



Appendix C

RF Test Data for 2.4GWIFI (Conducted Measurement)

Product Name: FDM 3D Printer

Trade Mark: ELEGOO

Test Model: OrangeStorm Giga

Environmental Conditions

Temperature:	24.5° C
Relative Humidity:	52.2%
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	9
2.1 Test Result	9
3 -6dB Bandwidth	10
3.1 Test Result	10
3.2 Test Graphs	11
4 Maximum Power Spectral Density Level	16
4.1 Test Result	16
4.2 Test Graphs	17
5 Band Edge	22
5.1 Test Result	22
5.2 Test Graphs	23
6 Conducted RF Spurious Emission	29
6.1 Test Result	29
6.2 Test Graphs	30
7 Restrict Band	39
7.1 Test Result	39
7.2 Test Graphs	41

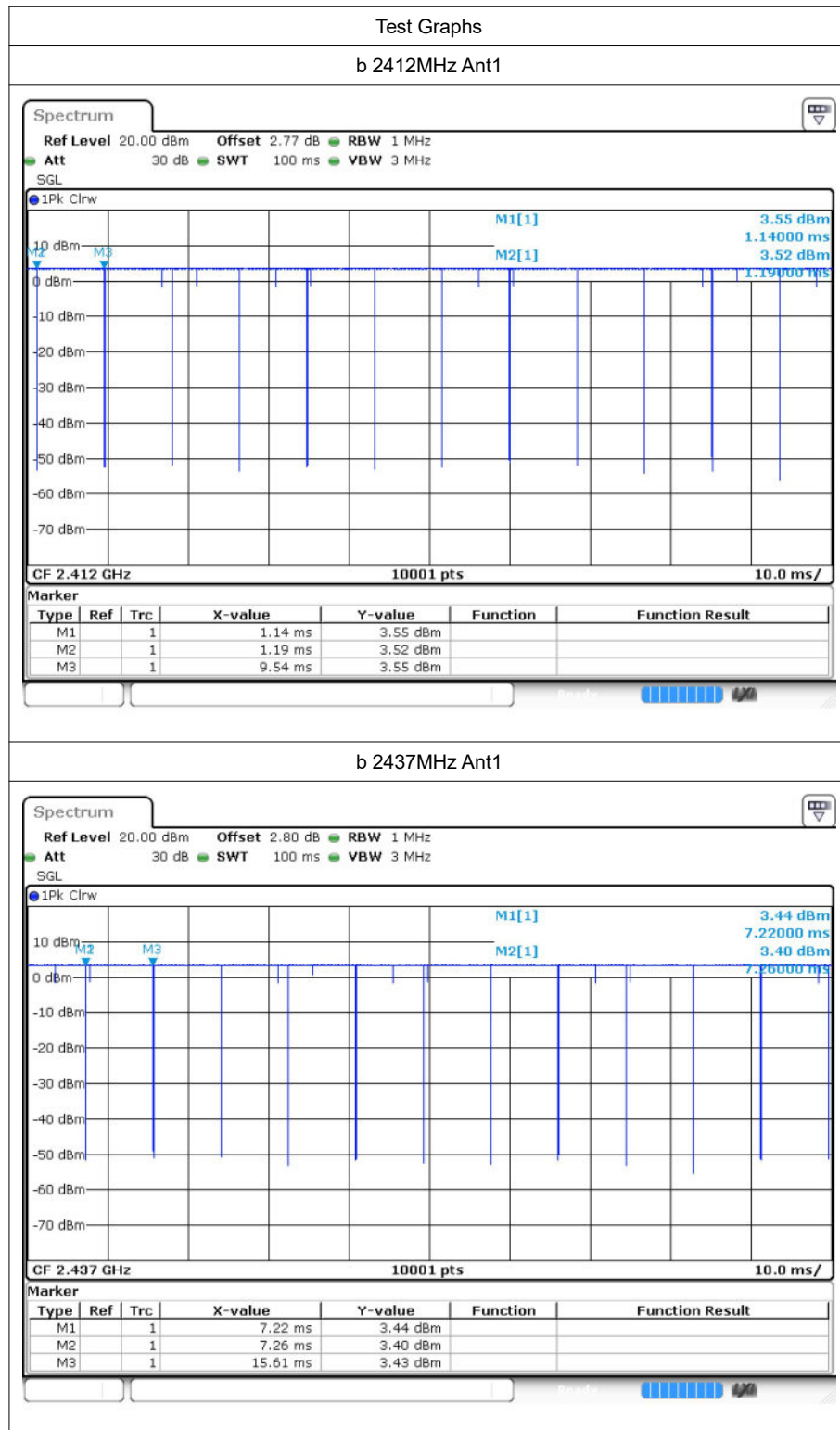


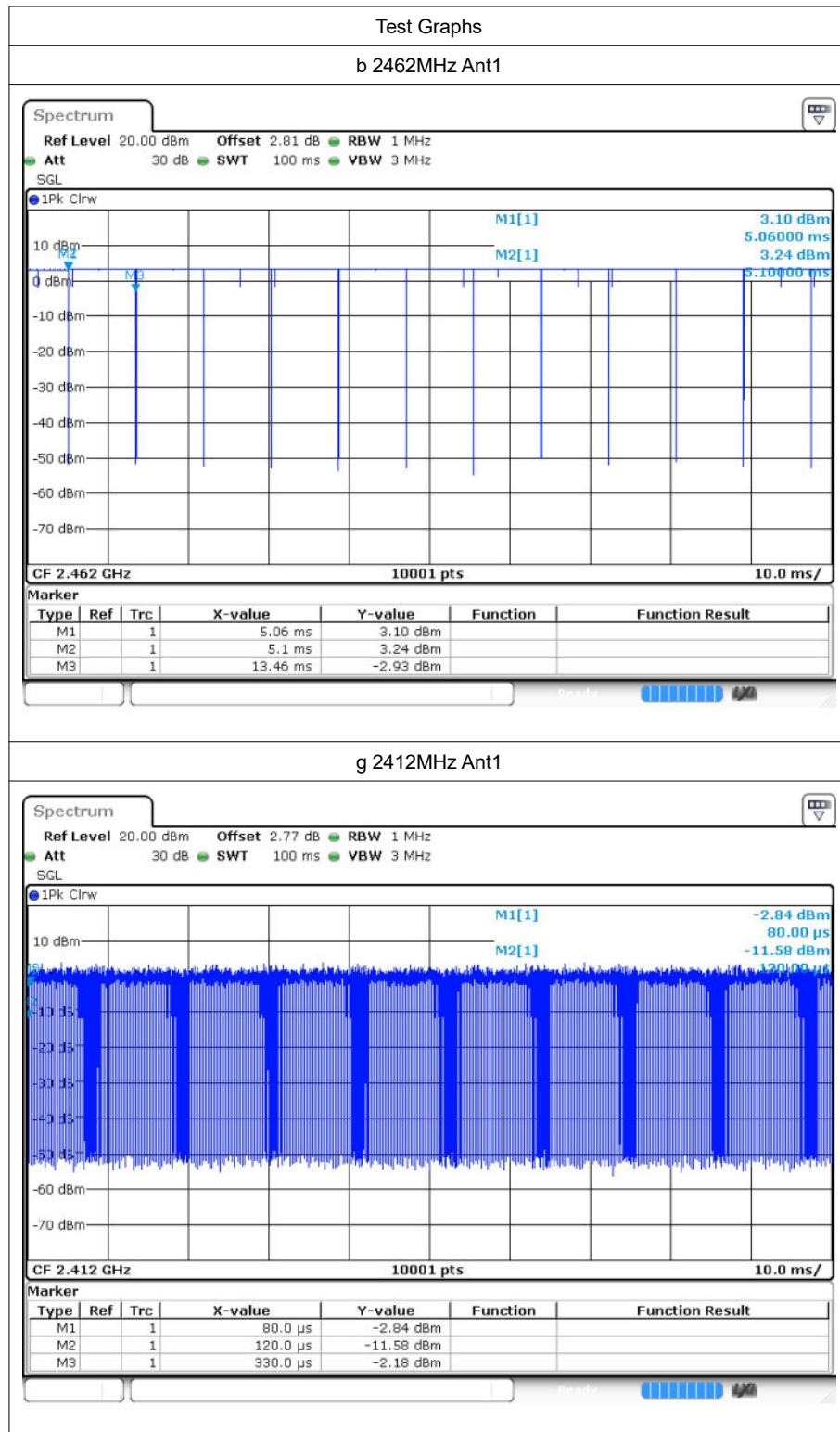
1 Duty Cycle

1.1 Test Result

Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor	1/T (kHz)
b	2412	Ant1	99.6	0.02	0.12
b	2437	Ant1	99.6	0.02	0.12
b	2462	Ant1	99.6	0.02	0.12
g	2412	Ant1	86.95	0.61	4.76
g	2437	Ant1	86.77	0.62	4.55
g	2462	Ant1	86.95	0.61	4.76
n20	2412	Ant1	87.53	0.58	4.35
n20	2437	Ant1	87.57	0.58	4.17
n20	2462	Ant1	87.56	0.58	4.35

