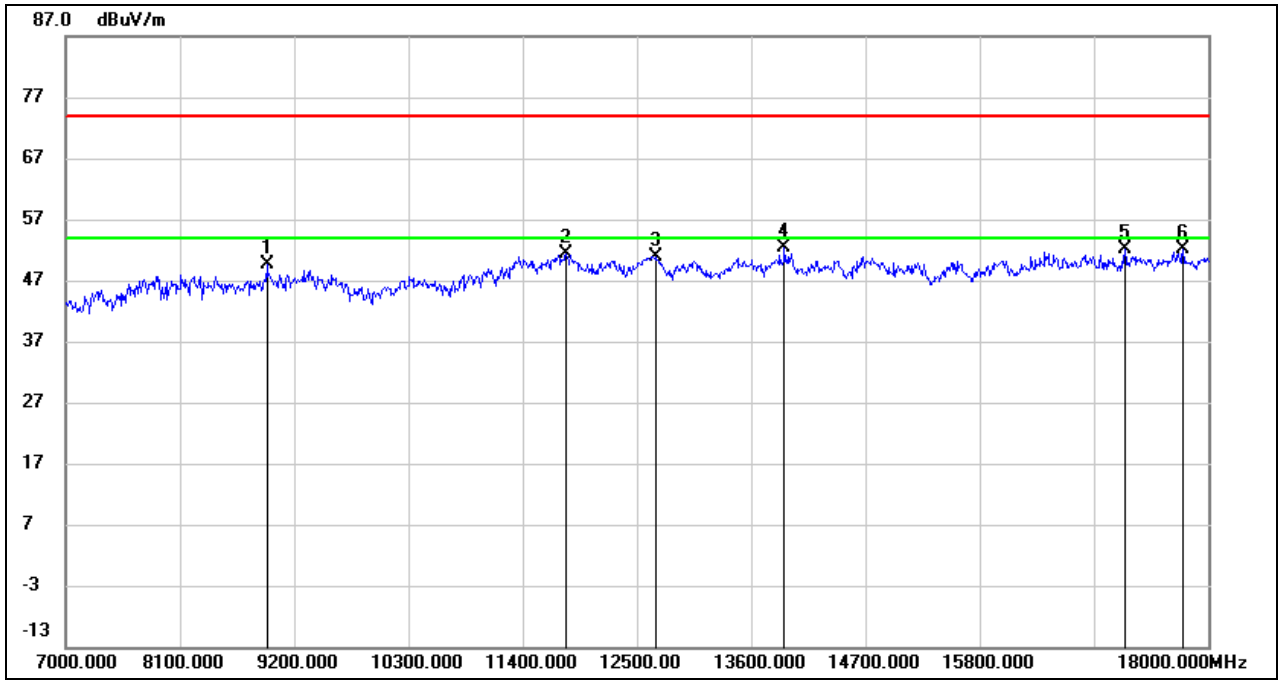
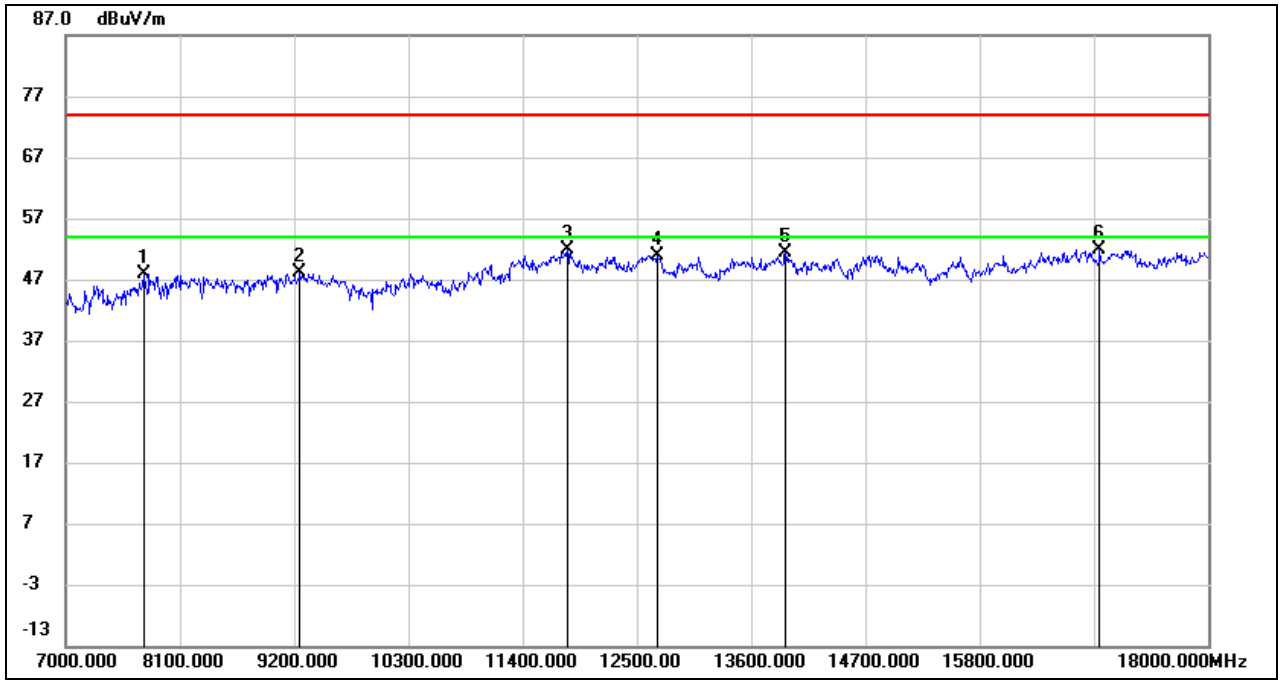
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8936.000	38.49	11.10	49.59	74.00	-24.41	peak
2	11818.000	34.78	16.68	51.46	74.00	-22.54	peak
3	12687.000	34.16	16.82	50.98	74.00	-23.02	peak
4	13919.000	34.43	17.97	52.40	74.00	-21.60	peak
5	17197.000	29.60	22.46	52.06	74.00	-21.94	peak
6	17758.000	28.45	23.66	52.11	74.00	-21.89	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. 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. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.

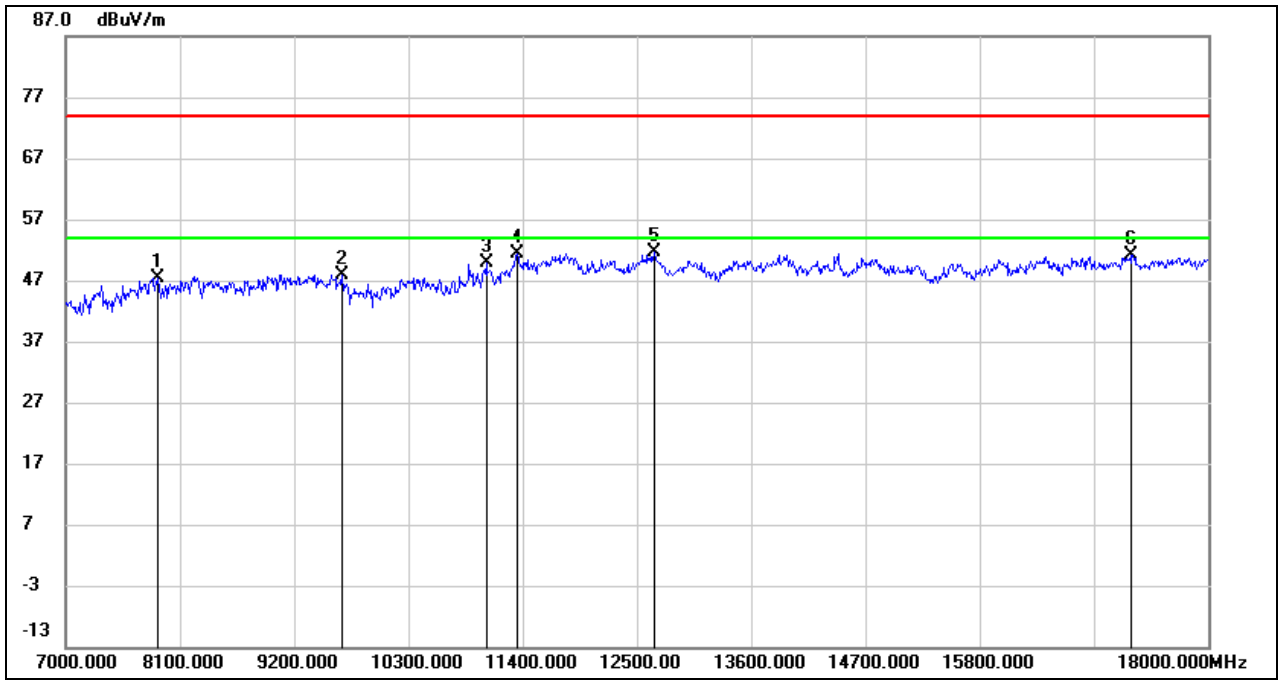
HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7748.000	38.59	9.29	47.88	74.00	-26.12	peak
2	9255.000	37.35	10.80	48.15	74.00	-25.85	peak
3	11829.000	35.23	16.67	51.90	74.00	-22.10	peak
4	12698.000	34.17	16.81	50.98	74.00	-23.02	peak
5	13930.000	33.45	17.97	51.42	74.00	-22.58	peak
6	16955.000	30.61	21.28	51.89	74.00	-22.11	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. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.

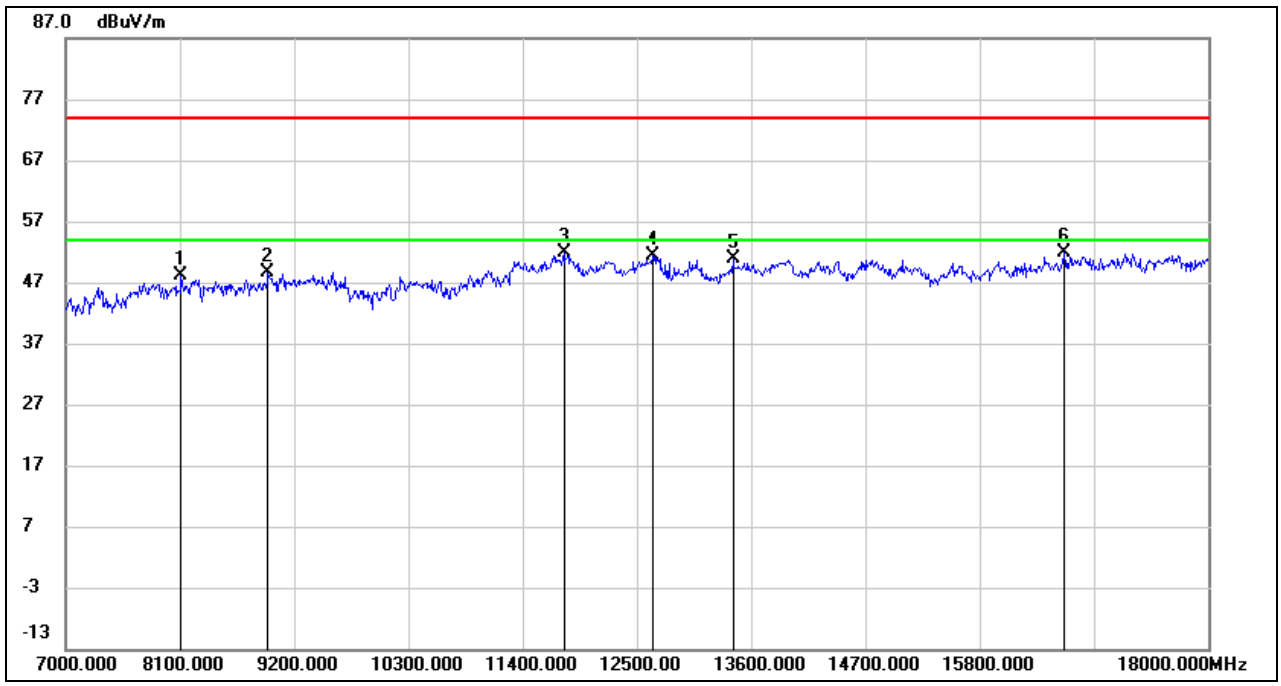
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7891.000	38.23	9.24	47.47	74.00	-26.53	peak
2	9662.000	36.20	11.72	47.92	74.00	-26.08	peak
3	11048.000	35.42	14.53	49.95	74.00	-24.05	peak
4	11345.000	36.21	15.29	51.50	74.00	-22.50	peak
5	12665.000	34.88	16.82	51.70	74.00	-22.30	peak
6	17263.000	28.86	22.28	51.14	74.00	-22.86	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. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)

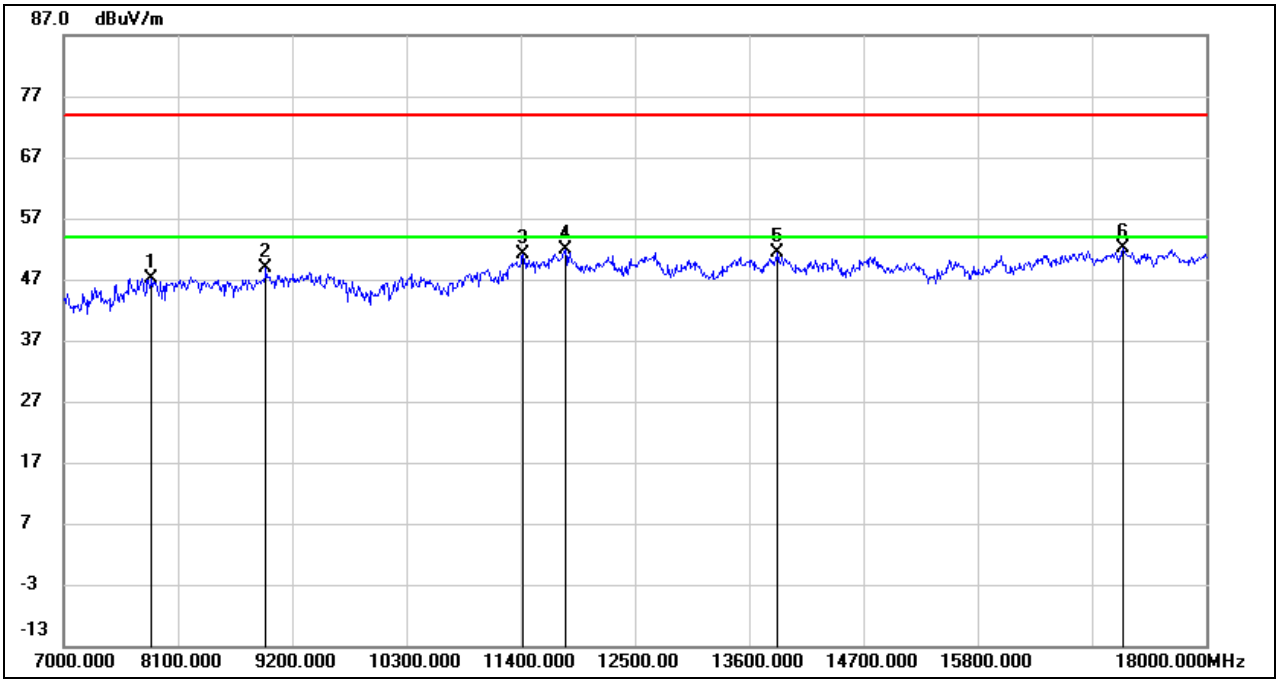


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8111.000	38.34	9.83	48.17	74.00	-25.83	peak
2	8947.000	37.46	11.21	48.67	74.00	-25.33	peak
3	11796.000	35.16	16.69	51.85	74.00	-22.15	peak
4	12654.000	34.49	16.81	51.30	74.00	-22.70	peak
5	13424.000	33.41	17.43	50.84	74.00	-23.16	peak
6	16614.000	31.01	20.80	51.81	74.00	-22.19	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. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.

STRADDLE CHANNEL 142

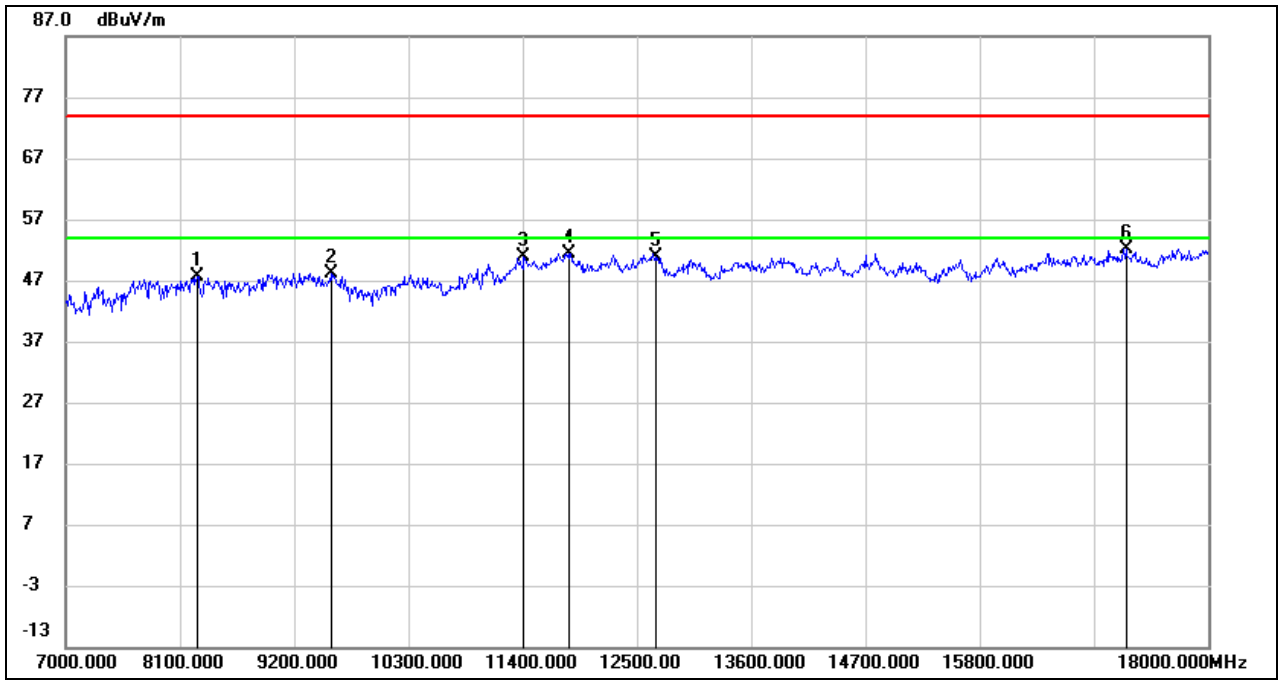
HARMONICS AND SPURIOUS EMISSIONS (HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7847.000	37.89	9.35	47.24	74.00	-26.76	peak
2	8947.000	37.64	11.21	48.85	74.00	-25.15	peak
3	11422.000	35.73	15.47	51.20	74.00	-22.80	peak
4	11829.000	35.25	16.67	51.92	74.00	-22.08	peak
5	13875.000	33.40	18.04	51.44	74.00	-22.56	peak
6	17197.000	29.72	22.46	52.18	74.00	-21.82	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. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.

HARMONICS AND SPURIOUS EMISSIONS (VERTICAL)

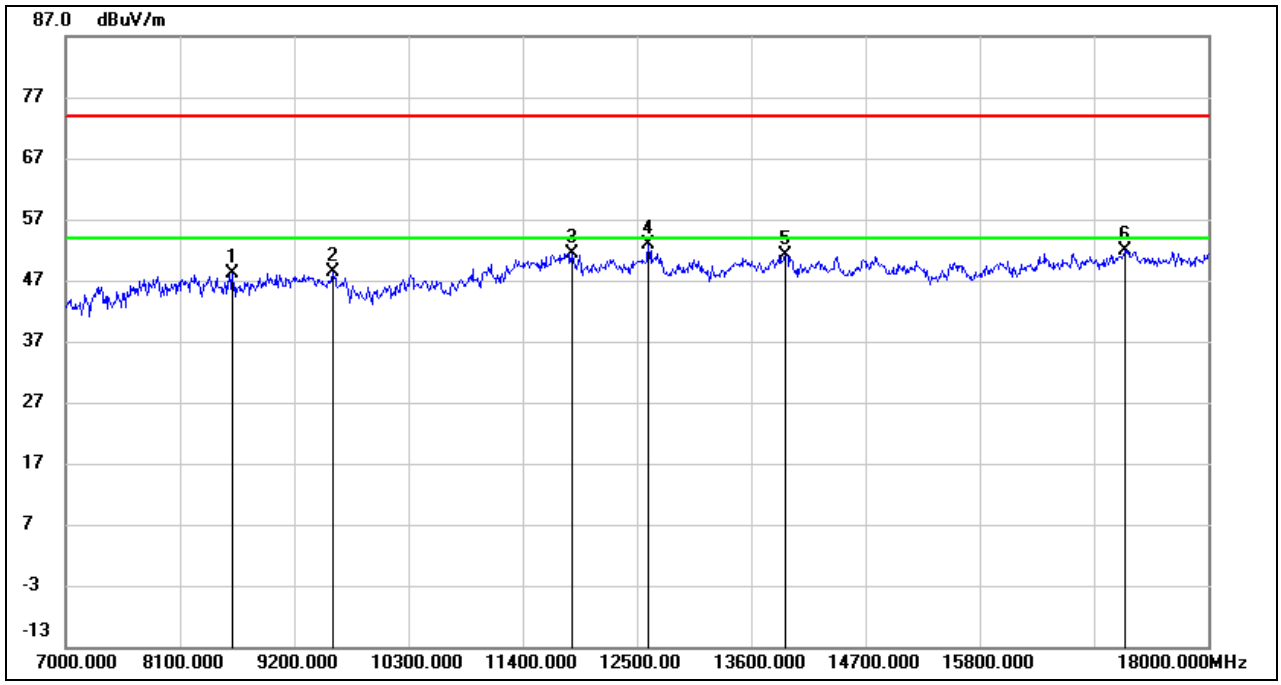


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8265.000	37.29	10.30	47.59	74.00	-26.41	peak
2	9552.000	36.31	11.86	48.17	74.00	-25.83	peak
3	11411.000	35.36	15.44	50.80	74.00	-23.20	peak
4	11840.000	34.73	16.66	51.39	74.00	-22.61	peak
5	12687.000	34.13	16.82	50.95	74.00	-23.05	peak
6	17208.000	29.78	22.45	52.23	74.00	-21.77	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. 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. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.

