



Appendix C

RF Test Data for 2.4GWIFI (Conducted Measurement)

Product Name: SwitchBot Pan/Tilt Cam 2K

Trade Mark: SwitchBot

Test Model: W3101100

Environmental Conditions

Temperature:	25.2° C
Relative Humidity:	53.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Simba Huang
Supervised by:	Seal Chen



Contents

	Page
COVER PAGE	
1 Duty Cycle	3
1.1 Test Result.....	3
1.2 Test Graphs.....	4
2 Maximum Conducted Output Power	10
2.1 Test Result.....	10
3 -6dB Bandwidth	11
3.1 Test Result.....	11
3.2 Test Graphs.....	12
4 Maximum Power Spectral Density Level	18
4.1 Test Result.....	18
4.2 Test Graphs.....	19
5 Band Edge.....	25
5.1 Test Result.....	25
5.2 Test Graphs.....	26
6 Conducted RF Spurious Emission.....	34
6.1 Test Result.....	34
6.2 Test Graphs.....	35
7 Restrict Band.....	47
7.1 Test Result.....	47
7.2 Test Graphs.....	49



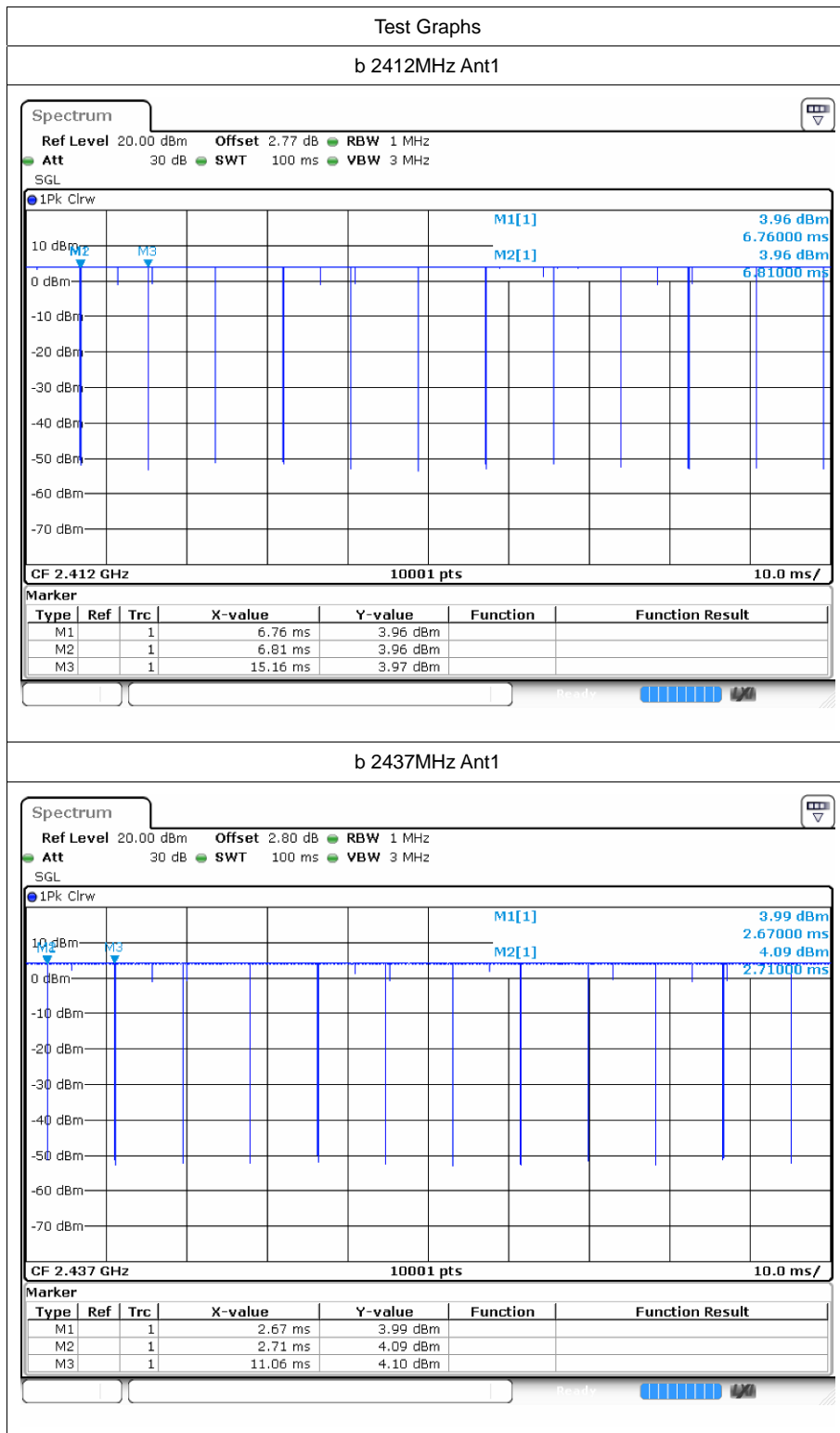
1 Duty Cycle

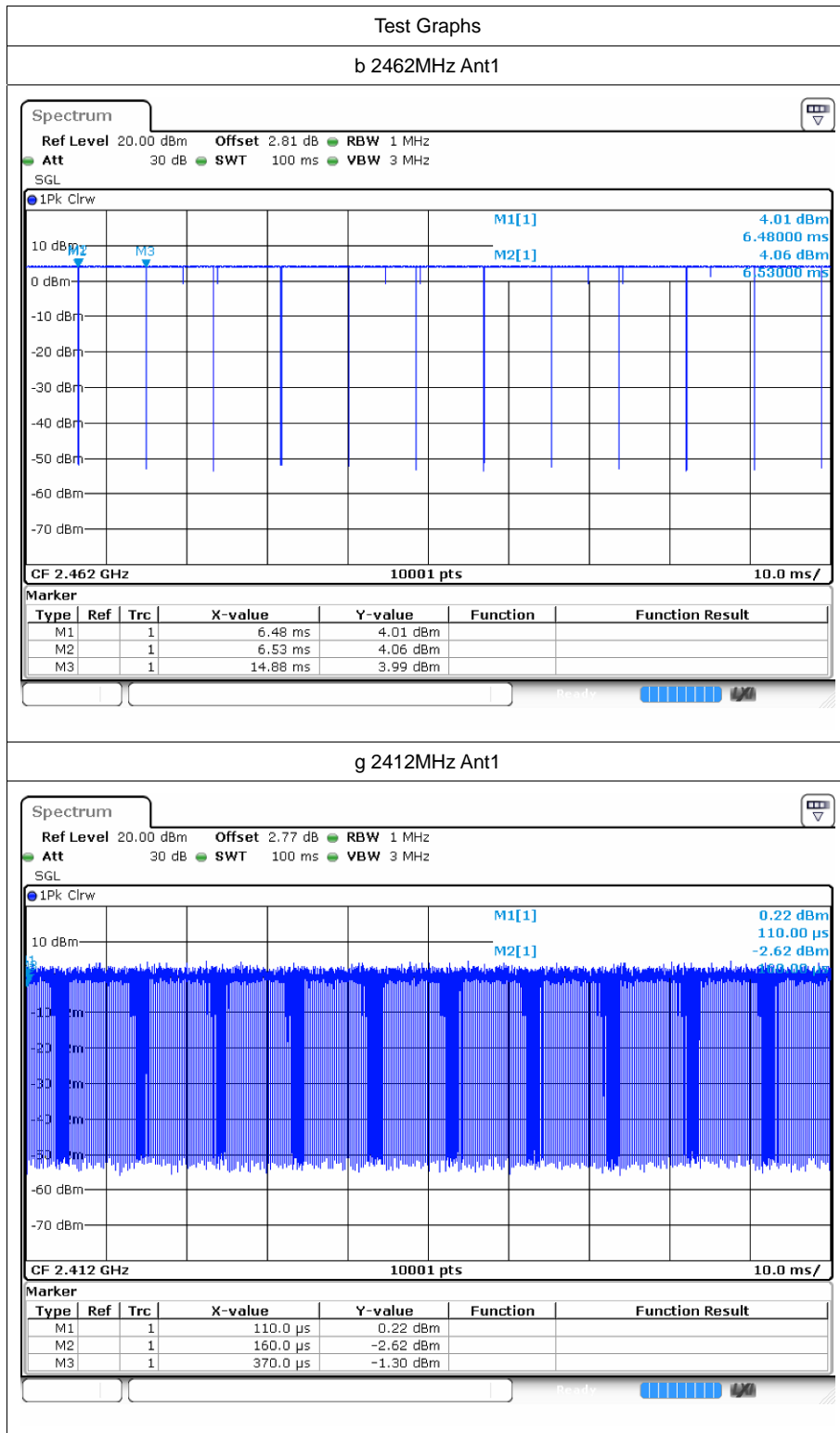
1.1 Test Result

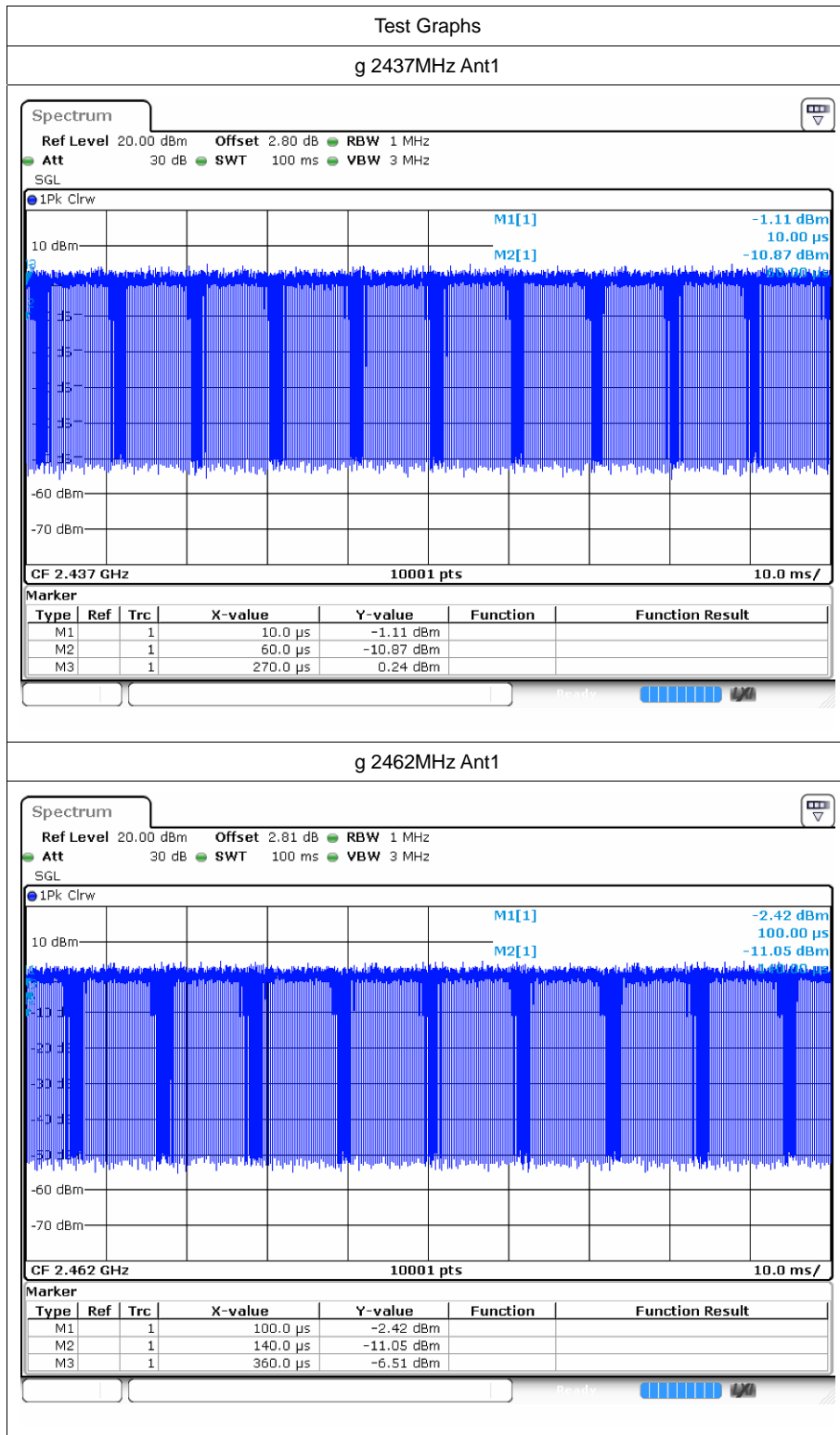
Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	1/T (kHz)
b	2412	Ant1	99.59	0.01
b	2437	Ant1	99.61	0.01
b	2462	Ant1	99.61	0.01
g	2412	Ant1	86.77	4.76
g	2437	Ant1	86.82	4.76
g	2462	Ant1	87	4.55
n20	2412	Ant1	87.56	4.17
n20	2437	Ant1	87.61	4.35
n20	2462	Ant1	87.6	4.35
n40	2422	Ant1	88.05	4.17
n40	2437	Ant1	88.04	4.17
n40	2452	Ant1	88.09	4

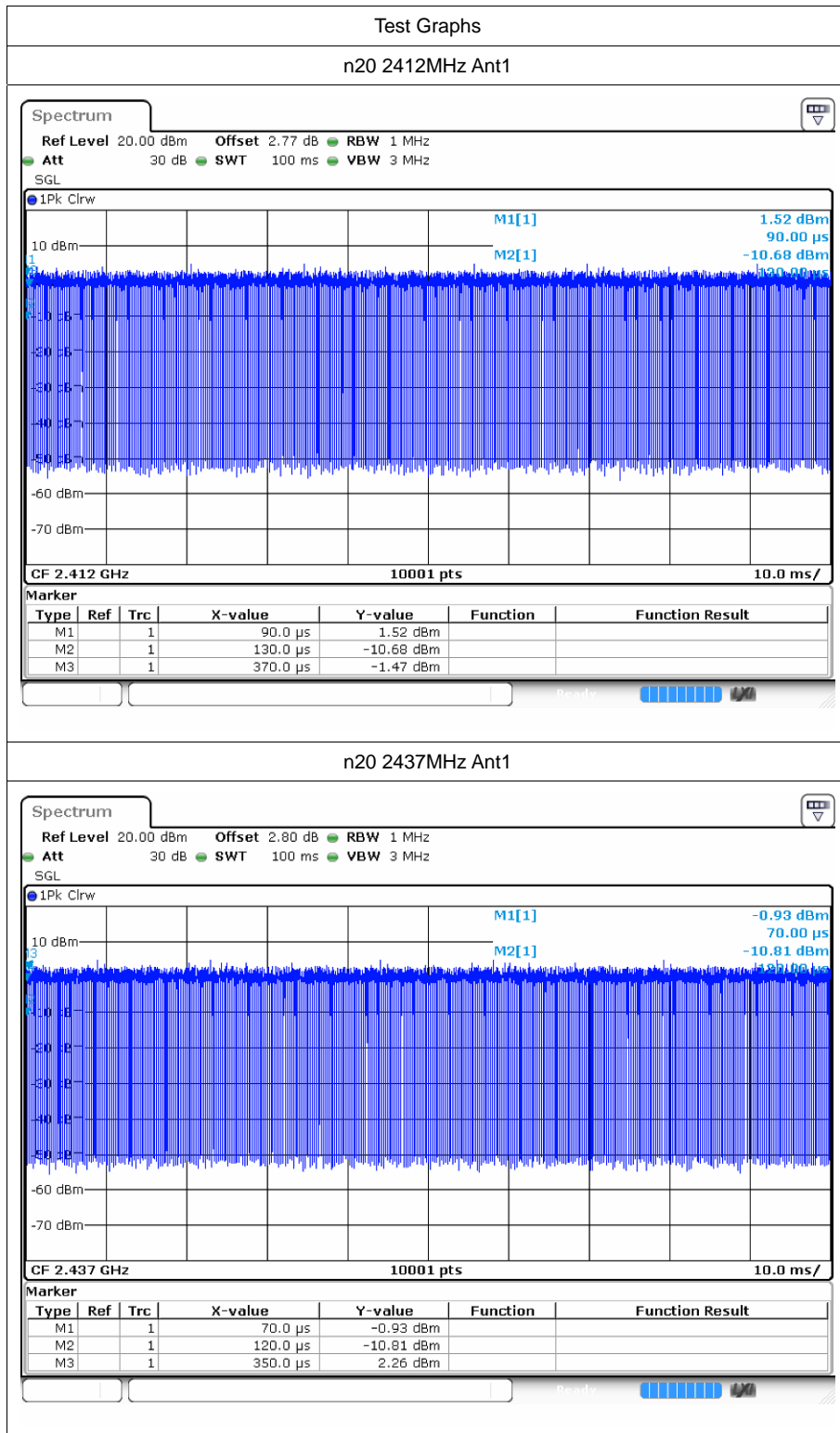


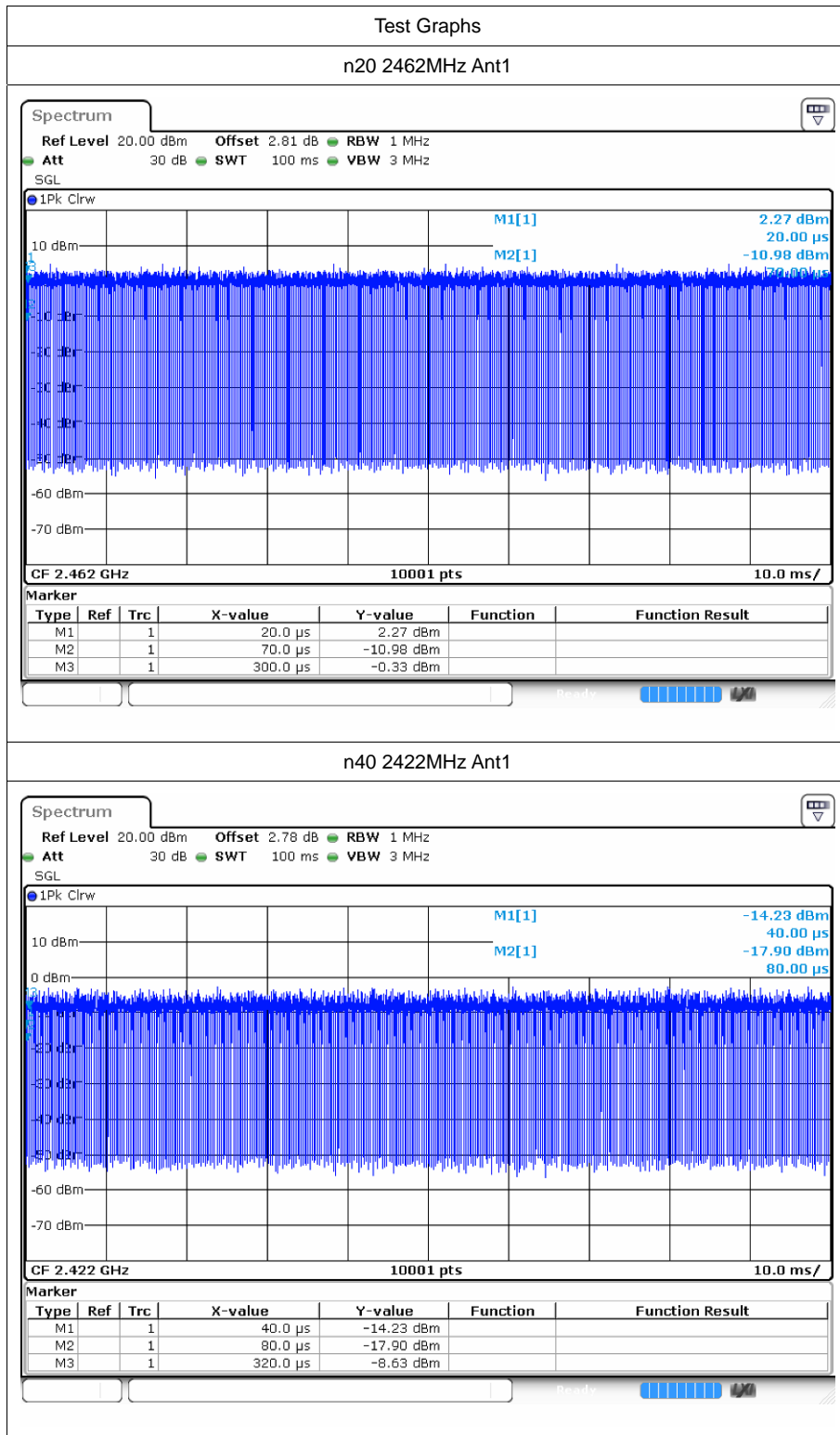
1.2 Test Graphs

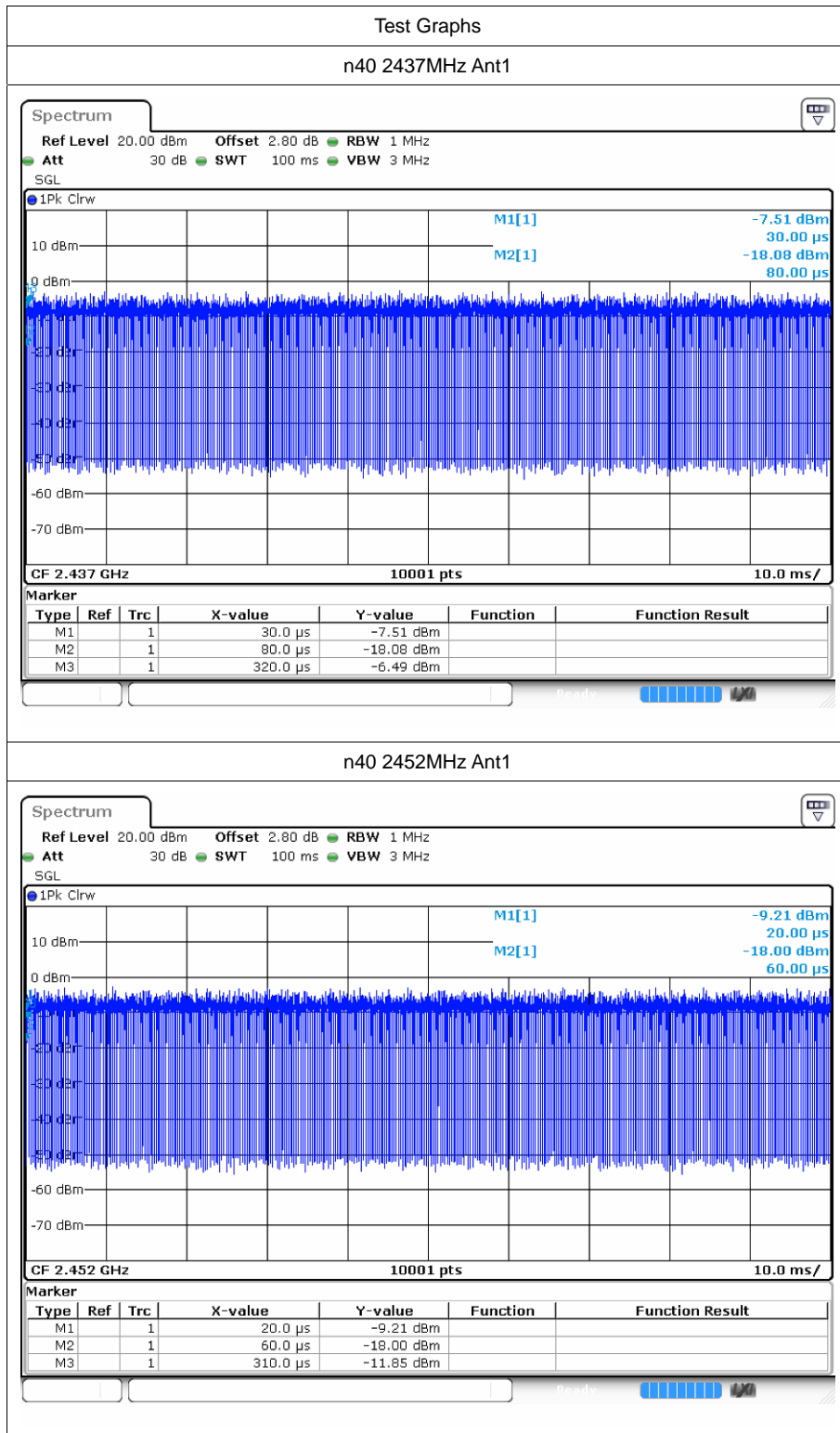












2 Maximum Conducted Output Power

2.1 Test Result

Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
b	2412	Ant1	14.54	30	Pass
b	2437	Ant1	14.56	30	Pass
b	2462	Ant1	14.53	30	Pass
g	2412	Ant1	13.85	30	Pass
g	2437	Ant1	13.83	30	Pass
g	2462	Ant1	13.79	30	Pass
n20	2412	Ant1	13.81	30	Pass
n20	2437	Ant1	13.85	30	Pass
n20	2462	Ant1	13.82	30	Pass
n40	2422	Ant1	13.59	30	Pass
n40	2437	Ant1	13.45	30	Pass
n40	2452	Ant1	13.53	30	Pass

