

Appendix A3

2.4G WiFi Test Data

Conducted Test Data

Conducted Output Power

Test Result

Mode	Channel	Peak Output Power (dBm)	Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)	Result
IEEE 802.11b	1	17.35	≤30	17.82	≤36	PASS
	6	18.35	≤30	18.82	≤36	PASS
	11	18.35	≤30	18.82	≤36	PASS
IEEE 802.11g	1	20.58	≤30	21.05	≤36	PASS
	6	22.46	≤30	22.93	≤36	PASS
	11	22.93	≤30	23.40	≤36	PASS
IEEE 802.11n_20	1	20.86	≤30	21.33	≤36	PASS
	6	22.63	≤30	23.10	≤36	PASS
	11	22.71	≤30	23.18	≤36	PASS
IEEE 802.11n_40	3	21.90	≤30	22.37	≤36	PASS
	6	22.93	≤30	23.40	≤36	PASS
	9	23.68	≤30	24.15	≤36	PASS

Note: $EIRP = P_{out} + G_{ant}$, where P_{out} is the conducted output power (i.e., the Peak Output Power in the table), and G_{ant} is the antenna gain equal to 0.47 dBi.

Duty Cycle

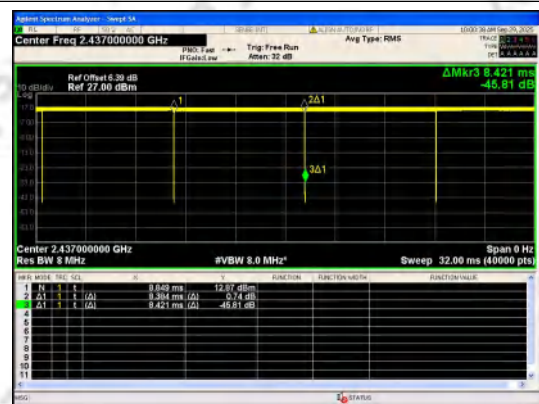
Test Result

Mode	Data rates	Channel	Antenna	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)	1/T
IEEE 802.11b	1	1	1	8.384	8.421	99.56	0.9956	0.0192	0.1193
		6		8.384	8.421	99.56	0.9956	0.0192	0.1193
		11		8.384	8.421	99.56	0.9956	0.0192	0.1193
IEEE 802.11g	6	1		1.395	1.437	97.08	0.9708	0.1287	0.7168
		6		1.395	1.437	97.08	0.9708	0.1287	0.7168
		11		1.395	1.437	97.08	0.9708	0.1287	0.7168
IEEE 802.11n_20	MCS 0	1		1.304	1.345	96.95	0.9695	0.1345	0.7669
		6		1.304	1.346	96.88	0.9688	0.1377	0.7669
		11		1.304	1.346	96.88	0.9688	0.1377	0.7669
IEEE 802.11n_40		3		0.650	0.693	93.84	0.9384	0.2761	1.5385
		6		0.650	0.692	93.90	0.9390	0.2733	1.5385
		9		0.650	0.693	93.84	0.9384	0.2761	1.5385

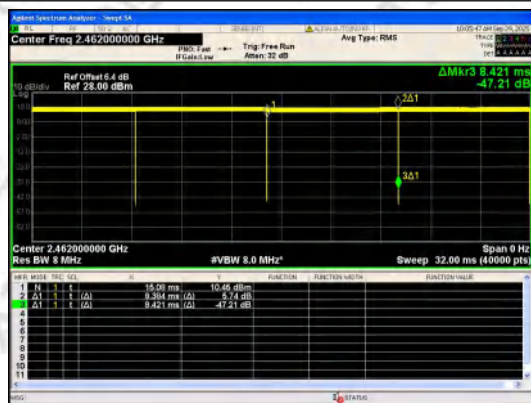
Test Graphs



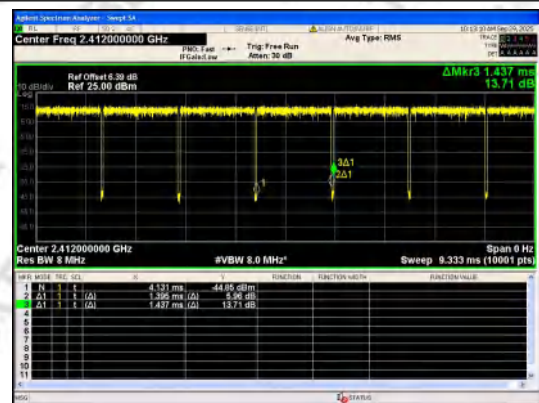
IEEE 802.11b_20MHz_Channel 1



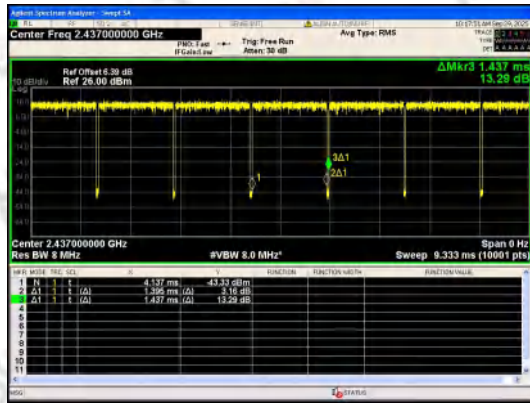
IEEE 802.11b_20MHz_Channel 6



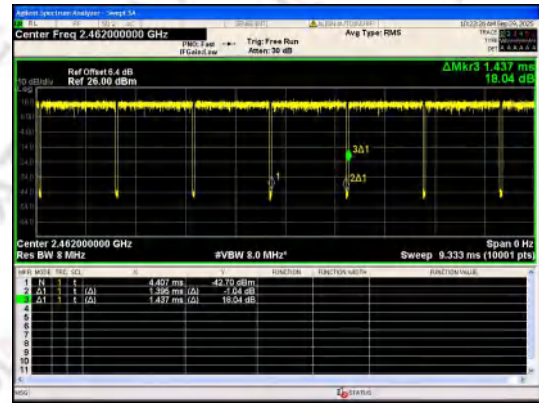
IEEE 802.11b_20MHz_Channel 11



IEEE 802.11g_20MHz_Channel 1



IEEE 802.11g_20MHz_Channel 6



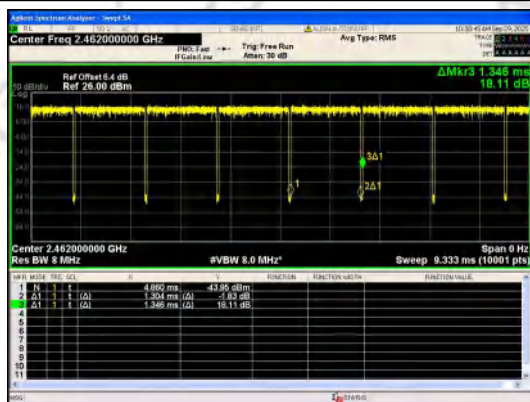
IEEE 802.11g_20MHz_Channel 11



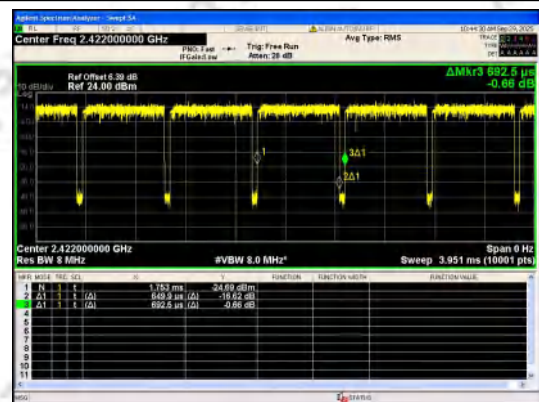
IEEE 802.11n_20MHz_Channel 1



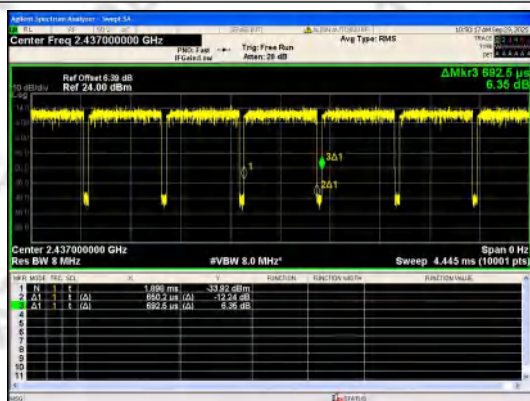
IEEE 802.11n_20MHz_Channel 6



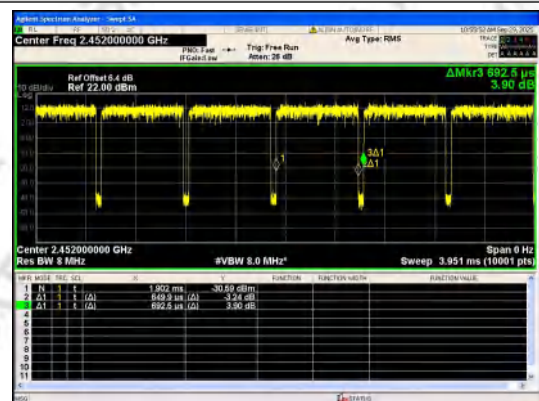
IEEE 802.11n_20MHz_Channel 11



IEEE 802.11n_40MHz_Channel 3



IEEE 802.11n_40MHz_Channel 6



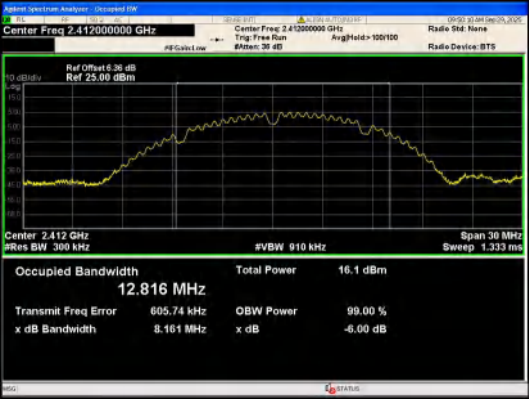
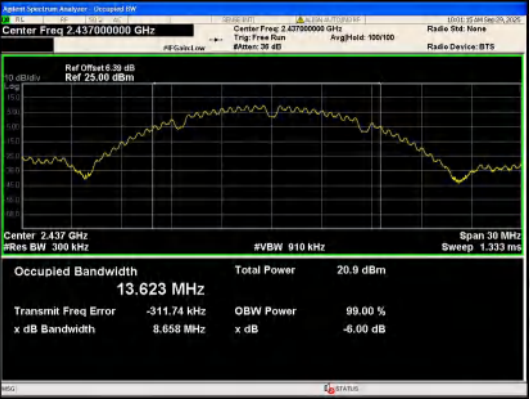
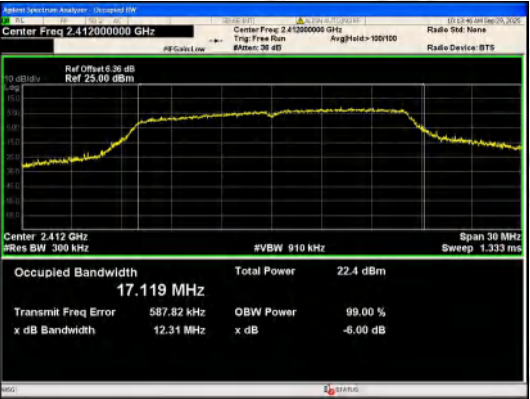
IEEE 802.11n_40MHz_Channel 9

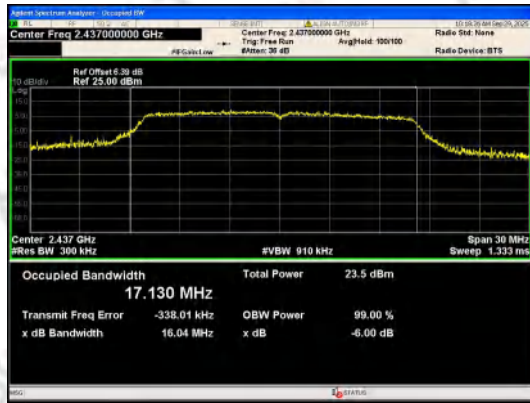
6dB Bandwidth

Test Result

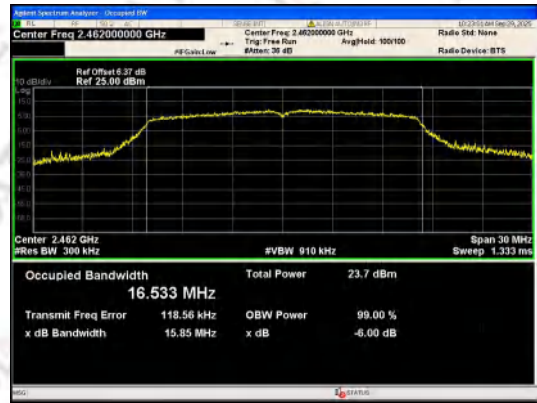
Mode	Channel	Ant.	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
IEEE 802.11b	1	0	2412	8.160	≥0.5	PASS
	6		2437	8.660		PASS
	11		2462	8.130		PASS
IEEE 802.11g	1		2412	12.31		PASS
	6		2437	16.04		PASS
	11		2462	15.85		PASS
IEEE 802.11n_20	1		2412	14.26		PASS
	6		2437	16.68		PASS
	11		2462	16.13		PASS
IEEE 802.11n_40	3		2422	22.60		PASS
	6		2437	36.10		PASS
	9		2452	34.92		PASS

Test Graphs

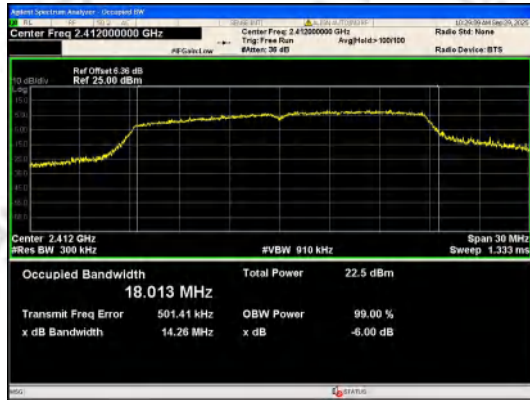
 Center Freq 2.41200000 GHz Occupied Bandwidth: 12.816 MHz Total Power: 16.1 dBm Transmit Freq Error: 605.74 kHz x dB Bandwidth: 8.161 MHz	 Center Freq 2.43700000 GHz Occupied Bandwidth: 13.623 MHz Total Power: 20.9 dBm Transmit Freq Error: -311.74 kHz x dB Bandwidth: 8.658 MHz
IEEE 802.11b_Channel 1_20MHz_Antenna 0	IEEE 802.11b_Channel 6_20MHz_Antenna 0
 Center Freq 2.46200000 GHz Occupied Bandwidth: 12.816 MHz Total Power: 21.0 dBm Transmit Freq Error: 177.08 kHz x dB Bandwidth: 8.131 MHz	 Center Freq 2.41200000 GHz Occupied Bandwidth: 17.119 MHz Total Power: 22.4 dBm Transmit Freq Error: 587.82 kHz x dB Bandwidth: 12.31 MHz
IEEE 802.11b_Channel 11_20MHz_Antenna 0	IEEE 802.11g_Channel 1_20MHz_Antenna 0



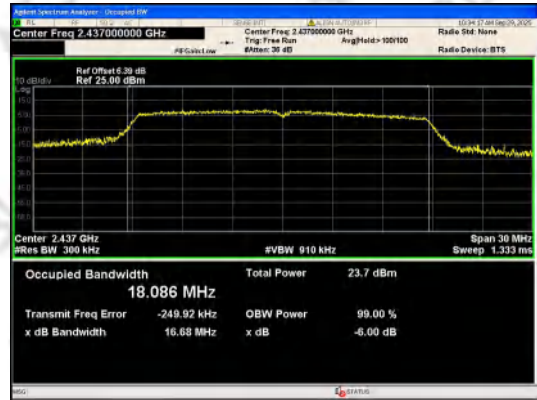
IEEE 802.11g_Channel 6_20MHz_Antenna 0



IEEE 802.11g_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 1_20MHz_Antenna 0