UNII-3 BAND

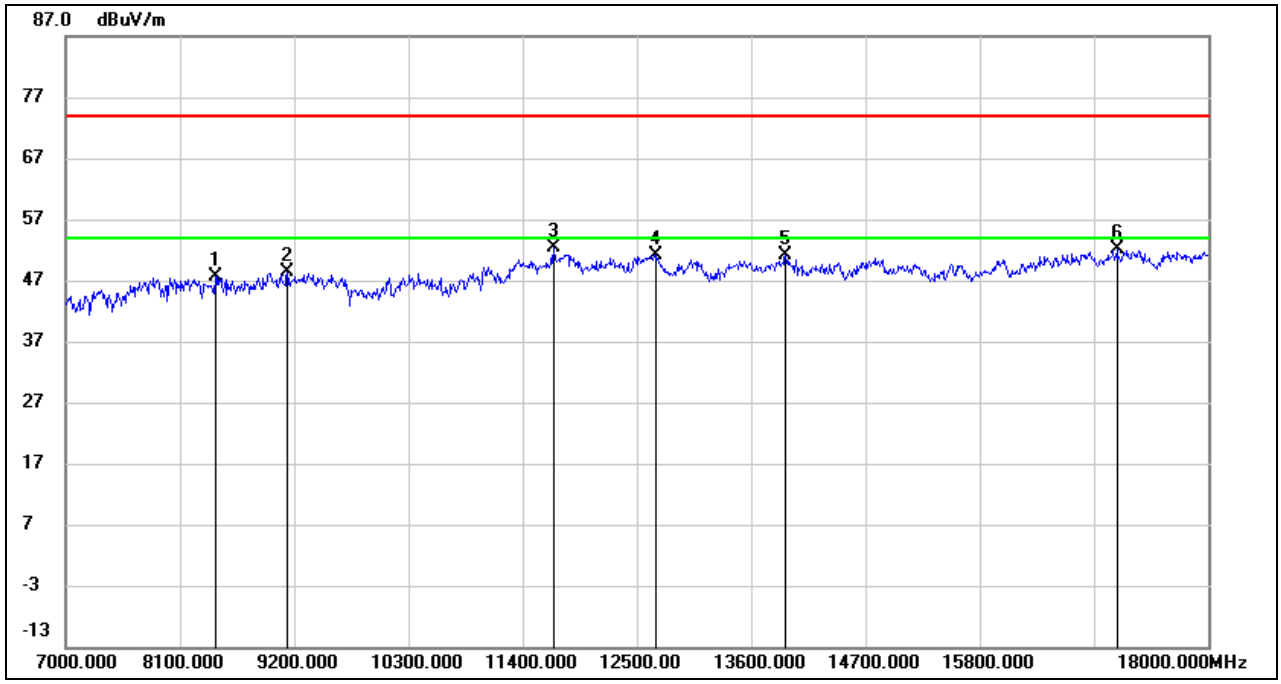
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8606.000	38.47	9.71	48.18	74.00	-25.82	peak
2	9574.000	36.46	11.90	48.36	74.00	-25.64	peak
3	11873.000	34.82	16.63	51.45	74.00	-22.55	peak
4	12610.000	36.07	16.82	52.89	74.00	-21.11	peak
5	13930.000	33.26	17.97	51.23	74.00	-22.77	peak
6	17197.000	29.34	22.46	51.80	74.00	-22.20	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. 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. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.

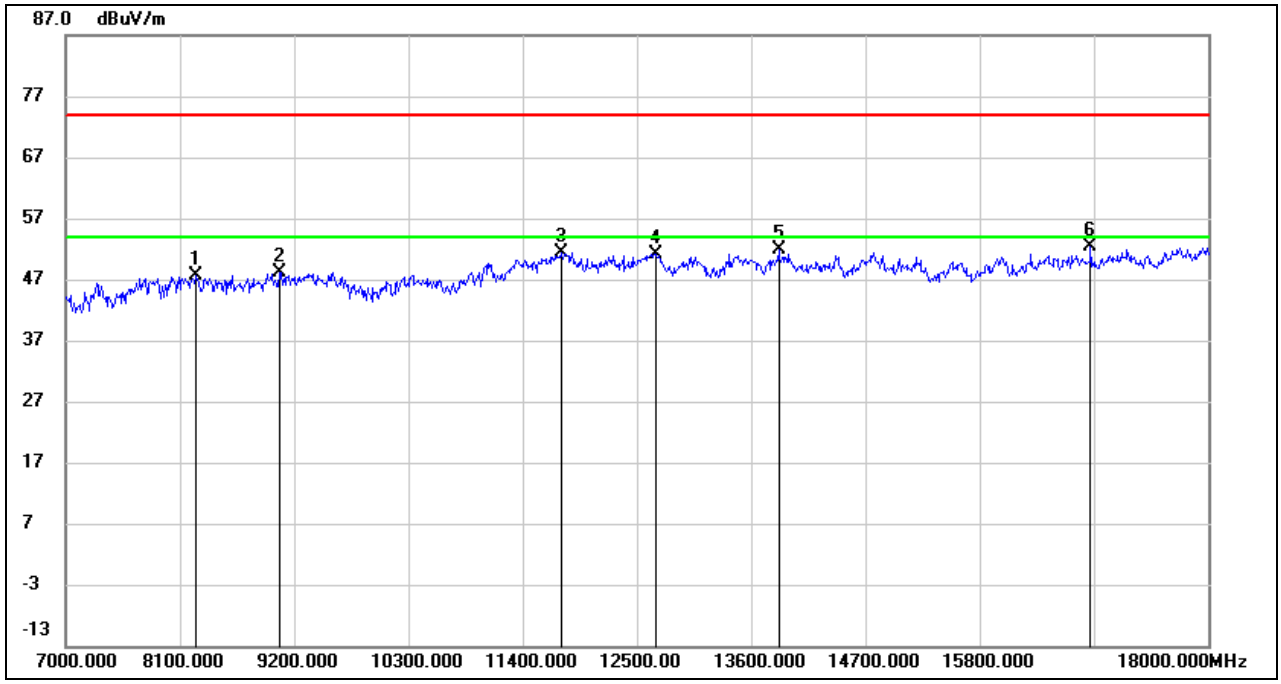
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8441.000	37.93	9.77	47.70	74.00	-26.30	peak
2	9134.000	37.43	10.95	48.38	74.00	-25.62	peak
3	11697.000	36.12	16.24	52.36	74.00	-21.64	peak
4	12687.000	34.41	16.82	51.23	74.00	-22.77	peak
5	13930.000	33.23	17.97	51.20	74.00	-22.80	peak
6	17120.000	30.01	22.03	52.04	74.00	-21.96	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. 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. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.

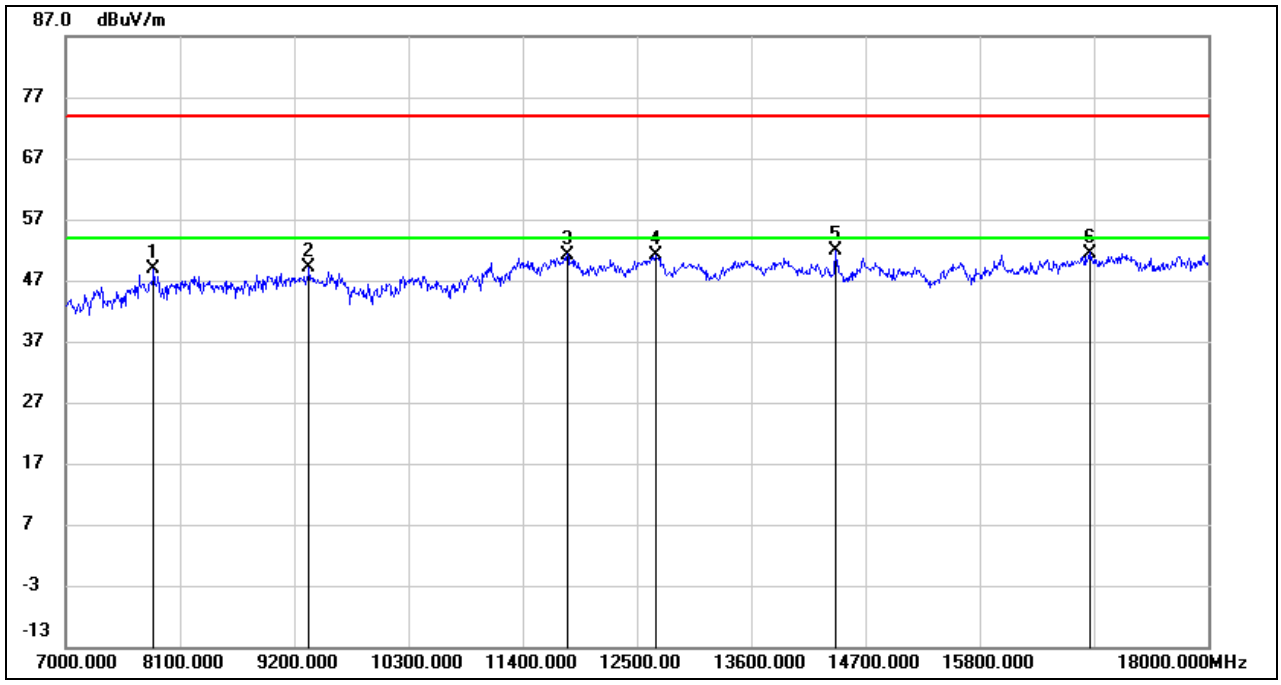
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8254.000	37.25	10.34	47.59	74.00	-26.41	peak
2	9057.000	36.83	11.40	48.23	74.00	-25.77	peak
3	11774.000	34.87	16.58	51.45	74.00	-22.55	peak
4	12676.000	34.40	16.81	51.21	74.00	-22.79	peak
5	13864.000	33.73	18.03	51.76	74.00	-22.24	peak
6	16867.000	31.23	21.12	52.35	74.00	-21.65	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. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)



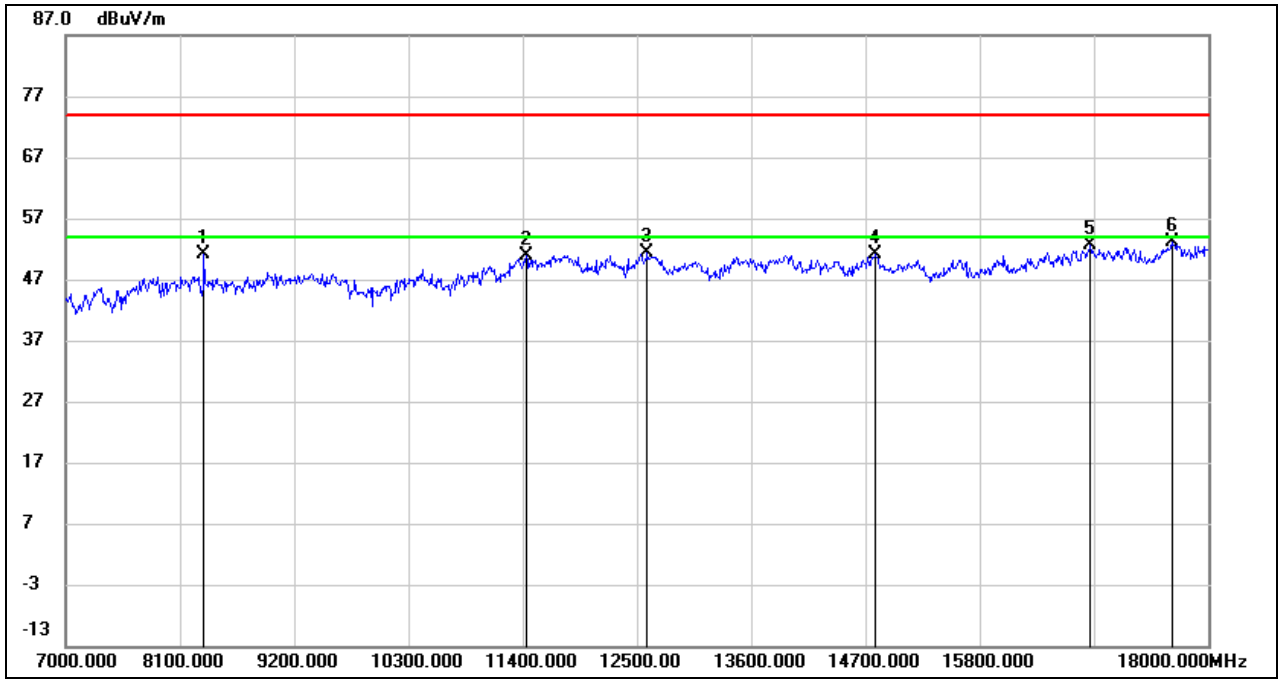
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7847.000	39.55	9.35	48.90	74.00	-25.10	peak
2	9343.000	37.89	11.19	49.08	74.00	-24.92	peak
3	11829.000	34.58	16.67	51.25	74.00	-22.75	peak
4	12676.000	34.20	16.81	51.01	74.00	-22.99	peak
5	14414.000	34.03	17.91	51.94	74.00	-22.06	peak
6	16856.000	30.40	21.10	51.50	74.00	-22.50	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. 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. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.

8.3.4. 802.11ac VHT80 MIMO MODE

UNII-1 BAND

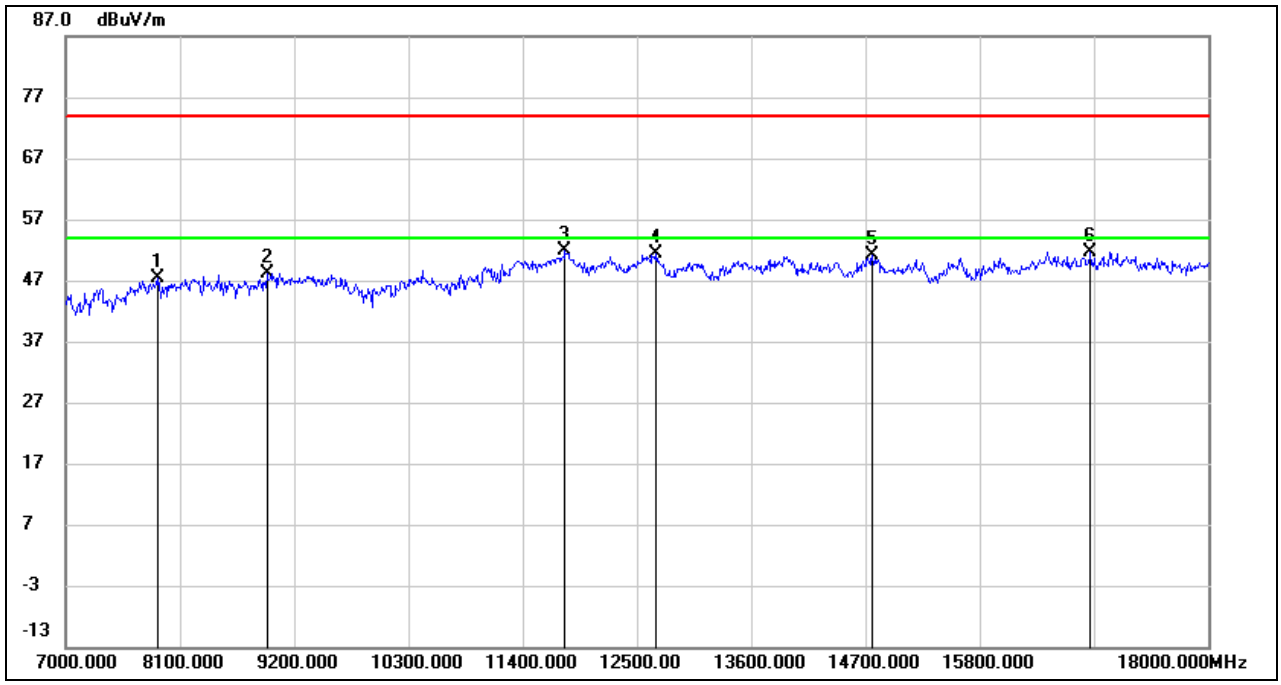
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8331.000	40.99	10.05	51.04	74.00	-22.96	peak
2	11433.000	35.46	15.49	50.95	74.00	-23.05	peak
3	12599.000	34.58	16.83	51.41	74.00	-22.59	peak
4	14799.000	33.38	17.82	51.20	74.00	-22.80	peak
5	16867.000	31.51	21.12	52.63	74.00	-21.37	peak
6	17648.000	30.13	22.89	53.02	74.00	-20.98	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. 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. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.

HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)

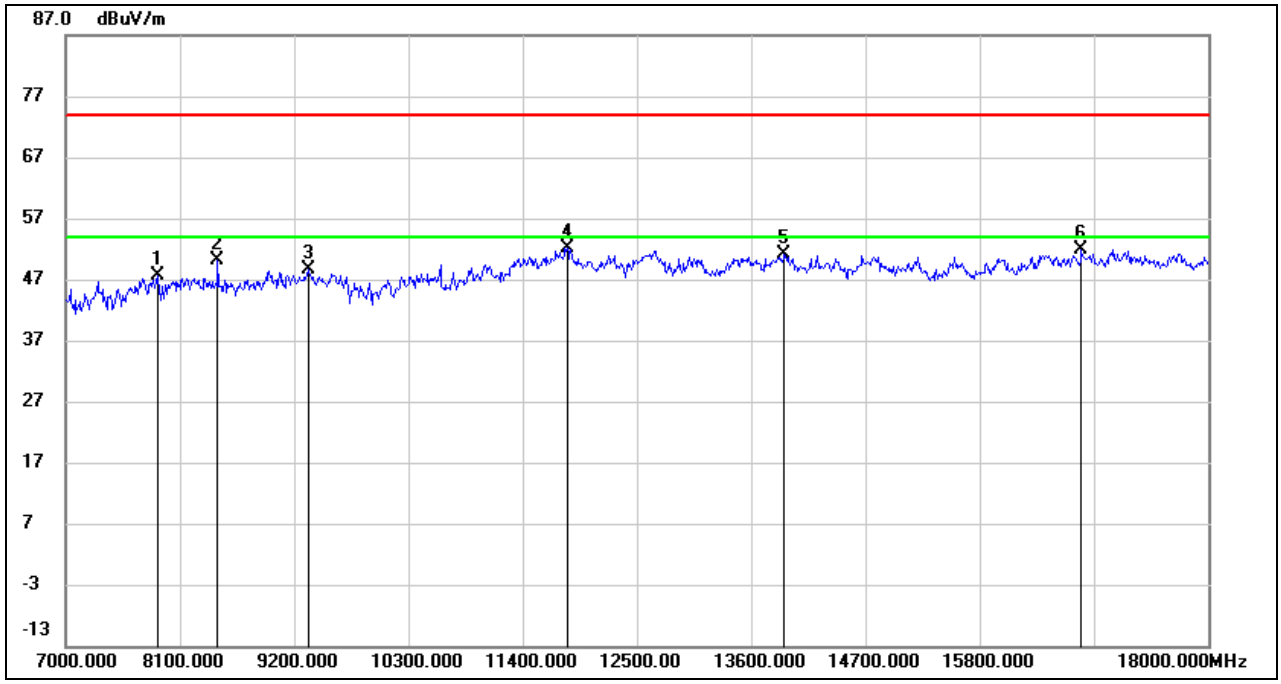


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7880.000	38.01	9.26	47.27	74.00	-26.73	peak
2	8936.000	37.04	11.10	48.14	74.00	-25.86	peak
3	11807.000	35.20	16.70	51.90	74.00	-22.10	peak
4	12687.000	34.57	16.82	51.39	74.00	-22.61	peak
5	14766.000	33.34	17.78	51.12	74.00	-22.88	peak
6	16867.000	30.57	21.12	51.69	74.00	-22.31	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. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.

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	7880.000	38.43	9.26	47.69	74.00	-26.31	peak
2	8463.000	40.39	9.75	50.14	74.00	-23.86	peak
3	9332.000	37.42	11.15	48.57	74.00	-25.43	peak
4	11829.000	35.53	16.67	52.20	74.00	-21.80	peak
5	13919.000	33.12	17.97	51.09	74.00	-22.91	peak
6	16779.000	30.85	20.98	51.83	74.00	-22.17	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. 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. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.

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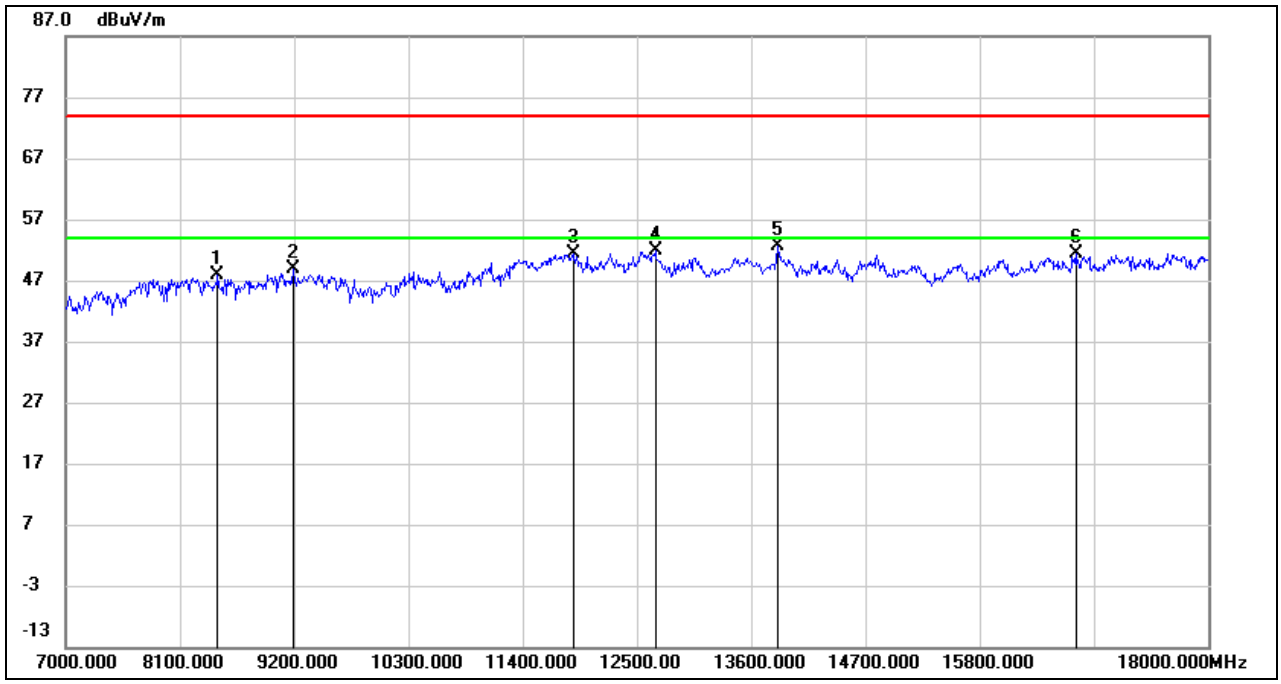
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8463.000	38.08	9.75	47.83	74.00	-26.17	peak
2	9189.000	38.14	10.63	48.77	74.00	-25.23	peak
3	11884.000	34.64	16.62	51.26	74.00	-22.74	peak
4	12676.000	34.95	16.81	51.76	74.00	-22.24	peak
5	13853.000	34.54	18.05	52.59	74.00	-21.41	peak
6	16724.000	30.51	20.92	51.43	74.00	-22.57	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. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.

