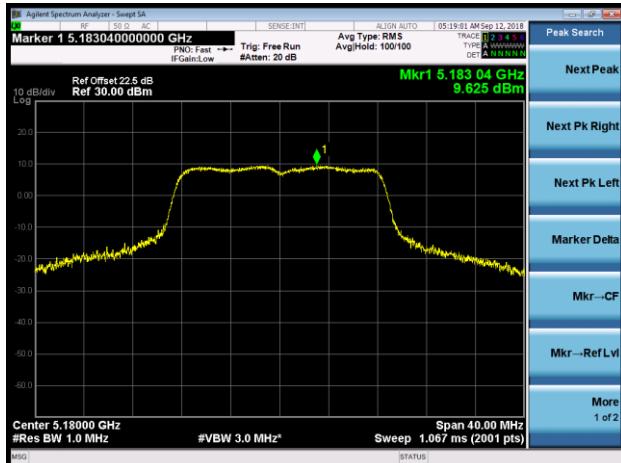
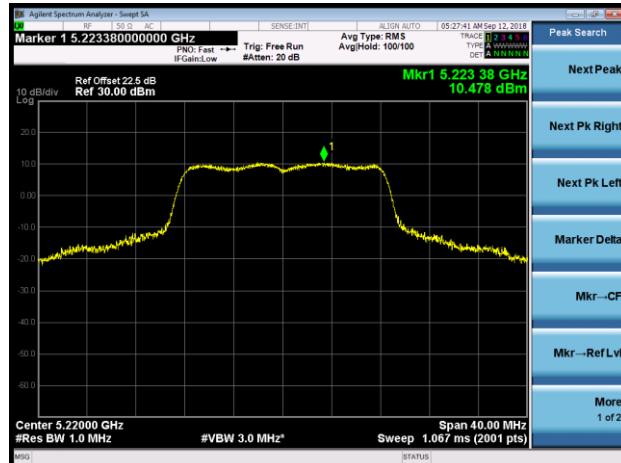


### 802.11a Power Spectral Density - Ant 1 / Ant 0 + 1(CDD Mode)

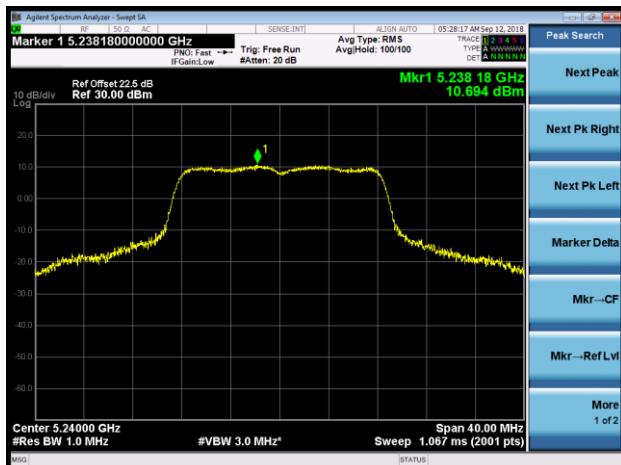
#### Channel 36 (5180MHz)



#### Channel 44 (5220MHz)



#### Channel 48 (5240MHz)



#### Channel 149 (5745MHz)

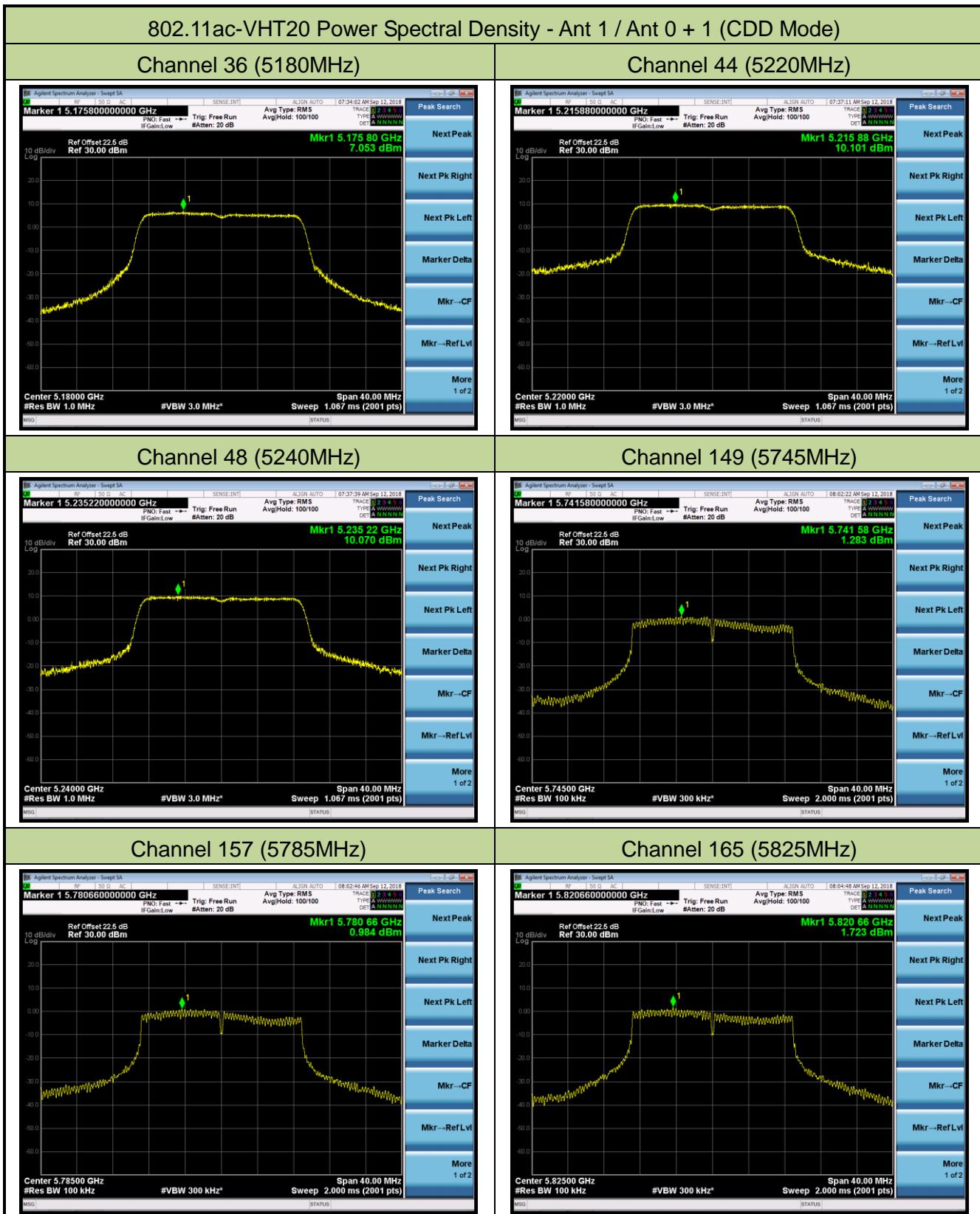


#### Channel 157 (5785MHz)



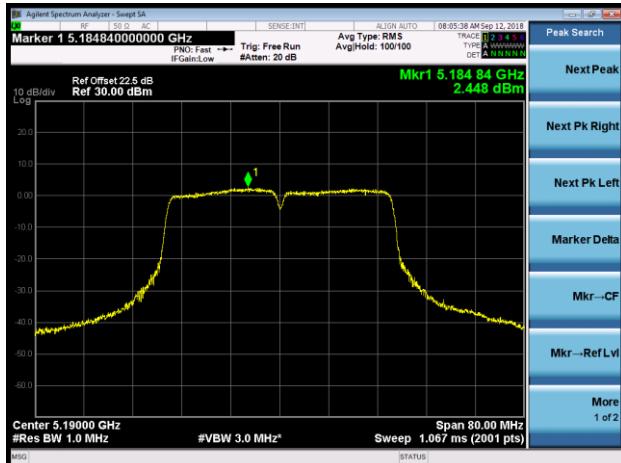
#### Channel 165 (5825MHz)



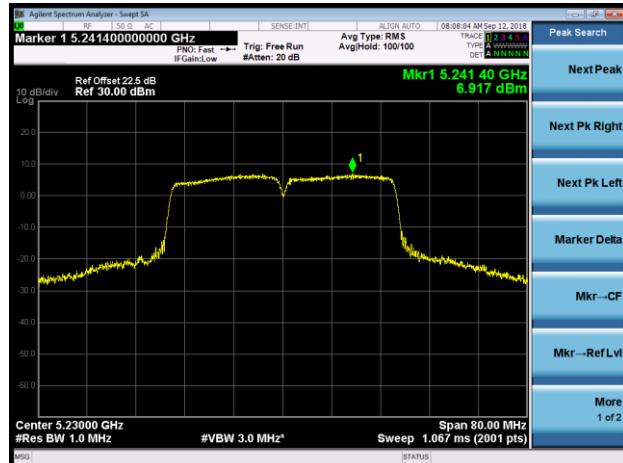


### 802.11ac-VHT40 Power Spectral Density - Ant 1 / Ant 0 + 1(CDD Mode)

#### Channel 38 (5190MHz)



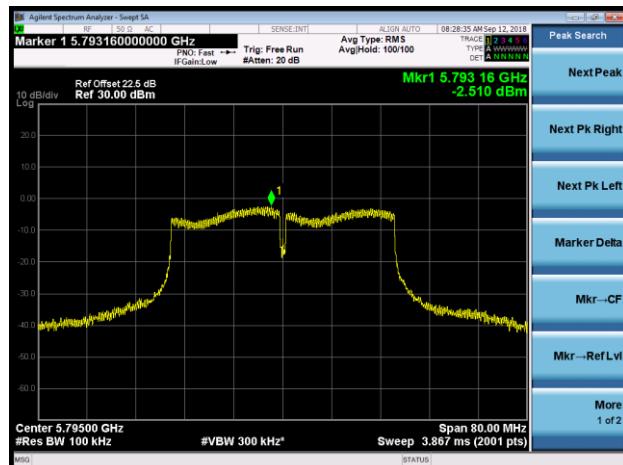
#### Channel 46 (5230MHz)



#### Channel 151 (5755MHz)

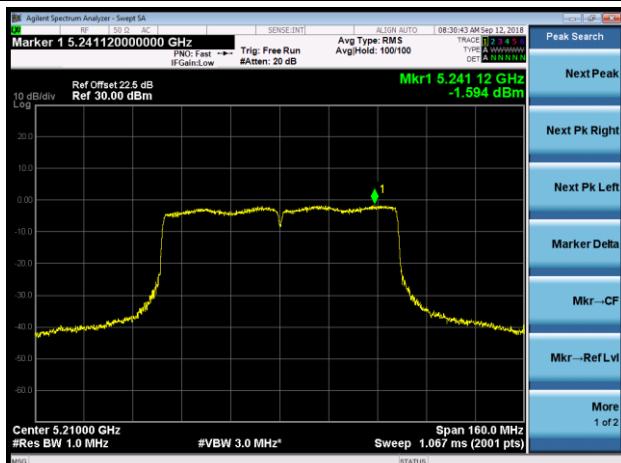


#### Channel 159 (5795MHz)

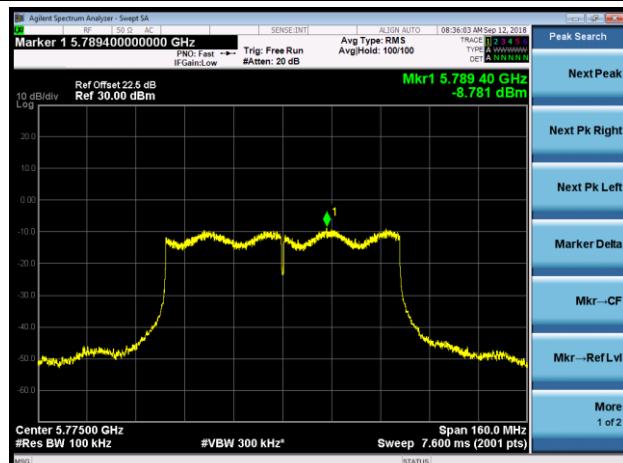


### 802.11ac-VHT80 Power Spectral Density - Ant 1 / Ant 0 + 1(CDD Mode)

#### Channel 42 (5210MHz)



#### Channel 155 (5775MHz)



### 802.11ac-VHT20 Power Spectral Density - Ant 0 / Ant 0 + 1 (Beam-Forming Mode)

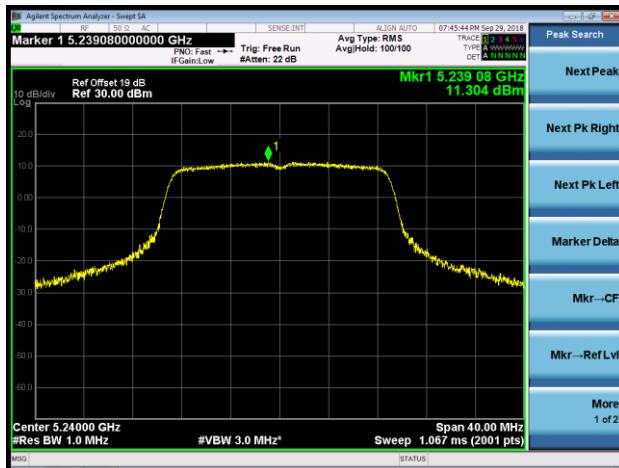
#### Channel 36 (5180MHz)



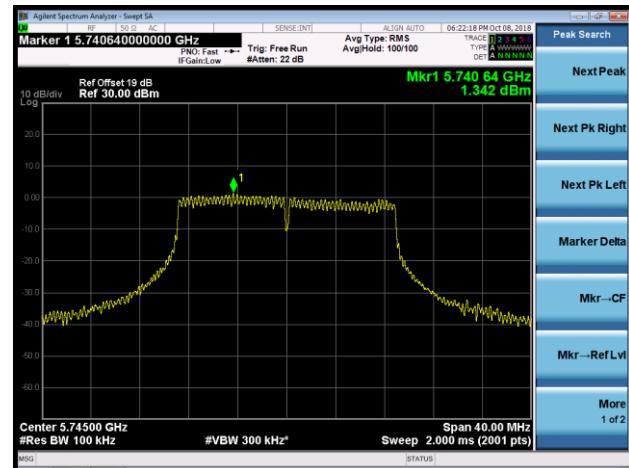
#### Channel 44 (5220MHz)



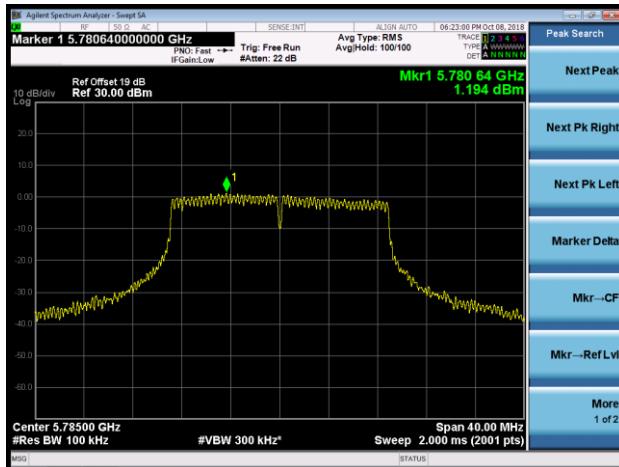
#### Channel 48 (5240MHz)



#### Channel 149 (5745MHz)



#### Channel 157 (5785MHz)



#### Channel 165 (5825MHz)

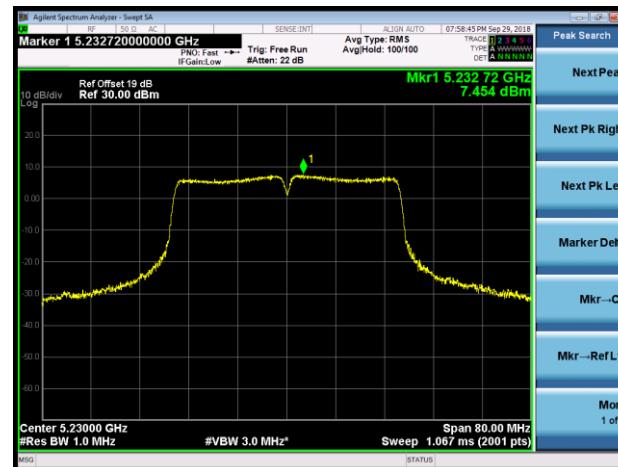


### 802.11ac-VHT40 Power Spectral Density - Ant 0 / Ant 0 + 1 (Beam-Forming Mode)

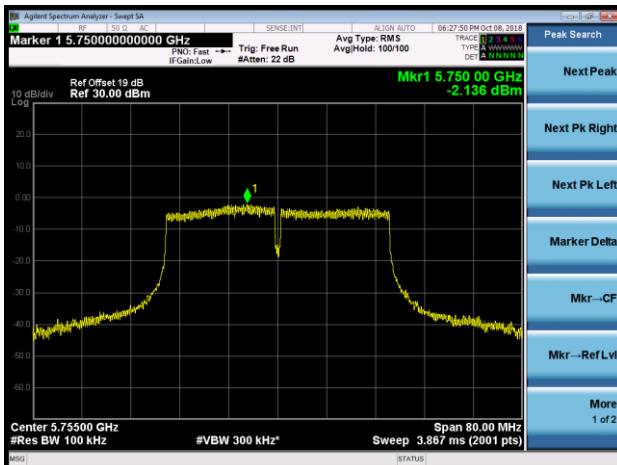
#### Channel 38 (5190MHz)



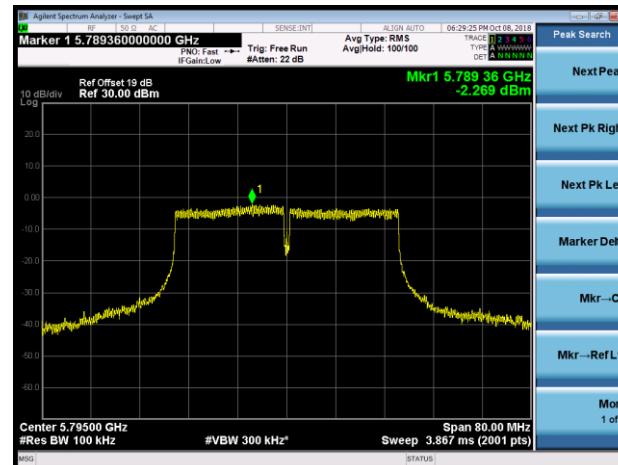
#### Channel 46 (5230MHz)



#### Channel 151 (5755MHz)



#### Channel 159 (5795MHz)

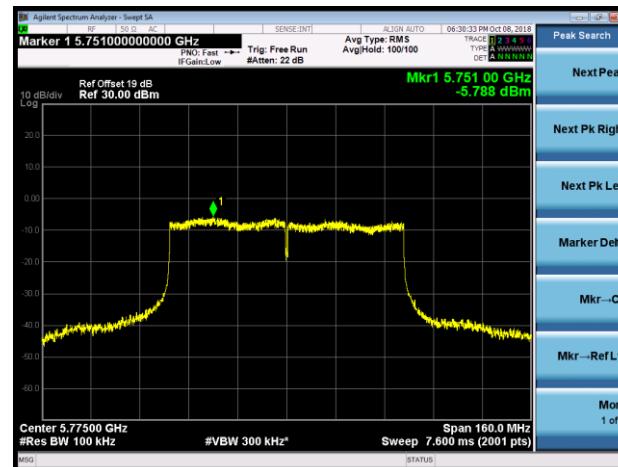


### 802.11ac-VHT80 Power Spectral Density - Ant 0 / Ant 0 + 1 (Beam-Forming Mode)

#### Channel 42 (5210MHz)



#### Channel 155 (5775MHz)

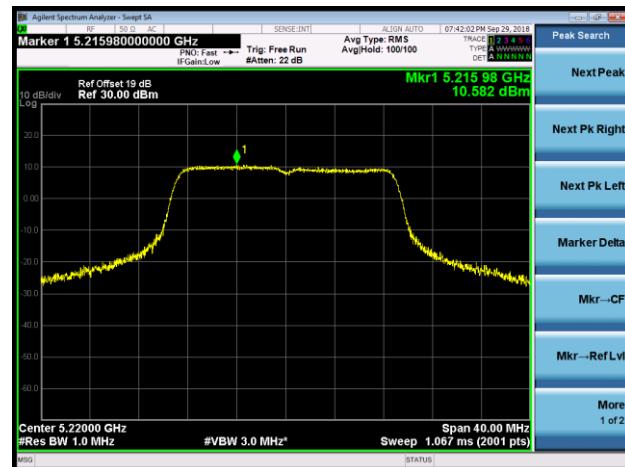


### 802.11ac-VHT20 Power Spectral Density - Ant 1 / Ant 0 + 1 (Beam-Forming Mode)

#### Channel 36 (5180MHz)



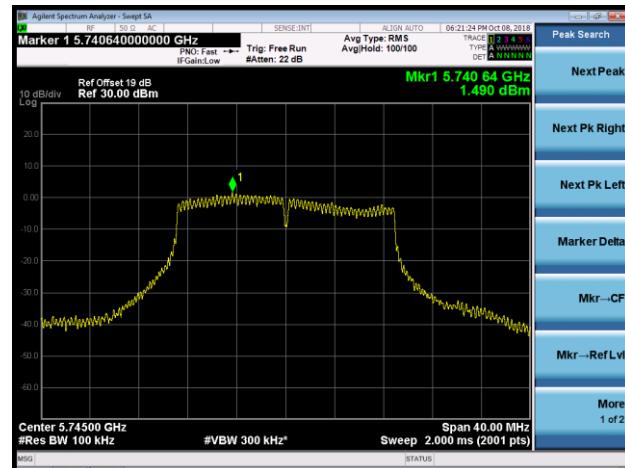
#### Channel 44 (5220MHz)



