Test Report

FCC Part15 Subpart E

Product Name	:	Access Point
Model No.	:	APEX0365 ,APEX0367
FCC ID	:	Q9DAPEX0365367

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. 26, 2016
Issued Date	:	Jan. 18, 2017
Report No.	:	16B2199R-RF-US-P09V02
Report Version	:	V1.1

Test Report Certification

Issued Date : Jan. 18, 2017
Report No. : 16B2199R-RF-US-P09V02

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
EUT Voltage	:	PoE 57V
Test Voltage		PoE 57V
Brand Name	:	aruba
Applicable Standard	:	FCC CFR Title 47 Part 15 Subpart E ANSI C63.4:2014; ANSI C63.10:2013; 789033 D02 General UNII Test Procedures New Rules v01r03 KDB 662911 D01 Multiple Transmitter Output v02r01 KDB 662911 D02 MIMO with Cross-Polarized Antennas v01
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;

Documented By : Kitty Li

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Reviewed By : Jack Zhang

(Senior Engineer: Jack Zhang)

Approved By : Harry Zhao

(Engineering Manager: Harry Zhao)

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History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
16B2199R-RF-US-P09V02	V1.0	Initial Issued Report	Jan. 11, 2017
16B2199R-RF-US-P09V02	V1.1	Add the conducted emission data	Jan. 18, 2017

1. General Information

1.1. EUT Description

Product Name	Access Point						
Brand Name	aruba						
Model No.	APEX0365 ,APEX0367						
SN	APEX0365:CNCFJSW047 APEX0367:CNCJJSX009						
SW	6.5.2.0 build 57798						
EUT Voltage	PoE 57V						
Test Voltage	PoE 57V						
Type of Modulation	OFDM						
Data Rate	802.11a: 6/9/12/18/24/36/48/54Mbps						
	802.11n: up to 150Mbps						
	802.11ac: up to 433.3Mbps						
Channel Control	Auto						
Transmit modes	☒	802.11a	☒	802.11n(20MHz)	☒	802.11n(40MHz)	
	☒	802.11ac(20MHz)	☒	802.11ac(40MHz)	☒	802.11ac(80MHz)	
Support Bands	☒	5150MHz~5250MHz	☒	Outdoor AP			
			☐	Indoor AP			
			☐	Fixed point-to-point AP			
			☒	Fixed point-to-Multi point AP			
			☐	Mobile and Portable Client			
	☐	5250MHz~5350MHz					
	☐	5470MHz~5725MHz	☐	With TDWR Channels			
			☐	Without TDWR Channels			
	☒	5725MHz~5850MHz					
Extreme Temperature	-40℃-50℃						

1.2. Antenna information

APEX0365:

Antenna Model No.	N/A					
Antenna manufacturer	N/A					
Antenna Delivery	☐	1*TX+1*RX	☒	2*TX+2*RX	☐	3*TX+3*RX
Antenna technology	☐	SISO				
	☒	MIMO	☐	Basic		
			☐	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					
Antenna Gain #1	4.3dBi					
Beamforming Gain	0dBi					
Antenna Gain #0*(Note1)	-0.9dBi					
Antenna Gain #1*(Note1)	-0.9dBi					
Note1: The antenna gain show above is the highest gain which has highest radiation pattern between 30° and 90° according to KDB 789033D02v01r03.						

APEX0367:

Antenna Model No.	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	6.5dBi					
Antenna Gain #1	6.5dBi					
Beamforming Gain	0dBi					
Antenna Gain #0*(Note1)	3.8dBi					
Antenna Gain #1*(Note1)	3.8dBi					
Note1: The antenna gain show above is the highest gain which has highest radiation pattern between 30° and 90° according to KDB 789033D02v01r03.						

1.3. Working Frequency of Each Channel:

802.11a/n/ac(20MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180 MHz	40	5200 MHz	44	5220 MHz	48	5240 MHz
149	5745 MHz	153	5765 MHz	157	5785 MHz	161	5805 MHz
165	5825MHz	N/A	N/A	N/A	N/A	N/A	N/A
802.11n/ac(40MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz	151	5755 MHz	159	5795 MHz
802.11ac(80MHz) Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
42	5210 MHz	155	5775 MHz	N/A	N/A	N/A	N/A

1.4. Mode of Operation

DEKRA Testing and Certification (Suzhou) Co., Ltd. has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Test Mode
Mode 1: Transmit by 802.11a
Mode 2: Transmit by 802.11n(20MHz)
Mode 3: Transmit by 802.11n(40MHz)
Mode 4: Transmit by 802.11ac(20MHz)
Mode 5: Transmit by 802.11ac(40MHz)
Mode 6: Transmit by 802.11ac(80MHz)
Mode 7: Transmit by 802.11ac(20MHz) with Beamforming
Mode 8: Transmit by 802.11ac(40MHz) with Beamforming
Mode 9: Transmit by 802.11ac(80MHz) with Beamforming

Note 1: Regards to the frequency band operation: the lowest, middle and highest frequency of channel were selected to perform the test, then shown on this report.

Note 2: For portable device, radiated tests was verified over X, Y, Z axis, and shown the worst case on this report.

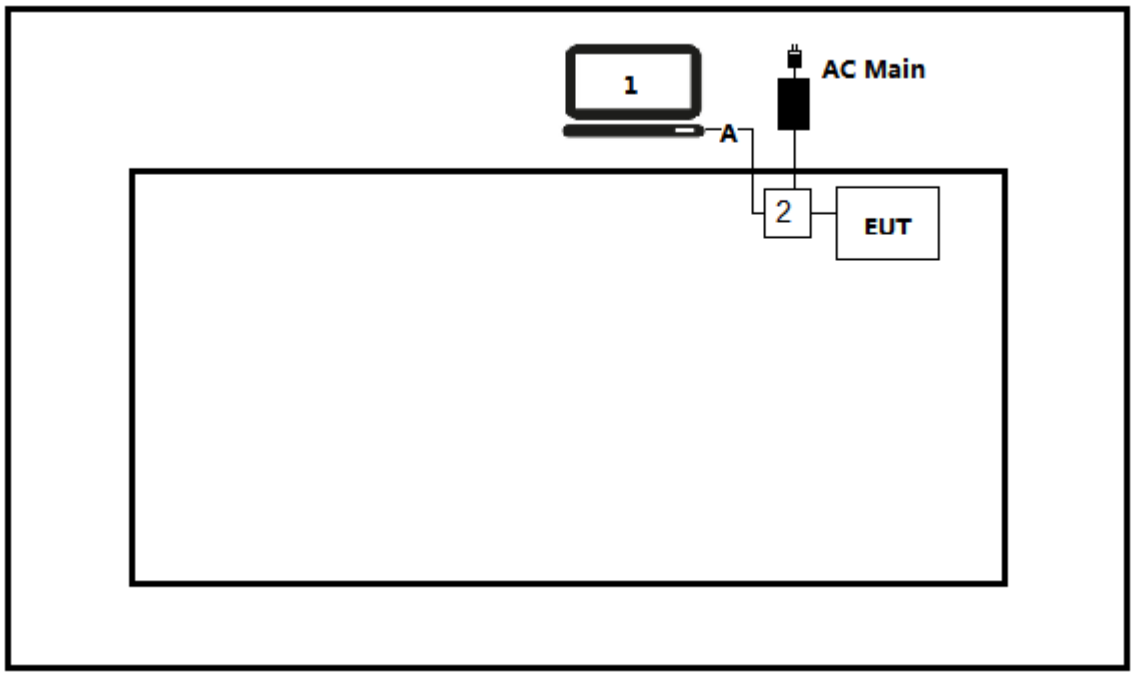
1.5. Tested System Details

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

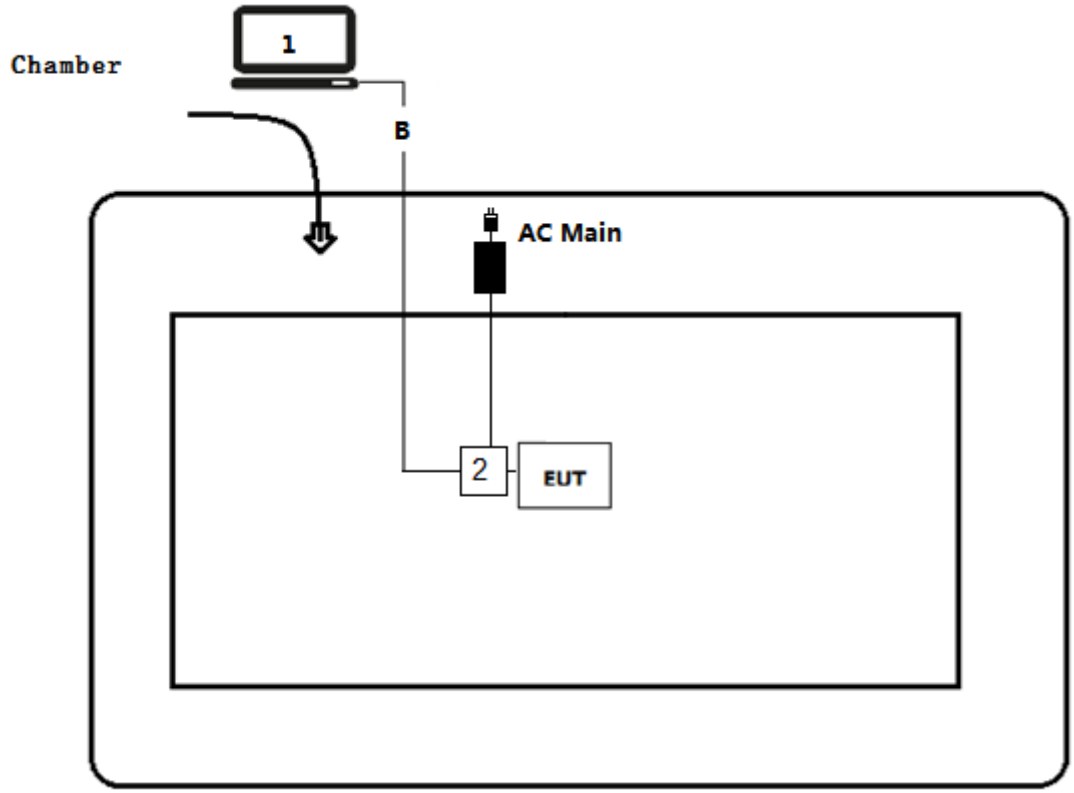
Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook	Lenovo	Think pad x220	SUA0600195	Non-shielded
3	Notebook	Asus	N80V	8BN0AS226971468	None-shielded
2	POE	N/A	N/A	N/A	Power by adapter

1.6. Configuration of Tested System

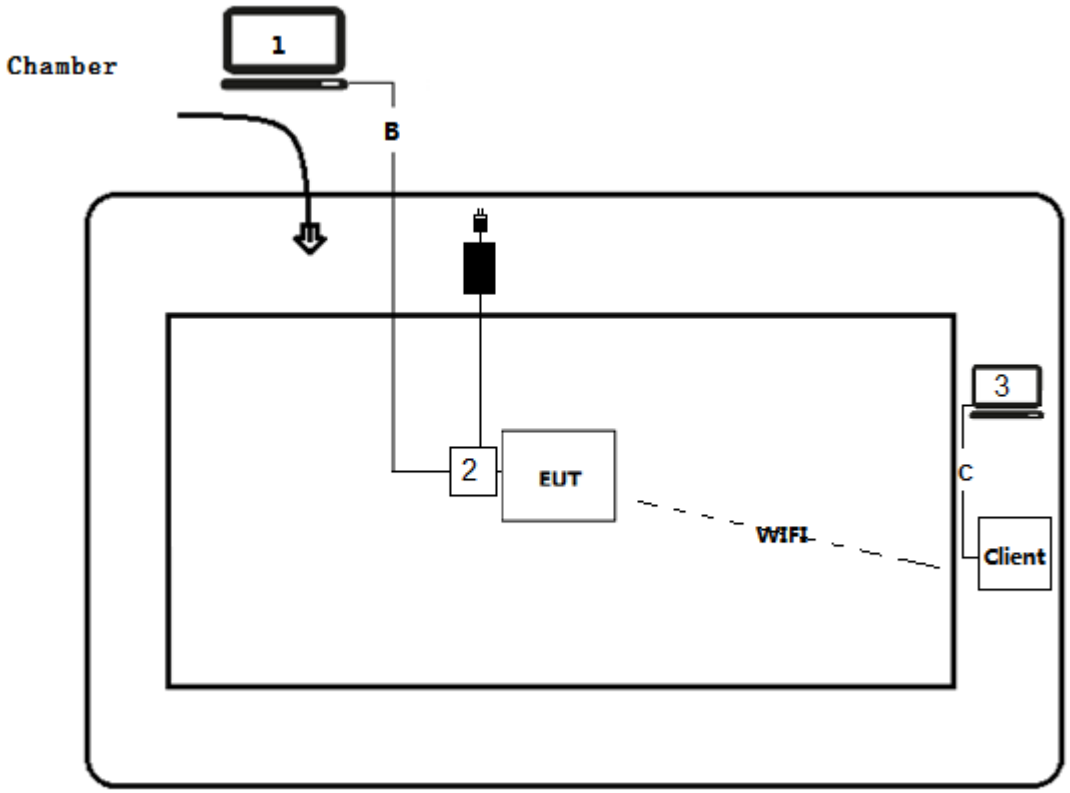
Test setup Diagram- AC Line Conducted Emission Test



Test setup Diagram- Radiated Emission



Test setup Diagram- Radiated Emission



Signal Cable Type		Signal cable Description
A	LAN Cable	Non-shielded, 1.5m
B	LAN Cable	Non-shielded, 15m
C	LAN Cable	Non-shielded, 1.5m

1.7. EUT Exercise Software

With Cross-polarized:

1	Setup the EUT and simulators as shown on above.
2	Turn on the power of equipment.
3	Run the software（QSPR V5.500.5975.23013）, and set the test mode and channel, then start to continue transmit or receive.

With Beamforming:

1	Setup the EUT and Client as shown on above.
2	Turn on the power of equipment.
3	Configure the client and connect the EUT.
4	Input RF commands, and set the test mode and channel, then traffic and test.

2. Technical Test

2.1. Summary of Test Result

☒ No deviations from the test standards

☐ Deviations from the test standards as below description:

Performed Test Item	Normative References	Limit	Result
Conducted Emission	FCC CFR Title 47 Part 15 Subpart E: 2015 Section 15.207	FCC 15.207	PASS
Radiated Emission	FCC CFR Title 47 Part 15 Subpart E: 2015 Section 15.209	FCC 15.209	PASS
Emission bandwidth and occupied bandwidth	FCC CFR Title 47 Part 15 Subpart E: 2015 Section 15.407(a)	FCC 15.407(e)	PASS
6dB Emission Bandwidth	FCC CFR Title 47 Part 15 Subpart E: 2015 Section 15.407(a)	FCC 15.407(e)	PASS
Power Output	FCC CFR Title 47 Part 15 Subpart E: 2015 Section 15.407(a)	FCC 15.407(a)	PASS
Peak Power Spectral Density	FCC CFR Title 47 Part 15 Subpart E: 2015 Section 15.407(a)	FCC 15.407(a)	PASS
Radiated Emission Band Edge	FCC CFR Title 47 Part 15 Subpart E: 2015 Section 15.205, 15.407(b)	FCC 15.407(b)	PASS
Frequency Stability	FCC CFR Title 47 Part 15 Subpart E: 2015 Section 15.407(g)	Within the band	PASS
Antenna Requirement	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.203	FCC 15.203	PASS

2.2. Test Frequency configuration:

Modulation Mode	Channel	Frequency	Channel	Frequency	Channel	Frequency
802.11a/n(20MHz) /ac(20MHz)	36	5180MHz	44	5220MHz	48	5240MHz
	149	5745MHz	157	5785MHz	165	5825MHz
802.11n(40MHz)/ ac(40MHz)	38	5190MHz	46	5230MHz	N/A	N/A
	151	5755MHz	159	5795MHz	N/A	N/A
802.11ac(80MHz)	42	5210MHz	155	5775MHz	N/A	N/A

2.3. Power Parameter Value of the test software

APEX0365:

Test Mode	Frequency	Power Setting		
		Ant 0	Ant 1	Ant 0+1
802.11a	5180	-	-	18.5
	5220	-	-	18.5
	5240	-	-	18.5
	5745	-	-	22
	5785	-	-	22
	5825	-	-	22
802.11n(20MHz)	5180	-	-	18.5
	5220	-	-	18.5
	5240	-	-	18.5
	5745	-	-	22
	5785	-	-	22
	5825	-	-	22
802.11n(40MHz)	5190	-	-	18.5
	5230	-	-	18.5
	5755	-	-	22
	5795	-	-	22
802.11ac(20MHz)	5180	-	-	18.5
	5220	-	-	18.5
	5240	-	-	18.5
	5745	-	-	22
	5785	-	-	22
	5825	-	-	22
802.11ac(40MHz)	5190	-	-	18.5
	5230	-	-	18.5
	5755	-	-	22
	5795	-	-	21.5
802.11ac(80MHz)	5210	-	-	18
	5775	-	-	22

