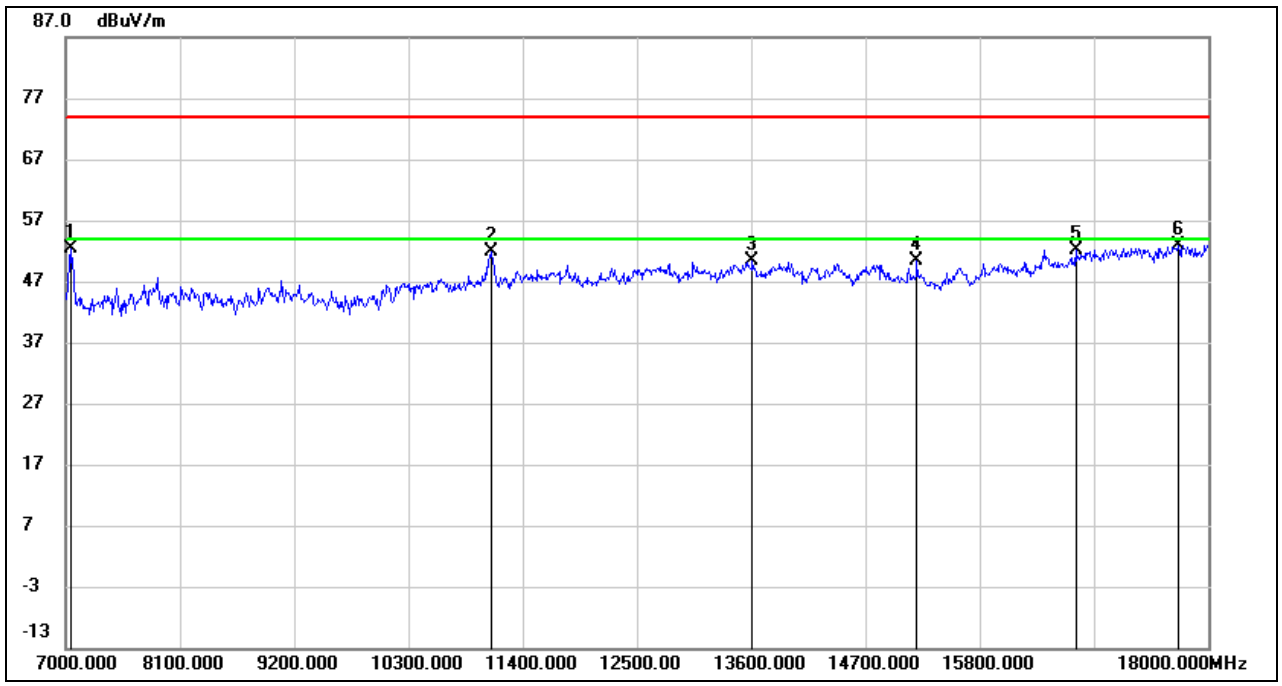
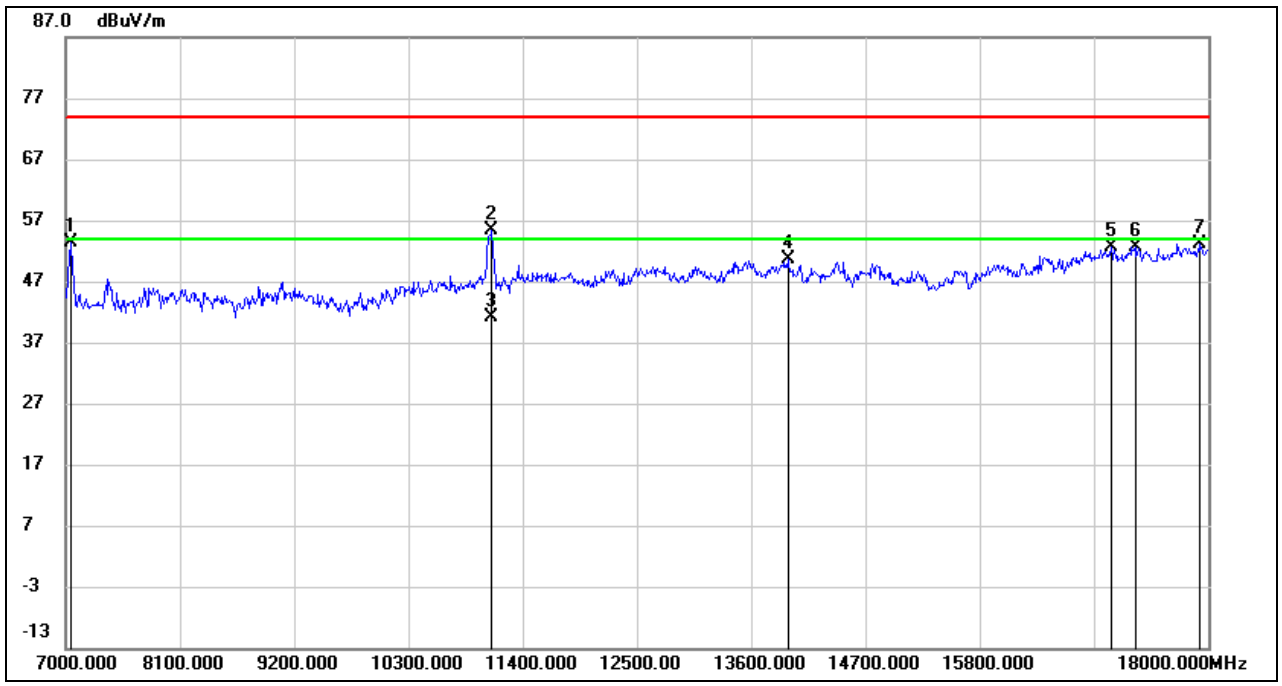
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7044.000	45.86	6.52	52.38	74.00	-21.62	peak
2	11103.000	39.10	12.66	51.76	74.00	-22.24	peak
3	13611.000	34.21	16.10	50.31	74.00	-23.69	peak
4	15195.000	34.15	16.14	50.29	74.00	-23.71	peak
5	16724.000	32.06	20.09	52.15	74.00	-21.85	peak
6	17714.000	30.18	22.62	52.80	74.00	-21.20	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point was deemed to comply with the limits list in the standard.

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)

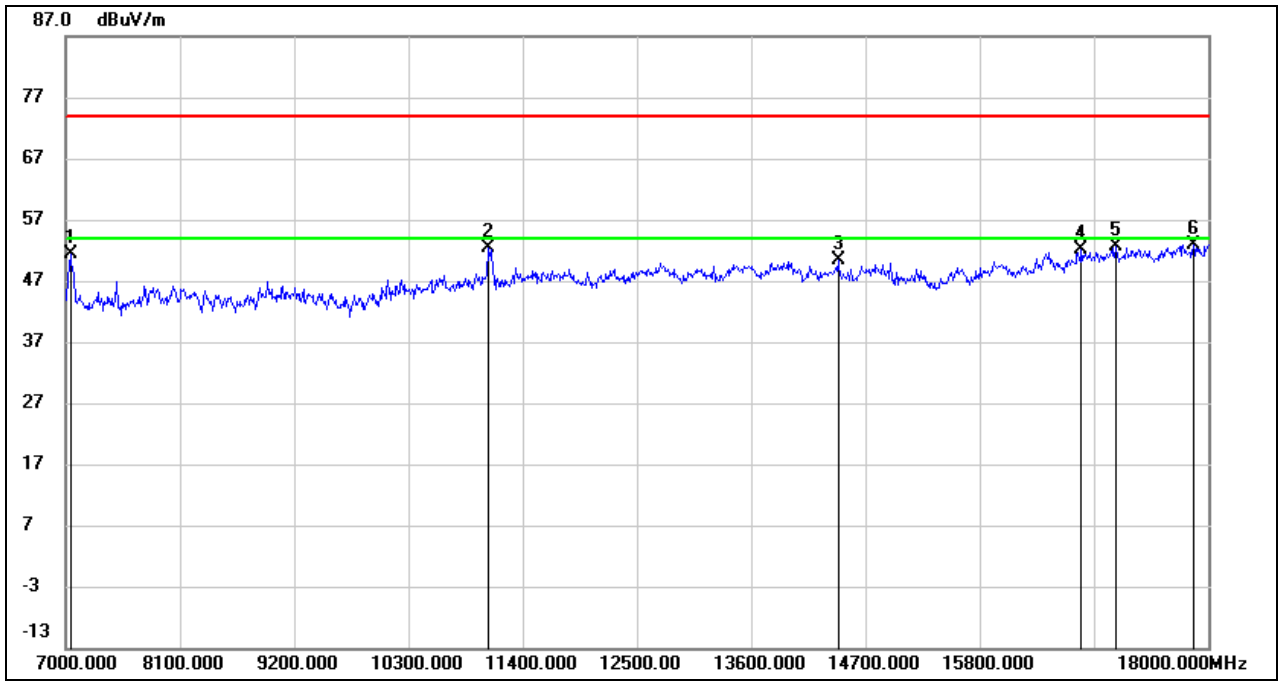


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7044.000	46.84	6.52	53.36	74.00	-20.64	peak
2	11103.000	42.70	12.66	55.36	74.00	-18.64	peak
3	11103.000	28.46	12.66	41.12	54.00	-12.88	AVG
4	13952.000	34.47	16.16	50.63	74.00	-23.37	peak
5	17065.000	31.79	20.79	52.58	74.00	-21.42	peak
6	17296.000	30.82	21.86	52.68	74.00	-21.32	peak
7	17923.000	29.82	23.42	53.24	74.00	-20.76	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. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point was deemed to comply with the limits list in the standard.

UNII-2C BAND

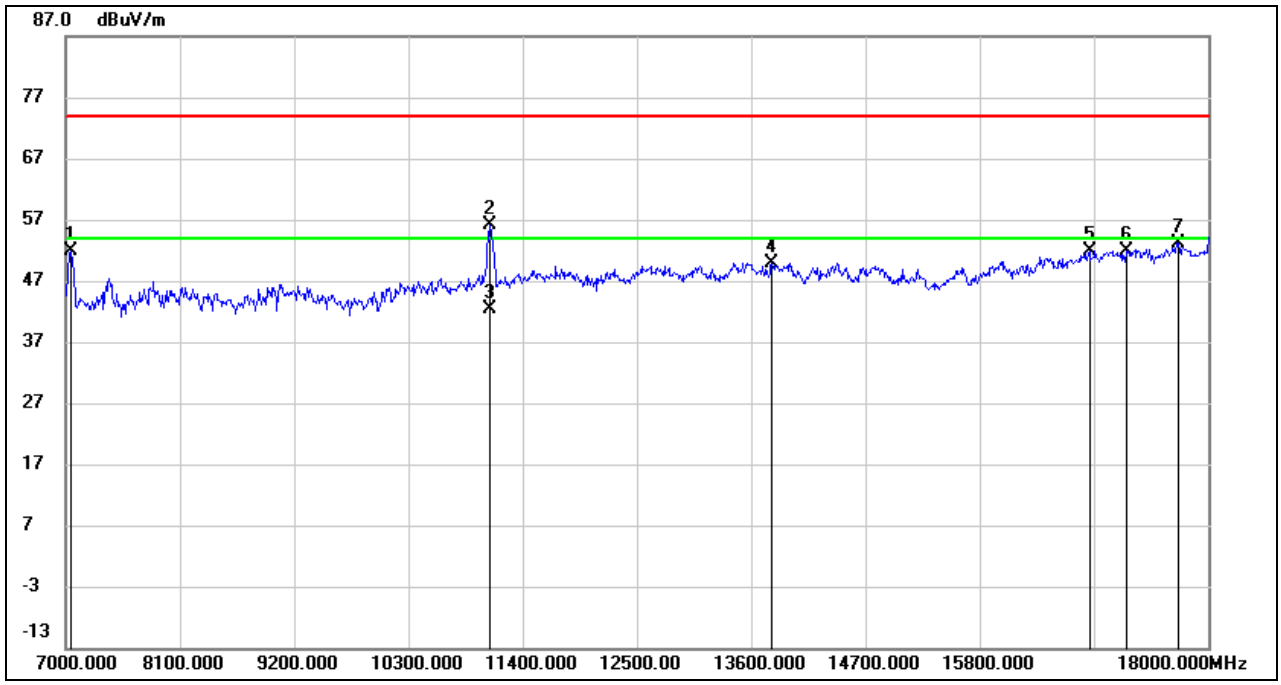
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7044.000	44.77	6.52	51.29	74.00	-22.71	peak
2	11070.000	39.80	12.65	52.45	74.00	-21.55	peak
3	14436.000	33.64	16.64	50.28	74.00	-23.72	peak
4	16779.000	31.85	20.16	52.01	74.00	-21.99	peak
5	17109.000	31.63	20.91	52.54	74.00	-21.46	peak
6	17857.000	29.57	23.41	52.98	74.00	-21.02	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point was deemed to comply with the limits list in the standard.

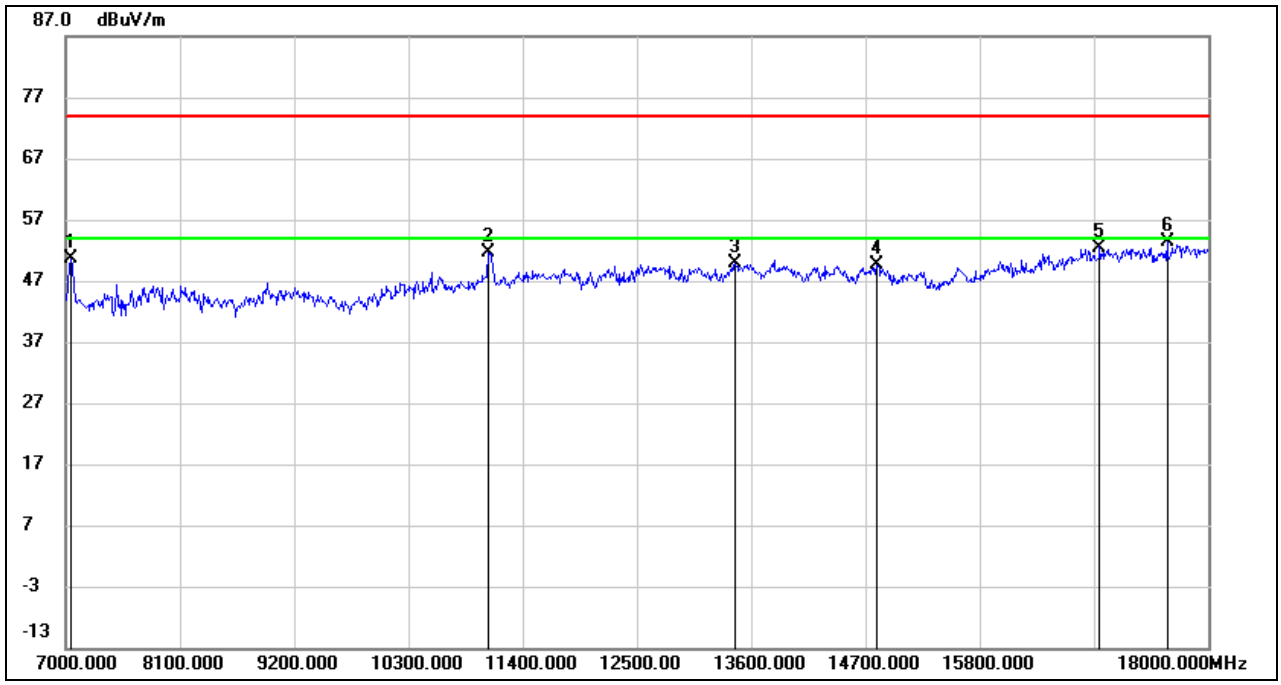
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7044.000	45.45	6.52	51.97	74.00	-22.03	peak
2	11081.000	43.58	12.64	56.22	74.00	-17.78	peak
3	11081.000	29.75	12.64	42.39	54.00	-11.61	AVG
4	13798.000	32.87	17.05	49.92	74.00	-24.08	peak
5	16856.000	31.76	20.13	51.89	74.00	-22.11	peak
6	17208.000	30.74	21.26	52.00	74.00	-22.00	peak
7	17714.000	30.51	22.62	53.13	74.00	-20.87	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. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point was deemed to comply with the limits list in the standard.

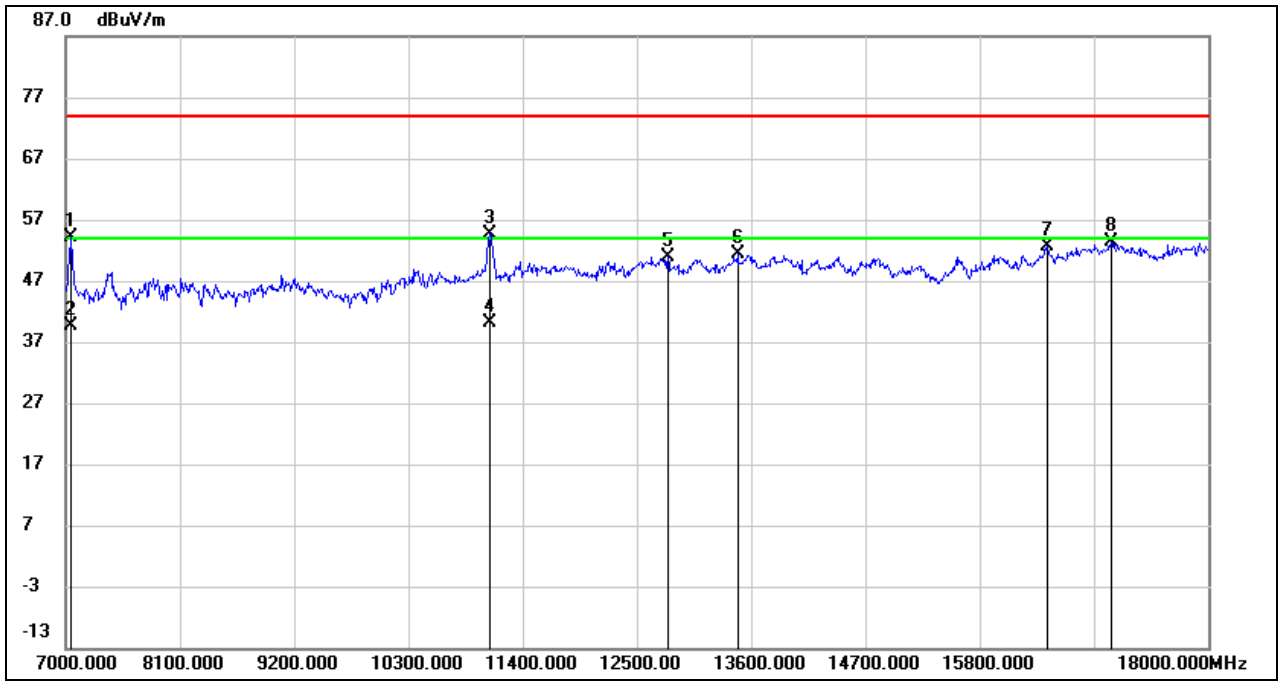
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7055.000	44.16	6.54	50.70	74.00	-23.30	peak
2	11070.000	38.89	12.65	51.54	74.00	-22.46	peak
3	13446.000	33.82	16.06	49.88	74.00	-24.12	peak
4	14810.000	33.52	16.07	49.59	74.00	-24.41	peak
5	16955.000	32.11	20.39	52.50	74.00	-21.50	peak
6	17604.000	31.40	21.89	53.29	74.00	-20.71	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point was deemed to comply with the limits list in the standard.

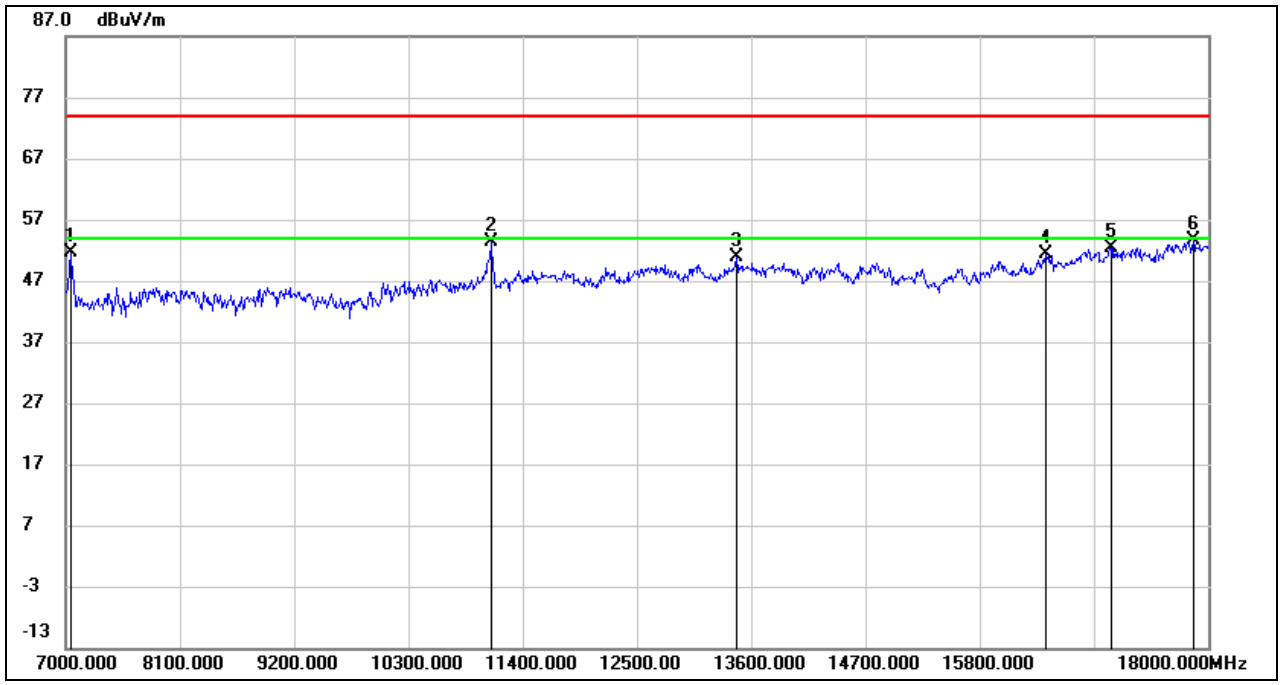
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7055.000	47.59	6.54	54.13	74.00	-19.87	peak
2	7055.000	33.09	6.54	39.63	54.00	-14.37	AVG
3	11081.000	42.08	12.64	54.72	74.00	-19.28	peak
4	11081.000	27.57	12.64	40.21	54.00	-13.79	AVG
5	12797.000	34.88	16.12	51.00	74.00	-23.00	peak
6	13468.000	35.39	15.98	51.37	74.00	-22.63	peak
7	16449.000	33.11	19.45	52.56	74.00	-21.44	peak
8	17065.000	32.58	20.79	53.37	74.00	-20.63	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. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point was deemed to comply with the limits list in the standard.

