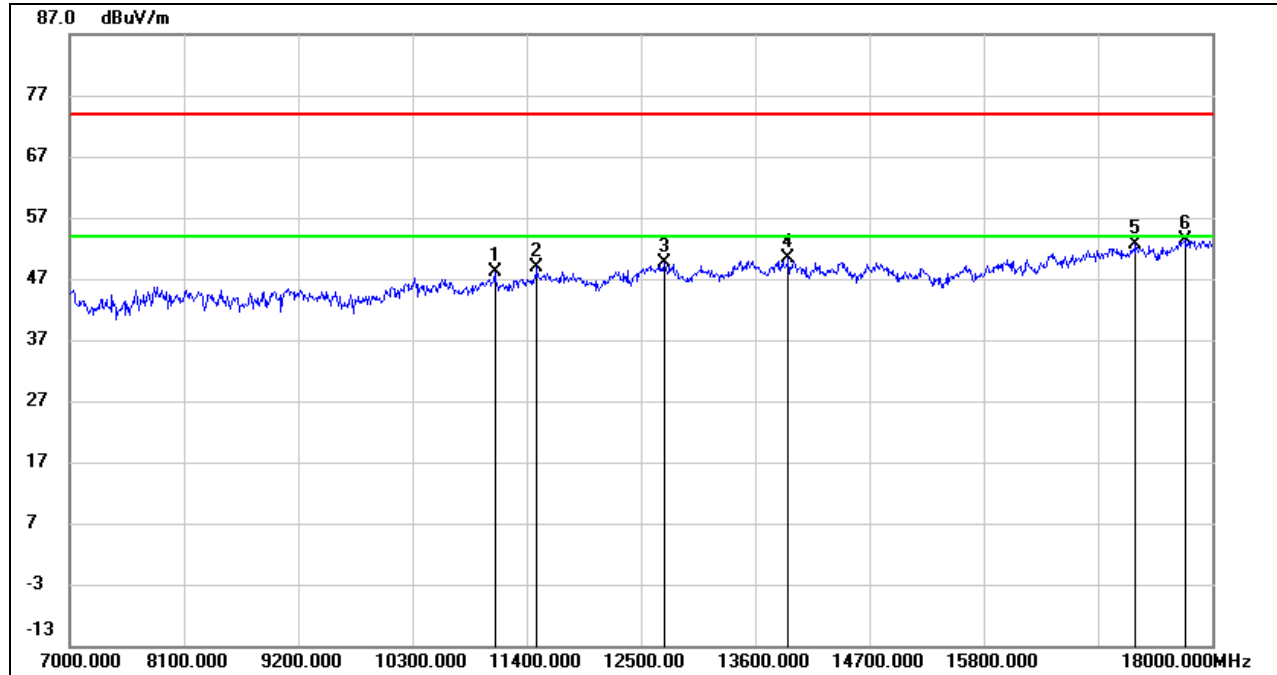


HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11092.000	35.36	12.65	48.01	74.00	-25.99	peak
2	11499.000	35.42	13.35	48.77	74.00	-25.23	peak
3	12720.000	34.73	14.79	49.52	74.00	-24.48	peak
4	13919.000	34.19	16.16	50.35	74.00	-23.65	peak
5	17263.000	31.04	21.64	52.68	74.00	-21.32	peak
6	17736.000	30.51	22.82	53.33	74.00	-20.67	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.

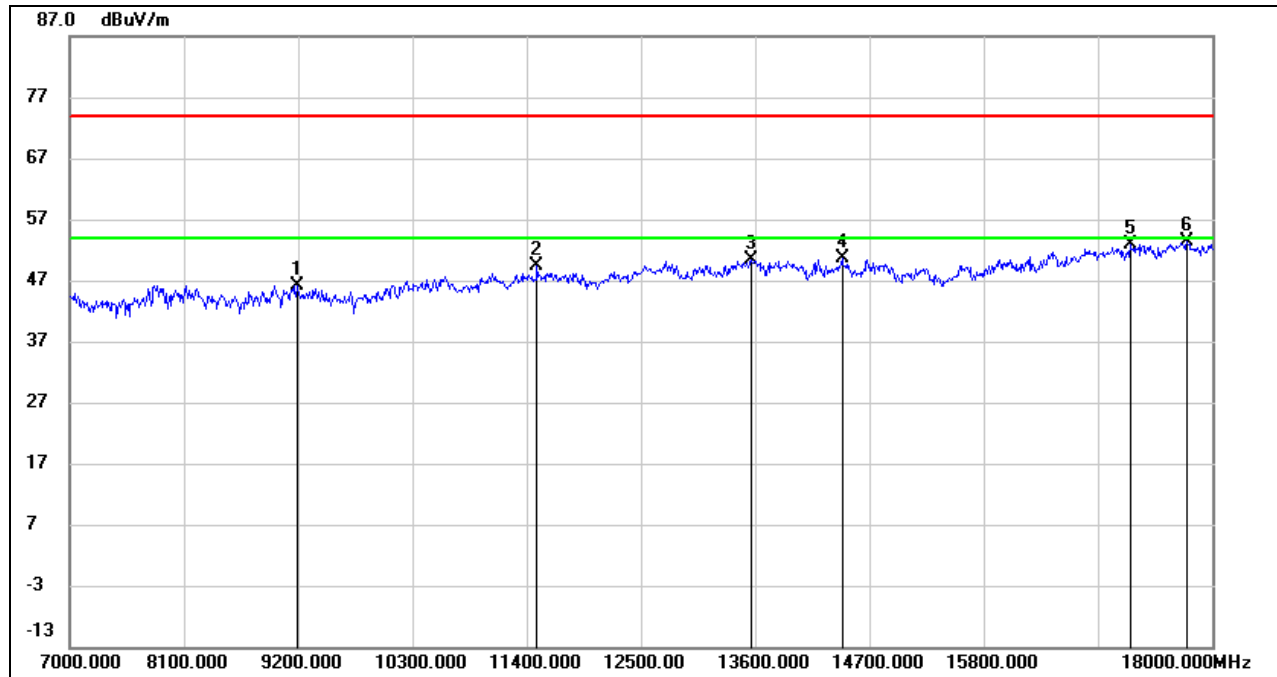
5. For the transmitting duration, please refer to clause 7.1.

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.

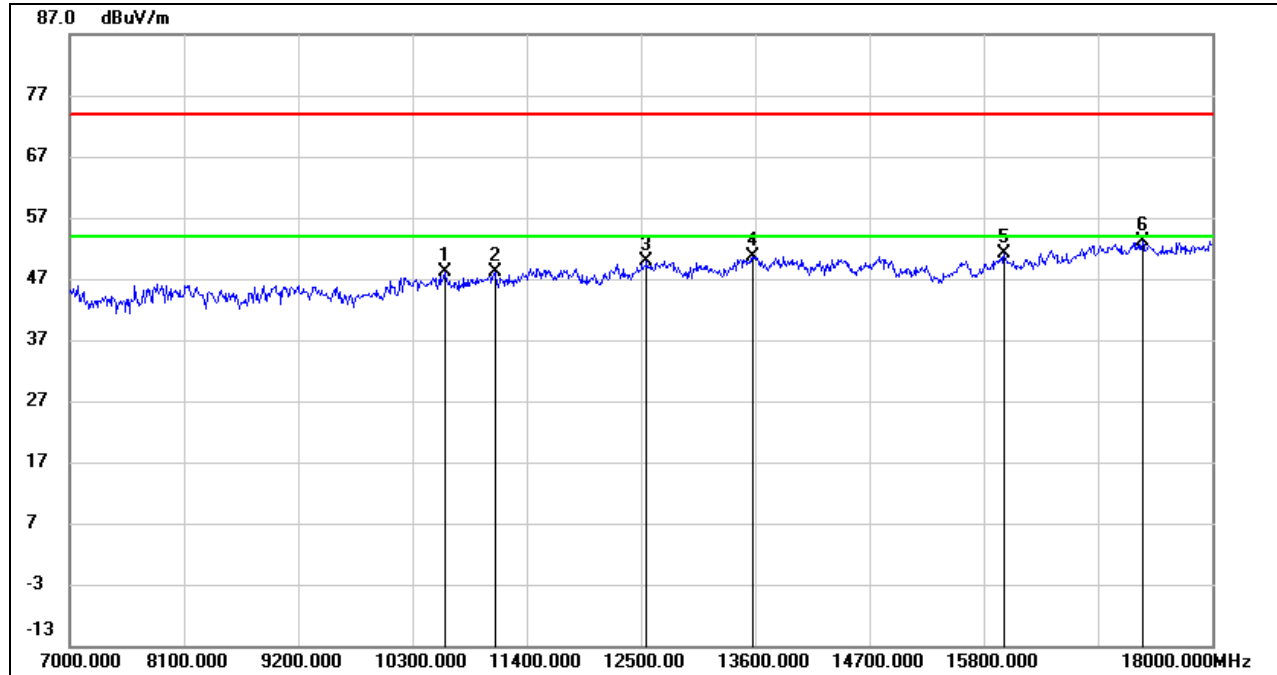
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	9189.000	37.26	8.95	46.21	74.00	-27.79	peak
2	11499.000	35.97	13.35	49.32	74.00	-24.68	peak
3	13556.000	34.43	16.01	50.44	74.00	-23.56	peak
4	14436.000	33.90	16.64	50.54	74.00	-23.46	peak
5	17208.000	31.71	21.26	52.97	74.00	-21.03	peak
6	17758.000	30.28	23.03	53.31	74.00	-20.69	peak

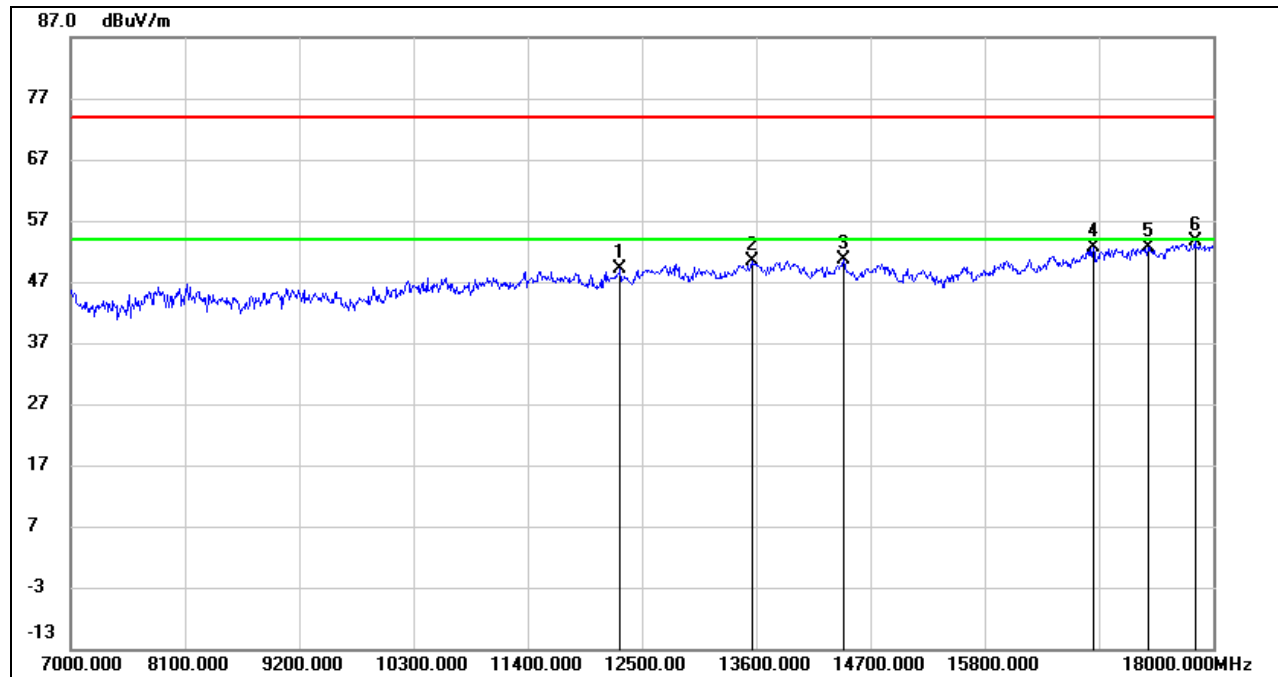
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: $VBW=1/Ton$, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses 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, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10608.000	35.65	12.39	48.04	74.00	-25.96	peak
2	11092.000	35.53	12.65	48.18	74.00	-25.82	peak
3	12555.000	35.32	14.49	49.81	74.00	-24.19	peak
4	13578.000	34.63	16.06	50.69	74.00	-23.31	peak
5	15998.000	33.35	17.80	51.15	74.00	-22.85	peak
6	17329.000	31.32	21.78	53.10	74.00	-20.90	peak

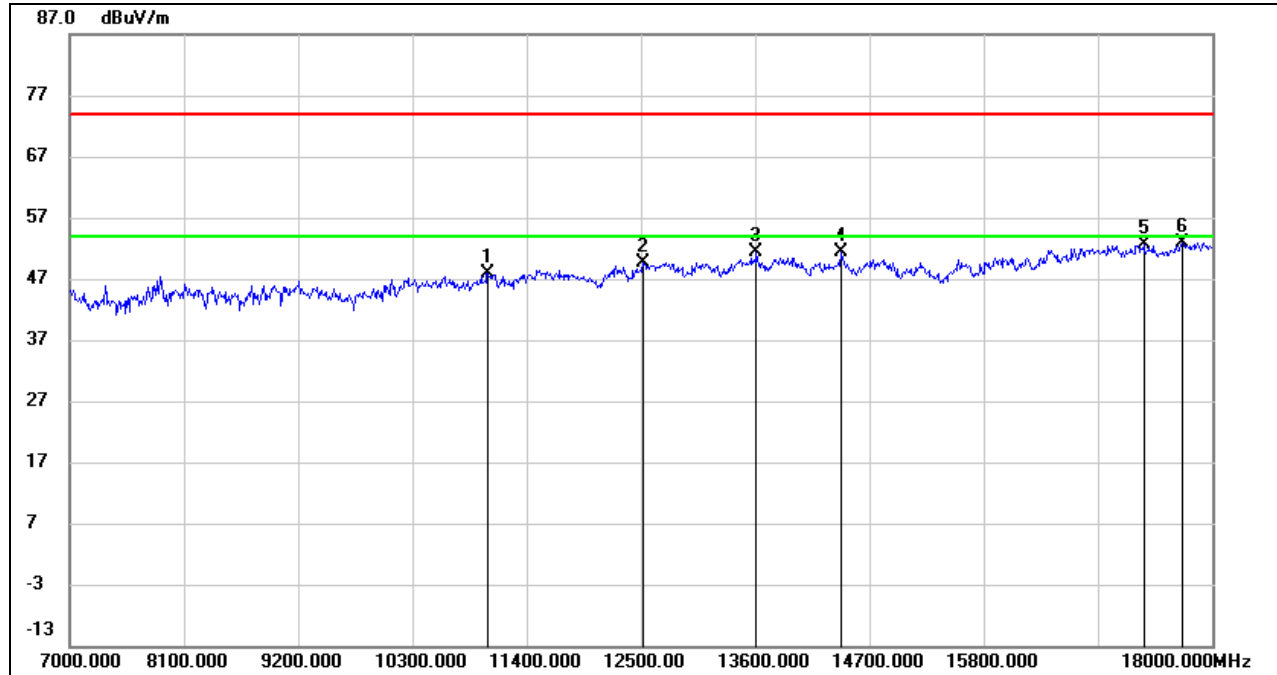
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: $VBW=1/Ton$, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Filter losses 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	12291.000	34.90	14.16	49.06	74.00	-24.94	peak
2	13556.000	34.36	16.01	50.37	74.00	-23.63	peak
3	14447.000	33.96	16.63	50.59	74.00	-23.41	peak
4	16845.000	32.48	20.15	52.63	74.00	-21.37	peak
5	17373.000	31.12	21.63	52.75	74.00	-21.25	peak
6	17824.000	30.26	23.42	53.68	74.00	-20.32	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 (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11026.000	35.17	12.63	47.80	74.00	-26.20	peak
2	12522.000	34.85	14.72	49.57	74.00	-24.43	peak
3	13611.000	35.17	16.10	51.27	74.00	-22.73	peak
4	14425.000	34.63	16.65	51.28	74.00	-22.72	peak
5	17340.000	30.81	21.74	52.55	74.00	-21.45	peak
6	17714.000	30.25	22.62	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. AVG: $VBW=1/Ton$, where: Ton is the transmitting duration.

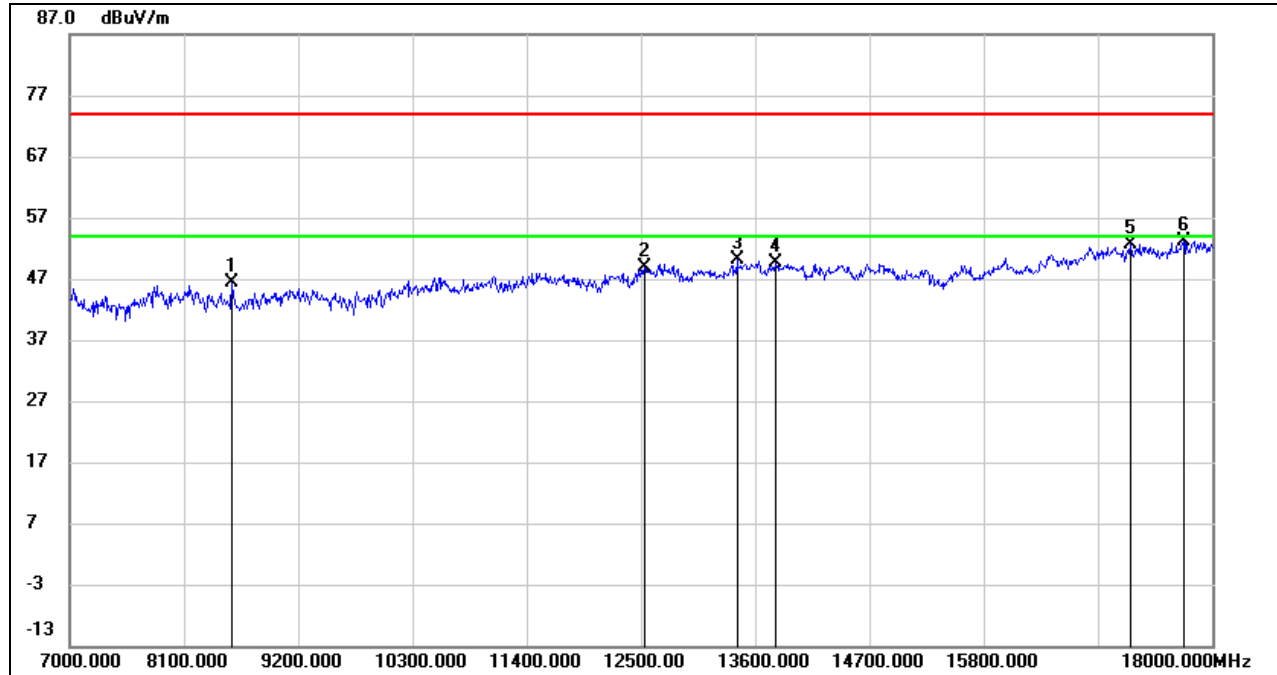
5. For the transmitting duration, please refer to clause 7.1.

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.

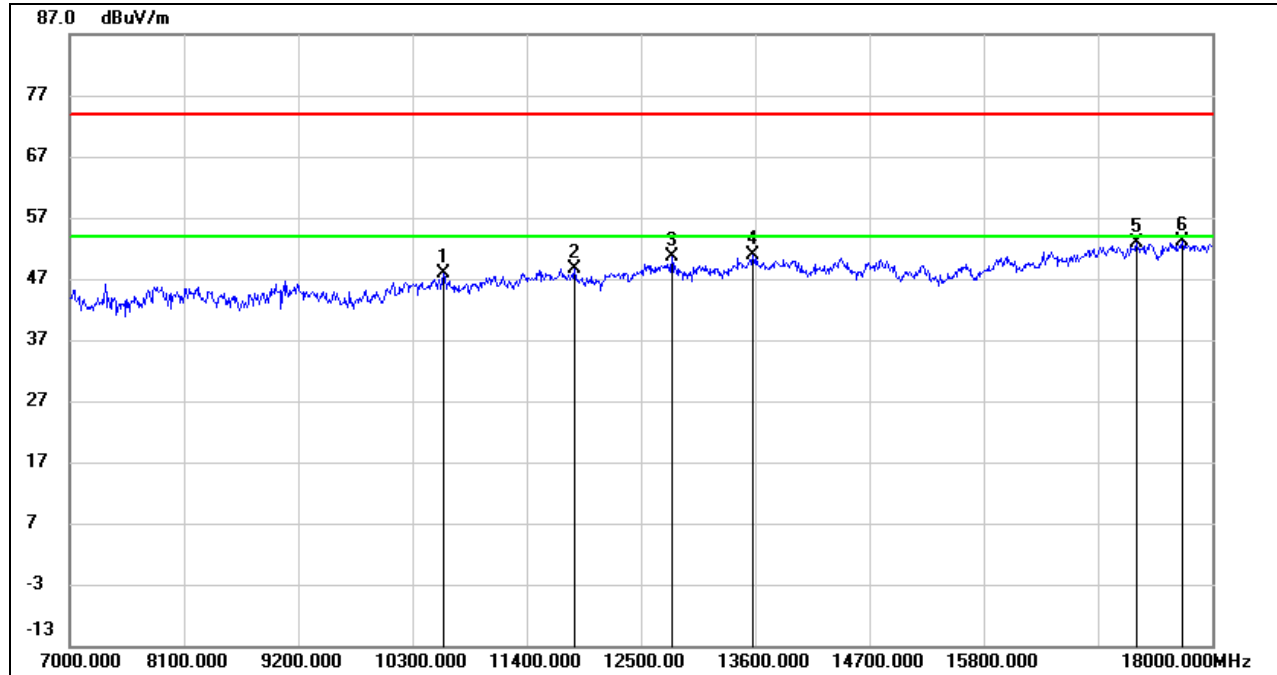
8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point was deemed to comply with the limits list in the standard.

