

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	7.97	≤30	11.68	≤36	PASS
	6	8.41	≤30	12.12	≤36	PASS
	11	7.21	≤30	10.92	≤36	PASS
IEEE 802.11g	1	8.52	≤30	12.23	≤36	PASS
	6	8.50	≤30	12.21	≤36	PASS
	11	7.76	≤30	11.47	≤36	PASS
IEEE 802.11n_20	1	8.39	≤30	12.10	≤36	PASS
	6	7.81	≤30	11.52	≤36	PASS
	11	7.84	≤30	11.55	≤36	PASS
IEEE 802.11n_40	3	7.77	≤30	11.48	≤36	PASS
	6	8.30	≤30	12.01	≤36	PASS
	9	8.46	≤30	12.17	≤36	PASS

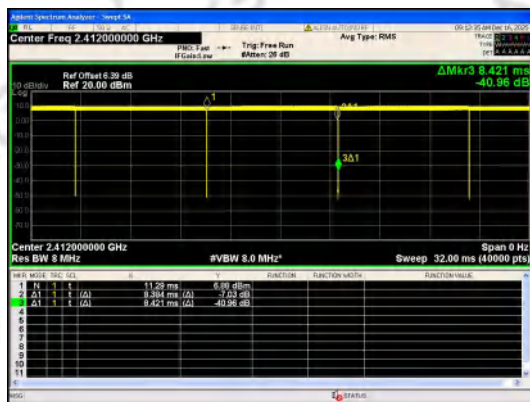
Note: $EIRP = P_{out} + G_{ant}$, where P_{out} is the conducted output power (i.e., the Peak Output Power in the table), and G_{ant} is the antenna gain equal to 3.71 dBi.

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	0	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		1.396	1.438	97.08	0.9708	0.1287	0.7163
		6		1.395	1.437	97.08	0.9708	0.1287	0.7168
		11		1.396	1.437	97.14	0.9714	0.126	0.7163
IEEE 802.11n_20	MCS 0	1		1.303	1.345	96.88	0.9688	0.1377	0.7675
		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	93.84	0.9384	0.2761	1.5385
		9		0.650	0.693	93.84	0.9384	0.2761	1.5385

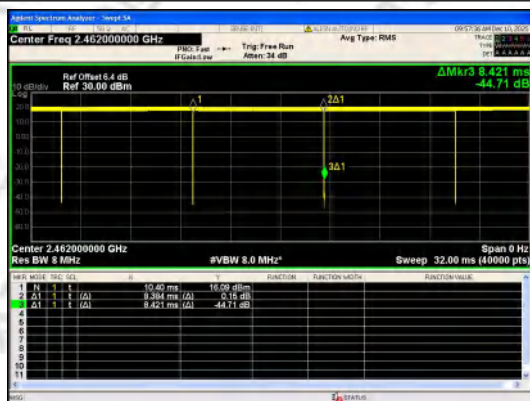
Test Graphs



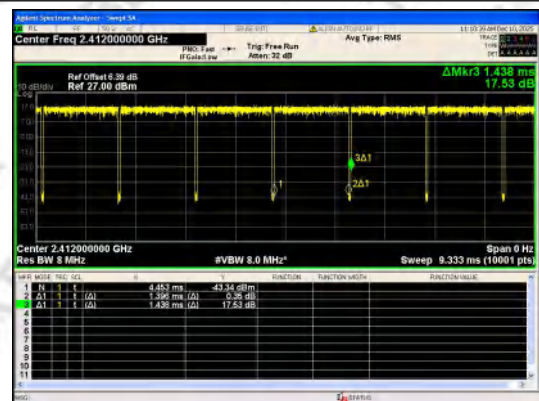
IEEE 802.11b_20MHz_Channel 1



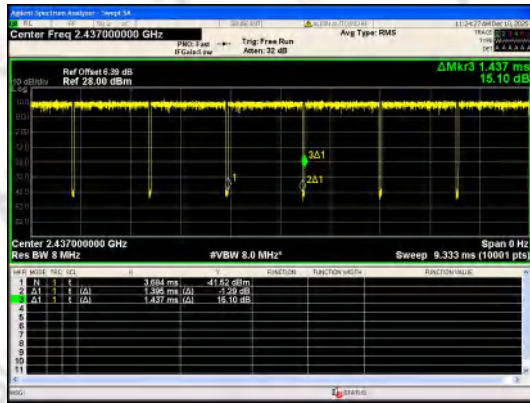
IEEE 802.11b_20MHz_Channel 6



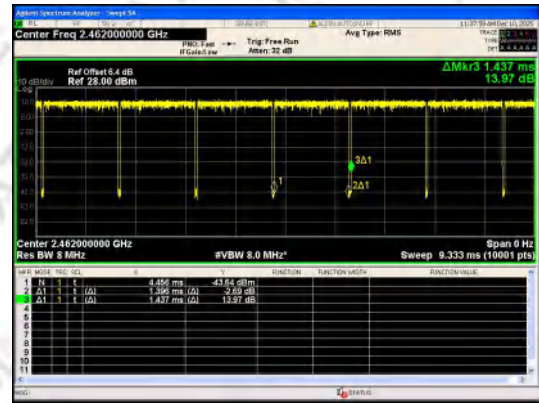
IEEE 802.11b_20MHz_Channel 11



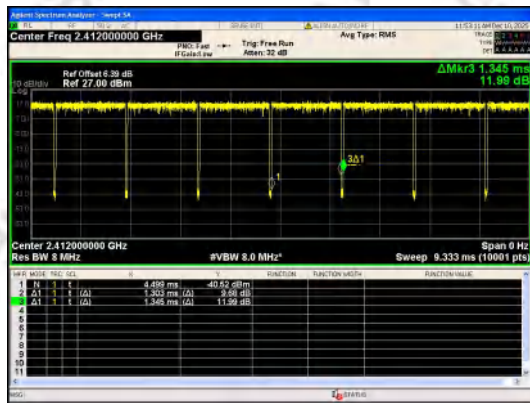
IEEE 802.11g_20MHz_Channel 1



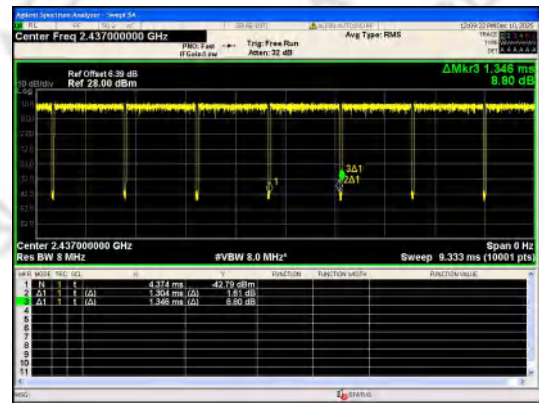
IEEE 802.11g_20MHz_Channel 6



IEEE 802.11g_20MHz_Channel 11



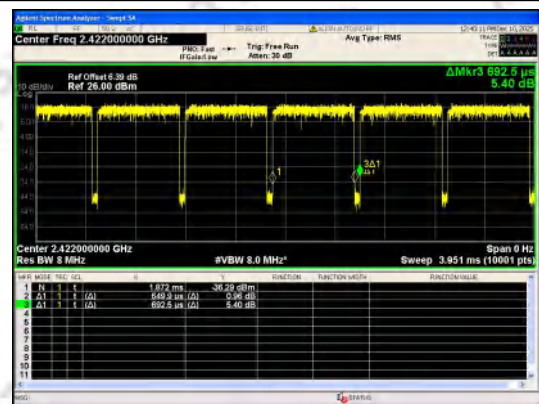
IEEE 802.11n_20MHz_Channel 1



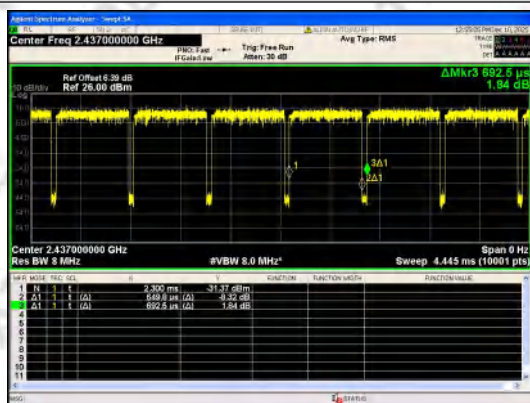
IEEE 802.11n_20MHz_Channel 6



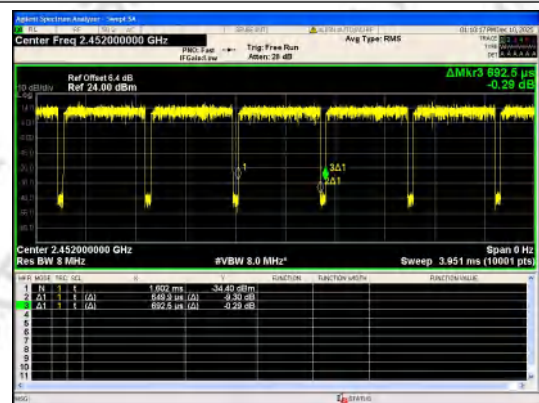
IEEE 802.11n_20MHz_Channel 11



IEEE 802.11n_40MHz_Channel 3



IEEE 802.11n_40MHz_Channel 6



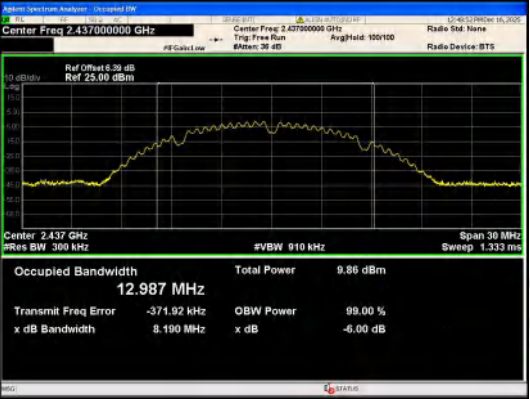
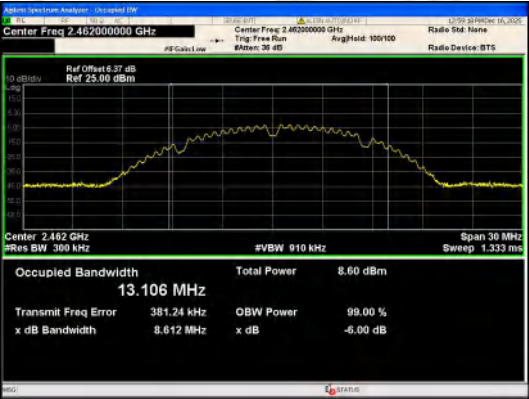
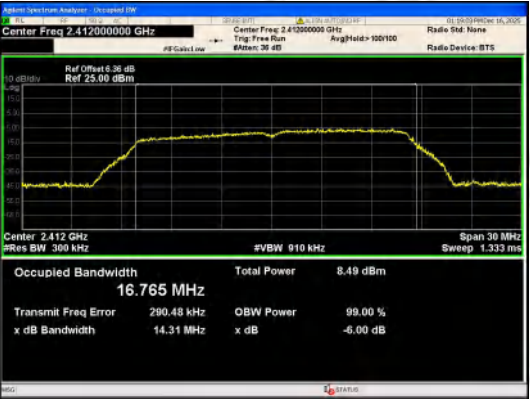
IEEE 802.11n_40MHz_Channel 9

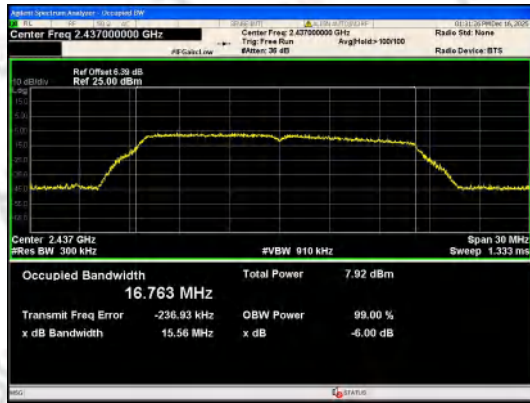
6dB Bandwidth

Test Result

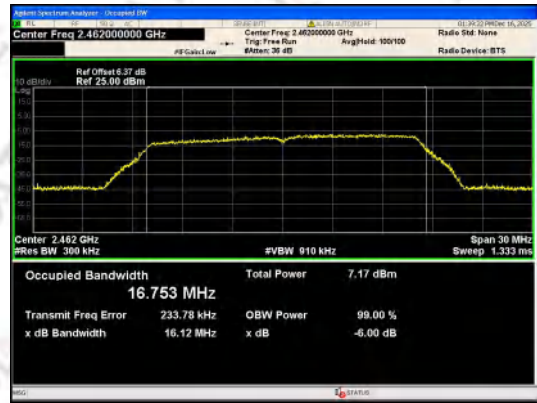
Mode	Channel	Ant.	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
IEEE 802.11b	1	0	2412	8.595	≥0.5	PASS
	6		2437	8.190		PASS
	11		2462	8.612		PASS
IEEE 802.11g	1		2412	14.31		PASS
	6		2437	15.56		PASS
	11		2462	16.12		PASS
IEEE 802.11n_20	1		2412	15.44		PASS
	6		2437	16.61		PASS
	11		2462	16.84		PASS
IEEE 802.11n_40	3		2422	20.50		PASS
	6		2437	28.65		PASS
	9		2452	36.62		PASS

