Test Report

FCC Part15 Subpart C& Industry Canada RSS-247 Issue 1

Product Name	:	Access Point
Model No.	:	APEX0365, APEX0367
FCC ID	:	Q9DAPEX0365367
IC	:	4675A-APEX0365367

Applicant	:	Hewlett Packard Enterprise Company
Address	:	3000 Hanover St. Palo Alto,CA 94304,USA

Date of Receipt	:	Nov. 29, 2016
Test Date	:	Nov. 29, 2016~ Dec. 12, 2016
Issued Date	:	Jan. 18, 2017
Report No.	:	16B2199R-RF-US-P06V01
Report Version	:	V1.1

Test Report Certification

Issued Date : Jan. 18, 2017
Report No. : 16B2199R-RF-US-P06V01

Product Name	:	Access Point
Applicant	:	Hewlett Packard Enterprise Company
Address	:	3000 Hanover St. Palo Alto,CA 94304,USA
Manufacturer	:	Hewlett Packard Enterprise Company
Address	:	3000 Hanover St. Palo Alto,CA 94304,USA
Model No.	:	APEX0365, APEX0367
FCC ID	:	Q9DAPEX0365367
IC	:	4675A-APEX0365367
EUT Voltage	:	PoE 57V
Testing Voltage	:	PoE 57V
Applicable Standard	:	FCC CFR Title 47 Part 15 Subpart C: 2015 ANSI C63.4:2014; ANSI C63.10:2013; KDB 558074 D01v03r05 Industry Canada RSS-Gen Issue 4 / RSS-247 Issue 1
Test Result	:	Complied
Performed Location	:	DEKRA Testing and Certification (Suzhou) Co., Ltd. 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; IC Lab Code: 4075B

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Reviewed By : Jack Zhang

(Senior Engineer: Jack Zhang)

Approved By : Harry Zhao

(Engineering Manager : Harry Zhao)

TABLE OF CONTENTS

History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
16B2199R-RF-US-P06V01	V1.0	Initial Issued Report	Jan. 11, 2017
16B2199R-RF-US-P06V01	V1.1	Page 70, modify the data description.	Jan. 18, 2017

1. General Information

1.1. EUT Description

Product Name	Access Point
Model No.	APEX0365, APEX0367
SN	APEX0365:CNCFJSW047 APEX0367:CNCJJSX009
SW	6.5.2.0 build 57798
EUT Voltage	PoE 57V
Testing Voltage	PoE 57V
Bluetooth Specification	V4.0
Frequency Range	2402- 2480 MHz
Channel Number	V4.0: 40
Channel Separation	V4.0: 2MHz
Type of Modulation	V4.0: GFSK
Data Rate	V4.0: 1Mbps(GFSK)
Antenna Type	Reference to Antenna List
Peak Antenna Gain	Reference to Antenna List
Extreme Temperature	-40℃-50℃

1.2. Channel List:

Bluetooth Working Frequency of Each Channel: (For BLE)							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
00	2402 MHz	01	2404 MHz	02	2406 MHz	03	2408 MHz
04	2410 MHz	05	2412 MHz	06	2414 MHz	07	2416 MHz
08	2418 MHz	09	2420 MHz	10	2422 MHz	11	2424 MHz
12	2426 MHz	13	2428 MHz	14	2430 MHz	15	2432 MHz
16	2434 MHz	17	2436 MHz	18	2438 MHz	19	2440 MHz
20	2442 MHz	21	2444 MHz	22	2446 MHz	23	2448 MHz
24	2450 MHz	25	2452 MHz	26	2454 MHz	27	2456 MHz
28	2458 MHz	29	2460 MHz	30	2462 MHz	31	2464 MHz
32	2466 MHz	33	2468 MHz	34	2470 MHz	35	2472 MHz
36	2474 MHz	37	2476 MHz	38	2478 MHz	39	2480 MHz

1.3. Test Channel:

Bluetooth Working Frequency of Each Channel: (For BLE)							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
00	2402 MHz	19	2440 MHz	39	2480 MHz	N/A	N/A

1.4. Antenna information

APEX0365:

Antenna manufacturer	N/A					
Antenna Delivery	☒	1*TX+1*RX	☐	2*TX+2*RX	☐	3*TX+3*RX
Antenna technology	☒	SISO				
	☐	MIMO	☐	Basic		
			☐	Sectorized antenna systems		
			☐	Cross-polarized antennas		
			☐	Unequal antenna gains, with equal transmit powers		
			☐	Spatial Multiplexing		
			☐	CDD		
			☐	Beam-forming		
Antenna Type	☐	External	☐	Dipole		

	☒	Internal	☐	PIFA
			☐	PCB
			☐	Ceramic Chip Antenna
			☒	Metal plate type F antenna
			☐	Cross-polarize Antenna
Antenna Gain #0	2.7dBi			

APEX0367:

Antenna manufacturer	N/A			
Antenna Delivery	☒	1*TX+1*RX	☐ 2*TX+2*RX	☐ 3*TX+3*RX
Antenna technology	☒	SISO		
	☐	MIMO	☐	Basic
			☐	Sectorized antenna systems
			☐	Cross-polarized antennas
			☐	Unequal antenna gains, with equal transmit powers
			☐	Spatial Multiplexing
			☐	CDD
			☐	Beam-forming
Antenna Type	☐	External	☐	Dipole
	☒	Internal	☒	PIFA
			☐	PCB
			☐	Ceramic Chip Antenna
			☐	Metal plate type F antenna
			☐	Cross-polarize Antenna
Antenna Gain #0	4.3dBi			

1.5. Mode of Operation

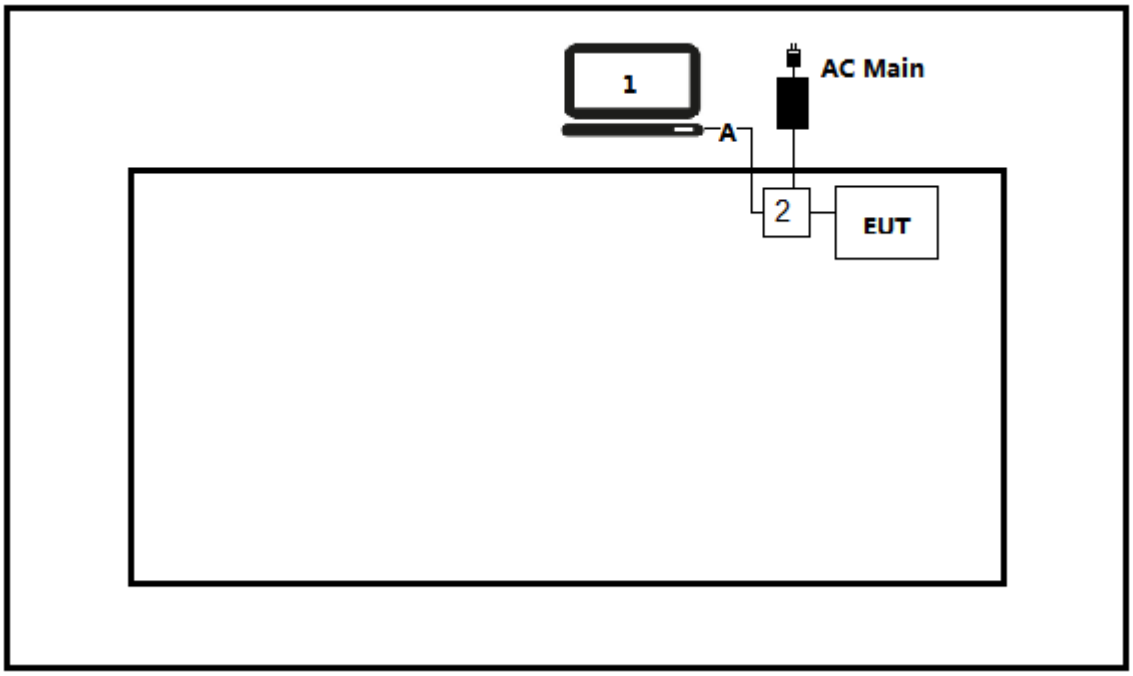
Test Mode
Mode 1: Transmit–1Mbps(GFSK_BLE)

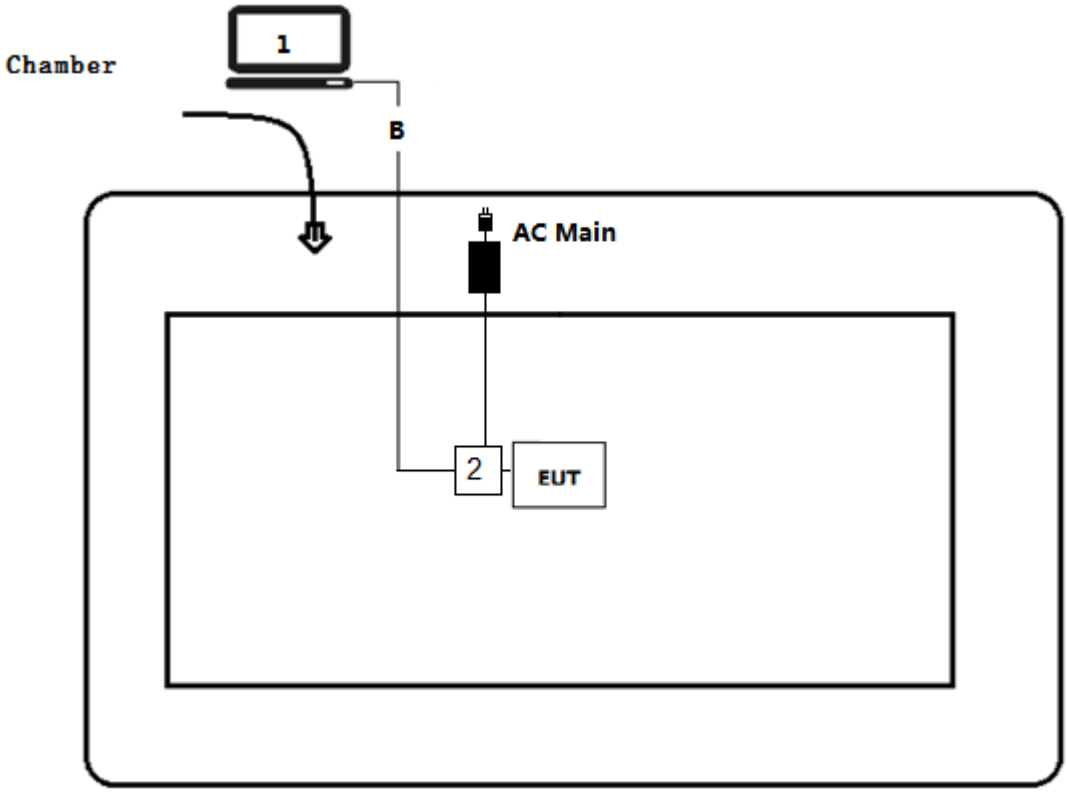
1.6. Tested System Details

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	Think Pad	2526	LV-A3285	Power by adapter
2	POE	N/A	N/A	N/A	Power by adapter

1.7. Configuration of Tested System

Test setup Diagram- AC Line Conducted Emission Test

Test setup Diagram- Radiated Emission



A	LAN Cable	Non-shielded, 1.5m
B	LAN Cable	Non-shielded, 15m

1.8. EUT Exercise Software

1	Setup the EUT and simulators as shown on above.
2	Turn on the power of all equipment.
3	Run the RF test software（CMD）, and set the test mode and channel, then press OK to start continue receive.

2. Technical Test

2.1. Summary of Test Result

For FCC Rule:

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	Pass
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	⩾20dBc	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	⩾500kHz	Pass
Fundamental emission output power	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(b)(3)	Mode 1	⩽30dBm	Pass
Power Spectral Density	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(e)	Mode 1	⩽8dBm/3kHz	Pass
Antenna Requirement	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.203	N/A	FCC 15.203	Pass

For IC Rule:

Performed Test Item	Normative References	Worst case mode	Limit	Result
AC Power Line Conducted Emission	RSS-Gen Issue 4 Section 8.8	Mode 1	RSS-Gen	Pass
Emissions in restricted frequency bands	RSS-Gen Issue 4 Section 8.9	Mode 1	RSS-Gen	Pass
Emissions in non-restricted frequency bands	RSS-247 Issue 1 Section A5.5	Mode 1	⩾20dBc	Pass
Radiated Emission Band Edge	RSS-247 Issue 1 Section A5.5	Mode 1	RSS-247	Pass
Occupied Bandwidth	RSS-Gen Issue 4 Section 6.6 RSS-247 Issue 1 Section A5.2(1)	Mode 1	⩾500kHz	Pass
Fundamental emission output power	RSS-247 Issue 1 Section A5.4(4)	Mode 1	⩽30dBm	Pass
Power Spectral Density	RSS-247 Issue 1 Section A5.2(2)	Mode 1	⩽8dBm/3kHz	Pass
Antenna Requirement	RSS-Gen Issue 4 Section 8.3	N/A	RSS-Gen Issue 4	Pass

2.2. 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

2.3. Measurement Uncertainty

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

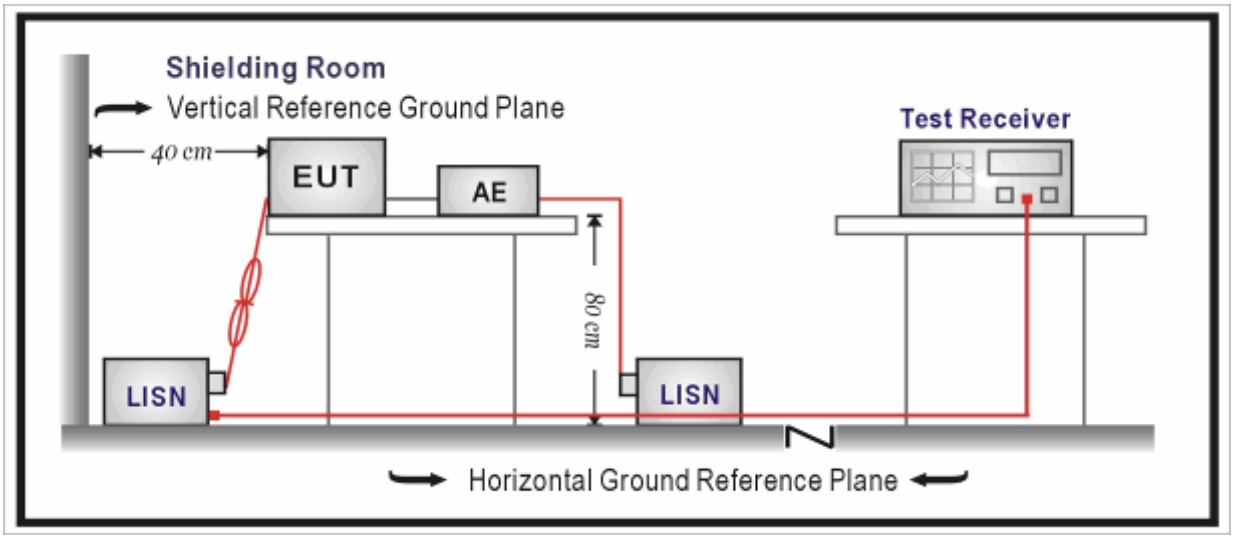
3. AC Power Line Conducted Emission

3.1. Test Equipment

AC Power Line Conducted Emission / TR-1					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Test Receiver	R&S	ESCI	100906	2016.03.05	2017.03.04
Two-Line V-Network	R&S	ENV 216	101189	2016.07.16	2017.07.15
Two-Line V-Network	R&S	ENV 216	101044	2015.09.16	2017.09.15
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	N/A	N/A
50ohm Termination	SHX	TF2	07081402	2015.09.16	2017.09.15
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.					

3.2. Test Setup

AC Power Line Conducted Emission test setup



3.3. Limit

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

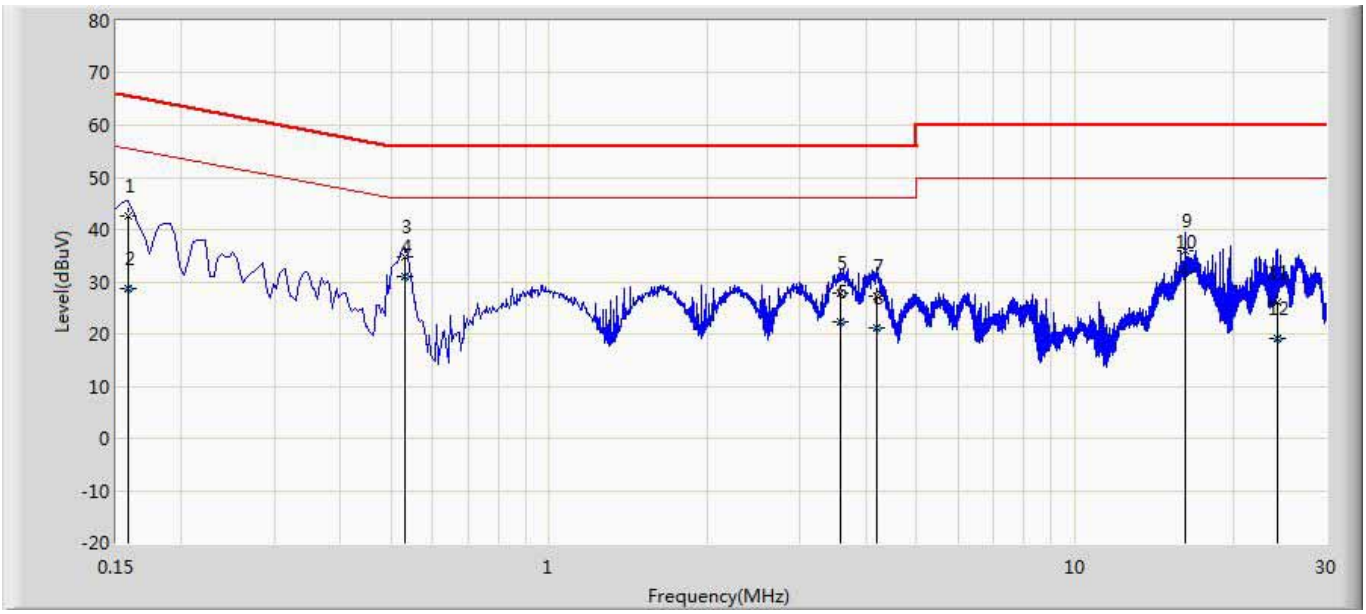
3.4. Test Procedure

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

3.5. Test Result

APEX0365:

Site: TR5	Time: 2017/01/18 - 14:37
Limit: FCC_Part15.107_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Line
EUT: Access Point	Power: PoE 57V
Note: Mode 1	