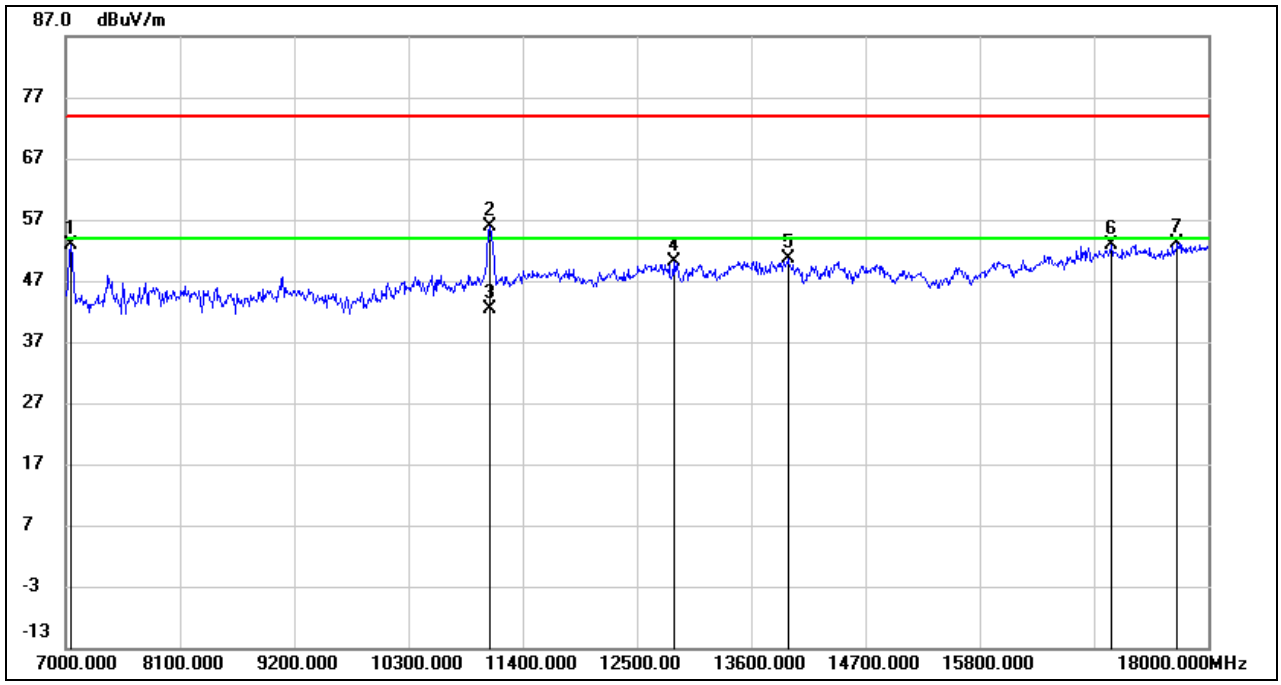
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7044.000	45.08	6.52	51.60	74.00	-22.40	peak
2	11092.000	40.74	12.65	53.39	74.00	-20.61	peak
3	13457.000	34.86	16.02	50.88	74.00	-23.12	peak
4	16438.000	31.86	19.41	51.27	74.00	-22.73	peak
5	17065.000	31.69	20.79	52.48	74.00	-21.52	peak
6	17857.000	30.14	23.41	53.55	74.00	-20.45	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point was deemed to comply with the limits list in the standard.

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)



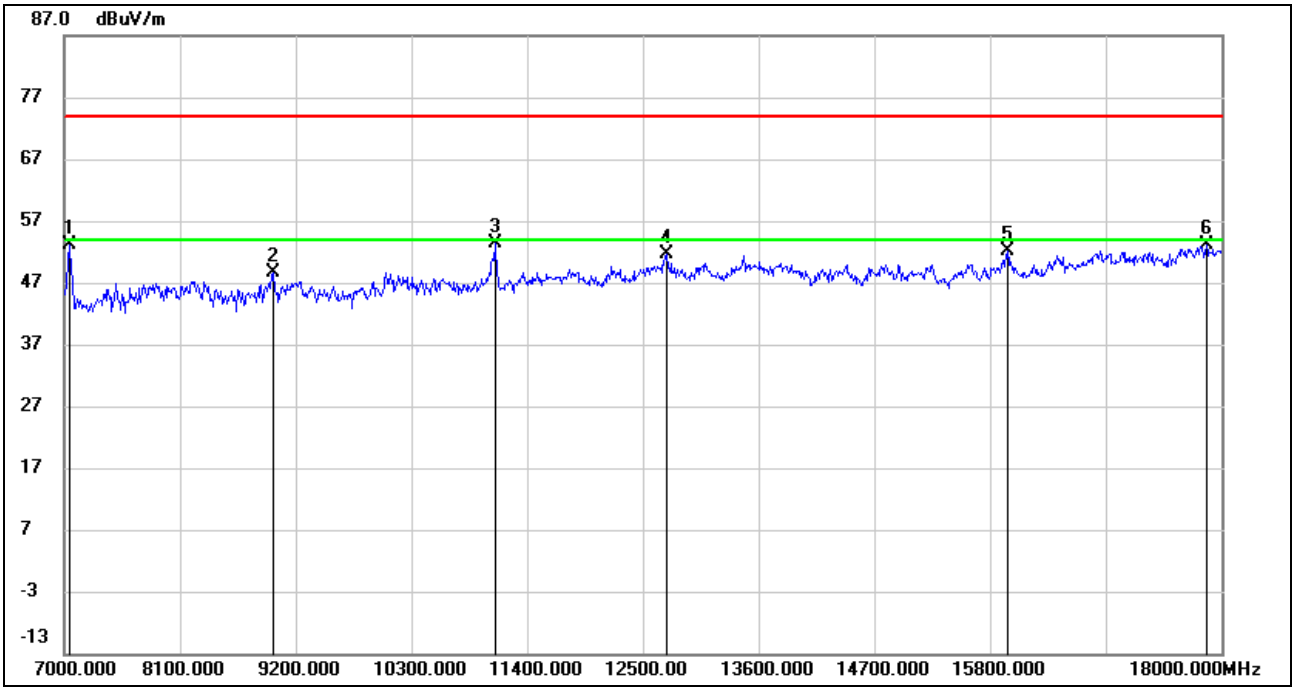
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7055.000	46.41	6.54	52.95	74.00	-21.05	peak
2	11081.000	43.17	12.64	55.81	74.00	-18.19	peak
3	11081.000	29.73	12.64	42.37	54.00	-11.63	AVG
4	12852.000	34.63	15.61	50.24	74.00	-23.76	peak
5	13952.000	34.50	16.16	50.66	74.00	-23.34	peak
6	17065.000	32.14	20.79	52.93	74.00	-21.07	peak
7	17703.000	30.62	22.52	53.14	74.00	-20.86	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. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point was deemed to comply with the limits list in the standard.

STRADDLE CHANNEL 142

ANTENNA 1 TEST RESULTS (WORST CASE)

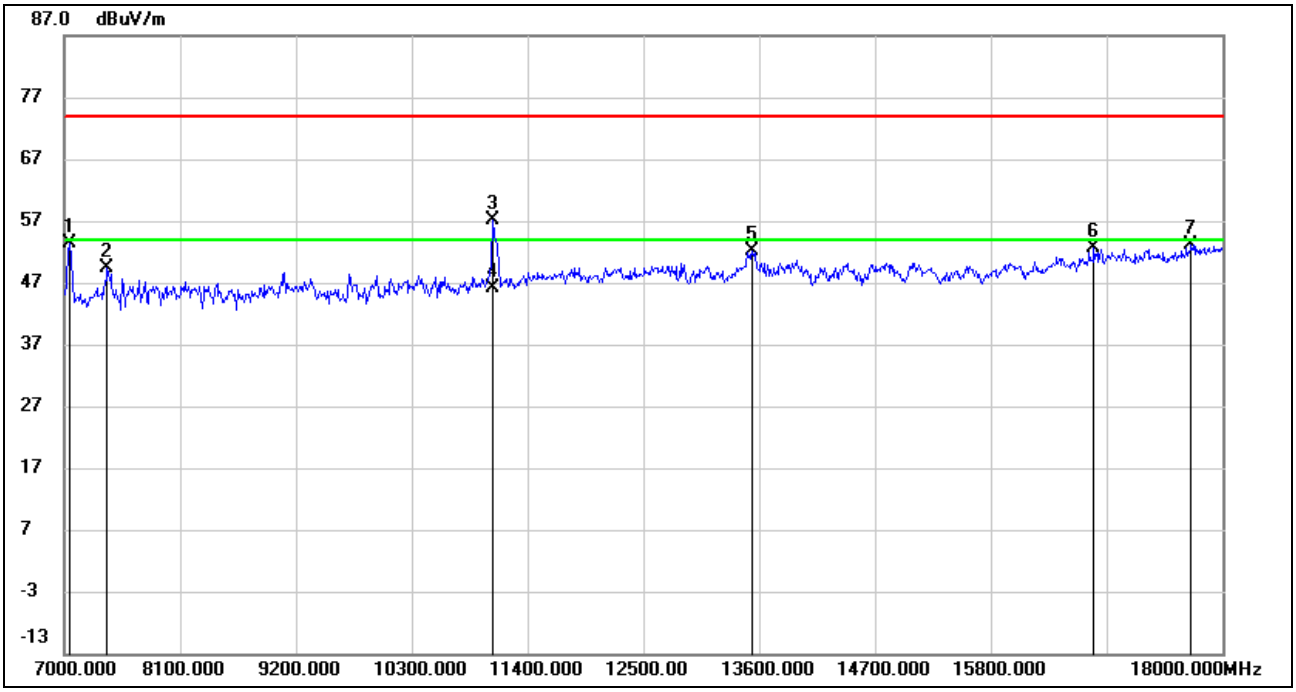
HARMONICS AND SPURIOUS EMISSIONS (HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7044.000	46.58	6.52	53.10	74.00	-20.90	peak
2	8980.000	39.49	9.23	48.72	74.00	-25.28	peak
3	11092.000	40.74	12.65	53.39	74.00	-20.61	peak
4	12731.000	36.75	14.97	51.72	74.00	-22.28	peak
5	15965.000	34.27	17.76	52.03	74.00	-21.97	peak
6	17857.000	29.64	23.41	53.05	74.00	-20.95	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point was deemed to comply with the limits list in the standard.

HARMONICS AND SPURIOUS EMISSIONS (VERTICAL)

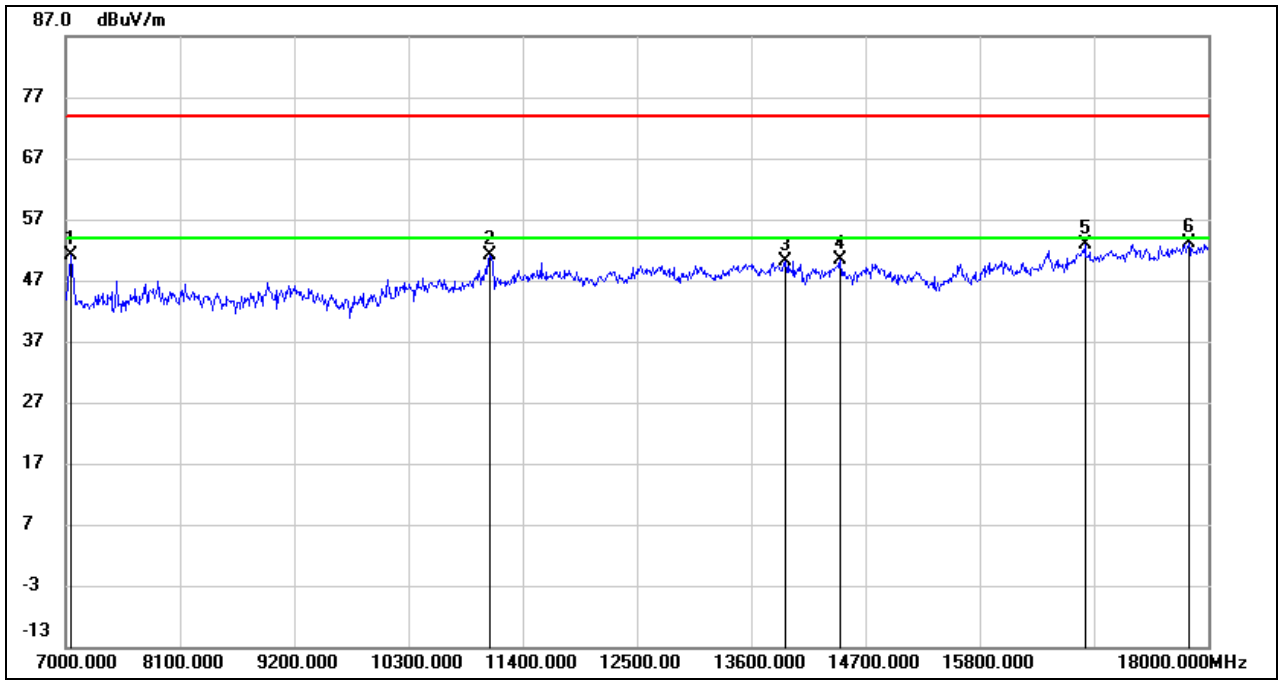


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7055.000	46.91	6.54	53.45	74.00	-20.55	peak
2	7407.000	42.33	7.04	49.37	74.00	-24.63	peak
3	11070.000	44.48	12.65	57.13	74.00	-16.87	peak
4	11070.000	33.58	12.65	46.23	54.00	-7.77	AVG
5	13534.000	36.08	15.97	52.05	74.00	-21.95	peak
6	16779.000	32.41	20.16	52.57	74.00	-21.43	peak
7	17703.000	30.62	22.52	53.14	74.00	-20.86	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. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point was deemed to comply with the limits list in the standard.

UNII-3 BAND

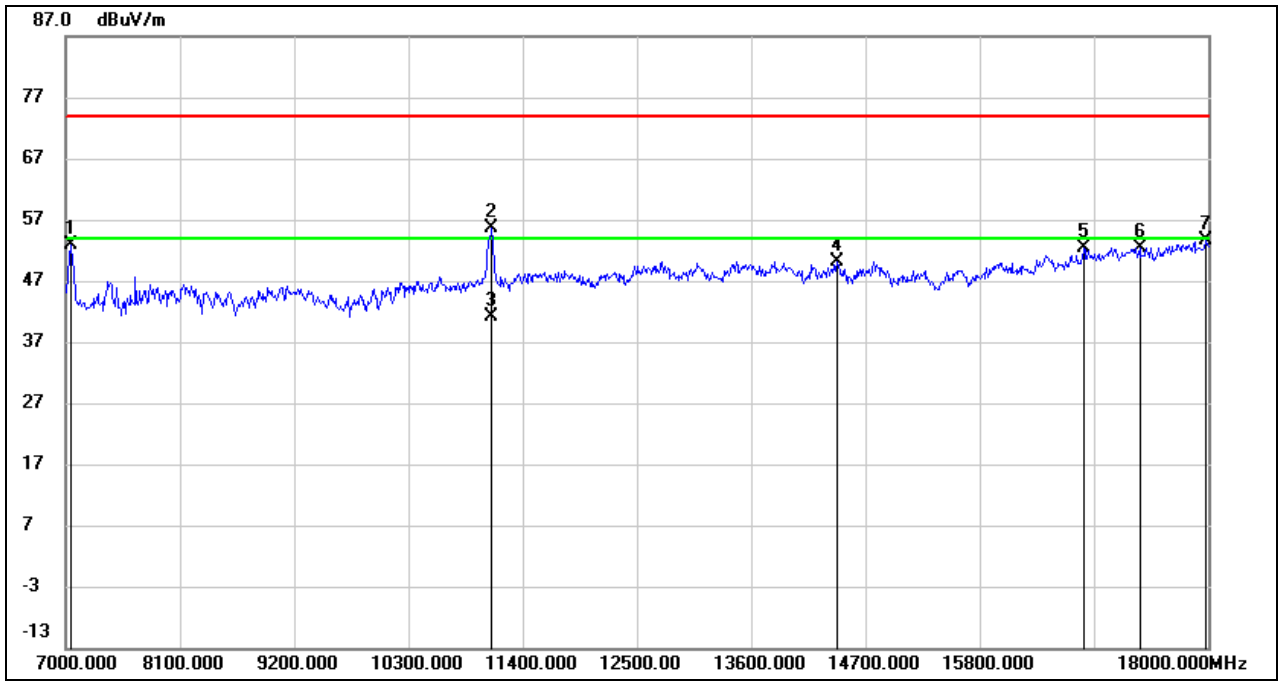
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7055.000	44.65	6.54	51.19	74.00	-22.81	peak
2	11081.000	38.50	12.64	51.14	74.00	-22.86	peak
3	13930.000	33.92	16.17	50.09	74.00	-23.91	peak
4	14458.000	33.78	16.62	50.40	74.00	-23.60	peak
5	16812.000	32.74	20.18	52.92	74.00	-21.08	peak
6	17813.000	29.79	23.41	53.20	74.00	-20.80	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point was deemed to comply with the limits list in the standard.

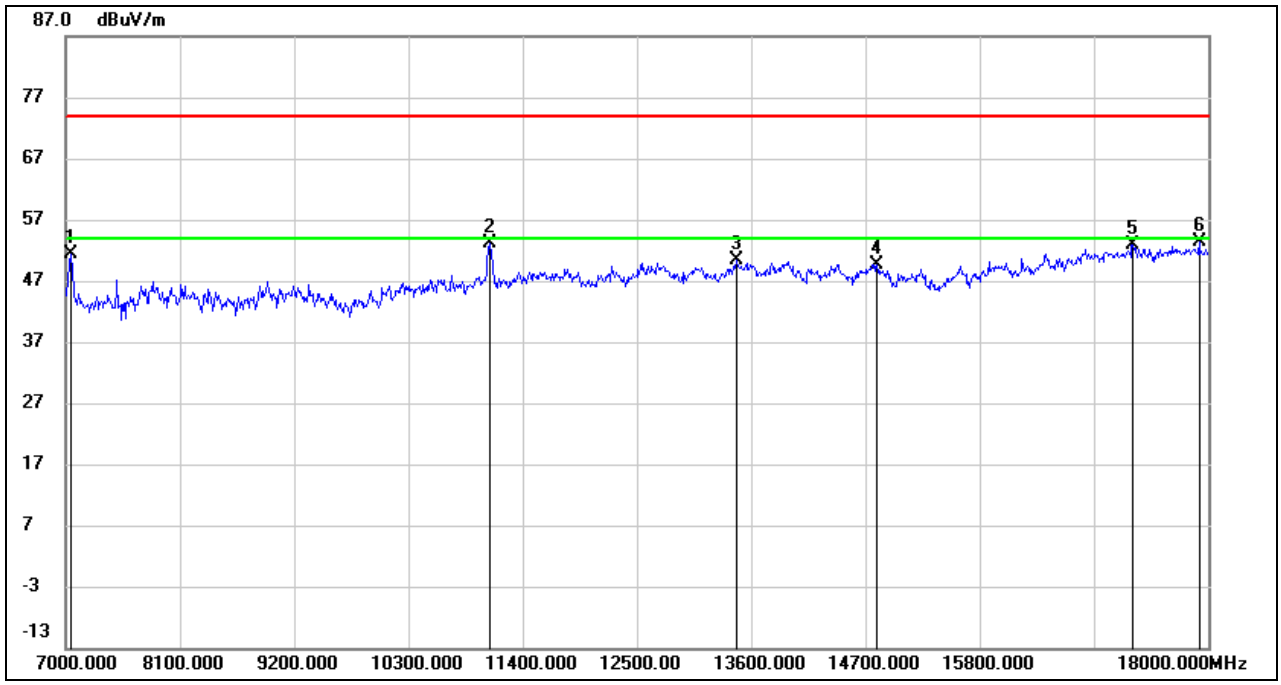
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7044.000	46.29	6.52	52.81	74.00	-21.19	peak
2	11103.000	42.98	12.66	55.64	74.00	-18.36	peak
3	11103.000	28.53	12.66	41.19	54.00	-12.81	AVG
4	14425.000	33.37	16.65	50.02	74.00	-23.98	peak
5	16801.000	32.07	20.19	52.26	74.00	-21.74	peak
6	17340.000	30.76	21.74	52.50	74.00	-21.50	peak
7	17978.000	30.05	23.51	53.56	74.00	-20.44	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. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point was deemed to comply with the limits list in the standard.