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	8562.000	38.51	7.76	46.27	74.00	-27.73	peak
2	12533.000	34.19	14.65	48.84	74.00	-25.16	peak
3	13424.000	33.98	16.11	50.09	74.00	-23.91	peak
4	13798.000	32.48	17.05	49.53	74.00	-24.47	peak
5	17219.000	31.31	21.34	52.65	74.00	-21.35	peak
6	17725.000	30.49	22.72	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 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, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10597.000	35.50	12.43	47.93	74.00	-26.07	peak
2	11862.000	35.28	13.35	48.63	74.00	-25.37	peak
3	12797.000	34.40	16.12	50.52	74.00	-23.48	peak
4	13578.000	34.70	16.06	50.76	74.00	-23.24	peak
5	17274.000	31.11	21.71	52.82	74.00	-21.18	peak
6	17714.000	30.61	22.62	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. AVG: $VBW=1/Ton$, where: Ton is the transmitting duration.

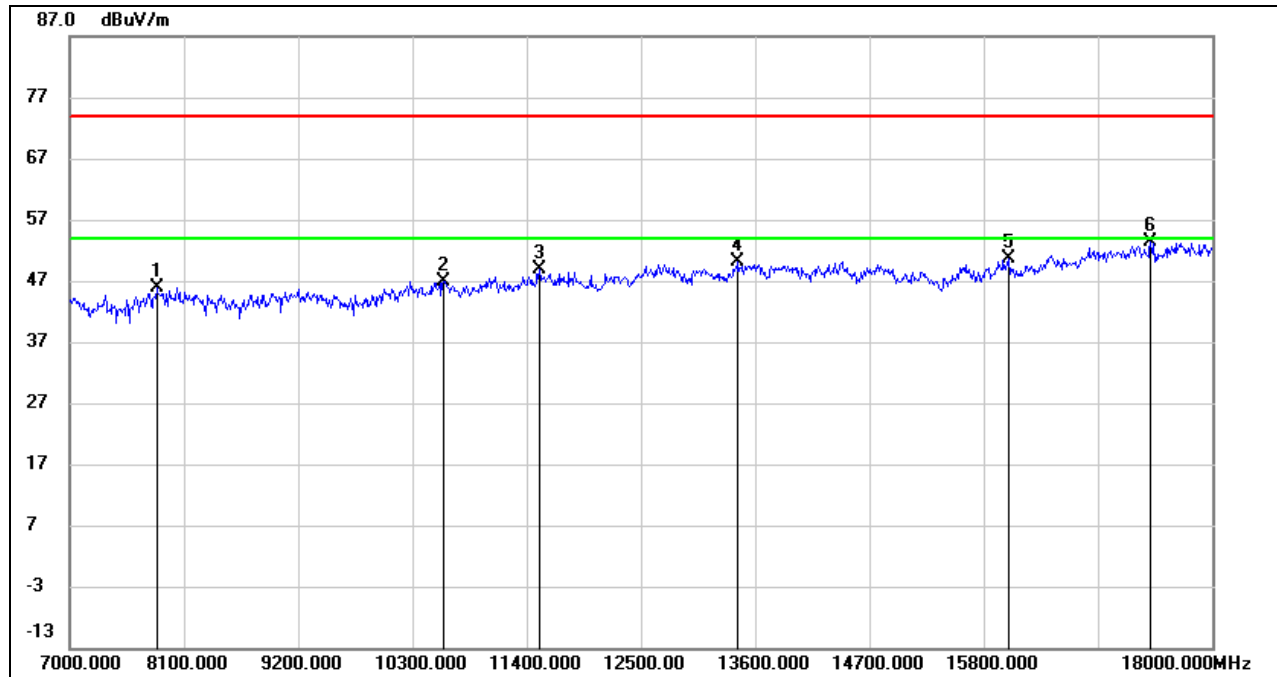
5. For the transmitting duration, please refer to clause 7.1.

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.

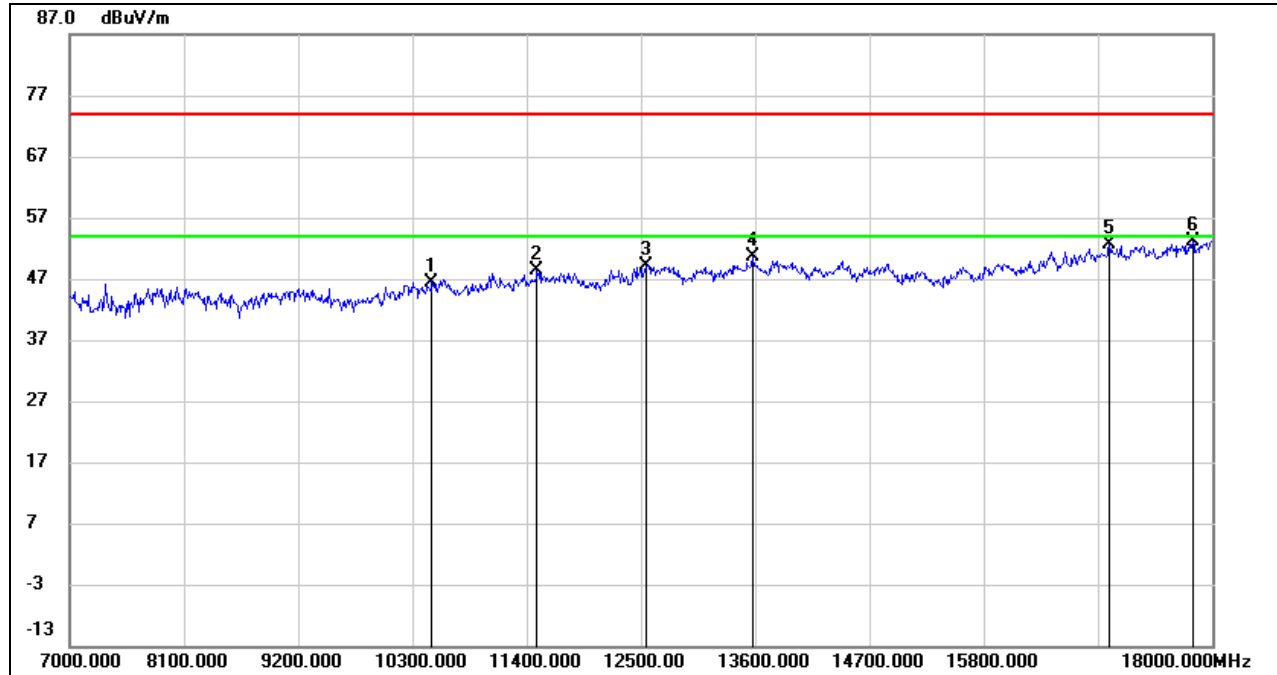
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7836.000	37.90	7.96	45.86	74.00	-28.14	peak
2	10597.000	34.55	12.43	46.98	74.00	-27.02	peak
3	11521.000	35.51	13.40	48.91	74.00	-25.09	peak
4	13435.000	34.04	16.08	50.12	74.00	-23.88	peak
5	16042.000	32.54	18.04	50.58	74.00	-23.42	peak
6	17406.000	31.86	21.53	53.39	74.00	-20.61	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, VERTICAL)

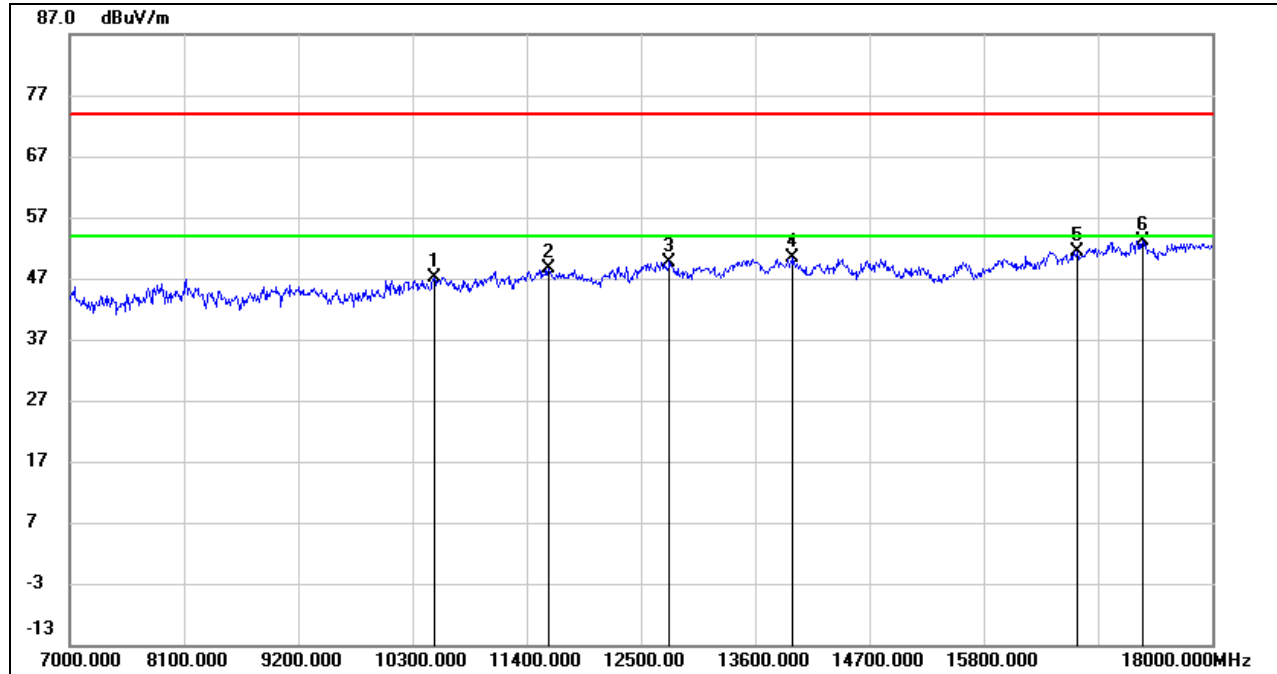


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10487.000	35.17	11.33	46.50	74.00	-27.50	peak
2	11499.000	35.01	13.35	48.36	74.00	-25.64	peak
3	12555.000	34.75	14.49	49.24	74.00	-24.76	peak
4	13578.000	34.49	16.06	50.55	74.00	-23.45	peak
5	17010.000	32.00	20.67	52.67	74.00	-21.33	peak
6	17813.000	29.75	23.41	53.16	74.00	-20.84	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. 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.

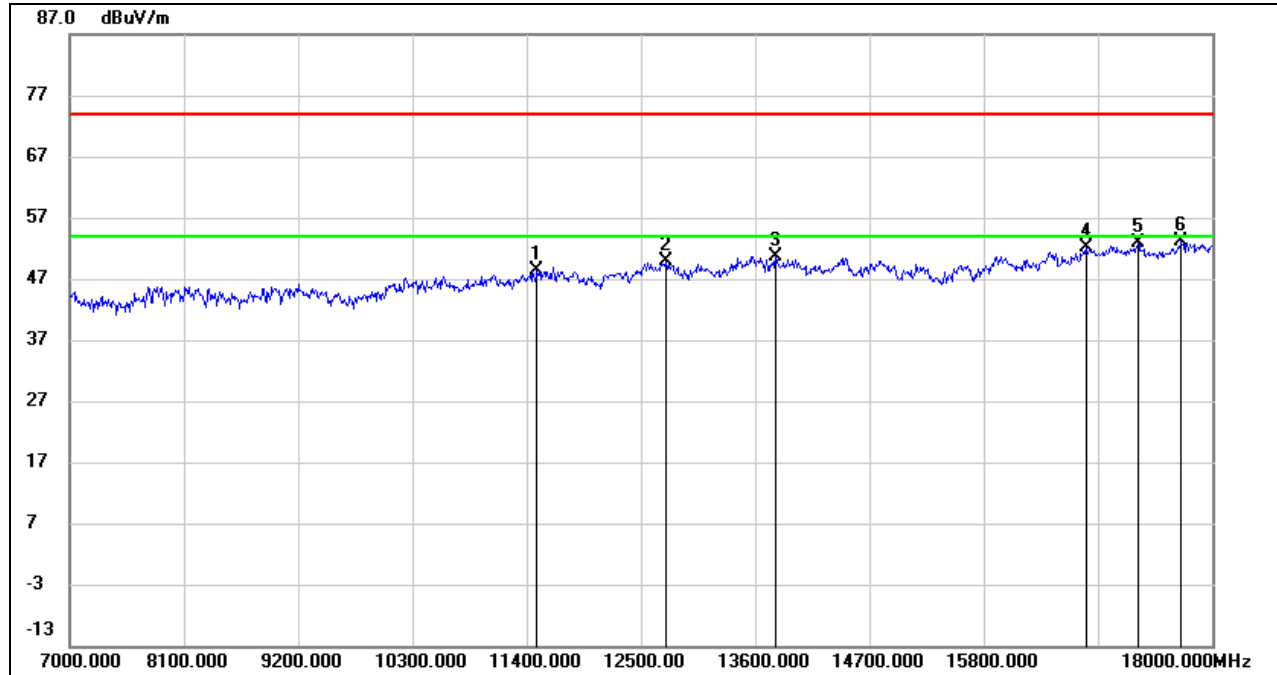
UNII-3 BAND

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	10509.000	35.65	11.46	47.11	74.00	-26.89	peak
2	11609.000	35.08	13.50	48.58	74.00	-25.42	peak
3	12775.000	34.01	15.74	49.75	74.00	-24.25	peak
4	13963.000	34.34	16.16	50.50	74.00	-23.50	peak
5	16702.000	31.38	20.06	51.44	74.00	-22.56	peak
6	17329.000	31.46	21.78	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.

**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	11499.000	35.03	13.35	48.38	74.00	-25.62	peak
2	12742.000	34.75	15.16	49.91	74.00	-24.09	peak
3	13798.000	33.49	17.05	50.54	74.00	-23.46	peak
4	16790.000	31.93	20.18	52.11	74.00	-21.89	peak
5	17285.000	31.15	21.79	52.94	74.00	-21.06	peak
6	17703.000	30.53	22.52	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. AVG: $VBW=1/Ton$, where: Ton is the transmitting duration.

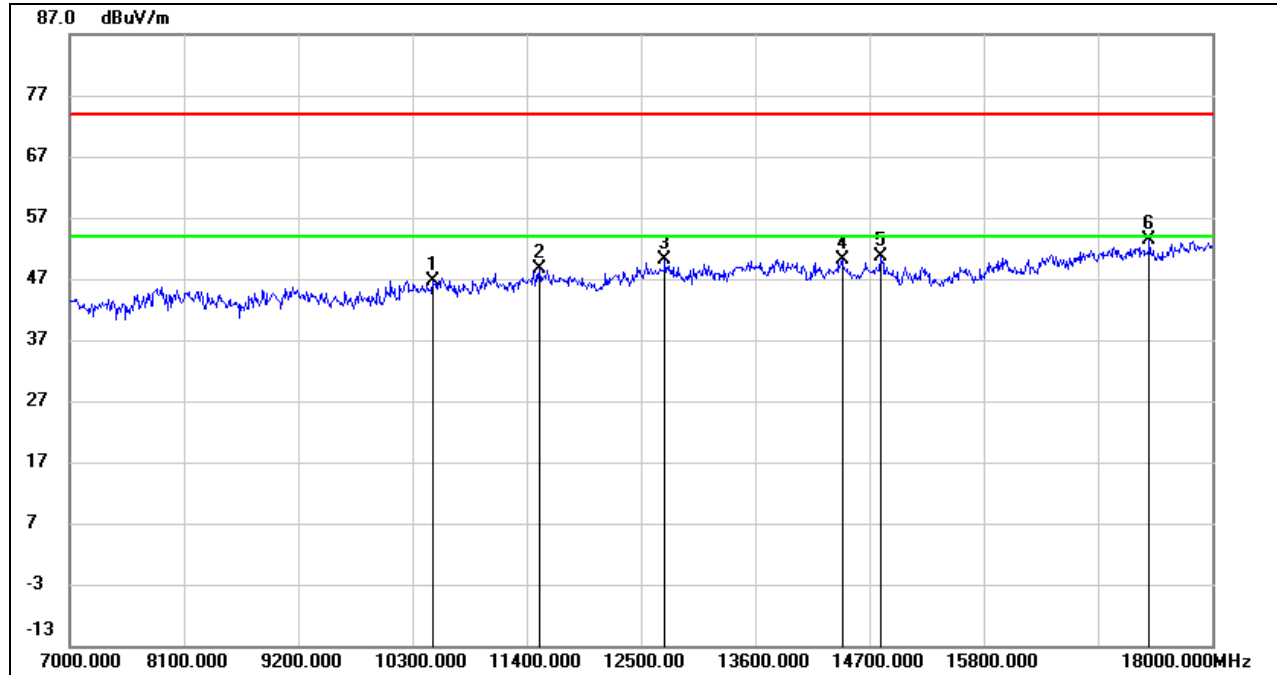
5. For the transmitting duration, please refer to clause 7.1.

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	10498.000	35.36	11.35	46.71	74.00	-27.29	peak
2	11521.000	35.22	13.40	48.62	74.00	-25.38	peak
3	12731.000	35.13	14.97	50.10	74.00	-23.90	peak
4	14436.000	33.42	16.64	50.06	74.00	-23.94	peak
5	14810.000	34.61	16.07	50.68	74.00	-23.32	peak
6	17395.000	31.72	21.55	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.

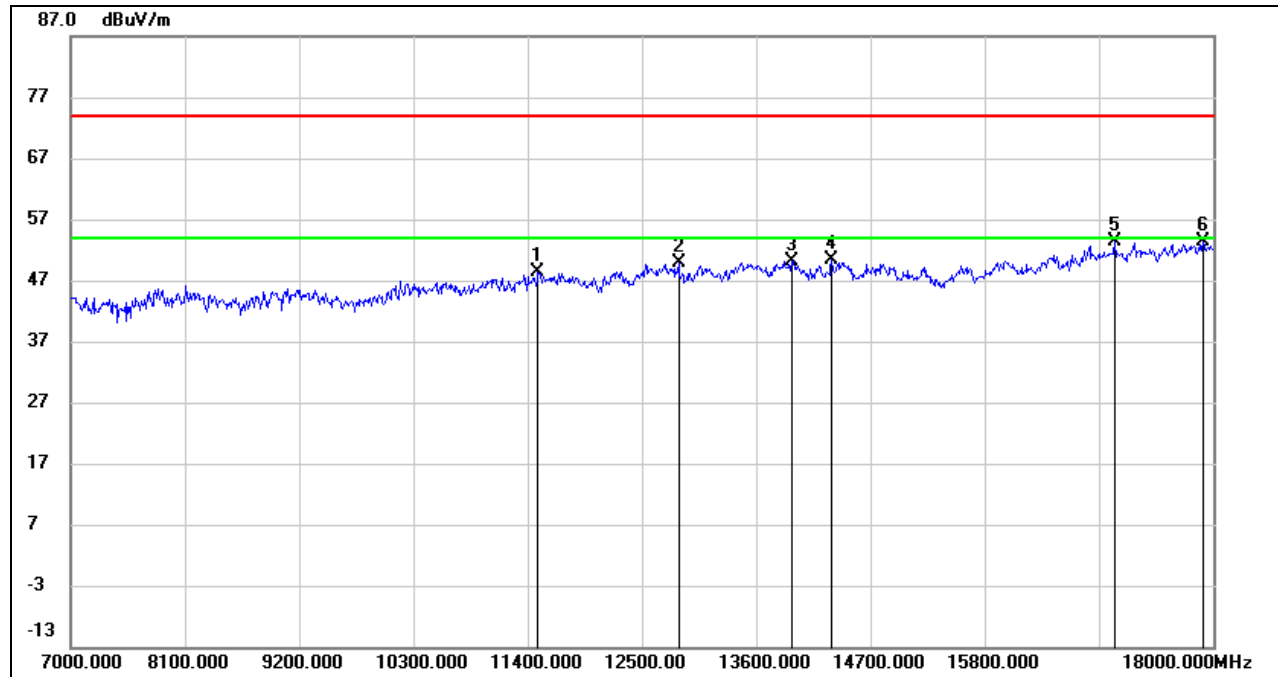
4. AVG: $VBW=1/Ton$, where: Ton is the transmitting duration.

