode	Tx On (ms)	Tx Off (ms)	VBW	Tx On + Tx Off (ms)	Duty Cycle
802.11b	12.10	0.15	91Hz	12.25	98.78%
802.11g	2.012	0.06	510Hz	2.072	97.10%
802.11n(20MHz)	1.876	0.06	560Hz	1.936	96.90%
802.11n(40MHz)	0.896	0.072	1.2kHz	0.968	92.56%



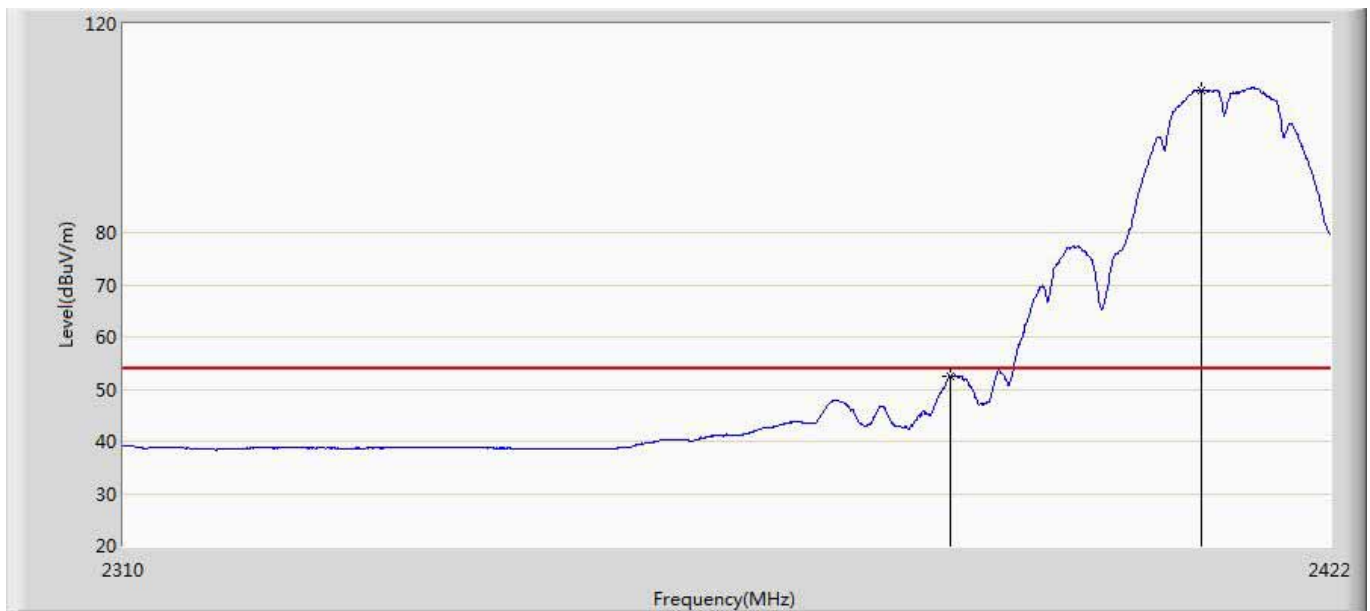
6.7. Test Result

Engineer: Yock	
Site: AC5	Time: 2016/06/08 - 09:30
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300Mbps Wireless N Mini Router	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2412Mhz by 802.11b	



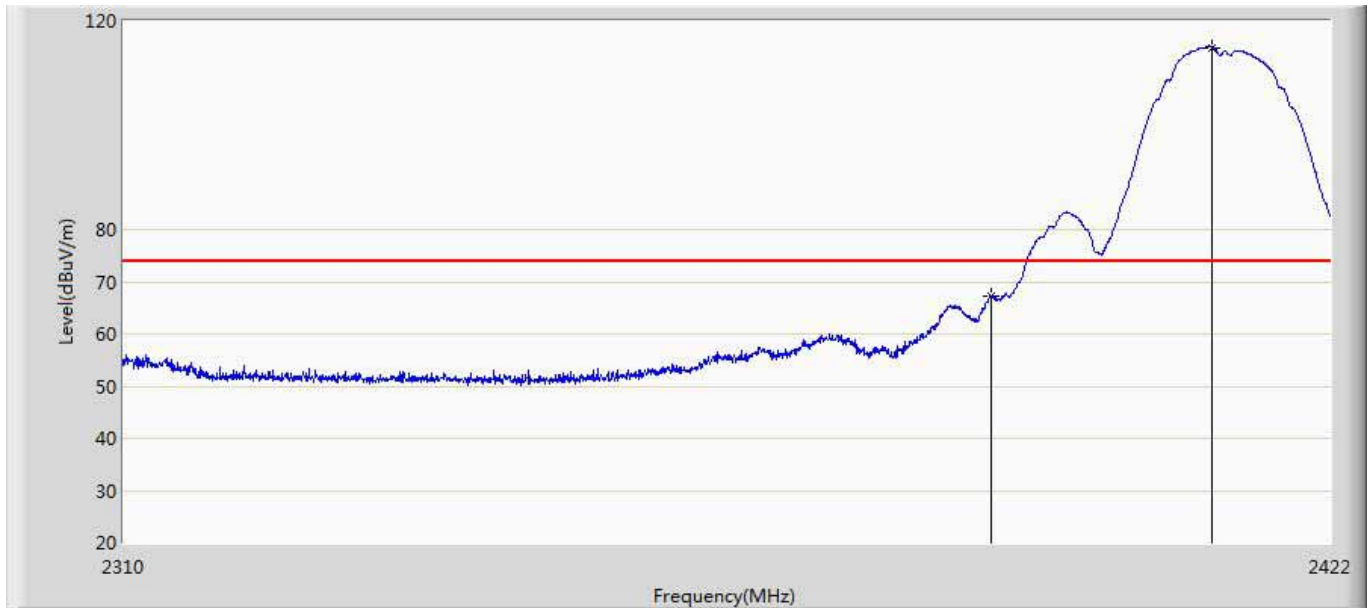
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	60.202	21.971	-13.798	74.000	38.231	PK
2	*	2414.048	111.249	72.904	37.249	74.000	38.346	PK

Engineer: Yock	
Site: AC5	Time: 2016/06/08 - 09:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300MBPS WIRELESS N MINI ROUTER	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2412Mhz by 802.11b	



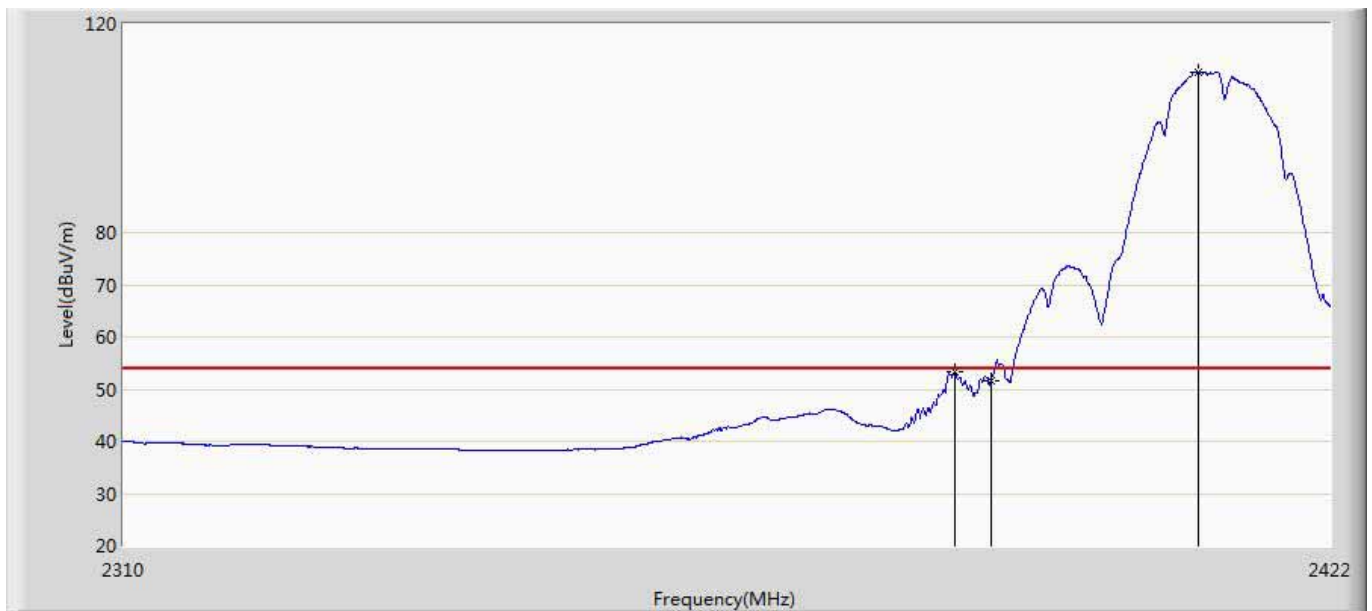
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2386.160	52.462	14.237	-1.538	54.000	38.225	AV
2	*	2409.792	107.309	68.971	53.309	54.000	38.338	AV

Engineer: Yock	
Site: AC5	Time: 2016/06/08 - 09:46
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300MBPS WIRELESS N MINI ROUTER	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2412Mhz by 802.11b	



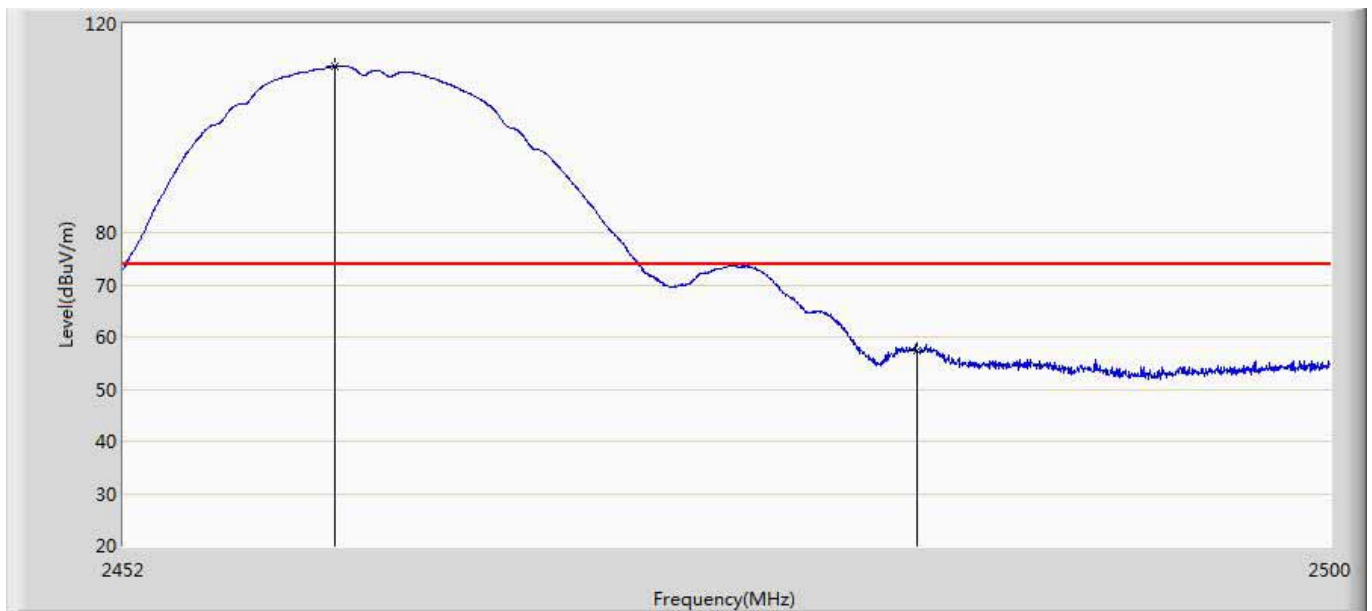
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	67.104	28.873	-6.896	74.000	38.231	PK
2	*	2410.856	114.918	76.574	40.918	74.000	38.345	PK

Engineer: Yock	
Site: AC5	Time: 2016/06/08 - 09:46
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300MBPS WIRELESS N MINI ROUTER	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2412Mhz by 802.11b	



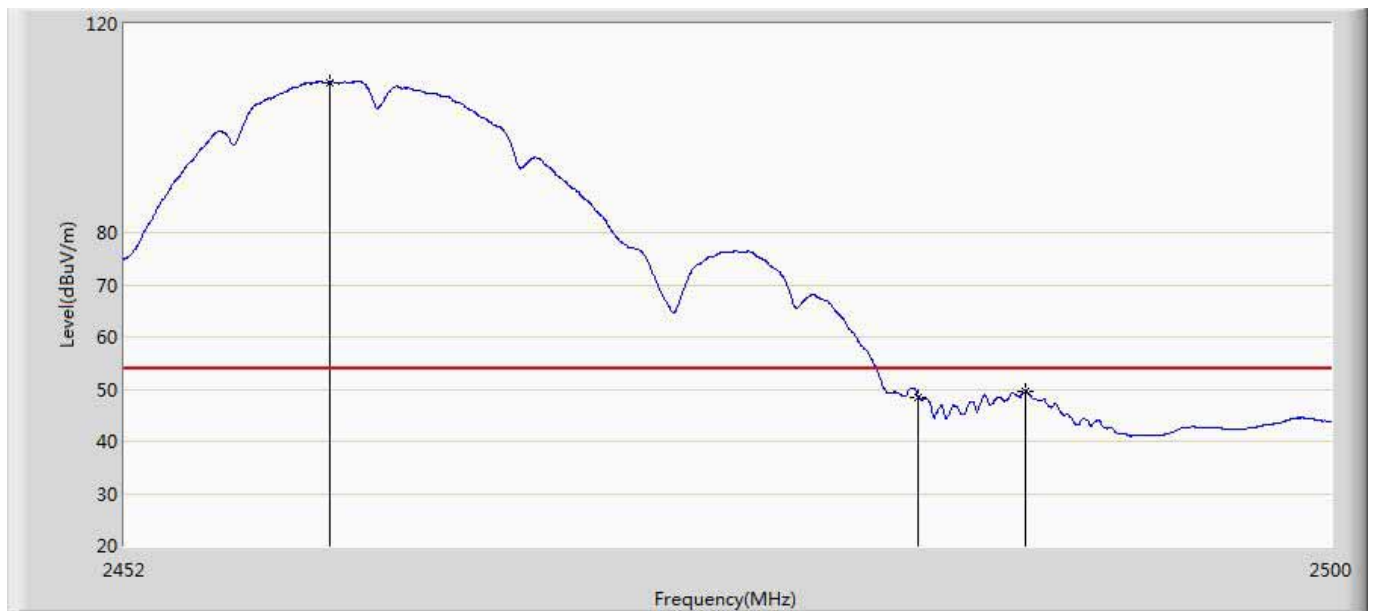
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2386.664	53.292	15.066	-0.708	54.000	38.226	AV
2		2390.000	51.653	13.422	-2.347	54.000	38.231	AV
3	*	2409.568	110.850	72.514	56.850	54.000	38.336	AV

Engineer: Yock	
Site: AC5	Time: 2016/06/12 - 19:42
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300MBPS WIRELESS N MINI ROUTER	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2462Mhz by 802.11b	



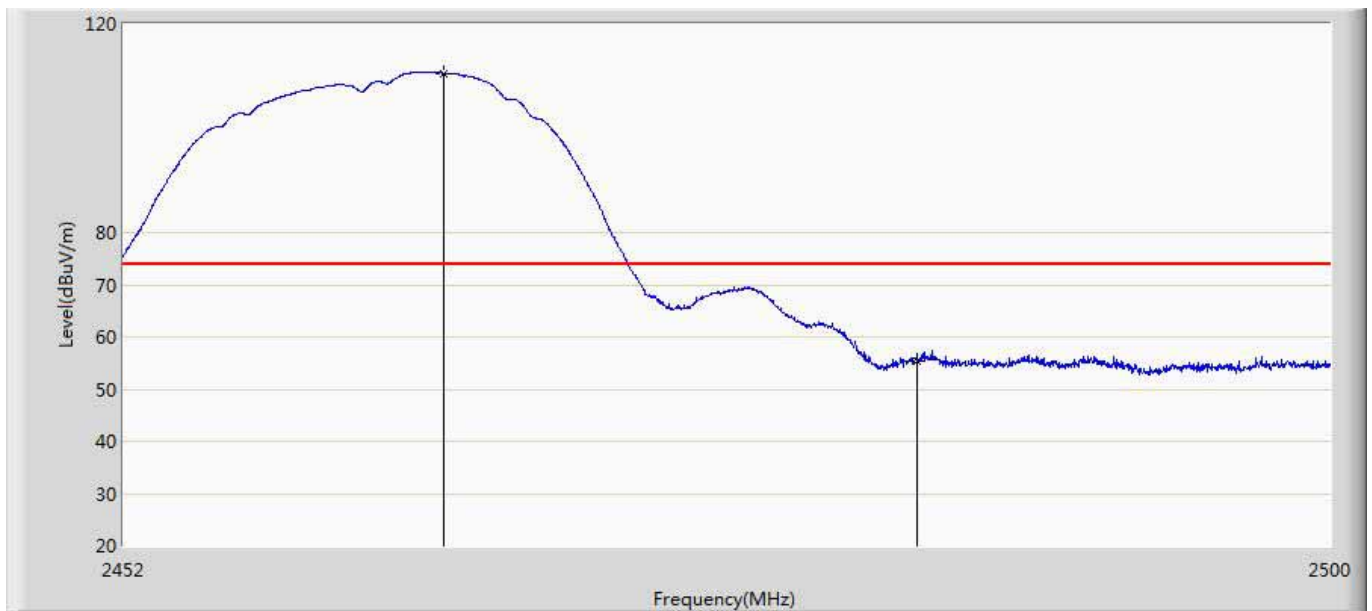
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2460.328	111.798	73.338	37.798	74.000	38.460	PK
2		2483.500	57.299	18.807	-16.701	74.000	38.492	PK

Engineer: Yock	
Site: AC5	Time: 2016/06/12 - 19:43
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300MBPS WIRELESS N MINI ROUTER	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2462Mhz by 802.11b	



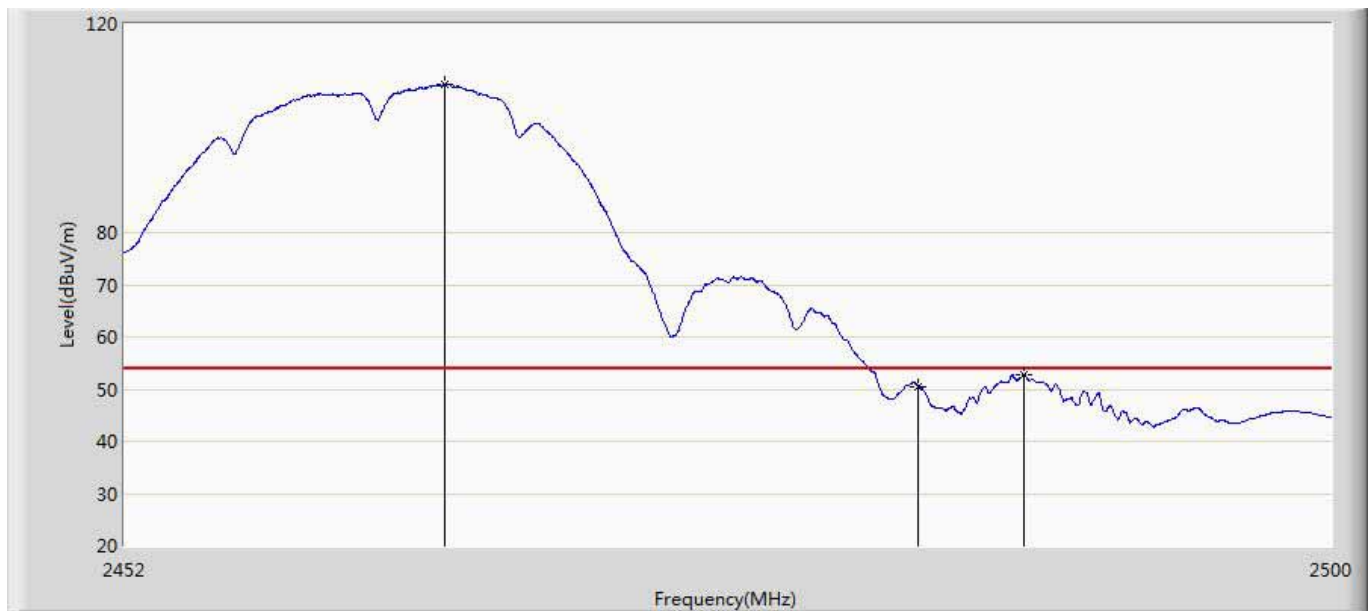
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2460.088	108.840	70.381	54.840	54.000	38.459	AV
2		2483.500	48.334	9.842	-5.666	54.000	38.492	AV
3		2487.784	49.685	11.180	-4.315	54.000	38.505	AV

Engineer: Yock	
Site: AC5	Time: 2016/06/12 - 19:47
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300MBPS WIRELESS N MINI ROUTER	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2462Mhz by 802.11b	



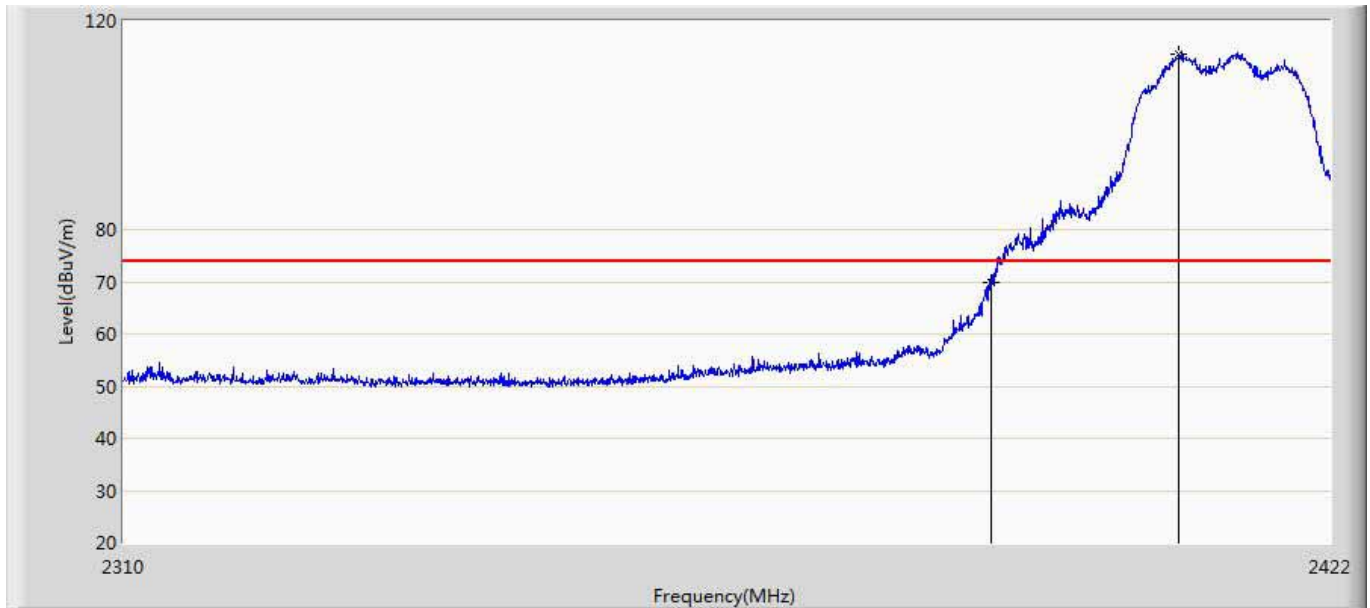
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2464.648	110.546	72.076	36.546	74.000	38.470	PK
2		2483.500	55.422	16.930	-18.578	74.000	38.492	PK

Engineer: Yock	
Site: AC5	Time: 2016/06/12 - 19:48
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300MBPS WIRELESS N MINI ROUTER	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2462Mhz by 802.11b	



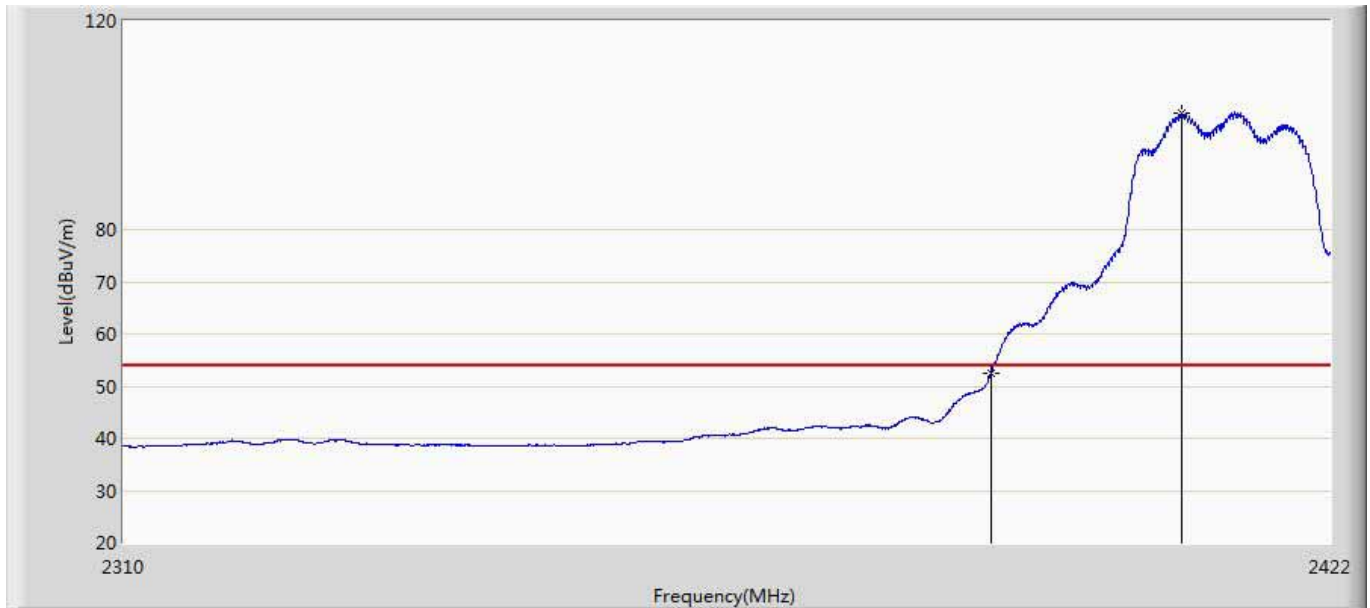
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2464.648	108.354	69.884	54.354	54.000	38.470	AV
2		2483.500	50.475	11.983	-3.525	54.000	38.492	AV
3		2487.688	53.168	14.663	-0.832	54.000	38.505	AV