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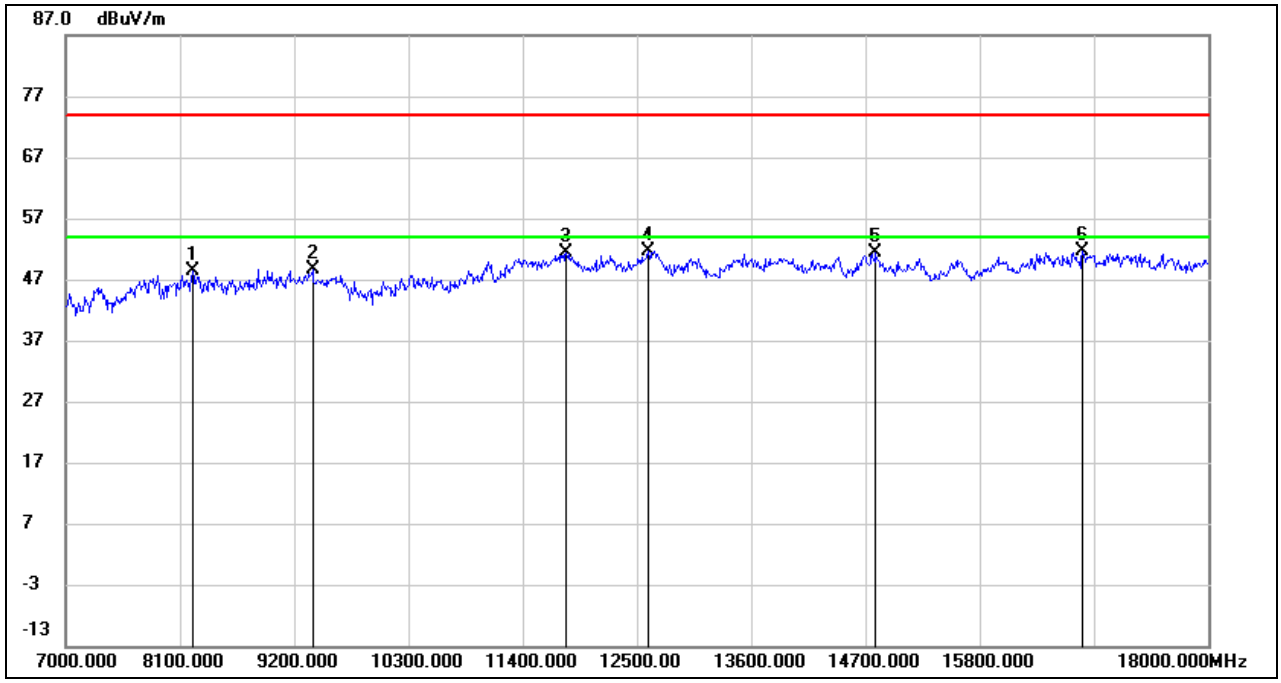
UNII-2C BAND

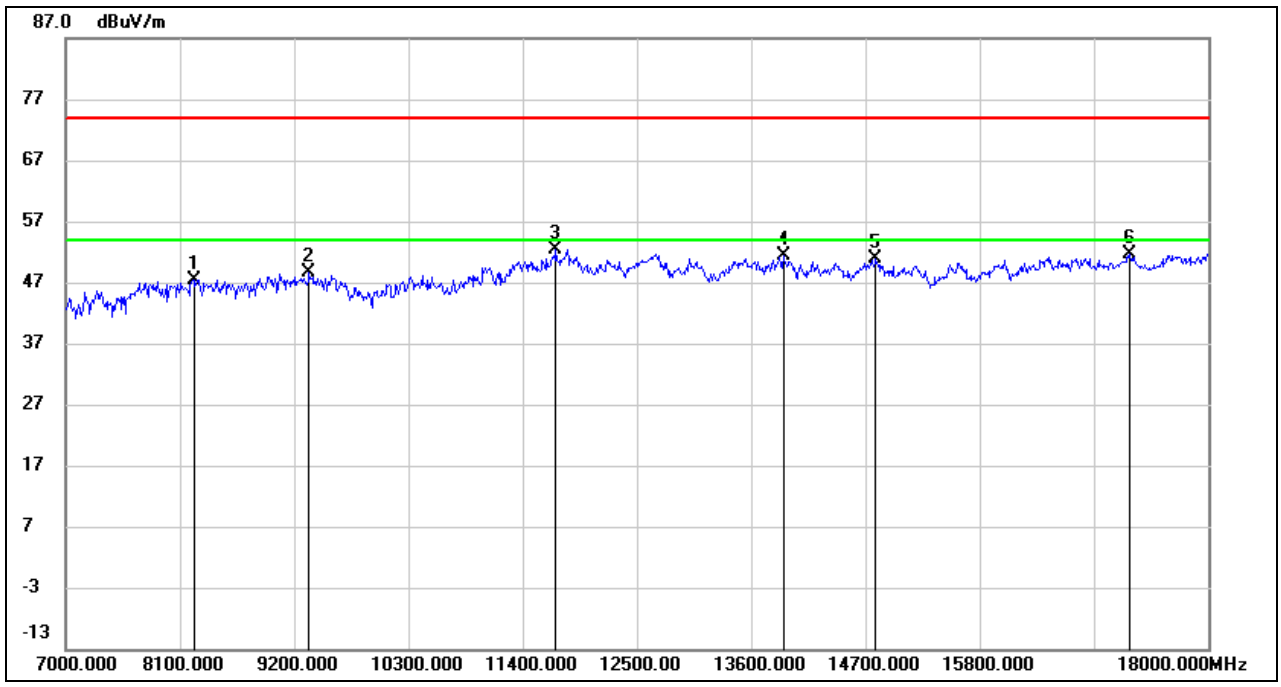
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8221.000	37.86	10.46	48.32	74.00	-25.68	peak
2	9376.000	37.40	11.34	48.74	74.00	-25.26	peak
3	11818.000	34.76	16.68	51.44	74.00	-22.56	peak
4	12610.000	34.91	16.82	51.73	74.00	-22.27	peak
5	14799.000	33.63	17.82	51.45	74.00	-22.55	peak
6	16790.000	30.58	20.99	51.57	74.00	-22.43	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. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.

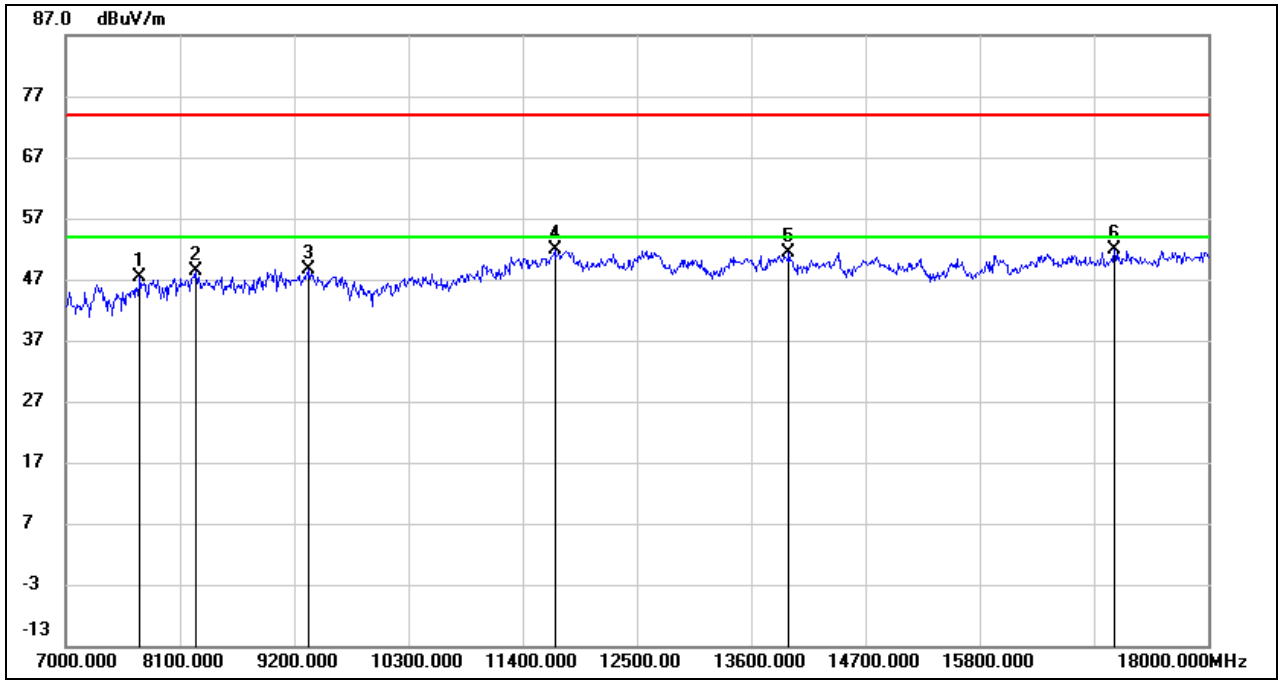
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8232.000	36.95	10.41	47.36	74.00	-26.64	peak
2	9343.000	37.54	11.19	48.73	74.00	-25.27	peak
3	11719.000	36.04	16.34	52.38	74.00	-21.62	peak
4	13908.000	33.27	17.99	51.26	74.00	-22.74	peak
5	14799.000	32.99	17.82	50.81	74.00	-23.19	peak
6	17241.000	29.26	22.34	51.60	74.00	-22.40	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. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.

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	7715.000	38.21	9.17	47.38	74.00	-26.62	peak
2	8254.000	38.11	10.34	48.45	74.00	-25.55	peak
3	9343.000	37.46	11.19	48.65	74.00	-25.35	peak
4	11708.000	35.58	16.28	51.86	74.00	-22.14	peak
5	13963.000	33.55	17.92	51.47	74.00	-22.53	peak
6	17098.000	29.93	21.91	51.84	74.00	-22.16	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. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.

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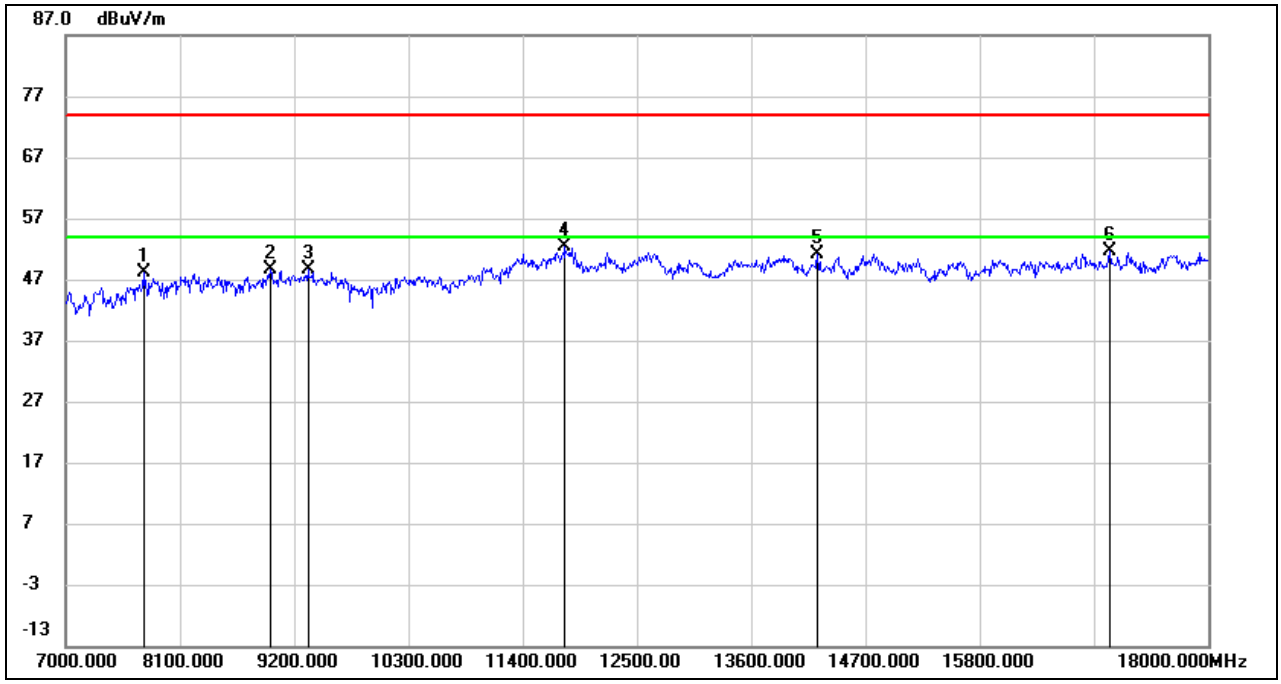
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)

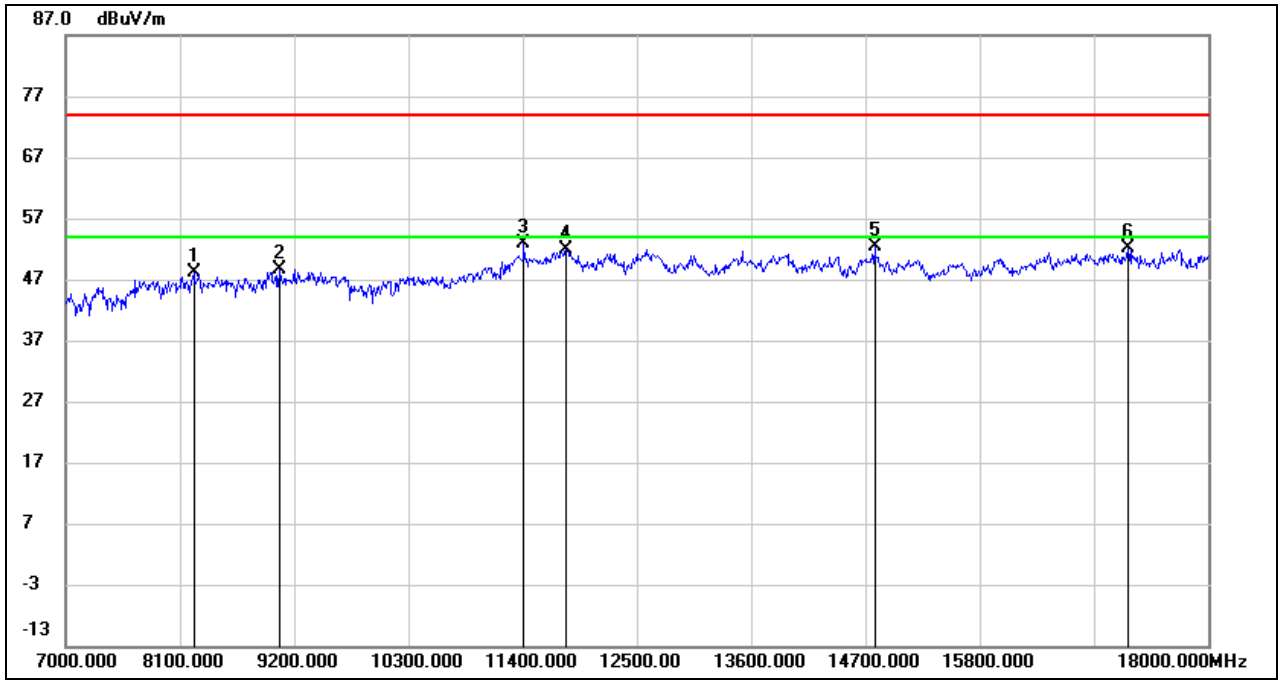


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7748.000	38.89	9.29	48.18	74.00	-25.82	peak
2	8969.000	37.22	11.42	48.64	74.00	-25.36	peak
3	9332.000	37.37	11.15	48.52	74.00	-25.48	peak
4	11807.000	35.67	16.70	52.37	74.00	-21.63	peak
5	14238.000	33.27	17.91	51.18	74.00	-22.82	peak
6	17054.000	29.85	21.66	51.51	74.00	-22.49	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. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.

STRADDLE CHANNEL 138

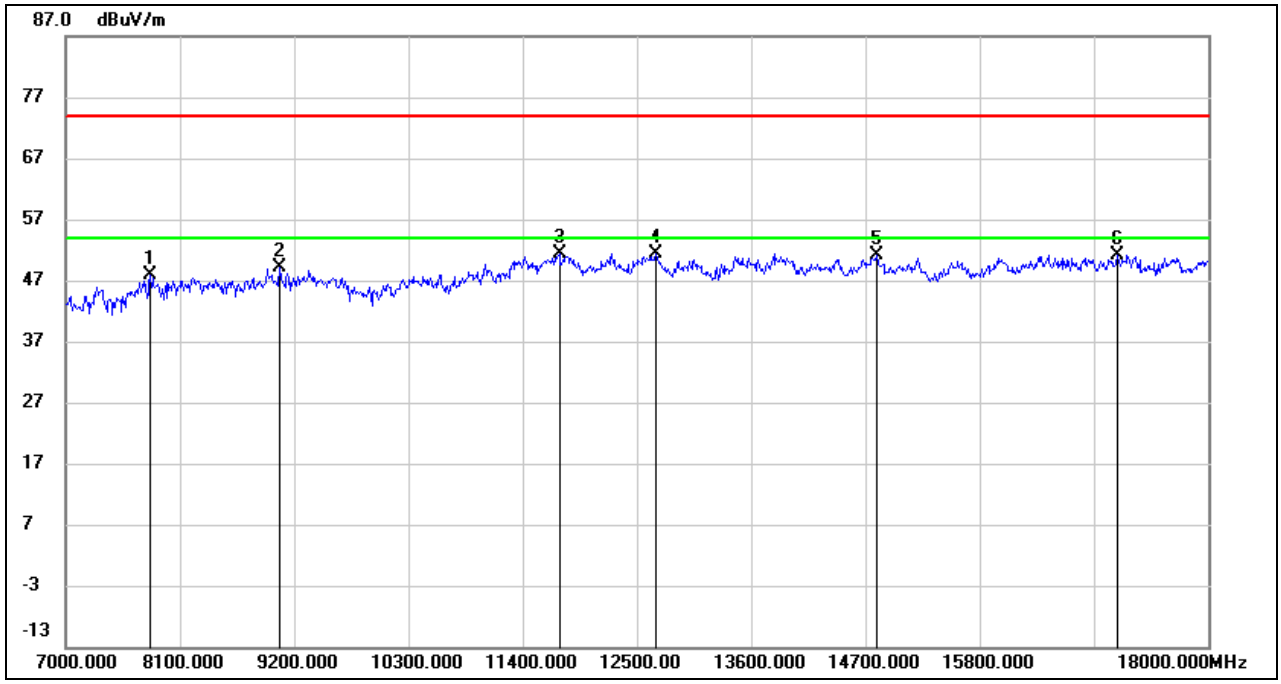
HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	8232.000	37.78	10.41	48.19	74.00	-25.81	peak
2	9057.000	37.12	11.40	48.52	74.00	-25.48	peak
3	11411.000	37.50	15.44	52.94	74.00	-21.06	peak
4	11818.000	35.20	16.68	51.88	74.00	-22.12	peak
5	14788.000	34.64	17.80	52.44	74.00	-21.56	peak
6	17230.000	29.65	22.37	52.02	74.00	-21.98	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. 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. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.

HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)

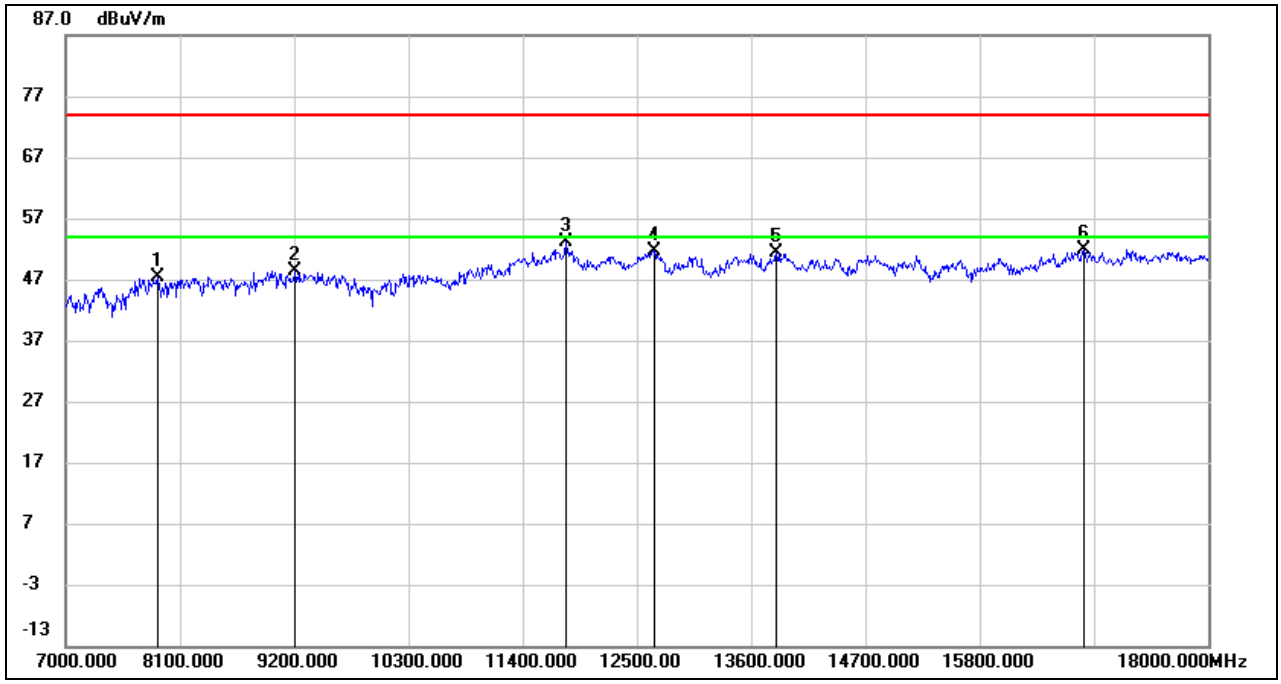


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7814.000	38.32	9.44	47.76	74.00	-26.24	peak
2	9057.000	37.66	11.40	49.06	74.00	-24.94	peak
3	11752.000	34.94	16.48	51.42	74.00	-22.58	peak
4	12676.000	34.63	16.81	51.44	74.00	-22.56	peak
5	14810.000	33.23	17.82	51.05	74.00	-22.95	peak
6	17120.000	29.21	22.03	51.24	74.00	-22.76	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. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.

