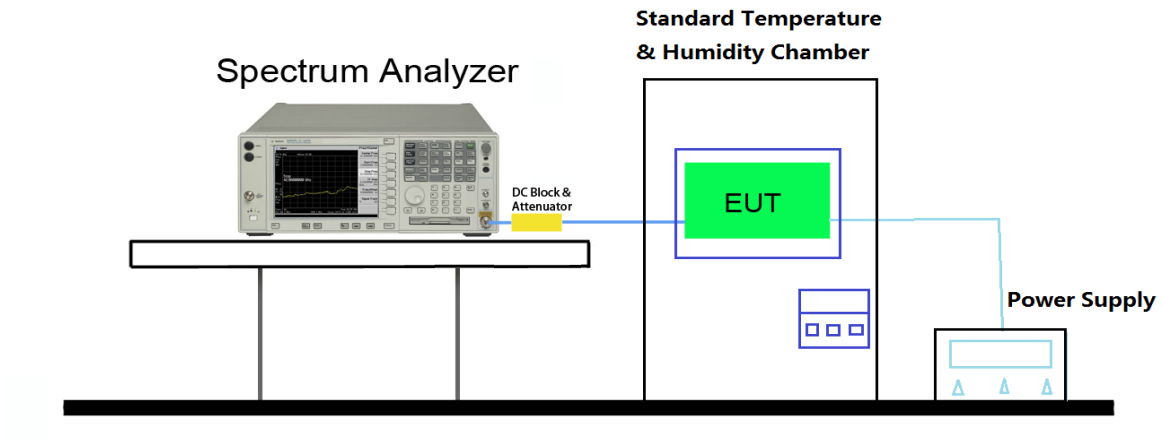
7.6.3.Test Setup



7.6.4.Test Result

Test Engineer	Kevin Ker	Temperature	-30 ~ 50°C
Test Time	2017/11/21	Relative Humidity	52%RH
Test Mode	5180MHz (Carrier Mode)	Test Site	SR1

Voltage (%)	Power (VAC)	Temp (°C)	Frequency Tolerance (ppm)			
			0 minutes	2 minutes	5 minutes	10 minutes
100%	3.6	- 30	-3.96	-3.87	-3.79	-3.31
		- 20	-4.10	-3.88	-3.89	-3.44
		- 10	-3.90	-3.89	-3.86	-3.54
		0	-3.95	-3.99	-3.50	-3.69
		+ 10	-3.87	-3.99	-3.79	-4.02
		+ 20 (Ref)	-3.48	-3.78	-3.88	-4.09
		+ 30	-3.46	-3.37	-3.37	-3.24
		+ 40	-3.68	-3.81	-4.05	-3.73
		+ 50	-4.76	-4.76	-4.73	-4.43
115%	4.14	+ 20	-3.72	-3.70	-3.64	-3.71
85%	3.06	+ 20	-3.57	-3.50	-3.54	-2.64

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.

All out of band emissions appearing in a restricted band as specified in Section 8.10 of the RSS-Gen Issue 4 must not exceed the limits shown in Table per Section 8.9.

FCC Part 15 Subpart C Paragraph 15.209 & RSS-Gen Issue4 Section 8.9		
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

ANSI C63.10 Section 6.3 (General Requirements)

ANSI C63.10 Section 6.4 (Standard test method below 30MHz)

ANSI C63.10 Section 6.5 (Standard test method above 30MHz to 1GHz)

ANSI C63.10 Section 6.6 (Standard test method above 1GHz)

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

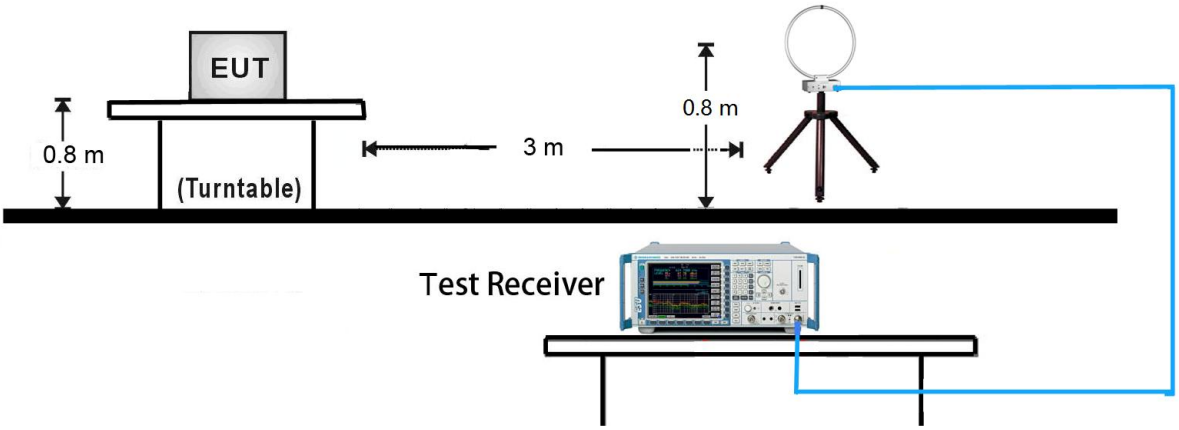
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Measurements above 1GHz (Method AD)

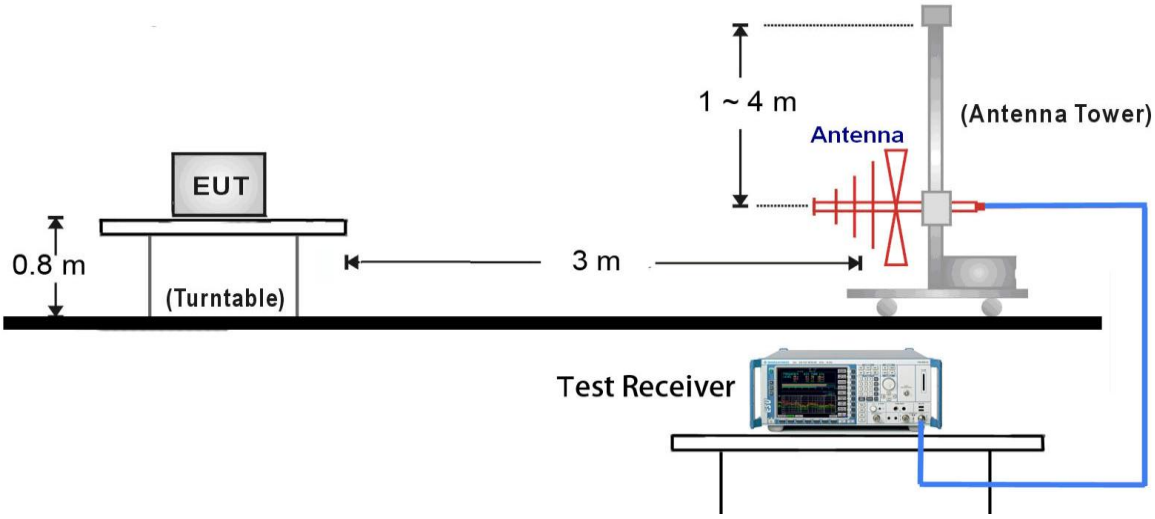
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = power average (Average)
5. Number of measurement points = 1001 (Number of points must be > 2 x span/RBW)
6. Sweep time = auto
7. Trace was averaged over at 100 sweeps

7.7.4.Test Setup

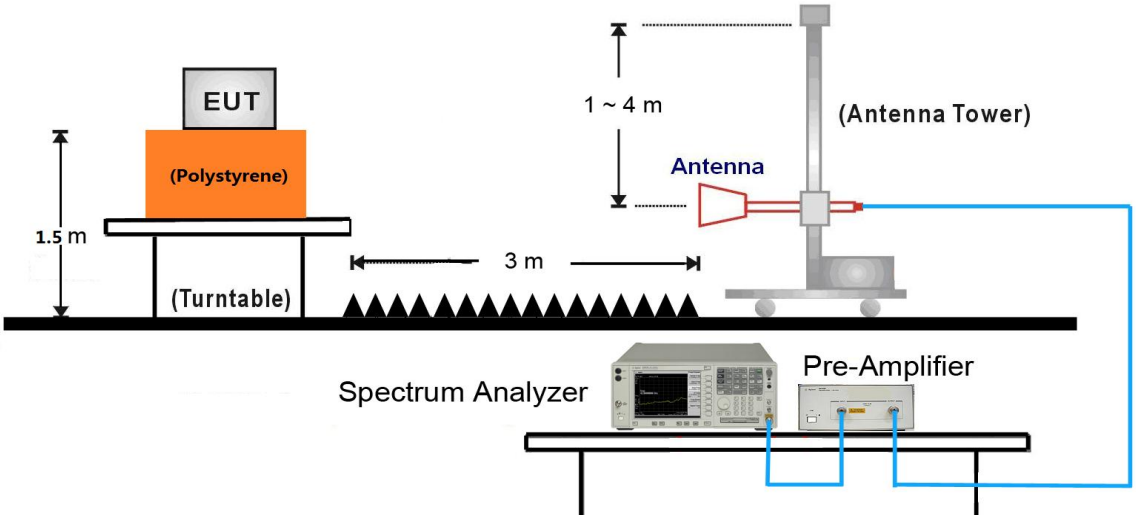
9kHz ~ 30MHz Test Setup:



30MHz ~ 1GHz Test Setup:



1GHz ~ 40GHz Test Setup:



7.7.5.Test Result

Test Mode:	802.11a - Ant A	Test Site:	AC1
Test Channel:	36	Test Engineer:	Kevin Ker
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
	7426.0	34.7	12.7	47.4	74.0	-26.6	Peak	Horizontal
	8225.0	36.0	11.9	47.9	74.0	-26.1	Peak	Horizontal
*	8820.0	33.1	14.0	47.1	68.2	-21.1	Peak	Horizontal
*	9857.0	33.0	16.2	49.2	68.2	-19.0	Peak	Horizontal
	7392.0	35.4	12.6	48.0	74.0	-26.0	Peak	Vertical
	8259.0	35.0	11.9	46.9	74.0	-27.1	Peak	Vertical
*	8837.0	34.7	14.0	48.7	68.2	-19.5	Peak	Vertical
*	9814.5	34.5	15.4	49.9	68.2	-18.3	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)

Test Mode:	802.11a - Ant A	Test Site:	AC1
Test Channel:	44	Test Engineer:	Kevin Ker
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	34.0	12.6	46.6	74.0	-27.4	Peak	Horizontal
	8429.0	34.3	12.4	46.7	74.0	-27.3	Peak	Horizontal
*	8777.5	33.5	13.9	47.4	68.2	-20.8	Peak	Horizontal
*	10001.5	33.7	15.4	49.1	68.2	-19.1	Peak	Horizontal
	7468.5	34.3	12.8	47.1	74.0	-26.9	Peak	Vertical
	8352.5	34.5	12.0	46.5	74.0	-27.5	Peak	Vertical
*	8871.0	33.6	14.0	47.6	68.2	-20.6	Peak	Vertical
*	13597.0	33.1	21.8	54.9	68.2	-13.3	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)

Test Mode:	802.11a - Ant A	Test Site:	AC1
Test Channel:	48	Test Engineer:	Kevin Ker
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	33.8	12.7	46.5	74.0	-27.5	Peak	Horizontal
	8395.0	34.6	12.2	46.8	74.0	-27.2	Peak	Horizontal
*	8879.5	33.3	14.0	47.3	68.2	-20.9	Peak	Horizontal
*	10086.5	34.9	15.7	50.6	68.2	-17.6	Peak	Horizontal
	7417.5	34.4	12.6	47.0	74.0	-27.0	Peak	Vertical
	8352.5	34.9	12.0	46.9	74.0	-27.1	Peak	Vertical
*	8888.0	33.0	14.0	47.0	68.2	-21.2	Peak	Vertical
*	9891.0	34.0	15.5	49.5	68.2	-18.7	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)

Test Mode:	802.11a - Ant A	Test Site:	AC1
Test Channel:	149	Test Engineer:	Kevin Ker
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
	7332.5	33.8	12.4	46.2	74.0	-27.8	Peak	Horizontal
	8191.0	35.1	12.0	47.1	74.0	-26.9	Peak	Horizontal
*	8820.0	33.2	14.0	47.2	68.2	-21.0	Peak	Horizontal
*	10154.5	34.0	16.0	50.0	68.2	-18.2	Peak	Horizontal
	7349.5	34.2	12.4	46.6	74.0	-27.4	Peak	Vertical
	8199.5	35.1	12.0	47.1	74.0	-26.9	Peak	Vertical
*	8888.0	32.5	14.0	46.5	68.2	-21.7	Peak	Vertical
*	10494.5	32.8	17.2	50.0	68.2	-18.2	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)

Test Mode:	802.11a - Ant A	Test Site:	AC1
Test Channel:	157	Test Engineer:	Kevin Ker
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	12.8	48.2	74.0	-25.8	Peak	Horizontal
	8327.0	34.7	11.9	46.6	74.0	-27.4	Peak	Horizontal
*	8879.5	33.1	14.0	47.1	68.2	-21.1	Peak	Horizontal
*	10010.0	34.1	15.4	49.5	68.2	-18.7	Peak	Horizontal
	7324.0	35.5	12.4	47.9	74.0	-26.1	Peak	Vertical
	8437.5	34.1	12.4	46.5	74.0	-27.5	Peak	Vertical
*	8956.0	32.7	14.0	46.7	68.2	-21.5	Peak	Vertical
*	10044.0	33.7	15.5	49.2	68.2	-19.0	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)

Test Mode:	802.11a - Ant A	Test Site:	AC1
Test Channel:	165	Test Engineer:	Kevin Ker
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	35.2	12.6	47.8	74.0	-26.2	Peak	Horizontal
	8250.5	34.6	11.9	46.5	74.0	-27.5	Peak	Horizontal
*	8956.0	32.5	14.0	46.5	68.2	-21.7	Peak	Horizontal
*	10333.0	33.0	16.7	49.7	68.2	-18.5	Peak	Horizontal
	7392.0	34.8	12.6	47.4	74.0	-26.6	Peak	Vertical
	8233.5	35.1	11.9	47.0	74.0	-27.0	Peak	Vertical
*	8879.5	32.9	14.0	46.9	68.2	-21.3	Peak	Vertical
*	10231.0	33.3	16.4	49.7	68.2	-18.5	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)

