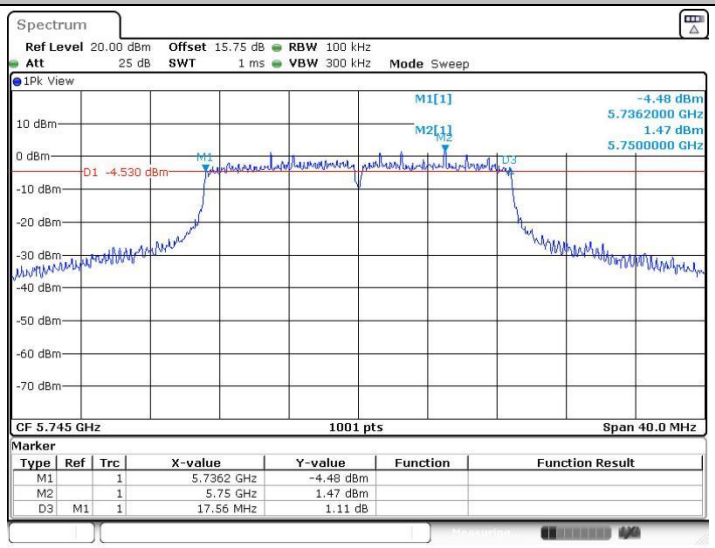
Test Graphs B4

11N20MIMO_Ant1_5745



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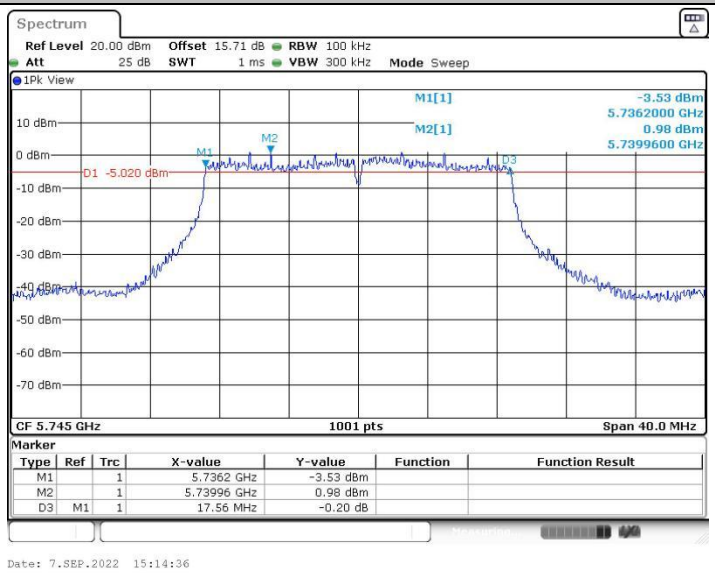

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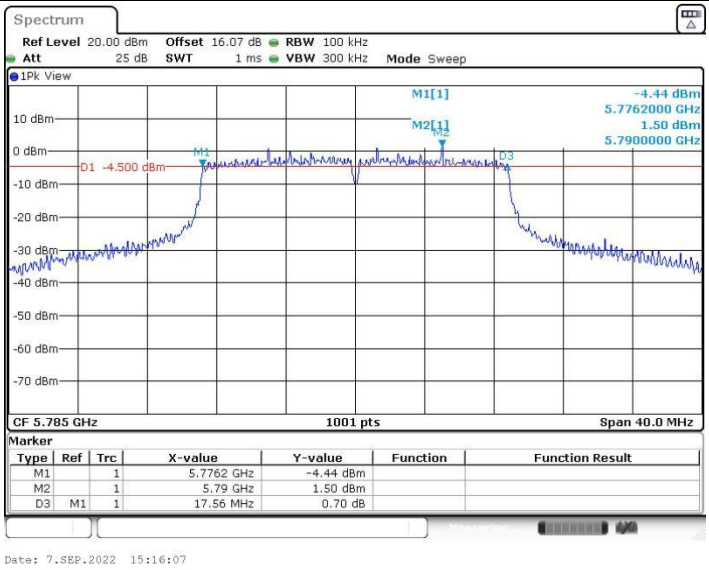
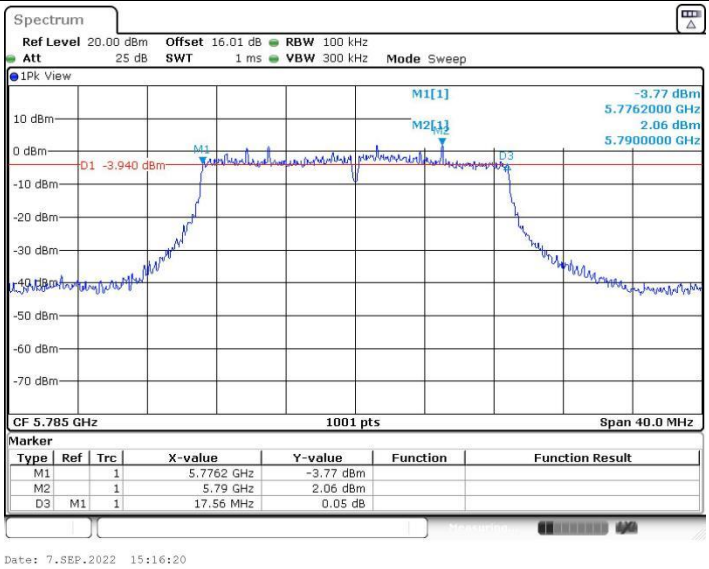


11N20MIMO_Ant2_5785



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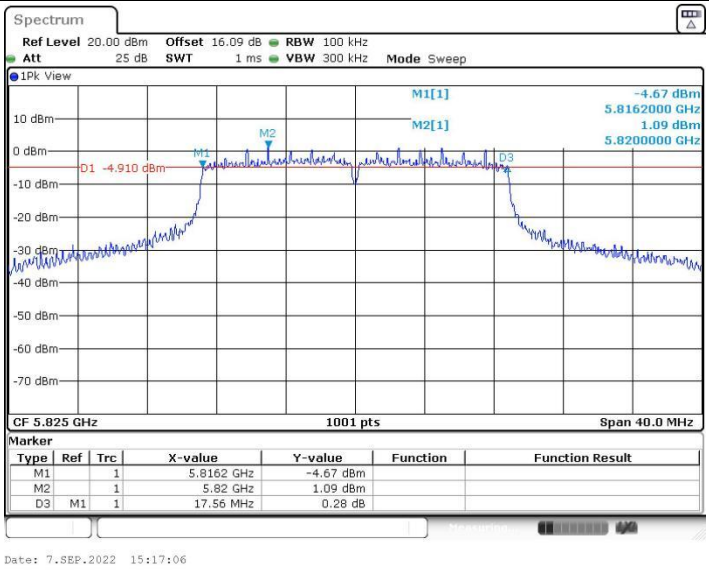
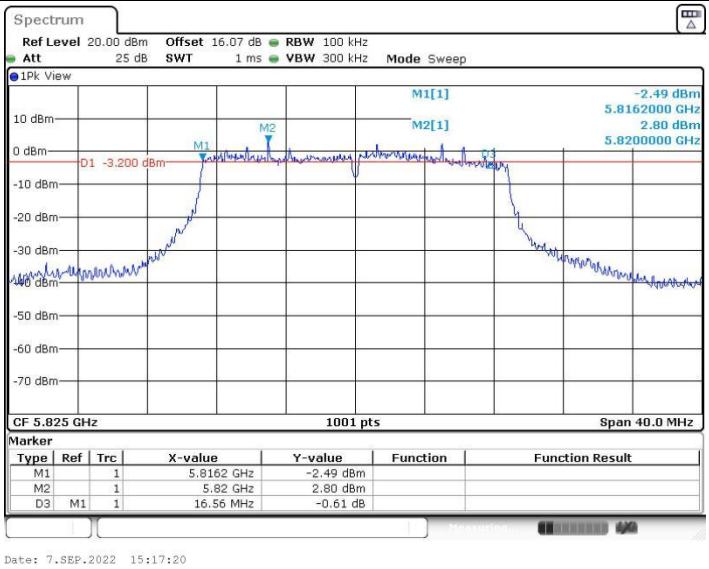


11N20MIMO_Ant2_5825



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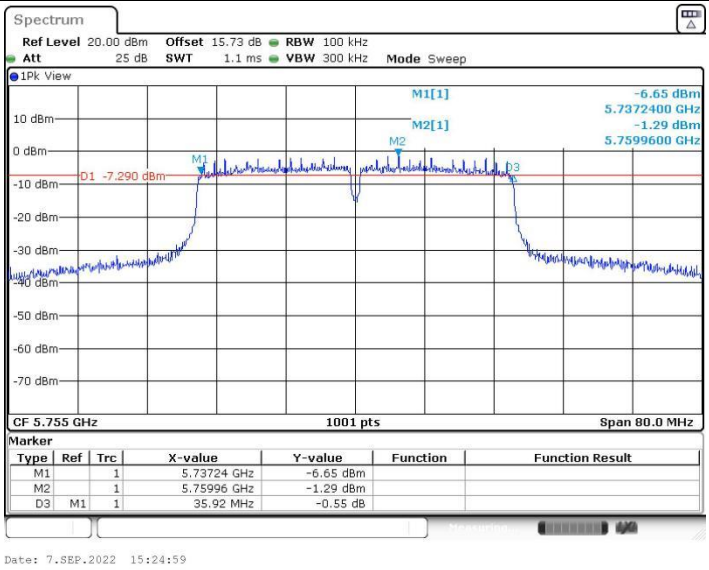