UNII-3 BAND

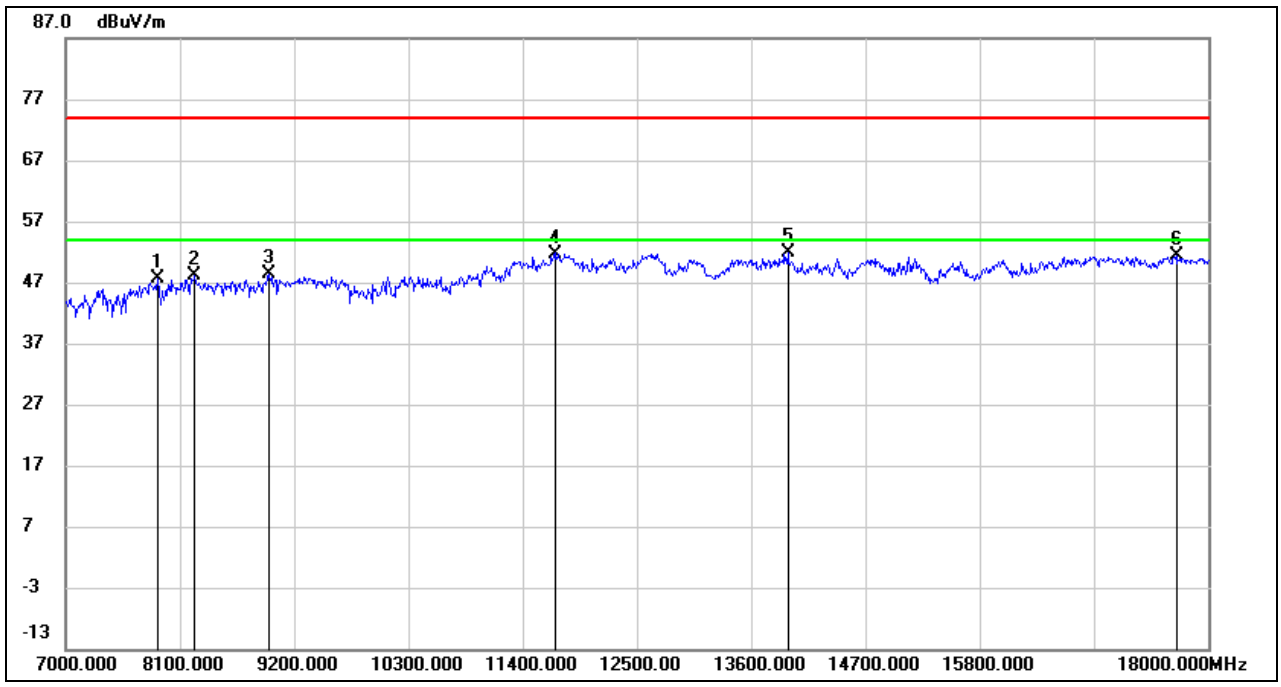
HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7880.000	38.21	9.26	47.47	74.00	-26.53	peak
2	9211.000	37.76	10.61	48.37	74.00	-25.63	peak
3	11818.000	36.35	16.68	53.03	74.00	-20.97	peak
4	12665.000	34.92	16.82	51.74	74.00	-22.26	peak
5	13842.000	33.19	18.07	51.26	74.00	-22.74	peak
6	16801.000	30.84	21.00	51.84	74.00	-22.16	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. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.

HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



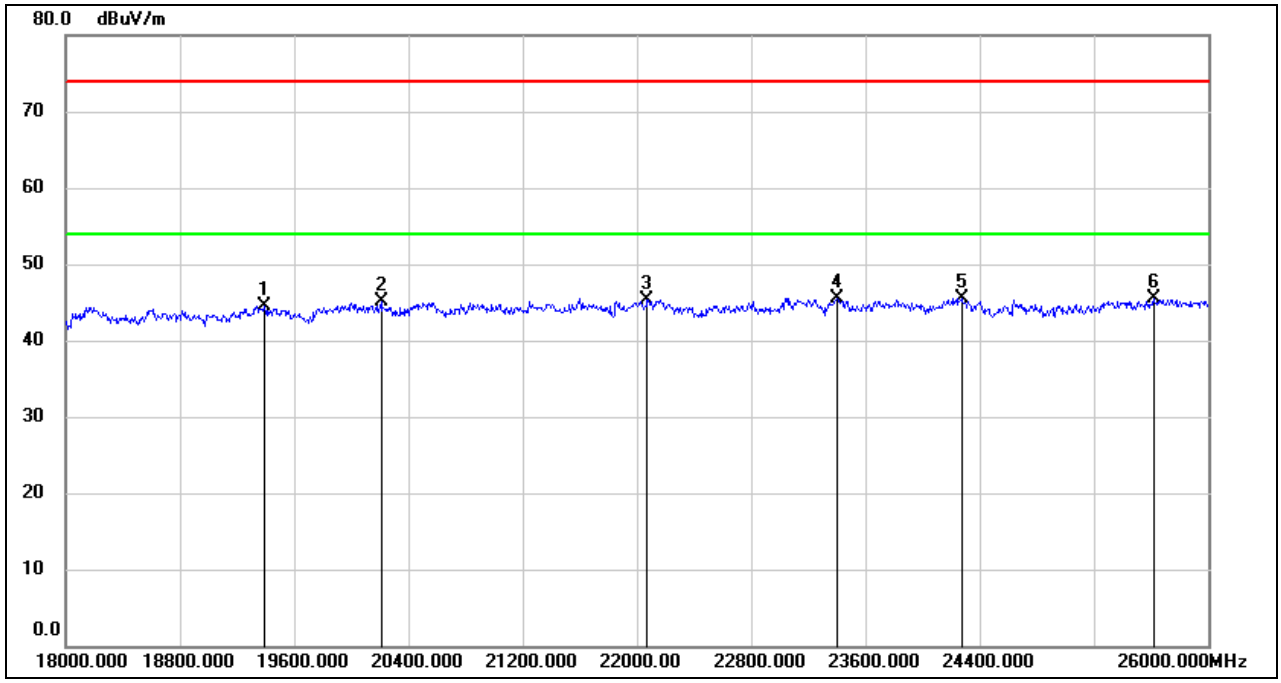
No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7880.000	38.25	9.26	47.51	74.00	-26.49	peak
2	8243.000	37.65	10.37	48.02	74.00	-25.98	peak
3	8958.000	37.11	11.31	48.42	74.00	-25.58	peak
4	11708.000	35.47	16.28	51.75	74.00	-22.25	peak
5	13952.000	33.89	17.94	51.83	74.00	-22.17	peak
6	17692.000	28.11	23.19	51.30	74.00	-22.70	peak

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. 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. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.

8.4. SPURIOUS EMISSIONS (18 GHz ~ 26 GHz)

8.4.1. 802.11n HT40 MODE

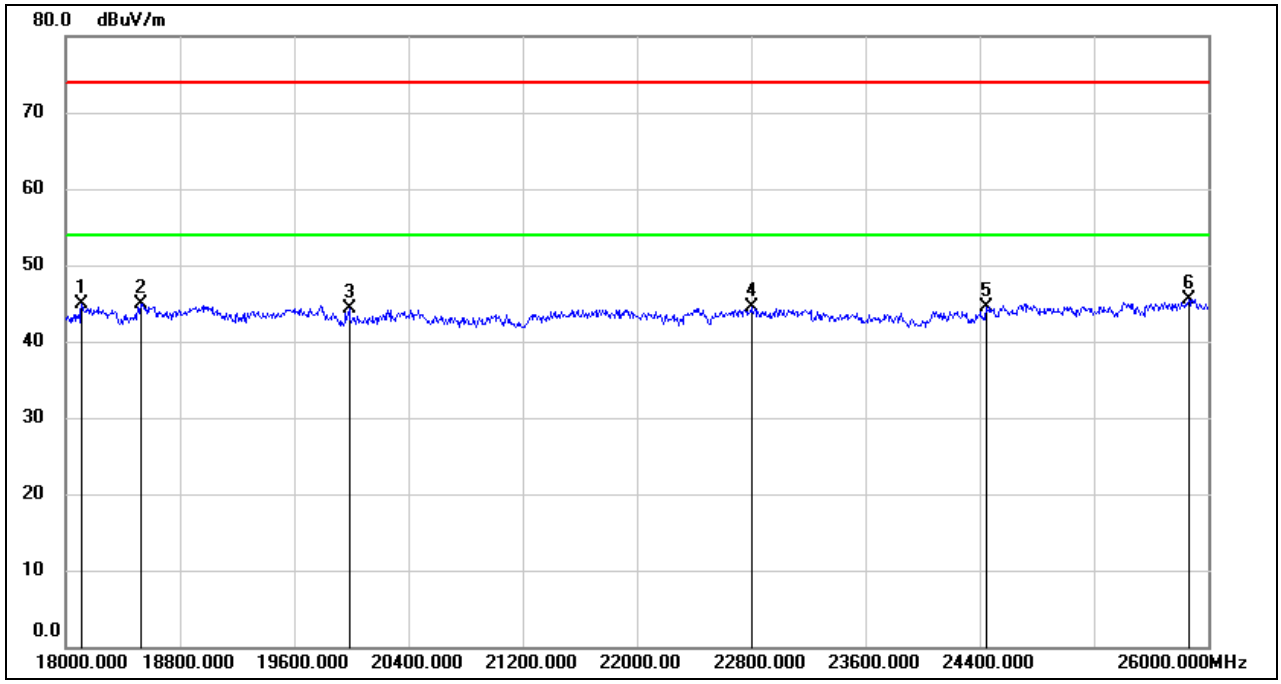
SPURIOUS EMISSIONS (UNII-2A BAND LOW CHANNEL, HORIZONTAL, WORST-CASE CONFIGURATION)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	19392.000	50.12	-5.57	44.55	74.00	-29.45	peak
2	20208.000	50.65	-5.59	45.06	74.00	-28.94	peak
3	22072.000	49.77	-4.41	45.36	74.00	-28.64	peak
4	23400.000	48.69	-3.23	45.46	74.00	-28.54	peak
5	24272.000	48.25	-2.79	45.46	74.00	-28.54	peak
6	25616.000	46.68	-1.24	45.44	74.00	-28.56	peak

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

SPURIOUS EMISSIONS (UNII-2A BAND LOW CHANNEL, VERTICAL, WORST-CASE CONFIGURATION)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18112.000	50.46	-5.47	44.99	74.00	-29.01	peak
2	18528.000	50.11	-5.26	44.85	74.00	-29.15	peak
3	19984.000	49.71	-5.44	44.27	74.00	-29.73	peak
4	22800.000	48.05	-3.64	44.41	74.00	-29.59	peak
5	24448.000	46.92	-2.42	44.50	74.00	-29.50	peak
6	25864.000	46.40	-0.81	45.59	74.00	-28.41	peak

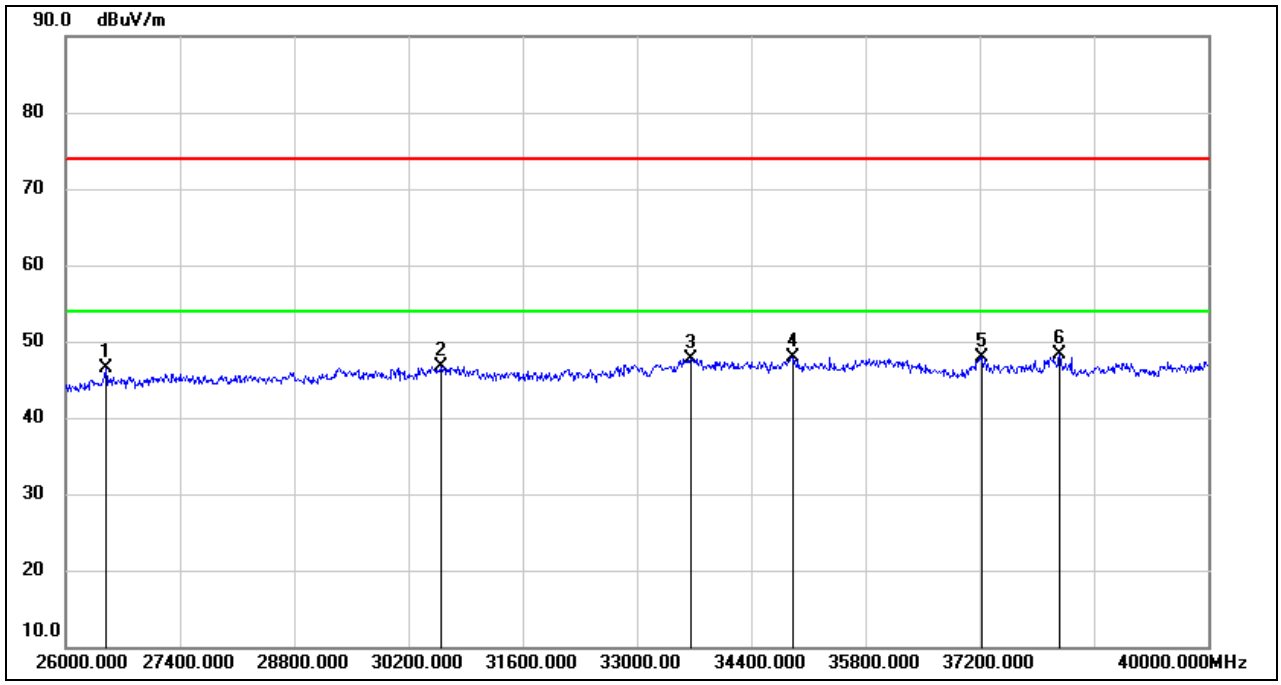
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.

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. 802.11n HT40 MODE

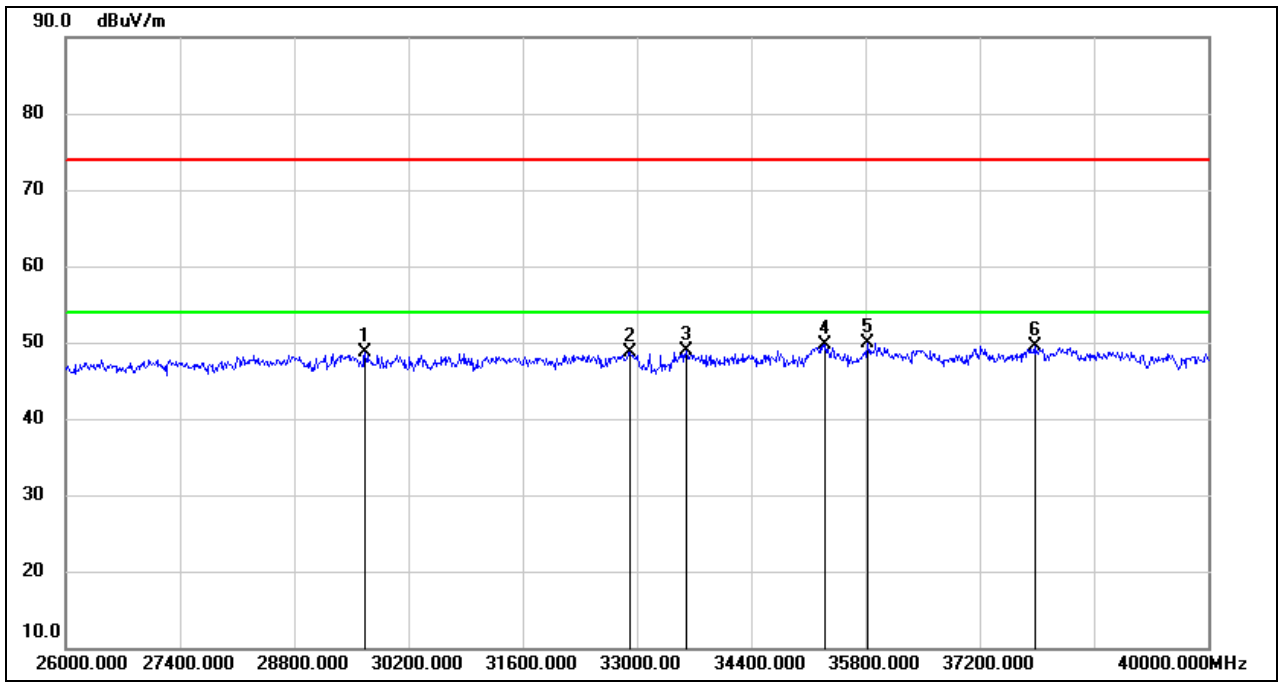
SPURIOUS EMISSIONS (UNII-2A BAND LOW CHANNEL, HORIZONTAL, WORST-CASE CONFIGURATION)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	26490.000	51.29	-4.74	46.55	74.00	-27.45	peak
2	30592.000	47.77	-0.99	46.78	74.00	-27.22	peak
3	33658.000	47.28	0.41	47.69	74.00	-26.31	peak
4	34904.000	46.58	1.40	47.98	74.00	-26.02	peak
5	37228.000	44.73	3.14	47.87	74.00	-26.13	peak
6	38180.000	44.64	3.69	48.33	74.00	-25.67	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.

SPURIOUS EMISSIONS (UNII-2A BAND LOW CHANNEL, VERTICAL, WORST-CASE CONFIGURATION)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	29668.000	50.01	-1.40	48.61	74.00	-25.39	peak
2	32916.000	49.58	-0.86	48.72	74.00	-25.28	peak
3	33602.000	48.51	0.46	48.97	74.00	-25.03	peak
4	35310.000	47.04	2.62	49.66	74.00	-24.34	peak
5	35828.000	46.25	3.67	49.92	74.00	-24.08	peak
6	37872.000	45.97	3.48	49.45	74.00	-24.55	peak

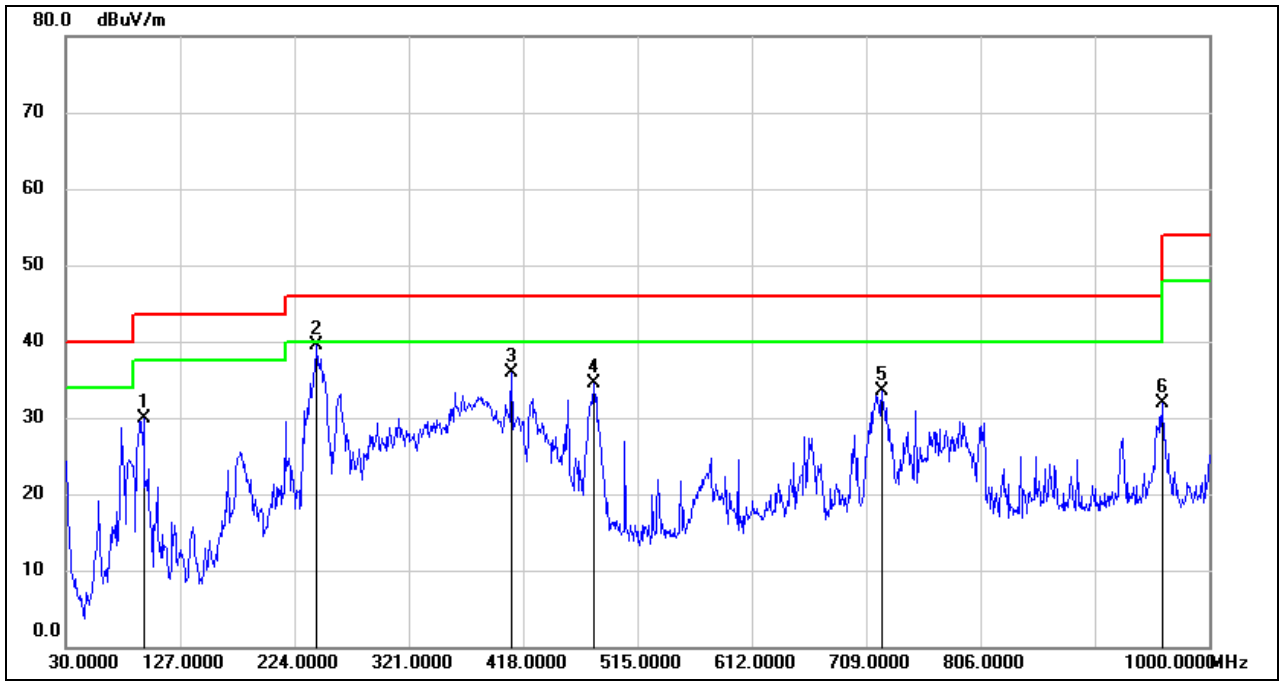
Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.