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, VERTICAL)**

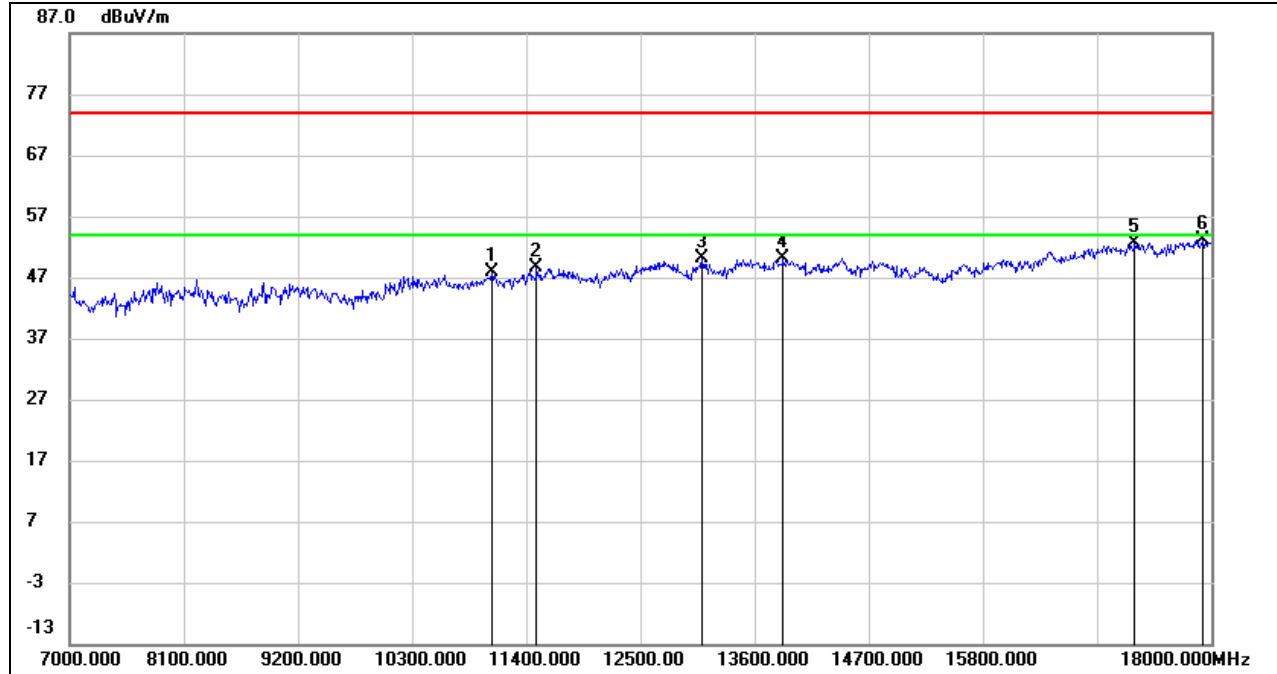
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11499.000	34.93	13.35	48.28	74.00	-25.72	peak
2	12852.000	34.19	15.61	49.80	74.00	-24.20	peak
3	13941.000	34.06	16.16	50.22	74.00	-23.78	peak
4	14326.000	33.88	16.44	50.32	74.00	-23.68	peak
5	17054.000	32.57	20.76	53.33	74.00	-20.67	peak
6	17901.000	29.94	23.40	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. 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 MIMO MODE

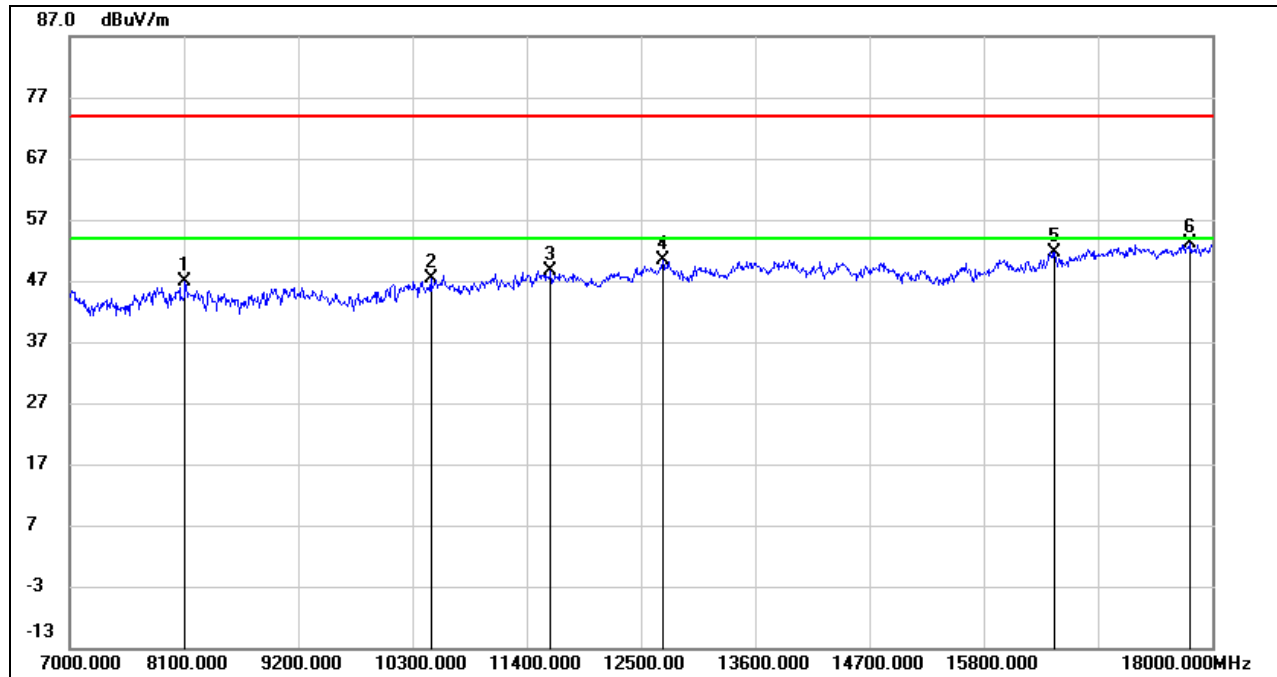
UNII-1 BAND

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	11070.000	35.18	12.65	47.83	74.00	-26.17	peak
2	11499.000	35.24	13.35	48.59	74.00	-25.41	peak
3	13094.000	34.67	15.36	50.03	74.00	-23.97	peak
4	13875.000	33.70	16.39	50.09	74.00	-23.91	peak
5	17263.000	30.94	21.64	52.58	74.00	-21.42	peak
6	17923.000	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. 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 (LOW CHANNEL, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8111.000	38.66	8.21	46.87	74.00	-27.13	peak
2	10476.000	36.08	11.31	47.39	74.00	-26.61	peak
3	11631.000	35.20	13.38	48.58	74.00	-25.42	peak
4	12709.000	35.89	14.59	50.48	74.00	-23.52	peak
5	16482.000	32.05	19.56	51.61	74.00	-22.39	peak
6	17791.000	29.74	23.33	53.07	74.00	-20.93	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.

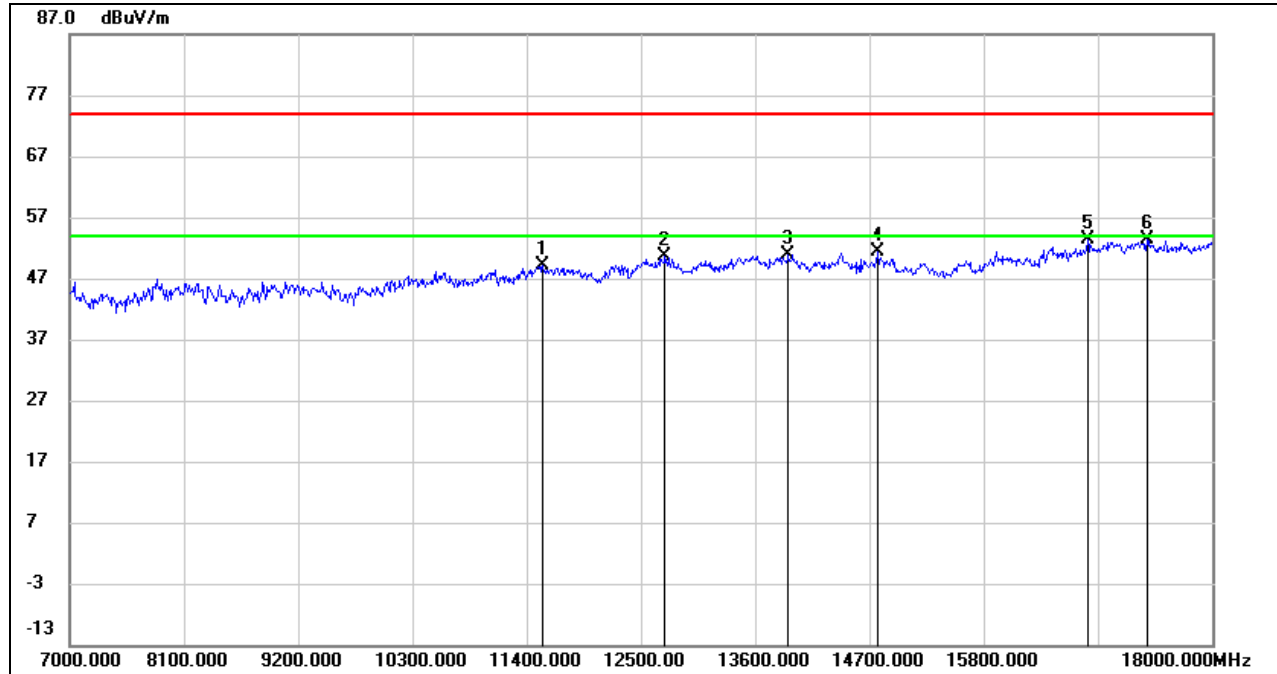
6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.

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	11554.000	35.75	13.45	49.20	74.00	-24.80	peak
2	12731.000	35.78	14.97	50.75	74.00	-23.25	peak
3	13919.000	34.80	16.16	50.96	74.00	-23.04	peak
4	14777.000	35.26	16.10	51.36	74.00	-22.64	peak
5	16801.000	33.08	20.19	53.27	74.00	-20.73	peak
6	17373.000	31.66	21.63	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.

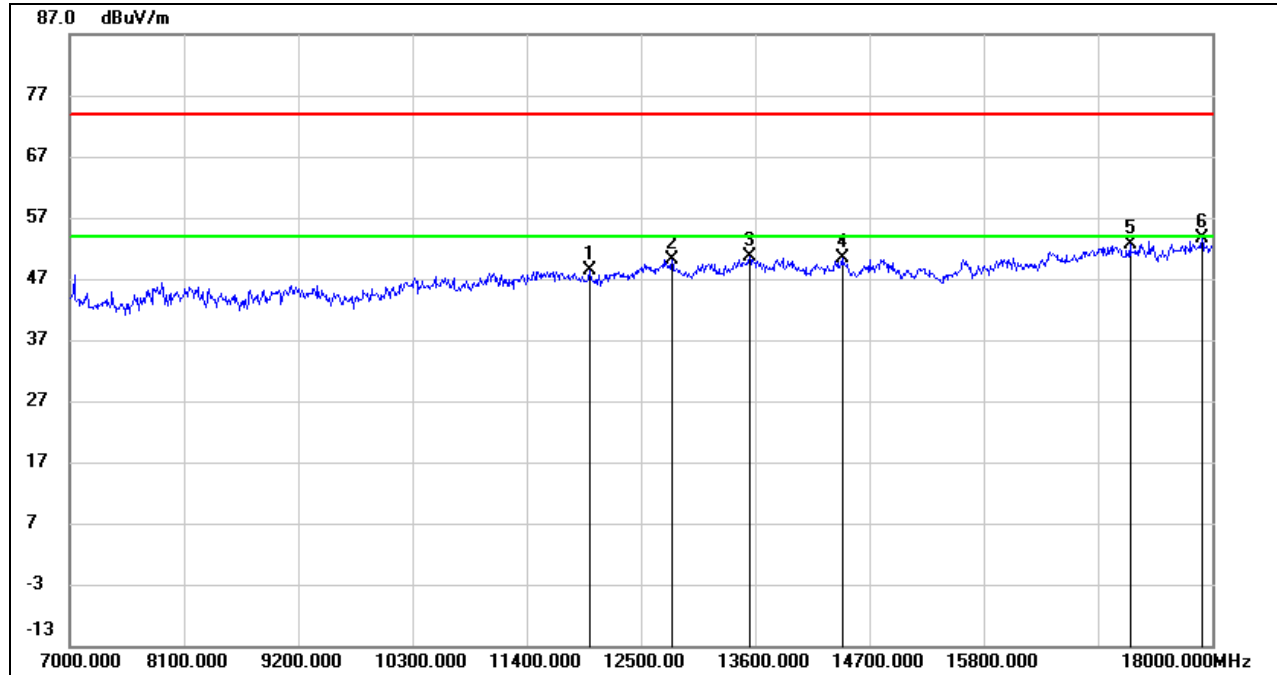
4. AVG: $VBW=1/T_{on}$, where: T_{on} is the transmitting duration.

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.

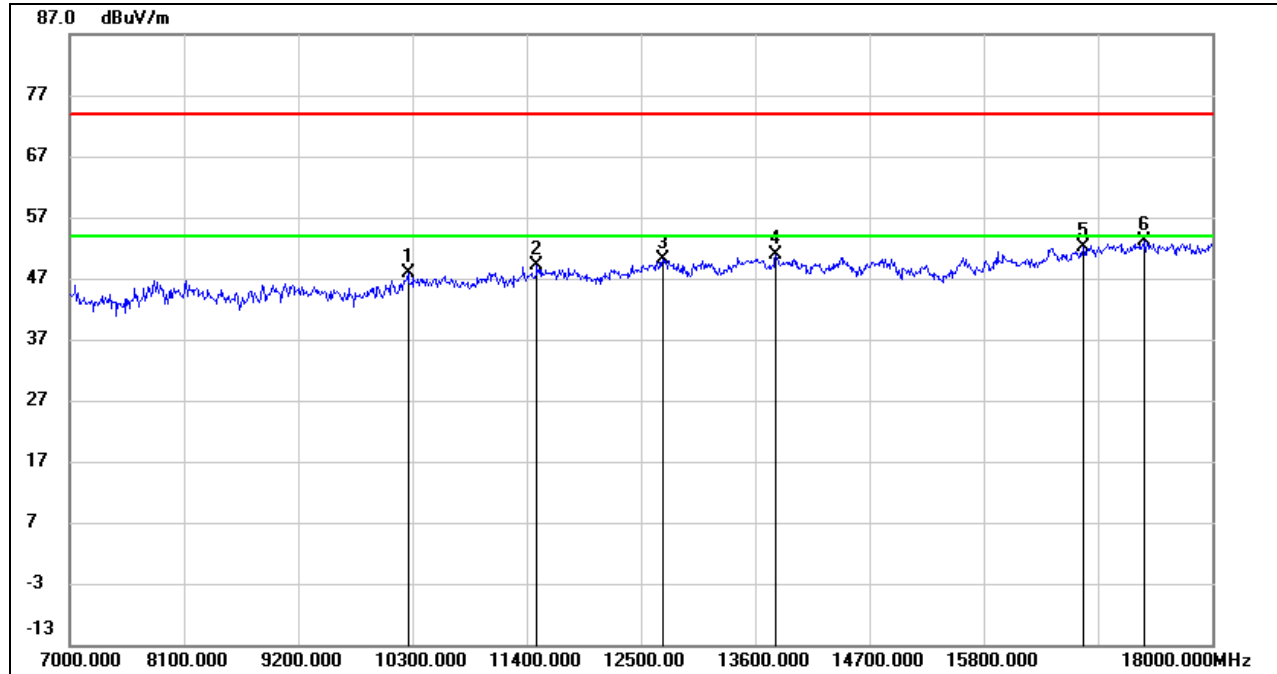
**HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	12005.000	34.64	13.69	48.33	74.00	-25.67	peak
2	12797.000	34.12	16.12	50.24	74.00	-23.76	peak
3	13545.000	34.76	15.98	50.74	74.00	-23.26	peak
4	14436.000	33.71	16.64	50.35	74.00	-23.65	peak
5	17208.000	31.41	21.26	52.67	74.00	-21.33	peak
6	17901.000	30.34	23.40	53.74	74.00	-20.26	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. 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.

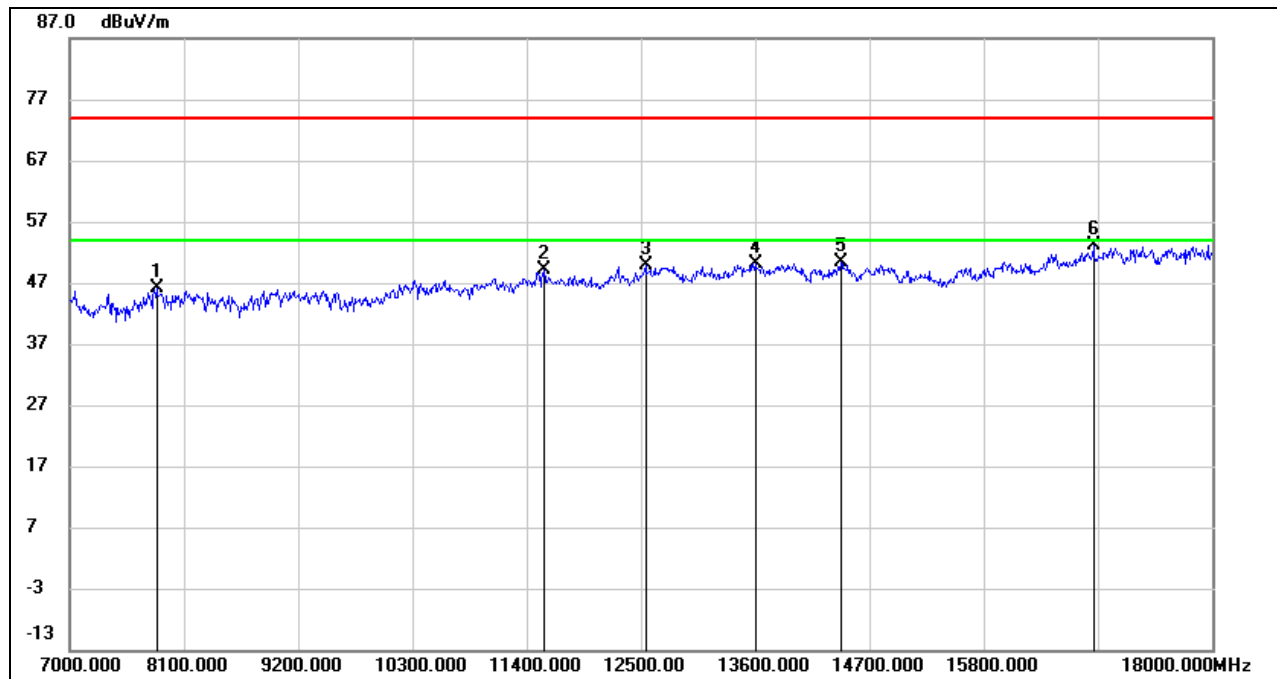
UNII-2C BAND

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	10256.000	37.01	10.91	47.92	74.00	-26.08	peak
2	11499.000	35.77	13.35	49.12	74.00	-24.88	peak
3	12709.000	35.43	14.59	50.02	74.00	-23.98	peak
4	13798.000	33.73	17.05	50.78	74.00	-23.22	peak
5	16757.000	32.08	20.13	52.21	74.00	-21.79	peak
6	17340.000	31.37	21.74	53.11	74.00	-20.89	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. 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 (LOW CHANNEL, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7836.000	38.11	7.96	46.07	74.00	-27.93	peak
2	11565.000	35.54	13.47	49.01	74.00	-24.99	peak
3	12544.000	35.24	14.57	49.81	74.00	-24.19	peak
4	13600.000	34.08	16.10	50.18	74.00	-23.82	peak
5	14425.000	33.71	16.65	50.36	74.00	-23.64	peak
6	16856.000	33.08	20.13	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.

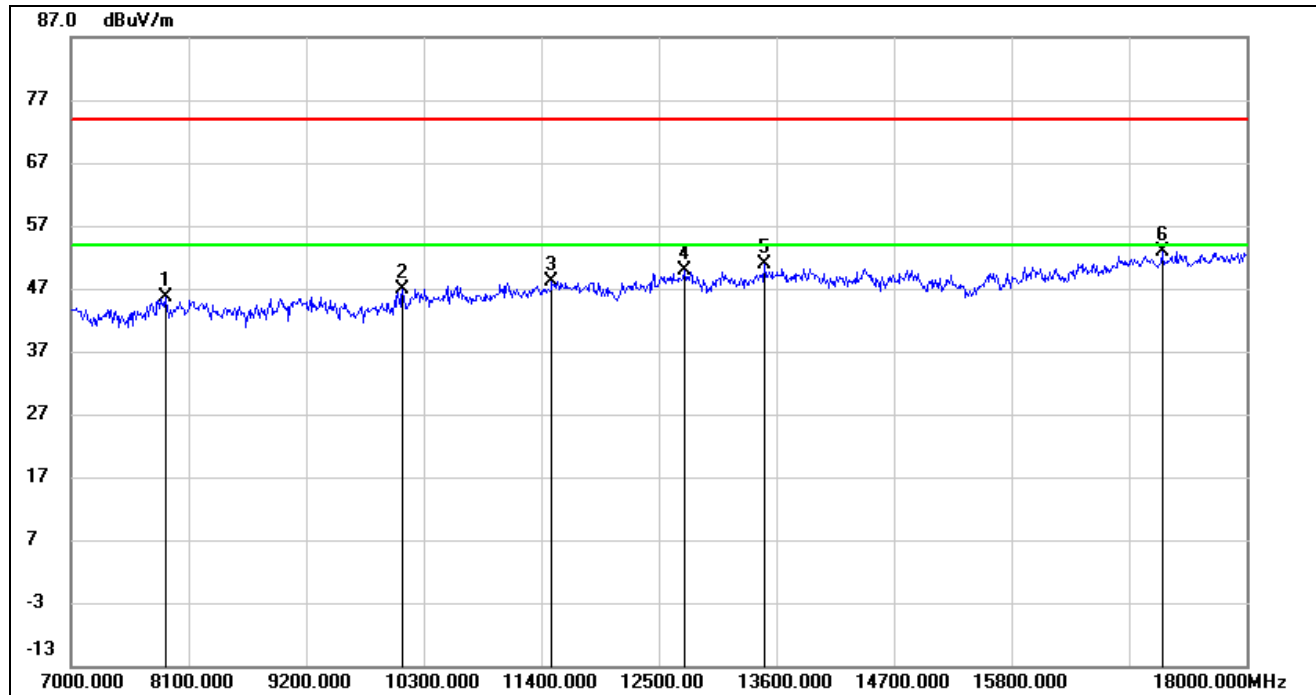
4. AVG: $VBW=1/Ton$, where: Ton is the transmitting duration.

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 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	7880.000	37.91	7.72	45.63	74.00	-28.37	peak
2	10102.000	36.16	10.78	46.94	74.00	-27.06	peak
3	11499.000	34.70	13.35	48.05	74.00	-25.95	peak
4	12742.000	34.68	15.16	49.84	74.00	-24.16	peak
5	13490.000	35.00	15.93	50.93	74.00	-23.07	peak
6	17208.000	31.69	21.26	52.95	74.00	-21.05	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.

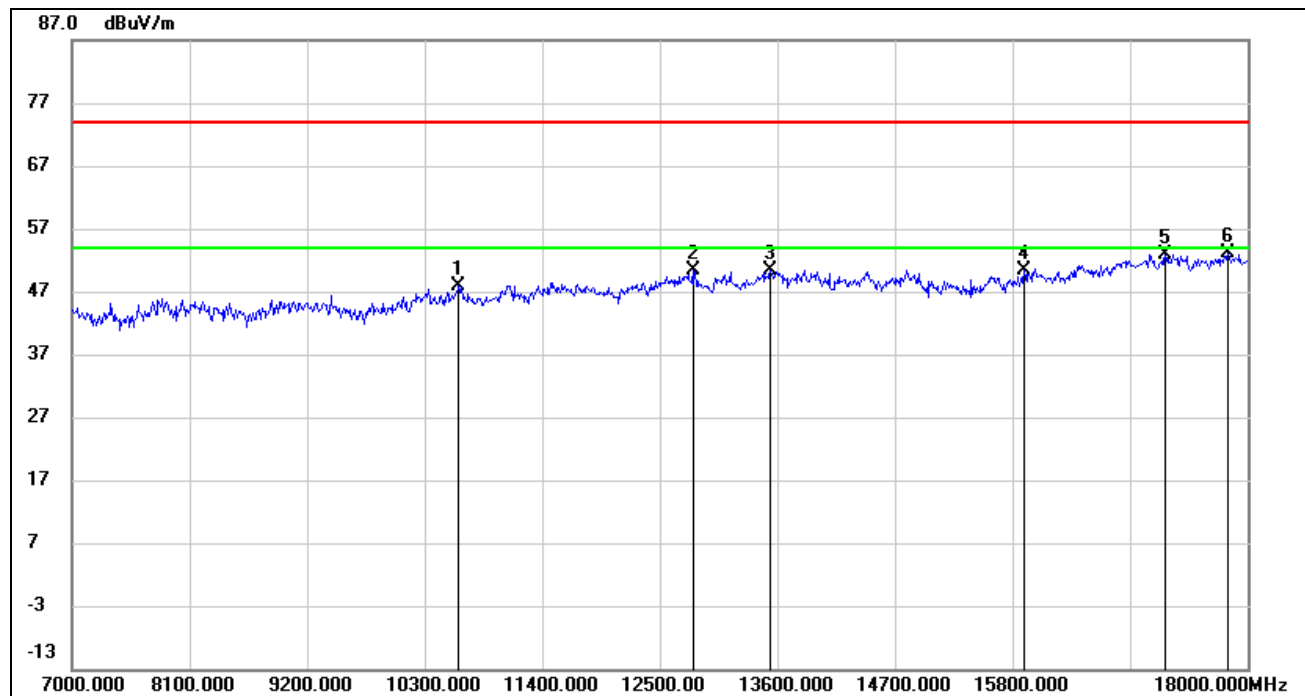
5. For the transmitting duration, please refer to clause 7.1.