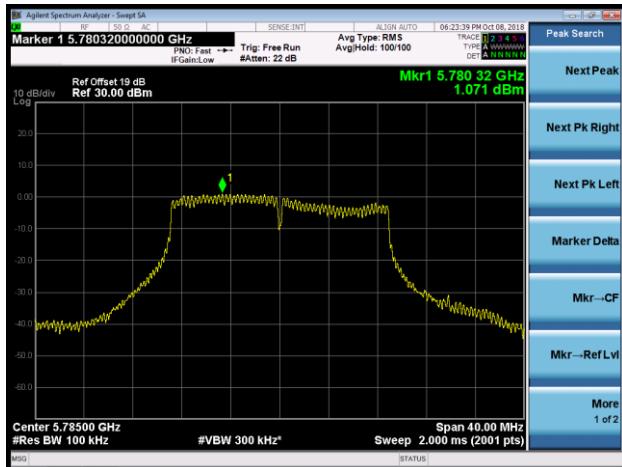
#### Channel 48 (5240MHz)



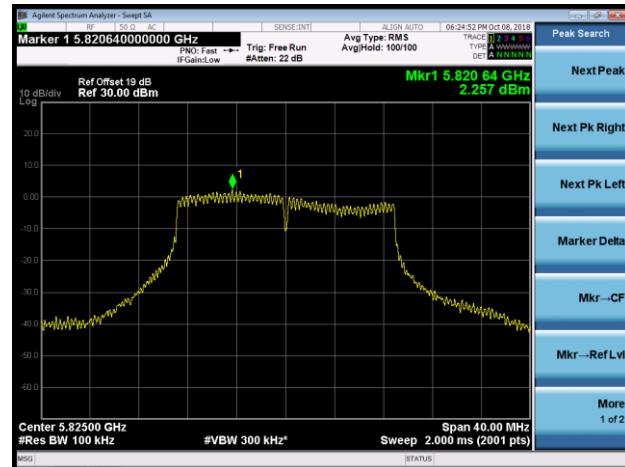
#### Channel 149 (5745MHz)



#### Channel 157 (5785MHz)

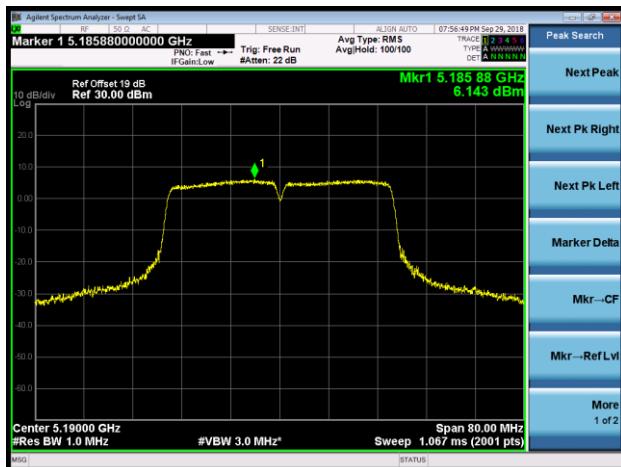


#### Channel 165 (5825MHz)

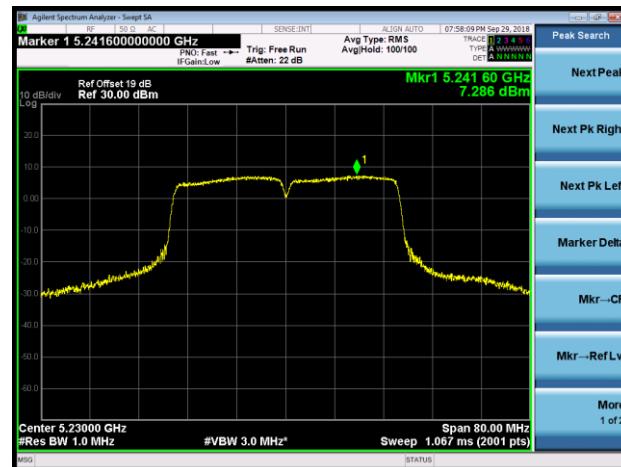


### 802.11ac-VHT40 Power Spectral Density - Ant 1 / Ant 0 + 1 (Beam-Forming Mode)

#### Channel 38 (5190MHz)



#### Channel 46 (5230MHz)



#### Channel 151 (5755MHz)



#### Channel 159 (5795MHz)



### 802.11ac-VHT80 Power Spectral Density - Ant 1 / Ant 0 + 1 (Beam-Forming Mode)

#### Channel 42 (5210MHz)



#### Channel 155 (5775MHz)



## 7.7. Frequency Stability Measurement

### 7.7.1 Test Limit

Manufactures of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

The transmitter center frequency tolerance shall be  $\pm 20$  ppm maximum for the 5GHz band (IEEE 802.11 specification).

### 7.7.2 Test Procedure Used

#### Frequency Stability Under Temperature Variations:

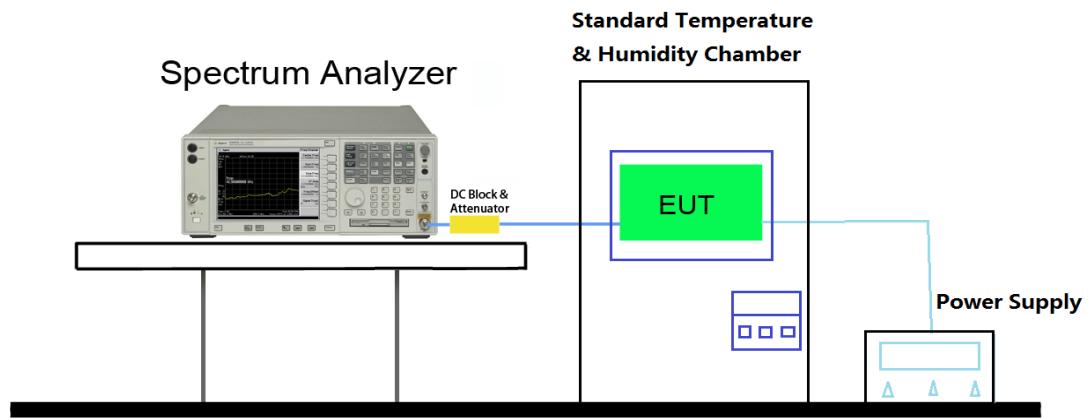
The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to highest. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C decreased per stage until the lowest temperature reached.

#### Frequency Stability Under Voltage Variations:

Set chamber temperature to 20°C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specify extreme voltage variation ( $\pm 15\%$ ) and endpoint, record the maximum frequency change.

### 7.7.3. Test Setup



#### 7.7.4. Test Result

Test Engineer	Messiah Li	Temperature	0 ~ 45°C
Test Time	2018/09/13	Relative Humidity	48 ~ 55%RH
Test Mode	5180MHz (Carrier Mode)	Test Site	TR3

Voltage (%)	Power (VAC)	Temp (°C)	Frequency Tolerance (ppm)			
			0 minutes	2 minutes	5 minutes	10 minutes
100%	120	0	-3.52	-3.25	-3.06	-4.57
		+ 10	-4.06	-4.25	-4.37	-4.89
		+ 20 (Ref)	-4.89	-4.55	-5.03	-5.89
		+ 30	-3.31	-3.41	-4.25	-4.90
		+ 40	-3.78	-4.39	-4.33	-5.39
		+ 45	-5.26	-5.09	-5.46	-5.22
115%	138	+ 20	-4.60	-5.07	-5.77	-5.08
85%	102	+ 20	-3.67	-4.08	-4.36	-5.05

Note: Frequency Tolerance (ppm) = {[Measured Frequency (Hz) - Declared Frequency (Hz)] / Declared Frequency (Hz)} \*10<sup>6</sup>.

## 7.8. Radiated Spurious Emission Measurement

### 7.8.1. Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 – 0.490	2400/F (kHz)	300
0.490 – 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

### 7.8.2. Test Procedure Used

KDB 789033 D02v02r01 – Section G

### 7.8.3. Test Setting

#### Quasi-Peak & Average Measurements below 30MHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = 200Hz for 9kHz to 150kHz frequency; RBW = 9kHz for 0.15MHz to 30MHz frequency
4. Detector = CISPR quasi-peak or power average (Average)
5. Sweep time = auto couple
6. Trace was allowed to stabilize

### **Quasi-Peak Measurements below 1GHz**

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = 120 kHz
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

### **Peak Measurements above 1GHz**

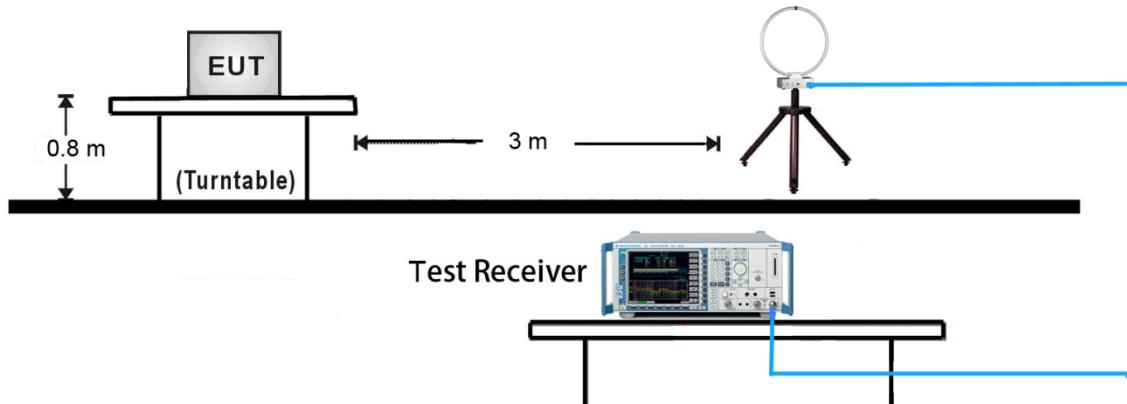
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

### **Average Measurements above 1GHz (Method AD)**

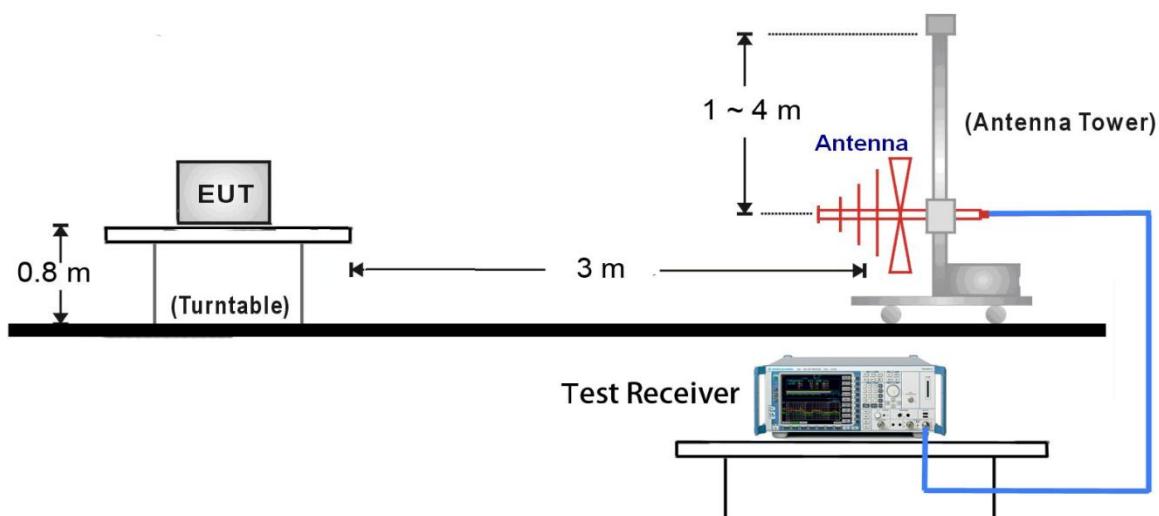
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. If duty cycle  $\geq$  98%, VBW  $\leq$  RBW/100 but not less than 10Hz; If duty cycle < 98%, set VBW  $\geq$  1/T.
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Allow max hold to run for at least 50 traces if the transmitted signal is continuous or has at least 98% duty cycle. For lower duty cycles, increase the minimum number of traces by a factor of 1/x, where x is the duty cycle.

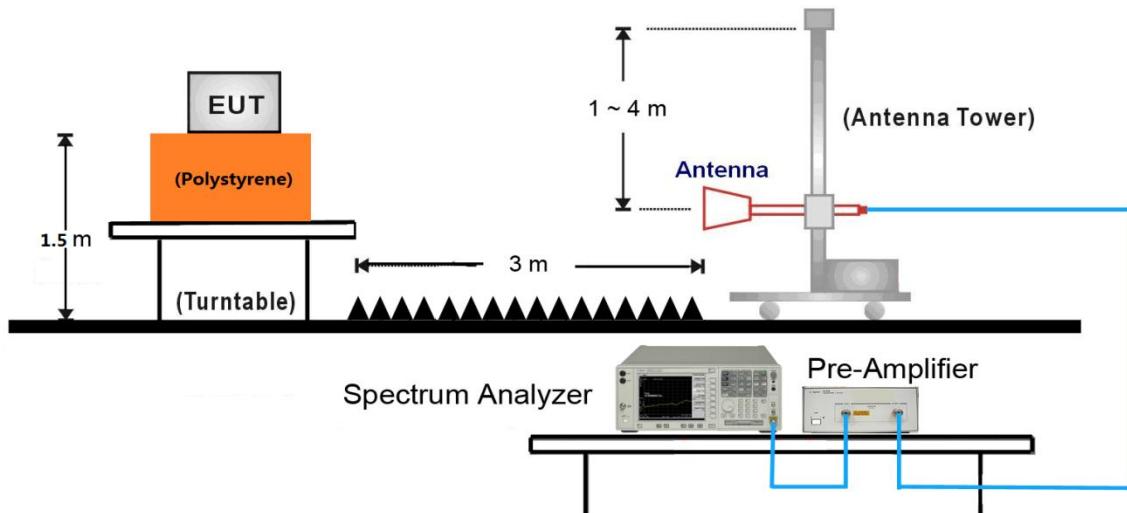
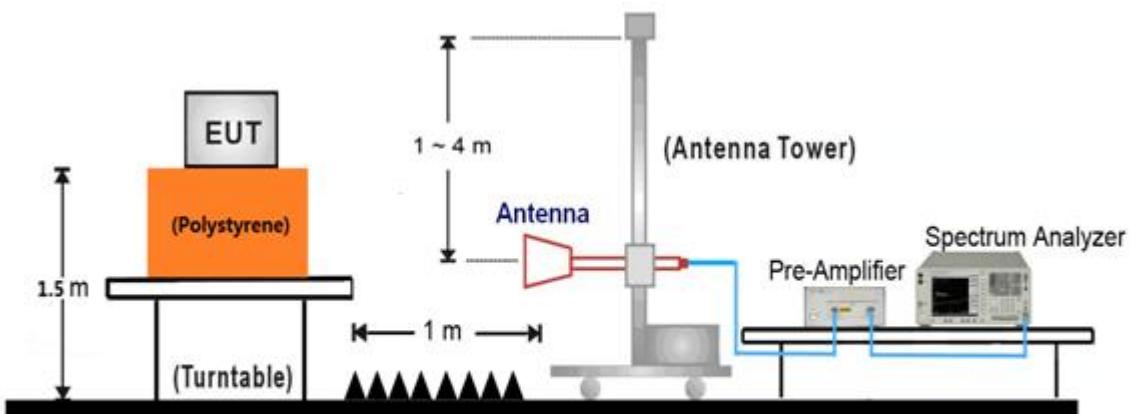
#### 7.8.4. Test Setup

9kHz ~30MHz Test Setup:

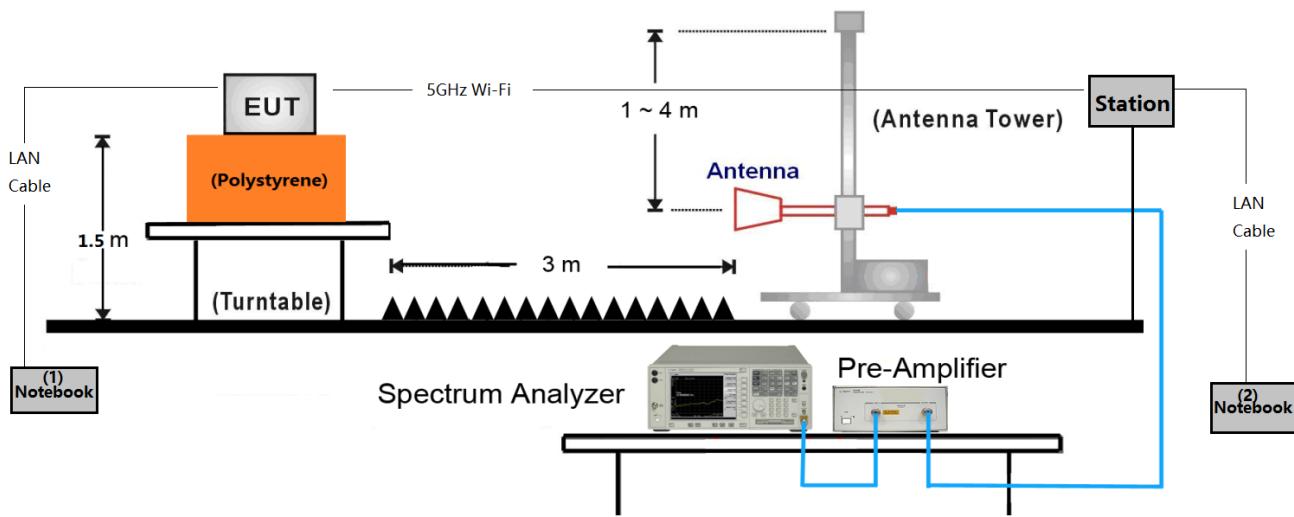


30MHz ~ 1GHz Test Setup:



1GHz ~18GHz Test Setup:

18GHz ~40GHz Test Setup:


Additional Beam-Forming Mode Test Setup (Apply to all BF radiated emission test frequency range)



Make the EUT connect with the station by 5GHz wireless.

Input some commands in the notebook (1) to open the EUT Beam Forming function, and setup the related test channel & data rate & power setting.

Make the notebook (1) ping with notebook (2) using the “iperf” software that can produce one bigger duty cycle waveform.