IEEE 802.11n_Channel 6_20MHz_Antenna 0



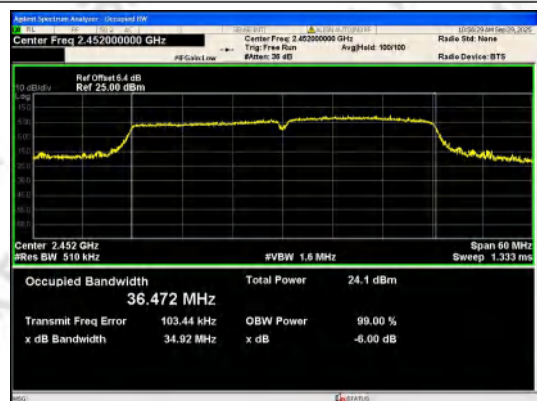
IEEE 802.11n_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 3_40MHz_Antenna 0



IEEE 802.11n_Channel 6_40MHz_Antenna 0



IEEE 802.11n_Channel 9_40MHz_Antenna 0

99% Bandwidth

Test Result

Mode	Channel	Ant.	Center Frequency (MHz)	99% BW (MHz)
IEEE 802.11b	1	0	2412	12.759
	6		2437	13.574
	11		2462	12.791
IEEE 802.11g	1		2412	16.994
	6		2437	16.945
	11		2462	16.439
IEEE 802.11n_20	1		2412	17.815
	6		2437	17.963
	11		2462	17.540
IEEE 802.11n_40	3		2422	35.279
	6		2437	36.588
	9		2452	36.269

Test Graphs



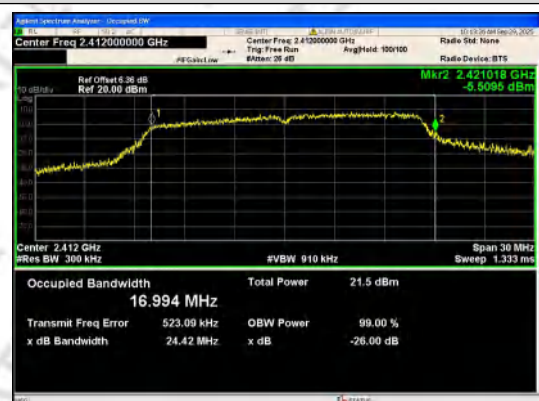
IEEE 802.11b_Channel 1_20MHz_Antenna 0



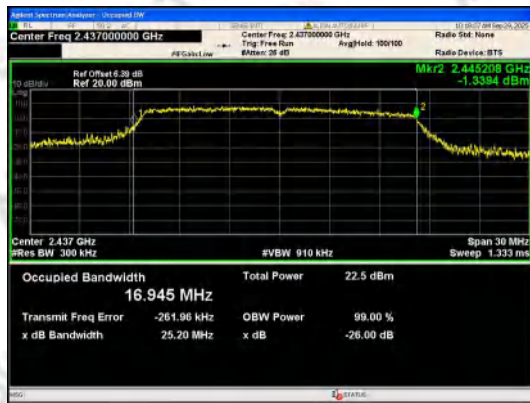
IEEE 802.11b_Channel 6_20MHz_Antenna 0



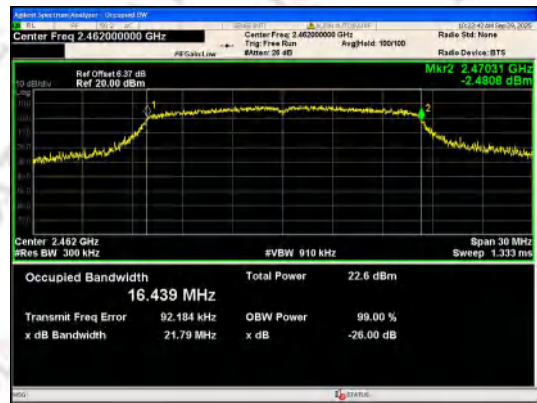
IEEE 802.11b_Channel 11_20MHz_Antenna 0



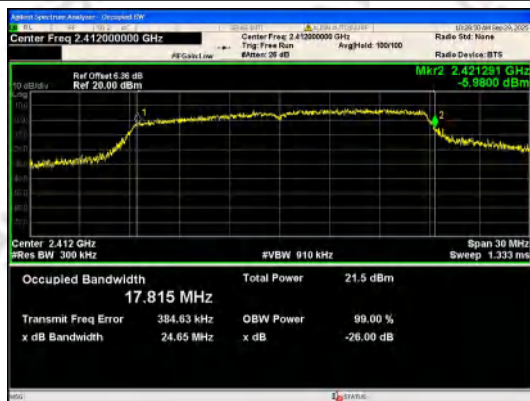
IEEE 802.11g_Channel 1_20MHz_Antenna 0



IEEE 802.11g_Channel 6_20MHz_Antenna 0



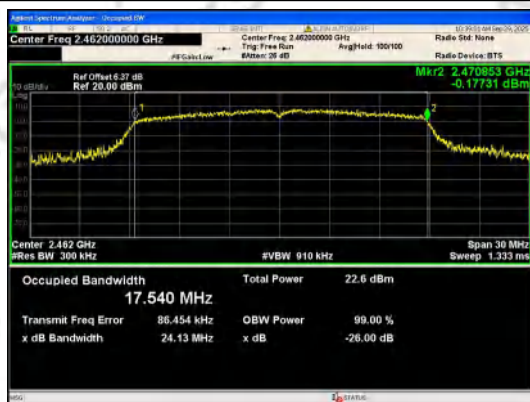
IEEE 802.11g_Channel 11_20MHz_Antenna 0



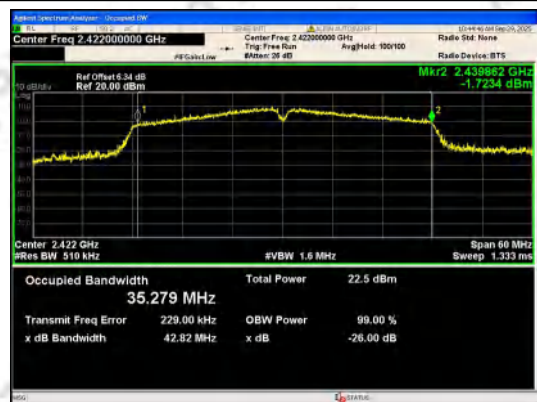
IEEE 802.11n_Channel 1_20MHz_Antenna 0



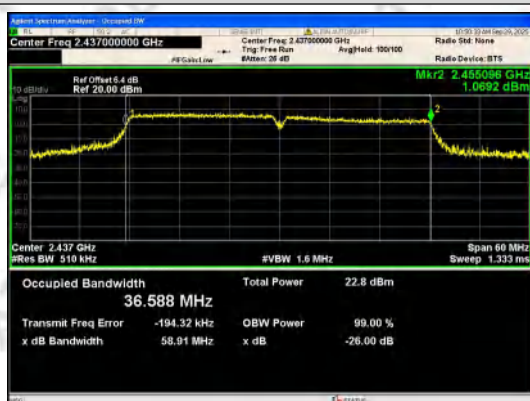
IEEE 802.11n_Channel 6_20MHz_Antenna 0



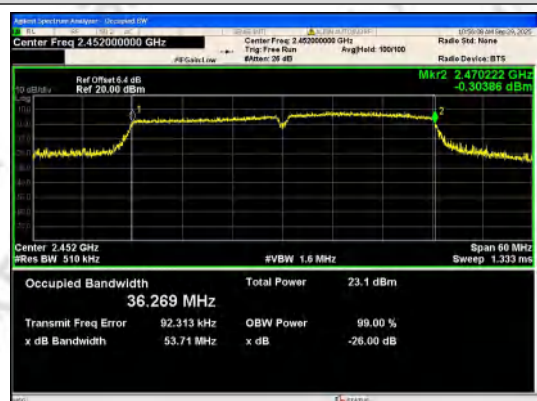
IEEE 802.11n_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 3_40MHz_Antenna 0



IEEE 802.11n_Channel 6_40MHz_Antenna 0



IEEE 802.11n_Channel 9_40MHz_Antenna 0

Power Spectral Density

Test Result

Mode	Channel	PSD (dBm/3kHz) Ant. 0	Limit (dBm/3kHz)	Result
IEEE 802.11b	1	-4.470	≤8	PASS
	6	-3.770		PASS
	11	-4.770		PASS
IEEE 802.11g	1	-8.100		PASS
	6	-6.890		PASS
	11	-6.870		PASS
IEEE 802.11n_20	1	-6.450		PASS
	6	-6.640		PASS
	11	-6.150		PASS
IEEE 802.11n_40	3	-8.990		PASS
	6	-10.530		PASS
	9	-9.410		PASS

Test Graphs



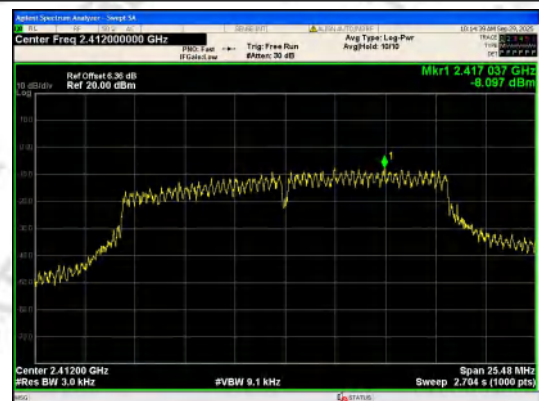
IEEE 802.11b_Channel 1_20MHz_Antenna 0



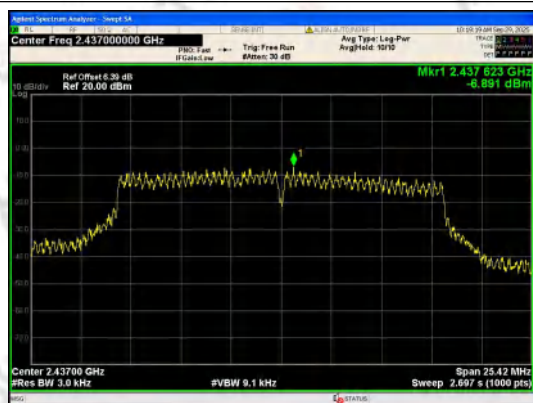
IEEE 802.11b_Channel 6_20MHz_Antenna 0



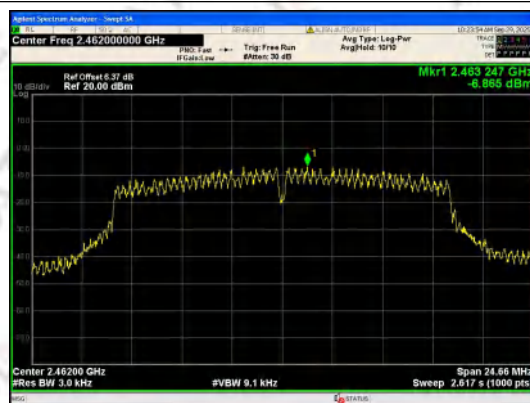
IEEE 802.11b_Channel 11_20MHz_Antenna 0



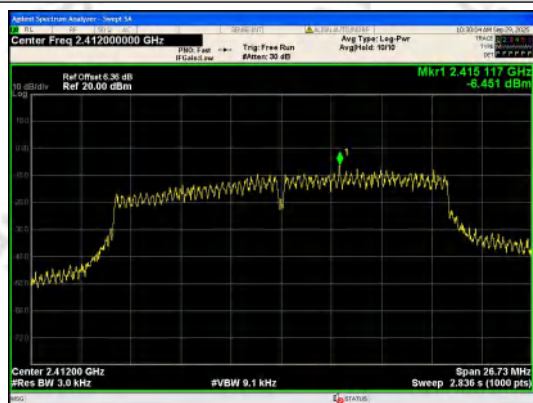
IEEE 802.11g_Channel 1_20MHz_Antenna 0



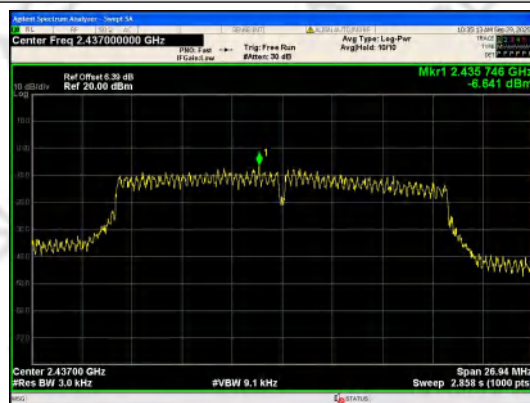
IEEE 802.11g_Channel 6_20MHz_Antenna 0



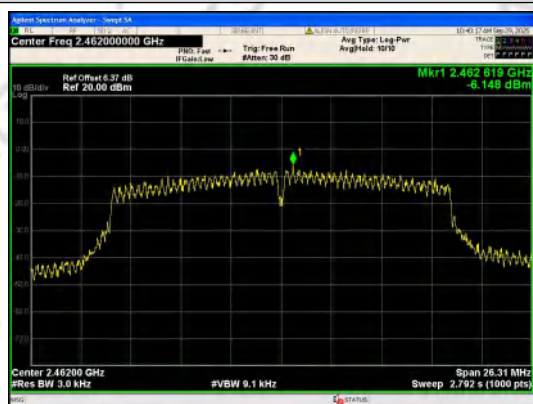
IEEE 802.11g_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 1_20MHz_Antenna 0



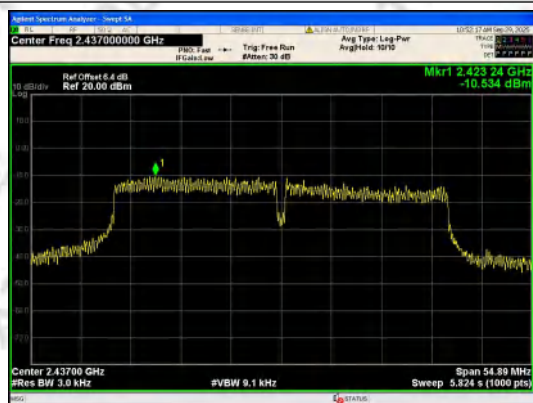
IEEE 802.11n_Channel 6_20MHz_Antenna 0



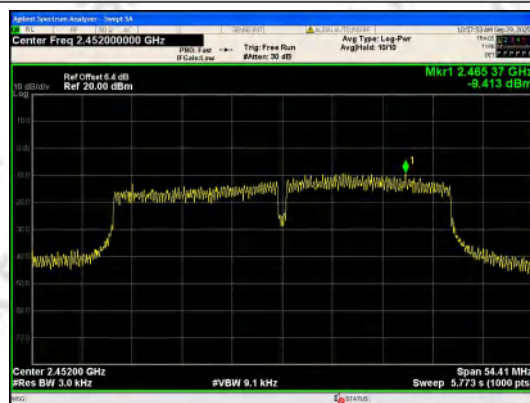
IEEE 802.11n_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 3_40MHz_Antenna 0



IEEE 802.11n_Channel 6_40MHz_Antenna 0



IEEE 802.11n_Channel 9_40MHz_Antenna 0

Conducted Out Of Band Emission

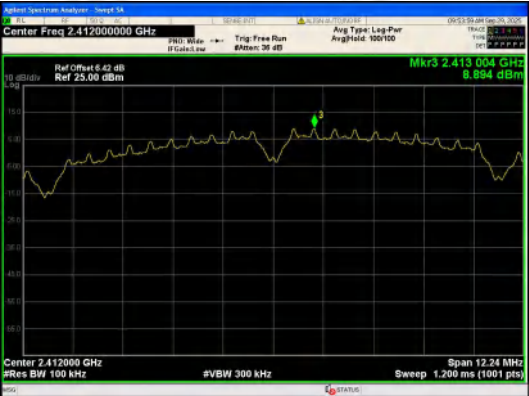
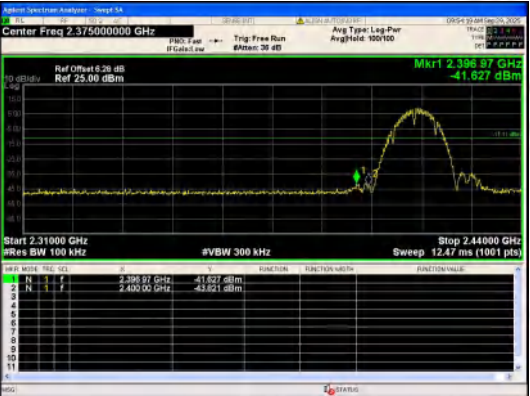
Note:The maximum loss of the test system for testing at 30MHz-26.5GHz is 17.2dB. The offset on the test chart is the offset of the main frequency, and the margin is sufficient to offset the difference between the maximum loss of the system and the offset of the main frequency.