Engineer: Yock	
Site: AC5	Time: 2016/06/12 - 20:05
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300MBPS WIRELESS N MINI ROUTER	Power: AC 120V/60Hz
Note: Mode2 Transmit at channel 2412Mhz by 802.11g	



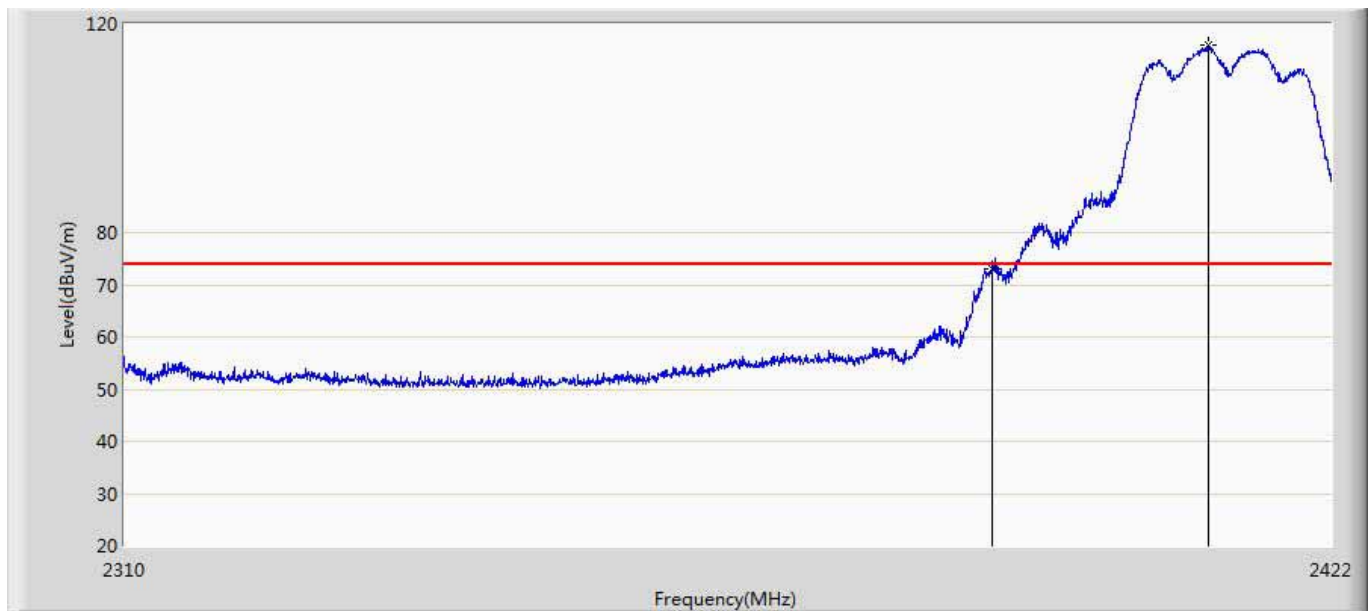
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	69.915	31.684	-4.085	74.000	38.231	PK
2	*	2407.720	113.644	75.319	39.644	74.000	38.324	PK

Engineer: Yock	
Site: AC5	Time: 2016/06/12 - 20:05
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300MBPS WIRELESS N MINI ROUTER	Power: AC 120V/60Hz
Note: Mode2 Transmit at channel 2412Mhz by 802.11g	



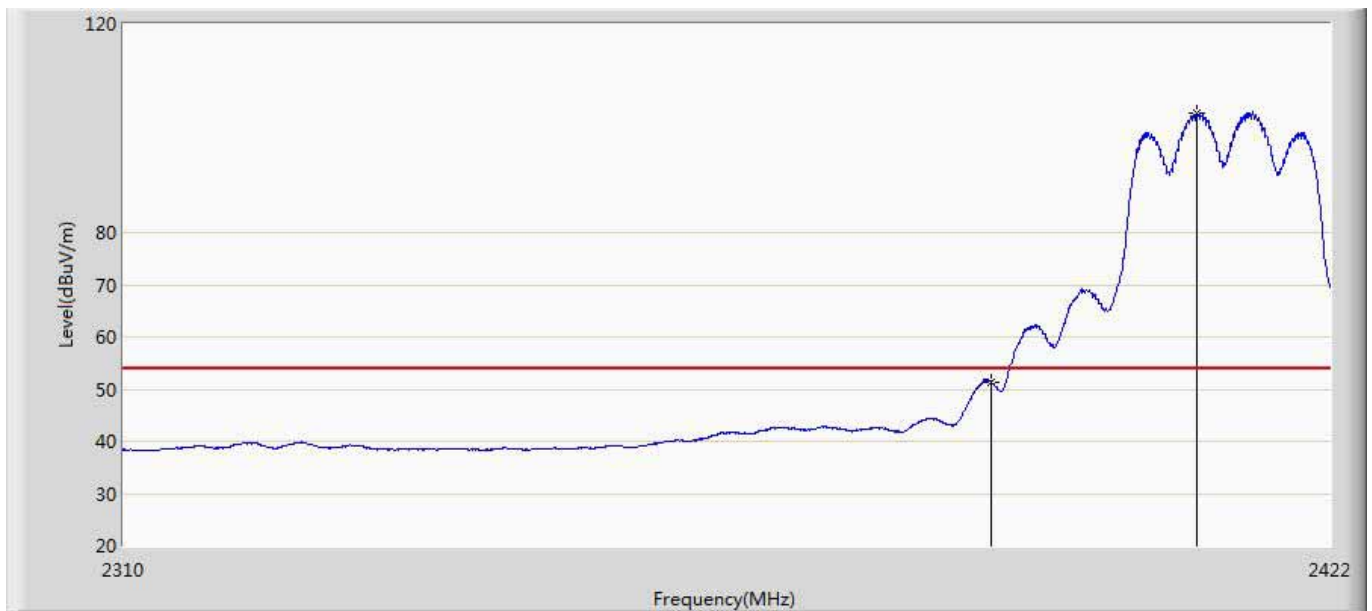
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	52.349	14.118	-1.651	54.000	38.231	AV
2	*	2407.888	102.198	63.872	48.198	54.000	38.325	AV

Engineer: Yock	
Site: AC5	Time: 2016/06/12 - 20:12
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300MBPS WIRELESS N MINI ROUTER	Power: AC 120V/60Hz
Note: Mode2 Transmit at channel 2412Mhz by 802.11g	



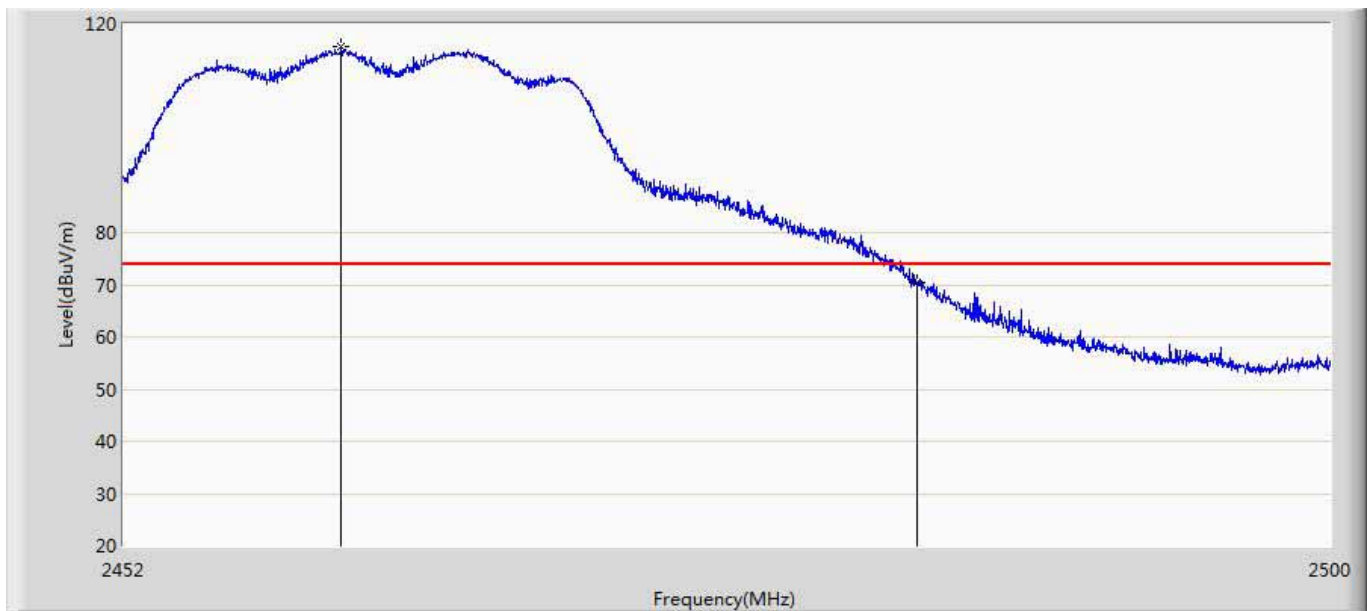
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	73.045	34.814	-0.955	74.000	38.231	PK
2	*	2410.352	115.903	77.562	41.903	74.000	38.341	PK

Engineer: Yock	
Site: AC5	Time: 2016/06/12 - 20:12
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300MBPS WIRELESS N MINI ROUTER	Power: AC 120V/60Hz
Note: Mode2 Transmit at channel 2412Mhz by 802.11g	



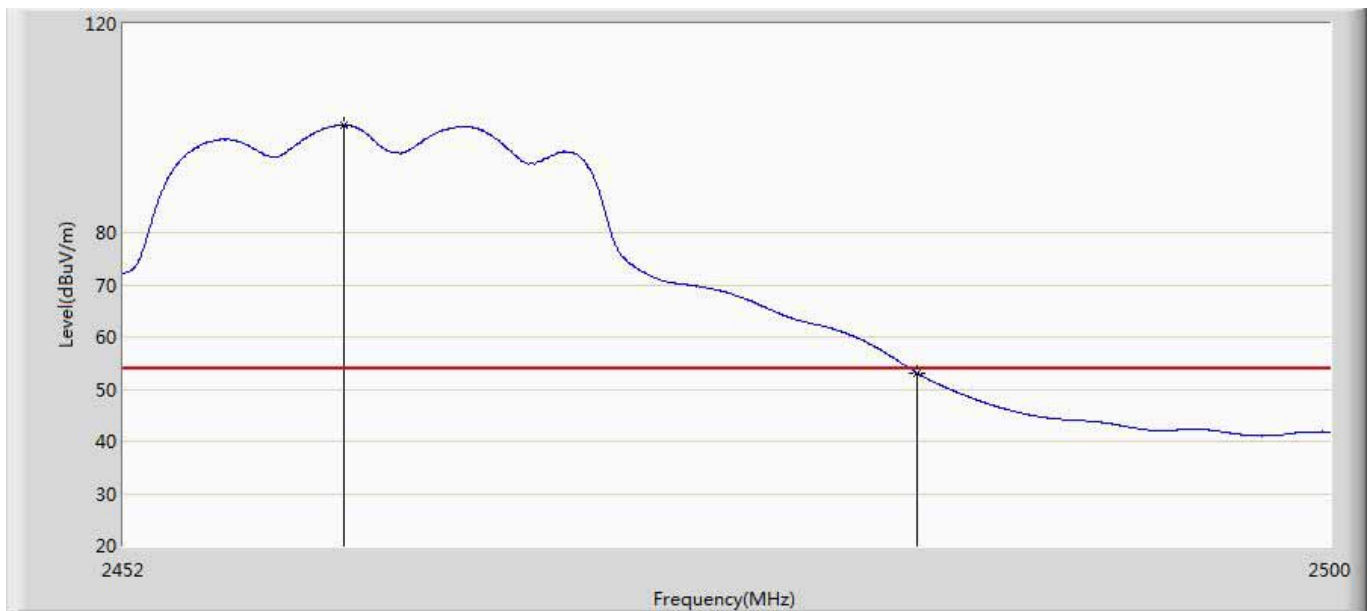
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	51.271	13.040	-2.729	54.000	38.231	AV
2	*	2409.344	102.870	64.535	48.870	54.000	38.335	AV

Engineer: Yock	
Site: AC5	Time: 2016/06/12 - 20:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300MBPS WIRELESS N MINI ROUTER	Power: AC 120V/60Hz
Note: Mode2 Transmit at channel 2462Mhz by 802.11g	



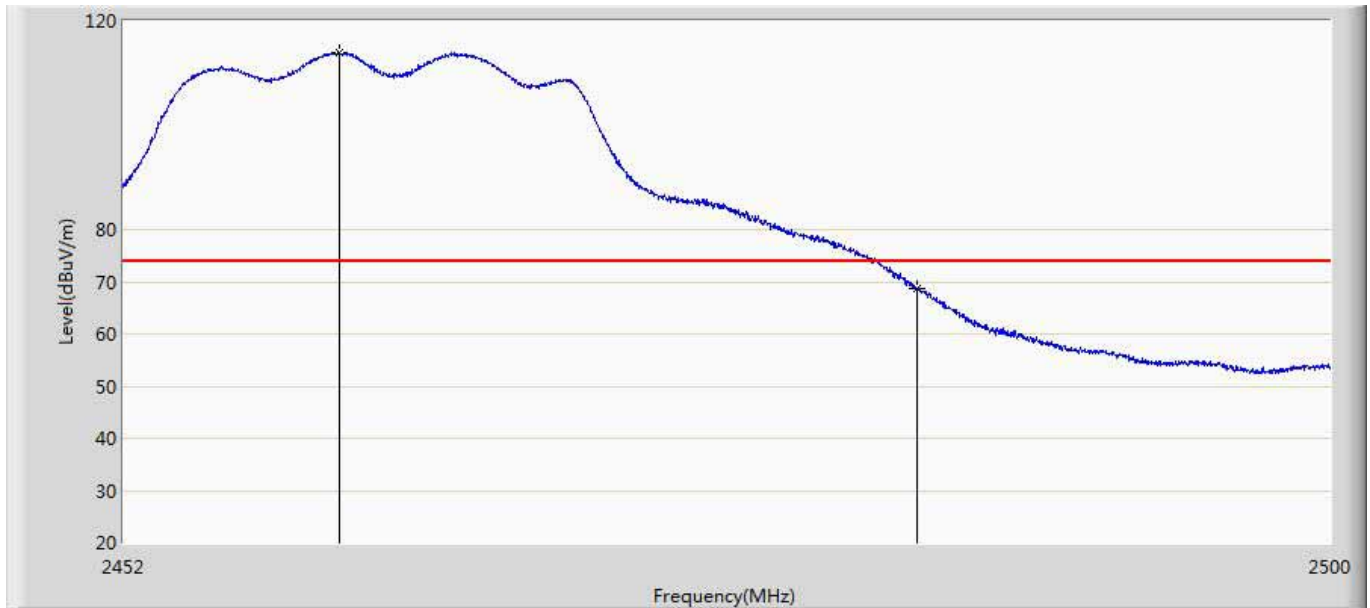
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2460.616	115.600	77.138	41.600	74.000	38.461	PK
2		2483.500	70.508	32.016	-3.492	74.000	38.492	PK

Engineer: Yock	
Site: AC5	Time: 2016/06/12 - 20:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300MBPS WIRELESS N MINI ROUTER	Power: AC 120V/60Hz
Note: Mode2 Transmit at channel 2462Mhz by 802.11g	



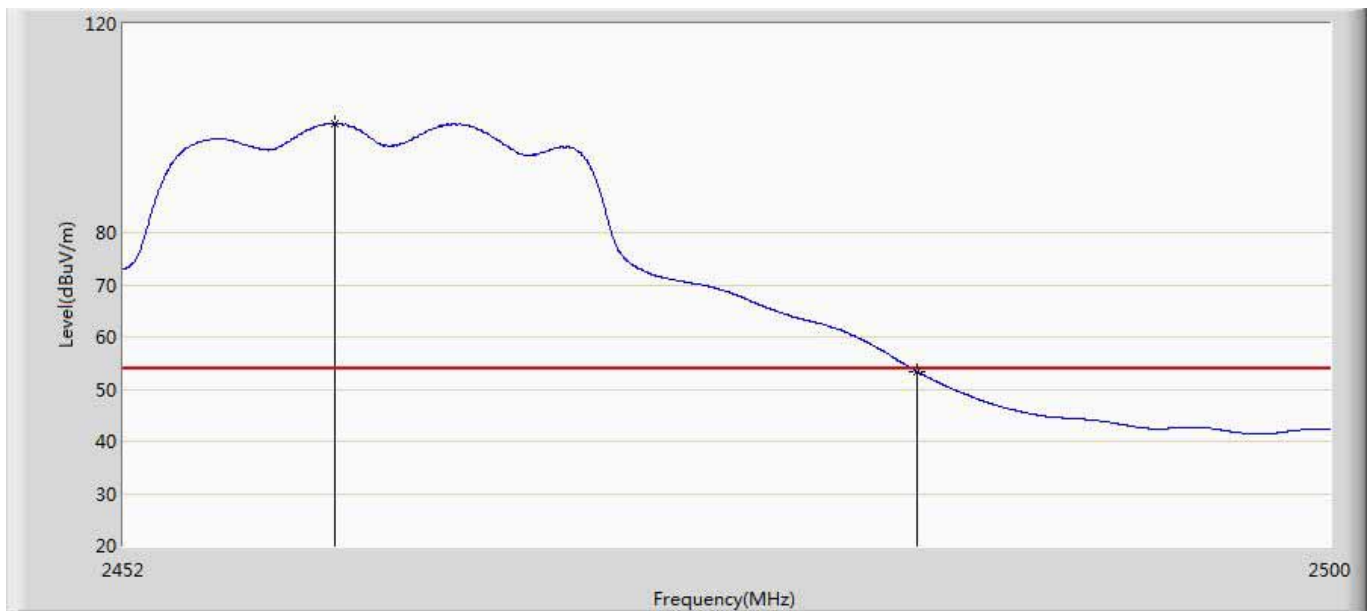
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2460.712	100.598	62.136	46.598	54.000	38.462	AV
2		2483.500	53.023	14.531	-0.977	54.000	38.492	AV

Engineer: Yock	
Site: AC5	Time: 2016/06/12 - 20:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300MBPS WIRELESS N MINI ROUTER	Power: AC 120V/60Hz
Note: Mode2 Transmit at channel 2462Mhz by 802.11g	



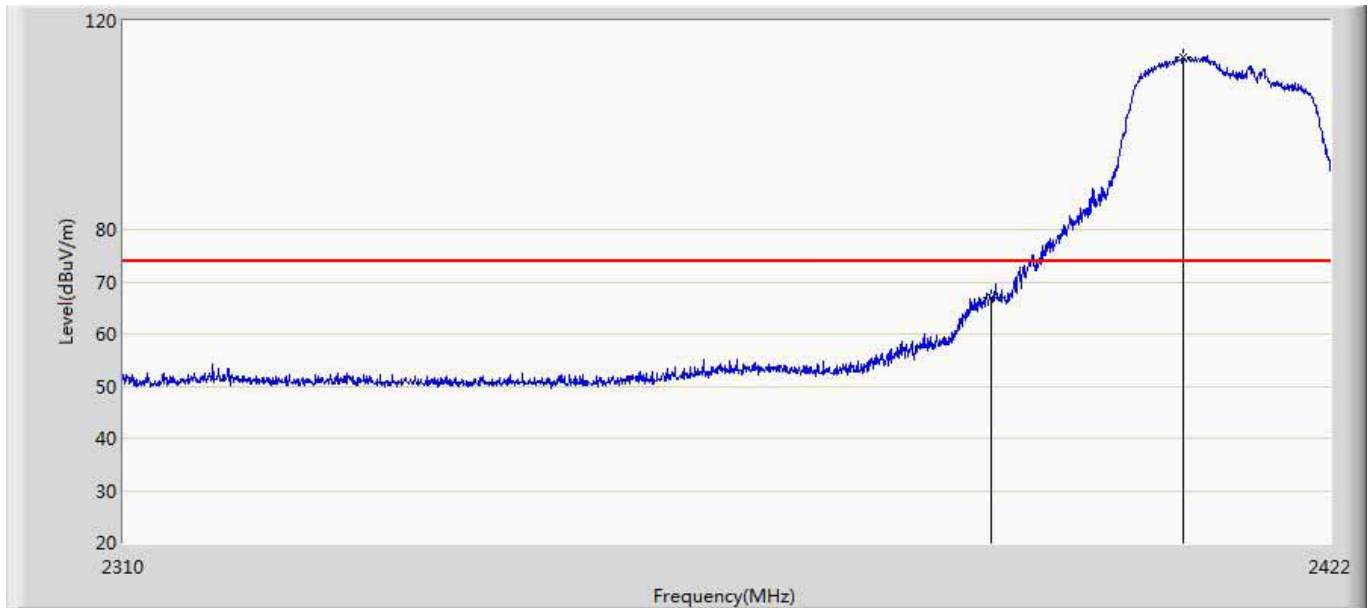
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2460.520	114.029	75.568	40.029	74.000	38.461	PK
2		2483.500	68.557	30.065	-5.443	74.000	38.492	PK

Engineer: Yock	
Site: AC5	Time: 2016/06/12 - 20:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300MBPS WIRELESS N MINI ROUTER	Power: AC 120V/60Hz
Note: Mode2 Transmit at channel 2462Mhz by 802.11g	



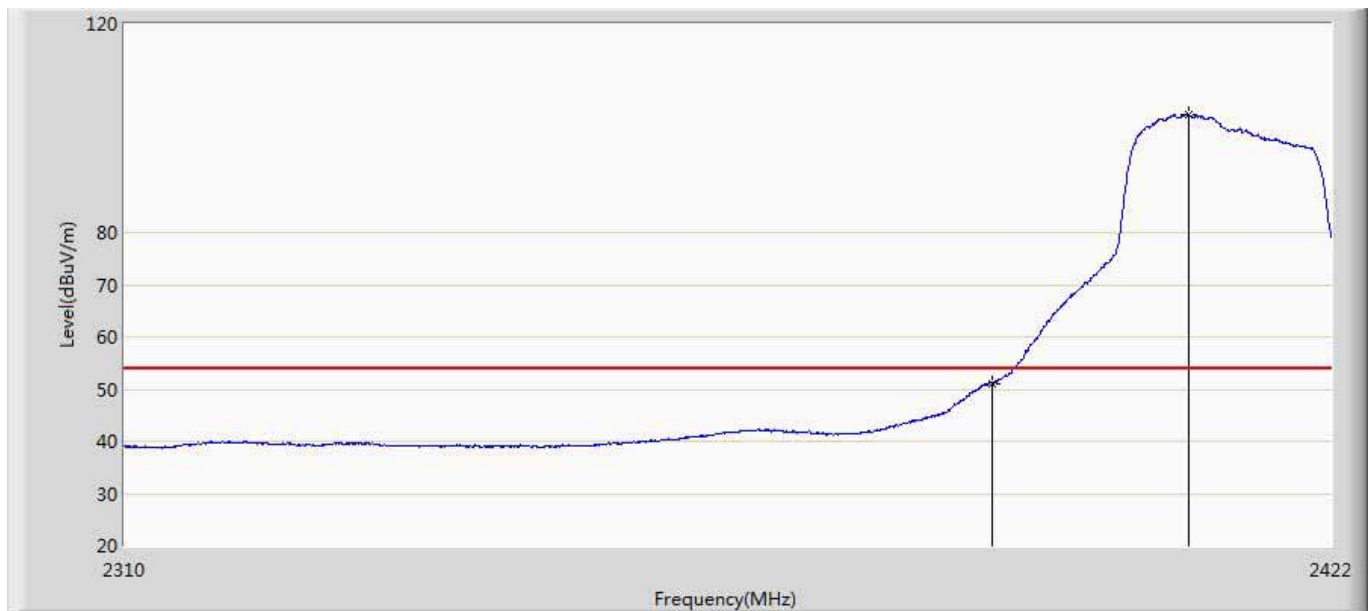
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2460.328	100.951	62.491	46.951	54.000	38.460	AV
2		2483.500	53.276	14.784	-0.724	54.000	38.492	AV

Engineer: Yock	
Site: AC5	Time: 2016/06/12 - 20:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300MBPS WIRELESS N MINI ROUTER	Power: AC 120V/60Hz
Note: Mode3 Transmit at channel 2412Mhz by 802.11n20	