### 7.8.5. Test Result

Product	HAN Access Point	Temperature	26°C
Test Engineer	Messiah Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11a - Ant 0 + 1 (CDD Mode)	Test Channel:	36
Remark:	<ol style="list-style-type: none"> <li>Average measurement was not performed if peak level lower than average limit.</li> <li>Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.</li> </ol>		

Mark	Frequency (MHz)	Reading Level (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	7460.0	36.1	12.9	49.0	74.0	-25.0	Peak	Horizontal
	8250.5	36.7	12.9	49.6	74.0	-24.4	Peak	Horizontal
*	8845.5	35.9	13.3	49.2	68.2	-19.0	Peak	Horizontal
*	10367.0	39.6	17.4	57.0	68.2	-11.2	Peak	Horizontal
	7596.0	36.2	12.8	49.0	74.0	-25.0	Peak	Vertical
	8208.0	35.9	13.0	48.9	74.0	-25.1	Peak	Vertical
*	8616.0	36.0	12.9	48.9	68.2	-19.3	Peak	Vertical
*	9976.0	34.4	16.7	51.1	68.2	-17.1	Peak	Vertical

Note 1: "\*" is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)  
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Messiah Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11a - Ant 0 + 1 (CDD Mode)	Test Channel:	44
Remark:	<ol style="list-style-type: none"> <li>1. Average measurement was not performed if peak level lower than average limit.</li> <li>2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.</li> </ol>		

Mark	Frequency (MHz)	Reading Level (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	7519.5	35.6	12.8	48.4	74.0	-25.6	Peak	Horizontal
	8267.5	34.8	12.8	47.6	74.0	-26.4	Peak	Horizontal
*	8769.0	35.9	13.2	49.1	68.2	-19.1	Peak	Horizontal
*	10443.5	36.8	17.2	54.0	68.2	-14.2	Peak	Horizontal
	7451.5	36.3	12.9	49.2	74.0	-24.8	Peak	Vertical
	8335.5	34.9	12.6	47.5	74.0	-26.5	Peak	Vertical
*	8854.0	36.2	13.4	49.6	68.2	-18.6	Peak	Vertical
*	10265.0	34.2	17.2	51.4	68.2	-16.8	Peak	Vertical

Note 1: “\*\*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Messiah Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11a - Ant 0 + 1 (CDD Mode)	Test Channel:	48
Remark:	<ol style="list-style-type: none"> <li>1. Average measurement was not performed if peak level lower than average limit.</li> <li>2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.</li> </ol>		

Mark	Frequency (MHz)	Reading Level (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	553.5	35.6	13.0	48.6	74.0	-25.4	Peak	Horizontal
	8250.5	35.6	12.9	48.5	74.0	-25.5	Peak	Horizontal
*	8828.5	35.8	13.3	49.1	68.2	-19.1	Peak	Horizontal
*	10486.0	35.8	17.5	53.3	68.2	-14.9	Peak	Horizontal
	7621.5	36.4	12.6	49.0	74.0	-25.0	Peak	Vertical
	8361.0	36.2	12.6	48.8	74.0	-25.2	Peak	Vertical
*	8837.0	35.3	13.2	48.5	68.2	-19.7	Peak	Vertical
*	10163.0	34.4	17.0	51.4	68.2	-16.8	Peak	Vertical

Note 1: “\*\*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Messiah Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11a - Ant 0 + 1 (CDD Mode)	Test Channel:	149
Remark:	<ol style="list-style-type: none"> <li>Average measurement was not performed if peak level lower than average limit.</li> <li>Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.</li> </ol>		

Mark	Frequency (MHz)	Reading Level (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	7519.5	34.7	12.8	47.5	74.0	-26.5	Peak	Horizontal
	8242.0	36.7	13.0	49.7	74.0	-24.3	Peak	Horizontal
*	8820.0	35.0	13.3	48.3	68.2	-19.9	Peak	Horizontal
*	10375.5	34.7	17.4	52.1	68.2	-16.1	Peak	Horizontal
	7689.5	36.4	12.8	49.2	74.0	-24.8	Peak	Vertical
	8497.0	35.9	12.7	48.6	74.0	-25.4	Peak	Vertical
*	8752.0	35.9	13.2	49.1	68.2	-19.1	Peak	Vertical
*	10205.5	34.9	17.1	52.0	68.2	-16.2	Peak	Vertical

Note 1: “\*\*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Messiah Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11a - Ant 0 + 1 (CDD Mode)	Test Channel:	157
Remark:	<ol style="list-style-type: none"> <li>1. Average measurement was not performed if peak level lower than average limit.</li> <li>2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.</li> </ol>		

Mark	Frequency (MHz)	Reading Level (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	7494.0	36.3	12.7	49.0	74.0	-25.0	Peak	Horizontal
	8174.0	36.4	13.2	49.6	74.0	-24.4	Peak	Horizontal
*	8862.5	35.2	13.3	48.5	68.2	-19.7	Peak	Horizontal
*	9908.0	35.4	16.6	52.0	68.2	-16.2	Peak	Horizontal
	7604.5	35.6	12.7	48.3	74.0	-25.7	Peak	Vertical
	8352.5	35.0	12.6	47.6	74.0	-26.4	Peak	Vertical
*	8888.0	34.9	13.2	48.1	68.2	-20.1	Peak	Vertical
*	10341.5	34.8	17.3	52.1	68.2	-16.1	Peak	Vertical

Note 1: “\*\*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Messiah Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11a - Ant 0 + 1 (CDD Mode)	Test Channel:	165
Remark:	<ol style="list-style-type: none"> <li>1. Average measurement was not performed if peak level lower than average limit.</li> <li>2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.</li> </ol>		

Mark	Frequency (MHz)	Reading Level (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	7298.5	36.2	12.5	48.7	74.0	-25.3	Peak	Horizontal
	8250.5	35.7	12.9	48.6	74.0	-25.4	Peak	Horizontal
*	8845.5	35.4	13.3	48.7	68.2	-19.5	Peak	Horizontal
*	10163.0	34.0	17.0	51.0	68.2	-17.2	Peak	Horizontal
	7553.5	35.3	13.0	48.3	74.0	-25.7	Peak	Vertical
	8157.0	36.1	13.3	49.4	74.0	-24.6	Peak	Vertical
*	8641.5	35.1	12.9	48.0	68.2	-20.2	Peak	Vertical
*	10537.0	34.4	17.7	52.1	68.2	-16.1	Peak	Vertical

Note 1: “\*\*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Messiah Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11ac-VHT20 - Ant 0 + 1 (CDD Mode)	Test Channel:	36
Remark:	<ol style="list-style-type: none"> <li>1. Average measurement was not performed if peak level lower than average limit.</li> <li>2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.</li> </ol>		

Mark	Frequency (MHz)	Reading Level (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	7443.0	35.9	12.9	48.8	74.0	-25.2	Peak	Horizontal
	8412.0	35.9	12.5	48.4	74.0	-25.6	Peak	Horizontal
*	8811.5	34.9	13.3	48.2	68.2	-20.0	Peak	Horizontal
*	10358.5	34.8	17.4	52.2	68.2	-16.0	Peak	Horizontal
	7562.0	35.3	12.9	48.2	74.0	-25.8	Peak	Vertical
	8335.5	35.3	12.6	47.9	74.0	-26.1	Peak	Vertical
*	8794.5	34.5	13.3	47.8	68.2	-20.4	Peak	Vertical
*	10299.0	34.2	17.3	51.5	68.2	-16.7	Peak	Vertical

Note 1: “\*\*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Messiah Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11ac-VHT20 - Ant 0 + 1 (CDD Mode)	Test Channel:	44
Remark:	<ol style="list-style-type: none"> <li>1. Average measurement was not performed if peak level lower than average limit.</li> <li>2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.</li> </ol>		

Mark	Frequency (MHz)	Reading Level (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	7528.0	35.5	12.8	48.3	74.0	-25.7	Peak	Horizontal
	8225.0	35.9	13.1	49.0	74.0	-25.0	Peak	Horizontal
*	8837.0	35.0	13.2	48.2	68.2	-20.0	Peak	Horizontal
*	10154.5	35.2	17.0	52.2	68.2	-16.0	Peak	Horizontal
	7494.0	36.3	12.7	49.0	74.0	-25.0	Peak	Vertical
	8199.5	35.3	13.1	48.4	74.0	-25.6	Peak	Vertical
*	8837.0	34.6	13.2	47.8	68.2	-20.4	Peak	Vertical
*	10086.5	34.3	16.9	51.2	68.2	-17.0	Peak	Vertical

Note 1: “\*\*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Messiah Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11ac-VHT20 - Ant 0 + 1 (CDD Mode)	Test Channel:	48
Remark:	<ol style="list-style-type: none"> <li>1. Average measurement was not performed if peak level lower than average limit.</li> <li>2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.</li> </ol>		

Mark	Frequency (MHz)	Reading Level (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	7477.0	34.7	12.9	47.6	74.0	-26.4	Peak	Horizontal
	8089.0	35.9	13.6	49.5	74.0	-24.5	Peak	Horizontal
*	8650.0	35.6	13.0	48.6	68.2	-19.6	Peak	Horizontal
*	9806.0	34.8	16.3	51.1	68.2	-17.1	Peak	Horizontal
	7494.0	35.7	12.7	48.4	74.0	-25.6	Peak	Vertical
	8148.5	35.0	13.3	48.3	74.0	-25.7	Peak	Vertical
*	8658.5	34.7	13.0	47.7	68.2	-20.5	Peak	Vertical
*	9993.0	35.3	16.7	52.0	68.2	-16.2	Peak	Vertical

Note 1: “\*\*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Messiah Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11ac-VHT20 - Ant 0 + 1 (CDD Mode)	Test Channel:	149
Remark:	<ol style="list-style-type: none"> <li>1. Average measurement was not performed if peak level lower than average limit.</li> <li>2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.</li> </ol>		

Mark	Frequency (MHz)	Reading Level (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	7502.5	34.6	12.7	47.3	74.0	-26.7	Peak	Horizontal
	8284.5	35.8	12.7	48.5	74.0	-25.5	Peak	Horizontal
*	8743.5	35.2	13.1	48.3	68.2	-19.9	Peak	Horizontal
*	9806.0	34.1	16.3	50.4	68.2	-17.8	Peak	Horizontal
	7494.0	36.0	12.7	48.7	74.0	-25.3	Peak	Vertical
	8165.5	37.7	13.3	51.0	74.0	-23.0	Peak	Vertical
*	8726.5	35.4	13.0	48.4	68.2	-19.8	Peak	Vertical
*	10503.0	34.4	17.6	52.0	68.2	-16.2	Peak	Vertical

Note 1: “\*\*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Messiah Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11ac-VHT20 - Ant 0 + 1 (CDD Mode)	Test Channel:	157
Remark:	<ol style="list-style-type: none"> <li>1. Average measurement was not performed if peak level lower than average limit.</li> <li>2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.</li> </ol>		

Mark	Frequency (MHz)	Reading Level (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	7451.5	35.6	12.9	48.5	74.0	-25.5	Peak	Horizontal
	8361.0	36.0	12.6	48.6	74.0	-25.4	Peak	Horizontal
*	8811.5	34.9	13.3	48.2	68.2	-20.0	Peak	Horizontal
*	10307.5	34.9	17.3	52.2	68.2	-16.0	Peak	Horizontal
	7553.5	35.1	13.0	48.1	74.0	-25.9	Peak	Vertical
	8327.0	35.1	12.6	47.7	74.0	-26.3	Peak	Vertical
*	8769.0	35.4	13.2	48.6	68.2	-19.6	Peak	Vertical
*	10231.0	34.5	17.1	51.6	68.2	-16.6	Peak	Vertical

Note 1: “\*\*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Messiah Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11ac-VHT20 - Ant 0 + 1 (CDD Mode)	Test Channel:	165
Remark:	<ol style="list-style-type: none"> <li>1. Average measurement was not performed if peak level lower than average limit.</li> <li>2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.</li> </ol>		

Mark	Frequency (MHz)	Reading Level (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	7434.5	35.3	12.8	48.1	74.0	-25.9	Peak	Horizontal
	8284.5	35.5	12.7	48.2	74.0	-25.8	Peak	Horizontal
*	8871.0	35.8	13.2	49.0	68.2	-19.2	Peak	Horizontal
*	10248.0	34.5	17.2	51.7	68.2	-16.5	Peak	Horizontal
	7689.5	35.9	12.8	48.7	74.0	-25.3	Peak	Vertical
	8335.5	34.8	12.6	47.4	74.0	-26.6	Peak	Vertical
*	8718.0	36.1	13.0	49.1	68.2	-19.1	Peak	Vertical
*	9823.0	35.8	16.5	52.3	68.2	-15.9	Peak	Vertical

Note 1: “\*\*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Messiah Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11ac-VHT40 - Ant 0 + 1 (CDD Mode)	Test Channel:	38
Remark:	<ol style="list-style-type: none"> <li>1. Average measurement was not performed if peak level lower than average limit.</li> <li>2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.</li> </ol>		

Mark	Frequency (MHz)	Reading Level (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	7460.0	35.1	12.9	48.0	74.0	-26.0	Peak	Horizontal
	8284.5	36.2	12.7	48.9	74.0	-25.1	Peak	Horizontal
*	8820.0	35.0	13.3	48.3	68.2	-19.9	Peak	Horizontal
*	9967.5	34.3	16.7	51.0	68.2	-17.2	Peak	Horizontal
	7417.5	35.9	12.7	48.6	74.0	-25.4	Peak	Vertical
	8174.0	35.8	13.2	49.0	74.0	-25.0	Peak	Vertical
*	8794.5	35.2	13.3	48.5	68.2	-19.7	Peak	Vertical
*	9797.5	35.1	16.2	51.3	68.2	-16.9	Peak	Vertical

Note 1: “\*\*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Messiah Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11ac-VHT40 - Ant 0 + 1 (CDD Mode)	Test Channel:	46
Remark:	<ol style="list-style-type: none"> <li>1. Average measurement was not performed if peak level lower than average limit.</li> <li>2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.</li> </ol>		

Mark	Frequency (MHz)	Reading Level (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	7562.0	36.3	12.9	49.2	74.0	-24.8	Peak	Horizontal
	8250.5	36.1	12.9	49.0	74.0	-25.0	Peak	Horizontal
*	8820.0	34.8	13.3	48.1	68.2	-20.1	Peak	Horizontal
*	9993.0	35.1	16.7	51.8	68.2	-16.4	Peak	Horizontal
	7528.0	35.5	12.8	48.3	74.0	-25.7	Peak	Vertical
	8318.5	35.4	12.6	48.0	74.0	-26.0	Peak	Vertical
*	8769.0	34.2	13.2	47.4	68.2	-20.8	Peak	Vertical
*	9755.0	35.4	16.2	51.6	68.2	-16.6	Peak	Vertical

Note 1: “\*\*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Messiah Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11ac-VHT40 - Ant 0 + 1 (CDD Mode)	Test Channel:	151
Remark:	<ol style="list-style-type: none"> <li>Average measurement was not performed if peak level lower than average limit.</li> <li>Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.</li> </ol>		

Mark	Frequency (MHz)	Reading Level (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	7494.0	35.7	12.7	48.4	74.0	-25.6	Peak	Horizontal
	8199.5	33.6	13.1	46.7	74.0	-27.3	Peak	Horizontal
*	8760.5	34.2	13.2	47.4	68.2	-20.8	Peak	Horizontal
*	9993.0	33.9	16.7	50.6	68.2	-17.6	Peak	Horizontal
	7366.5	35.6	12.7	48.3	74.0	-25.7	Peak	Vertical
	8225.0	35.2	13.1	48.3	74.0	-25.7	Peak	Vertical
*	8879.5	35.9	13.2	49.1	68.2	-19.1	Peak	Vertical
*	10443.5	34.7	17.2	51.9	68.2	-16.3	Peak	Vertical

Note 1: “\*\*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Messiah Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11ac-VHT40 - Ant 0 + 1 (CDD Mode)	Test Channel:	159
Remark:	<ol style="list-style-type: none"> <li>1. Average measurement was not performed if peak level lower than average limit.</li> <li>2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.</li> </ol>		

Mark	Frequency (MHz)	Reading Level (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	7528.0	35.7	12.8	48.5	74.0	-25.5	Peak	Horizontal
	8259.0	35.1	12.9	48.0	74.0	-26.0	Peak	Horizontal
*	8667.0	34.6	12.9	47.5	68.2	-20.7	Peak	Horizontal
*	10222.5	34.3	17.1	51.4	68.2	-16.8	Peak	Horizontal
	7519.5	34.9	12.8	47.7	74.0	-26.3	Peak	Vertical
	8208.0	35.0	13.0	48.0	74.0	-26.0	Peak	Vertical
*	8692.5	35.4	13.0	48.4	68.2	-19.8	Peak	Vertical
*	9882.5	33.8	16.7	50.5	68.2	-17.7	Peak	Vertical

Note 1: “\*\*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Messiah Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11ac-VHT80 - Ant 0 + 1 (CDD Mode)	Test Channel:	42
Remark:	<ol style="list-style-type: none"> <li>1. Average measurement was not performed if peak level lower than average limit.</li> <li>2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.</li> </ol>		

Mark	Frequency (MHz)	Reading Level (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	7579.0	35.4	12.8	48.2	74.0	-25.8	Peak	Horizontal
	8216.5	35.7	13.0	48.7	74.0	-25.3	Peak	Horizontal
*	8658.5	35.2	13.0	48.2	68.2	-20.0	Peak	Horizontal
*	10197.0	33.8	17.2	51.0	68.2	-17.2	Peak	Horizontal
	7409.0	35.5	12.6	48.1	74.0	-25.9	Peak	Vertical
	8327.0	35.3	12.6	47.9	74.0	-26.1	Peak	Vertical
*	8692.5	35.5	13.0	48.5	68.2	-19.7	Peak	Vertical
*	10435.0	35.0	17.3	52.3	68.2	-15.9	Peak	Vertical

Note 1: “\*\*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Messiah Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11ac-VHT80 - Ant 0 + 1 (CDD Mode)	Test Channel:	155
Remark:	<ol style="list-style-type: none"> <li>1. Average measurement was not performed if peak level lower than average limit.</li> <li>2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.</li> </ol>		

Mark	Frequency (MHz)	Reading Level (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	7494.0	36.4	12.7	49.1	74.0	-24.9	Peak	Horizontal
	8250.5	35.7	12.9	48.6	74.0	-25.4	Peak	Horizontal
*	8854.0	35.7	13.4	49.1	68.2	-19.1	Peak	Horizontal
*	10307.5	34.3	17.3	51.6	68.2	-16.6	Peak	Horizontal
	7341.0	35.8	12.7	48.5	74.0	-25.5	Peak	Vertical
	8352.5	34.9	12.6	47.5	74.0	-26.5	Peak	Vertical
*	8718.0	34.9	13.0	47.9	68.2	-20.3	Peak	Vertical
*	9644.5	35.1	15.5	50.6	68.2	-17.6	Peak	Vertical

Note 1: “\*\*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Messiah Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/18
Test Mode:	802.11ac-VHT20 - Ant 0 + 1 (Beam-Forming Mode)	Test Channel:	36
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	7681.0	36.2	12.8	49.0	74.0	-25.0	Peak	Horizontal
	8106.0	36.5	13.4	49.9	74.0	-24.1	Peak	Horizontal
*	8837.0	35.4	13.2	48.6	68.2	-19.6	Peak	Horizontal
*	10069.5	34.5	17.0	51.5	68.2	-16.7	Peak	Horizontal
	7383.5	35.7	12.6	48.3	74.0	-25.7	Peak	Vertical
	8420.5	35.7	12.6	48.3	74.0	-25.7	Peak	Vertical
*	8922.0	35.4	13.3	48.7	68.2	-19.5	Peak	Vertical
*	10384.0	35.0	17.4	52.4	68.2	-15.8	Peak	Vertical

Note 1: “\*\*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Messiah Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/18
Test Mode:	802.11ac-VHT20 - Ant 0 + 1 (Beam-Forming Mode)	Test Channel:	44
Remark:	<ol style="list-style-type: none"> <li>1. Average measurement was not performed if peak level lower than average limit.</li> <li>2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.</li> </ol>		

Mark	Frequency (MHz)	Reading Level (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	7494.0	35.6	12.7	48.3	74.0	-25.7	Peak	Horizontal
	8276.0	35.5	12.8	48.3	74.0	-25.7	Peak	Horizontal
*	8675.5	35.7	13.0	48.7	68.2	-19.5	Peak	Horizontal
*	9823.0	35.2	16.5	51.7	68.2	-16.5	Peak	Horizontal
	7434.5	35.4	12.8	48.2	74.0	-25.8	Peak	Vertical
	8327.0	35.5	12.6	48.1	74.0	-25.9	Peak	Vertical
*	8777.5	35.9	13.2	49.1	68.2	-19.1	Peak	Vertical
*	9636.0	35.1	15.5	50.6	68.2	-17.6	Peak	Vertical

Note 1: “\*\*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Messiah Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/18
Test Mode:	802.11ac-VHT20 - Ant 0 + 1 (Beam-Forming Mode)	Test Channel:	48
Remark:	<ol style="list-style-type: none"> <li>1. Average measurement was not performed if peak level lower than average limit.</li> <li>2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.</li> </ol>		

Mark	Frequency (MHz)	Reading Level (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	7553.5	36.3	13.0	49.3	74.0	-24.7	Peak	Horizontal
	8344.0	35.7	12.6	48.3	74.0	-25.7	Peak	Horizontal
*	8803.0	35.5	13.3	48.8	68.2	-19.4	Peak	Horizontal
*	9942.0	34.5	16.8	51.3	68.2	-16.9	Peak	Horizontal
	7715.0	35.8	12.7	48.5	74.0	-25.5	Peak	Vertical
	8123.0	35.8	13.4	49.2	74.0	-24.8	Peak	Vertical
*	8743.5	36.3	13.1	49.4	68.2	-18.8	Peak	Vertical
*	9942.0	36.0	16.8	52.8	68.2	-15.4	Peak	Vertical

Note 1: “\*\*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Messiah Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/18
Test Mode:	802.11ac-VHT20 - Ant 0 + 1 (Beam-Forming Mode)	Test Channel:	149
Remark:	<ol style="list-style-type: none"> <li>1. Average measurement was not performed if peak level lower than average limit.</li> <li>2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.</li> </ol>		

Mark	Frequency (MHz)	Reading Level (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	7494.0	36.1	12.7	48.8	74.0	-25.2	Peak	Horizontal
	8242.0	35.7	13.0	48.7	74.0	-25.3	Peak	Horizontal
*	8675.5	35.6	13.0	48.6	68.2	-19.6	Peak	Horizontal
*	10086.5	36.2	16.9	53.1	68.2	-15.1	Peak	Horizontal
	7298.5	36.2	12.5	48.7	74.0	-25.3	Peak	Vertical
	8327.0	35.5	12.6	48.1	74.0	-25.9	Peak	Vertical
*	8803.0	35.2	13.3	48.5	68.2	-19.7	Peak	Vertical
*	10299.0	34.6	17.3	51.9	68.2	-16.3	Peak	Vertical

Note 1: “\*\*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Messiah Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/18
Test Mode:	802.11ac-VHT20 - Ant 0 + 1 (Beam-Forming Mode)	Test Channel:	157
Remark:	<ol style="list-style-type: none"> <li>1. Average measurement was not performed if peak level lower than average limit.</li> <li>2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.</li> </ol>		

Mark	Frequency (MHz)	Reading Level (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	7545.0	35.2	13.0	48.2	74.0	-25.8	Peak	Horizontal
	8242.0	35.4	13.0	48.4	74.0	-25.6	Peak	Horizontal
*	8862.5	35.0	13.3	48.3	68.2	-19.9	Peak	Horizontal
*	9933.5	34.7	16.7	51.4	68.2	-16.8	Peak	Horizontal
	7664.0	35.9	12.8	48.7	74.0	-25.3	Peak	Vertical
	8225.0	35.9	13.1	49.0	74.0	-25.0	Peak	Vertical
*	8641.5	35.2	12.9	48.1	68.2	-20.1	Peak	Vertical
*	9984.5	34.3	16.7	51.0	68.2	-17.2	Peak	Vertical

