

5.7 FREQUENCY STABILITY

Test Requirement: FCC 47 CFR Part 15 Subpart E Section 15.407 (g)
RSS-Gen Issue 4, Section 6.11

Test Method: ANSI C63.10-2013

Limit: The frequency of the carrier signal shall be maintained within band of operation.

Test Procedure:

a) To ensure emission at the band edge is maintained within the authorized band, those values shall be measured by radiation emissions at upper and lower frequency points, and finally compensated by frequency deviation as procedures below.

b) The EUT was operated at the maximum output power, and connected to the spectrum analyzer, which is set to maximum hold function and peak detector. The peak value of the power envelope was measured and noted. The upper and lower frequency points were respectively measured relatively 10 dB lower than the measured peak value.

c) The frequency deviation was calculated by adding the upper frequency point and the lower frequency point divided by two. Those detailed values of frequency deviation are provided in table below.

EUT Operation Condition:

- Keep the EUT transmit at un-modulation mode to frequency stability
- Keep the EUT in transmitting mode with all kind of modulation and all kind of data rate.

Test Setup: Refer to section 4.5.3 for details.

Instruments Used: Refer to section 3 for details

Test Mode: Transmitter mode

Test Results: Pass

Test Data:

Frequency Stability Versus Temp.			
Operation Frequency: 5180 MHz			
Temp. (°C)	Voltage	Measured Frequency (MHz)	Frequency Drift (ppm)
50	VN	5180.017315	3.342664
40		5180.019350	3.735425
30		5180.017443	3.367375
20		5180.016224	3.131950
10		5180.016516	3.188320
0		5180.015141	2.922876
-10		5180.014269	2.754537
-20		5180.017840	3.444015
Frequency Stability Versus Voltage			
Operation Frequency: 5180 MHz			
Temp.	Voltage	Measured Frequency (MHz)	Frequency Drift (ppm)
TN	VL	5180.015763	3.043050
	VN	5180.016224	3.131950
	VH	5180.018932	3.654730

Frequency Stability Versus Temp.			
Operation Frequency: 5320 MHz			
Temp. (°C)	Voltage	Measured Frequency (MHz)	Frequency Drift (ppm)
50	VN	5320.008764	1.647440
40		5320.010031	1.885616
30		5320.010983	2.064539
20		5320.009685	1.820414
10		5320.006431	1.208916
0		5320.012290	2.310168
-10		5320.012681	2.383574
-20		5320.005211	0.979563

Frequency Stability Versus Voltage			
Operation Frequency: 5320 MHz			
Temp.	Voltage	Measured Frequency (MHz)	Frequency Drift (ppm)
TN	VL	5320.005218	0.980811
	VN	5320.013161	2.473953
	VH	5320.006330	1.189915

Frequency Stability Versus Temp.			
Operation Frequency: 5500 MHz			
Temp. (°C)	Voltage	Measured Frequency (MHz)	Frequency Drift (ppm)
50	VN	5500.010378	1.886977
40		5500.012983	2.360549
30		5500.011495	2.090001
20		5500.011959	2.174409
10		5500.013835	2.515383
0		5500.013034	2.369744
-10		5500.006932	1.260353
-20		5500.006342	1.153173

Frequency Stability Versus Voltage			
Operation Frequency: 5500 MHz			
Temp.	Voltage	Measured Frequency (MHz)	Frequency Drift (ppm)
TN	VL	5500.013165	2.393631
	VN	5500.008680	1.578186
	VH	5500.011111	2.020217

Frequency Stability Versus Temp.			
Operation Frequency: 5745 MHz			
Temp. (°C)	Voltage	Measured Frequency	Frequency Drift
		(MHz)	(ppm)
50	VN	5745.035553	6.188425
40		5745.036292	6.317058
30		5745.035425	6.166144
20		5745.035998	6.265970
10		5745.035517	6.182245
0		5745.035742	6.221410
-10		5745.036210	6.302872
-20		5745.036377	6.331854

Frequency Stability Versus Voltage			
Operation Frequency: 5500 MHz			
Temp.	Voltage	Measured Frequency	Frequency Drift
		(MHz)	(ppm)
TN	VL	5745.036505	6.354134
	VN	5745.035998	6.265970
	VH	5745.036377	6.331854

The Maximum value is 6.331854 ppm.

It is proved that the frequency stability such that an emission is maintained within the band of operation under all condition.

5.8 RADIATED EMISSIONS AND BAND EDGE MEASUREMENT

Test Requirement: FCC 47 CFR Part 15 Subpart E Section 15.407 (b)(1)(2)(3)(4)(6)
 FCC 47 CFR Part 15 Subpart C Section 15.209/205
 RSS-247 Issue 2 Section 6.2.1.2/6.2.2.2/6.2.3.2/6.2.4.2

Test Method: KDB 789033 D02 v02r01 Section G.3, G.4, G.5, and G.6

Receiver Setup:

Frequency	RBW
0.009 MHz-0.150 MHz	200/300 kHz
0.150 MHz -30 MHz	9/10 kHz
30 MHz-1 GHz	100/120 kHz
Above 1 GHz	1 MHz

Limits:

1. Limits of Radiated Emission and Band edge Measurement

Radiated emissions that fall in the restricted bands must comply with the general emissions limits in 15.209(a) as below table. Other emissions shall be at least 20 dB below the highest level of the desired power.

Frequency	Field strength (microvolt/meter)	Limit (dBµV/m)	Remark	Measurement distance (m)
0.009 MHz-0.490 MHz	2400/F(kHz)	--	--	300
0.490 MHz-1.705 MHz	24000/F(kHz)	--	--	30
1.705 MHz-30 MHz	30	--	--	30
30 MHz-88 MHz	100	40.0	Quasi-peak	3
88 MHz-216 MHz	150	43.5	Quasi-peak	3
216 MHz-960 MHz	200	46.0	Quasi-peak	3
960MHz-1GHz	500	54.0	Quasi-peak	3
Above 1 GHz	500	54.0	Average	3

Remark:

- a. The lower limit shall apply at the transition frequencies.
- b. Emission level (dBuV/m) = 20 log Emission level (uV/m).
- c. For frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20 dB under any condition of modulation.

2. Limits of Unwanted Emission Out of the Restricted Bands

Applicable To	Limit	
789033 D02 General U-NII Test Procedures New Rules v01r04	Field Strength at 3 m	
	PK: 74 (dBμV/m)	AV: 54 (dBμV/m)
Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
RSS-247 Issue 2 Section 6.2.1.2	PK: -27 (dBm/MHz)	PK: 74 (dBμV/m)
RSS-247 Issue 2 Section 6.2.2.2	PK: -27 (dBm/MHz)	PK: 74 (dBμV/m)
RSS-247 Issue 2 Section 6.2.3.2	PK: -27 (dBm/MHz)	PK: 68.2 (dBμV/m)
RSS-247 Issue 2 Section 6.2.4.2	27 dBm/MHz at frequencies from the band edges decreasing linearly to 15.6 dBm/MHz at 5 MHz above or below the band edges;	PK: 68.2 (dBμV/m)
	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;	
	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;	
	-27 dBm/MHz at frequencies more than 75 MHz above or below the band edges.	

Test Setup: Refer to section 4.5.1 for details.

Test Procedures:

- The EUT was placed on the top of a rotating table 0.8 meters (for below 1 GHz) / 1.5 meters (for above 1 GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- The test-receiver system was set to peak and average detected function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Remark:

- The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1 GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for RMS Average (Duty cycle < 98 %) for Average detection (AV) at frequency above 1 GHz, then the measurement results was added to a correction factor (10 log(1/duty cycle)).
- The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz (Duty cycle ≥ 98 %) or ≥ 1/T(duty cycle is < 98%) for Average detection (AV) at frequency above 1 GHz.
- All modes of operation were investigated and the worst-case emissions are reported.

Equipment Used: Refer to section 3 for details.

