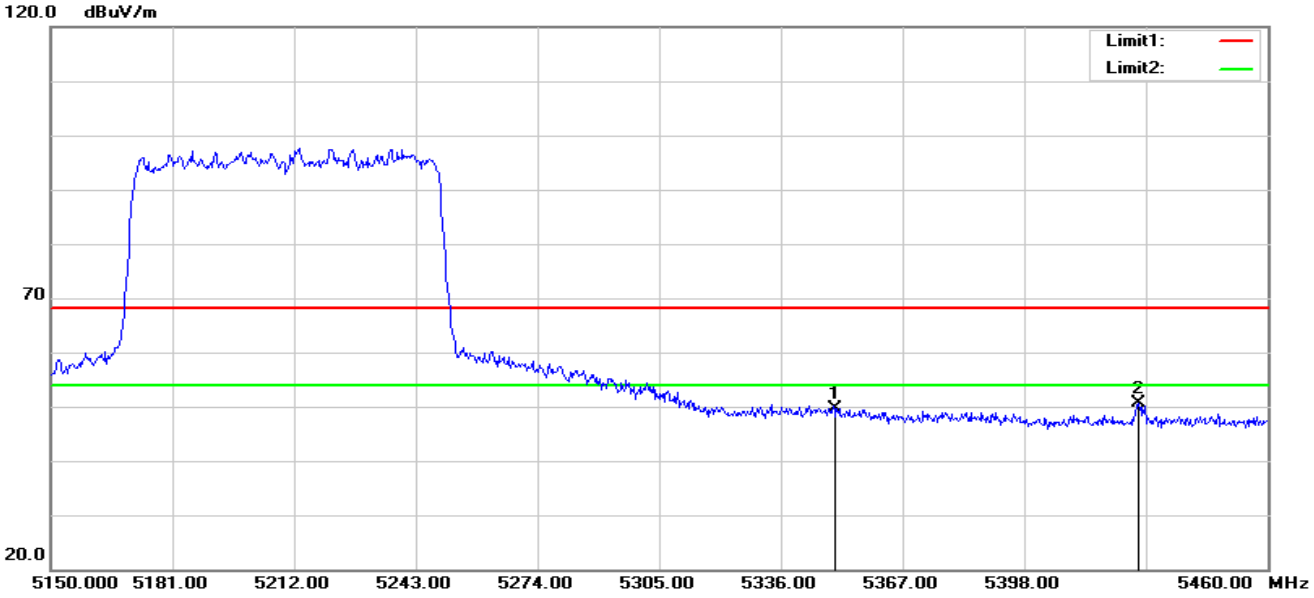
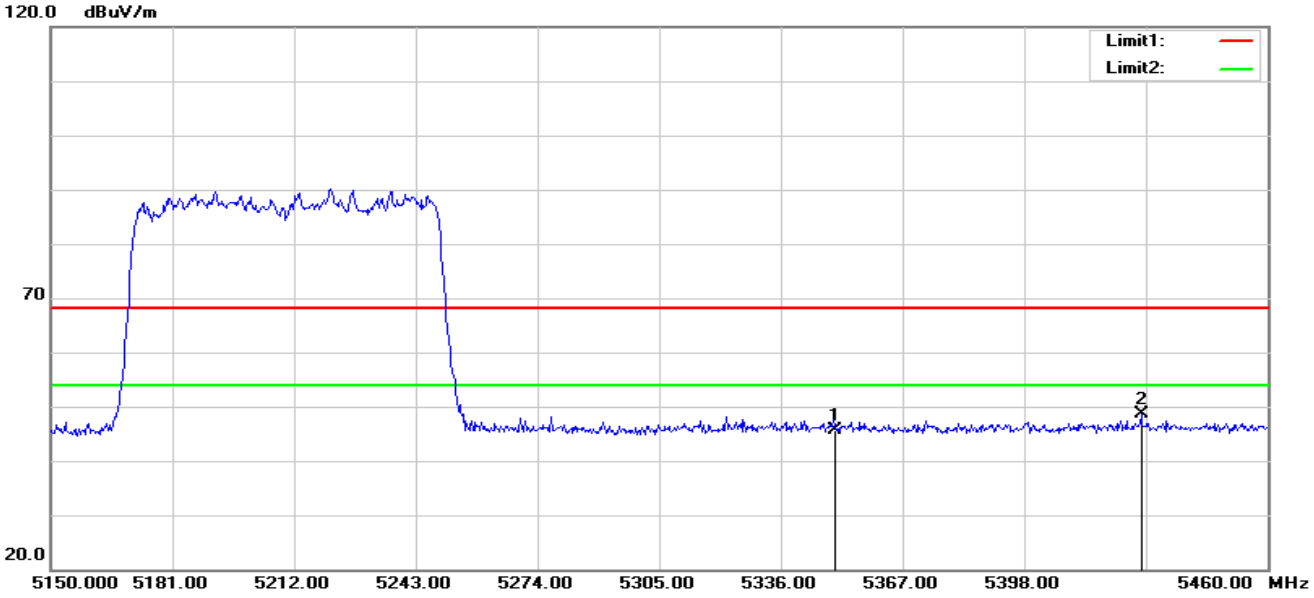
802.11ax80-H-H



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5350.000	54.74	-5.23	49.51	68.20	-18.69	peak
2	5427.140	55.87	-5.19	50.68	68.20	-17.52	peak

802.11ax80-H-V



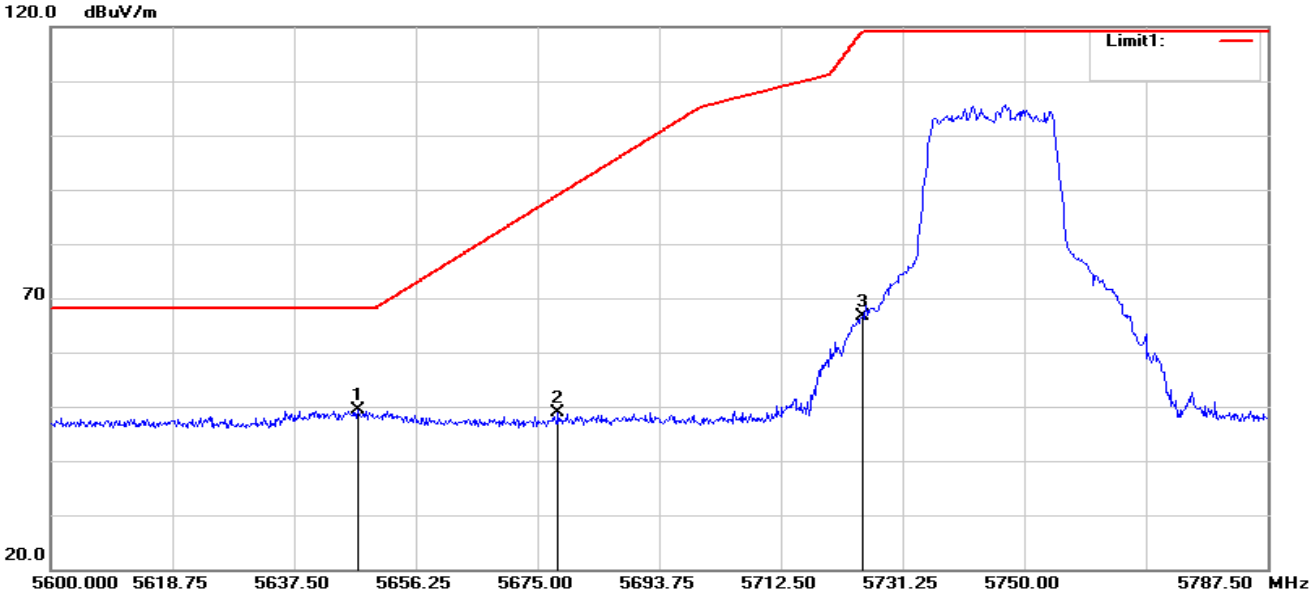
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5350.000	50.96	-5.23	45.73	68.20	-22.47	peak
2	5427.760	53.82	-5.19	48.63	68.20	-19.57	peak

Note: 1. All modes have been tested. Only the worst mode shown in the report.

