



C2PC Test Report

FCC Part15 Subpart C

Product Name : 1. Smart Wi-Fi Plug Mini
2. Kasa Wi-Fi Smart Plug -Slim Edition
Model No. : 1. HS105
2. KP100
FCC ID : TE7HS105

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 : Jul. 18, 2017
Test Date : Jul. 18, 2017~ Oct. 31, 2017
Issued Date : Dec. 06, 2017
Report No. : 1772096R-RF-US-P06V02
Report Version : V1.1

Note: This report was based on DEKRA report (Report No. 1672088R), the EUT only changes the model of CCWS socket, and delete a capacitance. And add a new EUT model KP100 and it is the same as HS105.

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.

This report must not be used to claim product endorsement by TAF, A2LA or any agency of the government.

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Test Report Certification

Issued Date : Dec. 06, 2017

Report No. : 1772096R-RF-US-P06V02



Product Name : 1.Smart Wi-Fi Plug Mini
2. Kasa Wi-Fi Smart Plug -Slim Edition

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

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. : 1.HS105
2.KP100

FCC ID : TE7HS105

EUT Voltage : 100V~120V 60Hz 15A (0.1A product only)

Test Voltage : AC 120V/60Hz

Brand Name : tp-link

Applicable Standard : FCC CFR Title 47 Part 15 Subpart C
ANSI C63.4:2014; ANSI C63.10:2013;
KDB 558074 D01v04

Test Result : Complied

Performed Location : DEKRA Testing and Certification (Suzhou) Co., Ltd.
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FCC Registration Number: CN1199

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History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
1772096R-RF-US-P06V02	V1.0	Initial Issued Report	Nov. 17, 2017
1772096R-RF-US-P06V02	V1.1	Add adjacent channel power and bandage	Dec. 06, 2017

1. General Information

1.1. EUT Description

Product Name	1.Smart Wi-Fi Plug Mini 2. Kasa Wi-Fi Smart Plug -Slim Edition
Brand Name	tp-link
Model No.	1.HS105 2.KP100
EUT Voltage	100V~120V 60Hz 15A (0.1A product only)
Test Voltage	AC 120V/60Hz
Frequency Range	For 2.4GHz Band 802.11b/g/n(20MHz): 2412~2462MHz 802.11n(40MHz): 2422~2452MHz
Channel Number	For 2.4GHz Band 802.11b/g/n(20MHz): 11 802.11n(40MHz): 7
Type of Modulation	802.11b: DSSS 802.11g: OFDM
Data Rate	802.11g: 6/9/12/18/24/36/48/54 Mbps 802.11b: 1/2/5.5/11 Mbps 802.11n: up to 150 Mbps
Channel Control	Auto

a) Channel List:

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

b) Test Channel:

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

c) Antenna information

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

d) 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)

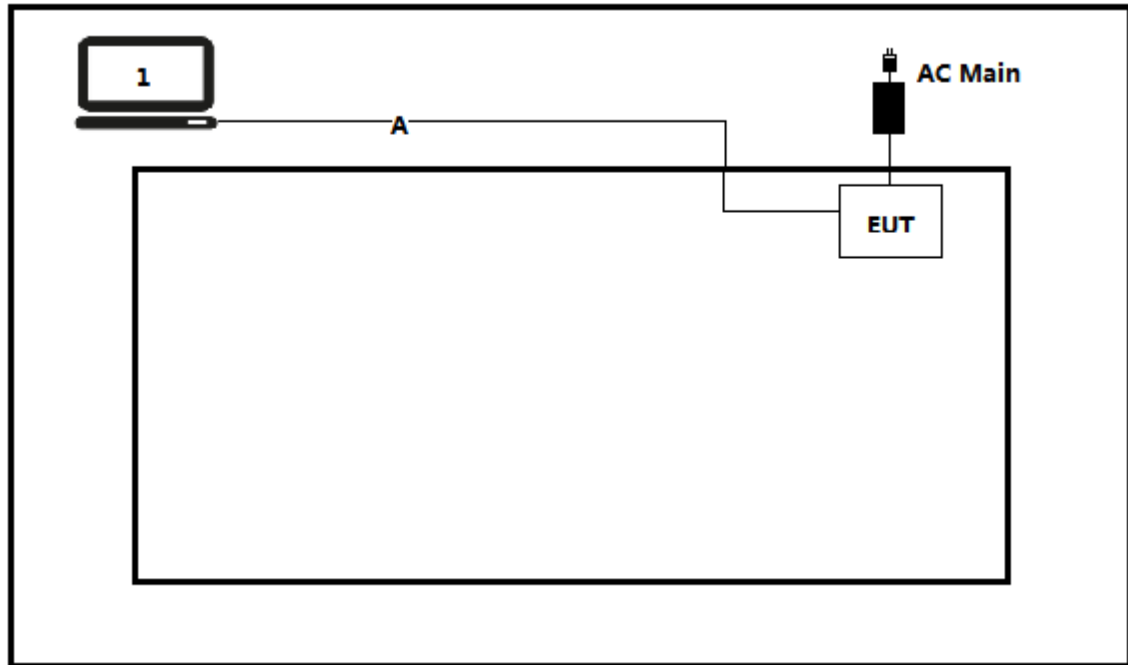
e) Tested System Details

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

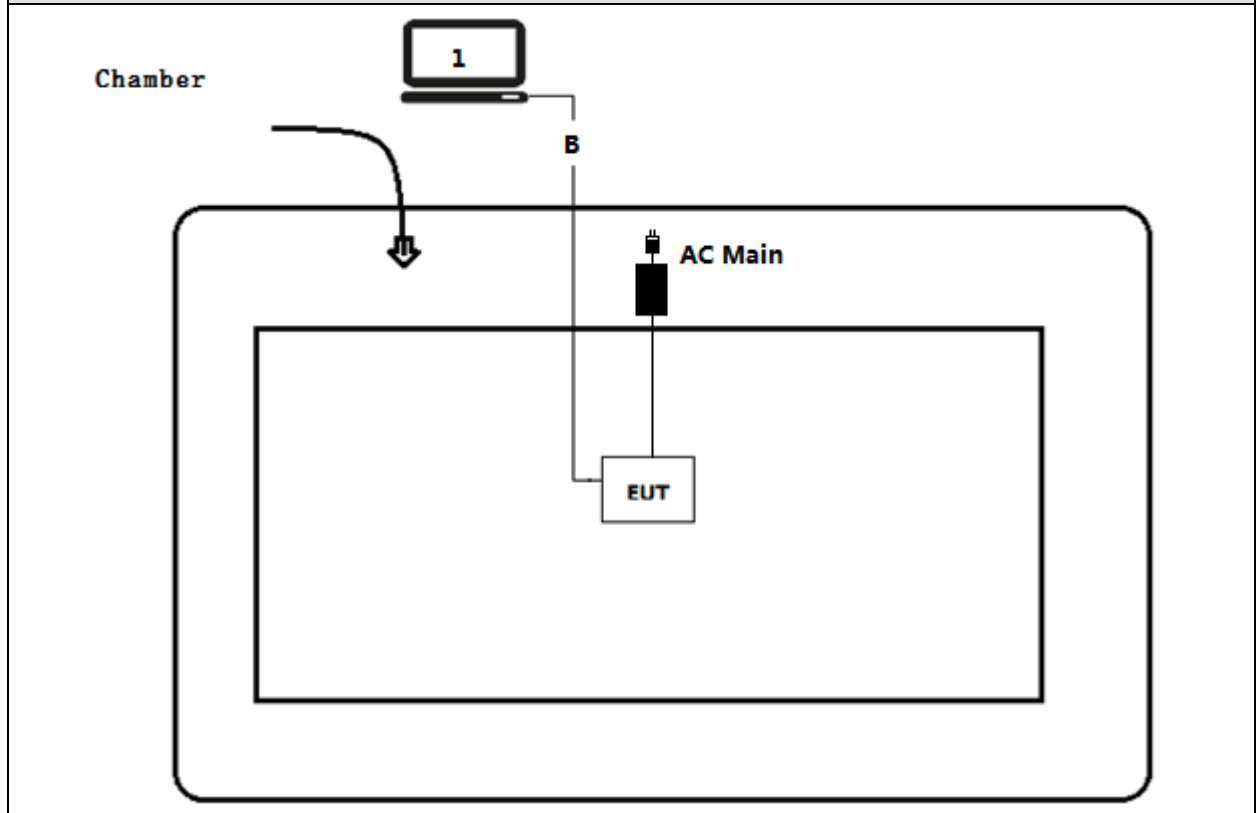
Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook	Think Pad	2526	LV-A3285	Power by adapter
A	USB-Serial Cable	N/A	N/A	N/A	Shield, 1m
B	USB-Serial Cable	N/A	N/A	N/A	Shield, 10m

f) Configuration of Tested System

Test setup Diagram- AC Line Conducted Emission Test



Test setup Diagram- Radiated Emission



2. Technical Test

a) Summary of Test Result

Performed Test Item	Normative References	Worst case mode	Limit	Result
AC Power Line Conducted Emission	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.207	Mode 1	FCC 15.207	N/A
Emissions in restricted frequency bands	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.209	Mode 1	FCC 15.209	PASS
Emissions in non-restricted frequency bands	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(d)	Mode 1	$\geq 30\text{dBc}$	PASS
Radiated Emission Band Edge	FCC CFR Title 47 Part 15 Subpart C: 2015 15.247(d)	Mode 1	FCC 15.209	PASS
Occupied Bandwidth	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(a)(2)	Mode 1	$\geq 500\text{kHz}$	PASS
Fundamental emission output power	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(b)(3)	Mode 1	$\leq 30\text{dBm}$	PASS
Power Spectral Density	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(e)	Mode 1	$\leq 8\text{dBm}/3\text{kHz}$	PASS
Antenna Requirement	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.203	N/A	FCC 15.203	PASS

b) Power setting parameter

Test Software	Artgui	
Modulation Mode	Test Frequency	Ant 0
802.11b	2412	21.0
	2417	22.5
	2437	26.5
	2457	21.5
	2462	20.5
802.11g	2412	15.5
	2417	18.5
	2437	24.0
	2457	18.0
	2462	14.0
802.11n(20MHz)	2412	15.0
	2417	18.5
	2437	23.5
	2457	18.0
	2462	14.0
802.11n(40MHz)	2422	12.5
	2427	14.5
	2437	17.0
	2447	14.0
	2452	12.0

c) 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

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

d) 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

e) 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	$\pm 1.27\text{dB}$

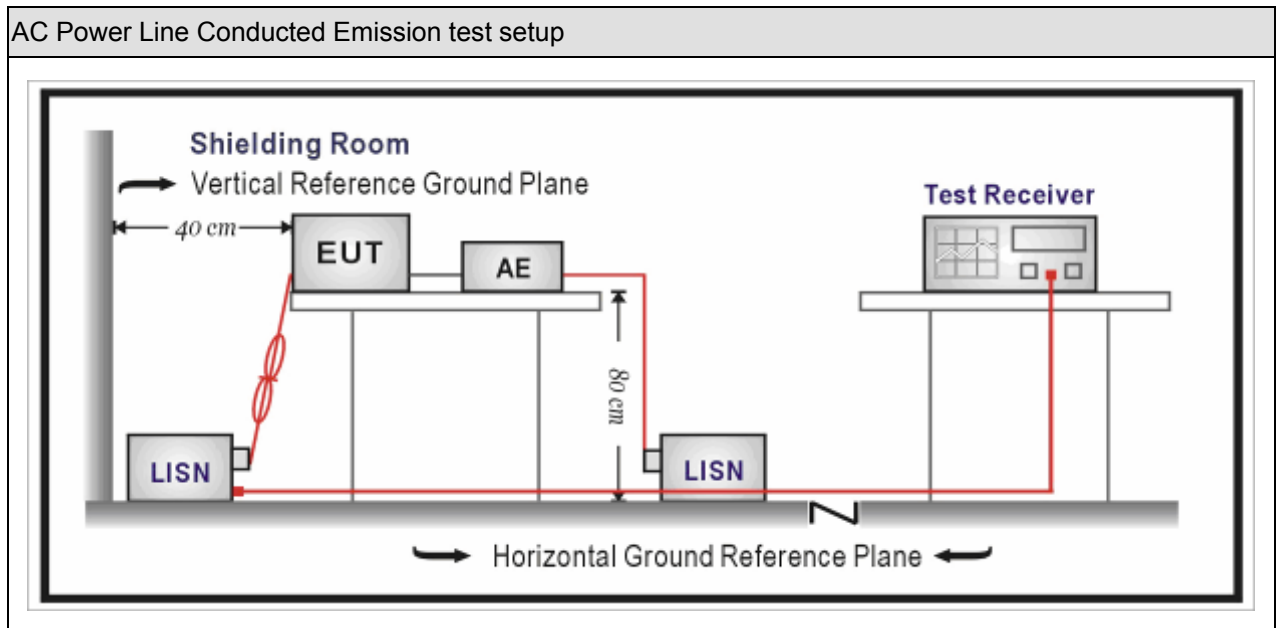
3. AC Power Line Conducted Emission

a) Test Equipment

AC Power Line Conducted Emission / TR-1					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Test Receiver	R&S	ESCI	100906	2017.03.05	2018.03.04
Two-Line V-Network	R&S	ENV 216	101189	2017.07.16	2018.07.15
Two-Line V-Network	R&S	ENV 216	101044	2017.09.16	2018.09.15
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	N/A	N/A
50ohm Termination	SHX	TF2	07081402	2017.09.16	2018.09.15
Temperature/Humidity Meter	Zhichen	ZC1-2	TR1-TH	2017.01.04	2018.01.03

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

b) Test Setup



c) Limit

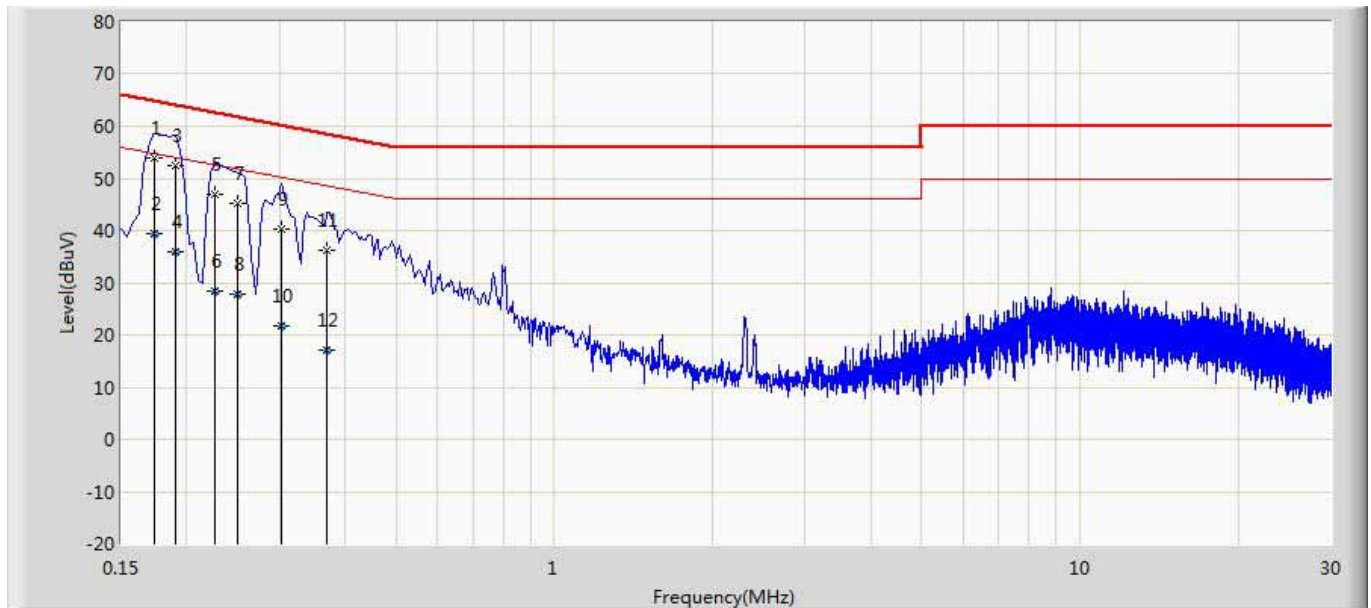
Frequency of Emission (MHz)	Conducted Limit	
	Quasi-peak (dB μ V)	Average (dB μ V)
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50
Note 1: The lower limit shall apply at the transition frequencies.		
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5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

d) 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

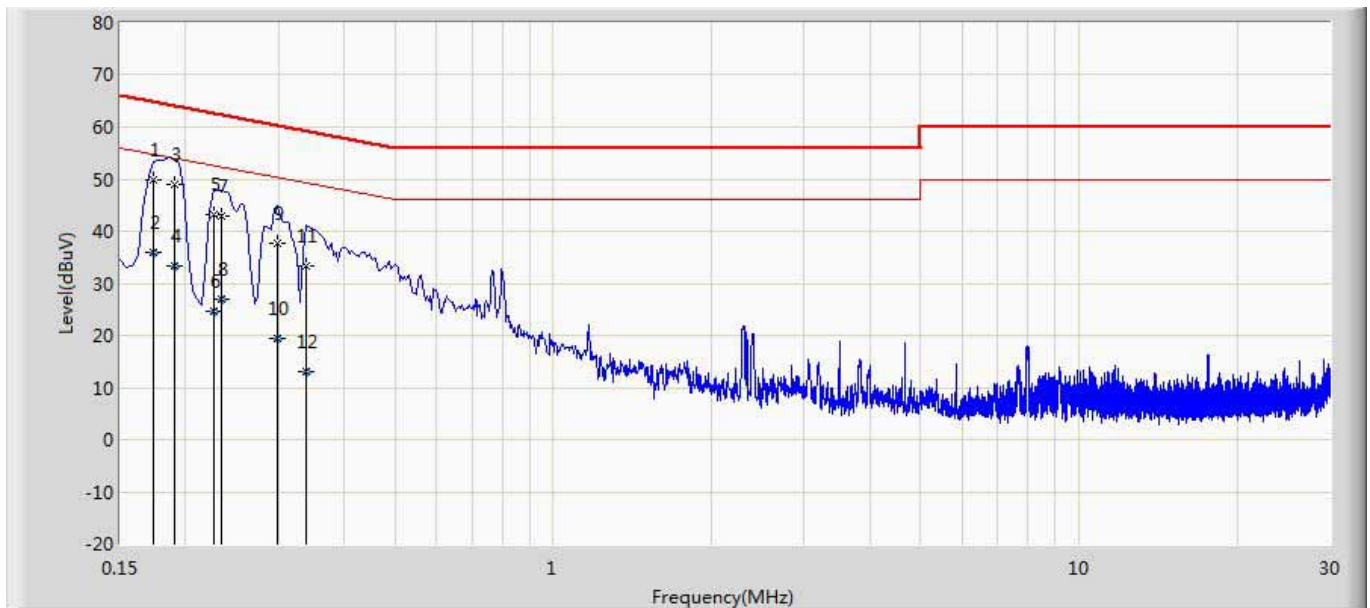
e) Test Result

Engineer: Damon	
Site: TR1	Time: 2017/09/29 - 14:42
Limit: FCC_Part15.207_CE_AC Power	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Line
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 1: Transmit at 2412MHz by 802.11b	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1	*	0.174	53.865	44.233	-10.902	64.767	9.605	0.027	0.000	QP
2		0.174	39.452	29.819	-15.316	54.767	9.605	0.027	0.000	AV
3		0.190	52.458	42.828	-11.579	64.037	9.602	0.028	0.000	QP
4		0.190	35.923	26.293	-18.113	54.037	9.602	0.028	0.000	AV
5		0.226	47.079	37.449	-15.517	62.595	9.600	0.030	0.000	QP
6		0.226	28.400	18.770	-24.196	52.595	9.600	0.030	0.000	AV
7		0.250	45.091	35.460	-16.666	61.757	9.600	0.031	0.000	QP
8		0.250	27.818	18.187	-23.939	51.757	9.600	0.031	0.000	AV
9		0.302	40.322	30.688	-19.866	60.188	9.600	0.034	0.000	QP
10		0.302	21.850	12.216	-28.338	50.188	9.600	0.034	0.000	AV
11		0.370	36.270	26.633	-22.231	58.501	9.600	0.037	0.000	QP
12		0.370	17.163	7.526	-31.338	48.501	9.600	0.037	0.000	AV

Engineer: Damon	
Site: TR1	Time: 2017/09/29 - 15:00
Limit: FCC_Part15.207_CE_AC Power	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Neutral
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 1: Transmit at 2412MHz by 802.11b	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1	*	0.174	49.863	40.241	-14.904	64.767	9.595	0.027	0.000	QP
2		0.174	35.852	26.230	-18.915	54.767	9.595	0.027	0.000	AV
3		0.190	48.946	39.320	-15.091	64.037	9.598	0.028	0.000	QP
4		0.190	33.395	23.769	-20.641	54.037	9.598	0.028	0.000	AV
5		0.226	43.253	33.625	-19.342	62.595	9.599	0.030	0.000	QP
6		0.226	24.638	15.009	-27.958	52.595	9.599	0.030	0.000	AV
7		0.234	42.870	33.242	-19.437	62.307	9.598	0.030	0.000	QP
8		0.234	27.065	17.436	-25.242	52.307	9.598	0.030	0.000	AV
9		0.298	37.545	27.915	-22.753	60.298	9.596	0.034	0.000	QP
10		0.298	19.512	9.881	-30.787	50.298	9.596	0.034	0.000	AV
11		0.338	33.253	23.622	-26.000	59.252	9.595	0.035	0.000	QP
12		0.338	12.952	3.321	-36.300	49.252	9.595	0.035	0.000	AV

4. Emissions in restricted frequency bands

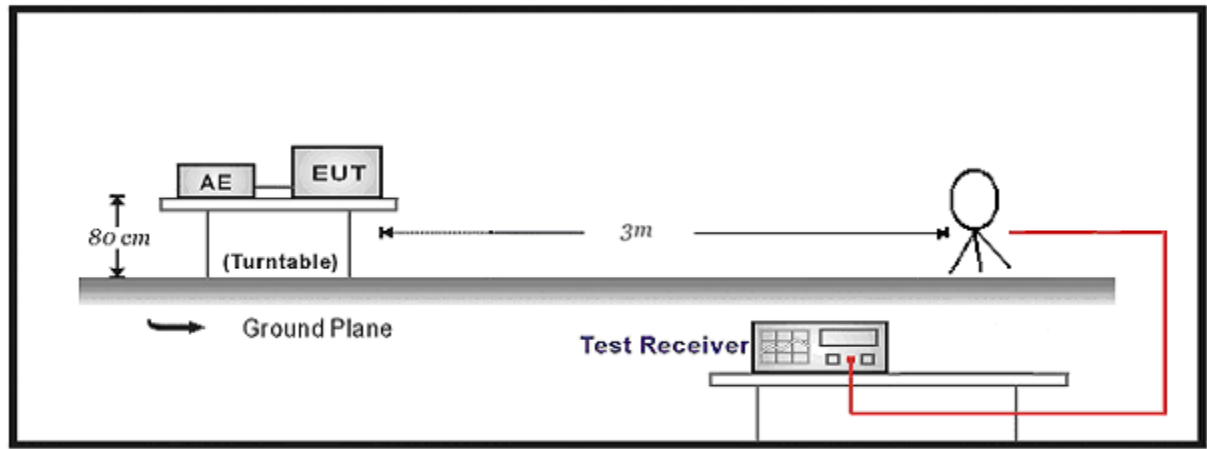
a) Test Equipment

Radiated Emission(Below 1GHz) / AC-2					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Test Receiver	R&S	ESCI	100573	2017.03.29	2018.03.28
Loop Antenna	R&S	HFH2-Z2	833799/003	2016.11.16	2017.11.15
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2017.10.16	2018.10.15
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC2-C	2017.03.02	2018.03.01
Temperature/Humidity Meter	Zhichen	ZC1-2	AC2-TH	2017.01.04	2018.01.03
Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

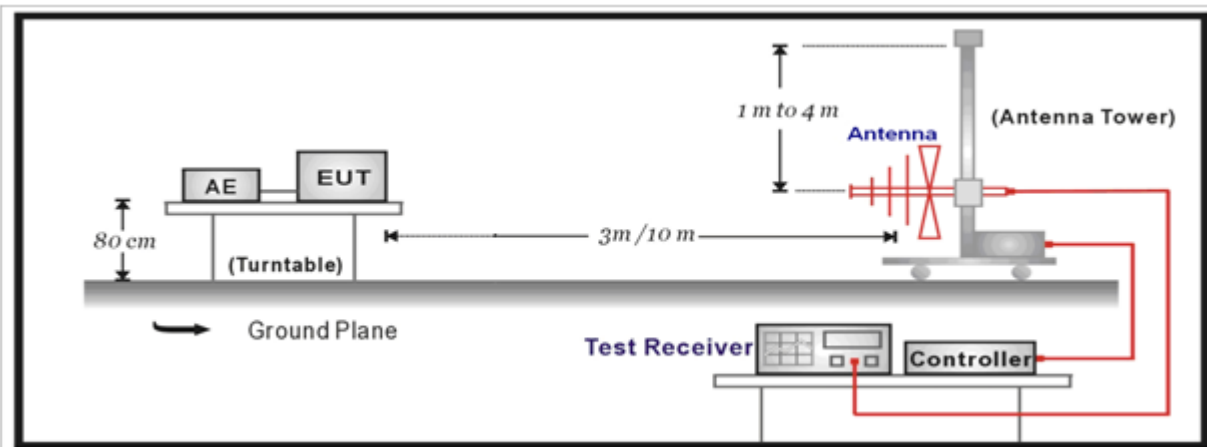
Radiated Emission(Above 1GHz) / AC-5					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2017.01.03	2018.01.02
Preamplifier	Miteq	NSP1800-25	1364185	2017.05.06	2018.05.05
Preamplifier	Quietek	AP-040G	CHM-0906001	2017.05.06	2018.05.05
DRG Horn	ETS-Lindgren	3117	00123988	2017.01.22	2018.01.21
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2016.11.25	2017.11.24
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2017.03.02	2018.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2017.03.02	2018.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	AC5-C3	2017.03.02	2018.03.01
EMI Receiver	Agilent	N9038A	MY51210196	2017.06.10	2018.06.09
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2017.01.04	2018.01.03
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

b) Test Setup

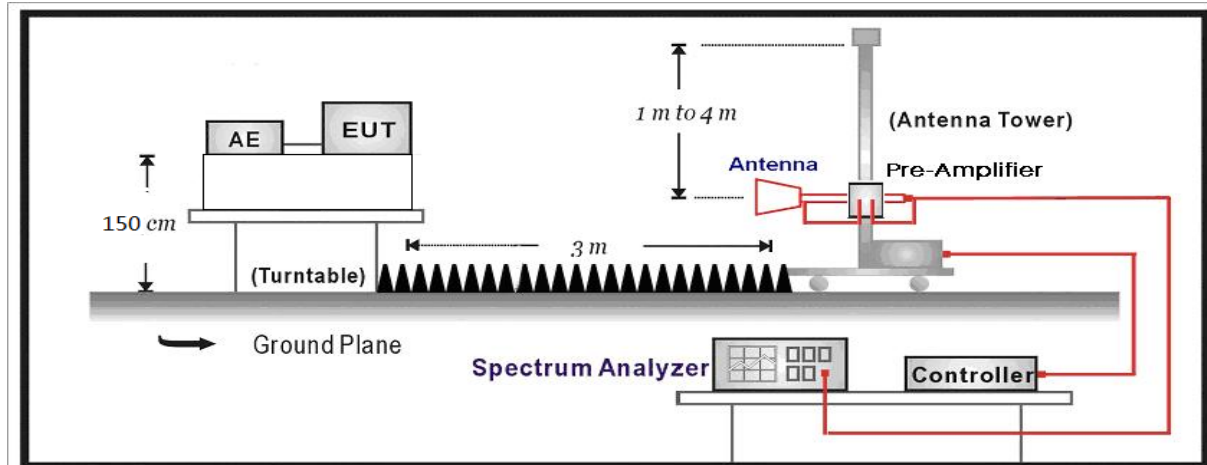
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:



c) Limit

For FCC:

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

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

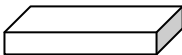
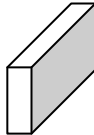
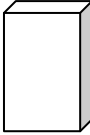
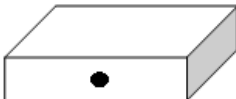
Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed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

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

d) Test Procedure

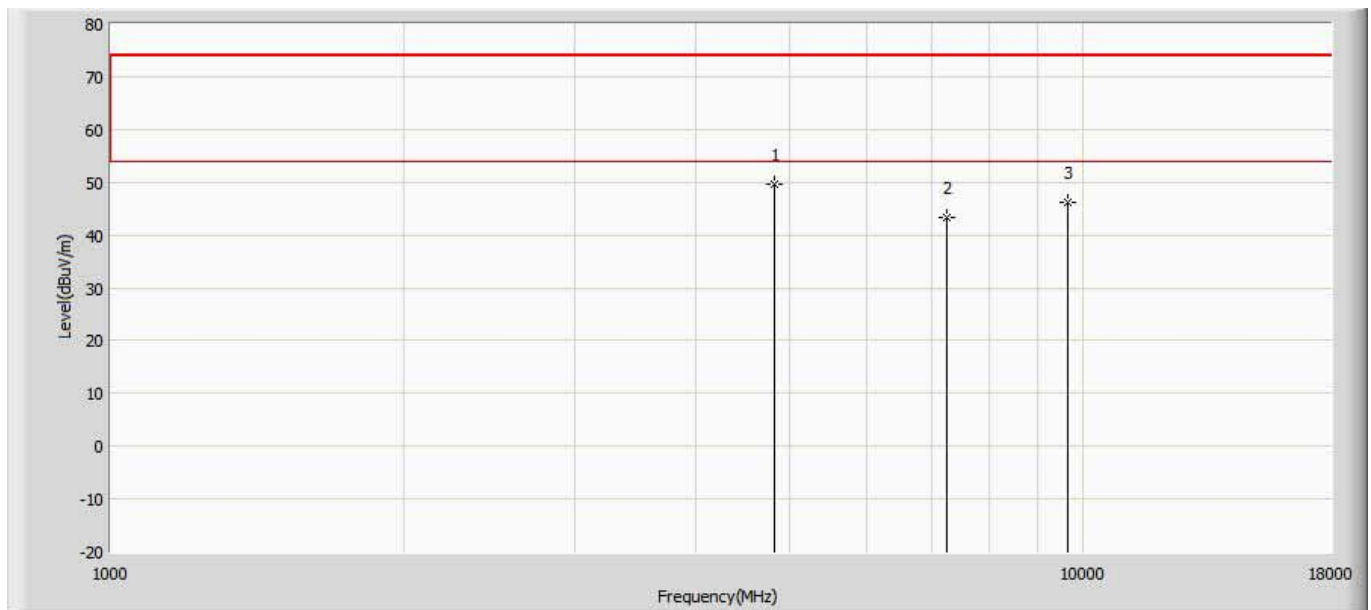
Test Method						
	References Rule		Chapter	Description		
☐	ANSI C63.10		11.11	Emissions in non-restricted frequency bands		
	☐	ANSI C63.10	11.11.2	Reference level measurement		
	☐	ANSI C63.10	11.11.3	Emission level measurement		
☒	ANSI C63.10		11.12	Emissions in restricted frequency bands		
	☒	ANSI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

e) 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
				

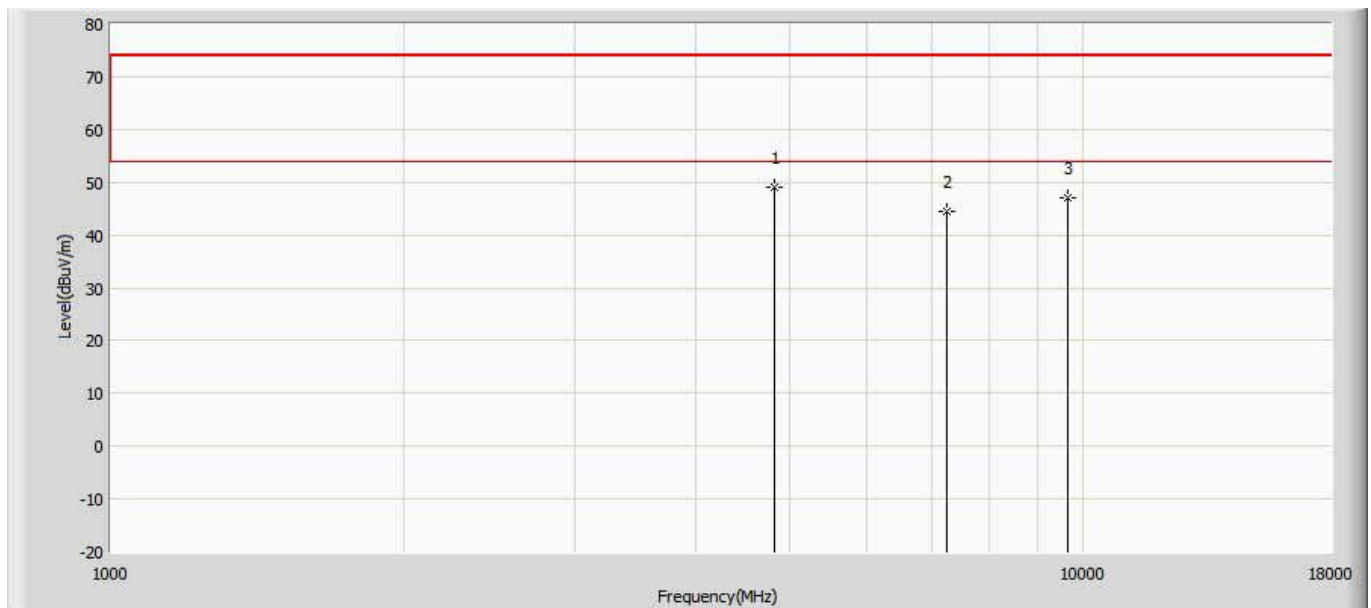
f) Test Result

Engineer: Damon	
Site: AC5	Time: 2017/08/22 - 18:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2412MHz by 11b	



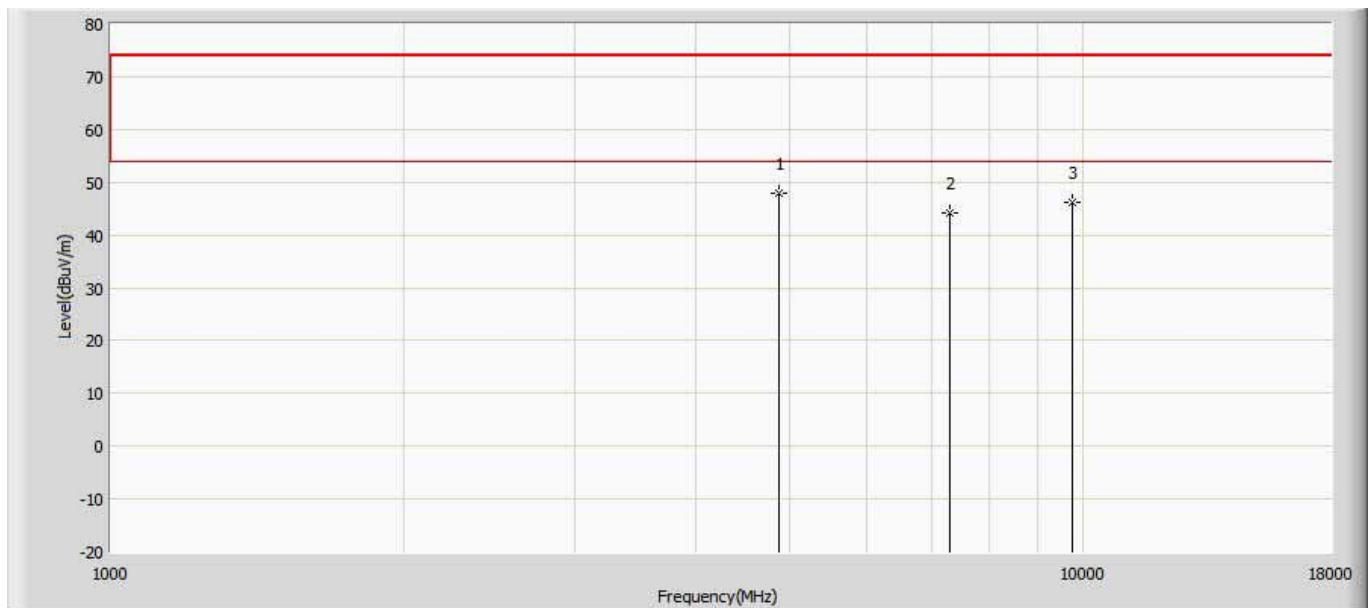
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4825.000	49.684	62.694	-24.316	74.000	-13.010	PK
2		7236.000	43.396	51.106	-30.604	74.000	-7.710	PK
3		9648.000	46.317	47.907	-27.683	74.000	-1.590	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/22 - 18:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2412MHz by 11b	