Note 1: “\*\*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Messiah Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/18
Test Mode:	802.11ac-VHT20 - Ant 0 + 1 (Beam-Forming Mode)	Test Channel:	165
Remark:	<ol style="list-style-type: none"> <li>Average measurement was not performed if peak level lower than average limit.</li> <li>Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.</li> </ol>		

Mark	Frequency (MHz)	Reading Level (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	7477.0	35.5	12.9	48.4	74.0	-25.6	Peak	Horizontal
	8140.0	35.4	13.4	48.8	74.0	-25.2	Peak	Horizontal
*	8641.5	35.7	12.9	48.6	68.2	-19.6	Peak	Horizontal
*	10095.0	35.1	16.9	52.0	68.2	-16.2	Peak	Horizontal
	7485.5	36.1	12.8	48.9	74.0	-25.1	Peak	Vertical
	8242.0	35.3	13.0	48.3	74.0	-25.7	Peak	Vertical
*	8650.0	35.7	13.0	48.7	68.2	-19.5	Peak	Vertical
*	10001.5	35.1	16.7	51.8	68.2	-16.4	Peak	Vertical

Note 1: “\*\*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Messiah Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/18
Test Mode:	802.11ac-VHT40 - Ant 0 + 1 (Beam-Forming Mode)	Test Channel:	38
Remark:	<ol style="list-style-type: none"> <li>1. Average measurement was not performed if peak level lower than average limit.</li> <li>2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.</li> </ol>		

Mark	Frequency (MHz)	Reading Level (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	7553.5	35.9	13.0	48.9	74.0	-25.1	Peak	Horizontal
	8352.5	37.1	12.6	49.7	74.0	-24.3	Peak	Horizontal
*	8828.5	35.5	13.3	48.8	68.2	-19.4	Peak	Horizontal
*	10409.5	34.4	17.3	51.7	68.2	-16.5	Peak	Horizontal
	7460.0	36.0	12.9	48.9	74.0	-25.1	Peak	Vertical
	8335.5	36.8	12.6	49.4	74.0	-24.6	Peak	Vertical
*	8667.0	35.7	12.9	48.6	68.2	-19.6	Peak	Vertical
*	10188.5	34.4	17.1	51.5	68.2	-16.7	Peak	Vertical

Note 1: “\*\*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Messiah Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/18
Test Mode:	802.11ac-VHT40 - Ant 0 + 1 (Beam-Forming Mode)	Test Channel:	46
Remark:	<ol style="list-style-type: none"> <li>1. Average measurement was not performed if peak level lower than average limit.</li> <li>2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.</li> </ol>		

Mark	Frequency (MHz)	Reading Level (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	7477.0	35.9	12.9	48.8	74.0	-25.2	Peak	Horizontal
	8276.0	36.9	12.8	49.7	74.0	-24.3	Peak	Horizontal
*	8684.0	35.9	13.1	49.0	68.2	-19.2	Peak	Horizontal
*	10188.5	35.1	17.1	52.2	68.2	-16.0	Peak	Horizontal
	7570.5	35.7	12.9	48.6	74.0	-25.4	Peak	Vertical
	8131.5	35.9	13.4	49.3	74.0	-24.7	Peak	Vertical
*	8658.5	36.2	13.0	49.2	68.2	-19.0	Peak	Vertical
*	10520.0	35.8	17.6	53.4	68.2	-14.8	Peak	Vertical

Note 1: “\*\*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Messiah Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/18
Test Mode:	802.11ac-VHT40 - Ant 0 + 1 (Beam-Forming Mode)	Test Channel:	151
Remark:	<ol style="list-style-type: none"> <li>Average measurement was not performed if peak level lower than average limit.</li> <li>Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.</li> </ol>		

Mark	Frequency (MHz)	Reading Level (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	7366.5	35.6	12.7	48.3	74.0	-25.7	Peak	Horizontal
	8327.0	35.6	12.6	48.2	74.0	-25.8	Peak	Horizontal
*	8939.0	35.5	13.3	48.8	68.2	-19.4	Peak	Horizontal
*	10265.0	35.3	17.2	52.5	68.2	-15.7	Peak	Horizontal
	7400.5	36.4	12.6	49.0	74.0	-25.0	Peak	Vertical
	8123.0	36.1	13.4	49.5	74.0	-24.5	Peak	Vertical
*	8820.0	34.6	13.3	47.9	68.2	-20.3	Peak	Vertical
*	10154.5	34.5	17.0	51.5	68.2	-16.7	Peak	Vertical

Note 1: “\*\*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Messiah Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/18
Test Mode:	802.11ac-VHT40 - Ant 0 + 1 (Beam-Forming Mode)	Test Channel:	159
Remark:	<ol style="list-style-type: none"> <li>1. Average measurement was not performed if peak level lower than average limit.</li> <li>2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.</li> </ol>		

Mark	Frequency (MHz)	Reading Level (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	7655.5	36.0	12.7	48.7	74.0	-25.3	Peak	Horizontal
	8225.0	36.5	13.1	49.6	74.0	-24.4	Peak	Horizontal
*	8616.0	35.9	12.9	48.8	68.2	-19.4	Peak	Horizontal
*	10163.0	34.7	17.0	51.7	68.2	-16.5	Peak	Horizontal
	7519.5	36.0	12.8	48.8	74.0	-25.2	Peak	Vertical
	8344.0	35.4	12.6	48.0	74.0	-26.0	Peak	Vertical
*	8811.5	35.0	13.3	48.3	68.2	-19.9	Peak	Vertical
*	10112.0	34.7	16.9	51.6	68.2	-16.6	Peak	Vertical

Note 1: “\*\*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Messiah Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/18
Test Mode:	802.11ac-VHT80 - Ant 0 + 1 (Beam-Forming Mode)	Test Channel:	42
Remark:	<ol style="list-style-type: none"> <li>1. Average measurement was not performed if peak level lower than average limit.</li> <li>2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.</li> </ol>		

Mark	Frequency (MHz)	Reading Level (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	7655.5	35.9	12.7	48.6	74.0	-25.4	Peak	Horizontal
	8242.0	35.9	13.0	48.9	74.0	-25.1	Peak	Horizontal
*	8692.5	34.6	13.0	47.6	68.2	-20.6	Peak	Horizontal
*	10214.0	34.8	17.1	51.9	68.2	-16.3	Peak	Horizontal
	7477.0	35.7	12.9	48.6	74.0	-25.4	Peak	Vertical
	8250.5	35.1	12.9	48.0	74.0	-26.0	Peak	Vertical
*	8735.0	35.3	13.0	48.3	68.2	-19.9	Peak	Vertical
*	9857.0	34.2	16.7	50.9	68.2	-17.3	Peak	Vertical

Note 1: “\*\*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Messiah Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/18
Test Mode:	802.11ac-VHT80 - Ant 0 + 1 (Beam-Forming Mode)	Test Channel:	155
Remark:	<ol style="list-style-type: none"> <li>1. Average measurement was not performed if peak level lower than average limit.</li> <li>2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.</li> </ol>		

Mark	Frequency (MHz)	Reading Level (dB $\mu$ V)	Factor (dB)	Measure Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Detector	Polarization
	7460.0	34.9	12.9	47.8	74.0	-26.2	Peak	Horizontal
	8386.5	35.5	12.6	48.1	74.0	-25.9	Peak	Horizontal
*	8667.0	34.7	12.9	47.6	68.2	-20.6	Peak	Horizontal
*	10154.5	34.1	17.0	51.1	68.2	-17.1	Peak	Horizontal
	7477.0	35.5	12.9	48.4	74.0	-25.6	Peak	Vertical
	8259.0	35.6	12.9	48.5	74.0	-25.5	Peak	Vertical
*	8803.0	35.9	13.3	49.2	68.2	-19.0	Peak	Vertical
*	10129.0	34.6	16.9	51.5	68.2	-16.7	Peak	Vertical

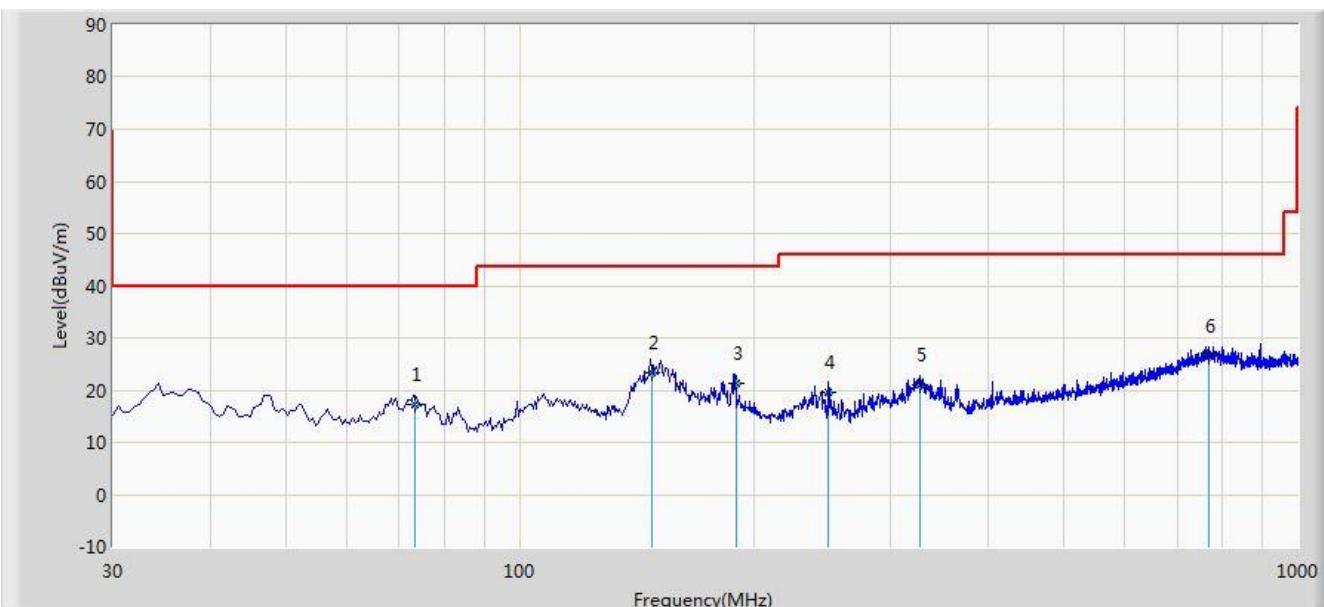
Note 1: “\*\*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB $\mu$ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

**The worst case of Radiated Emission below 1GHz:**

Site: AC1	Time: 2018/09/11 - 10:33
Limit: FCC_Part15.209_RE(3m)	Engineer: Cloud Guo
Probe: VULB 9168 _20-2000MHz	Polarity: Horizontal
EUT: HAN Access Point	Power: AC 120V/60Hz
<b>Worst Case: Transmit by 802.11a at Channel 5180MHz Ant 0 + 1</b>	



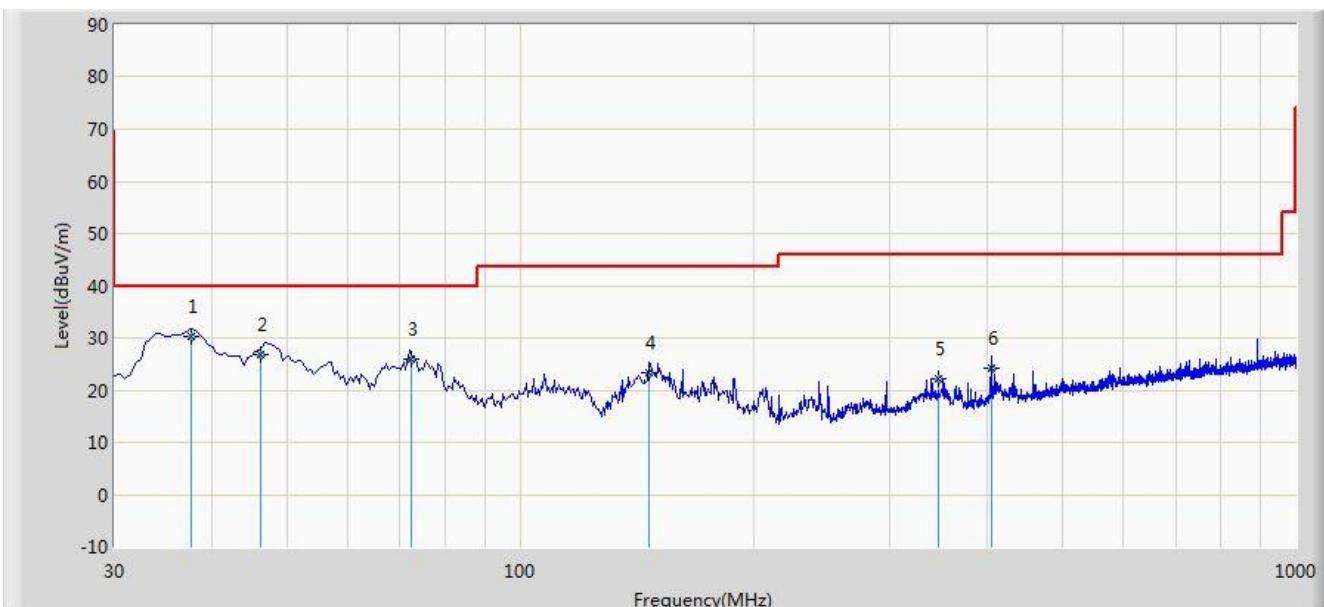
No	Flag	Mark	Frequency (MHz)	Measure Level (dB $\mu$ V/m)	Reading Level (dB $\mu$ V)	Margin (dB)	Limit (dB $\mu$ V/m)	Factor (dB)	Type
1			73.336	17.361	6.265	-22.639	40.000	11.096	QP
2			147.628	23.446	8.326	-20.054	43.500	15.121	QP
3			189.656	21.302	9.518	-22.198	43.500	11.785	QP
4			249.659	19.679	6.663	-26.321	46.000	13.016	QP
5			326.645	20.971	5.856	-25.029	46.000	15.116	QP
6		*	767.550	26.541	3.515	-19.459	46.000	23.026	QP

Note 1: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 40GHz), therefore no data appear in the report.

Site: AC1	Time: 2018/09/11 - 10:34
Limit: FCC_Part15.209_RE(3m)	Engineer: Cloud Guo
Probe: VULB 9168 _20-2000MHz	Polarity: Vertical
EUT: HAN Access Point	Power: AC 120V/60Hz
<b>Worst Case: Transmit by 802.11a at Channel 5180MHz Ant 0 + 1</b>	



No	Flag	Mark	Frequency (MHz)	Measure Level (dB $\mu$ V/m)	Reading Level (dB $\mu$ V)	Margin (dB)	Limit (dB $\mu$ V/m)	Factor (dB)	Type
1		*	37.655	30.287	15.966	-9.713	40.000	14.322	QP
2			46.250	26.918	12.663	-13.082	40.000	14.256	QP
3			72.325	25.896	14.650	-14.104	40.000	11.246	QP
4			146.326	23.395	8.366	-20.105	43.500	15.028	QP
5			346.658	22.081	6.589	-23.919	46.000	15.492	QP
6			404.905	24.248	7.526	-21.752	46.000	16.721	QP

Note 1: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 40GHz), therefore no data appear in the report.

## 7.9. Radiated Restricted Band Edge Measurement

### 7.9.1 Test Limit

#### For 15.205 requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a).

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 - 0.110	16.42-16.423	399.9 - 410	4.5-5.15
<sup>1</sup> 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	156.52475-156.525	2483.5 - 2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690 - 2900	22.01-23.12
8.41425-8.41475	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	( <sup>2</sup> )
13.36-13.41	--	--	--

#### For 15.407(b) requirement:

For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing

linearly to a level of 15.6dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27dBm/MHz at the band edge.

Refer to KDB 789033 D02v01r04 G)2)c), as specified in § 15.407(b), emissions above 1000 MHz that are outside of the restricted bands are subject to a maximum emission limit of -27dBm/MHz as specified in § 15.407(b)(4)). However, an out-of-band emission that complies with both the peak and average limits of § 15.209 is not required to satisfy the -27dBm/MHz.

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 – 0.490	2400/F (kHz)	300
0.490 – 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

### 7.9.2. Test Procedure Used

KDB 789033 D02v02r01 – Section G

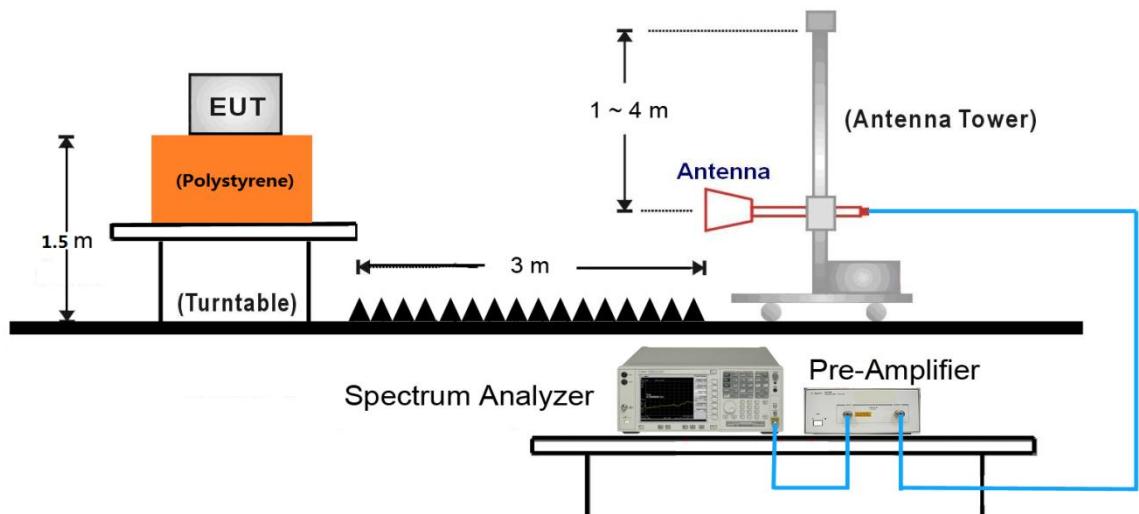
### 7.9.3. Test Setting

#### Peak Measurements above 1GHz

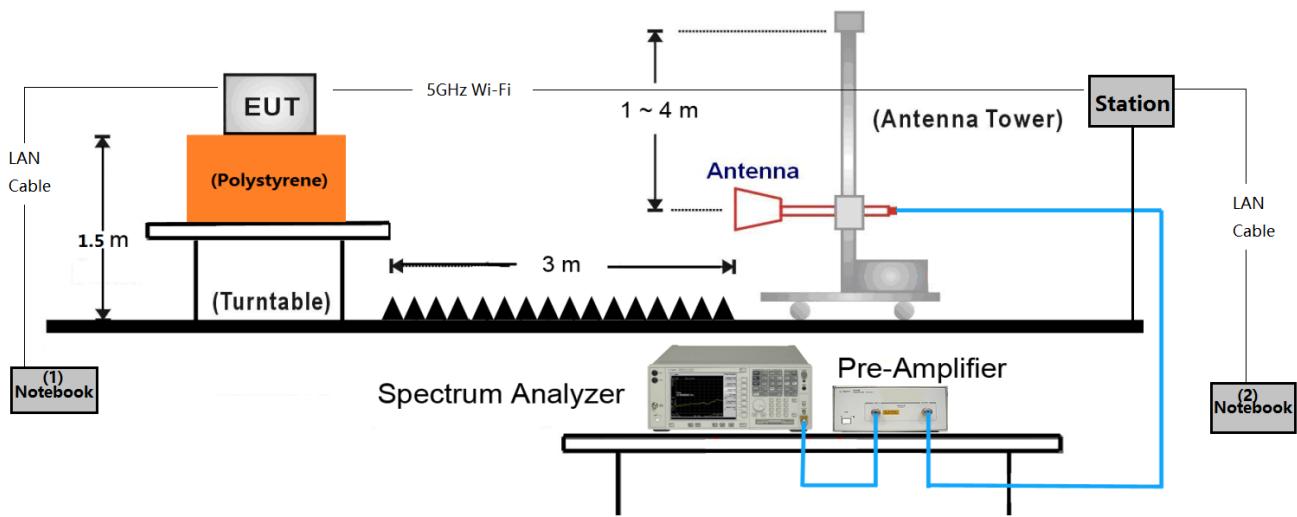
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

**Average Measurements above 1GHz (Method AD)**

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. If duty cycle  $\geq 98\%$ , VBW  $\leq$  RBW/100 but not less than 10Hz; If duty cycle  $< 98\%$ , set VBW $\geq 1/T$ .
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Allow max hold to run for at least 50 traces if the transmitted signal is continuous or has at least 98% duty cycle. For lower duty cycles, increase the minimum number of traces by a factor of  $1/x$ , where x is the duty cycle.

**7.9.4. Test Setup**

### Additional Beam-Forming Mode Test Setup



Make the EUT connect with the station by 5GHz wireless.

Input some commands in the notebook (1) to open the EUT Beam Forming function, and setup the related test channel & data rate & power setting.

Make the notebook (1) ping with notebook (2) using the “iperf” software that can produce one bigger duty cycle waveform.

