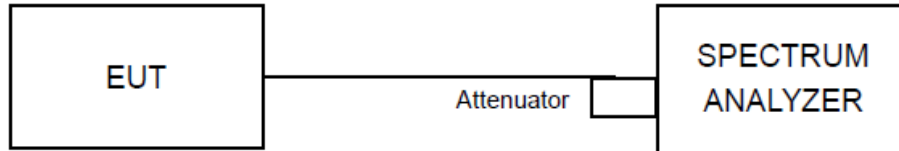


4.6 Conducted Spurious Emissions

4.6.1 Limit

Below 30 dB of the highest emission level of operating band (in 100 kHz Resolution Bandwidth).

4.6.2 Test Setup



4.6.3 Test Procedures

The EUT was tested according to DTS test procedure of “KDB558074 D01 DTS Meas Guidance” (clause 11.0) for compliance to FCC 47CFR 15.247 requirements.

MEASUREMENT PROCEDURE REF

1. Set the RBW = 100 kHz.
2. Set the VBW $\geq$ 300 kHz.
3. Detector = peak.
4. Sweep time = auto couple.
5. Trace mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

MEASUREMENT PROCEDURE OOB

1. Set RBW = 100 kHz.
2. Set VBW $\geq$ 300 kHz.
3. Detector = peak.
4. Sweep = auto couple.
5. Trace Mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum amplitude level.

4.6.4 Deviation of Test Standard

No deviation.

4.6.5 Test Results

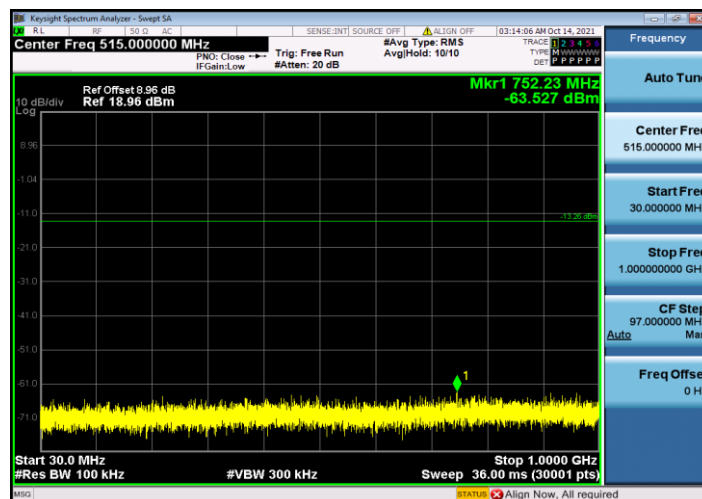
Test Mode	Antenna	Channel [MHz]	FreqRange [MHz]	RefLevel [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	6.74	6.74	---	PASS
			30~1000	6.74	-63.53	<=-13.26	PASS
			1000~26500	6.74	-47.14	<=-13.26	PASS
		2437	Reference	5.35	5.35	---	PASS
			30~1000	5.35	-63.74	<=-14.65	PASS
			1000~26500	5.35	-47.61	<=-14.65	PASS
		2462	Reference	2.76	2.76	---	PASS
			30~1000	2.76	-63.25	<=-17.24	PASS
			1000~26500	2.76	-47.28	<=-17.24	PASS
11G	Ant1	2412	Reference	1.49	1.49	---	PASS
			30~1000	1.49	-63.51	<=-18.51	PASS
			1000~26500	1.49	-46.87	<=-18.51	PASS
		2437	Reference	2.04	2.04	---	PASS
			30~1000	2.04	-62.99	<=-17.97	PASS
			1000~26500	2.04	-46.99	<=-17.97	PASS
		2462	Reference	0.60	0.60	---	PASS
			30~1000	0.60	-63.65	<=-19.4	PASS
			1000~26500	0.60	-47.84	<=-19.4	PASS
11N20SISO	Ant1	2412	Reference	1.93	1.93	---	PASS
			30~1000	1.93	-62.65	<=-18.08	PASS
			1000~26500	1.93	-47.28	<=-18.08	PASS
		2437	Reference	1.46	1.46	---	PASS
			30~1000	1.46	-63.1	<=-18.55	PASS
			1000~26500	1.46	-47.7	<=-18.55	PASS
		2462	Reference	-1.37	-1.37	---	PASS
			30~1000	-1.37	-63.77	<=-21.37	PASS
			1000~26500	-1.37	-47.73	<=-21.37	PASS