APEX0365 with Beamforming:

802.11ac(20MHz)	5180	-	-	18.5
	5220	-	-	18.5
	5240	-	-	18.5
	5745	-	-	22
	5785	-	-	22
	5825	-	-	22
802.11ac(40MHz)	5190	-	-	18.5
	5230	-	-	18.5
	5755	-	-	22
	5795	-	-	21.5
802.11ac(80MHz)	5210	-	-	18
	5775	-	-	22

APEX0367:

Test Mode	Frequency	Power Setting		
		Ant 0	Ant 1	Ant 0+1
802.11a	5180	-	-	14
	5220	-	-	14
	5240	-	-	14
	5745		-	22
	5785	-	-	22
	5825	-	-	22
802.11n(20MHz)	5180	-	-	14
	5220	-	-	14
	5240	-	-	14
	5745	-	-	22
	5785	-	-	22
	5825	-	-	22
802.11n(40MHz)	5190	-	-	14
	5230	-	-	14
	5755	-	-	22
	5795	-	-	22
802.11ac(20MHz)	5180	-	-	14
	5220	-	-	14
	5240	-	-	14
	5745	-	-	22
	5785	-	-	22
	5825	-	-	22
802.11ac(40MHz)	5190	-	-	14
	5230	-	-	14
	5755	-	-	22
	5795	-	-	22
802.11ac(80MHz)	5210	-	-	14
	5775	-	-	20.5

APEX0367 with Beamforming:

802.11ac(20MHz)	5180	-	-	14
	5220	-	-	14
	5240	-	-	14
	5745	-	-	22
	5785	-	-	22
	5825	-	-	22
802.11ac(40MHz)	5190	-	-	14
	5230	-	-	14
	5755	-	-	22
	5795	-	-	22
802.11ac(80MHz)	5210	-	-	14
	5775	-	-	20.5

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

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

Spatial Streams (Note1)	MCS Index	Modulation type	Coding rate	Data Rate(Mb/s)							
				20MHz		40MHz		80MHz		160MHz	
				Guard Interval		Guard Interval		Guard Interval		Guard Interval	
				800ns	400ns	800ns	400ns	800ns	400ns	800ns	400ns
1	0	BPSK	1/2	6.5	7.2	13.5	15	29.3	32.5	58.5	65
	1	QPSK	1/2	13	14.4	27	30	58.5	65	117	130
	2	QPSK	3/4	19.5	21.7	40.5	45	87.8	97.5	175.5	195
	3	16-QAM	1/2	26	28.9	54	60	117	130	234	260
	4	16-QAM	3/4	39	43.3	81	90	175.5	195	351	390
	5	64-QAM	2/3	52	57.8	108	120	234	260	468	520
	6	64-QAM	3/4	58.5	65	121.5	135	263.3	292.5	526.5	585
	7	64-QAM	5/6	65	72.2	135	150	292.5	325	585	650
	8	256-QAM	3/4	78	86.7	162	180	351	390	702	780
	9	256-QAM	5/6	N/A	N/A	180	200	390	433.3	780	866.7

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

2.5. Duty Cycle

APEX0365:

Test Mode	Tx On (ms)	Tx Off (ms)	VBW	Tx On + Tx Off (ms)	Duty Cycle
802.11a	2.015	0.095	510KHz	2.110	95.50%
802.11 n(20MHz)	4.935	0.120	220KHz	5.055	97.63%
802.11n(40MHz)	2.376	0.112	430KHz	2.488	95.50%
802.11ac(20MHz)	4.965	0.090	220KHz	5.055	98.22%
802.11ac(40MHz)	2.368	0.112	430KHz	2.480	95.48%
802.11ac(80MHz)	1.105	0.110	910KHz	1.215	90.95%

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 789033，when test for Radiated Emission Band Edge and Radiated Emission, VBW ≥ 1/T will be used.

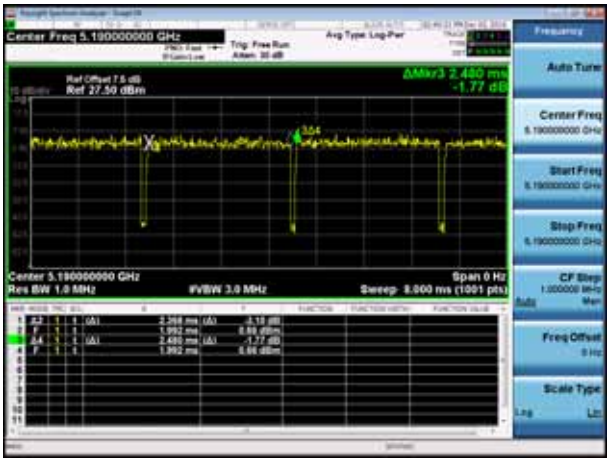
802.11a

802.11n(20MHz)

802.11n(40MHz)

802.11ac(20MHz)

802.11ac(40MHz)



802.11ac(80MHz)

APEX0365 with Beamforming:

Test Mode	Tx On (ms)	Tx Off (ms)	VBW	Tx On + Tx Off (ms)	Duty Cycle
802.11ac(20MHz)	4.956	0.108	220Hz	5.064	97.87%
802.11ac(40MHz)	2.376	0.102	430Hz	2.478	95.88%
802.11ac(80MHz)	1.098	0.111	1kHz	1.209	90.82%

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 ANSI C63.10，when test for Radiated Emission Band Edge and Radiated Emission, VBW ≥ 1/T will be used.

802.11ac(20MHz)

802.11ac(40MHz)

802.11ac(80MHz)

APEX0367:

Test Mode	Tx On (ms)	Tx Off (ms)	VBW	Tx On + Tx Off (ms)	Duty Cycle
802.11a	2.020	0.085	510Hz	2.105	95.96%
802.11n(20MHz)	4.950	0.12	220Hz	5.070	97.63%
802.11n(40MHz)	2.360	0.14	430Hz	2.500	94.40%
802.11ac(20MHz)	4.965	0.09	220Hz	5.055	98.22%
802.11ac(40MHz)	2.370	0.13	430Hz	2.500	94.80%
802.11ac(80MHz)	1.105	0.11	910Hz	1.215	90.95%

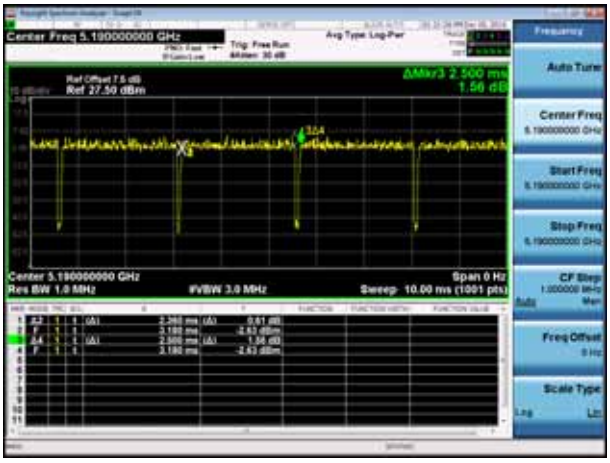
Note 1: T means the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

Note 2: According to KDB 789033，when test for Radiated Emission Band Edge and Radiated Emission, VBW ≥ 1/T will be used.

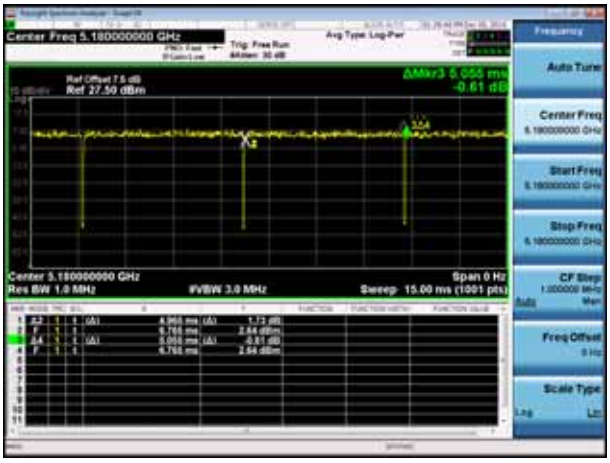
802.11a

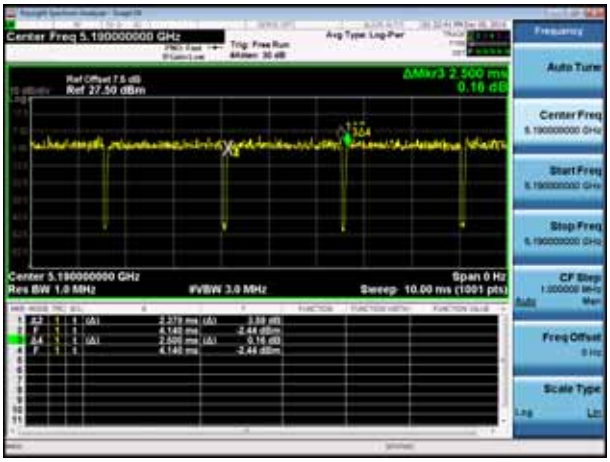
802.11n(20MHz)

802.11n(40MHz)



802.11ac(20MHz)



802.11ac(40MHz)	802.11ac(80MHz)
	

APEX0367 with Beamforming:

Test Mode	Tx On (ms)	Tx Off (ms)	VBW	Tx On + Tx Off (ms)	Duty Cycle
802.11ac(20MHz)	4.968	0.096	220Hz	5.064	98.10%
802.11ac(40MHz)	2.400	0.096	430Hz	2.496	96.15%
802.11ac(80MHz)	1.131	0.084	910Hz	1.215	93.09%

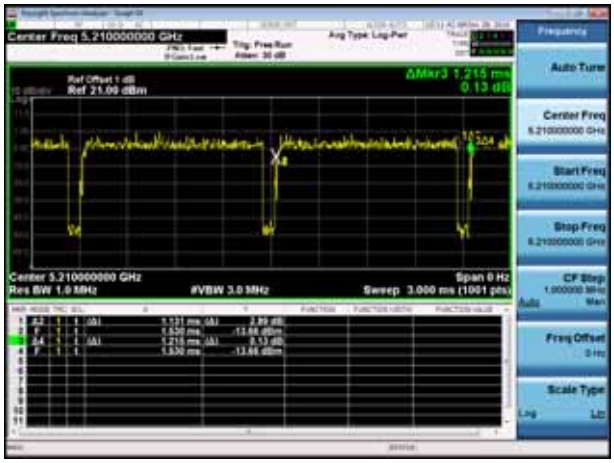
Note 1: T means the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

Note 2: According to ANSI C63.10，when test for Radiated Emission Band Edge and Radiated Emission, VBW ≥ 1/T will be used.

802.11ac(20MHz)

802.11ac(40MHz)

802.11ac(80MHz)



2.6. 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

2.7. Uncertainty

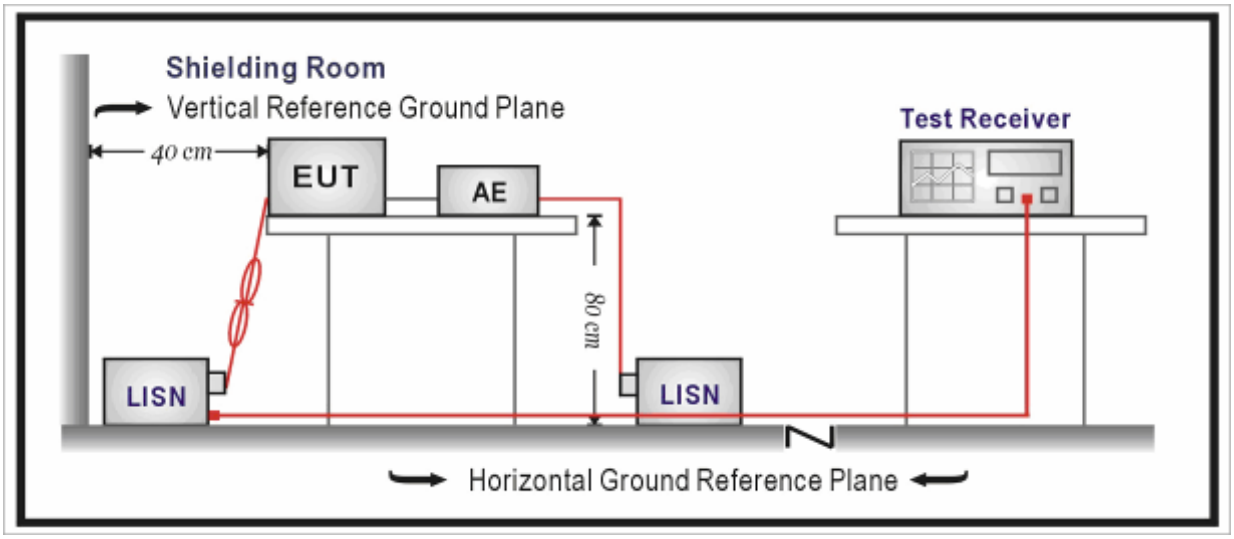
Test Items	Uncertainty
AC Power Line Conducted Emission	±2.02dB
Radiated Emission	Below 1GHz ±3.8 dB
	Above 1GHz ±3.9 dB
RF Antenna Port Conducted Emission	±1.27dB
Radiated Emission Band Edge	±3.9dB
Occupied Bandwidth	±1kHz
Power Spectral Density	±1.27dB
Frequency Stability	±100 Hz

3. Conducted Emission

3.1. Test Equipment

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	2016.06.16	2017.07.15
Two-Line V-Network	R&S	ENV 216	101044	2016.09.16	2017.09.15
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	N/A	N/A
50ohm Termination	SHX	TF2	07081402	2016.09.16	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



3.3. Limit

Frequency (MHz)	QP (dBμV)	AV (dBμV)
0.15 - 0.50	66 – 56	56 – 46
0.50 - 5.0	56	46
5.0 - 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.		

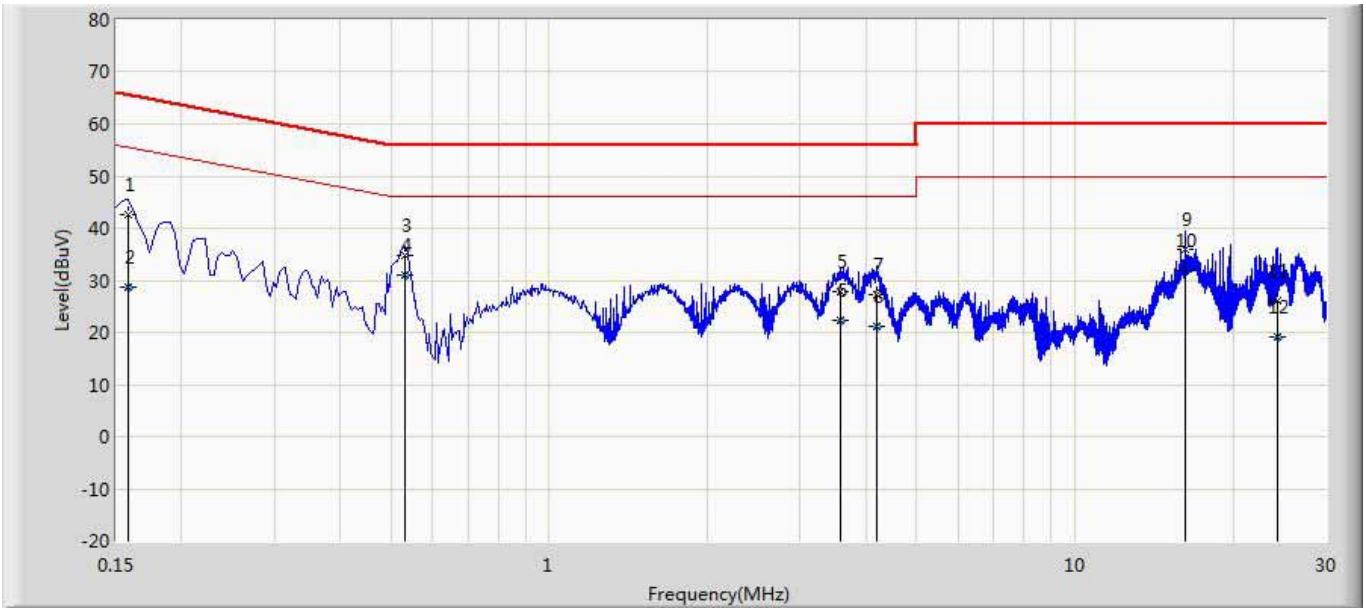
3.4. Test Procedure

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: TR1	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:

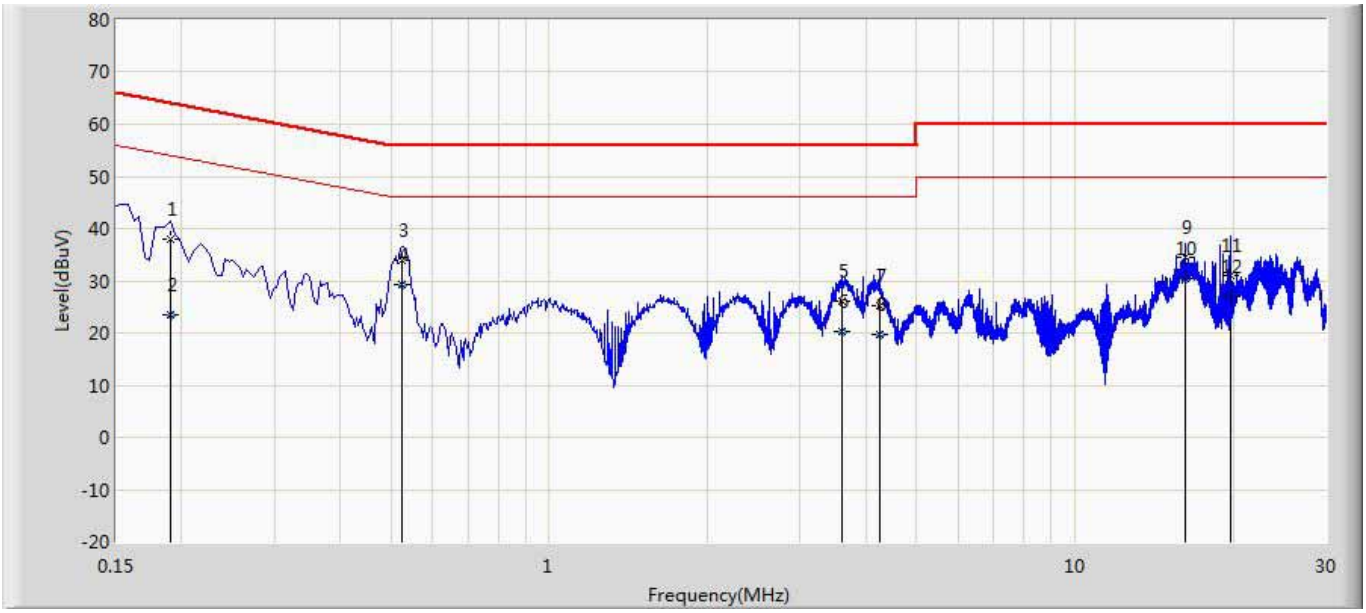
1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average

measurements as necessary.