### 7.9.5.Test Result

Site: AC1	Time: 2018/09/09 - 16:28
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at channel 5180MHz(CDD Mode)	

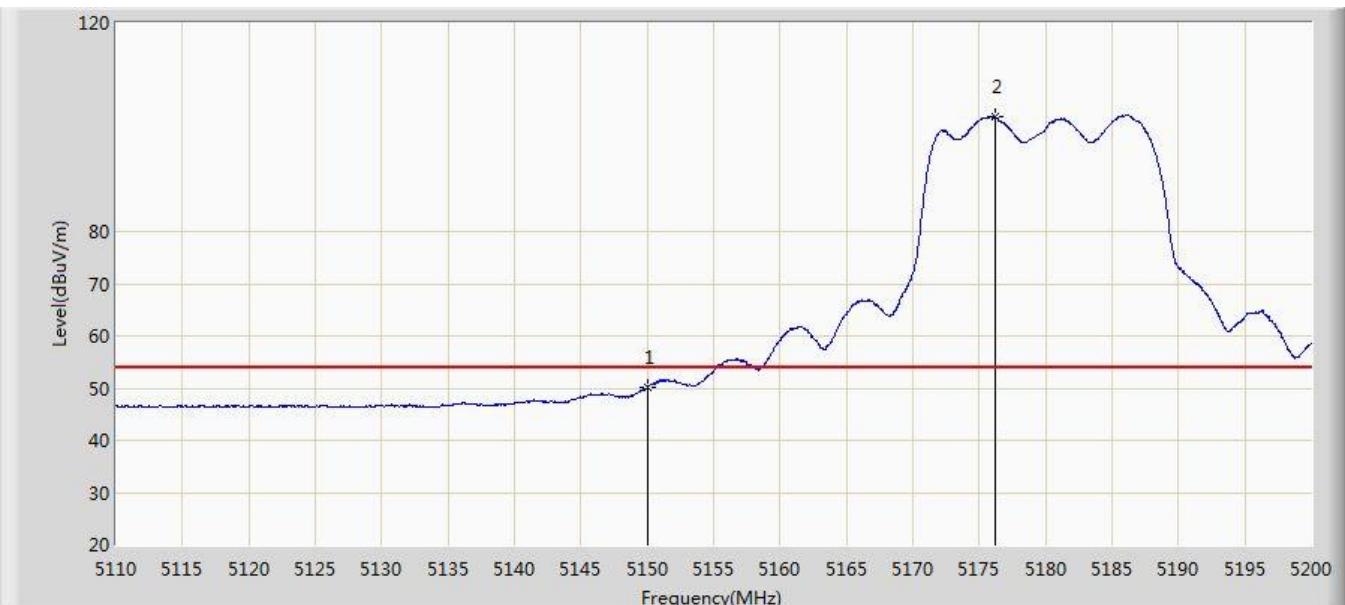


No	Flag	Mark	Frequency (MHz)	Measure Level (dB $\mu$ V/m)	Reading Level (dB $\mu$ V)	Over Limit (dB)	Limit (dB $\mu$ V/m)	Factor (dB)	Type
1			5150.000	71.499	64.937	-2.501	74.000	6.562	PK
2	*		5175.745	112.083	105.605	N/A	N/A	6.478	PK

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Site: AC1	Time: 2018/09/09 - 16:45
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at channel 5180MHz(CDD Mode)	

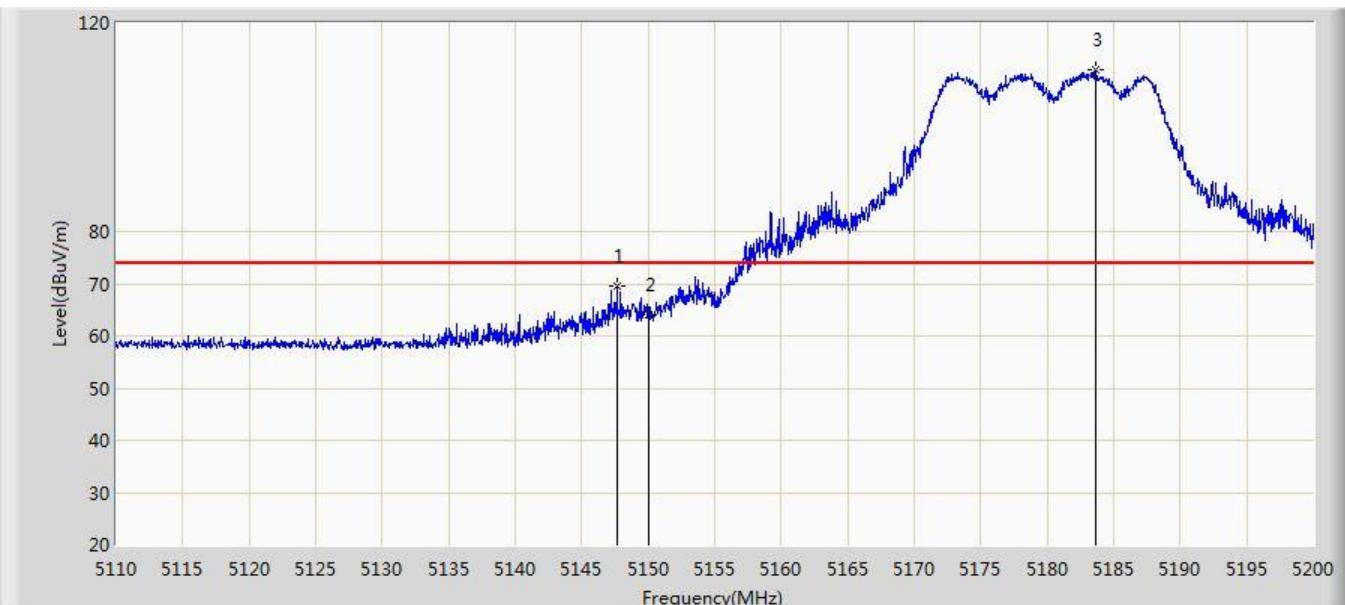


No	Flag	Mark	Frequency (MHz)	Measure Level (dB $\mu$ V/m)	Reading Level (dB $\mu$ V)	Over Limit (dB)	Limit (dB $\mu$ V/m)	Factor (dB)	Type
1			5150.000	50.078	43.516	-3.922	54.000	6.562	AV
2		*	5176.150	101.954	95.479	N/A	N/A	6.474	AV

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Site: AC1	Time: 2018/09/09 - 16:50
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at channel 5180MHz(CDD Mode)	

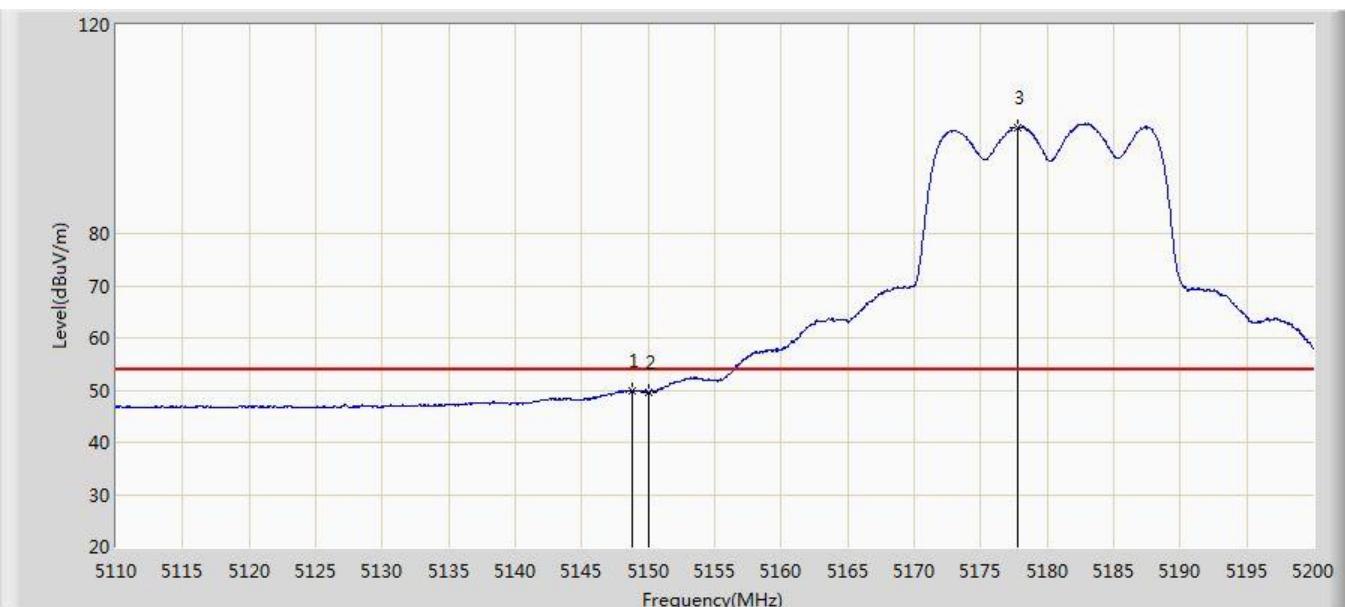


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Over Limit (dB)	Limit (dBμV/m)	Factor (dB)	Type
1			5147.665	69.696	63.135	-4.304	74.000	6.560	PK
2			5150.000	64.114	57.552	-9.886	74.000	6.562	PK
3		*	5183.665	111.048	104.630	N/A	N/A	6.418	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Site: AC1	Time: 2018/09/09 - 16:52
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at channel 5180MHz(CDD Mode)	

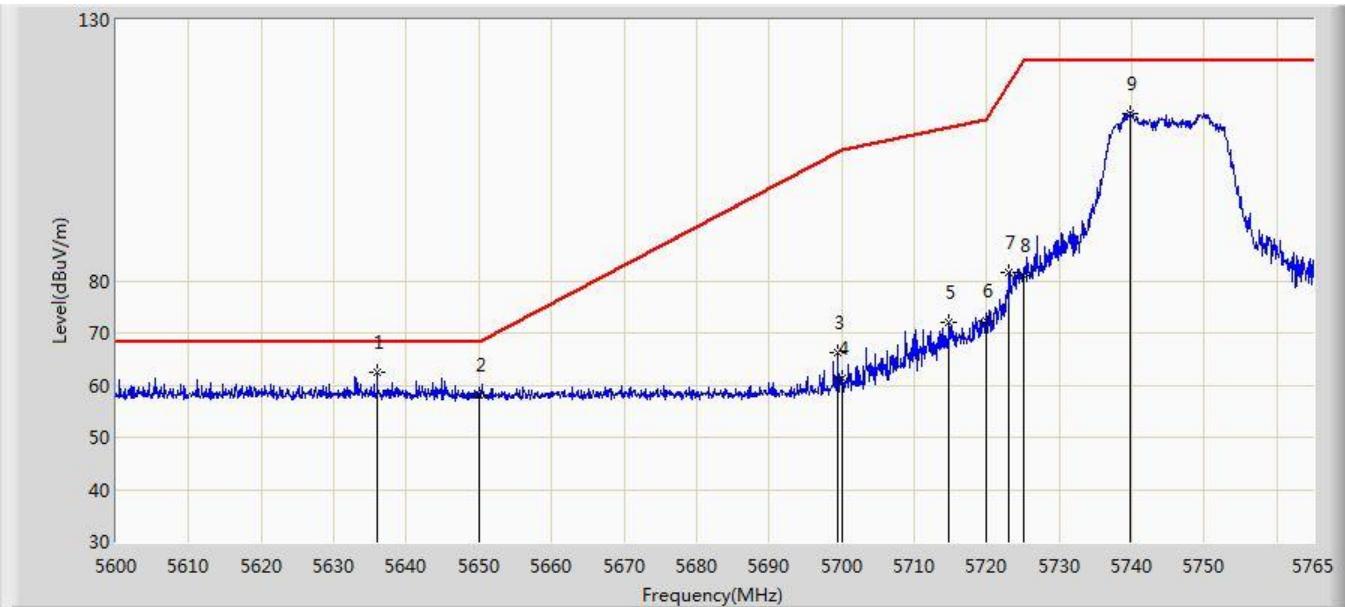


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5148.745	49.728	43.168	-4.272	54.000	6.560	AV
2			5150.000	49.652	43.090	-4.348	54.000	6.562	AV
3		*	5177.815	100.316	93.854	N/A	N/A	6.462	AV

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Site: AC1	Time: 2018/09/09 - 17:29
Limit: FCC_Part15.407_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at channel 5745MHz(CDD Mode)	

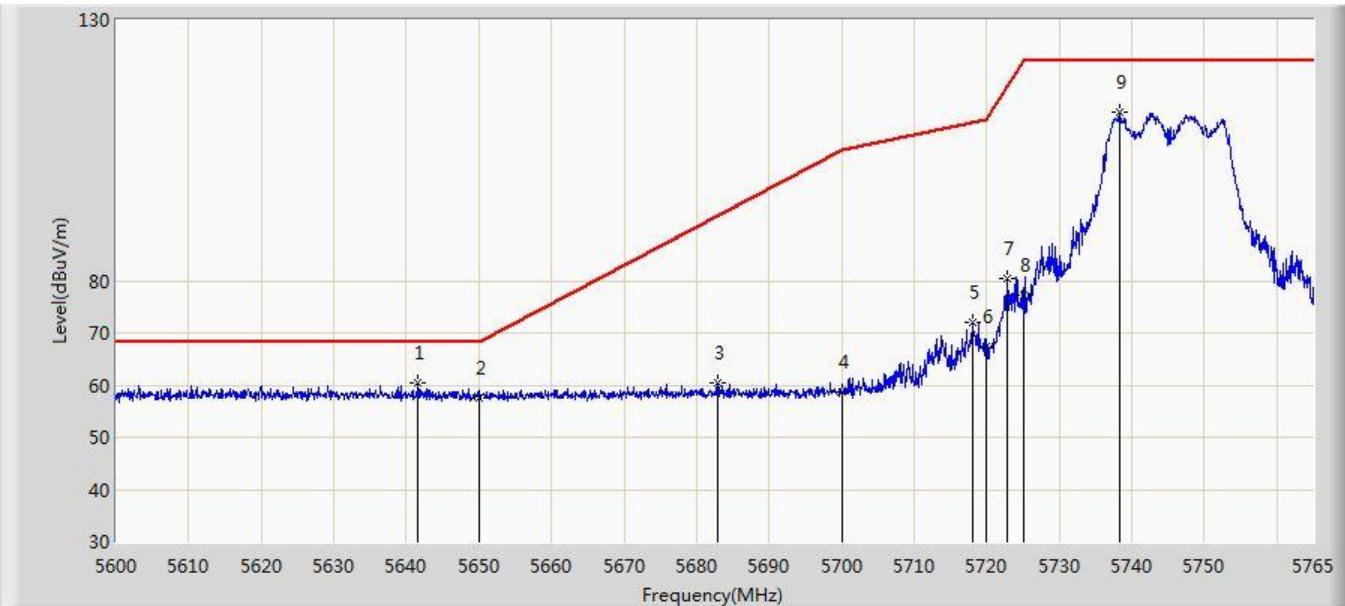


No	Flag	Mark	Frequency (MHz)	Measure Level (dB $\mu$ V/m)	Reading Level (dB $\mu$ V)	Over Limit (dB)	Limit (dB $\mu$ V/m)	Factor (dB)	Type
1		*	5635.970	62.455	55.461	-5.745	68.200	6.994	PK
2			5650.000	58.134	51.129	-10.066	68.200	7.005	PK
3			5699.495	66.167	59.005	-38.661	104.828	7.162	PK
4			5700.000	61.317	54.152	-43.883	105.200	7.165	PK
5			5714.840	71.943	64.673	-37.414	109.357	7.270	PK
6			5720.000	72.257	64.958	-38.543	110.800	7.299	PK
7			5723.090	81.701	74.384	-36.145	117.846	7.317	PK
8			5725.000	80.988	73.660	-41.212	122.200	7.328	PK
9			5739.672	112.090	104.699	N/A	N/A	7.391	PK

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Site: AC1	Time: 2018/09/09 - 17:33
Limit: FCC_Part15.407_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at channel 5745MHz(CDD Mode)	

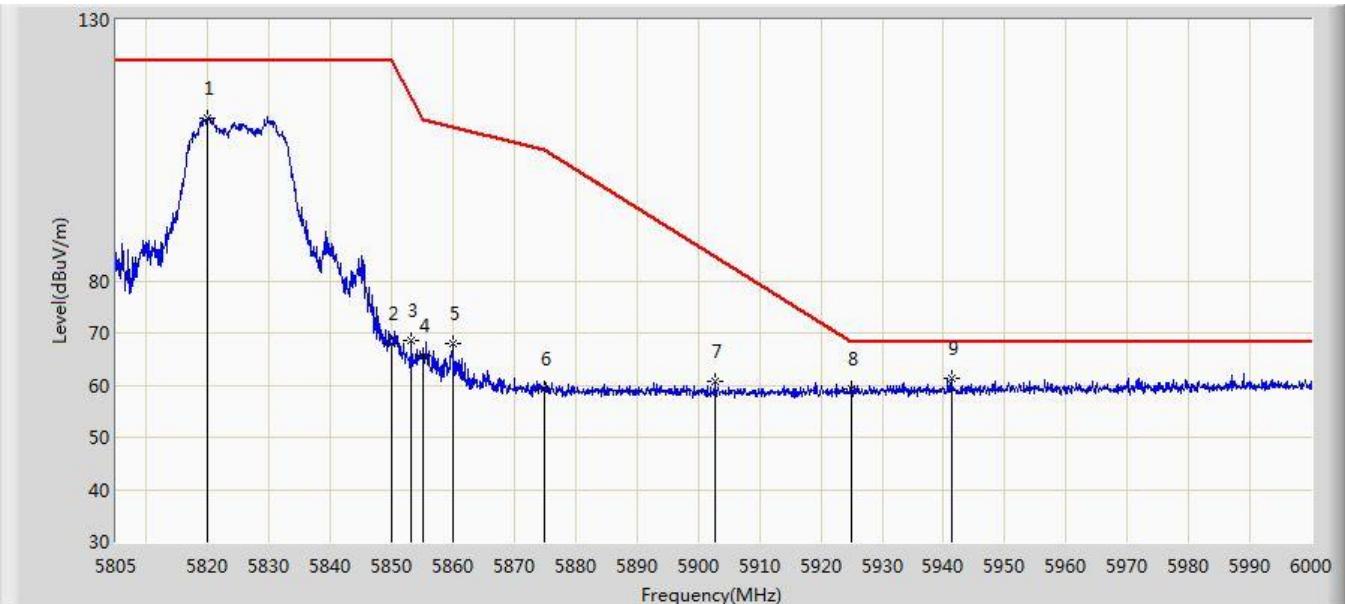


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5641.663	60.376	53.389	-7.824	68.200	6.987	PK
2			5650.000	57.411	50.406	-10.789	68.200	7.005	PK
3			5682.830	60.570	53.490	-31.961	92.531	7.080	PK
4			5700.000	58.691	51.526	-46.509	105.200	7.165	PK
5			5717.975	71.906	64.618	-38.328	110.234	7.288	PK
6			5720.000	67.489	60.190	-43.311	110.800	7.299	PK
7			5722.760	80.490	73.175	-36.604	117.094	7.315	PK
8			5725.000	77.280	69.952	-44.920	122.200	7.328	PK
9			5738.270	112.182	104.797	N/A	N/A	7.386	PK

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Site: AC1	Time: 2018/09/09 - 17:35
Limit: FCC_Part15.407_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at channel 5825MHz(CDD Mode)	

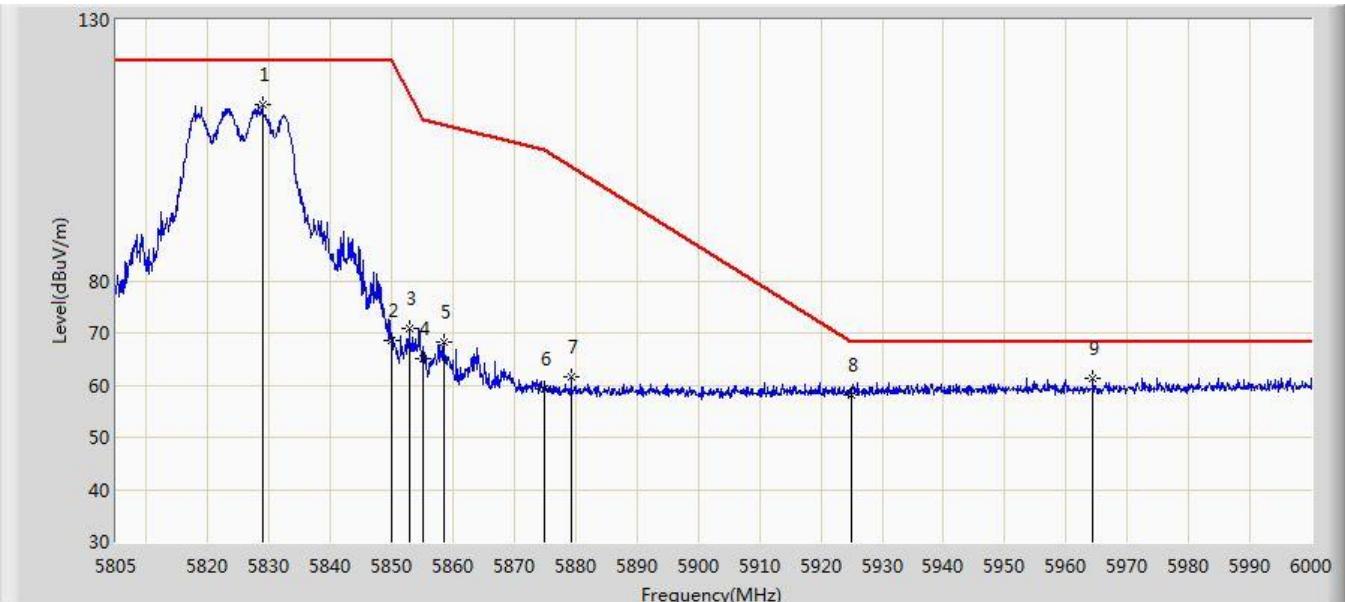


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5819.820	111.233	103.598	N/A	N/A	7.634	PK
2			5850.000	67.899	60.126	-54.301	122.200	7.774	PK
3			5853.165	68.525	60.750	-46.458	114.983	7.775	PK
4			5855.000	65.595	57.819	-45.205	110.800	7.775	PK
5			5859.893	67.912	60.133	-41.517	109.428	7.779	PK
6			5875.000	59.368	51.550	-45.832	105.200	7.818	PK
7			5902.695	60.655	52.828	-24.012	84.667	7.826	PK
8			5925.000	59.168	51.349	-9.032	68.200	7.819	PK
9	*		5941.305	61.215	53.378	-6.985	68.200	7.837	PK

