# 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-P06V02 |
| Report Version | : | V1.1 |

# Test Report Certification

Issued Date : Jan. 18, 2017
Report No. : 16B2199R-RF-US-P06V02

| | | |
|---|---|---|
| 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 |
| Test Voltage | | PoE 57V |
| Brand Name | : | aruba |
| Applicable Standard | : | FCC CFR Title 47 Part 15 Subpart C<br>ANSI C63.4:2014; ANSI C63.10:2013;<br>KDB 558074 D01v03r05<br>KDB 662911 D01 Multiple Transmitter Output v02r01<br>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<br>No.99 Hongye Rd., Suzhou Industrial Park, Suzhou, 215006, Jiangsu, China<br>TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098<br>FCC Registration Number: 800392; IC Lab Code: 4075B |

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# TABLE OF CONTENTS


| Description | | Page |
|---|---|---|
| 1. | General Information | 6 |
| 1.1. | EUT Description | 6 |
| 1.2. | Channel List: | 6 |
| 1.3. | Test Channel: | 7 |
| 1.4. | Antenna information | 7 |
| 1.5. | Mode of Operation | 9 |
| 1.6. | Tested System Details | 9 |
| 1.7. | Configuration of Tested System | 10 |
| 2. | Technical Test | 12 |
| 2.1. | Summary of Test Result | 12 |
| 2.2. | Power setting parameter | 14 |
| 2.3. | Power vs Data Rate | 15 |
| 2.4. | Test Environment | 16 |
| 2.5. | Measurement Uncertainty | 16 |
| 3. | AC Power Line Conducted Emission | 17 |
| 3.1. | Test Equipment | 17 |
| 3.2. | Test Setup | 17 |
| 3.3. | Limit | 18 |
| 3.4. | Test Procedure | 18 |
| 3.5. | Test Result | 19 |
| 4. | Emissions in restricted frequency bands | 25 |
| 4.1. | Test Equipment | 25 |
| 4.2. | Test Setup | 26 |
| 4.3. | Limit | 27 |
| 4.4. | Test Procedure | 30 |
| 4.5. | EUT test Axis definition | 31 |
| 4.6. | Test Result | 32 |
| 5. | Emissions in non-restricted frequency bands | 44 |
| 5.1. | Test Equipment | 44 |
| 5.2. | Test Setup | 44 |
| 5.3. | Limit | 45 |
| 5.4. | Test Procedure | 46 |
| 5.5. | EUT test Axis definition | 47 |
| 5.6. | Test Result | 48 |
| 6. | Radiated Emission Band Edge | 52 |
| 6.1. | Test Equipment | 52 |
| 6.2. | Test Setup | 53 |

6.3. Limit ..... 53
6.4. Test Procedure ..... 54
6.5. EUT test definition ..... 55
6.6. Duty Cycle ..... 56
6.7. Test Result ..... 58
7. Occupied Bandwidth ..... 138
7.1. Test Equipment ..... 138
7.2. Test Setup ..... 138
7.3. Limit ..... 139
7.4. Test Procedure ..... 139
7.5. EUT test definition ..... 140
7.6. Test Result ..... 141
8. Fundamental emission output power ..... 143
8.1. Test Equipment ..... 143
8.2. Test Setup ..... 143
8.3. Limit ..... 144
8.4. Test Procedure ..... 145
8.5. EUT test definition ..... 147
8.6. Test Result ..... 148
9. Power Spectral Density ..... 150
9.1. Test Equipment ..... 150
9.2. Test Setup ..... 150
9.3. Limit ..... 150
9.4. Test Procedure ..... 151
9.5. EUT test definition ..... 153
9.6. Test Result ..... 154
10. Antenna Requirement ..... 158
10.1. Limit ..... 158
10.2. Antenna Connector Construction ..... 158

## History of This Test Report

| REPORT NO. | VERSION | DESCRIPTION | ISSUED DATE |
|---|---|---|---|
| 16B2199R-RF-US-P06V02 | V1.0 | Initial Issued Report | Jan. 11, 2017 |
| 16B2199R-RF-US-P06V02 | V1.1 | (1) Add new channel data with band-edge and power of 802.11n(40MHz).<br>(2) Update the data rate. | 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 |
| Frequency Range | For 2.4GHz Band<br>802.11b/g/n(20MHz): 2412~2462MHz<br>802.11n(40MHz): 2422~2452MHz |
| Channel Number | For 2.4GHz Band<br>802.11b/g/n(20MHz): 11 802.11n(40MHz): 7 |
| Type of Modulation | 802.11b: DSSS |
| | 802.11g: OFDM |
| Data Rate | 802.11g: 6/9/12/18/24/36/48/54 Mbps |
| | 802.11b: 1/2/5.5/11 Mbps |
| | 802.11n: up to 300 Mbps |
| Channel Control | Auto |
| Extreme Temperature | -40℃-50℃ |

## 1.2. Channel List:

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

## 1.3. Test Channel:

| 802.11b/g/n(20MHz) Working Frequency of Each Channel: | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Frequency | Channel | Frequency | Channel | Frequency | Channel | Frequency |
| 01 | 2412 MHz | 06 | 2437MHz | 11 | 2462 MHz | N/A | N/A |
| 802.11n(40MHz) Working Frequency of Each Channel: | | | | | | | |
| Channel | Frequency | Channel | Frequency | Channel | Frequency | Channel | Frequency |
| 03 | 2422 MHz | 06 | 2437 MHz | 09 | 2452 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 | | | | | |
| Antenna Gain #1 | 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 | 6.3dBi | | | | | |
| Antenna Gain #1 | 6.3dBi | | | | | |

## 1.5. Mode of Operation

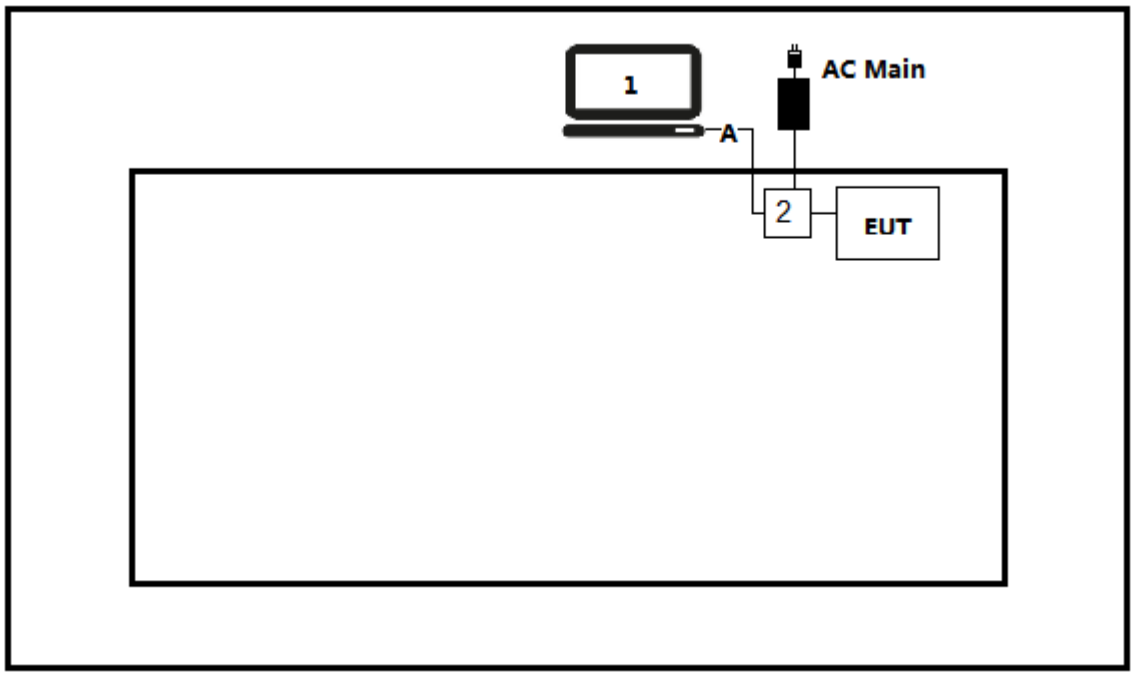
| Test Modes List |
|---|
| Mode 1: Transmit by 802.11b |
| Mode 2: Transmit by 802.11g |
| Mode 3: Transmit by 802.11n(20MHz) |
| Mode 4: Transmit by 802.11n(40MHz) |

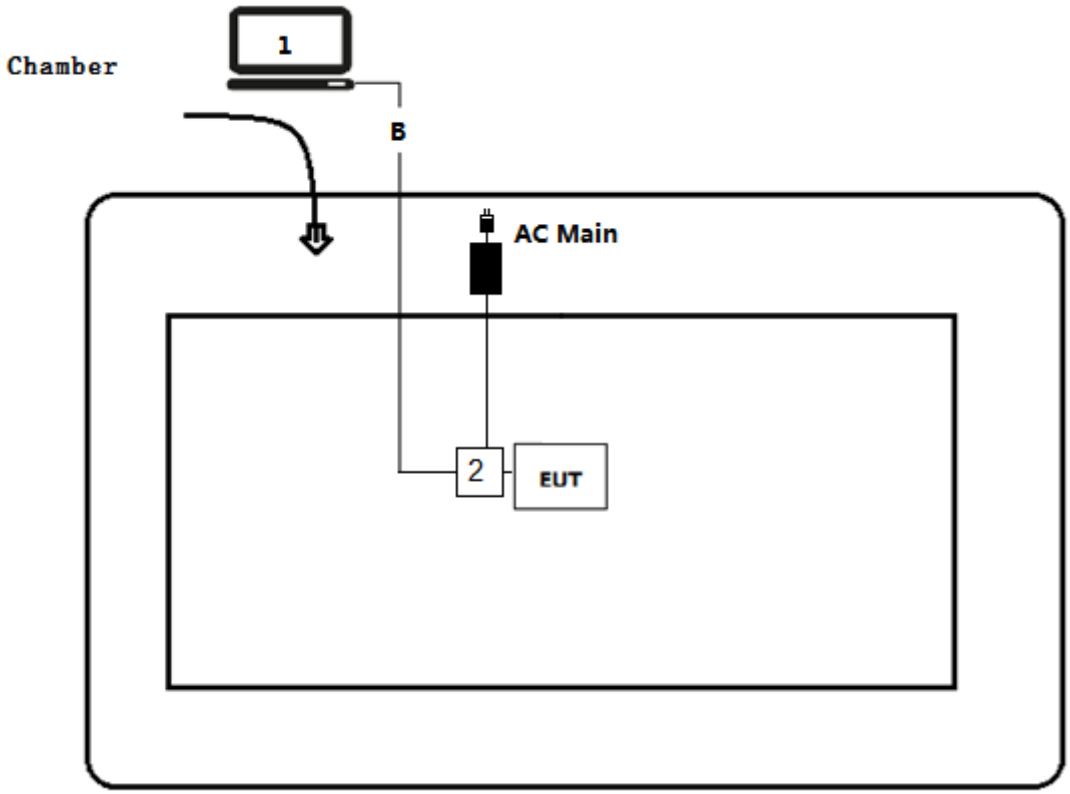
## 1.6. Tested System Details

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 | Lenovo | Think pad x220 | SUA0600195 | Non-shielded |
| A | LAN cable | N/A | N/A | N/A | Non-shielded,1.5m |
| B | LAN cable | N/A | N/A | N/A | Non-shielded,10m |

## 1.7. 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 |

# 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 | ⩾30dBc | 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 | ⩾30dBc | 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. Power setting parameter

**APEX0365:**

| Test Software | QSPR V5.500.5975.23013 | |
|---|---|---|
| Modulation Mode | Test Frequency | Ant 0+1 |
| 802.11b | 2412 | 17.5 |
| | 2437 | 17.5 |
| | 2462 | 17.5 |
| 802.11g | 2412 | 18 |
| | 2437 | 18 |
| | 2462 | 18 |
| 802.11n(20MHz) | 2412 | 18 |
| | 2437 | 18 |
| | 2462 | 18 |
| 802.11n(40MHz) | 2422 | 15 |
| | 2427 | 15 |
| | 2437 | 18 |
| | 2447 | 18 |
| | 2452 | 17 |

**APEX0367:**

| Test Software | QSPR V5.500.5975.23013 | |
|---|---|---|
| Modulation Mode | Test Frequency | Ant 0+1 |
| 802.11b | 2412 | 18 |
| | 2437 | 18 |
| | 2462 | 18 |
| 802.11g | 2412 | 16.5 |
| | 2437 | 18 |
| | 2462 | 17 |
| 802.11n(20MHz) | 2412 | 15.5 |
| | 2437 | 18 |
| | 2462 | 17 |
| 802.11n(40MHz) | 2422 | 13.5 |
| | 2427 | 14 |
| | 2437 | 18 |
| | 2447 | 17 |
| | 2452 | 16 |

## 2.3. Power vs Data Rate

| MCS Index for 802.11n | Spatial Streams | Data Rate (Mbps) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 802.11b | 802.11g | | 20MHz Bandwidth | | 40MHz Bandwidth | |
| | | | | | 800ns GI | 400ns GI | 800ns GI | 400ns GI |
| 0 | 1 | 1 | 6 | --- | 6.5 | 7.2 | 13.5 | 15.0 |
| 1 | 1 | 2 | 9 | --- | 13.0 | 14.4 | 27.0 | 30.0 |
| 2 | 1 | 5.5 | 12 | --- | 19.5 | 21.7 | 40.5 | 45.0 |
| 3 | 1 | 11 | 18 | --- | 26.0 | 28.9 | 54.0 | 60.0 |
| 4 | 1 | --- | 24 | --- | 39.0 | 43.3 | 81.0 | 90.0 |
| 5 | 1 | --- | 36 | --- | 52.0 | 57.8 | 108.0 | 120.0 |
| 6 | 1 | --- | 48 | --- | 58.5 | 65.0 | 121.5 | 135.0 |
| 7 | 1 | --- | 54 | --- | 65.0 | 72.2 | 135.0 | 150.0 |

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

## 2.4. 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 |

## 2.5. 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 |

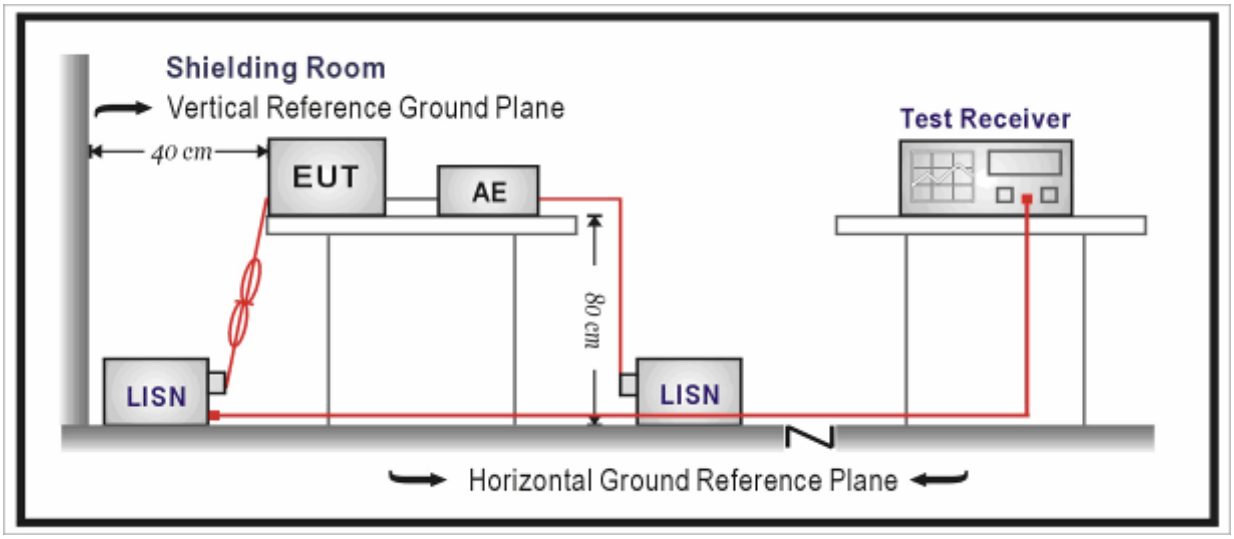
# 3. AC Power Line Conducted Emission

## 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 | 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

AC Power Line Conducted Emission test setup



## 3.3. Limit

| Frequency of Emission (MHz) | Conducted Limit | |
|---|---|---|
| | Quasi-peak (dBμV) | Average(dBμV) |
| 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.<br>Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz. | | |

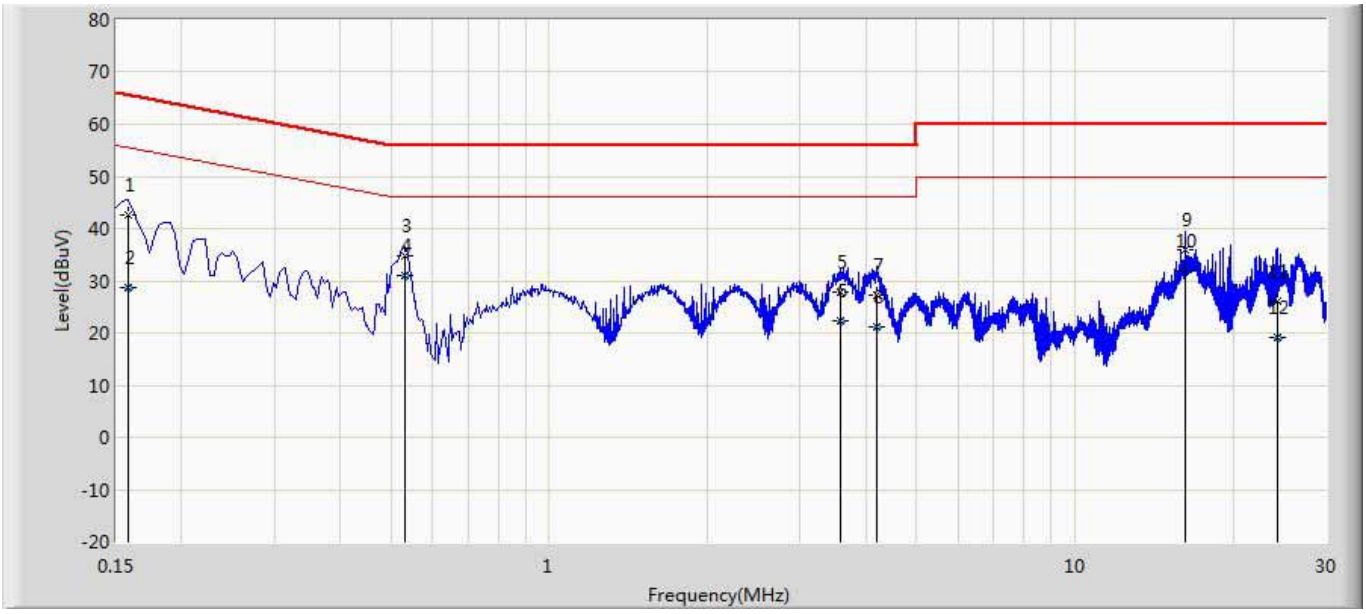
## 3.4. Test Procedure

| 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:

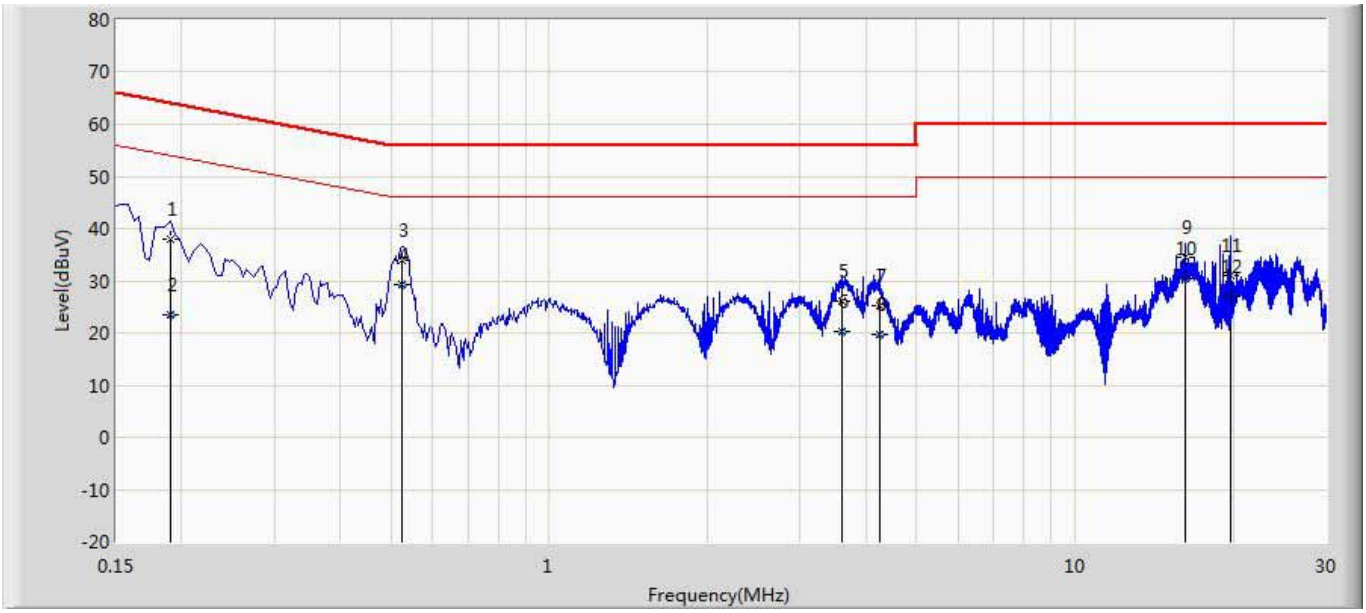
1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average

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 |

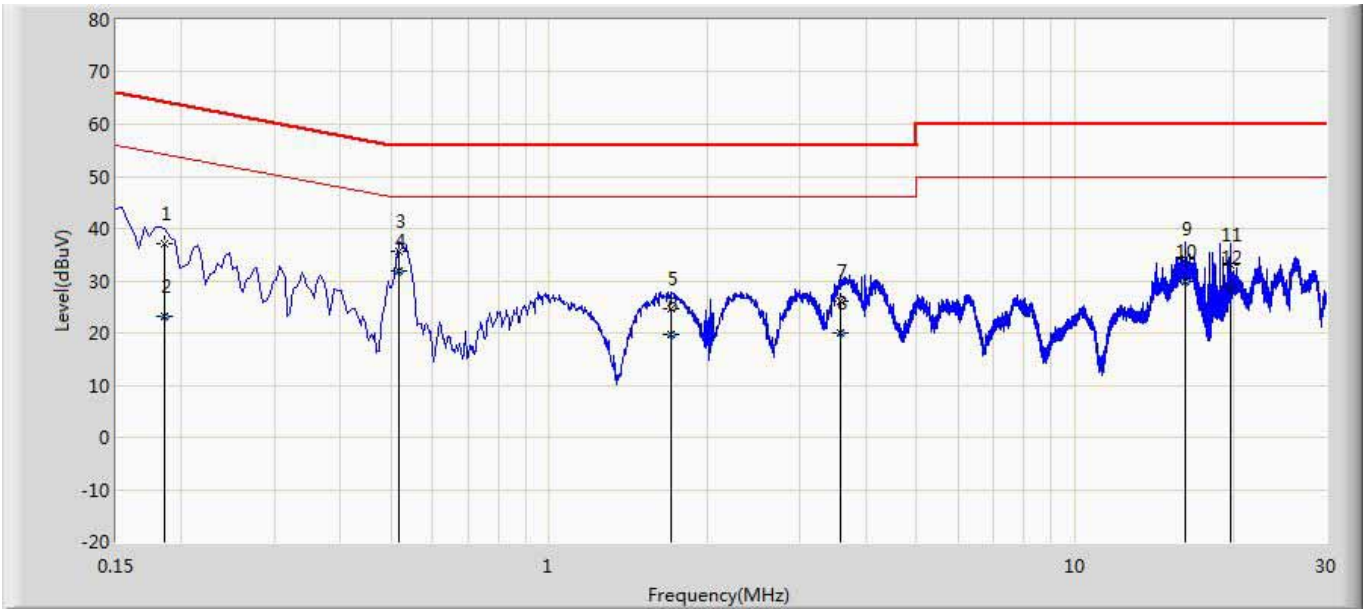
Note: 1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.