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

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

Site: TR1	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

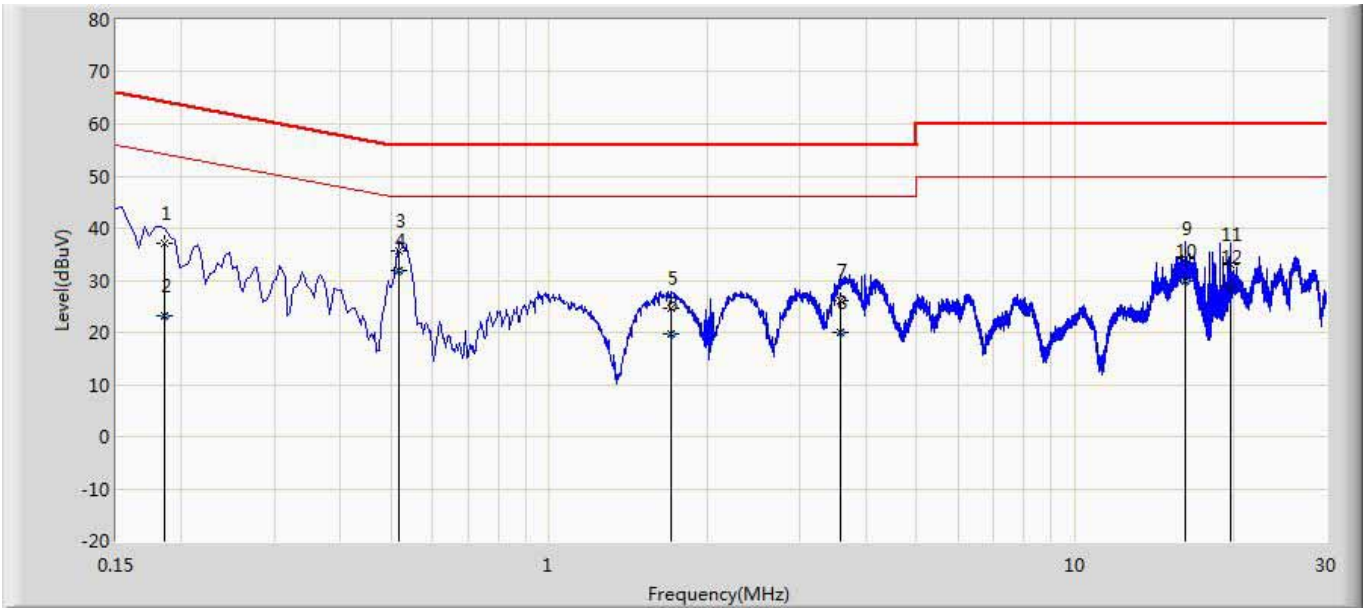
Note: 1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.

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	



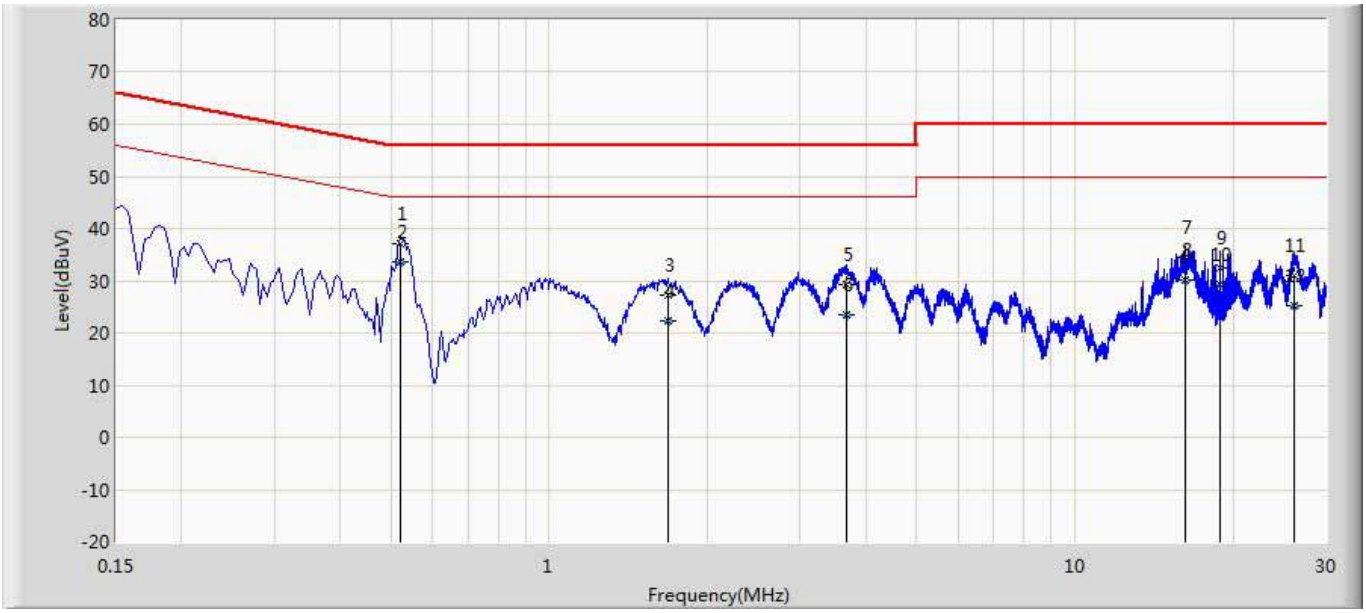
No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.186	37.063	27.439	-27.150	64.213	9.597	0.027	0.000	QP
2		0.186	23.268	13.644	-30.945	54.213	9.597	0.027	0.000	AV
3		0.518	35.510	25.874	-20.490	56.000	9.590	0.046	0.000	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. Radiated Emission

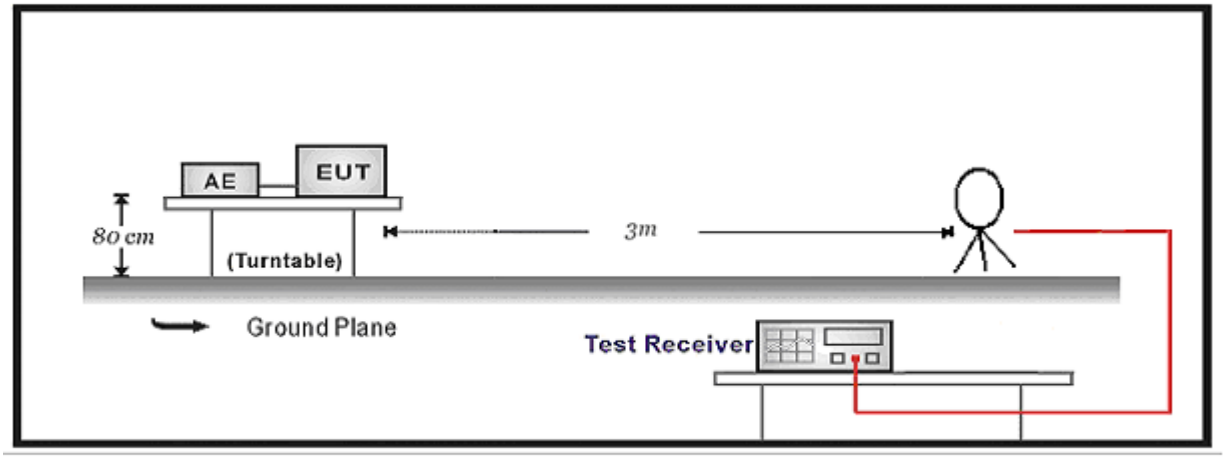
4.1. Test Equipment

Radiated Emission / 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	2016.11.16	2017.11.15
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2016.10.16	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

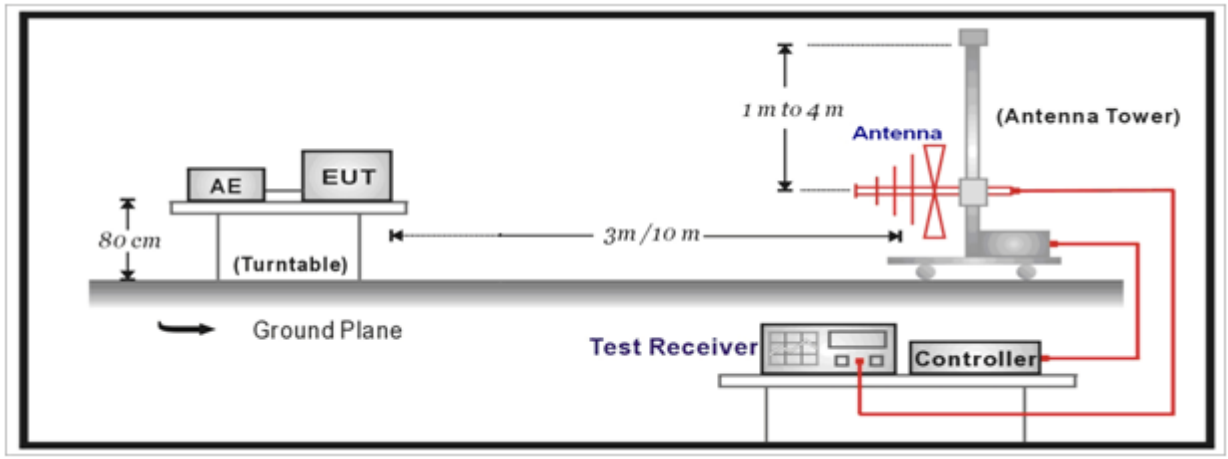
Radiated Emission / AC-5					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Preamplifier	Miteq	NSP1800-25	1364185	2016.05.06	2017.05.05
Preamplifier	DEKRA Testing and Certification (Suzhou) Co., Ltd.	AP-040G	CHM-0906001	2016.05.06	2017.05.05
DRG Horn	ETS-Lindgren	3117	00123988	2016.01.22	2017.01.21
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2016.11.25	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	2017.01.03	2018.01.02
Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

4.2. Test Setup

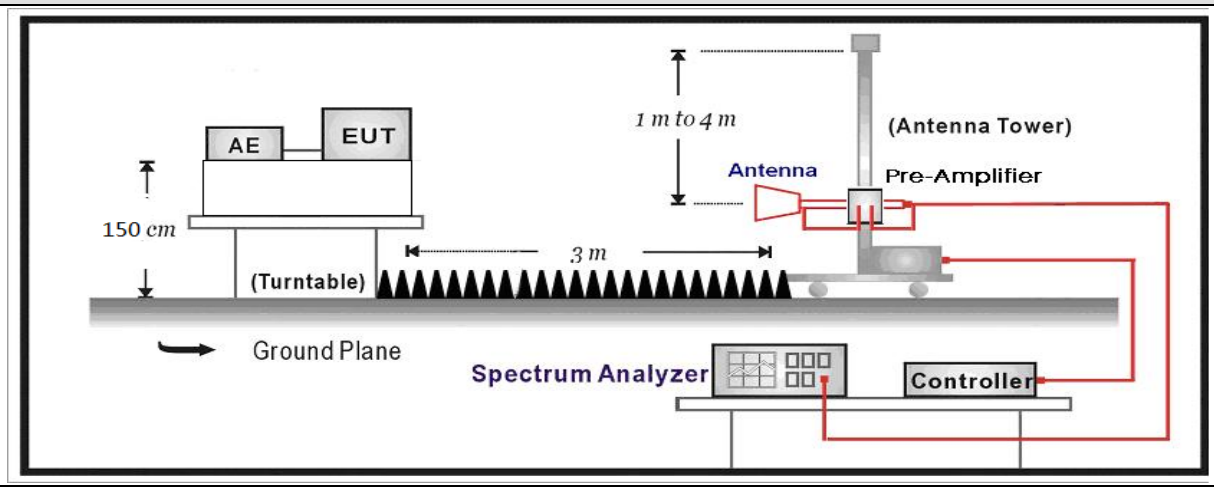
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:



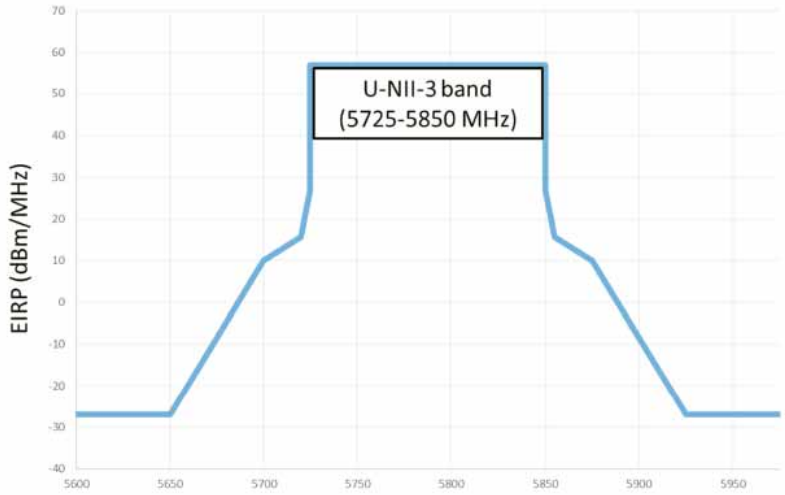
4.3. Limit

FCC Part 15 Subpart C Paragraph 15.209 (Restricted Band Emissions Limit)		
Frequency (MHz)	Distance (m)	Level (dB μV/m)
0.009-0.490	300	2400/F(kHz)
0.490-1.705	30	24000/F(kHz)
1.705-30.0	30	30
30-88	3	100**
88-216	3	150**
216-960	3	200**
Above 960	3	500

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).

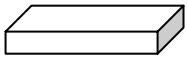
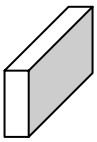
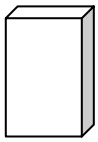
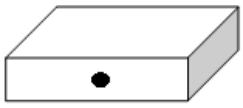
FCC Part 15 Subpart C Paragraph 15.205 (Restricted Band)			
Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 – 0.110	16.42 – 16.423	399.9 – 410	4.5 – 5.15
0.495 – 0.505	16.69475 –16.69525	608 – 614	5.35 – 5.46
2.1735 – 2.1905	16.80425 – 16.80475	960 – 1240	7.25 – 7.75
4.125 – 4.128	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			

FCC Part 15 Subpart C Paragraph 15.407(5)(b) (Unrestricted Band Emissions Limit)		
Operating Frequency Band (MHz)	EIRP Limit (dBm/MHz)	Equivalent Field Strength at 3m (dB μ V/m)
5150 - 5250	-27	68.3
5250 - 5350	-27	68.3
5470 - 5725	-27	68.3
FCC 16-24-A1		
Operating Frequency Band (MHz)	EIRP Limit (dBm/MHz)	
5725 - 5825		

4.4. Test Procedure

Test Method				
	References Rule		Chapter	Description
☐	ANSI C63.10		12.7.3	Emissions in non-restricted frequency bands
☒	ANSI C63.10		12.7.2	Emissions in restricted frequency bands
	☒	ANSI C63.10	12.7.5	Radiated emission measurements
	☒	ANSI C63.10	12.7.6	Procedure for peak unwanted emissions measurements above 1000 MHz
	☒	ANSI C63.10	12.7.7	Procedures for average unwanted emissions measurements above 1000 MHz
		☐ ANSI C63.10	12.7.7.2	Method AD (average detection)—primary method
		☒ ANSI C63.10	12.7.7.3	Method VB-A (Alternative)
	☒	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
☐	FCC KDB 789033 D02v01r03		G.2	Unwanted Emissions that fall Outside of the Restricted Bands
☐	FCC KDB 789033 D02v01r03		G.1	Unwanted Emissions in the Restricted Bands
	☐	FCC KDB 789033 D02v01r03	G.4	Procedure for Unwanted Emissions Measurements below 1000 MHz
	☐	FCC KDB 789033 D02v01r03	G.5	Procedure for Unwanted Maximum Emissions Measurements above 1000 MHz
	☐	FCC KDB 789033 D02v01r03	G.6	Procedures for Average Unwanted Emissions Measurements above 1000 MHz
		☐ FCC KDB 789033 D02v01r03	G.6.c	Method AD (Average detection)—primary method
		☐ FCC KDB 789033 D02v01r03	G.6.d	Method VB (Averaging using reduced video bandwidth): Alternative method.

