

TEST REPORT

4. Maximum conducted output power and e.i.r.p

4.1 Test Data

WLAN AVGSA Output Power							
Mode	Test Frequency (MHz)	Ant	Duty Cycle Factor (dB)	Max Power (dBm)	Limit (dBm)	EIRP (dBm)	Result
802.11b	2412	Ant1	0.10	16.01	30	18.71	Pass
802.11b	2412	Ant2	0.10	14.74	30	17.44	Pass
802.11b	2437	Ant1	0.10	16.00	30	18.70	Pass
802.11b	2437	Ant2	0.10	14.67	30	17.37	Pass
802.11b	2462	Ant1	0.10	15.80	30	18.50	Pass
802.11b	2462	Ant2	0.10	14.64	30	17.34	Pass
802.11g	2412	Ant1	0.62	11.43	30	14.13	Pass
802.11g	2412	Ant2	0.62	10.20	30	12.90	Pass
802.11g	2437	Ant1	0.59	16.30	30	19.00	Pass
802.11g	2437	Ant2	0.59	14.46	30	17.16	Pass
802.11g	2462	Ant1	0.59	11.12	30	13.82	Pass
802.11g	2462	Ant2	0.59	10.02	30	12.72	Pass
802.11n (HT20)	2412	Ant1	0.63	11.72	30	14.42	Pass
802.11n (HT20)	2412	Ant2	0.66	10.13	30	12.83	Pass
802.11n (HT20)	2437	Ant1	0.63	15.42	30	18.12	Pass
802.11n (HT20)	2437	Ant2	0.66	13.84	30	16.54	Pass
802.11n (HT20)	2462	Ant1	0.63	11.35	30	14.05	Pass
802.11n (HT20)	2462	Ant2	0.66	10.09	30	12.79	Pass
802.11n (HT40)	2422	Ant1	1.20	8.36	30	11.06	Pass
802.11n (HT40)	2437	Ant1	1.18	12.90	30	15.60	Pass
802.11n (HT40)	2452	Ant1	1.25	8.31	30	11.01	Pass

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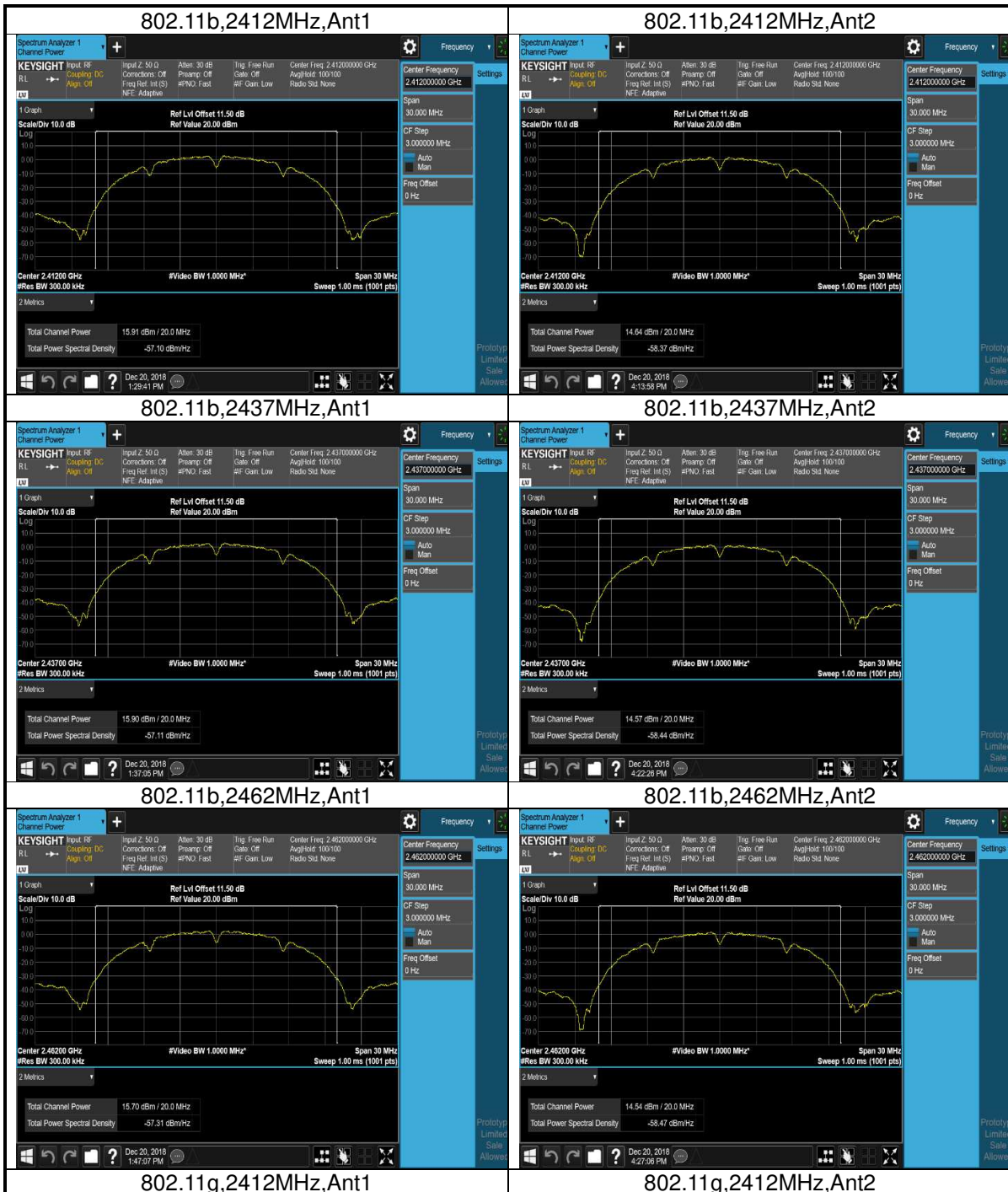
For MIMO mode:

Mode	Test Frequency (MHz)	Ant	Max Power (dBm)	Total Power	Limit (dBm)	EIRP (dBm)	Result
802.11n (HT20)	2412	Ant1	11.72	14.01	30	16.71	Pass
802.11n (HT20)	2412	Ant2	10.13				
802.11n (HT20)	2437	Ant1	15.42	17.71	30	20.41	Pass
802.11n (HT20)	2437	Ant2	13.84				
802.11n (HT20)	2462	Ant1	11.35	13.78	30	16.48	Pass
802.11n (HT20)	2462	Ant2	10.09				

