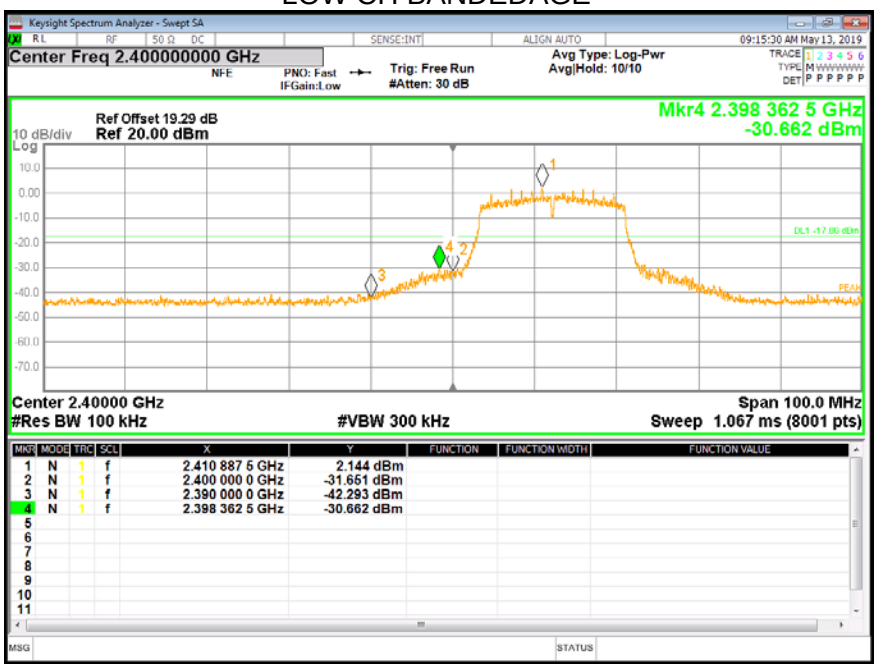
8.5.3. 802.11n HT20 MIMO MODE

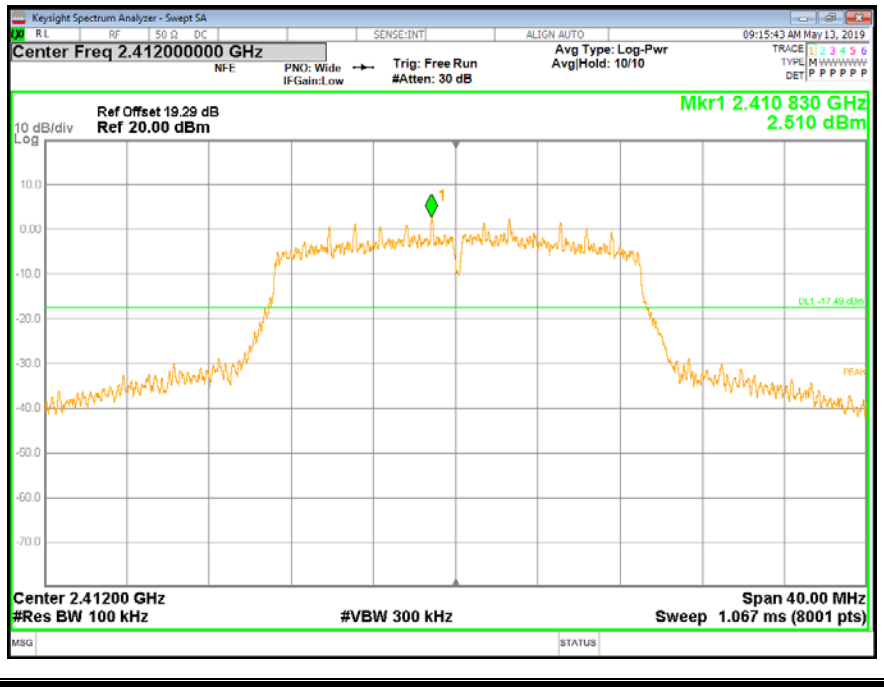
MIMO MODE-2TX

ANTENNA 0

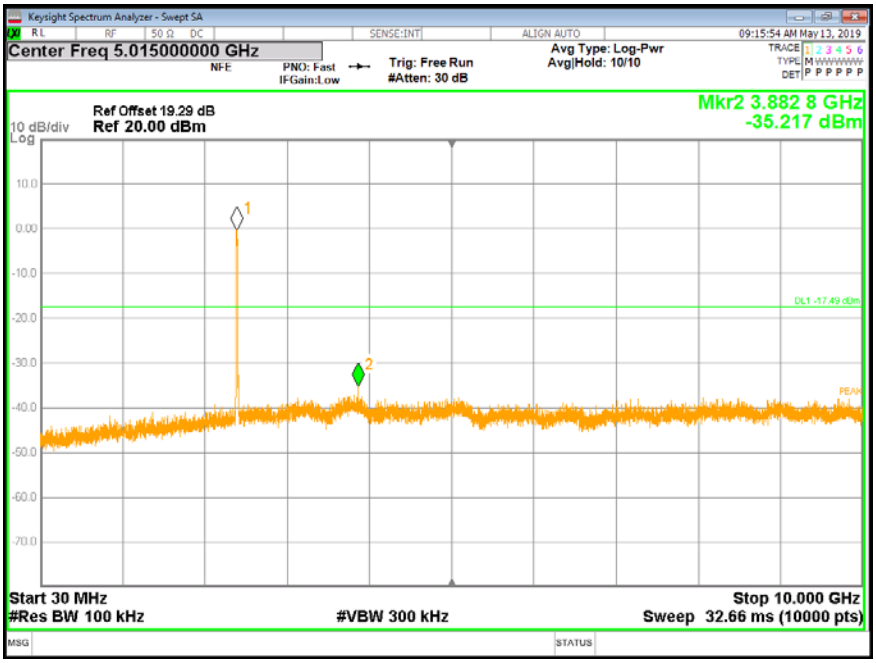
LOW CH BANDEDAGE



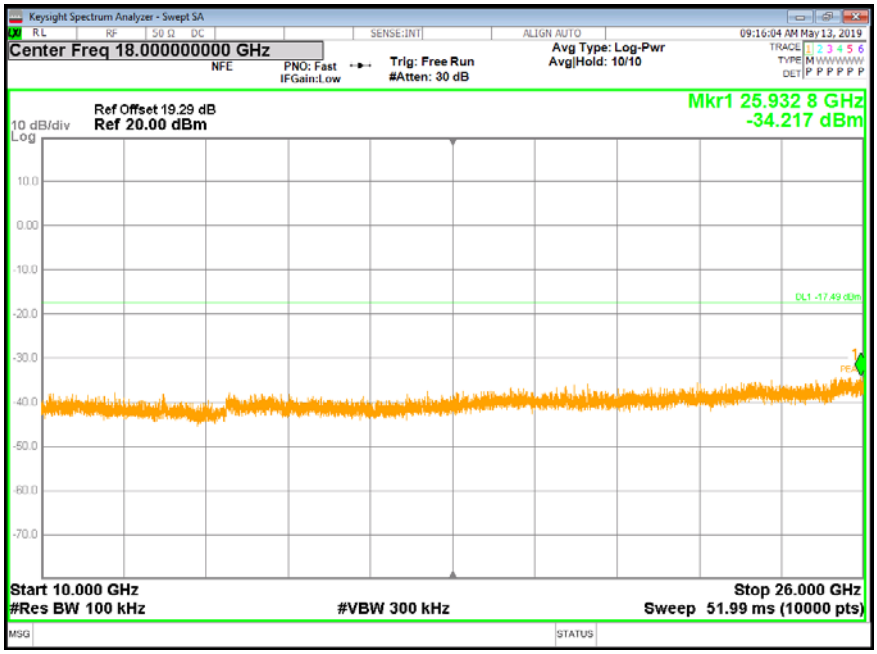
LOW CH REFERENCE



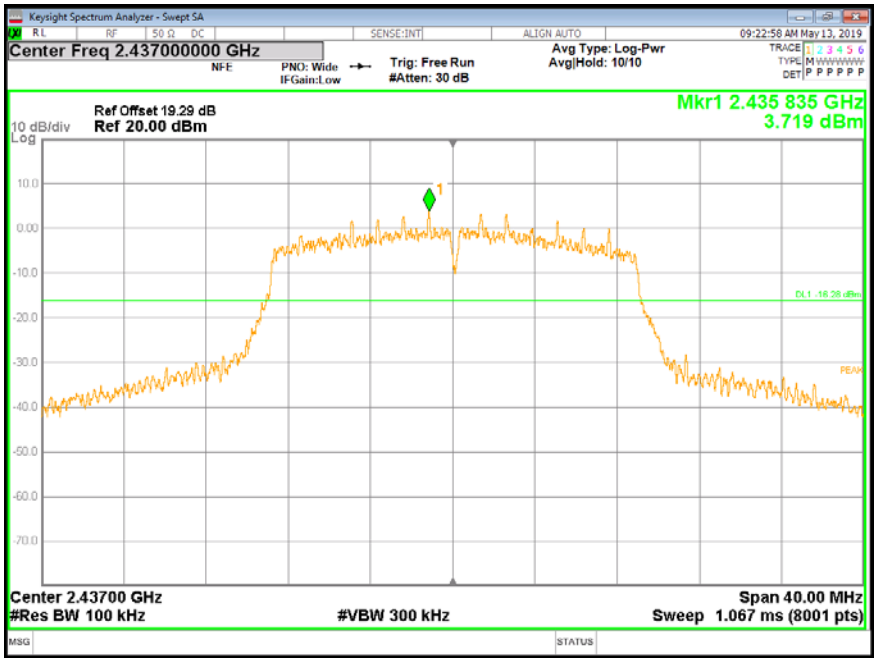
LOW CH SPURIOUS EMISSIONS 30M-10G



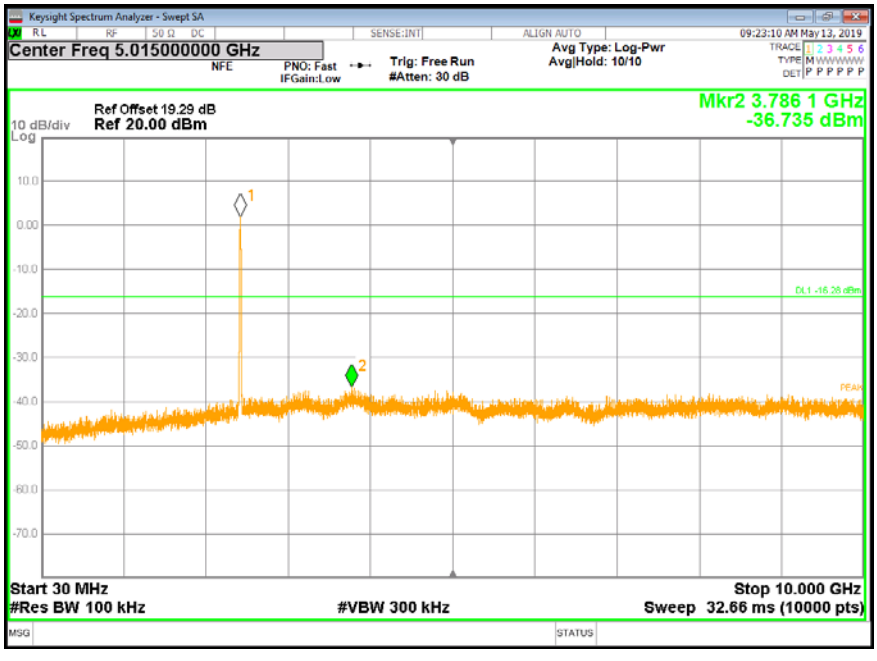
LOW CH SPURIOUS EMISSIONS 10G-26G



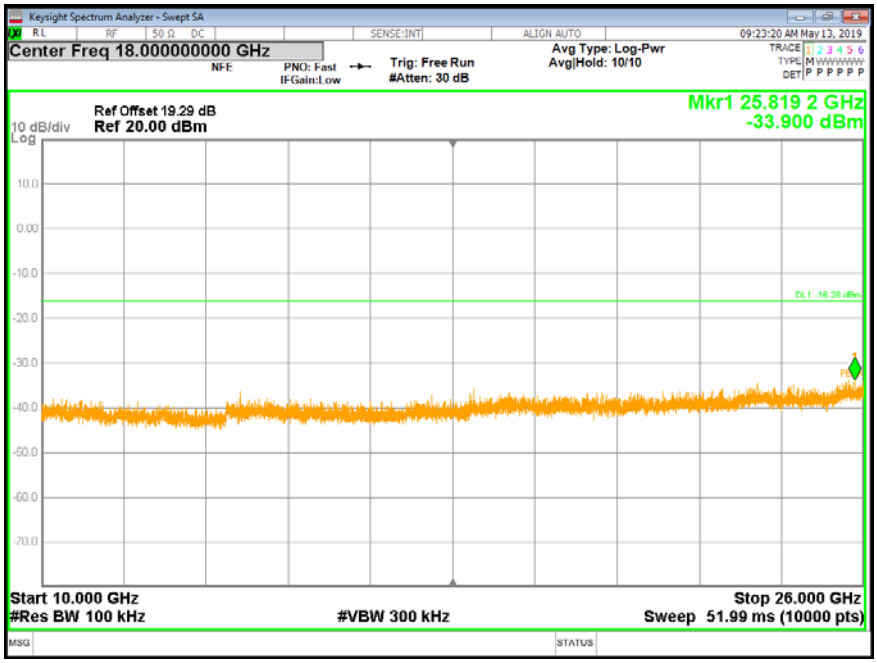
MID CH REFERENCE



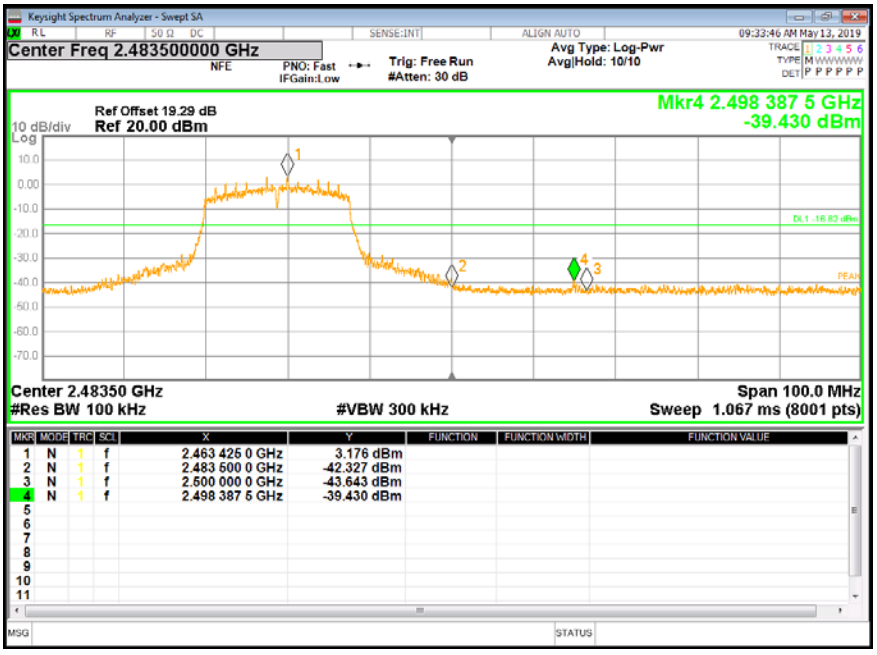
MID CH SPURIOUS EMISSIONS 30M-10G



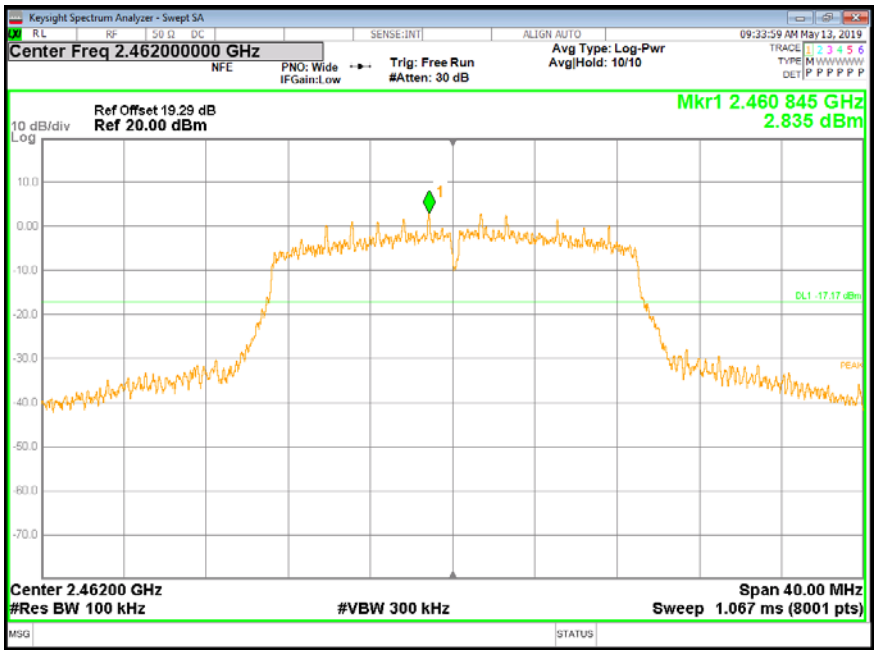
MID CH SPURIOUS EMISSIONS 10G-26G



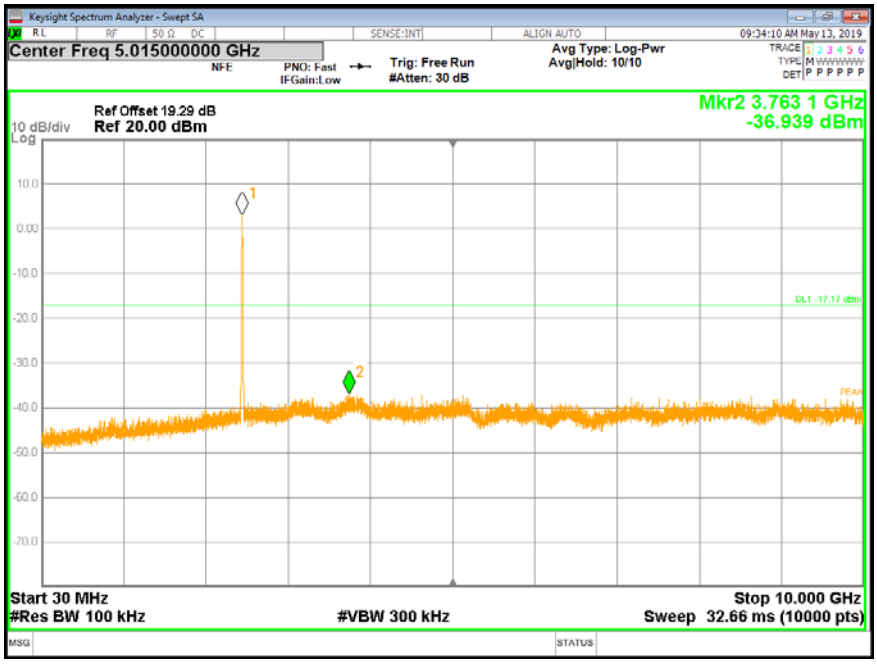
HIGH CH BANDEDAGE



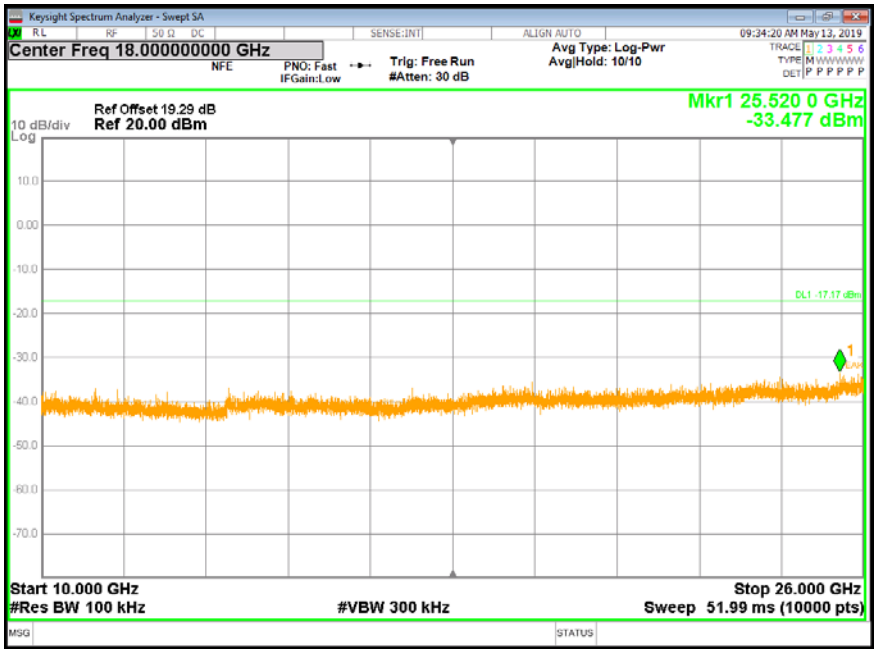
HIGH CH REFERENCE



HIGH CH SPURIOUS EMISSIONS 30M-10G

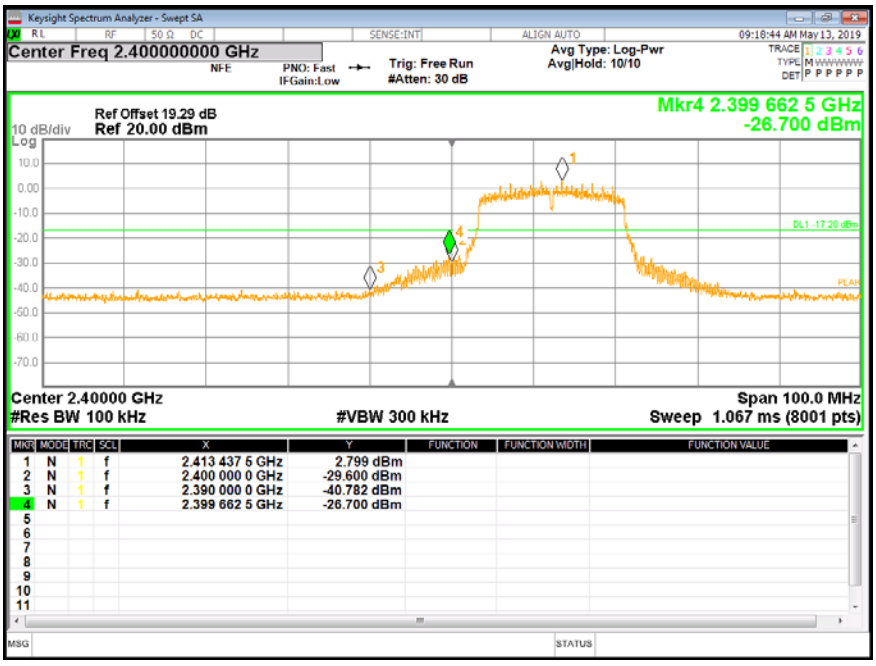


HIGH CH SPURIOUS EMISSIONS 10G-26G

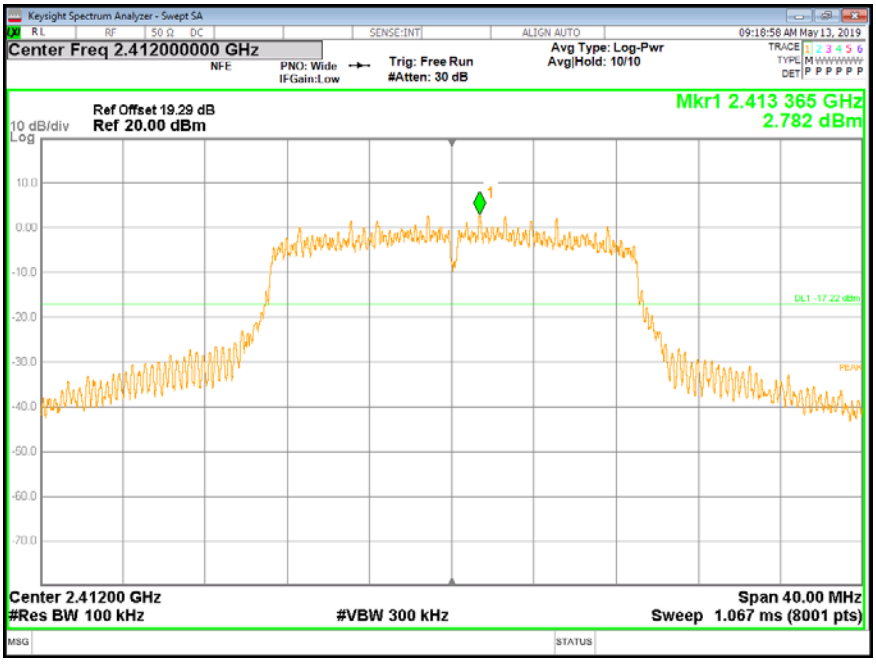


ANTENNA 1

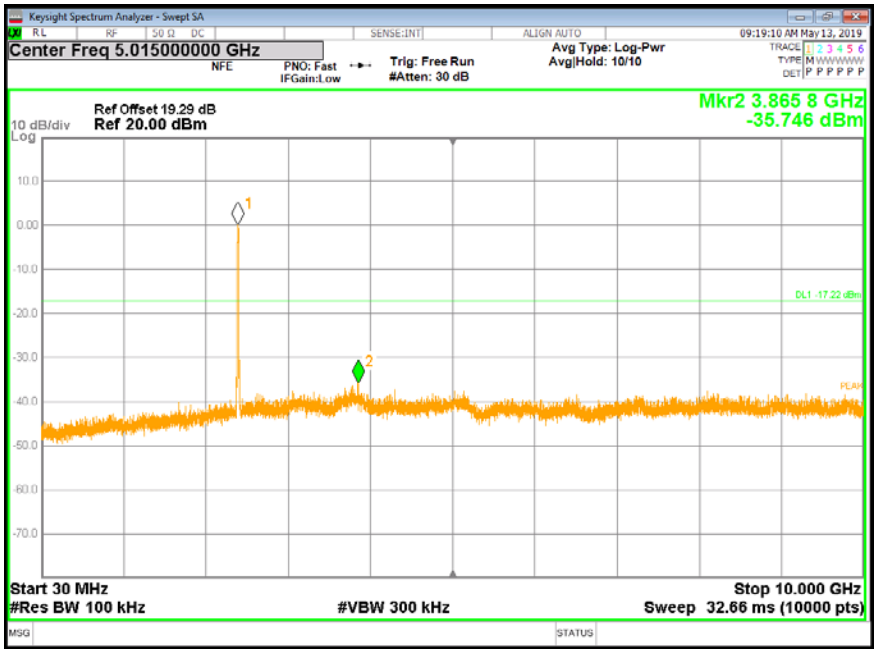
LOW CH BANDEDAGE



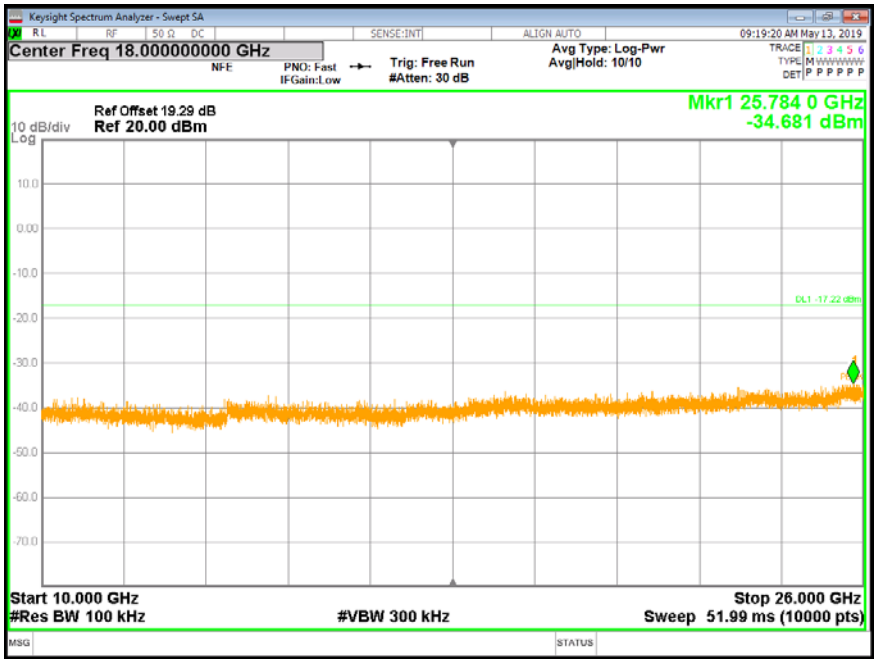
LOW CH REFERENCE



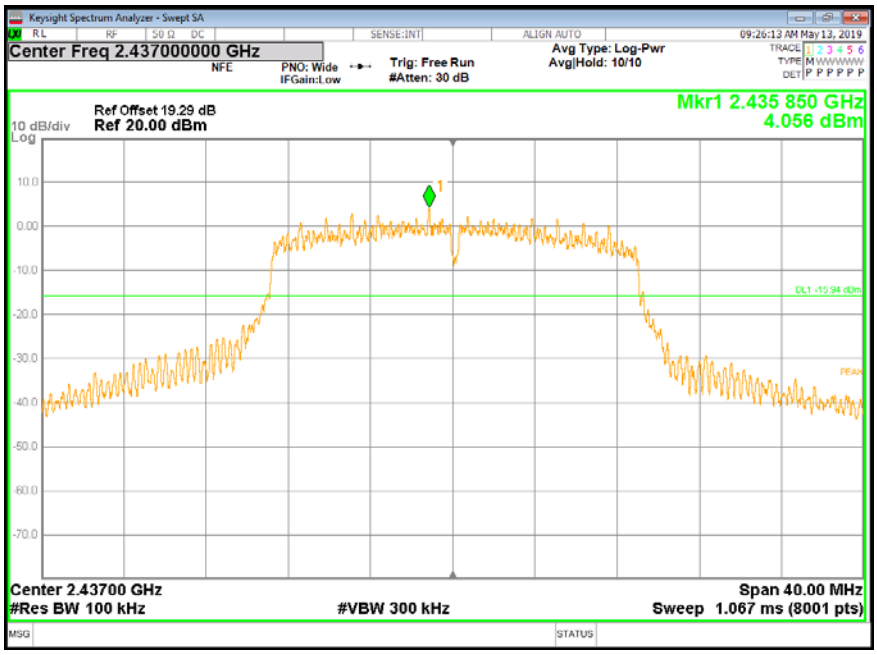
LOW CH SPURIOUS EMISSIONS 30M-10G



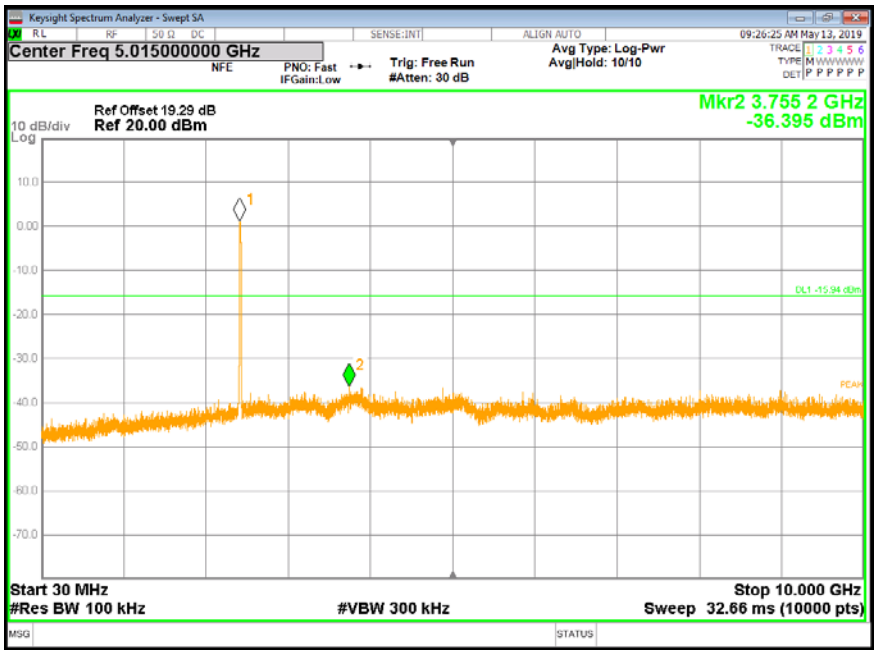
LOW CH SPURIOUS EMISSIONS 10G-26G



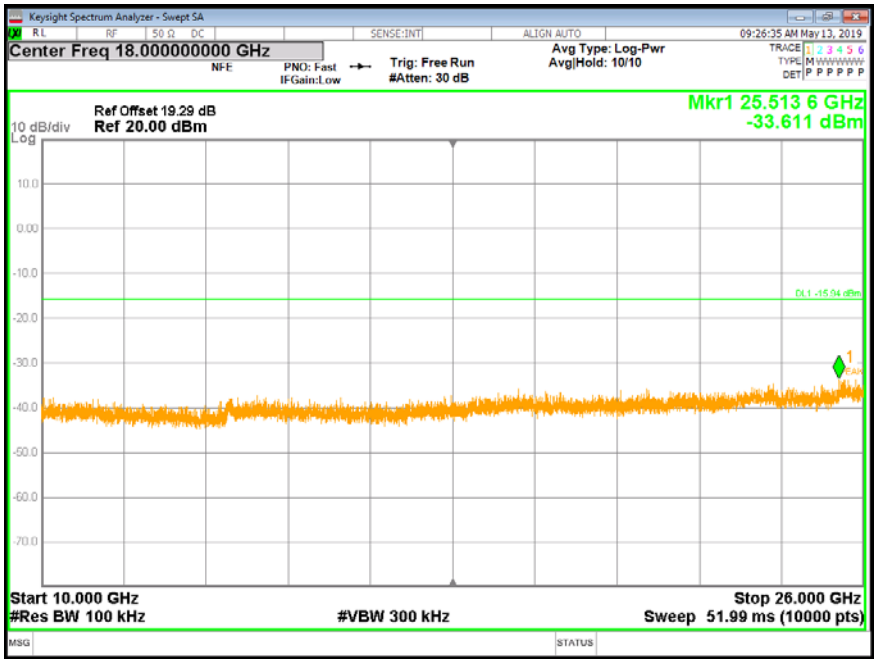
MID CH REFERENCE



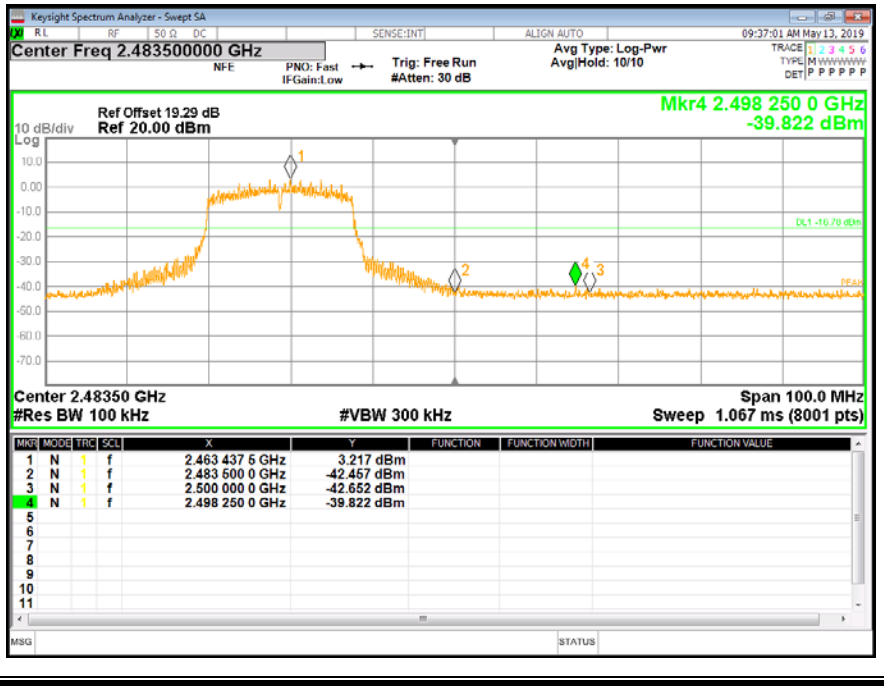
MID CH SPURIOUS EMISSIONS 30M-10G



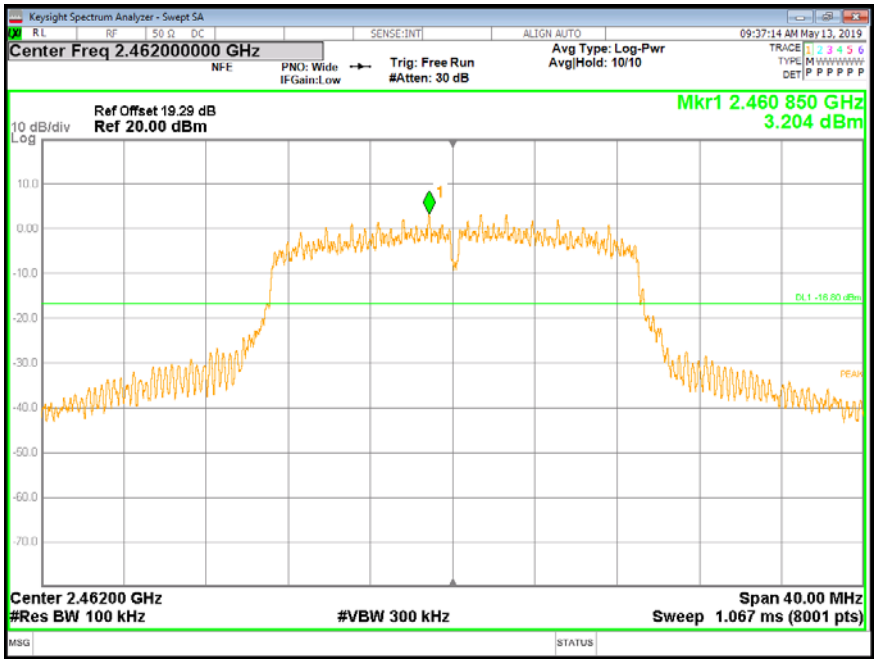
MID CH SPURIOUS EMISSIONS 10G-26G



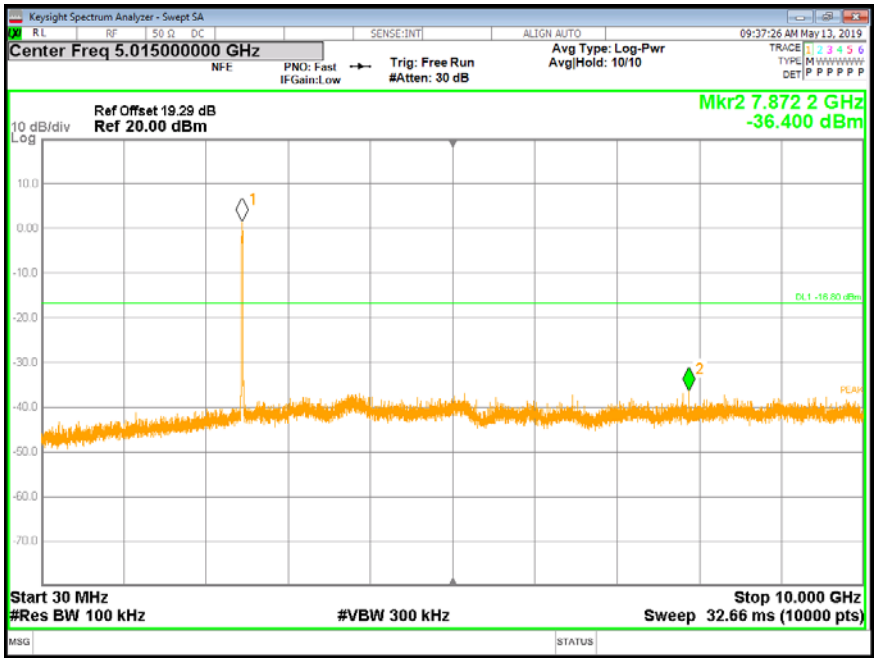
HIGH CH BANDEDAGE



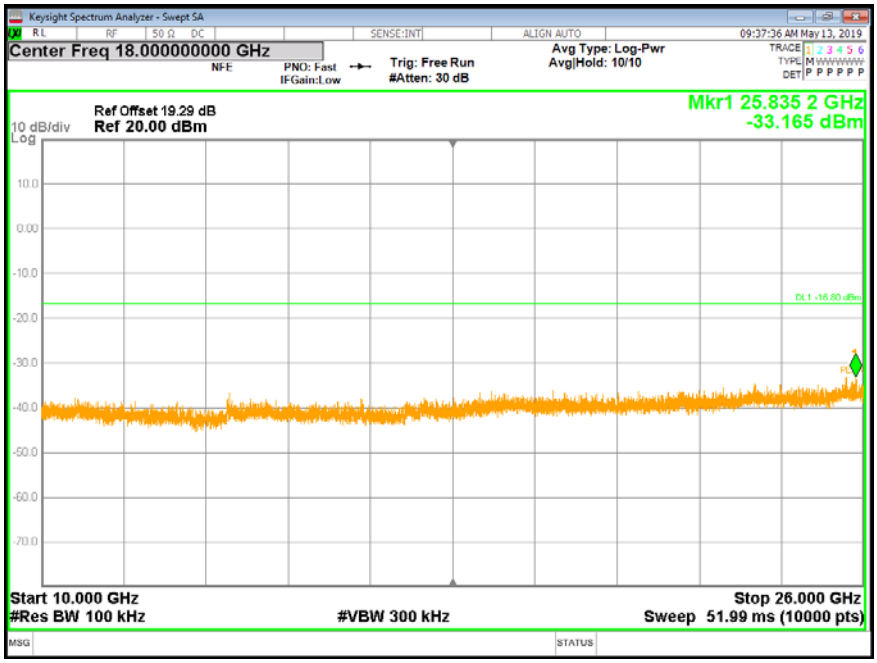
HIGH CH REFERENCE



HIGH CH SPURIOUS EMISSIONS 30M-10G



HIGH CH SPURIOUS EMISSIONS 10G-26G

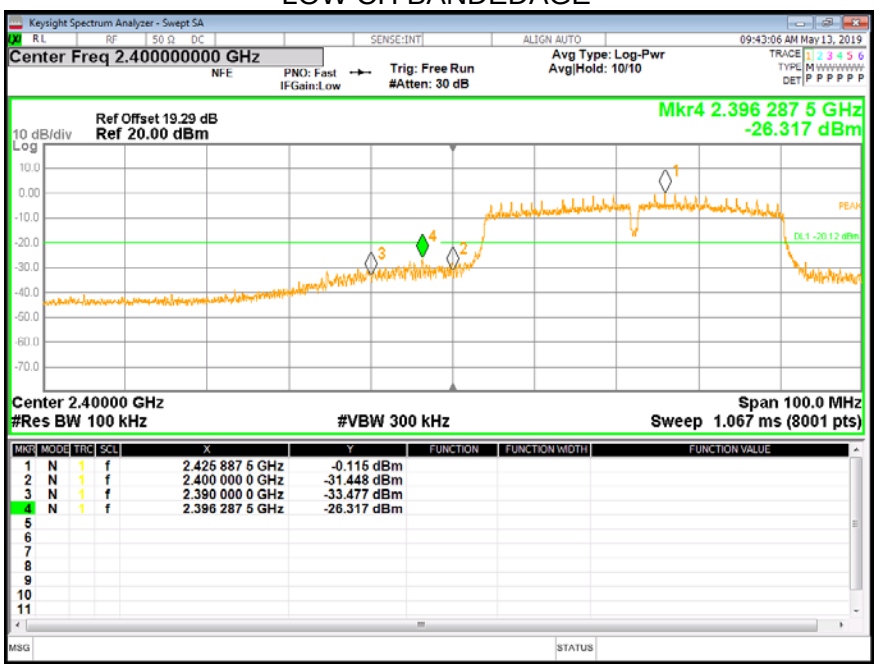


8.5.4. 802.11n HT40 MIMO MODE

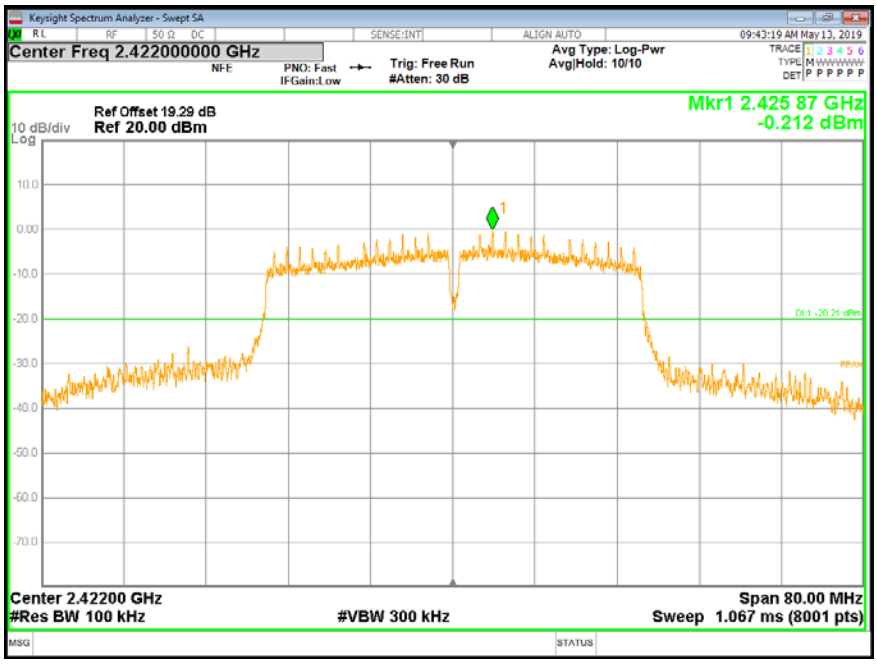
MIMO MODE-2TX

ANTENNA 0

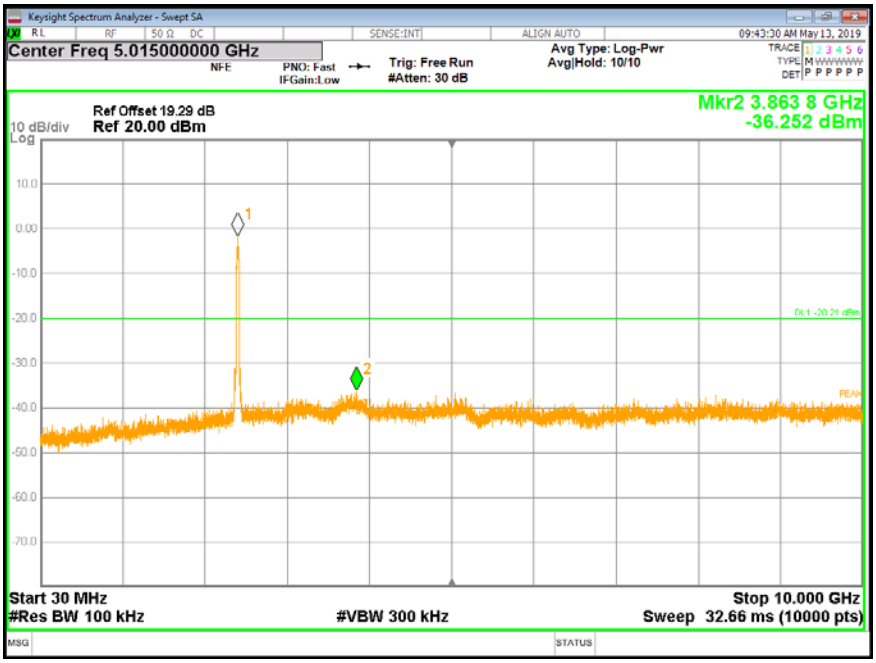
LOW CH BANDEDAGE



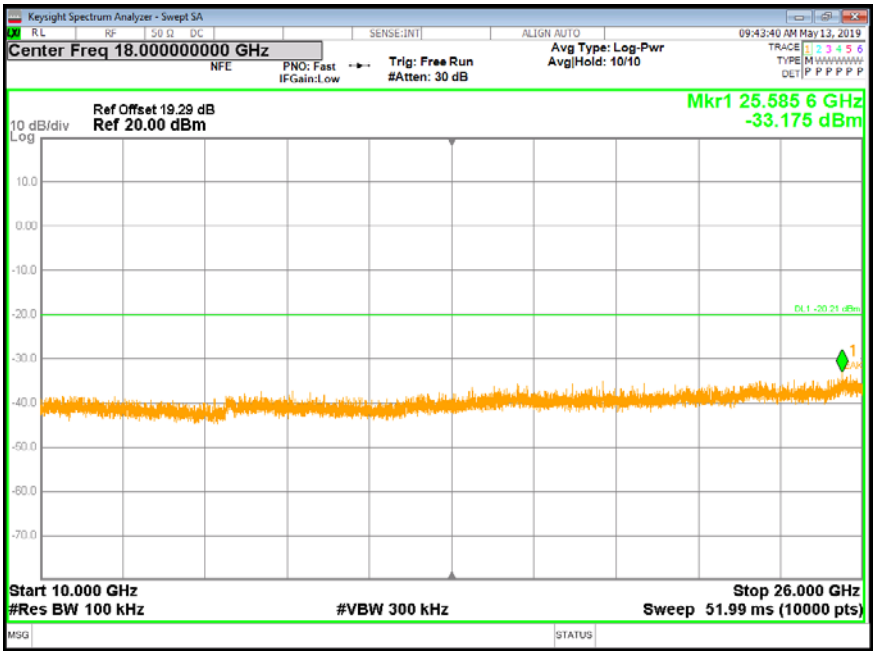
LOW CH REFERENCE



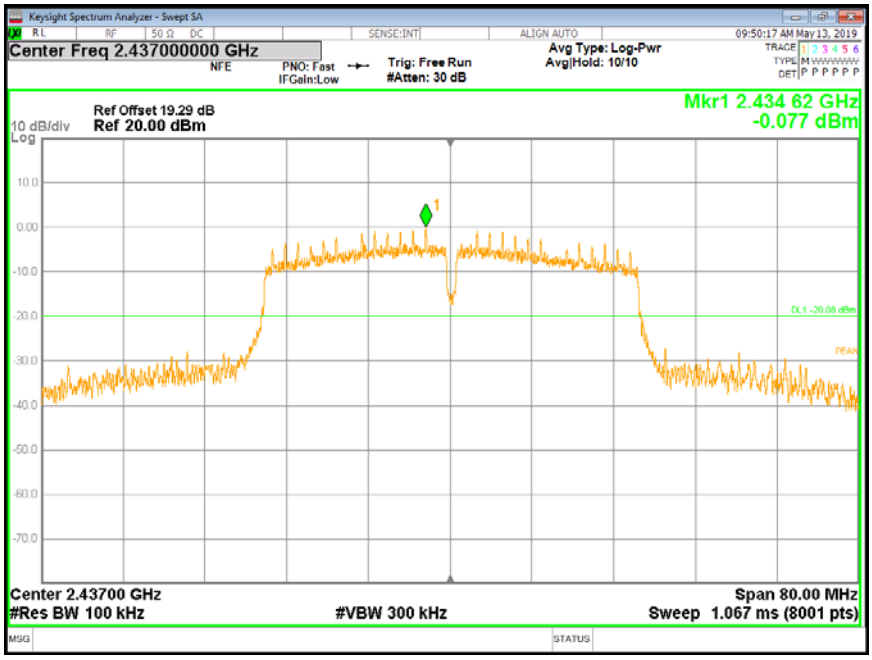
LOW CH SPURIOUS EMISSIONS 30M-10G



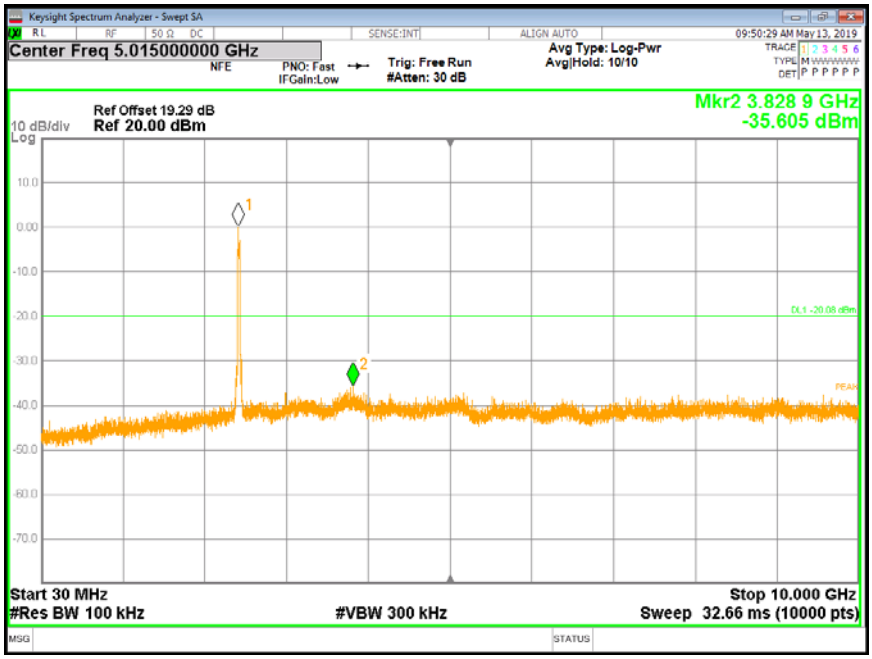
LOW CH SPURIOUS EMISSIONS 10G-26G



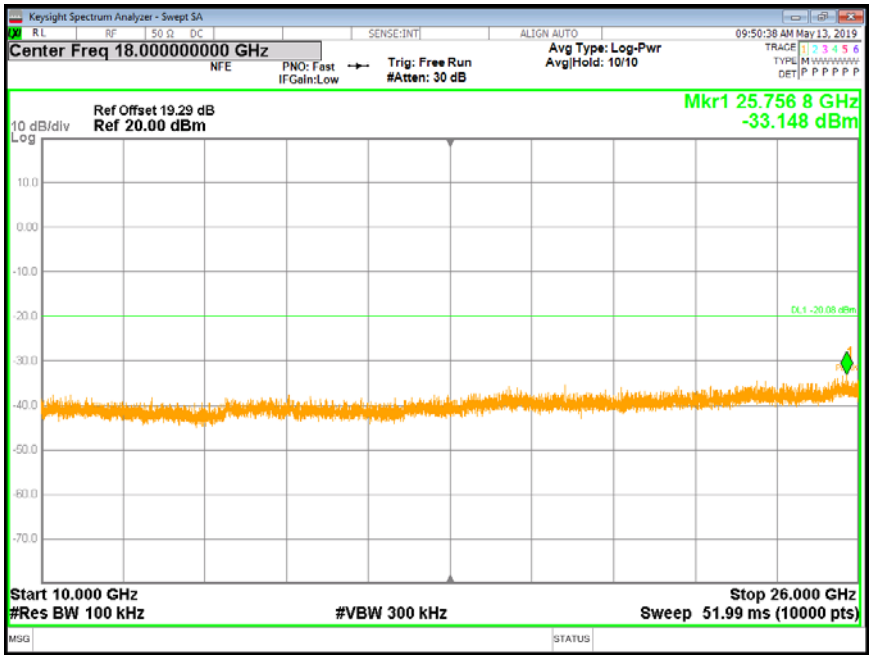
MID CH REFERENCE



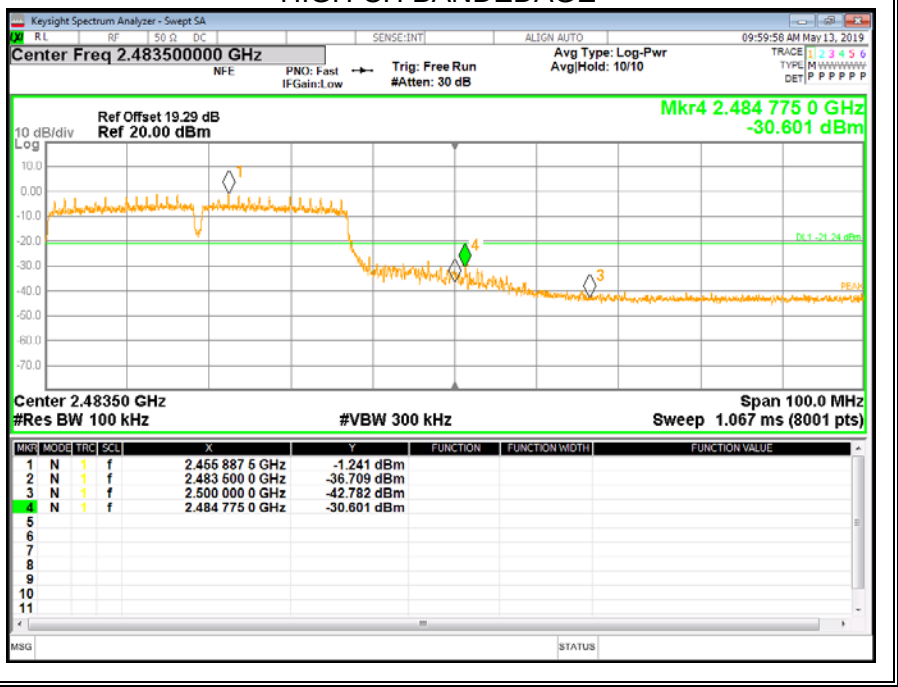
MID CH SPURIOUS EMISSIONS 30M-10G



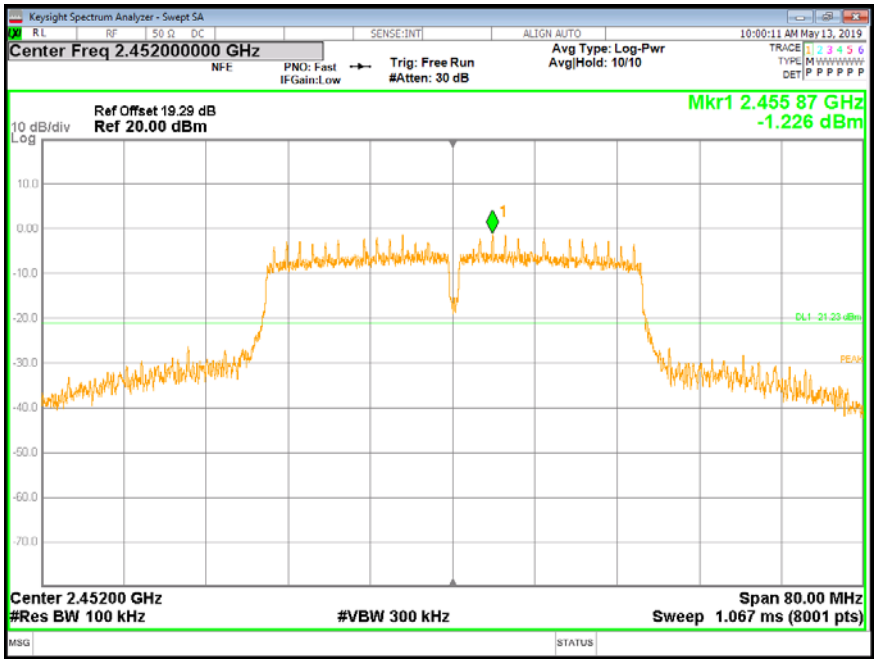
MID CH SPURIOUS EMISSIONS 10G-26G



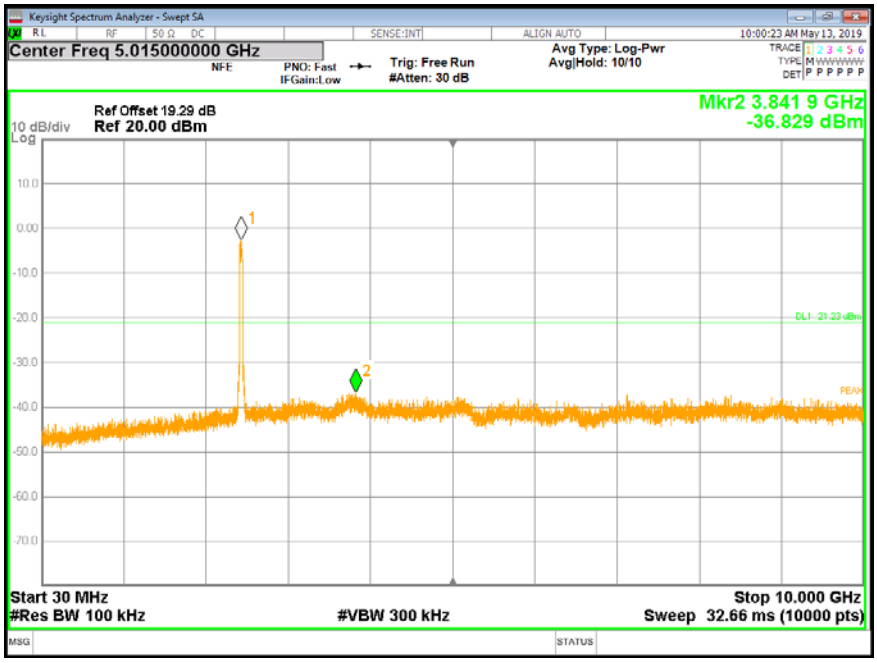
HIGH CH BANDEDAGE



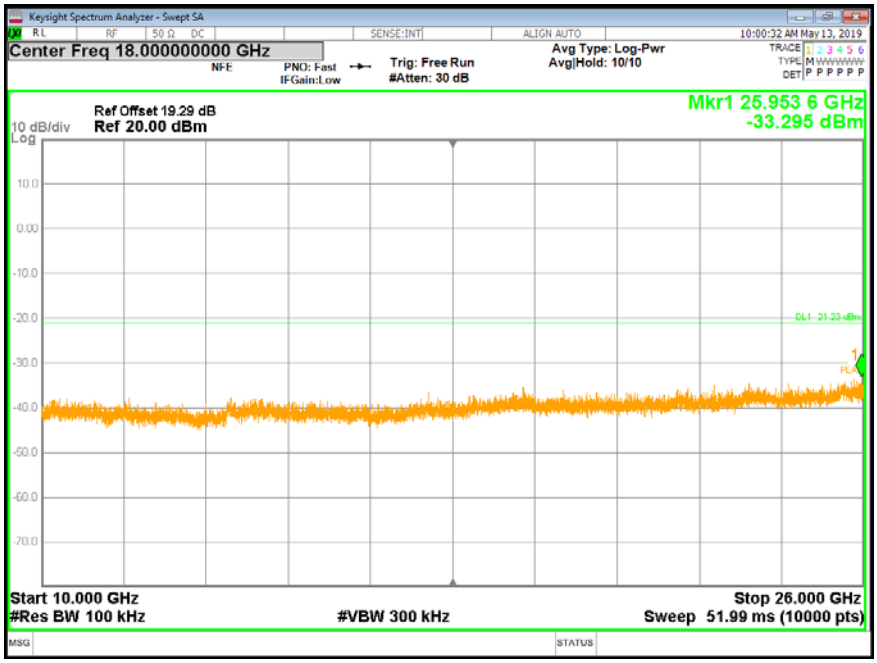
HIGH CH REFERENCE



HIGH CH SPURIOUS EMISSIONS 30M-10G

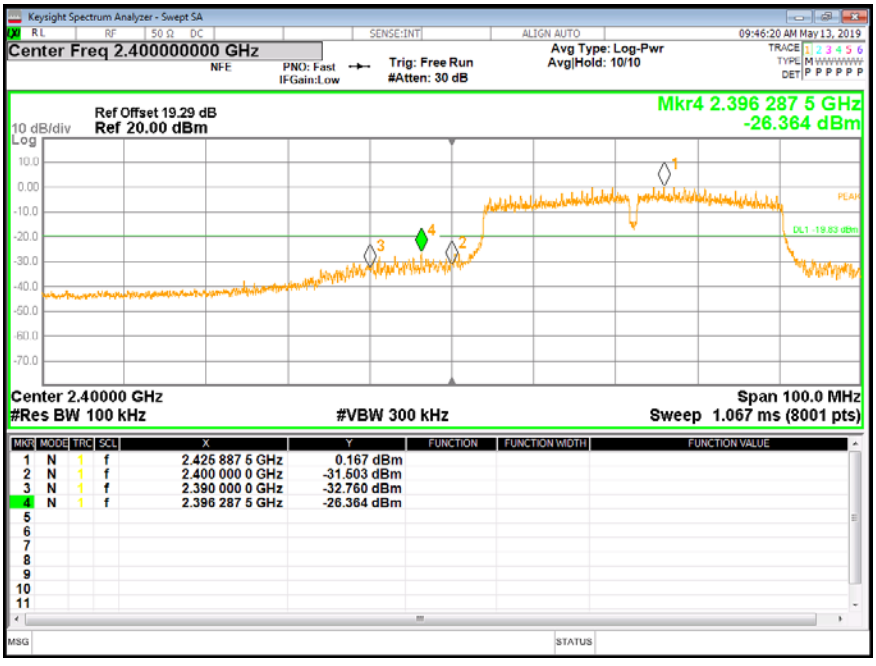


HIGH CH SPURIOUS EMISSIONS 10G-26G

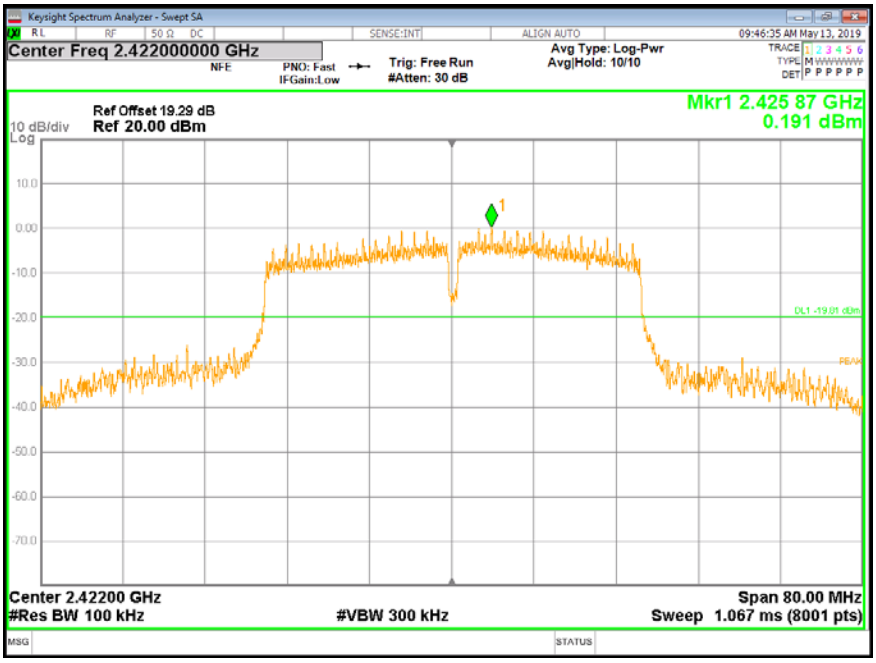


ANTENNA 1

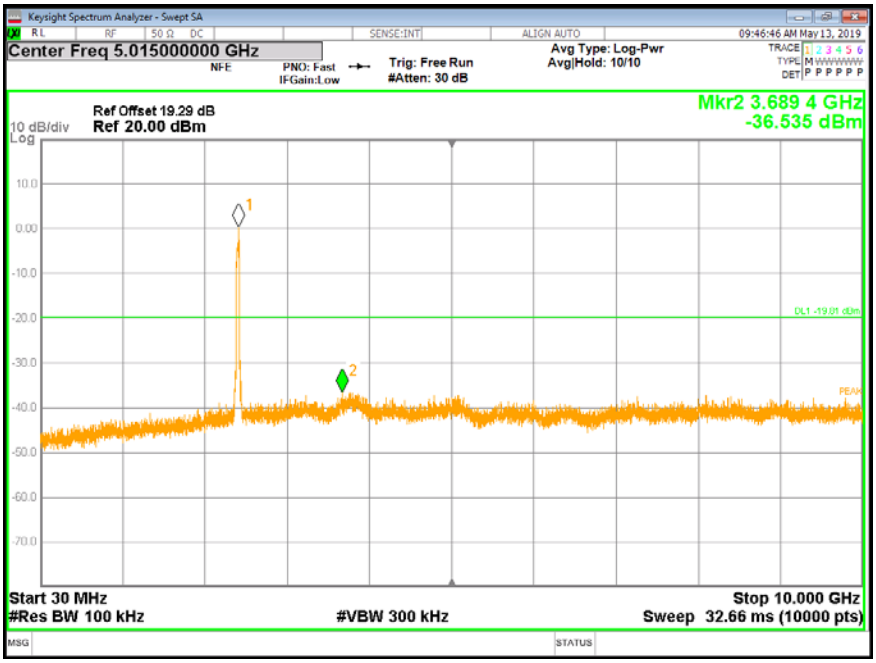
LOW CH BANDEDAGE



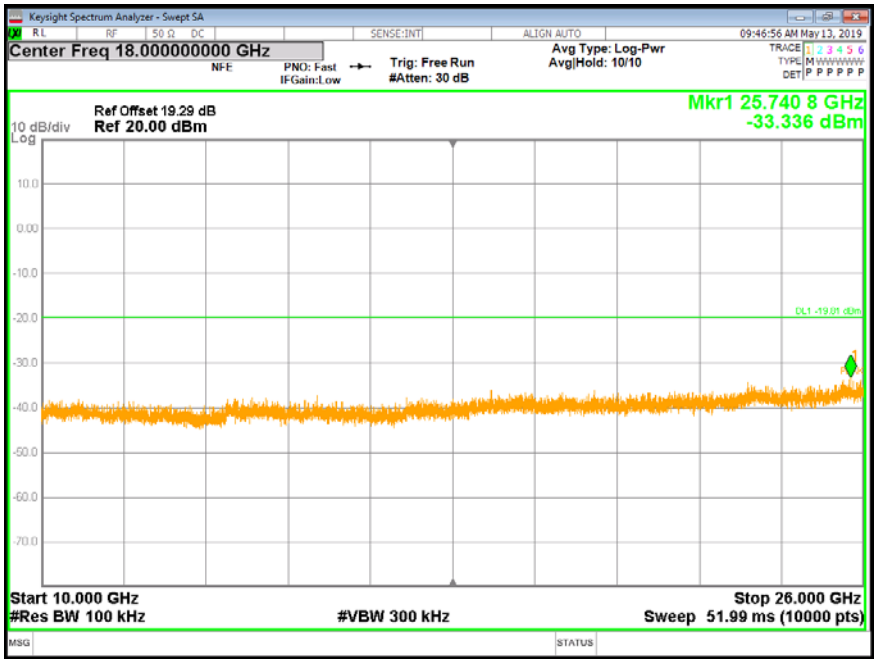
LOW CH REFERENCE



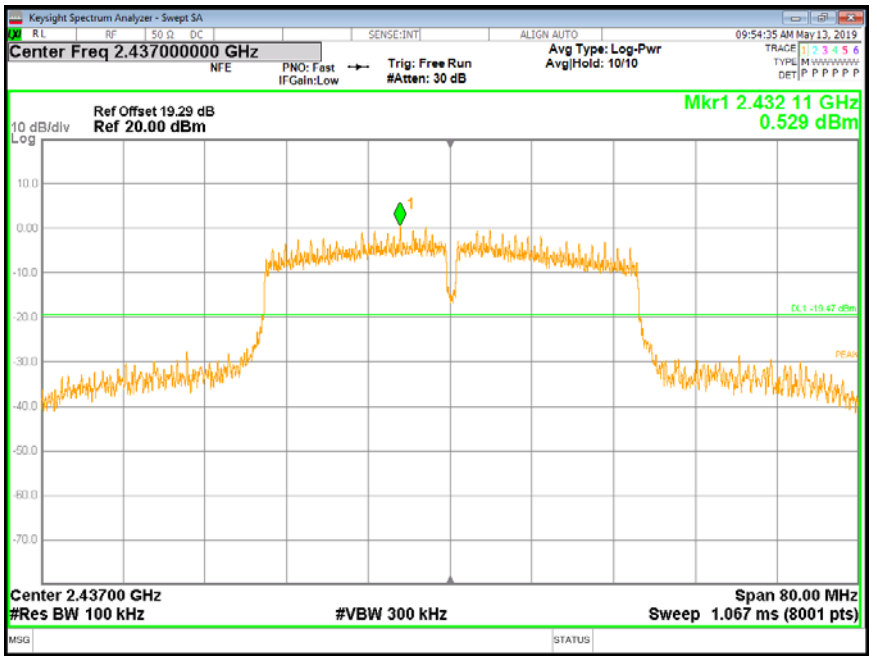
LOW CH SPURIOUS EMISSIONS 30M-10G



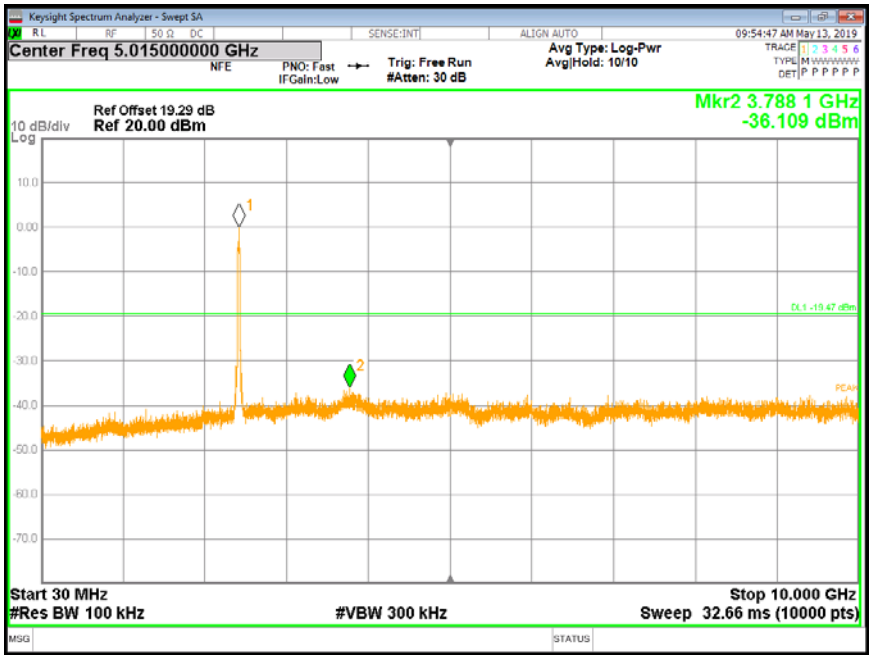
LOW CH SPURIOUS EMISSIONS 10G-26G



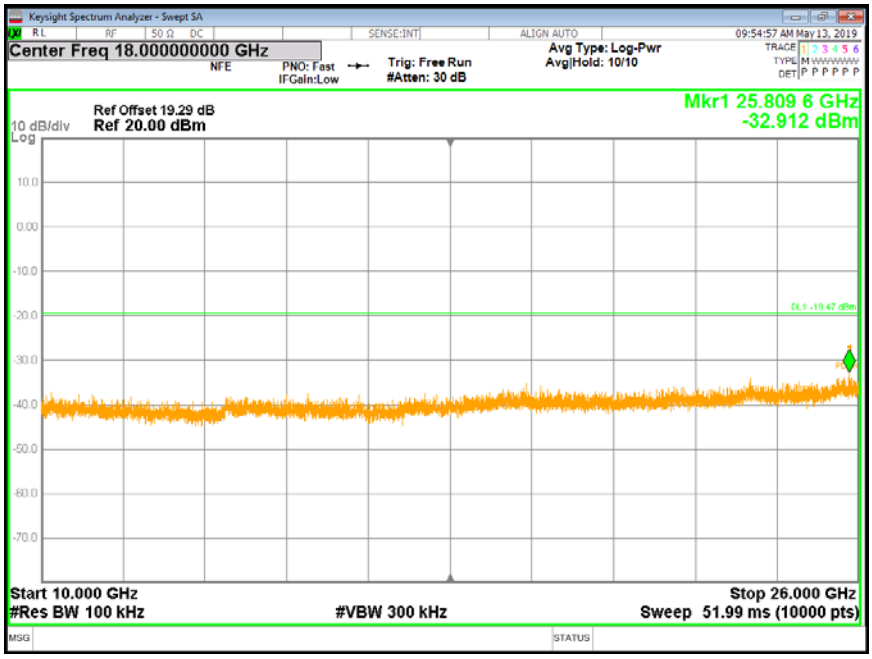
MID CH REFERENCE



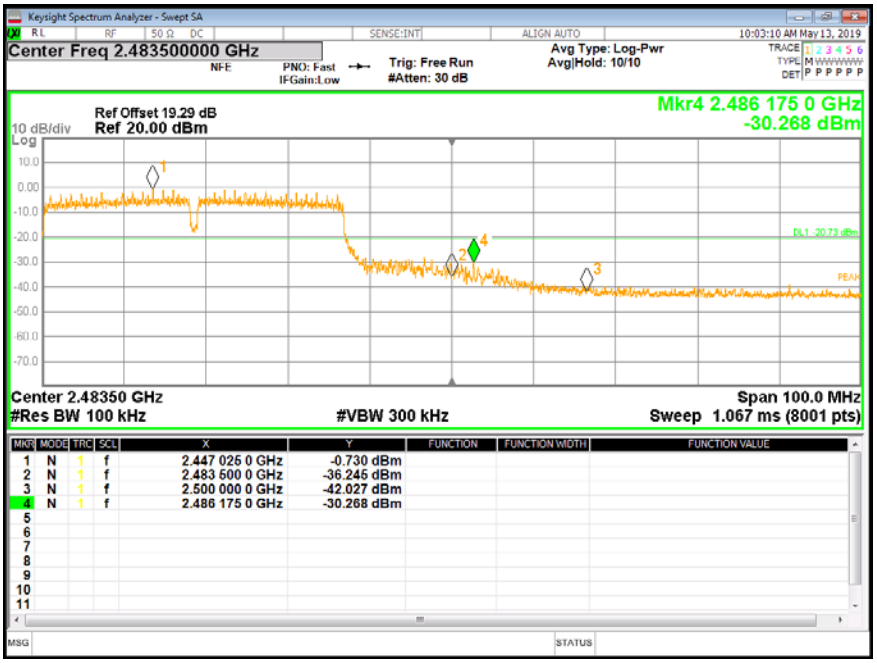
MID CH SPURIOUS EMISSIONS 30M-10G



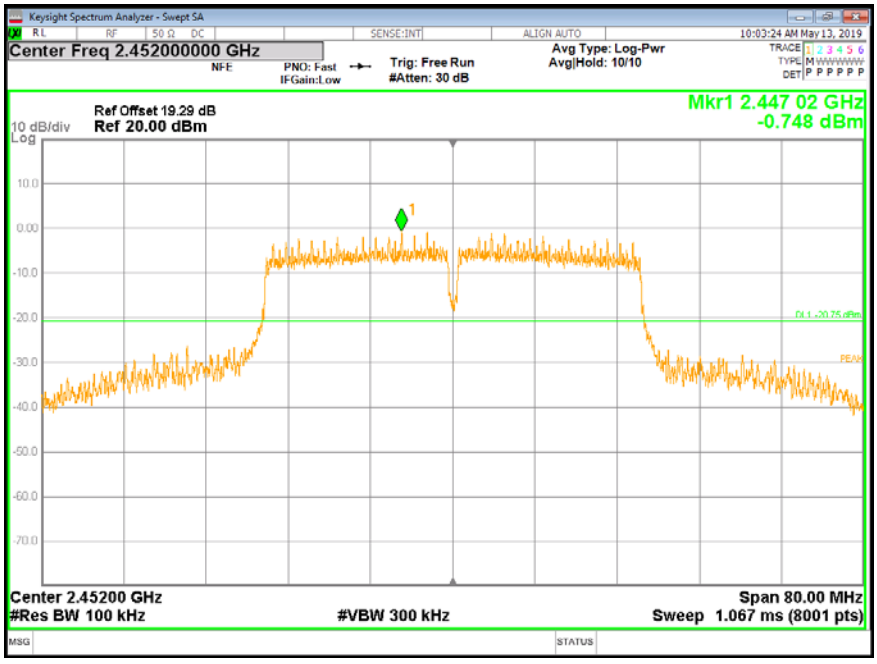
MID CH SPURIOUS EMISSIONS 10G-26G