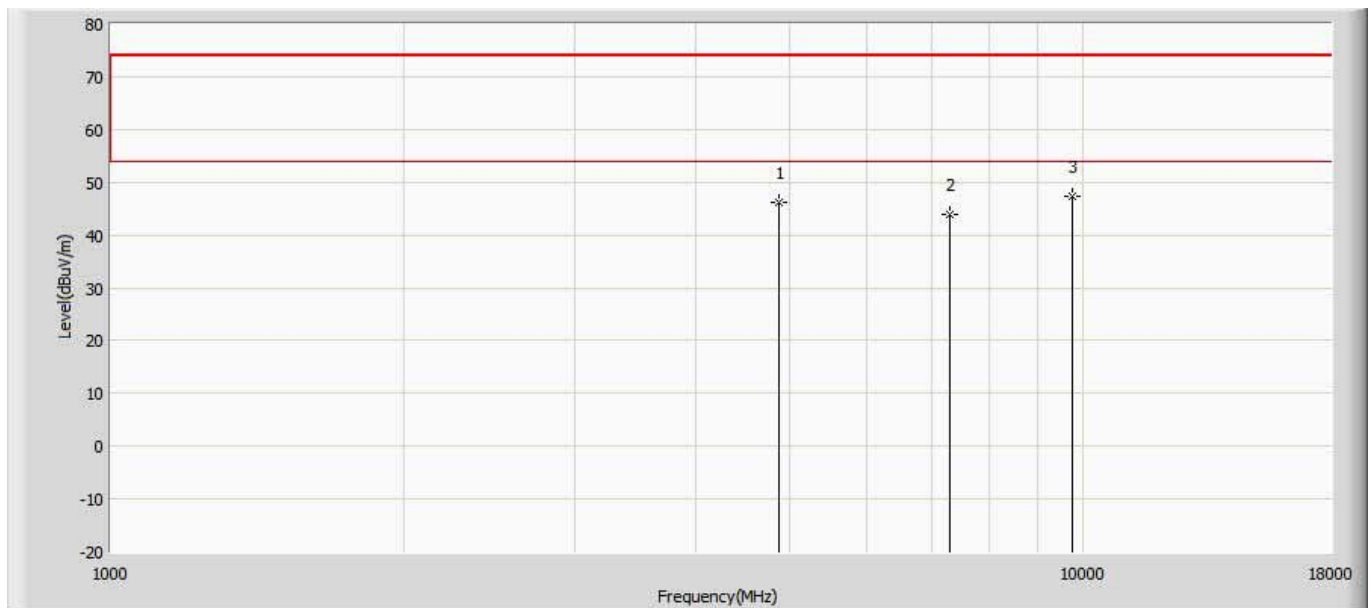
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4825.000	49.138	62.148	-24.862	74.000	-13.010	PK
2		7236.000	44.371	52.081	-29.629	74.000	-7.710	PK
3		9648.000	46.996	48.586	-27.004	74.000	-1.590	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/22 - 18:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 1:Tranmsit at channel 2437MHz by 11b	



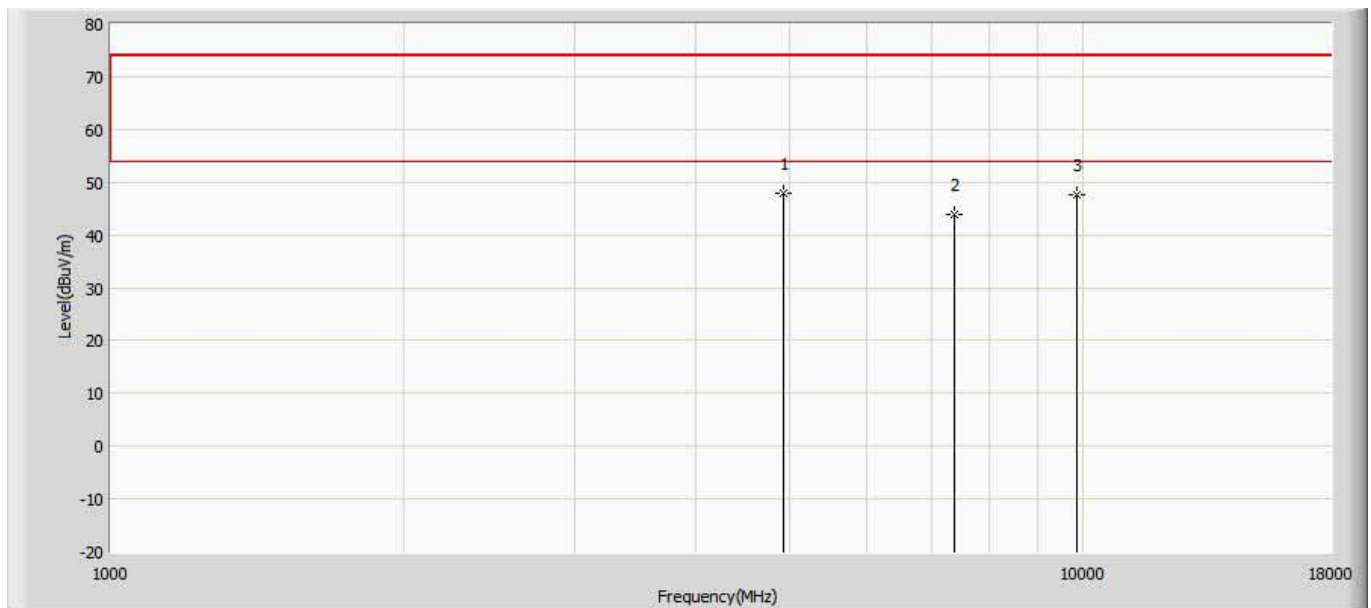
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4876.000	47.834	60.844	-26.166	74.000	-13.010	PK
2		7311.000	44.182	51.892	-29.818	74.000	-7.710	PK
3		9748.000	46.145	47.735	-27.855	74.000	-1.590	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/22 - 18:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 1:Tranmsit at channel 2437MHz by 11b	



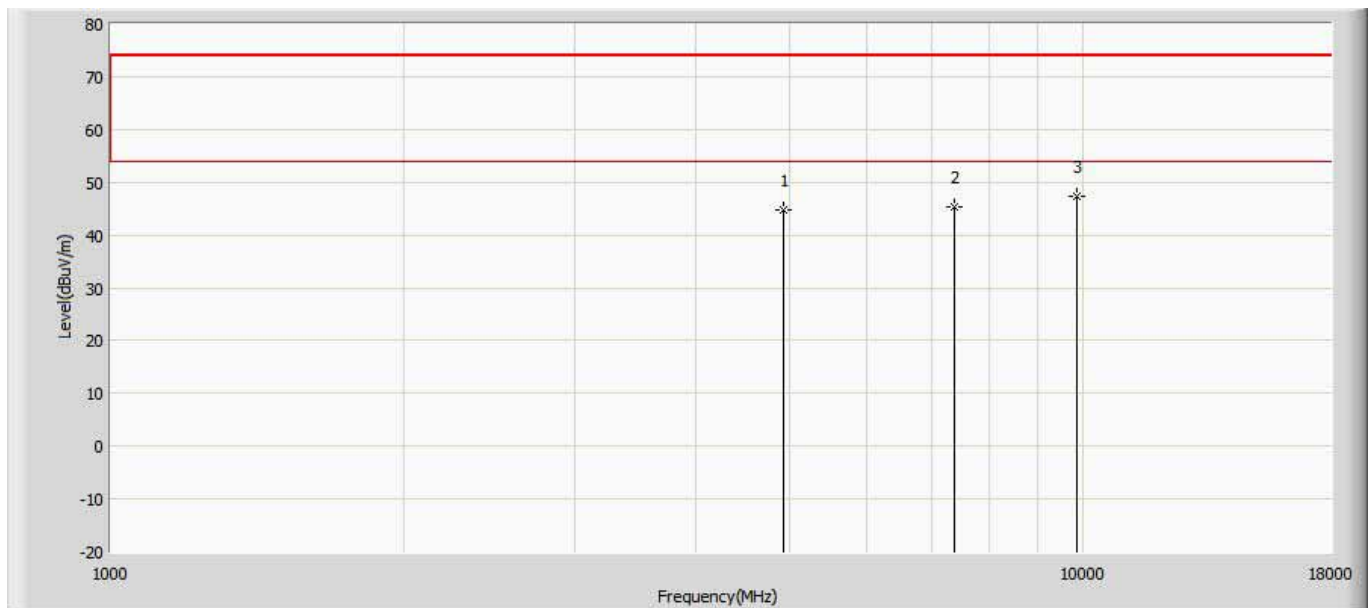
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4876.000	46.304	59.314	-27.696	74.000	-13.010	PK
2		7311.000	43.940	51.650	-30.060	74.000	-7.710	PK
3	*	9748.000	47.418	49.008	-26.582	74.000	-1.590	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/22 - 18:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 1:Tranmsit at channel 2462MHz by 11b	



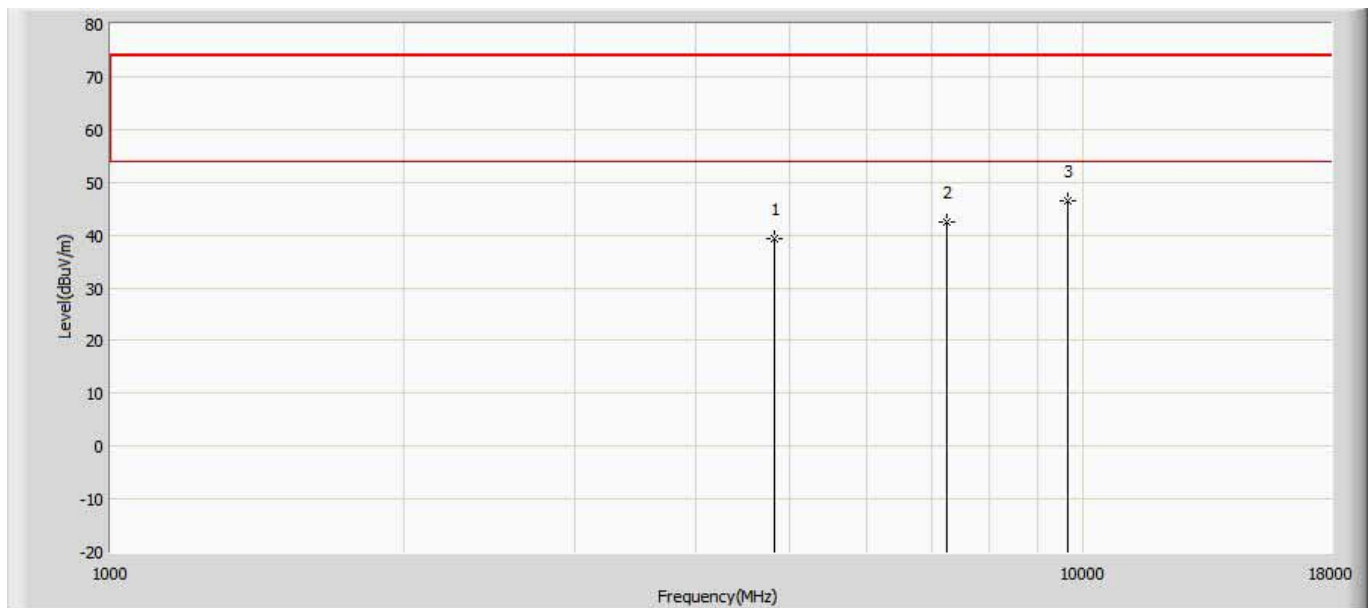
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	4927.000	47.872	60.882	-26.128	74.000	-13.010	PK
2		7386.000	43.930	51.640	-30.070	74.000	-7.710	PK
3		9848.000	47.557	49.147	-26.443	74.000	-1.590	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/22 - 18:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 1:Tranmsit at channel 2462MHz by 11b	



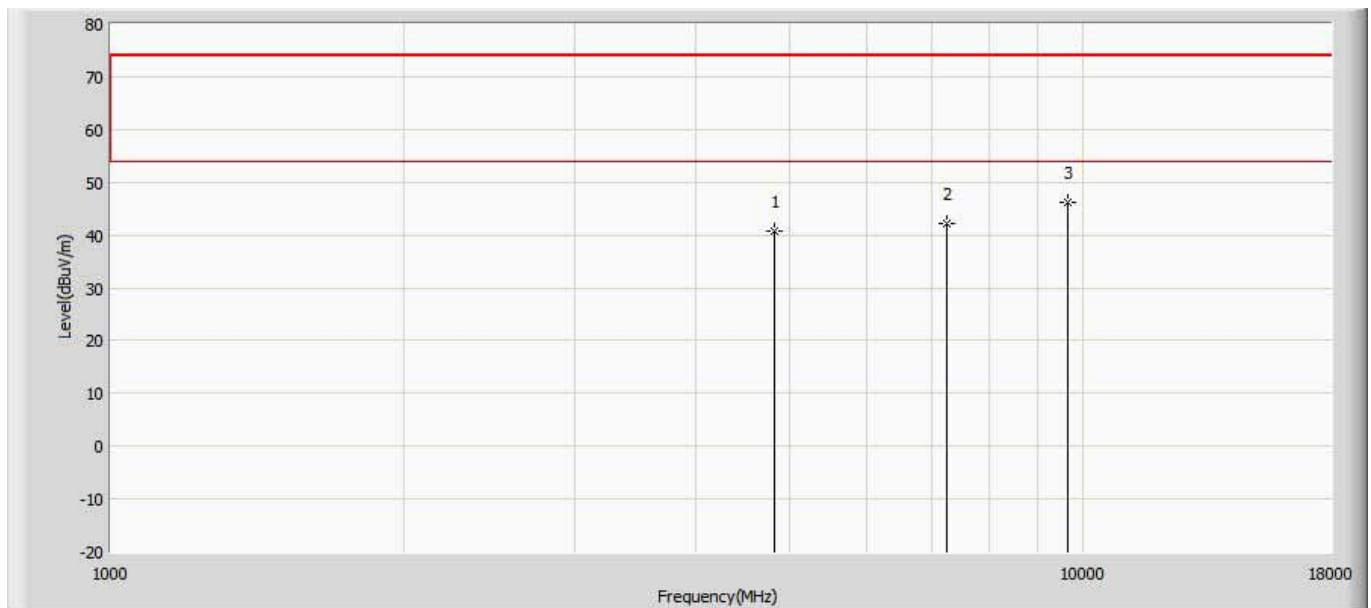
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4927.000	44.751	57.761	-29.249	74.000	-13.010	PK
2		7386.000	45.195	52.905	-28.805	74.000	-7.710	PK
3	*	9848.000	47.398	48.988	-26.602	74.000	-1.590	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/22 - 18:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 2:Tranmsit at channel 2412MHz by 11g	



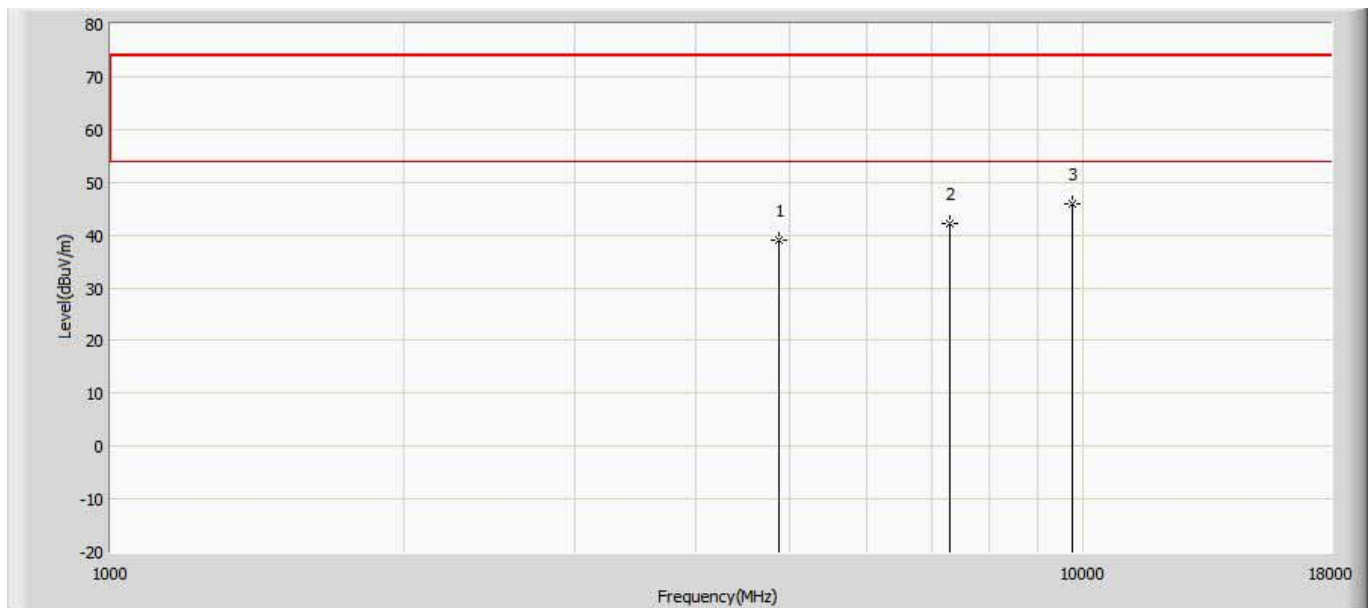
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	39.386	52.396	-34.614	74.000	-13.010	PK
2		7236.000	42.417	50.127	-31.583	74.000	-7.710	PK
3	*	9648.000	46.418	48.008	-27.582	74.000	-1.590	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/22 - 18:53
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 2:Tranmsit at channel 2412MHz by 11g	



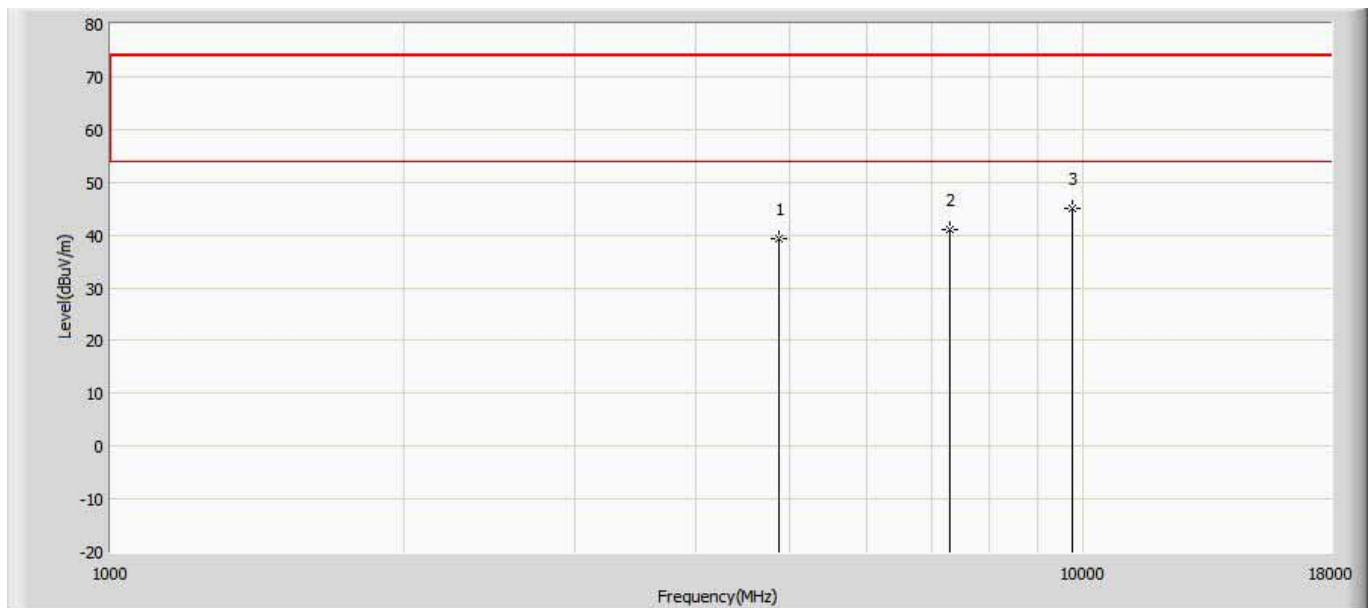
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	40.712	53.722	-33.288	74.000	-13.010	PK
2		7236.000	42.231	49.941	-31.769	74.000	-7.710	PK
3	*	9648.000	46.207	47.797	-27.793	74.000	-1.590	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/22 - 18:54
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 2:Tranmsit at channel 2437MHz by 11g	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	38.896	51.906	-35.104	74.000	-13.010	PK
2		7311.000	42.250	49.960	-31.750	74.000	-7.710	PK
3	*	9748.000	45.843	47.433	-28.157	74.000	-1.590	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/22 - 18:54
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 2:Tranmsit at channel 2437MHz by 11g	



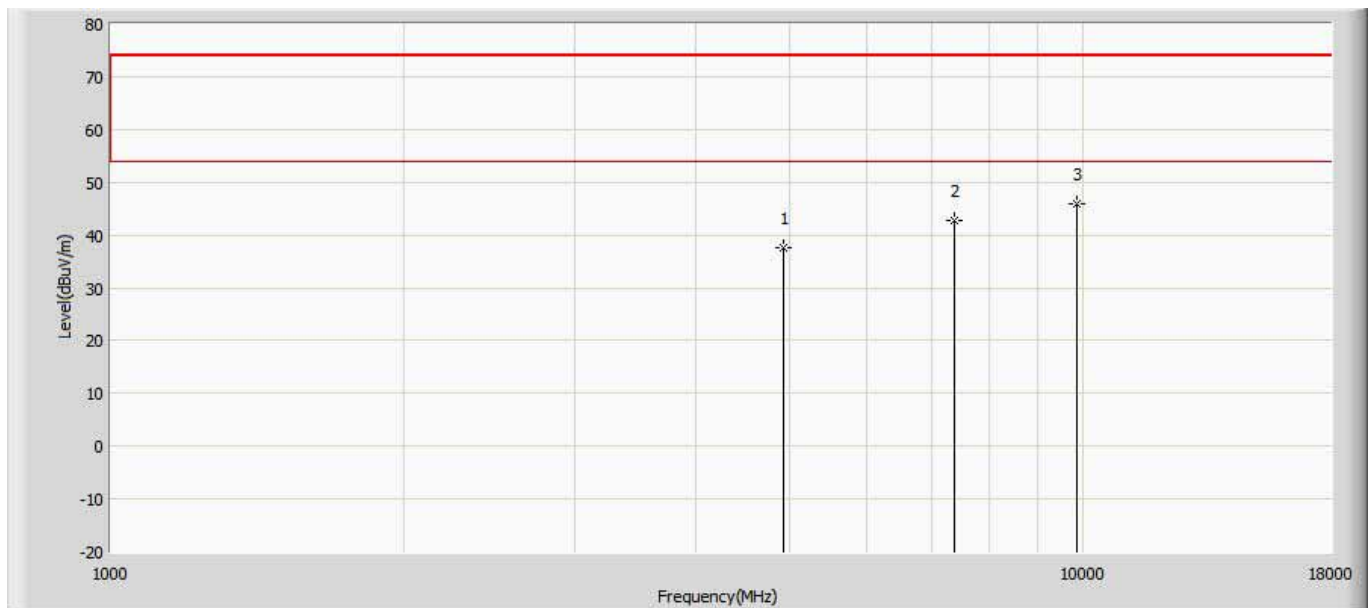
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	39.397	52.407	-34.603	74.000	-13.010	PK
2		7311.000	41.042	48.752	-32.958	74.000	-7.710	PK
3	*	9748.000	44.995	46.585	-29.005	74.000	-1.590	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/22 - 18:54
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 2:Tranmsit at channel 2462MHz by 11g	



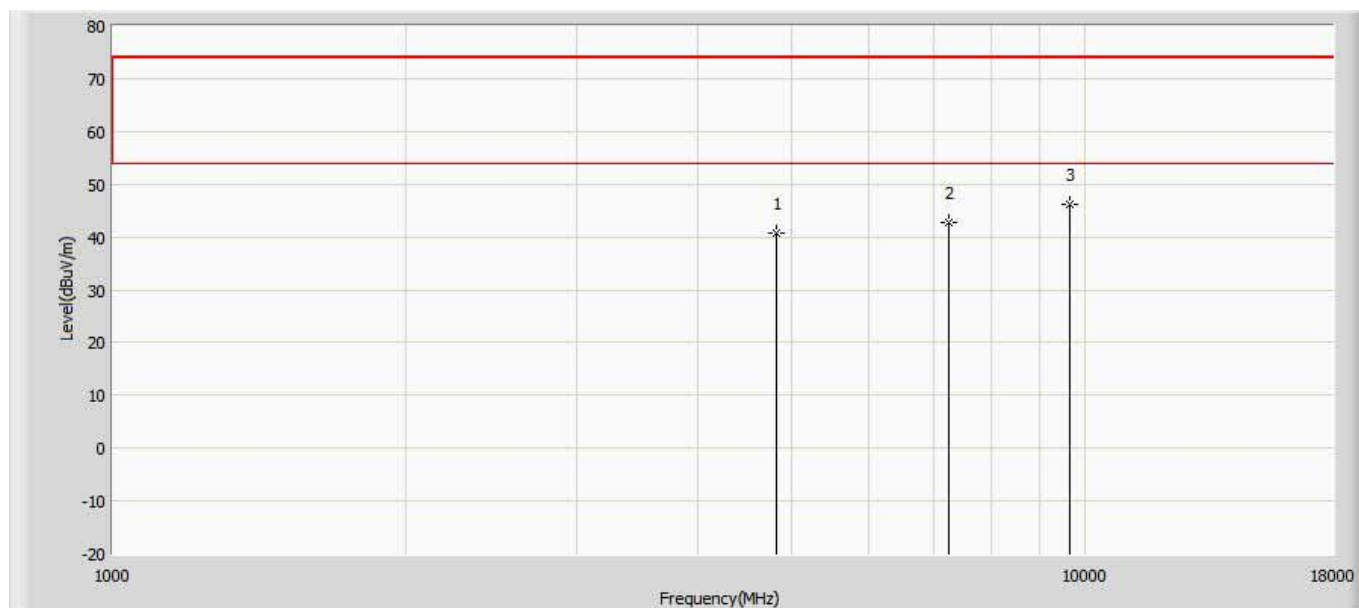
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	38.688	51.698	-35.312	74.000	-13.010	PK
2		7386.000	42.626	50.336	-31.374	74.000	-7.710	PK
3	*	9848.000	45.771	47.361	-28.229	74.000	-1.590	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/22 - 18:54
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 2:Tranmsit at channel 2462MHz by 11g	



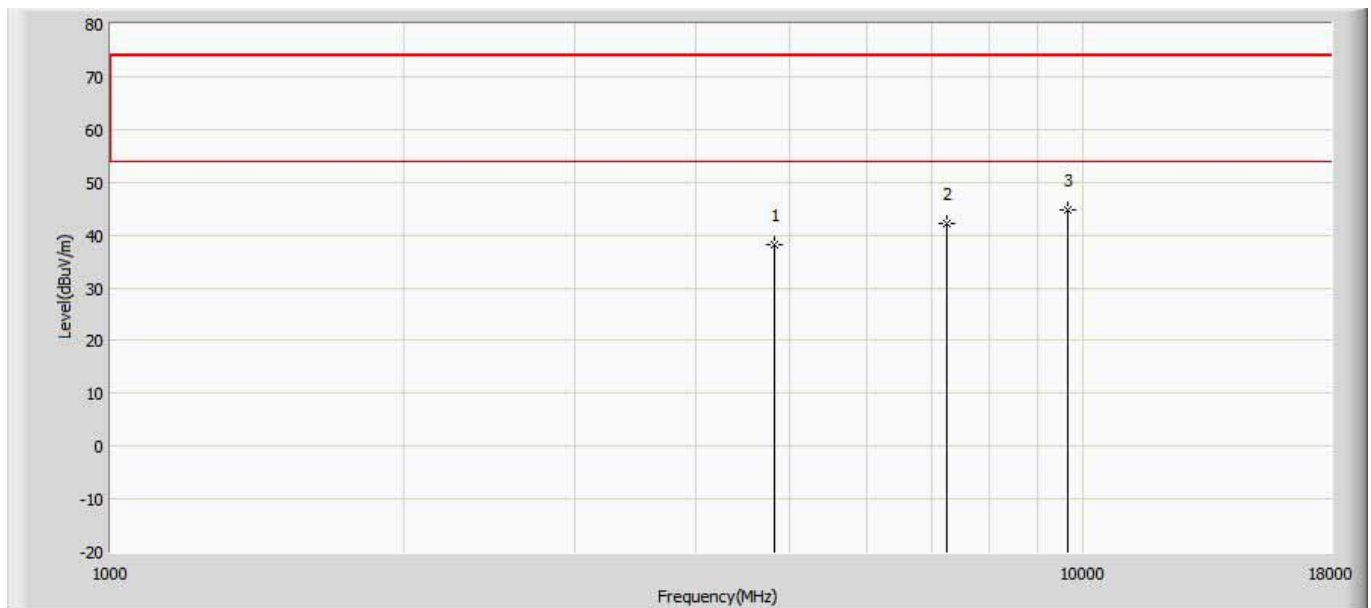
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	37.659	50.669	-36.341	74.000	-13.010	PK
2		7386.000	42.809	50.519	-31.191	74.000	-7.710	PK
3	*	9848.000	45.767	47.357	-28.233	74.000	-1.590	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/22 - 18:54
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 3:Tranmsit at channel 2412MHz by 11n20	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	40.735	53.745	-33.265	74.000	-13.010	PK
2		7236.000	42.660	50.370	-31.340	74.000	-7.710	PK
3	*	9648.000	46.314	47.904	-27.686	74.000	-1.590	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/22 - 18:54
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 3:Tranmsit at channel 2412MHz by 11n20	



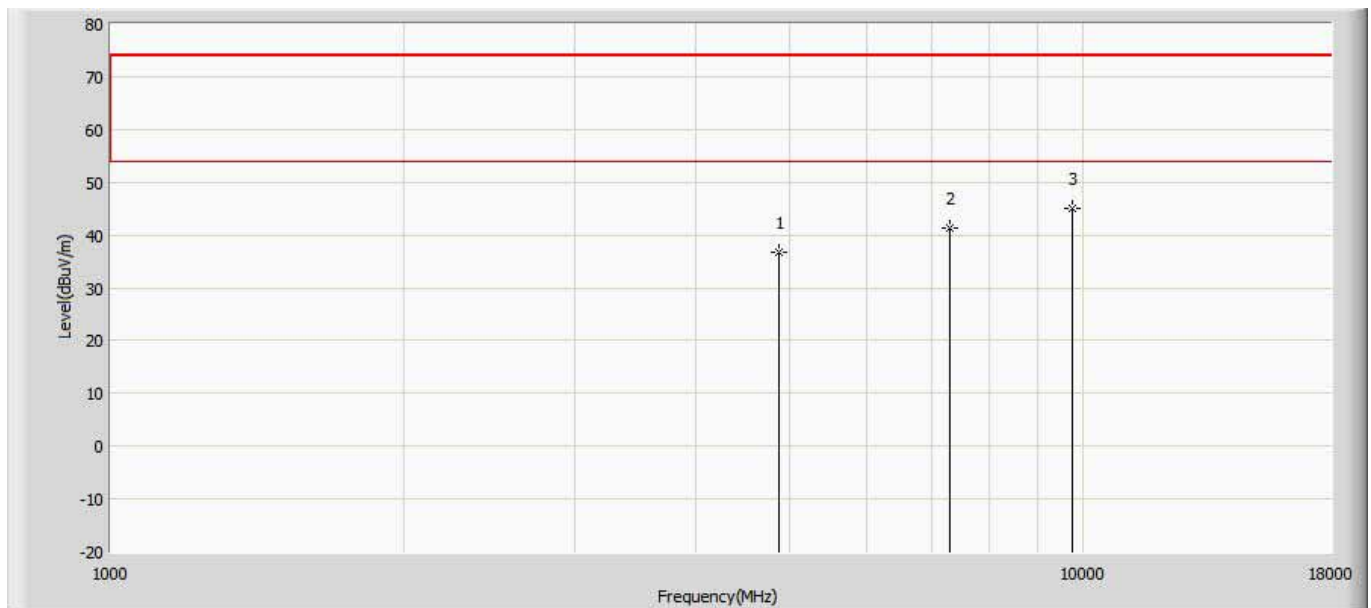
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4824.000	38.160	51.170	-35.840	74.000	-13.010	PK
2		7236.000	42.269	49.979	-31.731	74.000	-7.710	PK
3	*	9648.000	44.756	46.346	-29.244	74.000	-1.590	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/22 - 18:55
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 3:Tranmsit at channel 2437MHz by 11n20	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	37.543	50.553	-36.457	74.000	-13.010	PK
2		7311.000	41.227	48.937	-32.773	74.000	-7.710	PK
3	*	9748.000	45.082	46.672	-28.918	74.000	-1.590	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/22 - 18:55
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 3:Tranmsit at channel 2437MHz by 11n20	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	36.765	49.775	-37.235	74.000	-13.010	PK
2		7311.000	41.443	49.153	-32.557	74.000	-7.710	PK
3	*	9748.000	45.096	46.686	-28.904	74.000	-1.590	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/22 - 18:55
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 3:Tranmsit at channel 2462MHz by 11n20	



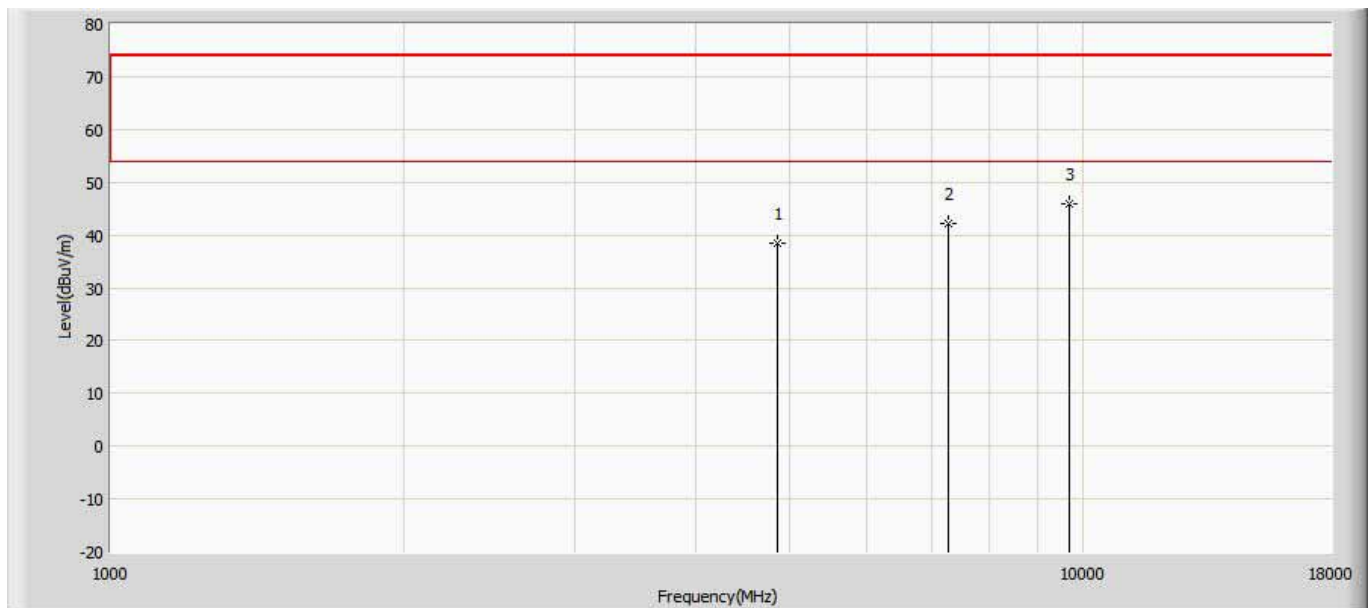
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	37.099	50.109	-36.901	74.000	-13.010	PK
2		7386.000	41.235	48.945	-32.765	74.000	-7.710	PK
3	*	9848.000	45.455	47.045	-28.545	74.000	-1.590	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/22 - 18:55
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 3:Tranmsit at channel 2462MHz by 11n20	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4924.000	37.532	50.542	-36.468	74.000	-13.010	PK
2		7386.000	41.744	49.454	-32.256	74.000	-7.710	PK
3	*	9848.000	44.337	45.927	-29.663	74.000	-1.590	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/22 - 18:55
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 4:Tranmsit at channel 2422MHz by 11n40	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4844.000	38.321	51.331	-35.679	74.000	-13.010	PK
2		7266.000	42.295	50.005	-31.705	74.000	-7.710	PK
3	*	9688.000	45.983	47.573	-28.017	74.000	-1.590	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/22 - 18:56
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 4:Tranmsit at channel 2422MHz by 11n40	