4.5. EUT test Axis definition

<table>
<tr><td>Item</td><td colspan="4">Radiated Emission</td></tr>
<tr><td rowspan="5">Device Category</td><td>☒</td><td colspan="3">Outdoor AP</td></tr>
<tr><td>☐</td><td colspan="3">Indoor AP</td></tr>
<tr><td>☐</td><td colspan="3">Fixed point-to-point AP</td></tr>
<tr><td>☒</td><td colspan="3">Outdoor fixed point-to-multipoint AP</td></tr>
<tr><td>☐</td><td colspan="3">Client</td></tr>
<tr><td>Test mode</td><td colspan="4">Mode 1-9</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 1</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
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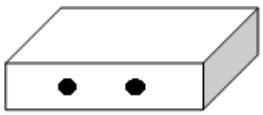
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☐</td><td>Chain 1</td><td>Chain 2</td><td>Chain 3</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
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4.6. Test Result

Product Name	:	Access Point	Power	:	PoE 57V
Model No.	:	APEX0365	Test Site	:	AC-5
Test Mode	:	Mode 1: Transmit by 802.11a	Test Date	:	2016.12.12

Chain	CH	Antenna Polarity	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measured Level (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
Ant 0+1	36	H	10360.000	45.379	-0.654	44.725	54(Note3)	-9.275	PK
		V	10360.000	45.734	-0.654	45.080	54(Note3)	-8.920	PK
		H	15540.000	40.810	4.813	45.623	54(Note3)	-8.377	PK
		V	15540.000	40.925	4.813	45.738	54(Note3)	-8.262	PK
	44	H	10440.000	45.547	-0.428	45.119	54(Note3)	-8.881	PK
		V	10440.000	45.404	-0.428	44.976	54(Note3)	-9.024	PK
		H	15660.000	40.751	4.968	45.718	54(Note3)	-8.282	PK
		V	15660.000	41.242	4.968	46.209	54(Note3)	-7.791	PK
	48	H	10480.000	44.378	-0.580	43.797	54(Note3)	-10.203	PK
		V	10480.000	44.231	-0.580	43.650	54(Note3)	-10.350	PK
		H	15720.000	40.326	5.557	45.883	54(Note3)	-8.117	PK
		V	15720.000	39.521	5.557	45.078	54(Note3)	-8.922	PK
	149	H	11490.000	42.927	-0.144	42.783	54(Note3)	-11.217	PK
		V	11490.000	44.427	-0.144	44.283	54(Note3)	-9.717	PK
		H	17235.000	41.037	5.291	46.328	54(Note3)	-7.672	PK
		V	17235.000	40.906	5.291	46.197	54(Note3)	-7.803	PK
	157	H	11570.000	43.034	0.379	43.413	54(Note3)	-10.587	PK
		V	11570.000	43.188	0.379	43.567	54(Note3)	-10.433	PK
		H	17355.000	40.839	5.921	46.760	54(Note3)	-7.240	PK
		V	17355.000	41.134	5.921	47.055	54(Note3)	-6.945	PK
	165	H	11650.000	43.760	0.549	44.308	54(Note3)	-9.692	PK
		V	11650.000	43.504	0.549	44.052	54(Note3)	-9.948	PK
		H	17475.000	42.808	6.825	49.633	54(Note3)	-4.367	PK
		V	17475.000	41.760	6.825	48.585	54(Note3)	-5.415	PK

1. Measured Level = Reading Level + Factor.
2. The test frequency range, 9kHz~30MHz, 18GHz~40GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.
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.
4. As the radiated emission was performed, so conducted emission was not tested.

Product Name	:	Access Point	Power	:	PoE 57V
Model No.	:	APEX0365	Test Site	:	AC-5
Test Mode	:	Mode 2: Transmit by 802.11n(20MHz)	Test Date	:	2016.12.12

Chain	CH	Antenna Polarity	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measured Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Detector
Ant 0+1	36	H	10360.000	45.603	-0.654	44.949	54(Note3)	-9.051	PK
		V	10360.000	45.136	-0.654	44.482	54(Note3)	-9.518	PK
		H	15540.000	40.634	4.813	45.447	54(Note3)	-8.553	PK
		V	15540.000	40.665	4.813	45.478	54(Note3)	-8.522	PK
	44	H	10440.000	43.755	-0.428	43.327	54(Note3)	-10.673	PK
		V	10440.000	44.529	-0.428	44.101	54(Note3)	-9.899	PK
		H	15660.000	39.262	4.968	44.229	54(Note3)	-9.771	PK
		V	15660.000	39.741	4.968	44.708	54(Note3)	-9.292	PK
	48	H	10480.000	44.262	-0.580	43.681	54(Note3)	-10.319	PK
		V	10480.000	43.832	-0.580	43.251	54(Note3)	-10.749	PK
		H	15720.000	39.983	5.557	45.540	54(Note3)	-8.460	PK
		V	15720.000	39.205	5.557	44.762	54(Note3)	-9.238	PK
	149	H	11490.000	43.632	-0.144	43.488	54(Note3)	-10.512	PK
		V	11490.000	44.284	-0.144	44.140	54(Note3)	-9.860	PK
		H	17235.000	40.484	5.291	45.775	54(Note3)	-8.225	PK
		V	17235.000	41.857	5.291	47.148	54(Note3)	-6.852	PK
	157	H	11570.000	44.102	0.379	44.481	54(Note3)	-9.519	PK
		V	11570.000	43.217	0.379	43.596	54(Note3)	-10.404	PK
		H	17355.000	41.622	5.921	47.543	54(Note3)	-6.457	PK
		V	17355.000	41.137	5.921	47.058	54(Note3)	-6.942	PK
	165	H	11650.000	43.463	0.549	44.011	54(Note3)	-9.989	PK
		V	11650.000	42.661	0.549	43.209	54(Note3)	-10.791	PK
		H	17475.000	42.387	6.825	49.212	54(Note3)	-4.788	PK
		V	17475.000	42.021	6.825	48.846	54(Note3)	-5.154	PK

1. Measured Level = Reading Level + Factor.
2. The test frequency range, 9kHz~30MHz, 18GHz~40GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.
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.
4. As the radiated emission was performed, so conducted emission was not tested.

Product Name	:	Access Point	Power	:	PoE 57V
Model No.	:	APEX0365	Test Site	:	AC-5
Test Mode	:	Mode 3: Transmit by 802.11n(40MHz)	Test Date	:	2016.12.12

Chain	CH	Antenna Polarity	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measured Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Detector
Ant 0+1	38	H	10380.000	44.069	-0.551	43.517	54(Note3)	-10.483	PK
		V	10380.000	45.311	-0.551	44.759	54(Note3)	-9.241	PK
		H	15570.000	39.861	5.931	45.793	54(Note3)	-8.207	PK
		V	15570.000	40.175	5.931	46.107	54(Note3)	-7.893	PK
	46	H	10460.000	45.313	-0.612	44.701	54(Note3)	-9.299	PK
		V	10460.000	44.272	-0.612	43.660	54(Note3)	-10.34	PK
		H	15690.000	40.145	6.791	46.936	54(Note3)	-7.064	PK
		V	15690.000	40.796	6.791	47.587	54(Note3)	-6.413	PK
	151	H	11510.000	43.918	0.321	44.239	54(Note3)	-9.761	PK
		V	11510.000	44.085	0.321	44.406	54(Note3)	-9.594	PK
		H	17265.000	41.102	7.110	48.212	54(Note3)	-5.788	PK
		V	17265.000	41.069	7.110	48.179	54(Note3)	-5.821	PK
	159	H	11590.000	43.502	1.193	44.696	54(Note3)	-9.304	PK
		V	11590.000	43.222	1.193	44.416	54(Note3)	-9.584	PK
		H	17385.000	39.715	7.024	46.739	54(Note3)	-7.261	PK
		V	17385.000	40.468	7.024	47.492	54(Note3)	-6.508	PK

1. Measured Level = Reading Level + Factor.
2. The test frequency range, 9kHz~30MHz, 18GHz~40GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.
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.
4. As the radiated emission was performed, so conducted emission was not tested.

Product Name	:	Access Point	Power	:	PoE 57V
Model No.	:	APEX0365	Test Site	:	AC-5
Test Mode	:	Mode 4: Transmit by 802.11ac(20MHz)	Test Date	:	2016.12.12

Chain	CH	Antenna Polarity	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measured Level (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
Ant 0+1	36	H	10360.000	44.795	-0.654	44.141	54(Note3)	-9.859	PK
		V	10360.000	43.507	-0.654	42.853	54(Note3)	-11.147	PK
		H	15540.000	40.174	4.813	44.987	54(Note3)	-9.013	PK
		V	15540.000	39.770	4.813	44.583	54(Note3)	-9.417	PK
	44	H	10440.000	43.814	-0.428	43.386	54(Note3)	-10.614	PK
		V	10440.000	44.336	-0.428	43.908	54(Note3)	-10.092	PK
		H	15660.000	39.991	4.968	44.958	54(Note3)	-9.042	PK
		V	15660.000	40.300	4.968	45.267	54(Note3)	-8.733	PK
	48	H	10480.000	45.203	-0.580	44.622	54(Note3)	-9.378	PK
		V	10480.000	44.275	-0.580	43.694	54(Note3)	-10.306	PK
		H	15720.000	40.040	5.557	45.597	54(Note3)	-8.403	PK
		V	15720.000	40.289	5.557	45.846	54(Note3)	-8.154	PK
	149	H	11490.000	43.284	-0.144	43.140	54(Note3)	-10.860	PK
		V	11490.000	42.542	-0.144	42.398	54(Note3)	-11.602	PK
		H	17235.000	41.437	5.291	46.728	54(Note3)	-7.272	PK
		V	17235.000	40.131	5.291	45.422	54(Note3)	-8.578	PK
	157	H	11570.000	41.807	0.379	42.186	54(Note3)	-11.814	PK
		V	11570.000	43.132	0.379	43.511	54(Note3)	-10.489	PK
		H	17355.000	40.582	5.921	46.503	54(Note3)	-7.497	PK
		V	17355.000	40.662	5.921	46.583	54(Note3)	-7.417	PK
	165	H	11650.000	44.054	0.549	44.602	54(Note3)	-9.398	PK
		V	11650.000	41.867	0.549	42.415	54(Note3)	-11.585	PK
		H	17475.000	41.055	6.825	47.880	54(Note3)	-6.120	PK
		V	17475.000	40.237	6.825	47.062	54(Note3)	-6.938	PK

1. Measured Level = Reading Level + Factor.
2. The test frequency range, 9kHz~30MHz, 18GHz~40GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.
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.
4. As the radiated emission was performed, so conducted emission was not tested.

Product Name	:	Access Point	Power	:	PoE 57V
Model No.	:	APEX0365	Test Site	:	AC-5
Test Mode	:	Mode 5: Transmit by 802.11ac(40MHz)	Test Date	:	2016.12.12

Chain	CH	Antenna Polarity	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measured Level (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
Ant 0+1	38	H	10380.000	44.716	-0.551	44.164	54(Note3)	-9.836	PK
		V	10380.000	44.101	-0.551	43.549	54(Note3)	-10.451	PK
		H	15570.000	39.856	5.931	45.788	54(Note3)	-8.212	PK
		V	15570.000	38.399	5.931	44.331	54(Note3)	-9.669	PK
	46	H	10460.000	43.427	-0.612	42.815	54(Note3)	-11.185	PK
		V	10460.000	42.971	-0.612	42.359	54(Note3)	-11.641	PK
		H	15690.000	39.644	6.791	46.435	54(Note3)	-7.565	PK
		V	15690.000	39.007	6.791	45.798	54(Note3)	-8.202	PK
	151	H	11510.000	42.455	0.321	42.776	54(Note3)	-11.224	PK
		V	11510.000	42.617	0.321	42.938	54(Note3)	-11.062	PK
		H	17265.000	39.818	7.110	46.928	54(Note3)	-7.072	PK
		V	17265.000	39.558	7.110	46.668	54(Note3)	-7.332	PK
	159	H	11590.000	42.239	1.193	43.433	54(Note3)	-10.567	PK
		V	11590.000	42.962	1.193	44.156	54(Note3)	-9.844	PK
		H	17385.000	40.009	7.024	47.033	54(Note3)	-6.967	PK
		V	17385.000	39.839	7.024	46.863	54(Note3)	-7.137	PK

1. Measured Level = Reading Level + Factor.
2. The test frequency range, 9kHz~30MHz, 18GHz~40GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.
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.
4. As the radiated emission was performed, so conducted emission was not tested.

Product Name	:	Access Point	Power	:	PoE 57V
Model No.	:	APEX0365	Test Site	:	AC-5
Test Mode	:	Mode 6: Transmit by 802.11ac(80MHz)	Test Date	:	2016.12.12

Chain	CH	Antenna Polarity	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measured Level (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
Ant 0+1	42	H	10420.000	43.706	-1.174	42.532	54(Note3)	-11.468	PK
		V	10420.000	44.304	-1.174	43.130	54(Note3)	-10.870	PK
		H	15630.000	38.401	5.688	44.088	54(Note3)	-9.912	PK
		V	15630.000	38.321	5.688	44.008	54(Note3)	-9.992	PK
	155	H	11550.000	42.638	0.134	42.772	54(Note3)	-11.228	PK
		V	11550.000	41.686	0.134	41.820	54(Note3)	-12.180	PK
		H	17325.000	40.521	5.545	46.066	54(Note3)	-7.934	PK
		V	17325.000	39.717	5.545	45.262	54(Note3)	-8.738	PK

1. Measured Level = Reading Level + Factor.
2. The test frequency range, 9kHz~30MHz, 18GHz~40GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.
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.
4. As the radiated emission was performed, so conducted emission was not tested.

Product Name	:	Wireless Access Point	Power	:	PoE 57V
Module No.	:	APEX0365	Test Site	:	AC-5
Test Mode	:	Mode 7: Transmit by 802.11ac(20MHz) with Beamforming	Test Date	:	2016.12.16

Chain	CH	Antenna Polarity	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measured Level (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
Ant 0+1	36	H	10360.000	41.370	-0.029	41.341	54(Note3)	-12.659	PK
		V	10360.000	40.896	-0.029	40.867	54(Note3)	-13.133	PK
		H	15540.000	37.535	5.857	43.392	54(Note3)	-10.608	PK
		V	15540.000	37.977	5.857	43.834	54(Note3)	-10.166	PK
	44	H	10440.000	40.798	0.050	40.848	54(Note3)	-13.152	PK
		V	10440.000	40.921	0.050	40.971	54(Note3)	-13.029	PK
		H	15660.000	38.285	5.774	44.058	54(Note3)	-9.942	PK
		V	15660.000	38.326	5.774	44.099	54(Note3)	-9.901	PK
	48	H	10480.000	41.089	0.001	41.089	54(Note3)	-12.911	PK
		V	10480.000	39.893	0.001	39.893	54(Note3)	-14.107	PK
		H	15720.000	36.494	6.217	42.711	54(Note3)	-11.289	PK
		V	15720.000	35.565	6.217	41.782	54(Note3)	-12.218	PK
	149	H	11490.000	40.162	0.577	40.738	54(Note3)	-13.262	PK
		V	11490.000	41.825	41.249	-32.175	54(Note3)	-86.175	PK
		H	17235.000	37.006	6.236	43.242	54(Note3)	-10.758	PK
		V	17235.000	36.114	6.236	42.350	54(Note3)	-11.65	PK
	157	H	11570.000	39.498	0.968	40.466	54(Note3)	-13.534	PK
		V	11570.000	40.956	0.968	41.924	54(Note3)	-12.076	PK
		H	17355.000	34.829	7.275	42.104	54(Note3)	-11.896	PK
		V	17355.000	35.987	7.275	43.262	54(Note3)	-10.738	PK
	165	H	11650.000	40.125	1.189	41.313	54(Note3)	-12.687	PK
		V	11650.000	39.894	1.189	41.082	54(Note3)	-12.918	PK
		H	17475.000	38.637	7.368	46.005	54(Note3)	-7.995	PK
		V	17475.000	38.888	7.368	46.256	54(Note3)	-7.744	PK

1. Measured Level = Reading Level + Factor.
2. The test frequency range, 9kHz~30MHz, 18GHz~40GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.
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.
4. As the radiated emission was performed, so conducted emission was not tested.

