



Appendix C

RF Test Data for 2.4GWIFI (Conducted Measurement)

Product Name: UV Photocuring 3D Printer

Trade Mark: Mars 4 Ultra

Test Model: ELEGOO

Environmental Conditions

Temperature:	25.9° C
Relative Humidity:	52.3%
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

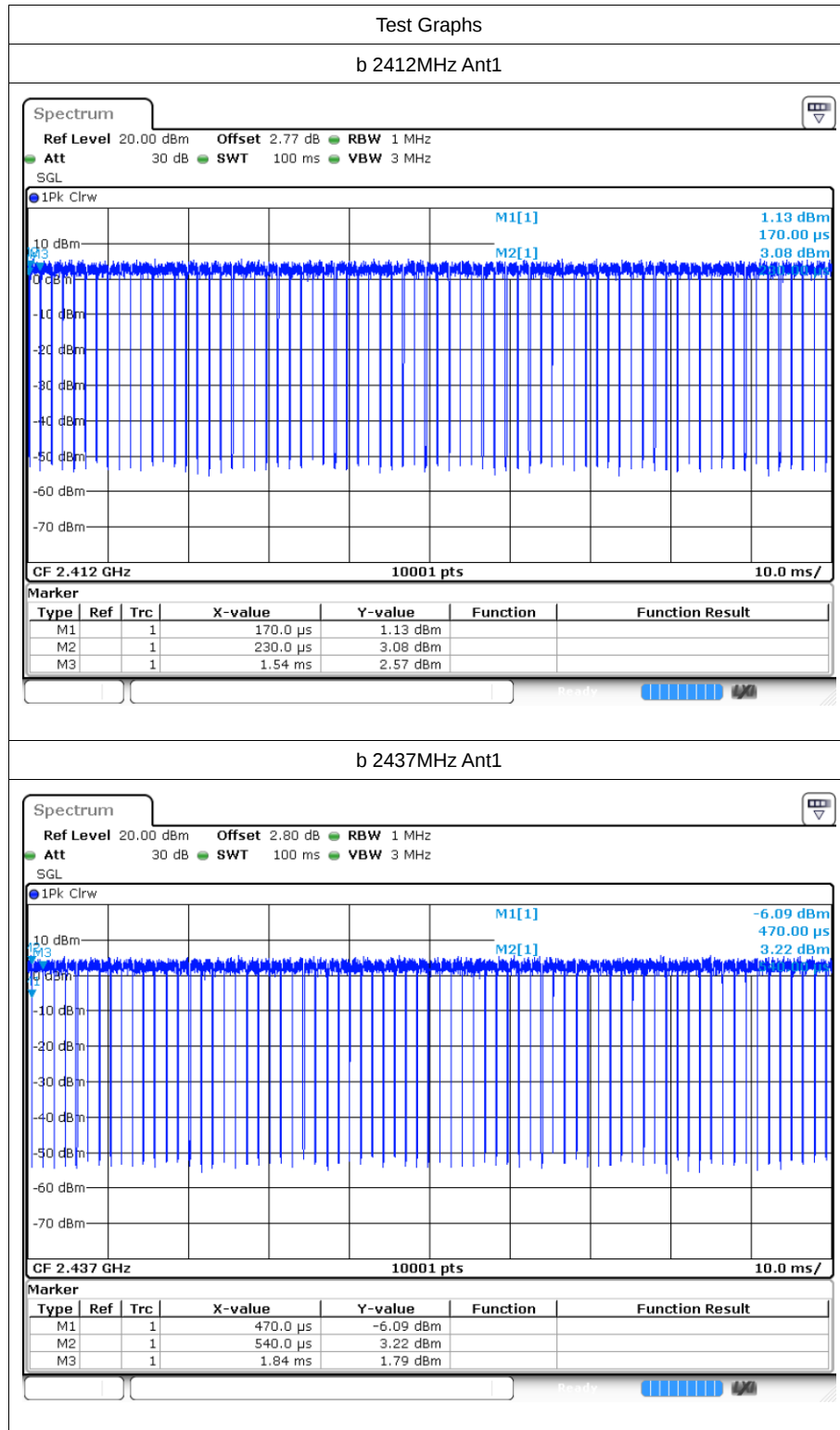


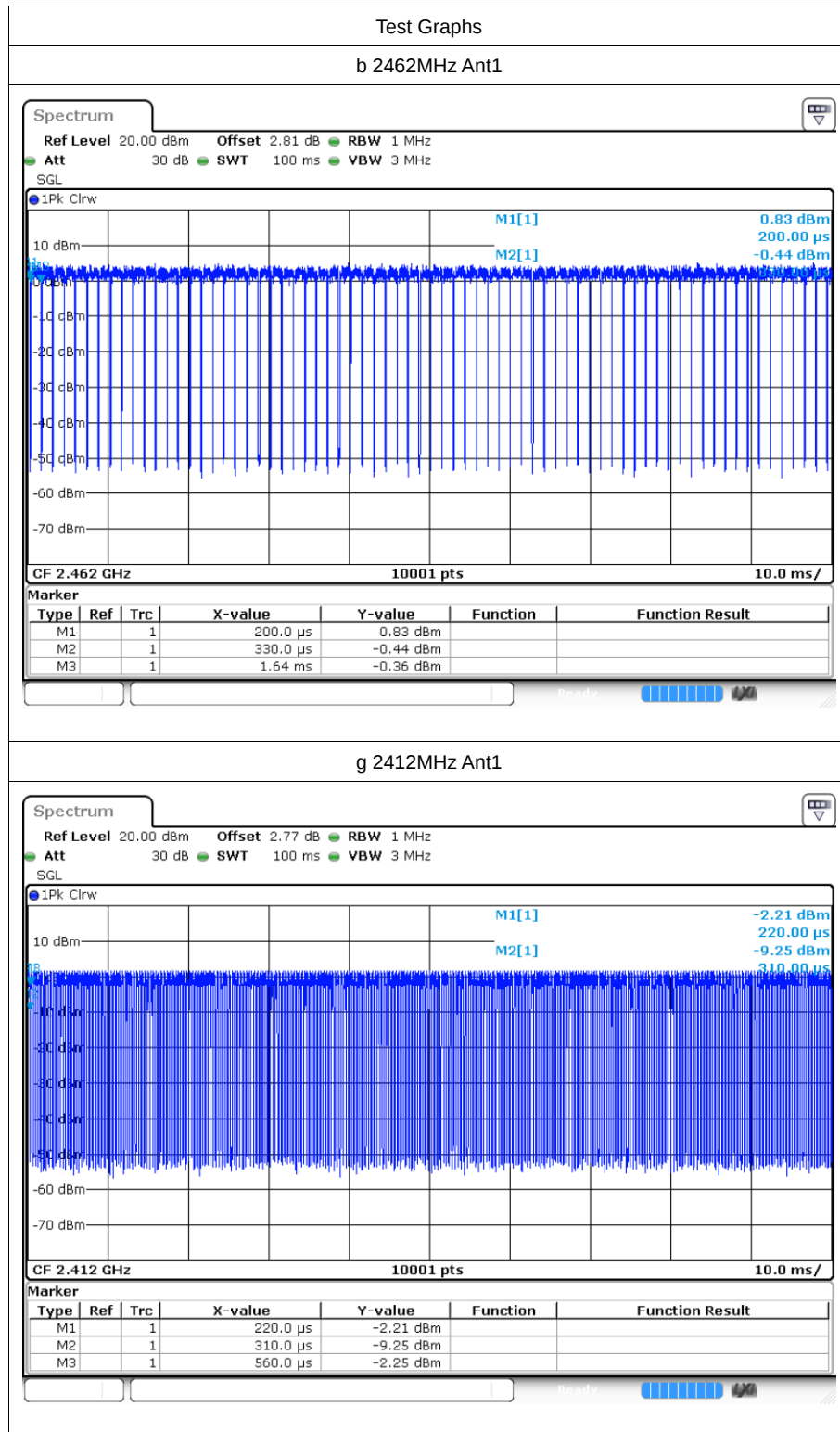
1 Duty Cycle

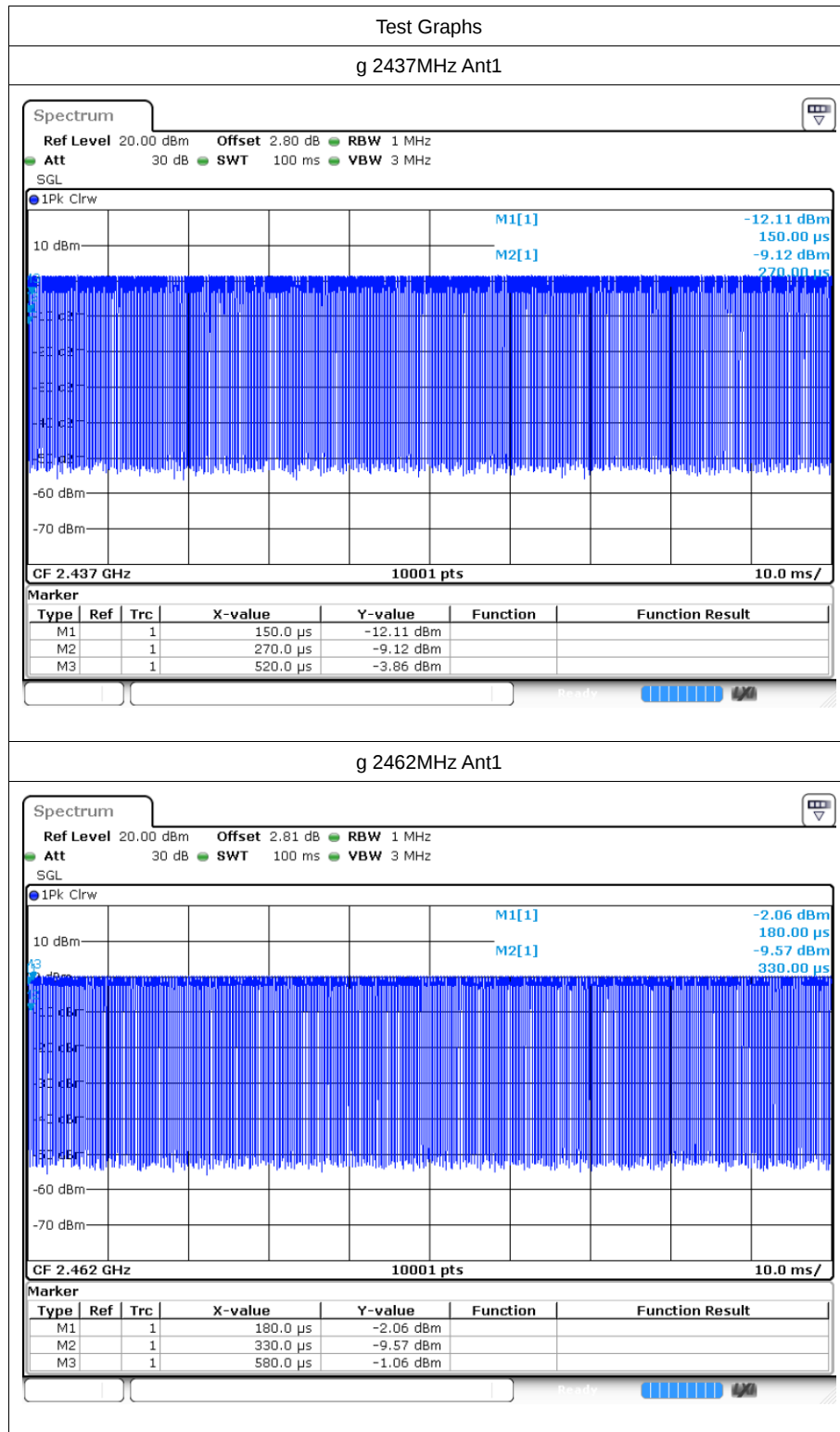
1.1 Test Result

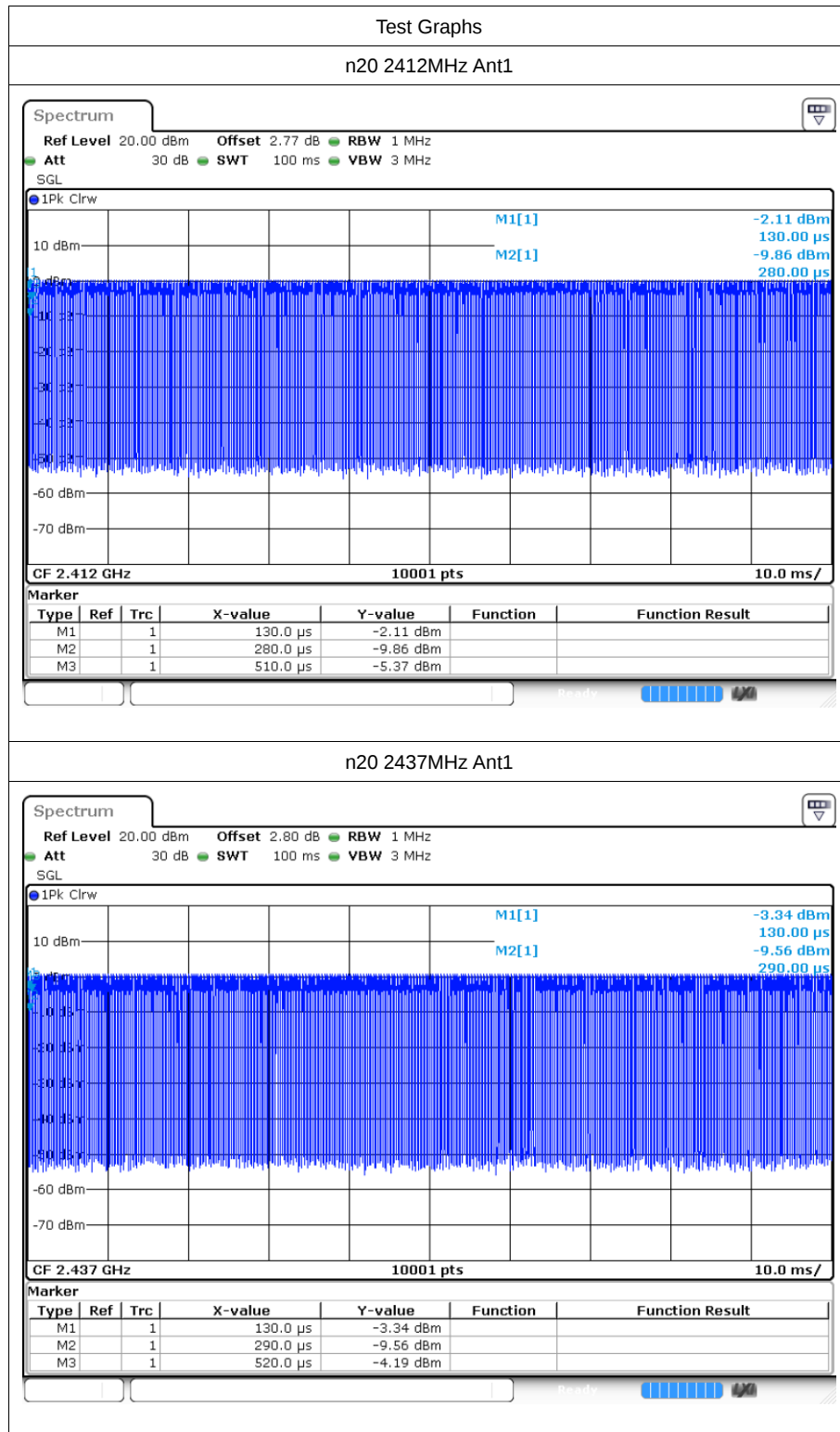
Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	1/T (kHz)
b	2412	Ant1	93.03	0.76
b	2437	Ant1	93.17	0.77
b	2462	Ant1	92.86	0.76
g	2412	Ant1	73.54	4
g	2437	Ant1	74.22	4
g	2462	Ant1	73.7	4
n20	2412	Ant1	72.65	4.35
n20	2437	Ant1	72.6	4.35
n20	2462	Ant1	72.51	4.35
n40	2422	Ant1	59.96	7.69
n40	2437	Ant1	59.36	7.69
n40	2452	Ant1	55.73	7.69

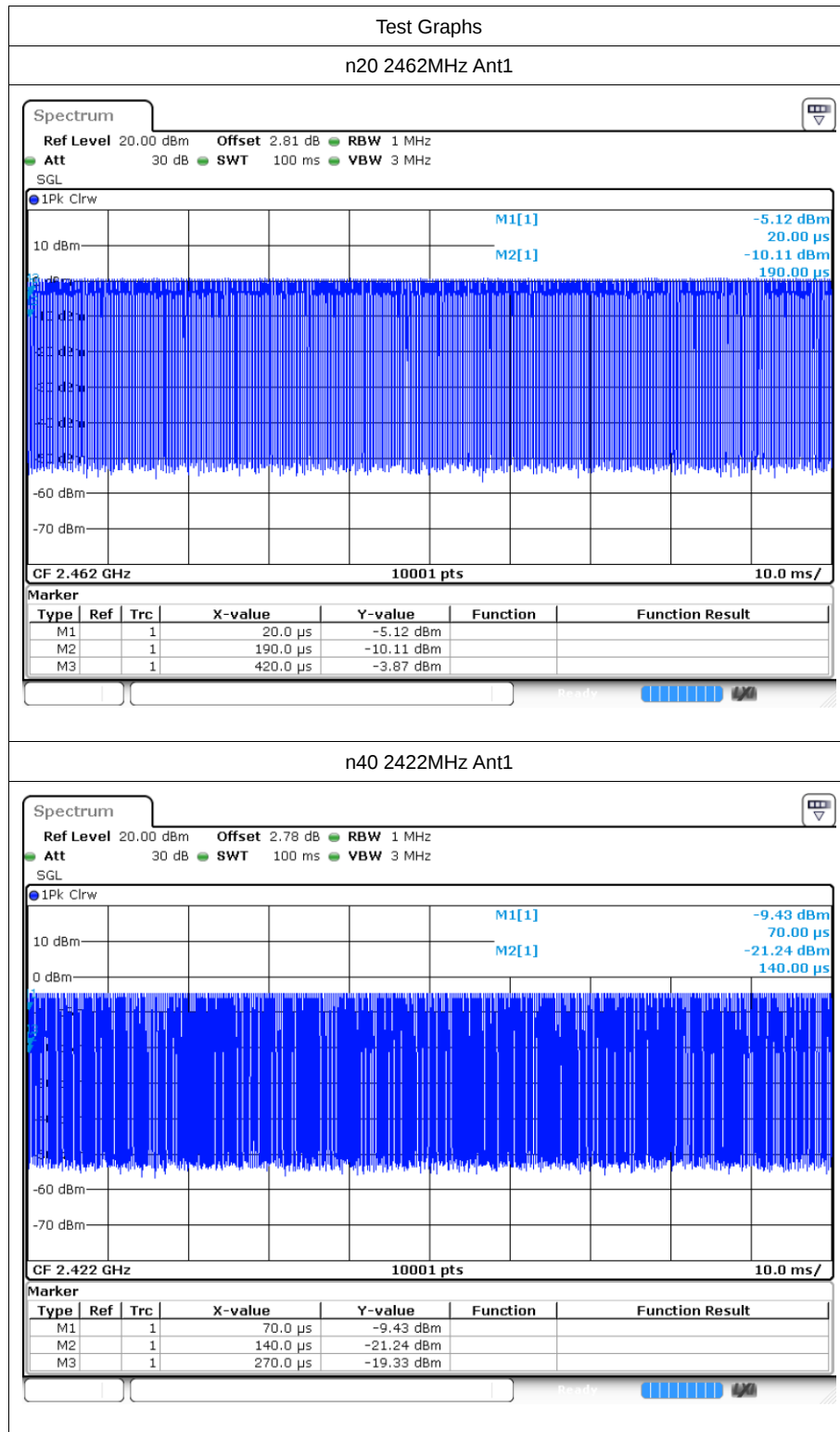
1.2 Test Graphs

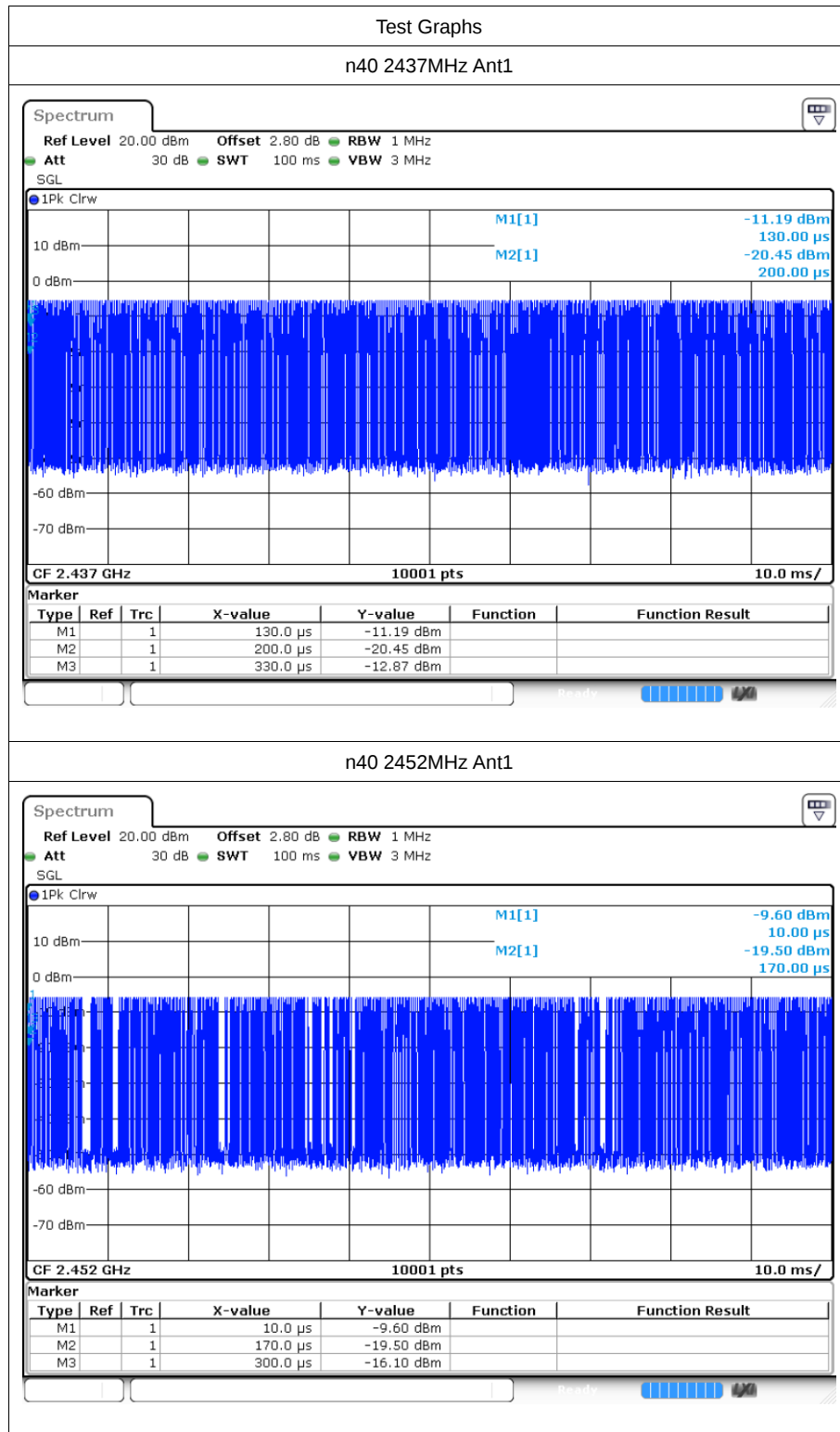














2 Maximum Conducted Output Power

2.1 Test Result

For Average Power Test:

