Test Report

FCC Part15 Subpart C (Class II Permissive Change)

Product Name	:	AC750 Wireless Dual Band Gigabit Router
Model No.	:	Archer C2
FCC ID	:	TE7C2

Applicant	:	TP-LINK TECHNOLOGIES CO., LTD.
Address	:	Building 24 (floors 1,3,4,5) and 28 (floors1-4) Central Science and Technology Park,Shennan Rd, Nanshan, Shenzhen,China

Date of Receipt	:	Feb. 18, 2016
Test Date	:	Feb. 19, 2016~May. 16, 2016
Issued Date	:	May. 26, 2016
Report No.	:	1612033R-RF-US-P06V01
Report Version	:	V1.0

Note: This report is based on AUDIX ACS-F14155, it is only update the regulation, so we re-evaluate items are output power, radiated emission and bandedge.

Test Report Certification

Issued Date : May. 26, 2016
Report No. : 1612033R-RF-US-P06V01

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Address	:	Building 24 (floors 1,3,4,5) and 28 (floors1-4) Central Science and Technology Park,Shennan Rd, Nanshan, Shenzhen,China
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Model No.	:	Archer C2
FCC ID	:	TE7C2
EUT Voltage	:	AC 100-240V, 50/60Hz
Brand Name	:	TP-LINK
Applicable Standard	:	FCC CFR Title 47 Part 15 Subpart C: 2015 ANSI C63.4:2014; ANSI C63.10:2013; KDB 558074 D01v03r05 KDB 662911 D01 Multiple Transmitter Output v02r01
Test Result	:	Complied
Performed Location	:	Quietek Corporation - Suzhou EMC Laboratory No.99 Hongye Rd., Suzhou Industrial Park, Suzhou, 215006, Jiangsu, China TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098 FCC Registration Number: 800392

Documented By : Alice Ni
(Senior Adm. Specialist: Alice Ni)

Reviewed By : Jack zhang
(Senior Engineer: Jack Zhang)

Approved By : Harry zhao
(Engineering Manager : Harry Zhao)

Laboratory Information

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

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

The related certificate for our laboratories about the test site and management system can be downloaded from QuieTek Corporation's Web Site : http://www.quietek.com/english/about/certificates.aspx?bval=5
The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site : http://www.quietek.com/index_en.aspx
If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

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TEL : 886-2-8601-3788 / FAX : 886-2-8601-3789 E-Mail : service@quietek.com

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TEL : +86-512-6251-5088 / FAX : 86-512-6251-5098 E-Mail : service@quietek.com

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History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
1612033R-RF-US-P06V01	V1.0	Initial Issued Report	May. 26, 2016

1. General Information

1.1. EUT Description

Product Name	AC750 Wireless Dual Band Gigabit Router
Brand Name	TP-LINK
Model No.	Archer C2
EUT Voltage	AC 100-240V, 50/60Hz
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/n: OFDM
Data Rate	802.11g: 6/9/12/18/24/36/48/54 Mbps
	802.11b: 1/2/5.5/11 Mbps
	802.11n: up to 300 Mbps
Channel Control	Auto

1.2. Working Frequency of Each Channel:

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

1.3. Antenna information

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

Antenna Technology	Ant Gain (dBi)	Directional Gain (dBi)	
		For Power	For PSD
☒ CDD	Ant 0: 2 Ant 1: 2	2	5
☐ Beam-forming	N/A	N/A	N/A

1.4. Mode of Operation

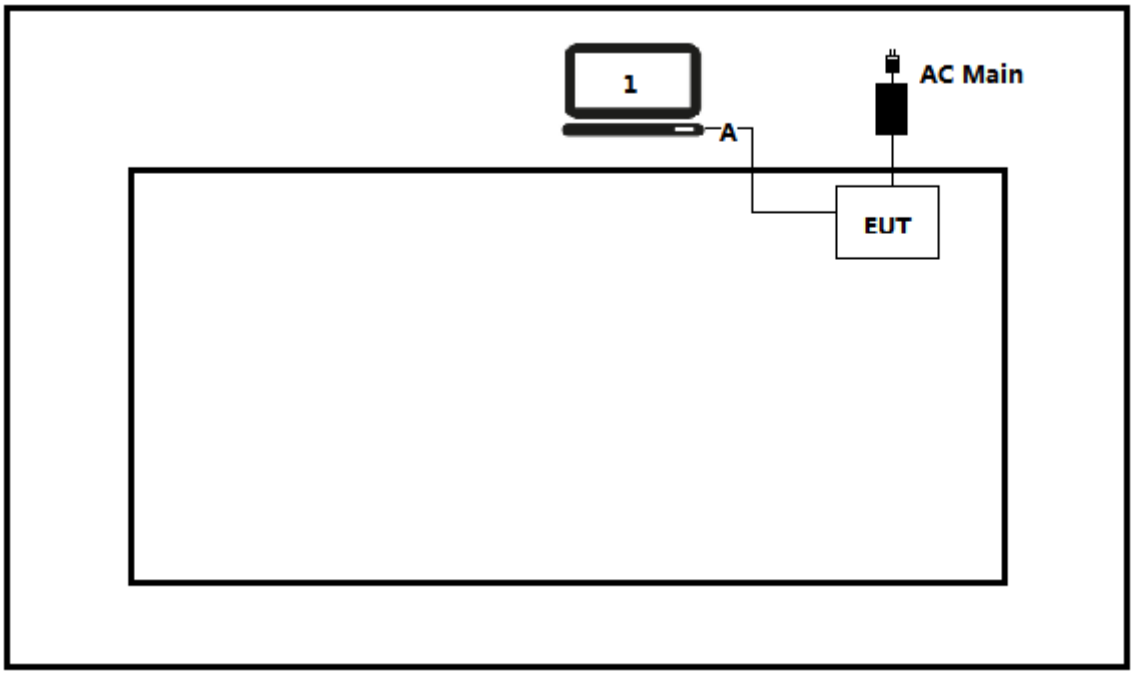
Test Modes List
Mode 1: Transmit by 802.11b with CDD
Mode 2: Transmit by 802.11g with CDD
Mode 3: Transmit by 802.11n(20MHz) with CDD
Mode 4: Transmit by 802.11n(40MHz) with CDD

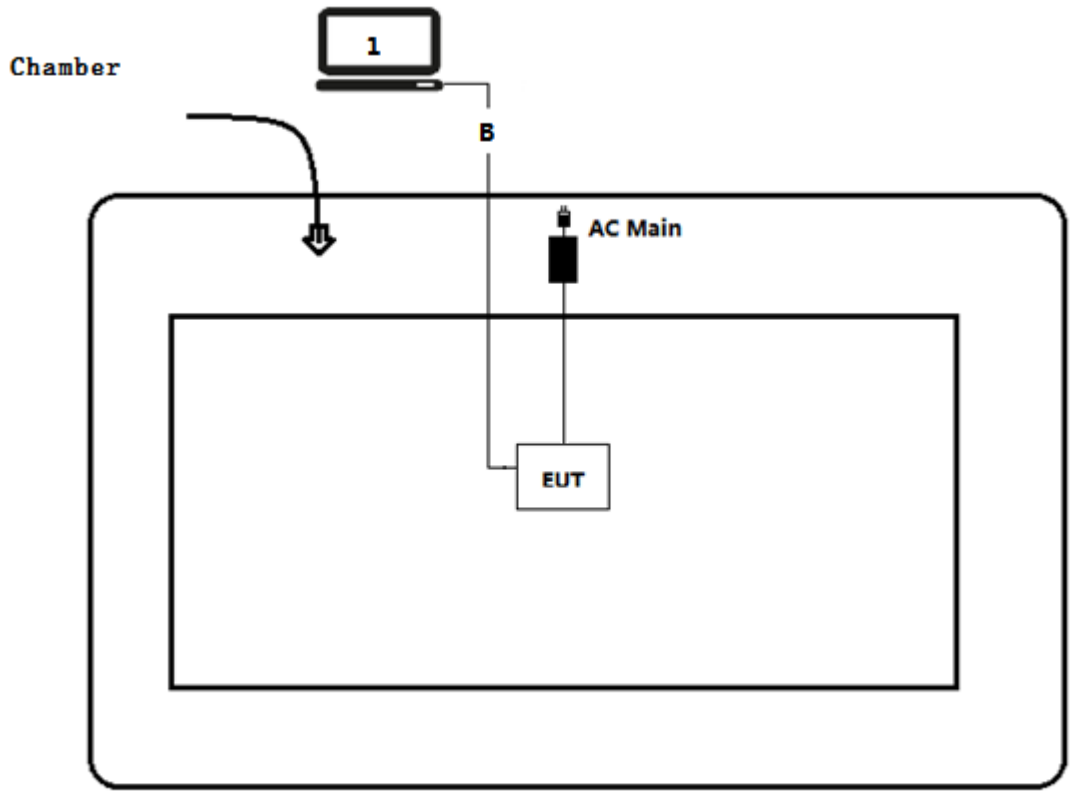
1.5. Tested System Details

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

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

1.6. Configuration of Tested System

Test setup Diagram- AC Line Conducted Emission Test


Test setup Diagram- Radiated Emission


2. Technical Test

2.1. Summary of Test Result

Performed Test Item	Normative References	Worst case mode	Limit	Result
Emissions in restricted frequency bands	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.209	802.11g	FCC 15.209	PASS
Radiated Emission Band Edge	FCC CFR Title 47 Part 15 Subpart C: 2015 15.247(d)	802.11g	FCC 15.209	PASS
Fundamental emission output power	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(b)(3)	802.11b	≤30dBm	PASS

2.2. Test Frequency configuration:

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

2.3. Power setting parameter

Test Software	Cart		
Modulation Mode	Test Frequency	Ant 0	Ant 1
802.11b	2412	15	19
	2437	16	18
	2462	13	17
802.11g	2412	5	9
	2437	10	12
	2462	0	4
802.11n(20MHz)	2412	11	13
	2437	9	11
	2462	5	11
802.11n(40MHz)	2422	6	10
	2437	10	12
	2452	3	7

Note: The device can only support MIMO mode.

2.4. Power vs Data Rate

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

2.5. Test Environment

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

2.6. Measurement Uncertainty

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

3. Emissions in restricted frequency bands

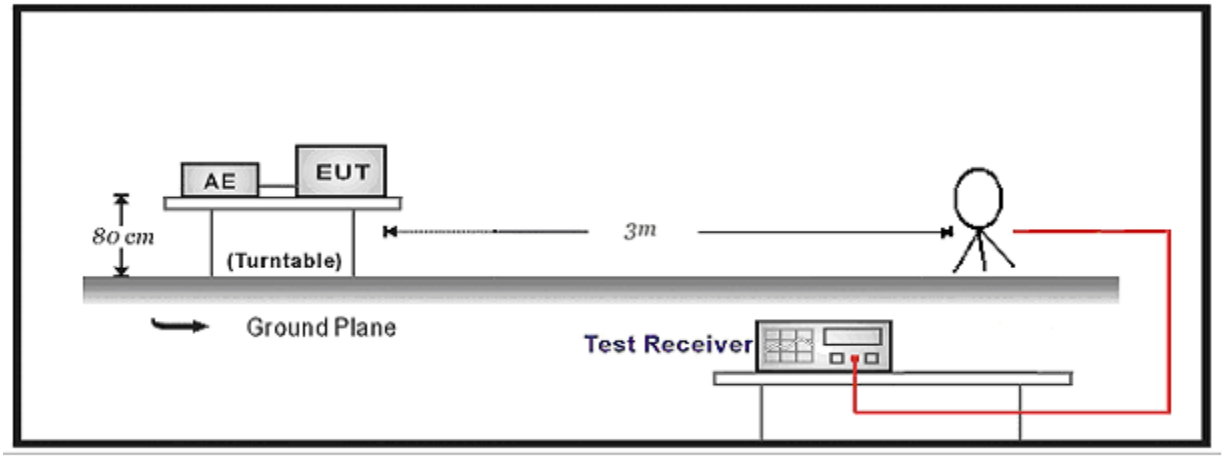
3.1. Test Equipment

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

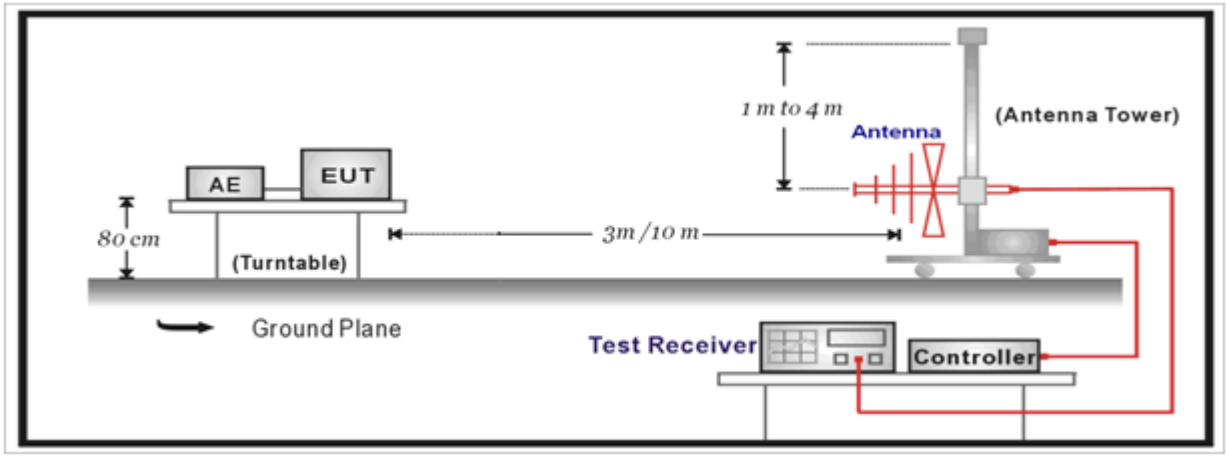
Emissions in restricted frequency bands / AC-5					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2016.01.04	2017.01.03
Preamplifier	Miteq	NSP1800-25	1364185	2016.05.06	2017.05.05
Preamplifier	QuieTek	AP-040G	CHM-0906001	2016.05.06	2017.05.05
DRG Horn	ETS-Lindgren	3117	00123988	2016.01.22	2017.01.21
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2015.11.25	2016.11.24
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2016.03.02	2017.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2016.03.02	2017.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	AC5-C3	2016.03.02	2017.03.01
EMI Receiver	Agilent	N9038A	MY51210196	2015.06.10	2016.06.09
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2016.01.04	2017.01.03
Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

3.2. Test Setup

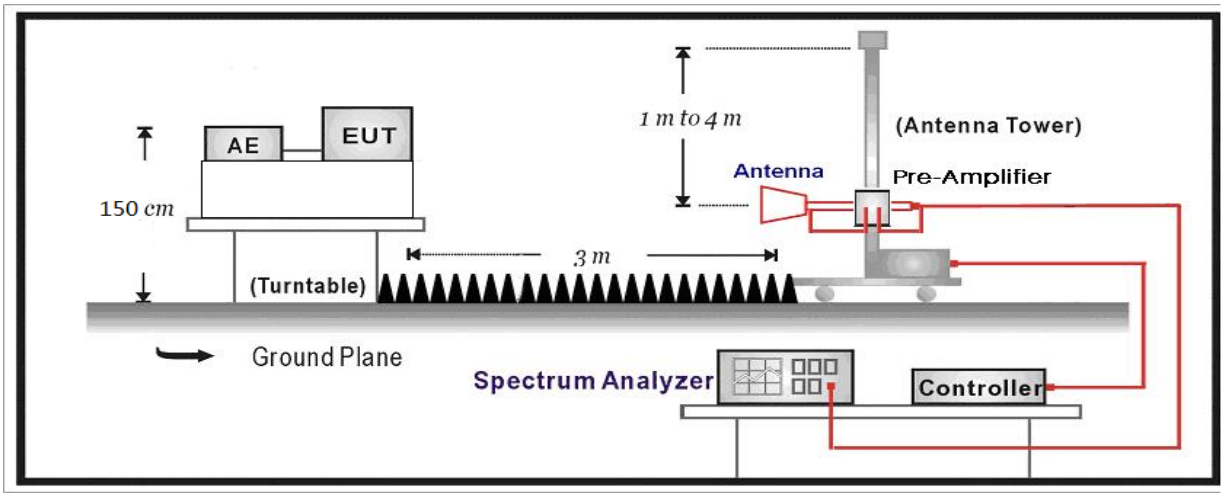
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:



3.3. Limit

Restricted Bands			
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)

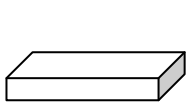
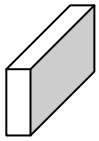
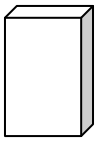
Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed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

3.4. Test Procedure

Test Method						
	References Rule				Chapter	Description
☐	ANSI C63.10				11.11	Emissions in non-restricted frequency bands
	☐	ANSI C63.10			11.11.2	Reference level measurement
	☐	ANSI C63.10			11.11.3	Emission level measurement
☒	ANSI C63.10				11.12	Emissions in restricted frequency bands
	☒	ANSI C63.10			11.12.1	Radiated emission measurements
	☒	ANSI C63.10			11.12.2.7	Radiated spurious emission test
		☒	ANSI C63.10		6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
		☒	ANSI C63.10		6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
		☒	ANSI C63.10		6.6	Radiated emissions from unlicensed wireless devices above 1 GHz
	☐	ANSI C63.10			11.12.2	Antenna-port conducted measurements
		☐	ANSI C63.10		11.12.2.3	Quasi-peak measurement procedure
		☐	ANSI C63.10		11.12.2.4	Peak power measurement procedure
		☒	ANSI C63.10		11.12.2.5	Average power measurement procedures
			☐	ANSI C63.10	11.12.2.5.1	Trace averaging with continuous EUT transmission at full power
			☐	ANSI C63.10	11.12.2.5.2	Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction
			☒	ANSI C63.10	11.12.2.5.3	Reduced VBW averaging across ON and OFF times of the EUT transmissions with max hold

