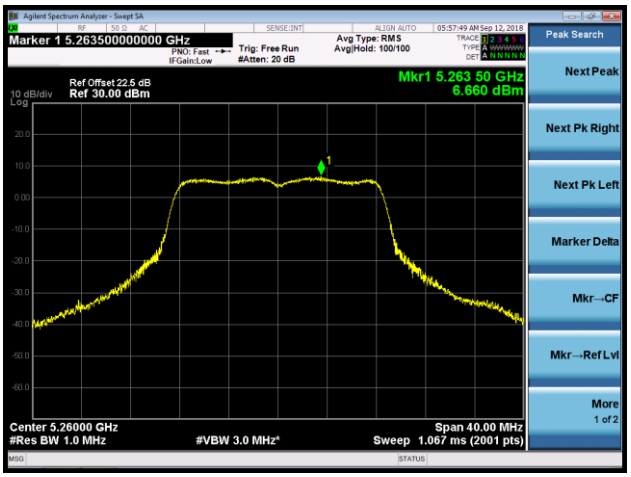
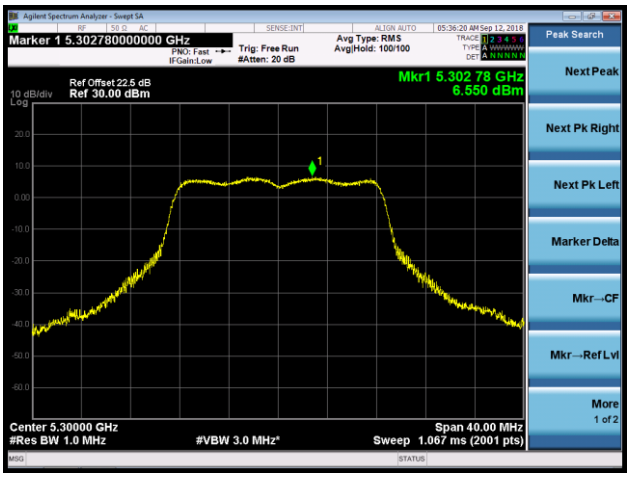
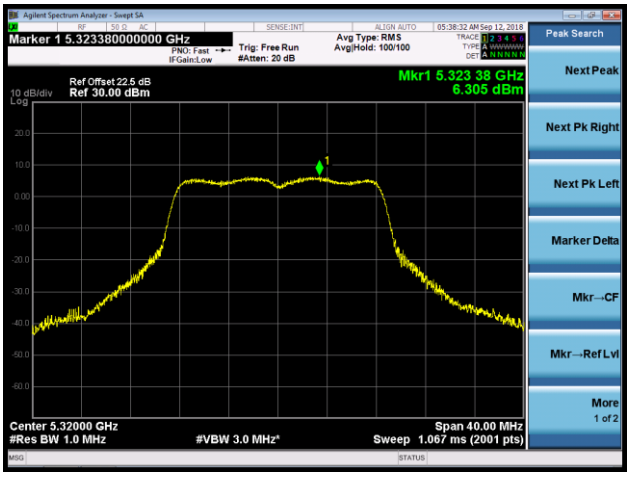
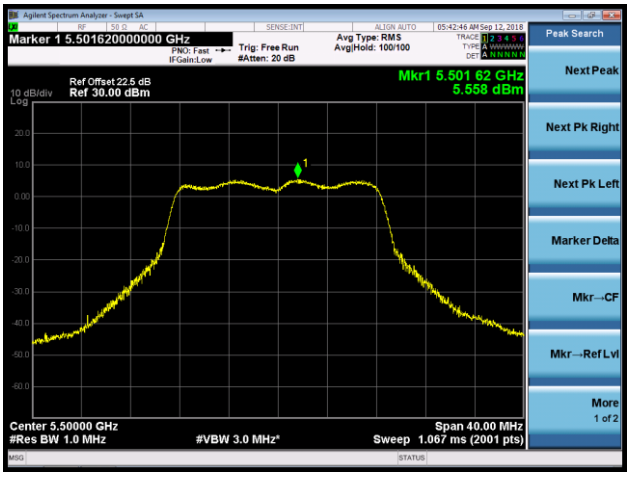
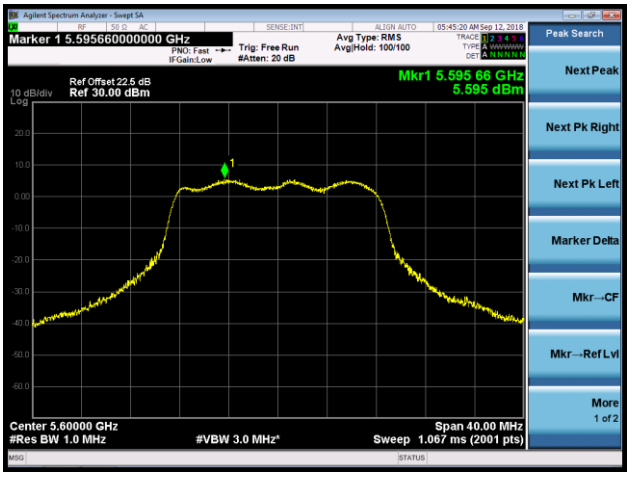
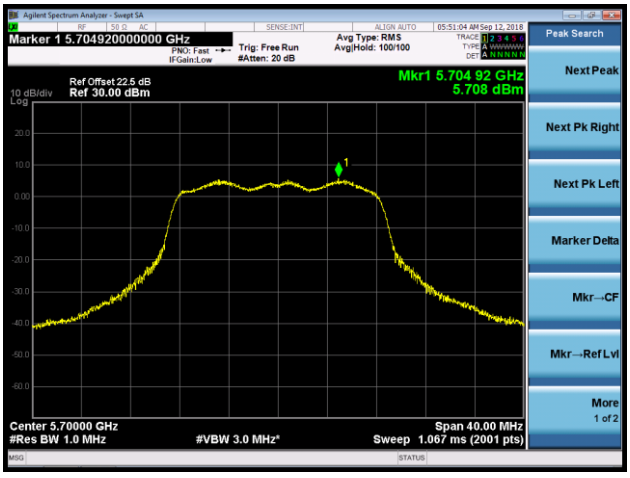
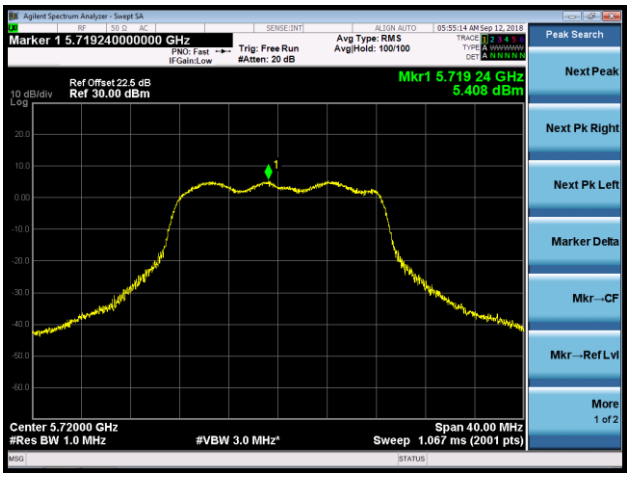
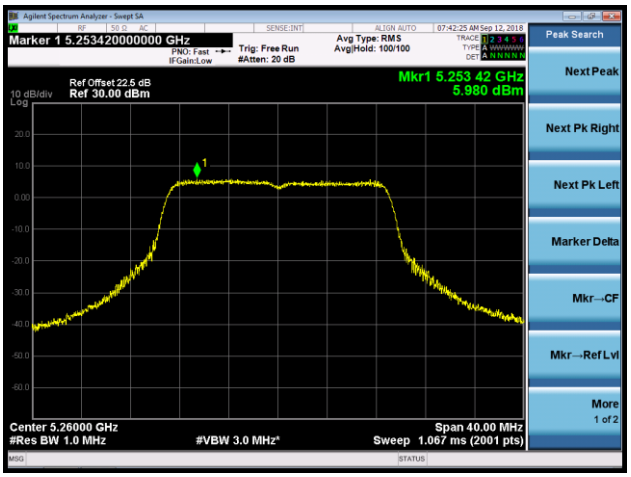
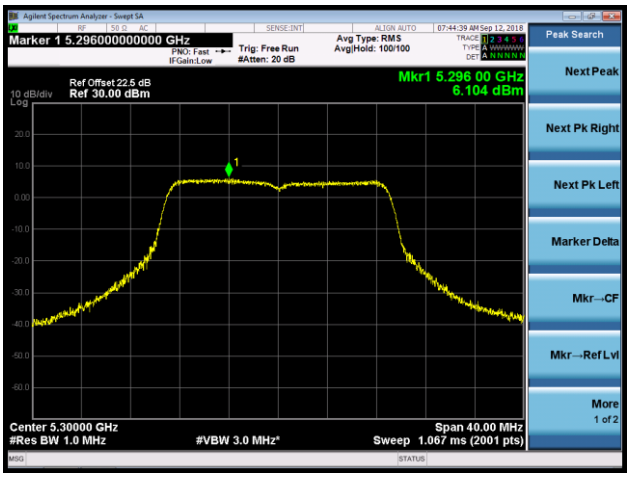
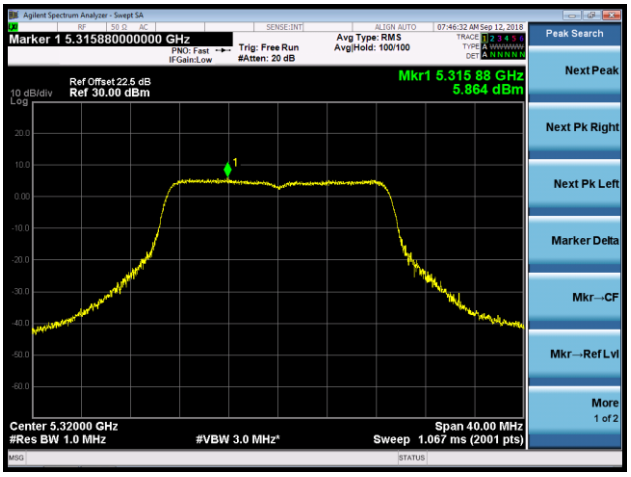
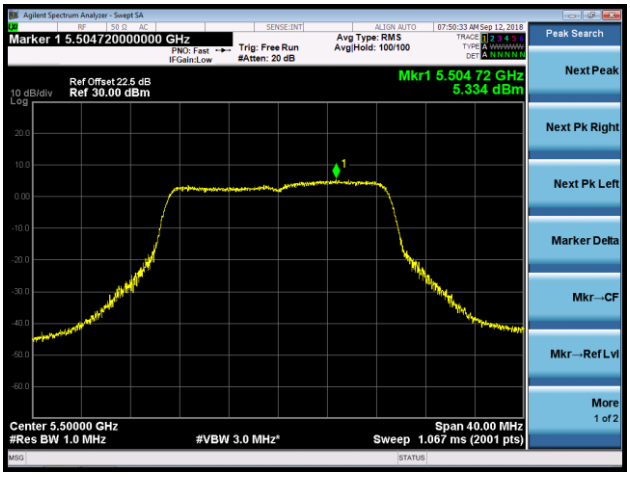
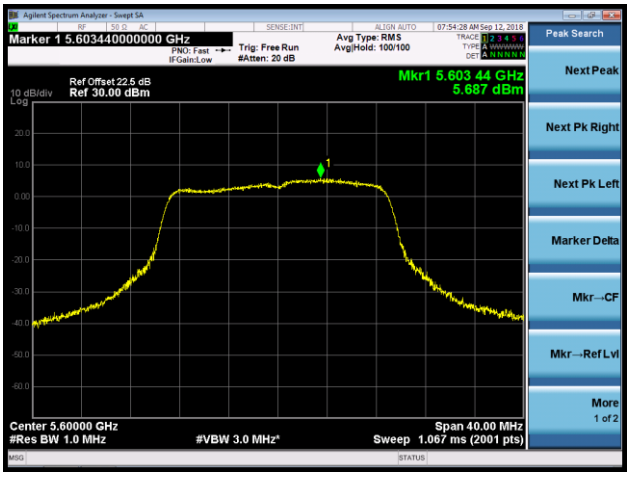
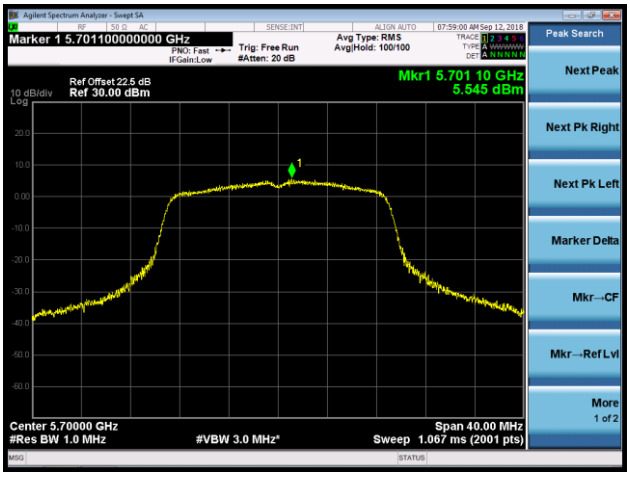
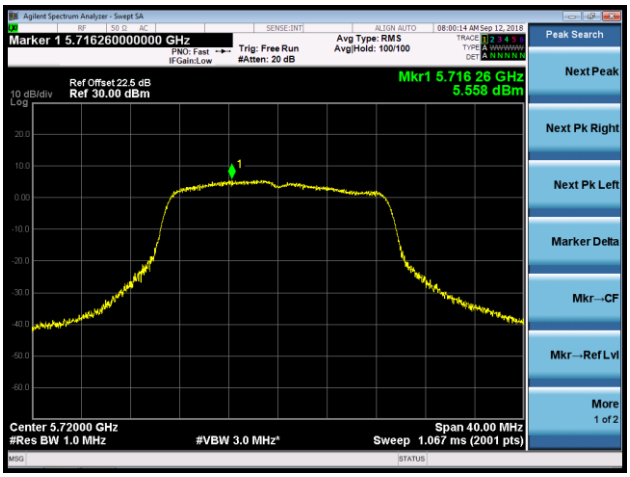
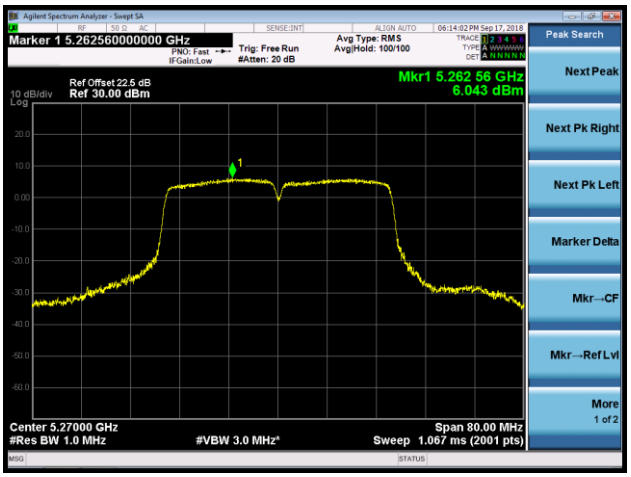
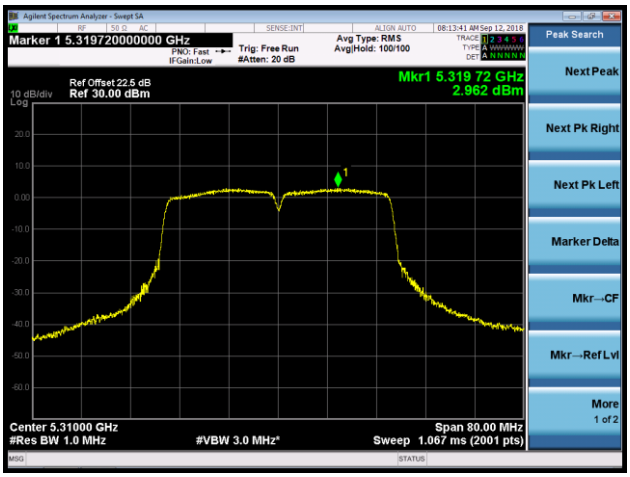
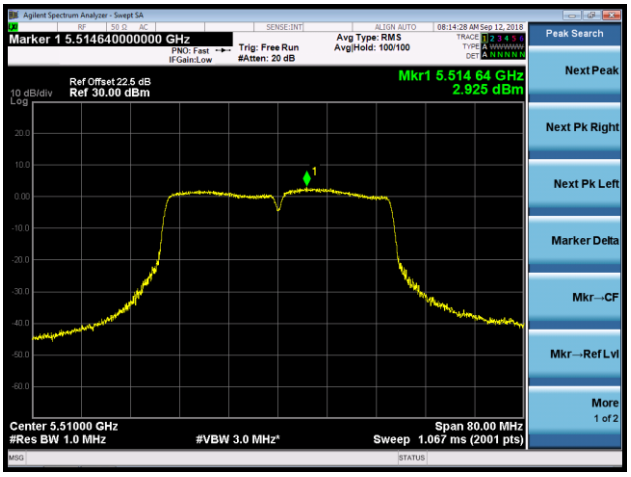
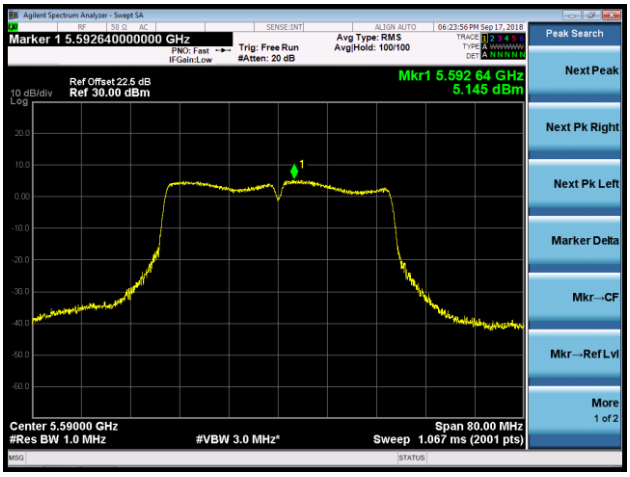
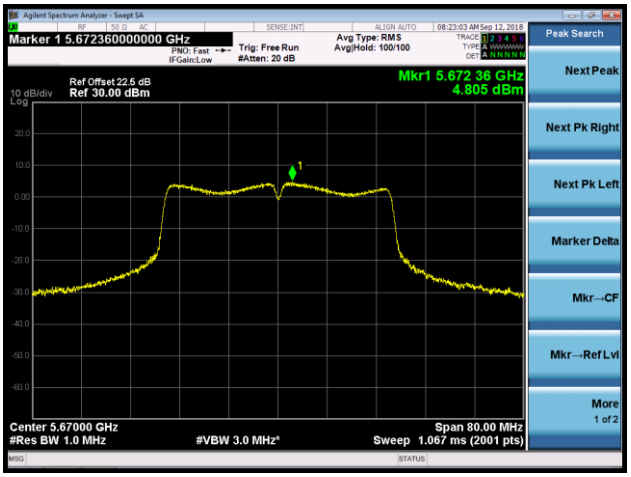
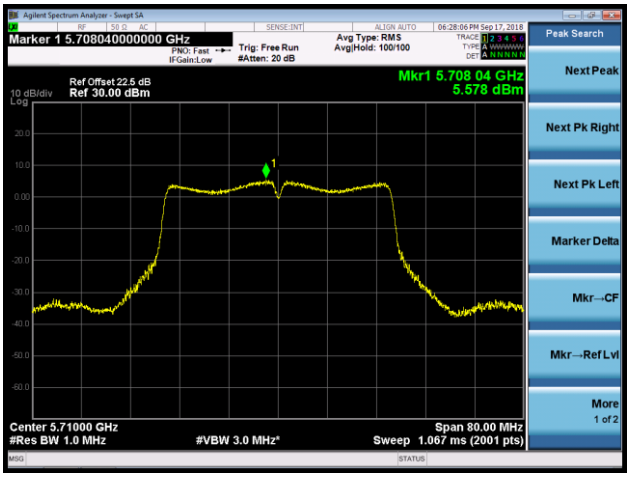
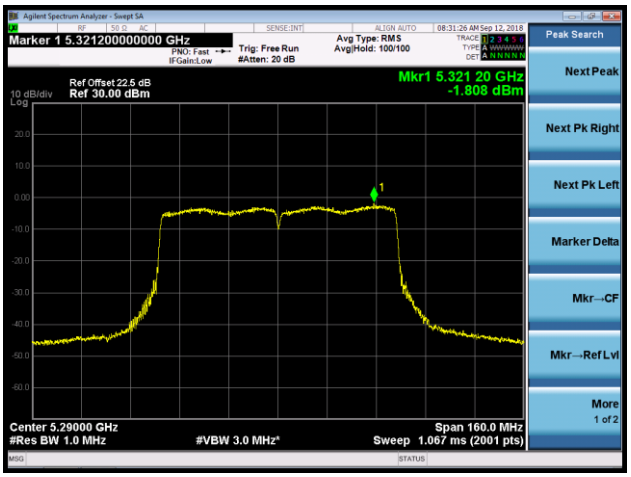
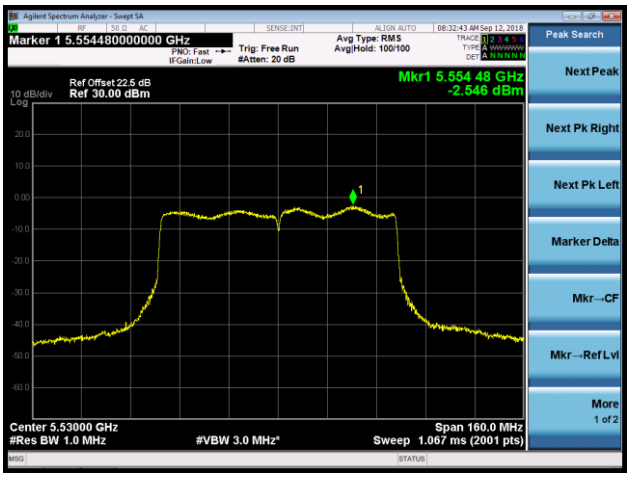
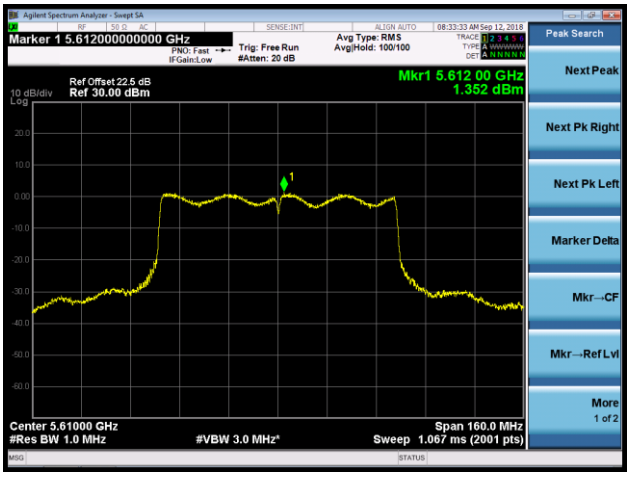
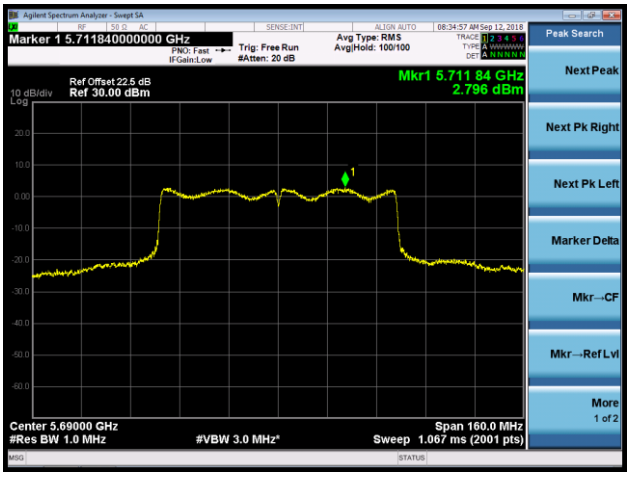
802.11a Power Spectral Density - Ant 1 / Ant 0 + 1 (CDD Mode)	
Channel 52 (5260MHz)	Channel 60 (5300MHz)
	
