

Appendix C of data

C1.Maximum Peak conducted output power

Test Result

Mode	Channel	Ant. 0 (dBm)	Limit (dBm)	Result
IEEE 802.11b	1	15.22	≤30	PASS
	6	15.51	≤30	PASS
	11	15.06	≤30	PASS
IEEE 802.11g	1	15.24	≤30	PASS
	6	15.43	≤30	PASS
	11	15.41	≤30	PASS
IEEE 802.11n_20	1	16.22	≤30	PASS
	6	16.27	≤30	PASS
	11	15.28	≤30	PASS
IEEE 802.11n_40	3	16.52	≤30	PASS
	6	16.01	≤30	PASS
	9	15.45	≤30	PASS

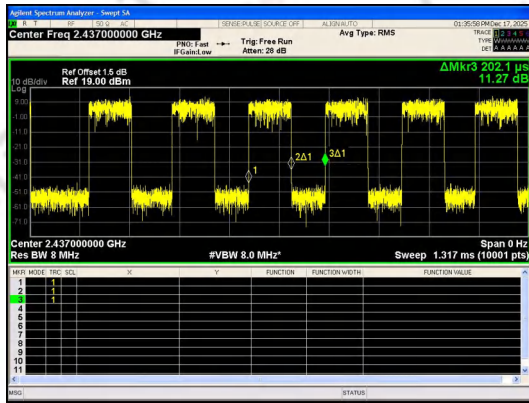
C2.Duty Cycle

Test Result

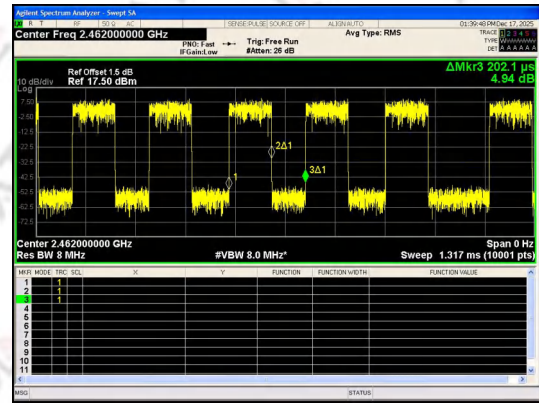
Mode	Data rates	Channel	Antenna	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)
IEEE 802.11b	1	1	0	0.704	0.807	87.29	0.8729	0.5904
		6		0.704	0.798	88.28	0.8828	0.5414
		11		0.704	0.789	89.28	0.8928	0.4925
IEEE 802.11g	6	1		0.113	0.202	55.77	0.5577	2.536
		6		0.113	0.202	55.83	0.5583	2.5313
		11		0.113	0.202	55.77	0.5577	2.536
IEEE 802.11n_20	MCS 0	1		0.112	0.202	55.50	0.5550	2.5571
		6		0.112	0.274	40.97	0.4097	3.8753
		11		0.112	0.256	43.91	0.4391	3.5744
IEEE 802.11n_40		3	0.073	0.153	47.53	0.4753	3.2303	
		6	0.073	0.207	35.14	0.3514	4.542	
		9	0.073	0.153	47.48	0.4748	3.2349	

Test Graphs

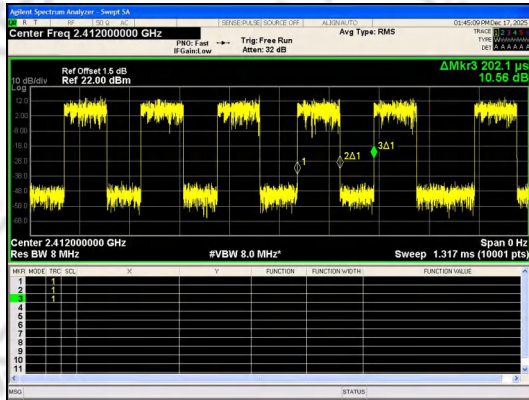




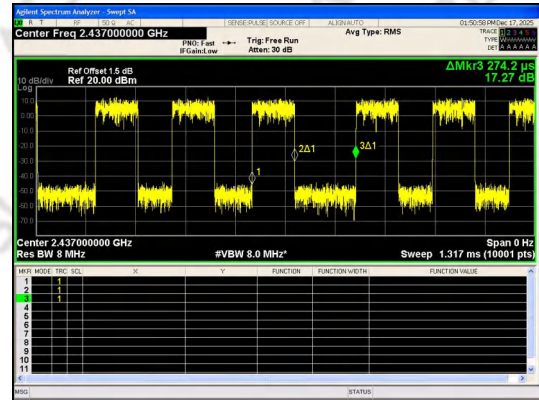
IEEE 802.11g 20MHz_Channel 6



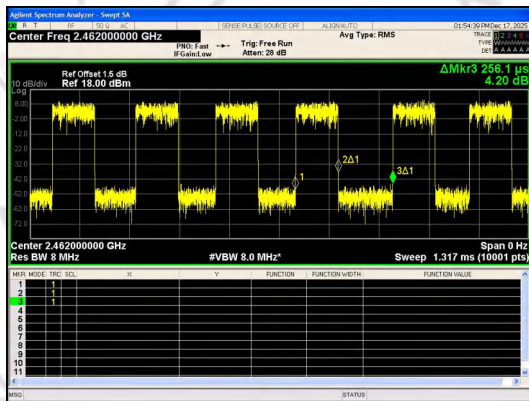
IEEE 802.11g 20MHz_Channel 11



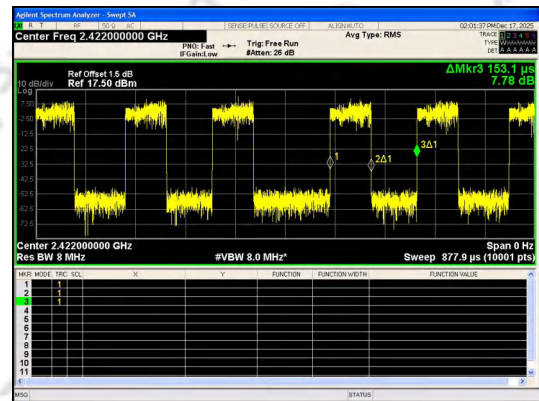
IEEE 802.11n 20MHz_Channel 1



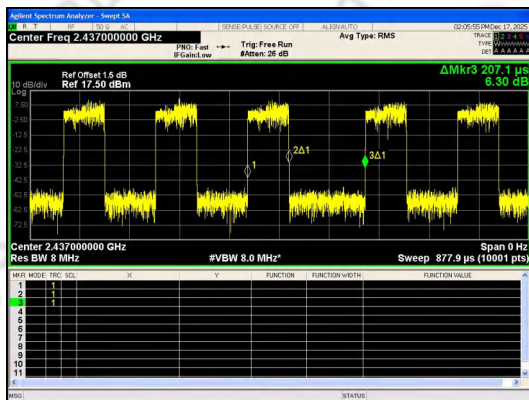
IEEE 802.11n 20MHz_Channel 6



IEEE 802.11n 20MHz_Channel 11



IEEE 802.11n 40MHz_Channel 3



IEEE 802.11n 40MHz_Channel 6



IEEE 802.11n 40MHz_Channel 9

C3.6dB Bandwidth

Test Result

Mode	Channel	Ant.	Center Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
IEEE 802.11b	1	0	2412	8.100	≥ 0.5	PASS
	6		2437	8.150		PASS
	11		2462	8.570		PASS
IEEE 802.11g	1		2412	15.78		PASS
	6		2437	17.40		PASS
	11		2462	16.52		PASS
IEEE 802.11n_20	1		2412	15.86		PASS
	6		2437	17.31		PASS
	11		2462	16.62		PASS
IEEE 802.11n_40	3		2422	35.70		PASS
	6		2437	35.62		PASS
	9		2452	25.92		PASS