3.5. EUT test Axis definition

<table>
<tr><td>Item</td><td colspan="4">Radiated Emission</td></tr>
<tr><td rowspan="4">Device Category</td><td>☒</td><td colspan="3">Indoor use</td></tr>
<tr><td>☐</td><td colspan="3">Outdoor use</td></tr>
<tr><td>☐</td><td colspan="3">Fix position use</td></tr>
<tr><td>☐</td><td colspan="3">Mobile position use</td></tr>
<tr><td>Test mode</td><td colspan="4">Mode 1-4</td></tr>
<tr><td rowspan="11">Test method</td><td>☒</td><td colspan="3">Radiated</td></tr>
<tr><td rowspan="3"></td><td>X Axis</td><td>Y Axis</td><td>Z Axis</td></tr>
<tr><td>  </td><td>  </td><td>  </td></tr>
<tr><td>Worst Axis ☒</td><td>Worst Axis ☐</td><td>Worst Axis ☐</td></tr>
<tr><td>☐</td><td colspan="3">Conducted</td></tr>
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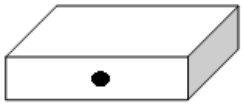
<tr><td></td><td colspan="3">  </td></tr>
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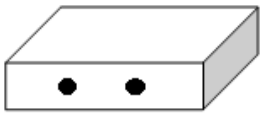
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☐</td><td>Chain 0</td><td>Chain 1</td><td>Chain 2</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
</table>

3.6. Test Result

Product Name	:	AC750 Wireless Dual Band Gigabit Router	Power	:	AC 120V/60Hz
Test Mode	:	Mode 1	Test Site	:	AC-5

Chain	CH	Antenna Polarity	Frequency (MHz)	Measure Level (dB μV/m)	Reading Level (dB μV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Detector
Ant 0+1	1	H	4825.000	47.794	39.814	-6.206	54(Note3)	7.980	PK
		H	7236.000	46.237	33.269	-7.763	54(Note3)	12.967	PK
		H	9648.000	46.187	30.169	-7.813	54(Note3)	16.019	PK
		V	4825.000	51.059	43.079	-2.941	54(Note3)	7.980	PK
		V	7239.000	51.186	38.199	-2.814	54(Note3)	12.987	PK
		V	9648.000	46.973	30.955	-7.027	54(Note3)	16.019	PK
	6	H	4876.000	51.336	43.178	-2.664	54(Note3)	8.158	PK
		H	7307.000	48.767	36.319	-5.233	54(Note3)	12.448	PK
		H	9748.000	45.680	29.796	-8.320	54(Note3)	15.884	PK
		V	4876.000	53.313	45.155	-0.687	54(Note3)	8.158	PK
		V	7307.000	56.669	44.221	-17.331	74	12.448	PK
		V	7310.300	53.843	41.286	-0.157	54	12.557	AV
		V	9748.000	46.499	30.615	-7.501	54(Note3)	15.884	PK
	11	H	4927.000	53.264	44.981	-0.736	54(Note3)	8.283	PK
		H	7392.000	50.538	37.994	-3.462	54(Note3)	12.544	PK
		H	9848.000	46.866	30.525	-7.134	54(Note3)	16.341	PK
		V	4927.000	53.790	45.507	-0.210	54(Note3)	8.283	PK
		V	7392.000	53.887	41.343	-0.113	54(Note3)	12.544	PK
		V	9848.000	46.686	30.345	-7.314	54(Note3)	16.341	PK

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

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

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

Note: 4. The RBW setting, see Clause 4.6.

Product Name	:	AC750 Wireless Dual Band Gigabit Router	Power	:	AC 120V/60Hz
Test Site	:	Mode 2	Test Site	:	AC-5

Chain	CH	Antenna Polarity	Frequency (MHz)	Measure Level (dB μV/m)	Reading Level (dB μV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Detector
Ant 0+1	1	H	4824.000	45.697	37.717	-8.303	54(Note3)	7.979	PK
		H	7236.000	46.445	33.477	-7.555	54(Note3)	12.967	PK
		H	9648.000	46.888	30.870	-7.112	54(Note3)	16.019	PK
		V	4825.000	47.851	39.871	-6.149	54(Note3)	7.980	PK
		V	7239.000	50.987	38.000	-3.013	54(Note3)	12.987	PK
		V	9648.000	46.414	30.396	-7.586	54(Note3)	16.019	PK
	6	H	4893.000	51.809	43.543	-2.191	54(Note3)	8.266	PK
		H	7310.064	47.186	34.637	-6.814	54(Note3)	12.550	PK
		H	7324.000	53.605	40.594	-0.395	54(Note3)	13.011	PK
		H	9748.000	46.251	30.367	-7.749	54(Note3)	15.884	PK
		V	4874.067	45.147	37.010	-8.853	54	8.138	AV
		V	4876.000	54.476	46.318	-19.524	74	8.158	PK
		V	7311.050	53.218	40.636	-0.782	54	12.582	AV
		V	7324.000	63.730	50.719	-10.270	74	13.011	PK
		V	9748.000	46.021	30.137	-7.979	54(Note3)	15.884	PK
	11	H	4924.000	43.797	35.521	-10.203	54(Note3)	8.276	PK
		H	7386.000	45.302	32.597	-8.698	54(Note3)	12.705	PK
		H	9848.000	47.049	30.708	-6.951	54(Note3)	16.341	PK
		V	4927.000	45.350	37.067	-8.650	54(Note3)	8.283	PK
		V	7386.000	47.269	34.564	-6.731	54(Note3)	12.705	PK
		V	9848.000	47.249	30.908	-6.751	54(Note3)	16.341	PK

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

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

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

Note: 4. The RBW setting, see Clause 4.6.

Product Name	:	AC750 Wireless Dual Band Gigabit Router	Power	:	AC 120V/60Hz
Test Site	:	Mode 3	Test Site	:	AC-5

Chain	CH	Antenna Polarity	Frequency (MHz)	Measure Level (dB μV/m)	Reading Level (dB μV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Detector
Ant 0+1	1	H	4824.000	45.321	37.341	-8.679	54(Note3)	7.979	PK
		H	7236.000	46.334	33.366	-7.666	54(Note3)	12.967	PK
		H	9648.000	46.530	30.512	-7.470	54(Note3)	16.019	PK
		V	4825.000	48.528	40.548	-5.472	54(Note3)	7.980	PK
		V	7239.000	48.378	35.391	-5.622	54(Note3)	12.987	PK
		V	9648.000	46.167	30.149	-7.833	54(Note3)	16.019	PK
	6	H	4876.000	49.928	41.770	-24.072	54(Note3)	8.158	PK
		H	7309.640	42.668	30.133	-11.332	54	12.536	AV
		H	7324.000	55.557	42.546	-18.443	74	13.011	PK
		H	9748.000	46.175	30.291	-7.825	54(Note3)	15.884	PK
		V	4876.000	53.376	45.218	-0.624	54(Note3)	8.158	PK
		V	7307.000	60.984	48.536	-13.016	74	12.448	PK
		V	7313.300	48.245	35.588	-5.755	54	12.656	AV
		V	9748.000	46.143	30.259	-7.857	54(Note3)	15.884	PK
	11	H	4924.000	42.703	34.427	-11.297	54(Note3)	8.276	PK
		H	7386.000	44.940	32.235	-9.060	54(Note3)	12.705	PK
		H	9848.000	47.281	30.940	-6.719	54(Note3)	16.341	PK
		V	4924.000	45.410	37.134	-8.590	54(Note3)	8.276	PK
		V	7386.000	46.436	33.731	-7.564	54(Note3)	12.705	PK
		V	9848.000	46.789	30.448	-7.211	54(Note3)	16.341	PK

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

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

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

Note: 4. The RBW setting, see Clause 4.6.

Product Name	:	AC750 Wireless Dual Band Gigabit Router	Power	:	AC 120V/60Hz
Test Site	:	Mode 4	Test Site	:	AC-5

Chain	CH	Antenna Polarity	Frequency (MHz)	Measure Level (dB μV/m)	Reading Level (dB μV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Detector
Ant 0+1	3	H	4844.000	42.928	34.737	-11.072	54(Note3)	8.191	PK
		H	7266.000	45.109	32.336	-8.891	54(Note3)	12.772	PK
		H	9688.000	45.553	29.818	-8.447	54(Note3)	15.734	PK
		V	4844.000	43.212	35.021	-10.788	54(Note3)	8.191	PK
		V	7266.000	45.154	32.381	-8.846	54(Note3)	12.772	PK
		V	9688.000	45.970	30.235	-8.030	54(Note3)	15.734	PK
	6	H	4874.000	43.946	35.810	-10.054	54(Note3)	8.136	PK
		H	7311.000	45.885	33.305	-8.115	54(Note3)	12.581	PK
		H	9748.000	45.751	29.867	-8.249	54(Note3)	15.884	PK
		V	4874.000	45.152	37.016	-8.848	54(Note3)	8.136	PK
		V	7311.000	51.140	38.560	-2.860	54(Note3)	12.581	PK
		V	9748.000	45.555	29.671	-8.445	54(Note3)	15.884	PK
	9	H	4904.000	42.758	34.505	-11.242	54(Note3)	8.253	PK
		H	7356.000	46.526	33.200	-7.474	54(Note3)	13.326	PK
		H	9808.000	46.339	30.373	-7.661	54(Note3)	15.965	PK
		V	4904.000	42.953	34.700	-11.047	54(Note3)	8.253	PK
		V	7356.000	45.911	32.585	-8.089	54(Note3)	13.326	PK
		V	9808.000	45.954	29.988	-8.046	54(Note3)	15.965	PK

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

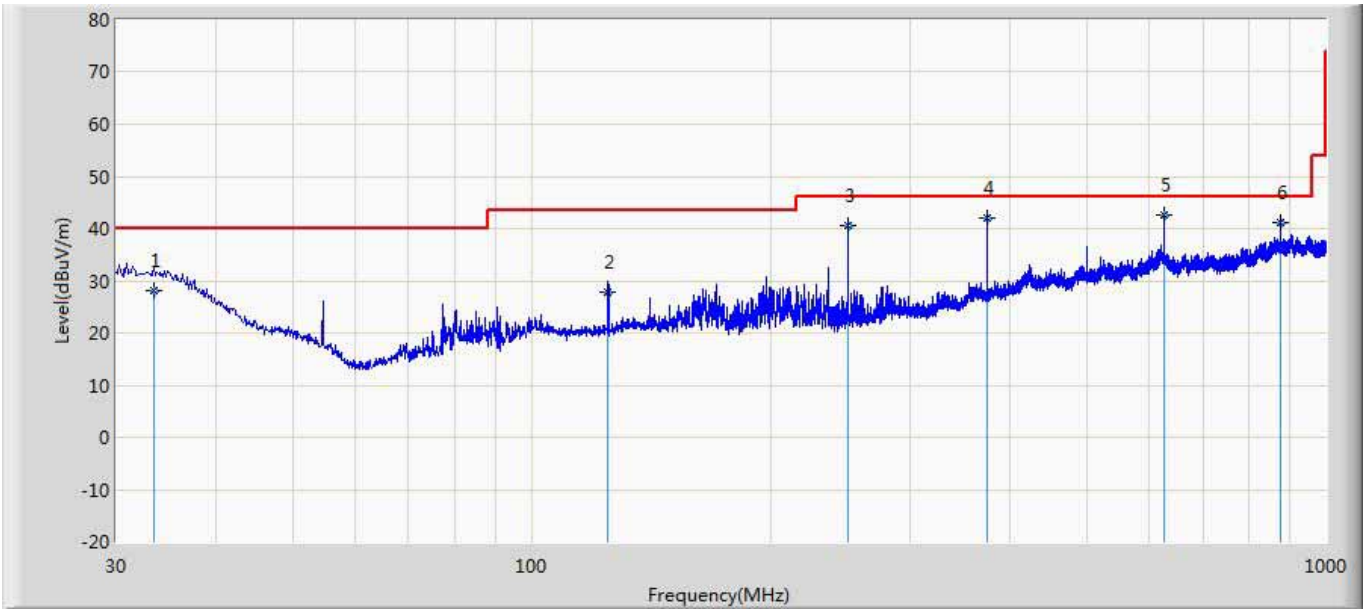
Note: 2. The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 6dB below the limits, therefore no data appear in the report.

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

Note: 4. The RBW setting, see Clause 4.6.

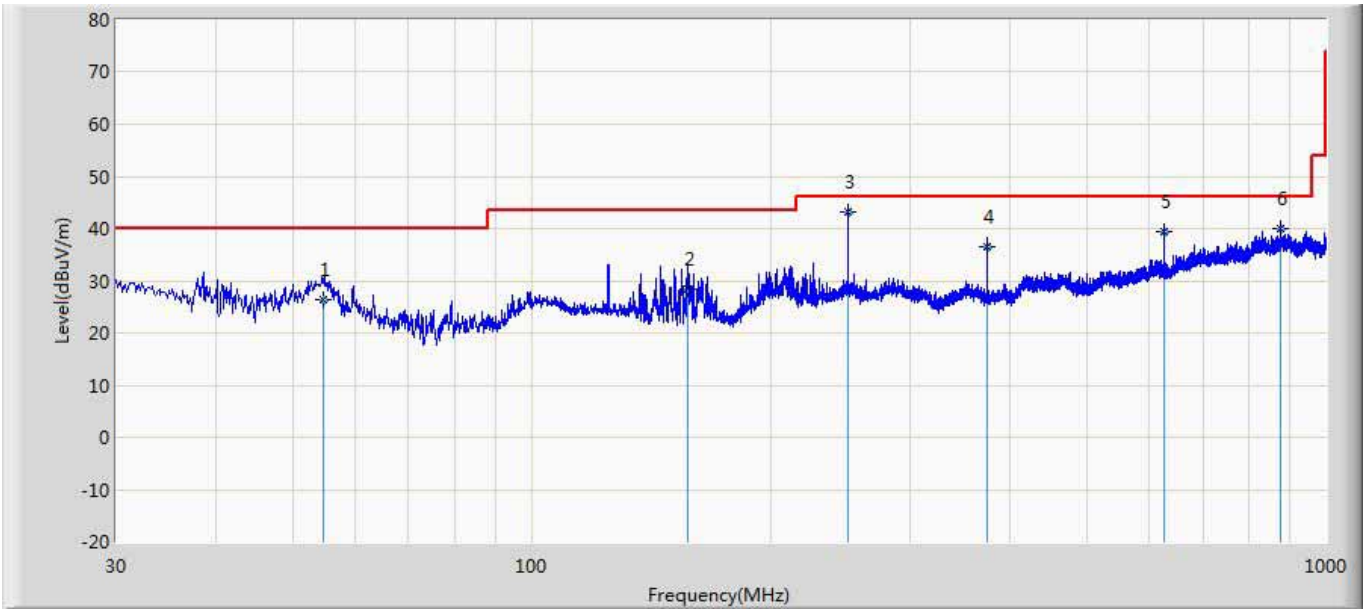
The worst case of Radiated Emission below 1GHz:

Site: AC2	Time: 2016/01/18
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: AC5_CBL6112_0726	Polarity: Horizontal
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		33.428	28.065	33.764	-11.935	40.000	16.812	0.630	23.141	100	0	QP
2		124.596	27.779	37.440	-15.721	43.500	12.224	1.205	23.090	300	32	QP
3		249.764	40.556	49.608	-5.444	46.000	12.578	1.700	23.330	200	350	QP
4		374.851	42.107	47.636	-3.893	46.000	15.346	2.125	23.000	100	47	QP
5	*	625.217	42.487	43.281	-3.513	46.000	19.000	2.740	22.534	200	308	QP
6		875.152	41.090	40.039	-4.910	46.000	20.451	3.260	22.660	100	53	QP

Site: AC2	Time: 2016/01/18
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: AC5_CBL6112_0726	Polarity: Vertical
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 1	



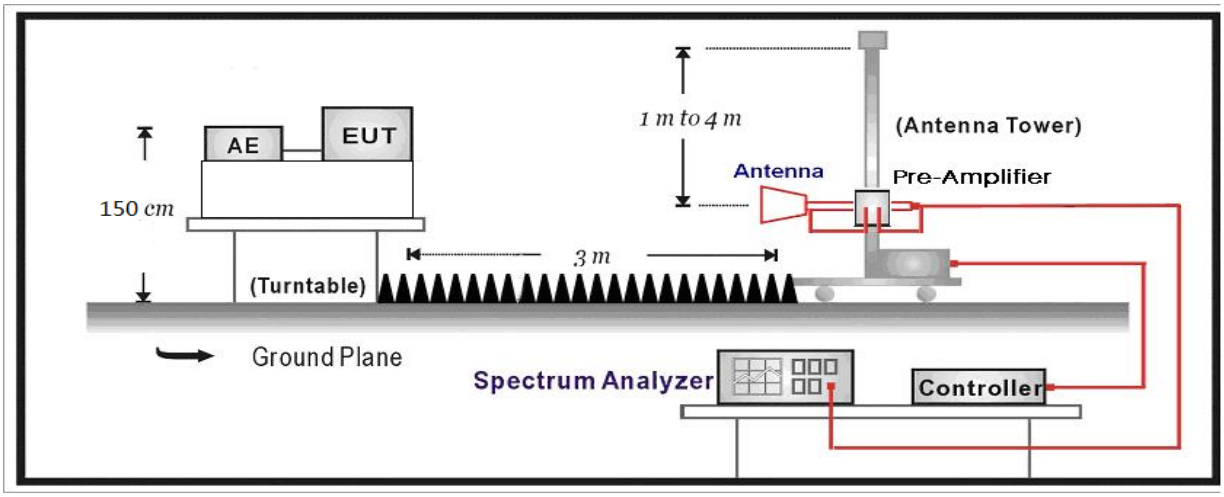
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		54.796	26.268	41.097	-13.732	40.000	7.385	0.806	23.020	200	2	QP
2		157.265	28.454	40.050	-15.046	43.500	10.064	1.360	23.020	100	107	QP
3	*	249.765	43.330	52.382	-2.670	46.000	12.578	1.700	23.330	100	165	QP
4		375.216	36.441	41.957	-9.559	46.000	15.355	2.129	23.000	200	136	QP
5		624.831	39.368	40.166	-6.632	46.000	19.000	2.740	22.538	102	360	QP
6		875.217	39.916	38.865	-6.084	46.000	20.451	3.260	22.660	200	311	QP