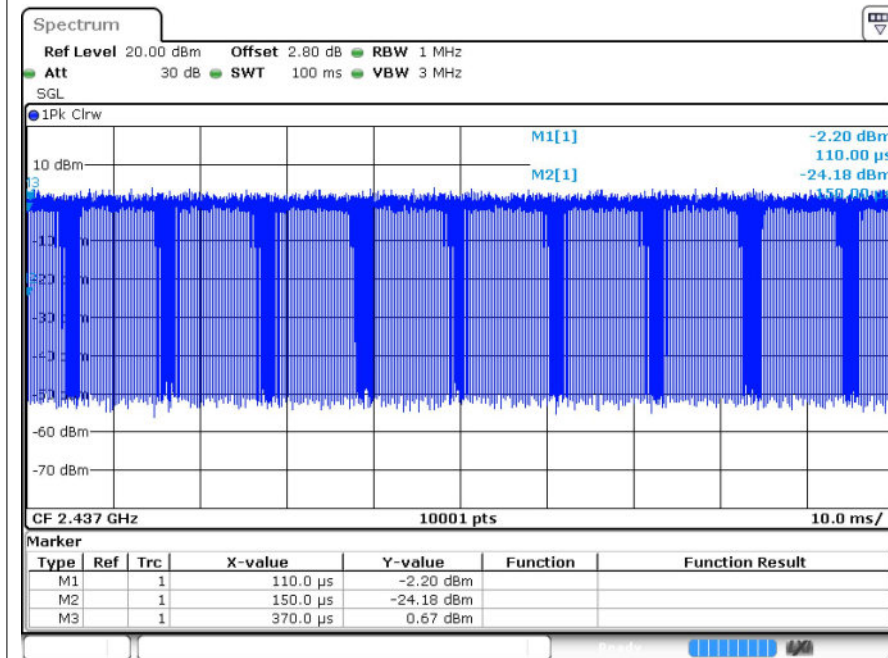
1.2 Test Graphs



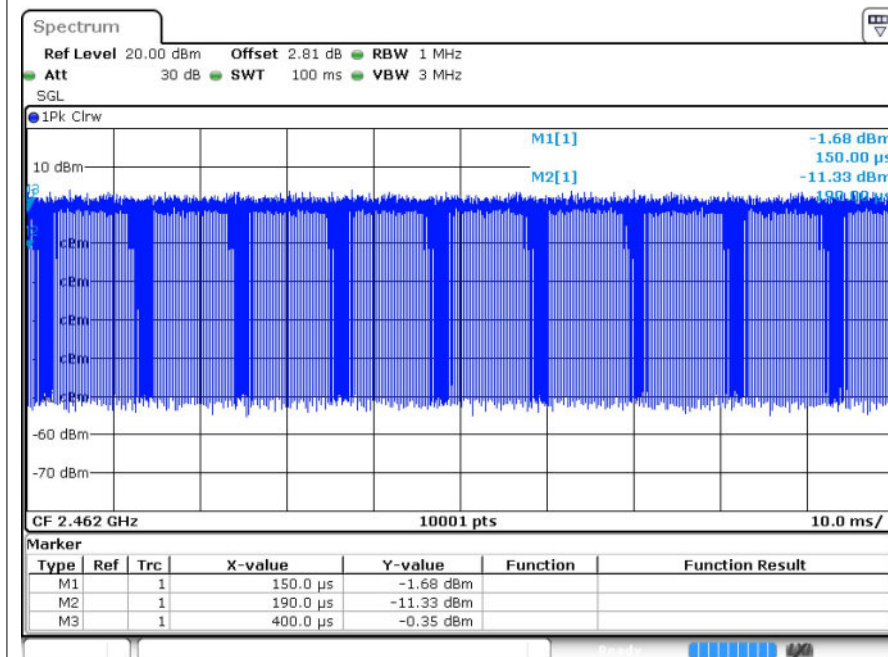


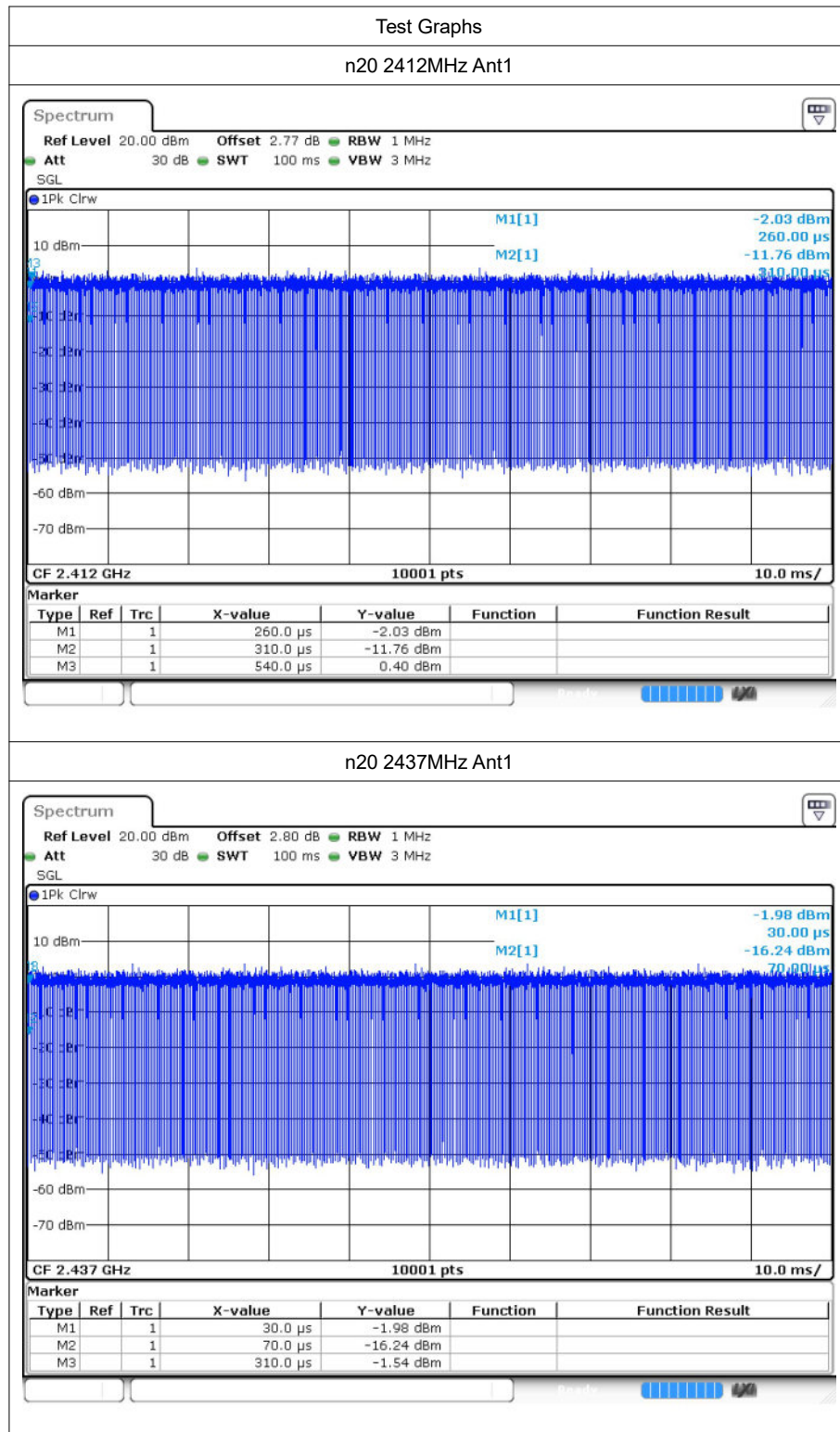
Test Graphs

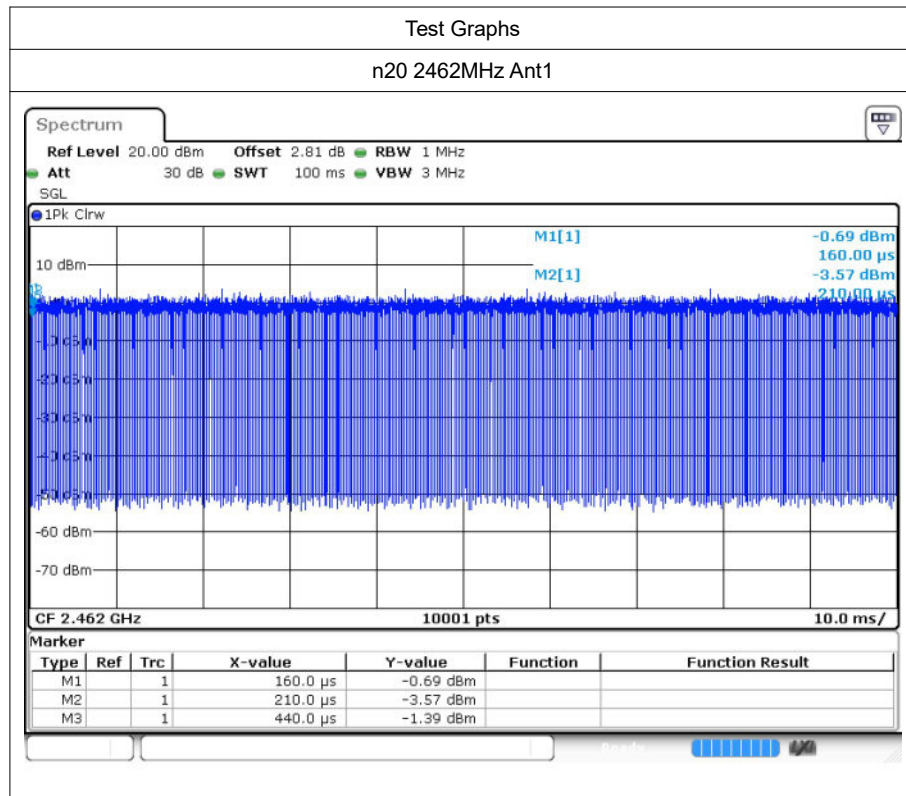
g 2437MHz Ant1



g 2462MHz Ant1









2 Maximum Conducted Output Power

2.1 Test Result

Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
b	2412	Ant1	13.69	30	Pass
b	2437	Ant1	13.65	30	Pass
b	2462	Ant1	13.49	30	Pass
g	2412	Ant1	13.1	30	Pass
g	2437	Ant1	13.11	30	Pass
g	2462	Ant1	12.79	30	Pass
n20	2412	Ant1	12.51	30	Pass
n20	2437	Ant1	12.49	30	Pass
n20	2462	Ant1	12.34	30	Pass