Product Name	:	Wireless Access Point	Power	:	PoE 57V
Module No.	:	APEX0365	Test Site	:	AC-5
Test Mode	:	Mode 8: Transmit by 802.11ac(40MHz) with Beamforming	Test Date	:	2016.12.16

Chain	CH	Antenna Polarity	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measured Level (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
Ant 0+1	38	H	10380.000	41.839	0.053	41.892	54(Note3)	-12.108	PK
		V	10380.000	40.820	0.053	40.873	54(Note3)	-13.127	PK
		H	15570.000	36.740	6.700	43.441	54(Note3)	-10.559	PK
		V	15570.000	36.553	6.700	43.254	54(Note3)	-10.746	PK
	46	H	10460.000	40.718	0.110	40.828	54(Note3)	-13.172	PK
		V	10460.000	41.293	0.110	41.403	54(Note3)	-12.597	PK
		H	15690.000	35.556	7.404	42.960	54(Note3)	-11.04	PK
		V	15690.000	35.539	7.404	42.943	54(Note3)	-11.057	PK
	151	H	11510.000	40.458	0.709	41.168	54(Note3)	-12.832	PK
		V	11510.000	39.942	0.709	40.652	54(Note3)	-13.348	PK
		H	17265.000	37.545	8.026	45.571	54(Note3)	-8.429	PK
		V	17265.000	37.252	8.026	45.278	54(Note3)	-8.722	PK
	159	H	11590.000	39.069	1.179	40.249	54(Note3)	-13.751	PK
		V	11590.000	40.058	1.179	41.238	54(Note3)	-12.762	PK
		H	17385.000	36.696	7.983	44.679	54(Note3)	-9.321	PK
		V	17385.000	36.987	7.983	44.970	54(Note3)	-9.03	PK

1. Measured Level = Reading Level + Factor.
2. The test frequency range, 9kHz~30MHz, 18GHz~40GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.
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.
4. As the radiated emission was performed, so conducted emission was not tested.

Product Name	:	Wireless Access Point	Power	:	PoE 57V
Module No.	:	APEX0365	Test Site	:	AC-5
Test Mode	:	Mode 9: Transmit by 802.11ac80(MHz) with Beamforming	Test Date	:	2016.12.16

Chain	CH	Antenna Polarity	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measured Level (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
Ant 0+1	42	H	10420.000	41.940	-0.329	41.611	54(Note3)	-12.389	PK
		V	10420.000	40.227	-0.329	39.898	54(Note3)	-14.102	PK
		H	15630.000	36.717	6.501	43.218	54(Note3)	-10.782	PK
		V	15630.000	36.309	6.501	42.810	54(Note3)	-11.19	PK
	155	H	11550.000	39.461	0.671	40.131	54(Note3)	-13.869	PK
		V	11550.000	39.807	0.671	40.477	54(Note3)	-13.523	PK
		H	17325.000	36.735	6.242	42.976	54(Note3)	-11.024	PK
		V	17325.000	37.261	6.242	43.502	54(Note3)	-10.498	PK

1. Measured Level = Reading Level + Factor.
2. The test frequency range, 9kHz~30MHz, 18GHz~40GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.
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.
4. As the radiated emission was performed, so conducted emission was not tested.

Product Name	:	Access Point	Power	:	PoE 57V
Module No.	:	APEX0367	Test Site	:	AC-5
Test Mode	:	Mode 1: Transmit by 802.11a	Test Date	:	2016.12.06

Chain	CH	Antenna Polarity	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measured Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Detector
Ant 0+1	36	H	10360.000	43.909	-0.654	43.255	54(Note3)	-10.745	PK
		V	10360.000	44.720	-0.654	44.066	54(Note3)	-10.093	PK
		H	15540.000	39.094	4.813	43.907	54(Note3)	-9.812	PK
		V	15540.000	39.375	4.813	44.188	54(Note3)	-9.934	PK
	44	H	10440.000	42.167	-0.428	41.739	54(Note3)	-12.261	PK
		V	10440.000	42.003	-0.428	41.575	54(Note3)	-11.655	PK
		H	15660.000	37.378	4.968	42.345	54(Note3)	-12.444	PK
		V	15660.000	36.589	4.968	41.556	54(Note3)	-12.425	PK
	48	H	10480.000	42.899	-0.580	42.318	54(Note3)	-11.682	PK
		V	10480.000	41.511	-0.580	40.930	54(Note3)	-11.858	PK
		H	15720.000	37.650	5.557	43.207	54(Note3)	-10.793	PK
		V	15720.000	37.874	5.557	43.431	54(Note3)	-10.569	PK
	149	H	11490.000	41.825	-0.144	41.681	54(Note3)	-12.319	PK
		V	11490.000	41.763	-0.144	41.619	54(Note3)	-11.097	PK
		H	17235.000	37.612	5.291	42.903	54(Note3)	-10.574	PK
		V	17235.000	38.135	5.291	43.426	54(Note3)	-11.858	PK
	157	H	11570.000	40.364	0.379	40.743	54(Note3)	-13.257	PK
		V	11570.000	41.186	0.379	41.565	54(Note3)	-9.324	PK
		H	17355.000	38.755	5.921	44.676	54(Note3)	-9.740	PK
		V	17355.000	38.339	5.921	44.260	54(Note3)	-12.435	PK
	165	H	11650.000	42.067	0.549	42.615	54(Note3)	-11.385	PK
		V	11650.000	41.233	0.549	41.781	54(Note3)	-12.219	PK
		H	17475.000	40.146	6.825	46.971	54(Note3)	-7.029	PK
		V	17475.000	40.990	6.825	47.815	54(Note3)	-6.185	PK

1. Measured Level = Reading Level + Factor.
2. The test frequency range, 9kHz~30MHz, 18GHz~40GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.
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.
4. As the radiated emission was performed, so conducted emission was not tested.

Product Name	:	Access Point	Power	:	PoE 57V
Module No.	:	APEX0367	Test Site	:	AC-5
Test Mode	:	Mode 2: Transmit by 802.11n(20MHz)	Test Date	:	2016.12.06

Chain	CH	Antenna Polarity	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measured Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Detector
Ant 0+1	36	H	10360.000	41.963	-0.654	41.309	54(Note3)	-12.691	PK
		V	10360.000	41.768	-0.654	41.114	54(Note3)	-12.886	PK
		H	15540.000	37.030	4.813	41.843	54(Note3)	-12.157	PK
		V	15540.000	37.710	4.813	42.523	54(Note3)	-11.477	PK
	44	H	10440.000	43.184	-0.428	42.756	54(Note3)	-11.244	PK
		V	10440.000	43.511	-0.428	43.083	54(Note3)	-10.917	PK
		H	15660.000	38.894	4.968	43.861	54(Note3)	-10.139	PK
		V	15660.000	38.348	4.968	43.315	54(Note3)	-10.685	PK
	48	H	10480.000	42.472	-0.580	41.891	54(Note3)	-12.109	PK
		V	10480.000	43.026	-0.580	42.445	54(Note3)	-11.555	PK
		H	15720.000	37.119	5.557	42.676	54(Note3)	-11.324	PK
		V	15720.000	36.296	5.557	41.853	54(Note3)	-12.147	PK
	149	H	11490.000	41.739	-0.144	41.595	54(Note3)	-12.405	PK
		V	11490.000	40.307	-0.144	40.163	54(Note3)	-13.837	PK
		H	17235.000	37.987	5.291	43.278	54(Note3)	-10.722	PK
		V	17235.000	40.307	5.291	45.598	54(Note3)	-8.402	PK
	157	H	11570.000	40.682	0.379	41.061	54(Note3)	-12.939	PK
		V	11570.000	40.303	0.379	40.682	54(Note3)	-13.318	PK
		H	17355.000	38.902	5.921	44.823	54(Note3)	-9.177	PK
		V	17355.000	39.824	5.921	45.745	54(Note3)	-8.255	PK
	165	H	11650.000	40.017	0.549	40.565	54(Note3)	-13.435	PK
		V	11650.000	41.298	0.549	41.846	54(Note3)	-12.154	PK
		H	17475.000	38.801	6.825	45.626	54(Note3)	-8.374	PK
		V	17475.000	39.013	6.825	45.838	54(Note3)	-8.162	PK

1. Measured Level = Reading Level + Factor.
2. The test frequency range, 9kHz~30MHz, 18GHz~40GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.
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.
4. As the radiated emission was performed, so conducted emission was not tested.

Product Name	:	Access Point	Power	:	PoE 57V
Module No.	:	APEX0367	Test Site	:	AC-5
Test Mode	:	Mode 3: Transmit by 802.11n(40MHz)	Test Date	:	2016.12.06

Chain	CH	Antenna Polarity	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measured Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Detector
Ant 0+1	38	H	10380.000	43.039	-0.551	42.487	54(Note3)	-11.513	PK
		V	10380.000	42.739	-0.551	42.187	54(Note3)	-11.813	PK
		H	15570.000	37.966	5.931	43.898	54(Note3)	-10.102	PK
		V	15570.000	37.801	5.931	43.733	54(Note3)	-10.267	PK
	46	H	10460.000	42.346	-0.612	41.734	54(Note3)	-12.266	PK
		V	10460.000	41.938	-0.612	41.326	54(Note3)	-9.886	PK
		H	15690.000	37.323	6.791	44.114	54(Note3)	-10.288	PK
		V	15690.000	36.921	6.791	43.712	54(Note3)	-12.674	PK
	151	H	11510.000	40.068	0.321	40.389	54(Note3)	-13.611	PK
		V	11510.000	41.128	0.321	41.449	54(Note3)	-12.551	PK
		H	17265.000	38.151	7.110	45.261	54(Note3)	-8.739	PK
		V	17265.000	37.401	7.110	44.511	54(Note3)	-9.489	PK
	159	H	11590.000	40.072	1.193	41.266	54(Note3)	-12.734	PK
		V	11590.000	40.218	1.193	41.412	54(Note3)	-12.588	PK
		H	17385.000	38.541	7.024	45.565	54(Note3)	-8.435	PK
		V	17385.000	38.003	7.024	45.027	54(Note3)	-8.973	PK

1. Measured Level = Reading Level + Factor.
2. The test frequency range, 9kHz~30MHz, 18GHz~40GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.
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.
4. As the radiated emission was performed, so conducted emission was not tested.

Product Name	:	Wireless Access Point	Power	:	PoE 57V
Module No.	:	APEX0367	Test Site	:	AC-5
Test Mode	:	Mode 4: Transmit by 802.11ac(20MHz)	Test Date	:	2016.12.06

Chain	CH	Antenna Polarity	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measured Level (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
Ant 0+1	36	H	10360.000	43.301	-0.654	42.647	54(Note3)	-11.353	PK
		V	10360.000	43.291	-0.654	42.637	54(Note3)	-11.363	PK
		H	15540.000	37.558	4.813	42.371	54(Note3)	-11.629	PK
		V	15540.000	39.188	4.813	44.001	54(Note3)	-9.999	PK
	44	H	10440.000	42.148	-0.428	41.720	54(Note3)	-12.280	PK
		V	10440.000	41.280	-0.428	40.852	54(Note3)	-13.148	PK
		H	15660.000	36.502	4.968	41.469	54(Note3)	-12.531	PK
		V	15660.000	37.114	4.968	42.081	54(Note3)	-11.919	PK
	48	H	10480.000	41.671	-0.580	41.090	54(Note3)	-12.910	PK
		V	10480.000	42.204	-0.580	41.623	54(Note3)	-12.377	PK
		H	15720.000	37.816	5.557	43.373	54(Note3)	-10.627	PK
		V	15720.000	36.737	5.557	42.294	54(Note3)	-11.706	PK
	149	H	11490.000	40.876	-0.144	40.732	54(Note3)	-13.268	PK
		V	11490.000	39.712	-0.144	39.568	54(Note3)	-14.432	PK
		H	17235.000	37.726	5.291	43.017	54(Note3)	-10.983	PK
		V	17235.000	38.993	5.291	44.284	54(Note3)	-9.716	PK
	157	H	11570.000	39.967	0.379	40.346	54(Note3)	-13.654	PK
		V	11570.000	40.298	0.379	40.677	54(Note3)	-13.323	PK
		H	17355.000	37.217	5.921	43.138	54(Note3)	-10.862	PK
		V	17355.000	37.853	5.921	43.774	54(Note3)	-10.226	PK
	165	H	11650.000	40.702	0.549	41.250	54(Note3)	-12.750	PK
		V	11650.000	39.802	0.549	40.350	54(Note3)	-8.782	PK
		H	17475.000	38.393	6.825	45.218	54(Note3)	-7.886	PK
		V	17475.000	39.289	6.825	46.114	54(Note3)	-13.650	PK

1. Measured Level = Reading Level + Factor.
2. The test frequency range, 9kHz~30MHz, 18GHz~40GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.
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.
4. As the radiated emission was performed, so conducted emission was not tested.

Product Name	:	Wireless Access Point	Power	:	PoE 57V
Module No.	:	APEX0367	Test Site	:	AC-5
Test Mode	:	Mode 5: Transmit by 802.11ac(40MHz)	Test Date	:	2016.12.06

Chain	CH	Antenna Polarity	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measured Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Detector
Ant 0+1	38	H	10380.000	42.107	-0.551	41.555	54(Note3)	-12.445	PK
		V	10380.000	41.112	-0.551	40.560	54(Note3)	-13.440	PK
		H	15570.000	37.327	5.931	43.259	54(Note3)	-10.741	PK
		V	15570.000	36.319	5.931	42.251	54(Note3)	-11.749	PK
	46	H	10460.000	40.775	-0.612	40.163	54(Note3)	-13.837	PK
		V	10460.000	40.741	-0.612	40.129	54(Note3)	-11.437	PK
		H	15690.000	35.772	6.791	42.563	54(Note3)	-9.614	PK
		V	15690.000	37.595	6.791	44.386	54(Note3)	-13.871	PK
	151	H	11510.000	40.091	0.321	40.412	54(Note3)	-13.588	PK
		V	11510.000	39.885	0.321	40.206	54(Note3)	-13.794	PK
		H	17265.000	36.873	7.110	43.983	54(Note3)	-10.017	PK
		V	17265.000	37.967	7.110	45.077	54(Note3)	-8.923	PK
	159	H	11590.000	39.928	1.193	41.122	54(Note3)	-12.878	PK
		V	11590.000	39.767	1.193	40.961	54(Note3)	-13.039	PK
		H	17385.000	39.210	7.024	46.234	54(Note3)	-7.766	PK
		V	17385.000	37.939	7.024	44.963	54(Note3)	-9.037	PK

1. Measured Level = Reading Level + Factor.
2. The test frequency range, 9kHz~30MHz, 18GHz~40GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.
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.
4. As the radiated emission was performed, so conducted emission was not tested.

Product Name	:	Wireless Access Point	Power	:	PoE 57V
Module No.	:	APEX0367	Test Site	:	AC-5
Test Mode	:	Mode 6: Transmit by 802.11ac80(MHz)	Test Date	:	2016.12.06

Chain	CH	Antenna Polarity	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measured Level (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
Ant 0+1	42	H	10420.000	41.682	-1.174	40.508	54(Note3)	-13.492	PK
		V	10420.000	43.037	-1.174	41.863	54(Note3)	-12.373	PK
		H	15630.000	35.940	5.688	41.627	54(Note3)	-11.536	PK
		V	15630.000	36.777	5.688	42.464	54(Note3)	-12.137	PK
	155	H	11550.000	40.497	0.134	40.631	54(Note3)	-13.369	PK
		V	11550.000	40.087	0.134	40.221	54(Note3)	-13.779	PK
		H	17325.000	37.928	5.545	43.473	54(Note3)	-10.527	PK
		V	17325.000	38.009	5.545	43.554	54(Note3)	-10.446	PK

1. Measured Level = Reading Level + Factor.
2. The test frequency range, 9kHz~30MHz, 18GHz~40GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.
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.
4. As the radiated emission was performed, so conducted emission was not tested.