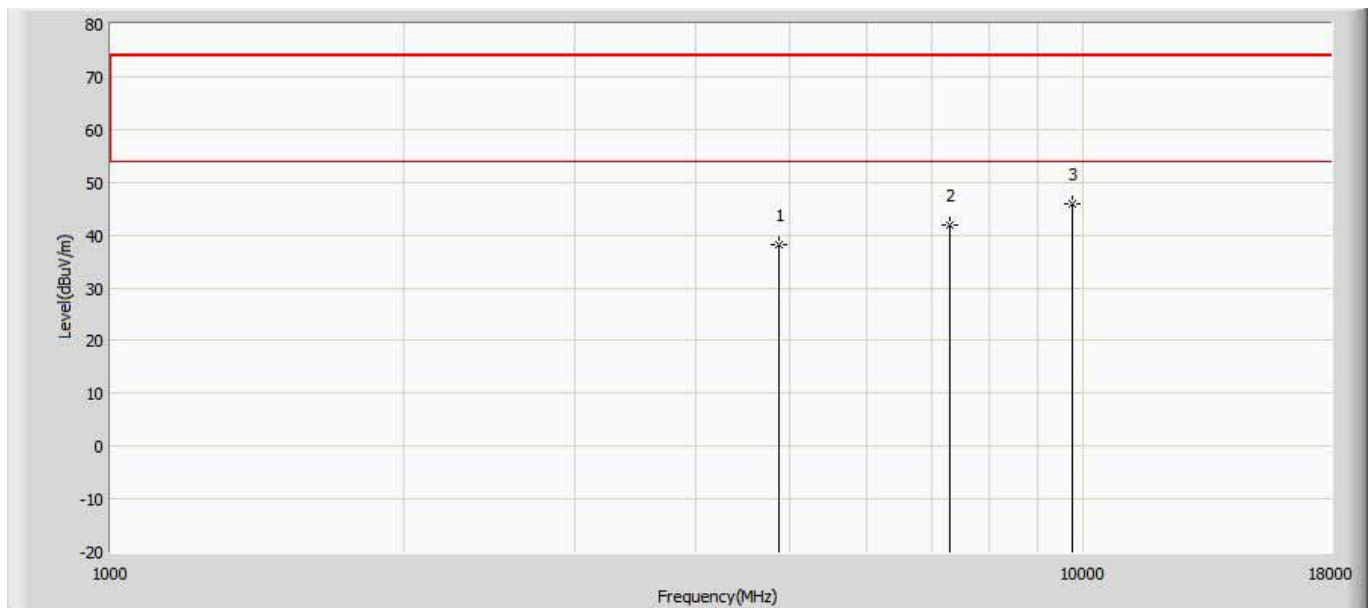
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4844.000	36.588	49.598	-37.412	74.000	-13.010	PK
2		7266.000	41.288	48.998	-32.712	74.000	-7.710	PK
3	*	9688.000	45.933	47.523	-28.067	74.000	-1.590	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/22 - 18:56
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 4:Tranmsit at channel 2437MHz by 11n40	



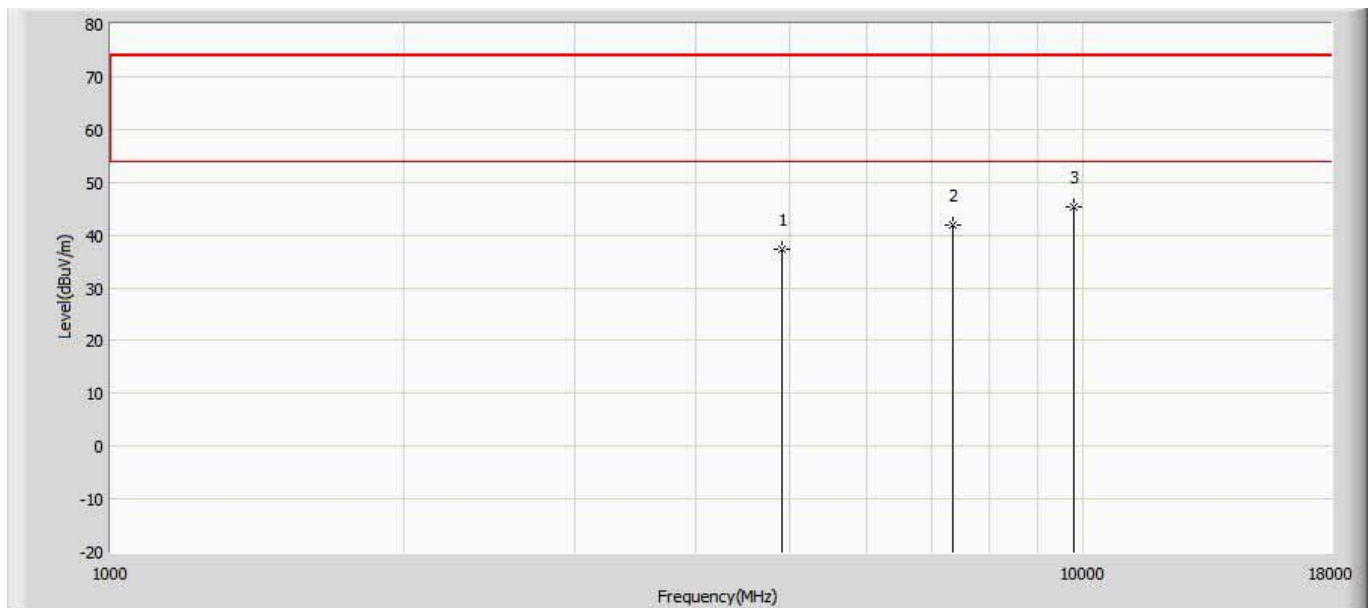
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	37.027	50.037	-36.973	74.000	-13.010	PK
2		7311.000	42.262	49.972	-31.738	74.000	-7.710	PK
3	*	9748.000	47.114	48.704	-26.886	74.000	-1.590	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/22 - 18:56
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 4:Tranmsit at channel 2437MHz by 11n40	



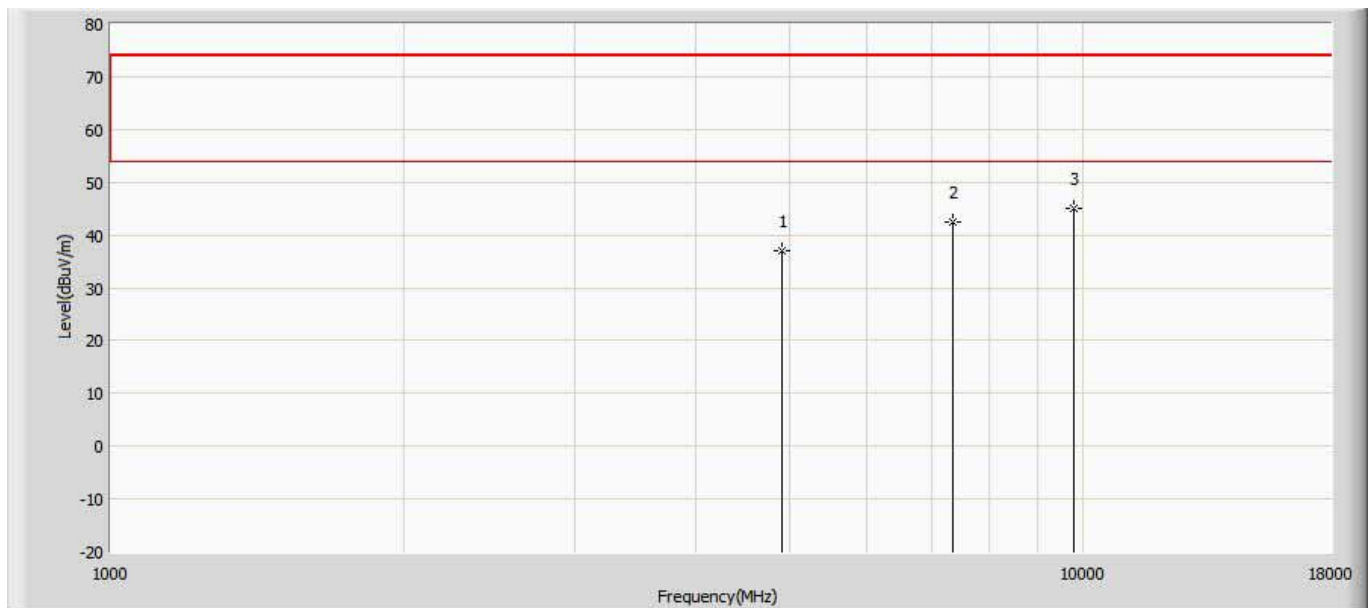
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4874.000	38.073	51.083	-35.927	74.000	-13.010	PK
2		7311.000	41.911	49.621	-32.089	74.000	-7.710	PK
3	*	9748.000	45.884	47.474	-28.116	74.000	-1.590	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/22 - 18:56
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 4:Tranmsit at channel 2452MHz by 11n40	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4904.000	37.312	50.322	-36.688	74.000	-13.010	PK
2		7356.000	41.942	49.652	-32.058	74.000	-7.710	PK
3	*	9808.000	45.341	46.931	-28.659	74.000	-1.590	PK

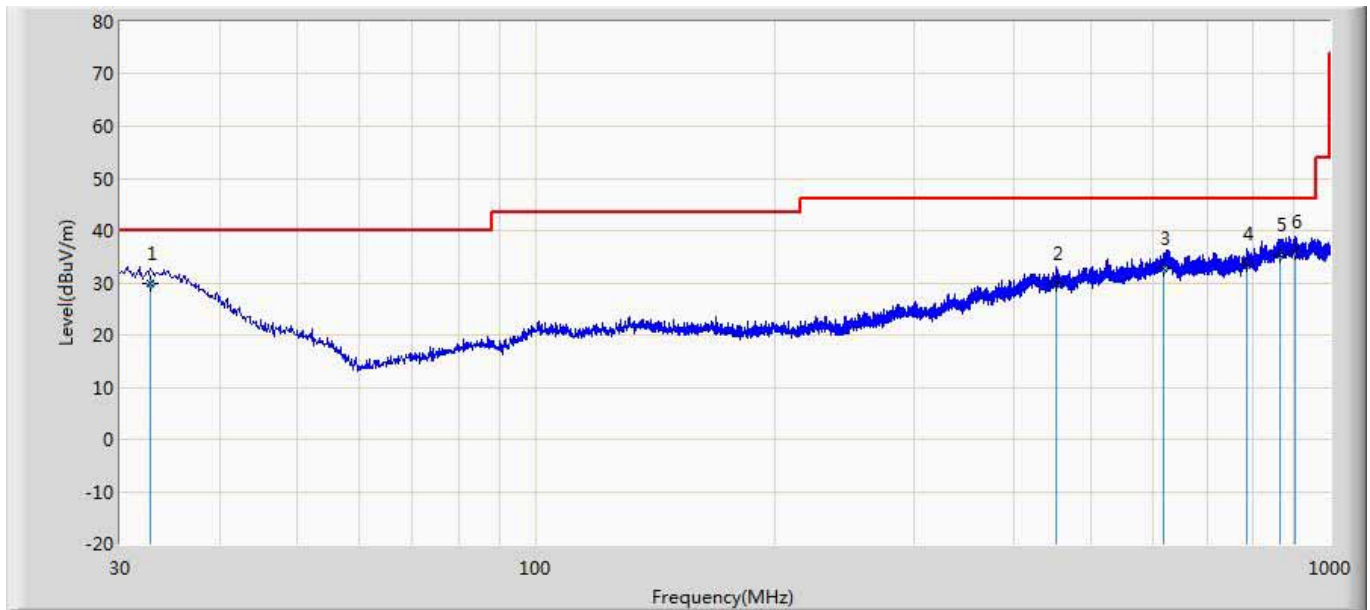
Engineer: Damon	
Site: AC5	Time: 2017/08/22 - 18:56
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 4:Tranmsit at channel 2452MHz by 11n40	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4904.000	36.997	50.007	-37.003	74.000	-13.010	PK
2		7356.000	42.604	50.314	-31.396	74.000	-7.710	PK
3	*	9808.000	45.122	46.712	-28.878	74.000	-1.590	PK

The worst case of Radiated Emission below 1GHz:

Engineer: TINA	
Site: AC2	Time: 2017/07/19 - 17:32
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: AC2_3M(30-1000M)	Polarity: Horizontal
EUT: Smart Wi-fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		32.789	29.771	2.400	-10.229	40.000	27.371	QP
2		453.284	29.964	2.800	-16.036	46.000	27.164	QP
3		616.850	32.673	2.400	-13.327	46.000	30.273	QP
4		786.357	33.657	3.100	-12.343	46.000	30.557	QP
5		863.594	35.351	2.500	-10.649	46.000	32.851	QP
6	*	903.849	35.864	2.600	-10.136	46.000	33.264	QP

Engineer: TINA

Site: AC2

Time: 2017/07/19 - 17:33

Limit: FCC_Part15.109_RE(3m)_ClassB

Margin: 0

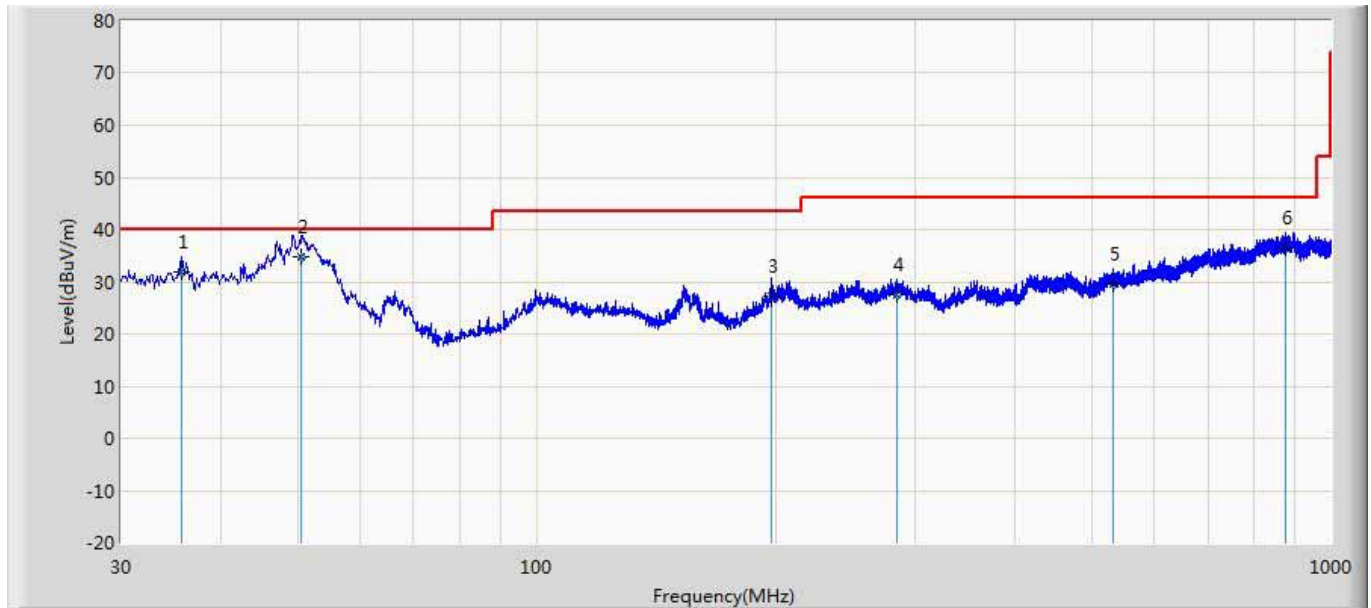
Probe: AC2_3M(30-1000M)

Polarity: Vertical

EUT: Smart Wi-fi Plug Mini

Power: AC 120V/60Hz

Note: Mode 1



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		35.699	31.782	9.400	-8.218	40.000	22.382	QP
2	*	50.491	34.868	15.400	-5.132	40.000	19.467	QP
3		197.446	27.147	4.200	-16.353	43.500	22.947	QP
4		284.746	27.544	2.300	-18.456	46.000	25.245	QP
5		532.703	29.616	2.600	-16.384	46.000	27.016	QP
6		877.416	36.391	3.100	-9.609	46.000	33.291	QP

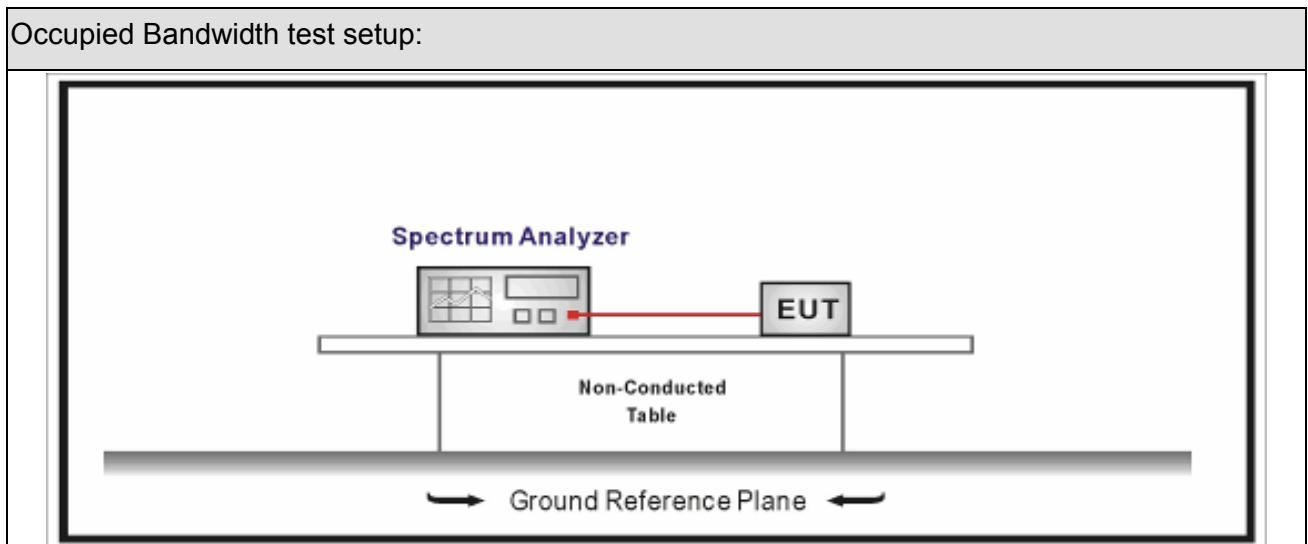
5. Emissions in non-restricted frequency bands

a) Test Equipment

Occupied Bandwidth / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2017.02.04	2018.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2017.04.09	2018.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2017.04.09	2018.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2017.04.10	2018.04.09

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

b) Test Setup



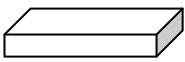
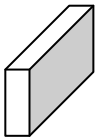
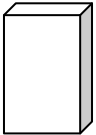
c) Limit

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).	

d) 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	Peak power measurement procedure
		☐	ANSI C63.10	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

e) 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 1		
				
	☐	Chain 1	Chain 2	
				
	☐	Chain 1	Chain 2	Chain 3
				

f) Test Result

Product Name	: Smart Wi-Fi Plug Mini	Power	: AC 120V/60Hz
Test Mode	: Mode1~4	Test Site	: TR8
Test Date	: 2017.09.15		

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	-9.459	2400	-37.307	27.848	>20	Pass
1	11	2462	-10.392	2500	-74.701	64.309	>20	Pass
2	01	2412	-15.561	2400	-42.504	26.943	>20	Pass
2	11	2462	-18.522	2500	-77.017	58.495	>20	Pass
3	01	2412	-15.184	2400	-44.297	29.113	>20	Pass
3	11	2462	-18.063	2500	-76.345	58.282	>20	Pass
4	03	2422	-20.602	2400	-50.923	30.321	>20	Pass
4	09	2452	-21.702	2500	-76.084	54.382	>20	Pass

Note 1: The worst case of Emissions in non-restricted frequency bands as below:

2: As the radiated emission was performed, so conducted emission was only tested for the nearest emission of fundamental frequency.

Mode 1 CH11(2462MHz)



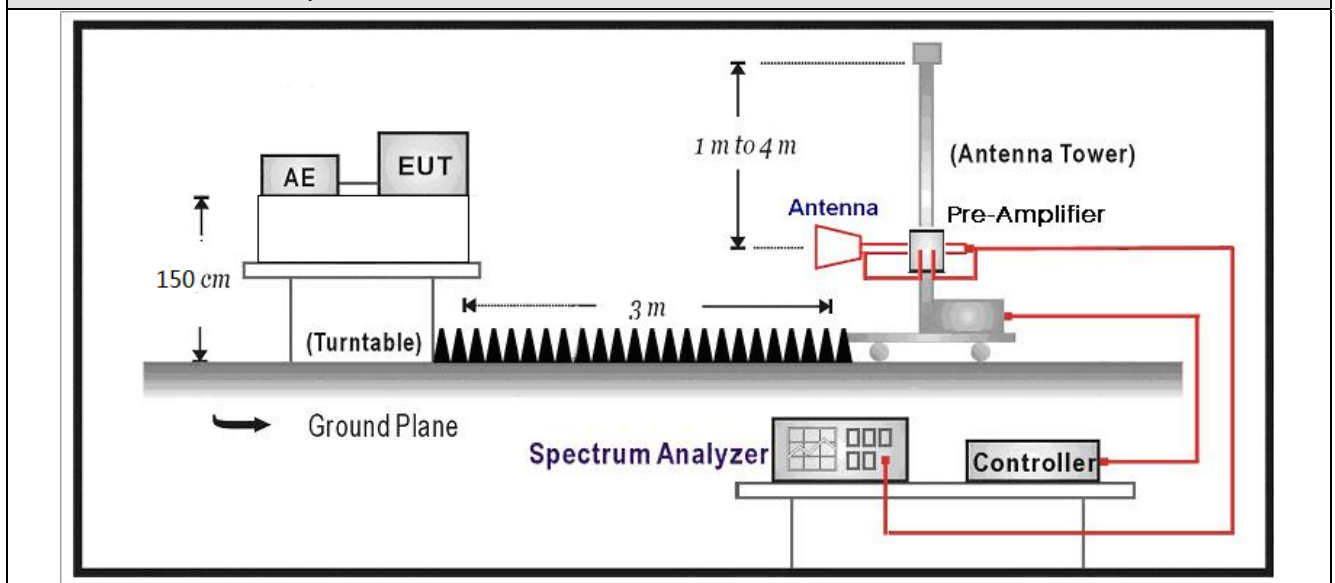
6. Radiated Emission Band Edge

a) Test Equipment

Radiated Emission(Above 1GHz) / AC-5					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Receiver	Agilent	N9038A	MY51210196	2017.07.16	2018.07.16
Pre-Amplifier	Miteq	NSP1800-25	1364185	2017.05.03	2018.05.02
DRG Horn Antenna	ETS-Lindgren	3117	00167055	2017.07.20	2018.07.20
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2017.09.18	2018.09.17
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2017.02.28	2018.02.27
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2017.02.28	2018.02.27
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2017.01.05	2018.01.04
Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

b) Test Setup

Above 1GHz Test Setup:



c) Limit

Band edge Limit

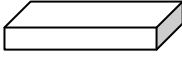
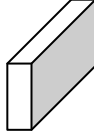
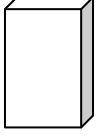
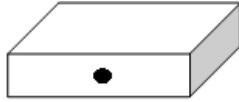
Frequency bands (MHz)	Detector	Limit (dB μ V/m)	RBW (MHz)	Distance (m)
2310-2390	PK	74	1	3
2483.5-2500	AV	54	1	3

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

d) Test Procedure

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

e) 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 1		
				
	☐	Chain 1	Chain 2	
				
	☐	Chain 1	Chain 2	Chain 3
				

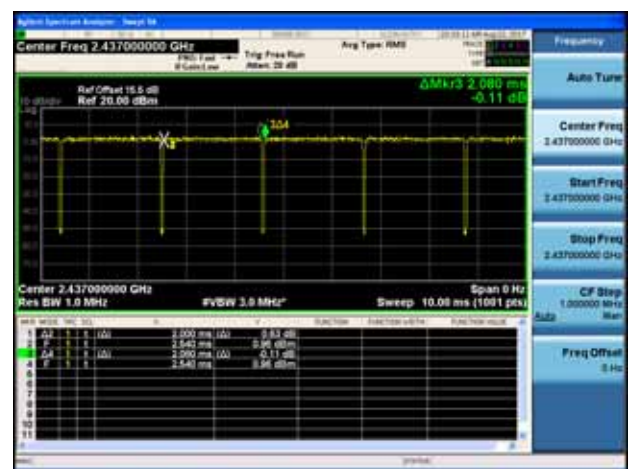
f) Duty Cycle

Test Mode	Tx On (ms)	Tx Off (ms)	VBW	Tx On + Tx Off (ms)	Duty Cycle
802.11b	12.15	0.09	91Hz	12.24	99.26%
802.11g	2.00	0.08	510HZ	2.08	96.15%
802.11n(20MHz)	1.85	0.10	560Hz	1.95	94.87%
802.11n(40MHz)	0.918	0.06	1.1kHz	0.978	93.87%

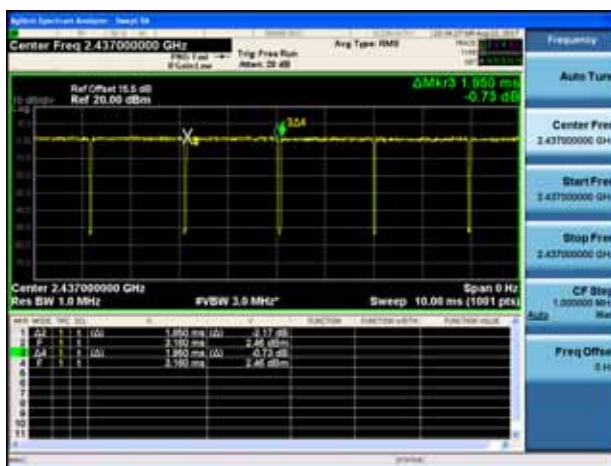
802.11b



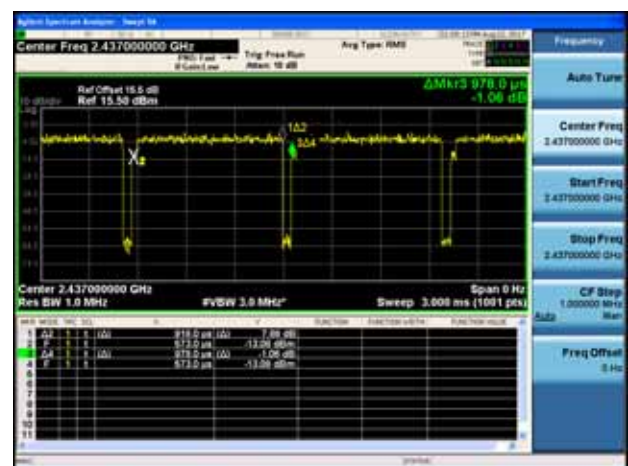
802.11g



802.11n(20MHz)

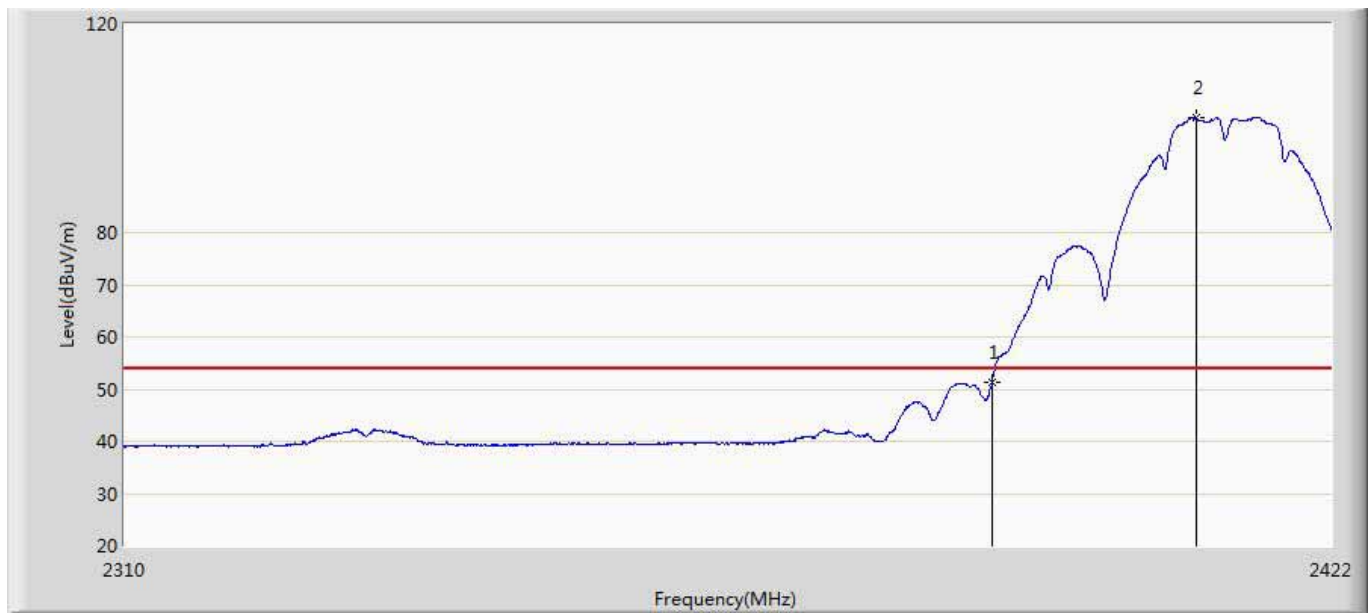


802.11n(40MHz)



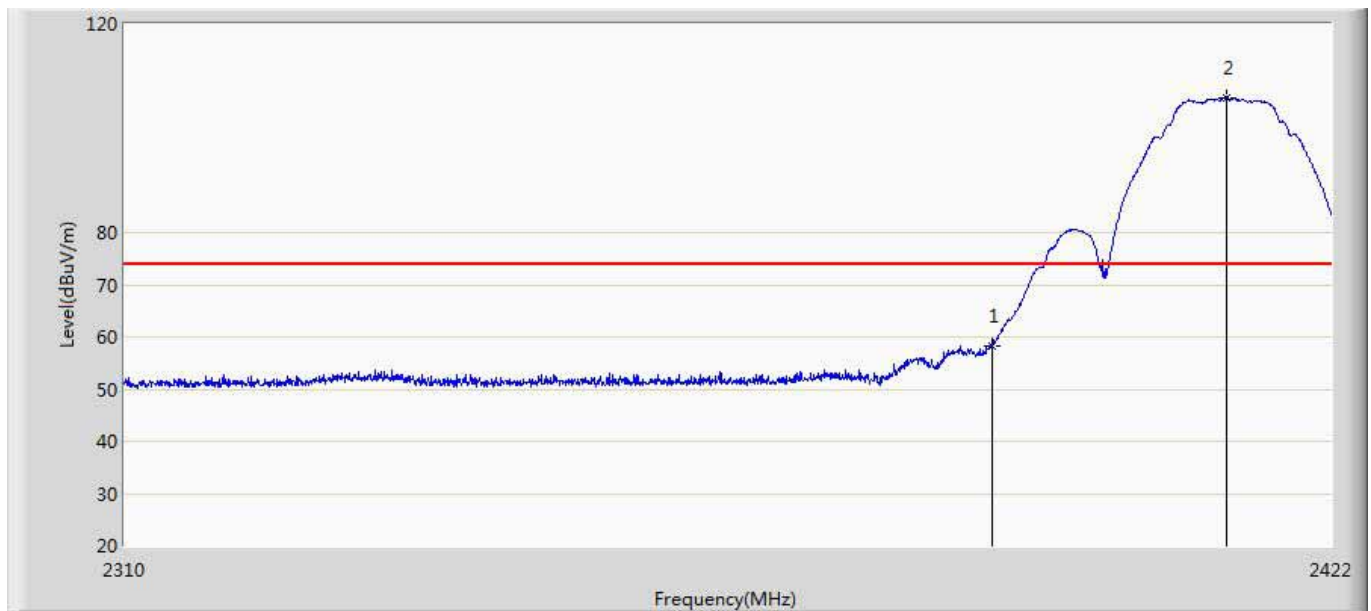
g) Test Result

Engineer: Damon	
Site: AC5	Time: 2017/08/21 - 09:59
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 1:Transmit at channel 2412MHz by 11b	



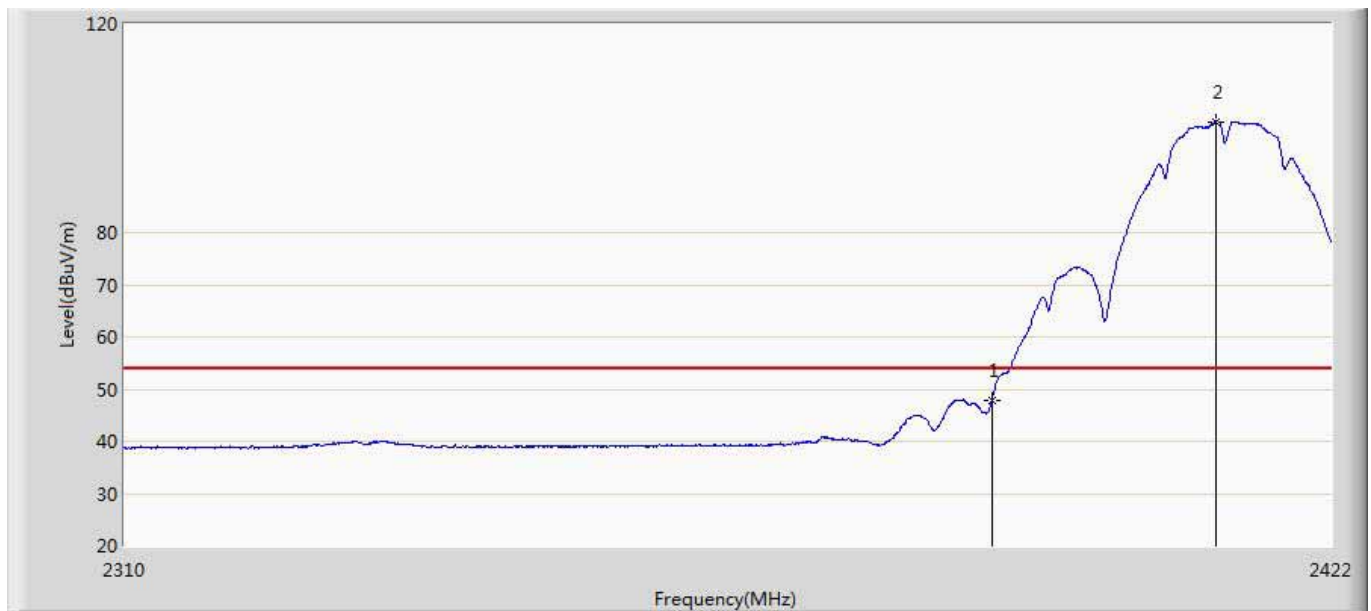
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	51.162	15.076	-2.838	54.000	36.086	AV
2	*	2409.232	101.910	65.758	47.910	54.000	36.152	AV