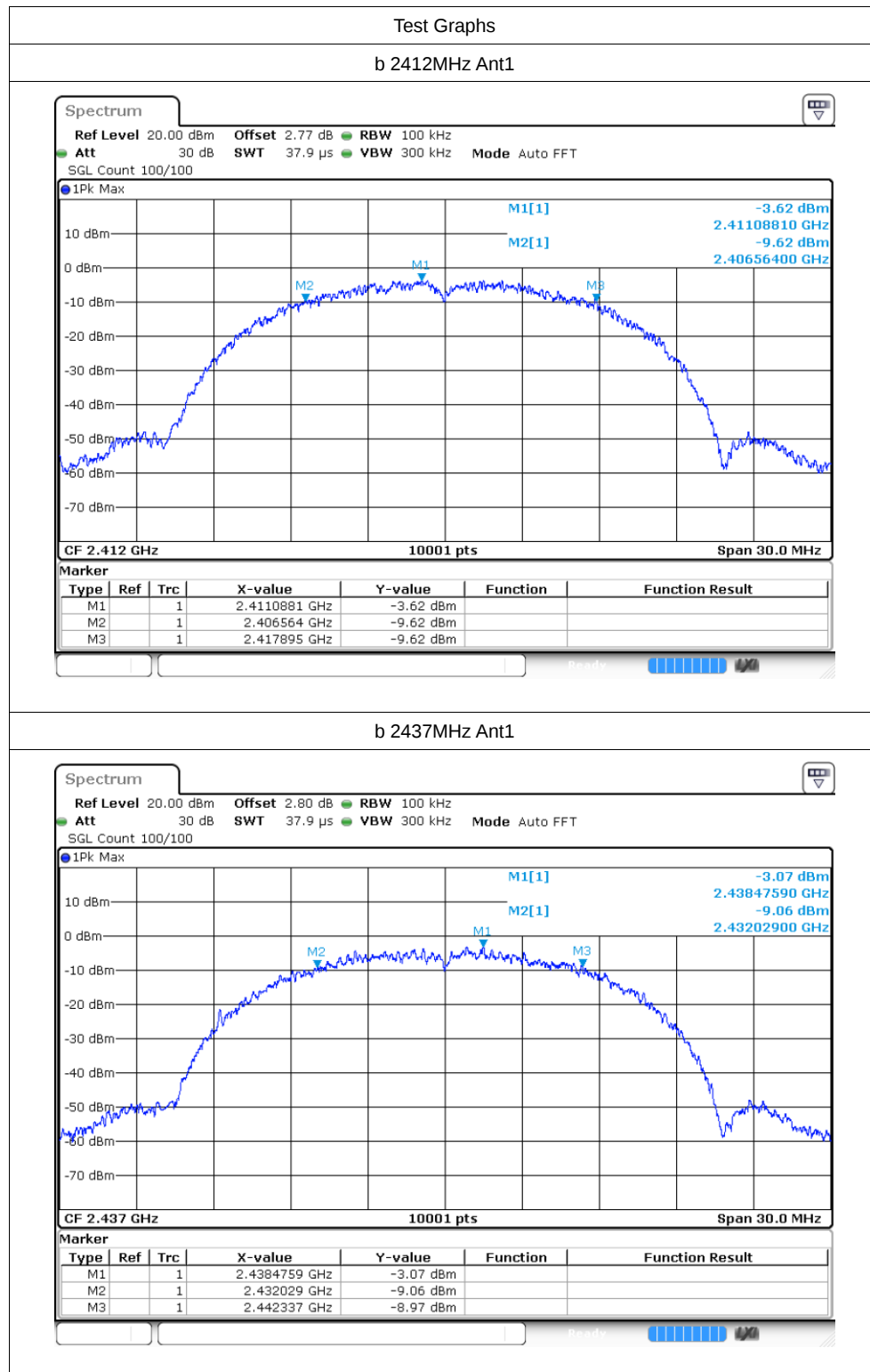
Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
b	2412	Ant1	14.11	30	Pass
b	2437	Ant1	13.93	30	Pass
b	2462	Ant1	13.47	30	Pass
g	2412	Ant1	13.87	30	Pass
g	2437	Ant1	13.92	30	Pass
g	2462	Ant1	13.54	30	Pass
n20	2412	Ant1	13.57	30	Pass
n20	2437	Ant1	13.34	30	Pass
n20	2462	Ant1	12.96	30	Pass
n40	2422	Ant1	13.2	30	Pass
n40	2437	Ant1	13.34	30	Pass
n40	2452	Ant1	13.17	30	Pass

3 -6dB Bandwidth

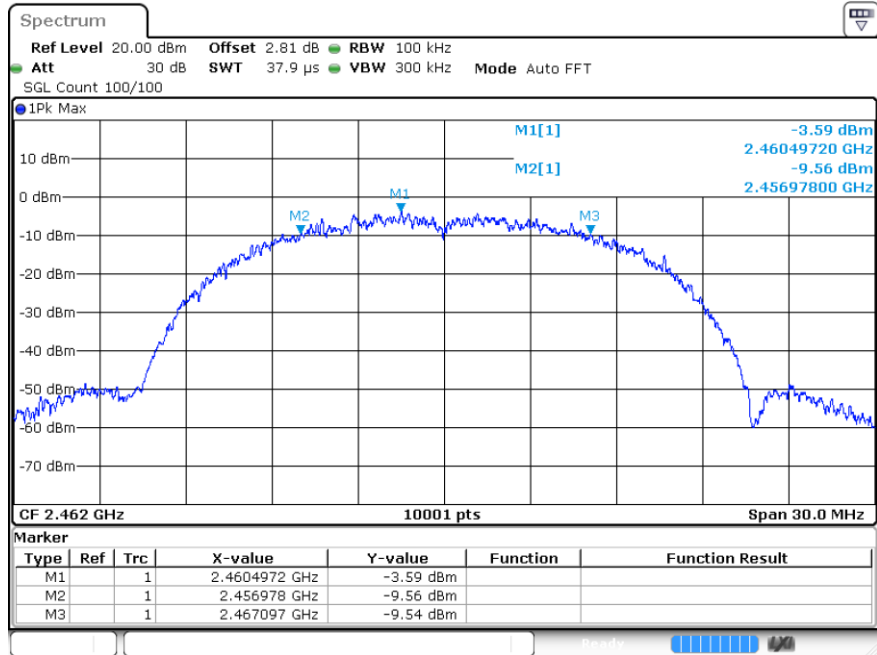
3.1 Test Result

Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
b	2412	Ant1	11.331	0.5	Pass
b	2437	Ant1	10.308	0.5	Pass
b	2462	Ant1	10.119	0.5	Pass
g	2412	Ant1	16.371	0.5	Pass
g	2437	Ant1	16.431	0.5	Pass
g	2462	Ant1	16.41	0.5	Pass
n20	2412	Ant1	17.328	0.5	Pass
n20	2437	Ant1	17.001	0.5	Pass
n20	2462	Ant1	17.265	0.5	Pass
n40	2422	Ant1	35.76	0.5	Pass
n40	2437	Ant1	36.246	0.5	Pass
n40	2452	Ant1	36.282	0.5	Pass