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Site: AC1	Time: 2018/09/09 - 17:37
Limit: FCC_Part15.407_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at channel 5825MHz(CDD Mode)	

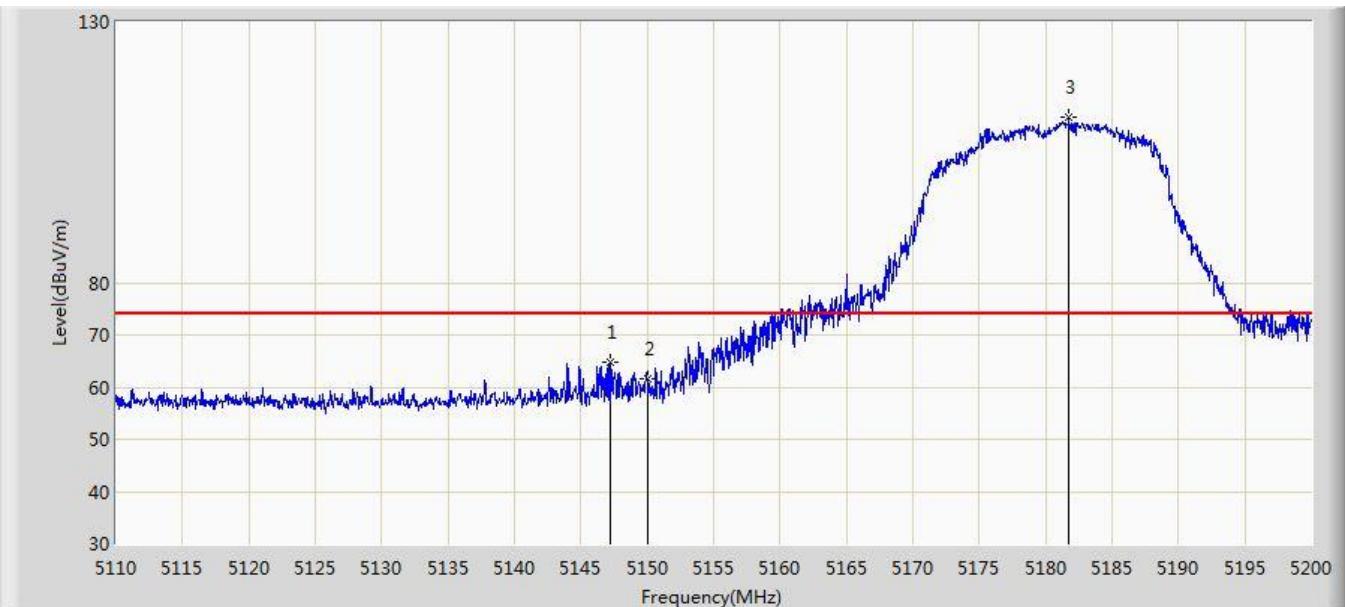


No	Flag	Mark	Frequency (MHz)	Measure Level (dB $\mu$ V/m)	Reading Level (dB $\mu$ V)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5828.888	113.757	106.080	N/A	N/A	7.677	PK
2			5850.000	68.480	60.707	-53.720	122.200	7.774	PK
3			5852.775	70.925	63.150	-44.947	115.872	7.774	PK
4			5855.000	65.104	57.328	-45.696	110.800	7.775	PK
5			5858.430	68.344	60.566	-41.494	109.838	7.778	PK
6			5875.000	59.329	51.511	-45.871	105.200	7.818	PK
7			5879.295	61.508	53.678	-40.501	102.009	7.829	PK
8			5925.000	58.155	50.336	-10.045	68.200	7.819	PK
9	*		5964.315	61.409	53.547	-6.791	68.200	7.862	PK

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Site: AC1	Time: 2018/09/11 - 05:12
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT20 at channel 5180MHz(CDD Mode)	



No	Flag	Mark	Frequency (MHz)	Measure Level (dB $\mu$ V/m)	Reading Level (dB $\mu$ V)	Over Limit (dB)	Limit (dB $\mu$ V/m)	Factor (dB)	Type
1			5147.215	64.832	58.269	-9.168	74.000	6.564	PK
2			5150.000	61.714	55.152	-12.286	74.000	6.562	PK
3	*		5181.730	111.720	105.290	N/A	N/A	6.431	PK

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Site: AC1	Time: 2018/09/11 - 05:14
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT20 at channel 5180MHz(CDD Mode)	

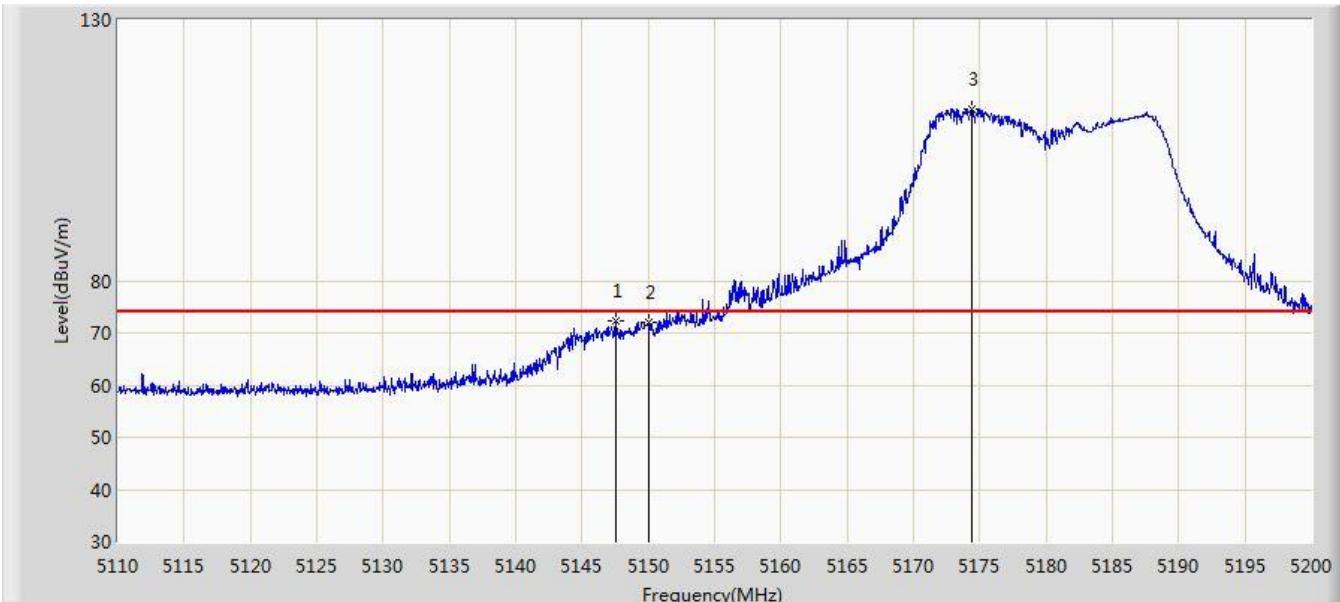


No	Flag	Mark	Frequency (MHz)	Measure Level (dB $\mu$ V/m)	Reading Level (dB $\mu$ V)	Over Limit (dB)	Limit (dB $\mu$ V/m)	Factor (dB)	Type
1			5150.000	46.700	40.138	-7.300	54.000	6.562	AV
2		*	5182.045	98.956	92.528	N/A	N/A	6.428	AV

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Site: AC1	Time: 2018/09/11 - 04:47
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT20 at channel 5180MHz(CDD Mode)	

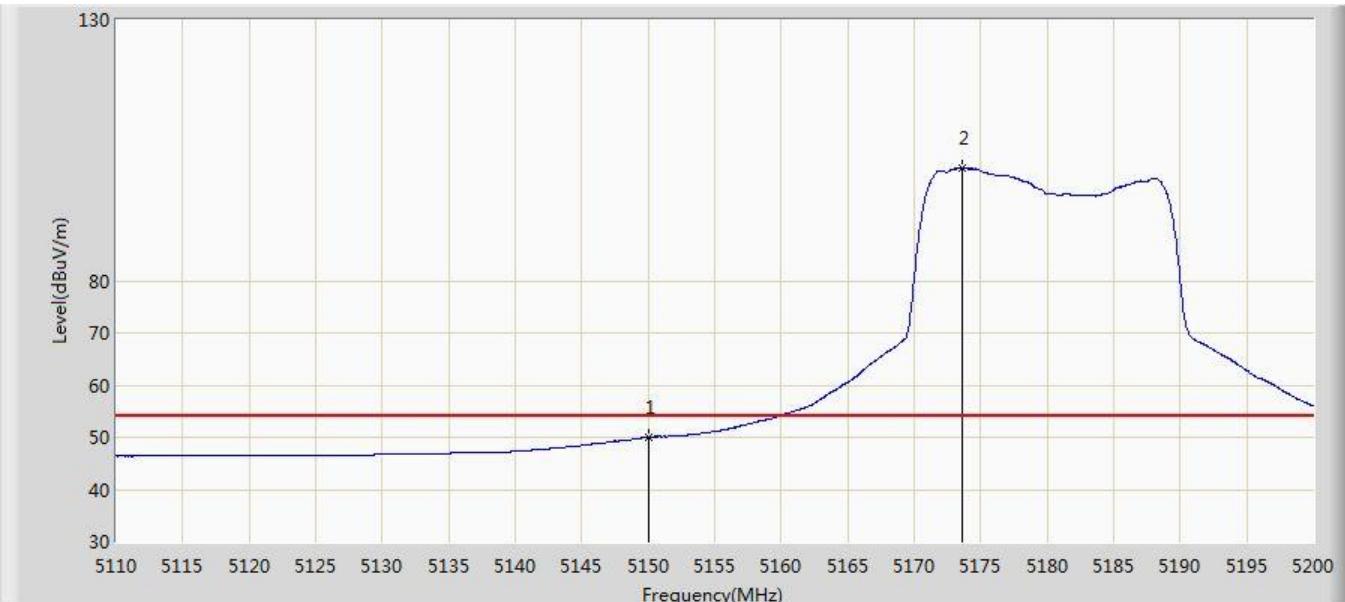


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Over Limit (dB)	Limit (dBμV/m)	Factor (dB)	Type
1			5147.530	72.415	65.854	-1.585	74.000	6.561	PK
2			5150.000	71.968	65.406	-2.032	74.000	6.562	PK
3		*	5174.395	112.820	106.331	N/A	N/A	6.489	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Site: AC1	Time: 2018/09/11 - 05:10
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT20 at channel 5180MHz(CDD Mode)	

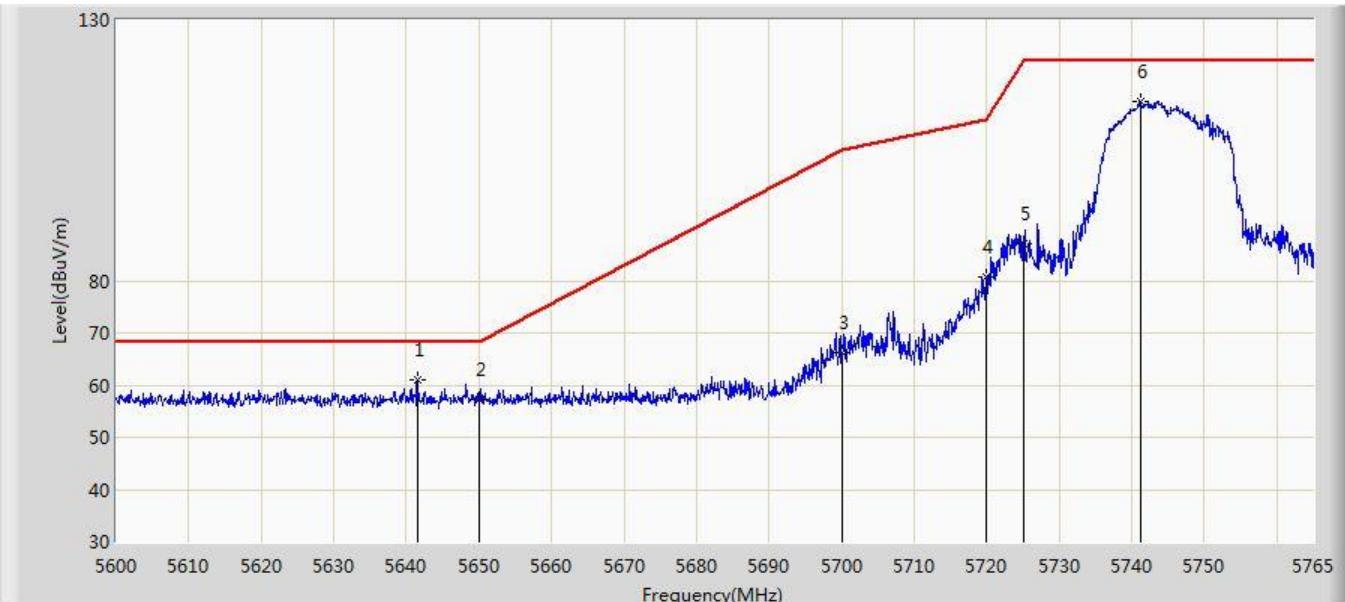


No	Flag	Mark	Frequency (MHz)	Measure Level (dB $\mu$ V/m)	Reading Level (dB $\mu$ V)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	49.983	43.421	-4.017	54.000	6.562	AV
2		*	5173.630	101.499	95.004	N/A	N/A	6.495	AV

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Site: AC1	Time: 2018/09/11 - 05:49
Limit: FCC_Part15.407_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT20 at channel 5745MHz(CDD Mode)	

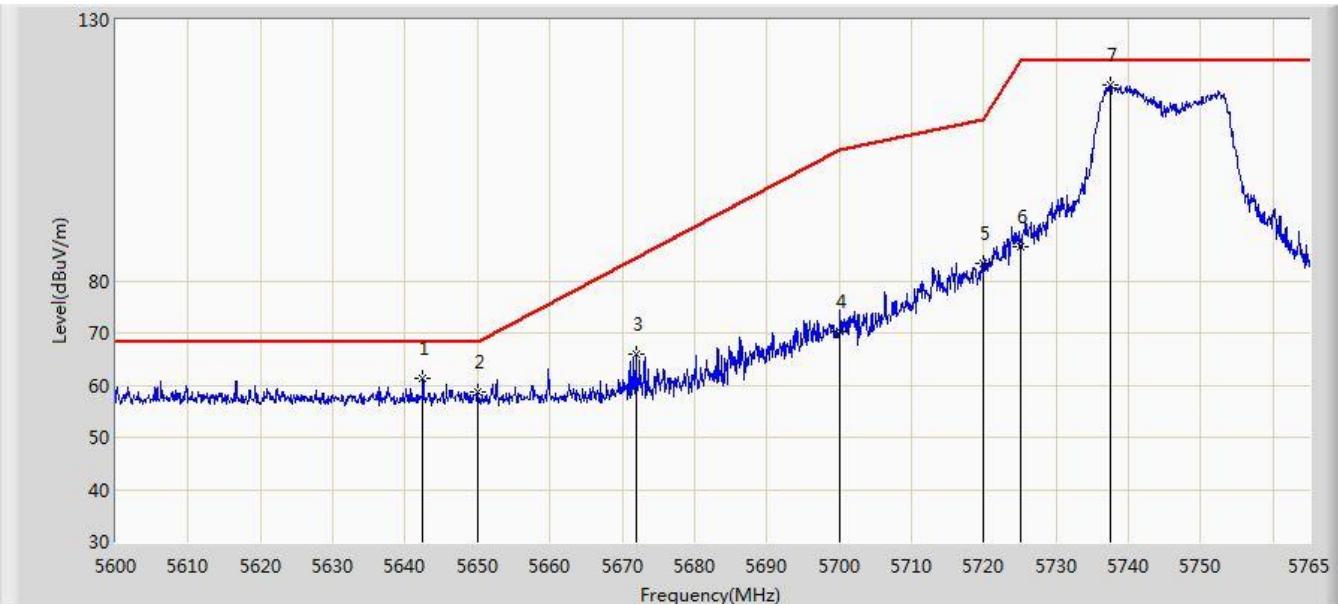


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Over Limit (dB)	Limit (dBμV/m)	Factor (dB)	Type
1		*	5641.498	60.872	53.886	-7.328	68.200	6.987	PK
2			5650.000	57.377	50.372	-10.823	68.200	7.005	PK
3			5700.000	66.315	59.150	-38.885	105.200	7.165	PK
4			5720.000	80.659	73.360	-30.141	110.800	7.299	PK
5			5725.000	87.109	79.781	-35.091	122.200	7.328	PK
6			5741.158	114.483	107.087	N/A	N/A	7.397	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Site: AC1	Time: 2018/09/11 - 05:52
Limit: FCC_Part15.407_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT20 at channel 5745MHz(CDD Mode)	

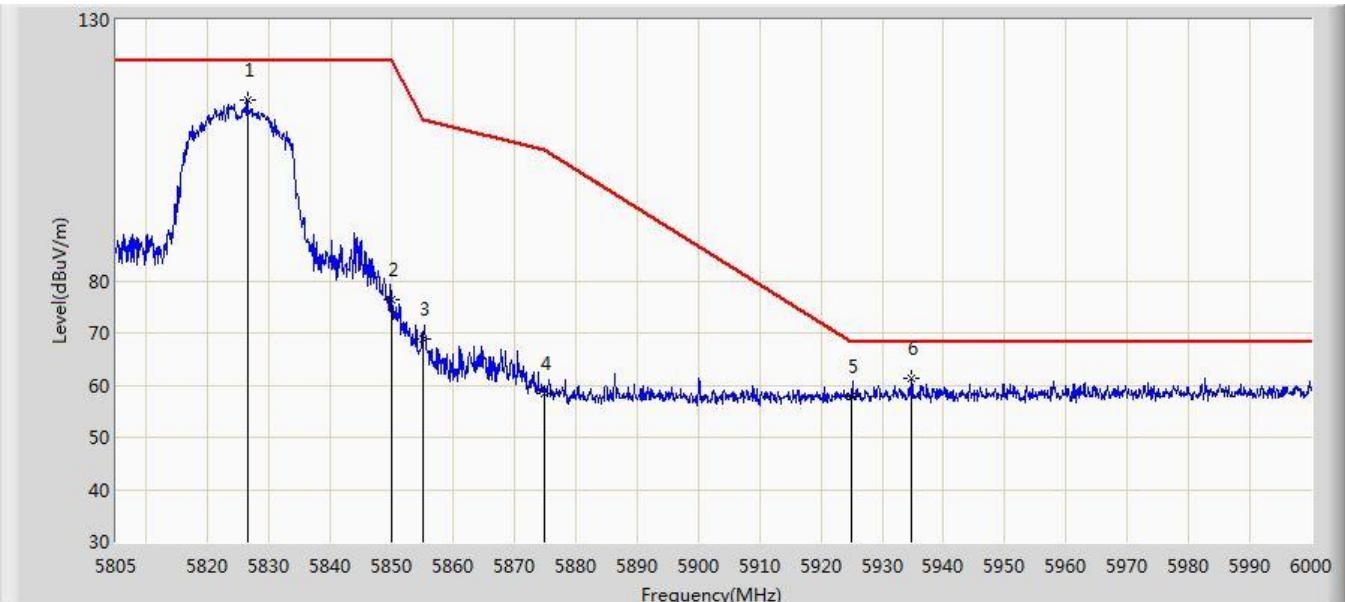


No	Flag	Mark	Frequency (MHz)	Measure Level (dB $\mu$ V/m)	Reading Level (dB $\mu$ V)	Over Limit (dB)	Limit (dB $\mu$ V/m)	Factor (dB)	Type
1			5642.487	61.161	54.173	-7.039	68.200	6.989	PK
2			5650.000	58.715	51.710	-9.485	68.200	7.005	PK
3			5671.857	66.019	58.968	-18.396	84.414	7.051	PK
4			5700.000	70.187	63.022	-35.013	105.200	7.165	PK
5			5720.000	83.264	75.965	-27.536	110.800	7.299	PK
6			5725.000	86.506	79.178	-35.694	122.200	7.328	PK
7	*		5737.527	117.552	110.170	N/A	N/A	7.382	PK

