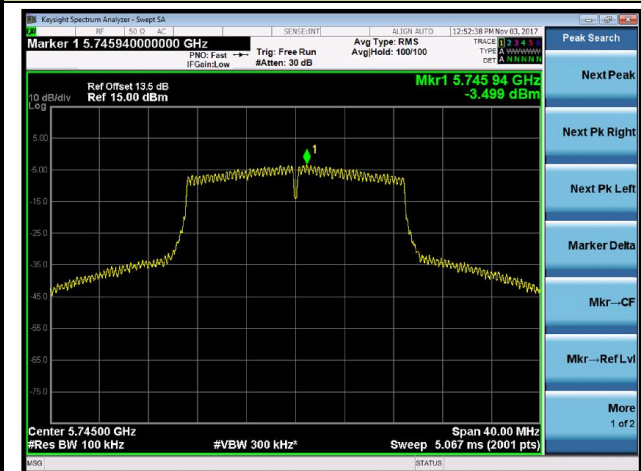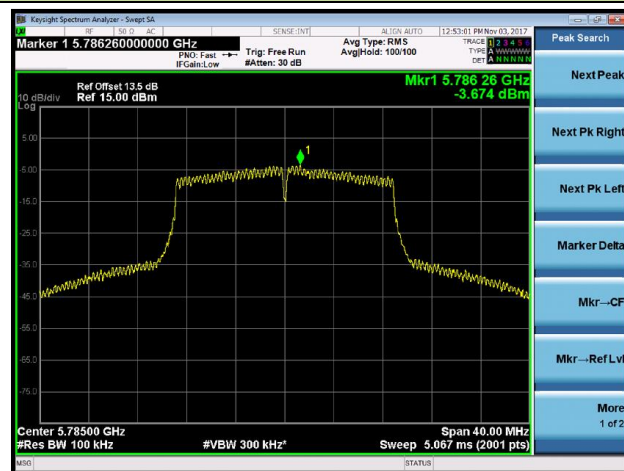## 802.11n-HT20 Power Spectral Density
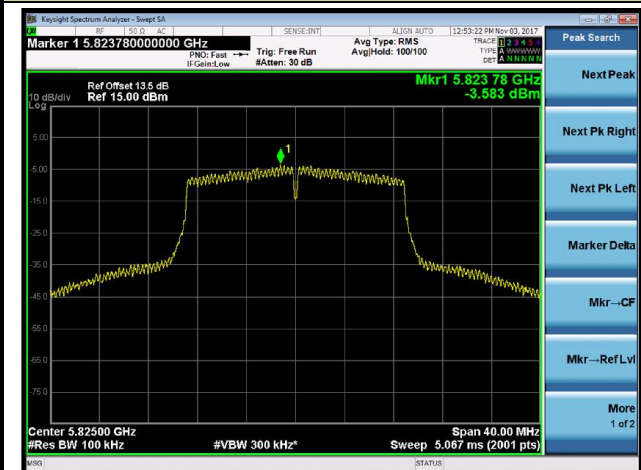
Channel 149 (5745MHz)

Channel 157 (5785MHz)

Channel 165 (5825MHz)

802.11n-HT40 Power Spectral Density
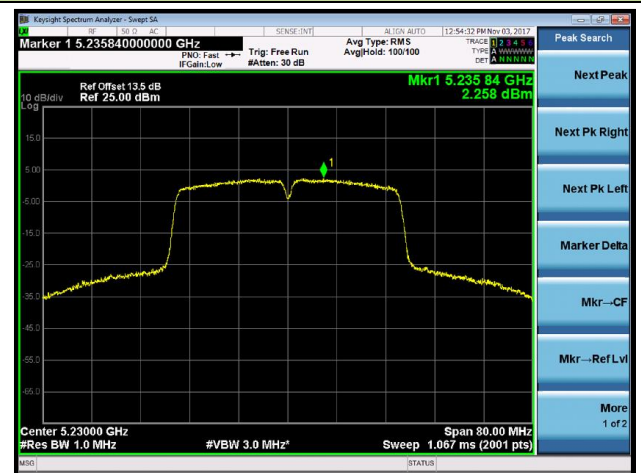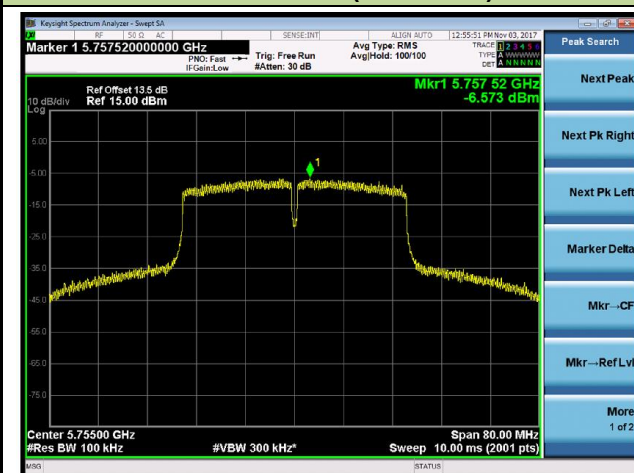
Channel 38 (5190MHz)	Channel 46 (5230MHz)

Channel 54 (5270MHz)	Channel 62 (5310MHz)

Channel 151 (5755MHz)	Channel 159 (5795MHz)

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.

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 (±15%) and endpoint, record the maximum frequency change.

7.7.3. Test Setup
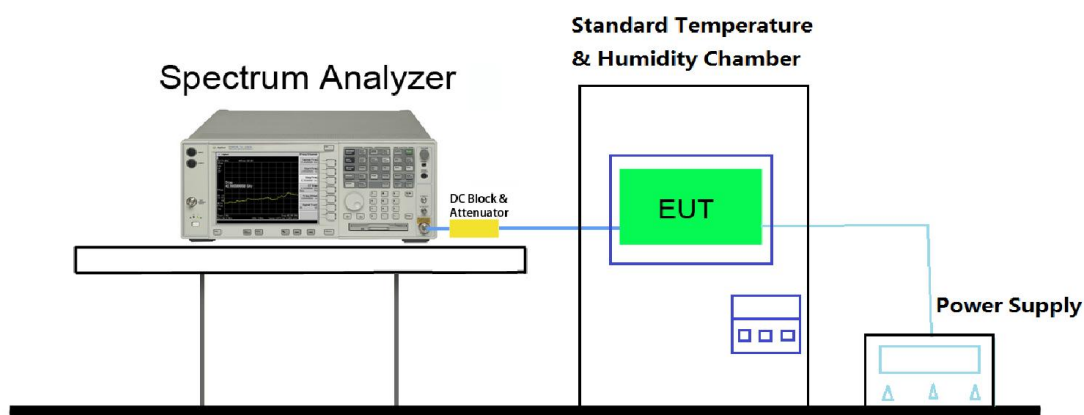
7.7.4.Test Result

Test Engineer	Hunk Li	Temperature	-30 ~ 50°C
Test Time	2017/11/05	Relative Humidity	48 ~ 55%RH
Test Mode	5180MHz (Carrier Mode)	Test Site	TR3

Voltage	Power	Temp	Frequency Tolerance (ppm)			
(%)	(Battery)	(°C)	0 minutes	2 minutes	5 minutes	10 minutes
100%	3.8V	- 30	4.27	4.31	4.26	3.92
		- 20	3.41	4.18	4.28	4.11
		- 10	3.66	4.10	4.25	4.36
		0	3.87	4.22	3.97	4.11
		+ 10	4.38	4.16	3.89	3.43
		+ 20 (Ref)	1.35	1.56	1.82	2.24
		+ 30	-1.06	-0.87	-1.02	-1.35
		+ 40	-1.11	-1.43	-1.86	-1.95
		+ 50	-1.85	-2.41	-2.71	-2.94
115%	4.37	+ 20	-1.22	-1.44	-2.33	-2.41
85%	3.23	+ 20	-2.14	-2.52	-3.11	-3.38

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

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

74KDB 789033 D02v02 – 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 ≥ 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

9kHz ~ 30MHz Test Setup:
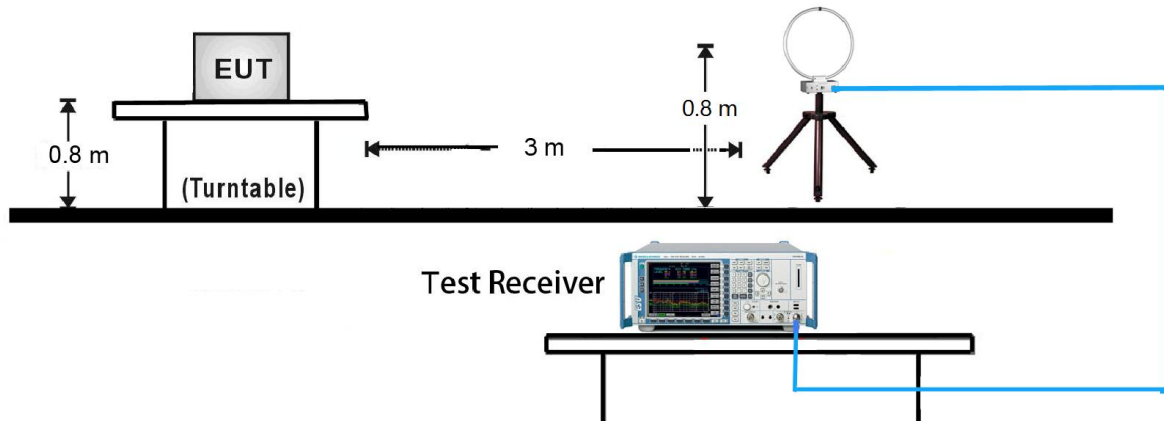
30MHz ~ 1GHz Test Setup:
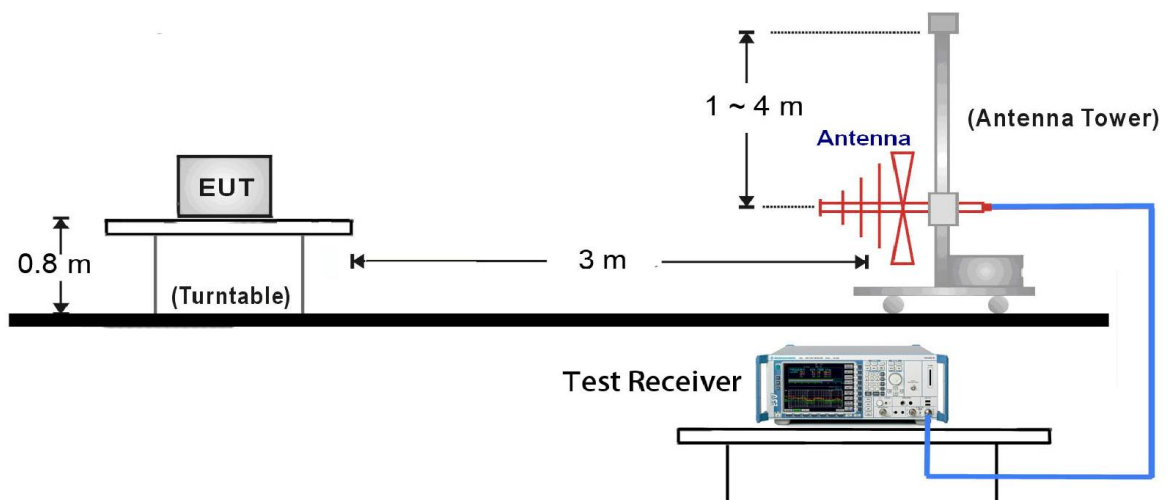
1GHz ~18GHz Test Setup:

18GHz ~40GHz Test Setup:
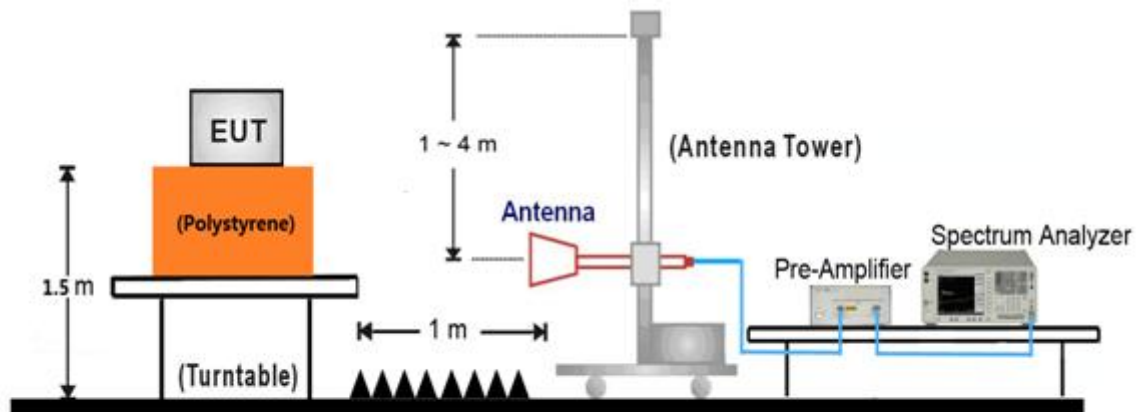
7.8.5.Test Result

Product	Mobile Data Terminal	Temperature	26°C
Test Engineer	Will Yan	Relative Humidity	56%
Test Site	AC2	Test Date	2017/11/03
Test Mode:	802.11a	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.		

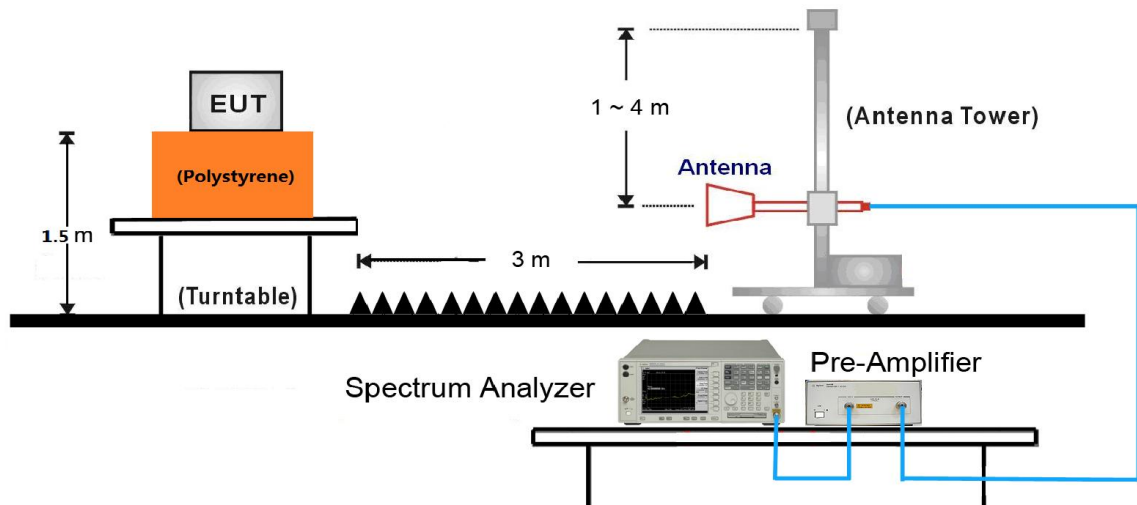| Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	7910.5	31.8	10.6	42.4	68.2	-25.8	Peak	Horizontal
*	8633.0	32.6	11.2	43.8	68.2	-24.4	Peak	Horizontal
	9355.5	31.0	12.7	43.7	74	-30.3	Peak	Horizontal
	10911.0	32.5	16.4	48.9	74	-25.1	Peak	Horizontal
*	7774.5	31.9	10.5	42.4	68.2	-25.8	Peak	Vertical
*	8582.0	32.6	11.0	43.6	68.2	-24.6	Peak	Vertical
	9330.0	31.3	12.9	44.2	74	-29.8	Peak	Vertical
	11157.5	31.3	16.8	48.1	74	-25.9	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	Mobile Data Terminal	Temperature	26°C
Test Engineer	Will Yan	Relative Humidity	56%
Test Site	AC2	Test Date	2017/11/03
Test Mode:	802.11a	Test Channel:	44
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
*	7774.5	31.9	10.5	42.4	68.2	-25.8	Peak	Horizontal
*	8633.0	31.9	11.2	43.1	68.2	-25.1	Peak	Horizontal
	9406.5	31.4	12.3	43.7	74	-30.3	Peak	Horizontal
	10928.0	31.6	16.4	48.0	74	-26.0	Peak	Horizontal
*	7808.5	32.0	10.4	42.4	68.2	-25.8	Peak	Vertical
*	8633.0	31.8	11.2	43.0	68.2	-25.2	Peak	Vertical
	9381.0	30.0	12.5	42.5	74	-31.5	Peak	Vertical
	10928.0	31.4	16.4	47.8	74	-26.2	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	Mobile Data Terminal	Temperature	26°C
Test Engineer	Will Yan	Relative Humidity	56%
Test Site	AC2	Test Date	2017/11/03
Test Mode:	802.11a	Test Channel:	48
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
*	7842.5	31.4	10.3	41.7	68.2	-26.5	Peak	Horizontal
*	8624.5	32.6	11.2	43.8	68.2	-24.4	Peak	Horizontal
	9372.5	29.9	12.7	42.6	74	-31.4	Peak	Horizontal
	10826.0	32.3	16.3	48.6	74	-25.4	Peak	Horizontal
*	7834.0	33.7	10.3	44.0	68.2	-24.2	Peak	Vertical
*	8803.0	31.6	11.7	43.3	68.2	-24.9	Peak	Vertical
	9338.5	30.3	12.6	42.9	74	-31.1	Peak	Vertical
	11047.0	31.8	16.6	48.4	74	-25.6	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	Mobile Data Terminal	Temperature	26°C
Test Engineer	Will Yan	Relative Humidity	56%
Test Site	AC2	Test Date	2017/11/03
Test Mode:	802.11a	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
*	7834.0	33.7	10.3	44.0	68.2	-24.2	Peak	Horizontal
*	8565.0	31.8	10.9	42.7	68.2	-25.5	Peak	Horizontal
	9151.5	31.6	12.6	44.2	74	-29.8	Peak	Horizontal
	10919.5	31.2	16.4	47.6	74	-26.4	Peak	Horizontal
*	7774.5	31.6	10.5	42.1	68.2	-26.1	Peak	Vertical
*	8854.0	30.2	11.7	41.9	68.2	-26.3	Peak	Vertical
	9389.5	30.0	12.4	42.4	74	-31.6	Peak	Vertical
	10987.5	30.9	16.4	47.3	74	-26.7	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	Mobile Data Terminal	Temperature	26°C
Test Engineer	Will Yan	Relative Humidity	56%
Test Site	AC2	Test Date	2017/11/03
Test Mode:	802.11a	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
*	7876.5	31.7	10.5	42.2	68.2	-26.0	Peak	Horizontal
*	8590.5	32.0	11.0	43.0	68.2	-25.2	Peak	Horizontal
	9321.5	29.7	12.9	42.6	74	-31.4	Peak	Horizontal
	10817.5	31.9	16.1	48.0	74	-26.0	Peak	Horizontal
*	7800.0	32.4	10.3	42.7	68.2	-25.5	Peak	Vertical
*	8667.0	31.8	11.3	43.1	68.2	-25.1	Peak	Vertical
	9381.0	30.1	12.5	42.6	74	-31.4	Peak	Vertical
	10613.5	32.4	15.5	47.9	74	-26.1	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	Mobile Data Terminal	Temperature	26°C
Test Engineer	Will Yan	Relative Humidity	56%
Test Site	AC2	Test Date	2017/11/03
Test Mode:	802.11a	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
*	7919.0	32.7	10.6	43.3	68.2	-24.9	Peak	Horizontal
*	8862.5	32.0	11.6	43.6	68.2	-24.6	Peak	Horizontal
	9304.5	30.7	12.7	43.4	74	-30.6	Peak	Horizontal
	11225.5	31.1	16.9	48.0	74	-26.0	Peak	Horizontal
*	7800.0	32.0	10.3	42.3	68.2	-25.9	Peak	Vertical
*	8862.5	30.6	11.6	42.2	68.2	-26.0	Peak	Vertical
	9338.5	32.0	12.6	44.6	74	-29.4	Peak	Vertical
	11565.5	31.2	17.6	48.8	74	-25.2	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	Mobile Data Terminal	Temperature	26°C
Test Engineer	Will Yan	Relative Humidity	56%
Test Site	AC2	Test Date	2017/11/03
Test Mode:	802.11a	Test Channel:	149
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
*	7800.0	32.0	10.3	42.3	68.2	-25.9	Peak	Horizontal
*	8641.5	32.0	11.1	43.1	68.2	-25.1	Peak	Horizontal
	9415.0	31.1	12.3	43.4	74	-30.6	Peak	Horizontal
	11557.0	31.3	17.7	49.0	74	-25.0	Peak	Horizontal
*	7834.0	33.0	10.3	43.3	68.2	-24.9	Peak	Vertical
*	8633.0	32.4	11.2	43.6	68.2	-24.6	Peak	Vertical
	9321.5	31.0	12.9	43.9	74	-30.1	Peak	Vertical
	11625.0	31.0	17.4	48.4	74	-25.6	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is -27dBm/MHz or -17dBm/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	Mobile Data Terminal	Temperature	26°C
Test Engineer	Will Yan	Relative Humidity	56%
Test Site	AC2	Test Date	2017/11/03
Test Mode:	802.11a	Test Channel:	157
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
*	7774.5	31.6	10.5	42.1	68.2	-26.1	Peak	Horizontal
*	8633.0	32.4	11.2	43.6	68.2	-24.6	Peak	Horizontal
	9457.5	31.8	12.4	44.2	74	-29.8	Peak	Horizontal
	10996.0	31.2	16.5	47.7	74	-26.3	Peak	Horizontal
*	7774.5	31.8	10.5	42.3	68.2	-25.9	Peak	Vertical
*	8573.5	32.7	11.0	43.7	68.2	-24.5	Peak	Vertical
	9338.5	30.7	12.6	43.3	74	-30.7	Peak	Vertical
	11089.5	30.5	17.0	47.5	74	-26.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is -27dBm/MHz or -17dBm/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	Mobile Data Terminal	Temperature	26°C
Test Engineer	Will Yan	Relative Humidity	56%
Test Site	AC2	Test Date	2017/11/03
Test Mode:	802.11a	Test Channel:	165
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
*	7740.5	31.0	10.4	41.4	68.2	-26.8	Peak	Horizontal
*	8624.5	31.9	11.2	43.1	68.2	-25.1	Peak	Horizontal
	9321.5	32.0	12.9	44.9	74	-29.1	Peak	Horizontal
	10970.5	30.1	16.5	46.6	74	-27.4	Peak	Horizontal
*	7774.5	30.3	10.5	40.8	68.2	-27.4	Peak	Vertical
*	8539.5	32.2	11.0	43.2	68.2	-25.0	Peak	Vertical
	9381.0	31.5	12.5	44.0	74	-30.0	Peak	Vertical
	10817.5	33.0	16.1	49.1	74	-24.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is -27dBm/MHz or -17dBm/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	Mobile Data Terminal	Temperature	26°C
Test Engineer	Will Yan	Relative Humidity	56%
Test Site	AC2	Test Date	2017/11/03
Test Mode:	802.11n-HT20	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 (dBµV)	Factor (dB)	Measure Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Polarization
*	7876.5	31.4	10.5	41.9	68.2	-26.3	Peak	Horizontal
*	8735.0	30.4	11.6	42.0	68.2	-26.2	Peak	Horizontal
	9364.0	31.7	12.8	44.5	74	-29.5	Peak	Horizontal
	11353.0	30.9	17.2	48.1	74	-25.9	Peak	Horizontal
*	7774.5	32.6	10.5	43.1	68.2	-25.1	Peak	Vertical
*	8641.5	32.9	11.1	44.0	68.2	-24.2	Peak	Vertical
	9423.5	30.3	12.4	42.7	74	-31.3	Peak	Vertical
	11557.0	31.7	17.7	49.4	74	-24.6	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	Mobile Data Terminal	Temperature	26°C
Test Engineer	Will Yan	Relative Humidity	56%
Test Site	AC2	Test Date	2017/11/03
Test Mode:	802.11n-HT20	Test Channel:	44
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
*	7876.5	30.2	10.5	40.7	68.2	-27.5	Peak	Horizontal
*	8811.5	30.4	11.7	42.1	68.2	-26.1	Peak	Horizontal
	9423.5	30.0	12.4	42.4	74	-31.6	Peak	Horizontal
	11523.0	31.6	17.2	48.8	74	-25.2	Peak	Horizontal
*	7834.0	30.9	10.3	41.2	68.2	-27.0	Peak	Vertical
*	8752.0	30.0	11.6	41.6	68.2	-26.6	Peak	Vertical
	9423.5	30.8	12.4	43.2	74	-30.8	Peak	Vertical
	11778.0	32.1	16.5	48.6	74	-25.4	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	Mobile Data Terminal	Temperature	26°C
Test Engineer	Will Yan	Relative Humidity	56%
Test Site	AC2	Test Date	2017/11/03
Test Mode:	802.11n-HT20	Test Channel:	48
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
*	7859.5	32.0	10.4	42.4	68.2	-25.8	Peak	Horizontal
*	8607.5	31.9	11.1	43.0	68.2	-25.2	Peak	Horizontal
	9338.5	31.9	12.6	44.5	74	-29.5	Peak	Horizontal
	11098.0	31.0	16.9	47.9	74	-26.1	Peak	Horizontal
*	7766.0	30.5	10.3	40.8	68.2	-27.4	Peak	Vertical
*	8701.0	31.1	11.4	42.5	68.2	-25.7	Peak	Vertical
	9389.5	30.6	12.4	43.0	74	-31.0	Peak	Vertical
	10911.0	31.0	16.4	47.4	74	-26.6	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	Mobile Data Terminal	Temperature	26°C
Test Engineer	Will Yan	Relative Humidity	56%
Test Site	AC2	Test Date	2017/11/03
Test Mode:	802.11n-HT20	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
*	7757.5	32.3	10.4	42.7	68.2	-25.5	Peak	Horizontal
*	8624.5	31.5	11.2	42.7	68.2	-25.5	Peak	Horizontal
	9474.5	31.7	12.3	44.0	74	-30.0	Peak	Horizontal
	11106.5	31.3	16.7	48.0	74	-26.0	Peak	Horizontal
*	7944.5	31.9	10.7	42.6	68.2	-25.6	Peak	Vertical
*	8777.5	29.9	11.9	41.8	68.2	-26.4	Peak	Vertical
	9423.5	31.1	12.4	43.5	74	-30.5	Peak	Vertical
	11089.5	30.8	17.0	47.8	74	-26.2	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	Mobile Data Terminal	Temperature	26°C
Test Engineer	Will Yan	Relative Humidity	56%
Test Site	AC2	Test Date	2017/11/03
Test Mode:	802.11n-HT20	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
*	7783.0	33.4	10.5	43.9	68.2	-24.3	Peak	Horizontal
*	8565.0	33.7	10.9	44.6	68.2	-23.6	Peak	Horizontal
	9423.5	31.2	12.4	43.6	74	-30.4	Peak	Horizontal
	11608.0	31.7	17.4	49.1	74	-24.9	Peak	Horizontal
*	7885.0	32.9	10.4	43.3	68.2	-24.9	Peak	Vertical
*	8752.0	31.2	11.6	42.8	68.2	-25.4	Peak	Vertical
	9466.0	30.5	12.5	43.0	74	-31.0	Peak	Vertical
	11667.5	31.2	17.6	48.8	74	-25.2	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	Mobile Data Terminal	Temperature	26°C
Test Engineer	Will Yan	Relative Humidity	56%
Test Site	AC2	Test Date	2017/11/03
Test Mode:	802.11n-HT20	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
*	7876.5	31.0	10.5	41.5	68.2	-26.7	Peak	Horizontal
*	8726.5	29.5	11.5	41.0	68.2	-27.2	Peak	Horizontal
	9423.5	31.4	12.4	43.8	74	-30.2	Peak	Horizontal
	11055.5	31.4	16.6	48.0	74	-26.0	Peak	Horizontal
*	7876.5	31.0	10.5	41.5	68.2	-26.7	Peak	Vertical
*	8684.0	31.6	11.2	42.8	68.2	-25.4	Peak	Vertical
	9381.0	30.0	12.5	42.5	74	-31.5	Peak	Vertical
	11608.0	31.0	17.4	48.4	74	-25.6	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	Mobile Data Terminal	Temperature	26°C
Test Engineer	Will Yan	Relative Humidity	56%
Test Site	AC2	Test Date	2017/11/03
Test Mode:	802.11n-HT20	Test Channel:	149
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
*	7842.5	31.5	10.3	41.8	68.2	-26.4	Peak	Horizontal
*	8624.5	32.0	11.2	43.2	68.2	-25.0	Peak	Horizontal
	9389.5	31.2	12.4	43.6	74	-30.4	Peak	Horizontal
	11191.5	31.4	16.7	48.1	74	-25.9	Peak	Horizontal
*	7842.5	30.7	10.3	41.0	68.2	-27.2	Peak	Vertical
*	8803.0	29.8	11.7	41.5	68.2	-26.7	Peak	Vertical
	9423.5	31.4	12.4	43.8	74	-30.2	Peak	Vertical
	11174.5	31.7	16.8	48.5	74	-25.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is -27dBm/MHz or -17dBm/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	Mobile Data Terminal	Temperature	26°C
Test Engineer	Will Yan	Relative Humidity	56%
Test Site	AC2	Test Date	2017/11/03
Test Mode:	802.11n-HT20	Test Channel:	157
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
*	7808.5	31.5	10.4	41.9	68.2	-26.3	Peak	Horizontal
*	8692.5	32.0	11.3	43.3	68.2	-24.9	Peak	Horizontal
	9423.5	30.4	12.4	42.8	74	-31.2	Peak	Horizontal
	10877.0	31.1	16.3	47.4	74	-26.6	Peak	Horizontal
*	7868.0	30.8	10.5	41.3	68.2	-26.9	Peak	Vertical
*	8607.5	32.3	11.1	43.4	68.2	-24.8	Peak	Vertical
	9304.5	30.3	12.7	43.0	74	-31.0	Peak	Vertical
	11149.0	31.3	16.7	48.0	74	-26.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is -27dBm/MHz or -17dBm/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	Mobile Data Terminal	Temperature	26°C
Test Engineer	Will Yan	Relative Humidity	56%
Test Site	AC2	Test Date	2017/11/03
Test Mode:	802.11n-HT20	Test Channel:	165
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
*	7851.0	33.0	10.4	43.4	68.2	-24.8	Peak	Horizontal
*	8811.5	29.8	11.7	41.5	68.2	-26.7	Peak	Horizontal
	9389.5	32.0	12.4	44.4	74	-29.6	Peak	Horizontal
	11506.0	31.1	17.5	48.6	74	-25.4	Peak	Horizontal
*	7876.5	31.4	10.5	41.9	68.2	-26.3	Peak	Vertical
*	8692.5	31.6	11.3	42.9	68.2	-25.3	Peak	Vertical
	9321.5	31.6	12.9	44.5	74	-29.5	Peak	Vertical
	11506.0	30.8	17.5	48.3	74	-25.7	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is -27dBm/MHz or -17dBm/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	Mobile Data Terminal	Temperature	26°C
Test Engineer	Will Yan	Relative Humidity	56%
Test Site	AC2	Test Date	2017/11/03
Test Mode:	802.11n-HT40	Test Channel:	38
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
*	7808.5	30.8	10.4	41.2	68.2	-27.0	Peak	Horizontal
*	8803.0	29.4	11.7	41.1	68.2	-27.1	Peak	Horizontal
	9347.0	30.0	12.4	42.4	74	-31.6	Peak	Horizontal
	11472.0	31.3	17.1	48.4	74	-25.6	Peak	Horizontal
*	7774.5	31.6	10.5	42.1	68.2	-26.1	Peak	Vertical
*	8769.0	30.8	11.8	42.6	68.2	-25.6	Peak	Vertical
	9381.0	30.2	12.5	42.7	74	-31.3	Peak	Vertical
	10834.5	32.4	16.1	48.5	74	-25.5	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	Mobile Data Terminal	Temperature	26°C
Test Engineer	Will Yan	Relative Humidity	56%
Test Site	AC2	Test Date	2017/11/03
Test Mode:	802.11n-HT40	Test Channel:	46
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
*	7774.5	31.0	10.5	41.5	68.2	-26.7	Peak	Horizontal
*	8692.5	29.7	11.3	41.0	68.2	-27.2	Peak	Horizontal
	9415.0	31.3	12.3	43.6	74	-30.4	Peak	Horizontal
	10953.5	31.3	16.4	47.7	74	-26.3	Peak	Horizontal
*	7774.5	30.9	10.5	41.4	68.2	-26.8	Peak	Vertical
*	8684.0	32.7	11.2	43.9	68.2	-24.3	Peak	Vertical
	9423.5	30.0	12.4	42.4	74	-31.6	Peak	Vertical
	11344.5	31.2	17.1	48.3	74	-25.7	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	Mobile Data Terminal	Temperature	26°C
Test Engineer	Will Yan	Relative Humidity	56%
Test Site	AC2	Test Date	2017/11/03
Test Mode:	802.11n-HT40	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
*	7783.0	31.3	10.5	41.8	68.2	-26.4	Peak	Horizontal
*	8633.0	32.7	11.2	43.9	68.2	-24.3	Peak	Horizontal
	9432.0	32.1	12.4	44.5	74	-29.5	Peak	Horizontal
	11472.0	31.4	17.1	48.5	74	-25.5	Peak	Horizontal
*	7885.0	30.6	10.4	41.0	68.2	-27.2	Peak	Vertical
*	8777.5	31.7	11.9	43.6	68.2	-24.6	Peak	Vertical
	9364.0	30.3	12.8	43.1	74	-30.9	Peak	Vertical
	11582.5	29.7	17.2	46.9	74	-27.1	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	Mobile Data Terminal	Temperature	26°C
Test Engineer	Will Yan	Relative Humidity	56%
Test Site	AC2	Test Date	2017/11/03
Test Mode:	802.11n-HT40	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
*	7885.0	30.6	10.4	41.0	68.2	-27.2	Peak	Horizontal
*	8777.5	30.5	11.9	42.4	68.2	-25.8	Peak	Horizontal
	9423.5	30.9	12.4	43.3	74	-30.7	Peak	Horizontal
	11548.5	31.0	17.5	48.5	74	-25.5	Peak	Horizontal
*	7919.0	30.6	10.6	41.2	68.2	-27.0	Peak	Vertical
*	8658.5	32.0	11.1	43.1	68.2	-25.1	Peak	Vertical
	9466.0	30.3	12.5	42.8	74	-31.2	Peak	Vertical
	11140.5	31.5	16.9	48.4	74	-25.6	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	Mobile Data Terminal		Temperature	26°C
Test Engineer	Will Yan		Relative Humidity	56%
Test Site	AC2		Test Date	2017/11/03
Test Mode:	802.11n-HT40		Test Channel:	151
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
*	7766.0	32.9	10.3	43.2	68.2	-25.0	Peak	Horizontal
*	8820.0	29.6	11.7	41.3	68.2	-26.9	Peak	Horizontal
	9313.0	29.5	12.7	42.2	74	-31.8	Peak	Horizontal
	11455.0	31.4	17.3	48.7	74	-25.3	Peak	Horizontal
*	7868.0	31.3	10.5	41.8	68.2	-26.4	Peak	Vertical
*	8786.0	30.8	11.8	42.6	68.2	-25.6	Peak	Vertical
	9440.5	31.7	12.4	44.1	74	-29.9	Peak	Vertical
	10928.0	30.3	16.4	46.7	74	-27.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is -27dBm/MHz or -17dBm/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.
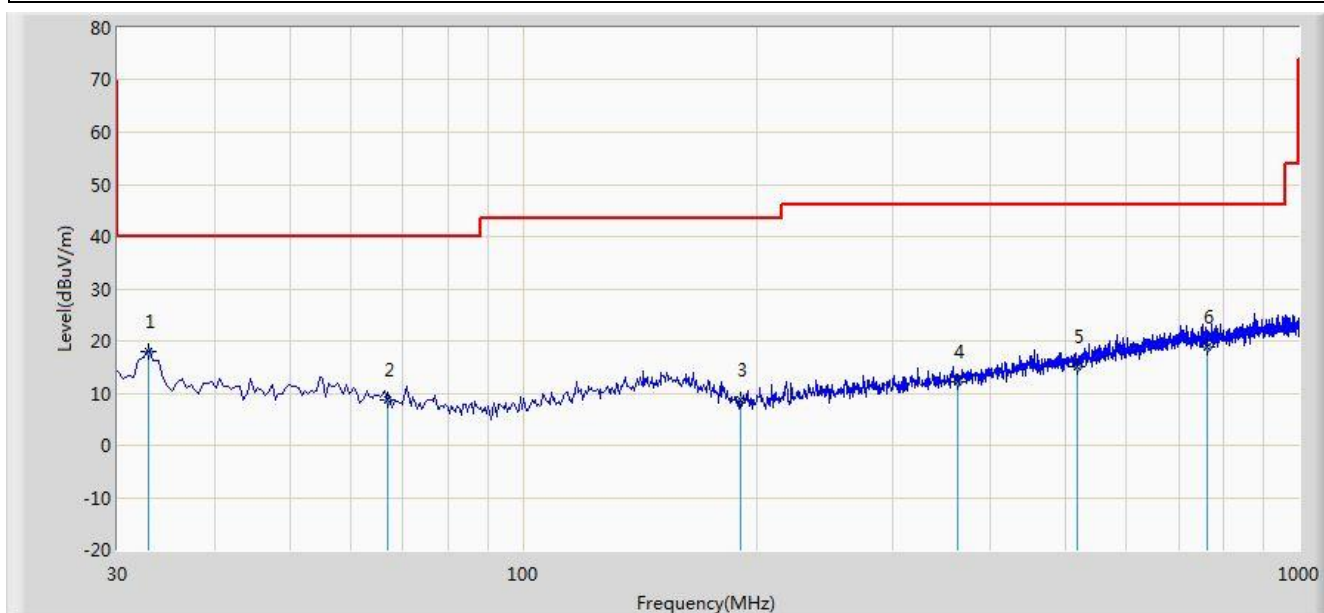
Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

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

Product	Mobile Data Terminal	Temperature	26°C
Test Engineer	Will Yan	Relative Humidity	56%
Test Site	AC2	Test Date	2017/11/03
Test Mode:	802.11n-HT40	Test Channel:	159
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
*	7783.0	31.3	10.5	41.8	68.2	-26.4	Peak	Horizontal
*	8811.5	29.6	11.7	41.3	68.2	-26.9	Peak	Horizontal
	9449.0	31.7	12.4	44.1	74	-29.9	Peak	Horizontal
	10902.5	31.4	16.3	47.7	74	-26.3	Peak	Horizontal
*	7876.5	30.6	10.5	41.1	68.2	-27.1	Peak	Vertical
*	8692.5	30.0	11.3	41.3	68.2	-26.9	Peak	Vertical
	9474.5	29.6	12.3	41.9	74	-32.1	Peak	Vertical
	11140.5	31.3	16.9	48.2	74	-25.8	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is -27dBm/MHz or -17dBm/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: AC2	Time: 2017/11/19 - 17:11
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: VULB 9168 _20-2000MHz	Polarity: Horizontal
EUT: Mobile Data Terminal	Power: AC 120V/60Hz

| Note: There is the worst case within frequency range 30MHz~1GHz. | |

No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	32.910	18.026	4.299	-21.974	40.000	13.727	QP
2			66.860	8.559	-3.512	-31.441	40.000	12.071	QP
3			190.535	8.831	-2.758	-34.669	43.500	11.589	QP
4			363.195	12.071	-3.666	-33.929	46.000	15.737	QP
5			518.395	15.022	-3.816	-30.978	46.000	18.838	QP
6			762.835	18.849	-4.035	-27.151	46.000	22.884	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 ~ 25GHz), therefore no data appear in the report.

Site: AC2	Time: 2017/11/19 - 17:12
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: VULB 9168 _20-2000MHz	Polarity: Vertical
EUT: Mobile Data Terminal	Power: AC 120V/60Hz

Note: There is the worst case within frequency range 30MHz~1GHz.
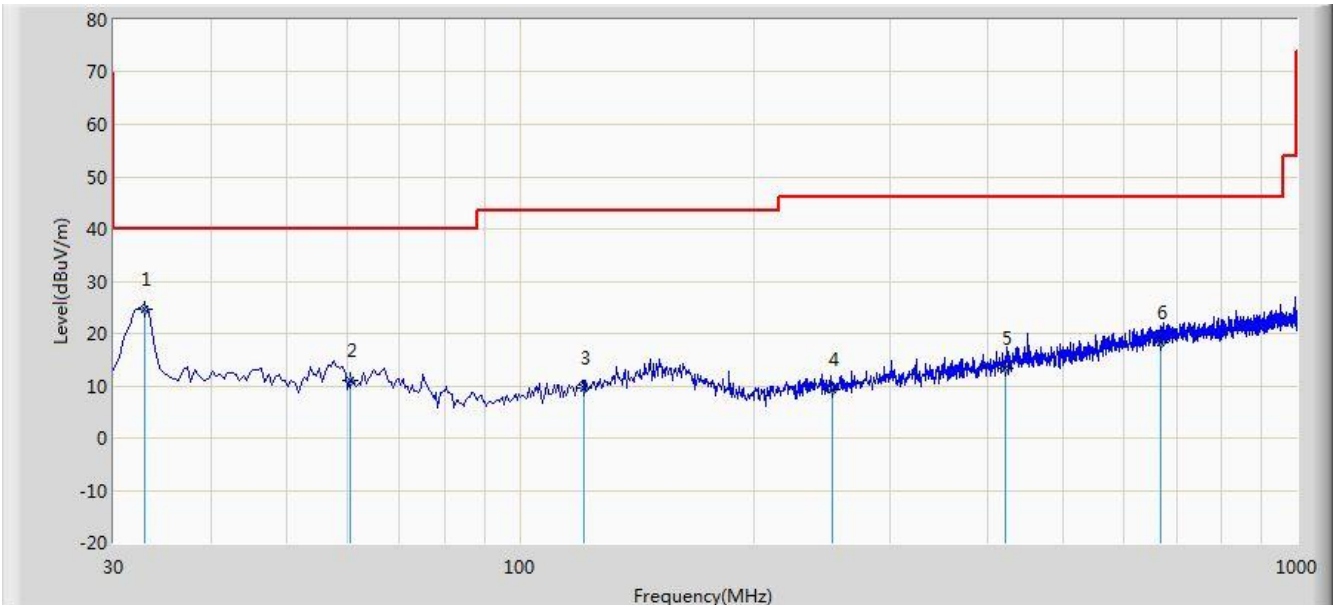
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	32.910	24.726	10.999	-15.274	40.000	13.727	QP
2			60.555	11.144	-2.090	-28.856	40.000	13.234	QP
3			120.695	9.494	-3.679	-34.006	43.500	13.173	QP
4			252.130	9.271	-3.712	-36.729	46.000	12.983	QP
5			421.880	13.415	-3.682	-32.585	46.000	17.097	QP
6			667.775	18.389	-3.210	-27.611	46.000	21.599	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 ~ 25GHz), 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
[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	8.25 - 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.

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

7.9.2.Test Procedure Used

74KDB 789033 D02v02 – 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 ≥ 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.

7.9.4. Test Setup
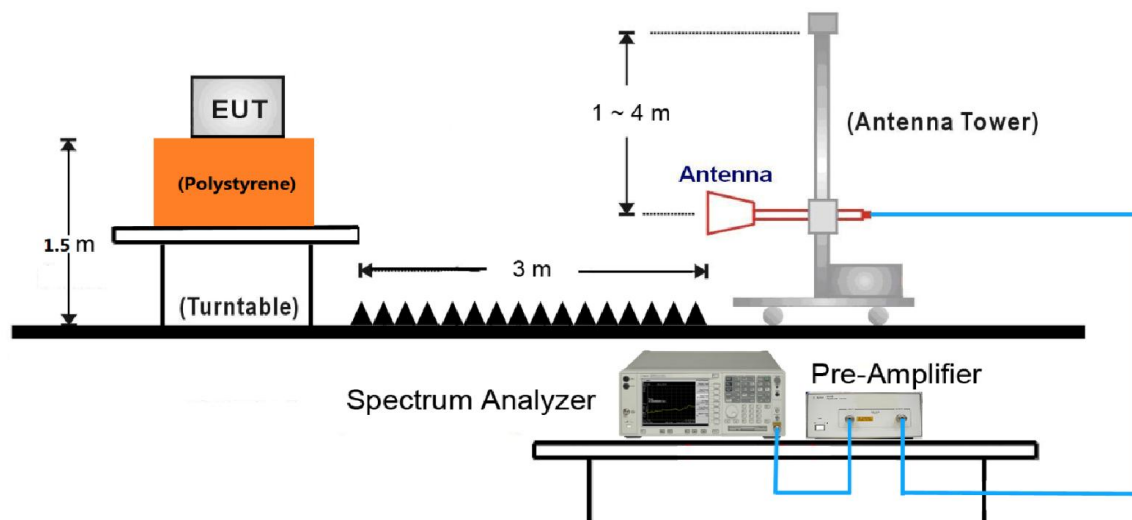
7.9.5.Test Result

| Site: AC2	Time: 2017/11/03 - 04:46
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at channel 5180MHz	
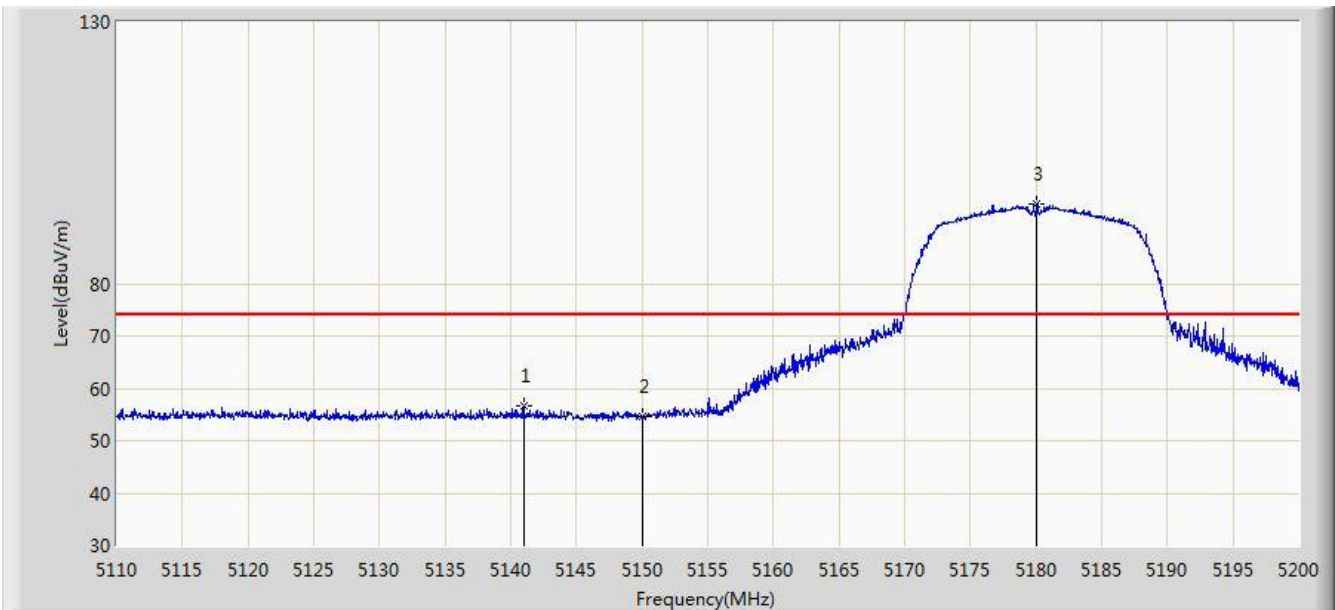
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5140.960	56.566	53.474	-17.434	74.000	3.092	PK
2			5150.000	54.597	51.527	-19.403	74.000	3.069	PK
3		*	5180.065	95.291	92.248	N/A	N/A	3.043	PK

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: 2017/11/03 - 04:55
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at channel 5180MHz	
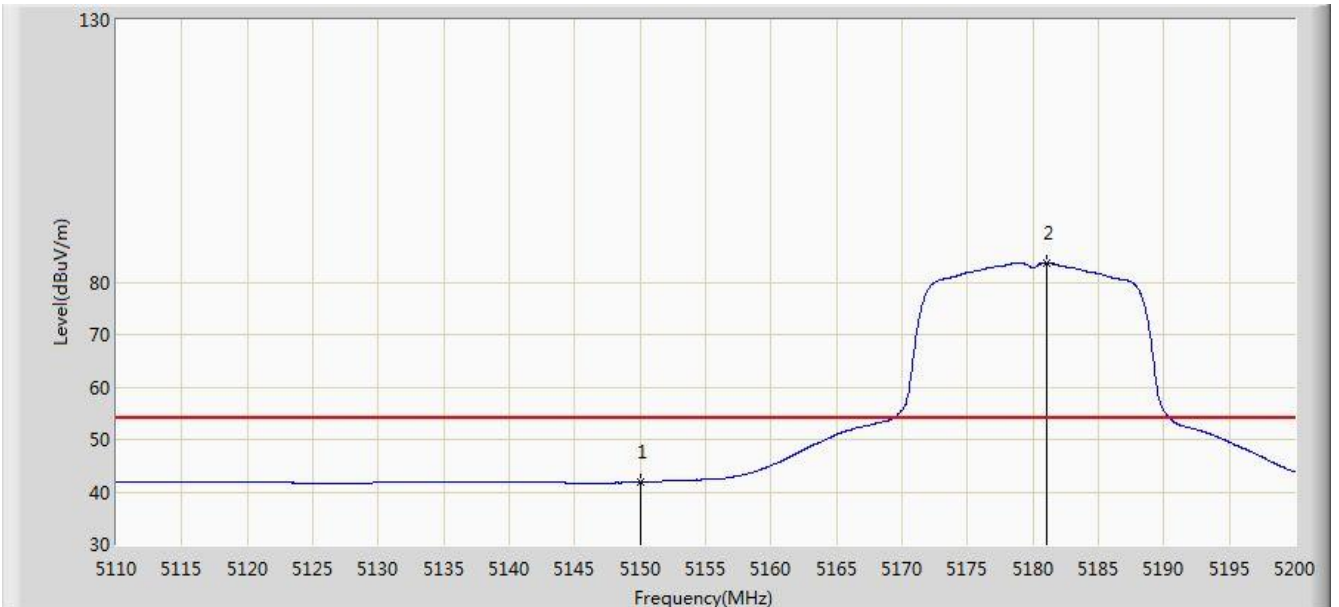
No	Flag	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	41.869	38.799	-12.131	54.000	3.069	AV
2		*	5181.055	83.634	80.587	N/A	N/A	3.047	AV

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: 2017/11/03 - 04:57
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at channel 5180MHz	
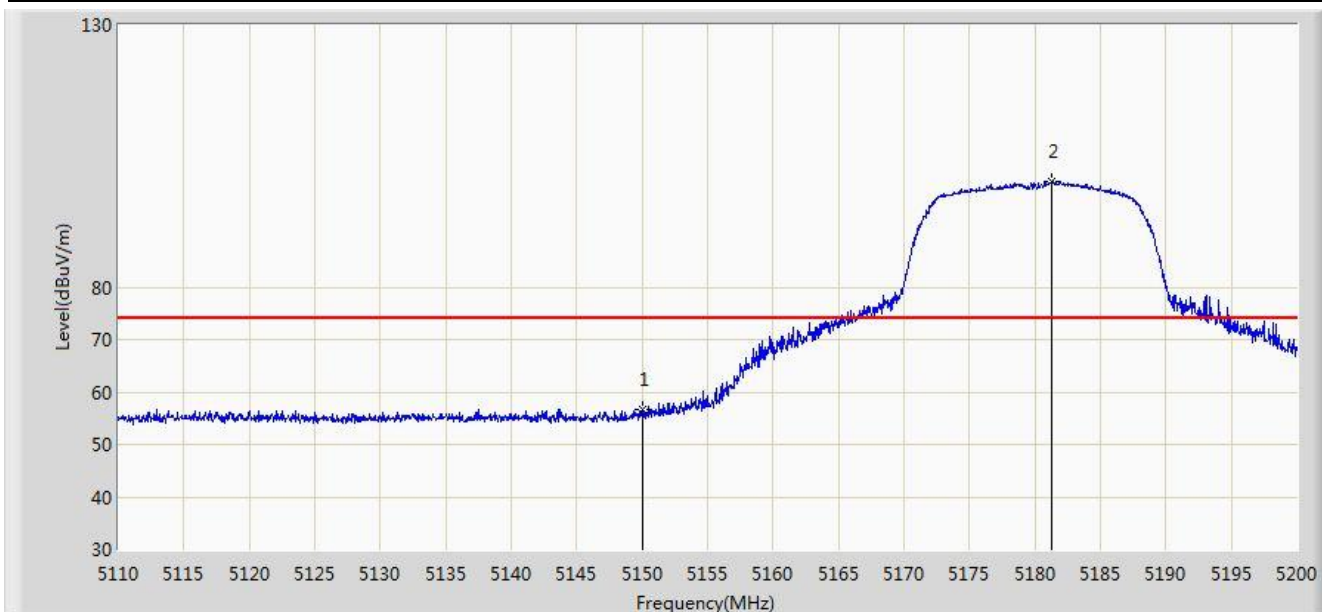
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	56.553	53.483	-17.447	74.000	3.069	PK
2		*	5181.235	100.236	97.188	N/A	N/A	3.048	PK

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: 2017/11/03 - 04:59
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at channel 5180MHz	
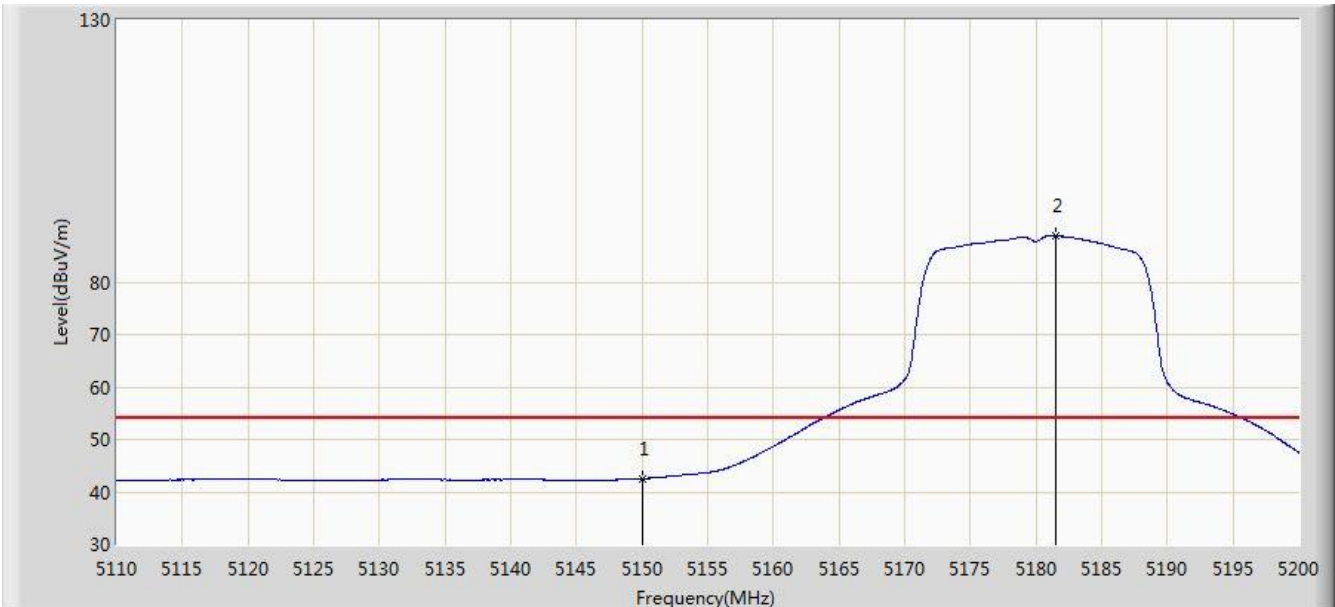
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	42.530	39.460	-11.470	54.000	3.069	AV
2		*	5181.460	88.891	85.842	N/A	N/A	3.048	AV

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

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

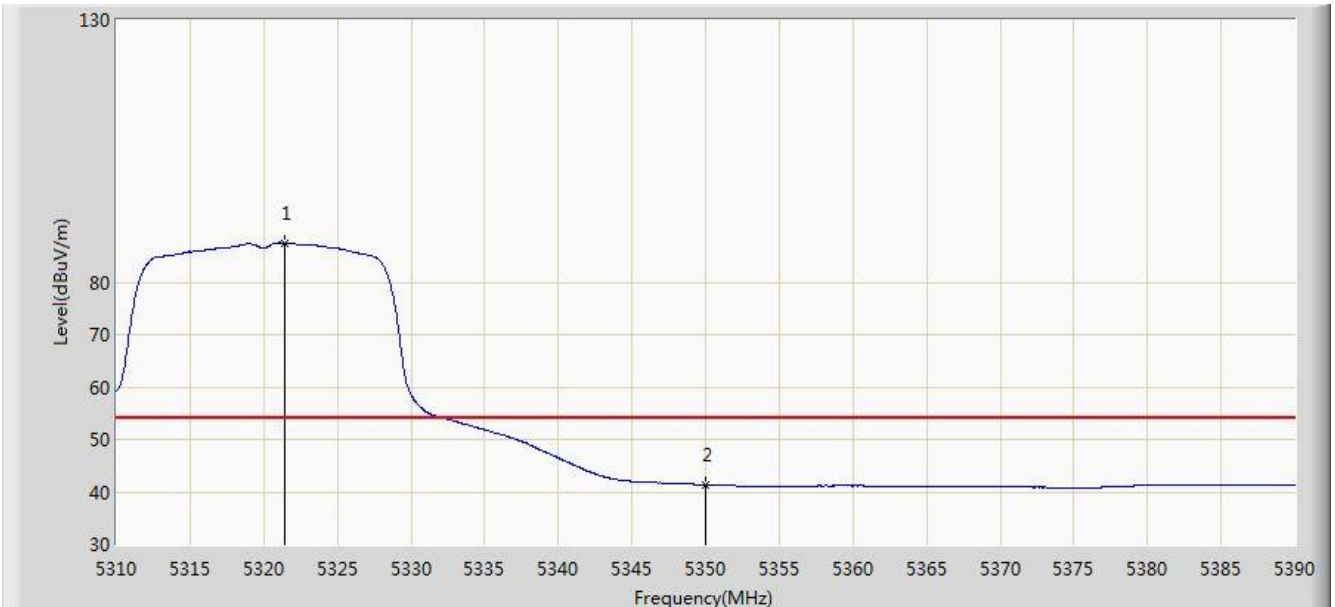| Site: AC2	Time: 2017/11/03 - 05:01
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at channel 5320MHz	
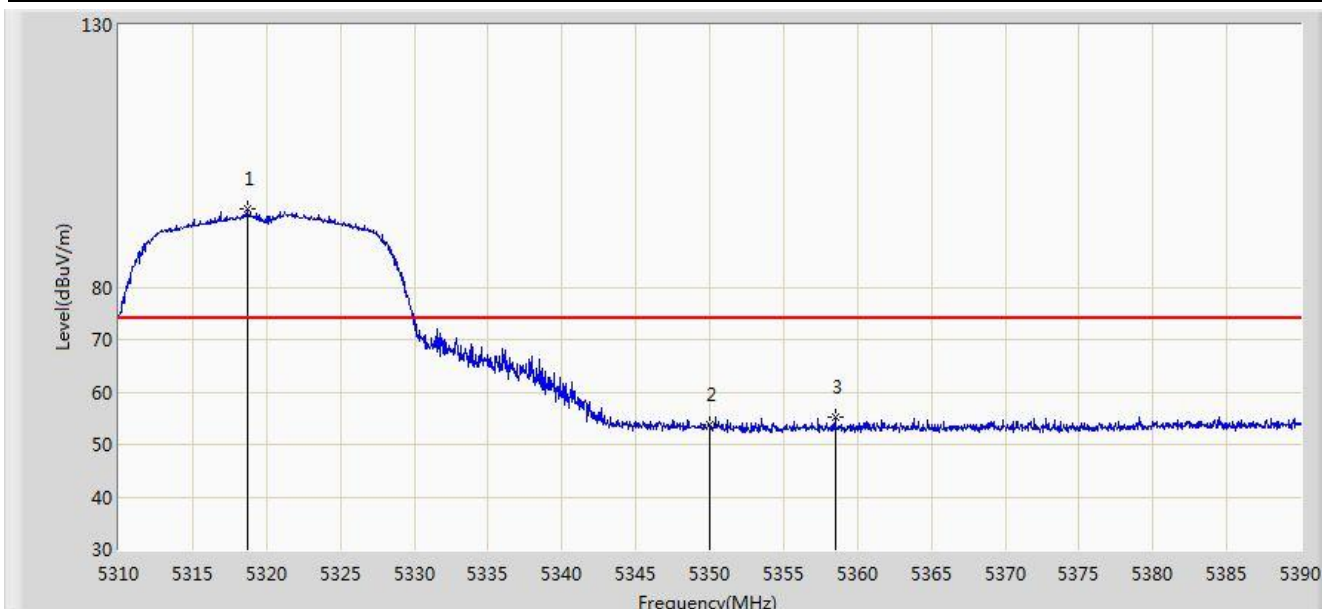
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5318.680	94.794	92.138	N/A	N/A	2.655	PK
2			5350.000	53.792	51.095	-14.408	68.200	2.697	PK
3			5358.480	55.149	52.431	-13.051	68.200	2.718	PK

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

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

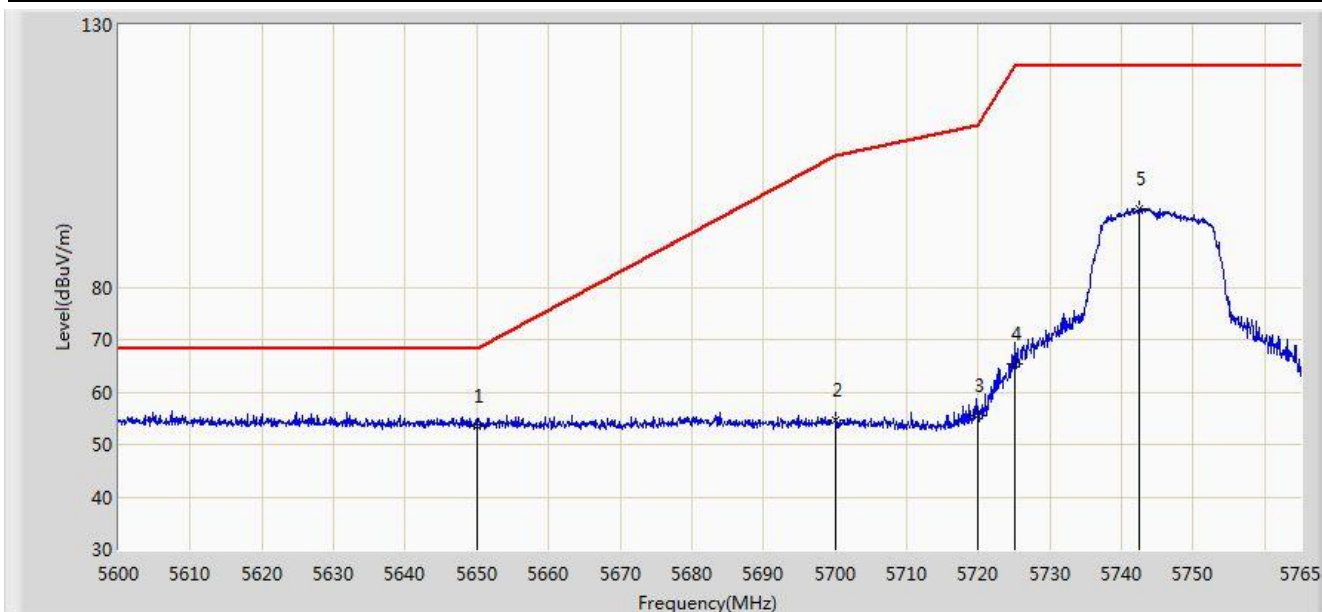| Site: AC2	Time: 2017/11/03 - 05:04
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at channel 5320MHz	
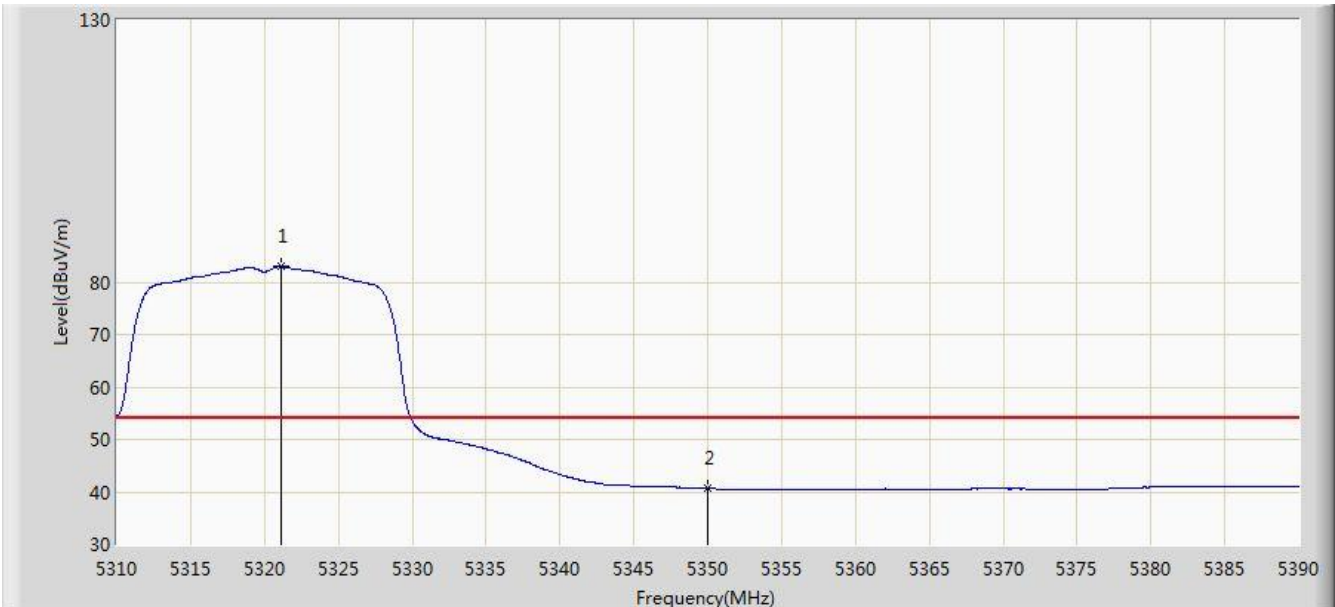
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5321.160	82.960	80.293	N/A	N/A	2.668	AV
2			5350.000	40.657	37.960	-13.343	54.000	2.697	AV

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: 2017/11/03 - 05:05
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at channel 5320MHz	
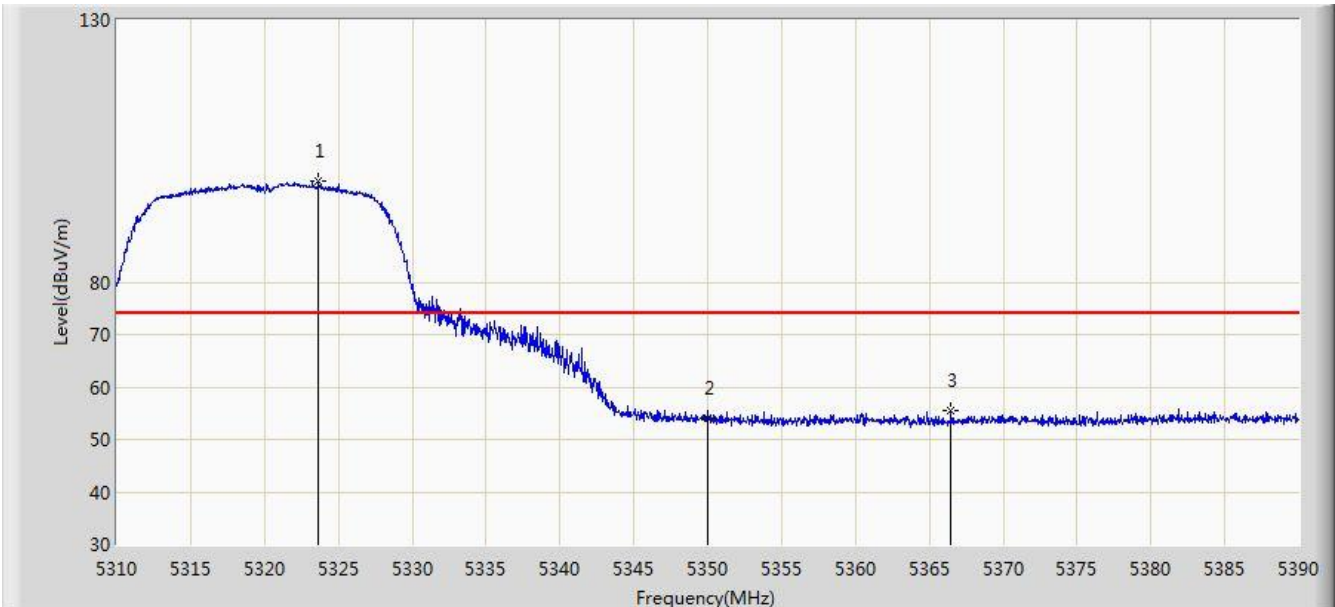
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5323.640	99.135	96.457	N/A	N/A	2.678	PK
2			5350.000	54.101	51.404	-19.899	74.000	2.697	PK
3			5366.480	55.531	52.775	-18.469	74.000	2.756	PK

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: 2017/11/03 - 05:06
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at channel 5320MHz	

No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5321.400	87.532	84.864	N/A	N/A	2.668	AV
2			5350.000	41.398	38.701	-12.602	54.000	2.697	AV

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: 2017/11/03 - 05:06
Limit: FCC_Part15.407_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at channel 5745MHz	

No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5650.000	53.532	49.729	-14.668	68.200	3.803	PK
2			5700.000	54.616	50.676	-50.584	105.200	3.940	PK
3			5720.000	55.483	51.501	-55.317	110.800	3.982	PK
4			5725.000	65.280	61.174	-56.920	122.200	4.105	PK
5			5742.560	94.811	90.539	N/A	N/A	4.272	PK

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

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

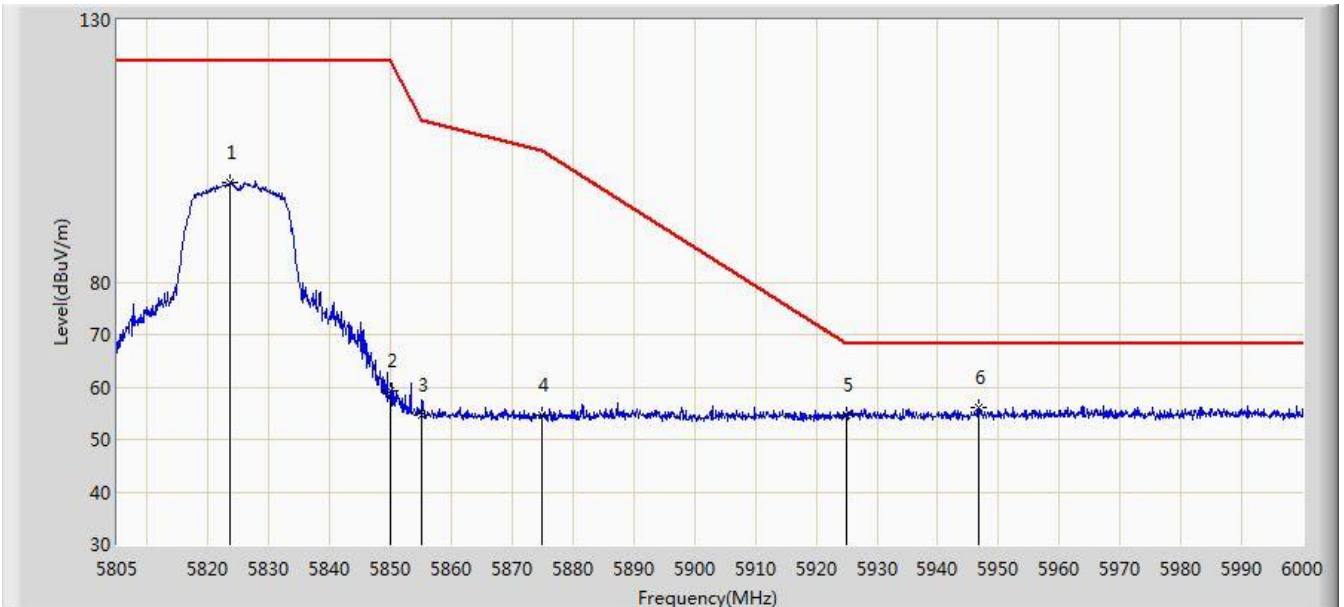| Site: AC2	Time: 2017/11/03 - 05:08
Limit: FCC_Part15.407_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at channel 5745MHz	
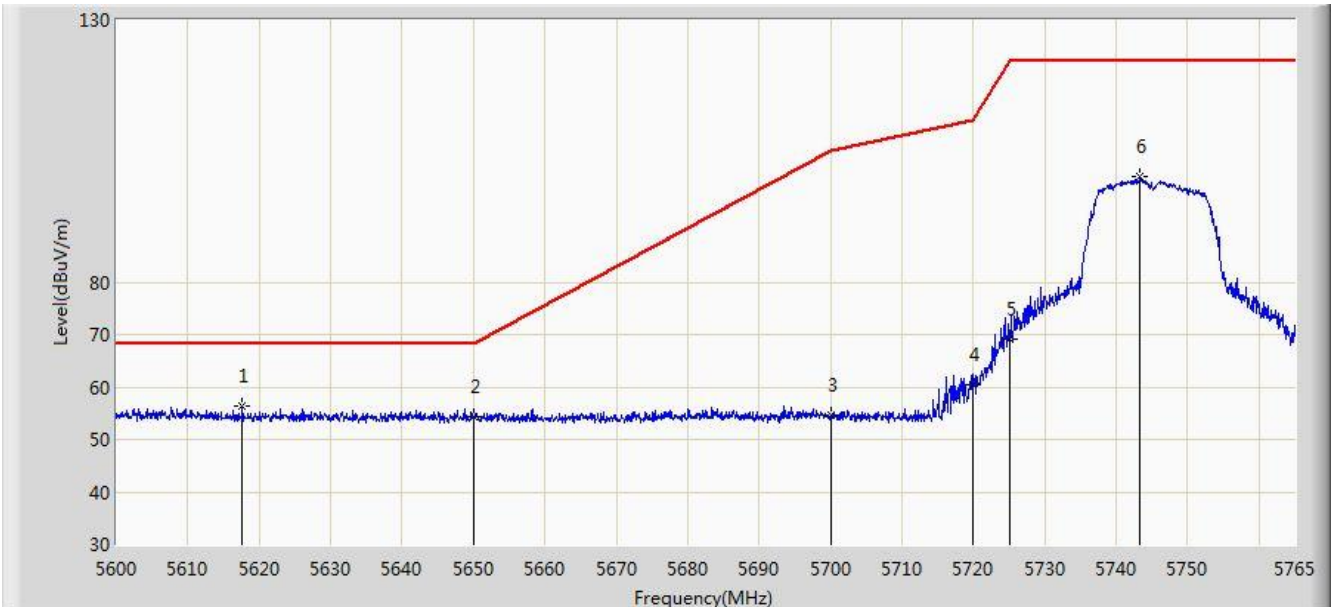
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5617.655	56.287	52.648	-11.913	68.200	3.639	PK
2			5650.000	54.292	50.489	-13.908	68.200	3.803	PK
3			5700.000	54.525	50.585	-50.675	105.200	3.940	PK
4			5720.000	60.361	56.379	-50.439	110.800	3.982	PK
5			5725.000	69.205	65.099	-52.995	122.200	4.105	PK
6			5743.303	100.097	95.827	N/A	N/A	4.270	PK

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

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

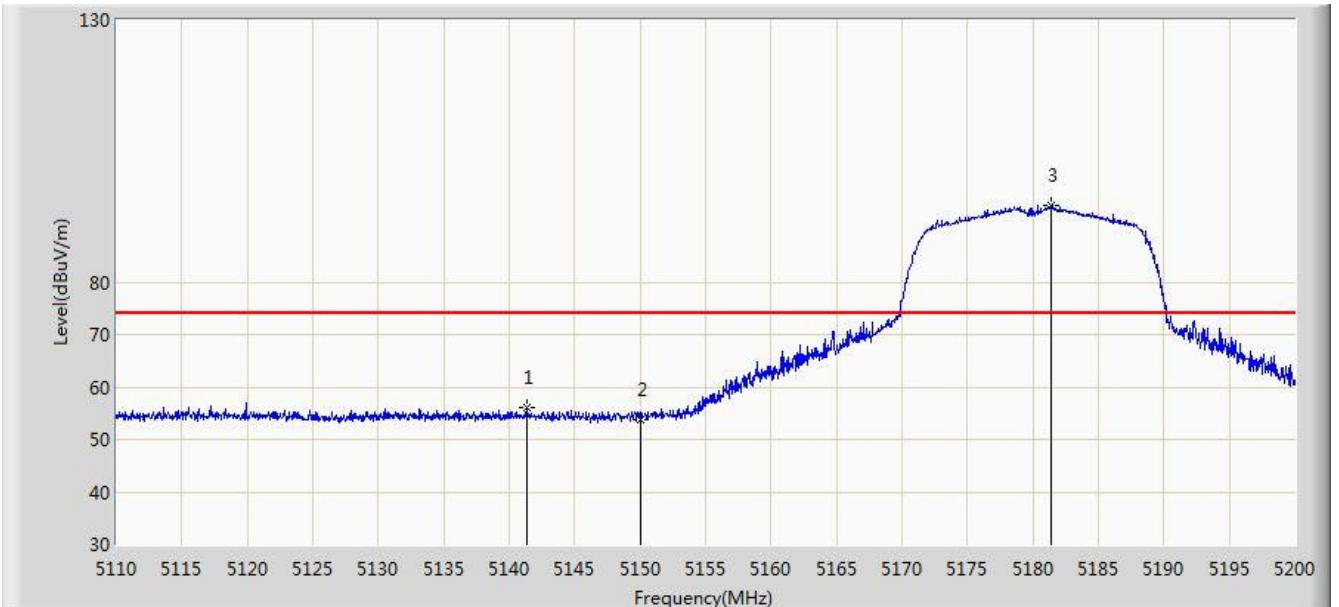| Site: AC2	Time: 2017/11/03 - 05:10
Limit: FCC_Part15.407_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at channel 5825MHz	
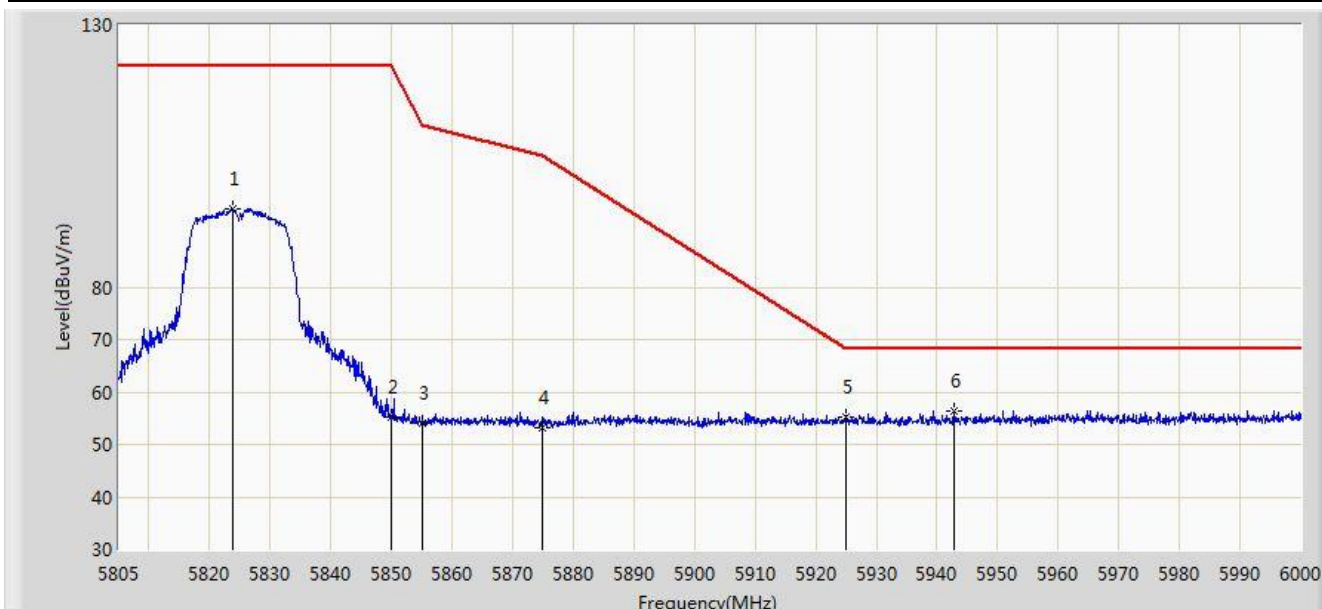
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5823.817	94.916	90.196	N/A	N/A	4.720	PK
2			5850.000	55.208	50.213	-66.992	122.200	4.995	PK
3			5855.000	54.064	49.076	-56.736	110.800	4.987	PK
4			5875.000	53.290	48.283	-51.910	105.200	5.008	PK
5			5925.000	55.350	50.198	-12.850	68.200	5.152	PK
6		*	5942.768	56.248	51.081	-11.952	68.200	5.168	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: 2017/11/03 - 05:12
Limit: FCC_Part15.407_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at channel 5825MHz	