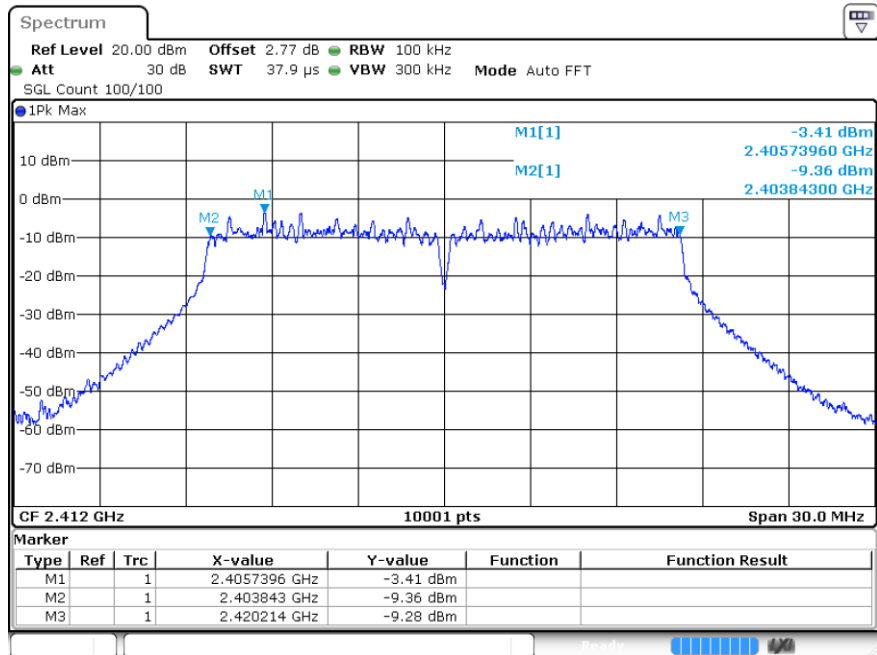
3.2 Test Graphs



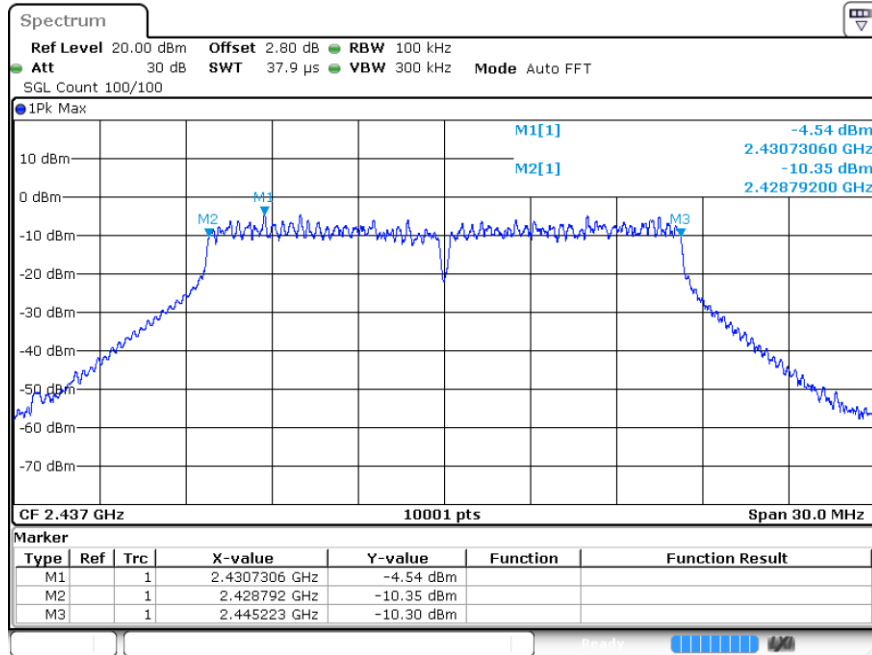
b 2462MHz Ant1



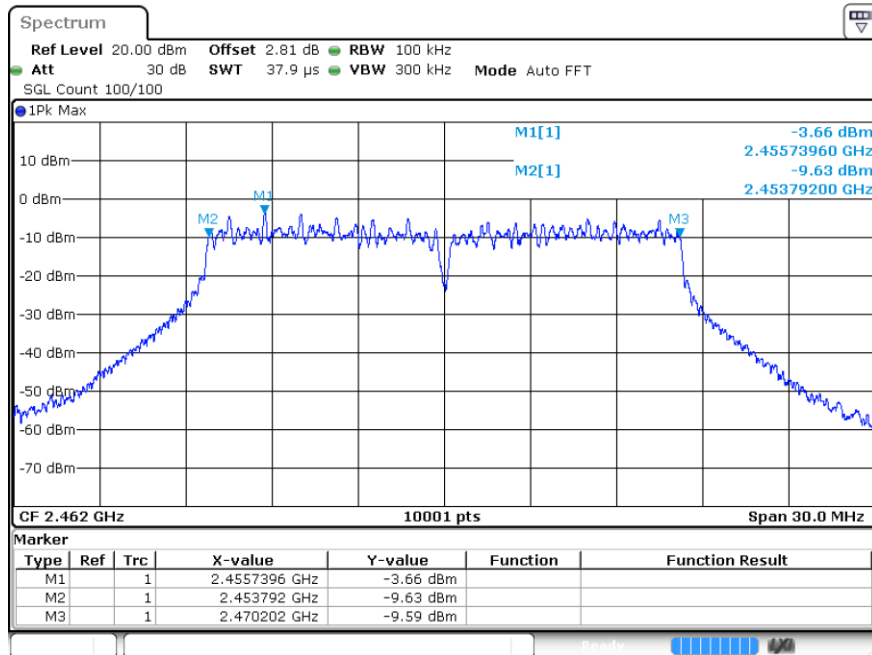
g 2412MHz Ant1

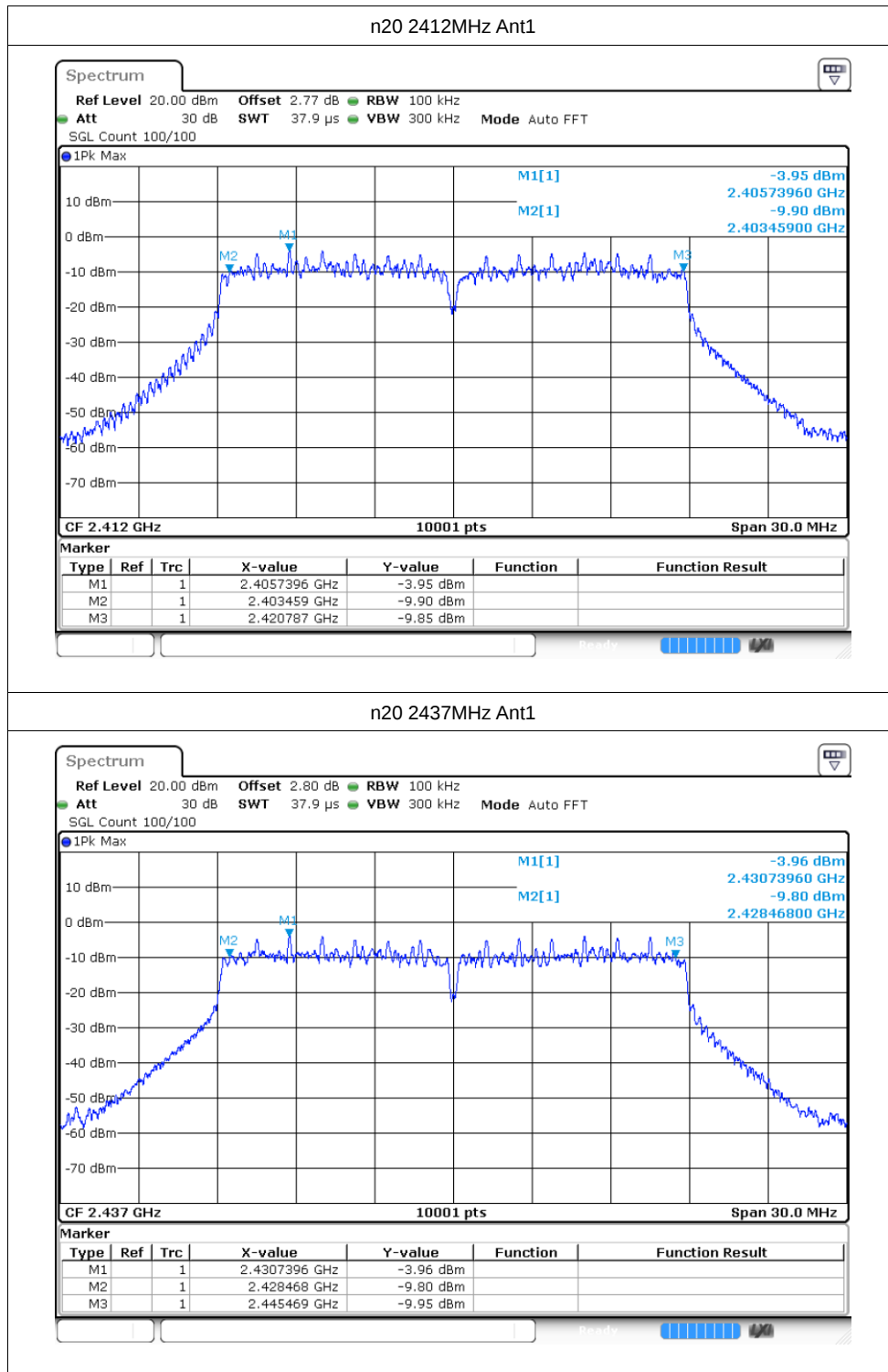


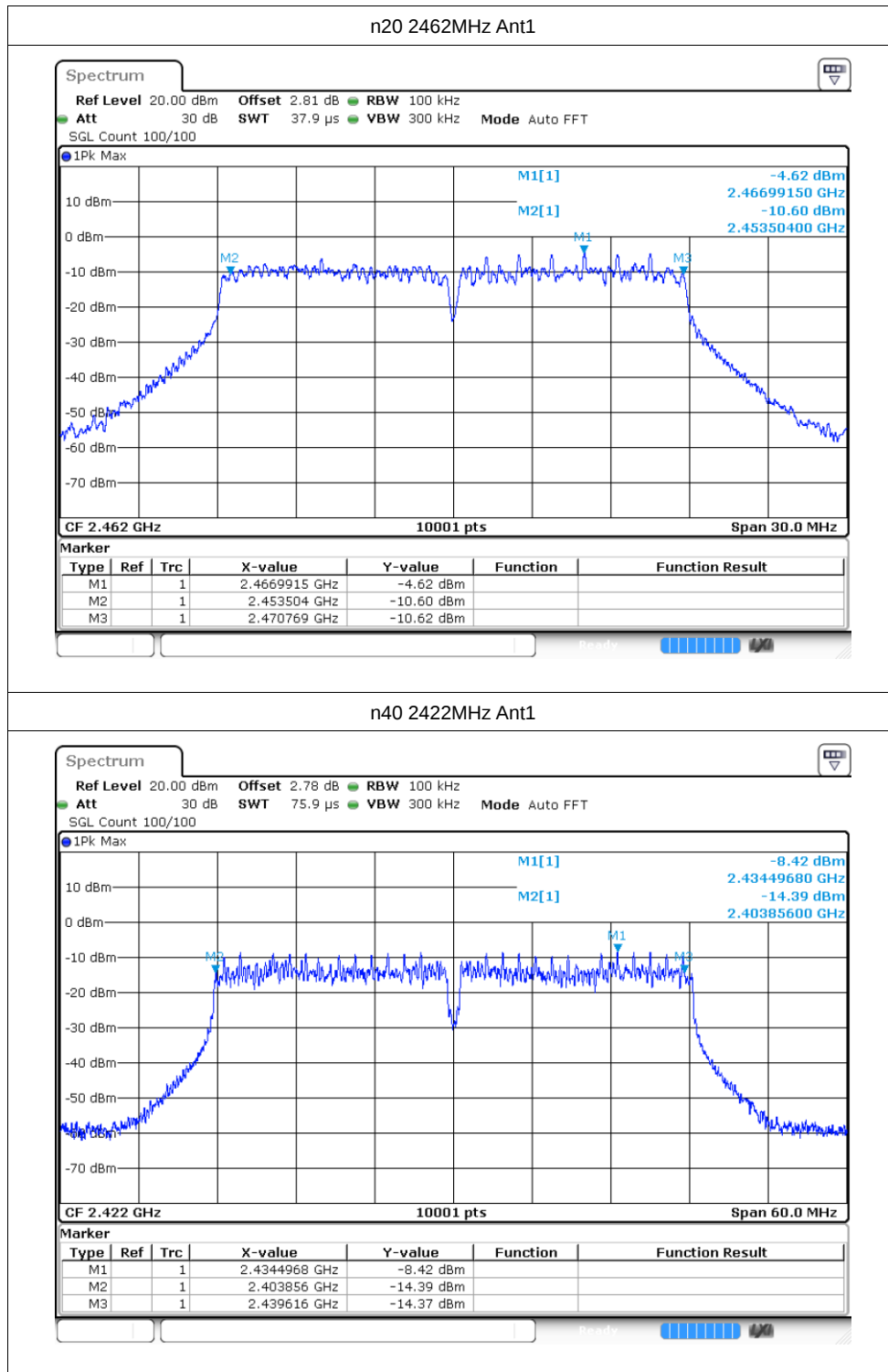
g 2437MHz Ant1

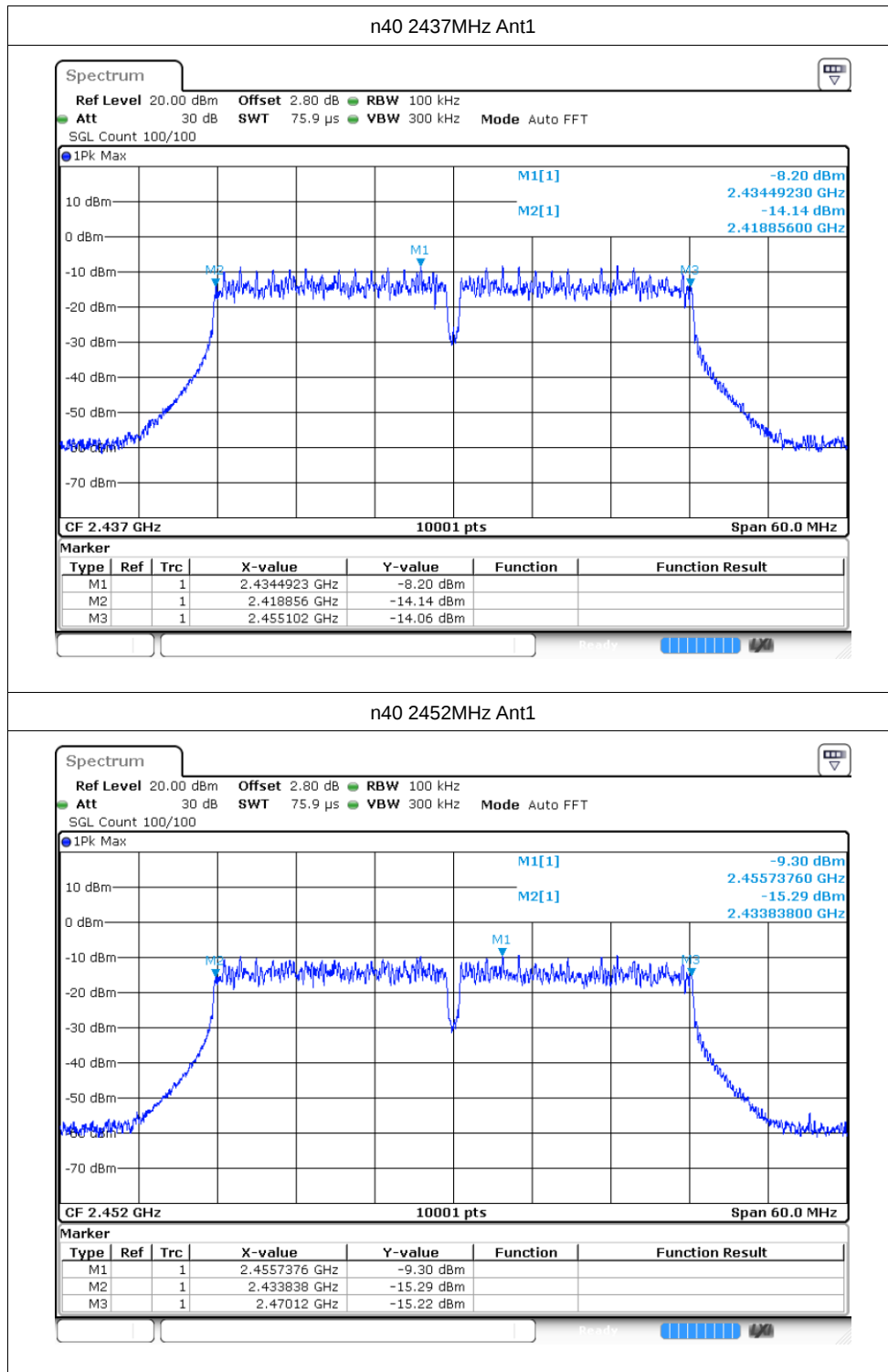


g 2462MHz Ant1







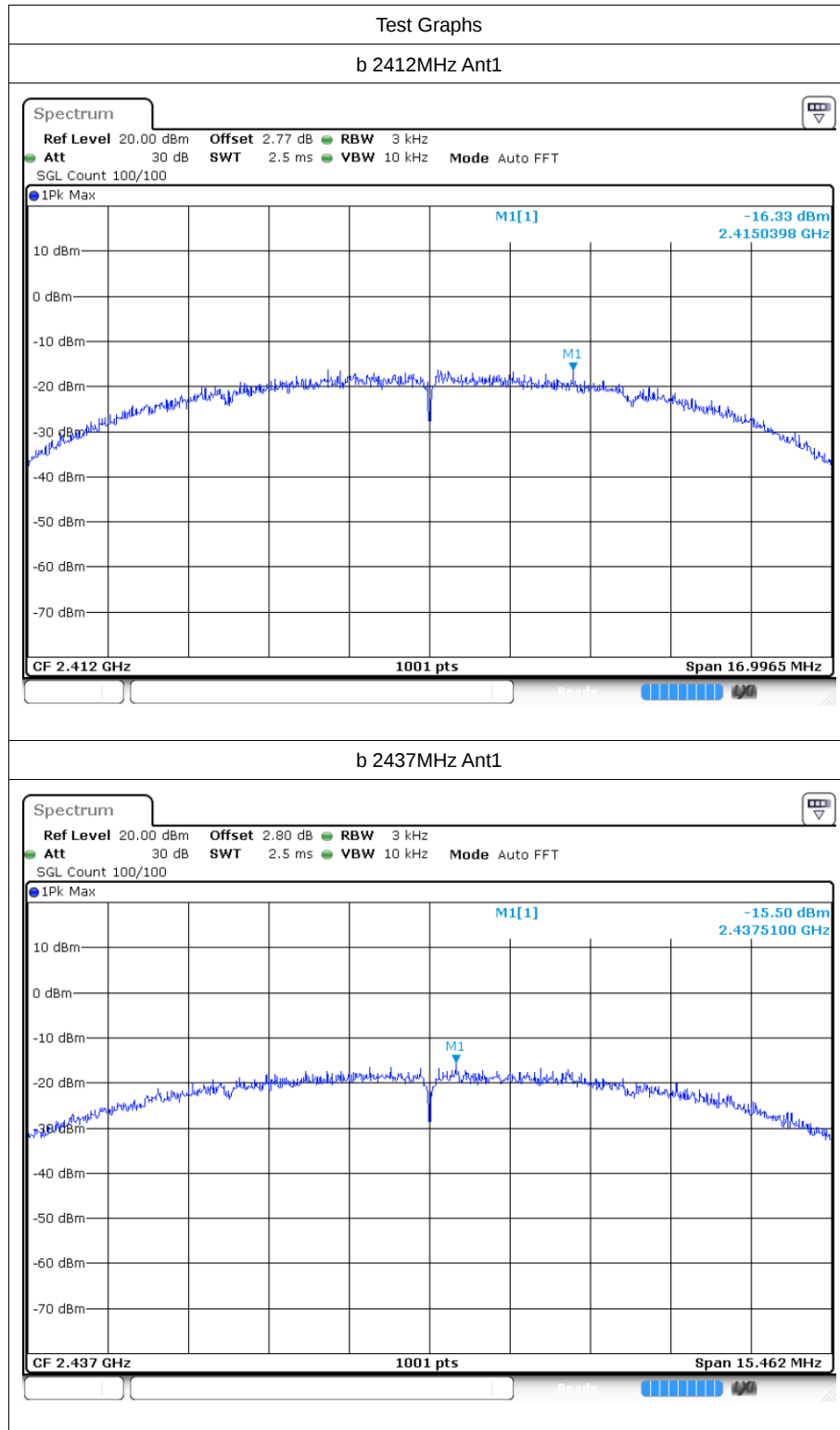


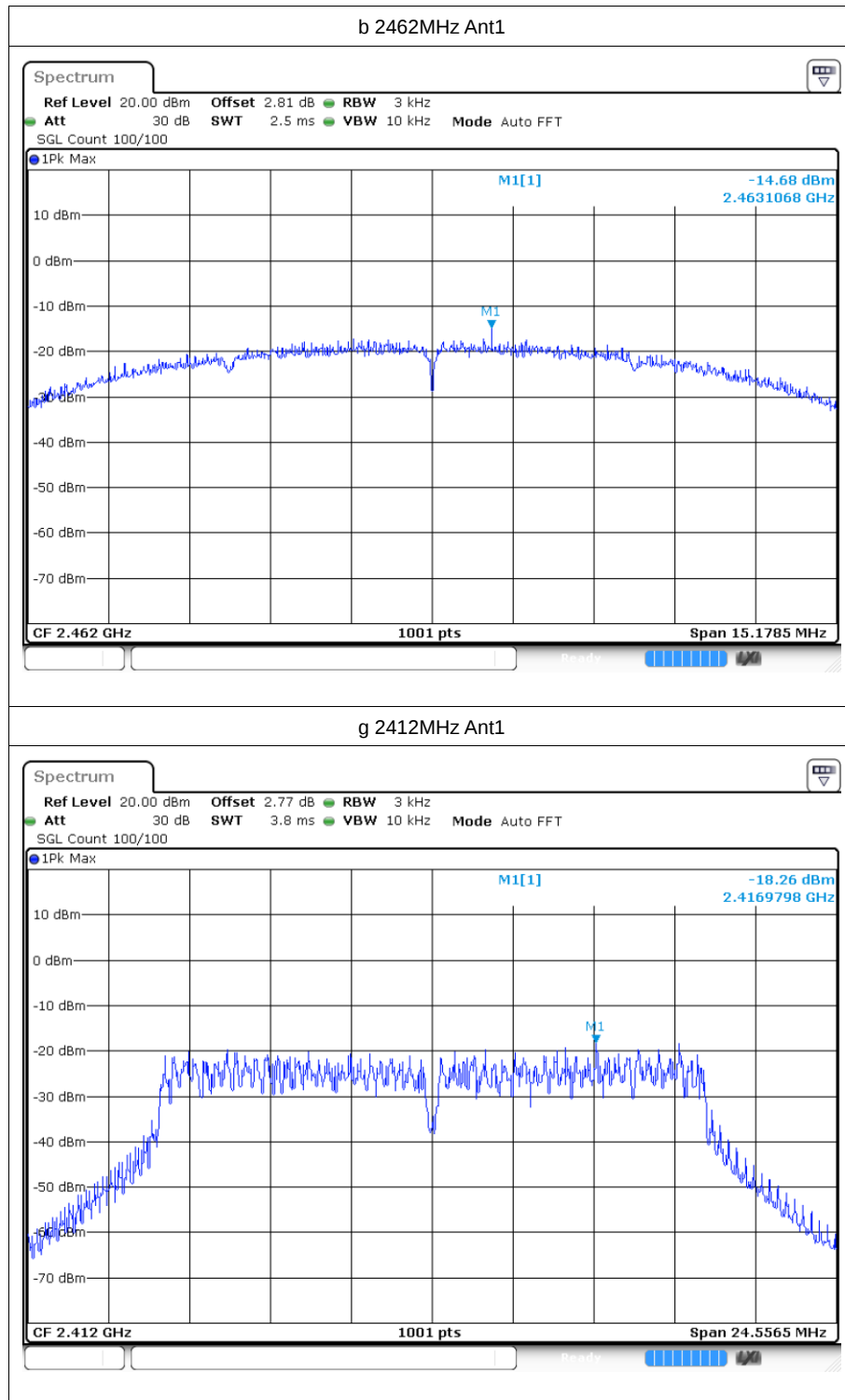
4 Maximum Power Spectral Density Level

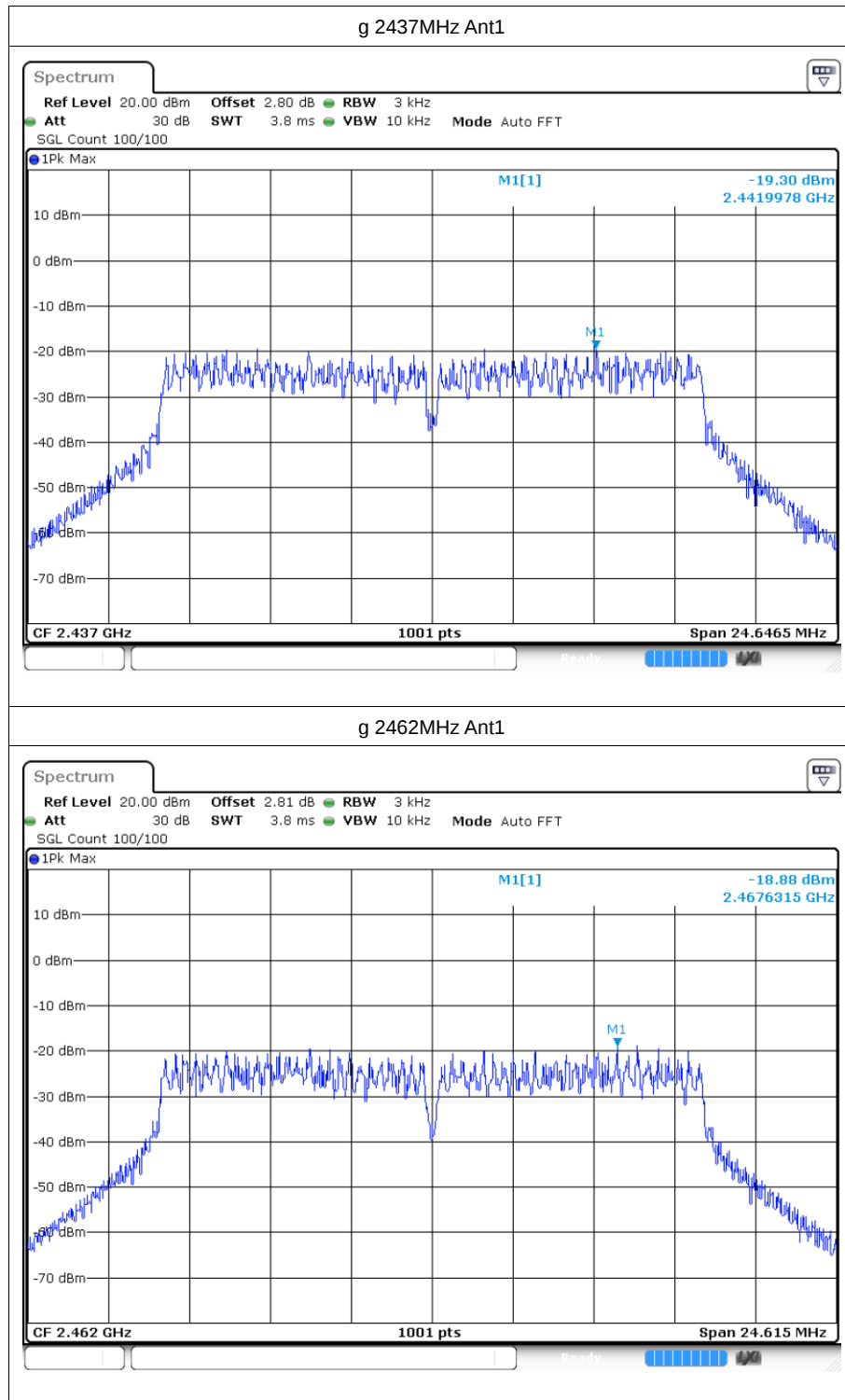