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Site: AC1	Time: 2018/09/11 - 05:55
Limit: FCC_Part15.407_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT20 at channel 5825MHz(CDD Mode)	

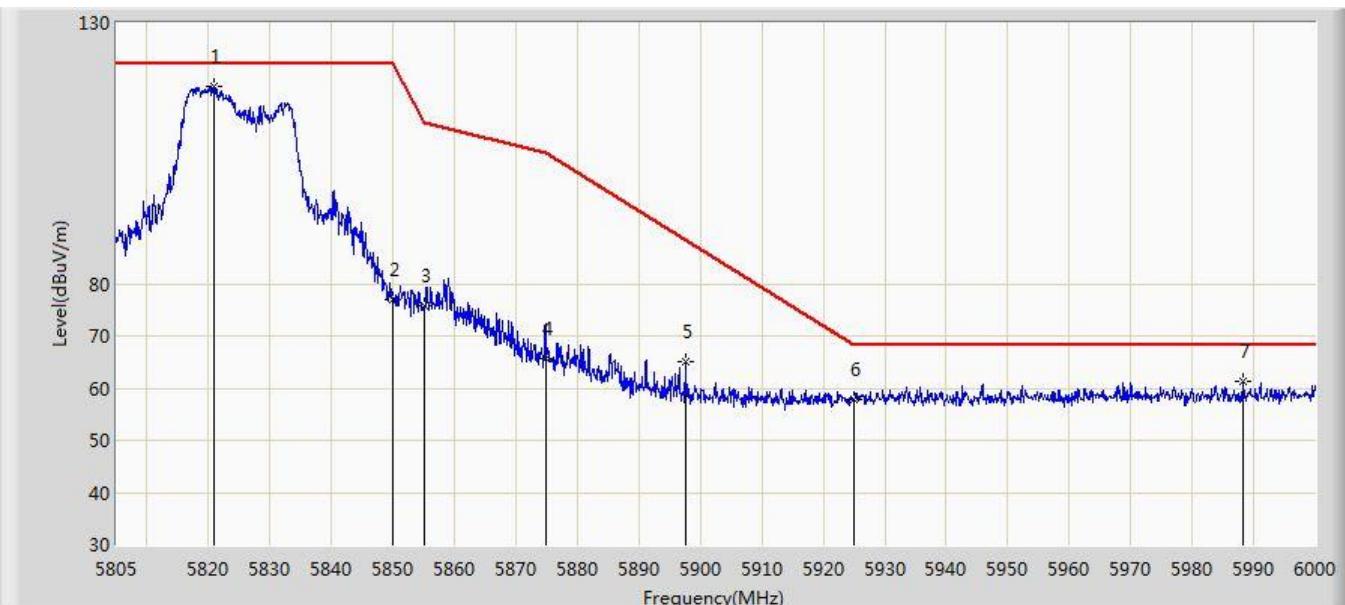


No	Flag	Mark	Frequency (MHz)	Measure Level (dB $\mu$ V/m)	Reading Level (dB $\mu$ V)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5826.450	114.689	107.024	N/A	N/A	7.665	PK
2			5850.000	76.512	68.739	-45.688	122.200	7.774	PK
3			5855.000	68.822	61.046	-41.978	110.800	7.775	PK
4			5875.000	58.360	50.542	-46.840	105.200	7.818	PK
5			5925.000	57.855	50.036	-10.345	68.200	7.819	PK
6		*	5934.870	61.274	53.445	-6.926	68.200	7.829	PK

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Site: AC1	Time: 2018/09/11 - 05:57
Limit: FCC_Part15.407_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT20 at channel 5825MHz(CDD Mode)	

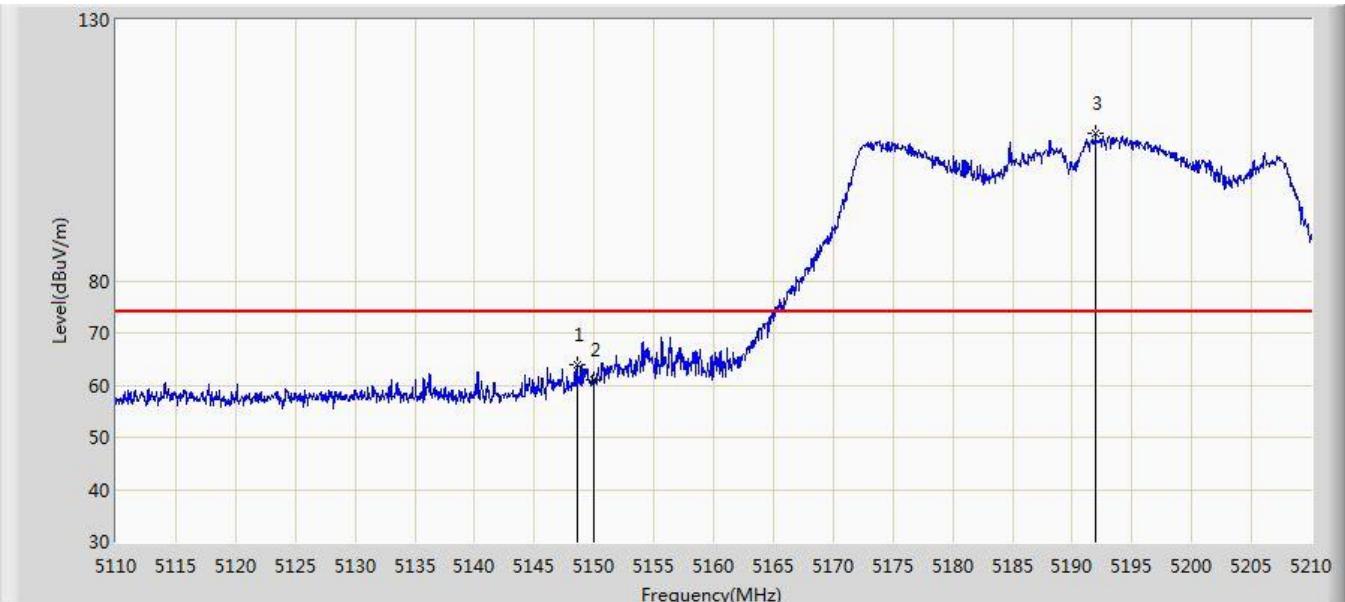


No	Flag	Mark	Frequency (MHz)	Measure Level (dB $\mu$ V/m)	Reading Level (dB $\mu$ V)	Over Limit (dB)	Limit (dB $\mu$ V/m)	Factor (dB)	Type
1		*	5820.795	117.747	110.108	N/A	N/A	7.639	PK
2			5850.000	77.059	69.286	-45.141	122.200	7.774	PK
3			5855.000	75.654	67.878	-35.146	110.800	7.775	PK
4			5875.000	65.773	57.955	-39.427	105.200	7.818	PK
5			5897.527	65.110	57.275	-23.381	88.491	7.835	PK
6			5925.000	57.834	50.015	-10.366	68.200	7.819	PK
7			5988.203	61.391	53.467	-6.809	68.200	7.925	PK

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Site: AC1	Time: 2018/09/11 - 06:04
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT40 at channel 5190MHz(CDD Mode)	

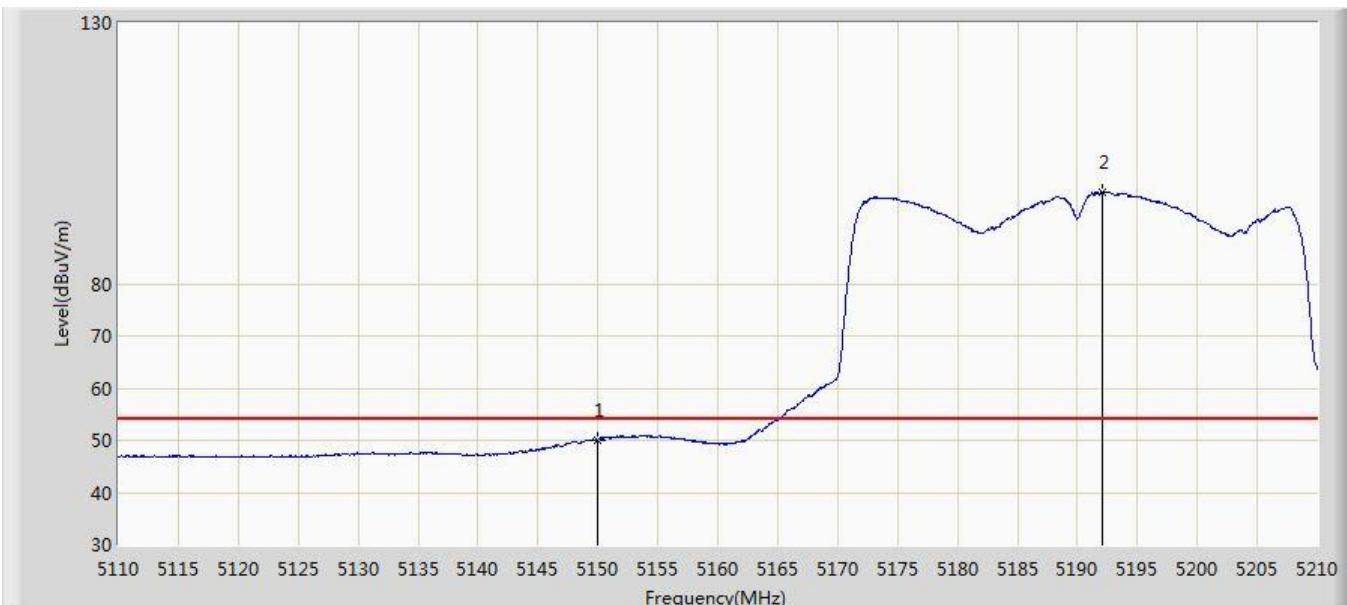


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5148.550	63.786	57.226	-10.214	74.000	6.560	PK
2			5150.000	60.872	54.310	-13.128	74.000	6.562	PK
3		*	5191.950	108.160	101.790	N/A	N/A	6.370	PK

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Site: AC1	Time: 2018/09/11 - 06:06
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT40 at channel 5190MHz(CDD Mode)	

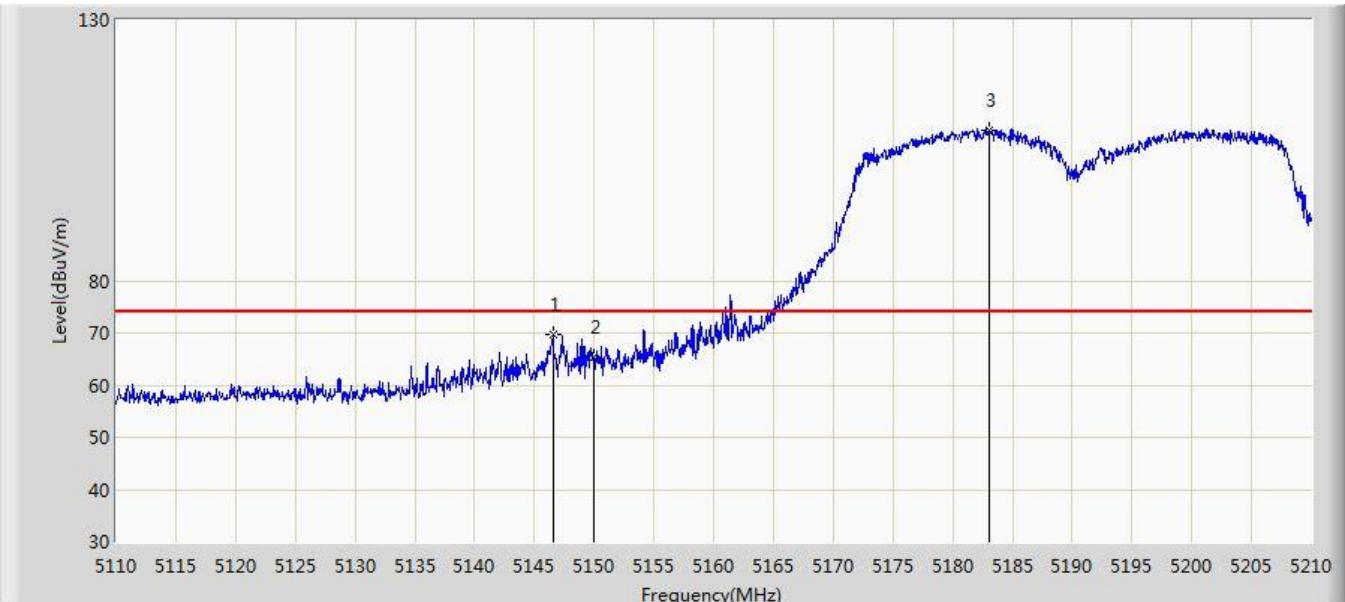


No	Flag	Mark	Frequency (MHz)	Measure Level (dB $\mu$ V/m)	Reading Level (dB $\mu$ V)	Over Limit (dB)	Limit (dB $\mu$ V/m)	Factor (dB)	Type
1			5150.000	50.079	43.517	-3.921	54.000	6.562	AV
2		*	5192.050	97.571	91.201	N/A	N/A	6.370	AV

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Site: AC1	Time: 2018/09/11 - 06:00
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT40 at channel 5190MHz(CDD Mode)	

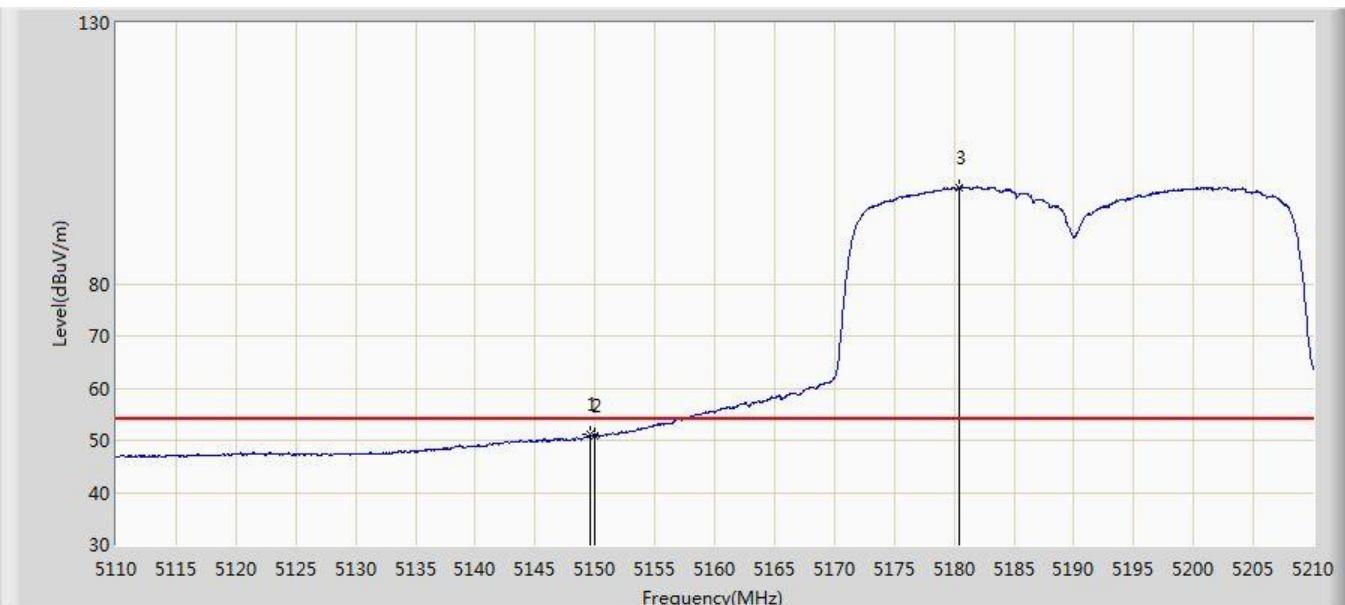


No	Flag	Mark	Frequency (MHz)	Measure Level (dB $\mu$ V/m)	Reading Level (dB $\mu$ V)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5146.600	69.752	63.185	-4.248	74.000	6.567	PK
2			5150.000	65.332	58.770	-8.668	74.000	6.562	PK
3		*	5183.000	108.960	102.538	N/A	N/A	6.422	PK

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Site: AC1	Time: 2018/09/11 - 06:04
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT40 at channel 5190MHz(CDD Mode)	

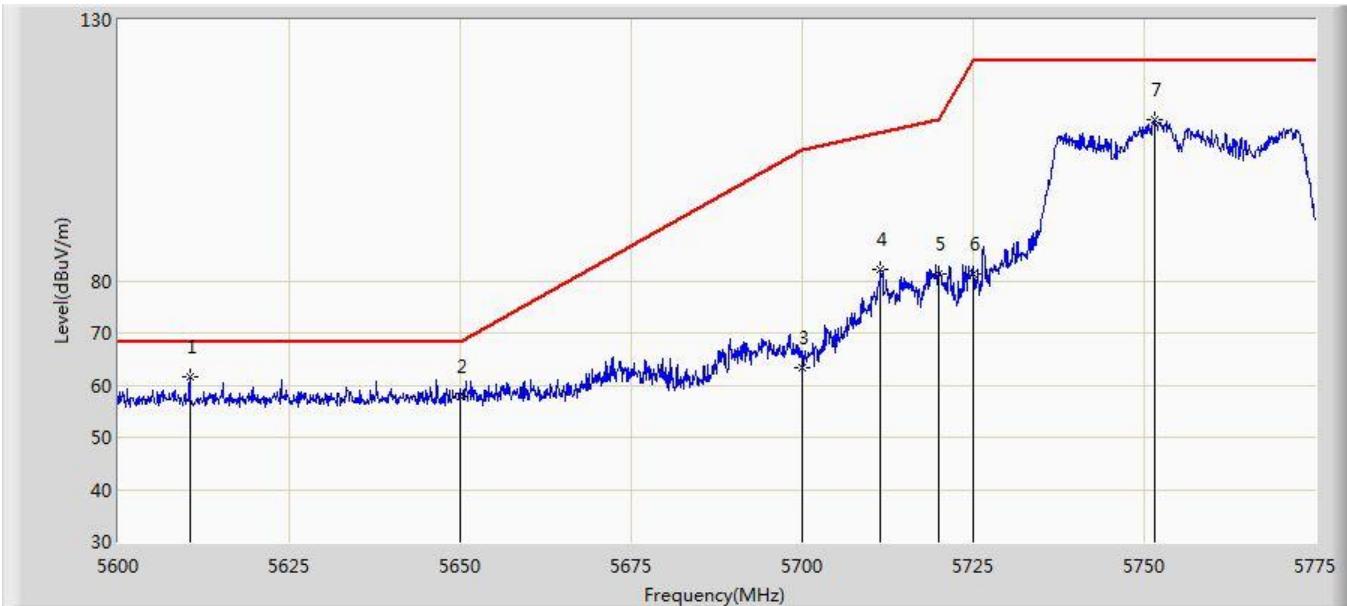


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5149.550	51.034	44.473	-2.966	54.000	6.562	AV
2			5150.000	50.739	44.177	-3.261	54.000	6.562	AV
3		*	5180.400	98.498	92.057	N/A	N/A	6.441	AV

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Site: AC1	Time: 2018/09/11 - 06:39
Limit: FCC_Part15.407_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT40 at channel 5755MHz(CDD Mode)	

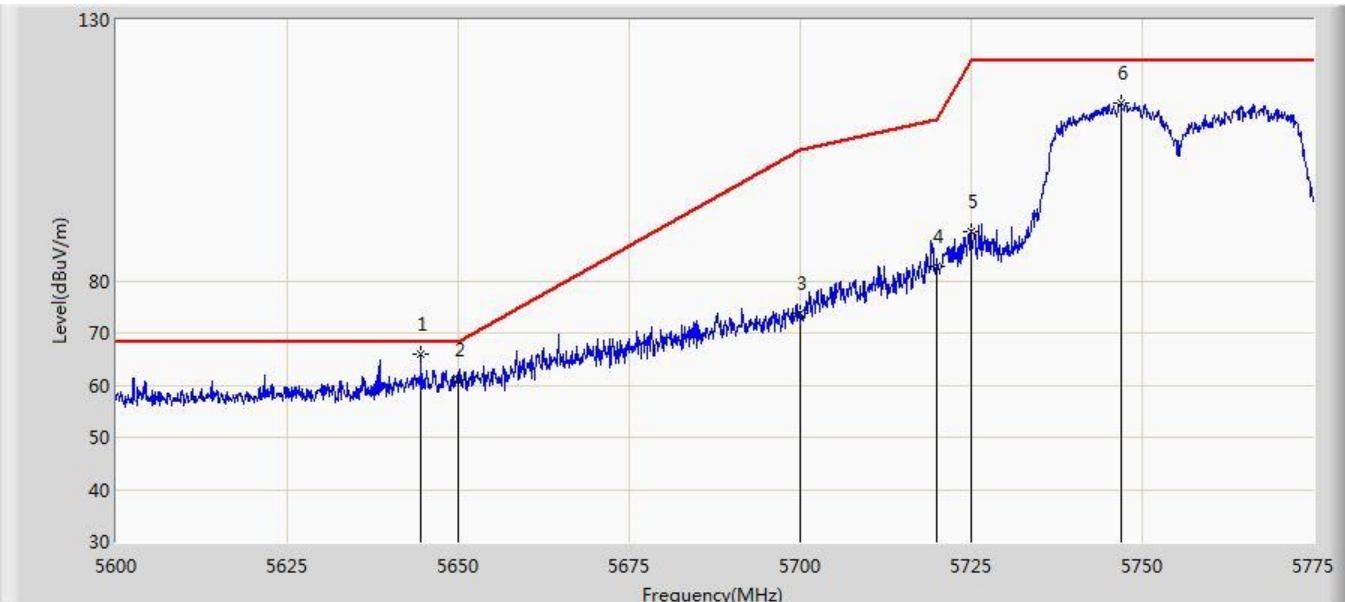


No	Flag	Mark	Frequency (MHz)	Measure Level (dB $\mu$ V/m)	Reading Level (dB $\mu$ V)	Over Limit (dB)	Limit (dB $\mu$ V/m)	Factor (dB)	Type
1		*	5610.500	61.458	54.473	-6.742	68.200	6.985	PK
2			5650.000	57.886	50.881	-10.314	68.200	7.005	PK
3			5700.000	63.325	56.160	-41.875	105.200	7.165	PK
4			5711.475	82.205	74.954	-26.210	108.415	7.251	PK
5			5720.000	81.259	73.960	-29.541	110.800	7.299	PK
6			5725.000	81.220	73.892	-40.980	122.200	7.328	PK
7			5751.638	110.856	103.446	N/A	N/A	7.410	PK