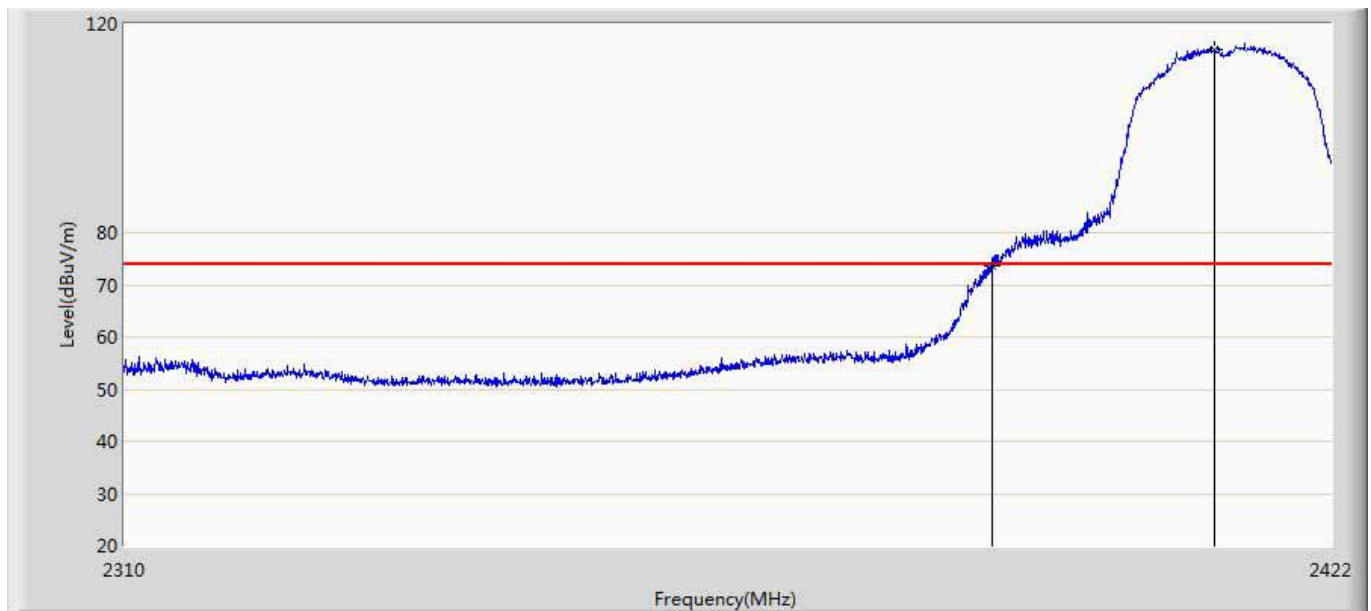
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	66.846	28.615	-7.154	74.000	38.231	PK
2	*	2408.112	112.965	74.638	38.965	74.000	38.327	PK

Engineer: Yock	
Site: AC5	Time: 2016/06/12 - 20:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300MBPS WIRELESS N MINI ROUTER	Power: AC 120V/60Hz
Note: Mode3 Transmit at channel 2412Mhz by 802.11n20	



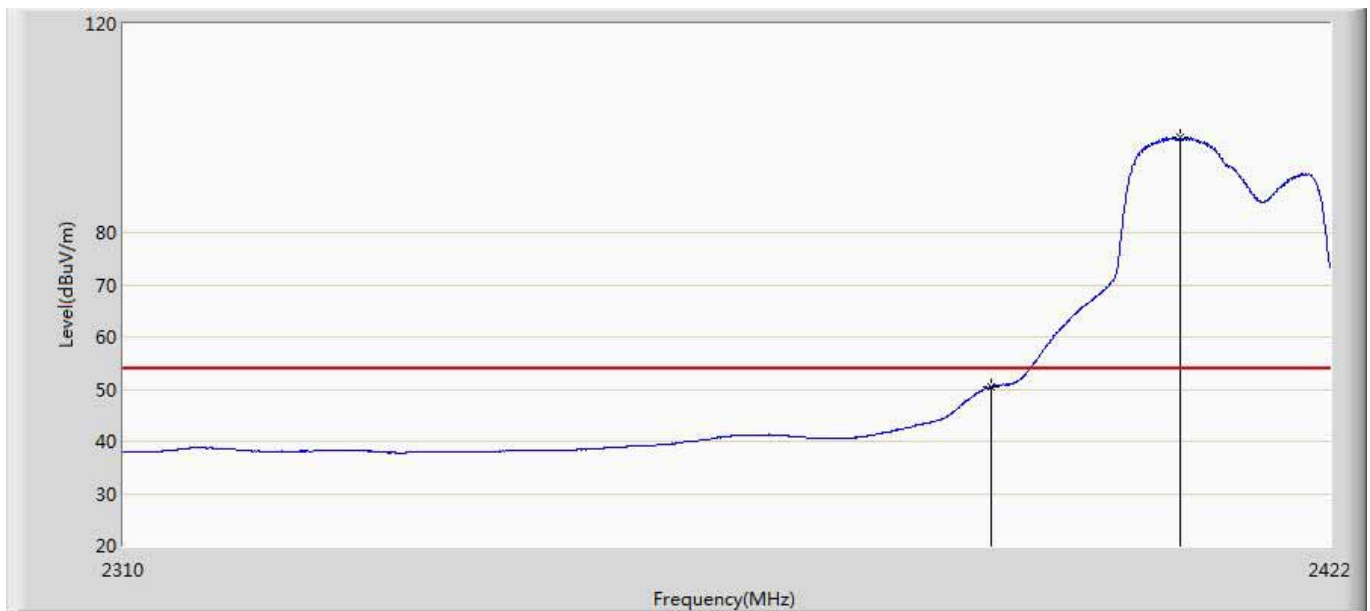
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	51.091	12.860	-2.909	54.000	38.231	AV
2	*	2408.504	102.573	64.244	48.573	54.000	38.329	AV

Engineer: Yock	
Site: AC5	Time: 2016/06/12 - 20:45
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300MBPS WIRELESS N MINI ROUTER	Power: AC 120V/60Hz
Note: Mode3 Transmit at channel 2412Mhz by 802.11n20	



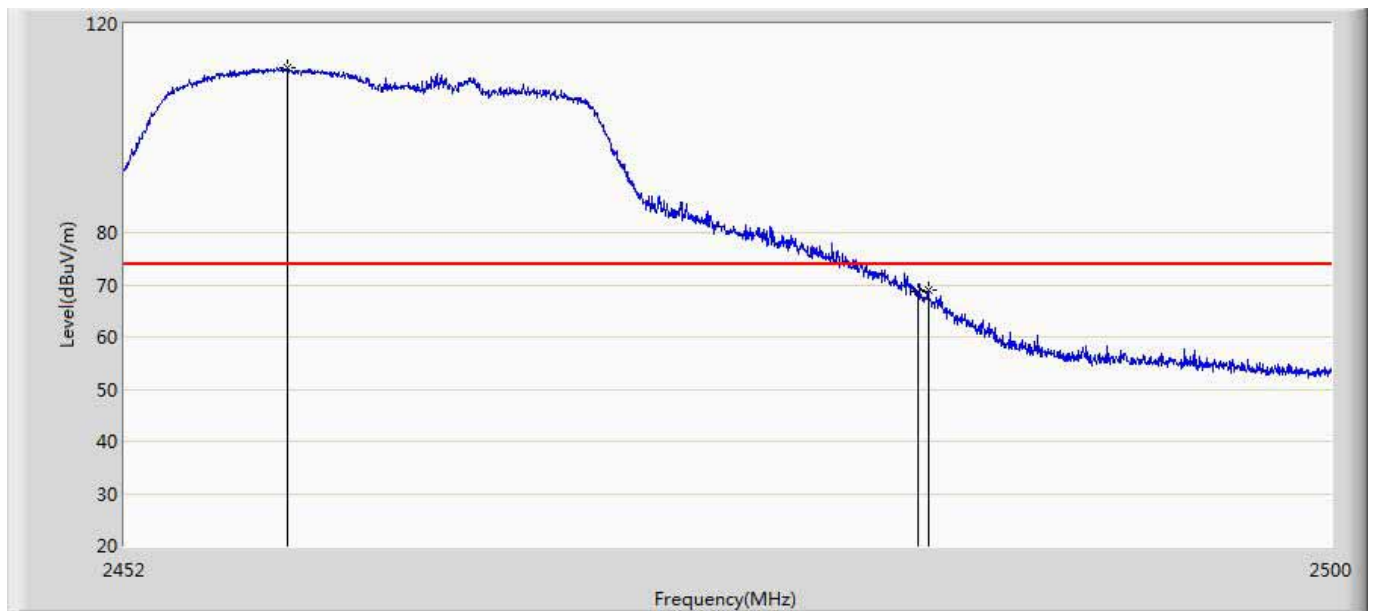
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	73.682	35.451	-0.318	74.000	38.231	PK
2	*	2410.912	115.195	76.850	41.195	74.000	38.345	PK

Engineer: Yock	
Site: AC5	Time: 2016/06/12 - 20:45
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300MBPS WIRELESS N MINI ROUTER	Power: AC 120V/60Hz
Note: Mode3 Transmit at channel 2412Mhz by 802.11n20	



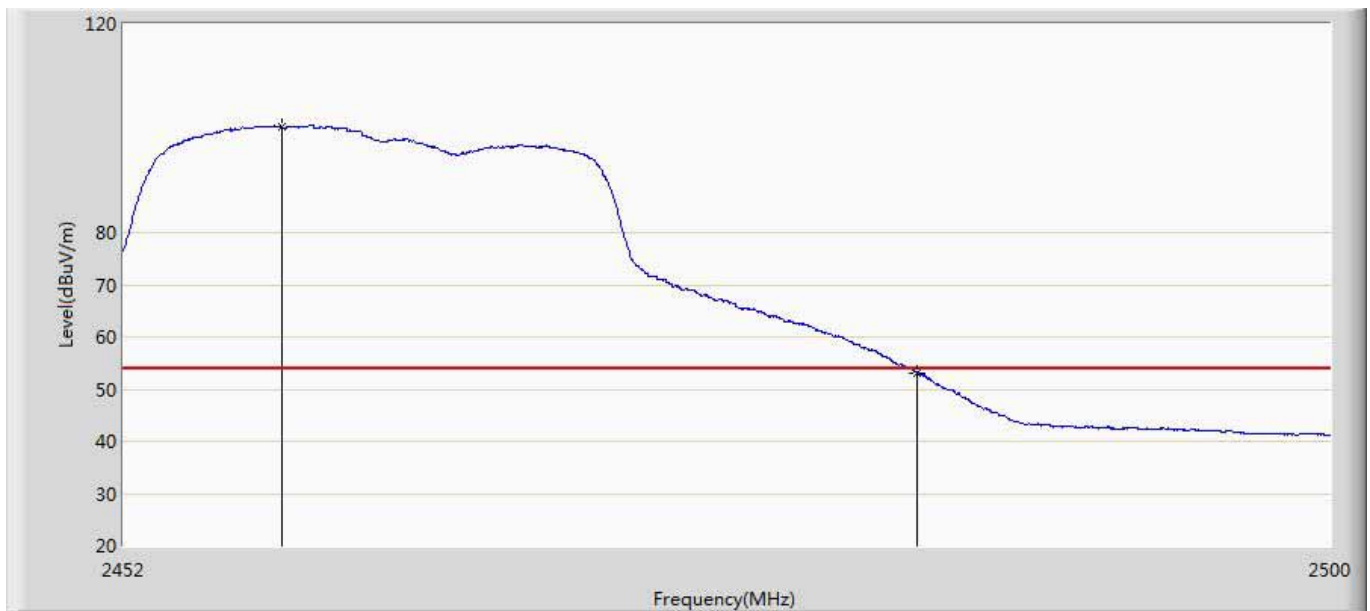
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.407	12.176	-3.593	54.000	38.231	AV
2	*	2407.832	98.230	59.905	44.230	54.000	38.325	AV

Engineer: Yock	
Site: AC5	Time: 2016/06/14 - 17:25
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300MBPS WIRELESS N MINI ROUTER	Power: AC 120V/60Hz
Note: Mode3 Transmit at channel 2462Mhz by 802.11N20	



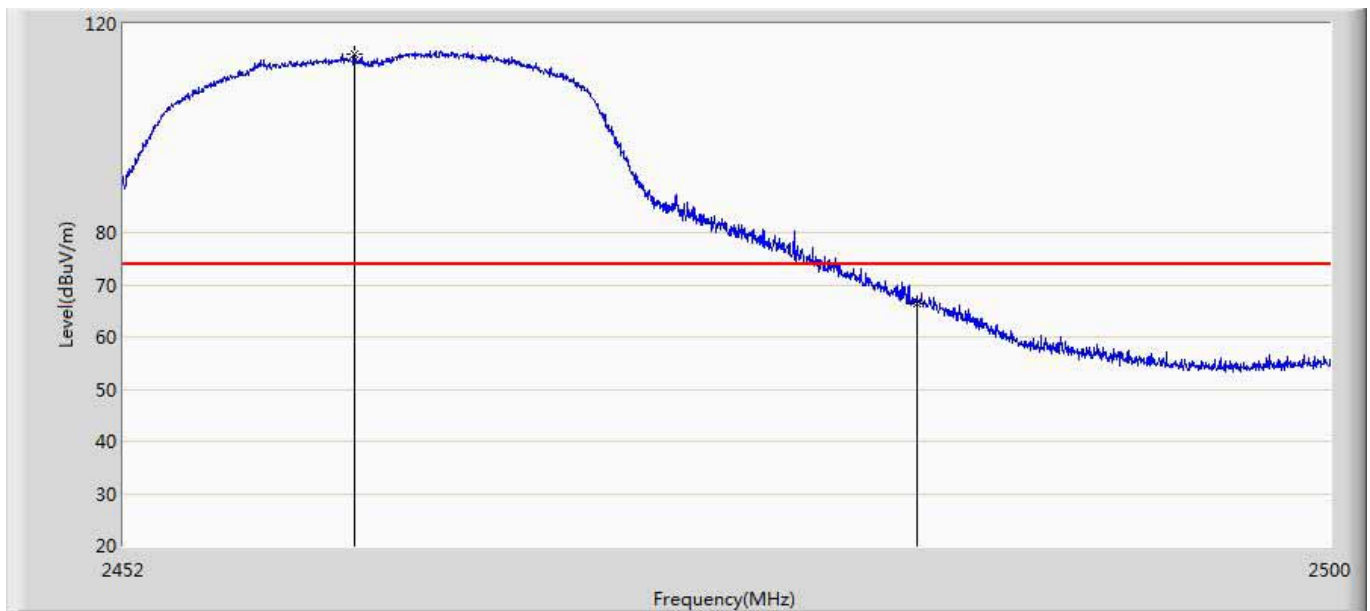
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2458.456	111.455	73.004	37.455	74.000	38.451	PK
2		2483.500	68.762	30.270	-5.238	74.000	38.492	PK
3		2483.872	68.932	30.439	-5.068	74.000	38.494	PK

Engineer: Yock	
Site: AC5	Time: 2016/06/14 - 17:25
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300MBPS WIRELESS N MINI ROUTER	Power: AC 120V/60Hz
Note: Mode3 Transmit at channel 2462Mhz by 802.11N20	



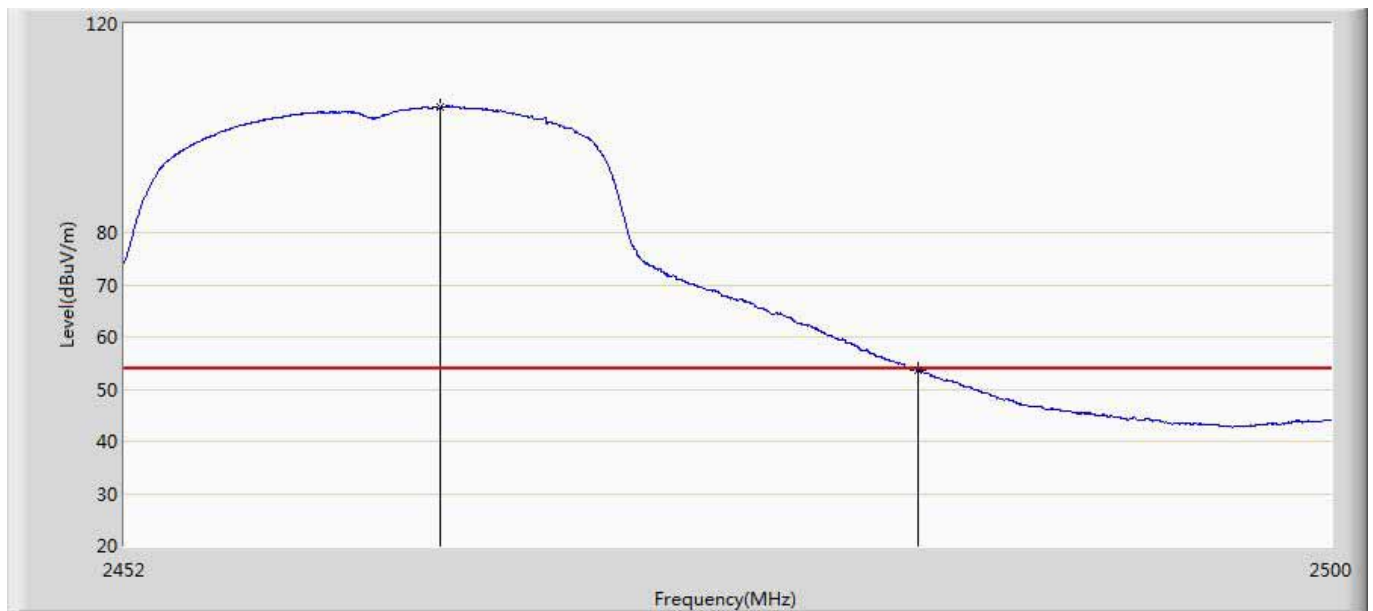
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2458.240	100.410	61.960	46.410	54.000	38.450	AV
2		2483.500	53.101	14.609	-0.899	54.000	38.492	AV

Engineer: Yock	
Site: AC5	Time: 2016/06/14 - 17:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300MBPS WIRELESS N MINI ROUTER	Power: AC 120V/60Hz
Note: Mode3 Transmit at channel 2462Mhz by 802.11N20	



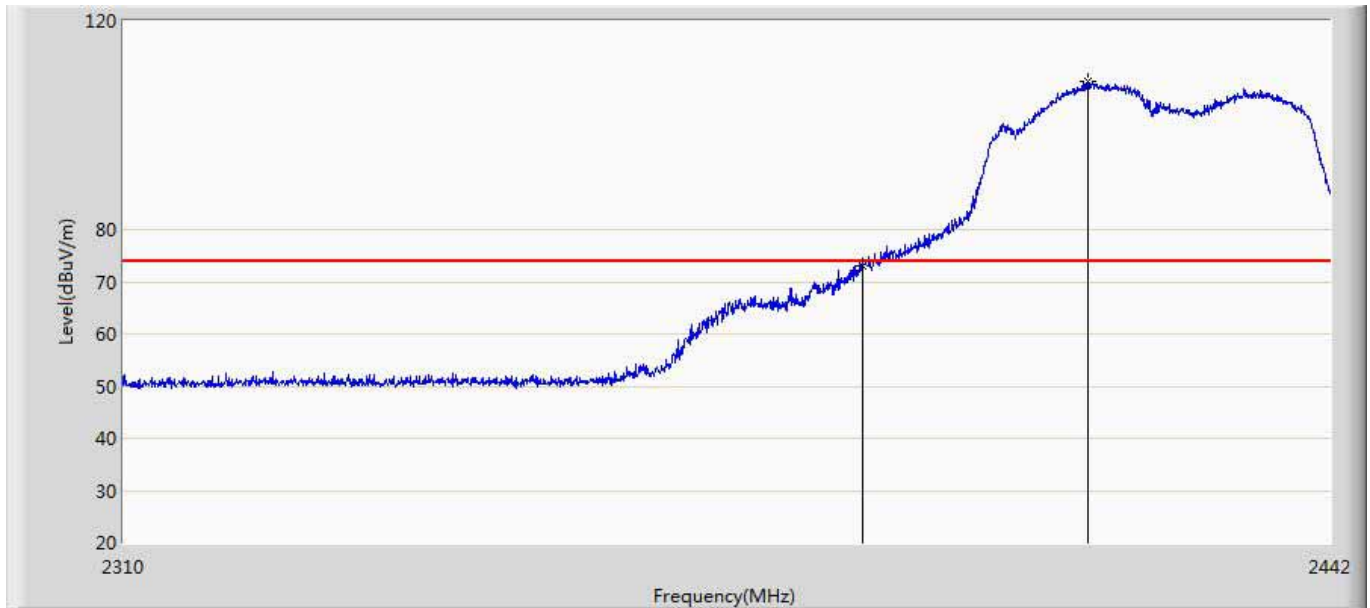
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2461.144	114.324	75.860	40.324	74.000	38.464	PK
2		2483.500	66.426	27.934	-7.574	74.000	38.492	PK

Engineer: Yock	
Site: AC5	Time: 2016/06/14 - 17:34
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300MBPS WIRELESS N MINI ROUTER	Power: AC 120V/60Hz
Note: Mode3 Transmit at channel 2462Mhz by 802.11N20	



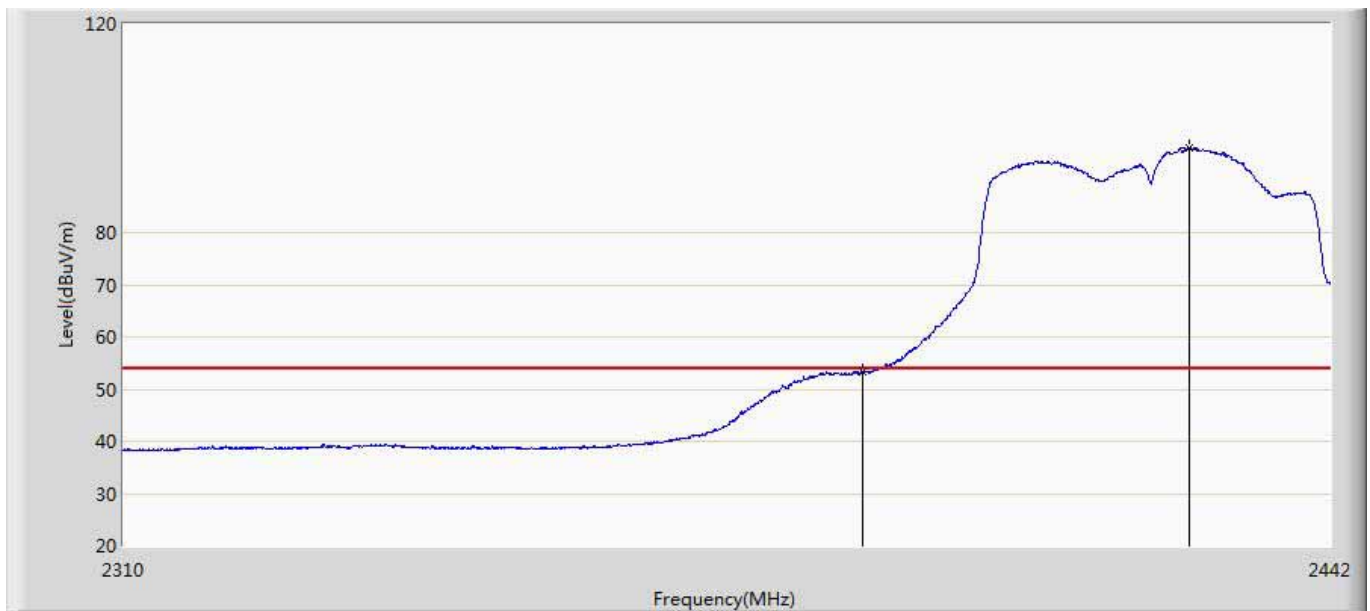
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2464.504	103.992	65.522	49.992	54.000	38.470	AV
2		2483.500	53.631	15.139	-0.369	54.000	38.492	AV

Engineer: Yock	
Site: AC5	Time: 2016/06/14 - 17:42
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300MBPS WIRELESS N MINI ROUTER	Power: AC 120V/60Hz
Note: Mode4 Transmit at channel 2422Mhz by 802.11N40	



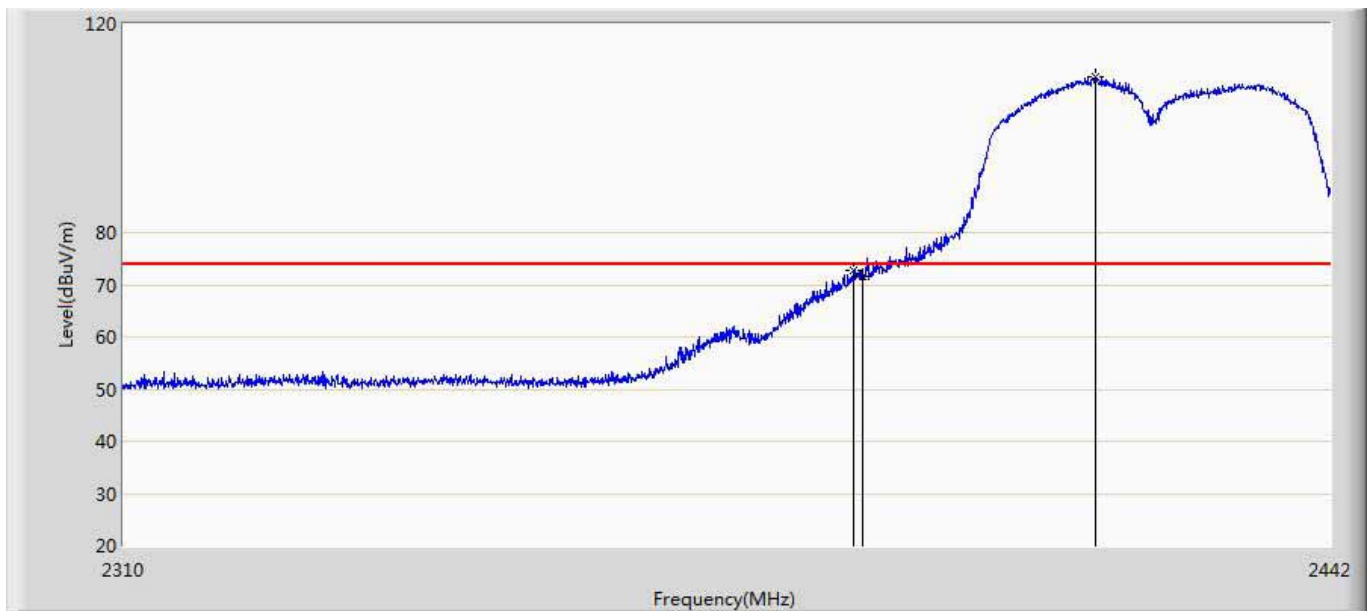
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	73.084	34.853	-0.916	74.000	38.231	PK
2	*	2415.006	108.287	69.942	34.287	74.000	38.345	PK

Engineer: Yock	
Site: AC5	Time: 2016/06/14 - 17:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300MBPS WIRELESS N MINI ROUTER	Power: AC 120V/60Hz
Note: Mode4 Transmit at channel 2422Mhz by 802.11N40	