Engineer: Damon	
Site: AC5	Time: 2017/08/21 - 10:04
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 1:Transmit at channel 2412MHz by 11b	



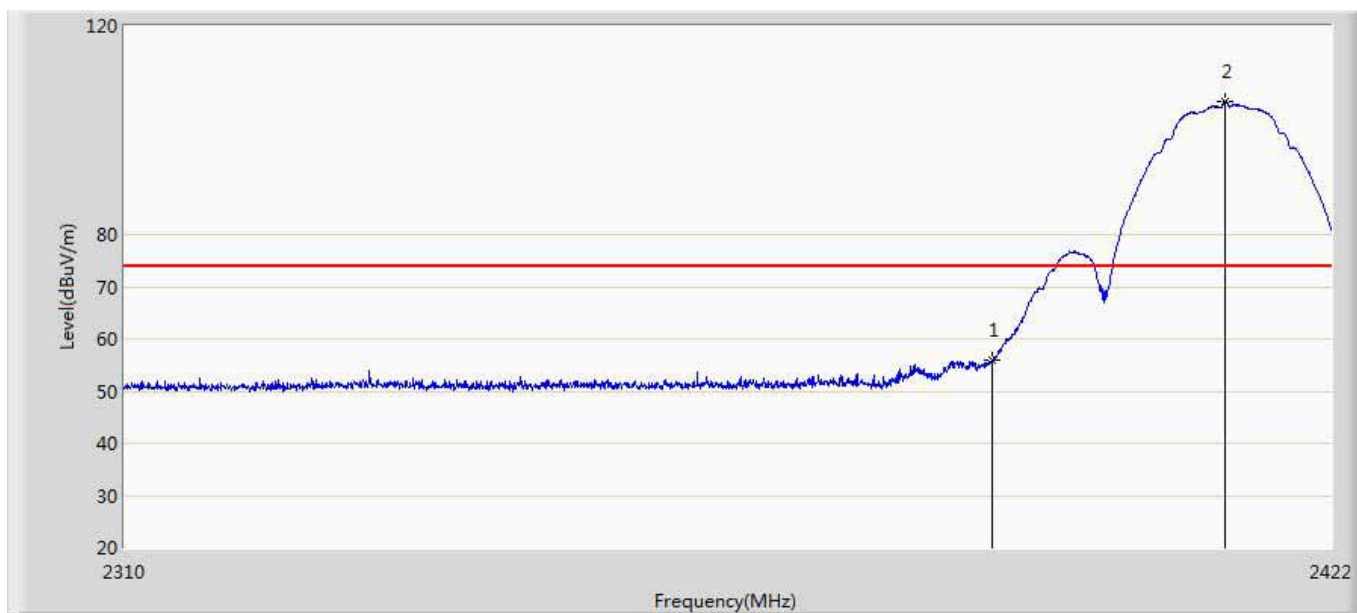
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	58.174	22.088	-15.826	74.000	36.086	PK
2	*	2412.088	105.888	69.729	31.888	74.000	36.159	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/21 - 10:06
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 1:Transmit at channel 2412MHz by 11b	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	47.742	11.656	-6.258	54.000	36.086	AV
2	*	2411.080	101.269	65.110	47.269	54.000	36.159	AV

Engineer: Damon	
Site: AC5	Time: 2017/08/21 - 10:08
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 1:Transmit at channel 2412MHz by 11b	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	56.005	19.919	-17.995	74.000	36.086	PK
2	*	2411.976	105.574	69.415	31.574	74.000	36.159	PK

Engineer: Damon

Site: AC5

Time: 2017/08/21 - 10:11

Limit: FCC_Part15.209_RE(3m)

Margin: 0

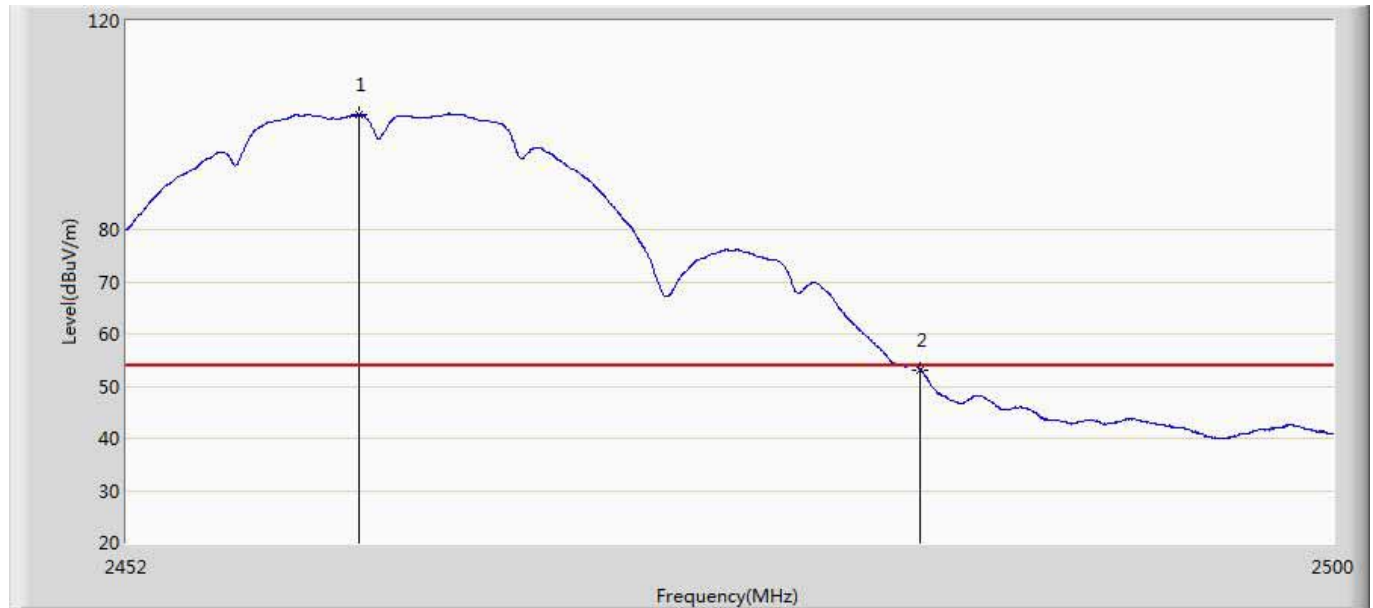
Probe: Horn_3117_00167055(1-18GHz)

Polarity: Vertical

EUT: Smart Wi-Fi Plug Mini

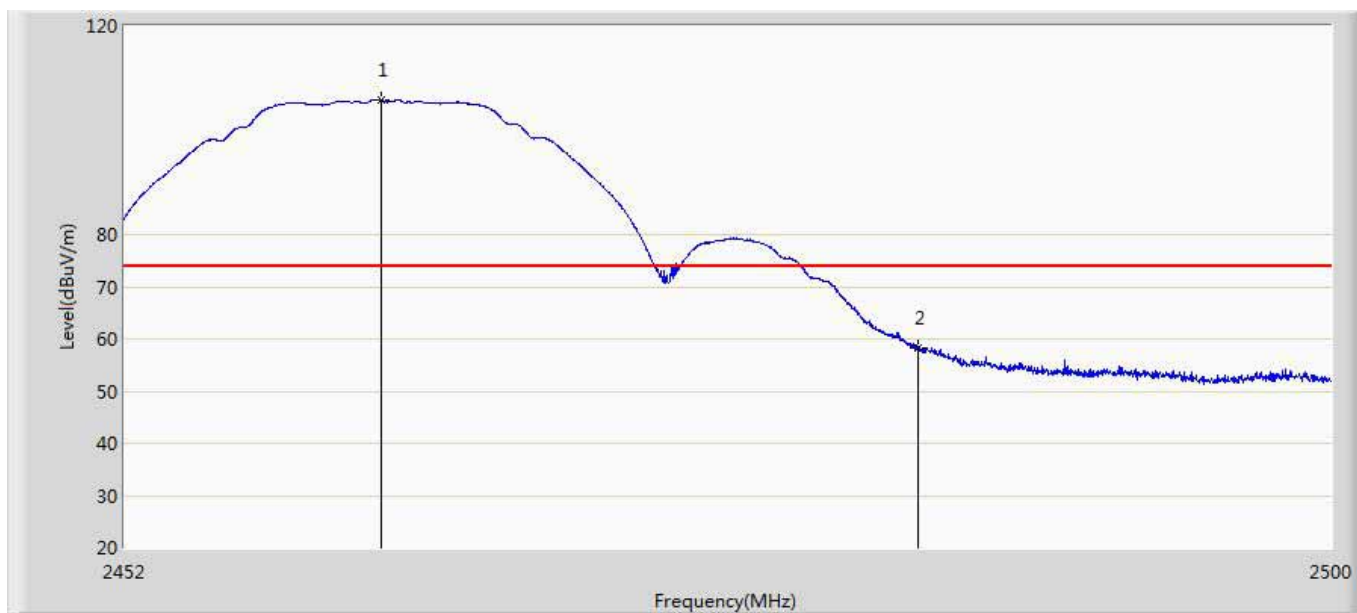
Power: AC 120V/60Hz

Note: Mode 1: Transmit at channel 2462MHz by 11b



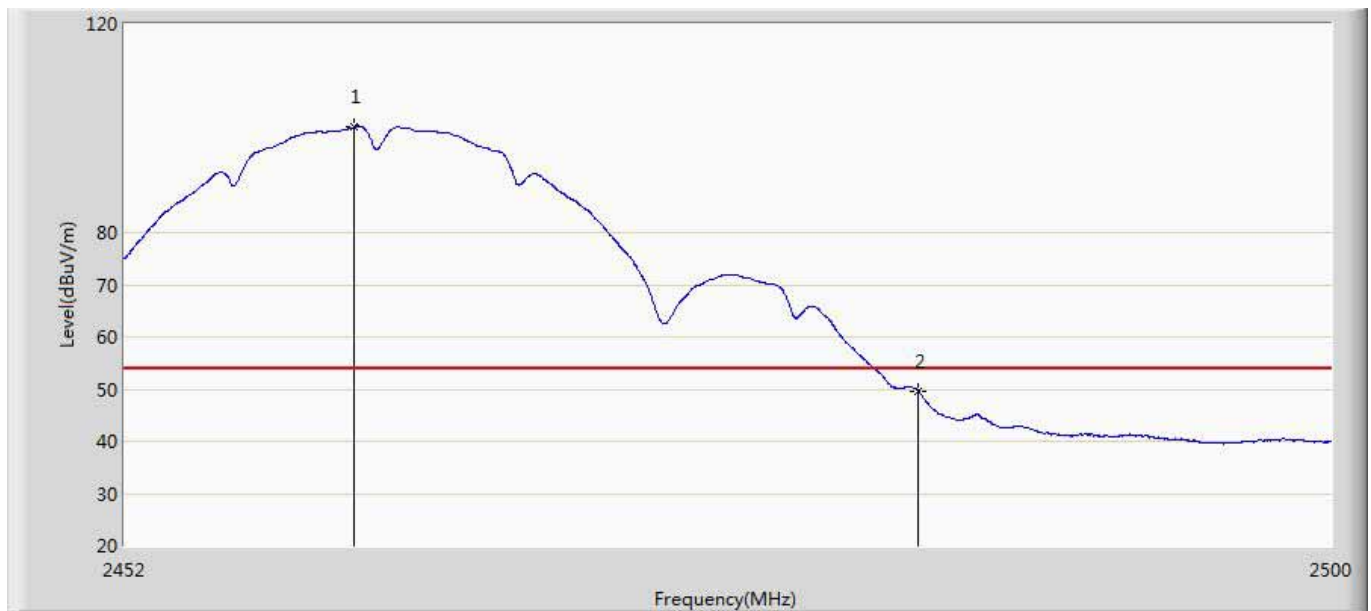
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2461.216	102.000	65.788	48.000	54.000	36.212	AV
2		2483.500	53.142	16.881	-0.858	54.000	36.261	AV

Engineer: Damon	
Site: AC5	Time: 2017/08/21 - 10:18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 1:Transmit at channel 2462MHz by 11b	



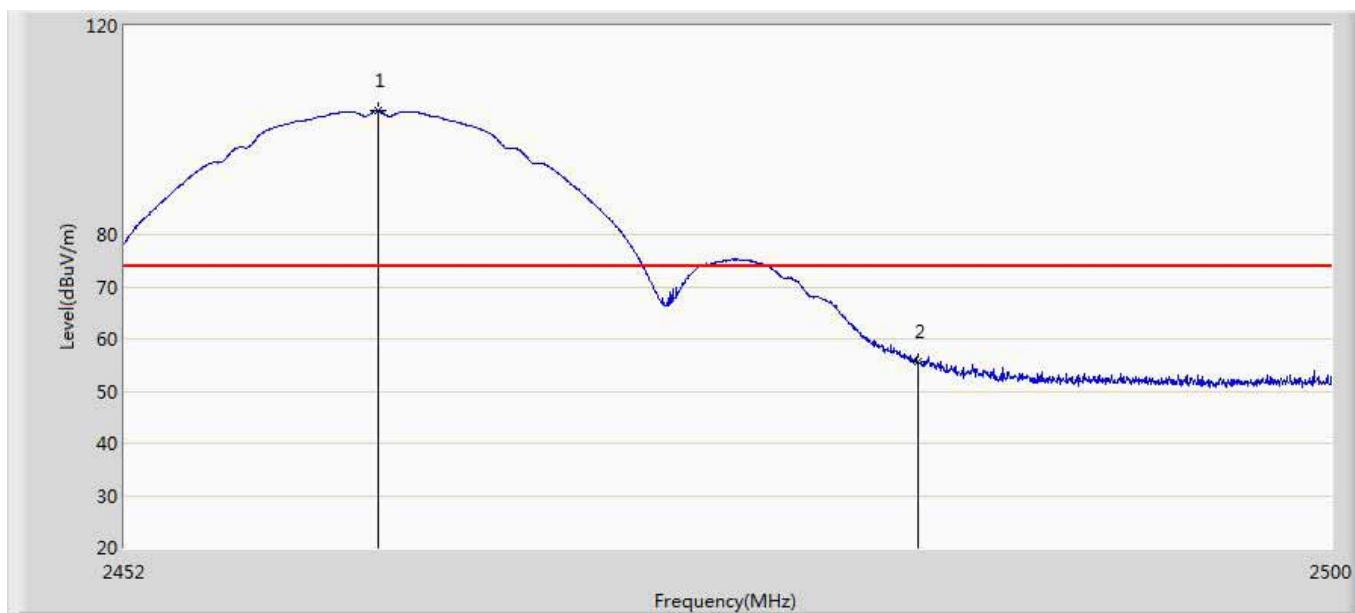
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2462.176	105.889	69.677	31.889	74.000	36.212	PK
2		2483.500	58.165	21.904	-15.835	74.000	36.261	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/21 - 10:19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 1:Transmit at channel 2462MHz by 11b	



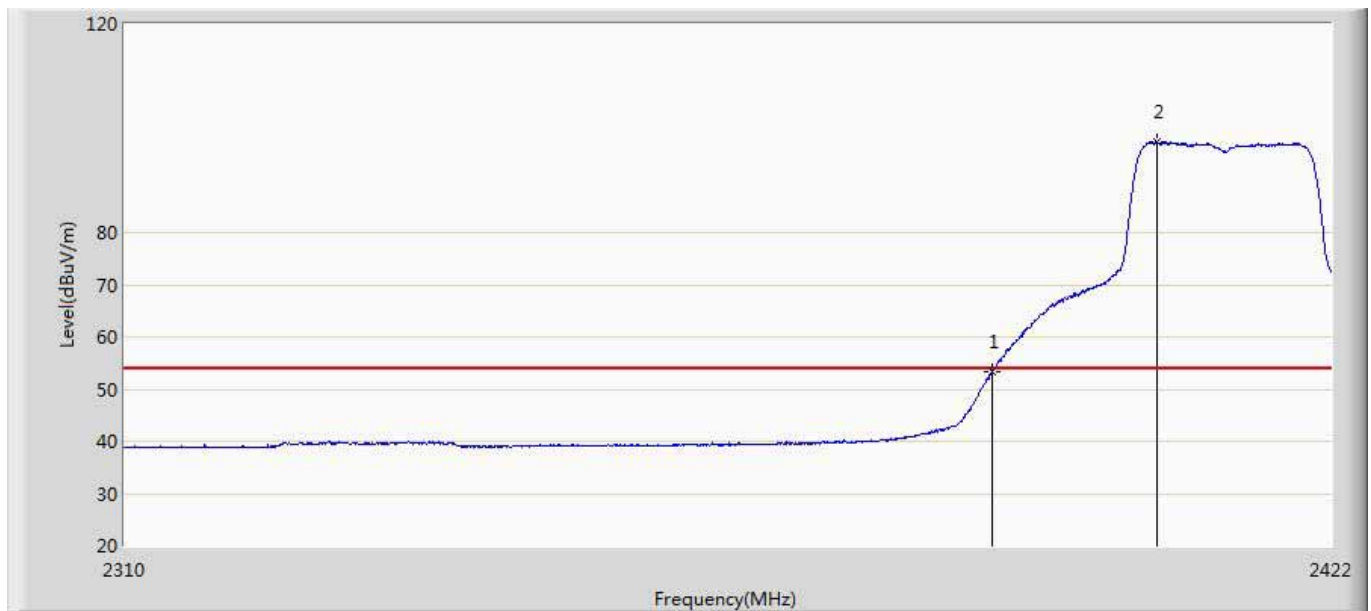
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2461.096	100.285	64.073	46.285	54.000	36.212	AV
2		2483.500	49.611	13.350	-4.389	54.000	36.261	AV

Engineer: Damon	
Site: AC5	Time: 2017/08/21 - 10:22
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 1:Transmit at channel 2462MHz by 11b	



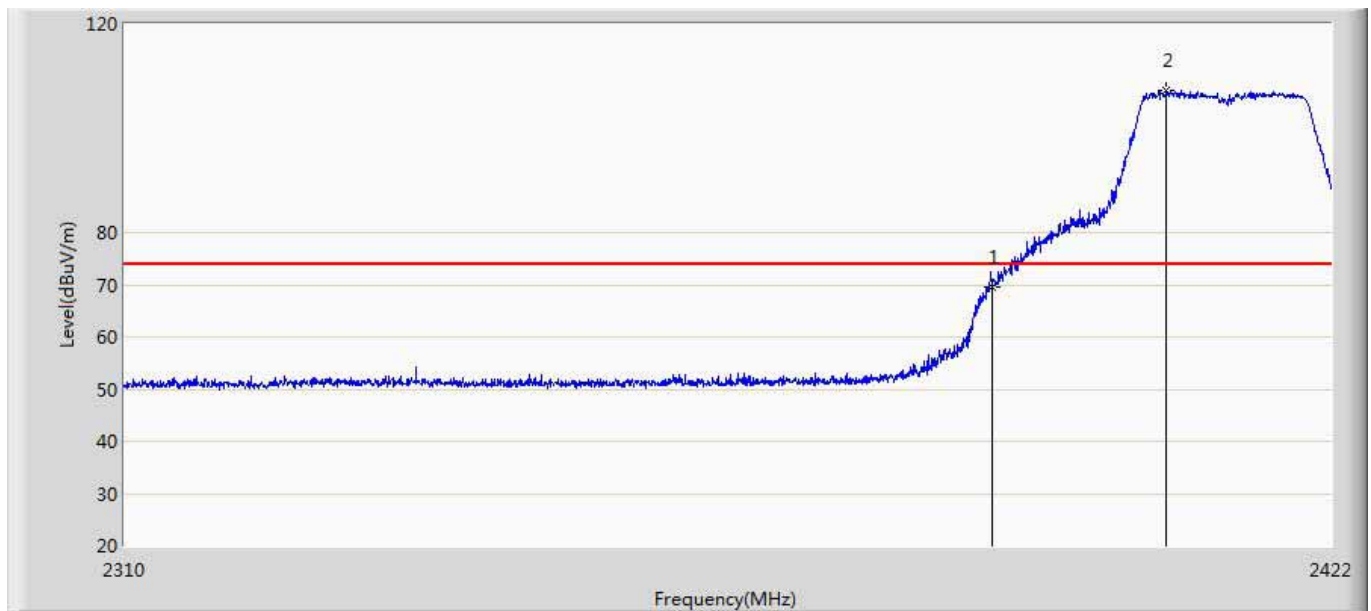
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2462.032	103.849	67.637	29.849	74.000	36.212	PK
2		2483.500	55.510	19.249	-18.490	74.000	36.261	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/21 - 10:24
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 2:Transmit at channel 2412MHz by 11g	



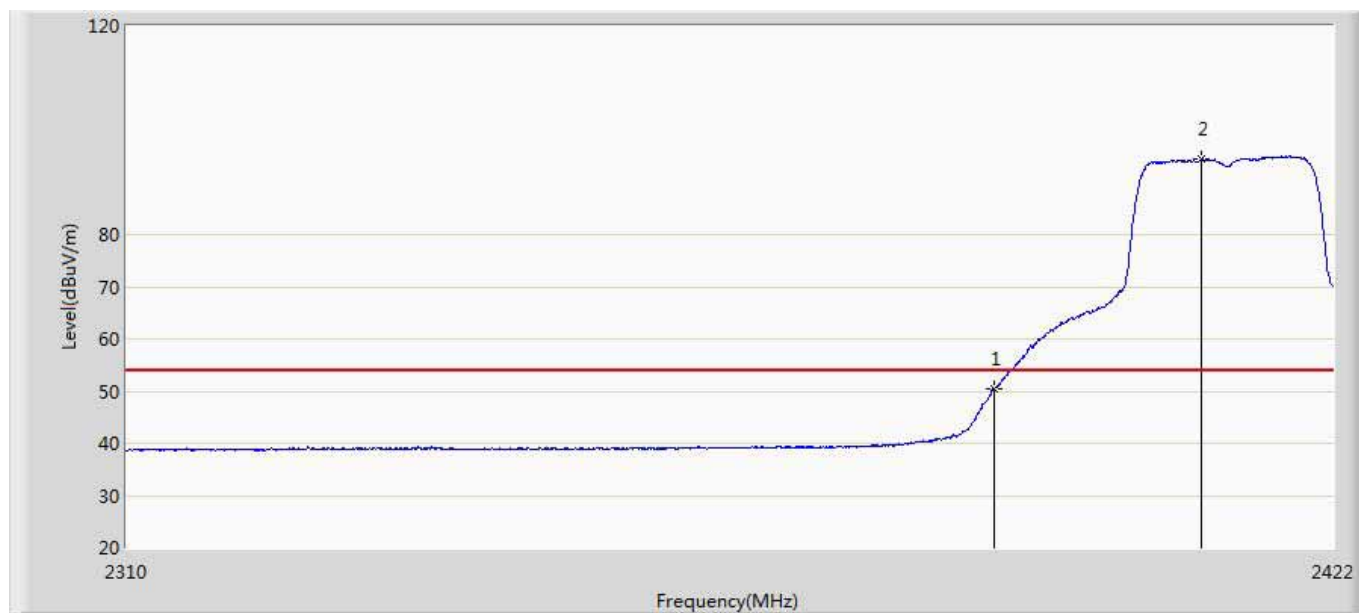
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	53.195	17.109	-0.805	54.000	36.086	AV
2	*	2405.480	97.323	61.185	43.323	54.000	36.138	AV

Engineer: Damon	
Site: AC5	Time: 2017/08/21 - 10:30
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 2:Transmit at channel 2412MHz by 11g	



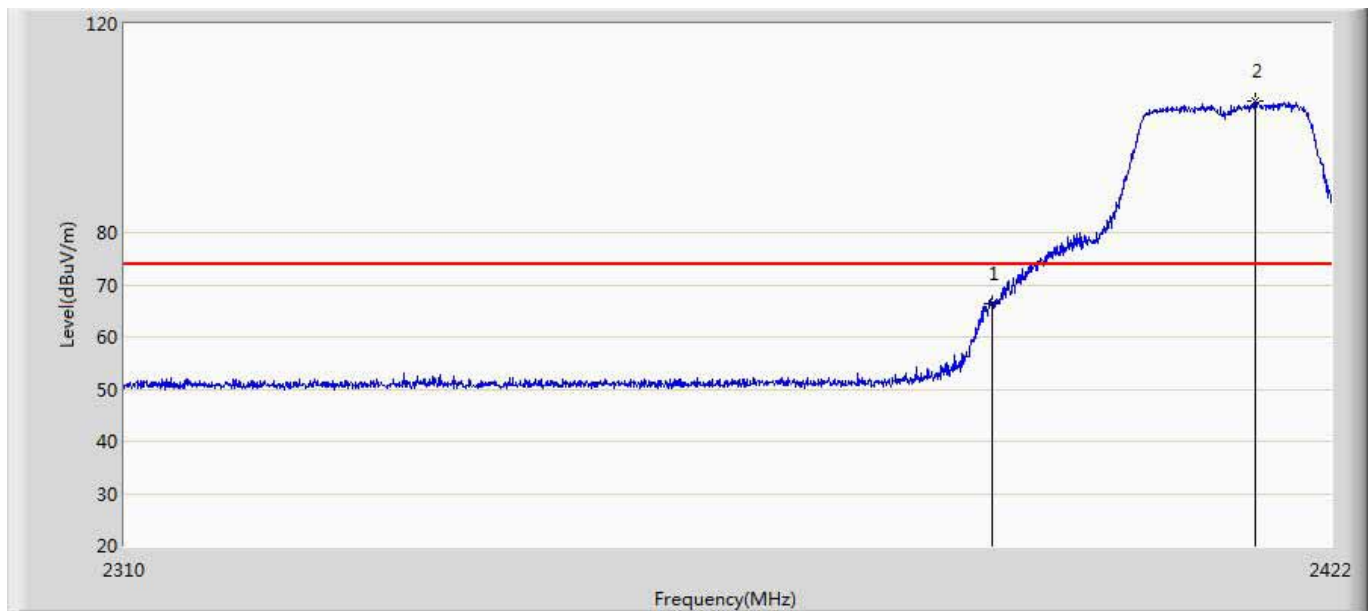
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	69.699	33.613	-4.301	74.000	36.086	PK
2	*	2406.376	107.264	71.123	33.264	74.000	36.142	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/21 - 10:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 2:Transmit at channel 2412MHz by 11g	



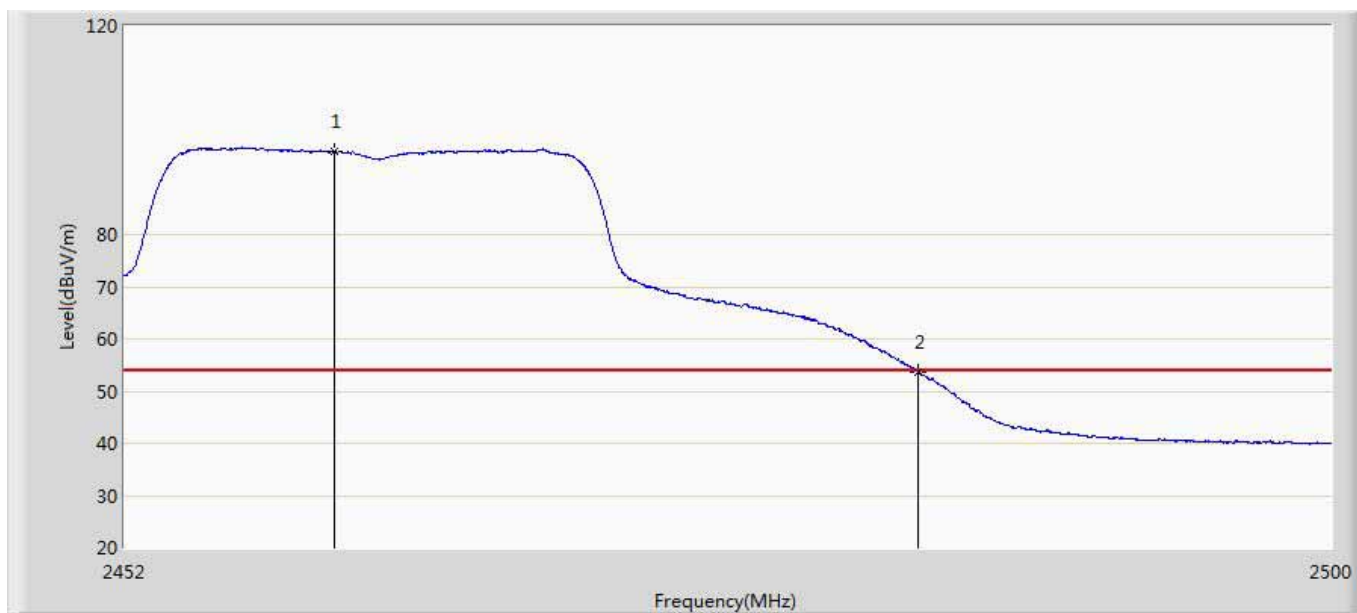
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.526	14.440	-3.474	54.000	36.086	AV
2	*	2409.568	94.528	58.374	40.528	54.000	36.153	AV

Engineer: Damon	
Site: AC5	Time: 2017/08/21 - 10:34
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 2:Transmit at channel 2412MHz by 11g	



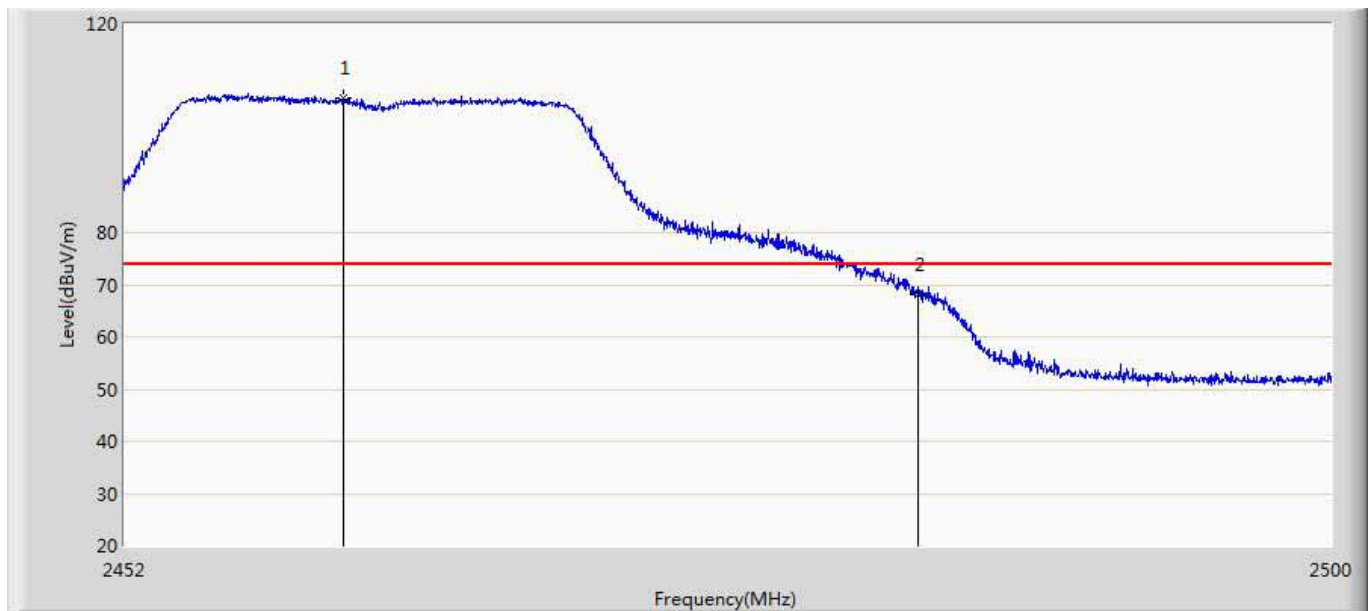
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	66.310	30.224	-7.690	74.000	36.086	PK
2	*	2414.776	105.336	69.176	31.336	74.000	36.161	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/21 - 10:36
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 2:Transmit at channel 2462MHz by 11g	



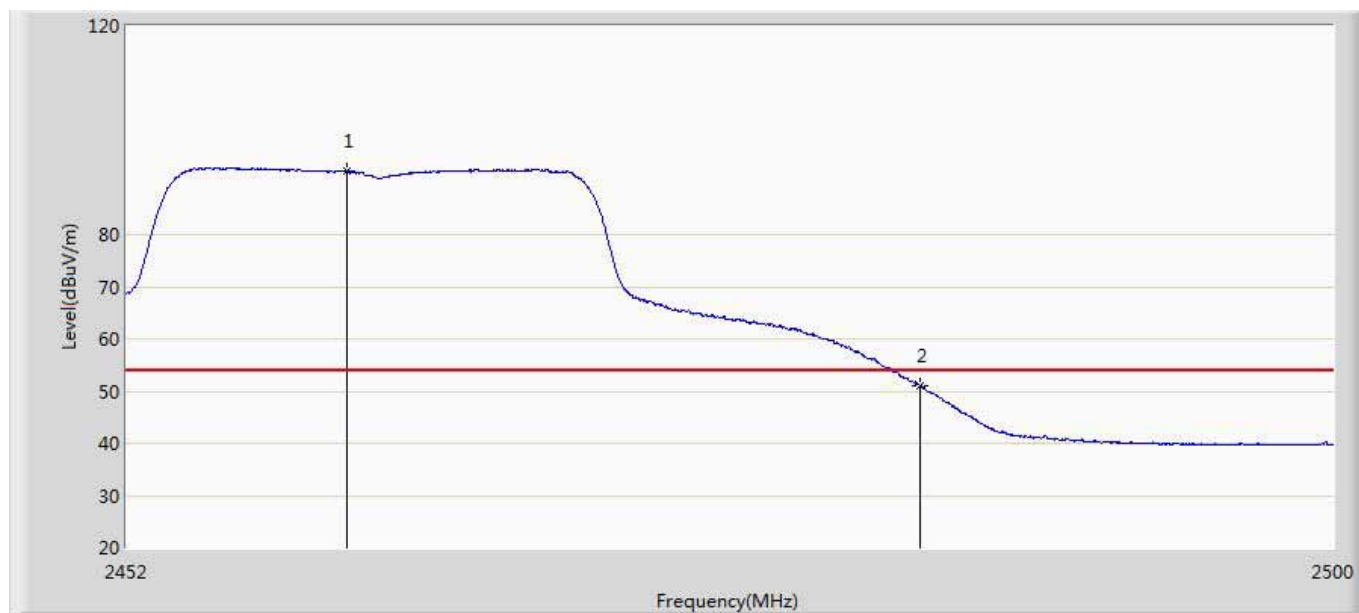
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2460.280	95.972	59.759	41.972	54.000	36.213	AV
2		2483.500	53.706	17.444	-0.294	54.000	36.261	AV

Engineer: Damon	
Site: AC5	Time: 2017/08/21 - 10:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 2:Transmit at channel 2462MHz by 11g	



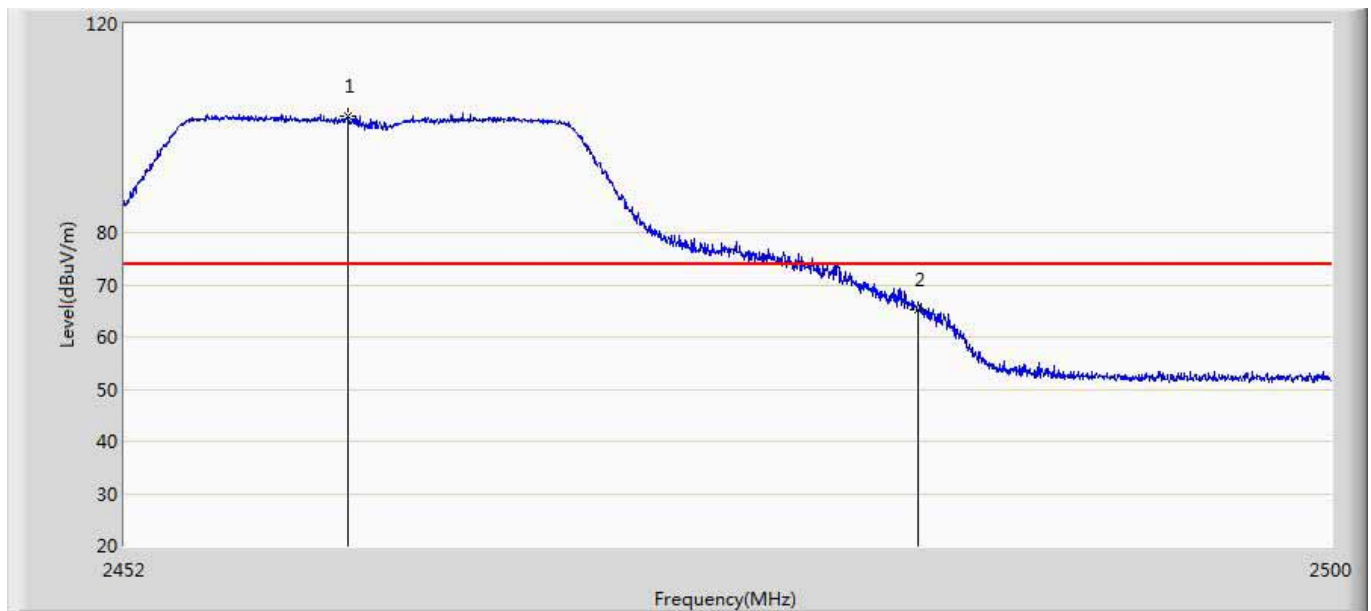
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2460.664	105.936	69.723	31.936	74.000	36.212	PK
2		2483.500	68.025	31.764	-5.975	74.000	36.261	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/21 - 10:45
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 2:Transmit at channel 2462MHz by 11g	