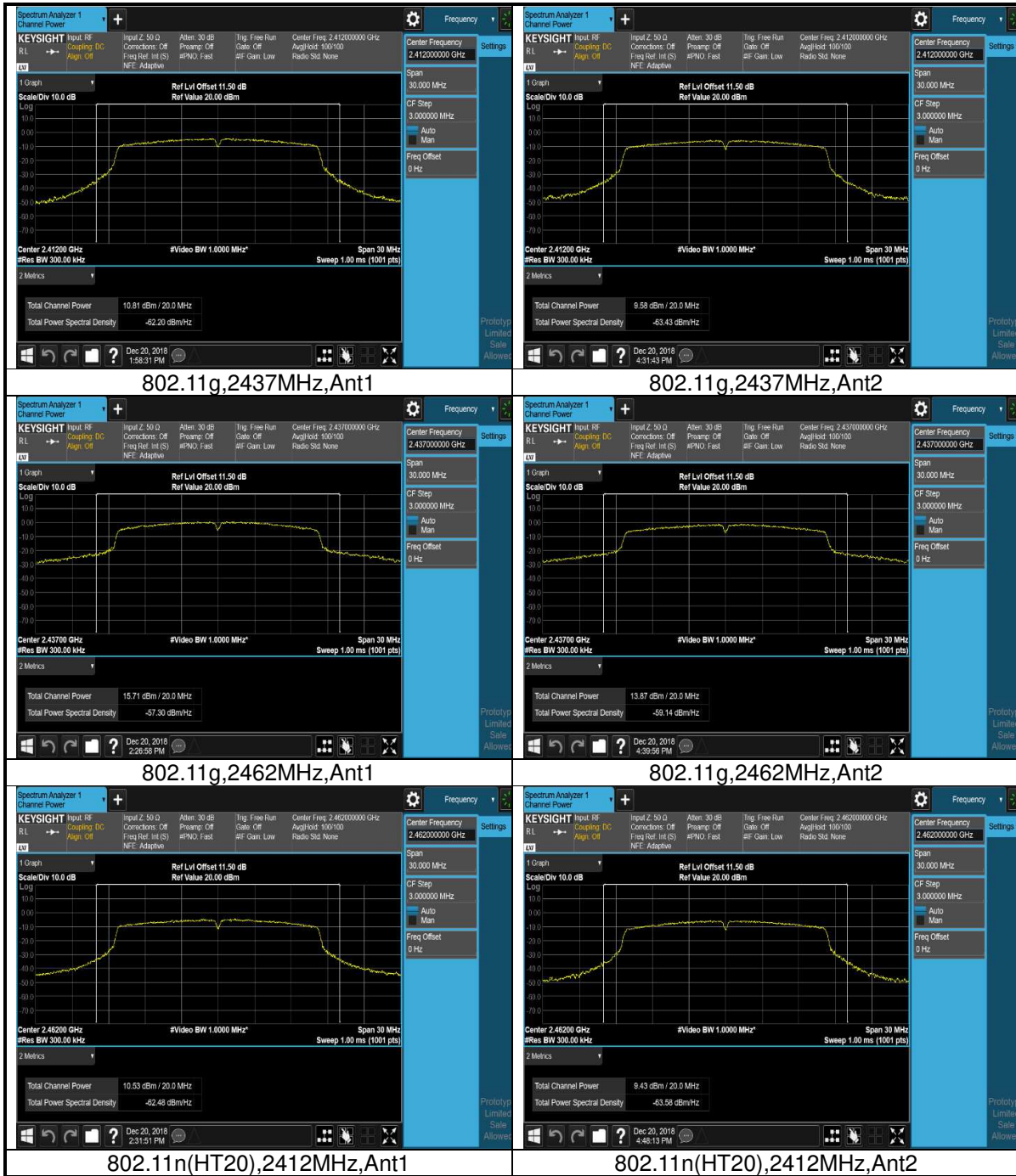
Max EIRP calculated as below:

Max Total Power (dBm)	EIRP (dBm)	EIRP (W)	Limit (W)	Result
17.71	20.41	0.1099	4	Pass