4. Radiated Emission Band Edge

4.1. Test Equipment

Radiated Emission Band Edge/ AC-5					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2016.01.04	2017.01.03
Preamplifier	Miteq	NSP1800-25	1364185	2016.05.06	2017.05.05
Preamplifier	QuieTek	AP-040G	CHM-0906001	2016.05.06	2017.05.05
DRG Horn	ETS-Lindgren	3117	00123988	2016.01.22	2017.01.21
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2015.11.25	2016.11.24
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2016.03.02	2017.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2016.03.02	2017.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	AC5-C3	2016.03.02	2017.03.01
EMI Receiver	Agilent	N9038A	MY51210196	2015.06.10	2016.06.09
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2016.01.04	2017.01.03
Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

4.2. Test Setup

Above 1GHz Test Setup:


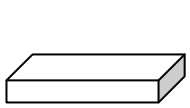
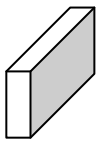
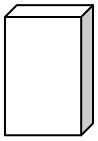
4.3. Limit

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

4.4. Test Procedure

Test Method						
	References Rule				Chapter	Description
☒	ANSI C63.10				6.10	Band-edge testing
	☒	ANSI C63.10			6.10.5	Restricted-band band-edge measurements
	☐	ANSI C63.10			6.10.6	Marker-delta method
☒	ANSI C63.10				11.12	Emissions in restricted frequency bands
	☒	ANSI C63.10			11.12.1	Radiated emission measurements
	☒	ANSI C63.10			11.12.2.7	Radiated spurious emission test
☐	ANSI C63.10				6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
☐	ANSI C63.10				6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
☒	ANSI C63.10				6.6	Radiated emissions from unlicensed wireless devices above 1 GHz
	☐	ANSI C63.10			11.12.2	Antenna-port conducted measurements
		☐	ANSI C63.10		11.12.2.3	Quasi-peak measurement procedure
		☒	ANSI C63.10		11.12.2.4	Peak power measurement procedure
		☒	ANSI C63.10		11.12.2.5	Average power measurement procedures
			☐	ANSI C63.10	11.12.2.5.1	Trace averaging with continuous EUT transmission at full power
			☐	ANSI C63.10	11.12.2.5.2	Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction
			☒	ANSI C63.10	11.12.2.5.3	Reduced VBW averaging across ON and OFF times of the EUT transmissions with max hold

4.5. EUT test definition

<table>
<tr><td>Item</td><td colspan="4">Radiated Emission Band Edge</td></tr>
<tr><td rowspan="4">Device Category</td><td>☒</td><td colspan="3">Indoor use</td></tr>
<tr><td>☐</td><td colspan="3">Outdoor use</td></tr>
<tr><td>☐</td><td colspan="3">Fix position use</td></tr>
<tr><td>☐</td><td colspan="3">Mobile position use</td></tr>
<tr><td>Test mode</td><td colspan="4">Mode 1-4</td></tr>
<tr><td rowspan="12">Test method</td><td>☒</td><td colspan="3">Radiated</td></tr>
<tr><td rowspan="3"></td><td>X Axis</td><td>Y Axis</td><td>Z Axis</td></tr>
<tr><td>  </td><td>  </td><td>  </td></tr>
<tr><td>Worst Axis ☒</td><td>Worst Axis ☐</td><td>Worst Axis ☐</td></tr>
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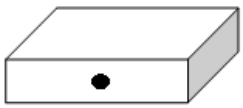
<tr><td></td><td colspan="3">  </td></tr>
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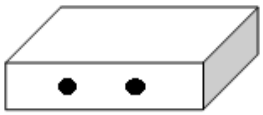
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☐</td><td>Chain 0</td><td>Chain 1</td><td>Chain 2</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
</table>

4.6. Duty Cycle

CDD mode:

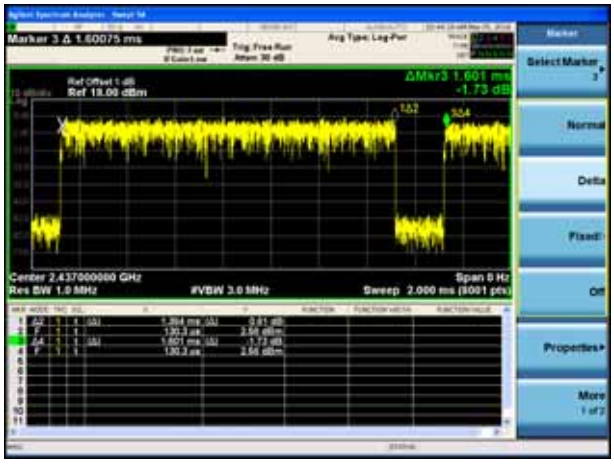
Test Mode	Tx On (ms)	Tx Off (ms)	VBW	Tx On + Tx Off (ms)	Duty Cycle
802.11b	8.41	0.21	119Hz	8.62	97.56%
802.11g	1.38	0.22	725Hz	1.60	86.25%
802.11n(20MHz)	1.29	0.22	775Hz	1.51	85.43%
802.11n(40MHz)	0.65	0.20	1.54Khz	0.85	76.47%

Note 1: T means the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

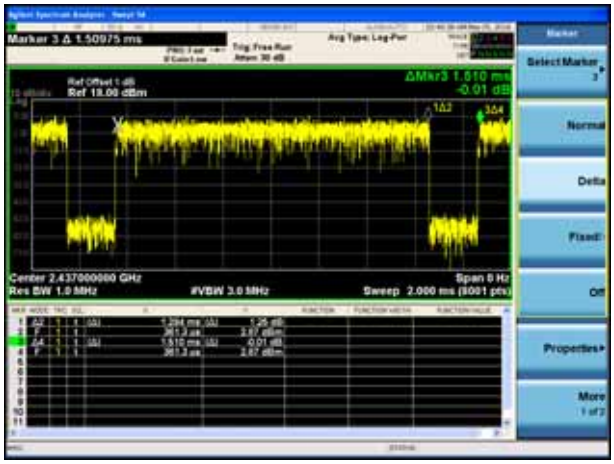
Note 2: According to KDB 558074， when test for Radiated Emission Band Edge and Radiated Emission,VBW ≥ 1/T will be used.

802.11b

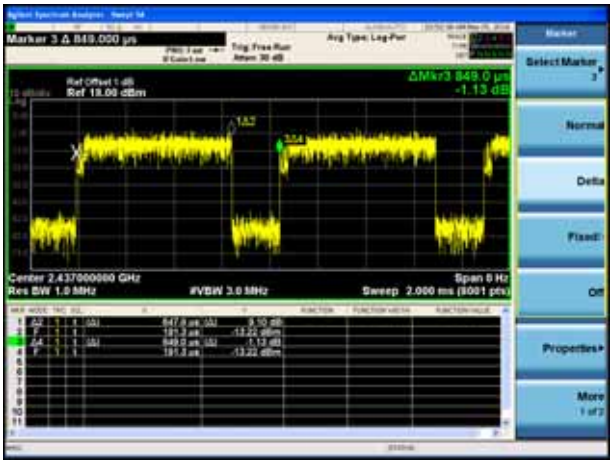
802.11g



802.11n(20MHz)

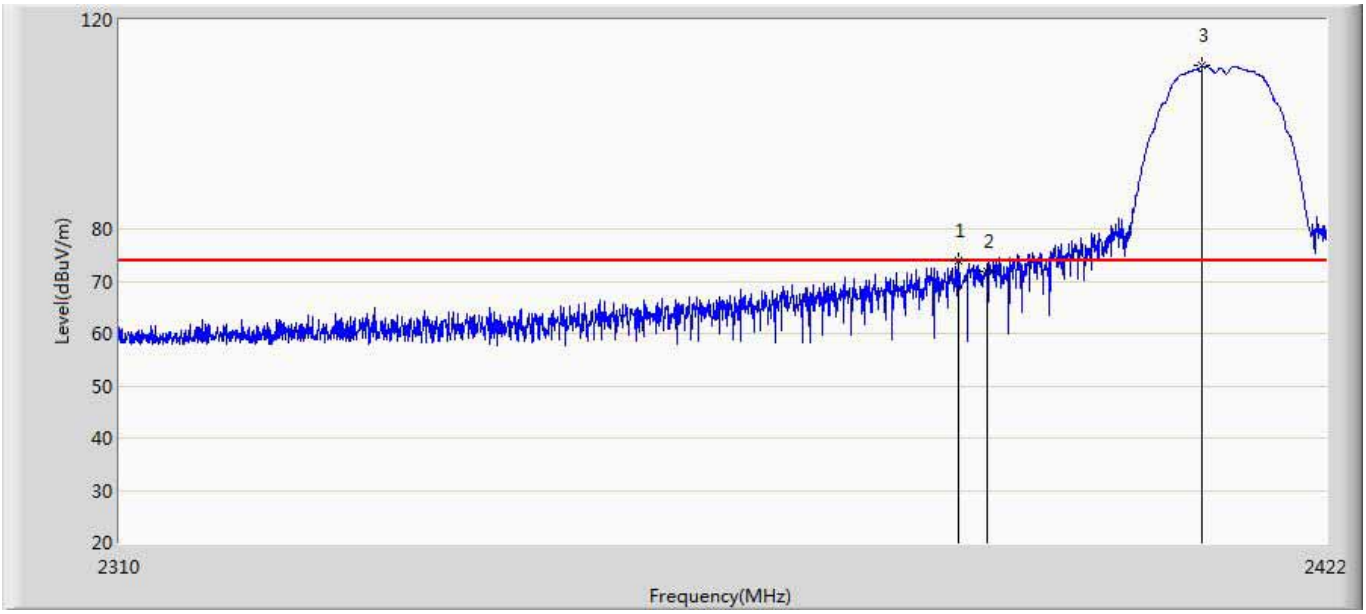


802.11n(40MHz)



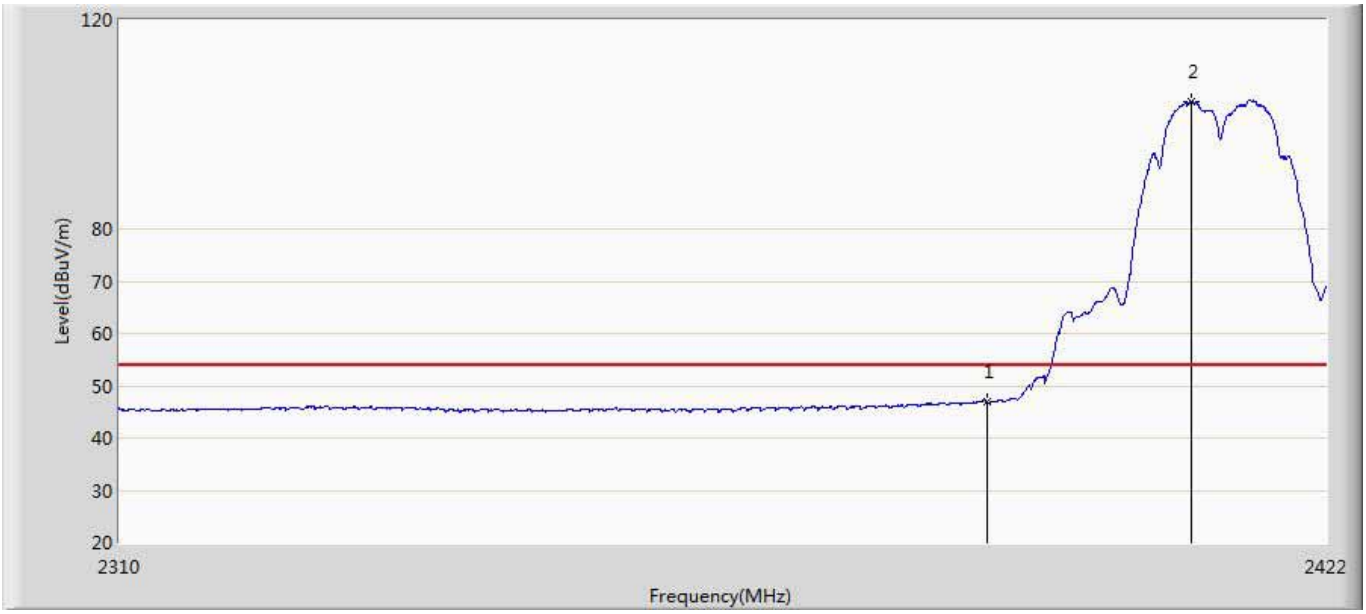
4.7. Test Result

Site: AC5	Time: 2016/04/13 - 21:04
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2412MHz by 802.11b	



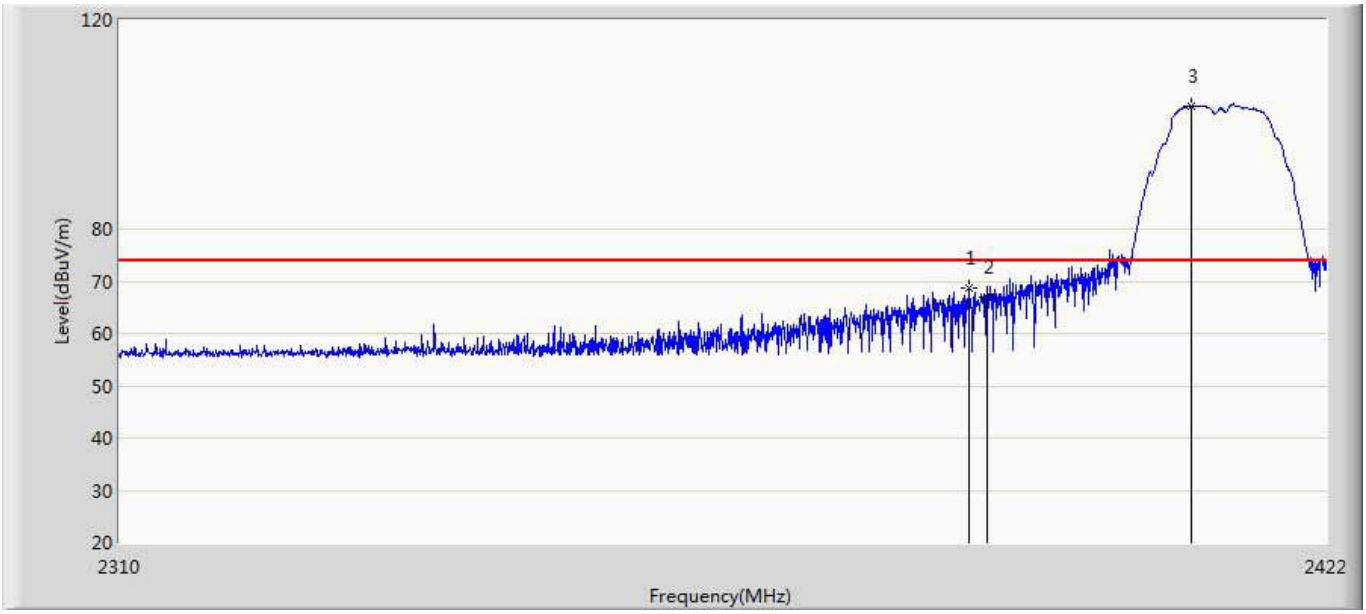
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2387.280	73.991	36.635	-0.009	74.000	37.356	PK
2		2390.000	72.017	34.662	-1.983	74.000	37.355	PK
3	*	2410.240	111.246	73.917	37.246	74.000	37.329	PK

Site: AC5	Time: 2016/04/13 - 21:10
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2412MHz by 802.11b	



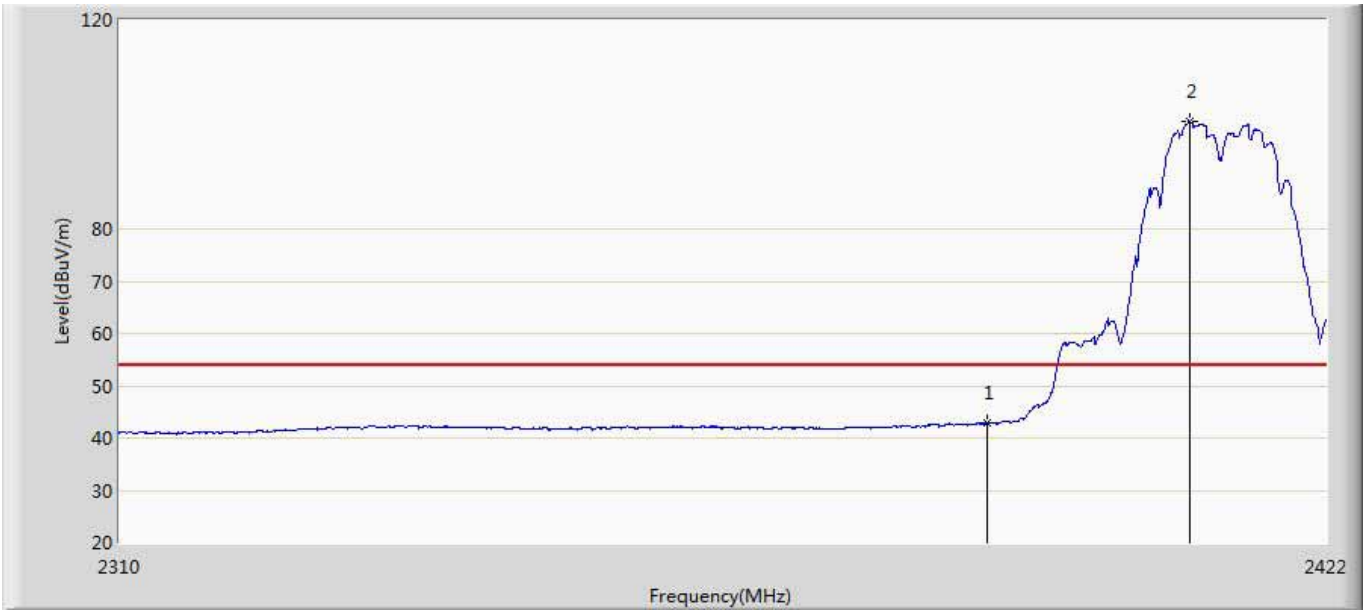
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	46.959	9.604	-7.041	54.000	37.355	AV
2	*	2409.232	104.322	66.992	50.322	54.000	37.330	AV