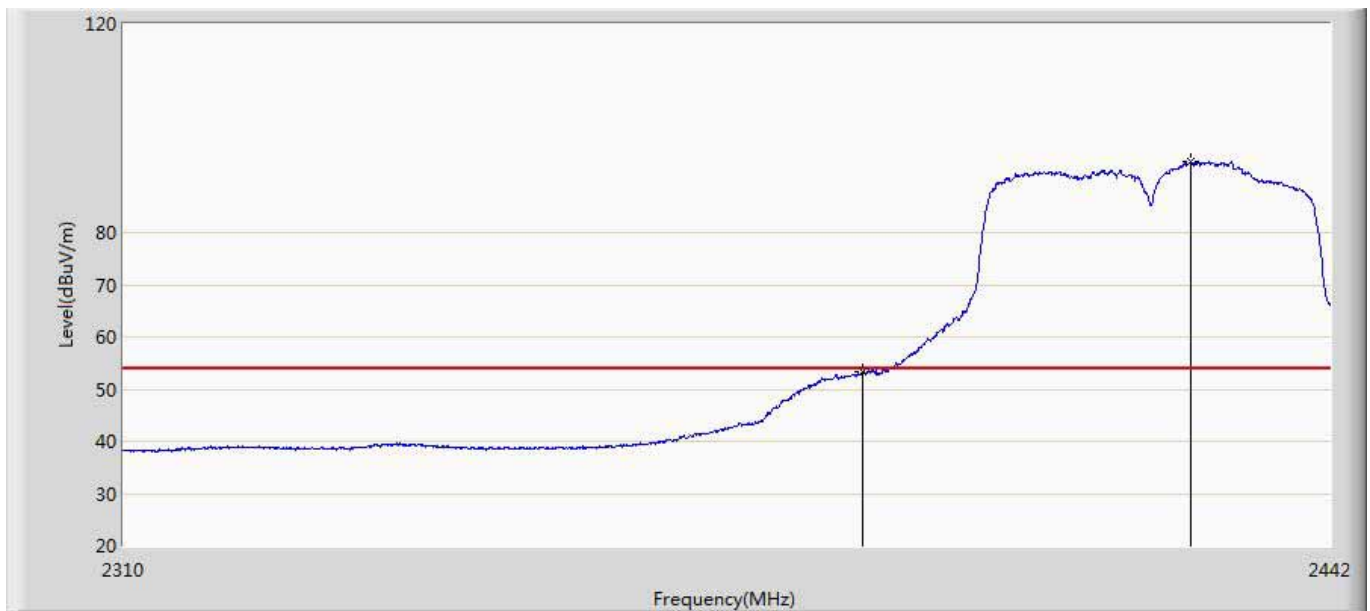
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	53.271	15.040	-0.729	54.000	38.231	AV
2	*	2426.160	96.307	57.962	42.307	54.000	38.346	AV

Engineer: Yock	
Site: AC5	Time: 2016/06/14 - 17:53
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300MBPS WIRELESS N MINI ROUTER	Power: AC 120V/60Hz
Note: Mode4 Transmit at channel 2422Mhz by 802.11N40	



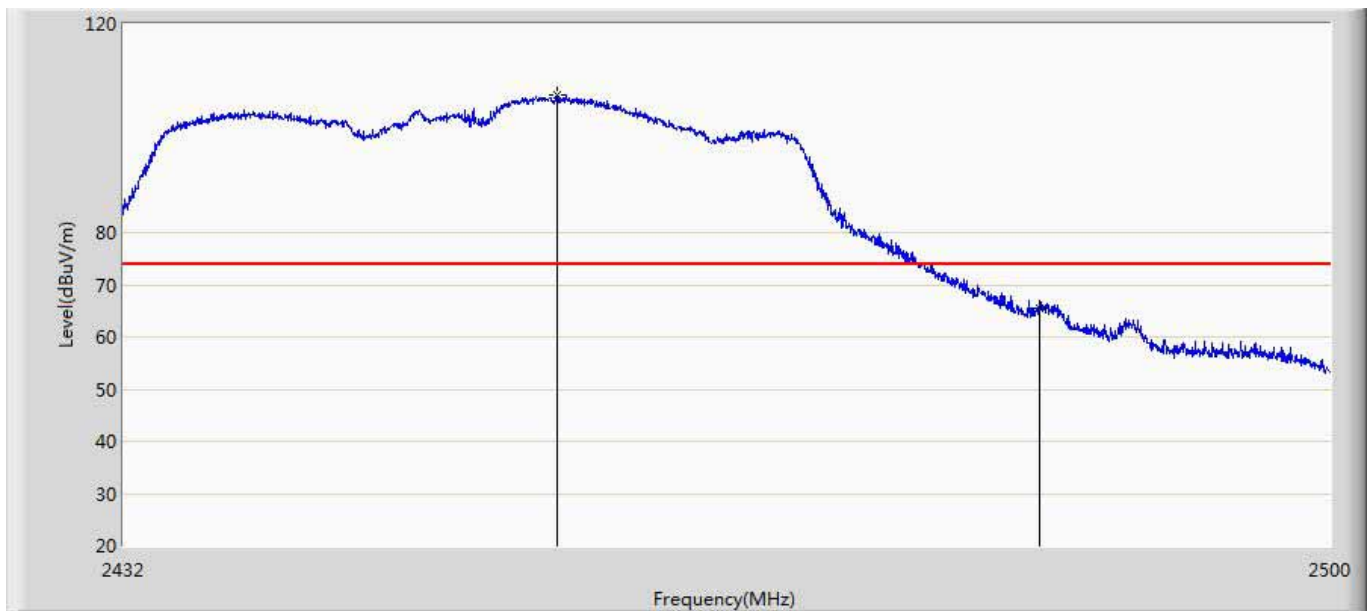
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2388.936	72.715	34.486	-1.285	74.000	38.230	PK
2		2390.000	71.629	33.398	-2.371	74.000	38.231	PK
3	*	2415.864	109.795	71.450	35.795	74.000	38.345	PK

Engineer: Yock	
Site: AC5	Time: 2016/06/14 - 17:55
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300MBPS WIRELESS N MINI ROUTER	Power: AC 120V/60Hz
Note: Mode4 Transmit at channel 2422Mhz by 802.11N40	



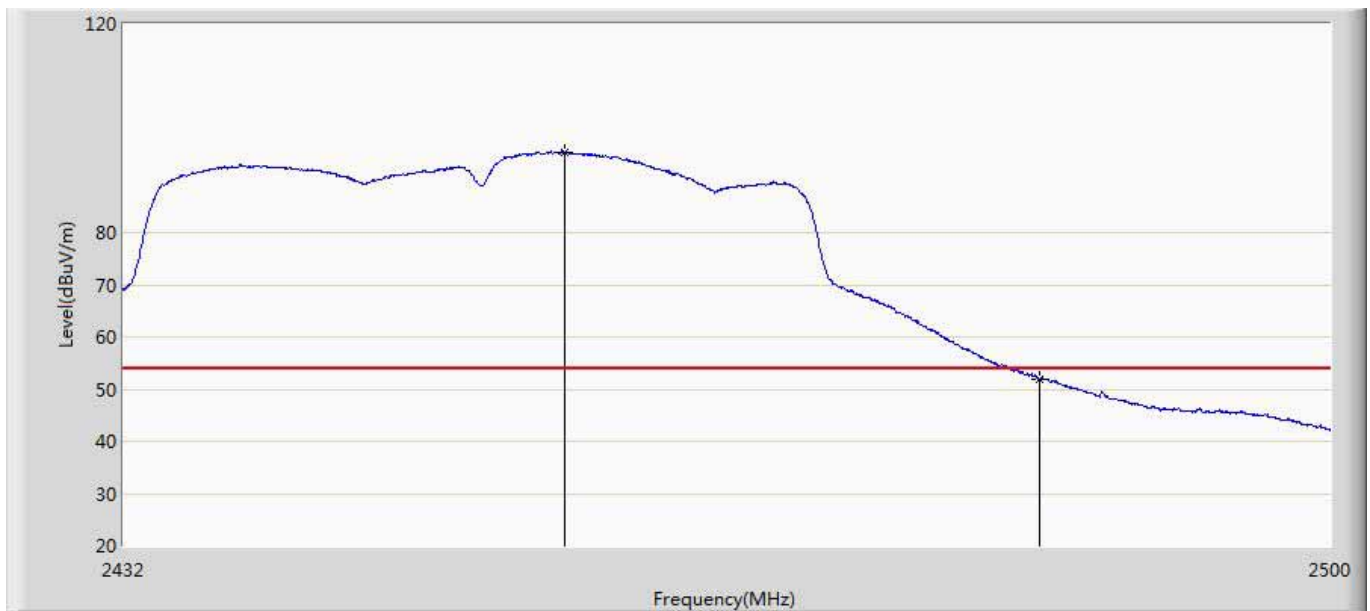
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	53.254	15.023	-0.746	54.000	38.231	AV
2	*	2426.424	93.490	55.145	39.490	54.000	38.345	AV

Engineer: Yock	
Site: AC5	Time: 2016/06/14 - 18:24
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300MBPS WIRELESS N MINI ROUTER	Power: AC 120V/60Hz
Note: Mode4 Transmit at channel 2452Mhz by 802.11N40	



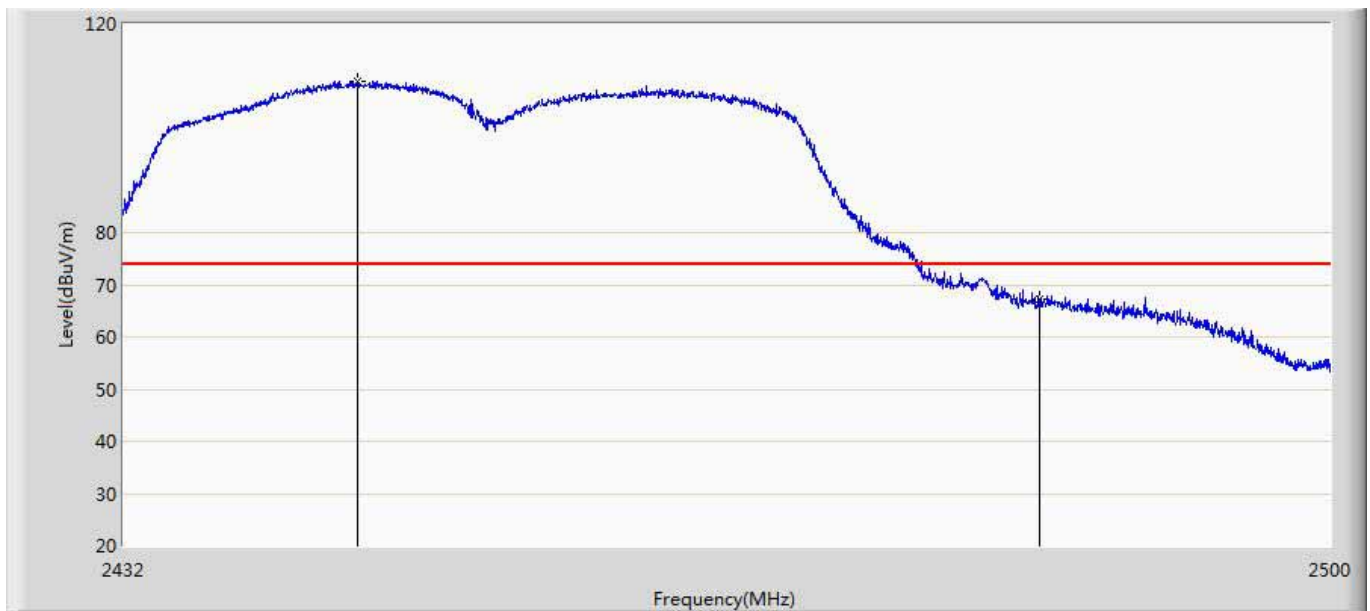
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2456.276	106.302	67.862	32.302	74.000	38.439	PK
2		2483.500	65.617	27.125	-8.383	74.000	38.492	PK

Engineer: Yock	
Site: AC5	Time: 2016/06/14 - 18:24
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 300MBPS WIRELESS N MINI ROUTER	Power: AC 120V/60Hz
Note: Mode4 Transmit at channel 2452Mhz by 802.11N40	



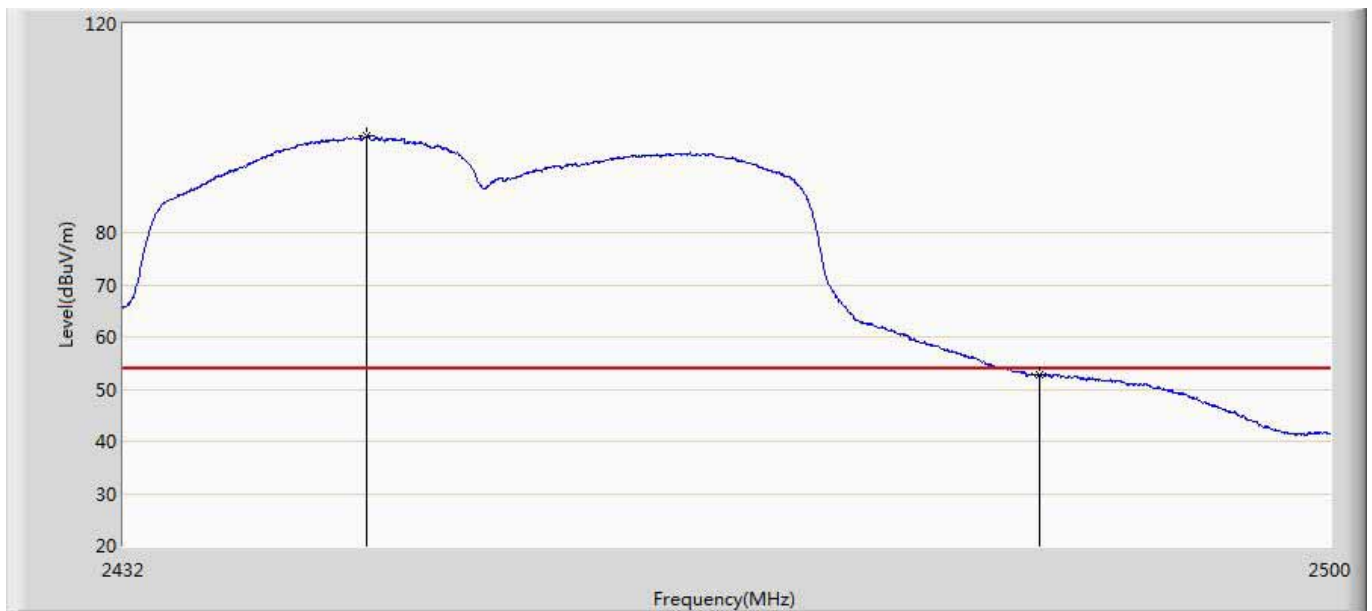
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2456.650	95.324	56.882	41.324	54.000	38.442	AV
2		2483.500	51.889	13.397	-2.111	54.000	38.492	AV

Engineer: Yock	
Site: AC5	Time: 2016/06/14 - 18:30
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300MBPS WIRELESS N MINI ROUTER	Power: AC 120V/60Hz
Note: Mode4 Transmit at channel 2452Mhz by 802.11N40	



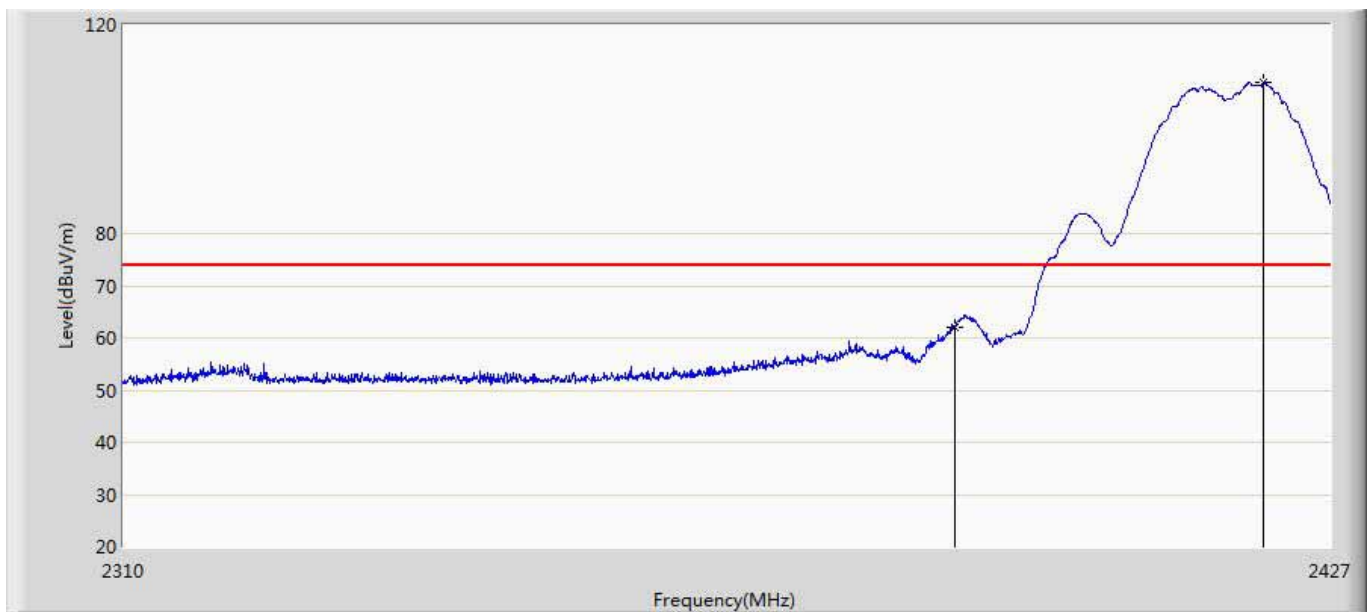
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2445.022	109.112	70.729	35.112	74.000	38.382	PK
2		2483.500	67.143	28.651	-6.857	74.000	38.492	PK

Engineer: Yock	
Site: AC5	Time: 2016/06/14 - 18:30
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 300MBPS WIRELESS N MINI ROUTER	Power: AC 120V/60Hz
Note: Mode4 Transmit at channel 2452Mhz by 802.11N40	



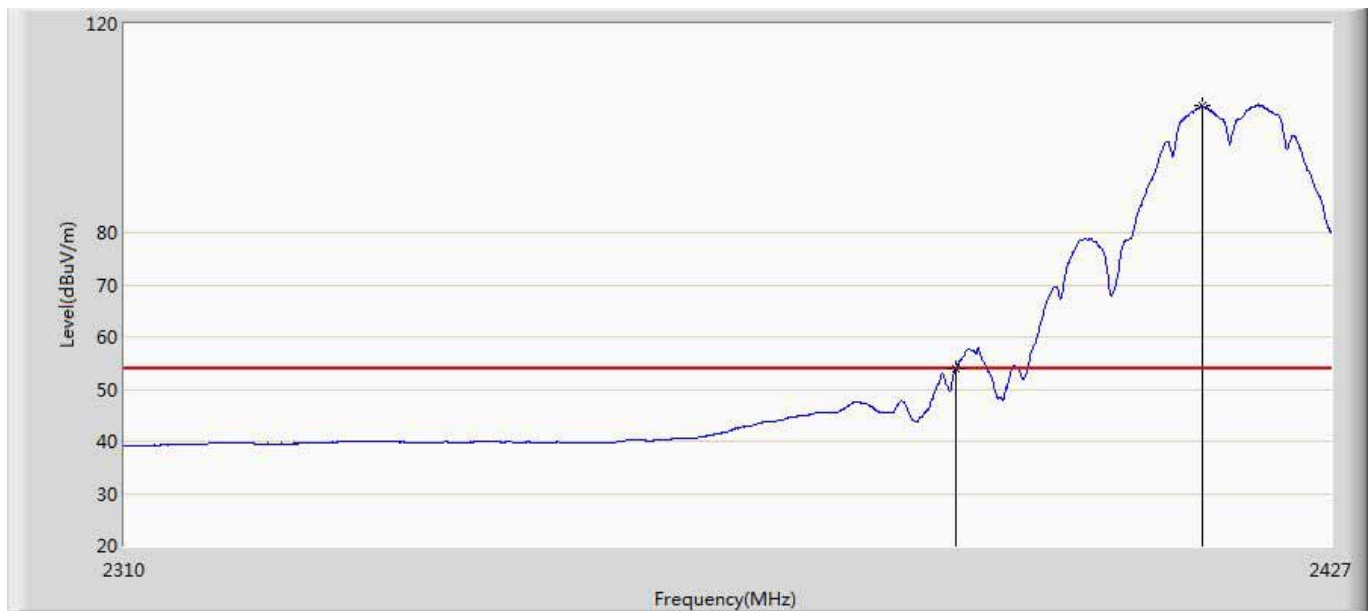
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2445.532	98.542	60.157	44.542	54.000	38.385	AV
2		2483.500	53.183	14.691	-0.817	54.000	38.492	AV

Engineer: Yock	
Site: AC5	Time: 2016/09/14 - 10:00
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 810	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2417Mhz by 802.11b	



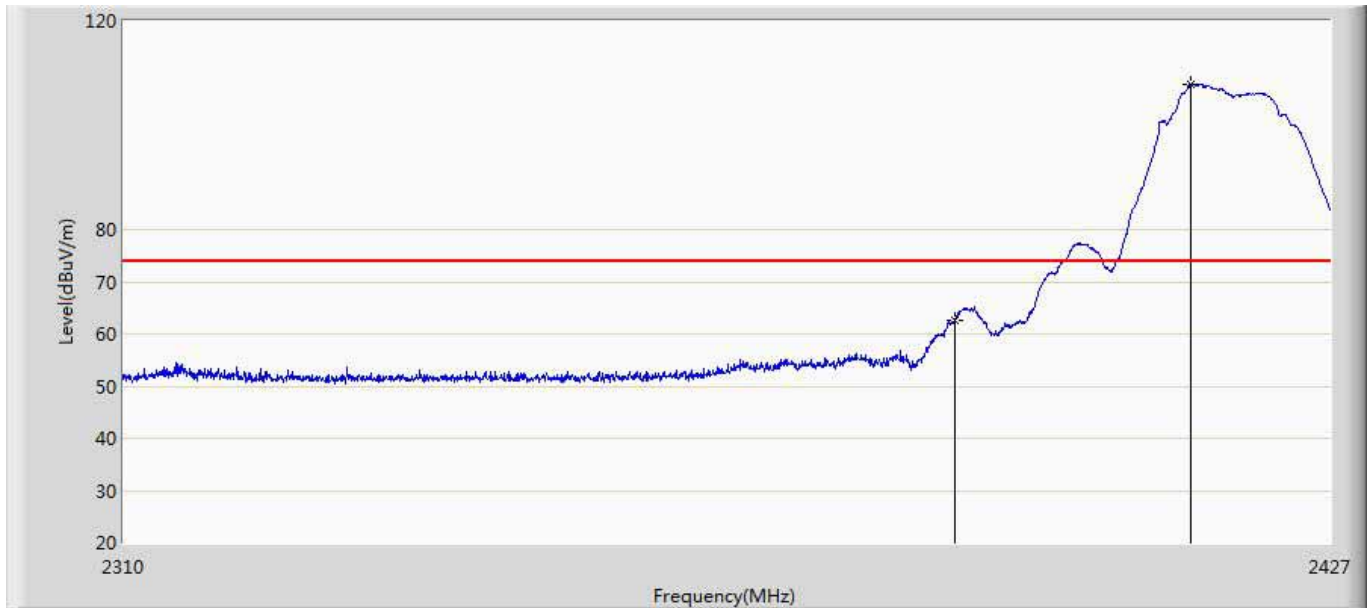
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	62.109	26.023	-11.891	74.000	36.086	PK
2	*	2420.389	108.849	72.687	34.849	74.000	36.163	PK

Engineer: Yock	
Site: AC5	Time: 2016/09/14 - 10:02
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 810	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2417Mhz by 802.11b	



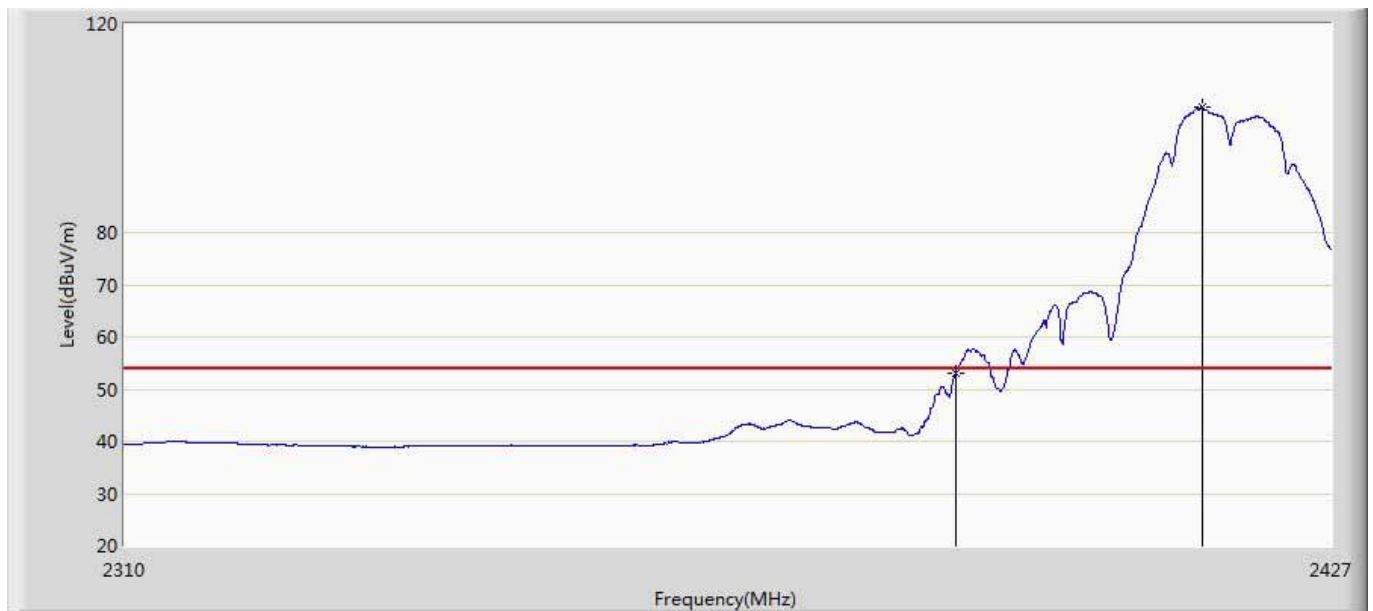
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	53.836	17.750	-0.164	54.000	36.086	AV
2	*	2414.188	104.269	68.109	50.269	54.000	36.160	AV