2. Pre-scan both the SISO and MIMO mode, only the worst-case results were reported.

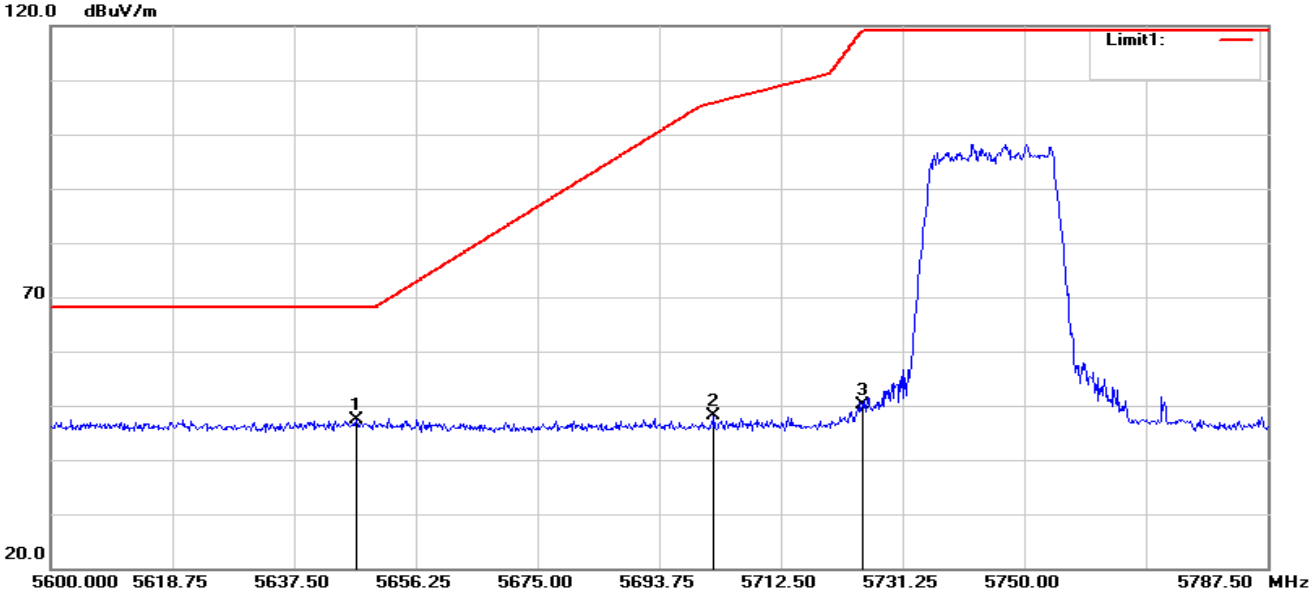
Band IV(5.725-5.85 GHz)

802.11ax20-L-H



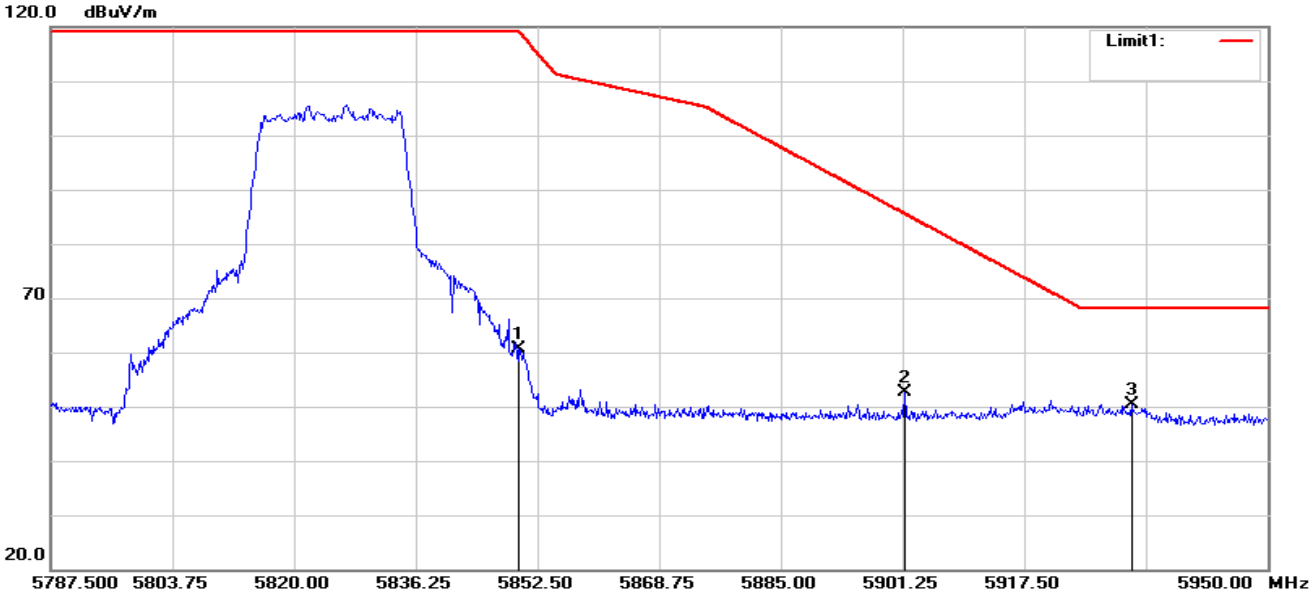
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5647.250	54.00	-4.68	49.32	68.20	-18.88	peak
2	5678.188	53.65	-4.66	48.99	89.06	-40.07	peak
3	5725.000	71.13	-4.57	66.56	119.20	-52.64	peak

802.11ax20-L-V



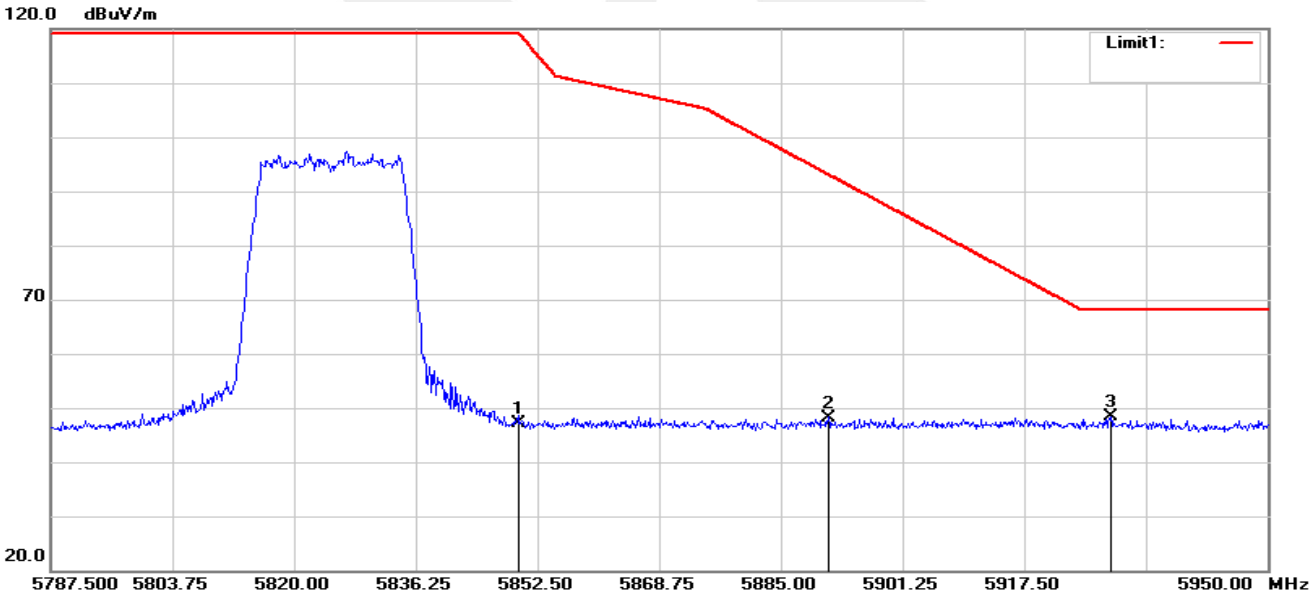
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5647.063	52.13	-4.68	47.45	68.20	-20.75	peak
2	5702.188	52.76	-4.66	48.10	105.86	-57.76	peak
3	5725.000	54.62	-4.57	50.05	119.20	-69.15	peak