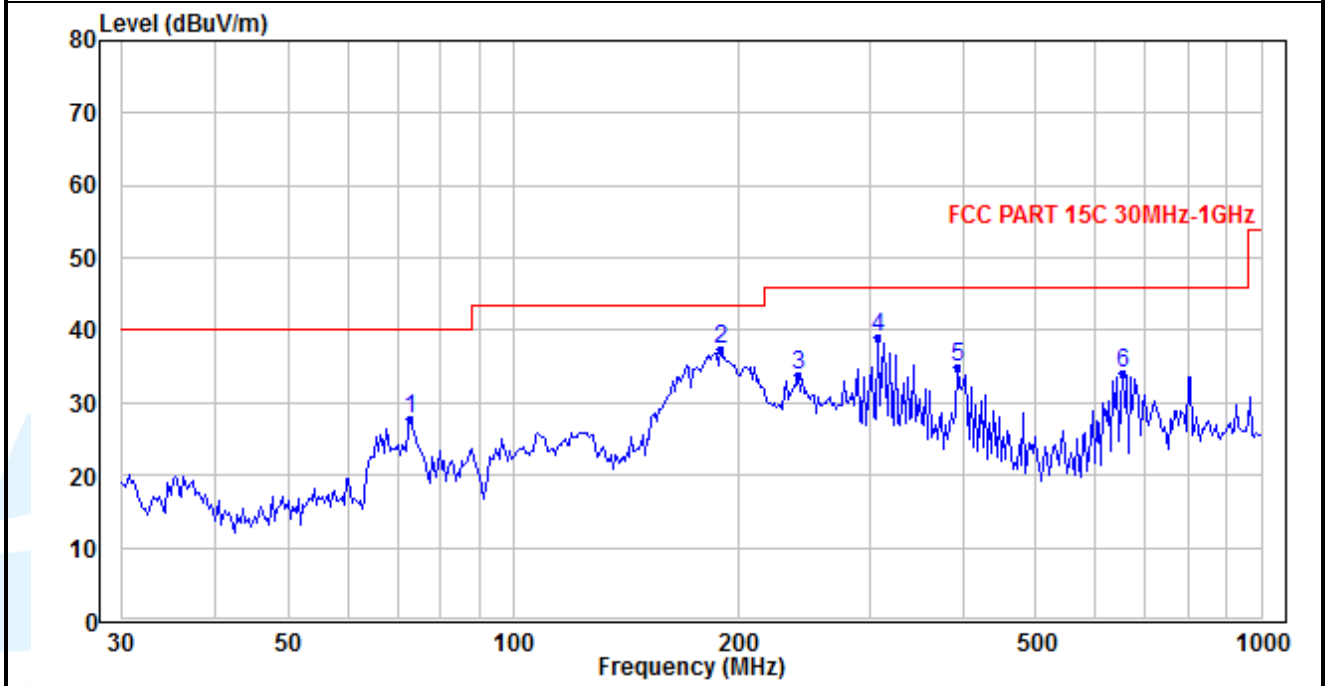
Test Result: Pass

The measurement data as follows:

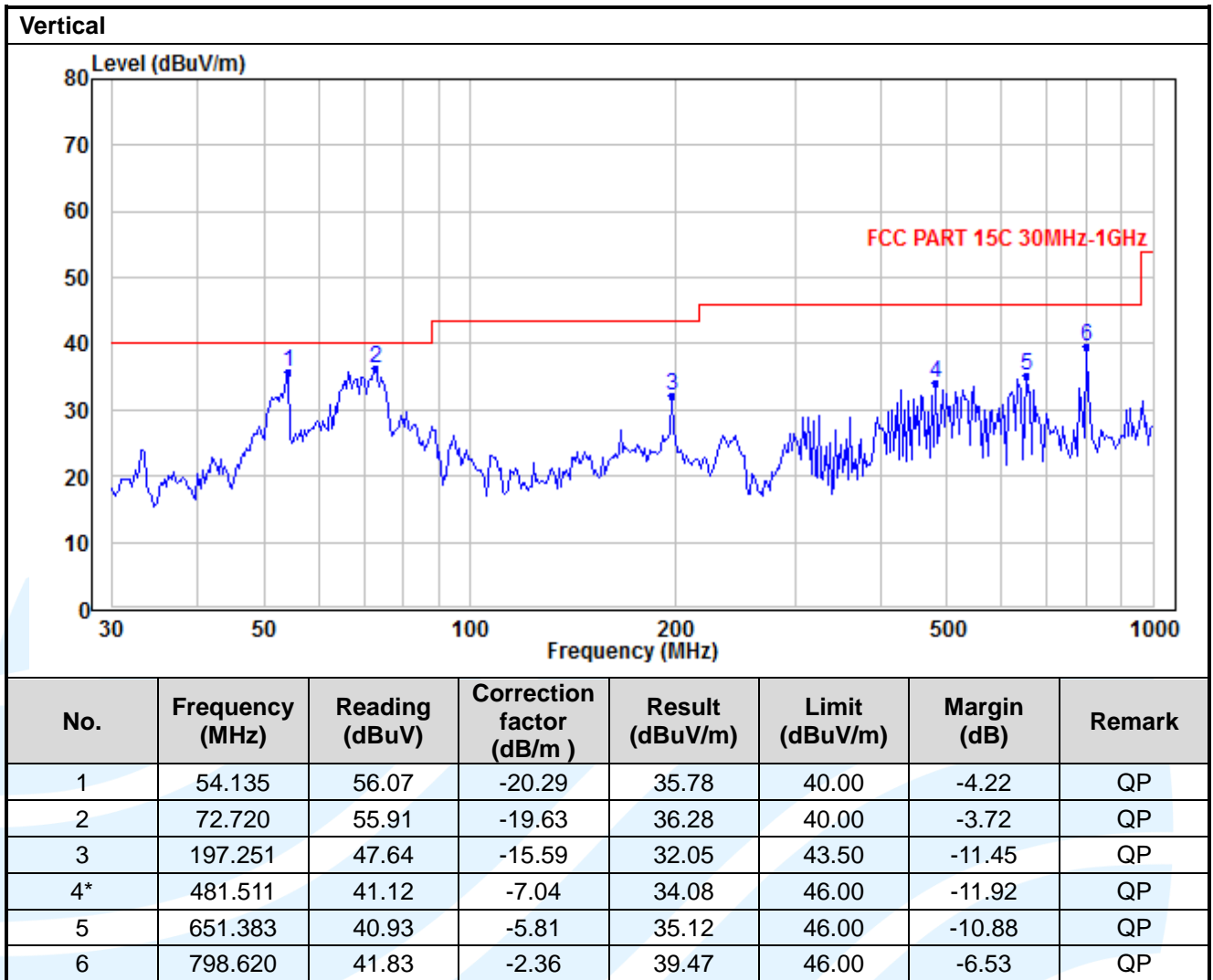
Radiated Emission Test Data (9 KHz ~ 30 MHz):
 The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

Radiated Emission Test Data (30 MHz ~ 1 GHz Worst Case):
IEEE 802.11a_Channel 116

Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correction factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1*	72.720	47.41	-19.75	27.66	40.00	-12.34	QP
2	189.108	53.38	-15.97	37.41	43.50	-6.09	QP
3	240.144	47.04	-13.22	33.82	46.00	-12.18	QP
4	307.105	50.02	-10.99	39.03	46.00	-6.97	QP
5	392.738	43.44	-8.57	34.87	46.00	-11.13	QP
6	651.383	38.12	-3.92	34.20	46.00	-11.80	QP



Radiated Emission Test Data (Above 1GHz):

SISO_Chain 0_IEEE 802.11a_Channel 36

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10360.00	53.90	74.00	-20.10	Peak	Horizontal
2	10360.00	39.30	54.00	-14.70	Average	Horizontal
3	15540.00	51.59	74.00	-22.41	Peak	Horizontal
4	15540.00	38.82	54.00	-15.18	Average	Horizontal
5	10360.00	54.48	74.00	-19.52	Peak	Vertical
6	10360.00	38.74	54.00	-15.26	Average	Vertical
7	15540.00	50.61	74.00	-23.39	Peak	Vertical
8	15540.00	38.24	54.00	-15.76	Average	Vertical

SISO_Chain 0_IEEE 802.11a_Channel 44

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10440.00	59.19	74.00	-14.81	Peak	Horizontal
2	10440.00	43.77	54.00	-10.23	Average	Horizontal
3	15660.00	52.37	74.00	-21.63	Peak	Horizontal
4	15660.00	38.61	54.00	-15.39	Average	Horizontal
5	10440.00	62.13	74.00	-11.87	Peak	Vertical
6	10440.00	43.47	54.00	-10.53	Average	Vertical
7	15660.00	50.57	74.00	-23.43	Peak	Vertical
8	15660.00	38.03	54.00	-15.97	Average	Vertical

SISO_Chain 0_IEEE 802.11a_Channel 48

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10480.00	58.47	74.00	-15.53	Peak	Horizontal
2	10480.00	41.86	54.00	-12.14	Average	Horizontal
3	15720.00	51.17	74.00	-22.83	Peak	Horizontal
4	15720.00	38.60	54.00	-15.40	Average	Horizontal
5	10480.00	58.99	74.00	-15.01	Peak	Vertical
6	10480.00	41.71	54.00	-12.29	Average	Vertical
7	15720.00	51.03	74.00	-22.97	Peak	Vertical
8	15720.00	38.19	54.00	-15.81	Average	Vertical