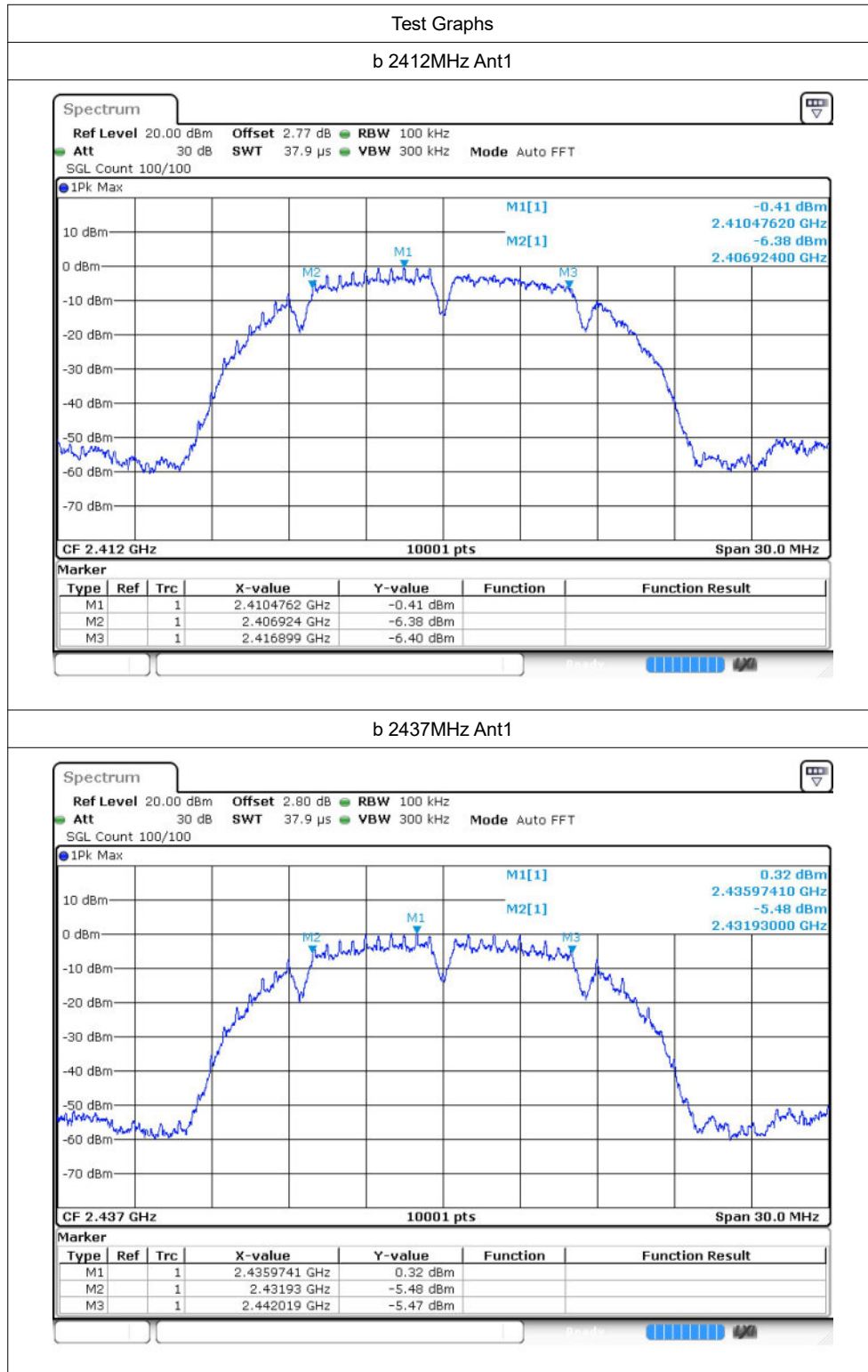


3 -6dB Bandwidth

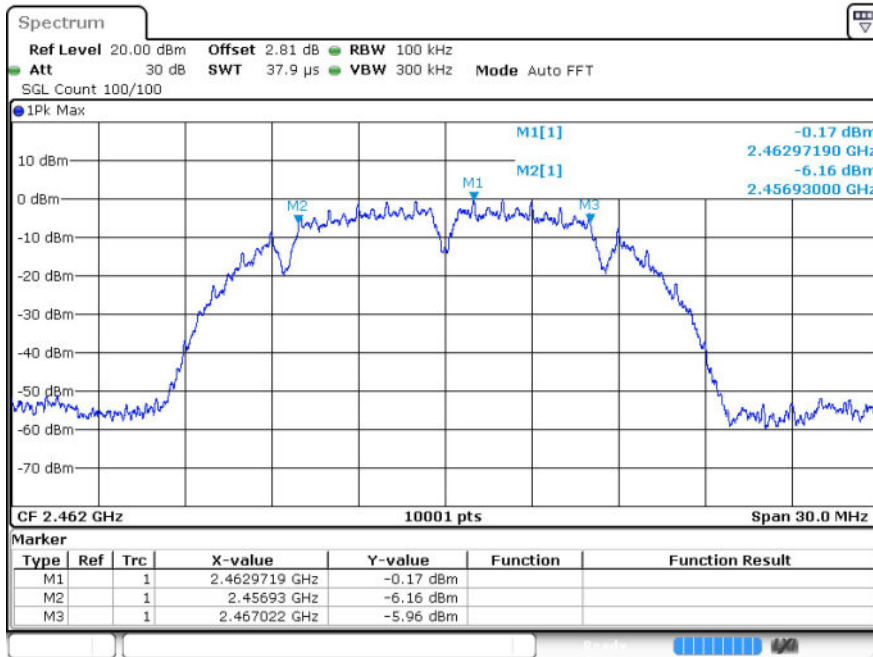
3.1 Test Result

Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
b	2412	Ant1	9.975	0.5	Pass
b	2437	Ant1	10.089	0.5	Pass
b	2462	Ant1	10.092	0.5	Pass
g	2412	Ant1	15.114	0.5	Pass
g	2437	Ant1	15.117	0.5	Pass
g	2462	Ant1	12.624	0.5	Pass
n20	2412	Ant1	15.102	0.5	Pass
n20	2437	Ant1	15.117	0.5	Pass
n20	2462	Ant1	15.078	0.5	Pass