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. 802.11n HT40 MODE

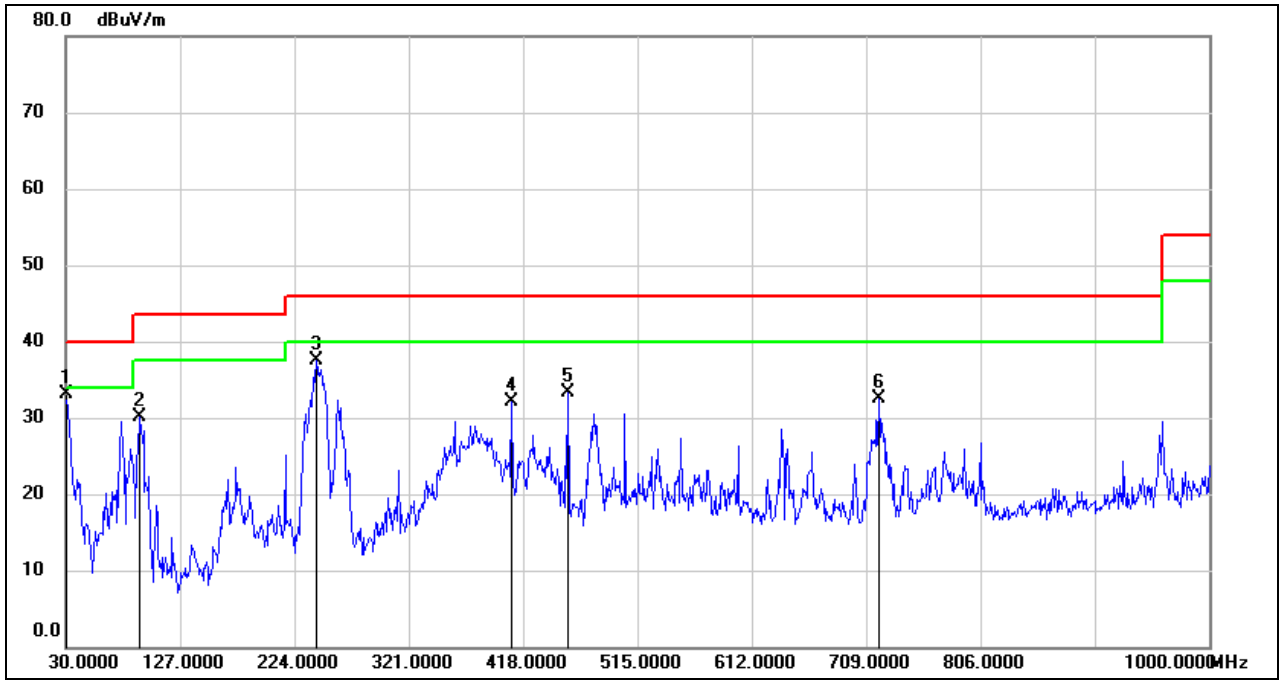
SPURIOUS EMISSIONS (UNII-2A BAND LOW CHANNEL, HORIZONTAL, WORST-CASE CONFIGURATION)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	95.9600	51.32	-21.44	29.88	43.50	-13.62	QP
2	242.4300	58.63	-19.12	39.51	46.00	-6.49	QP
3	408.3000	49.02	-13.17	35.85	46.00	-10.15	QP
4	478.1400	46.41	-11.83	34.58	46.00	-11.42	QP
5	722.5800	41.55	-8.08	33.47	46.00	-12.53	QP
6	960.2300	36.38	-4.54	31.84	54.00	-22.16	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-2A BAND LOW CHANNEL, VERTICAL, WORST-CASE CONFIGURATION)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	30.0000	52.11	-18.94	33.17	40.00	-6.83	QP
2	92.0800	51.88	-21.77	30.11	43.50	-13.39	QP
3	242.4300	56.57	-19.12	37.45	46.00	-8.55	QP
4	408.3000	45.32	-13.17	32.15	46.00	-13.85	QP
5	455.8300	45.60	-12.27	33.33	46.00	-12.67	QP
6	719.6700	40.67	-8.08	32.59	46.00	-13.41	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

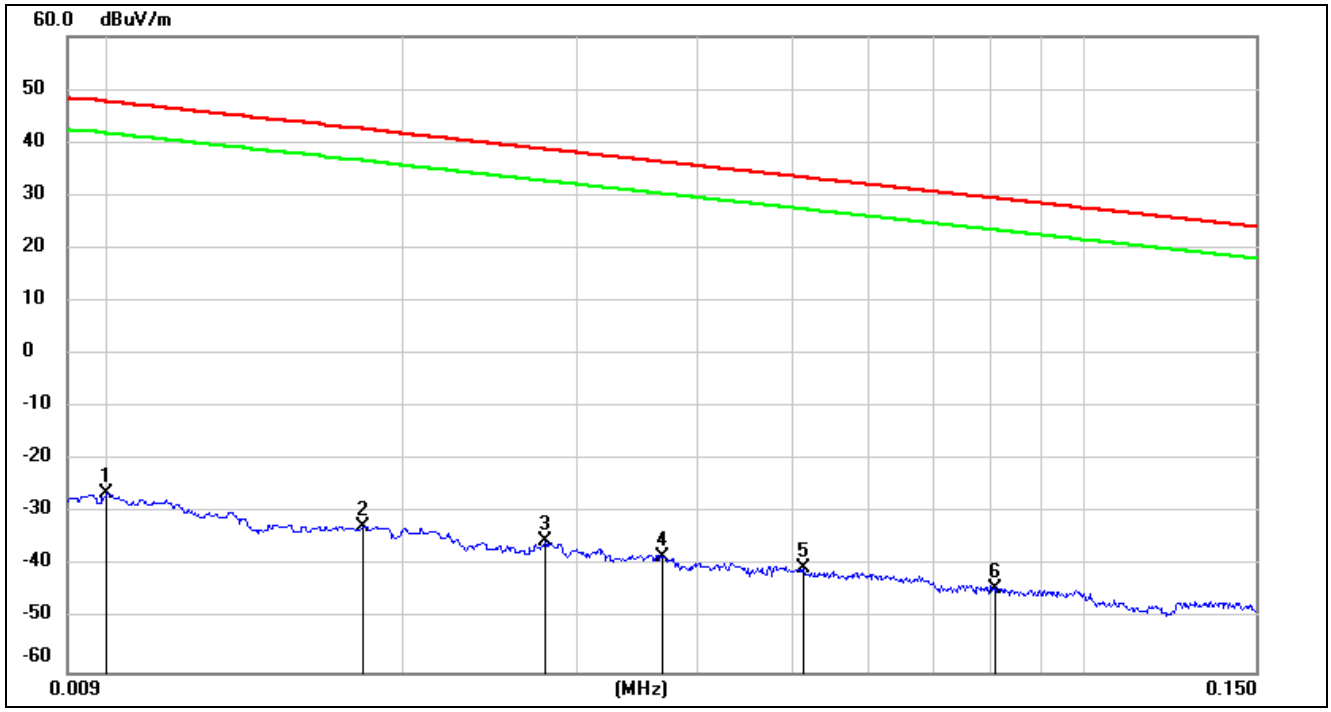
Note: All the modes and antennas had been tested, but only the worst data was recorded in the report.

8.7. SPURIOUS EMISSIONS BELOW 30 MHz

8.7.1. 802.11n HT40 MODE

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

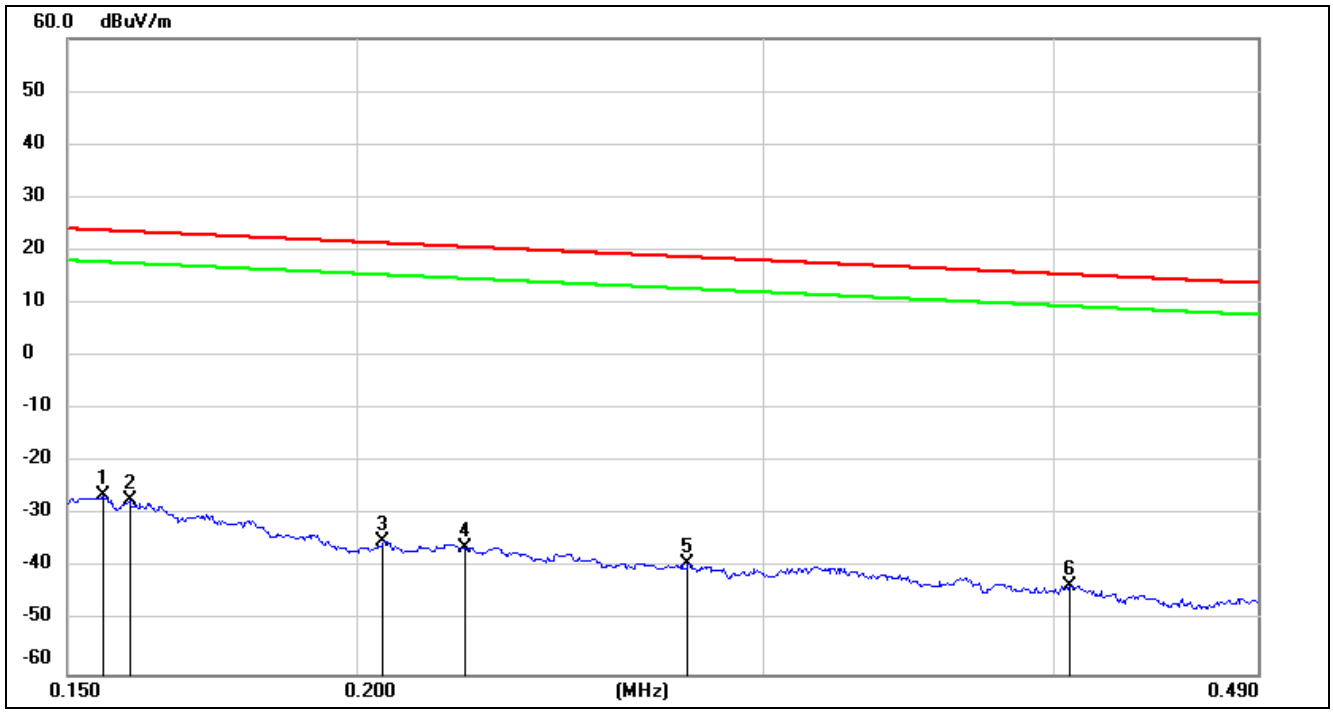
9 kHz~ 150 kHz



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	75.22	-101.40	-26.18	47.6	-77.68	-3.90	-73.78	peak
2	0.0181	68.85	-101.36	-32.51	42.45	-84.01	-9.05	-74.96	peak
3	0.0279	66.17	-101.38	-35.21	38.69	-86.71	-12.81	-73.90	peak
4	0.0367	63.25	-101.42	-38.17	36.31	-89.67	-15.19	-74.48	peak
5	0.0514	61.18	-101.48	-40.3	33.38	-91.80	-18.12	-73.68	peak
6	0.0810	57.52	-101.64	-44.12	29.43	-95.62	-22.07	-73.55	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.

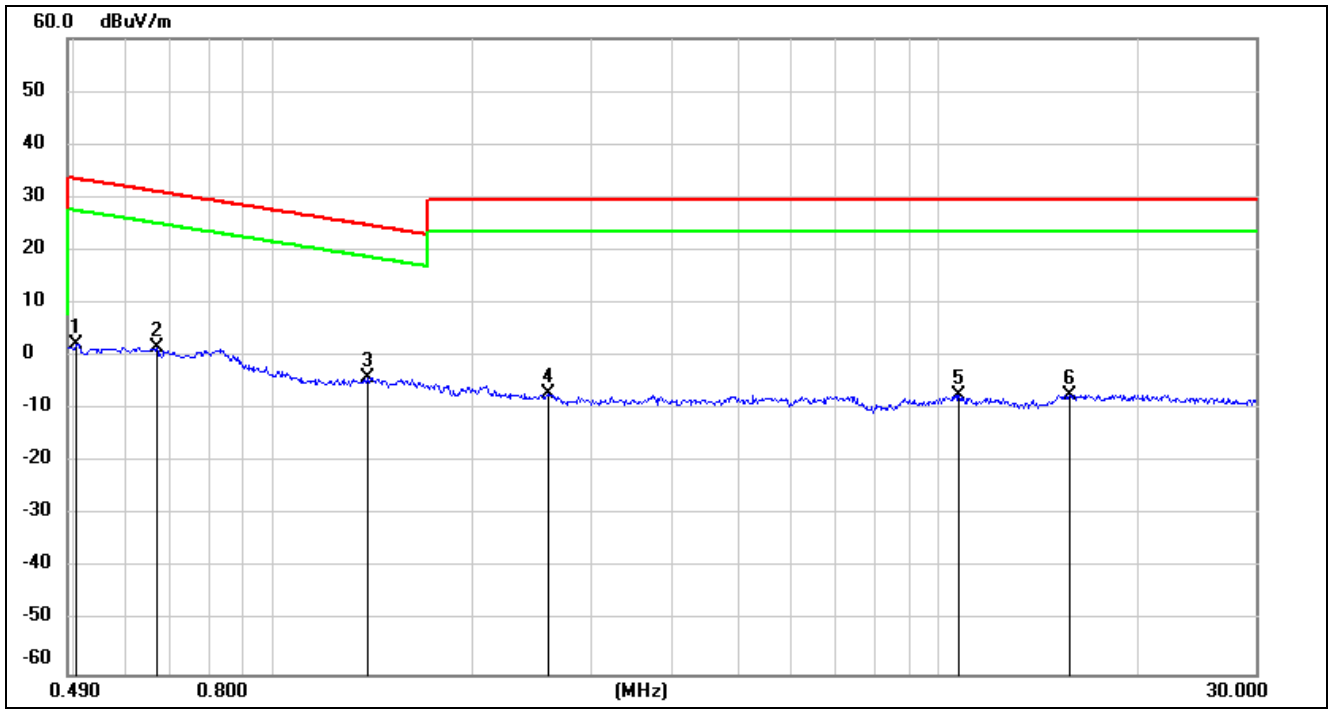
150 kHz ~ 490 kHz



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	75.27	-101.65	-26.38	23.77	-77.88	-27.73	-50.15	peak
2	0.1595	74.36	-101.65	-27.29	23.55	-78.79	-27.95	-50.84	peak
3	0.2053	66.79	-101.73	-34.94	21.35	-86.44	-30.15	-56.29	peak
4	0.2227	65.65	-101.75	-36.1	20.65	-87.60	-30.85	-56.75	peak
5	0.2782	62.79	-101.83	-39.04	18.71	-90.54	-32.79	-57.75	peak
6	0.4062	58.64	-101.96	-43.32	15.43	-94.82	-36.07	-58.75	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	64.44	-62.07	2.37	33.56	-49.13	-17.94	-31.19	peak
2	0.6671	63.75	-62.10	1.65	31.12	-49.85	-20.38	-29.47	peak
3	1.3810	57.97	-62.10	-4.13	24.8	-55.63	-26.70	-28.93	peak
4	2.5935	54.61	-61.68	-7.07	29.54	-58.57	-21.96	-36.61	peak
5	10.7299	53.48	-60.83	-7.35	29.54	-58.85	-21.96	-36.89	peak
6	15.7759	53.75	-60.99	-7.24	29.54	-58.74	-21.96	-36.78	peak

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

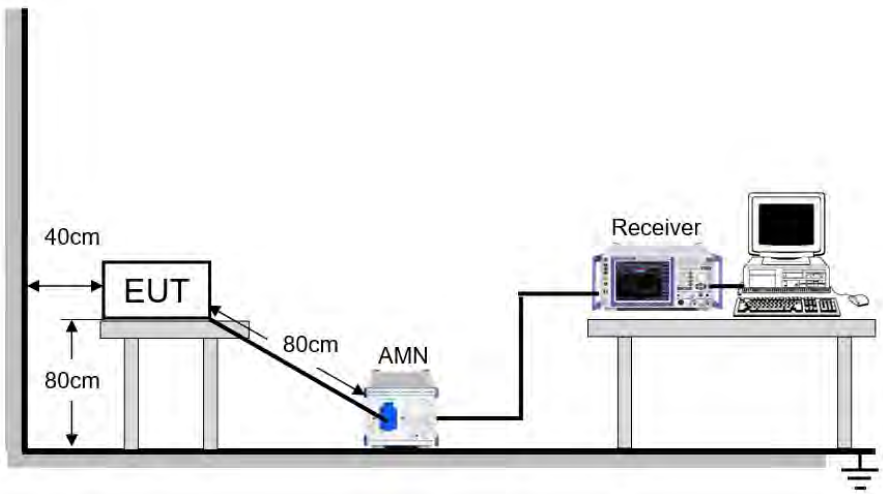
LIMITS

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.

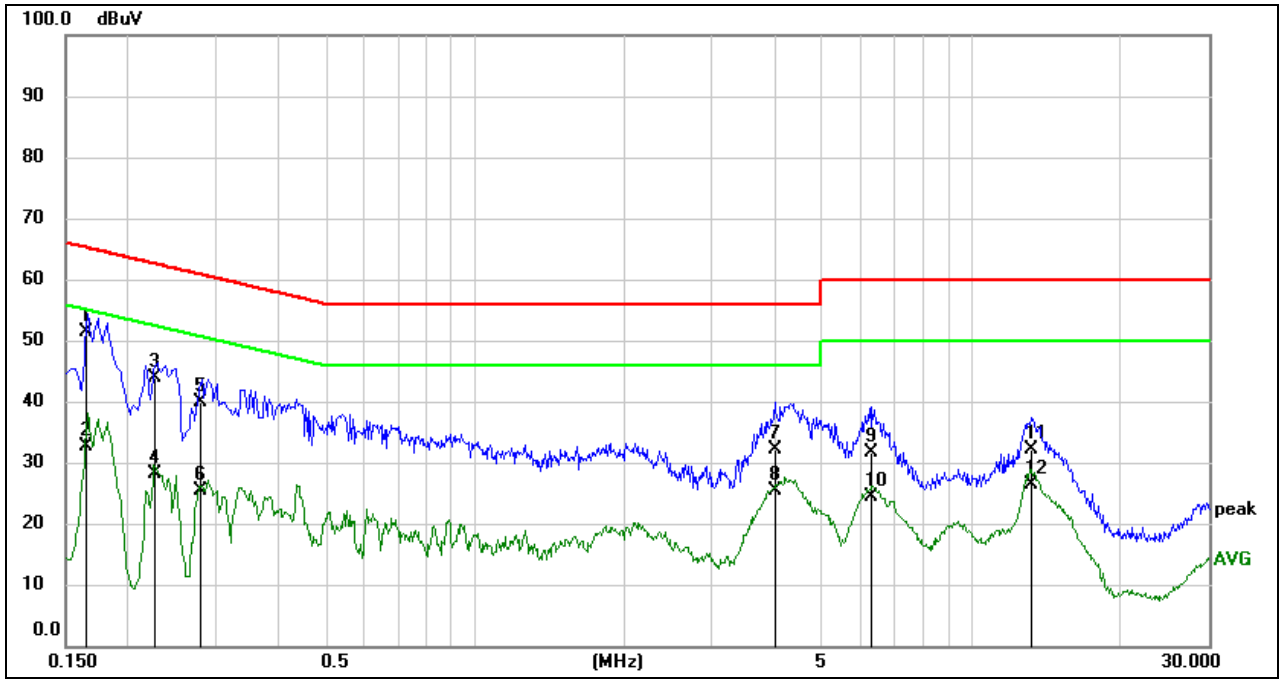
TEST ENVIRONMENT

Temperature	27.6 °C	Relative Humidity	64.8 %
Atmosphere Pressure	101 kPa	Test Voltage	AC 120 V, 60 Hz

RESULTS

9.1.1. 802.11n HT40 MODE

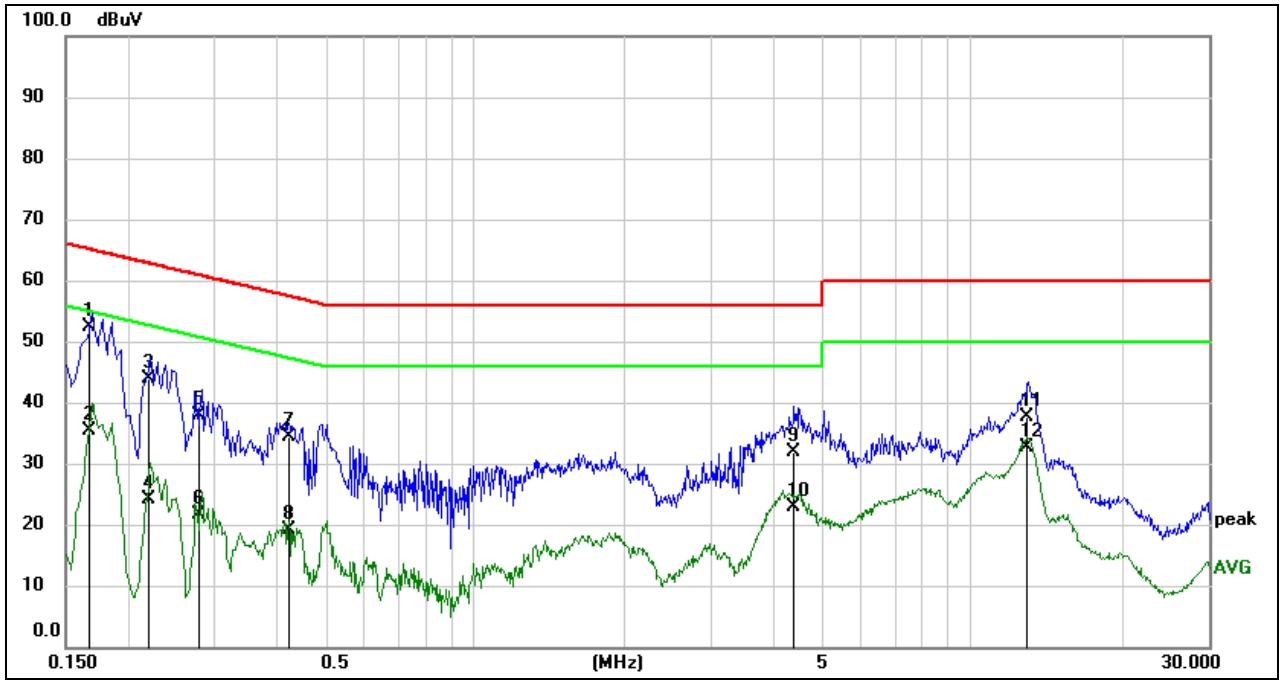
LINE L RESULTS (UNII-2A BAND LOW CHANNEL, WORST-CASE CONFIGURATION)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1642	41.75	9.59	51.34	65.25	-13.91	QP
2	0.1642	22.94	9.59	32.53	55.25	-22.72	AVG
3	0.2268	34.25	9.59	43.84	62.57	-18.73	QP
4	0.2268	18.58	9.59	28.17	52.57	-24.40	AVG
5	0.2788	30.35	9.59	39.94	60.85	-20.91	QP
6	0.2788	15.89	9.59	25.48	50.85	-25.37	AVG
7	4.0533	22.57	9.60	32.17	56.00	-23.83	QP
8	4.0533	15.73	9.60	25.33	46.00	-20.67	AVG
9	6.3048	22.05	9.64	31.69	60.00	-28.31	QP
10	6.3048	14.67	9.64	24.31	50.00	-25.69	AVG
11	13.1895	22.35	9.66	32.01	60.00	-27.99	QP
12	13.1895	16.74	9.66	26.40	50.00	-23.60	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 N RESULTS (UNII-2A BAND LOW CHANNEL, WORST-CASE CONFIGURATION)



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1661	42.74	9.59	52.33	65.15	-12.82	QP
2	0.1661	25.79	9.59	35.38	55.15	-19.77	AVG
3	0.2188	34.21	9.59	43.80	62.86	-19.06	QP
4	0.2188	14.56	9.59	24.15	52.86	-28.71	AVG
5	0.2785	28.26	9.59	37.85	60.86	-23.01	QP
6	0.2785	11.99	9.59	21.58	50.86	-29.28	AVG
7	0.4204	24.68	9.60	34.28	57.44	-23.16	QP
8	0.4204	9.47	9.60	19.07	47.44	-28.37	AVG
9	4.3910	22.37	9.60	31.97	56.00	-24.03	QP
10	4.3910	13.31	9.60	22.91	46.00	-23.09	AVG
11	12.9407	28.01	9.66	37.67	60.00	-22.33	QP
12	12.9407	22.97	9.66	32.63	50.00	-17.37	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 ~ 70 °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.