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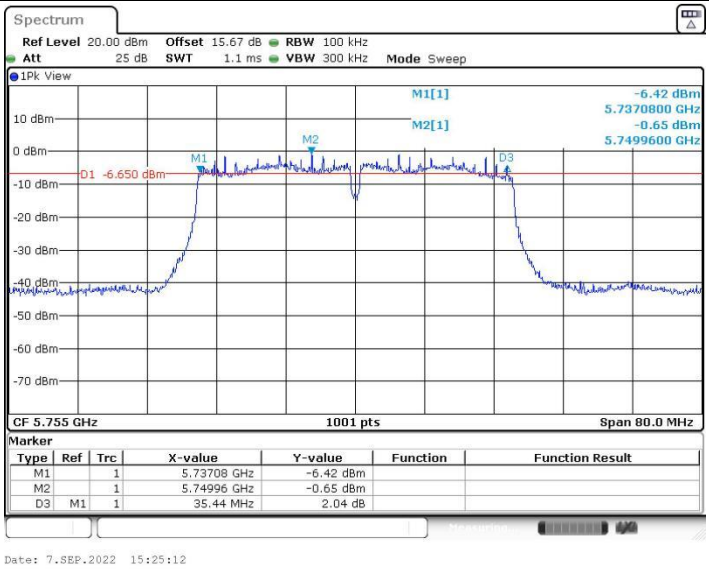
11N40MIMO_Ant2_5755



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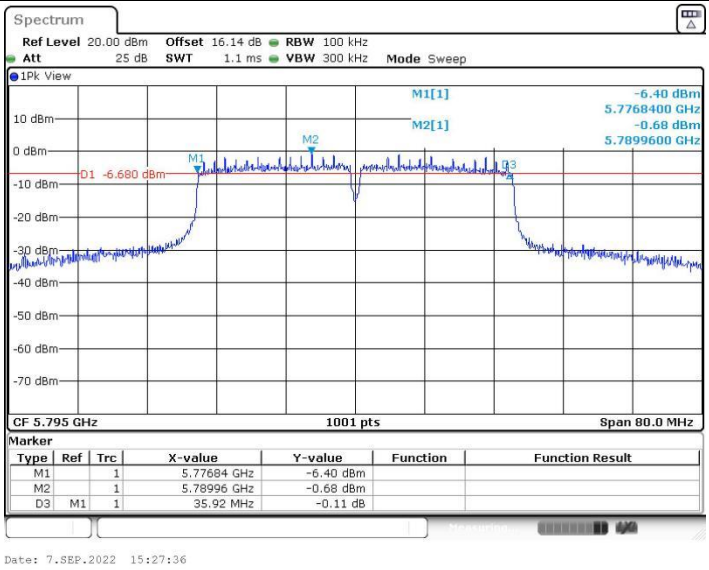
11N40MIMO_Ant1_5795



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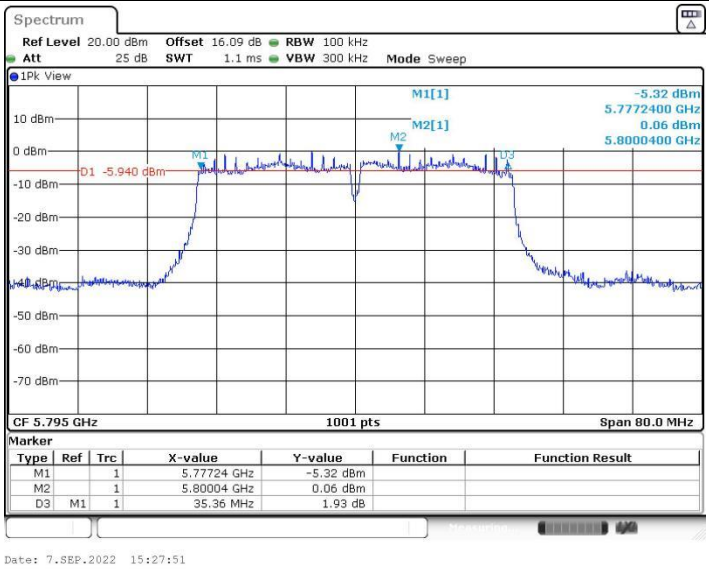
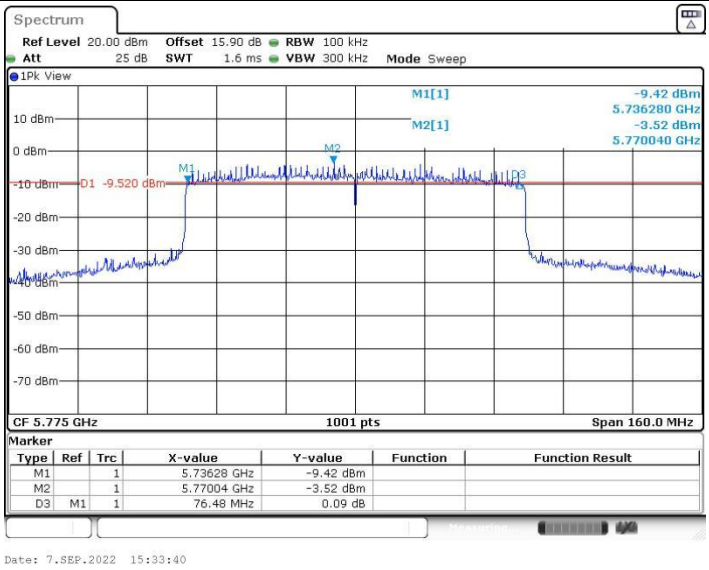


11AX80MIMO_Ant1_5775



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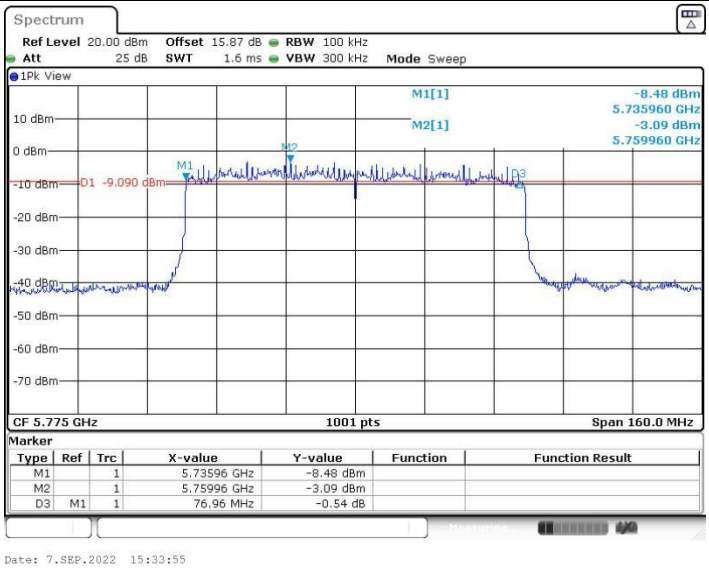


Maximum power spectral density

Test Result

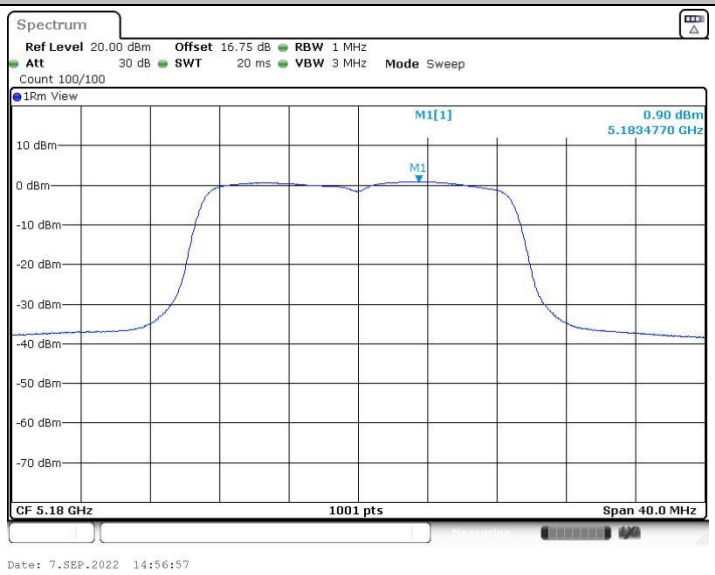
TestMode	Antenna	Frequency[MHz]	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11N20MIMO	Ant1	5180	0.9	≤17.00	PASS
	Ant2	5180	1.37	≤17.00	PASS
	total	5180	4.15	≤17.00	PASS
	Ant1	5220	0.59	≤17.00	PASS
	Ant2	5220	1.3	≤17.00	PASS
	total	5220	3.97	≤17.00	PASS
	Ant1	5240	1.31	≤17.00	PASS
	Ant2	5240	1.49	≤17.00	PASS
	total	5240	4.41	≤17.00	PASS
	Ant1	5745	-2.06	≤30.00	PASS
	Ant2	5745	-0.93	≤30.00	PASS
	total	5745	1.55	≤30.00	PASS
	Ant1	5785	-2.23	≤30.00	PASS
	Ant2	5785	-1.26	≤30.00	PASS
	total	5785	1.29	≤30.00	PASS
	Ant1	5825	-2.6	≤30.00	PASS
	Ant2	5825	-0.71	≤30.00	PASS
	total	5825	1.46	≤30.00	PASS
11N40MIMO	Ant1	5190	-2.42	≤17.00	PASS
	Ant2	5190	-2.21	≤17.00	PASS
	total	5190	0.70	≤17.00	PASS
	Ant1	5230	-1.96	≤17.00	PASS
	Ant2	5230	-1.66	≤17.00	PASS
	total	5230	1.20	≤17.00	PASS
	Ant1	5755	-5.16	≤30.00	PASS
	Ant2	5755	-4.23	≤30.00	PASS
	total	5755	-1.66	≤30.00	PASS
	Ant1	5795	-4.81	≤30.00	PASS
	Ant2	5795	-3.72	≤30.00	PASS
	total	5795	-1.22	≤30.00	PASS
11AX80MIMO	Ant1	5210	-5.23	≤17.00	PASS
	Ant2	5210	-5.65	≤17.00	PASS
	total	5210	-2.42	≤17.00	PASS

	Ant1	5775	-8.28	≤30.00	PASS
	Ant2	5775	-7.4	≤30.00	PASS
	total	5775	-4.81	≤30.00	PASS

Note：1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.
2.The Duty Cycle Factor and RBW Factor is compensated in the graph.