802.11ax20-H-H



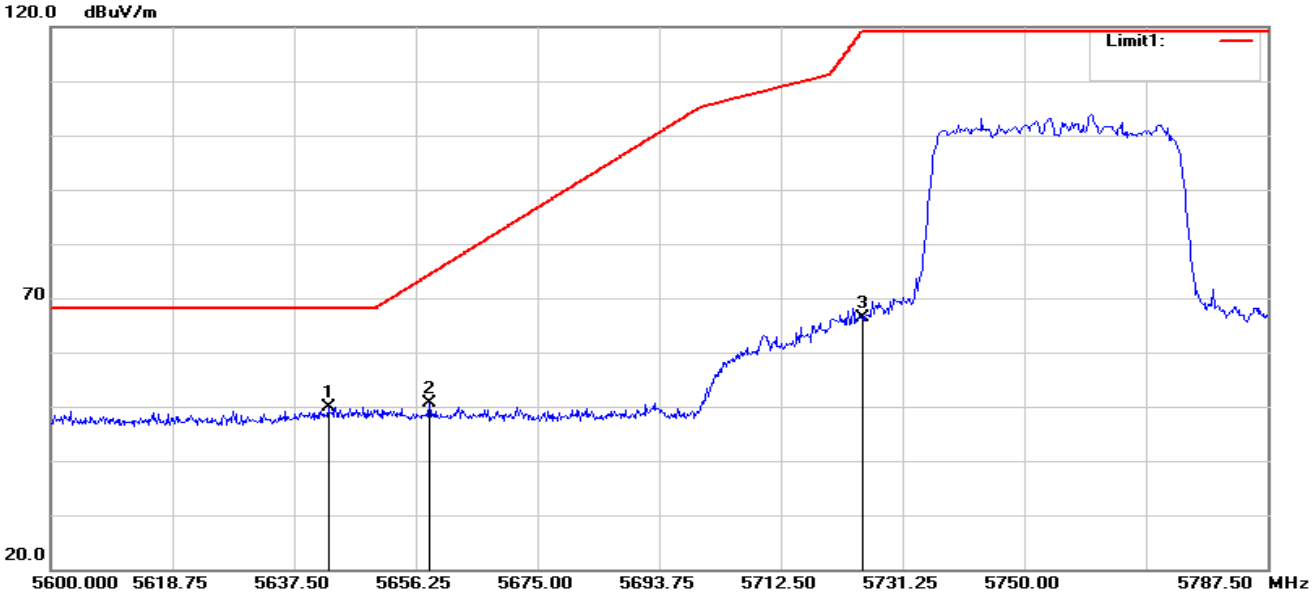
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5850.000	64.62	-4.10	60.52	119.20	-58.68	peak
2	5901.575	56.60	-3.89	52.71	85.53	-32.82	peak
3	5931.800	54.31	-3.93	50.38	68.20	-17.82	peak

802.11ax20-H-V



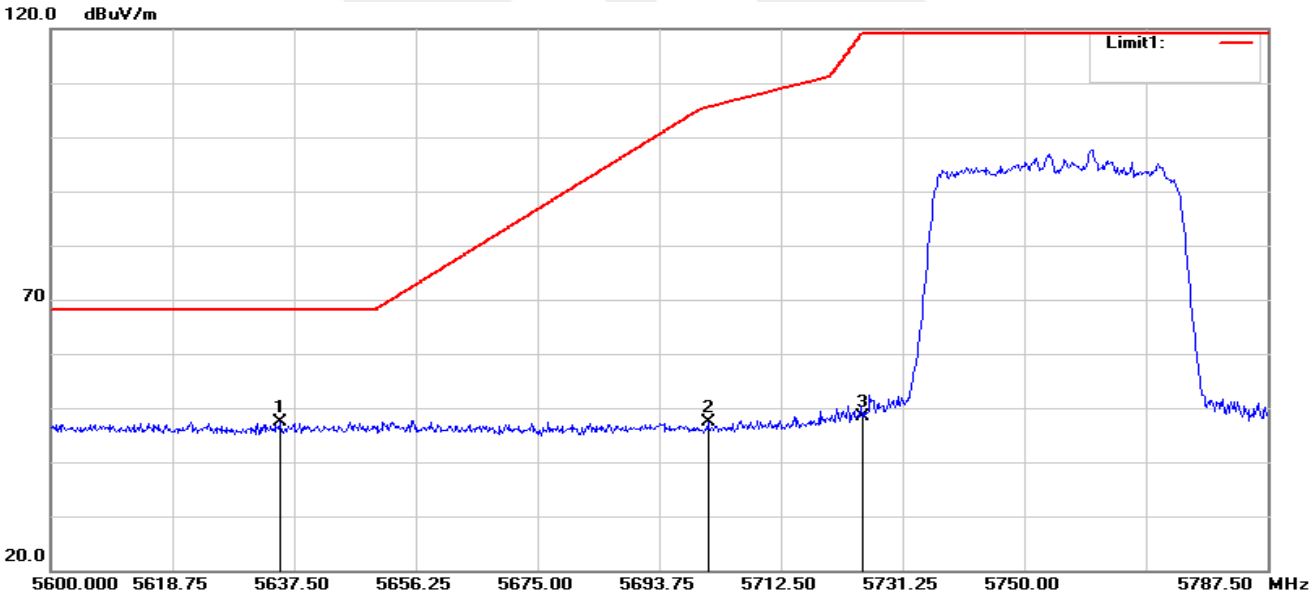
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5850.000	51.24	-4.10	47.14	119.20	-72.06	peak
2	5891.337	52.16	-3.91	48.25	93.11	-44.86	peak
3	5929.038	52.36	-3.93	48.43	68.20	-19.77	peak

802.11ax40-L-H



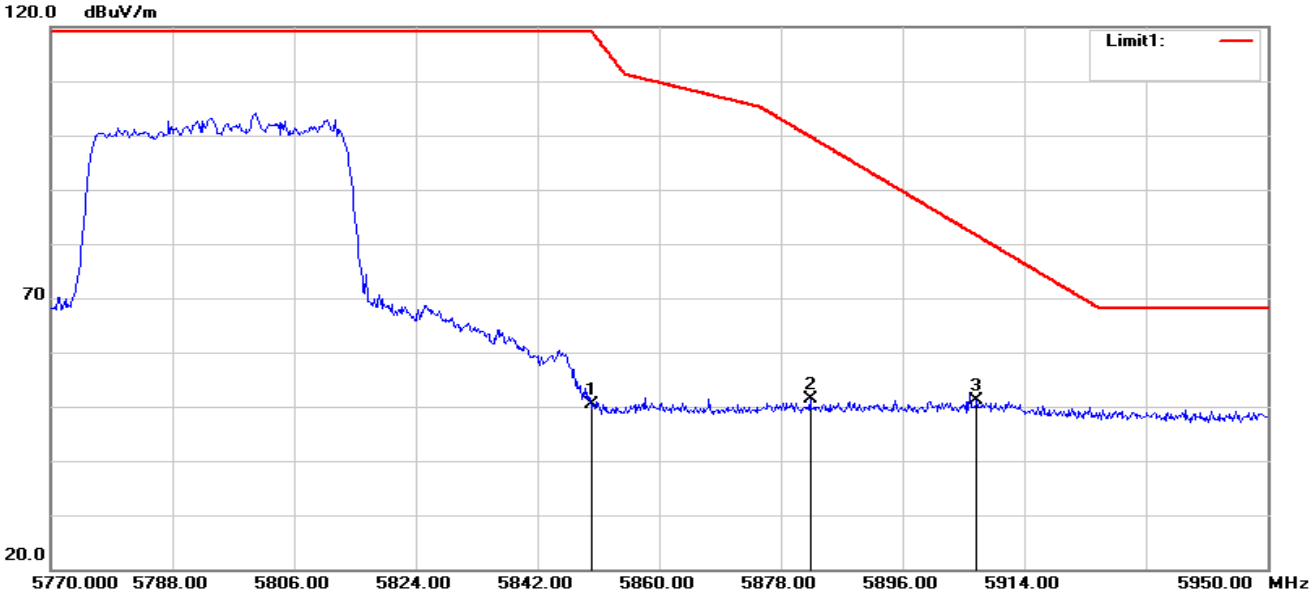
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5642.750	54.63	-4.68	49.95	68.20	-18.25	peak
2	5658.313	55.20	-4.68	50.52	74.35	-23.83	peak
3	5725.000	71.02	-4.57	66.45	119.20	-52.75	peak