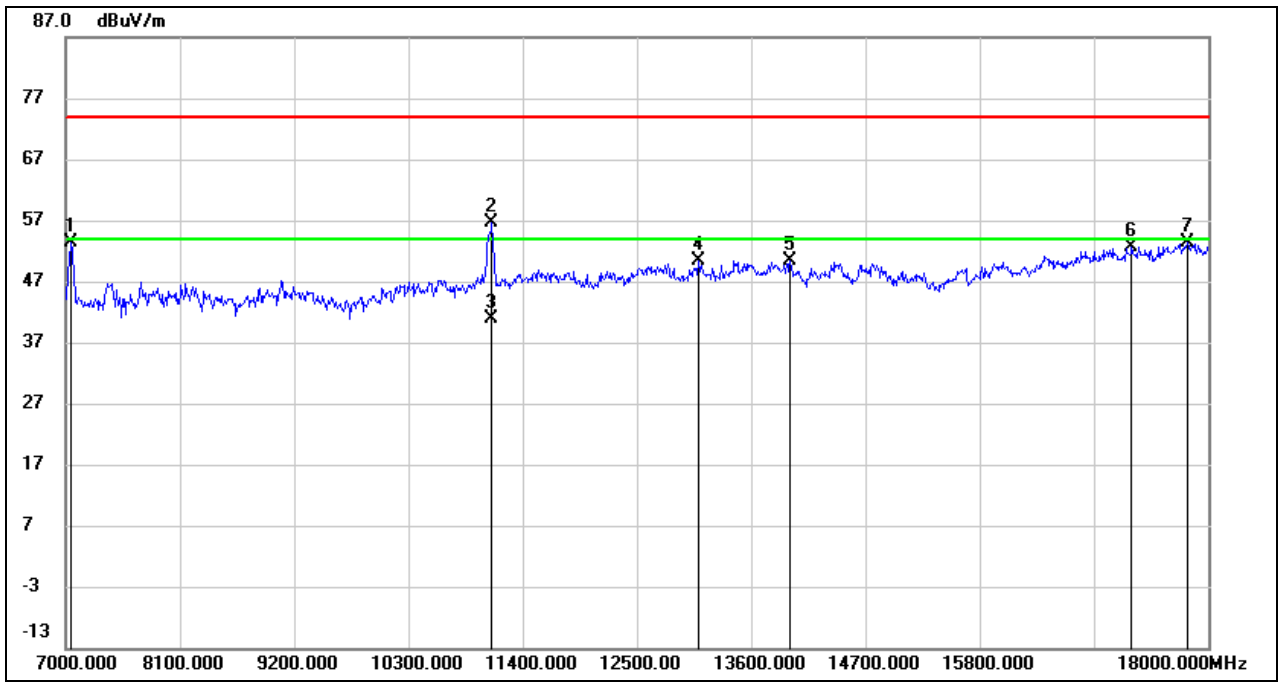
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7044.000	44.95	6.52	51.47	74.00	-22.53	peak
2	11081.000	40.38	12.64	53.02	74.00	-20.98	peak
3	13457.000	34.27	16.02	50.29	74.00	-23.71	peak
4	14810.000	33.61	16.07	49.68	74.00	-24.32	peak
5	17274.000	31.24	21.71	52.95	74.00	-21.05	peak
6	17912.000	29.96	23.42	53.38	74.00	-20.62	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point was deemed to comply with the limits list in the standard.

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)



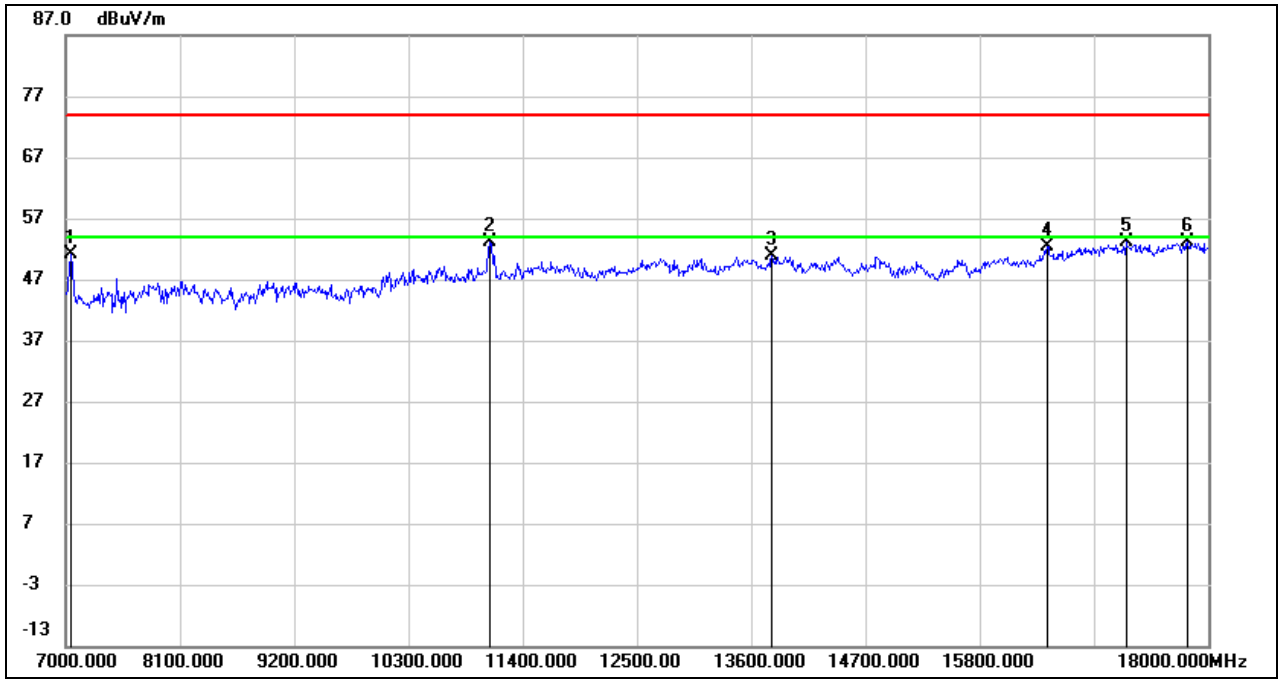
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7044.000	46.89	6.52	53.41	74.00	-20.59	peak
2	11103.000	43.99	12.66	56.65	74.00	-17.35	peak
3	11103.000	28.32	12.66	40.98	54.00	-13.02	AVG
4	13094.000	34.97	15.36	50.33	74.00	-23.67	peak
5	13974.000	34.30	16.16	50.46	74.00	-23.54	peak
6	17263.000	30.91	21.64	52.55	74.00	-21.45	peak
7	17802.000	30.00	23.41	53.41	74.00	-20.59	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. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point was deemed to comply with the limits list in the standard.

8.3.4. 802.11ac VHT80 MODE

UNII-1 BAND

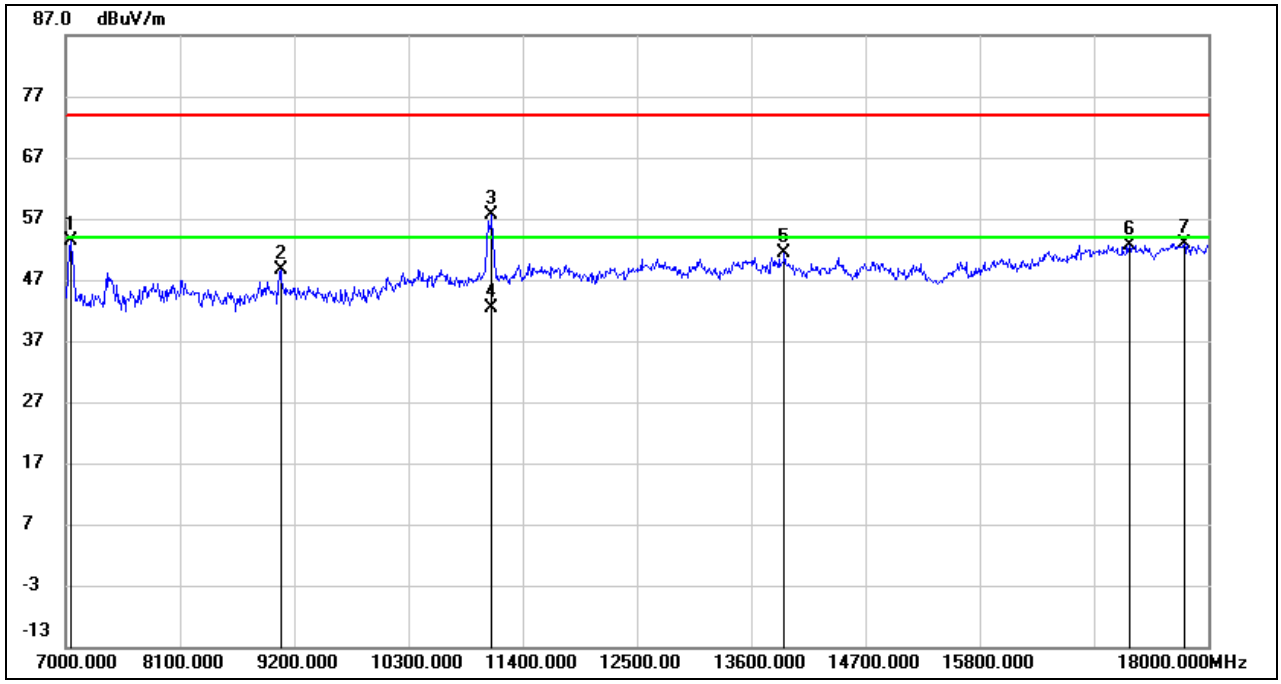
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7055.000	44.58	6.54	51.12	74.00	-22.88	peak
2	11081.000	40.55	12.64	53.19	74.00	-20.81	peak
3	13798.000	33.78	17.05	50.83	74.00	-23.17	peak
4	16449.000	33.02	19.45	52.47	74.00	-21.53	peak
5	17208.000	31.81	21.26	53.07	74.00	-20.93	peak
6	17802.000	29.67	23.41	53.08	74.00	-20.92	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point was deemed to comply with the limits list in the standard.

HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)

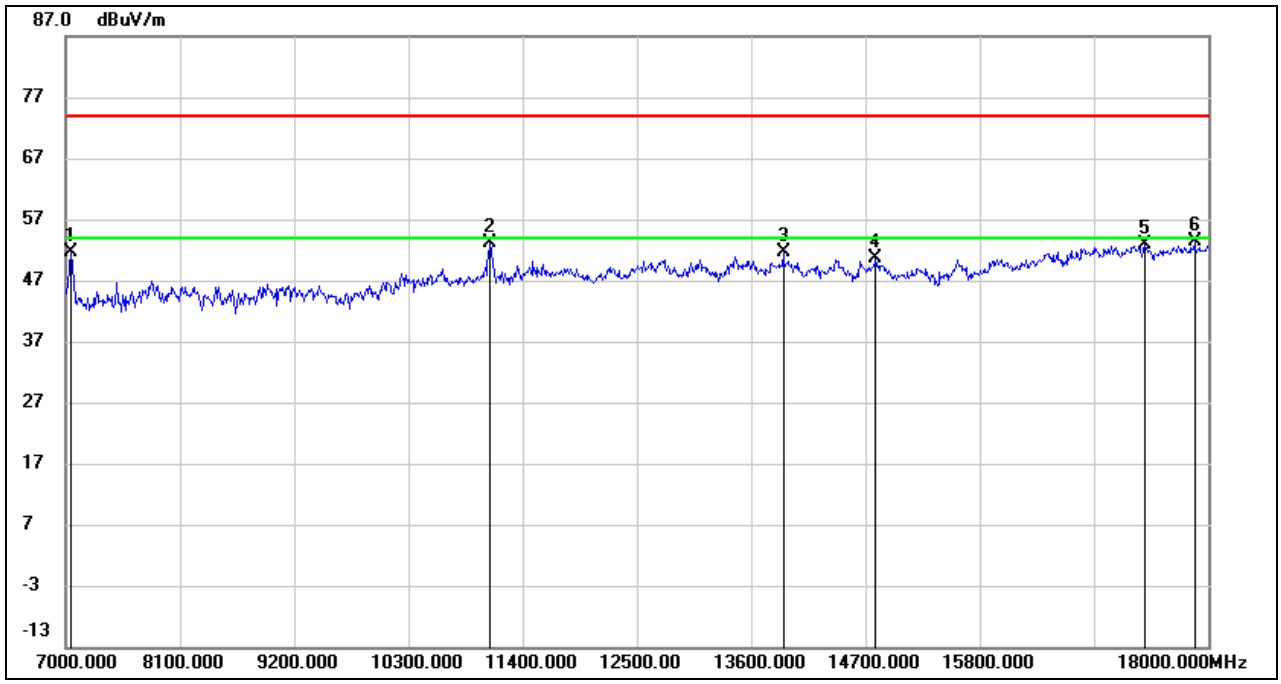


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7044.000	46.75	6.52	53.27	74.00	-20.73	peak
2	9068.000	39.25	9.45	48.70	74.00	-25.30	peak
3	11103.000	44.89	12.66	57.55	74.00	-16.45	peak
4	11103.000	29.83	12.66	42.49	54.00	-11.51	AVG
5	13919.000	35.11	16.16	51.27	74.00	-22.73	peak
6	17241.000	31.18	21.48	52.66	74.00	-21.34	peak
7	17769.000	29.84	23.12	52.96	74.00	-21.04	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. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point was deemed to comply with the limits list in the standard.

UNII-2A BAND

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	7044.000	45.16	6.52	51.68	74.00	-22.32	peak
2	11081.000	40.37	12.64	53.01	74.00	-20.99	peak
3	13908.000	35.40	16.16	51.56	74.00	-22.44	peak
4	14799.000	34.47	16.06	50.53	74.00	-23.47	peak
5	17384.000	31.30	21.60	52.90	74.00	-21.10	peak
6	17868.000	29.91	23.40	53.31	74.00	-20.69	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point was deemed to comply with the limits list in the standard.

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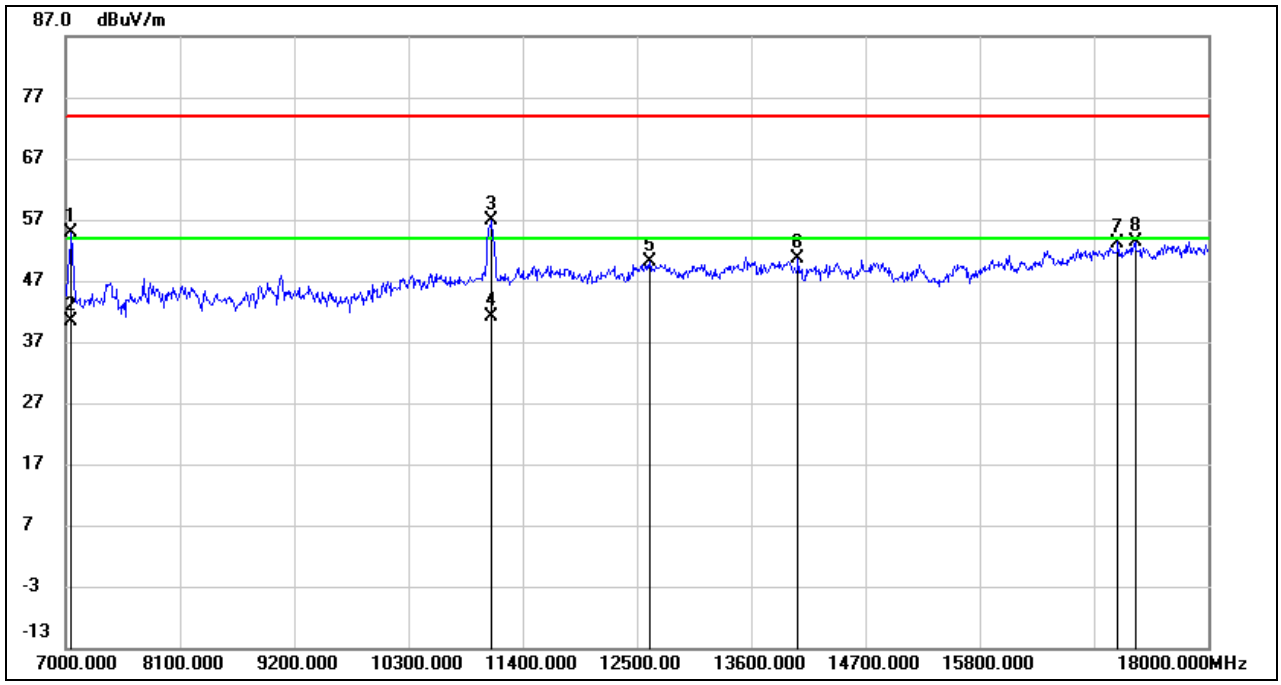
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7055.000	48.34	6.54	54.88	74.00	-19.12	peak
2	7055.000	33.95	6.54	40.49	54.00	-13.51	AVG
3	11103.000	44.10	12.66	56.76	74.00	-17.24	peak
4	11103.000	28.53	12.66	41.19	54.00	-12.81	AVG
5	12621.000	35.97	14.25	50.22	74.00	-23.78	peak
6	14051.000	34.36	16.19	50.55	74.00	-23.45	peak
7	17131.000	32.27	20.98	53.25	74.00	-20.75	peak
8	17296.000	31.60	21.86	53.46	74.00	-20.54	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. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point was deemed to comply with the limits list in the standard.

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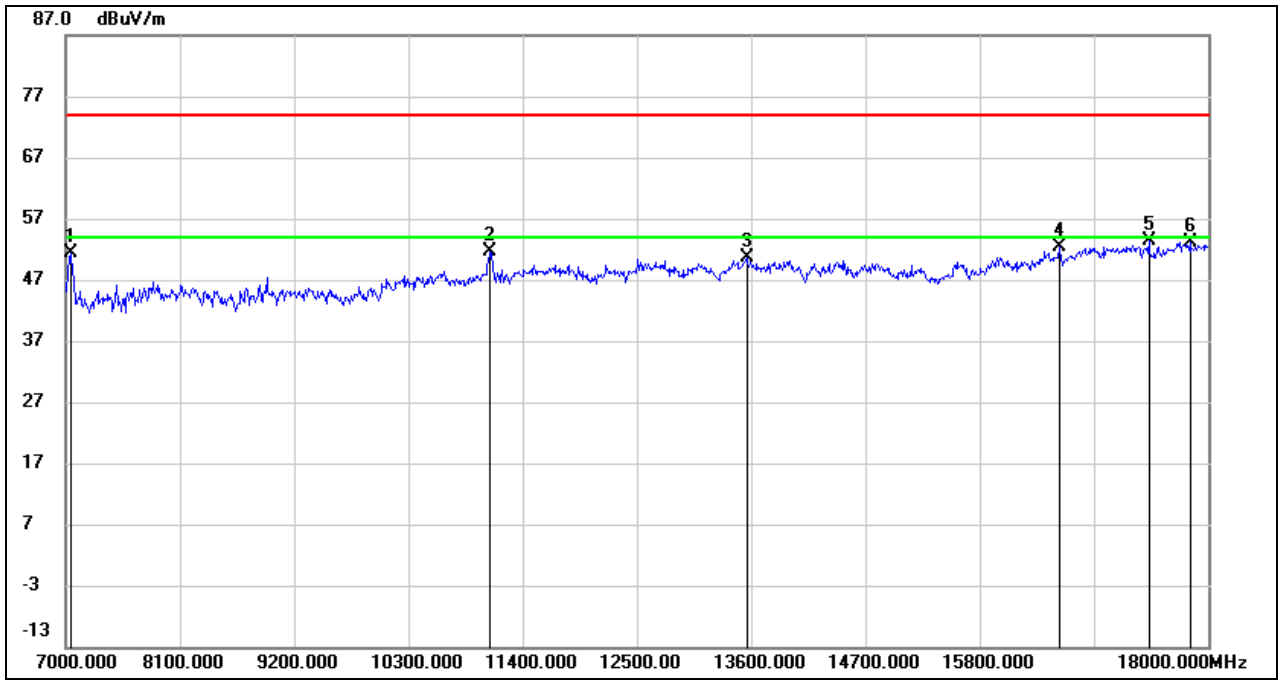
UNII-2C BAND

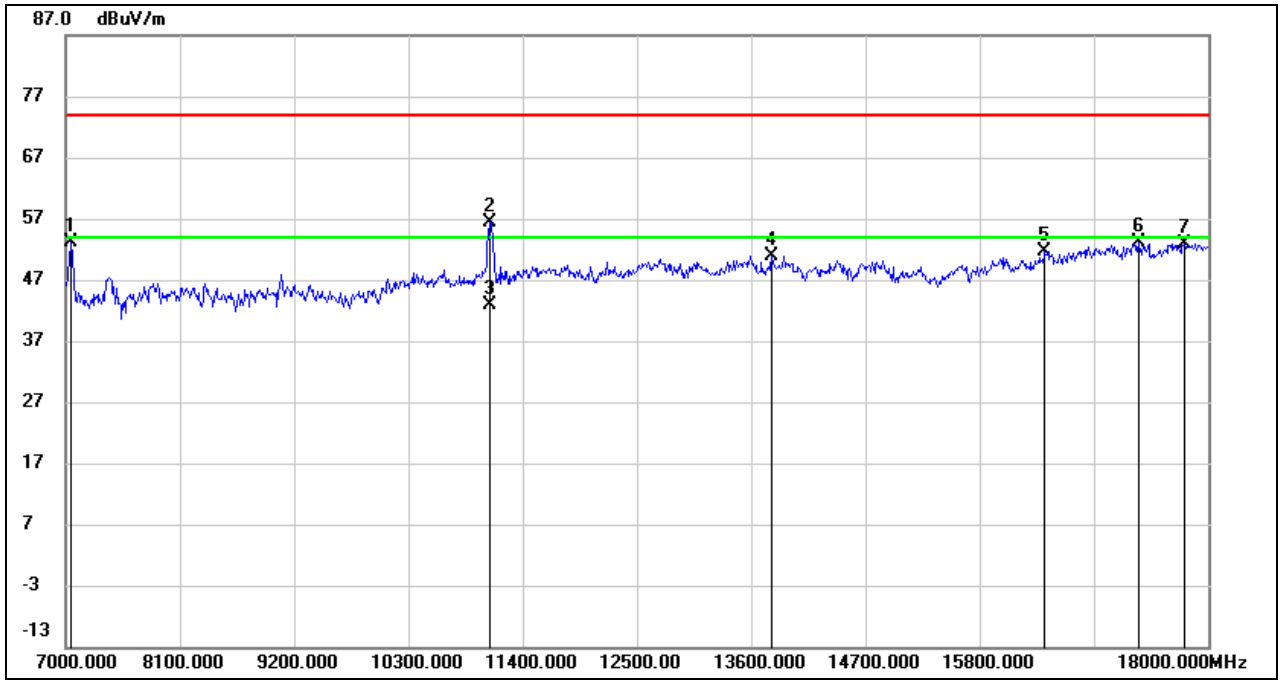
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7044.000	44.80	6.52	51.32	74.00	-22.68	peak
2	11081.000	39.02	12.64	51.66	74.00	-22.34	peak
3	13556.000	34.55	16.01	50.56	74.00	-23.44	peak
4	16570.000	32.69	19.60	52.29	74.00	-21.71	peak
5	17428.000	31.85	21.50	53.35	74.00	-20.65	peak
6	17824.000	29.75	23.42	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point was deemed to comply with the limits list in the standard.