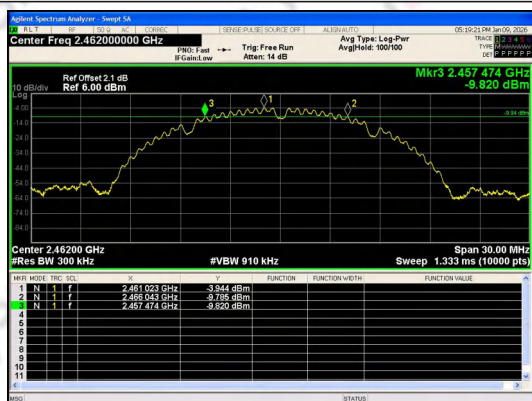
Test Graphs



IEEE 802.11b_Channel 1_20MHz_Antenna 0



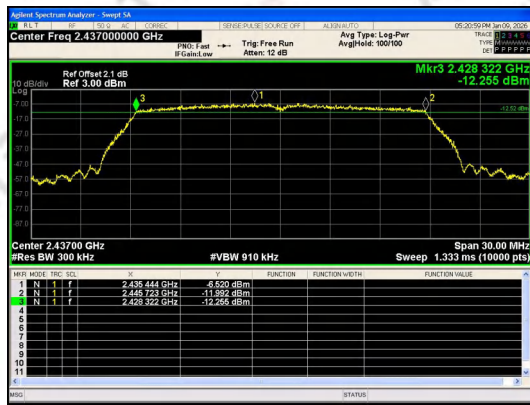
IEEE 802.11b_Channel 6_20MHz_Antenna 0



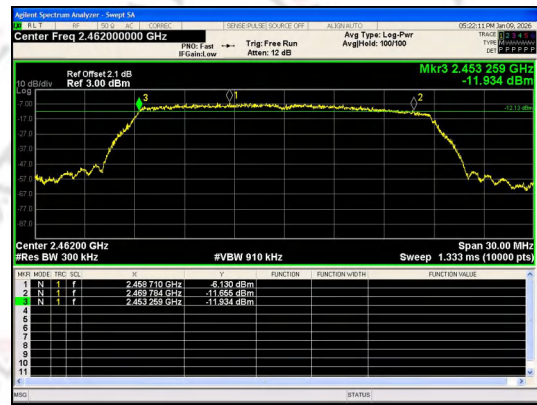
IEEE 802.11b_Channel 11_20MHz_Antenna 0



IEEE 802.11g_Channel 1_20MHz_Antenna 0



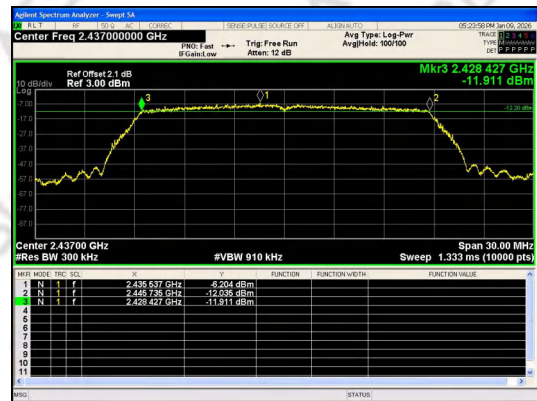
IEEE 802.11g_Channel 6_20MHz_Antenna 0



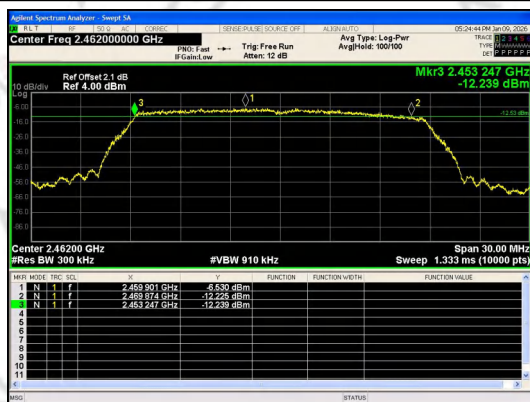
IEEE 802.11g_Channel 11_20MHz_Antenna 0



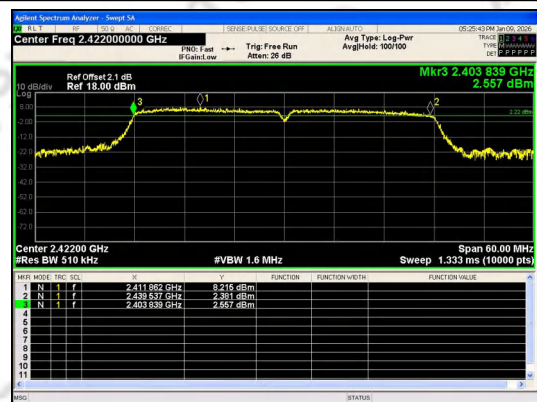
IEEE 802.11n_Channel 1_20MHz_Antenna 0



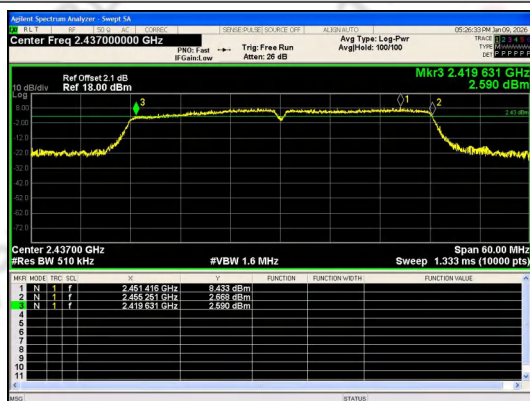
IEEE 802.11n_Channel 6_20MHz_Antenna 0



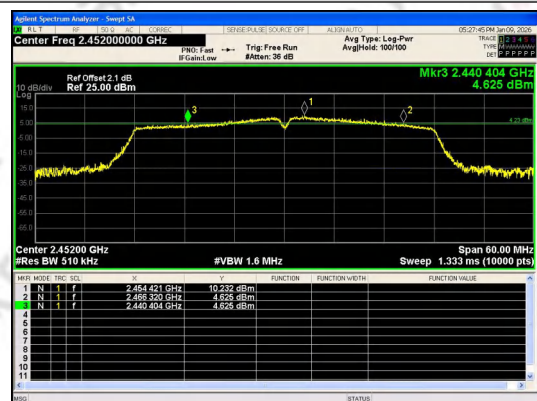
IEEE 802.11n_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 3_40MHz_Antenna 0