Channel 64 (5320MHz)	Channel 100 (5500MHz)
	
Channel 120 (5600MHz)	Channel 140 (5700MHz)
	

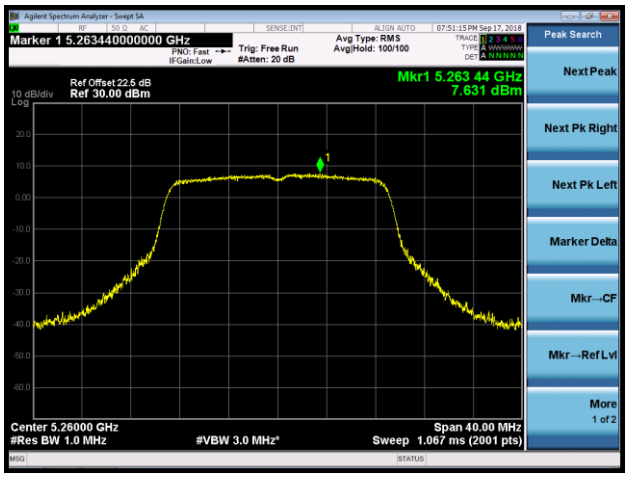
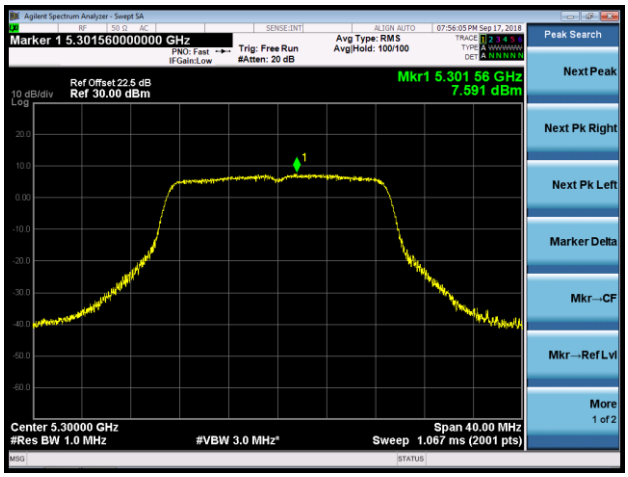
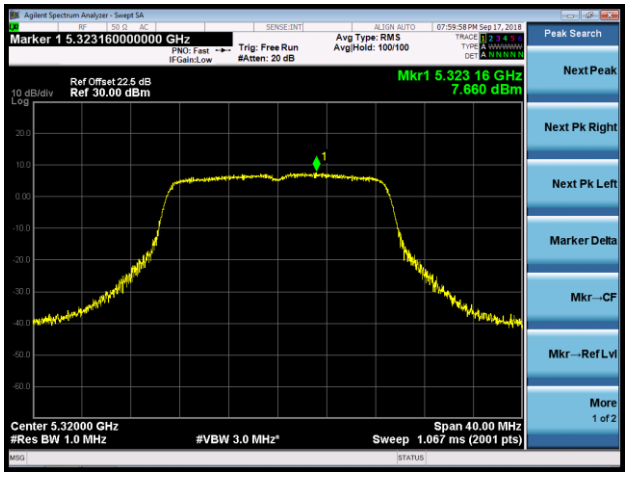
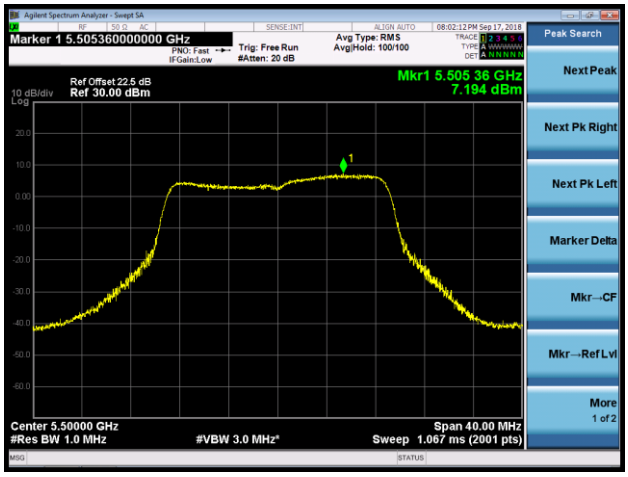
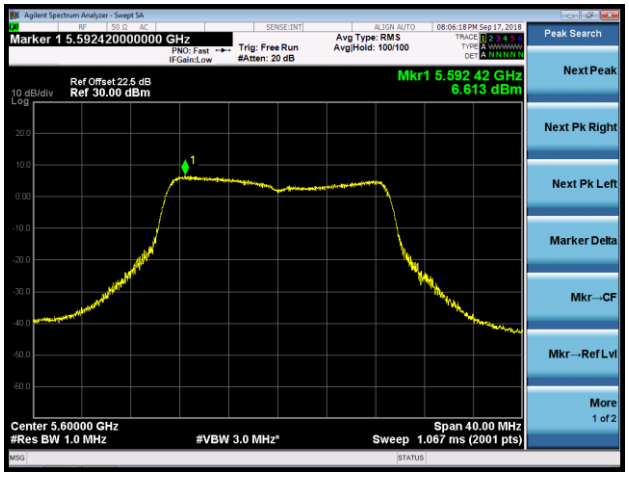
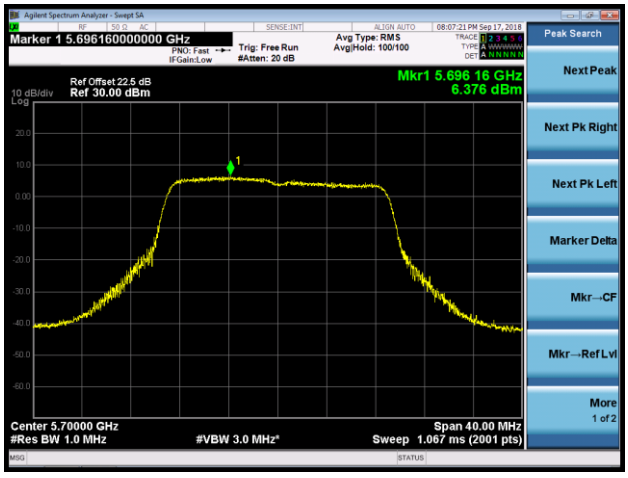
Channel 144 (5720MHz)	
	