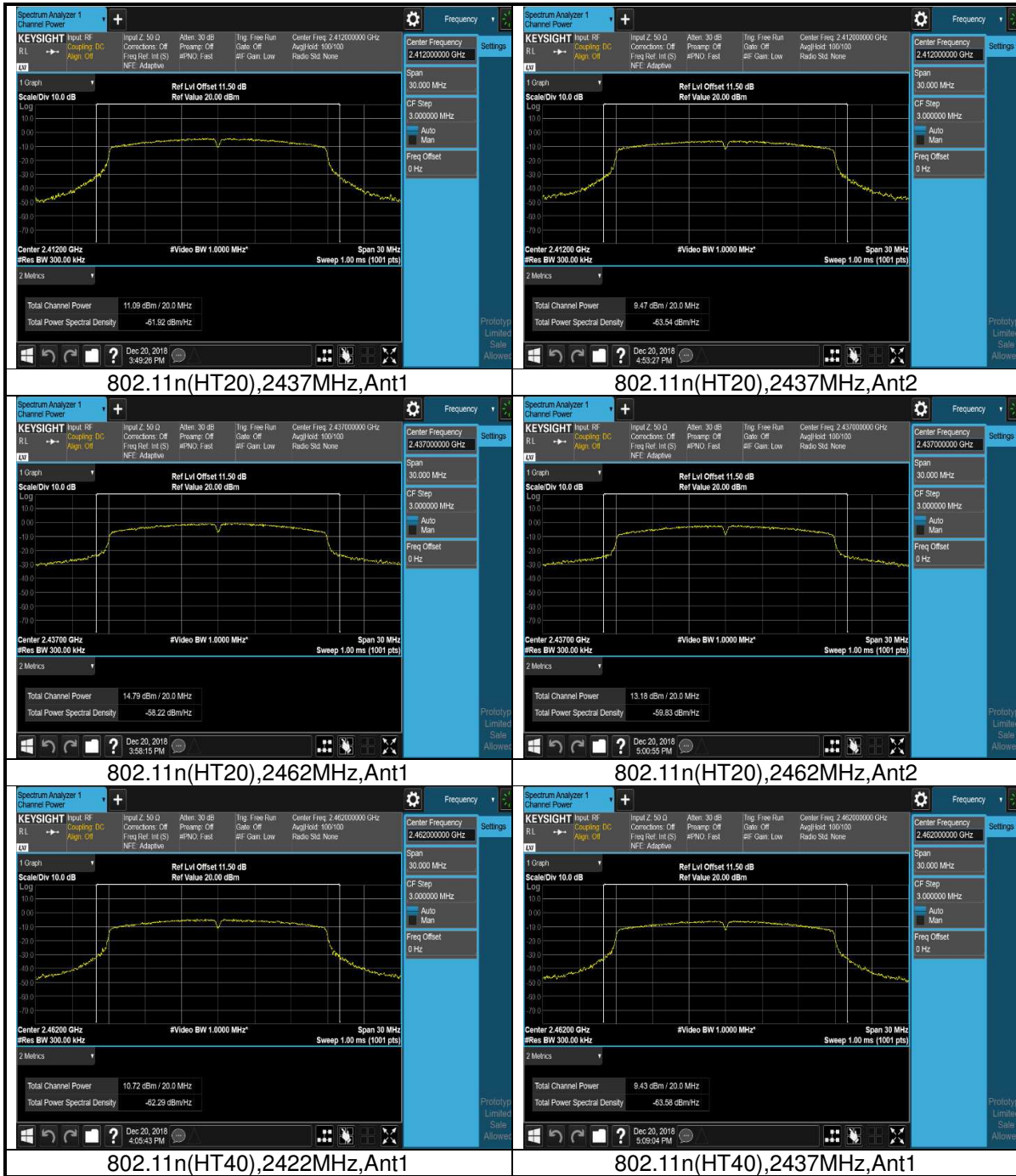
4.2 Test Plots



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5. Power spectrum density

5.1 Test Data

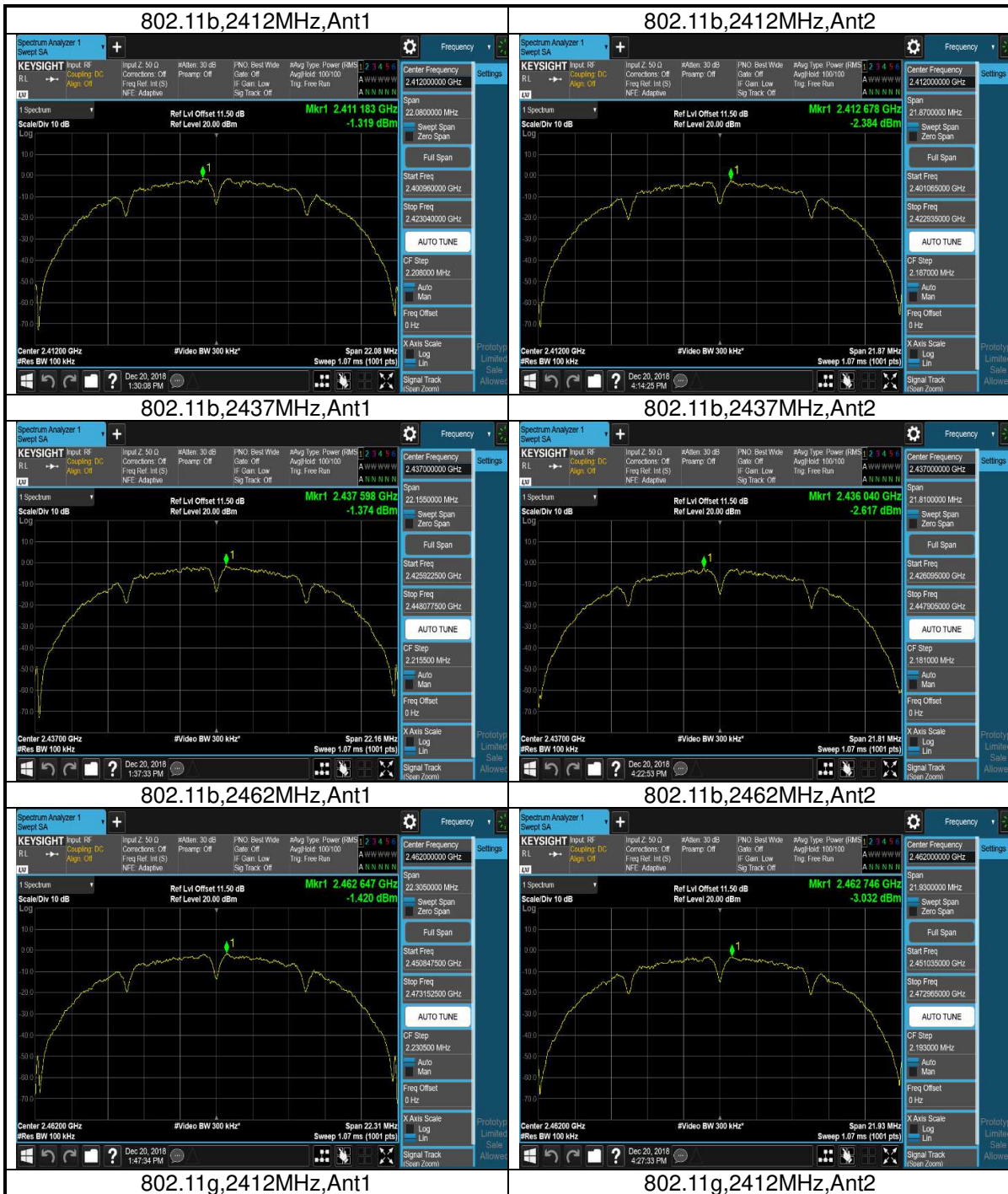
WLAN AVGSA Power Spectral Density							
Mode	Test Frequency (MHz)	Ant	Duty Cycle Factor (dB)	PSD (dBm)	RBW (kHz)	Limit (dBm)	Result
802.11b	2412	Ant1	0.10	-1.219	100	8	Pass
802.11b	2412	Ant2	0.10	-2.284	100	8	Pass
802.11b	2437	Ant1	0.10	-1.274	100	8	Pass
802.11b	2437	Ant2	0.10	-2.517	100	8	Pass
802.11b	2462	Ant1	0.10	-1.320	100	8	Pass
802.11b	2462	Ant2	0.10	-2.932	100	8	Pass
802.11g	2412	Ant1	0.62	-7.279	100	8	Pass
802.11g	2412	Ant2	0.62	-9.072	100	8	Pass
802.11g	2437	Ant1	0.59	-2.592	100	8	Pass
802.11g	2437	Ant2	0.59	-4.778	100	8	Pass
802.11g	2462	Ant1	0.59	-7.103	100	8	Pass
802.11g	2462	Ant2	0.59	-9.159	100	8	Pass
802.11n (HT20)	2412	Ant1	0.63	-7.061	100	8	Pass
802.11n (HT20)	2412	Ant2	0.66	-8.860	100	8	Pass
802.11n (HT20)	2437	Ant1	0.63	-3.358	100	8	Pass
802.11n (HT20)	2437	Ant2	0.66	-5.321	100	8	Pass
802.11n (HT20)	2462	Ant1	0.63	-7.384	100	8	Pass
802.11n (HT20)	2462	Ant2	0.66	-8.724	100	8	Pass
802.11n (HT40)	2422	Ant1	1.20	-13.654	100	8	Pass
802.11n (HT40)	2437	Ant1	1.18	-8.399	100	8	Pass
802.11n (HT40)	2452	Ant1	1.25	-13.707	100	8	Pass