4.1 Test Result

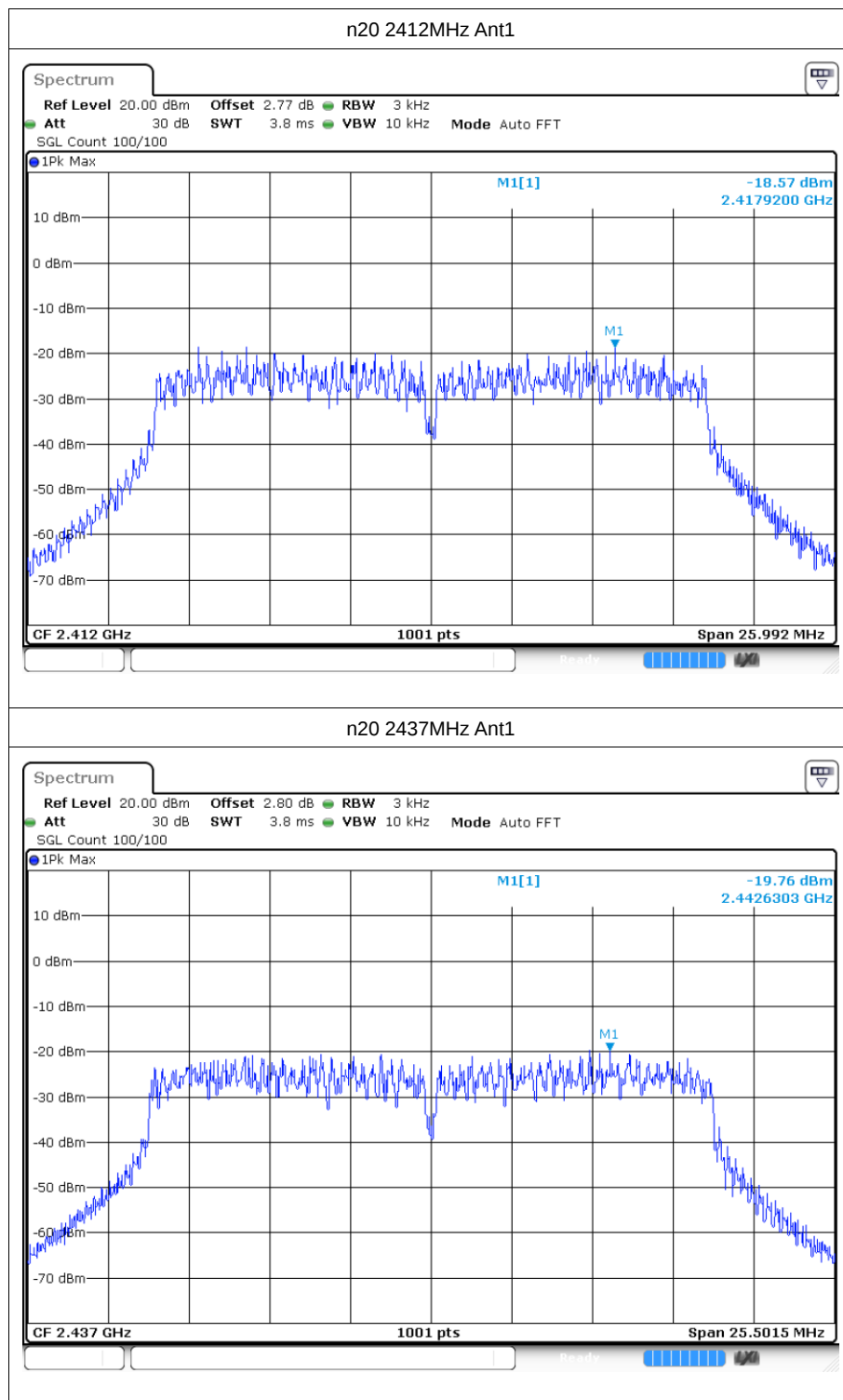
Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3-100kHz)	Limit (dBm/3kHz)	Verdict
b	2412	Ant1	-16.33	≤ 8	Pass
b	2437	Ant1	-15.5	≤ 8	Pass
b	2462	Ant1	-14.68	≤ 8	Pass
g	2412	Ant1	-18.26	≤ 8	Pass
g	2437	Ant1	-19.3	≤ 8	Pass
g	2462	Ant1	-18.88	≤ 8	Pass
n20	2412	Ant1	-18.57	≤ 8	Pass
n20	2437	Ant1	-19.76	≤ 8	Pass
n20	2462	Ant1	-19.96	≤ 8	Pass
n40	2422	Ant1	-22.93	≤ 8	Pass
n40	2437	Ant1	-22.95	≤ 8	Pass
n40	2452	Ant1	-22.77	≤ 8	Pass