Test Mode:	802.11n-HT20 - Ant A	Test Site:	AC1
Test Channel:	36	Test Engineer:	Kevin Ker
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
	7341.0	35.4	12.4	47.8	74.0	-26.2	Peak	Horizontal
	8250.5	35.8	11.9	47.7	74.0	-26.3	Peak	Horizontal
*	8905.0	33.2	14.0	47.2	68.2	-21.0	Peak	Horizontal
*	9976.0	34.3	15.3	49.6	68.2	-18.6	Peak	Horizontal
	7545.0	33.8	12.8	46.6	74.0	-27.4	Peak	Vertical
	8352.5	35.5	12.0	47.5	74.0	-26.5	Peak	Vertical
*	8896.5	32.6	14.0	46.6	68.2	-21.6	Peak	Vertical
*	10027.0	34.7	15.4	50.1	68.2	-18.1	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)

Test Mode:	802.11n-HT20 - Ant A	Test Site:	AC1
Test Channel:	44	Test Engineer:	Kevin Ker
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
	7358.0	34.6	12.4	47.0	74.0	-27.0	Peak	Horizontal
	8242.0	36.7	11.9	48.6	74.0	-25.4	Peak	Horizontal
*	8879.5	33.4	14.0	47.4	68.2	-20.8	Peak	Horizontal
*	10367.0	33.0	16.8	49.8	68.2	-18.4	Peak	Horizontal
	7426.0	34.1	12.7	46.8	74.0	-27.2	Peak	Vertical
	8216.5	35.3	11.9	47.2	74.0	-26.8	Peak	Vertical
*	8879.5	33.0	14.0	47.0	68.2	-21.2	Peak	Vertical
*	10350.0	33.5	16.8	50.3	68.2	-17.9	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)

Test Mode:	802.11n-HT20 - Ant A	Test Site:	AC1
Test Channel:	48	Test Engineer:	Kevin Ker
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	12.8	47.9	74.0	-26.1	Peak	Horizontal
	8199.5	35.7	12.0	47.7	74.0	-26.3	Peak	Horizontal
*	8854.0	32.6	14.0	46.6	68.2	-21.6	Peak	Horizontal
*	10341.5	33.1	16.7	49.8	68.2	-18.4	Peak	Horizontal
	7358.0	34.6	12.4	47.0	74.0	-27.0	Peak	Vertical
	8497.0	34.1	12.8	46.9	74.0	-27.1	Peak	Vertical
*	8854.0	31.7	14.0	45.7	68.2	-22.5	Peak	Vertical
*	10035.5	33.2	15.5	48.7	68.2	-19.5	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)

Test Mode:	802.11n-HT20 - Ant A	Test Site:	AC1
Test Channel:	149	Test Engineer:	Kevin Ker
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	34.5	12.6	47.1	74.0	-26.9	Peak	Horizontal
	8140.0	35.1	12.2	47.3	74.0	-26.7	Peak	Horizontal
*	8769.0	31.9	13.9	45.8	68.2	-22.4	Peak	Horizontal
*	10248.0	32.9	16.4	49.3	68.2	-18.9	Peak	Horizontal
	7460.0	34.8	12.8	47.6	74.0	-26.4	Peak	Vertical
	8165.5	34.4	12.1	46.5	74.0	-27.5	Peak	Vertical
*	8888.0	32.5	14.0	46.5	68.2	-21.7	Peak	Vertical
*	16988.5	30.3	24.5	54.8	68.2	-13.4	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)

Test Mode:	802.11n-HT20 - Ant A	Test Site:	AC1
Test Channel:	157	Test Engineer:	Kevin Ker
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
	7426.0	34.4	12.7	47.1	74.0	-26.9	Peak	Horizontal
	8259.0	35.4	11.9	47.3	74.0	-26.7	Peak	Horizontal
*	8862.5	33.5	14.0	47.5	68.2	-20.7	Peak	Horizontal
*	10214.0	33.4	16.3	49.7	68.2	-18.5	Peak	Horizontal
	7689.5	35.5	12.4	47.9	74.0	-26.1	Peak	Vertical
	8276.0	34.8	11.9	46.7	74.0	-27.3	Peak	Vertical
*	8854.0	32.8	14.0	46.8	68.2	-21.4	Peak	Vertical
*	10469.0	33.2	17.1	50.3	68.2	-17.9	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)

Test Mode:	802.11n-HT20 - Ant A	Test Site:	AC1
Test Channel:	165	Test Engineer:	Kevin Ker
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
	7426.0	35.2	12.7	47.9	74.0	-26.1	Peak	Horizontal
	8199.5	34.7	12.0	46.7	74.0	-27.3	Peak	Horizontal
*	8811.5	32.2	14.0	46.2	68.2	-22.0	Peak	Horizontal
*	10333.0	32.2	16.7	48.9	68.2	-19.3	Peak	Horizontal
	7519.5	35.3	12.8	48.1	74.0	-25.9	Peak	Vertical
	8174.0	35.7	12.0	47.7	74.0	-26.3	Peak	Vertical
*	8879.5	32.7	14.0	46.7	68.2	-21.5	Peak	Vertical
*	10520.0	33.0	17.2	50.2	68.2	-18.0	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)

Test Mode:	802.11n-HT20 - Ant A + B	Test Site:	AC1
Test Channel:	36	Test Engineer:	Kevin Ker
Remark:	3. Average measurement was not performed if peak level lower than average limit. 4. 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
	7426.0	33.9	12.7	46.6	74.0	-27.4	Peak	Horizontal
	8165.5	34.7	12.1	46.8	74.0	-27.2	Peak	Horizontal
*	8862.5	32.4	14.0	46.4	68.2	-21.8	Peak	Horizontal
*	10290.5	33.2	16.6	49.8	68.2	-18.4	Peak	Horizontal
	7434.5	33.6	12.7	46.3	74.0	-27.7	Peak	Vertical
	8182.5	34.8	12.0	46.8	74.0	-27.2	Peak	Vertical
*	8888.0	30.9	14.0	44.9	68.2	-23.3	Peak	Vertical
*	10358.5	34.1	16.8	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)

Test Mode:	802.11n-HT20 - Ant A + B	Test Site:	AC1
Test Channel:	44	Test Engineer:	Kevin Ker
Remark:	3. Average measurement was not performed if peak level lower than average limit. 4. 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	34.2	12.8	47.0	74.0	-27.0	Peak	Horizontal
	8191.0	36.0	12.0	48.0	74.0	-26.0	Peak	Horizontal
*	8845.5	32.8	14.0	46.8	68.2	-21.4	Peak	Horizontal
*	10443.5	37.1	17.1	54.2	68.2	-14.0	Peak	Horizontal
	7434.5	33.9	12.7	46.6	74.0	-27.4	Peak	Vertical
	8276.0	35.3	11.9	47.2	74.0	-26.8	Peak	Vertical
*	8913.5	32.8	14.0	46.8	68.2	-21.4	Peak	Vertical
*	10435.0	34.1	17.0	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)

Test Mode:	802.11n-HT20 - Ant A + B	Test Site:	AC1
Test Channel:	48	Test Engineer:	Kevin Ker
Remark:	3. Average measurement was not performed if peak level lower than average limit. 4. 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	34.6	12.7	47.3	74.0	-26.7	Peak	Horizontal
	8327.0	35.3	11.9	47.2	74.0	-26.8	Peak	Horizontal
*	8820.0	34.3	14.0	48.3	68.2	-19.9	Peak	Horizontal
*	10477.5	34.0	17.1	51.1	68.2	-17.1	Peak	Horizontal
	7494.0	35.3	12.8	48.1	74.0	-25.9	Peak	Vertical
	8165.5	35.1	12.1	47.2	74.0	-26.8	Peak	Vertical
*	8811.5	32.4	14.0	46.4	68.2	-21.8	Peak	Vertical
*	10222.5	33.6	16.3	49.9	68.2	-18.3	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)

Test Mode:	802.11n-HT20 - Ant A + B	Test Site:	AC1
Test Channel:	149	Test Engineer:	Kevin Ker
Remark:	3. Average measurement was not performed if peak level lower than average limit. 4. 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
	7426.0	34.7	12.7	47.4	74.0	-26.6	Peak	Horizontal
	8165.5	35.5	12.1	47.6	74.0	-26.4	Peak	Horizontal
*	8743.5	32.9	13.9	46.8	68.2	-21.4	Peak	Horizontal
*	10384.0	33.3	16.9	50.2	68.2	-18.0	Peak	Horizontal
	7366.5	34.7	12.5	47.2	74.0	-26.8	Peak	Vertical
	8276.0	34.9	11.9	46.8	74.0	-27.2	Peak	Vertical
*	8888.0	32.5	14.0	46.5	68.2	-21.7	Peak	Vertical
*	10443.5	31.4	17.1	48.5	68.2	-19.7	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)

Test Mode:	802.11n-HT20 - Ant A + B	Test Site:	AC1
Test Channel:	157	Test Engineer:	Kevin Ker
Remark:	3. Average measurement was not performed if peak level lower than average limit. 4. 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
	7536.5	32.6	12.8	45.4	74.0	-28.6	Peak	Horizontal
	8259.0	33.9	11.9	45.8	74.0	-28.2	Peak	Horizontal
*	8871.0	32.2	14.0	46.2	68.2	-22.0	Peak	Horizontal
*	10035.5	33.7	15.5	49.2	68.2	-19.0	Peak	Horizontal
	7443.0	34.0	12.7	46.7	74.0	-27.3	Peak	Vertical
	8165.5	34.7	12.1	46.8	74.0	-27.2	Peak	Vertical
*	8828.5	32.2	14.0	46.2	68.2	-22.0	Peak	Vertical
*	10333.0	31.5	16.7	48.2	68.2	-20.0	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)

Test Mode:	802.11n-HT20 - Ant A + B	Test Site:	AC1
Test Channel:	165	Test Engineer:	Kevin Ker
Remark:	3. Average measurement was not performed if peak level lower than average limit. 4. 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	33.7	12.8	46.5	74.0	-27.5	Peak	Horizontal
	8318.5	34.8	11.9	46.7	74.0	-27.3	Peak	Horizontal
*	8862.5	31.7	14.0	45.7	68.2	-22.5	Peak	Horizontal
*	9814.5	32.3	15.4	47.7	68.2	-20.5	Peak	Horizontal
	7681.0	34.0	12.5	46.5	74.0	-27.5	Peak	Vertical
	8276.0	33.2	11.9	45.1	74.0	-28.9	Peak	Vertical
*	8922.0	30.8	14.0	44.8	68.2	-23.4	Peak	Vertical
*	10486.0	30.5	17.1	47.6	68.2	-20.6	Peak	Vertical

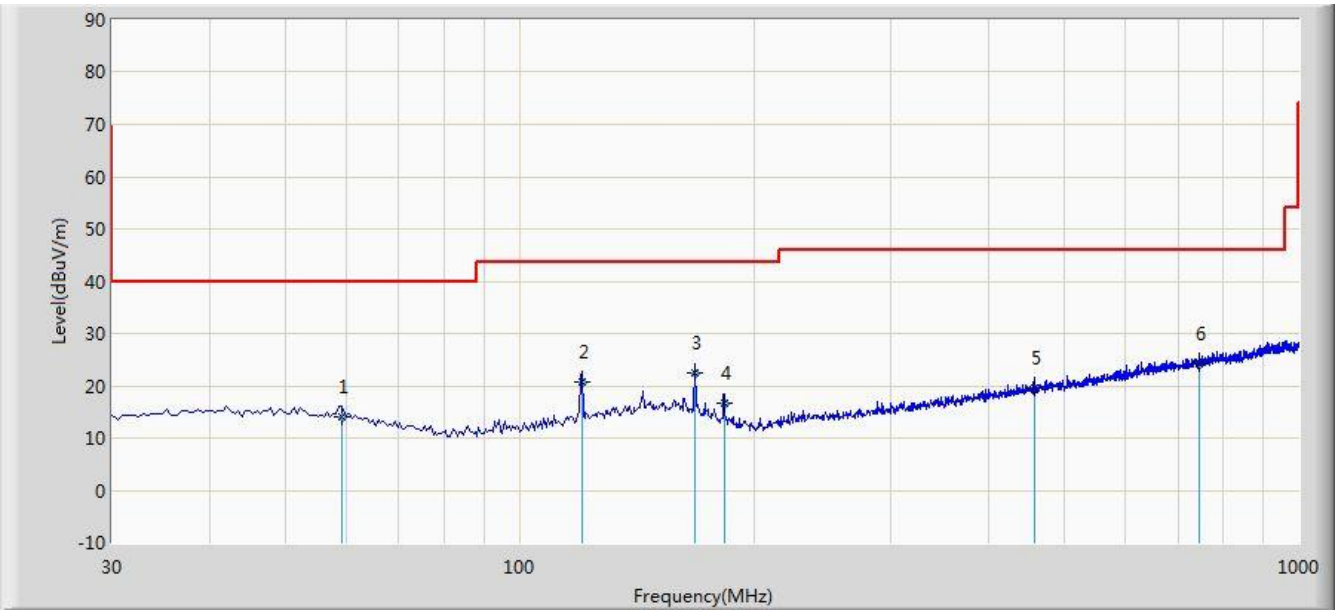
Note 1: "*" is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

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

The worst case of Radiated Emission below 1GHz:

Site: AC1	Time: 2017/10/23 - 23:04
Limit: FCC_Part15.209_RE(3m)	Engineer: Kevin Ker
Probe: VULB9162_0.03-8GHz	Polarity: Horizontal
EUT: Firebird FPV	Power: By Battery
Worse Case Mode: Transmit by 802.11a at Channel 5785MHz Ant A	