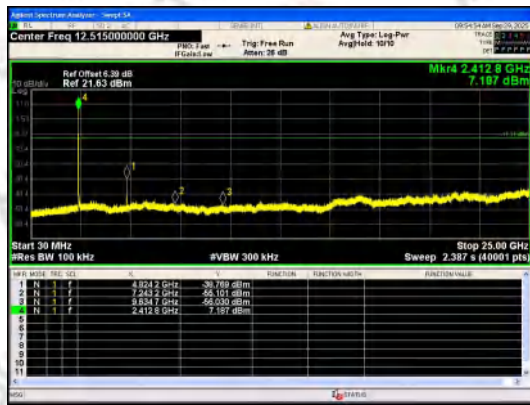
Test Result

Mode	Channel	Ant.	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm/MHz)	Over Limit (dB)	Result
IEEE 802.11b	1	0	2396.97	-41.627	-11.11	-30.517	PASS
			2400.00	-43.821	-11.11	-32.711	PASS
			4824.20	-38.769	-11.11	-27.659	PASS
			7243.20	-55.101	-11.11	-43.991	PASS
			9634.70	-56.030	-11.11	-44.920	PASS
	6		4874.18	-37.390	-10.65	-26.740	PASS
			7309.38	-55.130	-10.65	-44.480	PASS
			9752.07	-57.041	-10.65	-46.391	PASS
	11		2483.50	-47.453	-10.47	-36.983	PASS
			4924.12	-40.430	-10.47	-29.960	PASS
			7399.90	-56.311	-10.47	-45.841	PASS
			9867.56	-57.007	-10.47	-46.537	PASS
IEEE 802.11g	1		2398.92	-29.263	-13.05	-16.213	PASS
			2400.00	-31.587	-13.05	-18.537	PASS
			4824.90	-52.133	-13.05	-39.083	PASS
			7247.00	-55.023	-13.05	-41.973	PASS
			9660.30	-56.953	-13.05	-43.903	PASS
	6		24774.6	-44.328	-13.05	-31.278	PASS
			4871.06	-50.954	-13.37	-37.584	PASS
			7310.63	-56.261	-13.37	-42.891	PASS
			9762.06	-55.633	-13.37	-42.263	PASS
			24749.7	-44.484	-13.37	-31.114	PASS
	11		2483.50	-36.165	-12.85	-23.315	PASS
			4922.87	-53.120	-12.85	-40.270	PASS
			7375.55	-56.464	-12.85	-43.614	PASS
			9843.21	-57.191	-12.85	-44.341	PASS
			24697.2	-44.463	-12.85	-31.613	PASS
IEEE 802.11n_20	1		2400.00	-29.703	-12.97	-16.733	PASS
			4822.99	-51.433	-12.97	-38.463	PASS
			7248.83	-55.588	-12.97	-42.618	PASS
			9664.67	-55.607	-12.97	-42.637	PASS
			24932.0	-44.621	-12.97	-31.651	PASS
	6		4875.43	-52.310	-13.14	-39.170	PASS
			7304.39	-55.995	-13.14	-42.855	PASS

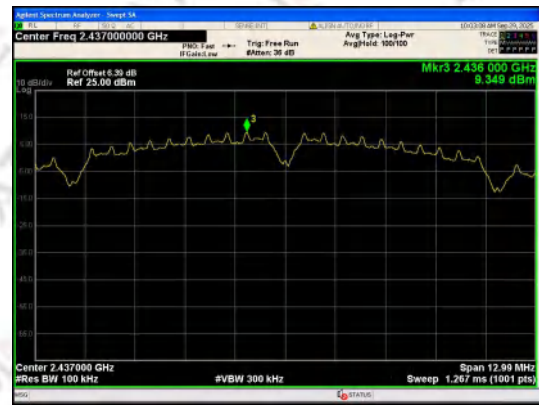
	11	9728.97	-56.625	-13.14	-43.485	PASS
		24687.3	-44.387	-13.14	-31.247	PASS
		2483.50	-35.874	-12.39	-23.484	PASS
		4922.87	-52.762	-12.39	-40.372	PASS
		7376.80	-55.025	-12.39	-42.635	PASS
		9843.21	-56.642	-12.39	-44.252	PASS
		24682.9	-44.268	-12.39	-31.878	PASS
		2394.50	-25.054	-13.67	-11.384	PASS
		2400.00	-29.103	-13.67	-15.433	PASS
		4820.50	-54.335	-13.67	-40.665	PASS
		7265.10	-54.790	-13.67	-41.120	PASS
IEEE 802.11n_40	3	9705.30	-55.820	-13.67	-42.150	PASS
		24802.7	-44.455	-13.67	-30.785	PASS
		4872.93	-52.507	-15.53	-36.977	PASS
		7303.14	-54.319	-15.53	-38.789	PASS
		9785.15	-56.648	-15.53	-41.117	PASS
	6	24606.1	-44.978	-15.53	-29.448	PASS
		2483.50	-27.816	-15.05	-12.766	PASS
		4906.64	-52.745	-15.05	-37.695	PASS
		7333.10	-56.350	-15.05	-41.300	PASS
		9842.59	-56.038	-15.05	-40.987	PASS
	9	24594.2	-44.801	-15.05	-29.751	PASS

Test Graphs

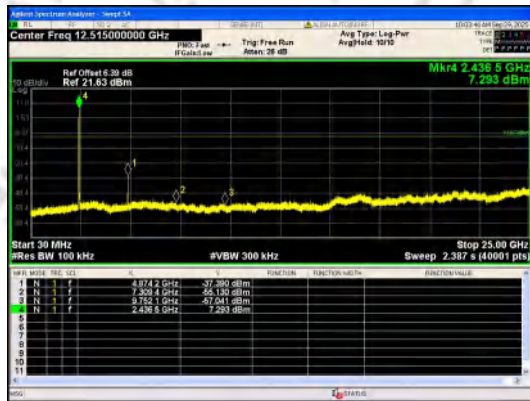
	
In-Band Reference Level IEEE 802.11b_Channel 1_20MHz_Antenna 0	Out Of Band Emission IEEE 802.11b_Channel 1_20MHz_Antenna 0



30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 1_20MHz_Antenna 0



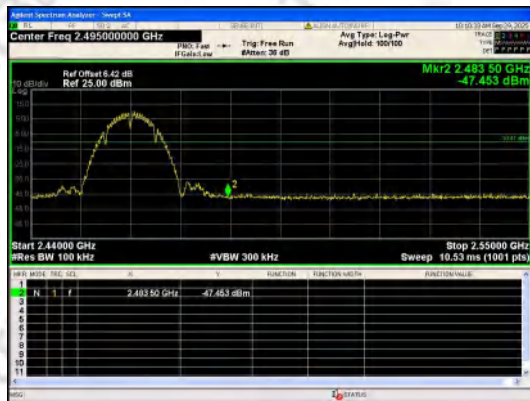
In-Band Reference Level
IEEE 802.11b_Channel 6_20MHz_Antenna 0



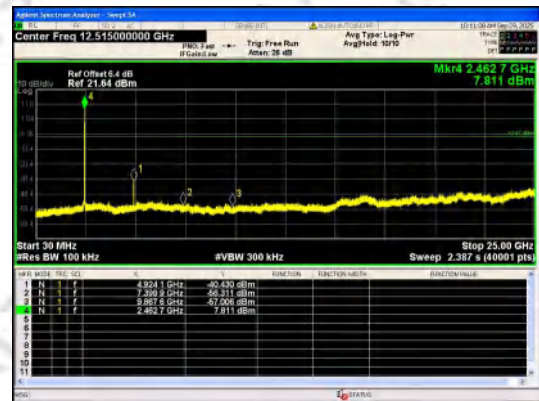
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 6_20MHz_Antenna 0



In-Band Reference Level
IEEE 802.11b_Channel 11_20MHz_Antenna 0



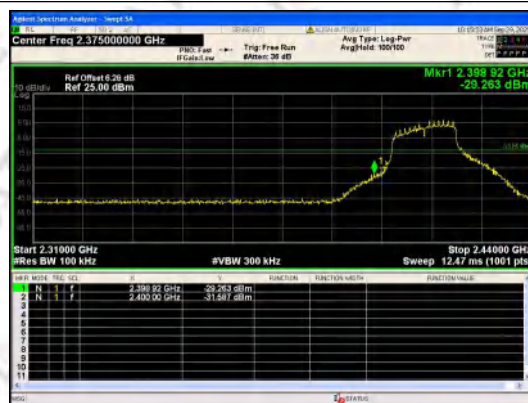
Out Of Band Emission
IEEE 802.11b_Channel 11_20MHz_Antenna 0



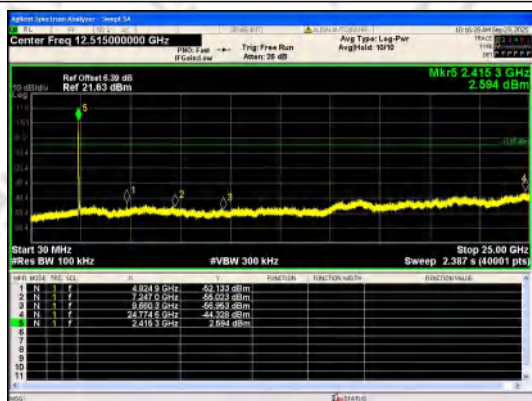
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 11_20MHz_Antenna 0



In-Band Reference Level
IEEE 802.11g_Channel 1_20MHz_Antenna 0



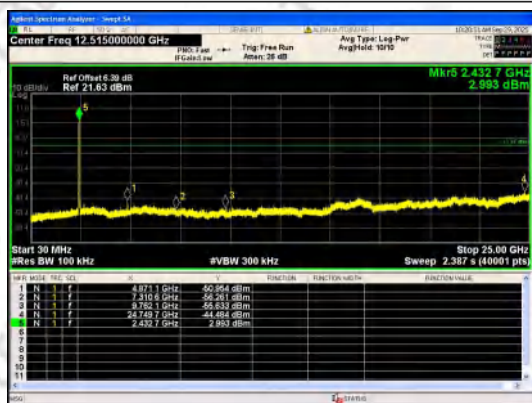
Out Of Band Emission
IEEE 802.11g_Channel 1_20MHz_Antenna 0



30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 1_20MHz_Antenna 0



In-Band Reference Level
IEEE 802.11g_Channel 6_20MHz_Antenna 0



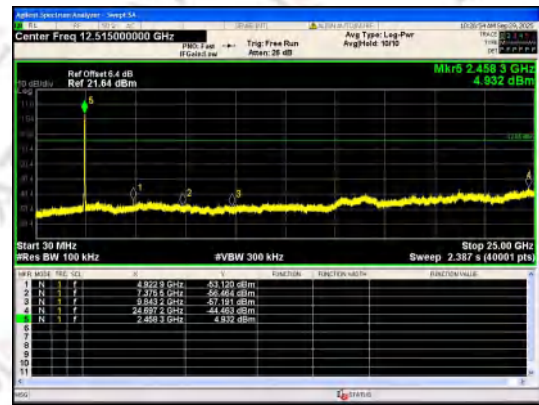
30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 6_20MHz_Antenna 0



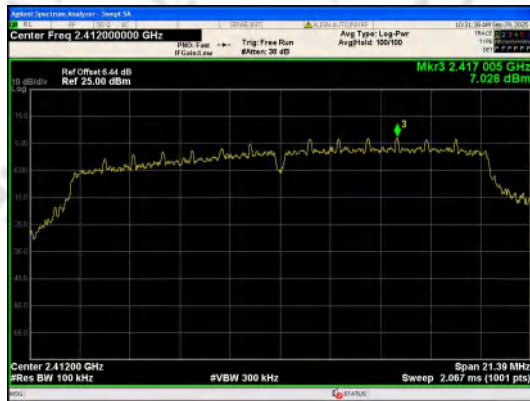
In-Band Reference Level
IEEE 802.11g_Channel 11_20MHz_Antenna 0



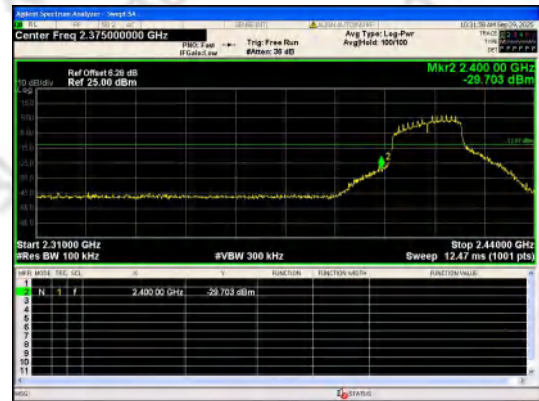
Out Of Band Emission
IEEE 802.11g_Channel 11_20MHz_Antenna 0



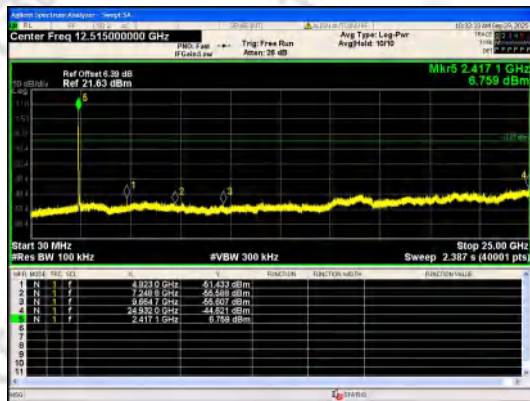
30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 11_20MHz_Antenna 0



In-Band Reference Level
IEEE 802.11n_Channel 1_20MHz_Antenna 0



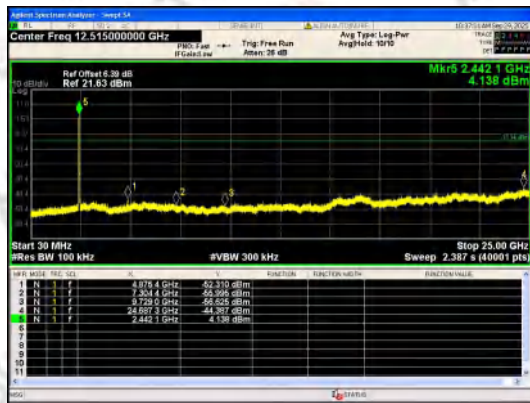
Out Of Band Emission
IEEE 802.11n_Channel 1_20MHz_Antenna 0



30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 1_20MHz_Antenna 0



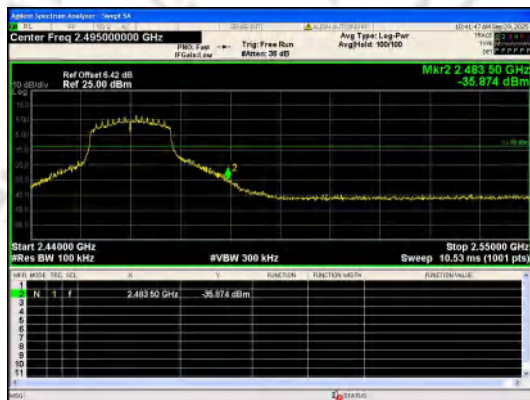
In-Band Reference Level
IEEE 802.11n_Channel 6_20MHz_Antenna 0



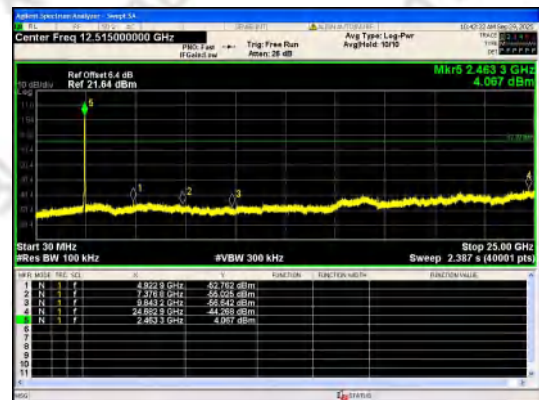
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 6_20MHz_Antenna 0



In-Band Reference Level
IEEE 802.11n_Channel 11_20MHz_Antenna 0



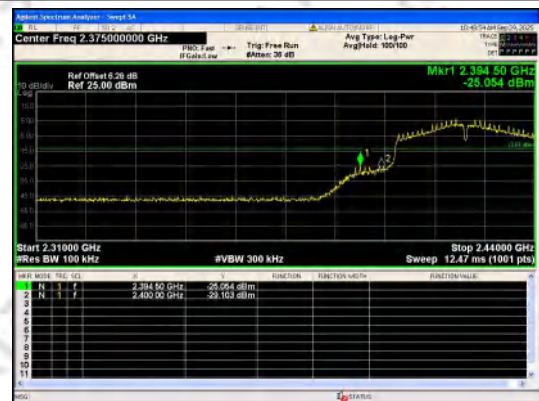
Out Of Band Emission
IEEE 802.11n_Channel 11_20MHz_Antenna 0