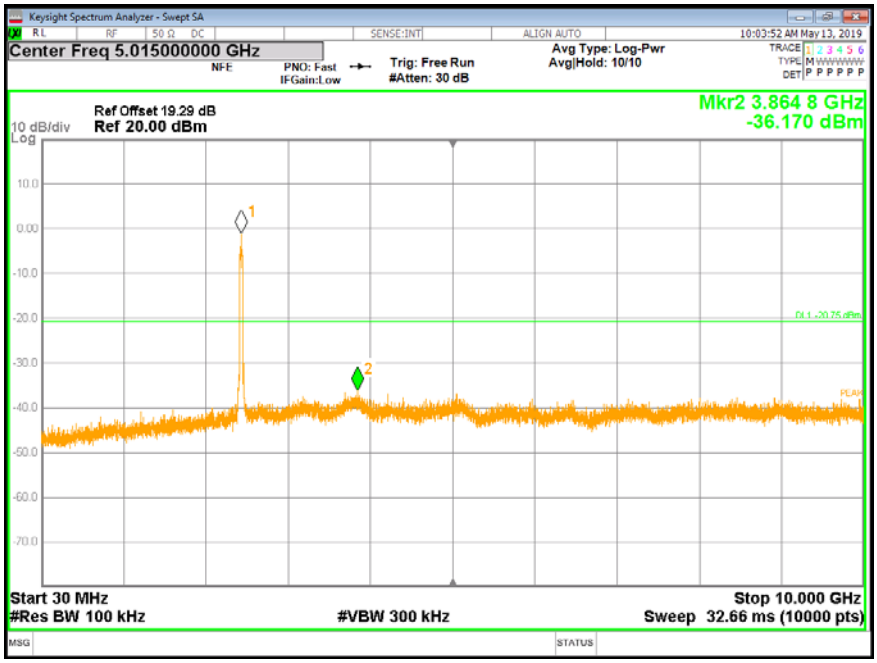
HIGH CH BANDEDAGE



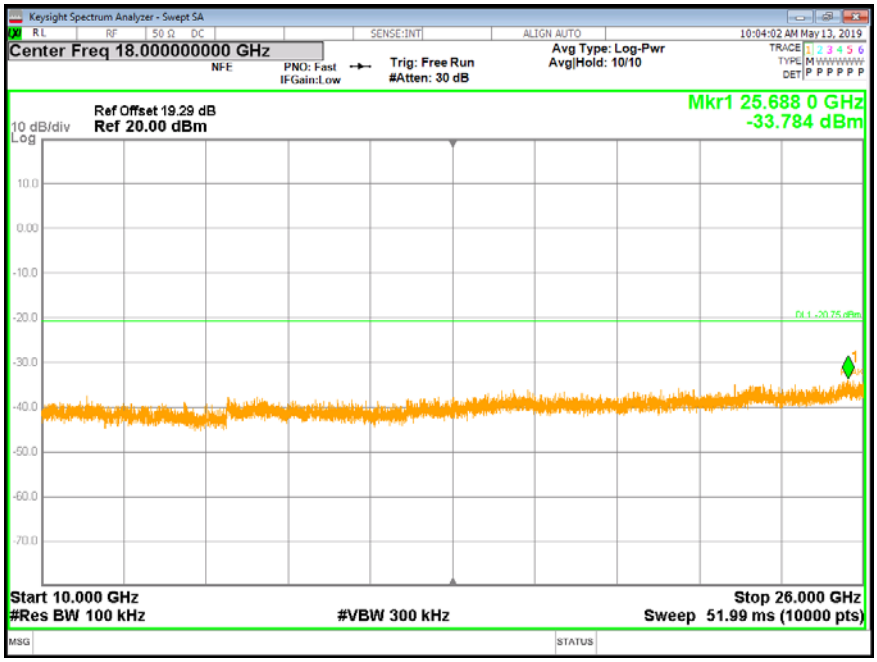
HIGH CH REFERENCE



HIGH CH SPURIOUS EMISSIONS 30M-10G



HIGH CH SPURIOUS EMISSIONS 10G-26G



9. RADIATED TEST RESULTS

LIMITS

Please refer to CFR 47 FCC §15.205 and §15.209

Please refer to ISED RSS-GEN Clause 8.9 (Transmitter)

Radiation Disturbance Test Limit for FCC (Class B)(9KHz-1GHz)

Frequency (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
960~1000	500	3

Note: 1) At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

(2) At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). This paragraph (f) shall not apply to Access BPL devices operating below 30 MHz.

Radiation Disturbance Test Limit for FCC (Above 1G)

Frequency (MHz)	dB(uV/m) (at 3 meters)	
	Peak	Average
Above 1000	74	54

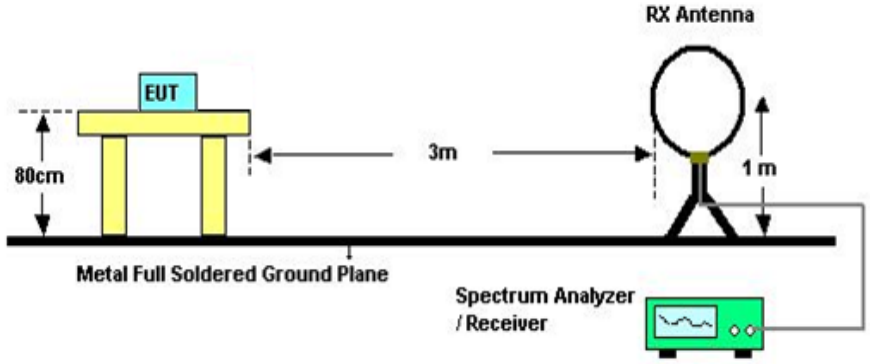
IC Restricted bands please refer to ISED RSS-GEN Clause 8.10
FCC Restricted bands of operation:

MHz	MHz	MHz	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	156.52475-156.52525	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			

Note: [1]Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.
[2]Above 38.6c

TEST SETUP AND PROCEDURE

Below 30MHz



The setting of the spectrum analyser

RBW	200Hz (From 9kHz to 0.15MHz)/ 9KHz (From 0.15MHz to 30MHz)
VBW	200Hz (From 9kHz to 0.15MHz)/ 9KHz (From 0.15MHz to 30MHz)
Sweep	Auto
Detector	Peak/QP/ Average
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013

2. The EUT was arranged to its worst case and then turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

3. The EUT was placed on a turntable with 80cm meter above ground.

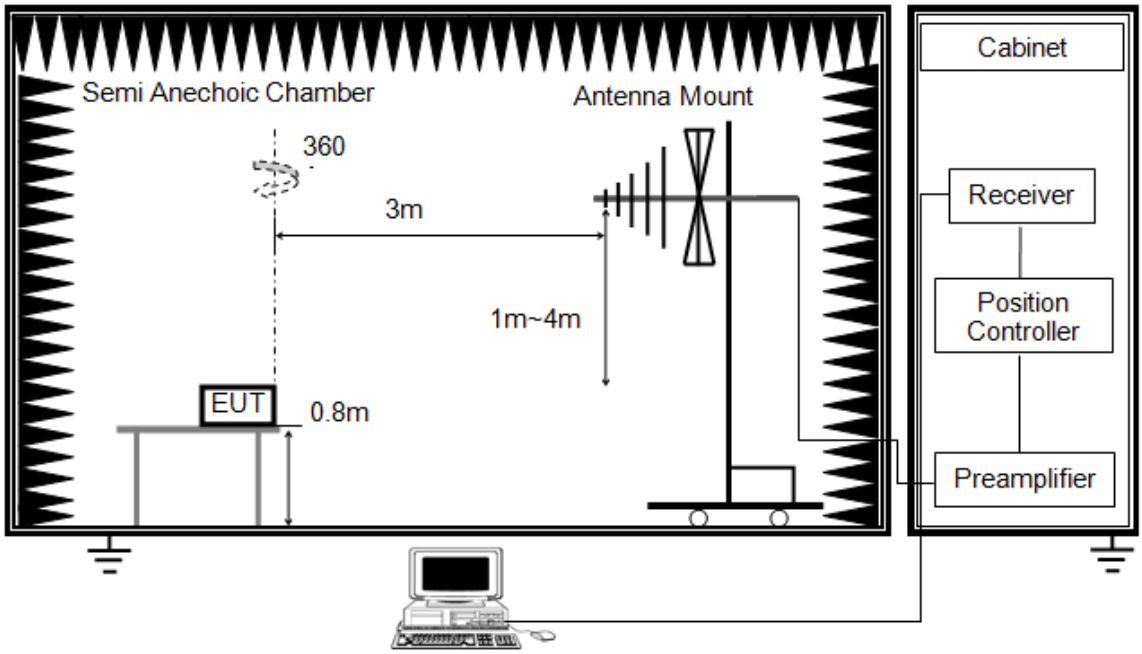
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

5. The radiated emission limits are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

6. For measurement below 1GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

7. Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30m open are test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

Below 1G



The setting of the spectrum analyser

RBW	120K
VBW	300K
Sweep	Auto
Detector	Peak/QP
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013.

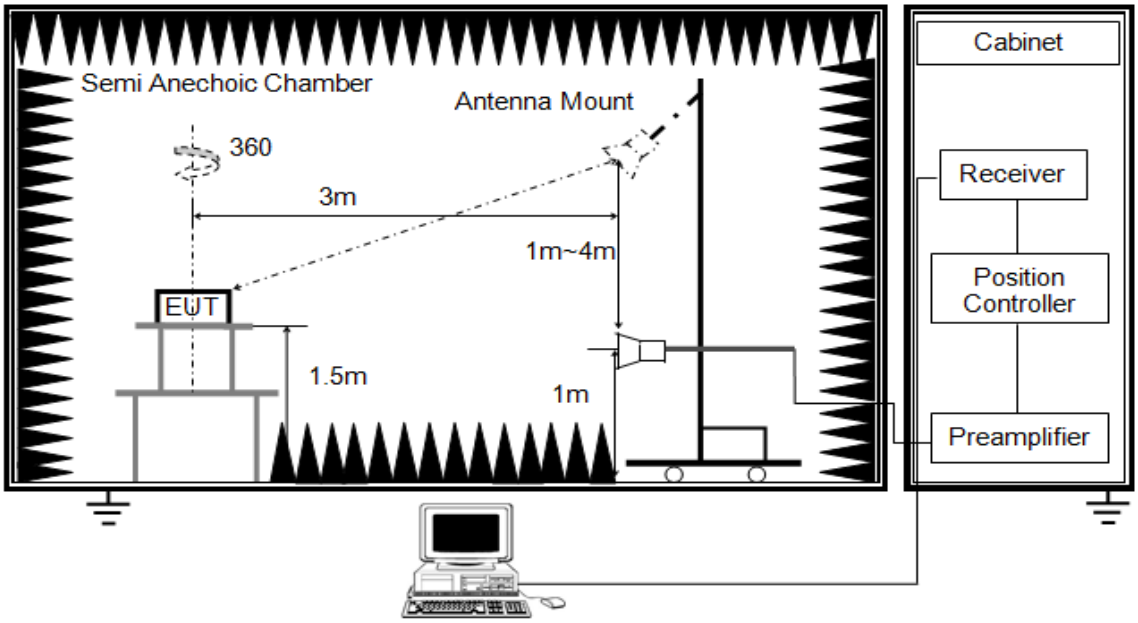
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

3. The EUT was placed on a turntable with 0.8 meter above ground.

4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

5. For measurement below 1GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

ABOVE 1G



The setting of the spectrum analyser

RBW	1M
VBW	PEAK: 3M AVG: see note 6
Sweep	Auto
Detector	Peak
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013.

2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

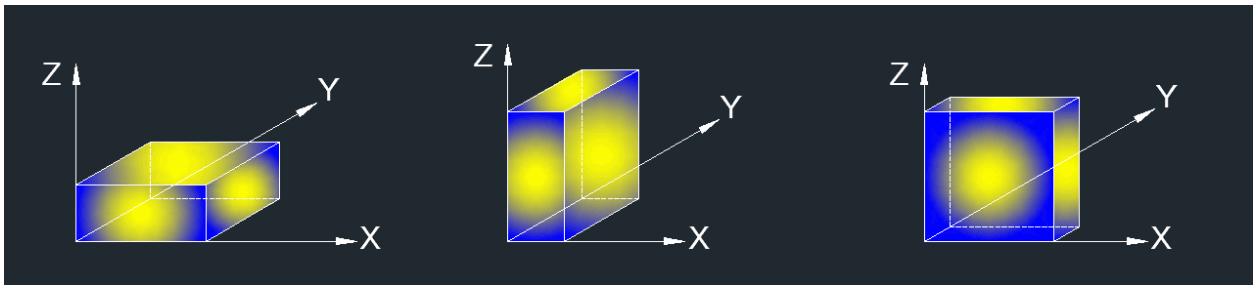
3. The EUT was placed on a turntable with 1.5m above ground.

4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

5. For measurement above 1GHz, the emission measurement will be measured by the peak detector. This peak level, once corrected, must comply with the limit specified in Section 15.209.