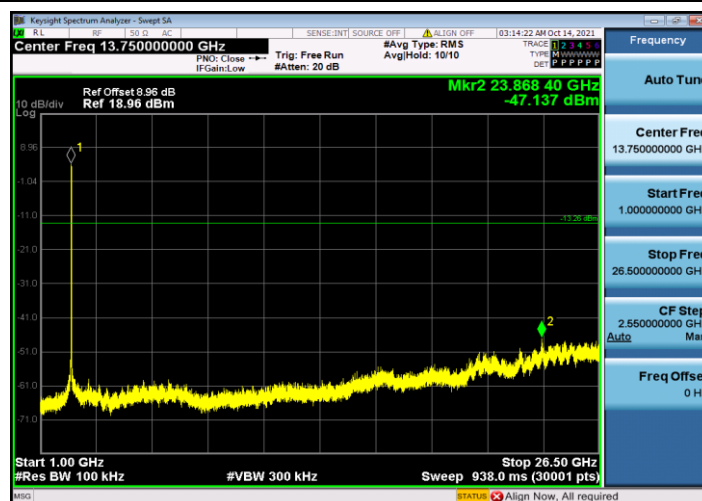
11B_Ant1_2412_0~Reference



11B_Ant1_2412_30~1000



11B_Ant1_2412_1000~26500

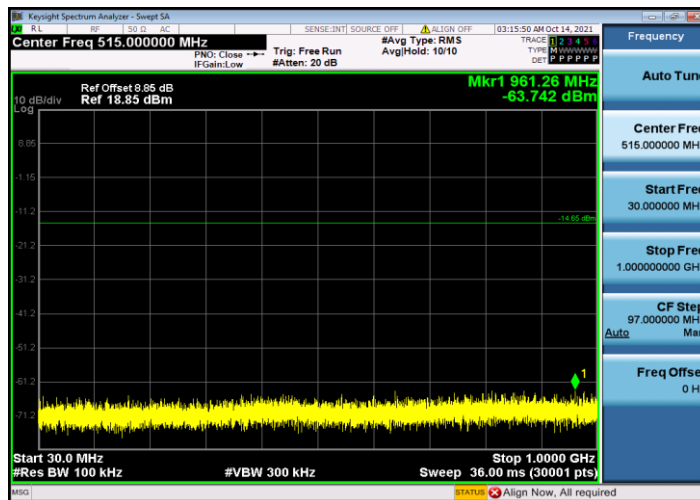




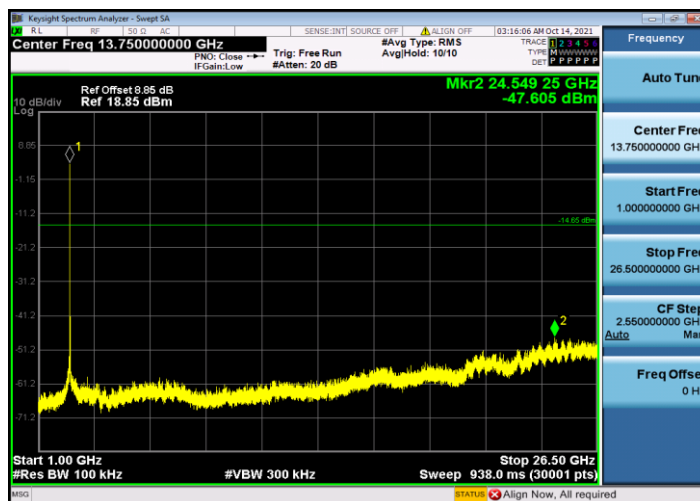
11B_Ant1_2437_0-Reference



11B_Ant1_2437_30-1000



11B_Ant1_2437_1000-26500

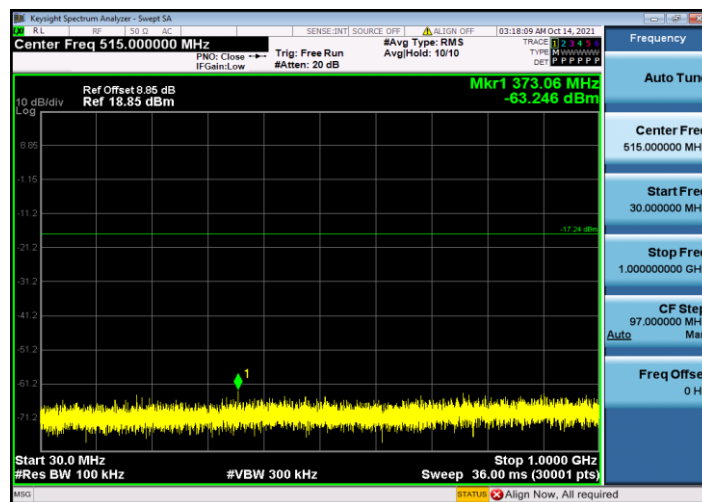




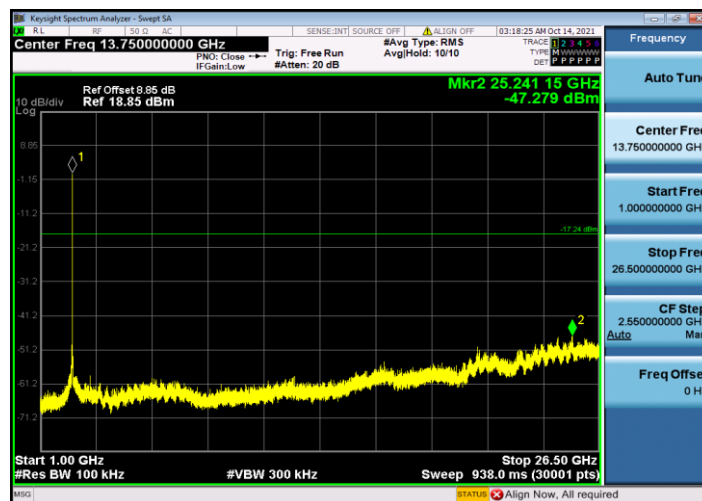
11B_Ant1_2462_0-Reference



11B_Ant1_2462_30-1000

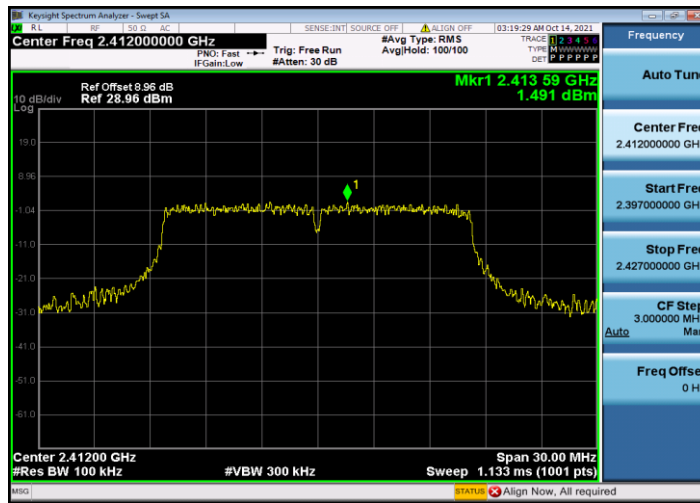


11B_Ant1_2462_1000-26500

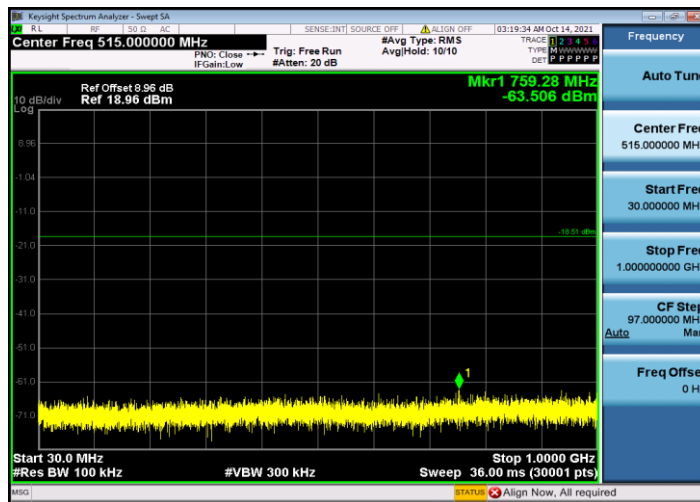




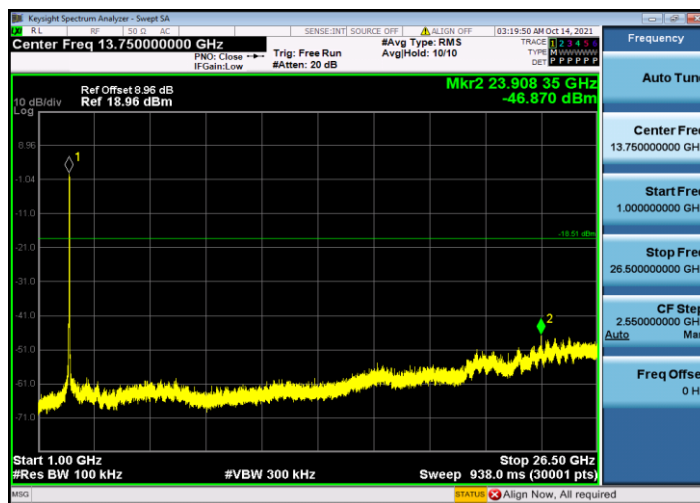
11G_Ant1_2412_0~Reference



11G_Ant1_2412_30~1000

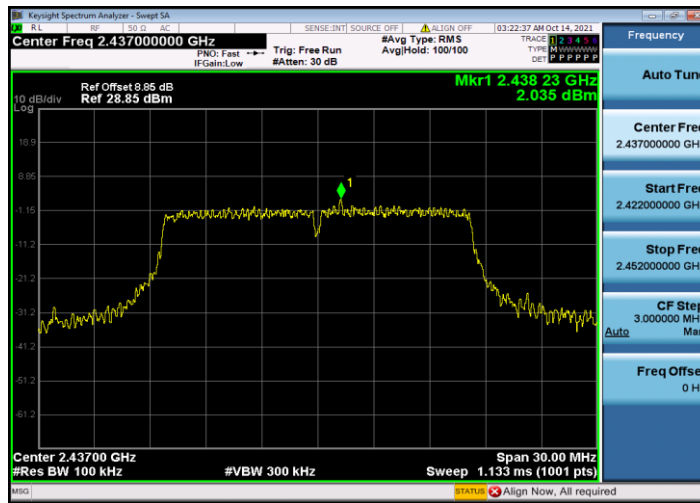


11G_Ant1_2412_1000~26500

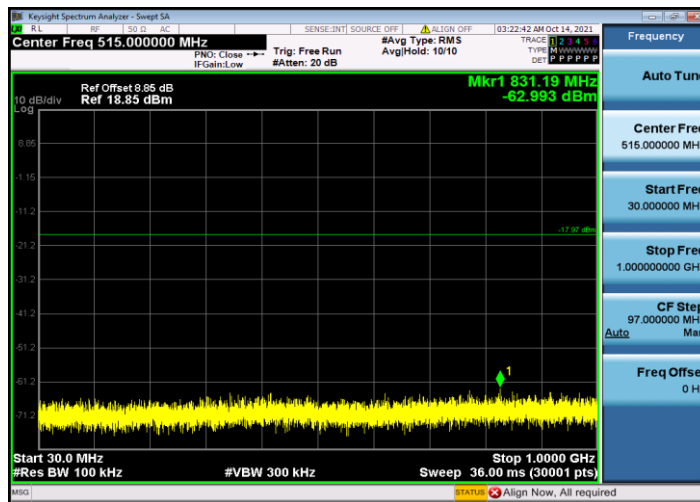




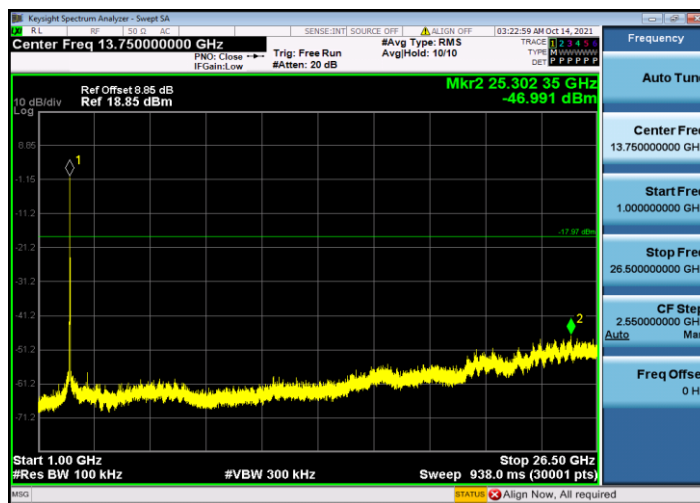
11G_Ant1_2437_0~Reference



11G_Ant1_2437_30~1000

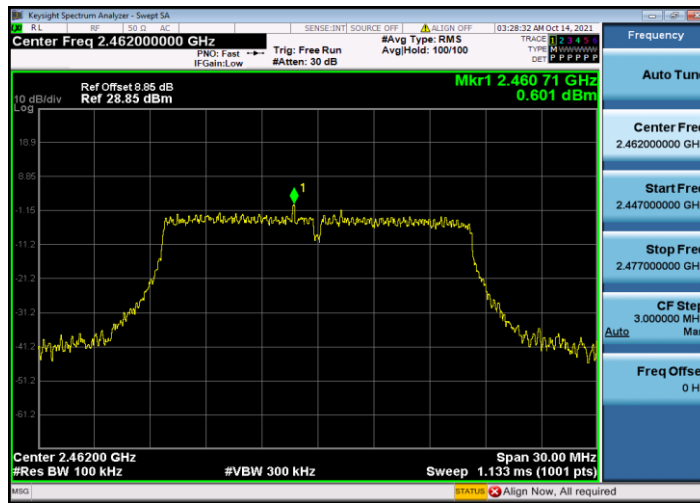


11G_Ant1_2437_1000~26500

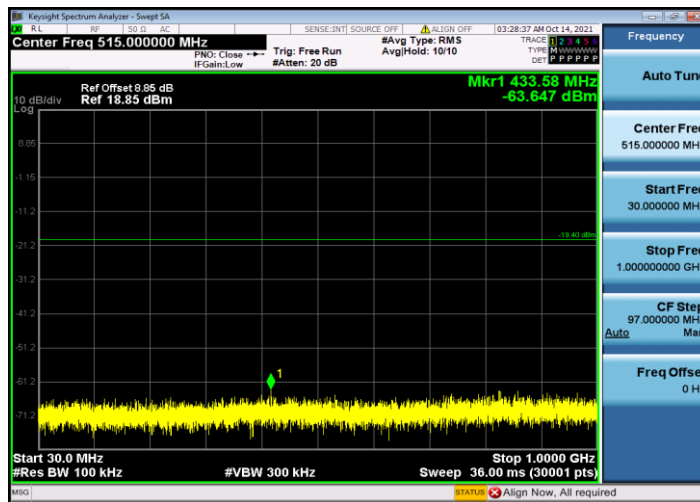




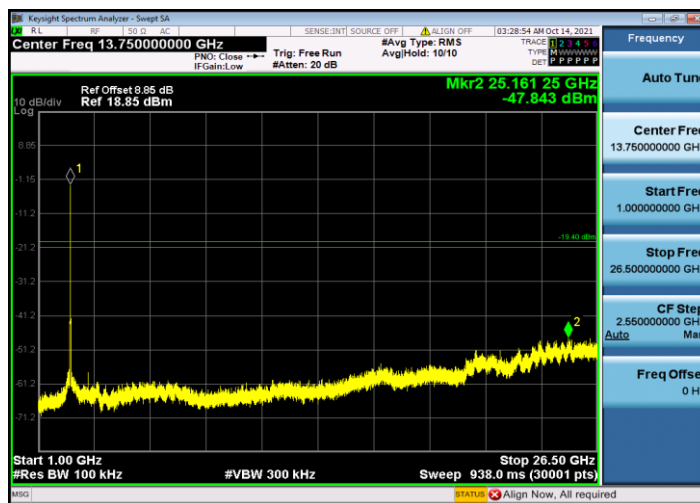
11G_Ant1_2462_0~Reference



11G_Ant1_2462_30~1000

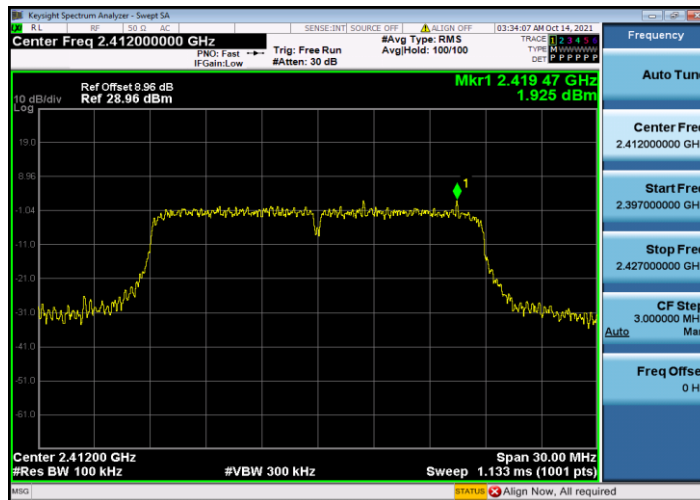


11G_Ant1_2462_1000~26500

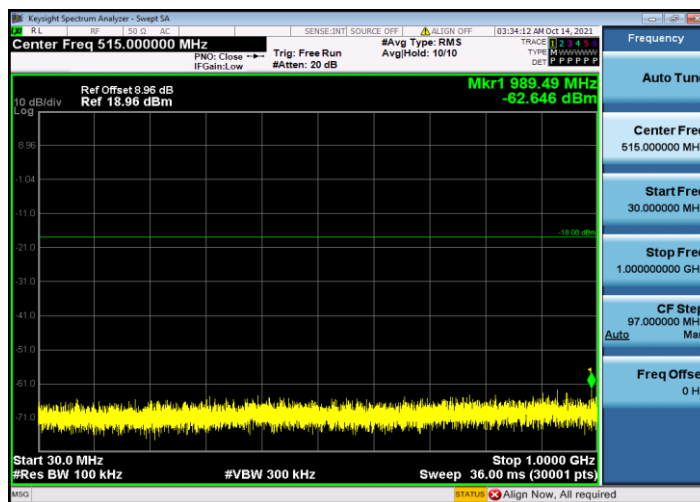




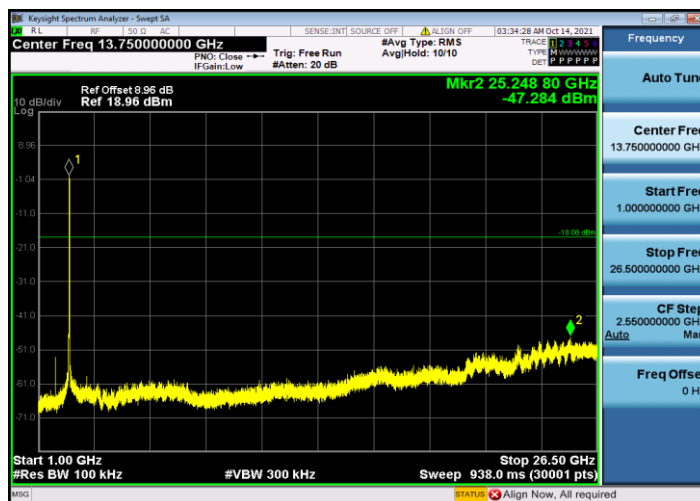
11N20SISO_Ant1_2412_0-Reference



11N20SISO_Ant1_2412_30-1000

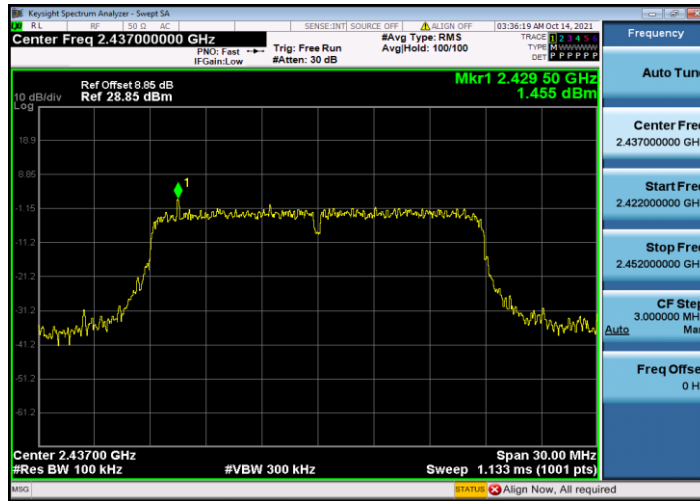


11N20SISO_Ant1_2412_1000-26500