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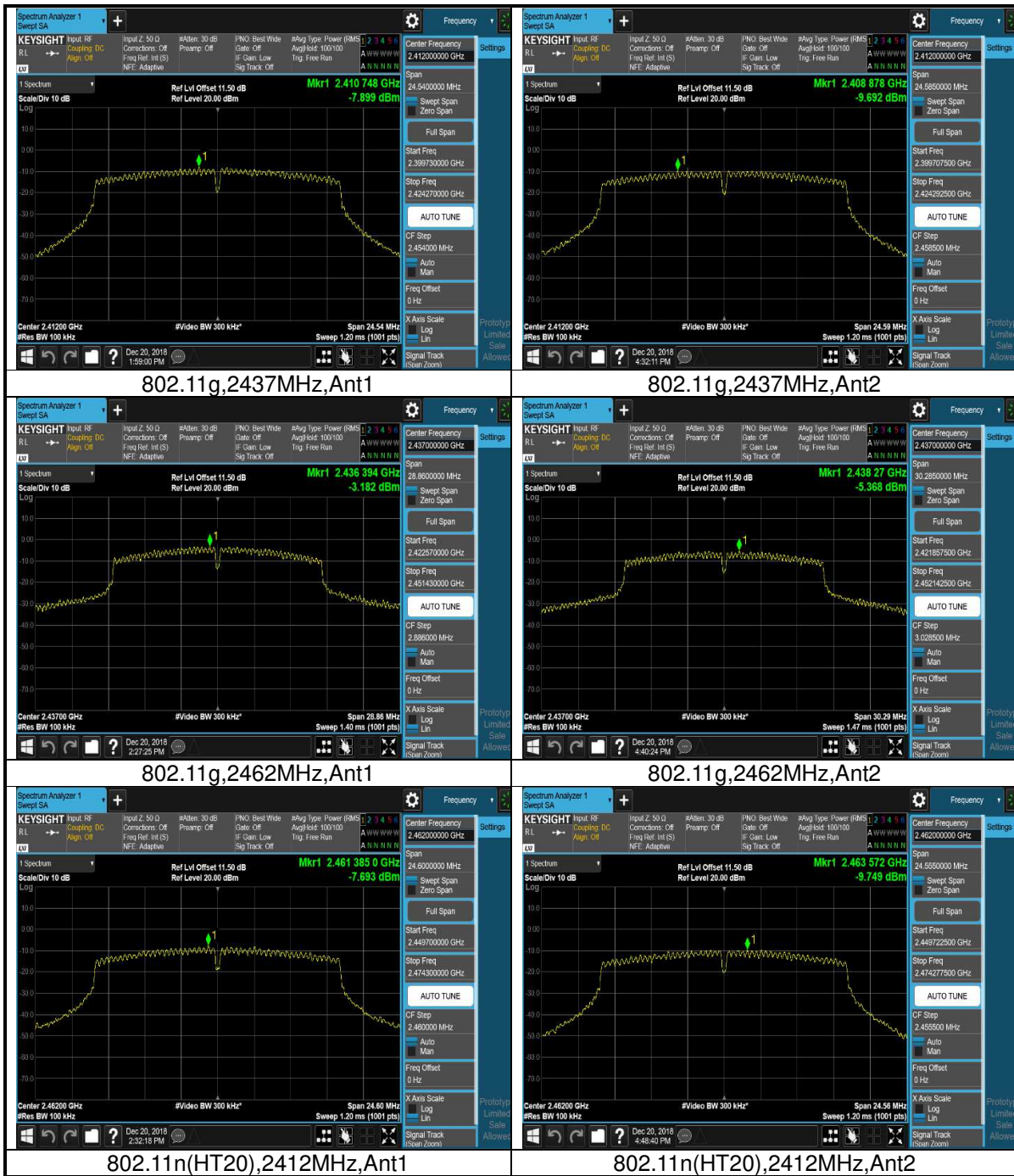
For MIMO mode:

Mode	Test Frequency (MHz)	Ant	Duty Cycle Factor (dB)	PSD (dBm)	Total PSD	Limit (dBm)	Result
802.11n (HT20)	2412	Ant1	0.63	-7.061	-4.86	8	Pass
802.11n (HT20)	2412	Ant2	0.66	-8.860			
802.11n (HT20)	2437	Ant1	0.63	-3.358	-1.22	8	Pass
802.11n (HT20)	2437	Ant2	0.66	-5.321			
802.11n (HT20)	2462	Ant1	0.63	-7.384	-4.99	8	Pass
802.11n (HT20)	2462	Ant2	0.66	-8.724			