802.11ax40-L-V



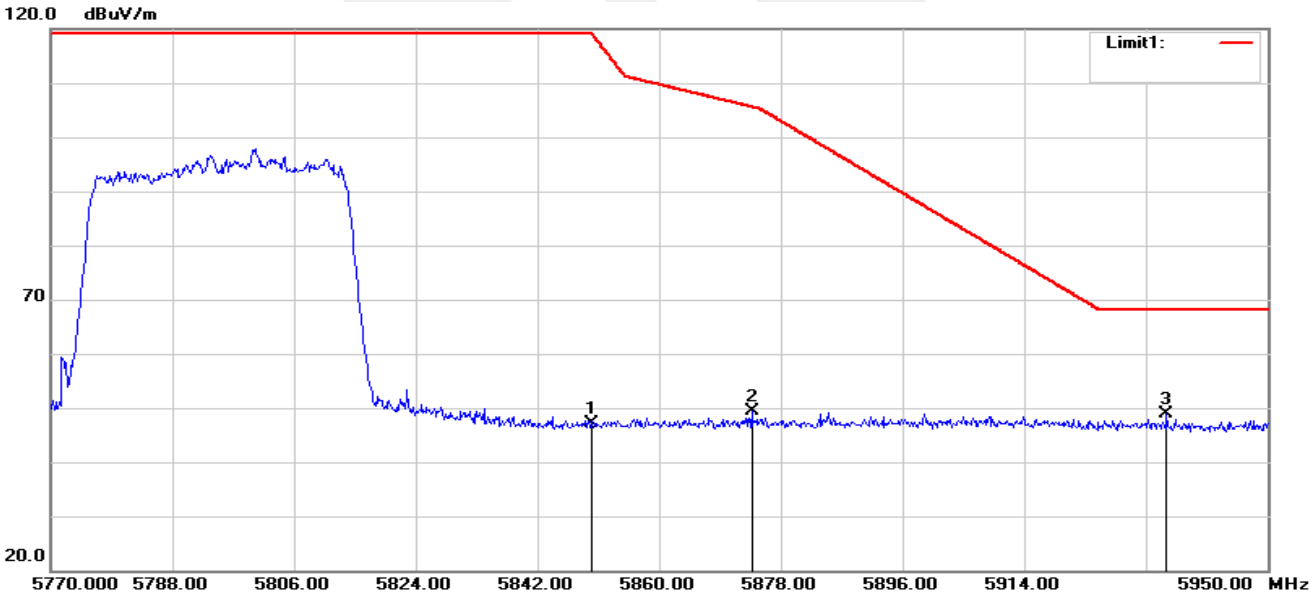
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5635.250	52.17	-4.68	47.49	68.20	-20.71	peak
2	5701.250	52.11	-4.66	47.45	105.58	-58.13	peak
3	5725.000	53.07	-4.57	48.50	119.20	-70.70	peak

802.11ax40-H-H



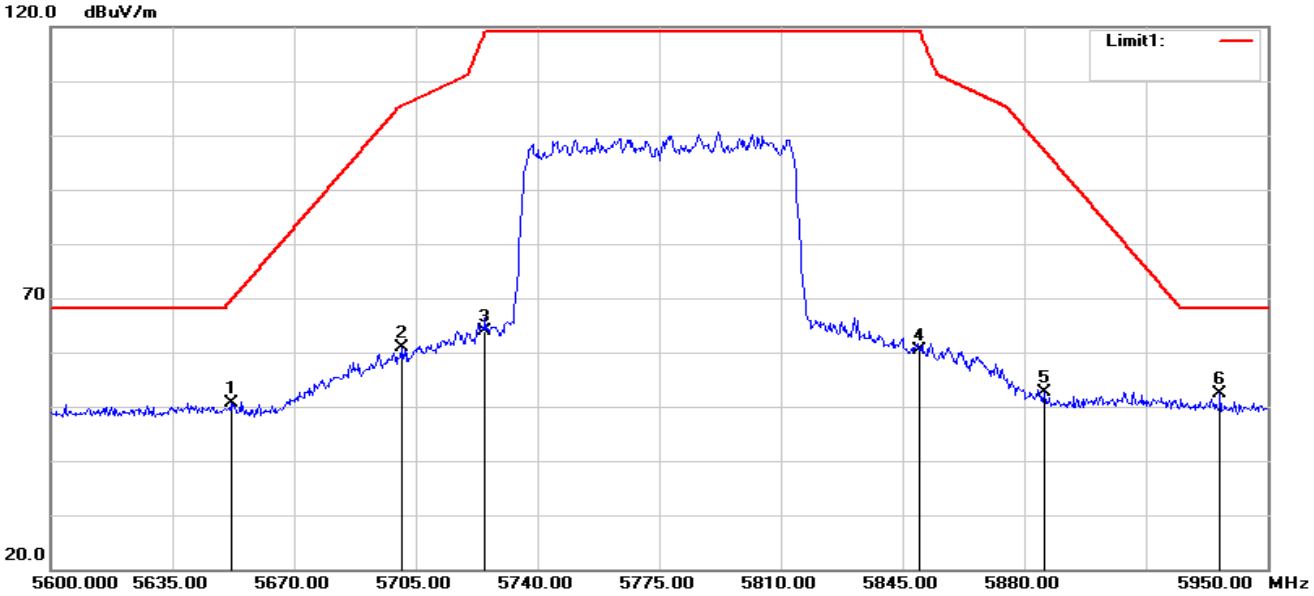
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5850.000	54.53	-4.10	50.43	119.20	-68.77	peak
2	5882.320	55.33	-3.96	51.37	99.78	-48.41	peak
3	5906.980	55.06	-3.89	51.17	81.53	-30.36	peak

802.11ax40-H-V



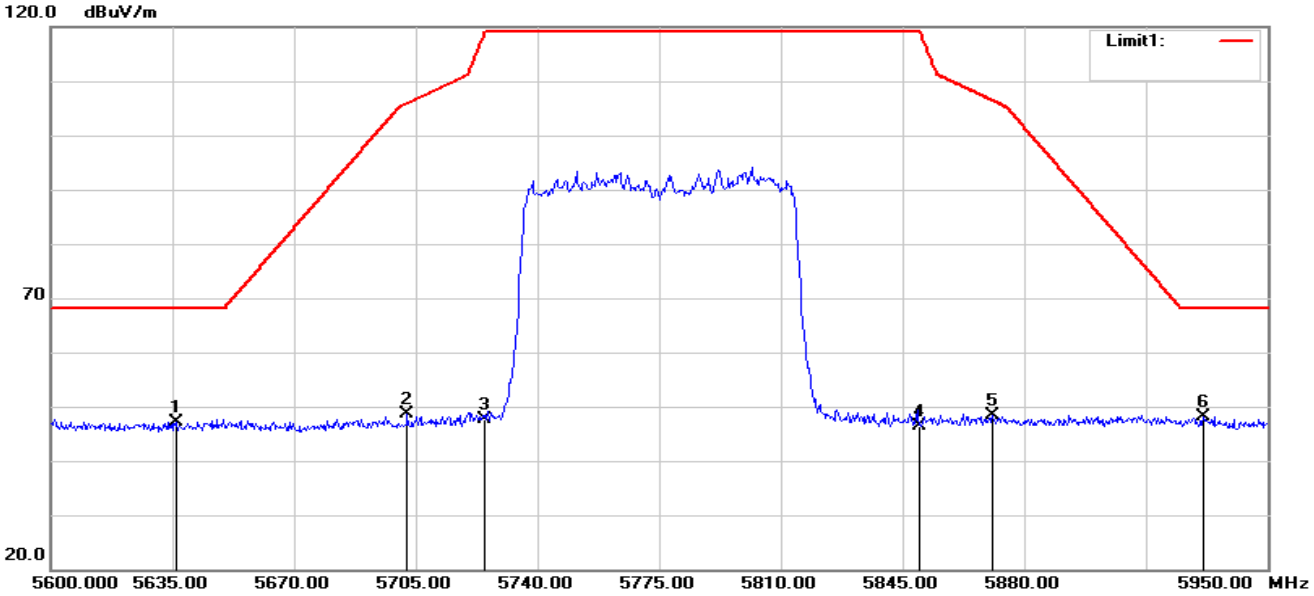
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5850.000	51.25	-4.10	47.15	119.20	-72.05	peak
2	5873.680	53.43	-3.99	49.44	105.60	-56.16	peak
3	5935.060	52.77	-3.94	48.83	68.20	-19.37	peak

802.11ax80-H



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5651.800	55.35	-4.68	50.67	69.53	-18.86	peak
2	5700.800	65.47	-4.66	60.81	105.44	-44.63	peak
3	5725.000	68.57	-4.57	64.00	119.20	-55.20	peak
4	5850.000	64.56	-4.10	60.46	119.20	-58.74	peak
5	5885.950	56.59	-3.94	52.65	97.10	-44.45	peak
6	5936.350	56.43	-3.94	52.49	68.20	-15.71	peak

802.11ax80-V



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5636.050	51.82	-4.68	47.14	68.20	-21.06	peak
2	5702.550	53.17	-4.66	48.51	105.97	-57.46	peak
3	5725.000	52.31	-4.57	47.74	119.20	-71.46	peak
4	5850.000	50.48	-4.10	46.38	119.20	-72.82	peak
5	5870.900	52.41	-4.01	48.40	106.43	-58.03	peak
6	5931.450	52.14	-3.93	48.21	68.20	-19.99	peak

Note: 1. All modes have been tested. Only the worst mode shown in the report.

2. Pre-scan both the SISO and MIMO mode, only the worst-case results were reported.

4. POWER SPECTRAL DENSITY TEST

4.1 LIMIT

1. For mobile and portable client devices in the 5.15-5.25 GHz band, , the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
2. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
3. For the band 5.725-5.850 GHz, the peak power spectral density shall not exceed 30 dBm in any 500KHz band. If transmitting antenna directional gain is greater than 6 dBi, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

4.2 TEST PROCEDURE

1. The setting follows Method SA-1 of FCC KDB D02 General UNII Test Procedures New Rules v01r03.

For devices operating in the band, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (*i.e.,* 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 KHz bandwidth, the following adjustments to the procedures apply:

a) Set RBW ≥ 1/*T*, where *T* is defined in section II.B.l.a).

b) Set VBW ≥ 3 RBW.

c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10 log (500kHz/RBW) to the measured result, whereas RBW (< 500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.

d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add 10 log (1MHz/RBW) to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.

e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Note: As a practical matter, it is recommended to use reduced RBW of 100 kHz for the sections5.c) and 5.d) above, since RBW=100 KHZ is available on nearly all spectrum analyzers.