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, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10619.000	35.64	12.32	47.96	74.00	-26.04	peak
2	12808.000	34.23	16.09	50.32	74.00	-23.68	peak
3	13534.000	34.42	15.97	50.39	74.00	-23.61	peak
4	15910.000	32.69	17.70	50.39	74.00	-23.61	peak
5	17230.000	31.52	21.41	52.93	74.00	-21.07	peak
6	17813.000	29.65	23.41	53.06	74.00	-20.94	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.

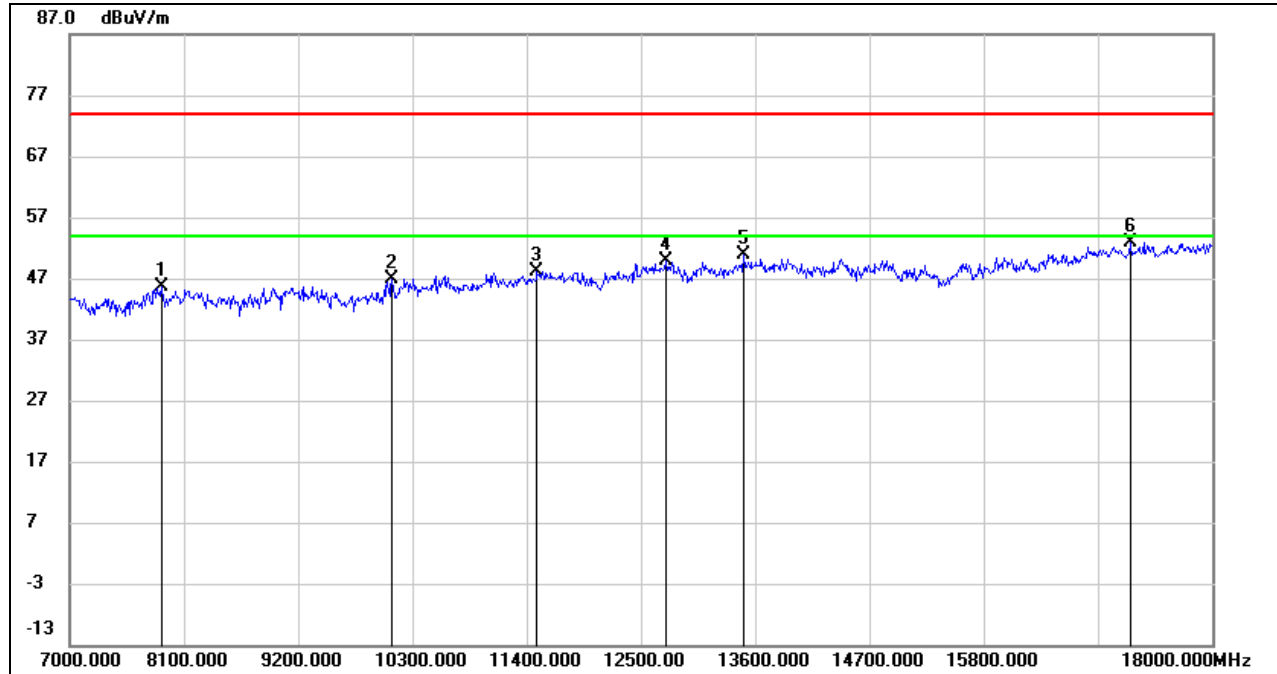
5. For the transmitting duration, please refer to clause 7.1.

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.

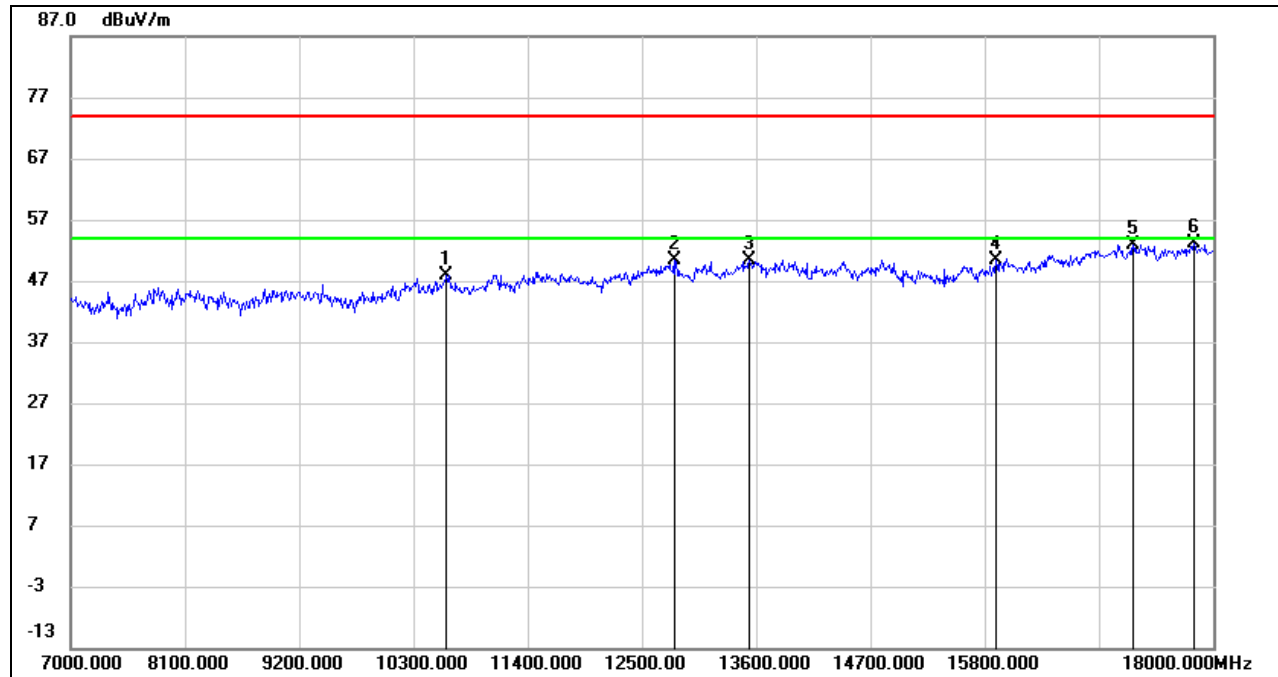
8. Owing to the highest peak level of unwanted emission out of the restricted bands complies with the lowest limit(54dBuV/m), so all the test point was deemed to comply with the limits list in the standard.

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	7880.000	37.91	7.72	45.63	74.00	-28.37	peak
2	10102.000	36.16	10.78	46.94	74.00	-27.06	peak
3	11499.000	34.70	13.35	48.05	74.00	-25.95	peak
4	12742.000	34.68	15.16	49.84	74.00	-24.16	peak
5	13490.000	35.00	15.93	50.93	74.00	-23.07	peak
6	17208.000	31.69	21.26	52.95	74.00	-21.05	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, VERTICAL)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10619.000	35.64	12.32	47.96	74.00	-26.04	peak
2	12808.000	34.23	16.09	50.32	74.00	-23.68	peak
3	13534.000	34.42	15.97	50.39	74.00	-23.61	peak
4	15910.000	32.69	17.70	50.39	74.00	-23.61	peak
5	17230.000	31.52	21.41	52.93	74.00	-21.07	peak
6	17813.000	29.65	23.41	53.06	74.00	-20.94	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.

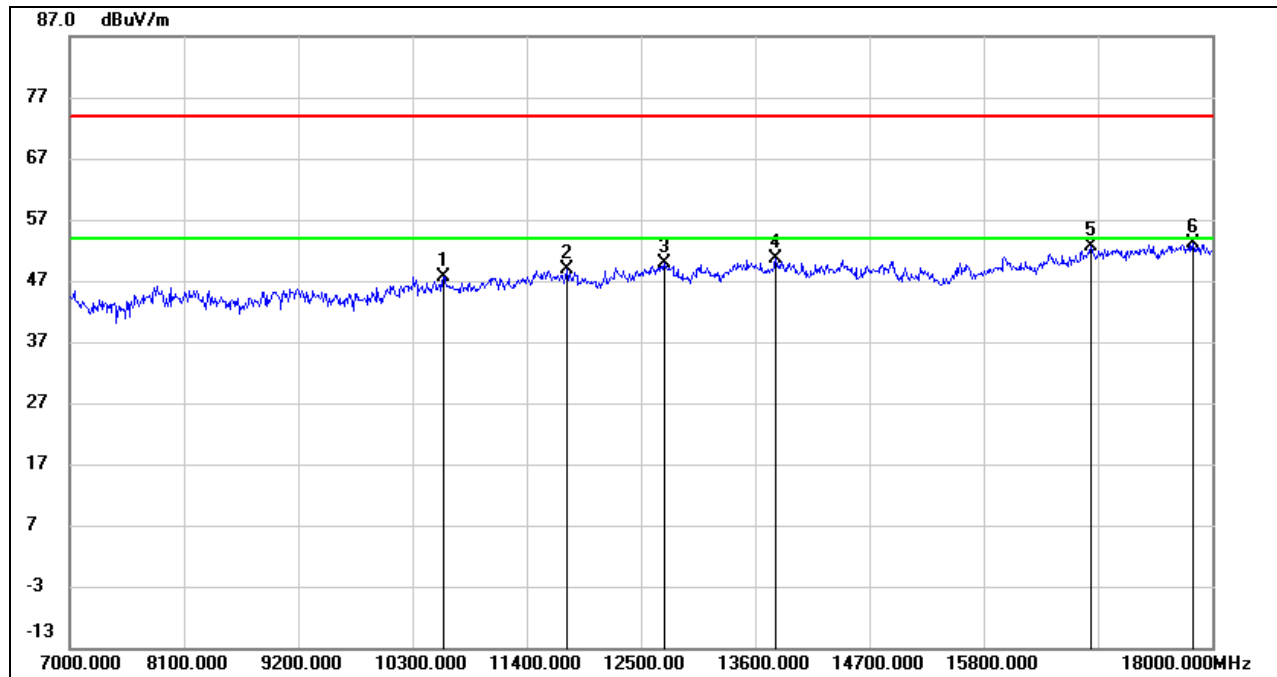
4. AVG: $VBW=1/Ton$, where: Ton is the transmitting duration.

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-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	10597.000	35.15	12.43	47.58	74.00	-26.42	peak
2	11785.000	35.61	13.22	48.83	74.00	-25.17	peak
3	12720.000	35.14	14.79	49.93	74.00	-24.07	peak
4	13798.000	33.50	17.05	50.55	74.00	-23.45	peak
5	16834.000	32.48	20.15	52.63	74.00	-21.37	peak
6	17813.000	29.82	23.41	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. AVG: $VBW=1/Ton$, where: Ton is the transmitting duration.

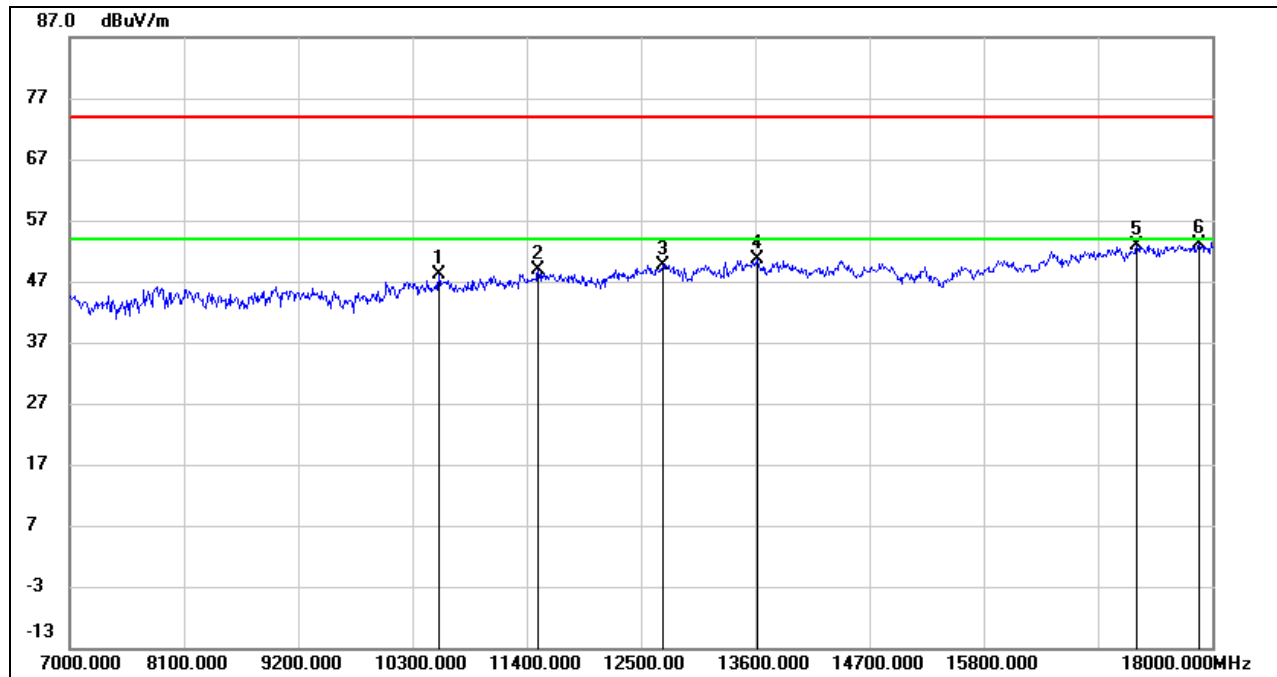
5. For the transmitting duration, please refer to clause 7.1.

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 (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10553.000	36.17	11.93	48.10	74.00	-25.90	peak
2	11510.000	35.37	13.39	48.76	74.00	-25.24	peak
3	12709.000	35.15	14.59	49.74	74.00	-24.26	peak
4	13622.000	34.60	16.08	50.68	74.00	-23.32	peak
5	17274.000	31.24	21.71	52.95	74.00	-21.05	peak
6	17868.000	29.76	23.40	53.16	74.00	-20.84	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. 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.

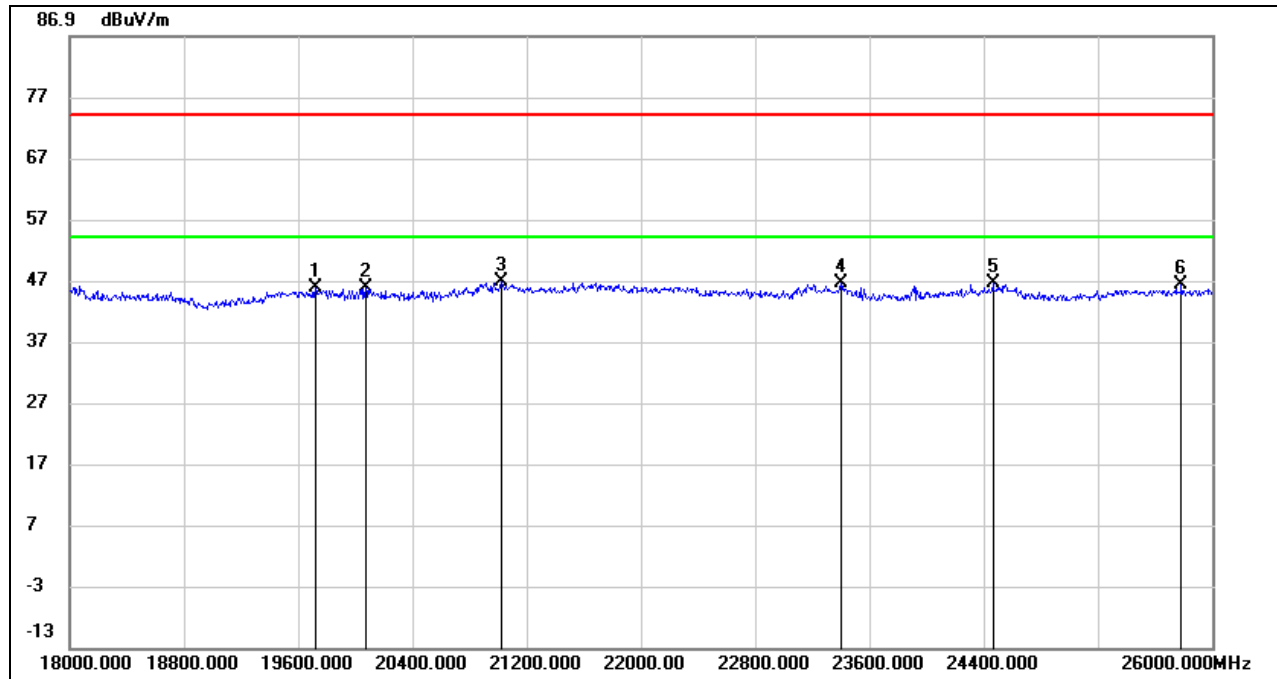
Note: All the modes and antennas had been tested, but only the worst data was recorded in the report.

8.4. SPURIOUS EMISSIONS (18 GHz ~ 26 GHz)

8.4.1. 802.11a MODE

ANTENNA 1 TEST RESULTS (WORST CASE)

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



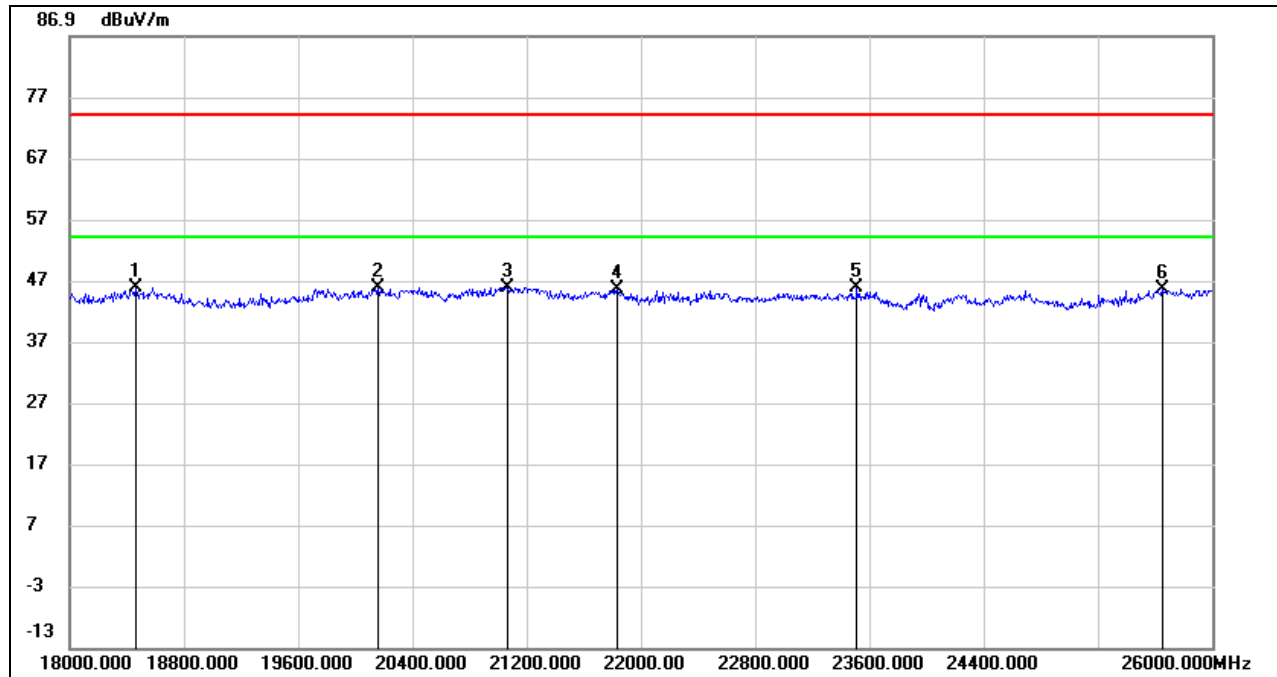
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	19720.000	50.08	-4.39	45.69	74.00	-28.31	peak
2	20072.000	50.34	-4.51	45.83	74.00	-28.17	peak
3	21024.000	52.12	-5.30	46.82	74.00	-27.18	peak
4	23400.000	51.42	-4.96	46.46	74.00	-27.54	peak
5	24464.000	49.28	-2.74	46.54	74.00	-27.46	peak
6	25784.000	47.73	-1.49	46.24	74.00	-27.76	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. The preamplifier only effect to the above 18GHz signal and no filter added to the measurement chain.

**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	20160.000	50.57	-4.70	45.87	74.00	-28.13	peak
3	21064.000	51.19	-5.34	45.85	74.00	-28.15	peak
4	21832.000	51.53	-5.92	45.61	74.00	-28.39	peak
5	23512.000	50.51	-4.76	45.75	74.00	-28.25	peak
6	25648.000	47.12	-1.53	45.59	74.00	-28.41	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.
4. The preamplifier only effect to the above 18GHz signal and no filter added to the measurement chain.