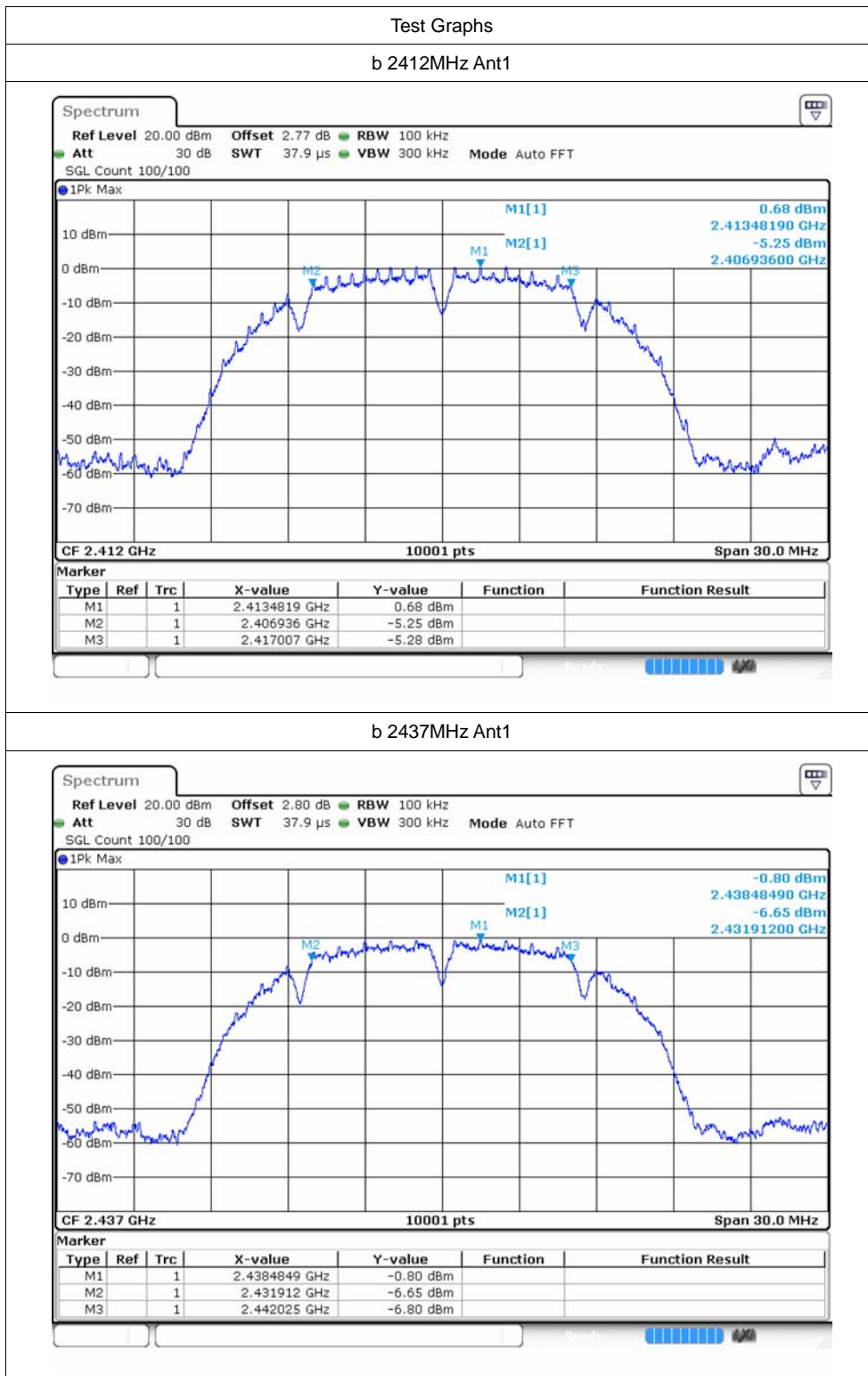


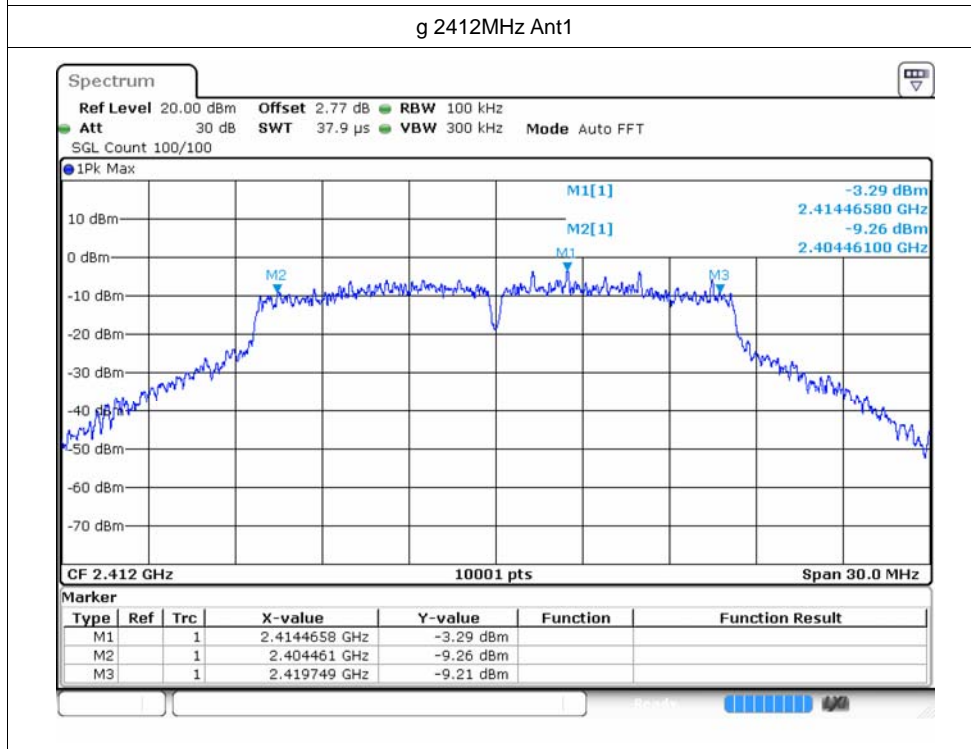
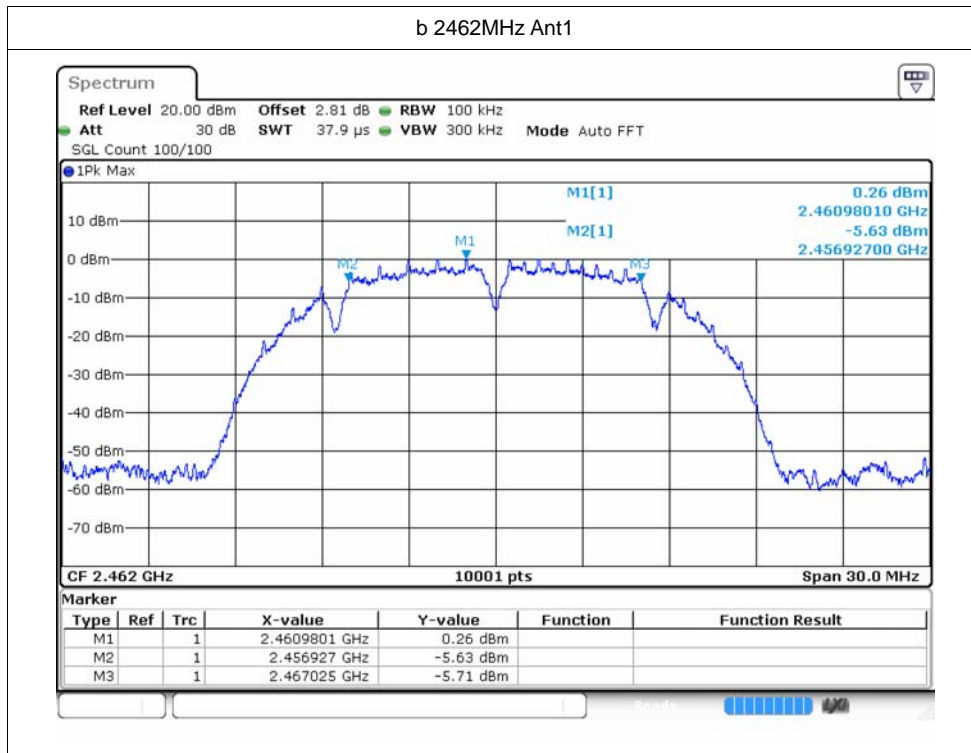
3 -6dB Bandwidth

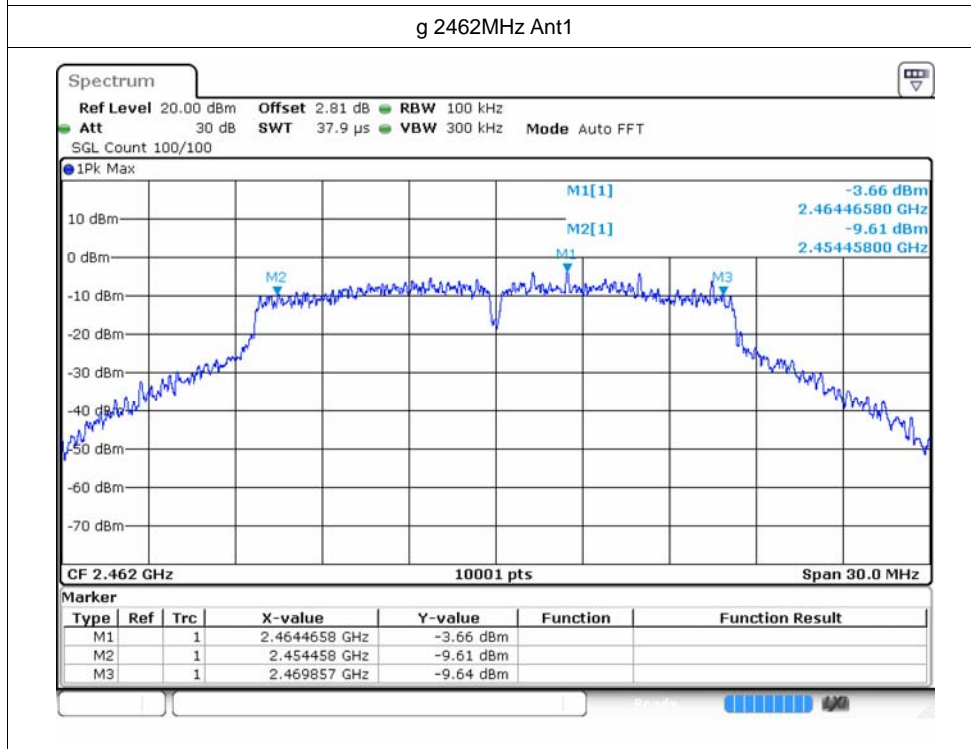
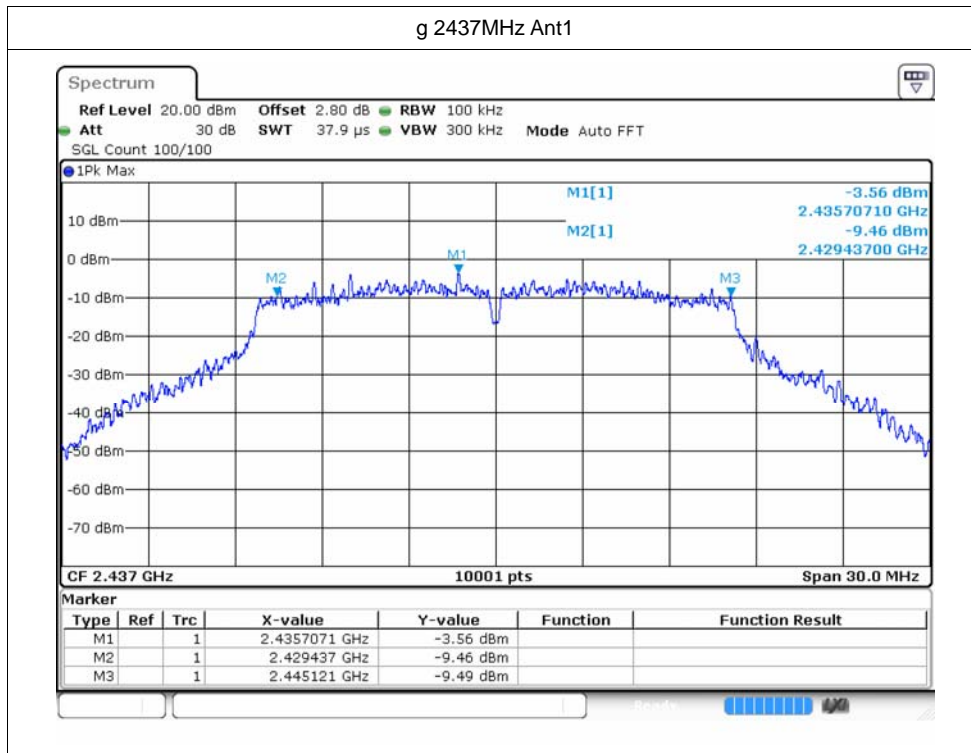
3.1 Test Result

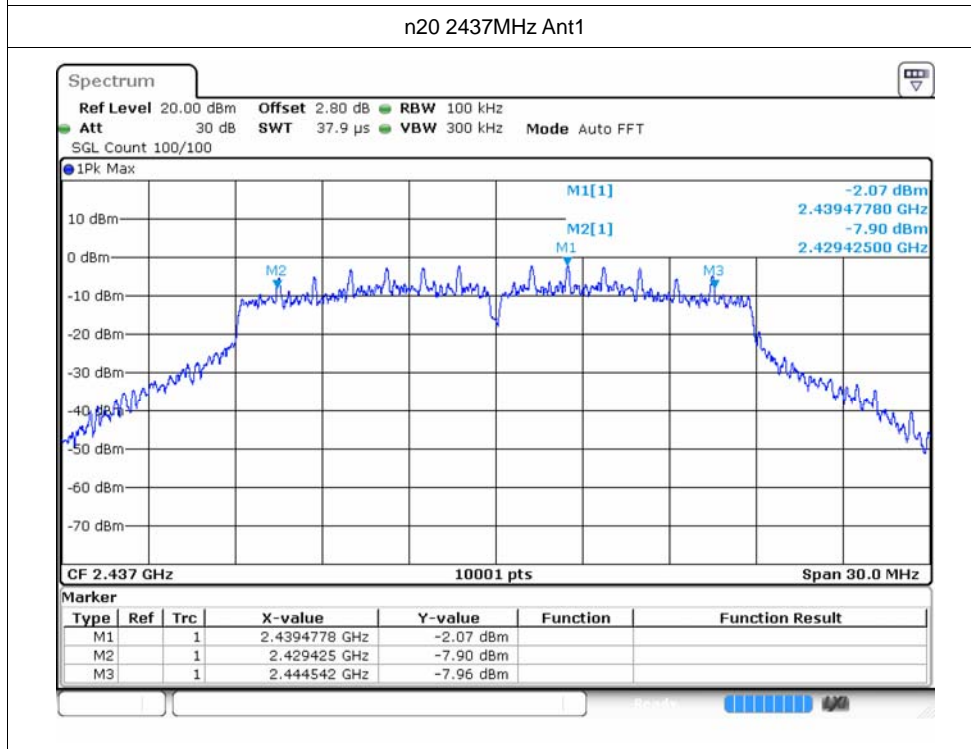
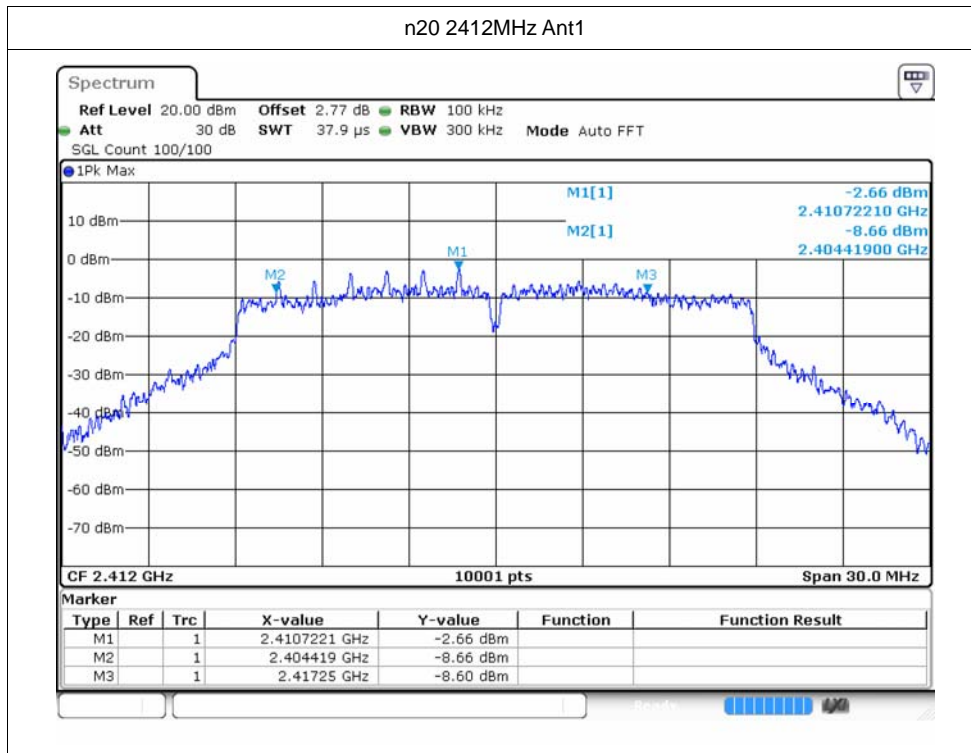
Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
b	2412	Ant1	10.071	0.5	Pass
b	2437	Ant1	10.113	0.5	Pass
b	2462	Ant1	10.098	0.5	Pass
g	2412	Ant1	15.288	0.5	Pass
g	2437	Ant1	15.684	0.5	Pass
g	2462	Ant1	15.399	0.5	Pass
n20	2412	Ant1	12.831	0.5	Pass
n20	2437	Ant1	15.117	0.5	Pass
n20	2462	Ant1	15.105	0.5	Pass
n40	2422	Ant1	33.816	0.5	Pass
n40	2437	Ant1	35.088	0.5	Pass
n40	2452	Ant1	35.076	0.5	Pass

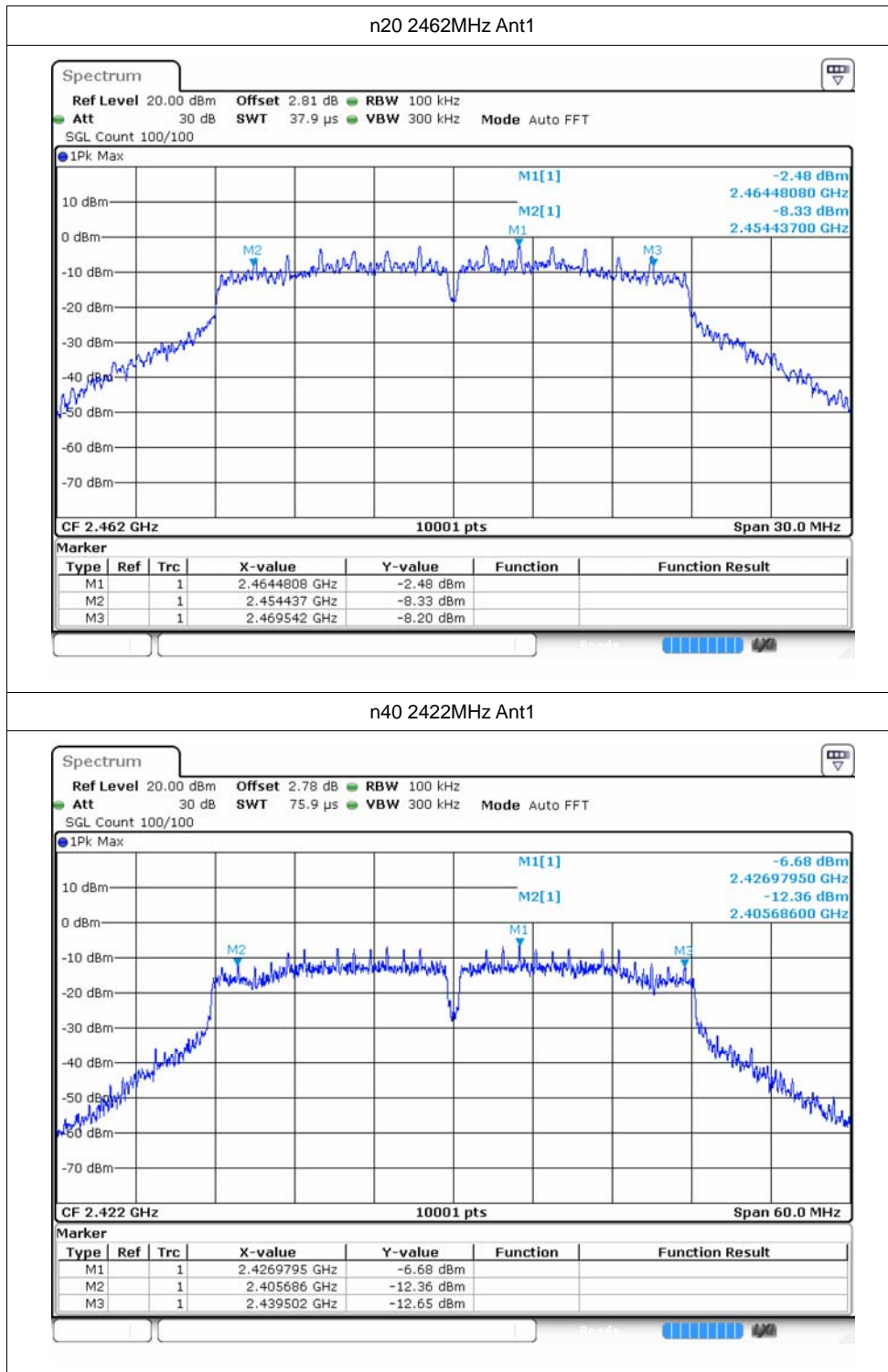
3.2 Test Graphs

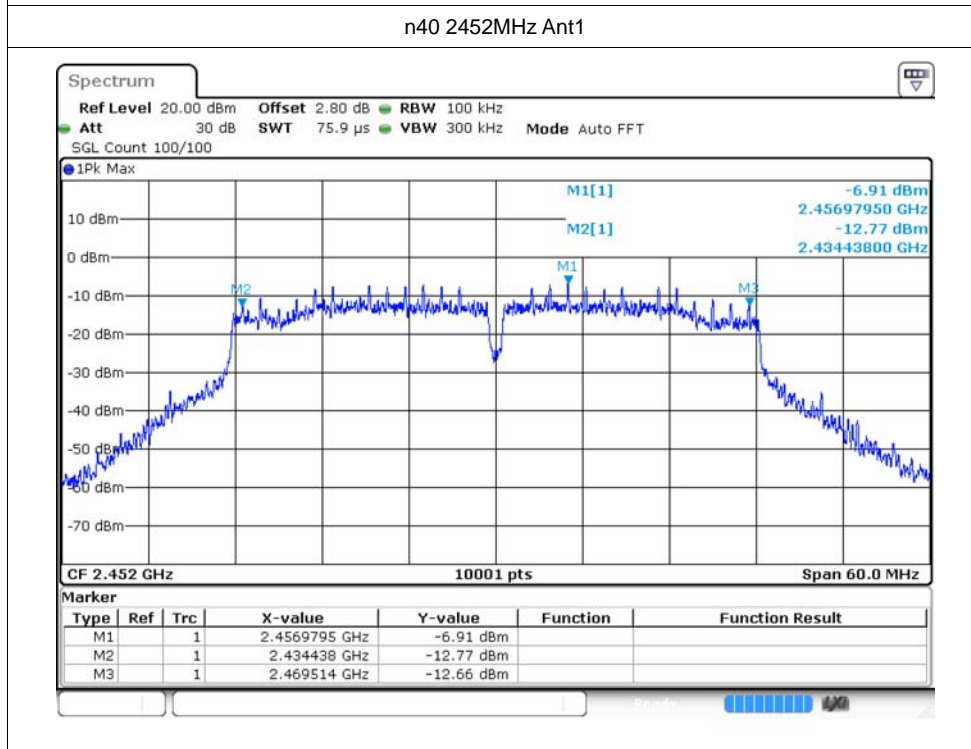
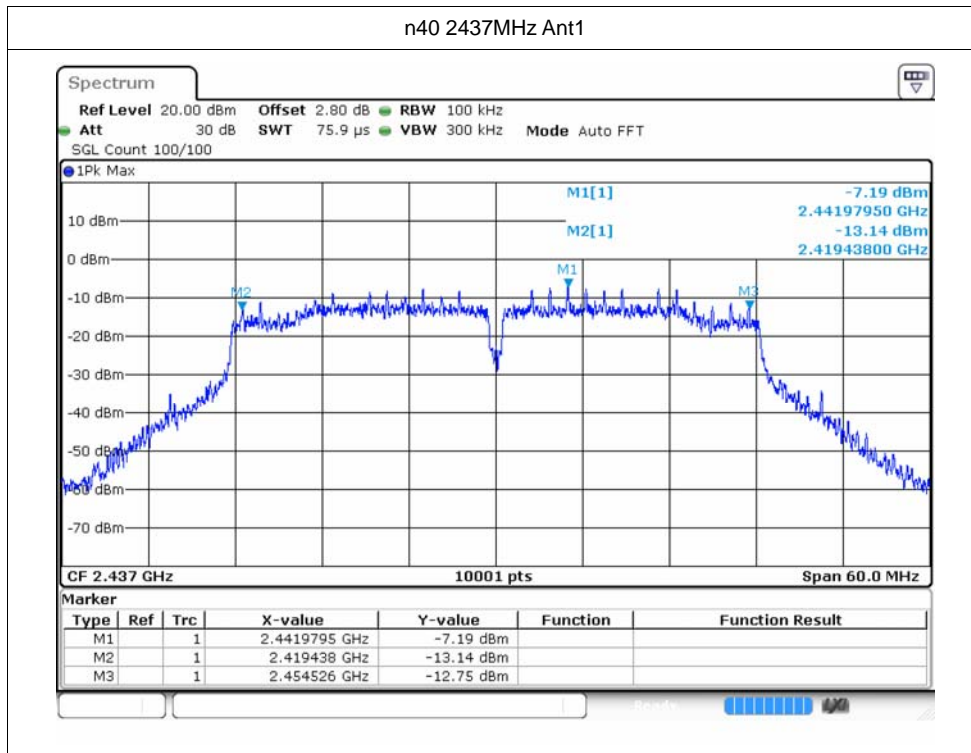