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

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

**APEX0367:**

| | |
|---|---|
| Site: TR1 | 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 |

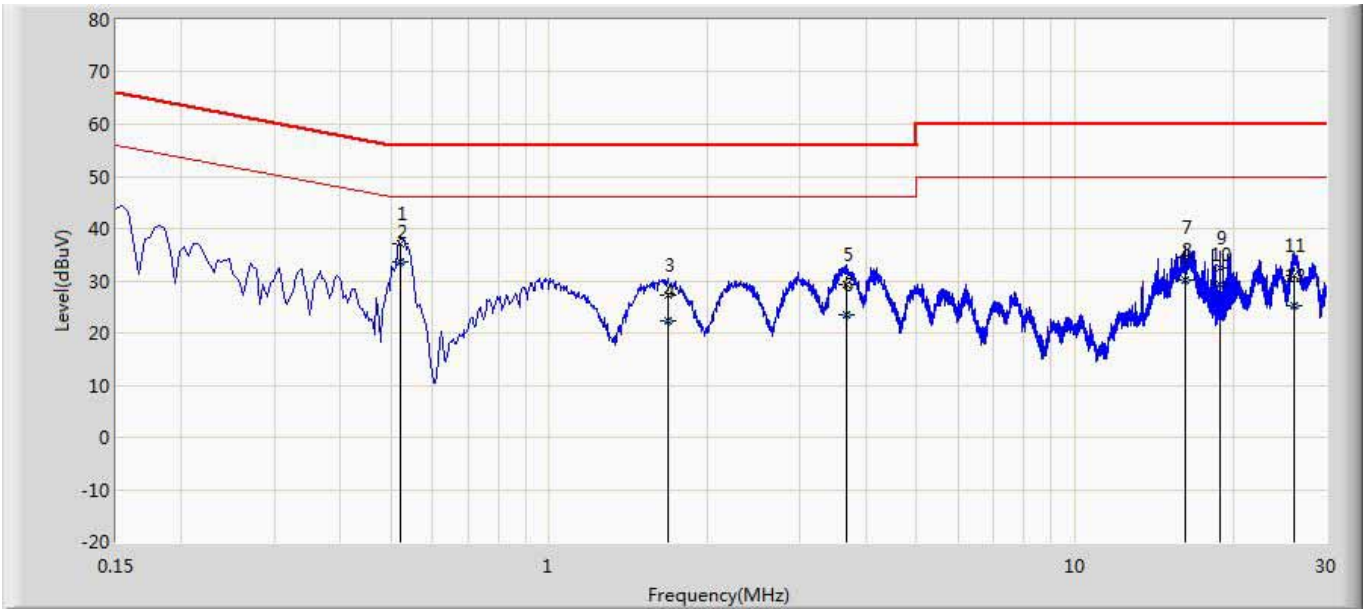
Note:

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: TR1 | 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

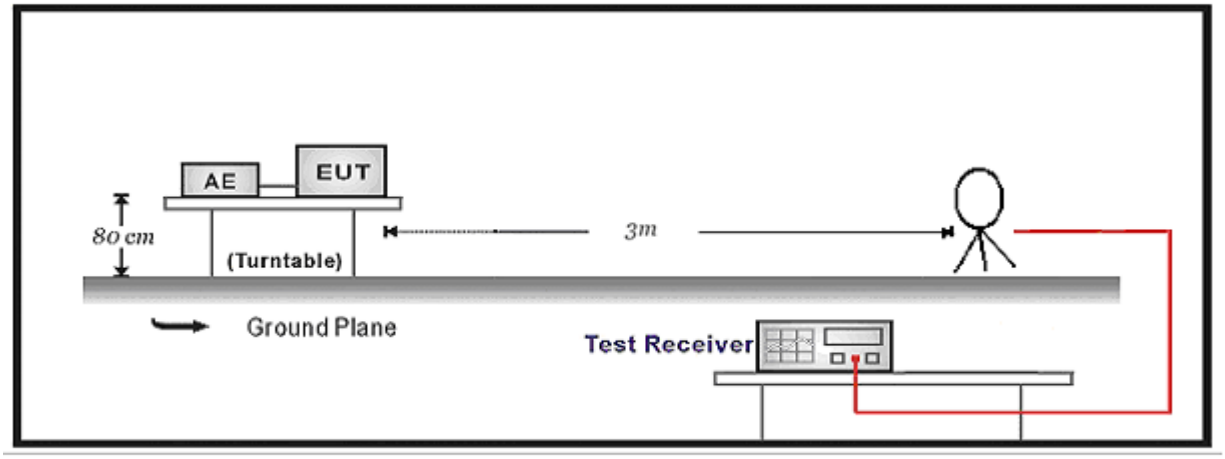
## 4.1. Test Equipment

| 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 | 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 | 2017.01.04 | 2018.01.03 |
| Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards. | | | | | |

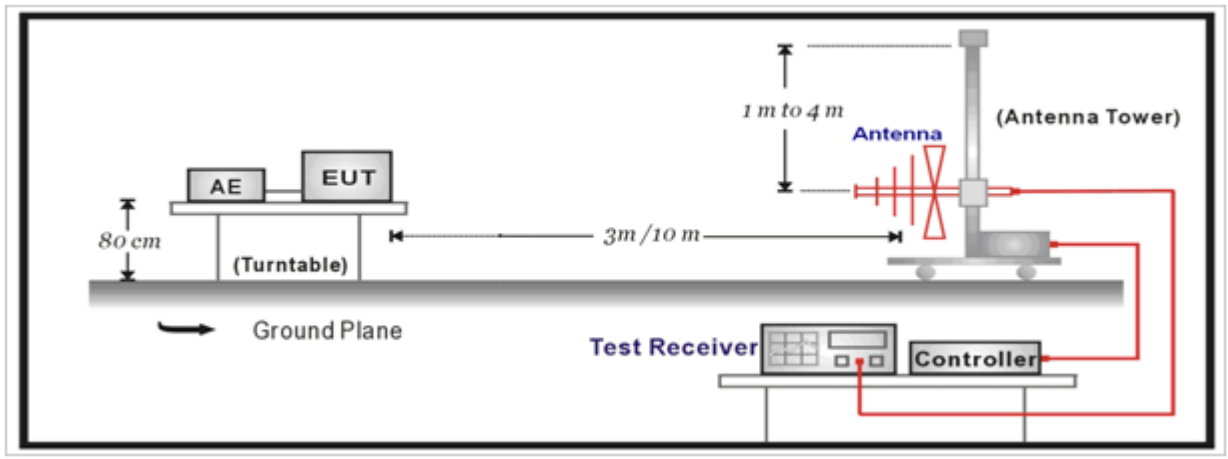
| Radiated Emission(Above 1GHz) / AC-5 | | | | | |
|---|---|---|---|---|---|
| Instrument | Manufacturer | Type No. | Serial No. | Cal. Date | Cal. Due Date |
| Spectrum Analyzer | Agilent | E4446A | MY45300103 | 2017.01.03 | 2018.01.02 |
| Preamplifier | Miteq | NSP1800-25 | 1364185 | 2016.05.06 | 2017.05.05 |
| 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 | 2017.01.04 | 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

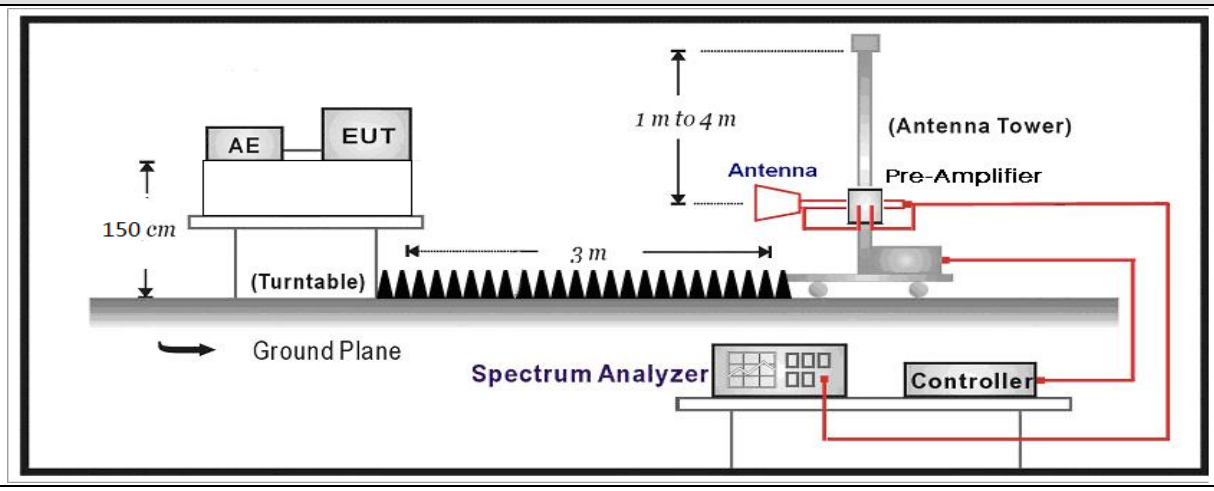
Below 30MHz Test Setup:




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 ( $\mu$ V/m) | Field strength (dB $\mu$ 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) |

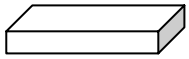
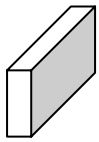
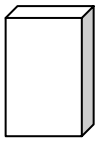
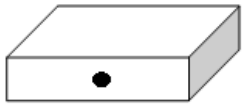
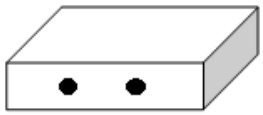
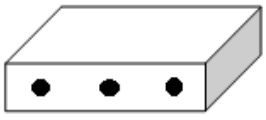
Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed 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 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 1~4</td></tr>
<tr><td rowspan="11">Test method</td><td>☒</td><td colspan="3">Radiated</td></tr>
<tr><td rowspan="3"></td><td>X Axis</td><td>Y Axis</td><td>Z Axis</td></tr>
<tr><td>  </td><td>  </td><td>  </td></tr>
<tr><td>Worst Axis ☐</td><td>Worst Axis ☐</td><td>Worst Axis ☒</td></tr>
<tr><td>☐</td><td colspan="3">Conducted</td></tr>
<tr><td>☐</td><td colspan="3">Chain 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>

## 4.6. Test Result

| Product Name | : | Access Point | Power | : | PoE 57V |
|---|---|---|---|---|---|
| Test Mode | : | Mode 1 | Test Site | : | AC-5 |
| Mode No. | : | APEX0365 | Test Date | : | 2016.11.31 |

| Chain | CH | Antenna Polarity | Frequency (MHz) | Reading Level (dB $\mu$V) | Factor (dB) | Measured Level (dB $\mu$V/m) | Limit (dB $\mu$V/m) | Over Limt (dB) | Detector |
|---|---|---|---|---|---|---|---|---|---|
| Ant 0+1 | 1 | H | 4825.000 | 64.301 | -8.345 | 55.956 | 74 | -18.044 | PK |
| | | H | 4825.000 | 61.685 | -8.345 | 53.340 | 54 | -0.660 | AV |
| | | H | 7239.000 | 54.315 | -4.981 | 49.334 | 54(note3) | -4.666 | PK |
| | | H | 9648.000 | 45.816 | -0.787 | 45.029 | 54(note3) | -8.971 | PK |
| | | V | 4825.000 | 58.952 | -8.345 | 50.607 | 54(note3) | -3.393 | PK |
| | | V | 7239.000 | 52.746 | -4.981 | 47.765 | 54(note3) | -6.235 | PK |
| | | V | 9648.000 | 47.456 | -0.787 | 46.669 | 54(note3) | -7.331 | PK |
| | 6 | H | 4876.000 | 66.674 | -8.352 | 58.322 | 74 | -15.678 | PK |
| | | H | 4876.000 | 61.850 | -8.352 | 53.498 | 54 | -0.502 | AV |
| | | H | 7307.000 | 61.240 | -4.794 | 56.446 | 74 | -17.554 | PK |
| | | H | 7307.000 | 56.397 | -4.794 | 51.603 | 54 | -2.397 | AV |
| | | H | 9748.000 | 46.038 | -1.066 | 44.972 | 54(note3) | -9.028 | PK |
| | | V | 4876.000 | 58.730 | -8.352 | 50.378 | 54(note3) | -3.622 | PK |
| | | V | 7307.000 | 56.894 | -4.794 | 52.100 | 54(note3) | -1.900 | PK |
| | | V | 9748.000 | 46.974 | -1.066 | 45.908 | 54(note3) | -8.092 | PK |
| | 11 | H | 4927.000 | 63.213 | -8.349 | 54.864 | 74 | -19.136 | PK |
| | | H | 4927.000 | 61.357 | -8.349 | 53.008 | 54 | -0.992 | AV |
| | | H | 7383.500 | 57.529 | -4.398 | 53.131 | 54(note3) | -0.869 | PK |
| | | H | 9848.000 | 45.680 | -1.039 | 44.641 | 54(note3) | -9.359 | PK |
| | | V | 4927.000 | 59.544 | -8.349 | 51.195 | 54(note3) | -2.805 | PK |
| | | V | 7383.500 | 56.649 | -4.398 | 52.251 | 54(note3) | -1.749 | PK |
| | | V | 9848.000 | 45.953 | -1.039 | 44.914 | 54(note3) | -9.086 | PK |

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

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

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

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

| | | | | | |
|---|---|---|---|---|---|
| Product Name | : | Access Point | Power | : | PoE 57V |
| Test Mode | : | Mode 2 | Test Site | : | AC-5 |
| Mode No. | : | APEX0365 | Test Date | : | 2016.11.31 |

| Chain | CH | Antenna Polarity | Frequency (MHz) | Reading Level (dB $\mu$V) | Factor (dB) | Measured Level (dB $\mu$V/m) | Limit (dB $\mu$V/m) | Over Limt (dB) | Detector |
|---|---|---|---|---|---|---|---|---|---|
| Ant 0+1 | 1 | H | 4816.500 | 58.576 | -8.279 | 50.297 | 54(note3) | -3.703 | PK |
| | | H | 7239.000 | 53.610 | -4.981 | 48.629 | 54(note3) | -5.371 | PK |
| | | H | 9648.000 | 45.287 | -0.787 | 44.500 | 54(note3) | -9.500 | PK |
| | | V | 4825.000 | 60.400 | -8.345 | 52.055 | 54(note3) | -1.945 | PK |
| | | V | 7239.000 | 51.569 | -4.981 | 46.588 | 54(note3) | -7.412 | PK |
| | | V | 9648.000 | 45.783 | -0.787 | 44.996 | 54(note3) | -9.004 | PK |
| | 6 | H | 4867.500 | 55.932 | -8.376 | 47.555 | 54(note3) | -6.445 | PK |
| | | H | 7307.000 | 52.778 | -4.794 | 47.984 | 54(note3) | -6.016 | PK |
| | | H | 9748.000 | 44.992 | -1.066 | 43.926 | 54(note3) | -10.074 | PK |
| | | V | 4867.500 | 56.256 | -8.376 | 47.879 | 54(note3) | -6.121 | PK |
| | | V | 7311.000 | 49.802 | -4.840 | 44.962 | 54(note3) | -9.038 | PK |
| | | V | 9748.000 | 45.062 | -1.066 | 43.996 | 54(note3) | -10.004 | PK |
| | 11 | H | 4927.000 | 57.119 | -8.349 | 48.770 | 54(note3) | -5.230 | PK |
| | | H | 7386.000 | 49.703 | -4.456 | 45.247 | 54(note3) | -8.753 | PK |
| | | H | 9848.000 | 45.023 | -1.039 | 43.984 | 54(note3) | -10.016 | PK |
| | | V | 4918.500 | 52.899 | -8.293 | 44.606 | 54(note3) | -9.394 | PK |
| | | V | 7386.000 | 49.603 | -4.456 | 45.147 | 54(note3) | -8.853 | PK |
| | | V | 9848.000 | 45.307 | -1.039 | 44.268 | 54(note3) | -9.732 | PK |

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

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

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

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

| | | | | | |
|---|---|---|---|---|---|
| Product Name | : | Access Point | Power | : | PoE 57V |
| Test Mode | : | Mode 3 | Test Site | : | AC-5 |
| Mode No. | : | APEX0365 | Test Date | : | 2016.11.31 |

| Chain | CH | Antenna Polarity | Frequency (MHz) | Reading Level (dB $\mu$V) | Factor (dB) | Measured Level (dB $\mu$V/m) | Limit (dB $\mu$V/m) | Over Limt (dB) | Detector |
|---|---|---|---|---|---|---|---|---|---|
| Ant 0+1 | 1 | H | 4825.000 | 58.241 | -8.345 | 49.896 | 54(note3) | -4.104 | PK |
| | | H | 7247.500 | 52.655 | -4.903 | 47.753 | 54(note3) | -6.247 | PK |
| | | H | 9648.000 | 45.501 | -0.787 | 44.714 | 54(note3) | -9.286 | PK |
| | | V | 4833.500 | 58.994 | -8.302 | 50.692 | 54(note3) | -3.308 | PK |
| | | V | 7247.500 | 51.348 | -4.903 | 46.446 | 54(note3) | -7.554 | PK |
| | | V | 9648.000 | 45.093 | -0.787 | 44.306 | 54(note3) | -9.694 | PK |
| | 6 | H | 4876.000 | 56.080 | -8.352 | 47.728 | 54(note3) | -6.272 | PK |
| | | H | 7311.000 | 48.904 | -4.840 | 44.064 | 54(note3) | -9.936 | PK |
| | | H | 9748.000 | 45.282 | -1.066 | 44.216 | 54(note3) | -9.784 | PK |
| | | V | 4867.500 | 55.151 | -8.376 | 46.774 | 54(note3) | -7.226 | PK |
| | | V | 7311.000 | 48.421 | -4.840 | 43.581 | 54(note3) | -10.419 | PK |
| | | V | 9748.000 | 45.257 | -1.066 | 44.191 | 54(note3) | -9.809 | PK |
| | 11 | H | 4927.000 | 54.944 | -8.349 | 46.595 | 54(note3) | -7.405 | PK |
| | | H | 7386.000 | 47.711 | -4.456 | 43.255 | 54(note3) | -10.745 | PK |
| | | H | 9848.000 | 44.357 | -1.039 | 43.318 | 54(note3) | -10.682 | PK |
| | | V | 4924.000 | 51.350 | -8.330 | 43.021 | 54(note3) | -10.979 | PK |
| | | V | 7386.000 | 49.573 | -4.456 | 45.117 | 54(note3) | -8.883 | PK |
| | | V | 9848.000 | 44.761 | -1.039 | 43.722 | 54(note3) | -10.278 | PK |

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

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

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

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

| | | | | | |
|---|---|---|---|---|---|
| Product Name | : | Access Point | Power | : | PoE 57V |
| Test Mode | : | Mode 4 | Test Site | : | AC-5 |
| Mode No. | : | APEX0365 | Test Date | : | 2016.11.31 |

| Chain | CH | Antenna Polarity | Frequency (MHz) | Reading Level (dB $\mu$V) | Factor (dB) | Measured Level (dB $\mu$V/m) | Limit (dB $\mu$V/m) | Over Limt (dB) | Detector |
|---|---|---|---|---|---|---|---|---|---|
| Ant 0+1 | 3 | H | 4842.000 | 54.434 | -8.267 | 46.167 | 54(note3) | -7.833 | PK |
| | | H | 7266.000 | 47.240 | -4.702 | 42.537 | 54(note3) | -11.463 | PK |
| | | H | 9688.000 | 44.775 | -0.941 | 43.835 | 54(note3) | -10.165 | PK |
| | | V | 4833.500 | 55.014 | -8.302 | 46.712 | 54(note3) | -7.288 | PK |
| | | V | 7266.000 | 47.288 | -4.702 | 42.585 | 54(note3) | -11.415 | PK |
| | | V | 9688.000 | 45.327 | -0.941 | 44.387 | 54(note3) | -9.613 | PK |
| | 6 | H | 4867.500 | 53.671 | -8.376 | 45.294 | 54(note3) | -8.706 | PK |
| | | H | 7311.000 | 48.323 | -4.840 | 43.483 | 54(note3) | -10.517 | PK |
| | | H | 9748.000 | 45.387 | -1.066 | 44.321 | 54(note3) | -9.679 | PK |
| | | V | 4859.000 | 56.424 | -8.380 | 48.044 | 54(note3) | -5.956 | PK |
| | | V | 7311.000 | 47.096 | -4.840 | 42.256 | 54(note3) | -11.744 | PK |
| | | V | 9748.000 | 46.097 | -1.066 | 45.031 | 54(note3) | -8.969 | PK |
| | 9 | H | 4893.000 | 54.322 | -8.253 | 46.069 | 54(note3) | -7.931 | PK |
| | | H | 7356.000 | 48.042 | -4.698 | 43.344 | 54(note3) | -10.656 | PK |
| | | H | 9808.000 | 45.036 | -0.858 | 44.179 | 54(note3) | -9.821 | PK |
| | | V | 4904.000 | 50.719 | -8.270 | 42.448 | 54(note3) | -11.552 | PK |
| | | V | 7356.000 | 47.249 | -4.698 | 42.551 | 54(note3) | -11.449 | PK |
| | | V | 9808.000 | 45.693 | -0.858 | 44.836 | 54(note3) | -9.164 | PK |