4.3 DEVIATION FROM STANDARD

No deviation.

4.4 TEST SETUP

4.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.1 Unless otherwise a special operating condition is specified in the follows during the testing.

4.6 TEST RESULTS

5150-5250MHz								
Frequency	Direct measurement Ant_A Power Density (dBm)	Direct measurement Ant_B Power Density (dBm)	Duty cycle factor	Final Ant_A Power Density (dBm)	Final Ant_B Power Density (dBm)	Power Density Total (dBm)	Limit (dBm)	Result
802.11a								
5180	-4.013	-5.937	2.498	-1.515	-3.439	--	11	PASS
5200	-3.802	-6.422	2.498	-1.304	-3.924	--	11	PASS
5240	-3.824	-6.754	2.498	-1.326	-4.256	--	11	PASS
802.11n20								
5180	-3.299	-6.525	2.095	-1.204	-4.430	0.486	9.49	PASS
5200	-4.466	-6.493	2.095	-2.371	-4.398	-0.257	9.49	PASS
5240	-4.658	-6.228	2.095	-2.563	-4.133	-0.267	9.49	PASS
802.11n40								
5190	-4.161	-10.548	2.482	-1.679	-8.066	-0.781	9.49	PASS
5230	-4.776	-11.153	2.482	-2.294	-8.671	-1.394	9.49	PASS
802.11ac20								
5180	-2.412	-5.058	0.669	-1.743	-4.389	0.143	9.49	PASS
5200	-2.852	-5.391	0.669	-2.183	-4.722	-0.259	9.49	PASS
5240	-2.987	-5.508	0.669	-2.318	-4.839	-0.387	9.49	PASS
802.11ac40								
5190	-5.596	-8.512	0.785	-4.811	-7.727	-3.018	9.49	PASS
5230	-5.689	-9.751	0.785	-4.904	-8.966	-3.466	9.49	PASS
802.11ac80								
5210	-8.679	-11.676	0.799	-7.880	-10.877	-6.115	9.49	PASS
802.11ax20								
5180	-2.203	-4.982	0.094	-2.109	-4.888	-0.270	9.49	PASS
5200	-2.639	-4.969	0.094	-2.545	-4.875	-0.545	9.49	PASS
5240	-2.744	-5.163	0.094	-2.650	-5.069	-0.683	9.49	PASS
802.11ax40								
5190	-5.522	-8.441	0.209	-5.313	-8.232	-3.521	9.49	PASS
5230	-5.759	-8.881	0.209	-5.550	-8.672	-3.826	9.49	PASS
802.11ax80								
5210	-10.365	-11.206	0.000	-10.365	-11.206	-7.755	9.49	PASS

5725-5850MHz										
Frequency	Use RBW 510KHz direct measurement Ant_A Power Density (dBm)	Use RBW 510KHz direct measurement Ant_B Power Density (dBm)	Convert to RBW 500KHz direct measurement Ant_A Power Density (dBm)	Convert to RBW 500KHz direct measurement Ant_B Power Density (dBm)	Duty cycle factor (dB)	Final Ant_A Power Density (dBm)	Final Ant_B Power Density (dBm)	Power Density Total (dBm)	Limit (dBm)	Result
802.11a										
5745	-7.385	-11.348	-7.471	-11.434	0.196	-7.275	-11.238	--	30	PASS
5785	-7.536	-11.399	-7.622	-11.485	0.196	-7.426	-11.289	--	30	PASS
5825	-7.514	-11.189	-7.600	-11.275	0.196	-7.404	-11.079	--	30	PASS
802.11n20										
5745	-6.808	-10.630	-6.894	-10.716	0.184	-6.710	-10.532	-5.203	28.49	PASS
5785	-7.802	-11.262	-7.888	-11.348	0.184	-7.704	-11.164	-6.088	28.49	PASS
5825	-7.994	-10.904	-8.080	-10.990	0.184	-7.896	-10.806	-6.101	28.49	PASS
802.11n40										
5755	-7.973	-12.332	-8.059	-12.418	0.390	-7.669	-12.028	-6.312	28.49	PASS
5795	-8.605	-12.585	-8.691	-12.671	0.390	-8.301	-12.281	-6.840	28.49	PASS
802.11ac20										
5745	-5.429	-9.645	-5.515	-9.731	0.027	-5.488	-9.704	-4.093	28.49	PASS
5785	-6.113	-10.111	-6.199	-10.197	0.027	-6.172	-10.170	-4.716	28.49	PASS
5825	-6.165	-9.839	-6.251	-9.925	0.027	-6.224	-9.898	-4.674	28.49	PASS
802.11ac40										
5755	-7.851	-11.090	-7.937	-11.176	0.094	-7.843	-11.082	-6.157	28.49	PASS
5795	-8.612	-11.239	-8.698	-11.325	0.094	-8.604	-11.231	-6.712	28.49	PASS
802.11ac80										
5775	-11.081	-14.485	-11.167	-14.571	0.209	-10.958	-14.362	-9.324	28.49	PASS
802.11ax20										
5745	-5.540	-9.639	-5.626	-9.725	0.000	-5.626	-9.725	-4.199	28.49	PASS
5785	-6.108	-10.076	-6.194	-10.162	0.000	-6.194	-10.162	-4.729	28.49	PASS
5825	-5.841	-10.143	-5.927	-10.229	0.000	-5.927	-10.229	-4.555	28.49	PASS
802.11ax40										
5755	-8.014	-10.981	-8.100	-11.067	0.000	-8.100	-11.067	-6.325	28.49	PASS
5795	-8.032	-11.150	-8.118	-11.236	0.000	-8.118	-11.236	-6.393	28.49	PASS
802.11ax80										
5775	-10.909	-14.081	-10.995	-14.167	0.000	-10.995	-14.167	-9.287	28.49	PASS

Note: 1. RB conversion formula: 10*LOG(500KHz/RBW)
2. Test plots see Attachment A.
3. The MIMO antenna gain is 7.51dBi, which is greater than 6dBi, the MIMO mode limit will be reduced by 1.51dBm.

5. BANDWIDTH MEASUREMENT

5.1 EMISSION BANDWIDTH (EBW) 26 BANDWID PROCEDURES / LIMIT

The following procedure shall be used for measuring 26 bandwidth.

5.1.1 TEST PROCEDURE

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > =RBW.
4. Detector = Peak.
5. Trace mode = max hold.
6. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

5.1.2 DEVIATION FROM STANDARD

No deviation.

5.1.3 TEST SETUP

5.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

5.1.5 TEST RESULTS

Note: Antenna A Power> Antenna B Power, Both antenna A and B have been test, Only show the worst data of Antenna A.

Frequency (MHz)	26dB Bandwidth (MHz)	Pass/Fail
802.11a		
5180	20.97	Pass
5200	20.83	Pass
5240	21.38	Pass
802.11n(HT20)		
5180	21.26	Pass
5200	21.23	Pass
5240	21.36	Pass
802.11n(HT40)		
5190	39.75	Pass
5230	39.85	Pass
802.11ac(VHT20)		
5180	21.35	Pass
5200	21.35	Pass
5240	21.21	Pass
802.11ac(VHT40)		
5190	39.58	Pass
5230	40.10	Pass
802.11ac(VHT80)		
5210	80.64	Pass
802.11ax(VHT20)		
5180	21.37	Pass
5200	21.54	Pass
5240	21.49	Pass
802.11ax(VHT40)		
5190	40.08	Pass
5230	40.03	Pass
802.11ax(VHT80)		
5210	80.56	Pass

Frequency (MHz)	26dB Bandwidth (MHz)	Pass/Fail
802.11a		
5745	20.95	Pass
5785	21.11	Pass
5825	20.96	Pass
802.11n(HT20)		
5745	21.32	Pass
5785	21.44	Pass
5825	21.31	Pass
802.11n(HT40)		
5755	39.81	Pass
5795	39.89	Pass
802.11ac(VHT20)		
5745	21.40	Pass
5785	21.24	Pass
5825	21.28	Pass
802.11ac(VHT40)		
5755	39.93	Pass
5795	39.98	Pass
802.11ac(VHT80)		
5775	81.16	Pass
802.11ax(VHT20)		
5745	21.44	Pass
5785	21.24	Pass
5825	21.06	Pass
802.11ax(VHT40)		
5755	39.84	Pass
5795	39.90	Pass
802.11ax(VHT80)		
5775	80.66	Pass

Test plots see Attachment B

5.2 OCCUPIED BANDWIDTH (99%) TEST APPLIED PROCEDURES / LIMIT

The following procedure shall be used for measuring (99 %) power bandwidth.