Test Graphs

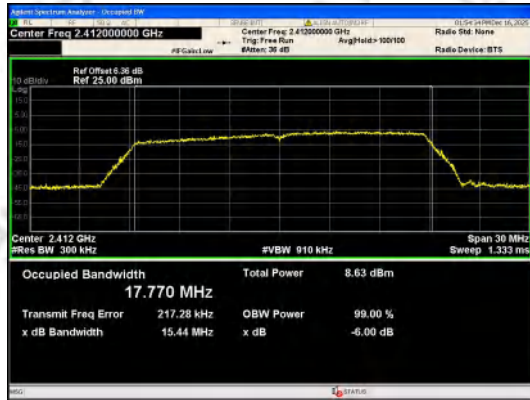
 Center Freq 2.41200000 GHz Ref Offset 6.36 dB Ref 25.00 dBm Center 2.412 GHz #Res BW 300 kHz #VBW 910 kHz Span 30 MHz Sweep 1.333 ms Occupied Bandwidth 13.003 MHz Total Power 9.23 dBm Transmit Freq Error 436.06 kHz x dB Bandwidth 8.595 MHz OBW Power 99.00 % x dB -6.00 dB	 Center Freq 2.43700000 GHz Ref 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 12.987 MHz Total Power 9.86 dBm Transmit Freq Error -371.92 kHz x dB Bandwidth 8.190 MHz OBW Power 99.00 % 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 13.106 MHz Total Power 8.60 dBm Transmit Freq Error 381.24 kHz x dB Bandwidth 8.612 MHz OBW Power 99.00 % 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 16.765 MHz Total Power 8.49 dBm Transmit Freq Error 290.48 kHz x dB Bandwidth 14.31 MHz OBW Power 99.00 % x dB -6.00 dB
IEEE 802.11b_Channel 11_20MHz_Antenna 0	IEEE 802.11g_Channel 1_20MHz_Antenna 0



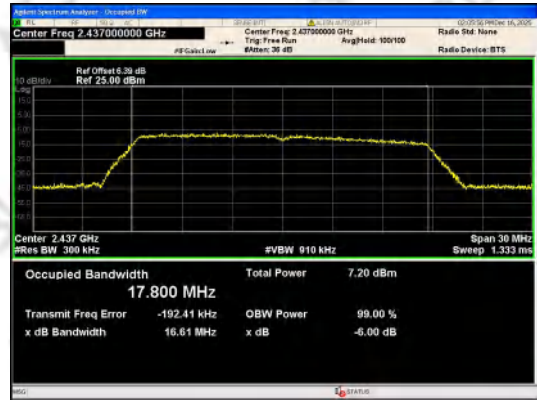
IEEE 802.11g_Channel 6_20MHz_Antenna 0



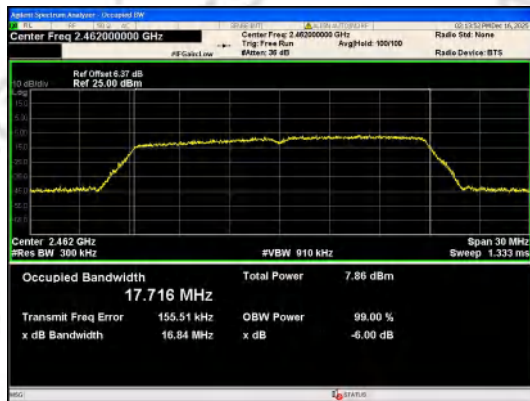
IEEE 802.11g_Channel 11_20MHz_Antenna 0



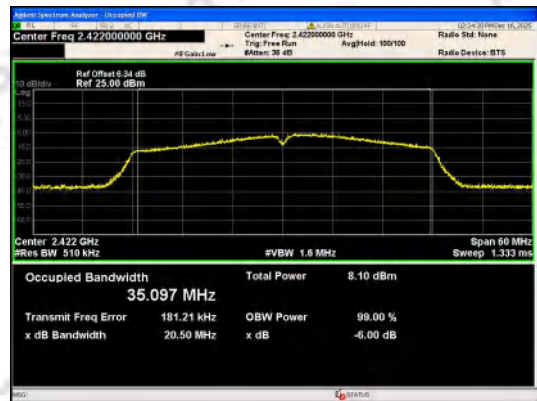
IEEE 802.11n_Channel 1_20MHz_Antenna 0



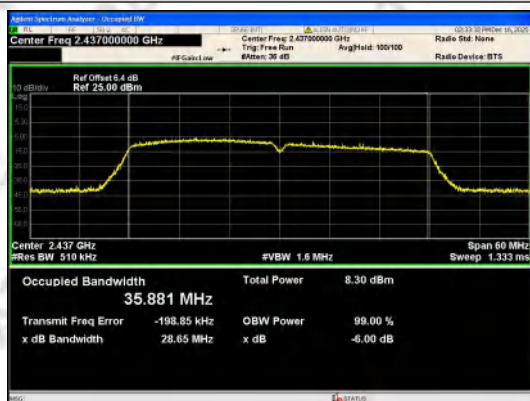
IEEE 802.11n_Channel 6_20MHz_Antenna 0



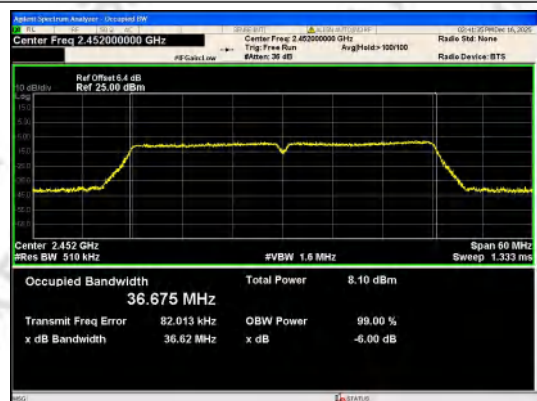
IEEE 802.11n_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 3_40MHz_Antenna 0



IEEE 802.11n_Channel 6_40MHz_Antenna 0



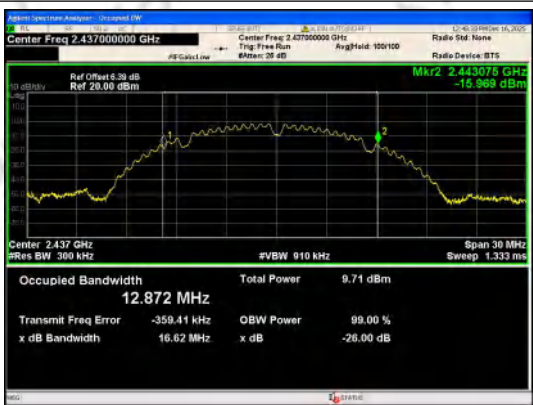
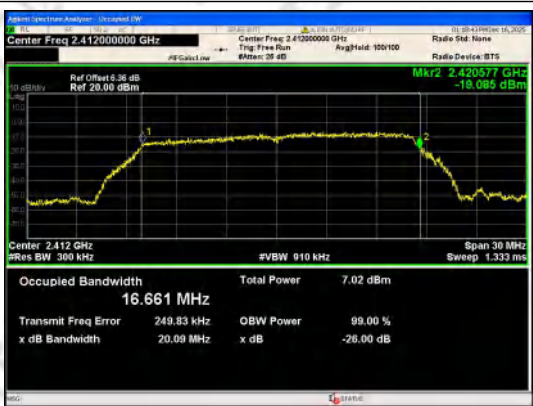
IEEE 802.11n_Channel 9_40MHz_Antenna 0

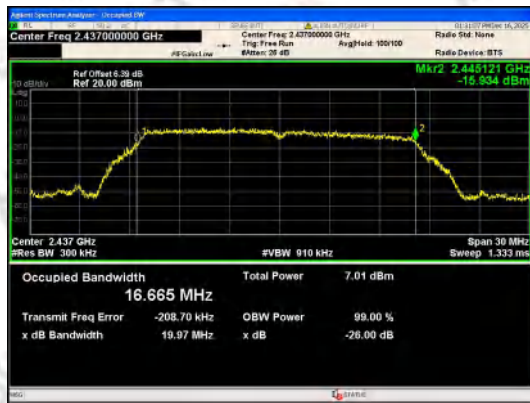
99% Bandwidth

Test Result

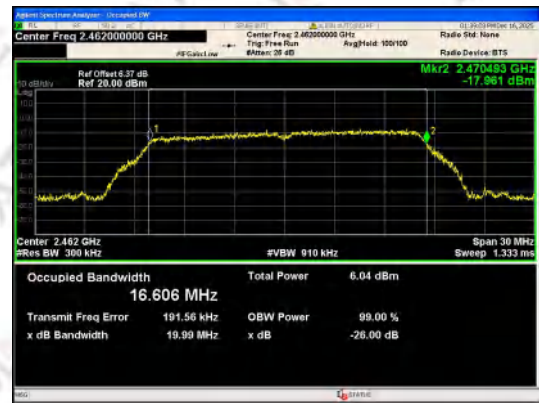
Mode	Channel	Ant.	Center Frequency (MHz)	99% BW (MHz)
IEEE 802.11b	1	0	2412	12.903
	6		2437	12.872
	11		2462	12.966
IEEE 802.11g	1		2412	16.661
	6		2437	16.665
	11		2462	16.606
IEEE 802.11n_20	1		2412	17.730
	6		2437	17.716
	11		2462	17.705
IEEE 802.11n_40	3		2422	35.005
	6		2437	35.794
	9		2452	36.522

Test Graphs

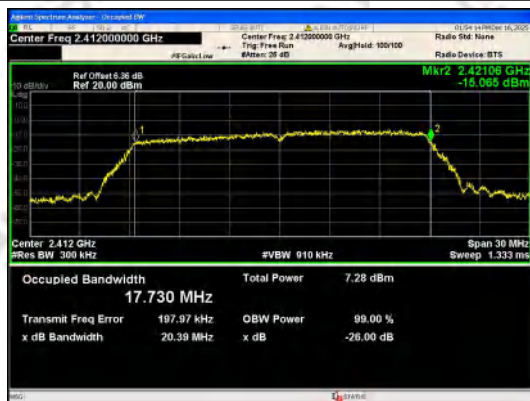
 Center Freq 2.41200000 GHz Ref Offset 6.36 dB Ref 20.00 dBm Mkr2 2.416879 GHz -18.676 dBm Center 2.412 GHz #Res BW 300 kHz #VBW 910 kHz Span 30 MHz Sweep 1.333 ms Occupied Bandwidth 12.903 MHz Total Power 9.08 dBm Transmit Freq Error 429.93 kHz OBW Power 99.00 % x dB Bandwidth 16.62 MHz x dB -26.00 dB	 Center Freq 2.43700000 GHz Ref Offset 6.39 dB Ref 20.00 dBm Mkr2 2.443078 GHz -18.969 dBm Center 2.437 GHz #Res BW 300 kHz #VBW 910 kHz Span 30 MHz Sweep 1.333 ms Occupied Bandwidth 12.872 MHz Total Power 9.71 dBm Transmit Freq Error -359.41 kHz OBW Power 99.00 % x dB Bandwidth 16.62 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 2.468864 GHz -18.618 dBm Center 2.462 GHz #Res BW 300 kHz #VBW 910 kHz Span 30 MHz Sweep 1.333 ms Occupied Bandwidth 12.966 MHz Total Power 8.33 dBm Transmit Freq Error 382.04 kHz OBW Power 99.00 % x dB Bandwidth 16.66 MHz x dB -26.00 dB	 Center Freq 2.41200000 GHz Ref Offset 6.38 dB Ref 20.00 dBm Mkr2 2.420577 GHz -18.085 dBm Center 2.412 GHz #Res BW 300 kHz #VBW 910 kHz Span 30 MHz Sweep 1.333 ms Occupied Bandwidth 16.661 MHz Total Power 7.02 dBm Transmit Freq Error 249.83 kHz OBW Power 99.00 % x dB Bandwidth 20.09 MHz x dB -26.00 dB
IEEE 802.11b_Channel 11_20MHz_Antenna 0	IEEE 802.11g_Channel 1_20MHz_Antenna 0



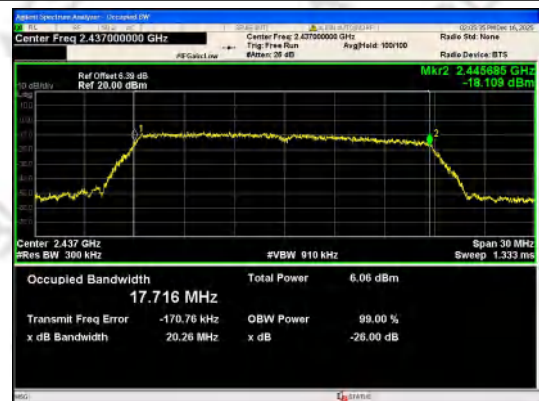
IEEE 802.11g_Channel 6_20MHz_Antenna 0



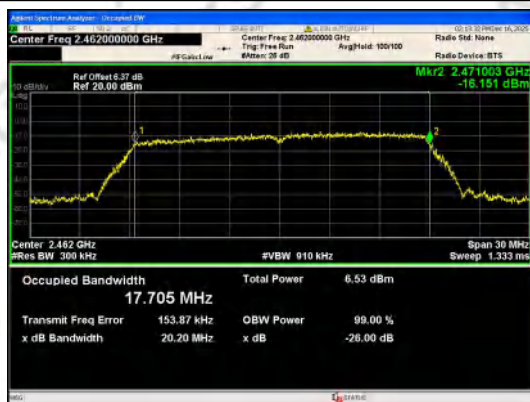
IEEE 802.11g_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 1_20MHz_Antenna 0



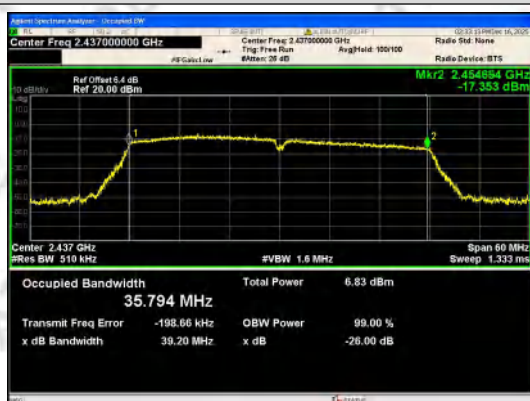
IEEE 802.11n_Channel 6_20MHz_Antenna 0



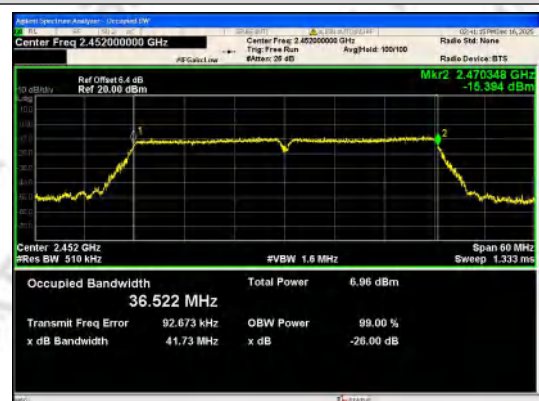
IEEE 802.11n_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 3_40MHz_Antenna 0