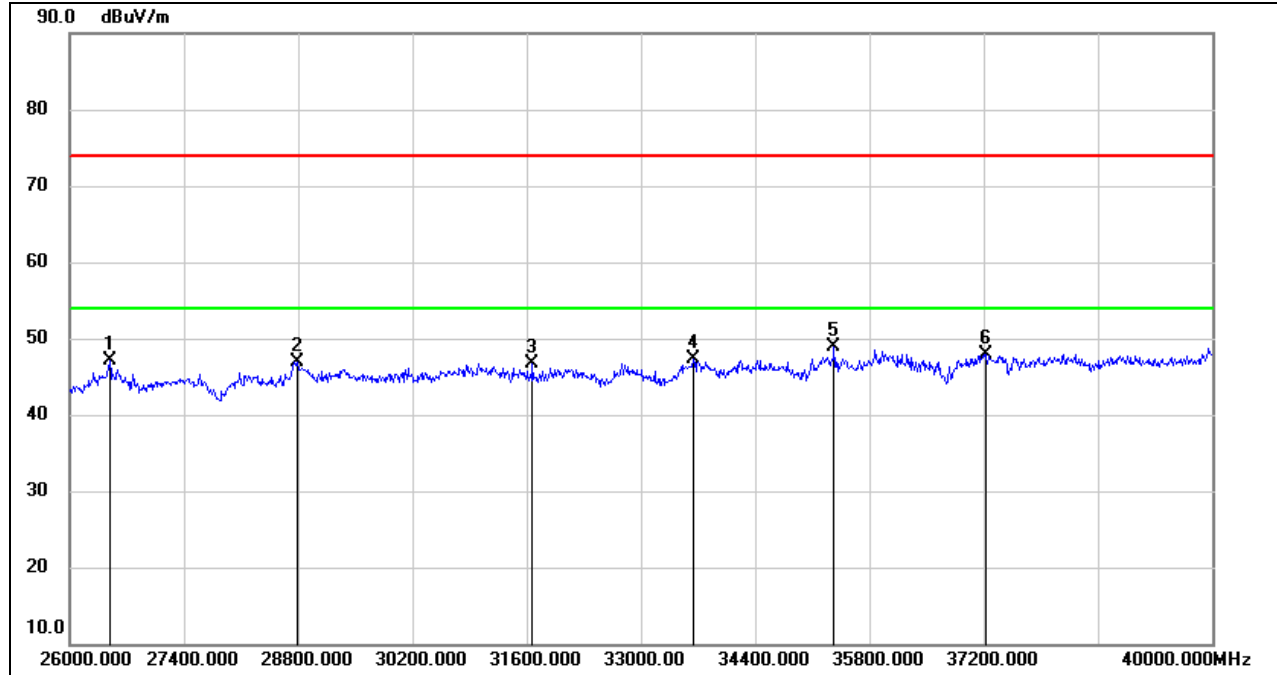
Note: All the modes and antennas had been tested, but only the worst data was recorded in the report.

8.5. SPURIOUS EMISSIONS (26 GHz ~ 40 GHz)

8.5.1. 802.11a MODE

ANTENNA 1 TEST RESULTS (WORST CASE)

SPURIOUS EMISSIONS (UNII-2A 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	51.79	-4.74	47.05	74.00	-26.95	peak
2	28786.000	47.49	-0.64	46.85	74.00	-27.15	peak
3	31670.000	47.86	-1.21	46.65	74.00	-27.35	peak
4	33644.000	46.81	0.42	47.23	74.00	-26.77	peak
5	35366.000	46.40	2.59	48.99	74.00	-25.01	peak
6	37228.000	44.73	3.14	47.87	74.00	-26.13	peak

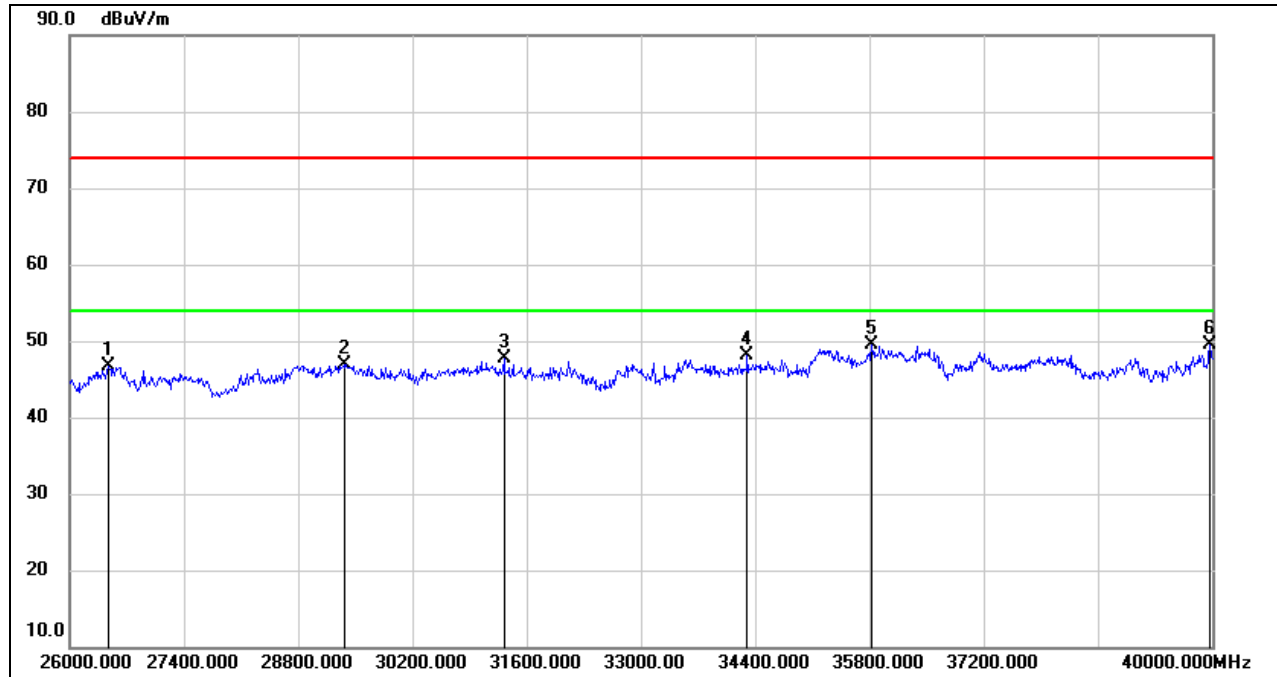
Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

4. Proper operation of the transmitter prior to adding the filter to the measurement chain.

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	26476.000	51.53	-4.78	46.75	74.00	-27.25	peak
2	29360.000	47.71	-0.88	46.83	74.00	-27.17	peak
3	31320.000	48.61	-0.93	47.68	74.00	-26.32	peak
4	34302.000	46.95	1.10	48.05	74.00	-25.95	peak
5	35828.000	45.75	3.67	49.42	74.00	-24.58	peak
6	39972.000	44.45	5.13	49.58	74.00	-24.42	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. Proper operation of the transmitter prior to adding the filter to the measurement chain.

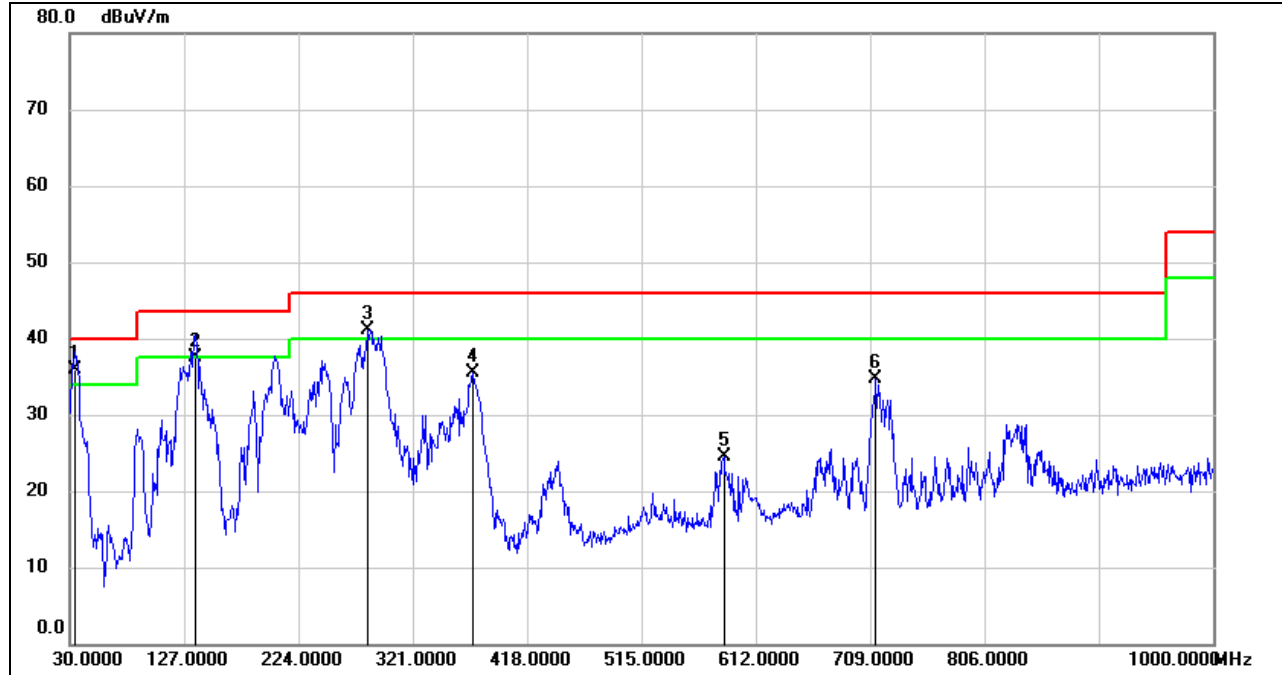
Note: All the modes and antennas had been tested, but only the worst data was recorded in the report.

8.6. SPURIOUS EMISSIONS (30 MHz ~ 1 GHz)

8.6.1. 802.11a MODE

ANTENNA 1 TEST RESULTS (WORST CASE)

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

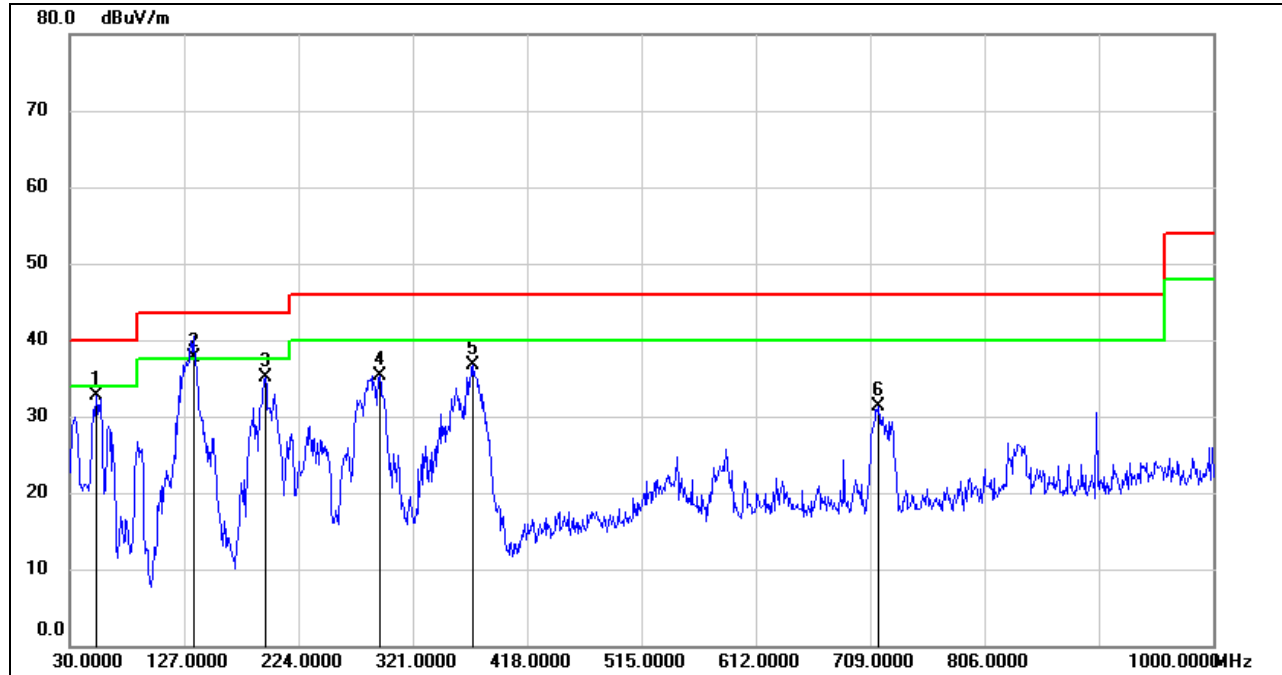


Note: 1. Result Level = Read Level + Correct Factor.

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-2A 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	52.3100	51.25	-18.56	32.69	40.00	-7.31	QP
2	134.7600	57.08	-19.40	37.68	43.50	-5.82	QP
3	195.8700	51.04	-16.03	35.01	43.50	-8.49	QP
4	292.8700	49.95	-14.60	35.35	46.00	-10.65	QP
5	372.4100	49.90	-13.13	36.77	46.00	-9.23	QP
6	715.7900	37.79	-6.58	31.21	46.00	-14.79	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.

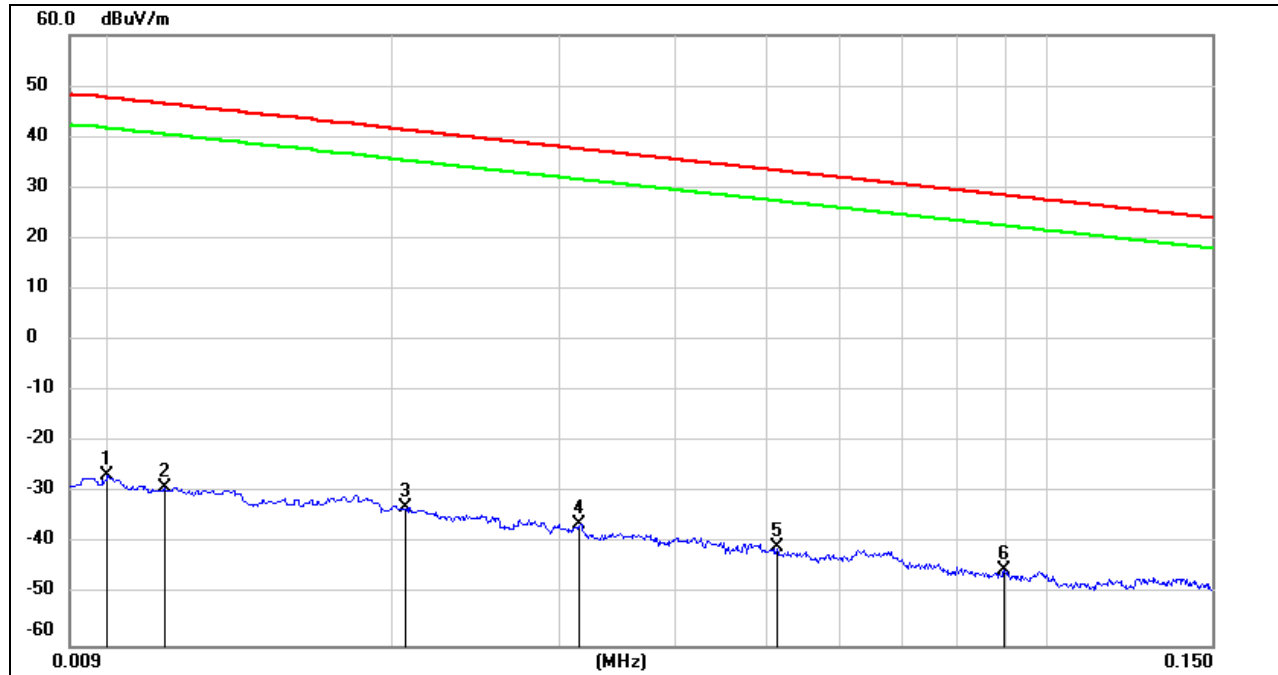
8.7. SPURIOUS EMISSIONS BELOW 30 MHz

8.7.1. 802.11a MODE

ANTENNA 1 TEST RESULTS (WORST CASE)

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

9 kHz~ 150 kHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	FCC Result (dBuV/m)	FCC Limit (dBuV/m)	ISED Result (dBuA/m)	ISED Limit (dBuA/m)	Margin (dB)	Remark
1	0.0100	74.72	-101.40	-26.68	47.6	-78.18	-3.90	-74.28	peak
2	0.0114	72.45	-101.40	-28.95	46.46	-80.45	-5.04	-75.41	peak
3	0.0206	68.42	-101.35	-32.93	41.32	-84.43	-10.18	-74.25	peak
4	0.0316	65.24	-101.40	-36.16	37.61	-87.66	-13.89	-73.77	peak
5	0.0514	60.68	-101.48	-40.8	33.38	-92.30	-18.12	-74.18	peak
6	0.0898	56.53	-101.71	-45.18	28.54	-96.68	-22.96	-73.72	peak

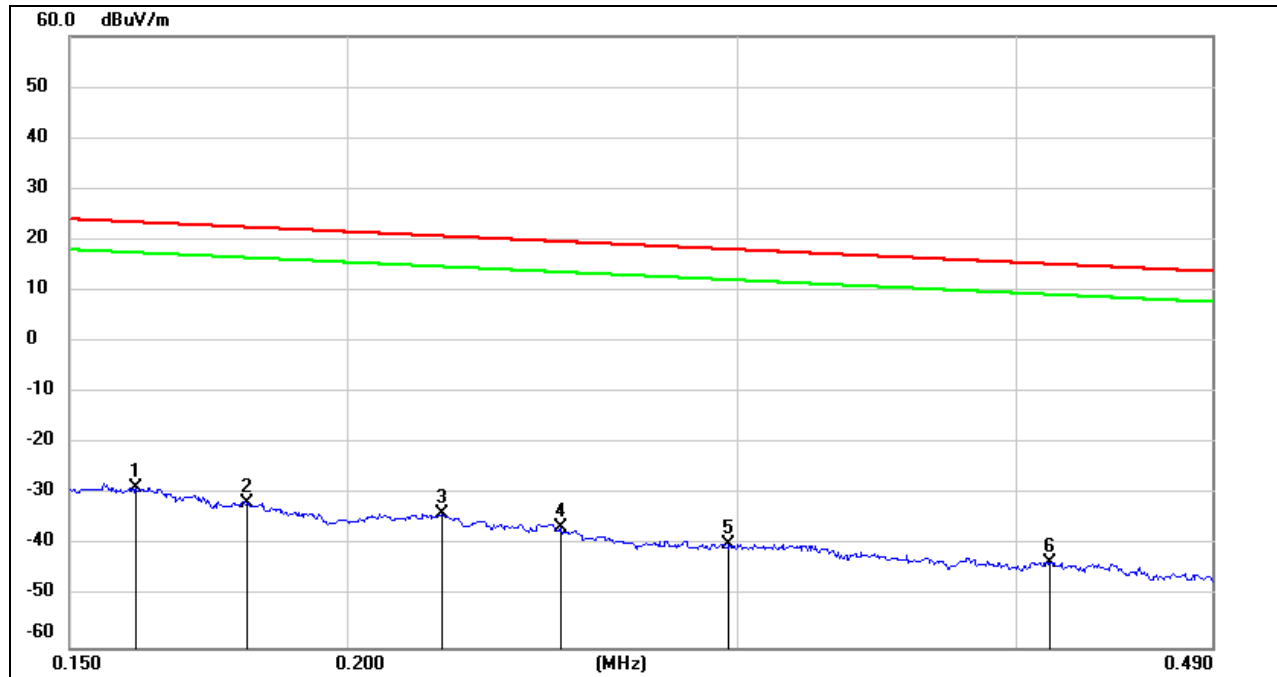
Note: 1. Measurement = Reading Level + Correct Factor.

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. $\text{dBuA/m} = \text{dBuV/m} - 20\log_{10}(120\pi) = \text{dBuV/m} - 51.5$.

150 kHz ~ 490 kHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	FCC Result (dBuV/m)	FCC Limit (dBuV/m)	ISED Result (dBuA/m)	ISED Limit (dBuA/m)	Margin (dB)	Remark
1	0.1607	73.11	-101.65	-28.54	23.48	-80.04	-28.02	-52.02	peak
2	0.1801	70.03	-101.68	-31.65	22.5	-83.15	-29.00	-54.15	peak
3	0.2207	68.02	-101.75	-33.73	20.72	-85.23	-30.78	-54.45	peak
4	0.2494	65.46	-101.80	-36.34	19.66	-87.84	-31.84	-56.00	peak
5	0.2972	62.16	-101.85	-39.69	18.14	-91.19	-33.36	-57.83	peak
6	0.4142	58.73	-101.98	-43.25	15.26	-94.75	-36.24	-58.51	peak

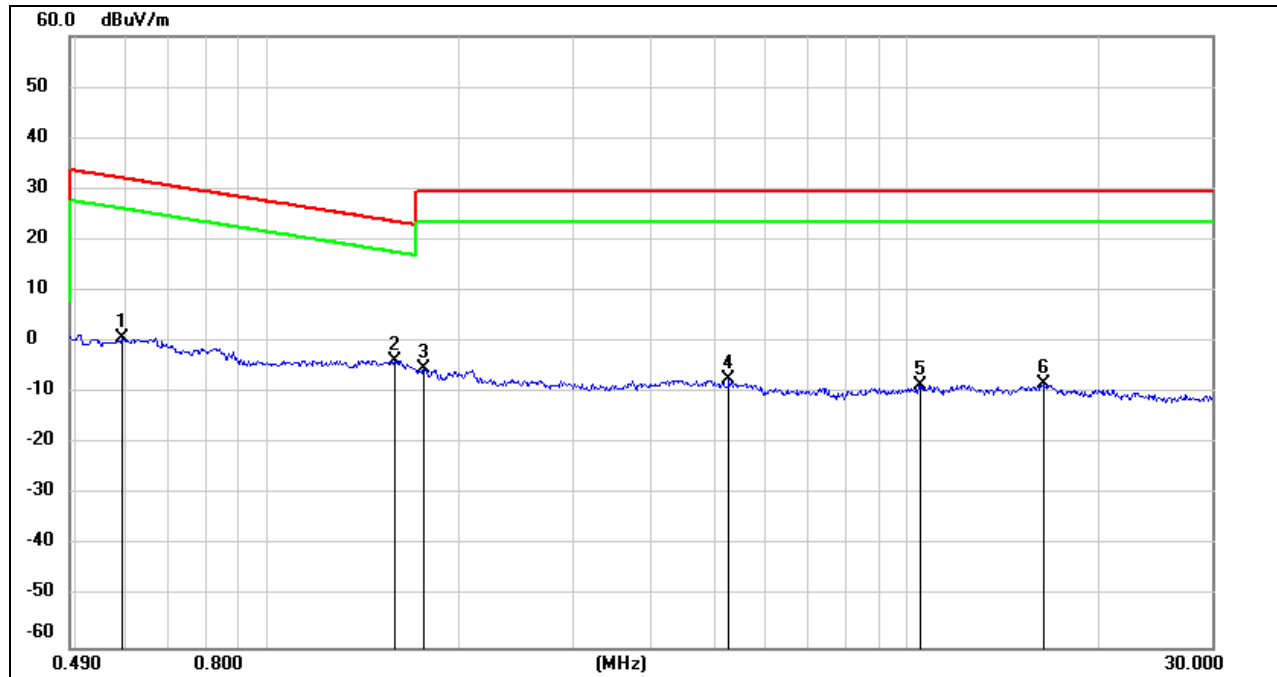
Note: 1. Measurement = Reading Level + Correct Factor.