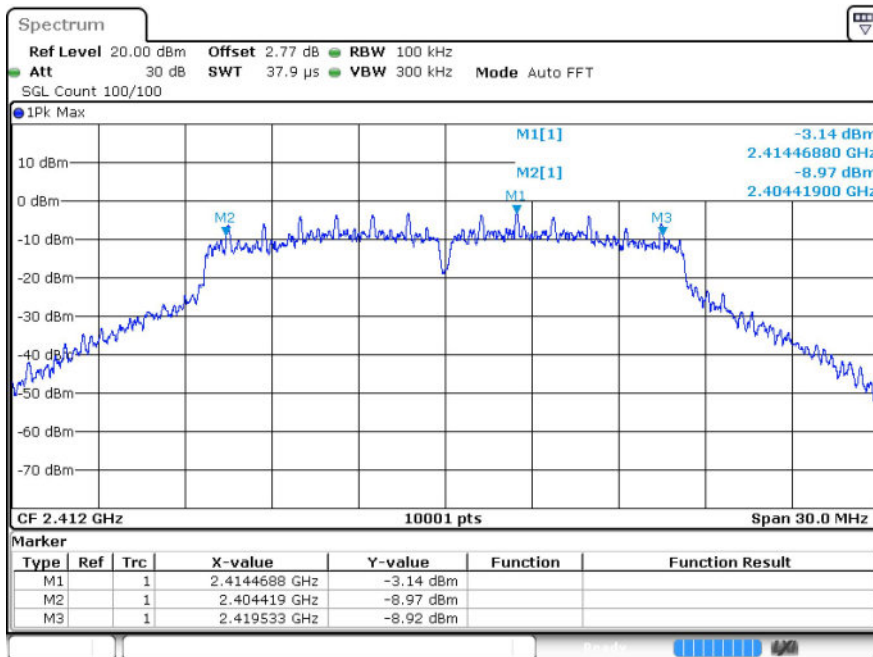
3.2 Test Graphs



b 2462MHz Ant1

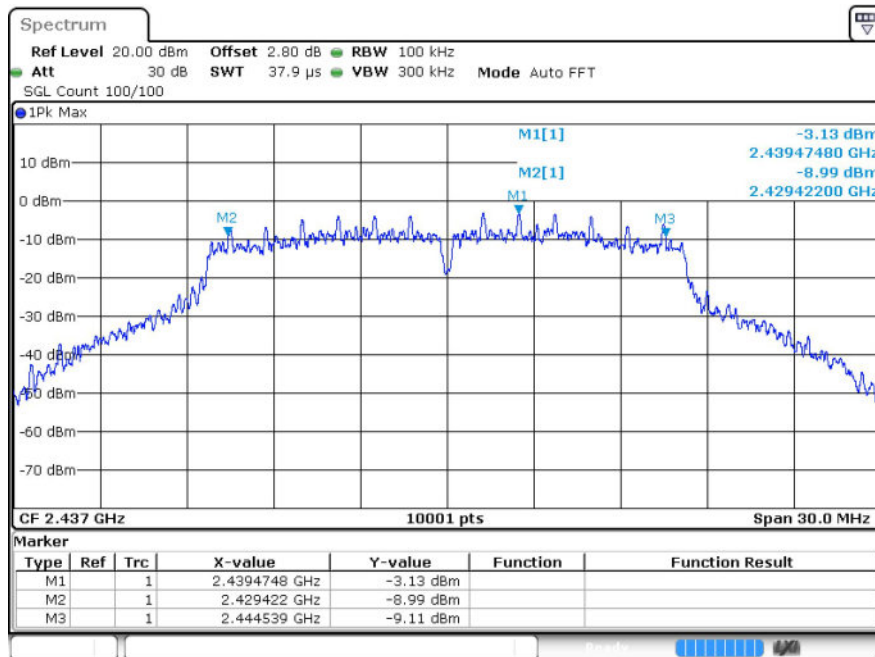


g 2412MHz Ant1

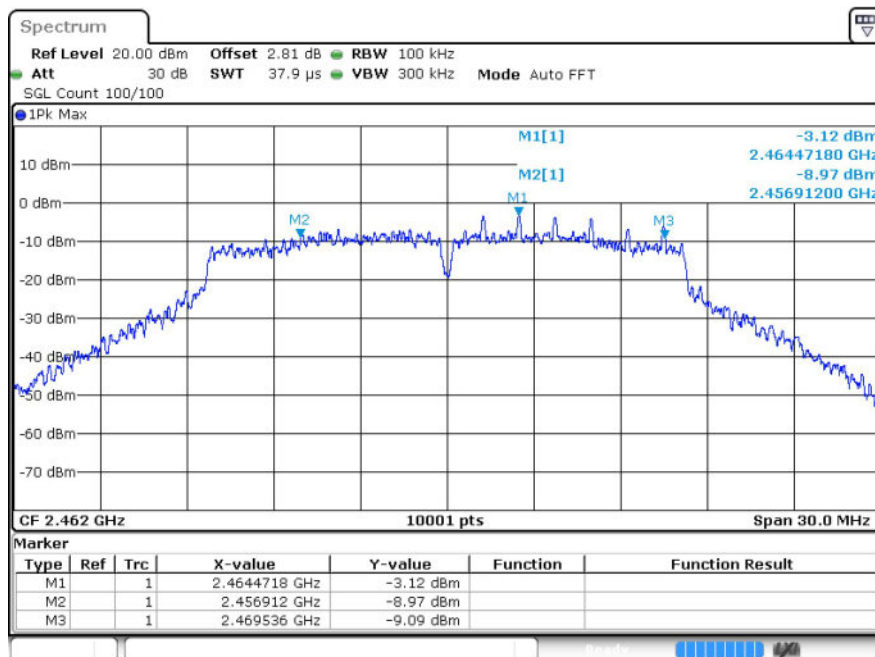


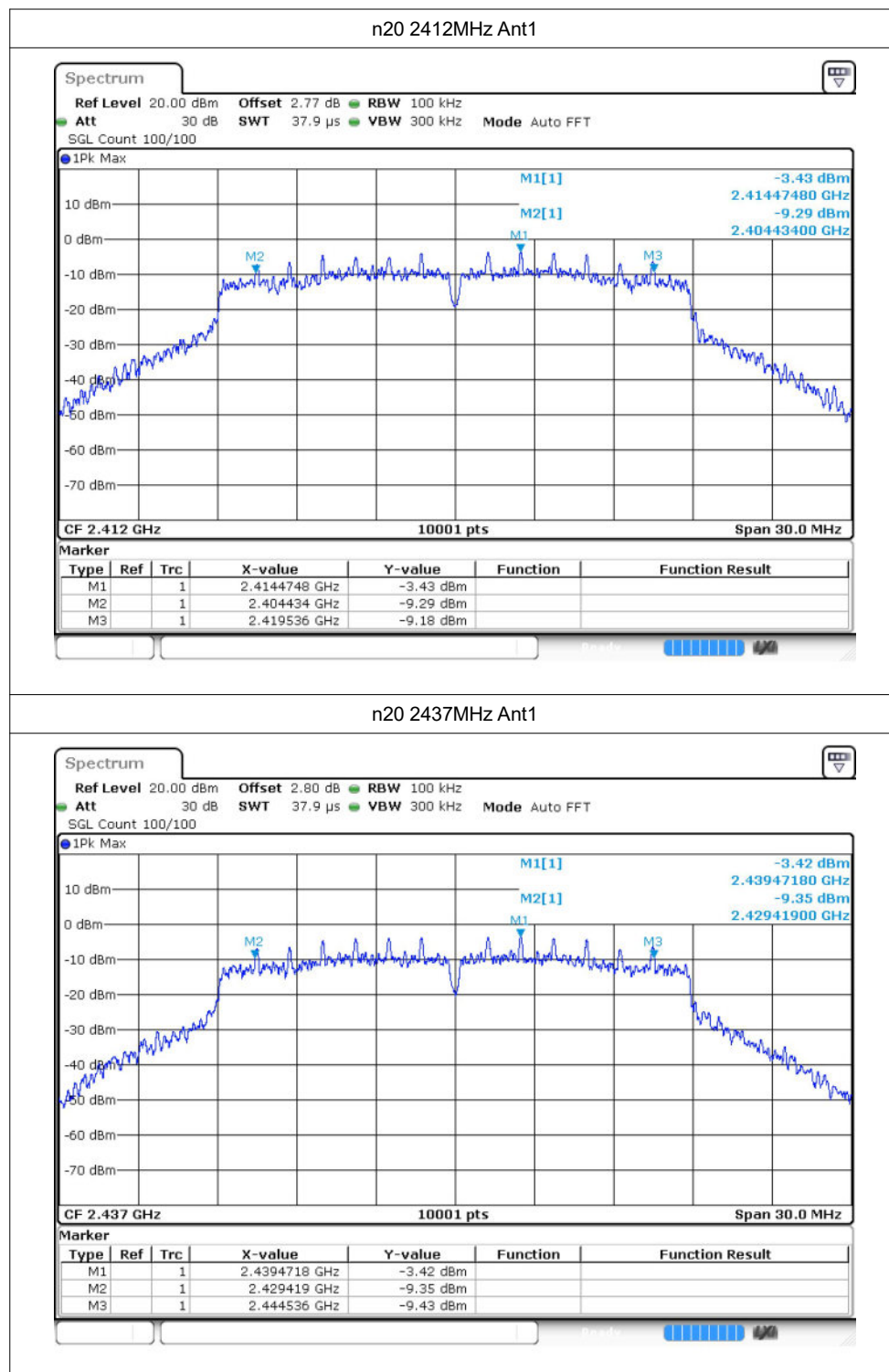