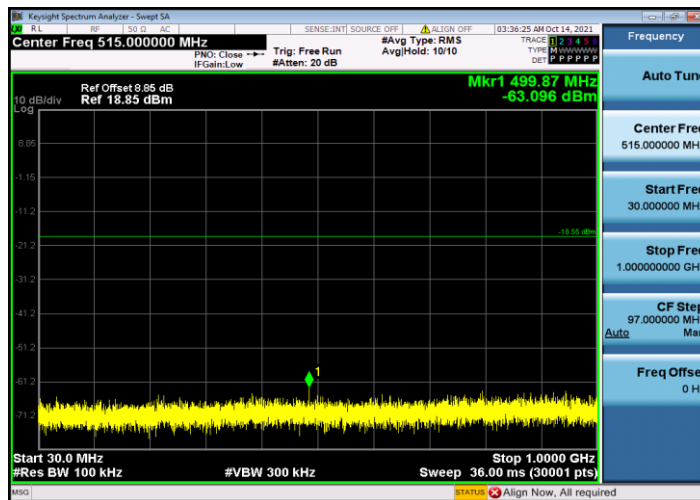




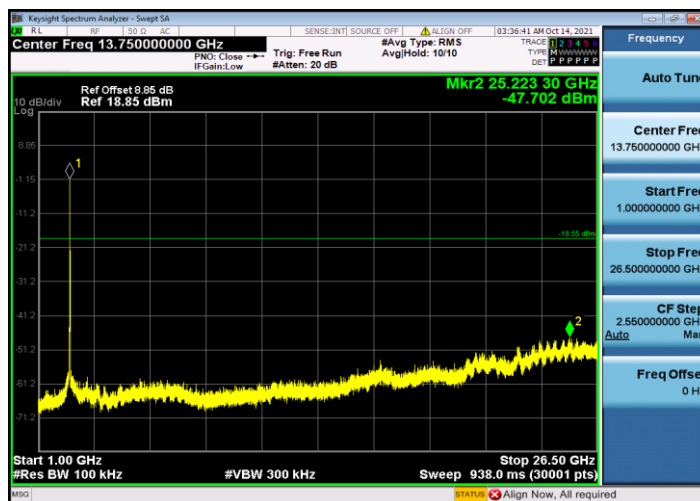
11N20SISO_Ant1_2437_0-Reference



11N20SISO_Ant1_2437_30-1000

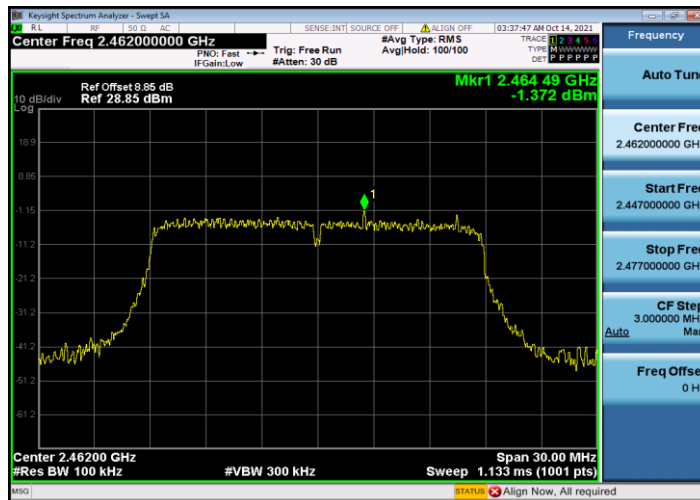


11N20SISO_Ant1_2437_1000-26500

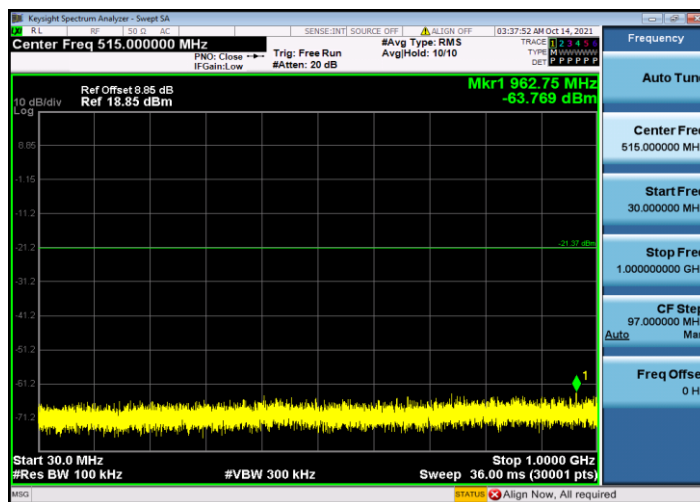




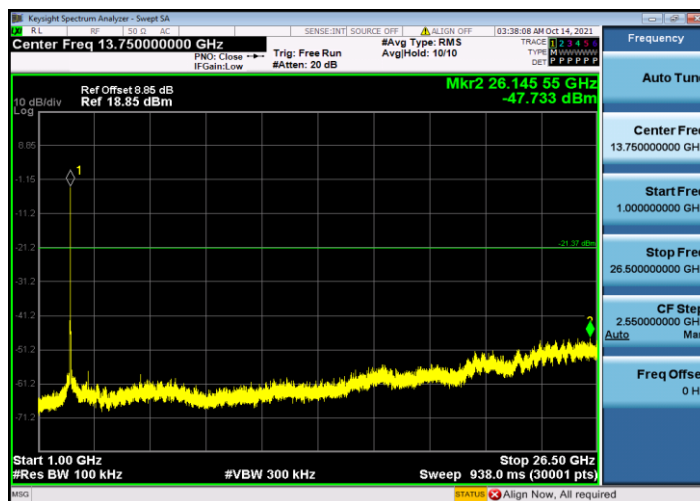
11N20SISO_Ant1_2462_0~Reference



11N20SISO_Ant1_2462_30~1000



11N20SISO_Ant1_2462_1000~26500





4.7 Emissions in restricted frequency bands

4.7.1 Test Limit

For 15.205 requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part15, must also comply with the radiated emission limits specified in Section 15.209(a).

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
1 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(2)
13.36 - 13.41	--	--	--



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

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

4.7.2 Test Procedure Reference

ANSI C63.10 Section 6.3 (General Requirements)

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

4.7.3 Test Procedures

Peak Field Strength Measurements

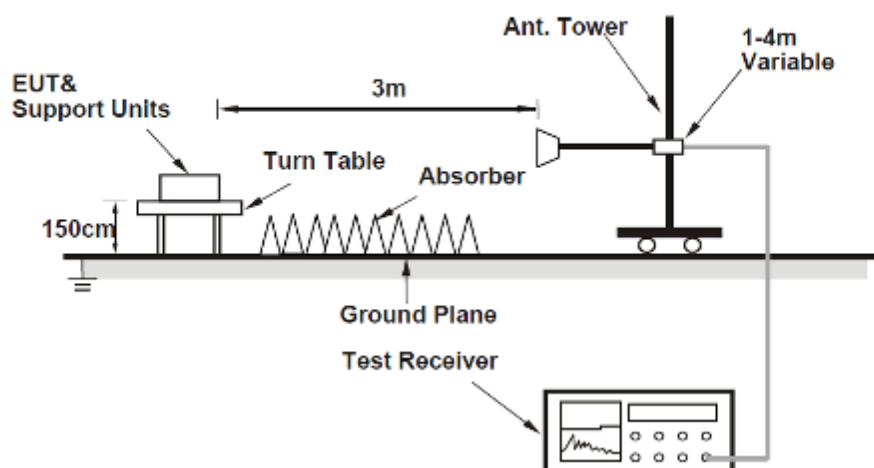
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Measurements above 1GHz (Method VB)

8. 1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
9. 2. RBW = 1MHz
10. 3. VBW; If the EUT is configured to transmit with duty cycle $\geq 98\%$, set VBW = 10 Hz.