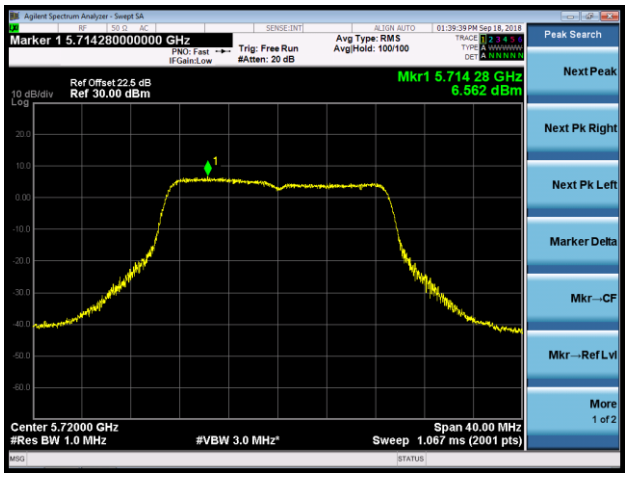
802.11ac-VHT20 Power Spectral Density - Ant 1 / Ant 0 + 1 (CDD Mode)	
Channel 52 (5260MHz)	Channel 60 (5300MHz)
	
Channel 64 (5320MHz)	Channel 100 (5500MHz)
	
Channel 120 (5600MHz)	Channel 140 (5700MHz)
	

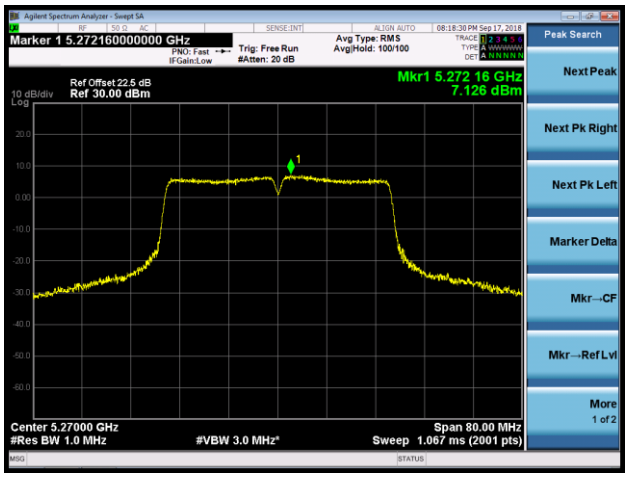
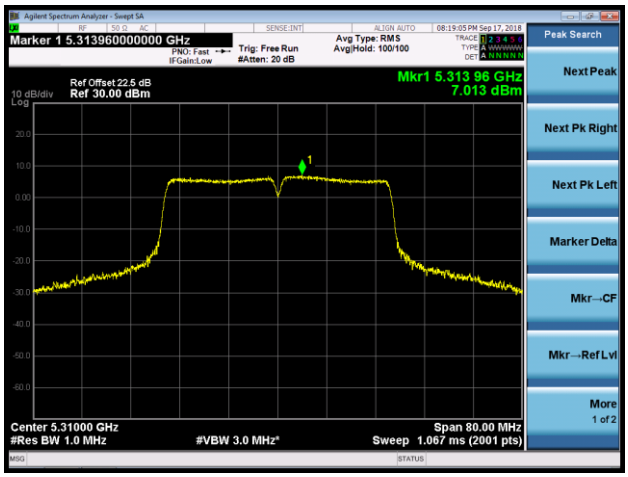
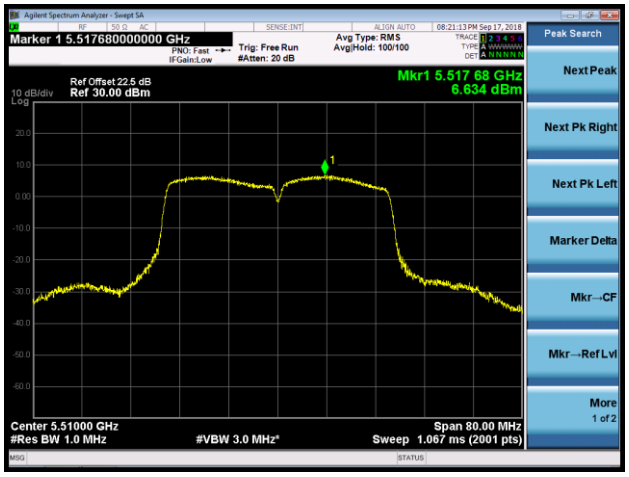
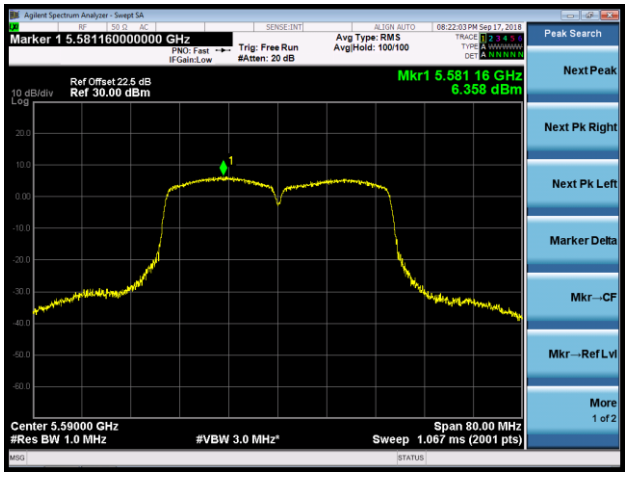
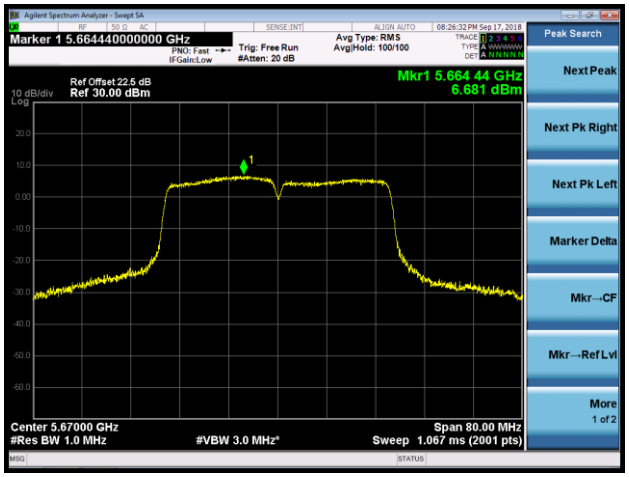
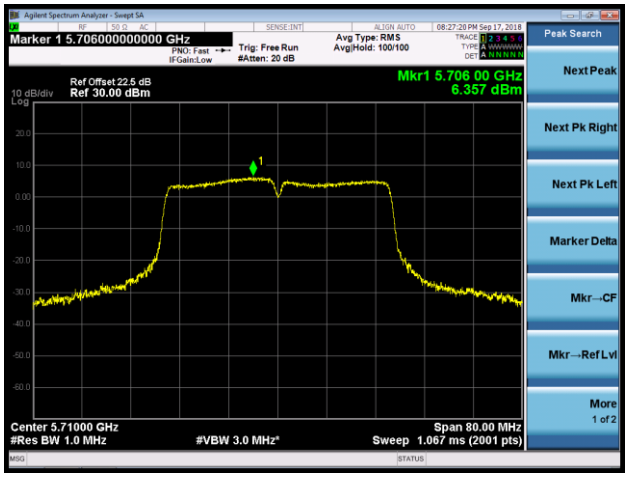
Channel 144 (5720MHz)	
	

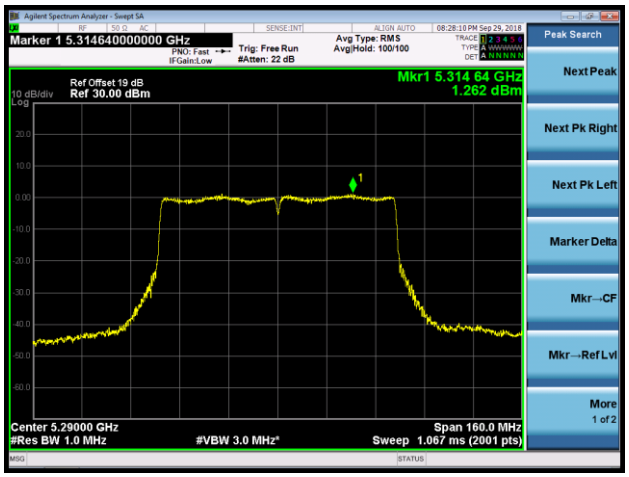
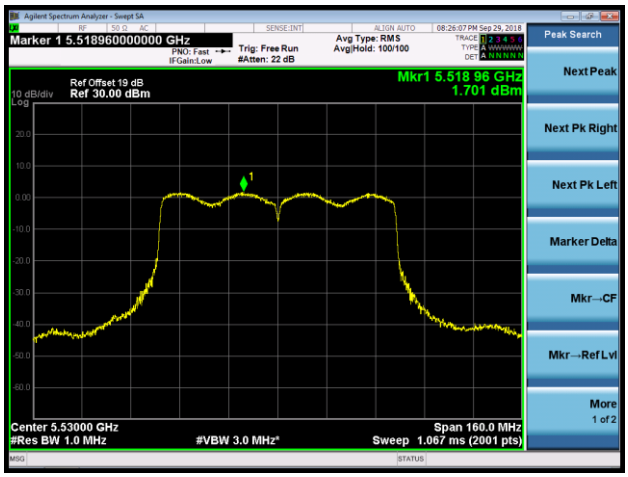
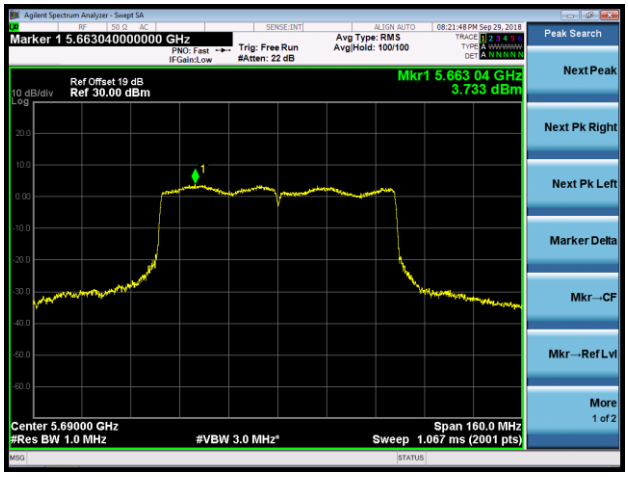
802.11ac-VHT40 Power Spectral Density - Ant 1 / Ant 0 + 1 (CDD Mode)	
Channel 54 (5270MHz)	Channel 62 (5310MHz)
	
Channel 102 (5510MHz)	Channel 118 (5590MHz)
	
Channel 134 (5670MHz)	Channel 142 (5710MHz)
	

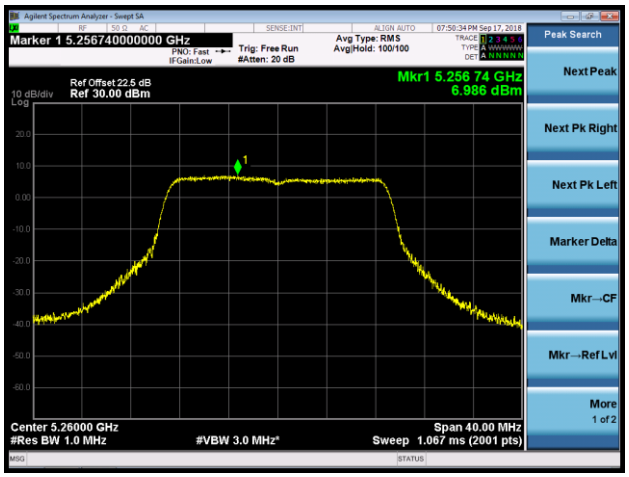
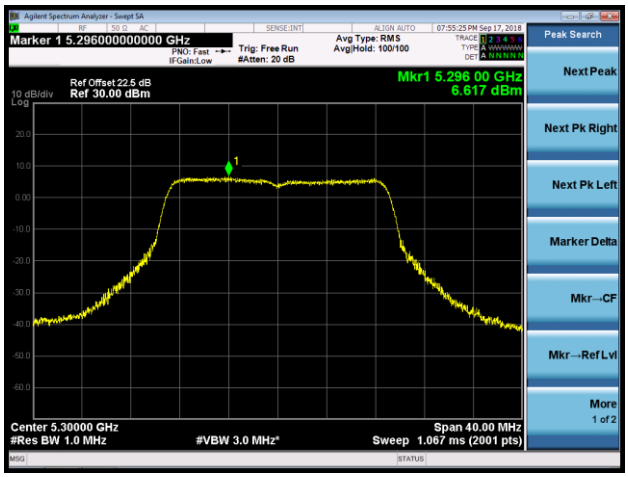
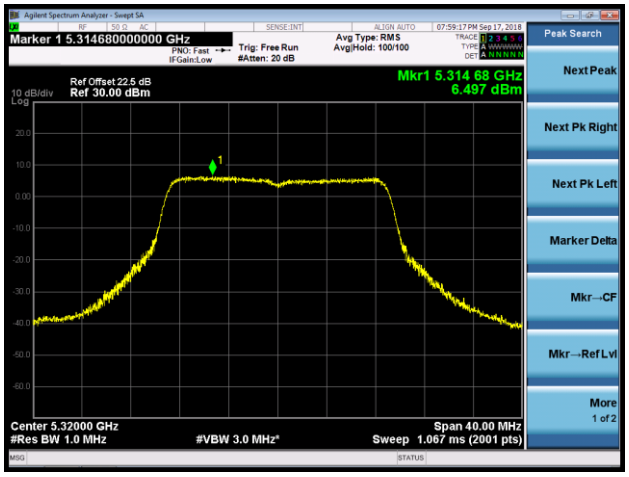
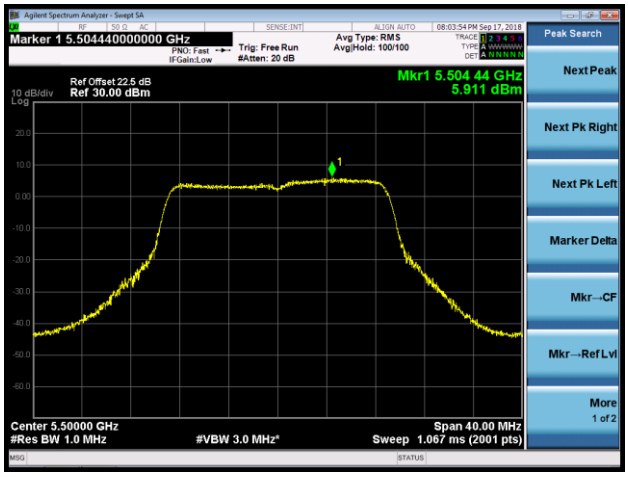
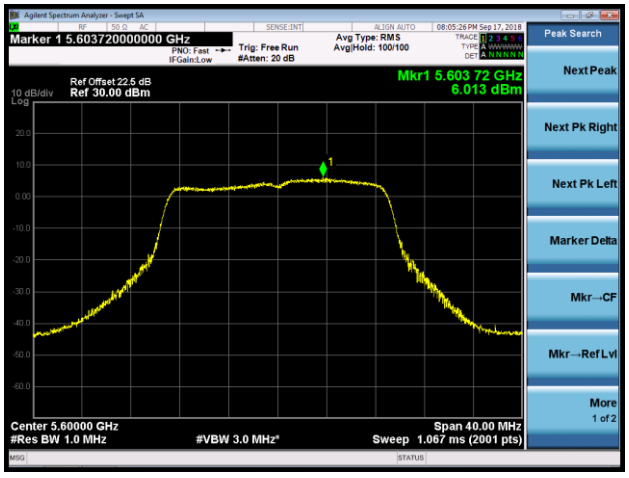
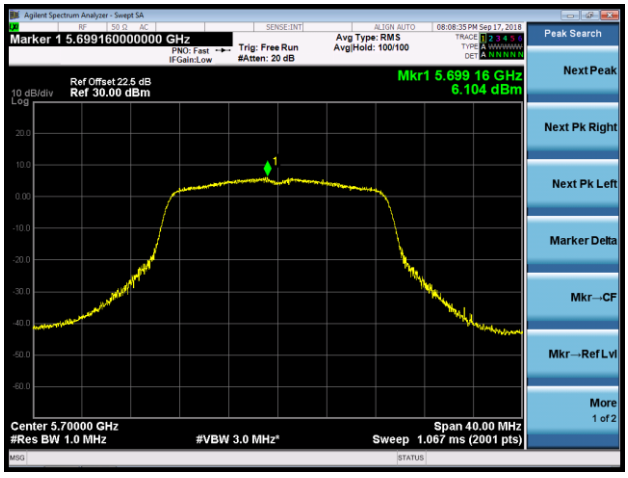
802.11ac-VHT80 Power Spectral Density - Ant 1 / Ant 0 + 1 (CDD Mode)	
Channel 58 (5290MHz)	Channel 106 (5530MHz)
	