IEEE 802.11n_Channel 6_40MHz_Antenna 0



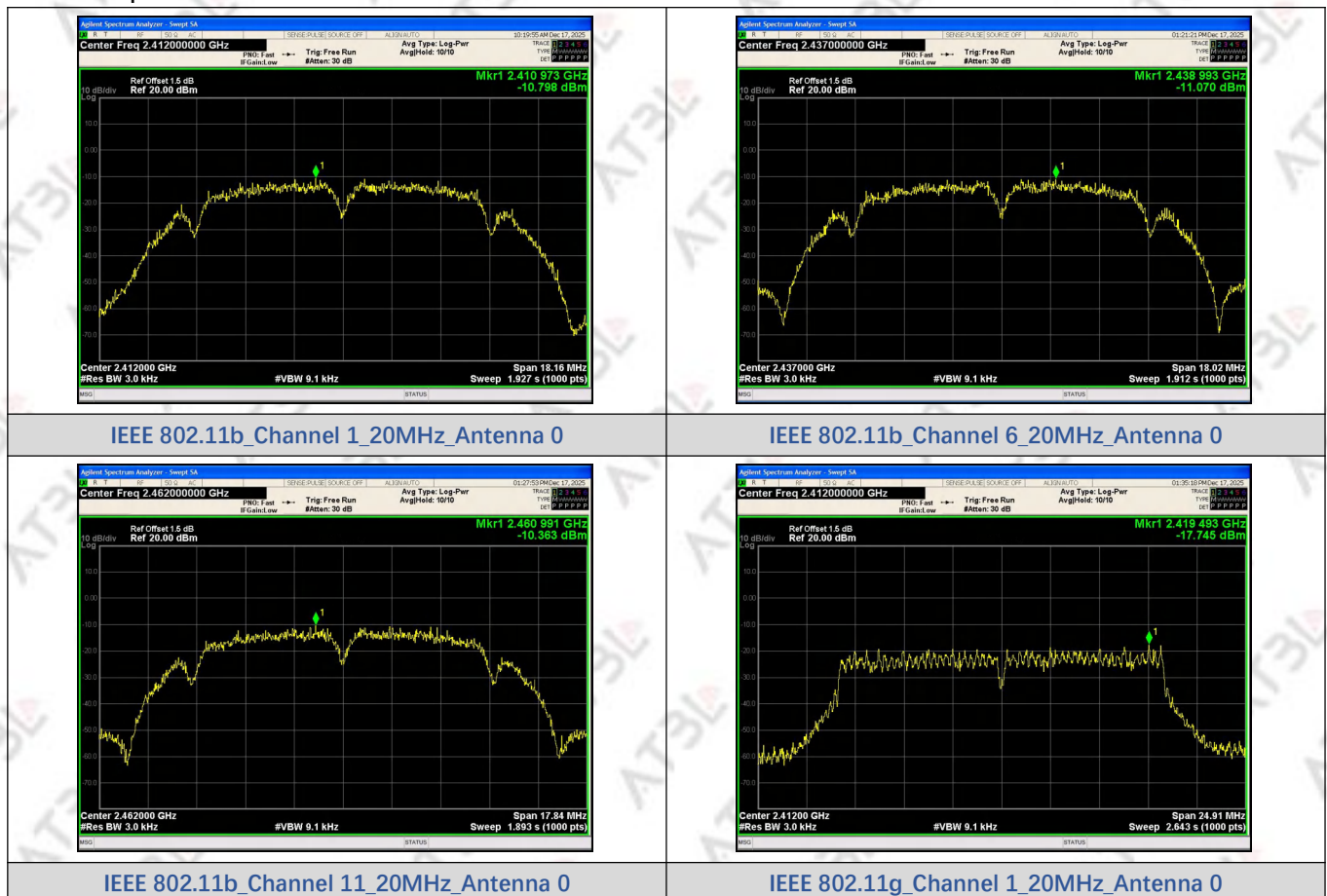
IEEE 802.11n_Channel 9_40MHz_Antenna 0

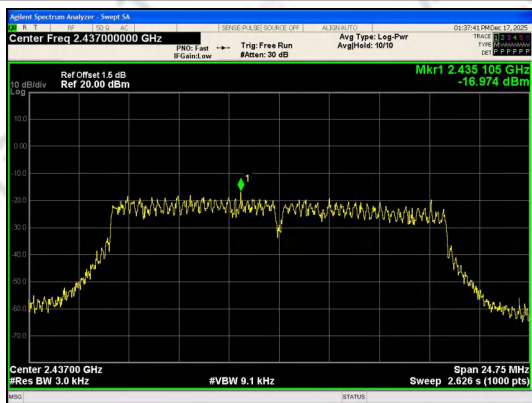
C4.Power Spectral Density

Test Result

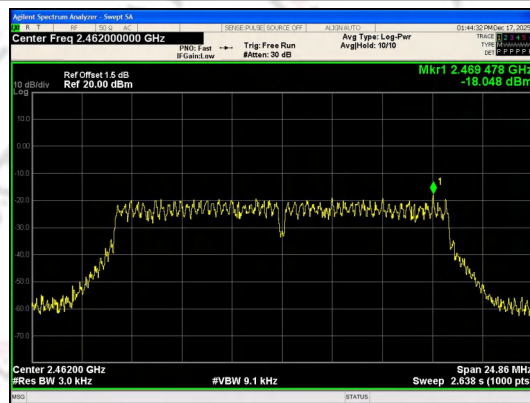
Mode	Channel	PSD (dBm/3kHz) Ant. 0	Limit (dBm/3kHz)	Result
IEEE 802.11b	1	-10.800	≤8	PASS
	6	-11.070		PASS
	11	-10.360		PASS
IEEE 802.11g	1	-17.750		PASS
	6	-16.970		PASS
	11	-18.050		PASS
IEEE 802.11n_20	1	-16.310		PASS
	6	-17.110		PASS
	11	-18.770		PASS
IEEE 802.11n_40	3	-18.230		PASS
	6	-18.390		PASS
	9	-19.050		PASS

Test Graphs





IEEE 802.11g_Channel 6_20MHz_Antenna 0



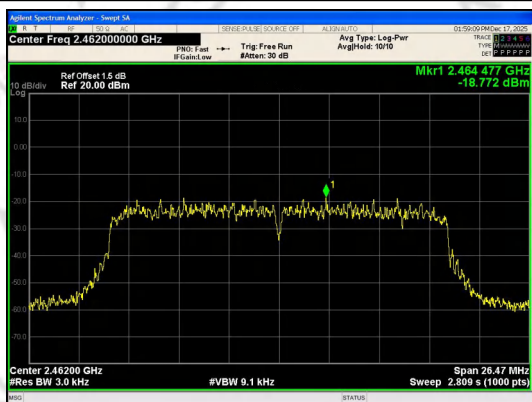
IEEE 802.11g_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 1_20MHz_Antenna 0



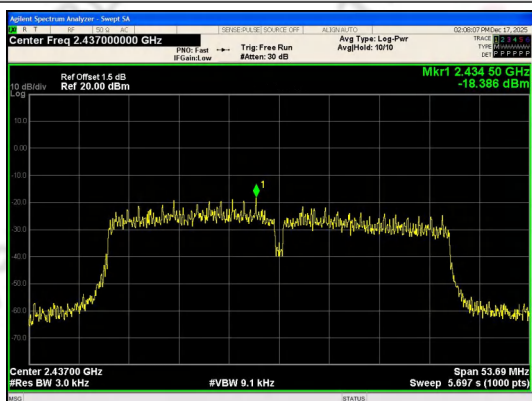
IEEE 802.11n_Channel 6_20MHz_Antenna 0



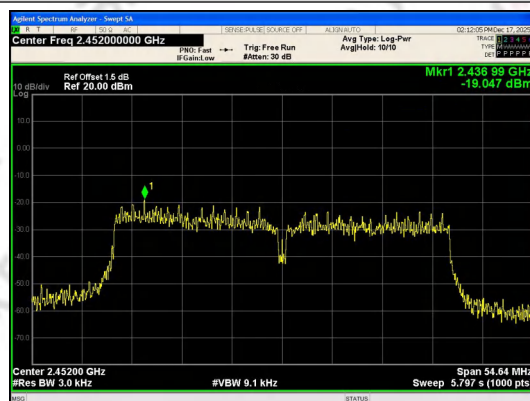
IEEE 802.11n_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 3_40MHz_Antenna 0



IEEE 802.11n_Channel 6_40MHz_Antenna 0



IEEE 802.11n_Channel 9_40MHz_Antenna 0

C5.Conducted Band Edge and Conducted Spurious Emission

Test Result

Mode	Channel	Ant.	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
IEEE 802.11b	1	0	2396.97	-39.334	-16.49	-22.844	PASS
			2400.00	-44.631	-16.49	-28.141	PASS
	6		24961.3	-42.150	-16.49	-25.660	PASS
			24827.1	-42.406	-18.64	-23.766	PASS
	11		2483.50	-49.452	-20.25	-29.202	PASS
			24837.1	-41.670	-20.25	-21.420	PASS
IEEE 802.11g	1		2398.27	-25.136	-14.77	-10.366	PASS
			2400.00	-25.360	-14.77	-10.590	PASS
	6		24963.8	-42.805	-14.77	-28.035	PASS
			24878.3	-41.119	-21.98	-19.139	PASS
	11		2483.50	-48.735	-24.7	-24.035	PASS
			24924.5	-42.207	-24.7	-17.507	PASS
IEEE 802.11n_20	1		2397.88	-29.522	-20.17	-9.352	PASS
			2400.00	-31.437	-20.17	-11.267	PASS
	6		24867.0	-42.085	-20.17	-21.915	PASS
			24842.7	-42.071	-21.03	-21.041	PASS
	11		2483.50	-45.578	-23.72	-21.858	PASS
			24883.9	-42.448	-23.72	-18.728	PASS
IEEE 802.11n_40	3		2395.80	-34.961	-22.87	-12.091	PASS
			2400.00	-39.807	-22.87	-16.937	PASS
	6		24966.9	-42.084	-22.87	-19.214	PASS
			24973.2	-41.944	-22.73	-19.214	PASS
	9		2483.50	-44.339	-23.15	-21.189	PASS

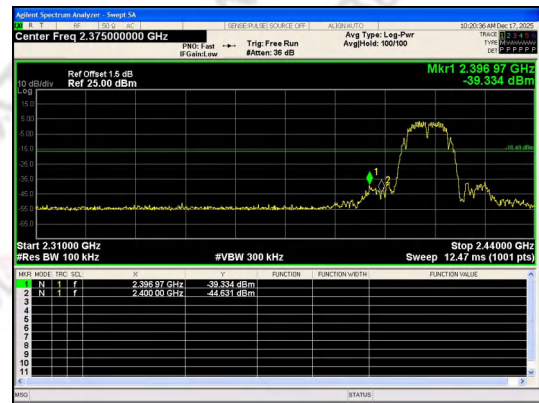
Note: input compensation coefficient (dB)= Cable Loss (dB)