SISO_Chain 0_IEEE 802.11a_Channel 52						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10520.00	60.62	74.00	-13.38	Peak	Horizontal
2	10520.00	42.28	54.00	-11.72	Average	Horizontal
3	15780.00	51.30	74.00	-22.70	Peak	Horizontal
4	15780.00	38.42	54.00	-15.58	Average	Horizontal
5	10520.00	58.45	74.00	-15.55	Peak	Vertical
6	10520.00	41.32	54.00	-12.68	Average	Vertical
7	15780.00	50.68	74.00	-23.32	Peak	Vertical
8	15780.00	38.36	54.00	-15.64	Average	Vertical

SISO_Chain 0_IEEE 802.11a_Channel 60						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10600.00	57.11	74.00	-16.89	Peak	Horizontal
2	10600.00	41.12	54.00	-12.88	Average	Horizontal
3	15900.00	52.31	74.00	-21.69	Peak	Horizontal
4	15900.00	39.14	54.00	-14.86	Average	Horizontal
5	10600.00	57.58	74.00	-16.42	Peak	Vertical
6	10600.00	40.97	54.00	-13.03	Average	Vertical
7	15900.00	51.75	74.00	-22.25	Peak	Vertical
8	15900.00	39.15	54.00	-14.85	Average	Vertical

SISO_Chain 0_IEEE 802.11a_Channel 64						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10640.00	55.88	74.00	-18.12	Peak	Horizontal
2	10640.00	39.94	54.00	-14.06	Average	Horizontal
3	15960.00	54.24	74.00	-19.76	Peak	Horizontal
4	15960.00	39.70	54.00	-14.30	Average	Horizontal
5	10640.00	55.80	74.00	-18.20	Peak	Vertical
6	10640.00	39.15	54.00	-14.85	Average	Vertical
7	15960.00	53.98	74.00	-20.02	Peak	Vertical
8	15960.00	39.47	54.00	-14.53	Average	Vertical

SISO_Chain 0_IEEE 802.11a_Channel 100						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11000.00	54.50	74.00	-19.50	Peak	Horizontal
2	11000.00	40.40	54.00	-13.60	Average	Horizontal
3	16500.00	51.64	74.00	-22.36	Peak	Horizontal
4	16500.00	38.40	54.00	-15.60	Average	Horizontal
5	11000.00	54.78	74.00	-19.22	Peak	Vertical
6	11000.00	39.90	54.00	-14.10	Average	Vertical
7	16500.00	51.31	74.00	-22.69	Peak	Vertical
8	16500.00	37.85	54.00	-16.15	Average	Vertical

SISO_Chain 0_IEEE 802.11a_Channel 116						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11160.00	59.59	74.00	-14.41	Peak	Horizontal
2	11160.00	39.49	54.00	-14.51	Average	Horizontal
3	16740.00	52.98	74.00	-21.02	Peak	Horizontal
4	16740.00	40.16	54.00	-13.84	Average	Horizontal
5	11160.00	57.57	74.00	-16.43	Peak	Vertical
6	11160.00	38.90	54.00	-15.10	Average	Vertical
7	16740.00	51.24	74.00	-22.76	Peak	Vertical
8	16740.00	38.15	54.00	-15.85	Average	Vertical

SISO_Chain 0_IEEE 802.11a_Channel 140						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11400.00	61.07	74.00	-12.93	Peak	Horizontal
2	11400.00	44.25	54.00	-9.75	Average	Horizontal
3	17100.00	52.90	74.00	-21.10	Peak	Horizontal
4	17100.00	39.66	54.00	-14.34	Average	Horizontal
5	11400.00	58.72	74.00	-15.28	Peak	Vertical
6	11400.00	42.14	54.00	-11.86	Average	Vertical
7	17100.00	50.81	74.00	-23.19	Peak	Vertical
8	17100.00	38.33	54.00	-15.67	Average	Vertical

SISO_Chain 0_IEEE 802.11a_Channel 149						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11490.00	58.35	74.00	-15.65	Peak	Horizontal
2	11490.00	40.01	54.00	-13.99	Average	Horizontal
3	17235.00	53.81	74.00	-20.19	Peak	Horizontal
4	17235.00	41.47	54.00	-12.53	Average	Horizontal
5	11490.00	60.02	74.00	-13.98	Peak	Vertical
6	11490.00	39.49	54.00	-14.51	Average	Vertical
7	17235.00	51.72	74.00	-22.28	Peak	Vertical
8	17235.00	38.73	54.00	-15.27	Average	Vertical

SISO_Chain 0_IEEE 802.11a_Channel 157						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11570.00	56.48	74.00	-17.52	Peak	Horizontal
2	11570.00	40.17	54.00	-13.83	Average	Horizontal
3	17355.00	56.28	74.00	-17.72	Peak	Horizontal
4	17355.00	41.53	54.00	-12.47	Average	Horizontal
5	11570.00	55.85	74.00	-18.15	Peak	Vertical
6	11570.00	39.09	54.00	-14.91	Average	Vertical
7	17355.00	53.58	74.00	-20.42	Peak	Vertical
8	17355.00	39.72	54.00	-14.28	Average	Vertical

SISO_Chain 0_IEEE 802.11a_Channel 165						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11650.00	63.46	74.00	-10.54	Peak	Horizontal
2	11650.00	44.91	54.00	-9.09	Average	Horizontal
3	17475.00	57.00	74.00	-17.00	Peak	Horizontal
4	17475.00	42.13	54.00	-11.87	Average	Horizontal
5	11650.00	60.54	74.00	-13.46	Peak	Vertical
6	11650.00	42.41	54.00	-11.59	Average	Vertical
7	17475.00	58.49	74.00	-15.51	Peak	Vertical
8	17475.00	40.49	54.00	-13.51	Average	Vertical

SISO_Chain 1_IEEE 802.11a_Channel 36						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10360.00	50.83	74.00	-23.17	Peak	Horizontal
2	10360.00	37.72	54.00	-16.28	Average	Horizontal
3	15540.00	51.59	74.00	-22.41	Peak	Horizontal
4	15540.00	39.00	54.00	-15.00	Average	Horizontal
5	10360.00	50.00	74.00	-24.00	Peak	Vertical
6	10360.00	36.38	54.00	-17.62	Average	Vertical
7	15540.00	51.45	74.00	-22.55	Peak	Vertical
8	15540.00	38.24	54.00	-15.76	Average	Vertical

SISO_Chain 1_IEEE 802.11a_Channel 44						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10440.00	53.79	74.00	-20.21	Peak	Horizontal
2	10440.00	39.46	54.00	-14.54	Average	Horizontal
3	15660.00	51.00	74.00	-23.00	Peak	Horizontal
4	15660.00	38.79	54.00	-15.21	Average	Horizontal
5	10440.00	51.83	74.00	-22.17	Peak	Vertical
6	10440.00	38.59	54.00	-15.41	Average	Vertical
7	15660.00	50.24	74.00	-23.76	Peak	Vertical
8	15660.00	38.03	54.00	-15.97	Average	Vertical

SISO_Chain 1_IIEEE 802.11a_Channel 48						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10480.00	51.43	74.00	-22.57	Peak	Horizontal
2	10480.00	38.29	54.00	-15.71	Average	Horizontal
3	15720.00	51.34	74.00	-22.66	Peak	Horizontal
4	15720.00	38.78	54.00	-15.22	Average	Horizontal
5	10480.00	49.55	74.00	-24.45	Peak	Vertical
6	10480.00	36.83	54.00	-17.17	Average	Vertical
7	15720.00	50.95	74.00	-23.05	Peak	Vertical
8	15720.00	38.19	54.00	-15.81	Average	Vertical

SISO_Chain 1_IIEEE 802.11a_Channel 52						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10520.00	52.60	74.00	-21.40	Peak	Horizontal
2	10520.00	38.55	54.00	-15.45	Average	Horizontal
3	15780.00	51.71	74.00	-22.29	Peak	Horizontal
4	15780.00	39.13	54.00	-14.87	Average	Horizontal
5	10520.00	49.45	74.00	-24.55	Peak	Vertical
6	10520.00	36.96	54.00	-17.04	Average	Vertical
7	15780.00	50.80	74.00	-23.20	Peak	Vertical
8	15780.00	38.19	54.00	-15.81	Average	Vertical

SISO_Chain 1_IIEEE 802.11a_Channel 60						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10600.00	50.54	74.00	-23.46	Peak	Horizontal
2	10600.00	38.05	54.00	-15.95	Average	Horizontal
3	15900.00	53.64	74.00	-20.36	Peak	Horizontal
4	15900.00	40.06	54.00	-13.94	Average	Horizontal
5	10600.00	49.34	74.00	-24.66	Peak	Vertical
6	10600.00	37.11	54.00	-16.89	Average	Vertical
7	15900.00	51.95	74.00	-22.05	Peak	Vertical
8	15900.00	38.98	54.00	-15.02	Average	Vertical