Engineer: Yock	
Site: AC5	Time: 2016/09/14 - 09:57
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 810	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2417Mhz by 802.11b	



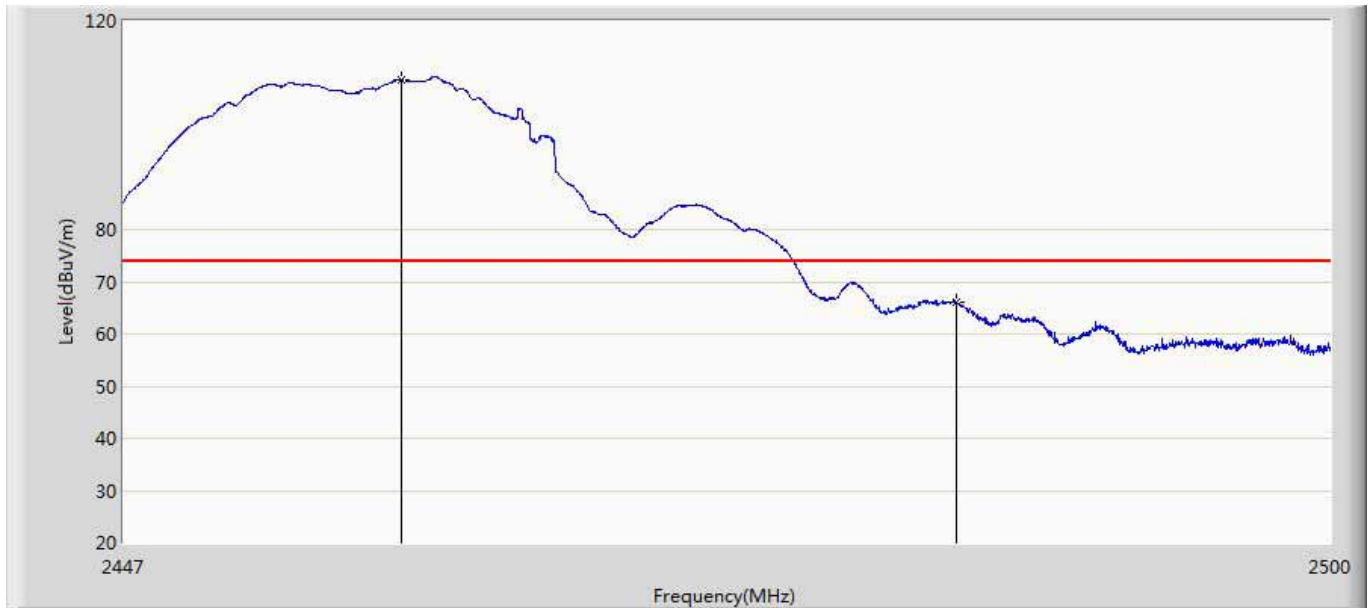
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	62.662	26.576	-11.338	74.000	36.086	PK
2	*	2413.252	107.767	71.607	33.767	74.000	36.160	PK

Engineer: Yock	
Site: AC5	Time: 2016/09/14 - 09:59
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 810	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2417Mhz by 802.11b	



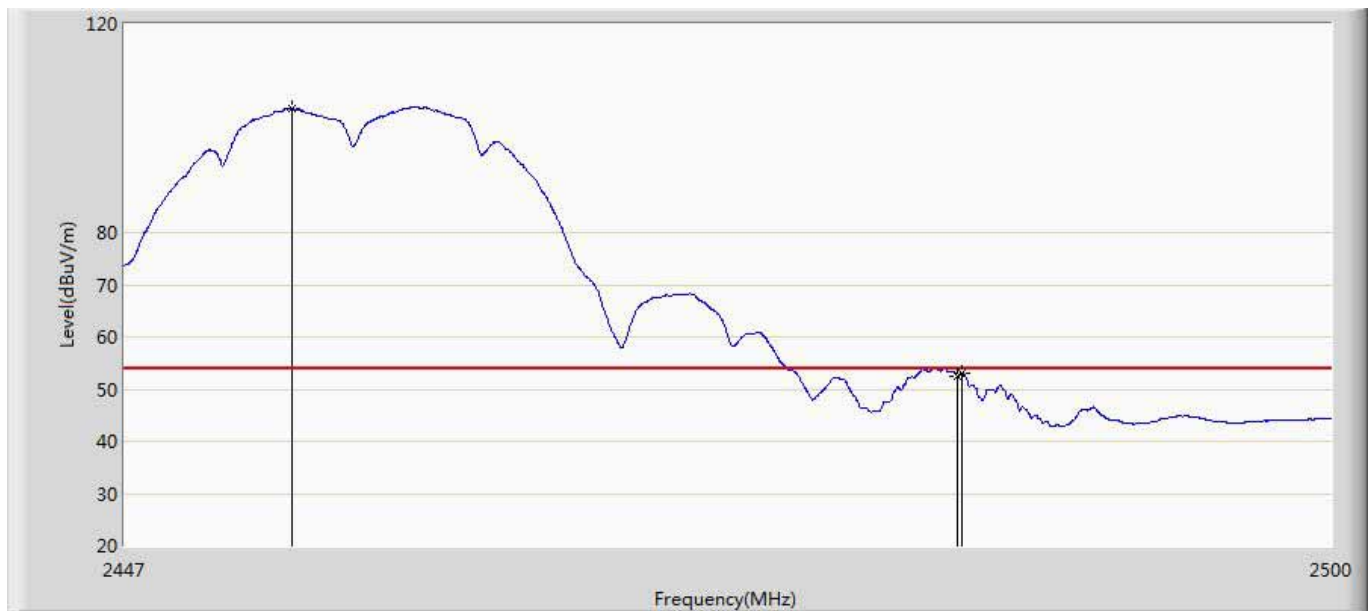
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	53.036	16.950	-0.964	54.000	36.086	AV
2	*	2414.188	103.956	67.796	49.956	54.000	36.160	AV

Engineer: Yock	
Site: AC5	Time: 2016/09/14 - 10:06
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 810	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2457Mhz by 802.11b	



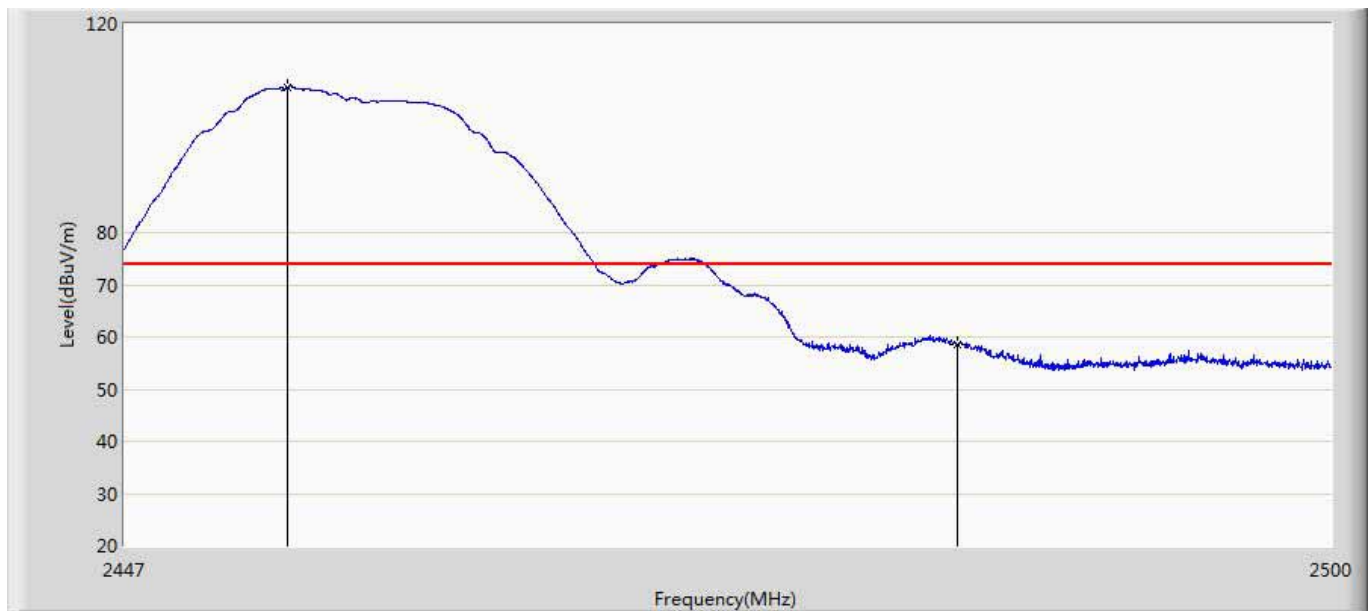
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2459.137	108.758	72.545	34.758	74.000	36.214	PK
2		2483.500	65.960	29.698	-8.040	74.000	36.261	PK

Engineer: Yock	
Site: AC5	Time: 2016/09/14 - 10:17
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 810	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2457Mhz by 802.11b	



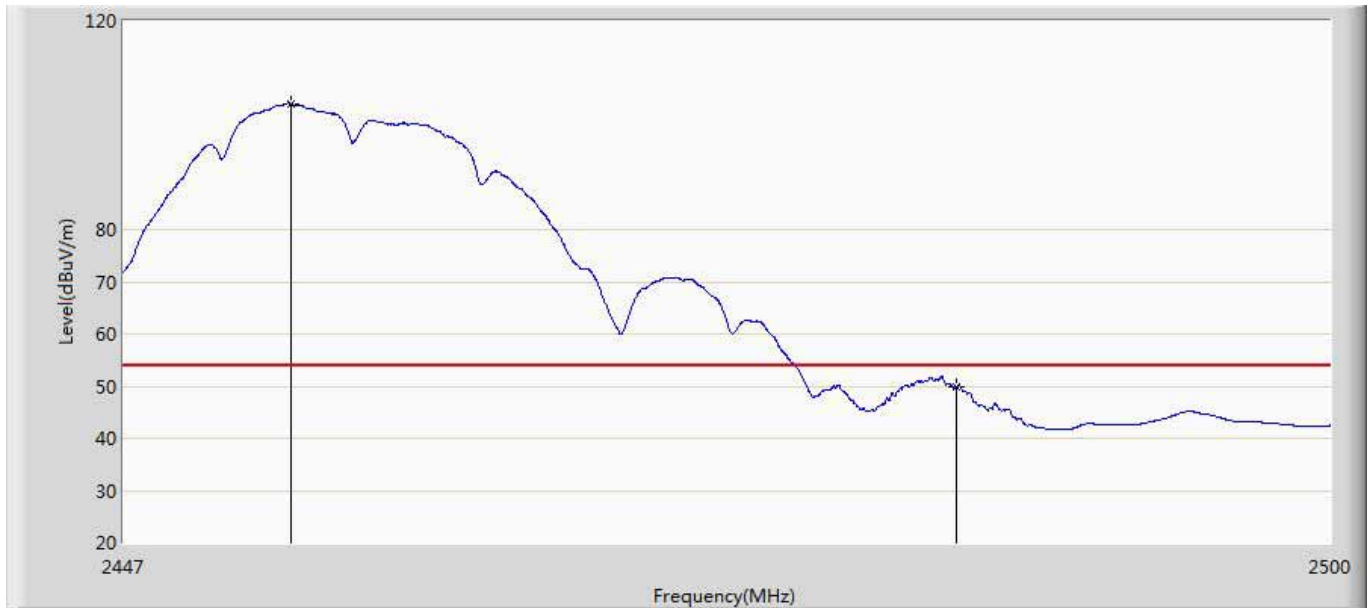
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2454.288	103.697	67.481	49.697	54.000	36.216	AV
2		2483.500	52.343	16.081	-1.657	54.000	36.261	AV
3		2483.676	53.163	16.901	-0.837	54.000	36.263	AV

Engineer: Yock	
Site: AC5	Time: 2016/09/14 - 10:20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 810	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2457Mhz by 802.11b	



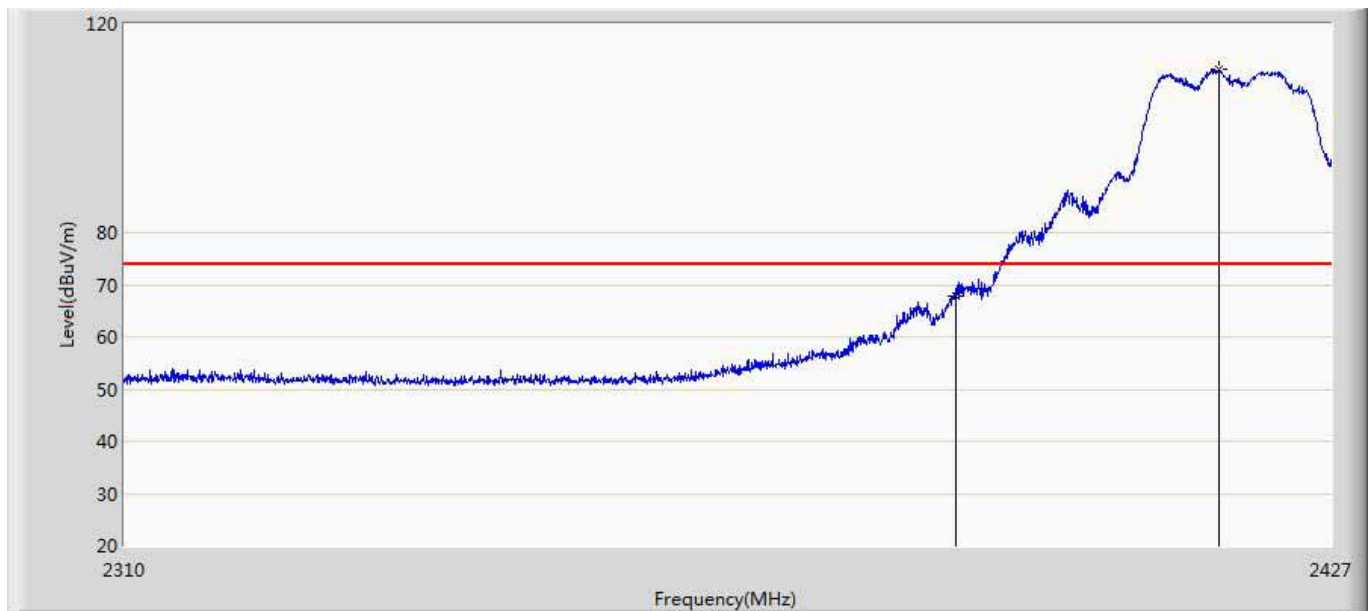
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2454.075	107.763	71.547	33.763	74.000	36.216	PK
2		2483.500	58.680	22.419	-15.320	74.000	36.261	PK

Engineer: Yock	
Site: AC5	Time: 2016/09/14 - 10:23
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 810	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2457Mhz by 802.11b	



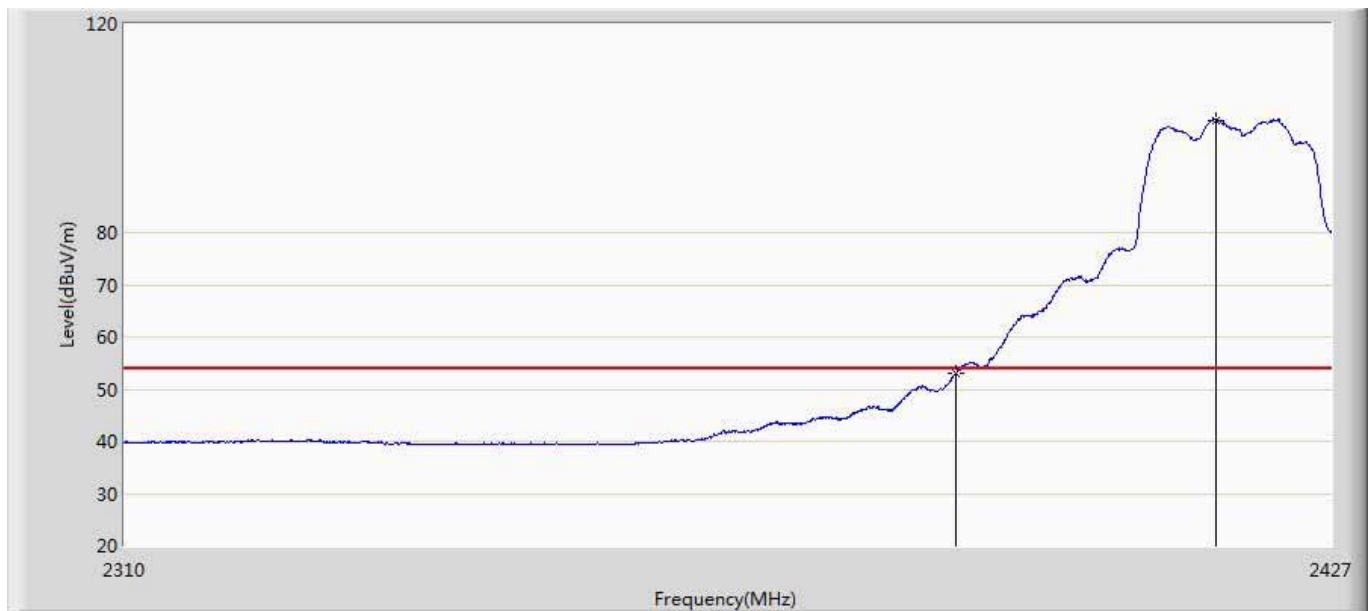
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2454.288	104.166	67.950	50.166	54.000	36.216	AV
2		2483.500	49.947	13.685	-4.053	54.000	36.261	AV

Engineer: Yock	
Site: AC5	Time: 2016/09/14 - 10:30
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 810	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2417Mhz by 802.11g	



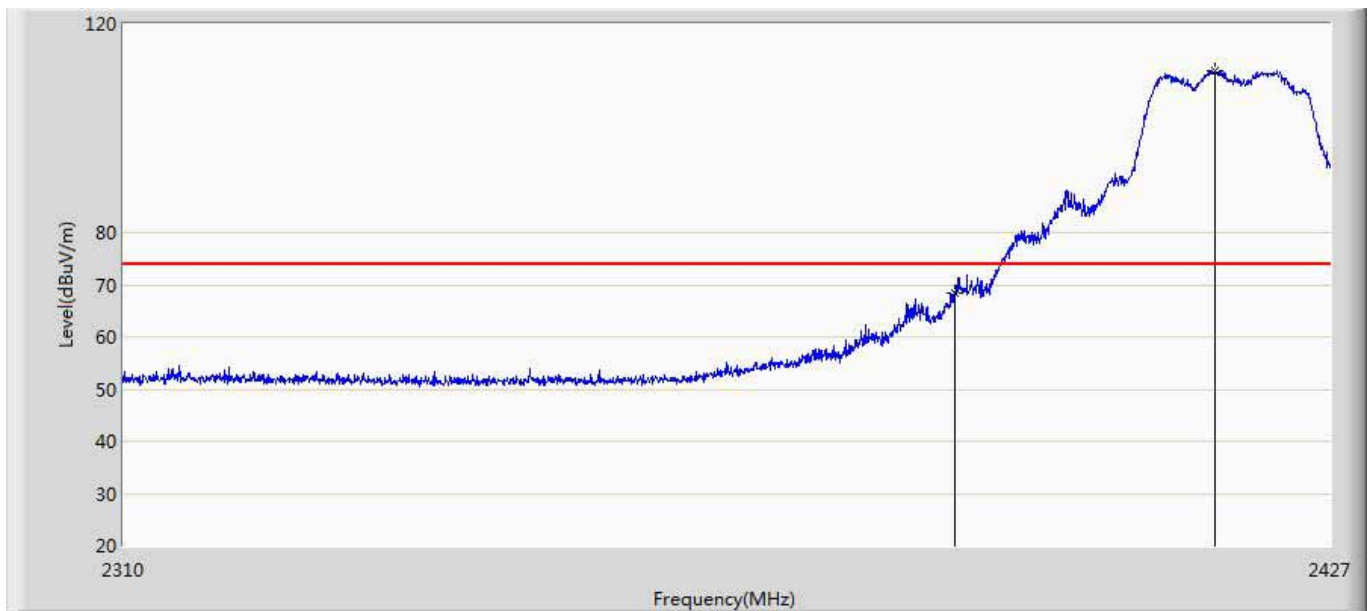
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	67.954	31.868	-6.046	74.000	36.086	PK
2	*	2415.944	111.408	75.247	37.408	74.000	36.161	PK

Engineer: Yock	
Site: AC5	Time: 2016/09/14 - 10:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 810	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2417Mhz by 802.11g	



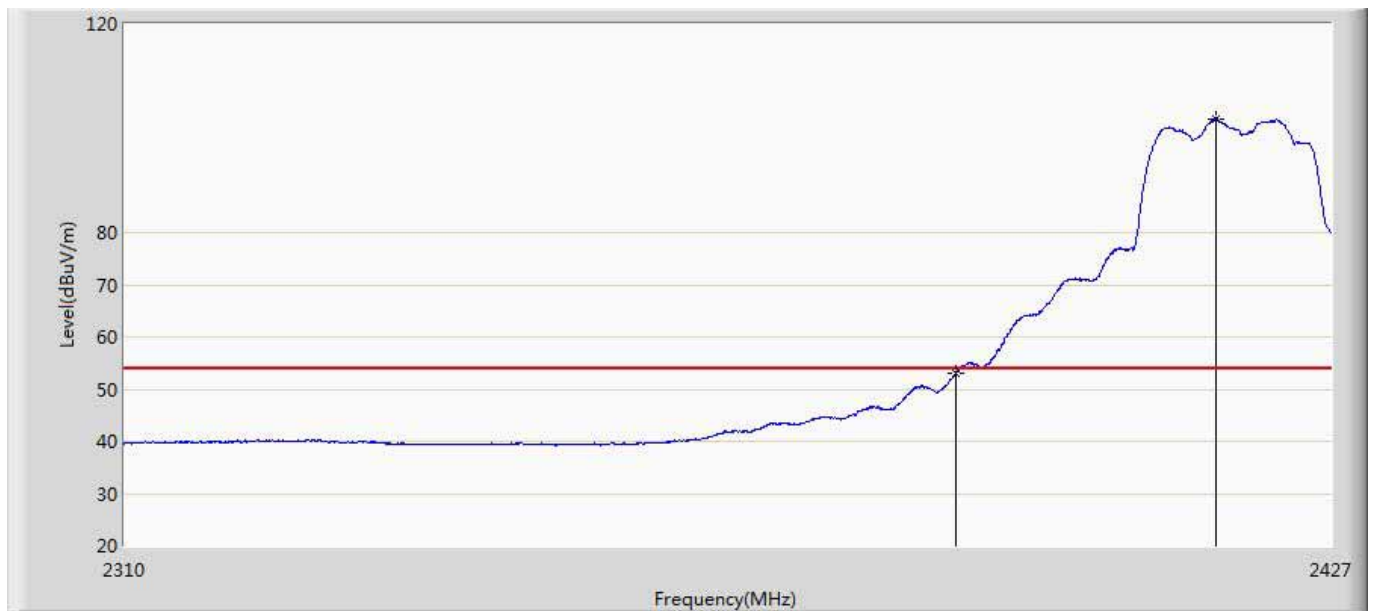
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	53.033	16.947	-0.967	54.000	36.086	AV
2	*	2415.534	101.570	65.409	47.570	54.000	36.161	AV

Engineer: Yock	
Site: AC5	Time: 2016/09/14 - 10:35
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 810	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2417Mhz by 802.11g	



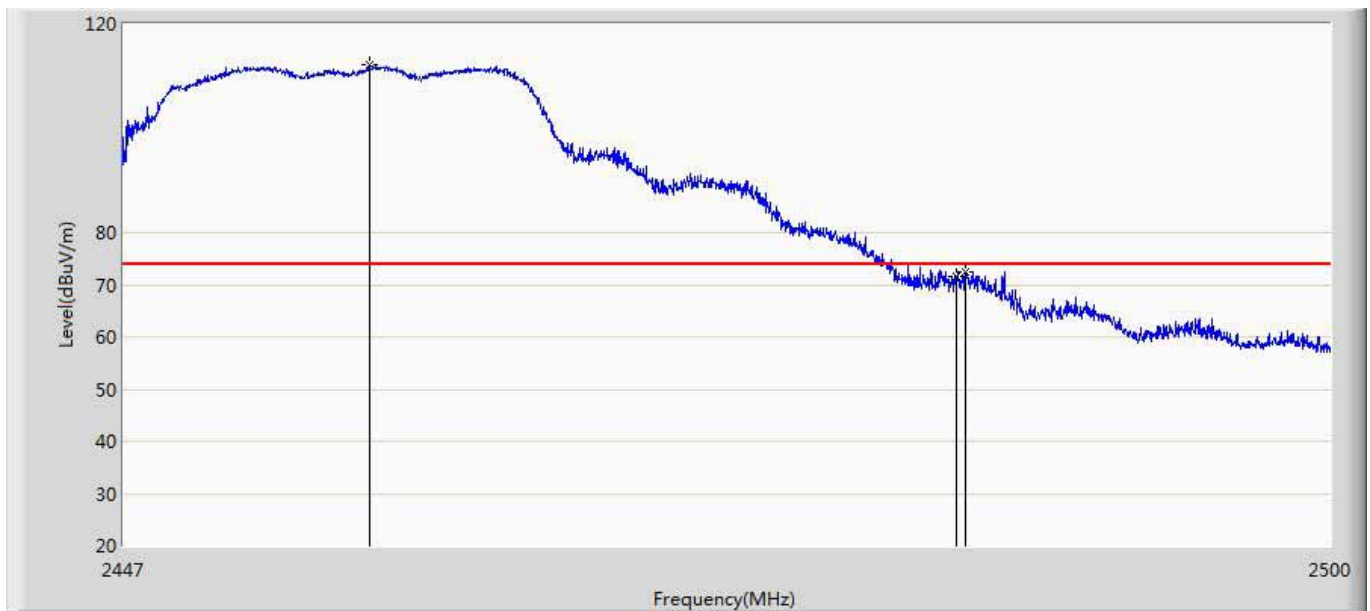
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	68.288	32.202	-5.712	74.000	36.086	PK
2	*	2415.534	111.034	74.873	37.034	74.000	36.161	PK