Test Graphs

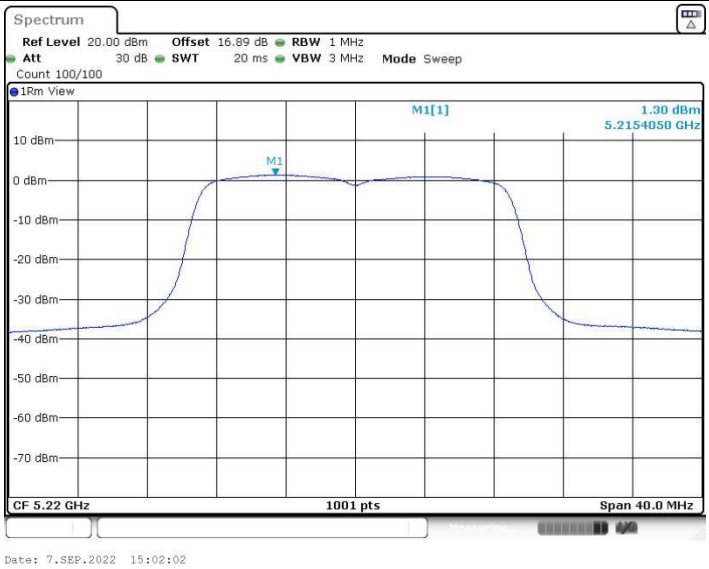
11N20MIMO_Ant1_5180



11N20MIMO_Ant2_5180

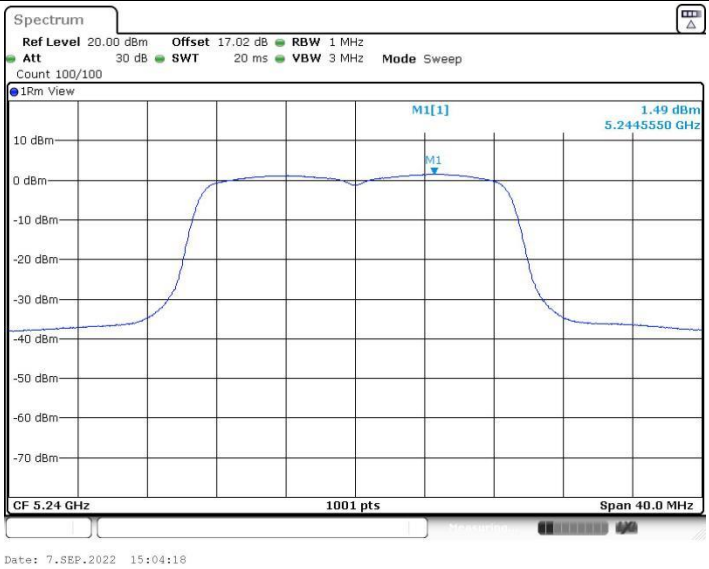
11N20MIMO_Ant1_5220

11N20MIMO_Ant2_5220



11N20MIMO_Ant1_5240

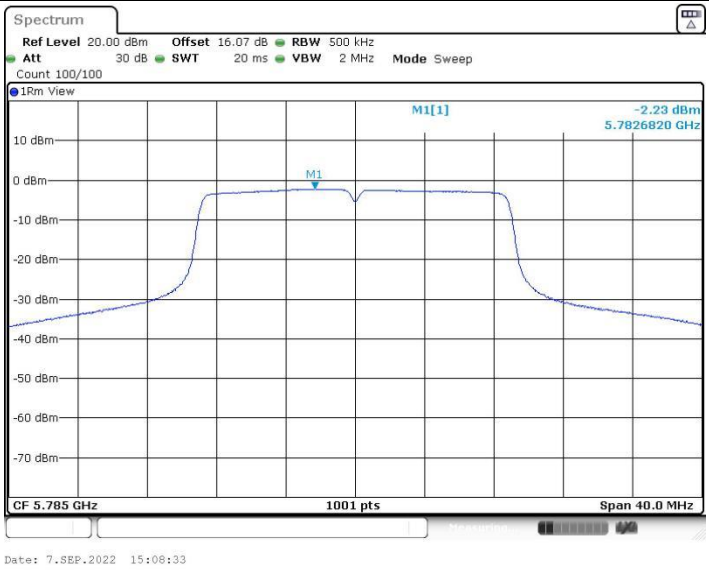
11N20MIMO_Ant2_5240



11N20MIMO_Ant1_5745

11N20MIMO_Ant2_5745

11N20MIMO_Ant1_5785

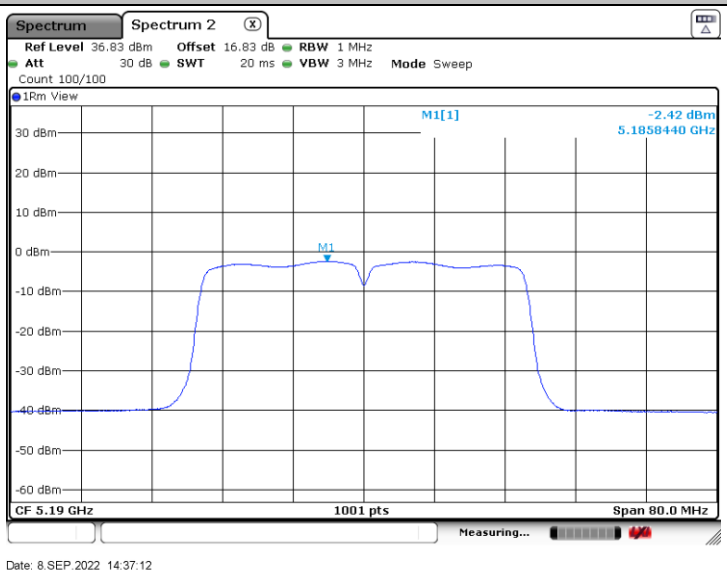


11N20MIMO_Ant2_5785

11N20MIMO_Ant1_5825

11N20MIMO_Ant2_5825

11N40MIMO_Ant1_5190



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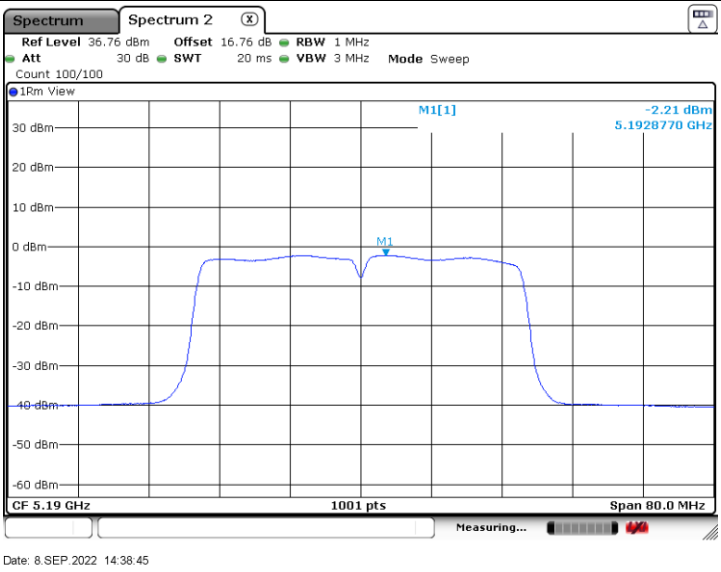
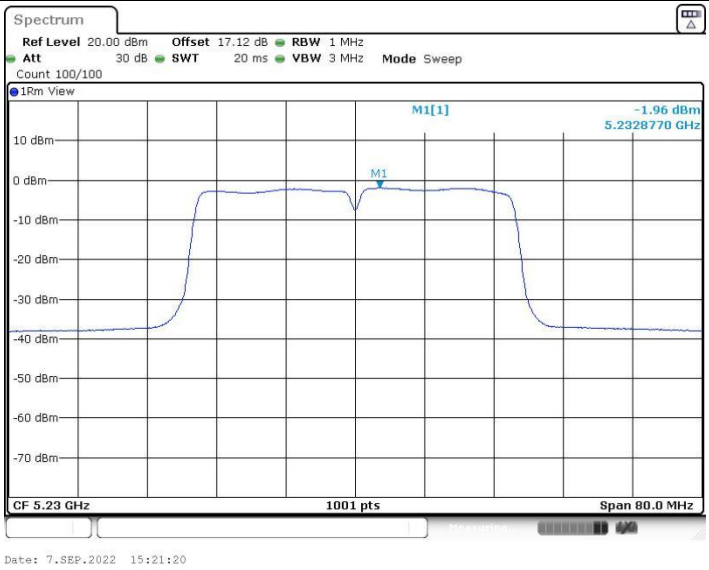