SISO_Chain 1_IIEEE 802.11a_Channel 64						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10640.00	51.26	74.00	-22.74	Peak	Horizontal
2	10640.00	37.78	54.00	-16.22	Average	Horizontal
3	15960.00	52.52	74.00	-21.48	Peak	Horizontal
4	15960.00	40.06	54.00	-13.94	Average	Horizontal
5	10640.00	49.80	74.00	-24.20	Peak	Vertical
6	10640.00	36.72	54.00	-17.28	Average	Vertical
7	15960.00	51.47	74.00	-22.53	Peak	Vertical
8	15960.00	38.98	54.00	-15.02	Average	Vertical

SISO_Chain 1_IIEEE 802.11a_Channel 100						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11000.00	50.08	74.00	-23.92	Peak	Horizontal
2	11000.00	37.76	54.00	-16.24	Average	Horizontal
3	16500.00	52.77	74.00	-21.23	Peak	Horizontal
4	16500.00	39.25	54.00	-14.75	Average	Horizontal
5	11000.00	48.61	74.00	-25.39	Peak	Vertical
6	11000.00	36.56	54.00	-17.44	Average	Vertical
7	16500.00	51.23	74.00	-22.77	Peak	Vertical
8	16500.00	38.44	54.00	-15.56	Average	Vertical

SISO_Chain 1_IIEEE 802.11a_Channel 116						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11160.00	49.91	74.00	-24.09	Peak	Horizontal
2	11160.00	37.25	54.00	-16.75	Average	Horizontal
3	16740.00	52.89	74.00	-21.11	Peak	Horizontal
4	16740.00	40.16	54.00	-13.84	Average	Horizontal
5	11160.00	48.62	74.00	-25.38	Peak	Vertical
6	11160.00	36.11	54.00	-17.89	Average	Vertical
7	16740.00	52.29	74.00	-21.71	Peak	Vertical
8	16740.00	39.15	54.00	-14.85	Average	Vertical

SISO_Chain 1_IIEEE 802.11a_Channel 140						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11400.00	53.53	74.00	-20.47	Peak	Horizontal
2	11400.00	40.36	54.00	-13.64	Average	Horizontal
3	17100.00	53.11	74.00	-20.89	Peak	Horizontal
4	17100.00	39.86	54.00	-14.14	Average	Horizontal
5	11400.00	51.22	74.00	-22.78	Peak	Vertical
6	11400.00	37.83	54.00	-16.17	Average	Vertical
7	17100.00	51.68	74.00	-22.32	Peak	Vertical
8	17100.00	39.29	54.00	-14.71	Average	Vertical

SISO_Chain 1_IIEEE 802.11a_Channel 149						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11490.00	56.24	74.00	-17.76	Peak	Horizontal
2	11490.00	40.13	54.00	-13.87	Average	Horizontal
3	17235.00	52.97	74.00	-21.03	Peak	Horizontal
4	17235.00	40.55	54.00	-13.45	Average	Horizontal
5	11490.00	53.34	74.00	-20.66	Peak	Vertical
6	11490.00	38.04	54.00	-15.96	Average	Vertical
7	17235.00	52.79	74.00	-21.21	Peak	Vertical
8	17235.00	40.10	54.00	-13.90	Average	Vertical

SISO_Chain 1_IIEEE 802.11a_Channel 157						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11570.00	51.19	74.00	-22.81	Peak	Horizontal
2	11570.00	39.11	54.00	-14.89	Average	Horizontal
3	17355.00	53.62	74.00	-20.38	Peak	Horizontal
4	17355.00	40.78	54.00	-13.22	Average	Horizontal
5	11570.00	50.41	74.00	-23.59	Peak	Vertical
6	11570.00	37.09	54.00	-16.91	Average	Vertical
7	17355.00	53.38	74.00	-20.62	Peak	Vertical
8	17355.00	40.29	54.00	-13.71	Average	Vertical

SISO_Chain 1_IIEEE 802.11a_Channel 165						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11650.00	63.13	74.00	-10.87	Peak	Horizontal
2	11650.00	44.37	54.00	-9.63	Average	Horizontal
3	17475.00	54.85	74.00	-19.15	Peak	Horizontal
4	17475.00	41.77	54.00	-12.23	Average	Horizontal
5	11650.00	54.66	74.00	-19.34	Peak	Vertical
6	11650.00	39.49	54.00	-14.51	Average	Vertical
7	17475.00	54.12	74.00	-19.88	Peak	Vertical
8	17475.00	41.21	54.00	-12.79	Average	Vertical

MIMO_Chain 0+ 1_IEEE 802.11n-HT20_Channel 36

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10360.00	52.41	74.00	-21.59	Peak	Horizontal
2	10360.00	37.85	54.00	-16.15	Average	Horizontal
3	15540.00	50.95	74.00	-23.05	Peak	Horizontal
4	15540.00	38.82	54.00	-15.18	Average	Horizontal
5	10360.00	51.99	74.00	-22.01	Peak	Vertical
6	10360.00	37.16	54.00	-16.84	Average	Vertical
7	15540.00	51.00	74.00	-23.00	Peak	Vertical
8	15540.00	37.90	54.00	-16.10	Average	Vertical

MIMO_Chain 0+ 1_IEEE 802.11n-HT20_Channel 44

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10440.00	55.21	74.00	-18.79	Peak	Horizontal
2	10440.00	41.27	54.00	-12.73	Average	Horizontal
3	15660.00	51.22	74.00	-22.78	Peak	Horizontal
4	15660.00	38.79	54.00	-15.21	Average	Horizontal
5	10440.00	57.13	74.00	-16.87	Peak	Vertical
6	10440.00	41.09	54.00	-12.91	Average	Vertical
7	15660.00	50.12	74.00	-23.88	Peak	Vertical
8	15660.00	37.69	54.00	-16.31	Average	Vertical

MIMO_Chain 0+ 1_IEEE 802.11n-HT20_Channel 48

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10480.00	52.90	74.00	-21.10	Peak	Horizontal
2	10480.00	38.55	54.00	-15.45	Average	Horizontal
3	15720.00	50.60	74.00	-23.40	Peak	Horizontal
4	15720.00	38.61	54.00	-15.39	Average	Horizontal
5	10480.00	55.57	74.00	-18.43	Peak	Vertical
6	10480.00	38.85	54.00	-15.15	Average	Vertical
7	15720.00	50.80	74.00	-23.20	Peak	Vertical
8	15720.00	37.85	54.00	-16.15	Average	Vertical

MIMO_Chain 0+ 1_IEEE 802.11n-HT20_Channel 52

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10520.00	55.05	74.00	-18.95	Peak	Horizontal
2	10520.00	39.04	54.00	-14.96	Average	Horizontal
3	15780.00	51.50	74.00	-22.50	Peak	Horizontal
4	15780.00	38.78	54.00	-15.22	Average	Horizontal
5	10520.00	54.91	74.00	-19.09	Peak	Vertical
6	10520.00	38.95	54.00	-15.05	Average	Vertical
7	15780.00	50.44	74.00	-23.56	Peak	Vertical
8	15780.00	37.85	54.00	-16.15	Average	Vertical

MIMO_Chain 0+ 1_IEEE 802.11n-HT20_Channel 60						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10600.00	53.16	74.00	-20.84	Peak	Horizontal
2	10600.00	39.28	54.00	-14.72	Average	Horizontal
3	15900.00	53.16	74.00	-20.84	Peak	Horizontal
4	15900.00	39.88	54.00	-14.12	Average	Horizontal
5	10600.00	53.83	74.00	-20.17	Peak	Vertical
6	10600.00	38.52	54.00	-15.48	Average	Vertical
7	15900.00	52.13	74.00	-21.87	Peak	Vertical
8	15900.00	38.98	54.00	-15.02	Average	Vertical
MIMO_Chain 0+ 1_IEEE 802.11n-HT20_Channel 64						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10640.00	52.54	74.00	-21.46	Peak	Horizontal
2	10640.00	38.68	54.00	-15.32	Average	Horizontal
3	15960.00	54.21	74.00	-19.79	Peak	Horizontal
4	15960.00	40.40	54.00	-13.60	Average	Horizontal
5	10640.00	53.54	74.00	-20.46	Peak	Vertical
6	10640.00	38.08	54.00	-15.92	Average	Vertical
7	15960.00	52.82	74.00	-21.18	Peak	Vertical
8	15960.00	38.98	54.00	-15.02	Average	Vertical
MIMO_Chain 0+ 1_IEEE 802.11n-HT20_Channel 100						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11000.00	51.54	74.00	-22.46	Peak	Horizontal
2	11000.00	38.57	54.00	-15.43	Average	Horizontal
3	16500.00	52.11	74.00	-21.89	Peak	Horizontal
4	16500.00	39.25	54.00	-14.75	Average	Horizontal
5	11000.00	52.76	74.00	-21.24	Peak	Vertical
6	11000.00	37.62	54.00	-16.38	Average	Vertical
7	16500.00	52.31	74.00	-21.69	Peak	Vertical
8	16500.00	38.44	54.00	-15.56	Average	Vertical
MIMO_Chain 0+ 1_IEEE 802.11n-HT20_Channel 116						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11160.00	54.26	74.00	-19.74	Peak	Horizontal
2	11160.00	38.38	54.00	-15.62	Average	Horizontal
3	16740.00	53.16	74.00	-20.84	Peak	Horizontal
4	16740.00	39.96	54.00	-14.04	Average	Horizontal
5	11160.00	52.36	74.00	-21.64	Peak	Vertical
6	11160.00	36.69	54.00	-17.31	Average	Vertical
7	16740.00	51.37	74.00	-22.63	Peak	Vertical
8	16740.00	38.96	54.00	-15.04	Average	Vertical