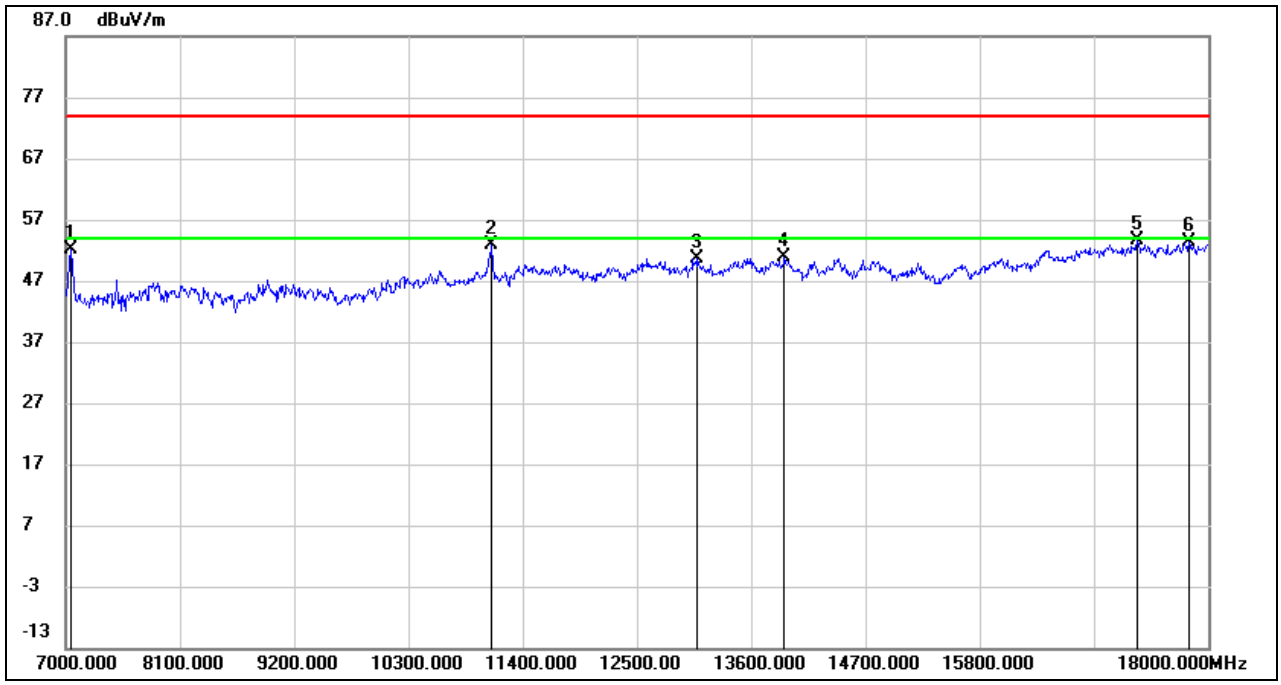
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7055.000	46.65	6.54	53.19	74.00	-20.81	peak
2	11081.000	43.85	12.64	56.49	74.00	-17.51	peak
3	11081.000	30.15	12.64	42.79	54.00	-11.21	AVG
4	13798.000	33.76	17.05	50.81	74.00	-23.19	peak
5	16427.000	32.27	19.37	51.64	74.00	-22.36	peak
6	17329.000	31.28	21.78	53.06	74.00	-20.94	peak
7	17769.000	29.66	23.12	52.78	74.00	-21.22	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. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point was deemed to comply with the limits list in the standard.

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	7044.000	45.53	6.52	52.05	74.00	-21.95	peak
2	11103.000	40.25	12.66	52.91	74.00	-21.09	peak
3	13072.000	35.41	15.28	50.69	74.00	-23.31	peak
4	13919.000	34.78	16.16	50.94	74.00	-23.06	peak
5	17318.000	31.91	21.82	53.73	74.00	-20.27	peak
6	17813.000	29.86	23.41	53.27	74.00	-20.73	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point was deemed to comply with the limits list in the standard.

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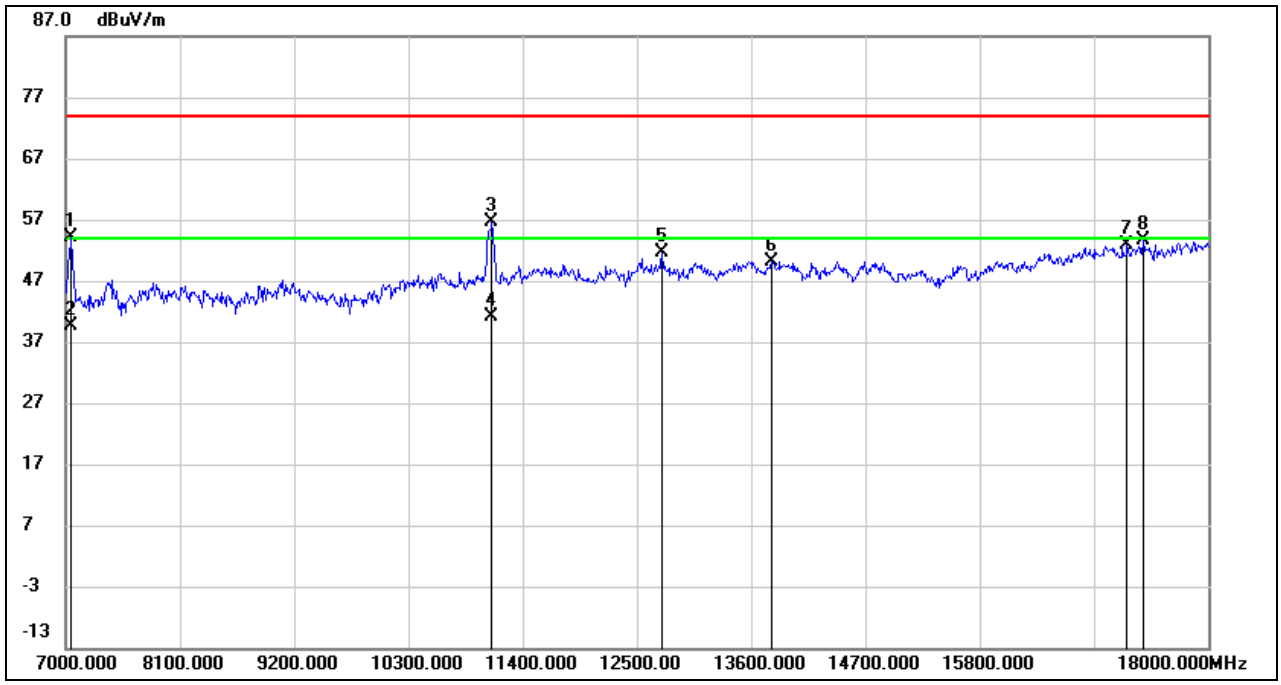
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)



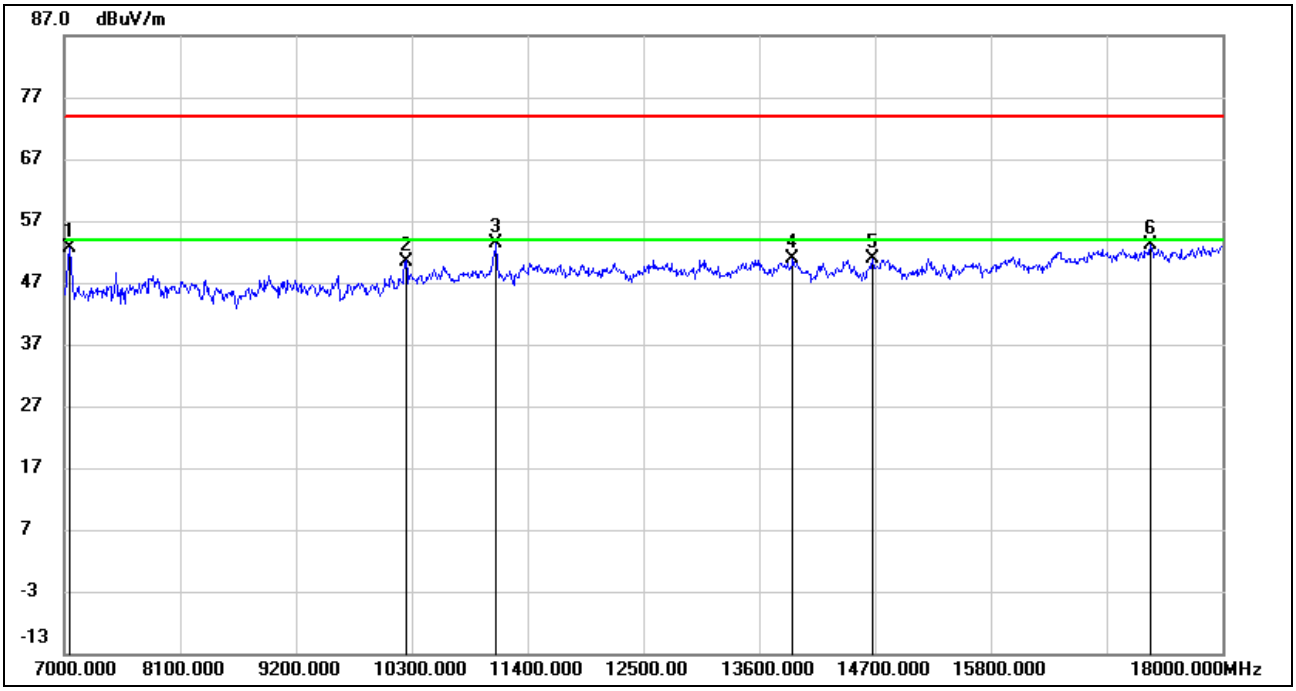
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7055.000	47.60	6.54	54.14	74.00	-19.86	peak
2	7055.000	33.00	6.54	39.54	54.00	-14.46	AVG
3	11103.000	43.89	12.66	56.55	74.00	-17.45	peak
4	11103.000	28.49	12.66	41.15	54.00	-12.85	AVG
5	12742.000	36.38	15.16	51.54	74.00	-22.46	peak
6	13798.000	33.12	17.05	50.17	74.00	-23.83	peak
7	17219.000	31.45	21.34	52.79	74.00	-21.21	peak
8	17373.000	32.08	21.63	53.71	74.00	-20.29	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. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point was deemed to comply with the limits list in the standard.

STRADDLE CHANNEL 138

ANTENNA 1 TEST RESULTS (WORST CASE)

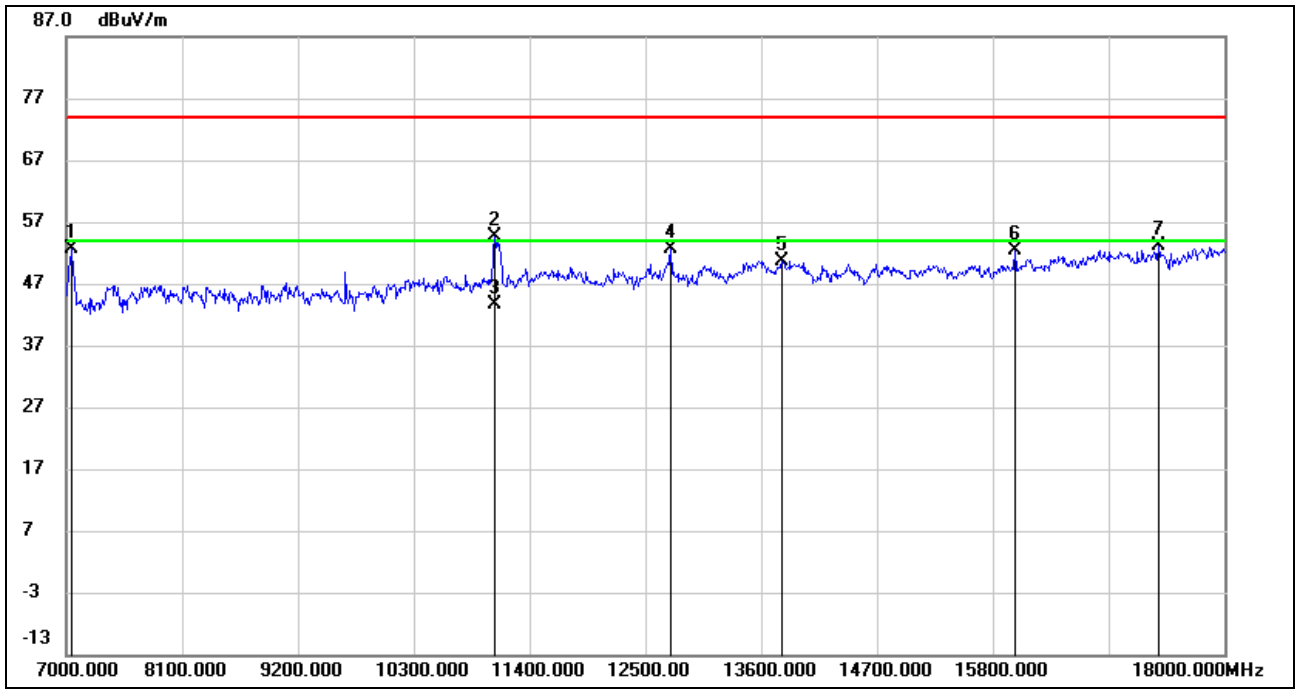
HARMONICS AND SPURIOUS EMISSIONS (HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7044.000	46.03	6.52	52.55	74.00	-21.45	peak
2	10245.000	39.68	10.82	50.50	74.00	-23.50	peak
3	11103.000	40.75	12.66	53.41	74.00	-20.59	peak
4	13919.000	34.78	16.16	50.94	74.00	-23.06	peak
5	14678.000	34.81	16.18	50.99	74.00	-23.01	peak
6	17318.000	31.41	21.82	53.23	74.00	-20.77	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point was deemed to comply with the limits list in the standard.

HARMONICS AND SPURIOUS EMISSIONS (VERTICAL)

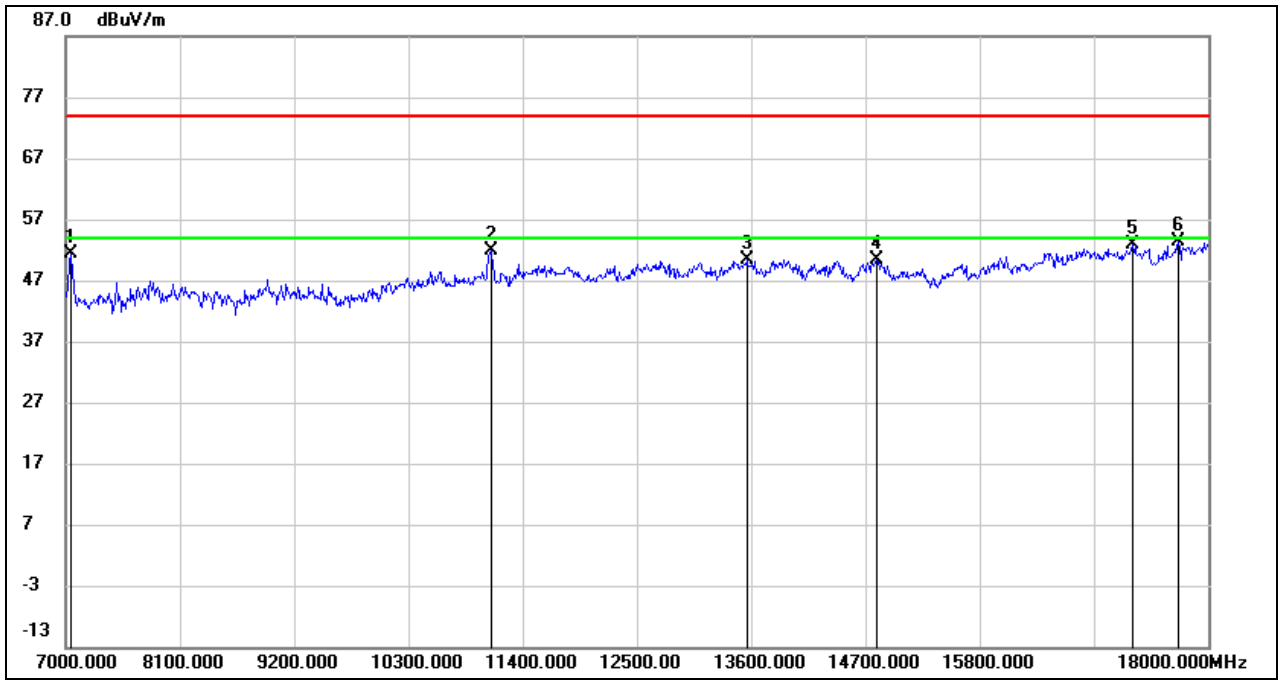


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7044.000	46.11	6.52	52.63	74.00	-21.37	peak
2	11070.000	42.00	12.65	54.65	74.00	-19.35	peak
3	11070.000	31.07	12.65	43.72	54.00	-10.28	AVG
4	12742.000	37.38	15.16	52.54	74.00	-21.46	peak
5	13798.000	33.62	17.05	50.67	74.00	-23.33	peak
6	16009.000	34.45	17.85	52.30	74.00	-21.70	peak
7	17373.000	31.58	21.63	53.21	74.00	-20.79	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. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point was deemed to comply with the limits list in the standard.

UNII-3 BAND

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	7044.000	44.74	6.52	51.26	74.00	-22.74	peak
2	11092.000	39.15	12.65	51.80	74.00	-22.20	peak
3	13556.000	34.38	16.01	50.39	74.00	-23.61	peak
4	14810.000	34.36	16.07	50.43	74.00	-23.57	peak
5	17274.000	31.20	21.71	52.91	74.00	-21.09	peak
6	17714.000	30.72	22.62	53.34	74.00	-20.66	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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
6. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point was deemed to comply with the limits list in the standard.

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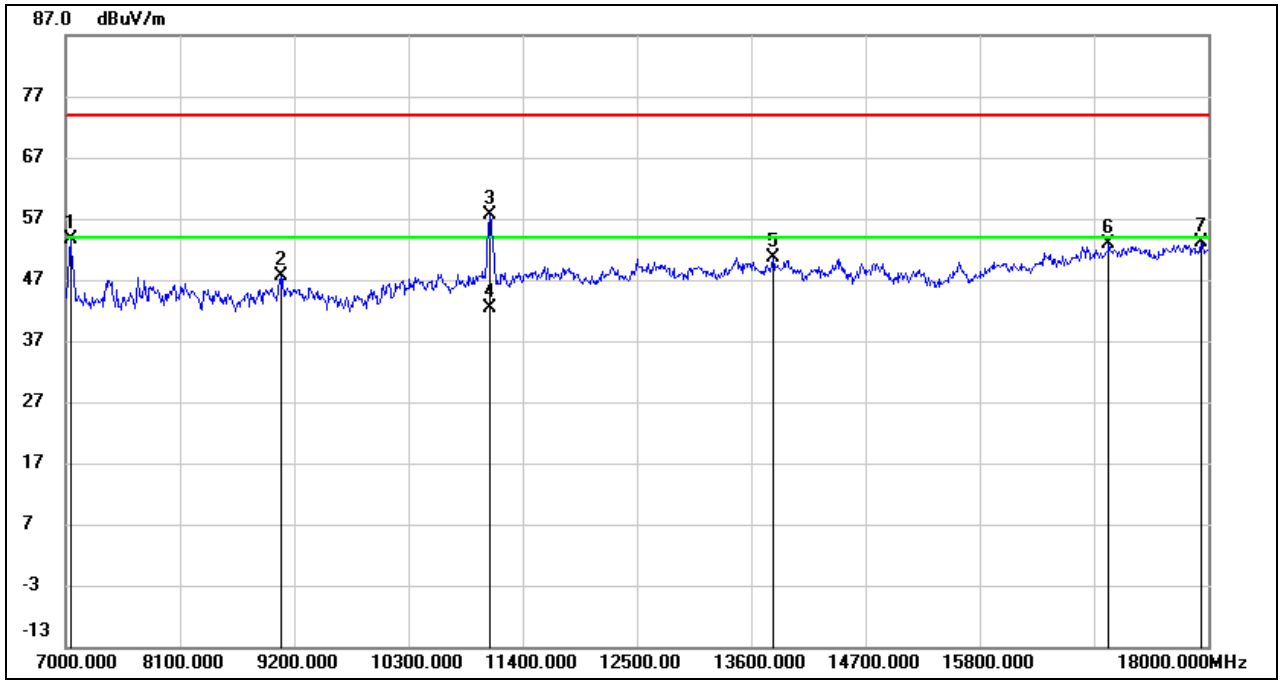
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



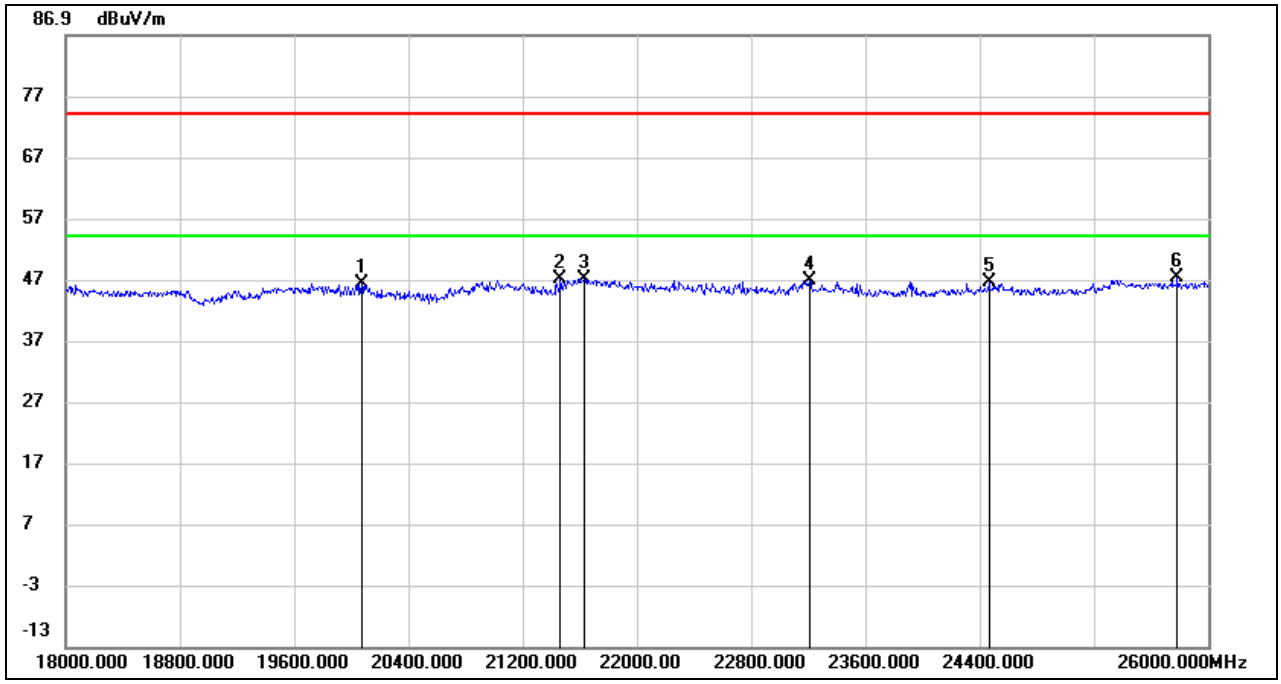
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7044.000	47.10	6.52	53.62	74.00	-20.38	peak
2	9079.000	38.14	9.45	47.59	74.00	-26.41	peak
3	11081.000	44.92	12.64	57.56	74.00	-16.44	peak
4	11081.000	29.69	12.64	42.33	54.00	-11.67	AVG
5	13809.000	33.69	16.99	50.68	74.00	-23.32	peak
6	17043.000	32.17	20.74	52.91	74.00	-21.09	peak
7	17934.000	29.64	23.45	53.09	74.00	-20.91	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. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point was deemed to comply with the limits list in the standard.