Test Graphs



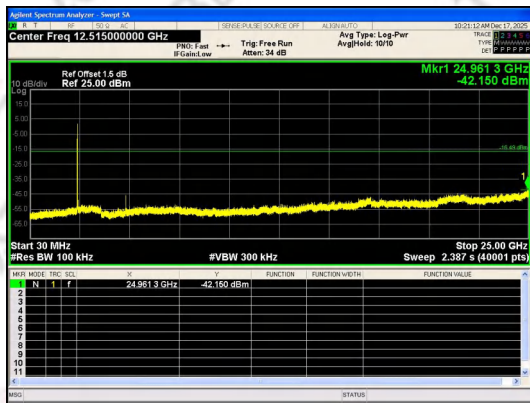
In-Band Reference Level

IEEE 802.11b_Channel 1_20MHz_Antenna 0



Out Of Band Emission

IEEE 802.11b_Channel 1_20MHz_Antenna 0



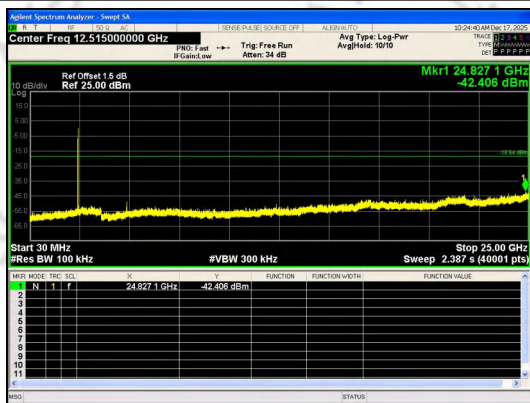
30.0 MHz - 25000.0 MHz

IEEE 802.11b_Channel 1_20MHz_Antenna 0



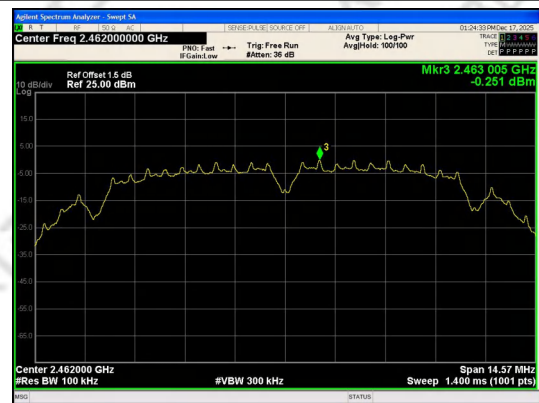
In-Band Reference Level

IEEE 802.11b_Channel 6_20MHz_Antenna 0



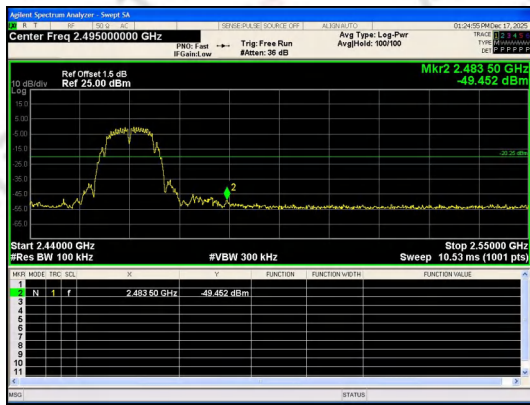
30.0 MHz - 25000.0 MHz

IEEE 802.11b_Channel 6_20MHz_Antenna 0

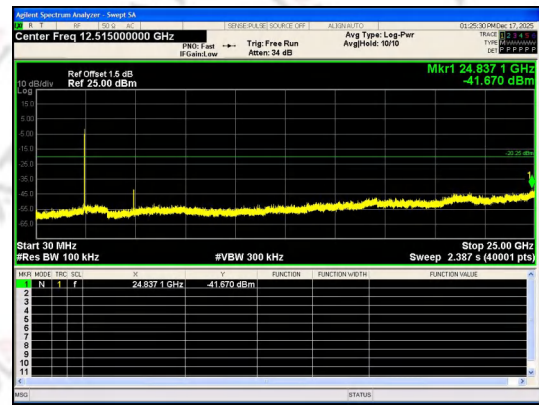


In-Band Reference Level

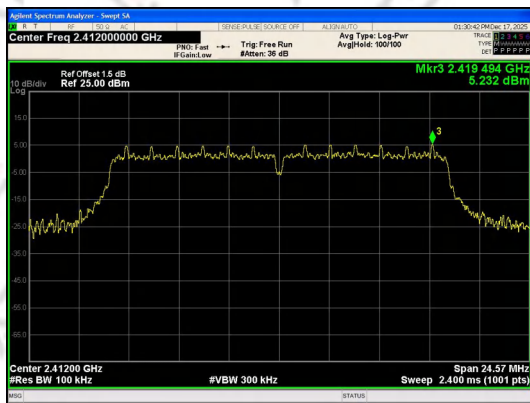
IEEE 802.11b_Channel 11_20MHz_Antenna 0



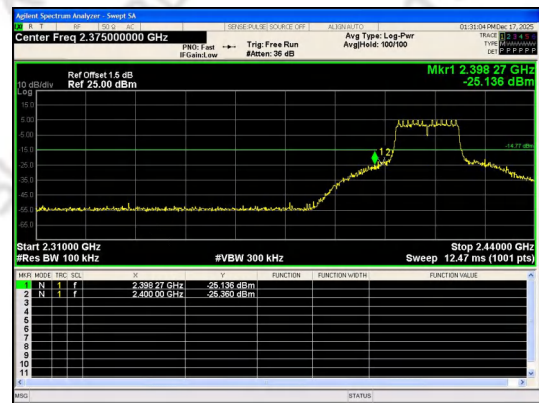
Out Of Band Emission
IEEE 802.11b_Channel 11_20MHz_Antenna 0



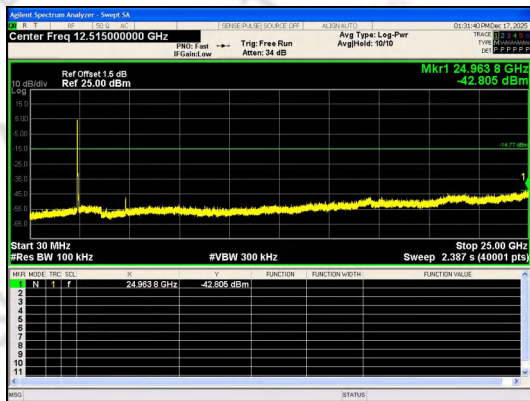
30.0 MHz - 25000.0 MHz
IEEE 802.11b_Channel 11_20MHz_Antenna 0



In-Band Reference Level
IEEE 802.11g_Channel 1_20MHz_Antenna 0



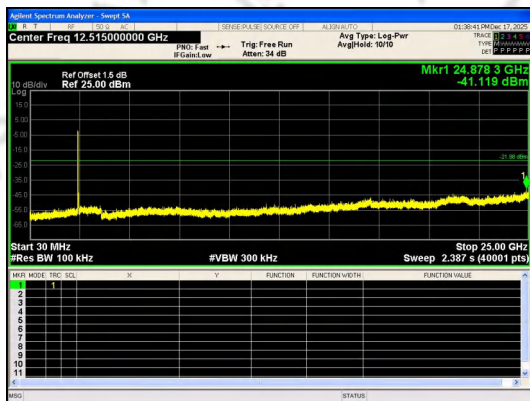
Out Of Band Emission
IEEE 802.11g_Channel 1_20MHz_Antenna 0