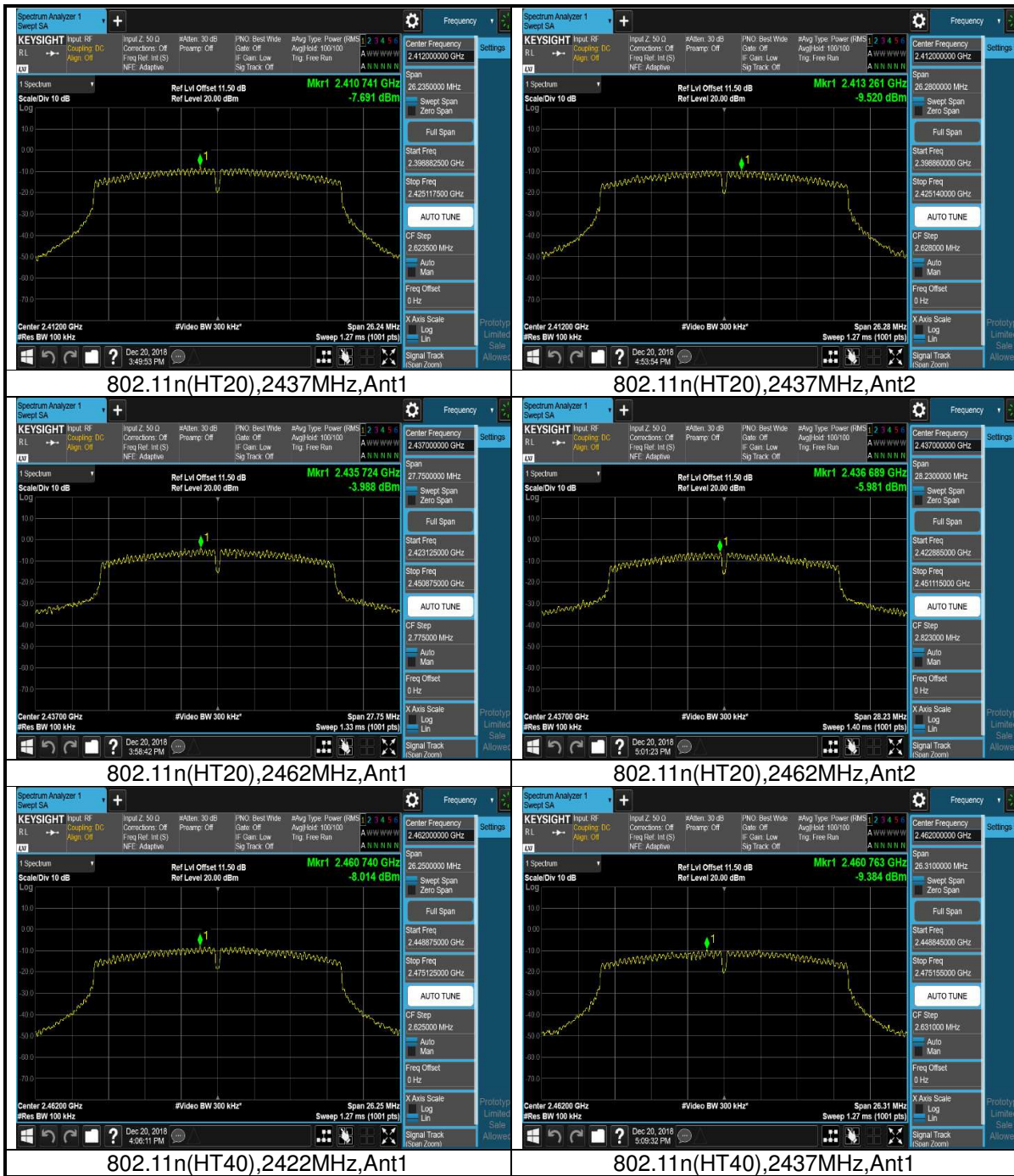
5.2 Test Plots



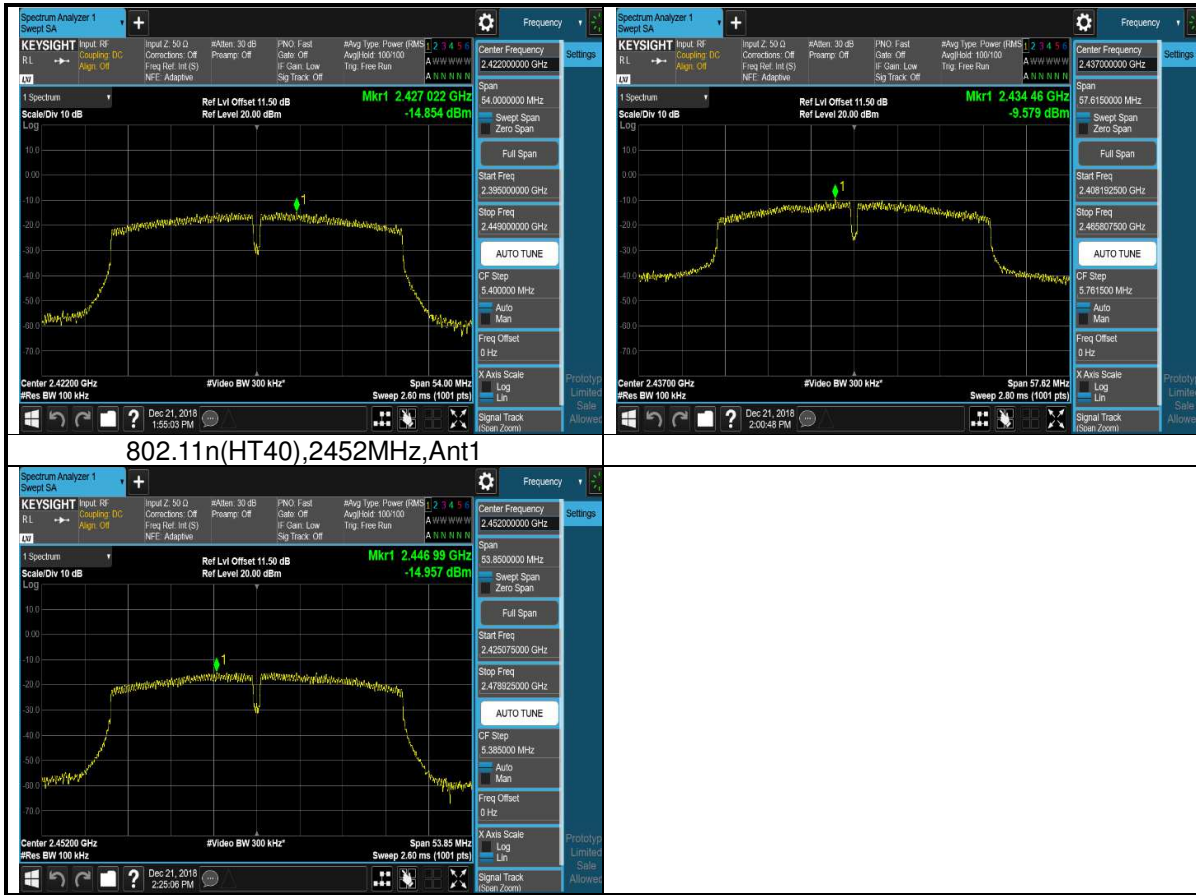
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6. Emission outside the frequency band

6.1 Test Data

WLAN Transmitter Spurious Emission						
Mode	Test Frequency (MHz)	Ant	Plot No.	Frequency Range	Emission (dBm)	Result
802.11b	2412	Ant1	1	Reference Level	8.33	Pass
802.11b	2412	Ant1	2	Band Edge	-25.24	Pass
802.11b	2412	Ant1	3	30MHz~2310MHz	-54.81	Pass
802.11b	2412	Ant1	4	2500MHz~5000MHz	-40.48	Pass
802.11b	2412	Ant1	5	5000MHz~25000MHz	-41.13	Pass
802.11b	2412	Ant2	1	Reference Level	5.93	Pass
802.11b	2412	Ant2	2	Band Edge	-36.24	Pass
802.11b	2412	Ant2	3	30MHz~2310MHz	-47.62	Pass
802.11b	2412	Ant2	4	2500MHz~5000MHz	-44.43	Pass
802.11b	2412	Ant2	5	5000MHz~25000MHz	-31.06	Pass
802.11b	2437	Ant1	1	Reference Level	6.75	Pass
802.11b	2437	Ant1	2	Band Edge	-54.23	Pass
802.11b	2437	Ant1	3	30MHz~2310MHz	-54.36	Pass
802.11b	2437	Ant1	4	2500MHz~5000MHz	-39.88	Pass
802.11b	2437	Ant1	5	5000MHz~25000MHz	-41.15	Pass
802.11b	2437	Ant2	1	Reference Level	5.76	Pass
802.11b	2437	Ant2	2	Band Edge	-48.89	Pass
802.11b	2437	Ant2	3	30MHz~2310MHz	-47.34	Pass
802.11b	2437	Ant2	4	2500MHz~5000MHz	-44.52	Pass
802.11b	2437	Ant2	5	5000MHz~25000MHz	-31.04	Pass
802.11b	2462	Ant1	1	Reference Level	6.81	Pass
802.11b	2462	Ant1	2	Band Edge	-51.92	Pass
802.11b	2462	Ant1	3	30MHz~2310MHz	-55.86	Pass
802.11b	2462	Ant1	4	2500MHz~5000MHz	-43.05	Pass
802.11b	2462	Ant1	5	5000MHz~25000MHz	-41.16	Pass
802.11b	2462	Ant2	1	Reference Level	5.77	Pass

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802.11b	2462	Ant2	2	Band Edge	-44.57	Pass
802.11b	2462	Ant2	3	30MHz~2310MHz	-46.78	Pass
802.11b	2462	Ant2	4	2500MHz~5000MHz	-44.13	Pass
802.11b	2462	Ant2	5	5000MHz~25000MHz	-31.18	Pass
802.11g	2412	Ant1	1	Reference Level	1.34	Pass
802.11g	2412	Ant1	2	Band Edge	-33.78	Pass
802.11g	2412	Ant1	3	30MHz~2310MHz	-54.64	Pass
802.11g	2412	Ant1	4	2500MHz~5000MHz	-39.98	Pass
802.11g	2412	Ant1	5	5000MHz~25000MHz	-41.40	Pass
802.11g	2412	Ant2	1	Reference Level	-0.66	Pass
802.11g	2412	Ant2	2	Band Edge	-35.62	Pass
802.11g	2412	Ant2	3	30MHz~2310MHz	-57.27	Pass
802.11g	2412	Ant2	4	2500MHz~5000MHz	-51.69	Pass
802.11g	2412	Ant2	5	5000MHz~25000MHz	-41.46	Pass
802.11g	2437	Ant1	1	Reference Level	6.29	Pass
802.11g	2437	Ant1	2	Band Edge	-46.04	Pass
802.11g	2437	Ant1	3	30MHz~2310MHz	-55.69	Pass
802.11g	2437	Ant1	4	2500MHz~5000MHz	-39.62	Pass
802.11g	2437	Ant1	5	5000MHz~25000MHz	-39.75	Pass
802.11g	2437	Ant2	1	Reference Level	4.60	Pass
802.11g	2437	Ant2	2	Band Edge	-45.63	Pass
802.11g	2437	Ant2	3	30MHz~2310MHz	-58.02	Pass
802.11g	2437	Ant2	4	2500MHz~5000MHz	-49.57	Pass
802.11g	2437	Ant2	5	5000MHz~25000MHz	-41.58	Pass
802.11g	2462	Ant1	1	Reference Level	0.52	Pass
802.11g	2462	Ant1	2	Band Edge	-47.68	Pass
802.11g	2462	Ant1	3	30MHz~2310MHz	-58.31	Pass
802.11g	2462	Ant1	4	2500MHz~5000MHz	-39.56	Pass
802.11g	2462	Ant1	5	5000MHz~25000MHz	-41.34	Pass
802.11g	2462	Ant2	1	Reference Level	-0.94	Pass
802.11g	2462	Ant2	2	Band Edge	-47.92	Pass
802.11g	2462	Ant2	3	30MHz~2310MHz	-56.82	Pass

Total Quality. Assured.