8.4. SPURIOUS EMISSIONS (18 GHz ~ 26 GHz)

8.4.1. 802.11a MODE

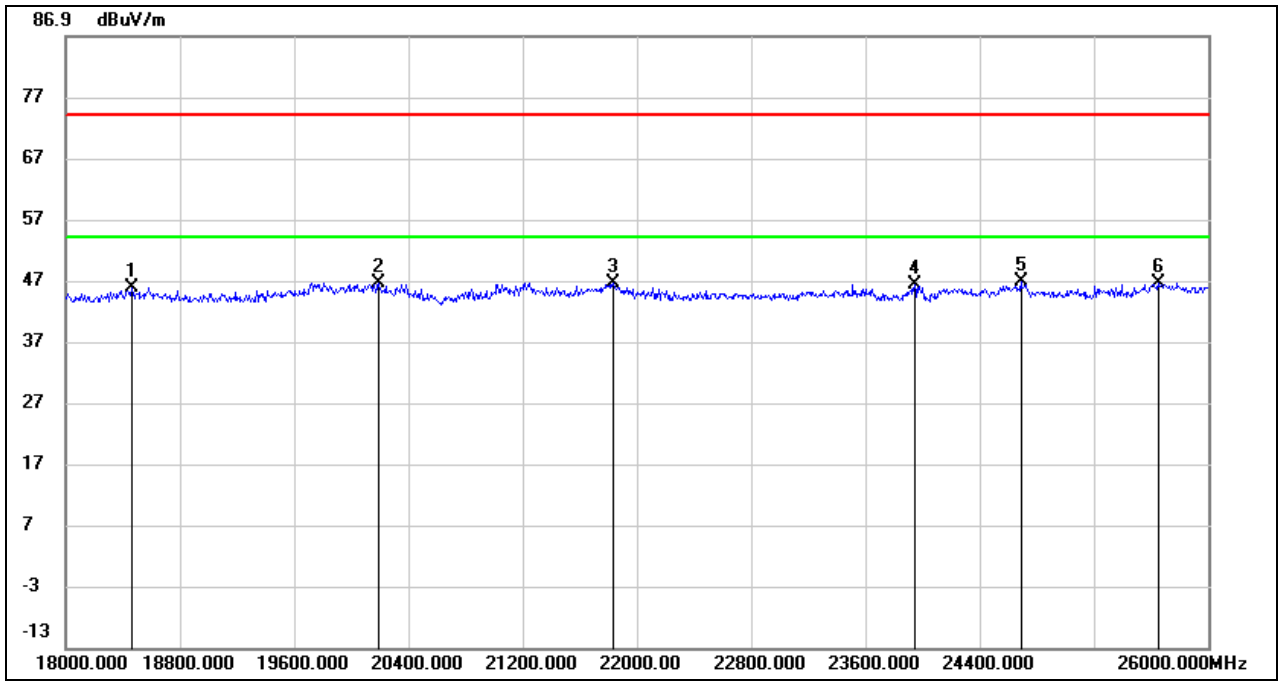
SPURIOUS EMISSIONS (UNII-2C BAND HIGH CHANNEL, HORIZONTAL, WORST-CASE CONFIGURATION)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	20072.000	50.84	-4.51	46.33	74.00	-27.67	peak
2	21464.000	52.75	-5.73	47.02	74.00	-26.98	peak
3	21632.000	52.84	-5.77	47.07	74.00	-26.93	peak
4	23208.000	52.08	-5.32	46.76	74.00	-27.24	peak
5	24464.000	49.28	-2.74	46.54	74.00	-27.46	peak
6	25784.000	48.73	-1.49	47.24	74.00	-26.76	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 (HIGH CHANNEL, VERTICAL, WORST-CASE CONFIGURATION)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18464.000	50.20	-4.39	45.81	74.00	-28.19	peak
2	20192.000	51.37	-4.76	46.61	74.00	-27.39	peak
3	21832.000	52.53	-5.92	46.61	74.00	-27.39	peak
4	23944.000	50.45	-4.14	46.31	74.00	-27.69	peak
5	24688.000	48.89	-2.11	46.78	74.00	-27.22	peak
6	25648.000	48.12	-1.53	46.59	74.00	-27.41	peak

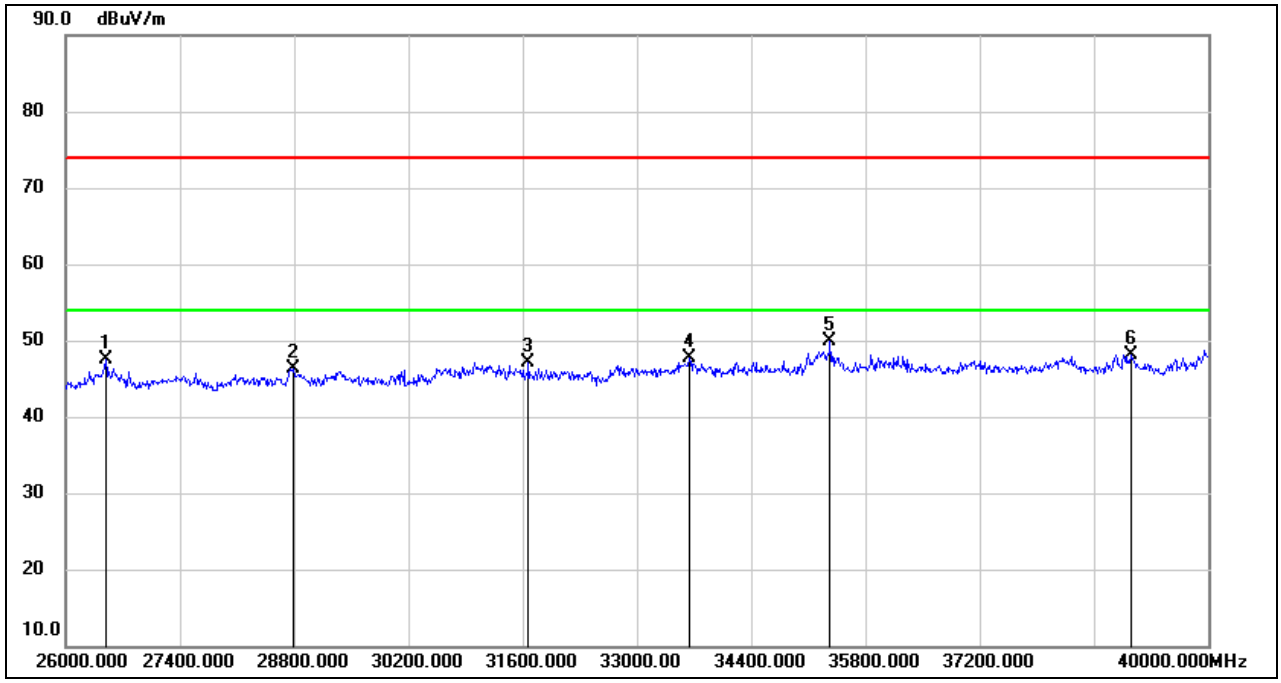
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.

Note: All the modes and antennas had been tested, but only the worst data was recorded in the report.

8.5. SPURIOUS EMISSIONS (26 GHz ~ 40 GHz)

8.5.1. 802.11a MODE

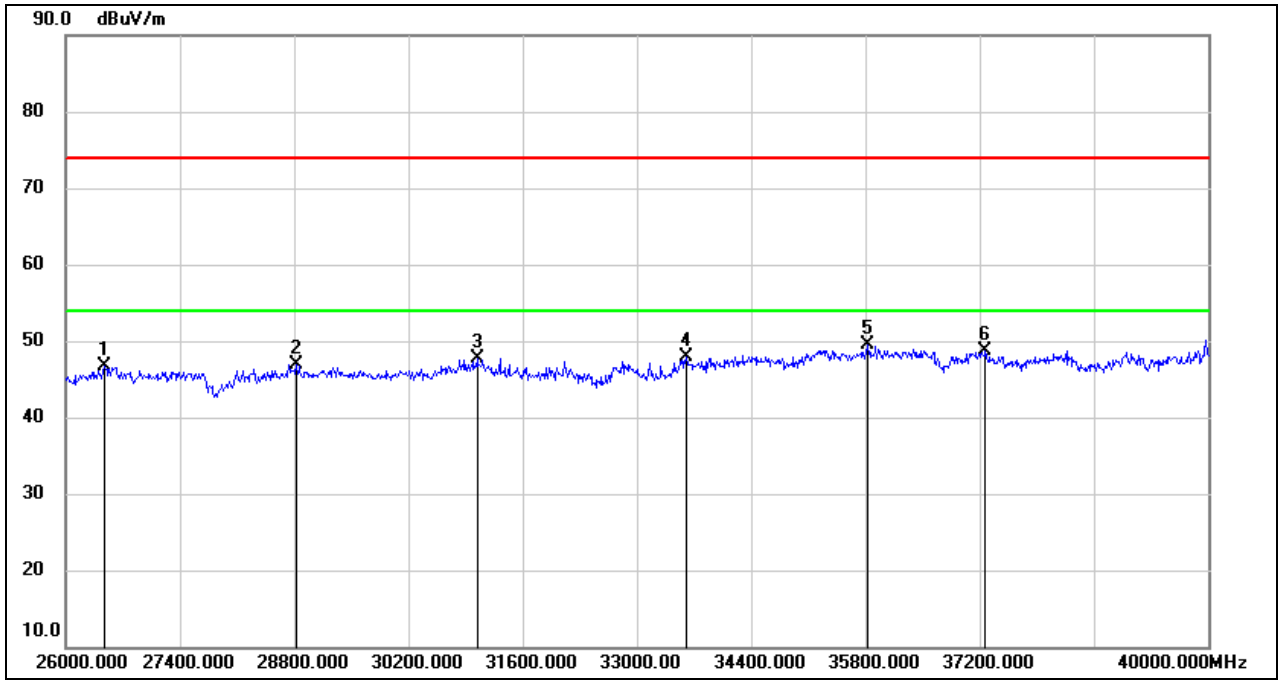
SPURIOUS EMISSIONS (UNII-2C BAND HIGH CHANNEL, HORIZONTAL, WORST-CASE CONFIGURATION)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	26490.000	52.29	-4.74	47.55	74.00	-26.45	peak
2	28786.000	46.99	-0.64	46.35	74.00	-27.65	peak
3	31670.000	48.36	-1.21	47.15	74.00	-26.85	peak
4	33644.000	47.31	0.42	47.73	74.00	-26.27	peak
5	35366.000	47.40	2.59	49.99	74.00	-24.01	peak
6	39062.000	43.81	4.30	48.11	74.00	-25.89	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.

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



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	26476.000	51.53	-4.78	46.75	74.00	-27.25	peak
2	28828.000	47.63	-0.79	46.84	74.00	-27.16	peak
3	31040.000	48.45	-0.72	47.73	74.00	-26.27	peak
4	33602.000	47.51	0.46	47.97	74.00	-26.03	peak
5	35828.000	45.75	3.67	49.42	74.00	-24.58	peak
6	37270.000	45.56	3.14	48.70	74.00	-25.30	peak

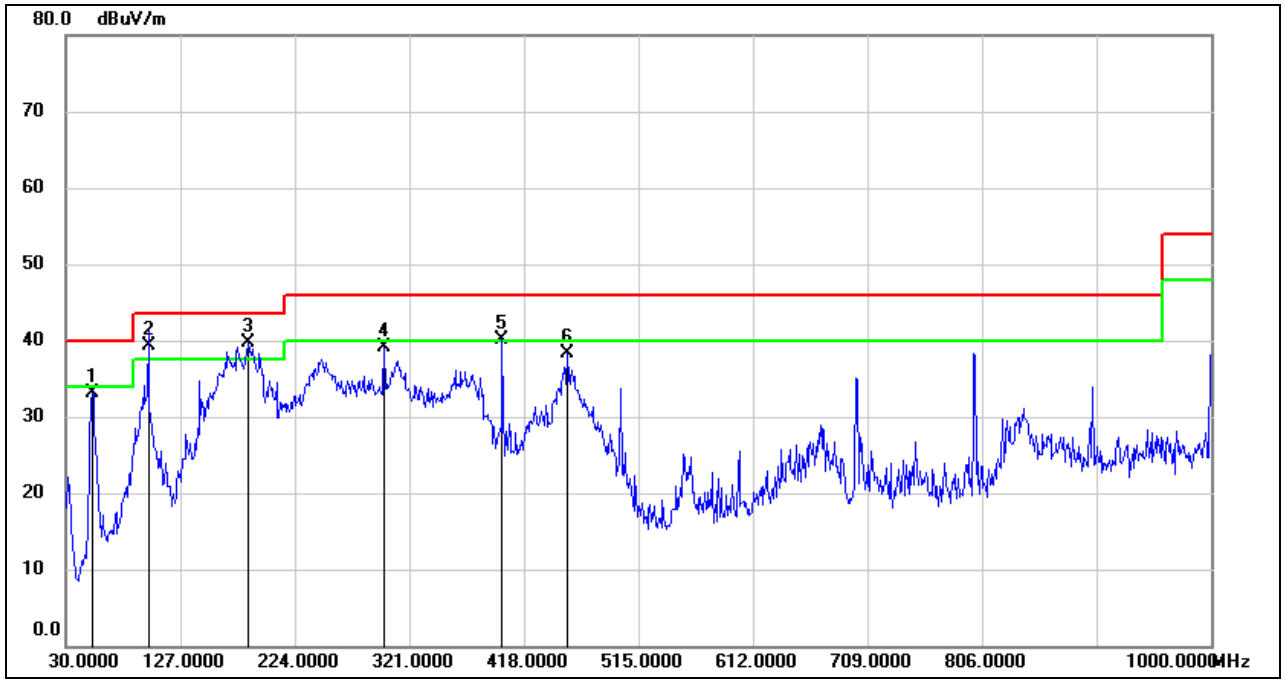
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.

Note: All the modes and antennas had been tested, but only the worst data was recorded in the report.

8.6. SPURIOUS EMISSIONS (30 MHz ~ 1 GHz)

8.6.1. 802.11a MODE

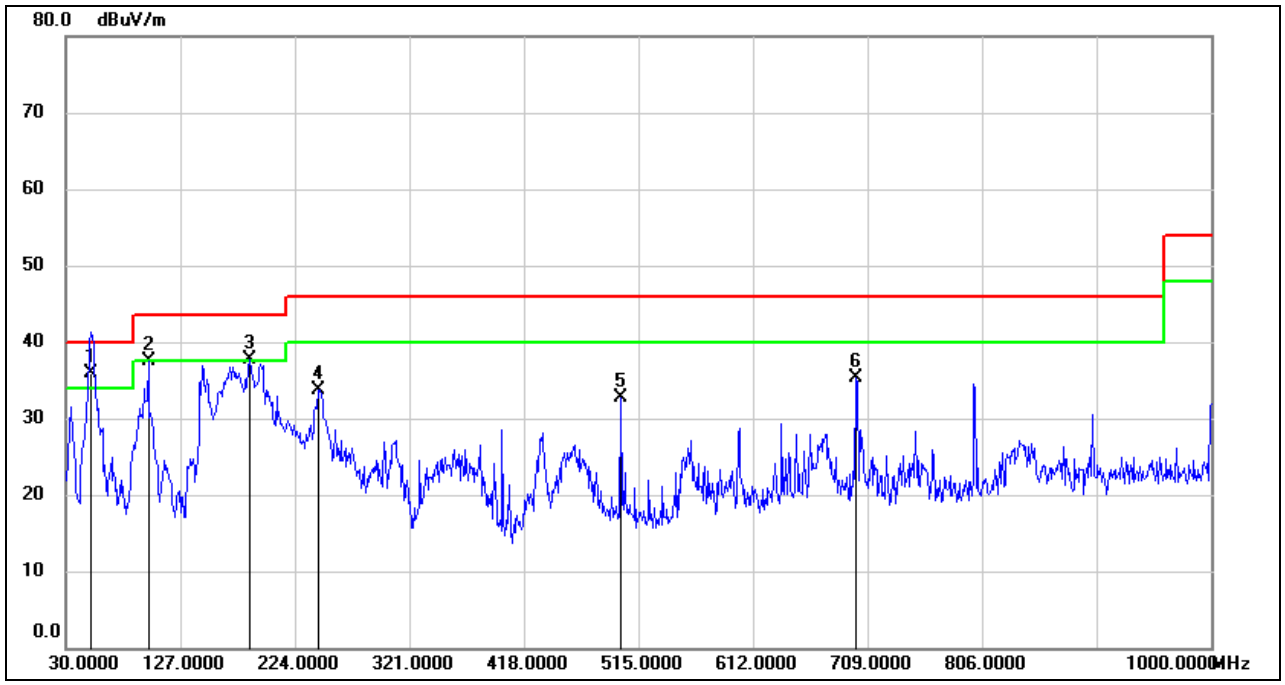
SPURIOUS EMISSIONS (UNII-2C BAND HIGH CHANNEL, HORIZONTAL, WORST-CASE CONFIGURATION)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	52.3100	51.73	-18.56	33.17	40.00	-6.83	QP
2	99.8399	60.99	-21.72	39.27	43.50	-4.23	QP
3	184.2300	56.03	-16.31	39.72	43.50	-3.78	QP
4	299.6600	53.52	-14.39	39.13	46.00	-6.87	QP
5	399.5700	52.94	-12.81	40.13	46.00	-5.87	QP
6	454.8600	50.11	-11.83	38.28	46.00	-7.72	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 (UNII-2C BAND HIGH CHANNEL, VERTICAL, WORST-CASE CONFIGURATION)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	51.3400	54.29	-18.46	35.83	40.00	-4.17	QP
2	99.8399	59.26	-21.72	37.54	43.50	-5.96	QP
3	185.2000	53.98	-16.26	37.72	43.50	-5.78	QP
4	244.3700	50.62	-16.84	33.78	46.00	-12.22	QP
5	499.4800	43.60	-10.93	32.67	46.00	-13.33	QP
6	699.3000	42.17	-6.93	35.24	46.00	-10.76	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

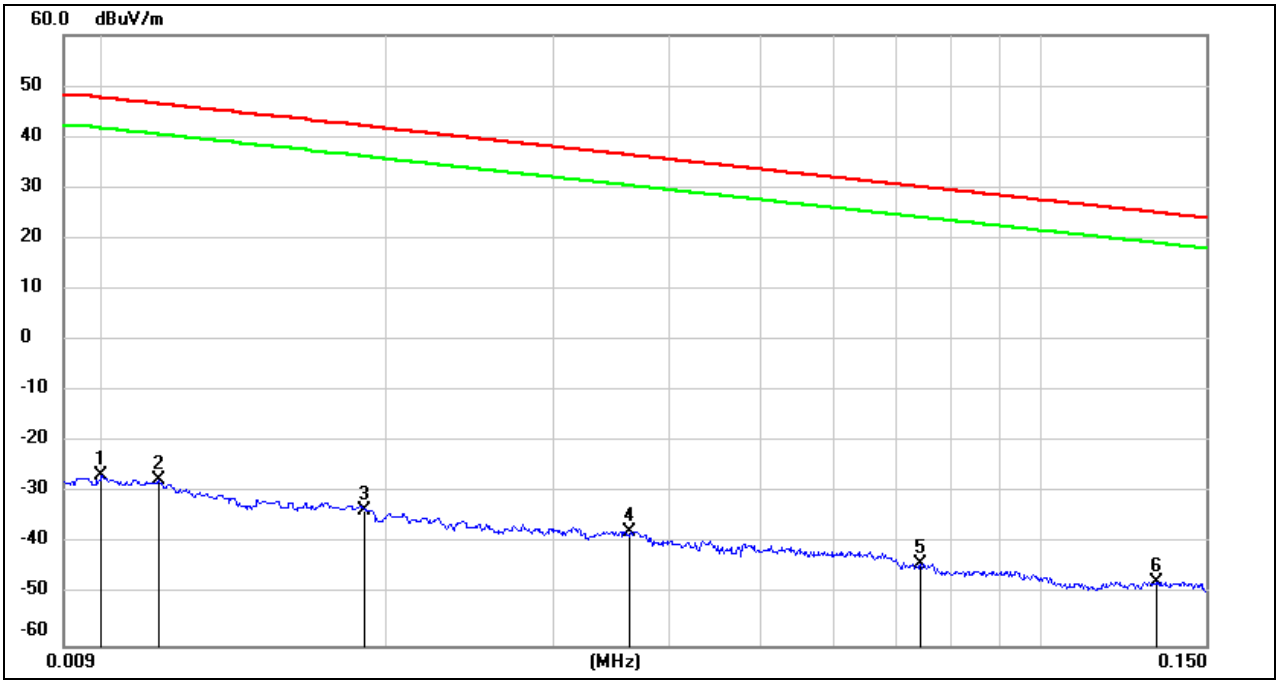
Note: All the modes and antennas had been tested, but only the worst data was recorded in the report.