11N40MIMO_Ant1_5230



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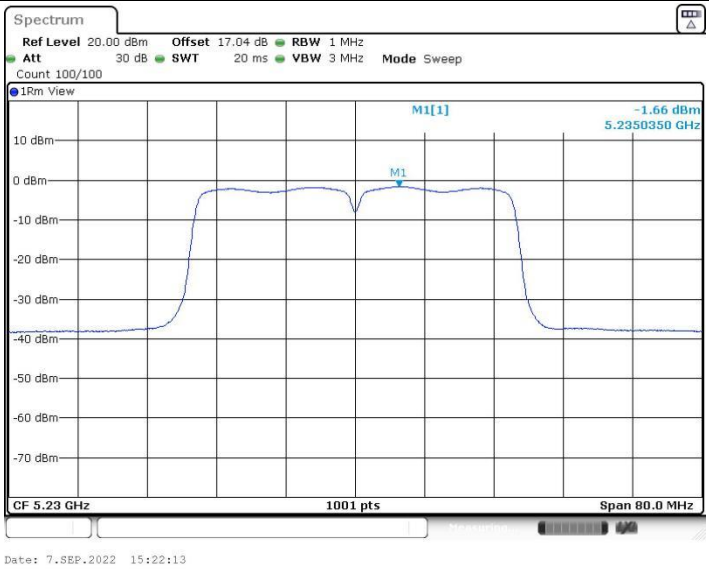
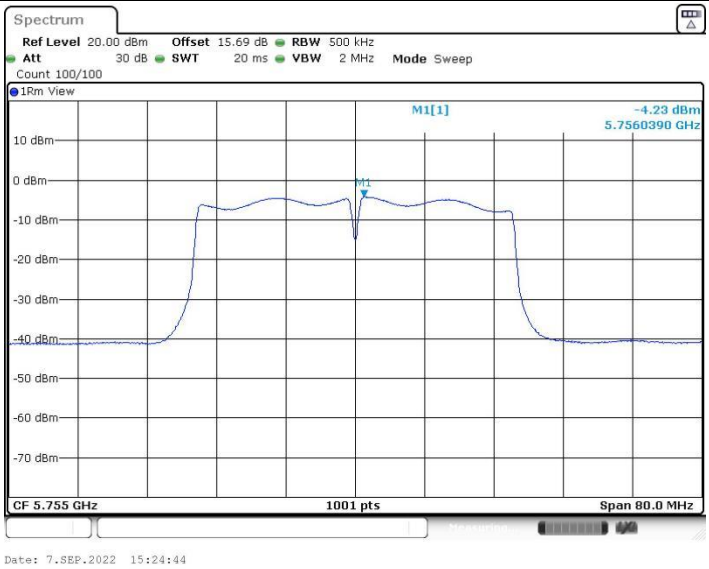


11N40MIMO_Ant1_5755

11N40MIMO_Ant2_5755



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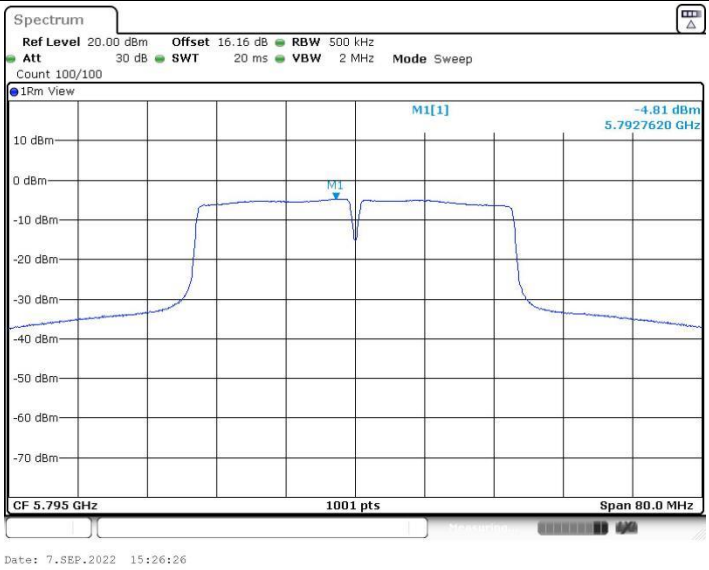

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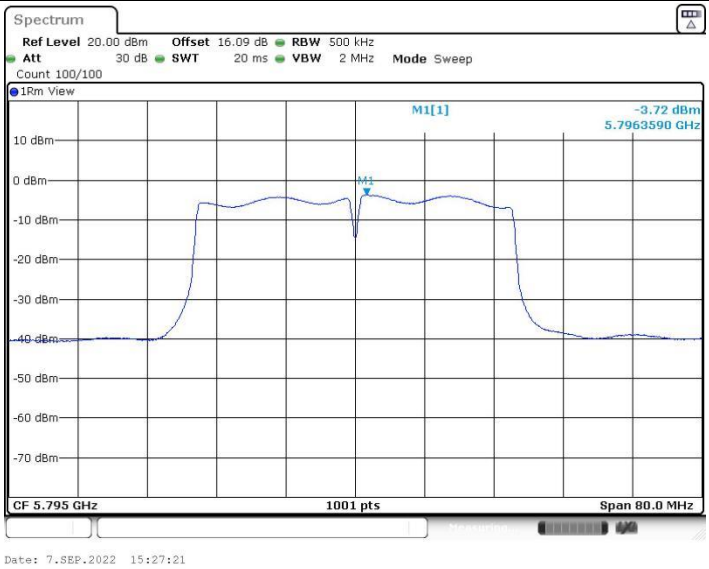
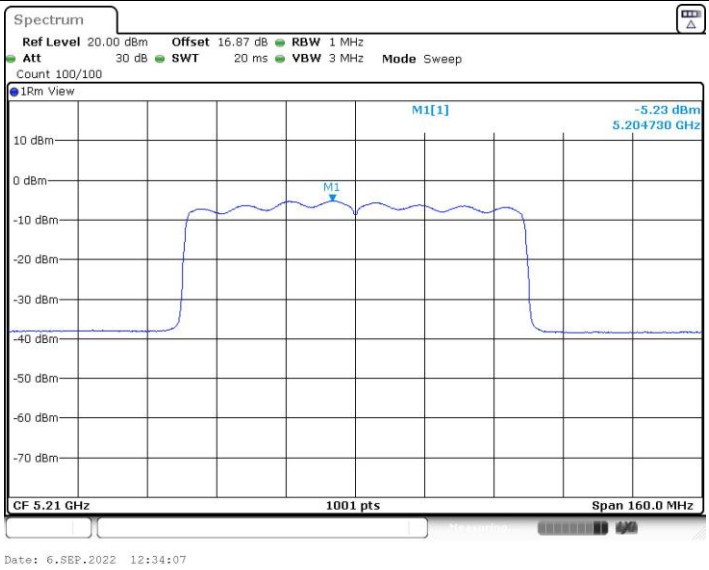
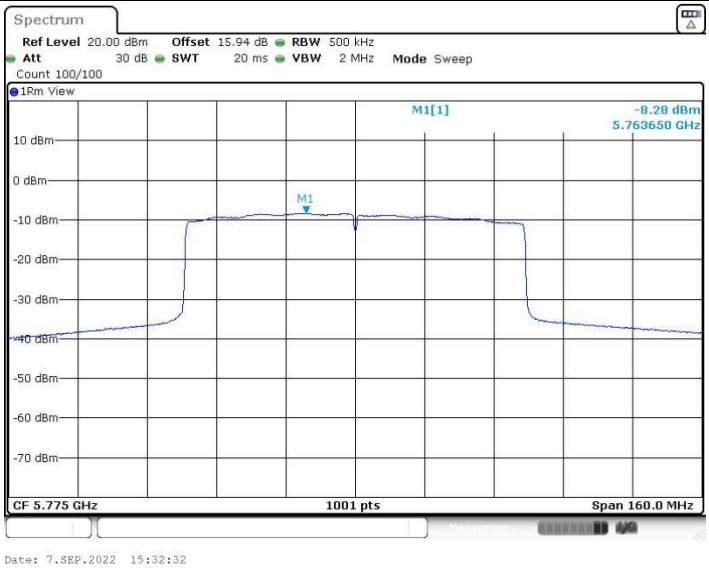