Channel 122 (5610MHz)	Channel 138 (5690MHz)
	

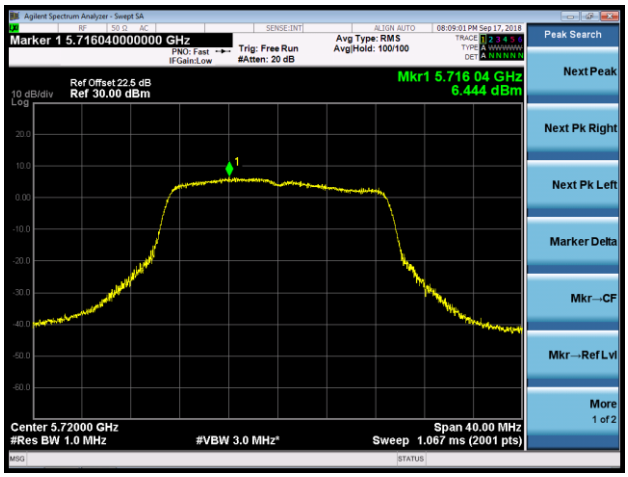
802.11ac-VHT20 Power Spectral Density - Ant 0 / Ant 0 + 1 (Beam-Forming Mode)	
Channel 52 (5260MHz)	Channel 60 (5300MHz)
	
Channel 64 (5320MHz)	Channel 100 (5500MHz)
	
Channel 120 (5600MHz)	Channel 140 (5700MHz)
	

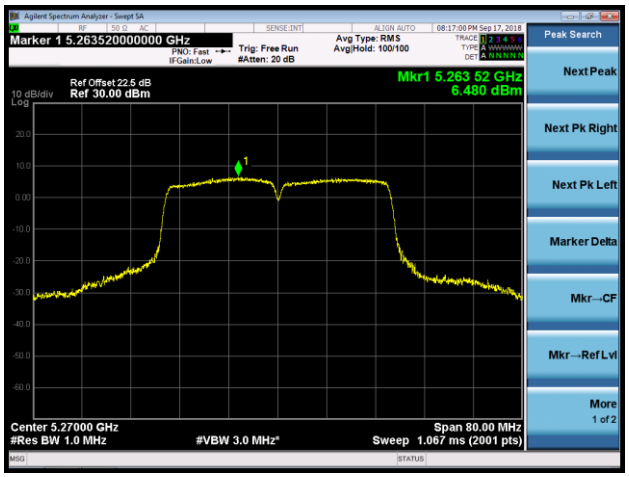
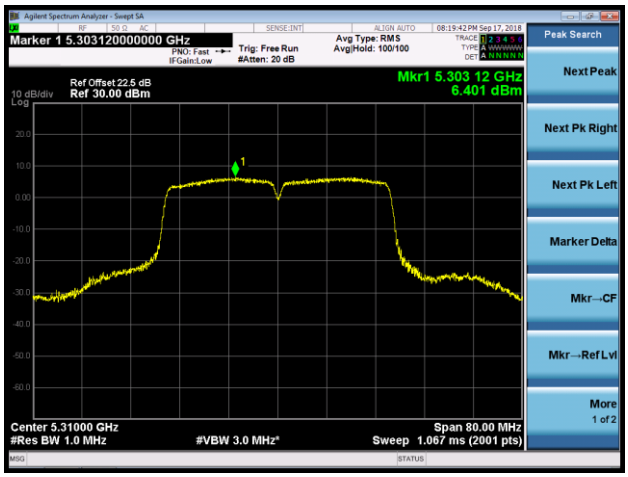
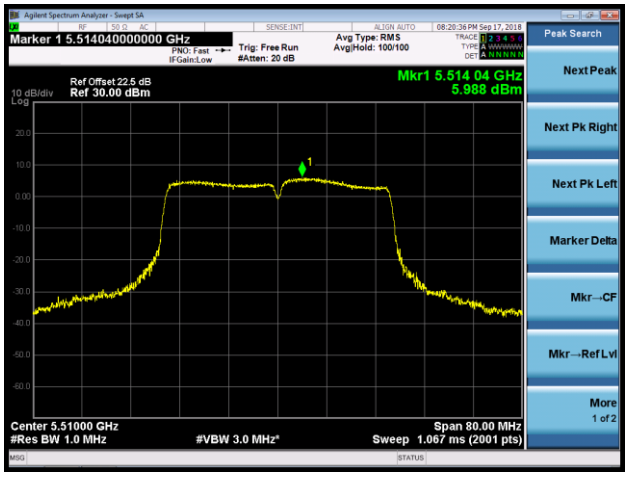
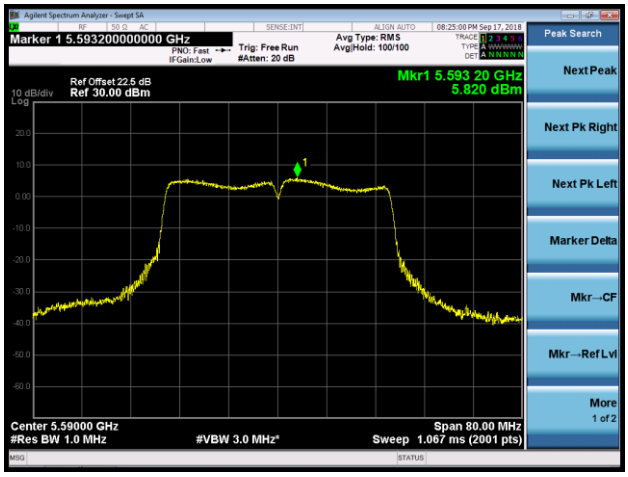
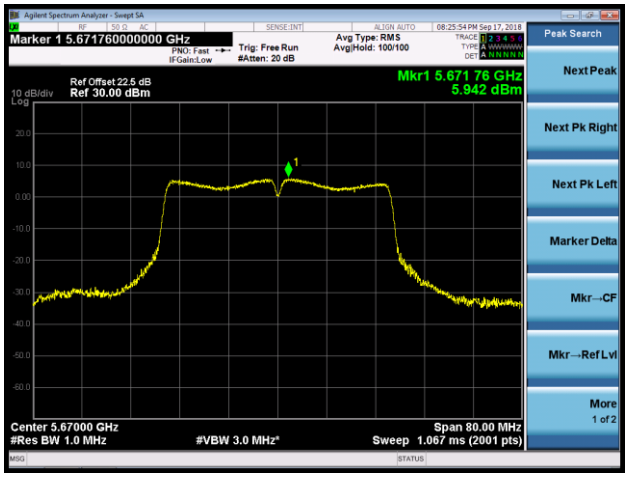
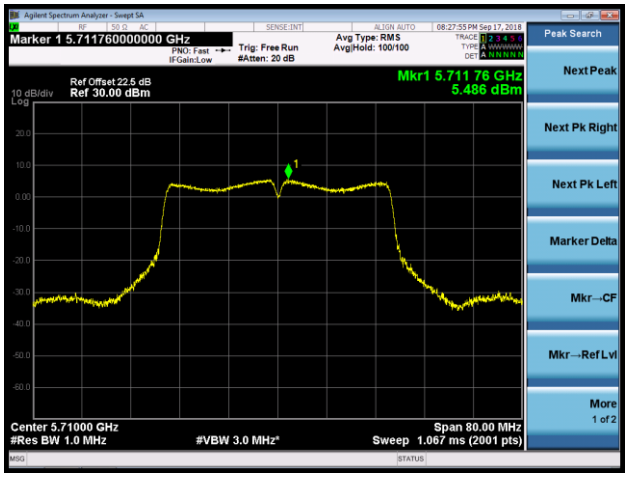
Channel 144 (5720MHz)	
	

802.11ac-VHT40 Power Spectral Density - Ant 0 / Ant 0 + 1 (Beam-Forming Mode)	
Channel 54 (5270MHz)	Channel 62 (5310MHz)
	
Channel 102 (5510MHz)	Channel 118 (5590MHz)
	
Channel 134 (5670MHz)	Channel 142 (5710MHz)
	

802.11ac-VHT80 Power Spectral Density - Ant 0 / Ant 0 + 1 (Beam-Forming Mode)	
Channel 58 (5290MHz)	Channel 106 (5530MHz)
	
Channel 122 (5610MHz)	Channel 138 (5690MHz)
	

802.11ac-VHT20 Power Spectral Density - Ant 1 / Ant 0 + 1 (Beam-Forming Mode)	
Channel 52 (5260MHz)	Channel 60 (5300MHz)
	
Channel 64 (5320MHz)	Channel 100 (5500MHz)
	
Channel 120 (5600MHz)	Channel 140 (5700MHz)
	

Channel 144 (5720MHz)	
	

802.11ac-VHT40 Power Spectral Density - Ant 1 / Ant 0 + 1 (Beam-Forming Mode)	
Channel 54 (5270MHz)	Channel 62 (5310MHz)
	
Channel 102 (5510MHz)	Channel 118 (5590MHz)
	
Channel 134 (5670MHz)	Channel 142 (5710MHz)
	

802.11ac-VHT80 Power Spectral Density - Ant 1 / Ant 0 + 1 (Beam-Forming Mode)	
Channel 58 (5290MHz)	Channel 106 (5530MHz)
	
Channel 122 (5610MHz)	Channel 138 (5690MHz)
	

7.6. Frequency Stability Measurement

7.6.1.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 ±20 ppm maximum for the 5GHz band (IEEE 802.11 specification).

7.6.2.Test Procedure Used

Frequency Stability Under Temperature Variations:

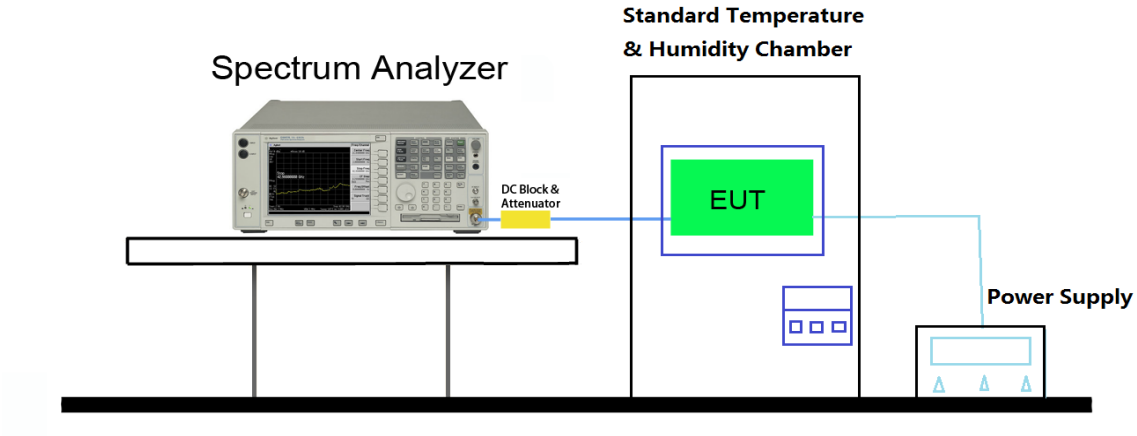
The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain 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 (±15%) and endpoint, recordthe maximum frequency change.