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. $\text{dBuA/m} = \text{dBuV/m} - 20\log_{10}(120\pi) = \text{dBuV/m} - 51.5$.

490 kHz ~ 30 MHz



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	FCC Result (dBuV/m)	FCC Limit (dBuV/m)	ISED Result (dBuA/m)	ISED Limit (dBuA/m)	Margin (dB)	Remark
1	0.5917	62.74	-62.08	0.66	32.16	-50.84	-19.34	-31.50	peak
2	1.5826	58.38	-62.01	-3.63	23.61	-55.13	-27.89	-27.24	peak
3	1.7580	56.58	-61.93	-5.35	29.54	-56.85	-21.96	-34.89	peak
4	5.2705	54.04	-61.45	-7.41	29.54	-58.91	-21.96	-36.95	peak
5	10.5234	52.30	-60.82	-8.52	29.54	-60.02	-21.96	-38.06	peak
6	16.3959	52.67	-60.96	-8.29	29.54	-59.79	-21.96	-37.83	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. $\text{dBuA/m} = \text{dBuV/m} - 20\log_{10}(120\pi) = \text{dBuV/m} - 51.5$.

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

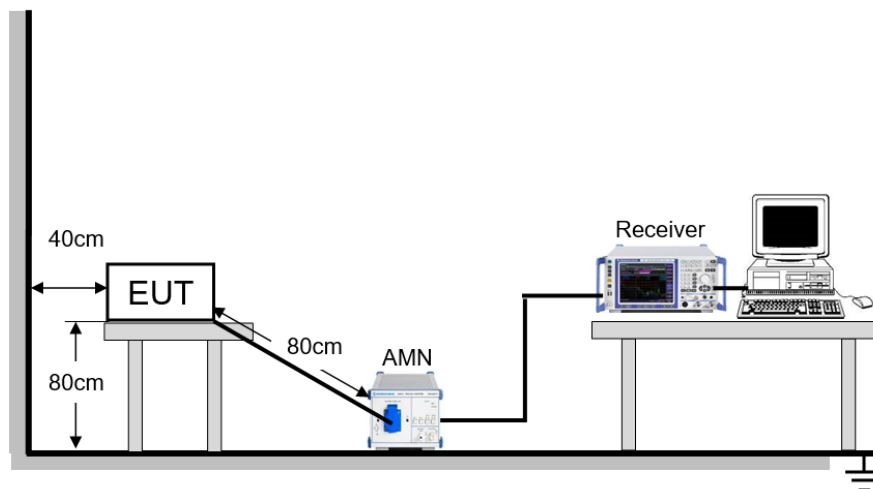
LIMITS

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.

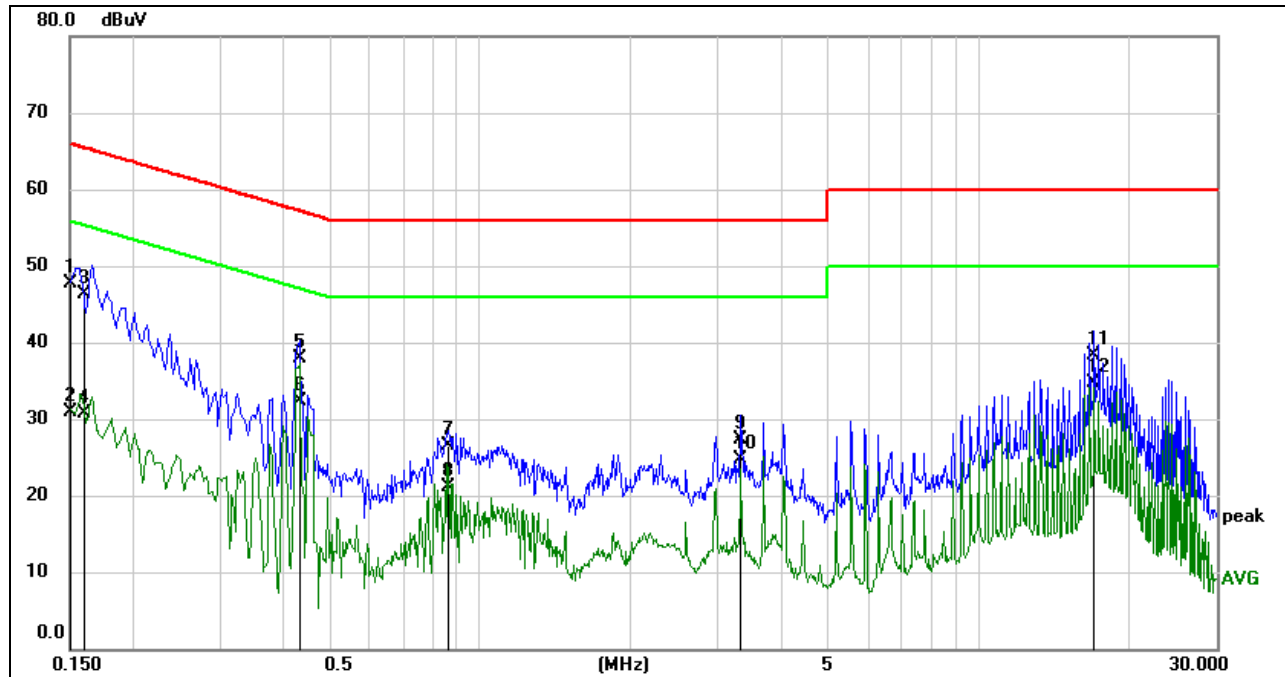


The EUT is put on a table of non-conducting material that is 80 cm high. The vertical conducting wall of shielding is located 40 cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.). A EMI Measurement Receiver (R&S Test Receiver 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	27.1 °C	Relative Humidity	64.2 %
Atmosphere Pressure	101 kPa	Test Voltage	AC 120V,60HZ

**RESULTS****9.1. 802.11a MODE****ANTENNA 1 TEST RESULTS (WORST CASE)****LINE N RESULTS (UNII-2A BAND HIGH CHANNEL, WORST-CASE CONFIGURATION)**

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1505	38.18	9.60	47.78	65.97	-18.19	QP
2	0.1505	21.23	9.60	30.83	55.97	-25.14	AVG
3	0.1615	36.73	9.60	46.33	65.39	-19.06	QP
4	0.1615	21.20	9.60	30.80	55.39	-24.59	AVG
5	0.4341	28.27	9.60	37.87	57.17	-19.30	QP
6	0.4341	22.61	9.60	32.21	47.17	-14.96	AVG
7	0.8584	16.86	9.60	26.46	56.00	-29.54	QP
8	0.8584	11.45	9.60	21.05	46.00	-24.95	AVG
9	3.3359	17.73	9.65	27.38	56.00	-28.62	QP
10	3.3359	14.98	9.65	24.63	46.00	-21.37	AVG
11	17.0386	28.17	10.04	38.21	60.00	-21.79	QP
12	17.0386	24.63	10.04	34.67	50.00	-15.33	AVG

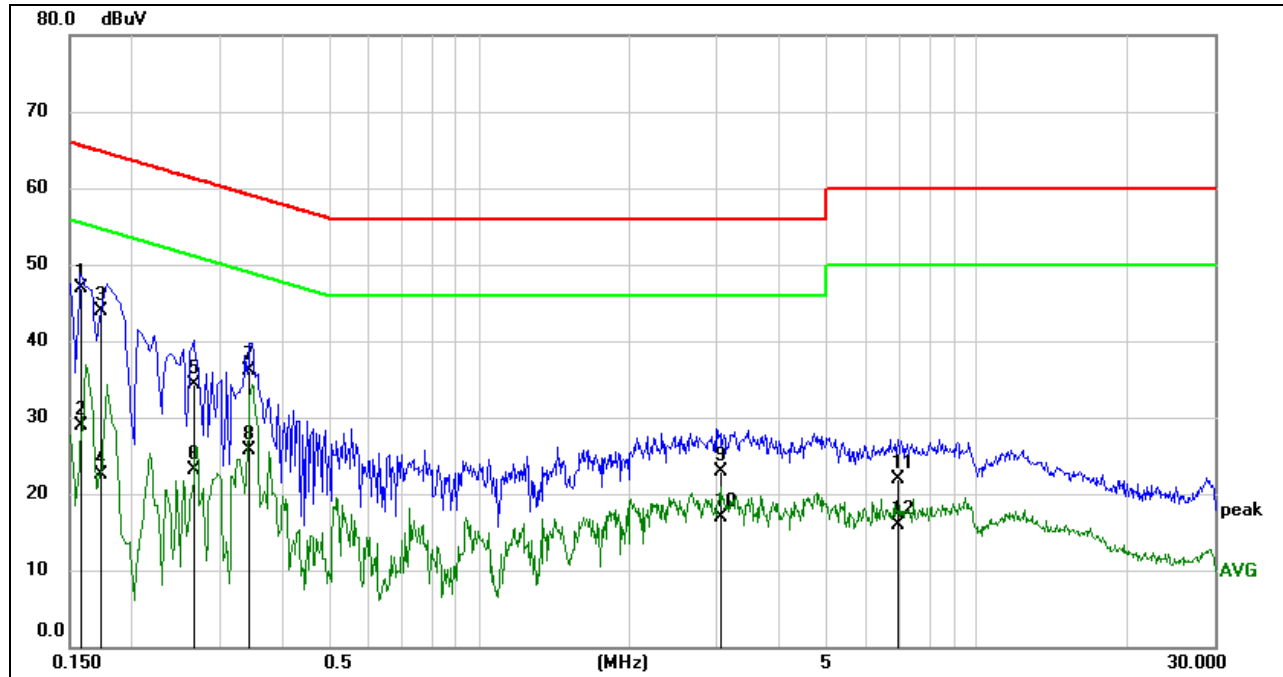
Note: 1. Result = Reading + Correct Factor.

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-2A BAND HIGH CHANNEL, WORST-CASE CONFIGURATION)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1585	37.32	9.61	46.93	65.54	-18.61	QP
2	0.1585	19.31	9.61	28.92	55.54	-26.62	AVG
3	0.1731	34.36	9.61	43.97	64.81	-20.84	QP
4	0.1731	12.99	9.61	22.60	54.81	-32.21	AVG
5	0.2695	24.68	9.60	34.28	61.13	-26.85	QP
6	0.2695	13.58	9.60	23.18	51.13	-27.95	AVG
7	0.3435	26.51	9.60	36.11	59.12	-23.01	QP
8	0.3435	16.11	9.60	25.71	49.12	-23.41	AVG
9	3.0654	13.34	9.64	22.98	56.00	-33.02	QP
10	3.0654	7.21	9.64	16.85	46.00	-29.15	AVG
11	6.8910	12.16	9.71	21.87	60.00	-38.13	QP
12	6.8910	6.21	9.71	15.92	50.00	-34.08	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

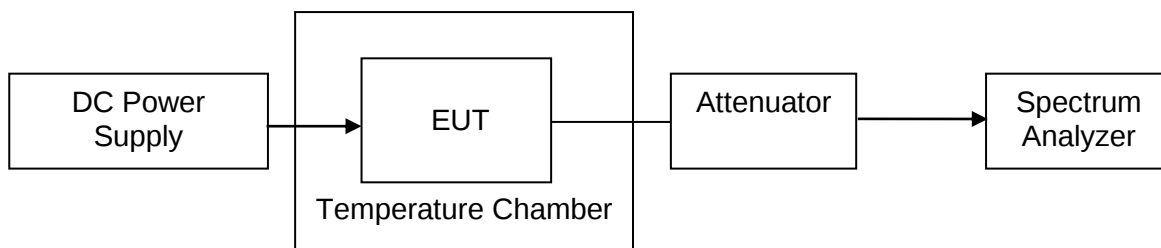
1. The EUT was placed inside an environmental chamber as the temperature in the chamber was varied between 0 °C ~ 40 °C (declared by customer).
2. The temperature was incremented by 10 °C intervals and the unit allowed to stabilize at each temperature before each measurement. The center frequency of 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	$\geq 3 \times \text{RBW}$
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): AC 120 V, 60Hz	V_L (Low Voltage): AC 132 V, 60Hz
		V_H (High Voltage): AC 108 V, 60Hz

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 $\geq$ 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.

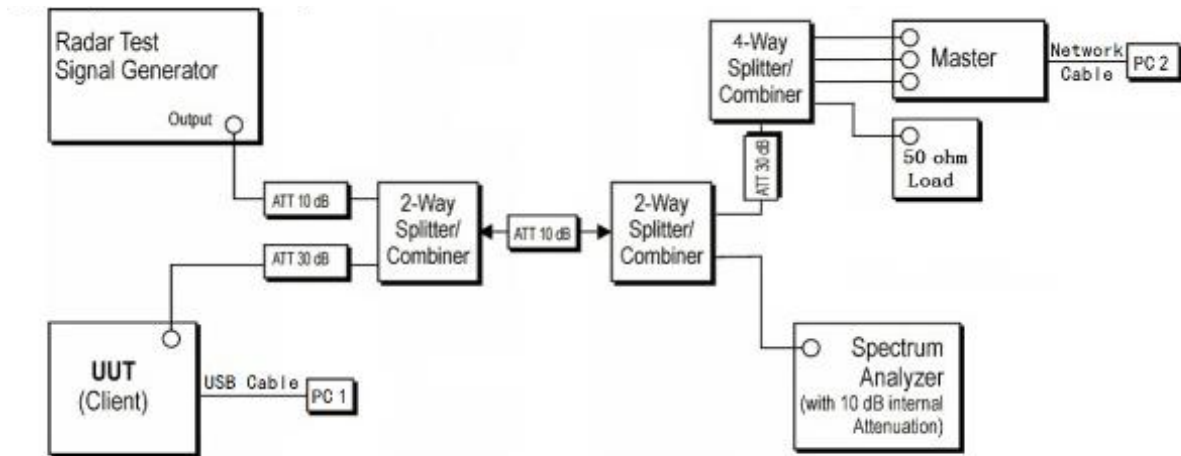
Table 5 Short Pulse Radar Test Waveforms

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	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

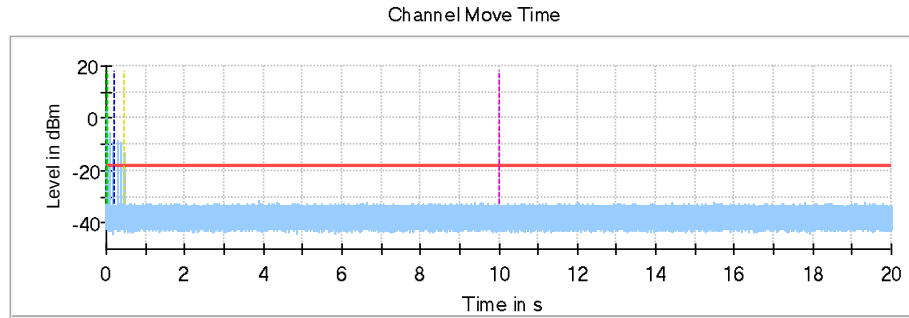


RESULTS

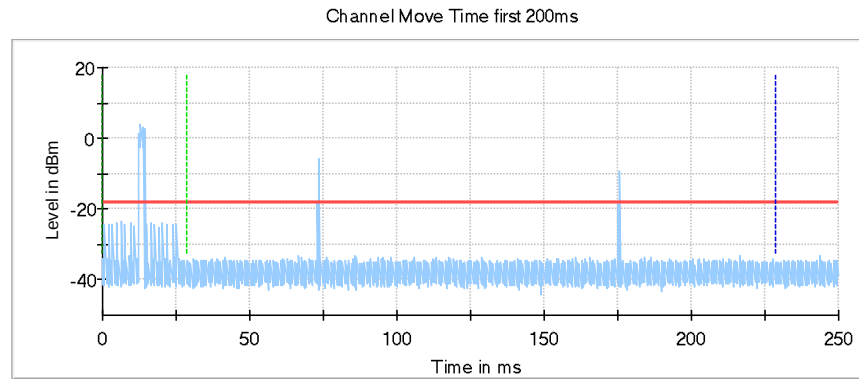
802.11ac VHT80 Mode

BW/Channel	Test Item	Test Result	Limit	Results
80MHz / 5530MHz	Channel Move Time	0.454S	< 10 s	pass
	Channel Closing Transmission Time	0.0012S	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period.	pass
	Non-Occupancy Period	Nothing appears	If the client moves with the master, the device is considered compliant if nothing appears in the client non-occupancy period test. For devices that shut down (rather than moving channels), no beacons should appear.	pass

Channel Move Time & Channel Closing Transmission Time

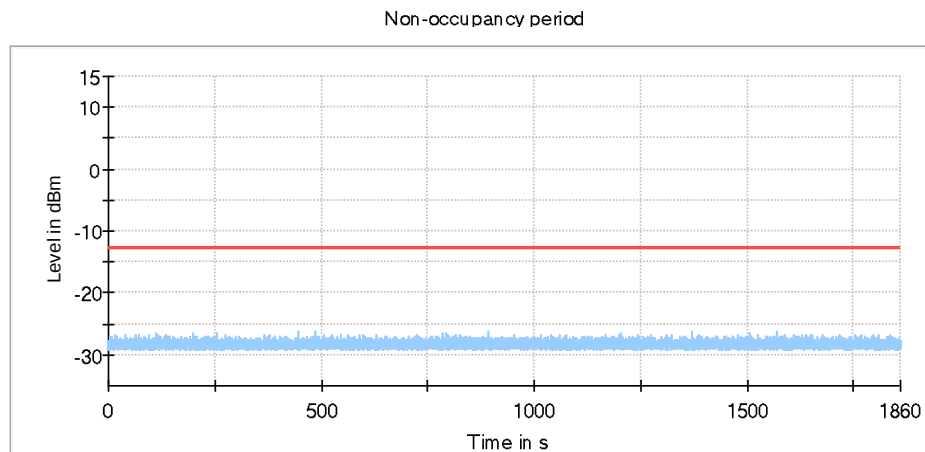


- Channel Move Time
- Threshold
- - - Start of Radar
- - - Trigger at end of Radar
- - - First 200ms of Channel Closing Tx Time
- - - 10sec Channel Move Time Limit
- - - Last measured edge of Channel Closing Tx Time



- Channel Move Time first 200ms
- Threshold
- - - Start of Radar
- - - Trigger at end of Radar
- - - First 200ms of Channel Closing Tx Time

Non-Occupancy Period



- Non-occupancy period
- Threshold



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 §15.407(a)

The conducted output power limit specified in paragraph (a) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (a) 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 (a)(1), (a)(2), and (a)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

RESULTS

Complies

13. Appendix

13.1. Appendix A1: Emission Bandwidth

13.1.1. Test Result

Test Mode	Antenna	Channel	26dB EBW [MHz]	FL[MHz]	FH[MHz]	Verdict
11A	Ant1	5180	22.120	5168.880	5191.000	PASS
	Ant2	5180	22.440	5169.120	5191.560	PASS
	Ant1	5200	22.160	5188.960	5211.120	PASS
	Ant2	5200	21.840	5188.800	5210.640	PASS
	Ant1	5240	21.720	5229.120	5250.840	PASS
	Ant2	5240	22.000	5229.040	5251.040	PASS
	Ant1	5260	21.680	5248.960	5270.640	PASS
	Ant2	5260	22.280	5248.760	5271.040	PASS
	Ant1	5280	21.640	5269.000	5290.640	PASS
	Ant2	5280	22.600	5269.120	5291.720	PASS
	Ant1	5320	22.200	5308.920	5331.120	PASS
	Ant2	5320	23.040	5308.920	5331.960	PASS
	Ant1	5500	22.200	5489.080	5511.280	PASS
	Ant2	5500	22.480	5488.800	5511.280	PASS
	Ant1	5580	22.920	5568.400	5591.320	PASS
	Ant2	5580	22.320	5569.400	5591.720	PASS
	Ant1	5700	22.160	5689.480	5711.640	PASS
	Ant2	5700	22.120	5689.400	5711.520	PASS
	Ant1	5745	22.680	5733.760	5756.440	PASS
	Ant2	5745	22.800	5733.320	5756.120	PASS
	Ant1	5785	22.480	5774.120	5796.600	PASS
	Ant2	5785	21.760	5774.680	5796.440	PASS
	Ant1	5825	23.280	5813.360	5836.640	PASS
	Ant2	5825	22.400	5814.280	5836.680	PASS
11N20MIMO	Ant1	5180	22.880	5168.960	5191.840	PASS
	Ant2	5180	23.200	5168.680	5191.880	PASS
	Ant1	5200	23.080	5189.040	5212.120	PASS
	Ant2	5200	23.880	5187.640	5211.520	PASS
	Ant1	5240	22.320	5229.360	5251.680	PASS
	Ant2	5240	22.760	5228.680	5251.440	PASS
	Ant1	5260	22.960	5248.280	5271.240	PASS
	Ant2	5260	22.760	5248.400	5271.160	PASS
	Ant1	5280	23.440	5267.960	5291.400	PASS
	Ant2	5280	23.520	5268.200	5291.720	PASS
	Ant1	5320	23.280	5308.480	5331.760	PASS
	Ant2	5320	23.320	5308.440	5331.760	PASS
	Ant1	5500	22.680	5488.520	5511.200	PASS
	Ant2	5500	23.440	5487.840	5511.280	PASS
	Ant1	5580	23.320	5568.440	5591.760	PASS
	Ant2	5580	23.080	5568.840	5591.920	PASS
	Ant1	5700	22.800	5688.800	5711.600	PASS
	Ant2	5700	23.200	5688.120	5711.320	PASS
	Ant1	5745	22.840	5733.680	5756.520	PASS
	Ant2	5745	23.800	5733.280	5757.080	PASS
	Ant1	5785	23.120	5773.680	5796.800	PASS
	Ant2	5785	23.400	5773.680	5797.080	PASS
	Ant1	5825	23.480	5813.720	5837.200	PASS
	Ant2	5825	23.400	5813.760	5837.160	PASS
11N40MIMO	Ant1	5190	40.720	5169.760	5210.480	PASS
	Ant2	5190	40.240	5170.400	5210.640	PASS
	Ant1	5230	40.320	5210.160	5250.480	PASS