8.7. SPURIOUS EMISSIONS BELOW 30 MHz

8.7.1. 802.11a MODE

SPURIOUS EMISSIONS (UNII-2C BAND HIGH CHANNEL, LOOP ANTENNA FACE ON TO THE EUT, WORST-CASE CONFIGURATION)

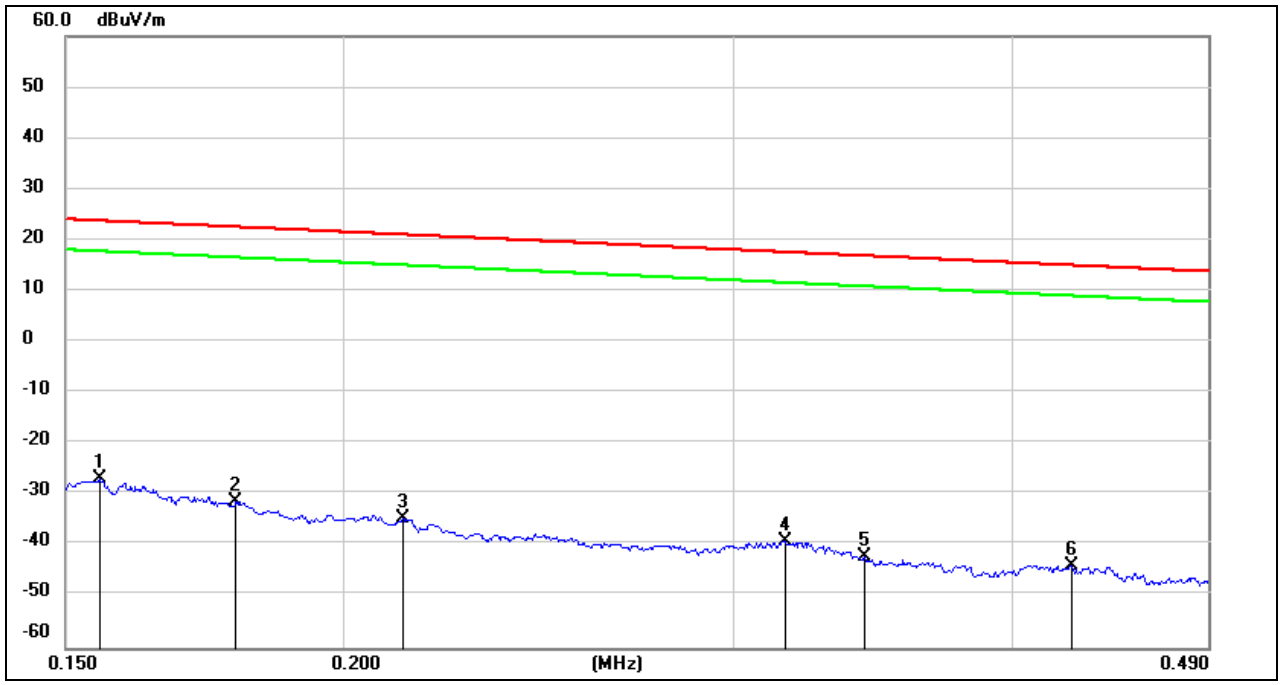
9 kHz~ 150 kHz



No.	Frequency	Reading	Correct	FCC Result	FCC Limit	ISED Result	ISED Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuA/m)	(dBuA/m)	(dB)	
1	0.0100	74.72	-101.40	-26.68	47.6	-78.18	-3.90	-74.28	peak
2	0.0114	73.88	-101.40	-27.52	46.46	-79.02	-5.04	-73.98	peak
3	0.0189	67.99	-101.35	-33.36	42.07	-84.86	-9.43	-75.43	peak
4	0.0362	63.88	-101.42	-37.54	36.43	-89.04	-15.07	-73.97	peak
5	0.0743	57.58	-101.59	-44.01	30.18	-95.51	-21.32	-74.19	peak
6	0.1324	54.17	-101.69	-47.52	25.17	-99.02	-26.33	-72.69	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.
4. dBuA/m = dBuV/m – 20log10(120π) = dBuV/m -51.5.

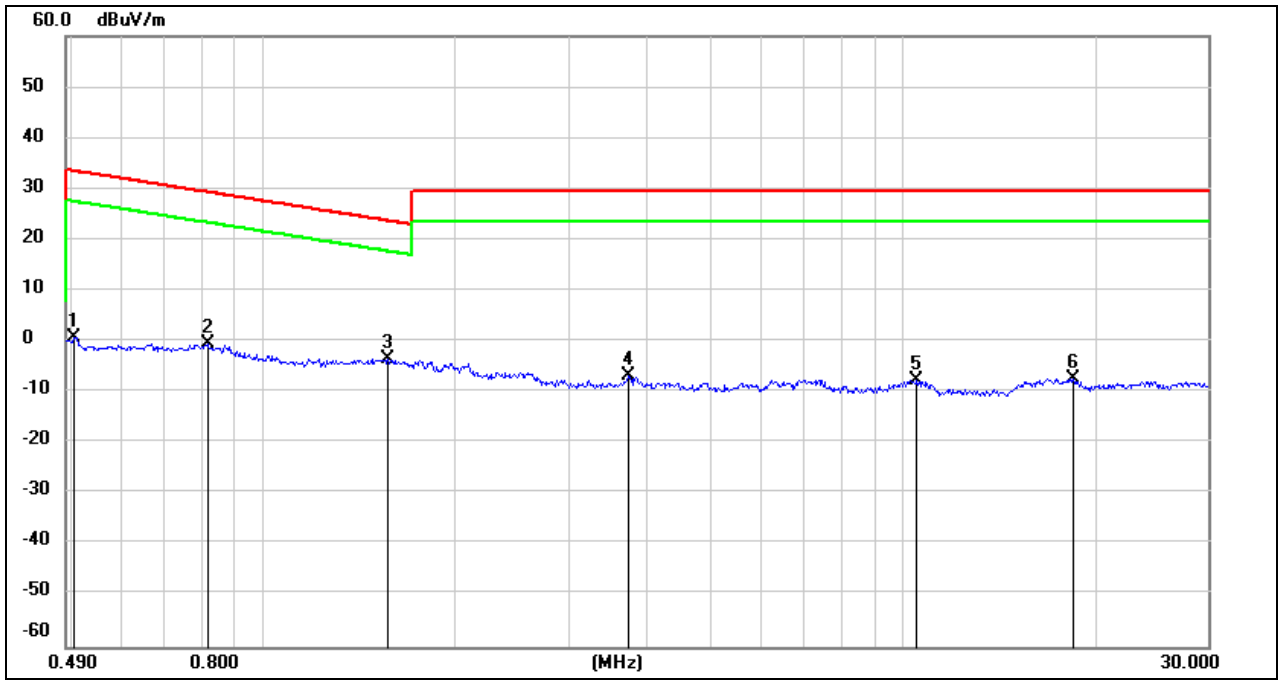
150 kHz ~ 490 kHz



No.	Frequency	Reading	Correct	FCC Result	FCC Limit	ISED Result	ISED Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuA/m)	(dBuA/m)	(dB)	
1	0.1554	74.77	-101.65	-26.88	23.77	-78.38	-27.73	-50.65	peak
2	0.1789	70.32	-101.68	-31.36	22.55	-82.86	-28.95	-53.91	peak
3	0.2127	66.95	-101.74	-34.79	21.04	-86.29	-30.46	-55.83	peak
4	0.3163	62.70	-101.87	-39.17	17.6	-90.67	-33.90	-56.77	peak
5	0.3431	59.67	-101.90	-42.23	16.89	-93.73	-34.61	-59.12	peak
6	0.4248	58.09	-101.99	-43.9	15.04	-95.40	-36.46	-58.94	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.
4. dBuA/m = dBuV/m – 20log10(120π) = dBuV/m -51.5.

490 kHz ~ 30 MHz



No.	Frequency	Reading	Correct	FCC Result	FCC Limit	ISED Result	ISED Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuA/m)	(dBuA/m)	(dB)	
1	0.5039	62.93	-62.07	0.86	33.56	-50.64	-17.94	-32.70	peak
2	0.8162	61.57	-62.16	-0.59	29.37	-52.09	-22.13	-29.96	peak
3	1.5625	58.46	-62.02	-3.56	23.73	-55.06	-27.77	-27.29	peak
4	3.7100	54.70	-61.41	-6.71	29.54	-58.21	-21.96	-36.25	peak
5	10.5234	53.31	-60.82	-7.51	29.54	-59.01	-21.96	-37.05	peak
6	18.4908	53.56	-60.89	-7.33	29.54	-58.83	-21.96	-36.87	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.
4. dBuA/m = dBuV/m – 20log10(120π) = dBuV/m -51.5.

Note: All the modes and antennas had been tested, but only the worst data was recorded in the report.

9. AC POWER LINE CONDUCTED EMISSIONS

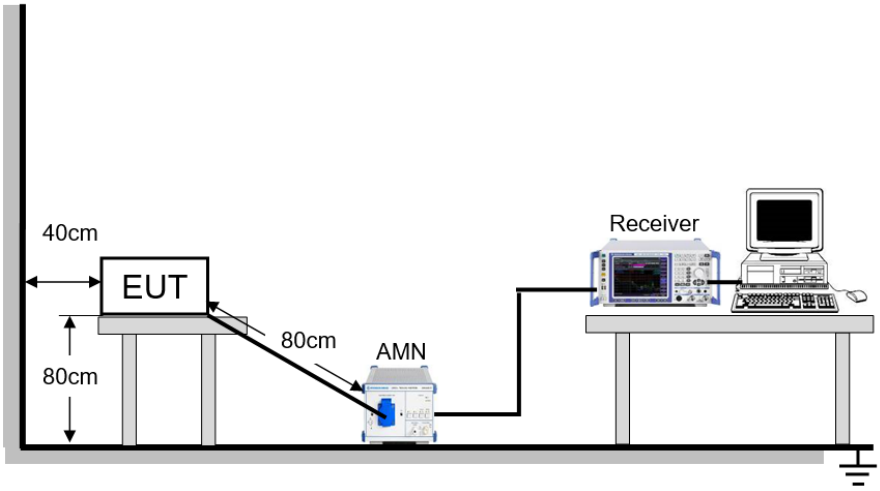
LIMITS

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

Refer to ANSI C63.10-2013 clause 6.2.



The EUT is put on a table of non-conducting material that is 80 cm high. The vertical conducting wall of shielding is located 40 cm 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 30 MHz using CISPR Quasi-Peak and average detector mode. The bandwidth of EMI test receiver is set at 9 kHz.

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.

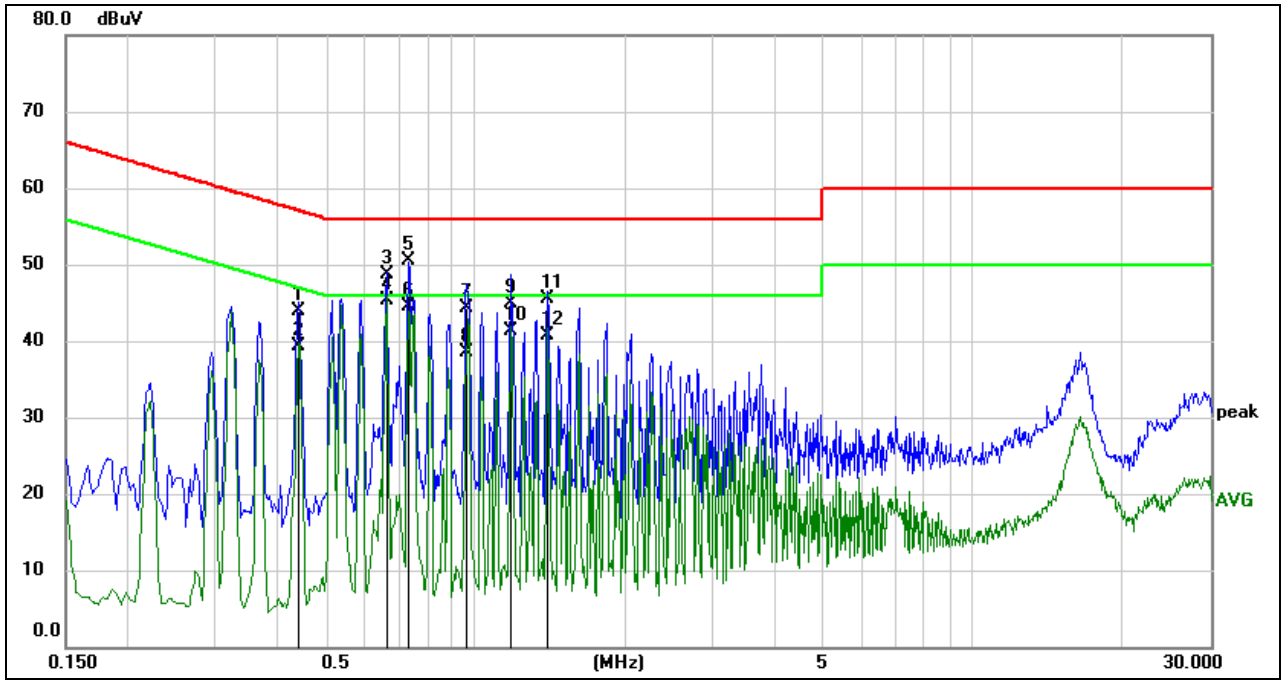
TEST ENVIRONMENT

Temperature	22 °C	Relative Humidity	68.9 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 12 V

RESULTS

9.1. 802.11a MODE

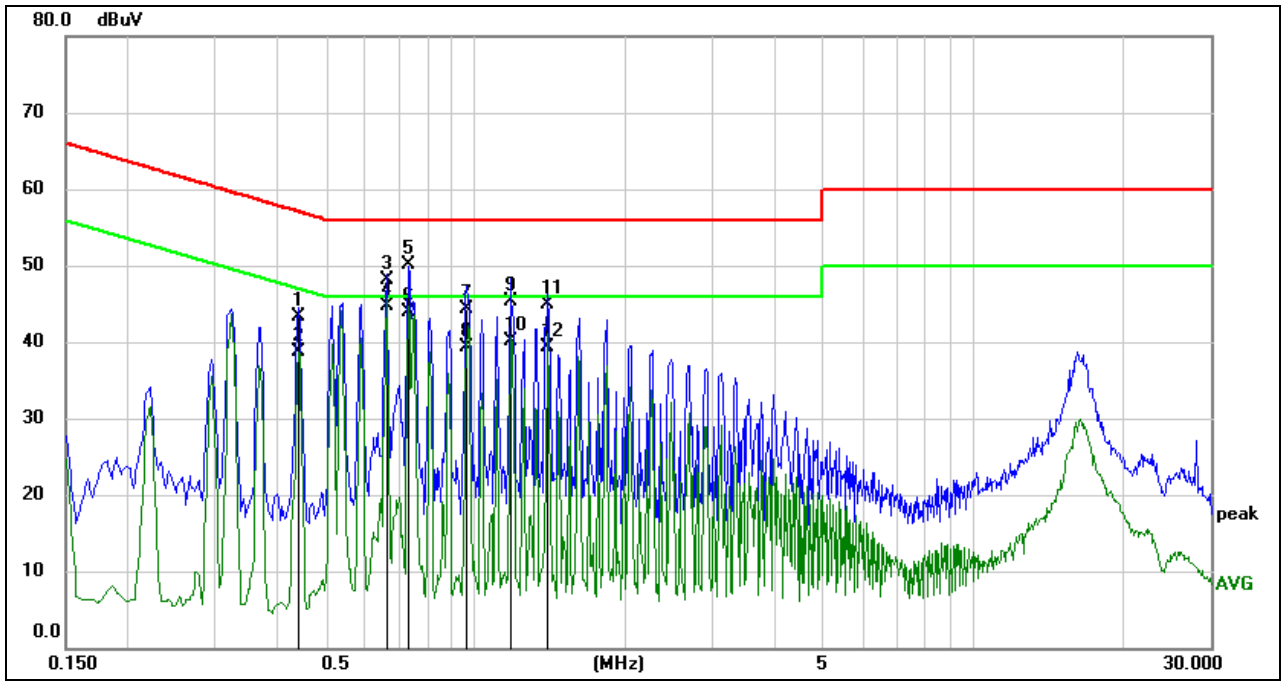
LINE N RESULTS (UNII-2C BAND HIGH CHANNEL, WORST-CASE CONFIGURATION)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.4418	34.26	9.60	43.86	57.03	-13.17	QP
2	0.4418	29.71	9.60	39.31	47.03	-7.72	AVG
3	0.6623	39.07	9.60	48.67	56.00	-7.33	QP
4	0.6623	35.70	9.60	45.30	46.00	-0.70	AVG
5	0.7356	40.97	9.60	50.57	56.00	-5.43	QP
6	0.7356	34.92	9.60	44.52	46.00	-1.48	AVG
7	0.9630	34.70	9.61	44.31	56.00	-11.69	QP
8	0.9630	28.97	9.61	38.58	46.00	-7.42	AVG
9	1.1816	35.32	9.61	44.93	56.00	-11.07	QP
10	1.1816	31.79	9.61	41.40	46.00	-4.60	AVG
11	1.3973	35.81	9.61	45.42	56.00	-10.58	QP
12	1.3973	31.14	9.61	40.75	46.00	-5.25	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: 80 Hz (0.009 MHz ~ 0.15 MHz), 4 kHz (0.15 MHz ~ 30 MHz), Scan time: auto.

LINE L RESULTS (UNII-2C BAND HIGH CHANNEL, WORST-CASE CONFIGURATION)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.4411	33.63	9.60	43.23	57.04	-13.81	QP
2	0.4411	29.12	9.60	38.72	47.04	-8.32	AVG
3	0.6615	38.58	9.60	48.18	56.00	-7.82	QP
4	0.6615	35.18	9.60	44.78	46.00	-1.22	AVG
5	0.7355	40.42	9.60	50.02	56.00	-5.98	QP
6	0.7355	34.36	9.60	43.96	46.00	-2.04	AVG
7	0.9637	34.62	9.61	44.23	56.00	-11.77	QP
8	0.9637	29.61	9.61	39.22	46.00	-6.78	AVG
9	1.1799	35.72	9.61	45.33	56.00	-10.67	QP
10	1.1799	30.42	9.61	40.03	46.00	-5.97	AVG
11	1.3981	35.31	9.61	44.92	56.00	-11.08	QP
12	1.3981	29.74	9.61	39.35	46.00	-6.65	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: 80 Hz (0.009 MHz ~ 0.15 MHz), 4 kHz (0.15 MHz ~ 30 MHz), Scan time: auto.

Note: All the modes had been tested, but only the worst data was recorded in the report.

10. FREQUENCY STABILITY

LIMITS

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

TEST PROCEDURE

1. The EUT was placed inside an environmental chamber as the temperature in the chamber was varied between 0 °C ~ 40 °C (declared by customer).

2. The temperature was incremented by 10 °C intervals and the unit allowed to stabilize at each temperature before each measurement. The center frequency of the transmitting channel was evaluated at each temperature and the frequency deviation from the channel's center frequency was recorded.

3. The primary supply voltage is varied from 85 % to 115 % of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

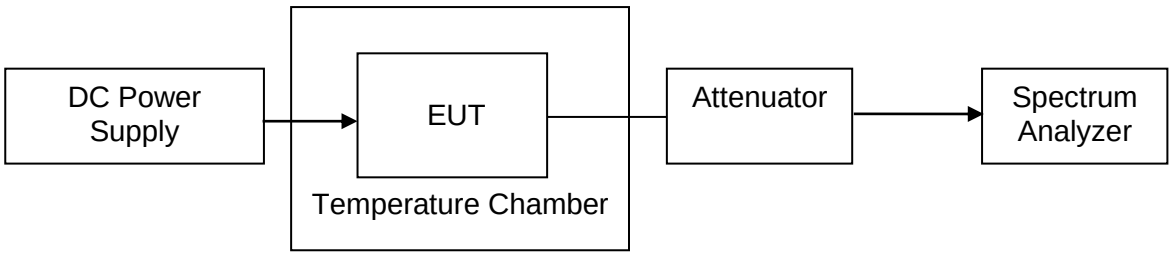
Connect the EUT to the spectrum analyser and use the following settings:

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	10 kHz
VBW	≥3 × RBW
Span	Encompass the entire emissions bandwidth (EBW) of the signal
Trace	Max hold
Sweep time	Auto

4. While maintaining a constant temperature inside the environmental chamber, turn the EUT on and record the operating frequency at startup, and at 2 minutes, 5minutes, and 10 minutes after the EUT is energized.

5. Allow the trace to stabilize, find the peak value of the power envelope and record the frequency, then calculated the frequency drift.

TEST SETUP



TEST ENVIRONMENT

	Normal Test Conditions	Extreme Test Conditions
Relative Humidity	20 % - 75 %	/
Atmospheric Pressure	100 kPa ~102 kPa	/
Temperature	T_N (Normal Temperature): 22 °C – 28 °C	T_L (Low Temperature): 0 °C
		T_H (High Temperature): 40 °C
Supply Voltage	V_N (Normal Voltage): DC 12 V	V_L (Low Voltage): DC 10.2 V
		V_H (High Voltage): DC 13.8 V

RESULTS

Please refer to Appendix E.

11. DYNAMIC FREQUENCY SELECTION

APPLICABILITY OF DFS REQUIREMENTS

A U-NII network will employ a DFS function to detect signals from radar systems and to avoid co-channel operation with these systems. This applies to the 5250-5350 MHz and/or 5470-5725 MHz bands.
Within the context of the operation of the DFS function, a U-NII device will operate in either Master Mode or Client Mode. U-NII devices operating in Client Mode can only operate in a network controlled by a U-NII device operating in Master Mode.

Table 1: Applicability of DFS Requirements Prior to Use of a Channel

Requirement	Operational Mode		
	☐ Master	☒ Client Without Radar Detection	☐ Client With Radar Detection
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes	Not required	Not required
U-NII Detection Bandwidth	Yes	Not required	Yes

Table 2: Applicability of DFS requirements during normal operation

Requirement	Operational Mode	
	☐ Master Device or Client with Radar Detection	☒ Client Without Radar Detection
DFS Detection Threshold	Yes	Not required
Channel Closing Transmission Time	Yes	Yes
Channel Move Time	Yes	Yes
U-NII Detection Bandwidth	Yes	Not required

Additional requirements for devices with multiple bandwidth modes	☐ Master Device or Client with Radar Detection	☒ Client Without Radar Detection
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other tests	Any single BW mode	Not required
Note: Frequencies selected for statistical performance check should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in each of the bonded 20 MHz channels and the channel center frequency.		

LIMITS

(1) DFS Detection Thresholds

Table 3: DFS Detection Thresholds for Master Devices and Client Devices With Radar Detection

Maximum Transmit Power	Value (See Notes 1, 2, and 3)
EIRP ≥ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64 dBm
Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna. Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response. Note3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.	

(2) DFS Response Requirements

Table 4: DFS Response Requirement Values

Parameter	Value
Non-occupancy period	Minimum 30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds See Note 1.
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.
Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst. Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required facilitating a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions. Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.	