7.6.3.Test Setup



7.6.4.Test Result

Test Engineer	Dandy Li	Temperature	0 ~ 45°C
Test Time	2018/09/13	Relative Humidity	48 ~ 55%RH
Test Mode	5320MHz (Carrier Mode)	Test Site	TR3

Voltage (%)	Power (VAC)	Temp (°C)	Frequency Tolerance (ppm)			
			0 minutes	2 minutes	5 minutes	10 minutes
100%	120	0	-4.18	-4.15	-3.72	-4.20
		+ 10	-3.77	-3.94	-3.77	-3.94
		+ 20 (Ref)	-5.02	-4.41	-4.02	-5.02
		+ 30	-5.51	-4.06	-5.04	-3.77
		+ 40	-4.06	-5.11	-4.93	-5.04
		+ 45	-4.41	-4.22	-4.42	-5.28
115%	138	+ 20	-3.91	-3.77	-3.93	-5.19
85%	102	+ 20	-4.19	-3.82	-4.05	-4.99

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

7.7. Radiated Spurious Emission Measurement

7.7.1.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

7.7.2.Test Procedure Used

KDB 789033 D02v02r01 – Section G

7.7.3.Test Setting

Quasi-Peak& Average Measurements below30MHz

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

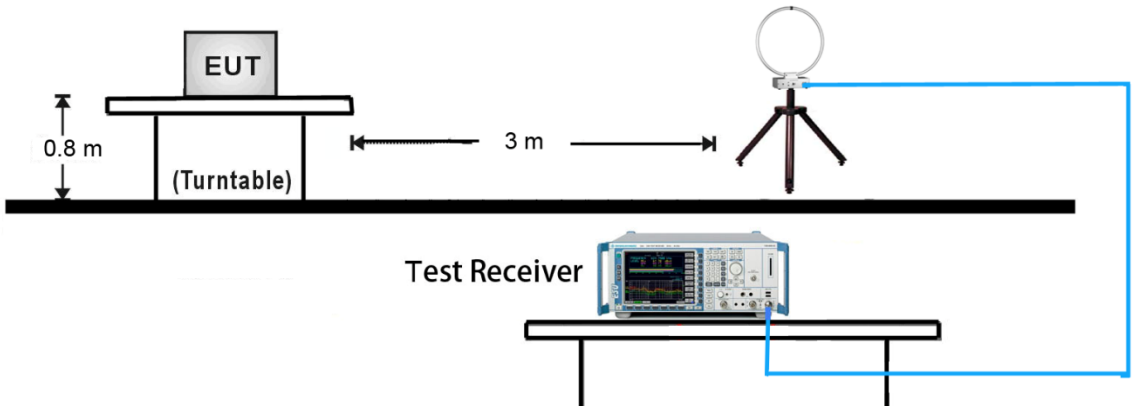
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Measurements above 1GHz (Method AD)

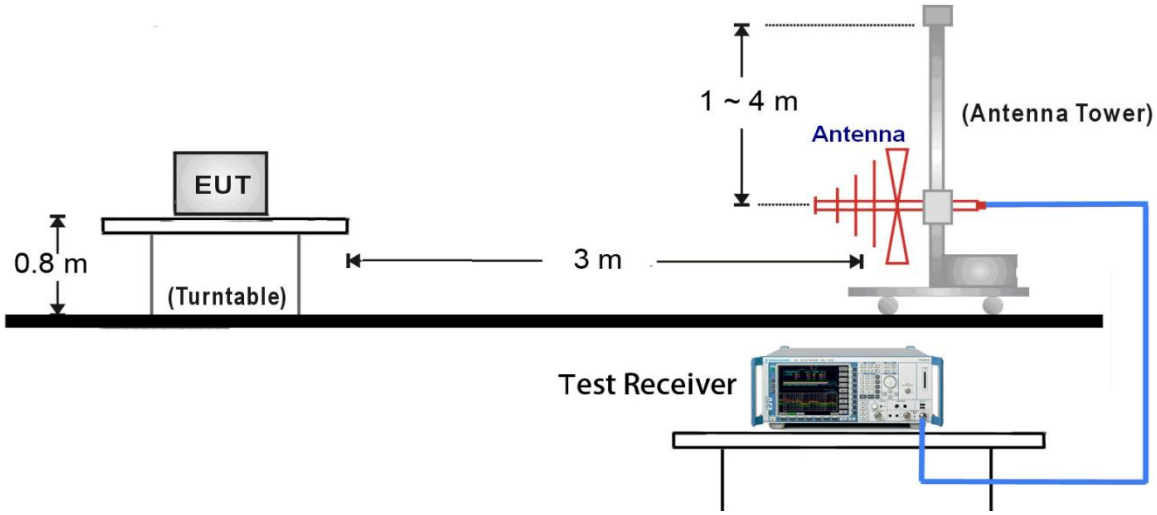
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. If duty cycle ≥ 98%, VBW ≤ RBW/100 but not less than 10Hz; If duty cycle < 98%, set VBW ≥ 1/T.
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Allow max hold to run 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.

7.7.4.Test Setup

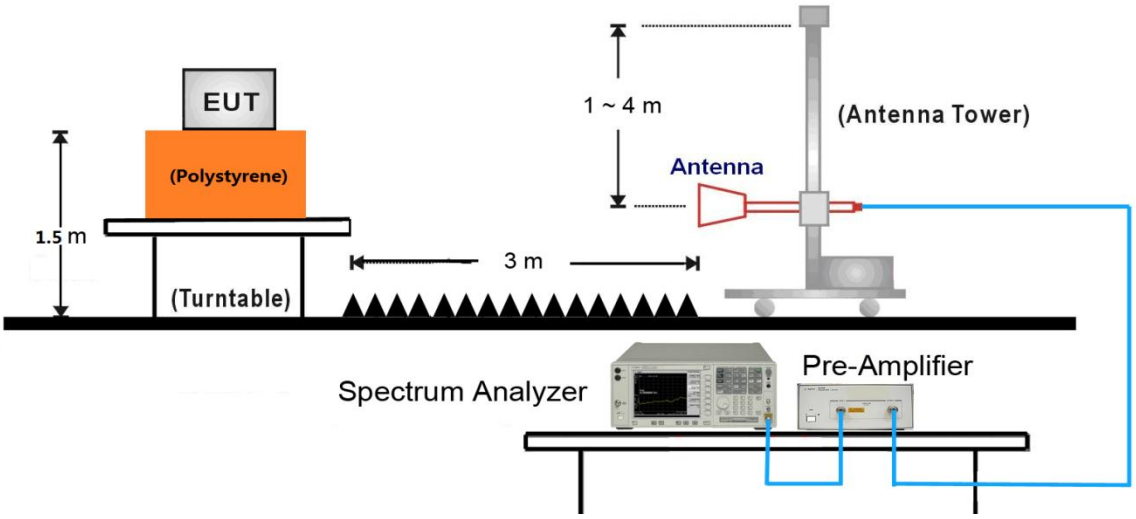
9kHz ~30MHz Test Setup:



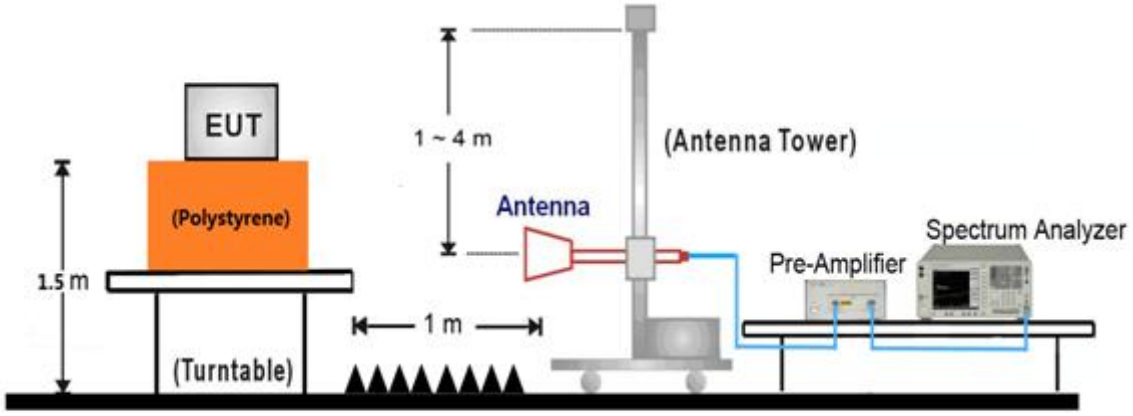
30MHz ~ 1GHz Test Setup:



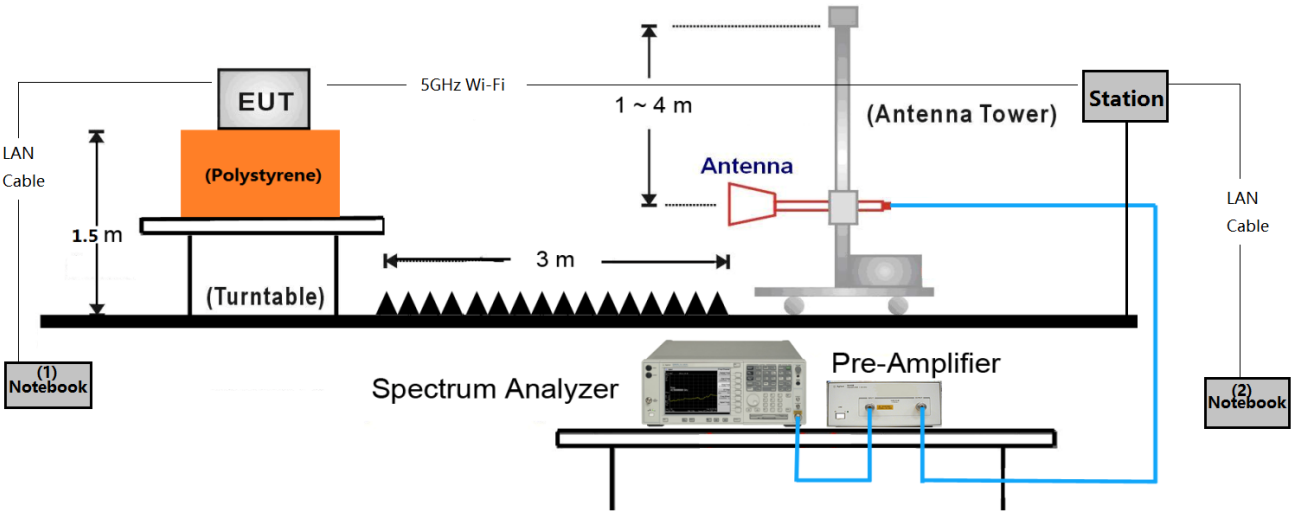
1GHz ~18GHz Test Setup:



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.