5.2.1 TEST PROCEDURE

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures v02r01.
The following procedure shall be used for measuring (99 %) power bandwidth:

1. Set center frequency to the nominal EUT channel center frequency.

2. Set span = 1.5 times to 5.0 times the OBW.

3. Set RBW = 1 % to 5 % of the OBW

4. Set VBW ≥ 3 · RBW

5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.

6. Use the 99 % power bandwidth function of the instrument (if available).

7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

5.2.2 DEVIATION FROM STANDARD

No deviation.

5.2.3 TEST SETUP

5.2.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

5.2.5 TEST RESULTS

Note: Antenna A Power> Antenna B Power, Both antenna A and B have been test, Only show the worst data of Antenna A.

Frequency (MHz)	99% Bandwidth (MHz)	Pass/Fail
802.11a		
5180	16.64	Pass
5200	16.65	Pass
5240	16.65	Pass
802.11n(HT20)		
5180	17.78	Pass
5200	17.80	Pass
5240	17.80	Pass
802.11n(HT40)		
5190	36.36	Pass
5230	36.36	Pass
802.11ac(VHT20)		
5180	17.78	Pass
5200	17.77	Pass
5240	17.75	Pass
802.11ac(VHT40)		
5190	36.31	Pass
5230	36.29	Pass
802.11ac(VHT80)		
5210	75.84	Pass
802.11ax(VHT20)		
5180	19.00	Pass
5200	19.00	Pass
5240	18.98	Pass
802.11ax(VHT40)		
5190	37.53	Pass
5230	37.47	Pass
802.11ax(VHT80)		
5210	76.96	Pass

Frequency (MHz)	99% Bandwidth (MHz)	Pass/Fail
802.11a		
5745	16.63	Pass
5785	16.65	Pass
5825	16.66	Pass
802.11n(HT20)		
5745	17.78	Pass
5785	17.78	Pass
5825	17.80	Pass
802.11n(HT40)		
5755	36.35	Pass
5795	36.38	Pass
802.11ac(VHT20)		
5745	17.77	Pass
5785	17.80	Pass
5825	17.79	Pass
802.11ac(VHT40)		
5755	36.37	Pass
5795	36.33	Pass
802.11ac(VHT80)		
5775	75.78	Pass
802.11ax(VHT20)		
5745	19.02	Pass
5785	19.03	Pass
5825	18.99	Pass
802.11ax(VHT40)		
5755	37.51	Pass
5795	37.57	Pass
802.11ax(VHT80)		
5775	76.85	Pass

Test plots See Attachment B

5.3 MINIMUM EMISSION BANDWIDTH(6 DB) PROCEDURES / LIMIT

Section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 KHz for the band 5.725-5.85 GHz. The following procedure shall be used for measuring this bandwidth:

5.3.1 TEST PROCEDURE

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures v02r01.

a) Set RBW = 100 kHz.

b) Set the video bandwidth (VBW) ≥ 3 × RBW.

c) Detector = Peak.

d) Trace mode = max hold.

e) Sweep = auto couple.

f) Allow the trace to stabilize.

g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

5.3.2 DEVIATION FROM STANDARD

No deviation.

5.3.3 TEST SETUP

5.3.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

5.3.5 TEST RESULTS

Note: Antenna A Power> Antenna B Power, Both antenna A and B have been test, Only show the worst data of Antenna A.

Frequency (MHz)	6dB Bandwidth (MHz)	Pass/Fail
802.11a		
5745	16.31	Pass
5785	16.32	Pass
5825	16.33	Pass
802.11n(HT20)		
5745	17.57	Pass
5785	17.59	Pass
5825	17.61	Pass
802.11n(HT40)		
5755	36.36	Pass
5795	36.37	Pass
802.11ac(VHT20)		
5745	17.58	Pass
5785	17.58	Pass
5825	17.59	Pass
802.11ac(VHT40)		
5755	36.38	Pass
5795	36.37	Pass
802.11ac(VHT80)		
5775	76.23	Pass
802.11ax(VHT20)		
5745	18.89	Pass
5785	18.85	Pass
5825	18.89	Pass
802.11ax(VHT40)		
5755	37.57	Pass
5795	37.42	Pass
802.11ax(VHT80)		
5775	76.01	Pass

Data see Attachment C

6. MAXIMUM CONDUCTED OUTPUT POWER

6.1 LIMIT

For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz,If transmitting antennas of directional gain greater than 6 dBi are used.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. If transmitting antennas of directional gain greater than 6 dBi are used.

FCC Part15 (15.407) , Subpart E				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.407(a) (1) (iv)	Peak Output Power	0.25 watt	5150-5250	PASS
		The lesser of 250 mW or 11 dBm + 10 log (26 dB emission bandwidth)	5250-5350 5470-5725	
15.407(a) (3)		1 watt	5725-5825	

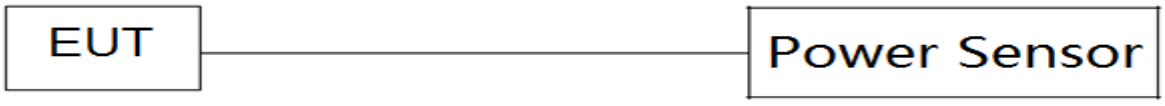
6.2 TEST PROCEDURE

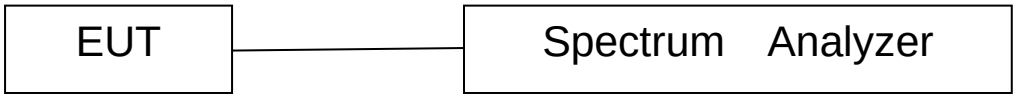
The EUT was directly connected to the Power Sensor&PC

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP





6.5 EUT OPERATION CONDITIONS

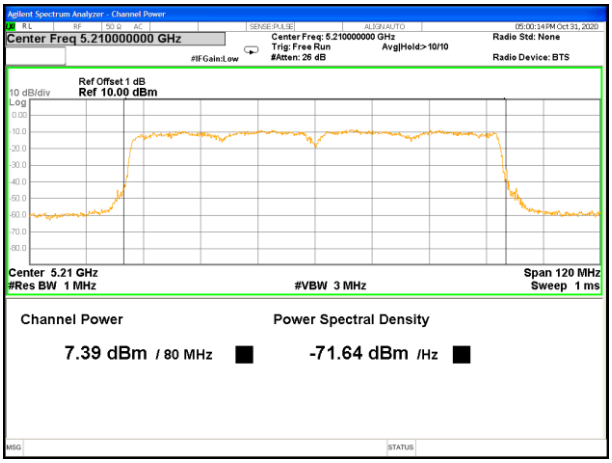
The EUT tested system was configured as the statements of 5 Unless otherwise a special operating condition is specified in the follows during the testing.

6.6 TEST RESULTS

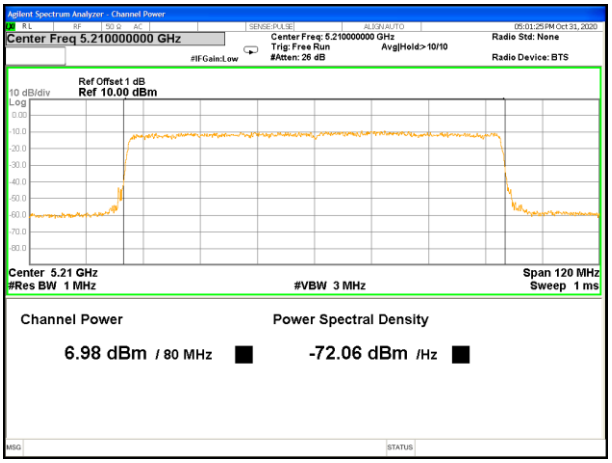
Note: The MIMO antenna gain is 7.21dBi, which is greater than 6dBi, the MIMO mode limit will be reduced by 1.21dBm.