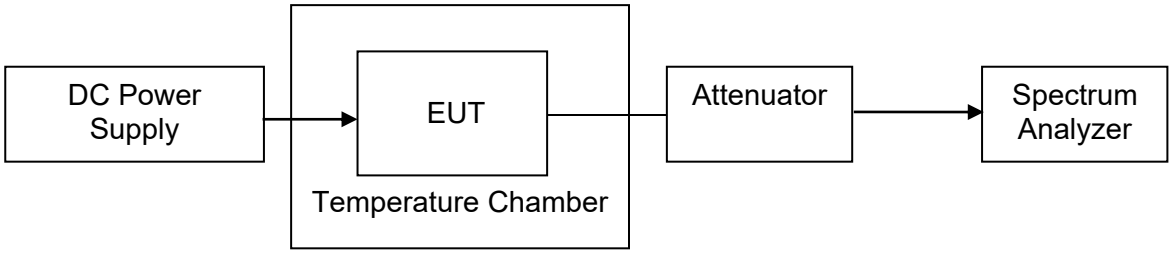
Connect the EUT to the spectrum analyser and use the following settings:

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): 25.1 °C	T_L (Low Temperature): 0 °C
		T_H (High Temperature): 70 °C
Supply Voltage	V_N (Normal Voltage): DC 5 V	V_L (Low Voltage): DC 4.5 V
		V_H (High Voltage): DC 5.5 V

RESULTS

Please refer to Appendix H.

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

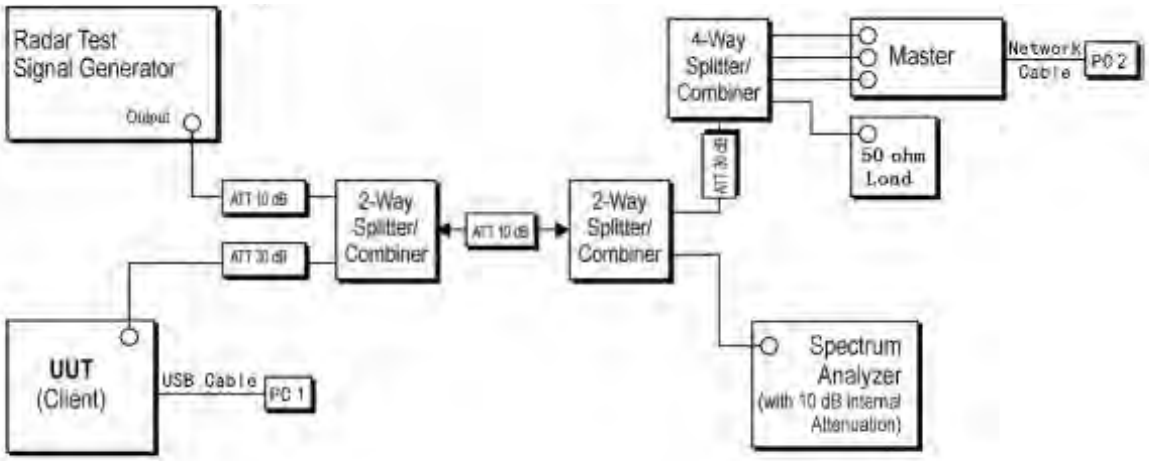
Radar Type	Pulse Width (μsec)	PRI (μsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A	Roundup $\left\{\left(\frac{1}{360}\right)\cdot\left(\frac{19\cdot 10^6}{PRI_{\mu sec}}\right)\right\}$	60%	30
		Test B			
2	1-5	150-230	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



TEST ENVIRONMENT

Temperature	26.2 °C	Relative Humidity	55.8 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 5 V

RESULTS

Please refer to Appendix E & F & G.

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

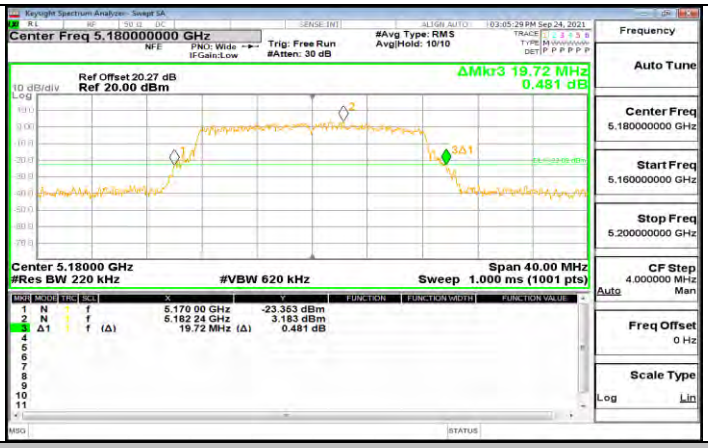
12.1. Appendix A1: Emission Bandwidth

12.1.1. Test Result

Test Mode	Antenna	Channel	26db EBW [MHz]	FL[MHz]	FH[MHz]	Verdict
11A20	Ant1	5180	19.720	5170.000	5189.720	PASS
	Ant2	5180	19.600	5170.160	5189.760	PASS
	Ant1	5200	19.720	5190.080	5209.800	PASS
	Ant2	5200	19.800	5190.040	5209.840	PASS
	Ant1	5240	20.000	5229.880	5249.880	PASS
	Ant2	5240	19.680	5230.000	5249.680	PASS
	Ant1	5260	19.640	5250.000	5269.640	PASS
	Ant2	5260	20.160	5249.920	5270.080	PASS
	Ant1	5280	19.400	5270.280	5289.680	PASS
	Ant2	5280	20.040	5269.920	5289.960	PASS
	Ant1	5320	19.600	5310.200	5329.800	PASS
	Ant2	5320	19.720	5309.880	5329.600	PASS
	Ant1	5500	19.600	5490.160	5509.760	PASS
	Ant2	5500	19.520	5490.280	5509.800	PASS
	Ant1	5580	19.640	5570.120	5589.760	PASS
	Ant2	5580	19.640	5570.320	5589.960	PASS
	Ant1	5700	19.800	5689.920	5709.720	PASS
	Ant2	5700	19.600	5690.160	5709.760	PASS
	Ant1	5720	19.800	5710.000	5729.800	PASS
	Ant2	5720	19.920	5710.040	5729.960	PASS
	Ant1	5720_UNII-2C	15	5710.000	5725	PASS
	Ant2	5720_UNII-2C	14.96	5710.040	5725	PASS
	Ant1	5720_UNII-3	4.8	5725	5729.800	PASS
	Ant2	5720_UNII-3	4.96	5725	5729.960	PASS
	Ant1	5745	20.120	5734.800	5754.920	PASS
	Ant2	5745	19.600	5735.080	5754.680	PASS
	Ant1	5785	21.080	5774.680	5795.760	PASS
	Ant2	5785	19.840	5774.960	5794.800	PASS
	Ant1	5825	19.880	5814.920	5834.800	PASS
	Ant2	5825	23.080	5813.720	5836.800	PASS
11N20MIMO	Ant1	5180	19.800	5170.160	5189.960	PASS
	Ant2	5180	19.640	5170.160	5189.800	PASS
	Ant1	5200	19.680	5190.240	5209.920	PASS
	Ant2	5200	19.800	5190.120	5209.920	PASS
	Ant1	5240	19.760	5230.040	5249.800	PASS
	Ant2	5240	19.760	5230.080	5249.840	PASS
	Ant1	5260	19.840	5250.000	5269.840	PASS
	Ant2	5260	19.880	5250.040	5269.920	PASS
	Ant1	5280	20.000	5269.840	5289.840	PASS
	Ant2	5280	19.720	5270.160	5289.880	PASS
	Ant1	5320	20.080	5309.920	5330.000	PASS
	Ant2	5320	19.880	5310.280	5330.160	PASS
	Ant1	5500	19.800	5490.120	5509.920	PASS
	Ant2	5500	20.040	5489.960	5510.000	PASS
	Ant1	5580	19.880	5570.080	5589.960	PASS
	Ant2	5580	20.360	5569.800	5590.160	PASS
	Ant1	5700	20.240	5689.880	5710.120	PASS
	Ant2	5700	19.920	5690.000	5709.920	PASS
	Ant1	5720	20.080	5710.000	5730.080	PASS
	Ant2	5720	19.920	5709.920	5729.840	PASS
	Ant1	5720_UNII-2C	15	5710.000	5725	PASS
	Ant2	5720_UNII-2C	15.08	5709.920	5725	PASS
	Ant1	5720_UNII-3	5.08	5725	5730.080	PASS
	Ant2	5720_UNII-3	4.84	5725	5729.840	PASS
	Ant1	5745	19.960	5734.760	5754.720	PASS

	Ant2	5745	19.960	5734.880	5754.840	PASS
	Ant1	5785	19.840	5774.960	5794.800	PASS
	Ant2	5785	19.880	5775.080	5794.960	PASS
	Ant1	5825	19.800	5814.960	5834.760	PASS
	Ant2	5825	19.880	5815.040	5834.920	PASS
11N40MIMO	Ant1	5190	40.160	5169.760	5209.920	PASS
	Ant2	5190	39.600	5170.160	5209.760	PASS
	Ant1	5230	40.240	5209.600	5249.840	PASS
	Ant2	5230	39.760	5209.520	5249.280	PASS
	Ant1	5270	40.480	5249.760	5290.240	PASS
	Ant2	5270	38.960	5250.560	5289.520	PASS
	Ant1	5310	40.320	5289.600	5329.920	PASS
	Ant2	5310	39.520	5290.160	5329.680	PASS
	Ant1	5510	39.600	5490.240	5529.840	PASS
	Ant2	5510	39.840	5490.240	5530.080	PASS
	Ant1	5550	40.400	5529.920	5570.320	PASS
	Ant2	5550	39.920	5529.840	5569.760	PASS
	Ant1	5670	40.720	5650.080	5690.800	PASS
	Ant2	5670	39.840	5650.000	5689.840	PASS
	Ant1	5710	40.800	5689.120	5729.920	PASS
	Ant2	5710	39.760	5690.320	5730.080	PASS
	Ant1	5710_UNII-2C	35.88	5689.120	5725	PASS
	Ant2	5710_UNII-2C	34.68	5690.320	5725	PASS
	Ant1	5710_UNII-3	4.92	5725	5729.920	PASS
	Ant2	5710_UNII-3	5.08	5725	5730.080	PASS
	Ant1	5755	40.160	5735.080	5775.240	PASS
	Ant2	5755	40.080	5735.160	5775.240	PASS
	Ant1	5795	39.920	5775.240	5815.160	PASS
	Ant2	5795	39.200	5775.080	5814.280	PASS
11AC80MIMO	Ant1	5210	79.680	5169.840	5249.520	PASS
	Ant2	5210	79.040	5170.640	5249.680	PASS
	Ant1	5290	80.160	5250.320	5330.480	PASS
	Ant2	5290	79.360	5250.160	5329.520	PASS
	Ant1	5530	80.960	5489.200	5570.160	PASS
	Ant2	5530	79.520	5490.160	5569.680	PASS
	Ant1	5610	79.360	5570.160	5649.520	PASS
	Ant2	5610	80.640	5569.680	5650.320	PASS
	Ant1	5690	80.800	5649.840	5730.640	PASS
	Ant2	5690	79.840	5650.480	5730.320	PASS
	Ant1	5690_UNII-2C	75.16	5649.840	5725	PASS
	Ant2	5690_UNII-2C	74.52	5650.480	5725	PASS
	Ant1	5690_UNII-3	5.64	5725	5730.640	PASS
	Ant2	5690_UNII-3	5.32	5725	5730.320	PASS
	Ant1	5775	79.520	5735.320	5814.840	PASS
	Ant2	5775	80.480	5734.520	5815.000	PASS

12.1.2. Test Graphs



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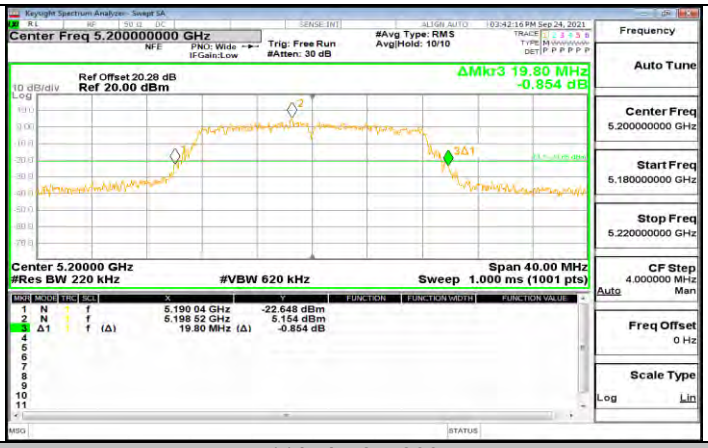
11A_Ant2_5180

11A_Ant1_5200



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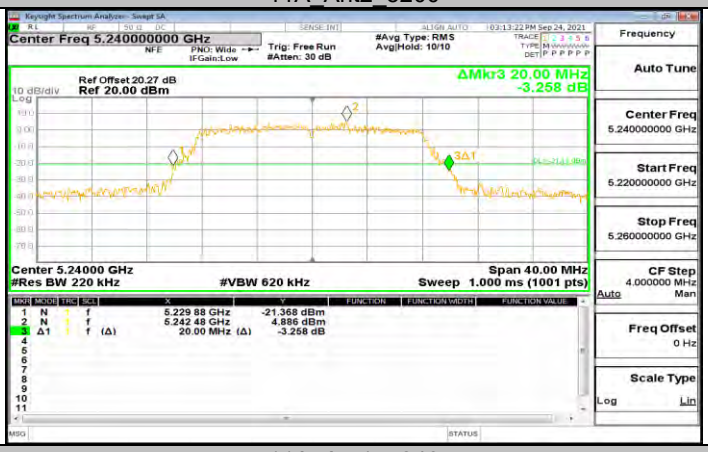

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11A_Ant1_5260

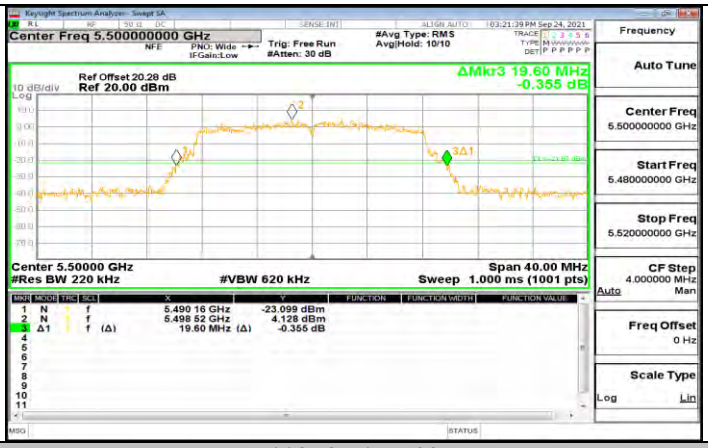
11A_Ant2_5260

11A_Ant1_5280

11A_Ant2_5280

11A_Ant1_5320

11A_Ant2_5320



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11A_Ant2_5500

11A_Ant1_5580

11A_Ant2_5580

11A_Ant1_5700

11A_Ant2_5700

11A_Ant1_5720

11A_Ant2_5720

11A_Ant1_5745

11A_Ant2_5745

11A_Ant1_5785

11A_Ant2_5785

11A_Ant1_5825

11A_Ant2_5825

11N20MIMO_Ant1_5180

11N20MIMO_Ant2_5180

11N20MIMO_Ant1_5200

11N20MIMO_Ant2_5200

11N20MIMO_Ant1_5240

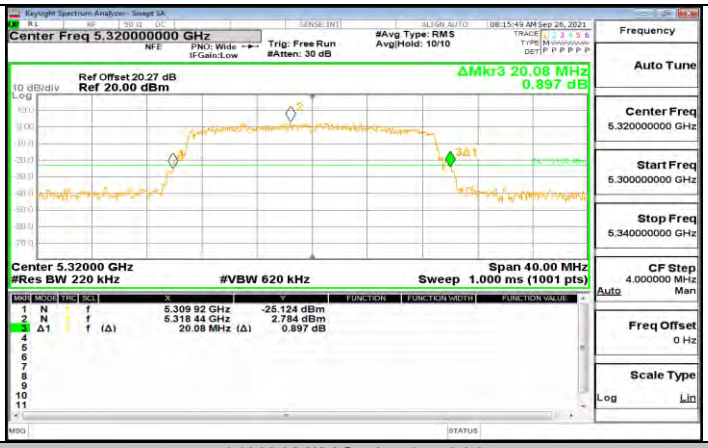
11N20MIMO_Ant2_5240

11N20MIMO_Ant1_5260

11N20MIMO_Ant2_5260

11N20MIMO_Ant1_5280

11N20MIMO_Ant2_5280



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11N20MIMO_Ant2_5320

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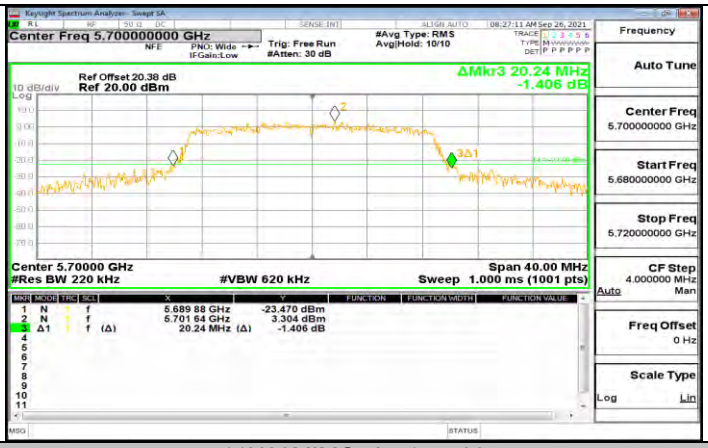
11N20MIMO_Ant1_5580

11N20MIMO_Ant2_5580



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11N20MIMO_Ant2_5720

11N20MIMO_Ant1_5745

11N20MIMO_Ant2_5745

11N20MIMO_Ant1_5785

11N20MIMO_Ant2_5785

11N20MIMO_Ant1_5825

11N20MIMO_Ant2_5825

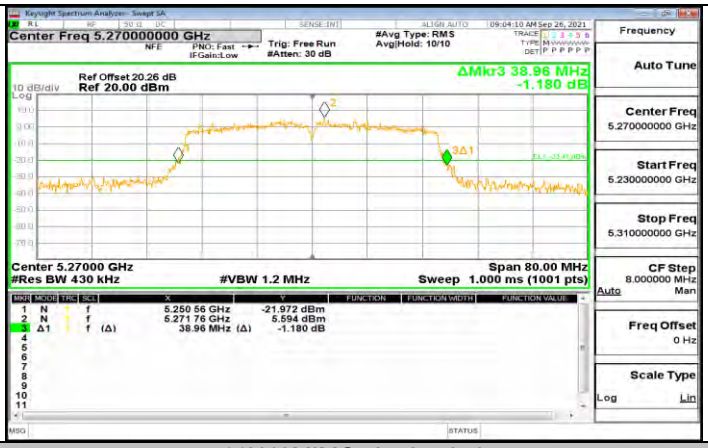
11N40MIMO_Ant1_5190

11N40MIMO_Ant2_5190

11N40MIMO_Ant1_5230

11N40MIMO_Ant2_5230

11N40MIMO_Ant1_5270



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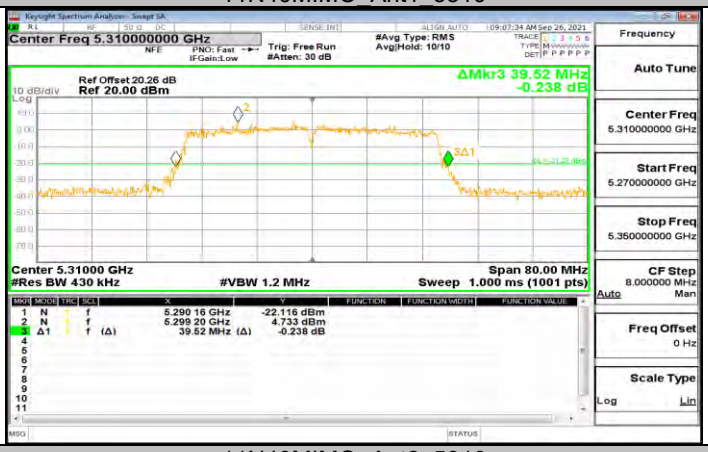
11N40MIMO_Ant1_5310



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11N40MIMO_Ant1_5510

11N40MIMO_Ant2_5510

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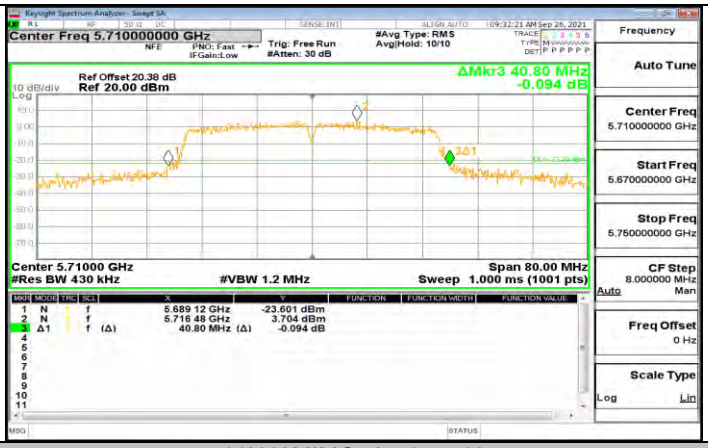
11N40MIMO_Ant2_5550