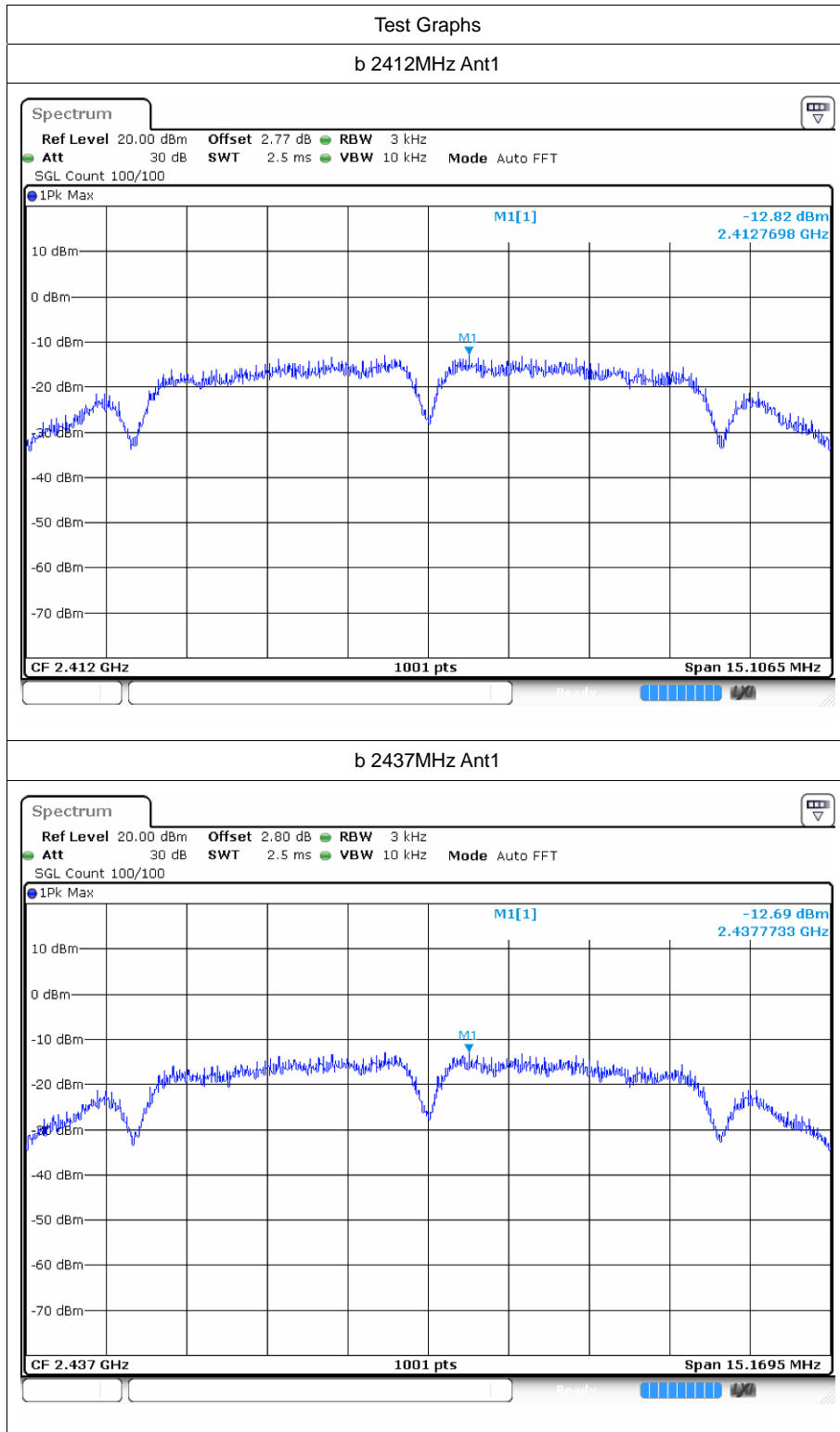


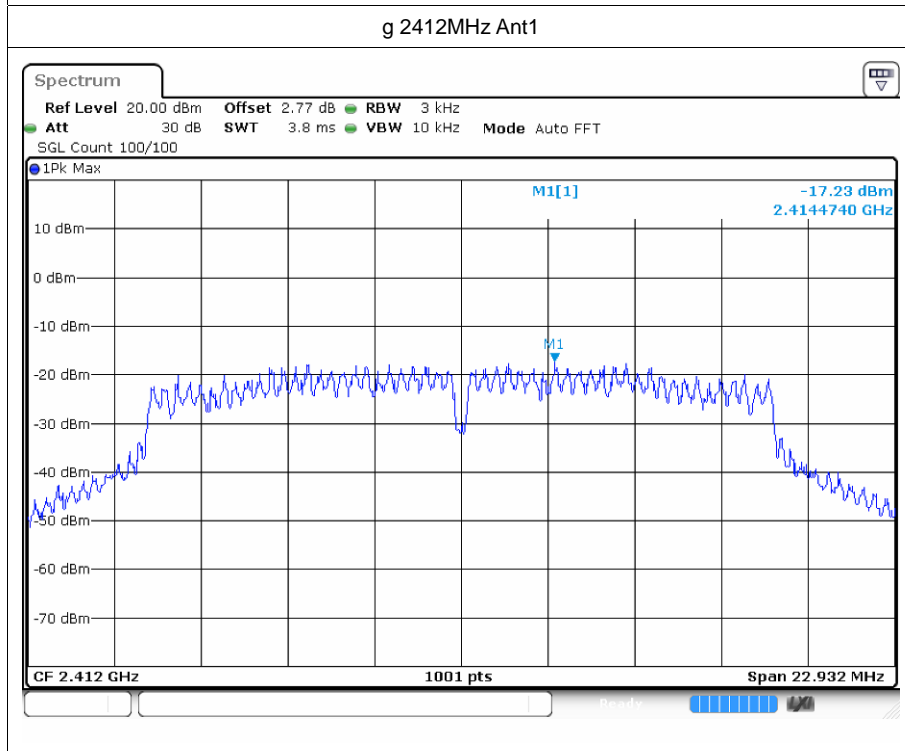
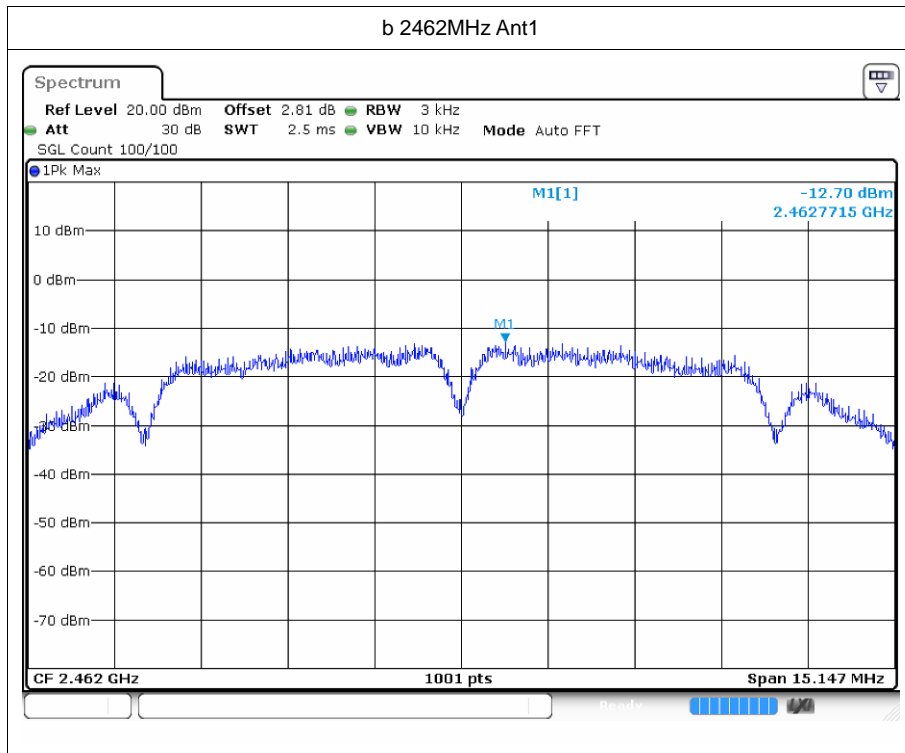
4 Maximum Power Spectral Density Level

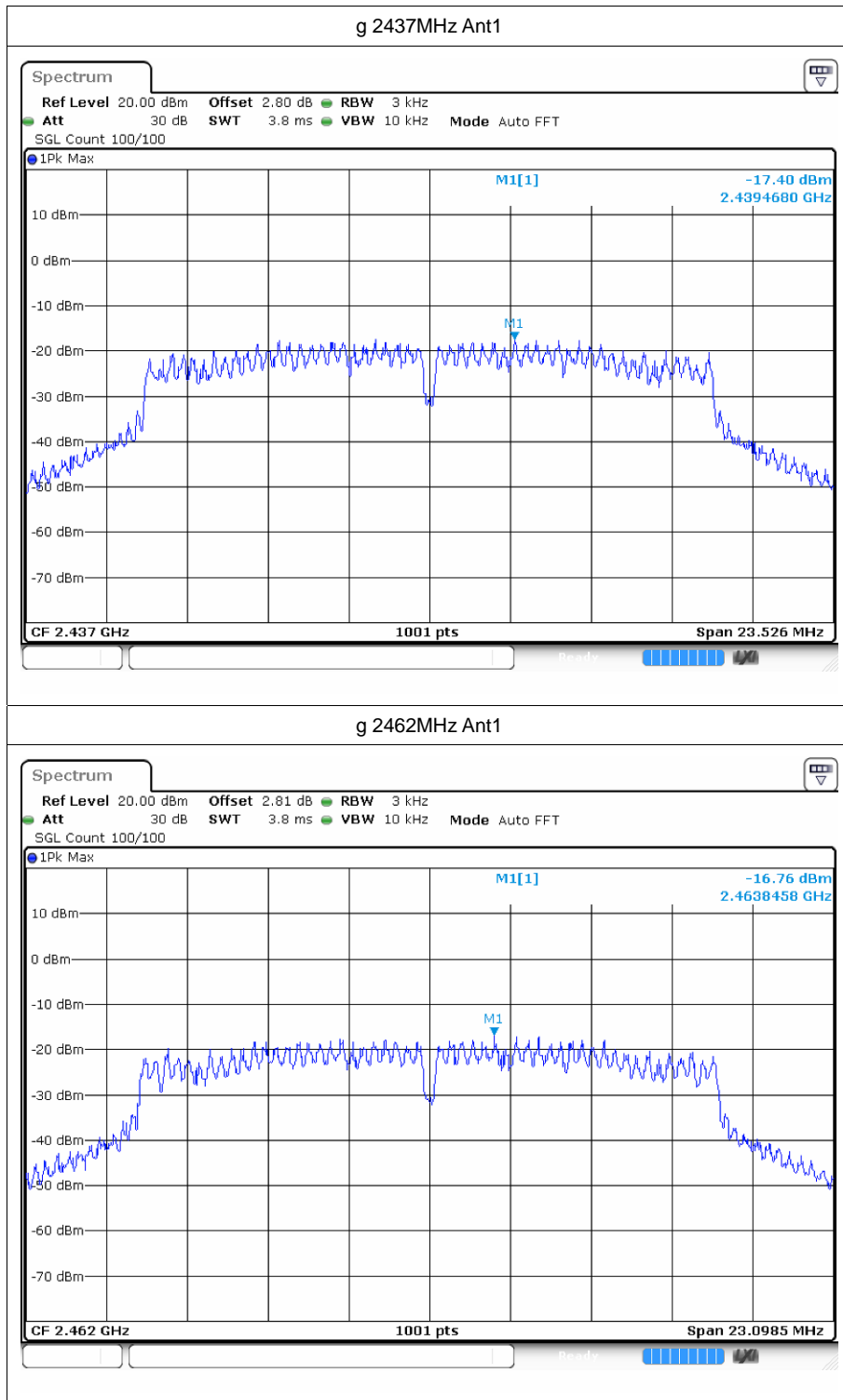
4.1 Test Result

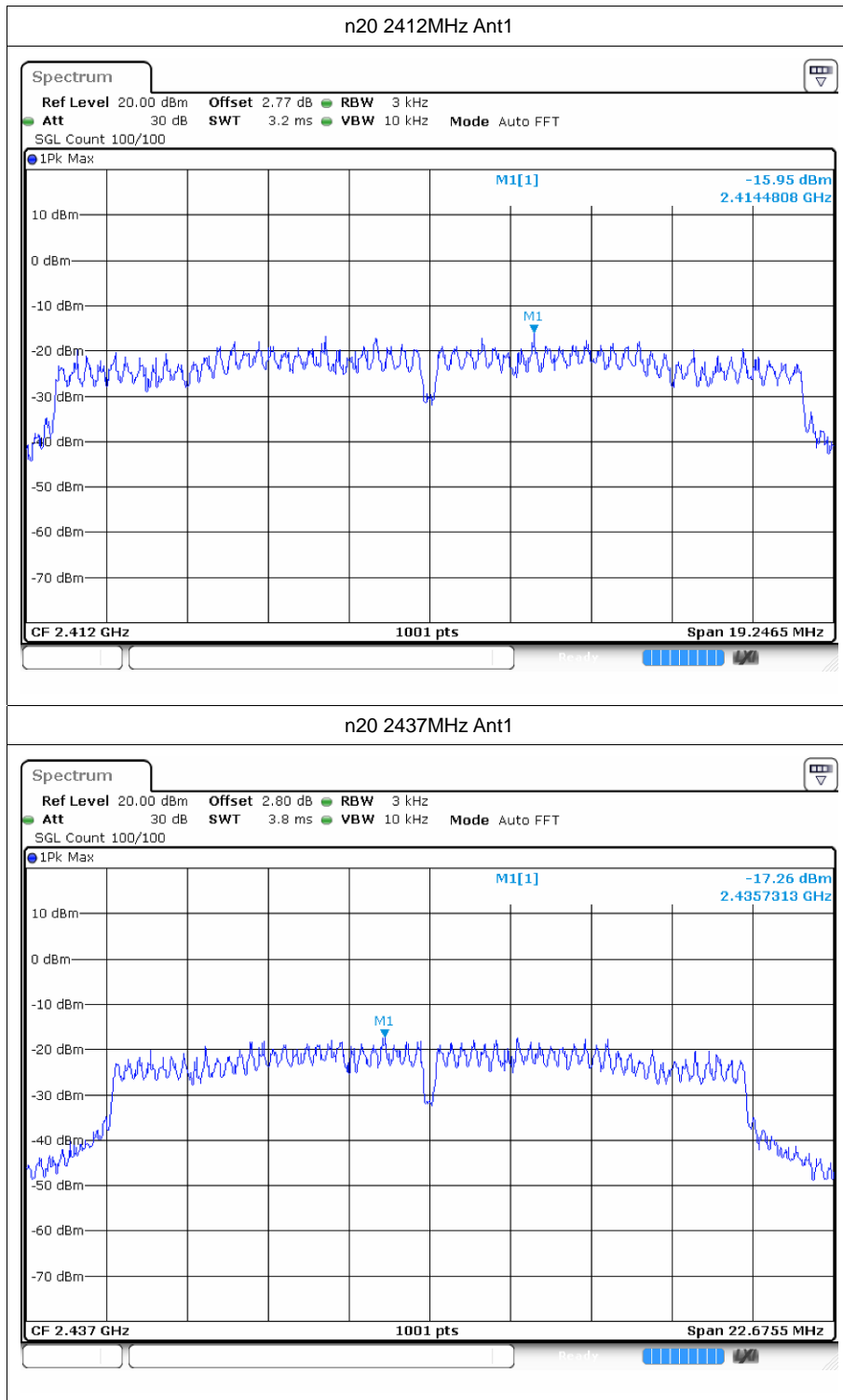
Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3-100kHz)	Limit (dBm/3kHz)	Verdict
b	2412	Ant1	-12.82	≤8	Pass
b	2437	Ant1	-12.69	≤8	Pass
b	2462	Ant1	-12.7	≤8	Pass
g	2412	Ant1	-17.23	≤8	Pass
g	2437	Ant1	-17.4	≤8	Pass
g	2462	Ant1	-16.76	≤8	Pass
n20	2412	Ant1	-15.95	≤8	Pass
n20	2437	Ant1	-17.26	≤8	Pass
n20	2462	Ant1	-16.71	≤8	Pass
n40	2422	Ant1	-21.24	≤8	Pass
n40	2437	Ant1	-20.39	≤8	Pass
n40	2452	Ant1	-21.73	≤8	Pass

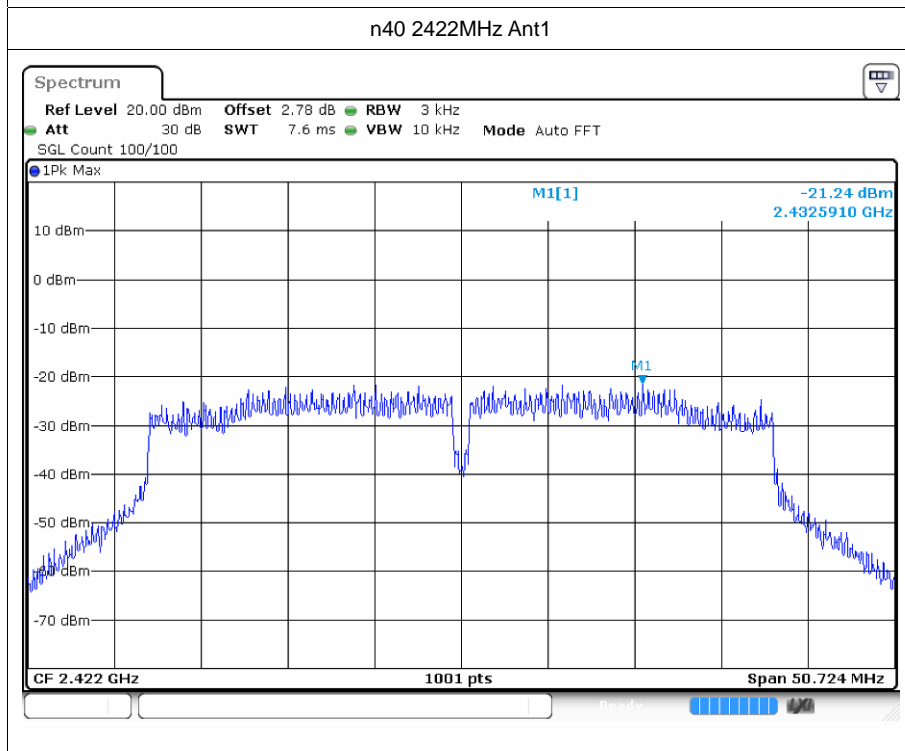
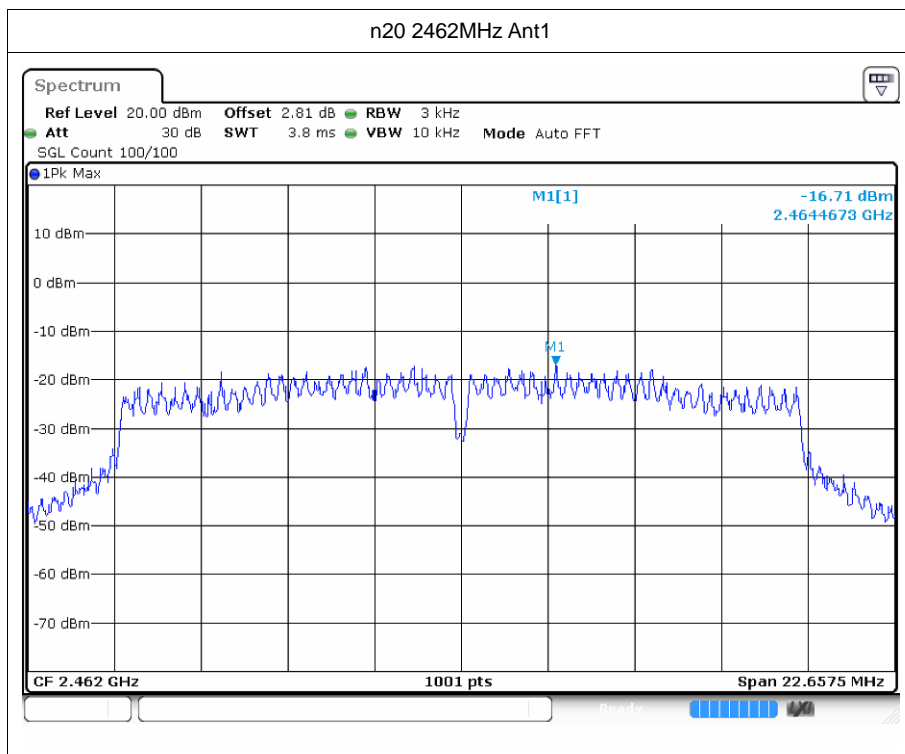
4.2 Test Graphs

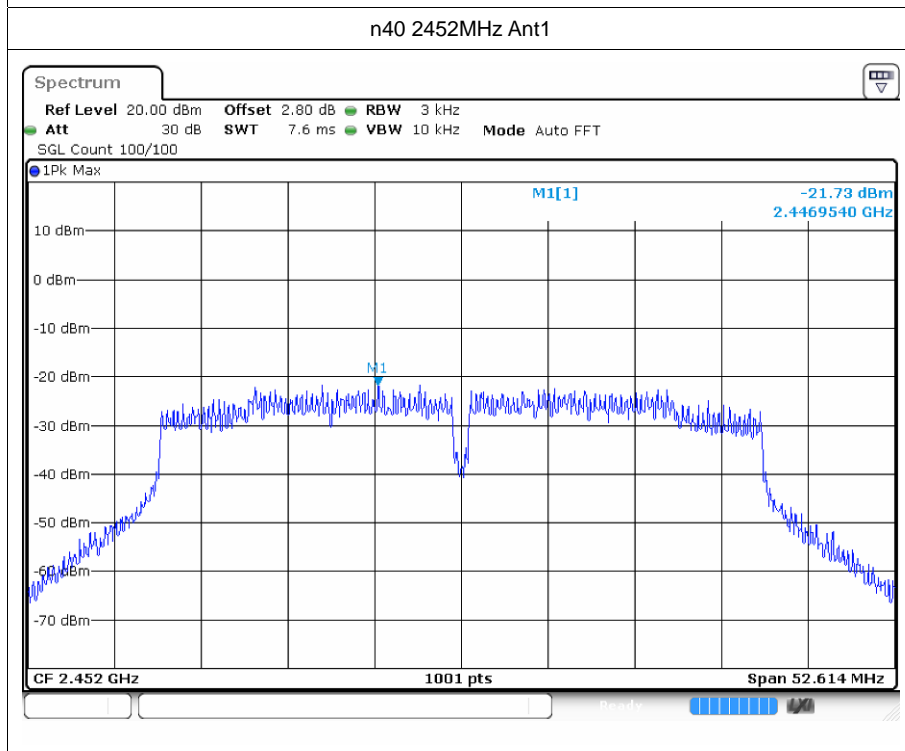
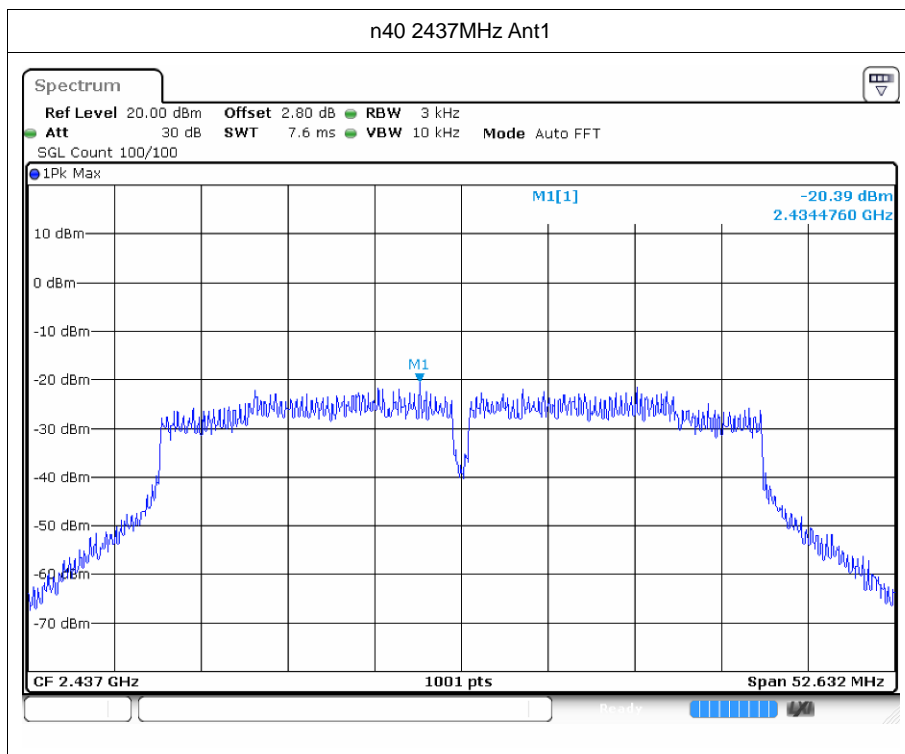