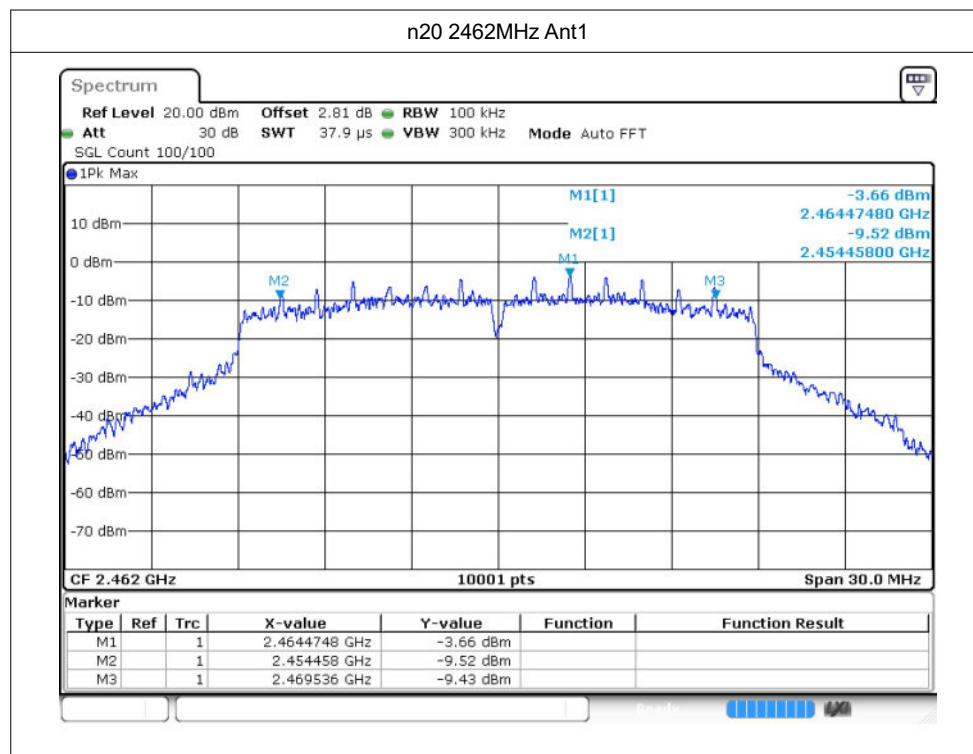
g 2437MHz Ant1



g 2462MHz Ant1





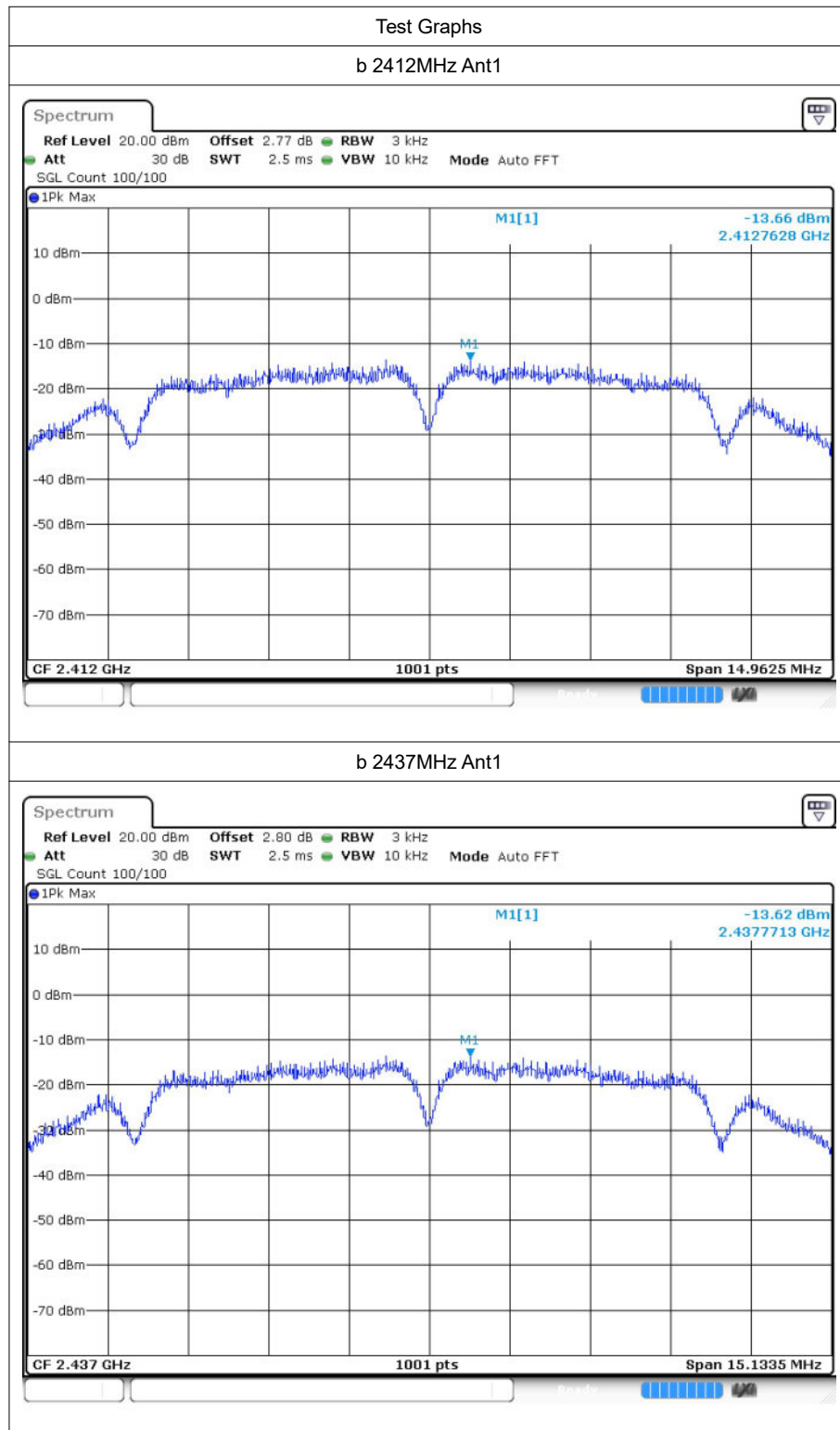


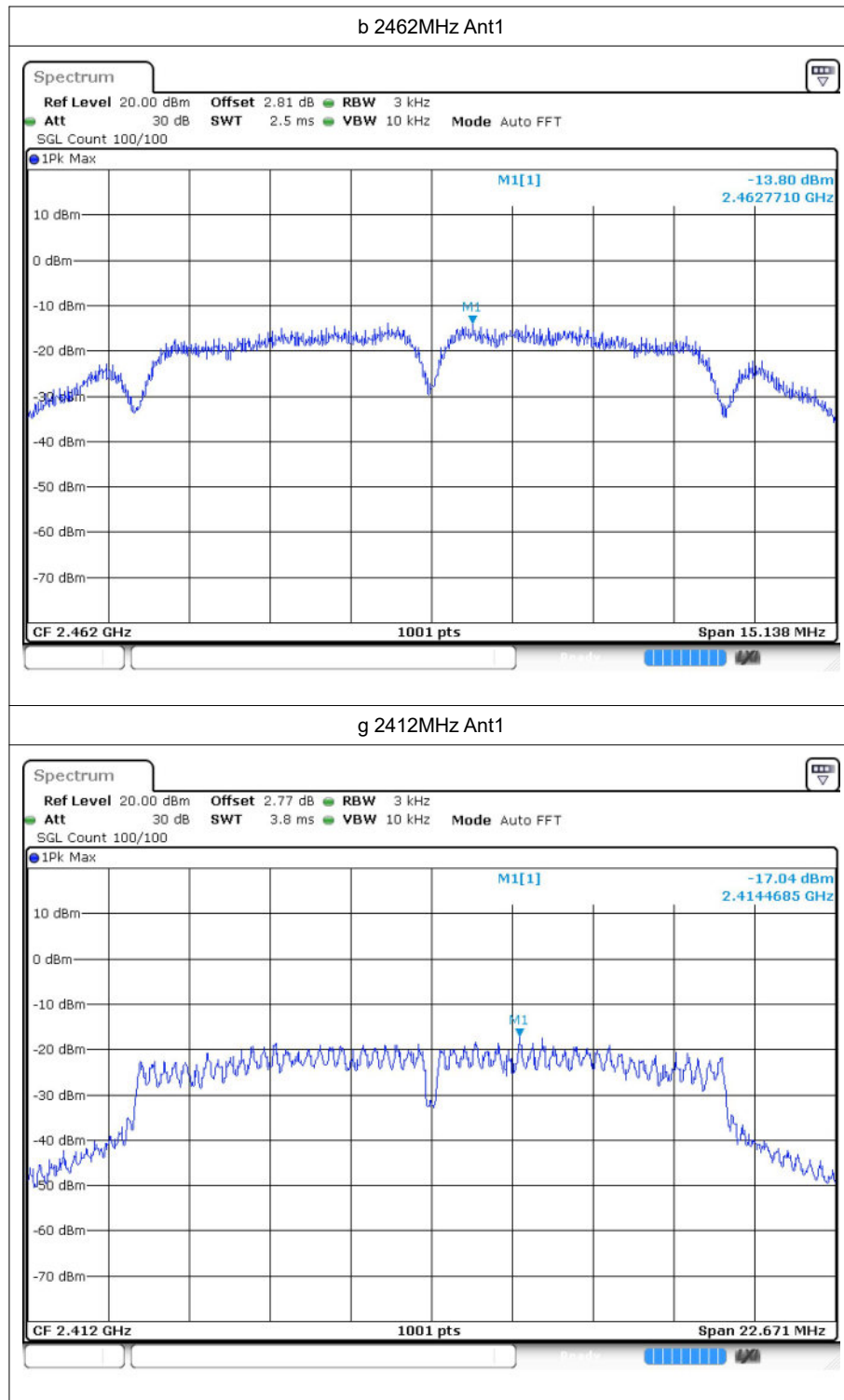
4 Maximum Power Spectral Density Level

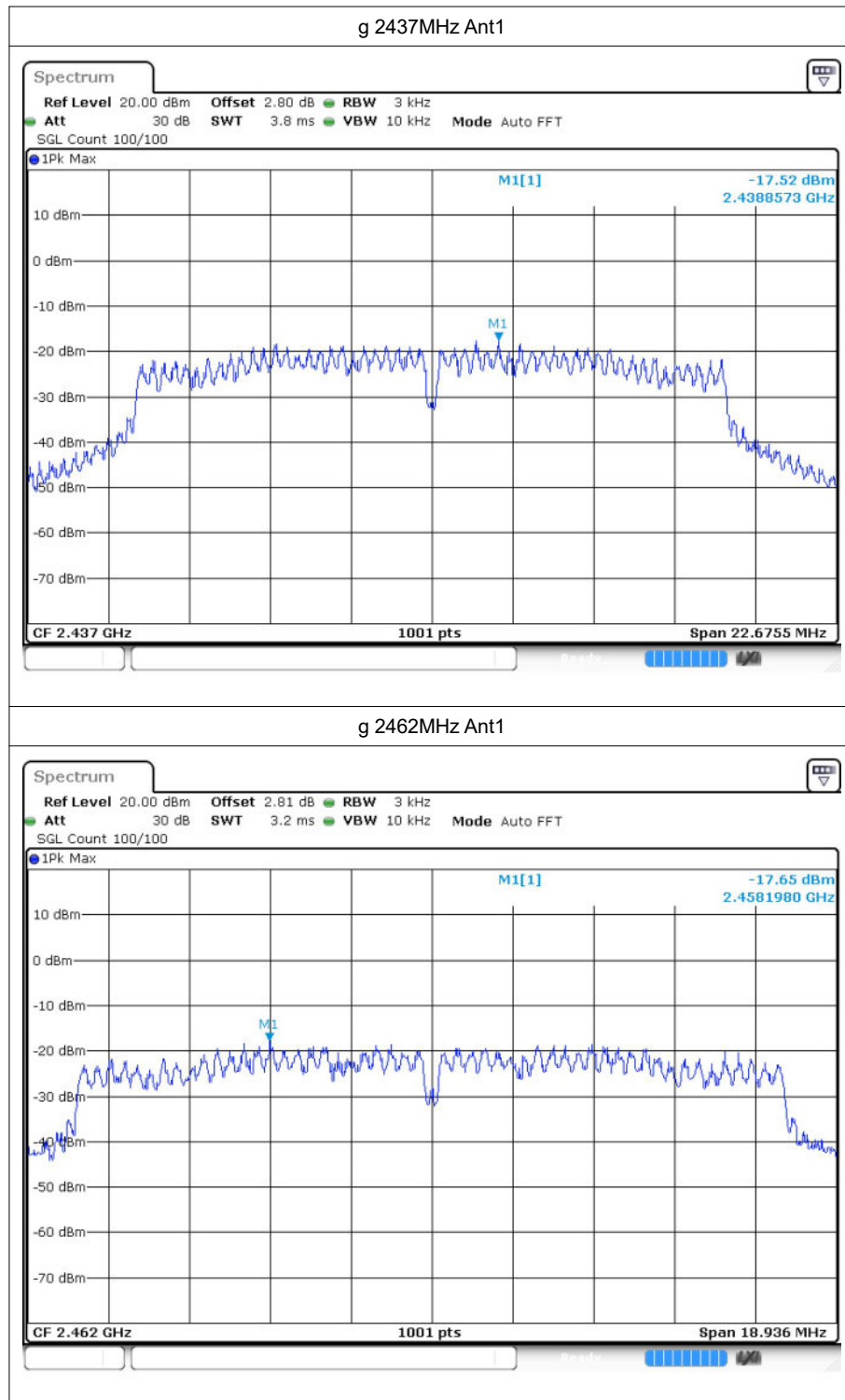