MIMO_Chain 0+ 1_IEEE 802.11n-HT20_Channel 140

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11400.00	51.47	74.00	-22.53	Peak	Horizontal
2	11400.00	38.65	54.00	-15.35	Average	Horizontal
3	17100.00	52.18	74.00	-21.82	Peak	Horizontal
4	17100.00	39.86	54.00	-14.14	Average	Horizontal
5	11400.00	49.78	74.00	-24.22	Peak	Vertical
6	11400.00	37.43	54.00	-16.57	Average	Vertical
7	17100.00	51.64	74.00	-22.36	Peak	Vertical
8	17100.00	39.10	54.00	-14.90	Average	Vertical

MIMO_Chain 0+ 1_IEEE 802.11n-HT20_Channel 149

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11490.00	51.35	74.00	-22.65	Peak	Horizontal
2	11490.00	38.40	54.00	-15.60	Average	Horizontal
3	17235.00	52.97	74.00	-21.03	Peak	Horizontal
4	17235.00	40.36	54.00	-13.64	Average	Horizontal
5	11490.00	50.44	74.00	-23.56	Peak	Vertical
6	11490.00	37.07	54.00	-16.93	Average	Vertical
7	17235.00	53.00	74.00	-21.00	Peak	Vertical
8	17235.00	39.92	54.00	-14.08	Average	Vertical

MIMO_Chain 0+ 1_IEEE 802.11n-HT20_Channel 157

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11570.00	50.23	74.00	-23.77	Peak	Horizontal
2	11570.00	37.75	54.00	-16.25	Average	Horizontal
3	17355.00	53.20	74.00	-20.80	Peak	Horizontal
4	17355.00	40.78	54.00	-13.22	Average	Horizontal
5	11570.00	49.09	74.00	-24.91	Peak	Vertical
6	11570.00	36.47	54.00	-17.53	Average	Vertical
7	17355.00	53.82	74.00	-20.18	Peak	Vertical
8	17355.00	40.29	54.00	-13.71	Average	Vertical

MIMO_Chain 0+ 1_IEEE 802.11n-HT20_Channel 165

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11650.00	55.84	74.00	-18.16	Peak	Horizontal
2	11650.00	40.81	54.00	-13.19	Average	Horizontal
3	17475.00	54.60	74.00	-19.40	Peak	Horizontal
4	17475.00	41.77	54.00	-12.23	Average	Horizontal
5	11650.00	53.59	74.00	-20.41	Peak	Vertical
6	11650.00	38.77	54.00	-15.23	Average	Vertical
7	17475.00	53.51	74.00	-20.49	Peak	Vertical
8	17475.00	41.04	54.00	-12.96	Average	Vertical

MIMO_Chain 0+ 1_IEEE 802.11n-HT40_Channel 38						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10380.00	50.09	74.00	-23.91	Peak	Horizontal
2	10380.00	37.45	54.00	-16.55	Average	Horizontal
3	15570.00	51.87	74.00	-22.13	Peak	Horizontal
4	15570.00	39.00	54.00	-15.00	Average	Horizontal
5	10380.00	51.34	74.00	-22.66	Peak	Vertical
6	10380.00	37.76	54.00	-16.24	Average	Vertical
7	15570.00	51.63	74.00	-22.37	Peak	Vertical
8	15570.00	38.24	54.00	-15.76	Average	Vertical
MIMO_Chain 0+ 1_IEEE 802.11n-HT40_Channel 46						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10460.00	52.30	74.00	-21.70	Peak	Horizontal
2	10460.00	39.57	54.00	-14.43	Average	Horizontal
3	15690.00	50.92	74.00	-23.08	Peak	Horizontal
4	15690.00	38.79	54.00	-15.21	Average	Horizontal
5	10460.00	54.49	74.00	-19.51	Peak	Vertical
6	10460.00	40.59	54.00	-13.41	Average	Vertical
7	15690.00	50.33	74.00	-23.67	Peak	Vertical
8	15690.00	37.86	54.00	-16.14	Average	Vertical
MIMO_Chain 0+ 1_IEEE 802.11n-HT40_Channel 54						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10540.00	54.55	74.00	-19.45	Peak	Horizontal
2	10540.00	39.56	54.00	-14.44	Average	Horizontal
3	15810.00	52.98	74.00	-21.02	Peak	Horizontal
4	15810.00	40.01	54.00	-13.99	Average	Horizontal
5	10540.00	53.98	74.00	-33.23	Peak	Vertical
6	10540.00	40.77	54.00	-13.23	Average	Vertical
7	15810.00	51.92	74.00	-35.00	Peak	Vertical
8	15810.00	39.00	54.00	-15.00	Average	Vertical
MIMO_Chain 0+ 1_IEEE 802.11n-HT40_Channel 62						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10620.00	51.08	74.00	-22.92	Peak	Horizontal
2	10620.00	38.68	54.00	-15.32	Average	Horizontal
3	15930.00	53.23	74.00	-20.77	Peak	Horizontal
4	15930.00	39.88	54.00	-14.12	Average	Horizontal
5	10620.00	51.09	74.00	-22.91	Peak	Vertical
6	10620.00	38.84	54.00	-15.16	Average	Vertical
7	15930.00	52.06	74.00	-21.94	Peak	Vertical
8	15930.00	38.98	54.00	-15.02	Average	Vertical

MIMO_Chain 0+ 1_IEEE 802.11n-HT40_Channel 102

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11020.00	50.25	74.00	-23.75	Peak	Horizontal
2	11020.00	37.90	54.00	-16.10	Average	Horizontal
3	16530.00	52.77	74.00	-21.23	Peak	Horizontal
4	16530.00	39.25	54.00	-14.75	Average	Horizontal
5	11020.00	49.75	74.00	-24.25	Peak	Vertical
6	11020.00	36.84	54.00	-17.16	Average	Vertical
7	16530.00	51.62	74.00	-22.38	Peak	Vertical
8	16530.00	38.25	54.00	-15.75	Average	Vertical

MIMO_Chain 0+ 1_IEEE 802.11n-HT40_Channel 110

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11100.00	52.84	74.00	-21.16	Peak	Horizontal
2	11100.00	39.13	54.00	-14.87	Average	Horizontal
3	16650.00	52.29	74.00	-21.71	Peak	Horizontal
4	16650.00	39.76	54.00	-14.24	Average	Horizontal
5	11100.00	50.44	74.00	-23.56	Peak	Vertical
6	11100.00	37.49	54.00	-16.51	Average	Vertical
7	16650.00	51.82	74.00	-22.18	Peak	Vertical
8	16650.00	39.15	54.00	-14.85	Average	Vertical

MIMO_Chain 0+ 1_IEEE 802.11n-HT40_Channel 134

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11340.00	51.58	74.00	-22.42	Peak	Horizontal
2	11340.00	38.69	54.00	-15.31	Average	Horizontal
3	17010.00	54.11	74.00	-19.89	Peak	Horizontal
4	17010.00	39.98	54.00	-14.02	Average	Horizontal
5	11340.00	49.17	74.00	-24.83	Peak	Vertical
6	11340.00	37.13	54.00	-16.87	Average	Vertical
7	17010.00	52.58	74.00	-21.42	Peak	Vertical
8	17010.00	38.97	54.00	-15.03	Average	Vertical

MIMO_Chain 0+ 1_IEEE 802.11n-HT40_Channel 151

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11510.00	51.65	74.00	-22.35	Peak	Horizontal
2	11510.00	39.38	54.00	-14.62	Average	Horizontal
3	17265.00	52.69	74.00	-21.31	Peak	Horizontal
4	17265.00	40.16	54.00	-13.84	Average	Horizontal
5	11510.00	50.72	74.00	-23.28	Peak	Vertical
6	11510.00	38.30	54.00	-15.70	Average	Vertical
7	17265.00	52.36	74.00	-21.64	Peak	Vertical
8	17265.00	39.92	54.00	-14.08	Average	Vertical