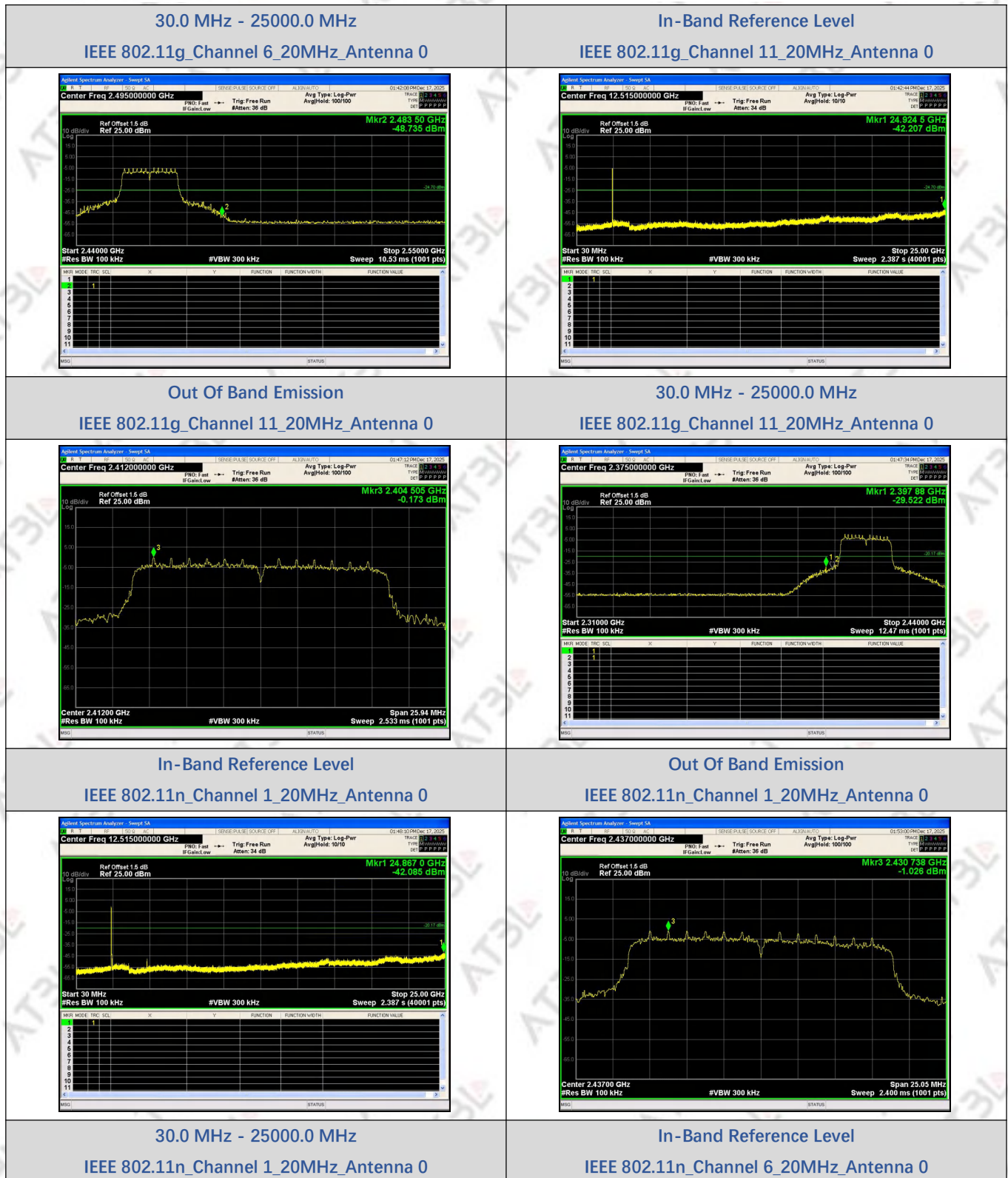


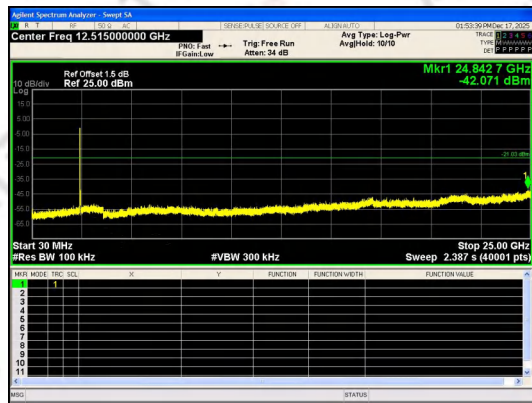
30.0 MHz - 25000.0 MHz
IEEE 802.11g_Channel 1_20MHz_Antenna 0



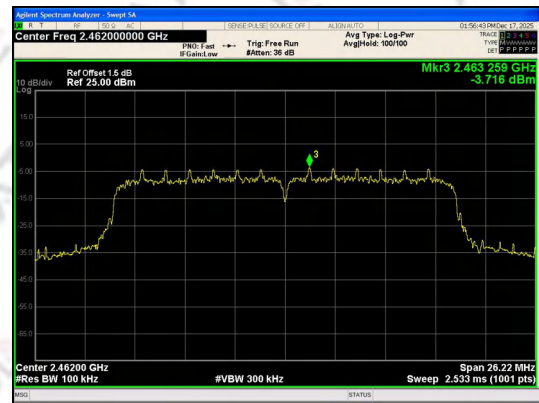
In-Band Reference Level
IEEE 802.11g_Channel 6_20MHz_Antenna 0







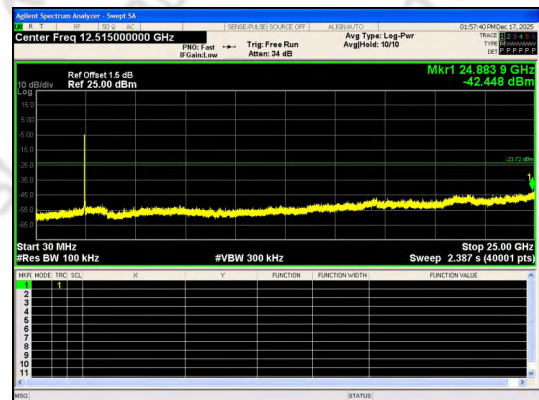
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 6_20MHz_Antenna 0



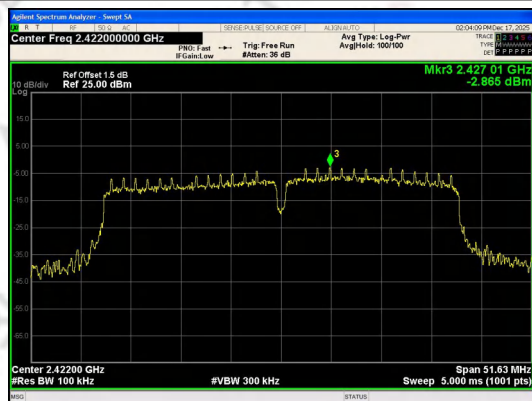
In-Band Reference Level
IEEE 802.11n_Channel 11_20MHz_Antenna 0



Out Of Band Emission
IEEE 802.11n_Channel 11_20MHz_Antenna 0



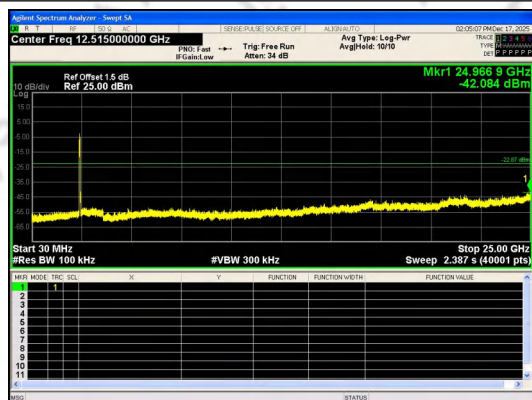
30.0 MHz - 25000.0 MHz
IEEE 802.11n_Channel 11_20MHz_Antenna 0