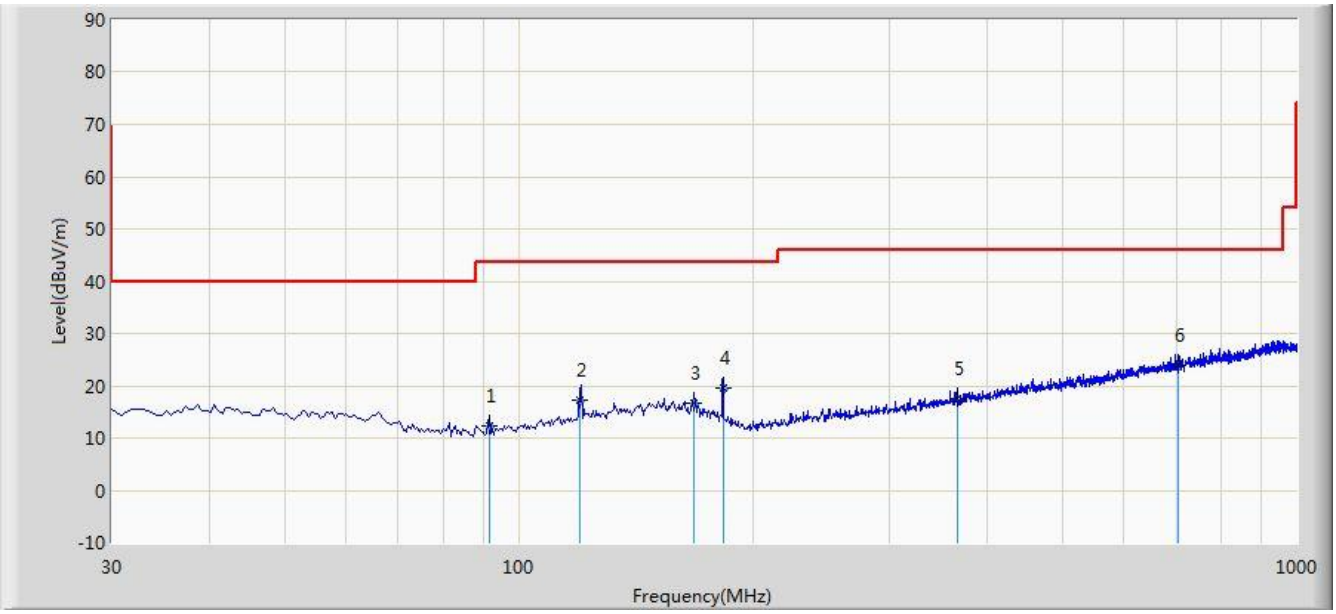
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			59.100	14.116	0.695	-25.884	40.000	13.421	QP
2			120.210	20.753	7.623	-22.747	43.500	13.130	QP
3		*	167.740	22.439	7.970	-21.061	43.500	14.469	QP
4			183.260	16.547	4.127	-26.953	43.500	12.420	QP
5			457.770	19.605	1.695	-26.395	46.000	17.910	QP
6			746.345	24.242	1.580	-21.758	46.000	22.662	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: AC1	Time: 2017/10/23 - 23:11
Limit: FCC_Part15.209_RE(3m)	Engineer: Kevin Ker
Probe: VULB9162_0.03-8GHz	Polarity: Vertical
EUT: Firebird FPV	Power: By Battery
Worse Case Mode: Transmit by 802.11a at Channel 5785MHz Ant A	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			91.595	12.225	1.900	-31.275	43.500	10.325	QP
2			119.725	17.120	4.033	-26.380	43.500	13.087	QP
3			168.222	16.766	2.337	-26.734	43.500	14.429	QP
4			183.250	19.664	7.242	-23.836	43.500	12.422	QP
5			366.105	17.580	1.780	-28.420	46.000	15.800	QP
6		*	702.695	24.023	1.987	-21.977	46.000	22.036	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.

7.8. 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	8.25 - 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 5.725-5.85 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 [V/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

For RSS-Gen Section 8.10 Requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 8.10 of RSS-Gen, must also comply with the radiated emission limits specified in Section 8.9.

Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.009 - 0.110	240 - 285	9.0 - 9.2
2.1735 - 2.1905	322 - 335.4	9.3 - 9.5
3.020 - 3.026	399.9 - 410	10.6 - 12.7
4.125 - 4.128	608 - 614	13.25 - 13.4
4.17725 - 4.17775	960 - 1427	14.47 - 14.5
4.20725 - 4.20775	1435 - 1626.5	15.35 - 16.2
5.677 - 5.683	1645.5 - 1646.5	17.7 - 21.4
6.215 - 6.218	1660 - 1710	22.01 - 23.12
6.26775 - 6.26825	1718.8 -1722.2	23.6 - 24.0
6.31175 - 6.31225	2200 - 2300	31.2 - 31.8
8.291 - 8.294	2310 -2390	36.43 - 36.5
8.362 - 8.366	2655 - 2900	Above 38.6
8.37625 - 8.38675	3260 - 3267	--
8.41425 - 8.41475	3332 -3339	
12.29 - 12.293	3345.8 - 3358	
12.51975 - 12.52025	3500 - 4400	
12.57675 - 12.57725	4500 - 5150	
13.36 -13.41	5350 - 5460	
16.42 - 16.423	7250 - 7750	
16.69475 - 16.69525	8025 - 8500	
16.80425 - 16.80475	--	
25.5 - 25.67		
37.5 - 38.25		
73 - 74.6		
74.8 - 75.2		
108 - 138		
156.52475 - 156.525225		
156.7 - 156.9		

Note: *Certain frequency bands listed in Table 6 and in bands above 38.6 GHz are designated for licence-exempt applications. These frequency bands and the requirements that apply to the devices

are set out in the 200- and 300-series of RSSs, such as RSS-210 and RSS-310, which contain the requirements that apply to licence-exempt radio apparatus.

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 band 5725-5850 MHz shall have e.i.r.p. of unwanted emissions comply with the following:

a) 27 dBm/MHz at frequencies from the band edges decreasing linearly to 15.6 dBm/MHz at 5MHz above or below the band edges;

b) 15.6 dBm/MHz at 5 MHz above or below the band edges decreasing linearly to 10 dBm/MHz at 25 MHz above or below the band edges;

c) 10 dBm/MHz at 25 MHz above or below the band edges decreasing linearly to -27 dBm/MHz at 75 MHz above or below the band edges; and

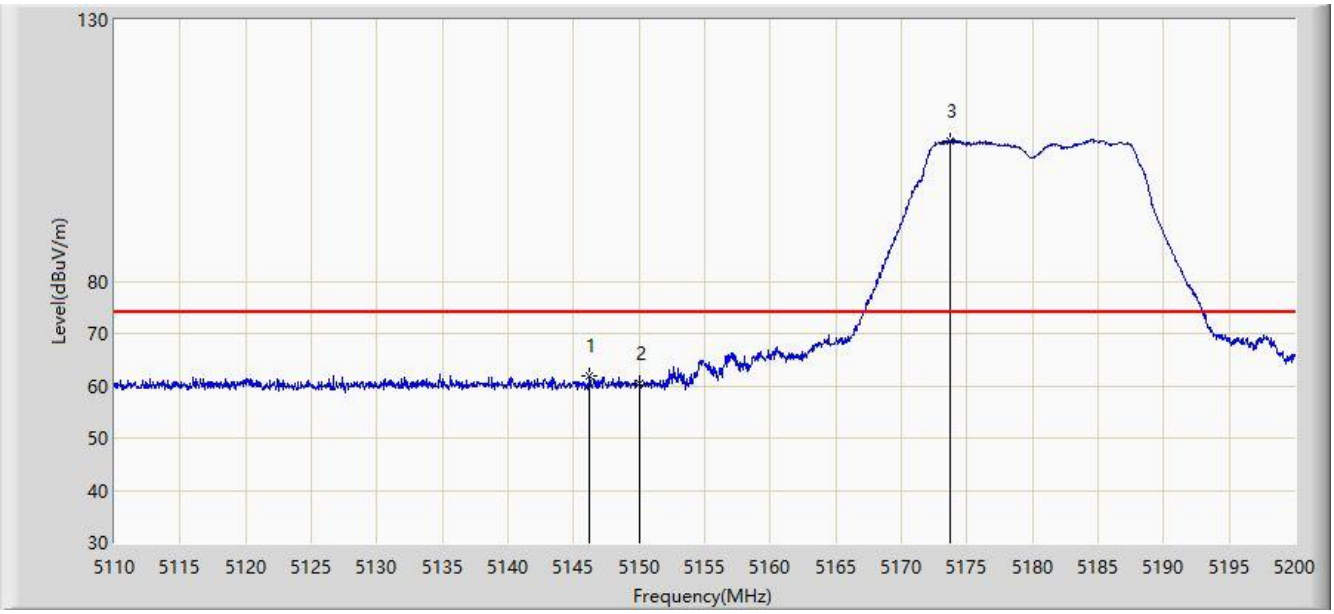
d) -27 dBm/MHz at frequencies more than 75 MHz above or below the band edges.

All out of band emissions appearing in a restricted band as specified in Section 8.10 of the RSS-Gen must not exceed the limits shown in Table per Section 8.9.

RSS-Gen Section 8.9		
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 Result

Site: AC1	Time: 2018/01/29 - 20:04
Limit: FCC_Part15.209_RE(3m)	Engineer: Kevin Ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Horizontal
EUT: Firebird FPV	Power: By Battery
Test Mode: Transmit by 802.11a at channel 5180MHz Ant A	

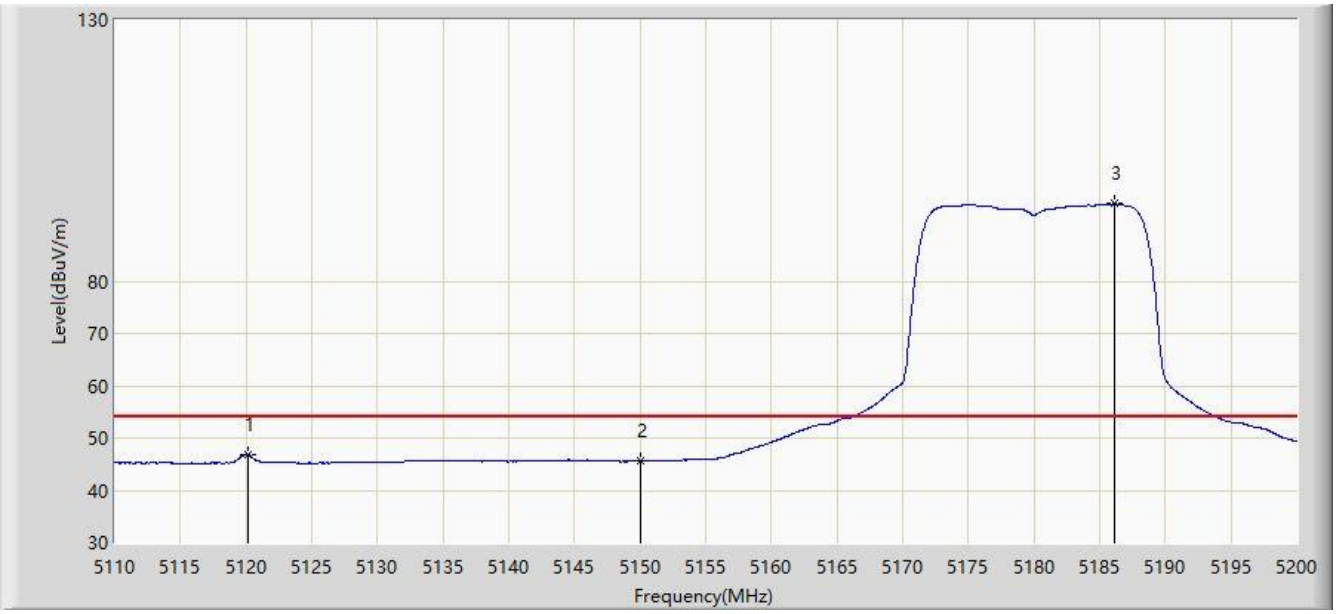


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5146.225	61.927	57.751	-12.073	74.000	4.176	PK
2			5150.000	60.432	56.263	-13.568	74.000	4.170	PK
3		*	5173.765	106.908	102.817	N/A	N/A	4.091	PK

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: 2018/01/29 - 20:06
Limit: FCC_Part15.209_RE(3m)	Engineer: Kevin Ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Horizontal
EUT: Firebird FPV	Power: By Battery
Test Mode: Transmit by 802.11a at channel 5180MHz Ant A	

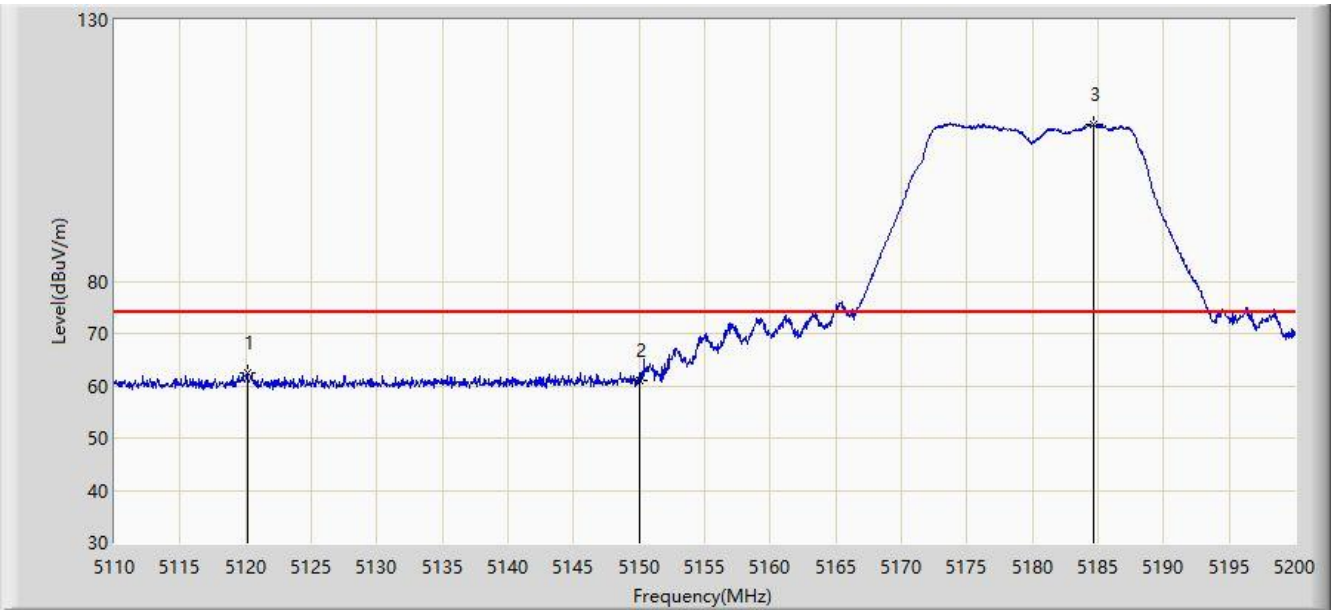


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5120.170	46.724	42.549	-7.276	54.000	4.175	AV
2			5150.000	45.598	41.429	-8.402	54.000	4.170	AV
3		*	5186.095	94.790	90.743	N/A	N/A	4.048	AV