11. If the EUT duty cycle is $< 98\%$, set VBW $\geq 1/T$. T is the minimum transmission duration.
12. 4. Detector = Peak
13. 5. Sweep time = auto
14. 6. Trace mode = max hold
15. 7. Trace was allowed to stabilize

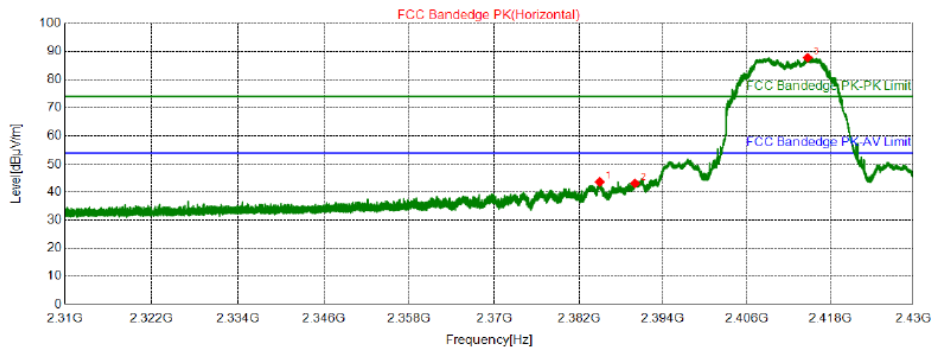
4.7.4 Test Setup

For Radiated emission above 1GHz



4.7.5 Test Results

802.11b-2412MHz/ Horizontal

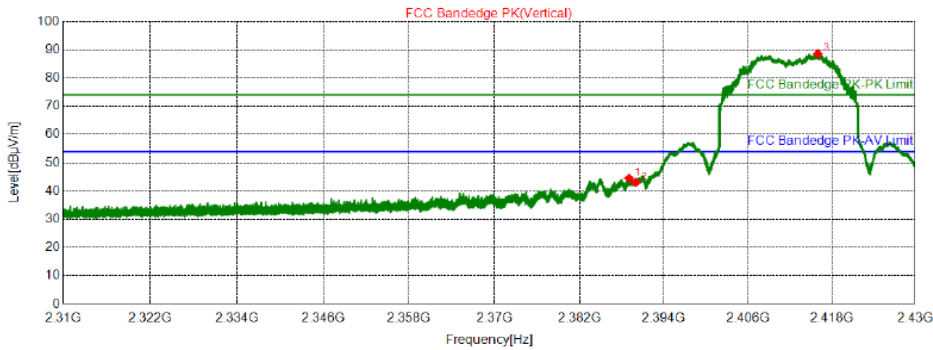


★ AV Detector

Suspected List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	2384.9580	61.09	43.60	74.00	30.40	155	98	Horizontal	PK
2	2390.0040	60.56	43.09	74.00	30.91	155	257	Horizontal	PK
3	2414.7540	105.11	87.72	74.00	-13.72	155	251	Horizontal	PK

802.11b-2412MHz/ Vertical



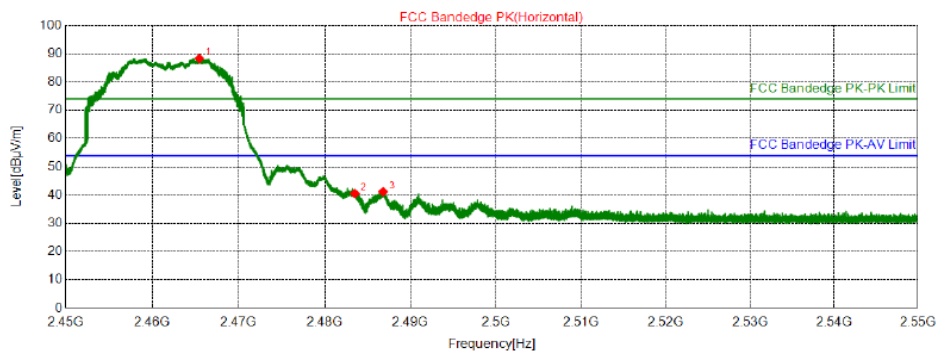
★ AV Detector

Suspected List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	2389.0320	61.98	44.51	74.00	29.49	155	301	Vertical	PK
2	2390.0040	60.51	43.04	74.00	30.96	155	301	Vertical	PK
3	2415.9900	105.96	88.58	74.00	-14.58	155	308	Vertical	PK



802.11b-2462MHz/ Horizontal

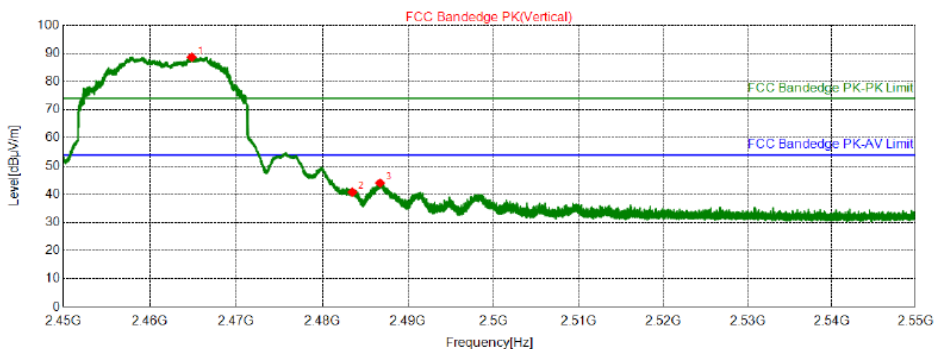


★ AV Detector

Suspected List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	2465.4500	105.57	88.35	74.00	-14.35	155	255	Horizontal	PK
2	2483.5000	57.72	40.56	74.00	33.44	155	224	Horizontal	PK
3	2486.8000	58.35	41.20	74.00	32.80	155	262	Horizontal	PK