	Ant2	5230	39.920	5210.080	5250.000	PASS
	Ant1	5270	39.440	5250.400	5289.840	PASS
	Ant2	5270	40.400	5250.320	5290.720	PASS
	Ant1	5310	40.000	5290.000	5330.000	PASS
	Ant2	5310	40.000	5290.000	5330.000	PASS
	Ant1	5510	40.800	5490.000	5530.800	PASS
	Ant2	5510	40.800	5490.000	5530.800	PASS
	Ant1	5550	40.240	5530.320	5570.560	PASS
	Ant2	5550	40.880	5529.760	5570.640	PASS
	Ant1	5670	40.400	5650.000	5690.400	PASS
	Ant2	5670	40.320	5650.000	5690.320	PASS
	Ant1	5755	40.960	5734.600	5775.560	PASS
	Ant2	5755	40.160	5735.240	5775.400	PASS
	Ant1	5795	40.400	5775.400	5815.800	PASS
	Ant2	5795	40.160	5774.680	5814.840	PASS
11AC20MIMO	Ant1	5180	22.440	5168.640	5191.080	PASS
	Ant2	5180	22.960	5168.840	5191.800	PASS
	Ant1	5200	23.600	5188.040	5211.640	PASS
	Ant2	5200	22.640	5188.840	5211.480	PASS
	Ant1	5240	21.720	5229.680	5251.400	PASS
	Ant2	5240	23.240	5228.040	5251.280	PASS
	Ant1	5260	22.680	5249.120	5271.800	PASS
	Ant2	5260	23.160	5247.800	5270.960	PASS
	Ant1	5280	23.680	5268.160	5291.840	PASS
	Ant2	5280	23.400	5268.240	5291.640	PASS
	Ant1	5320	23.000	5308.520	5331.520	PASS
	Ant2	5320	22.400	5308.960	5331.360	PASS
	Ant1	5500	23.600	5488.320	5511.920	PASS
	Ant2	5500	23.040	5489.000	5512.040	PASS
	Ant1	5580	23.440	5568.440	5591.880	PASS
	Ant2	5580	23.920	5567.640	5591.560	PASS
	Ant1	5700	22.880	5688.920	5711.800	PASS
	Ant2	5700	23.880	5687.640	5711.520	PASS
	Ant1	5745	22.080	5733.960	5756.040	PASS
	Ant2	5745	23.720	5733.640	5757.360	PASS
	Ant1	5785	23.320	5773.400	5796.720	PASS
	Ant2	5785	23.040	5773.600	5796.640	PASS
	Ant1	5825	22.600	5814.200	5836.800	PASS
	Ant2	5825	23.920	5813.320	5837.240	PASS
11AC40MIMO	Ant1	5190	40.400	5170.560	5210.960	PASS
	Ant2	5190	40.240	5170.240	5210.480	PASS
	Ant1	5230	41.440	5209.360	5250.800	PASS
	Ant2	5230	40.160	5210.240	5250.400	PASS
	Ant1	5270	41.040	5249.760	5290.800	PASS
	Ant2	5270	41.280	5249.680	5290.960	PASS
	Ant1	5310	40.400	5289.760	5330.160	PASS
	Ant2	5310	40.000	5290.320	5330.320	PASS
	Ant1	5510	39.360	5490.720	5530.080	PASS
	Ant2	5510	40.400	5490.080	5530.480	PASS
	Ant1	5550	40.400	5530.240	5570.640	PASS
	Ant2	5550	40.480	5529.840	5570.320	PASS
	Ant1	5670	40.320	5650.080	5690.400	PASS
	Ant2	5670	40.320	5649.920	5690.240	PASS
	Ant1	5755	39.840	5735.320	5775.160	PASS
	Ant2	5755	40.160	5735.240	5775.400	PASS
	Ant1	5795	41.520	5774.680	5816.200	PASS
	Ant2	5795	40.160	5775.080	5815.240	PASS
11AC80MIMO	Ant1	5210	81.280	5169.680	5250.960	PASS
	Ant2	5210	82.560	5168.720	5251.280	PASS
	Ant1	5290	83.040	5248.720	5331.760	PASS
	Ant2	5290	82.560	5248.560	5331.120	PASS

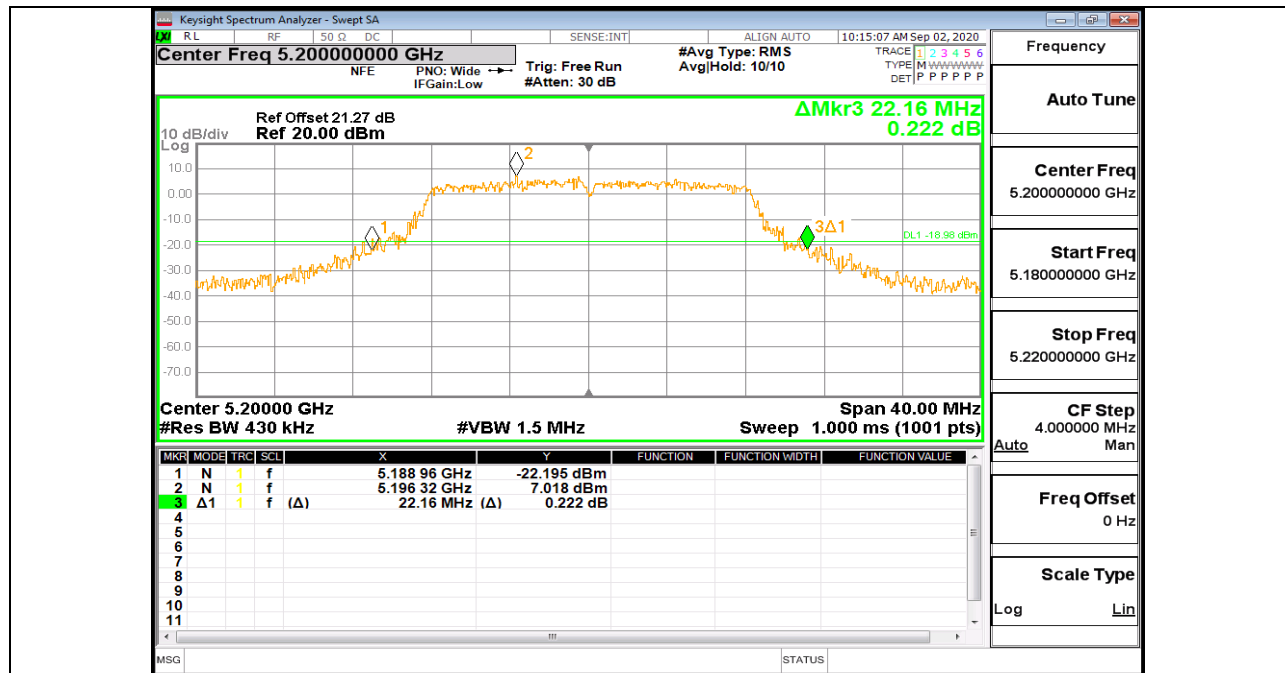


	Ant1	5530	82.880	5488.400	5571.280	PASS
	Ant2	5530	82.560	5489.520	5572.080	PASS
	Ant1	5610	82.240	5569.040	5651.280	PASS
	Ant2	5610	82.880	5568.560	5651.440	PASS
	Ant1	5775	81.280	5735.160	5816.440	PASS
	Ant2	5775	82.720	5734.200	5816.920	PASS

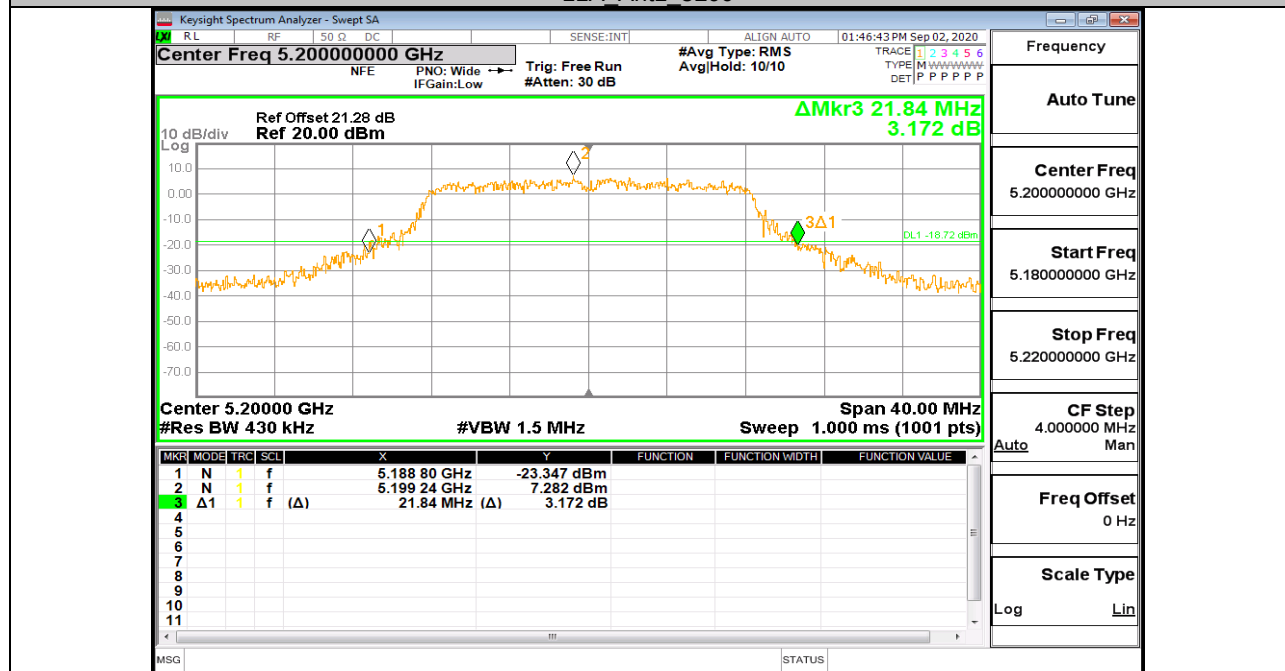


13.1.2. Test Graphs





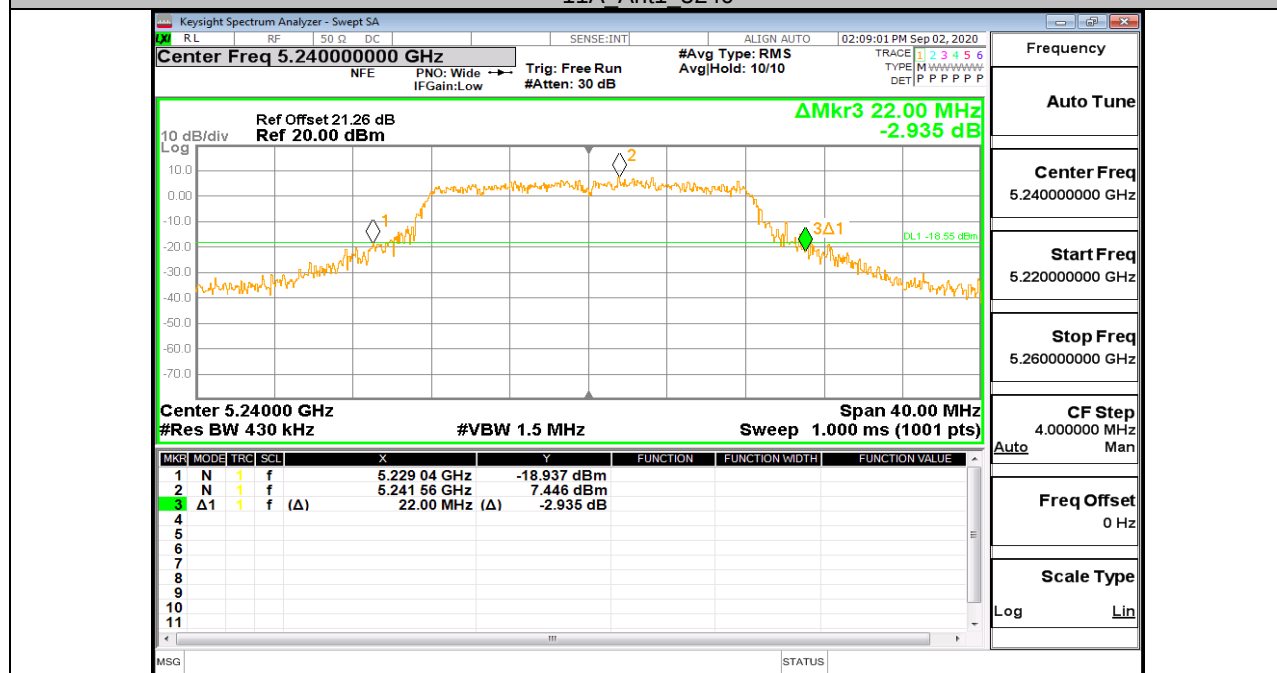
11A_Ant1_5200



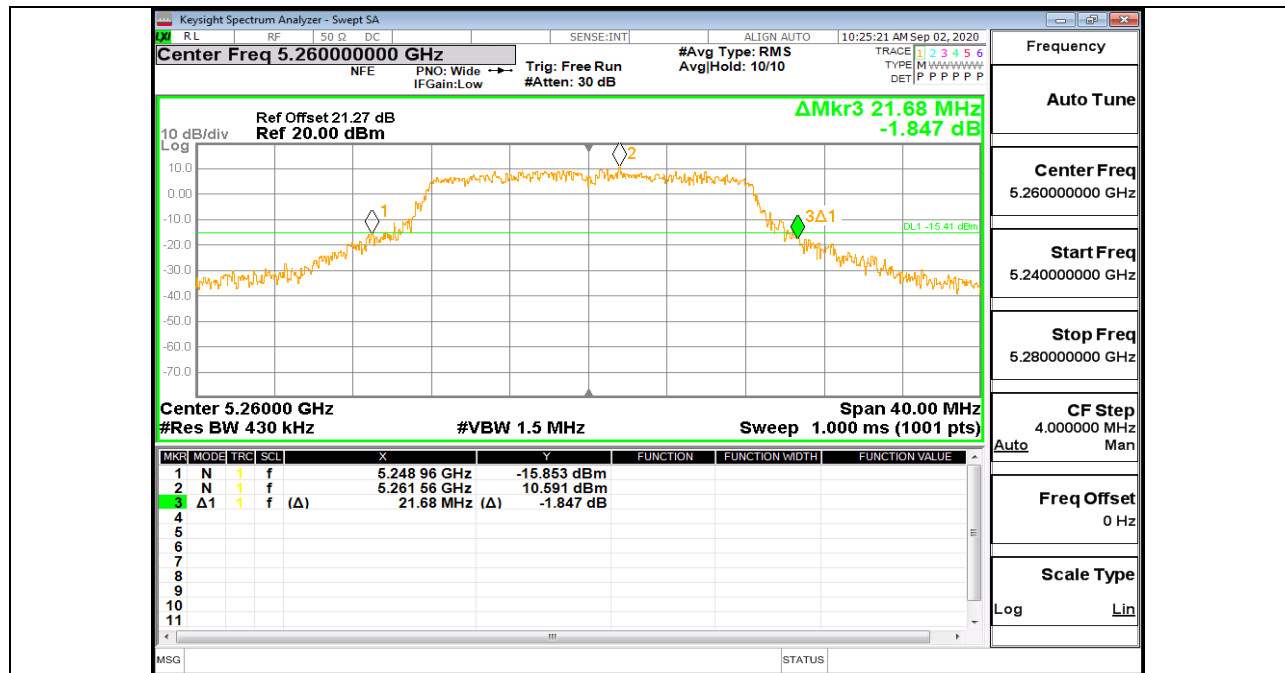
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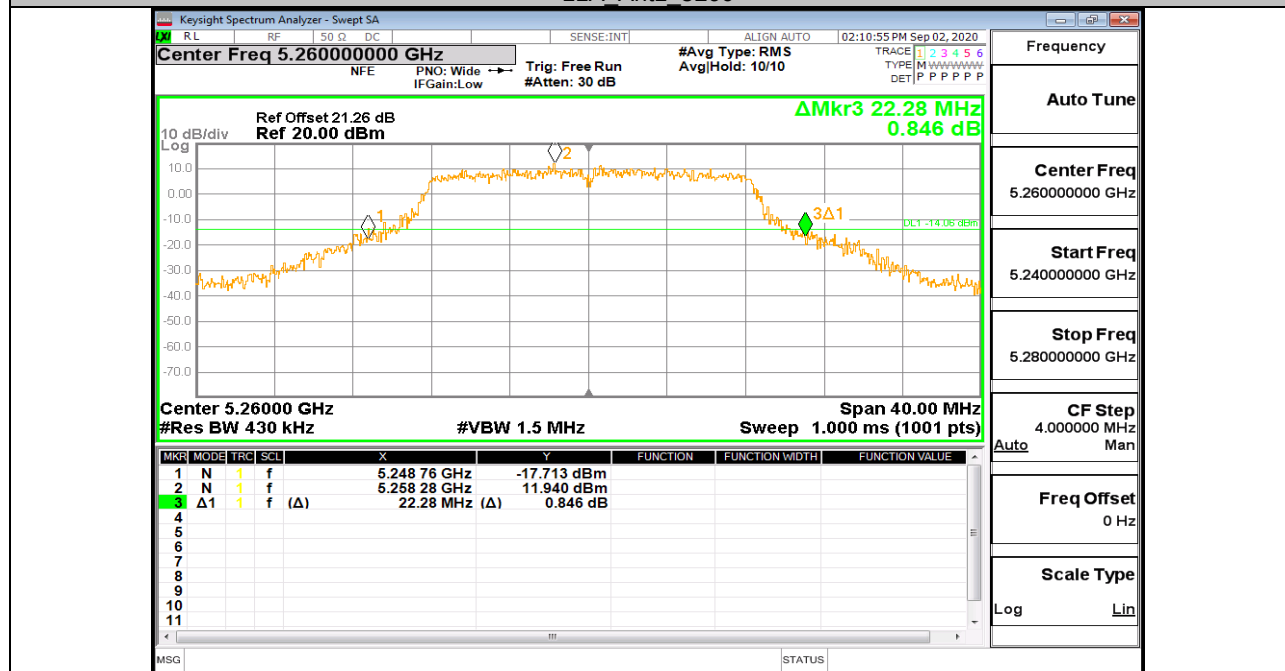
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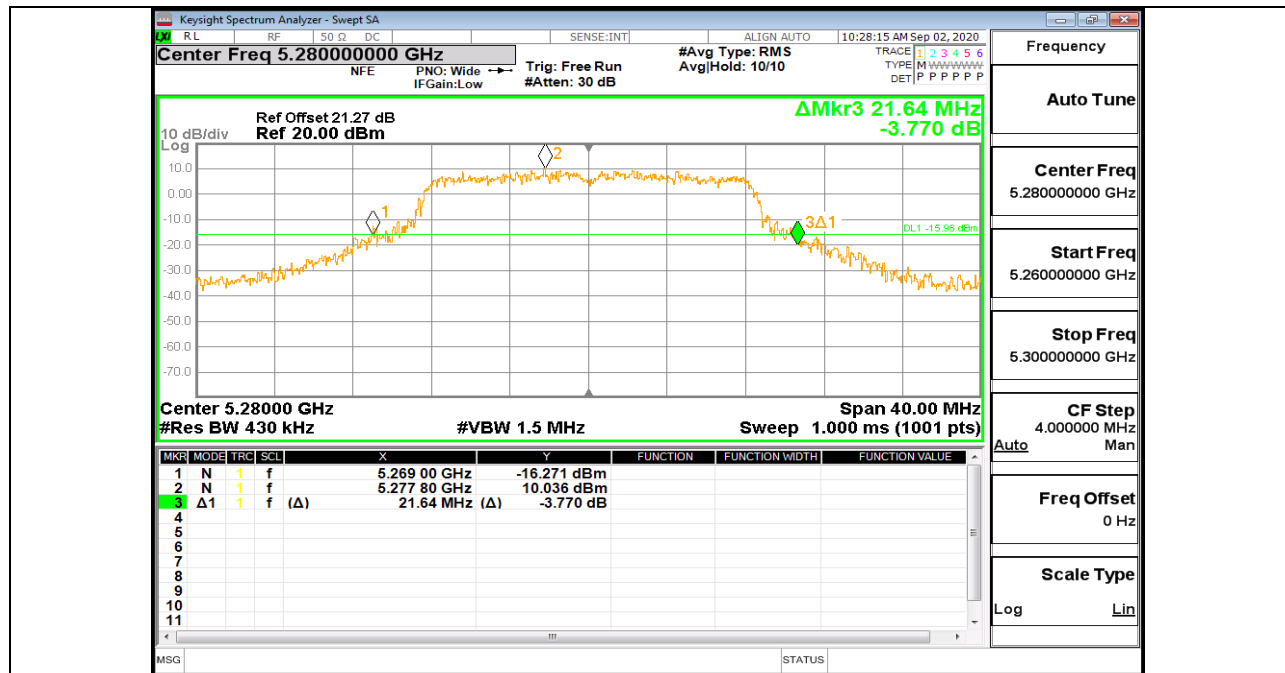
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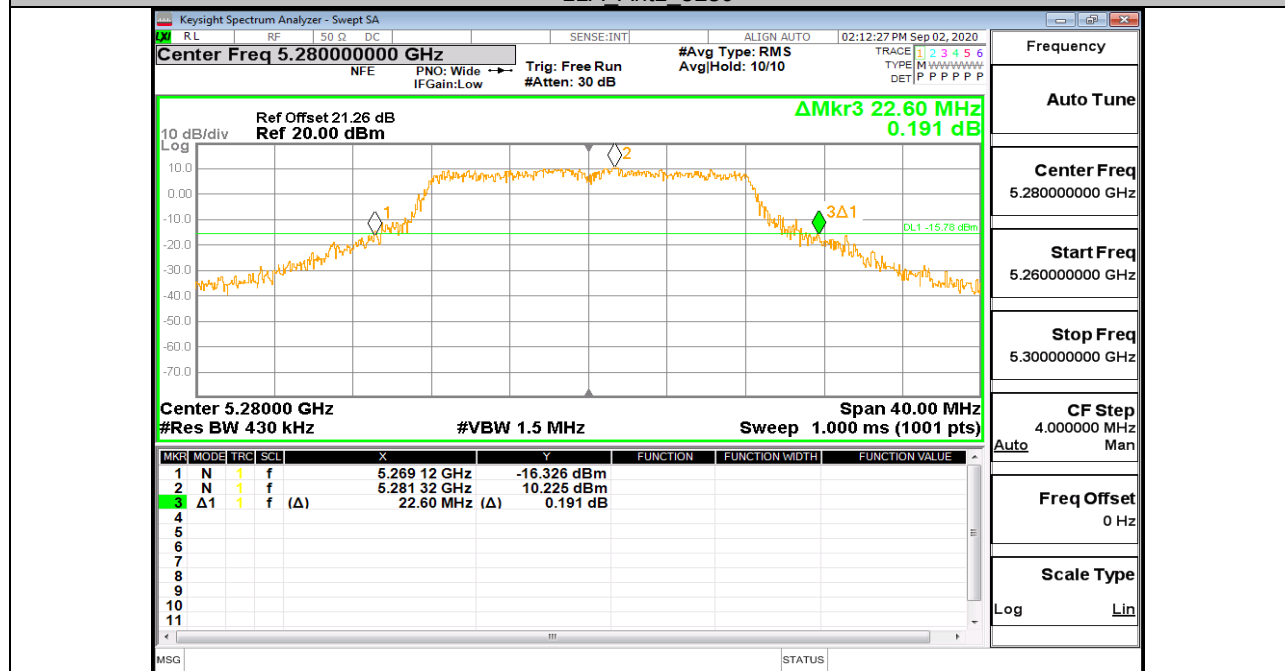
11A_Ant1_5260