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Site: AC1	Time: 2018/09/11 - 06:42
Limit: FCC_Part15.407_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT40 at channel 5755MHz(CDD Mode)	

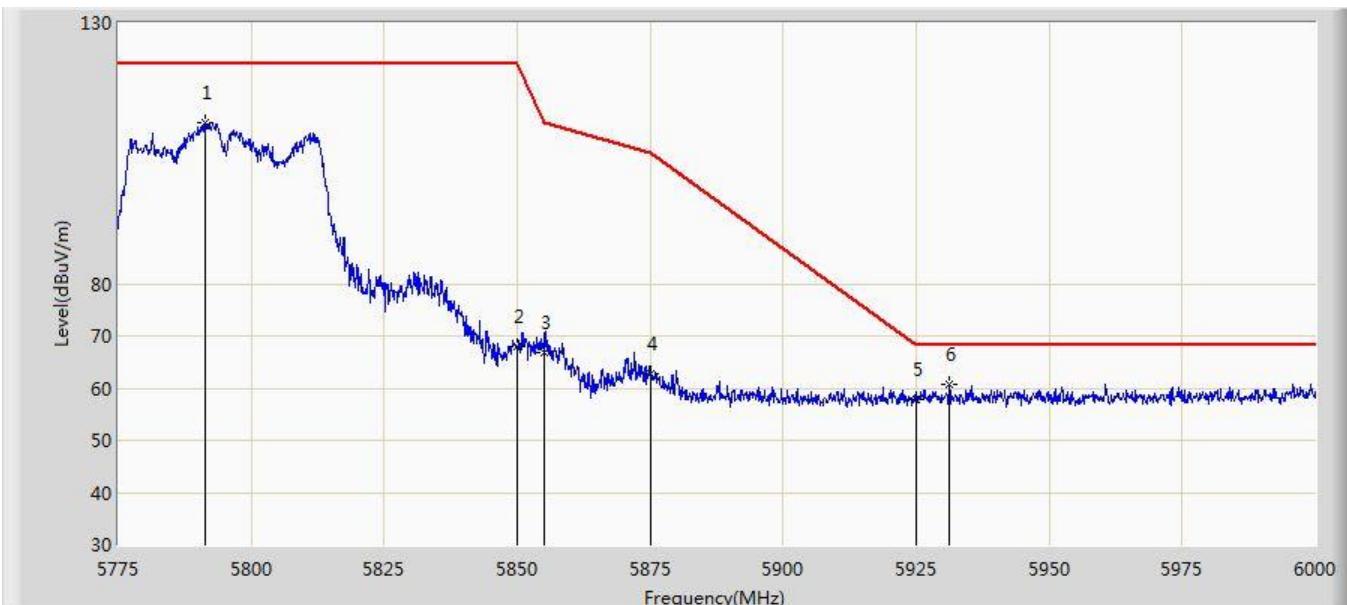


No	Flag	Mark	Frequency (MHz)	Measure Level (dBm/m)	Reading Level (dBmV)	Over Limit (dB)	Limit (dBm/m)	Factor (dB)	Type
1		*	5644.538	65.832	58.839	-2.368	68.200	6.993	PK
2			5650.000	61.103	54.098	-7.097	68.200	7.005	PK
3			5700.000	73.712	66.547	-31.488	105.200	7.165	PK
4			5720.000	82.872	75.573	-27.928	110.800	7.299	PK
5			5725.000	89.305	81.977	-32.895	122.200	7.328	PK
6			5746.825	114.040	106.634	N/A	N/A	7.406	PK

Note: Measure Level (dBm/m) = Reading Level (dBmV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Site: AC1	Time: 2018/09/11 - 06:44
Limit: FCC_Part15.407_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT40 at channel 5795MHz(CDD Mode)	

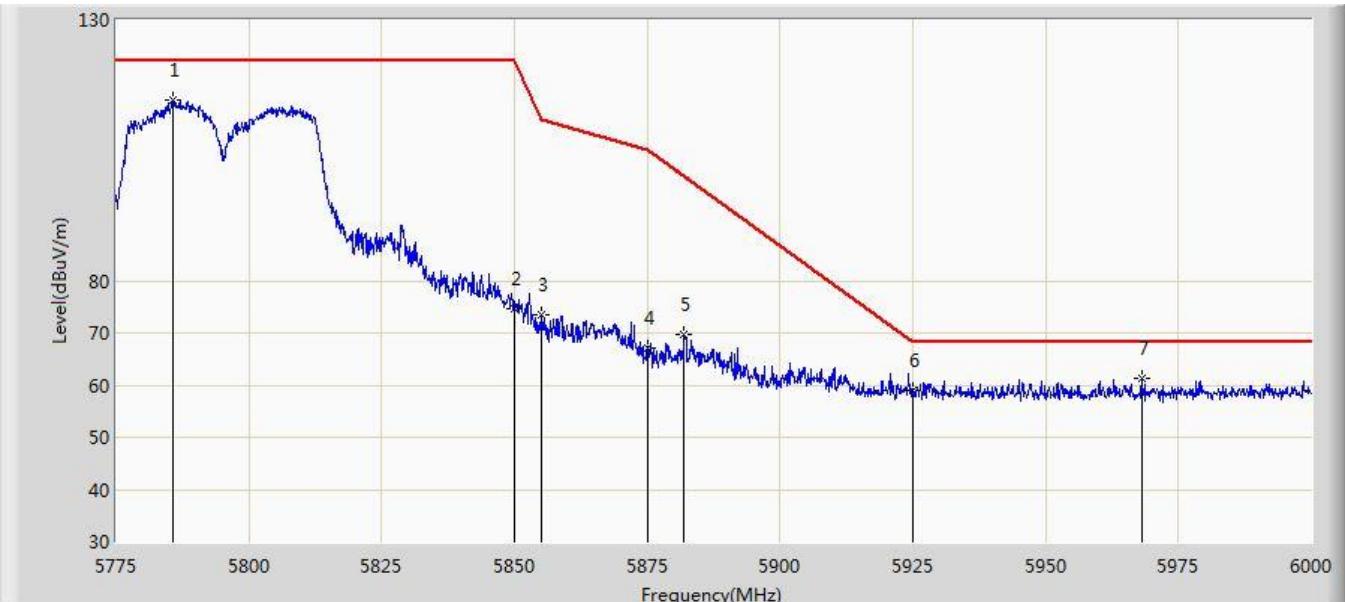


No	Flag	Mark	Frequency (MHz)	Measure Level (dB $\mu$ V/m)	Reading Level (dB $\mu$ V)	Over Limit (dB)	Limit (dB $\mu$ V/m)	Factor (dB)	Type
1			5791.312	110.850	103.324	N/A	N/A	7.527	PK
2			5850.000	68.016	60.243	-54.184	122.200	7.774	PK
3			5855.000	66.861	59.085	-43.939	110.800	7.775	PK
4			5875.000	62.872	55.054	-42.328	105.200	7.818	PK
5			5925.000	57.769	49.950	-10.431	68.200	7.819	PK
6		*	5931.263	60.604	52.780	-7.596	68.200	7.824	PK

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Site: AC1	Time: 2018/09/11 - 06:47
Limit: FCC_Part15.407_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT40 at channel 5795MHz(CDD Mode)	

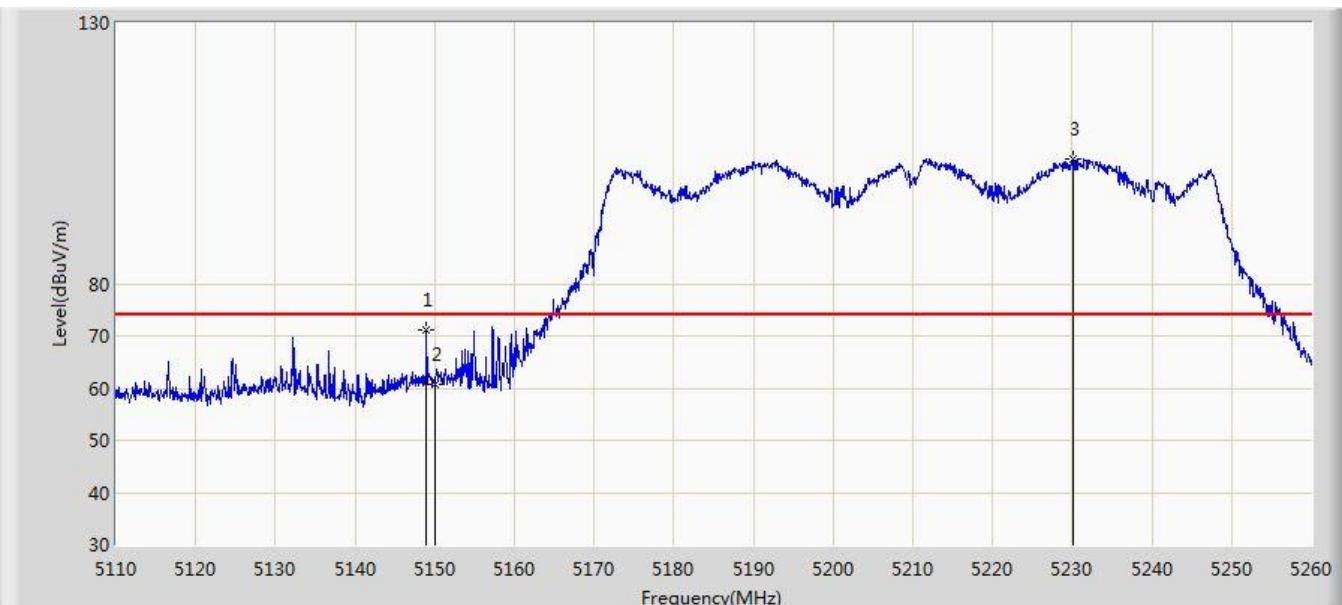


No	Flag	Mark	Frequency (MHz)	Measure Level (dB $\mu$ V/m)	Reading Level (dB $\mu$ V)	Over Limit (dB)	Limit (dB $\mu$ V/m)	Factor (dB)	Type
1			5785.687	114.715	107.209	N/A	N/A	7.505	PK
2			5850.000	74.671	66.898	-47.529	122.200	7.774	PK
3			5855.000	73.381	65.605	-37.419	110.800	7.775	PK
4			5875.000	67.214	59.396	-37.986	105.200	7.818	PK
5			5881.987	69.601	61.770	-30.410	100.011	7.831	PK
6			5925.000	58.987	51.168	-9.213	68.200	7.819	PK
7	*		5968.050	61.183	53.315	-7.017	68.200	7.869	PK

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Site: AC1	Time: 2018/09/11 - 07:41
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT80 at channel 5210MHz(CDD Mode)	

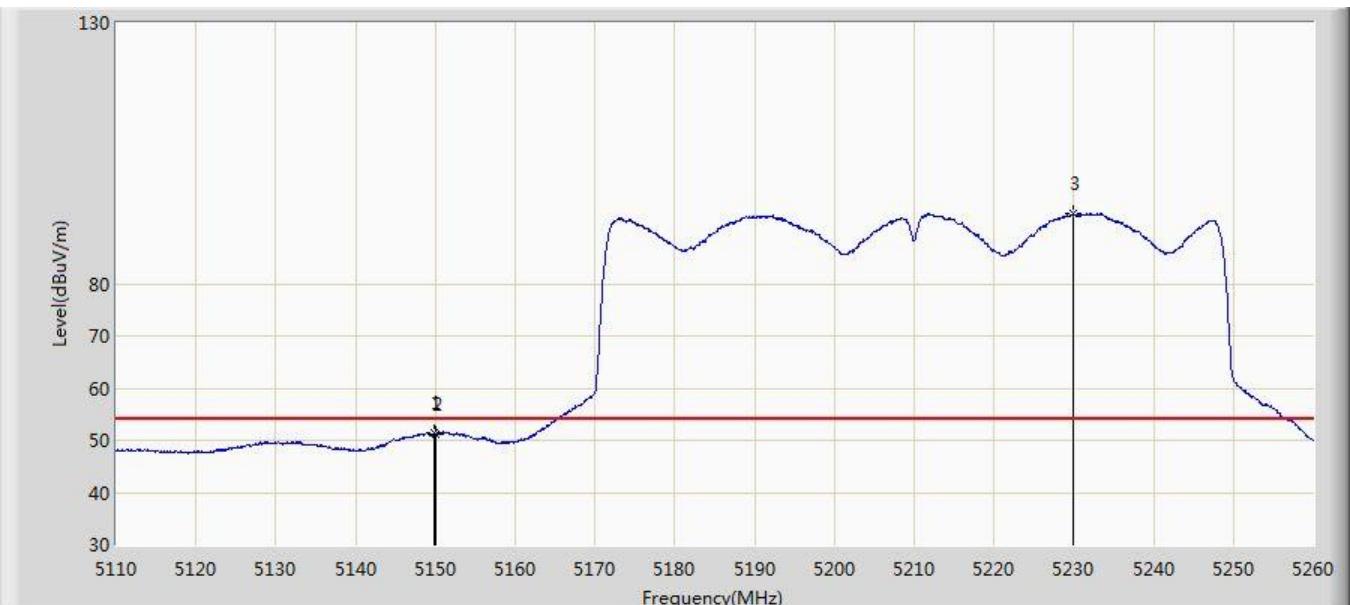


No	Flag	Mark	Frequency (MHz)	Measure Level (dB $\mu$ V/m)	Reading Level (dB $\mu$ V)	Over Limit (dB)	Limit (dB $\mu$ V/m)	Factor (dB)	Type
1			5149.000	71.151	64.591	-2.849	74.000	6.560	PK
2			5150.000	60.780	54.218	-13.220	74.000	6.562	PK
3		*	5230.075	103.803	97.397	N/A	N/A	6.406	PK

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Site: AC1	Time: 2018/09/11 - 07:43
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT80 at channel 5210MHz(CDD Mode)	

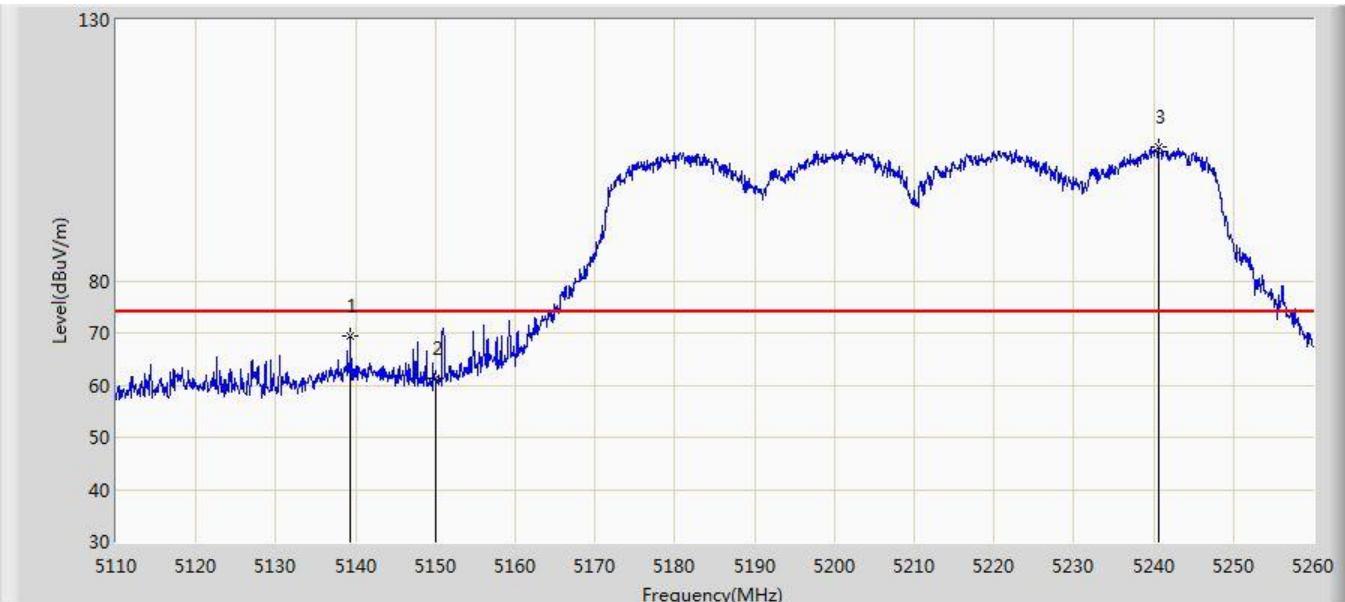


No	Flag	Mark	Frequency (MHz)	Measure Level (dB $\mu$ V/m)	Reading Level (dB $\mu$ V)	Over Limit (dB)	Limit (dB $\mu$ V/m)	Factor (dB)	Type
1			5149.900	51.396	44.834	-2.604	54.000	6.562	AV
2			5150.000	51.251	44.689	-2.749	54.000	6.562	AV
3		*	5229.850	93.375	86.969	N/A	N/A	6.405	AV

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Site: AC1	Time: 2018/09/11 - 07:39
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT80 at channel 5210MHz(CDD Mode)	

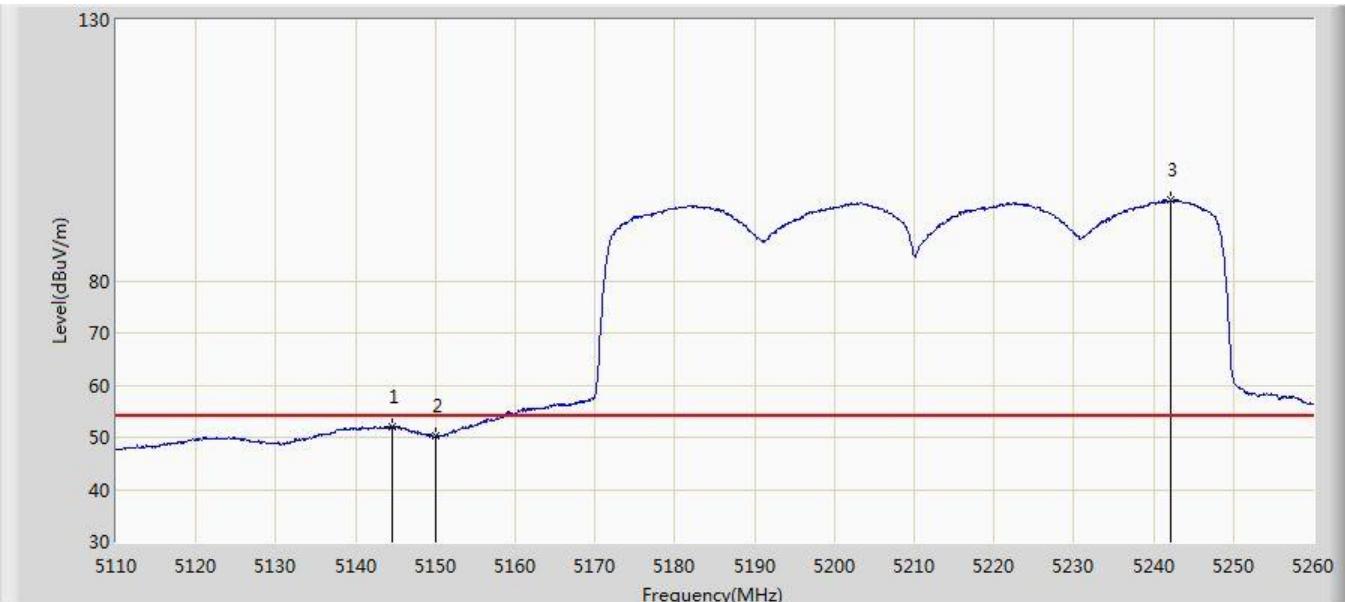


No	Flag	Mark	Frequency (MHz)	Measure Level (dB $\mu$ V/m)	Reading Level (dB $\mu$ V)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5139.325	69.424	62.815	-4.576	74.000	6.609	PK
2			5150.000	61.360	54.798	-12.640	74.000	6.562	PK
3		*	5240.650	105.573	99.175	N/A	N/A	6.397	PK

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)

Site: AC1	Time: 2018/09/11 - 07:38
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT80 at channel 5210MHz(CDD Mode)	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5144.500	52.108	45.529	-1.892	54.000	6.579	AV
2			5150.000	50.181	43.619	-3.819	54.000	6.562	AV
3		*	5242.150	95.379	88.983	N/A	N/A	6.396	AV

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB)