

Appendix A1

2.4G WiFi Test Data

Conducted Test Data

Conducted Output Power

Test Result

Mode	Channel	Peak Output Power (dBm)	Peak Output Power Limit(dBm)	EIRP (dBm)	EIRP Limit (dBm)	Result
IEEE 802.11b	1	7.96	≤30	12.83	≤36	PASS
	6	8.49	≤30	13.36	≤36	PASS
	11	8.54	≤30	13.41	≤36	PASS
IEEE 802.11g	1	8.62	≤30	13.49	≤36	PASS
	6	8.13	≤30	13.00	≤36	PASS
	11	7.53	≤30	12.40	≤36	PASS
IEEE 802.11n_20	1	8.65	≤30	13.52	≤36	PASS
	6	7.62	≤30	12.49	≤36	PASS
	11	8.31	≤30	13.18	≤36	PASS
IEEE 802.11n_40	3	7.71	≤30	12.58	≤36	PASS
	6	7.87	≤30	12.74	≤36	PASS
	9	8.43	≤30	13.30	≤36	PASS

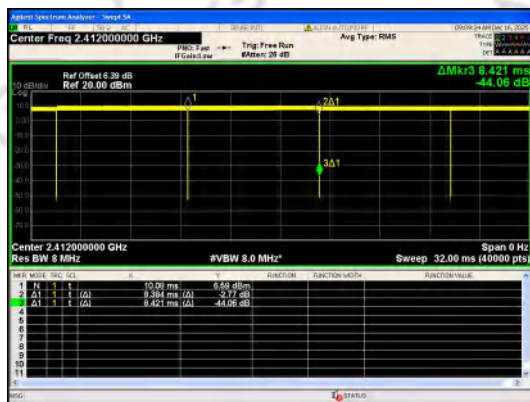
Note: $EIRP = P_{out} + G_{ant}$, where P_{out} is the conducted output power (i.e., the Peak Output Power in the table), and G_{ant} is the antenna gain equal to 4.87 dBi.

Duty Cycle

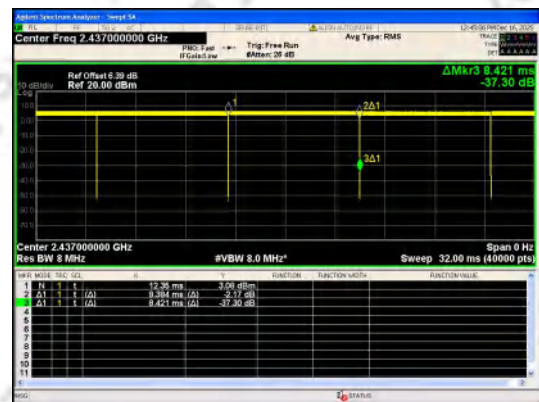
Test Result

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		8.385	8.422	99.56	0.9956	0.0192	0.1193
IEEE 802.11g	6	1		1.396	1.437	97.14	0.9714	0.126	0.7163
		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	1.346	96.88	0.9688	0.1377	0.7669
		6		1.304	1.345	96.95	0.9695	0.1345	0.7669
		11		1.304	1.345	96.95	0.9695	0.1345	0.7669
IEEE 802.11n_40		3		0.650	0.693	93.84	0.9384	0.2761	1.5385
		6		0.650	0.692	93.84	0.9384	0.2761	1.5385
		9		0.650	0.693	93.84	0.9384	0.2761	1.5385

Test Graphs



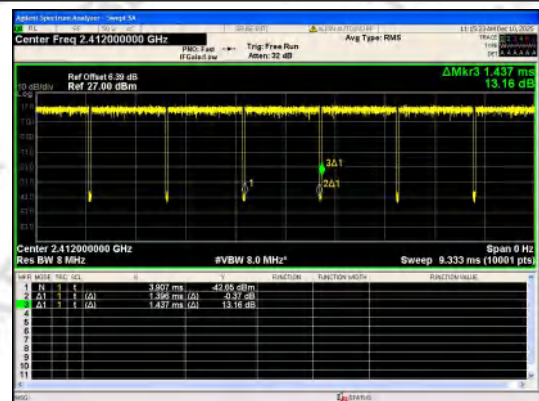
IEEE 802.11b_20MHz_Channel 1



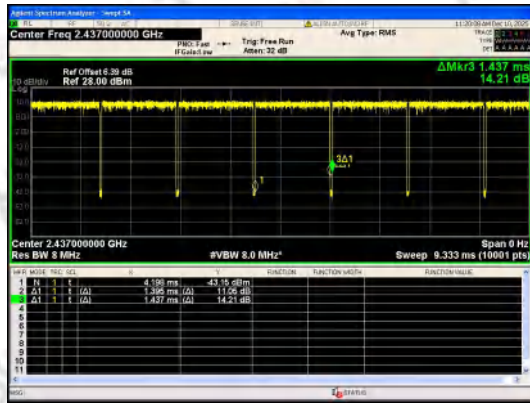
IEEE 802.11b_20MHz_Channel 6



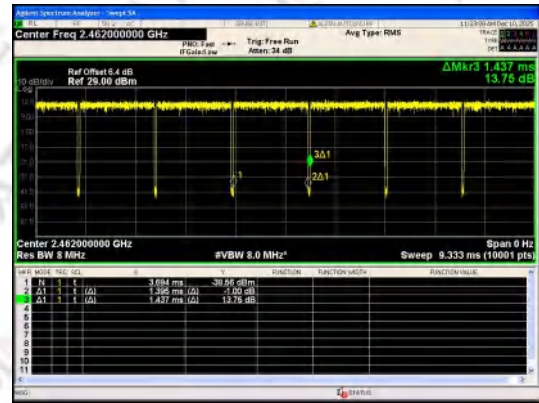
IEEE 802.11b_20MHz_Channel 11



IEEE 802.11g_20MHz_Channel 1



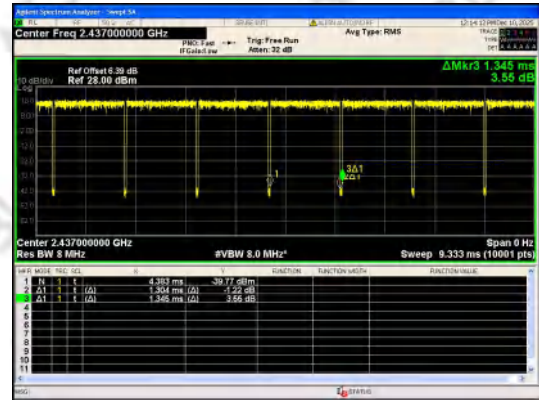
IEEE 802.11g_20MHz_Channel 6



IEEE 802.11g_20MHz_Channel 11



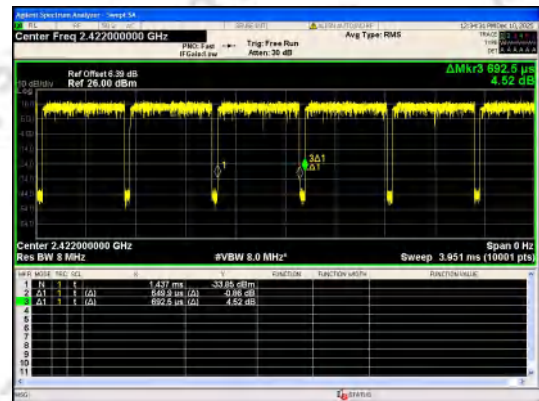
IEEE 802.11n_20MHz_Channel 1



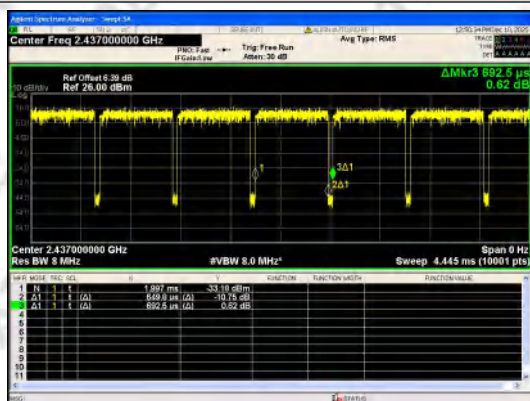
IEEE 802.11n_20MHz_Channel 6



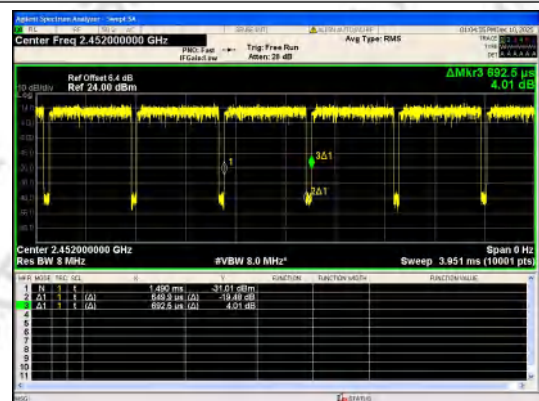
IEEE 802.11n_20MHz_Channel 11



IEEE 802.11n_40MHz_Channel 3



IEEE 802.11n_40MHz_Channel 6



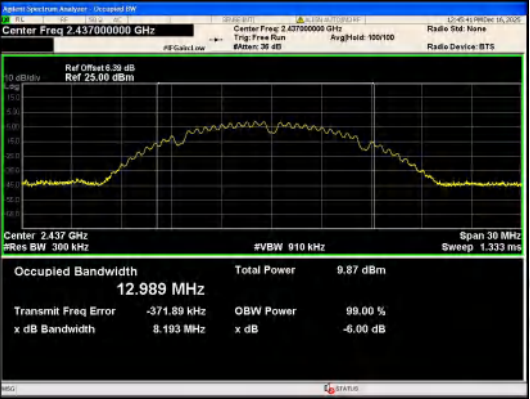
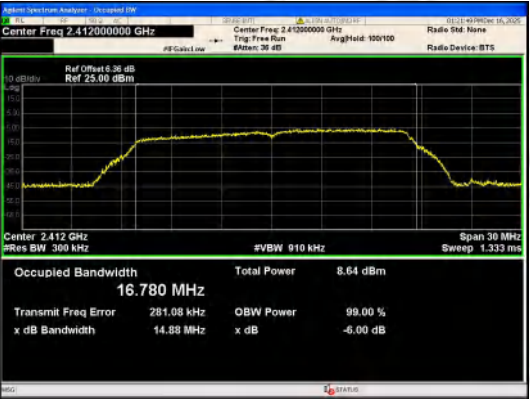
IEEE 802.11n_40MHz_Channel 9

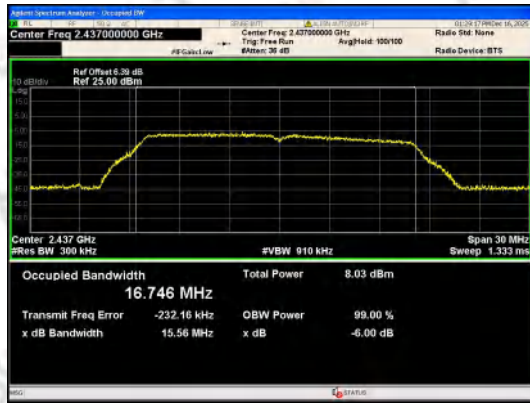
6dB Bandwidth

Test Result

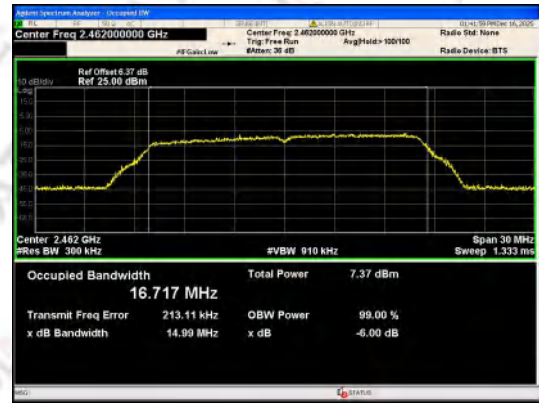
Mode	Channel	Ant.	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
IEEE 802.11b	1	0	2412	8.607	≥0.5	PASS
	6		2437	8.193		PASS
	11		2462	8.619		PASS
IEEE 802.11g	1		2412	14.88		PASS
	6		2437	15.56		PASS
	11		2462	14.99		PASS
IEEE 802.11n_20	1		2412	16.09		PASS
	6		2437	16.56		PASS
	11		2462	16.70		PASS
IEEE 802.11n_40	3		2422	21.97		PASS
	6		2437	28.64		PASS
	9		2452	36.53		PASS

Test Graphs

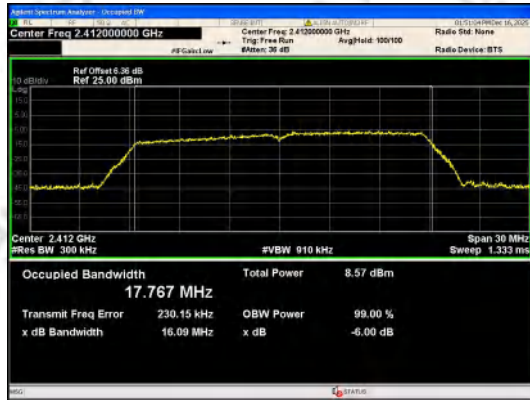
 Center Freq 2.41200000 GHz Ref Offset 6.36 dB Ref 25.00 dBm Center 2.412 GHz #Res BW 300 kHz #VBW 910 kHz Span 30 MHz Sweep 1.333 ms Occupied Bandwidth 13.009 MHz Total Power 9.21 dBm Transmit Freq Error 432.74 kHz OBW Power 99.00 % x dB Bandwidth 8.607 MHz x dB -6.00 dB	 Center Freq 2.43700000 GHz Ref Offset 6.36 dB Ref 25.00 dBm Center 2.437 GHz #Res BW 300 kHz #VBW 910 kHz Span 30 MHz Sweep 1.333 ms Occupied Bandwidth 12.989 MHz Total Power 9.87 dBm Transmit Freq Error -371.89 kHz OBW Power 99.00 % x dB Bandwidth 8.193 MHz x dB -6.00 dB
IEEE 802.11b_Channel 1_20MHz_Antenna 0	IEEE 802.11b_Channel 6_20MHz_Antenna 0
 Center Freq 2.46200000 GHz Ref Offset 6.37 dB Ref 25.00 dBm Center 2.462 GHz #Res BW 300 kHz #VBW 910 kHz Span 30 MHz Sweep 1.333 ms Occupied Bandwidth 13.018 MHz Total Power 9.80 dBm Transmit Freq Error 396.47 kHz OBW Power 99.00 % x dB Bandwidth 8.619 MHz x dB -6.00 dB	 Center Freq 2.41200000 GHz Ref Offset 6.36 dB Ref 25.00 dBm Center 2.412 GHz #Res BW 300 kHz #VBW 910 kHz Span 30 MHz Sweep 1.333 ms Occupied Bandwidth 16.780 MHz Total Power 8.64 dBm Transmit Freq Error 281.08 kHz OBW Power 99.00 % x dB Bandwidth 14.98 MHz x dB -6.00 dB
IEEE 802.11b_Channel 11_20MHz_Antenna 0	IEEE 802.11g_Channel 1_20MHz_Antenna 0