802.11b-2462MHz/ Vertical

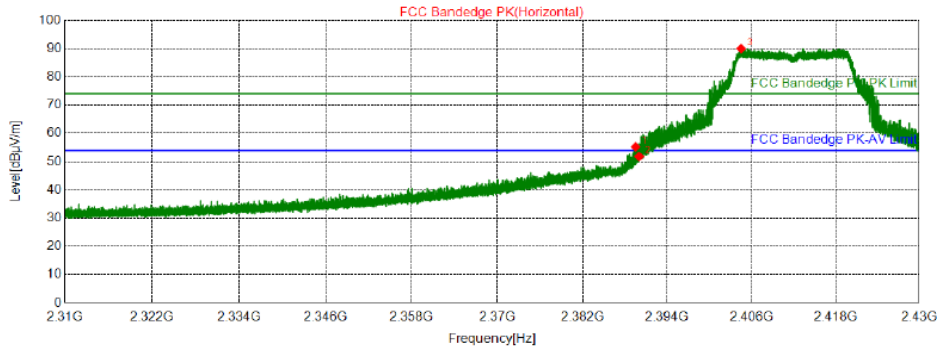


★ AV Detector

Suspected List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	2464.8400	105.91	88.69	74.00	-14.69	155	220	Vertical	PK
2	2483.5000	57.93	40.77	74.00	33.23	155	213	Vertical	PK
3	2486.7250	61.14	43.99	74.00	30.01	155	296	Vertical	PK

802.11g-2412MHz/ Horizontal-PK

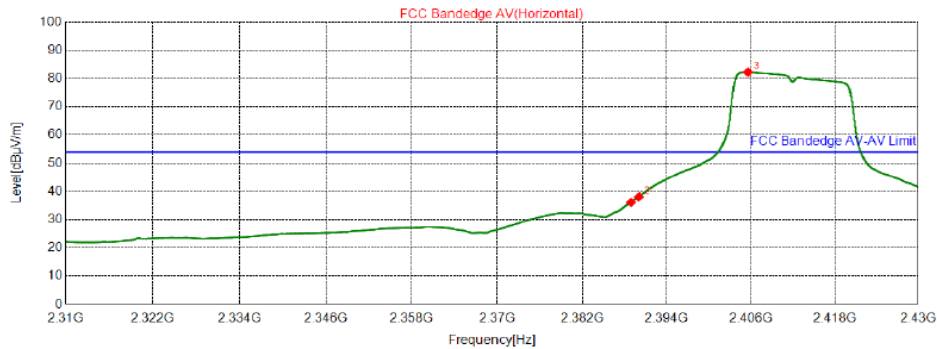


★ AV Detector

Suspected List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	2389.5120	72.71	55.24	74.00	18.76	155	255	Horizontal	PK
2	2390.0040	69.26	51.79	74.00	22.21	155	96	Horizontal	PK
3	2404.5000	107.41	89.99	74.00	-15.99	155	255	Horizontal	PK

802.11g-2412MHz/ Horizontal-AV

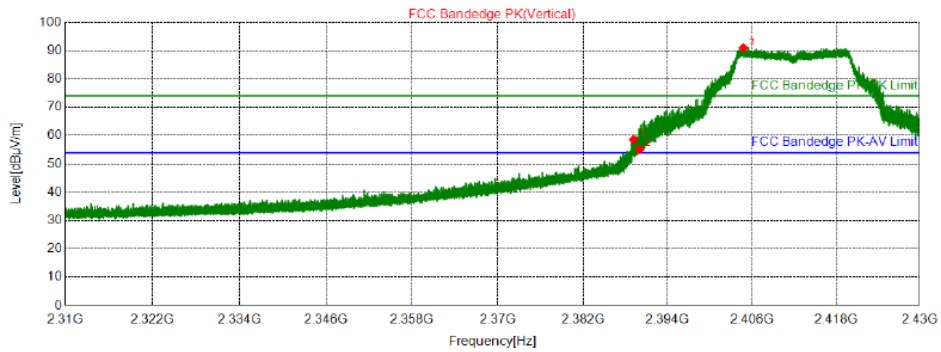


● QP Detector ★ AV Detector

Suspected List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	2388.9150	53.57	36.10	54.00	17.90	150	295	Horizontal	PK
2	2390.0100	55.48	38.01	54.00	15.99	150	295	Horizontal	PK
3	2405.5650	99.66	82.24	54.00	-28.24	150	194	Horizontal	PK

802.11g-2412MHz/ Vertical-PK

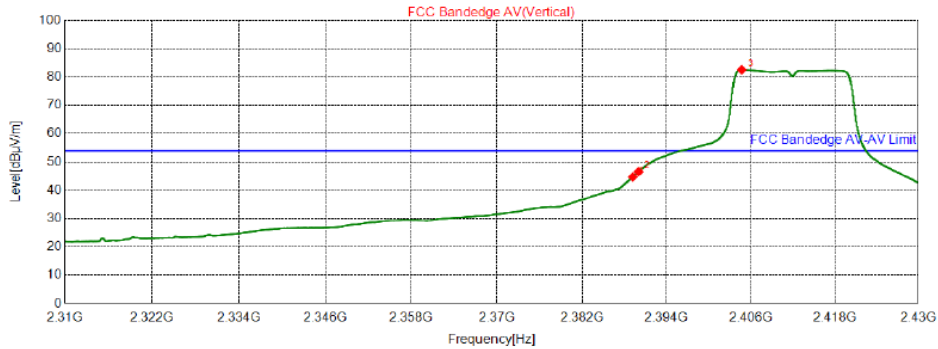


★ AV Detector

Suspected List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	2389.1520	76.02	58.55	74.00	15.45	155	307	Vertical	PK
2	2390.0040	72.63	55.16	74.00	18.84	155	307	Vertical	PK
3	2404.7700	108.38	90.96	74.00	-16.96	155	307	Vertical	PK

802.11g-2412MHz/ Vertical-AV

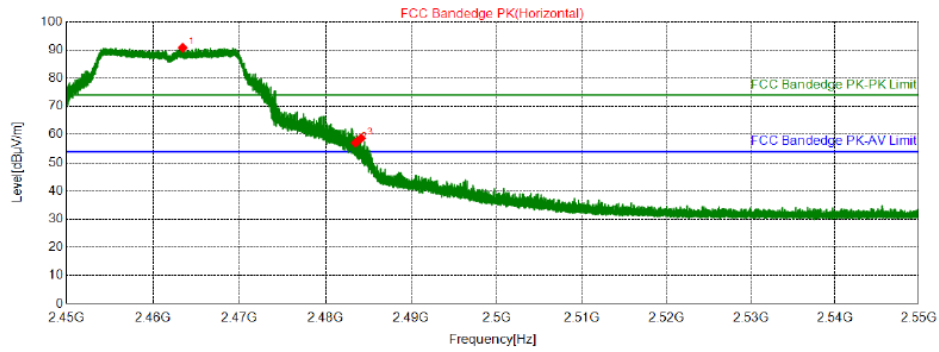


● QP Detector ★ AV Detector

Suspected List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	2389.1850	62.16	44.69	54.00	9.31	150	295	Vertical	PK
2	2390.0100	64.03	46.56	54.00	7.44	150	295	Vertical	PK
3	2404.6950	99.96	82.54	54.00	-28.54	150	287	Vertical	PK

802.11g-2462MHz/ Horizontal-PK

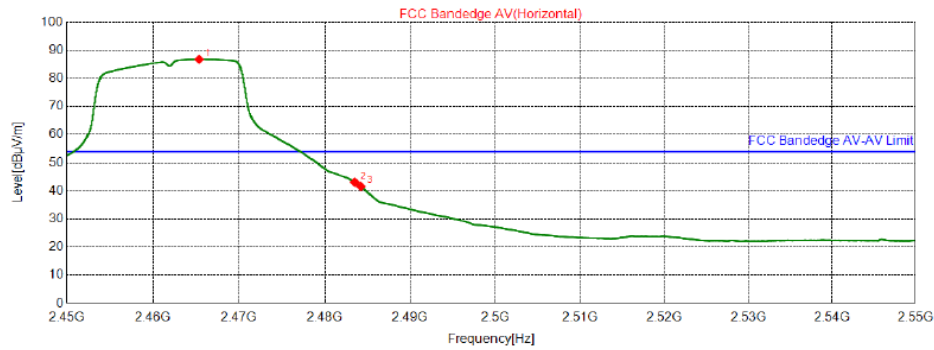


★ AV Detector

Suspected List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	2463.4350	108.01	90.78	74.00	-16.78	155	262	Horizontal	PK
2	2483.5000	74.25	57.09	74.00	16.91	155	179	Horizontal	PK
3	2484.1250	75.84	58.68	74.00	15.32	155	262	Horizontal	PK