Product Name	:	Wireless Access Point	Power	:	PoE 57V
Module No.	:	APEX0367	Test Site	:	AC-5
Test Mode	:	Mode 7: Transmit by 802.11ac(20MHz) with Beamforming	Test Date	:	2016.12.16

Chain	CH	Antenna Polarity	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measured Level (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
Ant 0+1	36	H	10360.000	42.920	-0.029	42.891	54(Note3)	-11.109	PK
		V	10360.000	43.280	-0.029	43.251	54(Note3)	-10.749	PK
		H	15540.000	39.274	5.857	45.131	54(Note3)	-8.869	PK
		V	15540.000	39.267	5.857	45.124	54(Note3)	-8.876	PK
	44	H	10440.000	40.405	0.050	40.455	54(Note3)	-13.545	PK
		V	10440.000	40.710	0.050	40.760	54(Note3)	-13.24	PK
		H	15660.000	37.923	5.774	43.696	54(Note3)	-10.304	PK
		V	15660.000	37.655	5.774	43.428	54(Note3)	-10.572	PK
	48	H	10480.000	40.293	0.001	40.293	54(Note3)	-13.707	PK
		V	10480.000	40.073	0.001	40.073	54(Note3)	-13.927	PK
		H	15720.000	36.359	6.217	42.576	54(Note3)	-11.424	PK
		V	15720.000	37.409	6.217	43.626	54(Note3)	-10.374	PK
	149	H	11490.000	40.630	0.577	41.206	54(Note3)	-12.794	PK
		V	11490.000	41.582	0.577	42.158	54(Note3)	-11.842	PK
		H	17235.000	38.408	6.236	44.644	54(Note3)	-9.356	PK
		V	17235.000	37.544	6.236	43.780	54(Note3)	-10.220	PK
	157	H	11570.000	40.970	0.968	41.938	54(Note3)	-12.062	PK
		V	11570.000	40.970	0.968	41.938	54(Note3)	-12.062	PK
		H	17355.000	36.228	7.275	43.503	54(Note3)	-10.497	PK
		V	17355.000	37.034	7.275	44.309	54(Note3)	-9.691	PK
	165	H	11650.000	39.504	1.189	40.692	54(Note3)	-13.308	PK
		V	11650.000	39.563	1.189	40.751	54(Note3)	-13.249	PK
		H	17475.000	38.587	7.368	45.955	54(Note3)	-8.045	PK
		V	17475.000	38.443	7.368	45.811	54(Note3)	-8.189	PK

1. Measured Level = Reading Level + Factor.
2. The test frequency range, 9kHz~30MHz, 18GHz~40GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.
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.
4. As the radiated emission was performed, so conducted emission was not tested.

Product Name	:	Wireless Access Point	Power	:	PoE 57V
Module No.	:	APEX0367	Test Site	:	AC-5
Test Mode	:	Mode 8: Transmit by 802.11ac(40MHz) with Beamforming	Test Date	:	2016.12.16

Chain	CH	Antenna Polarity	Frequency (MHz)	Reading Level (dBµV)	Factor (dB)	Measured Level (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
Ant 0+1	38	H	10380.000	41.024	0.053	41.077	54(Note3)	-12.923	PK
		V	10380.000	40.437	0.053	40.490	54(Note3)	-13.51	PK
		H	15570.000	36.935	6.700	43.636	54(Note3)	-10.364	PK
		V	15570.000	37.788	6.700	44.489	54(Note3)	-9.511	PK
	46	H	10460.000	39.763	0.110	39.873	54(Note3)	-14.127	PK
		V	10460.000	40.552	0.110	40.662	54(Note3)	-13.338	PK
		H	15690.000	35.757	7.404	43.161	54(Note3)	-10.839	PK
		V	15690.000	37.016	7.404	44.420	54(Note3)	-9.580	PK
	151	H	11510.000	40.513	0.709	41.223	54(Note3)	-12.777	PK
		V	11510.000	40.540	0.709	41.250	54(Note3)	-12.75	PK
		H	17265.000	37.556	8.026	45.582	54(Note3)	-8.418	PK
		V	17265.000	37.848	8.026	45.874	54(Note3)	-8.126	PK
	159	H	11650.000	39.616	1.189	40.804	54(Note3)	-13.196	PK
		V	11590.000	40.298	1.179	41.478	54(Note3)	-12.522	PK
		H	17475.000	38.629	7.368	45.997	54(Note3)	-8.003	PK
		V	17385.000	36.584	7.983	44.567	54(Note3)	-9.433	PK

1. Measured Level = Reading Level + Factor.
2. The test frequency range, 9kHz~30MHz, 18GHz~40GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.
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.
4. As the radiated emission was performed, so conducted emission was not tested.

Product Name	:	Wireless Access Point	Power	:	PoE 57V
Module No.	:	APEX0367	Test Site	:	AC-5
Test Mode	:	Mode 9: Transmit by 802.11ac80(MHz) with Beamforming	Test Date	:	2016.12.16

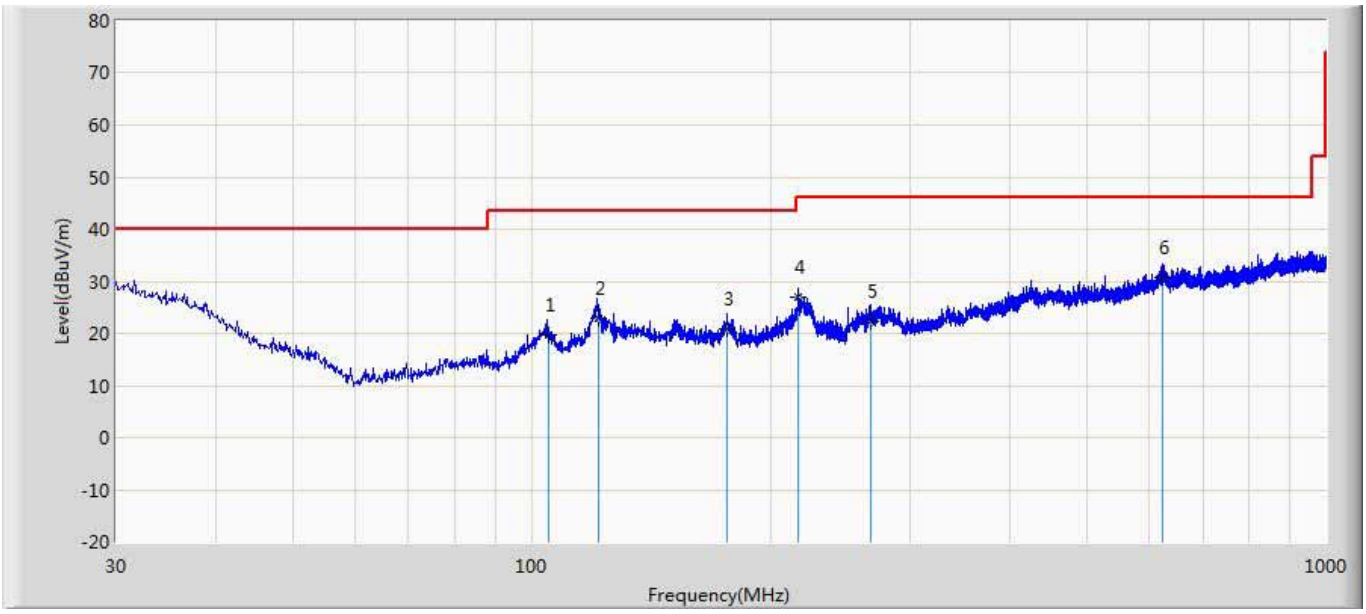
Chain	CH	Antenna Polarity	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measured Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Detector
Ant 0+1	42	H	10420.000	39.820	-0.329	39.491	54(Note3)	-14.509	PK
		V	10420.000	40.891	-0.329	40.562	54(Note3)	-13.438	PK
		H	15630.000	36.164	6.501	42.665	54(Note3)	-11.335	PK
		V	15630.000	35.730	6.501	42.231	54(Note3)	-11.769	PK
	155	H	11550.000	41.404	0.671	42.074	54(Note3)	-11.926	PK
		V	11550.000	39.567	0.671	40.237	54(Note3)	-13.763	PK
		H	17325.000	36.036	6.242	42.277	54(Note3)	-11.723	PK
		V	17325.000	36.049	6.242	42.290	54(Note3)	-11.710	PK

1. Measured Level = Reading Level + Factor.
2. The test frequency range, 9kHz~30MHz, 18GHz~40GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.
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.
4. As the radiated emission was performed, so conducted emission was not tested.

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 (APEX0365)	Power: PoE 57V
Note: Mode 1	

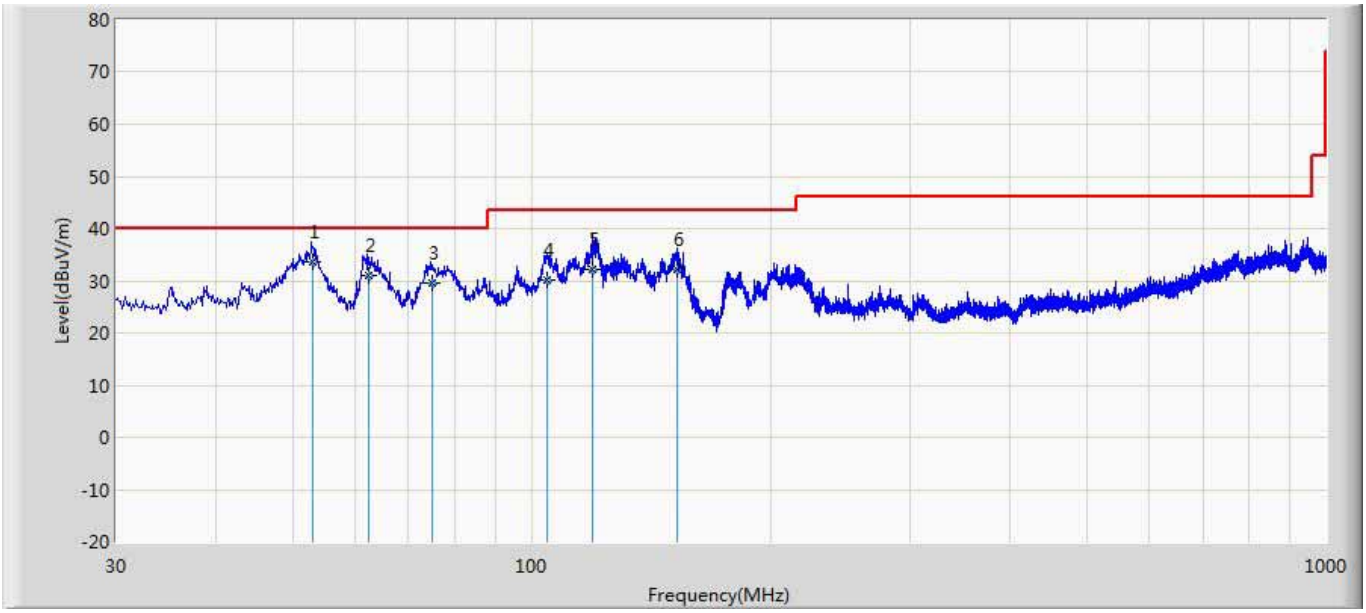


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		104.873	19.711	30.172	-23.789	43.500	11.587	1.110	23.158	200	140	QP
2		121.363	23.038	32.530	-20.462	43.500	12.418	1.190	23.100	100	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

Note:

1. " * ", 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 (APEX0365)	Power: PoE 57V
Note: Mode 1	



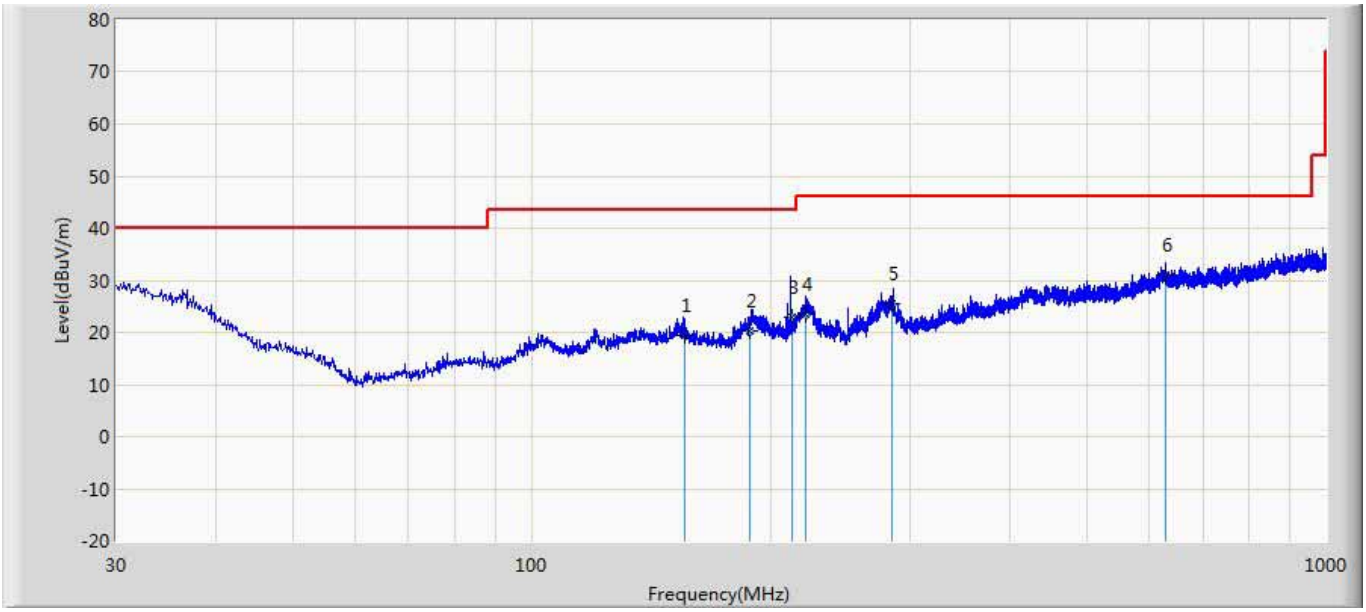
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1	*	53.117	33.524	48.083	-6.476	40.000	7.670	0.790	23.018	100	135	QP
2		62.500	31.005	46.750	-8.995	40.000	6.450	0.850	23.045	100	140	QP
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

Note:

1. " * ", 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: Wireless Access Point	Power: PoE 57V
Note: Mode 1	

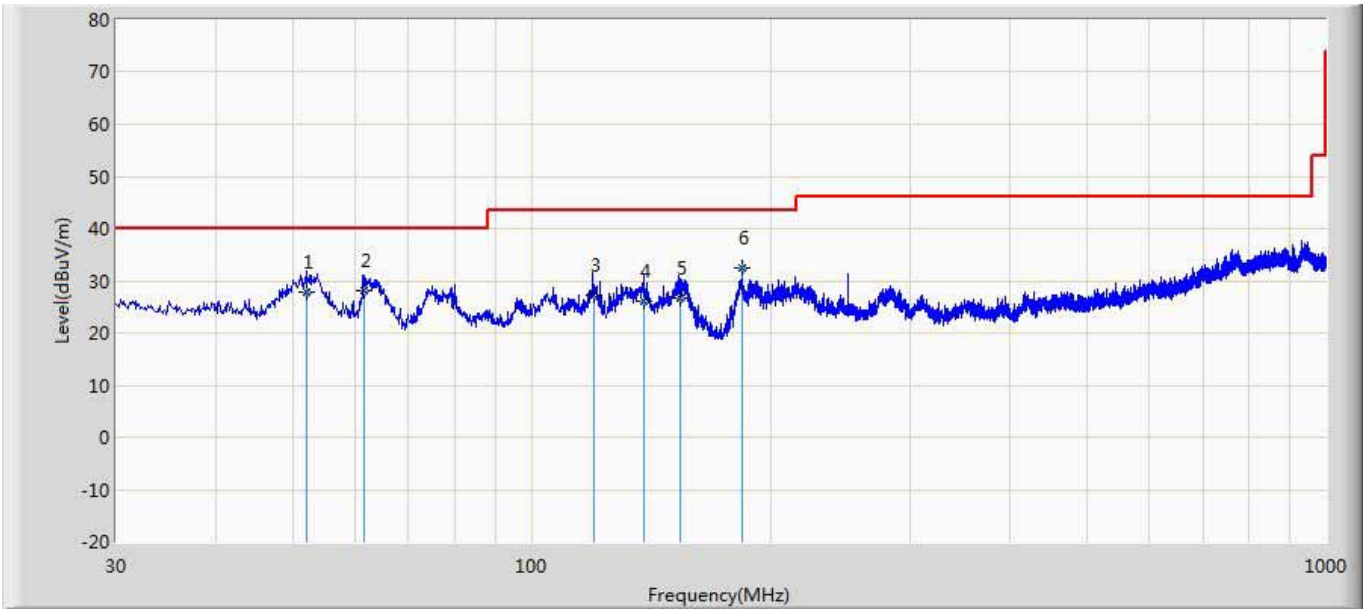


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		155.653	19.376	30.881	-24.124	43.500	10.161	1.350	23.015	100	331	QP
2		188.653	20.343	32.775	-23.157	43.500	9.213	1.490	23.136	100	154	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: Wireless 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.