IEEE 802.11n_Channel 6_40MHz_Antenna 0



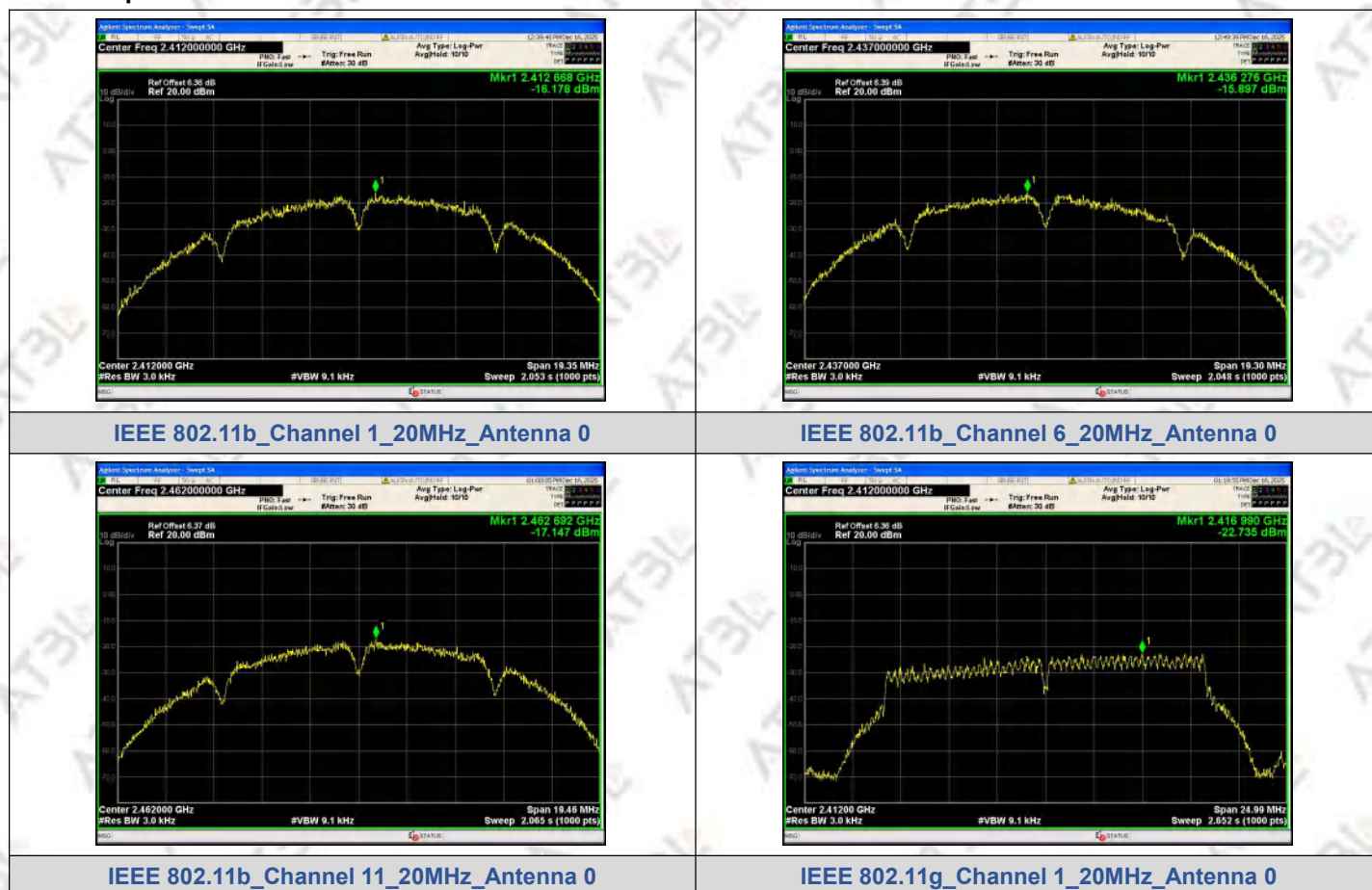
IEEE 802.11n_Channel 9_40MHz_Antenna 0

Power Spectral Density

Test Result

Mode	Channel	PSD (dBm/3kHz) Ant. 0	Limit (dBm/3kHz)	Result
IEEE 802.11b	1	-16.180	≤8	PASS
	6	-15.900		PASS
	11	-17.150		PASS
IEEE 802.11g	1	-22.730		PASS
	6	-22.330		PASS
	11	-22.260		PASS
IEEE 802.11n_20	1	-22.180		PASS
	6	-23.750		PASS
	11	-22.020		PASS
IEEE 802.11n_40	3	-22.700		PASS
	6	-24.110		PASS
	9	-25.140		PASS

Test Graphs

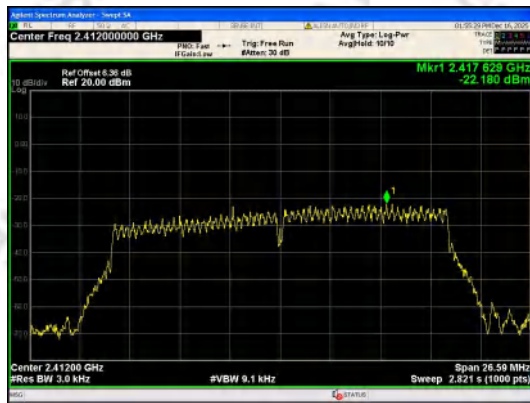




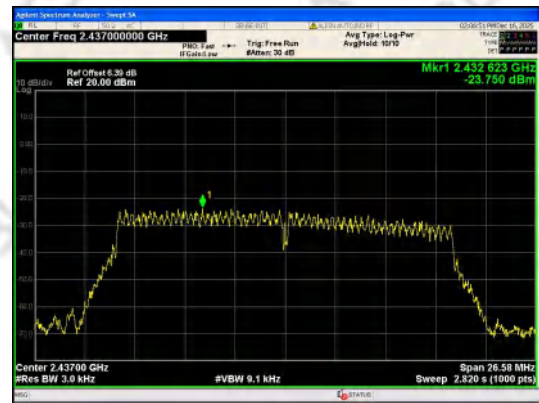
IEEE 802.11g_Channel 6_20MHz_Antenna 0



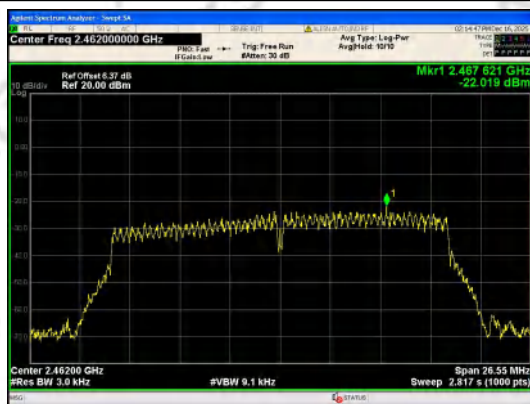
IEEE 802.11g_Channel 11_20MHz_Antenna 0



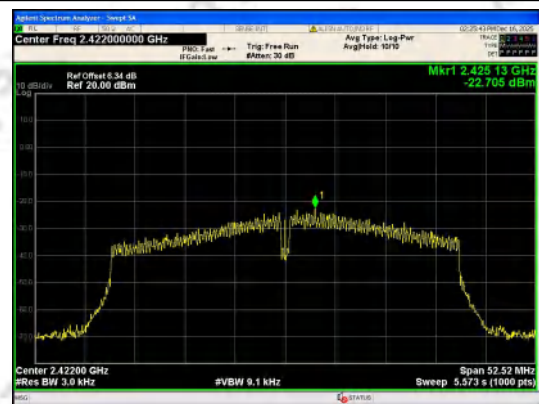
IEEE 802.11n_Channel 1_20MHz_Antenna 0



IEEE 802.11n_Channel 6_20MHz_Antenna 0



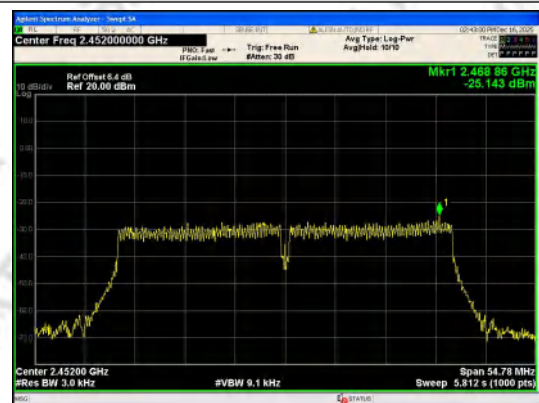
IEEE 802.11n_Channel 11_20MHz_Antenna 0



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.

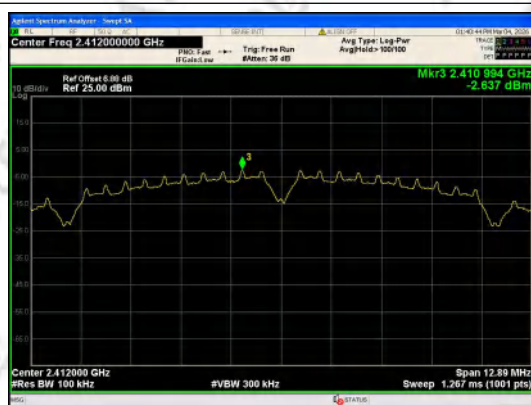
Test Result

Mode	Channel	Ant.	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
IEEE 802.11b	1	0	2370.71	-49.930	-22.64	-27.290	PASS
			2400.00	-52.876	-22.64	-30.236	PASS
			4824.20	-50.030	-22.64	-27.390	PASS
			7217.60	-50.160	-22.64	-27.520	PASS
			9659.70	-50.758	-22.64	-28.118	PASS
			24708.5	-40.003	-22.64	-17.363	PASS
	6		4884.17	-50.830	-23.28	-27.550	PASS
			7305.63	-51.066	-23.28	-27.786	PASS
			9767.68	-51.362	-23.28	-28.082	PASS
			24871.4	-38.722	-23.28	-15.442	PASS
	11		2483.50	-51.441	-23.37	-28.071	PASS
			4931.61	-49.174	-23.37	-25.804	PASS
			7393.03	-50.534	-23.37	-27.164	PASS
			9850.08	-51.218	-23.37	-27.848	PASS
			24876.4	-39.583	-23.37	-16.213	PASS
IEEE 802.11g	1		2400.00	-38.675	-24.25	-14.425	PASS
			4829.23	-50.990	-24.25	-26.740	PASS
			7255.69	-50.885	-24.25	-26.635	PASS
			9665.92	-51.479	-24.25	-27.229	PASS
			24943.2	-39.532	-24.25	-15.282	PASS
	6		4868.56	-50.084	-24.42	-25.664	PASS
			7308.76	-49.511	-24.42	-25.091	PASS
			9761.43	-51.618	-24.42	-27.198	PASS
			24974.4	-39.770	-24.42	-15.350	PASS
	11		2483.50	-52.082	-24.49	-27.592	PASS
			4904.77	-50.783	-24.49	-26.293	PASS
			7388.66	-50.837	-24.49	-26.347	PASS
			9857.57	-51.043	-24.49	-26.553	PASS
			24613.0	-39.687	-24.49	-15.197	PASS
IEEE 802.11n_20	1		2400.00	-35.653	-24.21	-11.443	PASS
			4825.49	-50.235	-24.21	-26.025	PASS
			7242.58	-49.775	-24.21	-25.565	PASS
			9634.09	-51.586	-24.21	-27.376	PASS
			24728.5	-39.644	-24.21	-15.434	PASS

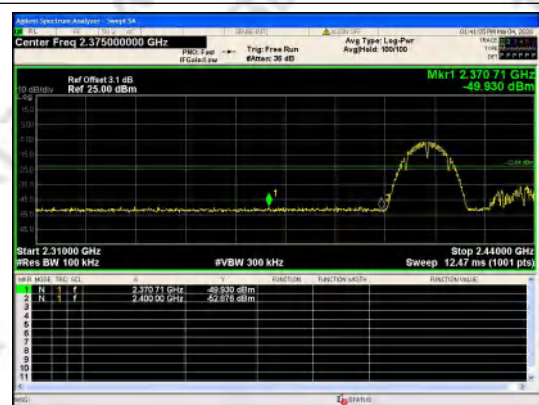
IEEE 802.11n_40	6	4874.80	-50.871	-24.49	-26.381	PASS
		7327.48	-50.222	-24.49	-25.732	PASS
		9737.71	-51.186	-24.49	-26.696	PASS
		24672.3	-39.268	-24.49	-14.778	PASS
	11	2483.50	-52.350	-24.52	-27.830	PASS
		4906.64	-51.211	-24.52	-26.691	PASS
		7394.28	-51.105	-24.52	-26.585	PASS
		9829.48	-51.177	-24.52	-26.657	PASS
		24720.3	-39.567	-24.52	-15.047	PASS
		2400.00	-45.412	-27.3	-18.112	PASS
		4866.69	-50.504	-27.3	-23.204	PASS
	3	7276.29	-50.671	-27.3	-23.371	PASS
		9695.26	-51.656	-27.3	-24.356	PASS
		24584.9	-39.843	-27.3	-12.543	PASS
		4837.97	-50.807	-28.02	-22.787	PASS
		7301.89	-50.942	-28.02	-22.922	PASS
	6	9745.20	-51.429	-28.02	-23.409	PASS
		24652.9	-39.566	-28.02	-11.546	PASS
		2483.50	-51.411	-27.26	-24.151	PASS
	9	4933.48	-50.498	-27.26	-23.238	PASS
		7361.19	-49.264	-27.26	-22.004	PASS
		9789.52	-51.579	-27.26	-24.319	PASS
		24646.7	-39.376	-27.26	-12.116	PASS