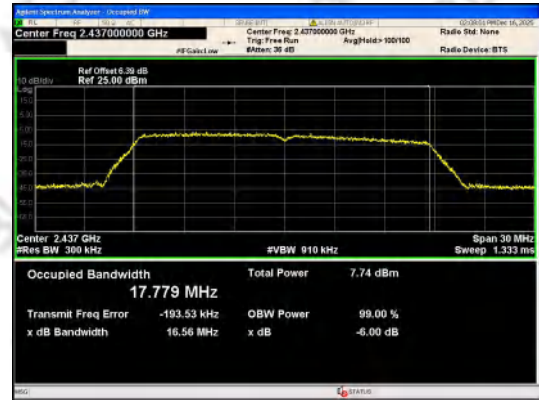
IEEE 802.11g_Channel 6_20MHz_Antenna 0



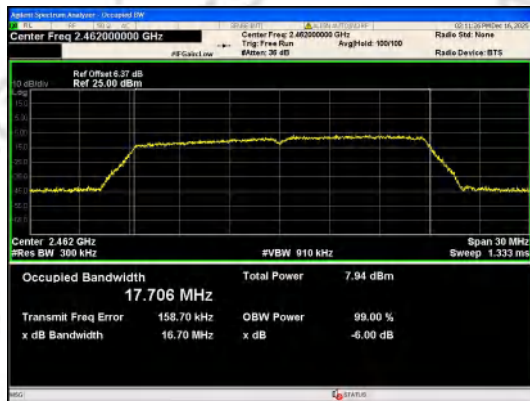
IEEE 802.11g_Channel 11_20MHz_Antenna 0



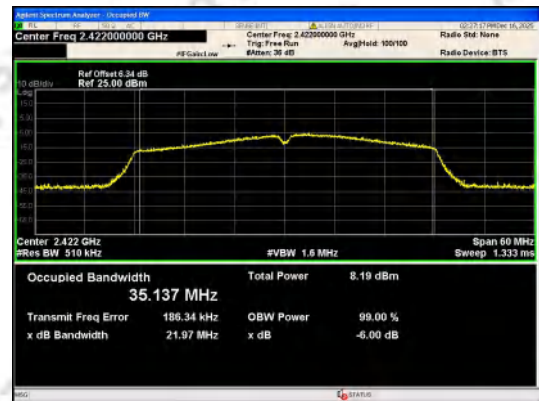
IEEE 802.11n_Channel 1_20MHz_Antenna 0



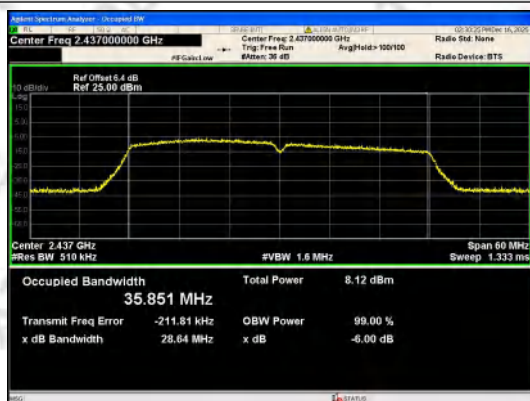
IEEE 802.11n_Channel 6_20MHz_Antenna 0



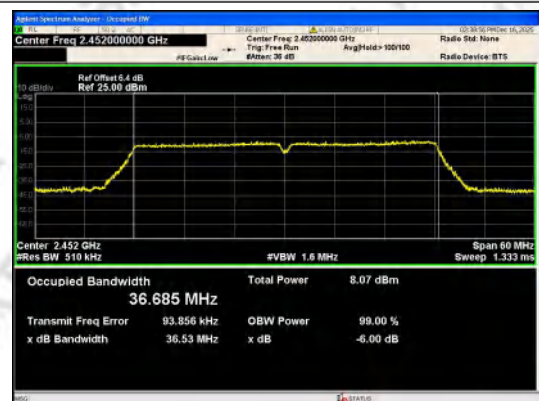
IEEE 802.11n_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 3_40MHz_Antenna 0



IEEE 802.11n_Channel 6_40MHz_Antenna 0



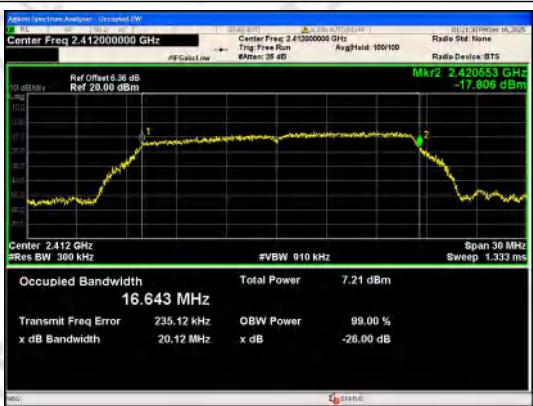
IEEE 802.11n_Channel 9_40MHz_Antenna 0

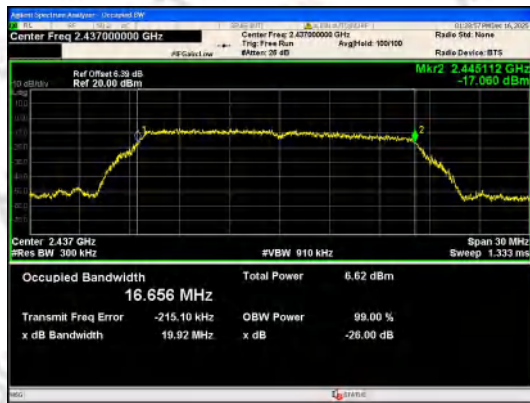
99% Bandwidth

Test Result

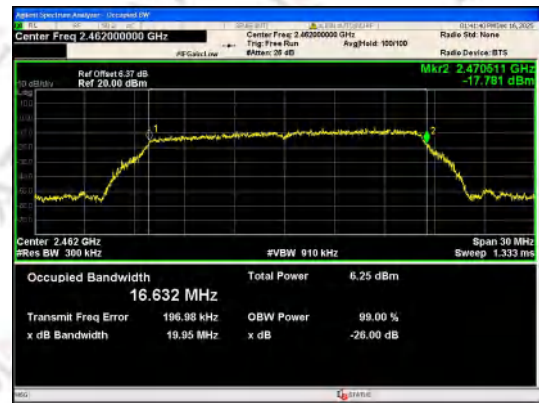
Mode	Channel	Ant.	Center Frequency (MHz)	99% BW (MHz)
IEEE 802.11b	1	0	2412	12.892
	6		2437	12.873
	11		2462	12.925
IEEE 802.11g	1		2412	16.643
	6		2437	16.656
	11		2462	16.632
IEEE 802.11n_20	1		2412	17.748
	6		2437	17.726
	11		2462	17.676
IEEE 802.11n_40	3		2422	35.025
	6		2437	35.699
	9		2452	36.535

Test Graphs

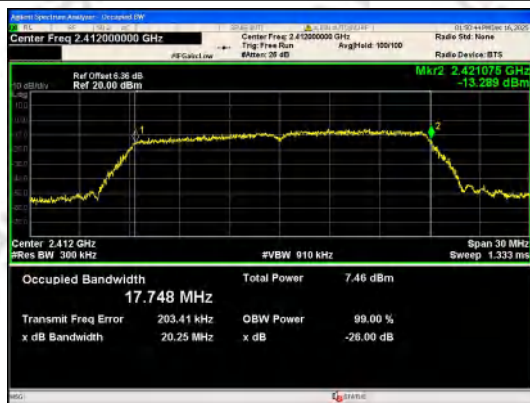
 Center Freq 2.41200000 GHz Ref Offset 6.36 dB Ref 20.00 dBm Mkr2 2.416984 GHz -19.083 dBm Center 2.412 GHz #Res BW 300 kHz #VBW 910 kHz Span 30 MHz Sweep 1.333 ms Occupied Bandwidth 12.892 MHz Total Power 9.08 dBm Transmit Freq Error 420.08 kHz OBW Power 99.00 % x dB Bandwidth 16.64 MHz x dB -26.00 dB	 Center Freq 2.43700000 GHz Ref Offset 6.39 dB Ref 20.00 dBm Mkr2 2.440078 GHz -19.858 dBm Center 2.437 GHz #Res BW 300 kHz #VBW 910 kHz Span 30 MHz Sweep 1.333 ms Occupied Bandwidth 12.873 MHz Total Power 9.77 dBm Transmit Freq Error -359.05 kHz OBW Power 99.00 % x dB Bandwidth 16.63 MHz x dB -26.00 dB
IEEE 802.11b_Channel 1_20MHz_Antenna 0	IEEE 802.11b_Channel 6_20MHz_Antenna 0
 Center Freq 2.46200000 GHz Ref Offset 6.37 dB Ref 20.00 dBm Mkr2 2.468852 GHz -18.489 dBm Center 2.462 GHz #Res BW 300 kHz #VBW 910 kHz Span 30 MHz Sweep 1.333 ms Occupied Bandwidth 12.925 MHz Total Power 9.69 dBm Transmit Freq Error 391.15 kHz OBW Power 99.00 % x dB Bandwidth 16.60 MHz x dB -26.00 dB	 Center Freq 2.41200000 GHz Ref Offset 6.38 dB Ref 20.00 dBm Mkr2 2.420653 GHz -17.806 dBm Center 2.412 GHz #Res BW 300 kHz #VBW 910 kHz Span 30 MHz Sweep 1.333 ms Occupied Bandwidth 16.643 MHz Total Power 7.21 dBm Transmit Freq Error 235.12 kHz OBW Power 99.00 % x dB Bandwidth 20.12 MHz x dB -26.00 dB
IEEE 802.11b_Channel 11_20MHz_Antenna 0	IEEE 802.11g_Channel 1_20MHz_Antenna 0



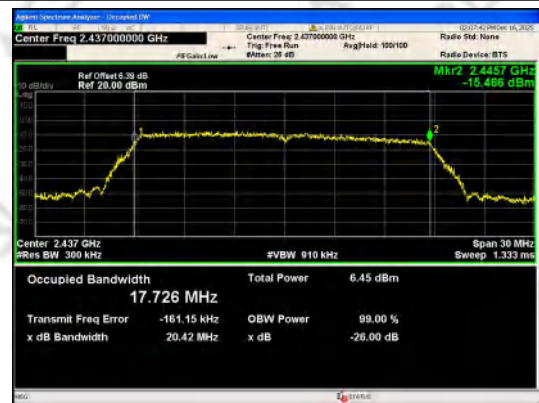
IEEE 802.11g_Channel 6_20MHz_Antenna 0



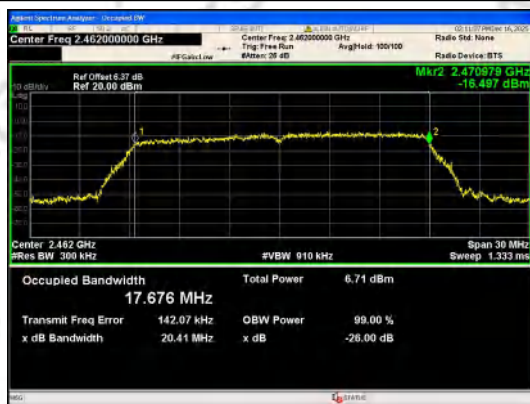
IEEE 802.11g_Channel 11_20MHz_Antenna 0



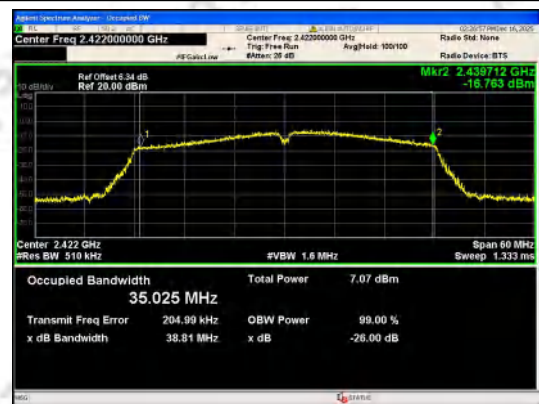
IEEE 802.11n_Channel 1_20MHz_Antenna 0



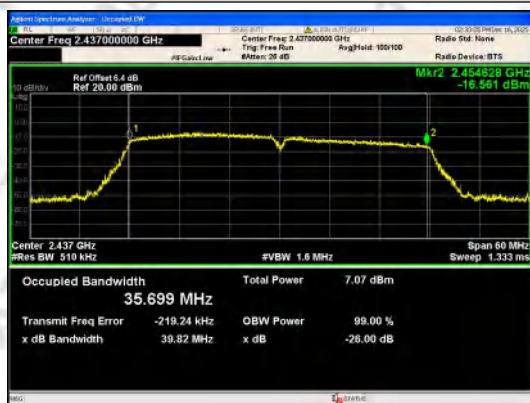
IEEE 802.11n_Channel 6_20MHz_Antenna 0



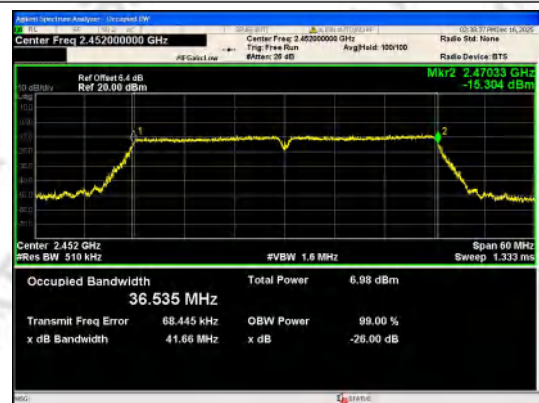
IEEE 802.11n_Channel 11_20MHz_Antenna 0



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

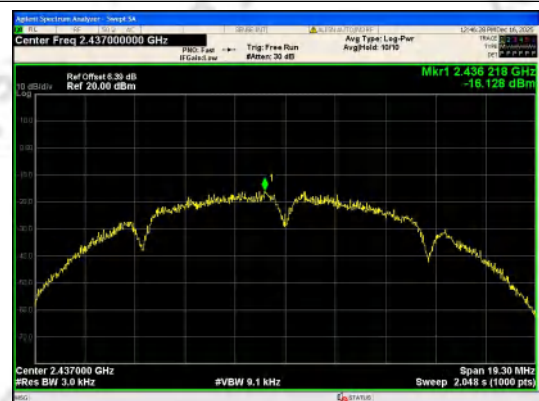
Test Result

Mode	Channel	PSD (dBm/3kHz) Ant. 0	Limit (dBm/3kHz)	Result
IEEE 802.11b	1	-16.570	≤8	PASS
	6	-16.130		PASS
	11	-16.240		PASS
IEEE 802.11g	1	-21.140		PASS
	6	-21.530		PASS
	11	-22.390		PASS
IEEE 802.11n_20	1	-21.730		PASS
	6	-22.920		PASS
	11	-22.490		PASS
IEEE 802.11n_40	3	-24.350		PASS
	6	-24.830		PASS
	9	-26.500		PASS