MIMO_Chain 0+ 1_IEEE 802.11n-HT40_Channel 159						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Detector
1	11590.00	50.03	74.00	-23.97	Peak	Horizontal
2	11590.00	37.75	54.00	-16.25	Average	Horizontal
3	17385.00	54.10	74.00	-19.90	Peak	Horizontal
4	17385.00	40.58	54.00	-13.42	Average	Horizontal
5	11590.00	48.59	74.00	-25.41	Peak	Vertical
6	11590.00	36.31	54.00	-17.69	Average	Vertical
7	17385.00	53.00	74.00	-21.00	Peak	Vertical
8	17385.00	40.11	54.00	-13.89	Average	Vertical

MIMO_Chain 0+ 1_IEEE 802.11ac-VHT80_Channel 42						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10460.00	52.63	74.00	-21.37	Peak	Horizontal
2	10460.00	39.12	54.00	-14.88	Average	Horizontal
3	15690.00	50.83	74.00	-23.17	Peak	Horizontal
4	15690.00	38.79	54.00	-15.21	Average	Horizontal
5	10460.00	53.75	74.00	-20.25	Peak	Vertical
6	10460.00	39.60	54.00	-14.40	Average	Vertical
7	15690.00	49.99	74.00	-24.01	Peak	Vertical
8	15690.00	38.03	54.00	-15.97	Average	Vertical

MIMO_Chain 0+ 1_IEEE 802.11ac-VHT80_Channel 58						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10580.00	51.32	74.00	-22.68	Peak	Horizontal
2	10580.00	39.22	54.00	-14.78	Average	Horizontal
3	15870.00	52.91	74.00	-21.09	Peak	Horizontal
4	15870.00	40.01	54.00	-13.99	Average	Horizontal
5	10580.00	53.25	74.00	-20.75	Peak	Vertical
6	10580.00	39.50	54.00	-14.50	Average	Vertical
7	15870.00	50.91	74.00	-23.09	Peak	Vertical
8	15870.00	39.00	54.00	-15.00	Average	Vertical

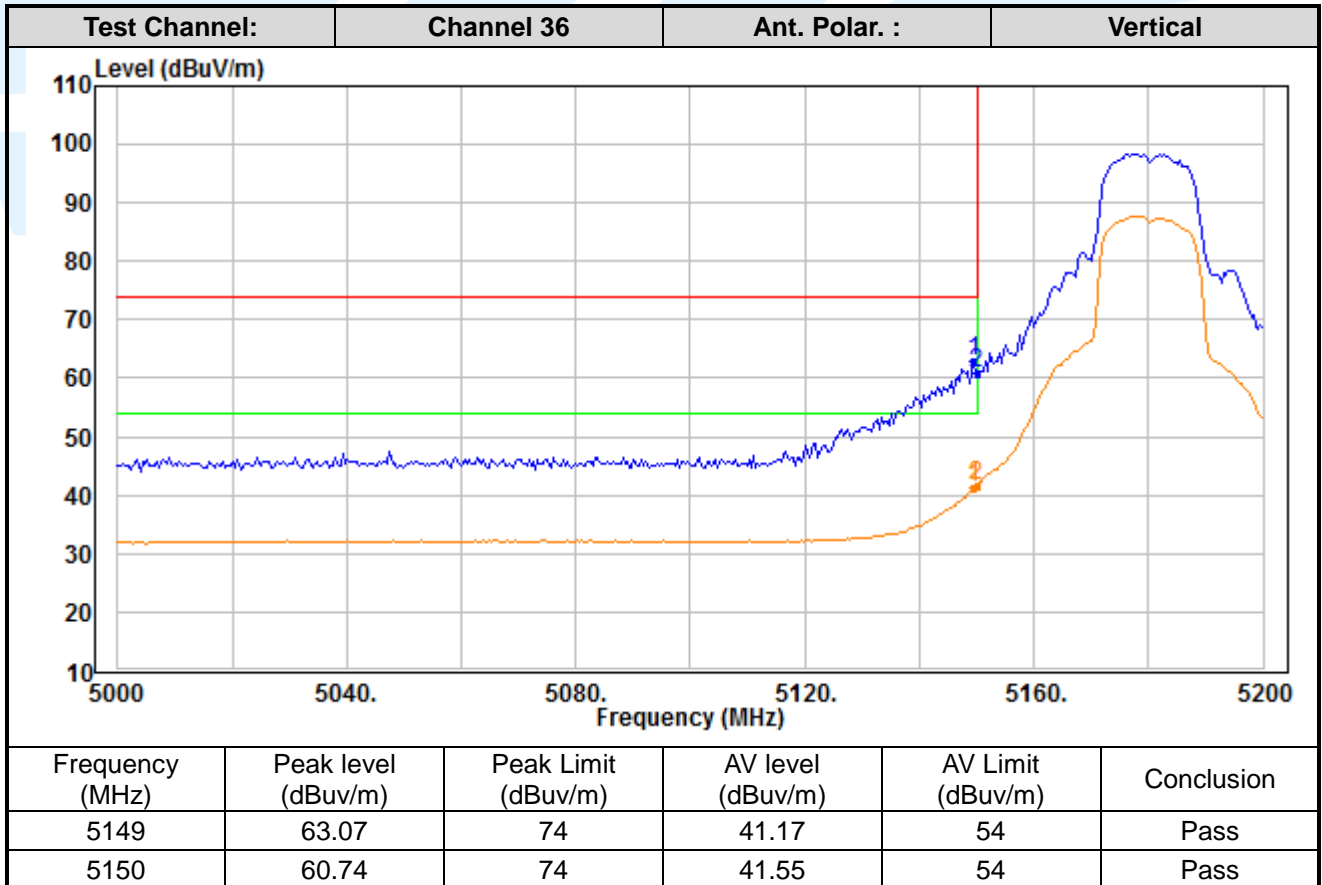
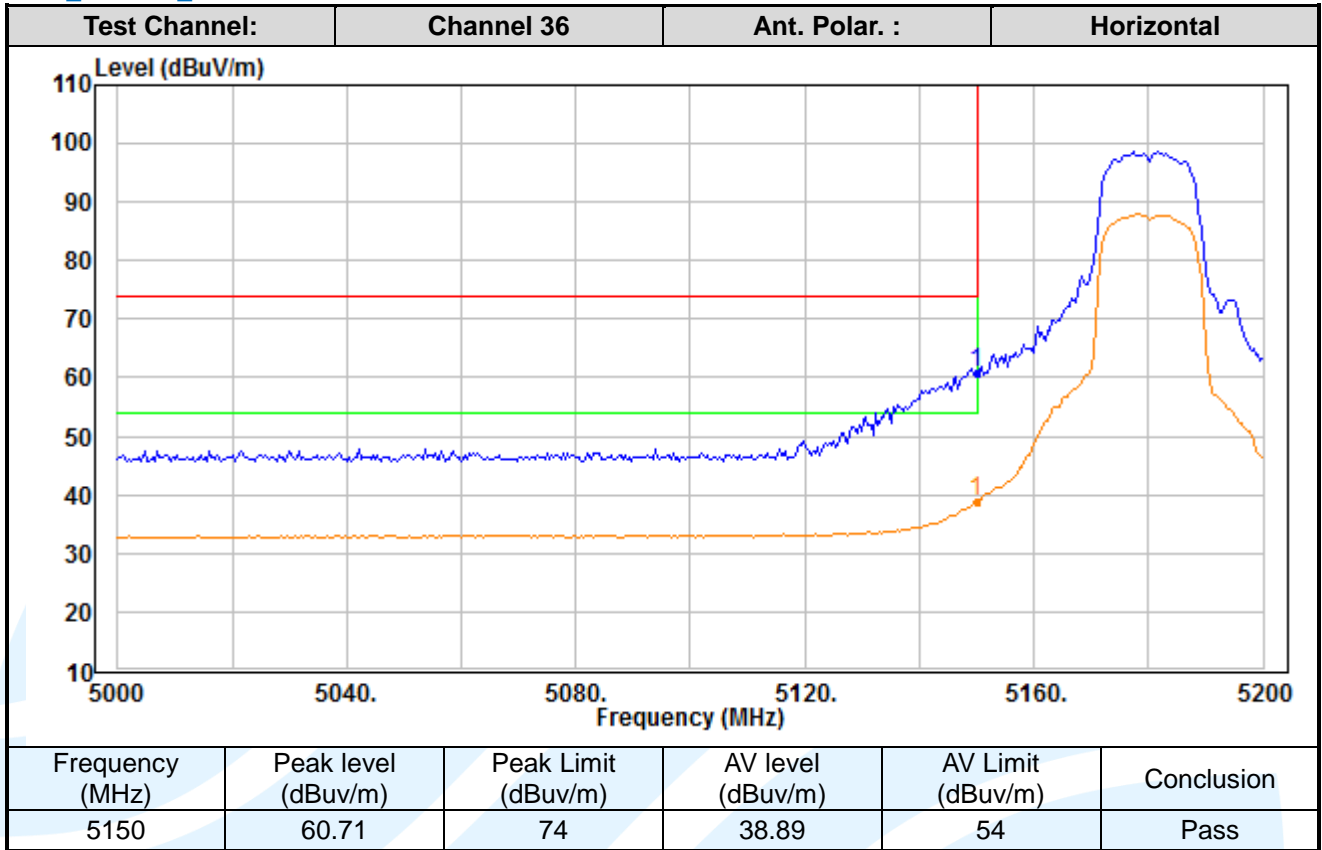
MIMO_Chain 0+ 1_IEEE 802.11ac-VHT80_Channel 106						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11550.00	53.57	74.00	-20.43	Peak	Horizontal
2	11550.00	39.10	54.00	-14.90	Average	Horizontal
3	17325.00	51.24	74.00	-22.76	Peak	Horizontal
4	17325.00	38.88	54.00	-15.12	Average	Horizontal
5	11550.00	51.63	74.00	-22.37	Peak	Vertical
6	11550.00	38.51	54.00	-15.49	Average	Vertical
7	17325.00	51.12	74.00	-22.88	Peak	Vertical
8	17325.00	38.10	54.00	-15.90	Average	Vertical