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

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

Site: AC1	Time: 2018/01/29 - 19:32
Limit: FCC_Part15.209_RE(3m)	Engineer: Kevin Ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Vertical
EUT: Firebird FPV	Power: By Battery
Test Mode: Transmit by 802.11a at channel 5180MHz Ant A	

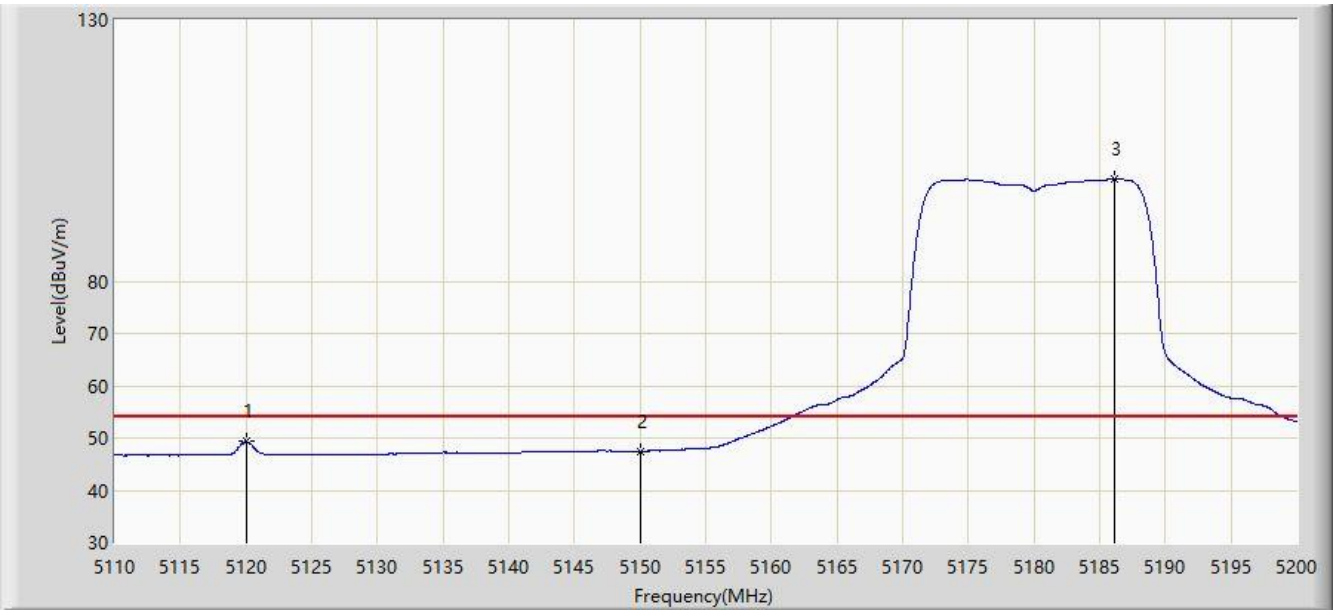


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5120.125	62.320	58.145	-11.680	74.000	4.175	PK
2			5150.000	61.117	56.948	-12.883	74.000	4.170	PK
3		*	5184.610	109.997	105.944	N/A	N/A	4.053	PK

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: 2018/01/29 - 20:03
Limit: FCC_Part15.209_RE(3m)	Engineer: Kevin Ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Vertical
EUT: Firebird FPV	Power: By Battery
Test Mode: Transmit by 802.11a at channel 5180MHz Ant A	

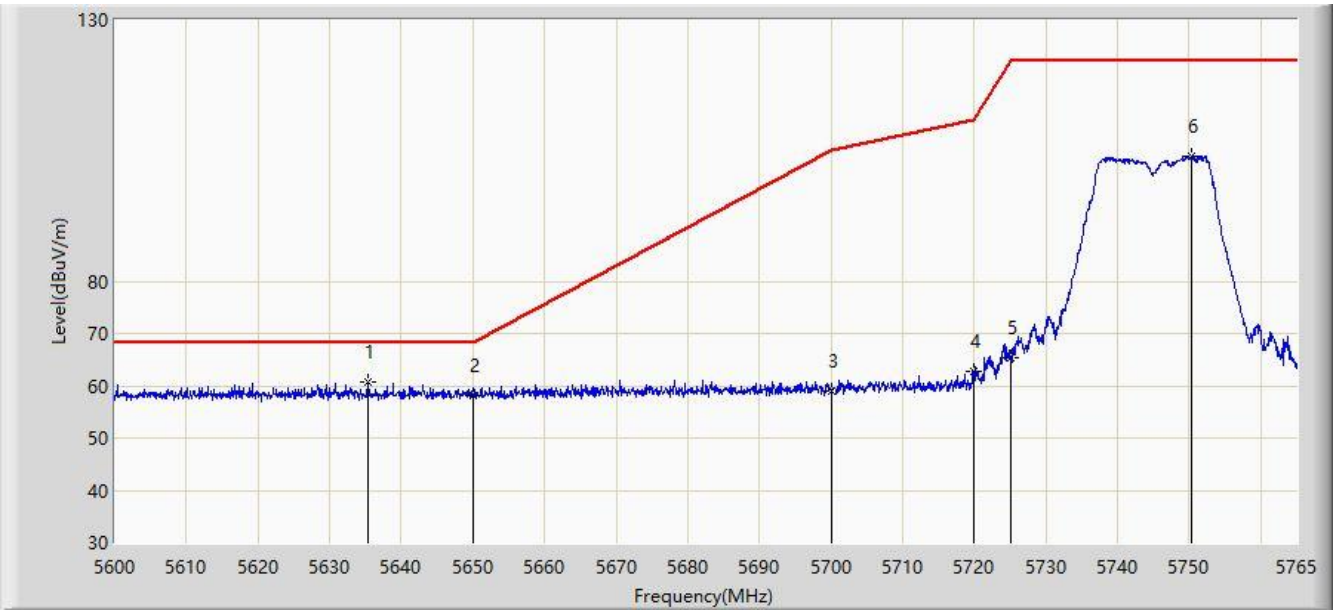


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5120.035	49.301	45.126	-4.699	54.000	4.175	AV
2			5150.000	47.399	43.230	-6.601	54.000	4.170	AV
3		*	5186.095	99.650	95.603	N/A	N/A	4.048	AV

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

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

Site: AC1	Time: 2018/01/29 - 20:10
Limit: FCC_Part15.407_RE(3m)	Engineer: Kevin Ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Horizontal
EUT: Firebird FPV	Power: By Battery
Test Mode: Transmit by 802.11a at channel 5745MHz Ant A	

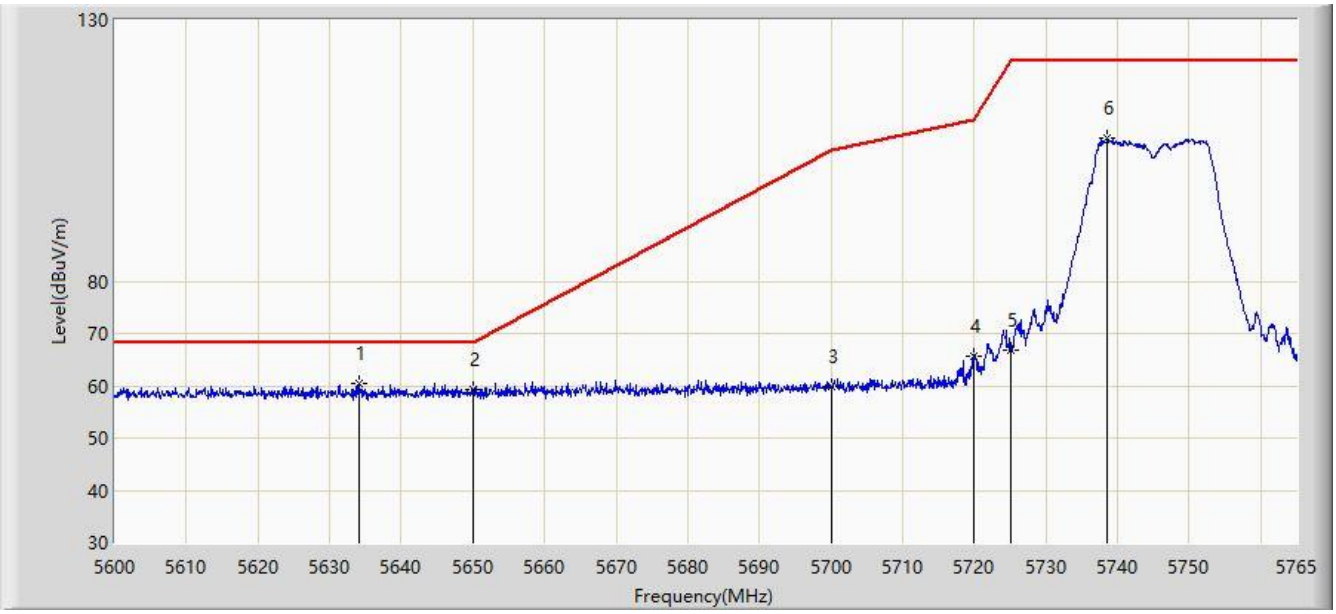


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5635.310	60.759	56.135	-7.441	68.200	4.624	PK
2			5650.000	58.220	53.549	-9.980	68.200	4.671	PK
3			5700.000	59.053	54.175	-46.147	105.200	4.878	PK
4			5720.000	62.852	57.855	-47.948	110.800	4.997	PK
5			5725.000	65.296	60.267	-56.904	122.200	5.029	PK
6			5750.315	103.962	98.777	N/A	N/A	5.186	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: 2018/01/29 - 20:11
Limit: FCC_Part15.407_RE(3m)	Engineer: Kevin Ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Vertical
EUT: Firebird FPV	Power: By Battery
Test Mode: Transmit by 802.11a at channel 5745MHz Ant A	

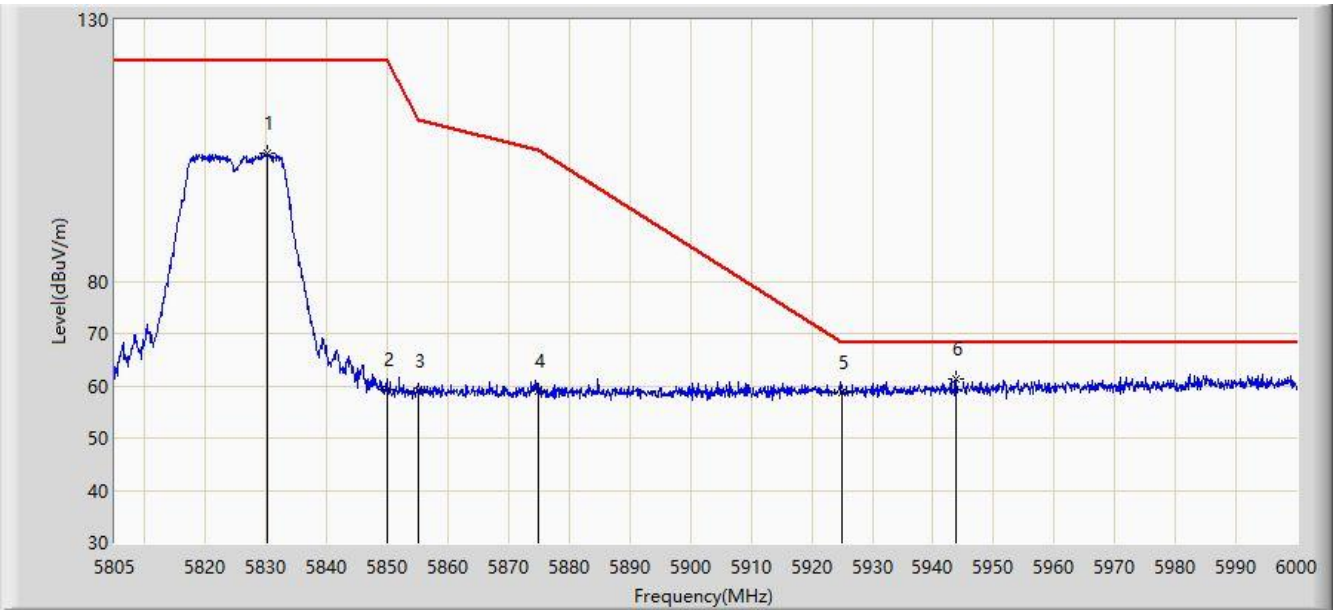


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5634.072	60.457	55.836	-7.743	68.200	4.621	PK
2			5650.000	59.166	54.495	-9.034	68.200	4.671	PK
3			5700.000	59.794	54.916	-45.406	105.200	4.878	PK
4			5720.000	65.767	60.770	-45.033	110.800	4.997	PK
5			5725.000	66.951	61.922	-55.249	122.200	5.029	PK
6			5738.600	107.412	102.296	N/A	N/A	5.115	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: 2018/01/29 - 20:14
Limit: FCC_Part15.407_RE(3m)	Engineer: Kevin Ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Horizontal
EUT: Firebird FPV	Power: By Battery
Test Mode: Transmit by 802.11a at channel 5825MHz Ant A	

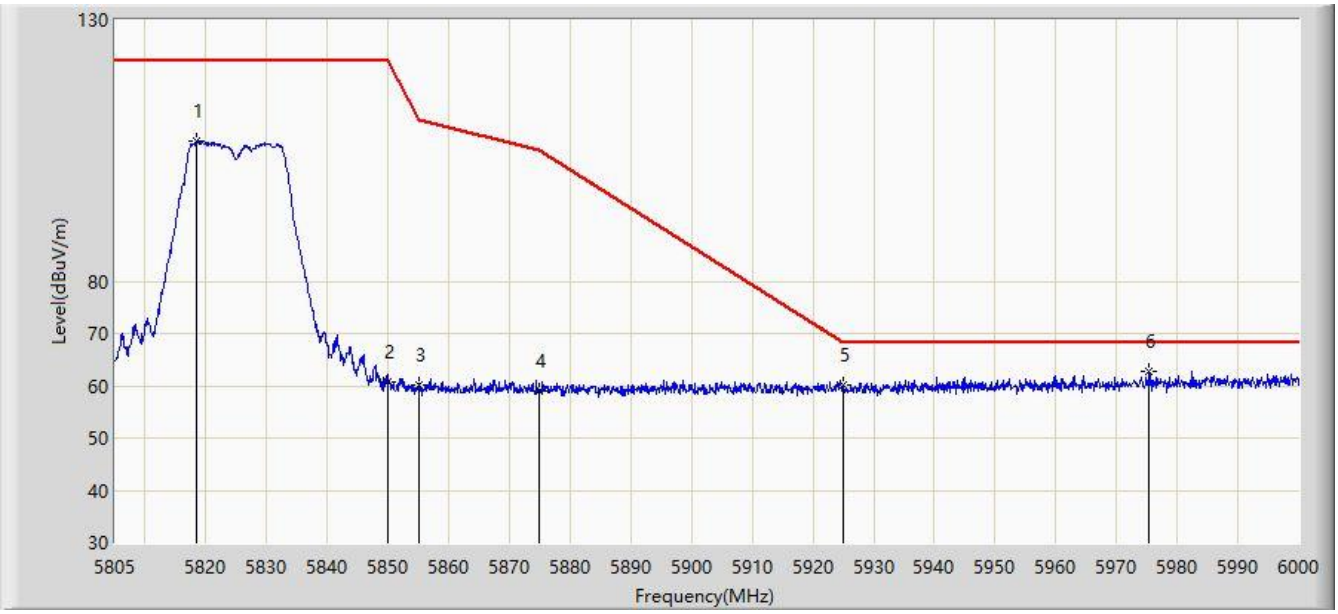


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5830.058	104.474	98.857	N/A	N/A	5.617	PK
2			5850.000	59.307	53.581	-62.893	122.200	5.726	PK
3			5855.000	59.014	53.268	-51.786	110.800	5.746	PK
4			5875.000	59.031	53.211	-46.169	105.200	5.820	PK
5			5925.000	58.683	52.717	-9.517	68.200	5.967	PK
6		*	5943.743	61.326	55.313	-6.874	68.200	6.012	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: 2018/01/29 - 20:16
Limit: FCC_Part15.407_RE(3m)	Engineer: Kevin Ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Vertical
EUT: Firebird FPV	Power: By Battery
Test Mode: Transmit by 802.11a at channel 5825MHz Ant A	

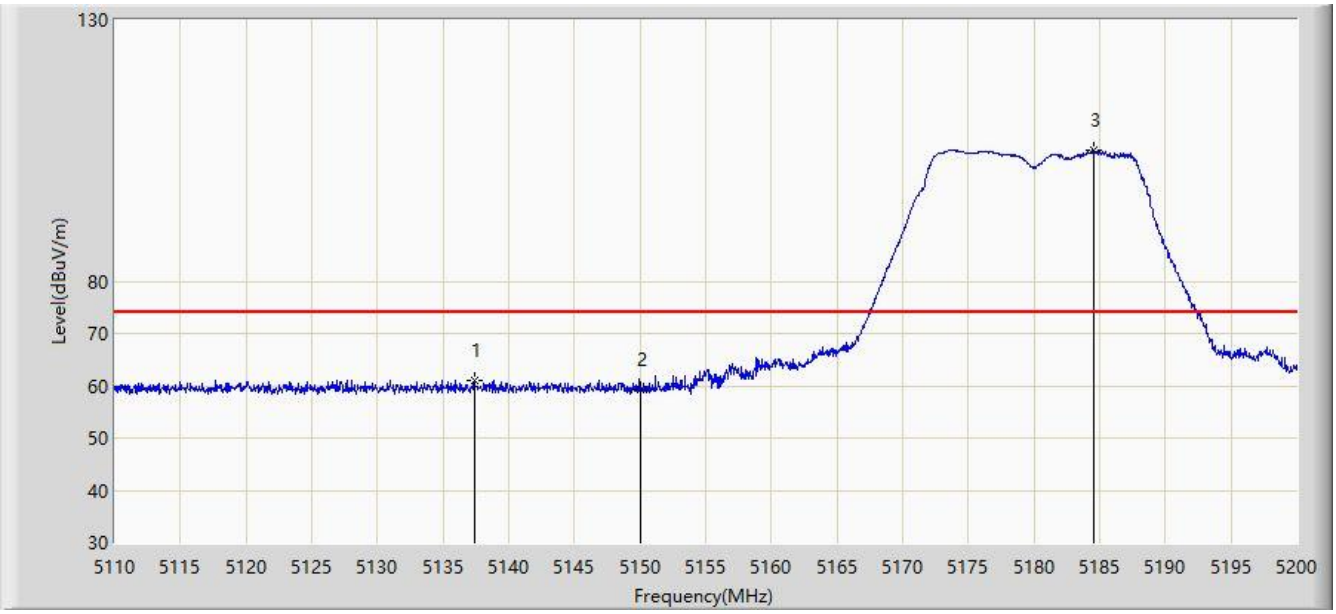


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5818.553	106.868	101.318	N/A	N/A	5.551	PK
2			5850.000	60.834	55.108	-61.366	122.200	5.726	PK
3			5855.000	60.021	54.275	-50.779	110.800	5.746	PK
4			5875.000	59.115	53.295	-46.085	105.200	5.820	PK
5			5925.000	60.005	54.039	-8.195	68.200	5.967	PK
6		*	5975.333	62.708	56.638	-5.492	68.200	6.069	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: 2018/01/29 - 20:18
Limit: FCC_Part15.209_RE(3m)	Engineer: Kevin Ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Horizontal
EUT: Firebird FPV	Power: By Battery
Test Mode: Transmit by 802.11n-HT20 at channel 5180MHz Ant A	

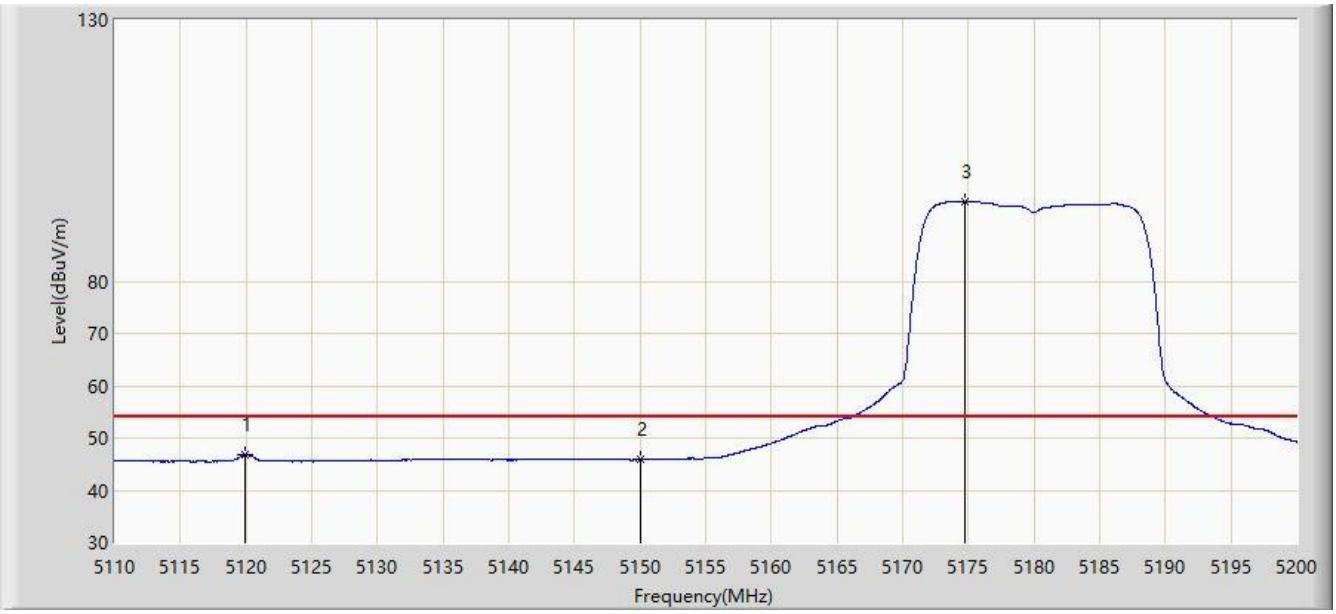


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5137.405	61.035	56.860	-12.965	74.000	4.175	PK
2			5150.000	59.272	55.103	-14.728	74.000	4.170	PK
3		*	5184.565	105.087	101.034	N/A	N/A	4.052	PK

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: 2018/01/29 - 20:21
Limit: FCC_Part15.209_RE(3m)	Engineer: Kevin Ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Horizontal
EUT: Firebird FPV	Power: By Battery
Test Mode: Transmit by 802.11n-HT20 at channel 5180MHz Ant A	

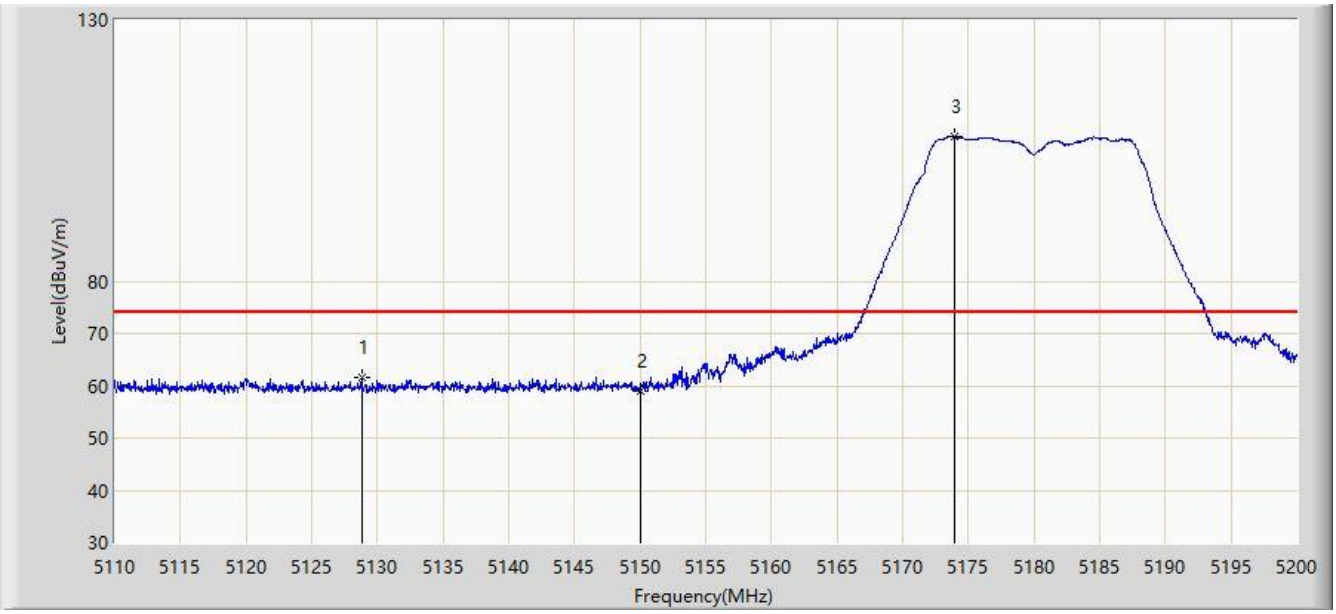


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5119.900	46.795	42.620	-7.205	54.000	4.175	AV
2			5150.000	45.818	41.649	-8.182	54.000	4.170	AV
3		*	5174.755	95.230	91.143	N/A	N/A	4.088	AV

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

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

Site: AC1	Time: 2018/01/29 - 20:21
Limit: FCC_Part15.209_RE(3m)	Engineer: Kevin Ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Vertical
EUT: Firebird FPV	Power: By Battery
Test Mode: Transmit by 802.11n-HT20 at channel 5180MHz Ant A	

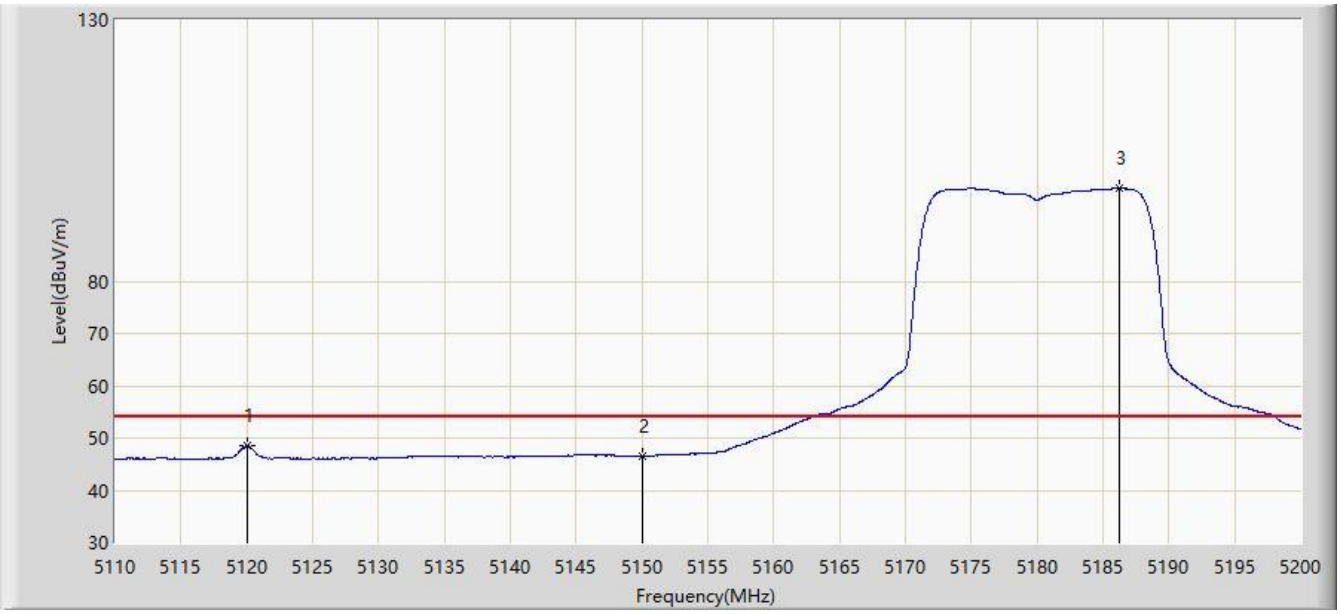


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5128.810	61.700	57.525	-12.300	74.000	4.175	PK
2			5150.000	58.909	54.740	-15.091	74.000	4.170	PK
3		*	5173.900	107.682	103.592	N/A	N/A	4.091	PK