6. For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and 1 MHz resolution bandwidth with 1/T video bandwidth with peak detector for average measurements. For the Duty Cycle please refer to clause 8.1.ON TIME AND DUTY CYCLE.

X axis, Y axis, Z axis positions:



Note 1: For all radiated test, EUT in each of three orthogonal axis emissions had been tested, but only the worst case (Y axis) data recorded in the report.

Note 2: All the EUT's emissions had been evaluated for simultaneous transmission with the other WIFI 2.4GHz, WIFI 5GHz and BT transmitter and there were no any additional or worse emissions found.

Note 3: The EUT was fully exercised with external accessories during the test. In the case of multiple accessory external ports, an external accessory shall be connected to one of each type of port.

TEST ENVIRONMENT

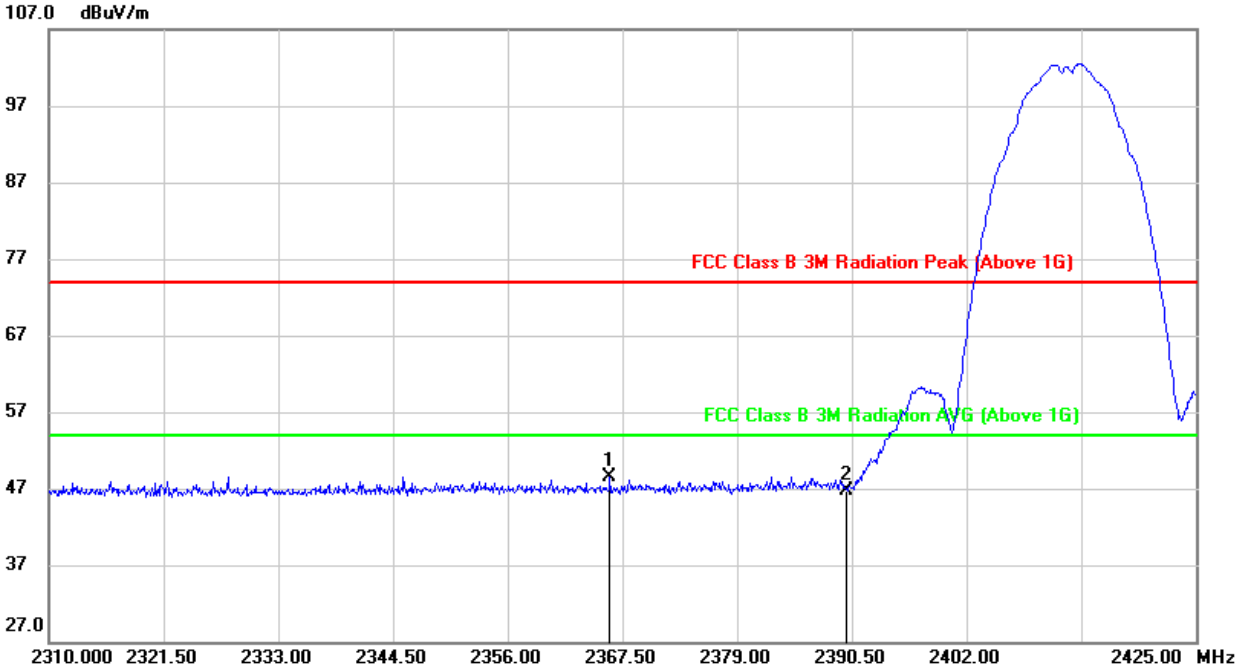
Temperature	24.6°C	Relative Humidity	59%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.3V

9.1. RESTRICTED BANDEDGE

9.1.1. 802.11b SISO MODE

1TX MODE FOR ANT1 (WORST-CASE CONFIGURATION)

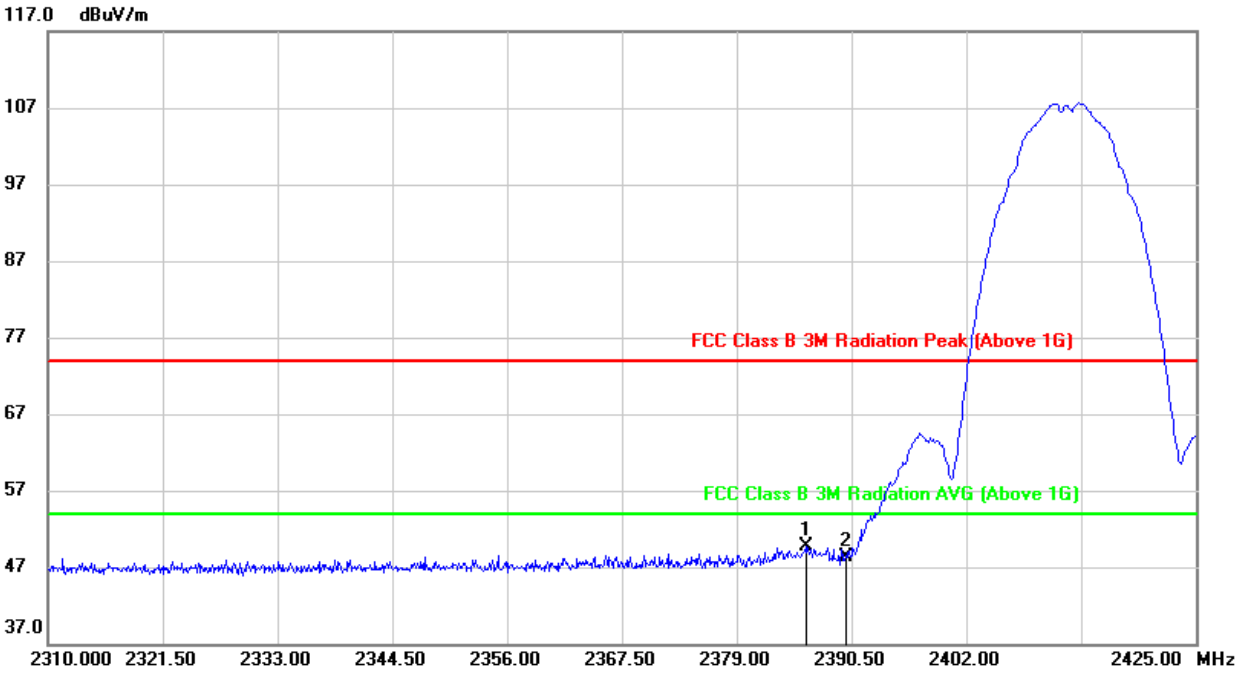
RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	2366.235	15.69	32.87	48.56	74.00	-25.44	peak
2	2390.000	13.78	32.94	46.72	74.00	-27.28	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

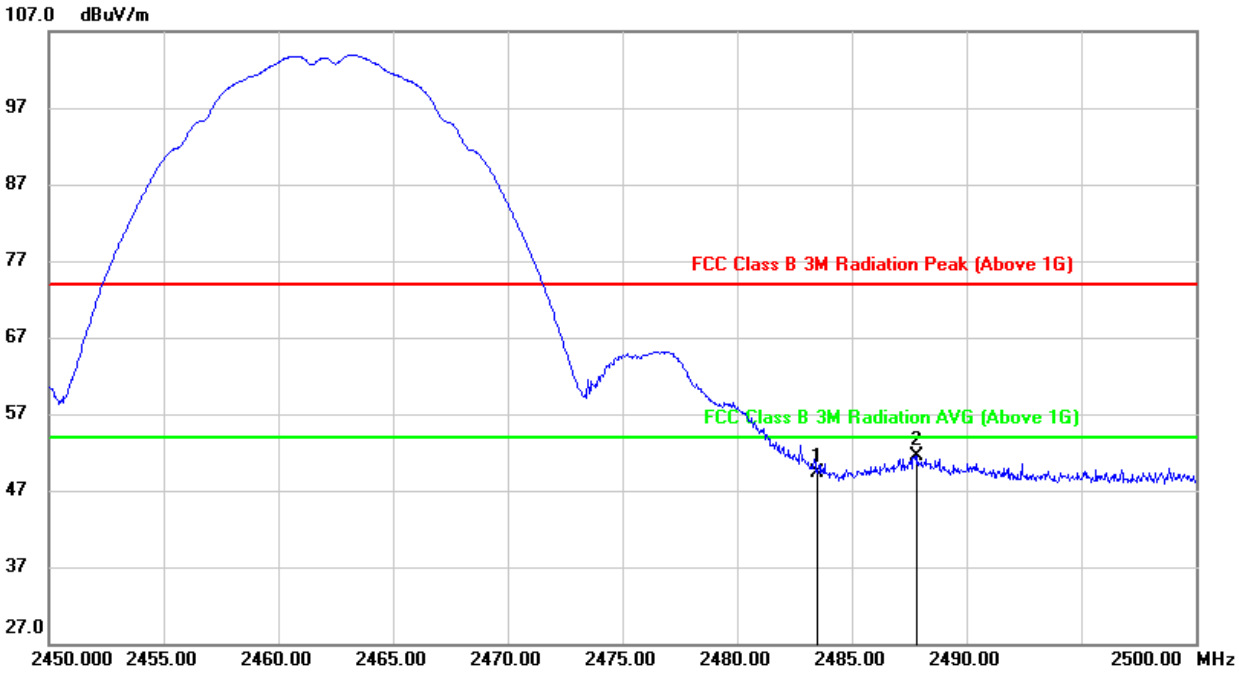
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	2385.900	16.67	32.93	49.60	74.00	-24.40	peak
2	2390.000	15.44	32.94	48.38	74.00	-25.62	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

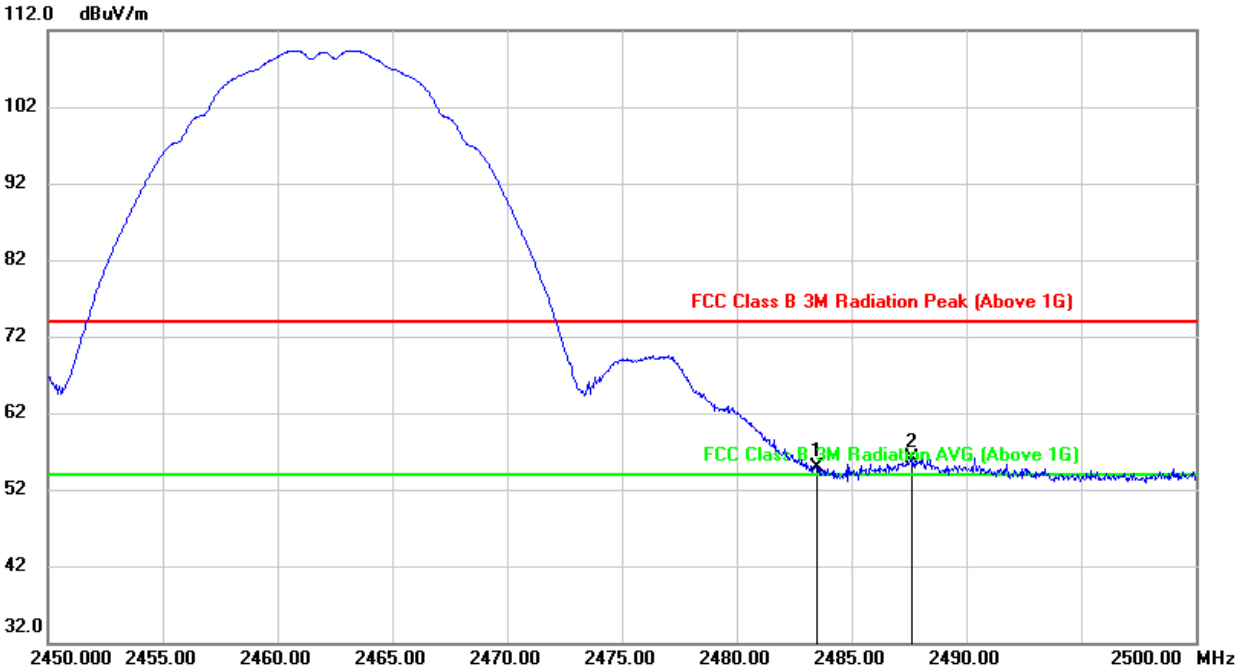


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	2483.500	15.80	33.58	49.38	74.00	-24.62	peak
2	2487.850	17.91	33.61	51.52	74.00	-22.48	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

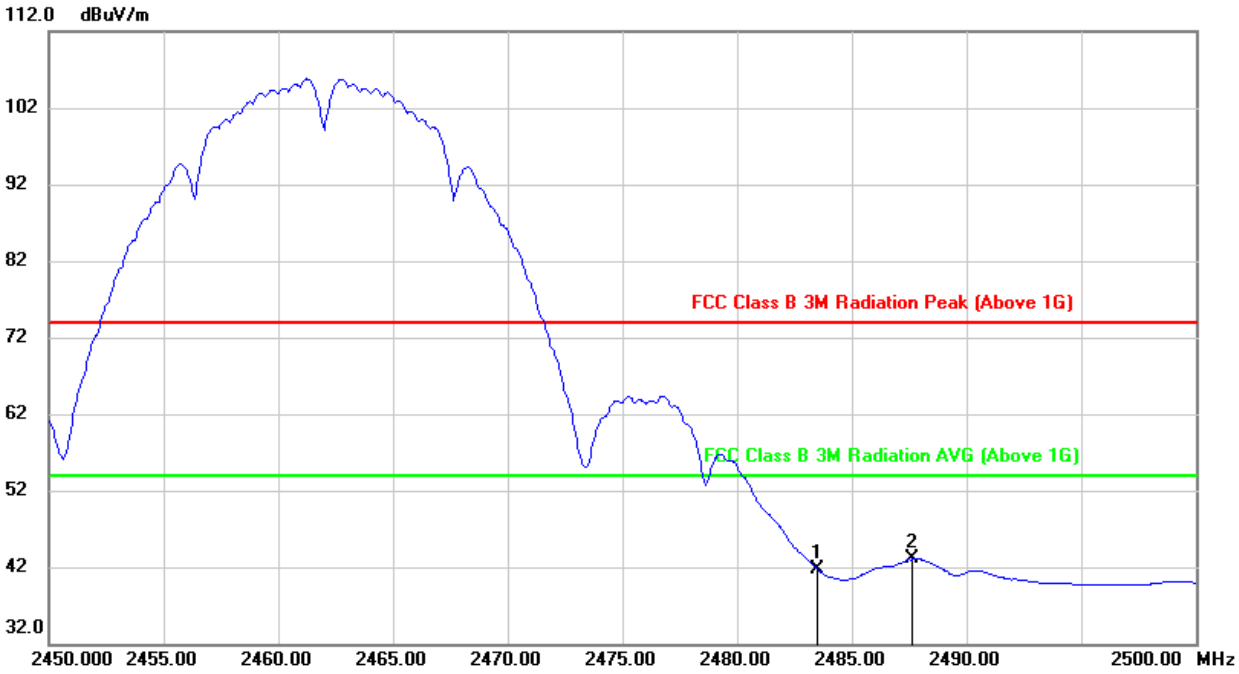
PEAK



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	2483.500	21.41	33.58	54.99	74.00	-19.01	peak
2	2487.650	22.41	33.61	56.02	74.00	-17.98	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG



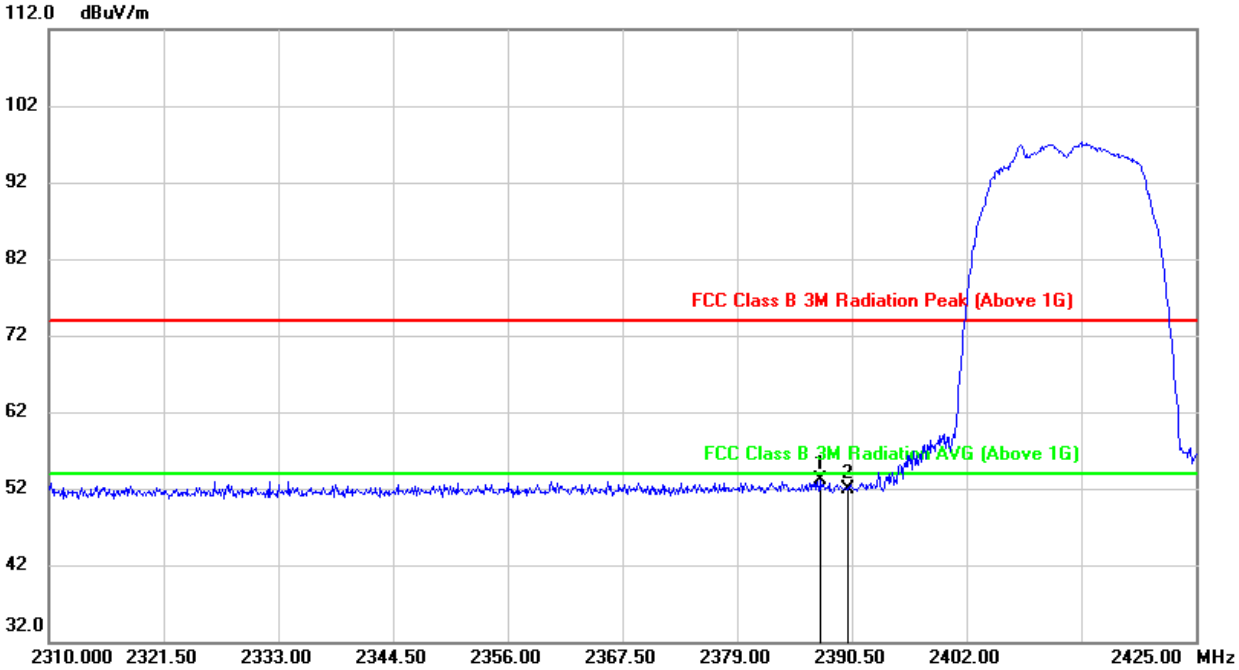
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	2483.500	8.19	33.58	41.77	54.00	-12.23	AVG
2	2487.650	9.41	33.61	43.02	54.00	-10.98	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. AVG: VBW=1/Ton where: ton is transmit duration.
4. For transmit duration, please refer to clause 8.1.
5. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

9.1.2. 802.11g SISO MODE

1TX MODE FOR ANT1 (WORST-CASE CONFIGURATION)

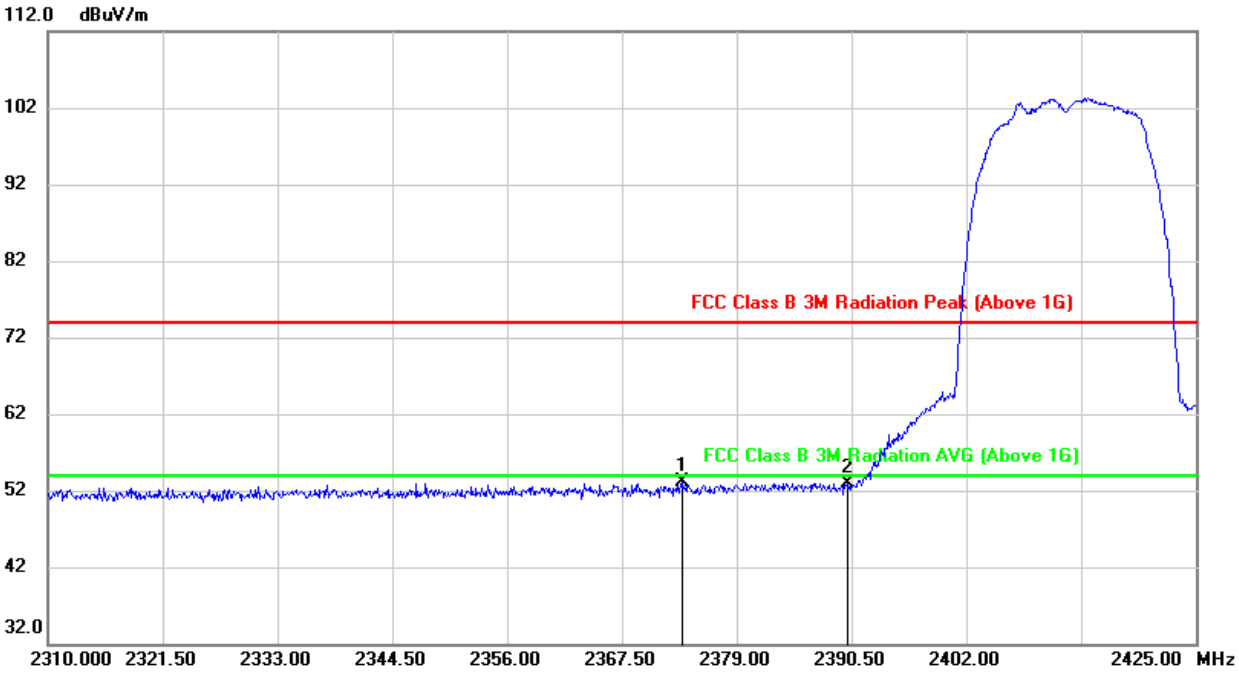
RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	2387.280	20.14	32.94	53.08	74.00	-20.92	peak
2	2390.000	18.97	32.94	51.91	74.00	-22.09	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

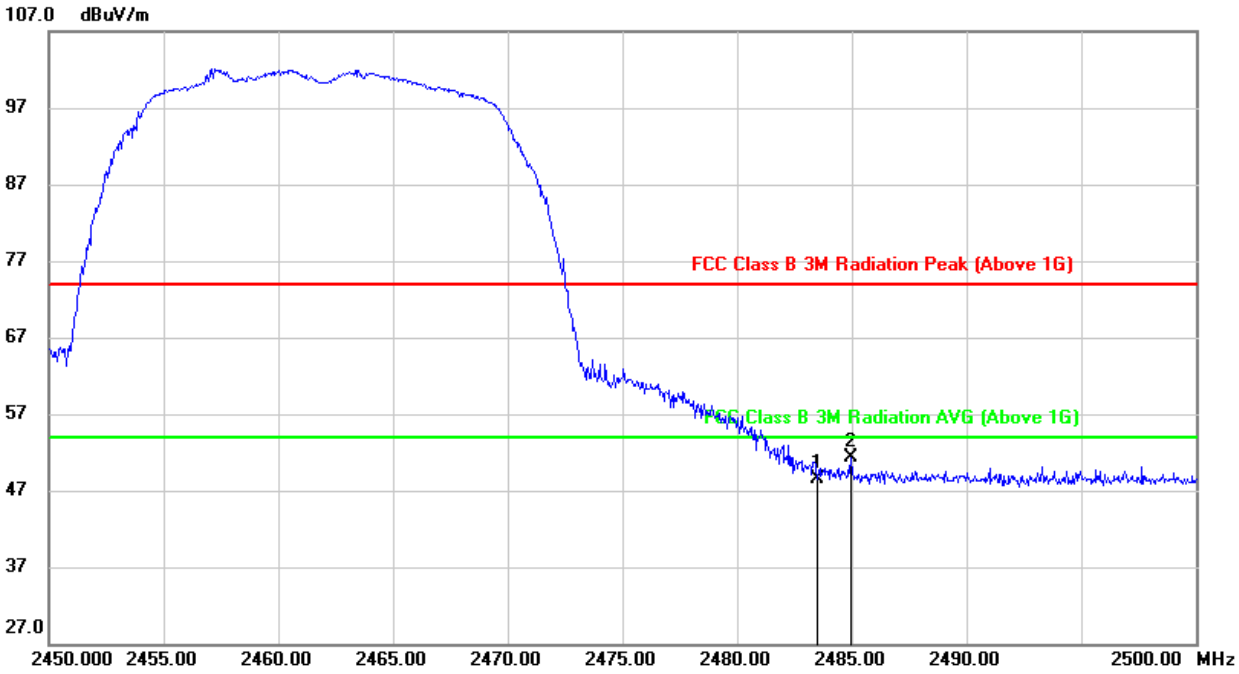
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	2373.595	20.29	32.89	53.18	74.00	-20.82	peak
2	2390.000	19.93	32.94	52.87	74.00	-21.13	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

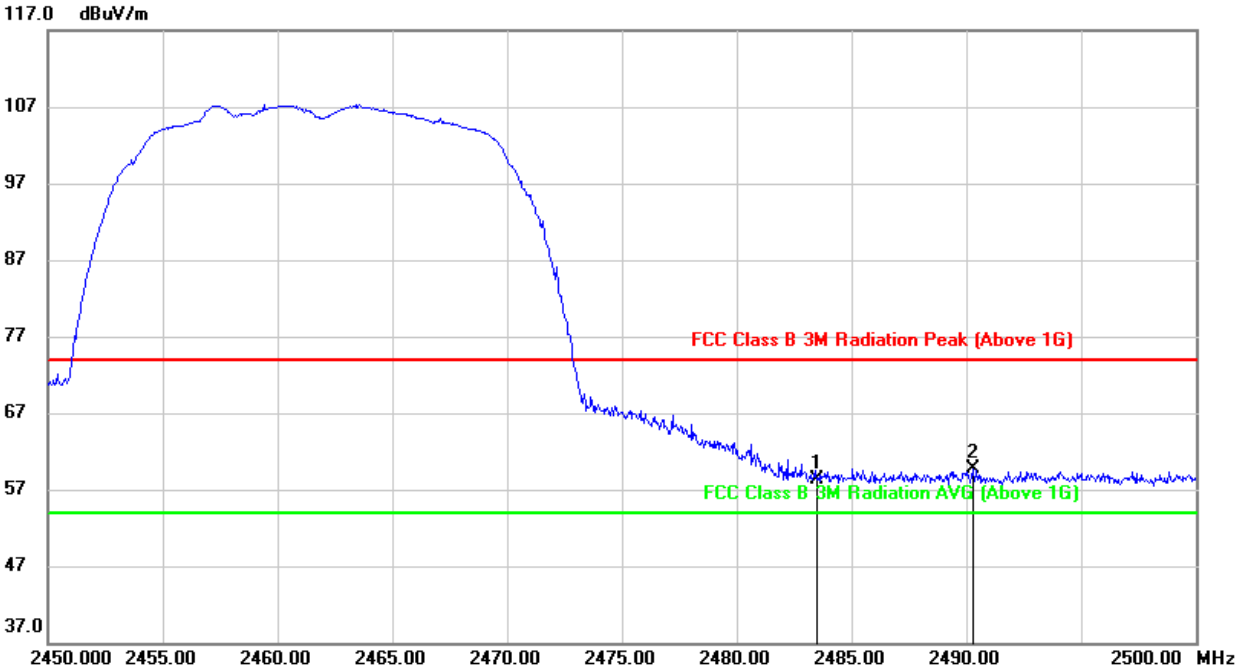


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	2483.500	14.83	33.58	48.41	74.00	-25.59	peak
2	2484.950	17.73	33.59	51.32	74.00	-22.68	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

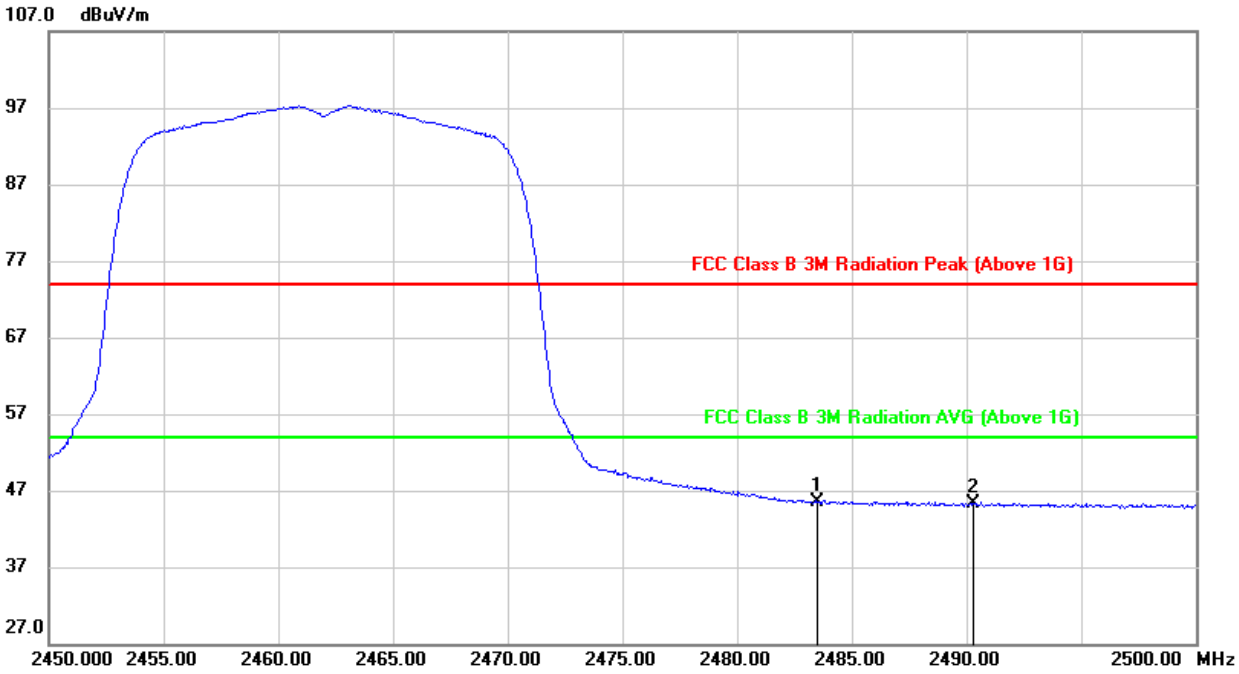
PEAK



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	2483.500	24.79	33.58	58.37	74.00	-15.63	peak
2	2490.300	26.13	33.63	59.76	74.00	-14.24	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG



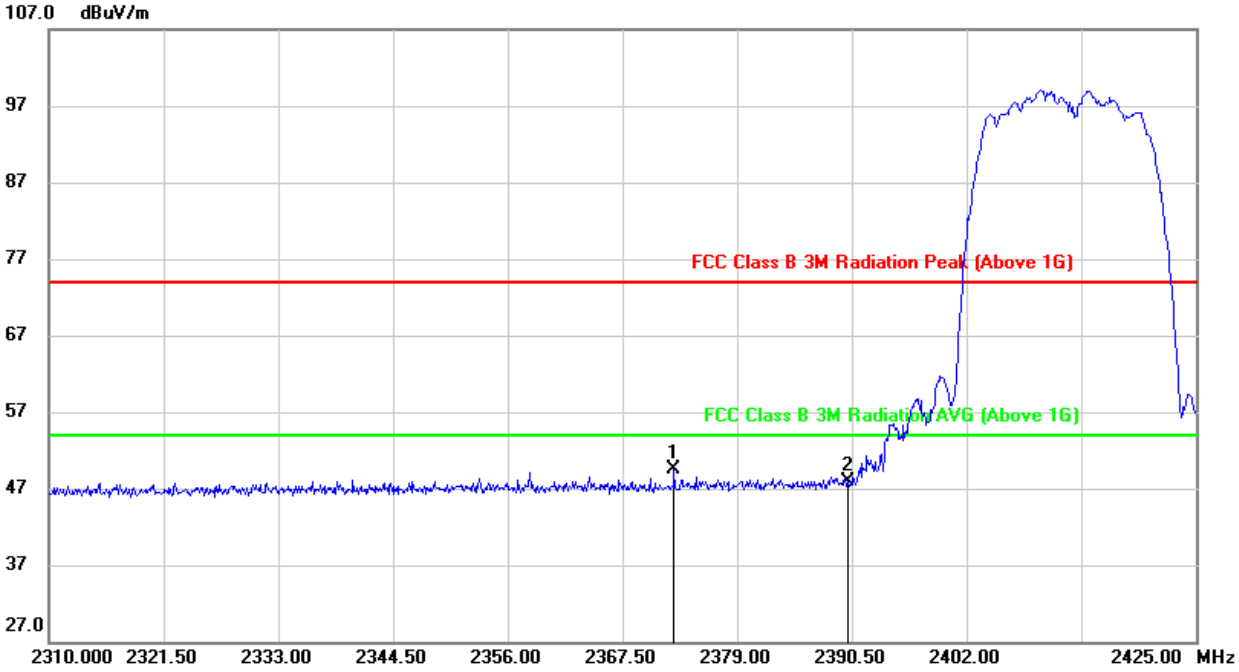
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	2483.500	11.94	33.58	45.52	54.00	-8.48	AVG
2	2490.300	11.62	33.63	45.25	54.00	-8.75	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. AVG: VBW=1/Ton where: ton is transmit duration.
4. For transmit duration, please refer to clause 8.1.
5. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

9.1.3. 802.11n HT20 MIMO MODE

2TX MODE (WORST-CASE CONFIGURATION)

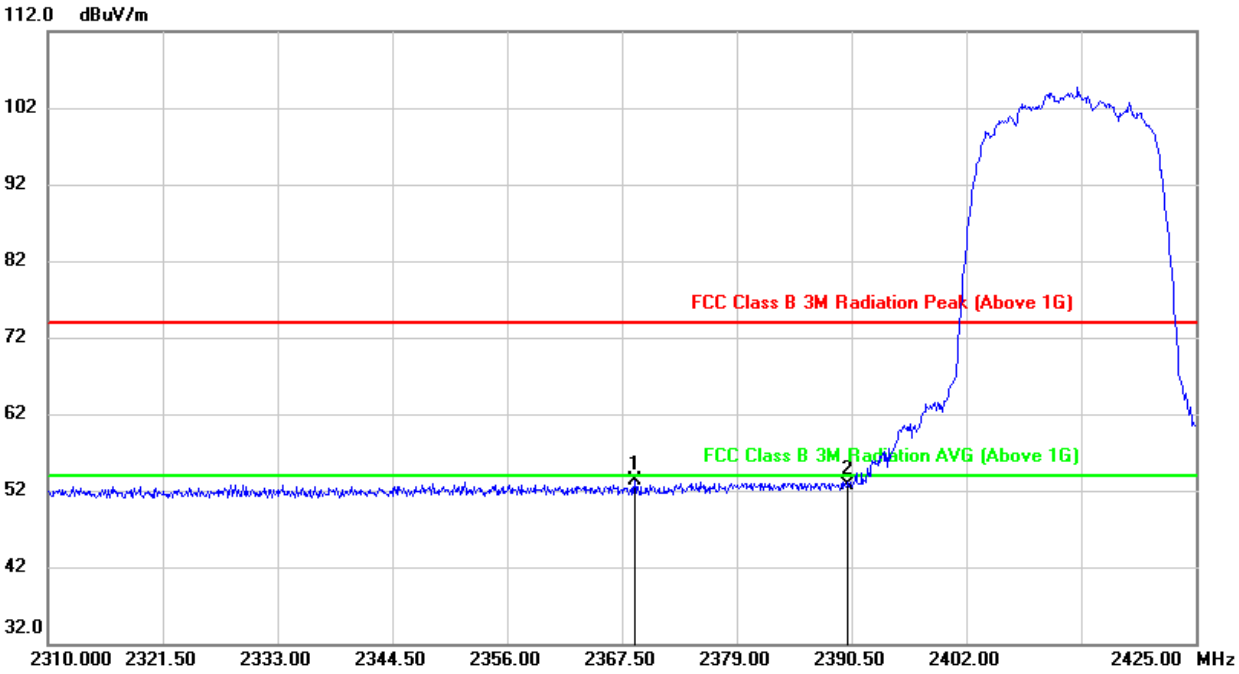
RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	2372.675	16.53	32.89	49.42	74.00	-24.58	peak
2	2390.000	14.89	32.94	47.83	74.00	-26.17	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

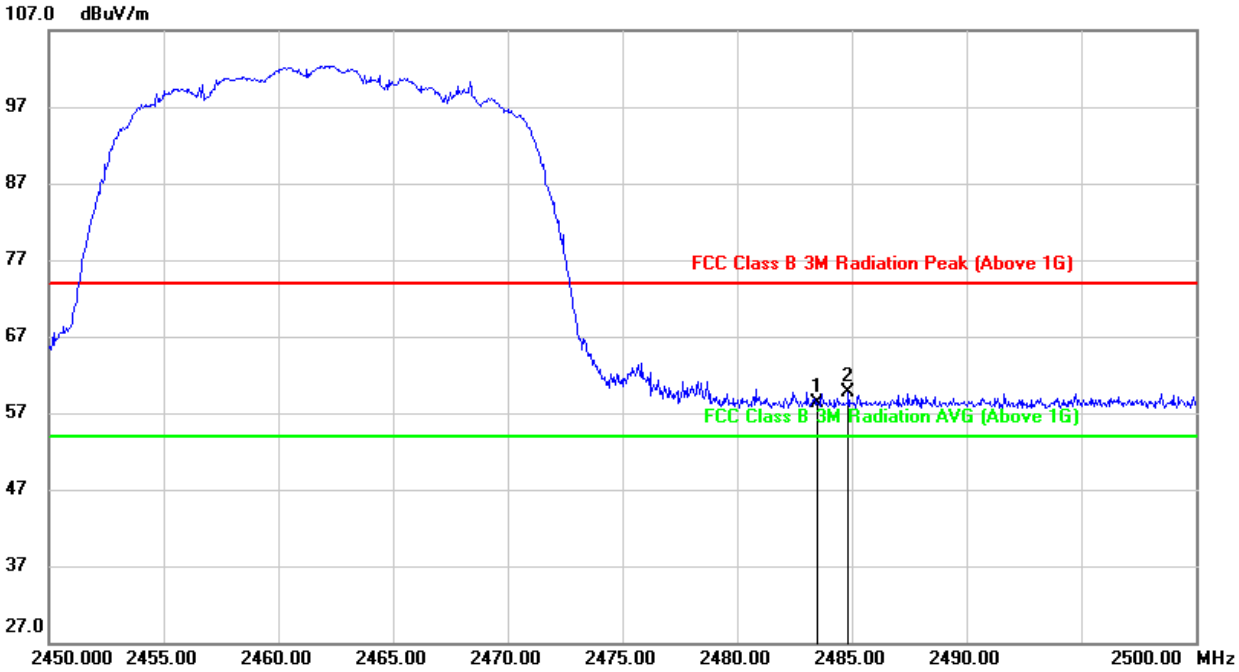


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	2368.765	20.45	32.87	53.32	74.00	-20.68	peak
2	2390.000	19.72	32.94	52.66	74.00	-21.34	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

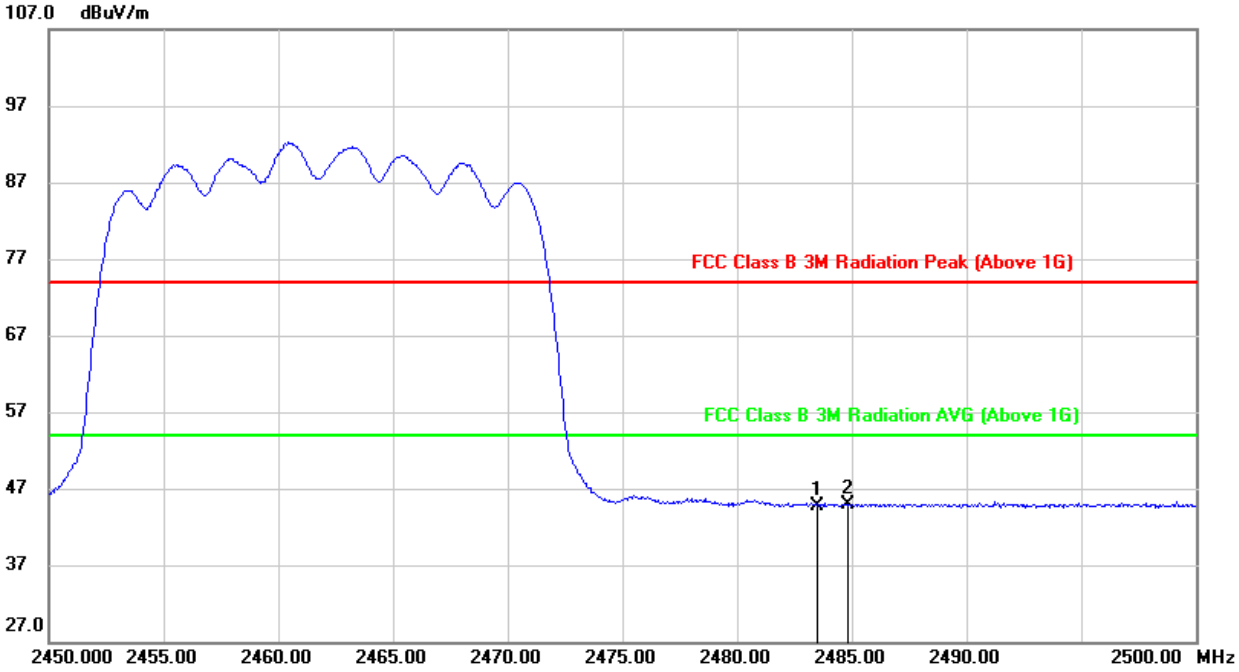
PEAK



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	2483.500	24.75	33.58	58.33	74.00	-15.67	peak
2	2484.850	26.06	33.59	59.65	74.00	-14.35	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG

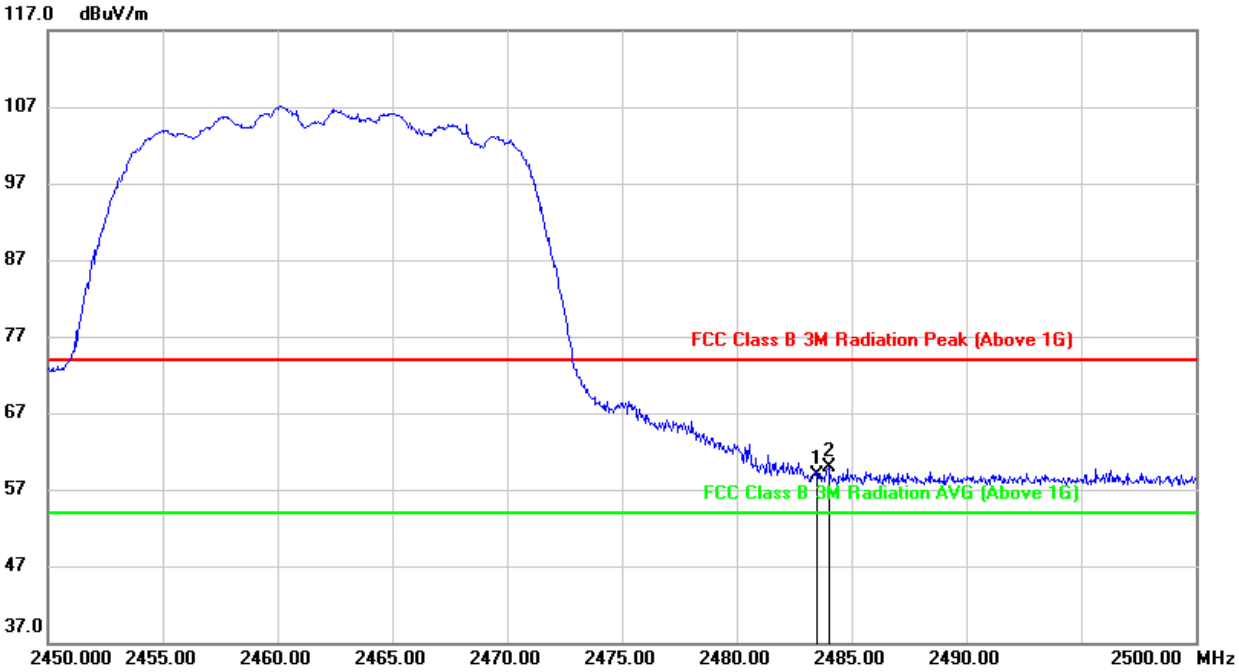


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	2483.500	11.16	33.58	44.74	54.00	-9.26	AVG
2	2484.850	11.39	33.59	44.98	54.00	-9.02	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. AVG: VBW=1/Ton where: ton is transmit duration.
4. For transmit duration, please refer to clause 8.1.
5. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

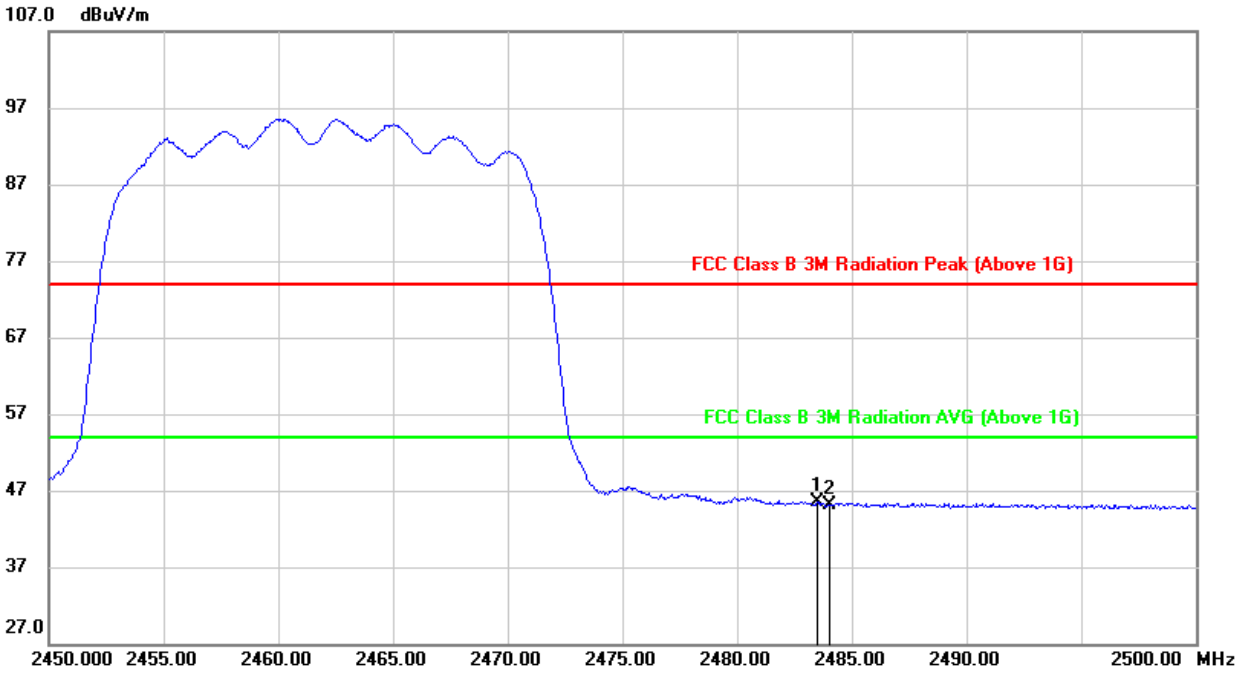
PEAK



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	2483.500	25.24	33.58	58.82	74.00	-15.18	peak
2	2484.000	26.39	33.58	59.97	74.00	-14.03	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	2483.500	11.87	33.58	45.45	54.00	-8.55	AVG
2	2484.000	11.55	33.58	45.13	54.00	-8.87	AVG