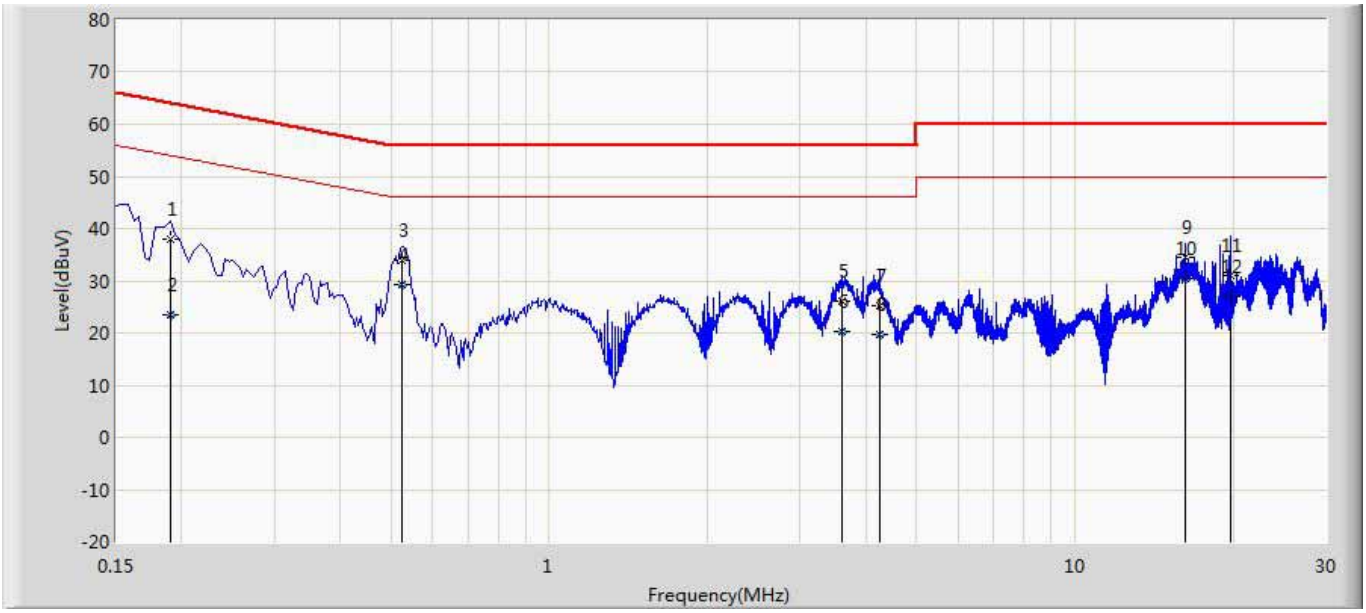


No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.158	42.586	32.955	-22.982	65.568	9.608	0.022	0.000	QP
2		0.158	28.689	19.059	-26.879	55.568	9.608	0.022	0.000	AV
3		0.530	34.921	25.273	-21.079	56.000	9.600	0.048	0.000	QP
4	*	0.530	30.992	21.343	-15.008	46.000	9.600	0.048	0.000	AV
5		3.578	27.897	18.136	-28.103	56.000	9.636	0.126	0.000	QP
6		3.578	22.306	12.544	-23.694	46.000	9.636	0.126	0.000	AV
7		4.210	27.337	17.558	-28.663	56.000	9.647	0.132	0.000	QP
8		4.210	21.303	11.524	-24.697	46.000	9.647	0.132	0.000	AV
9		16.230	35.943	25.718	-24.057	60.000	9.959	0.266	0.000	QP
10		16.230	31.771	21.546	-18.229	50.000	9.959	0.266	0.000	AV
11		24.294	26.223	15.469	-33.777	60.000	10.423	0.331	0.000	QP
12		24.294	19.163	8.408	-30.837	50.000	10.423	0.331	0.000	AV

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Site: TR5	Time: 2017/01/18 - 14:37
Limit: FCC_Part15.107_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Neutral
EUT: Access Point	Power: PoE 57V
Note: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.190	37.842	28.217	-26.195	64.037	9.598	0.028	0.000	QP
2		0.190	23.602	13.977	-30.435	54.037	9.598	0.028	0.000	AV
3		0.526	33.905	24.267	-22.095	56.000	9.590	0.048	0.000	QP
4	*	0.526	29.251	19.614	-16.749	46.000	9.590	0.048	0.000	AV
5		3.606	26.162	16.406	-29.838	56.000	9.631	0.125	0.000	QP
6		3.606	20.296	10.540	-25.704	46.000	9.631	0.125	0.000	AV
7		4.258	25.317	15.542	-30.683	56.000	9.640	0.135	0.000	QP
8		4.258	19.691	9.915	-26.309	46.000	9.640	0.135	0.000	AV
9		16.226	34.508	24.229	-25.492	60.000	10.014	0.266	0.000	QP
10		16.226	30.368	20.088	-19.632	50.000	10.014	0.266	0.000	AV
11		19.710	31.063	20.603	-28.937	60.000	10.167	0.294	0.000	QP
12		19.710	26.979	16.518	-23.021	50.000	10.167	0.294	0.000	AV

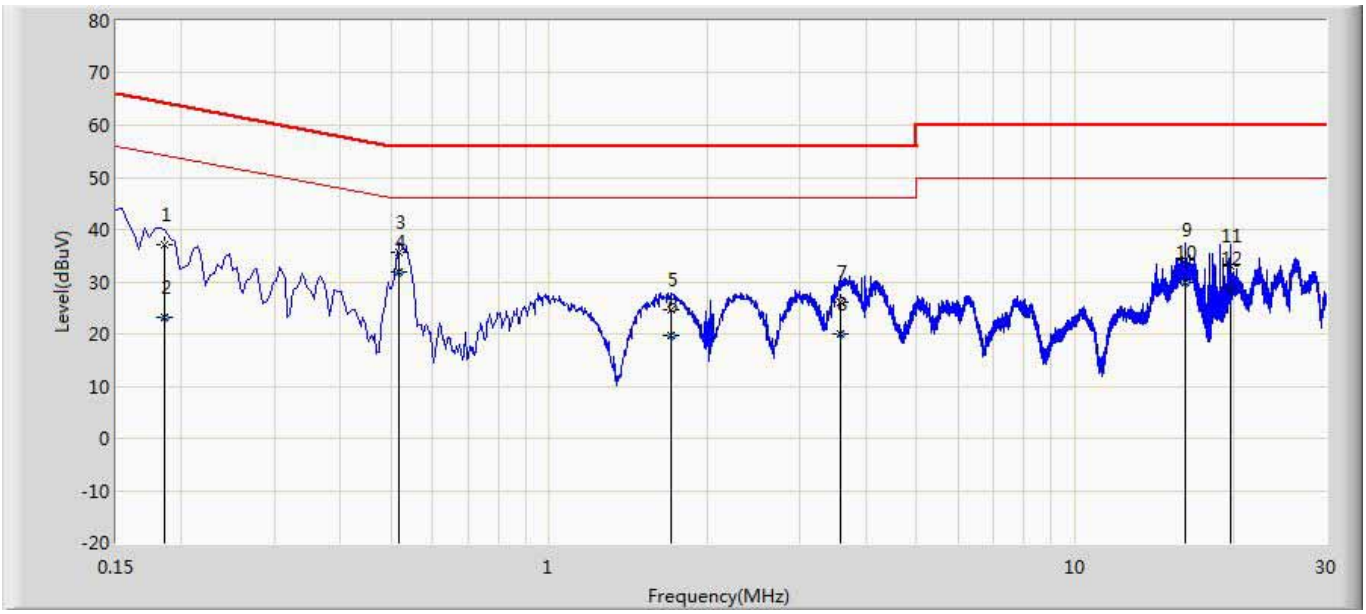
Note: 1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.

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

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

APEX0367:

Site: TR5	Time: 2017/01/18 - 14:29
Limit: FCC_Part15.107_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Neutral
EUT: Access Point	Power: PoE 57V
Note: Mode 1	

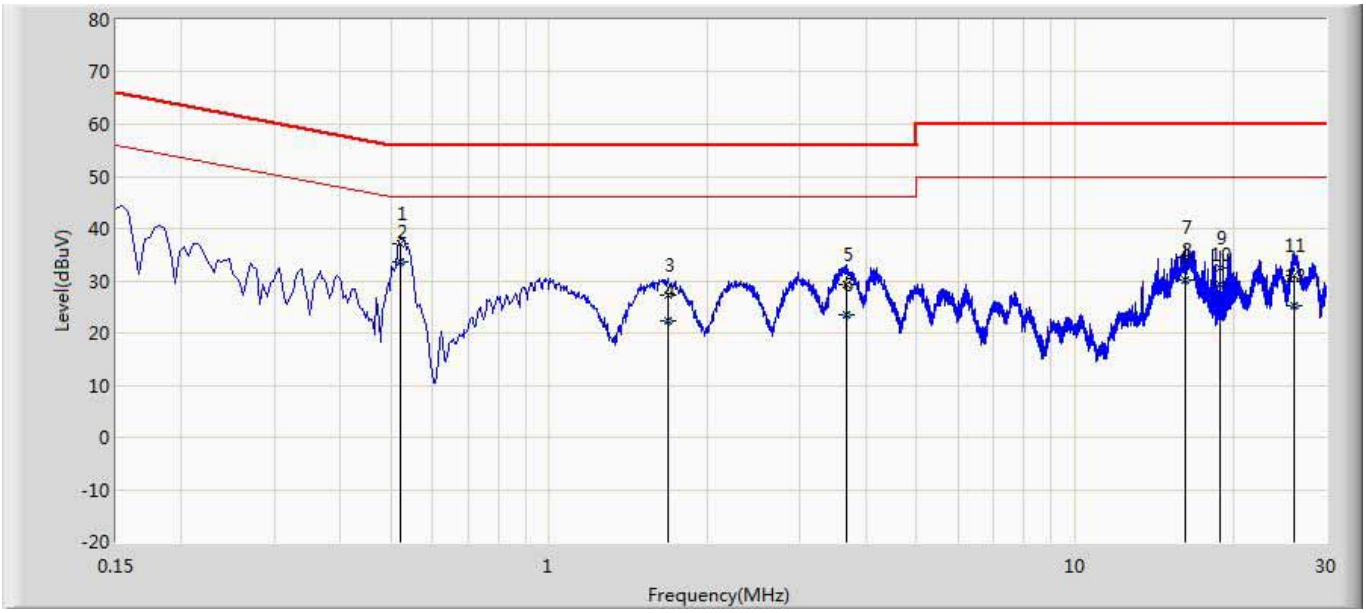


No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.186	37.063	27.439	-27.150	64.213	9.597	0.027	0.000	QP
2		0.186	23.268	13.644	-30.945	54.213	9.597	0.027	0.000	AV
3		0.518	35.510	25.874	-20.490	56.000	9.590	0.046	0.000	QP
4	*	0.518	31.879	22.243	-14.121	46.000	9.590	0.046	0.000	AV
5		1.706	24.652	14.966	-31.348	56.000	9.604	0.082	0.000	QP
6		1.706	19.847	10.161	-26.153	46.000	9.604	0.082	0.000	AV
7		3.578	26.111	16.354	-29.889	56.000	9.631	0.126	0.000	QP
8		3.578	19.944	10.187	-26.056	46.000	9.631	0.126	0.000	AV
9		16.166	34.134	23.860	-25.866	60.000	10.011	0.262	0.000	QP
10		16.166	29.775	19.501	-20.225	50.000	10.011	0.262	0.000	AV
11		19.710	32.988	22.527	-27.012	60.000	10.167	0.294	0.000	QP
12		19.710	28.682	18.221	-21.318	50.000	10.167	0.294	0.000	AV

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Site: TR5	Time: 2017/01/18 - 14:34
Limit: FCC_Part15.107_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Line
EUT: Access Point	Power: PoE 57V
Note: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.522	36.988	27.342	-19.012	56.000	9.600	0.047	0.000	QP
2	*	0.522	33.493	23.846	-12.507	46.000	9.600	0.047	0.000	AV
3		1.678	27.148	17.460	-28.852	56.000	9.610	0.078	0.000	QP
4		1.678	22.449	12.761	-23.551	46.000	9.610	0.078	0.000	AV
5		3.674	29.163	19.399	-26.837	56.000	9.638	0.126	0.000	QP
6		3.674	23.532	13.768	-22.468	46.000	9.638	0.126	0.000	AV
7		16.166	34.456	24.238	-25.544	60.000	9.956	0.262	0.000	QP
8		16.166	30.091	19.873	-19.909	50.000	9.956	0.262	0.000	AV
9		18.918	32.417	22.041	-27.583	60.000	10.088	0.288	0.000	QP
10		18.918	29.323	18.947	-20.677	50.000	10.088	0.288	0.000	AV
11		26.058	31.123	20.330	-28.877	60.000	10.451	0.342	0.000	QP
12		26.058	25.282	14.490	-24.718	50.000	10.451	0.342	0.000	AV

Note:1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.

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

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

4. Emissions in restricted frequency bands

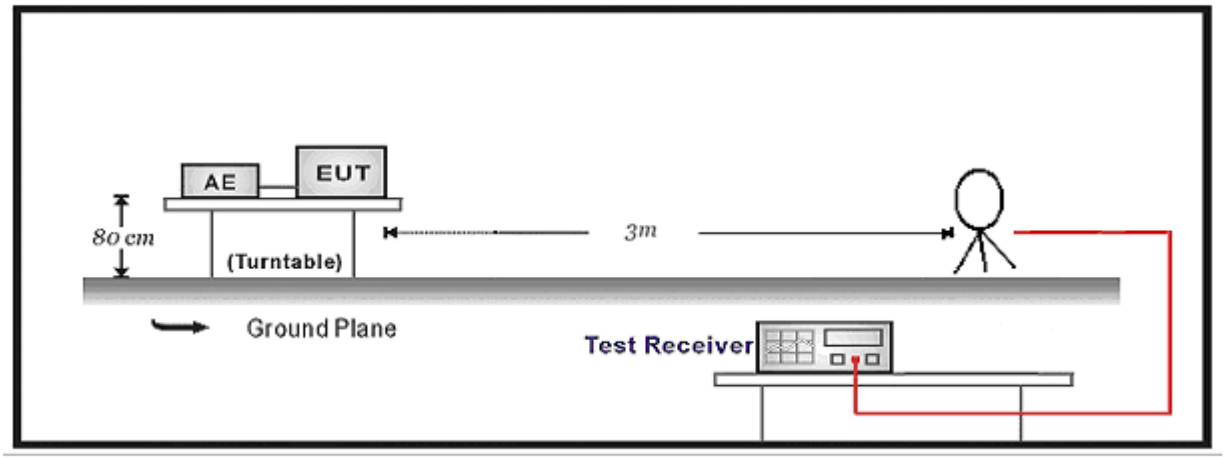
4.1. Test Equipment

Radiated Emission(Below 1GHz) / AC-2					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Test Receiver	R&S	ESCI	100573	2016.03.29	2017.03.28
Loop Antenna	R&S	HFH2-Z2	833799/003	2015.11.16	2017.11.15
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2015.10.16	2017.10.15
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC2-C	2016.03.02	2017.03.01
Temperature/Humidity Meter	Zhichen	ZC1-2	AC2-TH	2017.01.03	2018.01.02
Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

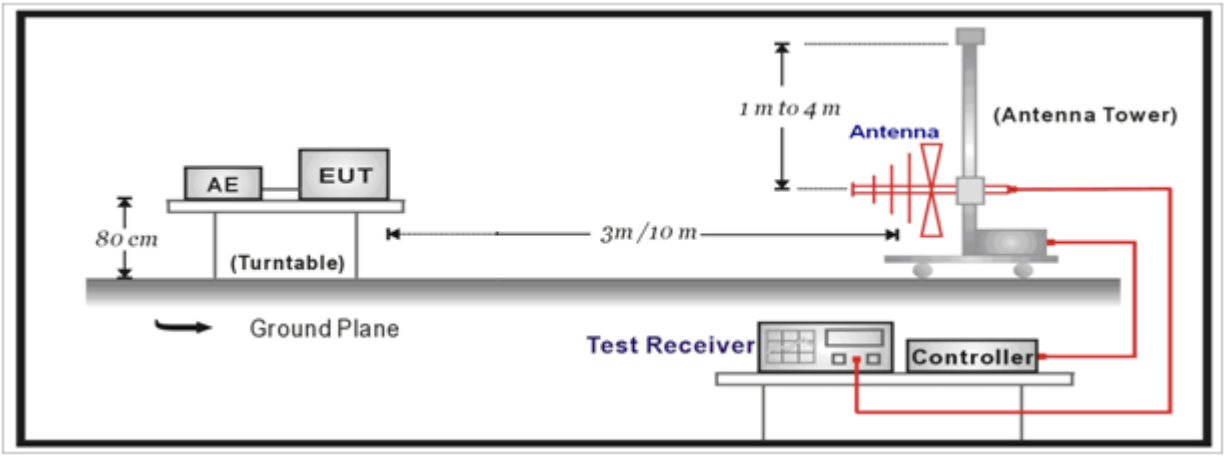
Radiated Emission(Above 1GHz) / AC-5					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2016.01.04	2017.01.03
Preamplifier	Miteq	NSP1800-25	1364185	2016.05.06	2017.05.05
Preamplifier	DEKRA Testing and Certification (Suzhou) Co., Ltd.	AP-040G	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	2017.11.24
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2016.03.02	2017.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2016.03.02	2017.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	AC5-C3	2016.03.02	2017.03.01
EMI Receiver	Agilent	N9038A	MY51210196	2016.06.10	2017.06.09
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2017.01.04	2018.01.03
Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

4.2. Test Setup

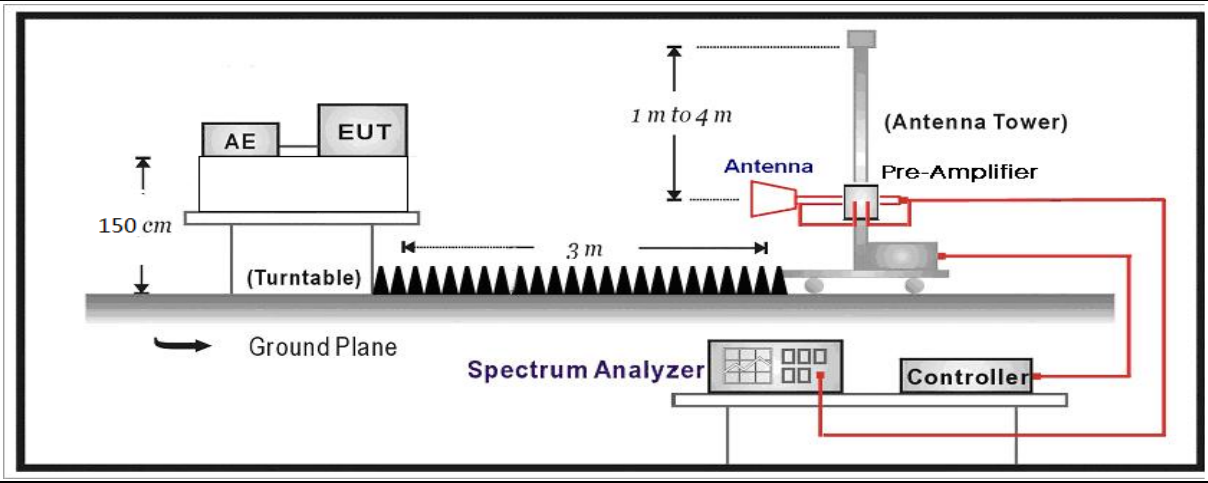
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:



4.3. Limit

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			

For IC:

Restricted Bands of operation			
Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090-0.110	13.36-13.41	1645.5-1646.5	13.25-13.4
2.1735-2.1905	16.42-16.423	1660-1710	14.47-14.5
3.020-3.026	16.69475-16.69525	1718.8-1722.2	15.35-16.2
4.125-4.128	16.80425-16.80475	2200-2300	17.7-21.4
4.17725-4.17775	25.5-25.67	2310-2390	22.01-23.12
4.20725-4.20775	37.5-38.25	2655-2900	23.6-24.0
5.677-5.683	73-74.6	3260-3267	31.2-31.8
6.215-6.218	74.8-75.2	3332-3339	36.43-36.5
6.26775-6.26825	108-138	3345.8-3358	Above 38.6
6.31175-6.31225	156.52475-156.52525	3500-4400	
8.291-8.294	156.7-156.9	4500-5150	
8.362-8.366	240-285	5350-5460	
8.37625-8.38675	322-335.4	7250-7750	
8.41425-8.41475	399.9-410	8025-8500	
12.29-12.293	608-614	9.0-9.2	
12.51975-12.52025	960-1427	9.3-9.5	
12.57675-12.57725	1435-1626.5	10.6-12.7	

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

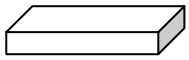
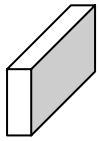
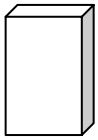
Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed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

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

4.4. Test Procedure

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

4.5. EUT test Axis definition

<table>
<tr><td>Item</td><td colspan="4">Emissions in non-restricted frequency bands</td></tr>
<tr><td rowspan="2">Device Category</td><td>☒</td><td colspan="3">Fixed 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</td></tr>
<tr><td rowspan="13">Test method</td><td>☒</td><td colspan="3">Radiated</td></tr>
<tr><td rowspan="3"></td><td>X Axis</td><td>Y Axis</td><td>Z Axis</td></tr>
<tr><td>  </td><td>  </td><td>  </td></tr>
<tr><td>Worst Axis ☐</td><td>Worst Axis ☐</td><td>Worst Axis ☒</td></tr>
<tr><td>☐</td><td colspan="3">Conducted</td></tr>
<tr><td>☐</td><td colspan="3">Chain 0</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
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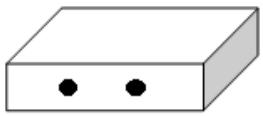
<tr><td rowspan="2"></td><td colspan="3">  </td></tr>
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<tr><td>Worst Chain ☐</td><td>Worst Chain ☐</td><td>Worst Chain ☐</td></tr>
</table>

4.6. Test Result

Product Name	:	Access Point	Power	:	PoE 57V
Test Mode	:	Mode 1	Test Site	:	AC-5
Model No.	:	APEX0365	Test Date	:	2016.12.08

Chain	CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector
Ant 0	0	H	4804.000	49.403	-8.912	40.492	54(Note3)	-13.508	PK
		V	4804.000	49.316	-8.912	40.405	54(Note3)	-13.595	PK
		H	7206.000	47.609	-5.496	42.114	54(Note3)	-11.886	PK
		V	7206.000	47.742	-5.496	42.247	54(Note3)	-11.753	PK
		H	9608.000	45.473	-2.167	43.306	54(Note3)	-10.694	PK
		V	9608.000	45.661	-2.167	43.494	54(Note3)	-10.506	PK
	19	H	4880.000	49.551	-8.714	40.836	54(Note3)	-13.164	PK
		V	4880.000	49.544	-8.714	40.829	54(Note3)	-13.171	PK
		H	7320.000	47.789	-5.436	42.353	54(Note3)	-11.647	PK
		V	7320.000	47.332	-5.436	41.896	54(Note3)	-12.104	PK
		H	9760.000	44.493	-2.358	42.135	54(Note3)	-11.865	PK
		V	9760.000	44.916	-2.358	42.558	54(Note3)	-11.442	PK
	39	H	4960.000	48.709	-8.720	39.989	54(Note3)	-14.011	PK
		V	4960.000	49.380	-8.720	40.660	54(Note3)	-13.34	PK
		H	7440.000	47.843	-5.025	42.818	54(Note3)	-11.182	PK
		V	7440.000	47.906	-5.025	42.881	54(Note3)	-11.119	PK
		H	9920.000	45.161	-1.888	43.274	54(Note3)	-10.726	PK
		V	9920.000	44.650	-1.888	42.763	54(Note3)	-11.237	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 set up, see Clause 6.6.