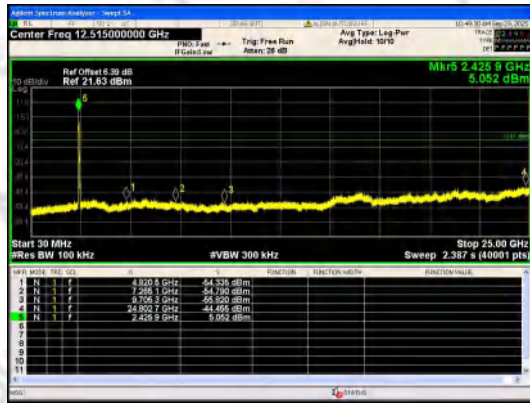
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 11_20MHz_Antenna 0



In-Band Reference Level
IEEE 802.11n_Channel 3_40MHz_Antenna 0



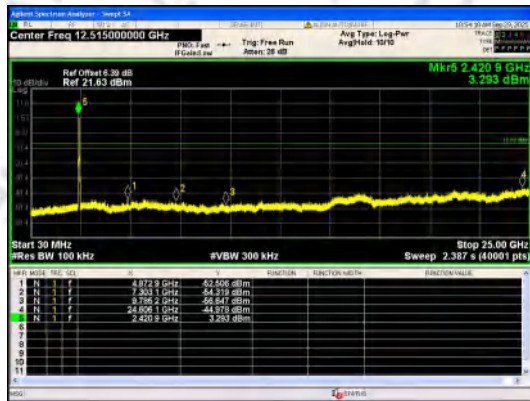
Out Of Band Emission
IEEE 802.11n_Channel 3_40MHz_Antenna 0



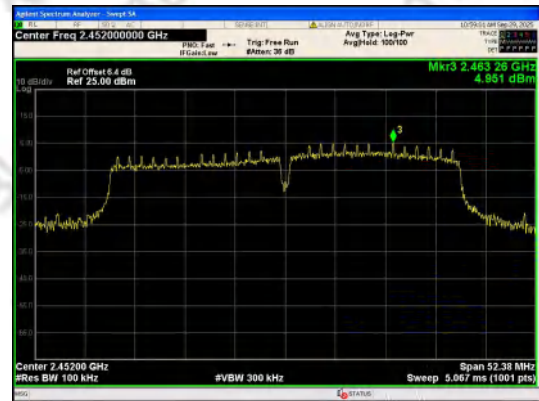
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 3_40MHz_Antenna 0



In-Band Reference Level
IEEE 802.11n_Channel 6_40MHz_Antenna 0



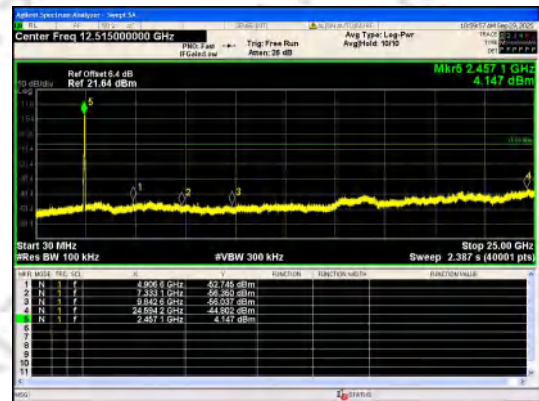
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 6_40MHz_Antenna 0



In-Band Reference Level
IEEE 802.11n_Channel 9_40MHz_Antenna 0



Out Of Band Emission
IEEE 802.11n_Channel 9_40MHz_Antenna 0



30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 9_40MHz_Antenna 0

Radiated Test Data

Radiated Spurious Emission

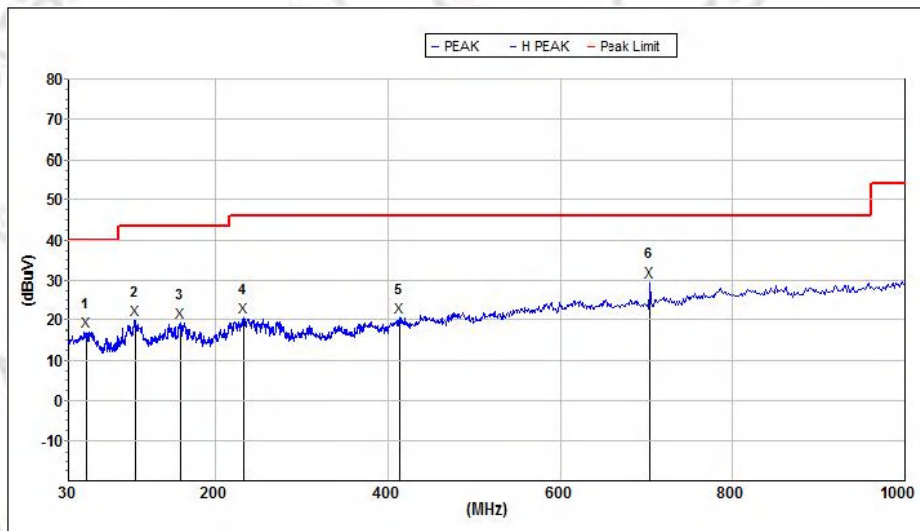
Radiated Emission (9KHz-30MHz)

Note:The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Radiated Emission (30MHz-1GHz)

Note:All modes have been tested, only worst case mode(802.11n20,n40) was recorded in the test report.

Temperature:	26°C	Relative Humidity:	39%
Test Voltage:	AC 120V/60Hz	Phase:	Horizontal
Test Mode:	802.11n20-2412 MHz	Comment:	30MHz-1GHz



Test Summary Result

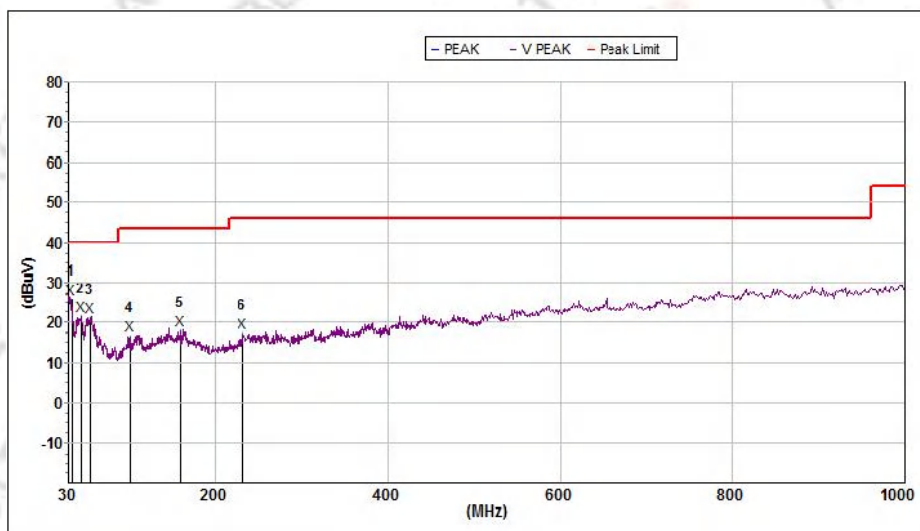
Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Pol.
Peak:							
1	51.301	17.1	40.0	22.9	19.4	30.9	H
2	106.013	20.2	43.5	23.3	15.3	30.9	H
3	159.225	19.5	43.5	24.0	18.6	31.4	H
4	232.940	20.8	46.0	25.2	17.0	32.0	H
5	412.547	20.8	46.0	25.2	21.8	33.0	H
6	704.226	29.8	46.0	16.2	26.8	31.9	H

Note:

1.Margin = Result (Result =Reading + Factor)-Limit

2.Factor= Cable Loss +Antenna Factor-Amplifier Gain

Temperature:	26℃	Relative Humidity:	39%
Test Voltage:	AC 120V/60Hz	Phase:	Vertical
Test Mode:	802.11n20-2412 MHz	Comment:	30MHz-1GHz



Test Summary Result

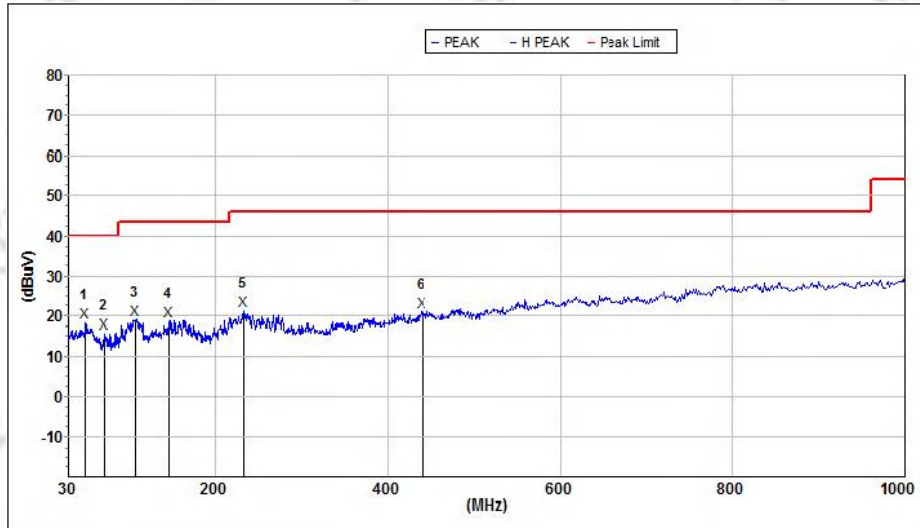
Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Pol.
Peak:							
1	32.406	25.9	40.0	14.1	18.5	31.8	V
2	44.509	21.7	40.0	18.3	19.3	31.4	V
3	55.609	21.4	40.0	18.6	18.7	31.1	V
4	100.229	16.7	43.5	26.8	14.8	30.8	V
5	159.784	18.3	43.5	25.2	18.5	31.4	V
6	232.532	17.5	46.0	28.5	16.9	32.0	V

Note:

1.Margin = Result (Result =Reading + Factor)-Limit

2.Factor= Cable Loss +Antenna Factor-Amplifier Gain

Temperature:	26°C	Relative Humidity:	39%
Test Voltage:	AC 120V/60Hz	Phase:	Horizontal
Test Mode:	802.11n20-2462 MHz	Comment:	30MHz-1GHz



Test Summary Result

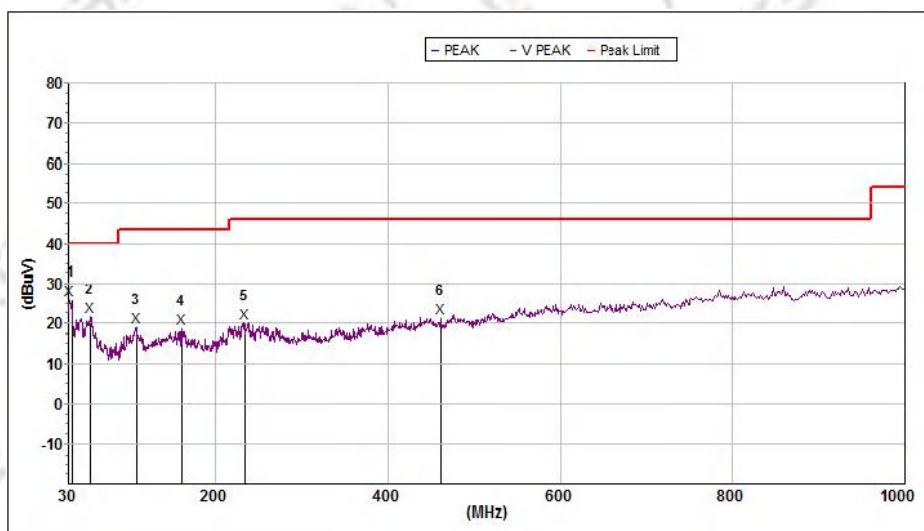
Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Pol.
Peak:							
1	49.881	18.4	40.0	21.6	19.6	30.9	H
2	71.205	15.9	40.0	24.1	16.2	32.9	H
3	106.572	19.2	43.5	24.3	15.4	30.9	H
4	147.145	18.8	43.5	24.7	18.9	31.3	H
5	233.349	21.4	46.0	24.6	17.0	32.0	H
6	440.196	21.2	46.0	24.8	22.6	32.5	H

Note:

1.Margin = Result (Result =Reading + Factor)-Limit

2.Factor= Cable Loss +Antenna Factor-Amplifier Gain

Temperature:	26°C	Relative Humidity:	39%
Test Voltage:	AC 120V/60Hz	Phase:	Vertical
Test Mode:	802.11n20-2462 MHz	Comment:	30MHz-1GHz



Test Summary Result

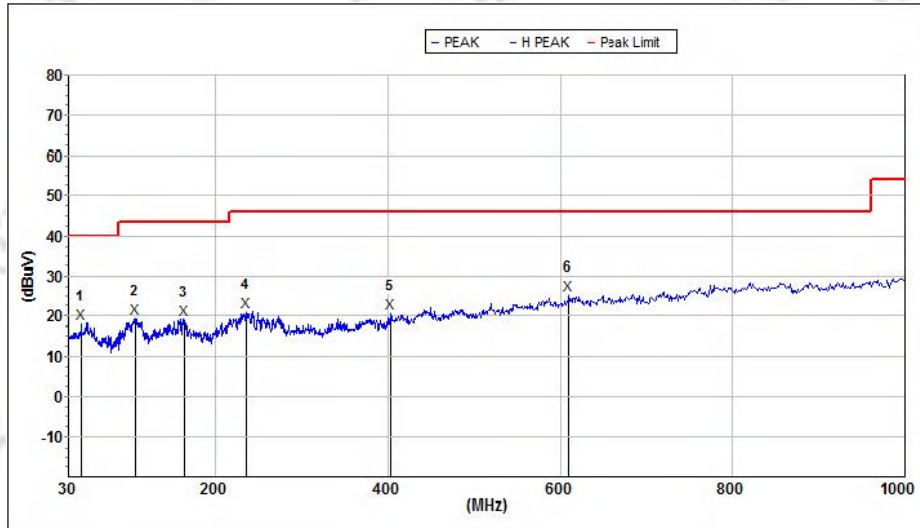
Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Pol.
Peak:							
1	31.899	26.1	40.0	13.9	18.5	31.8	V
2	55.609	21.7	40.0	18.3	18.7	31.1	V
3	107.510	19.1	43.5	24.4	15.5	30.9	V
4	161.191	18.7	43.5	24.8	18.4	31.4	V
5	234.579	20.1	46.0	25.9	17.0	32.0	V
6	461.536	21.5	46.0	24.5	23.0	32.2	V

Note:

1.Margin = Result (Result =Reading + Factor)-Limit

2.Factor= Cable Loss +Antenna Factor-Amplifier Gain

Temperature:	26°C	Relative Humidity:	39%
Test Voltage:	AC 120V/60Hz	Phase:	Horizontal
Test Mode:	802.11n40-2422 MHz	Comment:	30MHz-1GHz



Test Summary Result

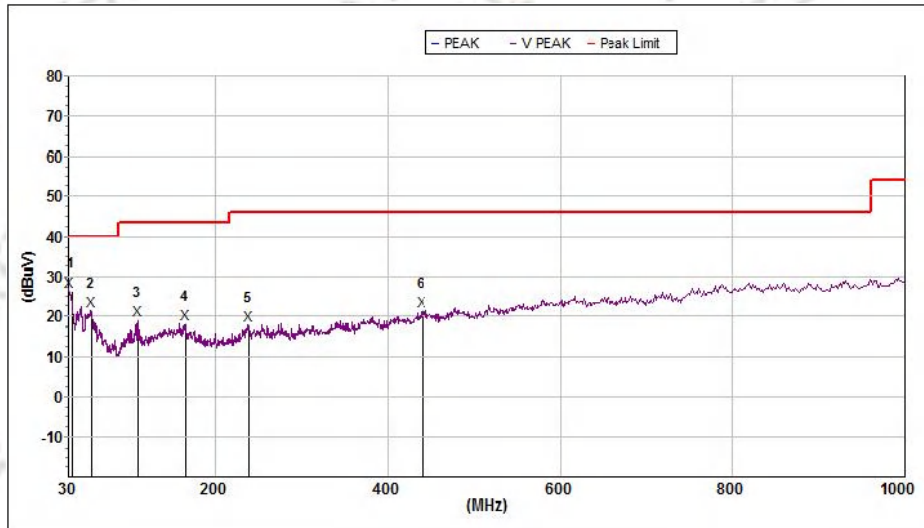
Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Pol.
Peak:							
1	44.979	18.1	40.0	21.9	19.3	31.4	H
2	106.013	19.4	43.5	24.1	15.3	30.9	H
3	164.330	19.3	43.5	24.2	18.2	31.4	H
4	236.230	21.2	46.0	24.8	17.1	32.0	H
5	403.250	20.9	46.0	25.1	21.5	33.1	H
6	609.922	25.5	46.0	20.5	26.1	31.7	H