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

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

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

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

| | | | | | |
|---|---|---|---|---|---|
| Product Name | : | Access Point | Power | : | PoE 57V |
| Test Mode | : | Mode 1 | Test Site | : | AC-5 |
| Mode No. | : | APEX0367 | Test Date | : | 2016.11.31 |

| Chain | CH | Antenna Polarity | Frequency (MHz) | Reading Level (dB $\mu$V) | Factor (dB) | Measured Level (dB $\mu$V/m) | Limit (dB $\mu$V/m) | Over Limt (dB) | Detector |
|---|---|---|---|---|---|---|---|---|---|
| Ant 0+1 | 1 | H | 4825.000 | 60.237 | -8.345 | 51.892 | 54(note3) | -2.108 | PK |
| | | H | 7236.000 | 48.246 | -4.998 | 43.248 | 54(note3) | -10.752 | PK |
| | | H | 7236.000 | 48.246 | -4.998 | 43.248 | 54(note3) | -10.752 | PK |
| | | V | 4825.000 | 60.915 | -8.345 | 52.570 | 54(note3) | -1.430 | PK |
| | | V | 7236.000 | 48.094 | -4.998 | 43.096 | 54(note3) | -10.904 | PK |
| | | V | 9648.000 | 45.158 | -0.787 | 44.371 | 54(note3) | -9.629 | PK |
| | 6 | H | 4876.000 | 57.892 | -8.352 | 49.540 | 54(note3) | -4.460 | PK |
| | | H | 7311.000 | 47.667 | -4.840 | 42.827 | 54(note3) | -11.173 | PK |
| | | H | 9748.000 | 45.430 | -1.066 | 44.364 | 54(note3) | -9.636 | PK |
| | | V | 4876.000 | 59.362 | -8.352 | 51.010 | 54(note3) | -2.990 | PK |
| | | V | 7311.000 | 47.131 | -4.840 | 42.291 | 54(note3) | -11.709 | PK |
| | | V | 9748.000 | 45.793 | -1.066 | 44.727 | 54(note3) | -9.273 | PK |
| | 11 | H | 4924.000 | 49.857 | -8.330 | 41.528 | 54(note3) | -12.472 | PK |
| | | H | 7386.000 | 48.196 | -4.456 | 43.740 | 54(note3) | -10.260 | PK |
| | | H | 9848.000 | 45.112 | -1.039 | 44.073 | 54(note3) | -9.927 | PK |
| | | V | 4924.000 | 50.376 | -8.330 | 42.047 | 54(note3) | -11.953 | PK |
| | | V | 7386.000 | 46.991 | -4.456 | 42.535 | 54(note3) | -11.465 | PK |
| | | V | 9848.000 | 44.917 | -1.039 | 43.878 | 54(note3) | -10.122 | PK |

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

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

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

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

| | | | | | |
|---|---|---|---|---|---|
| Product Name | : | Access Point | Power | : | PoE 57V |
| Test Mode | : | Mode 2 | Test Site | : | AC-5 |
| Mode No. | : | APEX0367 | Test Date | : | 2016.11.31 |

| Chain | CH | Antenna Polarity | Frequency (MHz) | Reading Level (dB $\mu$V) | Factor (dB) | Measured Level (dB $\mu$V/m) | Limit (dB $\mu$V/m) | Over Limt (dB) | Detector |
|---|---|---|---|---|---|---|---|---|---|
| Ant 0+1 | 1 | H | 4824.000 | 52.803 | -8.338 | 44.466 | 54(note3) | -9.534 | PK |
| | | H | 7236.000 | 47.829 | -4.998 | 42.831 | 54(note3) | -11.169 | PK |
| | | H | 9648.000 | 45.682 | -0.787 | 44.895 | 54(note3) | -9.105 | PK |
| | | V | 4824.000 | 53.203 | -8.338 | 44.866 | 54(note3) | -9.134 | PK |
| | | V | 7236.000 | 48.083 | -4.998 | 43.085 | 54(note3) | -10.915 | PK |
| | | V | 9648.000 | 45.058 | -0.787 | 44.271 | 54(note3) | -9.729 | PK |
| | 6 | H | 4874.000 | 49.727 | -8.358 | 41.369 | 54(note3) | -12.631 | PK |
| | | H | 7311.000 | 47.634 | -4.840 | 42.794 | 54(note3) | -11.206 | PK |
| | | H | 9748.000 | 44.731 | -1.066 | 43.665 | 54(note3) | -10.335 | PK |
| | | V | 4874.000 | 50.459 | -8.358 | 42.101 | 54(note3) | -11.899 | PK |
| | | V | 7311.000 | 47.230 | -4.840 | 42.390 | 54(note3) | -11.610 | PK |
| | | V | 9748.000 | 45.306 | -1.066 | 44.240 | 54(note3) | -9.760 | PK |
| | 11 | H | 4924.000 | 49.630 | -8.330 | 41.301 | 54(note3) | -12.699 | PK |
| | | H | 7386.000 | 48.278 | -4.456 | 43.822 | 54(note3) | -10.178 | PK |
| | | H | 9848.000 | 44.816 | -1.039 | 43.777 | 54(note3) | -10.223 | PK |
| | | V | 4924.000 | 49.326 | -8.330 | 40.997 | 54(note3) | -13.003 | PK |
| | | V | 7386.000 | 47.794 | -4.456 | 43.338 | 54(note3) | -10.662 | PK |
| | | V | 9848.000 | 44.966 | -1.039 | 43.927 | 54(note3) | -10.073 | PK |

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

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

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

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

| | | | | | |
|---|---|---|---|---|---|
| Product Name | : | Access Point | Power | : | PoE 57V |
| Test Mode | : | Mode 3 | Test Site | : | AC-5 |
| Mode No. | : | APEX0367 | Test Date | : | 2016.11.31 |

| Chain | CH | Antenna Polarity | Frequency (MHz) | Reading Level (dB $\mu$V) | Factor (dB) | Measured Level (dB $\mu$V/m) | Limit (dB $\mu$V/m) | Over Limt (dB) | Detector |
|---|---|---|---|---|---|---|---|---|---|
| Ant 0+1 | 1 | H | 4824.000 | 51.984 | -8.338 | 43.647 | 54(note3) | -10.353 | PK |
| | | H | 7236.000 | 48.259 | -4.998 | 43.261 | 54(note3) | -10.739 | PK |
| | | H | 9648.000 | 44.917 | -0.787 | 44.130 | 54(note3) | -9.870 | PK |
| | | V | 4824.000 | 53.201 | -8.338 | 44.864 | 54(note3) | -9.136 | PK |
| | | V | 7236.000 | 48.062 | -4.998 | 43.064 | 54(note3) | -10.936 | PK |
| | | V | 9648.000 | 45.403 | -0.787 | 44.616 | 54(note3) | -9.384 | PK |
| | 6 | H | 4874.000 | 49.609 | -8.358 | 41.251 | 54(note3) | -12.749 | PK |
| | | H | 7311.000 | 47.015 | -4.840 | 42.175 | 54(note3) | -11.825 | PK |
| | | H | 9748.000 | 45.526 | -1.066 | 44.460 | 54(note3) | -9.540 | PK |
| | | V | 4874.000 | 49.686 | -8.358 | 41.328 | 54(note3) | -12.672 | PK |
| | | V | 7311.000 | 47.553 | -4.840 | 42.713 | 54(note3) | -11.287 | PK |
| | | V | 9748.000 | 45.025 | -1.066 | 43.959 | 54(note3) | -10.041 | PK |
| | 11 | H | 4924.000 | 50.236 | -8.330 | 41.907 | 54(note3) | -12.093 | PK |
| | | H | 7386.000 | 47.753 | -4.456 | 43.297 | 54(note3) | -10.703 | PK |
| | | H | 9848.000 | 45.239 | -1.039 | 44.200 | 54(note3) | -9.800 | PK |
| | | V | 4924.000 | 50.342 | -8.330 | 42.013 | 54(note3) | -11.987 | PK |
| | | V | 7386.000 | 47.255 | -4.456 | 42.799 | 54(note3) | -11.201 | PK |
| | | V | 9848.000 | 43.945 | -1.039 | 42.906 | 54(note3) | -11.094 | PK |

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

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

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

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

| | | | | | |
|---|---|---|---|---|---|
| Product Name | : | Access Point | Power | : | PoE 57V |
| Test Mode | : | Mode 4 | Test Site | : | AC-5 |
| Mode No. | : | APEX0367 | Test Date | : | 2016.11.31 |

| Chain | CH | Antenna Polarity | Frequency (MHz) | Reading Level (dB $\mu$V) | Factor (dB) | Measured Level (dB $\mu$V/m) | Limit (dB $\mu$V/m) | Over Limt (dB) | Detector |
|---|---|---|---|---|---|---|---|---|---|
| Ant 0+1 | 3 | H | 4844.000 | 49.896 | -8.283 | 41.614 | 54(note3) | -12.386 | PK |
| | | H | 7266.000 | 46.840 | -4.702 | 42.137 | 54(note3) | -11.863 | PK |
| | | H | 9688.000 | 44.528 | -0.941 | 43.588 | 54(note3) | -10.412 | PK |
| | | V | 4844.000 | 50.904 | -8.283 | 42.622 | 54(note3) | -11.378 | PK |
| | | V | 7266.000 | 47.810 | -4.702 | 43.107 | 54(note3) | -10.893 | PK |
| | | V | 9688.000 | 45.778 | -0.941 | 44.838 | 54(note3) | -9.162 | PK |
| | 6 | H | 4874.000 | 49.720 | -8.358 | 41.362 | 54(note3) | -12.638 | PK |
| | | H | 7311.000 | 47.560 | -4.840 | 42.720 | 54(note3) | -11.280 | PK |
| | | H | 9748.000 | 45.199 | -1.066 | 44.133 | 54(note3) | -9.867 | PK |
| | | V | 4874.000 | 49.932 | -8.358 | 41.574 | 54(note3) | -12.426 | PK |
| | | V | 7311.000 | 47.445 | -4.840 | 42.605 | 54(note3) | -11.395 | PK |
| | | V | 9748.000 | 45.213 | -1.066 | 44.147 | 54(note3) | -9.853 | PK |
| | 9 | H | 4904.000 | 49.643 | -8.270 | 41.372 | 54(note3) | -12.628 | PK |
| | | H | 7356.000 | 47.022 | -4.698 | 42.324 | 54(note3) | -11.676 | PK |
| | | H | 9808.000 | 45.343 | -0.858 | 44.486 | 54(note3) | -9.514 | PK |
| | | V | 4904.000 | 49.112 | -8.270 | 40.841 | 54(note3) | -13.159 | PK |
| | | V | 7356.000 | 46.840 | -4.698 | 42.142 | 54(note3) | -11.858 | PK |
| | | V | 9808.000 | 45.001 | -0.858 | 44.144 | 54(note3) | -9.856 | PK |

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

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

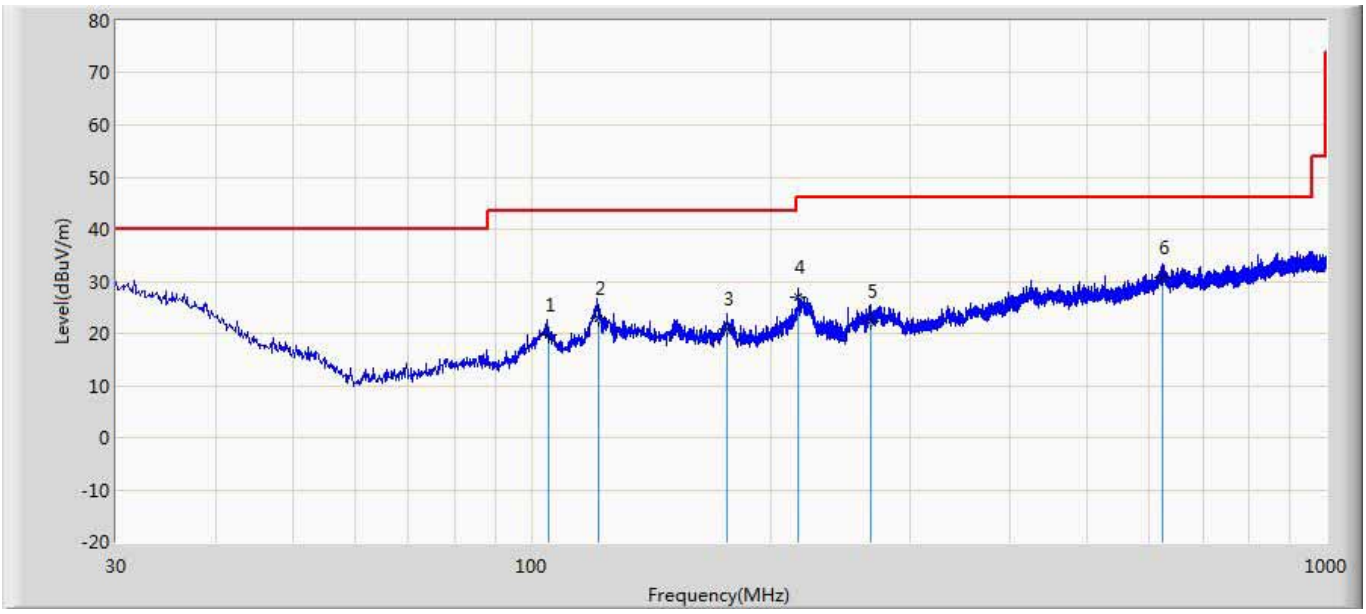
Note: 3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

Note: 4. The RBW setting, see Clause 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: Wireless Access Point | Power: AC 120V/60Hz |
| Note: Mode 1 | |

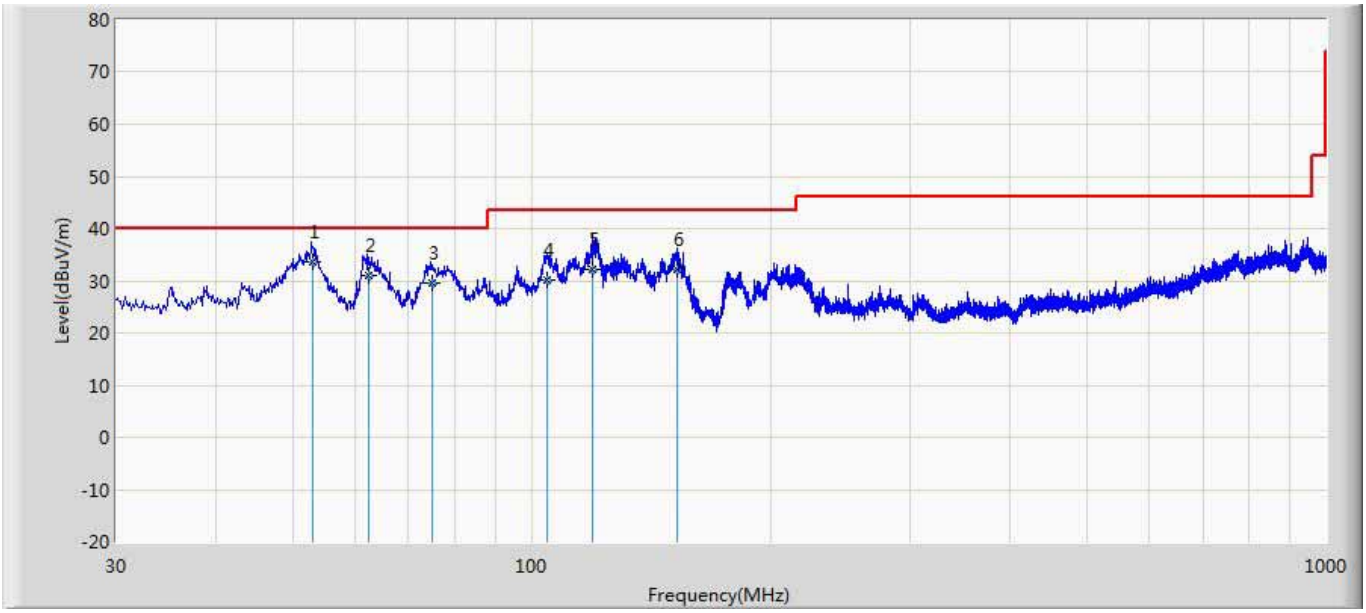



| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Probe (dB/m) | Cable (dB) | Amp (dB) | Ant Pos (cm) | Table Pos (deg) | Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | 104.873 | 19.711 | 30.172 | -23.789 | 43.500 | 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: Wireless Access Point | Power:PoE 57V |
| Note: Mode 1 | |



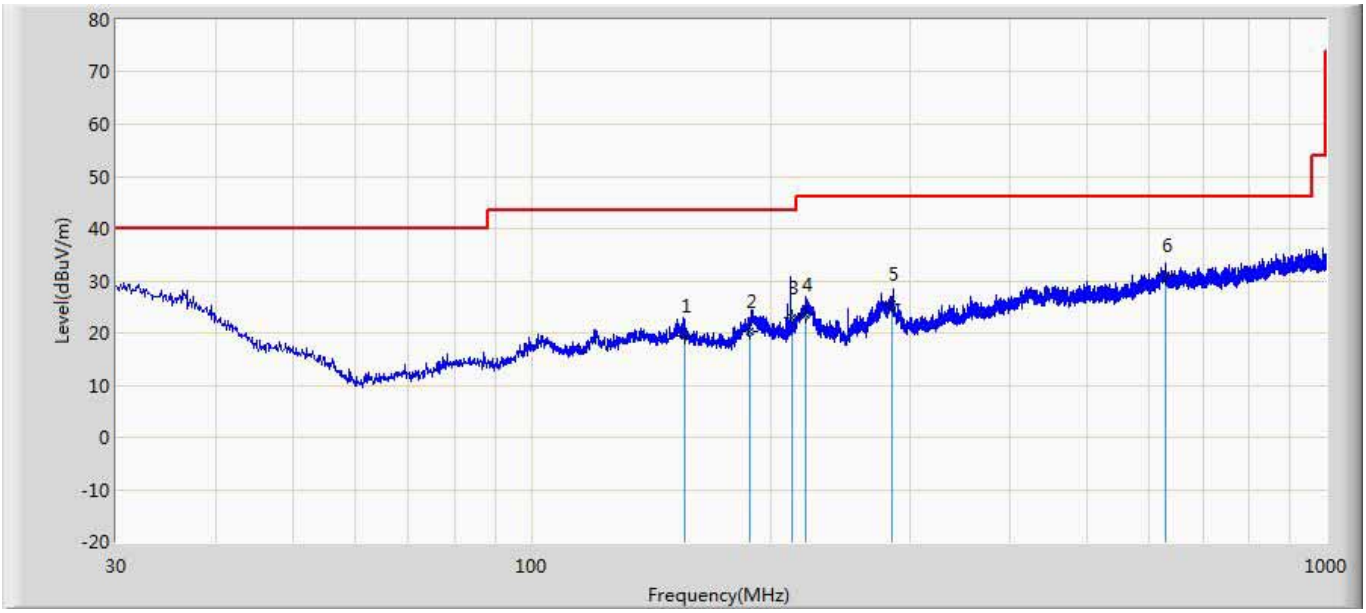

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Probe (dB/m) | Cable (dB) | Amp (dB) | Ant Pos (cm) | Table Pos (deg) | Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | * | 53.117 | 33.524 | 48.083 | -6.476 | 40.000 | 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: Wireless Access Point | Power:PoE 57V |
| Note: Mode 1 | |

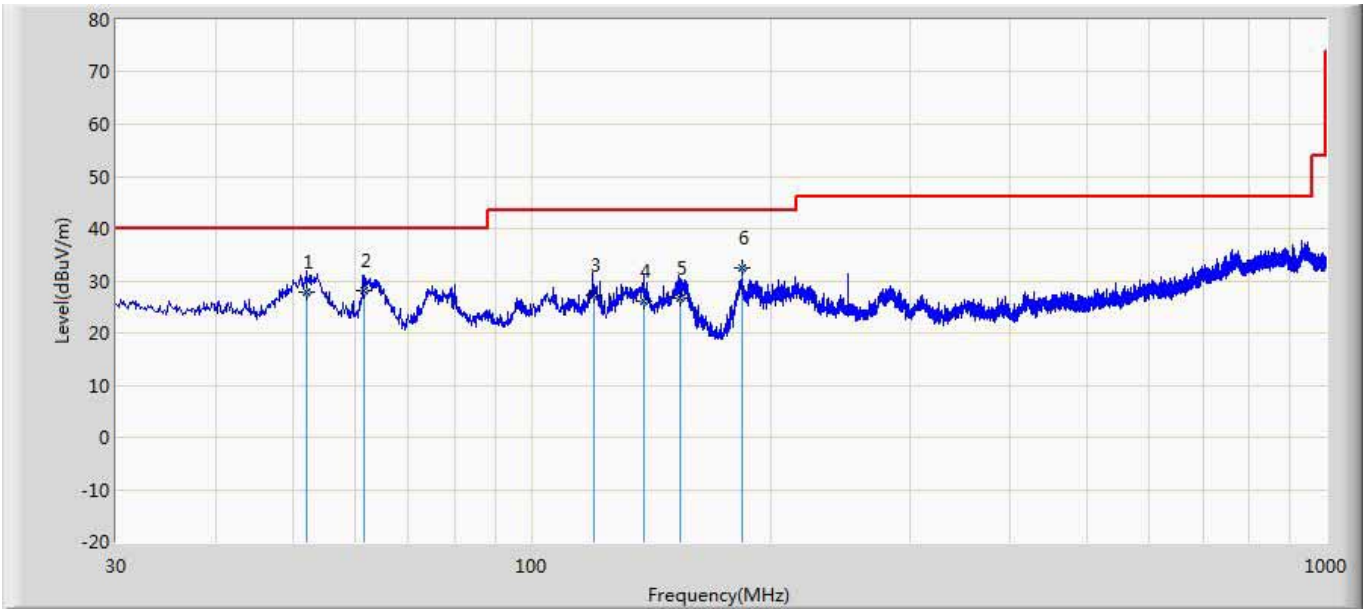



| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Probe (dB/m) | Cable (dB) | Amp (dB) | Ant Pos (cm) | Table Pos (deg) | Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | 155.653 | 19.376 | 30.881 | -24.124 | 43.500 | 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).

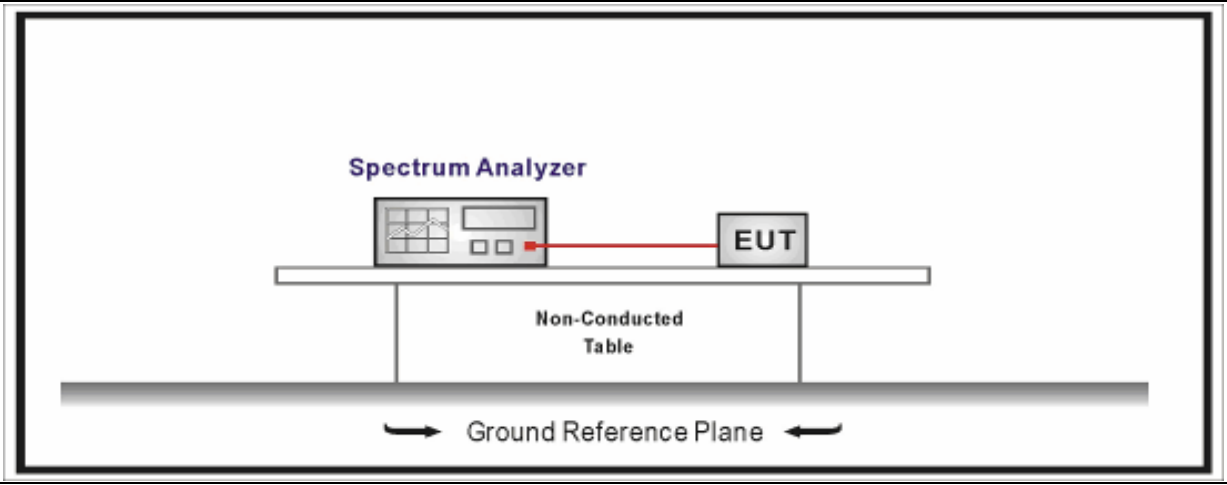
# 5. Emissions in non-restricted frequency bands

## 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) |

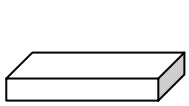
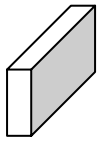
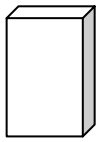
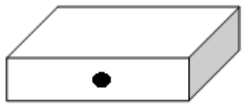
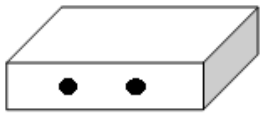
Note 1: If maximum conducted (average) output power was used to demonstrate compliance as described in 9.2, then the peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 30 dBc).