PARAMETERS OF RADAR TEST WAVEFORMS

This section provides the parameters for required test waveforms, minimum percentage of successful detections, and the minimum number of trials that must be used for determining DFS conformance. Step intervals of 0.1 microsecond for Pulse Width, 1 microsecond for PRI, 1 MHz for chirp width and 1 for the number of pulses will be utilized for the random determination of specific test waveforms.

Table 5 Short Pulse Radar Test Waveforms

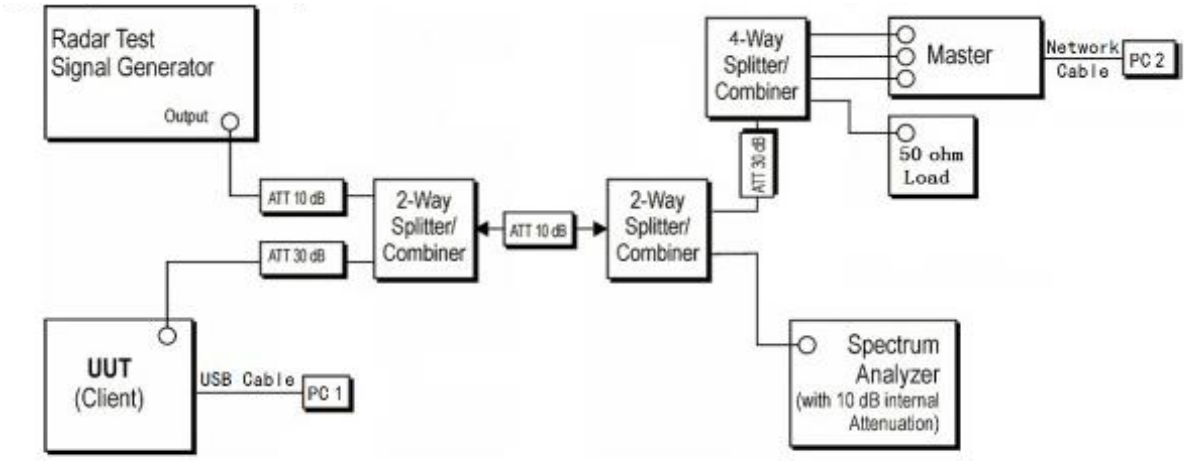
Radar Type	Pulse Width (μsec)	PRI (μsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A	$\text{Roundup}\left\{\left(\frac{1}{360}\right)\cdot\left(\frac{19\cdot 10^6}{\text{PRI}_{\mu\text{sec}}}\right)\right\}$	60%	30
		Test B			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120

Note 1: Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests.
Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a
Test B: 15 unique PRI values randomly selected within the range of 518-3066 μsec, with a minimum increment of 1 μsec, excluding PRI values selected in Test A

A minimum of 30 unique waveforms are required for each of the Short Pulse Radar Types 2 through 4. If more than 30 waveforms are used for Short Pulse Radar Types 2 through 4, then each additional waveform must also be unique and not repeated from the previous waveforms. If more than 30 waveforms are used for Short Pulse Radar Type 1, then each additional waveform is generated with Test B and must also be unique and not repeated from the previous waveforms in Tests A or B. Test aggregate is average of the percentage of successful detections of short pulse radar types 1-4.

TEST SETUP

Setup for Client with injection at the Master



RESULTS

Please refer to Appendix F.

12. 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

Appendix

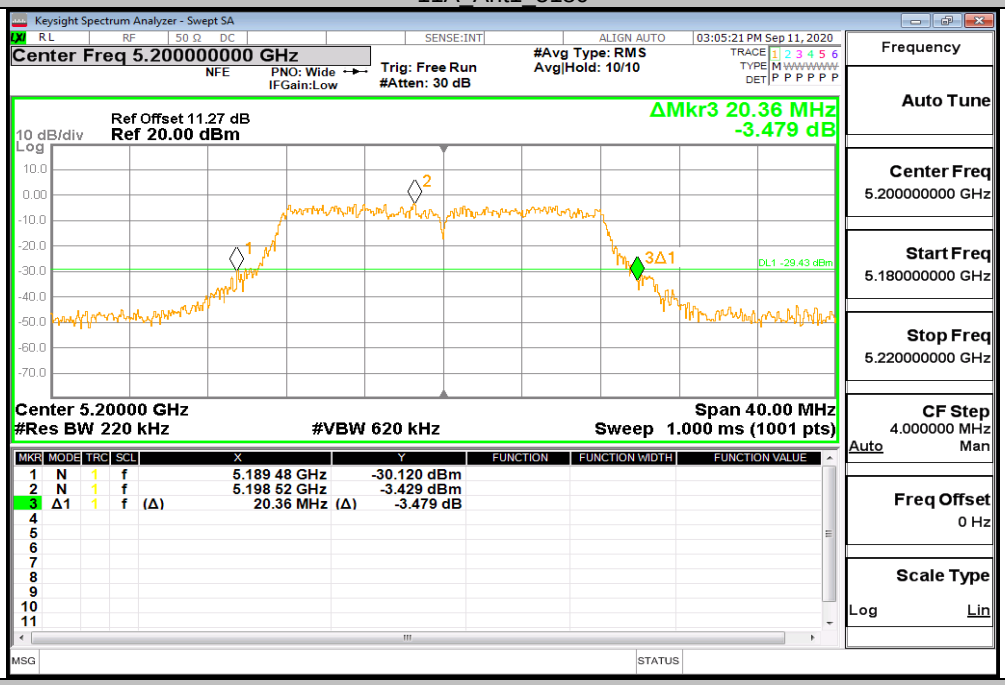
Appendix A1: Emission Bandwidth
Test Result

Test Mode	Antenna	Channel	26db EBW [MHz]	FL[MHz]	FH[MHz]	Verdict
11A	Ant1	5180	19.480	5170.400	5189.880	PASS
		5200	20.360	5189.480	5209.840	PASS
		5240	19.680	5229.880	5249.560	PASS
		5260	19.760	5250.280	5270.040	PASS
		5280	20.240	5269.880	5290.120	PASS
		5320	19.560	5310.080	5329.640	PASS
		5500	20.040	5489.920	5509.960	PASS
		5600	20.320	5589.680	5610.000	PASS
		5700	19.640	5690.040	5709.680	PASS
		5720	20.280	5709.800	5730.080	PASS
		5720_UNII-2C	15.2	5709.800	5725	PASS
		5720_UNII-3	5.08	5725	5730.080	PASS
		5745	19.880	5734.920	5754.800	PASS
		5785	19.800	5774.920	5794.720	PASS
		5825	19.360	5815.400	5834.760	PASS
11N20SISO	Ant1	5180	20.640	5169.560	5190.200	PASS
		5200	20.680	5189.440	5210.120	PASS
		5240	20.400	5229.800	5250.200	PASS
		5260	20.400	5249.680	5270.080	PASS
		5280	20.800	5269.320	5290.120	PASS
		5320	20.880	5309.160	5330.040	PASS
		5500	20.360	5490.000	5510.360	PASS
		5600	20.200	5589.880	5610.080	PASS
		5700	20.680	5689.600	5710.280	PASS
		5720	21.000	5709.240	5730.240	PASS
		5720_UNII-2C	15.76	5709.240	5725	PASS
		5720_UNII-3	5.24	5725	5730.240	PASS
		5745	20.800	5734.480	5755.280	PASS
		5785	20.600	5774.280	5794.880	PASS
		5825	20.920	5814.520	5835.440	PASS
11N40SISO	Ant1	5190	40.720	5169.280	5210.000	PASS
		5230	39.920	5209.760	5249.680	PASS
		5270	40.640	5249.440	5290.080	PASS
		5310	41.280	5289.200	5330.480	PASS
		5510	41.200	5489.600	5530.800	PASS
		5590	41.200	5569.440	5610.640	PASS
		5670	40.240	5649.440	5689.680	PASS
		5710	41.040	5689.360	5730.400	PASS
		5710_UNII-2C	35.64	5689.360	5725	PASS
		5710_UNII-3	5.4	5725	5730.400	PASS
		5755	41.040	5734.200	5775.240	PASS
		5795	40.880	5774.520	5815.400	PASS
11AC20SISO	Ant1	5180	20.440	5169.880	5190.320	PASS
		5200	21.240	5189.400	5210.640	PASS
		5240	20.160	5229.840	5250.000	PASS
		5260	20.320	5249.680	5270.000	PASS
		5280	20.920	5269.320	5290.240	PASS
		5320	21.280	5309.120	5330.400	PASS
		5500	20.800	5489.400	5510.200	PASS
		5600	20.640	5589.520	5610.160	PASS

		5700	21.080	5689.240	5710.320	PASS
		5720	20.840	5709.480	5730.320	PASS
		5720_UNII-2C	15.52	5709.480	5725	PASS
		5720_UNII-3	5.32	5725	5730.320	PASS
		5745	20.320	5734.680	5755.000	PASS
		5785	20.800	5774.400	5795.200	PASS
		5825	21.200	5814.280	5835.480	PASS
11AC40SISO	Ant1	5190	40.880	5169.440	5210.320	PASS
		5230	39.920	5209.840	5249.760	PASS
		5270	40.400	5249.680	5290.080	PASS
		5310	40.480	5289.760	5330.240	PASS
		5510	40.720	5489.680	5530.400	PASS
		5590	41.120	5569.440	5610.560	PASS
		5670	41.200	5649.520	5690.720	PASS
		5710	40.160	5689.760	5729.920	PASS
		5710_UNII-2C	35.24	5689.760	5725	PASS
		5710_UNII-3	4.92	5725	5729.920	PASS
		5755	41.040	5734.360	5775.400	PASS
		5795	41.280	5774.280	5815.560	PASS
11AC80SISO	Ant1	5210	79.840	5169.840	5249.680	PASS
		5290	82.080	5249.200	5331.280	PASS
		5530	82.240	5489.360	5571.600	PASS
		5610	81.760	5568.720	5650.480	PASS
		5690	80.800	5649.520	5730.320	PASS
		5690_UNII-2C	75.48	5649.520	5725	PASS
		5690_UNII-3	5.32	5725	5730.320	PASS
		5775	80.160	5734.840	5815.000	PASS