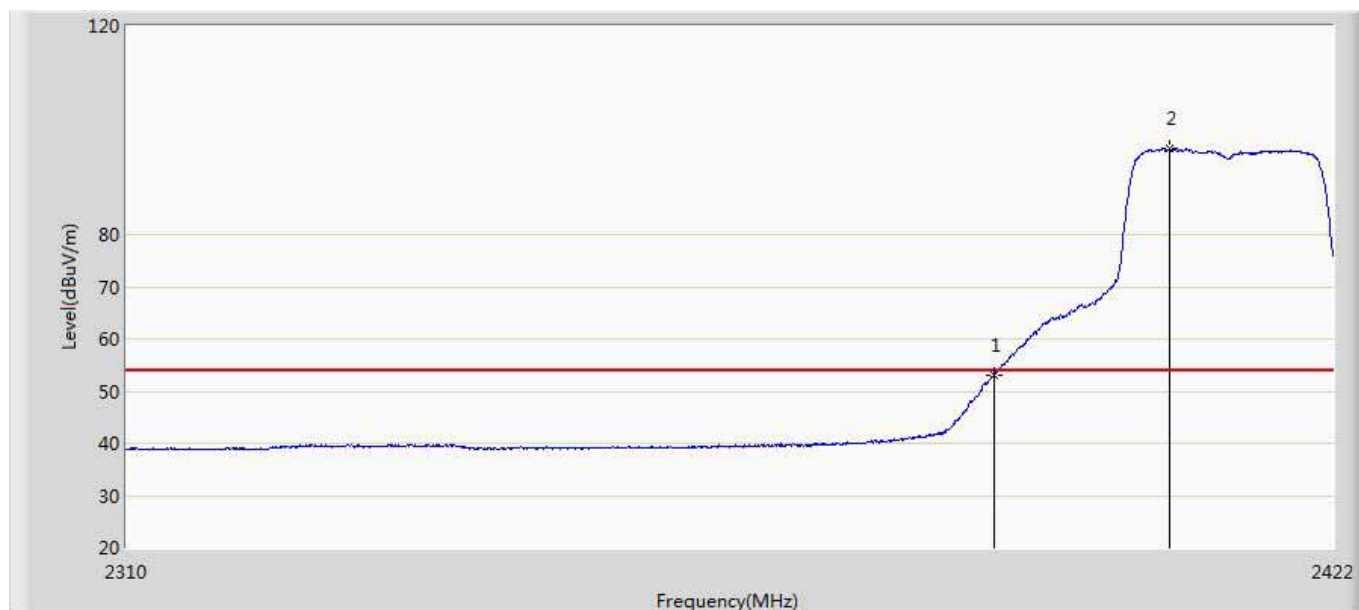
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2460.688	92.279	56.066	38.279	54.000	36.212	AV
2		2483.500	51.133	14.872	-2.867	54.000	36.261	AV

Engineer: Damon	
Site: AC5	Time: 2017/08/21 - 10:51
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 2:Transmit at channel 2462MHz by 11g	



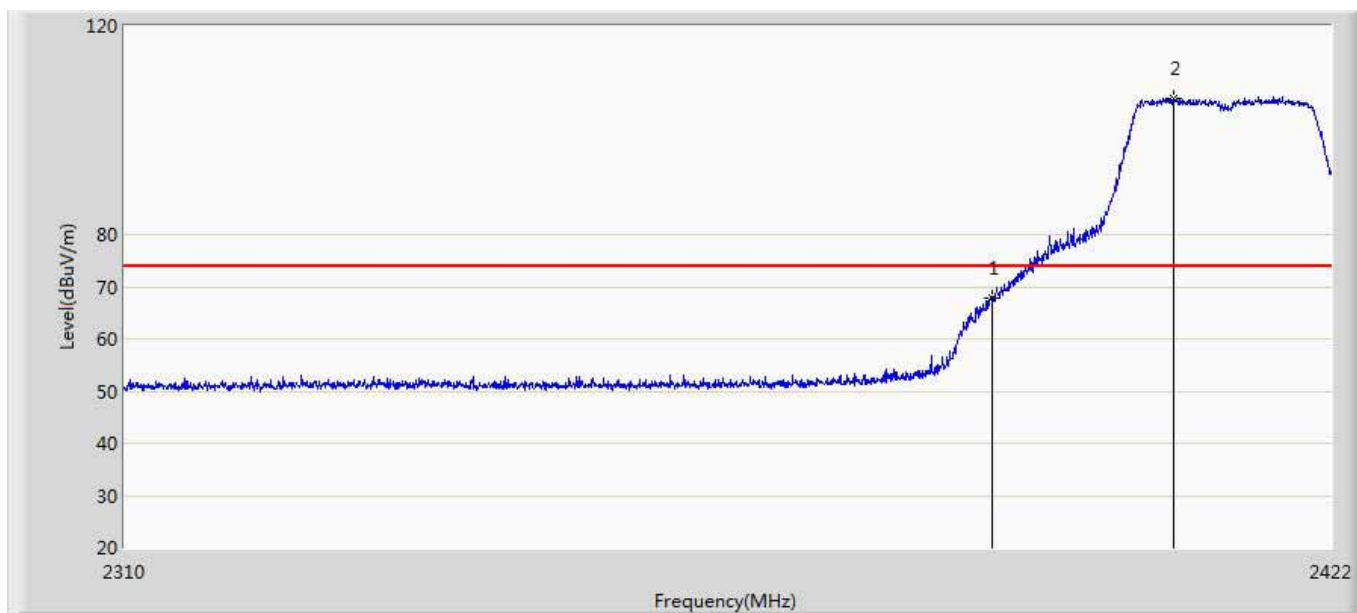
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2460.832	102.264	66.051	28.264	74.000	36.213	PK
2		2483.500	65.296	29.034	-8.704	74.000	36.261	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/21 - 10:56
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 3:Transmit at channel 2412MHz by 11n20	



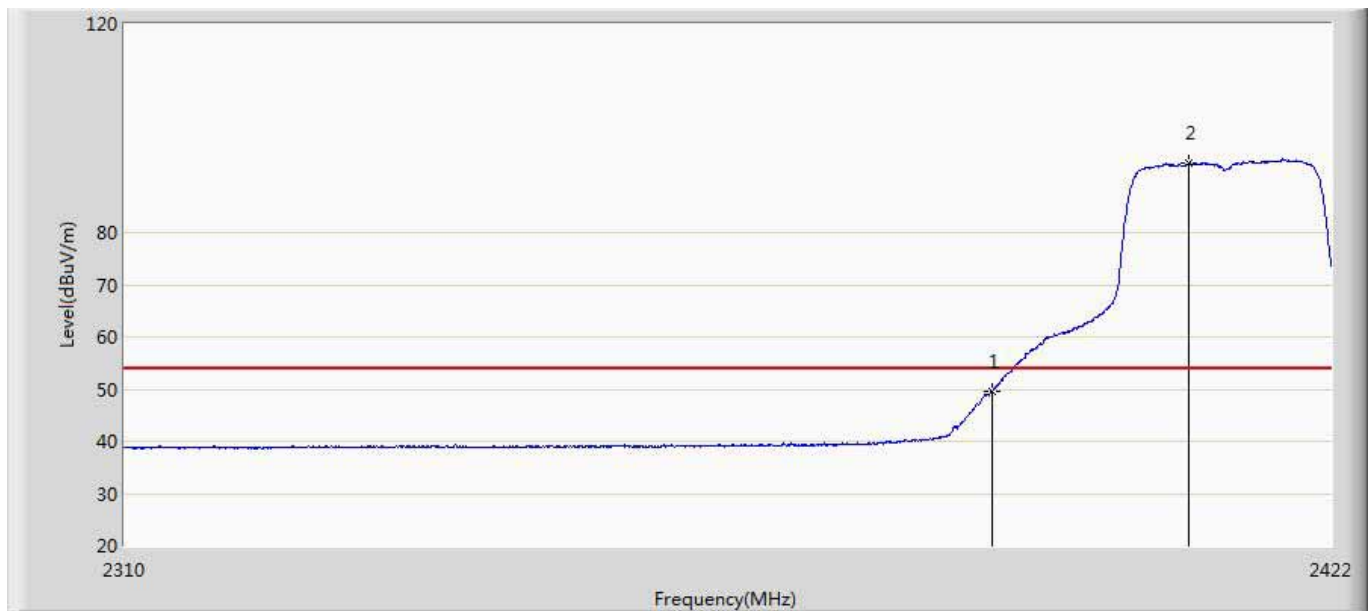
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	53.088	17.002	-0.912	54.000	36.086	AV
2	*	2406.544	96.608	60.466	42.608	54.000	36.142	AV

Engineer: Damon	
Site: AC5	Time: 2017/08/21 - 11:14
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 3:Transmit at channel 2412MHz by 11n20	



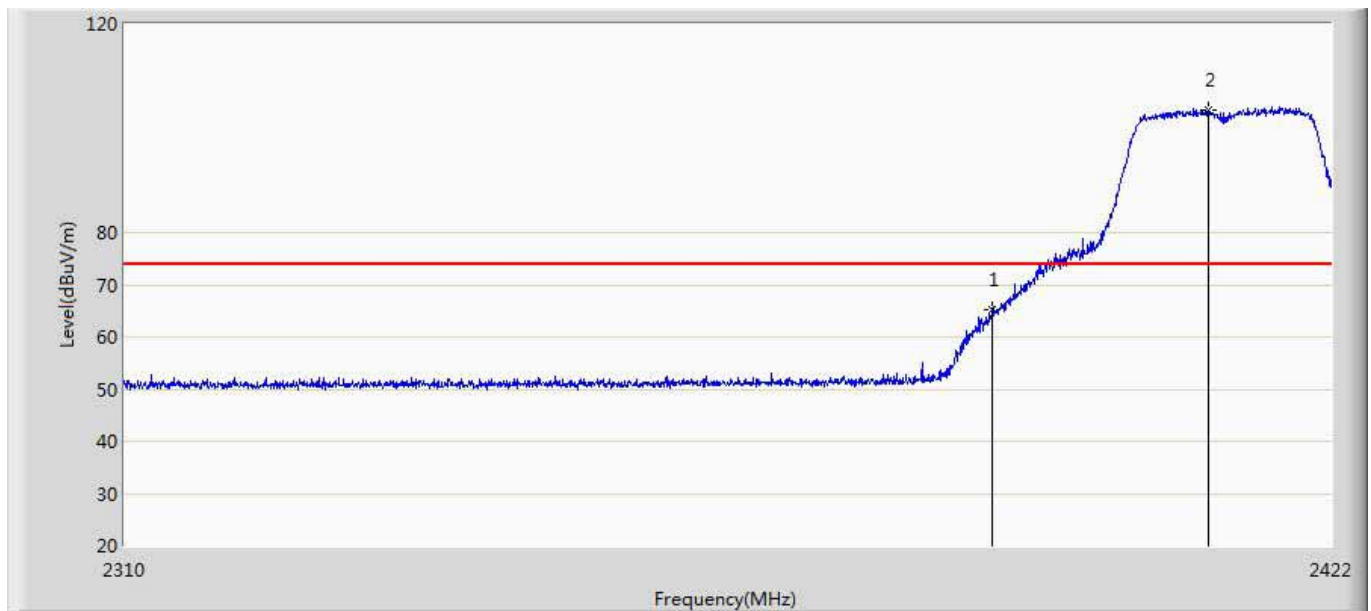
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	67.845	31.759	-6.155	74.000	36.086	PK
2	*	2407.048	106.121	69.977	32.121	74.000	36.144	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/21 - 11:15
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 3:Transmit at channel 2412MHz by 11n20	



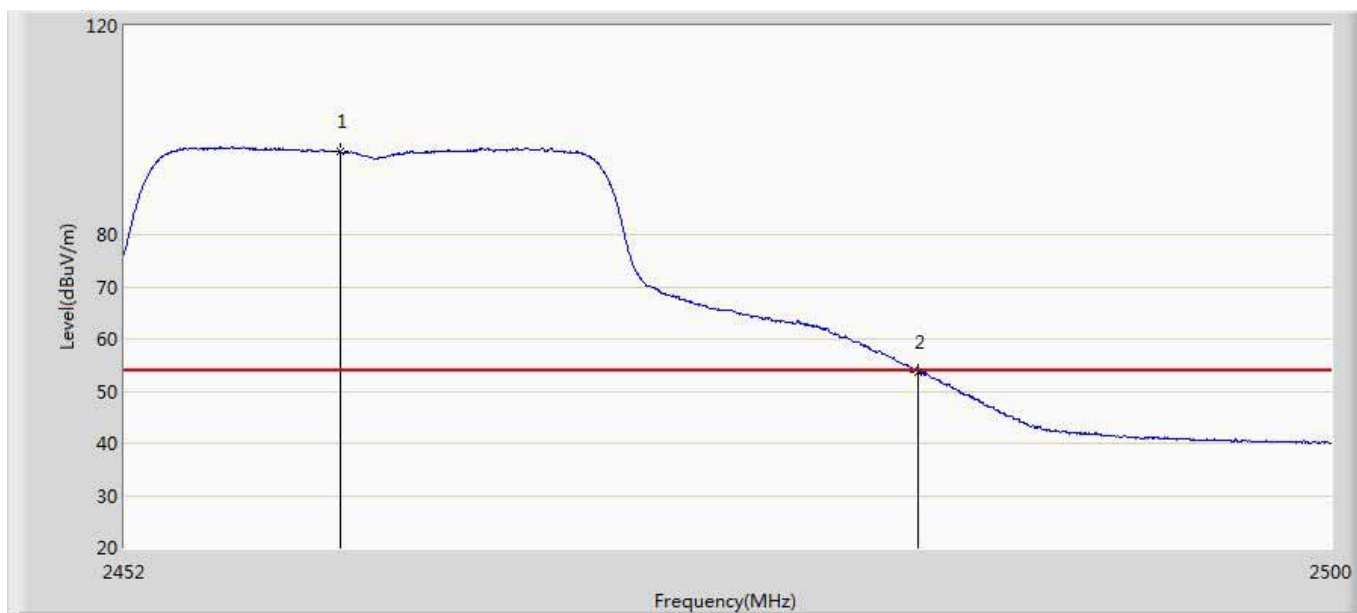
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	49.544	13.458	-4.456	54.000	36.086	AV
2	*	2408.504	93.206	57.057	39.206	54.000	36.149	AV

Engineer: Damon	
Site: AC5	Time: 2017/08/21 - 11:18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 3:Transmit at channel 2412MHz by 11n20	



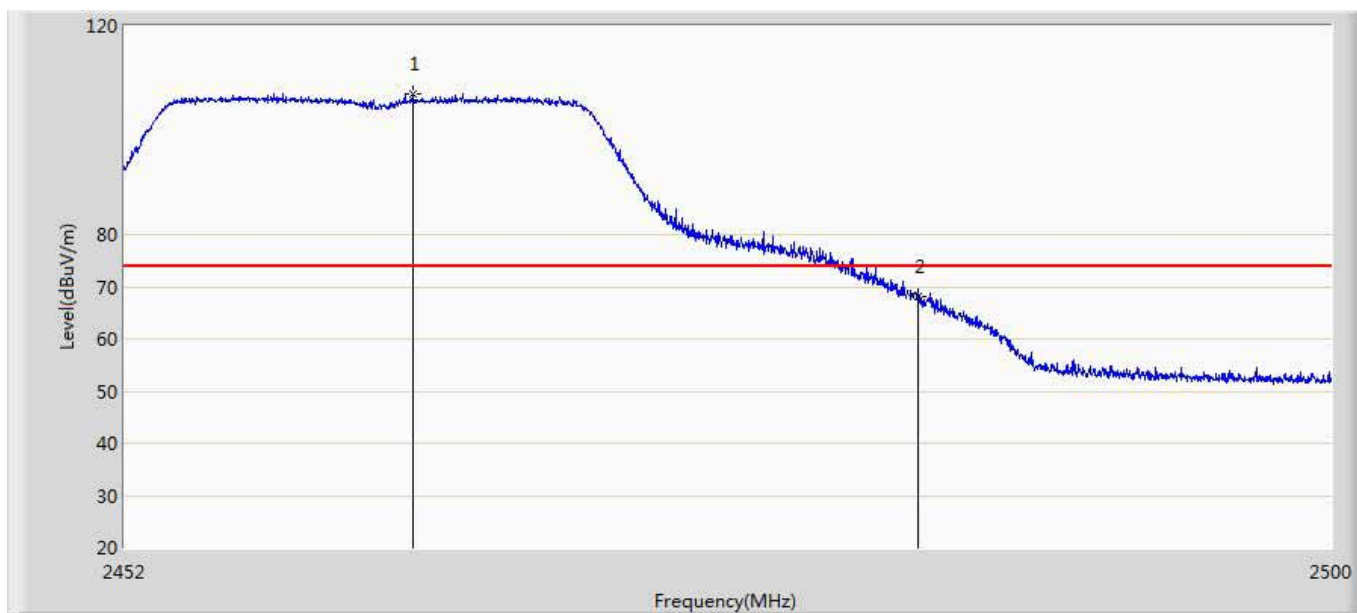
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	65.114	29.028	-8.886	74.000	36.086	PK
2	*	2410.408	103.514	67.357	29.514	74.000	36.156	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/21 - 11:20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 3:Transmit at channel 2462MHz by 11n20	



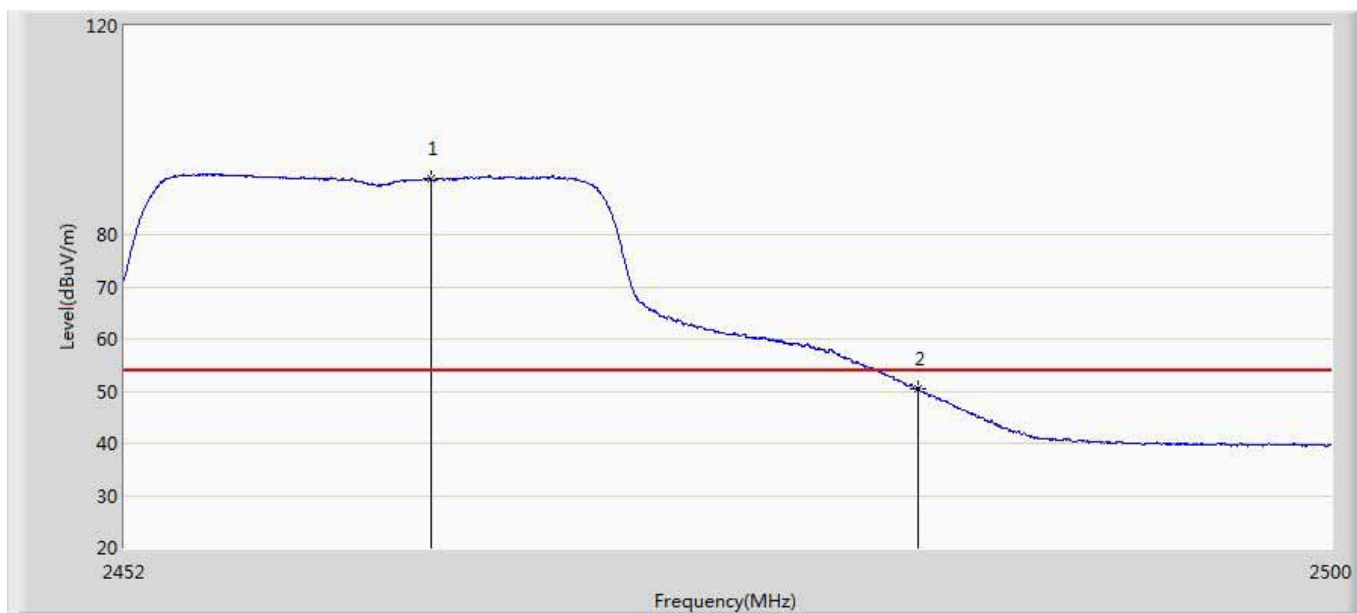
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2460.520	95.939	59.726	41.939	54.000	36.212	AV
2		2483.500	53.745	17.484	-0.255	54.000	36.261	AV

Engineer: Damon	
Site: AC5	Time: 2017/08/21 - 11:24
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 3:Transmit at channel 2462MHz by 11n20	



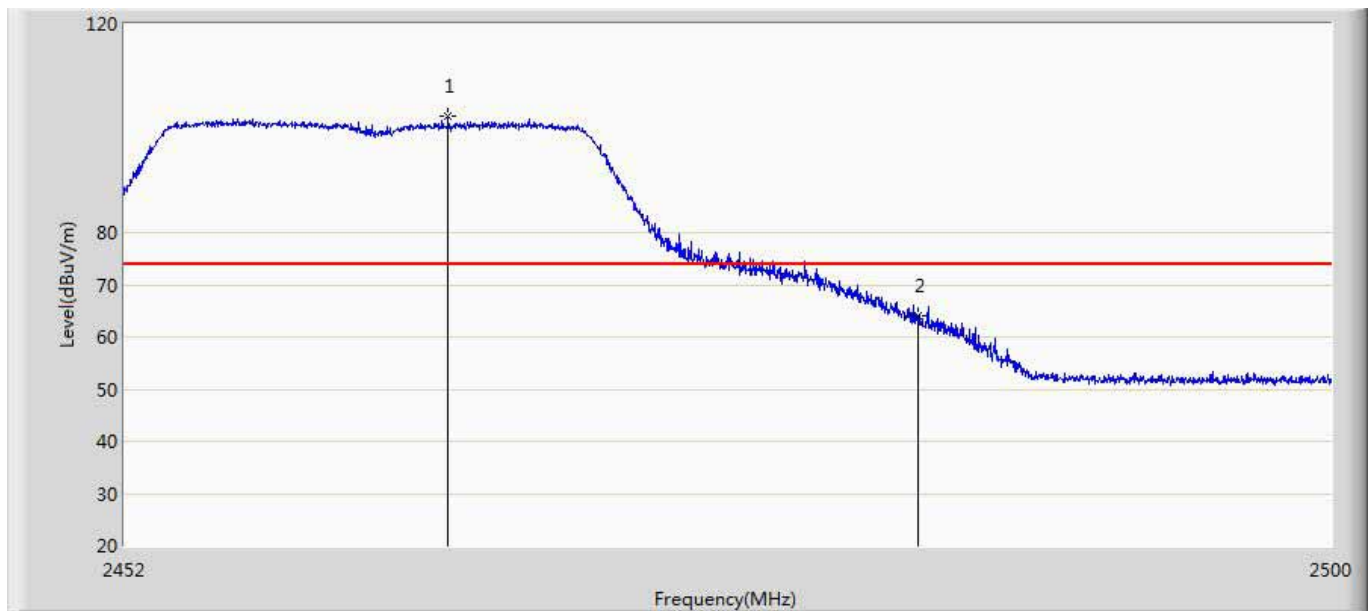
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2463.376	106.858	70.643	32.858	74.000	36.215	PK
2		2483.500	68.183	31.922	-5.817	74.000	36.261	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/21 - 11:26
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 3:Transmit at channel 2462MHz by 11n20	



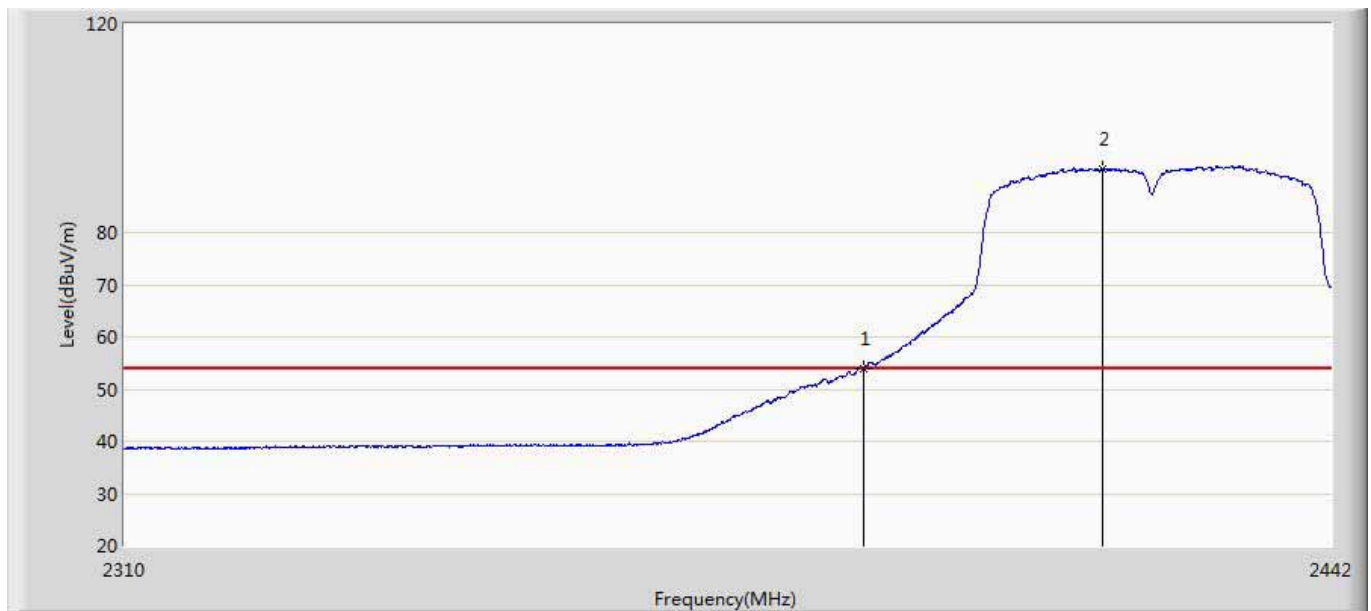
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2464.120	90.666	54.450	36.666	54.000	36.217	AV
2		2483.500	50.540	14.279	-3.460	54.000	36.261	AV

Engineer: Damon	
Site: AC5	Time: 2017/08/21 - 11:28
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 3:Transmit at channel 2462MHz by 11n20	



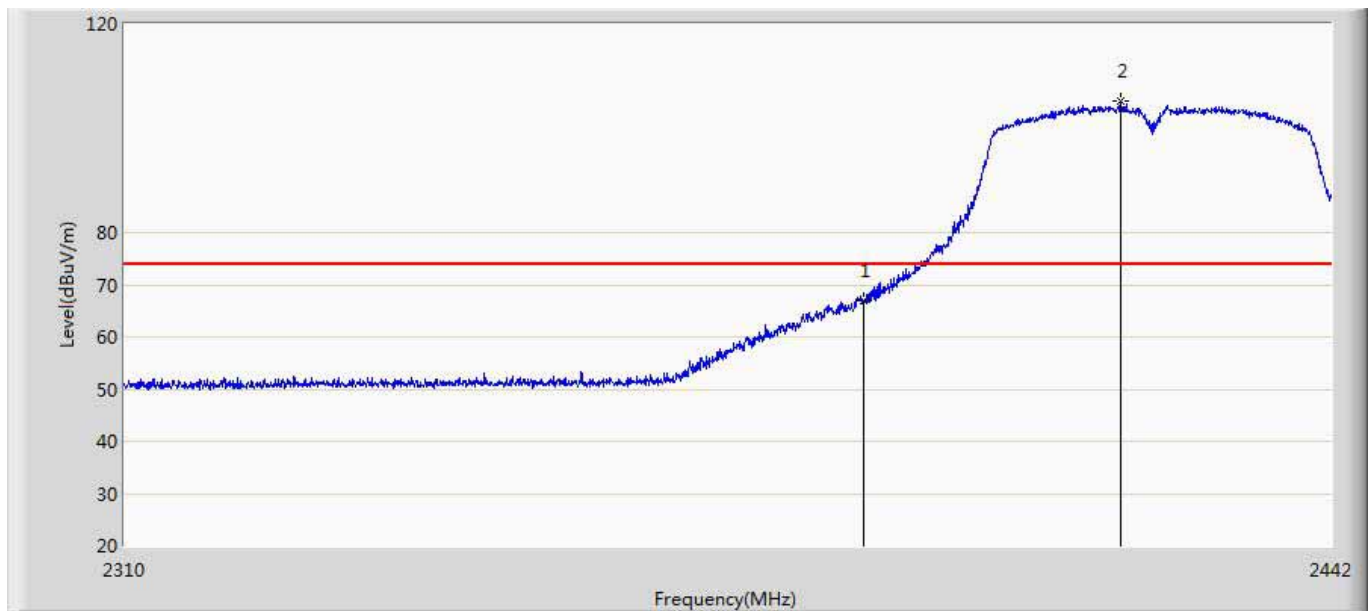
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2464.792	102.209	65.991	28.209	74.000	36.217	PK
2		2483.500	64.007	27.745	-9.993	74.000	36.261	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/21 - 11:30
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 4:Transmit at channel 2422MHz by 11n40	



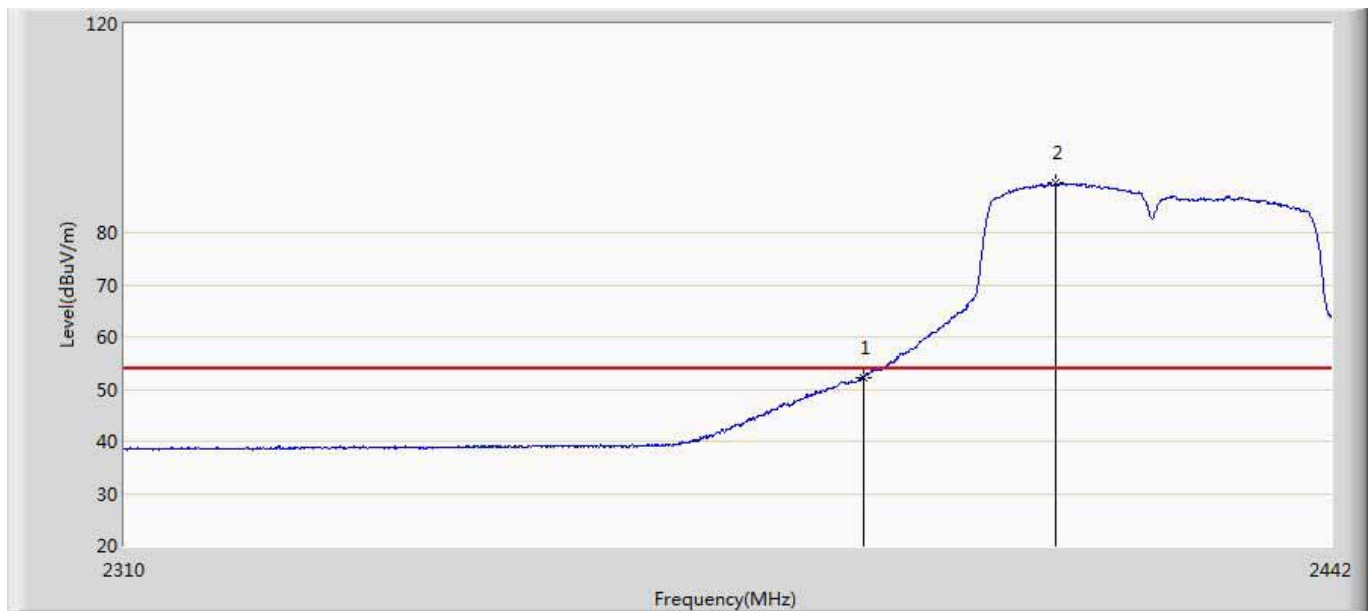
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	53.994	17.908	-0.006	54.000	36.086	AV
2	*	2416.392	92.226	56.065	38.226	54.000	36.161	AV

Engineer: Damon	
Site: AC5	Time: 2017/08/23 - 09:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 4:Transmit at channel 2422MHz by 11n40	



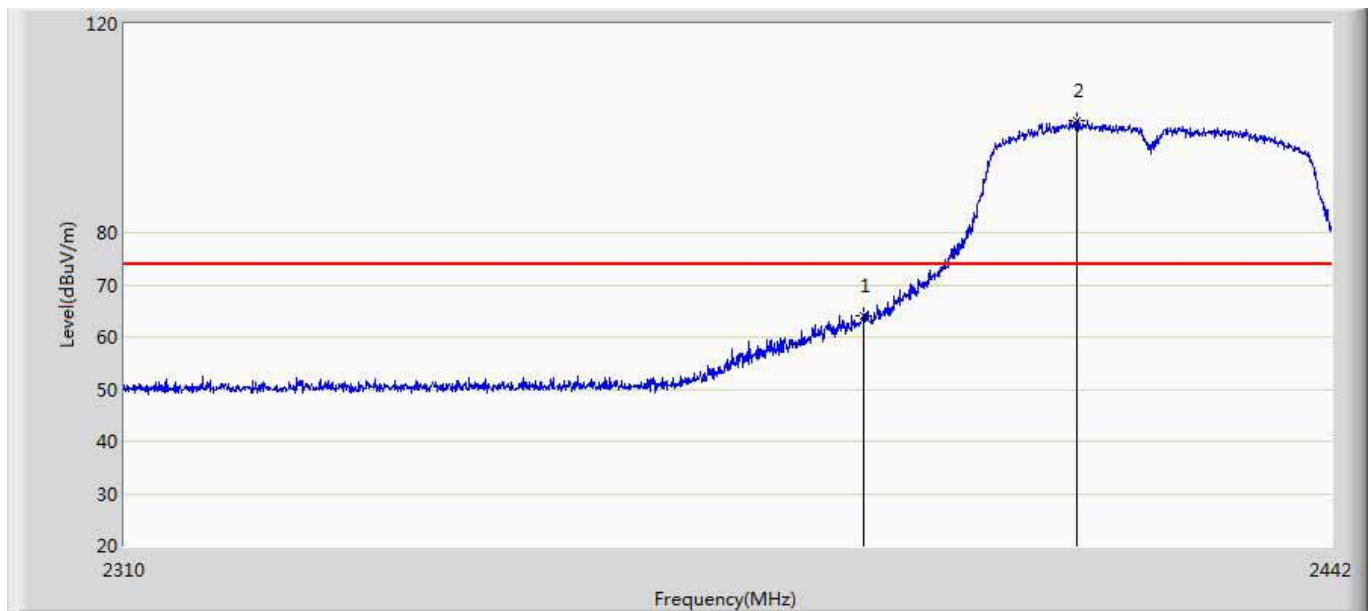
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	67.020	30.934	-6.980	74.000	36.086	PK
2	*	2418.504	105.092	68.930	31.092	74.000	36.161	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/23 - 09:34
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 4:Transmit at channel 2422MHz by 11n40	