Test Graphs



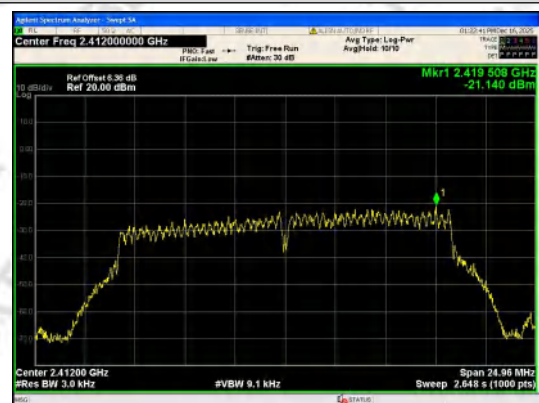
IEEE 802.11b_Channel 1_20MHz_Antenna 0



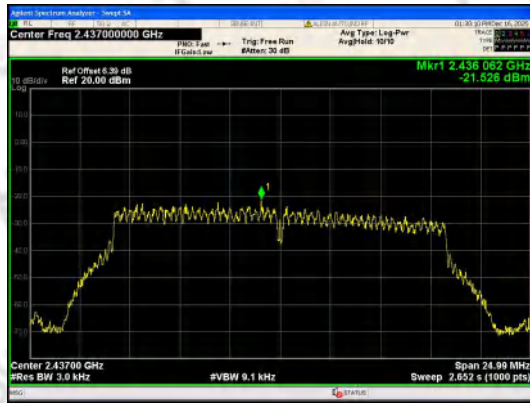
IEEE 802.11b_Channel 6_20MHz_Antenna 0



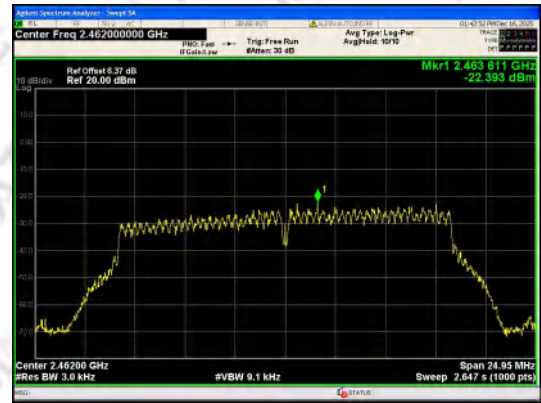
IEEE 802.11b_Channel 11_20MHz_Antenna 0



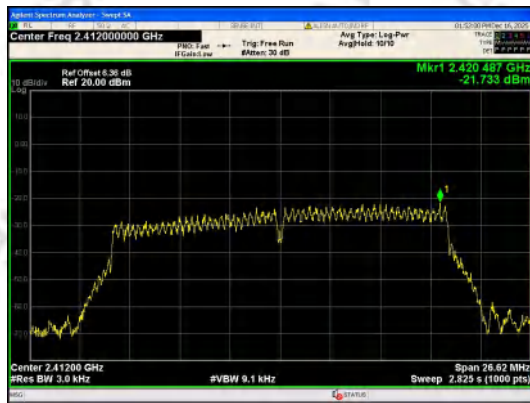
IEEE 802.11g_Channel 1_20MHz_Antenna 0



IEEE 802.11g_Channel 6_20MHz_Antenna 0



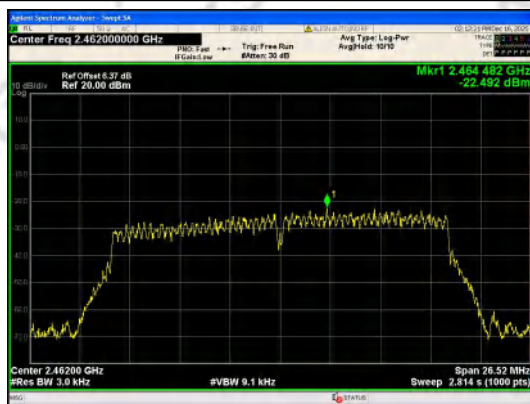
IEEE 802.11g_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 1_20MHz_Antenna 0



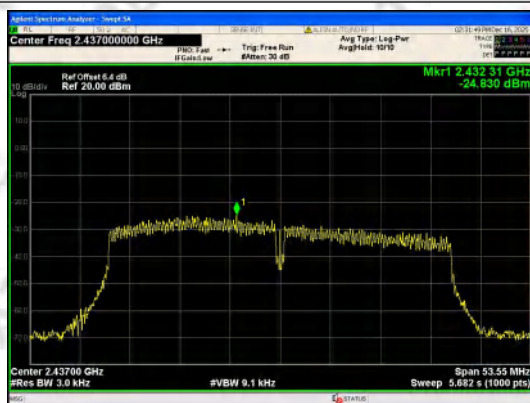
IEEE 802.11n_Channel 6_20MHz_Antenna 0



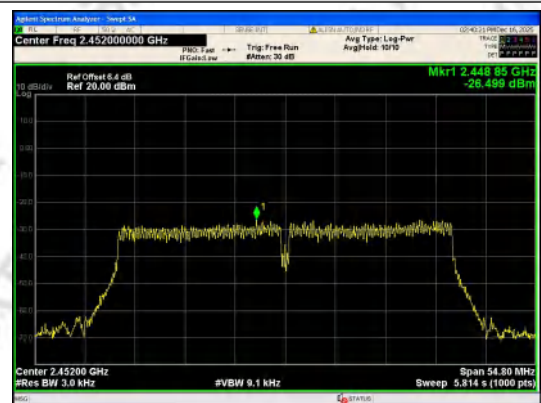
IEEE 802.11n_Channel 11_20MHz_Antenna 0



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 Spurious & Band Edge 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.

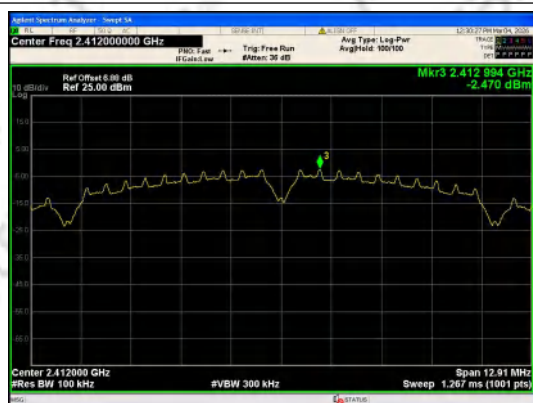
Test Result

Mode	Channel	Ant.	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
IEEE 802.11b	1	0	2394.63	-49.082	-22.47	-26.612	PASS
			2400.00	-52.046	-22.47	-29.576	PASS
			4839.80	-51.261	-22.47	-28.791	PASS
			7221.40	-49.932	-22.47	-27.462	PASS
			9642.80	-51.115	-22.47	-28.645	PASS
			24777.1	-39.800	-22.47	-17.330	PASS
	6		4864.19	-50.885	-23.22	-27.665	PASS
			7298.14	-51.538	-23.22	-28.318	PASS
			9763.93	-52.143	-23.22	-28.923	PASS
			24814.0	-39.588	-23.22	-16.368	PASS
	11		2483.50	-52.070	-23.91	-28.160	PASS
			4917.88	-50.230	-23.91	-26.320	PASS
			7385.54	-51.118	-23.91	-27.208	PASS
			9865.68	-50.756	-23.91	-26.846	PASS
			24716.0	-40.104	-23.91	-16.194	PASS
IEEE 802.11g	1		2400.00	-39.762	-24.46	-15.302	PASS
			4814.88	-49.937	-24.46	-25.477	PASS
			7250.08	-50.041	-24.46	-25.581	PASS
			9641.58	-50.894	-24.46	-26.434	PASS
			24602.4	-39.620	-24.46	-15.160	PASS
	6		4889.79	-50.456	-23.94	-26.516	PASS
			7300.02	-51.335	-23.94	-27.395	PASS
			9753.94	-52.196	-23.94	-28.256	PASS
			24671.0	-39.767	-23.94	-15.827	PASS
	11		2483.50	-51.345	-24.68	-26.665	PASS
			4912.88	-50.896	-24.68	-26.216	PASS
			7393.03	-50.206	-24.68	-25.526	PASS
			9836.97	-51.999	-24.68	-27.319	PASS
			24745.9	-39.652	-24.68	-14.972	PASS
			2400.00	-38.088	-24.46	-13.628	PASS
IEEE 802.11n_20	1		4817.37	-50.331	-24.46	-25.871	PASS
			7244.46	-49.541	-24.46	-25.081	PASS
			9642.83	-50.608	-24.46	-26.148	PASS
			24697.9	-39.232	-24.46	-14.772	PASS

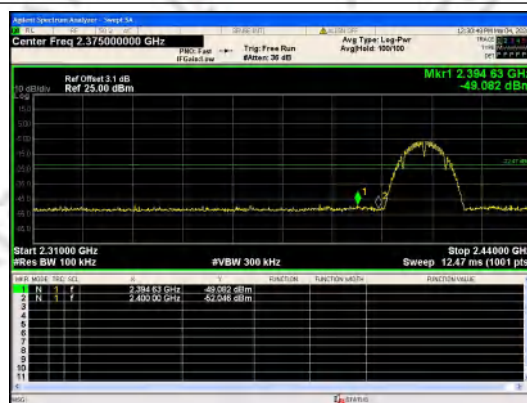
IEEE 802.11n_40	6	4881.05	-51.277	-24.49	-26.787	PASS
		7298.77	-50.332	-24.49	-25.842	PASS
		9748.32	-51.991	-24.49	-27.501	PASS
		24767.8	-39.820	-24.49	-15.330	PASS
	11	2483.50	-51.367	-24.68	-26.687	PASS
		4914.13	-51.047	-24.68	-26.367	PASS
		7371.80	-50.508	-24.68	-25.828	PASS
		9850.08	-51.749	-24.68	-27.069	PASS
		24687.9	-39.803	-24.68	-15.123	PASS
		2400.00	-45.825	-27.35	-18.475	PASS
		4819.87	-50.136	-27.35	-22.786	PASS
		7261.31	-50.199	-27.35	-22.849	PASS
	3	9675.29	-50.390	-27.35	-23.040	PASS
		24724.7	-39.694	-27.35	-12.344	PASS
	6	4873.56	-50.449	-28.09	-22.359	PASS
		7297.52	-49.451	-28.09	-21.361	PASS
		9734.59	-51.038	-28.09	-22.948	PASS
		24675.4	-39.469	-28.09	-11.379	PASS
	9	2483.50	-51.164	-27.41	-23.754	PASS
		4935.36	-47.407	-27.41	-19.997	PASS
		7325.61	-50.561	-27.41	-23.151	PASS
		9803.88	-51.438	-27.41	-24.028	PASS
		24685.4	-39.234	-27.41	-11.824	PASS

Note: input compensation coefficient (dB)= Cable Loss (dB)

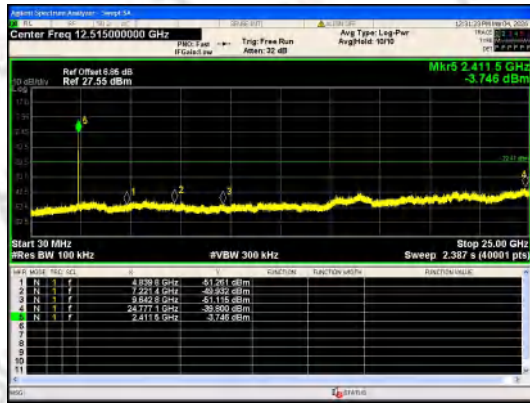
Test Graphs



In-Band Reference Level
IEEE 802.11b_Channel 1_20MHz_Antenna 0



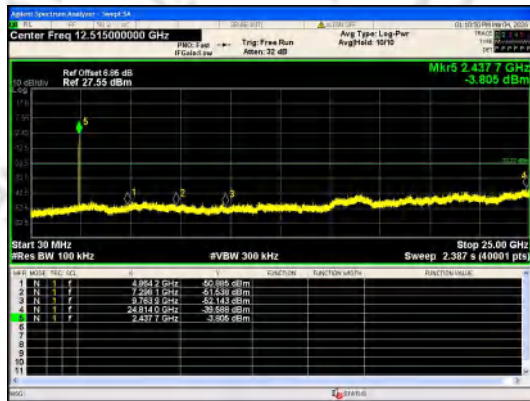
Out Of Band Emission
IEEE 802.11b_Channel 1_20MHz_Antenna 0