Note:

1.Margin = Result (Result =Reading + Factor)-Limit

2.Factor= Cable Loss +Antenna Factor-Amplifier Gain

Temperature:	26°C	Relative Humidity:	39%
Test Voltage:	AC 120V/60Hz	Phase:	Vertical
Test Mode:	802.11n40-2422 MHz	Comment:	30MHz-1GHz



Test Summary Result

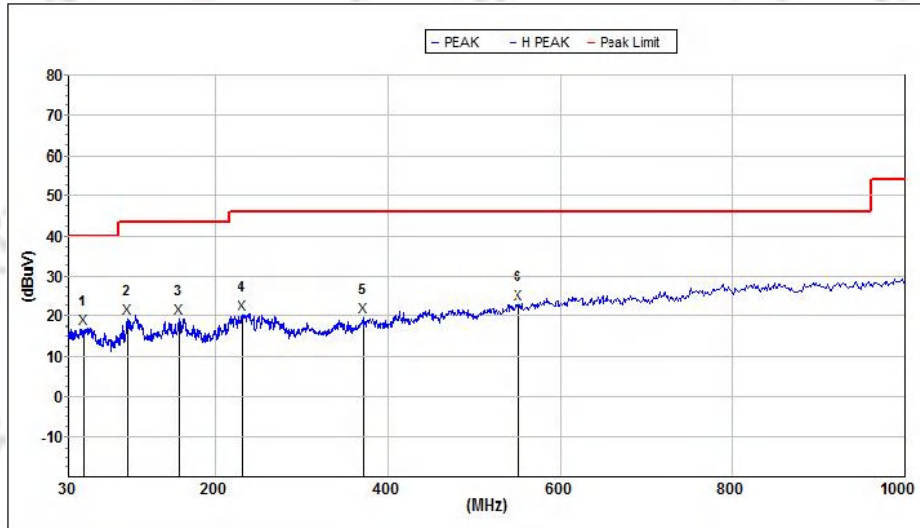
Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Pol.
Peak:							
1	31.454	26.4	40.0	13.6	18.5	31.8	V
2	56.099	21.5	40.0	18.5	18.6	31.1	V
3	109.029	19.3	43.5	24.2	15.6	30.9	V
4	166.068	18.1	43.5	25.4	18.1	31.5	V
5	238.728	17.8	46.0	28.2	17.2	32.0	V
6	439.425	21.5	46.0	24.5	22.6	32.5	V

Note:

1.Margin = Result (Result =Reading + Factor)-Limit

2.Factor= Cable Loss +Antenna Factor-Amplifier Gain

Temperature:	26°C	Relative Humidity:	39%
Test Voltage:	AC 120V/60Hz	Phase:	Horizontal
Test Mode:	802.11n40-2452 MHz	Comment:	30MHz-1GHz



Test Summary Result

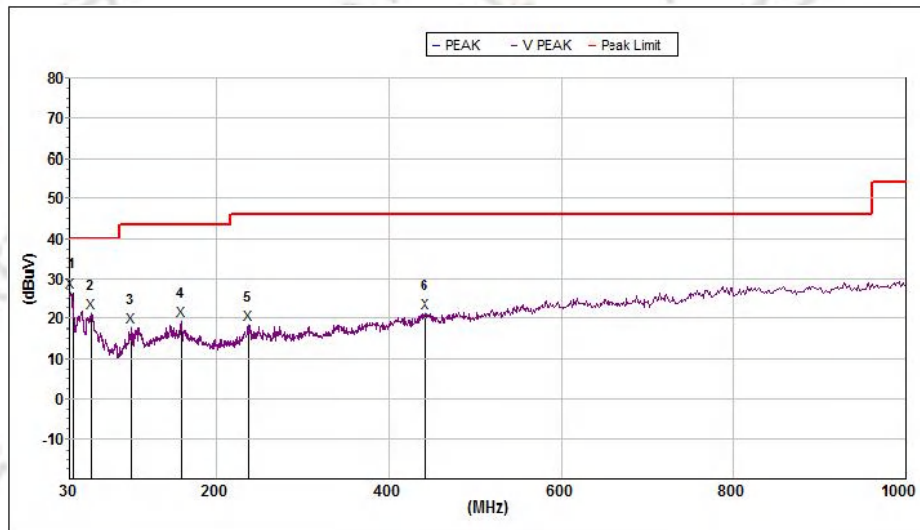
Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Pol.
Peak:							
1	48.417	16.8	40.0	23.2	19.5	31.0	H
2	97.285	19.6	43.5	23.9	14.8	31.0	H
3	158.390	19.4	43.5	24.1	18.6	31.4	H
4	232.532	20.4	46.0	25.6	16.9	32.0	H
5	371.353	19.9	46.0	26.1	20.7	32.9	H
6	551.915	23.2	46.0	22.8	24.7	31.6	H

Note:

1.Margin = Result (Result =Reading + Factor)-Limit

2.Factor= Cable Loss +Antenna Factor-Amplifier Gain

Temperature:	26°C	Relative Humidity:	39%
Test Voltage:	AC 120V/60Hz	Phase:	Vertical
Test Mode:	802.11n40-2452 MHz	Comment:	30MHz-1GHz



Test Summary Result

Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Pol.
Peak:							
1	31.454	26.7	40.0	13.3	18.5	31.8	V
2	55.124	21.5	40.0	18.5	18.8	31.1	V
3	100.229	17.9	43.5	25.6	14.8	30.8	V
4	159.225	19.4	43.5	24.1	18.6	31.4	V
5	238.310	18.6	46.0	27.4	17.2	32.0	V
6	443.294	21.3	46.0	24.7	22.7	32.5	V

Note:

1.Margin = Result (Result =Reading + Factor)-Limit

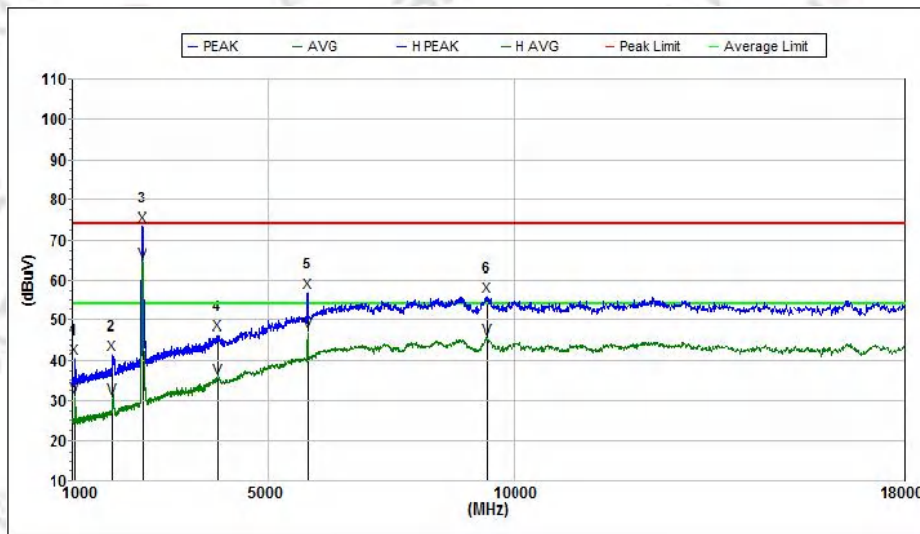
2.Factor= Cable Loss +Antenna Factor-Amplifier Gain

Radiated Emission (Above 1GHz)

Note:

- 1.All modes have been tested, only worst case mode(802.11n20,n40) was recorded in the test report.
- 2.We used the filter to test and the main frequency was filtered out.
- 3.Other 18G-25G Emission detected are more than 20dB below the limit.

Temperature:	26°C	Relative Humidity:	39%
Test Voltage:	AC 120V/60Hz	Phase:	Horizontal
Test Mode:	802.11n20-2412 MHz	Comment:	1GHz-18GHz



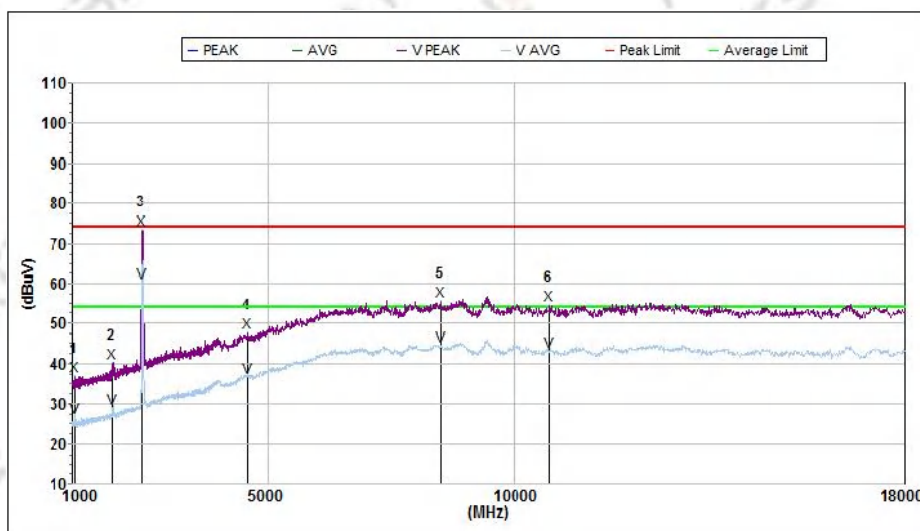
Test Summary Result

Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Pol.
Peak:							
1	1060.000	40.5	74.0	33.5	25.1	53.7	H
2	1817.500	41.7	74.0	32.3	25.2	53.7	H
3	2419.000	73.5	74.0	0.5	27.4	54.1	H
4	3965.500	46.5	74.0	27.5	30.8	53.2	H
5	5792.000	57.1	74.0	16.9	33.6	51.8	H
6	9467.000	56.1	74.0	17.9	38.1	52.2	H
Avg:							
1	1060.000	31.0	54.0	23.0	25.1	53.7	H
2	1817.500	30.6	54.0	23.4	25.2	53.7	H
3	2419.000	64.5	54.0	-10.5	27.4	54.1	H
4	3965.500	35.8	54.0	18.2	30.8	53.2	H
5	5792.000	47.1	54.0	6.9	33.6	51.8	H
6	9467.000	45.4	54.0	8.6	38.1	52.2	H

Note:

- 1.Margin = Result (Result =Reading + Factor)-Limit
- 2.Factor= Cable Loss +Antenna Factor-Amplifier Gain

Temperature:	26°C	Relative Humidity:	39%
Test Voltage:	AC 120V/60Hz	Phase:	Vertical
Test Mode:	802.11n20-2412 MHz	Comment:	1GHz-18GHz



Test Summary Result

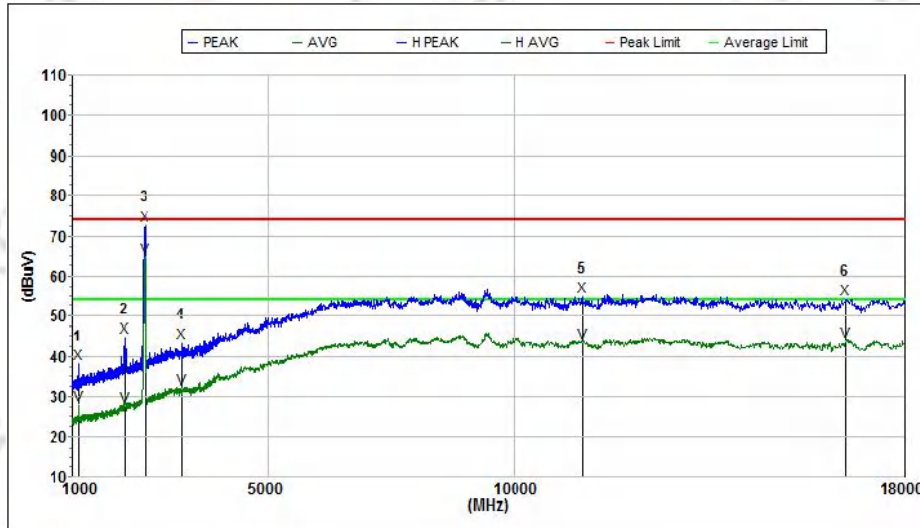
Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Pol.
Peak:							
1	1061.500	37.1	74.0	36.9	25.1	53.7	V
2	1817.500	40.3	74.0	33.7	25.2	53.7	V
3	2404.000	73.6	74.0	0.4	27.4	54.1	V
4	4588.000	47.8	74.0	26.2	31.9	52.9	V
5	8529.000	55.7	74.0	18.3	37.4	52.3	V
6	10741.000	54.8	74.0	19.2	38.5	51.8	V
Avg:							
1	1061.500	26.9	54.0	27.1	25.1	53.7	V
2	1817.500	29.1	54.0	24.9	25.2	53.7	V
3	2404.000	60.4	54.0	-6.4	27.4	54.1	V
4	4588.000	36.6	54.0	17.4	31.9	52.9	V
5	8529.000	44.5	54.0	9.5	37.4	52.3	V
6	10741.000	43.2	54.0	10.8	38.5	51.8	V

Note:

1.Margin = Result (Result =Reading + Factor)-Limit

2.Factor= Cable Loss +Antenna Factor-Amplifier Gain

Temperature:	26°C	Relative Humidity:	39%
Test Voltage:	AC 120V/60Hz	Phase:	Horizontal
Test Mode:	802.11n20-2462 MHz	Comment:	1GHz-18GHz



Test Summary Result

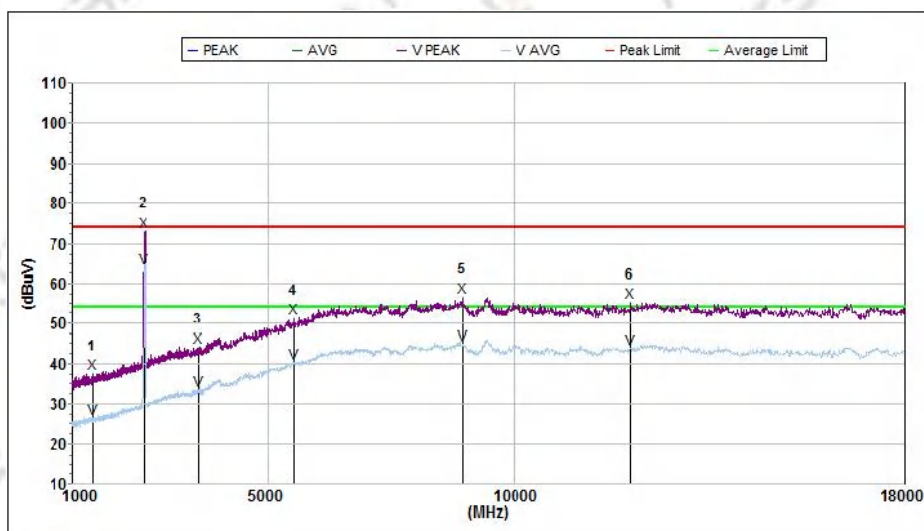
Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Pol.
Peak:							
1	1135.000	38.4	74.0	35.6	25.4	53.6	H
2	2062.000	45.0	74.0	29.0	26.6	53.9	H
3	2470.000	72.8	74.0	1.2	27.5	54.1	H
4	3239.500	43.5	74.0	30.5	29.4	54.0	H
5	11399.000	55.0	74.0	19.0	38.8	51.7	H
6	16782.000	54.5	74.0	19.5	38.9	50.8	H
Avg:							
1	1135.000	28.1	54.0	25.9	25.4	53.6	H
2	2062.000	27.7	54.0	26.3	26.6	53.9	H
3	2470.000	64.5	54.0	-10.5	27.5	54.1	H
4	3239.500	32.1	54.0	21.9	29.4	54.0	H
5	11399.000	43.7	54.0	10.3	38.8	51.7	H
6	16782.000	44.0	54.0	10.0	38.9	50.8	H