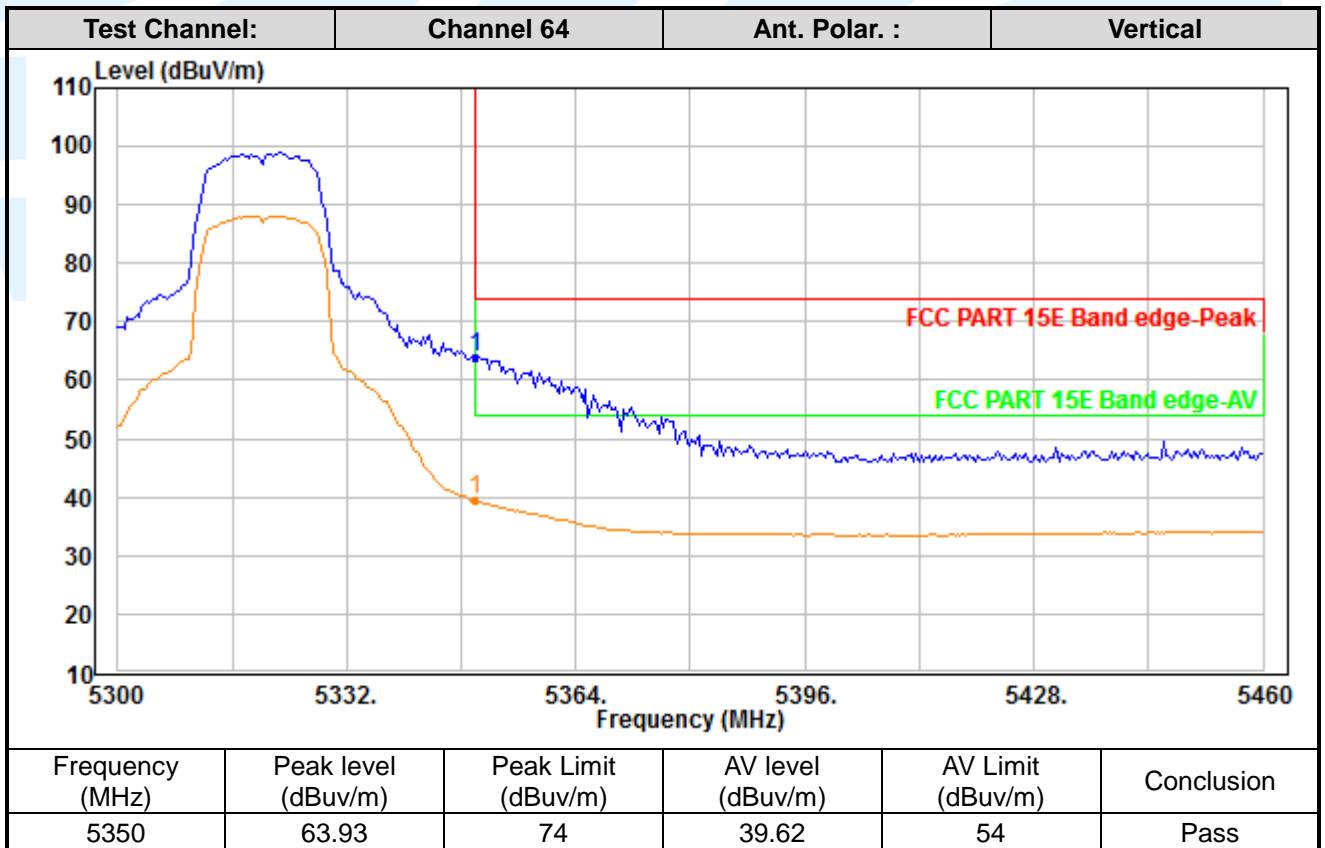
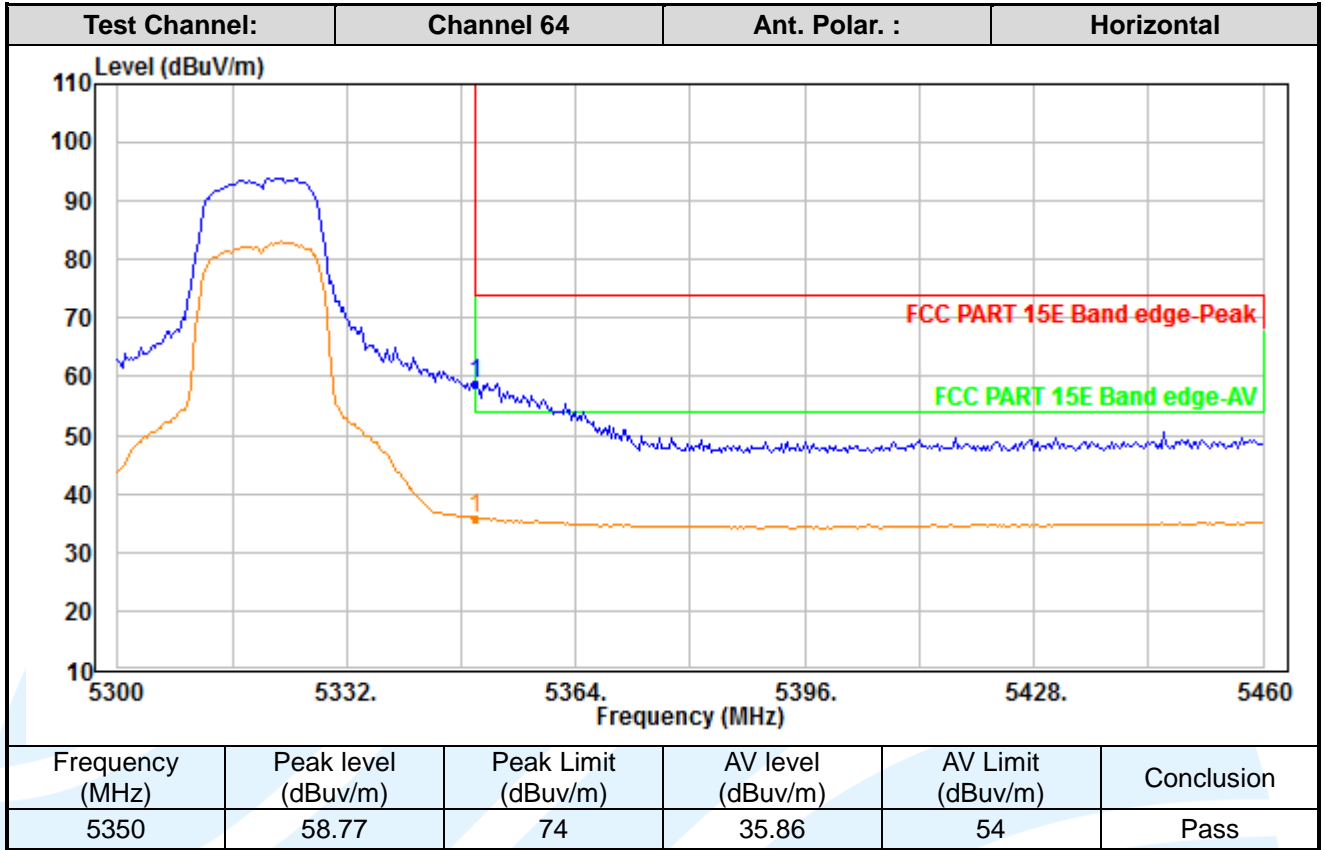
MIMO_Chain 0+ 1_IEEE 802.11ac-VHT80_Channel 155						
No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11550.00	51.18	74.00	-22.82	Peak	Horizontal
2	11550.00	38.55	54.00	-15.45	Average	Horizontal
3	17325.00	52.97	74.00	-21.03	Peak	Horizontal
4	17325.00	40.55	54.00	-13.45	Average	Horizontal
5	11550.00	49.91	74.00	-24.09	Peak	Vertical
6	11550.00	37.36	54.00	-16.64	Average	Vertical
7	17325.00	52.32	74.00	-21.68	Peak	Vertical
8	17325.00	39.92	54.00	-14.08	Average	Vertical