7.7.5.Test Result

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11a - Ant 0 + 1 (CDD Mode)	Test Channel:	52
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7638.5	36.2	12.6	48.8	74.0	-25.2	Peak	Horizontal
	8327.0	35.5	12.6	48.1	74.0	-25.9	Peak	Horizontal
*	8811.5	34.2	13.3	47.5	68.2	-20.7	Peak	Horizontal
*	10511.5	34.7	17.6	52.3	68.2	-15.9	Peak	Horizontal
	7477.0	35.6	12.9	48.5	74.0	-25.5	Peak	Vertical
	8395.0	35.3	12.5	47.8	74.0	-26.2	Peak	Vertical
*	8743.5	35.5	13.1	48.6	68.2	-19.6	Peak	Vertical
*	10511.5	33.8	17.6	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11a - Ant 0 + 1 (CDD Mode)	Test Channel:	60
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7502.5	35.5	12.7	48.2	74.0	-25.8	Peak	Horizontal
	8259.0	35.2	12.9	48.1	74.0	-25.9	Peak	Horizontal
*	8752.0	35.6	13.2	48.8	68.2	-19.4	Peak	Horizontal
*	9865.5	34.5	16.7	51.2	68.2	-17.0	Peak	Horizontal
	7511.0	35.5	12.7	48.2	74.0	-25.8	Peak	Vertical
	8208.0	35.7	13.0	48.7	74.0	-25.3	Peak	Vertical
*	8820.0	34.6	13.3	47.9	68.2	-20.3	Peak	Vertical
*	10197.0	34.0	17.2	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11a - Ant 0 + 1 (CDD Mode)	Test Channel:	64
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7409.0	36.1	12.6	48.7	74.0	-25.3	Peak	Horizontal
	8242.0	35.4	13.0	48.4	74.0	-25.6	Peak	Horizontal
*	8879.5	34.5	13.2	47.7	68.2	-20.5	Peak	Horizontal
*	9891.0	35.1	16.6	51.7	68.2	-16.5	Peak	Horizontal
	7587.5	36.2	12.8	49.0	74.0	-25.0	Peak	Vertical
	8148.5	35.8	13.3	49.1	74.0	-24.9	Peak	Vertical
*	8760.5	35.2	13.2	48.4	68.2	-19.8	Peak	Vertical
*	9976.0	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11a - Ant 0 + 1 (CDD Mode)	Test Channel:	100
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7485.5	35.1	12.8	47.9	74.0	-26.1	Peak	Horizontal
	8259.0	35.6	12.9	48.5	74.0	-25.5	Peak	Horizontal
*	8777.5	33.2	13.2	46.4	68.2	-21.8	Peak	Horizontal
*	9857.0	34.4	16.7	51.1	68.2	-17.1	Peak	Horizontal
	7502.5	35.2	12.7	47.9	74.0	-26.1	Peak	Vertical
	8344.0	35.1	12.6	47.7	74.0	-26.3	Peak	Vertical
*	8641.5	35.4	12.9	48.3	68.2	-19.9	Peak	Vertical
*	10384.0	34.0	17.4	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11a - Ant 0 + 1 (CDD Mode)	Test Channel:	120
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7468.5	35.8	12.9	48.7	74.0	-25.3	Peak	Horizontal
	8267.5	35.2	12.8	48.0	74.0	-26.0	Peak	Horizontal
*	8684.0	35.5	13.1	48.6	68.2	-19.6	Peak	Horizontal
*	10392.5	34.4	17.4	51.8	68.2	-16.4	Peak	Horizontal
	7638.5	36.0	12.6	48.6	74.0	-25.4	Peak	Vertical
	8276.0	34.4	12.8	47.2	74.0	-26.8	Peak	Vertical
*	8896.5	34.7	13.2	47.9	68.2	-20.3	Peak	Vertical
*	10197.0	34.1	17.2	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11a - Ant 0 + 1 (CDD Mode)	Test Channel:	140
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7468.5	35.1	12.9	48.0	74.0	-26.0	Peak	Horizontal
	8369.5	34.8	12.6	47.4	74.0	-26.6	Peak	Horizontal
*	8658.5	36.0	13.0	49.0	68.2	-19.2	Peak	Horizontal
*	10375.5	33.9	17.4	51.3	68.2	-16.9	Peak	Horizontal
	7451.5	35.0	12.9	47.9	74.0	-26.1	Peak	Vertical
	8208.0	35.6	13.0	48.6	74.0	-25.4	Peak	Vertical
*	8794.5	34.8	13.3	48.1	68.2	-20.1	Peak	Vertical
*	10078.0	34.9	17.0	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11a - Ant 0 + 1 (CDD Mode)	Test Channel:	144
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7468.5	35.2	12.9	48.1	74.0	-25.9	Peak	Horizontal
	8259.0	35.5	12.9	48.4	74.0	-25.6	Peak	Horizontal
*	8879.5	36.2	13.2	49.4	68.2	-18.8	Peak	Horizontal
*	10248.0	34.8	17.2	52.0	68.2	-16.2	Peak	Horizontal
	7468.5	35.5	12.9	48.4	74.0	-25.6	Peak	Vertical
	8191.0	35.6	13.1	48.7	74.0	-25.3	Peak	Vertical
*	8828.5	35.5	13.3	48.8	68.2	-19.4	Peak	Vertical
*	10044.0	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11ac-VHT20 - Ant 0 + 1 (CDD Mode)	Test Channel:	52
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7485.5	35.3	12.8	48.1	74.0	-25.9	Peak	Horizontal
	8242.0	36.4	13.0	49.4	74.0	-24.6	Peak	Horizontal
*	8837.0	36.0	13.2	49.2	68.2	-19.0	Peak	Horizontal
*	10214.0	35.2	17.1	52.3	68.2	-15.9	Peak	Horizontal
	7494.0	36.2	12.7	48.9	74.0	-25.1	Peak	Vertical
	8174.0	35.4	13.2	48.6	74.0	-25.4	Peak	Vertical
*	8760.5	34.9	13.2	48.1	68.2	-20.1	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11ac-VHT20 - Ant 0 + 1 (CDD Mode)	Test Channel:	60
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7655.5	35.9	12.7	48.6	74.0	-25.4	Peak	Horizontal
	8327.0	36.5	12.6	49.1	74.0	-24.9	Peak	Horizontal
*	8786.0	35.2	13.3	48.5	68.2	-19.7	Peak	Horizontal
*	10205.5	35.0	17.1	52.1	68.2	-16.1	Peak	Horizontal
	7562.0	35.3	12.9	48.2	74.0	-25.8	Peak	Vertical
	8259.0	35.1	12.9	48.0	74.0	-26.0	Peak	Vertical
*	8803.0	35.1	13.3	48.4	68.2	-19.8	Peak	Vertical
*	10154.5	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11ac-VHT20 - Ant 0 + 1 (CDD Mode)	Test Channel:	64
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7485.5	35.5	12.8	48.3	74.0	-25.7	Peak	Horizontal
	8148.5	35.9	13.3	49.2	74.0	-24.8	Peak	Horizontal
*	8726.5	35.4	13.0	48.4	68.2	-19.8	Peak	Horizontal
*	10307.5	34.4	17.3	51.7	68.2	-16.5	Peak	Horizontal
	7460.0	35.9	12.9	48.8	74.0	-25.2	Peak	Vertical
	8293.0	35.8	12.7	48.5	74.0	-25.5	Peak	Vertical
*	8658.5	35.8	13.0	48.8	68.2	-19.4	Peak	Vertical
*	10095.0	34.4	16.9	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11ac-VHT20 - Ant 0 + 1 (CDD Mode)	Test Channel:	100
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7545.0	35.4	13.0	48.4	74.0	-25.6	Peak	Horizontal
	8250.5	36.5	12.9	49.4	74.0	-24.6	Peak	Horizontal
*	8896.5	35.4	13.2	48.6	68.2	-19.6	Peak	Horizontal
*	9976.0	34.5	16.7	51.2	68.2	-17.0	Peak	Horizontal
	7485.5	35.3	12.8	48.1	74.0	-25.9	Peak	Vertical
	8361.0	35.2	12.6	47.8	74.0	-26.2	Peak	Vertical
*	8845.5	35.0	13.3	48.3	68.2	-19.9	Peak	Vertical
*	10205.5	34.2	17.1	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11ac-VHT20 - Ant 0 + 1 (CDD Mode)	Test Channel:	120
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7528.0	35.0	12.8	47.8	74.0	-26.2	Peak	Horizontal
	8182.5	35.4	13.2	48.6	74.0	-25.4	Peak	Horizontal
*	8845.5	35.0	13.3	48.3	68.2	-19.9	Peak	Horizontal
*	9848.5	34.2	16.7	50.9	68.2	-17.3	Peak	Horizontal
	7528.0	35.6	12.8	48.4	74.0	-25.6	Peak	Vertical
	8361.0	34.7	12.6	47.3	74.0	-26.7	Peak	Vertical
*	8862.5	34.8	13.3	48.1	68.2	-20.1	Peak	Vertical
*	10214.0	34.6	17.1	51.7	68.2	-16.5	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11ac-VHT20 - Ant 0 + 1 (CDD Mode)	Test Channel:	140
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7451.5	37.3	12.9	50.2	74.0	-23.8	Peak	Horizontal
	8335.5	35.9	12.6	48.5	74.0	-25.5	Peak	Horizontal
*	8871.0	35.7	13.2	48.9	68.2	-19.3	Peak	Horizontal
*	10197.0	33.9	17.2	51.1	68.2	-17.1	Peak	Horizontal
	7485.5	36.4	12.8	49.2	74.0	-24.8	Peak	Vertical
	8242.0	34.9	13.0	47.9	74.0	-26.1	Peak	Vertical
*	8769.0	34.0	13.2	47.2	68.2	-21.0	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11ac-VHT20 - Ant 0 + 1 (CDD Mode)	Test Channel:	144
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7434.5	35.2	12.8	48.0	74.0	-26.0	Peak	Horizontal
	8318.5	34.8	12.6	47.4	74.0	-26.6	Peak	Horizontal
*	8820.0	34.7	13.3	48.0	68.2	-20.2	Peak	Horizontal
*	10214.0	34.6	17.1	51.7	68.2	-16.5	Peak	Horizontal
	7528.0	36.3	12.8	49.1	74.0	-24.9	Peak	Vertical
	8233.5	35.5	13.0	48.5	74.0	-25.5	Peak	Vertical
*	8777.5	34.4	13.2	47.6	68.2	-20.6	Peak	Vertical
*	9925.0	34.9	16.6	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11ac-VHT40 - Ant 0 + 1 (CDD Mode)	Test Channel:	54
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7434.5	35.6	12.8	48.4	74.0	-25.6	Peak	Horizontal
	8225.0	35.4	13.1	48.5	74.0	-25.5	Peak	Horizontal
*	8692.5	34.9	13.0	47.9	68.2	-20.3	Peak	Horizontal
*	10401.0	34.1	17.3	51.4	68.2	-16.8	Peak	Horizontal
	7562.0	36.1	12.9	49.0	74.0	-25.0	Peak	Vertical
	8395.0	35.5	12.5	48.0	74.0	-26.0	Peak	Vertical
*	8913.5	35.3	13.3	48.6	68.2	-19.6	Peak	Vertical
*	10290.5	35.6	17.2	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11ac-VHT40 - Ant 0 + 1 (CDD Mode)	Test Channel:	62
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7511.0	36.1	12.7	48.8	74.0	-25.2	Peak	Horizontal
	8242.0	35.3	13.0	48.3	74.0	-25.7	Peak	Horizontal
*	8888.0	34.8	13.2	48.0	68.2	-20.2	Peak	Horizontal
*	10435.0	34.6	17.3	51.9	68.2	-16.3	Peak	Horizontal
	7434.5	36.3	12.8	49.1	74.0	-24.9	Peak	Vertical
	8301.5	35.8	12.6	48.4	74.0	-25.6	Peak	Vertical
*	8735.0	35.6	13.0	48.6	68.2	-19.6	Peak	Vertical
*	10350.0	34.4	17.3	51.7	68.2	-16.5	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11ac-VHT40 - Ant 0 + 1 (CDD Mode)	Test Channel:	102
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7579.0	36.0	12.8	48.8	74.0	-25.2	Peak	Horizontal
	8165.5	36.1	13.3	49.4	74.0	-24.6	Peak	Horizontal
*	8735.0	36.2	13.0	49.2	68.2	-19.0	Peak	Horizontal
*	10214.0	34.5	17.1	51.6	68.2	-16.6	Peak	Horizontal
	7332.5	36.0	12.6	48.6	74.0	-25.4	Peak	Vertical
	8225.0	35.5	13.1	48.6	74.0	-25.4	Peak	Vertical
*	8650.0	35.7	13.0	48.7	68.2	-19.5	Peak	Vertical
*	10154.5	34.8	17.0	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11ac-VHT40 - Ant 0 + 1 (CDD Mode)	Test Channel:	118
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7468.5	35.5	12.9	48.4	74.0	-25.6	Peak	Horizontal
	8395.0	35.3	12.5	47.8	74.0	-26.2	Peak	Horizontal
*	8905.0	34.7	13.3	48.0	68.2	-20.2	Peak	Horizontal
*	9967.5	34.1	16.7	50.8	68.2	-17.4	Peak	Horizontal
	7451.5	35.6	12.9	48.5	74.0	-25.5	Peak	Vertical
	8276.0	35.0	12.8	47.8	74.0	-26.2	Peak	Vertical
*	8811.5	35.0	13.3	48.3	68.2	-19.9	Peak	Vertical
*	10299.0	34.9	17.3	52.2	68.2	-16.0	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11ac-VHT40 - Ant 0 + 1 (CDD Mode)	Test Channel:	134
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7689.5	36.5	12.8	49.3	74.0	-24.7	Peak	Horizontal
	8386.5	34.8	12.6	47.4	74.0	-26.6	Peak	Horizontal
*	8862.5	34.9	13.3	48.2	68.2	-20.0	Peak	Horizontal
*	10350.0	34.7	17.3	52.0	68.2	-16.2	Peak	Horizontal
	7451.5	35.8	12.9	48.7	74.0	-25.3	Peak	Vertical
	8344.0	36.1	12.6	48.7	74.0	-25.3	Peak	Vertical
*	8845.5	35.1	13.3	48.4	68.2	-19.8	Peak	Vertical
*	10205.5	34.3	17.1	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11ac-VHT40 - Ant 0 + 1 (CDD Mode)	Test Channel:	142
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7613.0	36.3	12.6	48.9	74.0	-25.1	Peak	Horizontal
	8191.0	35.3	13.1	48.4	74.0	-25.6	Peak	Horizontal
*	8905.0	35.4	13.3	48.7	68.2	-19.5	Peak	Horizontal
*	9976.0	34.8	16.7	51.5	68.2	-16.7	Peak	Horizontal
	7434.5	35.1	12.8	47.9	74.0	-26.1	Peak	Vertical
	8301.5	35.3	12.6	47.9	74.0	-26.1	Peak	Vertical
*	8828.5	35.3	13.3	48.6	68.2	-19.6	Peak	Vertical
*	10197.0	34.1	17.2	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11ac-VHT80 - Ant 0 + 1 (CDD Mode)	Test Channel:	58
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7494.0	35.4	12.7	48.1	74.0	-25.9	Peak	Horizontal
	8259.0	36.2	12.9	49.1	74.0	-24.9	Peak	Horizontal
*	8837.0	36.0	13.2	49.2	68.2	-19.0	Peak	Horizontal
*	9993.0	34.0	16.7	50.7	68.2	-17.5	Peak	Horizontal
	7443.0	35.5	12.9	48.4	74.0	-25.6	Peak	Vertical
	8361.0	35.7	12.6	48.3	74.0	-25.7	Peak	Vertical
*	8871.0	34.9	13.2	48.1	68.2	-20.1	Peak	Vertical
*	10511.5	34.5	17.6	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11ac-VHT80 - Ant 0 + 1 (CDD Mode)	Test Channel:	106
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7570.5	35.7	12.9	48.6	74.0	-25.4	Peak	Horizontal
	8310.0	34.7	12.6	47.3	74.0	-26.7	Peak	Horizontal
*	8760.5	35.1	13.2	48.3	68.2	-19.9	Peak	Horizontal
*	10197.0	33.5	17.2	50.7	68.2	-17.5	Peak	Horizontal
	7485.5	35.5	12.8	48.3	74.0	-25.7	Peak	Vertical
	8369.5	35.1	12.6	47.7	74.0	-26.3	Peak	Vertical
*	8837.0	35.0	13.2	48.2	68.2	-20.0	Peak	Vertical
*	10180.0	34.0	17.1	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11ac-VHT80 - Ant 0 + 1 (CDD Mode)	Test Channel:	122
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7451.5	36.1	12.9	49.0	74.0	-25.0	Peak	Horizontal
	8208.0	35.5	13.0	48.5	74.0	-25.5	Peak	Horizontal
*	8743.5	34.7	13.1	47.8	68.2	-20.4	Peak	Horizontal
*	10341.5	34.4	17.3	51.7	68.2	-16.5	Peak	Horizontal
	7451.5	35.9	12.9	48.8	74.0	-25.2	Peak	Vertical
	8310.0	35.9	12.6	48.5	74.0	-25.5	Peak	Vertical
*	8811.5	34.7	13.3	48.0	68.2	-20.2	Peak	Vertical
*	10248.0	34.8	17.2	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2018/09/11
Test Mode:	802.11ac-VHT80 - Ant 0 + 1 (CDD Mode)	Test Channel:	138
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7392.0	36.1	12.6	48.7	74.0	-25.3	Peak	Horizontal
	8480.0	36.1	12.8	48.9	74.0	-25.1	Peak	Horizontal
*	8820.0	34.7	13.3	48.0	68.2	-20.2	Peak	Horizontal
*	10486.0	34.9	17.5	52.4	68.2	-15.8	Peak	Horizontal
	7468.5	35.3	12.9	48.2	74.0	-25.8	Peak	Vertical
	8208.0	35.4	13.0	48.4	74.0	-25.6	Peak	Vertical
*	8658.5	34.4	13.0	47.4	68.2	-20.8	Peak	Vertical
*	9959.0	34.0	16.7	50.7	68.2	-17.5	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy 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:	52
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7375.0	36.6	12.6	49.2	74.0	-24.8	Peak	Horizontal
	8233.5	36.4	13.0	49.4	74.0	-24.6	Peak	Horizontal
*	8786.0	35.1	13.3	48.4	68.2	-19.8	Peak	Horizontal
*	10341.5	35.1	17.3	52.4	68.2	-15.8	Peak	Horizontal
	7460.0	35.4	12.9	48.3	74.0	-25.7	Peak	Vertical
	8242.0	35.8	13.0	48.8	74.0	-25.2	Peak	Vertical
*	8837.0	35.8	13.2	49.0	68.2	-19.2	Peak	Vertical
*	10095.0	34.0	16.9	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy 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:	60
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7545.0	35.3	13.0	48.3	74.0	-25.7	Peak	Horizontal
	8182.5	35.5	13.2	48.7	74.0	-25.3	Peak	Horizontal
*	8616.0	35.7	12.9	48.6	68.2	-19.6	Peak	Horizontal
*	10001.5	35.3	16.7	52.0	68.2	-16.2	Peak	Horizontal
	7536.5	35.7	12.9	48.6	74.0	-25.4	Peak	Vertical
	8352.5	35.9	12.6	48.5	74.0	-25.5	Peak	Vertical
*	8837.0	36.1	13.2	49.3	68.2	-18.9	Peak	Vertical
*	10137.5	34.9	17.0	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy 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:	64
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7621.5	36.0	12.6	48.6	74.0	-25.4	Peak	Horizontal
	8199.5	35.6	13.1	48.7	74.0	-25.3	Peak	Horizontal
*	8828.5	36.8	13.3	50.1	68.2	-18.1	Peak	Horizontal
*	9908.0	35.3	16.6	51.9	68.2	-16.3	Peak	Horizontal
	7536.5	33.3	12.9	46.2	74.0	-27.8	Peak	Vertical
	8352.5	34.6	12.6	47.2	74.0	-26.8	Peak	Vertical
*	8658.5	35.7	13.0	48.7	68.2	-19.5	Peak	Vertical
*	10010.0	34.7	16.6	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy 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:	100
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7604.5	36.0	12.7	48.7	74.0	-25.3	Peak	Horizontal
	8165.5	35.7	13.3	49.0	74.0	-25.0	Peak	Horizontal
*	8777.5	35.9	13.2	49.1	68.2	-19.1	Peak	Horizontal
*	9865.5	34.8	16.7	51.5	68.2	-16.7	Peak	Horizontal
	7434.5	35.5	12.8	48.3	74.0	-25.7	Peak	Vertical
	8174.0	36.1	13.2	49.3	74.0	-24.7	Peak	Vertical
*	8726.5	35.3	13.0	48.3	68.2	-19.9	Peak	Vertical
*	9806.0	34.3	16.3	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy 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:	120
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7443.0	35.8	12.9	48.7	74.0	-25.3	Peak	Horizontal
	8386.5	36.3	12.6	48.9	74.0	-25.1	Peak	Horizontal
*	8794.5	35.2	13.3	48.5	68.2	-19.7	Peak	Horizontal
*	9908.0	34.7	16.6	51.3	68.2	-16.9	Peak	Horizontal
	7460.0	36.1	12.9	49.0	74.0	-25.0	Peak	Vertical
	8199.5	35.3	13.1	48.4	74.0	-25.6	Peak	Vertical
*	8862.5	35.1	13.3	48.4	68.2	-19.8	Peak	Vertical
*	10222.5	34.3	17.1	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy 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:	140
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7621.5	36.7	12.6	49.3	74.0	-24.7	Peak	Horizontal
	8242.0	36.8	13.0	49.8	74.0	-24.2	Peak	Horizontal
*	8658.5	35.5	13.0	48.5	68.2	-19.7	Peak	Horizontal
*	9925.0	34.7	16.6	51.3	68.2	-16.9	Peak	Horizontal
	7375.0	35.3	12.6	47.9	74.0	-26.1	Peak	Vertical
	8293.0	36.8	12.7	49.5	74.0	-24.5	Peak	Vertical
*	8701.0	35.9	13.0	48.9	68.2	-19.3	Peak	Vertical
*	9857.0	34.7	16.7	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy 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:	144
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7621.5	34.4	12.6	47.0	74.0	-27.0	Peak	Horizontal
	8259.0	35.7	12.9	48.6	74.0	-25.4	Peak	Horizontal
*	10171.5	33.3	17.0	50.3	68.2	-17.9	Peak	Horizontal
*	13070.0	32.2	18.7	50.9	68.2	-17.3	Peak	Horizontal
	8225.0	35.6	13.1	48.7	74.0	-25.3	Peak	Vertical
	9117.5	33.9	13.8	47.7	74.0	-26.3	Peak	Vertical
*	10324.5	32.6	17.3	49.9	68.2	-18.3	Peak	Vertical
*	12891.5	32.7	18.5	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy 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:	54
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7477.0	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
*	8675.5	35.5	13.0	48.5	68.2	-19.7	Peak	Horizontal
*	10180.0	35.7	17.1	52.8	68.2	-15.4	Peak	Horizontal
	7375.0	35.6	12.6	48.2	74.0	-25.8	Peak	Vertical
	8199.5	35.3	13.1	48.4	74.0	-25.6	Peak	Vertical
*	8718.0	35.3	13.0	48.3	68.2	-19.9	Peak	Vertical
*	9916.5	34.4	16.6	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy 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:	62
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7468.5	35.4	12.9	48.3	74.0	-25.7	Peak	Horizontal
	8242.0	36.0	13.0	49.0	74.0	-25.0	Peak	Horizontal
*	8633.0	36.1	12.9	49.0	68.2	-19.2	Peak	Horizontal
*	9984.5	34.3	16.7	51.0	68.2	-17.2	Peak	Horizontal
	7562.0	35.0	12.9	47.9	74.0	-26.1	Peak	Vertical
	8199.5	35.2	13.1	48.3	74.0	-25.7	Peak	Vertical
*	8896.5	36.2	13.2	49.4	68.2	-18.8	Peak	Vertical
*	10171.5	35.3	17.0	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy 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:	102
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7383.5	35.9	12.6	48.5	74.0	-25.5	Peak	Horizontal
	8395.0	36.3	12.5	48.8	74.0	-25.2	Peak	Horizontal
*	8811.5	35.3	13.3	48.6	68.2	-19.6	Peak	Horizontal
*	10171.5	34.4	17.0	51.4	68.2	-16.8	Peak	Horizontal
	7570.5	35.7	12.9	48.6	74.0	-25.4	Peak	Vertical
	8148.5	34.8	13.3	48.1	74.0	-25.9	Peak	Vertical
*	8735.0	35.2	13.0	48.2	68.2	-20.0	Peak	Vertical
*	9882.5	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy 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:	118
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7528.0	35.7	12.8	48.5	74.0	-25.5	Peak	Horizontal
	8318.5	35.3	12.6	47.9	74.0	-26.1	Peak	Horizontal
*	8854.0	35.2	13.4	48.6	68.2	-19.6	Peak	Horizontal
*	10137.5	34.2	17.0	51.2	68.2	-17.0	Peak	Horizontal
	7494.0	36.3	12.7	49.0	74.0	-25.0	Peak	Vertical
	8242.0	36.0	13.0	49.0	74.0	-25.0	Peak	Vertical
*	8811.5	35.5	13.3	48.8	68.2	-19.4	Peak	Vertical
*	10163.0	34.8	17.0	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy 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:	134
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7732.0	35.8	12.8	48.6	74.0	-25.4	Peak	Horizontal
	8327.0	35.7	12.6	48.3	74.0	-25.7	Peak	Horizontal
*	8854.0	35.0	13.4	48.4	68.2	-19.8	Peak	Horizontal
*	10188.5	34.6	17.1	51.7	68.2	-16.5	Peak	Horizontal
	7536.5	36.1	12.9	49.0	74.0	-25.0	Peak	Vertical
	8182.5	36.2	13.2	49.4	74.0	-24.6	Peak	Vertical
*	8624.5	35.6	12.9	48.5	68.2	-19.7	Peak	Vertical
*	9950.5	34.7	16.7	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy 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:	142
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7570.5	35.7	12.9	48.6	74.0	-25.4	Peak	Horizontal
	8310.0	36.7	12.6	49.3	74.0	-24.7	Peak	Horizontal
*	9857.0	33.9	16.7	50.6	68.2	-17.6	Peak	Horizontal
*	13010.5	32.6	18.5	51.1	68.2	-17.1	Peak	Horizontal
	8318.5	35.3	12.6	47.9	74.0	-26.1	Peak	Vertical
	11378.5	32.9	17.6	50.5	74.0	-23.5	Peak	Vertical
*	13027.5	32.9	18.4	51.3	68.2	-16.9	Peak	Vertical
*	16436.0	31.7	19.6	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy 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:	58
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7477.0	36.0	12.9	48.9	74.0	-25.1	Peak	Horizontal
	8242.0	36.3	13.0	49.3	74.0	-24.7	Peak	Horizontal
*	8820.0	35.7	13.3	49.0	68.2	-19.2	Peak	Horizontal
*	10248.0	34.9	17.2	52.1	68.2	-16.1	Peak	Horizontal
	7341.0	35.7	12.7	48.4	74.0	-25.6	Peak	Vertical
	8250.5	35.4	12.9	48.3	74.0	-25.7	Peak	Vertical
*	8871.0	35.3	13.2	48.5	68.2	-19.7	Peak	Vertical
*	9976.0	34.1	16.7	50.8	68.2	-17.4	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy 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:	106
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7485.5	35.8	12.8	48.6	74.0	-25.4	Peak	Horizontal
	8131.5	35.5	13.4	48.9	74.0	-25.1	Peak	Horizontal
*	8837.0	35.7	13.2	48.9	68.2	-19.3	Peak	Horizontal
*	10069.5	34.6	17.0	51.6	68.2	-16.6	Peak	Horizontal
	7485.5	35.8	12.8	48.6	74.0	-25.4	Peak	Vertical
	8276.0	35.3	12.8	48.1	74.0	-25.9	Peak	Vertical
*	8718.0	35.5	13.0	48.5	68.2	-19.7	Peak	Vertical
*	10265.0	35.3	17.2	52.5	68.2	-15.7	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy 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:	122
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7545.0	36.0	13.0	49.0	74.0	-25.0	Peak	Horizontal
	8276.0	36.2	12.8	49.0	74.0	-25.0	Peak	Horizontal
*	8760.5	34.8	13.2	48.0	68.2	-20.2	Peak	Horizontal
*	10035.5	35.0	16.7	51.7	68.2	-16.5	Peak	Horizontal
	7451.5	35.5	12.9	48.4	74.0	-25.6	Peak	Vertical
	8284.5	35.1	12.7	47.8	74.0	-26.2	Peak	Vertical
*	8854.0	34.9	13.4	48.3	68.2	-19.9	Peak	Vertical
*	9899.5	34.1	16.6	50.7	68.2	-17.5	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 dBμV/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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	HAN Access Point	Temperature	26°C
Test Engineer	Dandy 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:	138
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 (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	7400.5	36.4	12.6	49.0	74.0	-25.0	Peak	Horizontal
	8378.0	36.4	12.6	49.0	74.0	-25.0	Peak	Horizontal
*	10188.5	34.3	17.1	51.4	68.2	-16.8	Peak	Horizontal
*	16427.5	32.0	19.6	51.6	68.2	-16.6	Peak	Horizontal
	7647.0	35.4	12.7	48.1	74.0	-25.9	Peak	Vertical
	11217.0	32.4	17.6	50.0	74.0	-24.0	Peak	Vertical
*	12891.5	32.8	18.5	51.3	68.2	-16.9	Peak	Vertical
*	16495.5	33.6	19.8	53.4	68.2	-14.8	Peak	Vertical