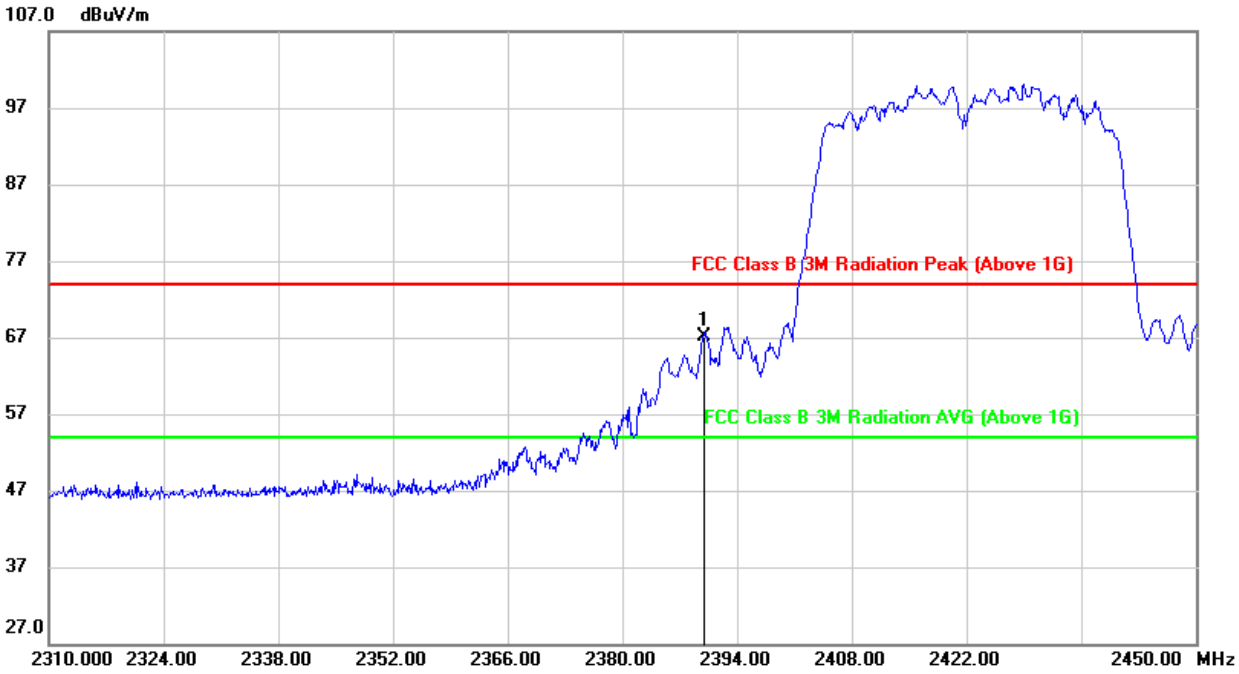
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. AVG: VBW=1/Ton where: ton is transmit duration.
4. For transmit duration, please refer to clause 8.1.
5. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

9.1.4. 802.11n HT40 MIMO MODE

2TX MODE (WORST-CASE CONFIGURATION)

RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

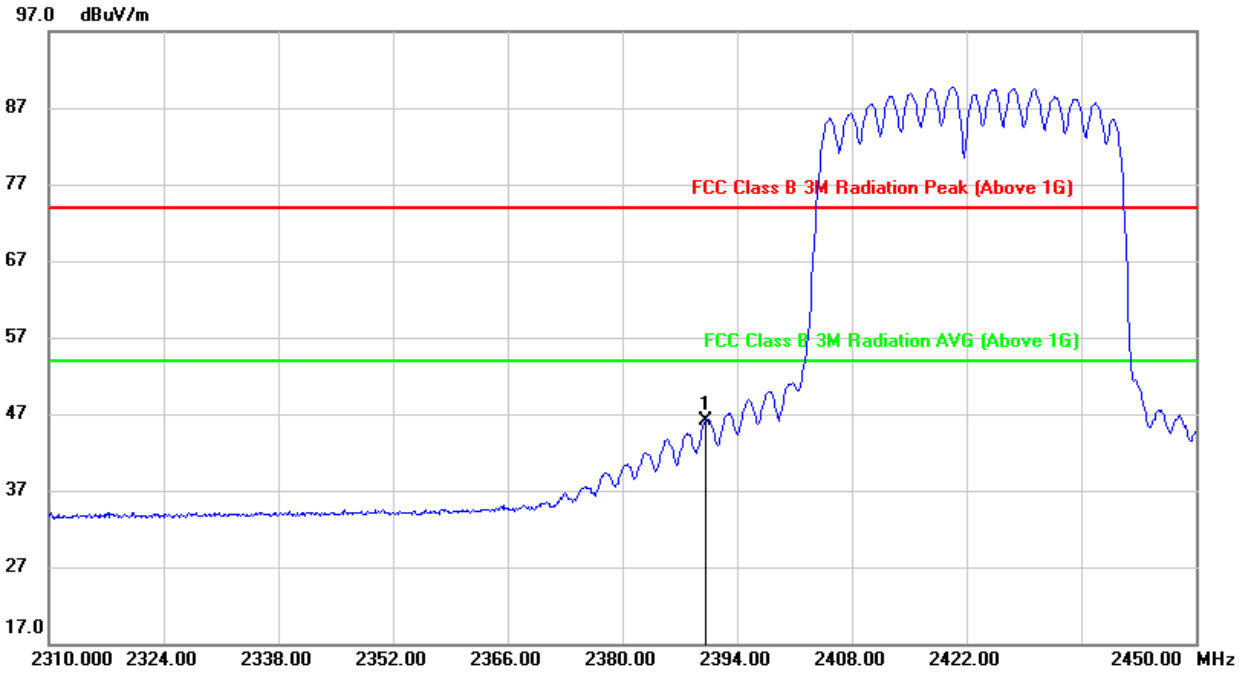
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	2390.000	34.09	32.94	67.03	74.00	-6.97	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG

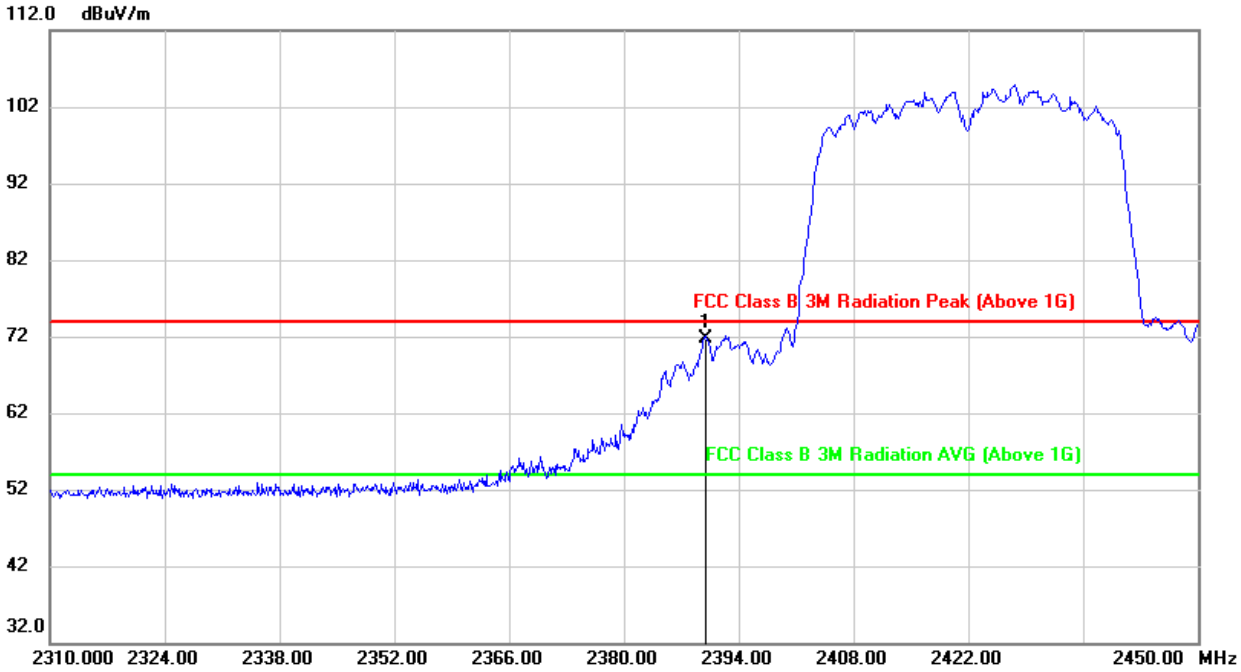


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	2390.000	13.26	32.94	46.20	54.00	-7.80	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. AVG: VBW=1/Ton where: ton is transmit duration.
4. For transmit duration, please refer to clause 8.1.
5. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

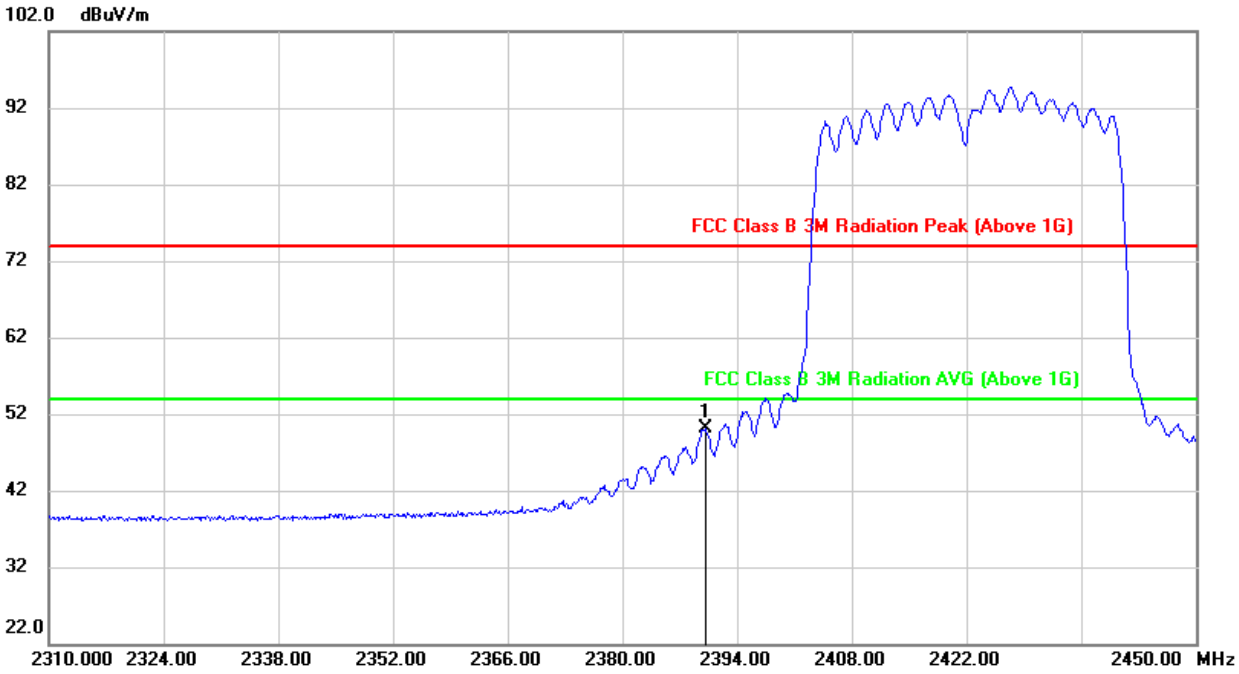
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	2390.000	38.79	32.94	71.73	74.00	-2.27	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG

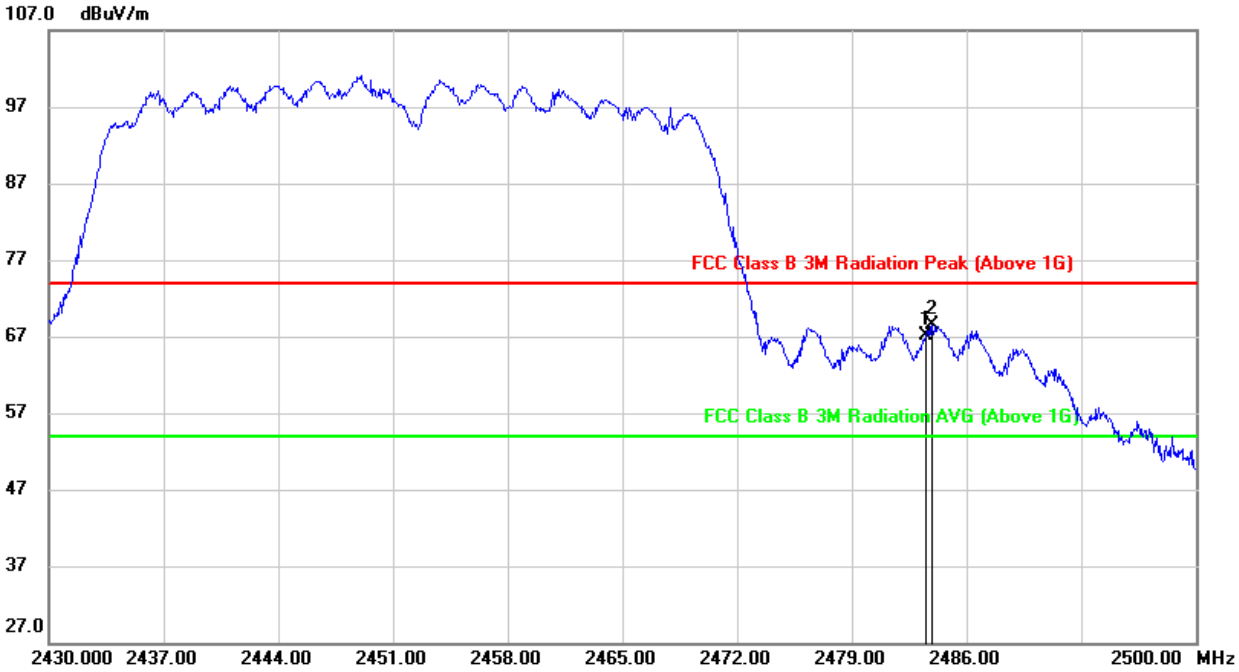


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	2390.000	17.13	32.94	50.07	54.00	-3.93	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. AVG: VBW=1/Ton where: ton is transmit duration.
4. For transmit duration, please refer to clause 8.1.
5. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

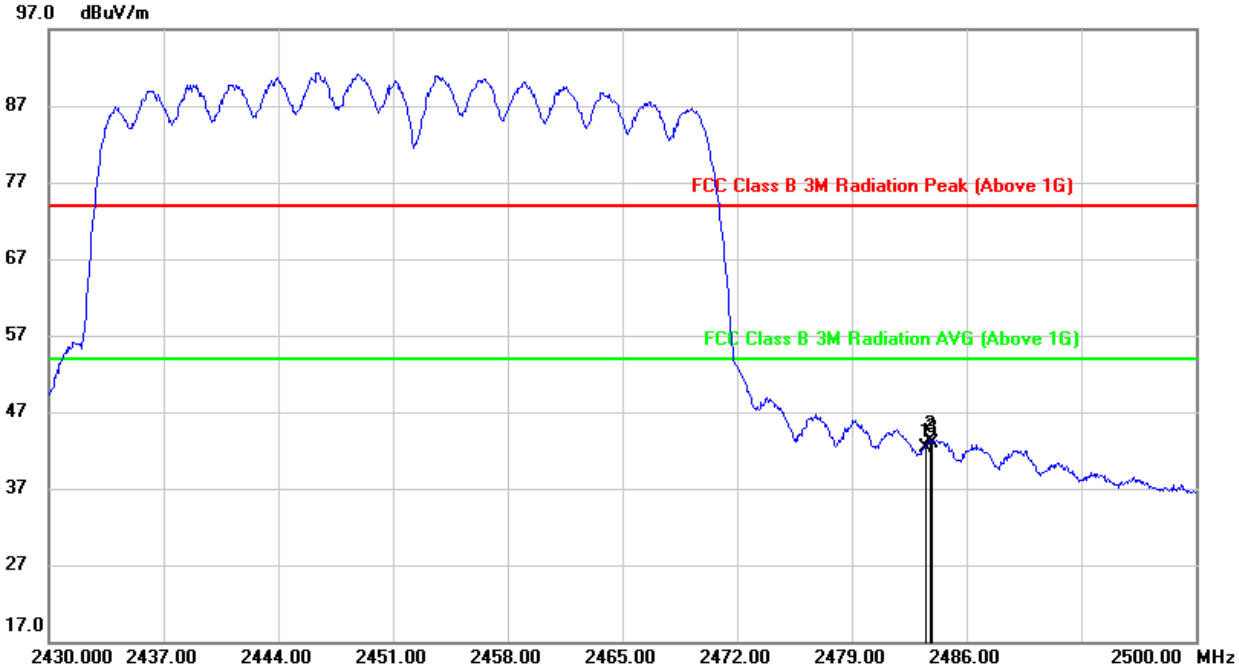
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	2483.500	33.55	33.58	67.13	74.00	-6.87	peak
2	2483.900	34.94	33.58	68.52	74.00	-5.48	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG

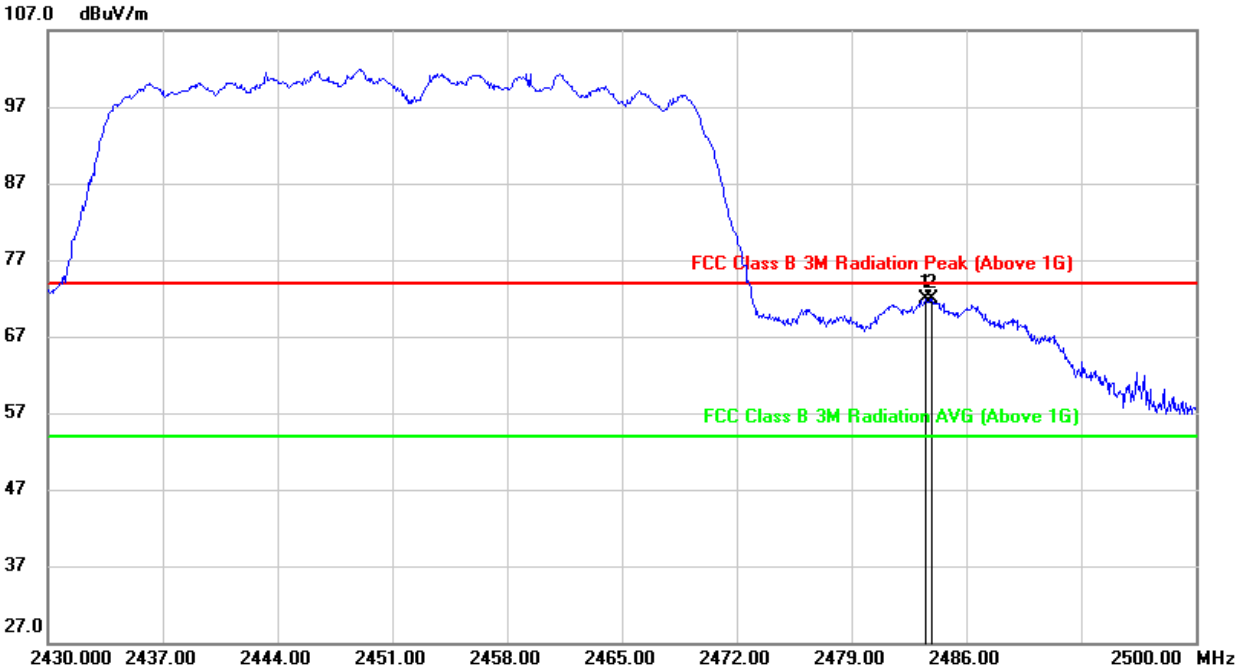


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	2483.500	8.80	33.58	42.38	54.00	-11.62	AVG
2	2483.900	9.35	33.58	42.93	54.00	-11.07	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. AVG: VBW=1/Ton where: ton is transmit duration.
4. For transmit duration, please refer to clause 8.1.
5. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

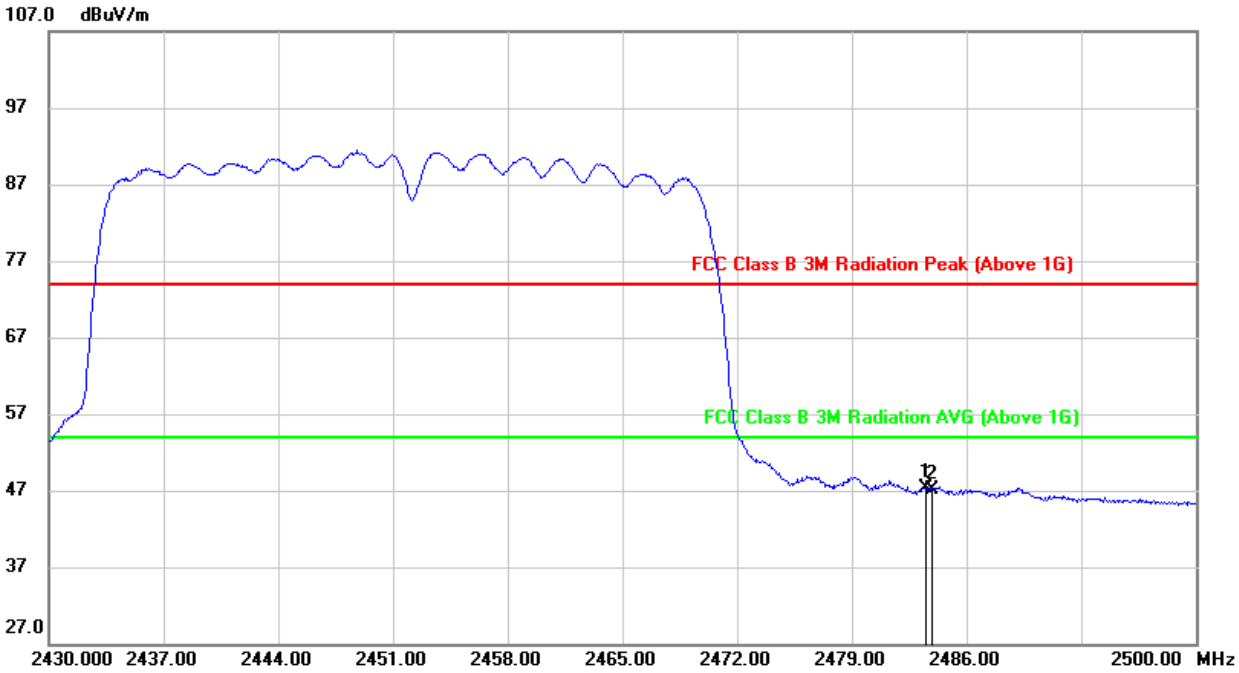
PEAK



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	2483.500	38.37	33.58	71.95	74.00	-2.05	peak
2	2483.900	38.36	33.58	71.94	74.00	-2.06	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	2483.500	13.74	33.58	47.32	54.00	-6.68	AVG
2	2483.900	13.54	33.58	47.12	54.00	-6.88	AVG

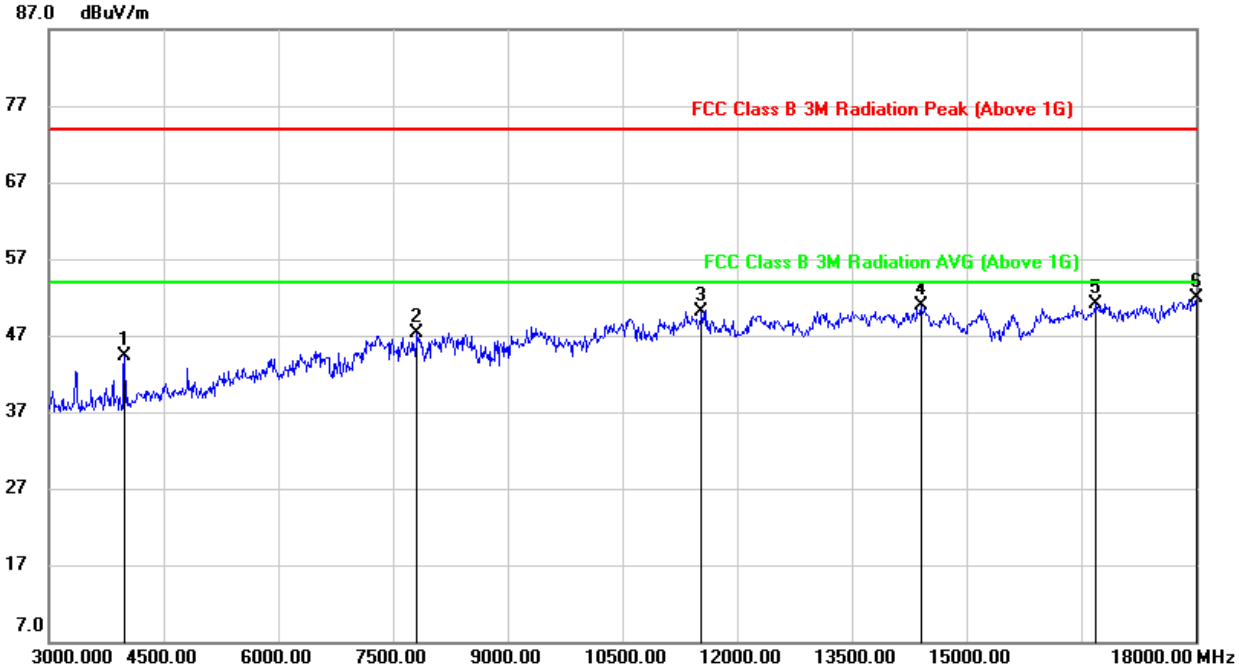
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. AVG: VBW=1/Ton where: ton is transmit duration.
4. For transmit duration, please refer to clause 8.1.
5. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

9.2. SPURIOUS EMISSIONS (3~18GHz)

9.2.1. 802.11b SISO MODE

1TX MODE FOR ANT1 (WORST-CASE CONFIGURATION)

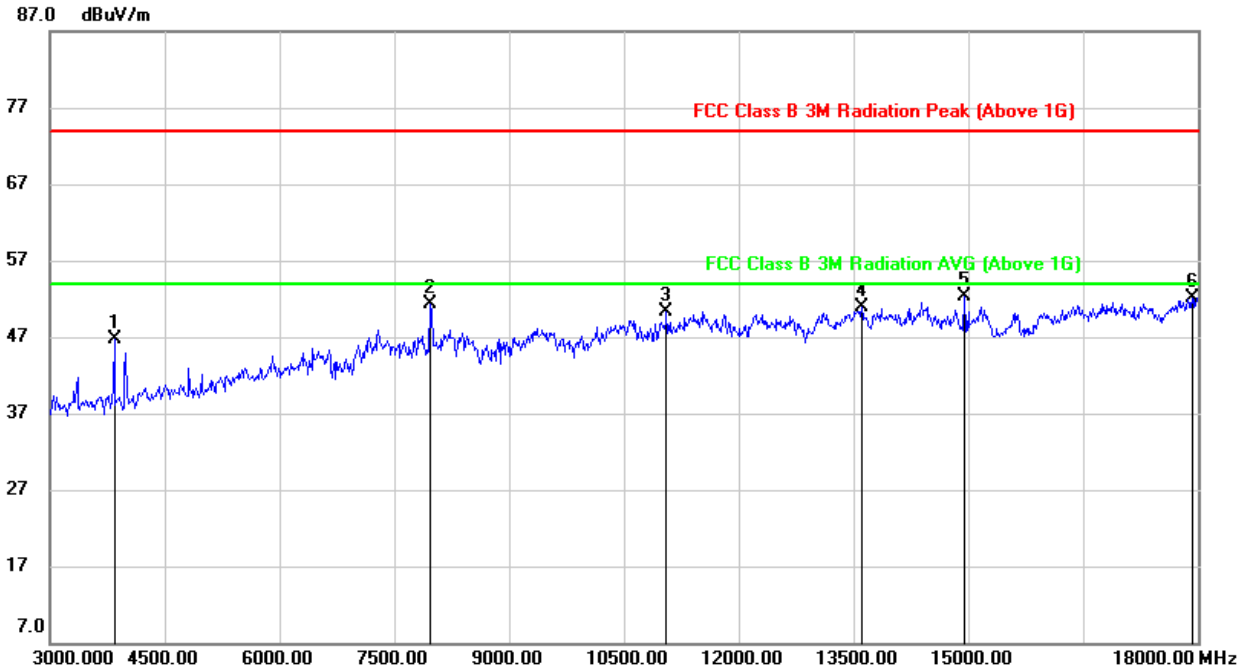
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3990.000	47.23	-2.95	44.28	74.00	-29.72	peak
2	7815.000	38.52	8.81	47.33	74.00	-26.67	peak
3	11535.000	35.94	14.10	50.04	74.00	-23.96	peak
4	14400.000	34.38	16.43	50.81	74.00	-23.19	peak
5	16680.000	31.45	19.74	51.19	74.00	-22.81	peak
6	18000.000	28.71	23.27	51.98	74.00	-22.02	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The High Pass filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

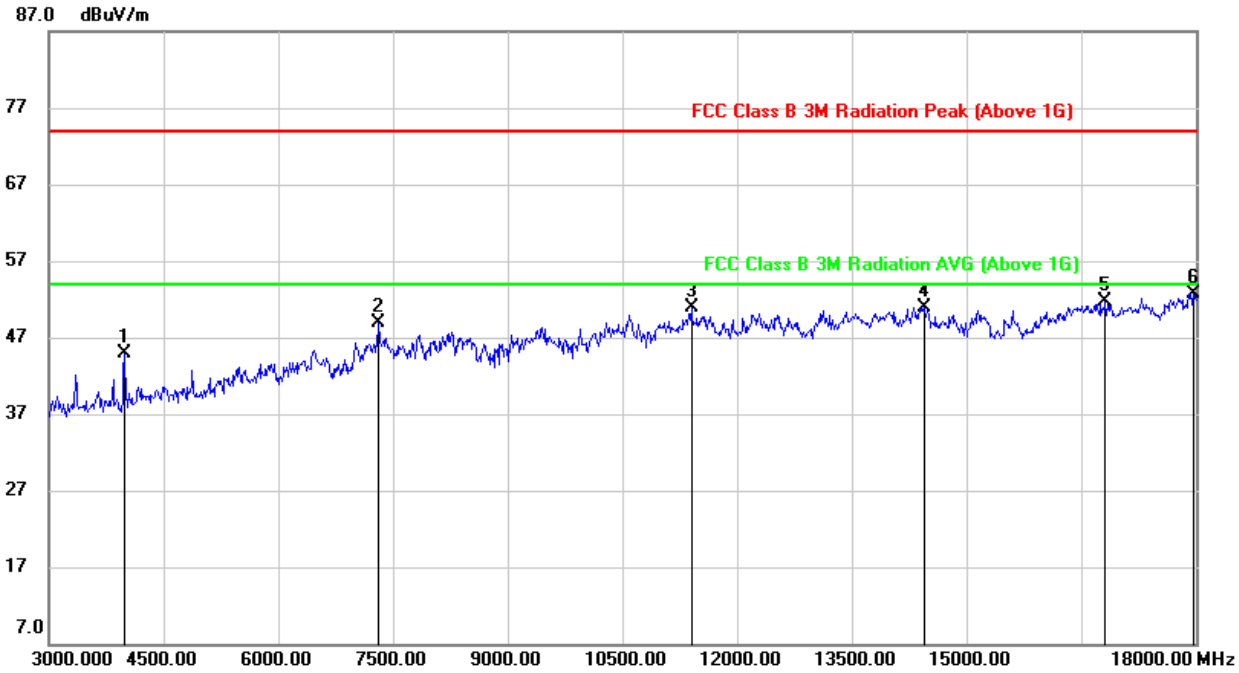
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3840.000	49.82	-3.07	46.75	74.00	-27.25	peak
2	7965.000	43.04	8.26	51.30	74.00	-22.70	peak
3	11055.000	37.04	13.26	50.30	74.00	-23.70	peak
4	13605.000	34.81	16.07	50.88	74.00	-23.12	peak
5	14955.000	36.82	15.49	52.31	74.00	-21.69	peak
6	17925.000	29.01	23.18	52.19	74.00	-21.81	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The High Pass filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

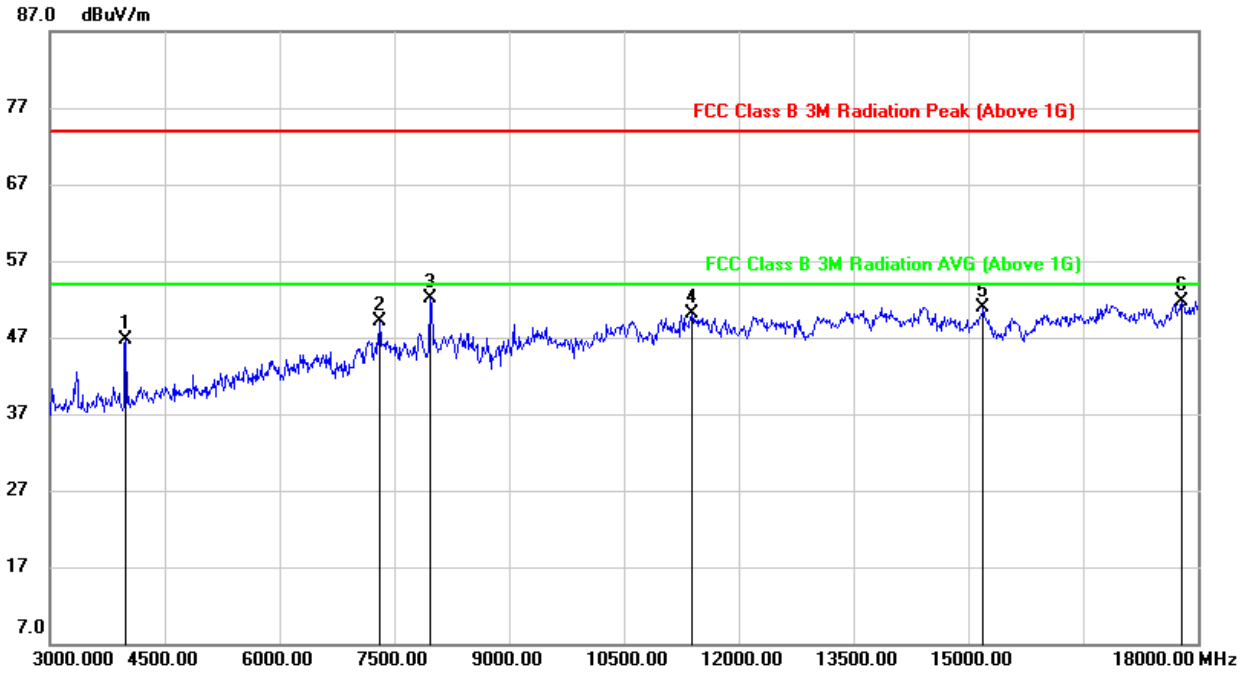
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3990.000	47.83	-2.95	44.88	74.00	-29.12	peak
2	7305.000	41.74	7.15	48.89	74.00	-25.11	peak
3	11400.000	37.58	13.36	50.94	74.00	-23.06	peak
4	14445.000	34.54	16.37	50.91	74.00	-23.09	peak
5	16815.000	31.73	19.92	51.65	74.00	-22.35	peak
6	17970.000	29.49	23.24	52.73	74.00	-21.27	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The High Pass filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

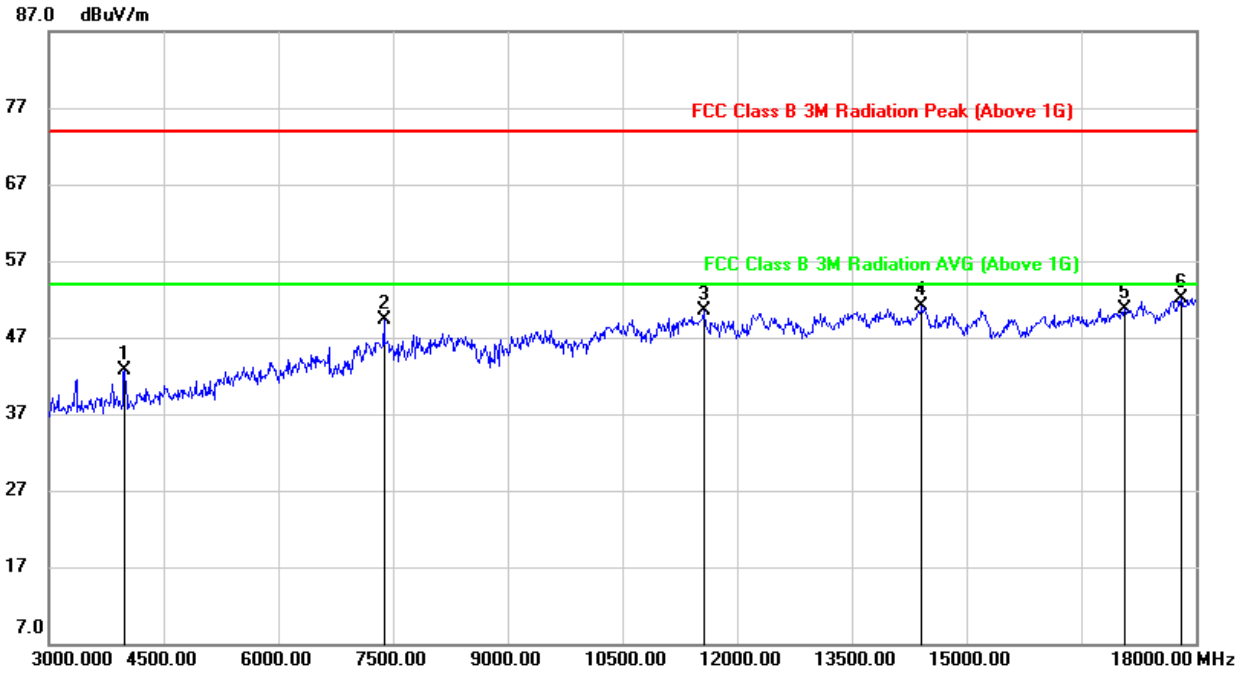
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3990.000	49.67	-2.95	46.72	74.00	-27.28	peak
2	7305.000	42.04	7.15	49.19	74.00	-24.81	peak
3	7965.000	43.92	8.26	52.18	74.00	-21.82	peak
4	11385.000	36.83	13.29	50.12	74.00	-23.88	peak
5	15195.000	35.44	15.56	51.00	74.00	-23.00	peak
6	17790.000	28.59	23.12	51.71	74.00	-22.29	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The High Pass filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

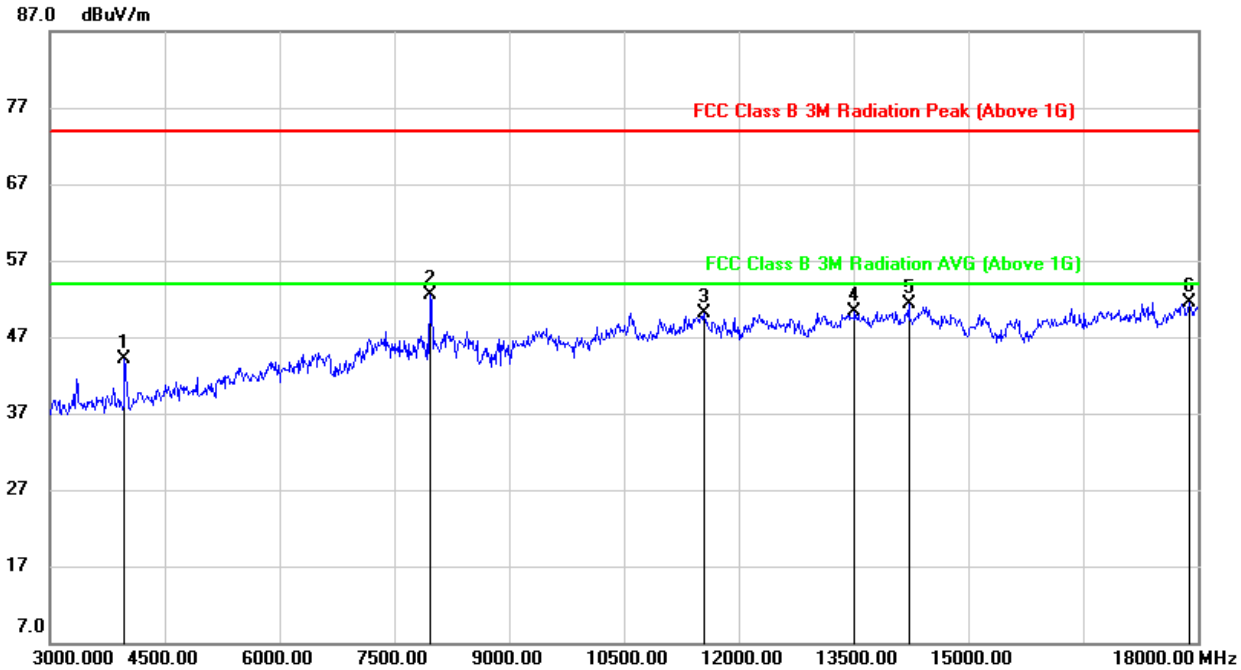
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3990.000	45.61	-2.95	42.66	74.00	-31.34	peak
2	7380.000	41.80	7.42	49.22	74.00	-24.78	peak
3	11565.000	36.32	14.14	50.46	74.00	-23.54	peak
4	14415.000	34.69	16.41	51.10	74.00	-22.90	peak
5	17070.000	30.13	20.65	50.78	74.00	-23.22	peak
6	17805.000	28.89	23.22	52.11	74.00	-21.89	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The High Pass filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)



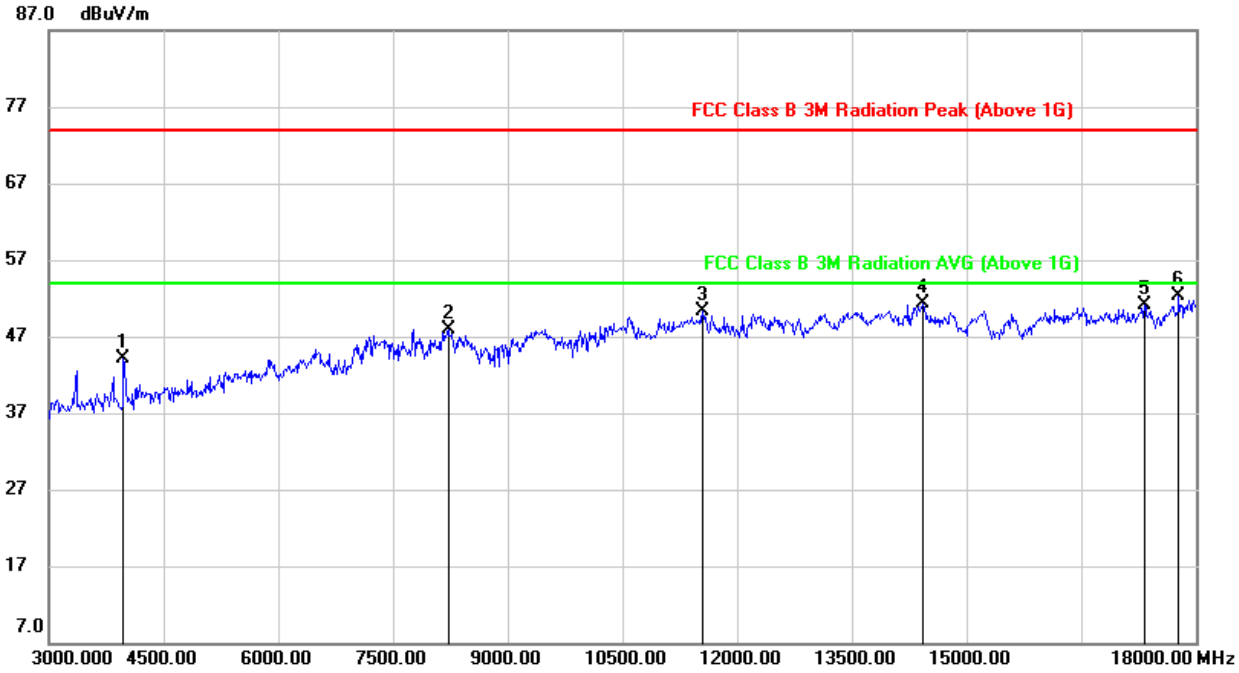
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3975.000	47.17	-2.98	44.19	74.00	-29.81	peak
2	7965.000	44.25	8.26	52.51	74.00	-21.49	peak
3	11550.000	35.97	14.13	50.10	74.00	-23.90	peak
4	13515.000	34.56	15.72	50.28	74.00	-23.72	peak
5	14220.000	34.89	16.45	51.34	74.00	-22.66	peak
6	17880.000	28.40	23.18	51.58	74.00	-22.42	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The High Pass filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

9.2.2. 802.11g SISO MODE

1TX MODE FOR ANT1 (WORST-CASE CONFIGURATION)

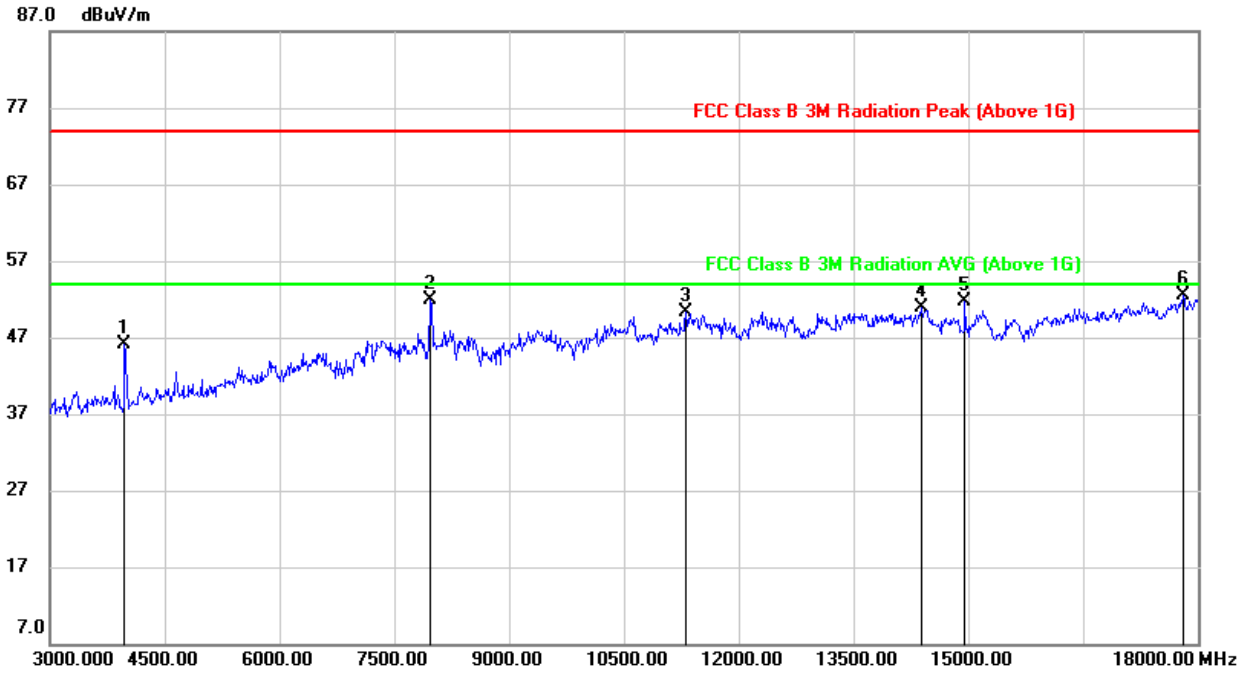
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3975.000	47.09	-2.98	44.11	74.00	-29.89	peak
2	8220.000	38.54	9.40	47.94	74.00	-26.06	peak
3	11550.000	36.11	14.13	50.24	74.00	-23.76	peak
4	14430.000	34.85	16.39	51.24	74.00	-22.76	peak
5	17325.000	29.39	21.80	51.19	74.00	-22.81	peak
6	17775.000	29.33	22.97	52.30	74.00	-21.70	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The High Pass filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