802.11g-2462MHz/ Horizontal-AV

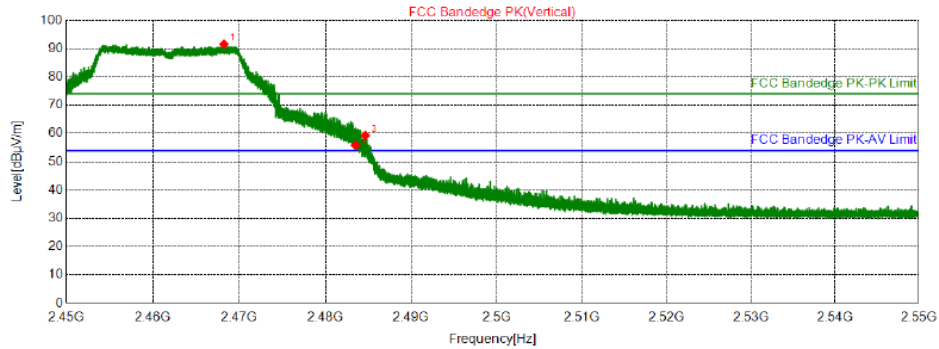


● QP Detector ★ AV Detector

Suspected List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	2465.3500	104.02	86.80	54.00	-32.80	150	253	Horizontal	PK
2	2483.5000	60.21	43.05	54.00	10.95	150	318	Horizontal	PK
3	2484.2125	58.72	41.56	54.00	12.44	150	318	Horizontal	PK

802.11g-2462MHz/ Vertical-PK

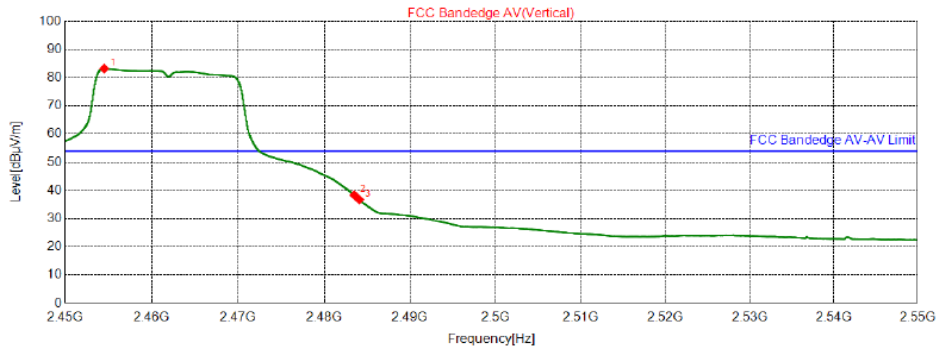


★ AV Detector

Suspected List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	2468.2200	108.76	91.55	74.00	-17.55	155	224	Vertical	PK
2	2483.5000	73.00	55.84	74.00	18.16	155	307	Vertical	PK
3	2484.6450	76.41	59.25	74.00	14.75	155	307	Vertical	PK

802.11g-2462MHz/ Vertical-AV

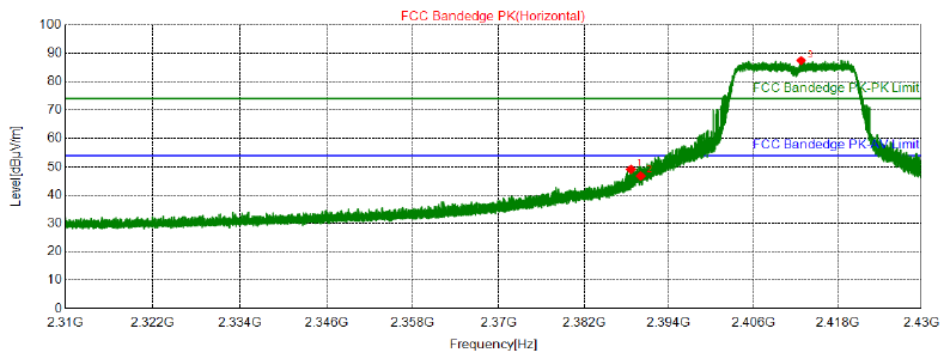


● QP Detector ★ AV Detector

Suspected List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	2454.5250	100.44	83.18	54.00	-29.18	150	117	Vertical	PK
2	2483.5000	55.52	38.36	54.00	15.64	150	328	Vertical	PK
3	2484.0750	53.89	36.73	54.00	17.27	150	328	Vertical	PK

802.11n (HT20)-2412MHz/ Horizontal-PK

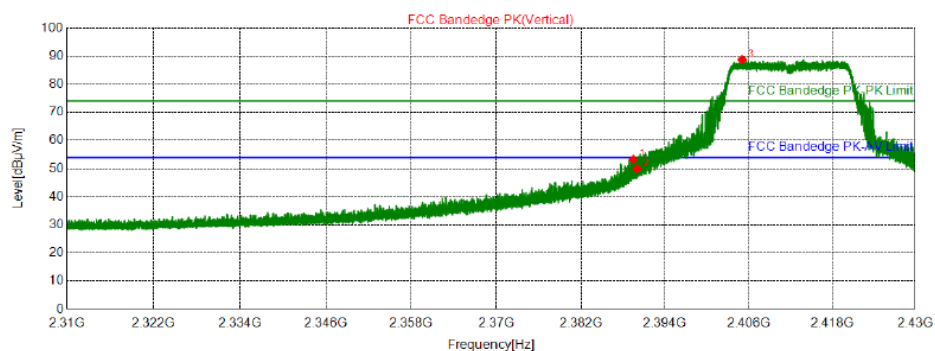


★ AV Detector

Suspected List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	2388.6240	66.55	49.08	74.00	24.92	155	251	Horizontal	PK
2	2390.0040	64.26	46.79	74.00	27.21	155	194	Horizontal	PK
3	2412.7920	104.76	87.37	74.00	-13.37	155	251	Horizontal	PK

802.11n (HT20)-2412MHz/ Vertical-PK

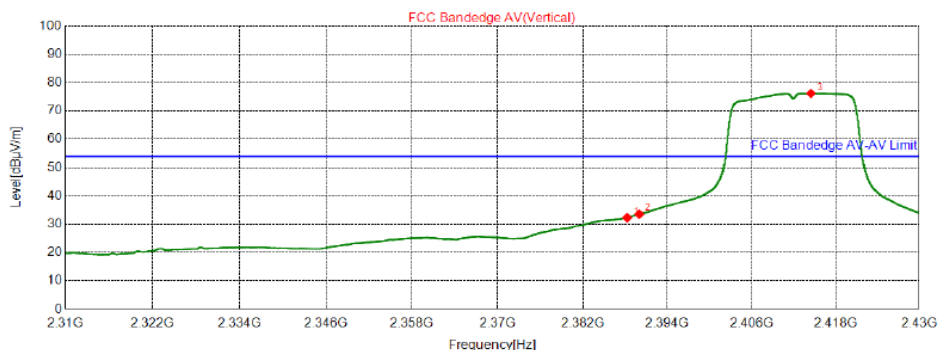


★ AV Detector

Suspected List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	2389.4640	70.74	53.27	74.00	20.73	155	302	Vertical	PK
2	2390.0040	67.40	49.93	74.00	24.07	155	308	Vertical	PK
3	2405.0400	106.17	88.75	74.00	-14.75	155	302	Vertical	PK

802.11n (HT20)-2412MHz/ Vertical-AV

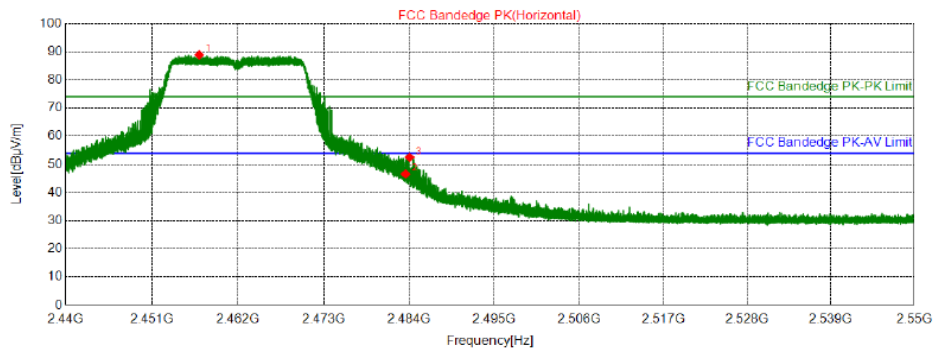


● QP Detector ★ AV Detector

Suspected List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	2388.2850	49.78	32.31	54.00	21.69	150	340	Vertical	PK
2	2390.0100	51.00	33.53	54.00	20.47	150	340	Vertical	PK
3	2414.4600	93.55	76.16	54.00	-22.16	150	359	Vertical	PK

802.11n (ht20)-2462MHz/ Horizontal-PK

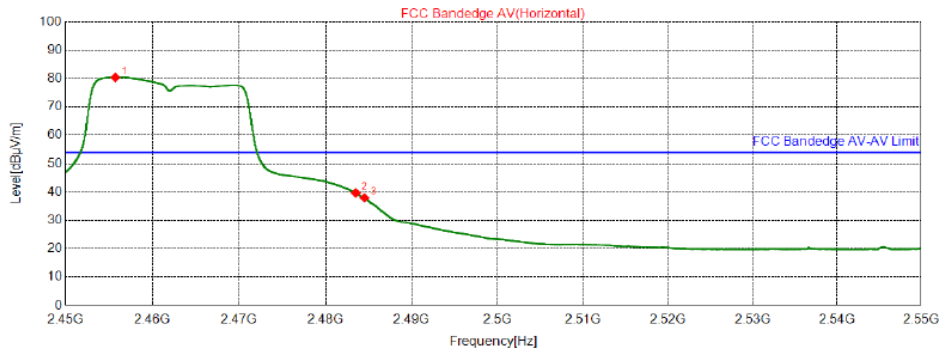


★ AV Detector

Suspected List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	2457.0225	106.13	88.88	74.00	-14.88	155	258	Horizontal	PK
2	2483.5050	63.79	46.63	74.00	27.37	155	322	Horizontal	PK
3	2484.0275	69.64	52.48	74.00	21.52	155	258	Horizontal	PK