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: 2018/01/29 - 20:23
Limit: FCC_Part15.209_RE(3m)	Engineer: Kevin Ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Vertical
EUT: Firebird FPV	Power: By Battery
Test Mode: Transmit by 802.11n-HT20 at channel 5180MHz Ant A	

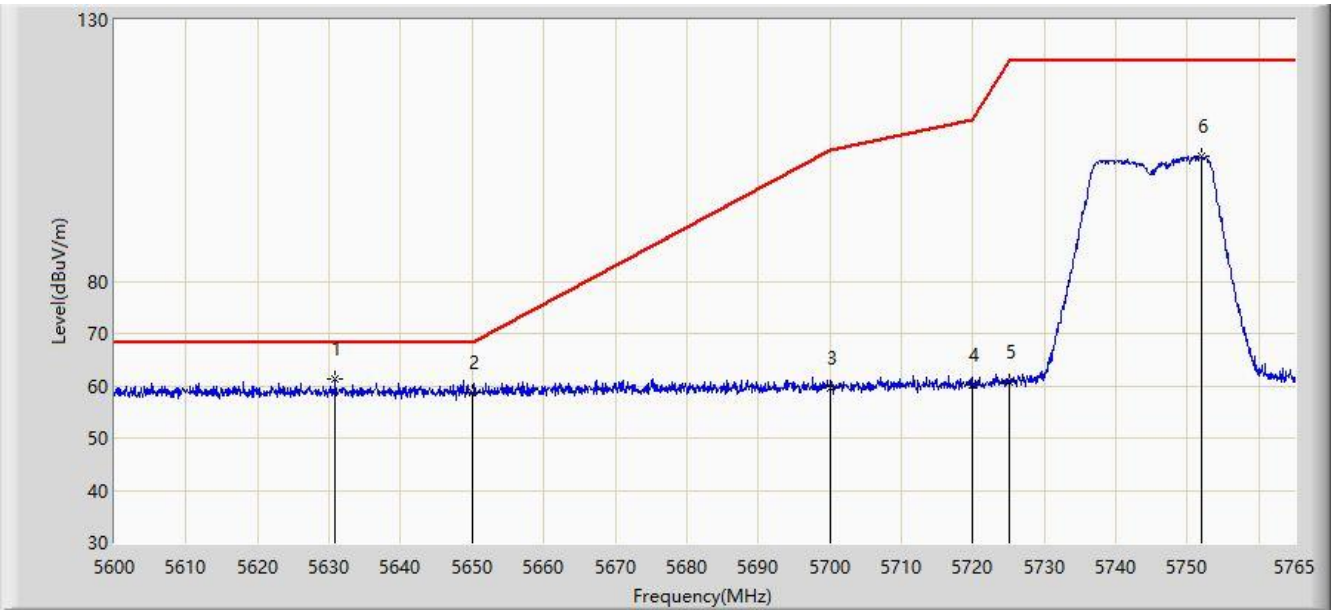


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5120.035	48.470	44.295	-5.530	54.000	4.175	AV
2			5150.000	46.547	42.378	-7.453	54.000	4.170	AV
3		*	5186.230	97.858	93.811	N/A	N/A	4.047	AV

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

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

Site: AC1	Time: 2018/01/29 - 20:24
Limit: FCC_Part15.407_RE(3m)	Engineer: Kevin Ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Horizontal
EUT: Firebird FPV	Power: By Battery
Test Mode: Transmit by 802.11n-HT20 at channel 5745MHz Ant A	

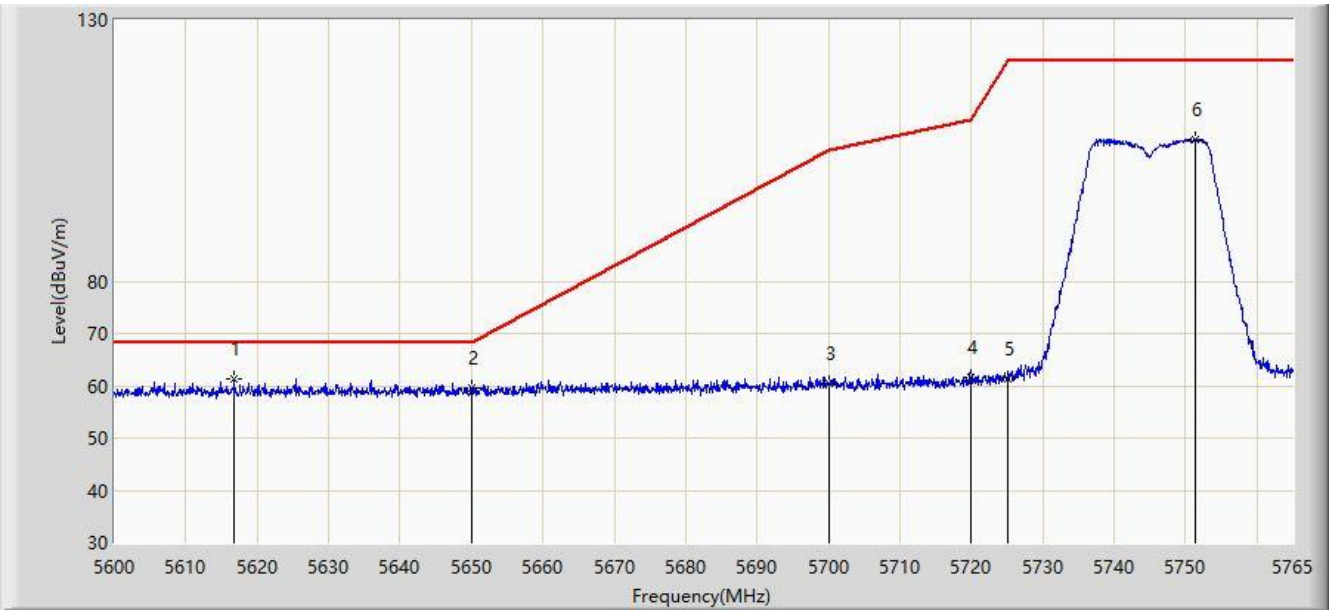


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5630.855	61.209	56.597	-6.991	68.200	4.612	PK
2			5650.000	58.754	54.083	-9.446	68.200	4.671	PK
3			5700.000	59.650	54.772	-45.550	105.200	4.878	PK
4			5720.000	60.030	55.033	-50.770	110.800	4.997	PK
5			5725.000	60.712	55.683	-61.488	122.200	5.029	PK
6			5751.882	103.784	98.590	N/A	N/A	5.194	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: 2018/01/29 - 20:26
Limit: FCC_Part15.407_RE(3m)	Engineer: Kevin Ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Vertical
EUT: Firebird FPV	Power: By Battery
Test Mode: Transmit by 802.11n-HT20 at channel 5745MHz Ant A	

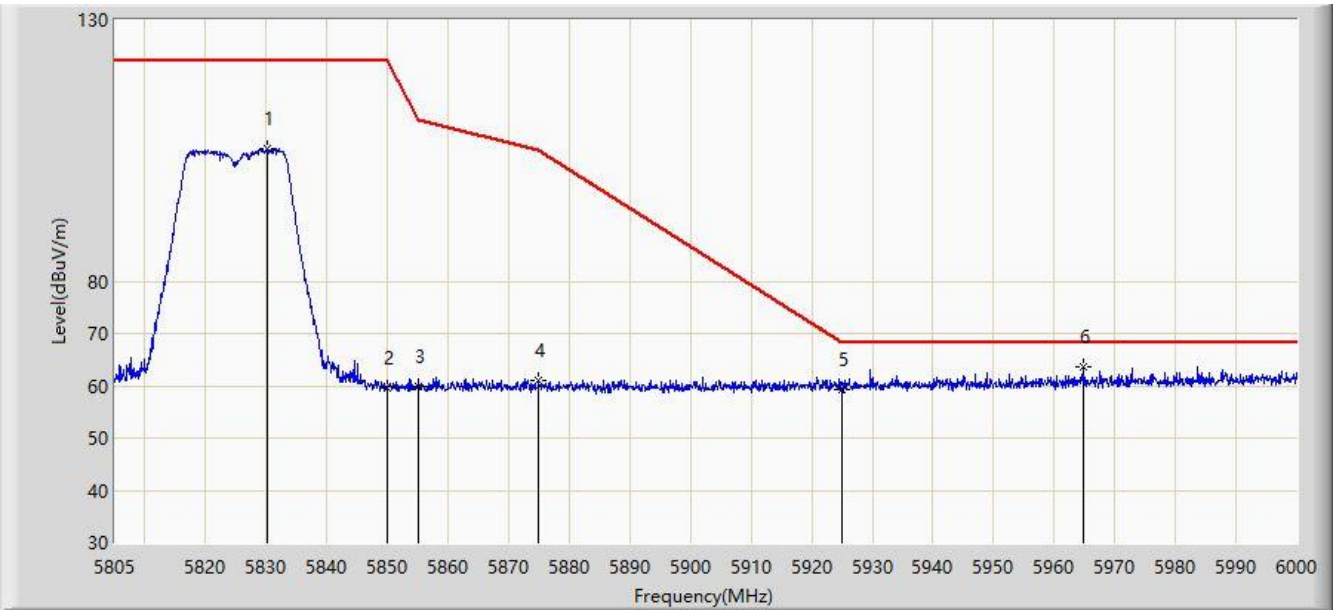


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5616.748	61.248	56.677	-6.952	68.200	4.572	PK
2			5650.000	59.501	54.830	-8.699	68.200	4.671	PK
3			5700.000	60.411	55.533	-44.789	105.200	4.878	PK
4			5720.000	61.530	56.533	-49.270	110.800	4.997	PK
5			5725.000	61.339	56.310	-60.861	122.200	5.029	PK
6			5751.388	107.236	102.045	N/A	N/A	5.191	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: 2018/01/29 - 20:28
Limit: FCC_Part15.407_RE(3m)	Engineer: Kevin Ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Horizontal
EUT: Firebird FPV	Power: By Battery
Test Mode: Transmit by 802.11n-HT20 at channel 5825MHz Ant A	

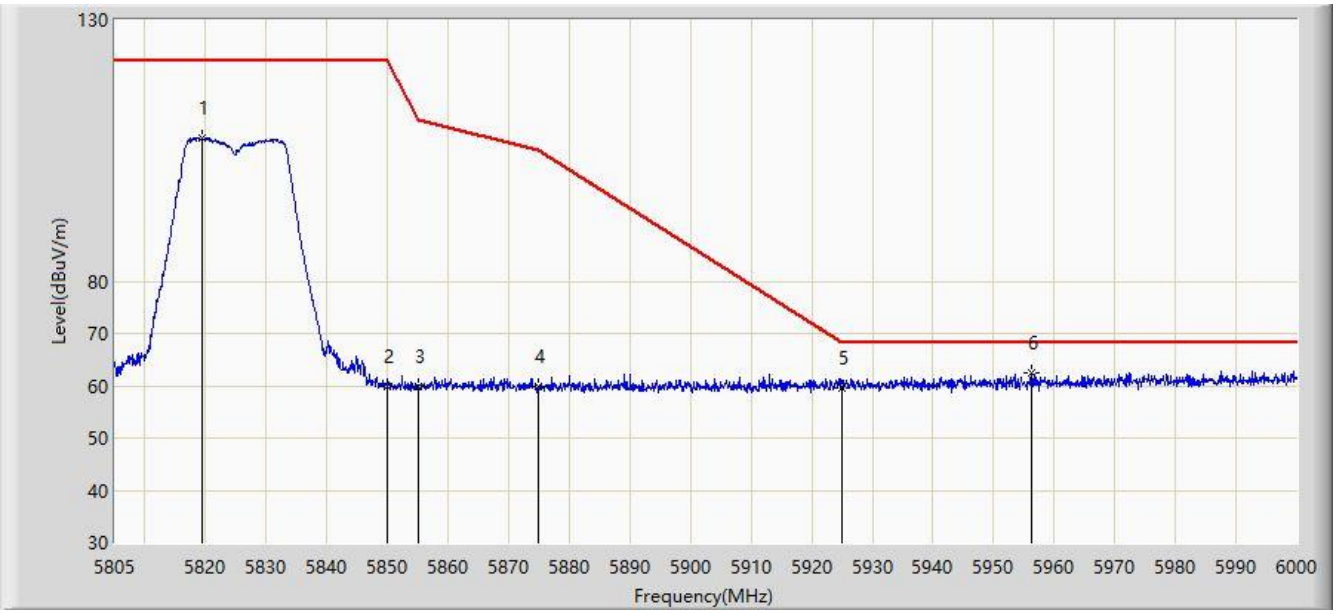


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5830.252	105.331	99.712	N/A	N/A	5.619	PK
2			5850.000	59.536	53.810	-62.664	122.200	5.726	PK
3			5855.000	59.755	54.009	-51.045	110.800	5.746	PK
4			5875.000	61.112	55.292	-44.088	105.200	5.820	PK
5			5925.000	59.178	53.212	-9.022	68.200	5.967	PK
6		*	5964.705	63.640	57.588	-4.560	68.200	6.053	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: 2018/01/29 - 20:30
Limit: FCC_Part15.407_RE(3m)	Engineer: Kevin Ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Vertical
EUT: Firebird FPV	Power: By Battery
Test Mode: Transmit by 802.11n-HT20 at channel 5825MHz Ant A	