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

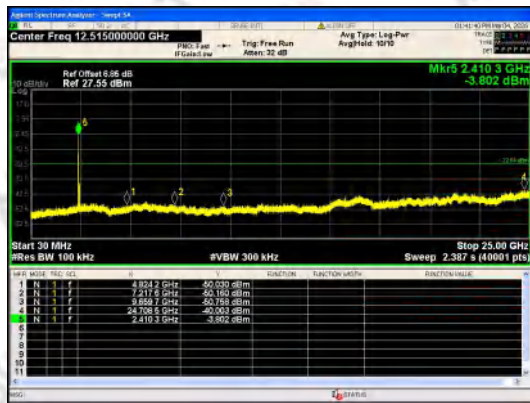
Test Graphs



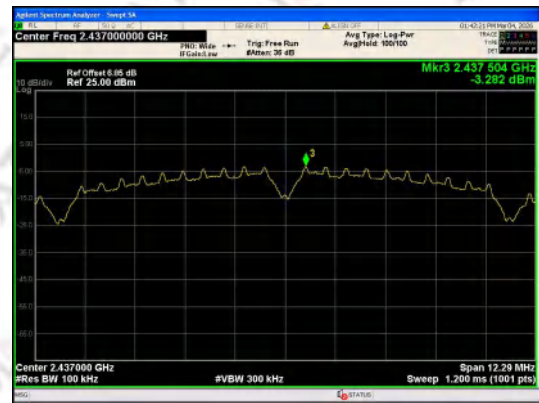
In-Band Reference Level
IEEE 802.11b_Channel 1_20MHz_Antenna 0



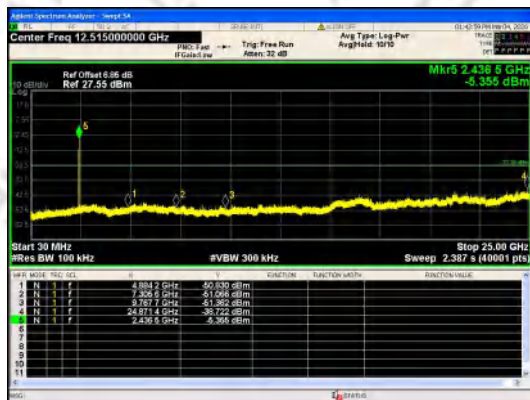
Out Of Band Emission
IEEE 802.11b_Channel 1_20MHz_Antenna 0



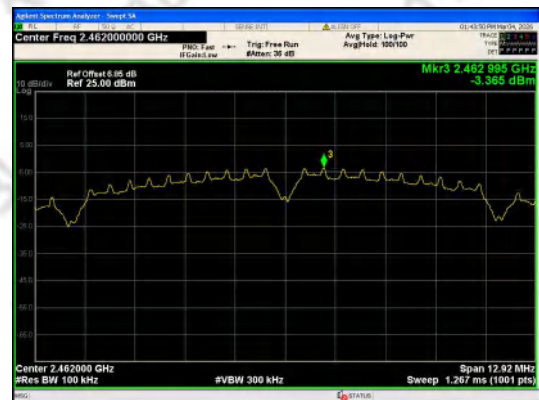
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 1_20MHz_Antenna 0



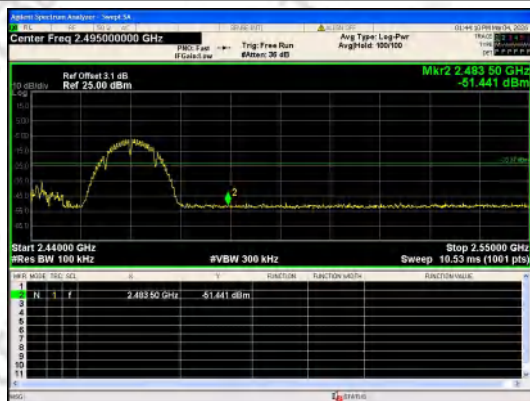
In-Band Reference Level
IEEE 802.11b_Channel 6_20MHz_Antenna 0



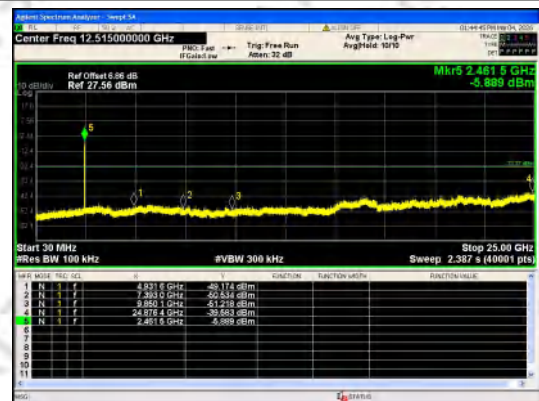
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 6_20MHz_Antenna 0



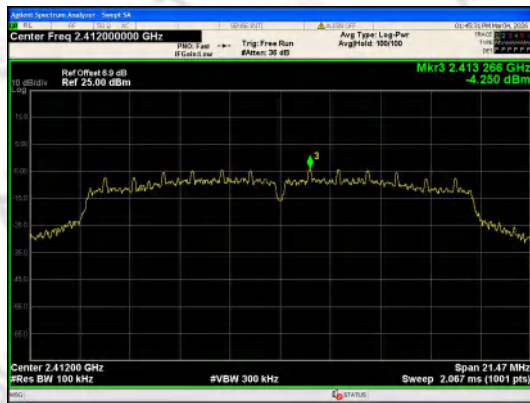
In-Band Reference Level
IEEE 802.11b_Channel 11_20MHz_Antenna 0



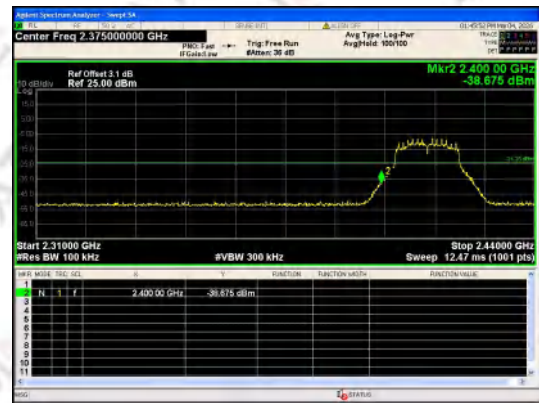
Out Of Band Emission
IEEE 802.11b_Channel 11_20MHz_Antenna 0



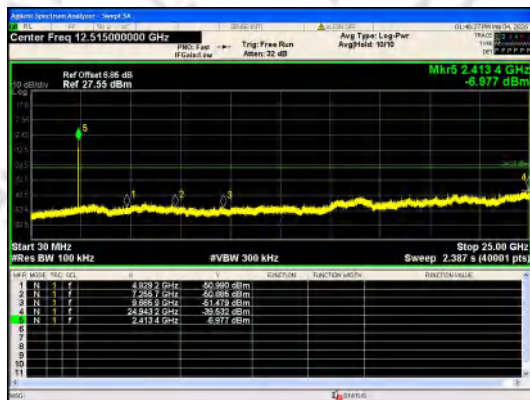
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 11_20MHz_Antenna 0



In-Band Reference Level
IEEE 802.11g_Channel 1_20MHz_Antenna 0



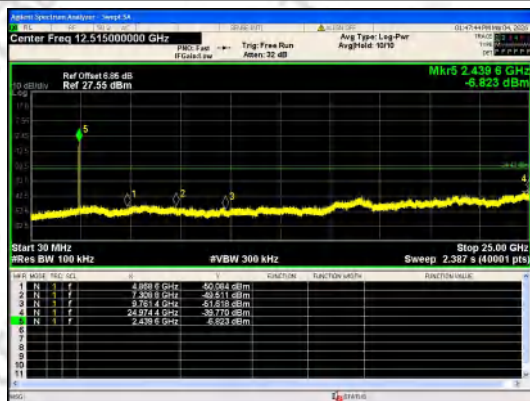
Out Of Band Emission
IEEE 802.11g_Channel 1_20MHz_Antenna 0



30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 1_20MHz_Antenna 0



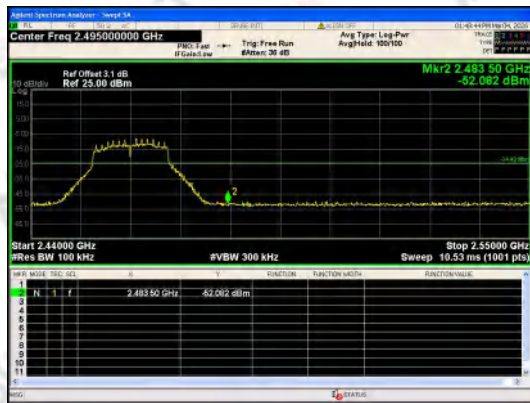
In-Band Reference Level
IEEE 802.11g_Channel 6_20MHz_Antenna 0



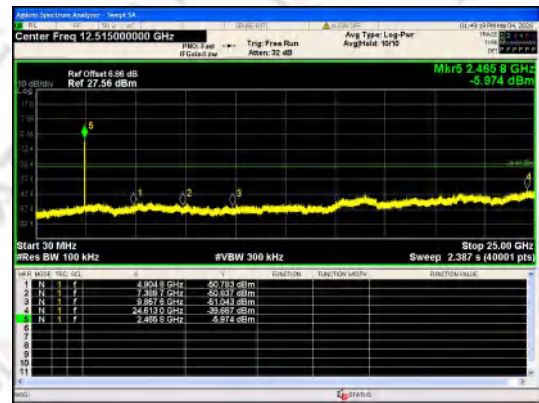
30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 6_20MHz_Antenna 0



In-Band Reference Level
IEEE 802.11g_Channel 11_20MHz_Antenna 0



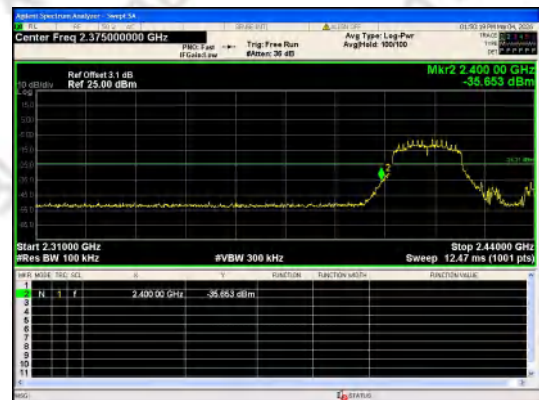
Out Of Band Emission
IEEE 802.11g_Channel 11_20MHz_Antenna 0



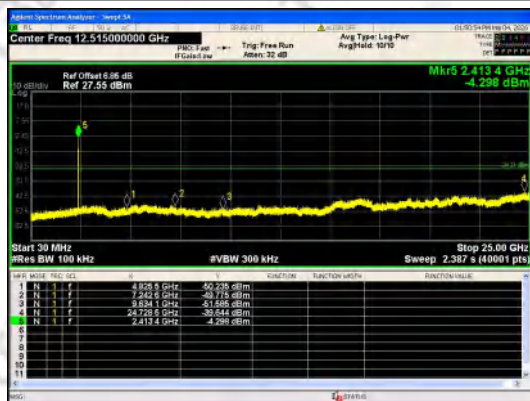
30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 11_20MHz_Antenna 0



In-Band Reference Level
IEEE 802.11n_Channel 1_20MHz_Antenna 0



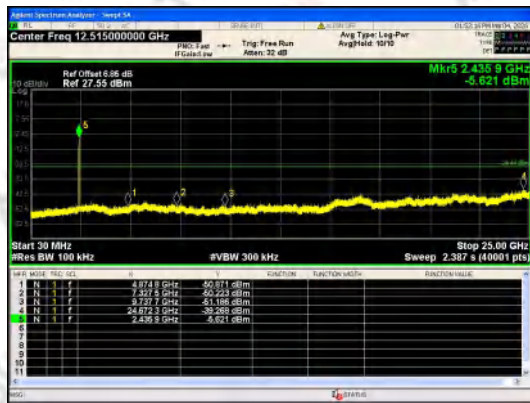
Out Of Band Emission
IEEE 802.11n_Channel 1_20MHz_Antenna 0



30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 1_20MHz_Antenna 0



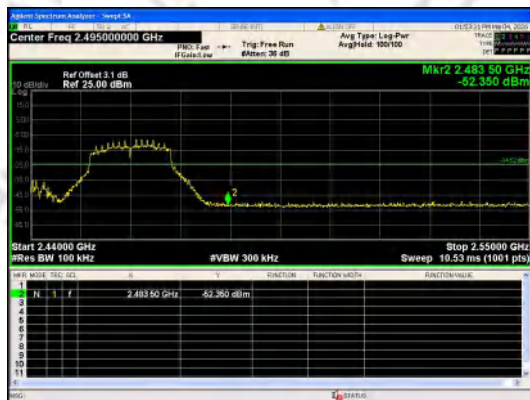
In-Band Reference Level
IEEE 802.11n_Channel 6_20MHz_Antenna 0



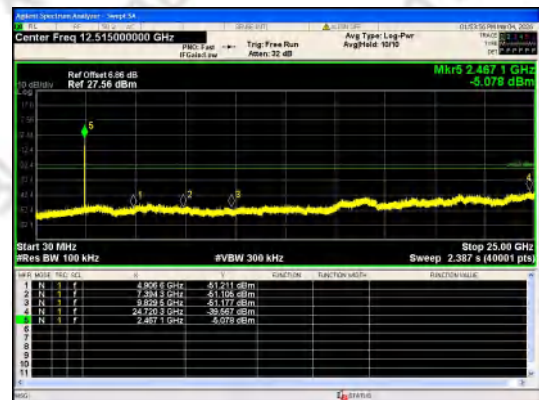
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 6_20MHz_Antenna 0