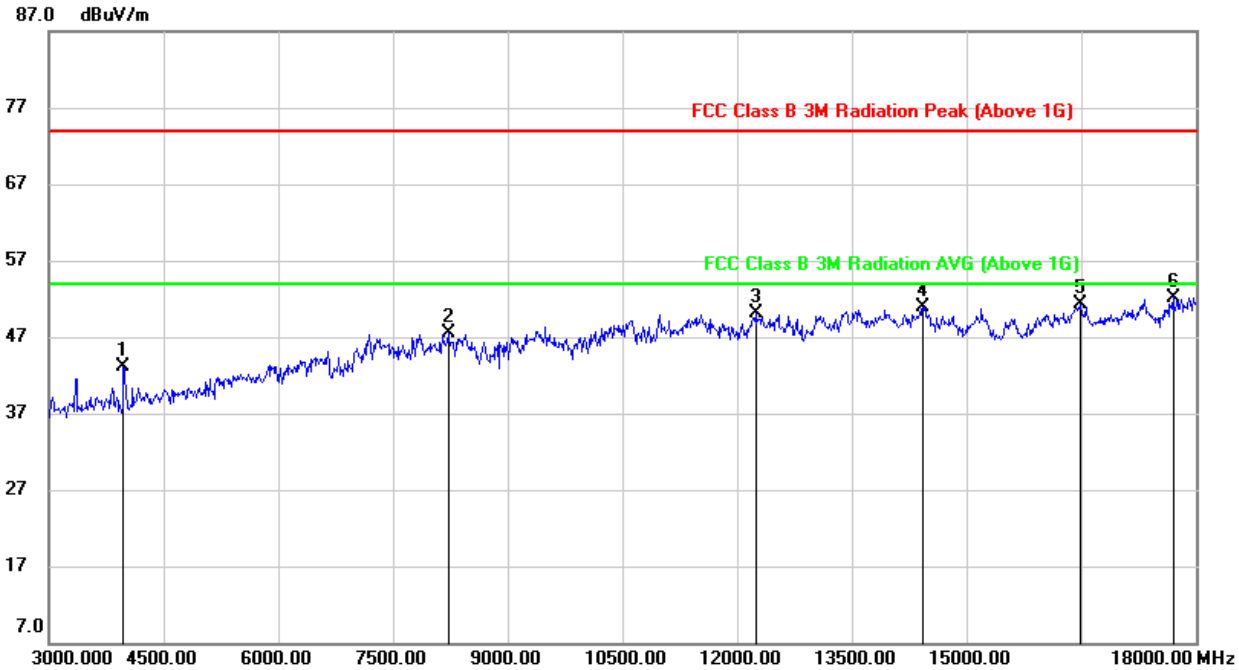
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3975.000	49.11	-2.98	46.13	74.00	-27.87	peak
2	7965.000	43.69	8.26	51.95	74.00	-22.05	peak
3	11310.000	37.36	12.94	50.30	74.00	-23.70	peak
4	14385.000	34.49	16.41	50.90	74.00	-23.10	peak
5	14955.000	36.12	15.49	51.61	74.00	-22.39	peak
6	17805.000	29.25	23.22	52.47	74.00	-21.53	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The High Pass filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

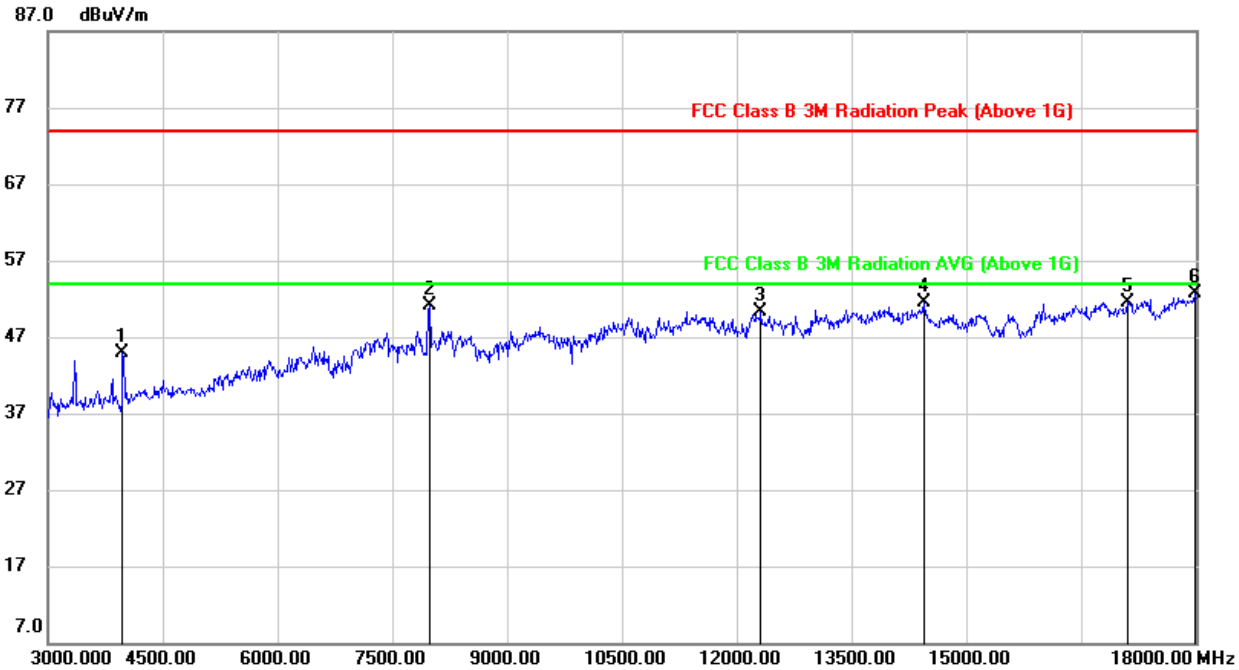
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3975.000	46.16	-2.98	43.18	74.00	-30.82	peak
2	8220.000	38.16	9.40	47.56	74.00	-26.44	peak
3	12240.000	35.77	14.31	50.08	74.00	-23.92	peak
4	14430.000	34.48	16.39	50.87	74.00	-23.13	peak
5	16485.000	32.41	18.84	51.25	74.00	-22.75	peak
6	17700.000	29.96	22.24	52.20	74.00	-21.80	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The High Pass filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

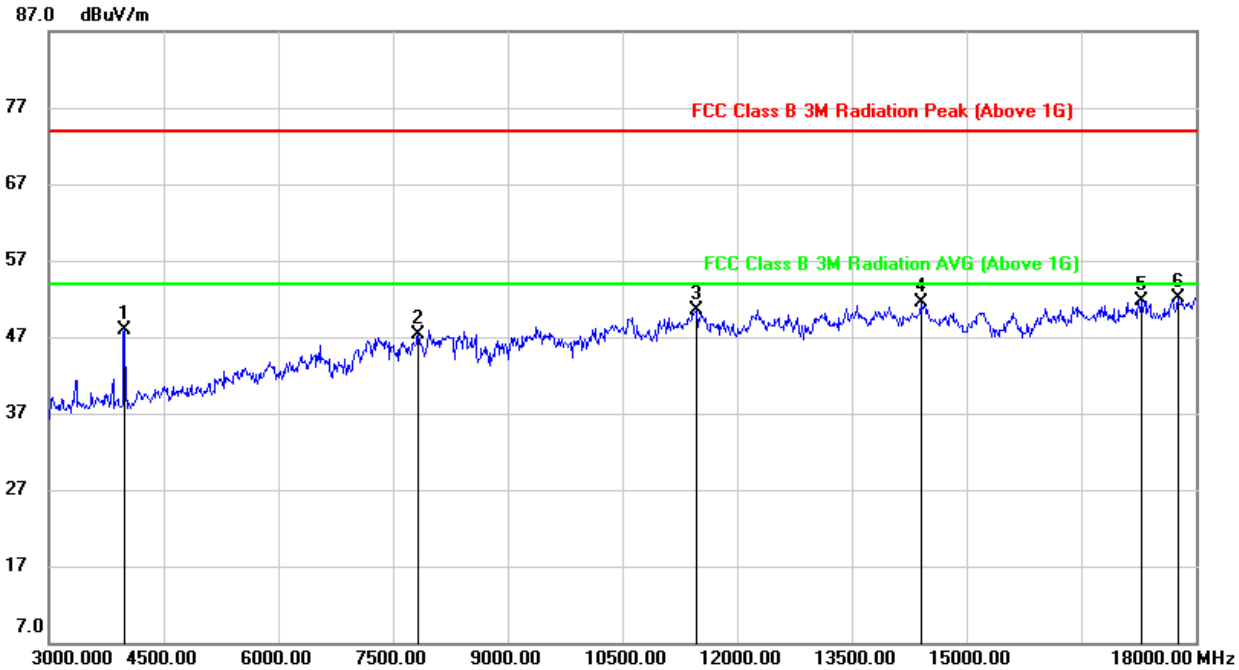
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3975.000	47.88	-2.98	44.90	74.00	-29.10	peak
2	7995.000	42.92	8.16	51.08	74.00	-22.92	peak
3	12315.000	35.98	14.37	50.35	74.00	-23.65	peak
4	14445.000	35.18	16.37	51.55	74.00	-22.45	peak
5	17100.000	30.68	20.78	51.46	74.00	-22.54	peak
6	17985.000	29.49	23.25	52.74	74.00	-21.26	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The High Pass filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

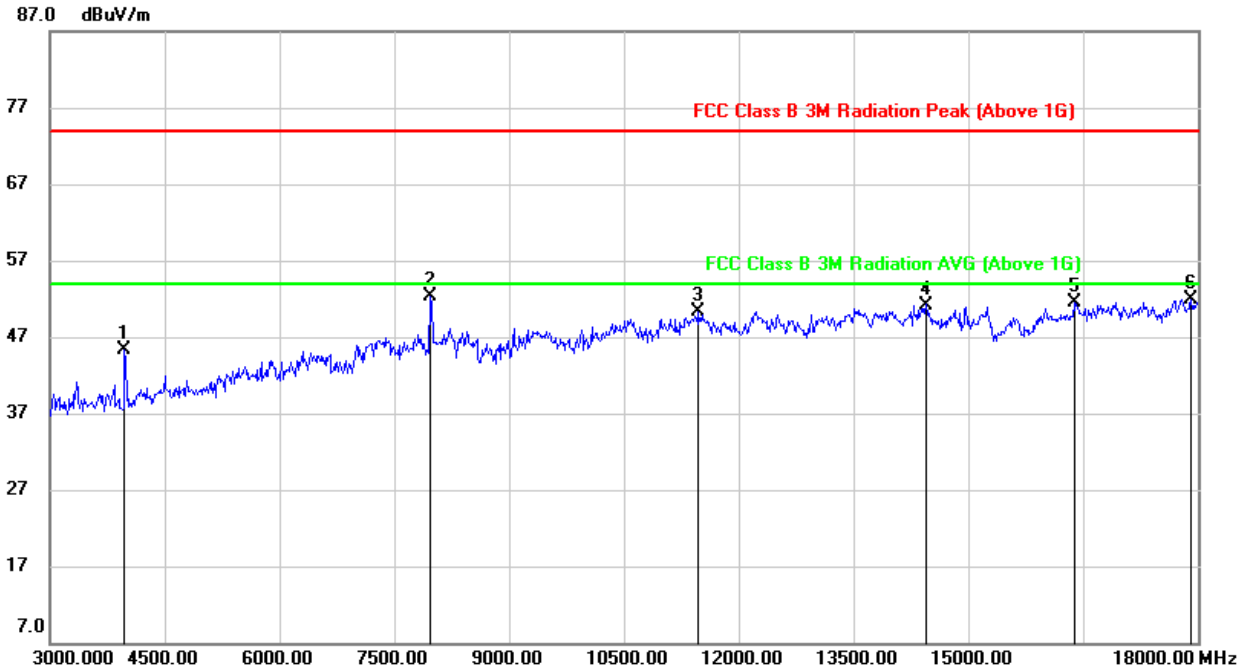
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3990.000	50.78	-2.95	47.83	74.00	-26.17	peak
2	7830.000	38.47	8.75	47.22	74.00	-26.78	peak
3	11475.000	36.57	13.90	50.47	74.00	-23.53	peak
4	14400.000	34.98	16.43	51.41	74.00	-22.59	peak
5	17295.000	29.82	21.86	51.68	74.00	-22.32	peak
6	17760.000	29.19	22.83	52.02	74.00	-21.98	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The High Pass filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)



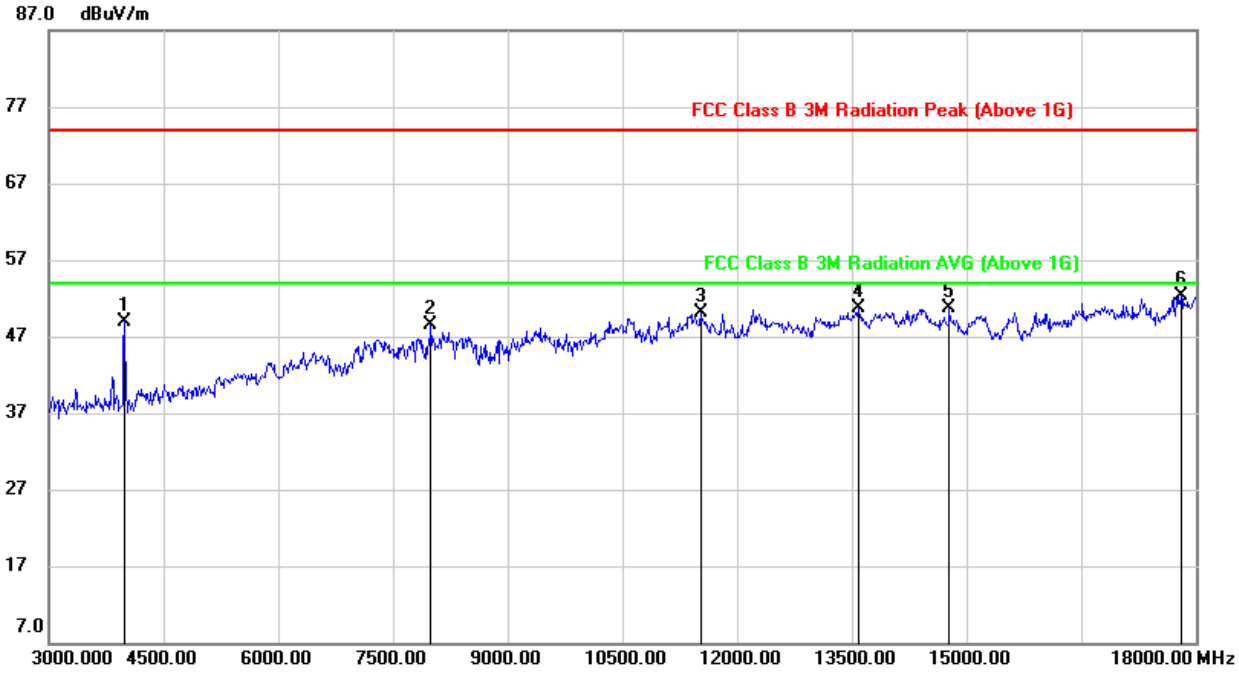
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3975.000	48.31	-2.98	45.33	74.00	-28.67	peak
2	7965.000	44.06	8.26	52.32	74.00	-21.68	peak
3	11475.000	36.31	13.90	50.21	74.00	-23.79	peak
4	14445.000	34.83	16.37	51.20	74.00	-22.80	peak
5	16380.000	33.01	18.47	51.48	74.00	-22.52	peak
6	17910.000	28.75	23.17	51.92	74.00	-22.08	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The High Pass filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

9.2.3. 802.11n HT20 MIMO MODE

2TX MODE (WORST-CASE CONFIGURATION)

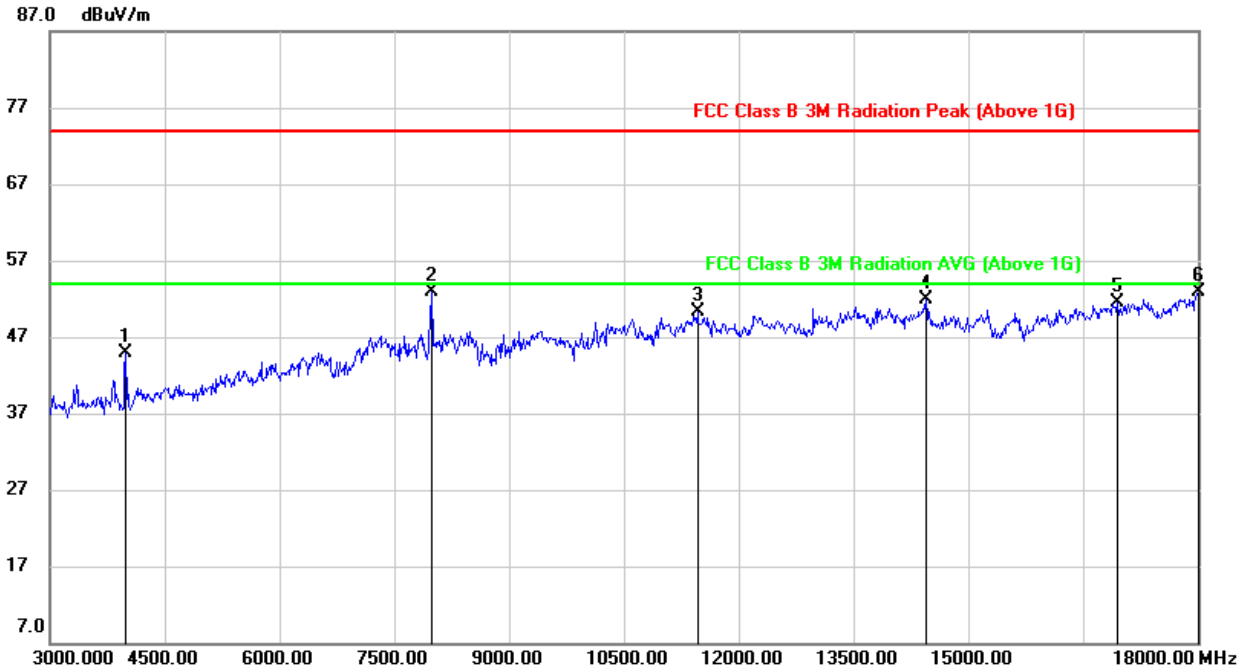
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3990.000	51.76	-2.95	48.81	74.00	-25.19	peak
2	7995.000	40.35	8.16	48.51	74.00	-25.49	peak
3	11520.000	35.95	14.10	50.05	74.00	-23.95	peak
4	13590.000	34.60	16.04	50.64	74.00	-23.36	peak
5	14775.000	35.07	15.71	50.78	74.00	-23.22	peak
6	17805.000	28.99	23.22	52.21	74.00	-21.79	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The High Pass filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

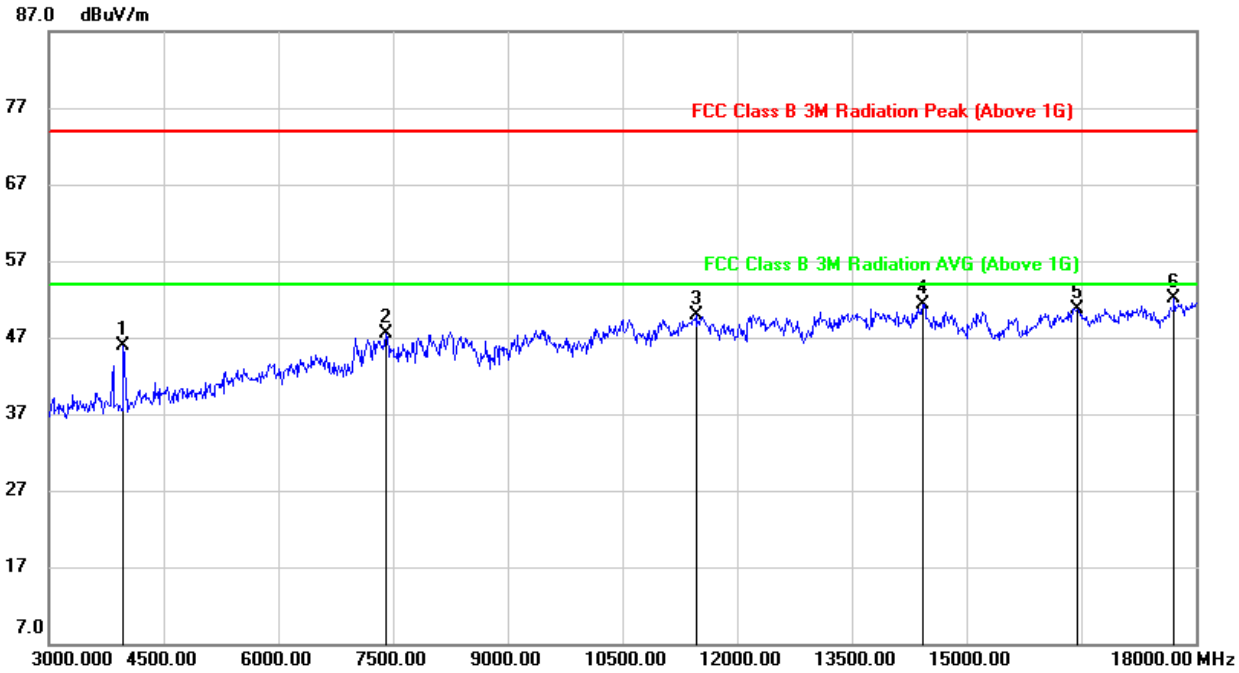
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3990.000	47.79	-2.95	44.84	74.00	-29.16	peak
2	7995.000	44.69	8.16	52.85	74.00	-21.15	peak
3	11460.000	36.59	13.79	50.38	74.00	-23.62	peak
4	14445.000	35.54	16.37	51.91	74.00	-22.09	peak
5	16950.000	31.40	20.13	51.53	74.00	-22.47	peak
6	18000.000	29.56	23.27	52.83	74.00	-21.17	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The High Pass filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

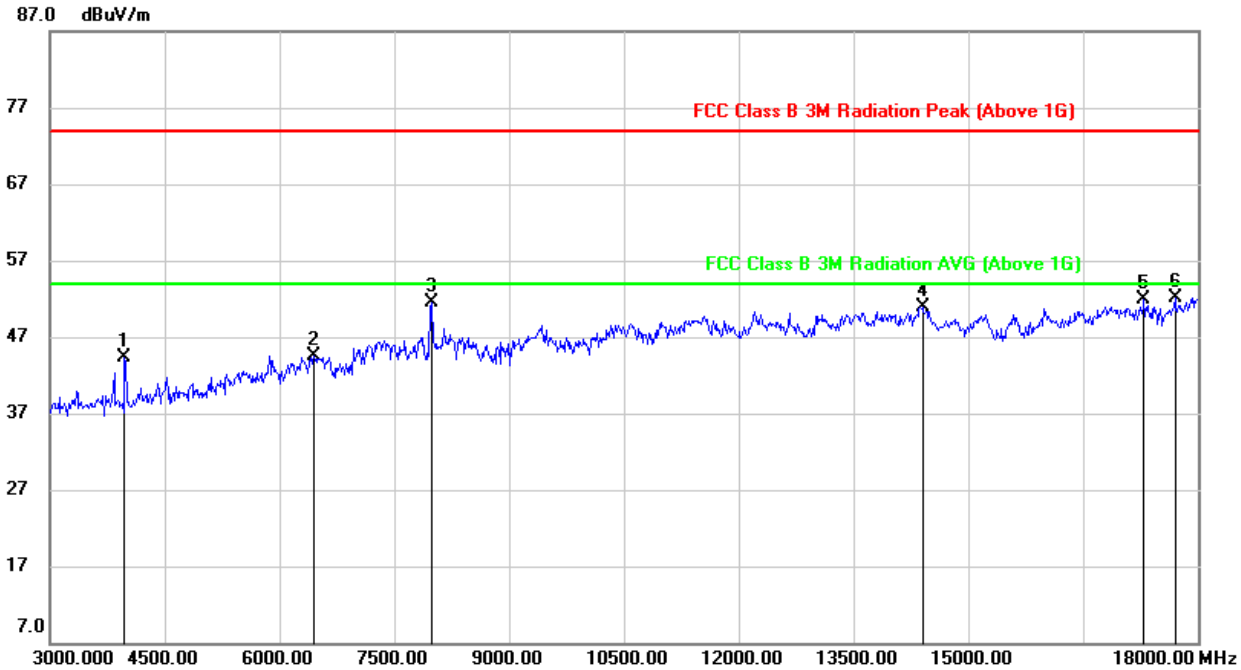
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3975.000	48.79	-2.98	45.81	74.00	-28.19	peak
2	7410.000	40.00	7.47	47.47	74.00	-26.53	peak
3	11460.000	36.10	13.79	49.89	74.00	-24.11	peak
4	14430.000	34.99	16.39	51.38	74.00	-22.62	peak
5	16440.000	32.06	18.69	50.75	74.00	-23.25	peak
6	17715.000	29.62	22.39	52.01	74.00	-21.99	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The High Pass filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

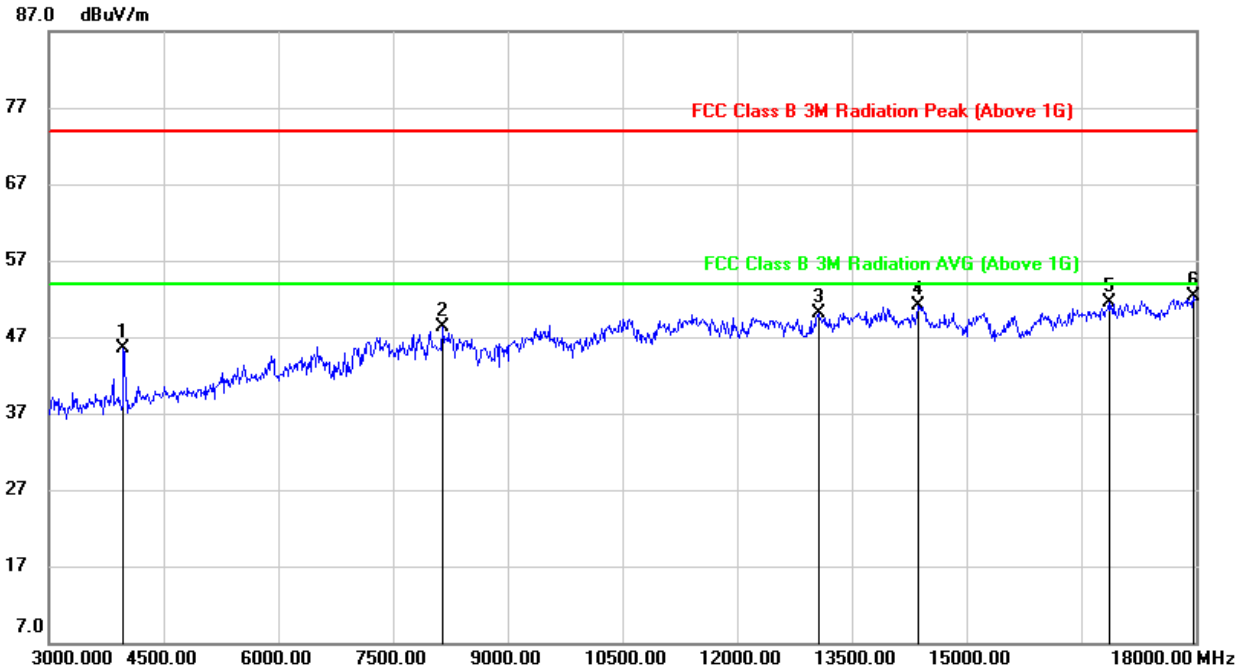
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3975.000	47.34	-2.98	44.36	74.00	-29.64	peak
2	6450.000	38.85	5.67	44.52	74.00	-29.48	peak
3	7995.000	43.35	8.16	51.51	74.00	-22.49	peak
4	14400.000	34.53	16.43	50.96	74.00	-23.04	peak
5	17295.000	30.07	21.86	51.93	74.00	-22.07	peak
6	17700.000	29.92	22.24	52.16	74.00	-21.84	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The High Pass filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

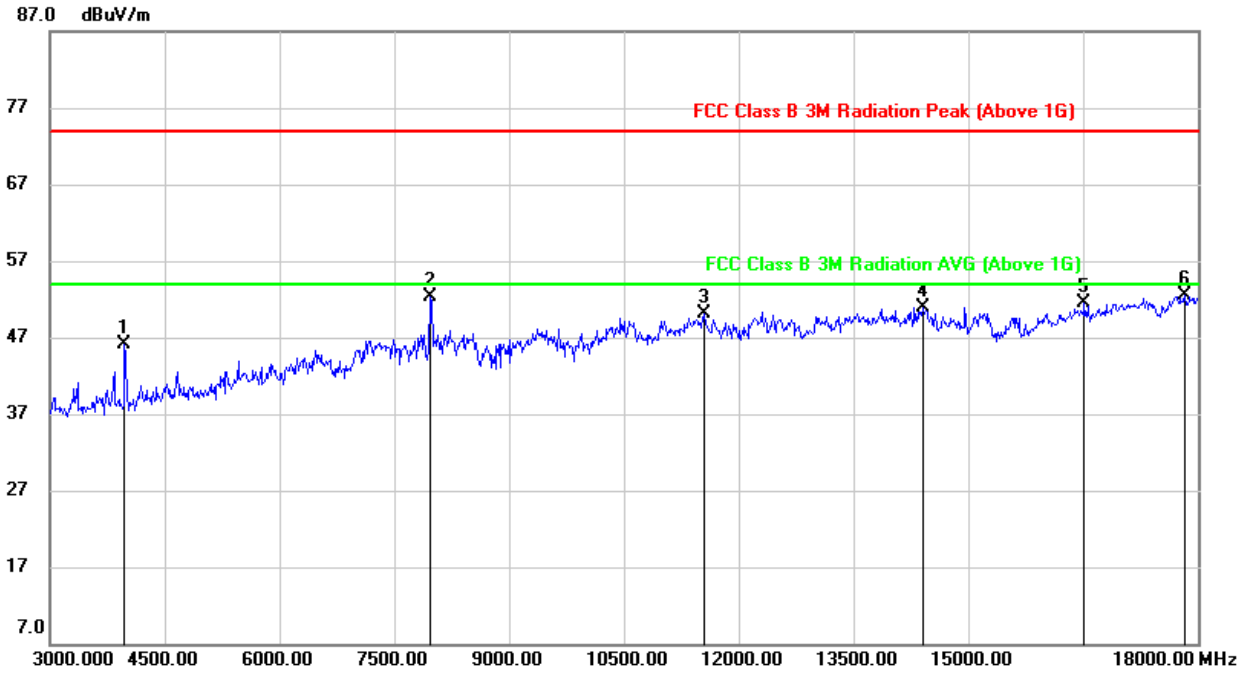
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3975.000	48.50	-2.98	45.52	74.00	-28.48	peak
2	8145.000	38.96	9.30	48.26	74.00	-25.74	peak
3	13065.000	35.30	14.89	50.19	74.00	-23.81	peak
4	14370.000	34.63	16.39	51.02	74.00	-22.98	peak
5	16860.000	31.54	19.92	51.46	74.00	-22.54	peak
6	17970.000	28.99	23.24	52.23	74.00	-21.77	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The High Pass filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)



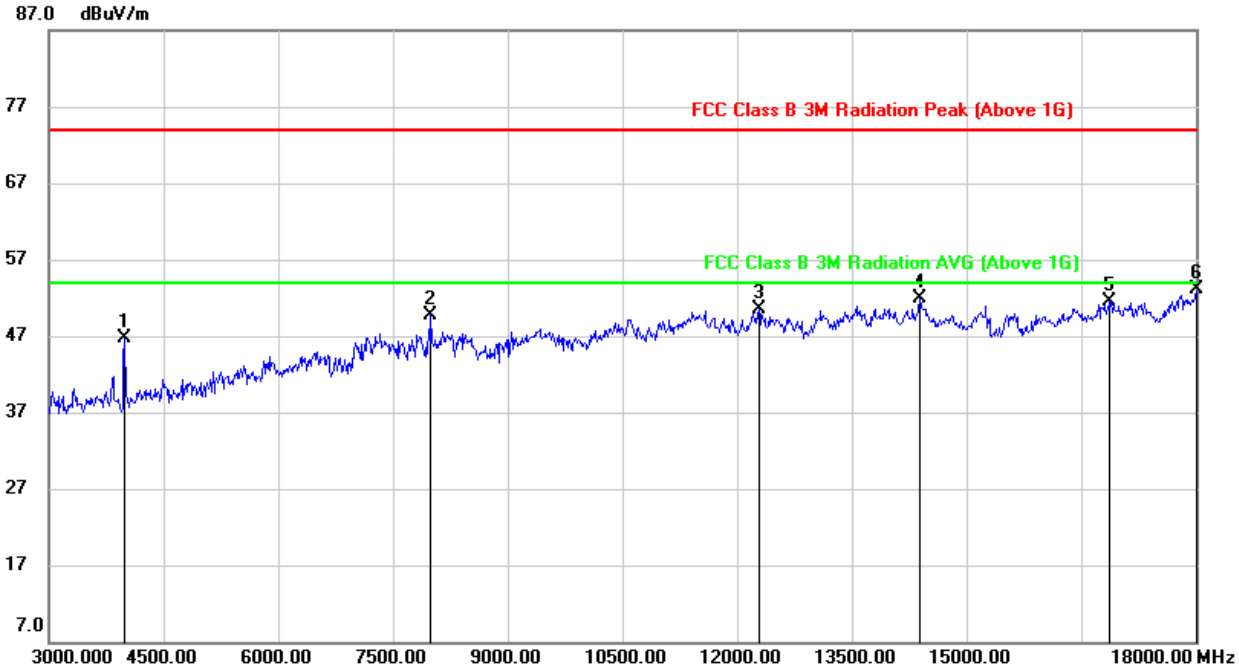
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3975.000	49.07	-2.98	46.09	74.00	-27.91	peak
2	7965.000	43.96	8.26	52.22	74.00	-21.78	peak
3	11550.000	35.92	14.13	50.05	74.00	-23.95	peak
4	14415.000	34.53	16.41	50.94	74.00	-23.06	peak
5	16515.000	32.48	18.97	51.45	74.00	-22.55	peak
6	17820.000	29.29	23.21	52.50	74.00	-21.50	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The High Pass filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

9.2.4. 802.11n HT40 MIMO MODE

2TX MODE (WORST-CASE CONFIGURATION)

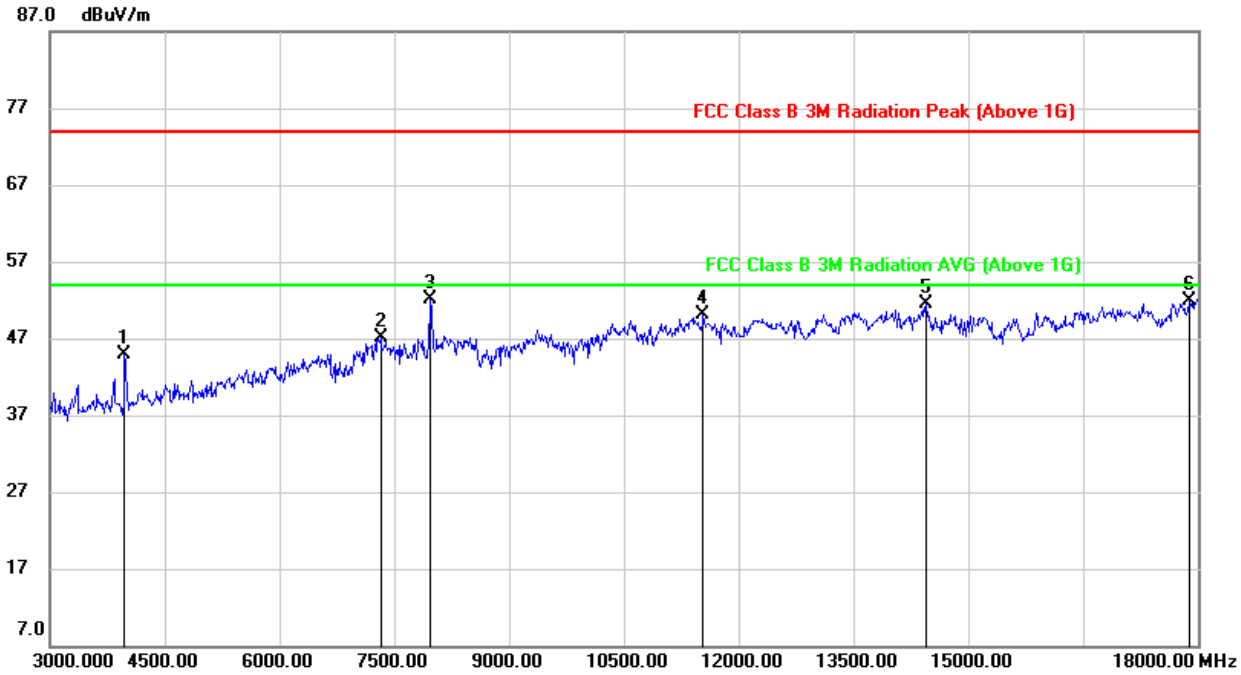
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3990.000	49.59	-2.95	46.64	74.00	-27.36	peak
2	7995.000	41.60	8.16	49.76	74.00	-24.24	peak
3	12285.000	36.08	14.37	50.45	74.00	-23.55	peak
4	14385.000	35.52	16.41	51.93	74.00	-22.07	peak
5	16875.000	31.64	19.93	51.57	74.00	-22.43	peak
6	18000.000	29.90	23.27	53.17	74.00	-20.83	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The High Pass filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

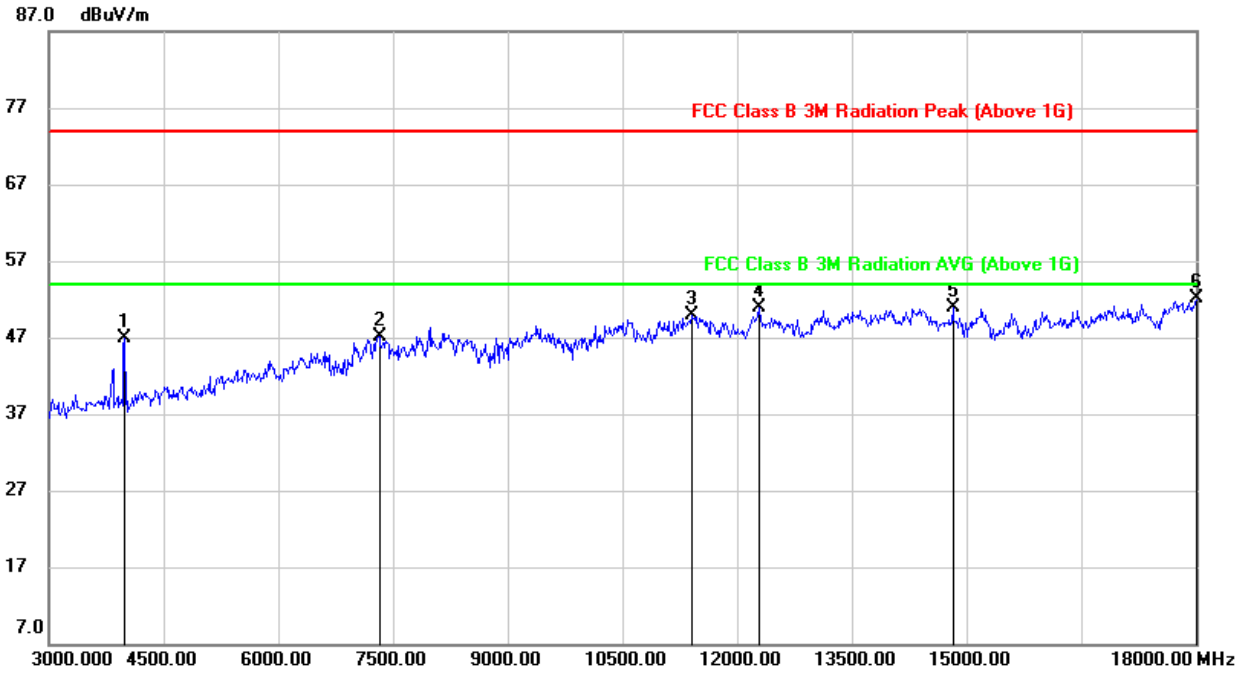
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3975.000	47.94	-2.98	44.96	74.00	-29.04	peak
2	7320.000	39.87	7.20	47.07	74.00	-26.93	peak
3	7965.000	43.88	8.26	52.14	74.00	-21.86	peak
4	11535.000	36.05	14.10	50.15	74.00	-23.85	peak
5	14445.000	35.09	16.37	51.46	74.00	-22.54	peak
6	17895.000	28.80	23.16	51.96	74.00	-22.04	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The High Pass filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

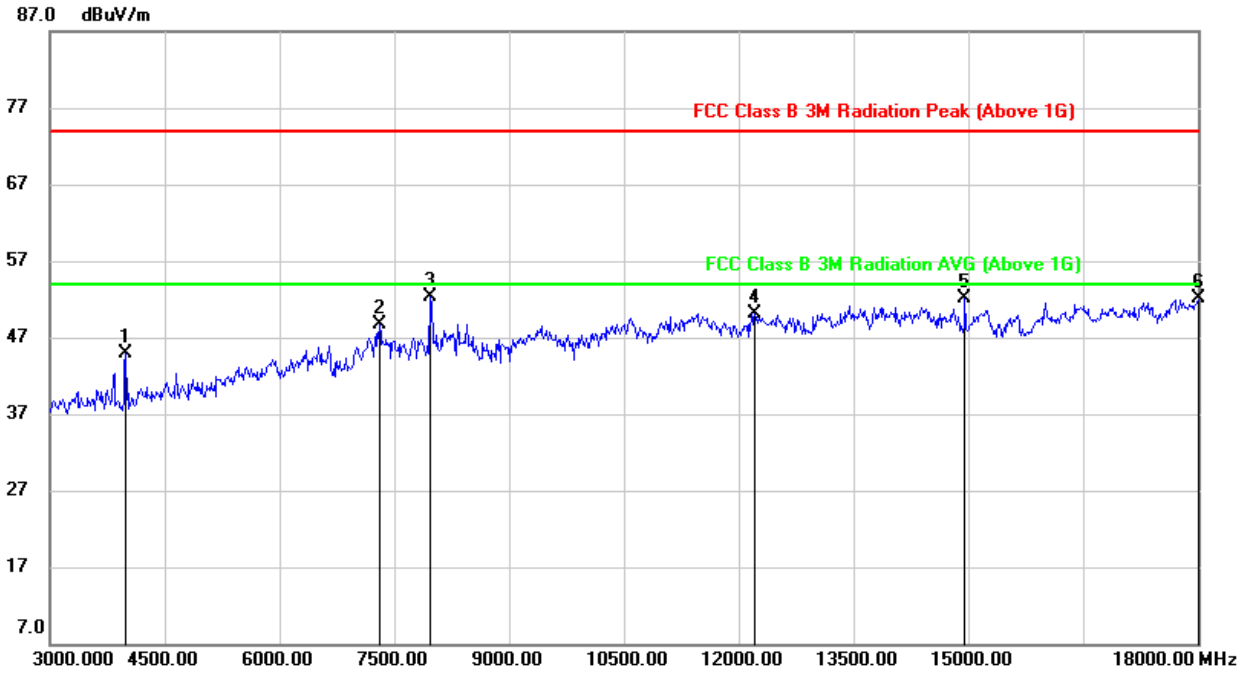
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3990.000	49.90	-2.95	46.95	74.00	-27.05	peak
2	7320.000	39.85	7.20	47.05	74.00	-26.95	peak
3	11400.000	36.49	13.36	49.85	74.00	-24.15	peak
4	12285.000	36.44	14.37	50.81	74.00	-23.19	peak
5	14820.000	35.31	15.63	50.94	74.00	-23.06	peak
6	18000.000	28.77	23.27	52.04	74.00	-21.96	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The High Pass filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

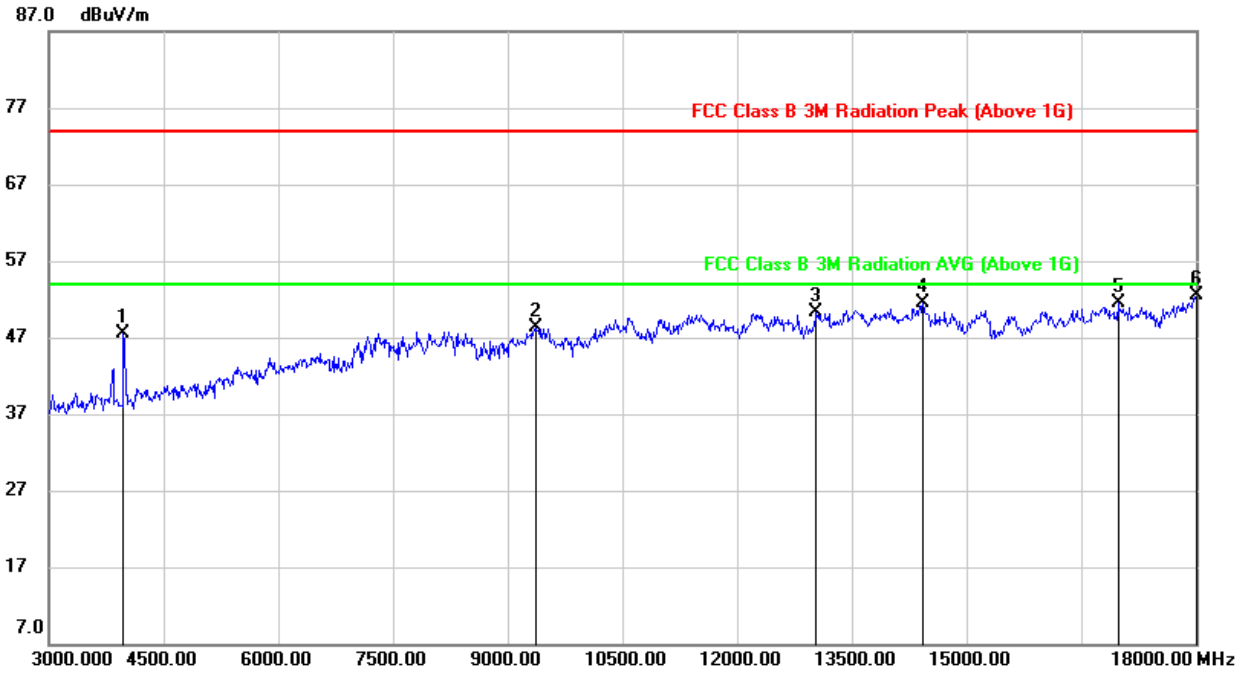
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3990.000	47.81	-2.95	44.86	74.00	-29.14	peak
2	7305.000	41.55	7.15	48.70	74.00	-25.30	peak
3	7965.000	44.11	8.26	52.37	74.00	-21.63	peak
4	12210.000	35.90	14.25	50.15	74.00	-23.85	peak
5	14955.000	36.60	15.49	52.09	74.00	-21.91	peak
6	18000.000	28.86	23.27	52.13	74.00	-21.87	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The High Pass filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