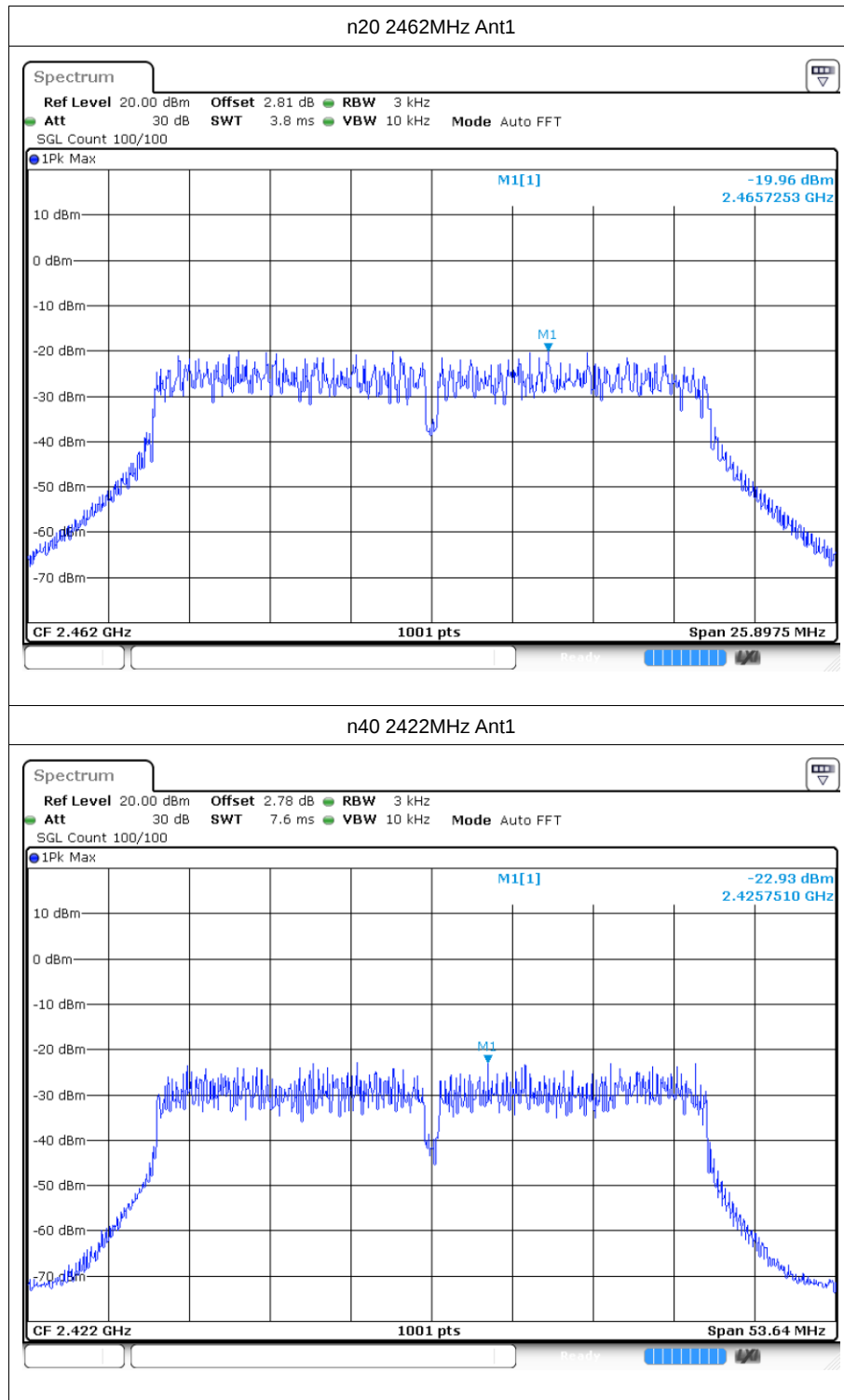
4.2 Test Graphs

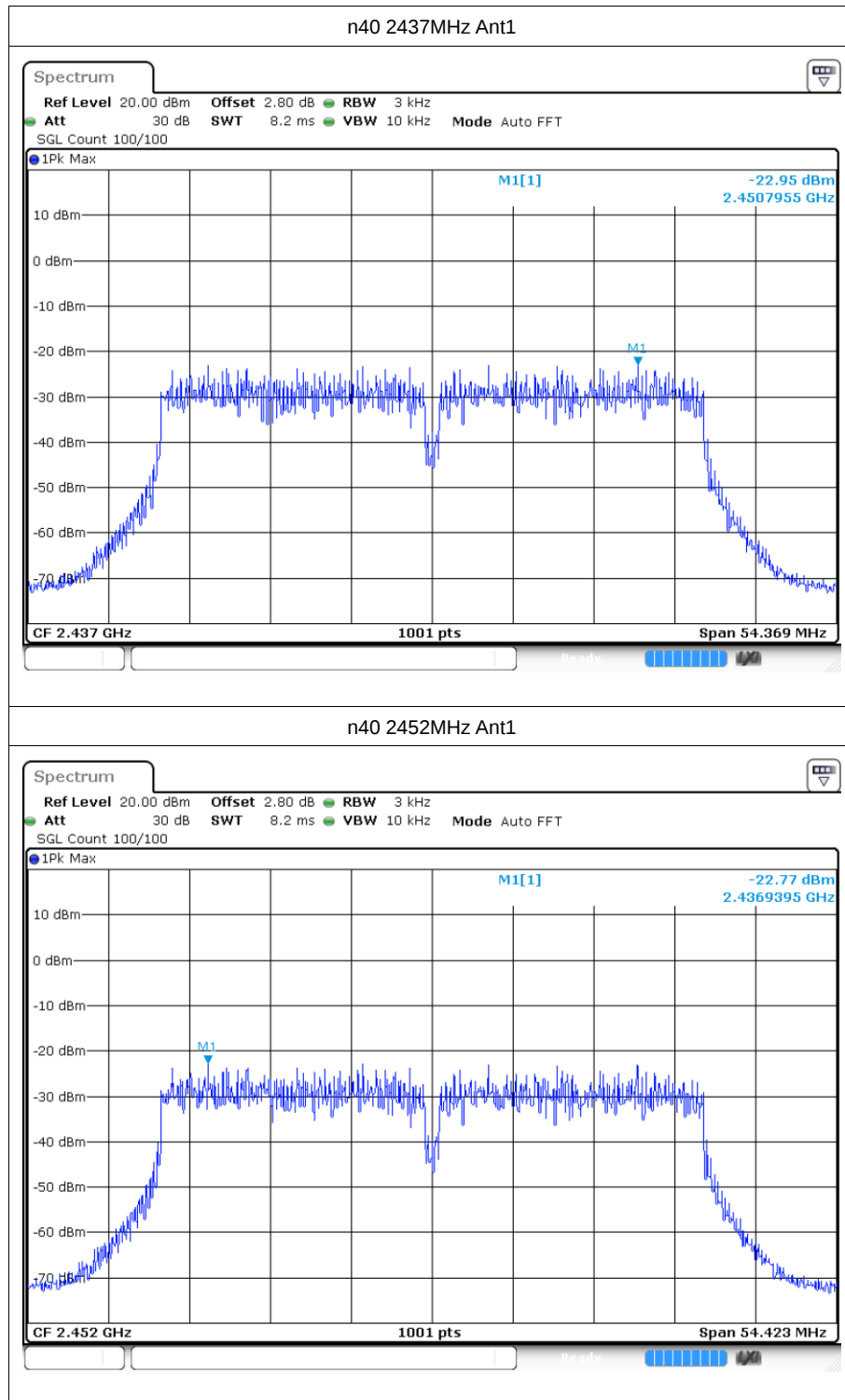












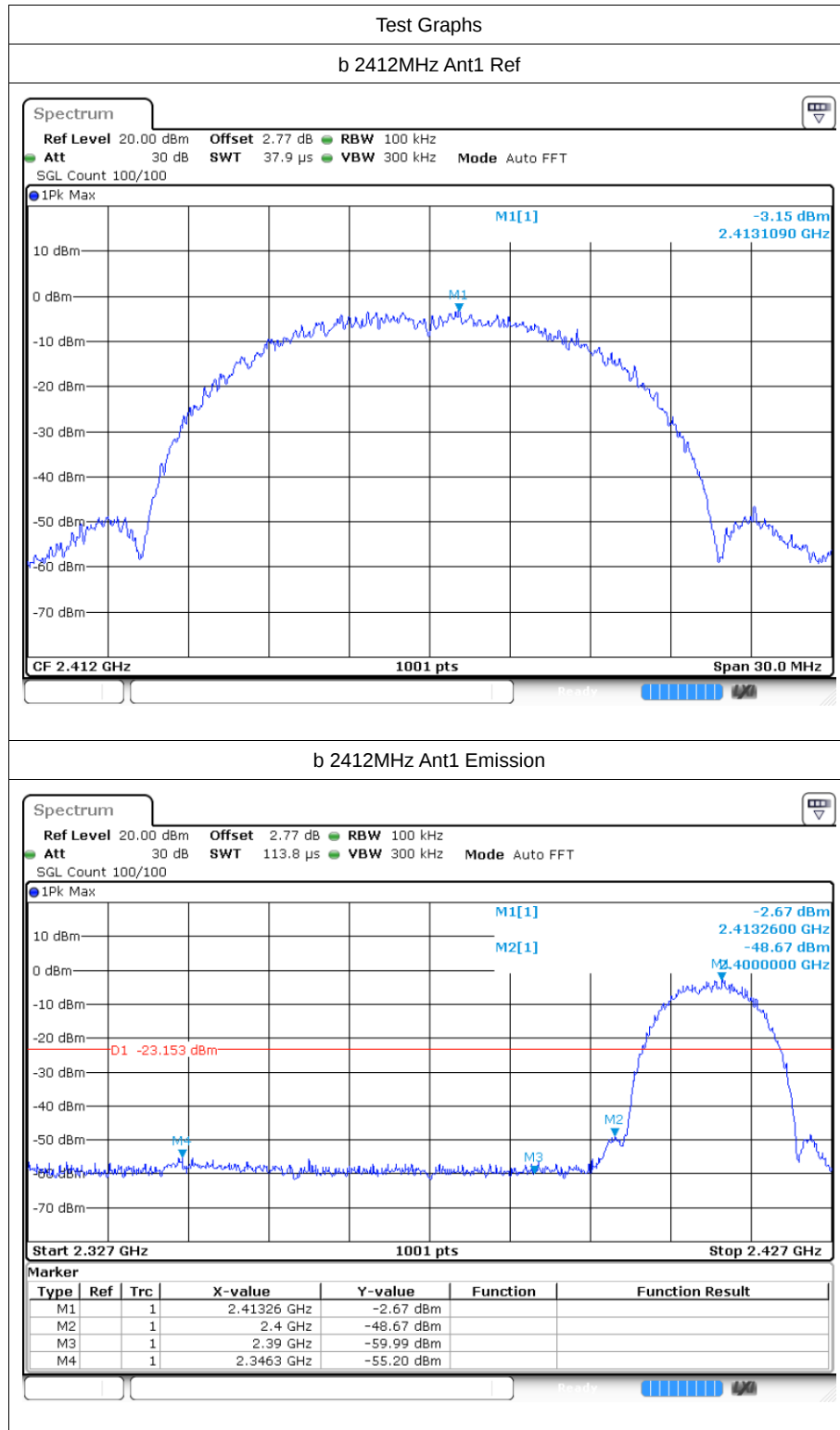


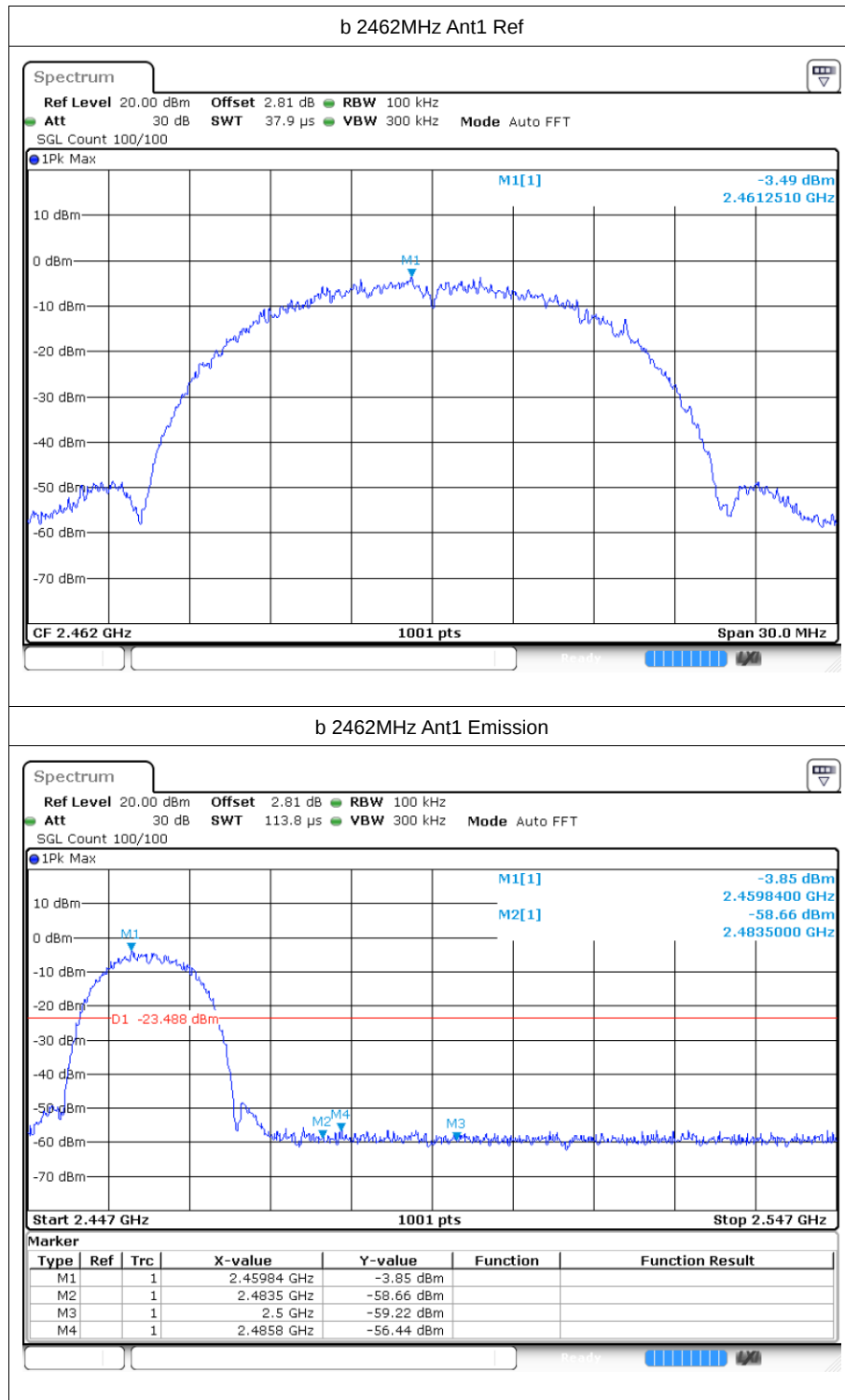
5 Band Edge

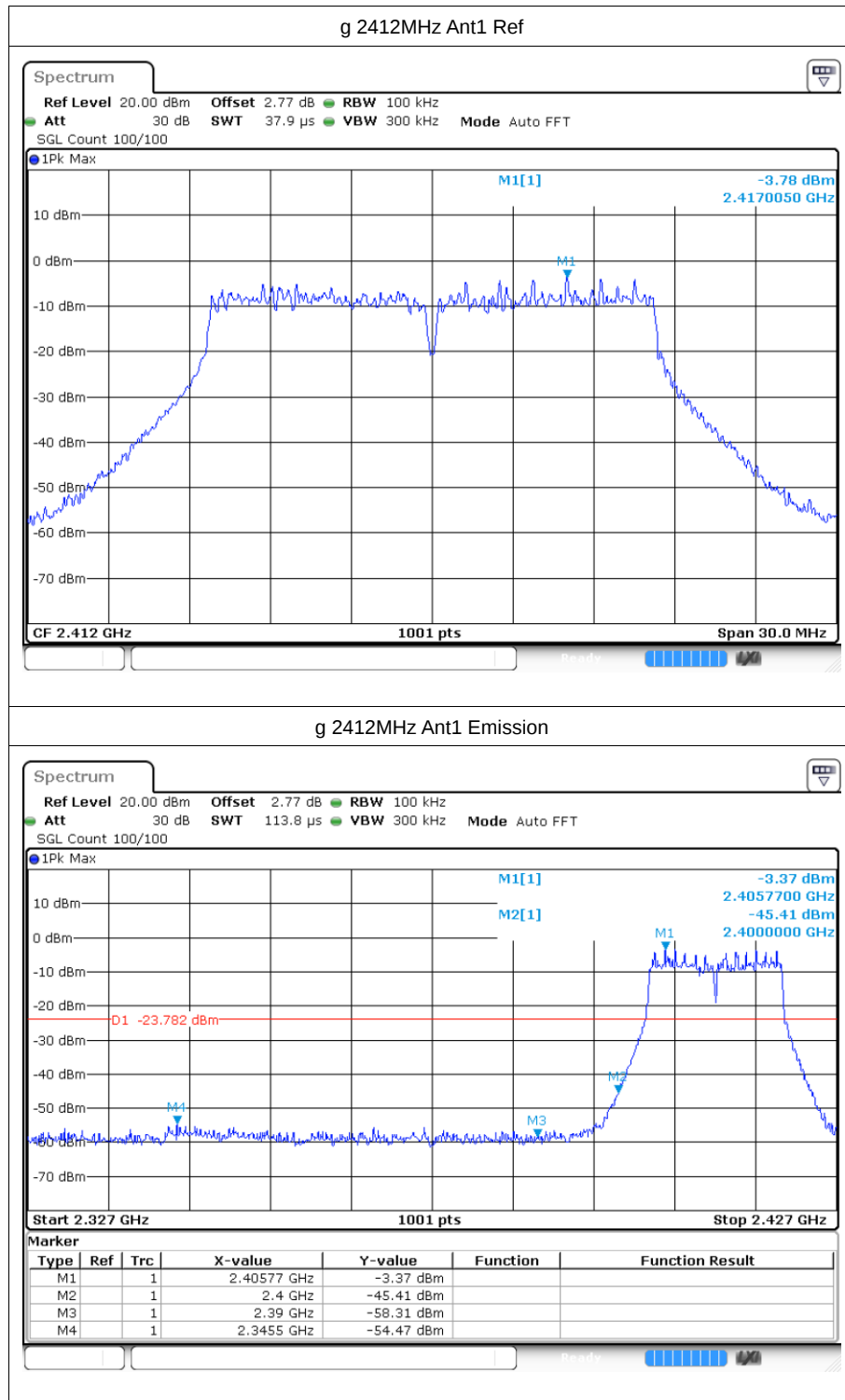
5.1 Test Result

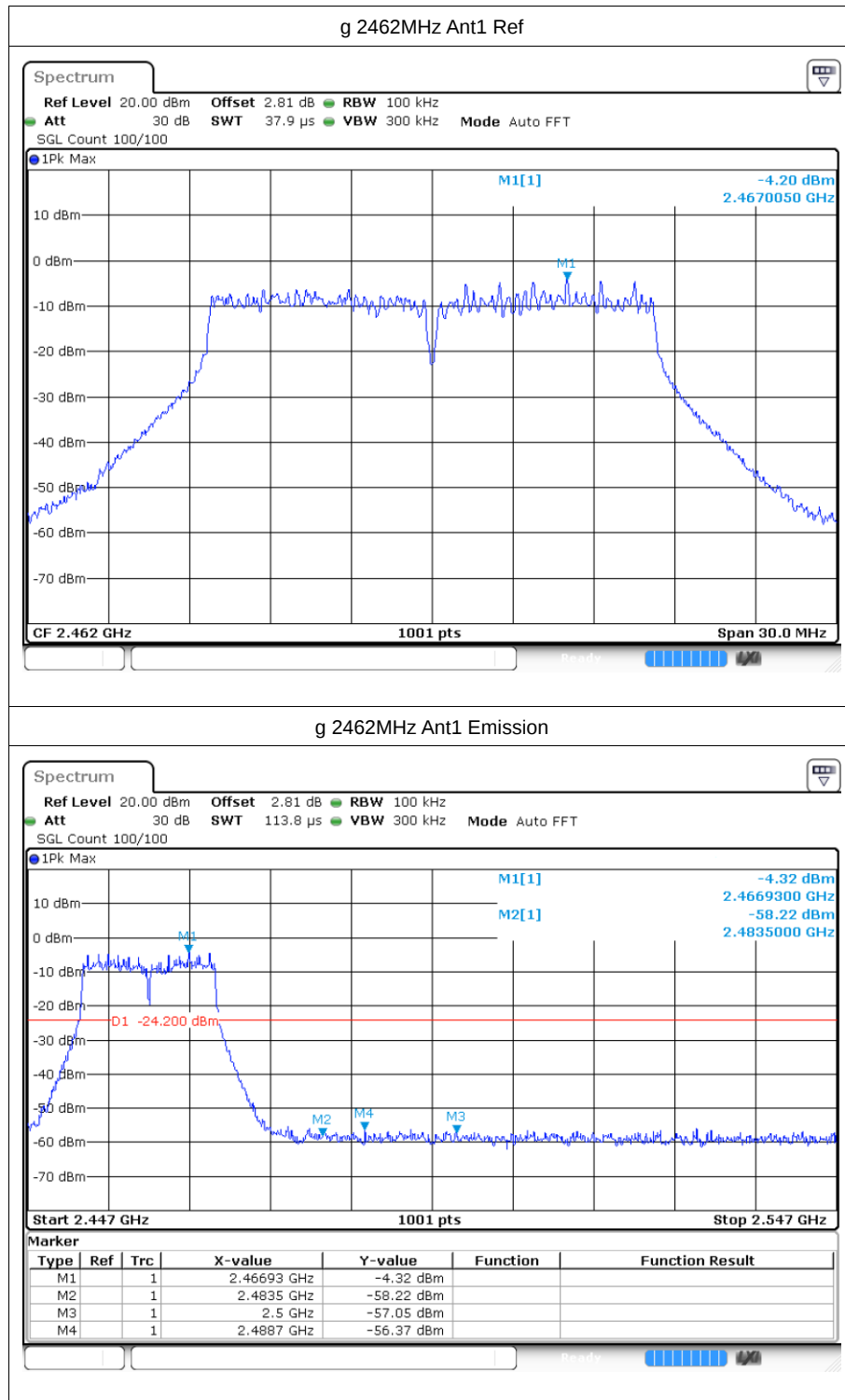
Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
b	2412	Ant1	-52.04	-20	-52.04
b	2462	Ant1	-52.94	-20	Pass
g	2412	Ant1	-50.69	-20	Pass
g	2462	Ant1	-52.16	-20	Pass
n20	2412	Ant1	-50.94	-20	Pass
n20	2462	Ant1	-51.41	-20	Pass
n40	2422	Ant1	-47.41	-20	Pass
n40	2452	Ant1	-46.75	-20	Pass