4.1 Test Result

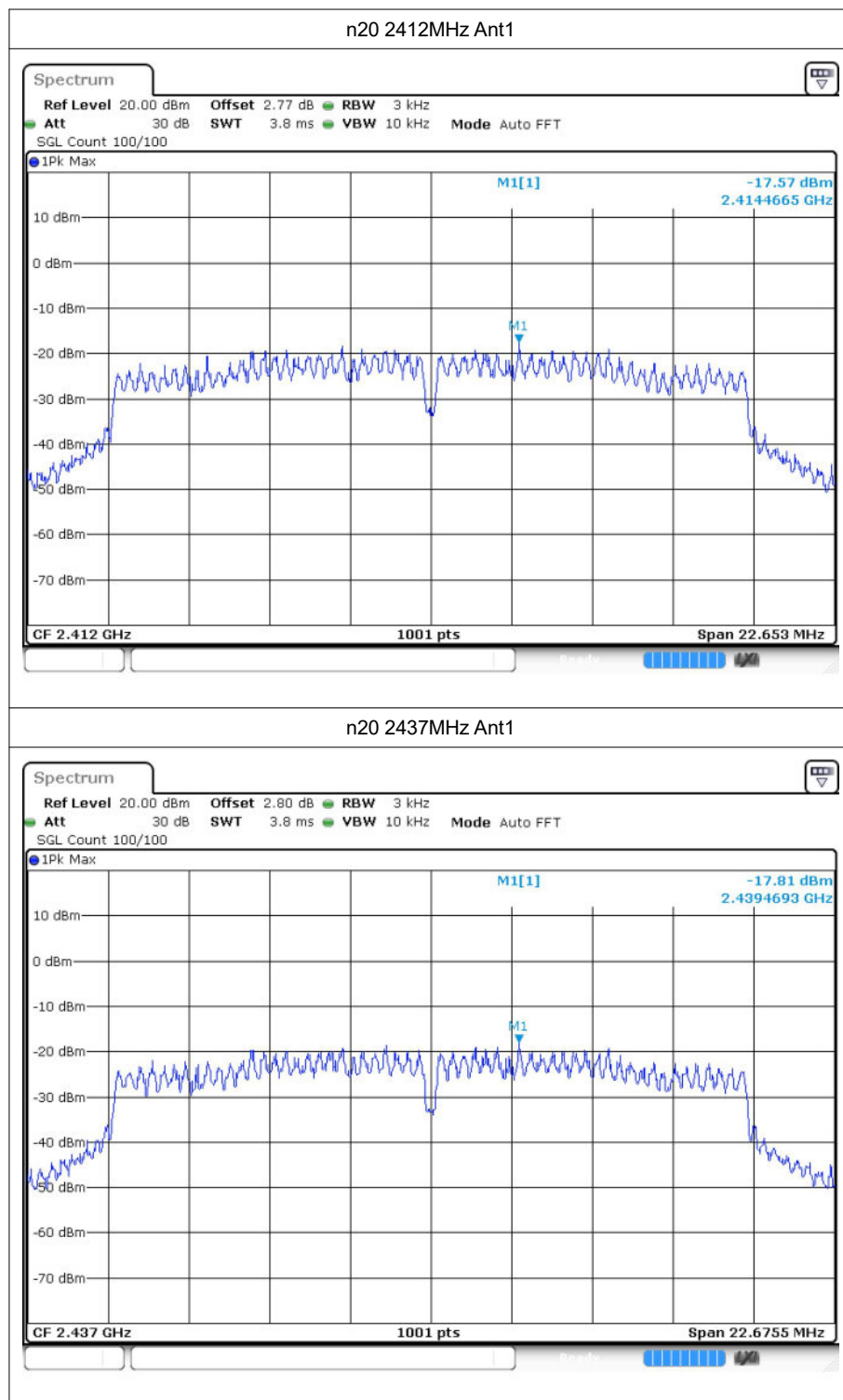
Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3-100kHz)	Limit (dBm/3kHz)	Verdict
b	2412	Ant1	-13.66	≤ 8	Pass
b	2437	Ant1	-13.62	≤ 8	Pass
b	2462	Ant1	-13.8	≤ 8	Pass