Product Name	:	Access Point	Power	:	PoE 57V
Test Mode	:	Mode 1	Test Site	:	AC-5
Model No.	:	APEX0367	Test Date	:	2016.12.08

Chain	CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector
Ant 0	0	H	4804.000	47.474	-8.912	38.563	54(Note3)	-15.437	PK
		V	4804.000	49.169	-8.912	40.258	54(Note3)	-13.742	PK
		H	7206.000	46.628	-5.496	41.133	54(Note3)	-12.867	PK
		V	7206.000	47.918	-5.496	42.423	54(Note3)	-11.577	PK
		H	9608.000	44.090	-2.167	41.923	54(Note3)	-12.077	PK
		V	9608.000	44.743	-2.167	42.576	54(Note3)	-11.424	PK
	19	H	4880.000	50.334	-8.714	41.619	54(Note3)	-12.381	PK
		V	4880.000	49.373	-8.714	40.658	54(Note3)	-13.342	PK
		H	7320.000	47.641	-5.436	42.205	54(Note3)	-11.795	PK
		V	7320.000	47.143	-5.436	41.707	54(Note3)	-12.293	PK
		H	9760.000	45.159	-2.358	42.801	54(Note3)	-11.199	PK
		V	9760.000	44.577	-2.358	42.219	54(Note3)	-11.781	PK
	39	H	4960.000	47.820	-8.720	39.100	54(Note3)	-14.900	PK
		V	4960.000	48.731	-8.720	40.011	54(Note3)	-13.989	PK
		H	7440.000	46.935	-5.025	41.910	54(Note3)	-12.090	PK
		V	7440.000	48.006	-5.025	42.981	54(Note3)	-11.019	PK
		H	9920.000	44.769	-1.888	42.882	54(Note3)	-11.118	PK
		V	9920.000	43.598	-1.888	41.711	54(Note3)	-12.289	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.

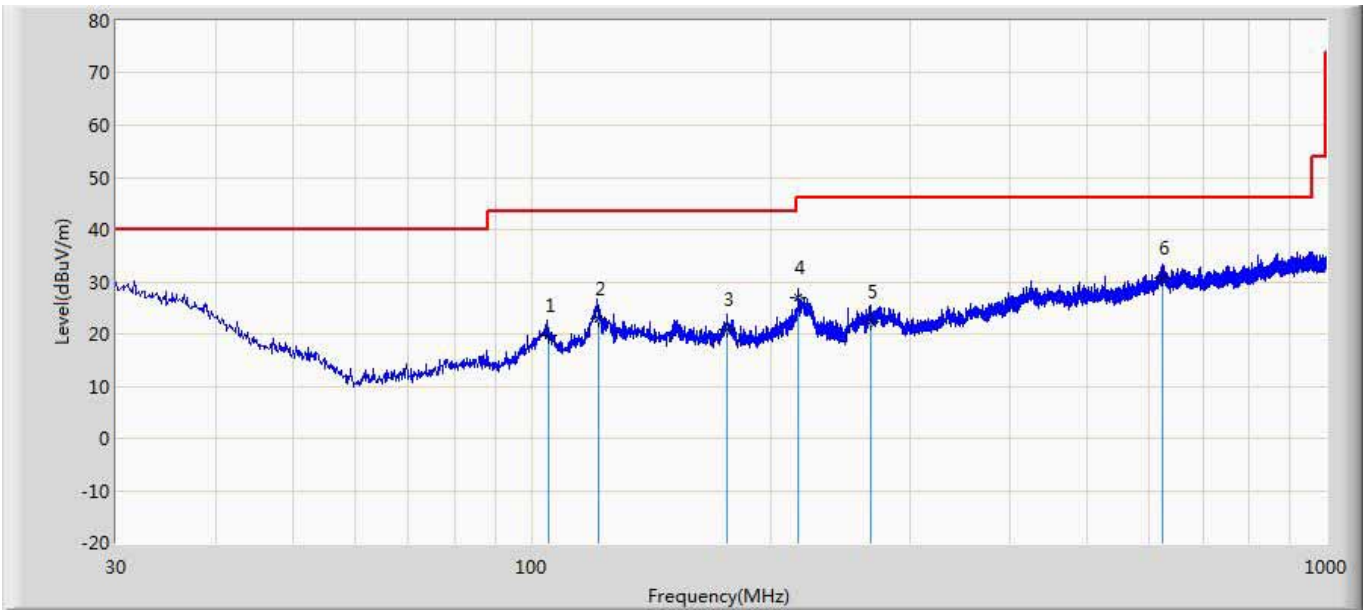
Note: 3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

Note: 4. The RBW set up, see Clause 6.6.

The worst case of Radiated Emission below 1GHz:

APEX0365:

Site: AC2	Time: 2016/12/20
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: AC2_3m (30-1000MHz)	Polarity: Horizontal
EUT: Access Point	Power: PoE 57V
Note: Mode 1	

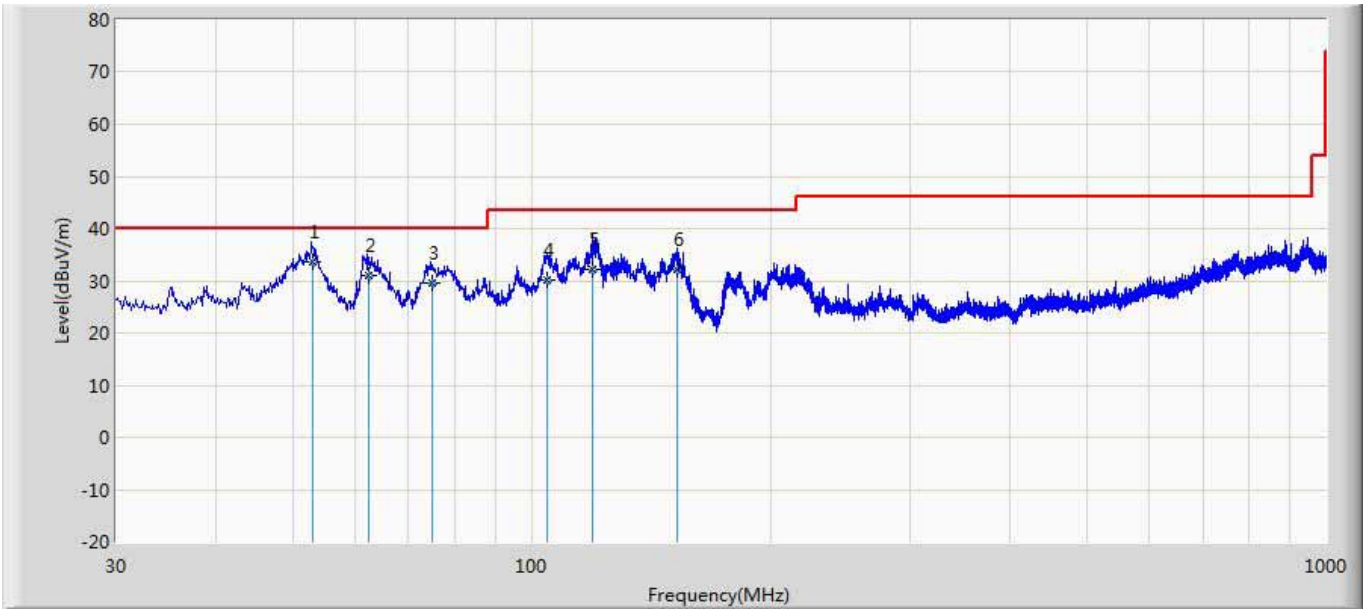


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		104.873	19.711	30.172	-23.789	43.500	11.587	1.110	23.158	200	140	QP
2		121.363	23.038	32.530	-20.462	43.500	12.418	1.190	23.100	100	221	QP
3		176.543	20.899	33.146	-22.601	43.500	9.404	1.440	23.091	100	281	QP
4		216.982	27.053	39.423	-18.947	46.000	9.270	1.590	23.230	100	337	QP
5		267.873	22.193	30.555	-23.807	46.000	13.076	1.760	23.198	100	340	QP
6	*	622.873	30.790	31.608	-15.210	46.000	19.000	2.740	22.558	200	310	QP

Note1: " * ", means this data is the worst emission level.

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

Site: AC2	Time: 2016/12/20
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: AC2_3m (30-1000MHz)	Polarity: Vertical
EUT: Access Point	Power: PoE 57V
Note: Mode 1	



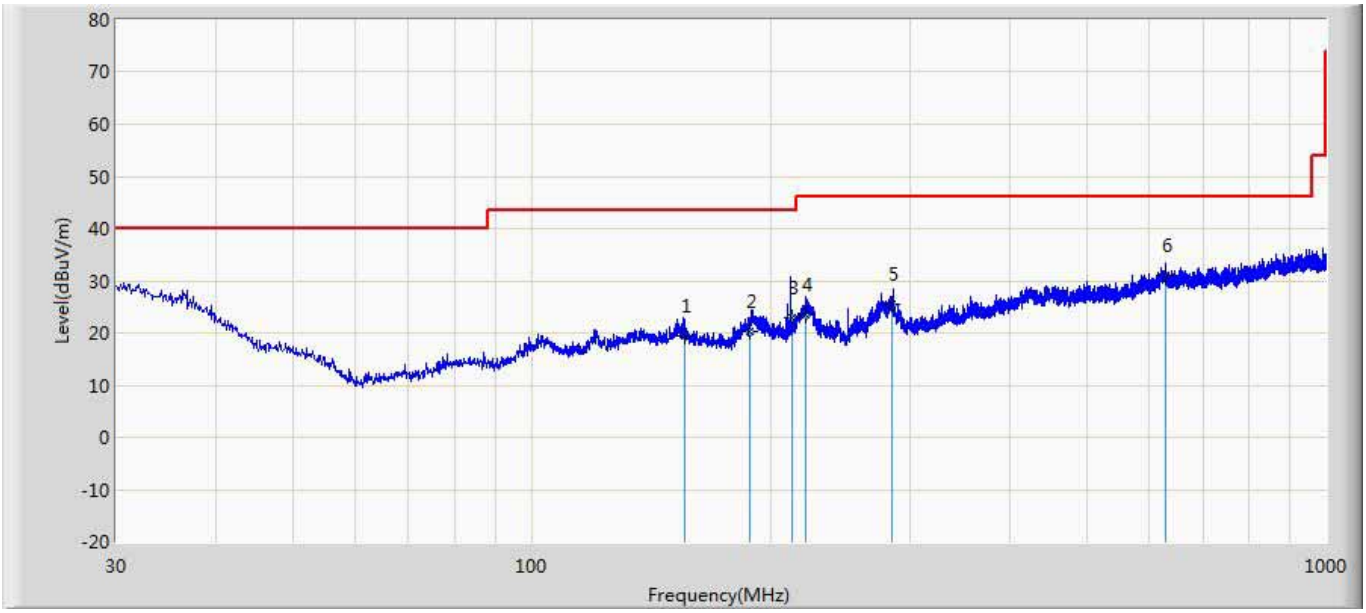
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1	*	53.117	33.524	48.083	-6.476	40.000	7.670	0.790	23.018	100	135	QP
2		62.500	31.005	46.750	-8.995	40.000	6.450	0.850	23.045	100	140	QP
3		74.853	29.523	45.044	-10.477	40.000	6.639	0.930	23.090	100	260	QP
4		104.783	30.269	40.740	-13.231	43.500	11.578	1.110	23.159	100	227	QP
5		119.086	32.111	41.579	-11.389	43.500	12.464	1.178	23.110	100	0	QP
6		152.543	32.125	43.441	-11.375	43.500	10.348	1.340	23.003	200	360	QP

Note1: " * ", means this data is the worst emission level.

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

APEX0367:

Site: AC2	Time: 2016/12/20
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: AC2_3m (30-1000MHz)	Polarity: Horizontal
EUT: Access Point	Power: PoE 57V
Note: Mode 1	

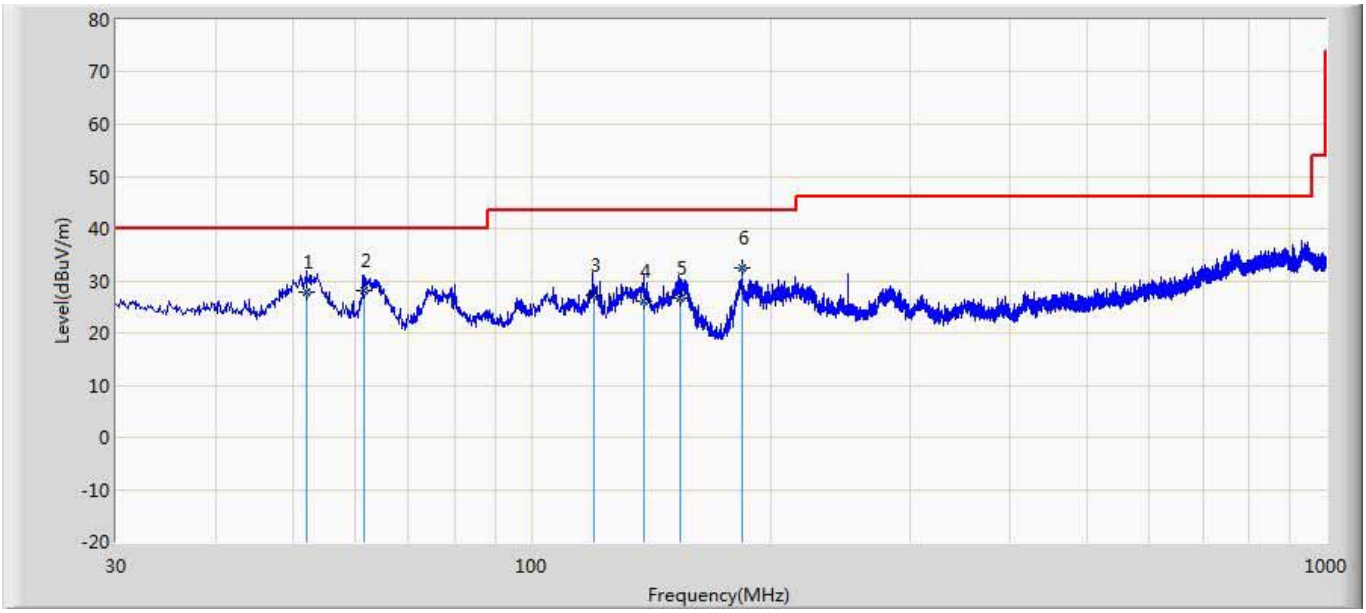


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		155.653	19.376	30.881	-24.124	43.500	10.161	1.350	23.015	100	331	QP
2		188.653	20.343	32.775	-23.157	43.500	9.213	1.490	23.136	100	154	QP
3		212.543	22.999	35.413	-20.501	43.500	9.226	1.580	23.220	200	360	QP
4		221.495	23.370	35.550	-22.630	46.000	9.450	1.610	23.240	200	52	QP
5		284.627	25.645	33.912	-20.355	46.000	12.993	1.810	23.070	100	260	QP
6	*	627.653	30.937	31.696	-15.063	46.000	19.000	2.750	22.509	100	202	QP

Note1: " * ", means this data is the worst emission level.

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

Site: AC2	Time: 2016/12/20
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: AC2_3m (30-1000MHz)	Polarity: Vertical
EUT: Access Point	Power: PoE 57V
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		52.087	27.897	42.277	-12.103	40.000	7.845	0.788	23.012	100	53	QP
2		61.492	28.121	43.846	-11.879	40.000	6.470	0.845	23.040	200	137	QP
3		120.044	27.344	36.782	-16.156	43.500	12.484	1.180	23.102	100	21	QP
4		138.681	26.156	36.720	-17.344	43.500	11.206	1.270	23.040	100	1	QP
5		153.591	26.679	38.060	-16.821	43.500	10.285	1.344	23.010	100	110	QP
6	*	184.328	32.516	44.908	-10.984	43.500	9.257	1.471	23.120	100	261	QP

Note1: " * ", means this data is the worst emission level.

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

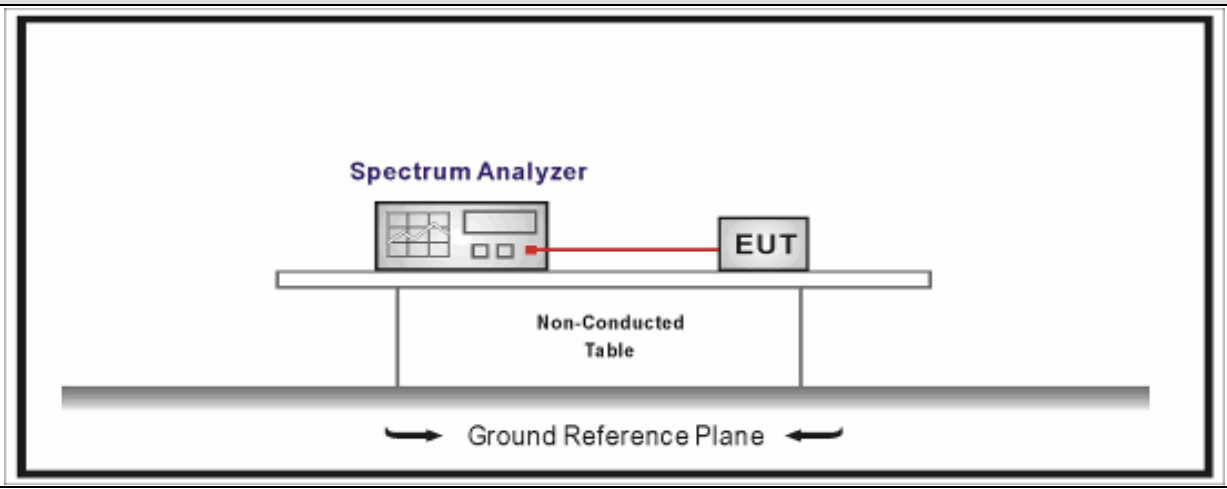
5. Emissions in non-restricted frequency bands

5.1. Test Equipment

Occupied Bandwidth / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2016.02.04	2017.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2016.04.09	2017.04.08
MXA Signal Anlyzer	Keysight	N9020A	MY56060147	2016.04.09	2017.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2016.04.10	2017.04.09
Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

5.2. Test Setup

Occupied Bandwidth test setup:



5.3. Limit

Un-Restricted Band Emissions Limit	
RF Output power (Detection methods)	Limit(dB)
RF Output power(Average detector)	30c(Note1)
RF Output power(PK detector)	20c(Note2)

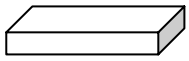
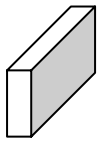
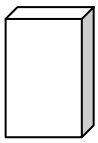
Note 1: If maximum conducted (average) output power was used to demonstrate compliance as described in 9.2, then the peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 30 dBc).

Note 2: If the maximum peak conducted output power procedure was used, then the peak output power measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 20 dBc).

5.4. Test Procedure

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

5.5. EUT test Axis definition

<table>
<tr><td>Item</td><td colspan="4">Emissions in non-restricted frequency bands</td></tr>
<tr><td rowspan="2">Device Category</td><td>☒</td><td colspan="3">Fixed 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</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>
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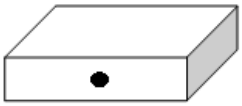
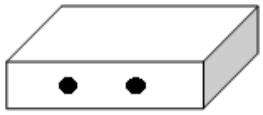
<tr><td>☒</td><td colspan="3">Chain 0</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☐</td><td>Chain 0</td><td colspan="2">Chain 1</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
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<tr><td>☐</td><td>Chain 0</td><td>Chain 1</td><td>Chain 2</td></tr>
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<tr><td></td><td>Worst Chain ☐</td><td>Worst Chain ☐</td><td>Worst Chain ☐</td></tr>
</table>

5.6. Test Result

Product Name	:	Access Point	Power	:	PoE 57V
Test Mode	:	Mode 1	Test Site	:	TR-8
Model No.	:	APEX0365	Test Date	:	2016.12.08

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	00	2402	2.161	2400.00	-40.705	42.866	>20	Pass
1	39	2480	2.161	2500.00	-56.261	58.422	>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 CH00 (2402MHz)

Product Name	:	Access Point	Power	:	PoE 57V
Test Mode	:	Mode 1	Test Site	:	TR-8
Model No.	:	APEX0367	Test Date	:	2016.12.08

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	00	2402	2.46	2399.258	-36.756	39.216	>20	Pass
1	39	2480	2.46	2485.285	-53.514	55.974	>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 CH00 (2402MHz)

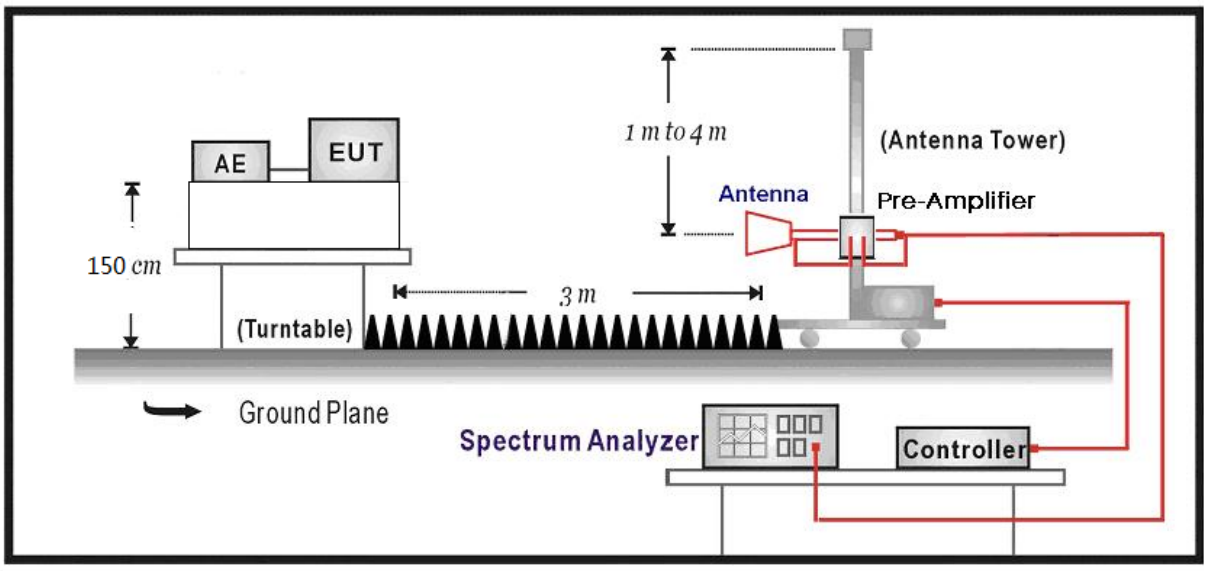
6. Radiated Emission Band Edge

6.1. Test Equipment

Radiated Emission(Above 1GHz) / AC-5					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Receiver	Agilent	N9038A	MY51210196	2016.07.16	2017.07.15
Pre-Amplifier	Miteq	NSP1800-25	1364185	2016.05.03	2017.05.02
DRG Horn Antenna	ETS-Lindgren	3117	00167055	2016.07.12	2017.07.11
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2014.09.18	2017.09.17
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2016.02.28	2017.02.27
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2016.02.28	2017.02.27
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2016.01.05	2017.01.04

6.2. Test Setup

Above 1GHz Test Setup:



6.3. Limit

Band edge Limit				
Frequency bands (MHz)	Detector	Limit (dB μ V/m)	RBW (MHz)	Distance (m)
2310-2390 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.				

6.4. Test Procedure

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

6.5. EUT test definition

<table>
<tr><td>Item</td><td colspan="4">Emissions in non-restricted frequency bands</td></tr>
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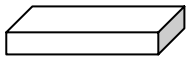
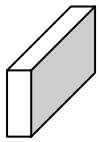
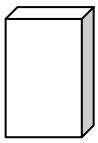
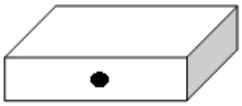
<tr><td>Test mode</td><td colspan="4">Mode 1</td></tr>
<tr><td rowspan="11">Test method</td><td>☒</td><td colspan="3">Radiated</td></tr>
<tr><td rowspan="3"></td><td>X Axis</td><td>Y Axis</td><td>Z Axis</td></tr>
<tr><td>  </td><td>  </td><td>  </td></tr>
<tr><td>Worst Axis ☐</td><td>Worst Axis ☐</td><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>
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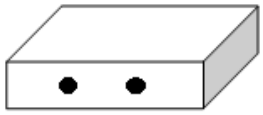
<tr><td></td><td colspan="3">  </td></tr>
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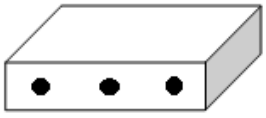
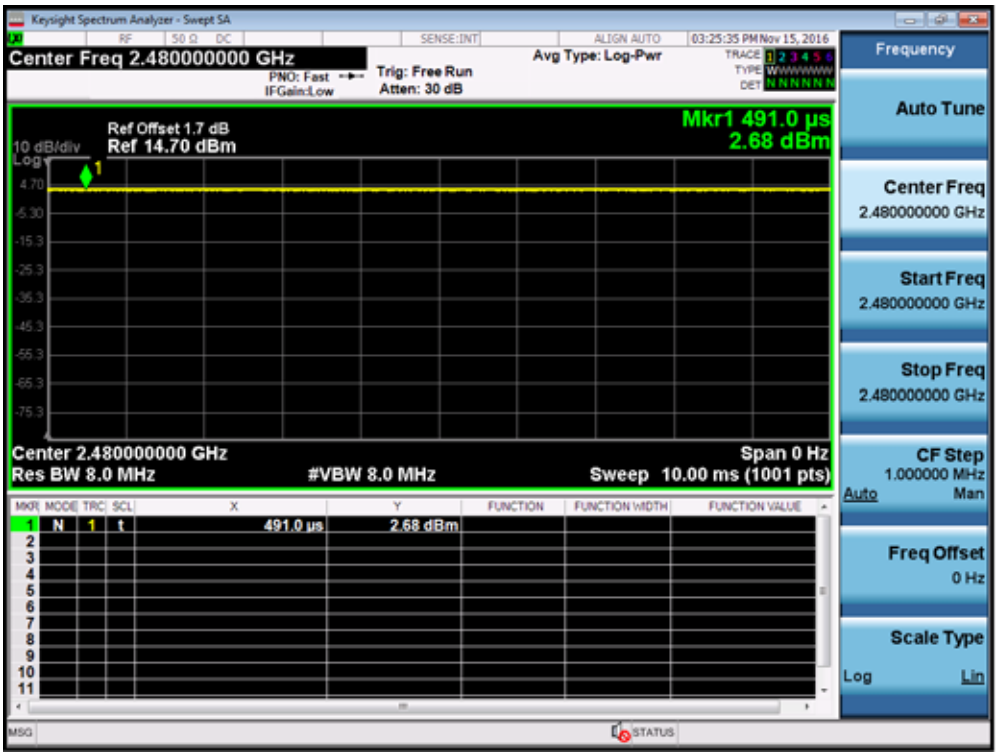
<tr><td></td><td colspan="3">  </td></tr>
</table>

6.6. Duty Cycle

APEX0365:

Test Mode	Tx On (ms)	Tx Off (ms)	Reduced VBW (Hz)	Tx On + Tx Off (ms)	Duty Cycle
BLE	N/A	N/A	10	N/A	100%

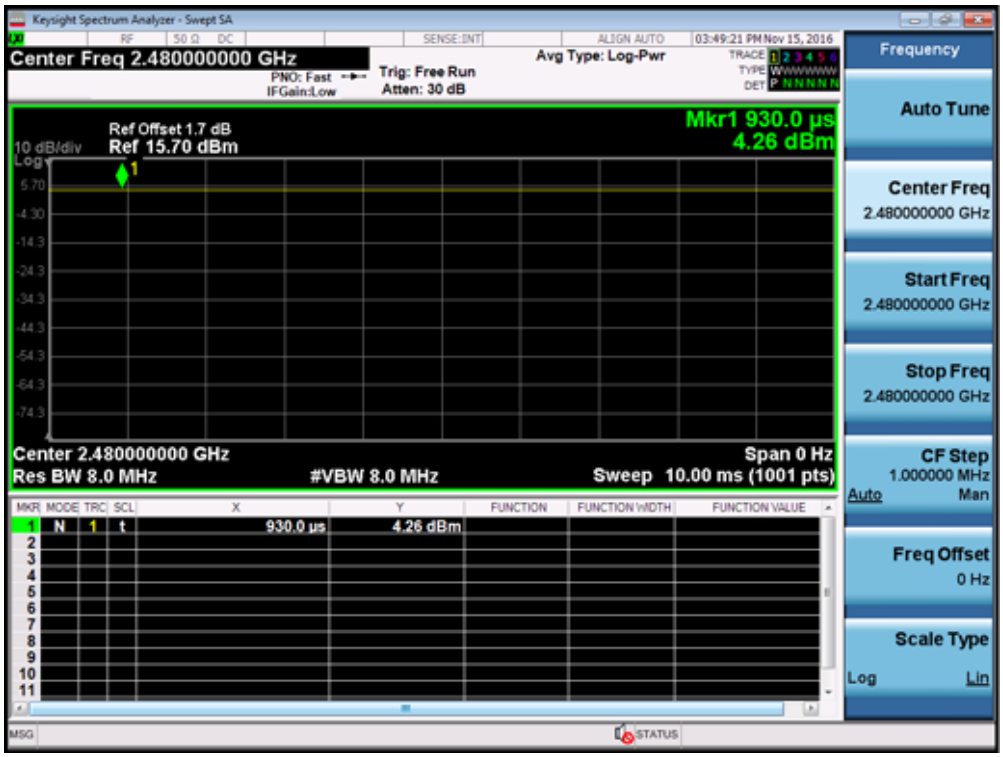
BLE



APEX0367:

Test Mode	Tx On (ms)	Tx Off (ms)	Reduced VBW (Hz)	Tx On + Tx Off (ms)	Duty Cycle
BLE	N/A	N/A	10	N/A	100%

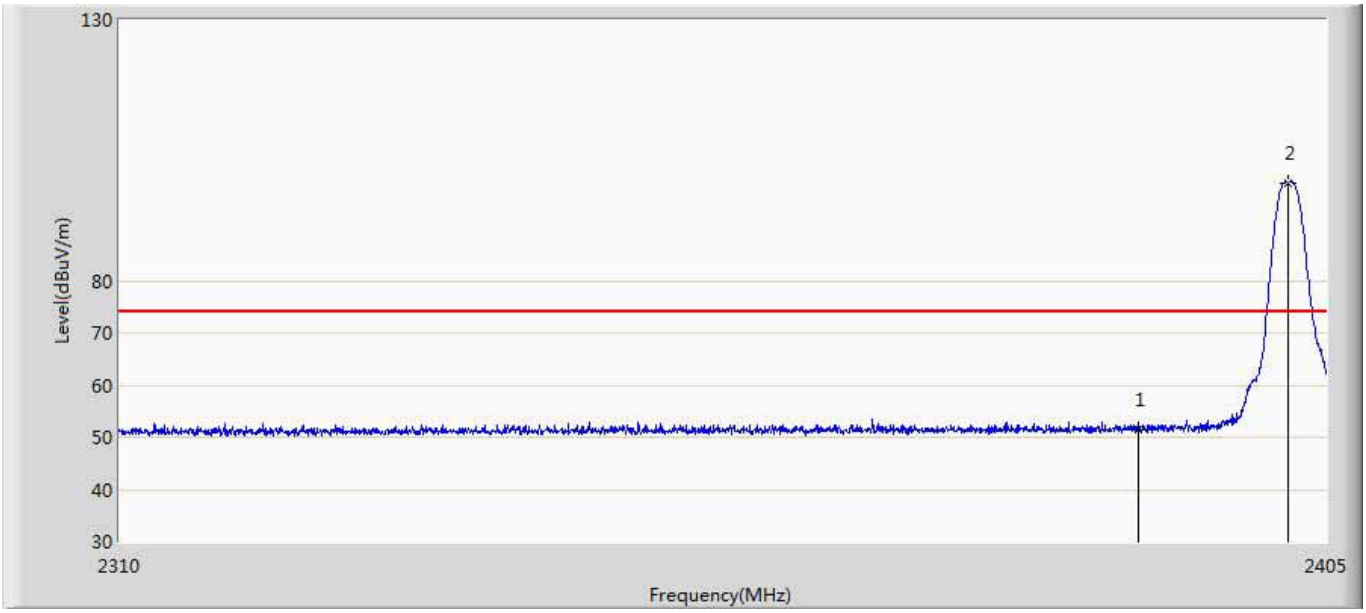
BLE



6.7 Test Result

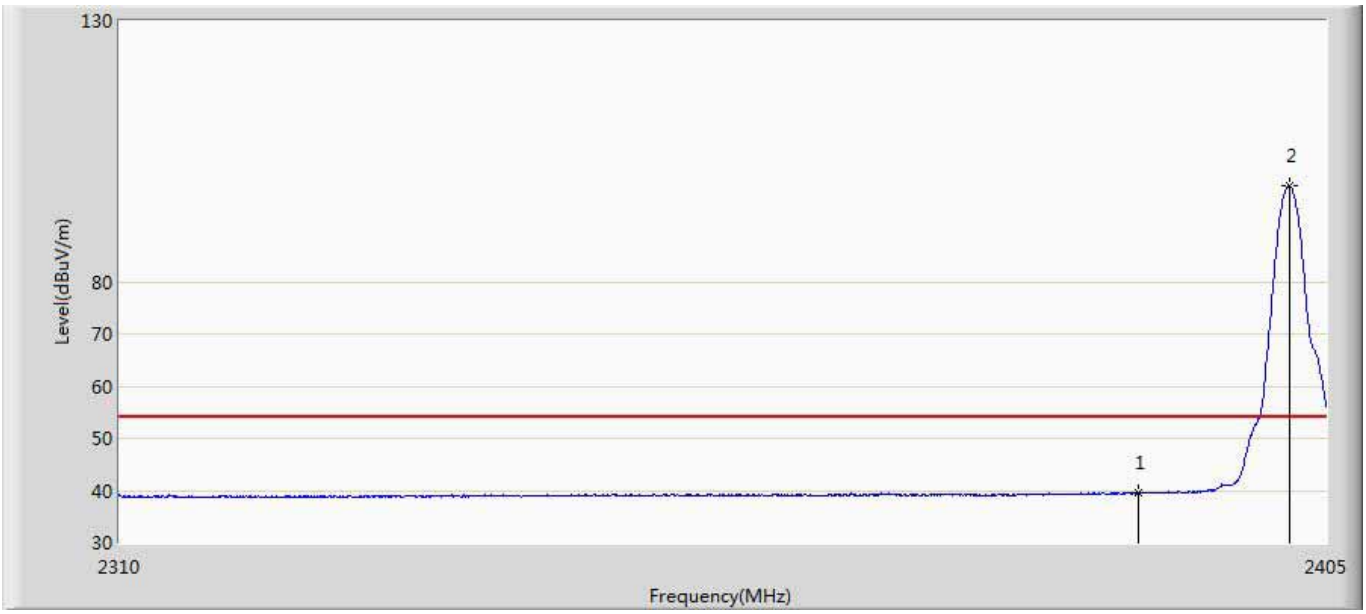
APEX0365:

Engineer: Bruce	
Site: AC5	Time: 2016/11/12 - 13:41
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Access Point	Power: PoE 57V
Note: Mode 1:Transmit at channel 2402MHz by BLE	



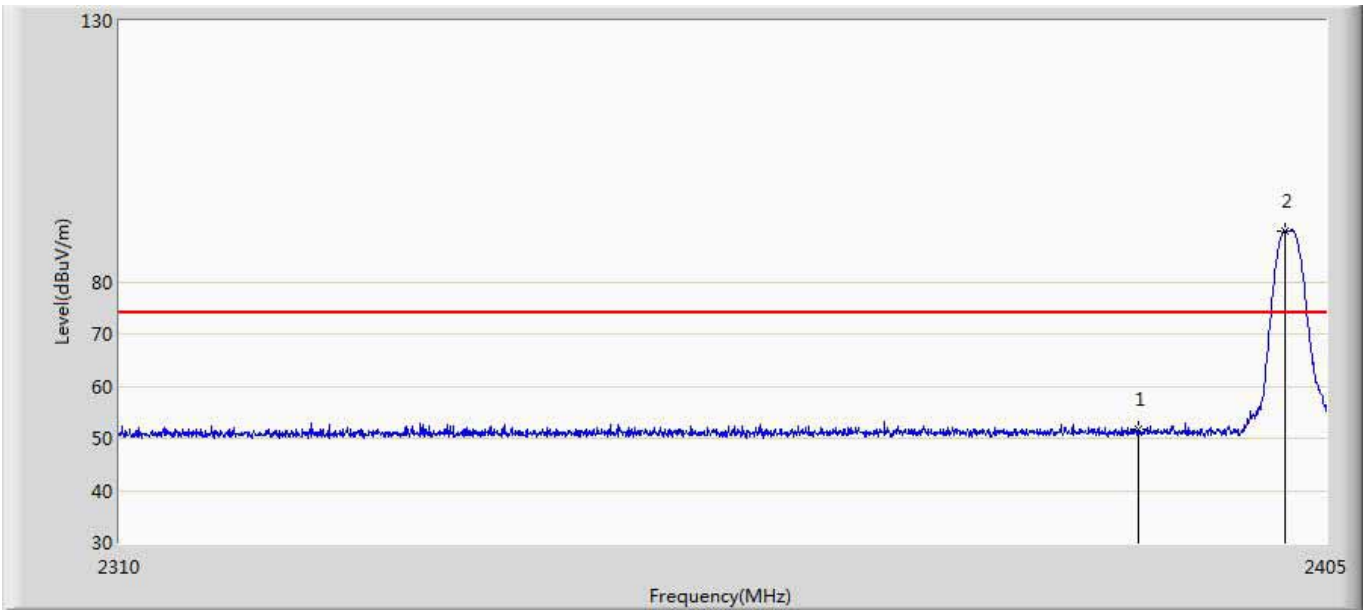
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	51.412	15.730	-22.588	74.000	35.682	PK
2	*	2401.913	98.818	63.106	24.818	74.000	35.712	PK

Engineer: Bruce	
Site: AC5	Time: 2016/11/12 - 13:45
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Access Point	Power: PoE 57V
Note: Mode 1:Transmit at channel 2402MHz by BLE	



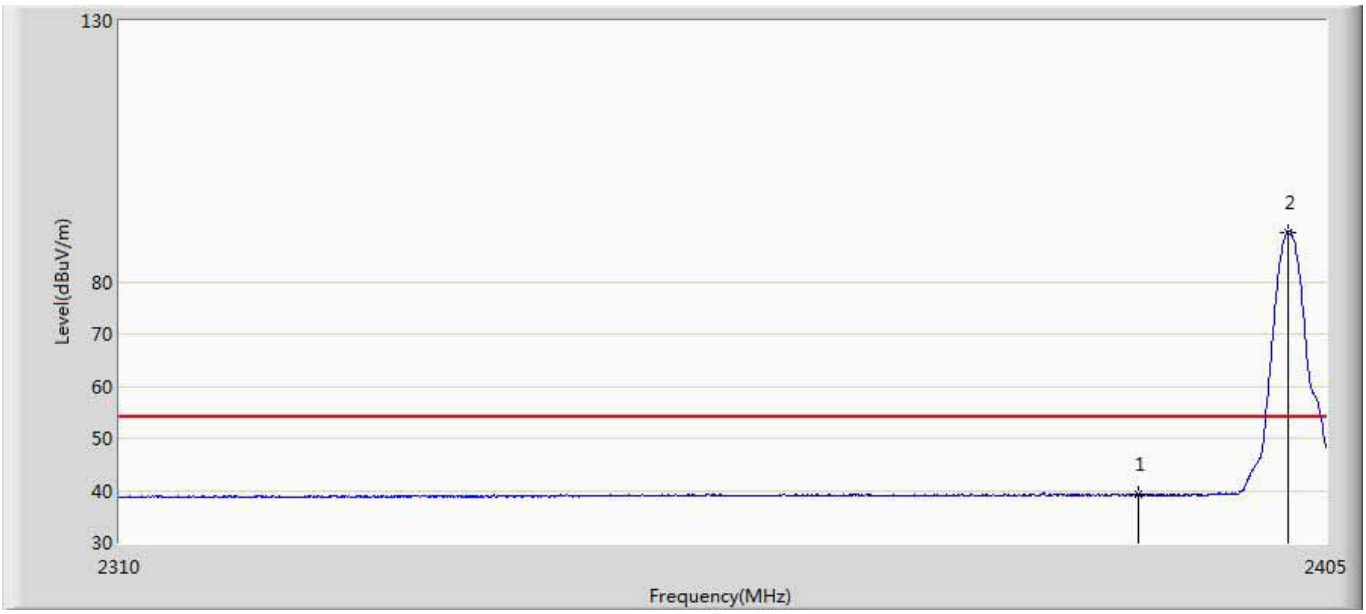
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	39.591	3.909	-14.409	54.000	35.682	AV
2	*	2402.055	98.418	62.705	44.418	54.000	35.712	AV

Engineer: Bruce	
Site: AC5	Time: 2016/11/12 - 13:47
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Access Point	Power: PoE 57V
Note: Mode 1:Transmit at channel 2402MHz by BLE	



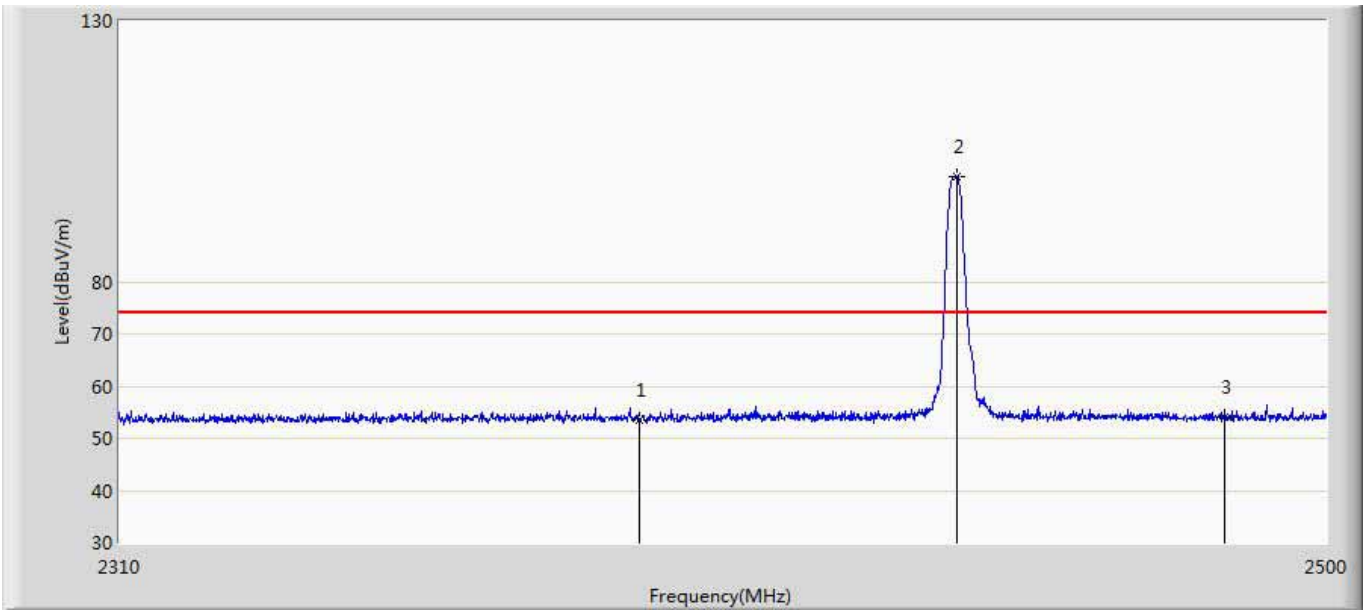
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	51.722	16.040	-22.278	74.000	35.682	PK
2	*	2401.770	89.848	54.136	15.848	74.000	35.712	PK

Engineer: Bruce	
Site: AC5	Time: 2016/11/12 - 13:49
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Access Point	Power: PoE 57V
Note: Mode 1:Transmit at channel 2402MHz by BLE	



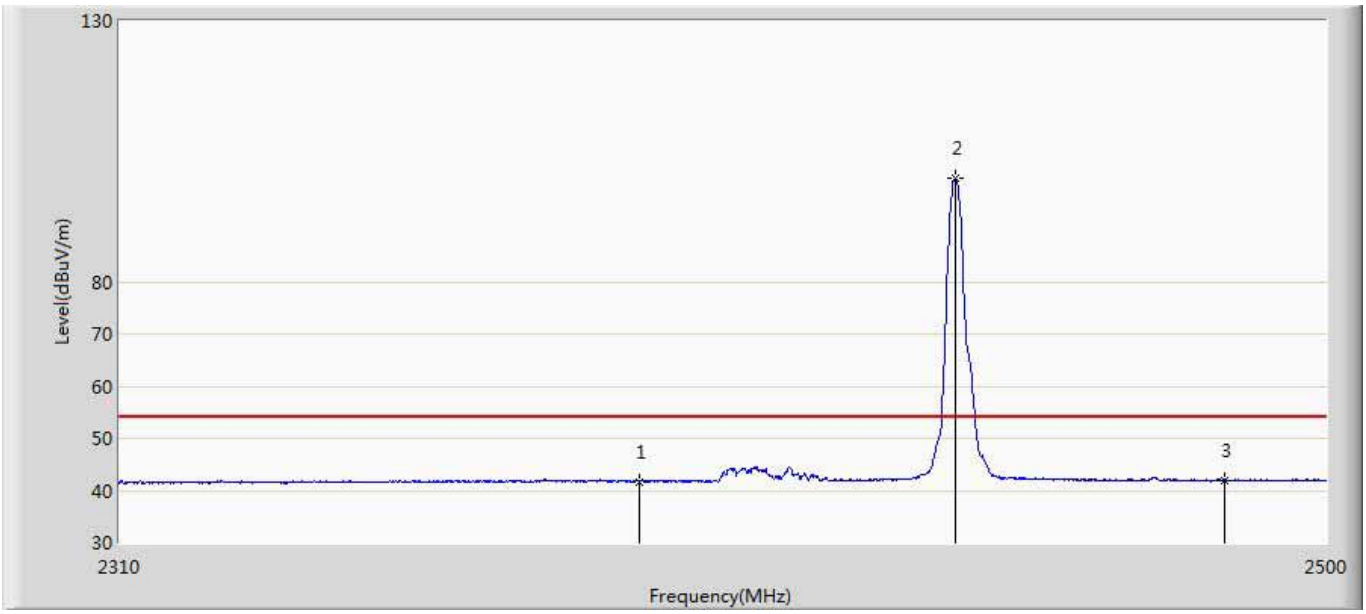
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	39.234	3.552	-14.766	54.000	35.682	AV
2	*	2401.913	89.498	53.786	35.498	54.000	35.712	AV

Engineer: Bruce	
Site: AC5	Time: 2016/11/12 - 13:51
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Access Point	Power: PoE 57V
Note: Mode 1:Transmit at channel 2440MHz by BLE	



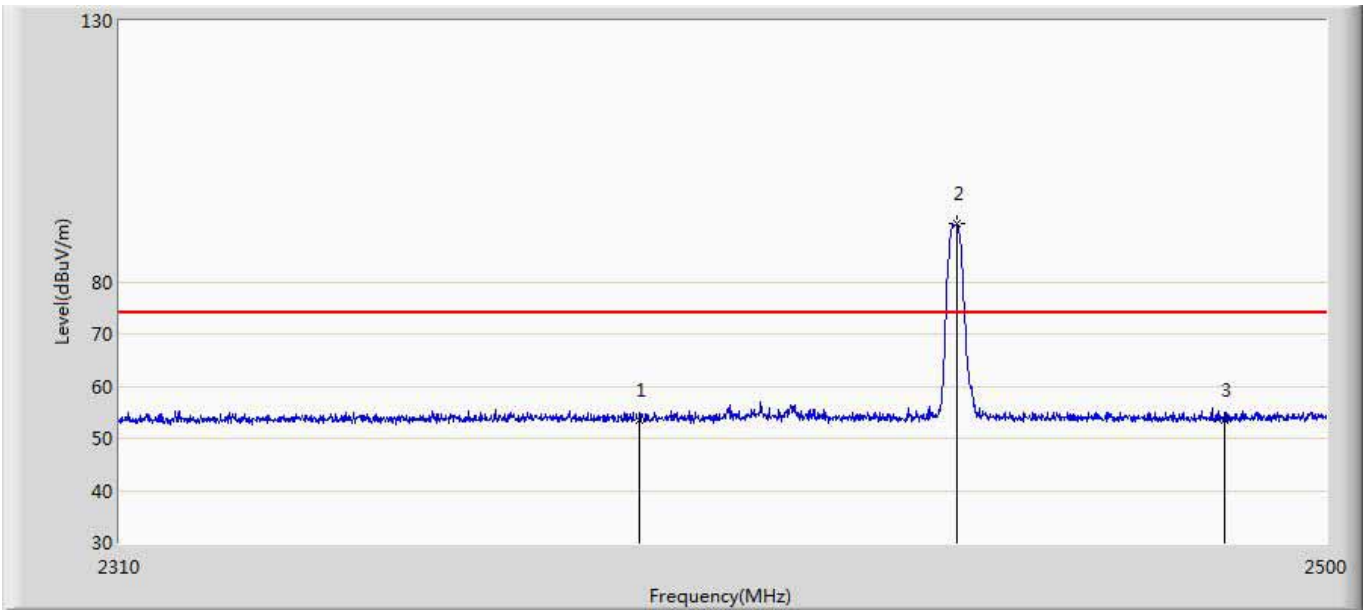
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	53.611	17.929	-20.389	74.000	35.682	PK
2	*	2440.340	100.206	64.401	26.206	74.000	35.806	PK
3		2483.500	53.950	18.058	-20.050	74.000	35.891	PK

Engineer: Bruce	
Site: AC5	Time: 2016/11/12 - 14:10
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Access Point	Power: PoE 57V
Note: Mode 1:Transmit at channel 2440MHz by BLE	



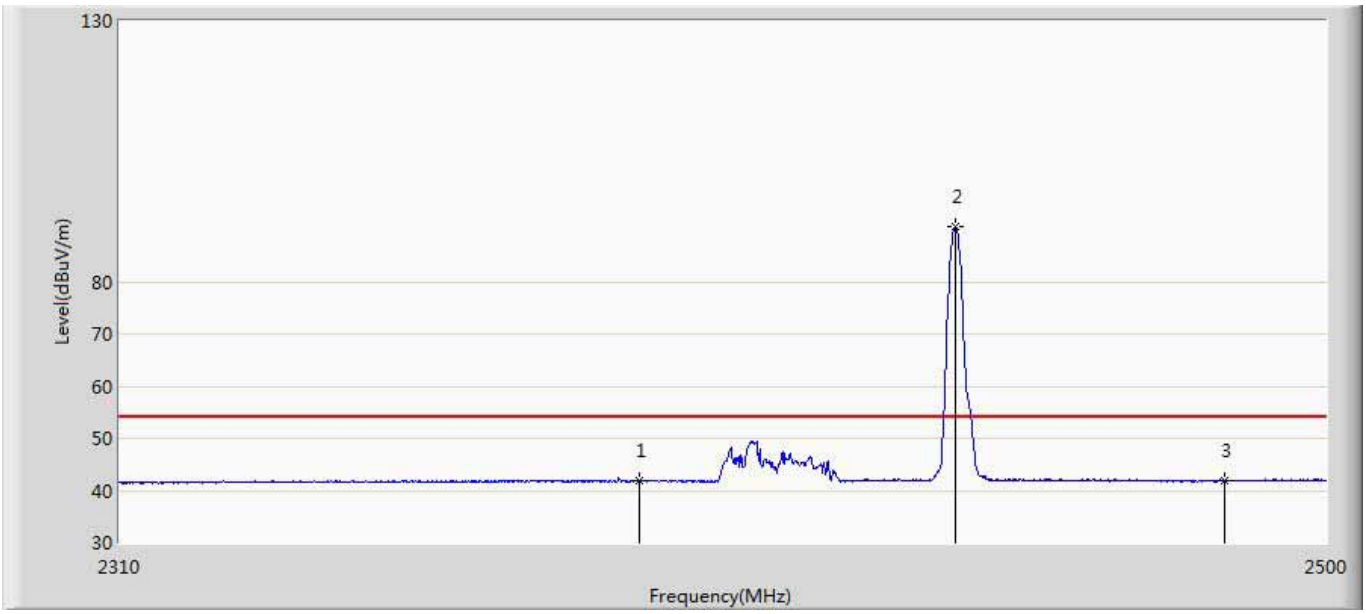
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	41.672	5.990	-12.328	54.000	35.682	AV
2	*	2439.960	99.751	63.946	45.751	54.000	35.805	AV
3		2483.500	41.950	6.058	-12.050	54.000	35.891	AV

Engineer: Bruce	
Site: AC5	Time: 2016/11/12 - 14:13
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Access Point	Power: PoE 57V
Note: Mode 1:Transmit at channel 2440MHz by BLE	



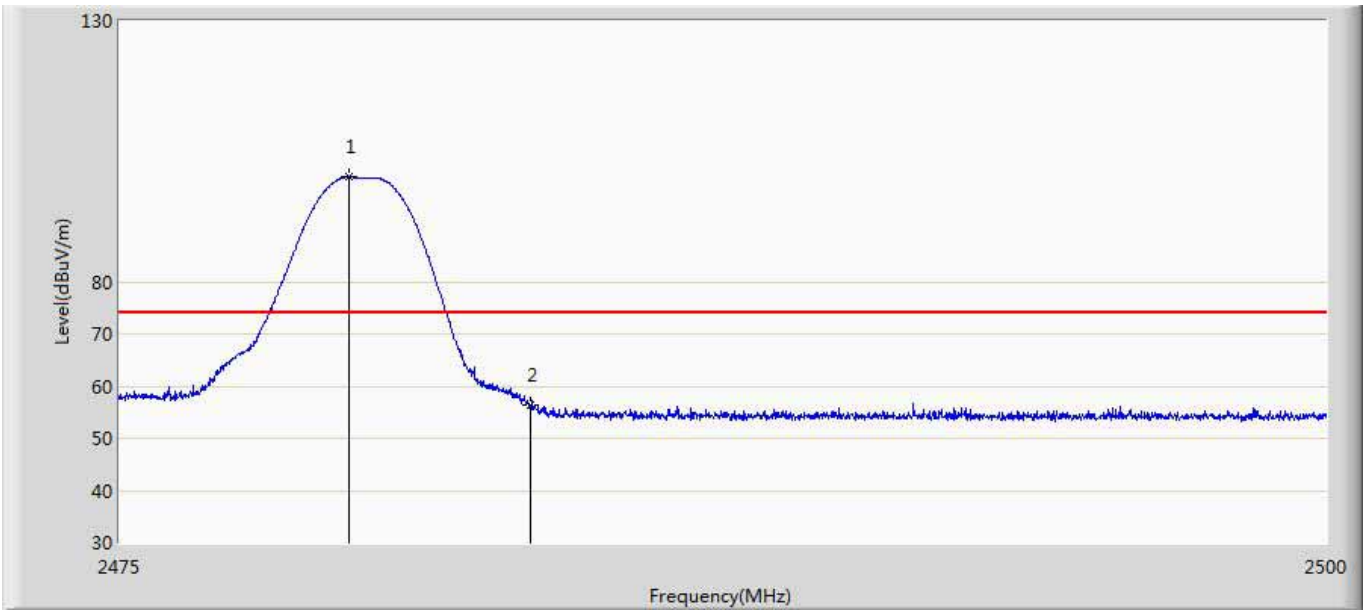
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	53.610	17.928	-20.390	74.000	35.682	PK
2	*	2440.245	91.057	55.252	17.057	74.000	35.805	PK
3		2483.500	53.405	17.513	-20.595	74.000	35.891	PK

Engineer: Bruce	
Site: AC5	Time: 2016/11/12 - 14:15
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Access Point	Power: PoE 57V
Note: Mode 1:Transmit at channel 2440MHz by BLE	



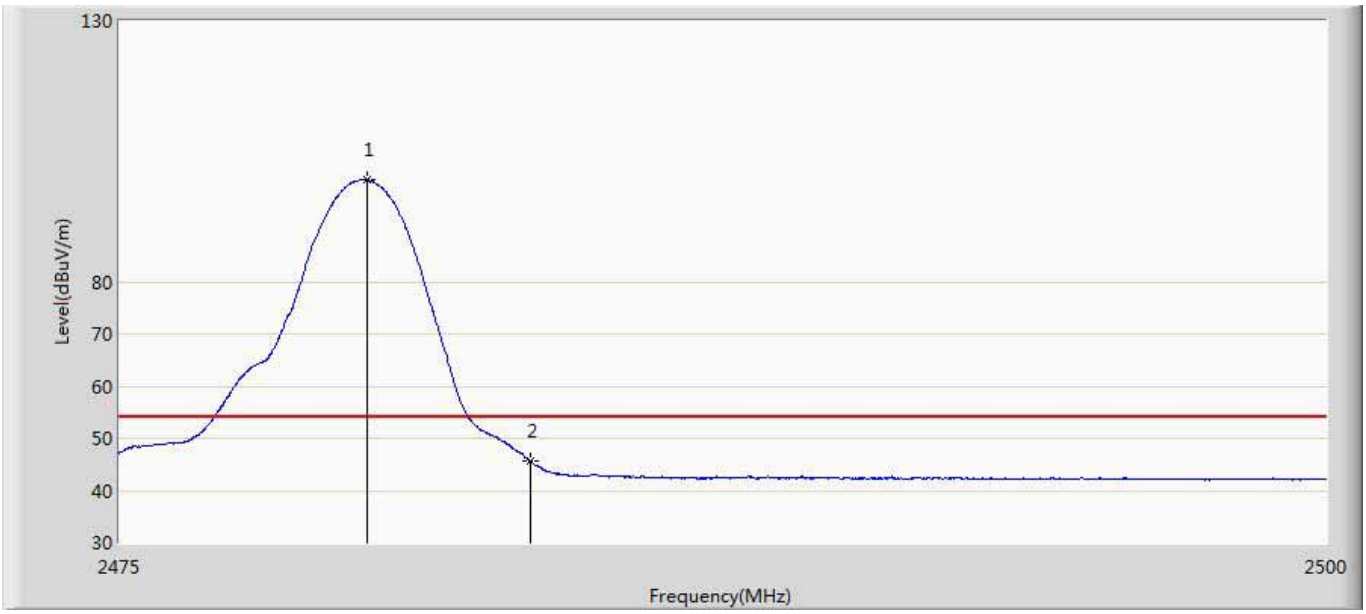
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	41.790	6.108	-12.210	54.000	35.682	AV
2	*	2440.055	90.588	54.783	36.588	54.000	35.805	AV
3		2483.500	41.782	5.890	-12.218	54.000	35.891	AV