Note:

1.Margin = Result (Result =Reading + Factor)-Limit

2.Factor= Cable Loss +Antenna Factor-Amplifier Gain

Temperature:	26°C	Relative Humidity:	39%
Test Voltage:	AC 120V/60Hz	Phase:	Vertical
Test Mode:	802.11n20-2462 MHz	Comment:	1GHz-18GHz



Test Summary Result

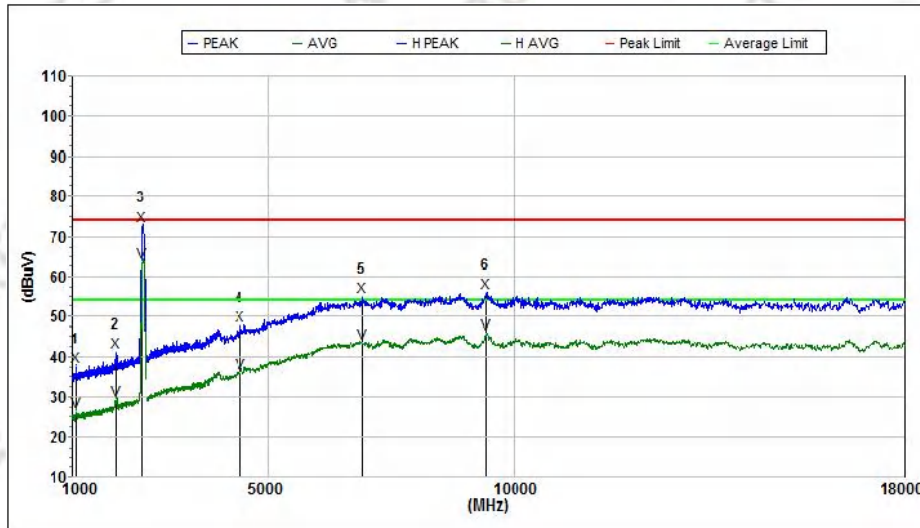
Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Pol.
Peak:							
1	1411.000	37.6	74.0	36.4	25.5	53.5	V
2	2455.000	73.2	74.0	0.8	27.5	54.1	V
3	3559.000	44.2	74.0	29.8	29.7	53.7	V
4	5526.000	51.5	74.0	22.5	33.0	52.3	V
5	8970.000	56.7	74.0	17.3	37.9	52.5	V
6	12400.000	55.4	74.0	18.6	39.3	51.6	V
Avg:							
1	1411.000	26.3	54.0	27.7	25.5	53.5	V
2	2455.000	64.1	54.0	-10.1	27.5	54.1	V
3	3559.000	33.3	54.0	20.7	29.7	53.7	V
4	5526.000	40.1	54.0	13.9	33.0	52.3	V
5	8970.000	44.8	54.0	9.2	37.9	52.5	V
6	12400.000	44.0	54.0	10.0	39.3	51.6	V

Note:

1.Margin = Result (Result =Reading + Factor)-Limit

2.Factor= Cable Loss +Antenna Factor-Amplifier Gain

Temperature:	26°C	Relative Humidity:	39%
Test Voltage:	AC 120V/60Hz	Phase:	Horizontal
Test Mode:	802.11n40-2422 MHz	Comment:	1GHz-18GHz



Test Summary Result

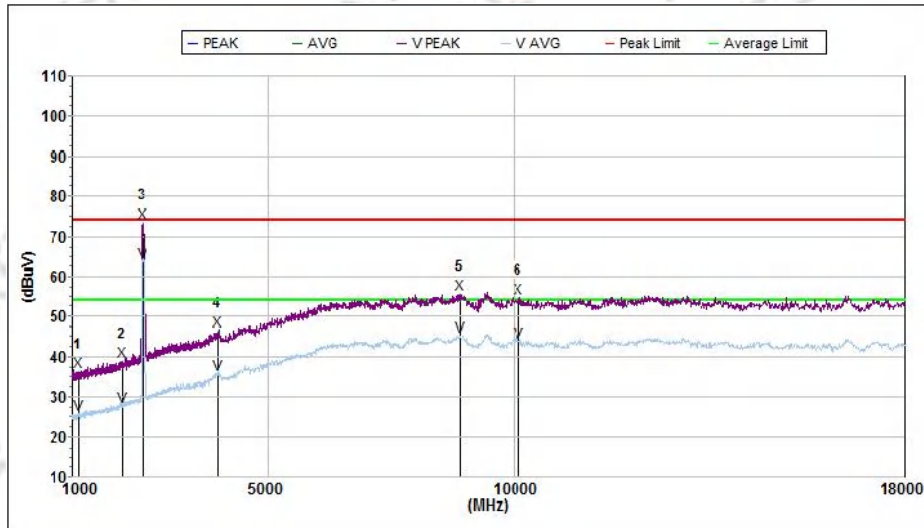
Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Pol.
Peak:							
1	1082.500	37.6	74.0	36.4	25.2	53.7	H
2	1891.000	41.1	74.0	32.9	25.7	53.8	H
3	2405.500	72.9	74.0	1.1	27.4	54.1	H
4	4434.000	47.7	74.0	26.3	31.5	53.0	H
5	6926.000	55.0	74.0	19.0	35.9	51.7	H
6	9446.000	56.2	74.0	17.8	38.1	52.2	H
Avg:							
1	1082.500	26.3	54.0	27.7	25.2	53.7	H
2	1891.000	29.4	54.0	24.6	25.7	53.8	H
3	2405.500	63.6	54.0	-9.6	27.4	54.1	H
4	4434.000	36.0	54.0	18.0	31.5	53.0	H
5	6926.000	43.5	54.0	10.5	35.9	51.7	H
6	9446.000	45.7	54.0	8.3	38.1	52.2	H

Note:

1.Margin = Result (Result =Reading + Factor)-Limit

2.Factor= Cable Loss +Antenna Factor-Amplifier Gain

Temperature:	26°C	Relative Humidity:	39%
Test Voltage:	AC 120V/60Hz	Phase:	Vertical
Test Mode:	802.11n40-2422 MHz	Comment:	1GHz-18GHz



Test Summary Result

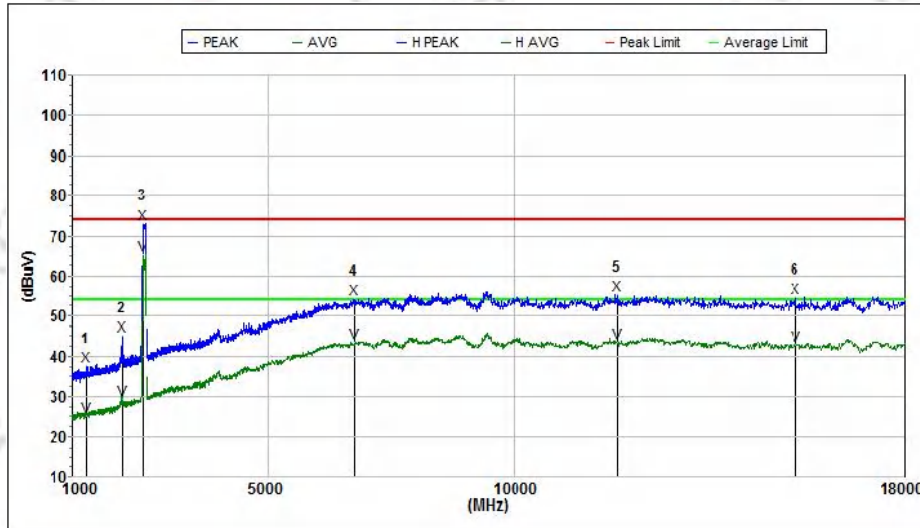
Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Pol.
Peak:							
1	1129.000	36.4	74.0	37.6	25.4	53.6	V
2	2009.500	38.9	74.0	35.1	26.5	53.9	V
3	2416.000	73.4	74.0	0.6	27.4	54.1	V
4	3961.000	46.5	74.0	27.5	30.8	53.2	V
5	8907.000	55.6	74.0	18.4	37.8	52.5	V
6	10104.000	54.7	74.0	19.3	38.4	51.9	V
Avg:							
1	1129.000	25.8	54.0	28.2	25.4	53.6	V
2	2009.500	27.9	54.0	26.1	26.5	53.9	V
3	2416.000	63.6	54.0	-9.6	27.4	54.1	V
4	3961.000	35.7	54.0	18.3	30.8	53.2	V
5	8907.000	45.1	54.0	8.9	37.8	52.5	V
6	10104.000	44.0	54.0	10.0	38.4	51.9	V

Note:

1.Margin = Result (Result =Reading + Factor)-Limit

2.Factor= Cable Loss +Antenna Factor-Amplifier Gain

Temperature:	26°C	Relative Humidity:	39%
Test Voltage:	AC 120V/60Hz	Phase:	Horizontal
Test Mode:	802.11n40-2452 MHz	Comment:	1GHz-18GHz



Test Summary Result

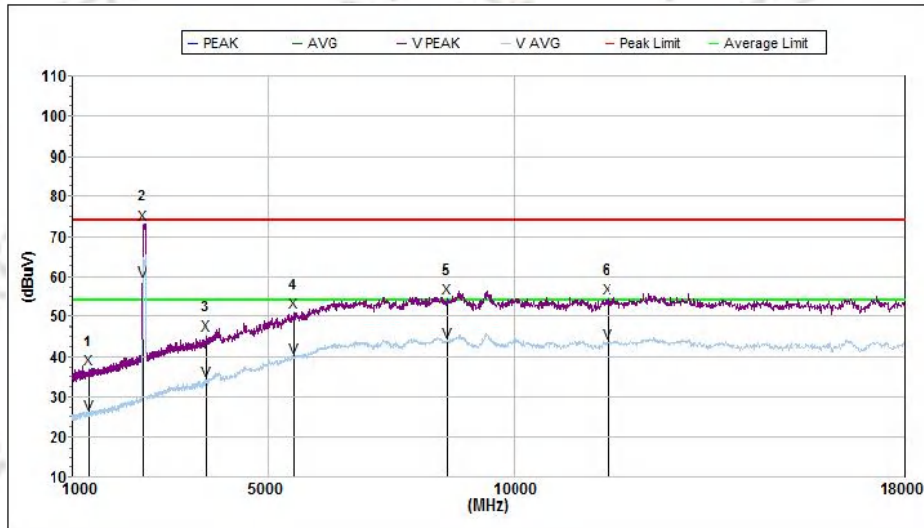
Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Pol.
Peak:							
1	1276.000	37.6	74.0	36.4	25.6	53.5	H
2	2008.000	45.1	74.0	28.9	26.5	53.9	H
3	2437.000	73.3	74.0	0.7	27.5	54.1	H
4	6765.000	54.3	74.0	19.7	35.7	51.7	H
5	12127.000	55.4	74.0	18.6	39.1	51.6	H
6	15767.000	54.9	74.0	19.1	38.6	51.4	H
Avg:							
1	1276.000	25.2	54.0	28.8	25.6	53.5	H
2	2008.000	29.4	54.0	24.6	26.5	53.9	H
3	2437.000	65.2	54.0	-11.2	27.5	54.1	H
4	6765.000	43.4	54.0	10.6	35.7	51.7	H
5	12127.000	43.5	54.0	10.5	39.1	51.6	H
6	15767.000	43.0	54.0	11.0	38.6	51.4	H

Note:

1.Margin = Result (Result =Reading + Factor)-Limit

2.Factor= Cable Loss +Antenna Factor-Amplifier Gain

Temperature:	26°C	Relative Humidity:	39%
Test Voltage:	AC 120V/60Hz	Phase:	Vertical
Test Mode:	802.11n40-2452 MHz	Comment:	1GHz-18GHz



Test Summary Result

Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Pol.
Peak:							
1	1334.500	37.1	74.0	36.9	25.6	53.5	V
2	2434.000	73.3	74.0	0.7	27.5	54.1	V
3	3721.000	45.5	74.0	28.5	30.1	53.5	V
4	5512.000	51.2	74.0	22.8	32.9	52.3	V
5	8655.000	54.9	74.0	19.1	37.6	52.3	V
6	11938.000	54.8	74.0	19.2	39.0	51.6	V
Avg:							
1	1334.500	25.7	54.0	28.3	25.6	53.5	V
2	2434.000	59.1	54.0	-5.1	27.5	54.1	V
3	3721.000	33.9	54.0	20.1	30.1	53.5	V
4	5512.000	40.0	54.0	14.0	32.9	52.3	V
5	8655.000	43.8	54.0	10.2	37.6	52.3	V
6	11938.000	43.7	54.0	10.3	39.0	51.6	V

Note:

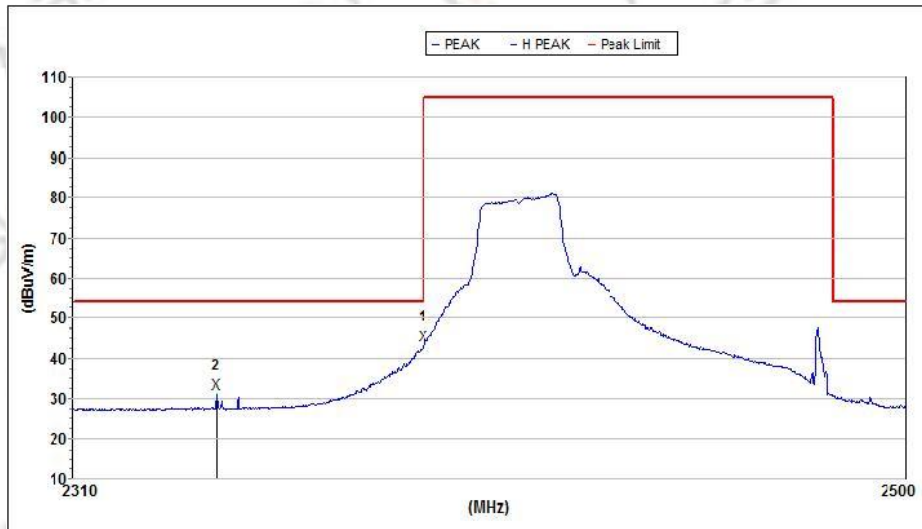
1.Margin = Result (Result =Reading + Factor)-Limit

2.Factor= Cable Loss +Antenna Factor-Amplifier Gain

Note: During the test, pre-scan 802.11b, 802.11g, 802.11n20, 802.11n40 mode, found 802.11n20 & 802.11n40 was worse case mode. The report only reflects the test data of worst mode.