Engineer: Yock	
Site: AC5	Time: 2016/09/14 - 10:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 810	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2417Mhz by 802.11g	



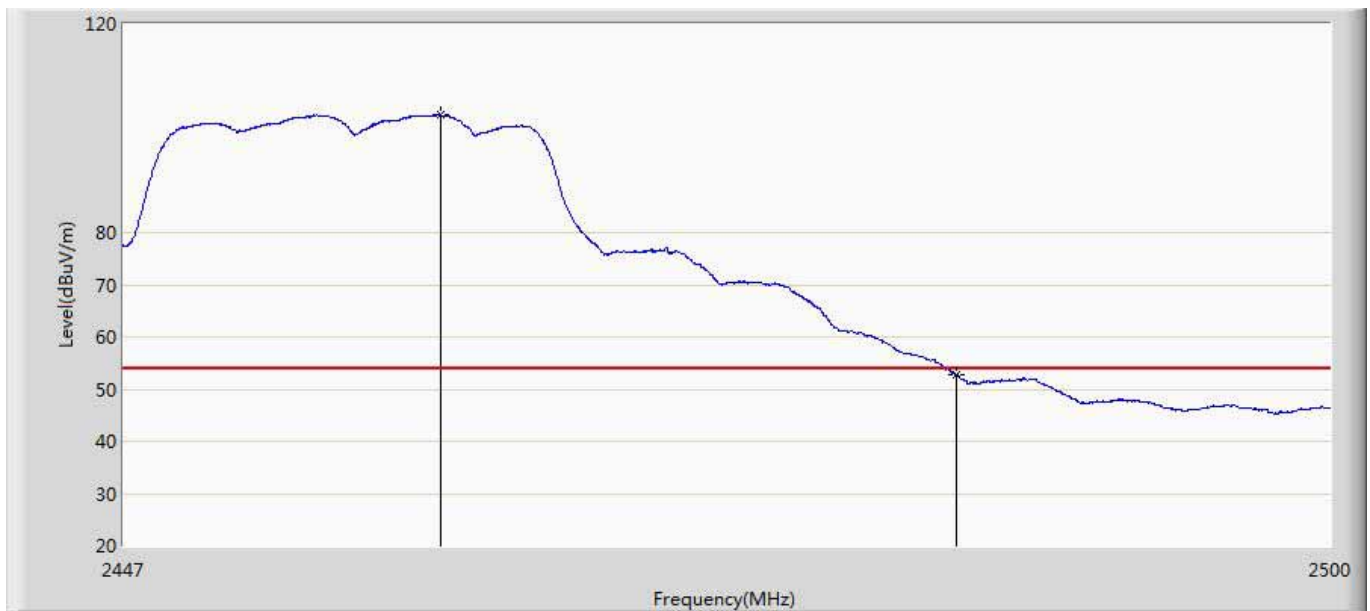
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	53.163	17.077	-0.837	54.000	36.086	AV
2	*	2415.534	101.862	65.701	47.862	54.000	36.161	AV

Engineer: Yock	
Site: AC5	Time: 2016/09/14 - 10:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 810	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2457Mhz by 802.11g	



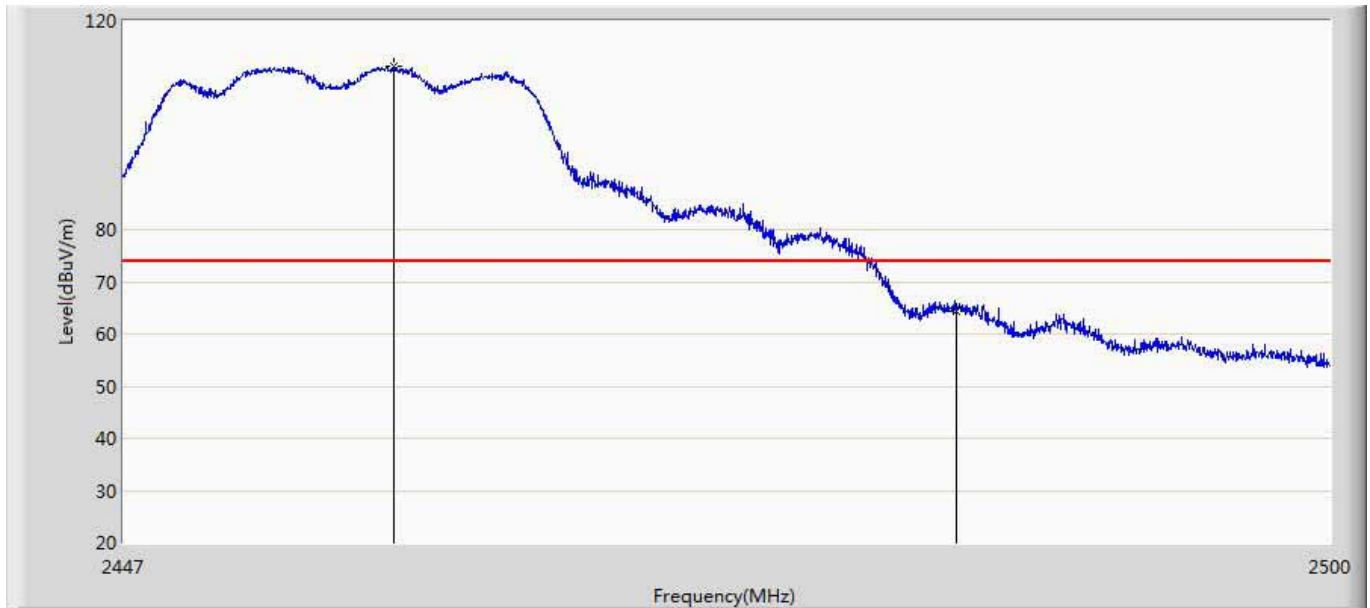
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2457.706	112.092	75.878	38.092	74.000	36.214	PK
2		2483.500	71.599	35.338	-2.401	74.000	36.261	PK
3		2483.862	72.342	36.079	-1.658	74.000	36.263	PK

Engineer: Yock	
Site: AC5	Time: 2016/09/14 - 10:43
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 810	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2457Mhz by 802.11g	



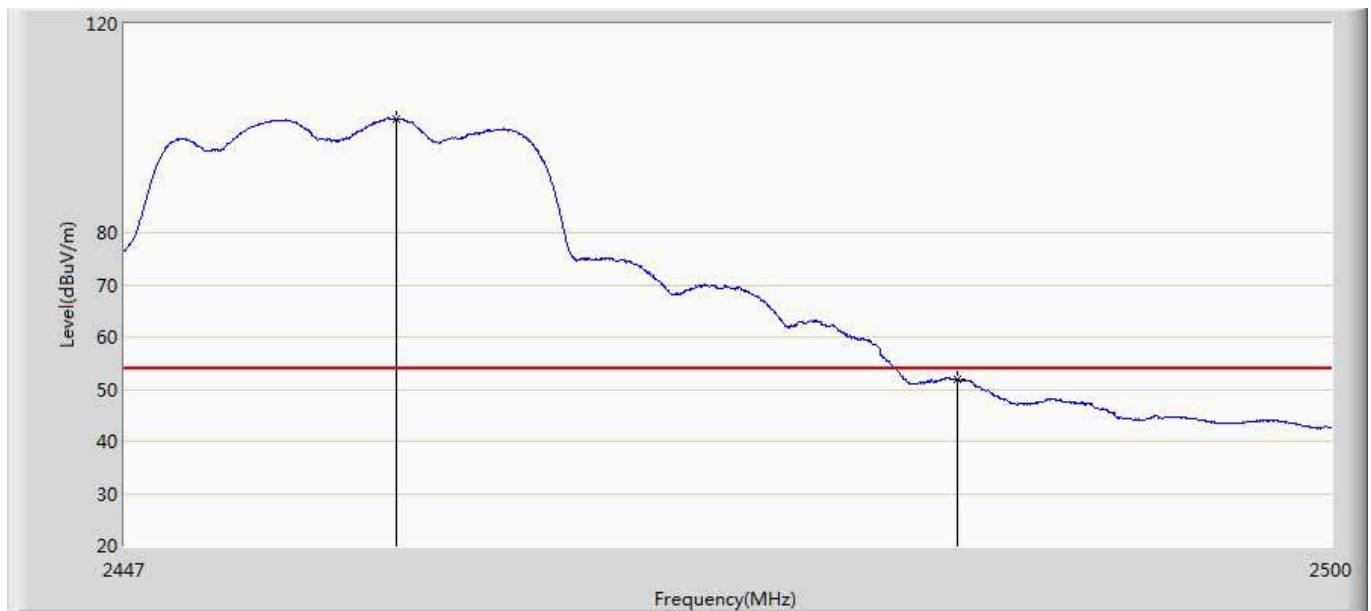
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2460.806	102.510	66.297	48.510	54.000	36.213	AV
2		2483.500	53.073	16.812	-0.927	54.000	36.261	AV

Engineer: Yock	
Site: AC5	Time: 2016/09/14 - 10:53
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 810	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2457Mhz by 802.11g	



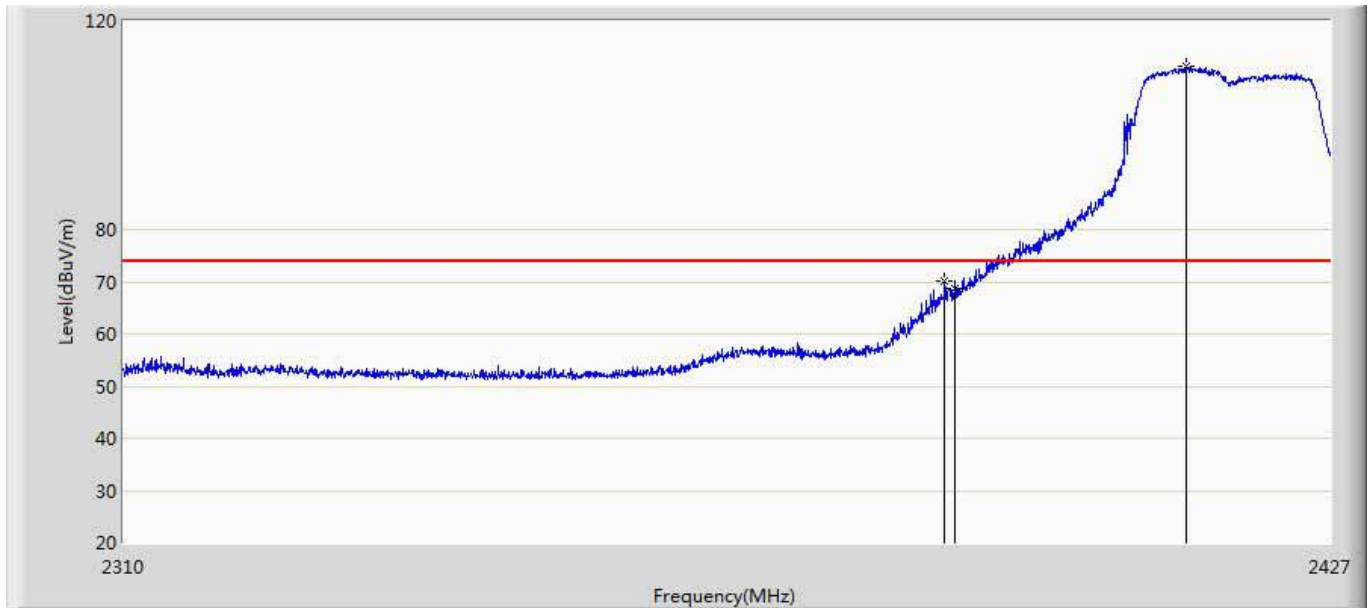
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2458.819	111.244	75.031	37.244	74.000	36.213	PK
2		2483.500	64.466	28.204	-9.534	74.000	36.261	PK

Engineer: Yock	
Site: AC5	Time: 2016/09/14 - 10:56
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 810	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2457Mhz by 802.11g	



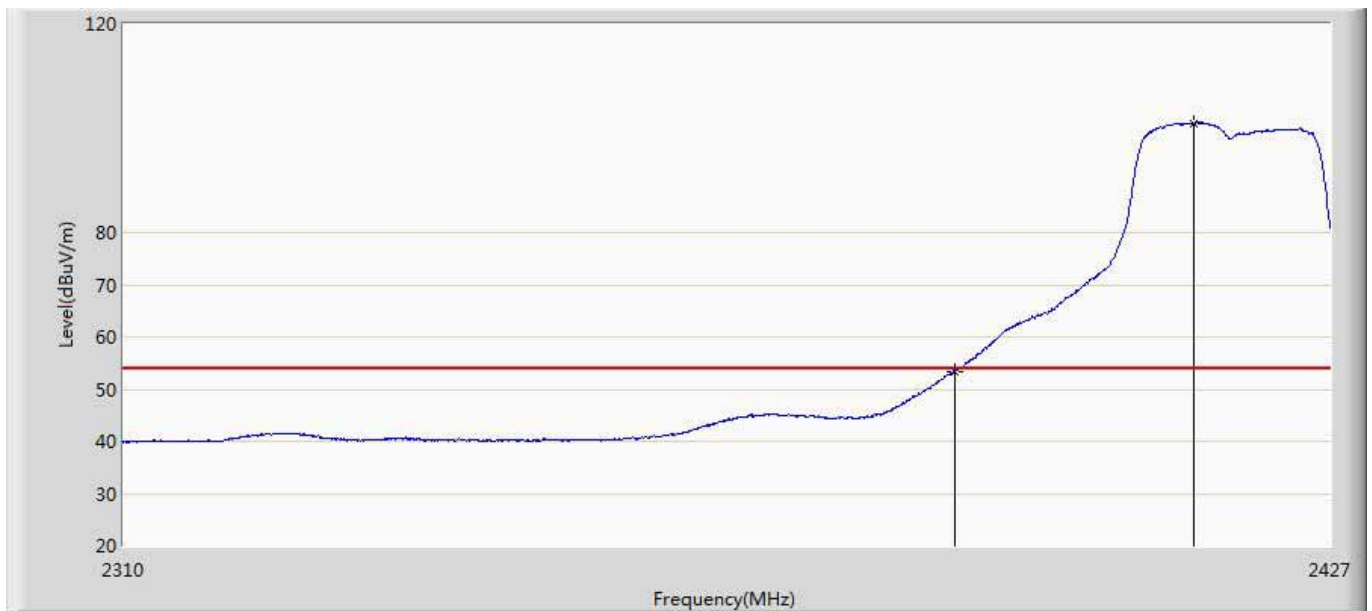
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2458.845	101.873	65.660	47.873	54.000	36.213	AV
2		2483.500	51.797	15.536	-2.203	54.000	36.261	AV

Engineer: Yock	
Site: AC5	Time: 2016/09/14 - 11:02
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 810	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2417Mhz by 802.11n20	



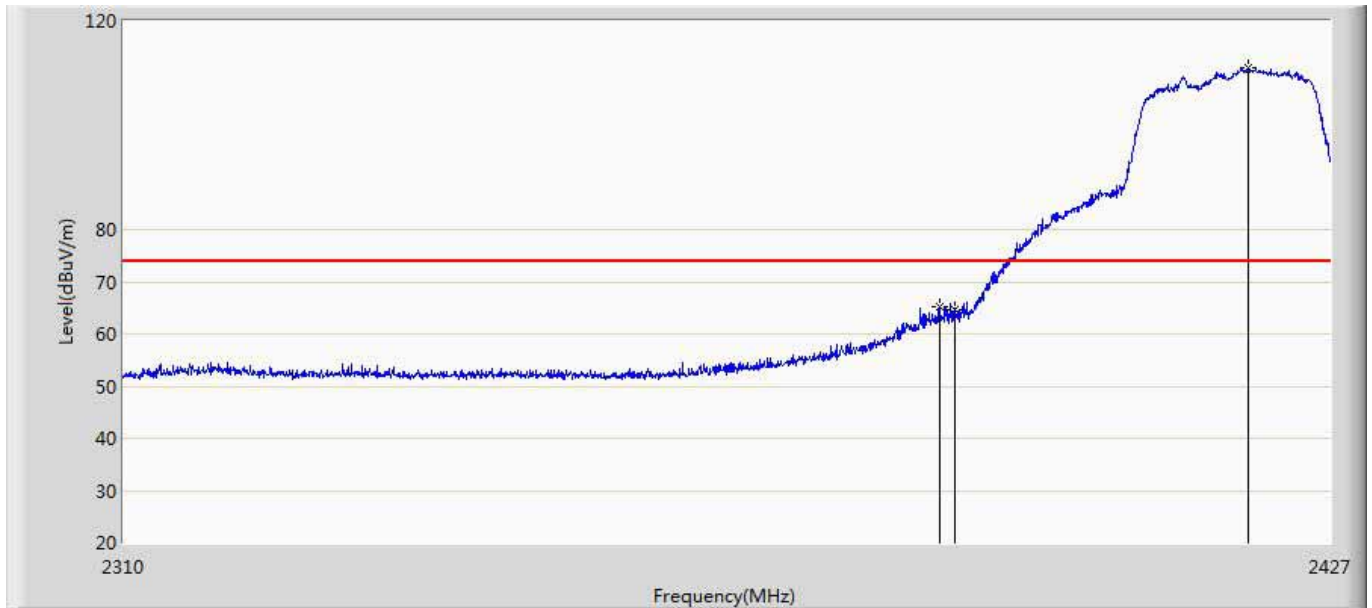
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2389.033	70.206	34.122	-3.794	74.000	36.084	PK
2		2390.000	68.586	32.500	-5.414	74.000	36.086	PK
3	*	2412.726	111.163	75.003	37.163	74.000	36.159	PK

Engineer: Yock	
Site: AC5	Time: 2016/09/14 - 11:05
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 810	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2417Mhz by 802.11n20	



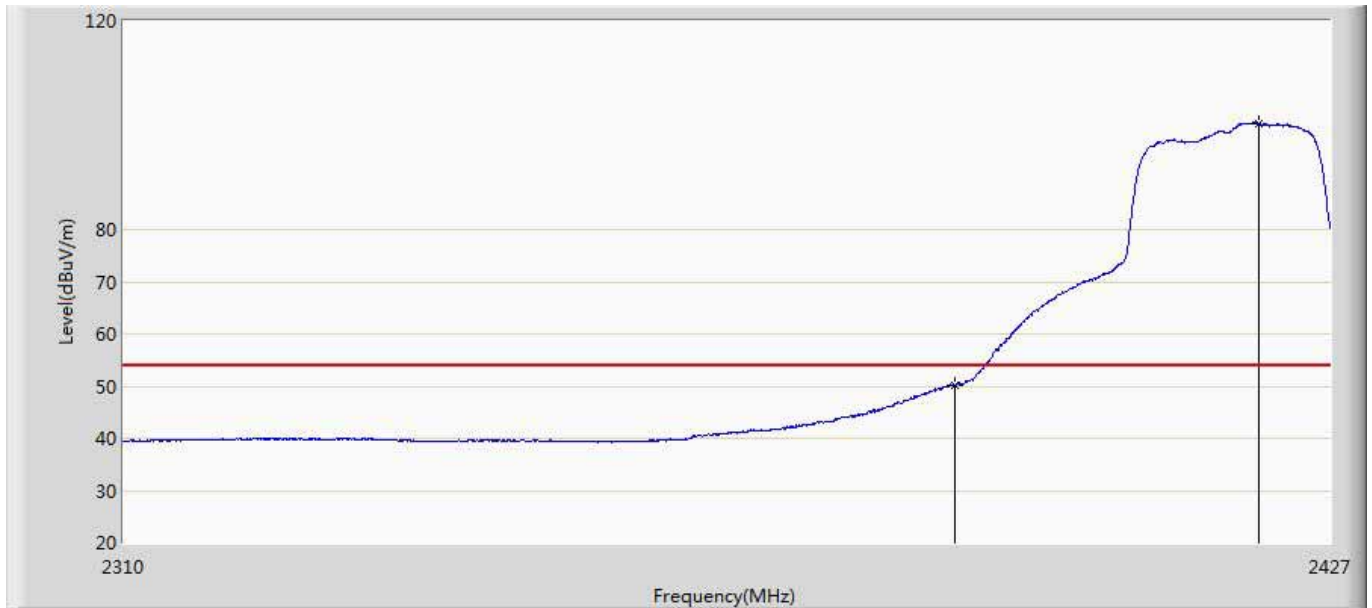
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	53.418	17.332	-0.582	54.000	36.086	AV
2	*	2413.487	100.982	64.822	46.982	54.000	36.160	AV

Engineer: Yock	
Site: AC5	Time: 2016/09/14 - 11:08
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 810	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2417Mhz by 802.11n20	



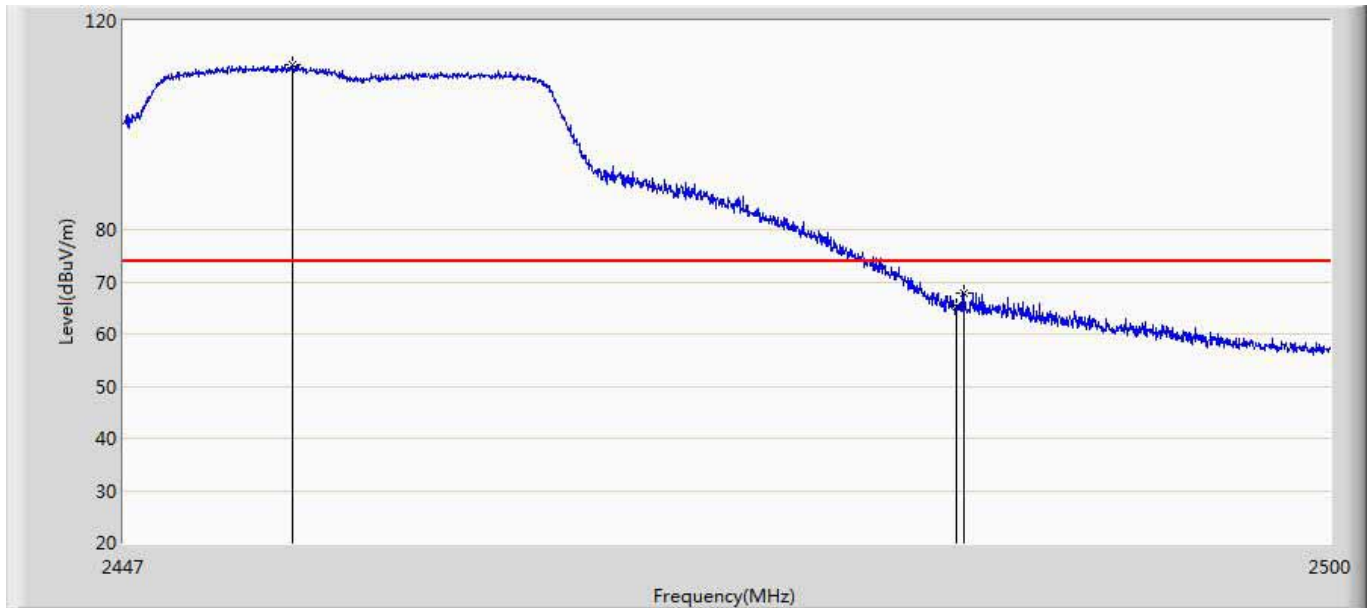
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2388.507	65.259	29.176	-8.741	74.000	36.083	PK
2		2390.000	64.782	28.696	-9.218	74.000	36.086	PK
3	*	2418.927	111.007	74.845	37.007	74.000	36.162	PK

Engineer: Yock	
Site: AC5	Time: 2016/09/14 - 11:13
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 810	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2417Mhz by 802.11n20	



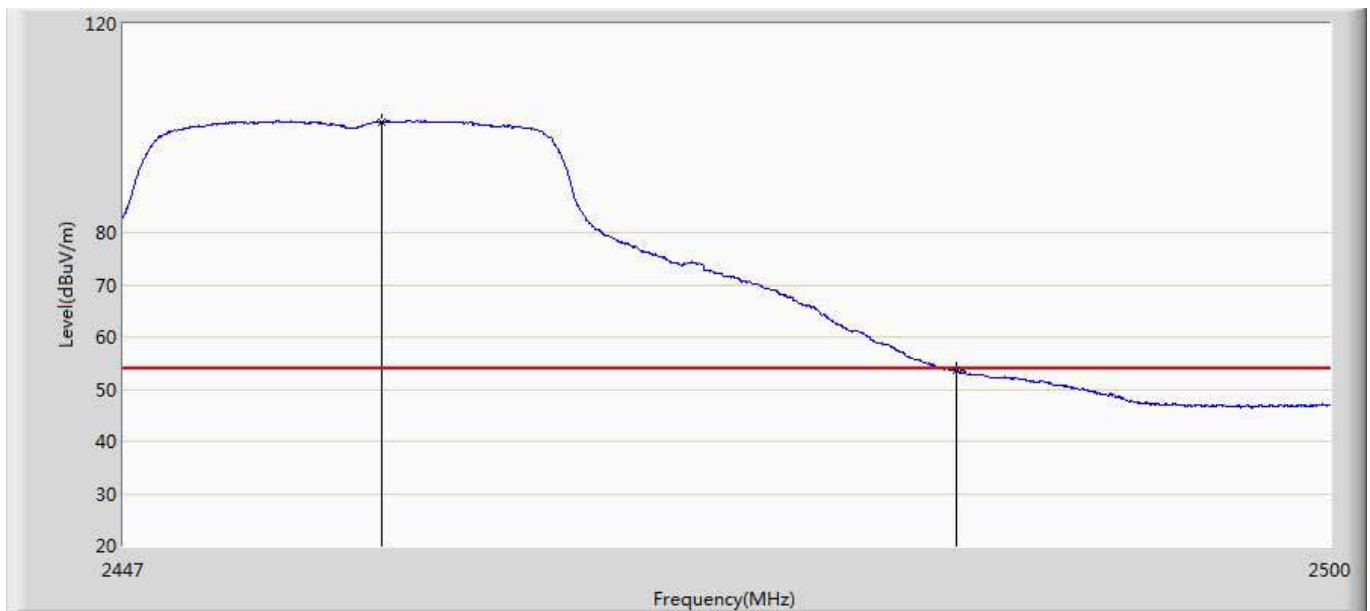
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.130	14.044	-3.870	54.000	36.086	AV
2	*	2419.921	100.316	64.154	46.316	54.000	36.162	AV