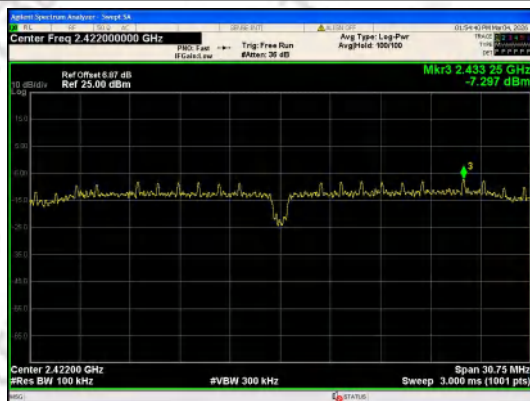
In-Band Reference Level
IEEE 802.11n_Channel 11_20MHz_Antenna 0



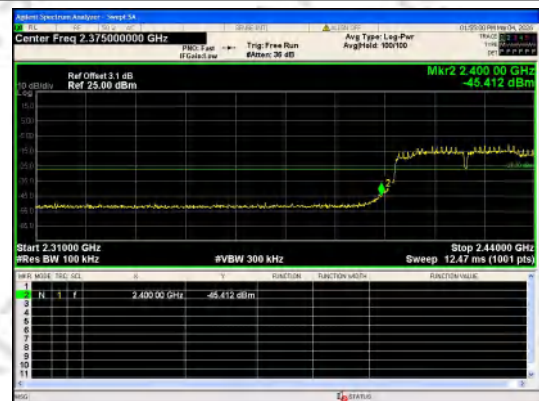
Out Of Band Emission
IEEE 802.11n_Channel 11_20MHz_Antenna 0



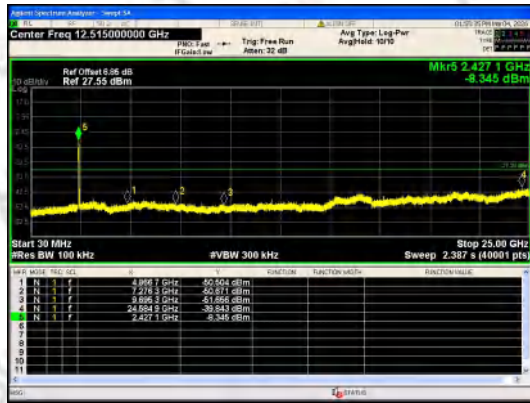
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 11_20MHz_Antenna 0



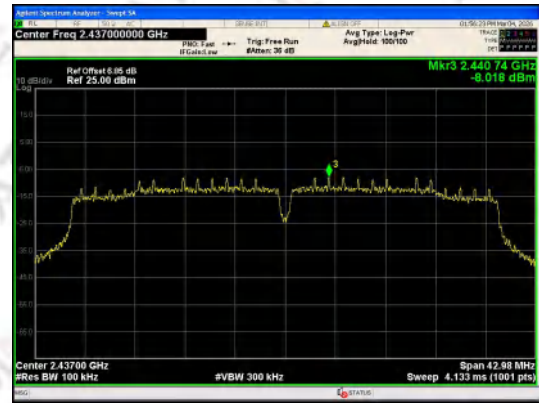
In-Band Reference Level
IEEE 802.11n_Channel 3_40MHz_Antenna 0



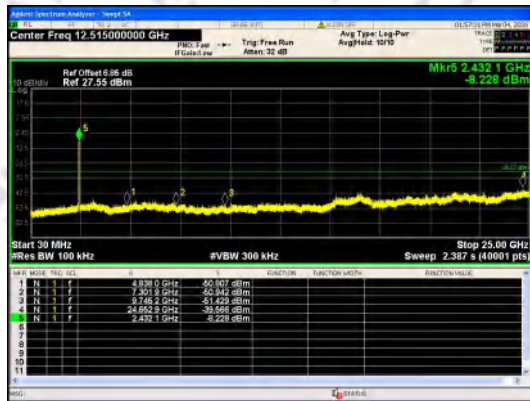
Out Of Band Emission
IEEE 802.11n_Channel 3_40MHz_Antenna 0



30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 3_40MHz_Antenna 0



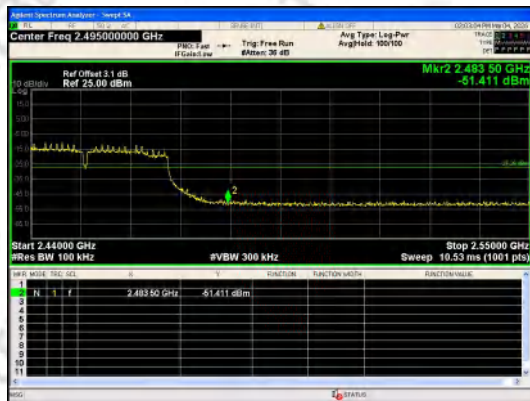
In-Band Reference Level
IEEE 802.11n_Channel 6_40MHz_Antenna 0



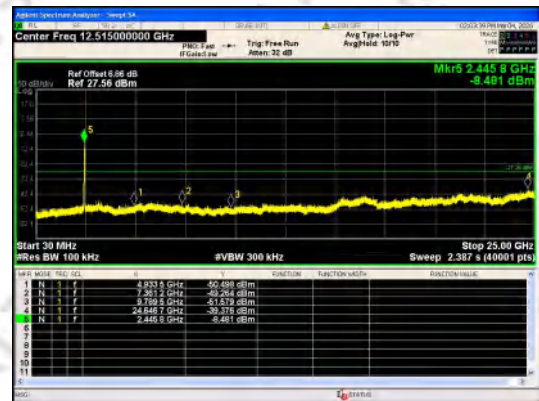
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 6_40MHz_Antenna 0



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. $\text{Reading} = \text{Level} - \text{factor}$

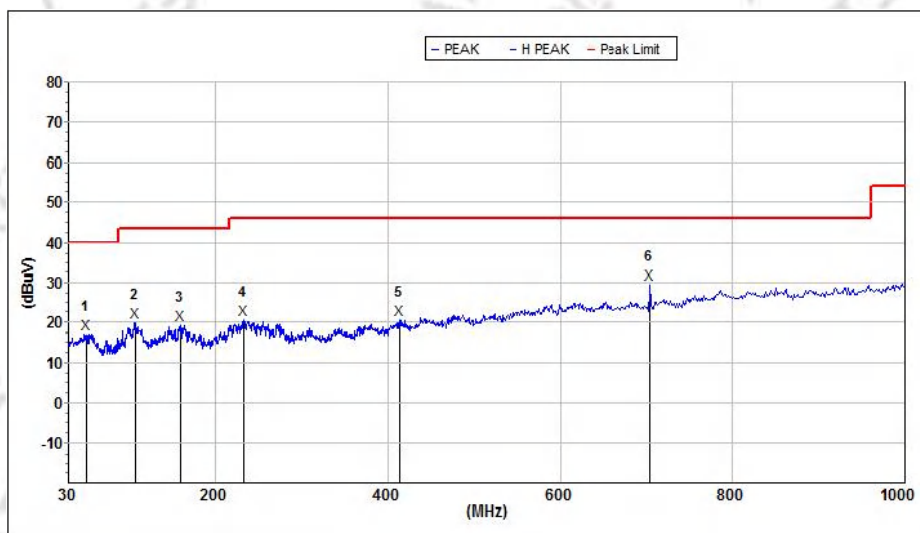
Radiated Emission (Above 1GHz)

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)

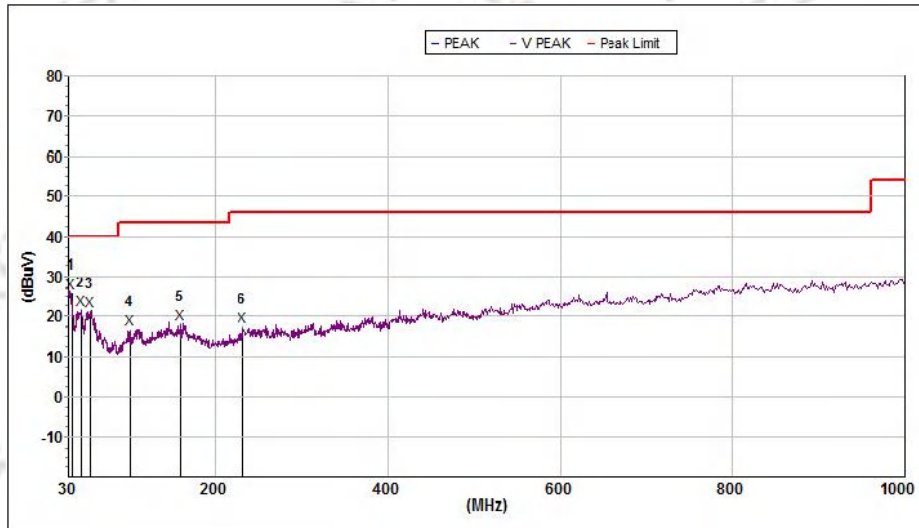
Temperature:	21°C	Relative Humidity:	40%
Test Voltage:	DC 12V from Adapter	Phase:	Horizontal
Test Mode:	802.11n20-2412 MHz	Comment:	30MHz-1GHz



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	51.301	17.1	40.0	22.9	19.4	30.9	1.2	H
2	106.013	20.2	43.5	23.3	15.3	30.9	1.4	H
3	159.225	19.5	43.5	24.0	18.6	31.4	1.6	H
4	232.940	20.8	46.0	25.2	17.0	32.0	1.8	H
5	412.547	20.8	46.0	25.2	21.8	33.0	2.5	H
6	704.226	29.8	46.0	16.2	26.8	31.9	3.1	H

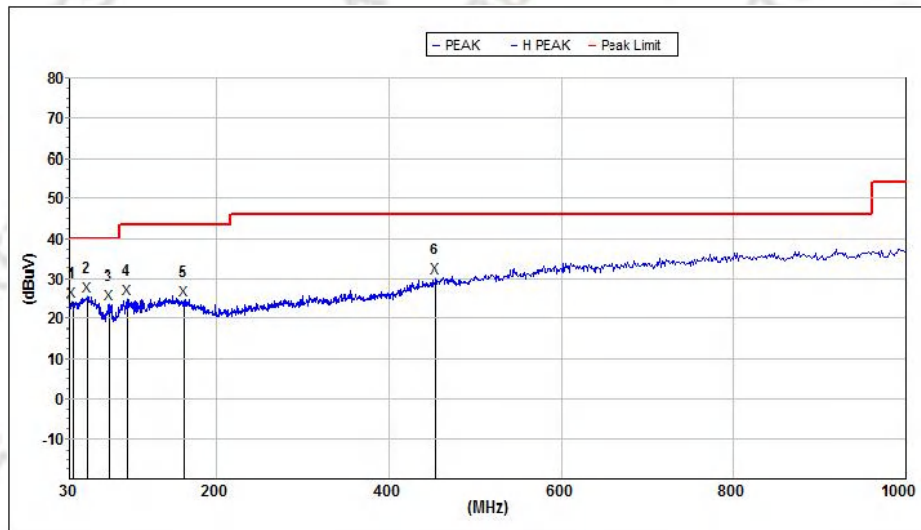
Temperature:	21°C	Relative Humidity:	40%
Test Voltage:	DC 12V from Adapter	Phase:	Vertical
Test Mode:	802.11n20-2412 MHz	Comment:	30MHz-1GHz



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	32.406	25.9	40.0	14.1	18.5	31.8	1.1	V
2	44.509	21.7	40.0	18.3	19.3	31.4	1.2	V
3	55.609	21.4	40.0	18.6	18.7	31.1	1.2	V
4	100.229	16.7	43.5	26.8	14.8	30.8	1.3	V
5	159.784	18.3	43.5	25.2	18.5	31.4	1.6	V
6	232.532	17.5	46.0	28.5	16.9	32.0	1.8	V

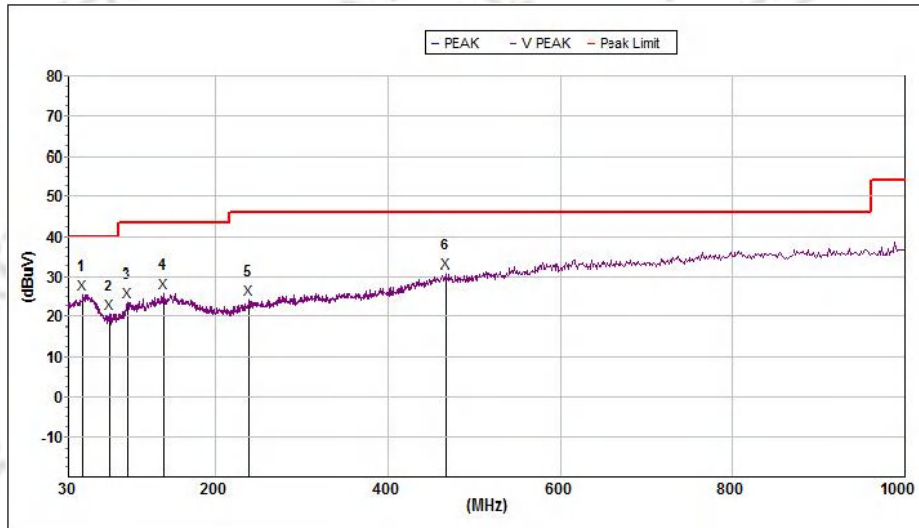
Temperature:	20°C	Relative Humidity:	35%
Test Voltage:	DC 12V from Adapter	Phase:	Horizontal
Test Mode:	802.11n20-2437 MHz	Comment:	30MHz-1GHz



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	32.406	24.3	40.0	15.7	-12.2	31.8	1.1	H
2	50.853	25.8	40.0	14.2	-10.2	30.9	1.2	H
3	75.051	23.8	40.0	16.2	-15.6	32.5	1.3	H
4	96.436	25.2	43.5	18.3	-14.9	31.0	1.3	H
5	162.326	24.9	43.5	18.6	-11.5	31.4	1.6	H
6	455.107	30.4	46.0	15.6	-6.2	32.3	3.1	H