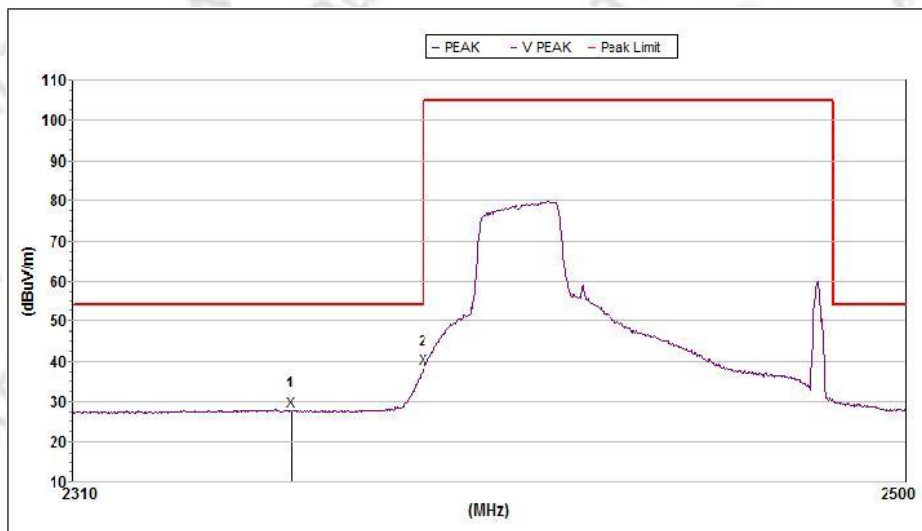
Test Mode: 802.11n20

Test Channel: Lowest channel, Test Polarization: Horizontal



Mk.	Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Pol.
AVG							
1	2390.000	43.4	54.0	10.6	27.4	54.1	H
2	2342.916	31.4	54.0	22.6	27.3	54.0	H

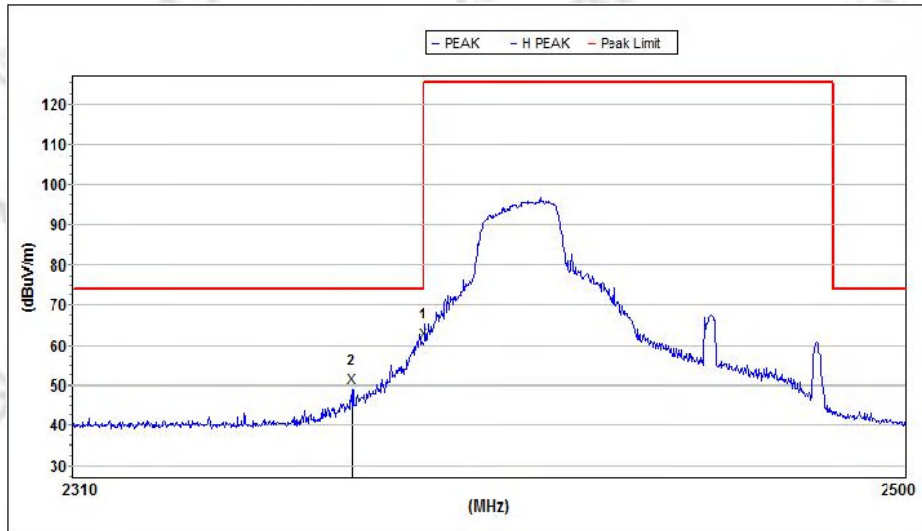
Test Channel: Lowest channel, Test Polarization: Vertical



Mk.	Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Pol.
AVG							
1	2360.000	27.6	54.0	26.4	27.3	54.0	V
2	2390.000	38.4	54.0	15.6	27.4	54.1	V

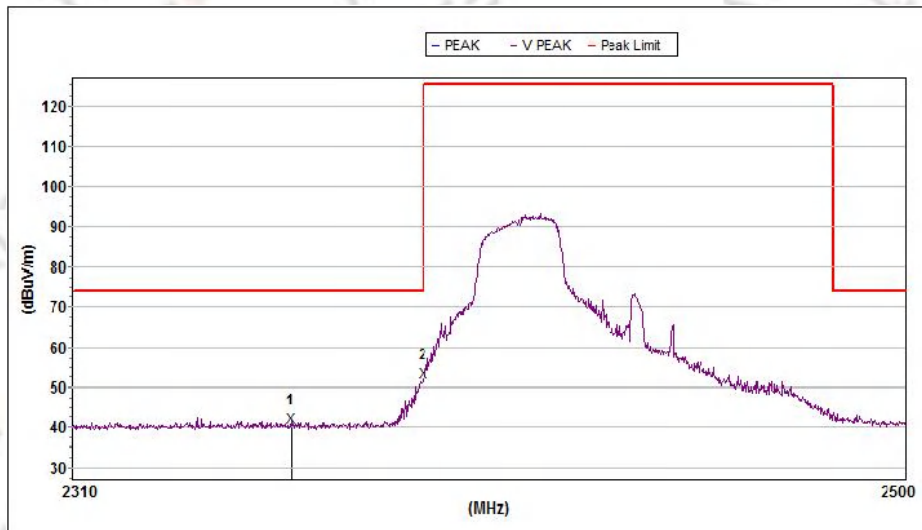
Test Mode: 802.11n20

Test Channel: Lowest channel, Test Polarization: Horizontal



Mk.	Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Pol.
PEAK							
1	2390.000	60.9	74.0	13.1	27.4	54.1	H
2	2373.860	49.4	74.0	24.6	27.3	54.0	H

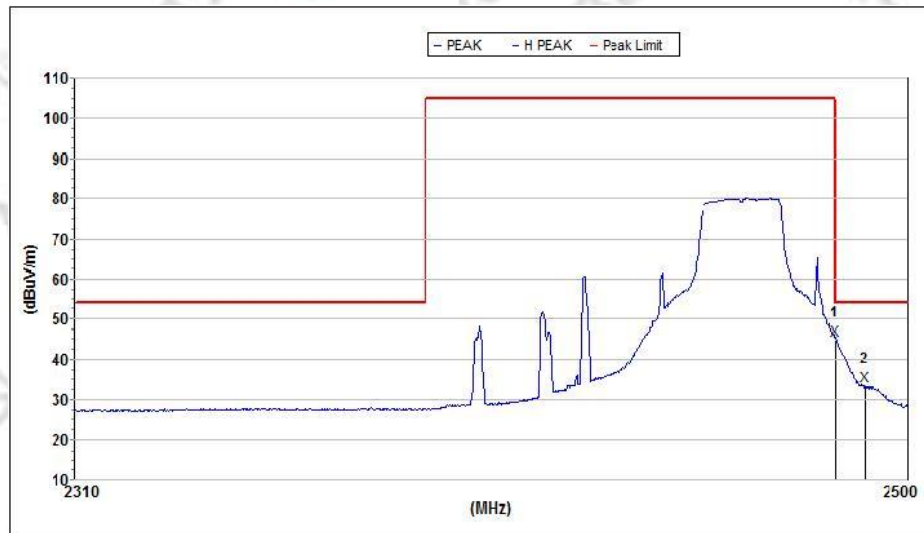
Test Channel: Lowest channel, Test Polarization: Vertical



Mk.	Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Pol.
PEAK							
1	2360.000	40.0	74.0	34.0	27.3	54.0	V
2	2390.000	51.2	74.0	22.8	27.4	54.1	V

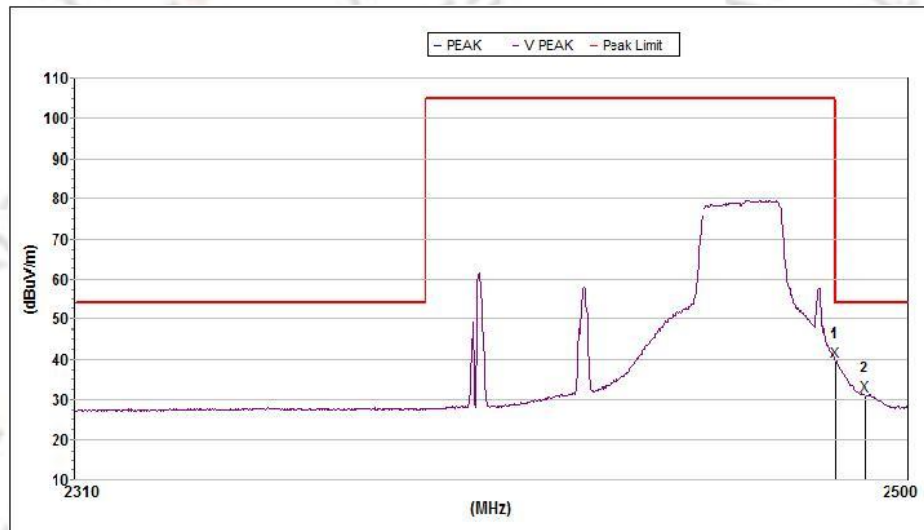
Test Mode: 802.11n20

Test Channel: Highest channel, Test Polarization: Horizontal



Mk.	Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Pol.
AVG							
1	2483.600	44.9	54.0	9.1	27.6	54.1	H
2	2490.000	33.3	54.0	20.7	27.6	54.1	H

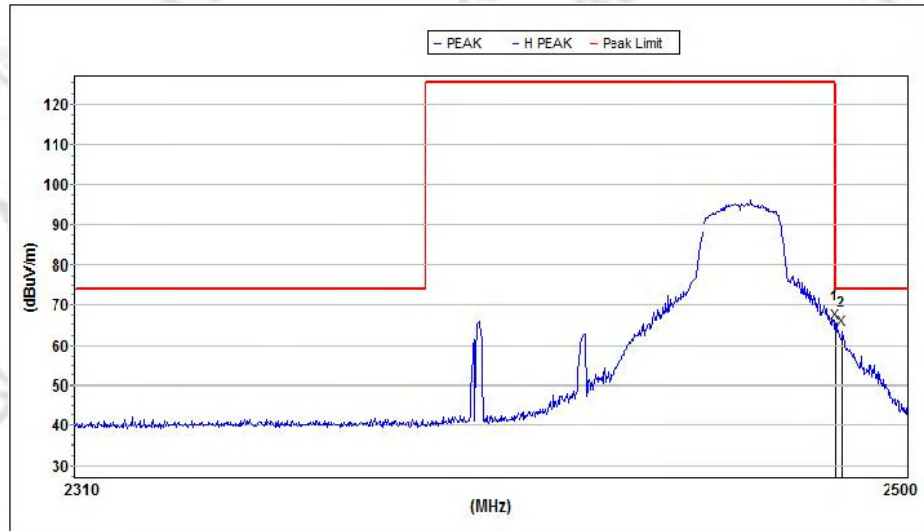
Test Channel: Highest channel, Test Polarization: Vertical



Mk.	Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Pol.
AVG							
1	2483.600	39.6	54.0	14.4	27.6	54.1	V
2	2490.000	31.0	54.0	23.0	27.6	54.1	V

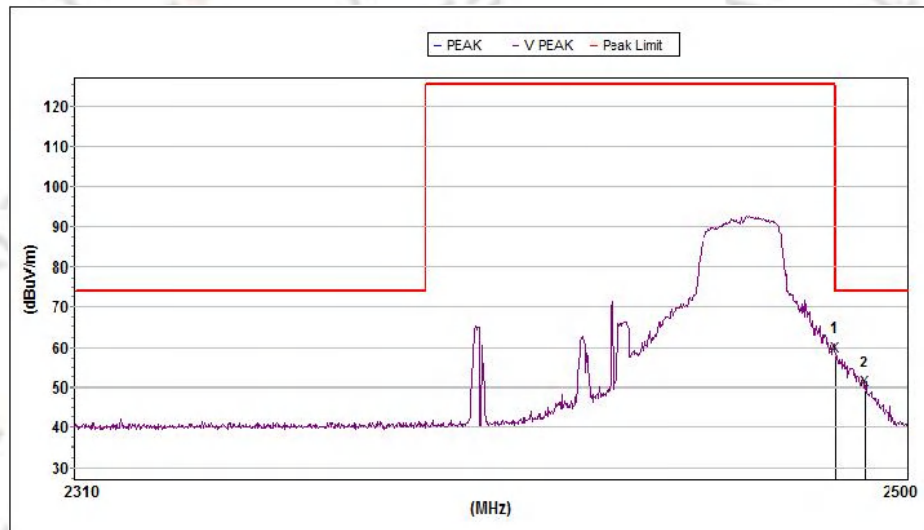
Test Mode: 802.11n20

Test Channel: Highest channel, Test Polarization: Horizontal



Mk.	Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Pol.
PEAK							
1	2483.600	65.6	74.0	8.4	27.6	54.1	H
2	2485.027	63.8	74.0	10.2	27.6	54.1	H

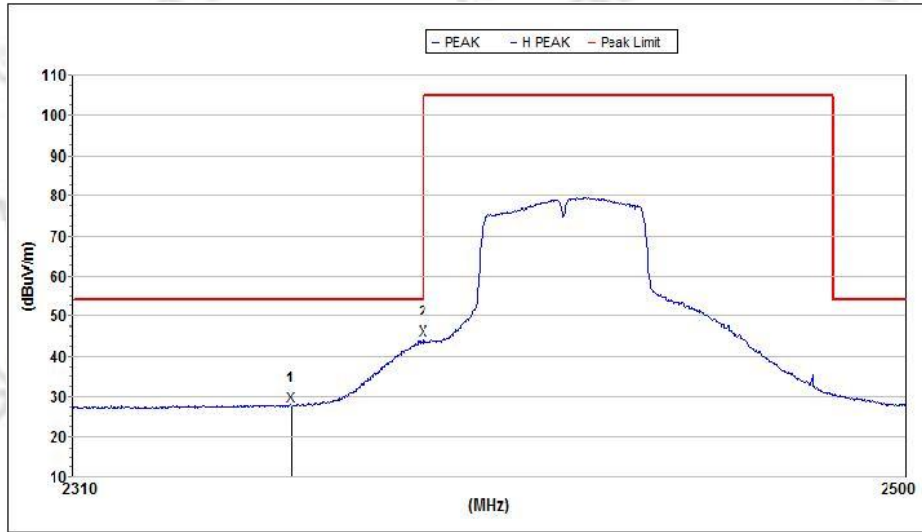
Test Channel: Highest channel, Test Polarization: Vertical



Mk.	Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Pol.
PEAK							
1	2483.600	57.8	74.0	16.2	27.6	54.1	V
2	2490.000	49.5	74.0	24.5	27.6	54.1	V

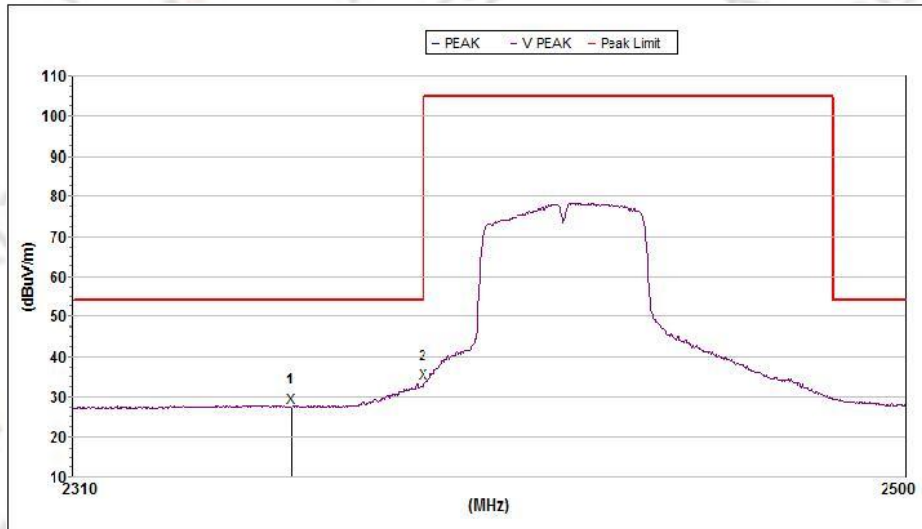
Test Mode: 802.11n40

Test Channel: Lowest channel, Test Polarization: Horizontal



Mk.	Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Pol.
AVG							
1	2360.000	27.7	54.0	26.3	27.3	54.0	H
2	2390.000	44.2	54.0	9.8	27.4	54.1	H

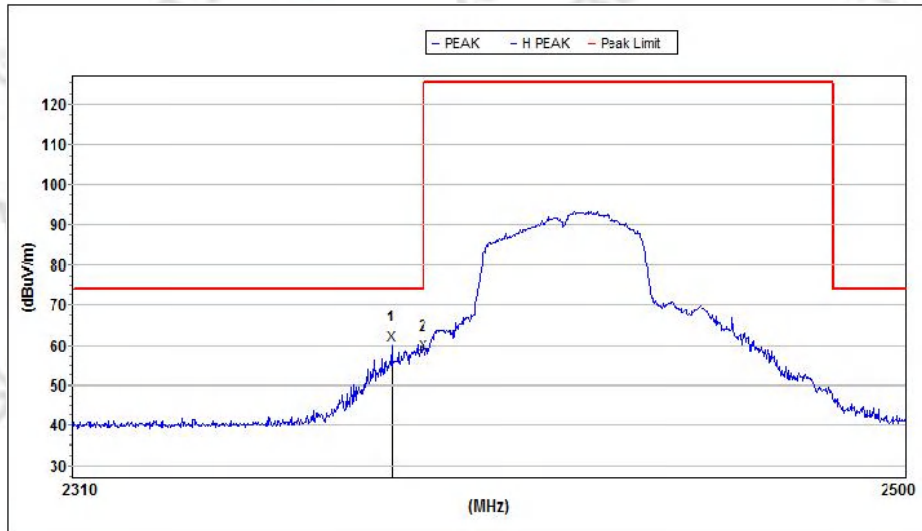
Test Channel: Lowest channel, Test Polarization: Vertical



Mk.	Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Pol.
AVG							
1	2360.000	27.4	54.0	26.6	27.3	54.0	V
2	2390.000	33.2	54.0	20.8	27.4	54.1	V