Band I (5.15-5.25GHz)								
Test Channel	Frequency (MHz)	Direct measurement Ant_A AV Power (dBm)	Direct measurement Ant B_AV Power (dBm)	Duty cycle factor (dB)	Final Ant_A AV Power (dBm)	Final Ant_B AV Power (dBm)	AV Power Total (dBm)	LIMIT (dBm)
802.11a								
36	5180	6.21	3.79	2.498	8.71	6.29	--	23.98
40	5200	6.07	3.70	2.498	8.57	6.20	--	23.98
48	5240	6.34	3.76	2.498	8.84	6.26	--	23.98
802.11n(HT20)								
36	5180	6.39	4.02	2.095	8.49	6.12	10.47	22.47
40	5200	6.34	3.89	2.095	8.44	5.99	10.39	22.47
48	5240	6.36	4.04	2.095	8.46	6.14	10.46	22.47
802.11n(HT40)								
38	5190	9.02	5.47	2.482	11.50	7.95	13.09	22.47
46	5230	9.09	5.46	2.482	11.57	7.94	13.14	22.47
802.11ac(VHT20)								
36	5180	8.25	5.43	0.669	8.92	6.10	10.74	22.47
40	5200	7.94	5.45	0.669	8.61	6.12	10.55	22.47
48	5240	8.00	5.46	0.669	8.67	6.13	10.59	22.47
802.11ac(VHT40)								
38	5190	9.33	5.71	0.785	10.12	6.50	11.68	22.47
46	5230	9.37	5.62	0.785	10.16	6.41	11.68	22.47
802.11ac(VHT80)								
42	5210	7.39	5.20	0.799	8.19	6.00	10.24	22.47
802.11ax(VHT20)								
36	5180	8.56	6.08	0.094	8.65	6.17	10.60	22.47
40	5200	8.50	6.05	0.094	8.59	6.14	10.55	22.47
48	5240	8.59	6.15	0.094	8.68	6.24	10.64	22.47
802.11ax(VHT40)								
38	5190	9.55	5.84	0.209	9.76	6.05	11.30	22.47
46	5230	9.45	5.89	0.209	9.66	6.10	11.24	22.47
802.11ax(VHT80)								
42	5210	6.98	5.28	0.000	6.98	5.28	9.22	22.47

Band IV (5.725-5.85GHz)								
Test Channel	Frequency (MHz)	Direct measurement Ant_A AV Power (dBm)	Direct measurement Ant B_AV Power (dBm)	Duty cycle factor (dB)	Final Ant_A AV Power (dBm)	Final Ant_B AV Power (dBm)	AV Power Total (dBm)	LIMIT (dBm)
802.11a								
149	5745	6.24	4.62	0.196	6.44	4.82	--	30.00
157	5785	6.28	4.82	0.196	6.48	5.02	--	30.00
165	5825	6.37	5.23	0.196	6.57	5.43	--	30.00
802.11n(HT20)								
149	5745	6.51	4.74	0.184	6.69	4.92	8.91	28.49
157	5785	6.56	4.81	0.184	6.74	4.99	8.97	28.49
165	5825	6.59	4.96	0.184	6.77	5.14	9.05	28.49
802.11n(HT40)								
151	5755	8.90	6.21	0.390	9.29	6.60	11.16	28.49
159	5795	8.81	6.28	0.390	9.20	6.67	11.13	28.49
802.11ac(VHT20)								
149	5745	8.13	4.81	0.027	8.16	4.84	9.82	28.49
157	5785	8.15	4.96	0.027	8.18	4.99	9.88	28.49
165	5825	7.95	5.11	0.027	7.98	5.14	9.80	28.49
802.11ac(VHT40)								
151	5755	9.13	6.49	0.094	9.22	6.58	11.11	28.49
159	5795	9.11	6.62	0.094	9.20	6.71	11.15	28.49
802.11ac(VHT80)								
155	5775	8.55	5.24	0.209	8.76	5.45	10.42	28.49
802.11ax(VHT20)								
149	5745	8.80	5.04	0.000	8.80	5.04	10.33	28.49
157	5785	8.90	5.22	0.000	8.90	5.22	10.45	28.49
165	5825	8.72	5.47	0.000	8.72	5.47	10.40	28.49
802.11ax(VHT40)								
151	5755	9.51	6.65	0.000	9.51	6.65	11.32	28.49
159	5795	9.27	6.75	0.000	9.27	6.75	11.20	28.49
802.11ax(VHT80)								
155	5775	8.55	5.47	0.000	8.55	5.47	10.29	28.49



5210MHz_ac80_Ant A



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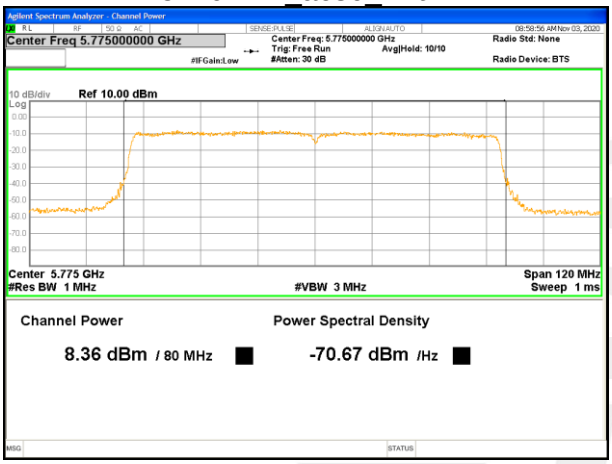
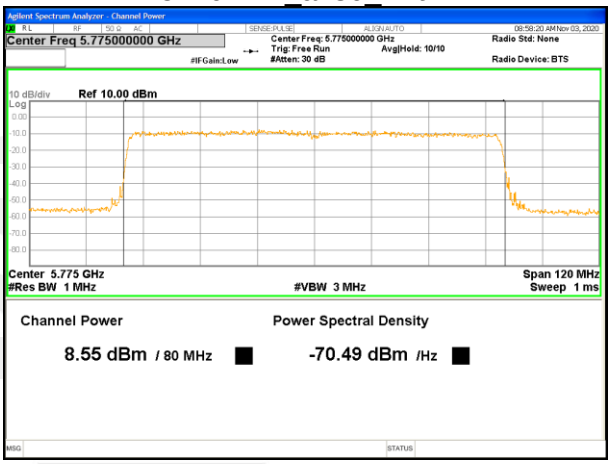
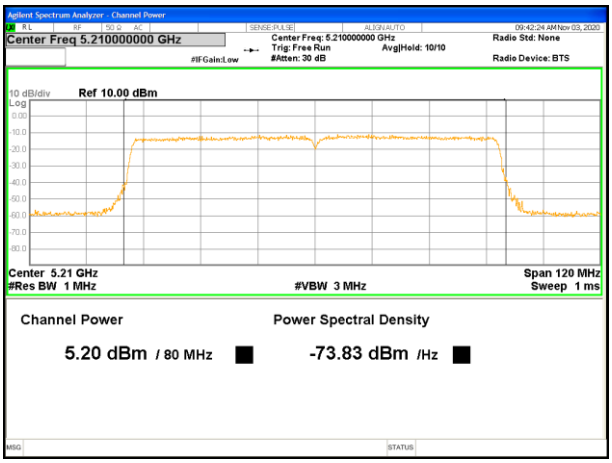


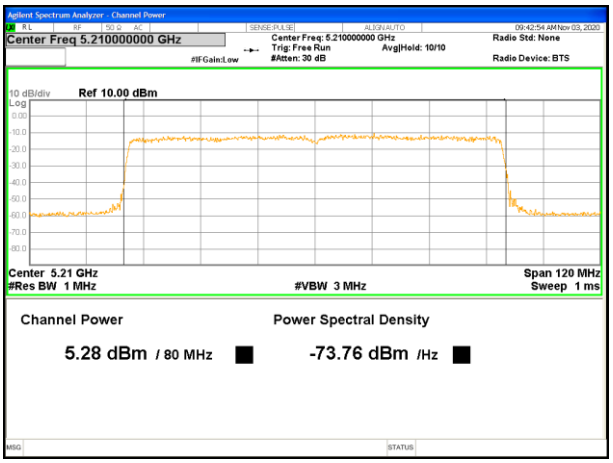
5775MHz_ac80_Ant A



5775MHz_ax80_Ant A



5210MHz_ac80_Ant B



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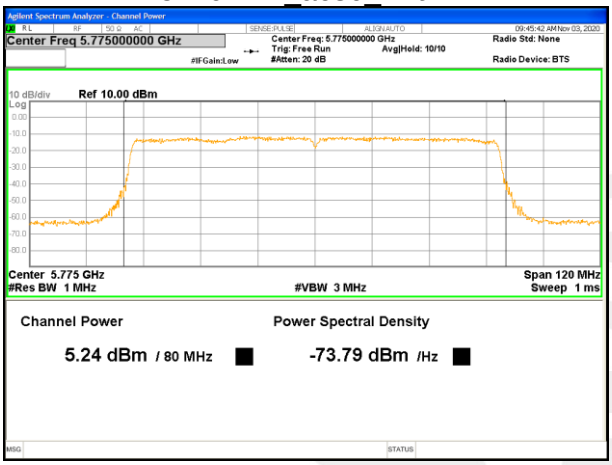
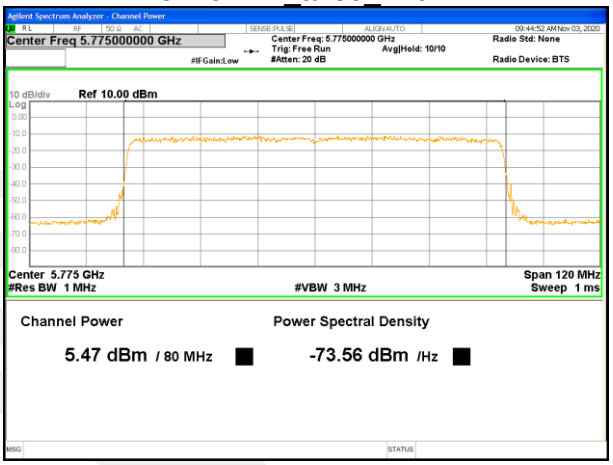