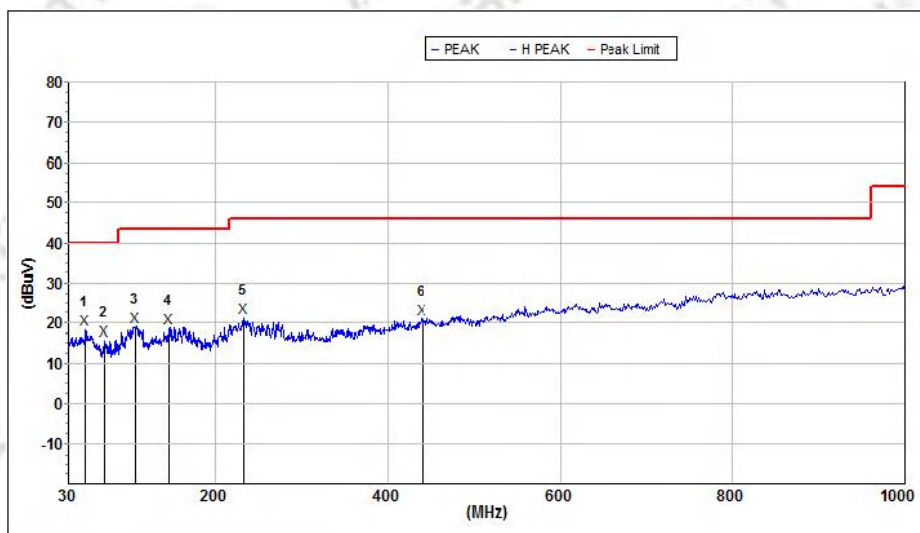
Temperature:	20°C	Relative Humidity:	35%
Test Voltage:	DC 12V from Adapter	Phase:	Vertical
Test Mode:	802.11n20-2437 MHz	Comment:	30MHz-1GHz



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	45.936	25.7	40.0	14.3	-10.7	31.3	1.2	V
2	77.457	20.9	40.0	19.1	-15.8	32.3	1.3	V
3	97.285	23.8	43.5	19.7	-14.9	31.0	1.3	V
4	139.851	25.9	43.5	17.6	-11.4	31.2	1.5	V
5	239.987	24.3	46.0	21.7	-12.9	32.0	1.9	V
6	467.235	30.9	46.0	15.1	-6.0	32.1	3.0	V

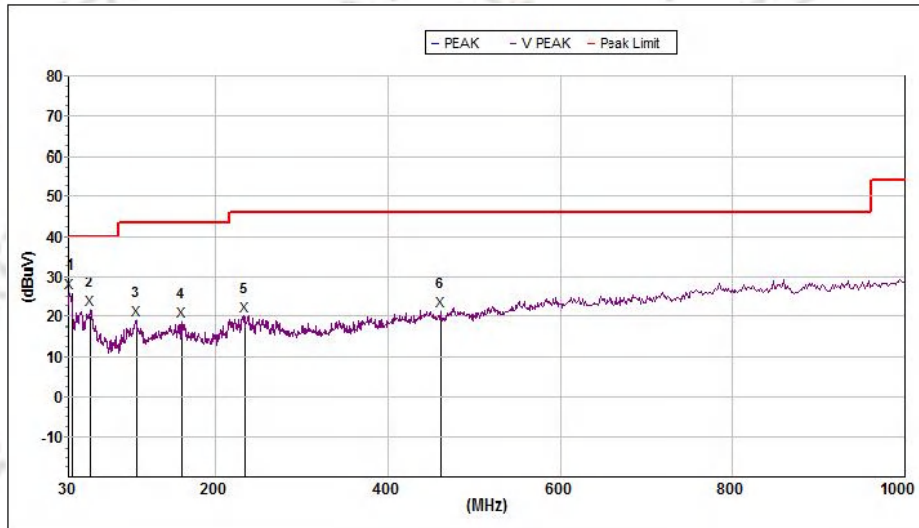
Temperature:	21°C	Relative Humidity:	40%
Test Voltage:	DC 12V from Adapter	Phase:	Horizontal
Test Mode:	802.11n20-2462 MHz	Comment:	30MHz-1GHz



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	49.881	18.4	40.0	21.6	19.6	30.9	1.2	H
2	71.205	15.9	40.0	24.1	16.2	32.9	1.2	H
3	106.572	19.2	43.5	24.3	15.4	30.9	1.4	H
4	147.145	18.8	43.5	24.7	18.9	31.3	1.5	H
5	233.349	21.4	46.0	24.6	17.0	32.0	1.8	H
6	440.196	21.2	46.0	24.8	22.6	32.5	3.0	H

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

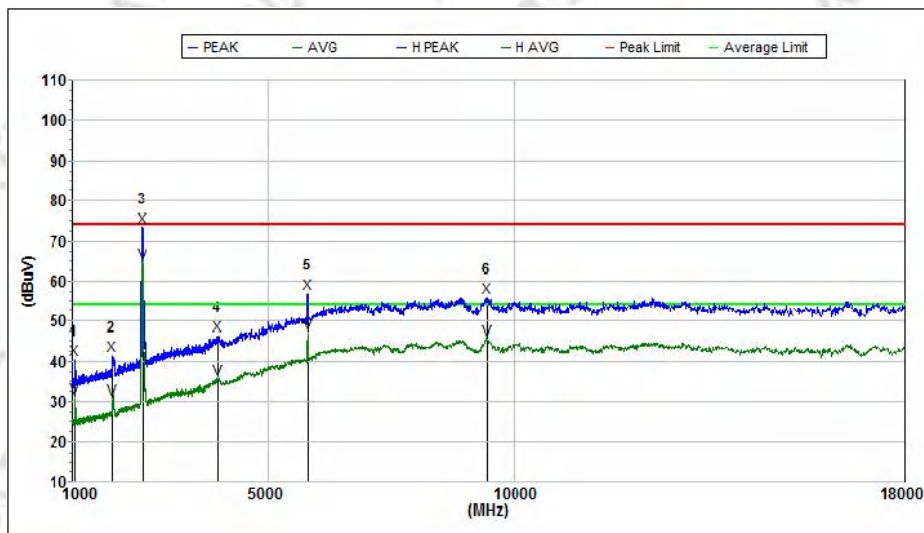


Test Summary Result

Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
Peak:								
1	31.899	26.1	40.0	13.9	18.5	31.8	1.1	V
2	55.609	21.7	40.0	18.3	18.7	31.1	1.2	V
3	107.510	19.1	43.5	24.4	15.5	30.9	1.4	V
4	161.191	18.7	43.5	24.8	18.4	31.4	1.6	V
5	234.579	20.1	46.0	25.9	17.0	32.0	1.8	V
6	461.536	21.5	46.0	24.5	23.0	32.2	3.0	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

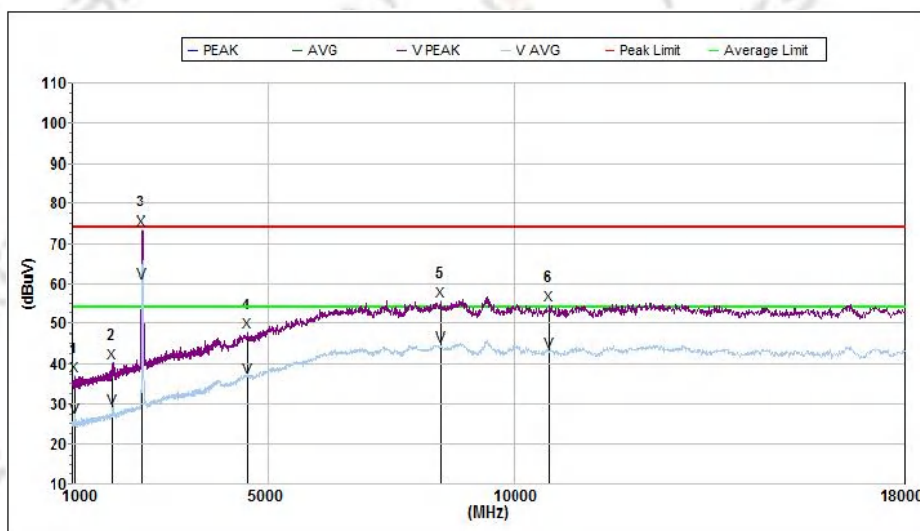


Test Summary Result

Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
Peak:								
1	1060.000	40.5	74.0	33.5	25.1	53.7	3.8	H
2	1817.500	41.7	74.0	32.3	25.2	53.7	4.9	H
3	2419.000	73.5	74.0	0.5	27.4	54.1	5.7	H
4	3965.500	46.5	74.0	27.5	30.8	53.2	7.9	H
5	5792.000	57.1	74.0	16.9	33.6	51.8	9.6	H
6	9467.000	56.1	74.0	17.9	38.1	52.2	12.8	H
Avg:								
1	1060.000	31.0	54.0	23.0	25.1	53.7	3.8	H
2	1817.500	30.6	54.0	23.4	25.2	53.7	4.9	H
3	2419.000	64.5	54.0	-10.5	27.4	54.1	5.7	H
4	3965.500	35.8	54.0	18.2	30.8	53.2	7.9	H
5	5792.000	47.1	54.0	6.9	33.6	51.8	9.6	H
6	9467.000	45.4	54.0	8.6	38.1	52.2	12.8	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

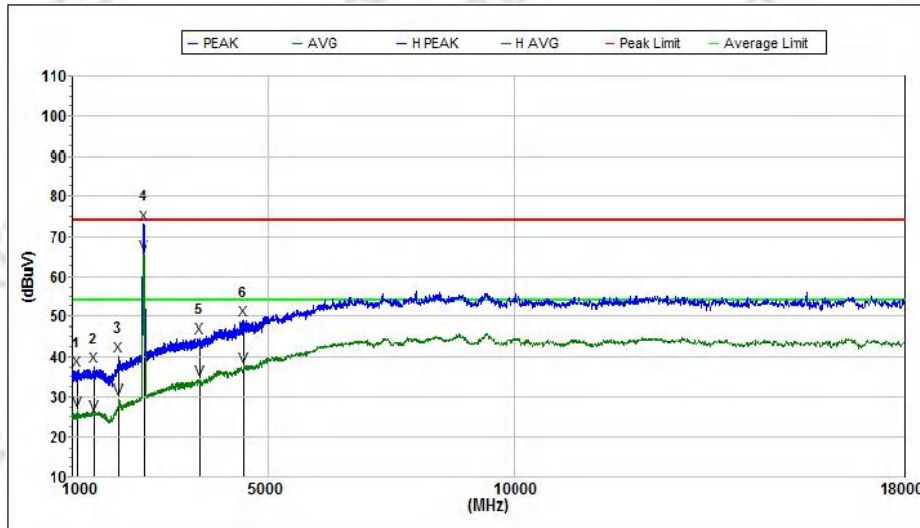


Test Summary Result

Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
Peak:								
1	1061.500	37.1	74.0	36.9	25.1	53.7	3.8	V
2	1817.500	40.3	74.0	33.7	25.2	53.7	4.9	V
3	2404.000	73.6	74.0	0.4	27.4	54.1	5.6	V
4	4588.000	47.8	74.0	26.2	31.9	52.9	8.1	V
5	8529.000	55.7	74.0	18.3	37.4	52.3	11.6	V
6	10741.000	54.8	74.0	19.2	38.5	51.8	13.8	V
Avg:								
1	1061.500	26.9	54.0	27.1	25.1	53.7	3.8	V
2	1817.500	29.1	54.0	24.9	25.2	53.7	4.9	V
3	2404.000	60.4	54.0	-6.4	27.4	54.1	5.6	V
4	4588.000	36.6	54.0	17.4	31.9	52.9	8.1	V
5	8529.000	44.5	54.0	9.5	37.4	52.3	11.6	V
6	10741.000	43.2	54.0	10.8	38.5	51.8	13.8	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

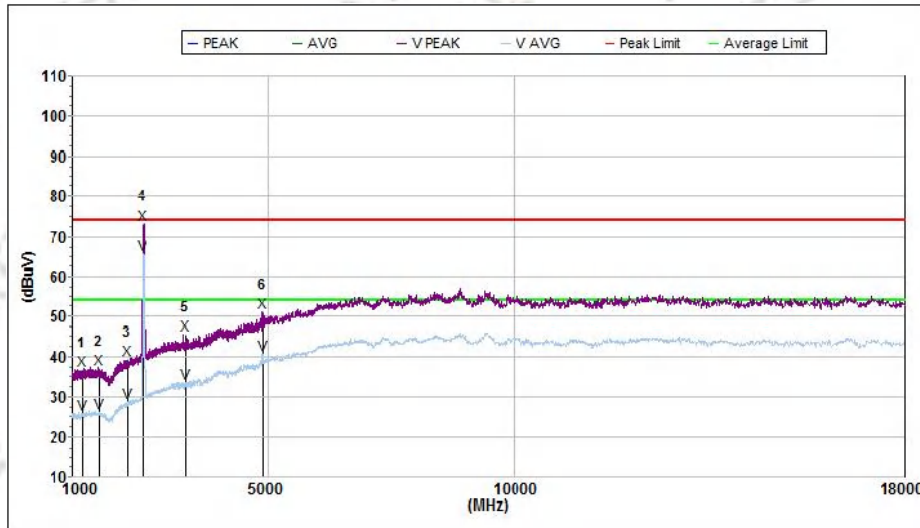


Test Summary Result

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	1440.000	37.7	74.0	36.3	-23.6	53.4	4.3	H
3	1943.000	40.3	74.0	33.7	-22.7	53.8	5.0	H
4	2445.000	73.2	74.0	0.8	-20.9	54.1	5.7	H
5	3597.000	44.8	74.0	29.2	-16.7	53.7	7.2	H
6	4506.000	49.0	74.0	25.0	-13.4	53.0	8.0	H
Avg:								
1	1094.000	26.7	54.0	27.3	-24.5	53.6	3.8	H
2	1440.000	25.9	54.0	28.1	-23.6	53.4	4.3	H
3	1943.000	29.6	54.0	24.4	-22.7	53.8	5.0	H
4	2445.000	65.5	54.0	-11.5	-20.9	54.1	5.7	H
5	3597.000	34.4	54.0	19.6	-16.7	53.7	7.2	H
6	4506.000	37.7	54.0	16.3	-13.4	53.0	8.0	H

Note:Point 4 serves as the primary frequency signal.