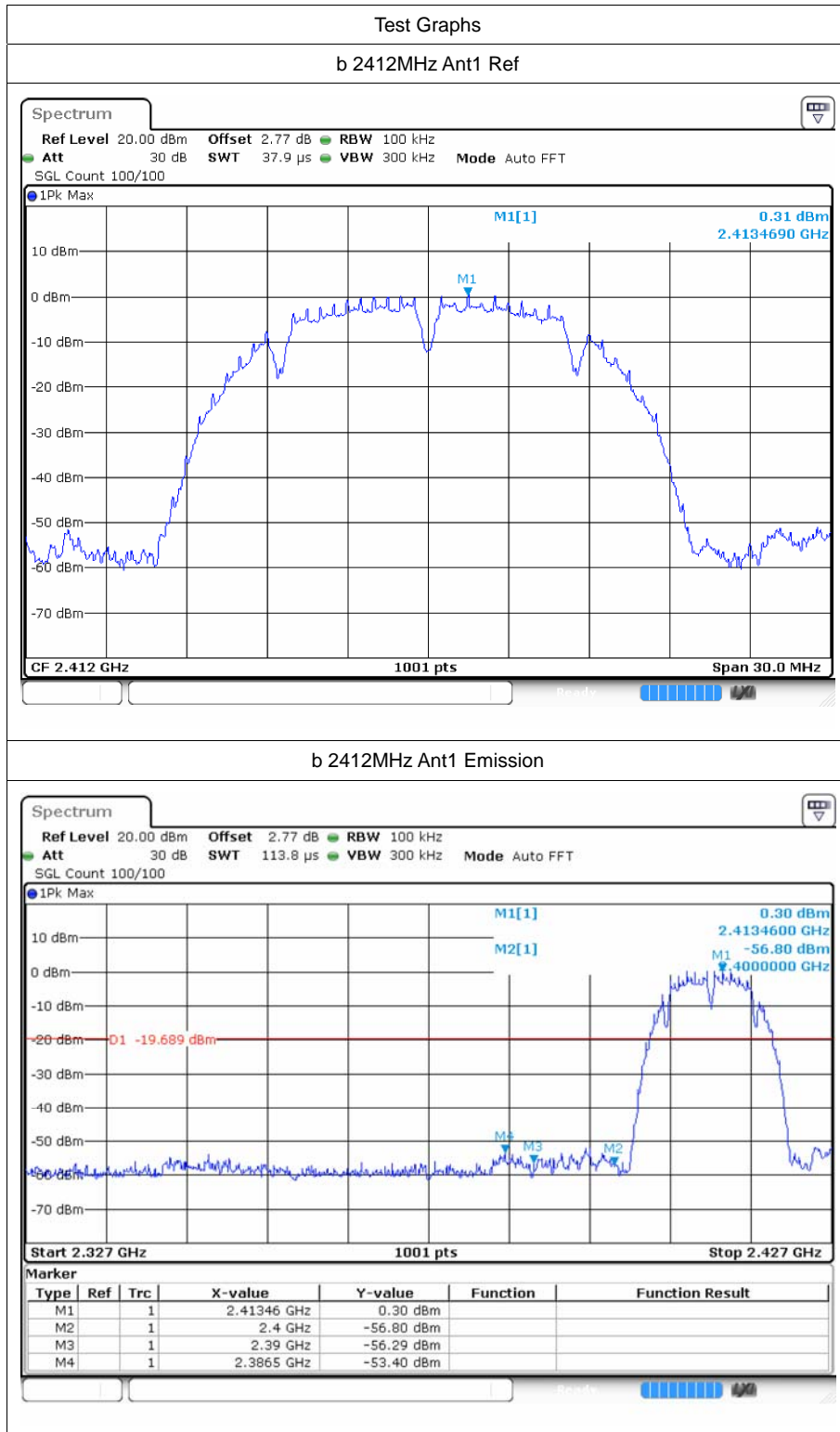


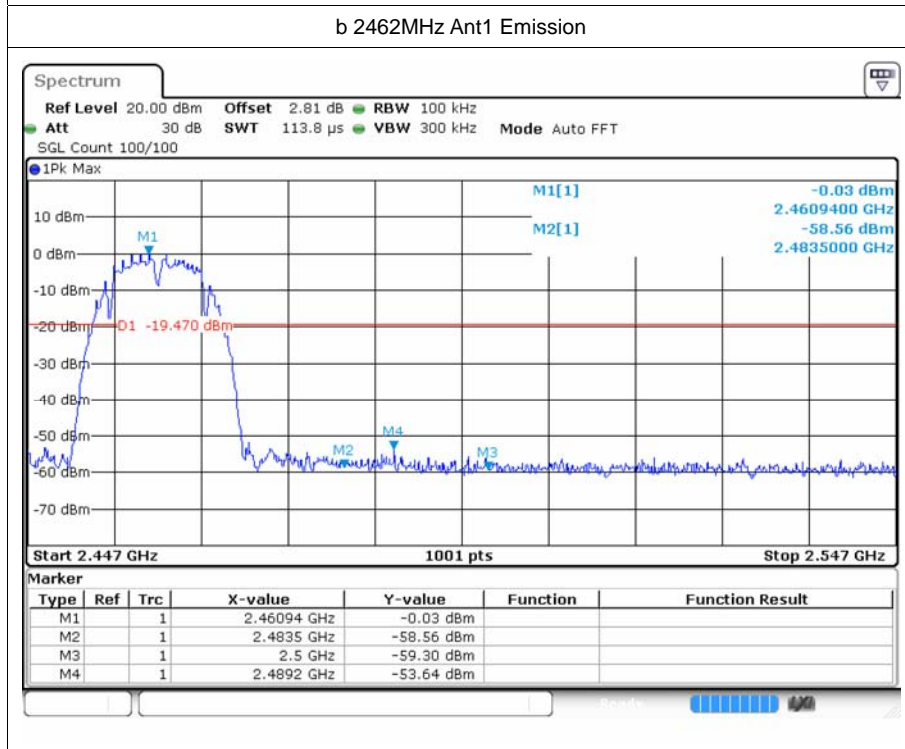
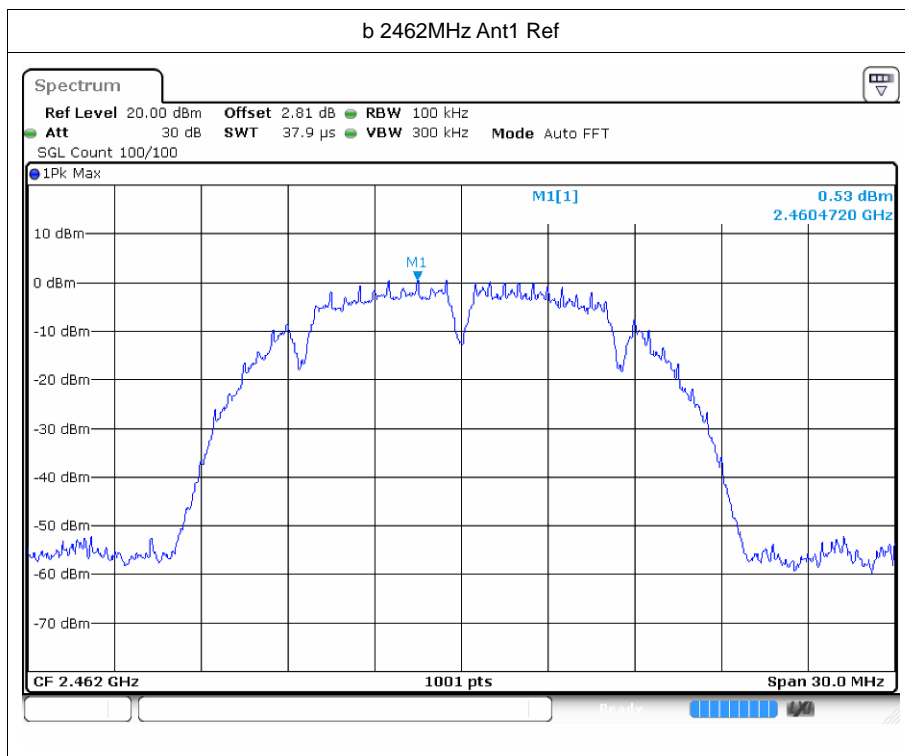
5 Band Edge

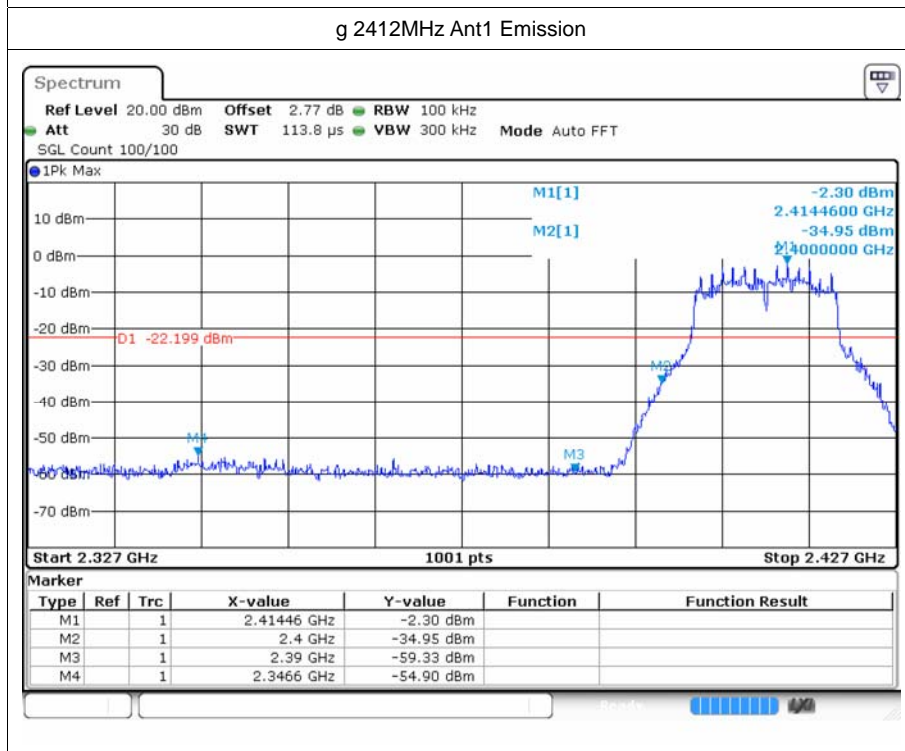
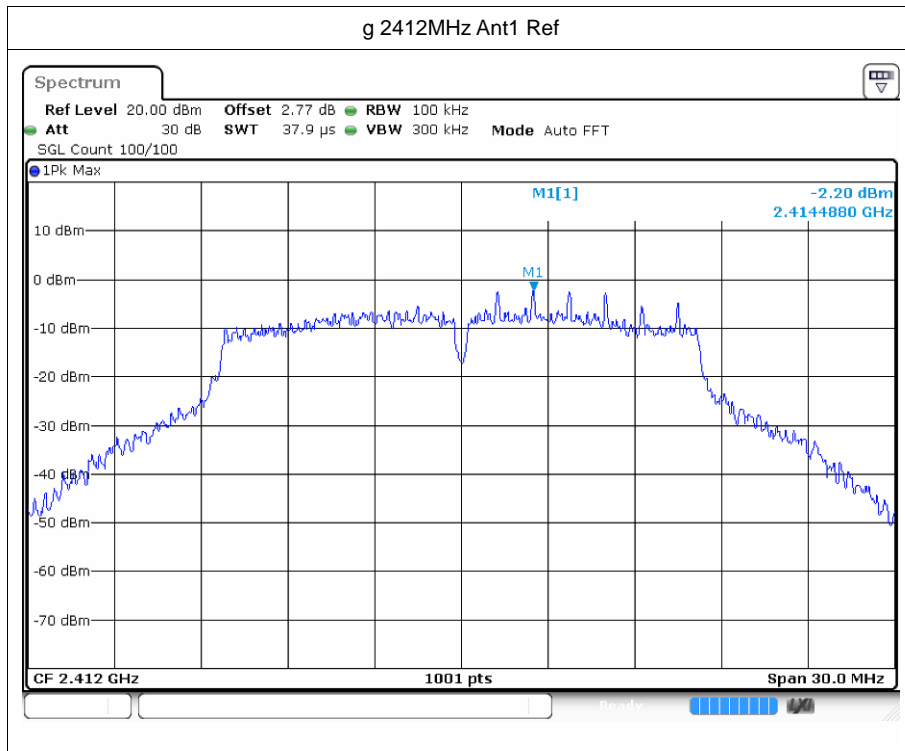
5.1 Test Result

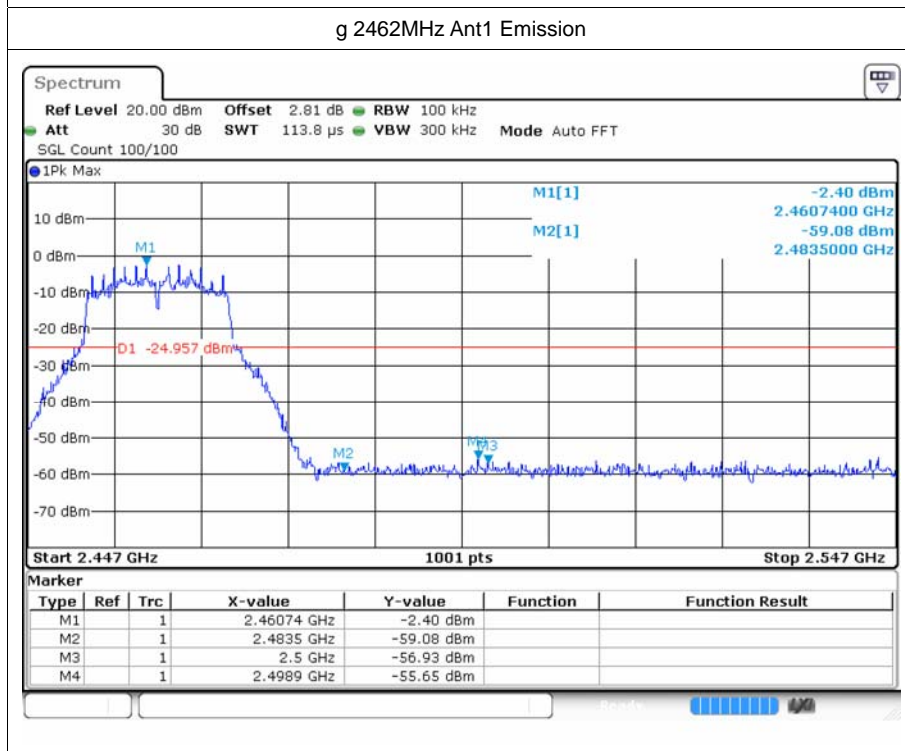
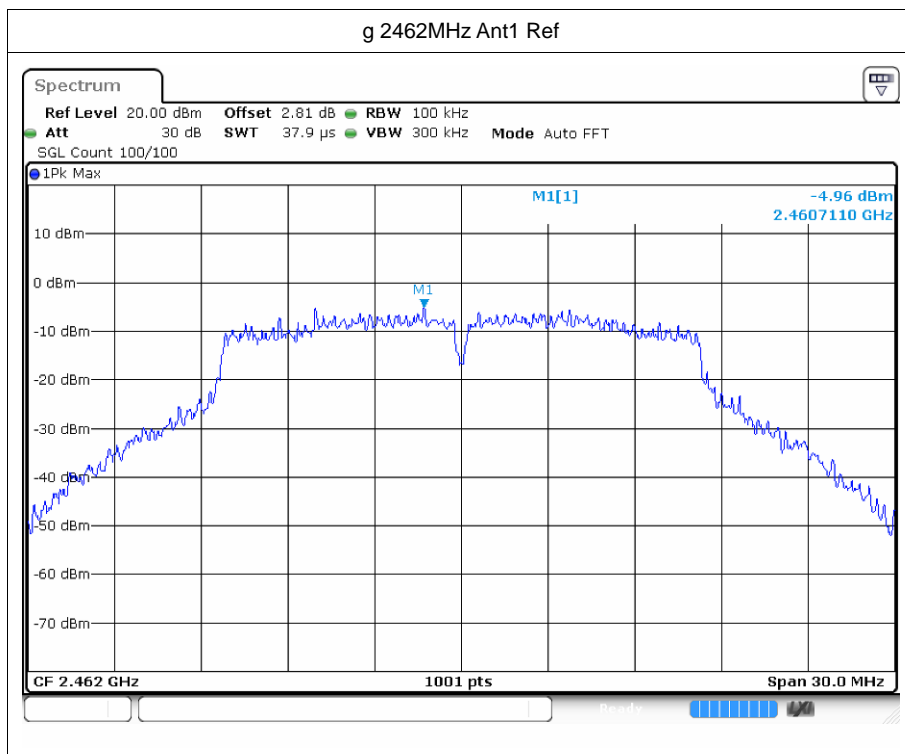
Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
b	2412	Ant1	-53.7	-20	-53.7
b	2462	Ant1	-54.17	-20	Pass
g	2412	Ant1	-52.69	-20	Pass
g	2462	Ant1	-50.68	-20	Pass
n20	2412	Ant1	-52.25	-20	Pass
n20	2462	Ant1	-53.99	-20	Pass
n40	2422	Ant1	-49.61	-20	Pass
n40	2452	Ant1	-46.04	-20	Pass

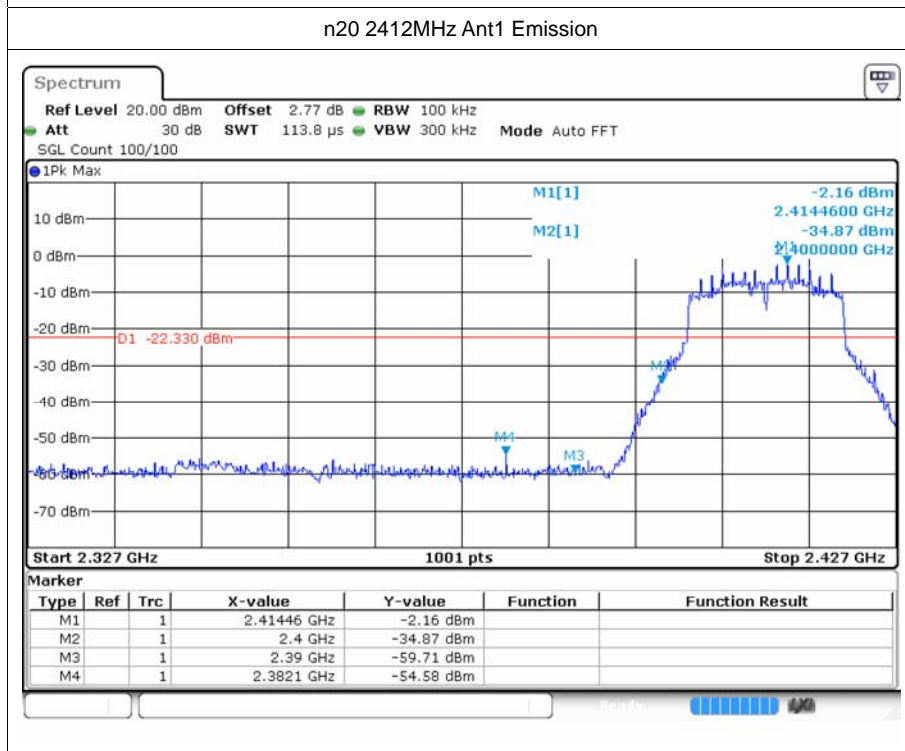
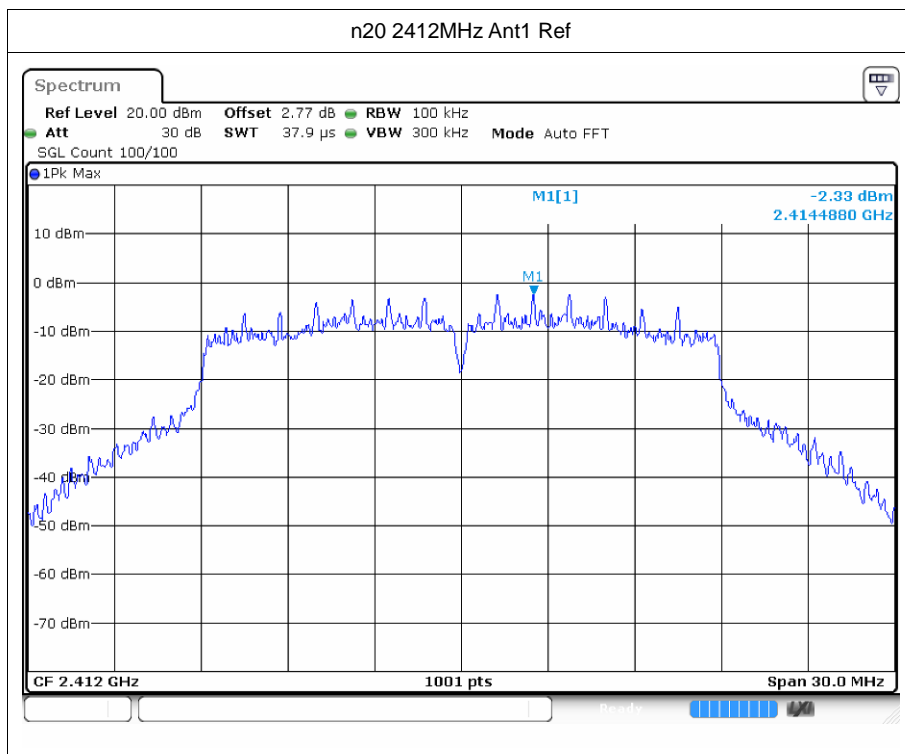
5.2 Test Graphs