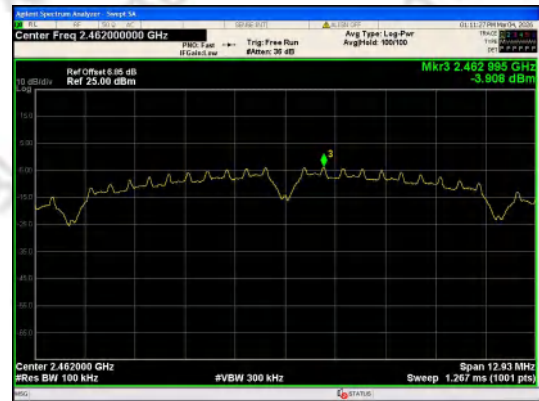
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 1_20MHz_Antenna 0



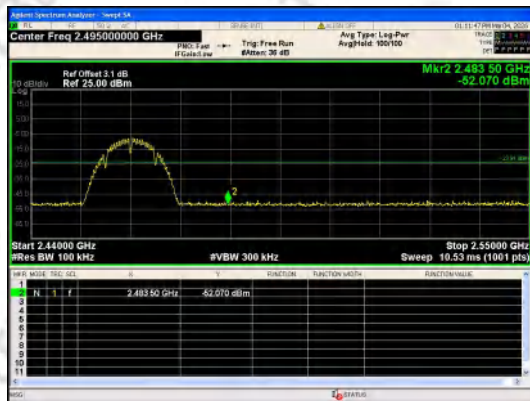
In-Band Reference Level
IEEE 802.11b_Channel 6_20MHz_Antenna 0



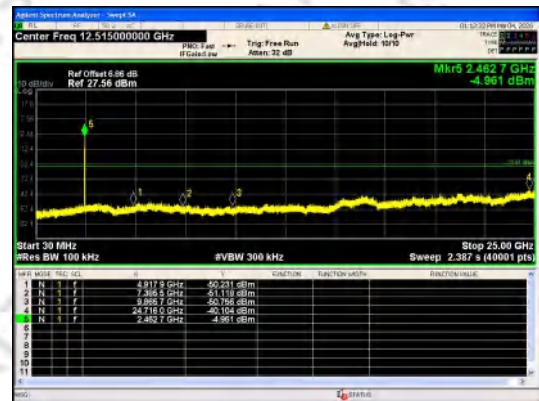
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 6_20MHz_Antenna 0



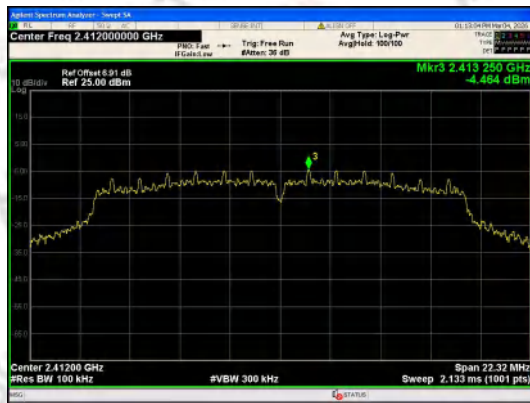
In-Band Reference Level
IEEE 802.11b_Channel 11_20MHz_Antenna 0



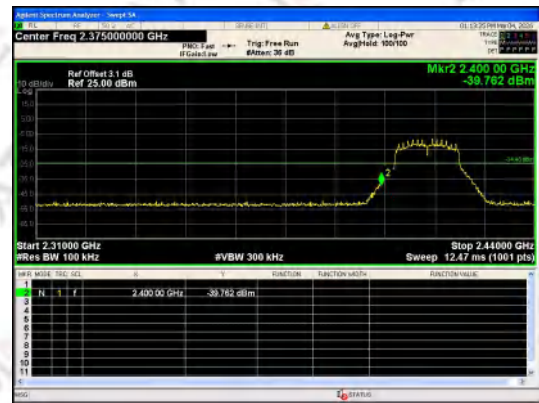
Out Of Band Emission
IEEE 802.11b_Channel 11_20MHz_Antenna 0



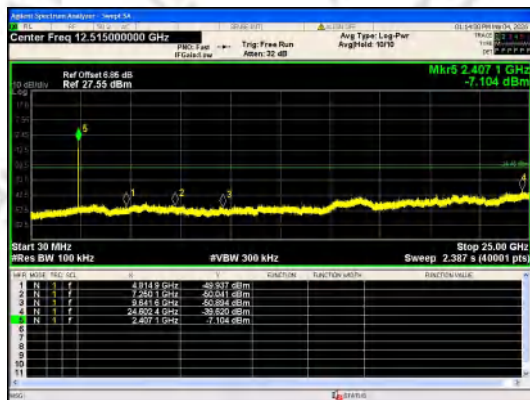
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 11_20MHz_Antenna 0



In-Band Reference Level
IEEE 802.11g_Channel 1_20MHz_Antenna 0



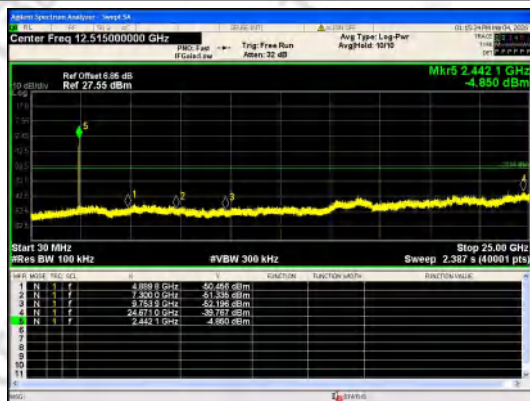
Out Of Band Emission
IEEE 802.11g_Channel 1_20MHz_Antenna 0



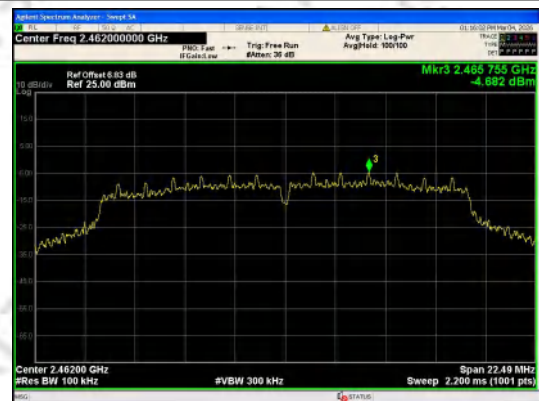
30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 1_20MHz_Antenna 0



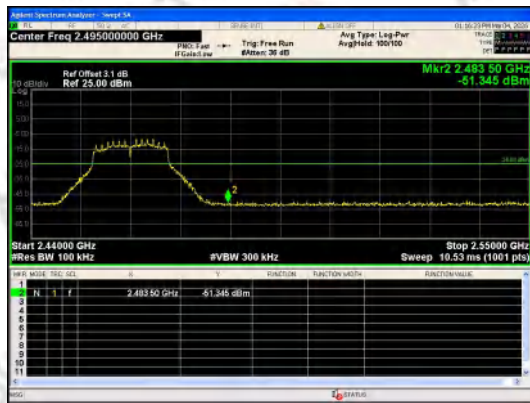
In-Band Reference Level
IEEE 802.11g_Channel 6_20MHz_Antenna 0



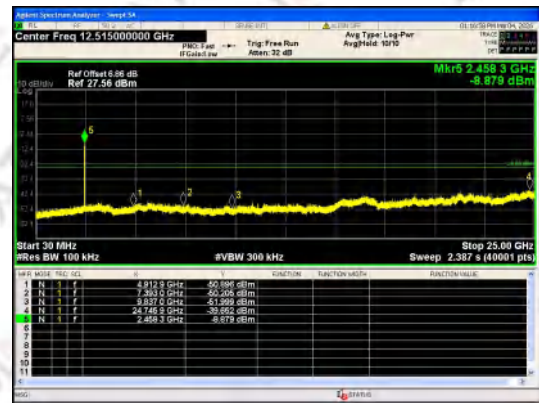
30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 6_20MHz_Antenna 0



In-Band Reference Level
IEEE 802.11g_Channel 11_20MHz_Antenna 0



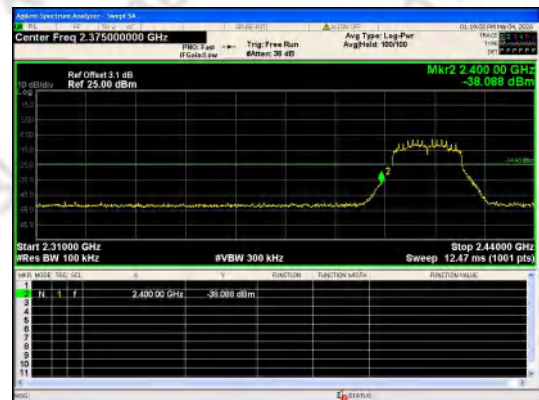
Out Of Band Emission
IEEE 802.11g_Channel 11_20MHz_Antenna 0



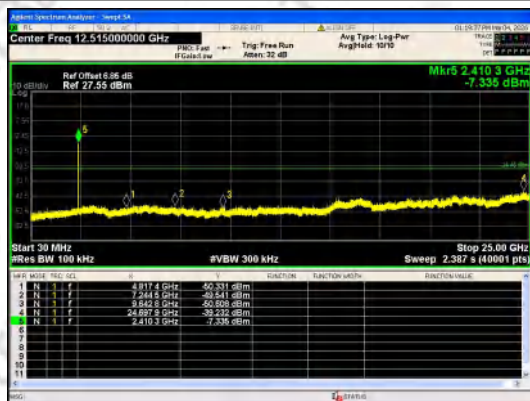
30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 11_20MHz_Antenna 0



In-Band Reference Level
IEEE 802.11n_Channel 1_20MHz_Antenna 0



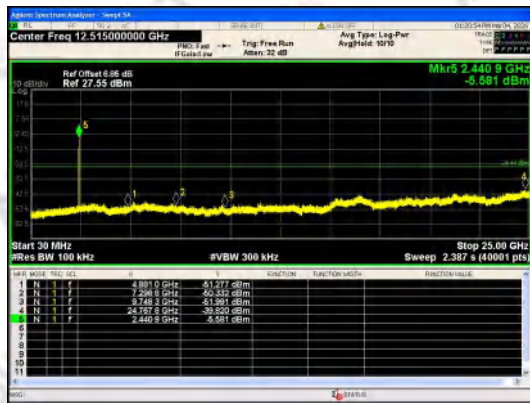
Out Of Band Emission
IEEE 802.11n_Channel 1_20MHz_Antenna 0



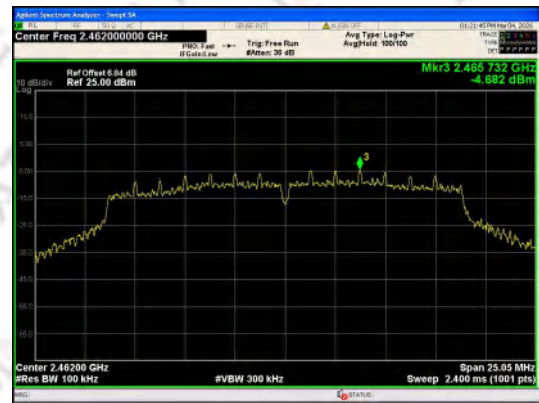
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 1_20MHz_Antenna 0



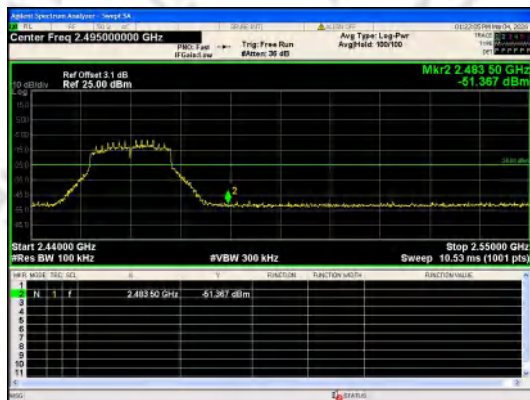
In-Band Reference Level
IEEE 802.11n_Channel 6_20MHz_Antenna 0



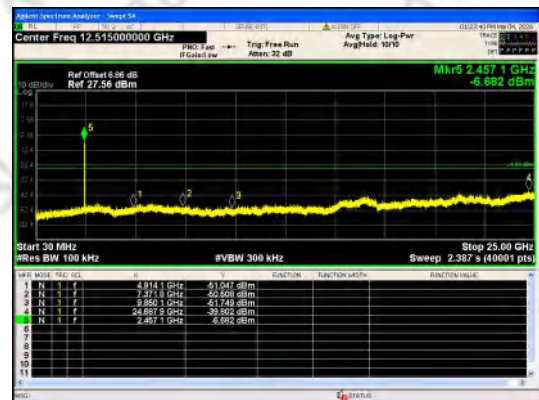
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 6_20MHz_Antenna 0



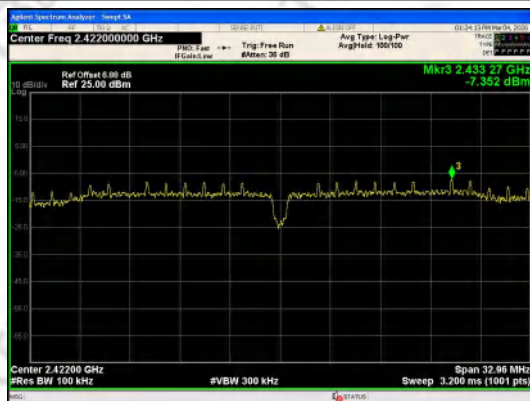
In-Band Reference Level
IEEE 802.11n_Channel 11_20MHz_Antenna 0



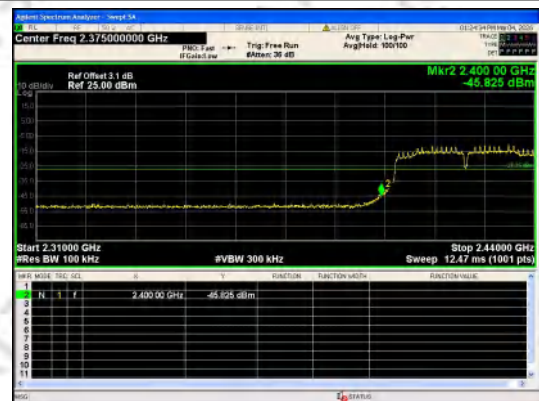
Out Of Band Emission
IEEE 802.11n_Channel 11_20MHz_Antenna 0



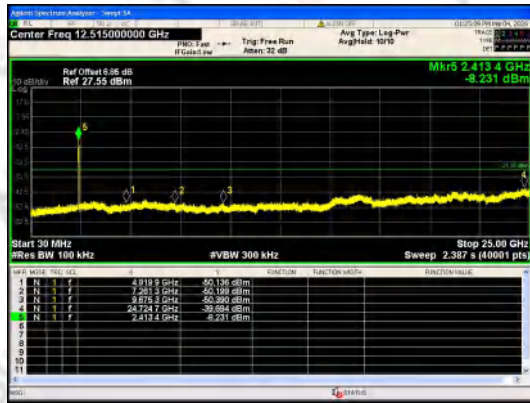
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 11_20MHz_Antenna 0



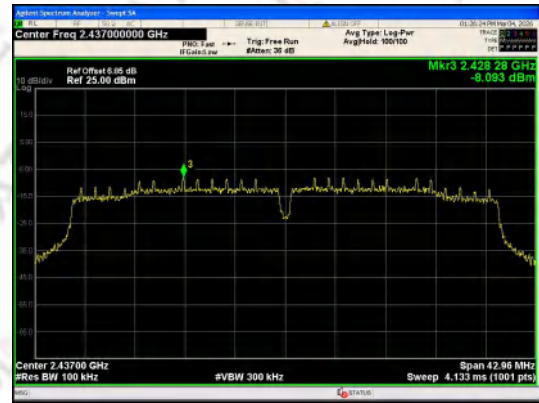
In-Band Reference Level
IEEE 802.11n_Channel 3_40MHz_Antenna 0



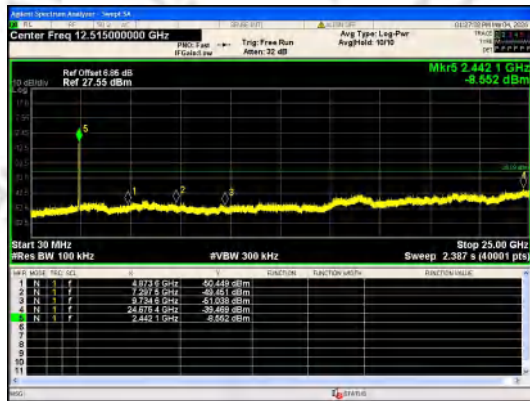
Out Of Band Emission
IEEE 802.11n_Channel 3_40MHz_Antenna 0



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



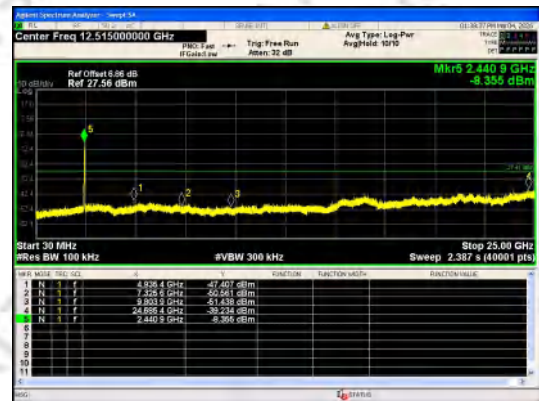
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 6_40MHz_Antenna 0



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:

1. All modes have been tested, only worst case mode(802.11n20) was recorded in the test report.
2. $\text{Margin} = \text{Result} (\text{Result} = \text{Reading} + \text{Factor}) - \text{Limit}$
3. $\text{Factor} = \text{Cable Loss} + \text{Antenna Factor} - \text{Amplifier Gain}$
4. $\text{Reading} = \text{Level} - \text{factor}$

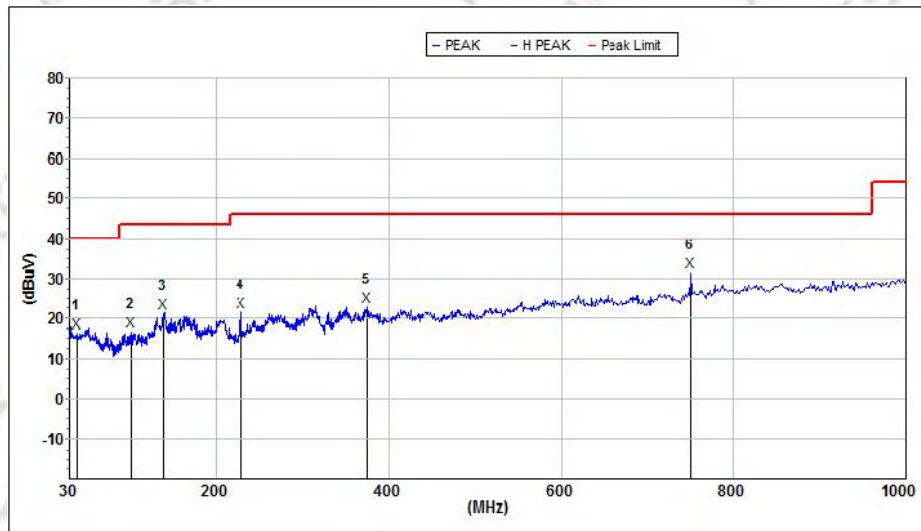
Radiated Emission (Above 1GHz)

Note:

1. All modes have been tested, only worst case mode(802.11n20) 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.
4. $\text{Margin} = \text{Result} (\text{Result} = \text{Reading} + \text{Factor}) - \text{Limit}$
5. $\text{Factor} = \text{Cable Loss} + \text{Antenna Factor} - \text{Amplifier Gain}$
6. $\text{Reading} = \text{Level} - \text{factor}$

Radiated Emission (30MHz-1GHz)

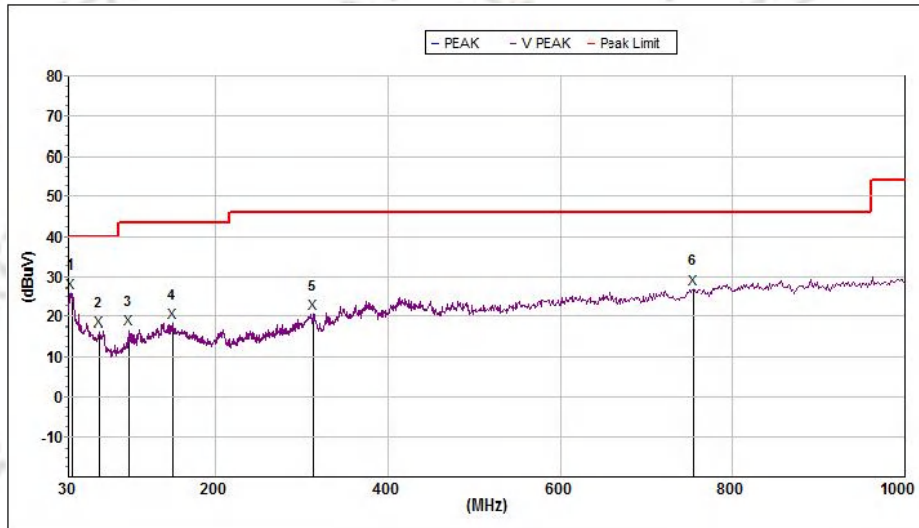
Temperature:	21°C	Relative Humidity:	40%
Test Voltage:	DC 12V from Adapter	Phase:	Horizontal
Test Mode:	802.11n20-2412 MHz	Comment:	30MHz-1GHz



Test Summary Result

Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
Peak:								
1	39.162	16.6	40.0	23.4	18.9	31.8	1.1	H
2	100.229	16.8	43.5	26.7	14.8	30.8	1.3	H
3	139.117	21.5	43.5	22.0	18.2	31.2	1.5	H
4	228.490	21.7	46.0	24.3	16.8	31.9	1.8	H
5	374.623	23.1	46.0	22.9	20.8	33.0	2.2	H
6	750.108	31.5	46.0	14.5	27.6	32.0	3.2	H

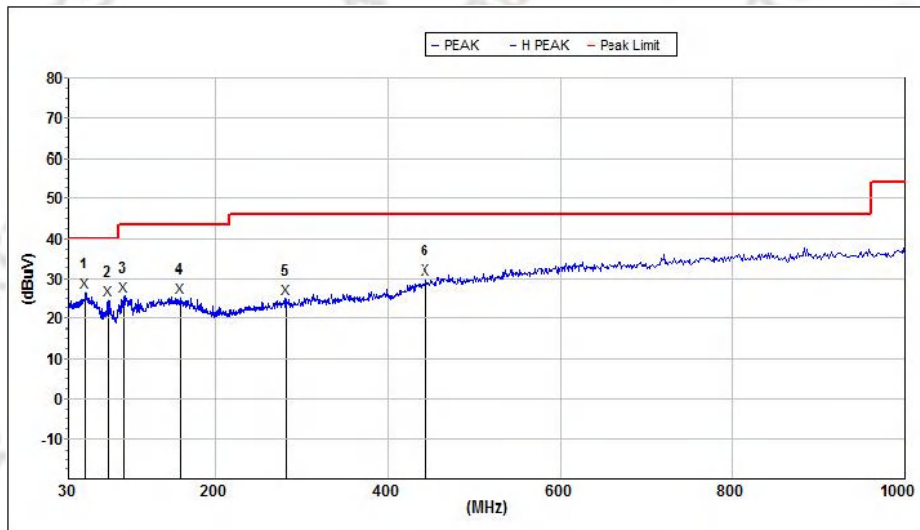
Temperature:	21°C	Relative Humidity:	40%
Test Voltage:	DC 12V from Adapter	Phase:	Vertical
Test Mode:	802.11n20-2412 MHz	Comment:	30MHz-1GHz



Test Summary Result

Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
Peak:								
1	33.386	25.9	40.0	14.1	18.6	31.8	1.1	V
2	64.887	16.5	40.0	23.5	17.2	32.1	1.2	V
3	99.354	16.7	43.5	26.8	14.8	30.8	1.3	V
4	150.538	18.4	43.5	25.1	19.2	31.3	1.5	V
5	312.727	20.9	46.0	25.1	19.5	32.4	2.1	V
6	754.064	27.0	46.0	19.0	27.7	32.0	3.2	V

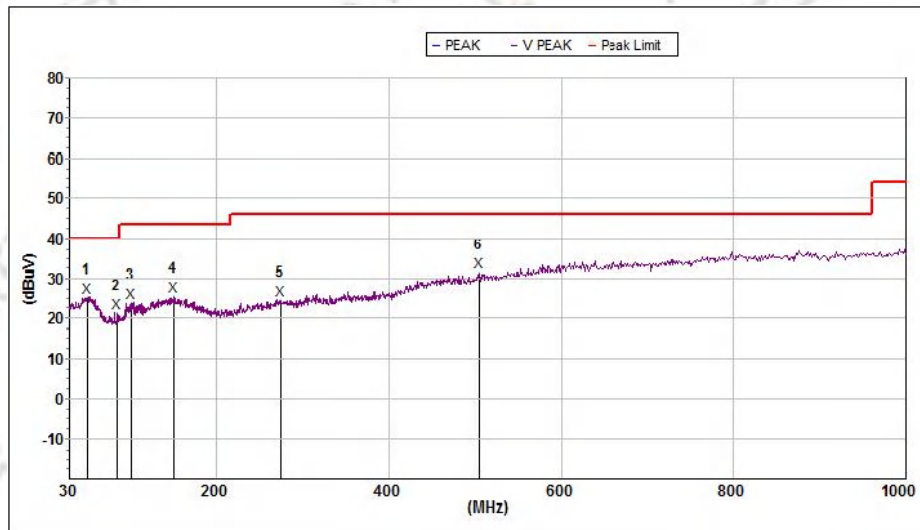
Temperature:	20°C	Relative Humidity:	35%
Test Voltage:	DC 12V from Adapter	Phase:	Horizontal
Test Mode:	802.11n20-2437 MHz	Comment:	30MHz-1GHz



Test Summary Result

Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
Peak:								
1	49.359	26.8	40.0	13.2	-10.2	31.0	1.2	H
2	75.579	24.7	40.0	15.3	-15.7	32.5	1.3	H
3	93.440	25.7	43.5	17.8	-15.1	31.2	1.3	H
4	159.784	25.3	43.5	18.2	-11.3	31.4	1.6	H
5	281.995	25.2	46.0	20.8	-11.6	32.2	2.0	H
6	444.851	29.9	46.0	16.1	-6.6	32.4	3.1	H

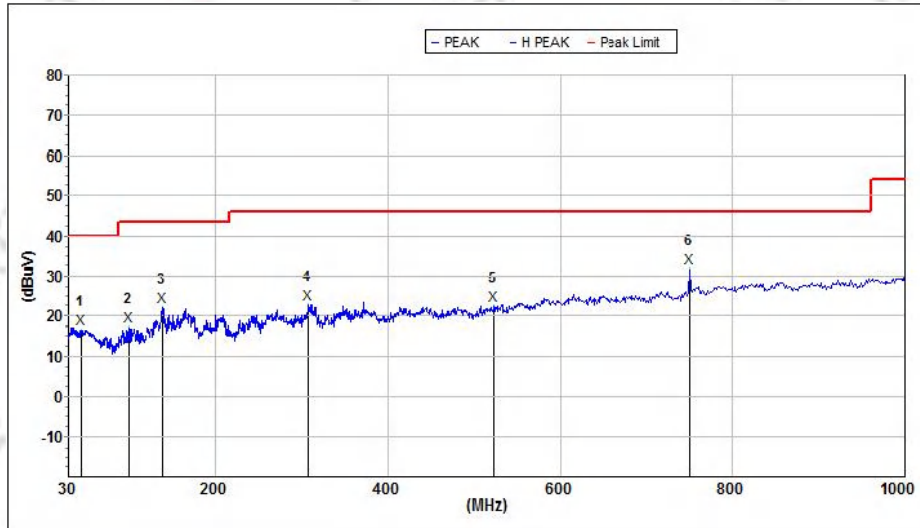
Temperature:	20°C	Relative Humidity:	35%
Test Voltage:	DC 12V from Adapter	Phase:	Vertical
Test Mode:	802.11n20-2437 MHz	Comment:	30MHz-1GHz



Test Summary Result

Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
Peak:								
1	50.764	25.4	40.0	14.6	-10.2	30.9	1.2	V
2	85.149	21.5	40.0	18.5	-15.7	31.8	1.3	V
3	100.229	24.2	43.5	19.3	-14.7	30.8	1.3	V
4	151.597	25.7	43.5	17.8	-10.7	31.3	1.5	V
5	274.194	24.6	46.0	21.4	-11.8	32.2	2.0	V
6	504.706	31.5	46.0	14.5	-5.5	31.5	2.5	V

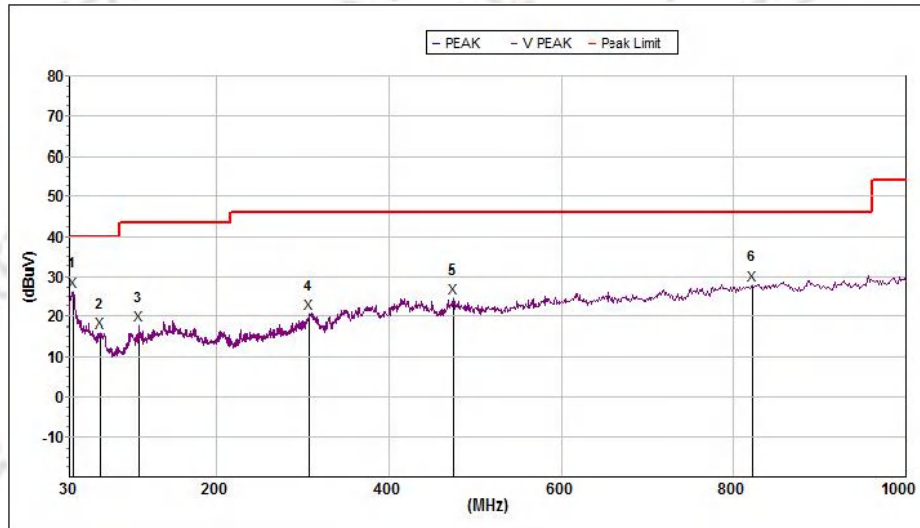
Temperature:	21°C	Relative Humidity:	40%
Test Voltage:	DC 12V from Adapter	Phase:	Horizontal
Test Mode:	802.11n20-2462 MHz	Comment:	30MHz-1GHz



Test Summary Result

Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
Peak:								
1	44.043	16.7	40.0	23.3	19.2	31.4	1.1	H
2	99.354	17.6	43.5	25.9	14.8	30.8	1.3	H
3	138.630	22.3	43.5	21.2	18.2	31.2	1.5	H
4	307.831	23.2	46.0	22.8	19.4	32.4	2.1	H
5	522.718	22.7	46.0	23.3	24.0	31.5	2.6	H
6	750.108	32.1	46.0	13.9	27.6	32.0	3.2	H

Temperature:	21°C	Relative Humidity:	40%
Test Voltage:	DC 12V from Adapter	Phase:	Vertical
Test Mode:	802.11n20-2462 MHz	Comment:	30MHz-1GHz

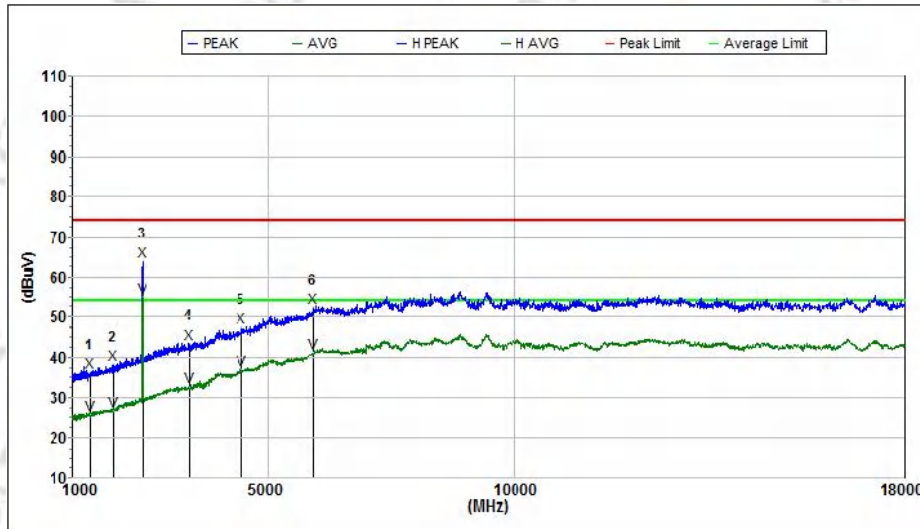


Test Summary Result

Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
Peak:								
1	33.858	26.3	40.0	13.7	18.6	31.8	1.1	V
2	65.803	16.2	40.0	23.8	17.1	32.2	1.2	V
3	109.989	17.7	43.5	25.8	15.7	30.9	1.4	V
4	307.292	20.8	46.0	25.2	19.3	32.4	2.1	V
5	475.499	24.6	46.0	21.4	23.2	31.9	2.8	V
6	821.710	28.0	46.0	18.0	28.6	32.1	3.3	V

Radiated Emission (Above 1GHz)

Temperature:	21°C	Relative Humidity:	40%
Test Voltage:	DC 12V from Adapter	Phase:	Horizontal
Test Mode:	802.11n20-2412 MHz	Comment:	1GHz-18GHz

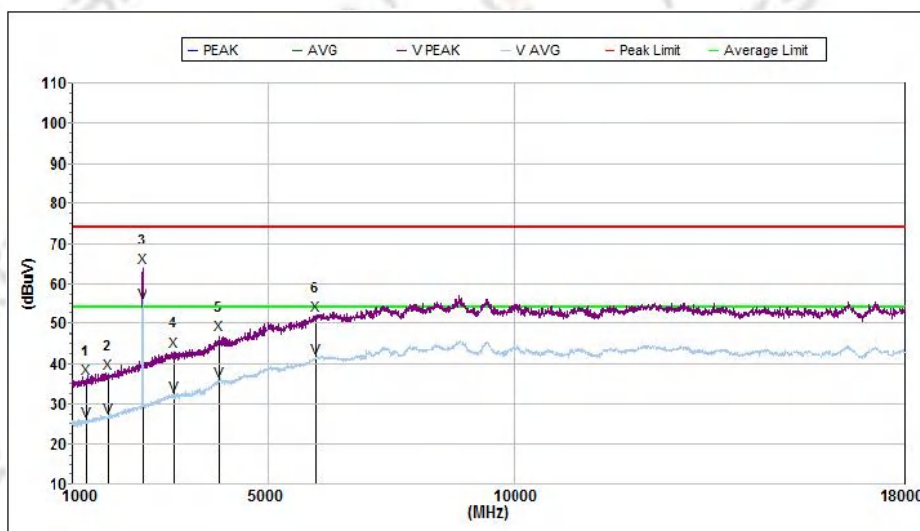


Test Summary Result

Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
Peak:								
1	1372.000	36.3	74.0	37.7	25.5	53.5	4.2	H
2	1843.000	38.2	74.0	35.8	25.4	53.7	4.9	H
3	2419.000	64.0	74.0	10.0	27.4	54.1	5.7	H
4	3391.000	43.7	74.0	30.3	29.5	53.9	6.9	H
5	4453.000	47.5	74.0	26.5	31.5	53.0	8.0	H
6	5899.000	52.3	74.0	21.7	33.9	51.7	9.7	H
Avg:								
1	1372.000	25.8	54.0	28.2	25.5	53.5	4.2	H
2	1843.000	26.9	54.0	27.1	25.4	53.7	4.9	H
3	2419.000	55.2	54.0	-1.2	27.4	54.1	5.7	H
4	3391.000	32.7	54.0	21.3	29.5	53.9	6.9	H
5	4453.000	36.9	54.0	17.1	31.5	53.0	8.0	H
6	5899.000	41.1	54.0	12.9	33.9	51.7	9.7	H

Note:Point 3 serves as the primary frequency signal.

Temperature:	21°C	Relative Humidity:	40%
Test Voltage:	DC 12V from Adapter	Phase:	Vertical
Test Mode:	802.11n20-2412 MHz	Comment:	1GHz-18GHz

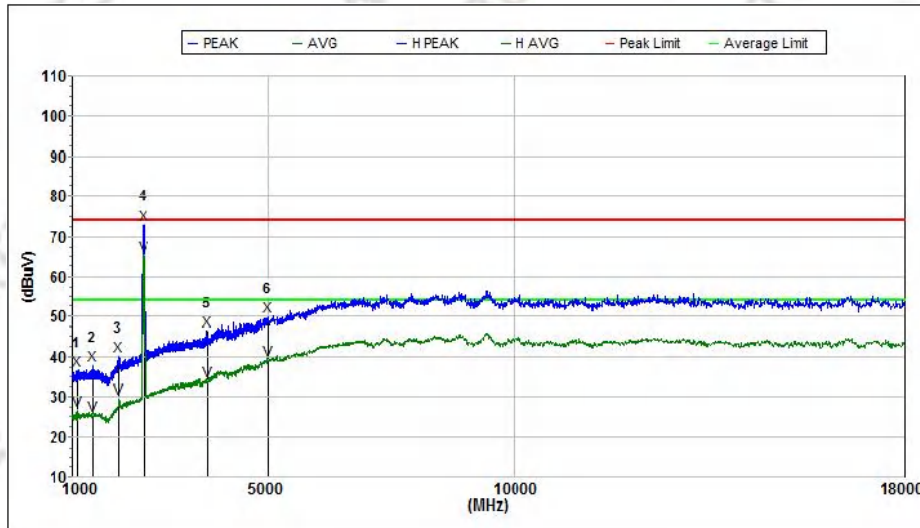


Test Summary Result

Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
Peak:								
1	1291.000	36.2	74.0	37.8	25.6	53.5	4.1	V
2	1726.000	37.5	74.0	36.5	25.2	53.6	4.7	V
3	2419.000	63.9	74.0	10.1	27.4	54.1	5.7	V
4	3067.000	43.3	74.0	30.7	29.4	54.1	6.6	V
5	3979.000	47.1	74.0	26.9	30.8	53.2	8.0	V
6	5962.000	52.2	74.0	21.8	34.0	51.6	9.8	V
Avg:								
1	1291.000	25.7	54.0	28.3	25.6	53.5	4.1	V
2	1726.000	26.7	54.0	27.3	25.2	53.6	4.7	V
3	2419.000	55.5	54.0	-1.5	27.4	54.1	5.7	V
4	3067.000	31.9	54.0	22.1	29.4	54.1	6.6	V
5	3979.000	35.8	54.0	18.2	30.8	53.2	8.0	V
6	5962.000	41.5	54.0	12.5	34.0	51.6	9.8	V

Note:Point 3 serves as the primary frequency signal.

Temperature:	20°C	Relative Humidity:	35%
Test Voltage:	DC 12V from Adapter	Phase:	Horizontal
Test Mode:	802.11n20-2437 MHz	Comment:	1GHz-18GHz

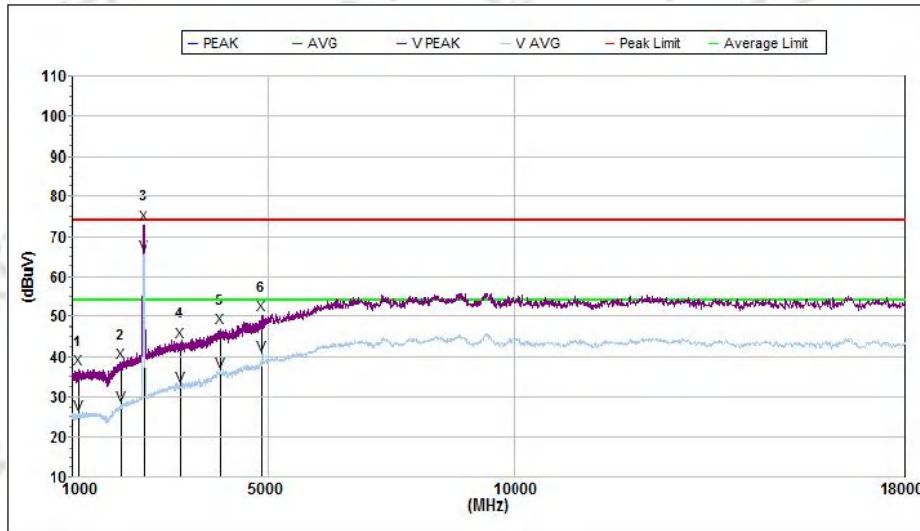


Test Summary Result

Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
Peak:								
1	1094.000	36.8	74.0	37.2	-24.5	53.6	3.8	H
2	1419.000	37.8	74.0	36.2	-23.6	53.4	4.3	H
3	1937.000	40.1	74.0	33.9	-22.7	53.8	5.0	H
4	2445.000	73.1	74.0	0.9	-20.9	54.1	5.7	H
5	3743.000	46.5	74.0	27.5	-15.8	53.5	7.5	H
6	4999.000	50.0	74.0	24.0	-10.6	52.4	8.7	H
Avg:								
1	1094.000	26.8	54.0	27.2	-24.5	53.6	3.8	H
2	1419.000	25.5	54.0	28.5	-23.6	53.4	4.3	H
3	1937.000	29.7	54.0	24.3	-22.7	53.8	5.0	H
4	2445.000	65.4	54.0	-11.4	-20.9	54.1	5.7	H
5	3743.000	34.1	54.0	19.9	-15.8	53.5	7.5	H
6	4999.000	39.4	54.0	14.6	-10.6	52.4	8.7	H

Note:Point 4 serves as the primary frequency signal.