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 ~ Mode 4</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>

## 5.6. Test Result

| | | | | | |
|---|---|---|---|---|---|
| Product Name | : | Access Point | Power | : | PoE 57V |
| Test Mode | : | Mode1~4 | Test Site | : | TR8 |
| Mode No. | : | APEX0365 | Test Date | : | 2016.12.01 |

**Antenna #0**

| Mode | Channel | Test Frequency (MHz) | In-Band PSD[a] (dBm/100kHz) | Frequency (MHz) | Out-Band PSD[b] (dBm/100kHz) | [a]-[b] (dB) | Limit (dB) | Result |
|---|---|---|---|---|---|---|---|---|
| 1 | 01 | 2412 | 17.920 | 2394.50 | -31.709 | 49.629 | >30 | Pass |
| 1 | 11 | 2462 | 17.920 | 2483.5 | -39.152 | 57.072 | >30 | Pass |
| 2 | 01 | 2412 | 10.179 | 2400 | -30.147 | 40.326 | >30 | Pass |
| 2 | 11 | 2462 | 10.179 | 2483.5 | -35.428 | 45.607 | >30 | Pass |
| 3 | 01 | 2412 | 7.719 | 2400 | -33.919 | 41.638 | >30 | Pass |
| 3 | 11 | 2462 | 7.719 | 2483.5 | -37.437 | 45.156 | >30 | Pass |
| 4 | 03 | 2422 | 3.913 | 2400 | -41.942 | 45.855 | >30 | Pass |
| 4 | 09 | 2452 | 3.913 | 2483.5 | -39.970 | 43.883 | >30 | 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.

3: In-Band PSD[a] data is tested by Mid channel.

Mode 2 CH01(2412MHz)

**Antenna #1**

| Mode | Channel | Test Frequency (MHz) | In-Band PSD[a] (dBm/100kHz) | Frequency (MHz) | Out-Band PSD[b] (dBm/100kHz) | [a]-[b] (dB) | Limit (dB) | Result |
|---|---|---|---|---|---|---|---|---|
| 1 | 01 | 2412 | 16.838 | 2396.1 | -32.217 | 49.055 | >30 | Pass |
| 1 | 11 | 2462 | 16.838 | 2483.5 | -41.840 | 58.678 | >30 | Pass |
| 2 | 01 | 2412 | 9.640 | 2399.8 | -31.584 | 41.224 | >30 | Pass |
| 2 | 11 | 2462 | 9.640 | 2438.3 | -38.835 | 48.475 | >30 | Pass |
| 3 | 01 | 2412 | 9.662 | 2400 | -34.10 | 43.762 | >30 | Pass |
| 3 | 11 | 2462 | 9.662 | 2483.5 | -36.616 | 46.278 | >30 | Pass |
| 4 | 03 | 2422 | 5.772 | 2394.5 | -32.578 | 38.350 | >30 | Pass |
| 4 | 09 | 2452 | 5.772 | 2483.5 | -41.506 | 47.278 | >30 | 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.

3: In-Band PSD[a] data is tested by Mid channel.

Mode 4 CH03(2422MHz)

| | | | | | |
|---|---|---|---|---|---|
| Product Name | : | Access Point | Power | : | PoE 57V |
| Test Mode | : | Mode1~4 | Test Site | : | TR8 |
| Mode No. | : | APEX0367 | Test Date | : | 2016.12.01 |

**Antenna #0**

| Mode | Channel | Test Frequency (MHz) | In-Band PSD[a] (dBm/100kHz) | Frequency (MHz) | Out-Band PSD[b] (dBm/100kHz) | [a]-[b] (dB) | Limit (dB) | Result |
|---|---|---|---|---|---|---|---|---|
| 1 | 01 | 2412 | 15.914 | 2399.496 | -31.399 | 47.313 | >30 | Pass |
| 1 | 11 | 2462 | 15.070 | 2483.5 | -44.300 | 59.370 | >30 | Pass |
| 2 | 01 | 2412 | 5.143 | 2400 | -40.224 | 45.367 | >30 | Pass |
| 2 | 11 | 2462 | 6.932 | 2483.5 | -46.422 | 53.354 | >30 | Pass |
| 3 | 01 | 2412 | 4.721 | 2400 | -38.704 | 43.425 | >30 | Pass |
| 3 | 11 | 2462 | 6.935 | 2483.5 | -45.213 | 52.148 | >30 | Pass |
| 4 | 03 | 2422 | 0.986 | 2400 | -42.685 | 43.671 | >30 | Pass |
| 4 | 09 | 2452 | 3.151 | 2483.5 | -46.419 | 49.570 | >30 | 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.

3: In-Band PSD[a] data is tested by Mid channel.

Mode 3 CH01(2412MHz)

**Antenna #1**

| Mode | Channel | Test Frequency (MHz) | In-Band PSD[a] (dBm/100kHz) | Frequency (MHz) | Out-Band PSD[b] (dBm/100kHz) | [a]-[b] (dB) | Limit (dB) | Result |
|---|---|---|---|---|---|---|---|---|
| 1 | 01 | 2412 | 14.567 | 2395.994 | -31.522 | 46.089 | >30 | Pass |
| 1 | 11 | 2462 | 15.317 | 2483.5 | -44.693 | 60.010 | >30 | Pass |
| 2 | 01 | 2412 | 4.702 | 2400 | -38.201 | 42.903 | >30 | Pass |
| 2 | 11 | 2462 | 6.108 | 2483.5 | -46.105 | 52.213 | >30 | Pass |
| 3 | 01 | 2412 | 4.657 | 2400 | -37.906 | 42.563 | >30 | Pass |
| 3 | 11 | 2462 | 6.370 | 2483.5 | -47.175 | 53.545 | >30 | Pass |
| 4 | 03 | 2422 | 2.976 | 2400 | -38.907 | 41.883 | >30 | Pass |
| 4 | 09 | 2452 | 2.390 | 2483.5 | -47.941 | 50.331 | >30 | 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.

3: In-Band PSD[a] data is tested by Mid channel.

Mode 4 CH03(2422MHz)

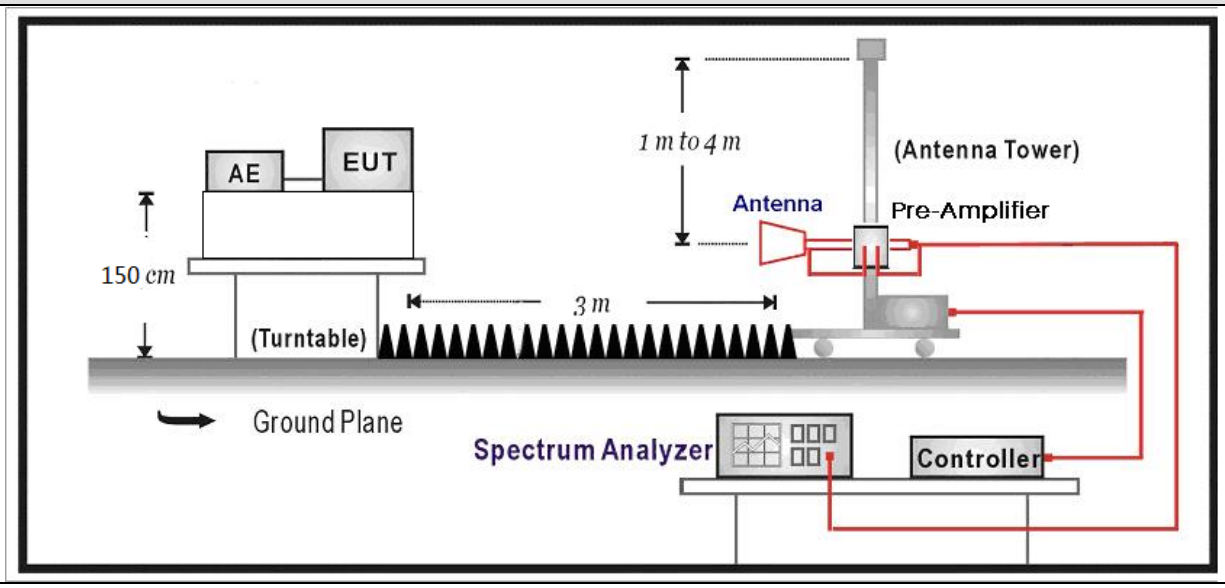
# 6. Radiated Emission Band Edge

## 6.1. Test Equipment

| Radiated Emission(Above 1GHz) / AC-5 | | | | | |
|---|---|---|---|---|---|
| Instrument | Manufacturer | Type No. | Serial No. | Cal. Date | Cal. Due Date |
| 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 | 2016.09.18 | 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 |
| Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards. | | | | | |

## 6.2. Test Setup

Above 1GHz Test Setup:



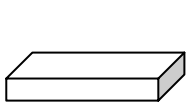
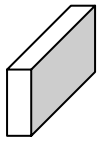
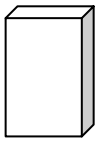
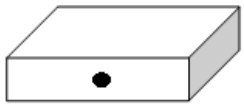
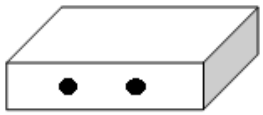

## 6.3. Limit

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

## 6.4. Test Procedure

| Test Method | | | | | | |
|---|---|---|---|---|---|---|
| | References Rule | | | | Chapter | Description |
| ☒ | ANSI C63.10 | | | | 6.10 | Band-edge testing |
| | ☒ | ANSI C63.10 | | | 6.10.5 | Restricted-band band-edge measurements |
| | ☐ | ANSI C63.10 | | | 6.10.6 | Marker-delta method |
| ☒ | ANSI C63.10 | | | | 11.12 | Emissions in restricted frequency bands |
| | ☒ | ANSI C63.10 | | | 11.12.1 | Radiated emission measurements |
| | ☒ | ANSI C63.10 | | | 11.12.2.7 | Radiated spurious emission test |
| ☐ | ANSI C63.10 | | | | 6.4 | Radiated emissions from unlicensed wireless devices below 30 MHz |
| ☐ | ANSI C63.10 | | | | 6.5 | Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz |
| ☒ | ANSI C63.10 | | | | 6.6 | Radiated emissions from unlicensed wireless devices above 1 GHz |
| | | ☐ | ANSI C63.10 | | 11.12.2.3 | 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>
<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 1~4</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 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. Duty Cycle

**APEX0365:**

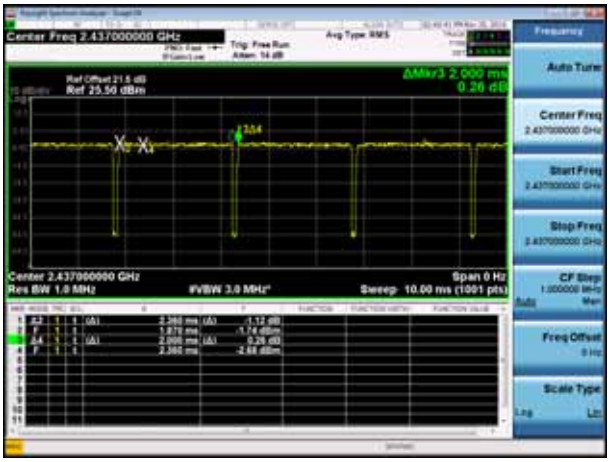
| Test Mode | Tx On (ms) | Tx Off (ms) | VBW | Tx On + Tx Off (ms) | Duty Cycle |
|---|---|---|---|---|---|
| 802.11b | N/A | N/A | 10Hz | N/A | 100% |
| 802.11g | 2.01 | 0.12 | 510Hz | 2.13 | 94.37% |
| 802.11n(20MHz) | 4.92 | 0.12 | 220Hz | 5.04 | 97.62% |
| 802.11n(40MHz) | 2.00 | 0.36 | 510Hz | 2.36 | 84.75% |

802.11b

802.11g

802.11n(20MHz)

802.11n(40MHz)



**APEX0367:**

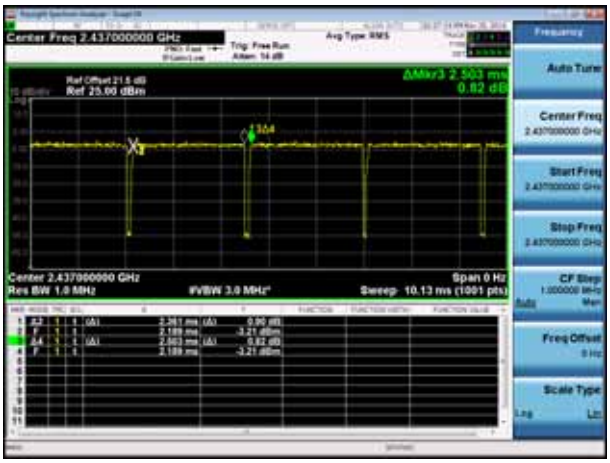
| Test Mode | Tx On (ms) | Tx Off (ms) | VBW | Tx On + Tx Off (ms) | Duty Cycle |
|---|---|---|---|---|---|
| 802.11b | N/A | N/A | 10Hz | N/A | 100% |
| 802.11g | 2.02 | 0.1 | 510 Hz | 2.12 | 95.28% |
| 802.11n(20MHz) | 4.94 | 0.14 | 210 Hz | 5.08 | 97.24% |
| 802.11n(40MHz) | 2.361 | 0.142 | 450 Hz | 2.503 | 94.33% |

802.11b

802.11g

802.11n(20MHz)

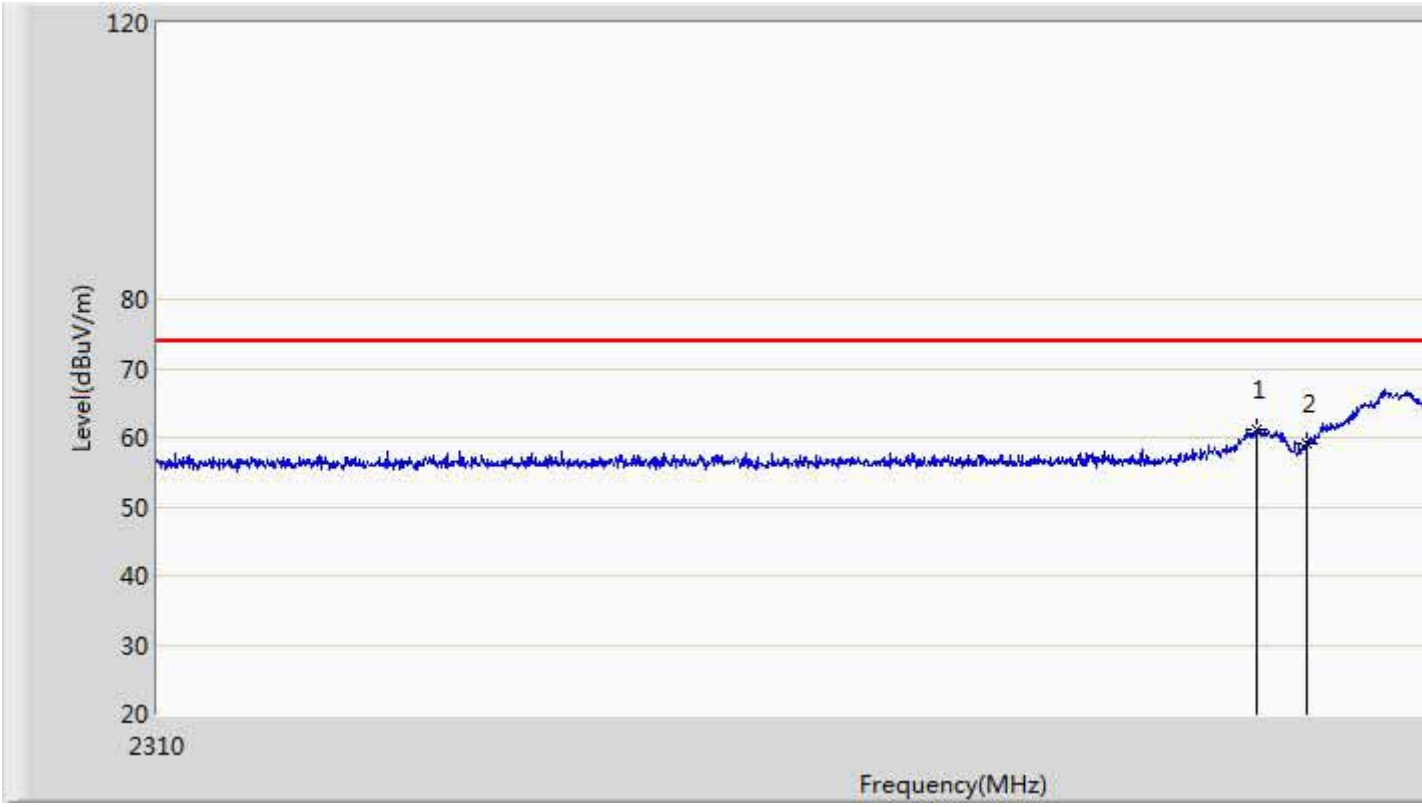
802.11n(40MHz)



## 6.7. Test Result

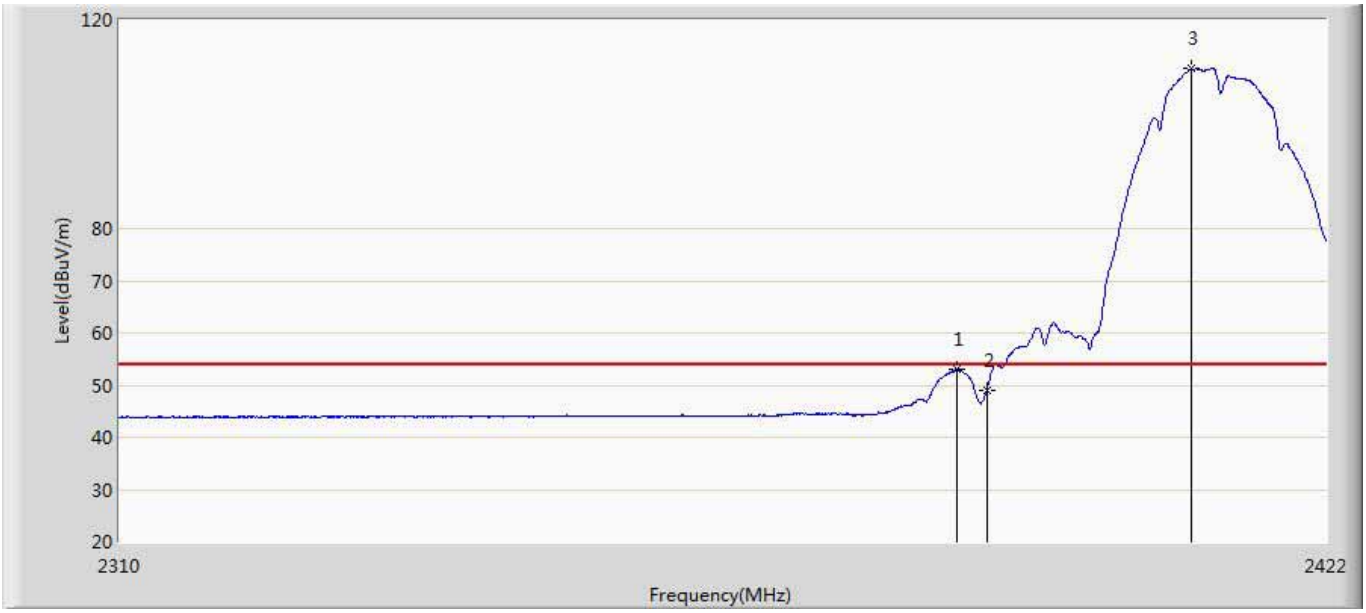
**APEX0365:**

| | |
|---|---|
| Site: AC5 | Time: 2016/11/19 - 14:02 |
| 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 2412MHz by 802.11b | |



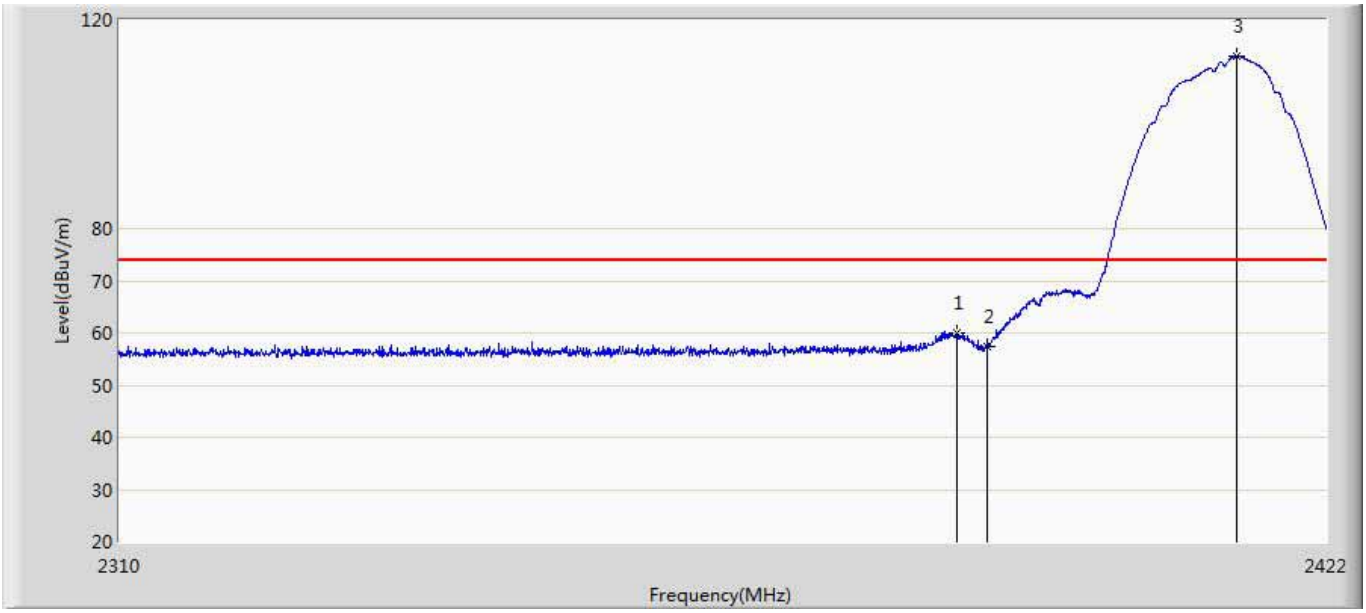

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2386.552 | 61.244 | 25.570 | -12.756 | 74.000 | 35.674 | PK |
| 2 | | 2390.000 | 59.182 | 23.500 | -14.818 | 74.000 | 35.682 | PK |
| 3 | * | 2410.464 | 113.977 | 78.241 | 39.977 | 74.000 | 35.735 | PK |

| | |
|---|---|
| Site: AC5 | Time: 2016/11/19 - 14:06 |
| 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 2412MHz by 802.11b | |