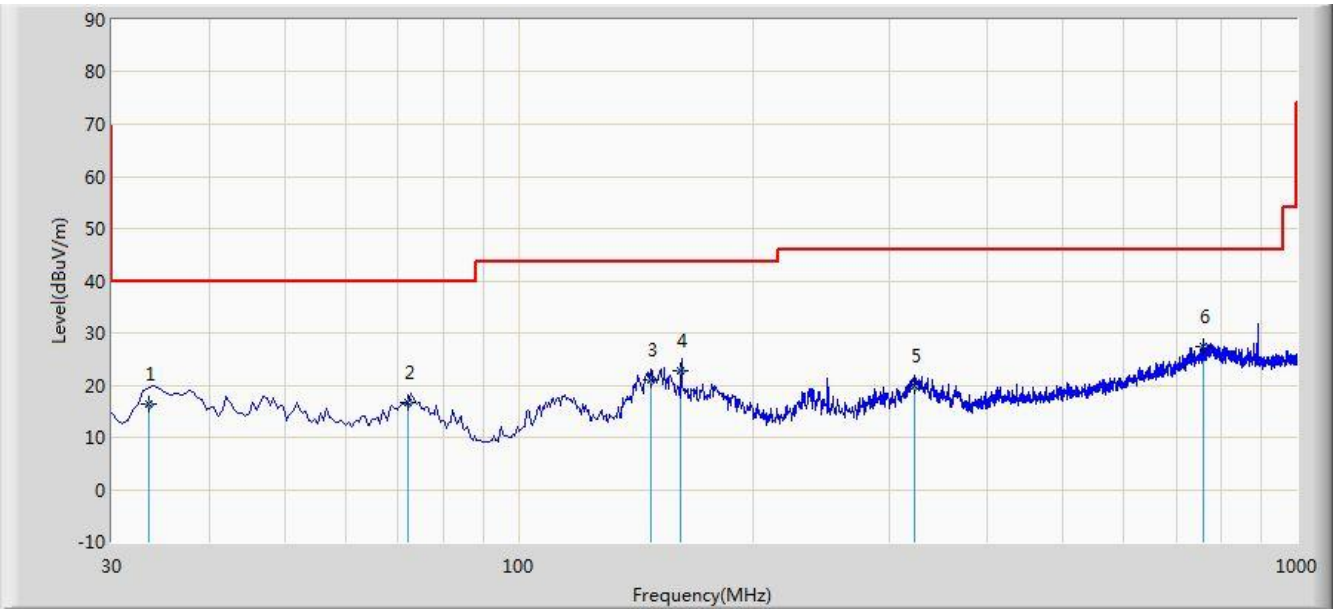
Note 1: “*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + 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 - 10:42
Limit: FCC_Part15.209_RE(3m)	Engineer: Cloud Guo
Probe: VULB 9168 _20-2000MHz	Polarity: Horizontal
EUT: HAN Access Point	Power: AC 120V/60Hz
Worst Case: Transmit by 802.11a at Channel 5300MHz Ant 0 + 1	



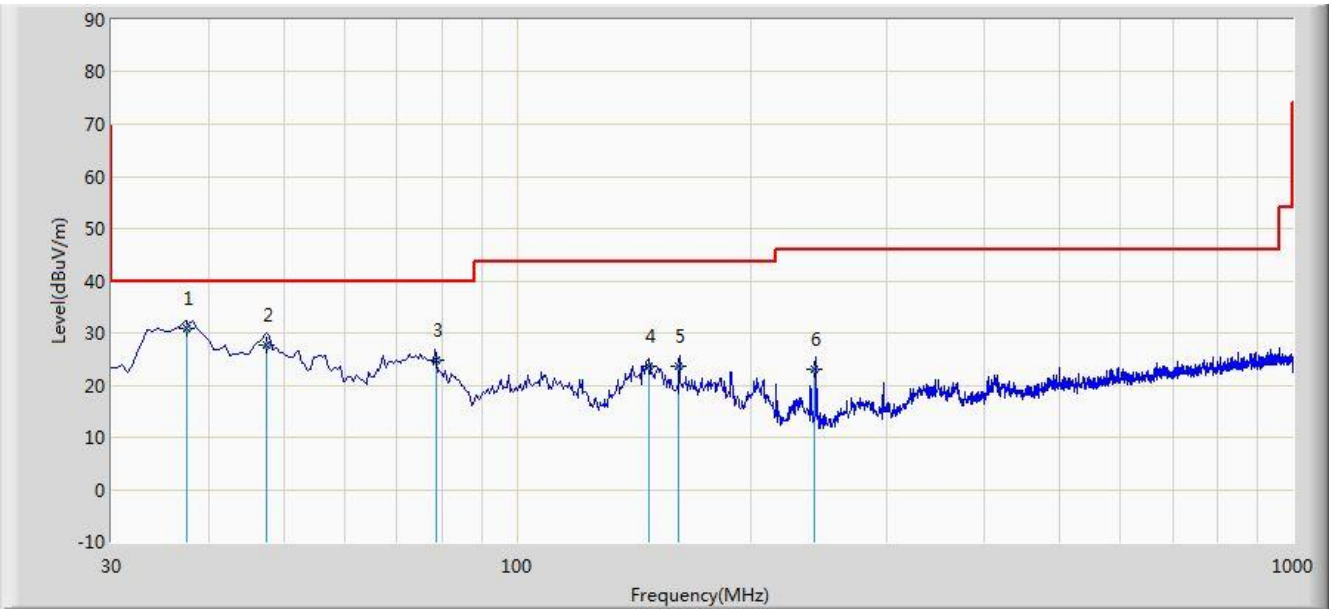
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			33.485	16.515	2.640	-23.485	40.000	13.874	QP
2			72.150	16.761	5.489	-23.239	40.000	11.271	QP
3			147.985	20.995	5.850	-22.505	43.500	15.146	QP
4			161.490	22.652	7.480	-20.848	43.500	15.172	QP
5			322.565	19.998	4.979	-26.002	46.000	15.019	QP
6		*	759.925	27.419	4.489	-18.581	46.000	22.929	QP

Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + 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 - 10:43
Limit: FCC_Part15.209_RE(3m)	Engineer: Cloud Guo
Probe: VULB 9168 _20-2000MHz	Polarity: Vertical
EUT: HAN Access Point	Power: AC 120V/60Hz
Worst Case: Transmit by 802.11a at Channel 5300MHz Ant 0 + 1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	37.490	30.786	16.489	-9.214	40.000	14.297	QP
2			47.565	27.730	13.498	-12.270	40.000	14.232	QP
3			78.550	24.818	14.489	-15.182	40.000	10.329	QP
4			147.898	23.681	8.542	-19.819	43.500	15.139	QP
5			161.156	23.752	8.550	-19.748	43.500	15.202	QP
6			242.165	23.169	10.265	-22.831	46.000	12.904	QP

Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + 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.