Engineer: Bruce	
Site: AC5	Time: 2016/11/12 - 14:17
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Access Point	Power: PoE 57V
Note: Mode 1:Transmit at channel 2480MHz by BLE	



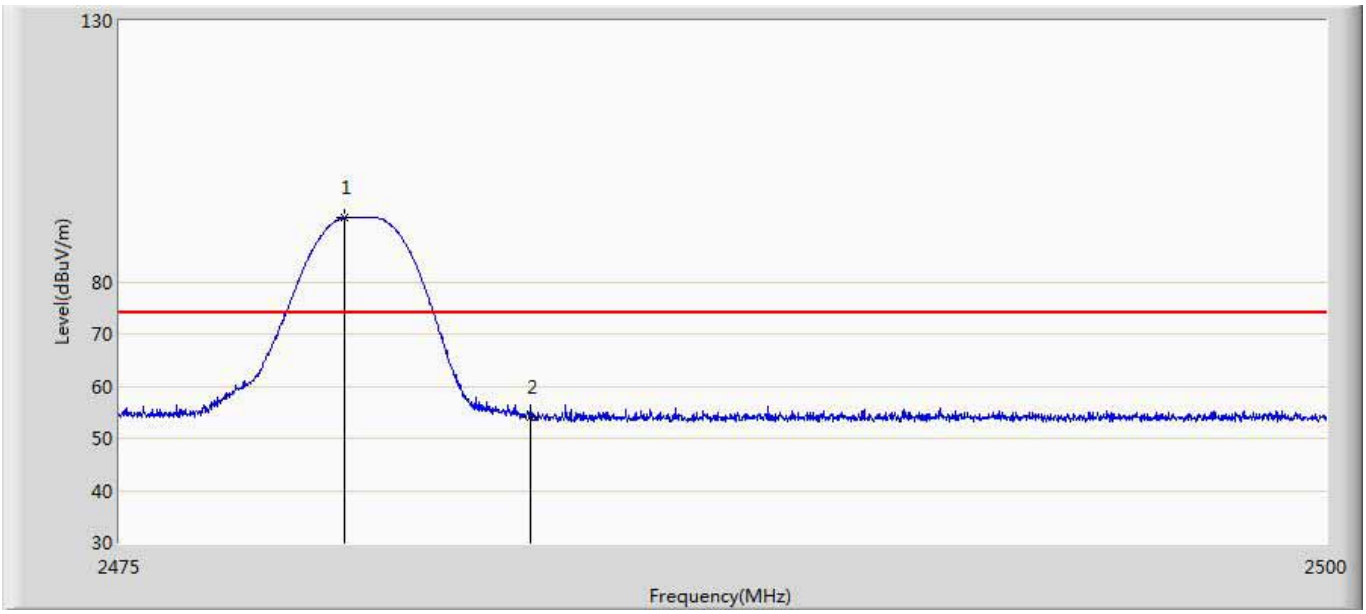
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.738	100.040	64.176	26.040	74.000	35.865	PK
2		2483.500	56.448	20.556	-17.552	74.000	35.891	PK

Engineer: Bruce	
Site: AC5	Time: 2016/11/12 - 14:19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Access Point	Power: PoE 57V
Note: Mode 1:Transmit at channel 2480MHz by BLE	



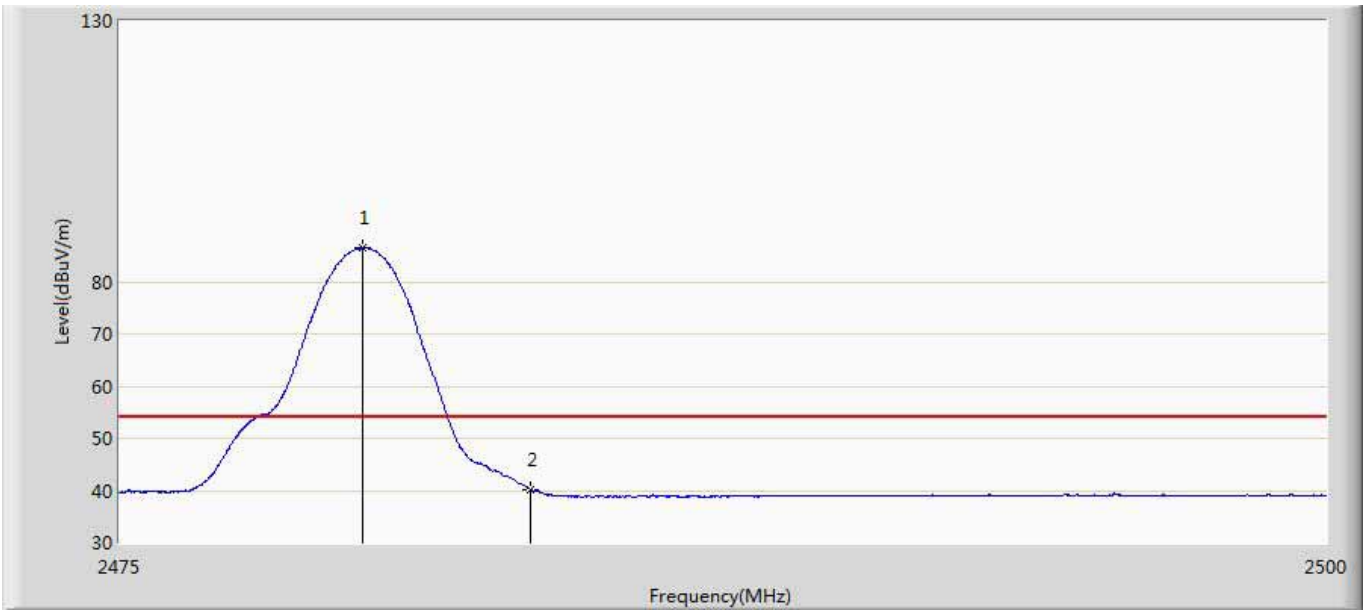
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.125	99.467	63.600	45.467	54.000	35.867	AV
2		2483.500	45.576	9.684	-8.424	54.000	35.891	AV

Engineer: Bruce	
Site: AC5	Time: 2016/11/12 - 14:21
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Access Point	Power: PoE 57V
Note: Mode 1:Transmit at channel 2480MHz by BLE	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.663	92.341	56.477	18.341	74.000	35.864	PK
2		2483.500	54.140	18.248	-19.860	74.000	35.891	PK

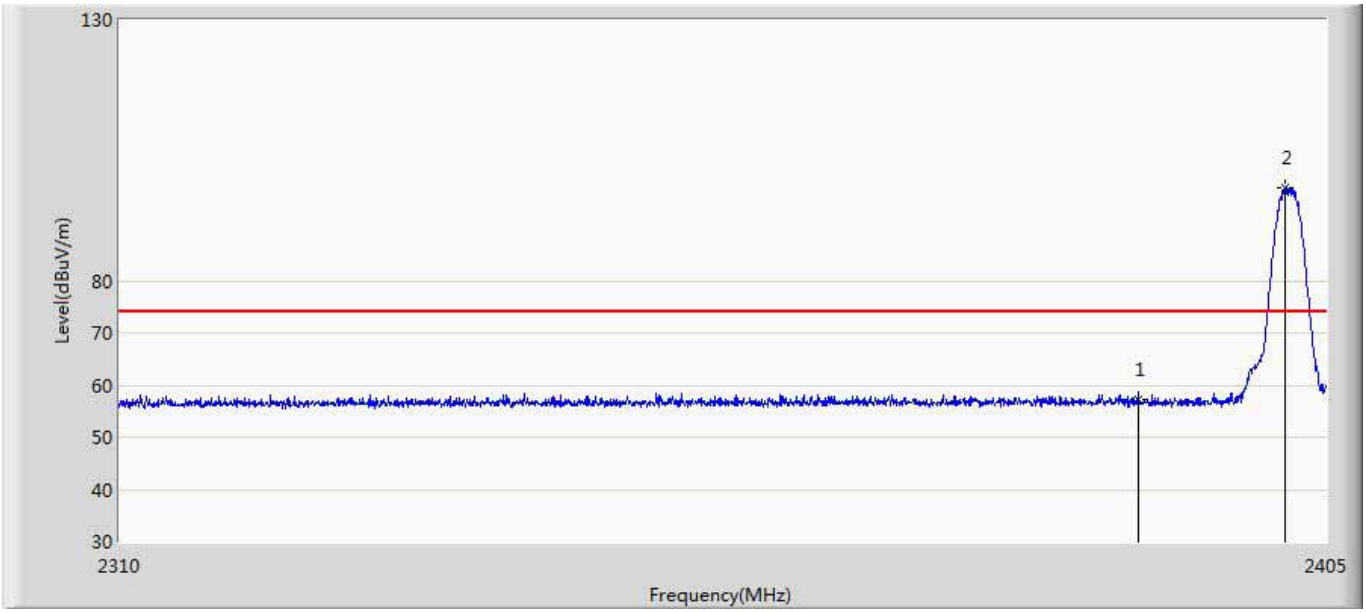
Engineer: Bruce	
Site: AC5	Time: 2016/11/12 - 14:26
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Access Point	Power: PoE 57V
Note: Mode 1:Transmit at channel 2480MHz by BLE	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.012	86.468	50.602	32.468	54.000	35.866	AV
2		2483.500	40.205	4.313	-13.795	54.000	35.891	AV

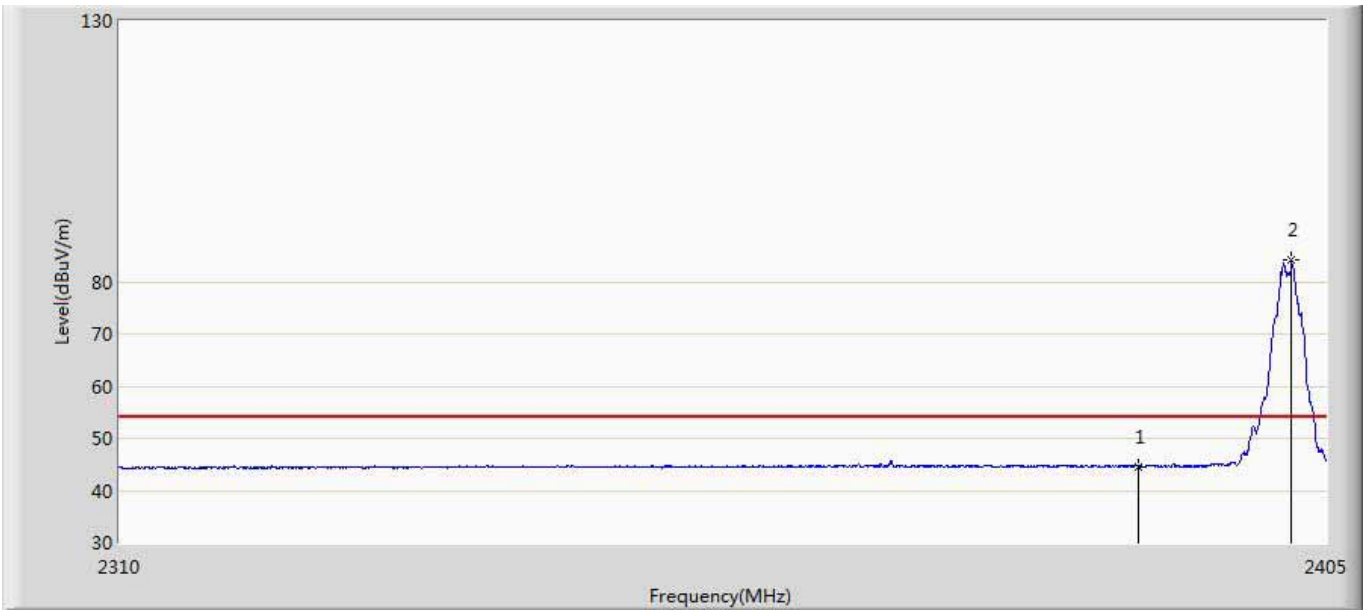
APEX0367:

Engineer: Bruce	
Site: AC5	Time: 2016/11/14 - 15:03
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Access Point	Power: PoE 57V
Note: Mode 1:Transmit at channel 2402MHz by BLE	



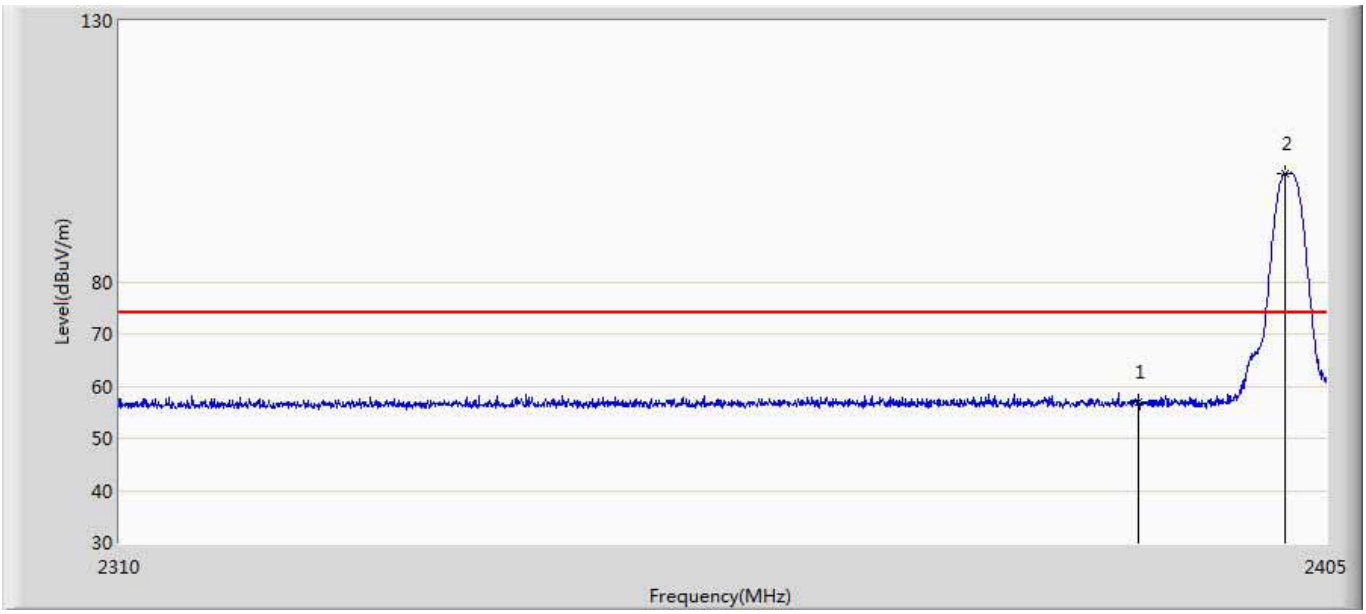
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	57.286	21.604	-16.714	74.000	35.682	PK
2	*	2401.770	97.782	62.070	23.782	74.000	35.712	PK

Engineer: Bruce	
Site: AC5	Time: 2016/11/14 - 15:10
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Access Point	Power: PoE 57V
Note: Mode 1:Transmit at channel 2402MHz by BLE	



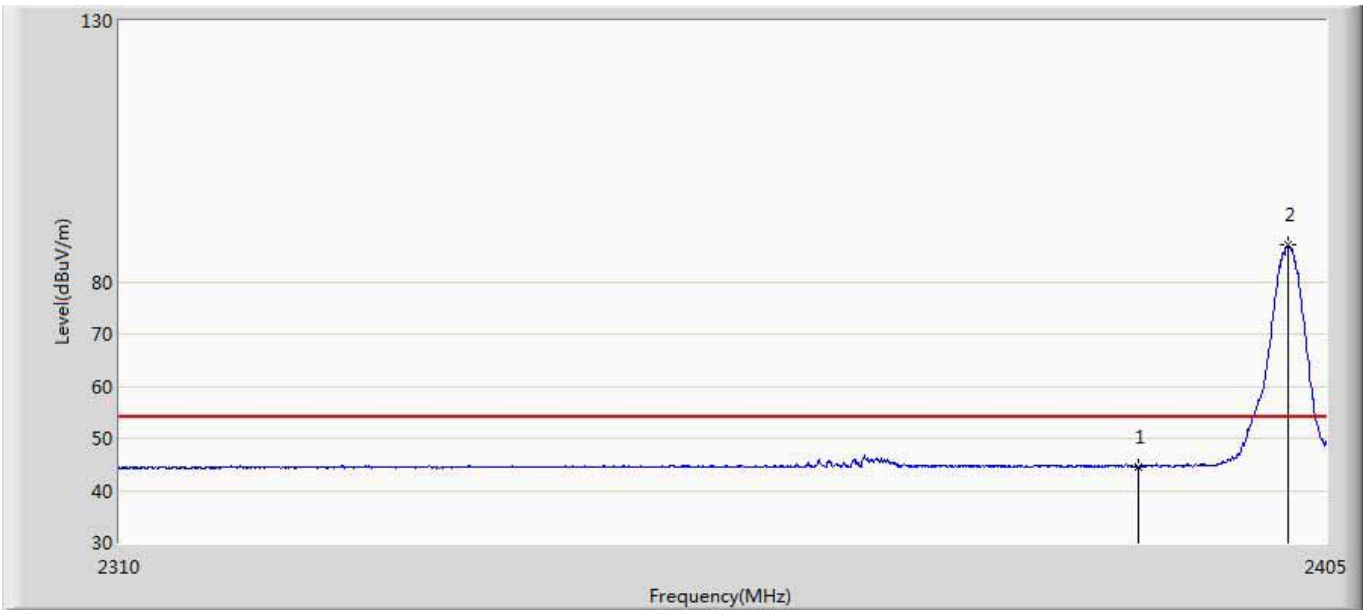
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	44.619	8.937	-9.381	54.000	35.682	AV
2	*	2402.198	84.102	48.389	30.102	54.000	35.714	AV

Engineer: Bruce	
Site: AC5	Time: 2016/11/14 - 15:11
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Access Point	Power: PoE 57V
Note: Mode 1:Transmit at channel 2402MHz by BLE	



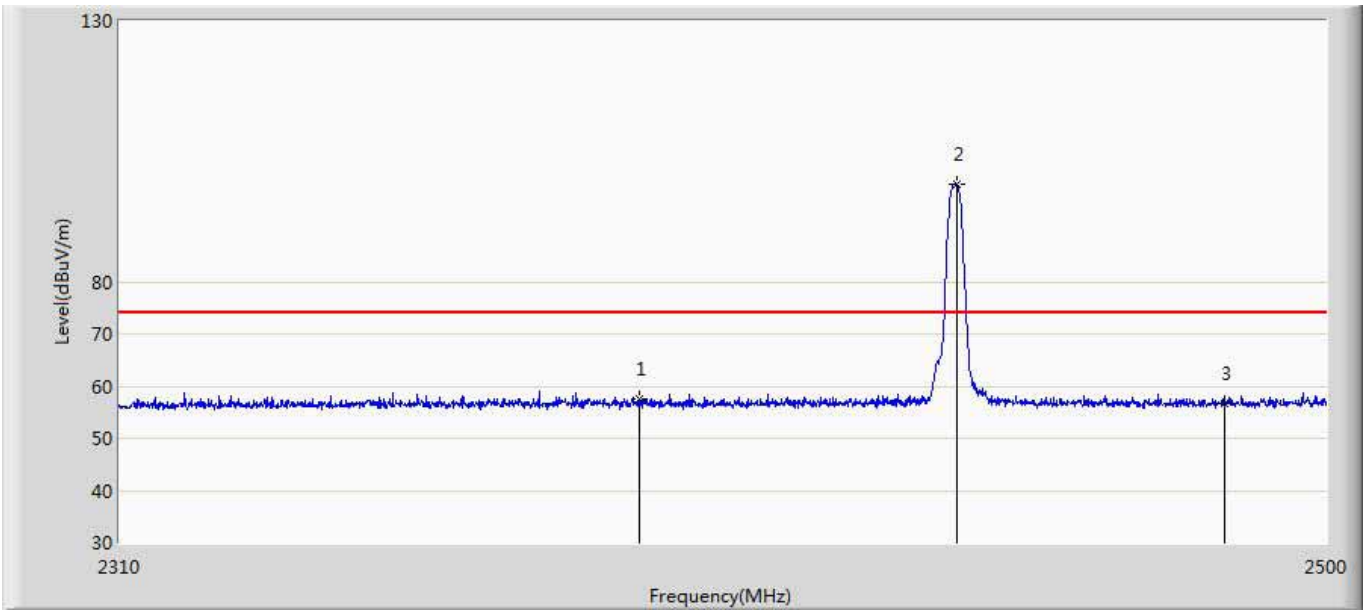
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	57.013	21.331	-16.987	74.000	35.682	PK
2	*	2401.770	100.808	65.096	26.808	74.000	35.712	PK