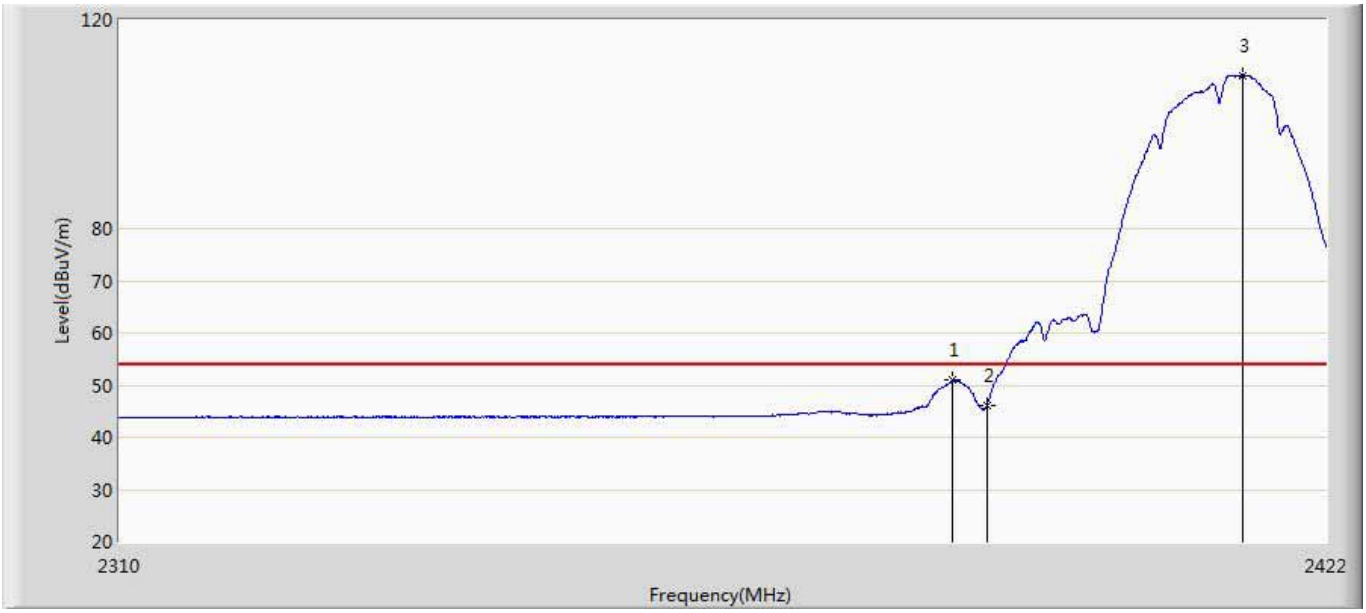

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2387.224 | 53.184 | 17.508 | -0.816 | 54.000 | 35.676 | AV |
| 2 | | 2390.000 | 49.095 | 13.413 | -4.905 | 54.000 | 35.682 | AV |
| 3 | * | 2409.232 | 110.590 | 74.858 | 56.590 | 54.000 | 35.732 | AV |

| | |
|---|---|
| Site: AC5 | Time: 2016/11/19 - 14:17 |
| 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 2412MHz by 802.11b | |



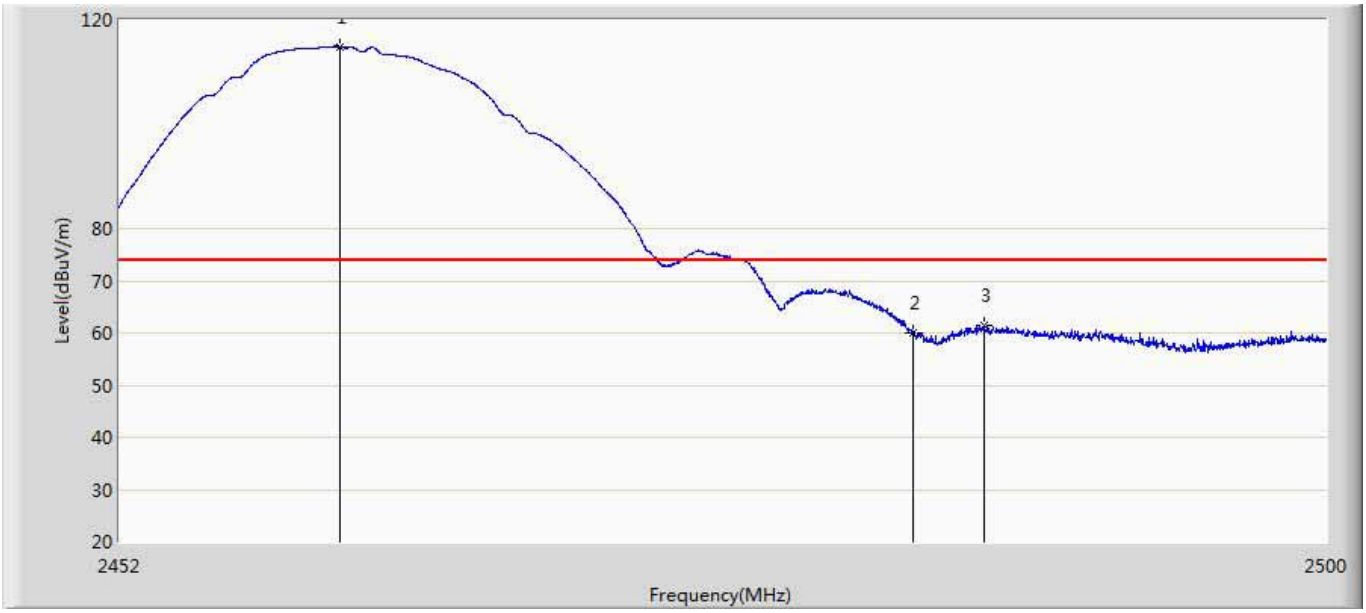

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2387.224 | 60.029 | 24.353 | -13.971 | 74.000 | 35.676 | PK |
| 2 | | 2390.000 | 57.367 | 21.685 | -16.633 | 74.000 | 35.682 | PK |
| 3 | * | 2413.488 | 113.015 | 77.267 | 39.015 | 74.000 | 35.748 | PK |

| | |
|---|---|
| Site: AC5 | Time: 2016/11/19 - 15:15 |
| 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 2412MHz by 802.11b | |



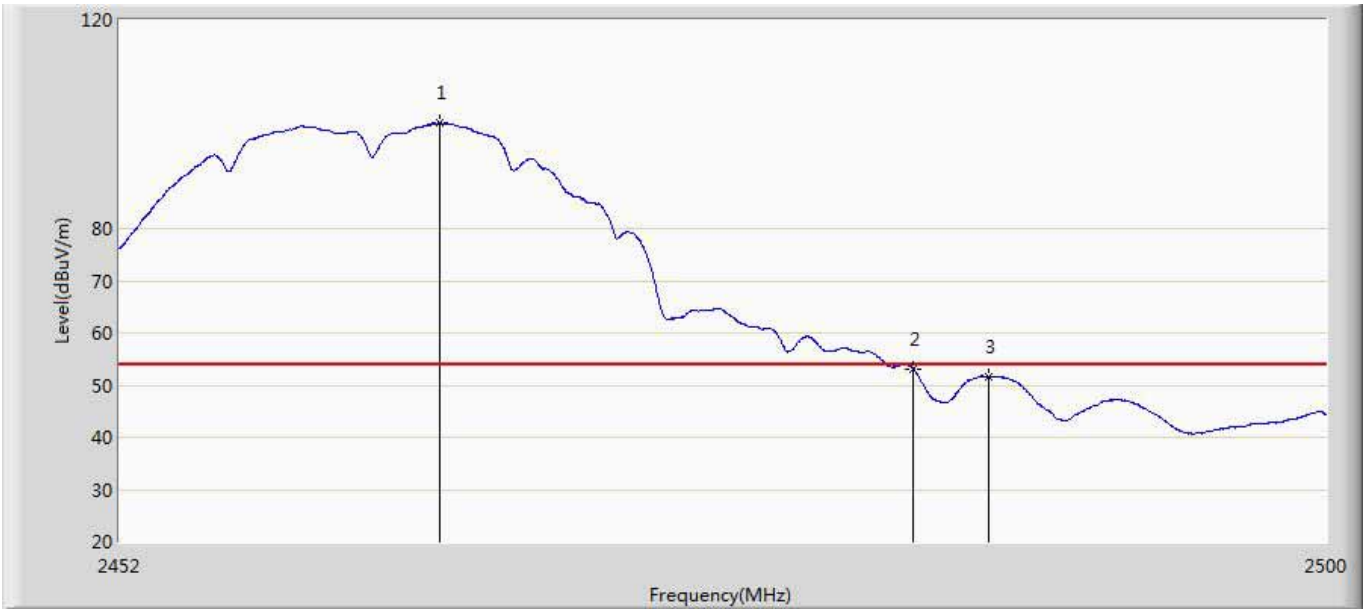

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2386.832 | 50.940 | 15.265 | -3.060 | 54.000 | 35.675 | AV |
| 2 | | 2390.000 | 46.152 | 10.470 | -7.848 | 54.000 | 35.682 | AV |
| 3 | * | 2414.048 | 109.350 | 73.600 | 55.350 | 54.000 | 35.750 | AV |

| | |
|---|---|
| Site: AC5 | Time: 2016/11/19 - 15:17 |
| 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 2462MHz by 802.11b | |



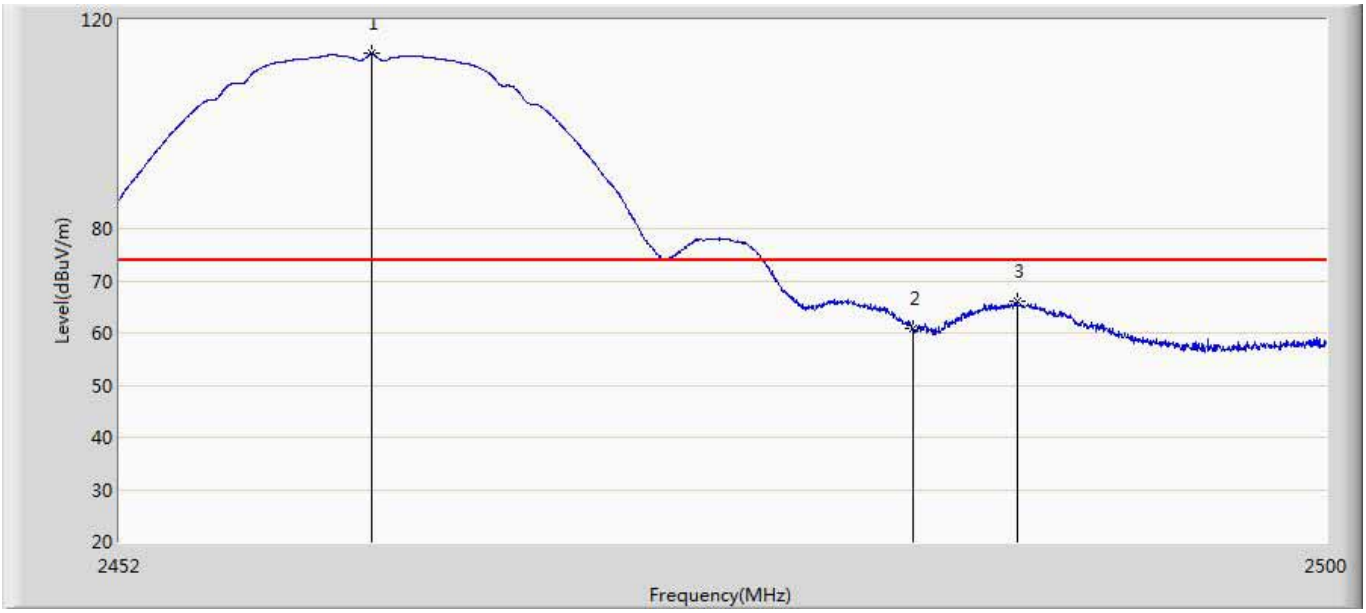

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2460.688 | 114.880 | 79.007 | 40.880 | 74.000 | 35.872 | PK |
| 2 | | 2483.500 | 59.947 | 24.055 | -14.053 | 74.000 | 35.891 | PK |
| 3 | | 2486.320 | 61.568 | 25.656 | -12.432 | 74.000 | 35.912 | PK |

| | |
|---|---|
| Site: AC5 | Time: 2016/11/19 - 15:18 |
| 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 2462MHz by 802.11b | |



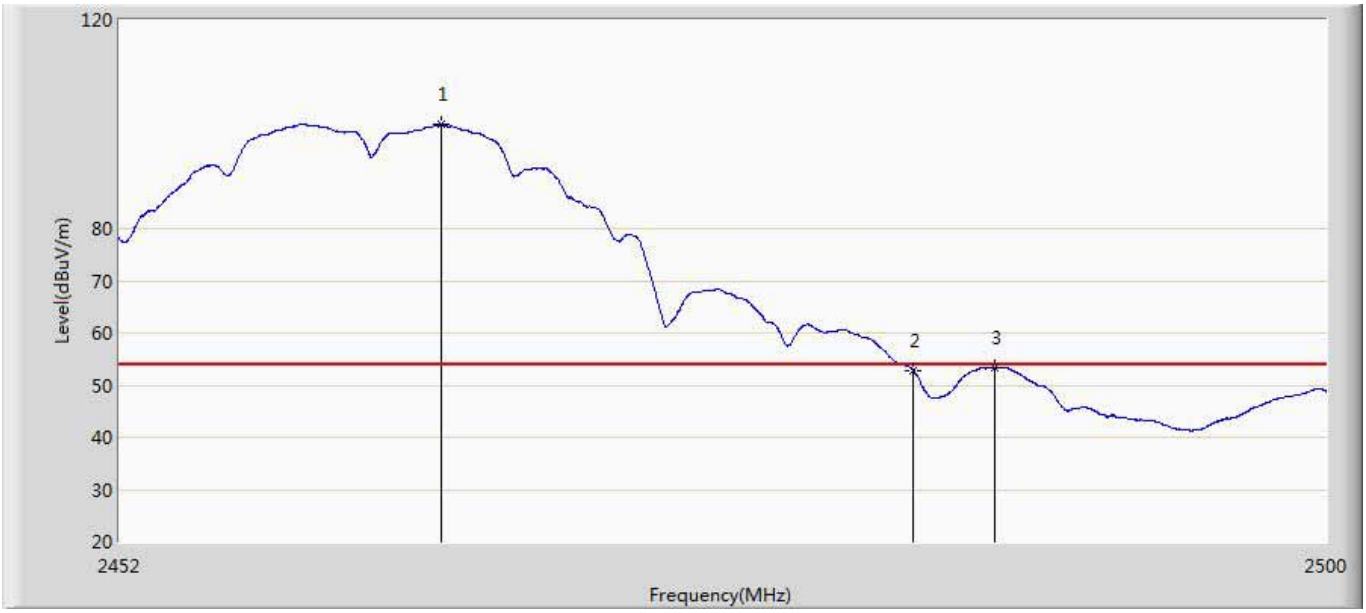

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2464.648 | 100.173 | 64.298 | 46.173 | 54.000 | 35.875 | AV |
| 2 | | 2483.500 | 53.079 | 17.187 | -0.921 | 54.000 | 35.891 | AV |
| 3 | | 2486.512 | 51.639 | 15.726 | -2.361 | 54.000 | 35.914 | AV |

| | |
|---|---|
| Site: AC5 | Time: 2016/11/19 - 15:27 |
| 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 2462MHz by 802.11b | |



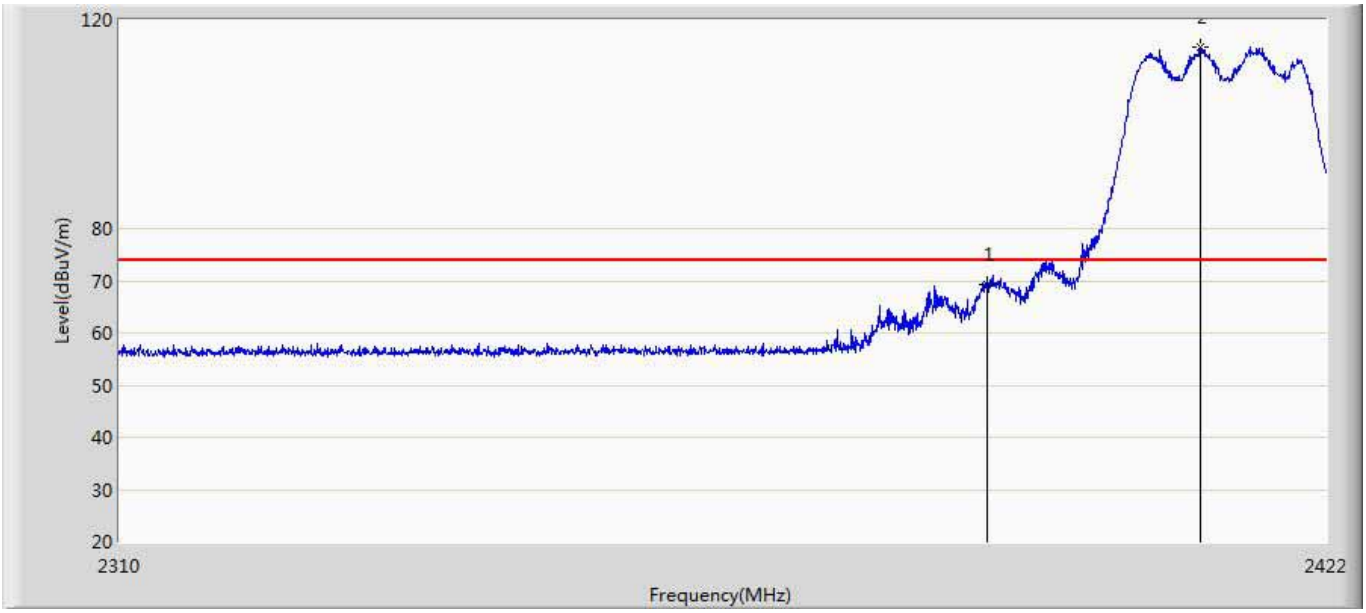

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2461.960 | 113.575 | 77.697 | 39.575 | 74.000 | 35.878 | PK |
| 2 | | 2483.500 | 60.746 | 24.854 | -13.254 | 74.000 | 35.891 | PK |
| 3 | | 2487.616 | 65.989 | 30.068 | -8.011 | 74.000 | 35.921 | PK |

| | |
|---|---|
| Site: AC5 | Time: 2016/11/19 - 15:28 |
| 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 2462MHz by 802.11b | |




| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2464.720 | 99.906 | 64.031 | 45.906 | 54.000 | 35.875 | AV |
| 2 | | 2483.500 | 52.747 | 16.855 | -1.253 | 54.000 | 35.891 | AV |
| 3 | | 2486.728 | 53.433 | 17.518 | -0.567 | 54.000 | 35.915 | AV |

| | |
|---|---|
| Site: AC5 | Time: 2016/11/19 - 15:30 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Vertical |
| EUT: Access Point | Power:PoE 57V |
| Note: Mode 2:Transmit at channel 2412MHz by 802.11g | |

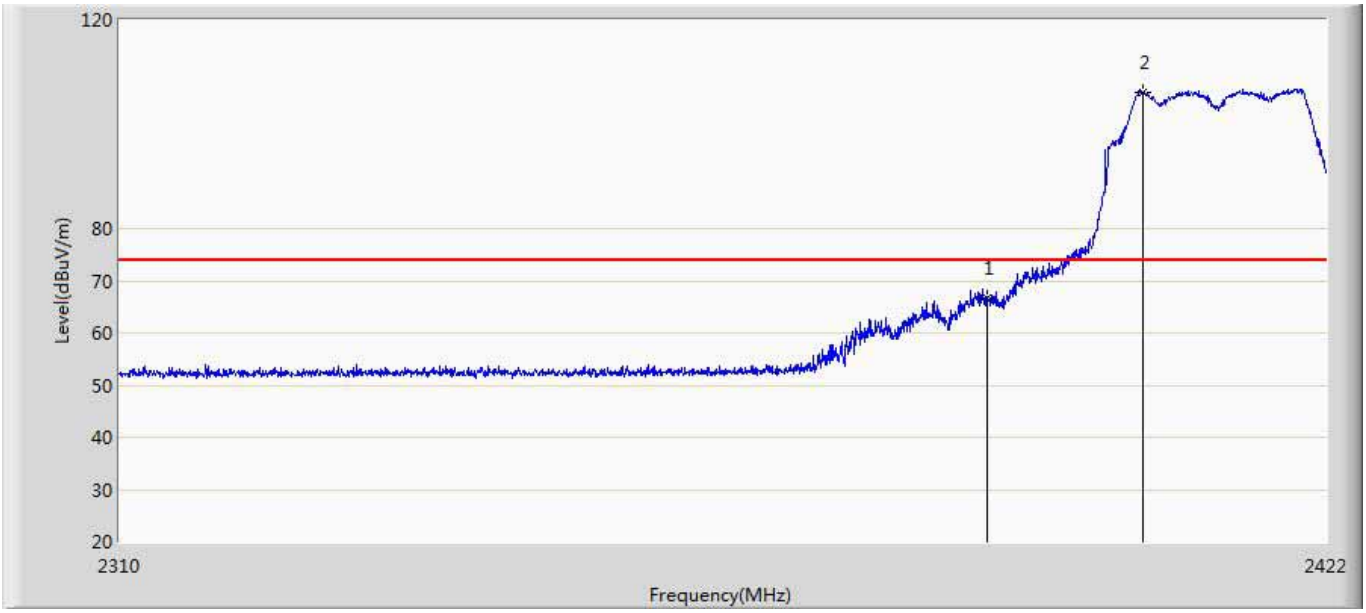



| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2390.000 | 69.284 | 33.602 | -4.716 | 74.000 | 35.682 | PK |
| 2 | * | 2410.072 | 114.780 | 79.045 | 40.780 | 74.000 | 35.735 | PK |

| | |
|---|---|
| Site: AC5 | Time: 2016/11/19 - 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 2:Transmit at channel 2412MHz by 802.11g | |