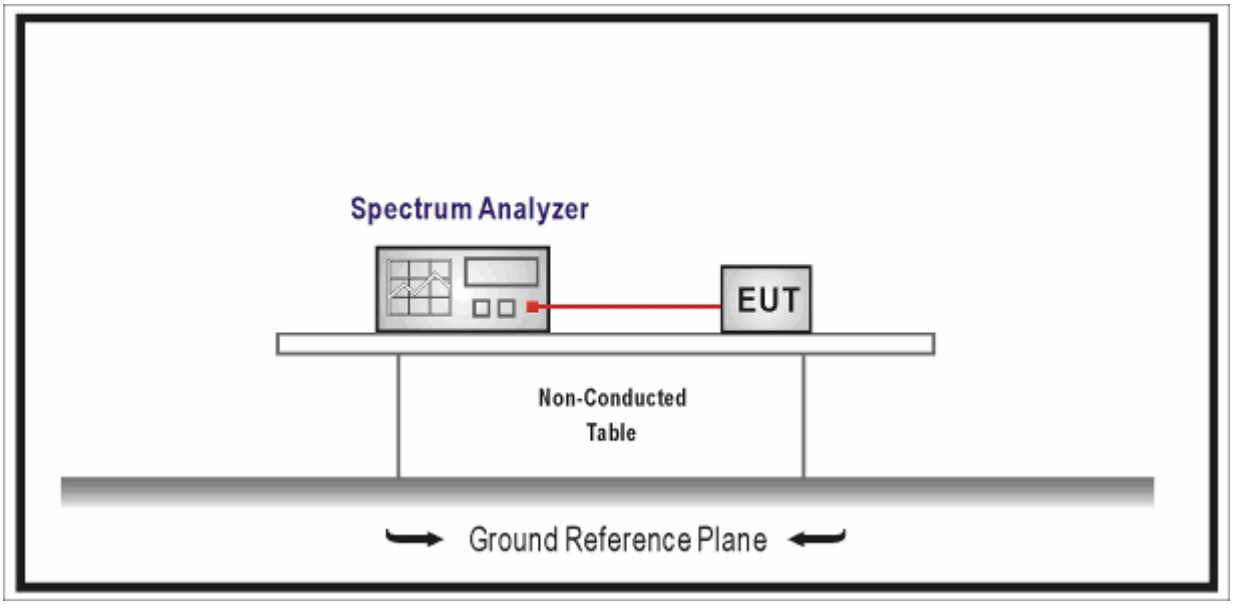
2: Measurement Level = Reading Level + Factor (Probe+Cable-Amp).

5. Emission bandwidth and occupied bandwidth

5.1. Test Equipment

Emission bandwidth and occupied bandwidth / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2016.02.04	2017.02.04
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2016.04.09	2017.04.09
MXA Signal Anlyzer	Keysight	N9020A	MY56060147	2016.04.09	2017.04.09
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2016.04.10	2017.04.10
Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

5.2. Test Setup



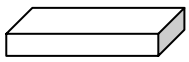
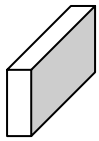
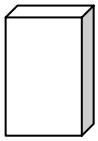
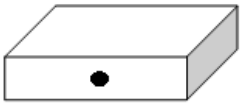
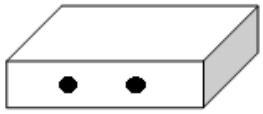
5.3. Limit

N/A

5.4. Test Procedure

Test Method			
	References Rule	Chapter	Description
☐	ANSI C63.10	12.4	Emission bandwidth and occupied bandwidth
	☐ ANSI C63.10	12.4.1	Emission bandwidth (26dB)
	☐ ANSI C63.10	12.4.2	Occupied bandwidth (99%)
☒	FCC KDB 789033 D02v01r03	C	Bandwidth Measurement
	☒ FCC KDB 789033 D02v01r03	C.1	Emission Bandwidth (26dB)
	☐ FCC KDB 789033 D02v01r03	C.2	Minimum Emission Bandwidth for the band 5.725-5.85 GHz (6dB)
☒	FCC KDB 789033 D02v01r03	D	99 Percent Occupied Bandwidth

5.5. EUT test Axis definition

<table>
<tr><td>Item</td><td colspan="4">Occupied bandwidth</td></tr>
<tr><td rowspan="5">Device Category</td><td>☒</td><td colspan="3">Outdoor AP</td></tr>
<tr><td>☐</td><td colspan="3">Indoor AP</td></tr>
<tr><td>☐</td><td colspan="3">Fixed point-to-point AP</td></tr>
<tr><td>☒</td><td colspan="3">Outdoor fixed point-to-multipoint AP</td></tr>
<tr><td>☐</td><td colspan="3">Client</td></tr>
<tr><td>Test mode</td><td colspan="4">Mode 1-9</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 1</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☒</td><td>Chain 1</td><td colspan="2">Chain 2</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☐</td><td>Chain 1</td><td>Chain 2</td><td>Chain 3</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
</table>

5.6. Test Result

Product Name	:	Access Point	Power	:	PoE 57V
Model No.	:	APEX0365	Test Site	:	TR8
Test Mode	:	Mode 1~9	Test Date	:	2016.12.12

Mode 1: Transmit by 802.11a

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant0(Worst Data)	Ant0(Worst Data)	Ant0(Worst Data)	
36	5180	19.27	16.447	5170.37	Pass
44	5220	18.64	16.430	N/A	Pass
48	5240	18.94	16.444	5249.47	Pass

Mode 2: Transmit by 802.11n(20MHz)

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant0(Worst Data)	Ant0(Worst Data)	Ant0(Worst Data)	
36	5180	20.02	17.642	5169.99	Pass
44	5220	20.15	17.648	N/A	Pass
48	5240	19.17	17.648	5249.59	Pass

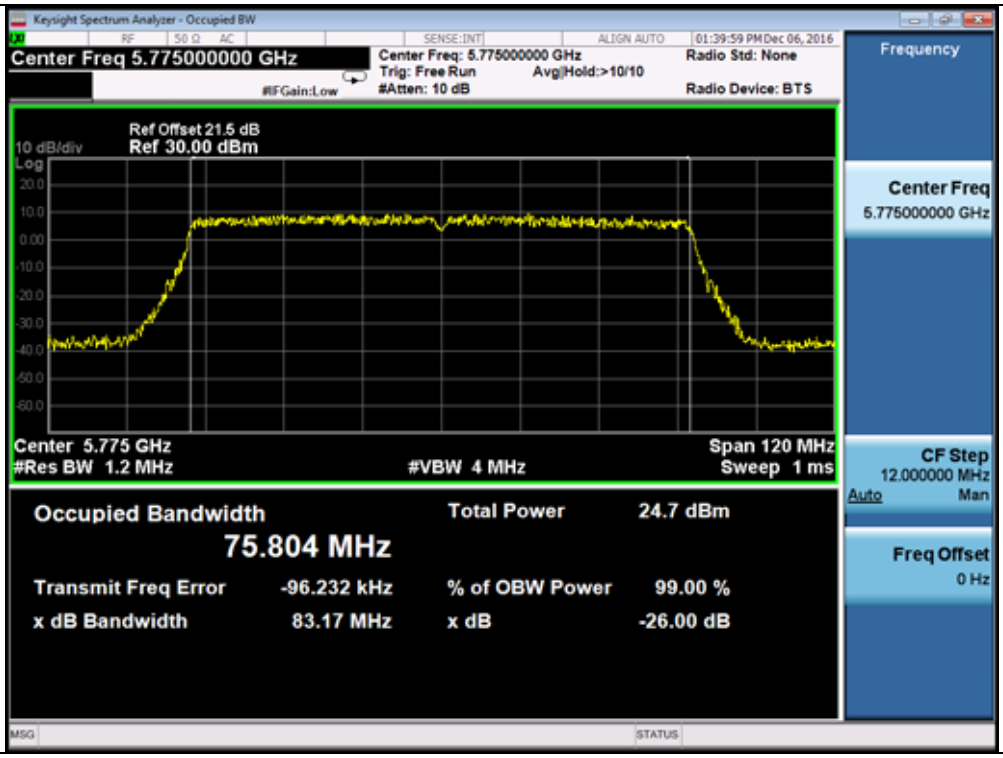
Mode 3: Transmit by 802.11n(40MHz)

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant0(Worst Data)	Ant0(Worst Data)	Ant0(Worst Data)	
38	5190	39.23	36.055	5170.39	Pass
46	5230	39.68	35.971	5249.84	Pass

Mode 4: Transmit by 802.11ac(20MHz)

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant0(Worst Data)	Ant0(Worst Data)	Ant0(Worst Data)	
36	5180	19.72	17.656	5170.14	Pass
44	5220	19.87	17.609	N/A	Pass
48	5240	19.92	17.642	5249.96	Pass

Mode 5: Transmit by 802.11ac(40MHz)					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant0(Worst Data)	Ant0(Worst Data)	Ant0(Worst Data)	
38	5190	39.35	36.029	5170.33	Pass
46	5230	39.30	35.895	5249.65	Pass
Mode 6: Transmit by 802.11ac(80MHz)					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant0(Worst Data)	Ant0(Worst Data)	Ant0(Worst Data)	
42	5210	79.73	75.744	5168.49/5249.87	Pass
The worst case of Occupied Bandwidth as below:					
Mode 7: Transmit by 802.11ac(20MHz) with Beamforming					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant0(Worst Data)	Ant0(Worst Data)	Ant0(Worst Data)	
36	5180	20.44	17.631	5169.78	Pass
44	5220	20.25	17.639	N/A	Pass
48	5240	19.80	17.675	5249.90	Pass
Mode 8: Transmit by 802.11ac(40MHz) with Beamforming					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant0(Worst Data)	Ant0(Worst Data)	Ant0(Worst Data)	
38	5190	39.69	36.026	5170.16	Pass
46	5230	39.48	35.994	5249.74	Pass
Mode 9: Transmit by 802.11ac(80MHz) with Beamforming					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant0(Worst Data)	Ant0(Worst Data)	Ant0(Worst Data)	
42	5210	79.90	75.711	5170.05/5249.95	Pass
The worst case of Occupied Bandwidth as below:					

Mode 6: CH155 (5775MHz) Ant 0


Product Name	:	Access Point	Power	:	PoE 57V
Module No.	:	APEX0367	Test Site	:	TR-8
Test Mode	:	Mode 1~9	Test Date	:	2016.12.06

Mode 1: Transmit by 802.11a

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant0(Worst Data)	Ant0(Worst Data)	Ant0(Worst Data)	
36	5180	18.95	16.412	5170.525	Pass
44	5220	18.78	16.435	N/A	Pass
48	5240	18.83	16.465	5249.415	Pass

Mode 2: Transmit by 802.11n(20MHz)

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant0(Worst Data)	Ant0(Worst Data)	Ant0(Worst Data)	
36	5180	20.29	17.618	5169.855	Pass
44	5220	20.10	17.651	N/A	Pass
48	5240	19.08	17.654	5249.540	Pass

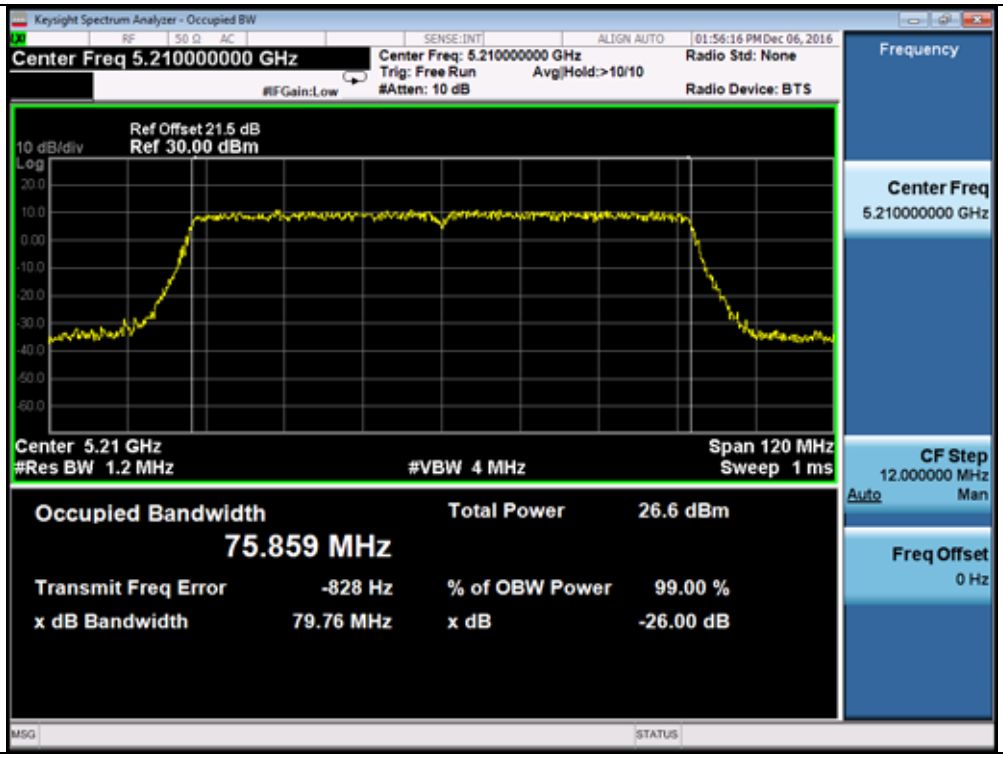
Mode 3: Transmit by 802.11n(40MHz)

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant0(Worst Data)	Ant0(Worst Data)	Ant0(Worst Data)	
38	5190	39.48	36.053	5170.26	Pass
46	5230	39.47	35.979	5249.735	Pass

Mode 4: Transmit by 802.11ac(20MHz)

Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant0(Worst Data)	Ant0(Worst Data)	Ant0(Worst Data)	
36	5180	20.08	17.647	5169.96	Pass
44	5220	20.23	17.637	N/A	Pass
48	5240	19.99	17.658	5249.995	Pass

Mode 5: Transmit by 802.11ac(40MHz)					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant0(Worst Data)	Ant0(Worst Data)	Ant0(Worst Data)	
38	5190	39.58	36.049	5170.21	Pass
46	5230	39.68	35.957	5249.84	Pass
Mode 6: Transmit by 802.11ac(80MHz)					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant0(Worst Data)	Ant0(Worst Data)	Ant0(Worst Data)	
42	5210	79.76	75.859	5170.12/5249.88	Pass
Mode 7: Transmit by 802.11ac(20MHz) with Beamforming					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant0(Worst Data)	Ant0(Worst Data)	Ant0(Worst Data)	
36	5180	20.36	17.635	5169.82	Pass
44	5220	20.28	17.636	N/A	Pass
48	5240	19.39	17.639	5249.70	Pass
Mode 8: Transmit by 802.11ac(40MHz) with Beamforming					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant0(Worst Data)	Ant0(Worst Data)	Ant0(Worst Data)	
38	5190	39.13	35.920	5170.44	Pass
46	5230	39.84	36.080	5249.92	Pass
Mode 9: Transmit by 802.11ac(80MHz) with Beamforming					
Channel No.	Frequency (MHz)	26dB Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Lower/Higher Frequency (MHz)	Result
		Ant0(Worst Data)	Ant0(Worst Data)	Ant0(Worst Data)	
42	5210	79.59	75.691	5170.21/5249.80	Pass
The worst case of Occupied Bandwidth as below:					

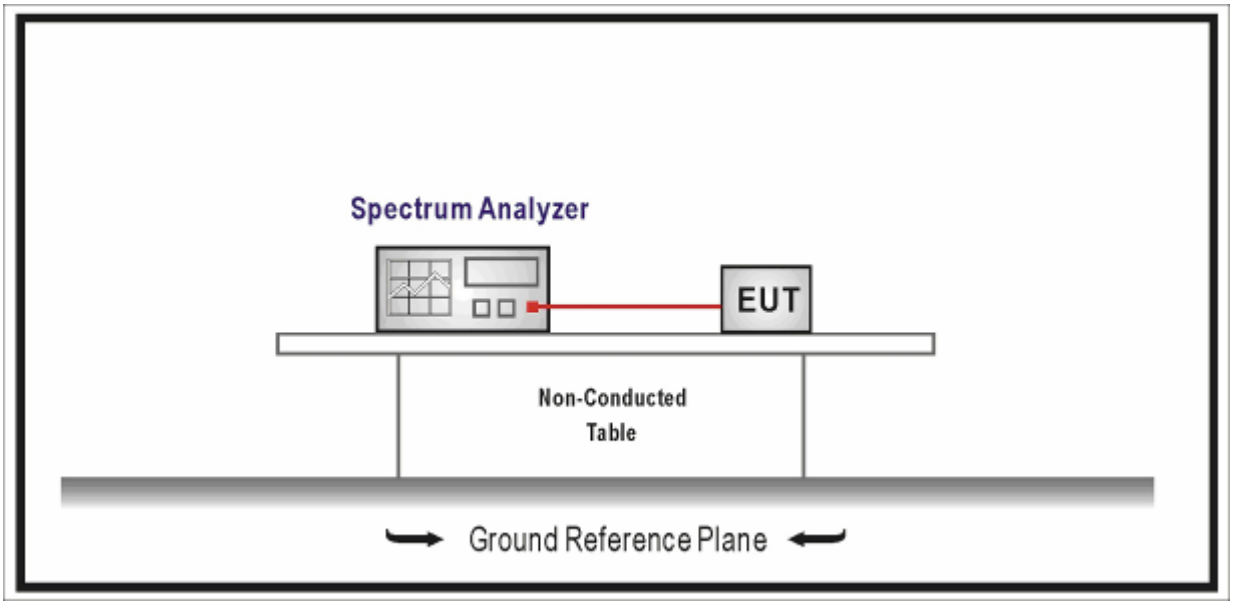
Mode 6: CH42 (5210MHz) Ant 0


6. 6dB bandwidth

6.1. Test Equipment

Emission bandwidth and 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.					