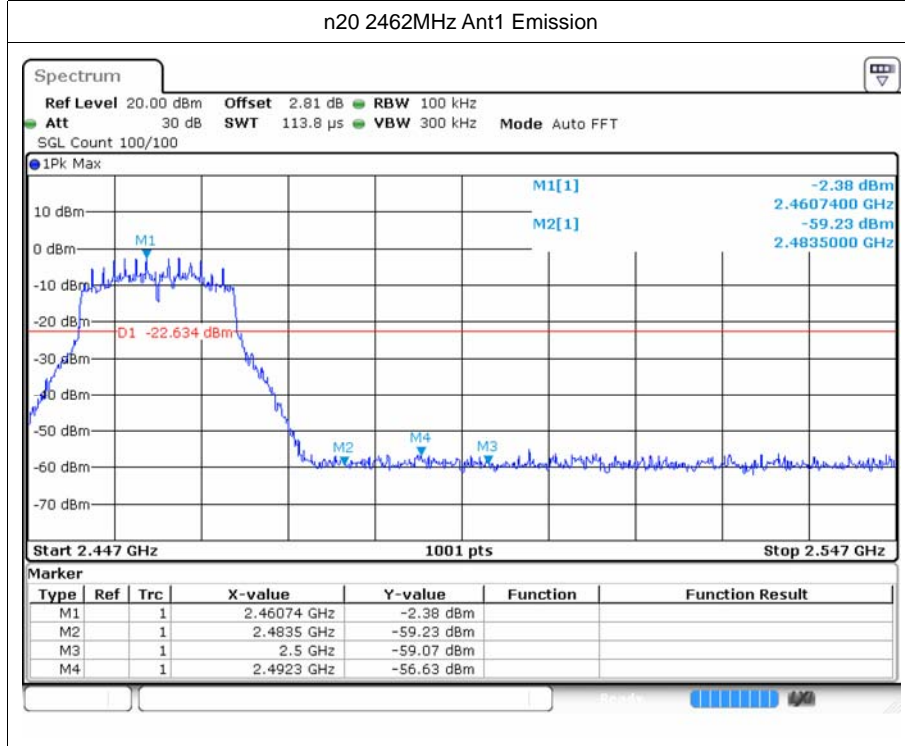
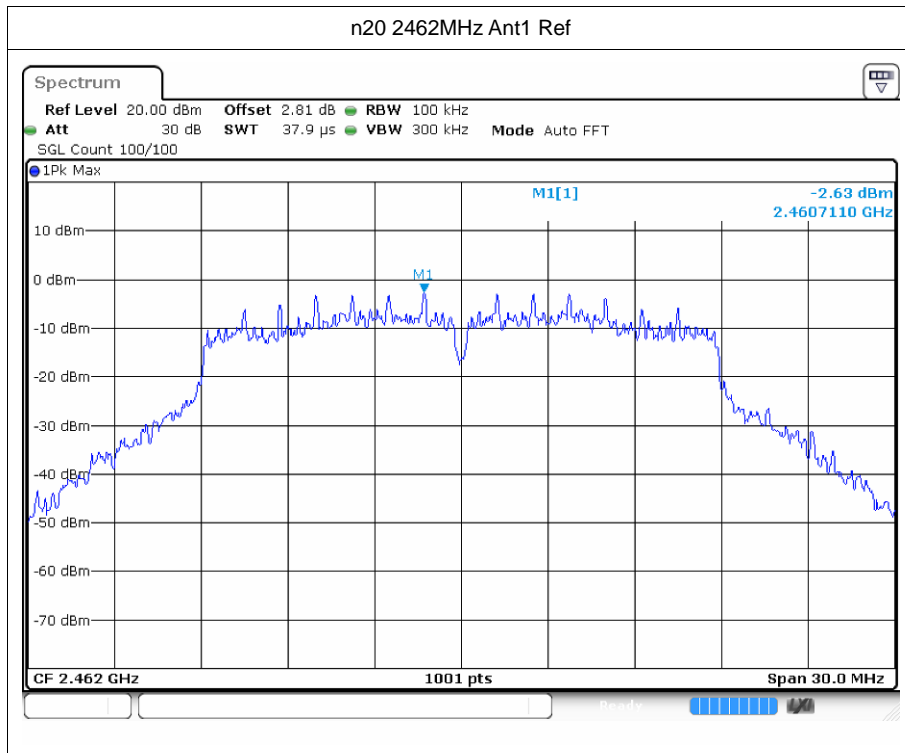


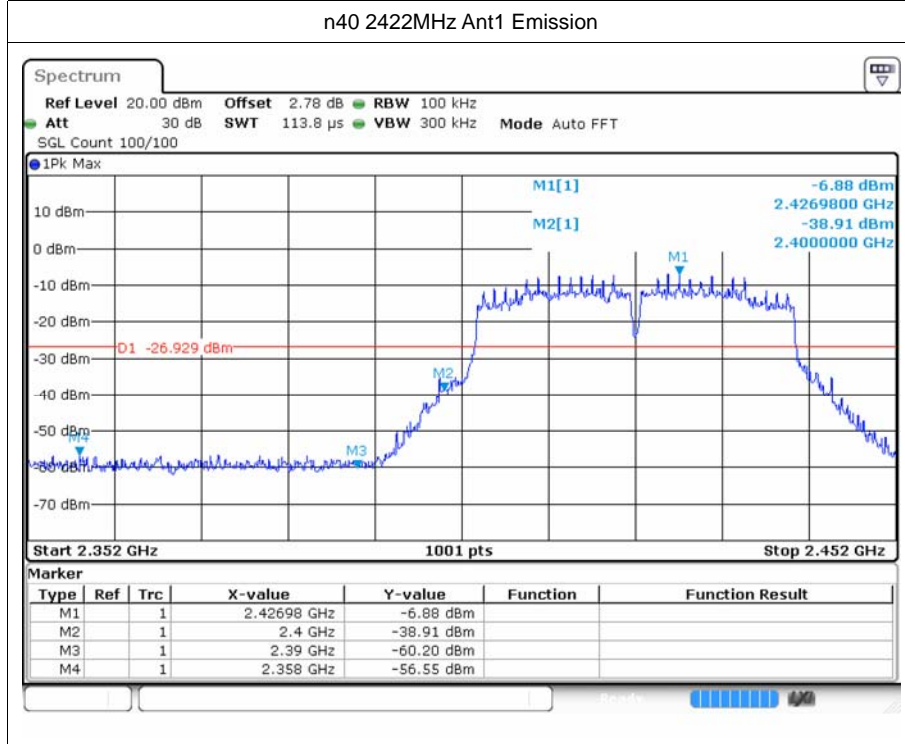
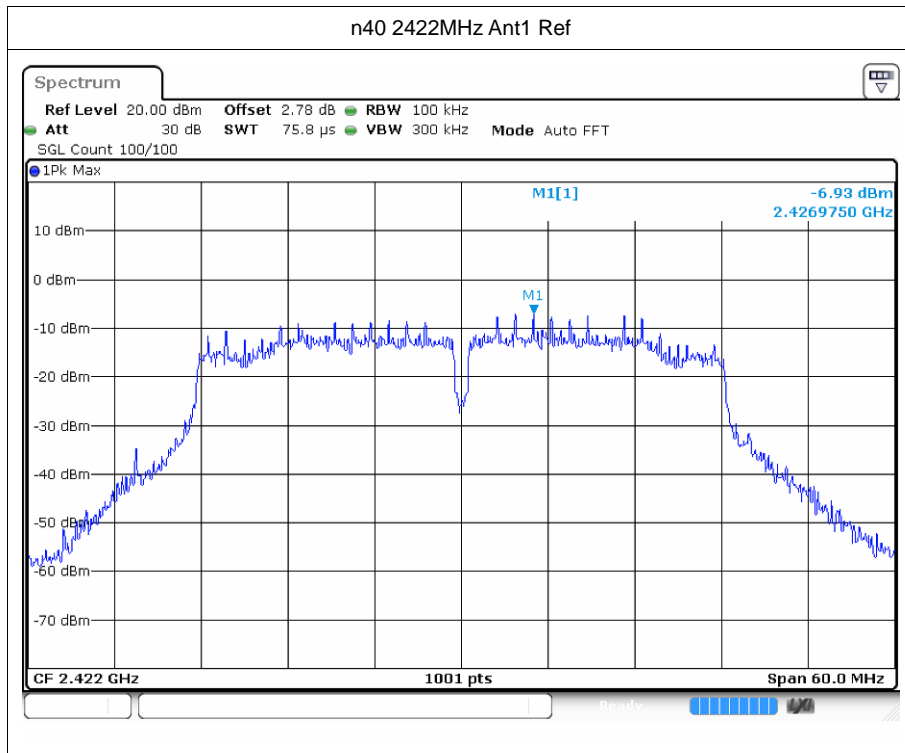


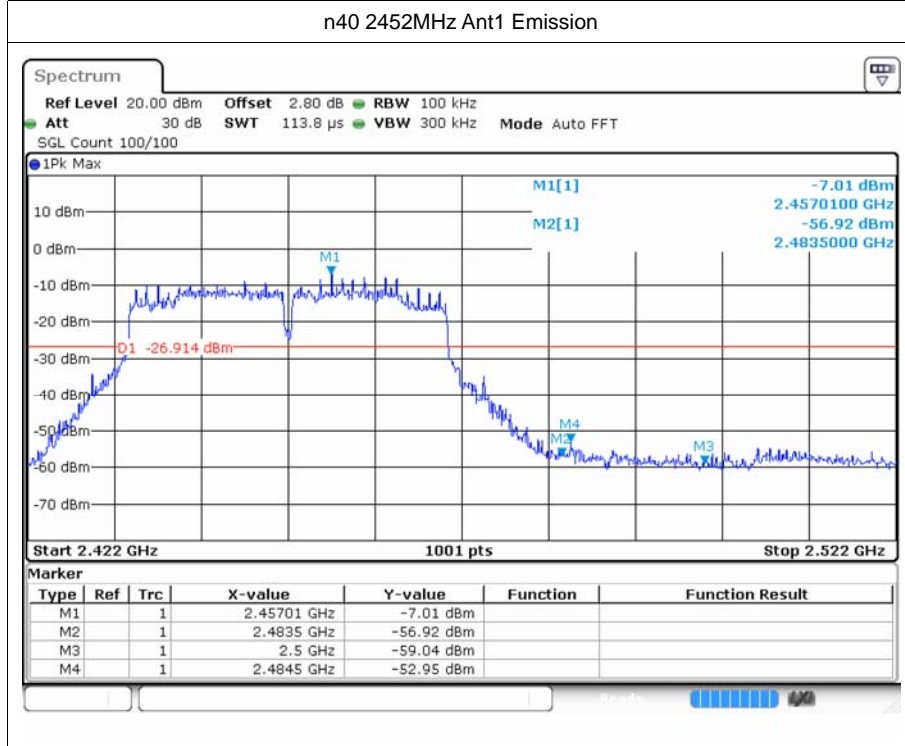
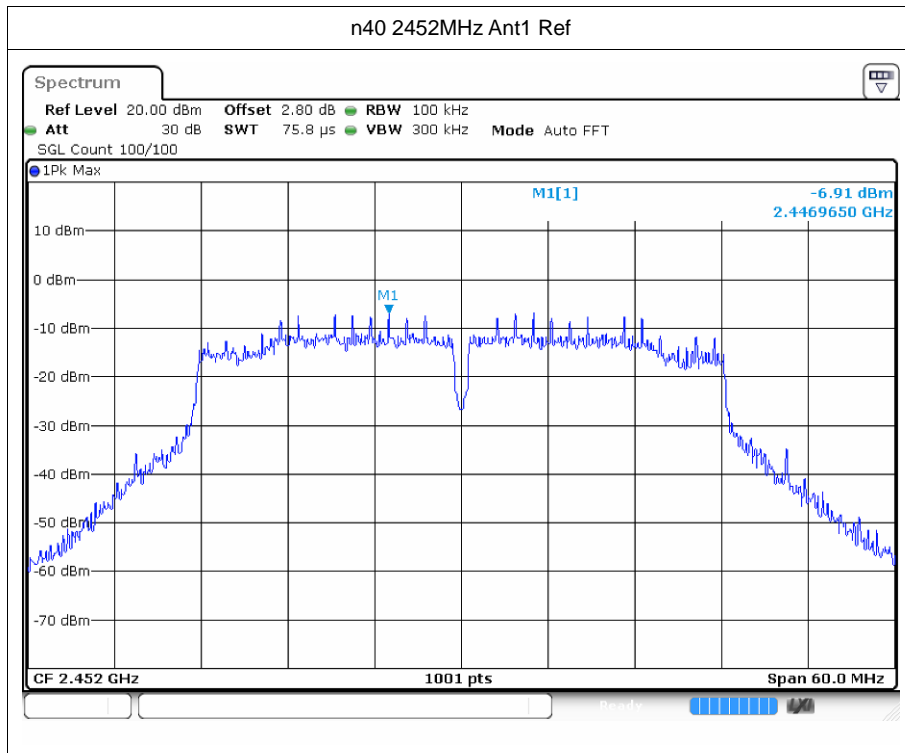










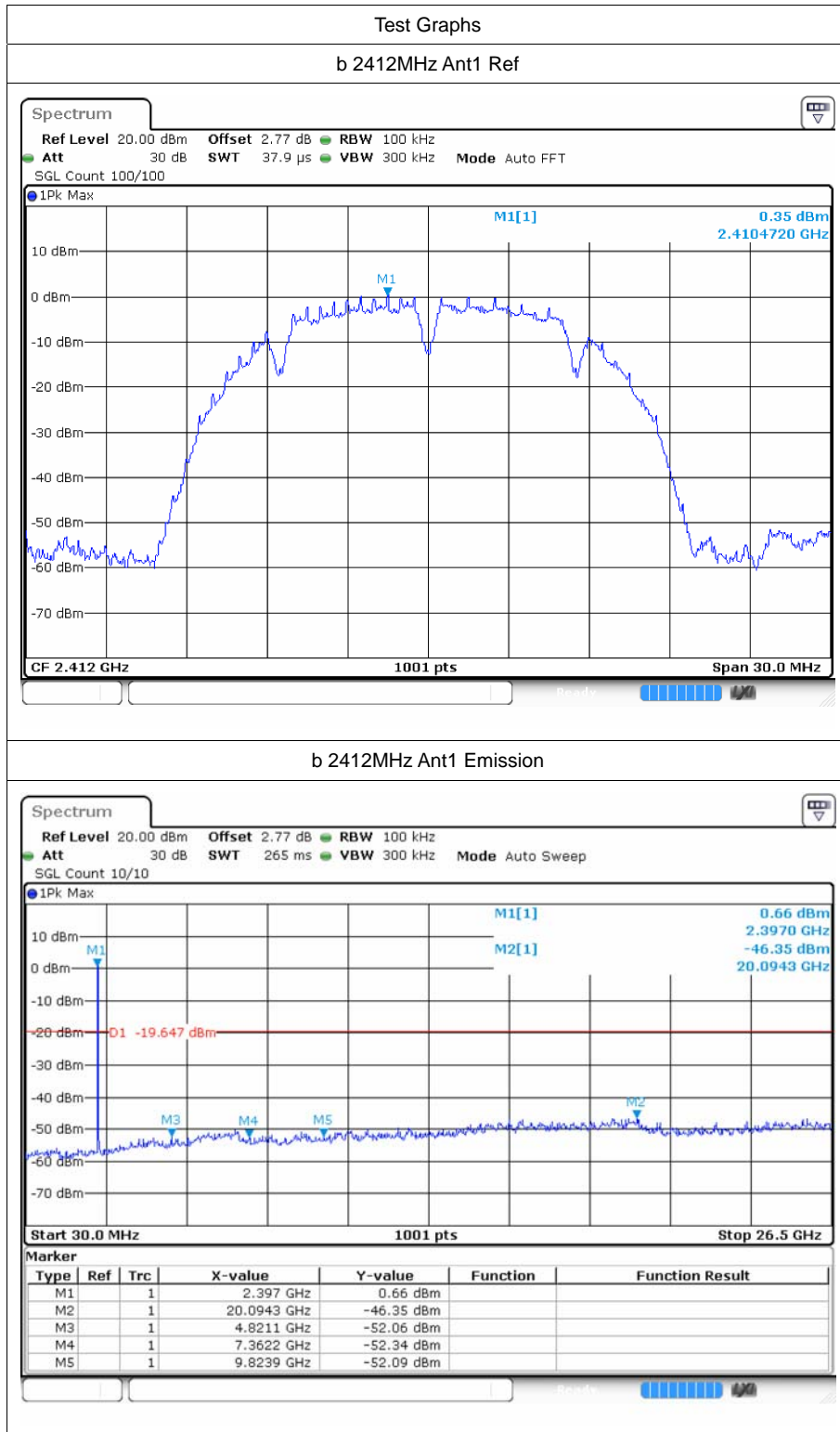


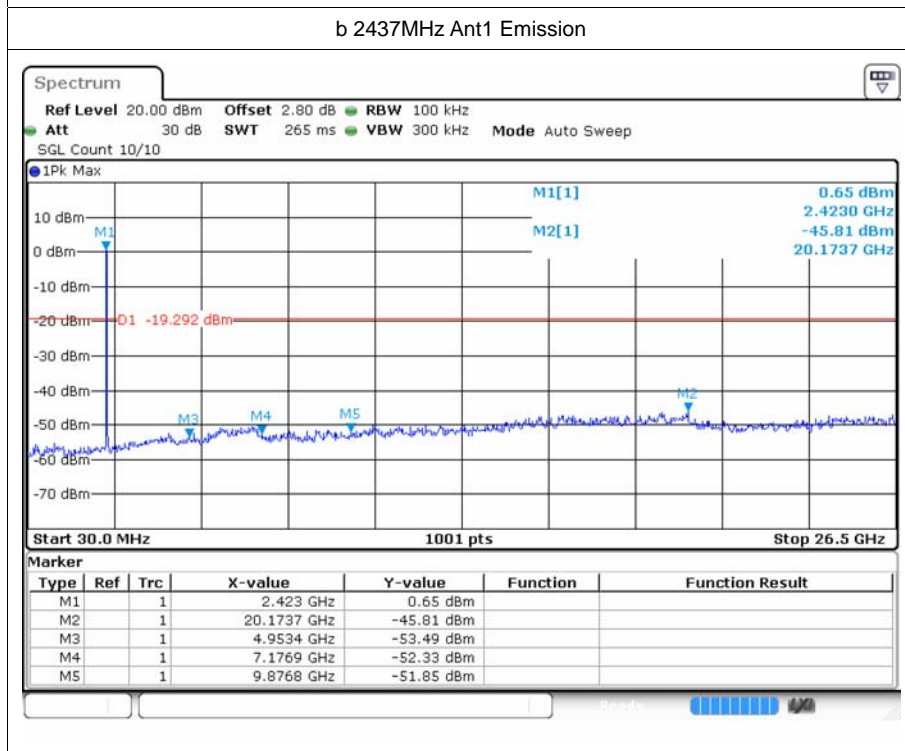
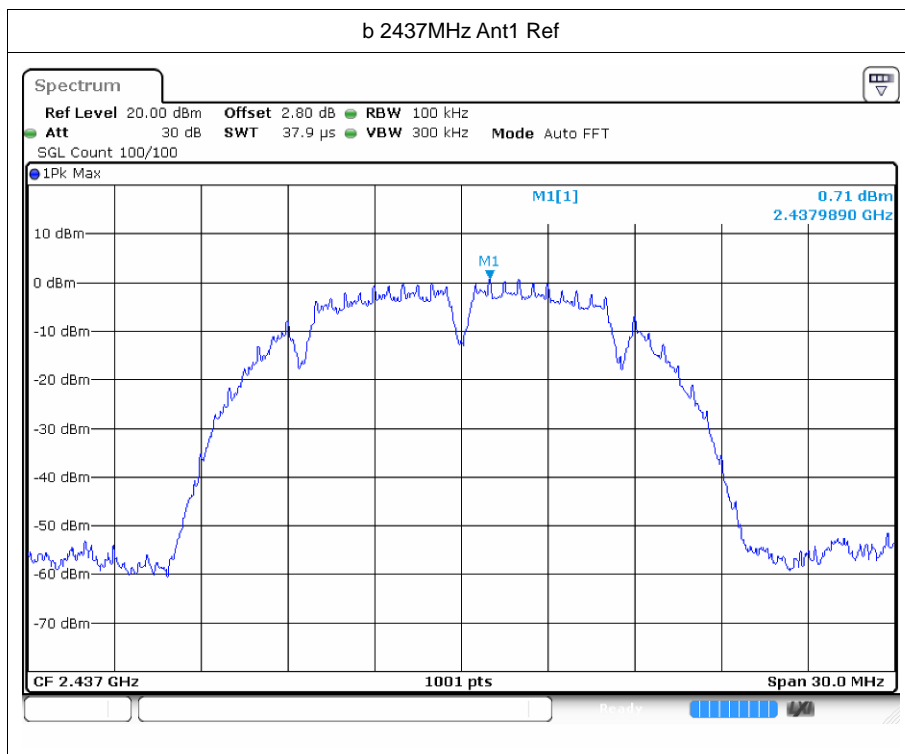
6 Conducted RF Spurious Emission

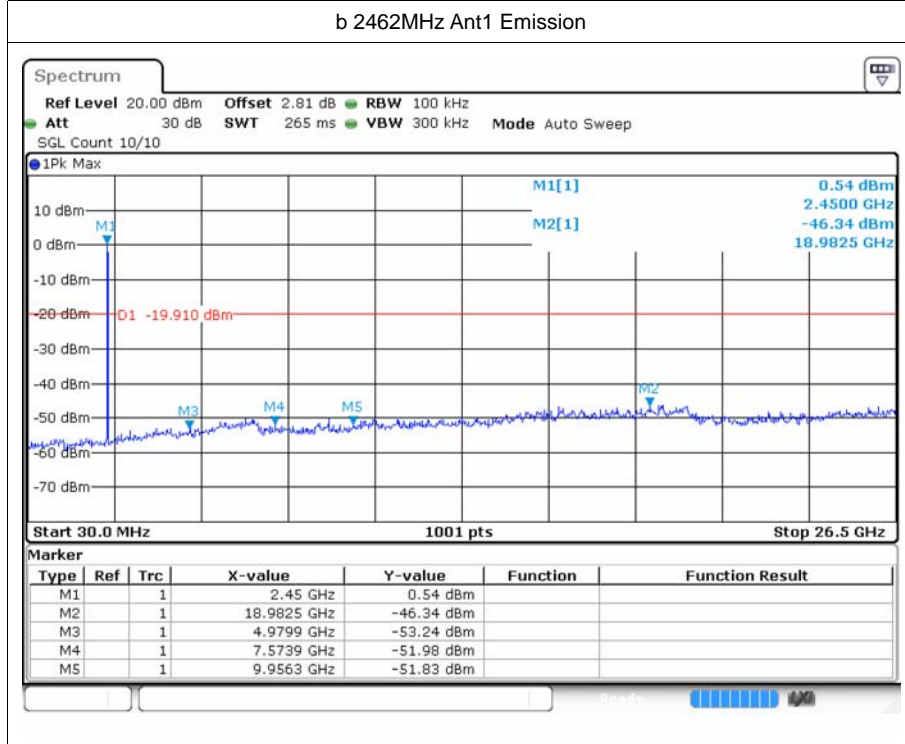
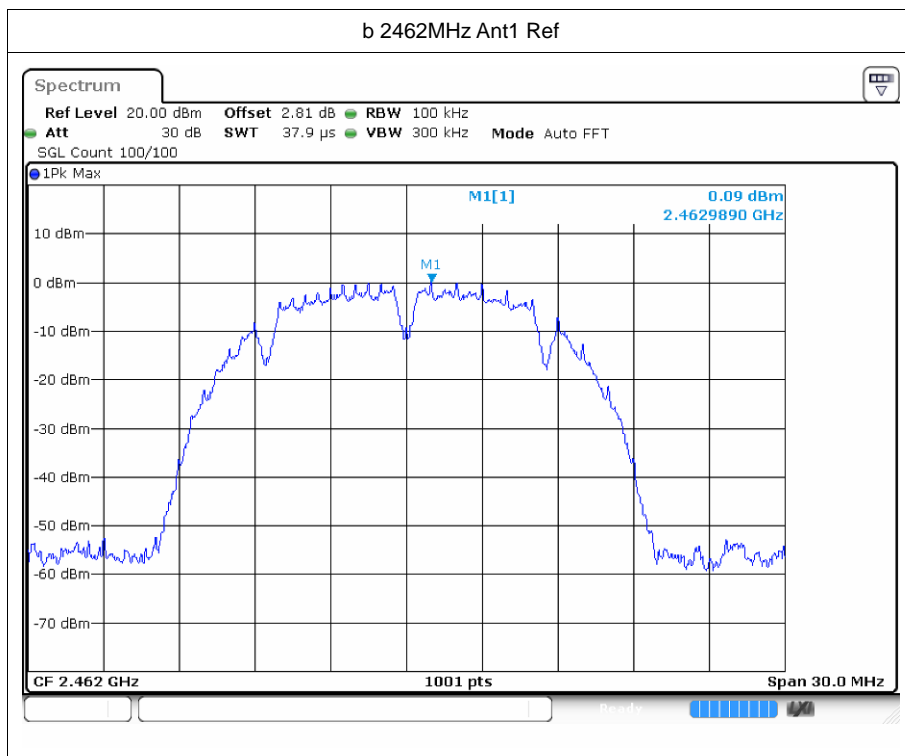
6.1 Test Result