11AX80MIMO_Ant1_5210

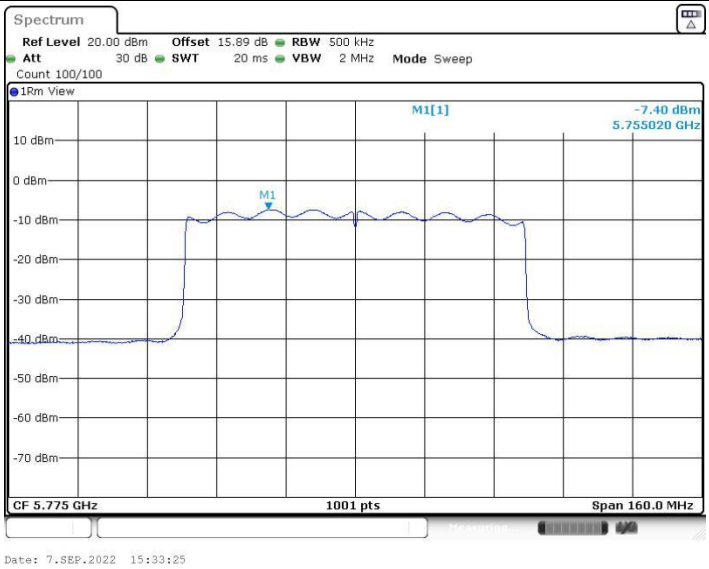


11AX80MIMO_Ant2_5210

11AX80MIMO_Ant1_5775

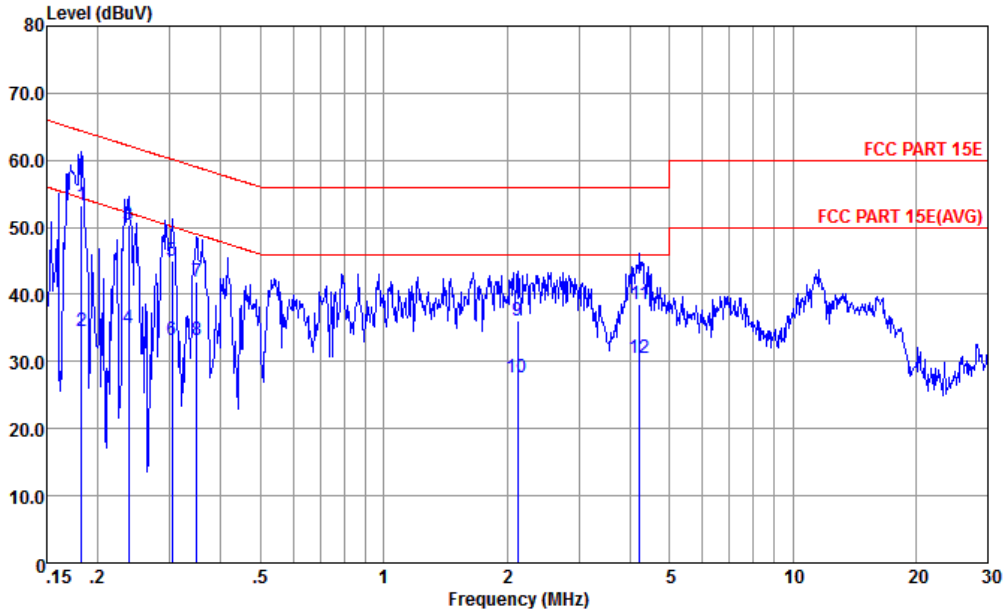


11AX80MIMO_Ant2_5775



Appendix B. AC Conducted Emission Test Results

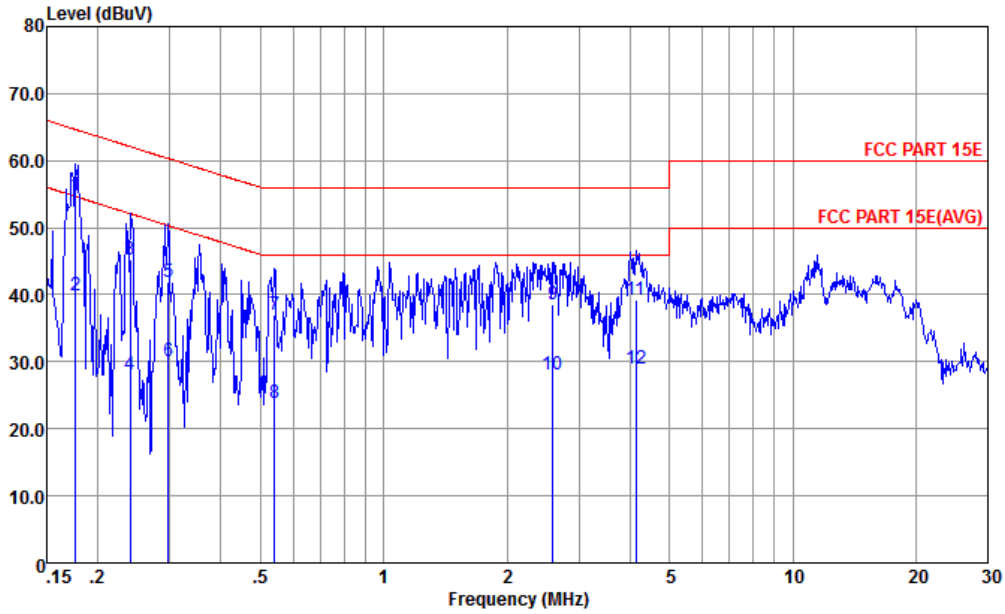
Test Engineer :	Amos Zhang	**Temperature :**	25.3~26.2℃
		Relative Humidity :	38~40%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : CO01-KS
Condition : FCC PART 15E LISN-060105-L LINE

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1 *	0.182	53.23	-11.14	64.37	42.80	0.03	10.40	QP
2	0.182	34.53	-19.84	54.37	24.10	0.03	10.40	Average
3	0.238	50.29	-11.88	62.17	39.90	0.05	10.34	QP
4	0.238	34.99	-17.18	52.17	24.60	0.05	10.34	Average
5	0.303	44.98	-15.17	60.15	34.60	0.07	10.31	QP
6	0.303	33.28	-16.87	50.15	22.90	0.07	10.31	Average
7	0.348	41.86	-17.14	59.00	31.49	0.08	10.29	QP
8	0.348	33.26	-15.74	49.00	22.89	0.08	10.29	Average
9	2.121	36.17	-19.83	56.00	25.80	0.14	10.23	QP
10	2.121	27.67	-18.33	46.00	17.30	0.14	10.23	Average
11	4.224	38.63	-17.37	56.00	28.20	0.17	10.26	QP
12	4.224	30.63	-15.37	46.00	20.20	0.17	10.26	Average

Test Engineer :	Amos Zhang	**Temperature :**	25.3~26.2℃
		Relative Humidity :	38~40%
Test Voltage :	120Vac / 60Hz	**Phase :**	Neutral
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : CO01-KS
Condition : FCC PART 15E LISN-060105-N NEUTRAL

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1 *	0.177	54.82	-9.82	64.64	44.31	0.10	10.41	QP
2	0.177	39.82	-14.82	54.64	29.31	0.10	10.41	Average
3	0.240	45.24	-16.84	62.08	34.80	0.10	10.34	QP
4	0.240	28.04	-24.04	52.08	17.60	0.10	10.34	Average
5	0.297	41.91	-18.41	60.32	31.50	0.10	10.31	QP
6	0.297	30.01	-20.31	50.32	19.60	0.10	10.31	Average
7	0.541	36.95	-19.05	56.00	26.60	0.11	10.24	QP
8	0.541	23.85	-22.15	46.00	13.50	0.11	10.24	Average
9	2.594	38.58	-17.42	56.00	28.19	0.15	10.24	QP
10	2.594	28.18	-17.82	46.00	17.79	0.15	10.24	Average
11	4.136	39.32	-16.68	56.00	28.90	0.17	10.25	QP
12	4.136	29.02	-16.98	46.00	18.60	0.17	10.25	Average

Note:

1. Level(dBμV) = Read Level(dBμV) + LISN Factor(dB) + Cable Loss(dB)
2. Over Limit(dB) = Level(dBμV) – Limit Line(dBμV)

Appendix C. Radiated Spurious Emission

Band 1 - 5150~5250MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT20 CH 36 5180MHz		5146.08	64.47	-9.53	74	48.13	35.03	10.62	29.31	120	304	P	H
		5147.68	52.23	-1.77	54	35.89	35.03	10.62	29.31	120	304	A	H
	*	5176	108.02	-	-	91.68	35.05	10.63	29.34	120	304	P	H
		5176	101.87	-	-	85.53	35.05	10.63	29.34	120	304	A	H
		5144.32	62.93	-11.07	74	46.59	35.03	10.62	29.31	117	29	P	V
		5150	50.84	-3.16	54	34.5	35.03	10.62	29.31	117	29	A	V
	*	5182	106.74	-	-	90.39	35.06	10.63	29.34	117	29	P	V
		5182	100.25	-	-	83.9	35.06	10.63	29.34	117	29	A	V
802.11n HT20 CH 44 5220MHz		5149.92	59.51	-14.49	74	43.17	35.03	10.62	29.31	101	122	P	H
		5145.6	48.04	-5.96	54	31.7	35.03	10.62	29.31	101	122	A	H
	*	5224	111.92	-	-	95.56	35.09	10.66	29.39	101	122	P	H
		5224	104.97	-	-	88.61	35.09	10.66	29.39	101	122	A	H
		5376.96	54.83	-19.17	74	38.29	35.24	10.85	29.55	101	122	P	H
		5350.68	45	-9	54	28.47	35.22	10.83	29.52	101	122	A	H
		5136.8	57.13	-16.87	74	40.79	35.01	10.61	29.28	301	15	P	V
		5150	47.06	-6.94	54	30.72	35.03	10.62	29.31	301	15	A	V
	*	5218	107.85	-	-	91.46	35.09	10.66	29.36	301	15	P	V
		5218	101.49	-	-	85.1	35.09	10.66	29.36	301	15	A	V
		5388.3	56.2	-17.8	74	39.62	35.26	10.87	29.55	301	15	P	V
		5369.76	44.8	-9.2	54	28.23	35.24	10.85	29.52	301	15	A	V
802.11n HT20 CH 48 5240MHz	*	5242	109.95	-	-	93.53	35.11	10.7	29.39	101	123	P	H
		5242	103.69	-	-	87.27	35.11	10.7	29.39	101	123	A	H
		5351.94	54.74	-19.26	74	38.21	35.22	10.83	29.52	101	123	P	H
		5351.22	44.86	-9.14	54	28.33	35.22	10.83	29.52	101	123	A	H
	*	5242	107.27	-	-	90.85	35.11	10.7	29.39	300	21	P	V
		5242	100.54	-	-	84.12	35.11	10.7	29.39	300	21	A	V
		5391.54	55.46	-18.54	74	38.88	35.26	10.87	29.55	300	21	P	V