Temperature:	21°C	Relative Humidity:	40%
Test Voltage:	DC 12V from Adapter	Phase:	Vertical
Test Mode:	802.11n20-2437 MHz	Comment:	1GHz-18GHz

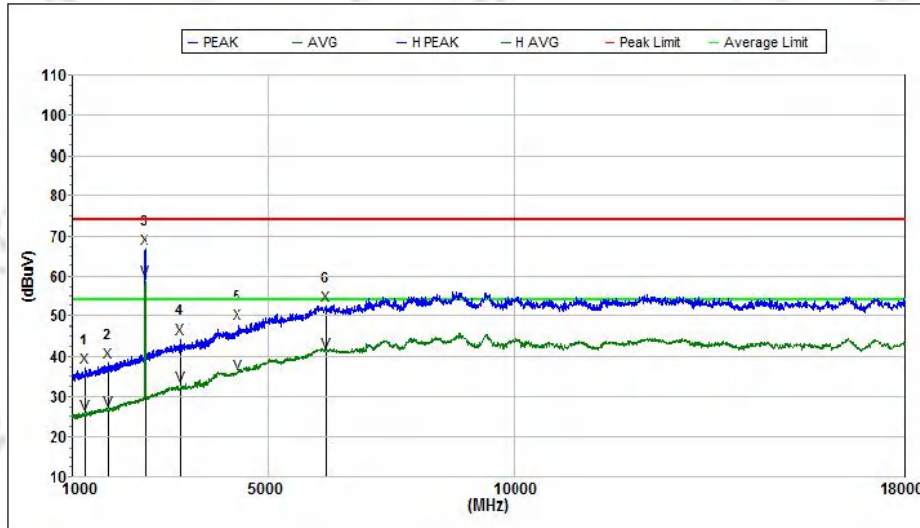


Test Summary Result

Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
Peak:								
1	1129.000	36.9	74.0	37.1	-24.3	53.6	3.9	V
2	1982.000	38.6	74.0	35.4	-22.4	53.9	5.1	V
3	2445.000	73.1	74.0	0.9	-20.9	54.1	5.7	V
4	3199.000	43.9	74.0	30.1	-17.9	54.0	6.7	V
5	4015.000	47.1	74.0	26.9	-14.3	53.2	8.0	V
6	4875.000	50.6	74.0	23.4	-11.3	52.5	8.5	V
Avg:								
1	1129.000	25.9	54.0	28.1	-24.3	53.6	3.9	V
2	1982.000	28.0	54.0	26.0	-22.4	53.9	5.1	V
3	2445.000	65.7	54.0	-11.7	-20.9	54.1	5.7	V
4	3199.000	32.8	54.0	21.2	-17.9	54.0	6.7	V
5	4015.000	36.4	54.0	17.6	-14.3	53.2	8.0	V
6	4875.000	40.6	54.0	13.4	-11.3	52.5	8.5	V

Note:Point 3 serves as the primary frequency signal.

Temperature:	21°C	Relative Humidity:	40%
Test Voltage:	DC 12V from Adapter	Phase:	Horizontal
Test Mode:	802.11n20-2462 MHz	Comment:	1GHz-18GHz

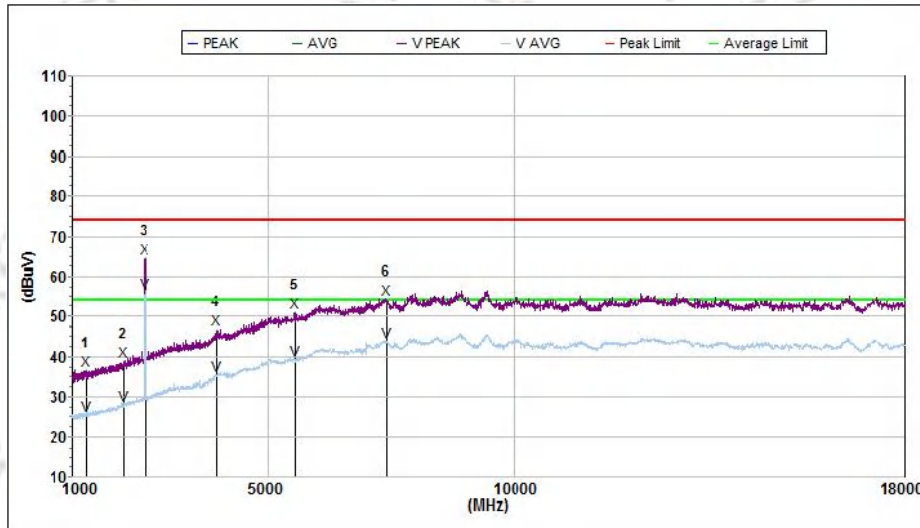


Test Summary Result

Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
Peak:								
1	1252.000	37.4	74.0	36.6	25.6	53.5	4.1	H
2	1717.000	38.6	74.0	35.4	25.2	53.6	4.7	H
3	2470.000	66.8	74.0	7.2	27.5	54.1	5.7	H
4	3199.000	44.6	74.0	29.4	29.4	54.0	6.7	H
5	4378.000	48.3	74.0	25.7	31.4	53.0	8.0	H
6	6154.000	52.8	74.0	21.2	34.5	51.5	10.0	H
Avg:								
1	1252.000	25.9	54.0	28.1	25.6	53.5	4.1	H
2	1717.000	26.8	54.0	27.2	25.2	53.6	4.7	H
3	2470.000	59.1	54.0	-5.1	27.5	54.1	5.7	H
4	3199.000	32.6	54.0	21.4	29.4	54.0	6.7	H
5	4378.000	35.8	54.0	18.2	31.4	53.0	8.0	H
6	6154.000	41.3	54.0	12.7	34.5	51.5	10.0	H

Note:Point 3 serves as the primary frequency signal.

Temperature:	21°C	Relative Humidity:	40%
Test Voltage:	DC 12V from Adapter	Phase:	Vertical
Test Mode:	802.11n20-2462 MHz	Comment:	1GHz-18GHz



Test Summary Result

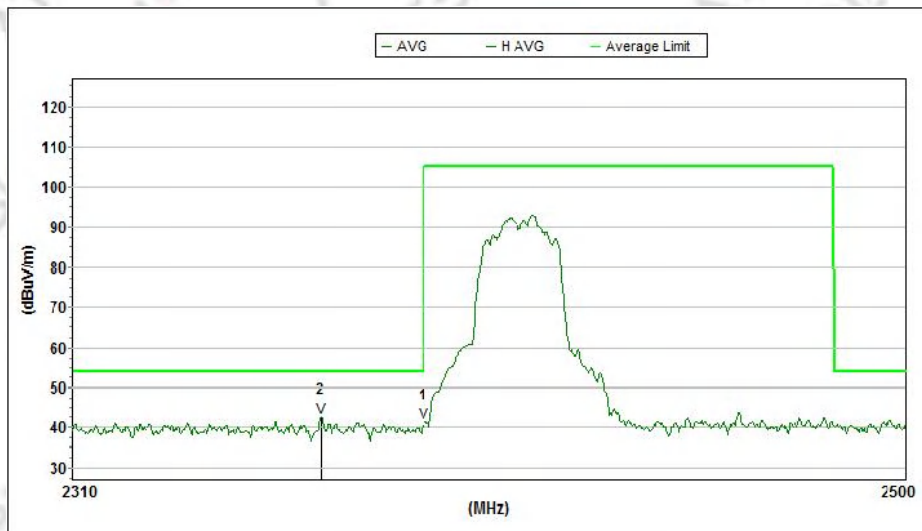
Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
Peak:								
1	1288.000	36.6	74.0	37.4	25.6	53.5	4.1	V
2	2029.000	38.8	74.0	35.2	26.6	53.9	5.1	V
3	2467.000	64.5	74.0	9.5	27.5	54.1	5.7	V
4	3922.000	47.0	74.0	27.0	30.7	53.3	7.8	V
5	5533.000	51.0	74.0	23.0	33.0	52.2	9.3	V
6	7412.500	54.5	74.0	19.5	36.2	51.8	11.0	V
Avg:								
1	1288.000	25.4	54.0	28.6	25.6	53.5	4.1	V
2	2029.000	28.0	54.0	26.0	26.6	53.9	5.1	V
3	2467.000	56.0	54.0	-2.0	27.5	54.1	5.7	V
4	3922.000	35.2	54.0	18.8	30.7	53.3	7.8	V
5	5533.000	39.4	54.0	14.6	33.0	52.2	9.3	V
6	7412.500	43.8	54.0	10.2	36.2	51.8	11.0	V

Note:Point 3 serves as the primary frequency signal.

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

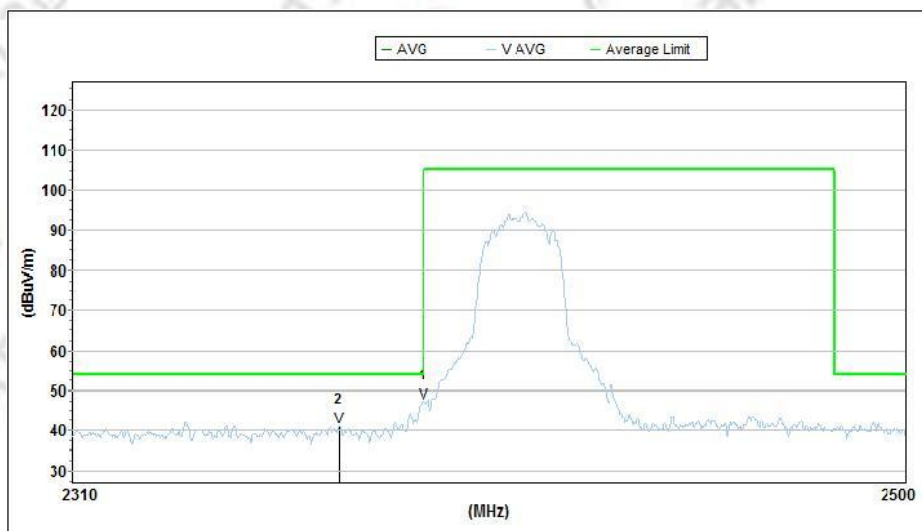
Test Mode: 802.11n20

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)	Cbl.L. (dB)	Pol
AVG								
1	2390.000	41.4	54.0	12.6	27.4	54.1	5.6	H
2	2366.620	42.9	54.0	11.1	27.3	54.0	5.6	H

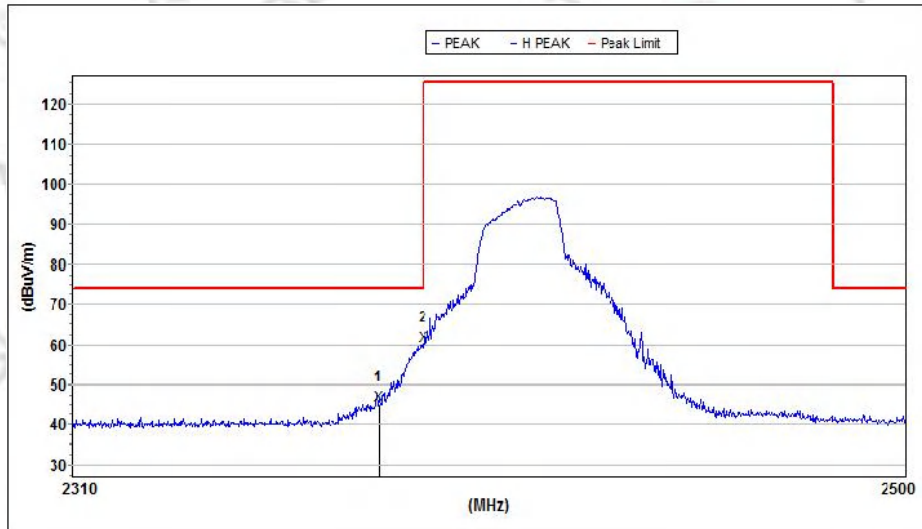
Test Channel: Lowest channel, Test Polarization: Vertical



Mk.	Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Cbl.L. (dB)	Pol
AVG								
1	2390.000	47.2	54.0	6.8	27.4	54.1	5.6	V
2	2370.990	41.2	54.0	12.8	27.3	54.0	5.6	V

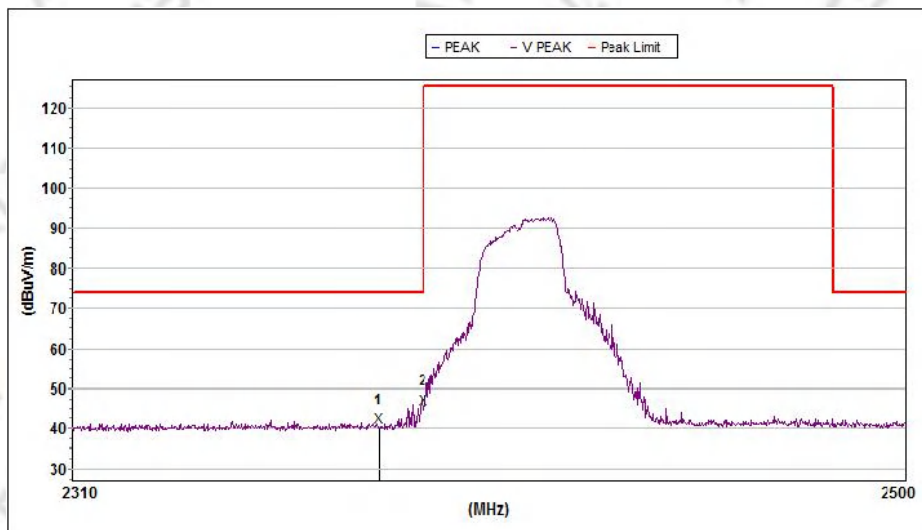
Test Mode: 802.11n20

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)	Cbl.L. (dB)	Pol.
PEAK								
1	2380.000	45.2	74.0	28.8	27.3	54.1	5.6	H
2	2390.000	60.0	74.0	14.0	27.4	54.1	5.6	H

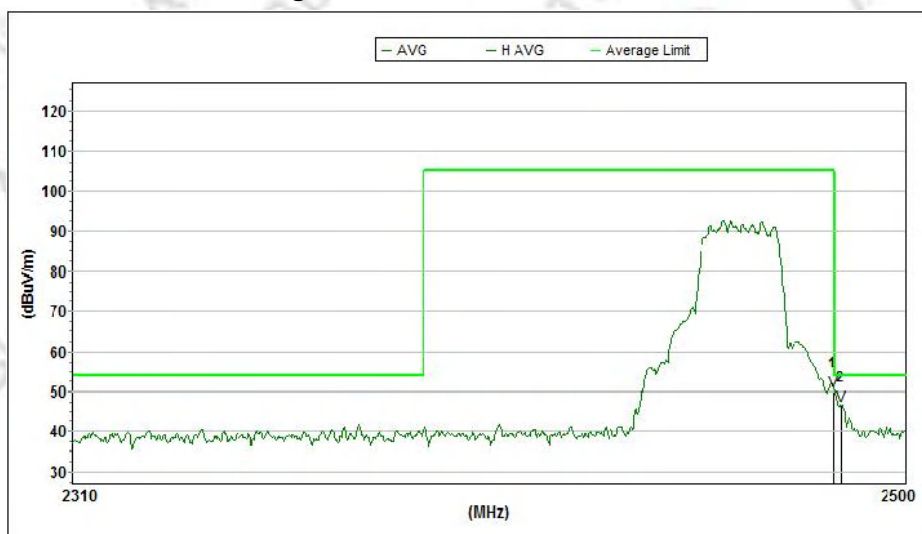
Test Channel: Lowest channel, Test Polarization: Vertical