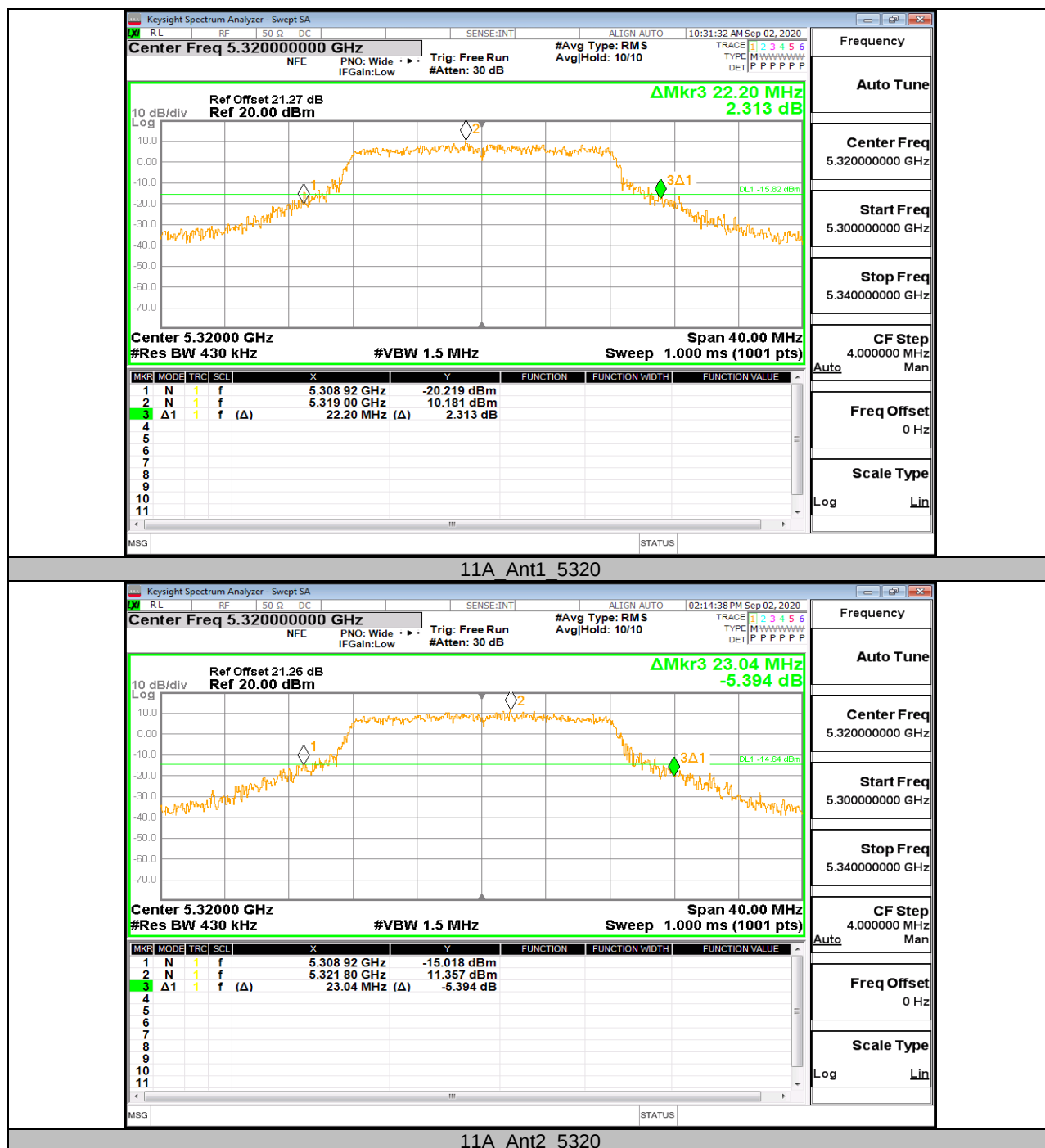
11A_Ant2_5260



11A_Ant1_5280



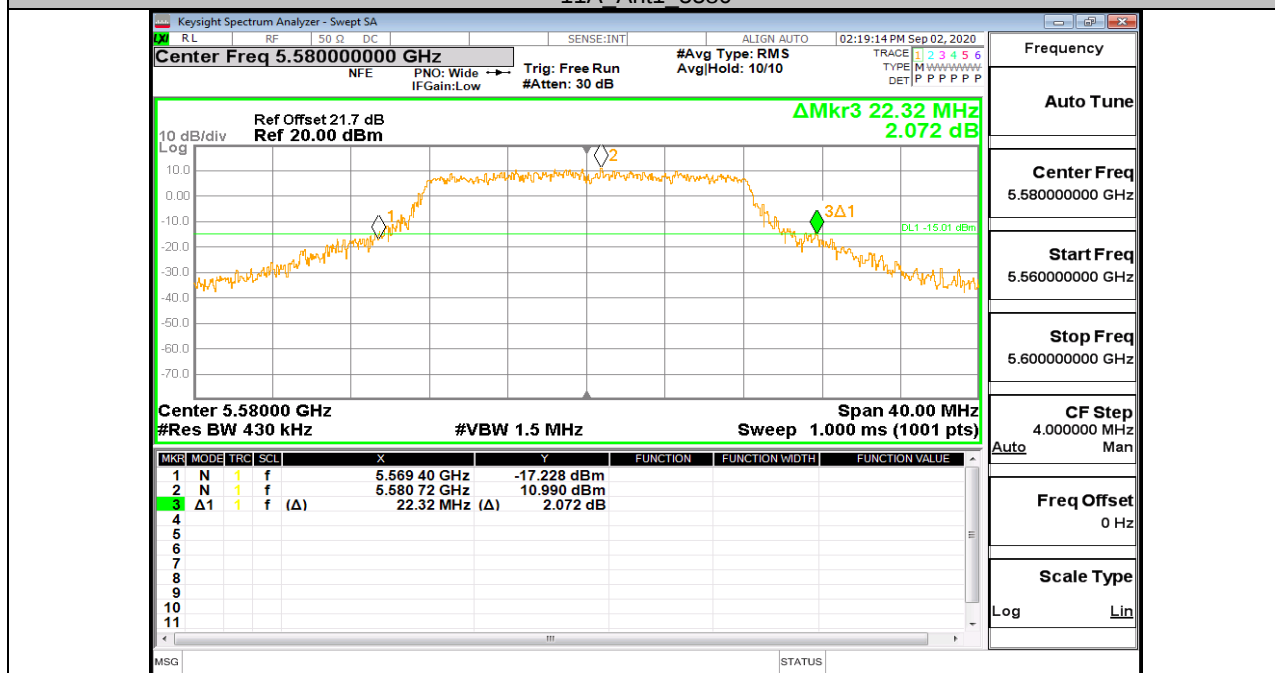
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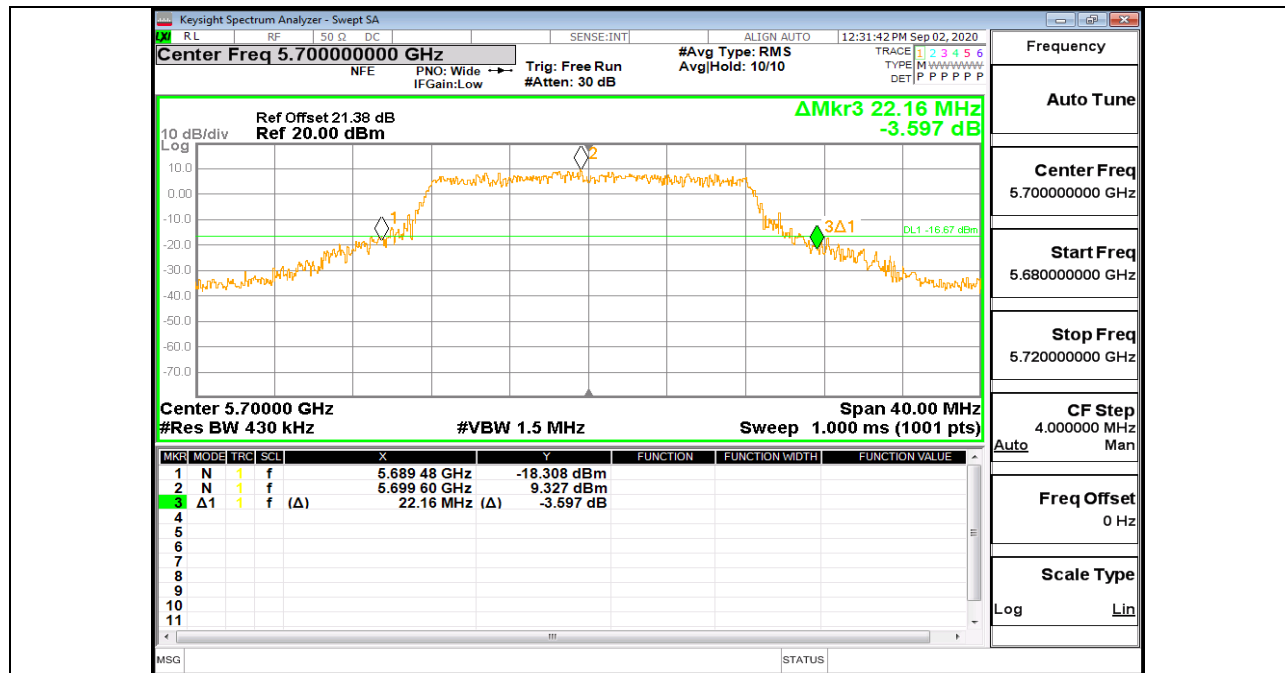




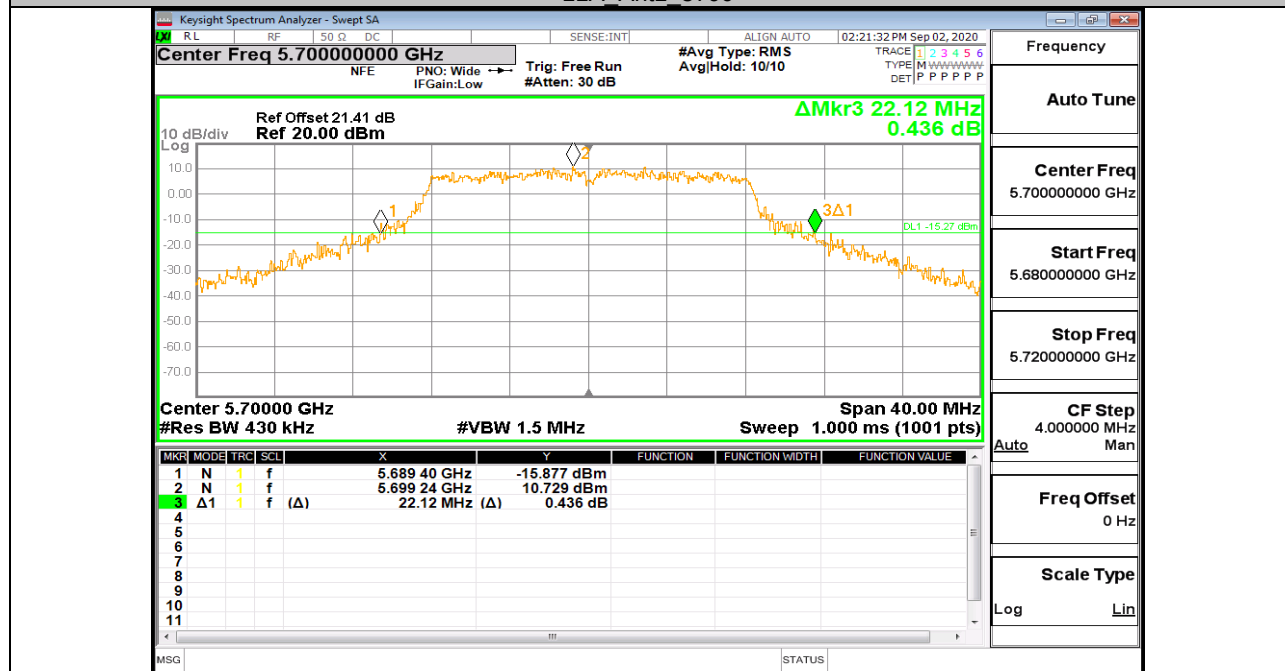
11A_Ant1_5580



11A_Ant2_5580



11A_Ant1_5700

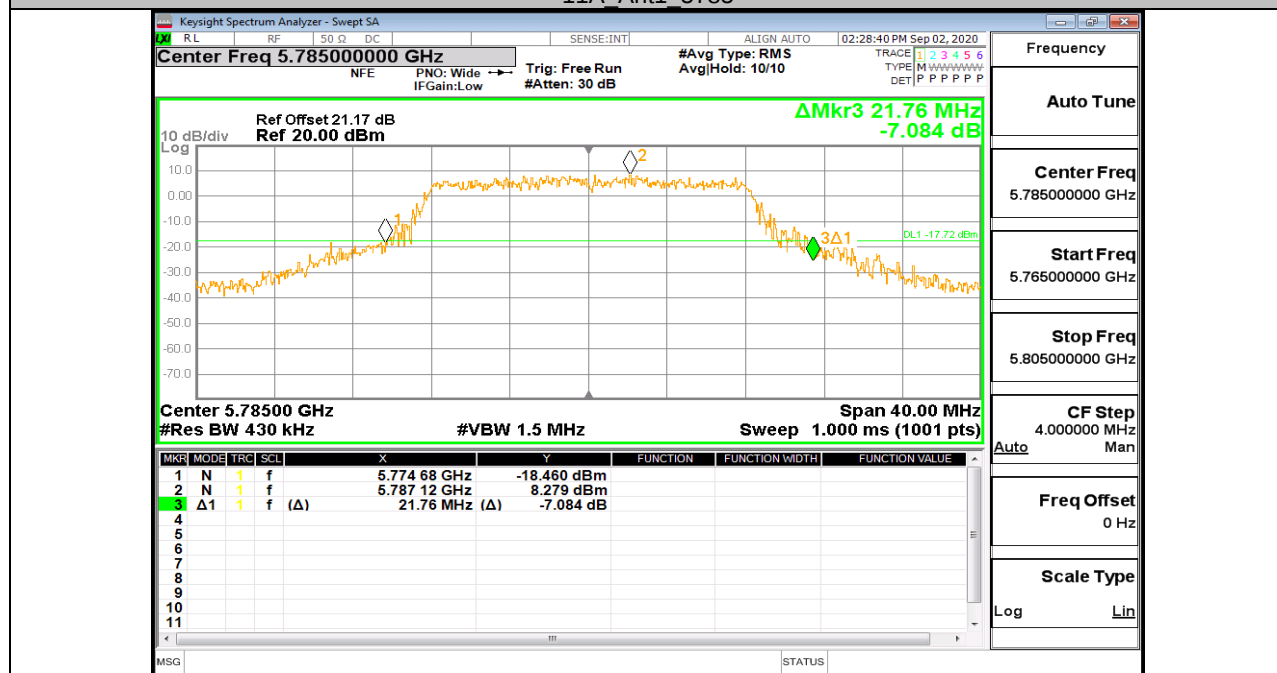


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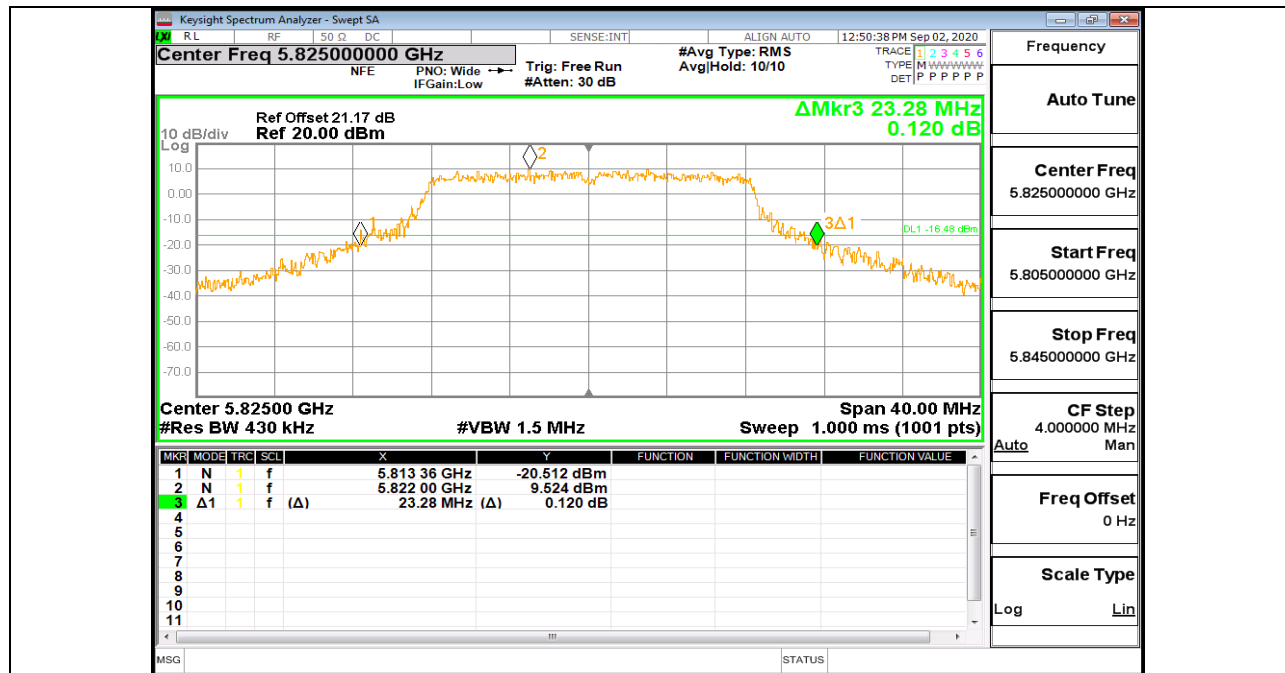




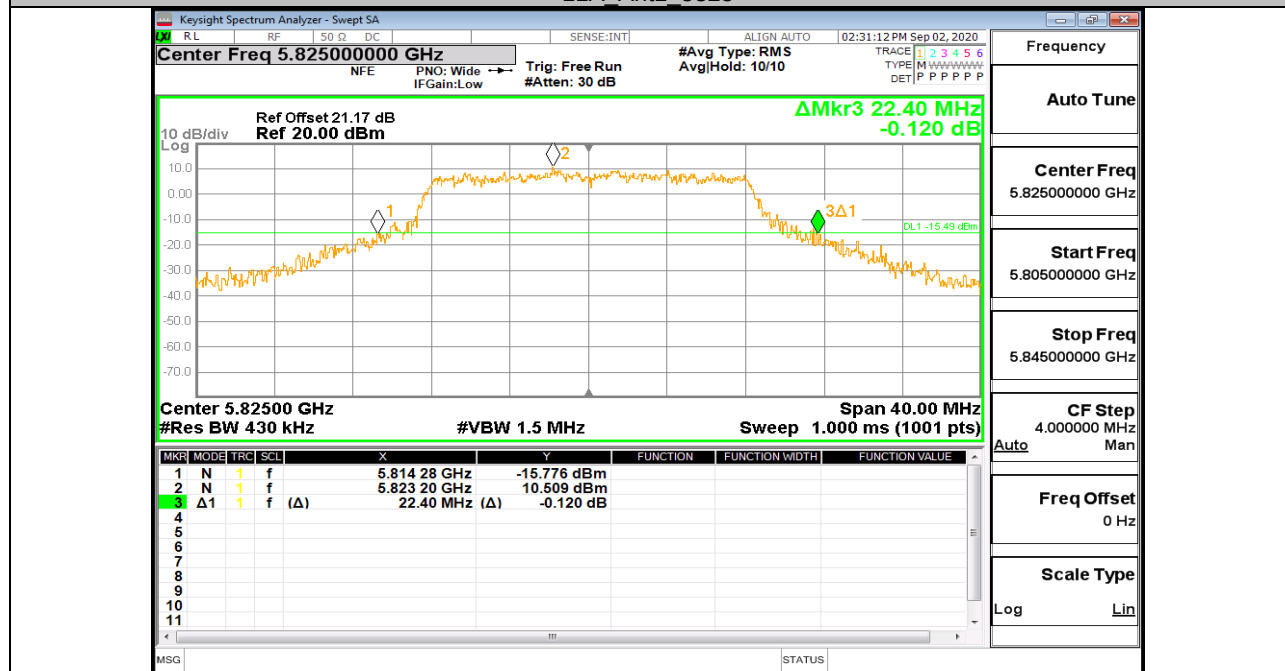
11A_Ant1_5785



11A_Ant2_5785



11A_Ant1_5825



11A_Ant2_5825