Engineer: Yock	
Site: AC5	Time: 2016/09/14 - 11:20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 810	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2457Mhz by 802.11n20	



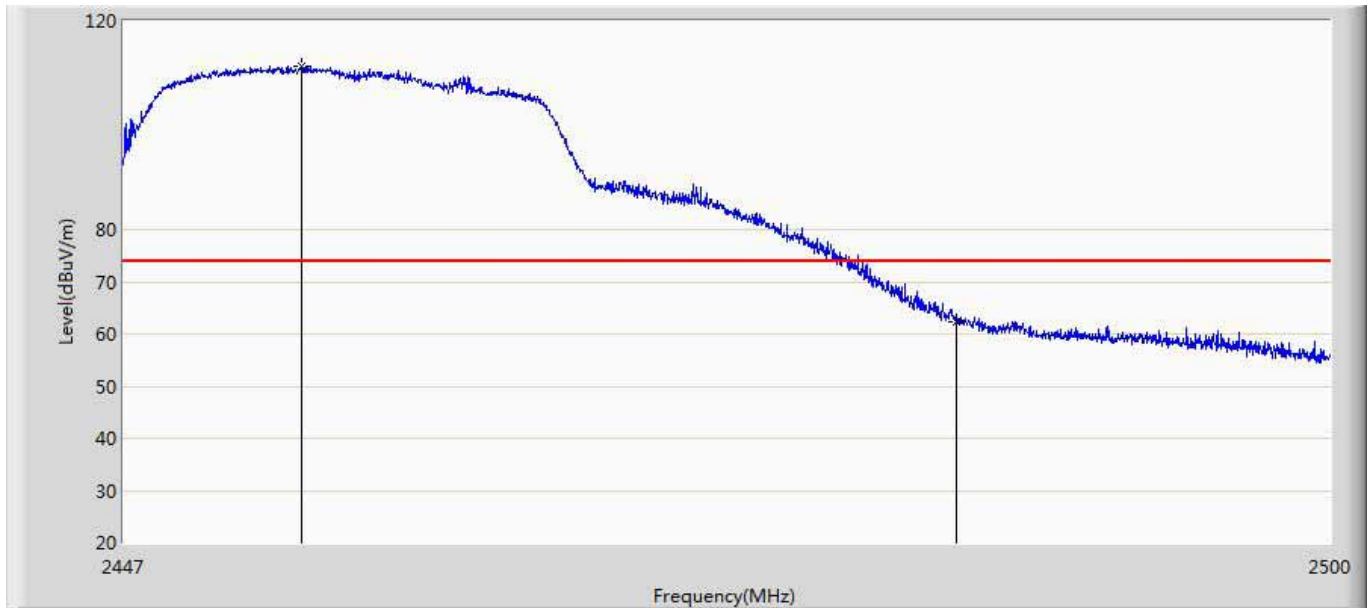
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2454.367	111.483	75.267	37.483	74.000	36.216	PK
2		2483.500	65.290	29.028	-8.710	74.000	36.261	PK
3		2483.835	67.767	31.504	-6.233	74.000	36.263	PK

Engineer: Yock	
Site: AC5	Time: 2016/09/14 - 11:22
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 810	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2457Mhz by 802.11n20	



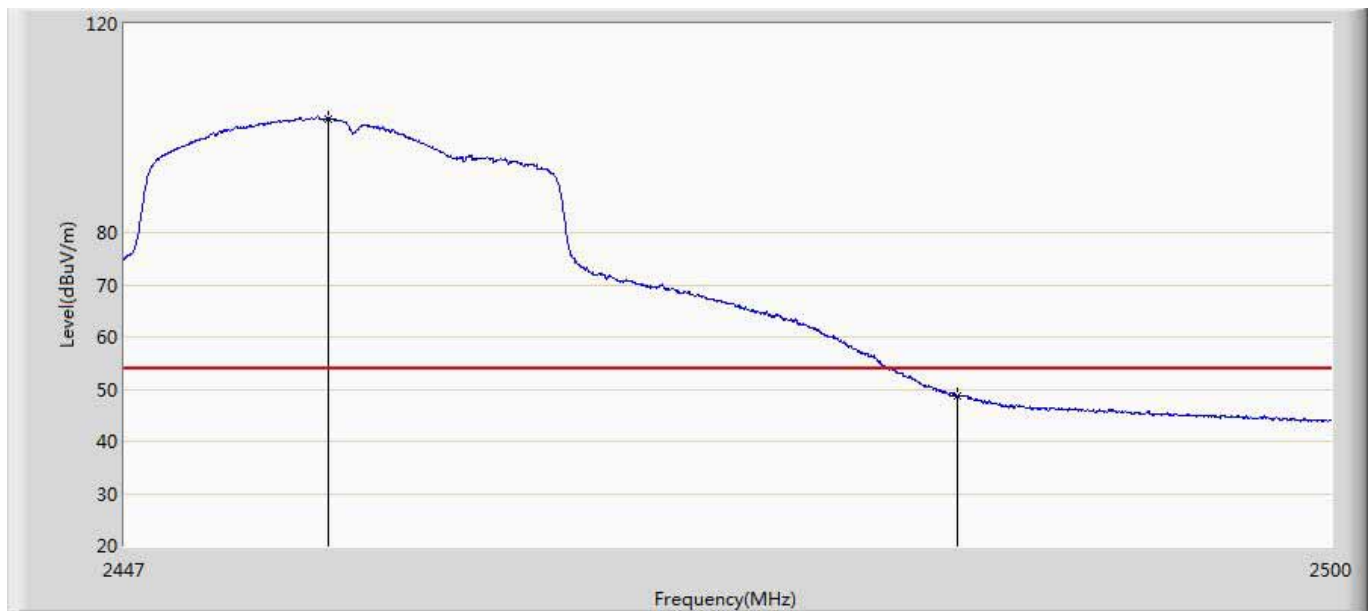
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2458.289	101.217	65.003	47.217	54.000	36.214	AV
2		2483.500	53.564	17.303	-0.436	54.000	36.261	AV

Engineer: Yock	
Site: AC5	Time: 2016/09/14 - 11:28
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 810	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2457Mhz by 802.11n20	



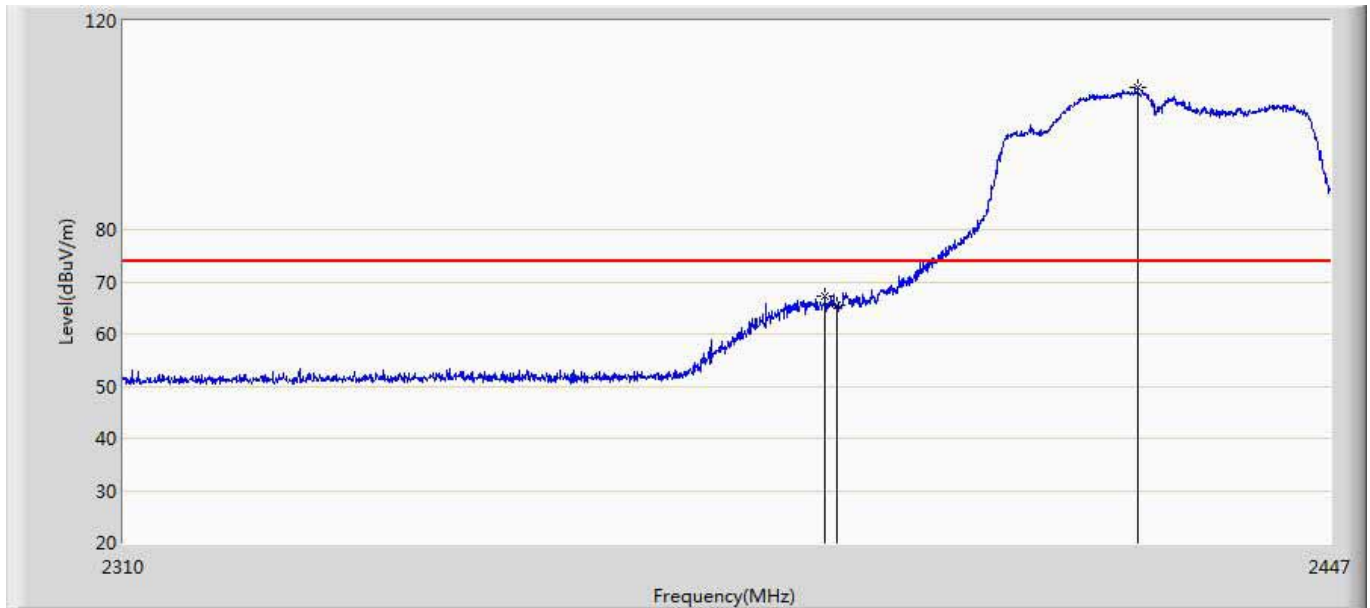
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2454.764	111.200	74.985	37.200	74.000	36.215	PK
2		2483.500	62.280	26.019	-11.720	74.000	36.261	PK

Engineer: Yock	
Site: AC5	Time: 2016/09/14 - 11:30
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 810	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2457Mhz by 802.11n20	



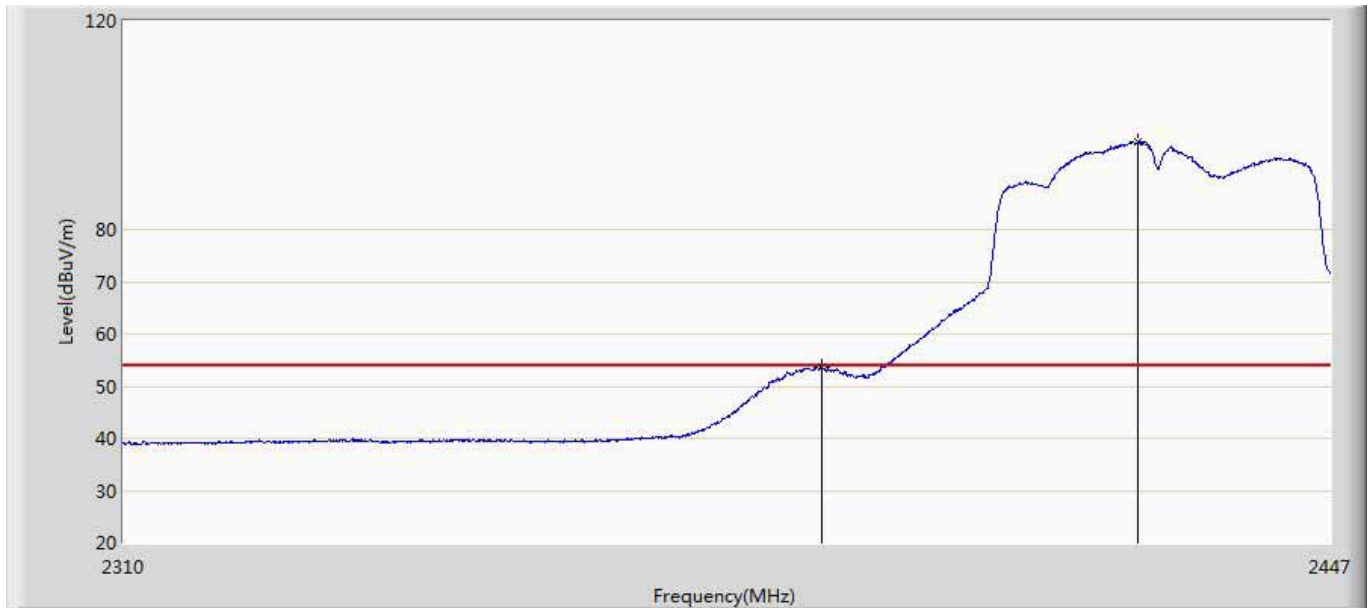
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2455.877	101.836	65.621	47.836	54.000	36.215	AV
2		2483.500	48.803	12.542	-5.197	54.000	36.261	AV

Engineer: Yock	
Site: AC5	Time: 2016/09/14 - 11:38
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 810	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2427Mhz by 802.11n40	



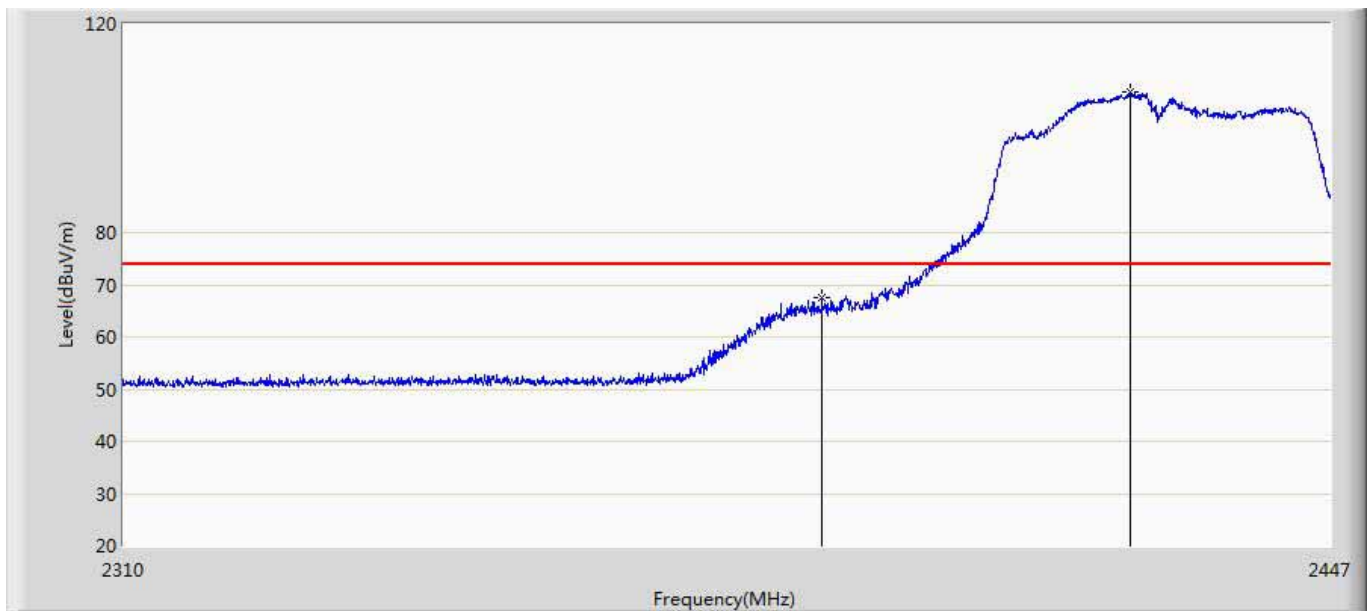
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2388.707	67.107	31.023	-6.893	74.000	36.083	PK
2		2390.000	65.473	29.387	-8.527	74.000	36.086	PK
3	*	2424.669	107.183	71.019	33.183	74.000	36.164	PK

Engineer: Yock	
Site: AC5	Time: 2016/09/14 - 11:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 810	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2427Mhz by 802.11n40	



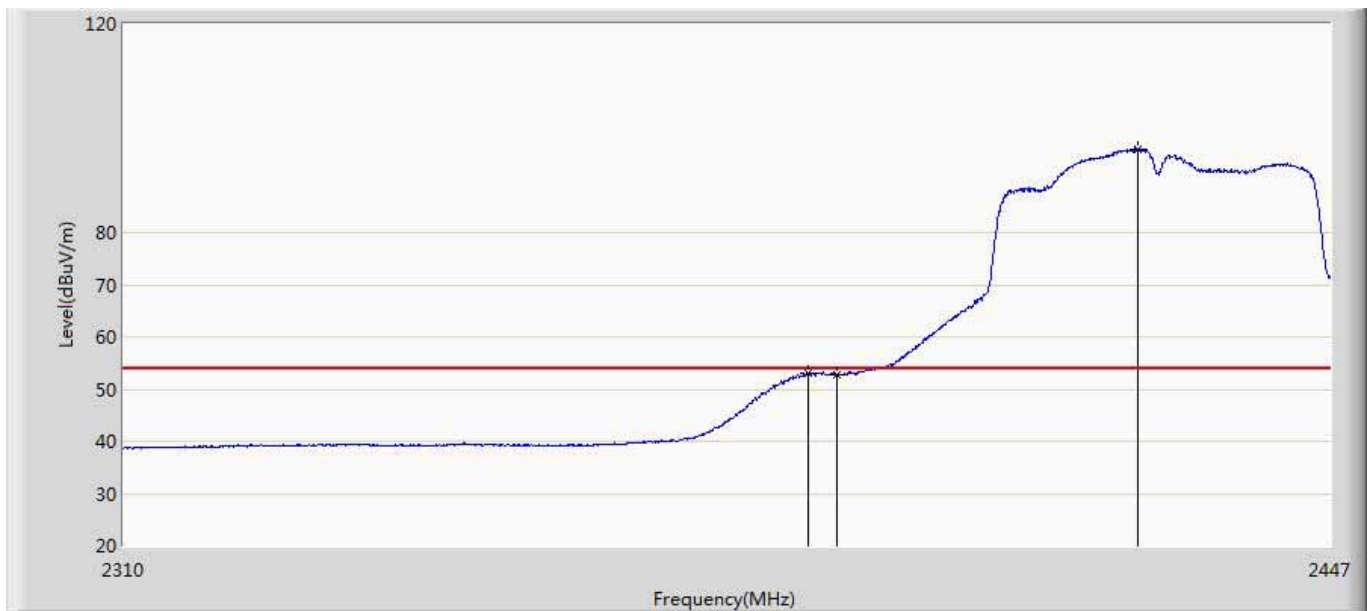
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2388.433	53.714	17.631	-0.286	54.000	36.083	AV
2	*	2424.738	96.715	60.551	42.715	54.000	36.164	AV

Engineer: Yock	
Site: AC5	Time: 2016/09/14 - 11:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 810	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2427Mhz by 802.11n40	



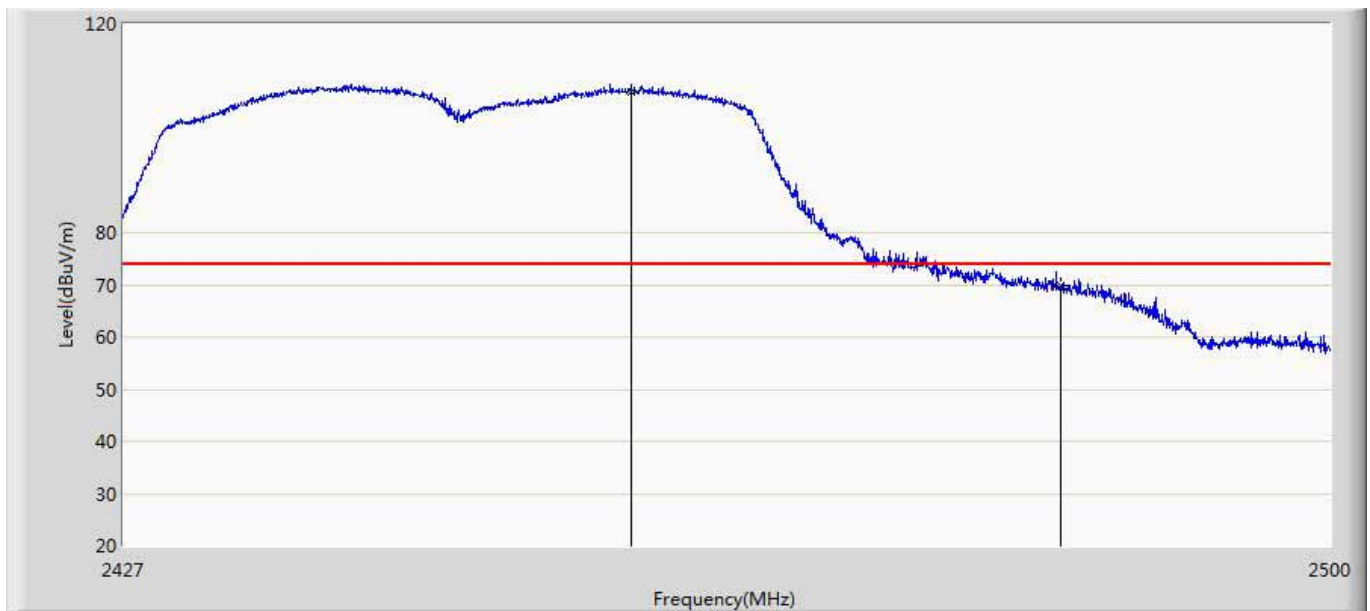
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2388.364	67.525	31.442	-6.475	74.000	36.083	PK
2	*	2423.847	106.868	70.704	32.868	74.000	36.164	PK

Engineer: Yock	
Site: AC5	Time: 2016/09/14 - 11:46
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 810	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2427Mhz by 802.11n40	



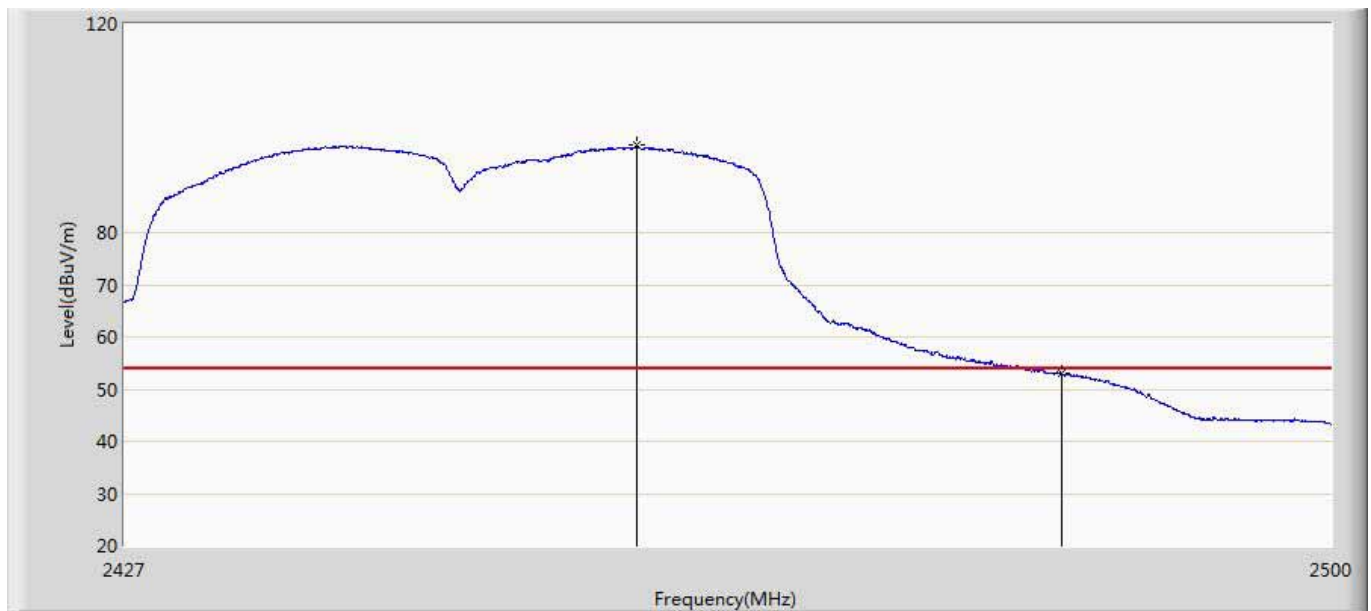
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2386.789	53.188	17.108	-0.812	54.000	36.080	AV
2		2390.000	52.697	16.611	-1.303	54.000	36.086	AV
3	*	2424.738	95.962	59.798	41.962	54.000	36.164	AV

Engineer: Yock	
Site: AC5	Time: 2016/09/14 - 11:51
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 810	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2447Mhz by 802.11n40	



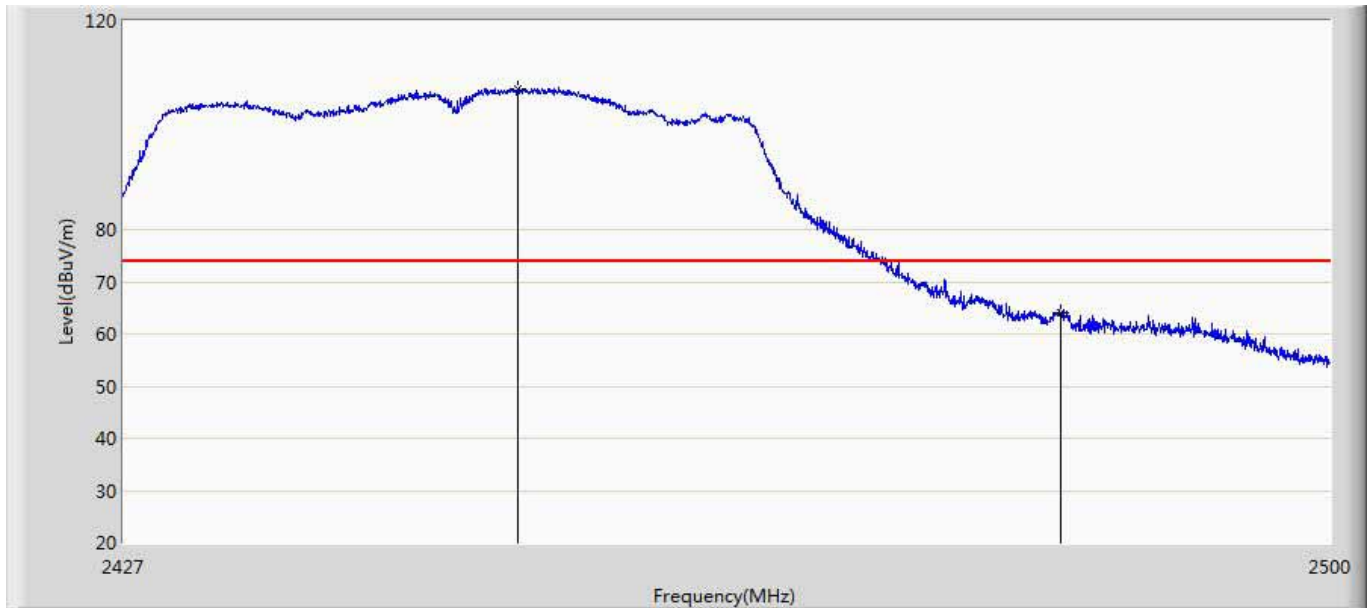
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2457.441	107.080	70.866	33.080	74.000	36.215	PK
2		2483.500	69.928	33.667	-4.072	74.000	36.261	PK