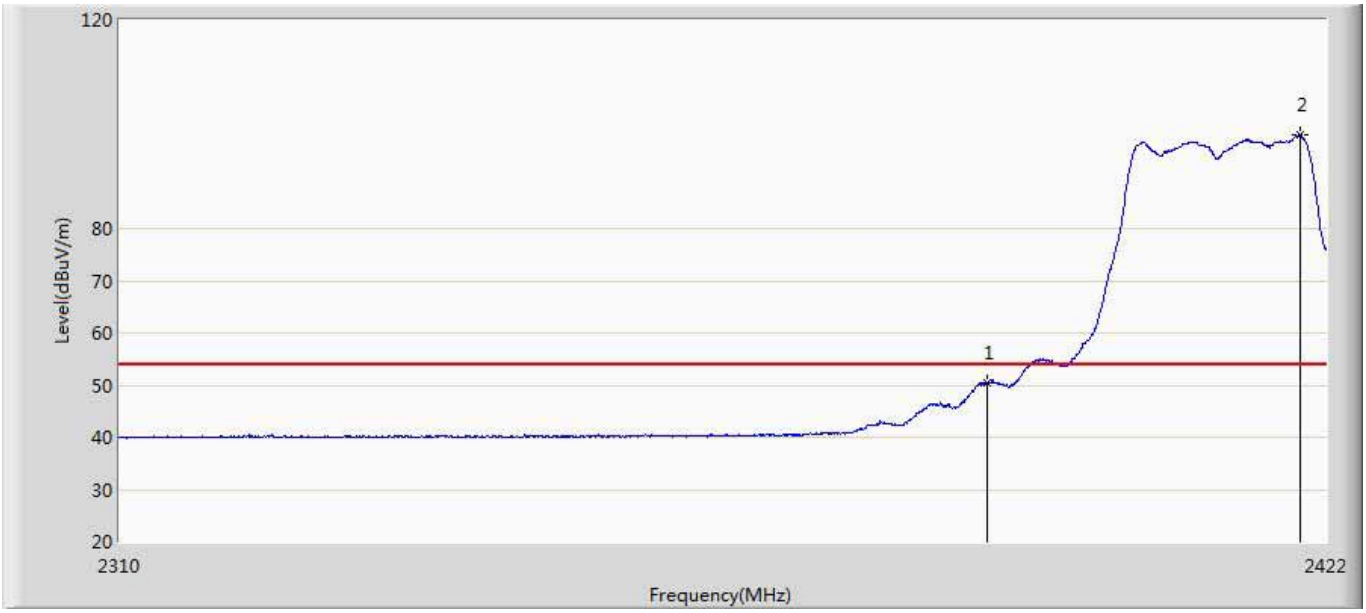

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2390.000 | 53.062 | 17.380 | -0.938 | 54.000 | 35.682 | AV |
| 2 | * | 2404.976 | 97.519 | 61.798 | 43.519 | 54.000 | 35.721 | AV |

| | |
|---|---|
| Site: AC5 | Time: 2016/11/19 - 15:42 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Horizontal |
| EUT: Access Point | Power:PoE 57V |
| Note: Mode 2:Transmit at channel 2412MHz by 802.11g | |



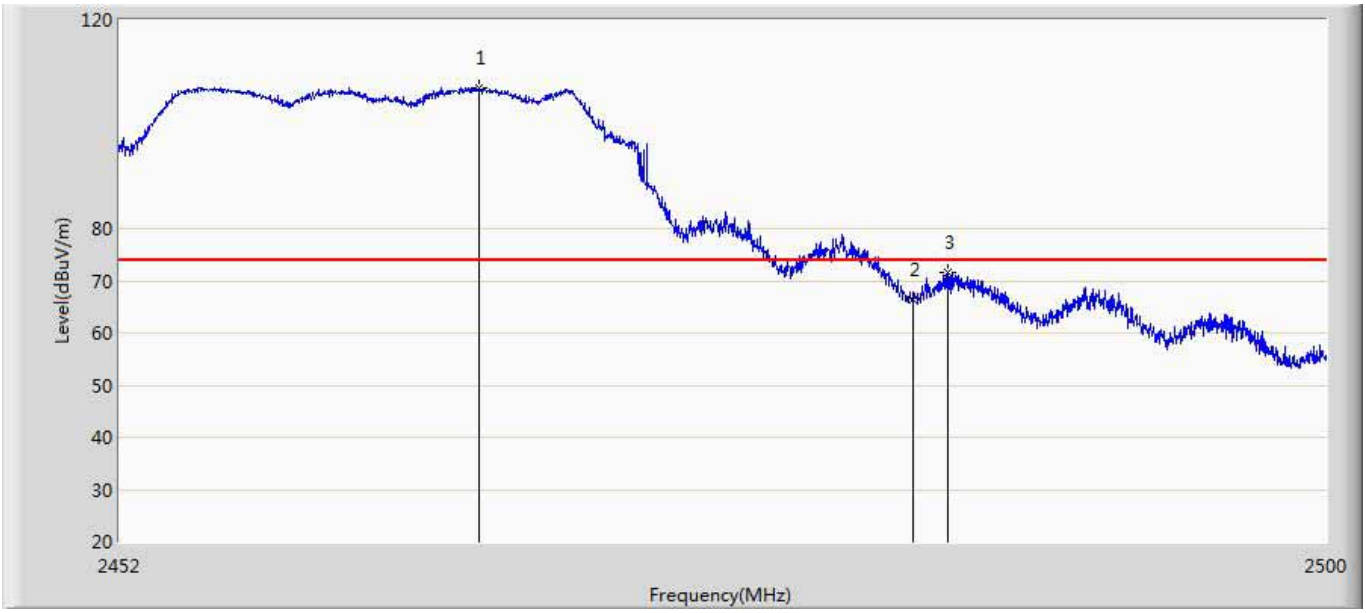

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2390.000 | 66.743 | 31.061 | -7.257 | 74.000 | 35.682 | PK |
| 2 | * | 2404.640 | 106.227 | 70.507 | 32.227 | 74.000 | 35.720 | PK |

| | |
|---|---|
| Site: AC5 | Time: 2016/11/19 - 15:44 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Horizontal |
| EUT: Access Point | Power:PoE 57V |
| Note: Mode 2:Transmit at channel 2412MHz by 802.11g | |



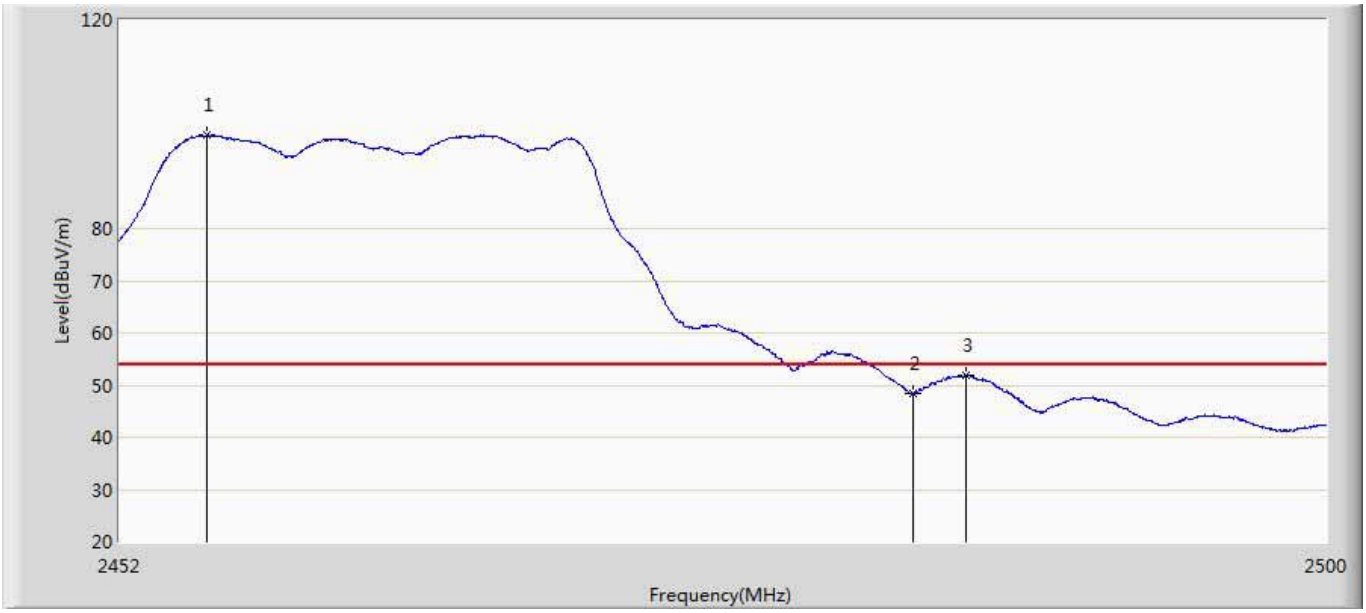

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2390.000 | 50.356 | 14.674 | -3.644 | 54.000 | 35.682 | AV |
| 2 | * | 2419.592 | 97.905 | 62.132 | 43.905 | 54.000 | 35.774 | AV |

| | |
|---|---|
| Site: AC5 | Time: 2016/11/19 - 15:45 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Vertical |
| EUT: Access Point | Power:PoE 57V |
| Note: Mode 2:Transmit at channel 2462MHz by 802.11g | |



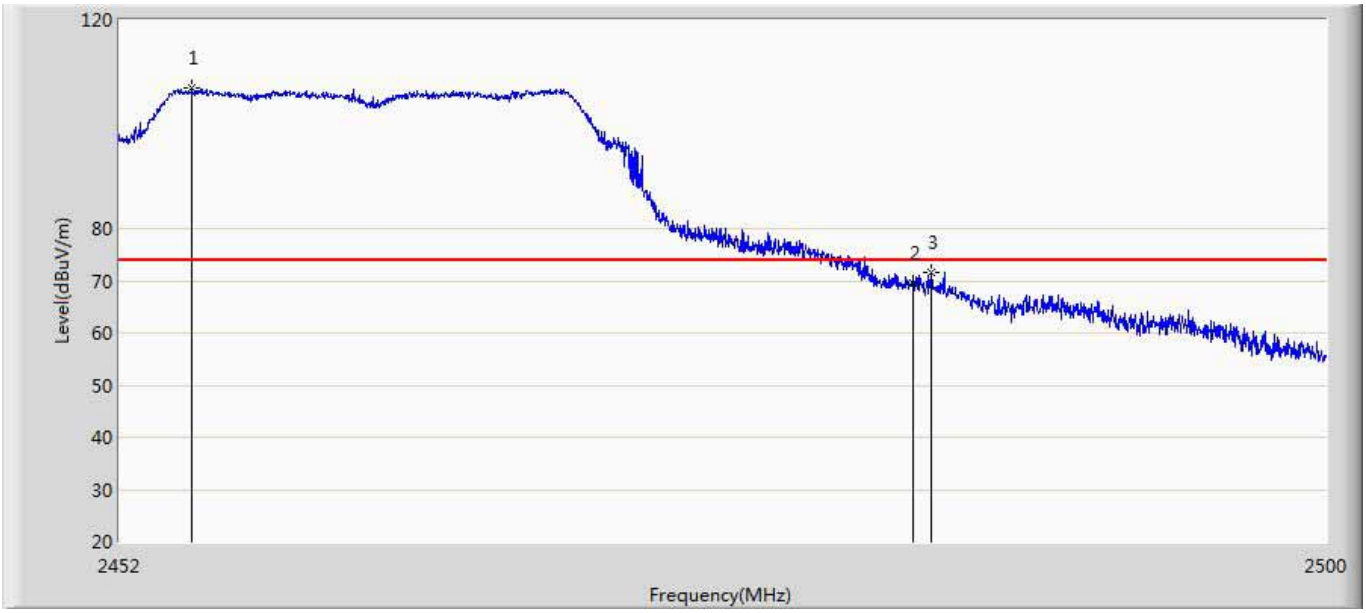

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2466.232 | 106.878 | 71.004 | 32.878 | 74.000 | 35.873 | PK |
| 2 | | 2483.500 | 66.362 | 30.470 | -7.638 | 74.000 | 35.891 | PK |
| 3 | | 2484.880 | 71.478 | 35.576 | -2.522 | 74.000 | 35.902 | PK |

| | |
|---|---|
| Site: AC5 | Time: 2016/11/19 - 15:47 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Vertical |
| EUT: Access Point | Power:PoE 57V |
| Note: Mode 2:Transmit at channel 2462MHz by 802.11g | |



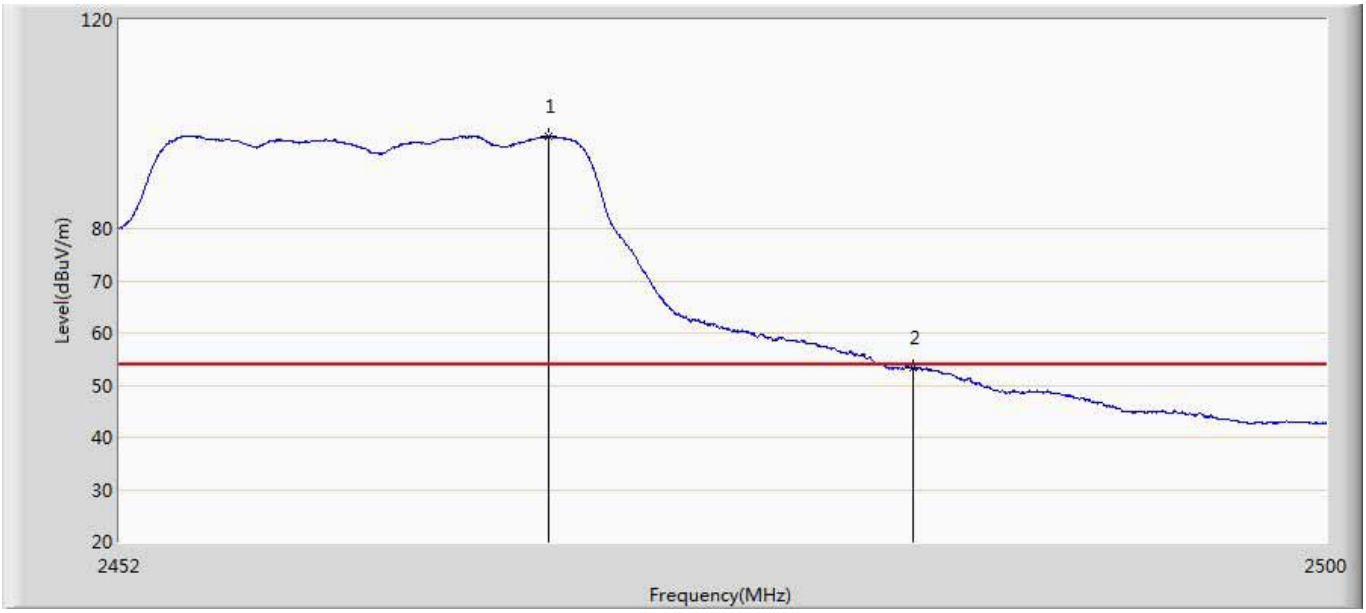

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2455.480 | 98.023 | 62.173 | 44.023 | 54.000 | 35.849 | AV |
| 2 | | 2483.500 | 48.289 | 12.397 | -5.711 | 54.000 | 35.891 | AV |
| 3 | | 2485.576 | 51.836 | 15.929 | -2.164 | 54.000 | 35.907 | AV |

| | |
|---|---|
| Site: AC5 | Time: 2016/11/19 - 16:12 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Horizontal |
| EUT: Access Point | Power:PoE 57V |
| Note: Mode 2:Transmit at channel 2462MHz by 802.11g | |



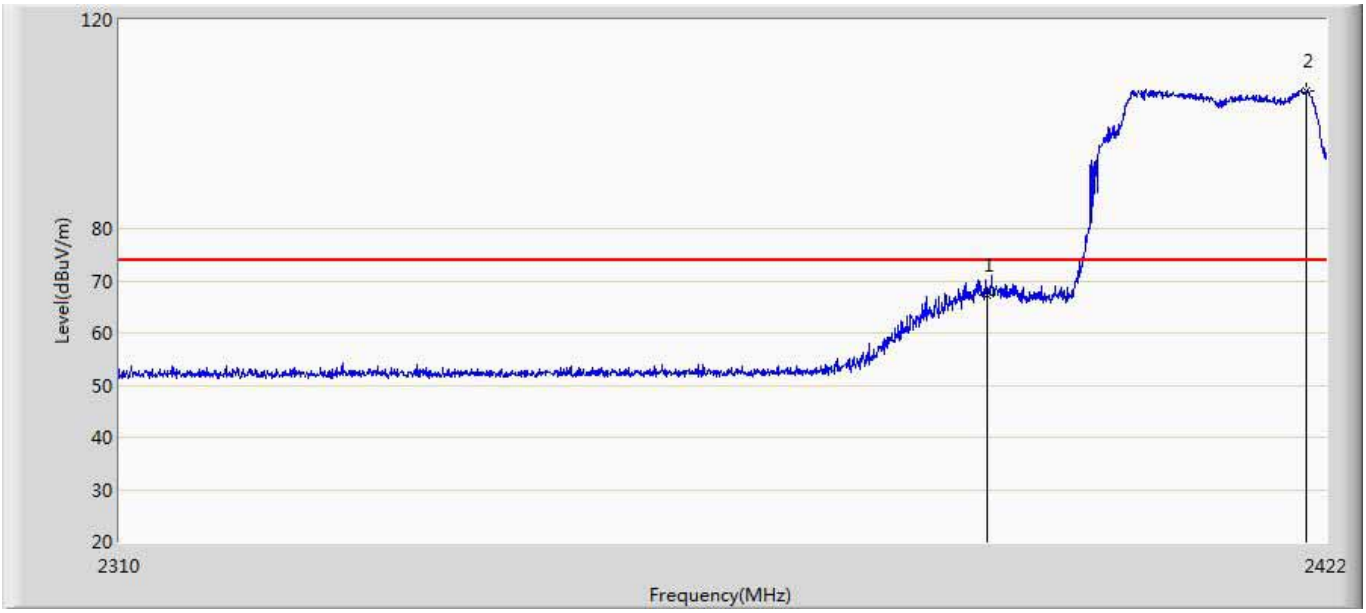

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2454.880 | 106.919 | 71.072 | 32.919 | 74.000 | 35.848 | PK |
| 2 | | 2483.500 | 69.611 | 33.719 | -4.389 | 74.000 | 35.891 | PK |
| 3 | | 2484.208 | 71.510 | 35.613 | -2.490 | 74.000 | 35.897 | PK |

| | |
|---|---|
| Site: AC5 | Time: 2016/11/19 - 16:13 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Horizontal |
| EUT: Access Point | Power:PoE 57V |
| Note: Mode 2:Transmit at channel 2462MHz by 802.11g | |



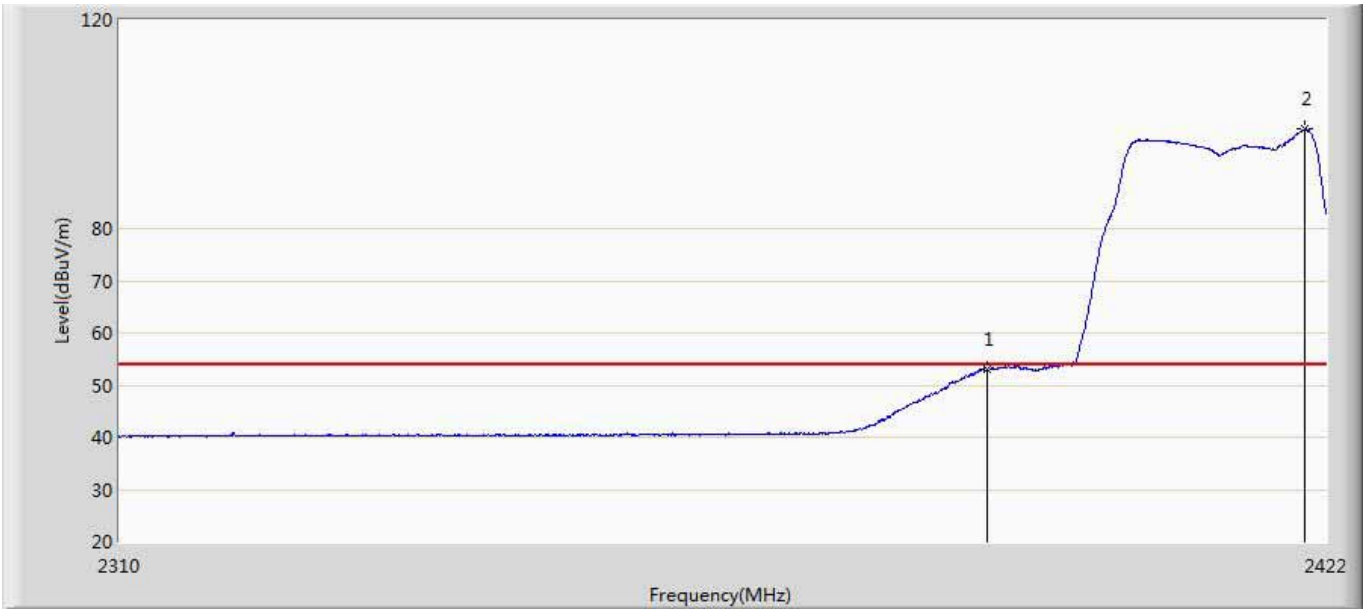

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2468.992 | 97.632 | 61.762 | 43.632 | 54.000 | 35.871 | AV |
| 2 | | 2483.500 | 53.304 | 17.412 | -0.696 | 54.000 | 35.891 | AV |

| | |
|---|---|
| Site: AC5 | Time: 2016/11/19 - 16:16 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Vertical |
| EUT: Access Point | Power:PoE 57V |
| Note: Mode 3:Transmit at channel 2412MHz by 802.11n20 | |