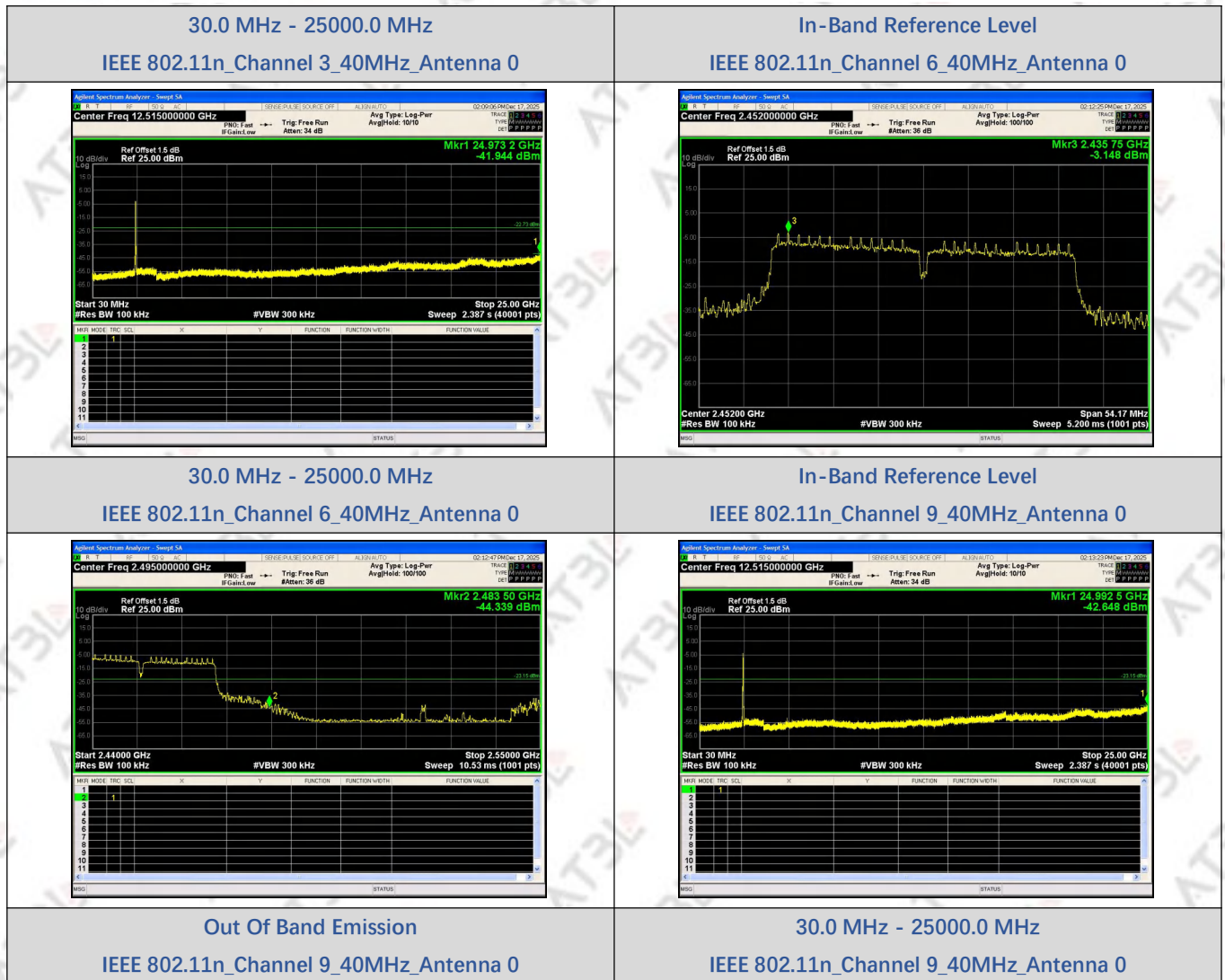


In-Band Reference Level
IEEE 802.11n_Channel 3_40MHz_Antenna 0



Out Of Band Emission
IEEE 802.11n_Channel 3_40MHz_Antenna 0





C6.Radiated Spurious Emission and Restricted Band

For 9 kHz ~ 30 MHz

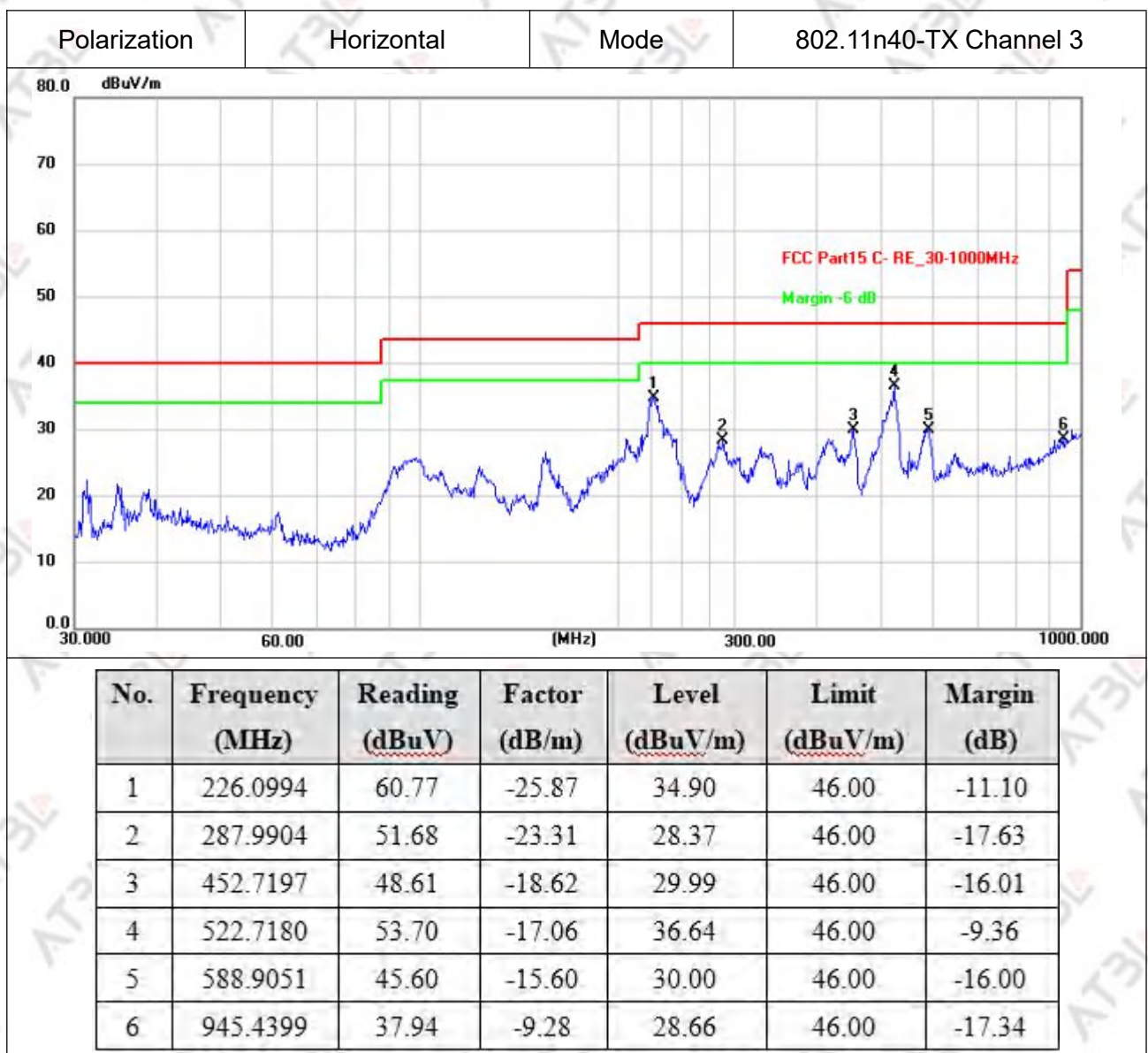
Note:

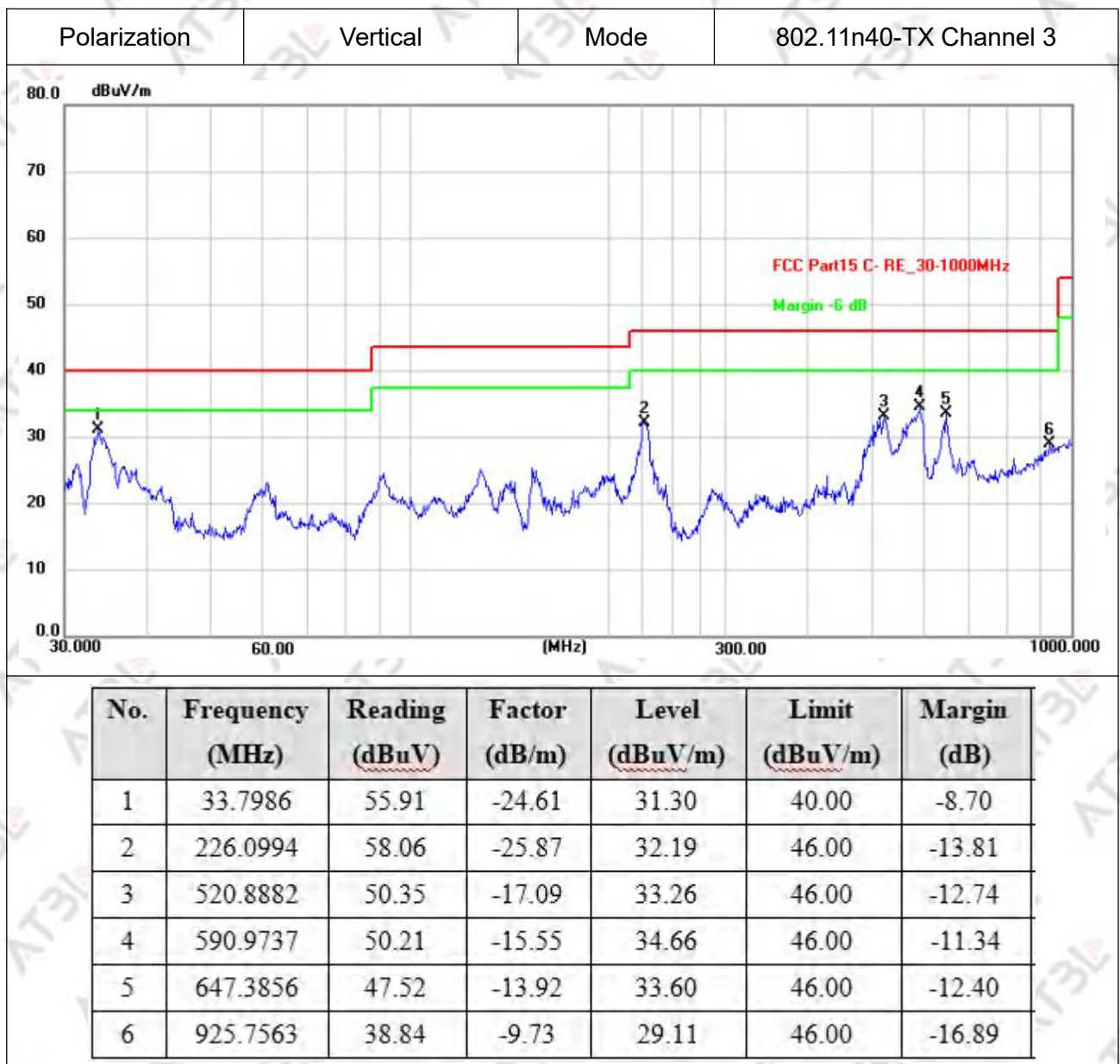
- 1.The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.
- 2.The all data rate modes had been test, but only worse test data was recorded in the test report.