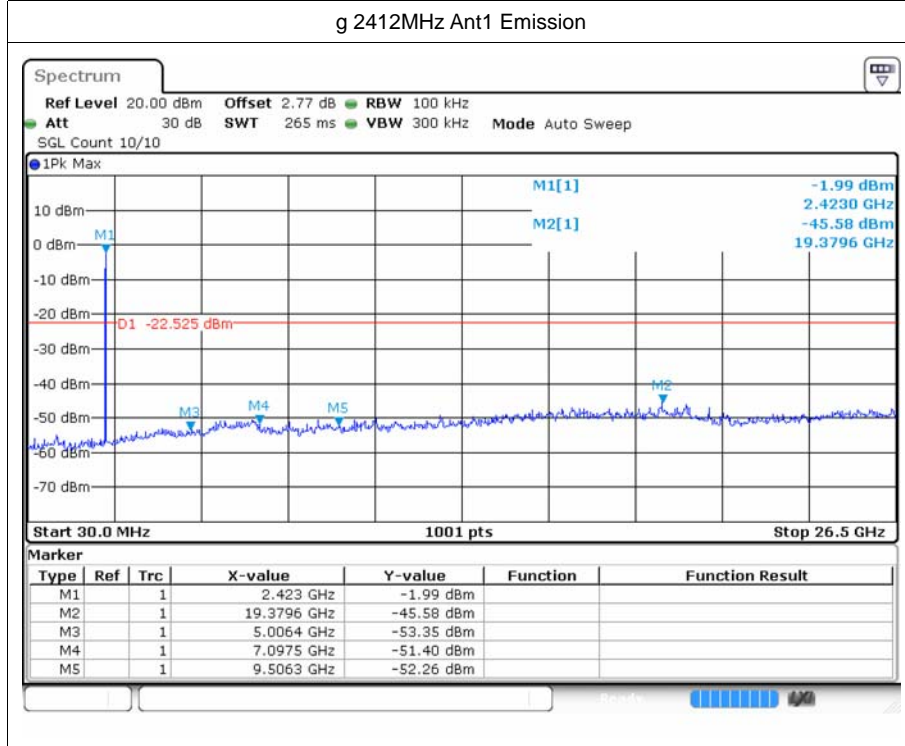
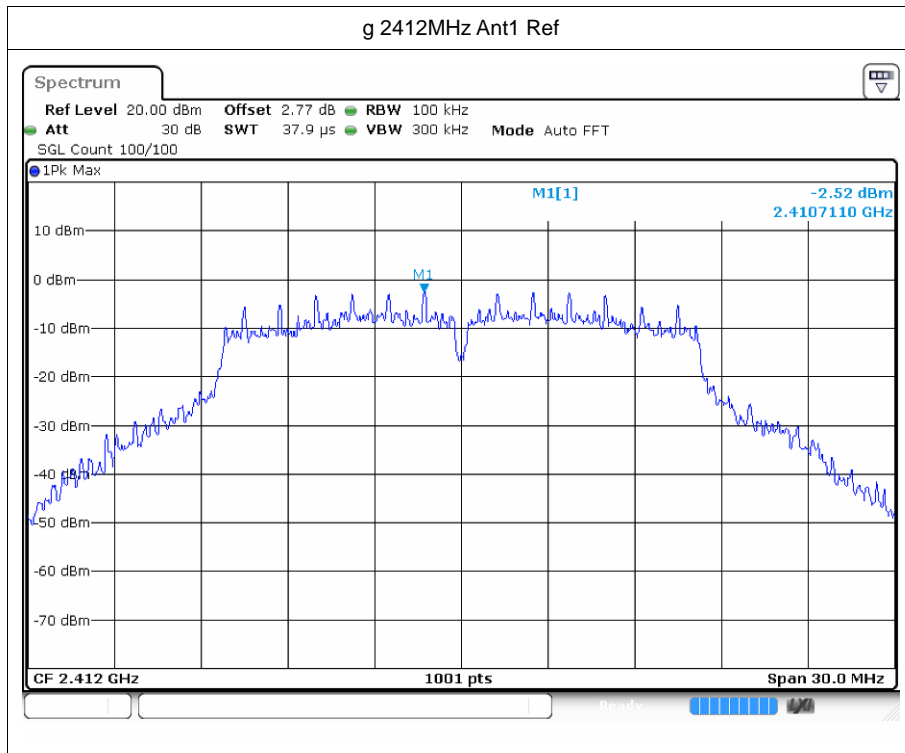
Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
b	2412	Ant1	-46.7	-20	Pass
b	2437	Ant1	-46.52	-20	Pass
b	2462	Ant1	-46.43	-20	Pass
g	2412	Ant1	-43.06	-20	Pass
g	2437	Ant1	-44.47	-20	Pass
g	2462	Ant1	-43.55	-20	Pass
n20	2412	Ant1	-43.21	-20	Pass
n20	2437	Ant1	-44.21	-20	Pass
n20	2462	Ant1	-43.88	-20	Pass
n40	2422	Ant1	-39.51	-20	Pass
n40	2437	Ant1	-39.12	-20	Pass
n40	2452	Ant1	-39.04	-20	Pass

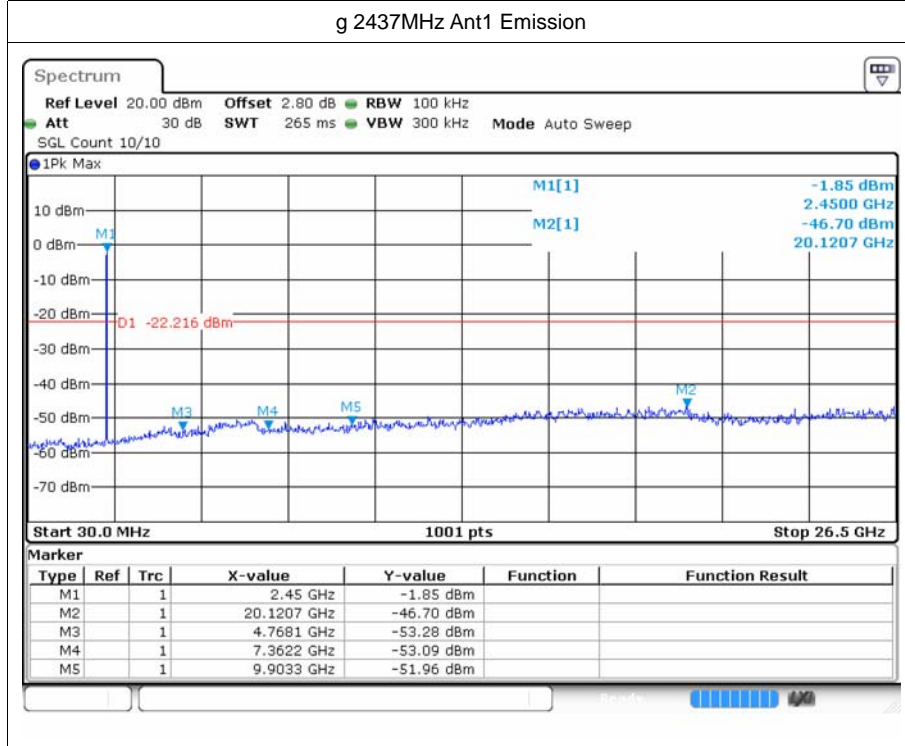
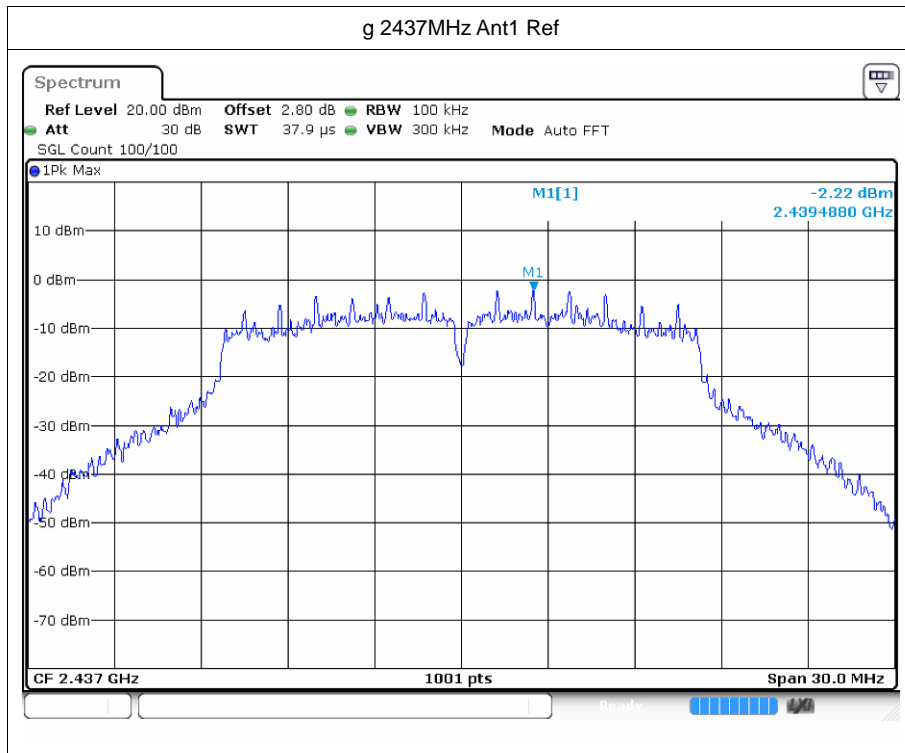
6.2 Test Graphs

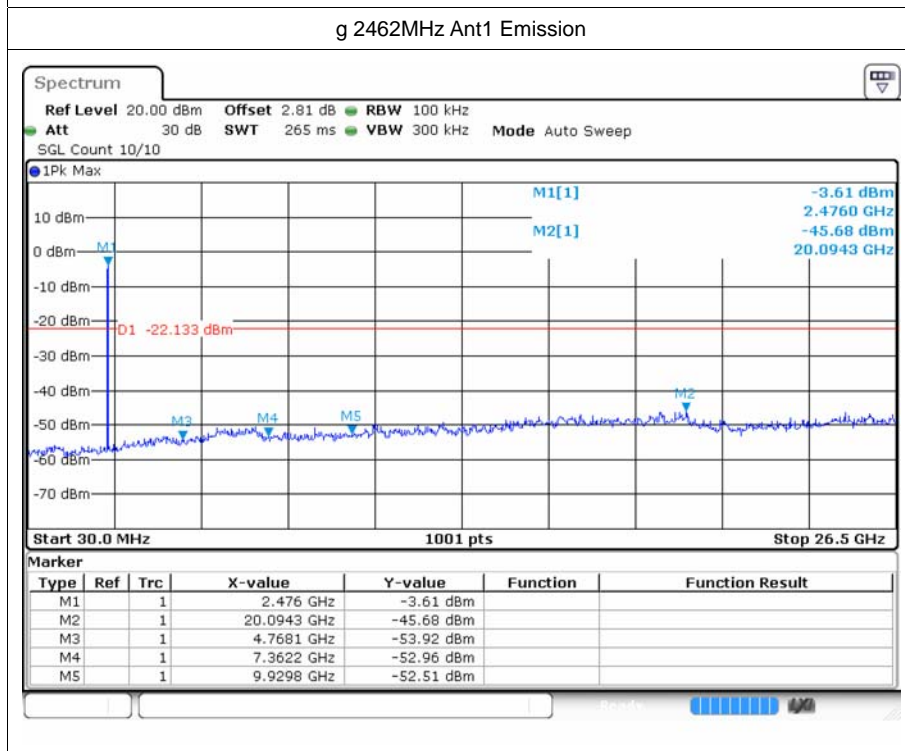
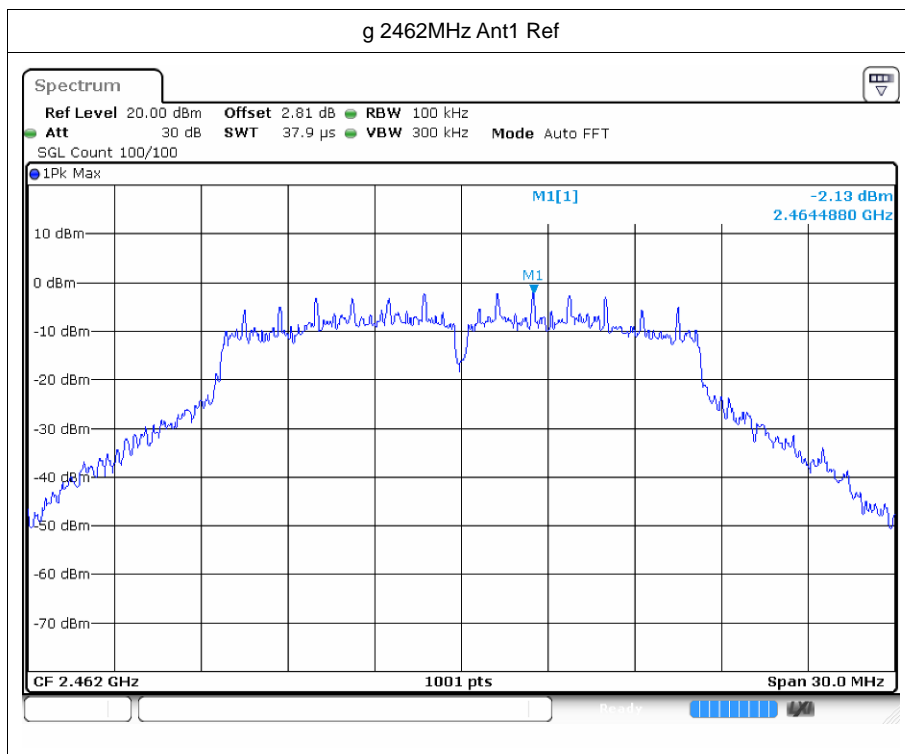


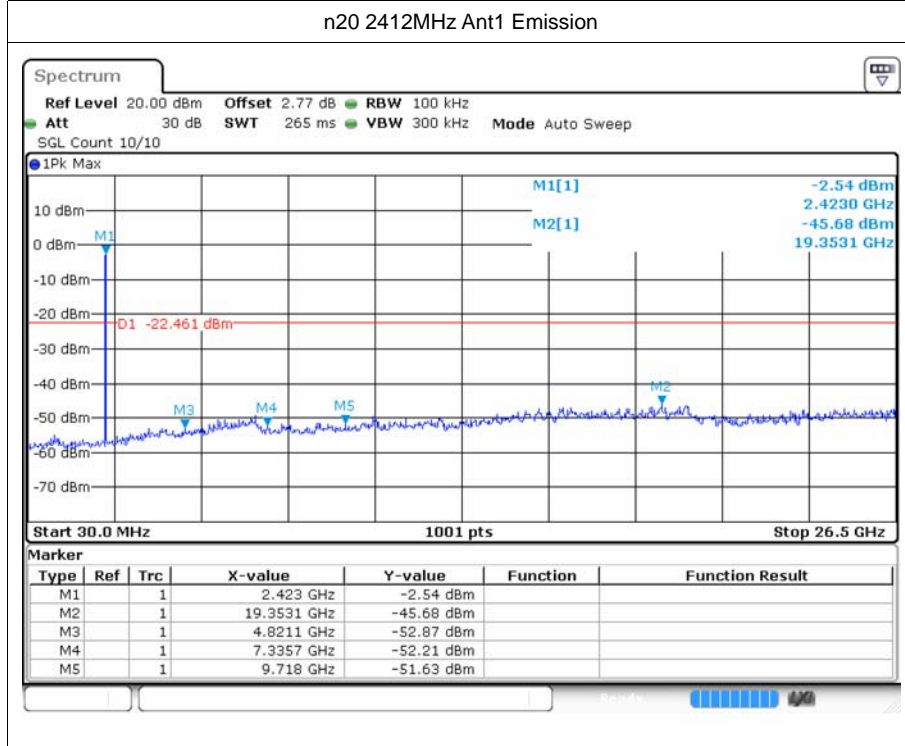
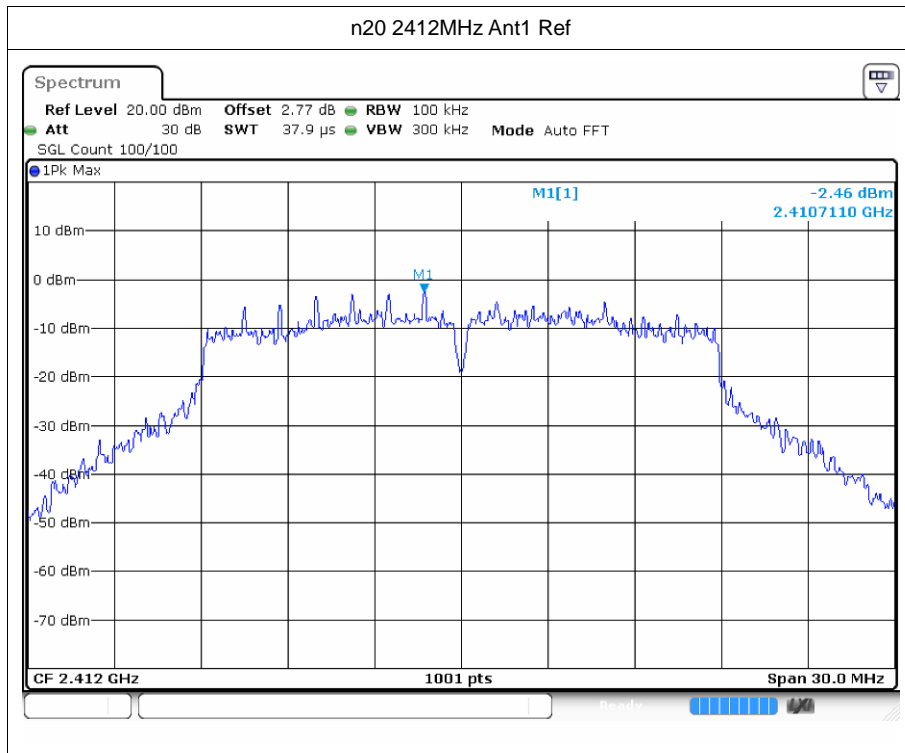


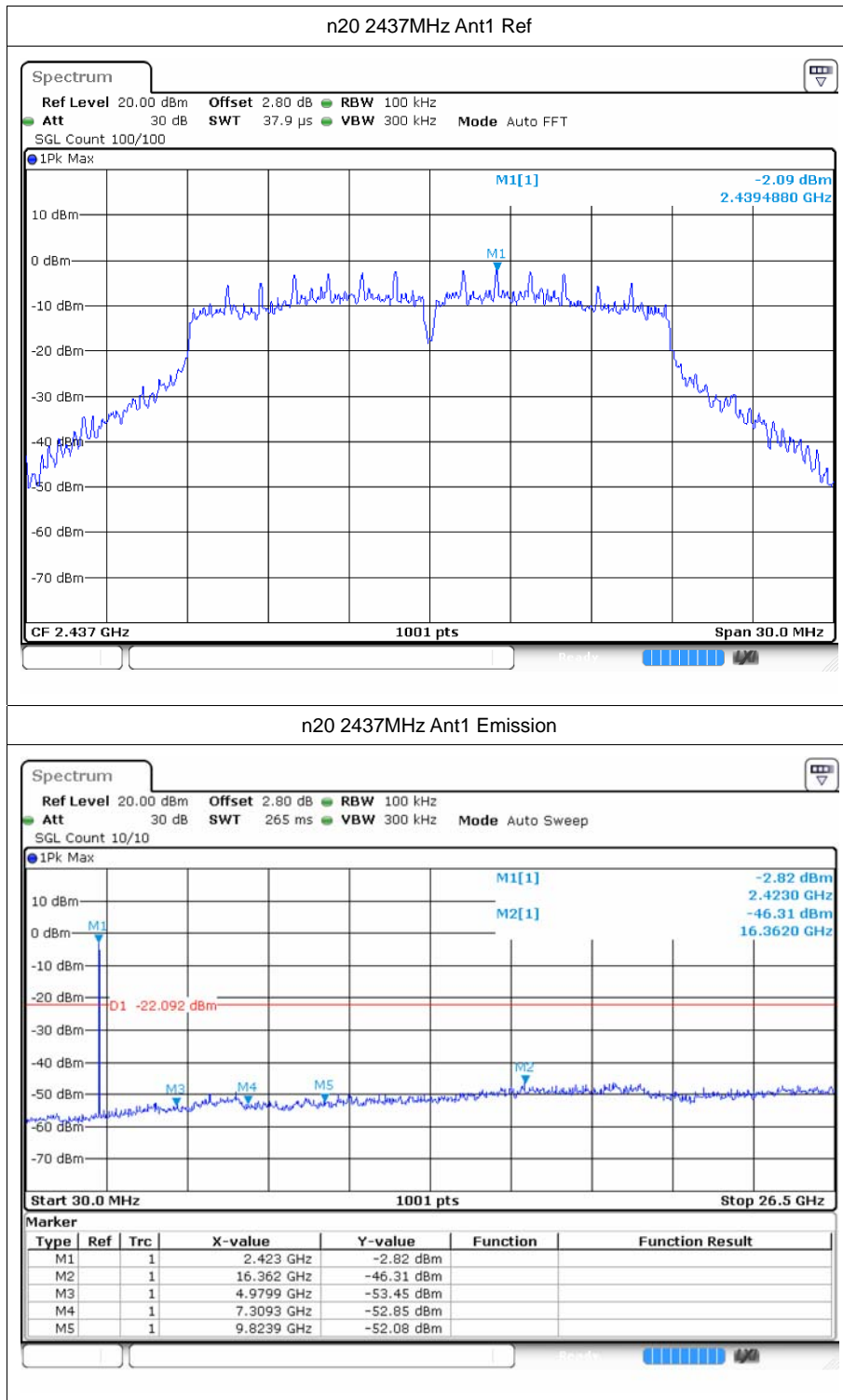


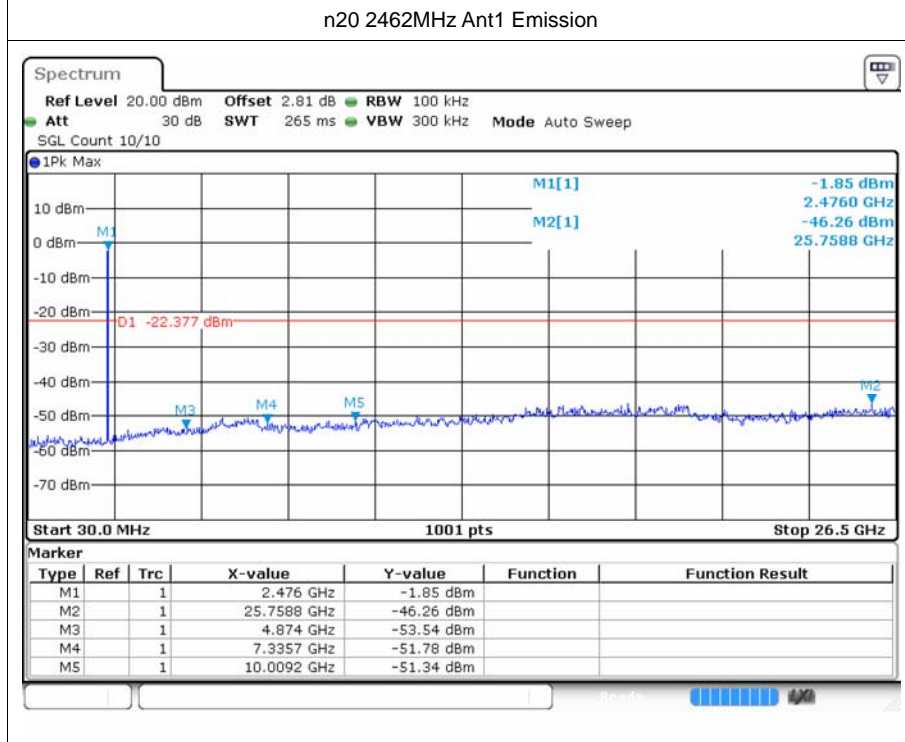
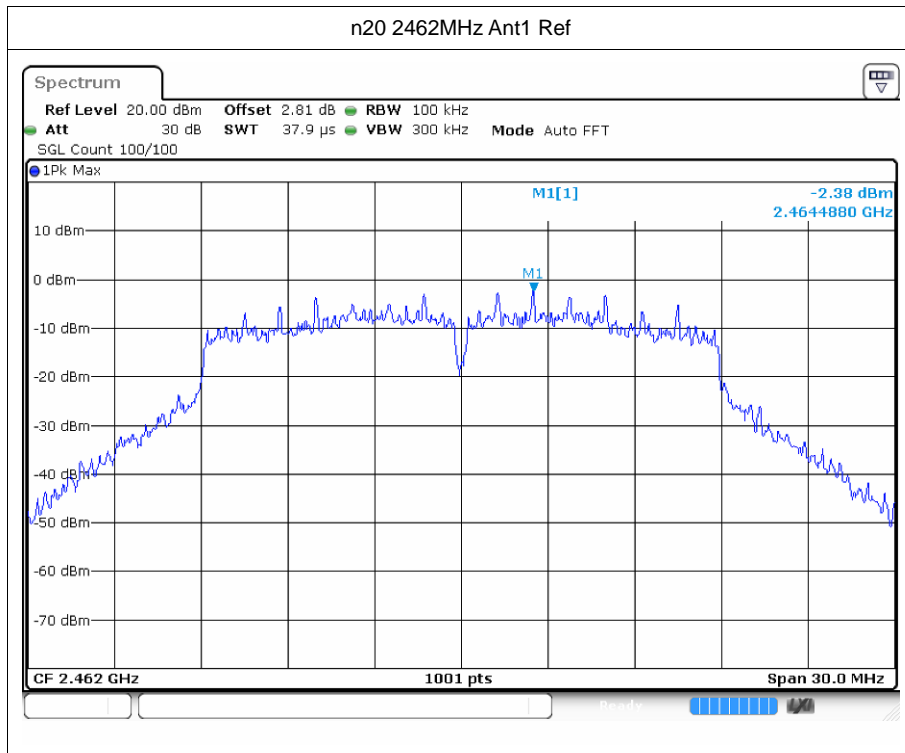