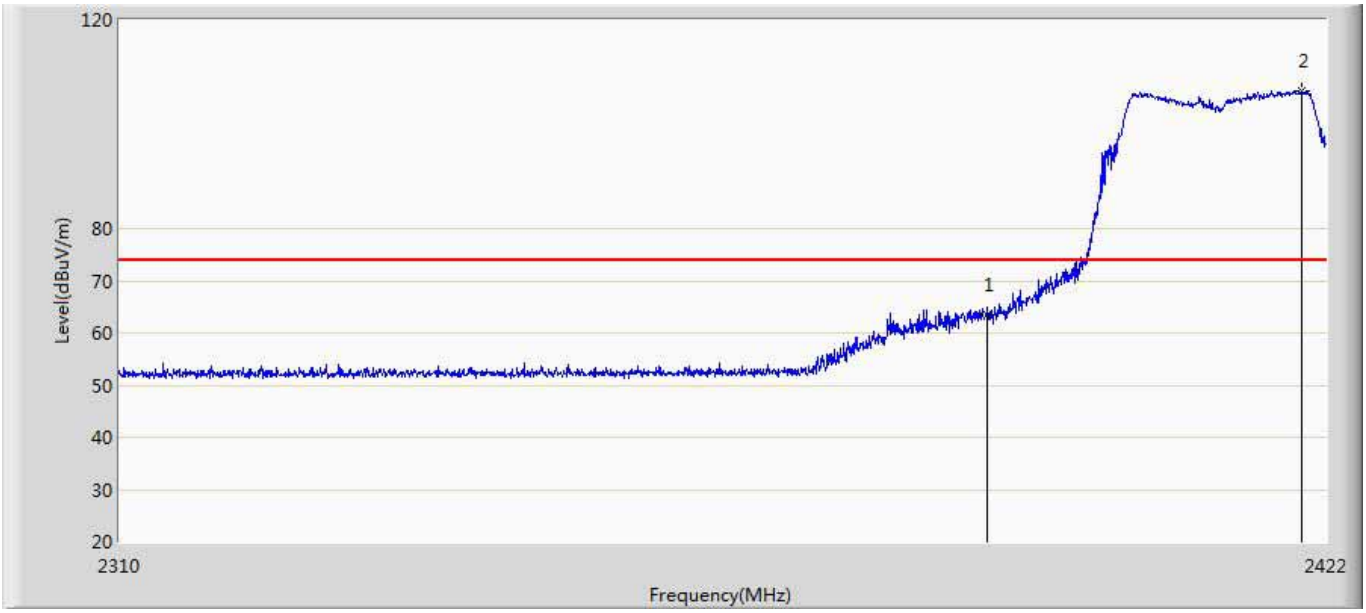

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2390.000 | 67.347 | 31.665 | -6.653 | 74.000 | 35.682 | PK |
| 2 | * | 2420.152 | 106.511 | 70.735 | 32.511 | 74.000 | 35.775 | PK |

| | |
|---|---|
| Site: AC5 | Time: 2016/11/19 - 16:28 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Vertical |
| EUT: Access Point | Power:PoE 57V |
| Note: Mode 3:Transmit at channel 2412MHz by 802.11n20 | |



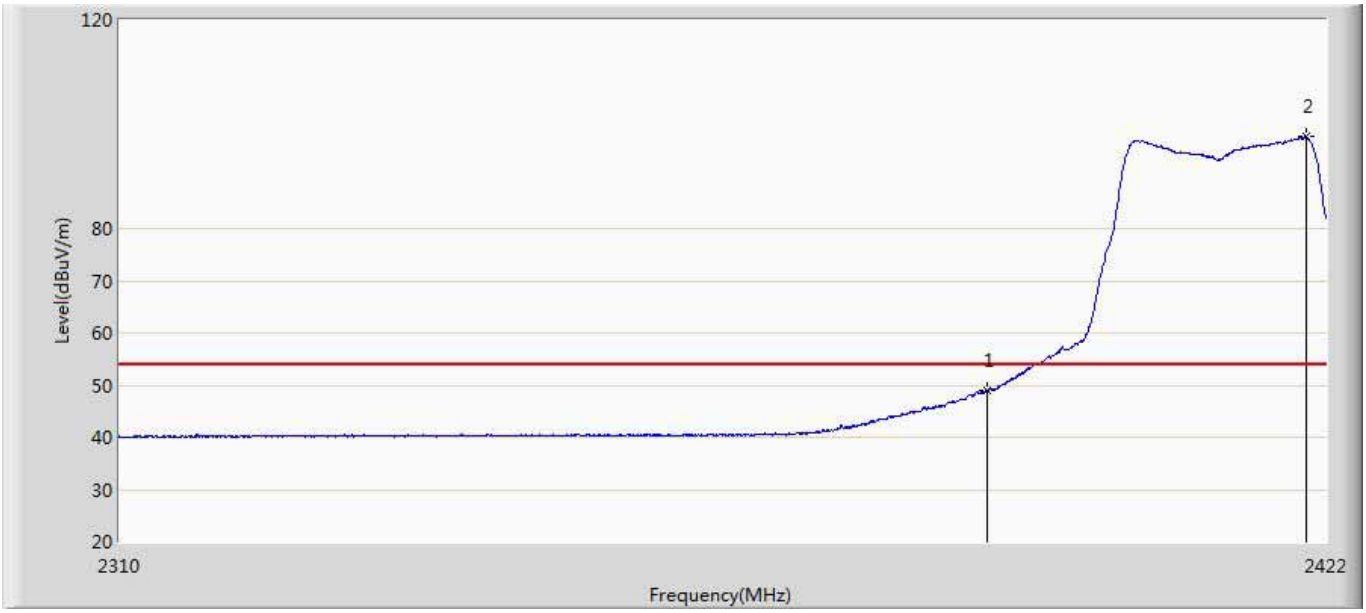

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2390.000 | 53.044 | 17.362 | -0.956 | 54.000 | 35.682 | AV |
| 2 | * | 2419.984 | 99.046 | 63.271 | 45.046 | 54.000 | 35.775 | AV |

| | |
|---|---|
| Site: AC5 | Time: 2016/11/19 - 16:31 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Horizontal |
| EUT: Access Point | Power:PoE 57V |
| Note: Mode 3:Transmit at channel 2412MHz by 802.11n20 | |



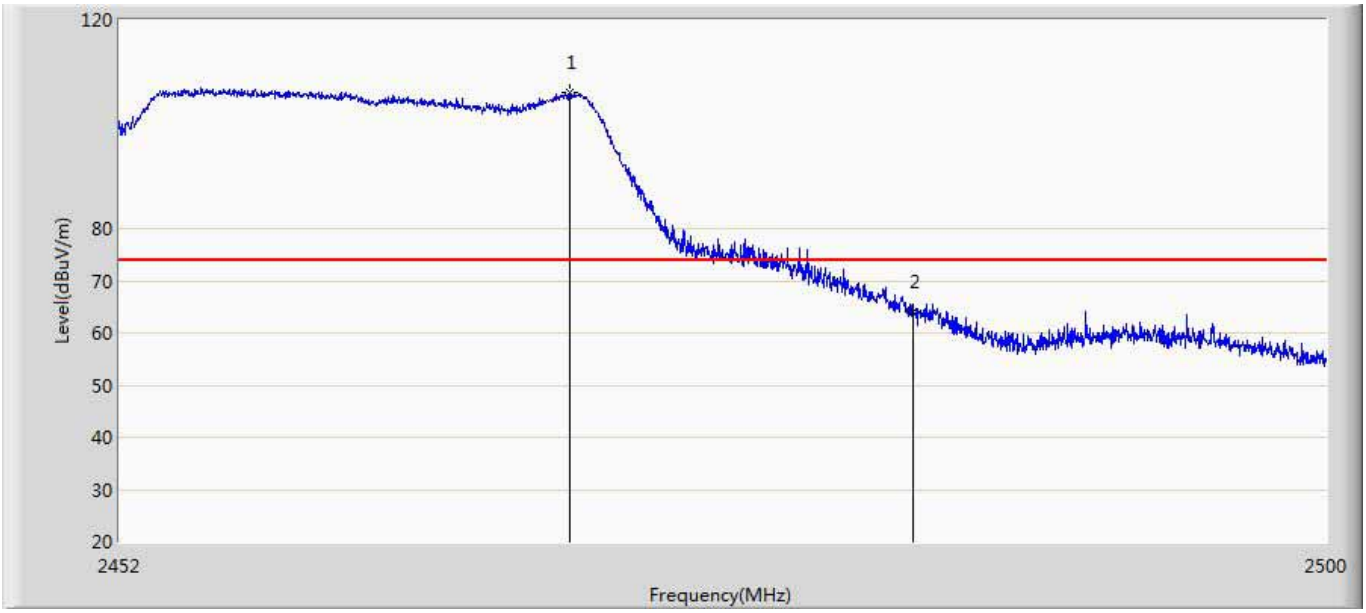

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2390.000 | 63.589 | 27.907 | -10.411 | 74.000 | 35.682 | PK |
| 2 | * | 2419.648 | 106.424 | 70.651 | 32.424 | 74.000 | 35.774 | PK |

| | |
|---|---|
| Site: AC5 | Time: 2016/11/19 - 16:33 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Horizontal |
| EUT: Access Point | Power:PoE 57V |
| Note: Mode 3:Transmit at channel 2412MHz by 802.11n20 | |



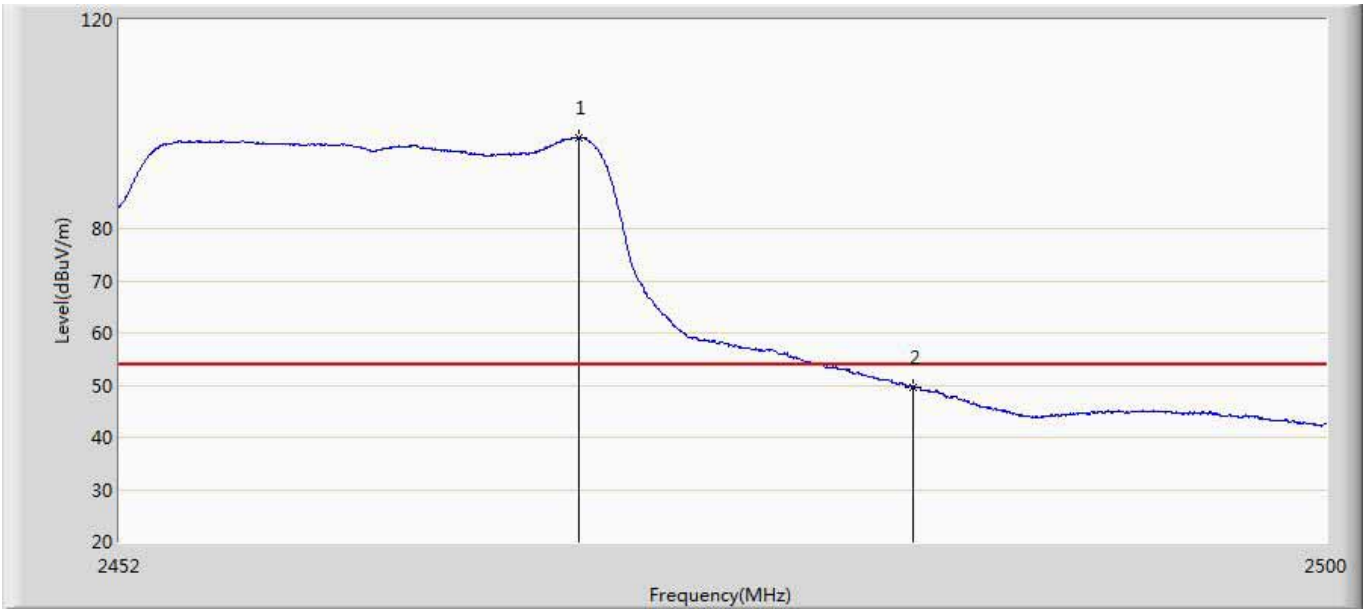

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2390.000 | 48.984 | 13.302 | -5.016 | 54.000 | 35.682 | AV |
| 2 | * | 2420.152 | 97.552 | 61.776 | 43.552 | 54.000 | 35.775 | AV |

| | |
|---|---|
| Site: AC5 | Time: 2016/11/19 - 16:35 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Vertical |
| EUT: Access Point | Power:PoE 57V |
| Note: Mode 3:Transmit at channel 2462MHz by 802.11n20 | |



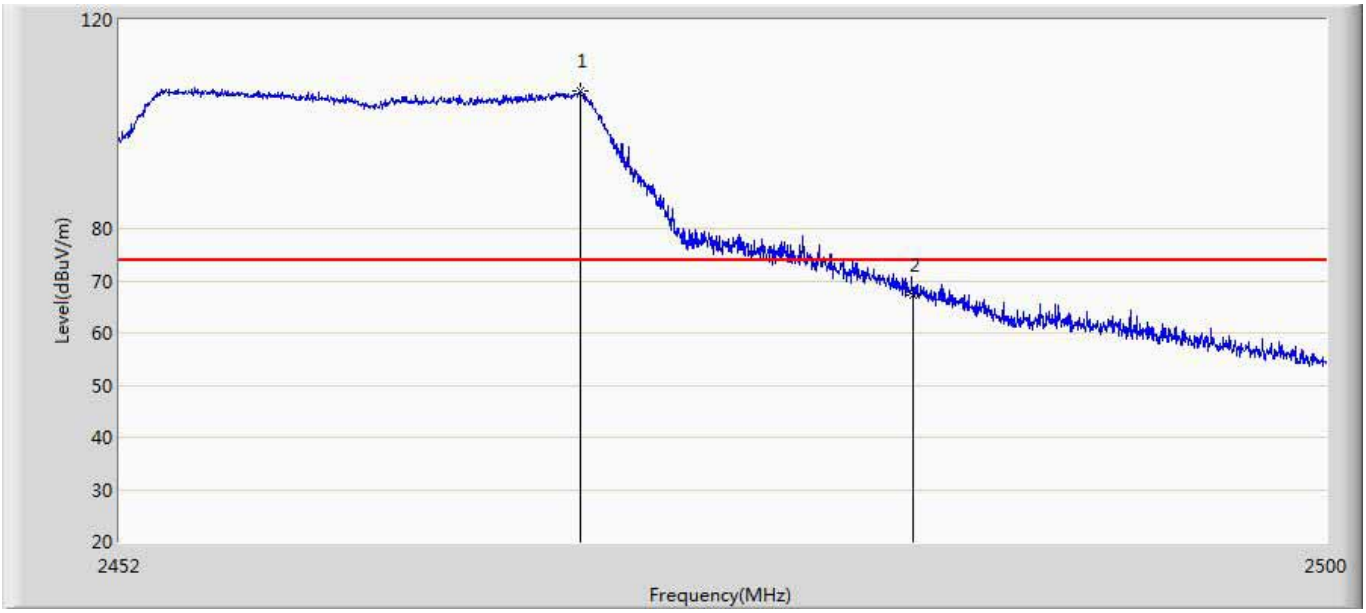

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2469.808 | 106.229 | 70.360 | 32.229 | 74.000 | 35.870 | PK |
| 2 | | 2483.500 | 64.093 | 28.201 | -9.907 | 74.000 | 35.891 | PK |

| | |
|---|---|
| Site: AC5 | Time: 2016/11/19 - 16:36 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Vertical |
| EUT: Access Point | Power:PoE 57V |
| Note: Mode 3:Transmit at channel 2462MHz by 802.11n20 | |



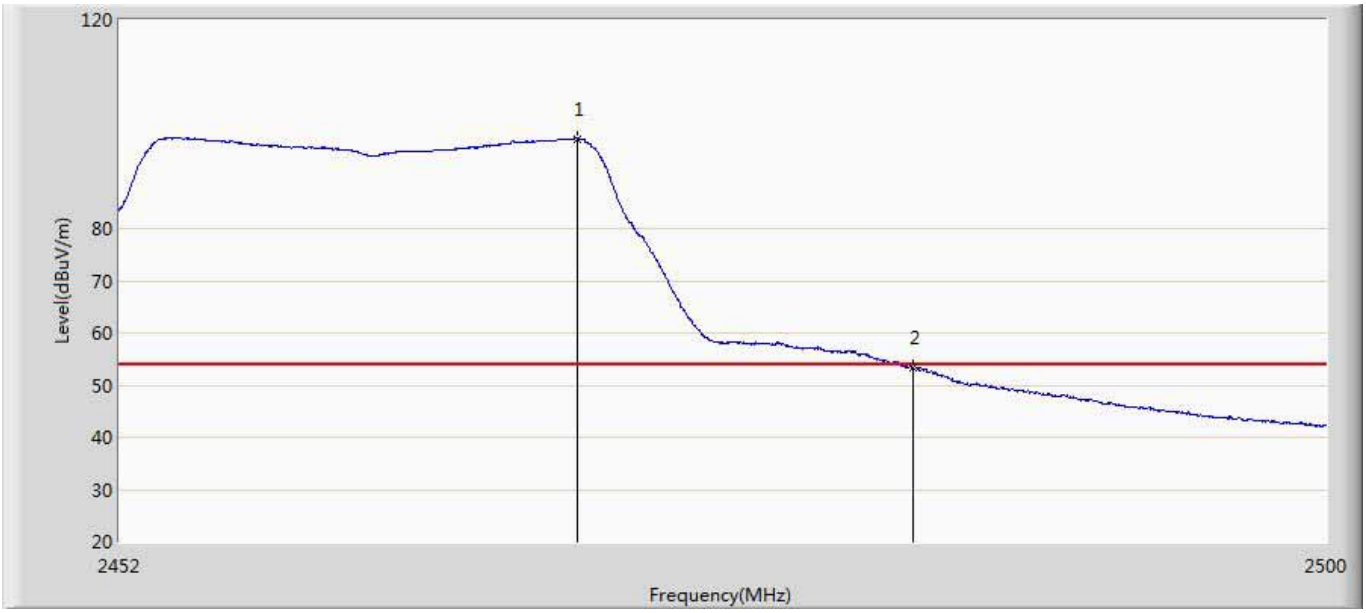

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2470.192 | 97.430 | 61.561 | 43.430 | 54.000 | 35.869 | AV |
| 2 | | 2483.500 | 49.638 | 13.746 | -4.362 | 54.000 | 35.891 | AV |

| | |
|---|---|
| Site: AC5 | Time: 2016/11/19 - 16:41 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Horizontal |
| EUT: Access Point | Power:PoE 57V |
| Note: Mode 3:Transmit at channel 2462MHz by 802.11n20 | |



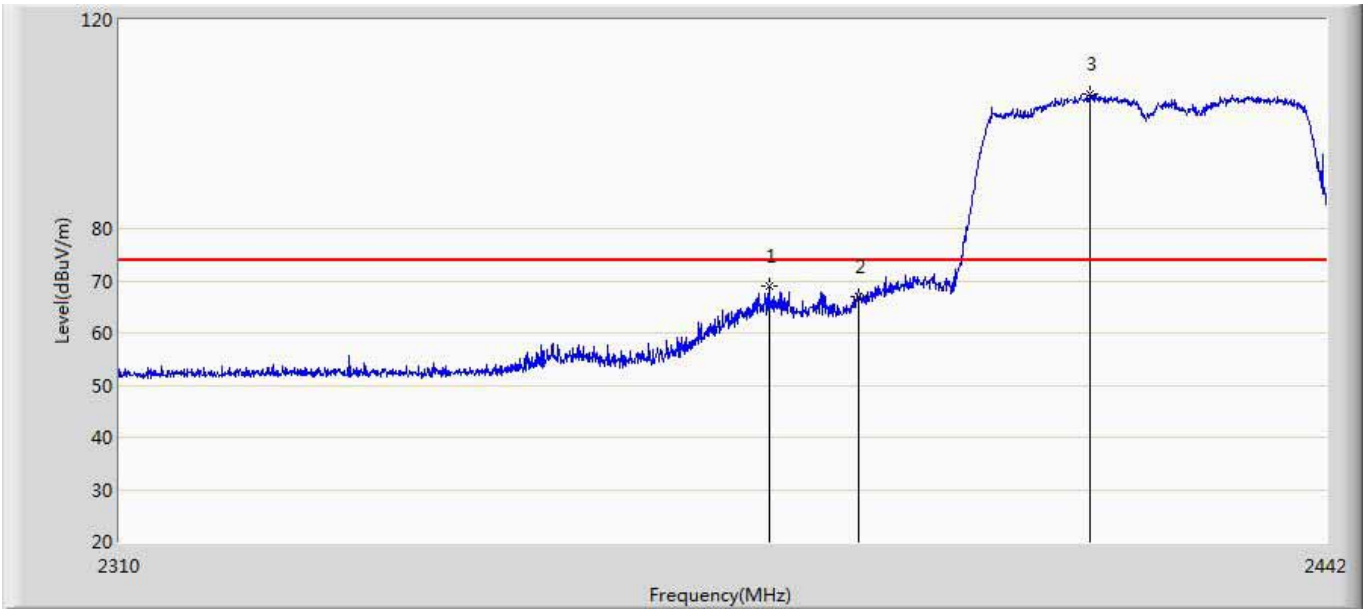

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2470.216 | 106.380 | 70.511 | 32.380 | 74.000 | 35.869 | PK |
| 2 | | 2483.500 | 67.354 | 31.462 | -6.646 | 74.000 | 35.891 | PK |

| | |
|---|---|
| Site: AC5 | Time: 2016/11/19 - 16:41 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Horizontal |
| EUT: Access Point | Power:PoE 57V |
| Note: Mode 3:Transmit at channel 2462MHz by 802.11n20 | |



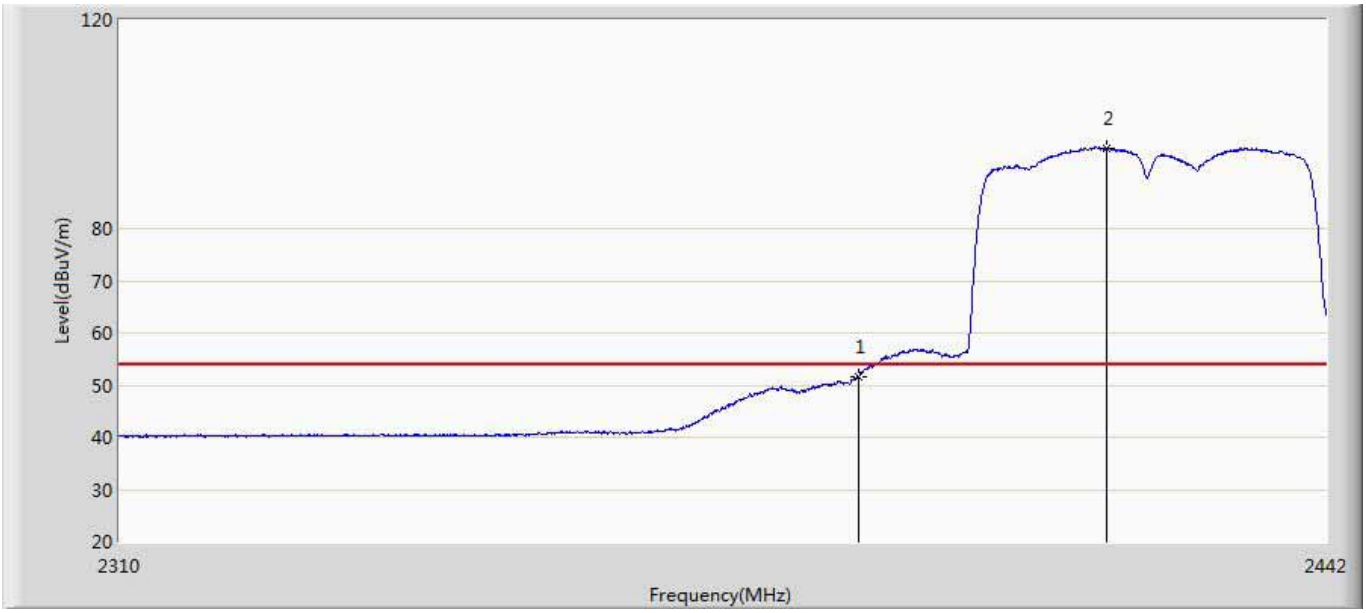

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2470.120 | 97.237 | 61.368 | 43.237 | 54.000 | 35.869 | AV |
| 2 | | 2483.500 | 53.368 | 17.476 | -0.632 | 54.000 | 35.891 | AV |

| | |
|---|---|
| Site: AC5 | Time: 2016/11/19 - 16:42 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Vertical |
| EUT: Access Point | Power:PoE 57V |
| Note: Mode 4:Transmit at channel 2422MHz by 802.11n40 | |