6.2. Test Setup



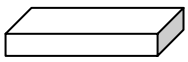
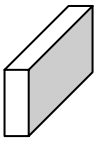
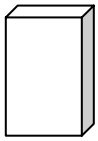
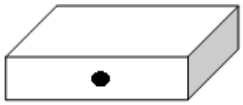
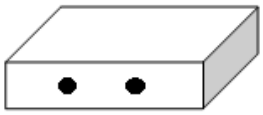
6.3. Limit

>500kHz

6.4. Test Procedure

Test Method			
	References Rule	Chapter	Description
☐	ANSI C63.10	12.4	Emission bandwidth and occupied bandwidth
	☐ ANSI C63.10	12.4.1	Emission bandwidth (26dB)
	☐ ANSI C63.10	12.4.2	Occupied bandwidth (99%)
☒	FCC KDB 789033 D02v01r03	C	Bandwidth Measurement
	☐ FCC KDB 789033 D02v01r03	C.1	Emission Bandwidth (26dB)
	☒ FCC KDB 789033 D02v01r03	C.2	Minimum Emission Bandwidth for the band 5.725-5.85 GHz (6dB)
☐	FCC KDB 789033 D02v01r03	D	99 Percent Occupied Bandwidth

6.5. EUT test Axis definition

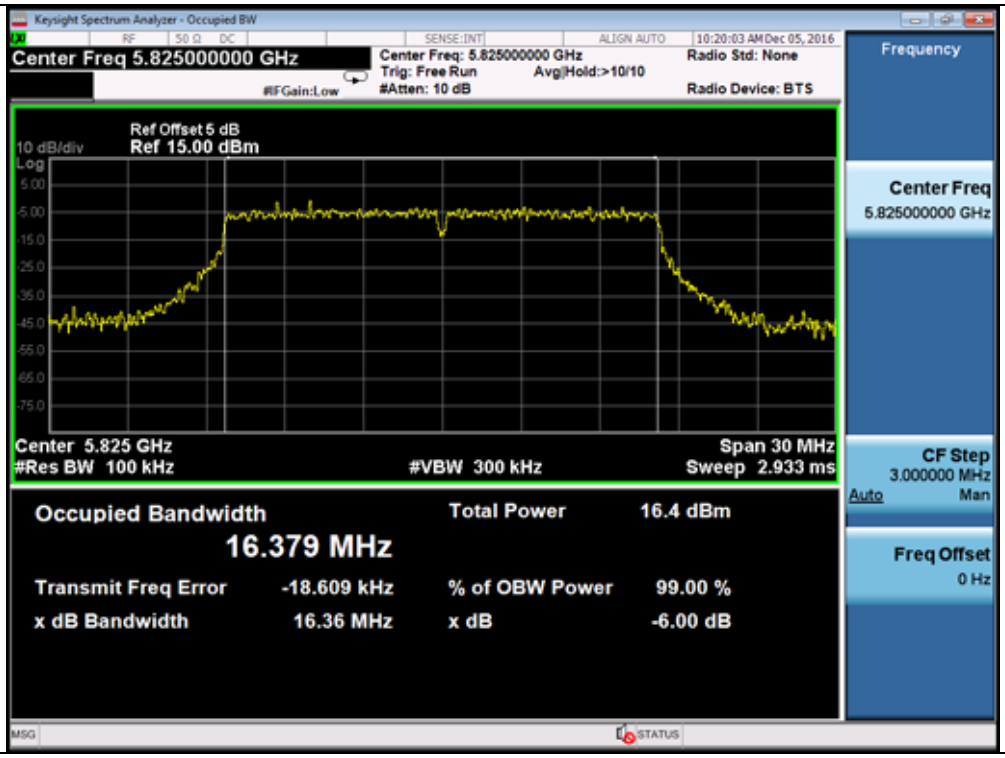
<table>
<tr><td>Item</td><td colspan="4">6dB bandwidth</td></tr>
<tr><td rowspan="5">Device Category</td><td>☒</td><td colspan="3">Outdoor AP</td></tr>
<tr><td>☐</td><td colspan="3">Indoor AP</td></tr>
<tr><td>☐</td><td colspan="3">Fixed point-to-point AP</td></tr>
<tr><td>☒</td><td colspan="3">Outdoor fixed point-to-multipoint AP</td></tr>
<tr><td>☐</td><td colspan="3">Client</td></tr>
<tr><td>Test mode</td><td colspan="4">Mode 1-9</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 1</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☒</td><td>Chain 1</td><td colspan="2">Chain 2</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☐</td><td>Chain 1</td><td>Chain 2</td><td>Chain 3</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
</table>

6.6. Test Result

Product Name	:	Access Point	Power	:	PoE 57V
Model No.	:	APEX0365	Test Site	:	TR8
Test Mode	:	Mode 1~9	Test Date	:	2016.12.12

Mode 1: Transmit by 802.11a				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant0 (Worst Data)		
149	5745	16.39	>500	Pass
157	5785	16.50		Pass
165	5825	16.36		Pass
Mode 2: Transmit by 802.11n(20MHz)				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant0 (Worst Data)		
149	5745	17.69	>500	Pass
157	5785	17.71		Pass
165	5825	17.71		Pass
Mode 3: Transmit by 802.11n(40MHz)				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant0 (Worst Data)		
151	5755	36.03	>500	Pass
159	5795	36.39		Pass
Mode 4: Transmit by 802.11ac(20MHz)				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant0 (Worst Data)		
149	5745	17.68	>500	Pass
157	5785	17.70		Pass
165	5825	17.67		Pass

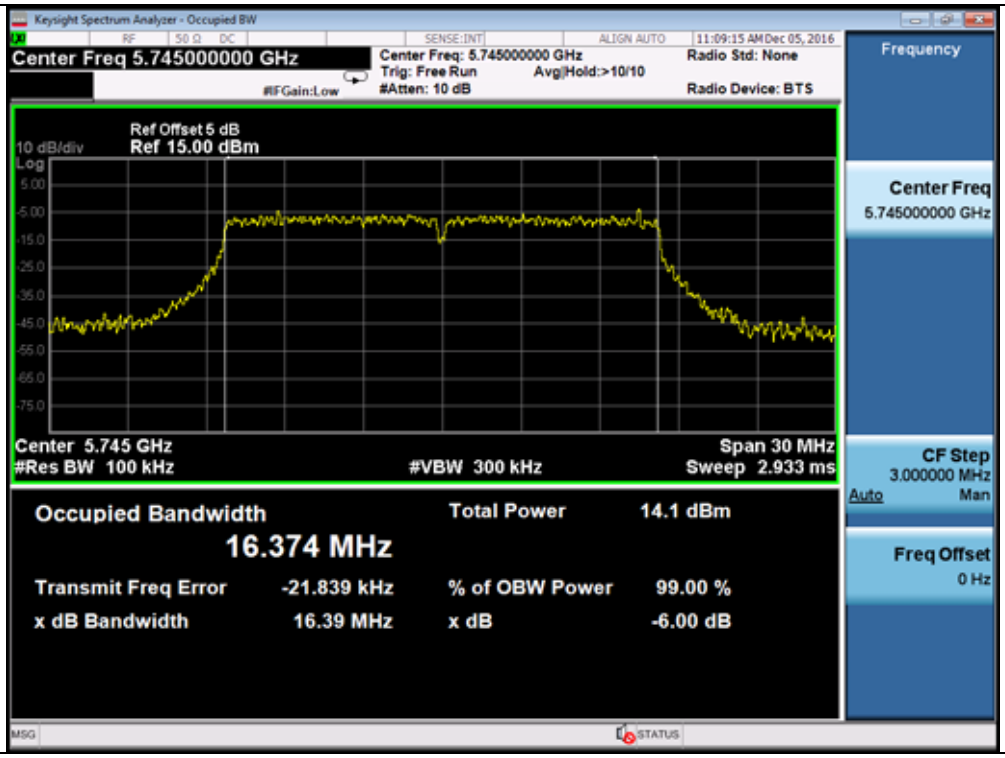
Mode 5: Transmit by 802.11ac(40MHz)				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant0 (Worst Data)		
151	5755	33.45	>500	Pass
159	5795	35.33		Pass
Mode 6: Transmit by 802.11ac(80MHz)				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant0 (Worst Data)		
155	5775	73.40	>500	Pass
The worst case of 6dB Bandwidth as below:				
Mode 7: Transmit by 802.11ac(20MHz) with Beamforming				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant0 (Worst Data)		
149	5745	17.70	>500	Pass
157	5785	17.61		Pass
165	5825	17.63		Pass
Mode 8: Transmit by 802.11ac(40MHz) with Beamforming				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant0 (Worst Data)		
151	5755	35.70	>500	Pass
159	5795	35.42		Pass
Mode 9: Transmit by 802.11ac(80MHz) with Beamforming				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant0 (Worst Data)		
155	5775	75.96	>500	Pass
Note:The worst case of Occupied Bandwidth as below:				

Mode 1: CH165 (5825MHz) Ant 0


Product Name	:	Access Point	Power	:	PoE 57V
Module No.	:	APEX0367	Test Site	:	TR-8
Test Mode	:	Mode 1~9	Test Date	:	2016.12.06

Mode 1: Transmit by 802.11a				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant0 (Worst Data)		
149	5745	16.39	>500	Pass
157	5785	16.40		Pass
165	5825	16.53		Pass
Mode 2: Transmit by 802.11n(20MHz)				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant0 (Worst Data)		
149	5745	17.63	>500	Pass
157	5785	17.63		Pass
165	5825	17.72		Pass
Mode 3: Transmit by 802.11n(40MHz)				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant0 (Worst Data)		
151	5755	34.72	>500	Pass
159	5795	35.31		Pass
Mode 4: Transmit by 802.11ac(20MHz)				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant0 (Worst Data)		
149	5745	17.62	>500	Pass
157	5785	17.76		Pass
165	5825	17.63		Pass

Mode 5: Transmit by 802.11ac(40MHz)				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant0 (Worst Data)		
151	5755	35.92	>500	Pass
159	5795	36.35		Pass
Mode 6: Transmit by 802.11ac(80MHz)				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant0 (Worst Data)		
155	5775	76.31	>500	Pass
The worst case of 6dB Bandwidth as below:				
Mode 7: Transmit by 802.11ac(20MHz) with Beamforming				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant0 (Worst Data)		
149	5745	17.62	>500	Pass
157	5785	17.60		Pass
165	5825	17.63		Pass
Mode 8: Transmit by 802.11ac(40MHz) with Beamforming				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant0 (Worst Data)		
151	5755	35.44	>500	Pass
159	5795	35.66		Pass
Mode 9: Transmit by 802.11ac(80MHz) with Beamforming				
Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (kHz)	Result
		Ant0 (Worst Data)		
155	5775	76.13	>500	Pass
Note:The worst case of Occupied Bandwidth as below:				

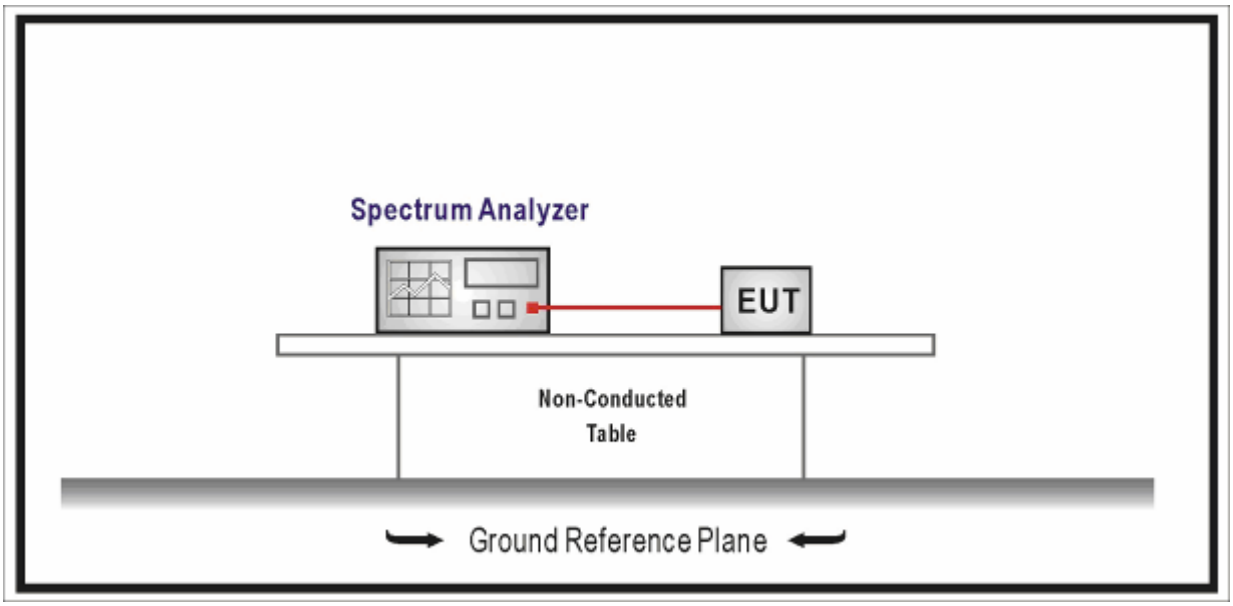
Mode 1: CH149 (5745MHz) Ant 0


7. Power Output

7.1. Test Equipment

Power Output / 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	2016.10.14	2017.10.13
Power Sensor	Anritsu	MA2411B	0846014	2016.10.14	2017.10.13
Temperature/Humidity Meter	zhicheng	ZC1-2	TR8-TH	2016.04.10	2017.04.09
Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

7.2. Test Setup



7.3. Limit

Fundamental emission output power Limit		
☒	For the band 5.15-5.25 GHz	
	☒	Outdoor access point: the maximum conducted output power shall not exceed 1 W. If G_{TX} > 6dBi, then Pout ≤ 30 - (G_{TX} - 6) and ≤125mW at any angle above 30 degrees
	☐	Indoor access point: the maximum conducted output power shall not exceed 1 W. If G_{TX} > 6dBi, then Pout ≤ 30 - (G_{TX} - 6)
	☐	Fixed point-to-point access points: the maximum conducted output power shall not exceed 1 W. If G_{TX} > 23dBi, then Pout ≤ 30 - (G_{TX} - 23)
	☐	Mobile and portable client devices: the maximum conducted output power shall not exceed 250mW. If G_{TX} > 6dBi, then Pout ≤ 24 - (G_{TX} - 6)
☐	For the band 5.25-5.35 GHz:	
	☐	the maximum conducted output power shall not exceed 250mW or 11dBm+10 Log B, where B is the 26dB emission bandwidth in MHz. If G_{TX} > 6dBi, then Pout ≤ (The lesser of 24 or 11dBm+10 Log B) - (GTX - 6)
☐	For the 5.47-5.725 GHz:	
	☐	the maximum conducted output power shall not exceed 250mW or 11dBm+10 Log B, where B is the 26dB emission bandwidth in MHz. If G_{TX} > 6dBi, then Pout ≤ (The lesser of 24 or 11dBm+10 Log B) - (G_{TX} - 6)
☒	For the band 5.725-5.85 GHz:	
	☒	Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If G_{TX} > 6 dBi, then P_{Out} = 30 – (G_{TX} – 6)
	☐	Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W
Note 1 : G_{TX} directional gain of transmitting antennas. Note 2 : P_{out} is maximum peak conducted output power .		

7.4. Test Procedure

Fundamental emission output power Test Method				
	References Rule		Chapter	Description
☒	ANSI C63.10		12.3	Maximum conducted output power
	☒	ANSI C63.10	12.3.2	Maximum conducted output power measurement using a spectrum analyzer (SA) or EMI receiver
		☐ ANSI C63.10	12.3.2.2	Method SA-1
		☐ ANSI C63.10	12.3.2.3	Method SA-1A (alternative)
		☒ ANSI C63.10	12.3.2.4	Method SA-2
		☐ ANSI C63.10	12.3.2.5	Method SA-2A (alternative)
		☐ ANSI C63.10	12.3.2.6	Method SA-3
		☐ ANSI C63.10	12.3.2.7	Method SA-3A (alternative)
	☒	ANSI C63.10	12.3.3	Maximum conducted output power using a power meter
		☐ ANSI C63.10	12.3.3.1	Method PM
		☒ ANSI C63.10	12.3.3.2	Method PM-G
☒	KDB 789033		H	Measurement of emission at elevation angle higher than 30° from horizon
	☒	KDB 789033	1	For fixed infrastructure, not electrically or mechanically steerable beam antenna
		☒ KDB 789033	a)	elevation plane radiation pattern is available:
		☐ KDB 789033	b)	elevation plane radiation pattern is not available
	☐	KDB 789033	2	For All Other Types of Antenna