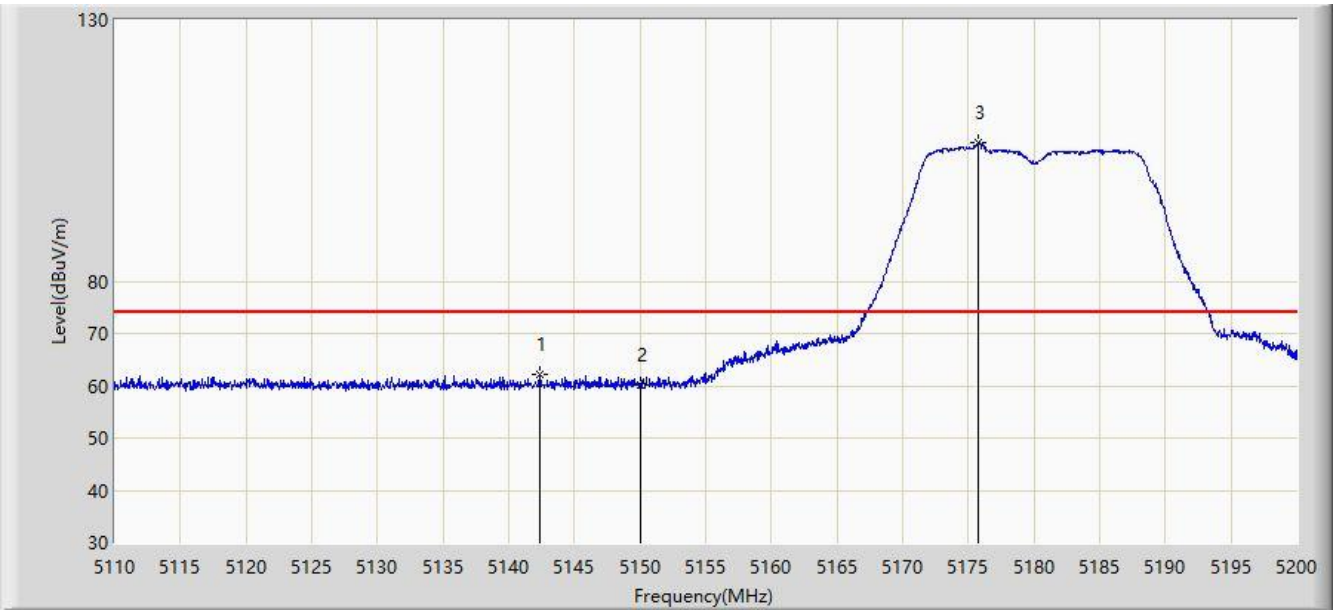


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5819.333	107.300	101.745	N/A	N/A	5.554	PK
2			5850.000	59.736	54.010	-62.464	122.200	5.726	PK
3			5855.000	59.727	53.981	-51.073	110.800	5.746	PK
4			5875.000	59.946	54.126	-45.254	105.200	5.820	PK
5			5925.000	59.675	53.709	-8.525	68.200	5.967	PK
6		*	5956.223	62.555	56.518	-5.645	68.200	6.037	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: 2018/01/29 - 21:17
Limit: FCC_Part15.209_RE(3m)	Engineer: Kevin Ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Horizontal
EUT: Firebird FPV	Power: By Battery
Test Mode: Transmit by 802.11n-HT20 at channel 5180MHz Ant A + B	

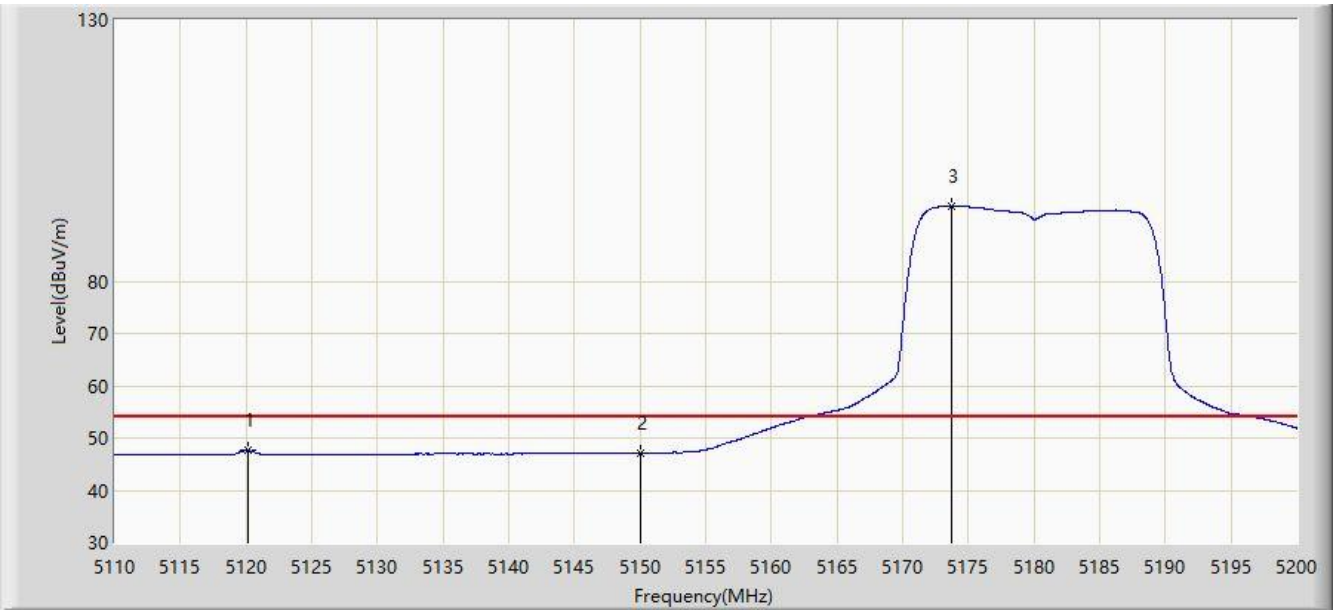


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5142.400	62.188	58.012	-11.812	74.000	4.175	PK
2			5150.000	60.038	55.869	-13.962	74.000	4.170	PK
3		*	5175.745	106.435	102.351	N/A	N/A	4.084	PK

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: 2018/01/29 - 21:22
Limit: FCC_Part15.209_RE(3m)	Engineer: Kevin Ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Horizontal
EUT: Firebird FPV	Power: By Battery
Test Mode: Transmit by 802.11n-HT20 at channel 5180MHz Ant A + B	

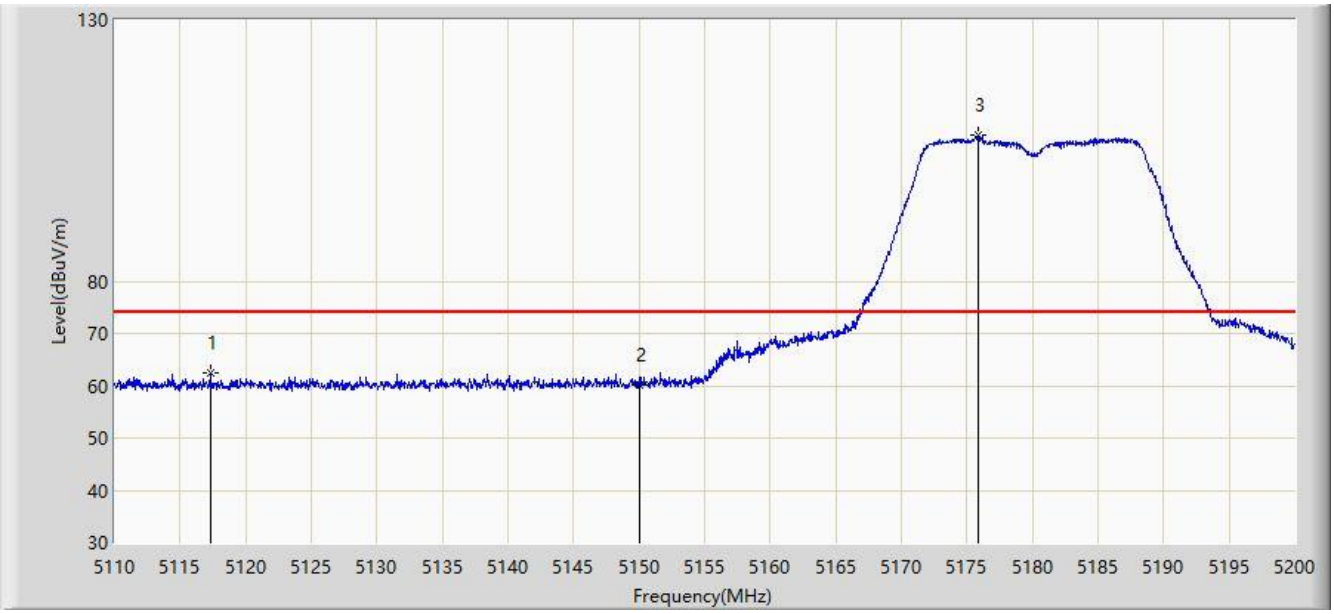


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5120.170	47.625	43.450	-6.375	54.000	4.175	AV
2			5150.000	47.052	42.883	-6.948	54.000	4.170	AV
3		*	5173.765	94.372	90.281	N/A	N/A	4.091	AV

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

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

Site: AC1	Time: 2018/01/29 - 21:23
Limit: FCC_Part15.209_RE(3m)	Engineer: Kevin Ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Vertical
EUT: Firebird FPV	Power: By Battery
Test Mode: Transmit by 802.11n-HT20 at channel 5180MHz Ant A + B	

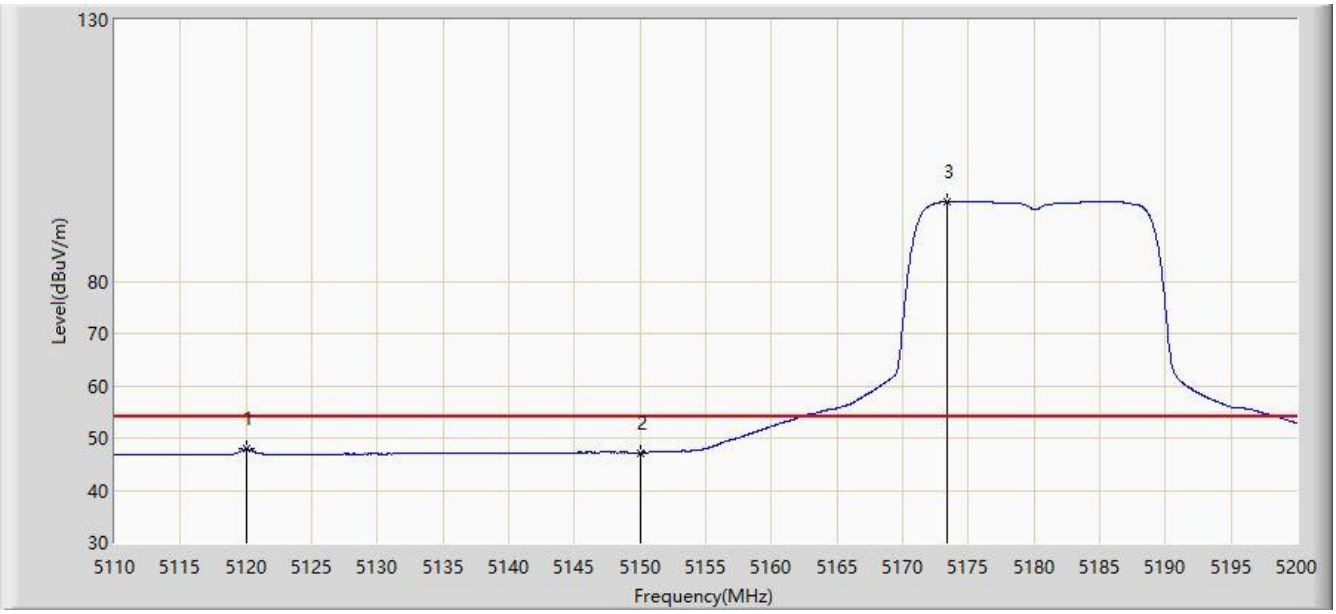


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5117.290	62.532	58.357	-11.468	74.000	4.174	PK
2			5150.000	60.229	56.060	-13.771	74.000	4.170	PK
3		*	5175.835	107.877	103.793	N/A	N/A	4.084	PK

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: 2018/01/29 - 21:25
Limit: FCC_Part15.209_RE(3m)	Engineer: Kevin Ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Vertical
EUT: Firebird FPV	Power: By Battery
Test Mode: Transmit by 802.11n-HT20 at channel 5180MHz Ant A + B	

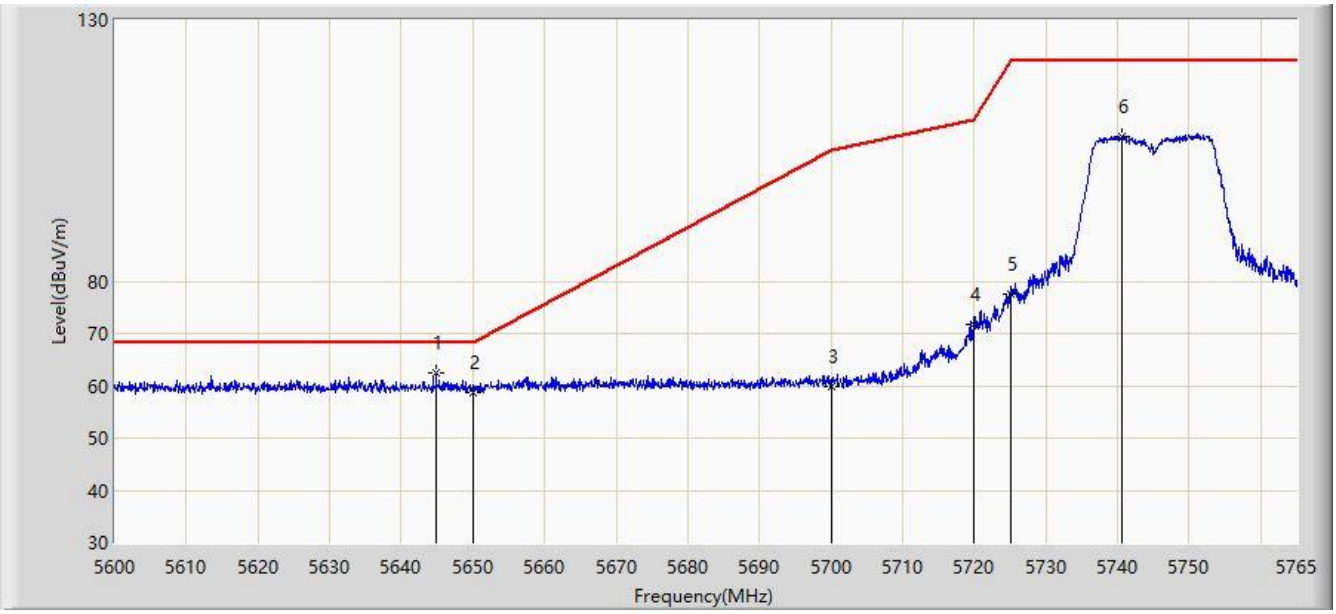


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5120.035	47.846	43.671	-6.154	54.000	4.175	AV
2			5150.000	47.215	43.046	-6.785	54.000	4.170	AV
3		*	5173.360	95.233	91.141	N/A	N/A	4.092	AV