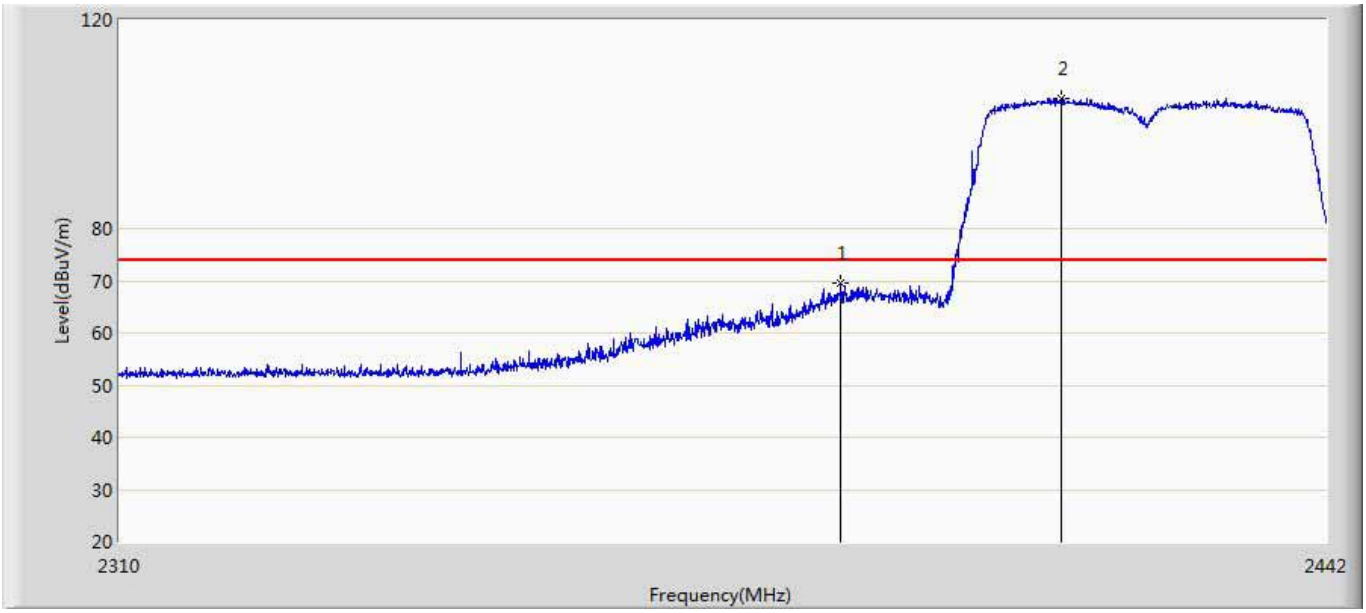

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2380.224 | 68.956 | 33.296 | -5.044 | 74.000 | 35.660 | PK |
| 2 | | 2390.000 | 66.830 | 31.148 | -7.170 | 74.000 | 35.682 | PK |
| 3 | * | 2415.534 | 105.745 | 69.989 | 31.745 | 74.000 | 35.757 | PK |

| | |
|---|---|
| Site: AC5 | Time: 2016/11/19 - 17:03 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Vertical |
| EUT: Access Point | Power:PoE 57V |
| Note: Mode 4:Transmit at channel 2422MHz by 802.11n40 | |



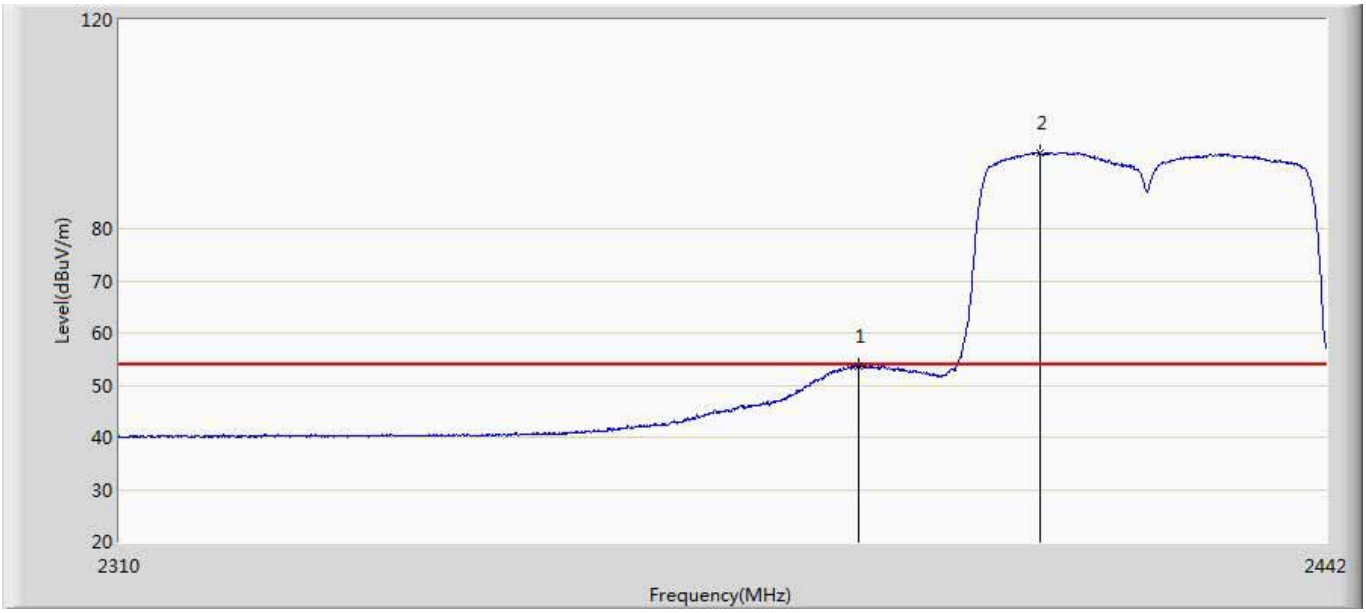

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2390.000 | 51.640 | 15.958 | -2.360 | 54.000 | 35.682 | AV |
| 2 | * | 2417.448 | 95.413 | 59.649 | 41.413 | 54.000 | 35.764 | AV |

| | |
|---|---|
| Site: AC5 | Time: 2016/11/19 - 17:03 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Horizontal |
| EUT: Access Point | Power:PoE 57V |
| Note: Mode 4:Transmit at channel 2422MHz by 802.11n40 | |



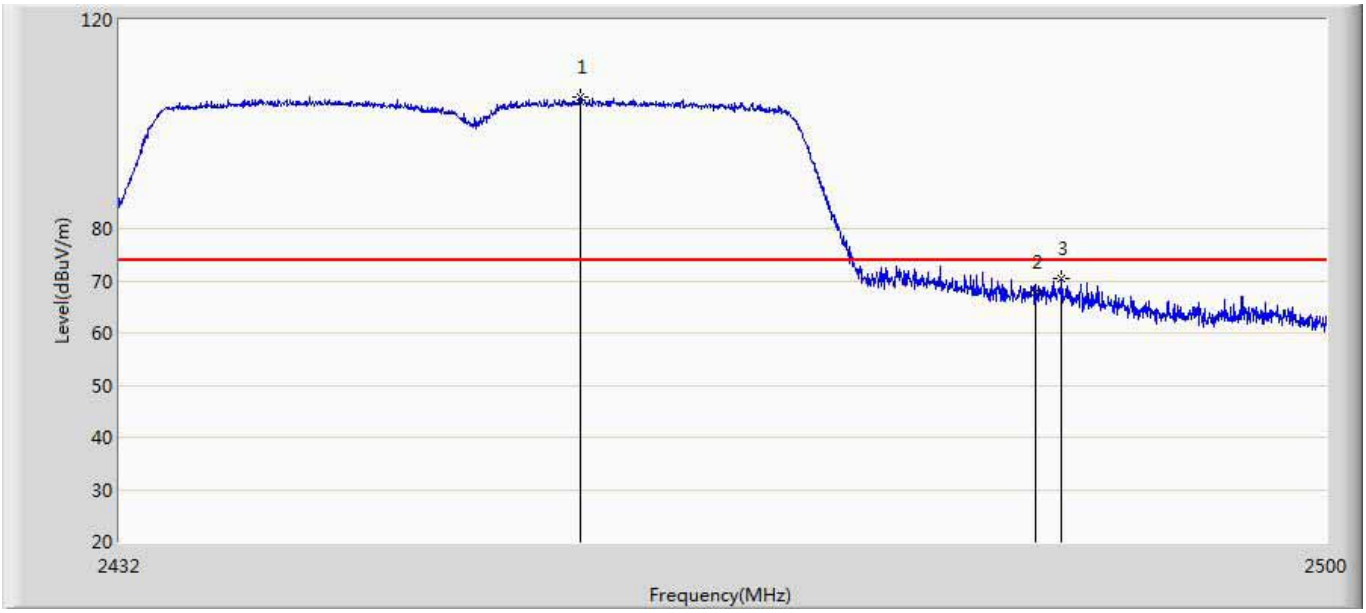

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2388.078 | 69.500 | 33.822 | -4.500 | 74.000 | 35.678 | PK |
| 2 | * | 2412.498 | 104.974 | 69.230 | 30.974 | 74.000 | 35.744 | PK |

| | |
|---|---|
| Site: AC5 | Time: 2016/11/19 - 17:13 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Horizontal |
| EUT: Access Point | Power:PoE 57V |
| Note: Mode 4:Transmit at channel 2422MHz by 802.11n40 | |



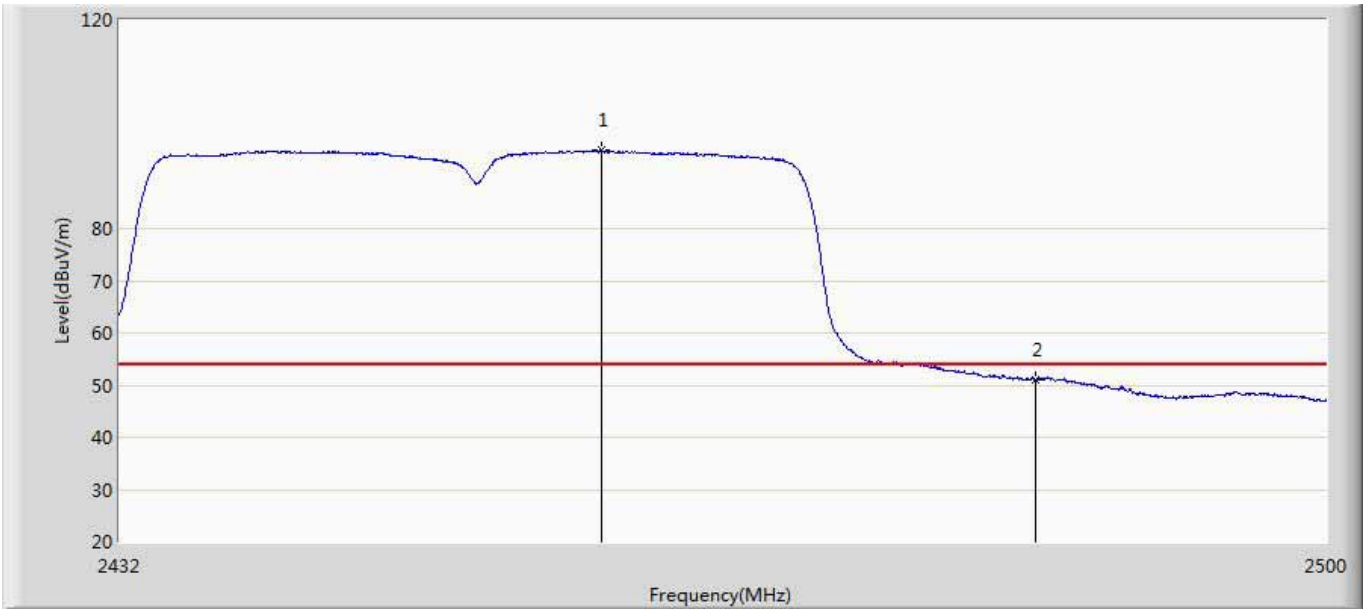

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2390.000 | 53.499 | 17.817 | -0.501 | 54.000 | 35.682 | AV |
| 2 | * | 2410.056 | 94.536 | 58.801 | 40.536 | 54.000 | 35.735 | AV |

| | |
|---|---|
| Site: AC5 | Time: 2016/11/19 - 17:18 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Horizontal |
| EUT: Access Point | Power:PoE 57V |
| Note: Mode 4:Transmit at channel 2452MHz by 802.11n40 | |



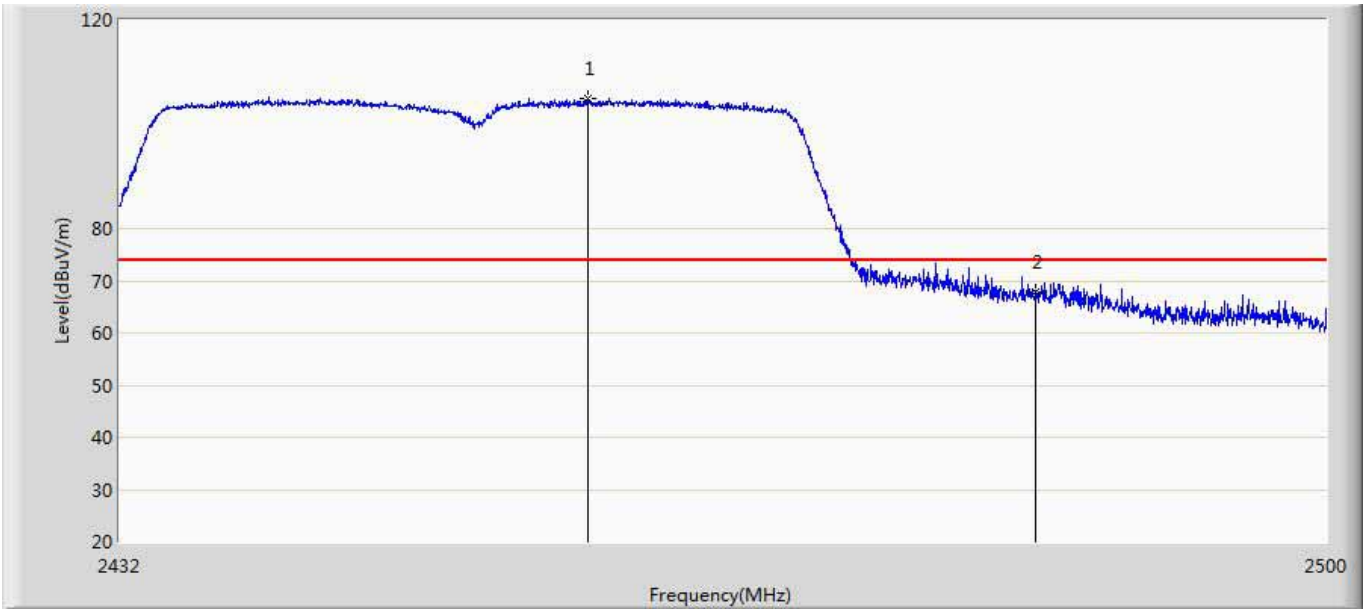

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2457.738 | 105.157 | 69.297 | 31.157 | 74.000 | 35.860 | PK |
| 2 | | 2483.500 | 67.748 | 31.856 | -6.252 | 74.000 | 35.891 | PK |
| 3 | | 2484.938 | 70.549 | 34.647 | -3.451 | 74.000 | 35.902 | PK |

| | |
|---|---|
| Site: AC5 | Time: 2016/11/19 - 17:19 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Horizontal |
| EUT: Access Point | Power:PoE 57V |
| Note: Mode 4:Transmit at channel 2452MHz by 802.11n40 | |



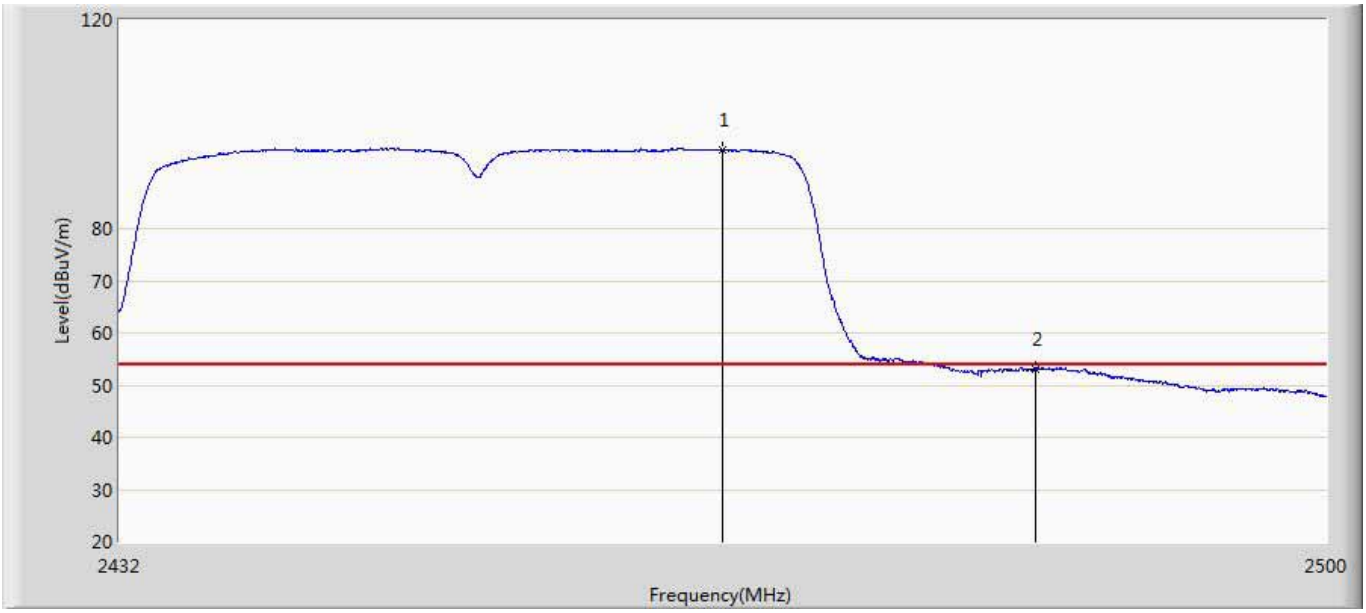

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2458.928 | 95.045 | 59.180 | 41.045 | 54.000 | 35.864 | AV |
| 2 | | 2483.500 | 51.027 | 15.135 | -2.973 | 54.000 | 35.891 | AV |

| | |
|---|---|
| Site: AC5 | Time: 2016/11/19 - 17:19 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Vertical |
| EUT: Access Point | Power:PoE 57V |
| Note: Mode 4:Transmit at channel 2452MHz by 802.11n40 | |



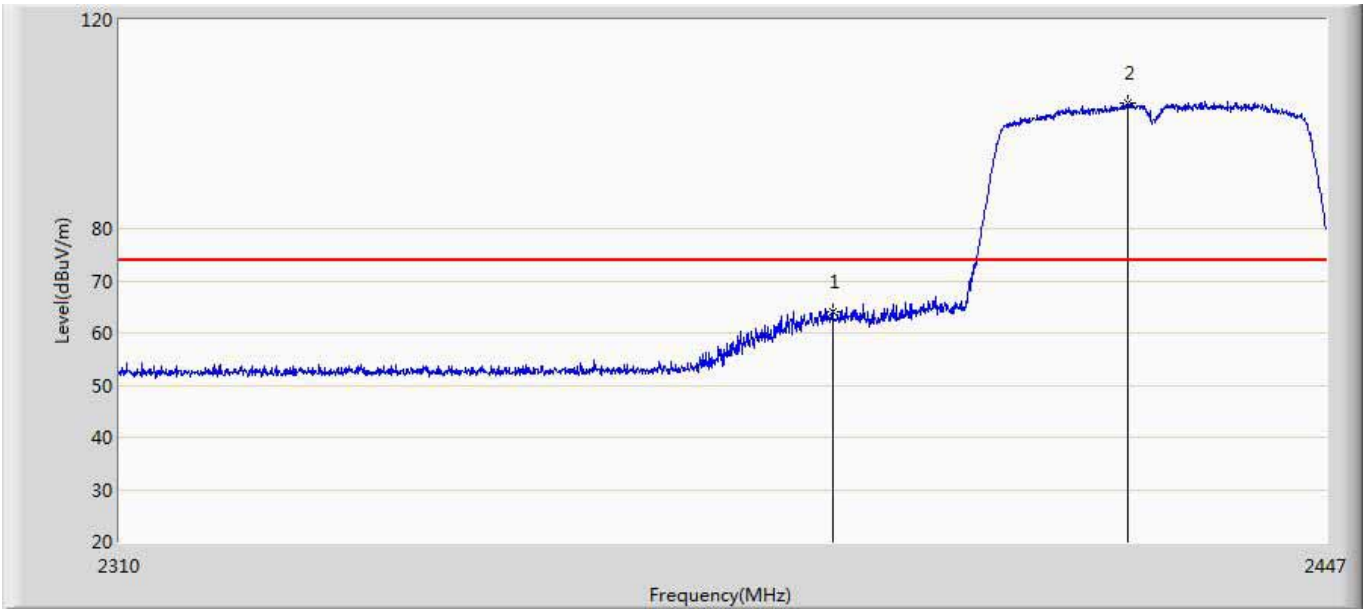

| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2458.180 | 104.928 | 69.066 | 30.928 | 74.000 | 35.862 | PK |
| 2 | | 2483.500 | 67.922 | 32.030 | -6.078 | 74.000 | 35.891 | PK |

| | |
|---|---|
| Site: AC5 | Time: 2016/11/19 - 17:25 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Vertical |
| EUT: Access Point | Power:PoE 57V |
| Note: Mode 4:Transmit at channel 2452MHz by 802.11n40 | |




| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 2465.796 | 95.090 | 59.216 | 41.090 | 54.000 | 35.874 | AV |
| 2 | | 2483.500 | 53.095 | 17.203 | -0.905 | 54.000 | 35.891 | AV |

| | |
|---|---|
| Site: AC5 | Time: 2017/01/17 - 09:23 |
| Limit: FCC_Part15.209_RE(3m) | Margin: 0 |
| Probe: Horn_3117_00167055(1-18GHz) | Polarity: Vertical |
| EUT: Wireless Access Point | Power: PoE 57V |
| Note: Mode 4:Transmit at channel 2427MHz by 802.11n40 | |




| No | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 2390.000 | 64.148 | 28.466 | -9.852 | 74.000 | 35.682 | PK |
| 2 | * | 2423.916 | 104.040 | 68.249 | 30.040 | 74.000 | 35.791 | PK |