802.11n (HT20)-2462MHz/ Horizontal-AV

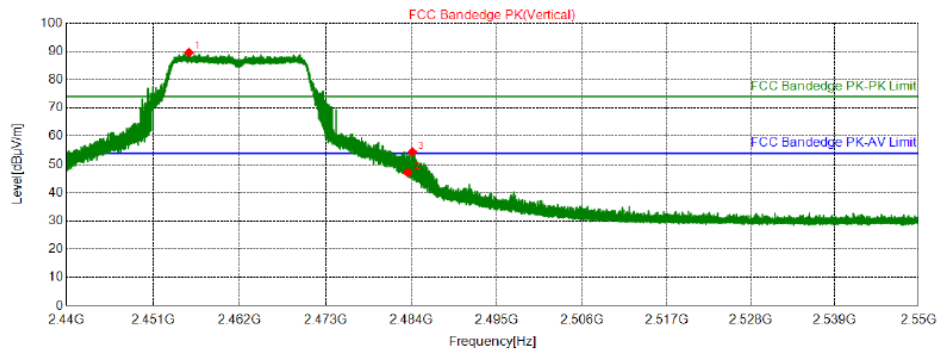


● QP Detector ★ AV Detector

Suspected List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	2455.7375	97.69	80.44	54.00	-26.44	150	193	Horizontal	PK
2	2483.5000	56.86	39.70	54.00	14.30	150	250	Horizontal	PK
3	2484.5125	55.11	37.95	54.00	16.05	150	250	Horizontal	PK

802.11n (ht20)-2462MHz/ Vertical-PK

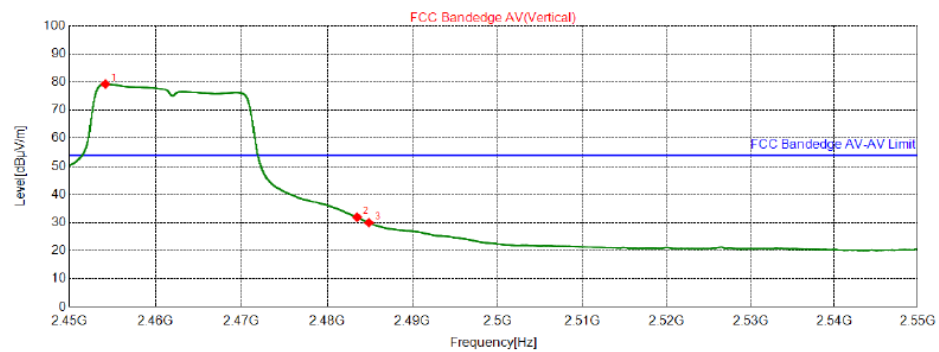


★ AV Detector

Suspected List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	2455.5430	106.85	89.60	74.00	-15.60	155	314	Vertical	PK
2	2483.5050	64.30	47.14	74.00	26.86	155	301	Vertical	PK
3	2484.0880	71.60	54.44	74.00	19.56	155	218	Vertical	PK

802.11n (HT20)-2462MHz/ Vertical-AV



● QP Detector ★ AV Detector

Suspected List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	2454.1875	96.58	79.32	54.00	-25.32	150	320	Vertical	PK
2	2483.5000	49.12	31.96	54.00	22.04	150	340	Vertical	PK
3	2484.8875	47.15	29.99	54.00	24.01	150	344	Vertical	PK



4.8 Radiated Emission Measurement

4.8.1 Limits

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table.

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F (kHz)	300
0.490 ~ 1.705	24000/F (kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. 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.

4.8.2 Test Procedures

For Radiated emission below 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degree to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Both X and Y axes of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotate table was turned from 0 degree to 360 degree to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

Note:

The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

For Radiated emission above 30MHz

- a. 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
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. 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.
- d. 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.
- e. 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.
- f. 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.

Note:

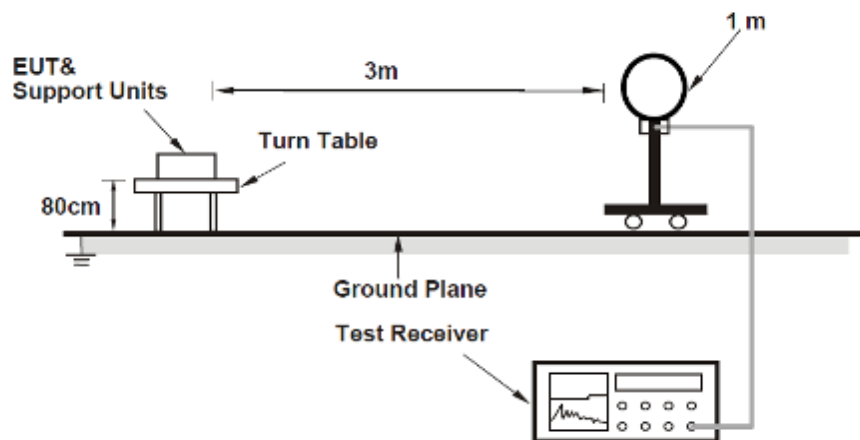
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz & 360 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1 GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 1/T for RMS Average (Duty cycle < 98 %) for Peak detection at frequency above 1 GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz (Duty cycle $\geq$ 98 %) for Average detection (AV) at frequency above 1 GHz.
5. All modes of operation were investigated and the worst-case emissions are reported.

4.8.3 Deviation from Test Standard

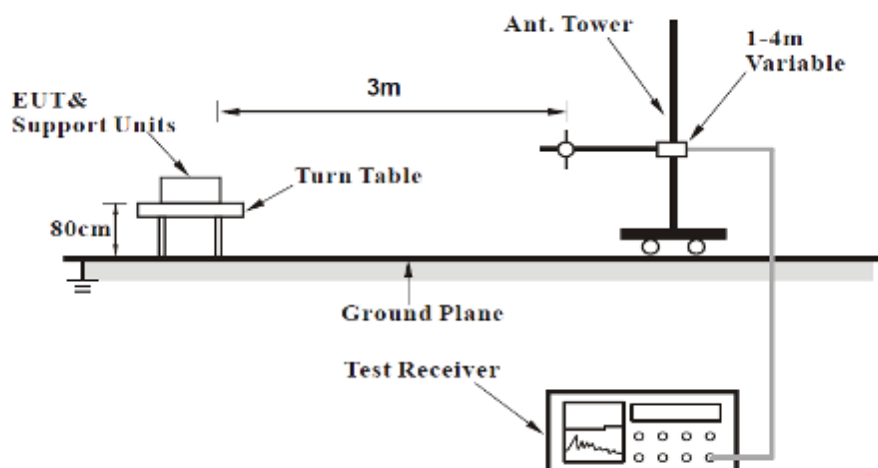
No deviation.

4.8.4 Test Setup

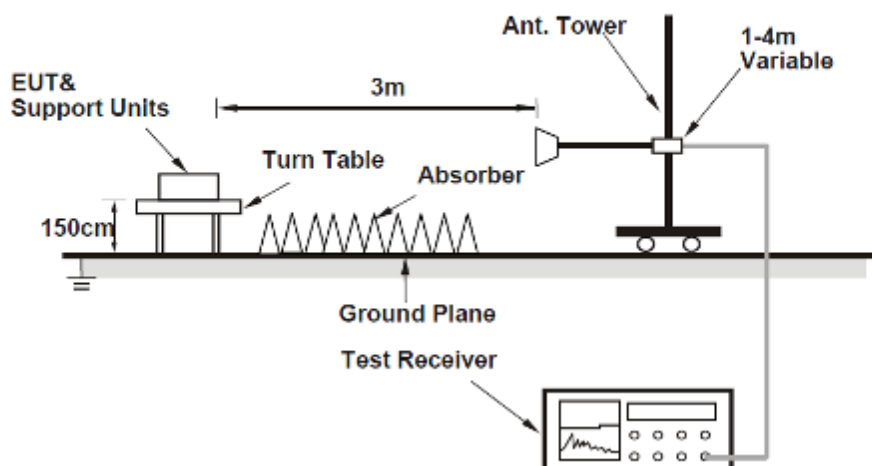
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz





For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.8.5 EUT Operating Conditions

- a. Placed the EUT on a testing table.
- b. Use the software to control the EUT under transmission condition continuously at specific channel frequency.