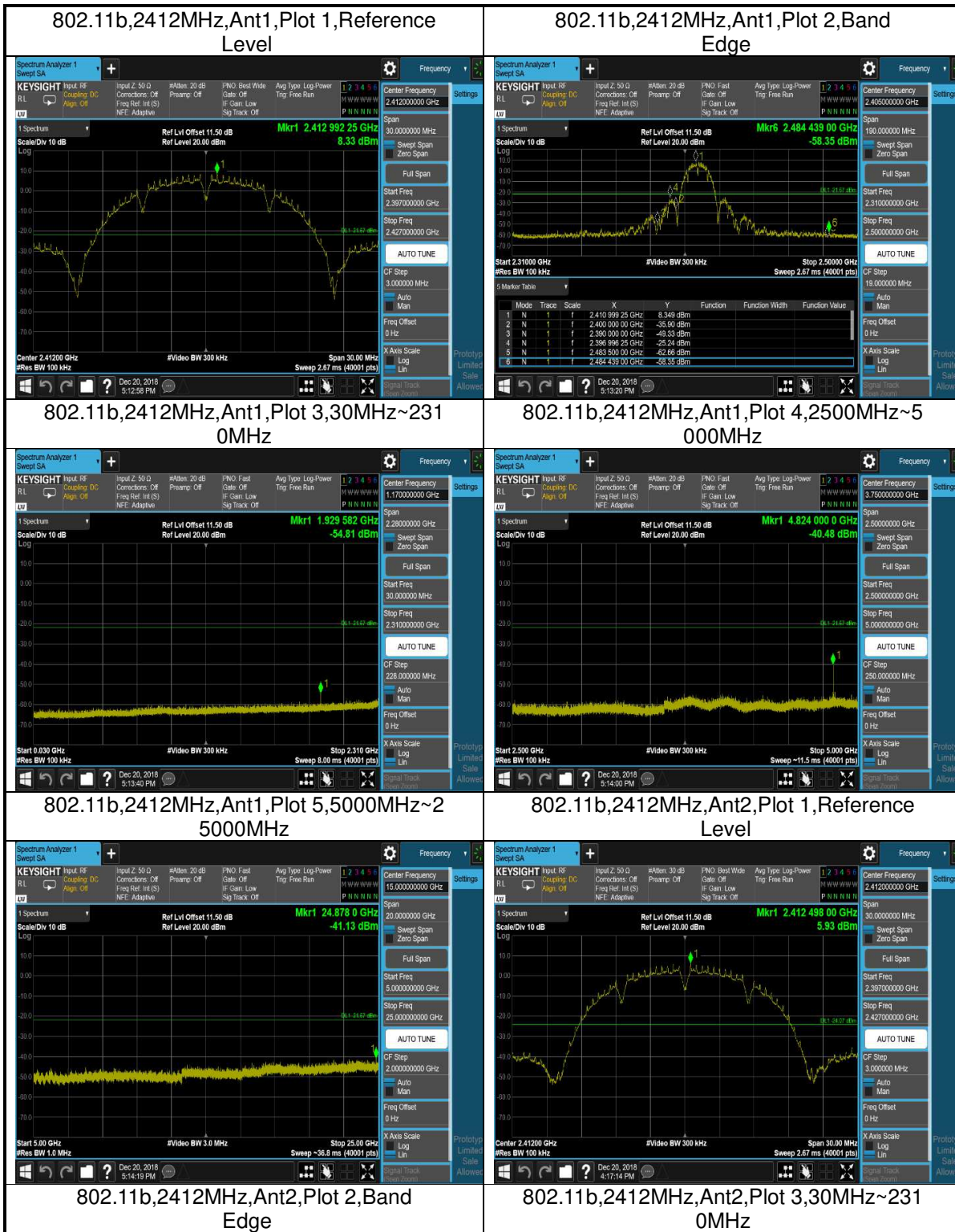
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802.11g	2462	Ant2	4	2500MHz~5000MHz	-50.32	Pass
802.11g	2462	Ant2	5	5000MHz~25000MHz	-40.64	Pass
802.11n (HT20)	2412	Ant1	1	Reference Level	1.65	Pass
802.11n (HT20)	2412	Ant1	2	Band Edge	-34.22	Pass
802.11n (HT20)	2412	Ant1	3	30MHz~2310MHz	-56.29	Pass
802.11n (HT20)	2412	Ant1	4	2500MHz~5000MHz	-39.51	Pass
802.11n (HT20)	2412	Ant1	5	5000MHz~25000MHz	-40.97	Pass
802.11n (HT20)	2412	Ant2	1	Reference Level	-0.28	Pass
802.11n (HT20)	2412	Ant2	2	Band Edge	-31.34	Pass
802.11n (HT20)	2412	Ant2	3	30MHz~2310MHz	-57.90	Pass
802.11n (HT20)	2412	Ant2	4	2500MHz~5000MHz	-51.08	Pass
802.11n (HT20)	2412	Ant2	5	5000MHz~25000MHz	-40.66	Pass
802.11n (HT20)	2437	Ant1	1	Reference Level	5.88	Pass
802.11n (HT20)	2437	Ant1	2	Band Edge	-47.08	Pass
802.11n (HT20)	2437	Ant1	3	30MHz~2310MHz	-50.37	Pass
802.11n (HT20)	2437	Ant1	4	2500MHz~5000MHz	-38.65	Pass
802.11n (HT20)	2437	Ant1	5	5000MHz~25000MHz	-41.05	Pass
802.11n (HT20)	2437	Ant2	1	Reference Level	3.83	Pass
802.11n (HT20)	2437	Ant2	2	Band Edge	-50.57	Pass
802.11n (HT20)	2437	Ant2	3	30MHz~2310MHz	-58.11	Pass
802.11n (HT20)	2437	Ant2	4	2500MHz~5000MHz	-50.38	Pass
802.11n (HT20)	2437	Ant2	5	5000MHz~25000MHz	-41.26	Pass
802.11n (HT20)	2462	Ant1	1	Reference Level	1.37	Pass
802.11n (HT20)	2462	Ant1	2	Band Edge	-47.44	Pass
802.11n (HT20)	2462	Ant1	3	30MHz~2310MHz	-57.78	Pass
802.11n (HT20)	2462	Ant1	4	2500MHz~5000MHz	-39.61	Pass
802.11n (HT20)	2462	Ant1	5	5000MHz~25000MHz	-40.56	Pass