Below 1GHz:

Note:

- 1.All modes have been tested, only worst (802.11n40-TX Channel 3)mode was recorded in the test report.
- 2.Emission Level (dBuV/m) = Reading Value (dBuV) + Correction Factor (dB/m).
- 3.Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)-Amplifier Gain.
- 4.The emission levels of other frequencies were less than 20dB margin against the limit.
- 5.Margin value = Emission level-Limit value.





Above 1GHz:

Note:

- 1.All modes have been tested, only worst (802.11n20 and 802.11n40)mode was recorded in the test report.
- 2.In frequency ranges 18 ~25GHz no any other harmonic emissions detected which are tested to compliance with the limit. No recording in the test report. No any other emissions level which are attenuated less than 20dB below the limit. No recording in the test report.
- 3.We used the filter to test and the main frequency was filtered out.
- 4.Emission Level (dBuV/m) = Reading Value (dBuV) + Correction Factor (dB/m).
5. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)-Amplifier Gain.
6. Margin value = Emission level-Limit value.

Test Mode: 802.11n20							
Test Channel:Lowest channel, Test Polarization: Vertical							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
4824.000	60.48	-1.47	59.01	74.00	-14.99	peak	Pass
4824.000	48.39	-1.38	47.01	54.00	-6.99	AV	Pass
7326.000	43.26	13.17	56.43	74.00	-17.57	peak	Pass
7326.000	31.66	13.24	44.90	54.00	-9.10	AV	Pass
Test Channel:Lowest channel, Test Polarization: Horizontal							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
4824.000	66.45	-14.52	51.93	74.00	-22.07	peak	Pass
4824.000	50.56	-14.51	36.05	54.00	-17.95	AVG	Pass
7326.000	42.07	12.72	54.79	74.00	-19.21	peak	Pass
7326.000	31.97	12.77	44.74	54.00	-9.26	AVG	Pass
Test Channel:Middle channel, Test Polarization: Vertical							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
4874.000	67.36	-14.52	52.84	74.00	-21.16	peak	Pass
4874.000	53.18	-14.51	38.67	54.00	-15.33	AV	Pass
7311.000	45.46	8.42	53.88	74.00	-20.12	peak	Pass
7311.000	33.15	8.42	41.57	54.00	-12.43	AV	Pass
Test Channel: Middle channel, Test Polarization: Horizontal							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
4874.000	58.94	-1.12	57.82	74.00	-16.18	peak	Pass
4874.000	47.31	-1.03	46.28	54.00	-7.72	AV	Pass

7311.000	44.16	10.68	54.84	74.00	-19.16	peak	Pass
7311.000	33.73	10.68	44.41	54.00	-9.59	AV	Pass
Test Channel:Highest channel, Test Polarization: Vertical							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
4924.000	61.57	-0.70	60.87	74.00	-13.13	peak	Pass
4924.000	50.00	-0.61	49.39	54.00	-4.61	AV	Pass
7386.000	33.85	10.68	44.53	54.00	-9.47	peak	Pass
7386.000	43.91	10.70	54.61	74.00	-19.39	AV	Pass
Test Channel:Highest channel, Test Polarization: Horizontal							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
4924.000	52.50	-0.70	51.80	74.00	-22.20	peak	Pass
4924.000	40.77	-0.61	40.16	54.00	-13.84	AV	Pass
7386.000	44.37	10.68	55.05	74.00	-18.95	peak	Pass
7386.000	33.68	10.68	44.36	54.00	-9.64	AV	Pass

Test Mode: 802.11n40							
Test Channel:Lowest channel, Test Polarization: Vertical							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
4844.000	67.40	-14.52	52.88	74.00	-21.12	peak	Pass
4844.000	50.52	-14.51	36.01	54.00	-17.99	AV	Pass
7266.000	46.45	8.42	54.87	74.00	-19.13	peak	Pass
7266.000	33.61	8.42	42.03	54.00	-11.97	AV	Pass
Test Channel:Lowest channel, Test Polarization: Horizontal							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
4844.000	60.77	-1.47	59.30	74.00	-14.70	peak	Pass
4844.000	48.49	-1.38	47.11	54.00	-6.89	AVG	Pass
7266.000	43.64	11.58	55.22	74.00	-18.78	peak	Pass
7266.000	32.70	11.60	44.30	54.00	-9.70	AVG	Pass
Test Channel:Middle channel, Test Polarization: Vertical							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
4874.000	61.19	-1.12	60.07	74.00	-13.93	peak	Pass
4874.000	49.61	-1.03	48.58	54.00	-5.42	AV	Pass
7311.000	44.28	13.67	57.95	74.00	-16.05	peak	Pass
7311.000	33.64	14.04	47.68	54.00	-6.32	AV	Pass
Test Channel: Middle channel, Test Polarization: Horizontal							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
4874.000	68.51	-14.52	53.99	74.00	-20.01	peak	Pass
4874.000	53.03	-14.51	38.52	54.00	-15.48	AV	Pass
7311.000	45.98	8.42	54.40	74.00	-19.60	peak	Pass
7311.000	33.56	8.42	41.98	54.00	-12.02	AV	Pass
Test Channel:Highest channel, Test Polarization: Vertical							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
4904.000	54.81	-0.70	54.11	74.00	-19.89	peak	Pass
4904.000	43.14	-0.61	42.53	54.00	-11.47	AV	Pass
7356.000	45.41	8.42	53.83	74.00	-20.17	peak	Pass
7356.000	33.39	8.42	41.81	54.00	-12.19	AV	Pass
Test Channel:Highest channel, Test Polarization: Horizontal							

Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
4904.000	54.83	-0.70	54.13	74.00	-19.87	peak	Pass
4904.000	42.26	-0.61	41.65	54.00	-12.35	AV	Pass
7356.000	45.84	8.42	54.26	74.00	-19.74	peak	Pass
7356.000	33.49	8.42	41.91	54.00	-12.09	AV	Pass

Test Result of Restricted Band

Test Mode: 802.11n20							
Test Channel: Lowest channel, Test Polarization: Vertical							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
2310.000	51.43	-19.82	31.61	74.00	-42.39	peak	Pass
2310.000	41.88	-19.82	22.06	54.00	-31.94	AV	Pass
2390.000	53.21	-19.70	33.51	74.00	-40.49	peak	Pass
2390.000	42.56	-19.70	22.86	54.00	-31.14	AV	Pass
Test Channel: Lowest channel, Test Polarization: Horizontal							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
2310.000	52.51	-19.82	32.69	74.00	-41.31	peak	Pass
2310.000	41.77	-19.82	21.95	54.00	-32.05	AV	Pass
2390.000	52.29	-19.70	32.59	74.00	-41.41	peak	Pass
2390.000	42.50	-19.70	22.80	54.00	-31.20	AV	Pass
Test Channel: Highest channel, Test Polarization: Vertical							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
2483.500	52.23	-19.07	33.16	74.00	-40.84	peak	Pass
2483.500	42.19	-19.07	23.12	54.00	-30.88	AV	Pass
2500.000	54.12	-18.98	35.14	74.00	-38.86	peak	Pass
2500.000	42.90	-18.98	23.92	54.00	-30.08	AV	Pass
Test Channel: Highest channel, Test Polarization: Horizontal							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
2483.500	52.66	-19.07	33.59	74.00	-40.41	peak	Pass
2483.500	42.17	-19.07	23.10	54.00	-30.90	AV	Pass
2500.000	53.19	-18.98	34.21	74.00	-39.79	peak	Pass
2500.000	42.83	-18.98	23.85	54.00	-30.15	AV	Pass