No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5823.623	98.971	94.254	N/A	N/A	4.717	PK
2			5850.000	59.221	54.226	-62.979	122.200	4.995	PK
3			5855.000	54.620	49.632	-56.180	110.800	4.987	PK
4			5875.000	54.736	49.729	-50.464	105.200	5.008	PK
5			5925.000	54.565	49.413	-13.635	68.200	5.152	PK
6		*	5946.765	56.024	50.850	-12.176	68.200	5.174	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: 2017/11/03 - 05:12
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at channel 5180MHz	

No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5141.365	56.137	53.046	-17.863	74.000	3.091	PK
2			5150.000	53.913	50.843	-20.087	74.000	3.069	PK
3		*	5181.415	94.661	91.612	N/A	N/A	3.048	PK

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

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

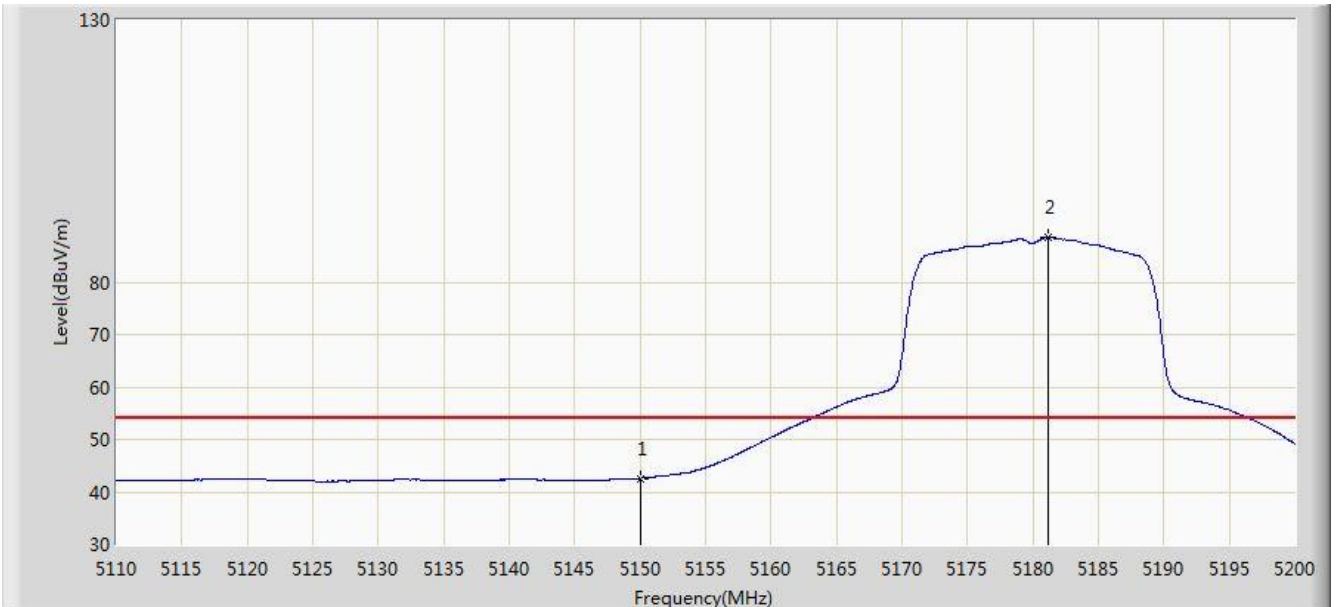| Site: AC2	Time: 2017/11/03 - 05:15
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at channel 5180MHz	
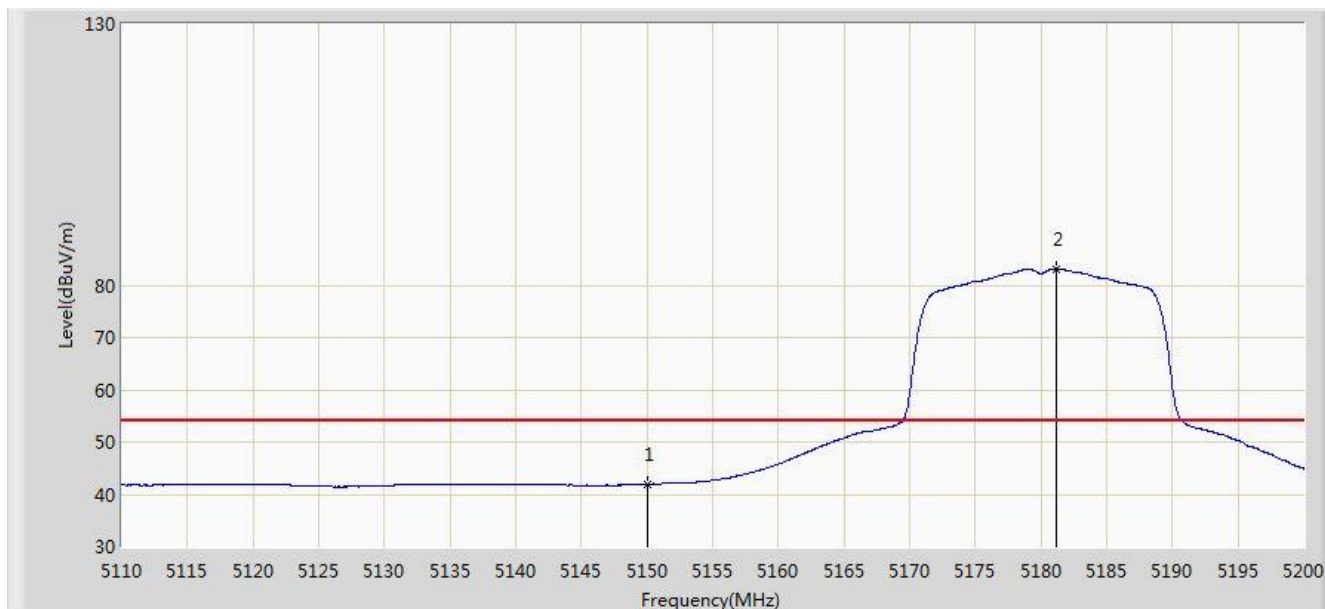
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	41.931	38.861	-12.069	54.000	3.069	AV
2		*	5181.190	83.173	80.125	N/A	N/A	3.048	AV

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

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

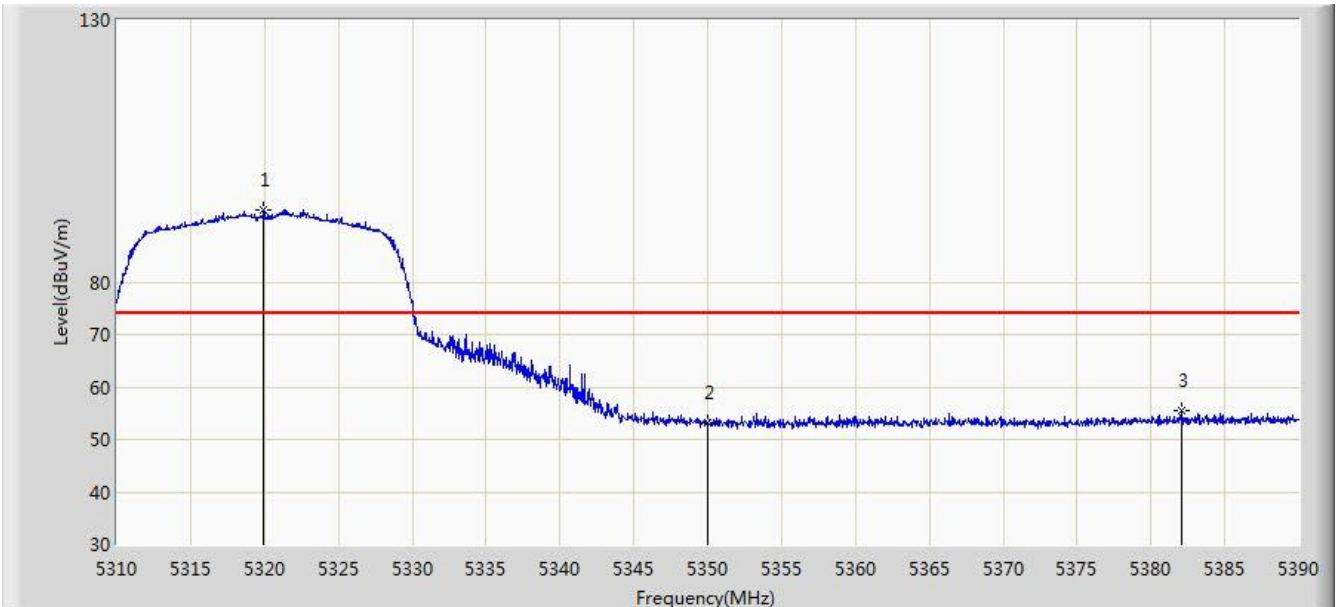| Site: AC2	Time: 2017/11/03 - 05:16
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at channel 5180MHz	
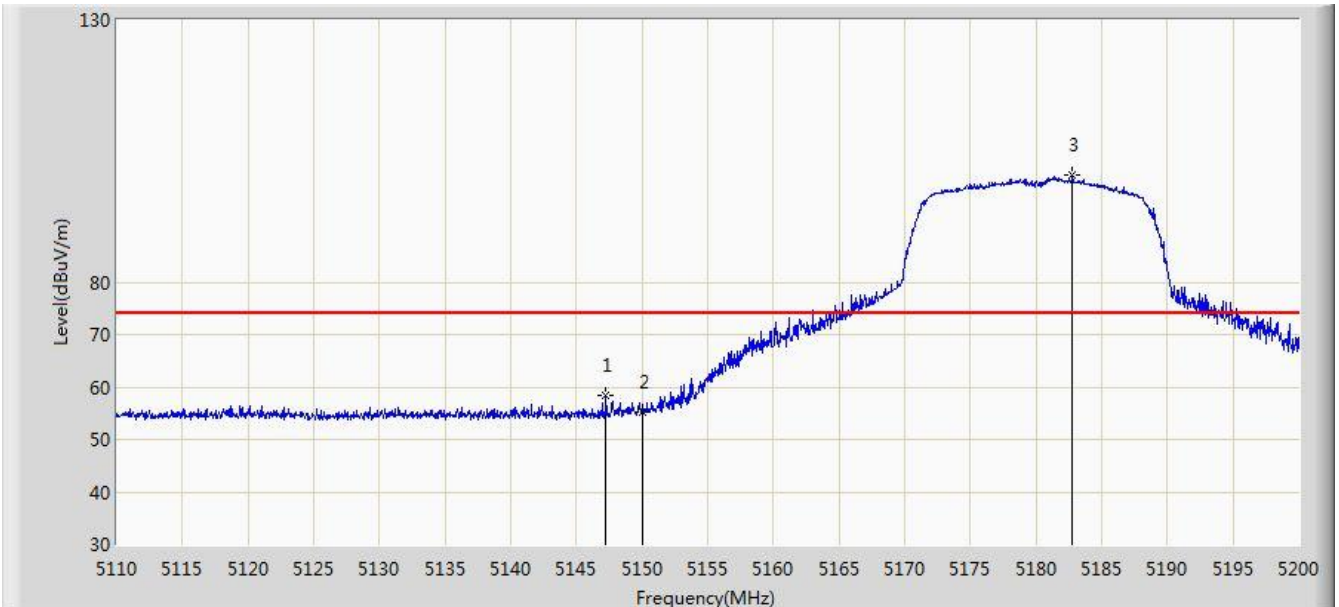
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5147.260	58.266	55.190	-15.734	74.000	3.077	PK
2			5150.000	55.315	52.245	-18.685	74.000	3.069	PK
3		*	5182.765	100.454	97.413	N/A	N/A	3.042	PK

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: 2017/11/03 - 05:17
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at channel 5180MHz	

No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	42.606	39.536	-11.394	54.000	3.069	AV
2		*	5181.190	88.497	85.449	N/A	N/A	3.048	AV

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: 2017/11/03 - 05:17
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at channel 5320MHz	

No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5319.960	93.898	91.236	N/A	N/A	2.662	PK
2			5350.000	53.055	50.358	-20.945	74.000	2.697	PK
3			5382.040	55.367	52.212	-18.633	74.000	3.156	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: 2017/11/03 - 05:19
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at channel 5320MHz	
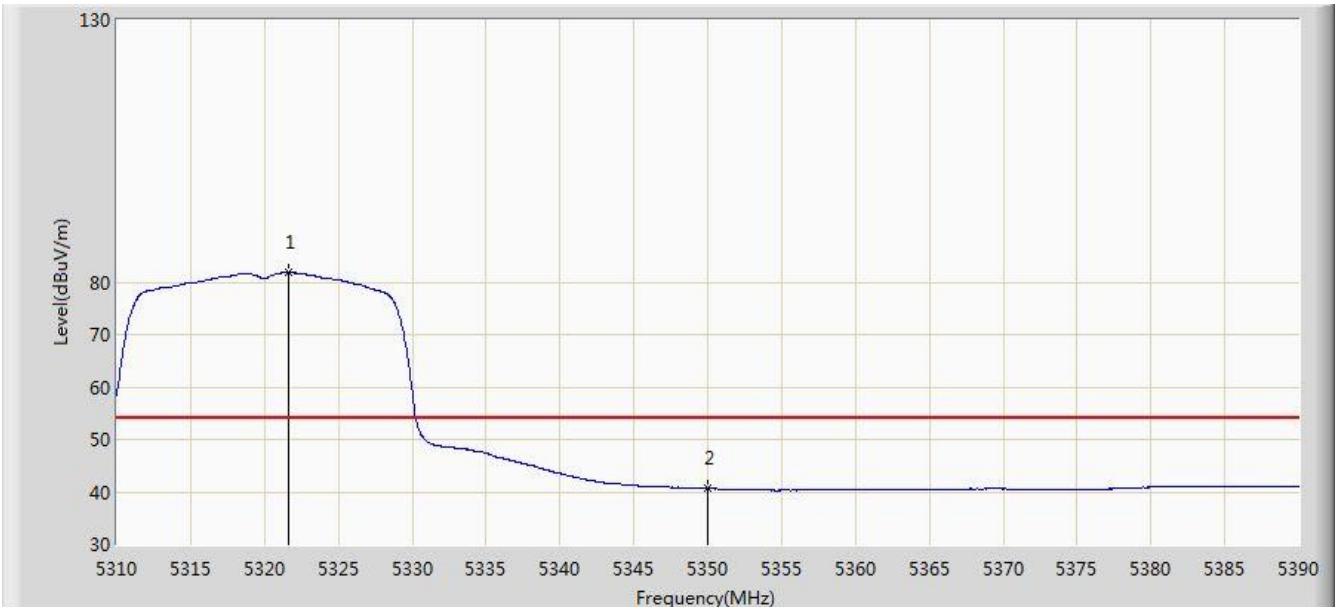
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5321.640	81.908	79.239	N/A	N/A	2.669	AV
2			5350.000	40.685	37.988	-13.315	54.000	2.697	AV

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: 2017/11/03 - 05:20
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at channel 5320MHz	
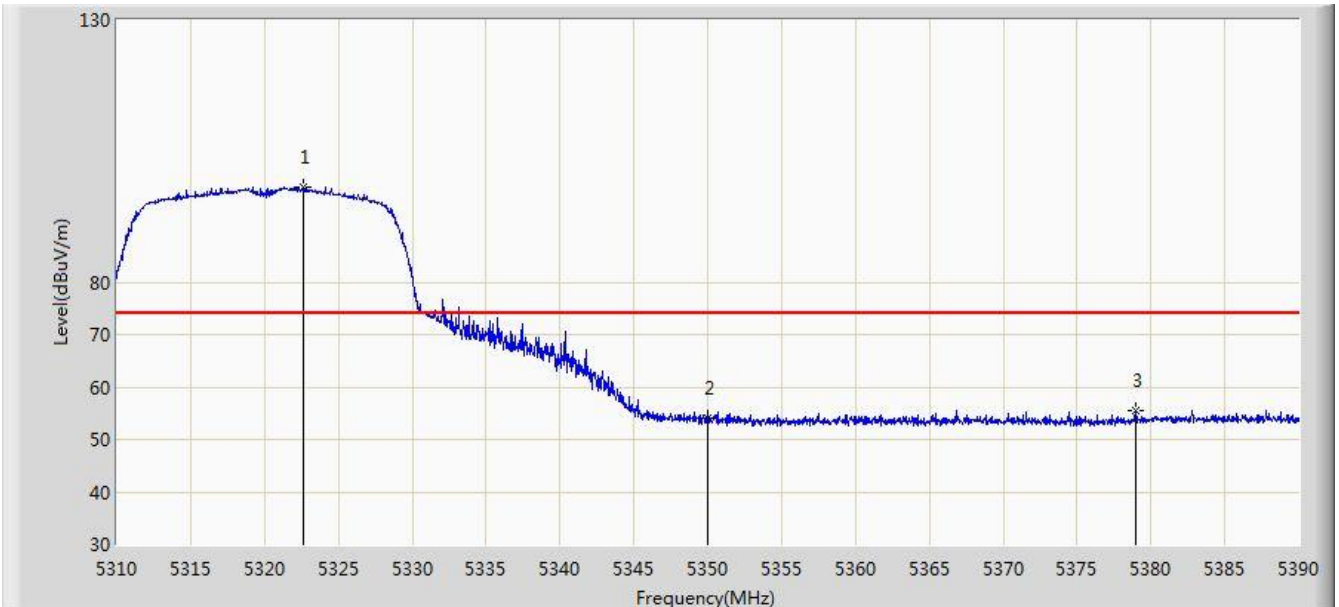
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5322.600	98.201	95.528	N/A	N/A	2.673	PK
2			5350.000	53.952	51.255	-20.048	74.000	2.697	PK
3			5378.960	55.617	52.546	-18.383	74.000	3.071	PK