Engineer: Yock	
Site: AC5	Time: 2016/09/14 - 11:53
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: 810	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2447Mhz by 802.11n40	



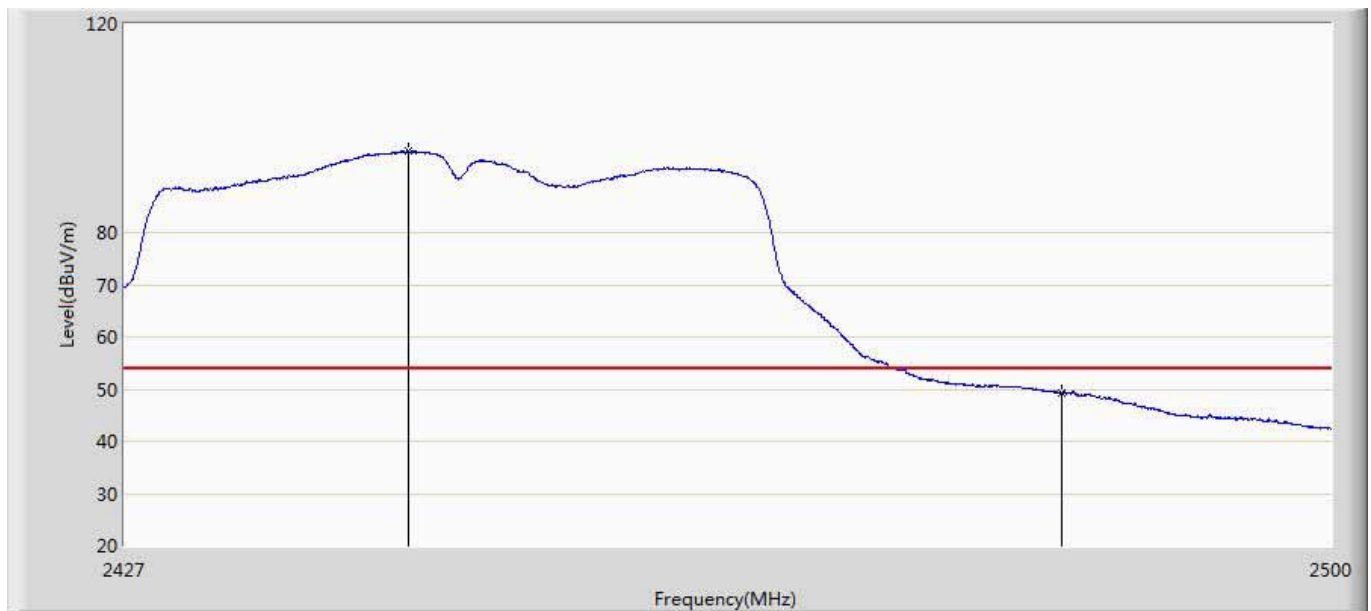
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2457.770	96.704	60.490	42.704	54.000	36.214	AV
2		2483.500	53.023	16.762	-0.977	54.000	36.261	AV

Engineer: Yock	
Site: AC5	Time: 2016/09/14 - 13:08
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 810	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2447Mhz by 802.11n40	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2450.615	106.969	70.752	32.969	74.000	36.218	PK
2		2483.500	63.981	27.720	-10.019	74.000	36.261	PK

Engineer: Yock	
Site: AC5	Time: 2016/09/14 - 13:10
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: 810	Power: AC 120V/60Hz
Note: Mode1 Transmit at channel 2447Mhz by 802.11n40	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2444.045	95.623	59.406	41.623	54.000	36.217	AV
2		2483.500	49.158	12.897	-4.842	54.000	36.261	AV

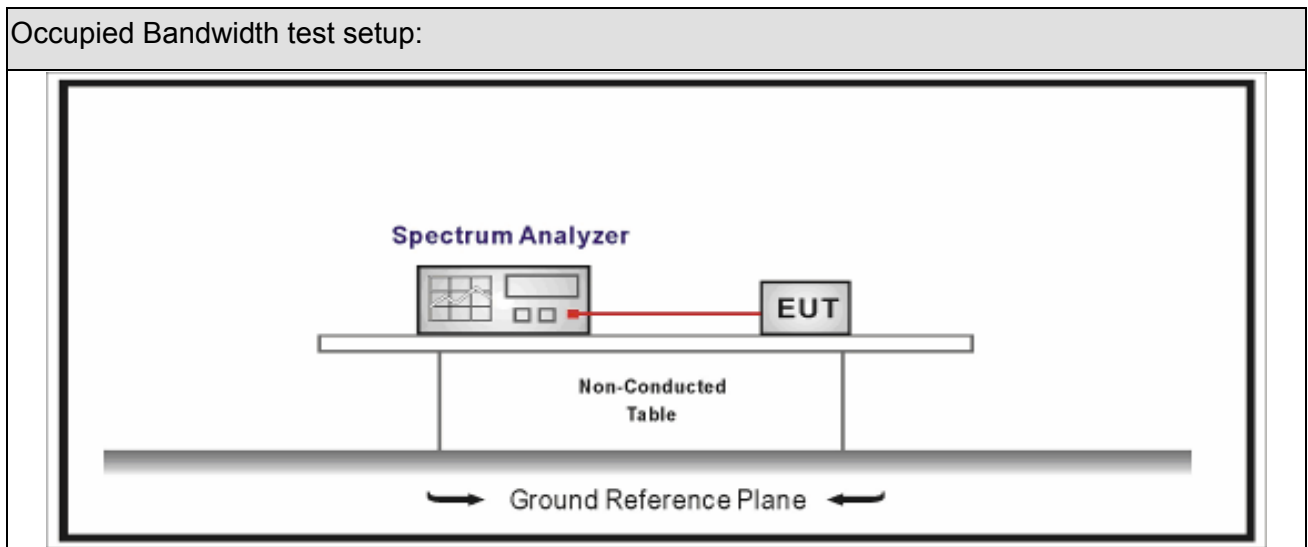
7. Occupied Bandwidth

7.1. Test Equipment

Occupied Bandwidth / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2016.01.04	2017.01.03
Spectrum Analyzer	Agilent	N9010A	MY48030494	2016.03.11	2017.03.10
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2016.04.10	2017.04.09

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

7.2. Test Setup



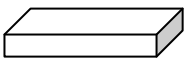
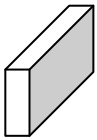
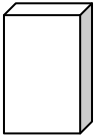
7.3. Limit

Occupied Bandwidth
Systems using digital modulation techniques operate in the 2400-2483.5 MHz. The minimum 6 dB bandwidth shall be at least 500 kHz

7.4. Test Procedure

Test Method				
	Reference Rule		Chapter	Description
☒	ANSI C63.10		11.8	DTS bandwidth
	☐	ANSI C63.10	11.8.1	Option 1
	☒	ANSI C63.10	11.8.2	Option 2

7.5. EUT test definition

Item	Occupied Bandwidth			
Device Category	☒	Fixed position use		
	☐	Mobile position use		
Test mode	Mode 1~4			
Test method	☐	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis ☐	Worst Axis ☐	Worst Axis ☐
	☒	Conducted		
	☐	Chain 0		
				
	☒	Chain 0	Chain 1	
				
	☐	Chain 0	Chain 1	Chain 2
				

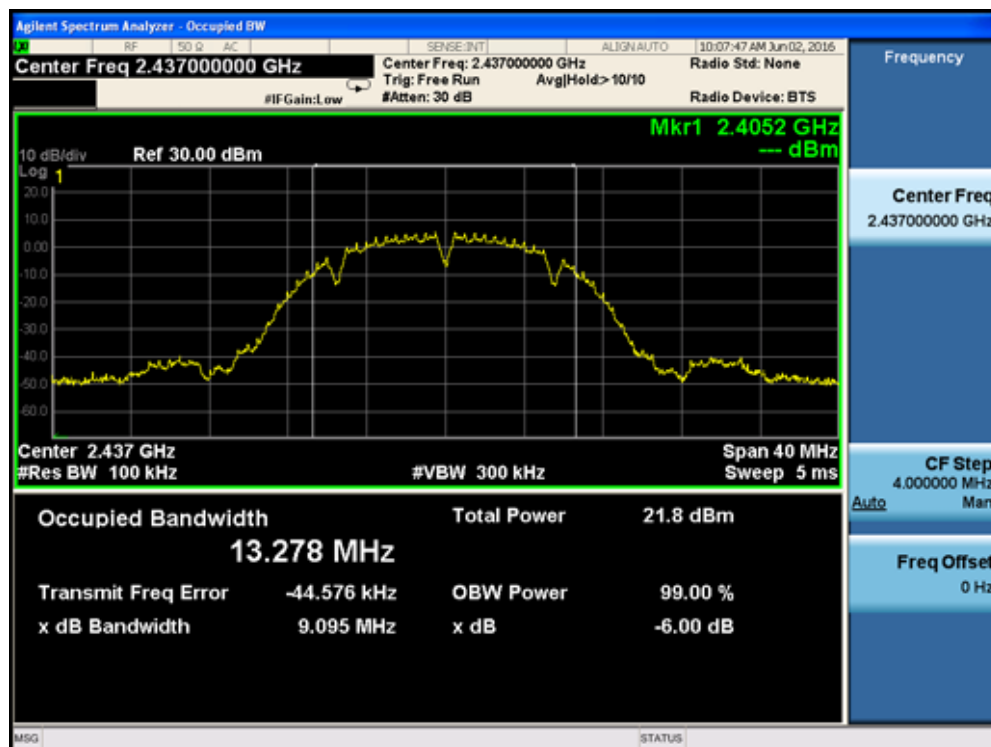
7.6. Test Result

Product Name	:	300Mbps Wireless N Mini Router	Test Power	:	AC 120V/60Hz
Test Site	:	TR-8			

Mode	CH.	Test Freq. (MHz)	99% Occupied Bandwidth (MHz)		6dB Occupied Bandwidth (MHz)		Limit (kHz)	Result
			Ant 0	Ant 1	Ant 0	Ant 1		
1	01	2412	13.587	13.688	10.02	11.58	>500	Pass
1	06	2437	13.278	13.450	9.095	10.211	>500	Pass
1	11	2462	13.702	13.890	9.578	10.711	>500	Pass
2	01	2412	16.177	16.276	15.10	16.20	>500	Pass
2	06	2437	16.194	16.311	15.10	16.20	>500	Pass
2	11	2462	16.207	16.408	15.12	16.22	>500	Pass
3	01	2412	17.249	17.351	15.13	16.23	>500	Pass
3	06	2437	17.270	17.281	15.12	16.22	>500	Pass
3	11	2462	17.302	17.311	15.12	16.22	>500	Pass
4	03	2422	35.788	35.821	32.65	32.78	>500	Pass
4	06	2437	35.768	35.801	32.63	32.76	>500	Pass
4	09	2452	35.646	35.746	35.01	36.03	>500	Pass

Note : The worst case of Occupied Bandwidth as below in next page:

Mode 1 CH06 (2437MHz) Ant 0



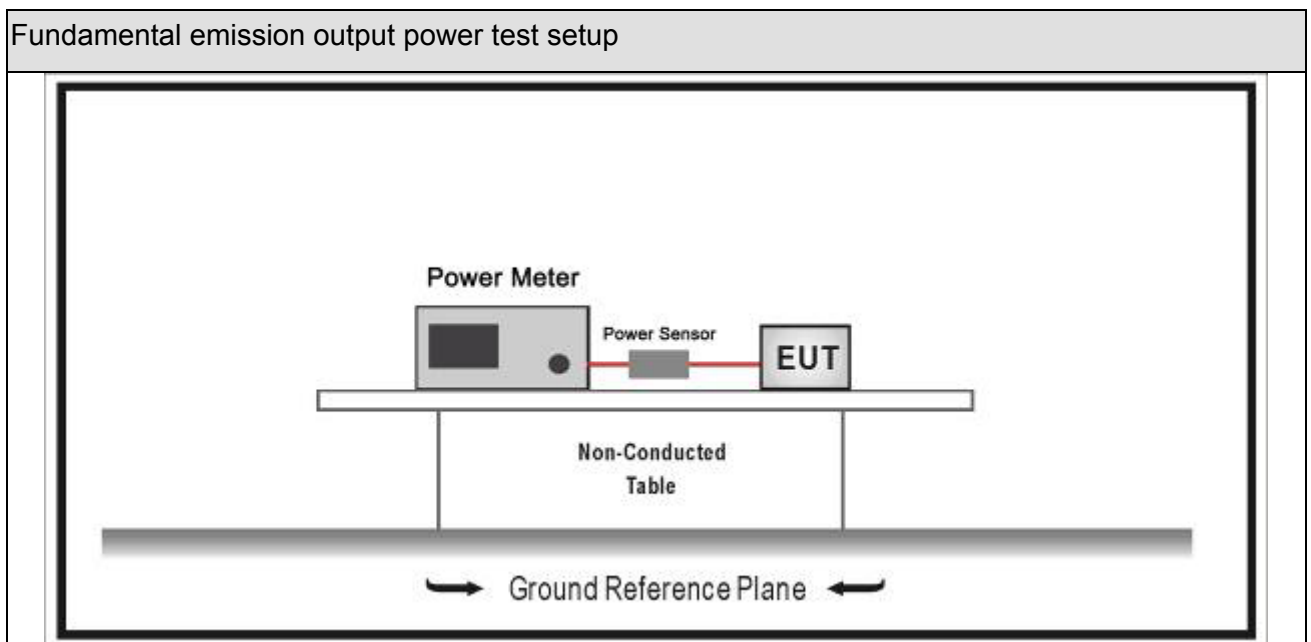
8. Fundamental emission output power

8.1. Test Equipment

Fundamental emission output power/ TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2016.01.04	2017.01.03
Spectrum Analyzer	Agilent	N9010A	MY48030494	2016.03.11	2017.03.10
Wideband Peak Power Meter	Anritsu	ML2495A	0905006	2015.11.11	2016.11.10
Power Sensor	Anritsu	MA2411B	0846014	2015.11.11	2016.11.10
Temperature/Humidity Meter	zhicheng	ZC1-2	TR8-TH	2016.04.10	2017.04.09

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

8.2. Test Setup



8.3. Limit

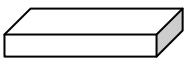
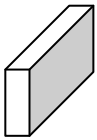
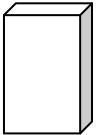
Fundamental emission output power Limit		
☒	$G_{TX} < 6\text{dBi}$	$P_{out} \leq 30\text{dBm}$
☐	$G_{TX} > 6\text{dBi}$	
☐	Non-Fix point-point	$P_{out} \leq 30 - (G_{TX} - 6)$
☐	Fix point-point	$P_{out} \leq 30 - [(G_{TX} - 6)]/3$
☐	Point-to-multipoint	$P_{out} \leq 30 - (G_{TX} - 6)$
☐	Overlap Beams	$P_{out} \leq 30 - [(G_{TX} - 6)]/3$
☐	Aggregate power transmitted simultaneously on all beams	$P_{out} \leq 30 - [(G_{TX} - 6)]/3$
☐	single directional beam	$P_{out} \leq 30 - [(G_{TX} - 6)]/3 + 8\text{dB}$
Note 1 : G_{TX} directional gain of transmitting antennas. Note 2 : P_{out} is maximum peak conducted output power .		

8.4. 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

Directional Gain Calculations for In-Band test method				
	References Rule		Chapter	Description
☐	KDB 662911		F2)a)	Basic methodology with NANT transmit antennas
	☐	KDB 662911	F2)a) (i)	transmit signals are correlated
	☐	KDB 662911	F2)a) (ii)	transmit signals are uncorrelated
☐	KDB 662911		F2)b)	Sectorized antenna systems.
☐	KDB 662911		F2)c)	Cross-polarized antennas
	☐	ANSI C63.10	F2)c) (i)	Cross-polarized antennas with NANT = 2.
	☐	ANSI C63.10	F2)c) (ii)	Multiple antennas
☐	KDB 662911		F2)e)	Spatial stream
	☐	KDB 662911	F2)e) (i)	Antennas have the same gain
	☐	KDB 662911	F2)e) (ii)	Antenna have the different gain with one spatial stream
	☐	KDB 662911	F2)e) (iii)	Antenna have the different gain with more than one spatial stream
☒	KDB 662911		F2)f)	Cyclic Delay Diversity (CDD)
	☐	KDB 662911	F2)f) (i)	Antennas have the same gain
	☐	KDB 662911	F2)f) (ii)	Antenna have the different gain with one spatial stream
	☒	KDB 662911	F2)f) (ii)	Antenna have the different gain with more than one spatial stream

8.5. EUT test definition

Item	Fundamental emission output power			
Device Category	☒	Fixed position use		
	☐	Mobile position use		
Test mode	Mode 1~4			
Test method	☐	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis ☐	Worst Axis ☐	Worst Axis ☐
	☒	Conducted		
	☐	Chain 0		
				
	☒	Chain 0	Chain 1	
				
	☐	Chain 0	Chain 1	Chain 2
				

8.6. Test Result

Product Name	:	300Mbps Wireless N Mini Router	Test Power	:	AC 120V/60Hz
Test Site	:	TR8			

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	17.58	17.04	20.33	1	30	Pass
1	02	2417	20.31	19.85	23.10	1	30	Pass
1	06	2437	20.67	19.86	23.30	1	30	Pass
1	10	2457	20.33	19.92	23.14	1	30	Pass
1	11	2462	19.52	18.75	22.16	1	30	Pass
2	01	2412	17.38	16.68	20.05	1	30	Pass
2	02	2417	19.39	18.57	22.01	1	30	Pass
2	06	2437	21.57	21.23	24.41	1	30	Pass
2	10	2457	19.04	18.22	21.66	1	30	Pass
2	11	2462	17.43	16.82	20.15	1	30	Pass
3	01	2412	17.54	16.79	20.19	1	30	Pass
3	02	2417	18.98	18.26	21.65	1	30	Pass
3	06	2437	21.94	21.09	24.55	1	30	Pass
3	10	2457	18.77	17.36	21.13	1	30	Pass
3	11	2462	16.42	15.84	19.15	1	30	Pass
4	03	2422	13.42	12.86	16.16	1	30	Pass

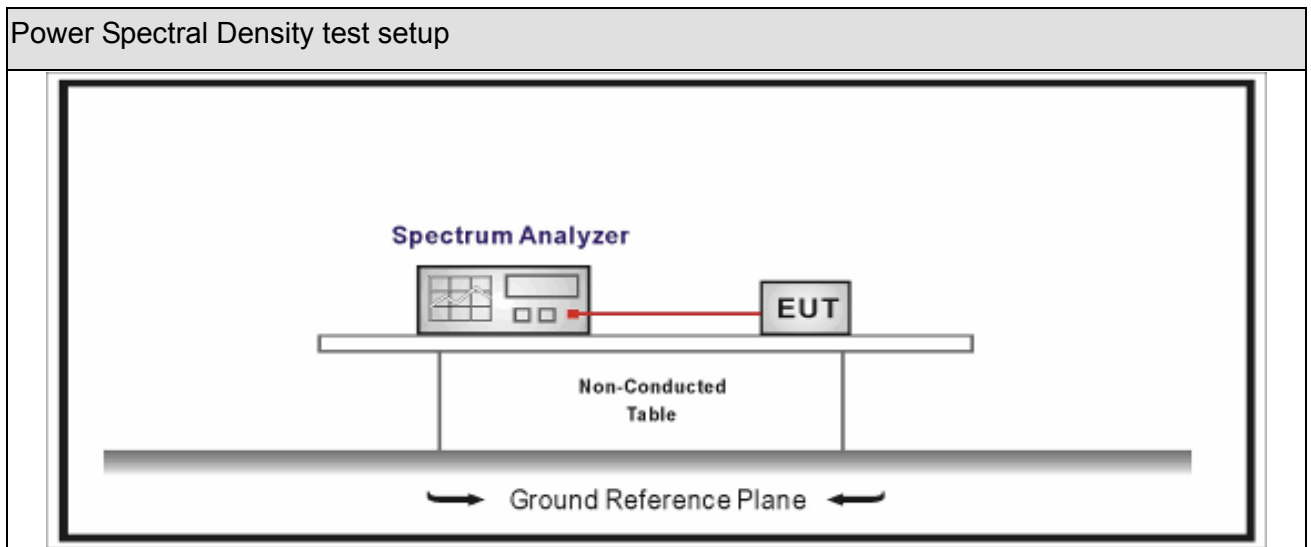
4	04	2427	15.13	14.51	17.84	1	30	Pass
4	06	2437	17.41	16.77	20.11	1	30	Pass
4	08	2447	14.92	14.17	17.57	1	30	Pass
4	09	2452	13.68	12.92	16.33	1	30	Pass

9. Power Spectral Density

9.1. Test Equipment

Power Spectral Density / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2016.01.04	2017.01.03
Spectrum Analyzer	Agilent	N9010A	MY48030494	2016.03.11	2017.03.10
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2016.04.10	2017.04.09
Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

9.2. Test Setup



9.3. Limit

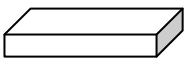
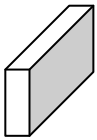
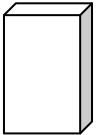
Power Spectral Density Limit
Power Spectral Density $\leq 8\text{dBm}/3\text{kHz}$

9.4. Test Procedure

Power Spectral Density Test Method				
	References Rule		Chapter	Description
☒	ANSI C63.10		11.10	Maximum power spectral density level in the fundamental emission
	☒	ANSI C63.10	11.10.2	Method PKPSD (peak PSD)
	☐	ANSI C63.10	11.10.3	Method AVGPSD-1(Duty cycle $\geq$ 98%)
	☐	ANSI C63.10	11.10.4	Method AVGPSD-1A(Duty cycle $\geq$ 98%)
	☐	ANSI C63.10	11.10.5	Method AVGPSD-2(Duty cycle $<$ 98%)
	☐	ANSI C63.10	11.10.6	Method AVGPSD-2A(Duty cycle $<$ 98%)
	☐	ANSI C63.10	11.10.7	Method AVGPSD-3
	☐	ANSI C63.10	11.10.8	Method AVGPSD-3A

Directional Gain Calculations for In-Band test method				
	Referred Rule		Chapter	Description
☐	KDB 662911		F2)a)	Basic methodology with NANT transmit antennas
	☐	KDB 662911	F2)a) (i)	transmit signals are correlated
	☐	KDB 662911	F2)a) (ii)	transmit signals are uncorrelated
☐	KDB 662911		F2)b)	Sectorized antenna systems.
☐	KDB 662911		F2)c)	Cross-polarized antennas
	☐	ANSI C63.10	F2)c) (i)	Cross-polarized antennas with NANT = 2.
	☐	ANSI C63.10	F2)c) (ii)	Multiple antennas
☐	KDB 662911		F2)e)	Spatial stream
	☐	KDB 662911	F2)e) (i)	Antennas have the same gain
	☐	KDB 662911	F2)e) (ii)	Antenna have the different gain with one spatial stream
	☐	KDB 662911	F2)e) (iii)	Antenna have the different gain with more than one spatial stream
☒	KDB 662911		F2)f)	Cyclic Delay Diversity (CDD)
	☒	KDB 662911	F2)f) (i)	Antennas have the same gain
	☐	KDB 662911	F2)f) (ii)	Antenna have the different gain with one spatial stream
	☐	KDB 662911	F2)f) (ii)	Antenna have the different gain with more than one spatial stream

9.5. EUT test definition

Item	Power Spectral Density Test Method			
Device Category	☒	Fixed position use		
	☐	Mobile position use		
Test mode	Mode 1~4			
Test method	☐	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis ☐	Worst Axis ☐	Worst Axis ☐
	☒	Conducted		
	☐	Chain 0		
				
	☒	Chain 0	Chain 1	
				
	☐	Chain 0	Chain 1	Chain 2
				

9.6. Test Result

Product Name	:	300Mbps Wireless N Mini Router	Test Power	:	AC 120V/60Hz
Test Site	:	TR8			

Mode	Channel	Test Frequency (MHz)	Measurement PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	Directional Gain (dBi)	Limit (dBm/3kHz)	Result
			Ant 0	Ant 1				
1	01	2412	-4.413	-2.491	-0.336	4	8.0	Pass
1	06	2437	-2.041	-1.343	1.332	4	8.0	Pass
1	11	2462	-3.431	-4.004	-0.698	4	8.0	Pass
2	01	2412	-8.027	-7.567	-4.781	4	8.0	Pass
2	06	2437	-2.588	-1.203	1.170	4	8.0	Pass
2	11	2462	-6.953	-5.788	-3.321	4	8.0	Pass
3	01	2412	-9.762	-8.206	-5.904	4	8.0	Pass
3	06	2437	-3.179	-3.797	-0.467	4	8.0	Pass
3	11	2462	-6.976	-7.356	-4.152	4	8.0	Pass
4	03	2422	-13.117	-14.545	-10.762	4	8.0	Pass
4	06	2437	-8.207	-7.907	-5.044	4	8.0	Pass
4	09	2452	-14.37	-15.46	-11.871	4	8.0	Pass

Mode 1 CH06(2437MHz) Ant 1



The End