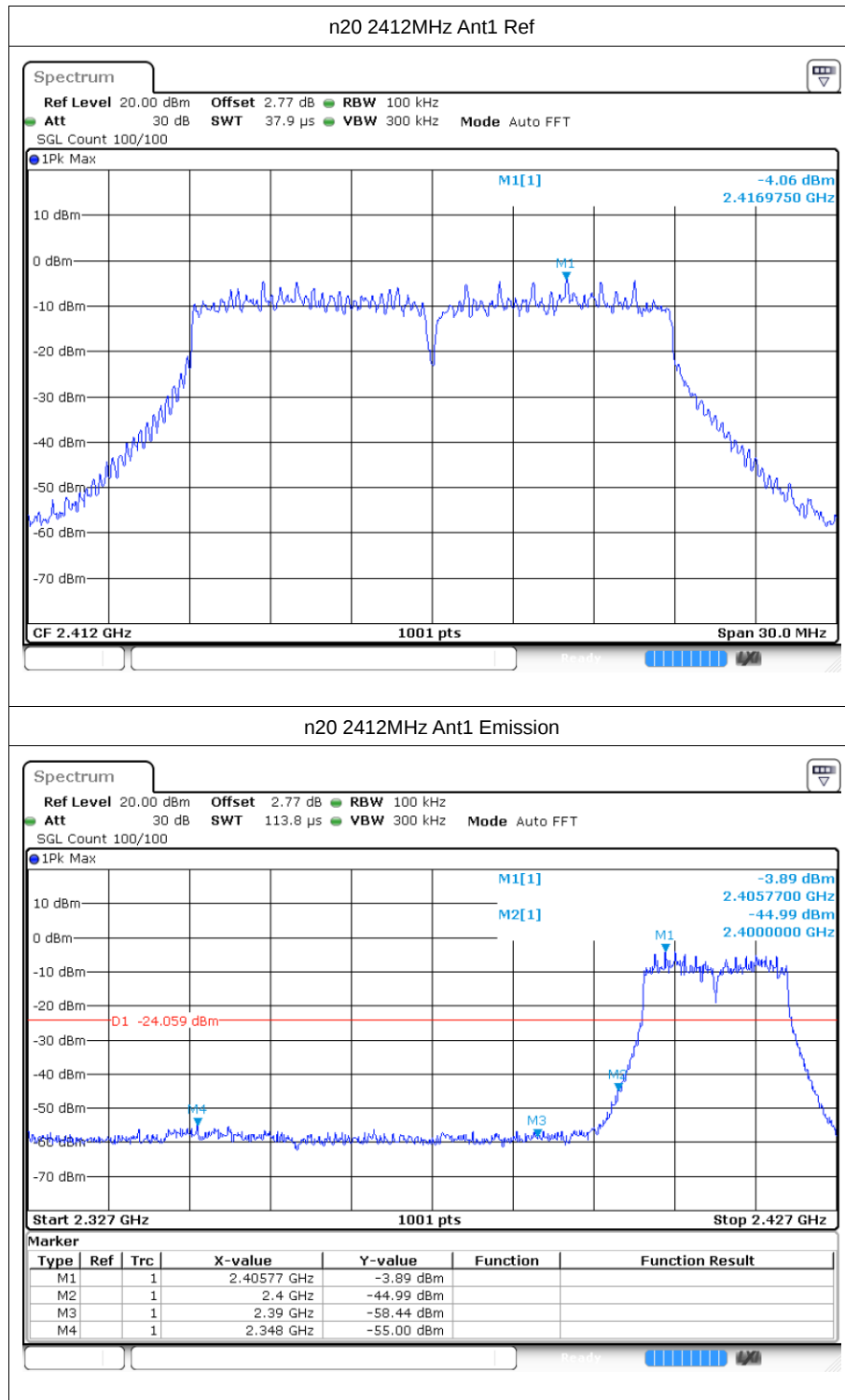
5.2 Test Graphs

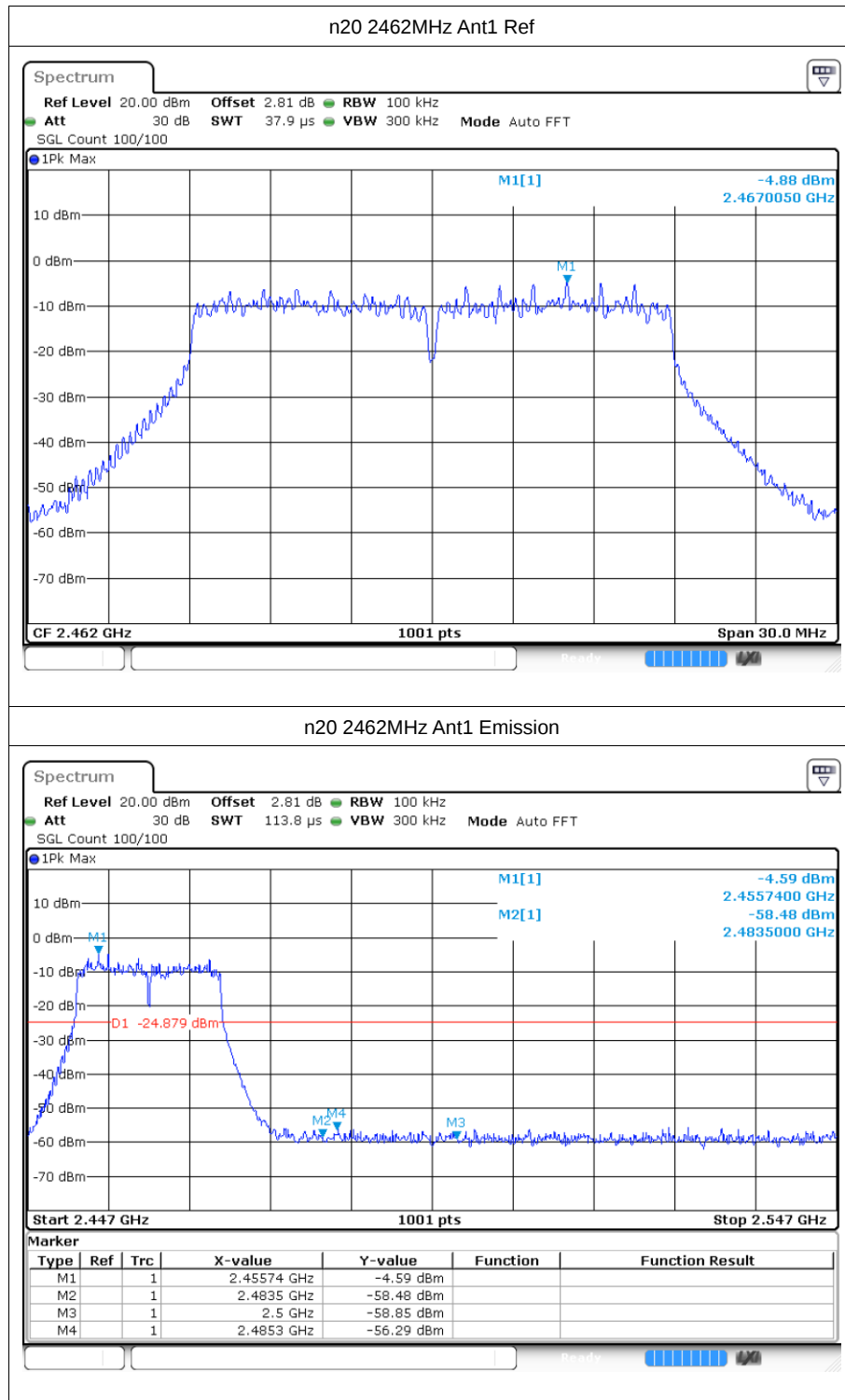


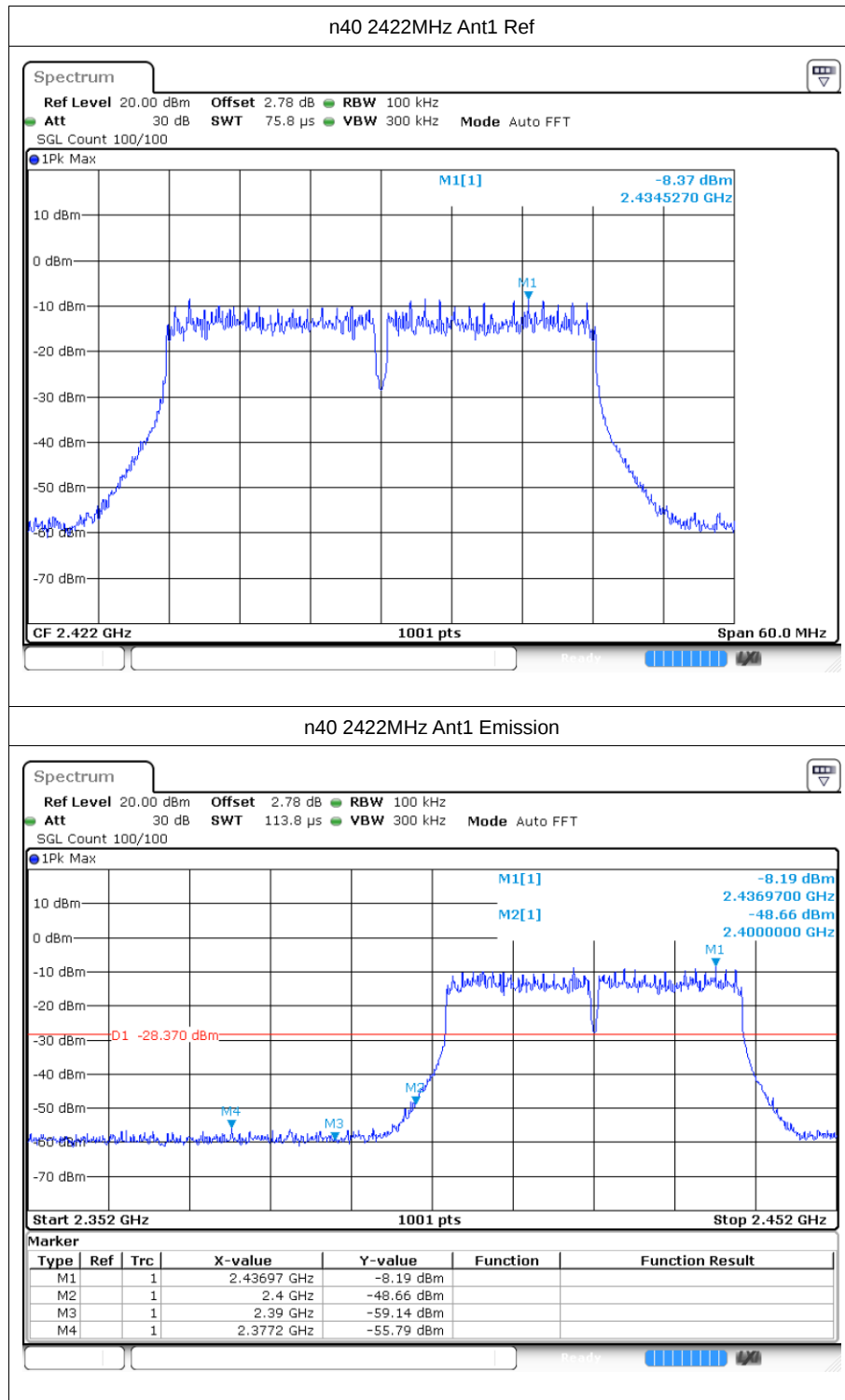


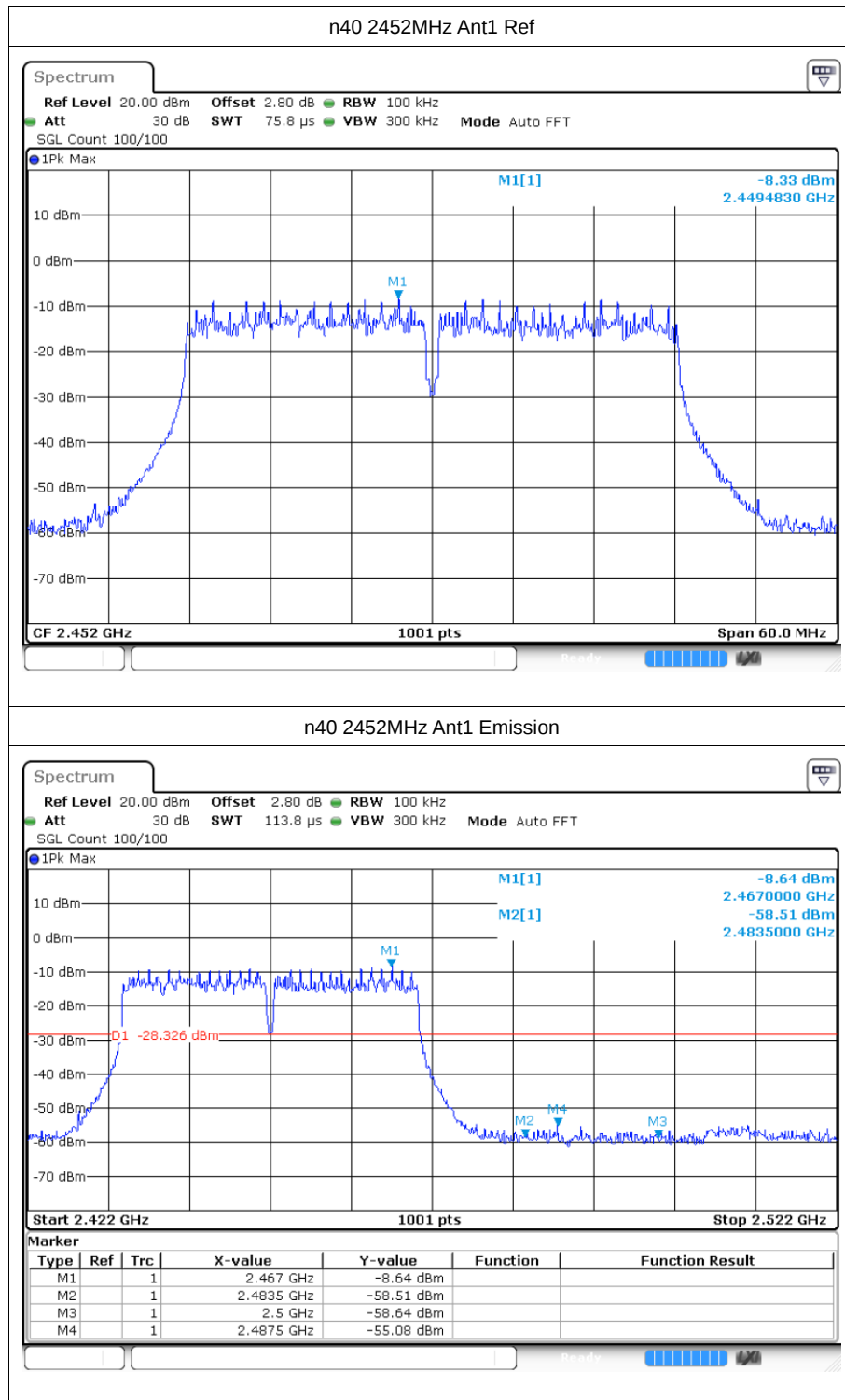














6 Conducted RF Spurious Emission

6.1 Test Result

Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
b	2412	Ant1	-40.44	-20	Pass
b	2437	Ant1	-39.27	-20	Pass
b	2462	Ant1	-40.21	-20	Pass
g	2412	Ant1	-37.43	-20	Pass
g	2437	Ant1	-39.5	-20	Pass
g	2462	Ant1	-39.57	-20	Pass
n20	2412	Ant1	-38.89	-20	Pass
n20	2437	Ant1	-38.85	-20	Pass
n20	2462	Ant1	-38.31	-20	Pass
n40	2422	Ant1	-33.76	-20	Pass
n40	2437	Ant1	-35.34	-20	Pass
n40	2452	Ant1	-35.65	-20	Pass

6.2 Test Graphs