Site: AC5	Time: 2016/04/13 - 21:11
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2412MHz by 802.11b	



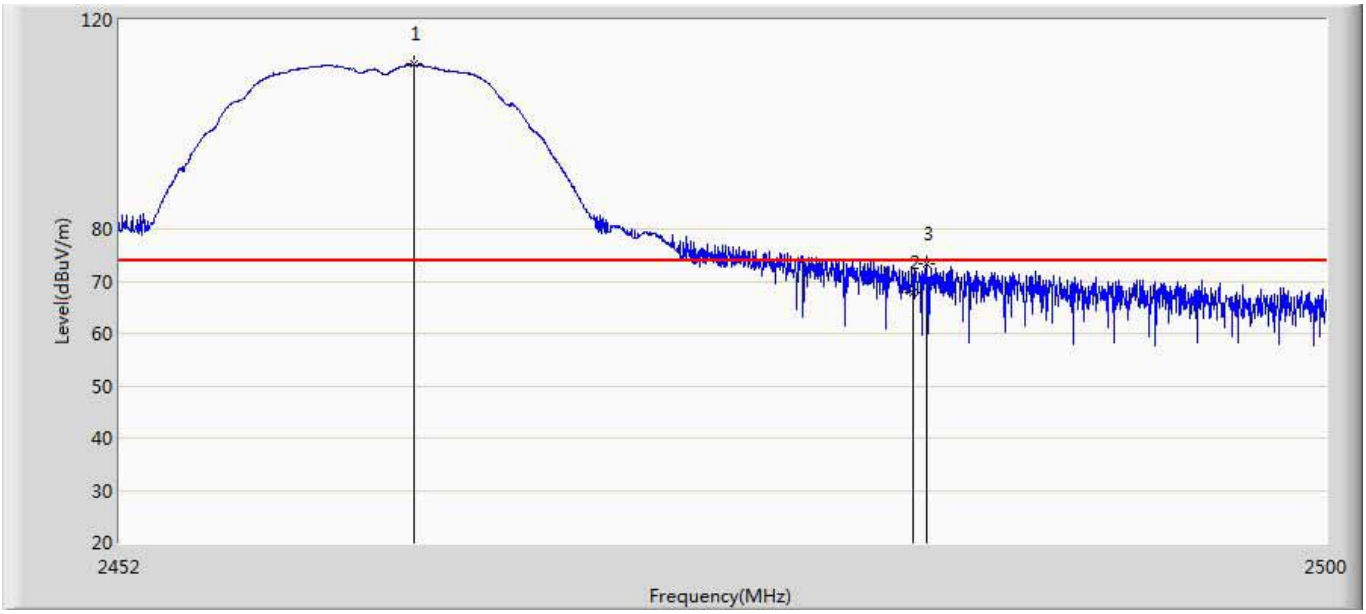
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2388.288	68.809	31.453	-5.191	74.000	37.356	PK
2		2390.000	66.840	29.485	-7.160	74.000	37.355	PK
3	*	2409.288	103.490	66.160	29.490	74.000	37.330	PK

Site: AC5	Time: 2016/04/13 - 21:13
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2412MHz by 802.11b	



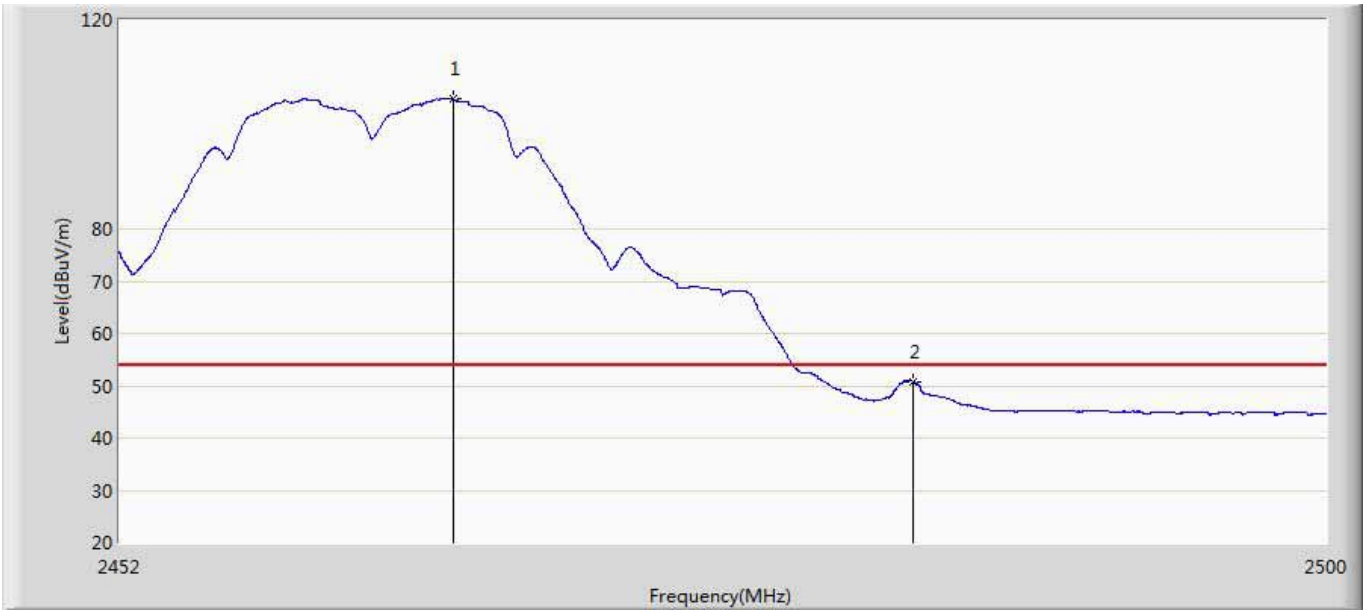
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	42.813	5.458	-11.187	54.000	37.355	AV
2	*	2409.120	100.668	63.337	46.668	54.000	37.331	AV

Site: AC5	Time: 2016/04/13 - 21:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2462MHz by 802.11b	



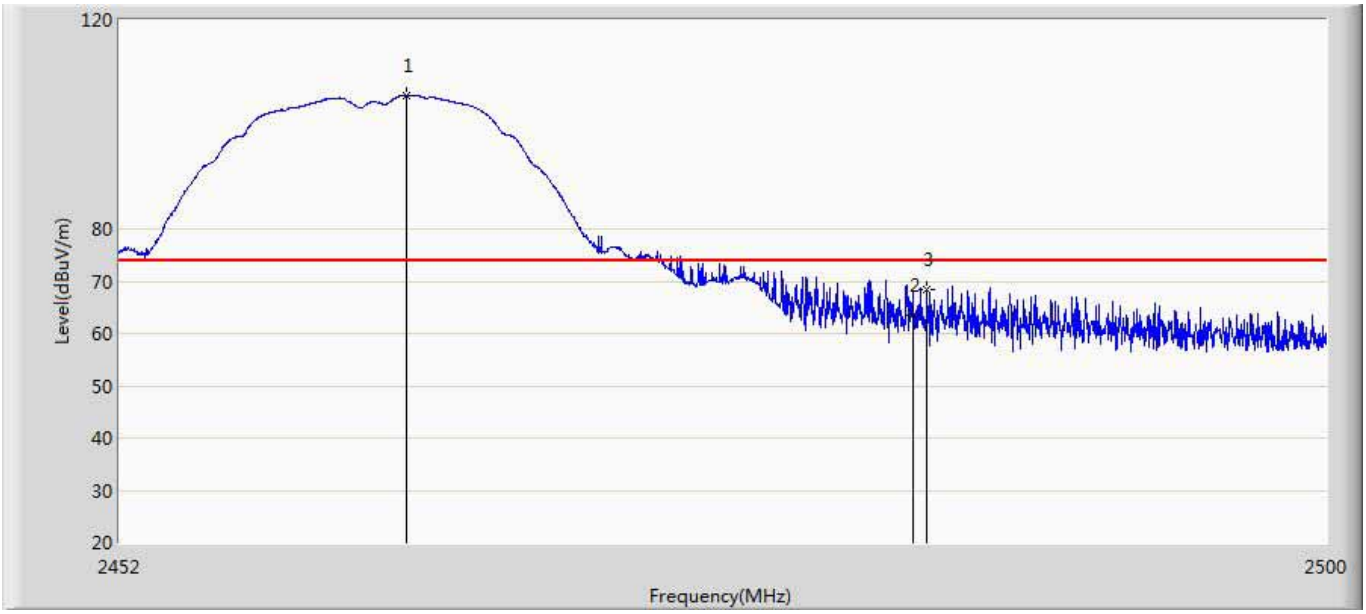
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2463.616	111.604	74.178	37.604	74.000	37.426	PK
2		2483.500	67.923	30.412	-6.077	74.000	37.511	PK
3		2484.016	73.322	35.807	-0.678	74.000	37.515	PK

Site: AC5	Time: 2016/04/13 - 21:34
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2462MHz by 802.11b	



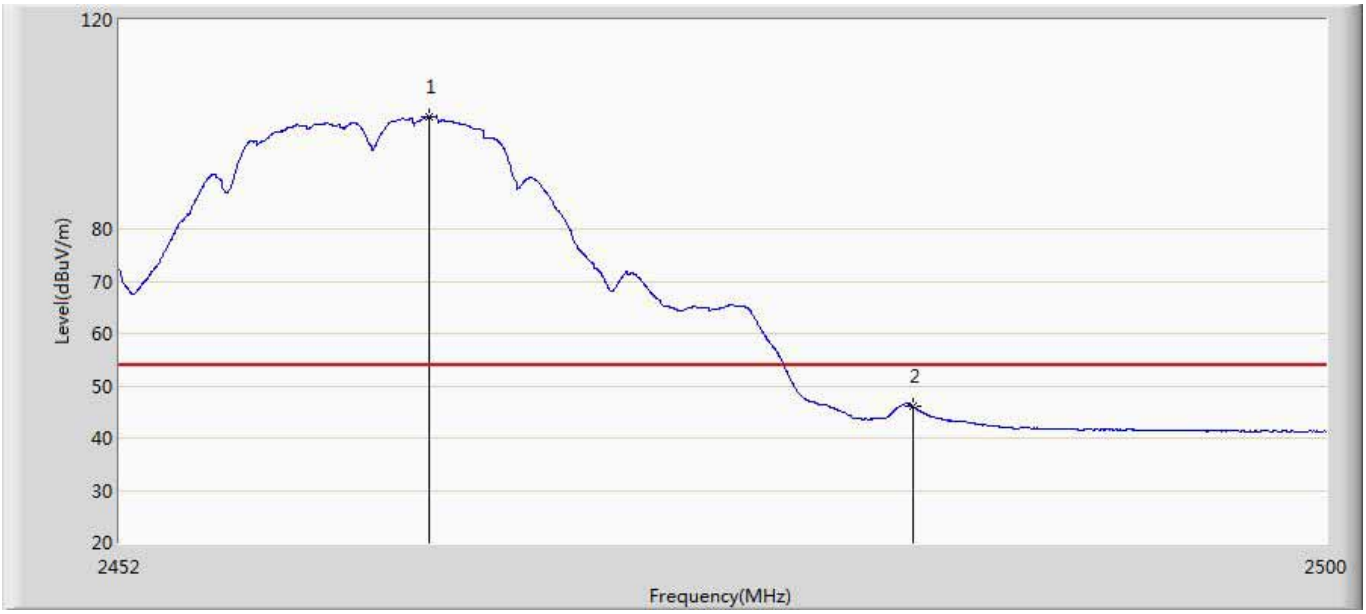
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2465.176	104.945	67.514	50.945	54.000	37.431	AV
2		2483.500	50.747	13.236	-3.253	54.000	37.511	AV

Site: AC5	Time: 2016/04/14 - 09:26
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2462MHz by 802.11b	



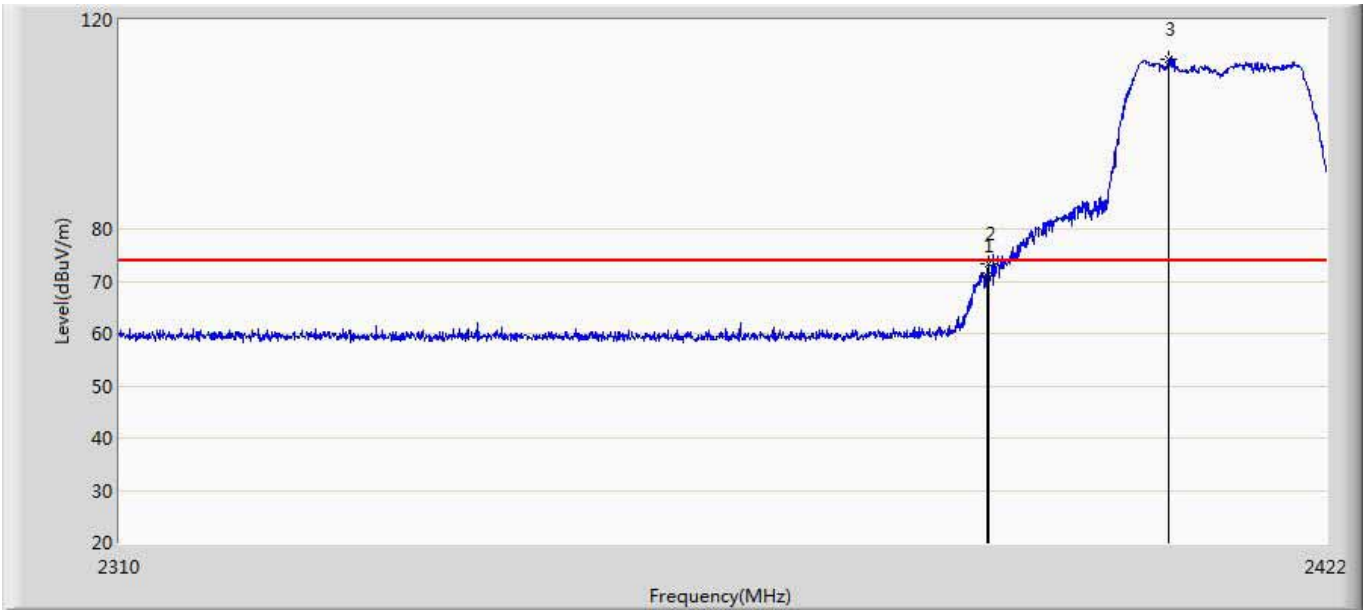
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2463.352	105.571	68.146	31.571	74.000	37.425	PK
2		2483.500	63.367	25.856	-10.633	74.000	37.511	PK
3		2484.016	68.322	30.807	-5.678	74.000	37.515	PK

Site: AC5	Time: 2016/04/14 - 09:31
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2462MHz by 802.11b	



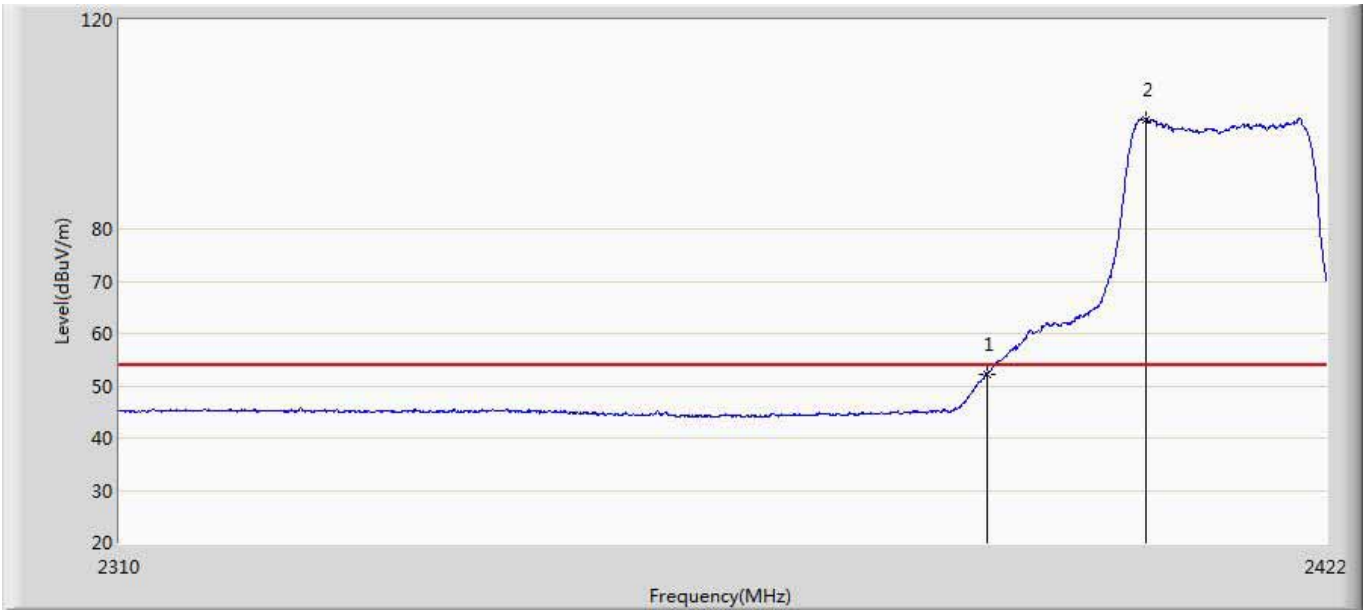
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2464.240	101.531	64.103	47.531	54.000	37.428	AV
2		2483.500	45.945	8.434	-8.055	54.000	37.511	AV