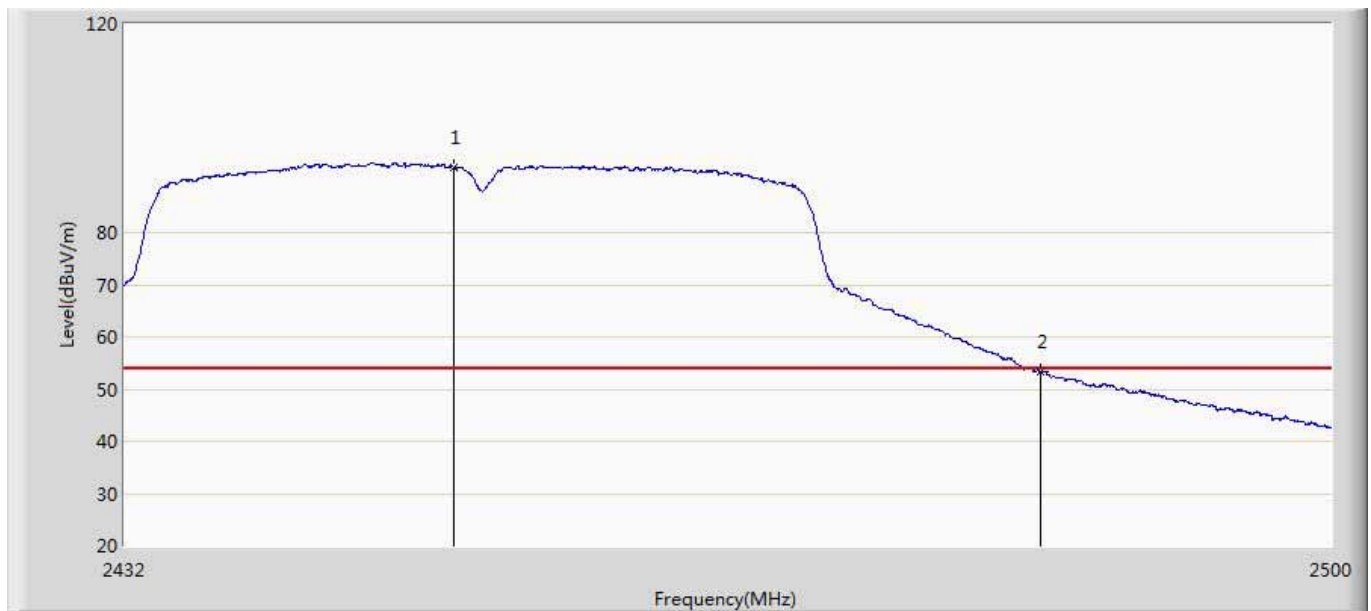
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	52.296	16.210	-1.704	54.000	36.086	AV
2	*	2411.244	89.433	53.274	35.433	54.000	36.159	AV

Engineer: Damon	
Site: AC5	Time: 2017/08/23 - 09:36
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 4:Transmit at channel 2422MHz by 11n40	



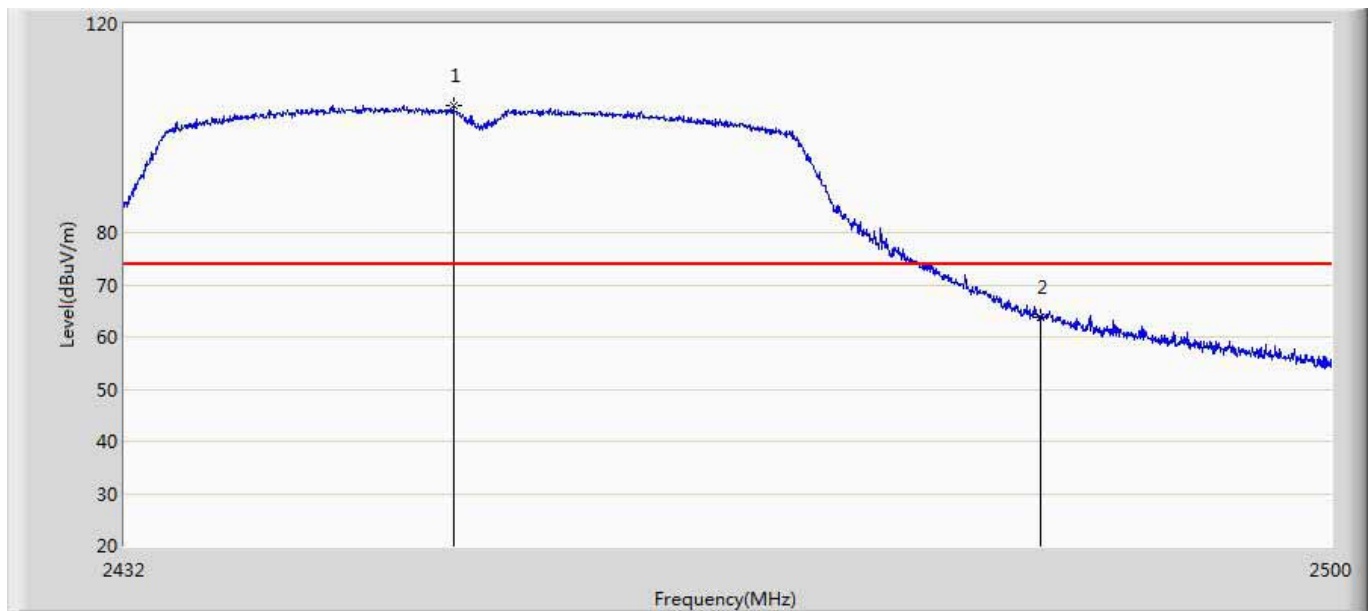
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	64.153	28.067	-9.847	74.000	36.086	PK
2	*	2413.620	101.576	65.416	27.576	74.000	36.160	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/23 - 09:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 4:Transmit at channel 2452MHz by 11n40	



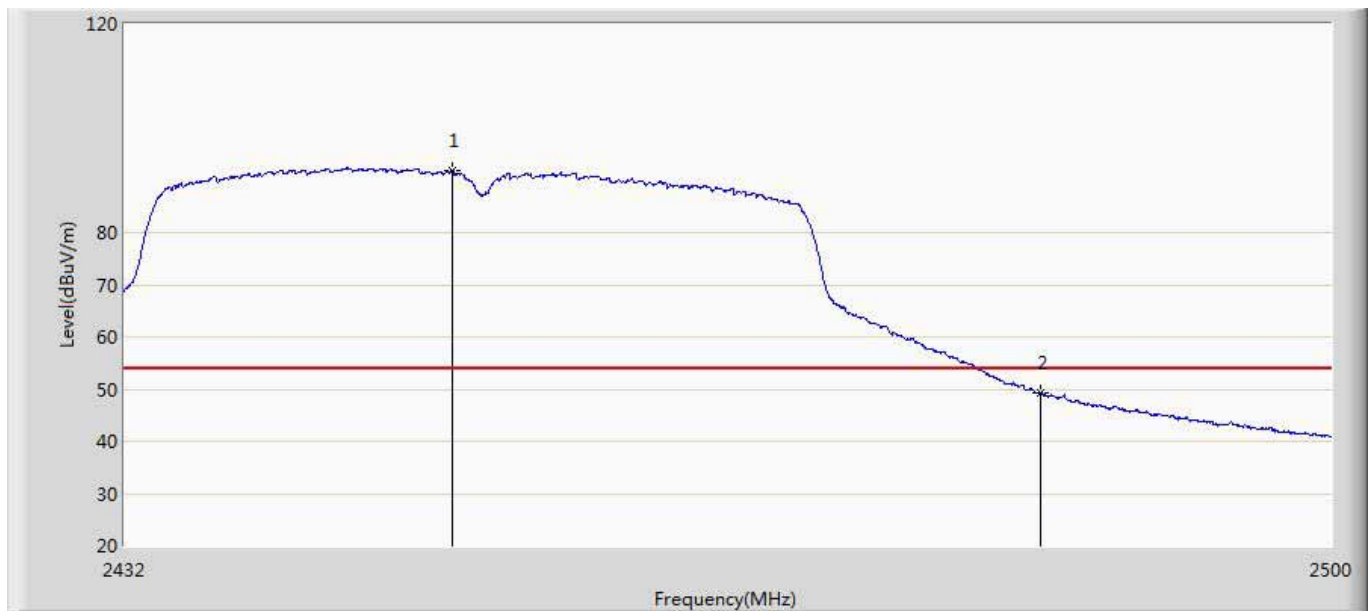
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2450.428	92.572	56.355	38.572	54.000	36.217	AV
2		2483.500	53.227	16.966	-0.773	54.000	36.261	AV

Engineer: Damon	
Site: AC5	Time: 2017/08/23 - 09:43
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 4:Transmit at channel 2452MHz by 11n40	



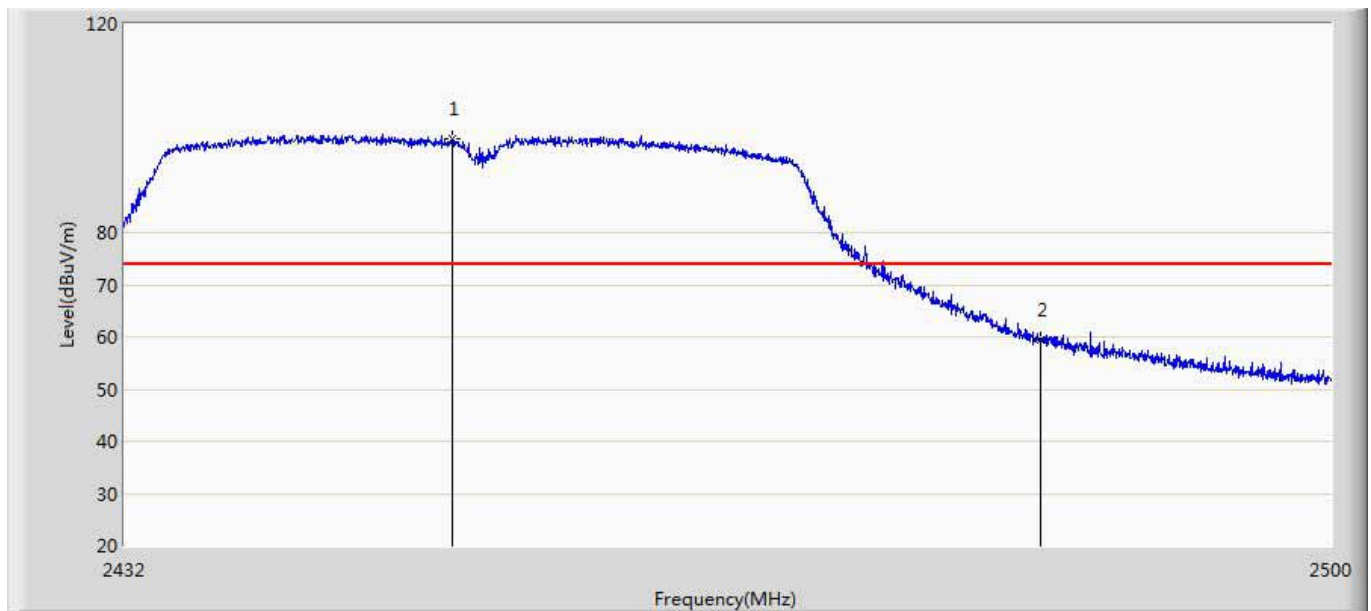
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2450.394	104.391	68.174	30.391	74.000	36.217	PK
2		2483.500	63.876	27.614	-10.124	74.000	36.261	PK

Engineer: Damon	
Site: AC5	Time: 2017/08/23 - 09:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 4:Transmit at channel 2452MHz by 11n40	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2450.292	91.961	55.743	37.961	54.000	36.217	AV
2		2483.500	49.197	12.936	-4.803	54.000	36.261	AV

Engineer: Damon	
Site: AC5	Time: 2017/08/23 - 09:45
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 4:Transmit at channel 2452MHz by 11n40	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2450.292	97.894	61.676	23.894	74.000	36.217	PK
2		2483.500	59.552	23.291	-14.448	74.000	36.261	PK

Engineer: Eric	
Site: AC5	Time: 2017/12/02 - 19:06
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2417MHz by 11b	



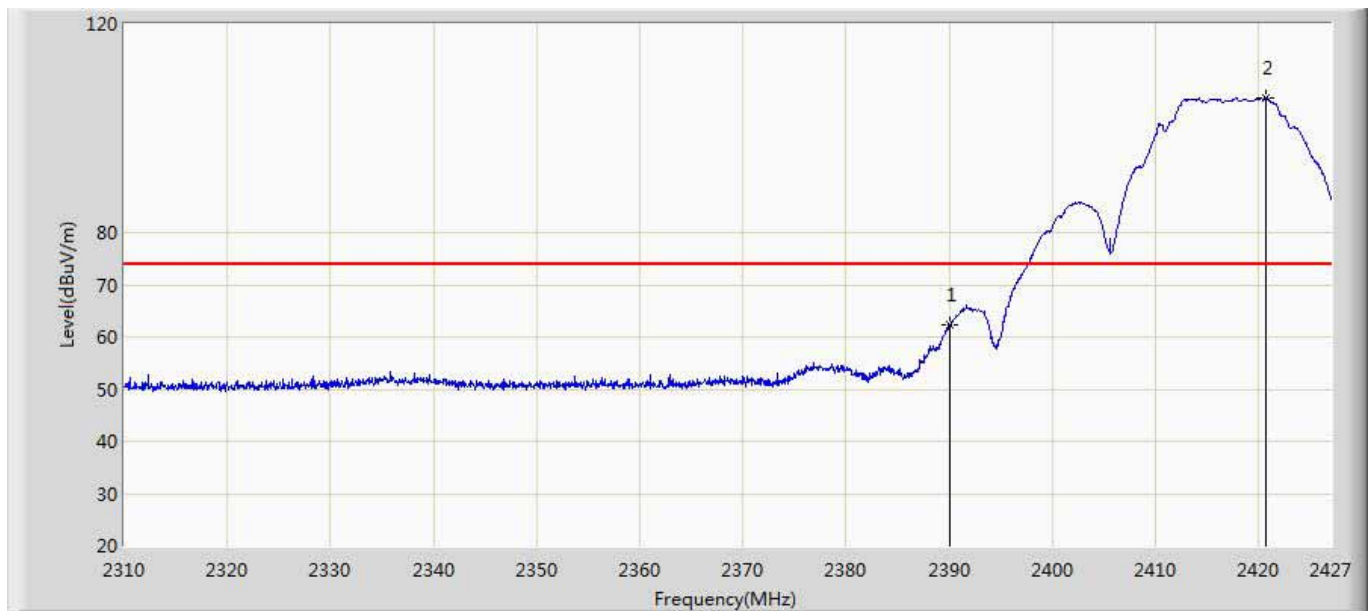
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	53.270	17.588	-0.730	54.000	35.682	AV
2	*	2419.571	100.942	65.168	46.942	54.000	35.774	AV

Engineer: Eric	
Site: AC5	Time: 2017/12/02 - 19:07
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2417MHz by 11b	



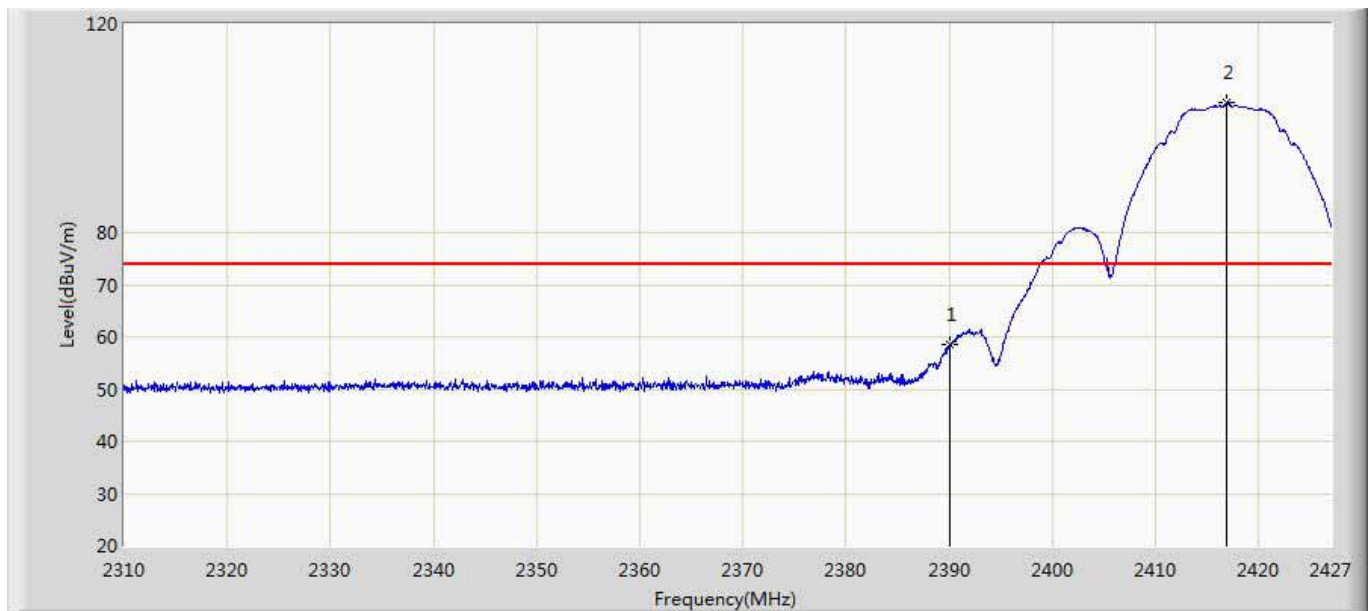
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	50.292	14.610	-3.708	54.000	35.682	AV
2	*	2416.119	100.841	65.082	46.841	54.000	35.758	AV

Engineer: Eric	
Site: AC5	Time: 2017/12/02 - 19:09
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2417MHz by 11b	



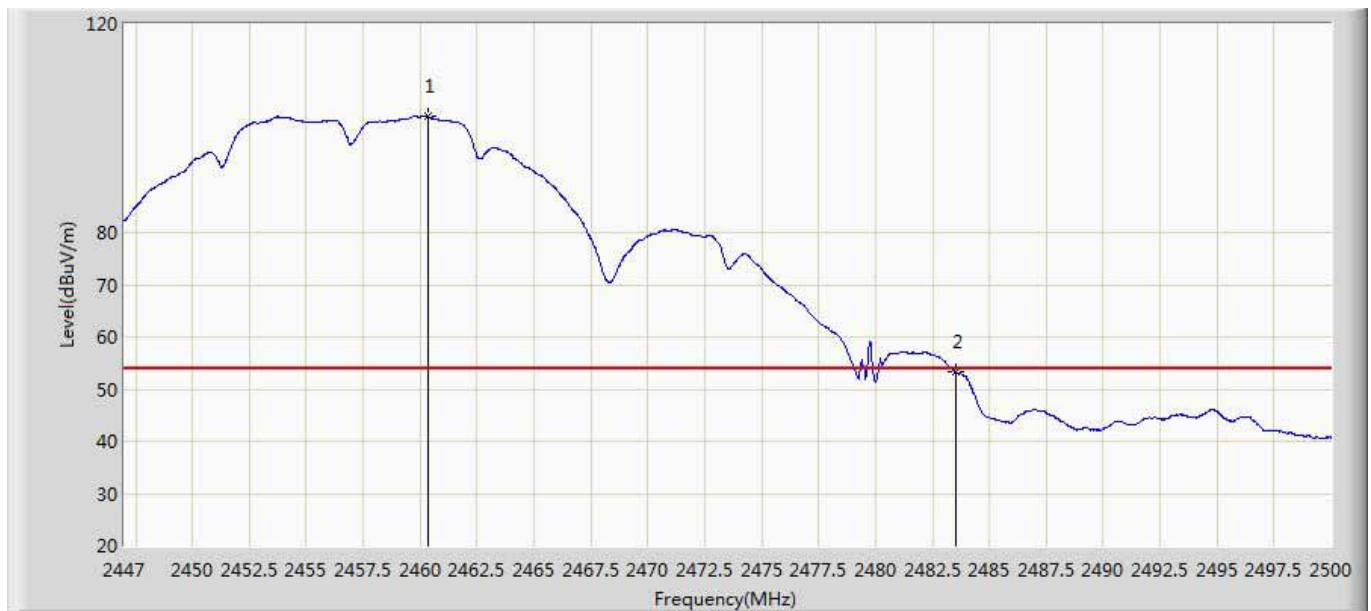
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	62.418	26.736	-11.582	74.000	35.682	PK
2	*	2420.740	105.827	70.049	31.827	74.000	35.778	PK

Engineer: Eric	
Site: AC5	Time: 2017/12/02 - 19:11
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2417MHz by 11b	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	58.455	22.773	-15.545	74.000	35.682	PK
2	*	2416.879	104.948	69.186	30.948	74.000	35.762	PK

Engineer: Eric	
Site: AC5	Time: 2017/12/02 - 19:13
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2457MHz by 11b	



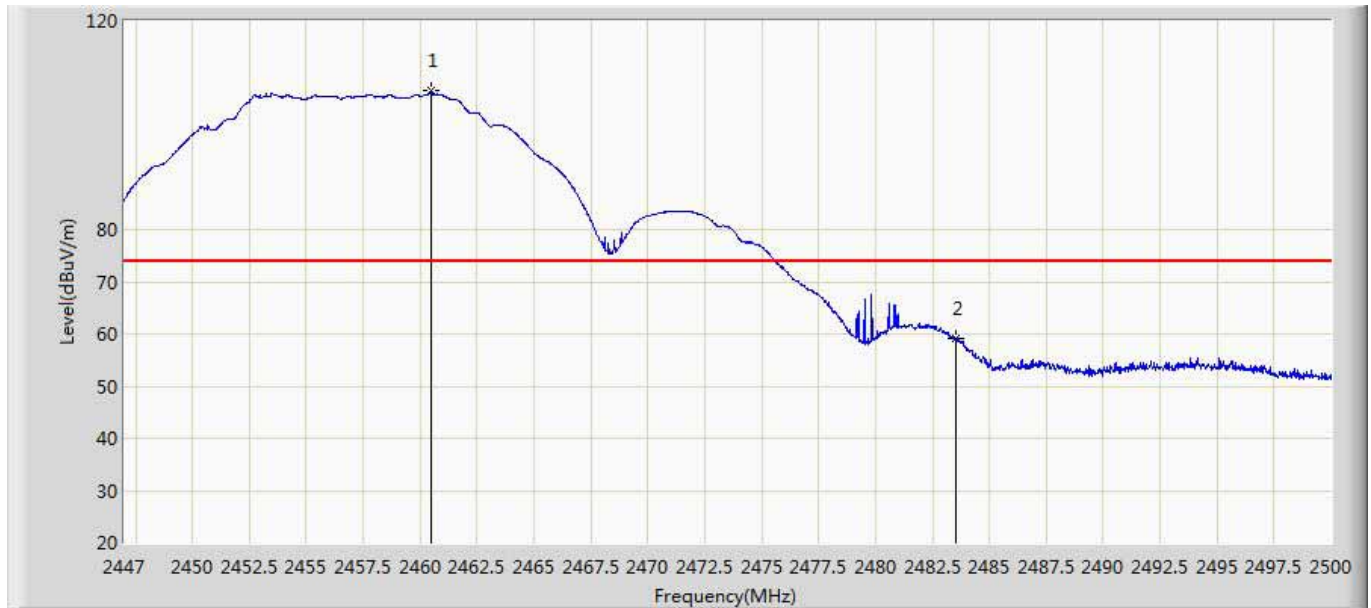
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2460.330	102.270	66.399	48.270	54.000	35.871	AV
2		2483.500	53.257	17.365	-0.743	54.000	35.891	AV

Engineer: Eric	
Site: AC5	Time: 2017/12/02 - 19:22
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2457MHz by 11b	



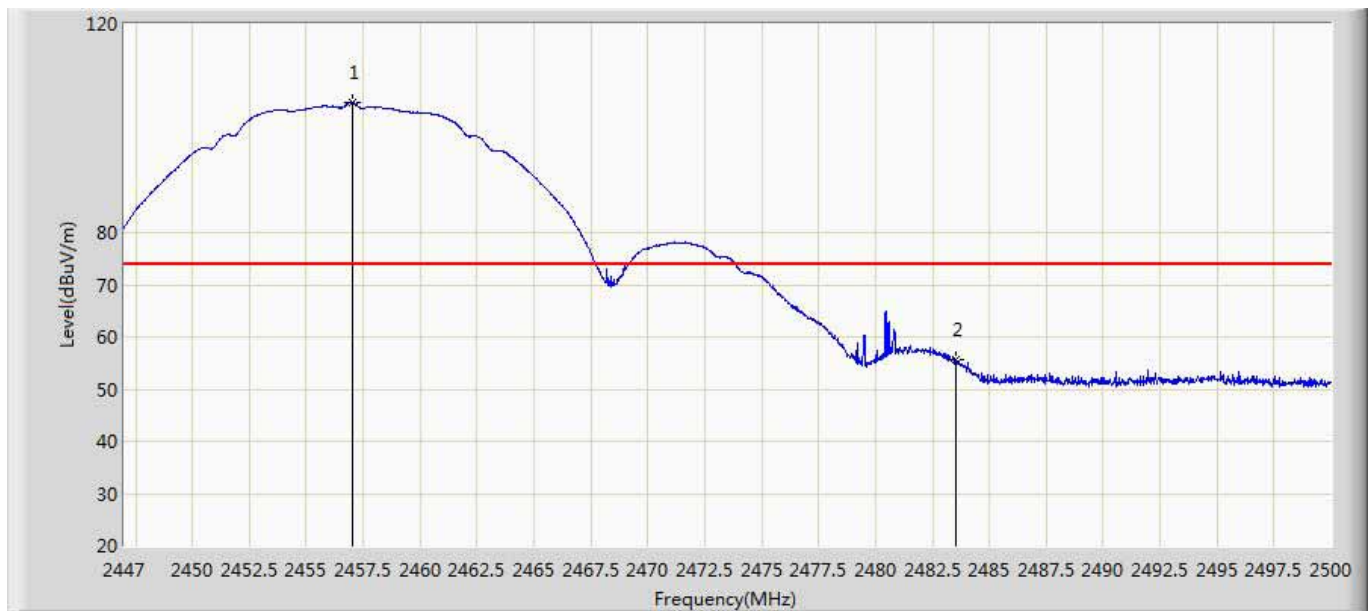
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2457.838	100.609	64.749	46.609	54.000	35.860	AV
2		2483.500	48.558	12.666	-5.442	54.000	35.891	AV

Engineer: Eric	
Site: AC5	Time: 2017/12/02 - 19:24
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2457MHz by 11b	



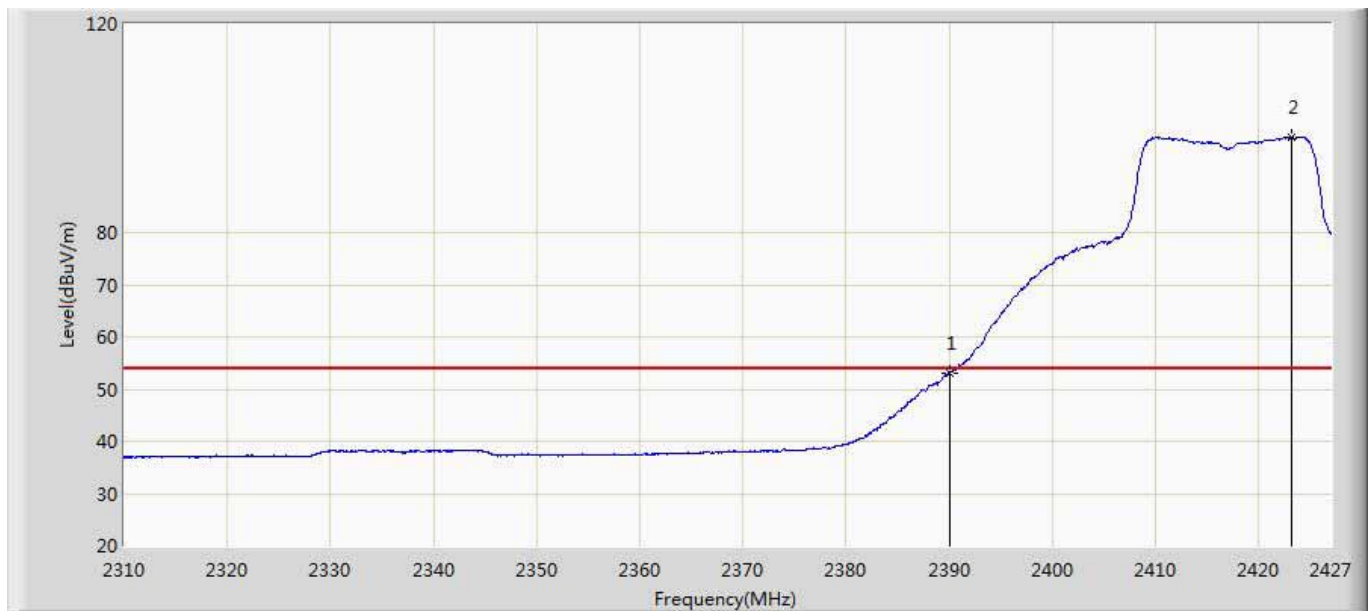
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2460.515	106.754	70.882	32.754	74.000	35.872	PK
2		2483.500	59.108	23.216	-14.892	74.000	35.891	PK

Engineer: Eric	
Site: AC5	Time: 2017/12/02 - 19:26
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2457MHz by 11b	



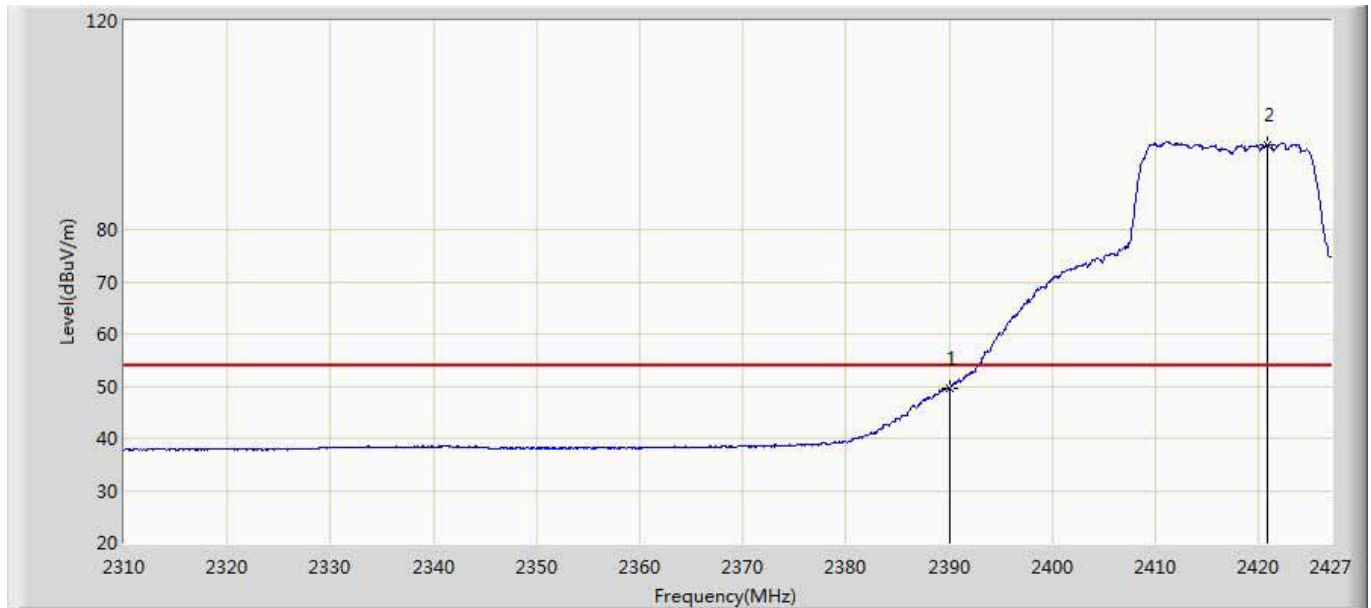
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2457.017	105.002	69.146	31.002	74.000	35.856	PK
2		2483.500	55.521	19.629	-18.479	74.000	35.891	PK

Engineer: Eric	
Site: AC5	Time: 2017/12/02 - 19:36
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2417MHz by 11g	



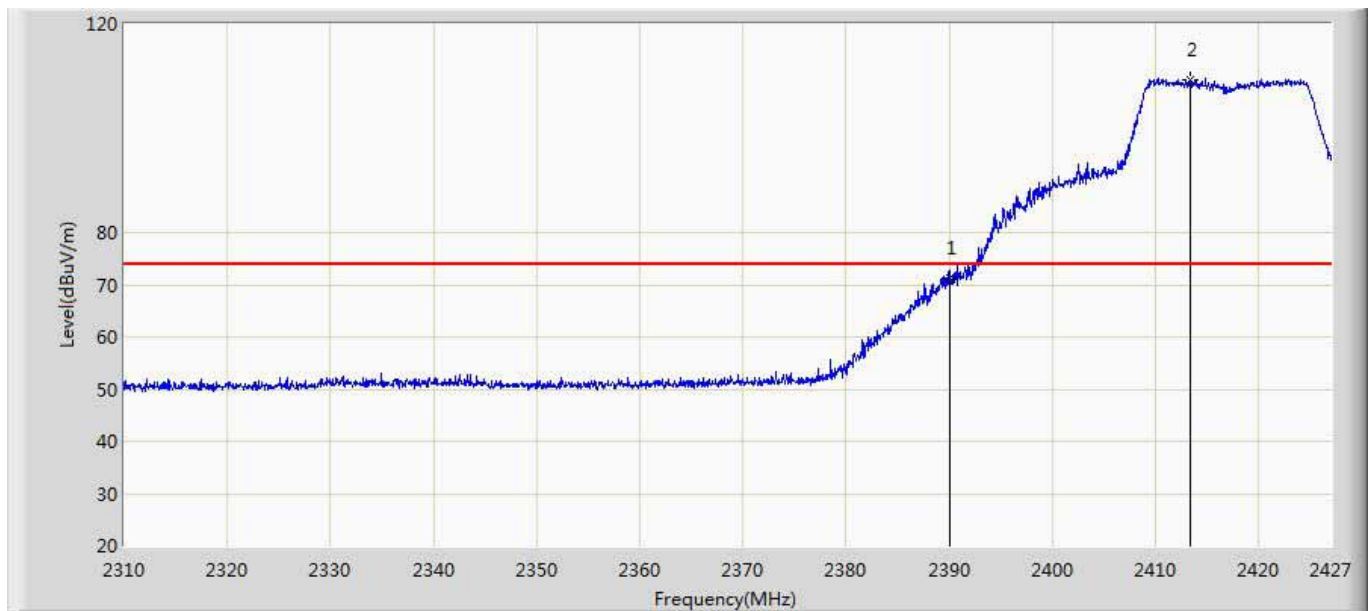
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	53.180	17.498	-0.820	54.000	35.682	AV
2	*	2423.198	98.350	62.562	44.350	54.000	35.788	AV

Engineer: Eric	
Site: AC5	Time: 2017/12/02 - 19:36
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2417MHz by 11g	



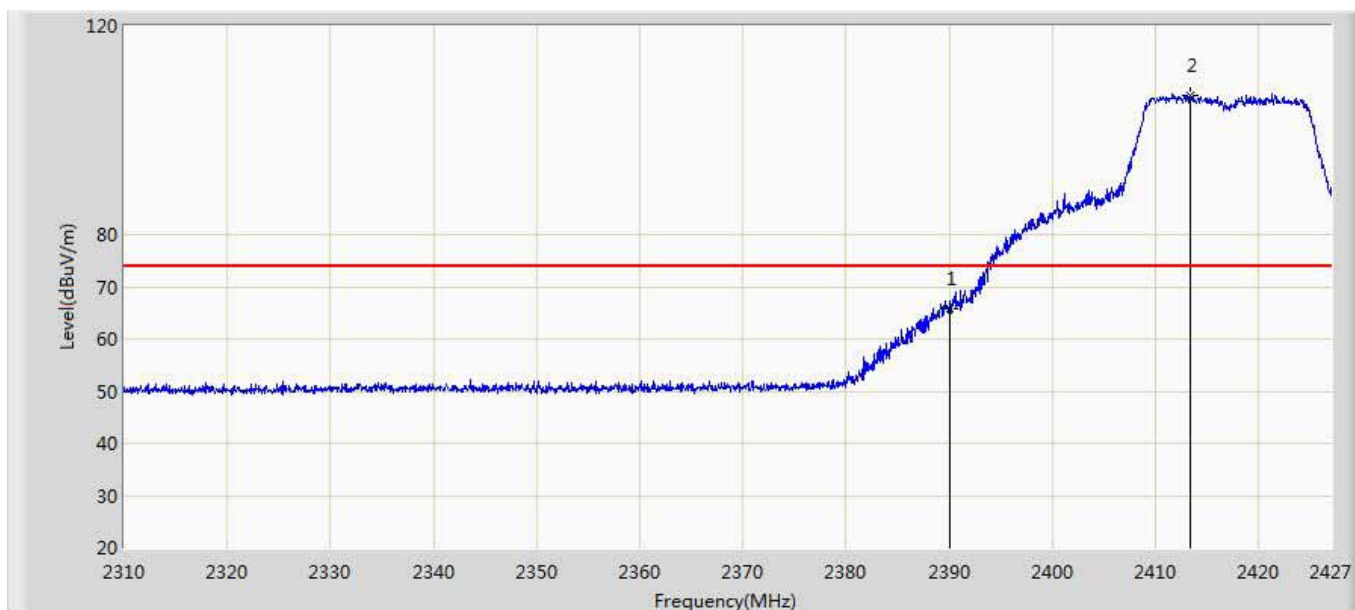
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	49.583	13.901	-4.417	54.000	35.682	AV
2	*	2420.799	96.271	60.493	42.271	54.000	35.778	AV