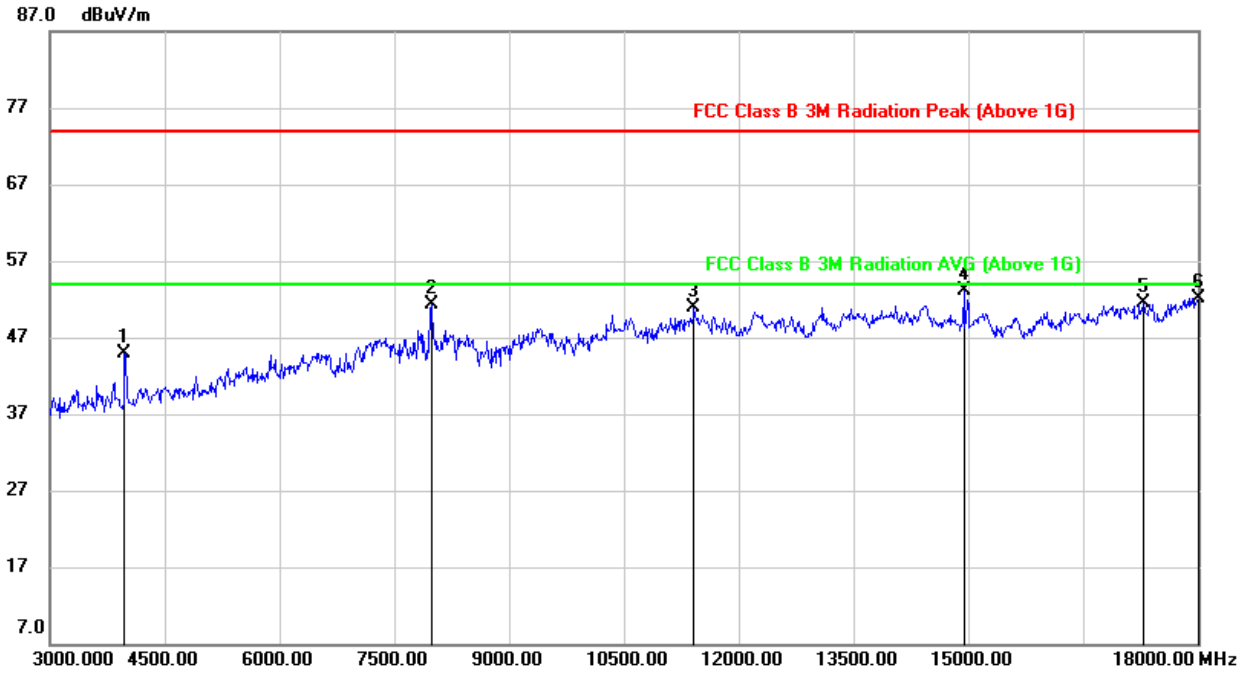
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3975.000	50.57	-2.98	47.59	74.00	-26.41	peak
2	9360.000	38.24	10.05	48.29	74.00	-25.71	peak
3	13035.000	35.47	14.81	50.28	74.00	-23.72	peak
4	14430.000	35.05	16.39	51.44	74.00	-22.56	peak
5	16980.000	31.18	20.25	51.43	74.00	-22.57	peak
6	18000.000	29.17	23.27	52.44	74.00	-21.56	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The High Pass filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3975.000	47.81	-2.98	44.83	74.00	-29.17	peak
2	7995.000	43.09	8.16	51.25	74.00	-22.75	peak
3	11415.000	37.38	13.46	50.84	74.00	-23.16	peak
4	14940.000	37.57	15.50	53.07	74.00	-20.93	peak
5	17295.000	29.62	21.86	51.48	74.00	-22.52	peak
6	18000.000	28.86	23.27	52.13	74.00	-21.87	peak

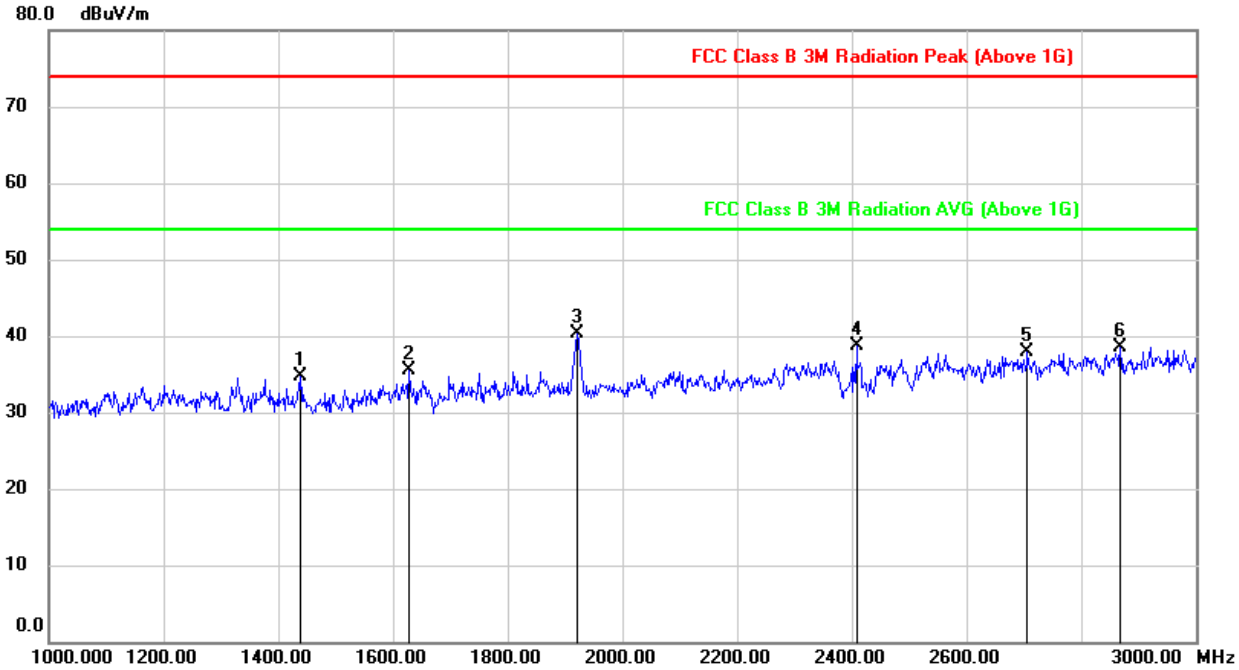
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The High Pass filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

9.3. SPURIOUS EMISSIONS (1~3GHz)

9.3.1. 802.11b SISO MODE

1TX MODE FOR ANT1 (WORST-CASE CONFIGURATION)

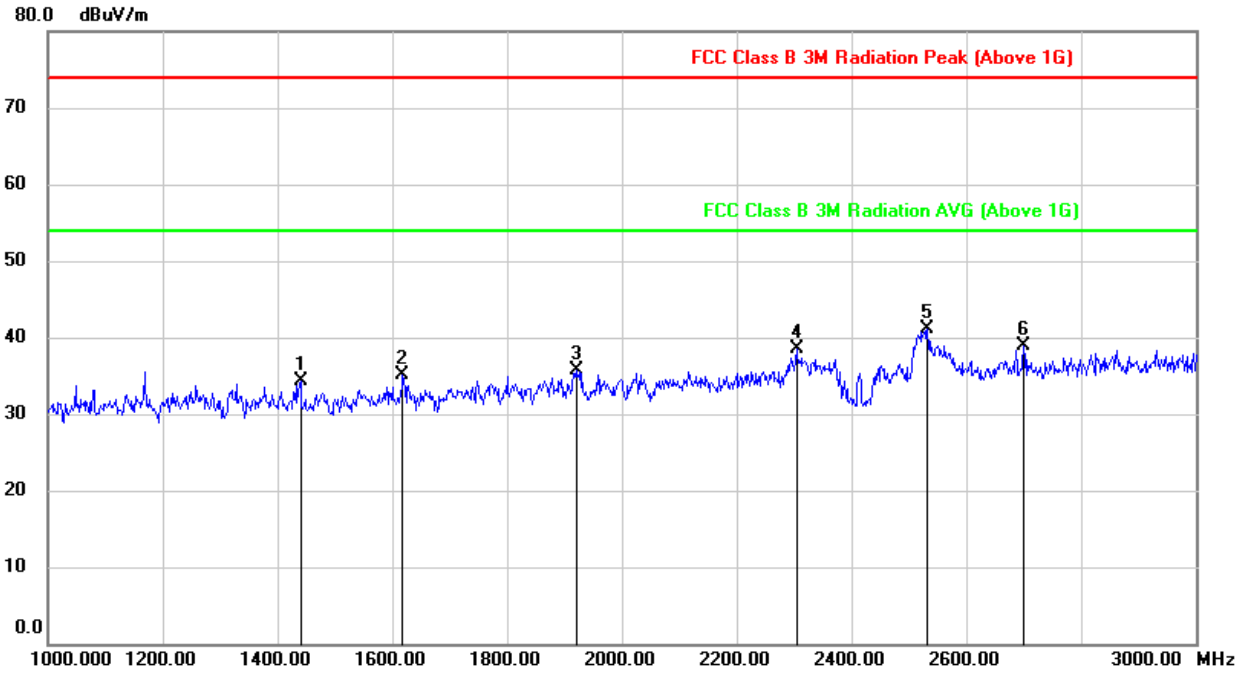
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1438.000	46.54	-11.85	34.69	74.00	-39.31	peak
2	1628.000	46.25	-10.76	35.49	74.00	-38.51	peak
3	1922.000	49.65	-9.37	40.28	74.00	-33.72	peak
4	2408.000	45.66	-6.94	38.72	74.00	-35.28	peak
5	2706.000	43.81	-5.93	37.88	74.00	-36.12	peak
6	2868.000	43.36	-4.93	38.43	74.00	-35.57	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The Band Reject filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

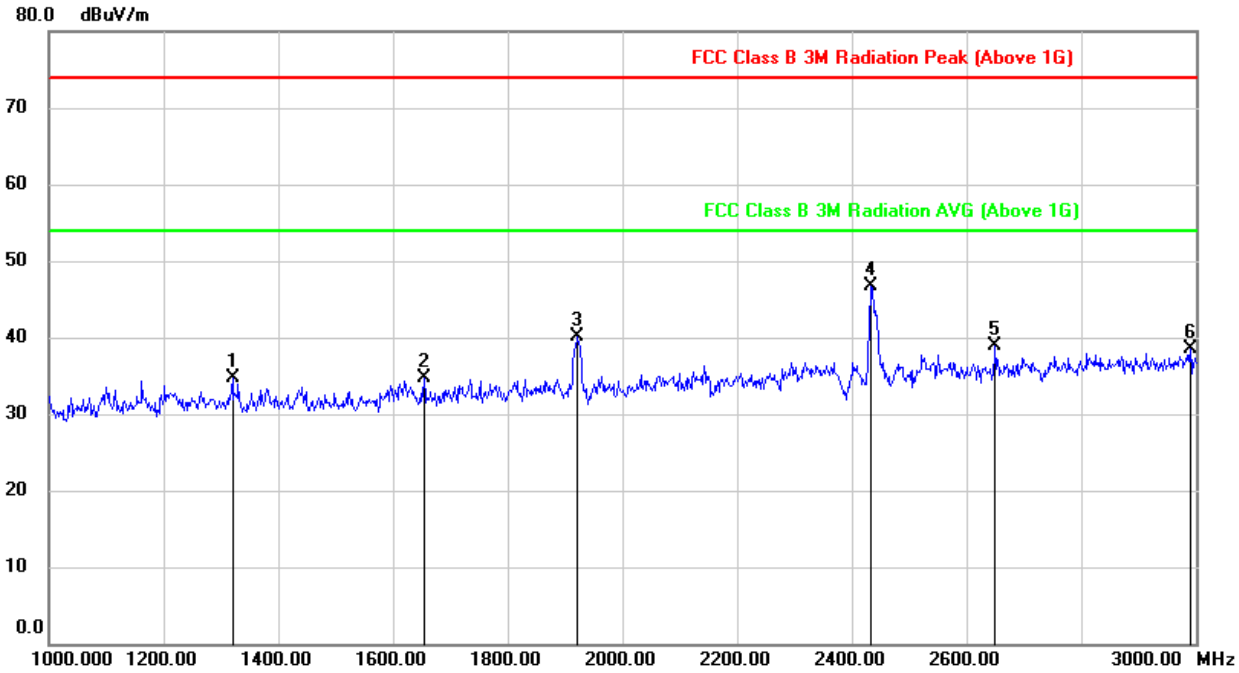
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1440.000	46.09	-11.85	34.24	74.00	-39.76	peak
2	1618.000	45.90	-10.79	35.11	74.00	-38.89	peak
3	1920.000	45.11	-9.36	35.75	74.00	-38.25	peak
4	2304.000	45.93	-7.45	38.48	74.00	-35.52	peak
5	2532.000	47.41	-6.29	41.12	74.00	-32.88	peak
6	2700.000	44.95	-5.98	38.97	74.00	-35.03	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The Band Reject filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

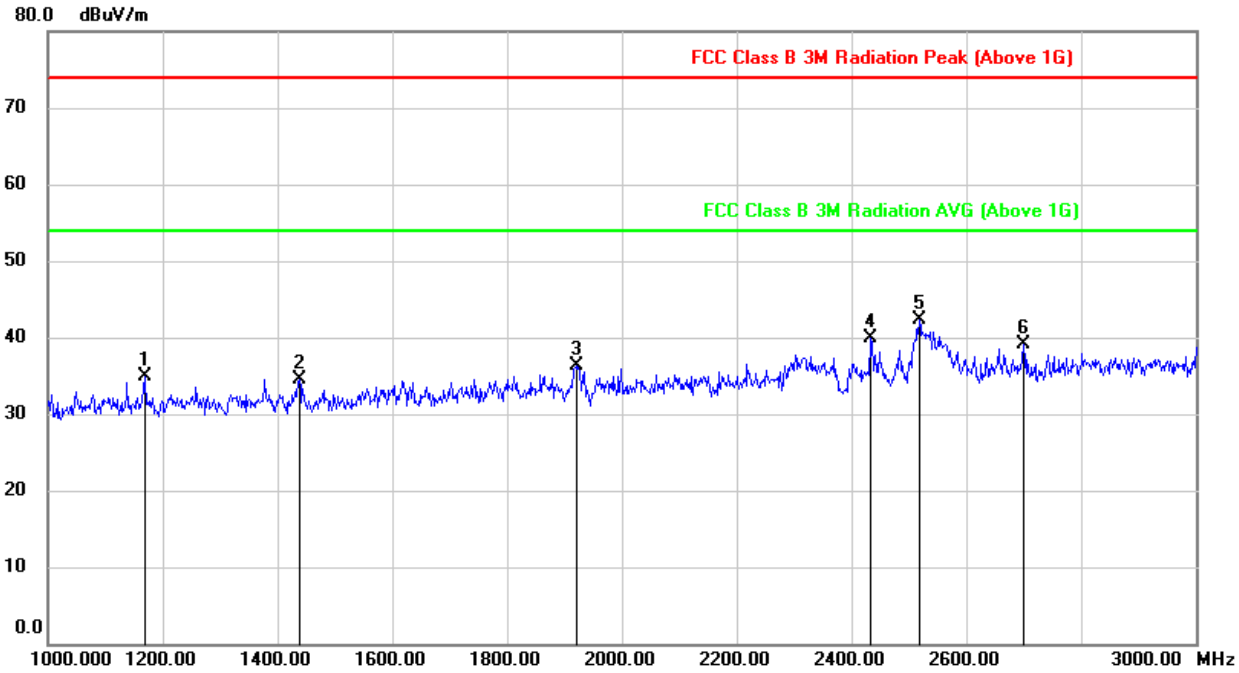
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1320.000	46.62	-11.86	34.76	74.00	-39.24	peak
2	1654.000	45.43	-10.71	34.72	74.00	-39.28	peak
3	1922.000	49.53	-9.37	40.16	74.00	-33.84	peak
4	2434.000	53.41	-6.72	46.69	74.00	-27.31	peak
5	2650.000	45.26	-6.29	38.97	74.00	-35.03	peak
6	2990.000	42.87	-4.37	38.50	74.00	-35.50	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The Band Reject filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

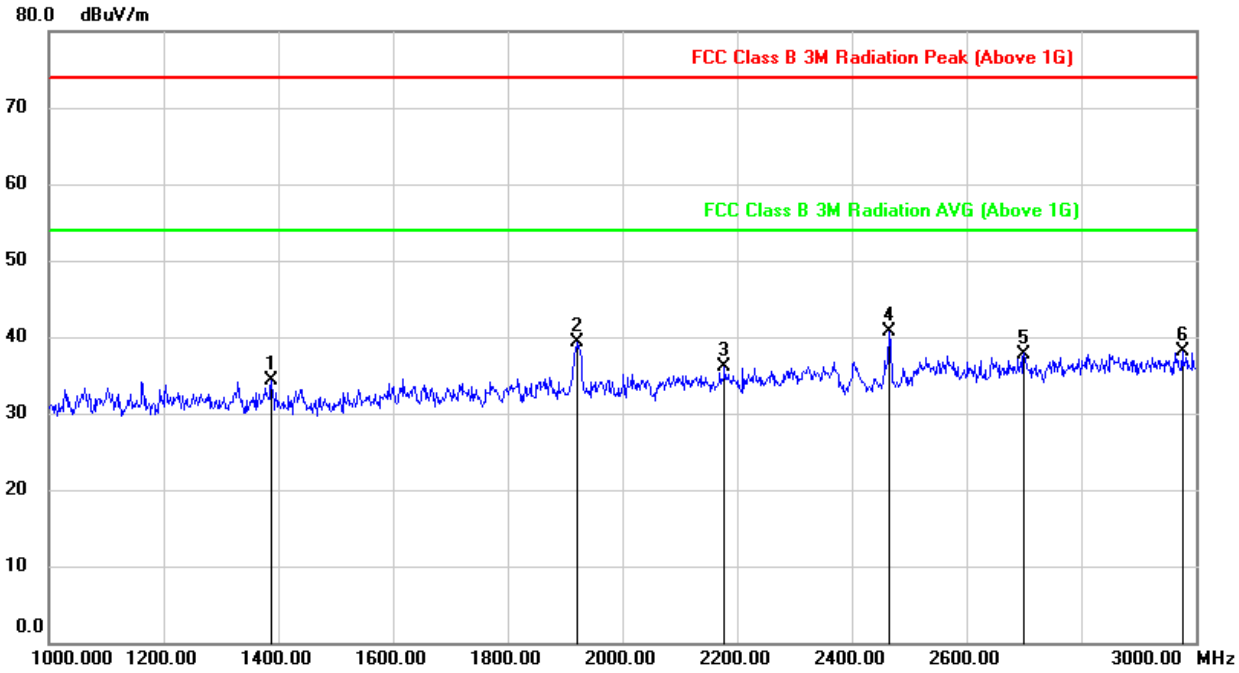
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1168.000	47.38	-12.51	34.87	74.00	-39.13	peak
2	1438.000	46.38	-11.85	34.53	74.00	-39.47	peak
3	1922.000	45.69	-9.37	36.32	74.00	-37.68	peak
4	2434.000	46.62	-6.72	39.90	74.00	-34.10	peak
5	2518.000	48.55	-6.24	42.31	74.00	-31.69	peak
6	2700.000	45.14	-5.98	39.16	74.00	-34.84	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The Band Reject filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

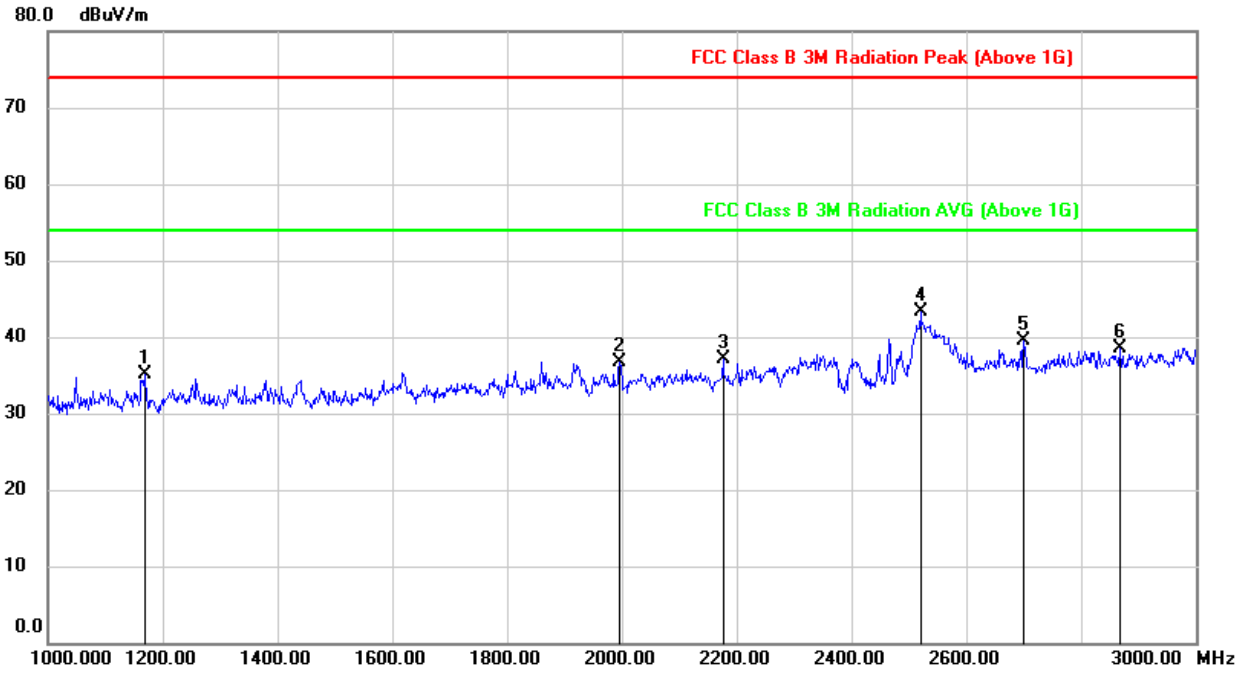
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1388.000	46.17	-11.90	34.27	74.00	-39.73	peak
2	1920.000	48.68	-9.36	39.32	74.00	-34.68	peak
3	2178.000	44.23	-8.20	36.03	74.00	-37.97	peak
4	2464.000	47.26	-6.46	40.80	74.00	-33.20	peak
5	2700.000	43.78	-5.98	37.80	74.00	-36.20	peak
6	2976.000	42.45	-4.43	38.02	74.00	-35.98	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The Band Reject filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)



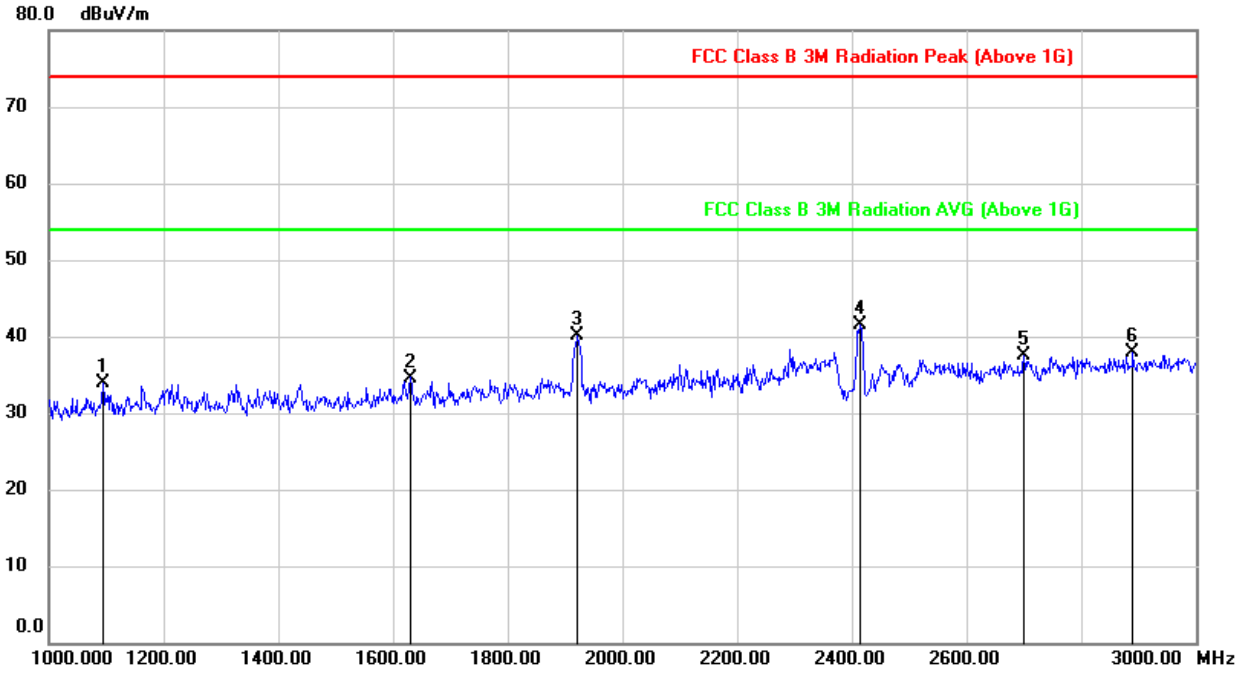
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1168.000	47.58	-12.51	35.07	74.00	-38.93	peak
2	1996.000	46.23	-9.43	36.80	74.00	-37.20	peak
3	2176.000	45.33	-8.21	37.12	74.00	-36.88	peak
4	2520.000	49.50	-6.25	43.25	74.00	-30.75	peak
5	2700.000	45.53	-5.98	39.55	74.00	-34.45	peak
6	2868.000	43.49	-4.93	38.56	74.00	-35.44	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The Band Reject filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

9.3.2. 802.11g SISO MODE

1TX MODE FOR ANT1 (WORST-CASE CONFIGURATION)

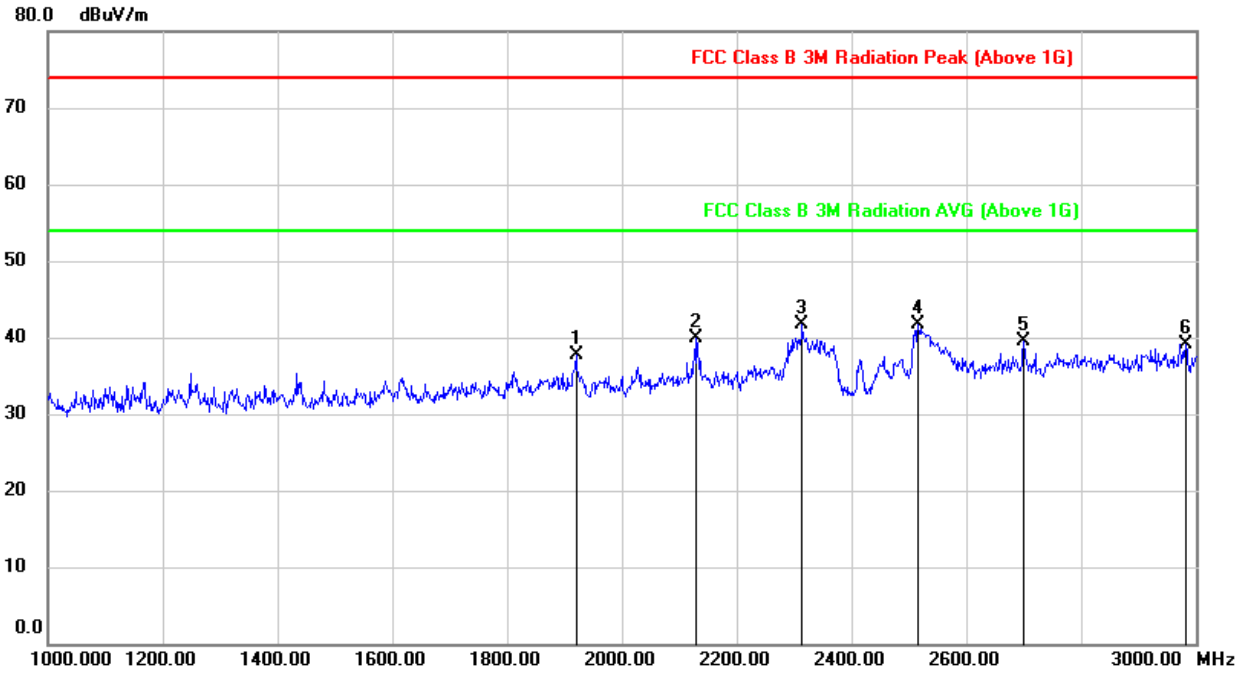
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1094.000	47.08	-13.15	33.93	74.00	-40.07	peak
2	1630.000	45.36	-10.76	34.60	74.00	-39.40	peak
3	1920.000	49.44	-9.36	40.08	74.00	-33.92	peak
4	2414.000	48.31	-6.89	41.42	74.00	-32.58	peak
5	2700.000	43.52	-5.98	37.54	74.00	-36.46	peak
6	2890.000	42.65	-4.80	37.85	74.00	-36.15	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The Band Reject filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

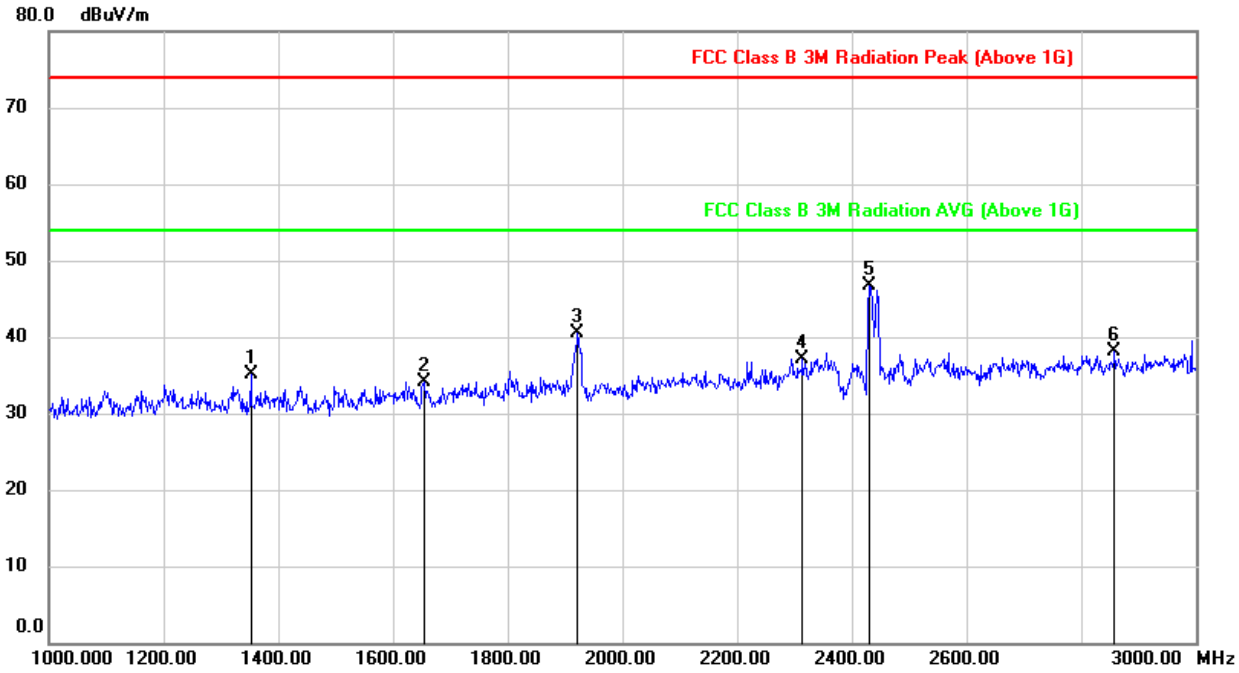
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1920.000	47.12	-9.36	37.76	74.00	-36.24	peak
2	2130.000	48.35	-8.45	39.90	74.00	-34.10	peak
3	2314.000	49.07	-7.40	41.67	74.00	-32.33	peak
4	2516.000	47.84	-6.23	41.61	74.00	-32.39	peak
5	2700.000	45.56	-5.98	39.58	74.00	-34.42	peak
6	2982.000	43.52	-4.40	39.12	74.00	-34.88	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The Band Reject filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

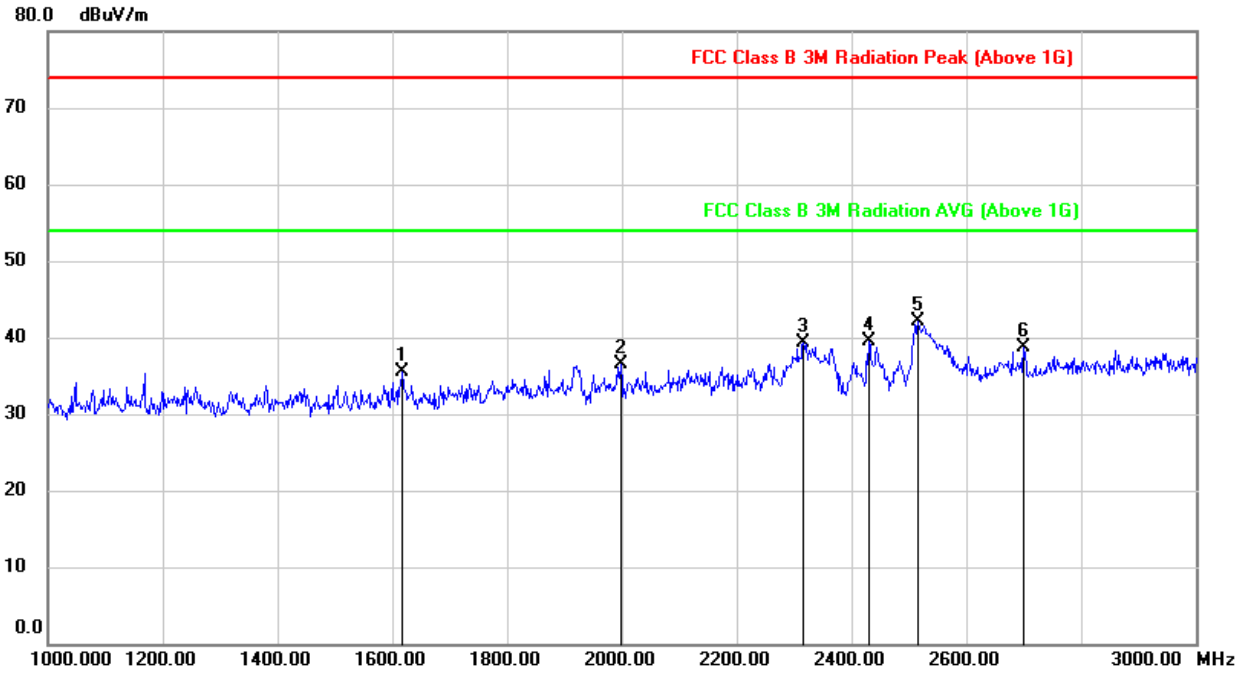
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1352.000	46.94	-11.89	35.05	74.00	-38.95	peak
2	1654.000	44.77	-10.71	34.06	74.00	-39.94	peak
3	1922.000	49.87	-9.37	40.50	74.00	-33.50	peak
4	2314.000	44.48	-7.40	37.08	74.00	-36.92	peak
5	2430.000	53.48	-6.76	46.72	74.00	-27.28	peak
6	2858.000	43.08	-4.97	38.11	74.00	-35.89	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The Band Reject filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

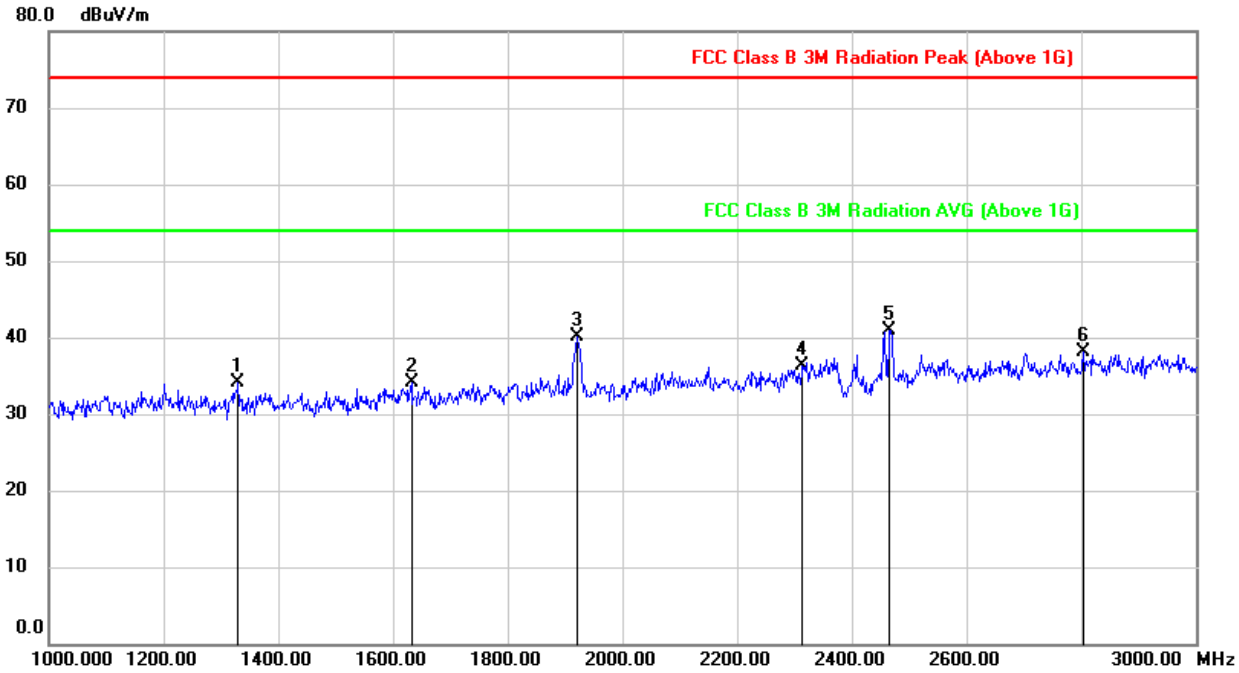
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1618.000	46.27	-10.79	35.48	74.00	-38.52	peak
2	1998.000	46.00	-9.43	36.57	74.00	-37.43	peak
3	2316.000	46.62	-7.40	39.22	74.00	-34.78	peak
4	2430.000	46.33	-6.76	39.57	74.00	-34.43	peak
5	2516.000	48.39	-6.23	42.16	74.00	-31.84	peak
6	2700.000	44.72	-5.98	38.74	74.00	-35.26	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The Band Reject filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

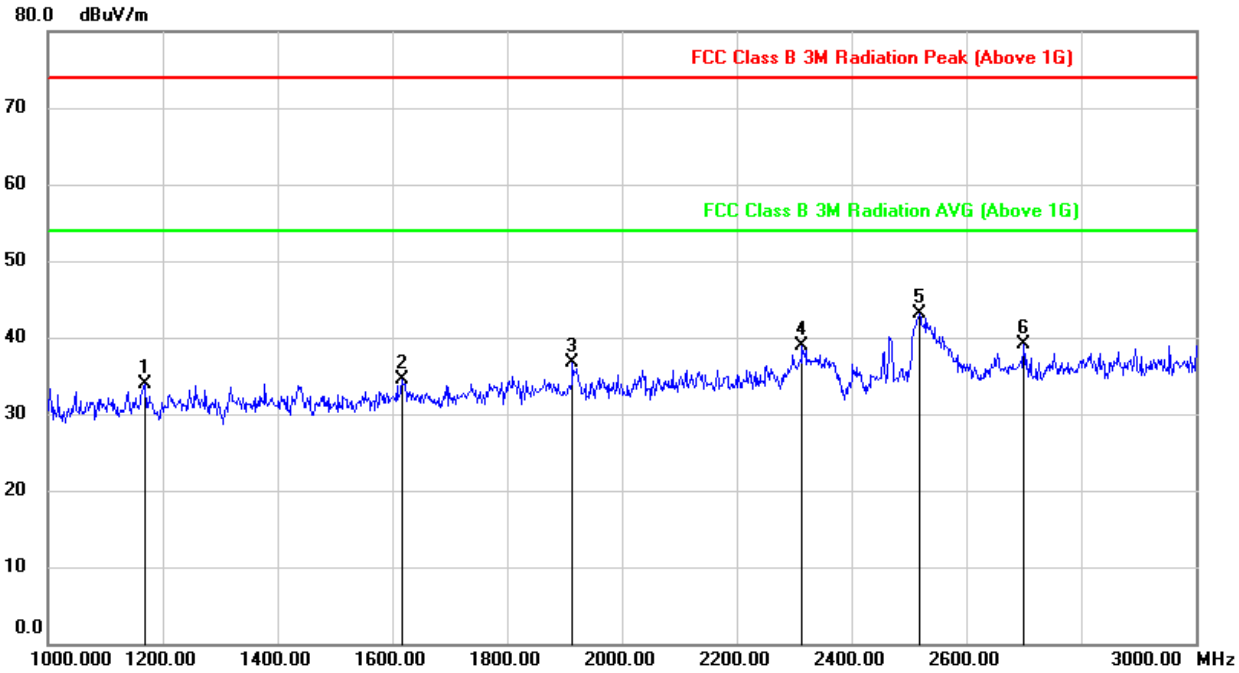
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1330.000	45.93	-11.87	34.06	74.00	-39.94	peak
2	1632.000	44.79	-10.75	34.04	74.00	-39.96	peak
3	1920.000	49.48	-9.36	40.12	74.00	-33.88	peak
4	2314.000	43.68	-7.40	36.28	74.00	-37.72	peak
5	2466.000	47.28	-6.45	40.83	74.00	-33.17	peak
6	2804.000	43.35	-5.27	38.08	74.00	-35.92	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The Band Reject filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)



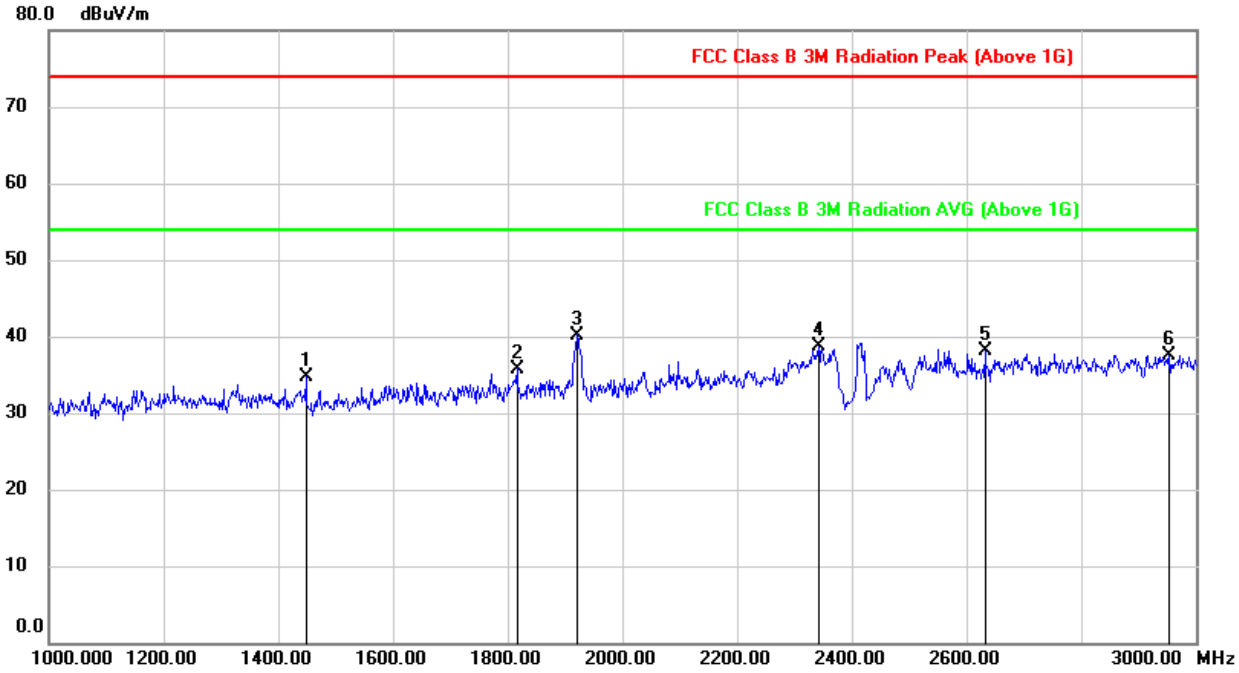
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1168.000	46.40	-12.51	33.89	74.00	-40.11	peak
2	1616.000	45.39	-10.79	34.60	74.00	-39.40	peak
3	1914.000	46.09	-9.36	36.73	74.00	-37.27	peak
4	2314.000	46.29	-7.40	38.89	74.00	-35.11	peak
5	2518.000	49.33	-6.24	43.09	74.00	-30.91	peak
6	2700.000	45.00	-5.98	39.02	74.00	-34.98	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The Band Reject filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

9.3.3. 802.11n HT20 MIMO MODE

2TX MODE (WORST-CASE CONFIGURATION)