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

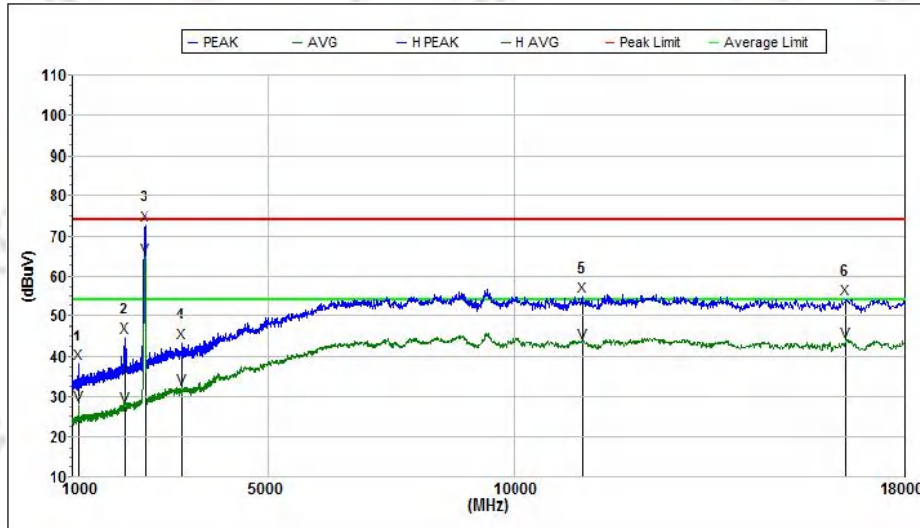


Test Summary Result

Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
Peak:								
1	1209.000	36.7	74.0	37.3	-23.9	53.6	4.0	V
2	1543.000	37.0	74.0	37.0	-23.5	53.4	4.5	V
3	2109.000	39.2	74.0	34.8	-22.0	53.9	5.2	V
4	2431.000	73.0	74.0	1.0	-21.0	54.1	5.7	V
5	3318.000	45.4	74.0	28.6	-17.6	53.9	6.8	V
6	4882.000	51.0	74.0	23.0	-11.3	52.5	8.5	V
Avg:								
1	1209.000	25.9	54.0	28.1	-23.9	53.6	4.0	V
2	1543.000	26.1	54.0	27.9	-23.5	53.4	4.5	V
3	2109.000	28.9	54.0	25.1	-22.0	53.9	5.2	V
4	2431.000	65.5	54.0	-11.5	-21.0	54.1	5.7	V
5	3318.000	33.4	54.0	20.6	-17.6	53.9	6.8	V
6	4882.000	40.6	54.0	13.4	-11.3	52.5	8.5	V

Note:Point 4 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

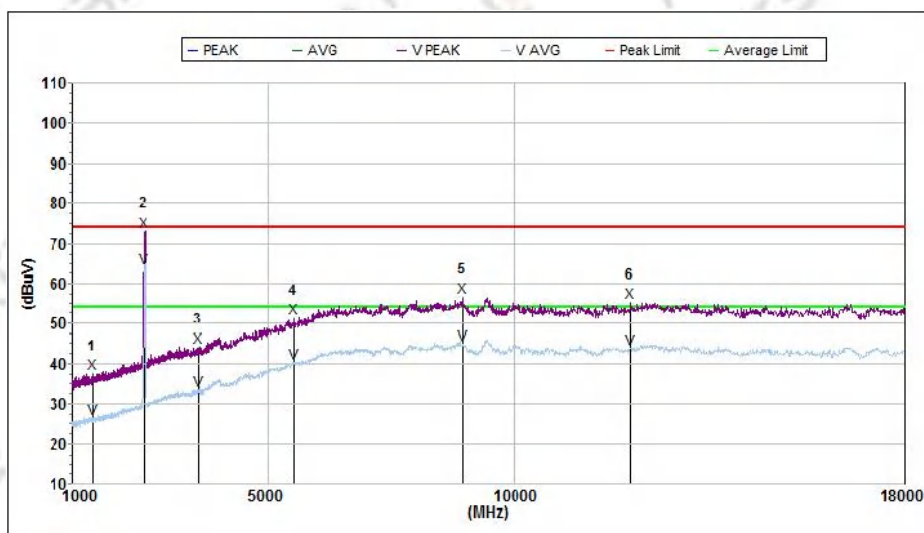


Test Summary Result

Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
Peak:								
1	1135.000	38.4	74.0	35.6	25.4	53.6	3.9	H
2	2062.000	45.0	74.0	29.0	26.6	53.9	5.2	H
3	2470.000	72.8	74.0	1.2	27.5	54.1	5.7	H
4	3239.500	43.5	74.0	30.5	29.4	54.0	6.7	H
5	11399.000	55.0	74.0	19.0	38.8	51.7	14.1	H
6	16782.000	54.5	74.0	19.5	38.9	50.8	17.8	H
Avg:								
1	1135.000	28.1	54.0	25.9	25.4	53.6	3.9	H
2	2062.000	27.7	54.0	26.3	26.6	53.9	5.2	H
3	2470.000	64.5	54.0	-10.5	27.5	54.1	5.7	H
4	3239.500	32.1	54.0	21.9	29.4	54.0	6.7	H
5	11399.000	43.7	54.0	10.3	38.8	51.7	14.1	H
6	16782.000	44.0	54.0	10.0	38.9	50.8	17.8	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

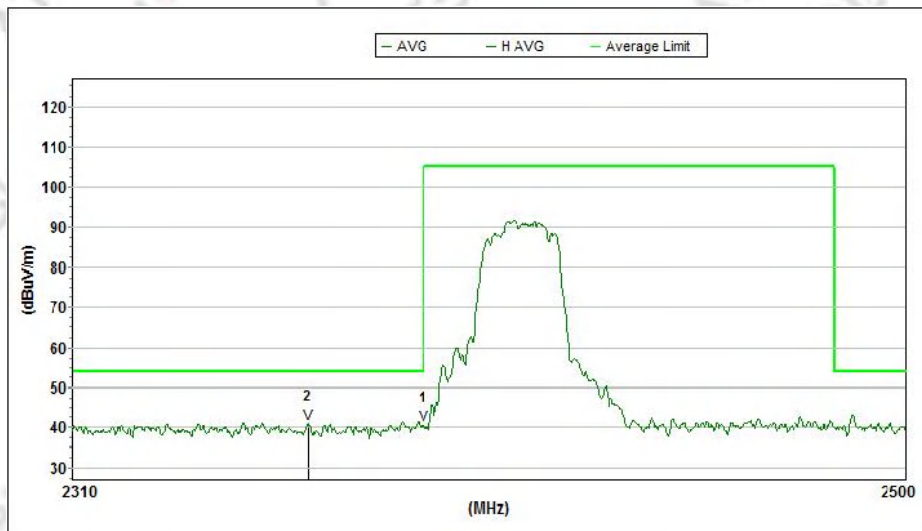
Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Cbl.L. (dB)	Pol.
Peak:								
1	1411.000	37.6	74.0	36.4	25.5	53.5	4.3	V
2	2455.000	73.2	74.0	0.8	27.5	54.1	5.7	V
3	3559.000	44.2	74.0	29.8	29.7	53.7	7.1	V
4	5526.000	51.5	74.0	22.5	33.0	52.3	9.3	V
5	8970.000	56.7	74.0	17.3	37.9	52.5	12.2	V
6	12400.000	55.4	74.0	18.6	39.3	51.6	14.5	V
Avg:								
1	1411.000	26.3	54.0	27.7	25.5	53.5	4.3	V
2	2455.000	64.1	54.0	-10.1	27.5	54.1	5.7	V
3	3559.000	33.3	54.0	20.7	29.7	53.7	7.1	V
4	5526.000	40.1	54.0	13.9	33.0	52.3	9.3	V
5	8970.000	44.8	54.0	9.2	37.9	52.5	12.2	V
6	12400.000	44.0	54.0	10.0	39.3	51.6	14.5	V

Note:Point 2 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.

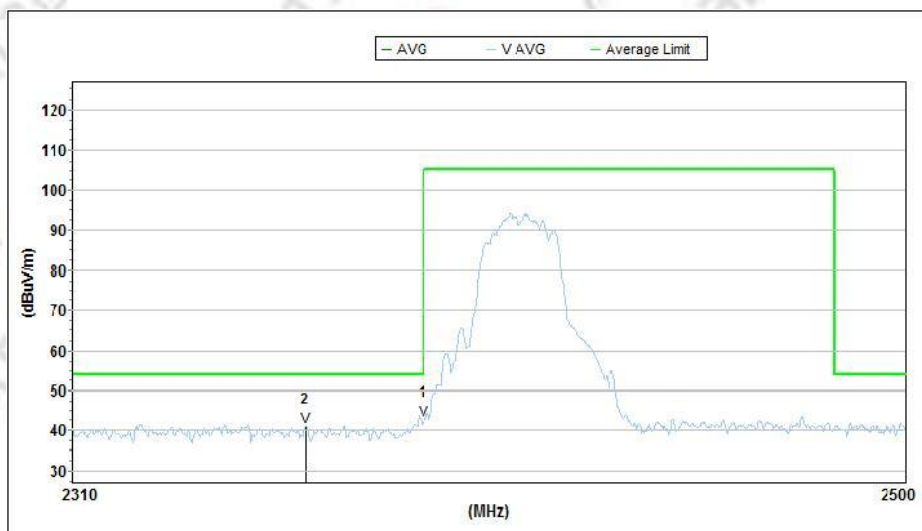
Test Mode: 802.11n20

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)	Aux.F. (dB)	Pol
AVG								
1	2390.000	40.8	54.0	13.2	27.4	54.1	5.6	H
2	2363.580	41.0	54.0	13.0	27.3	54.0	5.6	H

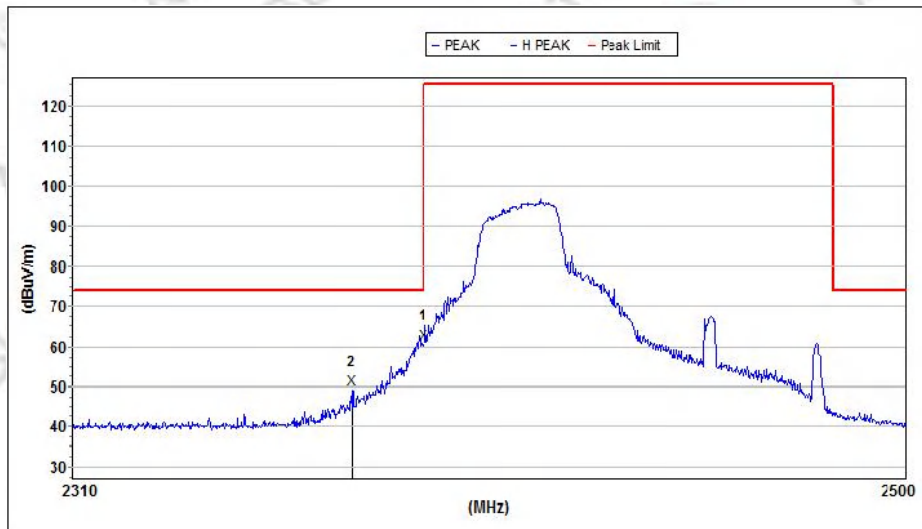
Test Channel: Lowest channel, Test Polarization: Vertical



Mk.	Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Aux.F. (dB)	Pol
AVG								
1	2390.000	42.9	54.0	11.1	27.4	54.1	5.6	V
2	2363.200	41.3	54.0	12.7	27.3	54.0	5.6	V

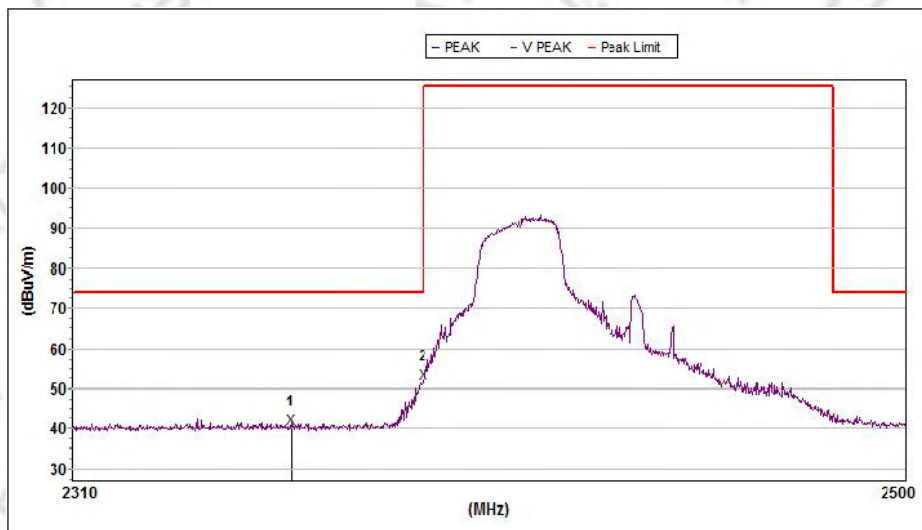
Test Mode: 802.11n20

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)	Aux.F. (dB)	Pol
PEAK								
1	2390.000	60.9	74.0	13.1	27.4	54.1	5.6	H
2	2373.860	49.4	74.0	24.6	27.3	54.0	5.6	H