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: 2017/11/03 - 05:21
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at channel 5320MHz	
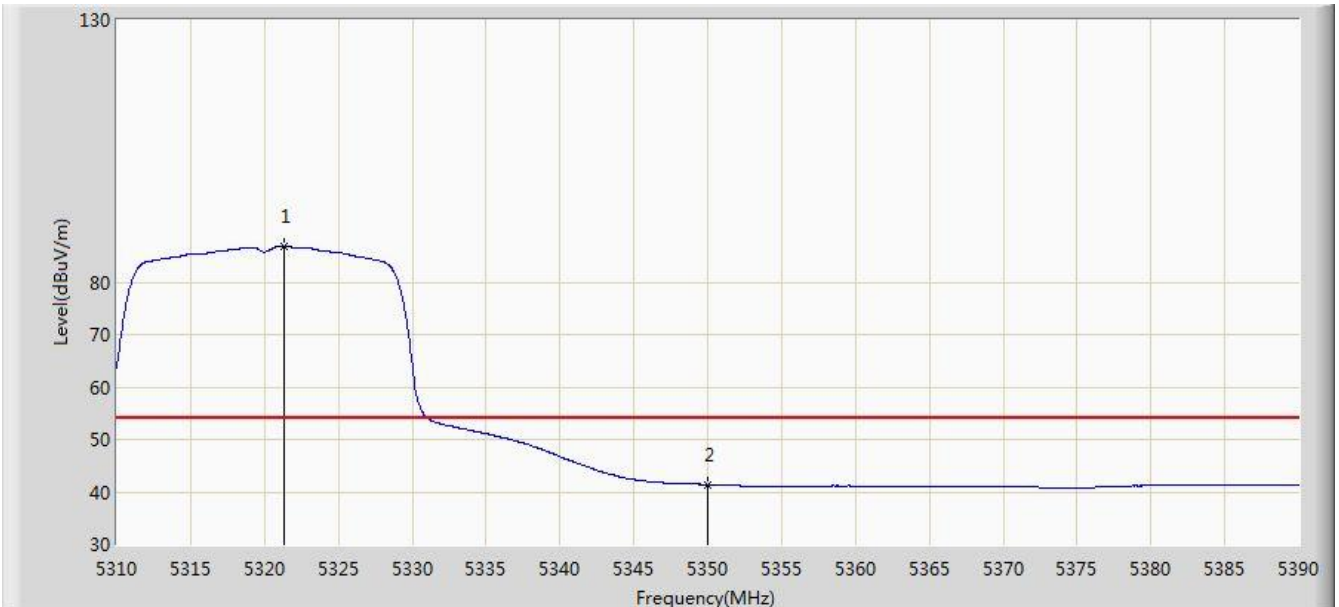
No	Flag	Mark	Frequency (MHz)	Measure Level (dBµV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5321.280	86.870	84.202	N/A	N/A	2.667	AV
2			5350.000	41.368	38.671	-12.632	54.000	2.697	AV

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: 2017/11/03 - 05:22
Limit: FCC_Part15.407_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at channel 5745MHz	
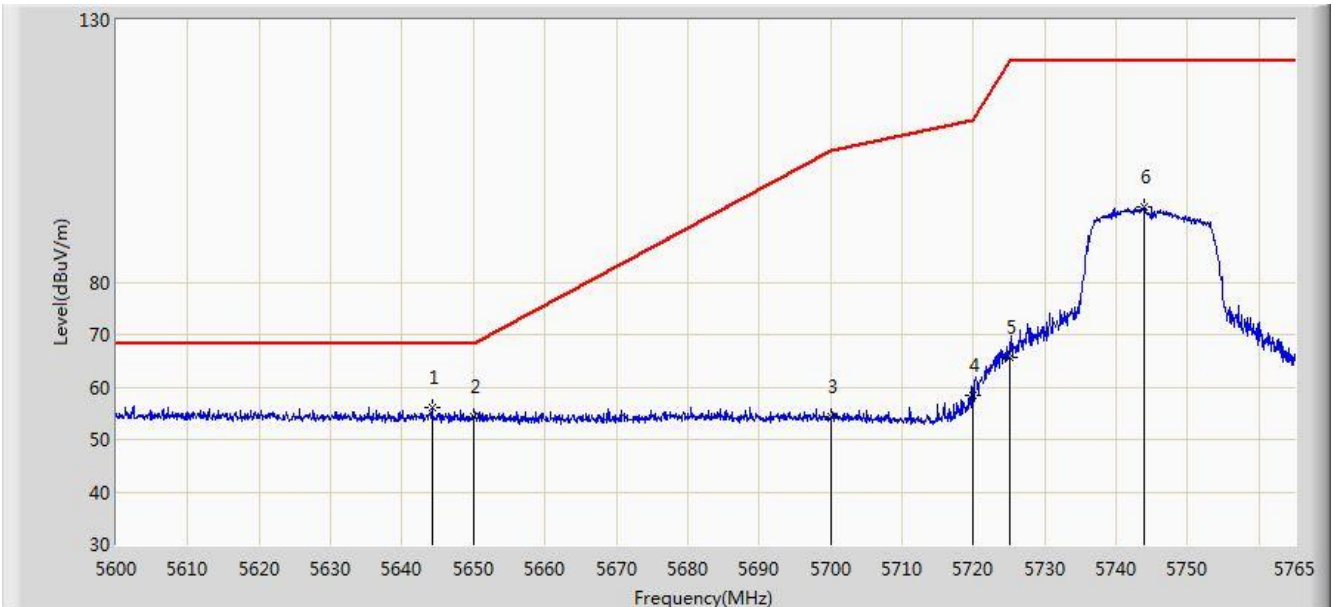
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5644.220	55.960	52.056	-12.240	68.200	3.903	PK
2			5650.000	54.244	50.441	-13.956	68.200	3.803	PK
3			5700.000	54.373	50.433	-50.827	105.200	3.940	PK
4			5720.000	58.300	54.318	-52.500	110.800	3.982	PK
5			5725.000	65.626	61.520	-56.574	122.200	4.105	PK
6			5743.962	94.243	89.973	N/A	N/A	4.270	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: 2017/11/03 - 05:24
Limit: FCC_Part15.407_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at channel 5745MHz	
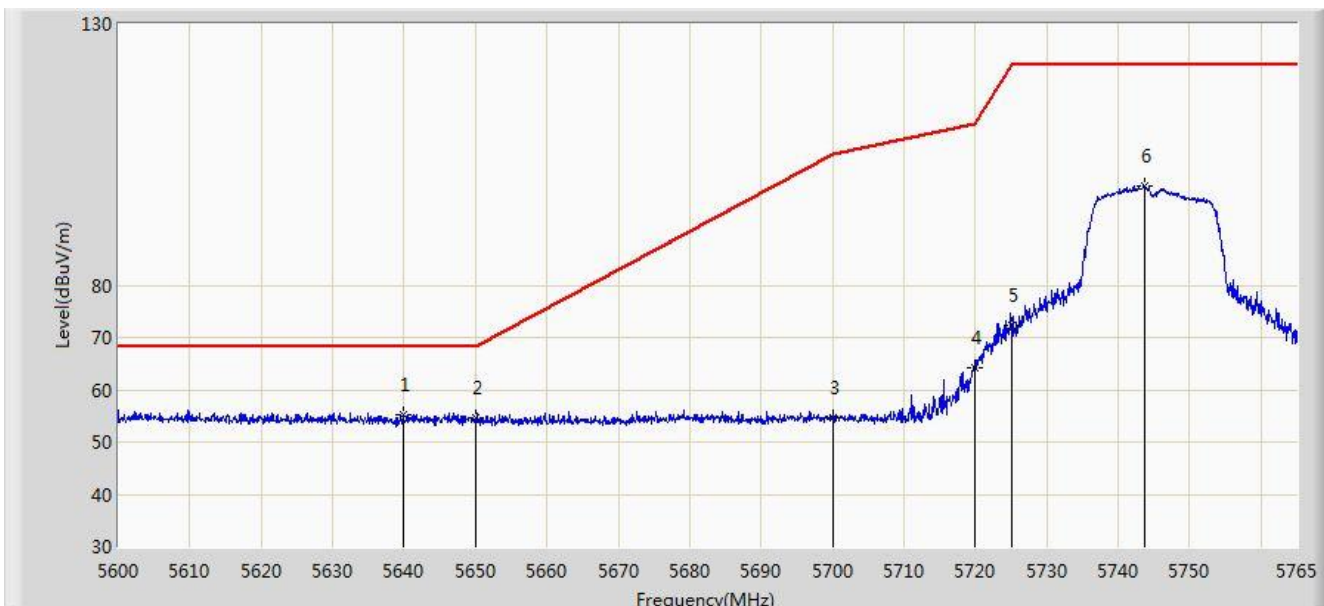
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5639.848	55.338	51.515	-12.862	68.200	3.823	PK
2			5650.000	54.636	50.833	-13.564	68.200	3.803	PK
3			5700.000	54.595	50.655	-50.605	105.200	3.940	PK
4			5720.000	64.328	60.346	-46.472	110.800	3.982	PK
5			5725.000	72.281	68.175	-49.919	122.200	4.105	PK
6			5743.715	98.877	94.607	N/A	N/A	4.270	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: 2017/11/03 - 05:26
Limit: FCC_Part15.407_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at channel 5825MHz	
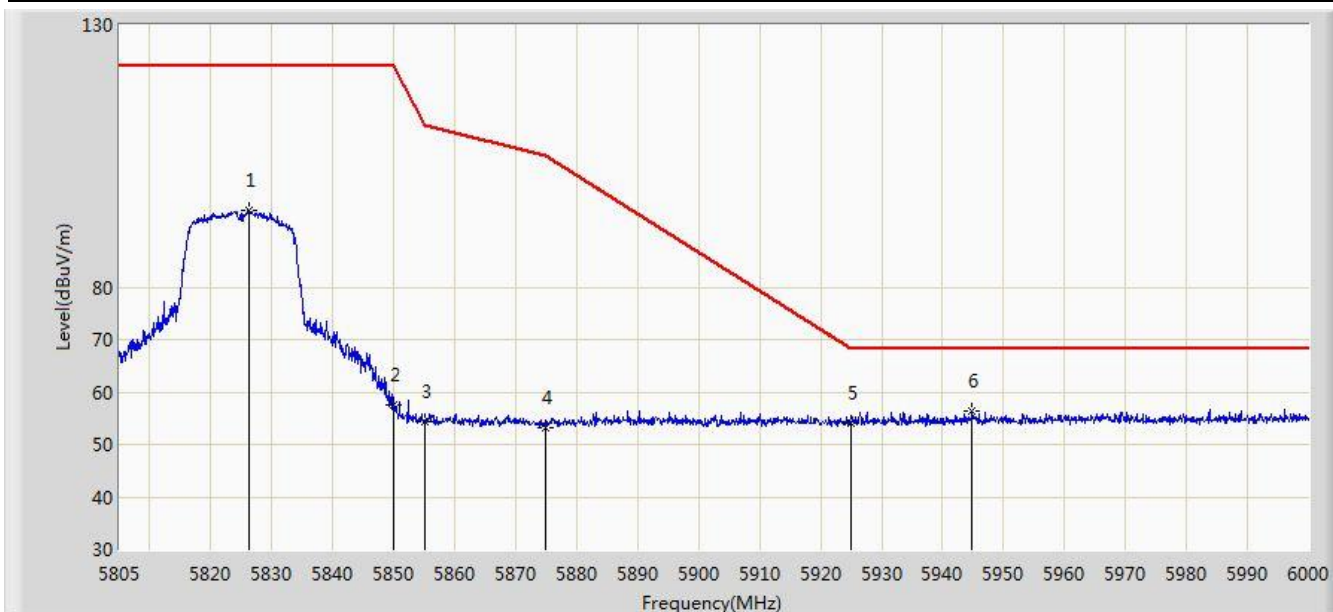
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5826.158	94.524	89.769	N/A	N/A	4.755	PK
2			5850.000	57.499	52.504	-64.701	122.200	4.995	PK
3			5855.000	54.283	49.295	-56.517	110.800	4.987	PK
4			5875.000	53.286	48.279	-51.914	105.200	5.008	PK
5			5925.000	54.079	48.927	-14.121	68.200	5.152	PK
6		*	5944.815	56.303	51.132	-11.897	68.200	5.170	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: 2017/11/03 - 05:28
Limit: FCC_Part15.407_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at channel 5825MHz	
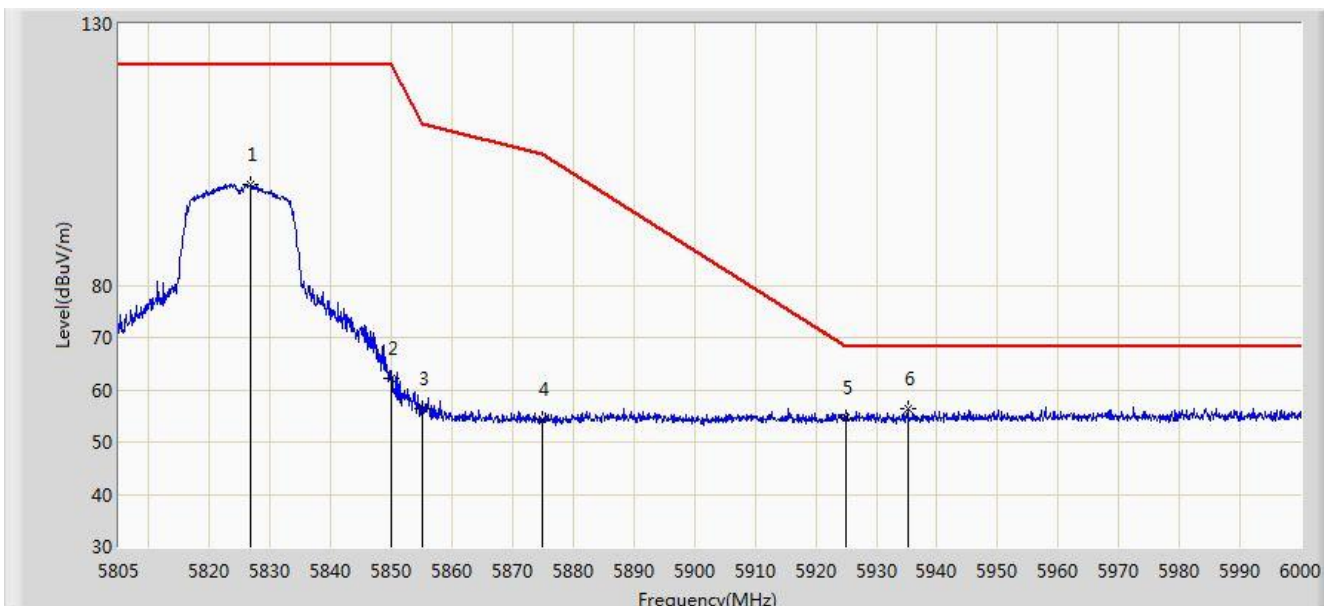
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5826.743	99.151	94.387	N/A	N/A	4.764	PK
2			5850.000	62.141	57.146	-60.059	122.200	4.995	PK
3			5855.000	56.254	51.266	-54.546	110.800	4.987	PK
4			5875.000	54.373	49.366	-50.827	105.200	5.008	PK
5			5925.000	54.630	49.478	-13.570	68.200	5.152	PK
6		*	5935.163	56.277	51.093	-11.923	68.200	5.184	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: 2017/11/03 - 05:29
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at channel 5190MHz	
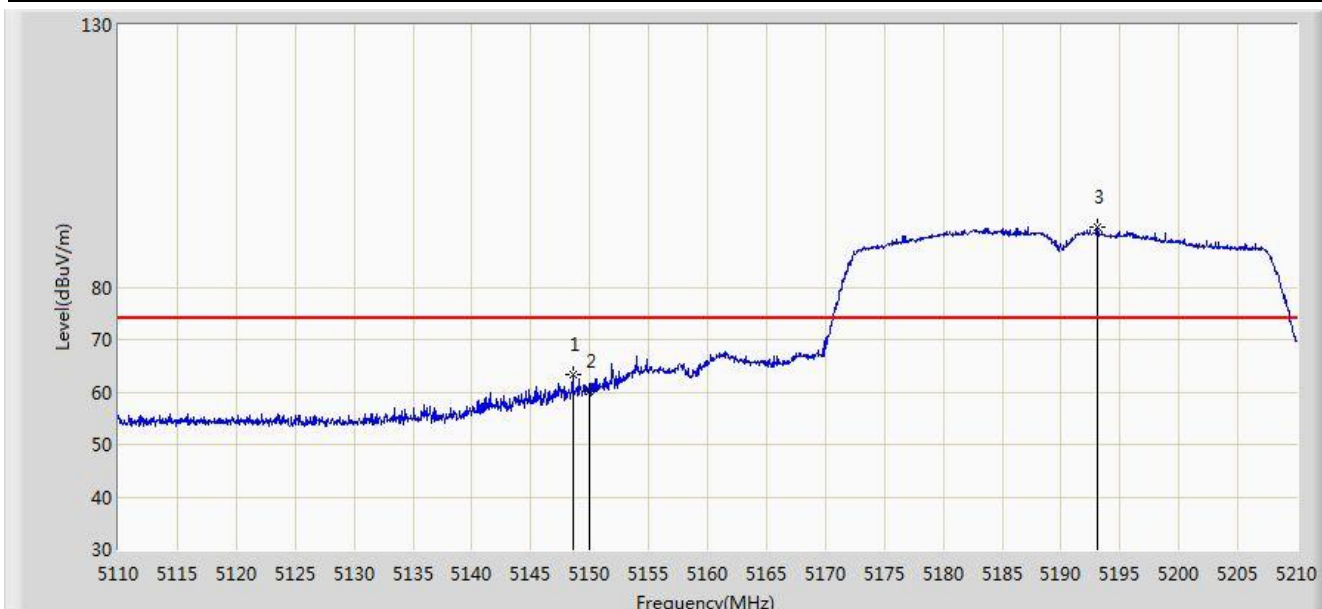
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5148.550	63.428	60.355	-10.572	74.000	3.073	PK
2			5150.000	60.191	57.121	-13.809	74.000	3.069	PK
3		*	5193.100	91.364	88.459	N/A	N/A	2.905	PK

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: 2017/11/03 - 05:31
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at channel 5190MHz	
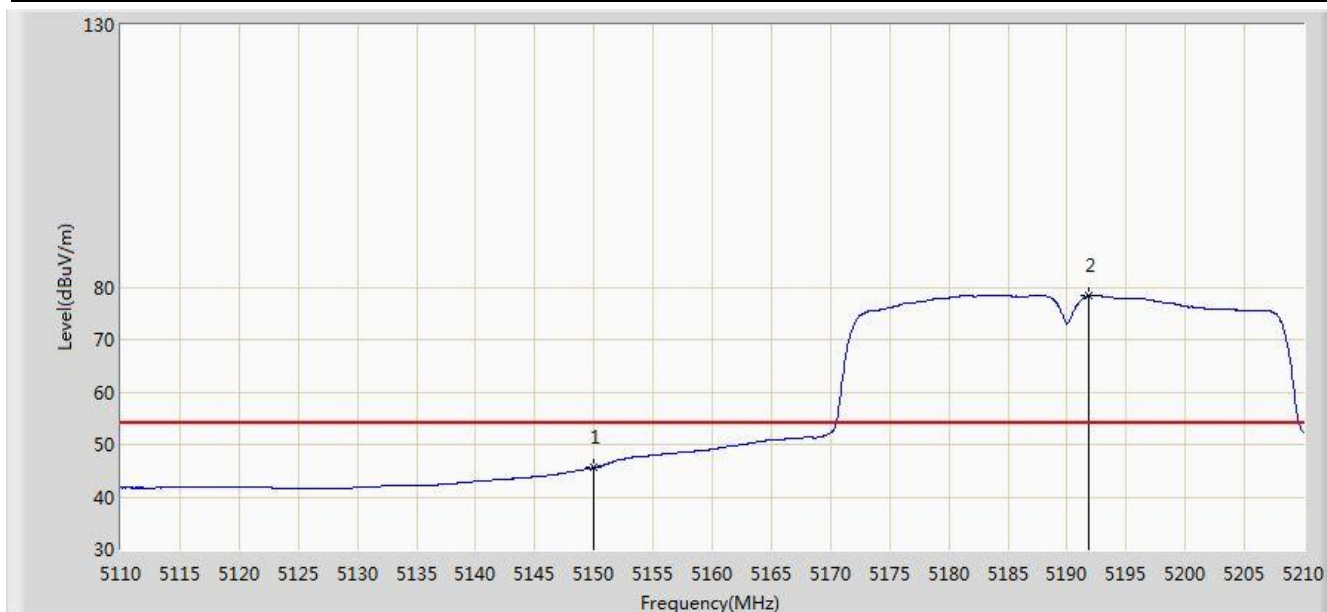
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	45.616	42.546	-8.384	54.000	3.069	AV
2		*	5191.800	78.313	75.388	N/A	N/A	2.925	AV