Engineer: Bruce	
Site: AC5	Time: 2016/11/14 - 15:13
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Access Point	Power: PoE 57V
Note: Mode 1:Transmit at channel 2402MHz by BLE	



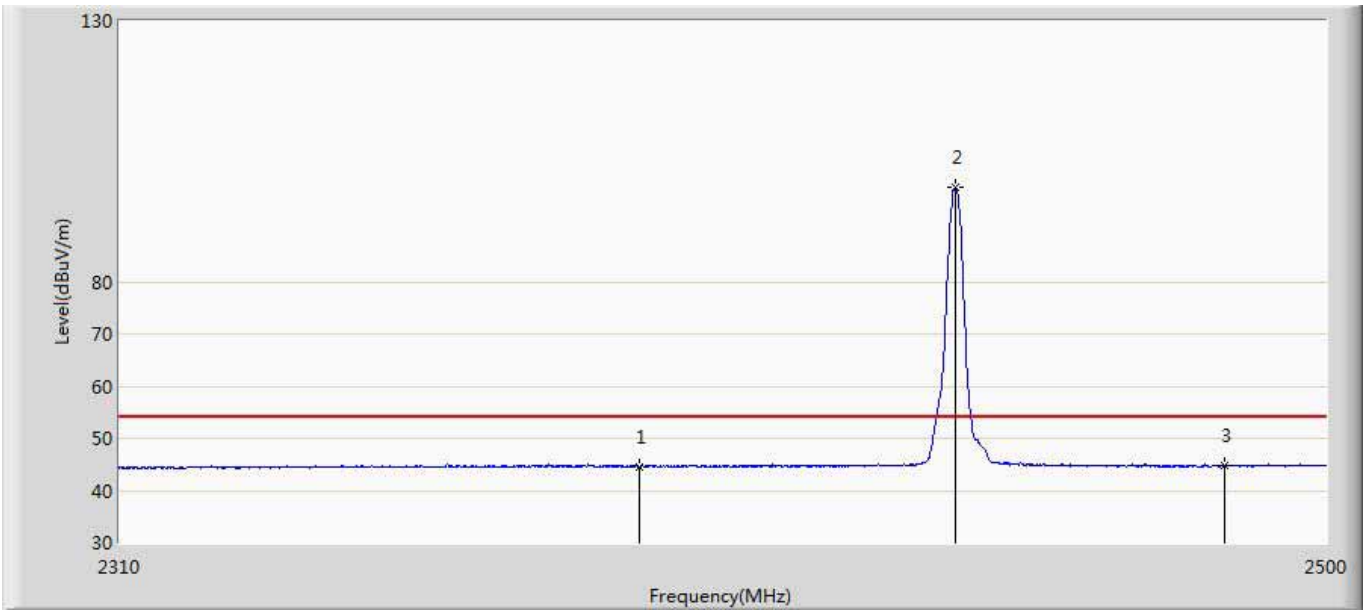
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	44.579	8.897	-9.421	54.000	35.682	AV
2	*	2401.960	87.141	51.428	33.141	54.000	35.712	AV

Engineer: Bruce	
Site: AC5	Time: 2016/11/14 - 15:15
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Access Point	Power: PoE 57V
Note: Mode 1:Transmit at channel 2440MHz by BLE	



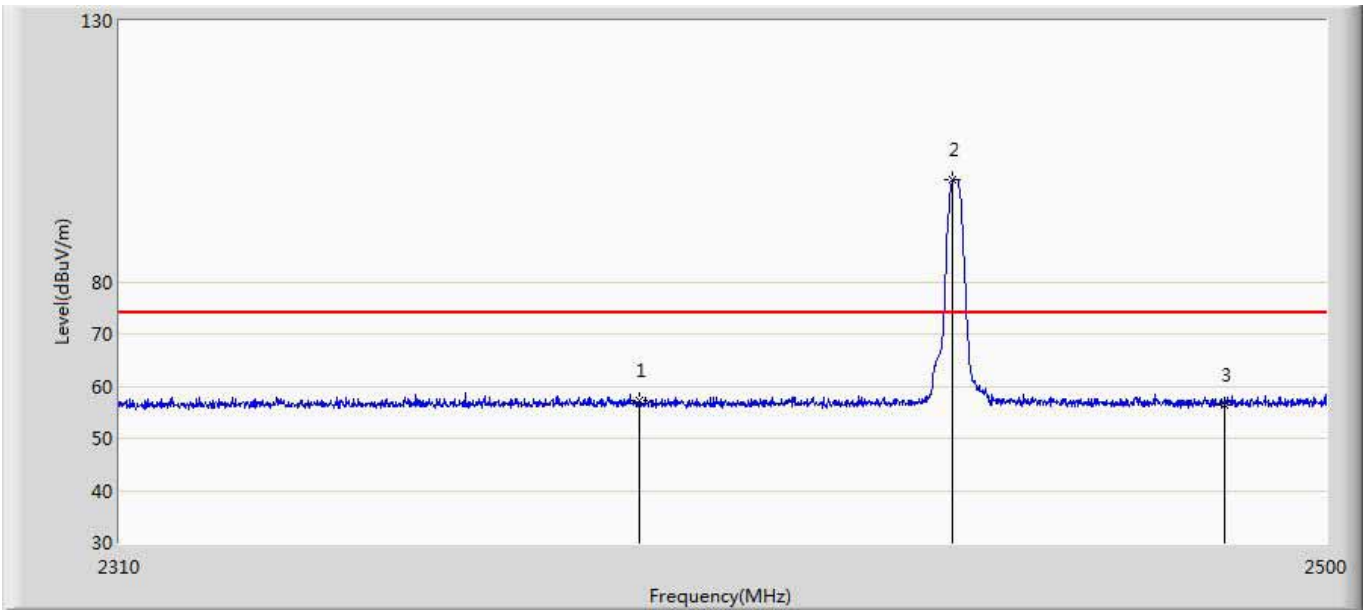
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	57.518	21.836	-16.482	74.000	35.682	PK
2	*	2440.340	98.677	62.872	24.677	74.000	35.806	PK
3		2483.500	56.685	20.793	-17.315	74.000	35.891	PK

Engineer: Bruce	
Site: AC5	Time: 2016/11/14 - 15:29
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Access Point	Power: PoE 57V
Note: Mode 1:Transmit at channel 2440MHz by BLE	



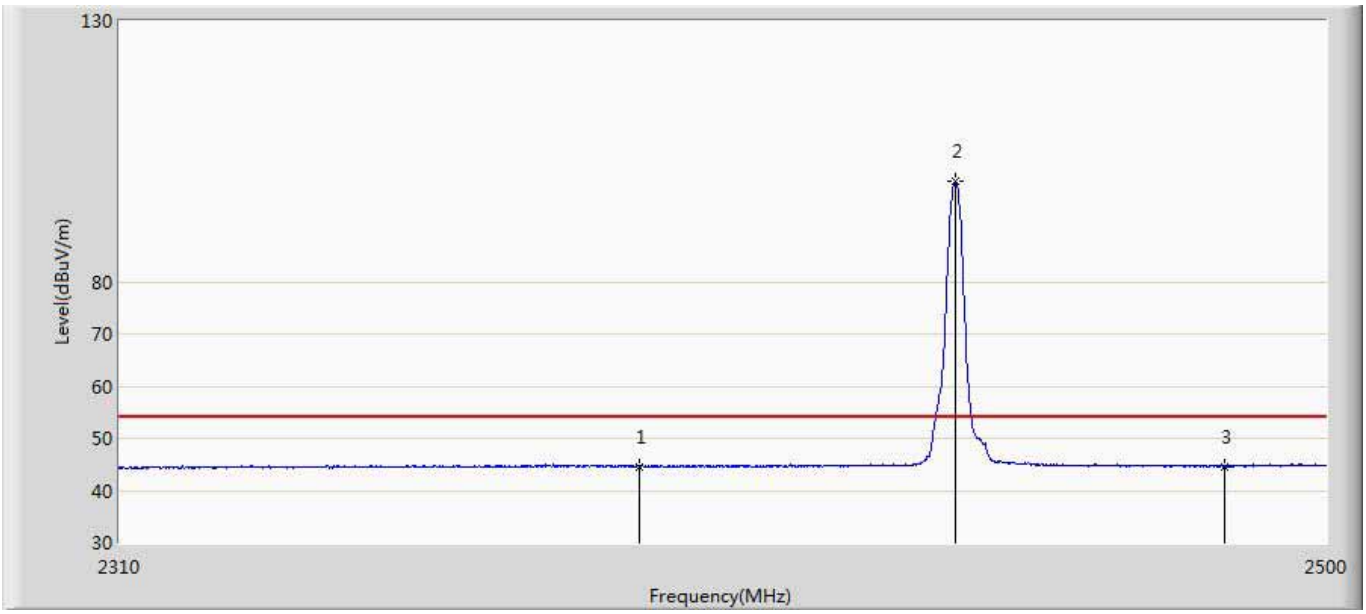
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	44.586	8.904	-9.414	54.000	35.682	AV
2	*	2440.055	98.129	62.324	44.129	54.000	35.805	AV
3		2483.500	44.677	8.785	-9.323	54.000	35.891	AV

Engineer: Bruce	
Site: AC5	Time: 2016/11/14 - 15:31
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Access Point	Power: PoE 57V
Note: Mode 1:Transmit at channel 2440MHz by BLE	



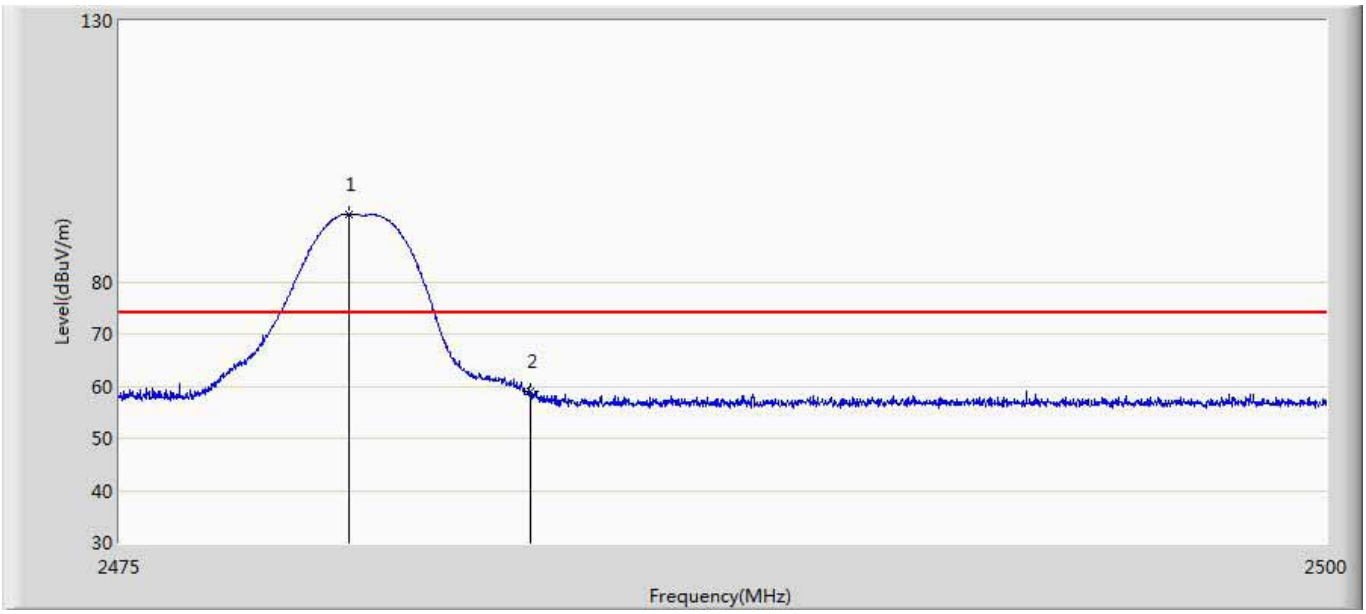
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	57.211	21.529	-16.789	74.000	35.682	PK
2	*	2439.675	99.508	63.703	25.508	74.000	35.806	PK
3		2483.500	56.313	20.421	-17.687	74.000	35.891	PK

Engineer: Bruce	
Site: AC5	Time: 2016/11/14 - 15:32
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Access Point	Power: PoE 57V
Note: Mode 1:Transmit at channel 2440MHz by BLE	



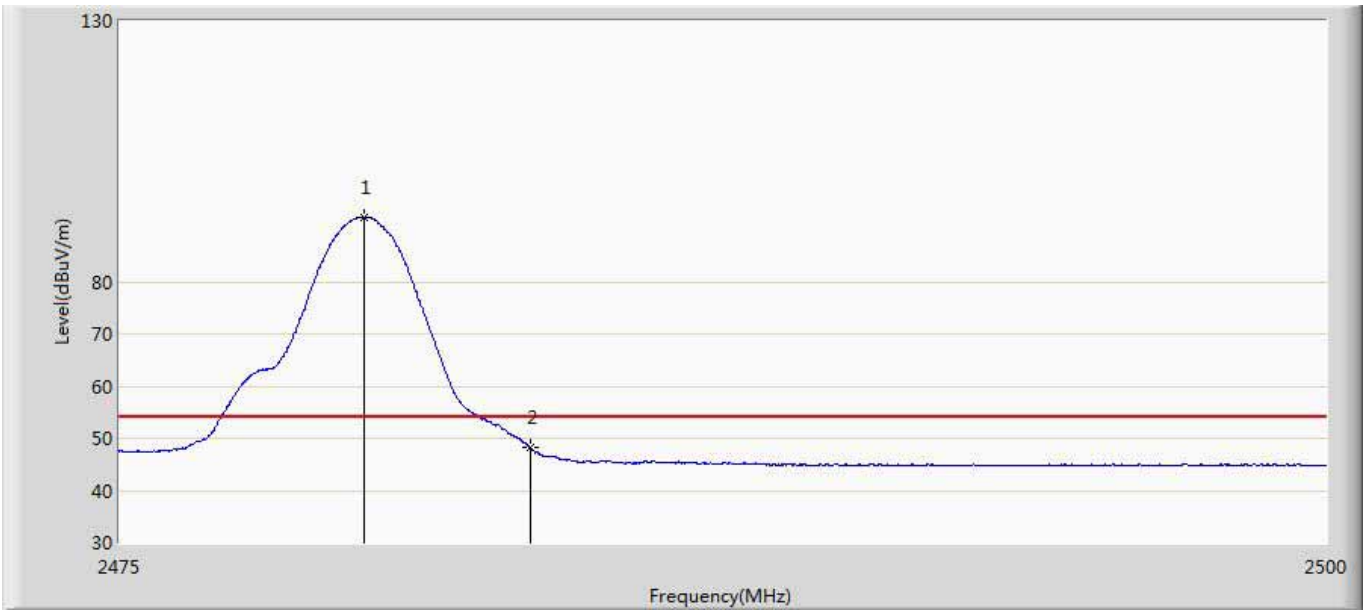
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	44.622	8.940	-9.378	54.000	35.682	AV
2	*	2440.055	99.168	63.363	45.168	54.000	35.805	AV
3		2483.500	44.618	8.726	-9.382	54.000	35.891	AV

Engineer: Bruce	
Site: AC5	Time: 2016/11/14 - 15:34
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Access Point	Power: PoE 57V
Note: Mode 1:Transmit at channel 2480MHz by BLE	



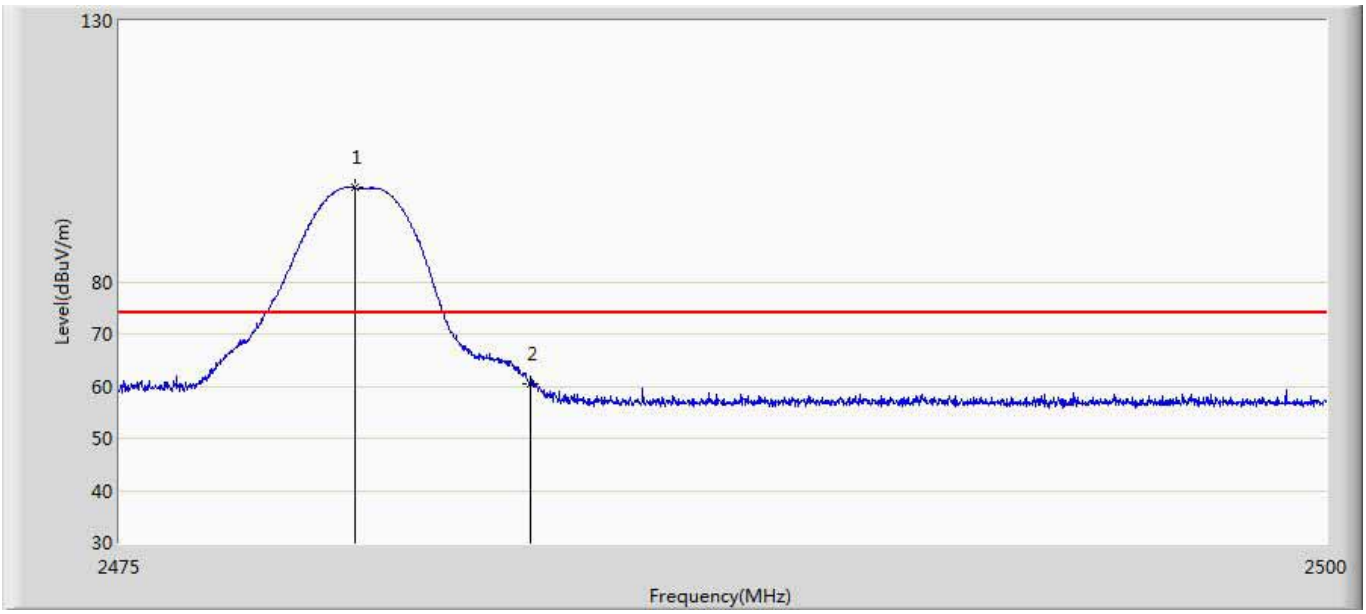
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.738	92.979	57.115	18.979	74.000	35.865	PK
2		2483.500	58.861	22.969	-15.139	74.000	35.891	PK

Engineer: Bruce	
Site: AC5	Time: 2016/11/14 - 15:36
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Access Point	Power: PoE 57V
Note: Mode 1:Transmit at channel 2480MHz by BLE	



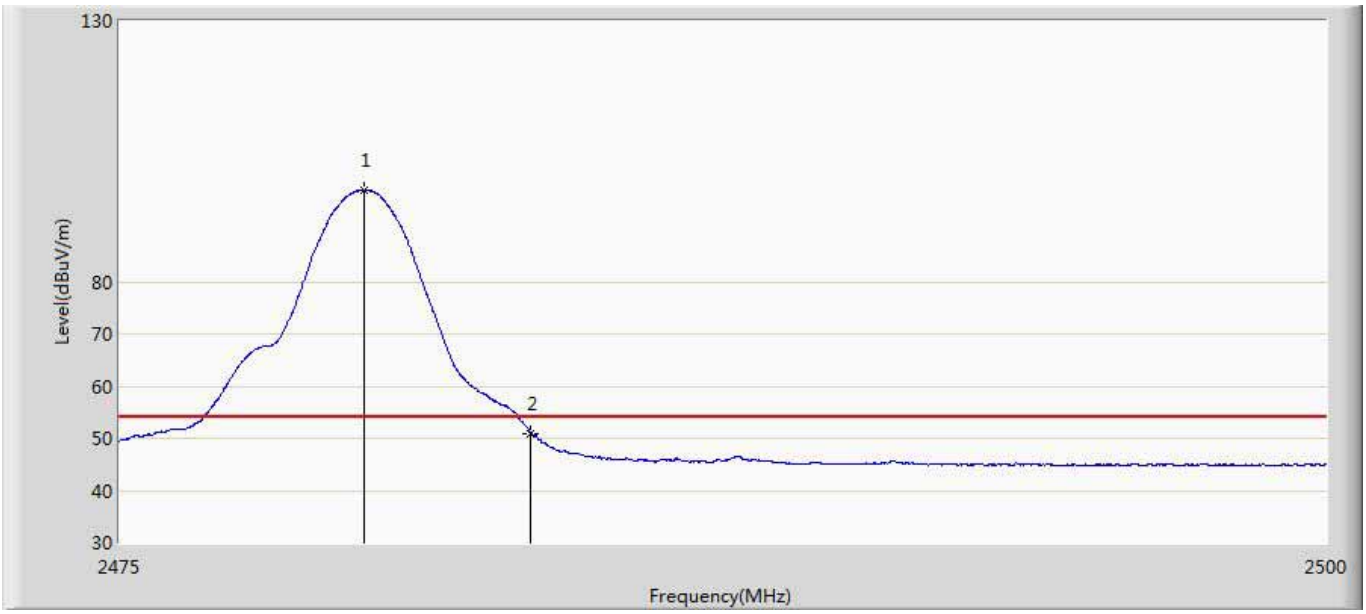
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.050	92.409	56.542	38.409	54.000	35.866	AV
2		2483.500	48.134	12.242	-5.866	54.000	35.891	AV