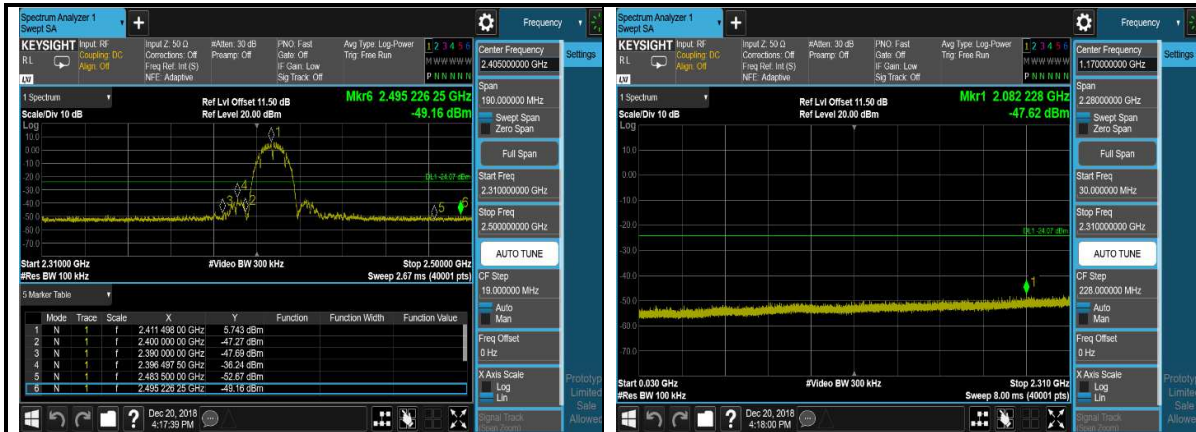
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802.11n (HT20)	2462	Ant2	1	Reference Level	-0.64	Pass
802.11n (HT20)	2462	Ant2	2	Band Edge	-44.42	Pass
802.11n (HT20)	2462	Ant2	3	30MHz~2310MHz	-57.20	Pass
802.11n (HT20)	2462	Ant2	4	2500MHz~5000MHz	-49.74	Pass
802.11n (HT20)	2462	Ant2	5	5000MHz~25000MHz	-41.28	Pass
802.11n (HT40)	2422	Ant1	1	Reference Level	-4.75	Pass
802.11n (HT40)	2422	Ant1	2	Band Edge	-40.43	Pass
802.11n (HT40)	2422	Ant1	3	30MHz~2310MHz	-58.10	Pass
802.11n (HT40)	2422	Ant1	4	2500MHz~5000MHz	-49.21	Pass
802.11n (HT40)	2422	Ant1	5	5000MHz~25000MHz	-41.33	Pass
802.11n (HT40)	2437	Ant1	1	Reference Level	-0.18	Pass
802.11n (HT40)	2437	Ant1	2	Band Edge	-34.04	Pass
802.11n (HT40)	2437	Ant1	3	30MHz~2310MHz	-57.62	Pass
802.11n (HT40)	2437	Ant1	4	2500MHz~5000MHz	-50.05	Pass
802.11n (HT40)	2437	Ant1	5	5000MHz~25000MHz	-40.28	Pass
802.11n (HT40)	2452	Ant1	1	Reference Level	-4.95	Pass
802.11n (HT40)	2452	Ant1	2	Band Edge	-46.62	Pass
802.11n (HT40)	2452	Ant1	3	30MHz~2310MHz	-58.13	Pass
802.11n (HT40)	2452	Ant1	4	2500MHz~5000MHz	-48.76	Pass
802.11n (HT40)	2452	Ant1	5	5000MHz~25000MHz	-40.94	Pass

9.2 Test Plots

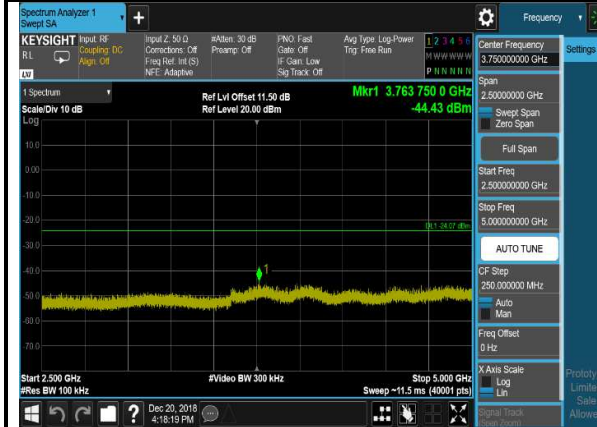


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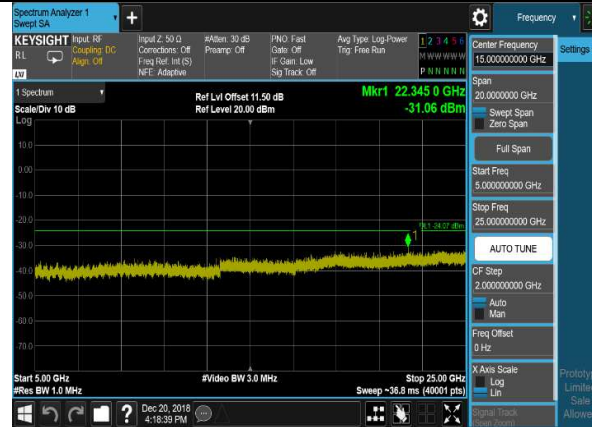