Site: AC5	Time: 2016/04/14 - 09:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2412MHz by 802.11g	



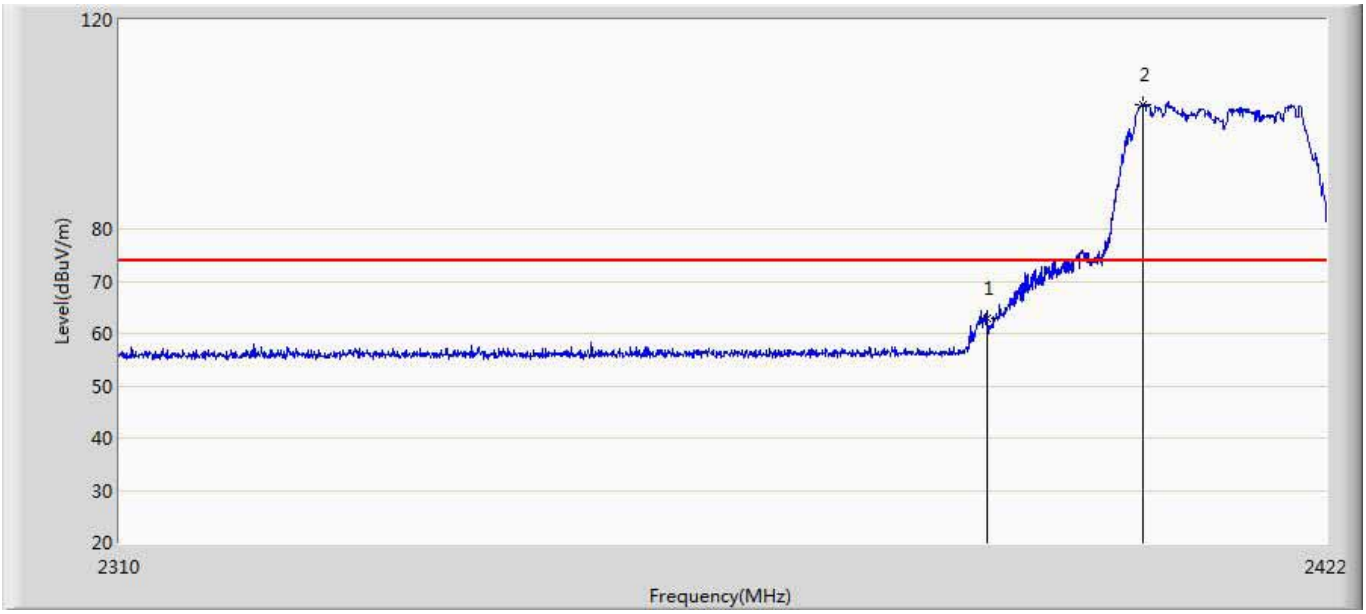
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	71.080	33.725	-2.920	74.000	37.355	PK
2		2390.136	73.359	36.004	-0.641	74.000	37.355	PK
3	*	2407.104	112.562	75.228	38.562	74.000	37.333	PK

Site: AC5	Time: 2016/04/14 - 09:45
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2412MHz by 802.11g	



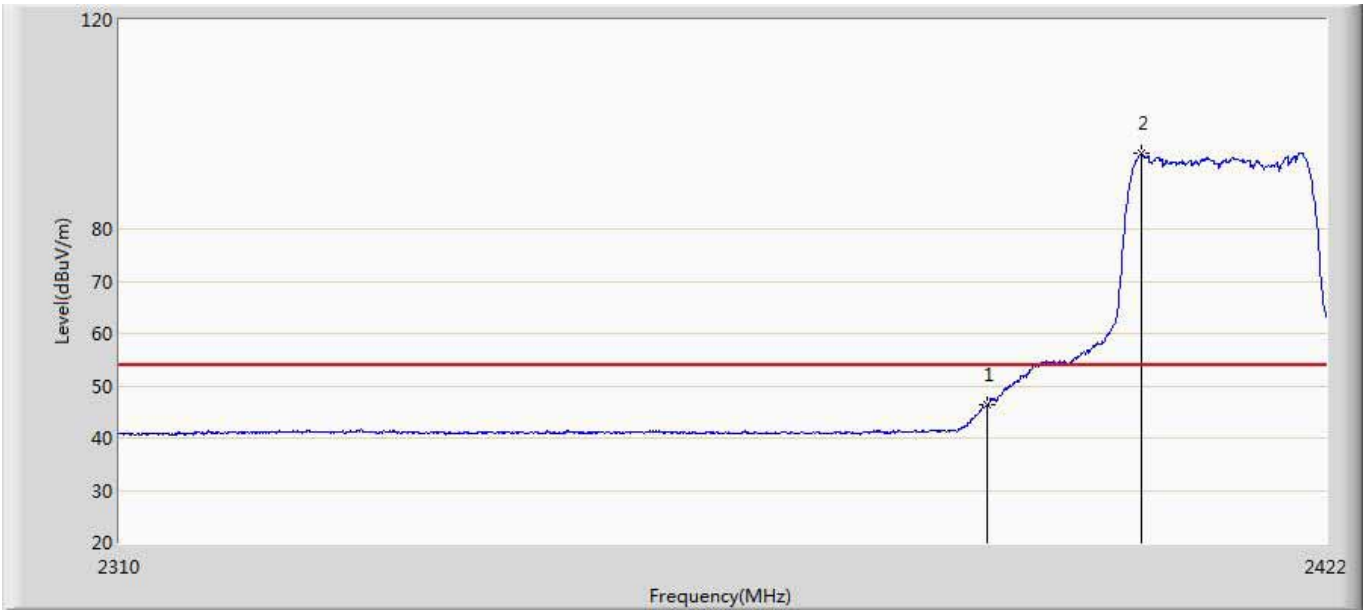
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	52.205	14.850	-1.795	54.000	37.355	AV
2	*	2404.976	100.957	63.620	46.957	54.000	37.337	AV

Site: AC5	Time: 2016/04/14 - 09:48
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2412MHz by 802.11g	



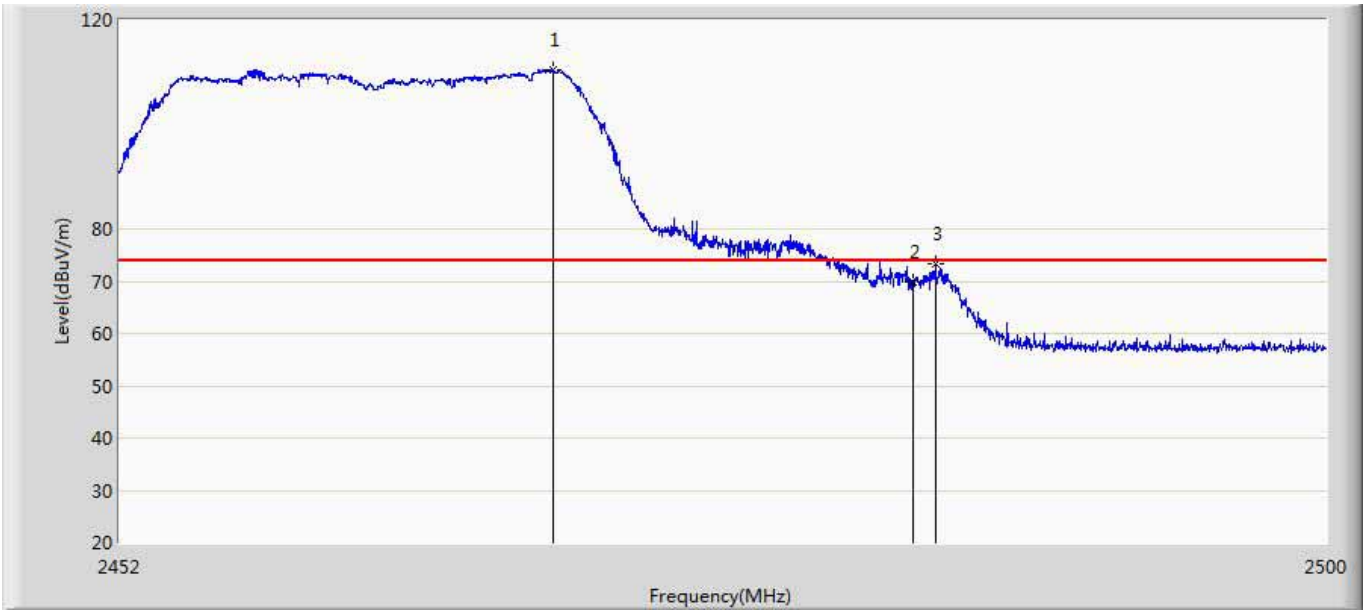
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	63.031	25.676	-10.969	74.000	37.355	PK
2	*	2404.640	103.838	66.500	29.838	74.000	37.338	PK

Site: AC5	Time: 2016/04/14 - 09:50
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2412MHz by 802.11g	



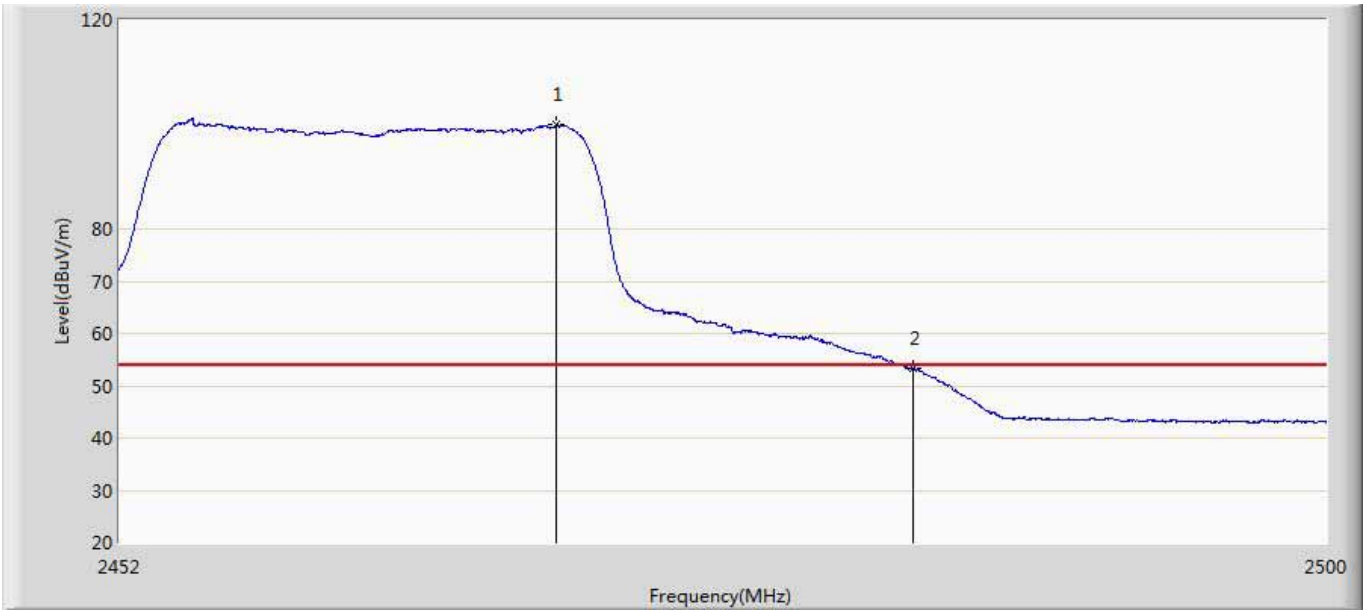
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	46.247	8.892	-7.753	54.000	37.355	AV
2	*	2404.472	94.433	57.095	40.433	54.000	37.338	AV

Site: AC5	Time: 2016/04/14 - 10:11
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2462MHz by 802.11g	



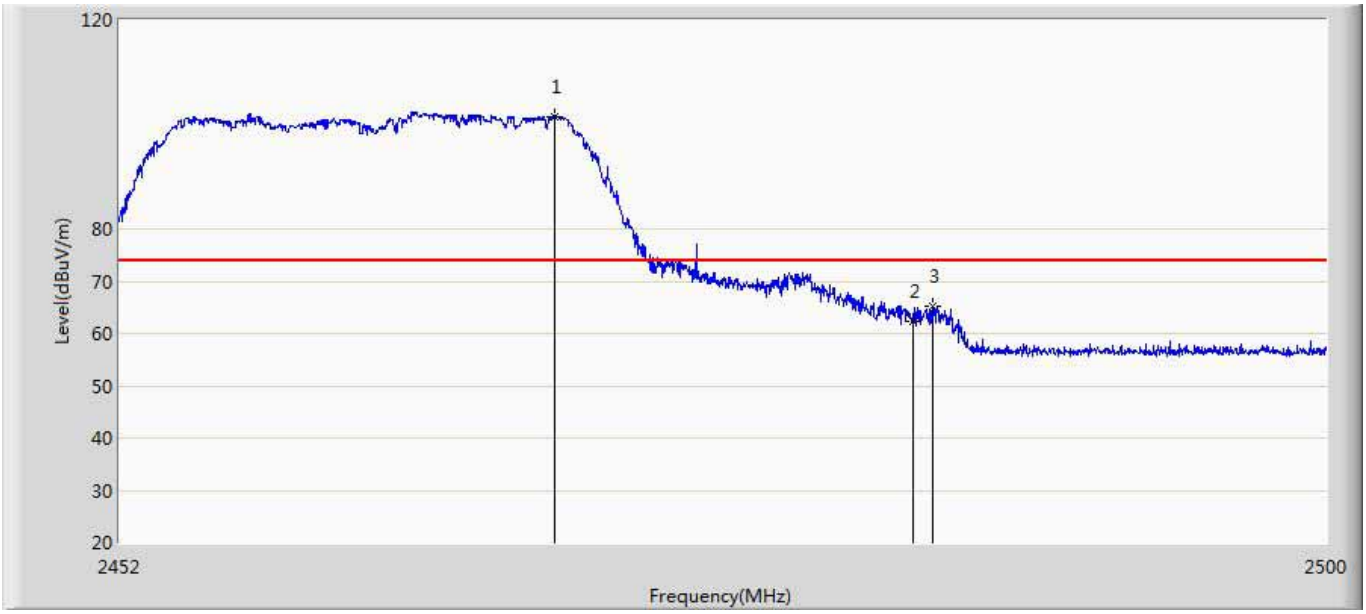
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2469.136	110.447	73.002	36.447	74.000	37.445	PK
2		2483.500	69.962	32.451	-4.038	74.000	37.511	PK
3		2484.352	73.260	35.743	-0.740	74.000	37.517	PK

Site: AC5	Time: 2016/04/14 - 10:20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2462MHz by 802.11g	



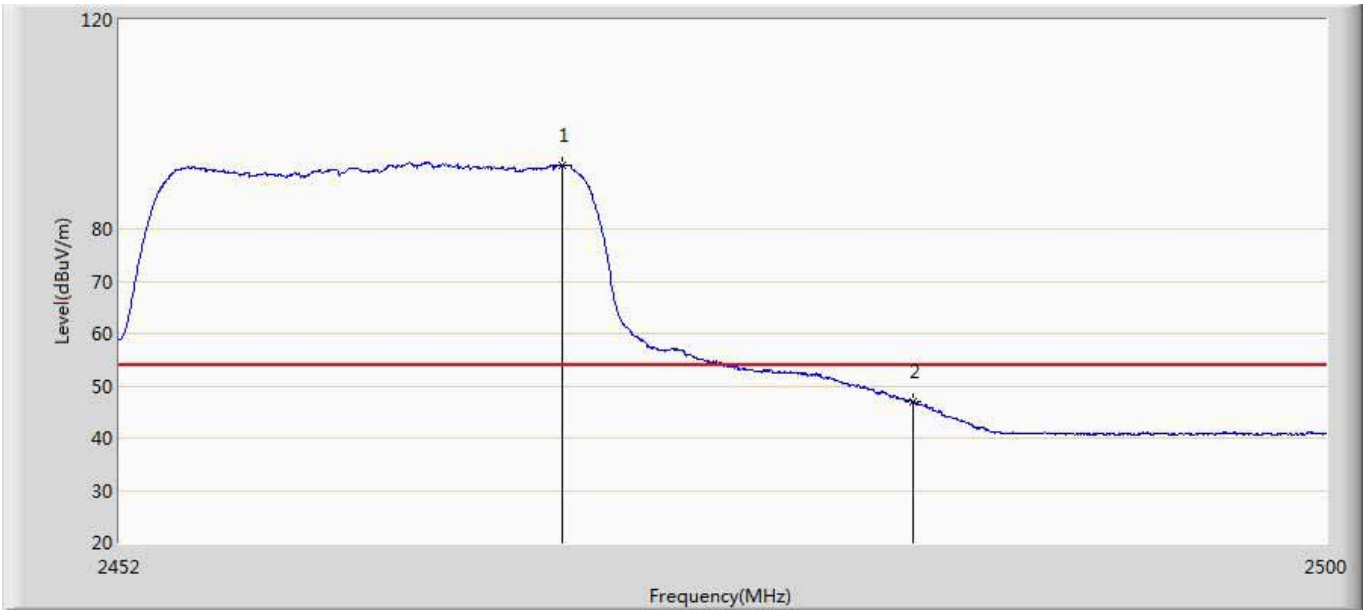
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2469.304	99.971	62.525	45.971	54.000	37.445	AV
2		2483.500	53.332	15.821	-0.668	54.000	37.511	AV