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: 2017/11/03 - 05:32
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at channel 5190MHz	
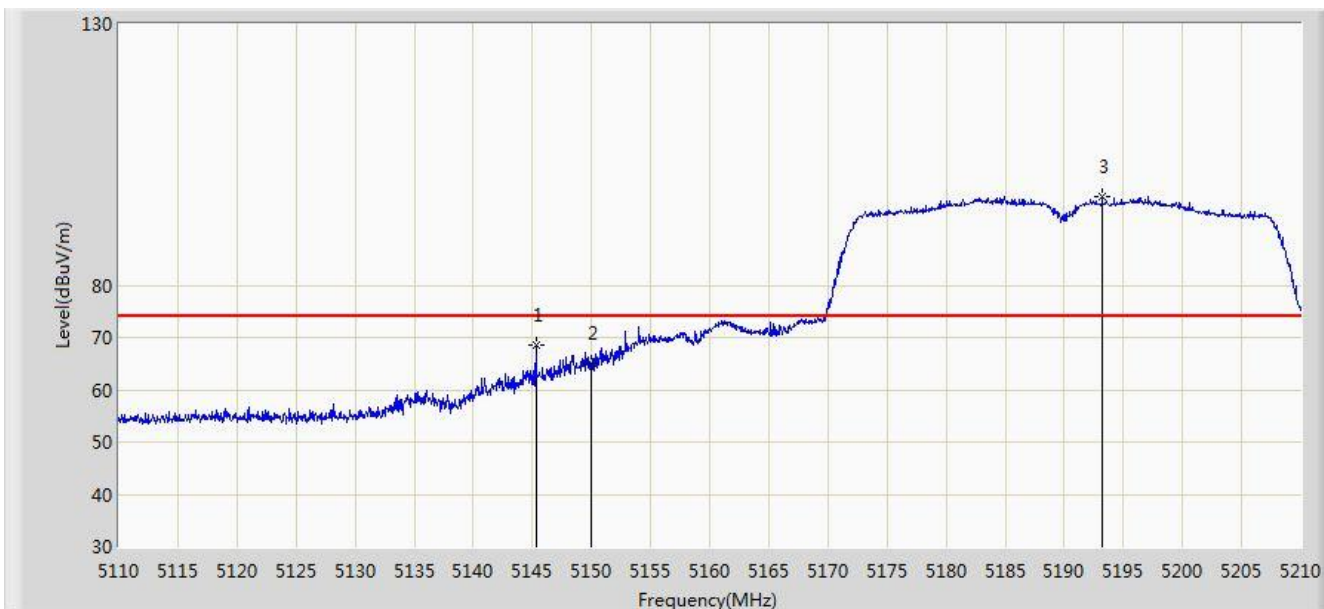
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5145.300	68.436	65.355	-5.564	74.000	3.081	PK
2			5150.000	65.027	61.957	-8.973	74.000	3.069	PK
3		*	5193.200	96.948	94.044	N/A	N/A	2.903	PK

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: 2017/11/03 - 05:33
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at channel 5190MHz	
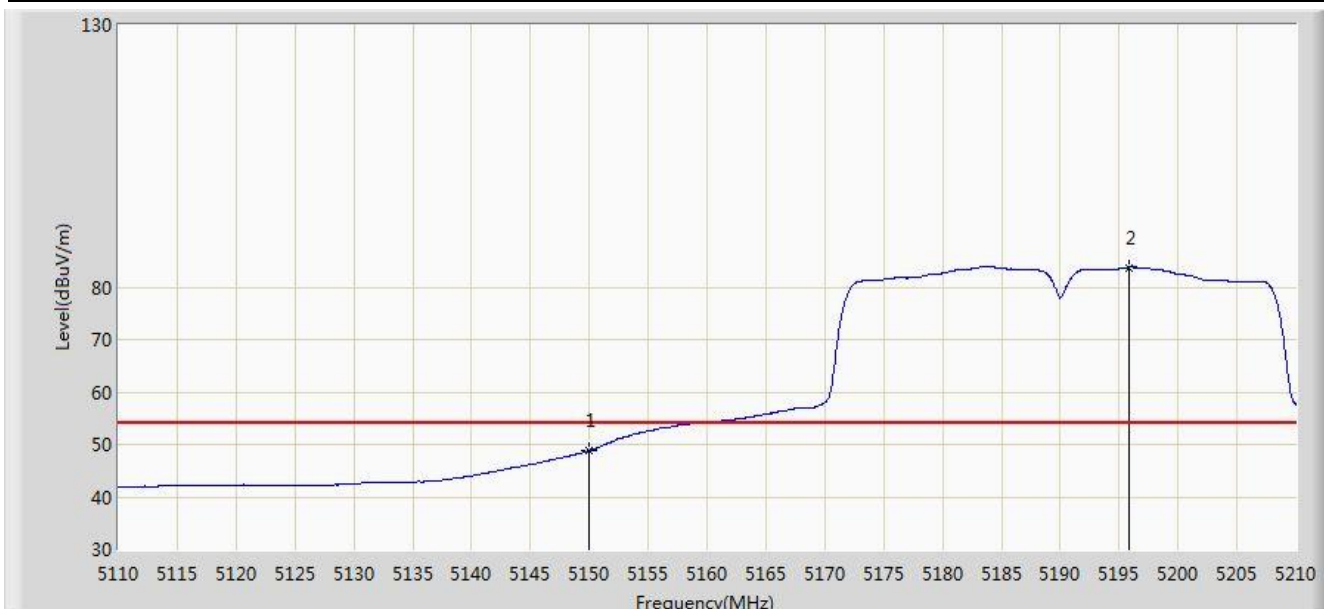
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	48.812	45.742	-5.188	54.000	3.069	AV
2		*	5195.800	83.716	80.851	N/A	N/A	2.864	AV

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

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

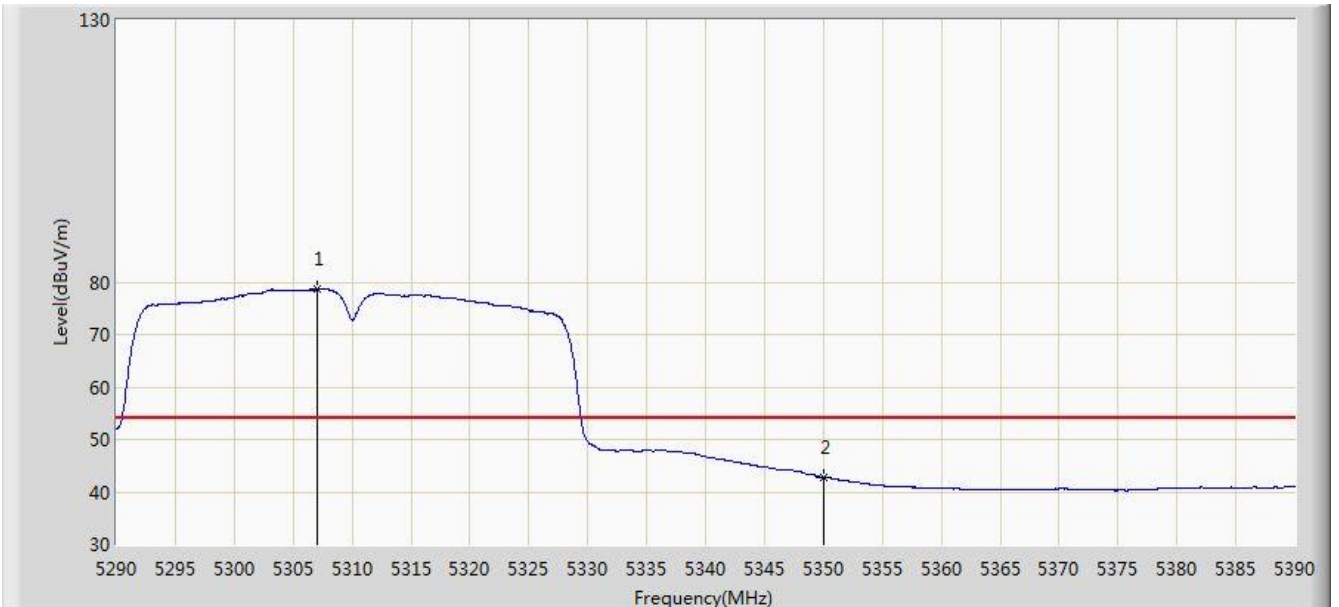| Site: AC2	Time: 2017/11/03 - 05:34
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at channel 5310MHz	
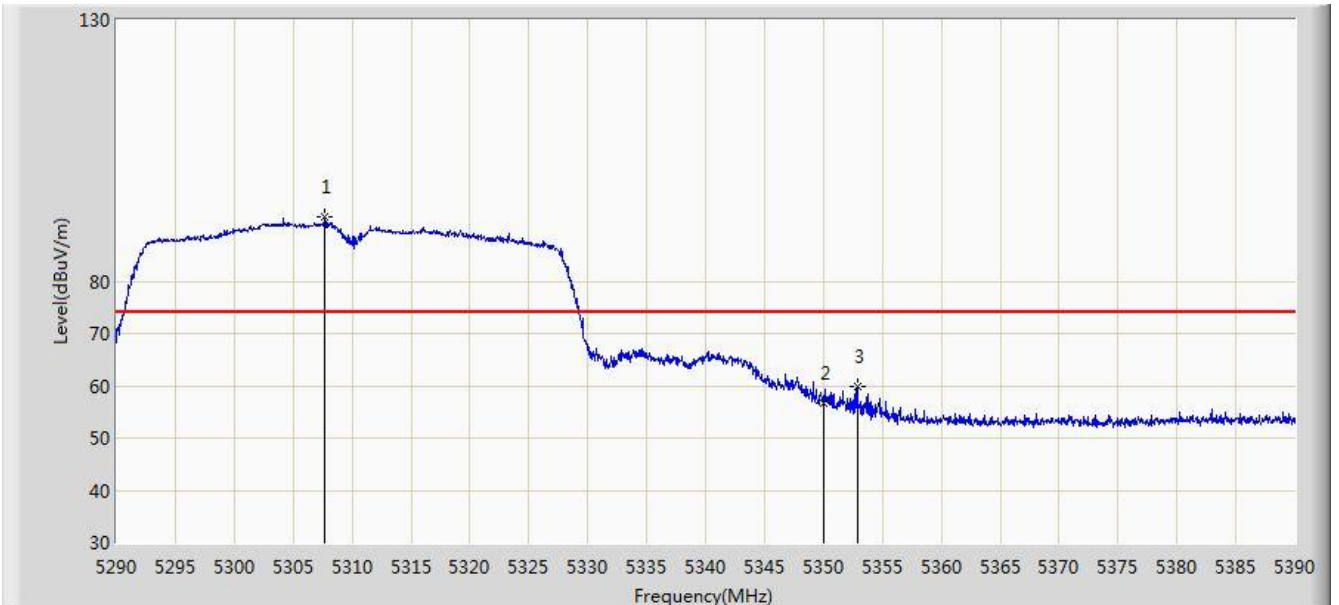
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5307.700	92.421	89.811	N/A	N/A	2.610	PK
2			5350.000	56.784	54.087	-17.216	74.000	2.697	PK
3			5352.850	59.885	57.178	-14.115	74.000	2.706	PK

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

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

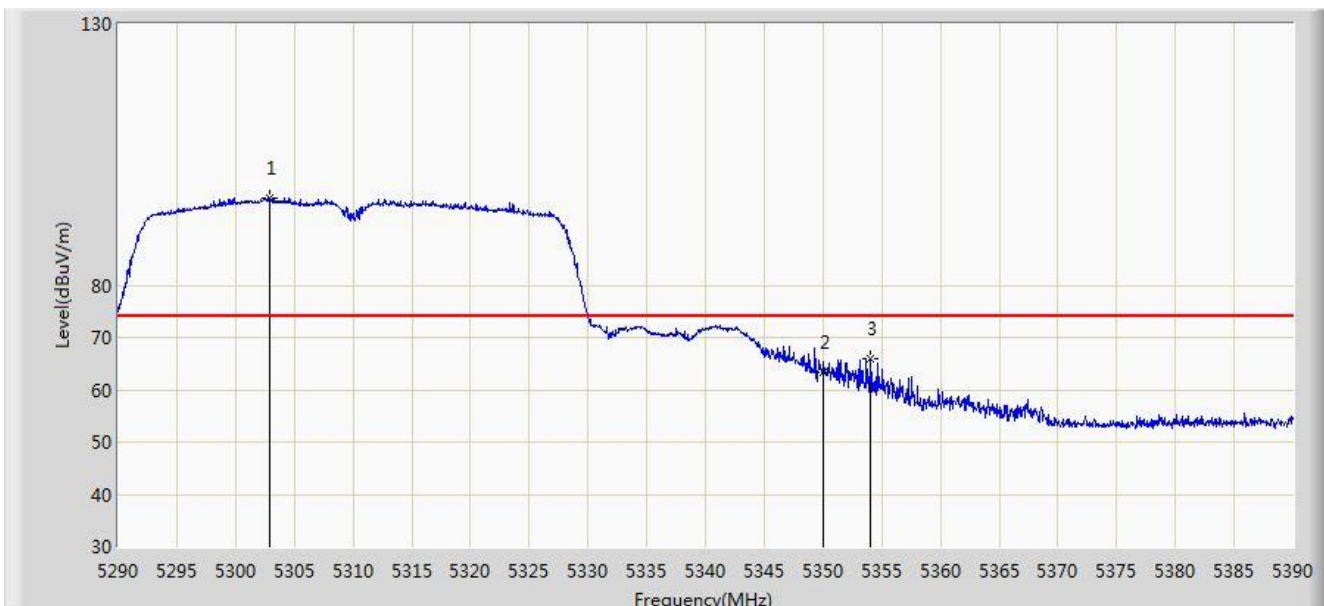| Site: AC2	Time: 2017/11/03 - 05:36
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at channel 5310MHz	

No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5307.000	78.610	75.999	N/A	N/A	2.611	AV
2			5350.000	42.757	40.060	-11.243	54.000	2.697	AV

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: 2017/11/03 - 05:36
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at channel 5310MHz	

No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5302.850	96.739	94.122	N/A	N/A	2.617	PK
2			5350.000	63.391	60.694	-10.609	74.000	2.697	PK
3			5354.050	65.854	63.145	-8.146	74.000	2.708	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: 2017/11/03 - 05:37
Limit: FCC_Part15.209_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at channel 5310MHz	
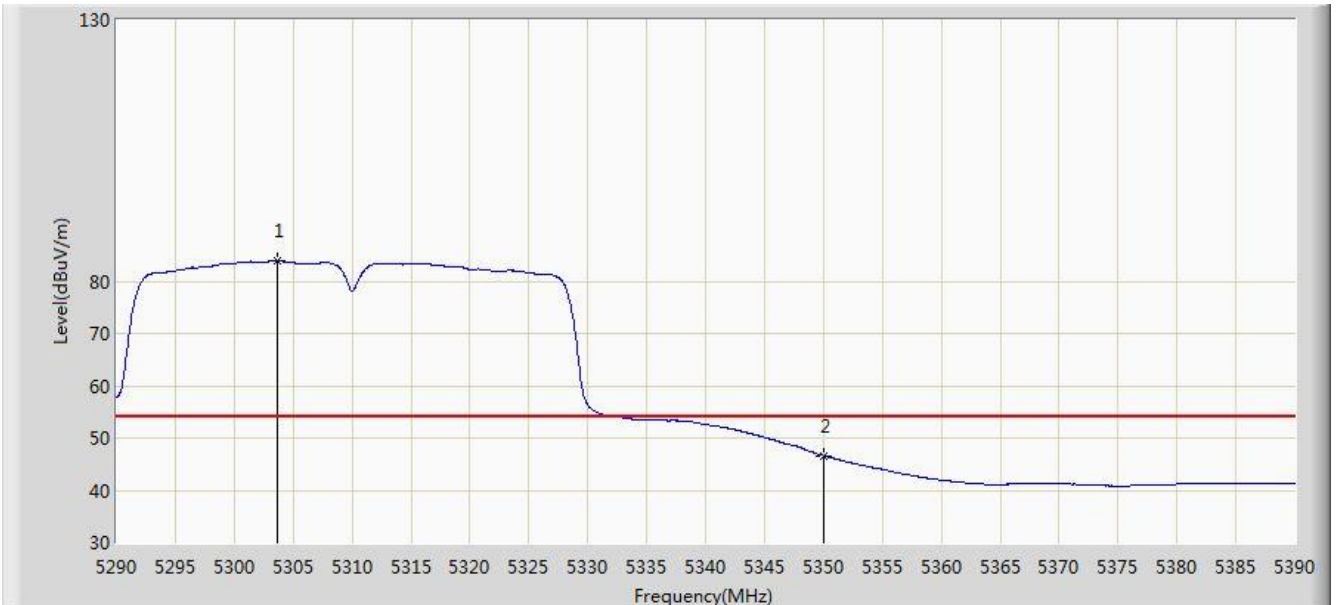
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5303.650	83.900	81.285	N/A	N/A	2.615	AV
2			5350.000	46.652	43.955	-7.348	54.000	2.697	AV