Engineer: Bruce	
Site: AC5	Time: 2016/11/14 - 15:38
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Access Point	Power: PoE 57V
Note: Mode 1:Transmit at channel 2480MHz by BLE	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.863	97.999	62.134	23.999	74.000	35.865	PK
2		2483.500	60.520	24.628	-13.480	74.000	35.891	PK

Engineer: Bruce	
Site: AC5	Time: 2016/11/14 - 15:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Access Point	Power: PoE 57V
Note: Mode 1:Transmit at channel 2480MHz by BLE	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.062	97.554	61.687	43.554	54.000	35.867	AV
2		2483.500	50.958	15.066	-3.042	54.000	35.891	AV

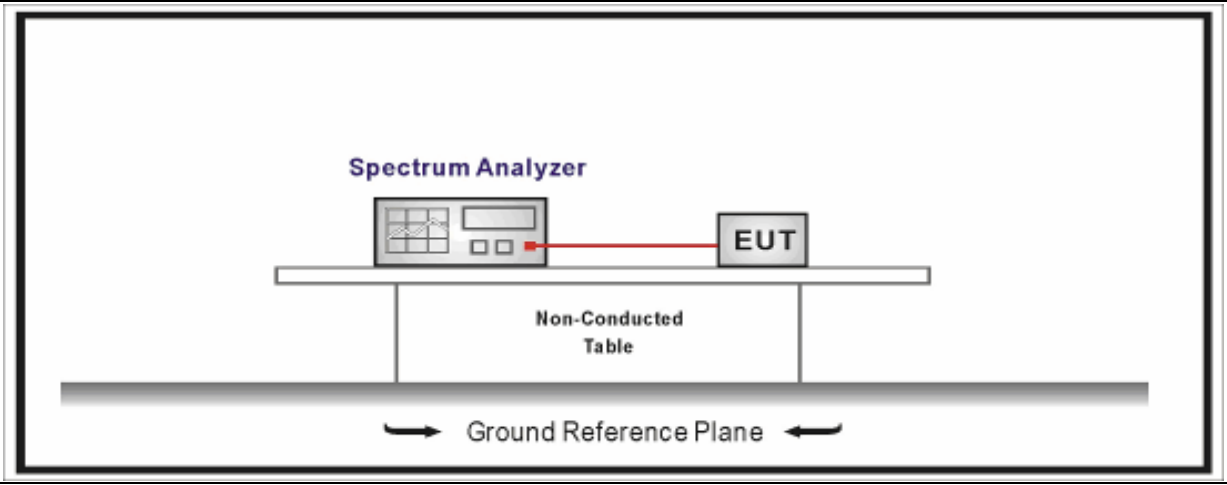
7. Occupied Bandwidth

7.1. Test Equipment

Occupied Bandwidth / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2016.02.04	2017.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2016.04.09	2017.04.08
MXA Signal Anlyzer	Keysight	N9020A	MY56060147	2016.04.09	2017.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2016.04.10	2017.04.09
Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

7.2. Test Setup

Occupied Bandwidth test setup:



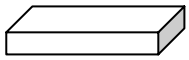
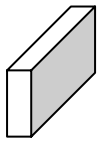
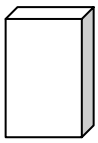
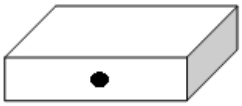
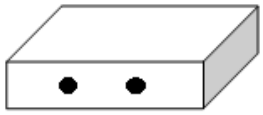
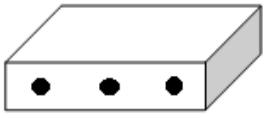
7.3. Limit

Occupied Bandwidth
Systems using digital modulation techniques operate in the2400-2483.5 MHz .The minimum 6 dB bandwidth shall be at least 500 kHz

7.4. Test Procedure

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

7.5. EUT test definition

<table>
<tr><td>Item</td><td colspan="4">Occupied Bandwidth</td></tr>
<tr><td rowspan="2">Device Category</td><td>☒</td><td colspan="3">Fixed 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</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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7.6. Test Result

Product Name	:	Access Point	Power	:	PoE 57V
Test Mode	:	Mode 1	Test Site	:	AC-5
Model No.	:	APEX0365	Test Date	:	2016.12.08

Mode	CH.	Test Freq. (MHz)	99% Occupied Bandwidth (kHz)	6dB Occupied Bandwidth (kHz)	Limit (kHz)	Result
1	00	2402	1086.6	708.2	>500	Pass
1	19	2440	1077.6	692.9	>500	Pass
1	39	2480	1082.8	694.0	>500	Pass

Note : The worst case of Occupied Bandwidth as below:

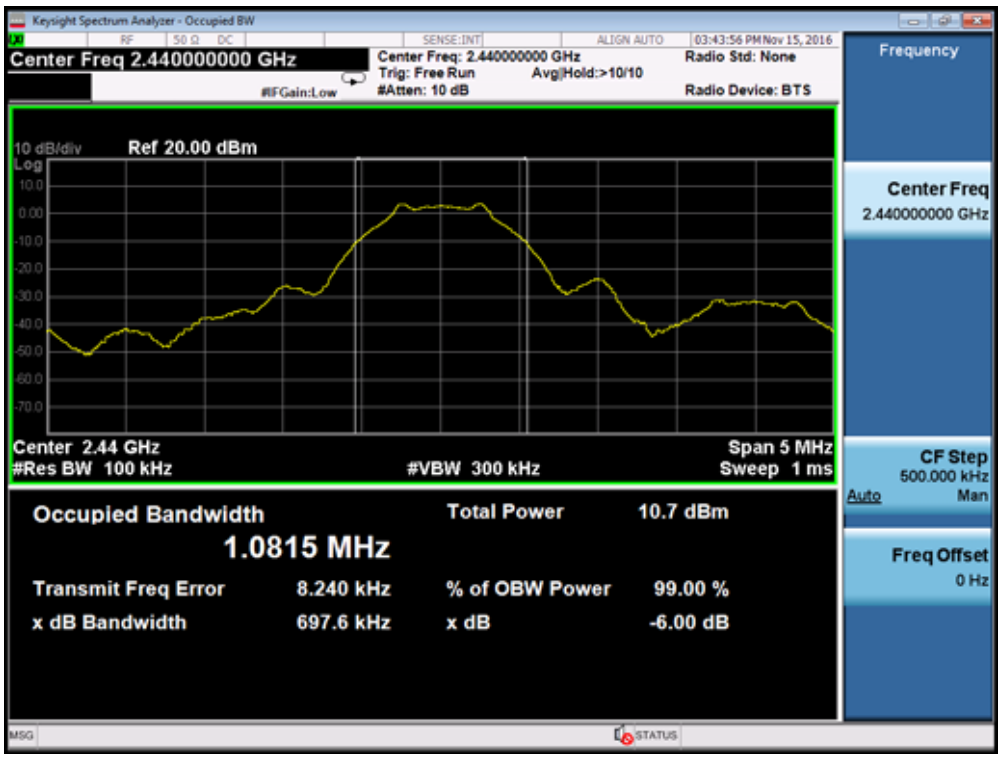
Mode 1 CH19 (2440MHz)

Product Name	:	Access Point	Power	:	PoE 57V
Test Mode	:	Mode 1	Test Site	:	AC-5
Model No.	:	APEX0367	Test Date	:	2016.12.08

Mode	CH.	Test Freq. (MHz)	99% Occupied Bandwidth (kHz)	6dB Occupied Bandwidth (kHz)	Limit (kHz)	Result
1	00	2402	1083.7	701.1	>500	Pass
1	19	2440	1081.5	697.6	>500	Pass
1	39	2480	1088.0	705.0	>500	Pass

Note : The worst case of Occupied Bandwidth as below:

Mode 1 CH19 (2440MHz)



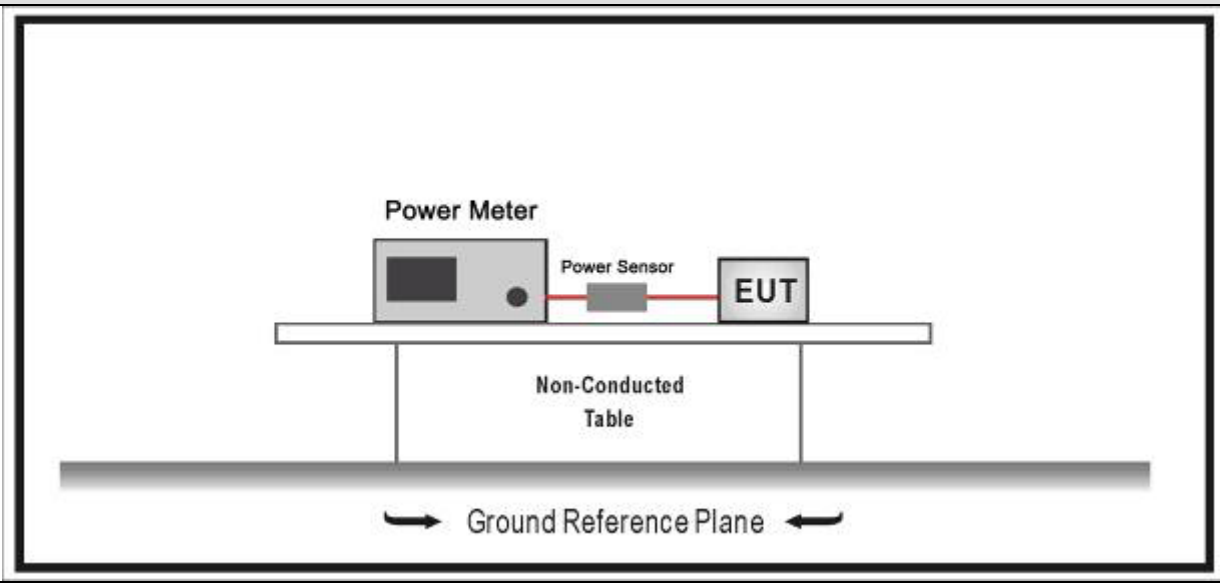
8. Fundamental emission output power

8.1. Test Equipment

Fundamental emission output power/ TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2017.01.03	2018.01.02
Spectrum Analyzer	Agilent	N9010A	MY48030494	2016.02.04	2017.02.03
Wideband Peak Power Meter	Anritsu	ML2495A	0905006	2015.10.14	2017.10.13
Power Sensor	Anritsu	MA2411B	0846014	2015.10.14	2017.10.13
Temperature/Humidity Meter	zhicheng	ZC1-2	TR8-TH	2016.04.10	2017.04. 09
Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

8.2. Test Setup

Fundamental emission output power test setup



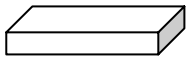
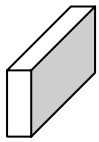
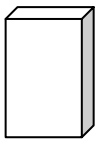
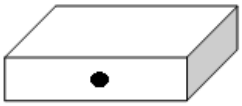
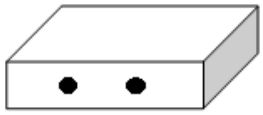
8.3. Limit

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 .			

8.4. Test Procedure

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

8.5. EUT test definition

<table>
<tr><td>Item</td><td colspan="4">Fundamental emission output power</td></tr>
<tr><td rowspan="2">Device Category</td><td>☒</td><td colspan="3">Fixed 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</td></tr>
<tr><td rowspan="13">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>
</table>

8.6. Test Result

Product Name	:	Access Point	Power	:	PoE 57V
Test Mode	:	Mode 1	Test Site	:	AC-5
Model No.	:	APEX0365	Test Date	:	2016.12.08

Mode	Channel	Test Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
1	00	2402	2.78	30	Pass
1	19	2440	2.68	30	Pass
1	39	2480	2.32	30	Pass

Product Name	:	Access Point	Power	:	PoE 57V
Test Mode	:	Mode 1	Test Site	:	AC-5
Model No.	:	APEX0367	Test Date	:	2016.12.08

Mode	Channel	Test Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
1	00	2402	2.87	30	Pass
1	19	2440	2.64	30	Pass
1	39	2480	2.66	30	Pass

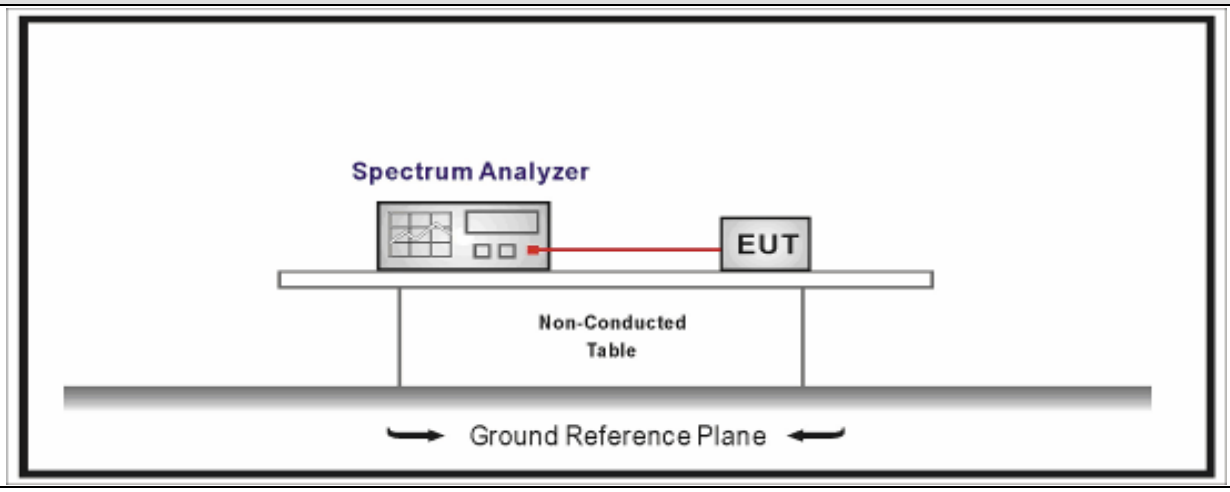
9. Power Spectral Density

9.1. Test Equipment

Power Spectral Density / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2016.02.04	2017.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2016.04.09	2017.04.08
MXA Signal Anlyzer	Keysight	N9020A	MY56060147	2016.04.09	2017.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2016.04.10	2017.04.09
Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

9.2. Test Setup

Power Spectral Density test setup



9.3. Limit

Power Spectral Density Limit
Power Spectral Density≤8dBm/3kHz

9.4. Test Procedure

Power Spectral Density Test Method				
	References Rule		Chapter	Description
☒	ANSI C63.10		11.10	Maximum power spectral density level in the fundamental emission
	☒	ANSI C63.10	11.10.2	Method PKPSD (peak PSD)
	☐	ANSI C63.10	11.10.3	Method AVGPSD-1(Duty cycle≥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

9.5. EUT test definition

<table>
<tr><td>Item</td><td colspan="4">Power Spectral Density Test Method</td></tr>
<tr><td rowspan="2">Device Category</td><td>☒</td><td colspan="3">Fixed 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</td></tr>
<tr><td rowspan="12">Test method</td><td>☐</td><td colspan="3">Radiated</td></tr>
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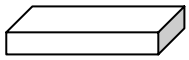
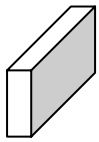
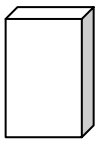
<tr><td>  </td><td>  </td><td>  </td></tr>
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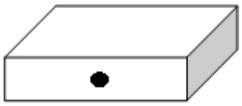
<tr><td></td><td colspan="3">  </td></tr>
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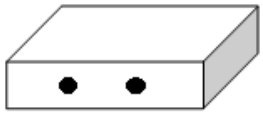
<tr><td></td><td colspan="3">  </td></tr>
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<tr><td></td><td colspan="3">  </td></tr>
</table>

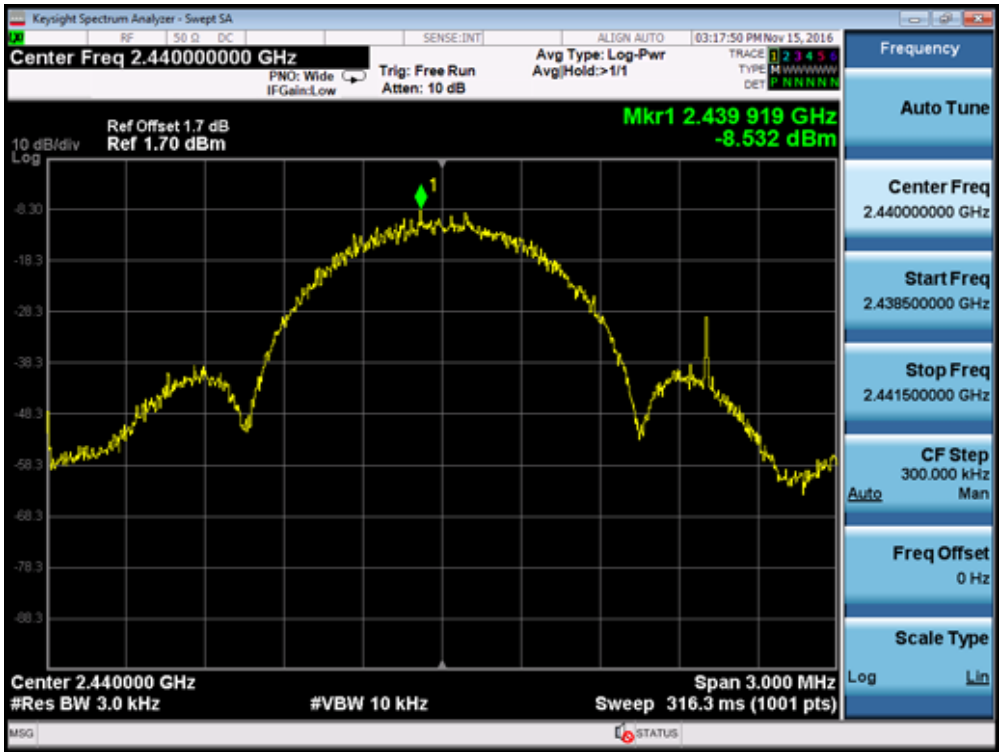
9.6. Test Result

Product Name	:	Access Point	Power	:	PoE 57V
Test Mode	:	Mode 1	Test Site	:	AC-5
Model No.	:	APEX0365	Test Date	:	2016.12.08

Mode	Channel	Test Frequency (MHz)	Measurement PSD (dBm/3kHz)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
1	00	2402	-9.370	-9.370	8	Pass
1	19	2440	-8.532	-8.532	8	Pass
1	39	2480	-10.732	-10.732	8	Pass

Note : The worst case of Power Spectral Density as below:

Mode 1 CH39(2480MHz)



Product Name	:	Access Point	Power	:	PoE 57V
Test Mode	:	Mode 1	Test Site	:	AC-5
Model No.	:	APEX0367	Test Date	:	2016.12.08

Mode	Channel	Test Frequency (MHz)	Measurement PSD (dBm/3kHz)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
1	00	2402	-8.653	-8.653	8	Pass
1	19	2440	-10.076	-10.076	8	Pass
1	39	2480	-8.231	-8.231	8	Pass

Note : The worst case of Power Spectral Density as below:

Mode 1 CH39(2480MHz)

10. Antenna Requirement

10.1. 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.

10.2. Antenna Connector Construction

Antenna Connector Construction	
☐	The use of a permanently attached antenna
☐	The antenna use of a unique coupling to the intentional radiator
☒	The use of a nonstandard antenna jack or electrical connector
Please refer to the attached document “Internal Photograph” to show the antenna connector.	

The End