Site: AC5	Time: 2016/04/14 - 10:21
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2462MHz by 802.11g	



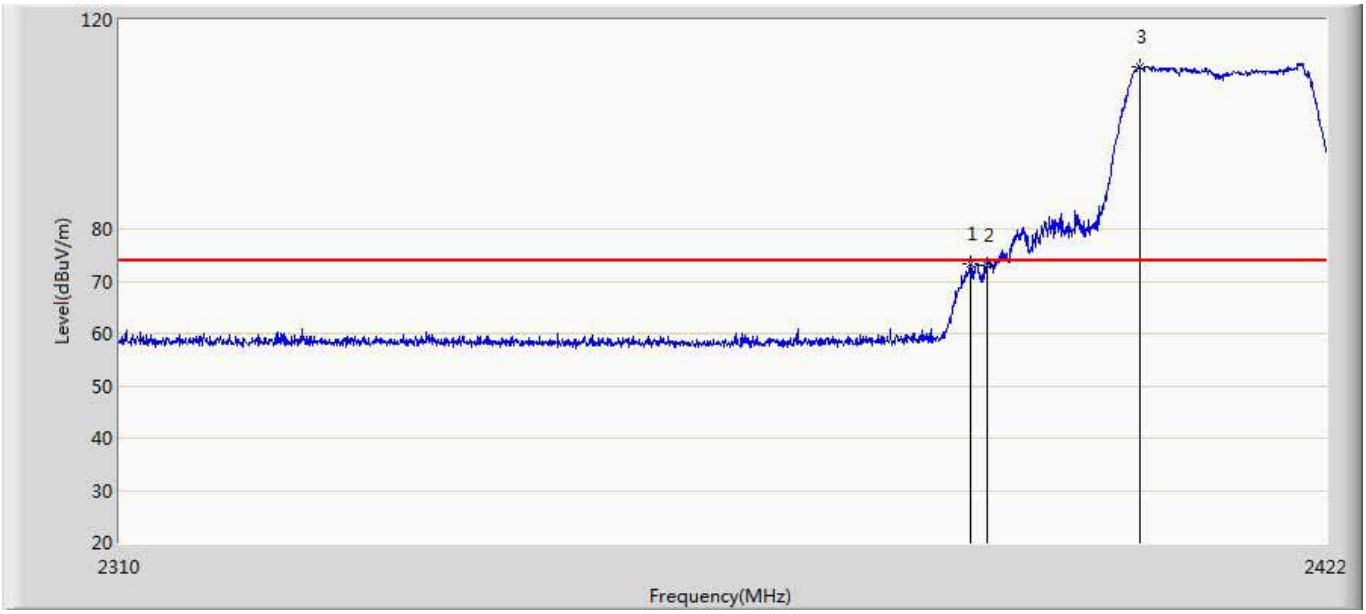
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2469.208	101.563	64.118	27.563	74.000	37.445	PK
2		2483.500	62.429	24.918	-11.571	74.000	37.511	PK
3		2484.256	65.340	27.823	-8.660	74.000	37.517	PK

Site: AC5	Time: 2016/04/14 - 10:23
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2462MHz by 802.11g	



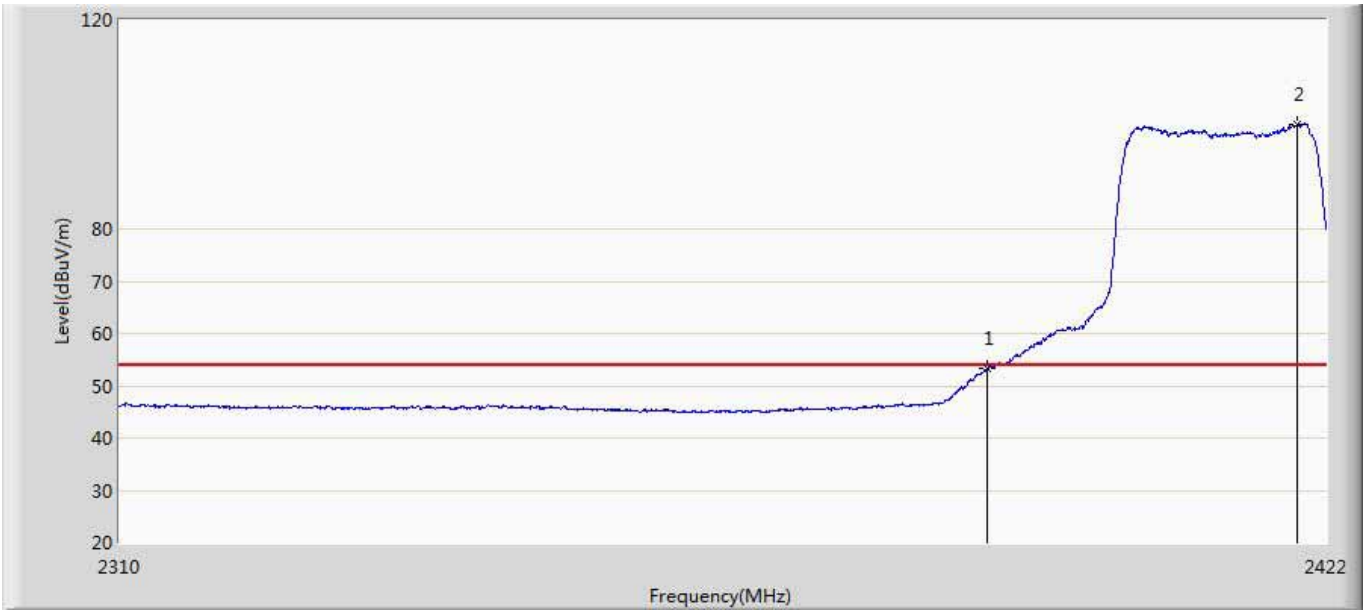
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2469.544	92.215	54.769	38.215	54.000	37.446	AV
2		2483.500	46.903	9.392	-7.097	54.000	37.511	AV

Site: AC5	Time: 2016/04/14 - 10:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2412MHz by 802.11n20	



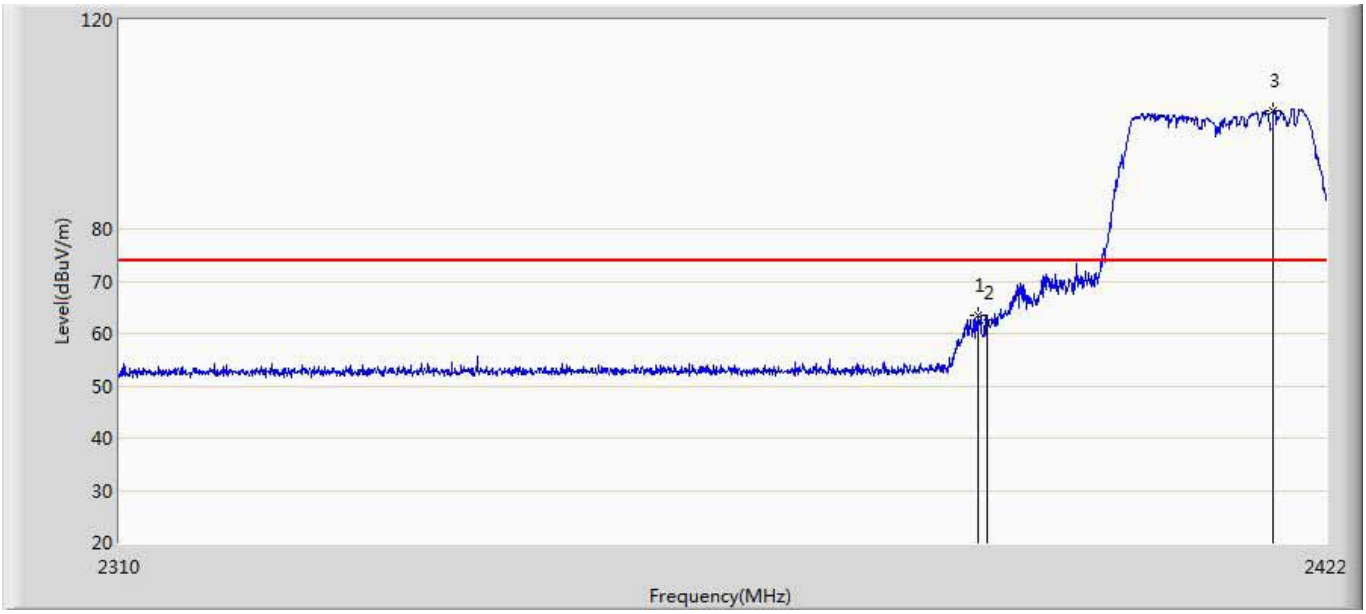
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2388.400	73.286	35.930	-0.714	74.000	37.356	PK
2		2390.000	72.994	35.639	-1.006	74.000	37.355	PK
3	*	2404.416	111.054	73.716	37.054	74.000	37.338	PK

Site: AC5	Time: 2016/04/14 - 10:34
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2412MHz by 802.11n20	



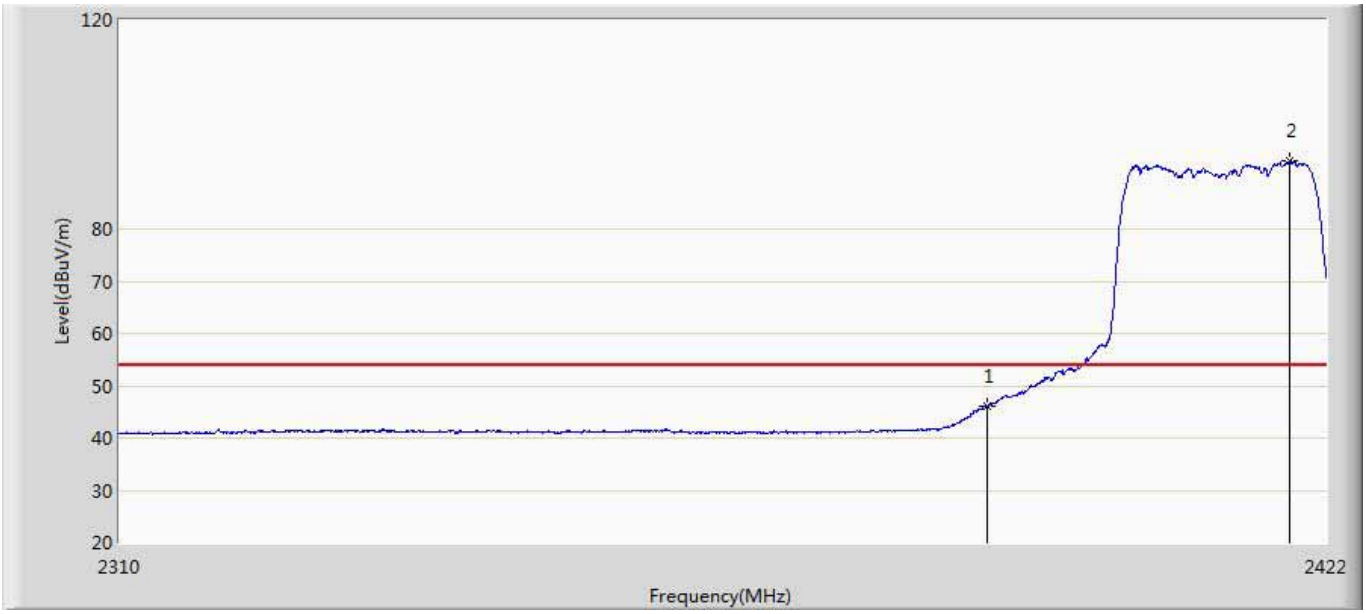
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	53.335	15.980	-0.665	54.000	37.355	AV
2	*	2419.256	100.007	62.624	46.007	54.000	37.383	AV

Site: AC5	Time: 2016/04/14 - 10:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2412MHz by 802.11n20	



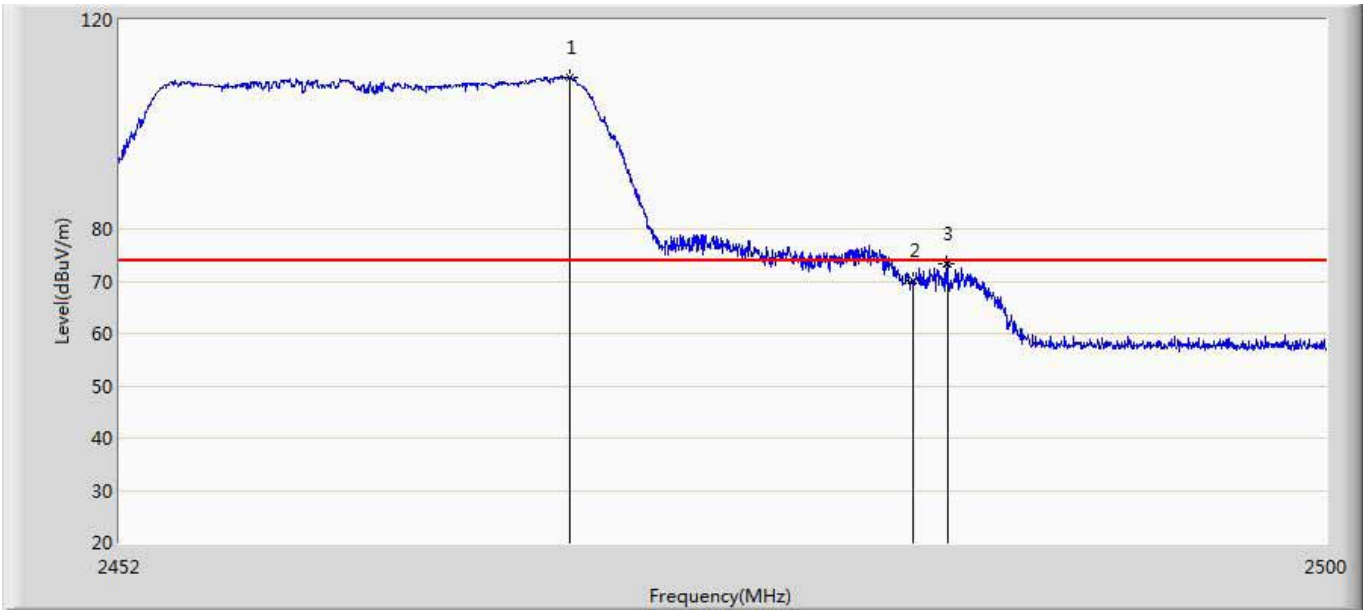
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2389.128	63.377	26.021	-10.623	74.000	37.356	PK
2		2390.000	62.084	24.729	-11.916	74.000	37.355	PK
3	*	2417.016	102.650	65.282	28.650	74.000	37.368	PK

Site: AC5	Time: 2016/04/14 - 10:41
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2412MHz by 802.11n20	



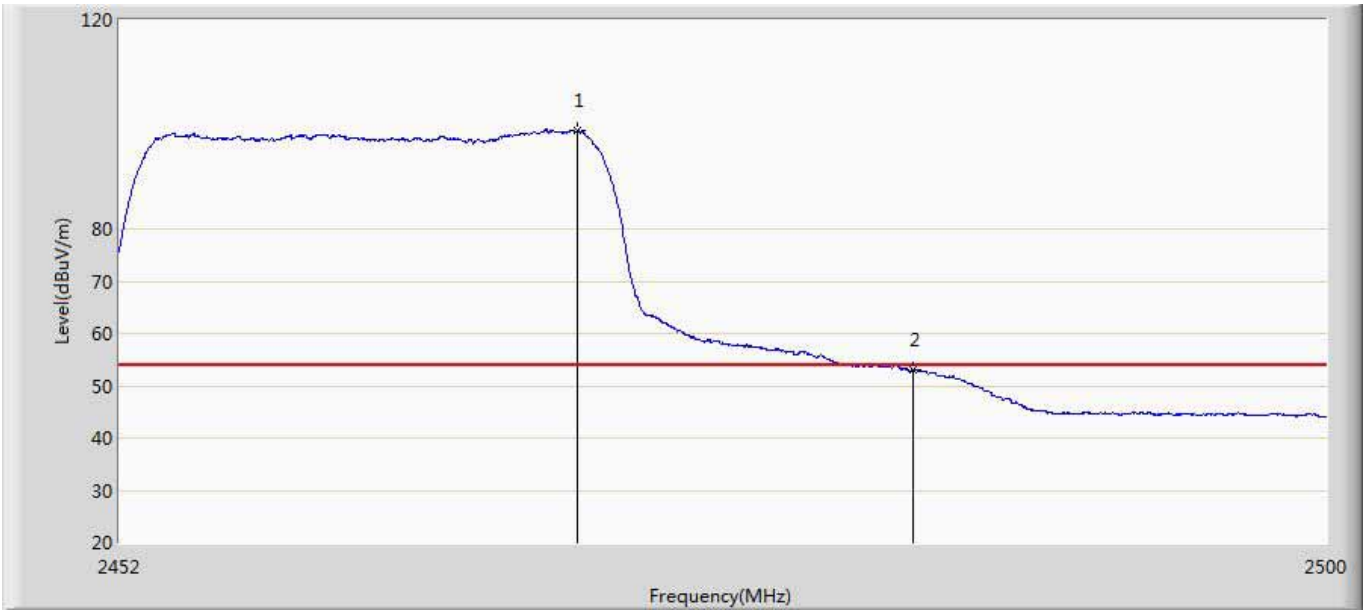
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	46.066	8.711	-7.934	54.000	37.355	AV
2	*	2418.584	92.972	55.593	38.972	54.000	37.378	AV

Site: AC5	Time: 2016/04/14 - 11:05
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2462Hz by 802.11n20	