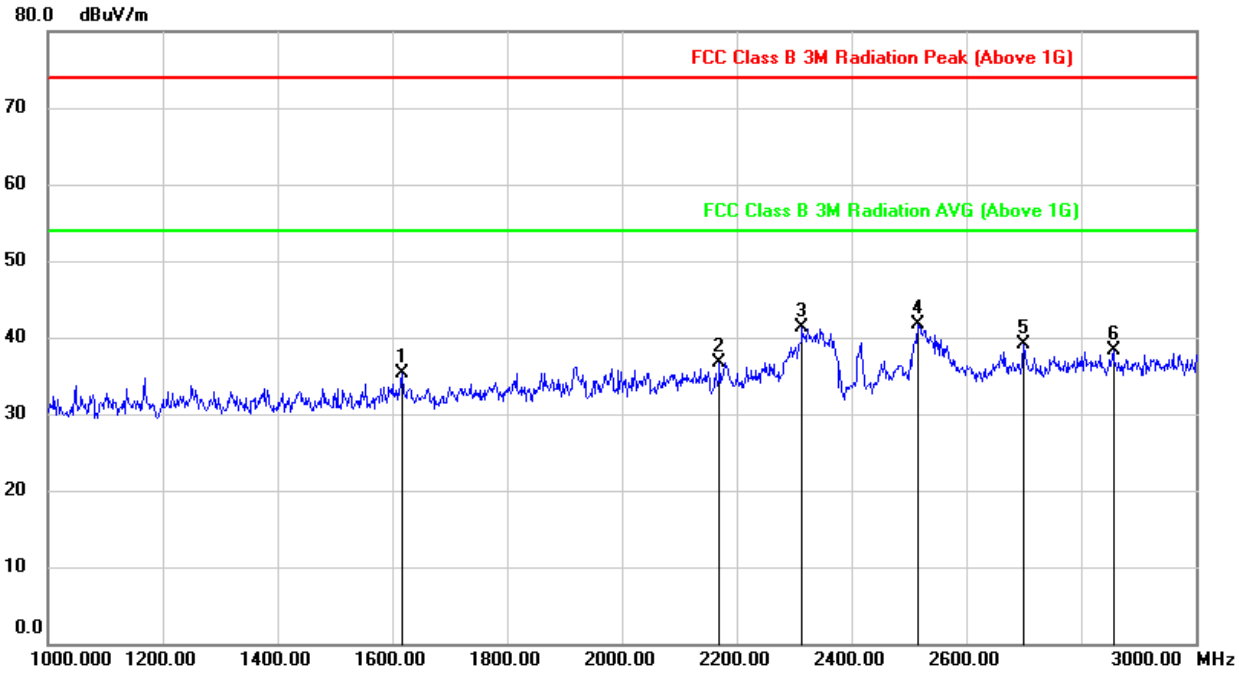
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1448.000	46.53	-11.83	34.70	74.00	-39.30	peak
2	1816.000	45.38	-9.58	35.80	74.00	-38.20	peak
3	1922.000	49.57	-9.37	40.20	74.00	-33.80	peak
4	2342.000	46.01	-7.27	38.74	74.00	-35.26	peak
5	2632.000	44.42	-6.39	38.03	74.00	-35.97	peak
6	2954.000	42.06	-4.52	37.54	74.00	-36.46	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The Band Reject filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

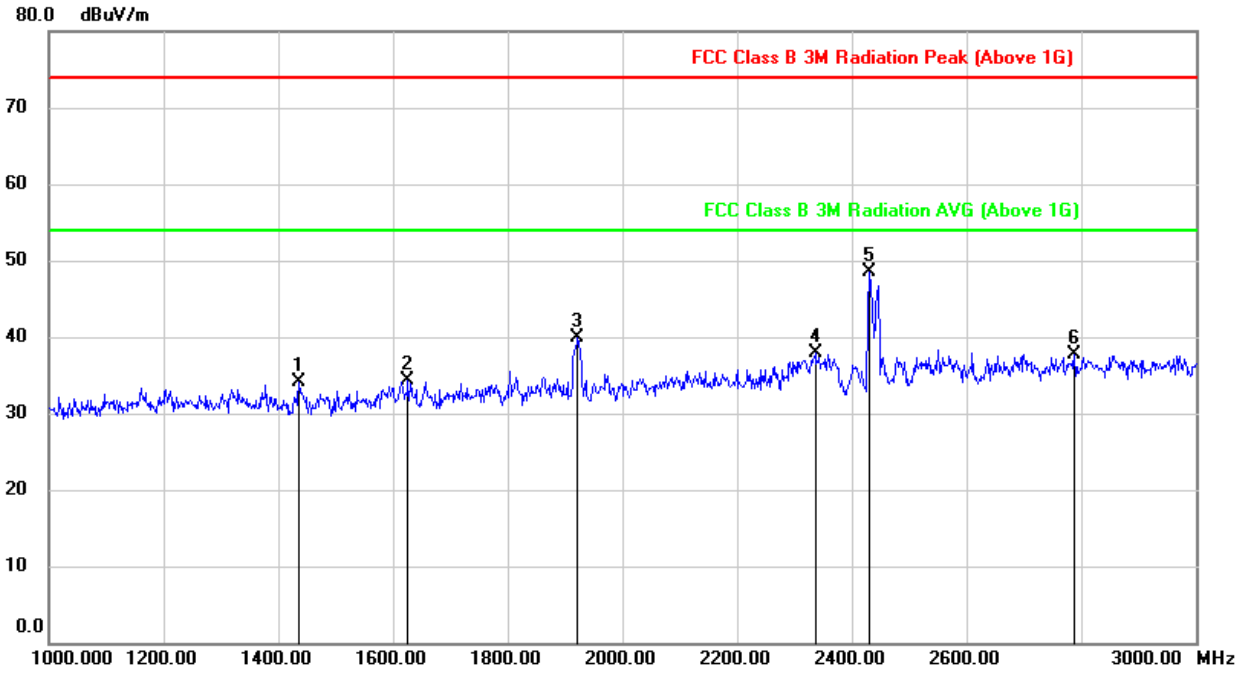
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1616.000	46.10	-10.79	35.31	74.00	-38.69	peak
2	2170.000	45.00	-8.24	36.76	74.00	-37.24	peak
3	2314.000	48.69	-7.40	41.29	74.00	-32.71	peak
4	2516.000	47.85	-6.23	41.62	74.00	-32.38	peak
5	2700.000	45.11	-5.98	39.13	74.00	-34.87	peak
6	2856.000	43.31	-4.99	38.32	74.00	-35.68	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The Band Reject filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

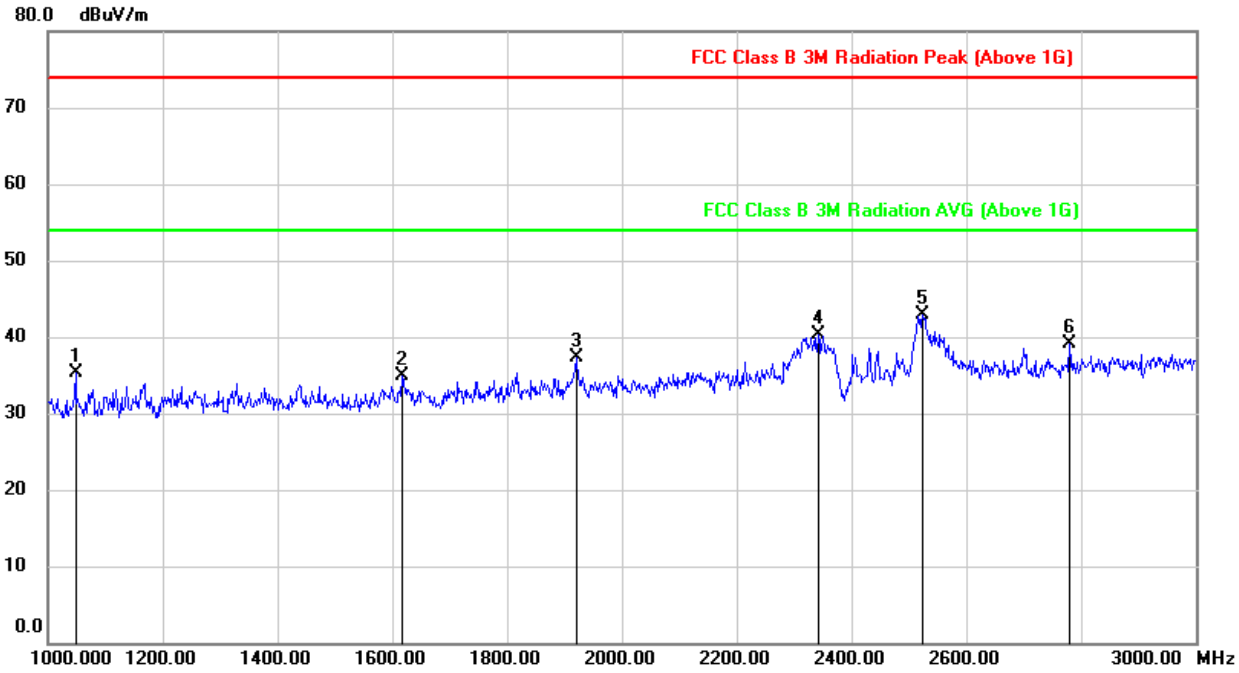
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1436.000	46.05	-11.86	34.19	74.00	-39.81	peak
2	1626.000	45.00	-10.77	34.23	74.00	-39.77	peak
3	1922.000	49.24	-9.37	39.87	74.00	-34.13	peak
4	2336.000	45.27	-7.30	37.97	74.00	-36.03	peak
5	2430.000	55.33	-6.76	48.57	74.00	-25.43	peak
6	2788.000	43.09	-5.36	37.73	74.00	-36.27	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The Band Reject filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

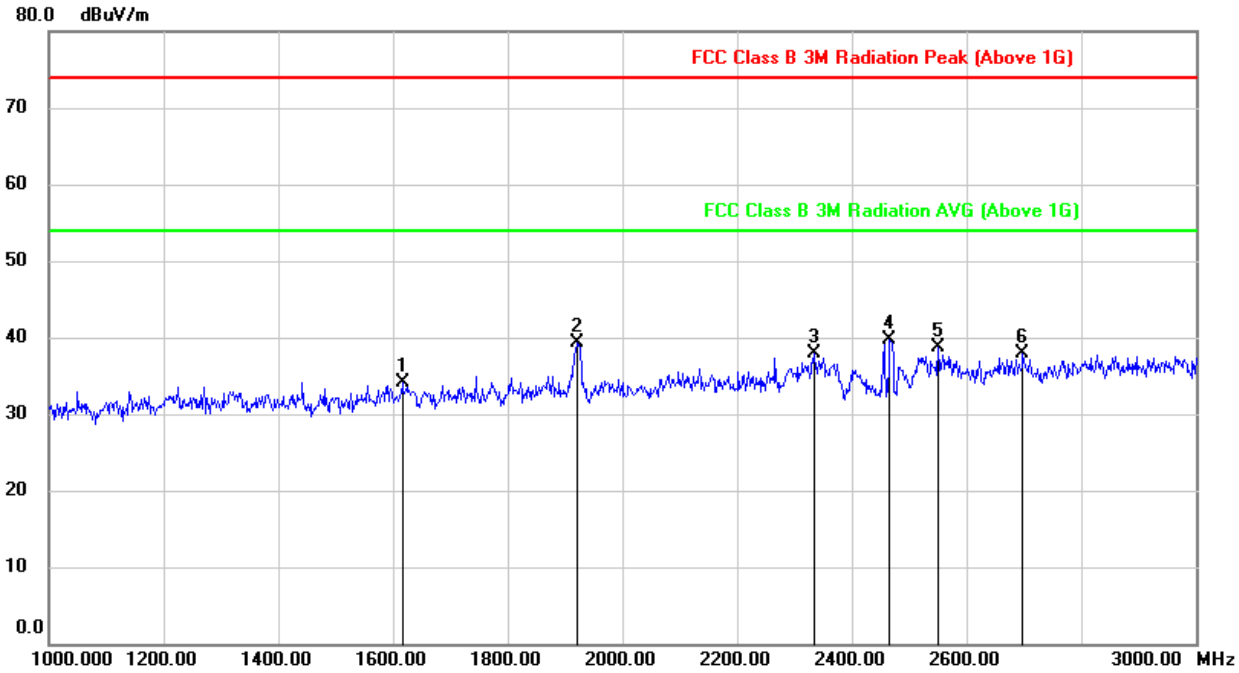
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1048.000	48.47	-13.24	35.23	74.00	-38.77	peak
2	1616.000	45.72	-10.79	34.93	74.00	-39.07	peak
3	1920.000	46.72	-9.36	37.36	74.00	-36.64	peak
4	2342.000	47.51	-7.27	40.24	74.00	-33.76	peak
5	2524.000	49.18	-6.26	42.92	74.00	-31.08	peak
6	2780.000	44.61	-5.42	39.19	74.00	-34.81	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The Band Reject filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

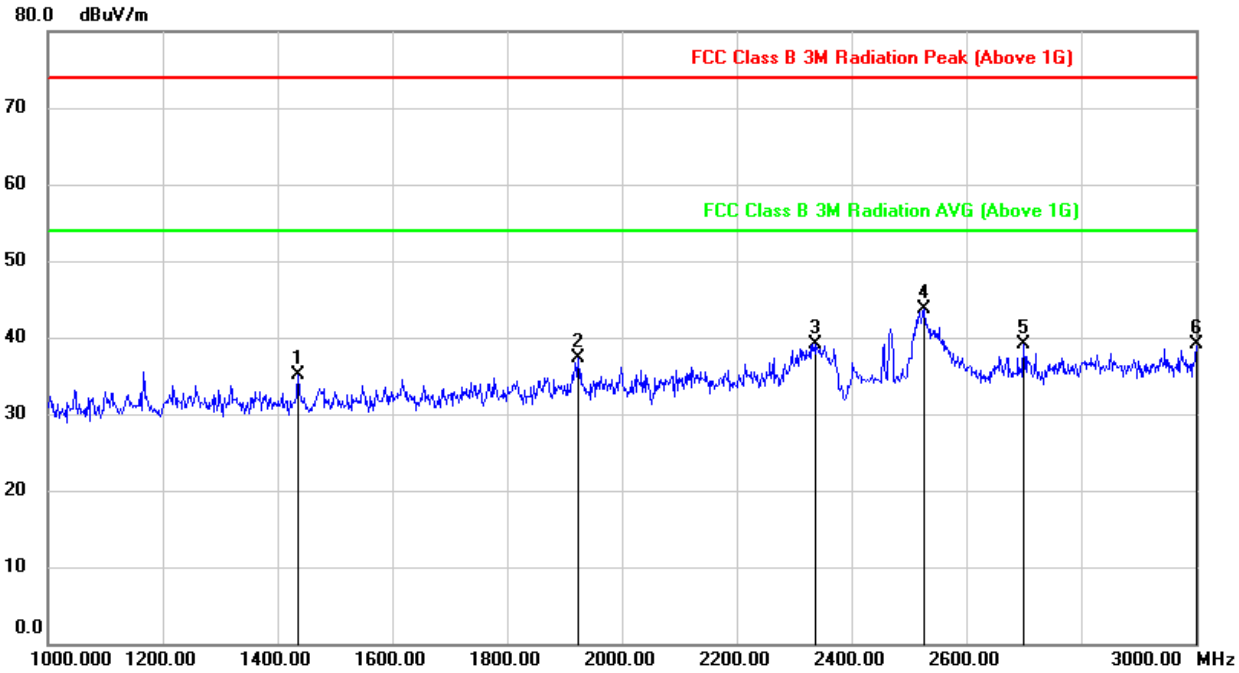
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1616.000	44.83	-10.79	34.04	74.00	-39.96	peak
2	1920.000	48.65	-9.36	39.29	74.00	-34.71	peak
3	2334.000	45.21	-7.32	37.89	74.00	-36.11	peak
4	2466.000	46.22	-6.45	39.77	74.00	-34.23	peak
5	2550.000	45.01	-6.38	38.63	74.00	-35.37	peak
6	2698.000	43.81	-5.99	37.82	74.00	-36.18	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The Band Reject filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)



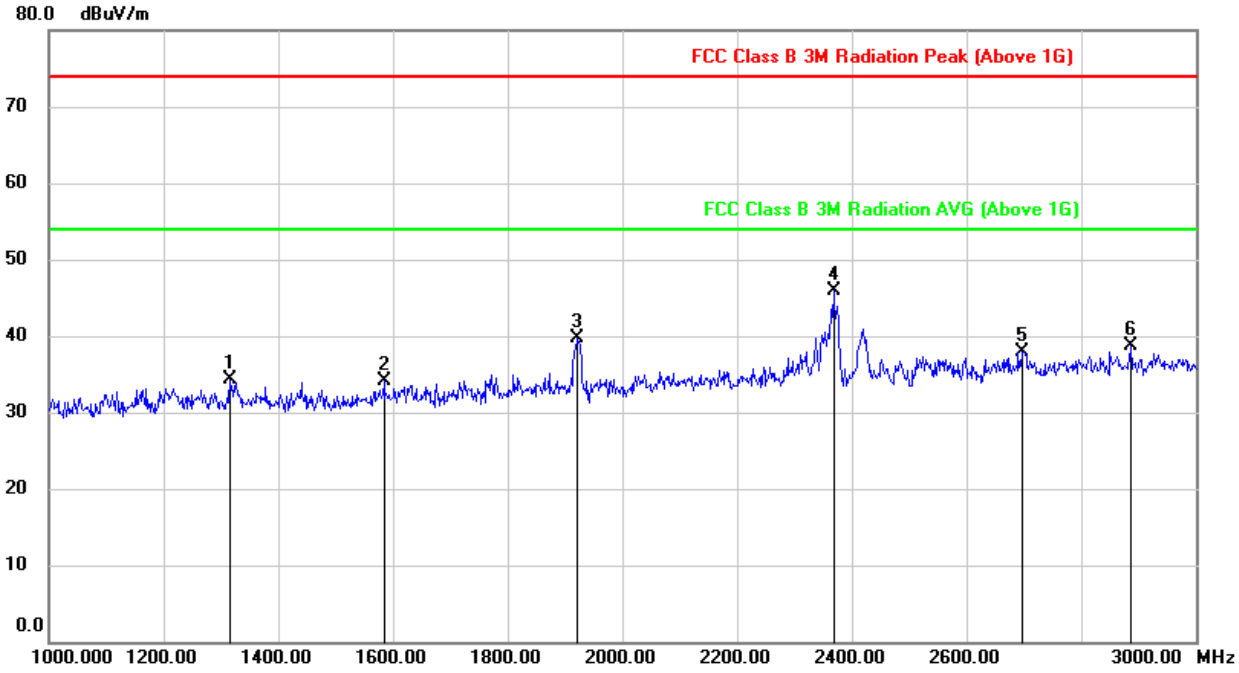
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1436.000	46.91	-11.86	35.05	74.00	-38.95	peak
2	1924.000	46.63	-9.37	37.26	74.00	-36.74	peak
3	2338.000	46.40	-7.29	39.11	74.00	-34.89	peak
4	2526.000	49.99	-6.28	43.71	74.00	-30.29	peak
5	2700.000	45.02	-5.98	39.04	74.00	-34.96	peak
6	3000.000	43.33	-4.32	39.01	74.00	-34.99	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The Band Reject filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

9.3.4. 802.11n HT40 MIMO MODE

2TX MODE (WORST-CASE CONFIGURATION)

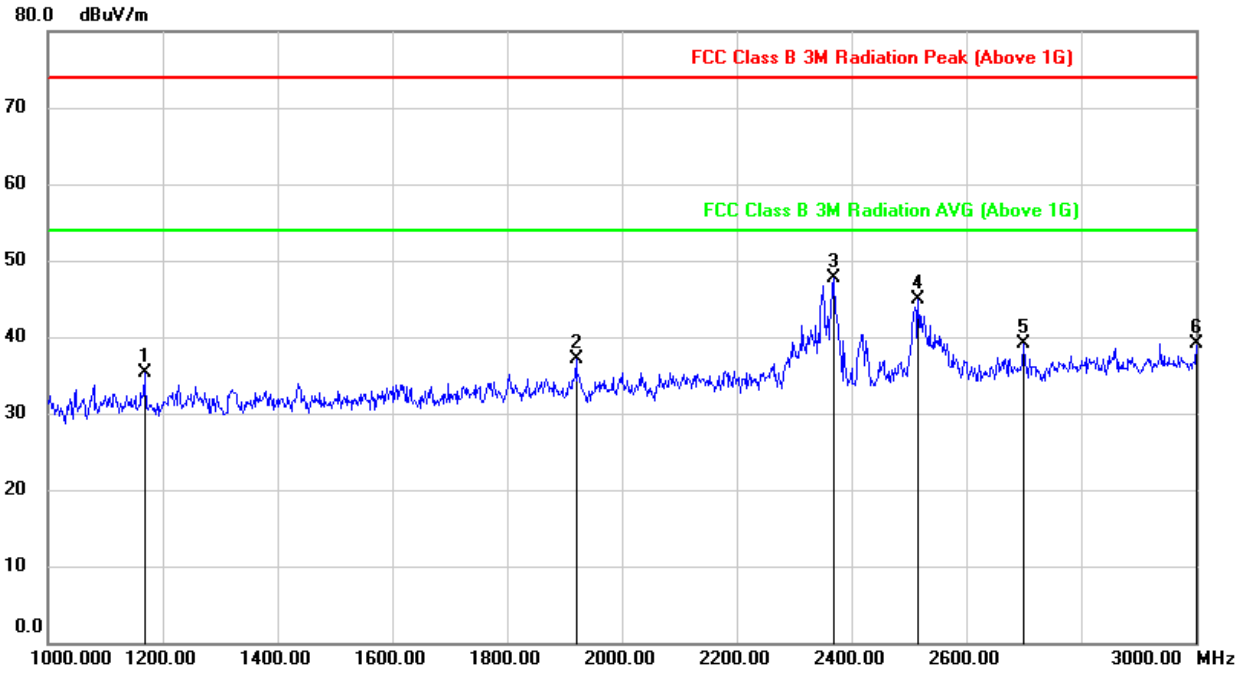
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1316.000	46.09	-11.86	34.23	74.00	-39.77	peak
2	1584.000	45.18	-10.98	34.20	74.00	-39.80	peak
3	1922.000	49.17	-9.37	39.80	74.00	-34.20	peak
4	2368.000	53.14	-7.16	45.98	74.00	-28.02	peak
5	2698.000	43.89	-5.99	37.90	74.00	-36.10	peak
6	2886.000	43.52	-4.82	38.70	74.00	-35.30	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The Band Reject filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

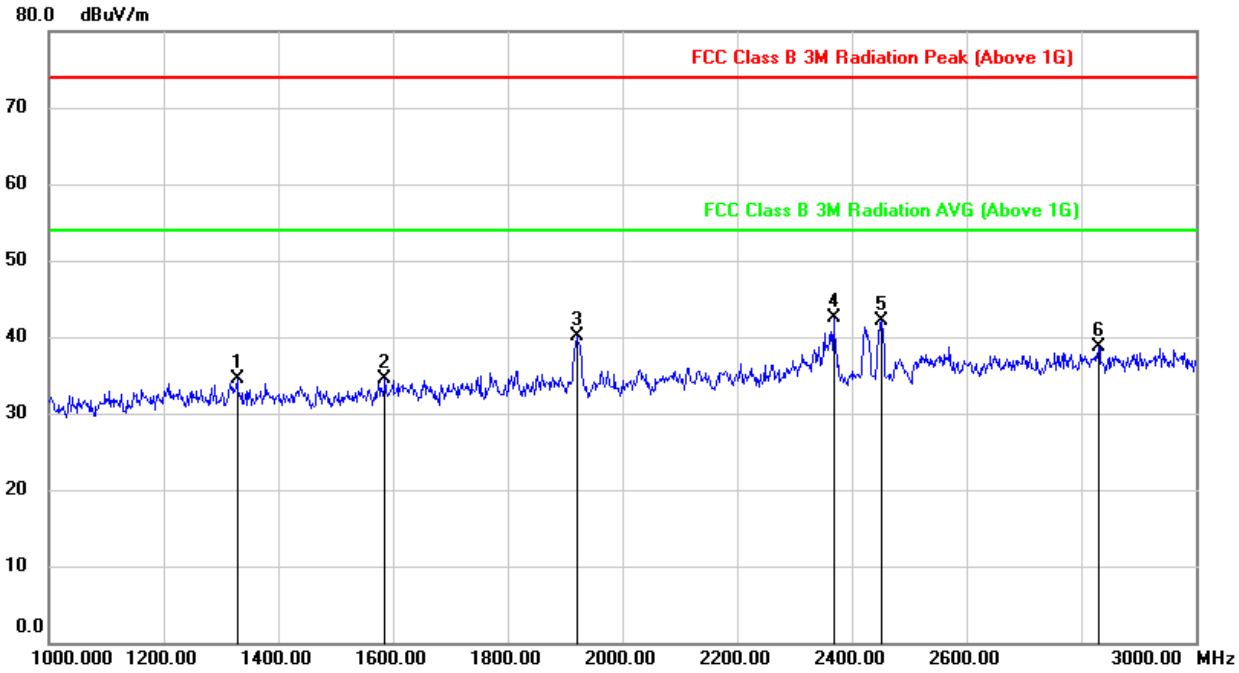
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1168.000	47.87	-12.51	35.36	74.00	-38.64	peak
2	1920.000	46.46	-9.36	37.10	74.00	-36.90	peak
3	2368.000	54.84	-7.16	47.68	74.00	-26.32	peak
4	2516.000	51.07	-6.23	44.84	74.00	-29.16	peak
5	2700.000	45.12	-5.98	39.14	74.00	-34.86	peak
6	3000.000	43.49	-4.32	39.17	74.00	-34.83	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The Band Reject filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

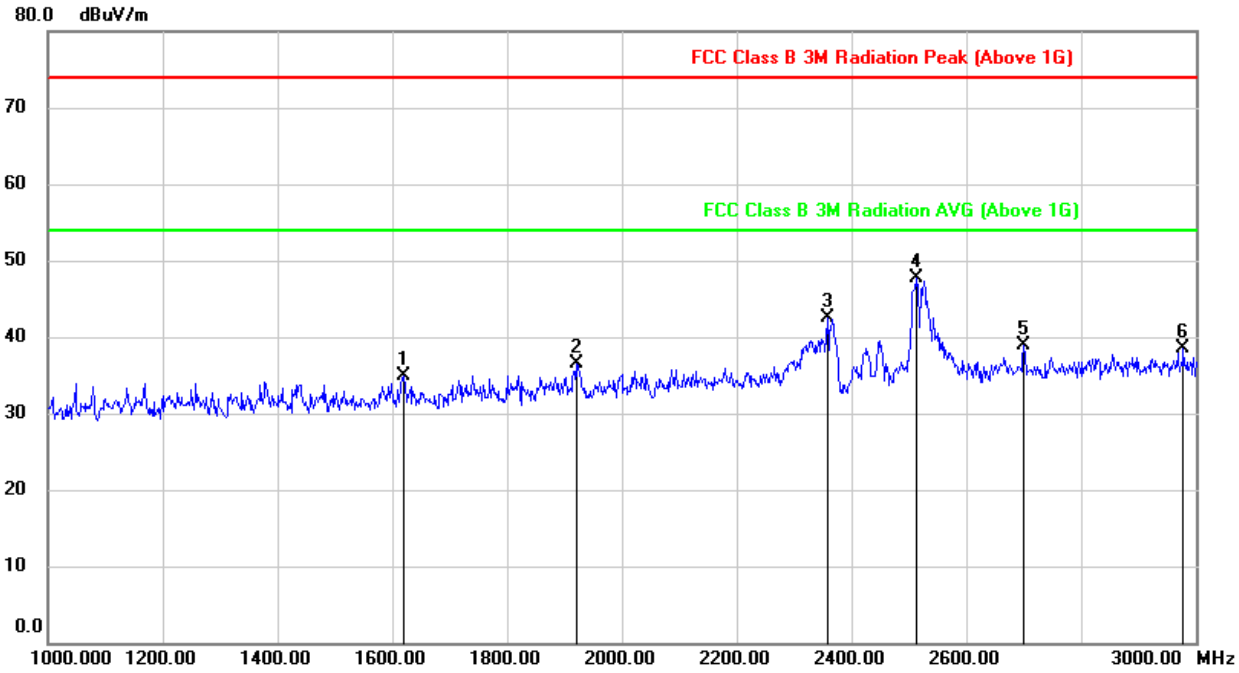
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1328.000	46.29	-11.86	34.43	74.00	-39.57	peak
2	1586.000	45.40	-10.96	34.44	74.00	-39.56	peak
3	1920.000	49.40	-9.36	40.04	74.00	-33.96	peak
4	2368.000	49.74	-7.16	42.58	74.00	-31.42	peak
5	2452.000	48.60	-6.57	42.03	74.00	-31.97	peak
6	2830.000	43.77	-5.12	38.65	74.00	-35.35	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The Band Reject filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

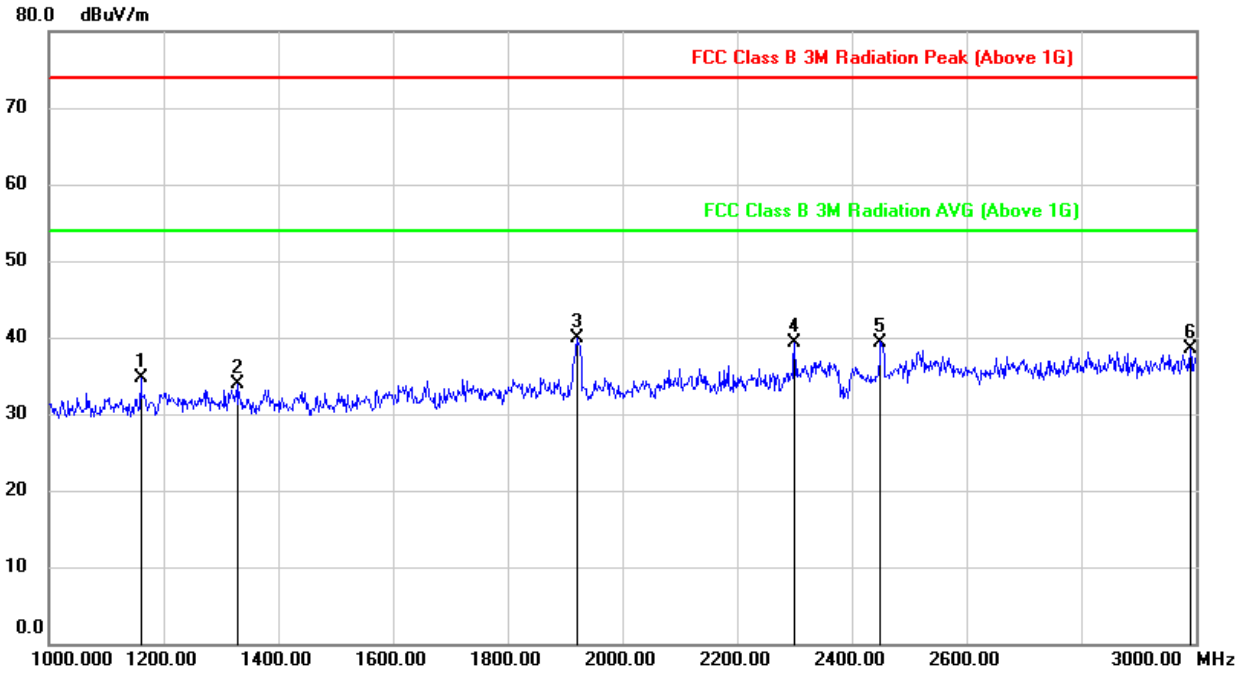
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1620.000	45.62	-10.78	34.84	74.00	-39.16	peak
2	1920.000	45.89	-9.36	36.53	74.00	-37.47	peak
3	2358.000	49.71	-7.21	42.50	74.00	-31.50	peak
4	2512.000	53.96	-6.22	47.74	74.00	-26.26	peak
5	2700.000	44.82	-5.98	38.84	74.00	-35.16	peak
6	2978.000	42.96	-4.42	38.54	74.00	-35.46	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The Band Reject filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

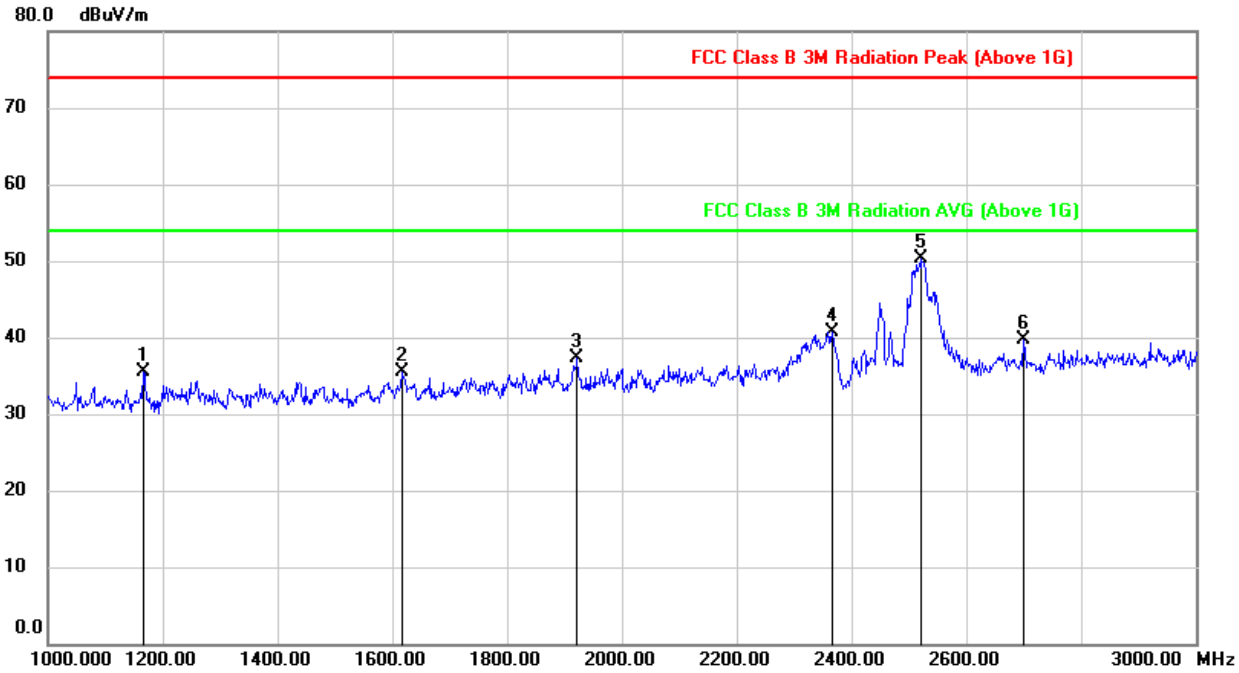
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1160.000	47.24	-12.58	34.66	74.00	-39.34	peak
2	1330.000	45.79	-11.87	33.92	74.00	-40.08	peak
3	1920.000	49.34	-9.36	39.98	74.00	-34.02	peak
4	2300.000	46.69	-7.47	39.22	74.00	-34.78	peak
5	2450.000	45.98	-6.58	39.40	74.00	-34.60	peak
6	2990.000	42.94	-4.37	38.57	74.00	-35.43	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The Band Reject filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1166.000	48.03	-12.52	35.51	74.00	-38.49	peak
2	1618.000	46.22	-10.79	35.43	74.00	-38.57	peak
3	1922.000	46.59	-9.37	37.22	74.00	-36.78	peak
4	2366.000	47.89	-7.16	40.73	74.00	-33.27	peak
5	2522.000	56.56	-6.26	50.30	74.00	-23.70	peak
6	2700.000	45.72	-5.98	39.74	74.00	-34.26	peak

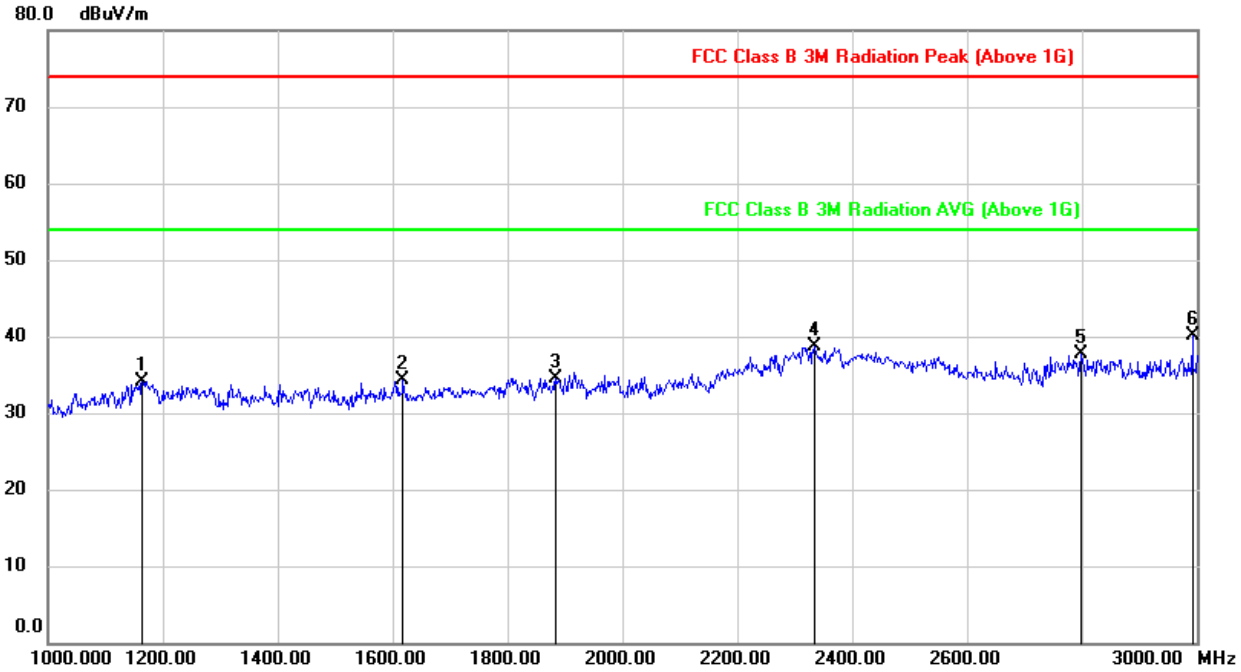
Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The Band Reject filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

9.4. WORST-CASE CO-LOCATION

9.4.1. BT GFSK AND 802.11n HT20 MIMO MODE

SPURIOUS EMISSIONS (LOW CHANNEL, WORST-CASE CONFIGURATION, HORIZONTAL)

1-3GHz

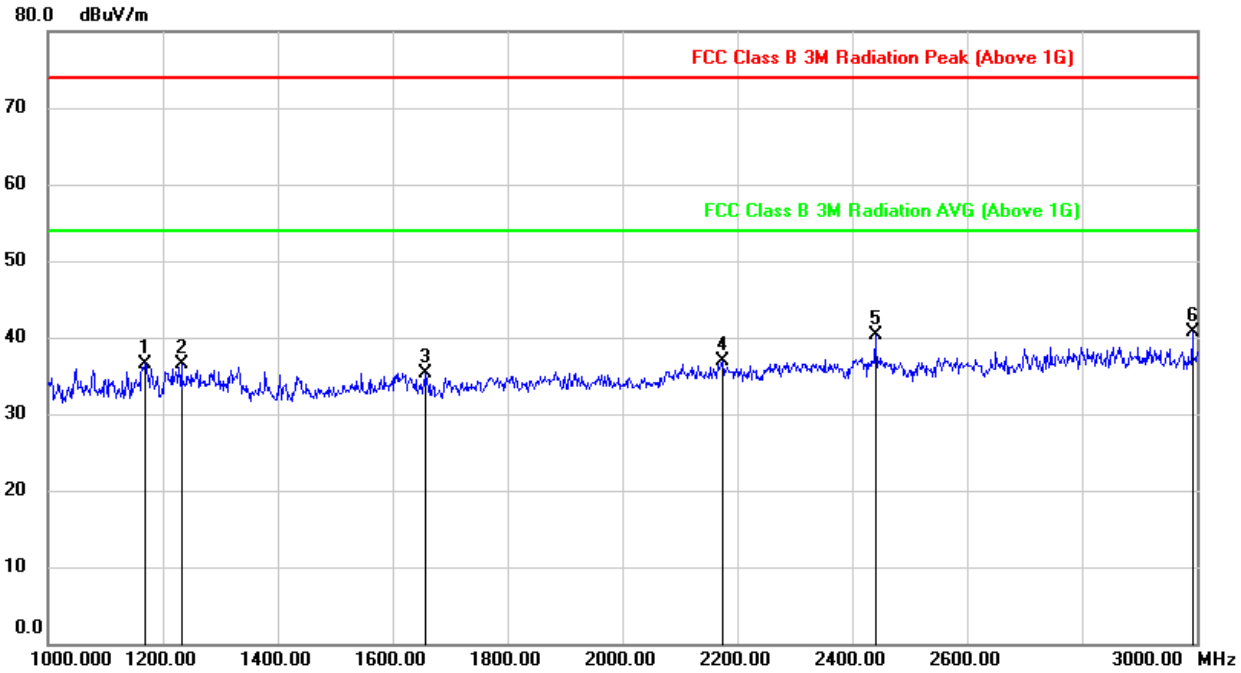


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	1164.000	46.57	-12.55	34.02	74.00	-39.98	peak
2	1618.000	45.08	-10.79	34.29	74.00	-39.71	peak
3	1884.000	43.93	-9.39	34.54	74.00	-39.46	peak
4	2334.000	45.93	-7.32	38.61	74.00	-35.39	peak
5	2798.000	43.05	-5.31	37.74	74.00	-36.26	peak
6	2992.000	44.52	-4.36	40.16	74.00	-33.84	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The Band Reject filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

SPURIOUS EMISSIONS (LOW CHANNEL, WORST-CASE CONFIGURATION, VERTICAL)

1-3GHz

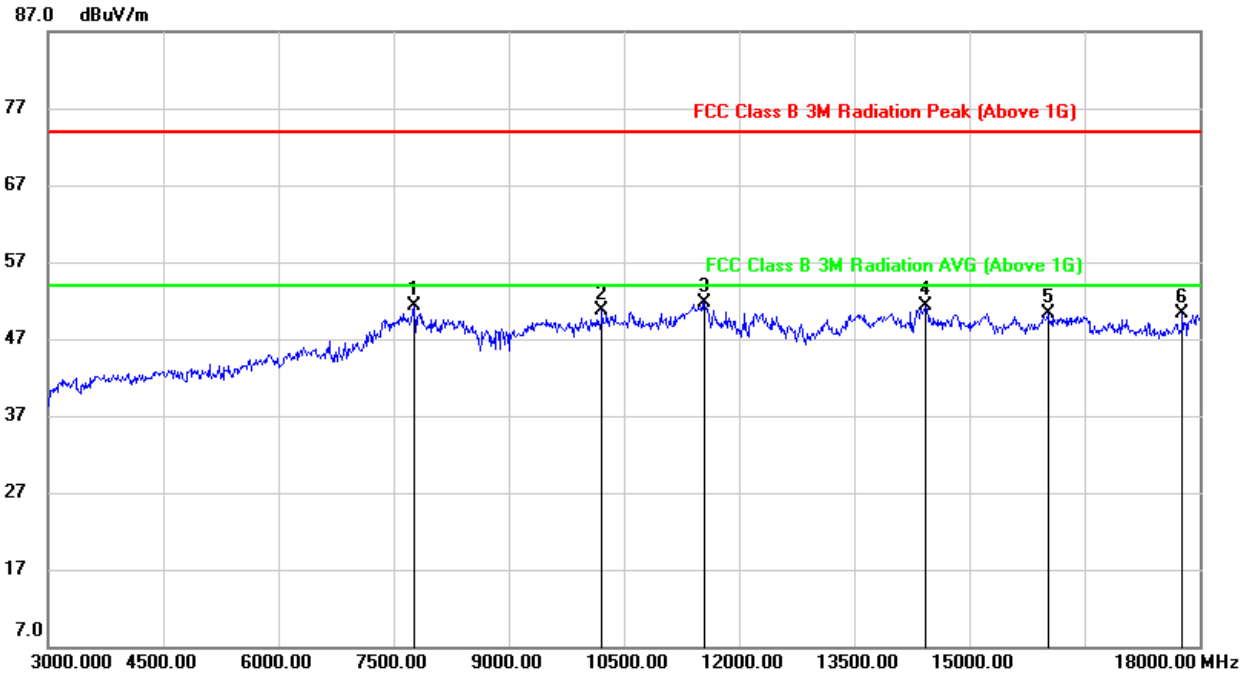


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	1170.000	49.08	-12.48	36.60	74.00	-37.40	peak
2	1232.000	48.57	-12.08	36.49	74.00	-37.51	peak
3	1658.000	46.04	-10.70	35.34	74.00	-38.66	peak
4	2174.000	45.15	-8.22	36.93	74.00	-37.07	peak
5	2440.000	47.00	-6.67	40.33	74.00	-33.67	peak
6	2992.000	45.02	-4.36	40.66	74.00	-33.34	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The Band Reject filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

SPURIOUS EMISSIONS (LOW CHANNEL, WORST-CASE CONFIGURATION, HORIZONTAL)