Note:Margin=Level-Limit=Reading+factor-Limit

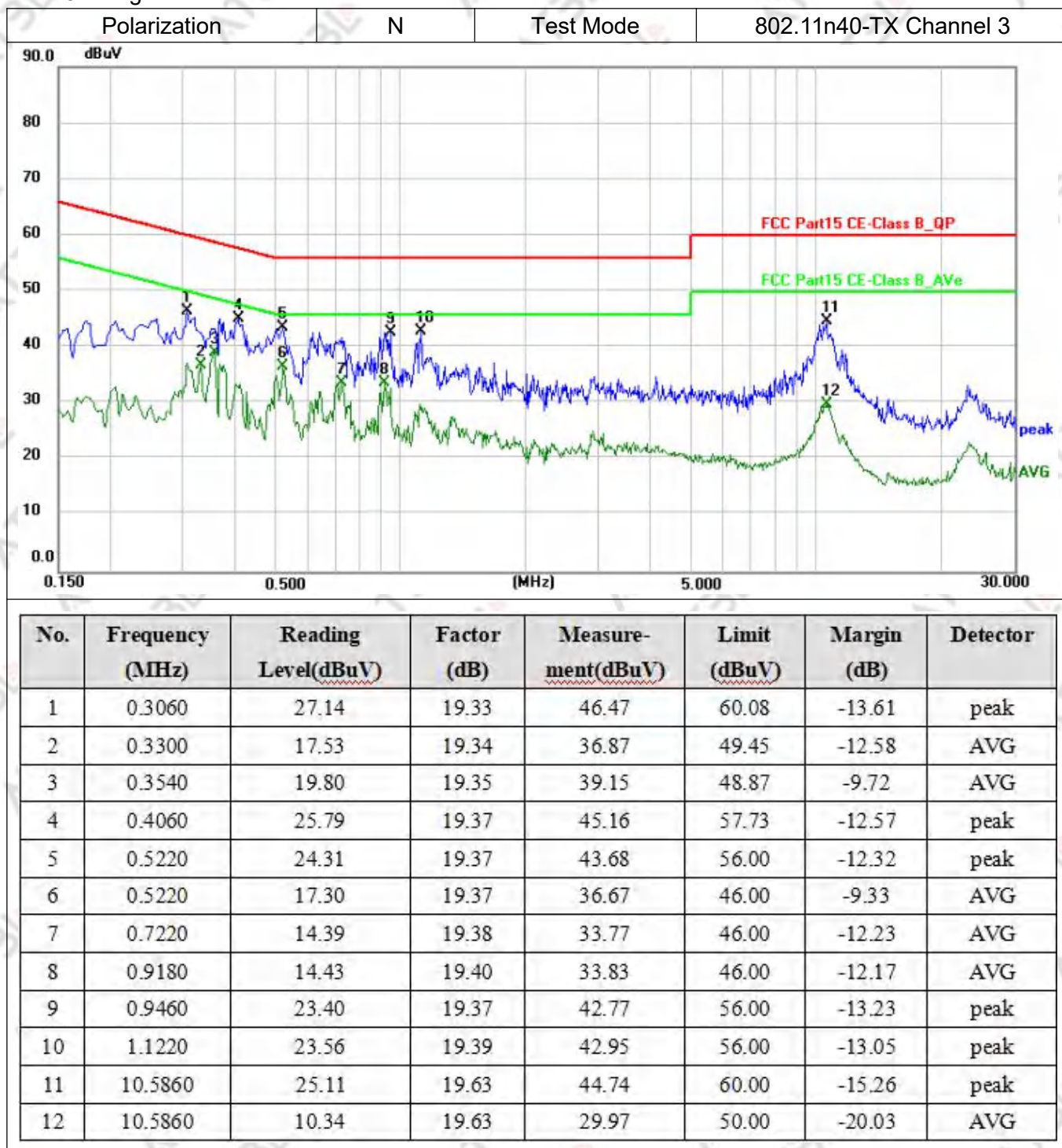
Test Mode: 802.11n40							
Test Channel: Lowest channel, Test Polarization: Vertical							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
2310.000	50.06	-19.82	30.24	74.00	-43.76	peak	Pass
2310.000	40.34	-19.82	20.52	54.00	-33.48	AV	Pass
2390.000	50.95	-19.70	31.25	74.00	-42.75	peak	Pass
2390.000	40.93	-19.70	21.23	54.00	-32.77	AV	Pass
Test Channel: Lowest channel, Test Polarization: Horizontal							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
2310.000	50.07	-19.82	30.25	74.00	-43.75	peak	Pass
2310.000	40.36	-19.82	20.54	54.00	-33.46	AV	Pass
2390.000	50.54	-19.70	30.84	74.00	-43.16	peak	Pass
2390.000	40.98	-19.70	21.28	54.00	-32.72	AV	Pass
Test Channel: Highest channel, Test Polarization: Vertical							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
2483.500	52.67	-19.07	33.60	74.00	-40.40	peak	Pass
2483.500	42.35	-19.07	23.28	54.00	-30.72	AV	Pass
2500.000	53.37	-18.98	34.39	74.00	-39.61	peak	Pass
2500.000	43.04	-18.98	24.06	54.00	-29.94	AV	Pass
Test Channel: Highest channel, Test Polarization: Horizontal							
Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Detector	Result
2483.500	52.25	-19.07	33.18	74.00	-40.82	peak	Pass
2483.500	42.50	-19.07	23.43	54.00	-30.57	AV	Pass
2500.000	52.32	-18.98	33.34	74.00	-40.66	peak	Pass
2500.000	42.78	-18.98	23.80	54.00	-30.20	AV	Pass

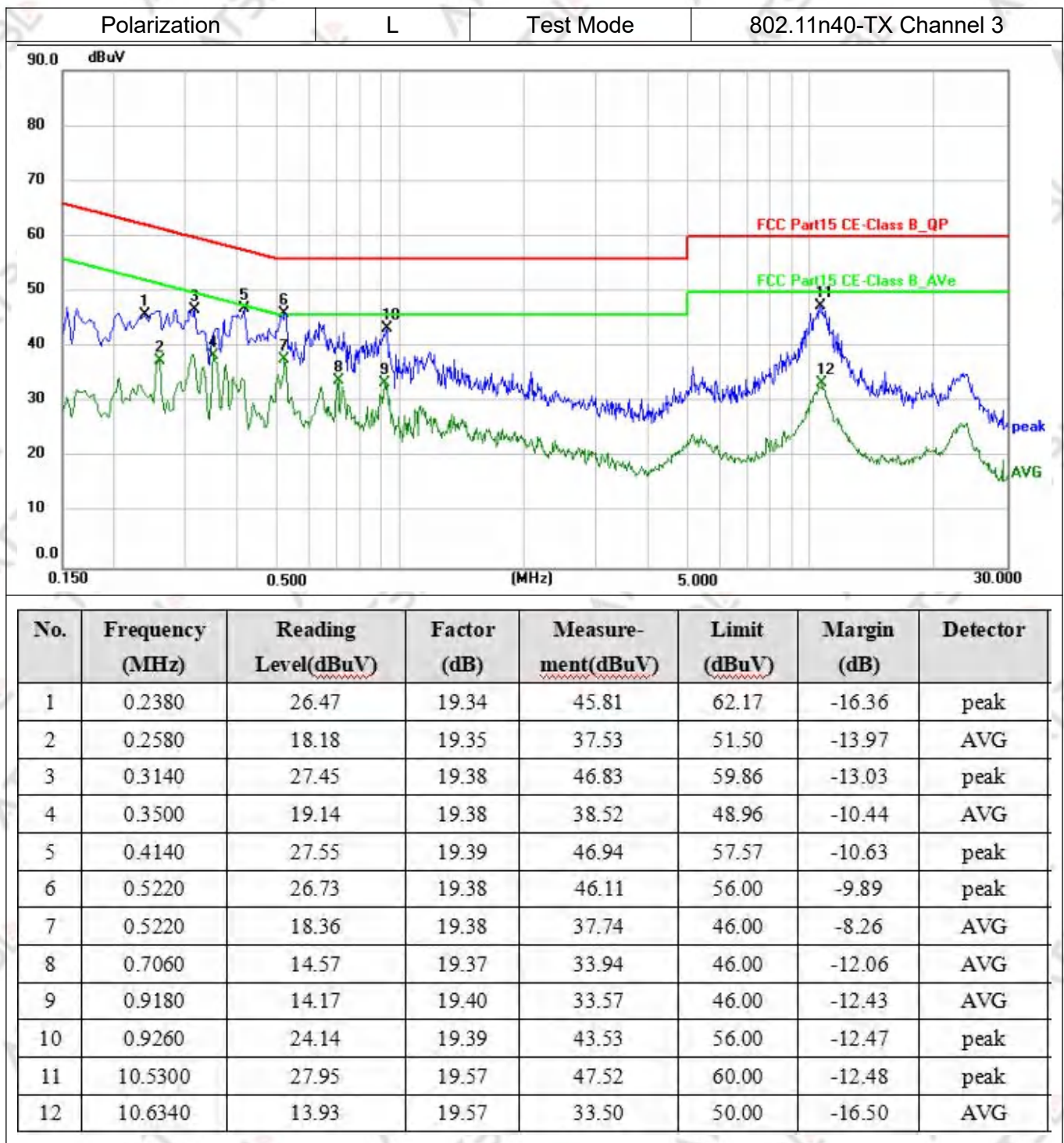
Note:Margin=Level-Limit=Reading+factor-Limit

C7.AC Power-Line Conducted Emission

Note:

- 1.All modes have been tested, only worst mode(802.11n40-TX Channel 3) was recorded in the test report.
- 2.Emission Level = Reading Value + Correction Factor .
3. Correction Factor = Insertion loss + Cable loss.
4. The emission levels of other frequencies were less than 20dB margin against the limit.
5. Margin value = Emission level-Limit value.





*****END*****