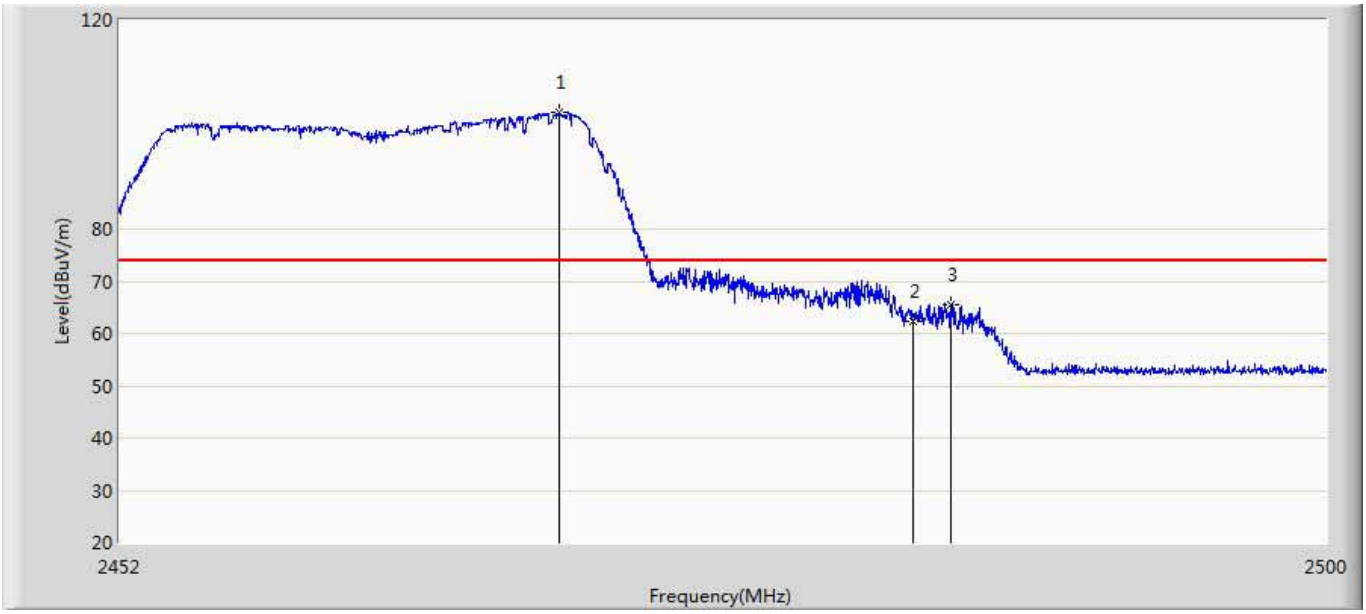
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2469.832	109.008	71.561	35.008	74.000	37.448	PK
2		2483.500	70.020	32.509	-3.980	74.000	37.511	PK
3		2484.832	73.286	35.765	-0.714	74.000	37.521	PK

Site: AC5	Time: 2016/04/14 - 11:18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2462Hz by 802.11n20	



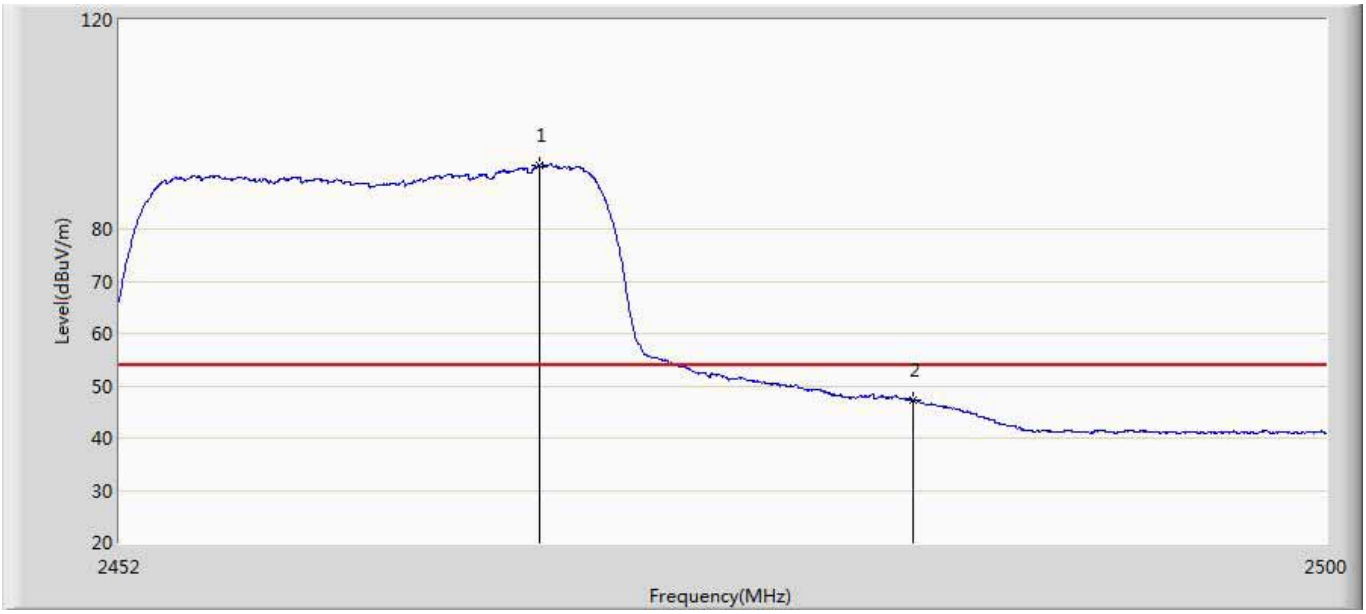
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2470.144	98.756	61.308	44.756	54.000	37.448	AV
2		2483.500	52.996	15.485	-1.004	54.000	37.511	AV

Site: AC5	Time: 2016/04/14 - 11:20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2462Hz by 802.11n20	



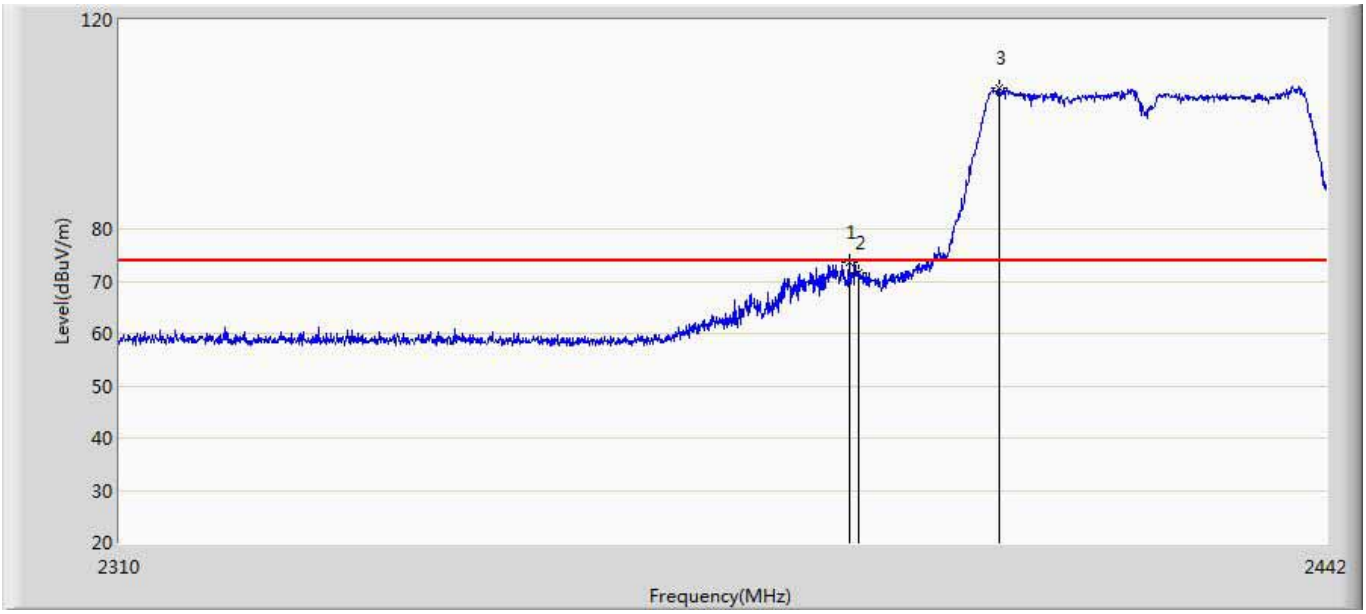
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2469.400	102.176	64.730	28.176	74.000	37.446	PK
2		2483.500	62.456	24.945	-11.544	74.000	37.511	PK
3		2485.000	65.530	28.008	-8.470	74.000	37.522	PK

Site: AC5	Time: 2016/04/14 - 11:22
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2462Hz by 802.11n20	



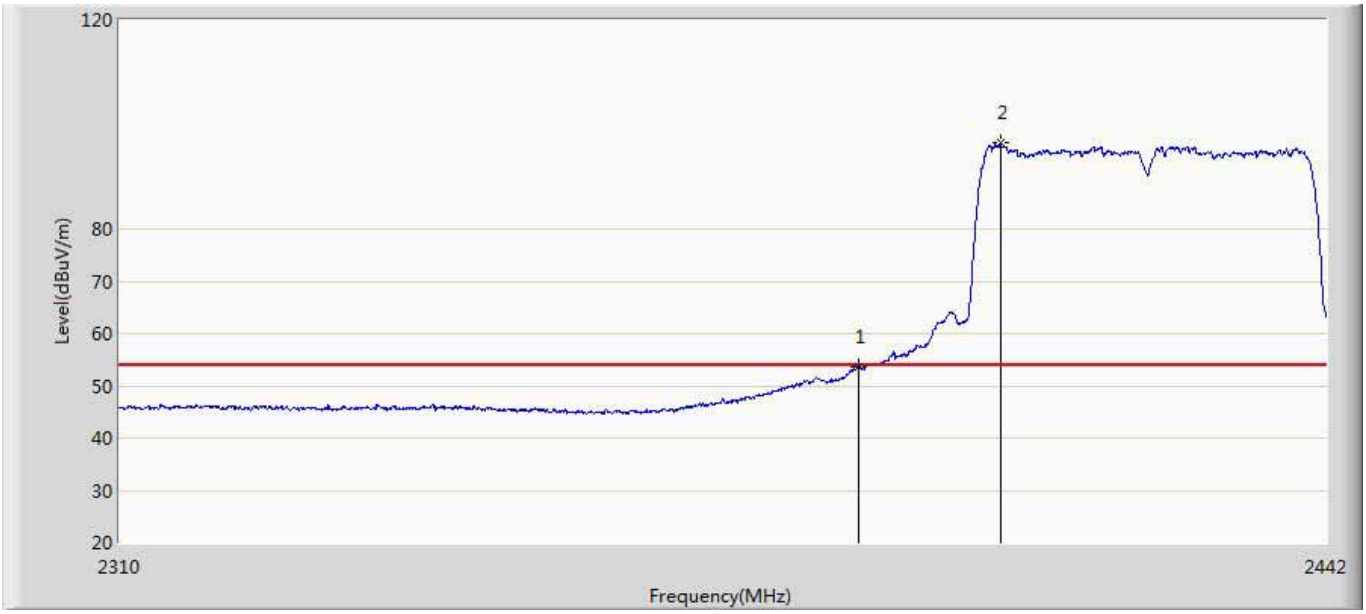
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2468.632	92.219	54.776	38.219	54.000	37.443	AV
2		2483.500	47.150	9.639	-6.850	54.000	37.511	AV

Site: AC5	Time: 2016/04/14 - 11:24
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2422Hz by 802.11n40	



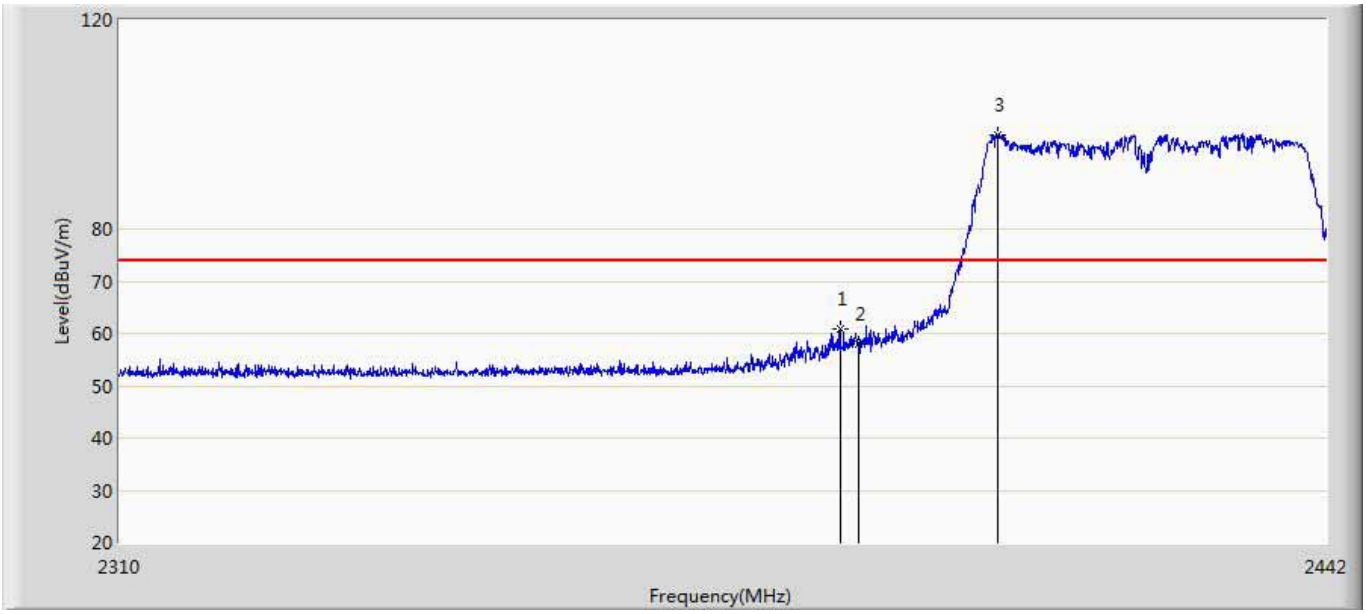
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2388.936	73.506	36.150	-0.494	74.000	37.356	PK
2		2390.000	71.707	34.352	-2.293	74.000	37.355	PK
3	*	2405.502	106.923	69.587	32.923	74.000	37.337	PK

Site: AC5	Time: 2016/04/14 - 11:30
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2422Hz by 802.11n40	



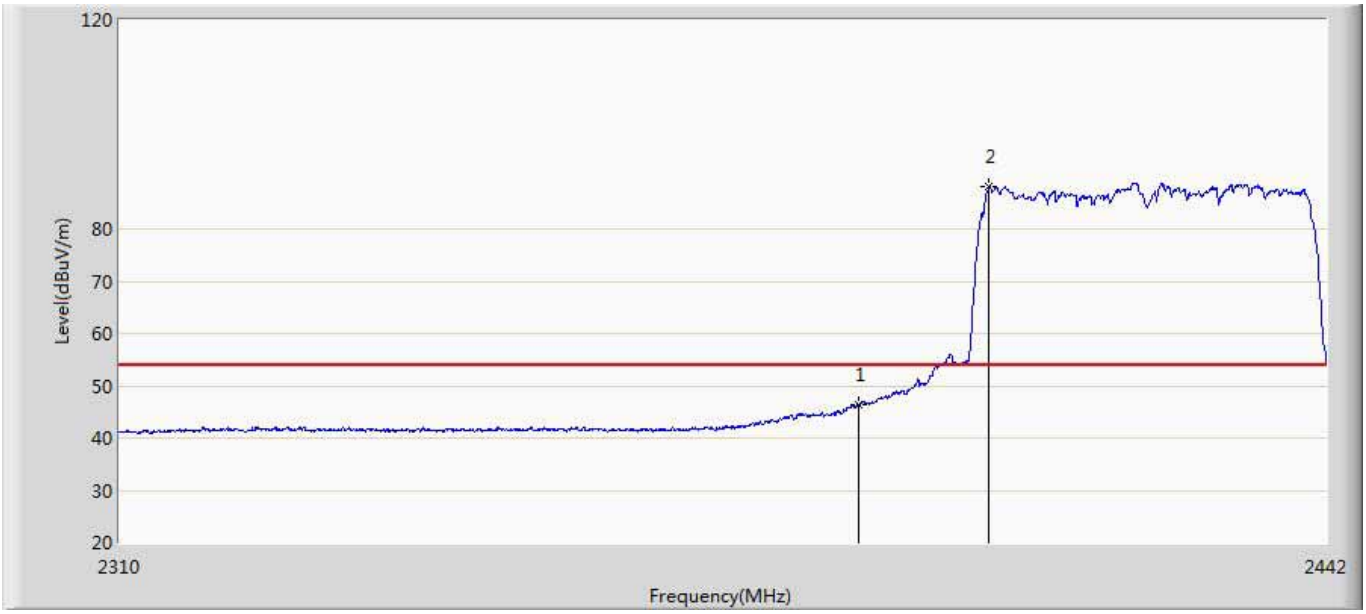
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	53.705	16.350	-0.295	54.000	37.355	AV
2	*	2405.634	96.378	59.042	42.378	54.000	37.336	AV

Site: AC5	Time: 2016/04/14 - 11:36
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2422Hz by 802.11n40	