3-18GHz

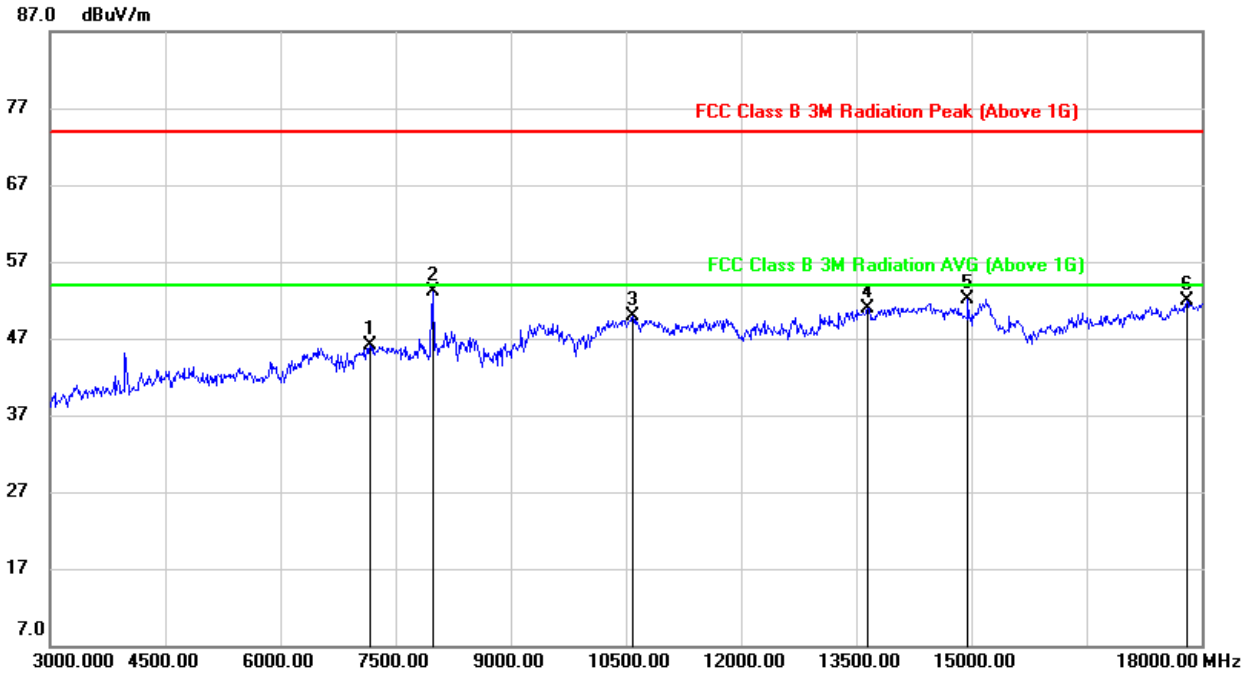


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	7770.000	42.85	8.49	51.34	74.00	-22.66	peak
2	10215.000	39.89	10.88	50.77	74.00	-23.23	peak
3	11550.000	37.61	14.13	51.74	74.00	-22.26	peak
4	14430.000	34.85	16.39	51.24	74.00	-22.76	peak
5	16020.000	33.08	17.28	50.36	74.00	-23.64	peak
6	17775.000	27.33	22.97	50.30	74.00	-23.70	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The High Pass filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

SPURIOUS EMISSIONS (LOW CHANNEL, WORST-CASE CONFIGURATION, VERTICAL)

3-18GHz



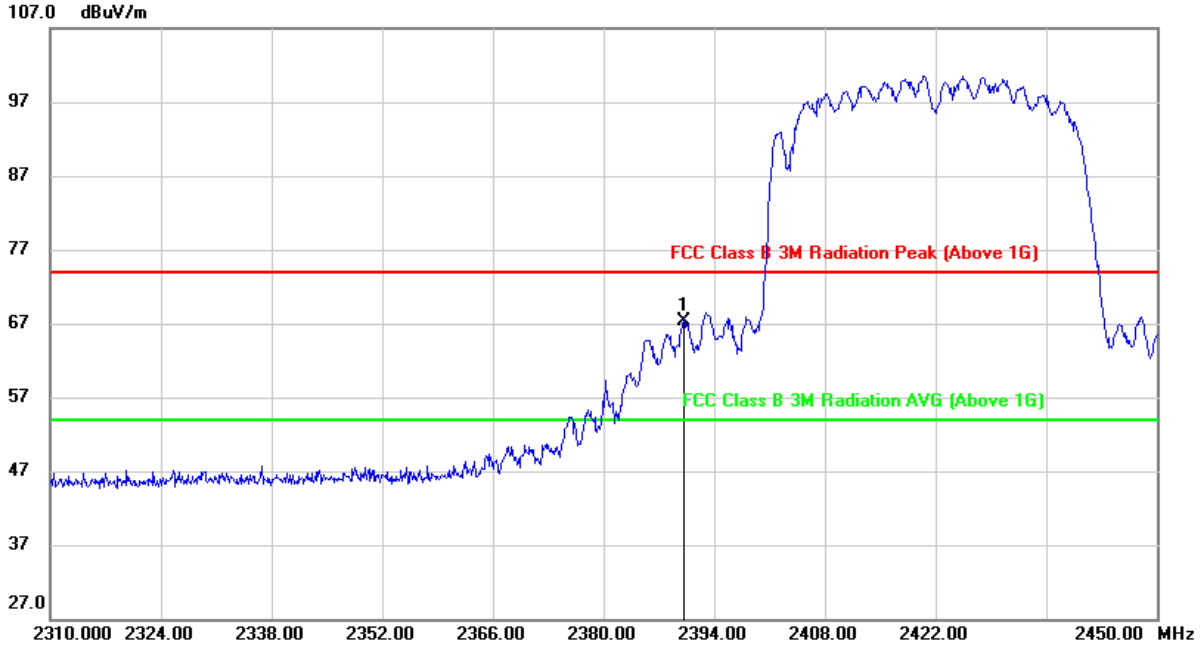
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	7170.000	39.15	6.87	46.02	74.00	-27.98	peak
2	7995.000	44.92	8.16	53.08	74.00	-20.92	peak
3	10590.000	37.14	12.68	49.82	74.00	-24.18	peak
4	13650.000	34.91	15.98	50.89	74.00	-23.11	peak
5	14955.000	36.62	15.49	52.11	74.00	-21.89	peak
6	17805.000	28.75	23.22	51.97	74.00	-22.03	peak

Note: 1. Peak Result = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. The High Pass filter loss factor already add into the correct factor.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

9.4.2. BT GFSK AND 802.11n HT40 MIMO MODE

RESTRICTED BANDEDGE (LOW CHANNEL, WORST-CASE CONFIGURATION, HORIZONTAL)

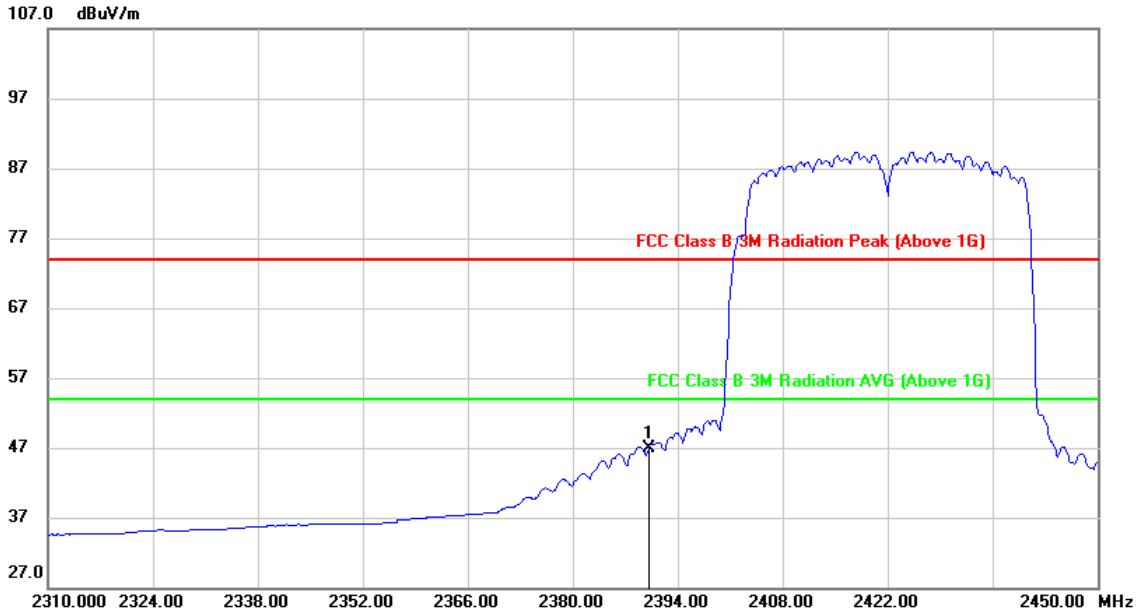
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	2390.000	34.31	32.94	67.25	74.00	-6.75	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG

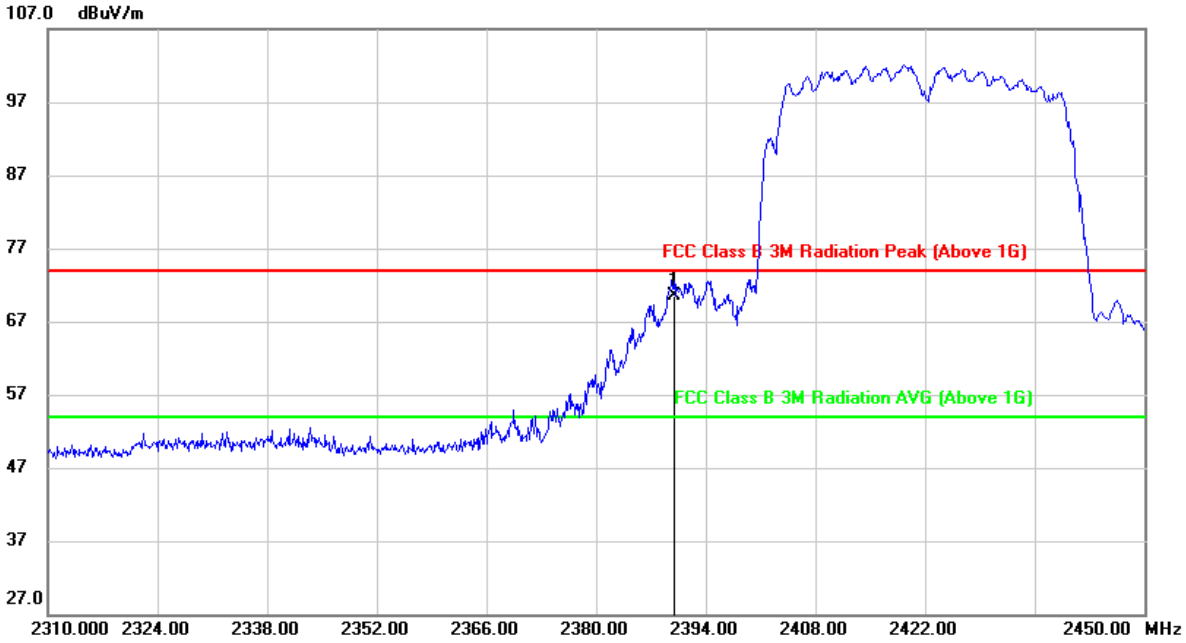


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	2390.000	13.95	32.94	46.89	54.00	-7.11	AVG

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. AVG: VBW=1/Ton where: ton is transmit duration.
4. For transmit duration, please refer to clause 8.1.
5. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

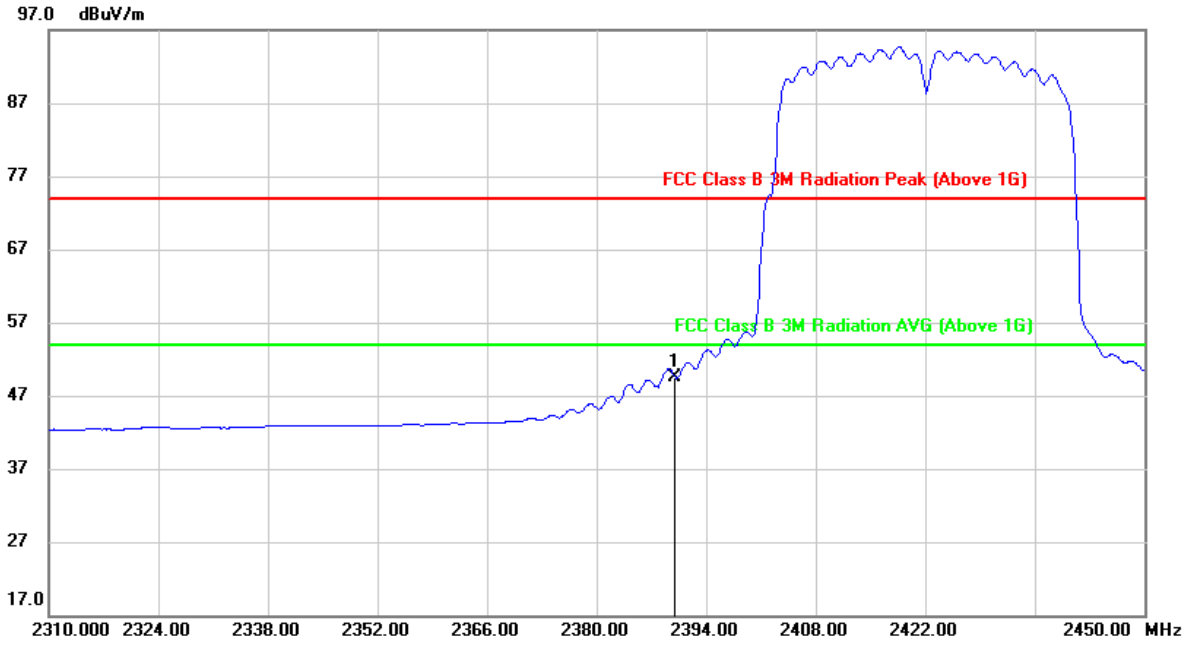
PEAK



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	2390.000	37.60	32.94	70.54	74.00	-3.46	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	2390.000	16.53	32.94	49.47	74.00	-4.53	AVG

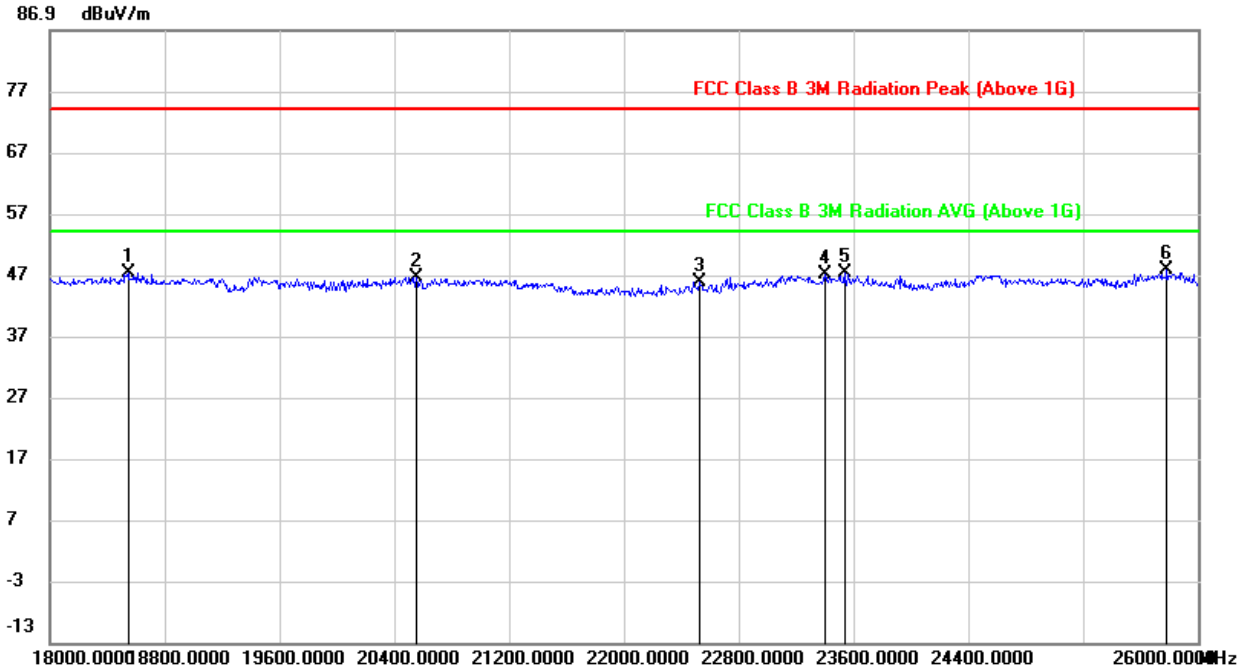
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. AVG: VBW=1/Ton where: ton is transmit duration.
4. For transmit duration, please refer to clause 8.1.
5. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

9.5. SPURIOUS EMISSIONS (18~25GHz)

9.5.1. 802.11n HT20 MIMO MODE

2TX MODE (WORST-CASE CONFIGURATION)

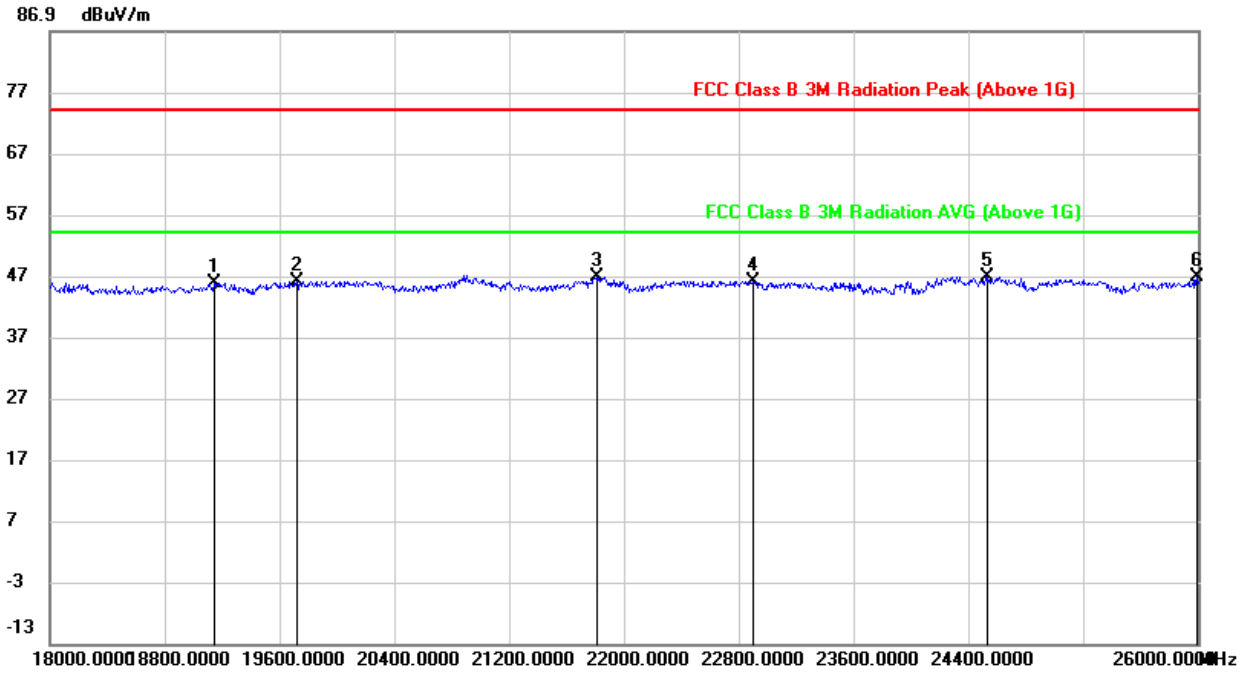
SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18544.000	51.76	-4.46	47.30	74.00	-26.70	peak
2	20552.000	51.55	-5.00	46.55	74.00	-27.45	peak
3	22528.000	51.66	-5.79	45.87	74.00	-28.13	peak
4	23400.000	51.92	-4.96	46.96	74.00	-27.04	peak
5	23536.000	51.96	-4.74	47.22	74.00	-26.78	peak
6	25784.000	49.23	-1.49	47.74	74.00	-26.26	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.

SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	19144.000	50.77	-4.98	45.79	74.00	-28.21	peak
2	19720.000	50.50	-4.39	46.11	74.00	-27.89	peak
3	21808.000	52.68	-5.86	46.82	74.00	-27.18	peak
4	22896.000	51.80	-5.66	46.14	74.00	-27.86	peak
5	24528.000	49.36	-2.51	46.85	74.00	-27.15	peak
6	25992.000	49.17	-2.43	46.74	74.00	-27.26	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.

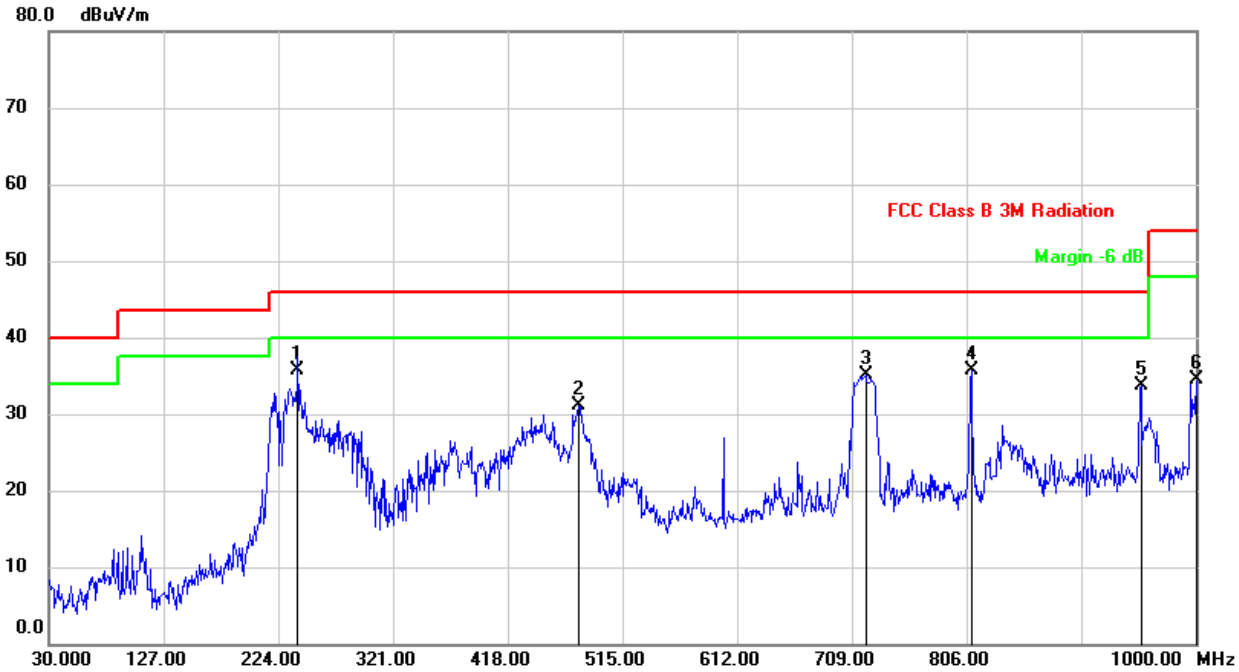
Note: All test mode has been tested, only the worst data record in the report

9.6. SPURIOUS EMISSIONS (0.03 ~ 1 GHz)

9.6.1. 802. 11n HT20 MIMO MODE

2TX MODE (WORST-CASE CONFIGURATION)

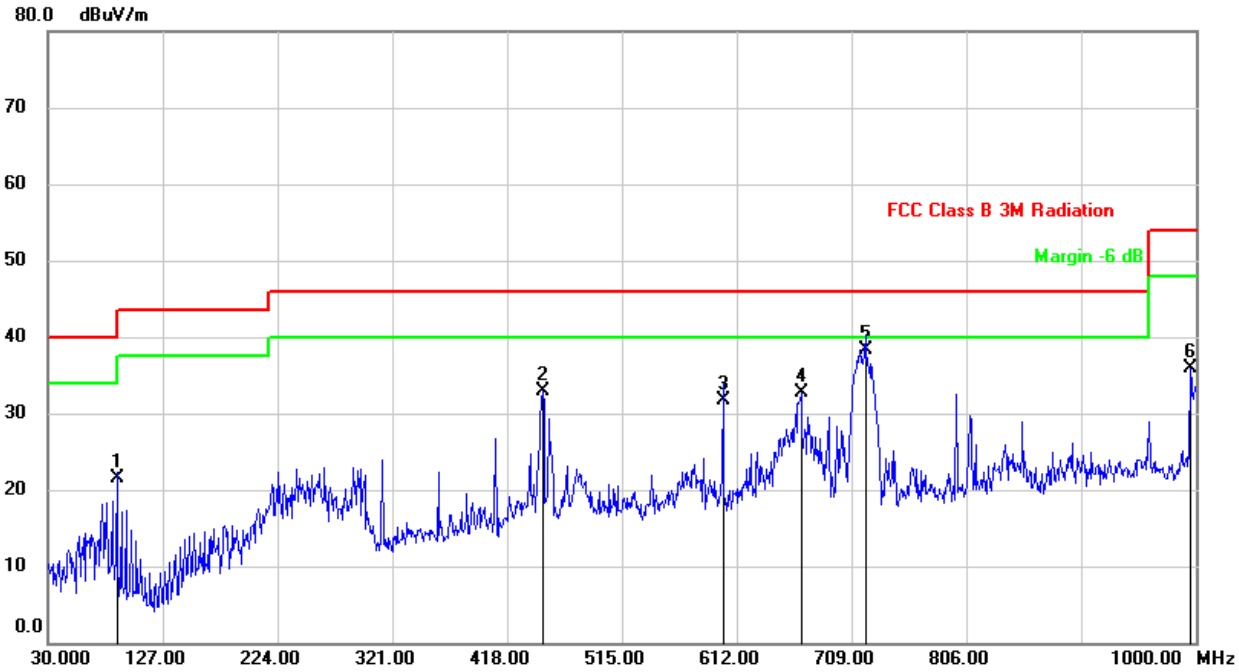
SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	240.4900	52.62	-16.97	35.65	46.00	-10.35	QP
2	478.1400	42.06	-10.87	31.19	46.00	-14.81	QP
3	720.6400	41.19	-6.10	35.09	46.00	-10.91	QP
4	809.8800	41.00	-5.27	35.73	46.00	-10.27	QP
5	953.4400	37.08	-3.37	33.71	46.00	-12.29	QP
6	1000.0000	37.38	-2.84	34.54	54.00	-19.46	QP

Note: 1. Result Level = Read Level + Correct Factor.
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	88.2000	42.59	-21.03	21.56	43.50	-21.94	QP
2	448.0700	44.31	-11.45	32.86	46.00	-13.14	QP
3	600.3600	40.05	-8.42	31.63	46.00	-14.37	QP
4	666.3200	39.93	-7.23	32.70	46.00	-13.30	QP
5	720.6400	44.33	-6.10	38.23	46.00	-7.77	QP
6	995.1500	38.76	-2.95	35.81	54.00	-18.19	QP

Note: 1. Result Level = Read Level + Correct Factor.
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto

Note: All test mode has been tested, only the worst data record in the report.

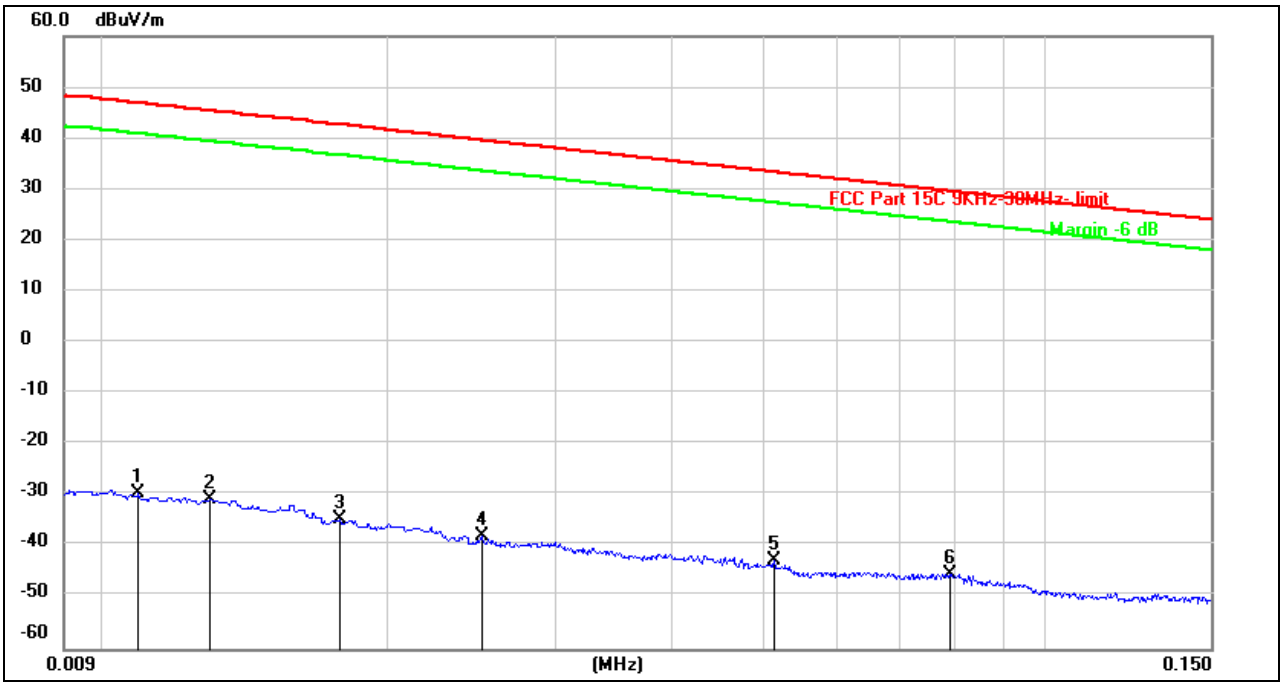
9.7. SPURIOUS EMISSIONS BELOW 30M

9.7.1. 802. 11n HT20 MIMO MODE

2TX MODE (WORST-CASE CONFIGURATION)

SPURIOUS EMISSIONS (MID CHANNEL, LOOP ANTENNA FACE ON TO THE EUT, WORST-CASE CONFIGURATION)

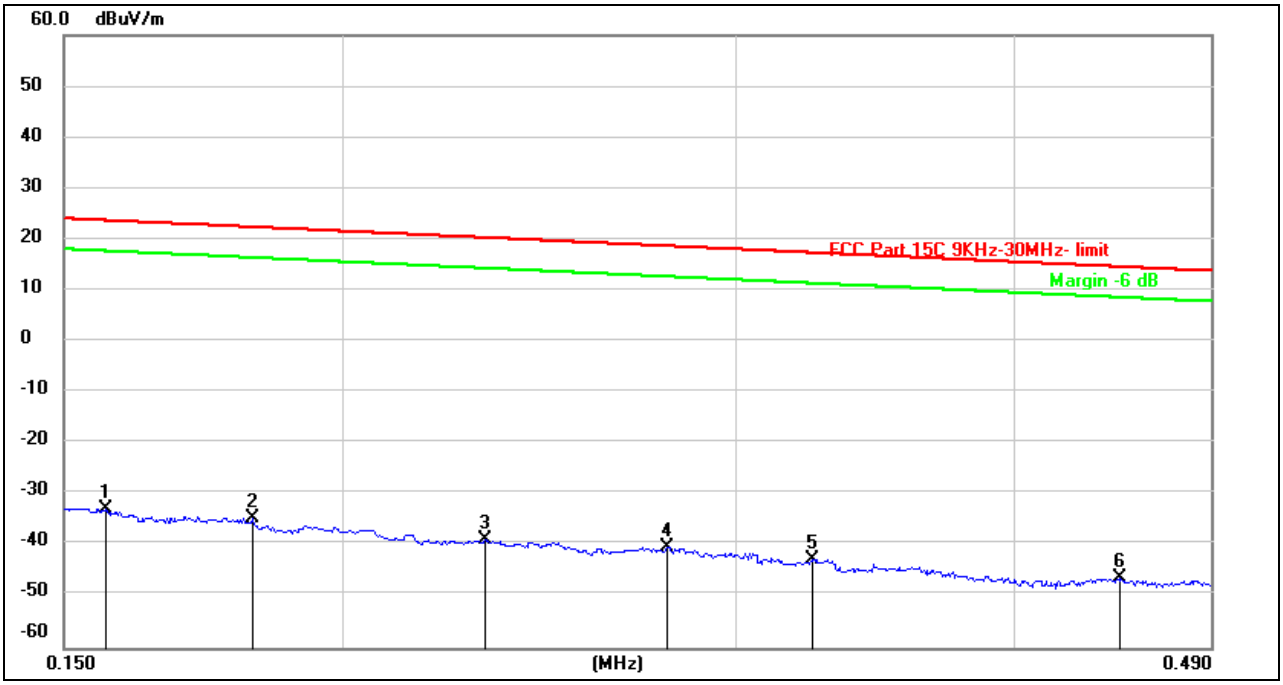
9kHz~ 150kHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0108	71.78	-101.39	-29.61	46.93	-76.54	peak
2	0.0129	70.68	-101.38	-30.70	45.39	-76.09	peak
3	0.0177	66.57	-101.35	-34.78	42.64	-77.42	peak
4	0.0251	63.29	-101.37	-38.08	39.61	-77.69	peak
5	0.0514	58.68	-101.48	-42.80	33.38	-76.18	peak
6	0.0791	56.21	-101.63	-45.42	29.64	-75.06	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.
3. All 3 polarizations(Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.

150kHz ~ 0.49MHz



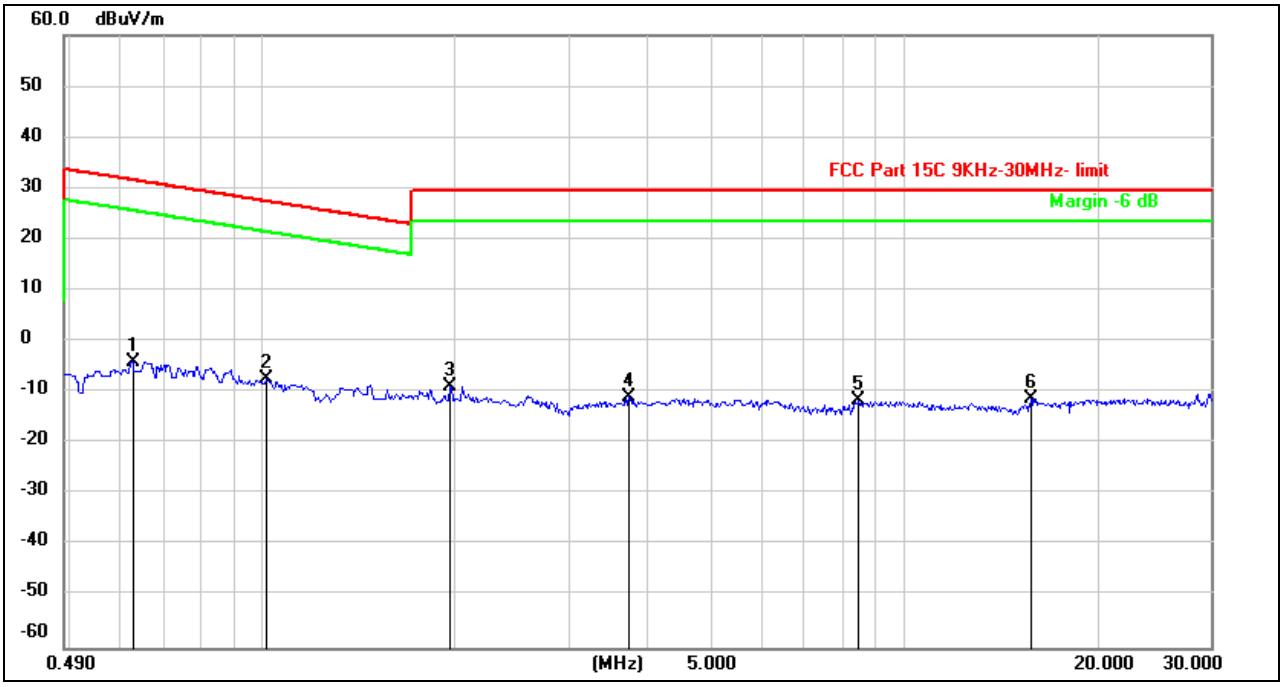
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	0.1567	68.95	-101.65	-32.70	23.70	-56.40	peak
2	0.1822	66.89	-101.68	-34.79	22.39	-57.18	peak
3	0.2316	63.02	-101.77	-38.75	20.31	-59.06	peak
4	0.2796	61.41	-101.83	-40.42	18.67	-59.09	peak
5	0.3251	59.21	-101.88	-42.67	17.36	-60.03	peak
6	0.4460	55.58	-102.01	-46.43	14.62	-61.05	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.

3. All 3 polarizations(Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.

0.49MHz ~ 30MHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.6270	58.15	-62.09	-3.94	31.66	-35.60	peak
2	1.0104	54.79	-62.27	-7.48	27.51	-34.99	peak
3	1.9521	53.11	-61.84	-8.73	29.54	-38.27	peak
4	3.7360	50.33	-61.40	-11.07	29.54	-40.61	peak
5	8.4870	49.60	-61.01	-11.41	29.54	-40.95	peak
6	15.7759	49.75	-60.99	-11.24	29.54	-40.78	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.
3. All 3 polarizations(Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.

Note: All test mode has been tested, only the worst data record in the report.

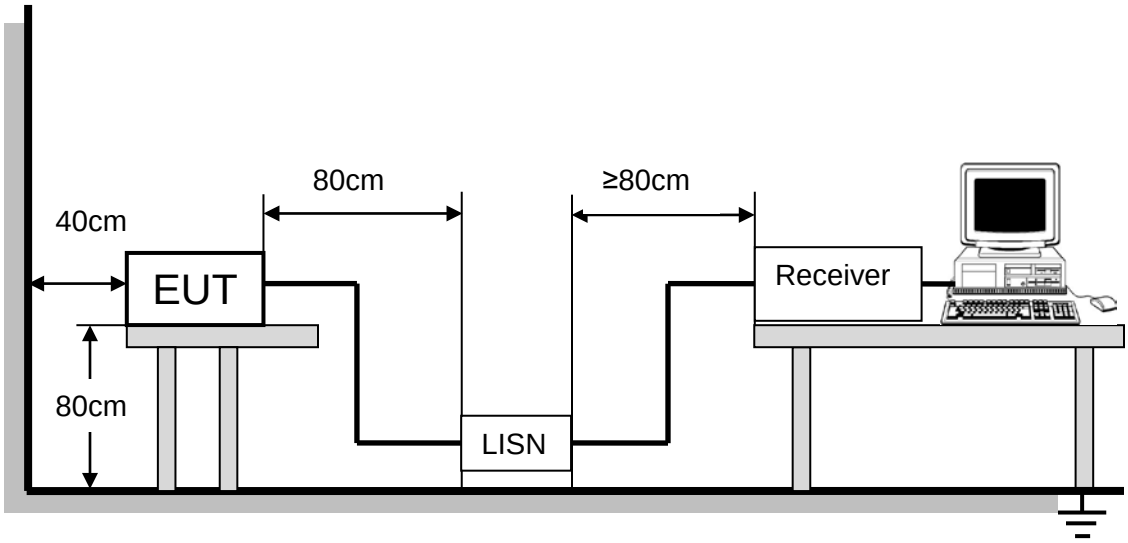
10. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

Please refer to CFR 47 FCC §15.207 (a) and ISED RSS-Gen Clause 8.8

FREQUENCY (MHz)	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

TEST SETUP AND PROCEDURE



The EUT is put on a table of non-conducting material that is 80cm high. The vertical conducting wall of shielding is located 40cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.). A EMI Measurement Receiver (R&S Test Receiver ESR3) is used to test the emissions from both sides of AC line. According to the requirements in Section 6.2 of ANSI C63.10-2013.Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and average detector mode. The bandwidth of EMI test receiver is set at 9kHz.

The arrangement of the equipment is installed to meet the standards and operating in a manner, which tends to maximize its emission characteristics in a normal application.

TEST ENVIRONMENT

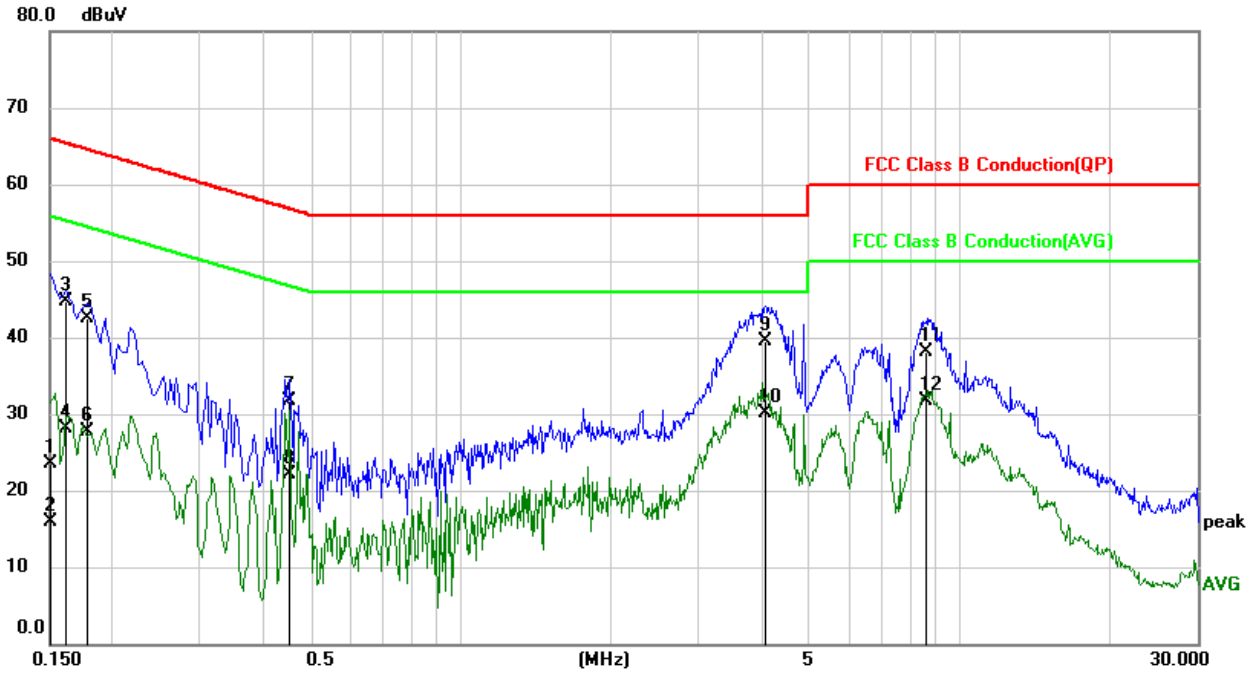
Temperature	24.1°C	Relative Humidity	63%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.3V

TEST RESULTS

10.1. 802. 11n HT20 MIMO MODE

2TX MODE (WORST-CASE CONFIGURATION)

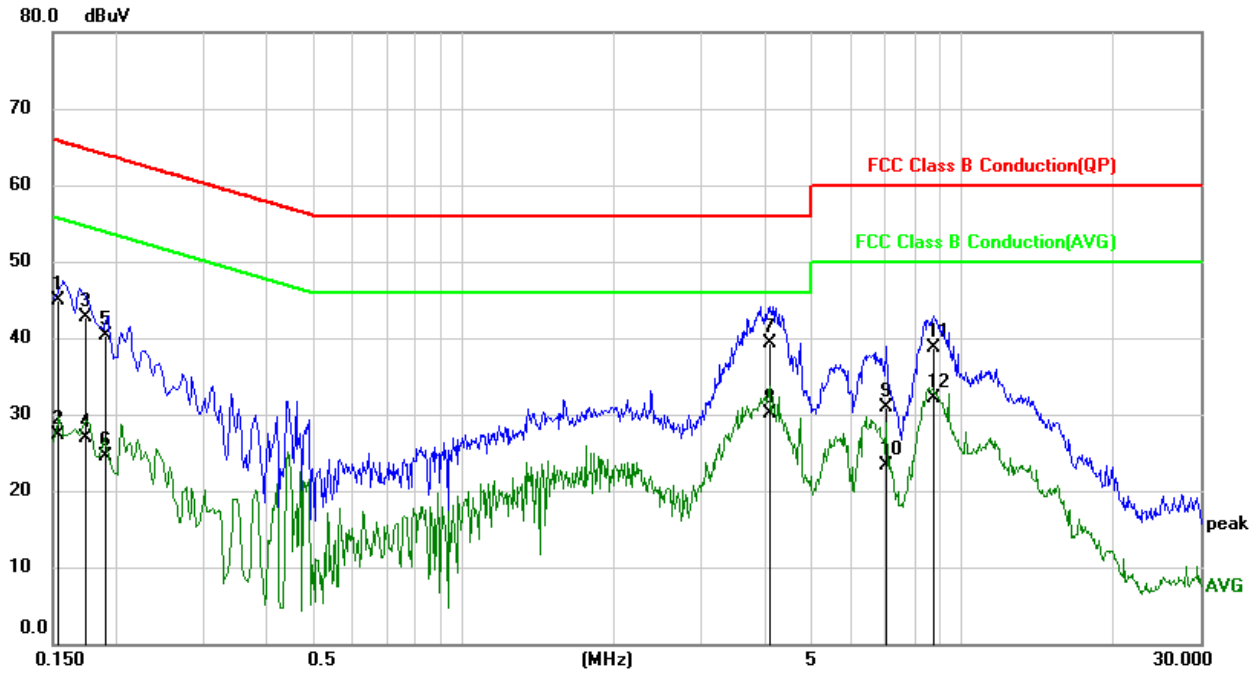
LINE N RESULTS (MID CHANNEL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1500	13.81	9.60	23.41	66.00	-42.59	QP
2	0.1500	6.30	9.60	15.90	56.00	-40.10	AVG
3	0.1617	35.17	9.60	44.77	65.38	-20.61	QP
4	0.1617	18.43	9.60	28.03	55.38	-27.35	AVG
5	0.1774	32.94	9.60	42.54	64.61	-22.07	QP
6	0.1774	18.03	9.60	27.63	54.61	-26.98	AVG
7	0.4573	22.17	9.60	31.77	56.74	-24.97	QP
8	0.4573	12.48	9.60	22.08	46.74	-24.66	AVG
9	4.0590	29.81	9.66	39.47	56.00	-16.53	QP
10	4.0590	20.48	9.66	30.14	46.00	-15.86	AVG
11	8.5599	28.37	9.74	38.11	60.00	-21.89	QP
12	8.5599	21.95	9.74	31.69	50.00	-18.31	AVG

Note: 1. Result = Reading +Correct Factor.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

LINE L RESULTS (MID CHANNEL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1538	35.39	9.61	45.00	65.79	-20.79	QP
2	0.1538	17.61	9.61	27.22	55.79	-28.57	AVG
3	0.1749	33.05	9.61	42.66	64.72	-22.06	QP
4	0.1749	17.21	9.61	26.82	54.72	-27.90	AVG
5	0.1912	30.65	9.60	40.25	63.98	-23.73	QP
6	0.1912	14.91	9.60	24.51	53.98	-29.47	AVG
7	4.1088	29.74	9.66	39.40	56.00	-16.60	QP
8	4.1088	20.40	9.66	30.06	46.00	-15.94	AVG
9	7.0567	21.28	9.71	30.99	60.00	-29.01	QP
10	7.0567	13.57	9.71	23.28	50.00	-26.72	AVG
11	8.7136	29.05	9.73	38.78	60.00	-21.22	QP
12	8.7136	22.31	9.73	32.04	50.00	-17.96	AVG

Note: 1. Result = Reading +Correct Factor.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

Note: All test mode has been tested, only the worst data record in the report

11. ANTENNA REQUIREMENTS

APPLICABLE REQUIREMENTS

Please refer to FCC §15.203
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

Please refer to FCC §15.247(b)(4)
The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

RESULTS

Complies

END OF REPORT