802.11b,2412MHz,Ant2,Plot 4,2500MHz~5000MHz

802.11b,2412MHz,Ant2,Plot 5,5000MHz~25000MHz



802.11b,2437MHz,Ant1,Plot 1,Reference Level



802.11b,2437MHz,Ant1,Plot 2,Band Edge

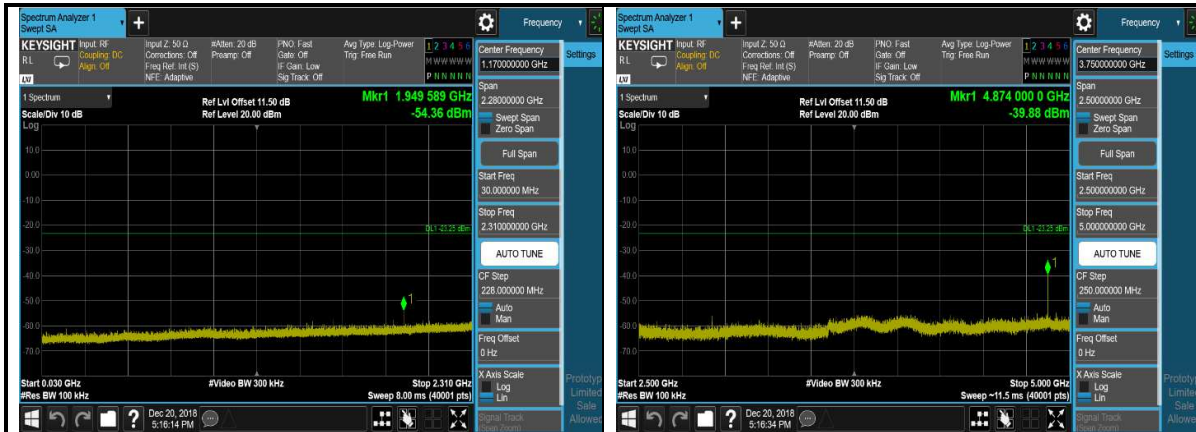


802.11b,2437MHz,Ant1,Plot 3,30MHz~2310MHz



802.11b,2437MHz,Ant1,Plot 4,2500MHz~5000MHz

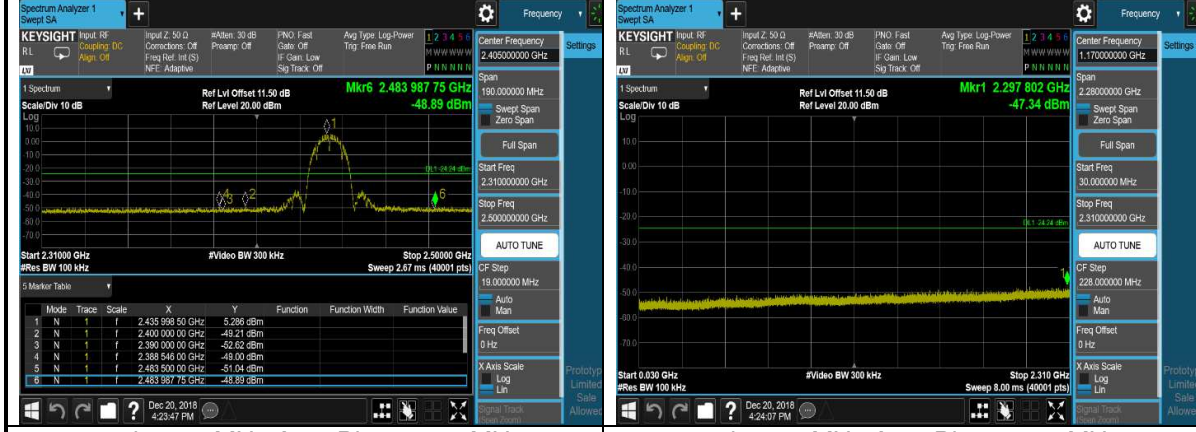
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802.11b,2437MHz,Ant2,Plot 1,Reference Level



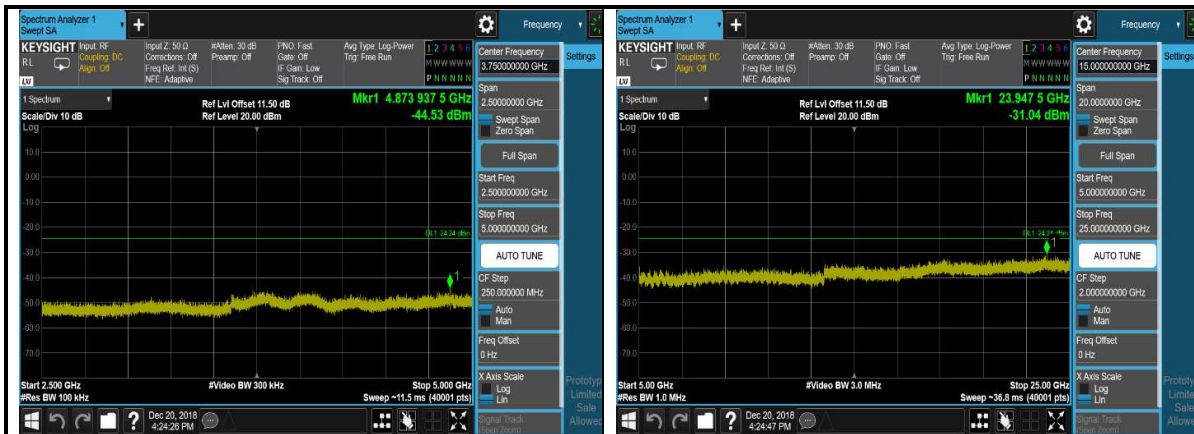
802.11b,2437MHz,Ant2,Plot 3,30MHz~2310MHz



802.11b,2437MHz,Ant2,Plot 5,5000MHz~25000MHz

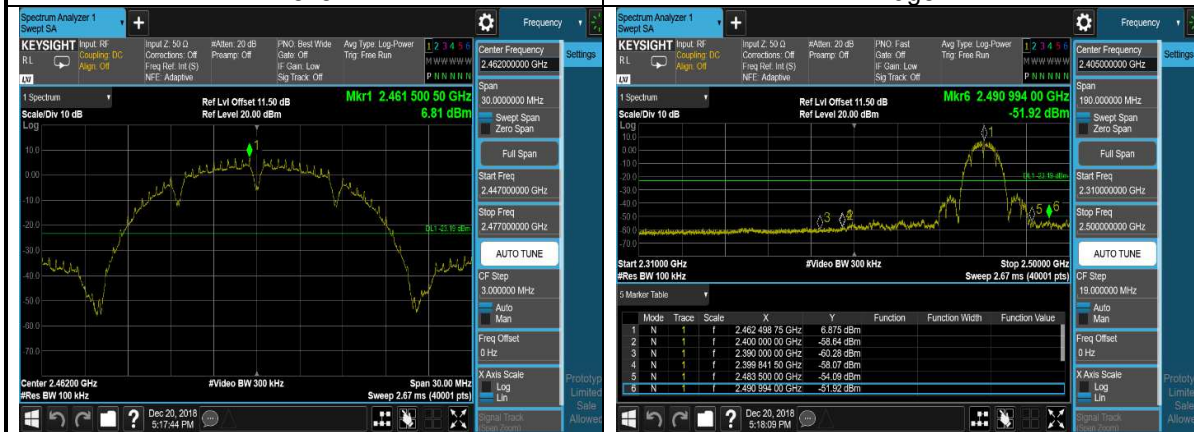


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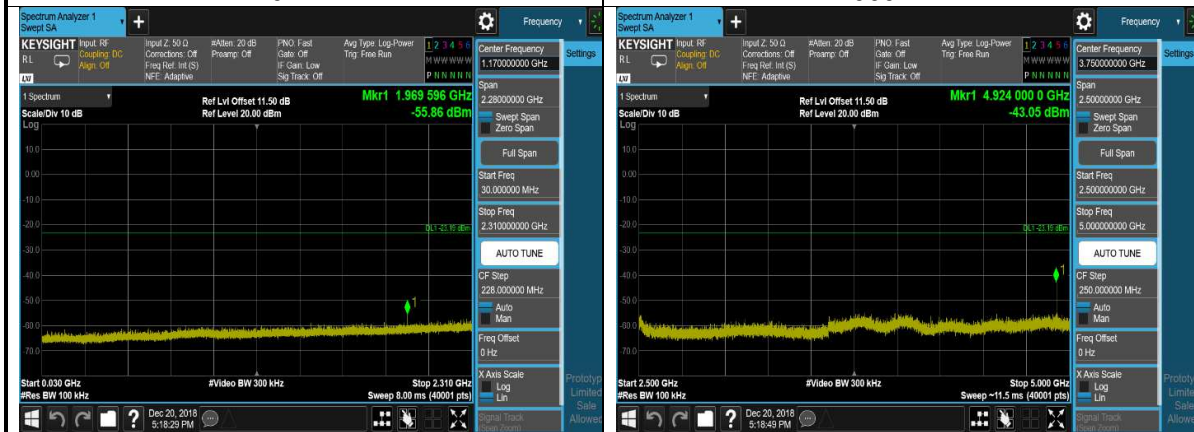
802.11b,2462MHz,Ant1,Plot 1,Reference Level

802.11b,2462MHz,Ant1,Plot 2,Band Edge



802.11b,2462MHz,Ant1,Plot 3,30MHz~231 0MHz

802.11b,2462MHz,Ant1,Plot 4,2500MHz~5 000MHz



802.11b,2462MHz,Ant1,Plot 5,5000MHz~2 5000MHz

802.11b,2462MHz,Ant2,Plot 1,Reference Level