Mk.	Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
PEAK								
1	2380.000	40.5	74.0	33.5	27.3	54.1	5.6	V
2	2390.000	45.0	74.0	29.0	27.4	54.1	5.6	V

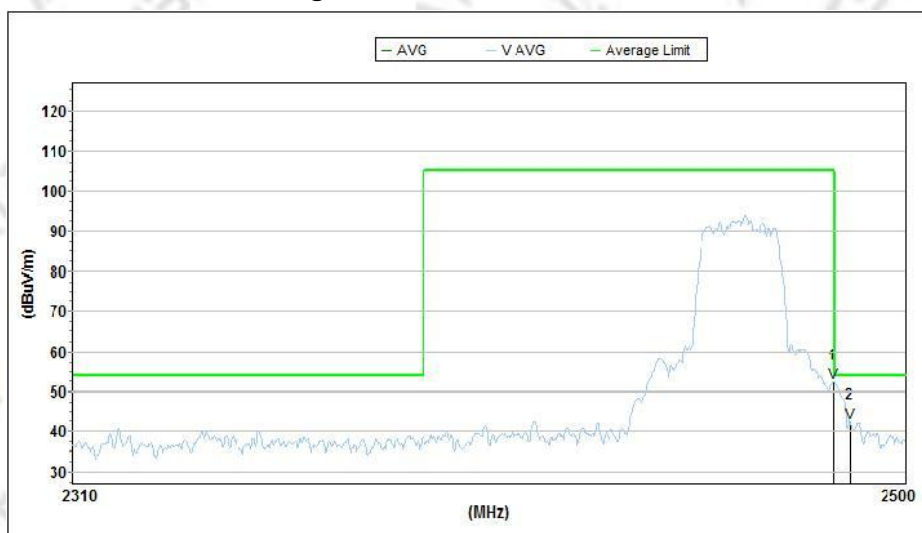
Test Mode: 802.11n20

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)	Cbl.L. (dB)	Pol
AVG								
1	2483.500	50.5	54.0	3.5	27.6	54.1	5.7	H
2	2485.180	46.9	54.0	7.1	27.6	54.1	5.7	H

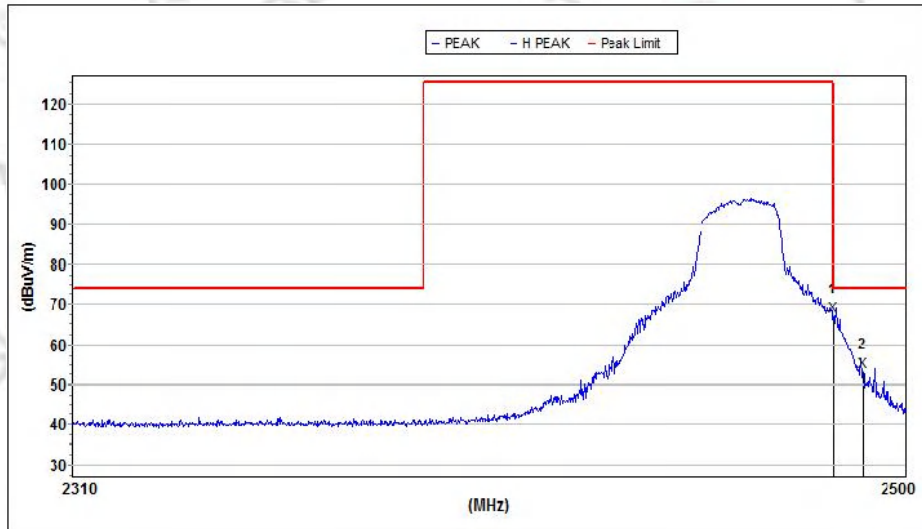
Test Channel: Highest channel, Test Polarization: Vertical



Mk.	Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Cbl.L. (dB)	Pol
AVG								
1	2483.500	52.2	54.0	1.8	27.6	54.1	5.7	V
2	2487.270	42.4	54.0	11.6	27.6	54.1	5.7	V

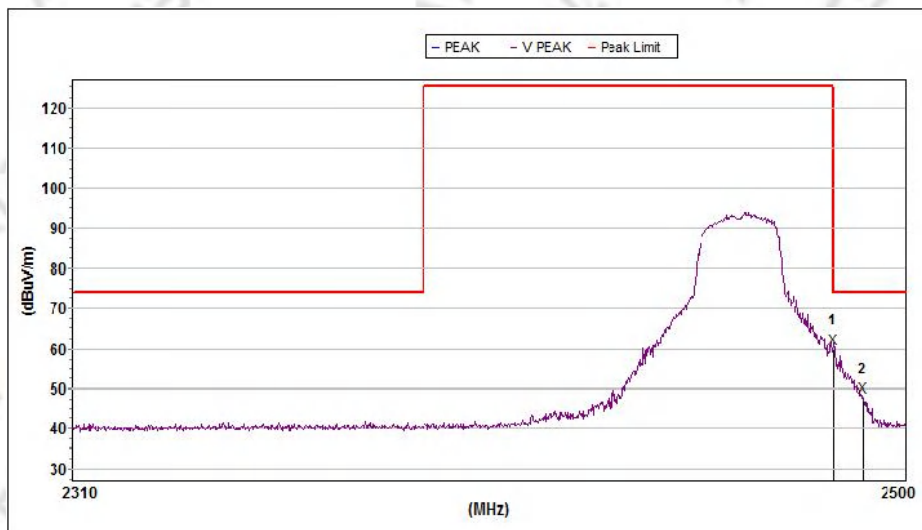
Test Mode: 802.11n20

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)	Cbl.L. (dB)	Pol.
PEAK								
1	2483.600	67.1	74.0	6.9	27.6	54.1	5.7	H
2	2490.000	53.4	74.0	20.6	27.6	54.1	5.8	H

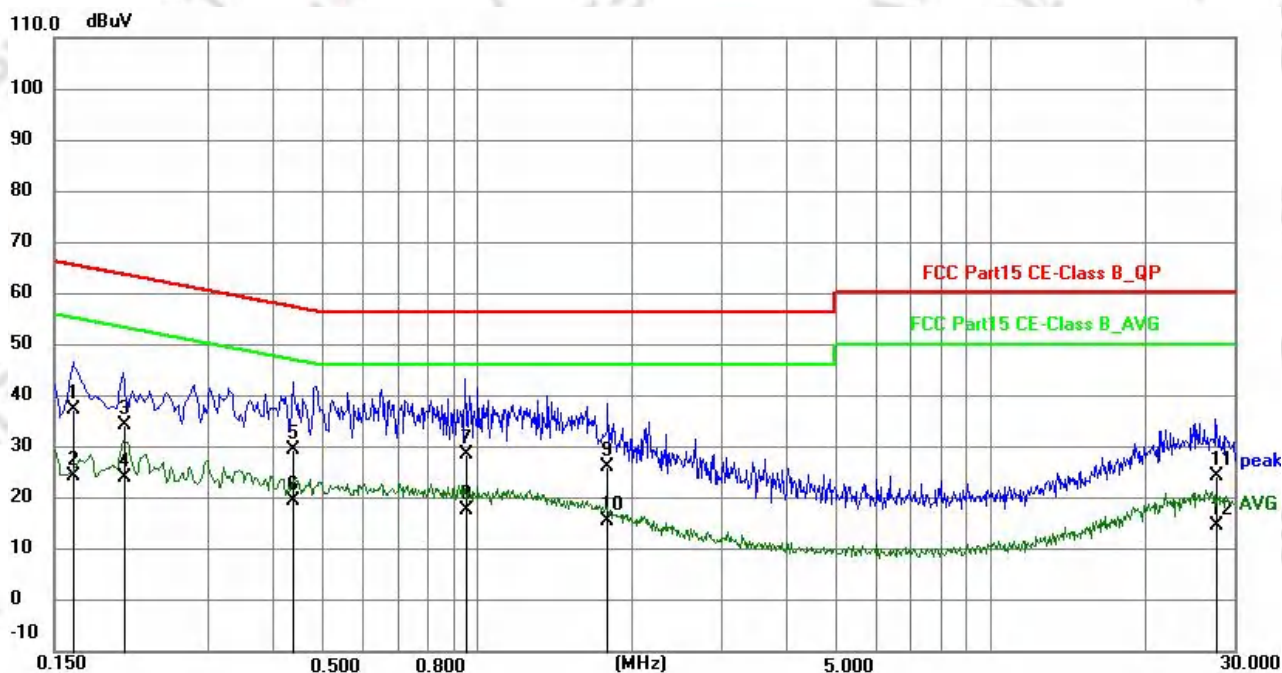
Test Channel: Highest channel, Test Polarization: Vertical



Mk.	Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
PEAK								
1	2483.600	60.3	74.0	13.7	27.6	54.1	5.7	V
2	2490.000	48.0	74.0	26.0	27.6	54.1	5.8	V

AC Power-Line Conducted Emission Test Data

Temperature:	23.1℃	Relative Humidity:	37%
Phase:	L	Test Mode:	Working Mode
Test Voltage:	AC 120V/60Hz	Test Date:	2025.12.15

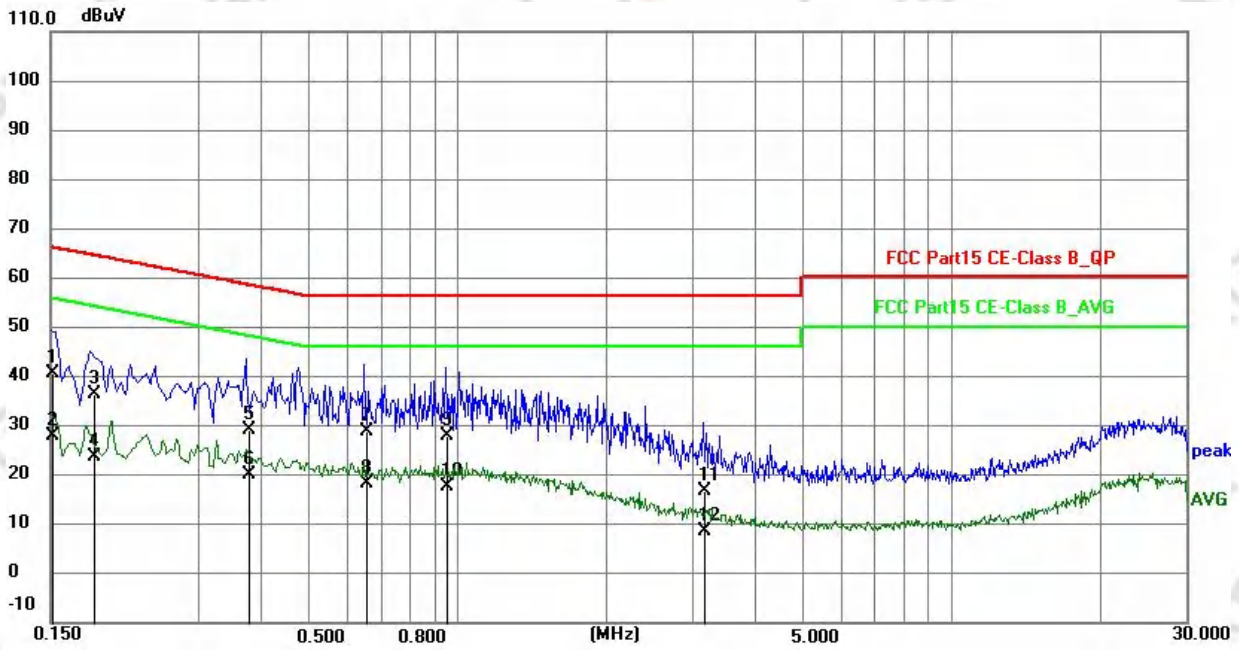


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1640	26.77	10.64	37.41	65.26	-27.85	QP
2	0.1640	13.67	10.64	24.31	55.26	-30.95	AVG
3	0.2040	23.56	10.59	34.15	63.45	-29.30	QP
4	0.2040	13.49	10.59	24.08	53.45	-29.37	AVG
5	0.4390	18.99	10.43	29.42	57.08	-27.66	QP
6	0.4390	9.01	10.43	19.44	47.08	-27.64	AVG
7	0.9530	18.15	10.41	28.56	56.00	-27.44	QP
8	0.9530	7.33	10.41	17.74	46.00	-28.26	AVG
9	1.7990	15.80	10.47	26.27	56.00	-29.73	QP
10	1.7990	5.11	10.47	15.58	46.00	-30.42	AVG
11	27.6110	9.35	14.90	24.25	60.00	-35.75	QP
12	27.6110	-0.16	14.90	14.74	50.00	-35.26	AVG

Remark:

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

Temperature:	23.1℃	Relative Humidity:	37%
Phase:	N	Test Mode:	Working Mode
Test Voltage:	AC 120V/60Hz	Test Date:	2025.12.15



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1510	30.08	10.64	40.72	65.94	-25.22	QP
2	0.1510	17.23	10.64	27.87	55.94	-28.07	AVG
3	0.1840	25.84	10.60	36.44	64.30	-27.86	QP
4	0.1840	13.16	10.60	23.76	54.30	-30.54	AVG
5	0.3790	18.84	10.45	29.29	58.30	-29.01	QP
6	0.3790	9.51	10.45	19.96	48.30	-28.34	AVG
7	0.6520	18.57	10.39	28.96	56.00	-27.04	QP
8	0.6520	7.78	10.39	18.17	46.00	-27.83	AVG
9	0.9510	17.65	10.40	28.05	56.00	-27.95	QP
10	0.9510	7.18	10.40	17.58	46.00	-28.42	AVG
11	3.1719	6.16	10.57	16.73	56.00	-39.27	QP
12	3.1719	-2.08	10.57	8.49	46.00	-37.51	AVG

Remark:

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

.*****END OF THE Appendix A1*****