		5352.48	44.79	-9.21	54	28.26	35.22	10.83	29.52	300	21	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 36 5180MHz		10355	44.98	-23.32	68.3	56.96	38.31	16.19	66.48	100	0	P	H
		10355	44.36	-23.94	68.3	56.34	38.31	16.19	66.48	100	360	P	V
802.11n HT20 CH 44 5220MHz		10443	50.95	-17.35	68.3	62.73	38.35	16.25	66.38	100	0	P	H
		10443	50.52	-17.78	68.3	62.3	38.35	16.25	66.38	100	360	P	V
802.11n HT20 CH 48 5240MHz		10476	48.46	-19.84	68.3	60.18	38.35	16.27	66.34	100	0	P	H
		10476	51.41	-16.89	68.3	63.13	38.35	16.27	66.34	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 38 5190MHz		5149.12	66.22	-7.78	74	49.88	35.03	10.62	29.31	100	125	P	H
		5147.04	53.28	-0.72	54	36.94	35.03	10.62	29.31	100	125	A	H
	*	5206	103.04	-	-	86.68	35.08	10.64	29.36	100	125	P	H
		5206	96.62	-	-	80.26	35.08	10.64	29.36	100	125	A	H
		5394.06	54.98	-19.02	74	38.4	35.26	10.87	29.55	100	125	P	H
		5353.02	44.97	-9.03	54	28.44	35.22	10.83	29.52	100	125	A	H
		5144.32	66.76	-7.24	74	50.42	35.03	10.62	29.31	137	217	P	V
		5144.48	53.71	-0.29	54	37.37	35.03	10.62	29.31	137	217	A	V
	*	5194	103.45	-	-	87.09	35.06	10.64	29.34	137	217	P	V
		5194	97.41	-	-	81.05	35.06	10.64	29.34	137	217	A	V
		5369.94	54.94	-19.06	74	38.37	35.24	10.85	29.52	137	217	P	V
		5352.3	44.94	-9.06	54	28.41	35.22	10.83	29.52	137	217	A	V
802.11n HT40 CH 46 5230MHz		5149.92	65.1	-8.9	74	48.76	35.03	10.62	29.31	100	119	P	H
		5144.48	52.25	-1.75	54	35.91	35.03	10.62	29.31	100	119	A	H
	*	5224	106.5	-	-	90.14	35.09	10.66	29.39	100	119	P	H
		5224	99.81	-	-	83.45	35.09	10.66	29.39	100	119	A	H
		5371.74	54.81	-19.19	74	38.24	35.24	10.85	29.52	100	119	P	H
		5355.18	45.48	-8.52	54	28.95	35.22	10.83	29.52	100	119	A	H
		5145.92	62.63	-11.37	74	46.29	35.03	10.62	29.31	300	275	P	V
		5148.32	50.93	-3.07	54	34.59	35.03	10.62	29.31	300	275	A	V
	*	5224	104.14	-	-	87.78	35.09	10.66	29.39	300	275	P	V
		5224	97.55	-	-	81.19	35.09	10.66	29.39	300	275	A	V
		5376.78	55.63	-18.37	74	39.09	35.24	10.85	29.55	300	275	P	V
		5349.96	45.18	-	-	28.65	35.22	10.83	29.52	300	275	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 38 5190MHz		10377	45.71	-22.59	68.3	57.61	38.33	16.21	66.44	100	0	P	H
		10377	47.01	-21.29	68.3	58.91	38.33	16.21	66.44	100	360	P	V
802.11n HT40 CH 46 5230MHz		10454	48	-20.3	68.3	59.75	38.35	16.26	66.36	100	0	P	H
		10454	51.83	-16.47	68.3	63.58	38.35	16.26	66.36	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11ax HE80 Full (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE80 Full CH 42 5210MHz		5143.2	64.07	-9.93	74	47.72	35.01	10.62	29.28	100	119	P	H
		5142.72	52.1	-1.9	54	35.75	35.01	10.62	29.28	100	119	A	H
	*	5200	101.58	-	-	85.22	35.08	10.64	29.36	100	119	P	H
		5200	93.47	-	-	77.11	35.08	10.64	29.36	100	119	A	H
		5376.6	54.99	-19.01	74	38.45	35.24	10.85	29.55	100	119	P	H
		5351.4	44.96	-9.04	54	28.43	35.22	10.83	29.52	100	119	A	H
		5148.48	63.98	-10.02	74	47.64	35.03	10.62	29.31	356	261	P	V
		5147.2	51.08	-2.92	54	34.74	35.03	10.62	29.31	356	261	A	V
	*	5218	99.26	-	-	82.87	35.09	10.66	29.36	356	261	P	V
		5218	91.47	-	-	75.08	35.09	10.66	29.36	356	261	A	V
		5397.48	55.23	-18.77	74	38.63	35.26	10.89	29.55	356	261	P	V
		5351.04	44.86	-9.14	54	28.33	35.22	10.83	29.52	356	261	A	V

Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.

Band 1 5150~5250MHz

WIFI 802.11ax HE80 Full (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE80 Full CH 42 5210MHz		10421	45.44	-22.86	68.3	57.26	38.34	16.24	66.4	100	0	P	H
		10421	45.08	-23.22	68.3	56.9	38.34	16.24	66.4	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

Emission below 1GHz

WIFI 802.11n HT40 (LF @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 LF		111.48	27.12	-16.38	43.5	40.97	16.8	1.53	32.18	-	-	P	H
		191.02	36.92	-6.58	43.5	52.4	14.6	2.02	32.1	-	-	P	H
		224	42.55	-3.45	46	57	15.52	2.18	32.15	-	-	P	H
		254.07	35.41	-10.59	46	46.24	19.04	2.32	32.19	-	-	P	H
		500.45	30.15	-15.85	46	35.49	23.8	3.26	32.4	-	-	P	H
		975.75	33.65	-20.35	54	30.38	30.88	4.54	32.15	-	-	P	H
		50.37	32.08	-7.92	40	49.31	14.2	0.77	32.2	-	-	P	V
		93.05	31.13	-12.37	43.5	47.1	14.9	1.37	32.24	-	-	P	V
		139.61	31.97	-11.53	43.5	45.09	17.3	1.7	32.12	-	-	P	V
		186.17	35.75	-7.75	43.5	51.26	14.6	1.99	32.1	-	-	P	V
		221.09	40.71	-5.29	46	55.4	15.28	2.17	32.14	-	-	P	V
		967.99	32.64	-21.36	54	29.2	31.08	4.52	32.16	-	-	P	V

Remark	1. No other spurious found. 2. All results are PASS against limit line.

Band 4 - 5725~5850MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT20 CH 149 5745MHz		5616	58.23	-10.07	68.3	41.33	35.47	11.21	29.78	100	118	P	H
		5696.4	73.43	-29.22	102.65	56.37	35.58	11.28	29.8	100	118	P	H
		5720	87.92	-22.98	110.9	70.79	35.6	11.32	29.79	100	118	P	H
		5724	93.05	-26.97	120.02	75.9	35.62	11.32	29.79	100	118	P	H
		5746	111.52	-	-	94.31	35.65	11.34	29.78	100	118	P	H
		5746	106.26	-	-	89.05	35.65	11.34	29.78	100	118	A	H
		5645.6	55.51	-12.79	68.3	38.59	35.5	11.23	29.81	100	241	P	V
		5699.2	63.5	-41.21	104.71	46.44	35.58	11.28	29.8	100	241	P	V
		5719.2	75.37	-35.31	110.68	58.24	35.6	11.32	29.79	100	241	P	V
		5724.4	84.64	-36.29	120.93	67.49	35.62	11.32	29.79	100	241	P	V
		5746	109.6	-	-	92.39	35.65	11.34	29.78	100	241	P	V
		5746	104.47	-	-	87.26	35.65	11.34	29.78	100	241	A	V

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT20 CH 157 5785MHz		5649.6	56.49	-11.81	68.3	39.56	35.5	11.24	29.81	100	125	P	H
		5692.4	58.28	-41.42	99.7	41.22	35.58	11.28	29.8	100	125	P	H
		5716	63.38	-46.4	109.78	46.27	35.6	11.3	29.79	100	125	P	H
		5720.8	63.08	-49.64	112.72	45.95	35.6	11.32	29.79	100	125	P	H
		5782	112.68	-	-	95.37	35.7	11.37	29.76	100	125	P	H
		5782	105.56	-	-	88.25	35.7	11.37	29.76	100	125	A	H
		5850.4	59.73	-61.66	121.39	42.26	35.8	11.42	29.75	100	125	P	H
		5862.4	59.07	-49.76	108.83	41.62	35.79	11.43	29.77	100	125	P	H
		5888.4	56.75	-38.6	95.35	39.31	35.79	11.45	29.8	100	125	P	H
		5978	56.41	-11.89	68.3	39	35.76	11.51	29.86	100	125	P	H

		5646	56.5	-11.8	68.3	39.58	35.5	11.23	29.81	100	232	P	V
		5686	56.29	-38.68	94.97	39.26	35.55	11.28	29.8	100	232	P	V
		5709.6	56.15	-51.84	107.99	39.04	35.6	11.3	29.79	100	232	P	V
		5722.4	58.44	-57.93	116.37	41.31	35.6	11.32	29.79	100	232	P	V
		5782	108.08	-	-	90.77	35.7	11.37	29.76	100	232	P	V
		5782	100.58	-	-	83.27	35.7	11.37	29.76	100	232	A	V
		5851.2	55.67	-63.89	119.56	38.2	35.8	11.42	29.75	100	232	P	V
		5872.8	56.9	-49.02	105.92	39.44	35.79	11.44	29.77	100	232	P	V
		5899.6	56.69	-30.37	87.06	39.26	35.78	11.45	29.8	100	232	P	V
		5960	57.07	-11.23	68.3	39.67	35.76	11.5	29.86	100	232	P	V