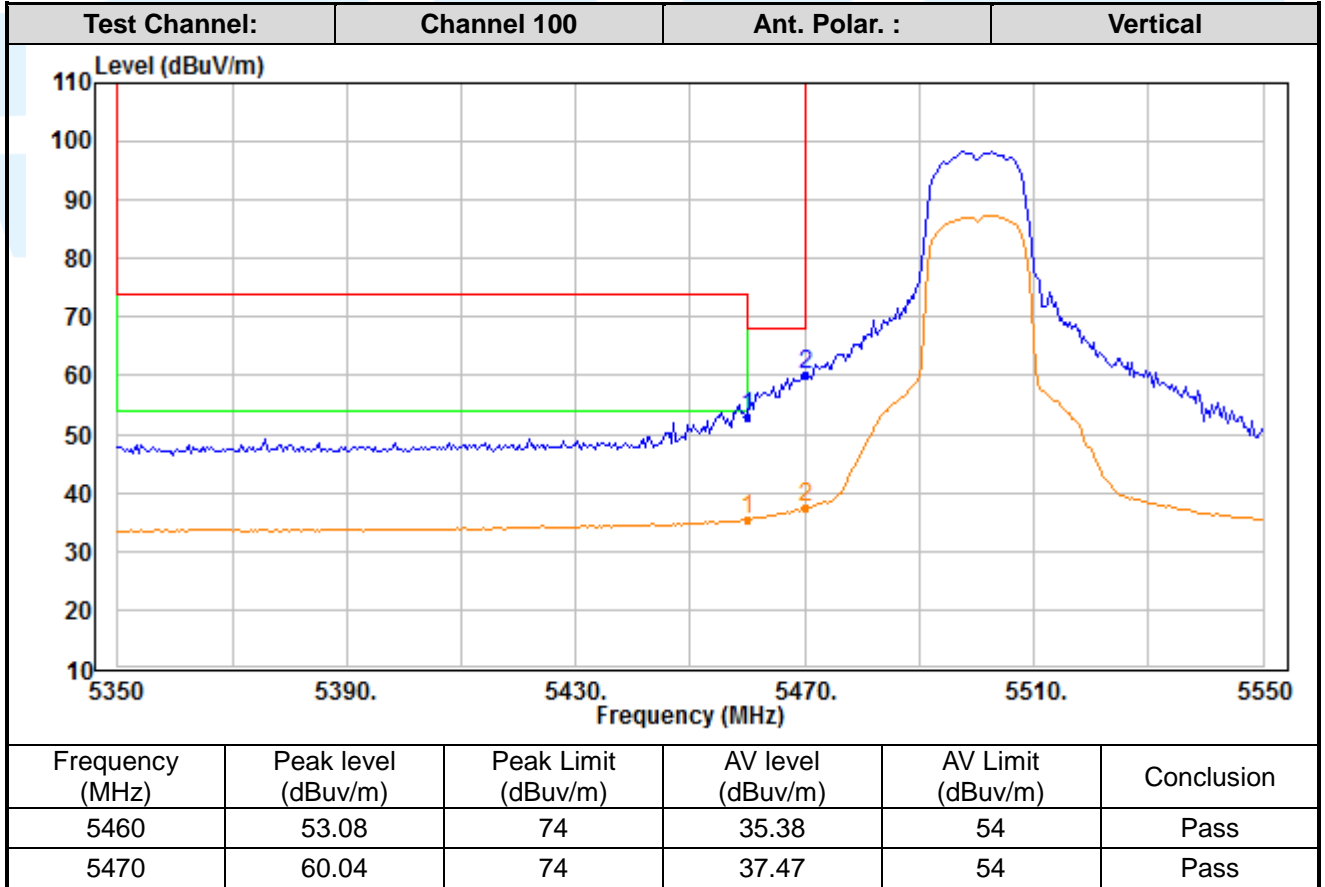
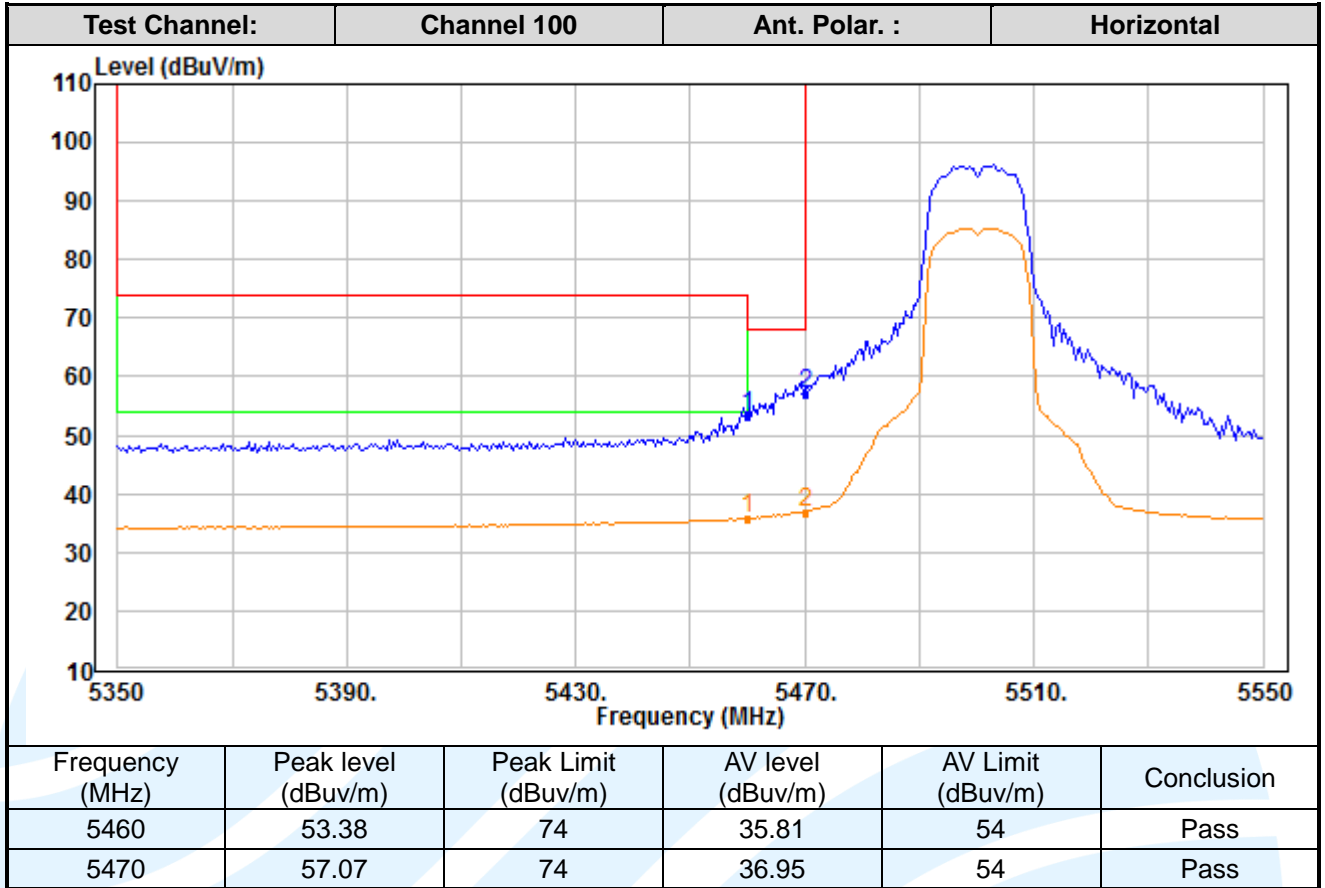


Band Edge Measurements (Radiated)

SISO_Chain 0_IEEE 802.11a







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