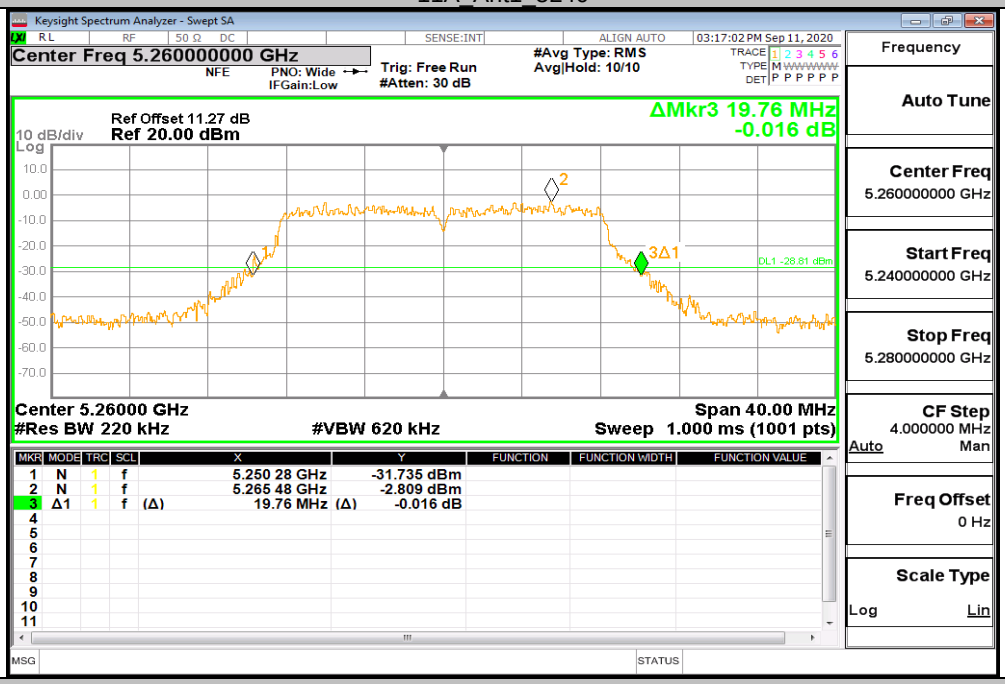
Test Graphs

11A_Ant1_5180



11A_Ant1_5200

11A_Ant1_5240



11A_Ant1_5260

11A_Ant1_5280

11A_Ant1_5320

11A_Ant1_5500

11A_Ant1_5600

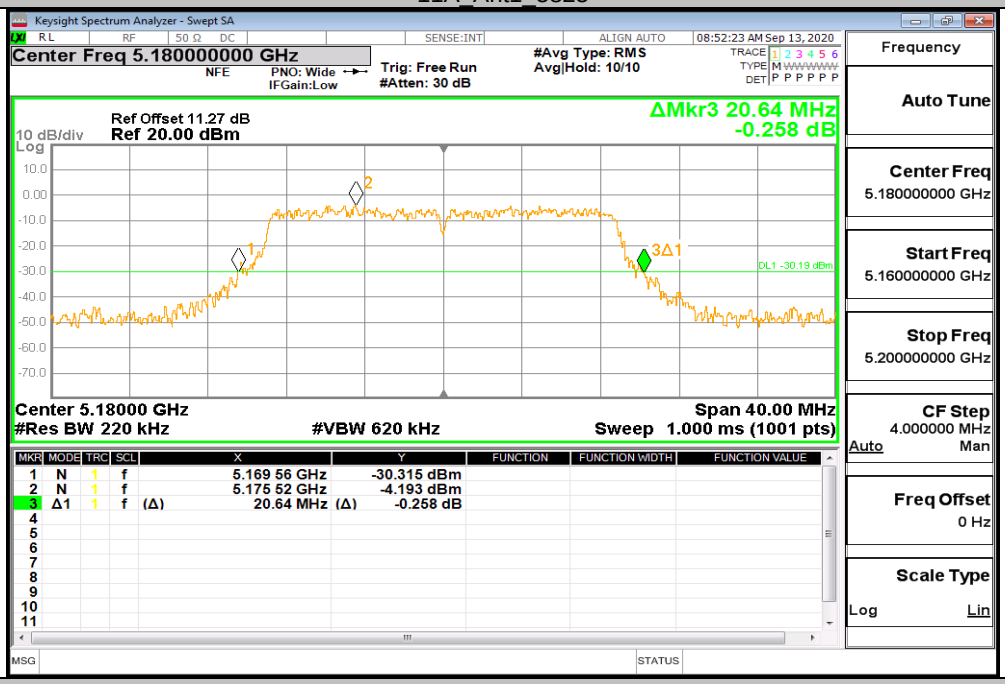
11A_Ant1_5700

11A_Ant1_5720

11A_Ant1_5745

11A_Ant1_5785

11A_Ant1_5825



11N20SISO_Ant1_5180

11N20SISO_Ant1_5200

11N20SISO_Ant1_5240

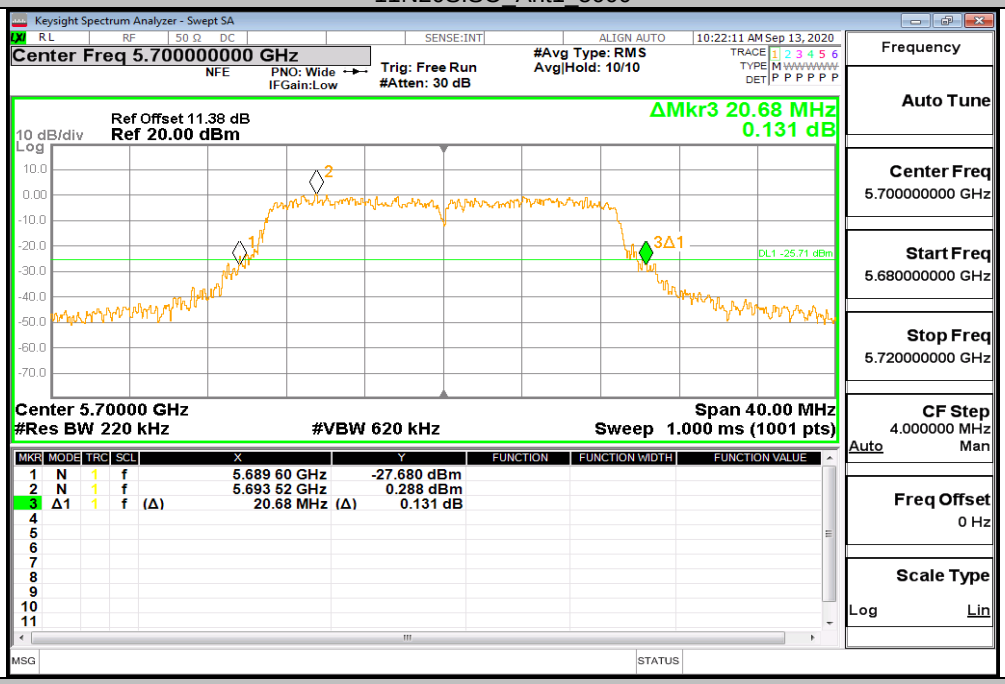
11N20SISO_Ant1_5260

11N20SISO_Ant1_5280

11N20SISO_Ant1_5320

11N20SISO_Ant1_5500

11N20SISO_Ant1_5600

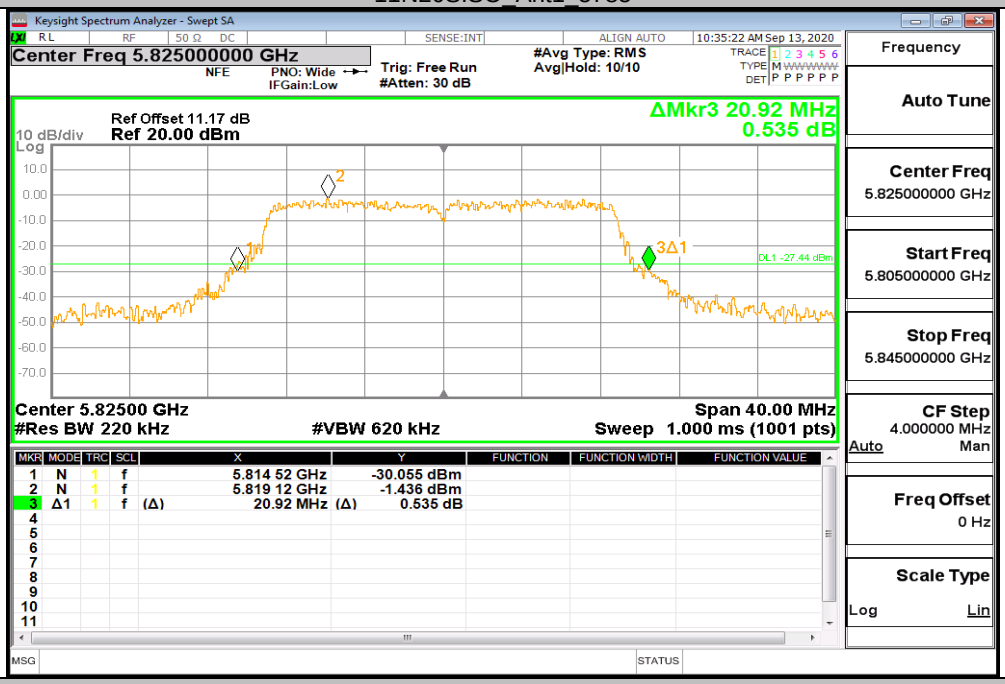


11N20SISO_Ant1_5700

11N20SISO_Ant1_5720

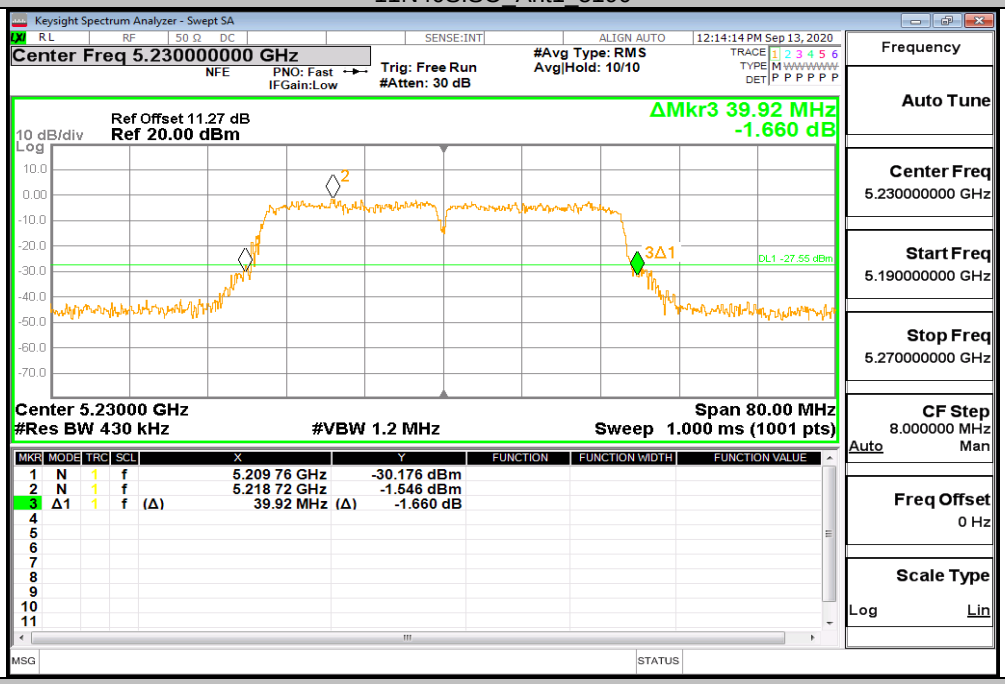
11N20SISO_Ant1_5745

11N20SISO_Ant1_5785



11N20SISO_Ant1_5825

11N40SISO_Ant1_5190



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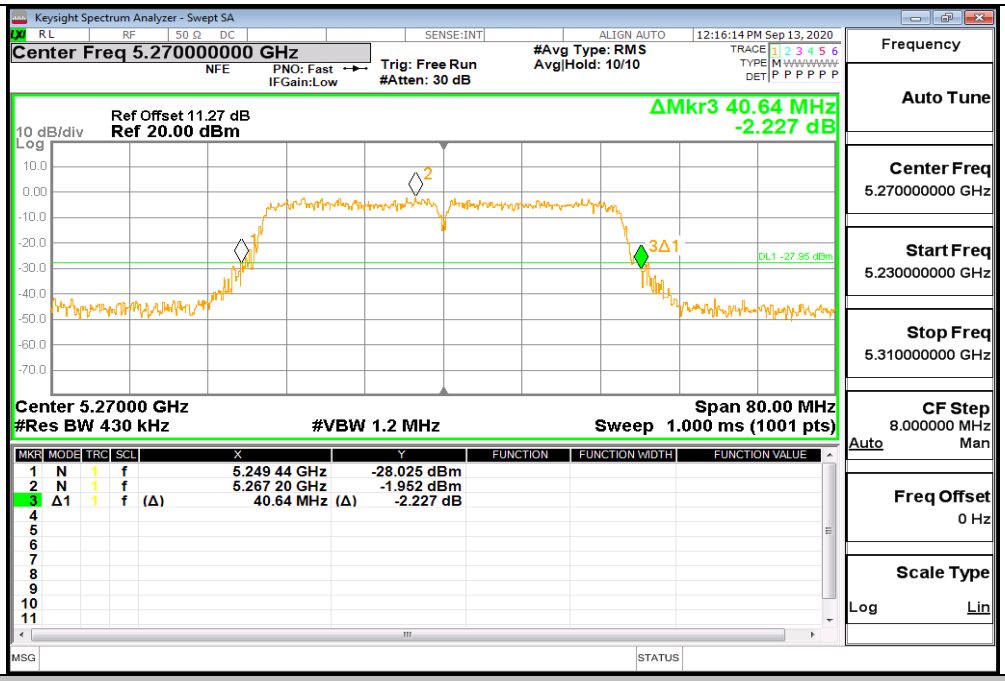
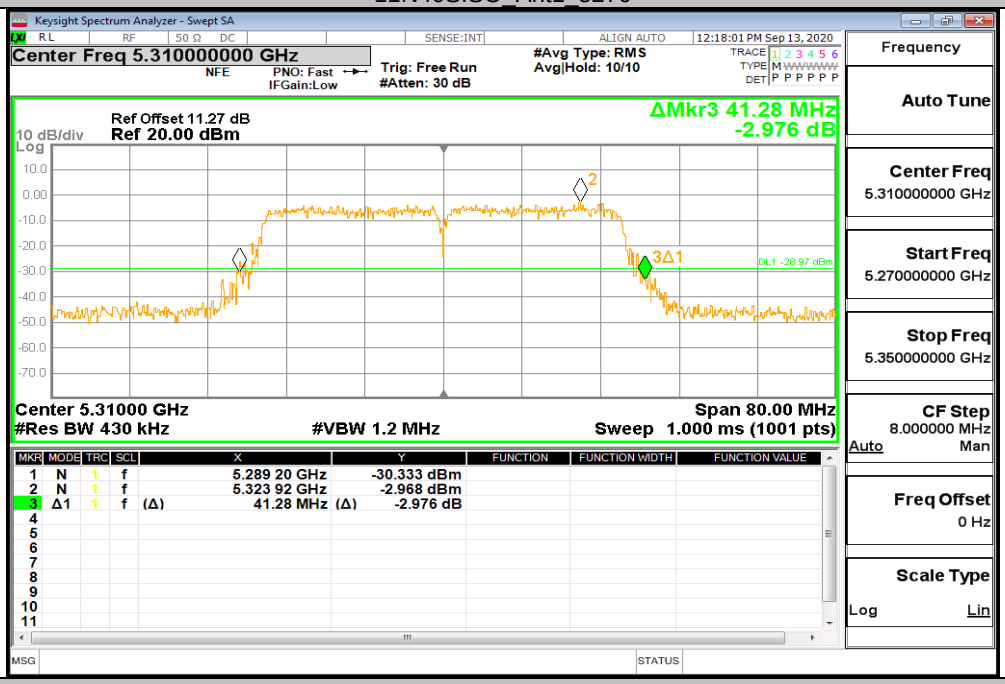


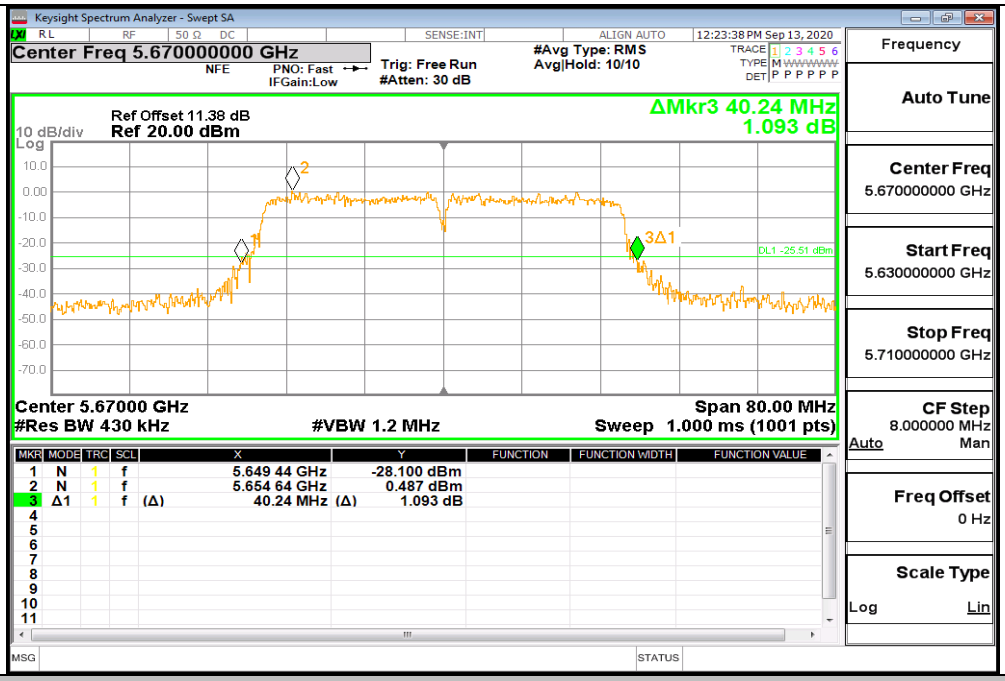
11N40SISO_Ant1_5270



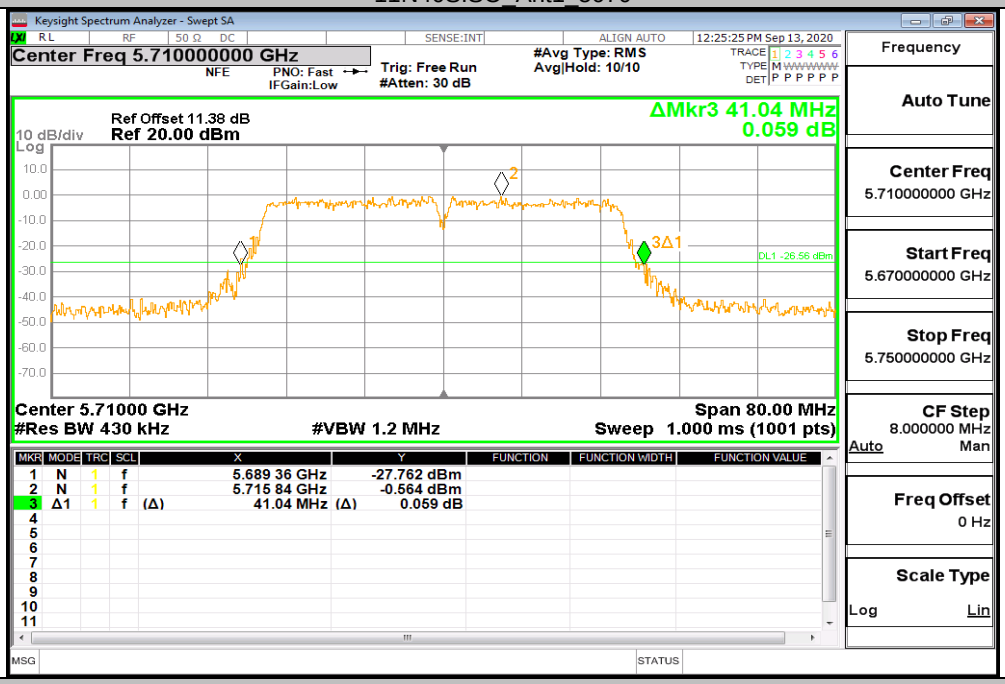
11N40SISO_Ant1_5310

11N40SISO_Ant1_5510

11N40SISO_Ant1_5590



11N40SISO_Ant1_5670



11N40SISO_Ant1_5710

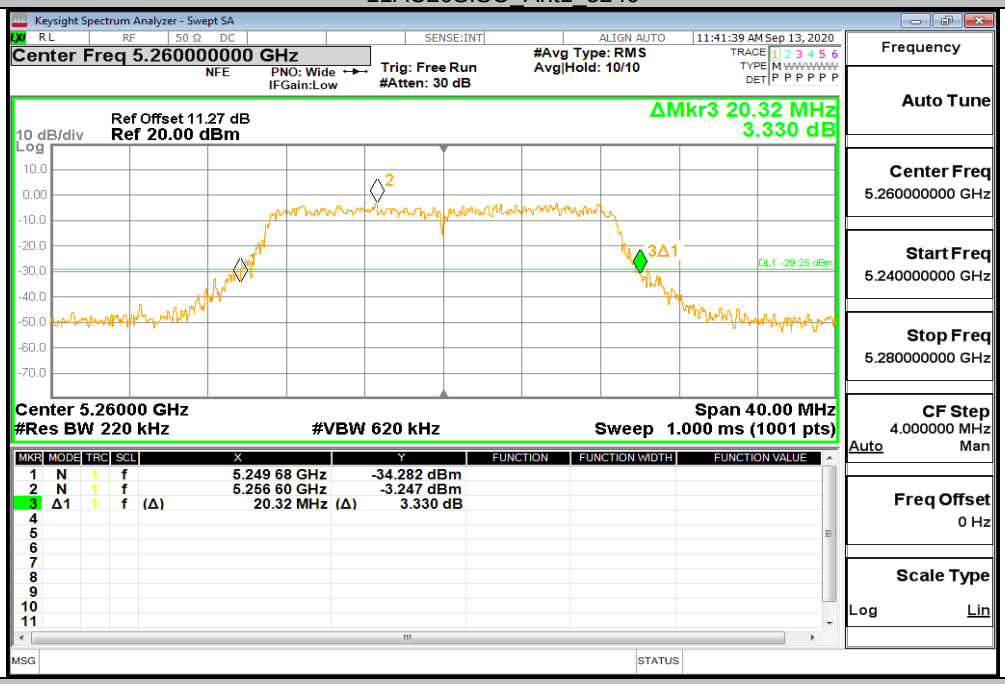
11N40SISO_Ant1_5755

11N40SISO_Ant1_5795

11AC20SISO_Ant1_5180

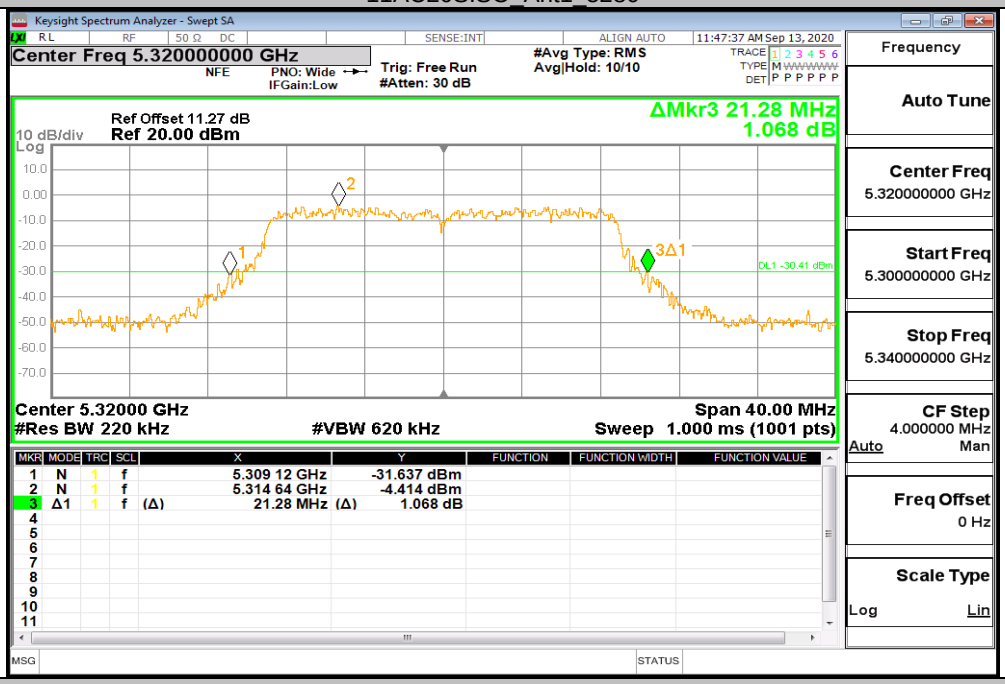
11AC20SISO_Ant1_5200

11AC20SISO_Ant1_5240



11AC20SISO_Ant1_5260

11AC20SISO_Ant1_5280

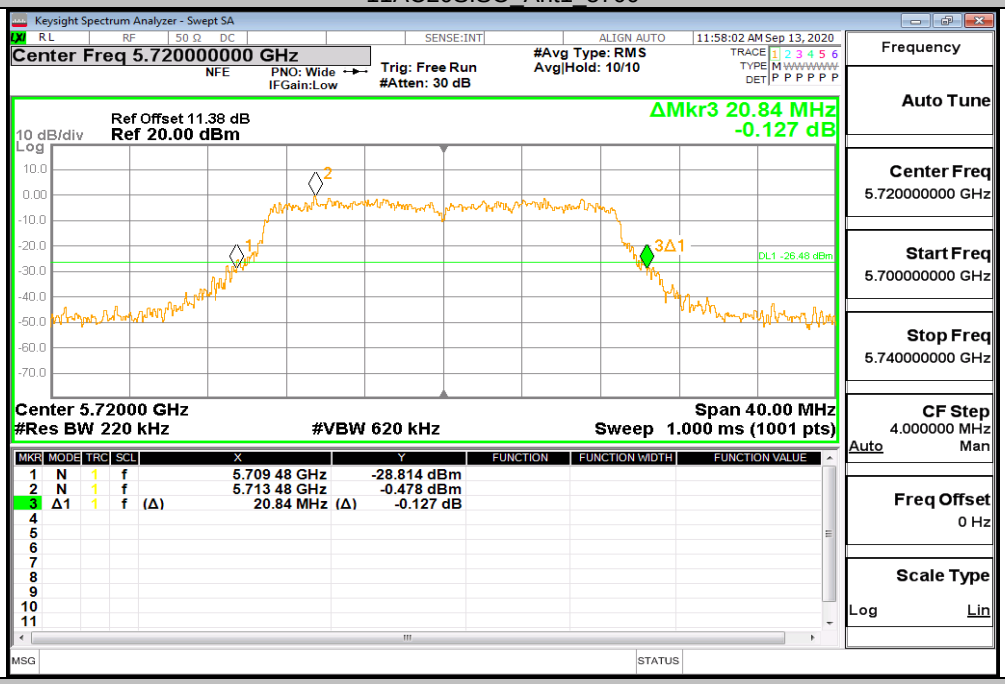


11AC20SISO_Ant1_5320

11AC20SISO_Ant1_5500

11AC20SISO_Ant1_5600

11AC20SISO_Ant1_5700

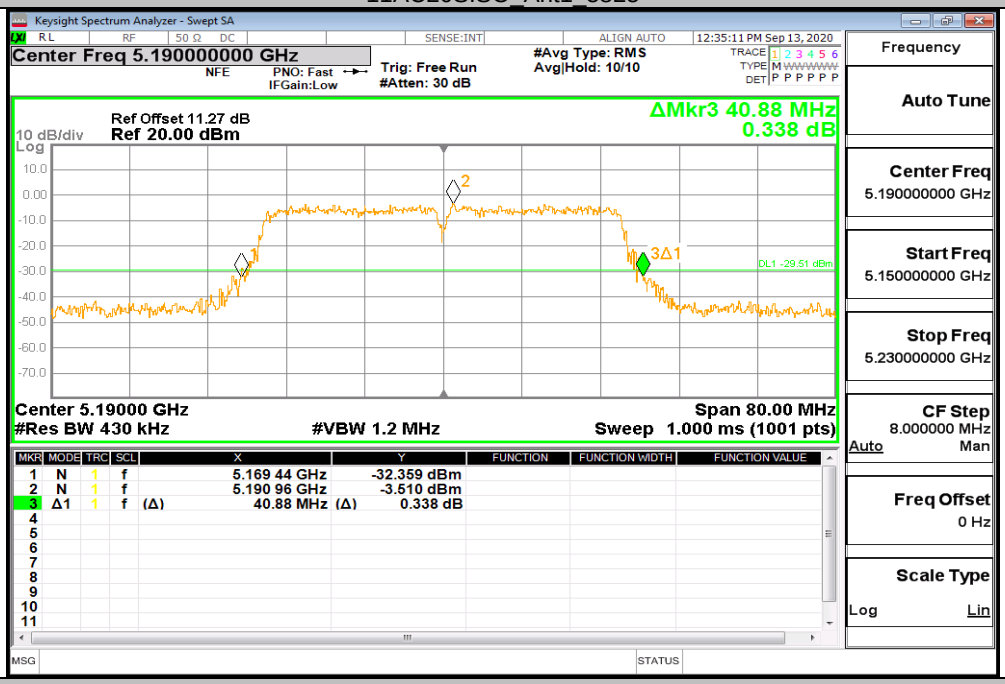


11AC20SISO_Ant1_5720

11AC20SISO_Ant1_5745

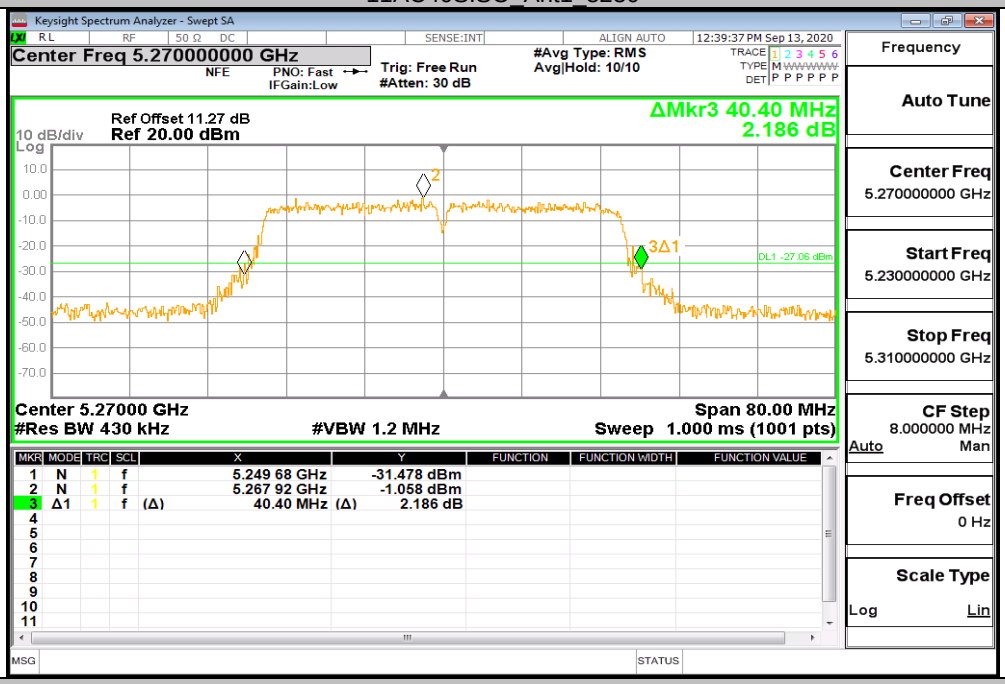
11AC20SISO_Ant1_5785

11AC20SISO_Ant1_5825



11AC40SISO_Ant1_5190

11AC40SISO_Ant1_5230

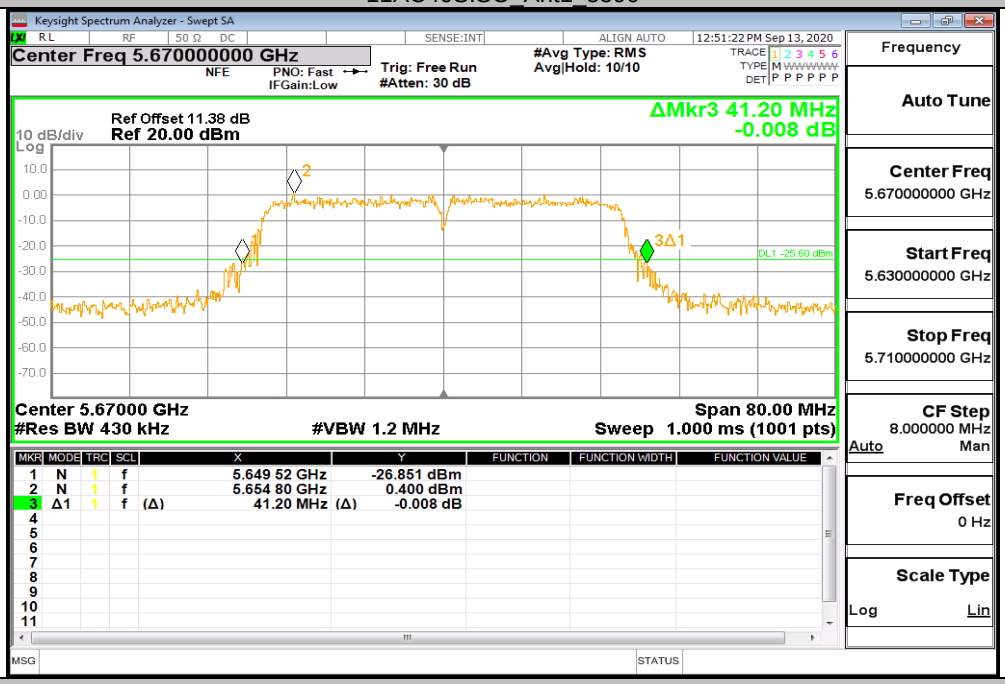


11AC40SISO_Ant1_5270

11AC40SISO_Ant1_5310

11AC40SISO_Ant1_5510

11AC40SISO_Ant1_5590



11AC40SISO_Ant1_5670

11AC40SISO_Ant1_5710

11AC40SISO_Ant1_5755