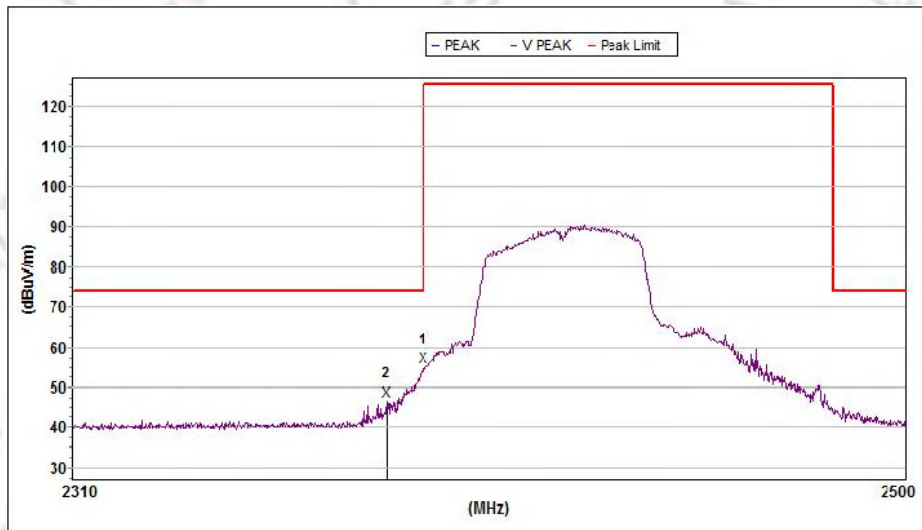
Test Mode: 802.11n40

Test Channel: Lowest channel, Test Polarization: Horizontal



Mk.	Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Pol.
PEAK							
1	2382.696	60.1	74.0	13.9	27.4	54.1	H
2	2390.000	57.8	74.0	16.2	27.4	54.1	H

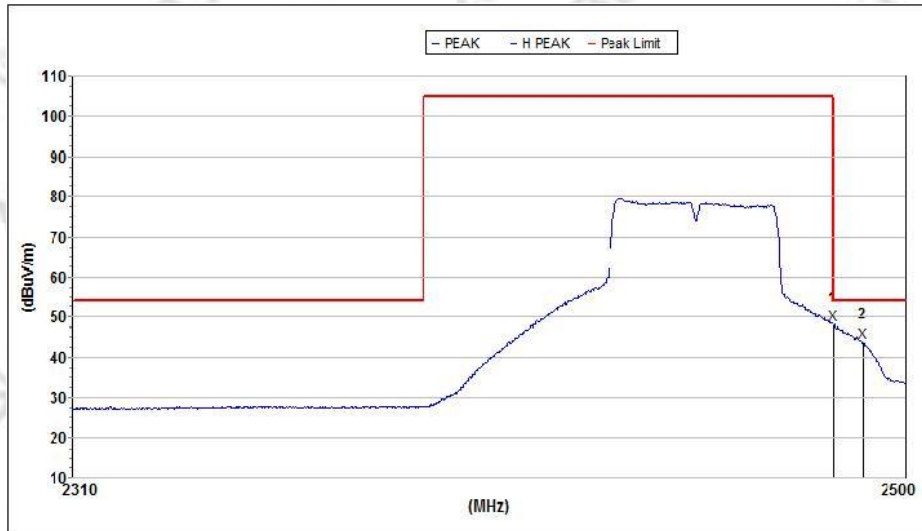
Test Channel: Lowest channel, Test Polarization: Vertical



Mk.	Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Pol.
PEAK							
1	2390.000	55.2	74.0	18.8	27.4	54.1	V
2	2381.566	46.9	74.0	27.1	27.3	54.1	V

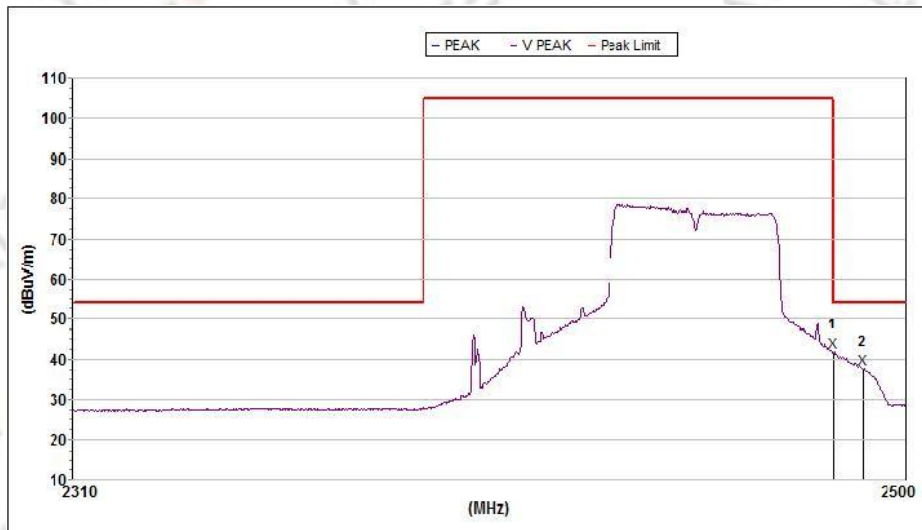
Test Mode: 802.11n40

Test Channel: Highest channel, Test Polarization: Horizontal



Mk.	Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Pol.
AVG							
1	2483.600	48.1	54.0	5.9	27.6	54.1	H
2	2490.000	43.8	54.0	10.2	27.6	54.1	H

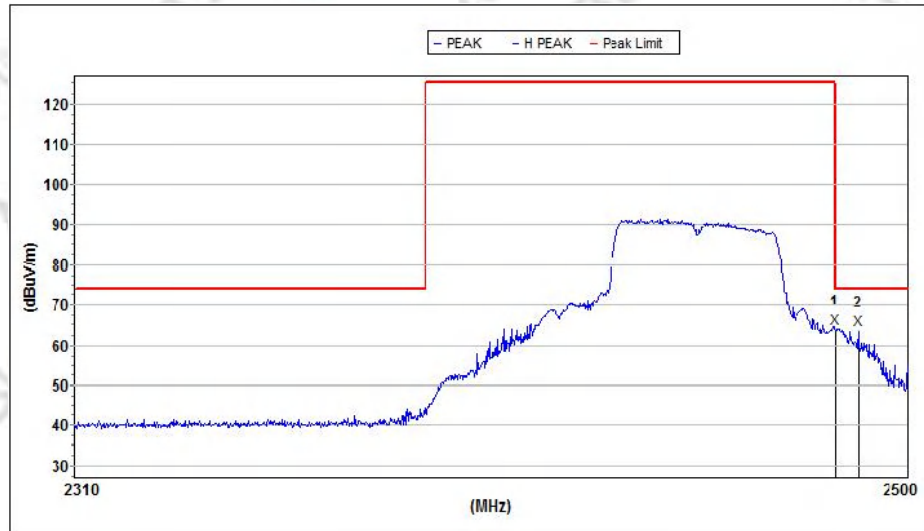
Test Channel: Highest channel, Test Polarization: Vertical



Mk.	Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Pol.
AVG							
1	2483.600	42.0	54.0	12.0	27.6	54.1	V
2	2490.000	37.5	54.0	16.5	27.6	54.1	V

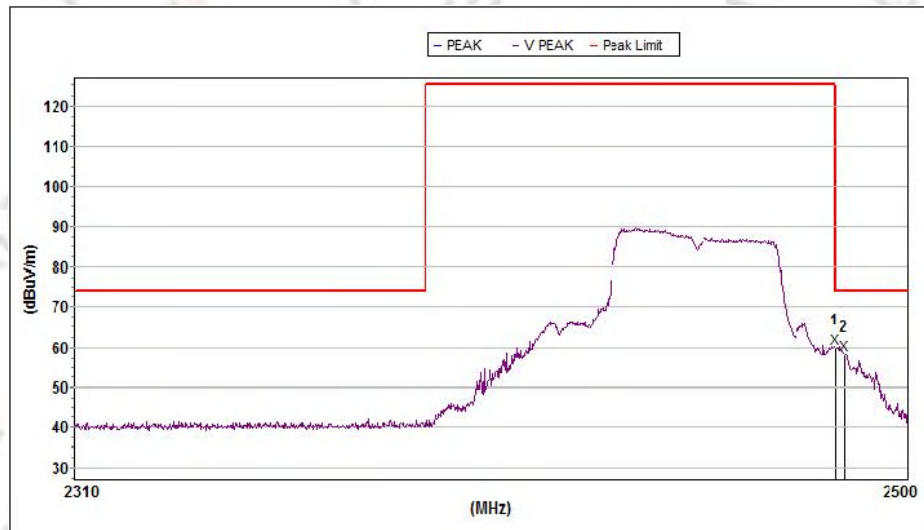
Test Mode: 802.11n40

Test Channel: Highest channel, Test Polarization: Horizontal



Mk.	Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Pol.
PEAK							
1	2483.600	64.2	74.0	9.8	27.6	54.1	H
2	2488.565	63.7	74.0	10.3	27.6	54.1	H

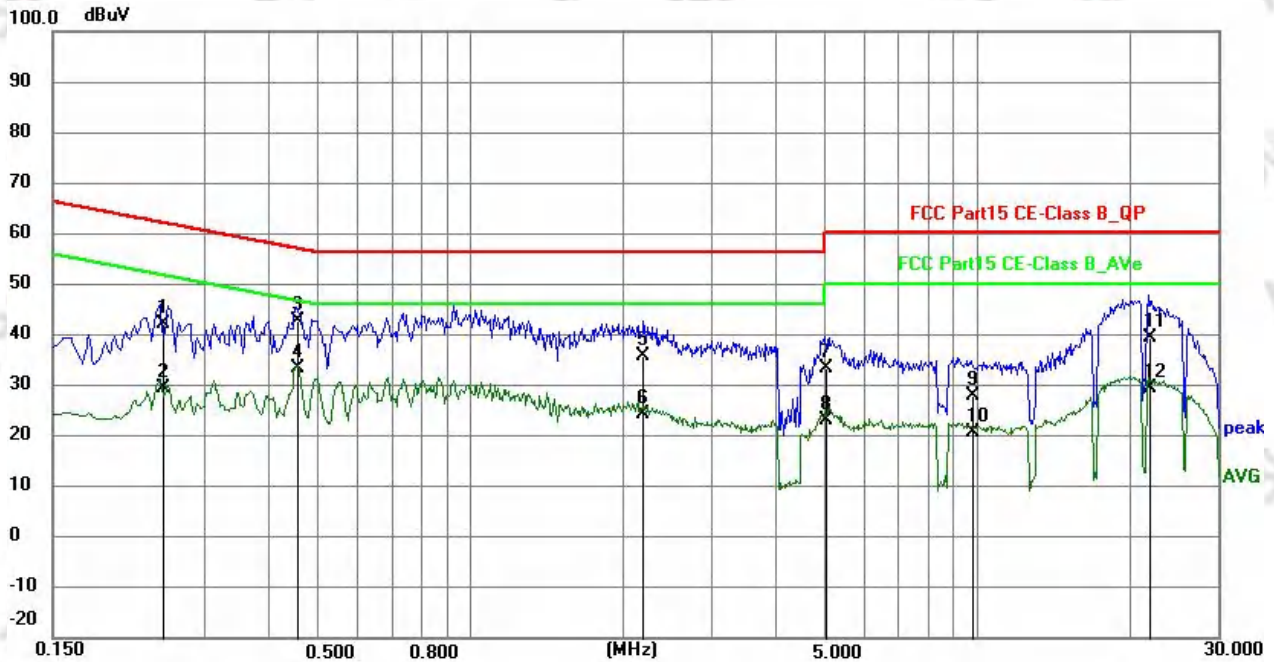
Test Channel: Highest channel, Test Polarization: Vertical



Mk.	Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Pol.
PEAK							
1	2483.600	60.0	74.0	14.0	27.6	54.1	V
2	2485.420	58.2	74.0	15.8	27.6	54.1	V

AC Power-Line Conducted Emission Test Data

Temperature:	24℃	Relative Humidity:	40%
Phase:	L	Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz	Test Date:	2025.09.25

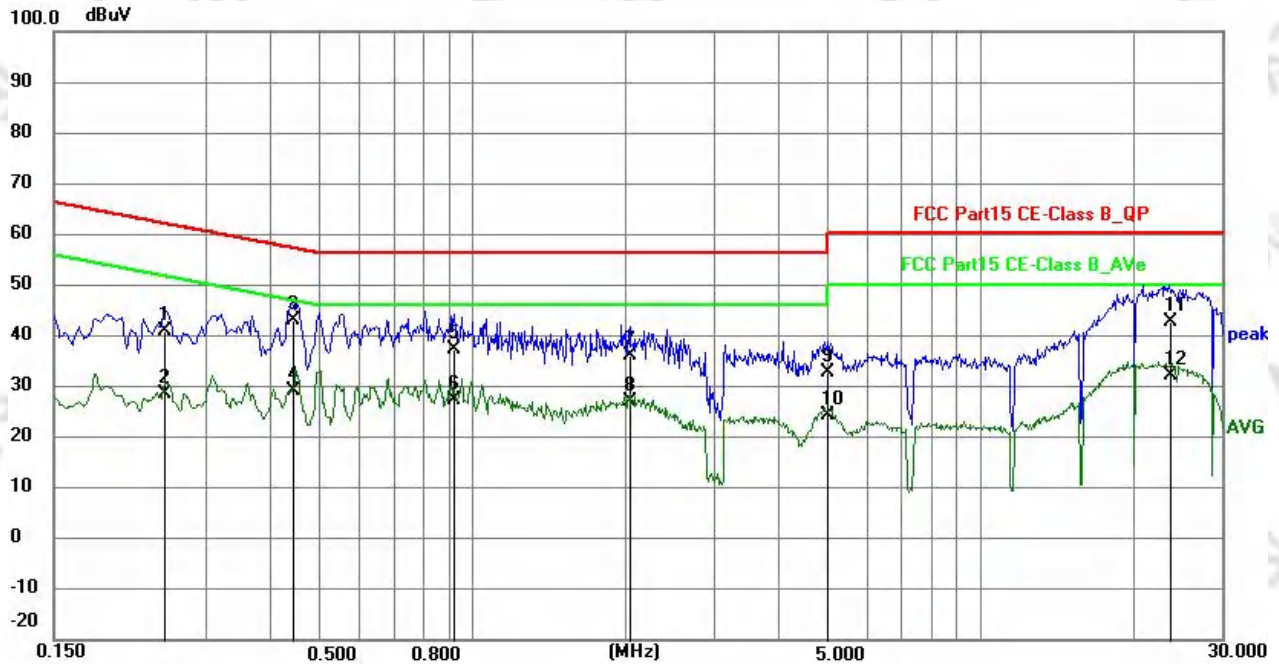


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.2470	31.47	10.56	42.03	61.86	-19.83	QP
2	0.2470	19.00	10.56	29.56	51.86	-22.30	AVG
3	0.4570	32.20	10.41	42.61	56.75	-14.14	QP
4	0.4570	22.98	10.41	33.39	46.75	-13.36	AVG
5	2.1950	25.24	10.49	35.73	56.00	-20.27	QP
6	2.1950	13.93	10.49	24.42	46.00	-21.58	AVG
7	5.0480	22.68	10.54	33.22	60.00	-26.78	QP
8	5.0480	12.41	10.54	22.95	50.00	-27.05	AVG
9	9.7680	17.18	10.81	27.99	60.00	-32.01	QP
10	9.7680	9.80	10.81	20.61	50.00	-29.39	AVG
11	22.0340	25.35	13.97	39.32	60.00	-20.68	QP
12	22.0340	15.35	13.97	29.32	50.00	-20.68	AVG

Remark:

1. Margin = Result (Result =Reading + Factor)–Limit
2. Factor= Cable Loss +Antenna Factor–Amplifier Gain

Temperature:	24℃	Relative Humidity:	40%
Phase:	N	Test Mode:	Mode 1
Test Voltage:	AC 120V/60Hz	Test Date:	2025.09.25



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.2480	30.46	10.55	41.01	61.82	-20.81	QP
2	0.2480	18.10	10.55	28.65	51.82	-23.17	AVG
3	0.4430	32.47	10.41	42.88	57.01	-14.13	QP
4	0.4430	18.66	10.41	29.07	47.01	-17.94	AVG
5	0.9220	26.77	10.40	37.17	56.00	-18.83	QP
6	0.9220	16.98	10.40	27.38	46.00	-18.62	AVG
7	2.0420	25.48	10.48	35.96	56.00	-20.04	QP
8	2.0420	16.50	10.48	26.98	46.00	-19.02	AVG
9	5.0210	22.06	10.60	32.66	60.00	-27.34	QP
10	5.0210	13.55	10.60	24.15	50.00	-25.85	AVG
11	23.6970	28.54	14.32	42.86	60.00	-17.14	QP
12	23.6970	17.67	14.32	31.99	50.00	-18.01	AVG

Remark:

1. Margin = Result (Result = Reading + Factor) – Limit
2. Factor= Cable Loss +Antenna Factor-Amplifier Gain

.*****END OF THE Appendix A3*****