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: 2017/11/03 - 05:38
Limit: FCC_Part15.407_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at channel 5755MHz	
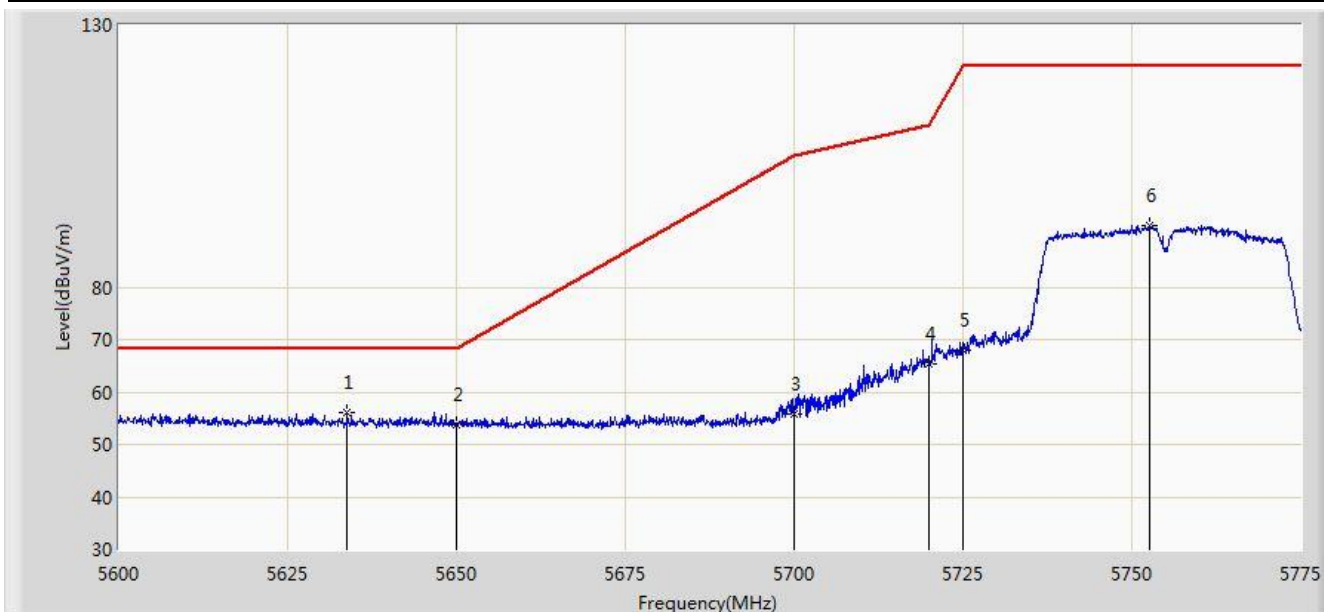
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5633.862	56.048	52.353	-12.152	68.200	3.696	PK
2			5650.000	53.770	49.967	-14.430	68.200	3.803	PK
3			5700.000	55.928	51.988	-49.272	105.200	3.940	PK
4			5720.000	65.459	61.477	-45.341	110.800	3.982	PK
5			5725.000	68.071	63.965	-54.129	122.200	4.105	PK
6			5752.687	91.681	87.368	N/A	N/A	4.313	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: 2017/11/03 - 05:40
Limit: FCC_Part15.407_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at channel 5755MHz	
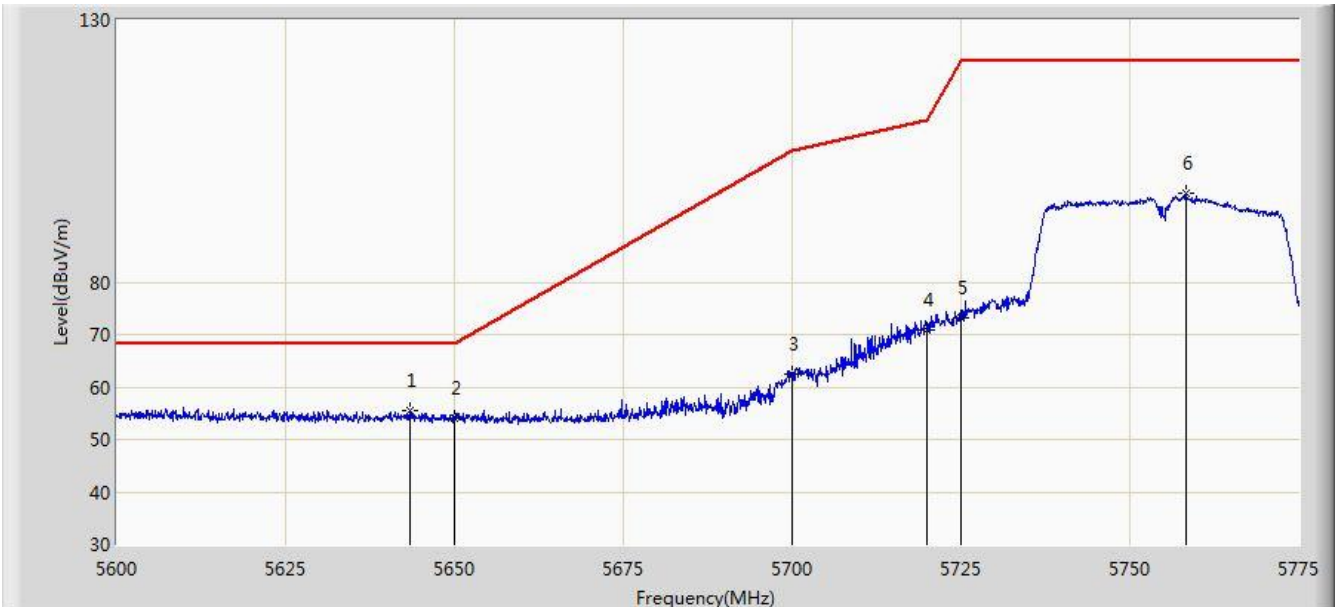
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5643.487	55.493	51.602	-12.707	68.200	3.892	PK
2			5650.000	54.173	50.370	-14.027	68.200	3.803	PK
3			5700.000	62.501	58.561	-42.699	105.200	3.940	PK
4			5720.000	70.851	66.869	-39.949	110.800	3.982	PK
5			5725.000	73.286	69.180	-48.914	122.200	4.105	PK
6			5758.375	96.902	92.491	N/A	N/A	4.412	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: 2017/11/03 - 05:41
Limit: FCC_Part15.407_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at channel 5795MHz	
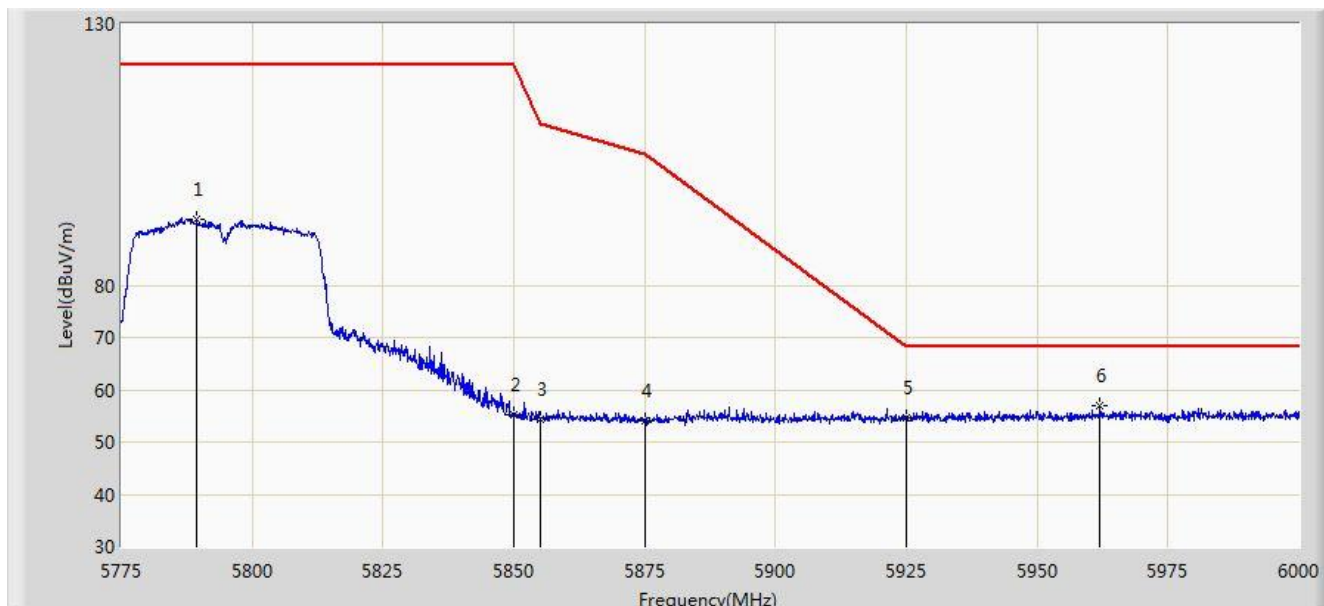
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5789.513	92.623	88.089	N/A	N/A	4.535	PK
2			5850.000	55.243	50.248	-66.957	122.200	4.995	PK
3			5855.000	54.203	49.215	-56.597	110.800	4.987	PK
4			5875.000	54.108	49.101	-51.092	105.200	5.008	PK
5			5925.000	54.609	49.457	-13.591	68.200	5.152	PK
6		*	5961.975	56.975	51.623	-11.225	68.200	5.353	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: 2017/11/03 - 05:44
Limit: FCC_Part15.407_RE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at channel 5795MHz	
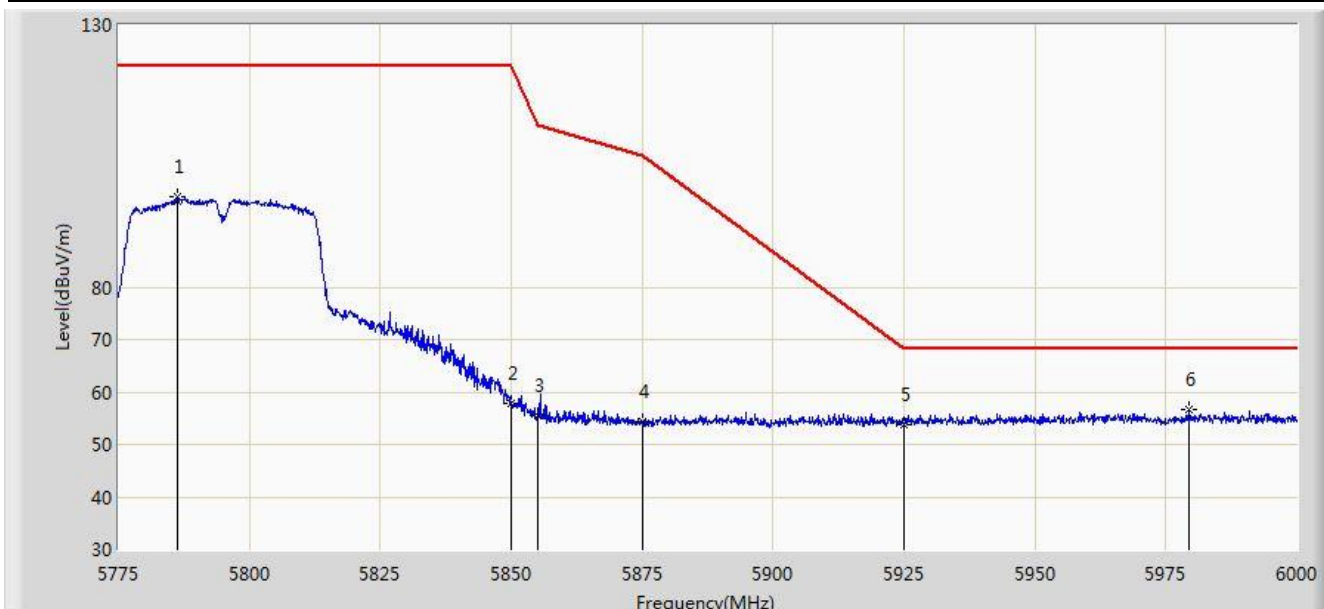
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5786.138	97.128	92.642	N/A	N/A	4.486	PK
2			5850.000	57.782	52.787	-64.418	122.200	4.995	PK
3			5855.000	55.428	50.440	-55.372	110.800	4.987	PK
4			5875.000	54.294	49.287	-50.906	105.200	5.008	PK
5			5925.000	53.858	48.706	-14.342	68.200	5.152	PK
6		*	5979.300	56.722	51.580	-11.478	68.200	5.142	PK

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

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

7.10. AC Conducted Emissions Measurement

7.10.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.207		
Frequency (MHz)	QP (dBμV)	AV (dBμV)
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Note 1: The lower limit shall apply at the transition frequencies.

Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.
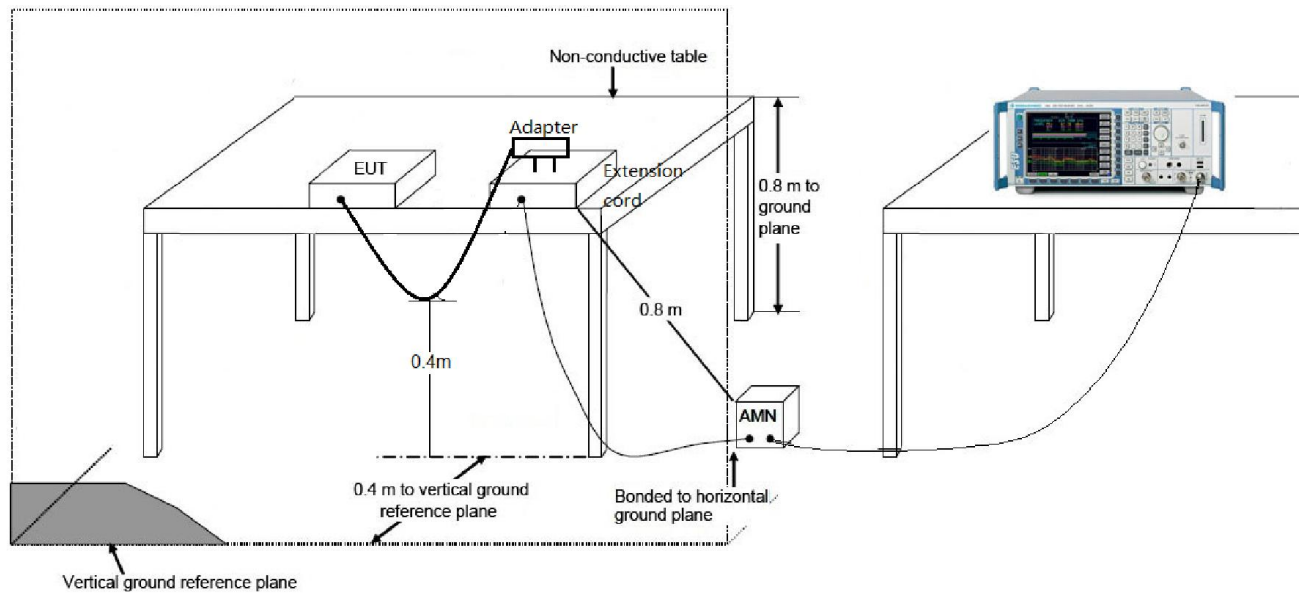
7.10.2. Test Procedure

The EUT was setup according to ANSI C63.4, 2009 and tested according to KDB 789033 for compliance to FCC 47CFR 15.247 requirements. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs) Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.

The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.

Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

7.10.3.Test Setup

Non-conductive table

Adapter

EUT

Extension cord

0.8 m to ground plane

0.8 m

AMN

0.4m

0.4 m to vertical ground reference plane

Bonded to horizontal ground plane

Vertical ground reference plane

7.10.4.Test Result

| Site: SR2	Time: 2017/11/13 - 10:27
Limit: FCC_Part15.207_CE_AC Power	Engineer: Polly Zong
Probe: ENV216_101683_Filter On	Polarity: Line
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 5220MHz	
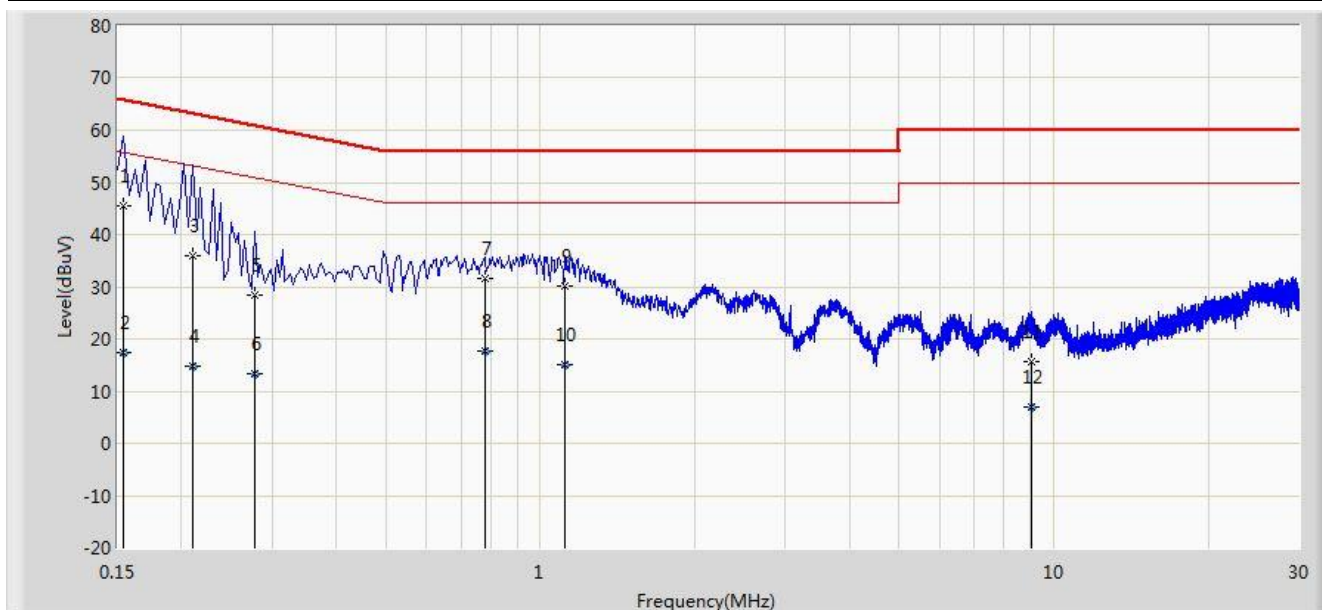
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		*	0.154	45.433	34.694	-20.348	65.781	10.740	QP
2			0.154	17.387	6.647	-38.395	55.781	10.740	AV
3			0.210	35.876	25.907	-27.329	63.205	9.969	QP
4			0.210	14.752	4.783	-38.454	53.205	9.969	AV
5			0.278	28.418	18.431	-32.458	60.875	9.986	QP
6			0.278	13.459	3.472	-37.417	50.875	9.986	AV
7			0.778	31.573	21.550	-24.427	56.000	10.022	QP
8			0.778	17.652	7.630	-28.348	46.000	10.022	AV
9			1.114	30.081	20.177	-25.919	56.000	9.904	QP
10			1.114	15.216	5.312	-30.784	46.000	9.904	AV
11			9.062	15.794	5.635	-44.206	60.000	10.159	QP
12			9.062	6.858	-3.300	-43.142	50.000	10.159	AV

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

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

Site: SR2	Time: 2017/11/13 - 10:42
Limit: FCC_Part15.207_CE_AC Power	Engineer: Polly Zong
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: Mobile Data Terminal	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 5220MHz	
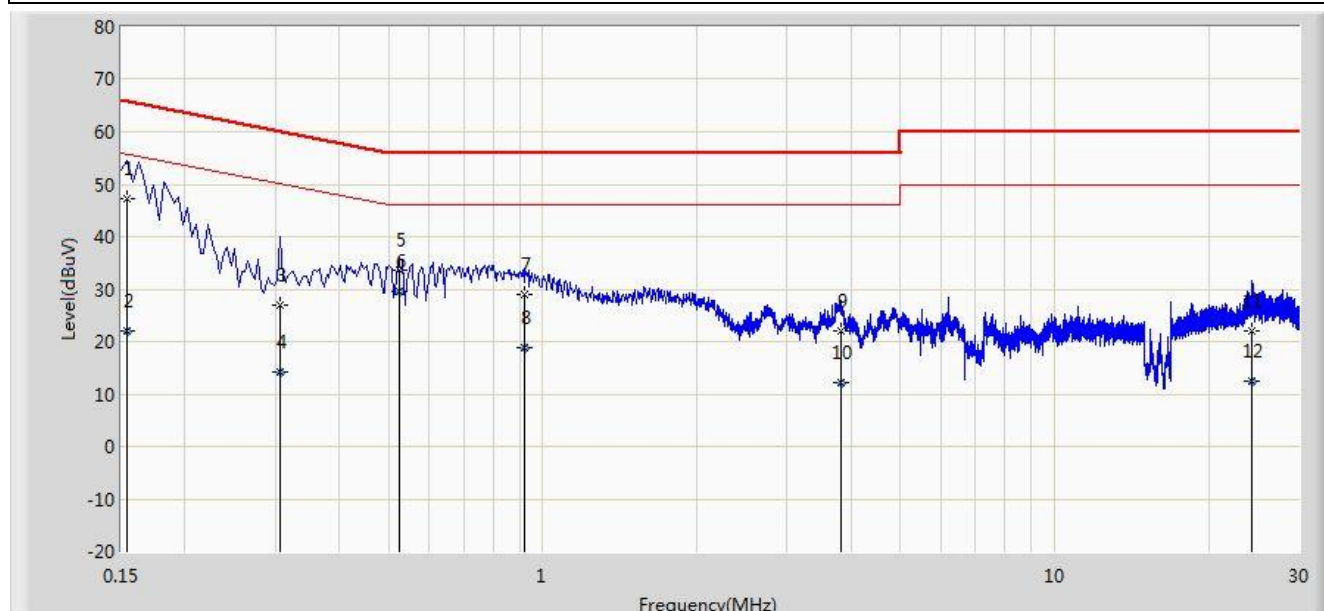
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.154	47.187	36.471	-18.594	65.781	10.716	QP
2			0.154	21.982	11.266	-33.800	55.781	10.716	AV
3			0.306	27.066	17.023	-33.013	60.078	10.042	QP
4			0.306	14.263	4.221	-35.815	50.078	10.042	AV
5			0.526	33.513	23.342	-22.487	56.000	10.172	QP
6		*	0.526	29.627	19.455	-16.373	46.000	10.172	AV
7			0.922	28.846	18.894	-27.154	56.000	9.952	QP
8			0.922	18.799	8.847	-27.201	46.000	9.952	AV
9			3.826	22.077	12.112	-33.923	56.000	9.966	QP
10			3.826	12.248	2.283	-33.752	46.000	9.966	AV
11			24.274	21.930	11.642	-38.070	60.000	10.288	QP
12			24.274	12.375	2.087	-37.625	50.000	10.288	AV

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

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

8. CONCLUSION

The data collected relate only the item(s) tested and show that the **Mobile Data Terminal** is in

compliance with Part 15E of the FCC Rules.

──────── The End ────────