4.8.6 Test Results

Radiated Emissions Range 9kHz~30MHz

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

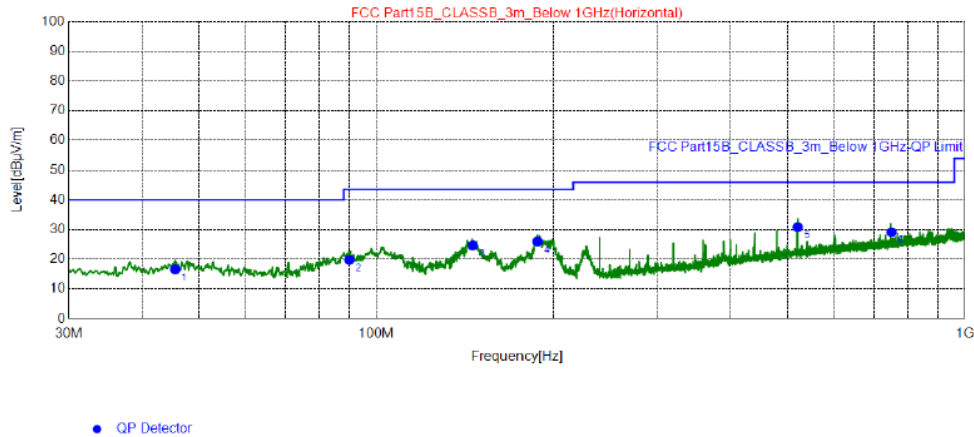


Radiated Emissions Range 30MHz~1GHz

Below is the worst test data

Channel	Channel 1	Detector Function	Quasi-Peak (QP)
Frequency Range	30MHz ~ 1GHz	Antenna Polarity	Horizontal

Test Plot:



Final Data List

NO.	Freq. [MHz]	QP Reading [dB μ V/m]	Factor [dB]	QP Value [dB μ V/m]	QP Limit [dB μ V/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	45.52	27.36	-10.72	16.64	40.00	23.36	200	105	Horizontal
2	89.94	35.82	-16.02	19.80	43.50	23.70	200	263	Horizontal
3	145.8	35.51	-10.83	24.68	43.50	18.82	200	120	Horizontal
4	187.9	38.26	-12.24	26.02	43.50	17.48	200	18	Horizontal
5	520.0	35.18	-4.29	30.89	46.00	15.11	200	232	Horizontal
6	750.1	30.01	-0.86	29.15	46.00	16.85	200	320	Horizontal

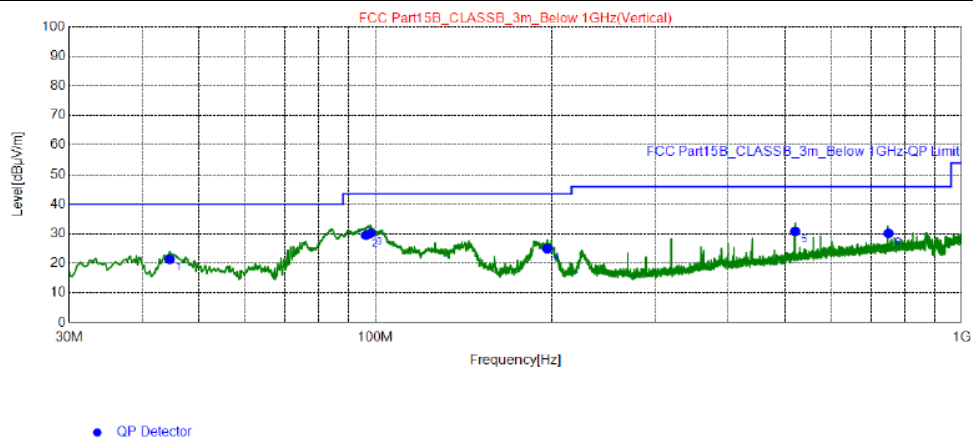
REMARKS:

1. Emission Level(dBuV/m) = Spectrum reading (dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Limit value – Emission Level



Channel	Channel 1	Detector Function	Quasi-Peak (QP)
Frequency Range	30MHz ~ 1GHz	Antenna Polarity	Vertical

Test Plot:



Final Data List

NO.	Freq. [MHz]	QP Reading [dB μ V/m]	Factor [dB]	QP Value [dB μ V/m]	QP Limit [dB μ V/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	44.55	32.14	-10.77	21.37	40.00	18.63	100	133	Vertical
2	96.34	44.95	-15.44	29.51	43.50	13.99	100	167	Vertical
3	98.09	45.44	-15.28	30.16	43.50	13.34	100	235	Vertical
4	196.4	37.87	-12.85	25.02	43.50	18.48	100	302	Vertical
5	520.0	35.14	-4.29	30.85	46.00	15.15	100	359	Vertical
6	750.1	31.02	-0.86	30.16	46.00	15.84	100	354	Vertical

REMARKS:

1. Emission Level(dBuV/m) = Original Spectrum reading (dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Limit value – Emission Level



Radiated Emission Range 1GHz~10th Harmonic

802.11b

Channel	TX Channel 1	Detector Function	Peak (PK)
Frequency Range	1GHz ~ 25GHz		Average (AV)

Spurious Emission Level							
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Correction Factor (dB/m)	Antenna Polarity	Detector
1	4823.3000	51.79	74.00	22.21	-12.41	H	PK
2	4825.0000	46.85	54.00	7.15	-12.41	H	AV
3	4823.3000	51.07	74.00	22.93	-12.41	V	PK
4	4825.0000	46.39	54.00	7.61	-12.41	V	AV

REMARKS:

1. Emission Level(dBuV/m) = Original Spectrum reading (dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Limit value – Emission Level

Channel	TX Channel 6	Detector Function	Peak (PK)
Frequency Range	1GHz ~ 25GHz		Average (AV)

Spurious Emission Level							
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Correction Factor (dB/m)	Antenna Polarity	Detector
1	4874.3000	54.04	74.00	19.96	-12.27	H	PK
2	4874.3000	43.77	54.00	10.23	-12.27	H	AV
3	4874.3000	55.22	74.00	18.78	-12.27	V	PK
4	4874.3000	45.11	54.00	8.89	-12.27	V	AV

REMARKS:

1. Emission Level(dBuV/m) = Original Spectrum reading (dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Limit value – Emission Level



Channel	TX Channel 11	Detector Function	Peak (PK)
Frequency Range	1GHz ~ 25GHz		Average (AV)

Spurious Emission Level							
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Correction Factor (dB/m)	Antenna Polarity	Detector
1	4923.6000	52.50	74.00	21.50	-12.14	H	PK
2	4925.3000	47.99	54.00	6.01	-12.13	H	AV
3	4923.6000	52.98	74.00	21.02	-12.14	V	PK
4	4925.3000	48.31	54.00	5.69	-12.13	V	AV

REMARKS:

1. Emission Level(dBuV/m) = Original Spectrum reading (dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value =Limit value – Emission Level



802.11g

Channel	TX Channel 1	Detector Function	Peak (PK)
Frequency Range	1GHz ~ 25GHz		Average (AV)

Spurious Emission Level							
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Correction Factor (dB/m)	Antenna Polarity	Detector
1	4825.0000	51.37	74.00	22.63	-12.41	H	PK
2	4825.0000	43.84	54.00	10.16	-12.41	H	AV
3	4825.0000	49.13	74.00	24.87	-12.41	V	PK
4	4825.0000	41.95	54.00	12.05	-12.41	V	AV

REMARKS:

1. Emission Level(dBuV/m) = Original Spectrum reading (dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Limit value – Emission Level

Channel	TX Channel 6	Detector Function	Peak (PK)
Frequency Range	1GHz ~ 25GHz		Average (AV)

Spurious Emission Level							
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Correction Factor (dB/m)	Antenna Polarity	Detector
1	4872.6000	52.33	74.00	21.67	-12.28	H	PK
2	4874.3000	45.38	54.00	8.62	-12.27	H	AV
3	4872.6000	50.76	74.00	23.24	-12.28	V	PK
4	4876.0000	45.61	54.00	8.39	-12.27	V	AV

REMARKS:

1. Emission Level(dBuV/m) = Original Spectrum reading (dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value =Limit value – Emission Level



Channel	TX Channel 11	Detector Function	Peak (PK)
Frequency Range	1GHz ~ 25GHz		Average (AV)

Spurious Emission Level							
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Correction Factor (dB/m)	Antenna Polarity	Detector
1	4920.2000	49.83	74.00	24.17	-12.15	H	PK
2	4923.6000	44.35	54.00	9.65	-12.14	H	AV
3	4930.4000	50.32	74.00	23.68	-12.12	V	PK
4	4927.0000	44.73	54.00	9.27	-12.13	V	AV

REMARKS:

1. Emission Level(dBuV/m) = Original Spectrum reading (dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Limit value – Emission Level



802.11n (HT20)

Channel	TX Channel 1	Detector Function	Peak (PK)
Frequency Range	1GHz ~ 25GHz		Average (AV)

Spurious Emission Level							
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Correction Factor (dB/m)	Antenna Polarity	Detector
1	4833.5000	47.67	74.00	26.33	-12.38	H	PK
2	4828.4000	41.71	54.00	12.29	-12.40	H	AV
3	4814.8000	46.76	74.00	27.24	-12.43	V	PK
4	4823.3000	40.96	54.00	13.04	-12.41	V	AV

REMARKS:

1. Emission Level(dBuV/m) = Original Spectrum reading (dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Limit value – Emission Level

Channel	TX Channel 6	Detector Function	Peak (PK)
Frequency Range	1GHz ~ 25GHz		Average (AV)

Spurious Emission Level							
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Correction Factor (dB/m)	Antenna Polarity	Detector
1	4874.3000	48.02	74.00	25.98	-12.27	H	PK
2	4874.3000	43.54	54.00	10.46	-12.27	H	AV
3	4864.1000	49.49	74.00	24.51	-12.30	V	PK
4	4872.6000	44.19	54.00	9.81	-12.28	V	AV

REMARKS:

1. Emission Level(dBuV/m) = Original Spectrum reading (dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Limit value – Emission Level



Channel	TX Channel 11	Detector Function	Peak (PK)
Frequency Range	1GHz ~ 25GHz		Average (AV)

Spurious Emission Level							
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Correction Factor (dB/m)	Antenna Polarity	Detector
1	4925.3000	47.45	74.00	26.55	-12.13	H	PK
2	4923.6000	41.77	54.00	12.23	-12.14	H	AV
3	4925.3000	47.53	74.00	26.47	-12.13	V	PK
4	4927.0000	43.91	54.00	10.09	-12.13	V	AV

REMARKS:

1. Emission Level(dBuV/m) = Original Spectrum reading (dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Limit value – Emission Level



5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

----- END -----