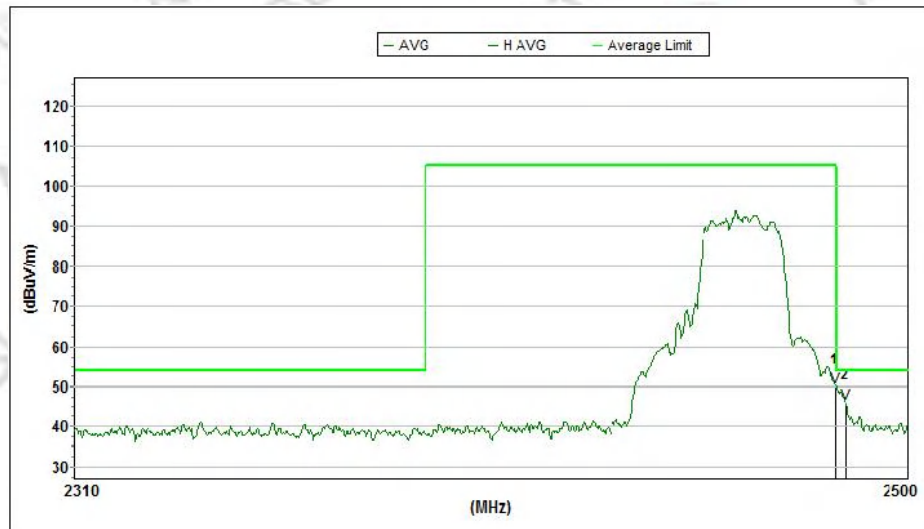
Test Channel: Lowest channel, Test Polarization: Vertical



Mk.	Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Aux.F. (dB)	Pol
PEAK								
1	2360.000	40.0	74.0	34.0	27.3	54.0	5.6	V
2	2390.000	51.2	74.0	22.8	27.4	54.1	5.6	V

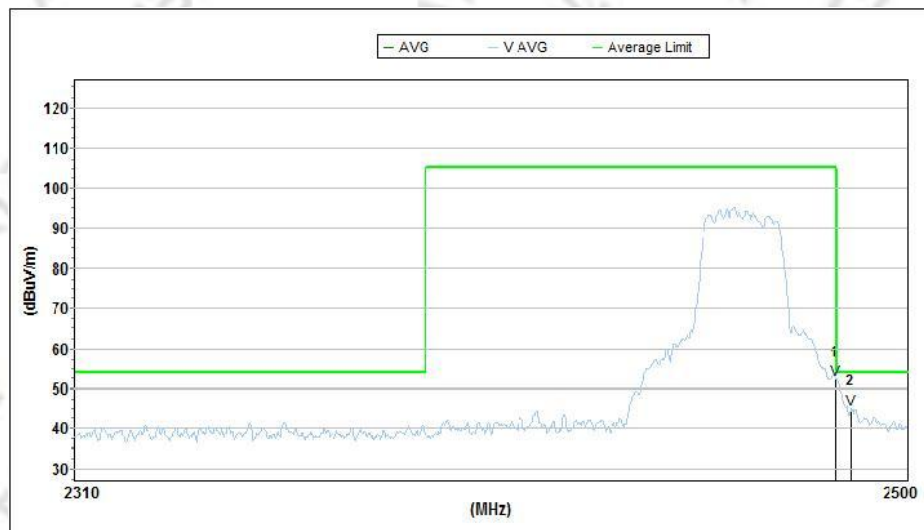
Test Mode: 802.11n20

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)	Aux.F. (dB)	Po l.
AVG								
1	2483.500	50.1	54.0	3.9	27.6	54.1	5.7	H
2	2485.750	46.1	54.0	7.9	27.6	54.1	5.7	H

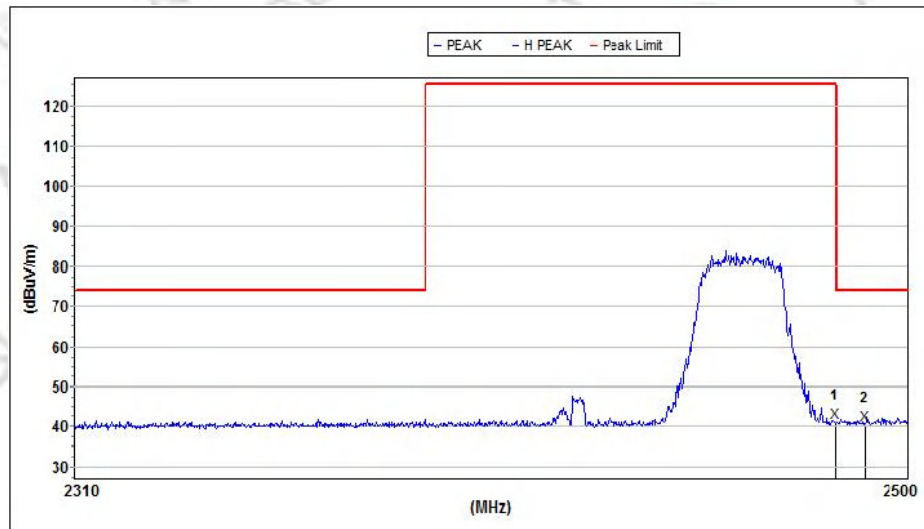
Test Channel: Highest channel, Test Polarization: Vertical



Mk.	Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Aux.F. (dB)	Po l.
AVG								
1	2483.500	52.2	54.0	1.8	27.6	54.1	5.7	V
2	2487.080	45.2	54.0	8.8	27.6	54.1	5.7	V

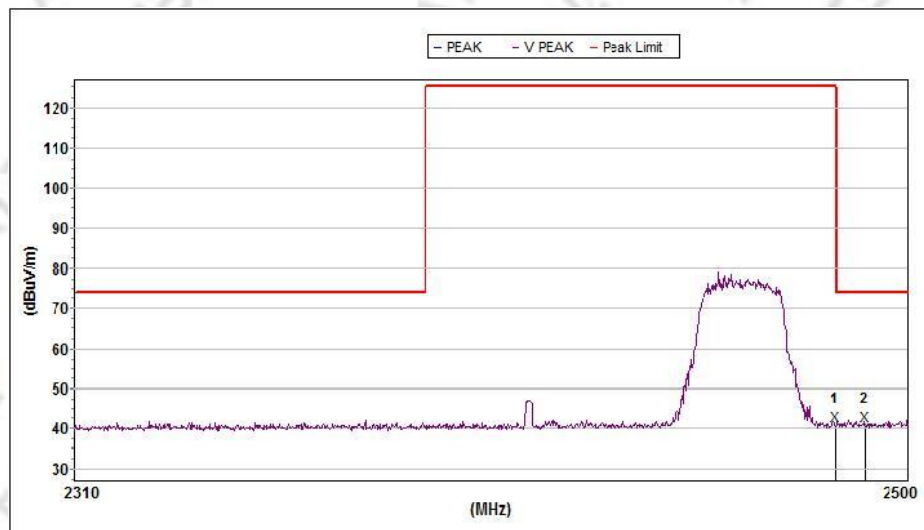
Test Mode: 802.11n20

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)	Aux.F. (dB)	Pol
PEAK								
1	2483.600	41.3	74.0	32.7	27.6	54.1	5.7	H
2	2490.000	40.6	74.0	33.4	27.6	54.1	5.8	H

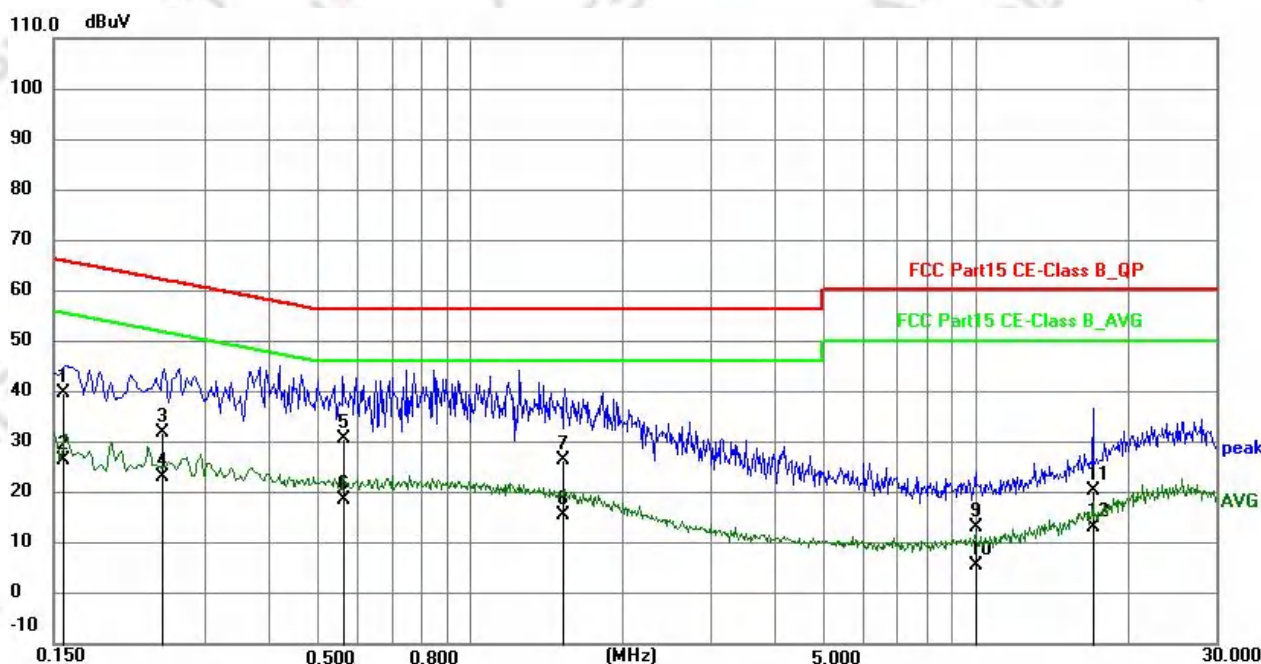
Test Channel: Highest channel, Test Polarization: Vertical



Mk.	Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB/m)	Amp.G. (dB)	Aux.F. (dB)	Pol
PEAK								
1	2483.600	40.8	74.0	33.2	27.6	54.1	5.7	V
2	2490.000	40.9	74.0	33.1	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

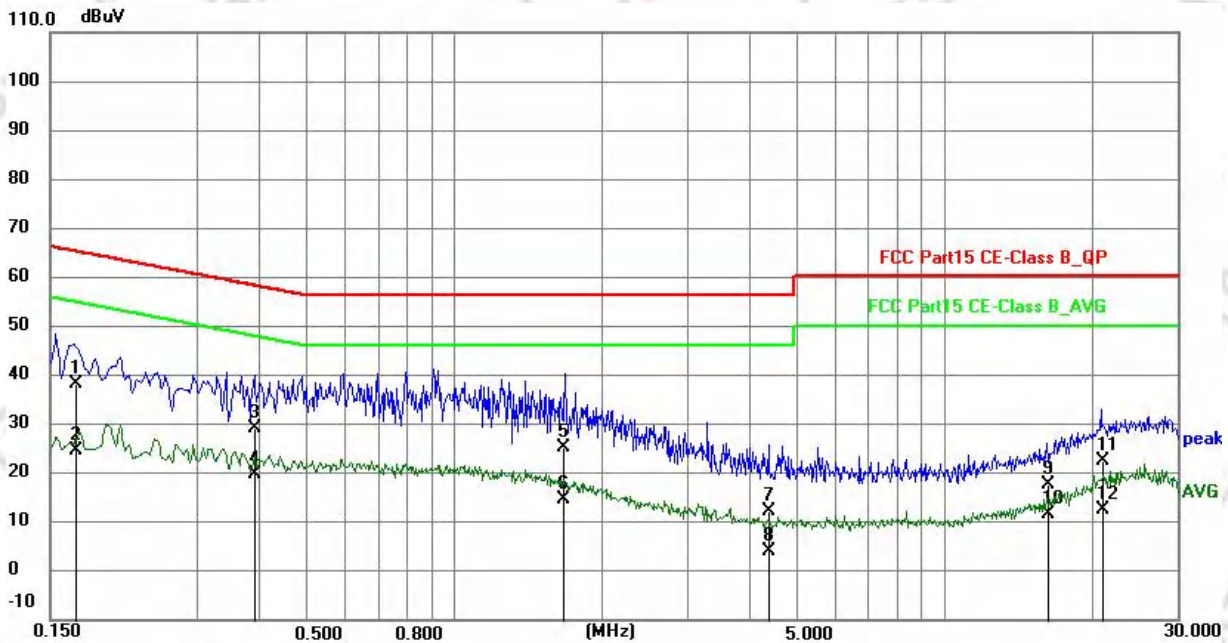


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1560	29.14	10.65	39.79	65.67	-25.88	QP
2	0.1560	15.67	10.65	26.32	55.67	-29.35	AVG
3	0.2460	21.27	10.56	31.83	61.89	-30.06	QP
4	0.2460	12.44	10.56	23.00	51.89	-28.89	AVG
5	0.5630	20.18	10.39	30.57	56.00	-25.43	QP
6	0.5630	8.25	10.39	18.64	46.00	-27.36	AVG
7	1.5339	16.05	10.45	26.50	56.00	-29.50	QP
8	1.5339	5.19	10.45	15.64	46.00	-30.36	AVG
9	10.0300	2.39	10.83	13.22	60.00	-46.78	QP
10	10.0300	-5.30	10.83	5.53	50.00	-44.47	AVG
11	17.1210	7.54	12.83	20.37	60.00	-39.63	QP
12	17.1210	0.26	12.83	13.09	50.00	-36.91	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	0.1689	27.61	10.61	38.22	65.01	-26.79	QP
2	0.1689	14.06	10.61	24.67	55.01	-30.34	AVG
3	0.3930	18.73	10.44	29.17	58.00	-28.83	QP
4	0.3930	9.24	10.44	19.68	48.00	-28.32	AVG
5	1.6800	14.71	10.45	25.16	56.00	-30.84	QP
6	1.6800	4.07	10.45	14.52	46.00	-31.48	AVG
7	4.3690	1.74	10.59	12.33	56.00	-43.67	QP
8	4.3690	-6.68	10.59	3.91	46.00	-42.09	AVG
9	16.2549	4.96	12.74	17.70	60.00	-42.30	QP
10	16.2549	-1.04	12.74	11.70	50.00	-38.30	AVG
11	21.0360	8.62	13.85	22.47	60.00	-37.53	QP
12	21.0360	-1.42	13.85	12.43	50.00	-37.57	AVG

Remark:

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

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