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

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

Site: AC1	Time: 2018/01/29 - 21:26
Limit: FCC_Part15.407_RE(3m)	Engineer: Kevin Ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Horizontal
EUT: Firebird FPV	Power: By Battery
Test Mode: Transmit by 802.11n-HT20 at channel 5745MHz Ant A + B	

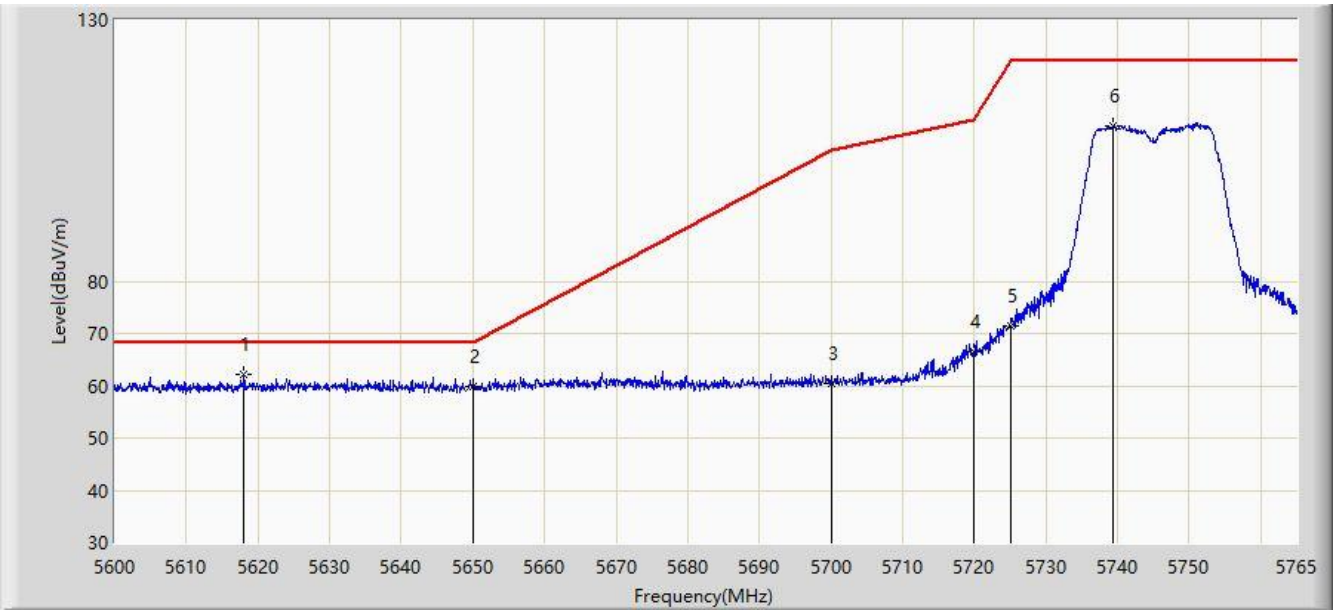


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5644.880	62.403	57.749	-5.797	68.200	4.654	PK
2			5650.000	58.766	54.095	-9.434	68.200	4.671	PK
3			5700.000	59.969	55.091	-45.231	105.200	4.878	PK
4			5720.000	71.742	66.745	-39.058	110.800	4.997	PK
5			5725.000	77.579	72.550	-44.621	122.200	5.029	PK
6			5740.663	107.806	102.677	N/A	N/A	5.129	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: 2018/01/29 - 21:35
Limit: FCC_Part15.407_RE(3m)	Engineer: Kevin Ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Vertical
EUT: Firebird FPV	Power: By Battery
Test Mode: Transmit by 802.11n-HT20 at channel 5745MHz Ant A + B	

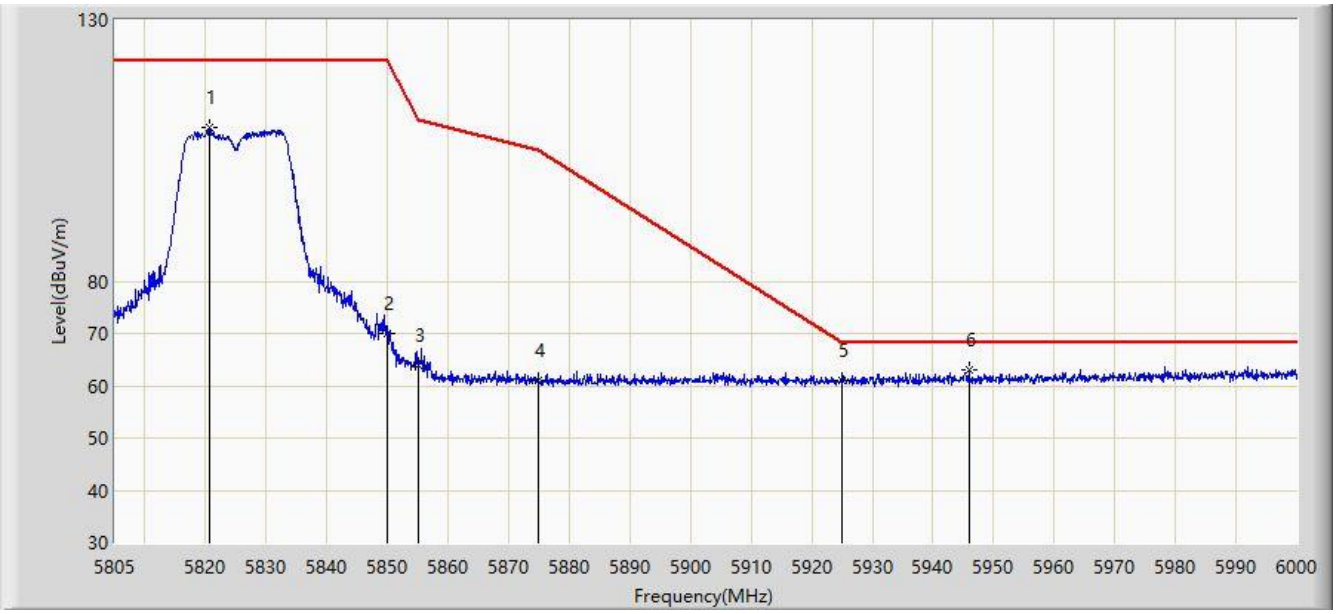


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5618.067	62.179	57.604	-6.021	68.200	4.575	PK
2			5650.000	59.923	55.252	-8.277	68.200	4.671	PK
3			5700.000	60.352	55.474	-44.848	105.200	4.878	PK
4			5720.000	66.389	61.392	-44.411	110.800	4.997	PK
5			5725.000	71.523	66.494	-50.677	122.200	5.029	PK
6			5739.260	109.702	104.582	N/A	N/A	5.120	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: 2018/01/29 - 21:37
Limit: FCC_Part15.407_RE(3m)	Engineer: Kevin Ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Horizontal
EUT: Firebird FPV	Power: By Battery
Test Mode: Transmit by 802.11n-HT20 at channel 5825MHz Ant A + B	

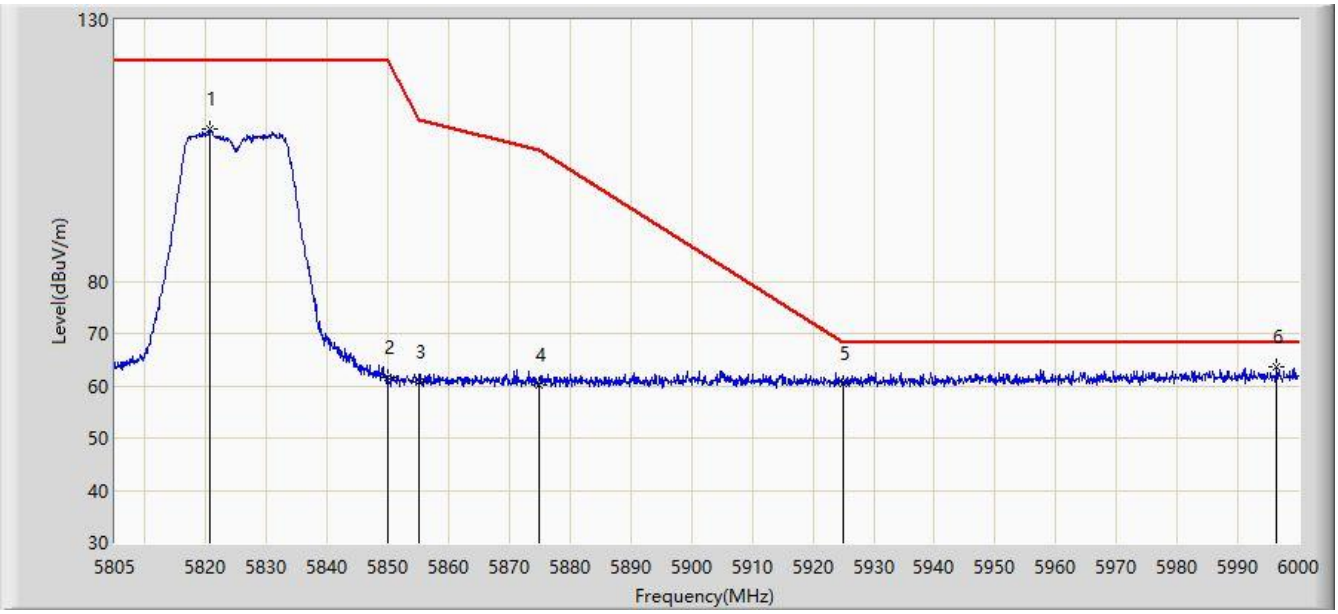


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5820.600	109.423	103.861	N/A	N/A	5.562	PK
2			5850.000	69.955	64.229	-52.245	122.200	5.726	PK
3			5855.000	63.904	58.158	-46.896	110.800	5.746	PK
4			5875.000	61.138	55.318	-44.062	105.200	5.820	PK
5			5925.000	61.054	55.088	-7.146	68.200	5.967	PK
6		*	5945.985	63.162	57.144	-5.038	68.200	6.018	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: 2018/01/29 - 21:49
Limit: FCC_Part15.407_RE(3m)	Engineer: Kevin Ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Vertical
EUT: Firebird FPV	Power: By Battery
Test Mode: Transmit by 802.11n-HT20 at channel 5825MHz Ant A + B	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5820.600	109.188	103.626	N/A	N/A	5.562	PK
2			5850.000	61.602	55.876	-60.598	122.200	5.726	PK
3			5855.000	60.856	55.110	-49.944	110.800	5.746	PK
4			5875.000	60.102	54.282	-45.098	105.200	5.820	PK
5			5925.000	60.573	54.607	-7.627	68.200	5.967	PK
6		*	5996.393	63.726	57.622	-4.474	68.200	6.105	PK

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

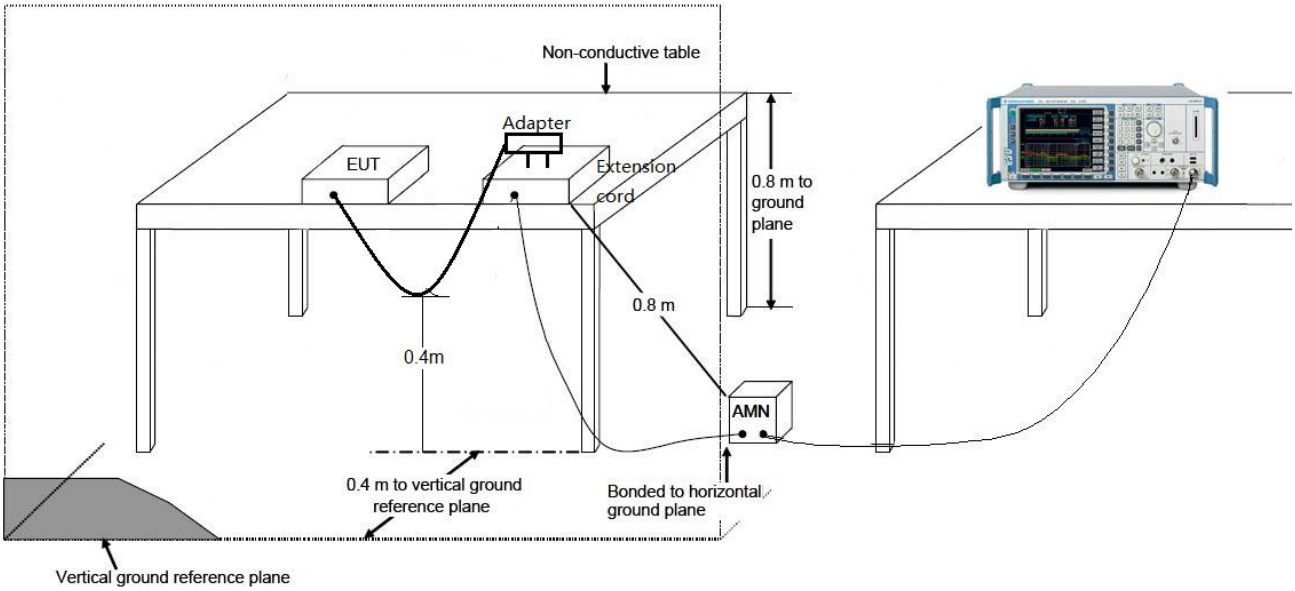
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

7.9. AC Conducted Emissions Measurement

7.9.1.Test Limit

FCC 15.207 Limits		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
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.		

7.9.2.Test Setup



7.9.3.Test Result

The EUT is powered by battery, so this requirement does not apply.

8. CONCLUSION

The data collected relate only the item(s) tested and show that the **Firebird FPV** is in compliance with Part 15E of the FCC Rules and ISED Rules.

The End