11N40MIMO_Ant1_5670

11N40MIMO_Ant2_5670



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11N40MIMO_Ant2_5710

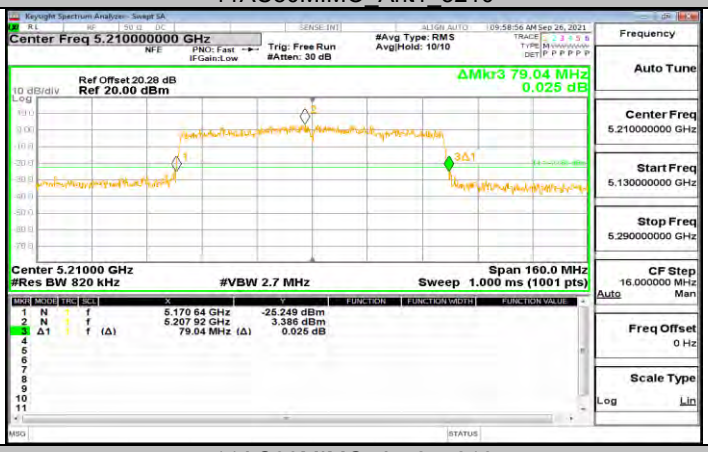
11N40MIMO_Ant1_5755

11N40MIMO_Ant2_5755

11N40MIMO_Ant1_5795

11N40MIMO_Ant2_5795

11AC80MIMO_Ant1_5210



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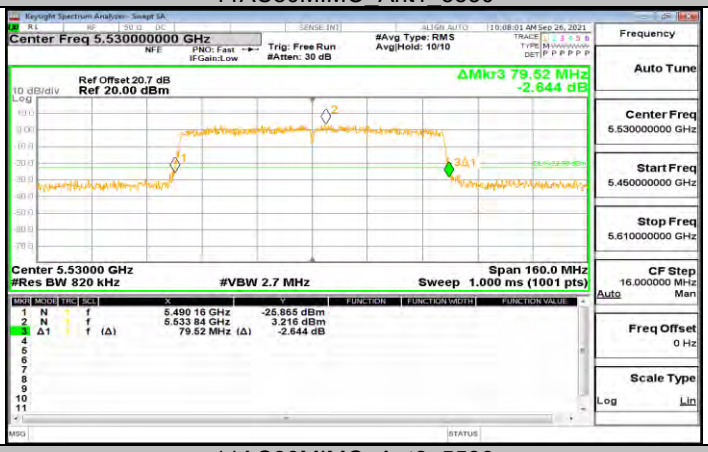
11AC80MIMO_Ant1_5290

11AC80MIMO_Ant2_5290

11AC80MIMO_Ant1_5530



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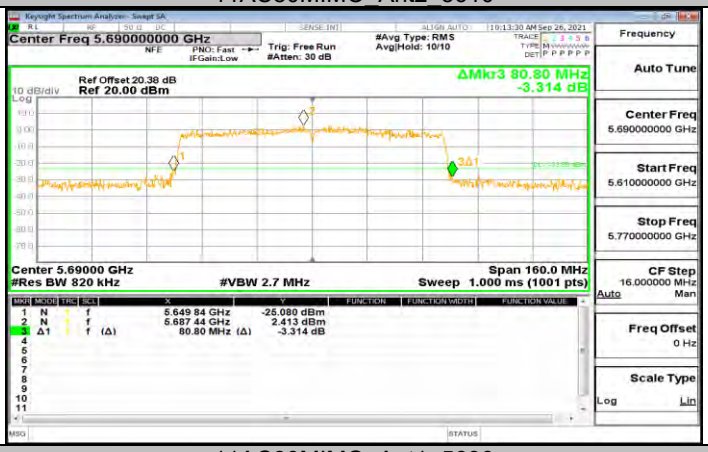
11AC80MIMO_Ant1_5610

11AC80MIMO_Ant2_5610



11AC80MIMO_Ant1_5690

11AC80MIMO_Ant2_5690

11AC80MIMO_Ant1_5775

11AC80MIMO_Ant2_5775

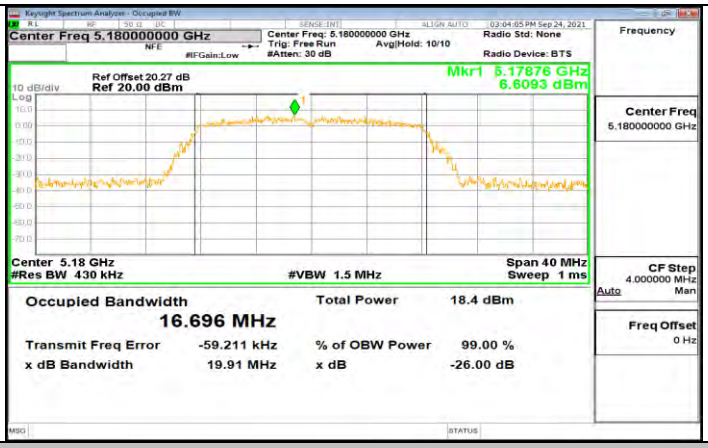
12.2. Appendix A2: Occupied channel bandwidth

12.2.1. Test Result

Test Mode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Verdict
11A20	Ant1	5180	16.696	5171.593	5188.289	PASS
	Ant2	5180	16.593	5171.605	5188.198	PASS
	Ant1	5200	16.515	5191.667	5208.182	PASS
	Ant2	5200	16.752	5191.545	5208.297	PASS
	Ant1	5240	16.611	5231.585	5248.196	PASS
	Ant2	5240	16.634	5231.627	5248.261	PASS
	Ant1	5260	16.530	5251.666	5268.196	PASS
	Ant2	5260	16.642	5251.621	5268.263	PASS
	Ant1	5280	16.706	5271.587	5288.293	PASS
	Ant2	5280	16.602	5271.612	5288.214	PASS
	Ant1	5320	16.568	5311.636	5328.204	PASS
	Ant2	5320	16.563	5311.684	5328.247	PASS
	Ant1	5500	16.616	5491.649	5508.265	PASS
	Ant2	5500	16.583	5491.650	5508.233	PASS
	Ant1	5580	16.607	5571.575	5588.182	PASS
	Ant2	5580	16.577	5571.647	5588.224	PASS
	Ant1	5700	16.643	5691.611	5708.254	PASS
	Ant2	5700	16.601	5691.623	5708.224	PASS
	Ant1	5720	16.767	5711.672	5728.439	PASS
	Ant2	5720	16.536	5711.680	5728.216	PASS
	Ant1	5720_UNII-2C	13.328	5711.672	5725	PASS
	Ant2	5720_UNII-2C	13.32	5711.680	5725	PASS
	Ant1	5720_UNII-3	3.439	5725	5728.439	PASS
	Ant2	5720_UNII-3	3.216	5725	5728.216	PASS
	Ant1	5745	16.584	5736.658	5753.242	PASS
	Ant2	5745	16.580	5736.611	5753.191	PASS
	Ant1	5785	16.748	5776.527	5793.275	PASS
	Ant2	5785	16.570	5776.608	5793.178	PASS
	Ant1	5825	16.670	5816.525	5833.195	PASS
	Ant2	5825	16.794	5816.518	5833.312	PASS
11N20MIMO	Ant1	5180	17.681	5171.104	5188.785	PASS
	Ant2	5180	17.764	5171.058	5188.822	PASS
	Ant1	5200	17.693	5191.084	5208.777	PASS
	Ant2	5200	17.606	5191.194	5208.800	PASS
	Ant1	5240	17.712	5231.044	5248.756	PASS
	Ant2	5240	17.682	5231.091	5248.773	PASS
	Ant1	5260	17.664	5251.142	5268.806	PASS
	Ant2	5260	17.625	5251.172	5268.797	PASS
	Ant1	5280	17.676	5271.121	5288.797	PASS
	Ant2	5280	17.709	5271.069	5288.778	PASS
	Ant1	5320	17.702	5311.117	5328.819	PASS
	Ant2	5320	17.666	5311.109	5328.775	PASS
	Ant1	5500	17.642	5491.171	5508.813	PASS
	Ant2	5500	17.683	5491.149	5508.832	PASS
	Ant1	5580	17.587	5571.188	5588.775	PASS
	Ant2	5580	17.698	5571.094	5588.792	PASS
	Ant1	5700	17.777	5691.092	5708.869	PASS
	Ant2	5700	17.664	5691.141	5708.805	PASS
	Ant1	5720	17.712	5711.126	5728.838	PASS
	Ant2	5720	17.660	5711.157	5728.817	PASS
	Ant1	5720_UNII-2C	13.874	5711.126	5725	PASS
	Ant2	5720_UNII-2C	13.843	5711.157	5725	PASS

	Ant1	5720_UNII-3	3.838	5725	5728.838	PASS
	Ant2	5720_UNII-3	3.817	5725	5728.817	PASS
	Ant1	5745	17.698	5736.106	5753.804	PASS
	Ant2	5745	17.707	5736.072	5753.779	PASS
	Ant1	5785	17.668	5776.112	5793.780	PASS
	Ant2	5785	17.694	5776.118	5793.812	PASS
	Ant1	5825	17.748	5816.064	5833.812	PASS
	Ant2	5825	17.787	5816.067	5833.854	PASS
11N40MIMO	Ant1	5190	36.002	5171.886	5207.888	PASS
	Ant2	5190	35.937	5172.003	5207.940	PASS
	Ant1	5230	36.089	5211.853	5247.942	PASS
	Ant2	5230	36.012	5211.922	5247.934	PASS
	Ant1	5270	35.951	5251.931	5287.882	PASS
	Ant2	5270	35.878	5251.980	5287.858	PASS
	Ant1	5310	36.050	5291.946	5327.996	PASS
	Ant2	5310	36.007	5291.924	5327.931	PASS
	Ant1	5510	36.127	5491.934	5528.061	PASS
	Ant2	5510	36.015	5491.953	5527.968	PASS
	Ant1	5550	36.099	5531.925	5568.024	PASS
	Ant2	5550	36.237	5531.926	5568.163	PASS
	Ant1	5670	36.103	5651.953	5688.056	PASS
	Ant2	5670	36.340	5651.688	5688.028	PASS
	Ant1	5710	36.230	5691.924	5728.154	PASS
	Ant2	5710	36.154	5691.847	5728.001	PASS
	Ant1	5710_UNII-2C	33.076	5691.924	5725	PASS
	Ant2	5710_UNII-2C	33.153	5691.847	5725	PASS
	Ant1	5710_UNII-3	3.154	5725	5728.154	PASS
	Ant2	5710_UNII-3	3.001	5725	5728.001	PASS
	Ant1	5755	36.326	5736.888	5773.214	PASS
	Ant2	5755	36.072	5736.874	5772.946	PASS
	Ant1	5795	36.202	5776.824	5813.026	PASS
	Ant2	5795	36.121	5776.865	5812.986	PASS
11AC80MIMO	Ant1	5210	75.573	5172.219	5247.792	PASS
	Ant2	5210	75.645	5172.064	5247.709	PASS
	Ant1	5290	75.604	5252.140	5327.744	PASS
	Ant2	5290	75.439	5252.222	5327.661	PASS
	Ant1	5530	75.569	5492.152	5567.721	PASS
	Ant2	5530	75.695	5492.206	5567.901	PASS
	Ant1	5610	75.607	5572.160	5647.767	PASS
	Ant2	5610	75.815	5572.029	5647.844	PASS
	Ant1	5690	75.722	5652.080	5727.802	PASS
	Ant2	5690	75.496	5652.056	5727.552	PASS
	Ant1	5690_UNII-2C	72.92	5652.080	5725	PASS
	Ant2	5690_UNII-2C	72.944	5652.056	5725	PASS
	Ant1	5690_UNII-3	2.802	5725	5727.802	PASS
	Ant2	5690_UNII-3	2.552	5725	5727.552	PASS
	Ant1	5775	75.621	5737.283	5812.904	PASS
	Ant2	5775	75.582	5737.107	5812.689	PASS

12.2.2. Test Graphs



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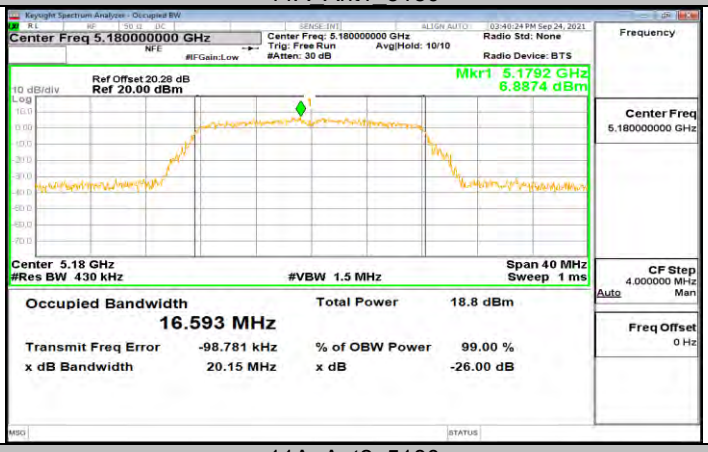

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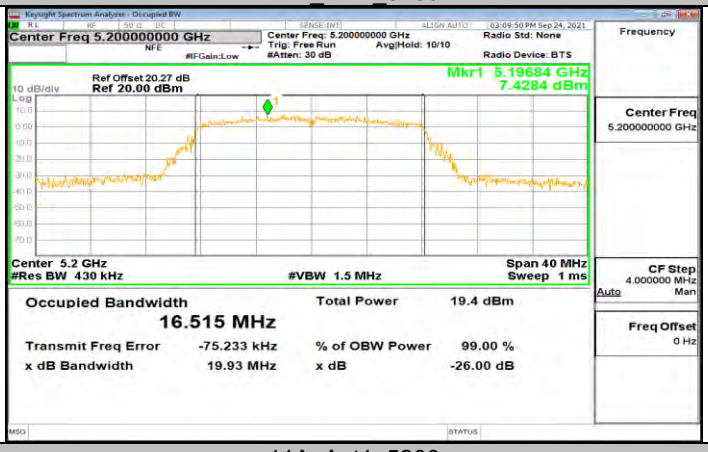

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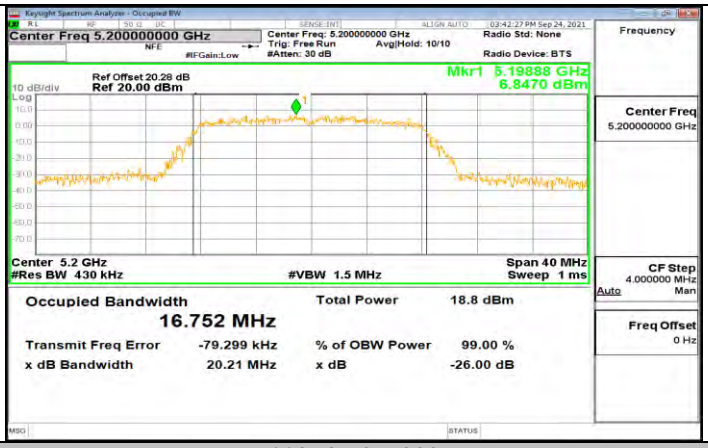

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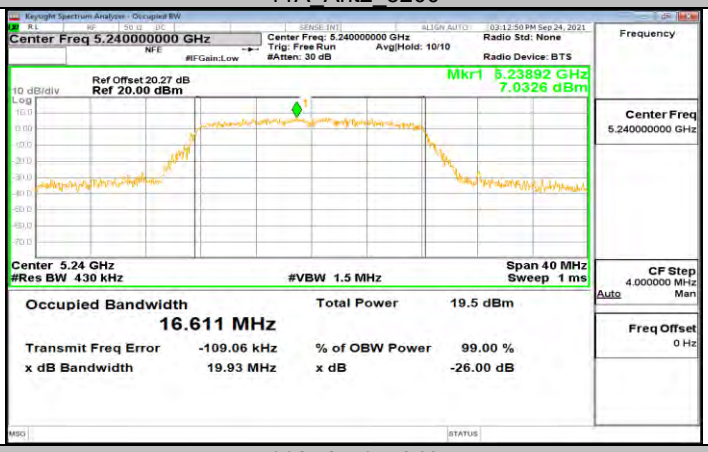

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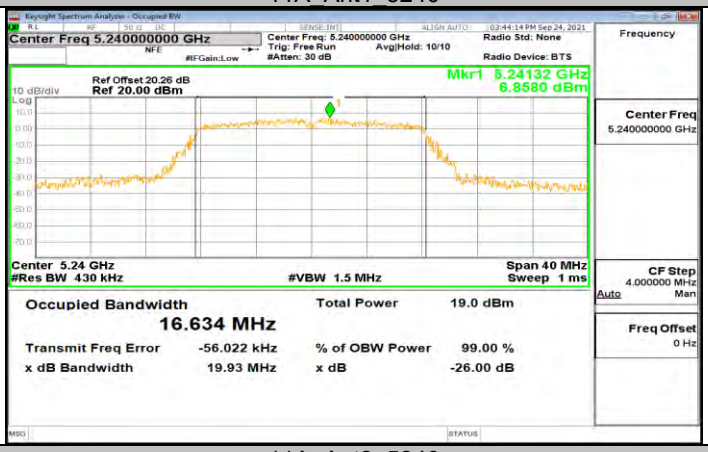

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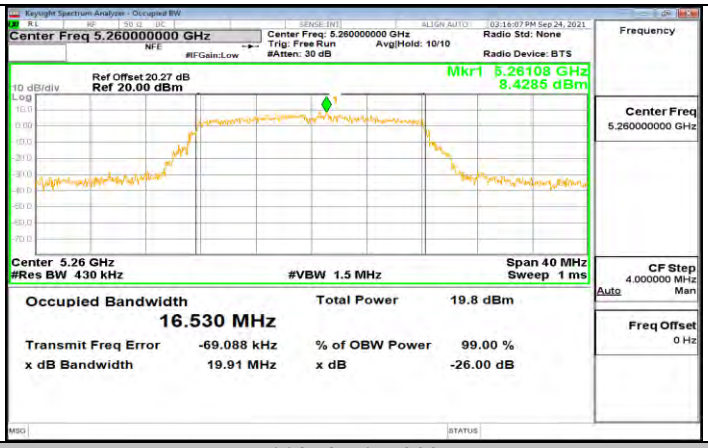

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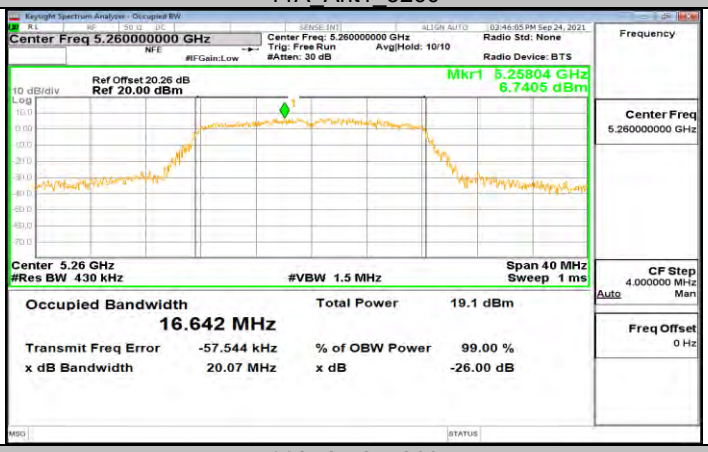

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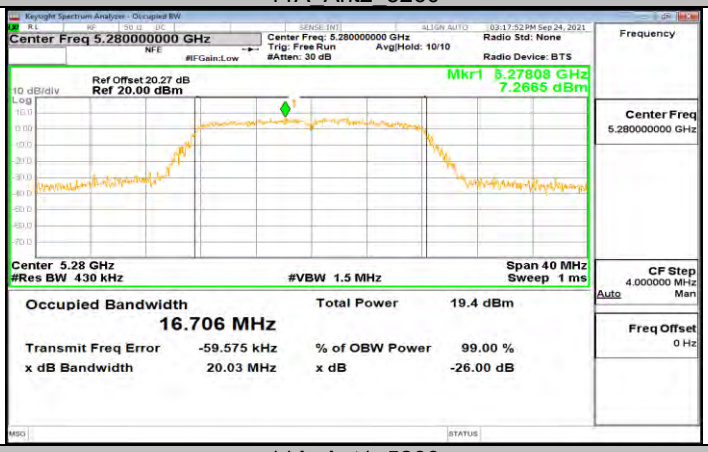

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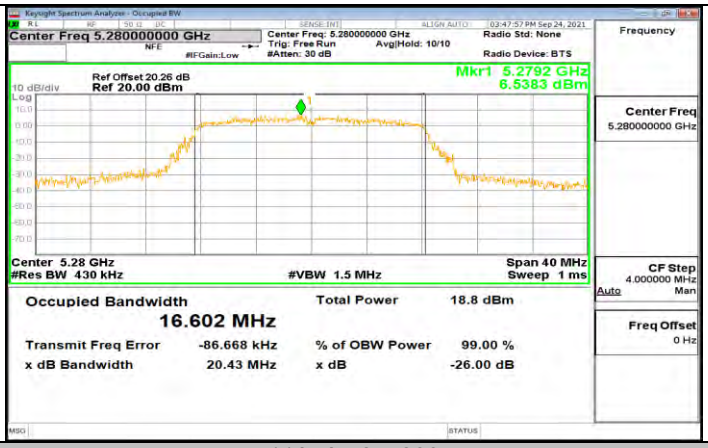

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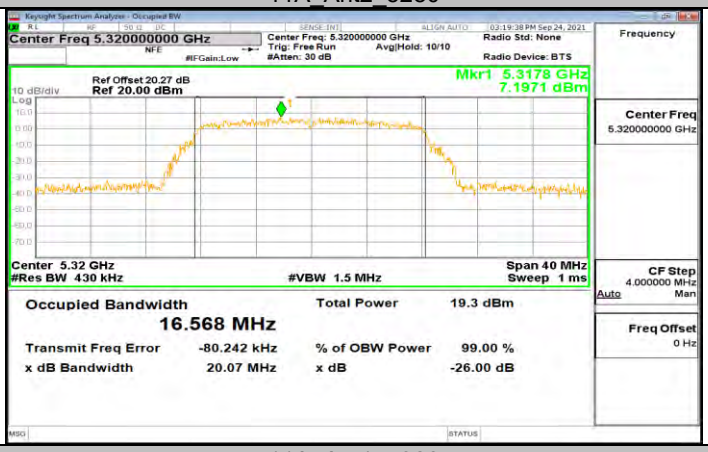

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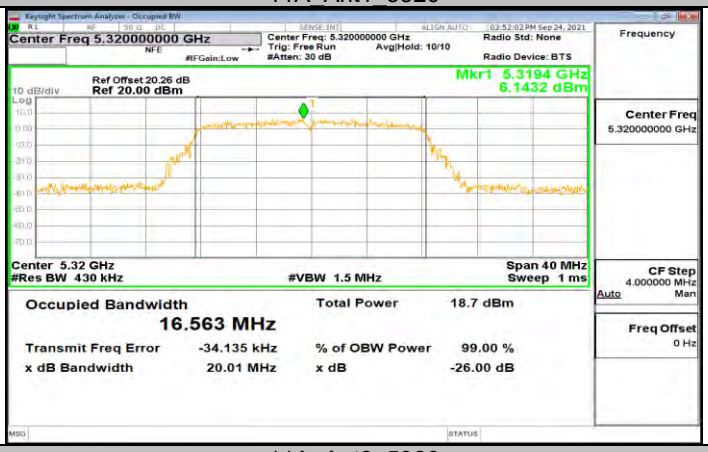