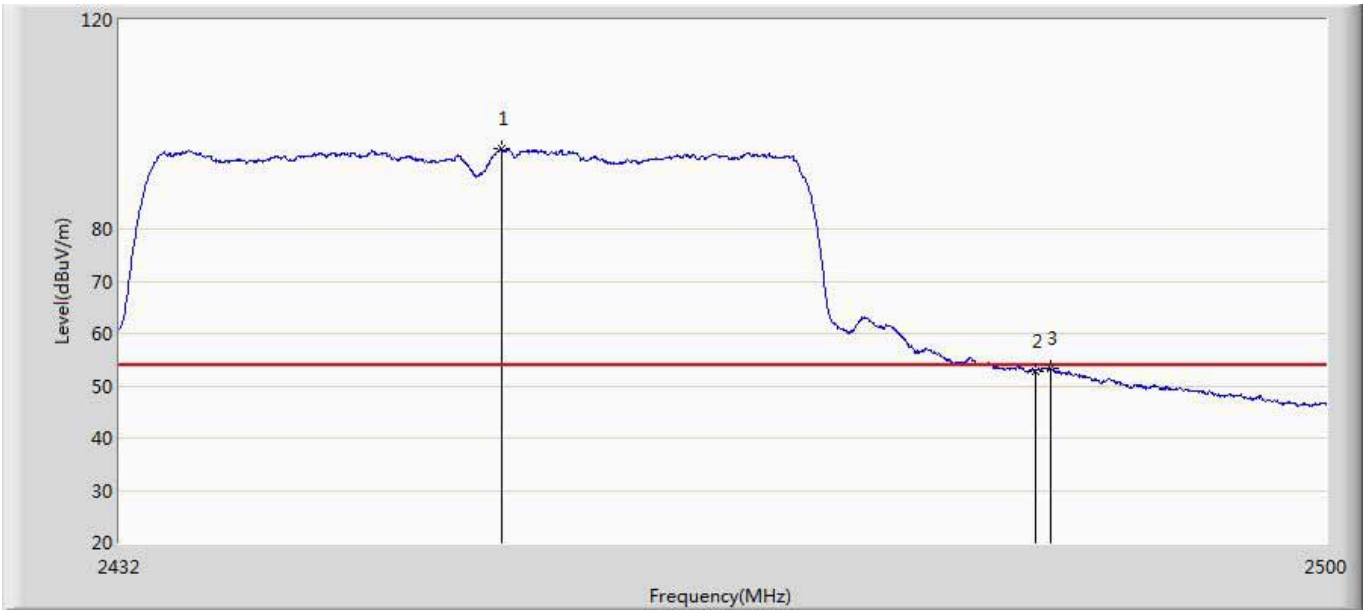
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2388.012	60.741	23.385	-13.259	74.000	37.356	PK
2		2390.000	58.016	20.661	-15.984	74.000	37.355	PK
3	*	2405.436	97.967	60.631	23.967	74.000	37.336	PK

Site: AC5	Time: 2016/04/14 - 11:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2422Hz by 802.11n40	



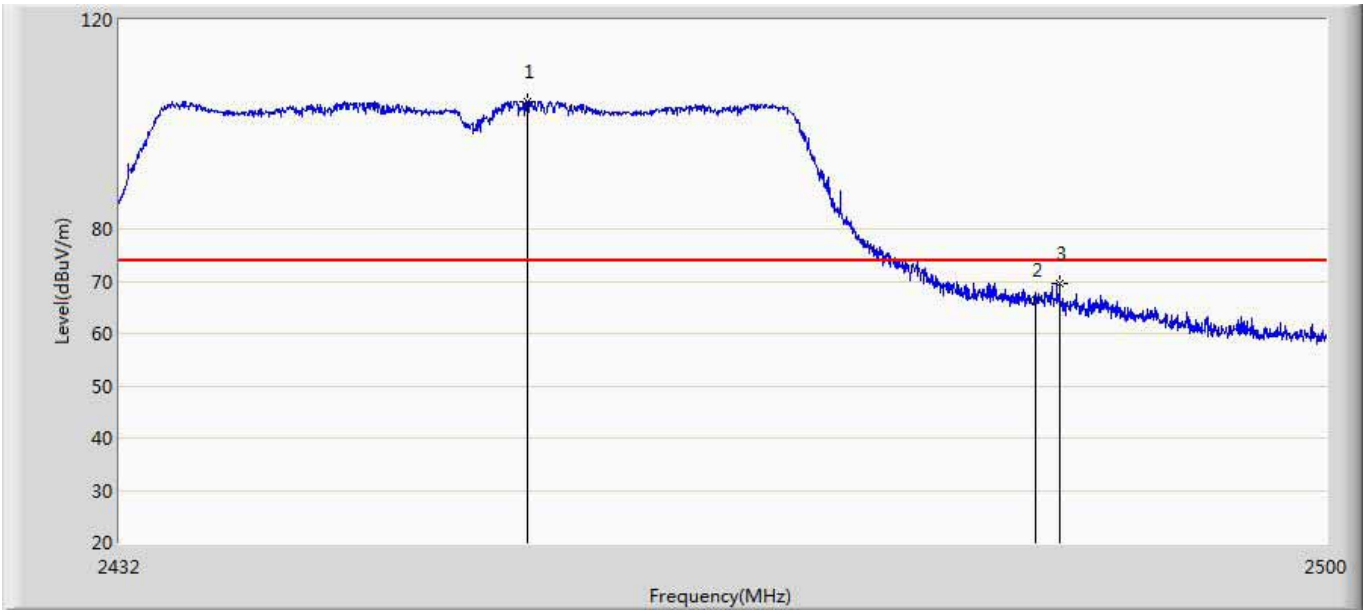
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	46.464	9.109	-7.536	54.000	37.355	AV
2	*	2404.446	88.016	50.678	34.016	54.000	37.338	AV

Site: AC5	Time: 2016/04/14 - 11:56
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2452Hz by 802.11n40	



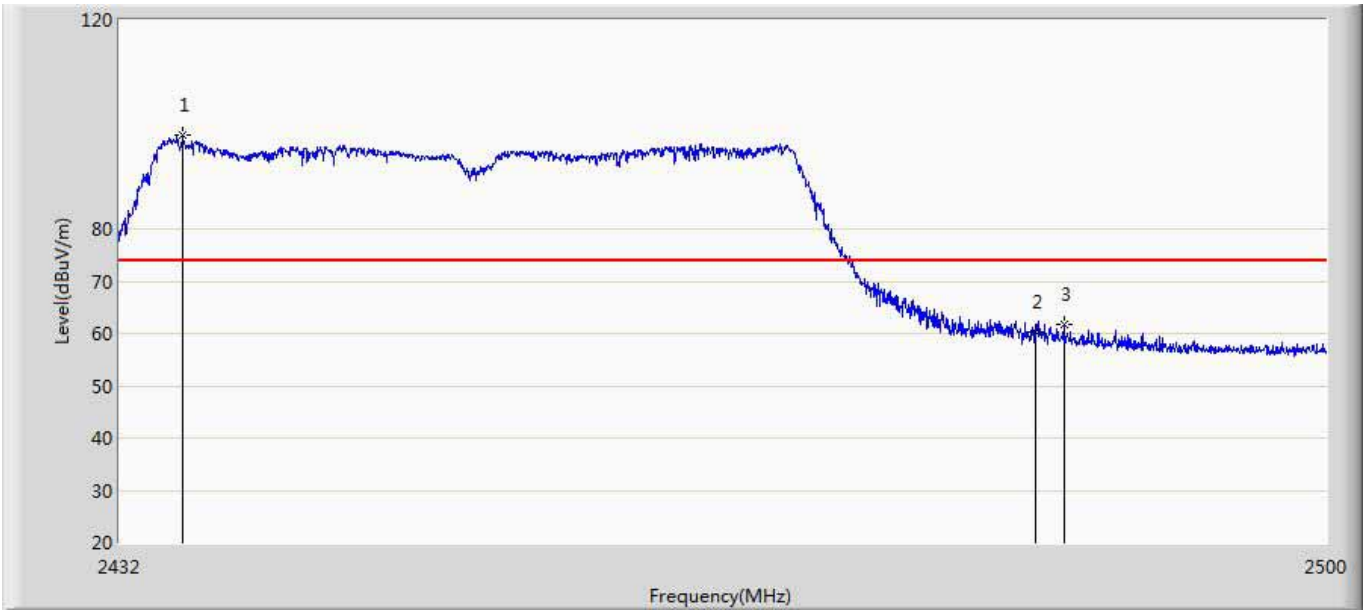
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2453.352	95.337	57.910	41.337	54.000	37.427	AV
2		2483.500	52.886	15.375	-1.114	54.000	37.511	AV
3		2484.326	53.460	15.943	-0.540	54.000	37.517	AV

Site: AC5	Time: 2016/04/14 - 11:58
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2452Hz by 802.11n40	



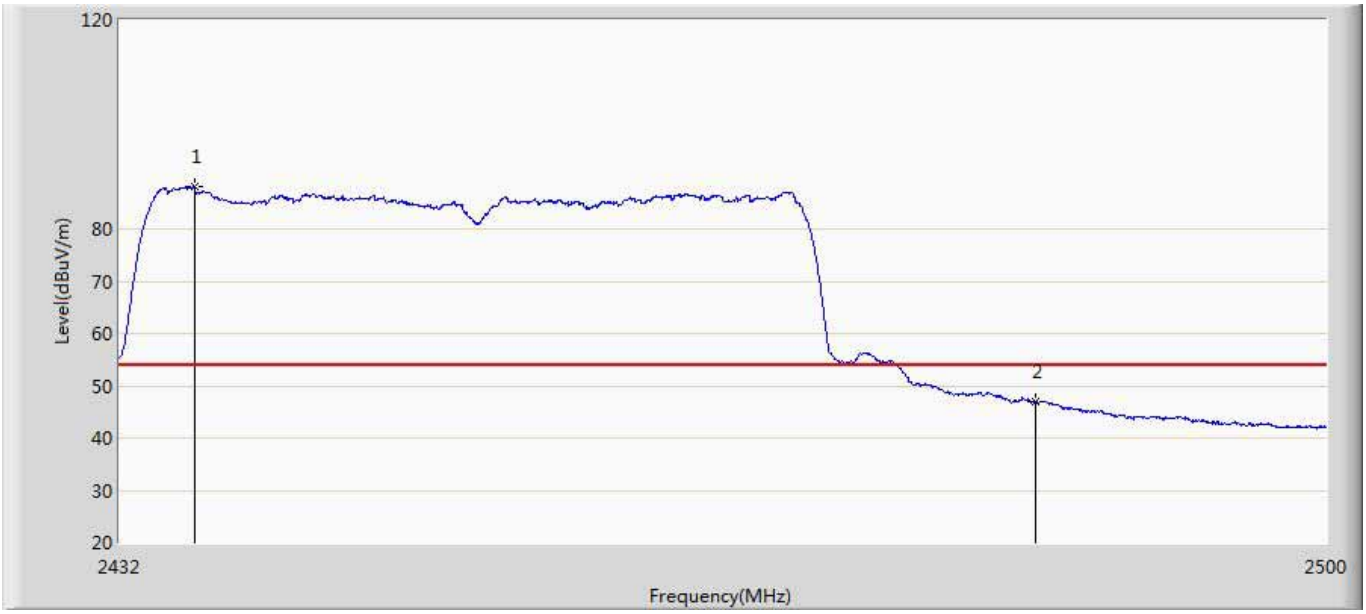
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2454.780	104.329	66.903	30.329	74.000	37.426	PK
2		2483.500	66.430	28.919	-7.570	74.000	37.511	PK
3		2484.836	69.461	31.940	-4.539	74.000	37.521	PK

Site: AC5	Time: 2016/04/14 - 12:00
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2452Hz by 802.11n40	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2435.570	97.846	60.408	23.846	74.000	37.438	PK
2		2483.500	60.386	22.875	-13.614	74.000	37.511	PK
3		2485.074	61.850	24.327	-12.150	74.000	37.522	PK

Site: AC5	Time: 2016/04/14 - 12:01
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: AC750 Wireless Dual Band Gigabit Router	Power: AC 120V/60Hz
Note: Mode 4:Transmit at 2452Hz by 802.11n40	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2436.182	87.998	50.560	33.998	54.000	37.438	AV
2		2483.500	46.872	9.361	-7.128	54.000	37.511	AV

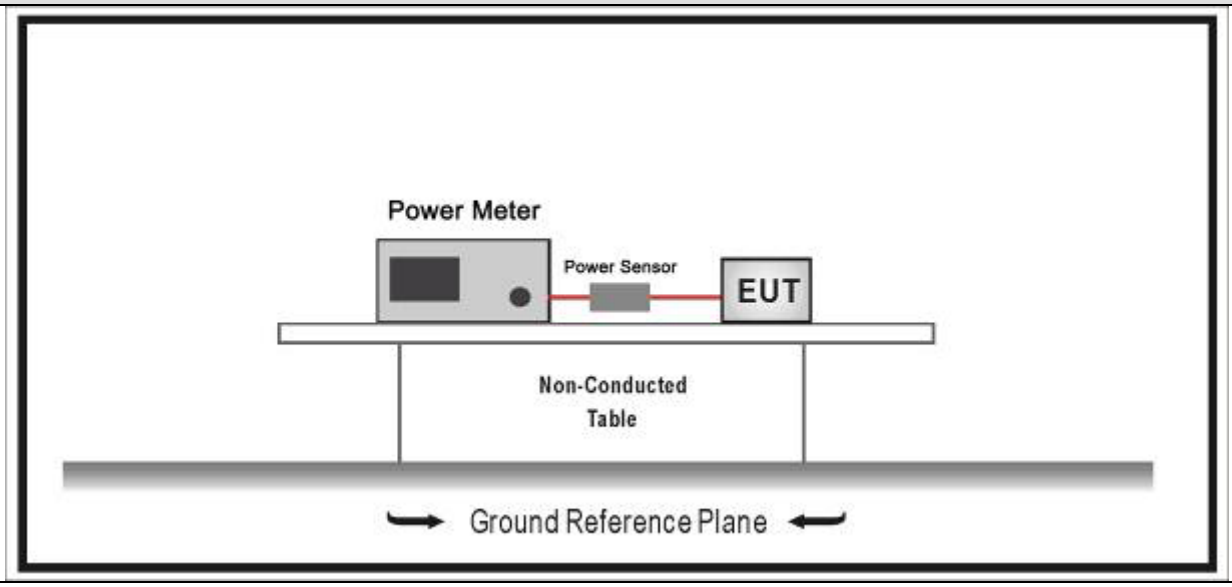
5. Fundamental emission output power

5.1. Test Equipment

Fundamental emission output power/ TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2016.01.04	2017.01.03
Spectrum Analyzer	Agilent	N9010A	MY48030494	2016.03.11	2017.03.10
Wideband Peak Power Meter	Anritsu	ML2495A	0905006	2015.11.11	2016.11.10
Power Sensor	Anritsu	MA2411B	0846014	2015.11.11	2016.11.10
Temperature/Humidity Meter	zhicheng	ZC1-2	TR8-TH	2016.04.10	2017.04.09
Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

5.2. Test Setup

Fundamental emission output power test setup



5.3. Limit

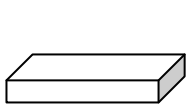
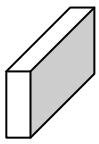
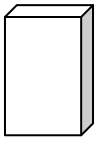
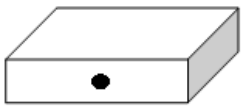
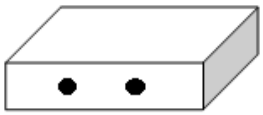
Fundamental emission output power Limit			
☒	G_{TX} ＜6dBi		P_{out}≤30dBm
☒	G_{TX} ＞6dBi		
	☒	Non-Fix point-point	P_{out}≤30-(G_{TX} -6)
	☐	Fix point-point	P_{out}≤30-[(G_{TX}-6)]/3
	☐	Point-to-multipoint	P_{out}≤30-(G_{TX}-6)
	☐	Overlap Beams	P_{out}≤30-[(G_{TX}-6)]/3
	☐	Aggregate power transmitted simultaneously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

5.4. Test Procedure

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

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

5.5. EUT test definition

<table>
<tr><td>Item</td><td colspan="4">Fundamental emission output power</td></tr>
<tr><td rowspan="4">Device Category</td><td>☒</td><td colspan="3">Indoor use</td></tr>
<tr><td>☐</td><td colspan="3">Outdoor use</td></tr>
<tr><td>☐</td><td colspan="3">Fix position use</td></tr>
<tr><td>☐</td><td colspan="3">Mobile position use</td></tr>
<tr><td>Test mode</td><td colspan="4">Mode 1-4</td></tr>
<tr><td rowspan="11">Test method</td><td>☐</td><td colspan="3">Radiated</td></tr>
<tr><td rowspan="3"></td><td>X Axis</td><td>Y Axis</td><td>Z Axis</td></tr>
<tr><td>  </td><td>  </td><td>  </td></tr>
<tr><td>Worst Axis ☐</td><td>Worst Axis ☐</td><td>Worst Axis ☐</td></tr>
<tr><td>☒</td><td colspan="3">Conducted</td></tr>
<tr><td>☐</td><td colspan="3">Chain 0</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☒</td><td>Chain 0</td><td colspan="2">Chain 1</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☐</td><td>Chain 0</td><td>Chain 1</td><td>Chain 2</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
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5.6. Test Result

Product Name	:	AC750 Wireless Dual Band Gigabit Router	Test Power	:	AC 120V/60Hz
Test Site	:	No.3			

Mode	Channel	Test Frequency (MHz)	Measurement Power Output (dBm)		Total Power (dBm)	Directional Gain (dBi)	Limit (dBm)	Result
			Ant 0	Ant 1				
1	01	2412	20.89	21.64	24.29	2	30	Pass
1	06	2437	20.73	20.32	23.54	2	30	Pass
1	11	2462	20.27	19.68	23.00	2	30	Pass
2	01	2412	22.82	23.59	26.23	2	30	Pass
2	06	2437	23.15	23.03	26.10	2	30	Pass
2	11	2462	21.18	21.26	24.23	2	30	Pass
3	01	2412	22.17	22.86	25.54	2	30	Pass
3	06	2437	21.29	21.41	24.36	2	30	Pass
3	11	2462	20.57	21.04	23.82	2	30	Pass
4	03	2422	20.61	21.27	23.96	5	30	Pass
4	06	2437	21.71	21.37	24.55	5	30	Pass
4	09	2452	19.72	19.24	22.50	5	30	Pass

The End