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 165 5825MHz		5824	113.43	-	-	96.03	35.75	11.41	29.76	100	301	P	H
		5824	105.61	-	-	88.21	35.75	11.41	29.76	100	301	A	H
		5852.8	84.19	-31.73	115.92	66.72	35.8	11.42	29.75	100	301	P	H
		5856.8	81.82	-28.58	110.4	64.34	35.8	11.43	29.75	100	301	P	H
		5878	66	-37.07	103.07	48.54	35.79	11.44	29.77	100	301	P	H
		5934.8	57.62	-10.68	68.3	40.21	35.77	11.48	29.84	100	301	P	H
		5824	108.4	-	-	91	35.75	11.41	29.76	100	64	P	V
		5824	101.35	-	-	83.95	35.75	11.41	29.76	100	64	A	V
		5850	74.18	-48.12	122.3	56.71	35.8	11.42	29.75	100	64	P	V
		5857.2	69.99	-40.29	110.28	52.51	35.8	11.43	29.75	100	64	P	V
		5876.4	58.77	-45.49	104.26	41.31	35.79	11.44	29.77	100	64	P	V
		5960.8	57.14	-11.16	68.3	39.74	35.76	11.5	29.86	100	64	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 149 5745MHz		11488	58.45	-15.55	74	68.12	38.69	17.09	65.45	400	80	P	H
		11488	44.5	-9.5	54	54.17	38.69	17.09	65.45	400	80	A	H
		17230	55.74	-12.56	68.3	57	41.83	21.1	64.19	300	360	P	H
		11499	52.32	-21.68	74	61.97	38.69	17.11	65.45	302	344	P	V
		11499	42.61	-11.39	54	52.26	38.69	17.11	65.45	302	344	A	V
		17230	59.17	-9.13	68.3	60.43	41.83	21.1	64.19	302	344	P	V
802.11n HT20 CH 157 5785MHz		11576	57.54	-16.46	74	67.06	38.71	17.18	65.41	296	269	P	H
		11576	48.97	-5.03	54	58.49	38.71	17.18	65.41	296	269	A	H
		17351	55.29	-13.01	68.3	56.36	42	21.14	64.21	300	360	P	H
		11565	56.63	-17.37	74	66.18	38.71	17.16	65.42	108	54	P	V
		11565	48.71	-5.29	54	58.26	38.71	17.16	65.42	108	54	A	V
		17362	62.95	-5.35	68.3	64	42.02	21.14	64.21	100	360	P	V
802.11n HT20 CH 165 5825MHz		11642	55.29	-18.71	74	64.69	38.73	17.24	65.37	300	145	P	H
		11642	47.35	-6.65	54	56.75	38.73	17.24	65.37	300	145	A	H
		11642	56.36	-17.64	74	65.76	38.73	17.24	65.37	100	74	P	V
		11642	48.05	-5.95	54	57.45	38.73	17.24	65.37	100	74	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 151 5755MHz		5644.8	63.23	-5.07	68.3	46.31	35.5	11.23	29.81	100	306	P	H
		5700	79.26	-26.04	105.3	62.2	35.58	11.28	29.8	100	306	P	H
		5719.6	89	-21.79	110.79	71.87	35.6	11.32	29.79	100	306	P	H
		5723.2	92.93	-25.27	118.2	75.78	35.62	11.32	29.79	100	306	P	H
		5752	109.3	-	-	92.08	35.65	11.35	29.78	100	306	P	H
		5752	101.64	-	-	84.42	35.65	11.35	29.78	100	306	A	H
		5852.4	63.97	-52.86	116.83	46.5	35.8	11.42	29.75	100	306	P	H
		5858.8	64.2	-45.63	109.83	46.74	35.8	11.43	29.77	100	306	P	H
		5877.2	60.05	-43.62	103.67	42.59	35.79	11.44	29.77	100	306	P	H
		5930.8	57.85	-10.45	68.3	40.42	35.77	11.48	29.82	100	306	P	H
		5649.6	59.2	-9.1	68.3	42.27	35.5	11.24	29.81	100	66	P	V
		5698.8	73.24	-31.18	104.42	56.18	35.58	11.28	29.8	100	66	P	V
		5719	86.05	-24.57	110.62	68.92	35.6	11.32	29.79	100	66	P	V
		5721.6	86.05	-28.5	114.55	68.92	35.6	11.32	29.79	100	66	P	V
		5746	106.24	-	-	89.03	35.65	11.34	29.78	100	66	P	V
		5746	99.09	-	-	81.88	35.65	11.34	29.78	100	66	A	V
		5854.4	56.74	-55.53	112.27	39.26	35.8	11.43	29.75	100	66	P	V
		5861.6	57.13	-51.92	109.05	39.68	35.79	11.43	29.77	100	66	P	V
		5906.8	57.17	-24.56	81.73	39.72	35.78	11.47	29.8	100	66	P	V
		5926.8	58.05	-10.25	68.3	40.61	35.78	11.48	29.82	100	66	P	V

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 159 5795MHz		5646.4	60.09	-8.21	68.3	43.17	35.5	11.23	29.81	102	304	P	H
		5695.2	64.9	-36.86	101.76	47.84	35.58	11.28	29.8	102	304	P	H
		5716.4	72.27	-37.62	109.89	55.16	35.6	11.3	29.79	102	304	P	H
		5724.4	74.63	-46.3	120.93	57.48	35.62	11.32	29.79	102	304	P	H
		5782	109.14	-	-	91.83	35.7	11.37	29.76	102	304	P	H
		5782	101.17	-	-	83.86	35.7	11.37	29.76	102	304	A	H
		5850.4	77.9	-43.49	121.39	60.43	35.8	11.42	29.75	102	304	P	H
		5855.2	75.22	-35.62	110.84	57.74	35.8	11.43	29.75	102	304	P	H
		5876.4	71.91	-32.35	104.26	54.45	35.79	11.44	29.77	102	304	P	H
		5927.6	58.62	-9.68	68.3	41.19	35.77	11.48	29.82	102	304	P	H
		5606	57.07	-11.23	68.3	40.19	35.47	11.19	29.78	100	65	P	V
		5700	62.91	-42.39	105.3	45.85	35.58	11.28	29.8	100	65	P	V
		5720	65.24	-45.66	110.9	48.11	35.6	11.32	29.79	100	65	P	V
		5720.4	67.7	-44.11	111.81	50.57	35.6	11.32	29.79	100	65	P	V
		5788	106.78	-	-	89.45	35.7	11.39	29.76	100	65	P	V
		5788	99.08	-	-	81.75	35.7	11.39	29.76	100	65	A	V
		5850	68.15	-54.15	122.3	50.68	35.8	11.42	29.75	100	65	P	V
		5857.2	66.16	-44.12	110.28	48.68	35.8	11.43	29.75	100	65	P	V
		5882	60.53	-39.57	100.1	43.07	35.79	11.44	29.77	100	65	P	V
		5944	56.75	-11.55	68.3	39.33	35.77	11.49	29.84	100	65	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 151 5755MHz		11510	51.69	-22.31	74	61.33	38.7	17.11	65.45	300	0	P	H
		11510	41.82	-12.18	54	51.46	38.7	17.11	65.45	300	175	A	H
		11521	53.28	-20.72	74	62.9	38.7	17.12	65.44	100	0	P	V
		11521	44.14	-9.86	54	53.76	38.7	17.12	65.44	100	147	A	V
802.11n HT40 CH 159 5795MHz		11587	51.32	-22.68	74	60.81	38.72	17.19	65.4	300	0	P	H
		11587	44.96	-9.04	54	54.45	38.72	17.19	65.4	300	147	A	H
		11598	55.75	-18.25	74	65.24	38.72	17.19	65.4	100	360	P	V
		11598	46.26	-7.74	54	55.75	38.72	17.19	65.4	100	176	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11ax HE80_Full (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE80 Full CH 155 5775MHz		5643.2	58.41	-9.89	68.3	41.49	35.5	11.23	29.81	100	304	P	H
		5697.6	73.99	-29.54	103.53	56.93	35.58	11.28	29.8	100	304	P	H
		5709.2	77.54	-30.34	107.88	60.43	35.6	11.3	29.79	100	304	P	H
		5724.4	77.42	-43.51	120.93	60.27	35.62	11.32	29.79	100	304	P	H
		5752	104.99	-	-	87.77	35.65	11.35	29.78	100	304	P	H
		5752	94.92	-	-	77.7	35.65	11.35	29.78	100	304	A	H
		5852.4	71.76	-45.07	116.83	54.29	35.8	11.42	29.75	100	304	P	H
		5856.3	71.63	-38.91	110.54	54.15	35.8	11.43	29.75	100	304	P	H
		5876.4	64.88	-39.38	104.26	47.42	35.79	11.44	29.77	100	304	P	H
		5928.4	57.52	-10.78	68.3	40.09	35.77	11.48	29.82	100	304	P	H
		5646	58.01	-10.29	68.3	41.09	35.5	11.23	29.81	100	66	P	V
		5698	67.5	-36.33	103.83	50.44	35.58	11.28	29.8	100	66	P	V
		5715.6	72.39	-37.28	109.67	55.28	35.6	11.3	29.79	100	66	P	V
		5724.8	69.3	-52.54	121.84	52.15	35.62	11.32	29.79	100	66	P	V

		5770	101.76	-	-	84.49	35.67	11.37	29.77	100	66	P	V
		5770	92.71	-	-	75.44	35.67	11.37	29.77	100	66	A	V
		5854.8	62.3	-49.06	111.36	44.82	35.8	11.43	29.75	100	66	P	V
		5858.8	63.28	-46.55	109.83	45.82	35.8	11.43	29.77	100	66	P	V
		5876	57.47	-47.09	104.56	40.01	35.79	11.44	29.77	100	66	P	V
		5947.6	56.85	-11.45	68.3	39.44	35.76	11.49	29.84	100	66	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11ax HE80_Full (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE80 Full CH 155 5775MHz		11554	46.93	-27.07	74	56.48	38.71	17.16	65.42	300	0	P	H
		11554	48.01	-25.99	74	57.56	38.71	17.16	65.42	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

Emission below 1GHz

WIFI 802.11n HT20 (LF @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT20 LF		101.78	30.49	-13.01	43.5	45.78	16.09	1.52	32.9	-	-	P	H
		186.17	36.96	-6.54	43.5	53.2	14.71	2.07	33.02	-	-	P	H
		223.03	40.68	-5.32	46	56.16	15.35	2.27	33.1	-	-	P	H
		253.1	32.74	-13.26	46	44.58	18.82	2.43	33.09	-	-	P	H
		757.5	30.04	-15.96	46	30.53	27.97	4.21	32.67	-	-	P	H
		972.84	32.49	-21.51	54	30.17	29.76	4.77	32.21	-	-	P	H
		47.46	29.05	-10.95	40	45.39	15.57	1.04	32.95	-	-	P	V
		93.05	27.15	-16.35	43.5	43.33	15.02	1.46	32.66	-	-	P	V
		141.55	33	-10.5	43.5	46.81	17.2	1.81	32.82	-	-	P	V
		182.29	37.09	-6.41	43.5	53.25	14.78	2.05	32.99	-	-	P	V
		219.15	38.07	-7.93	46	53.88	15.04	2.25	33.1	-	-	P	V
		960.23	33.02	-20.98	54	30.88	29.66	4.74	32.26	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