7.8. Radiated Restricted Band Edge Measurement

7.8.1.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
[1] 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	([2])
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 10 dBm/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 15.6 dBm/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 27 dBm/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 -27 dBm/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 -27 dBm/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

7.8.2.Test Procedure Used

KDB 789033 D02v02r01 – Section G

7.8.3.Test Setting

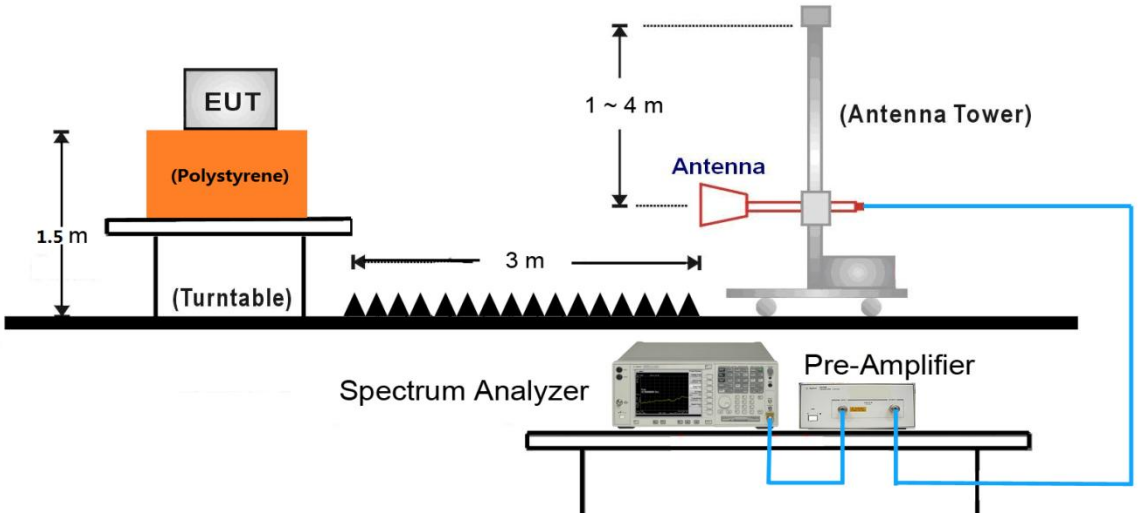
Peak Measurements above 1GHz

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

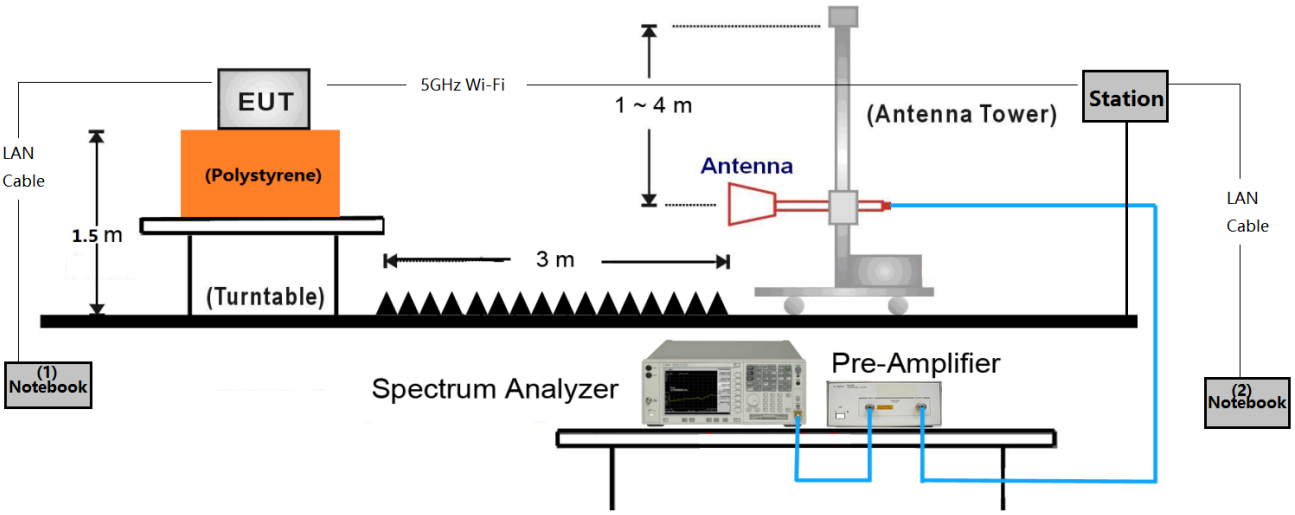
Average Measurements above 1GHz (Method AD)

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. If duty cycle ≥ 98%, VBW ≤ RBW/100 but not less than 10Hz; If duty cycle < 98%, set VBW ≥ 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



Additional Beam-Forming Mode Test Setup



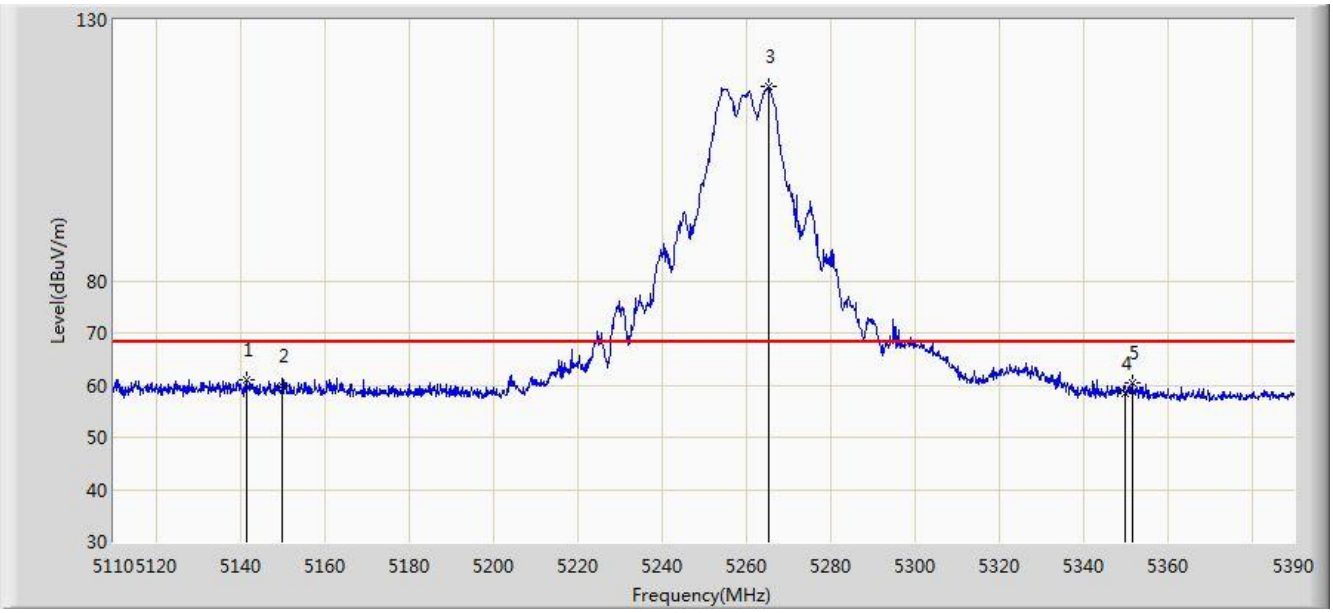
Make the EUT connect with the station by 5GHz wireless.

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.

7.8.5.Test Result

Site: AC2	Time: 2018/11/28 - 13:32
Limit: FCC_Part15.209_RE(3m)	Engineer: Stone Jia
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at channel 5260MHz (CDD Mode)	

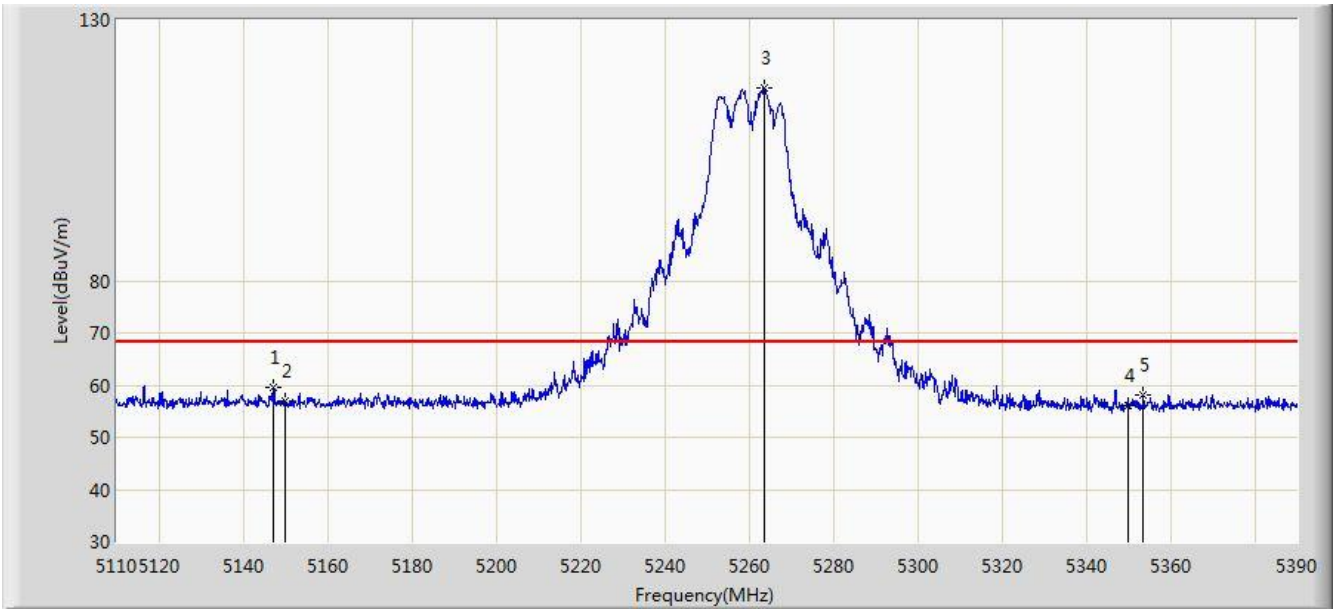


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5141.640	61.042	54.941	-7.158	68.200	6.101	PK
2			5150.000	59.822	53.699	-8.378	68.200	6.123	PK
3		*	5265.540	117.245	111.403	N/A	N/A	5.842	PK
4			5350.000	58.395	52.412	-9.805	68.200	5.983	PK
5			5351.640	60.459	54.460	-7.741	68.200	5.999	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: AC2	Time: 2018/11/28 - 13:33
Limit: FCC_Part15.209_RE(3m)	Engineer: Stone Jia
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: HAN Access Point	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at channel 5260MHz (CDD Mode)	

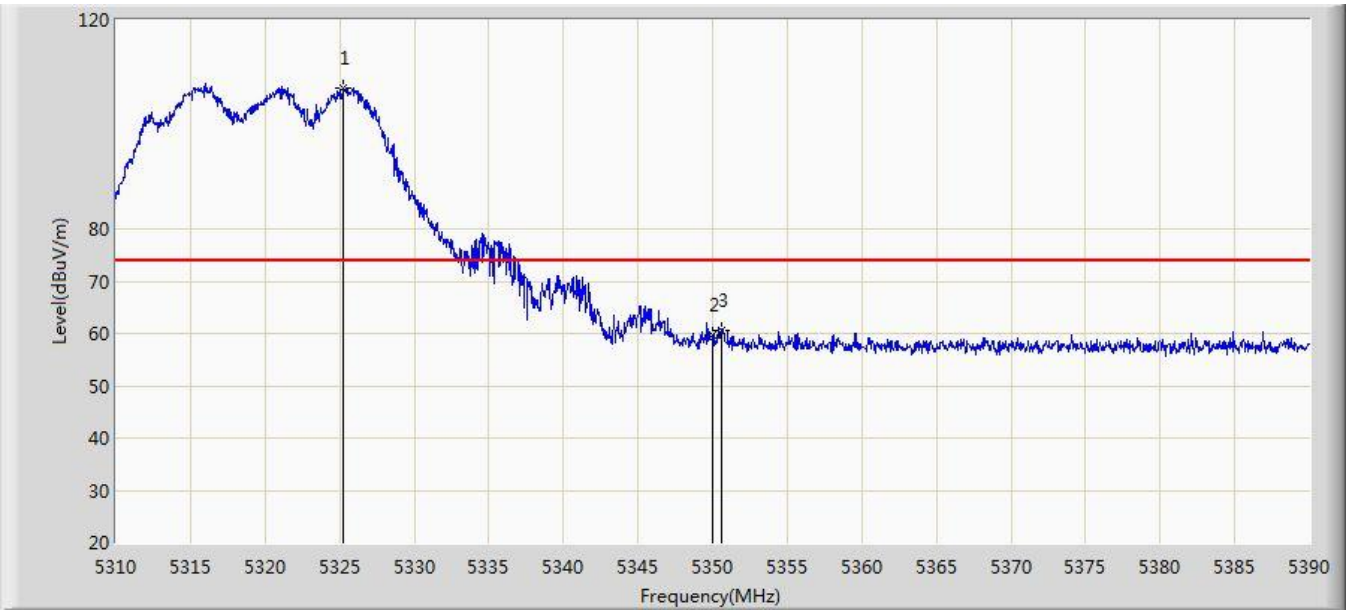


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			5147.240	59.532	53.415	-8.668	68.200	6.117	PK
2			5150.000	56.910	50.787	-11.290	68.200	6.123	PK
3		*	5263.580	117.050	111.215	N/A	N/A	5.835	PK
4			5350.000	56.097	50.114	-12.103	68.200	5.983	PK
5			5353.600	58.131	52.121	-10.069	68.200	6.010	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 - 20:22
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 5320MHz (CDD Mode)	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5325.280	106.812	100.488	N/A	N/A	6.324	PK
2			5350.000	59.661	53.201	-14.339	74.000	6.460	PK
3			5350.640	60.612	54.149	-13.388	74.000	6.463	PK

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)