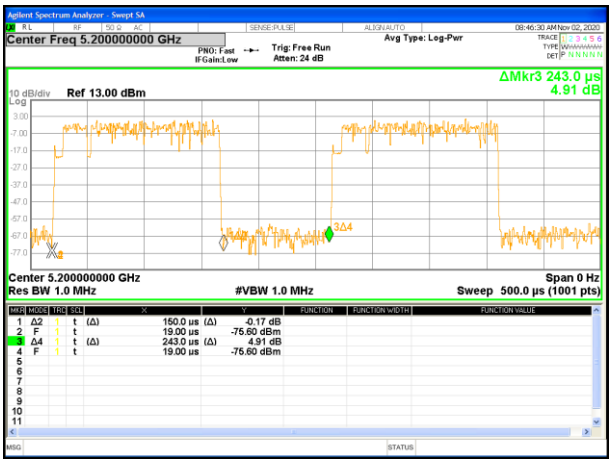
5775MHz_ac80_Ant B



5775MHz_ax80_Ant B

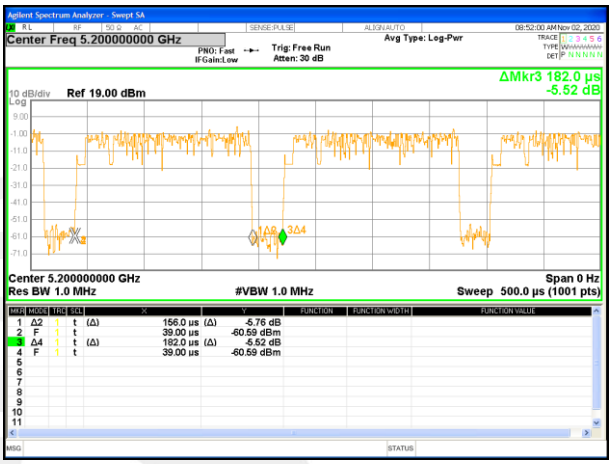
Band1				
Mode	Ton(ms)	Tp(ms)	Duty cycle(%)	Duty factor(dB)
a	0.133	0.236	56.26%	2.498
n20	0.150	0.243	61.73%	2.095
n40	0.124	0.220	56.47%	2.482
ac20	0.156	0.182	85.71%	0.669
ac40	0.131	0.157	83.46%	0.785
ac80	0.125	0.150	83.20%	0.799
ax20	0.323	0.347	93.09%	0.311
ax40	0.308	0.337	91.45%	0.388
ax80	0.296	0.324	91.36%	0.393
Band4				
Mode	Ton(ms)	Tp(ms)	Duty cycle(%)	Duty factor(dB)
a	2.076	2.172	95.58%	0.196
n20	1.938	2.022	95.85%	0.184
n40	0.957	1.047	91.40%	0.390
ac20	1.944	1.956	99.39%	0.027
ac40	0.960	0.981	97.86%	0.094
ac80	0.466	0.489	95.30%	0.209
ax20	1.500	1.520	98.68%	0.058
ax40	0.789	0.810	97.41%	0.114
ax80	0.423	0.449	94.19%	0.260

Band 1-a20

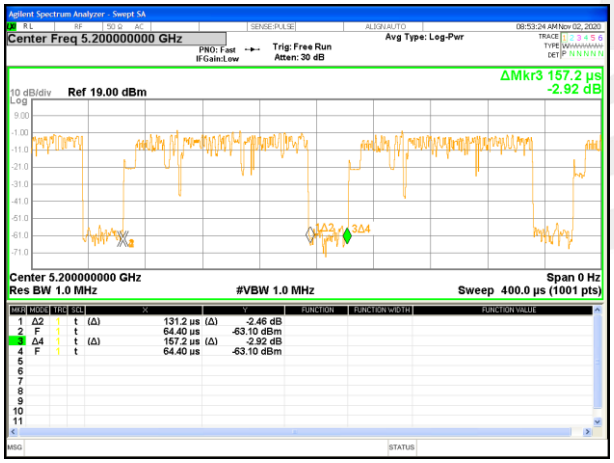


Band 1-n20

Band 1-n40

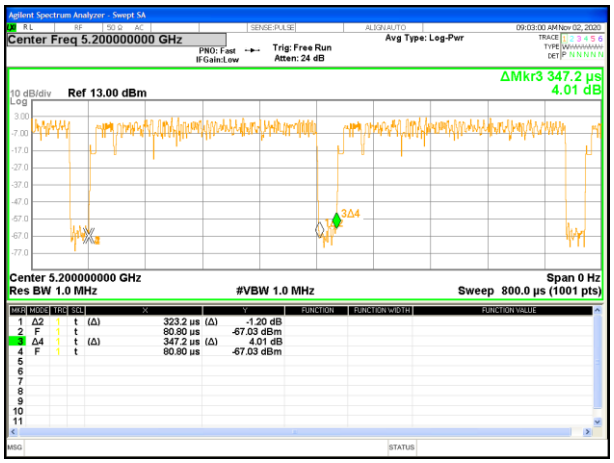


Band 1-ac20

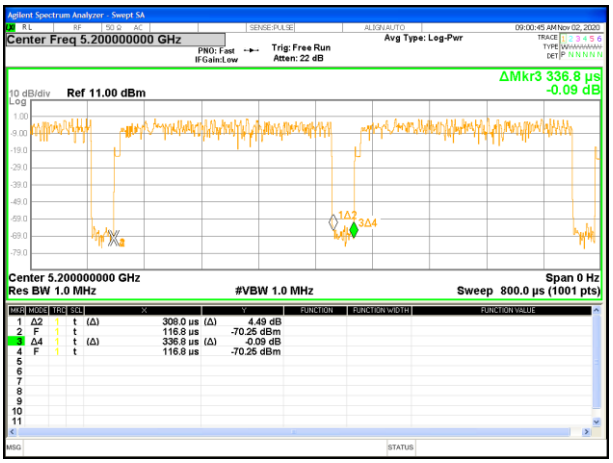


Band 1-ac40

Band 1-ac80



Band 1-ax20



Band 1-ax40

Band 1-ax80

Band 4-a20

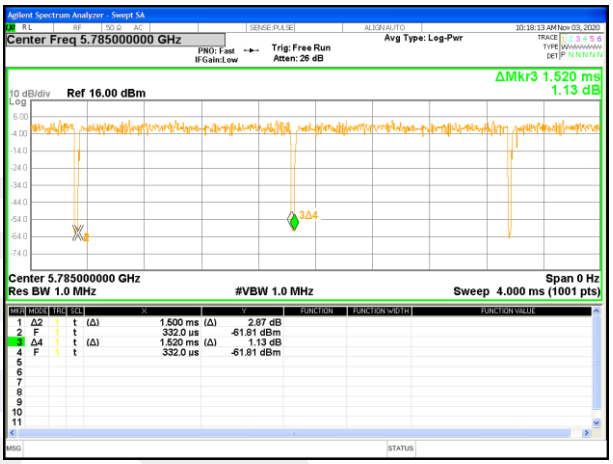
Band 4-n20

Band 4-n40

Band 4-ac20

Band 4-ac40

Band 4-ac80



Band 4-ax20

Band 4-ax40

Band 4-ax80

7. AUTOMATICALLY DISCONTINUE TRANSMISSION

7.1 LIMIT OF AUTOMATICALLY DISCONTINUE TRANSMISSION

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization to describe how this requirement is met.

7.2 TEST RESULT OF AUTOMATICALLY DISCONTINUE TRANSMISSION

During no any information transmission, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

8. ANTENNA REQUIREMENT

8.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 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.

8.2 EUT ANTENNA

The EUT antenna is PIFA Antenna. It comply with the standard requirement.

APPENDIX - PHOTOS OF TEST SETUP

Note: See test photos in setup photo document for the actual connections between Product and support equipment.

※※※※※END OF THE REPORT※※※※※