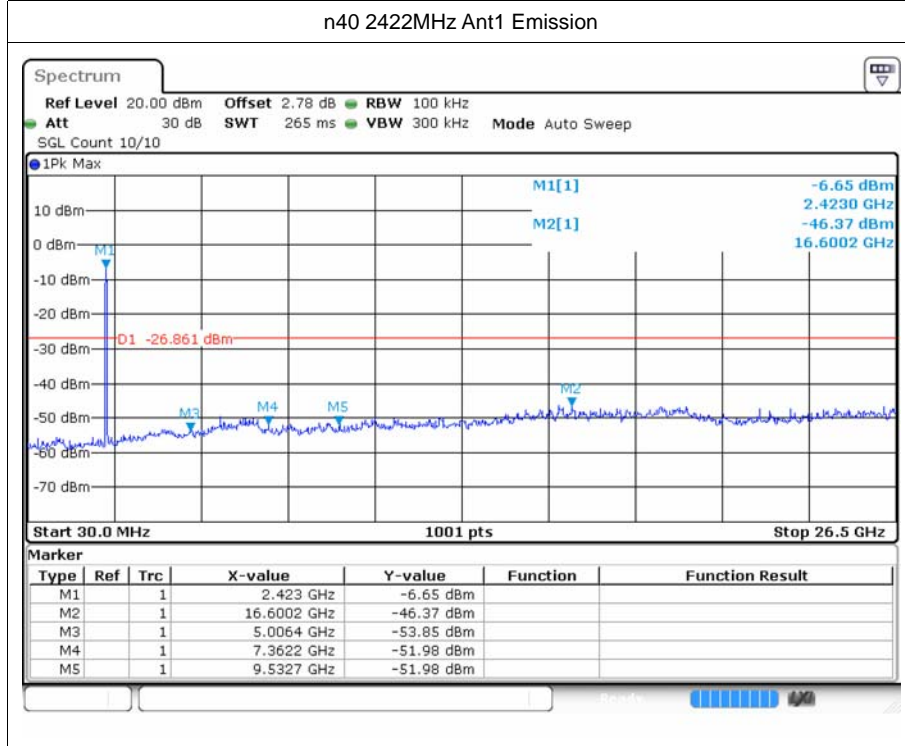
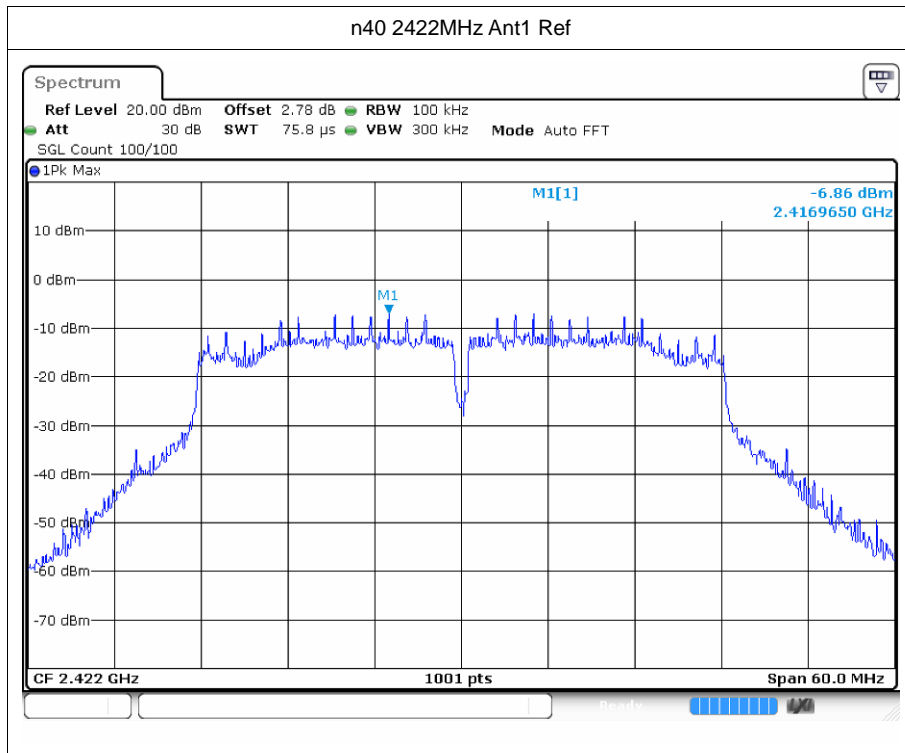


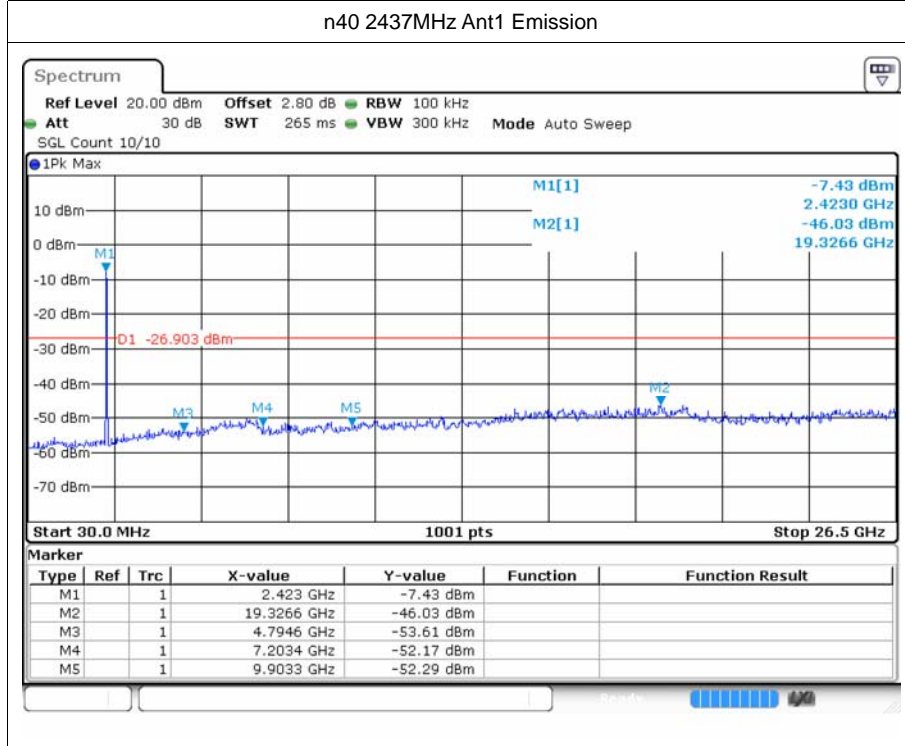
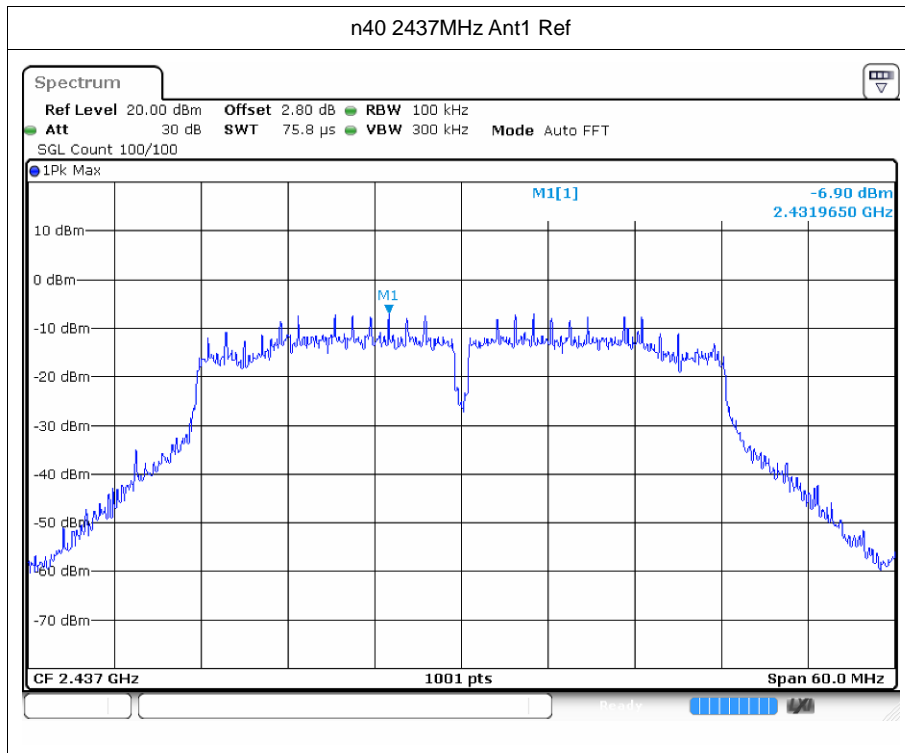


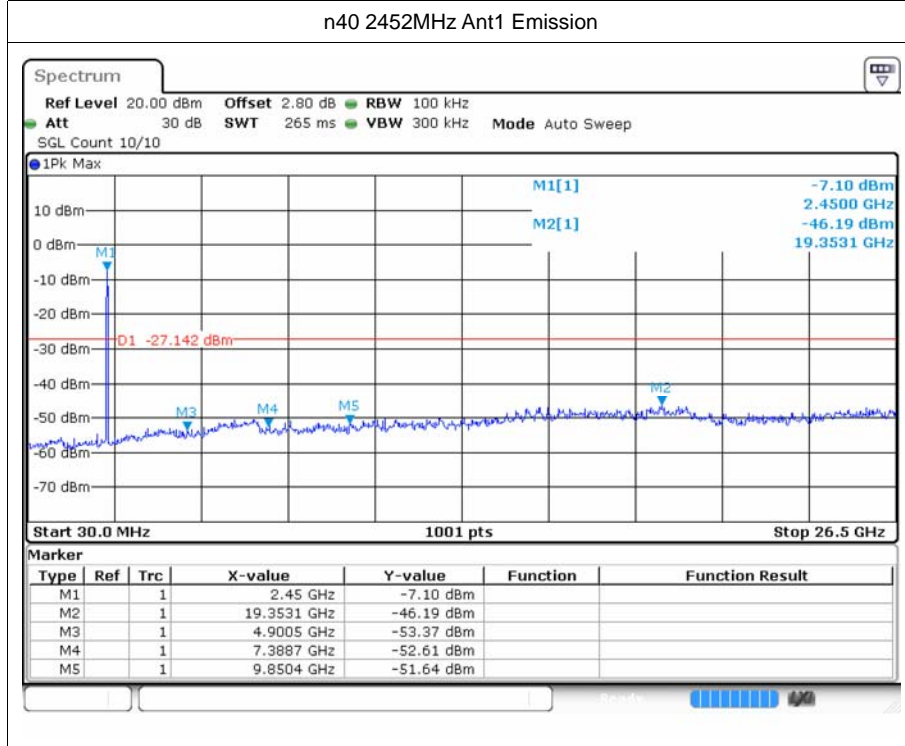
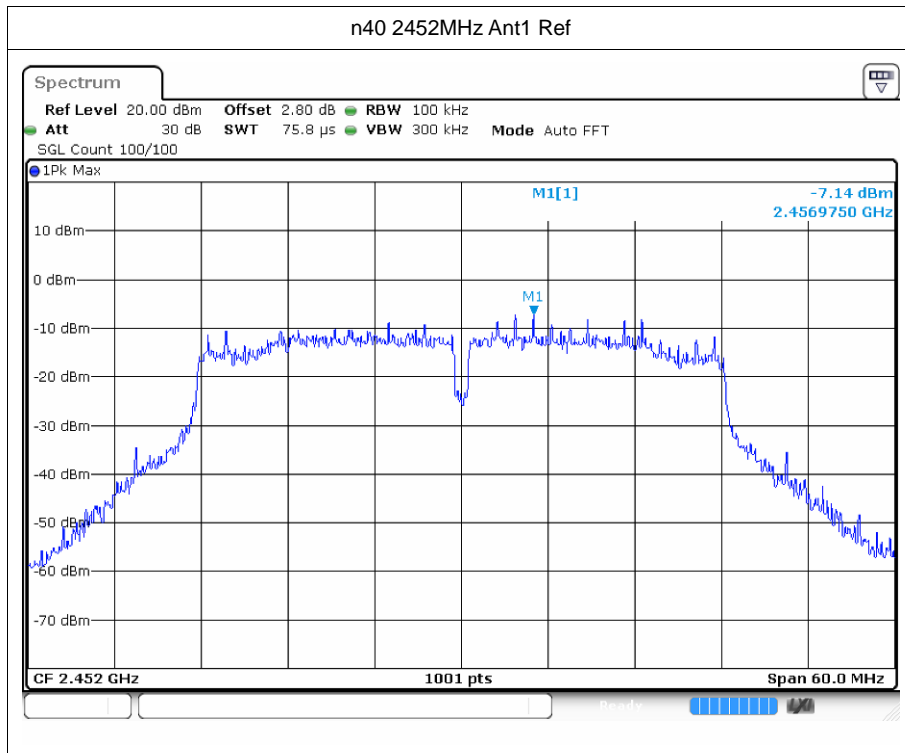














7 Restrict Band

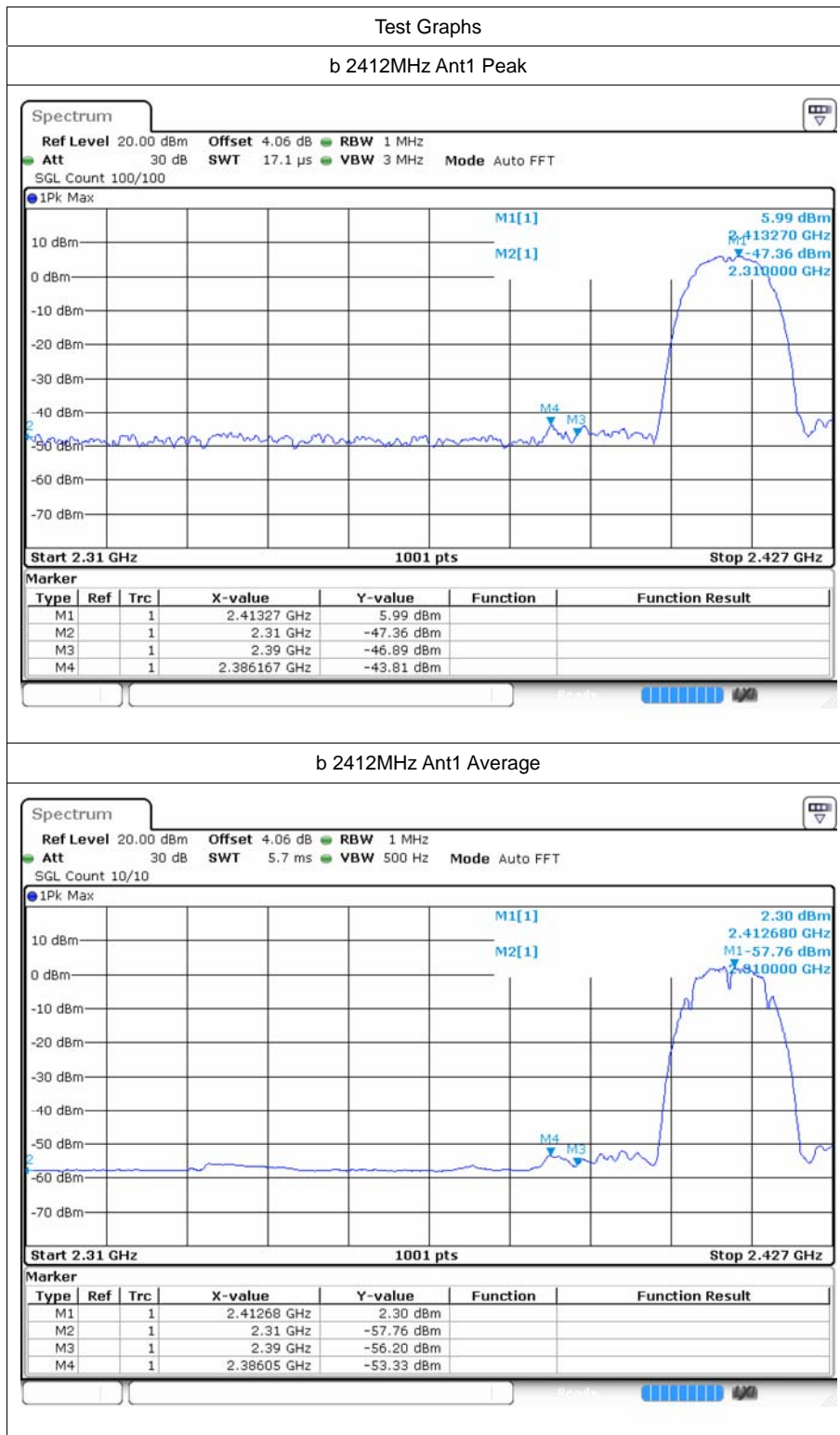
7.1 Test Result

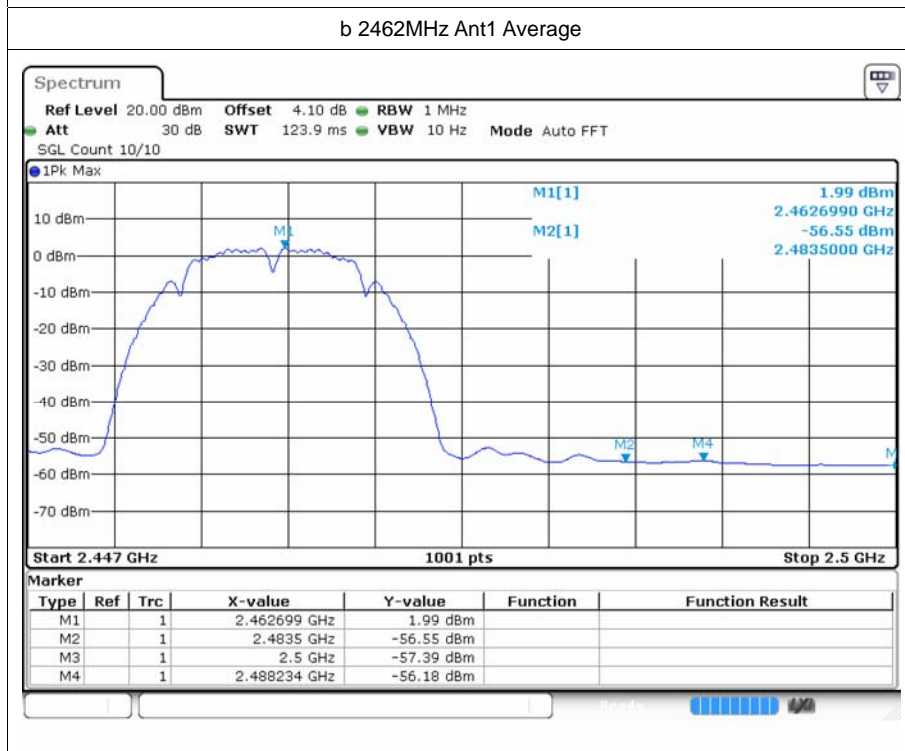
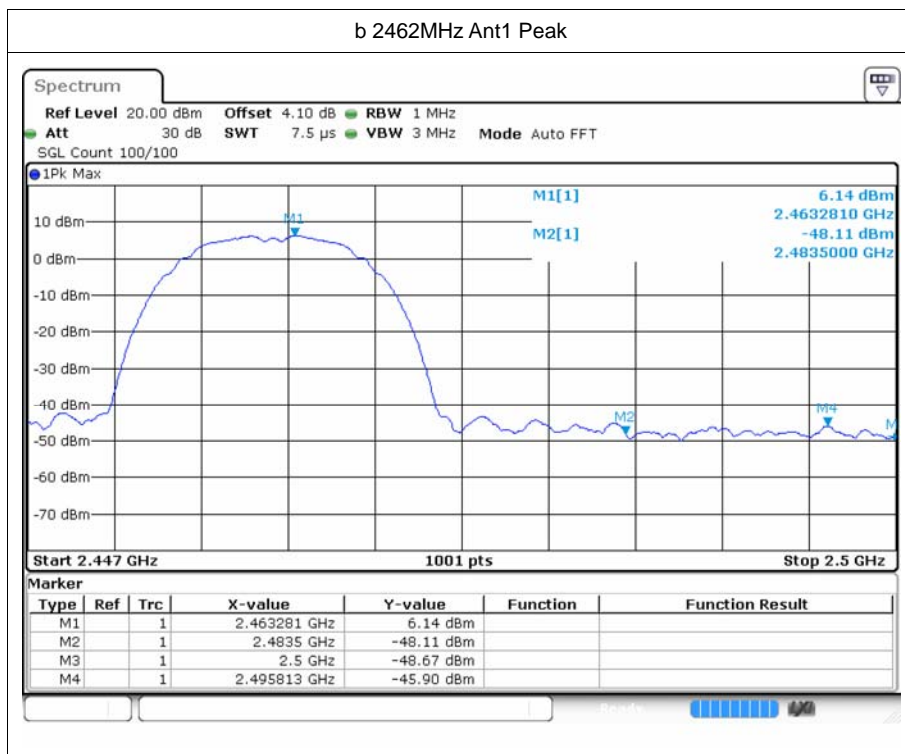
Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
b	2412	Ant1	2310	-47.36	2	49.9	Peak	74	Pass
b	2412	Ant1	2310	-57.76	2	39.5	Average	54	Pass
b	2412	Ant1	2386.167	-43.8	2	53.46	Peak	74	Pass
b	2412	Ant1	2386.05	-53.33	2	43.93	Average	54	Pass
b	2412	Ant1	2390	-46.88	2	50.38	Peak	74	Pass
b	2412	Ant1	2390	-56.2	2	41.06	Average	54	Pass
b	2462	Ant1	2483.5	-48.11	2	49.15	Peak	74	49.15
b	2462	Ant1	2483.5	-56.54	2	40.72	Average	54	Pass
b	2462	Ant1	2495.813	-45.9	2	51.36	Peak	74	Pass
b	2462	Ant1	2488.234	-56.17	2	41.09	Average	54	Pass
b	2462	Ant1	2500	-48.66	2	48.6	Peak	74	Pass
b	2462	Ant1	2500	-57.39	2	39.87	Average	54	Pass
g	2412	Ant1	2310	-50.34	2	46.92	Peak	74	Pass
g	2412	Ant1	2310	-56.58	2	40.68	Average	54	Pass
g	2412	Ant1	2338.665	-45.09	2	52.17	Peak	74	Pass
g	2412	Ant1	2338.548	-54.47	2	42.79	Average	54	Pass
g	2412	Ant1	2390	-49.85	2	50.38	Peak	74	Pass
g	2412	Ant1	2390	-56.63	2	40.63	Average	54	Pass
g	2462	Ant1	2483.5	-48.58	2	48.68	Peak	74	Pass
g	2462	Ant1	2483.5	-55.71	2	41.55	Average	54	Pass
g	2462	Ant1	2495.813	-45.46	2	51.8	Peak	74	Pass
g	2462	Ant1	2489.612	-55.38	2	41.88	Average	54	Pass
g	2462	Ant1	2500	-50	2	48.6	Peak	74	Pass
g	2462	Ant1	2500	-56.42	2	40.84	Average	54	Pass
n20	2412	Ant1	2310	-48.44	2	48.82	Peak	74	Pass
n20	2412	Ant1	2310	-56.36	2	40.9	Average	54	Pass
n20	2412	Ant1	2341.59	-44.05	2	53.21	Peak	74	Pass
n20	2412	Ant1	2338.548	-53.99	2	43.27	Average	54	Pass
n20	2412	Ant1	2390	-48.38	2	48.88	Peak	74	Pass
n20	2412	Ant1	2390	-56.5	2	40.76	Average	54	Pass
n20	2462	Ant1	2483.5	-48.08	2	49.18	Peak	74	Pass
n20	2462	Ant1	2483.5	-56.17	2	41.09	Average	54	Pass
n20	2462	Ant1	2497.403	-46.54	2	50.72	Peak	74	Pass
n20	2462	Ant1	2485.584	-55.02	2	42.24	Average	54	Pass