<Simultaneous transmission>

2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20& WIFI 802.11n HT40& Part 96 Band48 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 06 2437MHz		2389.95	59.89	-14.11	74	52.7	30.94	7.13	30.88	150	326	P	H
		2389.95	47.85	-6.15	54	40.66	30.94	7.13	30.88	150	326	A	H
		2483.98	60.43	-13.57	74	52.69	31.13	7.28	30.67	150	326	P	H
		2483.5	47.78	-6.22	54	40.04	31.13	7.28	30.67	150	326	A	H
		2434	106.19	--	--	98.74	31.07	7.19	30.81	150	326	P	H
		2434	98.54	--	--	91.09	31.07	7.19	30.81	150	326	A	H
		2389.95	57.44	-16.56	74	50.25	30.94	7.13	30.88	381	276	P	V
		2389.95	45.84	-8.16	54	38.65	30.94	7.13	30.88	381	276	A	V
		2485	54.39	-19.61	74	46.65	31.13	7.28	30.67	381	276	P	V
		2483.5	43.69	-10.31	54	35.95	31.13	7.28	30.67	381	276	A	V
		2430	103.08	--	--	95.67	31.03	7.19	30.81	381	276	P	V
		2432	95.93	--	--	88.52	31.03	7.19	30.81	381	276	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20& WIFI 802.11n HT40& Part 96 Band48 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 06 2437MHz		4875	53.36	-20.64	74	73.27	34.66	10.87	65.44	125	268	P	H
		4875	40.19	-13.81	54	60.1	34.66	10.87	65.44	125	268	A	H
		7305	51.31	-22.69	74	66.5	36.56	13.49	65.24	300	0	P	H
		7305	43.93	-10.07	54	59.12	36.56	13.49	65.24	300	0	A	H
		4860	52.55	-21.45	74	72.5	34.63	10.86	65.44	378	19	P	V
		4860	41.75	-12.25	54	61.7	34.63	10.86	65.44	378	19	A	V
		7290	52.89	-21.11	74	68.07	36.56	13.49	65.23	300	0	P	V
		7290	43.94	-10.06	54	59.12	36.56	13.49	65.23	300	0	A	V

Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.

Band 1 5150~5250MHz

WIFI 802.11n HT20& WIFI 802.11n HT40& Part 96 Band48 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 38 5190MHz		5148.8	65.97	-8.03	74	49.63	35.03	10.62	29.31	100	117	P	H
		5149.44	53.55	-0.45	54	37.21	35.03	10.62	29.31	100	117	A	H
	*	5188	101.73	--	--	85.38	35.06	10.63	29.34	100	117	P	H
		5188	94.72	--	--	78.37	35.06	10.63	29.34	100	117	A	H
		5351.76	55.36	-18.64	74	38.83	35.22	10.83	29.52	100	117	P	H
		5396.22	45.02	-8.98	54	28.42	35.26	10.89	29.55	100	117	A	H
		5145.12	61.81	-12.19	74	45.47	35.03	10.62	29.31	395	99	P	V
		5146.08	49.97	-4.03	54	33.63	35.03	10.62	29.31	395	99	A	V
	*	5194	100.31	--	--	83.95	35.06	10.64	29.34	395	99	P	V
		5194	92.67	--	--	76.31	35.06	10.64	29.34	395	99	A	V
		5355.9	55.51	-18.49	74	38.98	35.22	10.83	29.52	395	99	P	V
		5394.24	44.95	-9.05	54	28.37	35.26	10.87	29.55	395	99	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11n HT20& WIFI 802.11n HT40& Part 96 Band48 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 38 5190MHz		7297	53.61	-20.39	74	68.79	36.56	13.49	65.23	349	106	P	H
		7297	42.73	-11.27	54	57.91	36.56	13.49	65.23	349	106	A	H
		10377	45.01	-23.29	68.3	56.91	38.33	16.21	66.44	100	360	P	H
		7308	54.54	-19.46	74	69.73	36.56	13.49	65.24	308	0	P	V
		7308	44.81	-9.19	54	60	36.56	13.49	65.24	308	0	A	V
		10377	44.24	-24.06	68.3	56.14	38.33	16.21	66.44	300	0	P	V
Remark	3. No other spurious found. 4. All results are PASS against Peak and Average limit line.												

Note symbol

*	**Fundamental Frequency** which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
!	Test result is **over limit** line.
P/A	**P**eak or **A**verage
H/V	**H**orizontal or **V**ertical

A calculation example for radiated spurious emission is shown as below:

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

1. Path Loss(dB) = Cable loss(dB) + Filter loss(dB) + Attenuator loss(dB)
2. Level(dBμV/m) = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
3. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)

= 43.54 (dBμV/m)

2. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

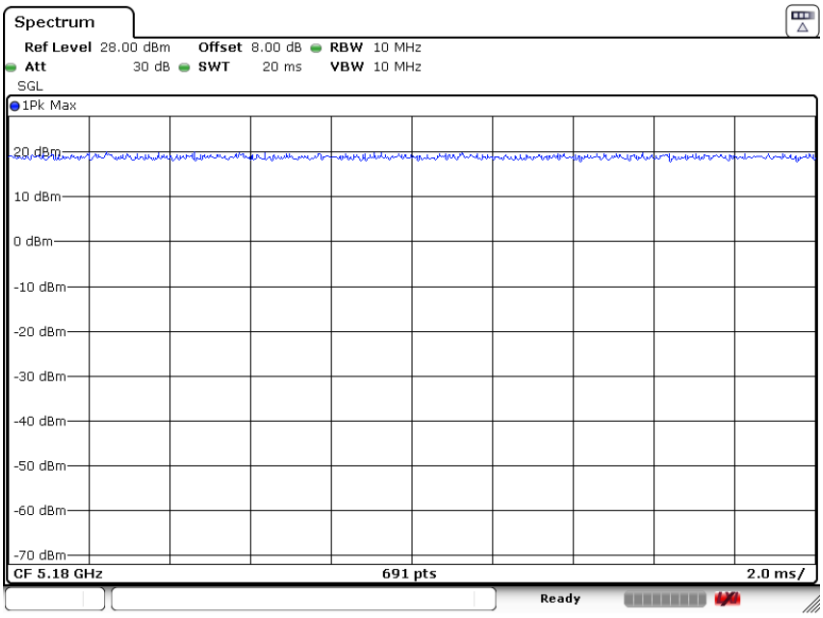
= -10.46(dB)

Both peak and average measured complies with the limit line, so test result is “PASS”.

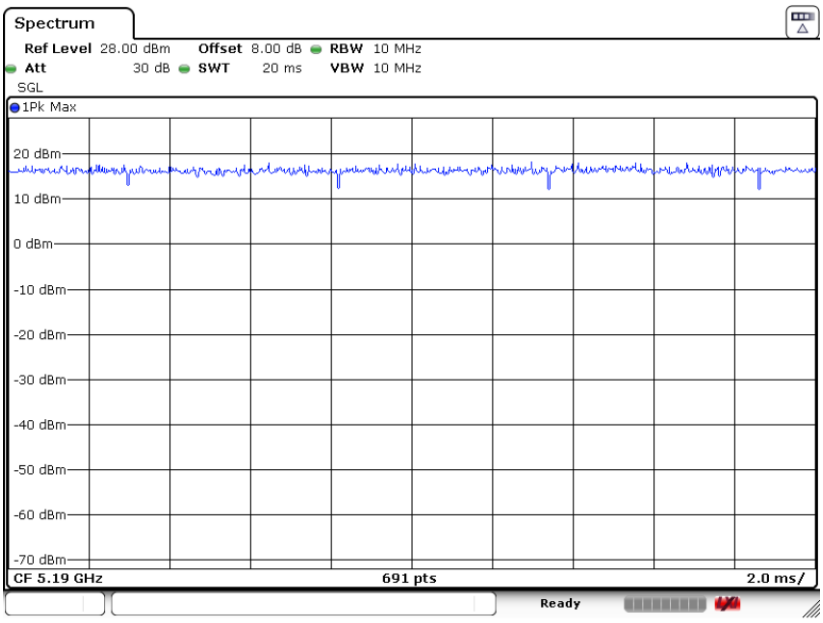
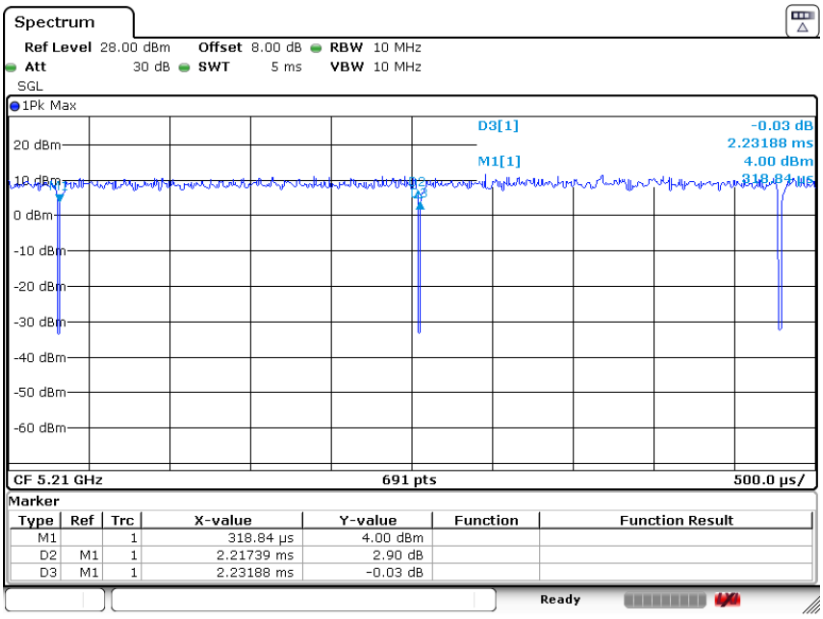
Appendix D. Duty Cycle Plots

Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
802.11n HT20	100	-	-	10Hz
802.11n HT40	100	-	-	10Hz
802.11ax HE80	99.35	-	-	10Hz

802.11n HT20



802.11n HT40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