Engineer: Eric	
Site: AC5	Time: 2017/12/02 - 19:38
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2417MHz by 11g	



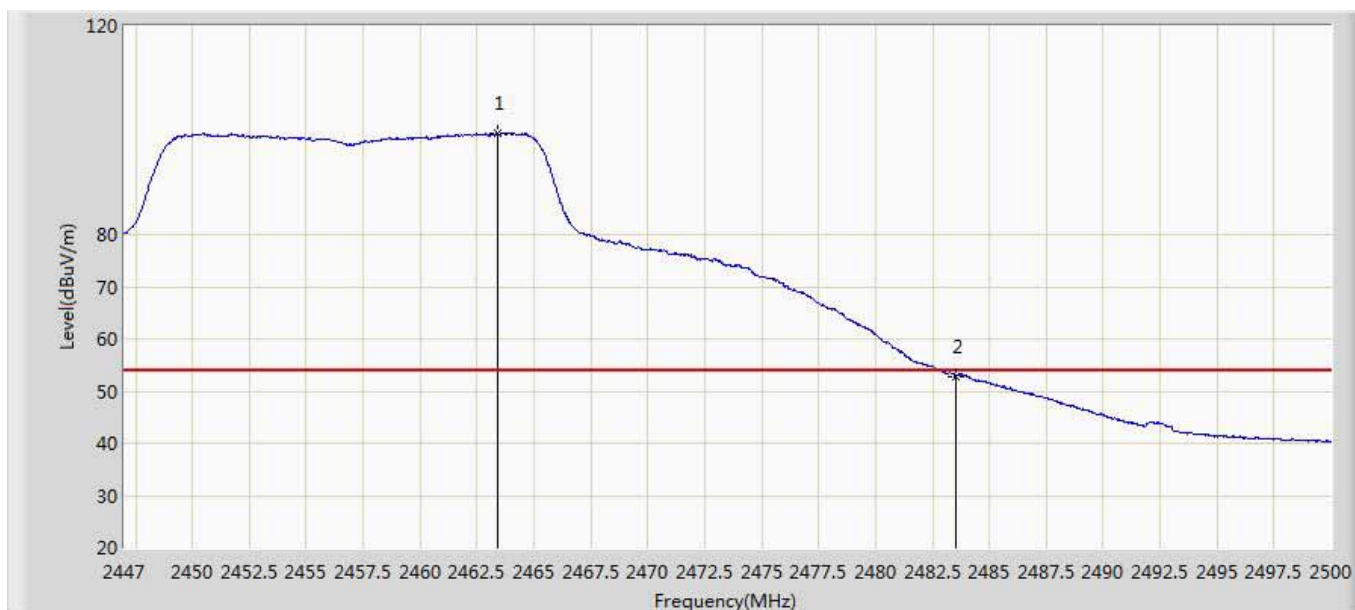
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	71.255	35.573	-2.745	74.000	35.682	PK
2	*	2413.311	109.419	73.672	35.419	74.000	35.747	PK

Engineer: Eric	
Site: AC5	Time: 2017/12/02 - 19:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2417MHz by 11g	



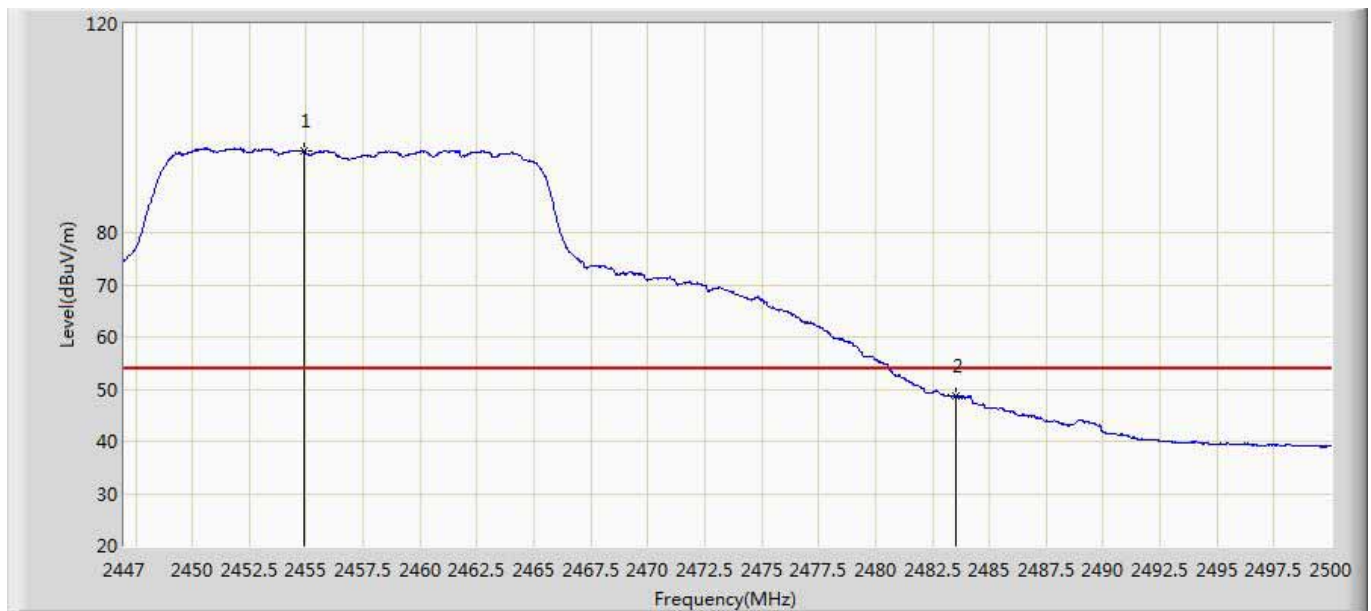
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	65.868	30.186	-8.132	74.000	35.682	PK
2	*	2413.311	106.753	71.006	32.753	74.000	35.747	PK

Engineer: Eric	
Site: AC5	Time: 2017/12/02 - 19:43
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2457MHz by 11g	



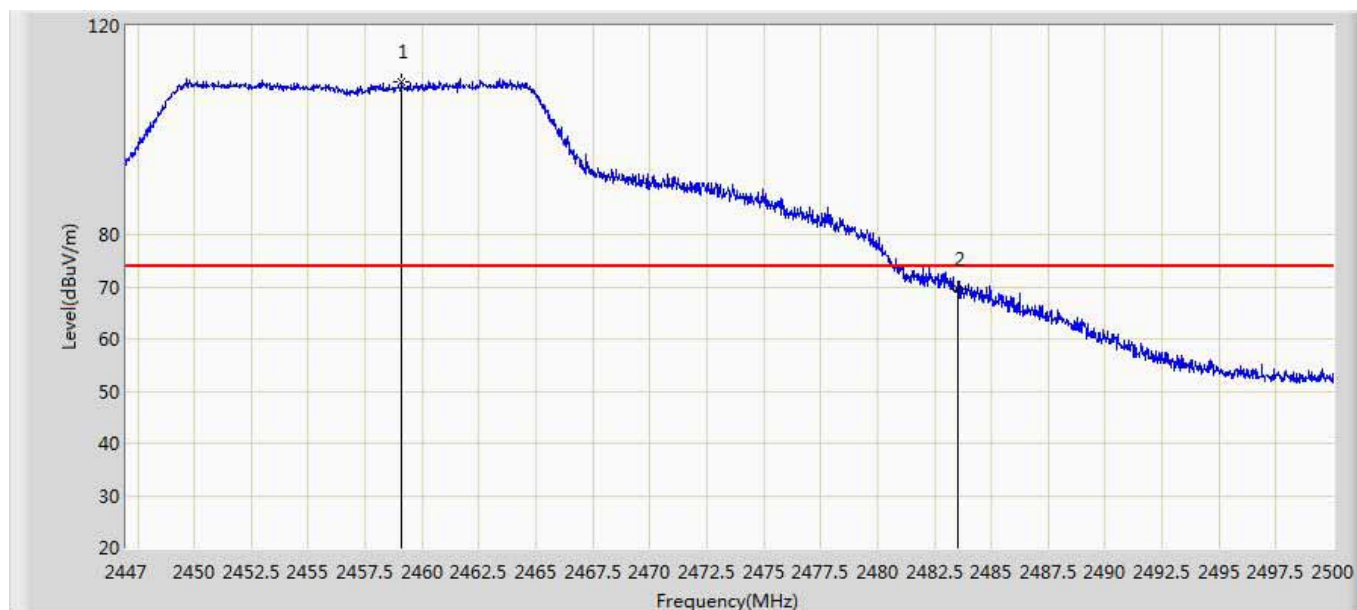
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2463.404	99.385	63.508	45.385	54.000	35.877	AV
2		2483.500	52.857	16.965	-1.143	54.000	35.891	AV

Engineer: Eric	
Site: AC5	Time: 2017/12/02 - 19:46
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2457MHz by 11g	



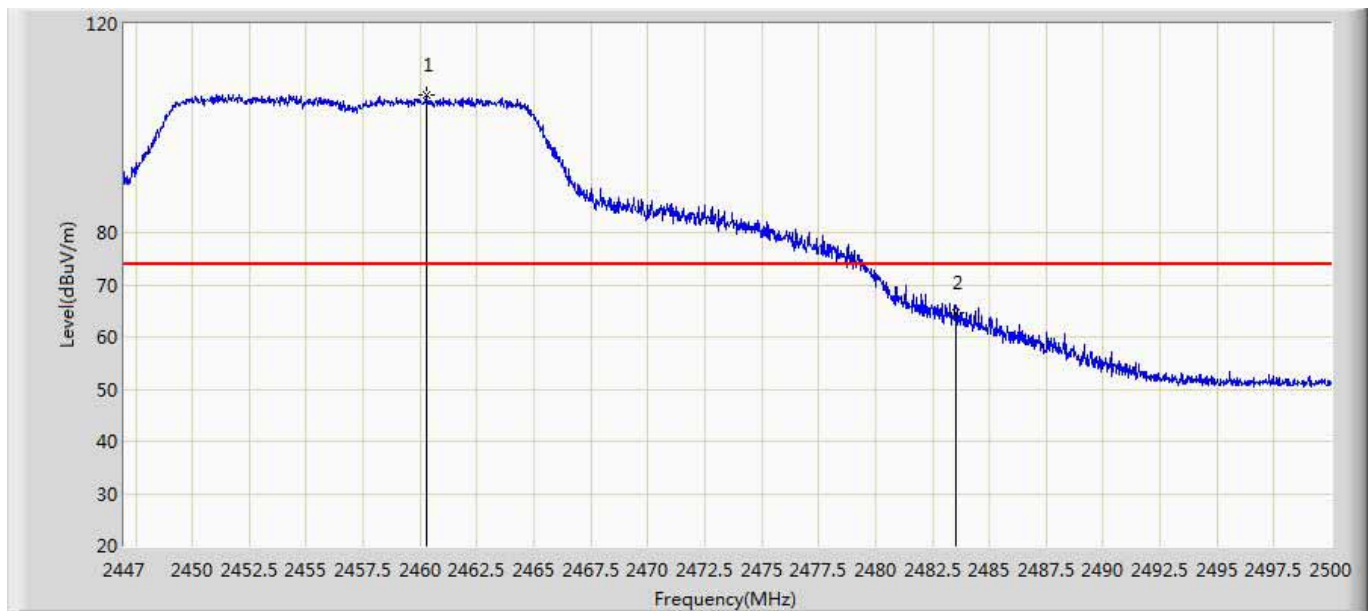
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2454.897	95.650	59.803	41.650	54.000	35.848	AV
2		2483.500	48.569	12.677	-5.431	54.000	35.891	AV

Engineer: Eric	
Site: AC5	Time: 2017/12/02 - 19:49
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2457MHz by 11g	



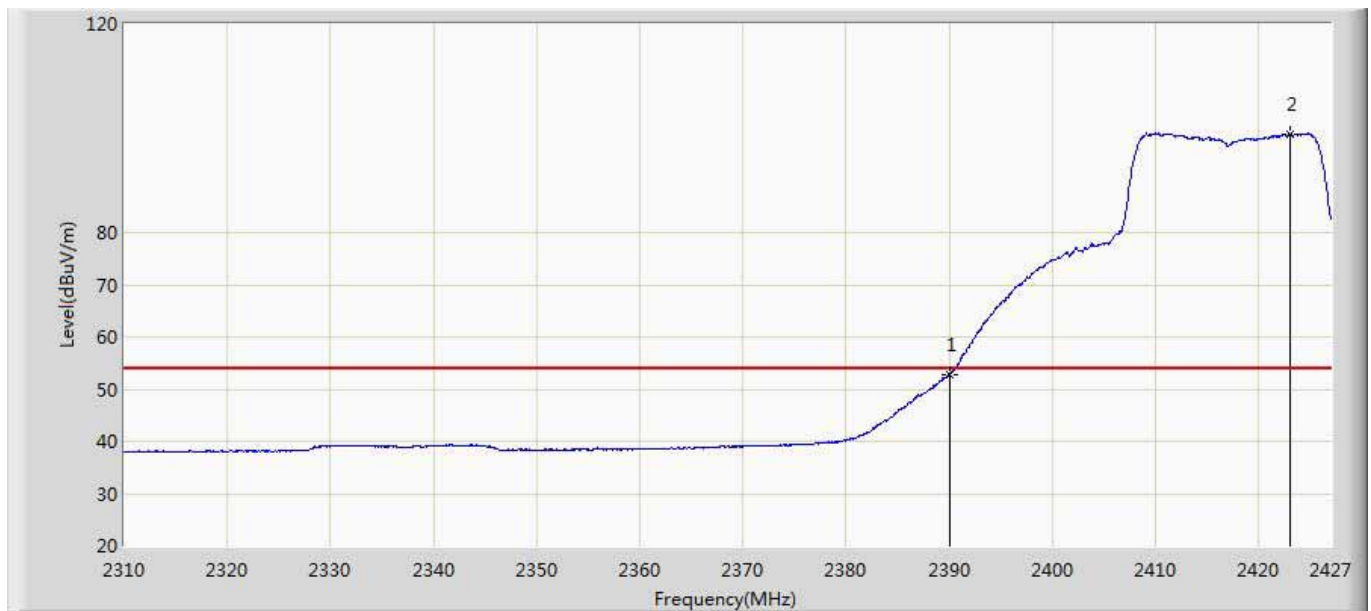
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2459.084	109.317	73.451	35.317	74.000	35.866	PK
2		2483.500	69.640	33.748	-4.360	74.000	35.891	PK

Engineer: Eric	
Site: AC5	Time: 2017/12/02 - 19:51
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2457MHz by 11g	



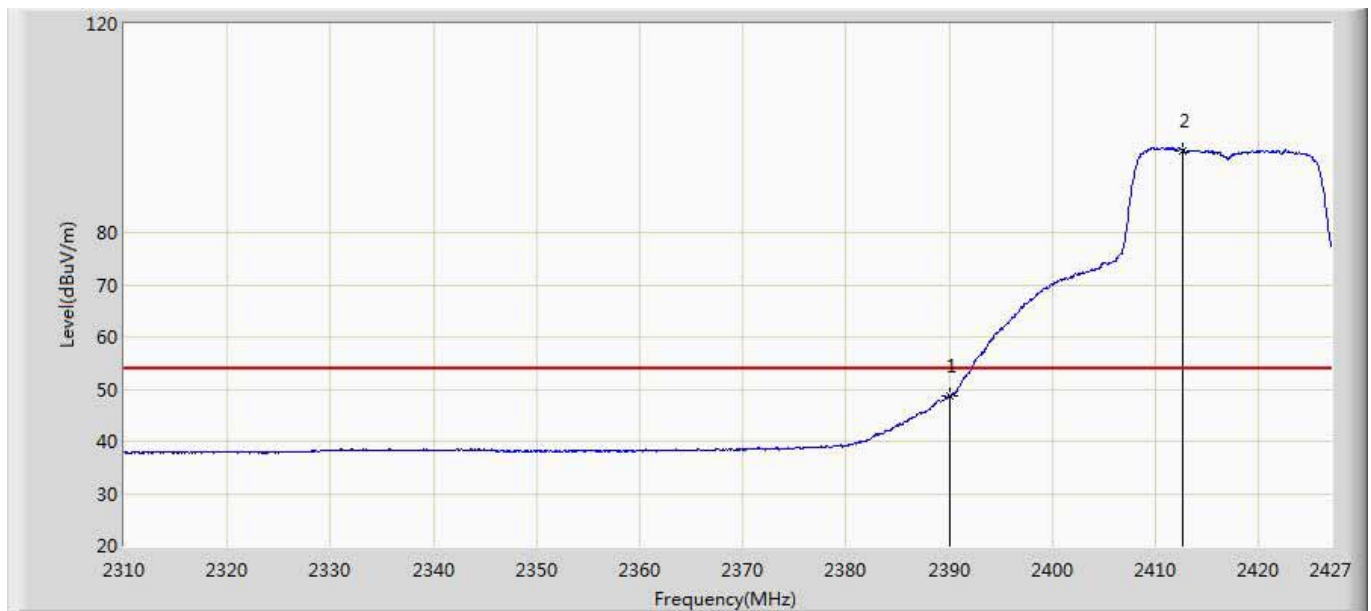
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2460.250	106.240	70.369	32.240	74.000	35.871	PK
2		2483.500	64.722	28.830	-9.278	74.000	35.891	PK

Engineer: Eric	
Site: AC5	Time: 2017/12/02 - 19:53
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2417MHz by 11n20	



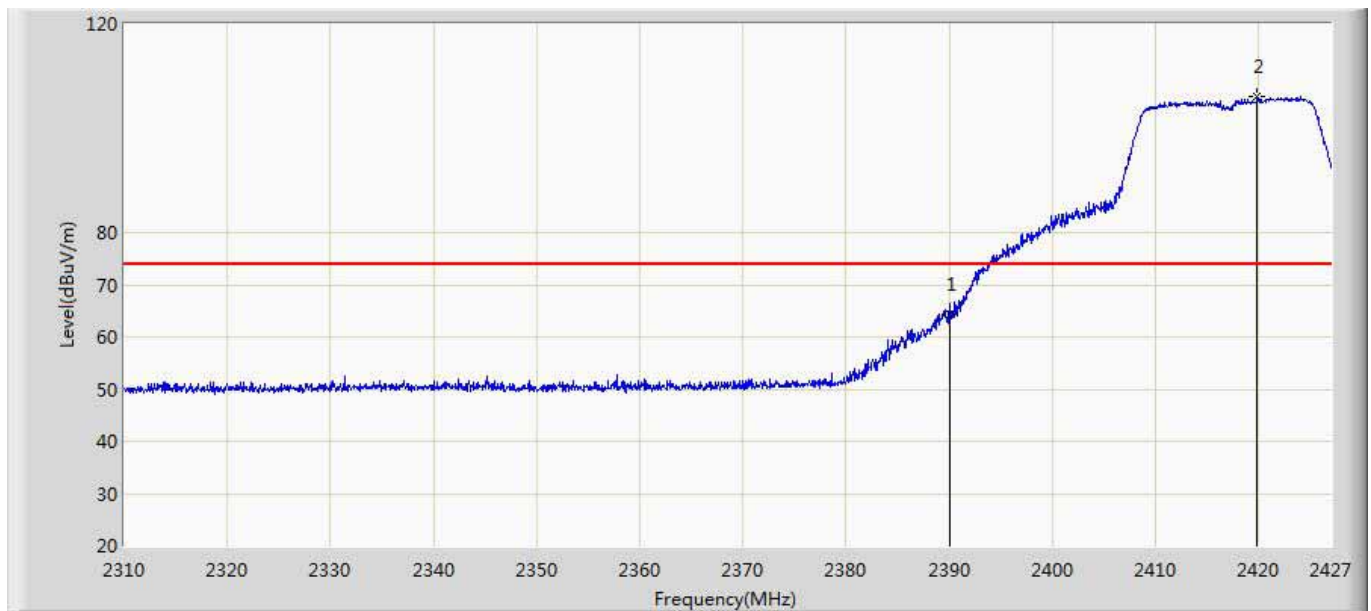
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	52.877	17.195	-1.123	54.000	35.682	AV
2	*	2423.081	98.789	63.001	44.789	54.000	35.788	AV

Engineer: Eric	
Site: AC5	Time: 2017/12/02 - 19:58
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2417MHz by 11n20	



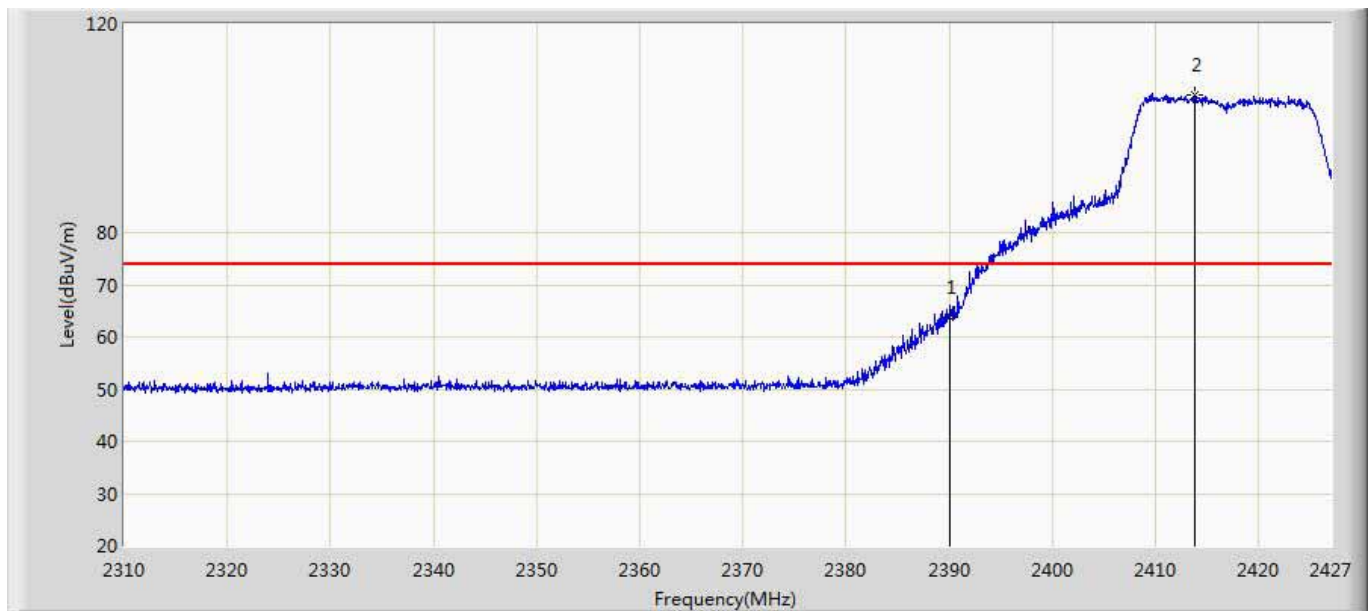
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	48.600	12.918	-5.400	54.000	35.682	AV
2	*	2412.667	95.797	60.053	41.797	54.000	35.744	AV

Engineer: Eric	
Site: AC5	Time: 2017/12/02 - 20:00
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2417MHz by 11n20	



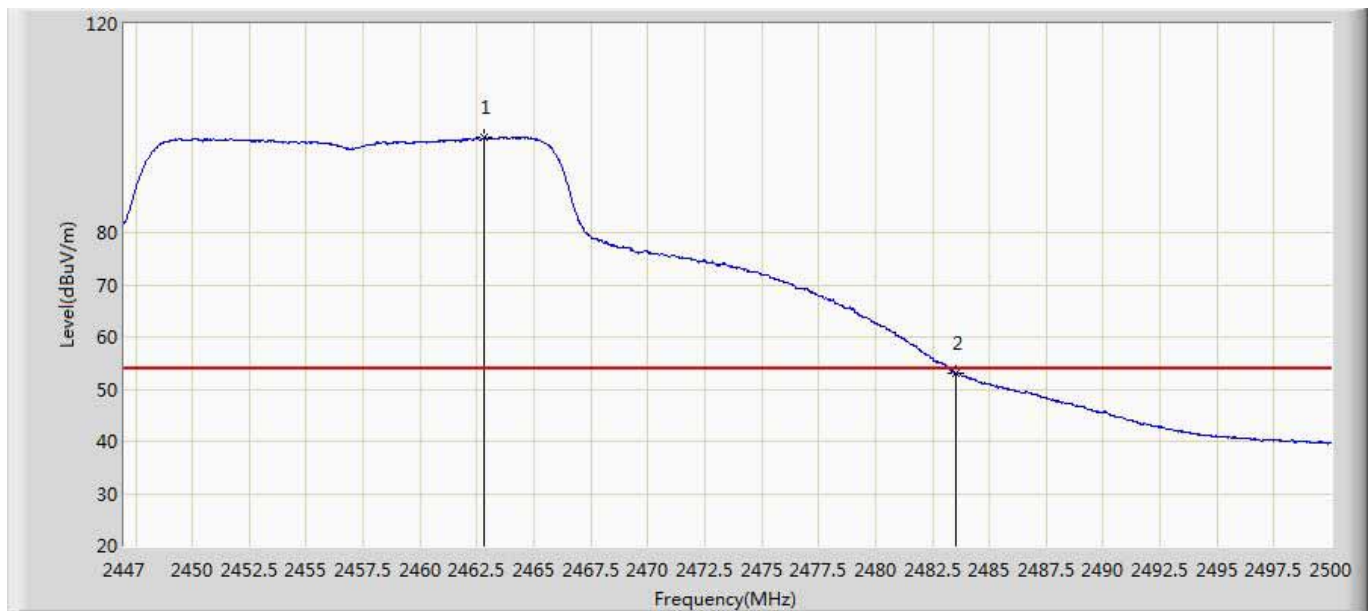
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	64.398	28.716	-9.602	74.000	35.682	PK
2	*	2419.863	106.105	70.331	32.105	74.000	35.774	PK

Engineer: Eric	
Site: AC5	Time: 2017/12/02 - 20:01
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2417MHz by 11n20	



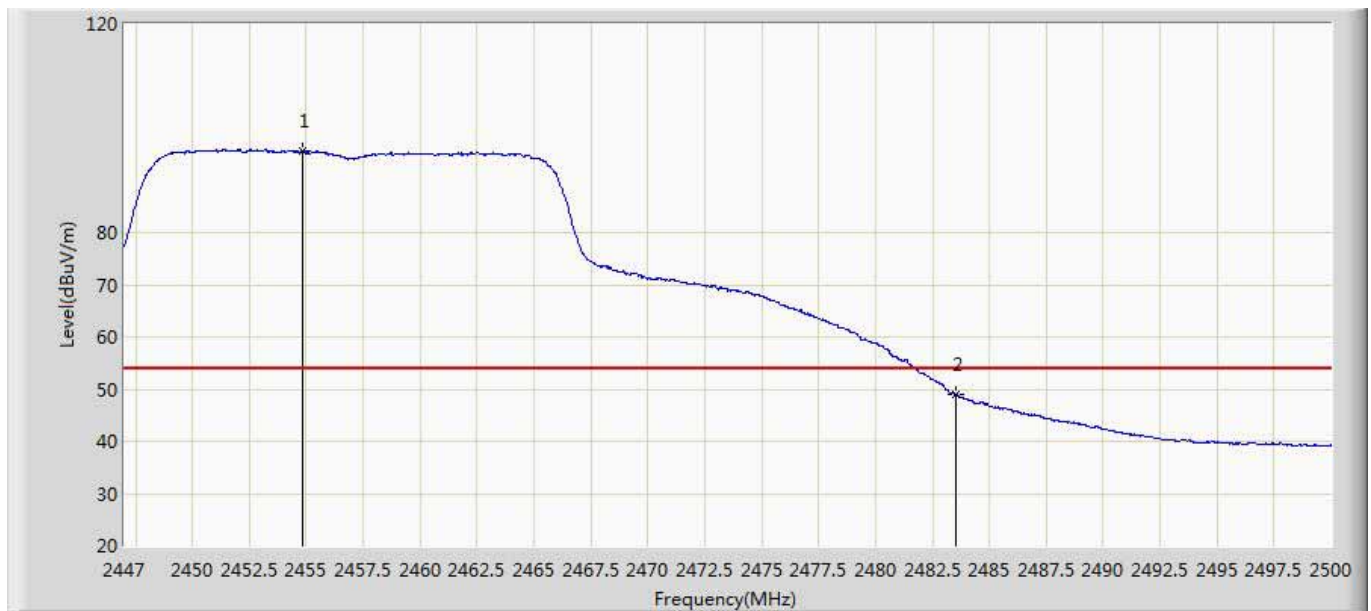
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	63.655	27.973	-10.345	74.000	35.682	PK
2	*	2413.779	106.317	70.568	32.317	74.000	35.748	PK

Engineer: Eric	
Site: AC5	Time: 2017/12/02 - 20:07
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2457MHz by 11n20	



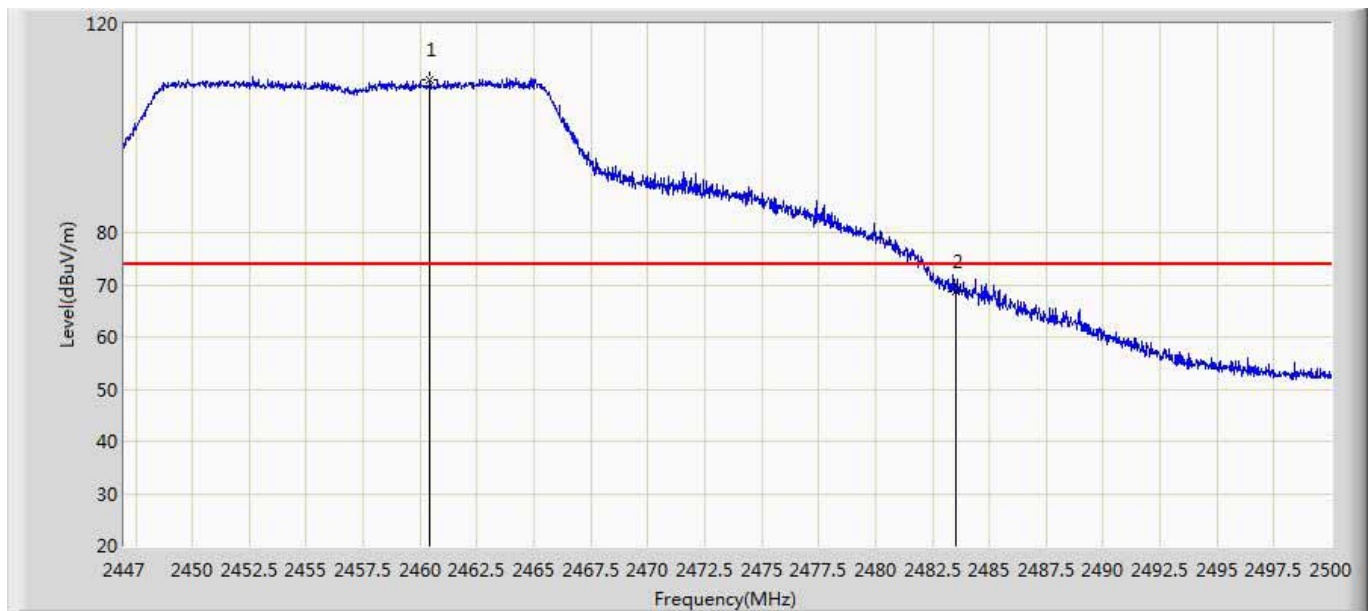
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2462.821	98.132	62.255	44.132	54.000	35.877	AV
2		2483.500	52.979	17.088	-1.021	54.000	35.891	AV

Engineer: Eric	
Site: AC5	Time: 2017/12/02 - 20:07
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2457MHz by 11n20	



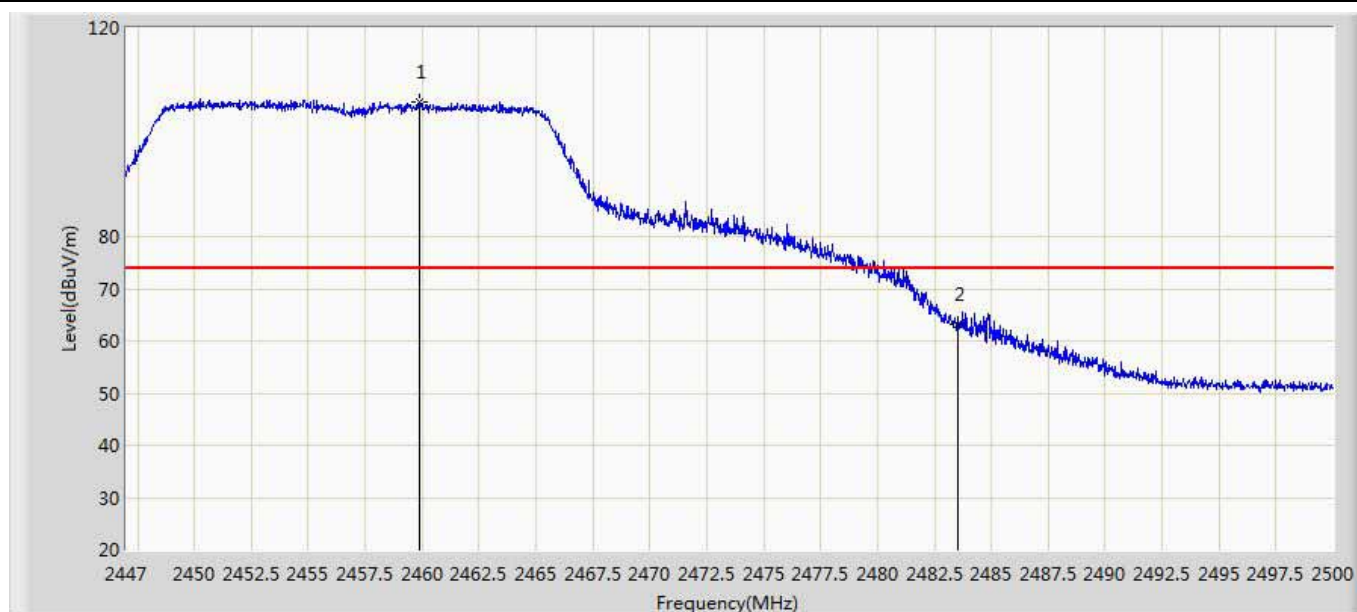
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2454.844	95.650	59.803	41.650	54.000	35.847	AV
2		2483.500	48.866	12.974	-5.134	54.000	35.891	AV

Engineer: Eric	
Site: AC5	Time: 2017/12/02 - 20:09
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2457MHz by 11n20	