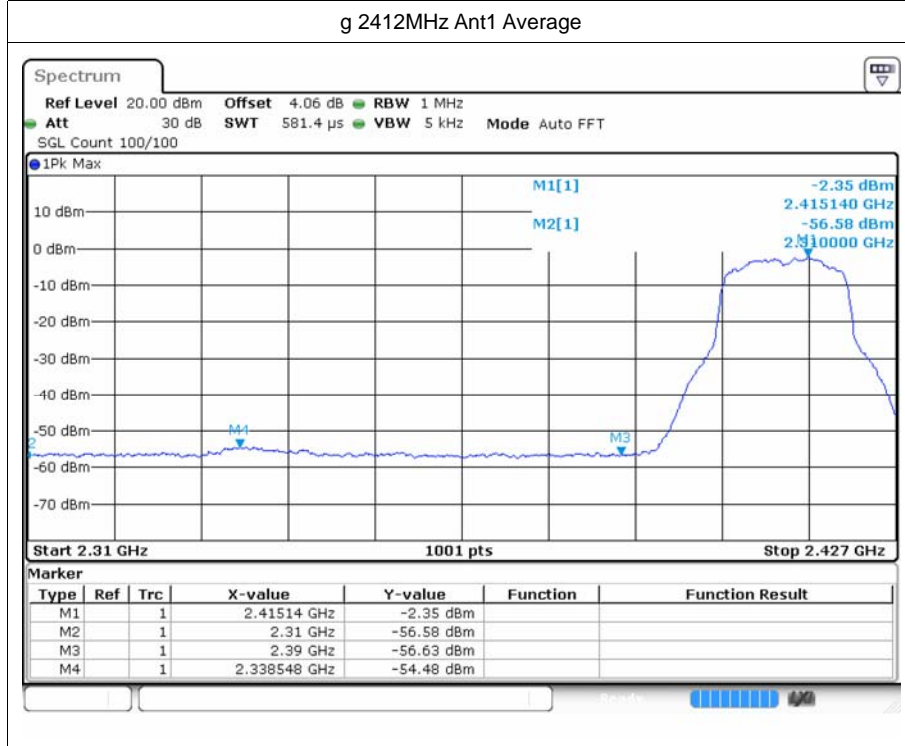
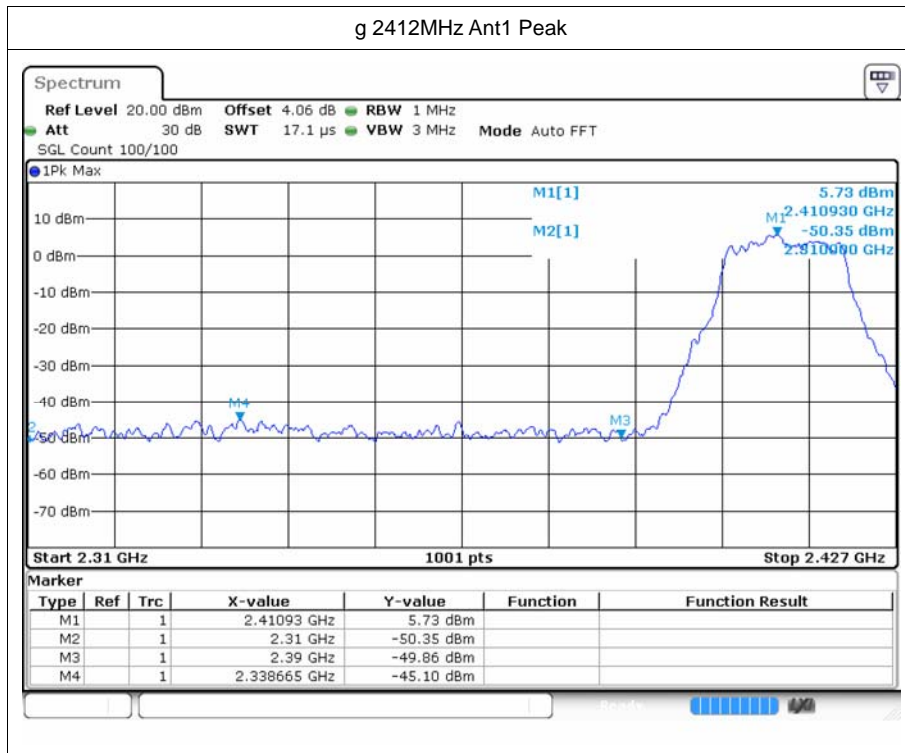


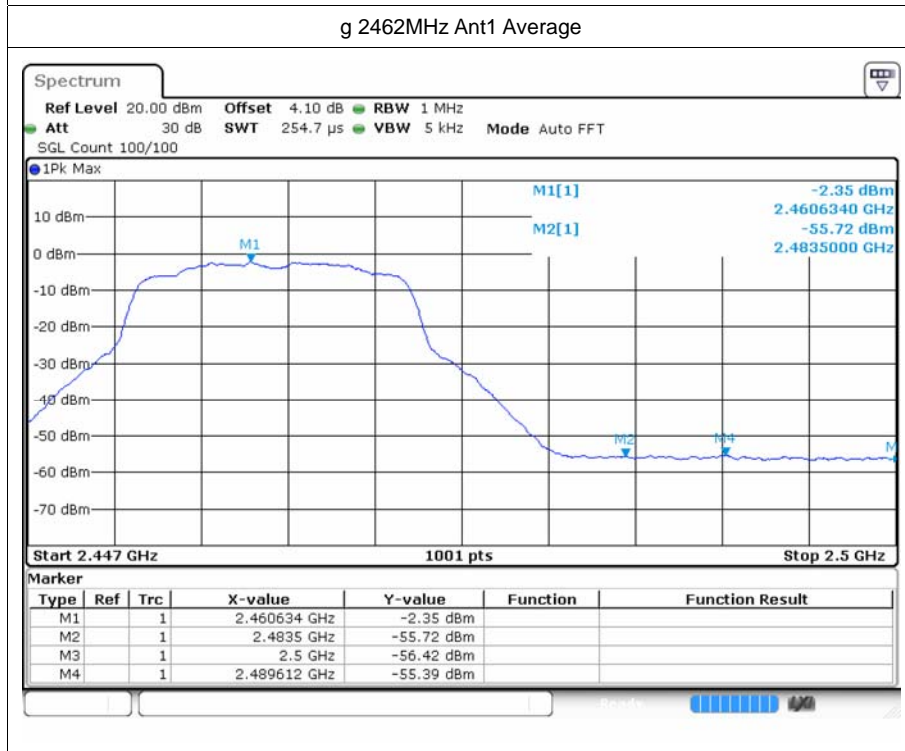
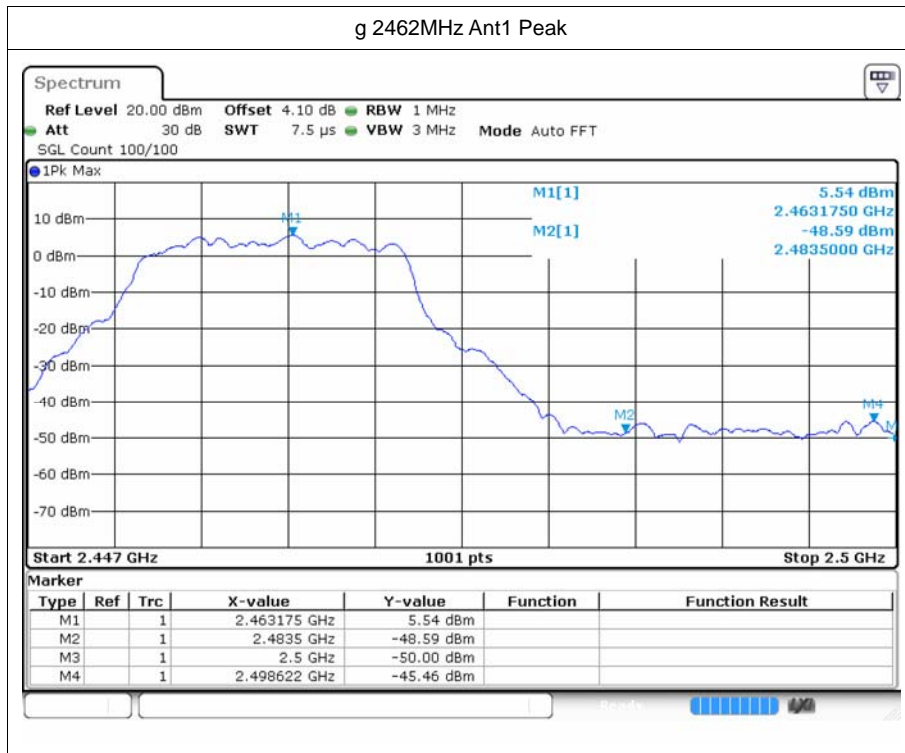
n20	2462	Ant1	2500	-48.9	2	48.36	Peak	74	Pass
n20	2462	Ant1	2500	-56.27	2	40.99	Average	54	Pass
n40	2422	Ant1	2310	-46.73	2	50.53	Peak	74	Pass
n40	2422	Ant1	2310	-56.62	2	40.64	Average	54	Pass
n40	2422	Ant1	2343.796	-45.44	2	51.82	Peak	74	Pass
n40	2422	Ant1	2339.678	-54.43	2	42.83	Average	54	Pass
n40	2422	Ant1	2390	-49.64	2	47.62	Peak	74	Pass
n40	2422	Ant1	2390	-56.36	2	40.9	Average	54	Pass
n40	2452	Ant1	2483.5	-44.95	2	52.31	Peak	74	Pass
n40	2452	Ant1	2483.5	-53.77	2	43.49	Average	54	Pass
n40	2452	Ant1	2490.094	-44.87	2	52.39	Peak	74	Pass
n40	2452	Ant1	2483.776	-53.76	2	43.5	Average	54	Pass
n40	2452	Ant1	2500	-48.23	2	49.03	Peak	74	Pass
n40	2452	Ant1	2500	-56.05	2	41.21	Average	54	Pass

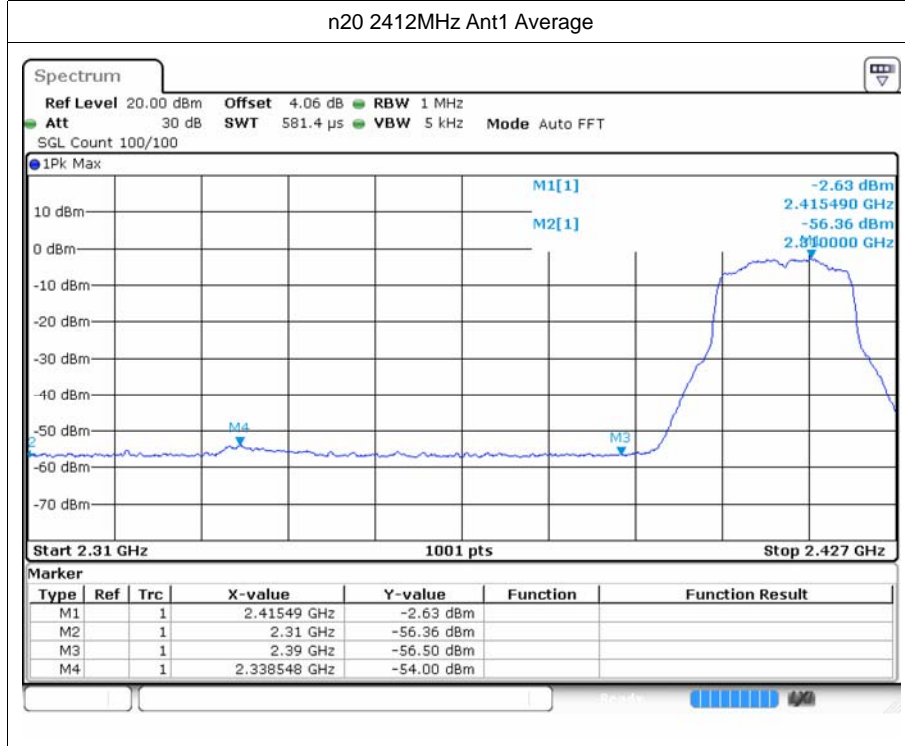
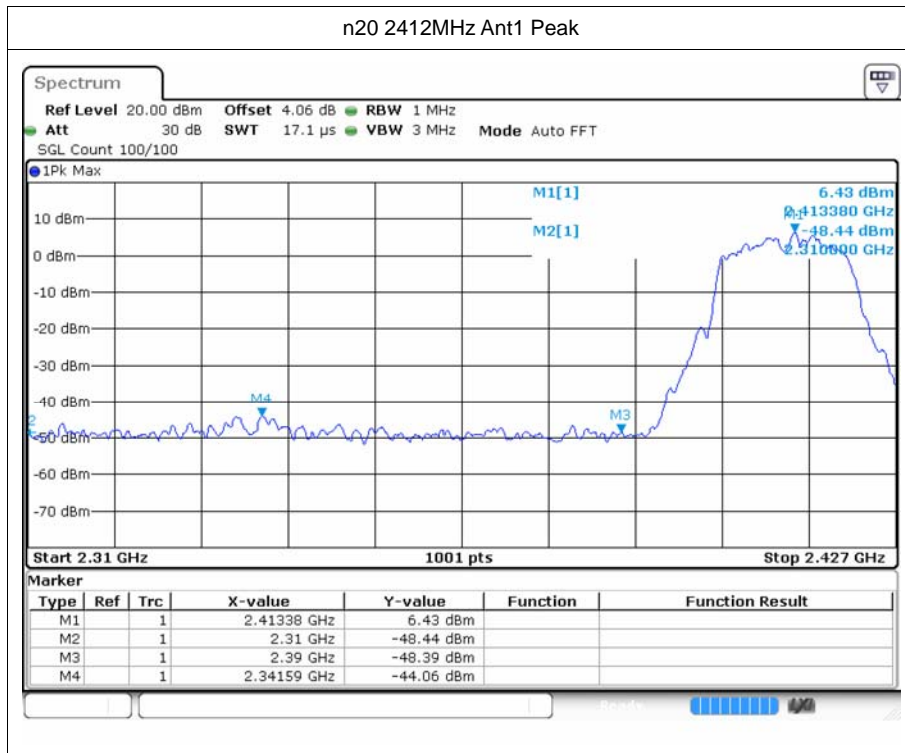
7.2 Test Graphs

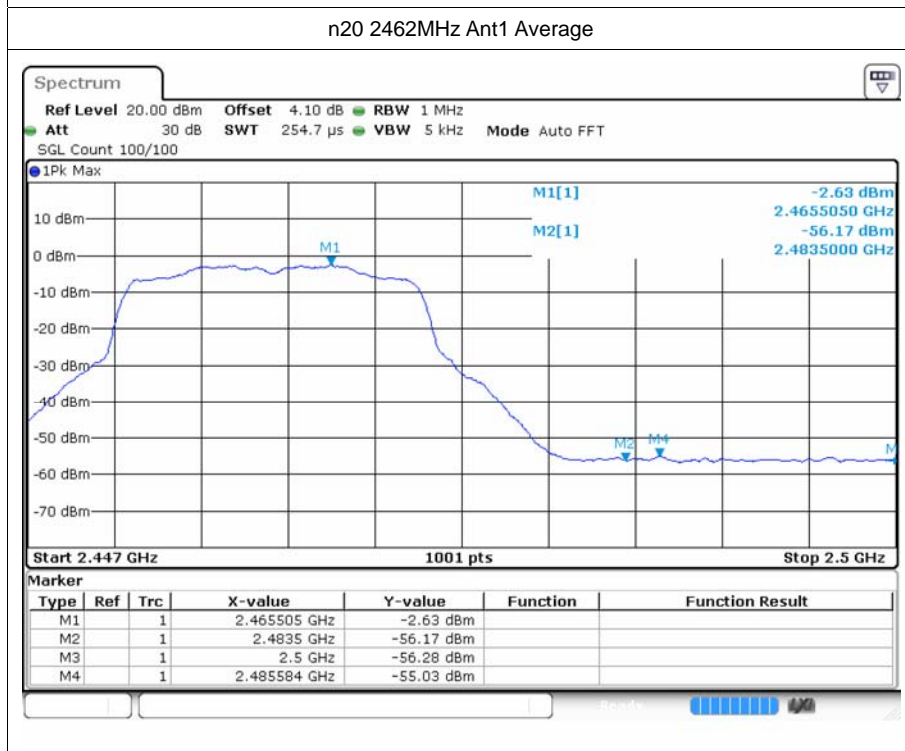
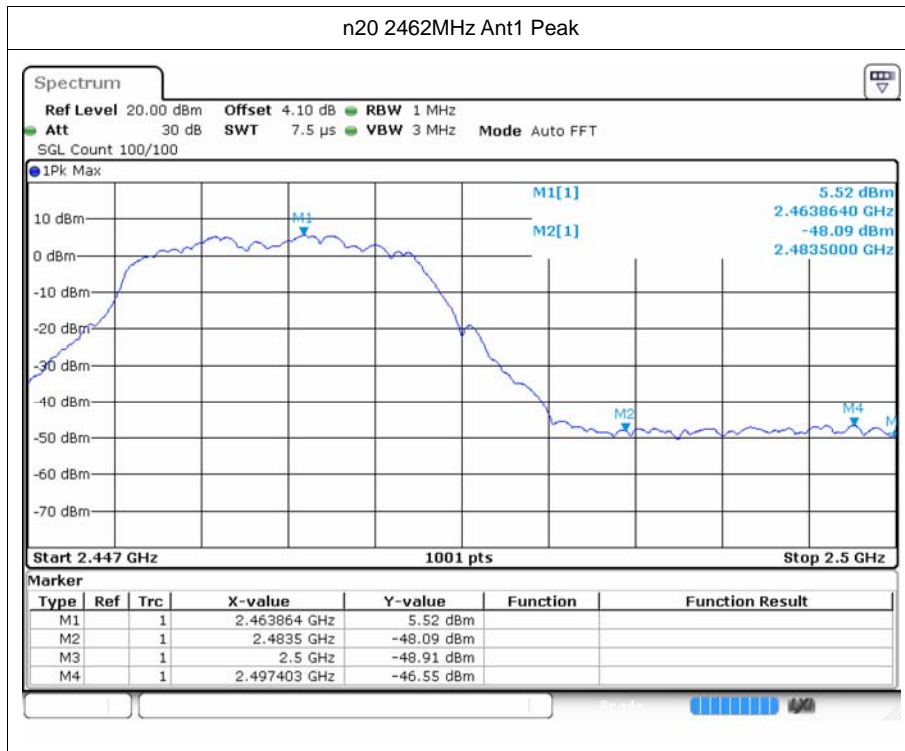


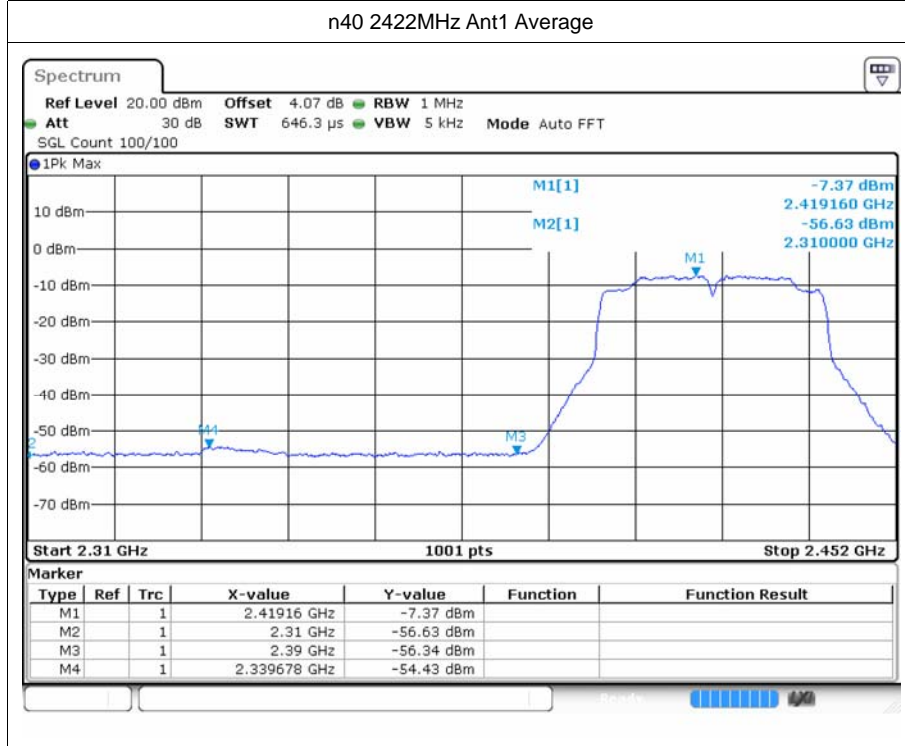
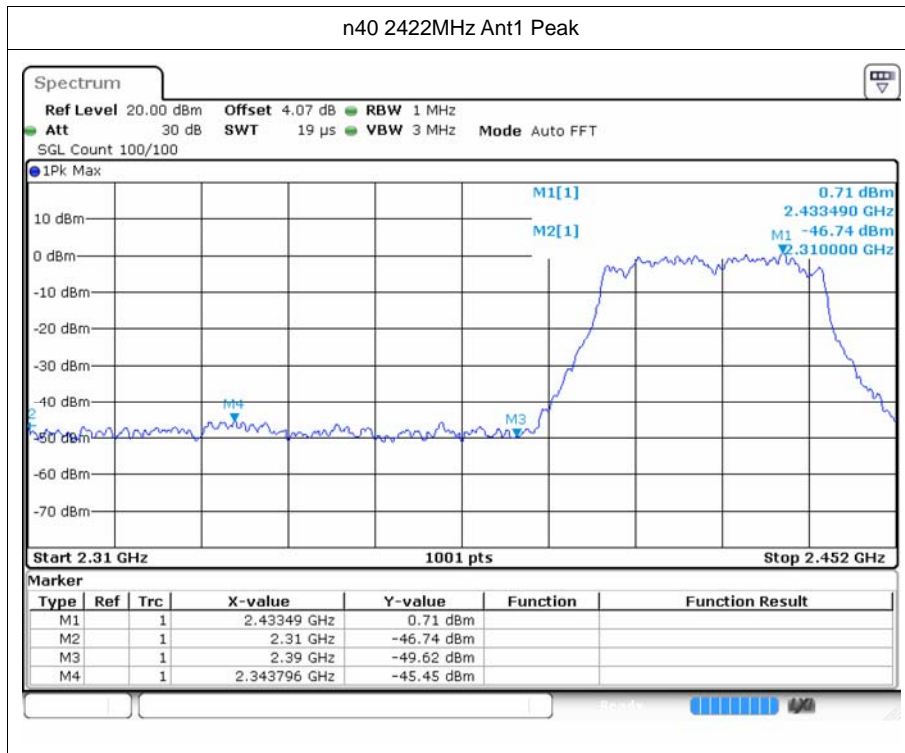


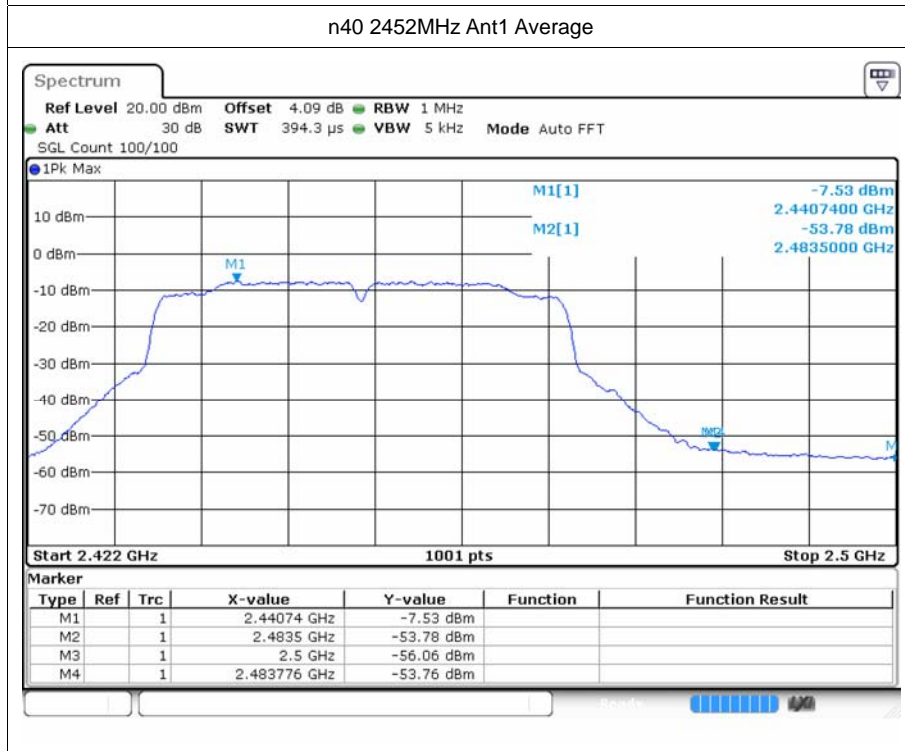
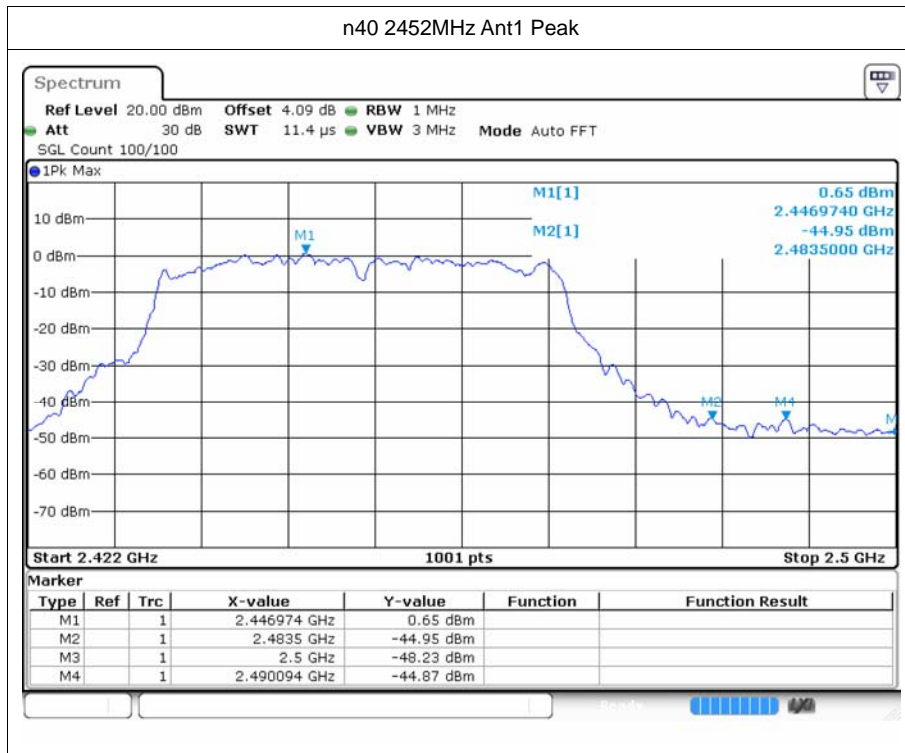












---The End---