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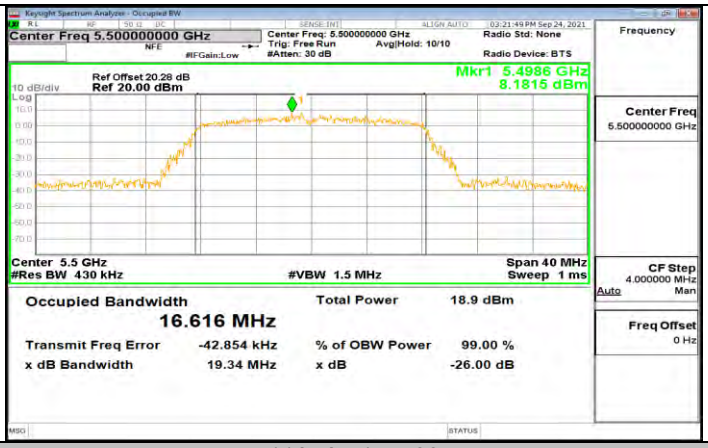

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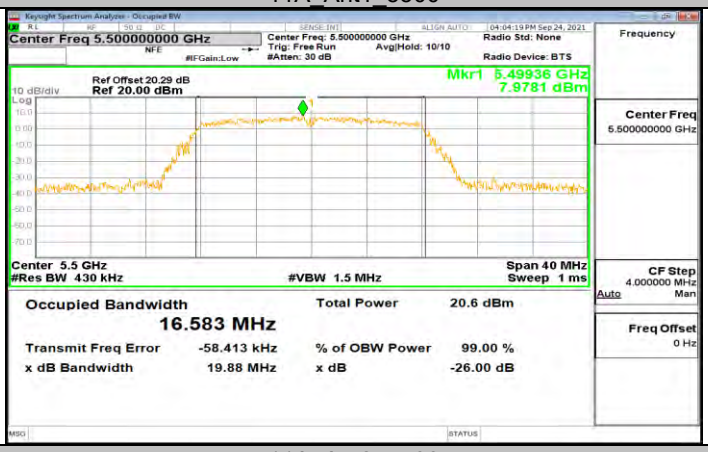

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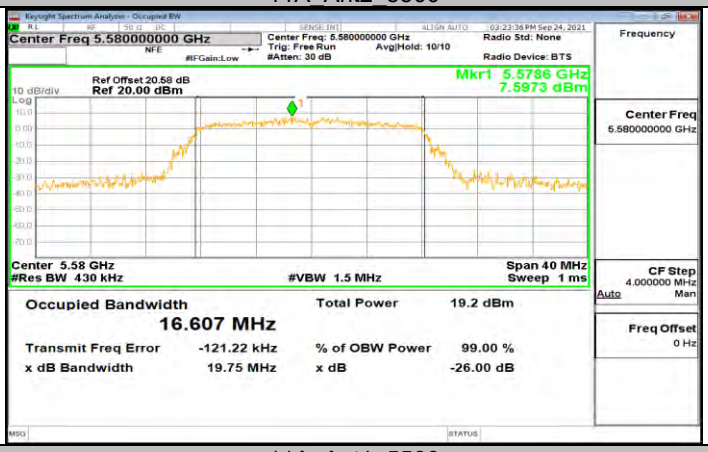

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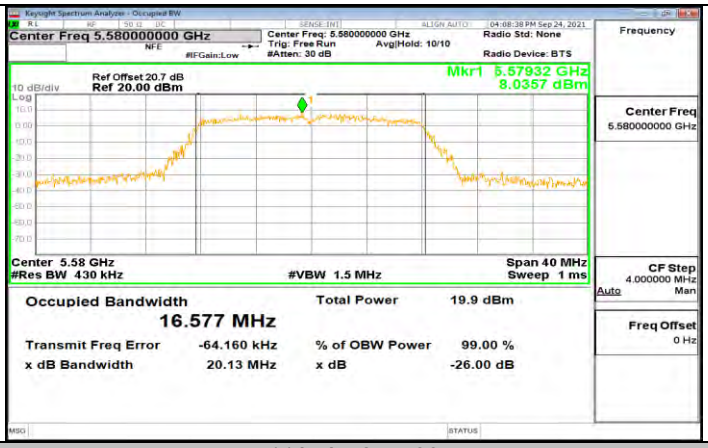

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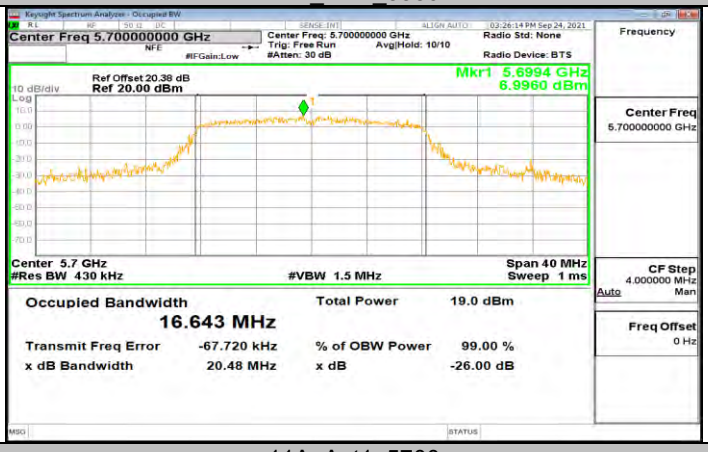

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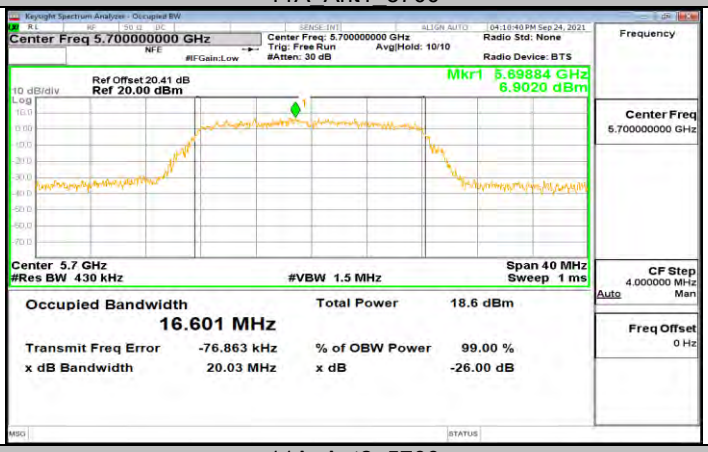

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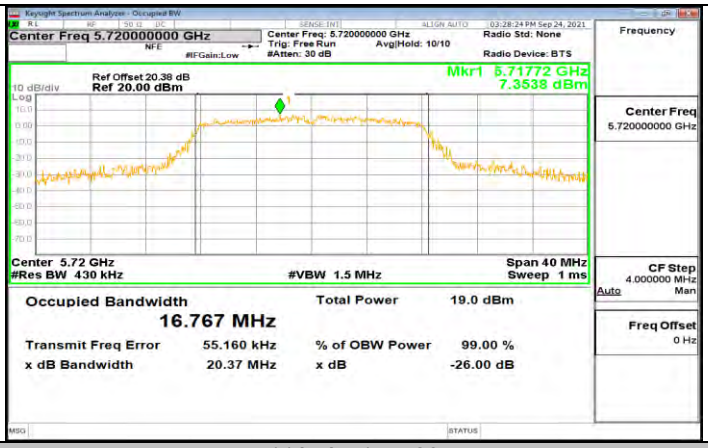

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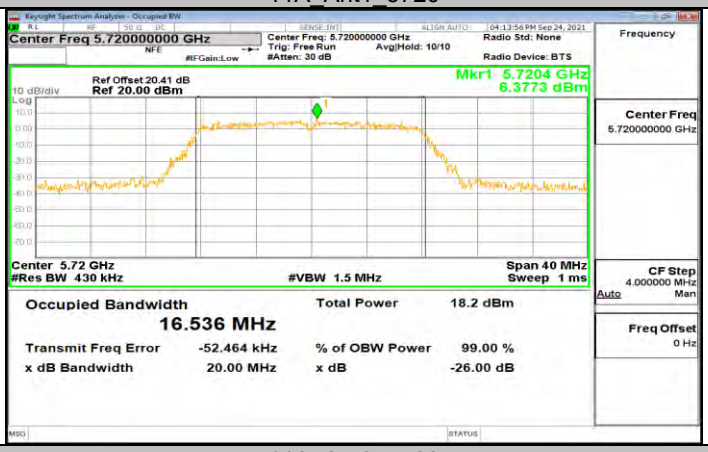

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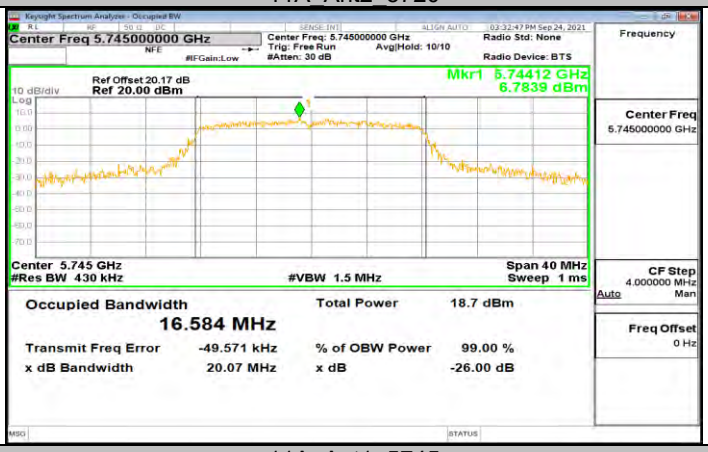
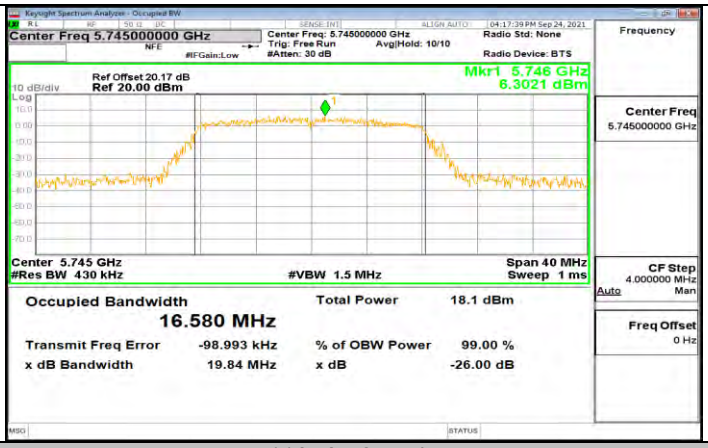


11A_Ant1_5745



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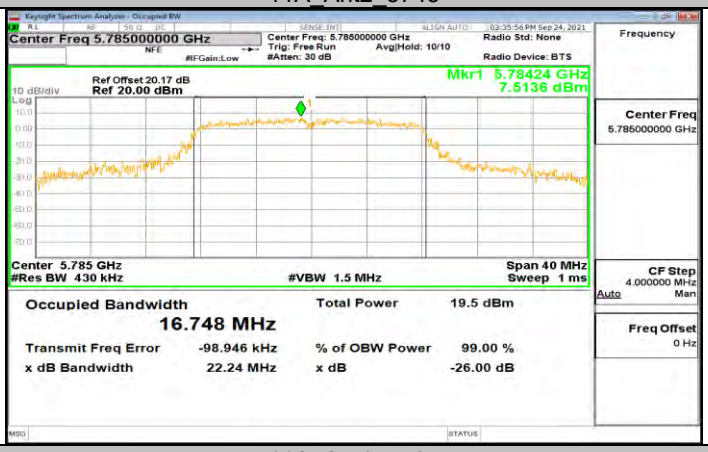

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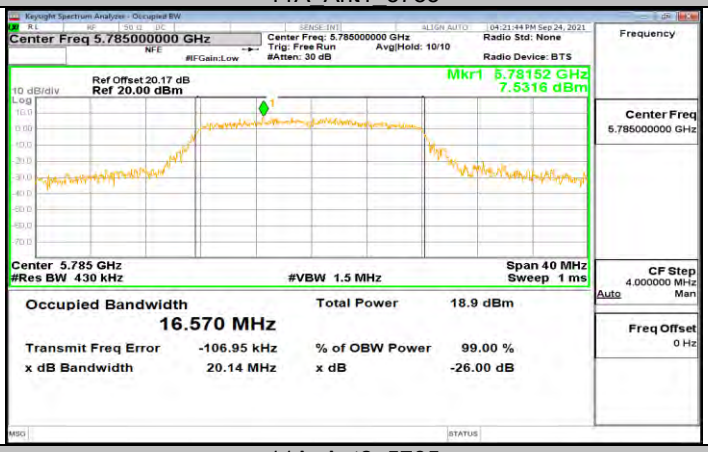

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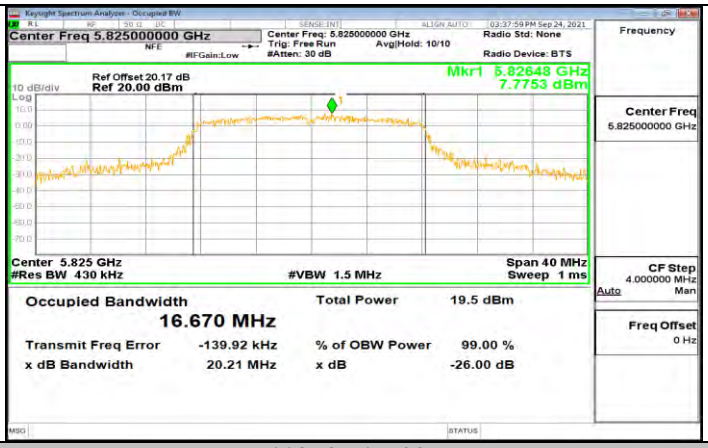

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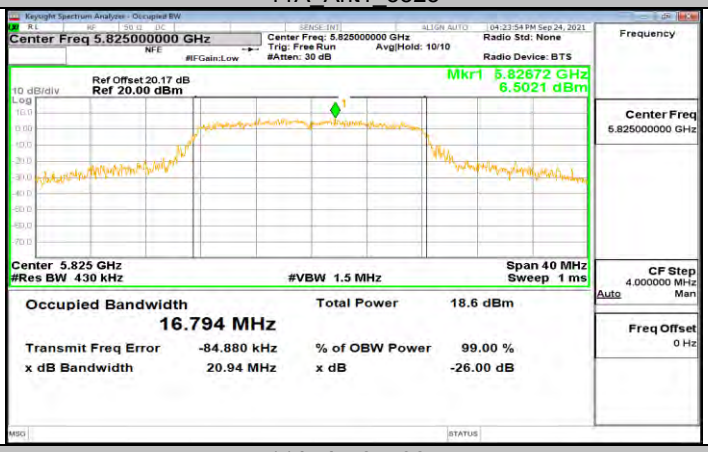

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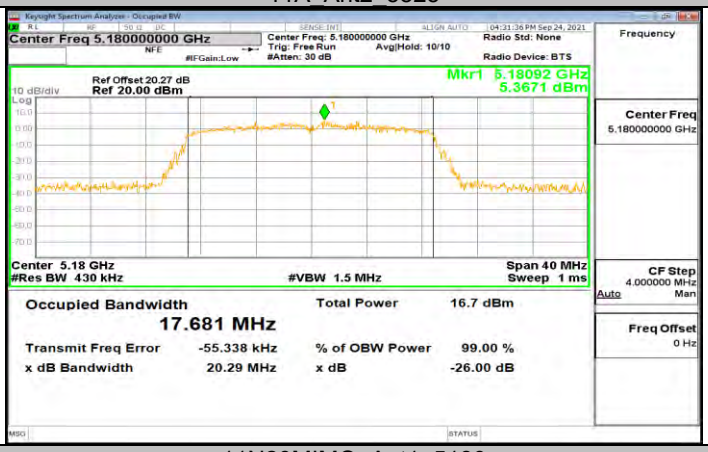

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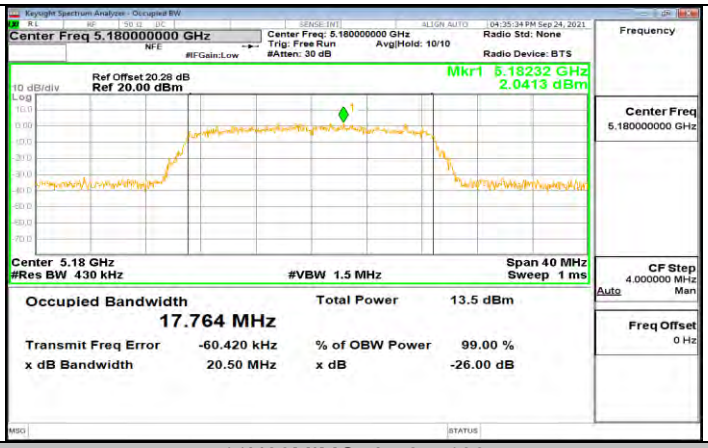

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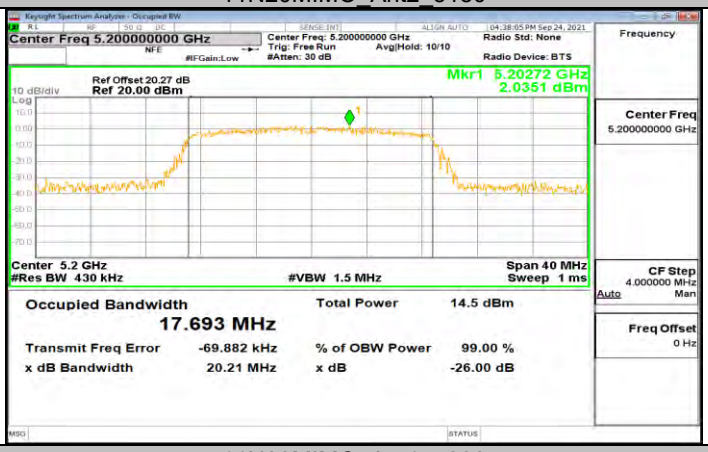

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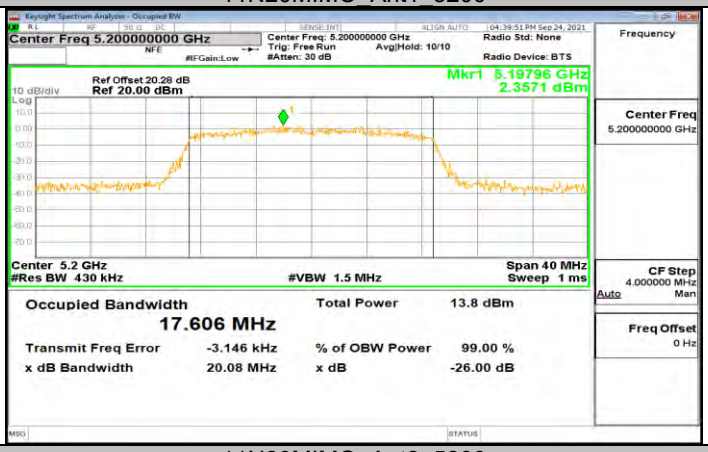

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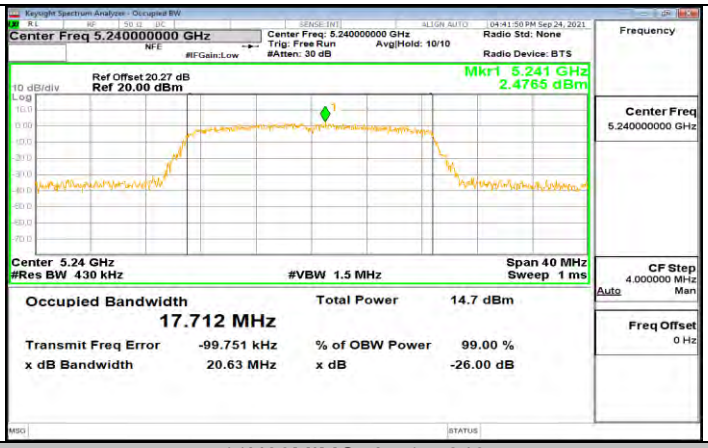

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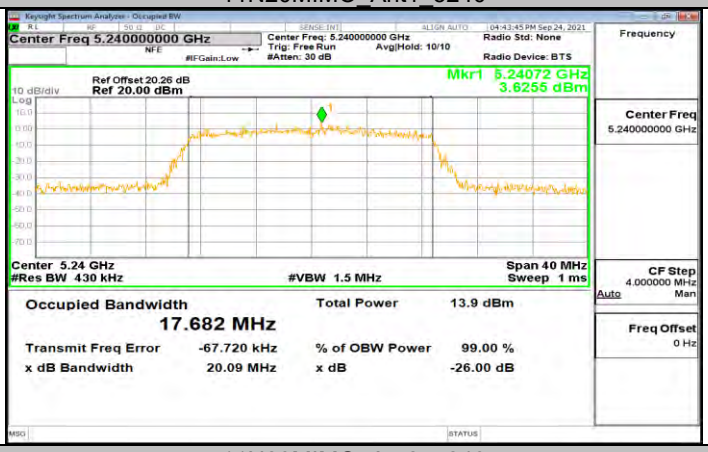

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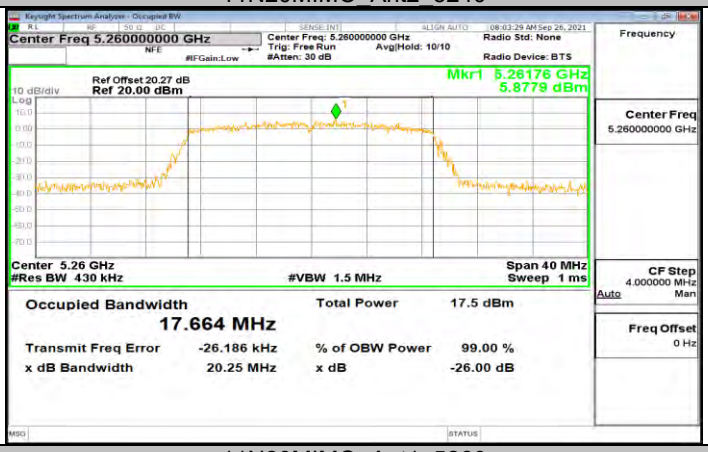

11N20MIMO_Ant1_5260