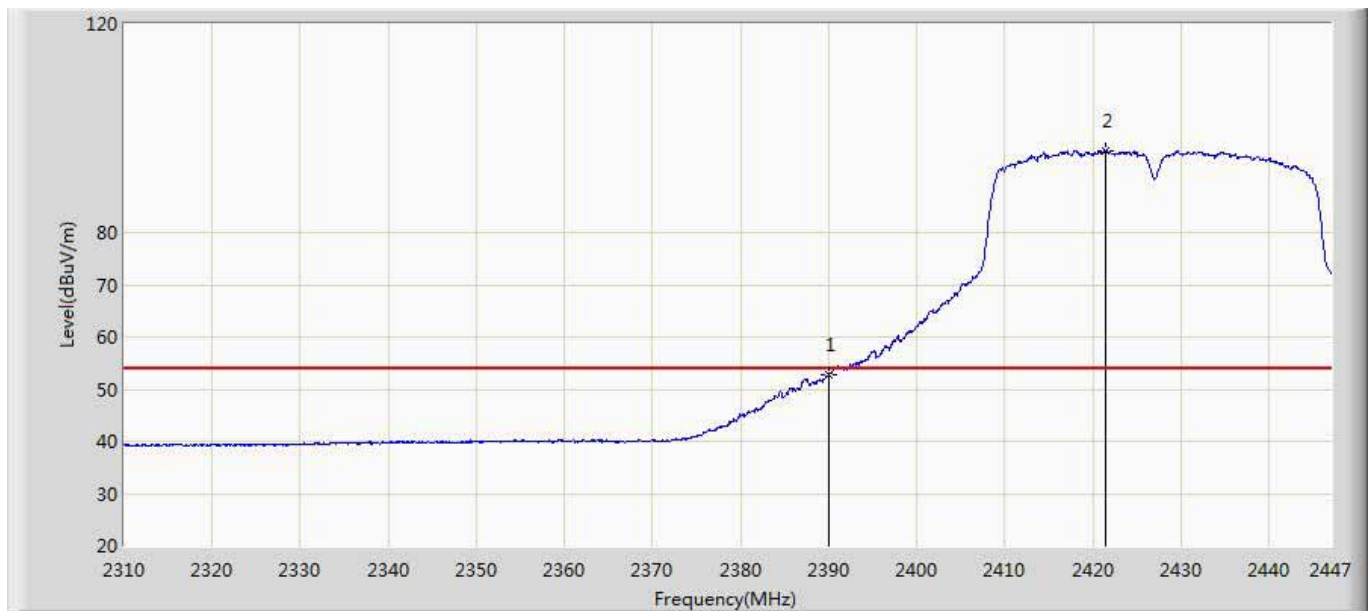
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2460.436	109.309	73.438	35.309	74.000	35.871	PK
2		2483.500	68.804	32.912	-5.196	74.000	35.891	PK

Engineer: Eric	
Site: AC5	Time: 2017/12/02 - 20:11
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2457MHz by 11n20	



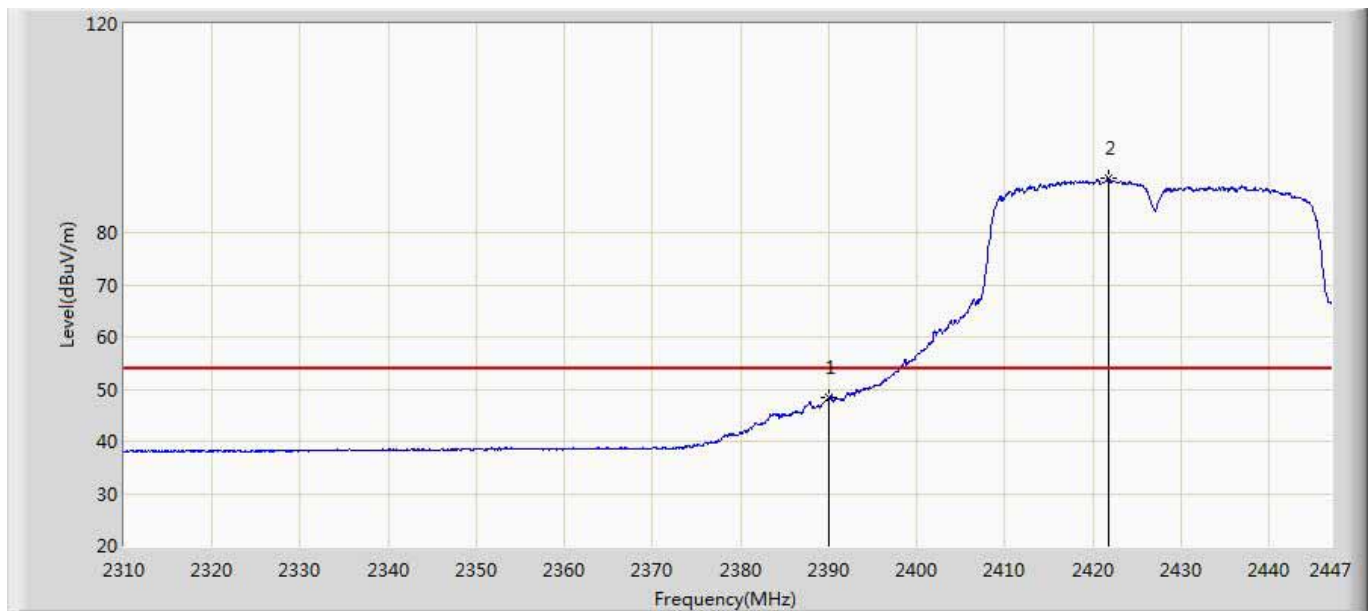
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2459.879	105.657	69.788	31.657	74.000	35.869	PK
2		2483.500	63.173	27.281	-10.827	74.000	35.891	PK

Engineer: Eric	
Site: AC5	Time: 2017/12/02 - 20:20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2427MHz by 11n40	



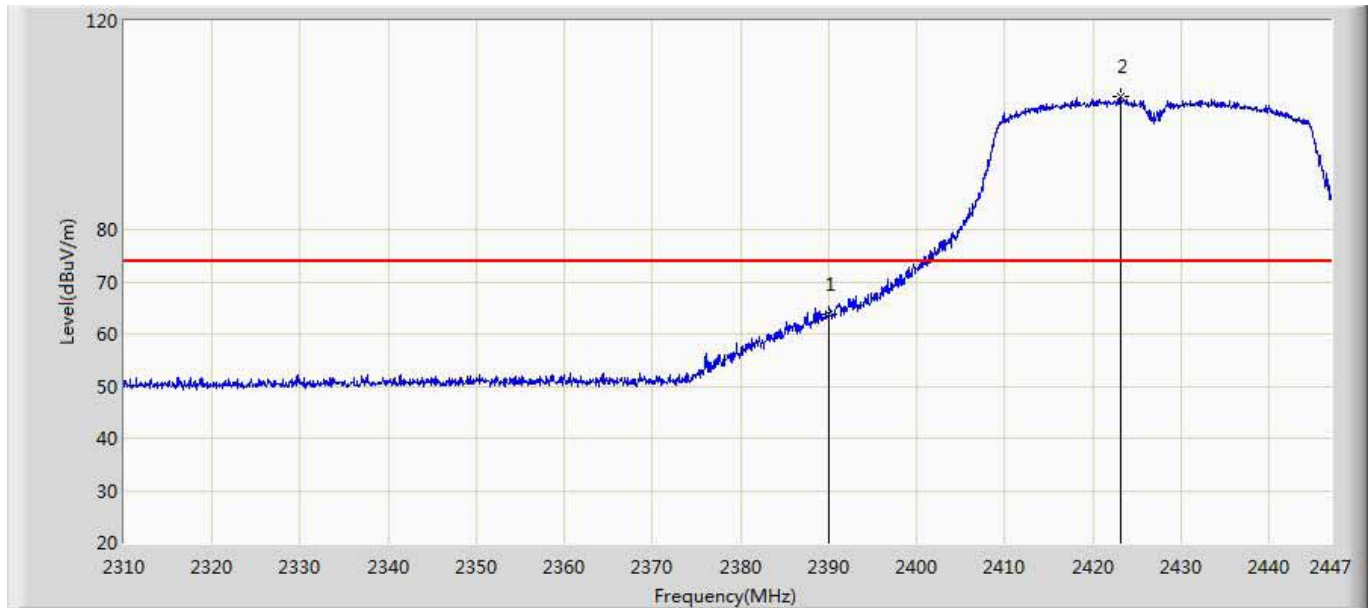
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	52.833	17.151	-1.167	54.000	35.682	AV
2	*	2421.381	95.729	59.948	41.729	54.000	35.781	AV

Engineer: Eric	
Site: AC5	Time: 2017/12/02 - 20:20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2427MHz by 11n40	



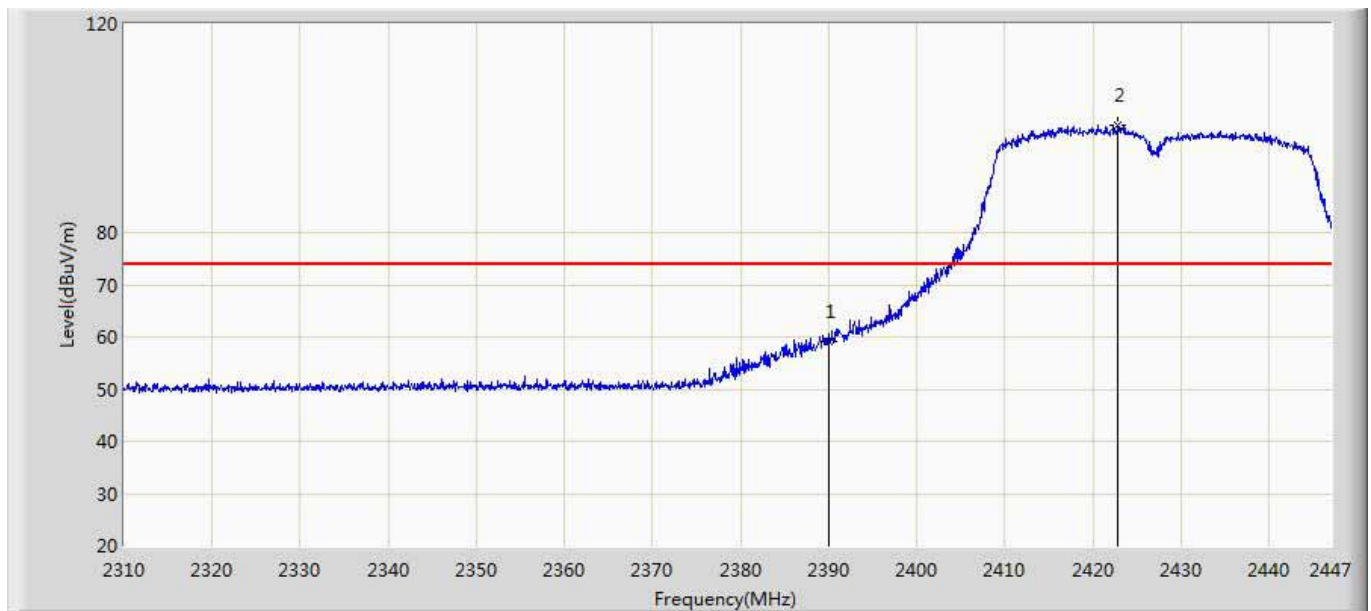
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	48.412	12.730	-5.588	54.000	35.682	AV
2	*	2421.723	90.445	54.663	36.445	54.000	35.782	AV

Engineer: Eric	
Site: AC5	Time: 2017/12/02 - 20:22
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2427MHz by 11n40	



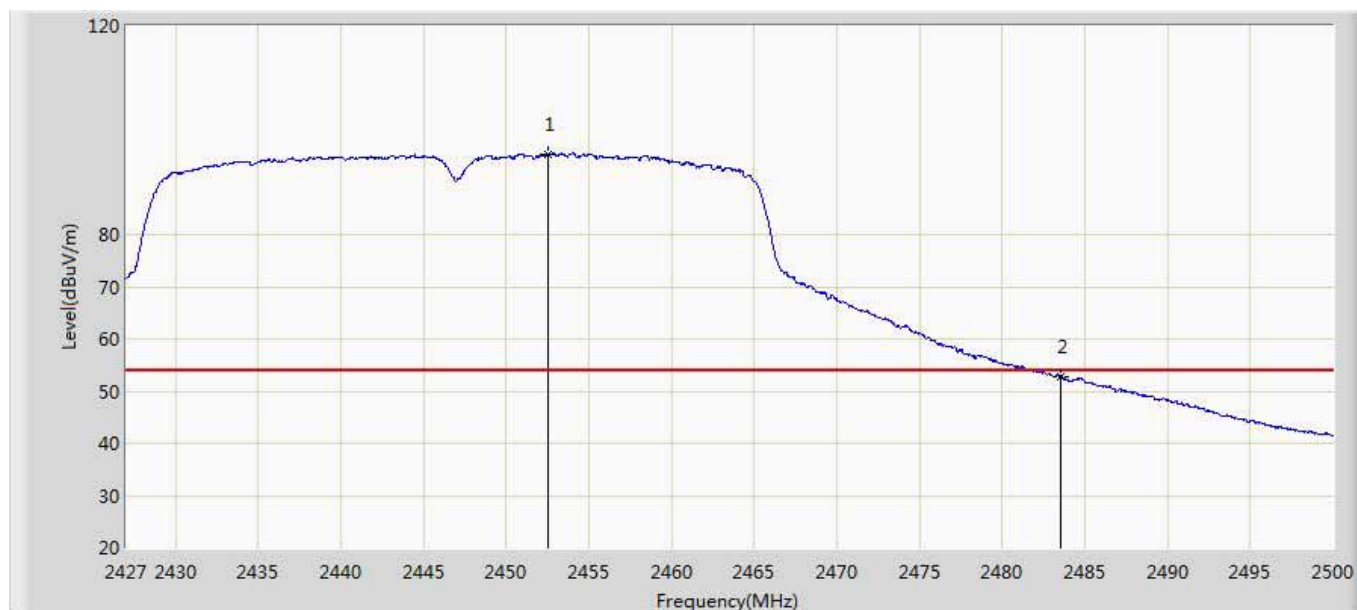
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	63.624	27.942	-10.376	74.000	35.682	PK
2	*	2423.162	105.389	69.601	31.389	74.000	35.788	PK

Engineer: Eric	
Site: AC5	Time: 2017/12/02 - 20:24
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2427MHz by 11n40	



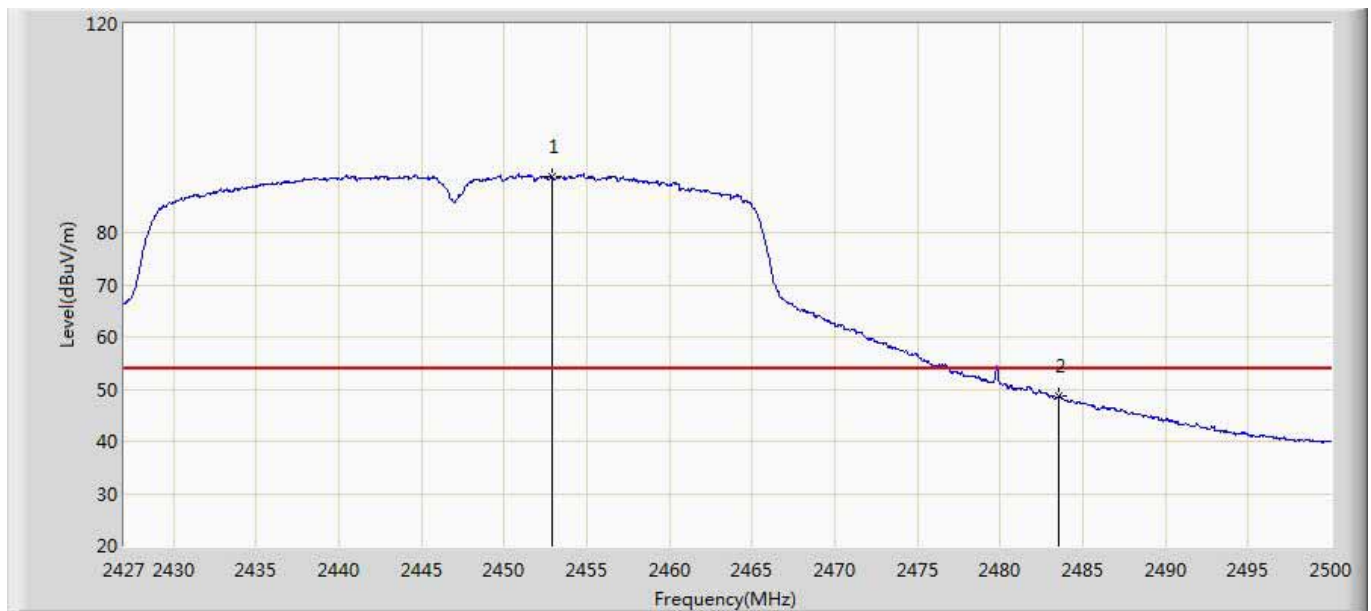
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	59.015	23.333	-14.985	74.000	35.682	PK
2	*	2422.820	100.619	64.832	26.619	74.000	35.787	PK

Engineer: Eric	
Site: AC5	Time: 2017/12/02 - 20:25
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2447MHz by 11n40	



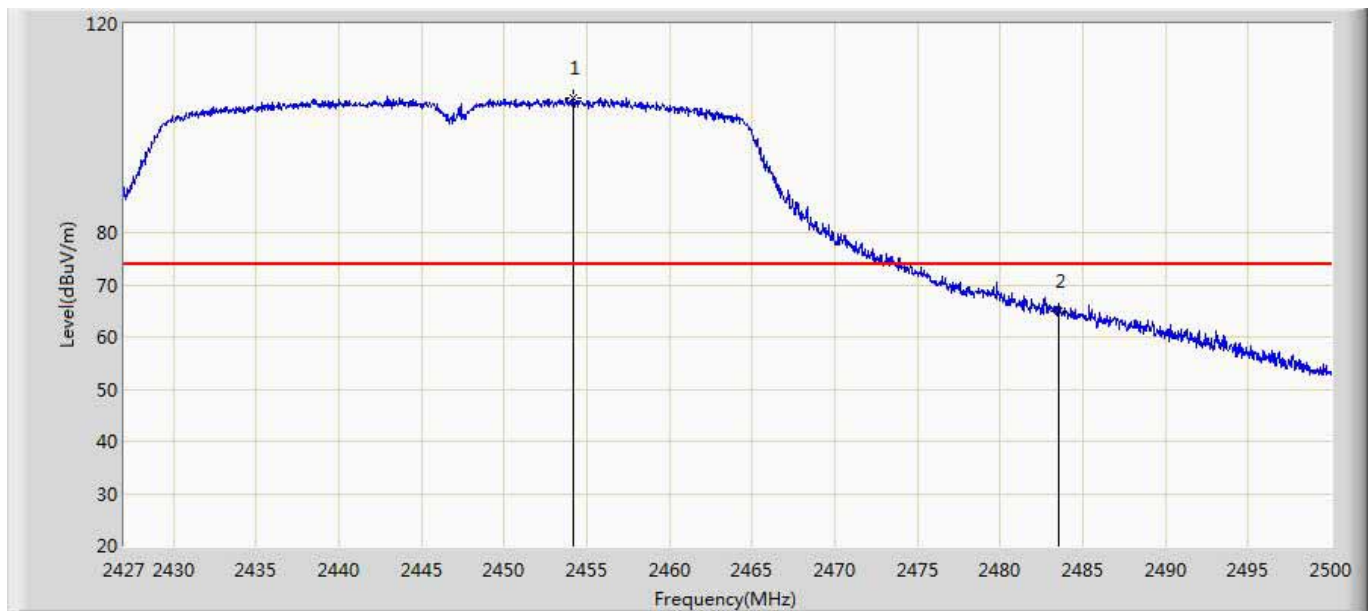
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2452.550	95.354	59.517	41.354	54.000	35.837	AV
2		2483.500	52.683	16.791	-1.317	54.000	35.891	AV

Engineer: Eric	
Site: AC5	Time: 2017/12/02 - 20:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2447MHz by 11n40	



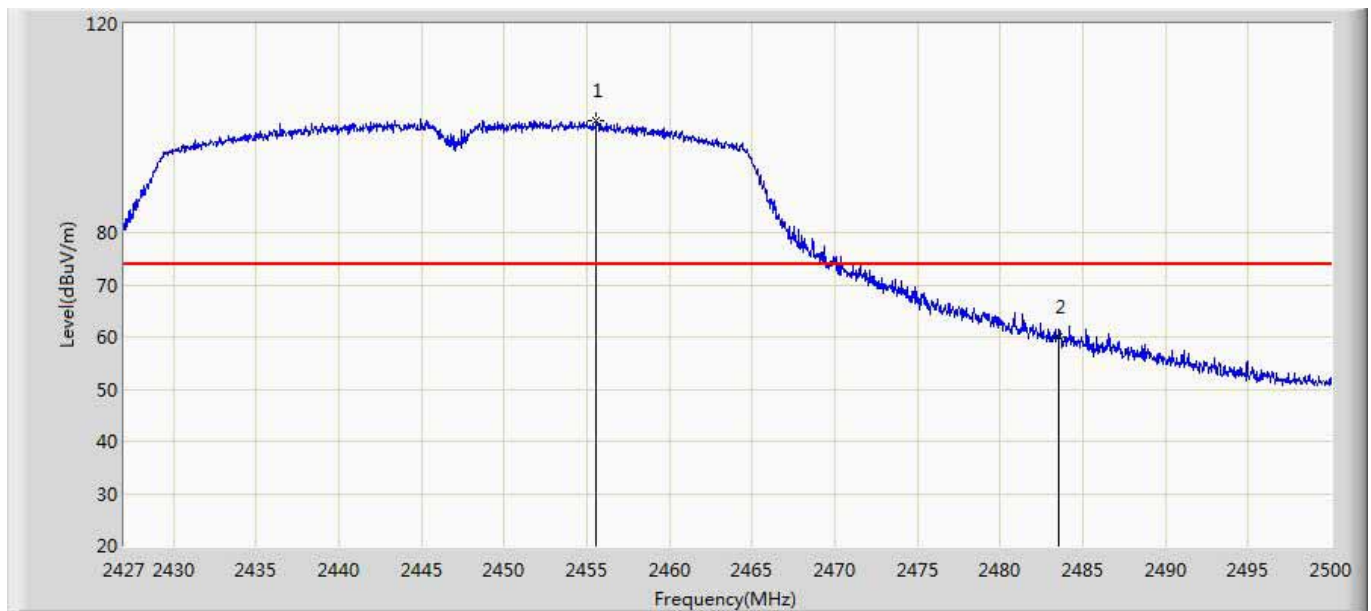
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2452.878	90.669	54.831	36.669	54.000	35.838	AV
2		2483.500	48.659	12.767	-5.341	54.000	35.891	AV

Engineer: Eric	
Site: AC5	Time: 2017/12/02 - 20:41
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2447MHz by 11n40	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2454.156	105.677	69.833	31.677	74.000	35.844	PK
2		2483.500	65.055	29.163	-8.945	74.000	35.891	PK

Engineer: Eric	
Site: AC5	Time: 2017/12/02 - 20:42
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Smart Wi-Fi Plug Mini	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2447MHz by 11n40	



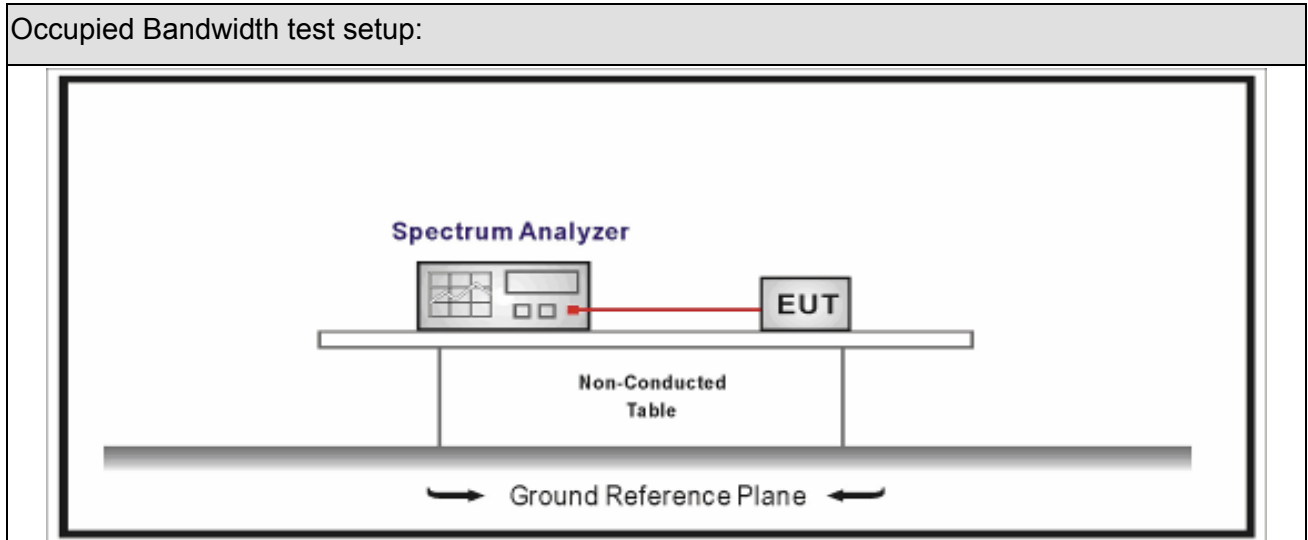
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2455.580	101.573	65.723	27.573	74.000	35.850	PK
2		2483.500	60.039	24.147	-13.961	74.000	35.891	PK

7. Occupied Bandwidth

a) Test Equipment

Occupied Bandwidth / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2017.02.04	2018.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2017.04.09	2018.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2017.04.09	2018.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2017.04.10	2018.04.09
Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

b) Test Setup



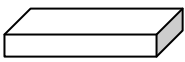
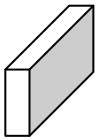
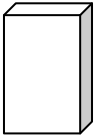
c) Limit**Occupied Bandwidth**

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

d) 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

e) 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 1		
				
	☐	Chain 1	Chain 2	
				
	☐	Chain 1	Chain 2	Chain 3
				

f) Test Result

Product Name	: Smart Wi-Fi Plug Mini	Power	: AC 120V/60Hz
Test Mode	: Mode1~4	Test Site	: TR8
Test Date	: 2017.09.16		

Mode	CH.	Test Freq. (MHz)	99% Occupied Bandwidth (MHz)	6dB Occupied Bandwidth (MHz)	Limit (kHz)	Result
1	01	2412	14.693	9.212	>500	Pass
1	06	2437	14.720	9.207	>500	Pass
1	11	2462	14.069	9.109	>500	Pass
2	01	2412	16.912	16.43	>500	Pass
2	06	2437	17.896	17.65	>500	Pass
2	11	2462	16.780	16.44	>500	Pass
3	01	2412	17.887	17.65	>500	Pass
3	06	2437	17.897	17.64	>500	Pass
3	11	2462	17.904	17.63	>500	Pass
4	03	2422	36.233	35.52	>500	Pass
4	06	2437	36.063	35.19	>500	Pass
4	09	2452	36.152	35.50	>500	Pass

Note : The worst case of Occupied Bandwidth as below:

Mode 1 CH11 (2462MHz) Ant0



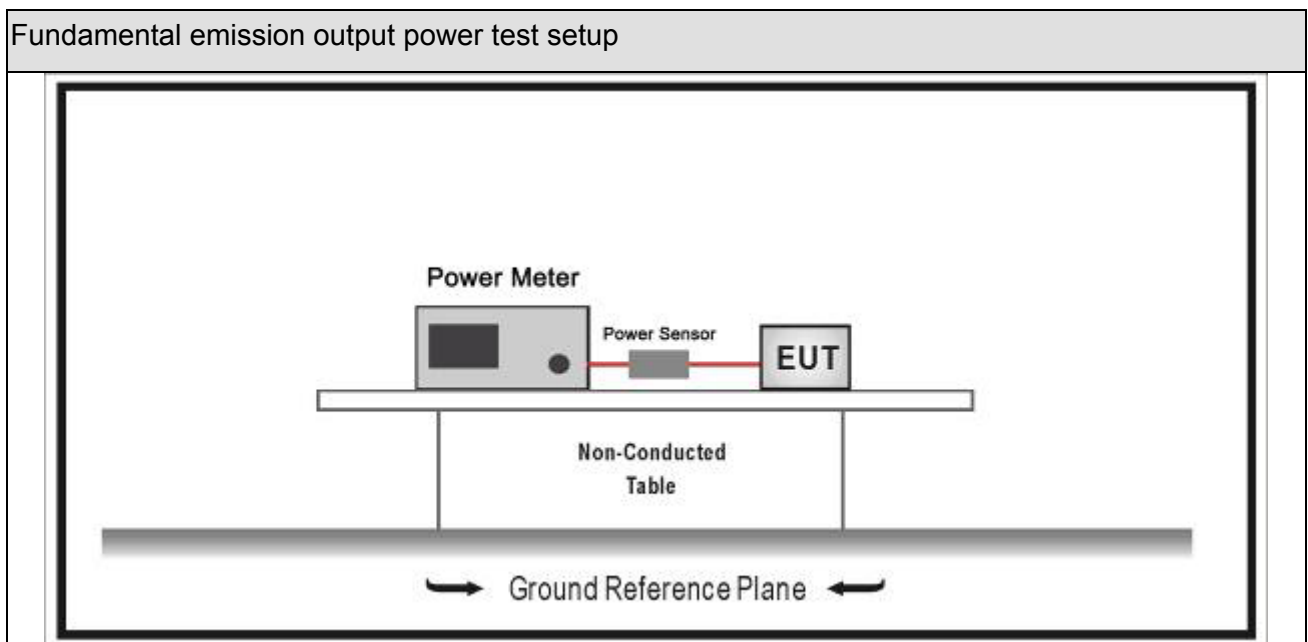
8. Fundamental emission output power

a) Test Equipment

Fundamental emission output power/ TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2017.01.03	2018.01.02
Spectrum Analyzer	Agilent	N9010A	MY48030494	2017.02.04	2018.02.03
Wideband Peak Power Meter	Anritsu	ML2495A	0905006	2017.10.14	2018.10.13
Power Sensor	Anritsu	MA2411B	0846014	2017.10.14	2018.10.13
Temperature/Humidity Meter	zhicheng	ZC1-2	TR8-TH	2017.04.10	2018.04.09

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

b) Test Setup



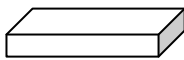
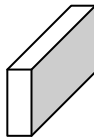
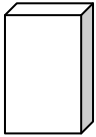
c) Limit

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	$P_{out} \leq 30 - [(G_{TX} - 6)]/3$
☐	emits multiple directional beams but does not do emit multiple directional beams simultaneously	$P_{out} \leq 30 - [(G_{TX} - 6)]/3$
☐	operates simultaneously on multiple directional beams using the same or different frequency channels	$P_{out} \leq 30 - [(G_{TX} - 6)]/3 + 8\text{dB}$
☐	single directional beam	$P_{out} \leq 30 - [(G_{TX} - 6)]/3$
Note 1 : G_{TX} directional gain of transmitting antennas.		
Note 2 : P_{out} is maximum peak conducted output power .		

d) 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

e) 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 1		
				
	☐	Chain 1	Chain 2	
				
	☐	Chain 1	Chain 2	Chain 3
				

f) Test Result

Product Name	:	Smart Wi-Fi Plug Mini	Power	:	AC 120V/60Hz
Test Mode	:	Mode1~4	Test Site	:	TR8
Test Date	:	2017.10.11			

Mode	Channel	Test Frequency (MHz)	Peak Power Output (dBm)	Antenna Gain (dBi)	Limit (dBm)	Result
1	01	2412	21.15	2	30	Pass
1	02	2417	21.87	2	30	Pass
1	06	2437	22.86	2	30	Pass
1	10	2457	21.26	2	30	Pass
1	11	2462	20.62	2	30	Pass
2	01	2412	15.71	2	30	Pass
2	02	2417	17.84	2	30	Pass
2	06	2437	21.80	2	30	Pass
2	10	2457	17.76	2	30	Pass
2	11	2462	14.19	2	30	Pass
3	01	2412	15.21	2	30	Pass
3	02	2417	17.78	2	30	Pass
3	06	2437	21.69	2	30	Pass
3	10	2457	17.66	2	30	Pass
3	11	2462	14.22	2	30	Pass

4	03	2422	12.63	2	30	Pass
4	04	2427	14.28	2	30	Pass
4	06	2437	17.15	2	30	Pass
4	08	2447	14.17	2	30	Pass
4	09	2452	12.24	2	30	Pass

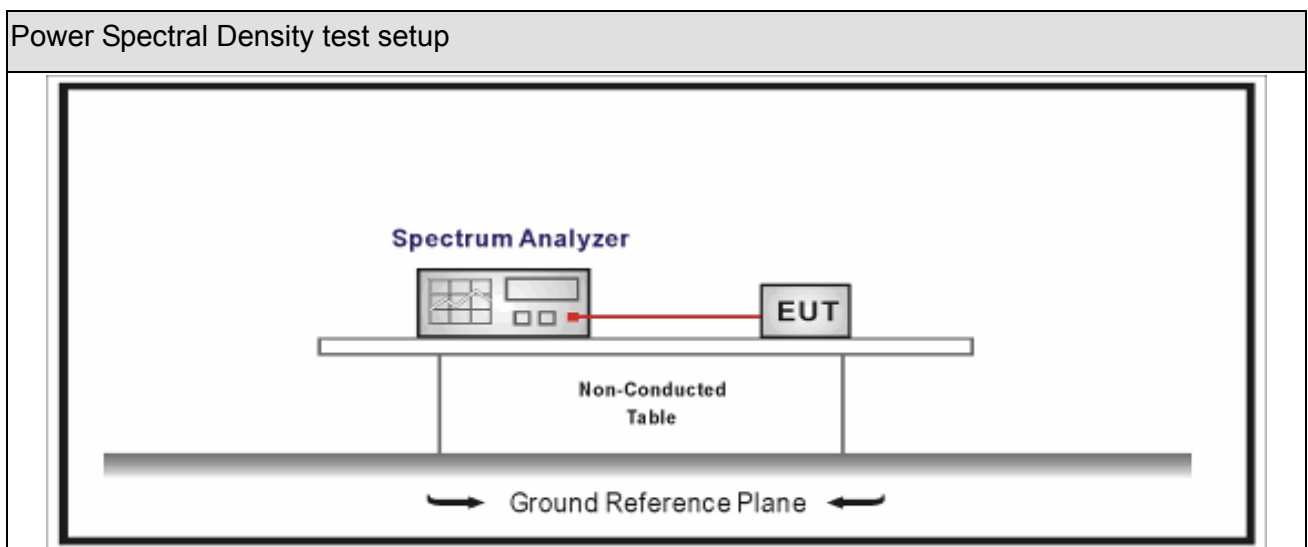
9. Power Spectral Density

a) Test Equipment

Power Spectral Density / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2017.02.04	2018.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2017.04.09	2018.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2017.04.09	2018.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2017.04.10	2018.04.09

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

b) Test Setup



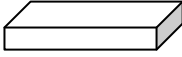
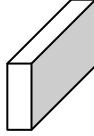
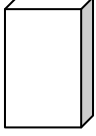
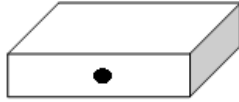
c) Limit

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

d) 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 ≥ 98%)
	☐	ANSI C63.10	11.10.4	Method AVGPSD-1A(Duty cycle ≥ 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

e) 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 1		
				
	☐	Chain 1	Chain 2	
				
	☐	Chain 1	Chain 2	Chain 3
				

f) Test Result

Product Name	: Smart Wi-Fi Plug Mini	Power	: AC 120V/60Hz
Test Mode	: Mode1~4	Test Site	: TR8
Test Date	: 2017.08.24		

Mode	Channel	Test Frequency (MHz)	Measurement PSD (dBm/3kHz)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
1	01	2412	-4.410	-4.410	8.0	Pass
1	06	2437	-1.684	-1.684	8.0	Pass
1	11	2462	-3.513	-3.513	8.0	Pass
2	01	2412	-6.655	-6.655	8.0	Pass
2	06	2437	-4.591	-4.591	8.0	Pass
2	11	2462	-10.254	-10.254	8.0	Pass
3	01	2412	-8.991	-8.991	8.0	Pass
3	06	2437	-4.395	-4.395	8.0	Pass
3	11	2462	-9.339	-9.339	8.0	Pass
4	03	2422	-15.717	-15.717	8.0	Pass
4	06	2437	-11.502	-11.502	8.0	Pass
4	09	2452	-15.251	-15.251	8.0	Pass

Note : The worst case of Occupied Bandwidth as below:

Mode 1 CH06 (2437MHz)



10. Antenna Requirement

a) Limit

Antenna Requirement Limit

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

b) Antenna Connector Construction

The EUT use permanently attached antennas and comply with FCC 15.203.

_____ The End _____