g	2412	Ant1	-17.04	≤ 8	Pass
g	2437	Ant1	-17.52	≤ 8	Pass
g	2462	Ant1	-17.65	≤ 8	Pass
n20	2412	Ant1	-17.57	≤ 8	Pass
n20	2437	Ant1	-17.81	≤ 8	Pass
n20	2462	Ant1	-18.05	≤ 8	Pass

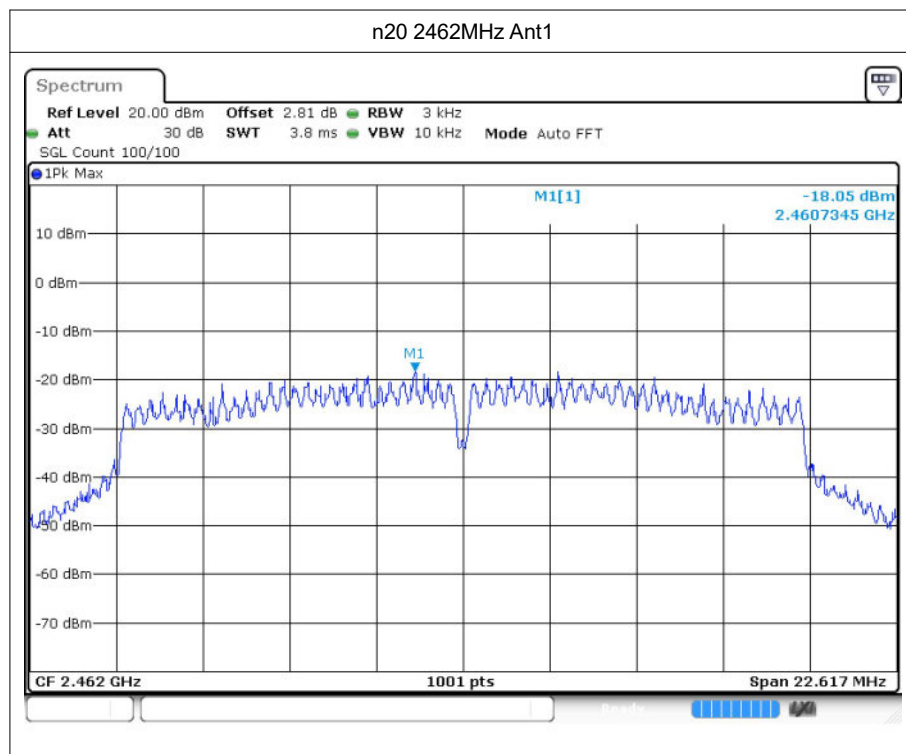
4.2 Test Graphs











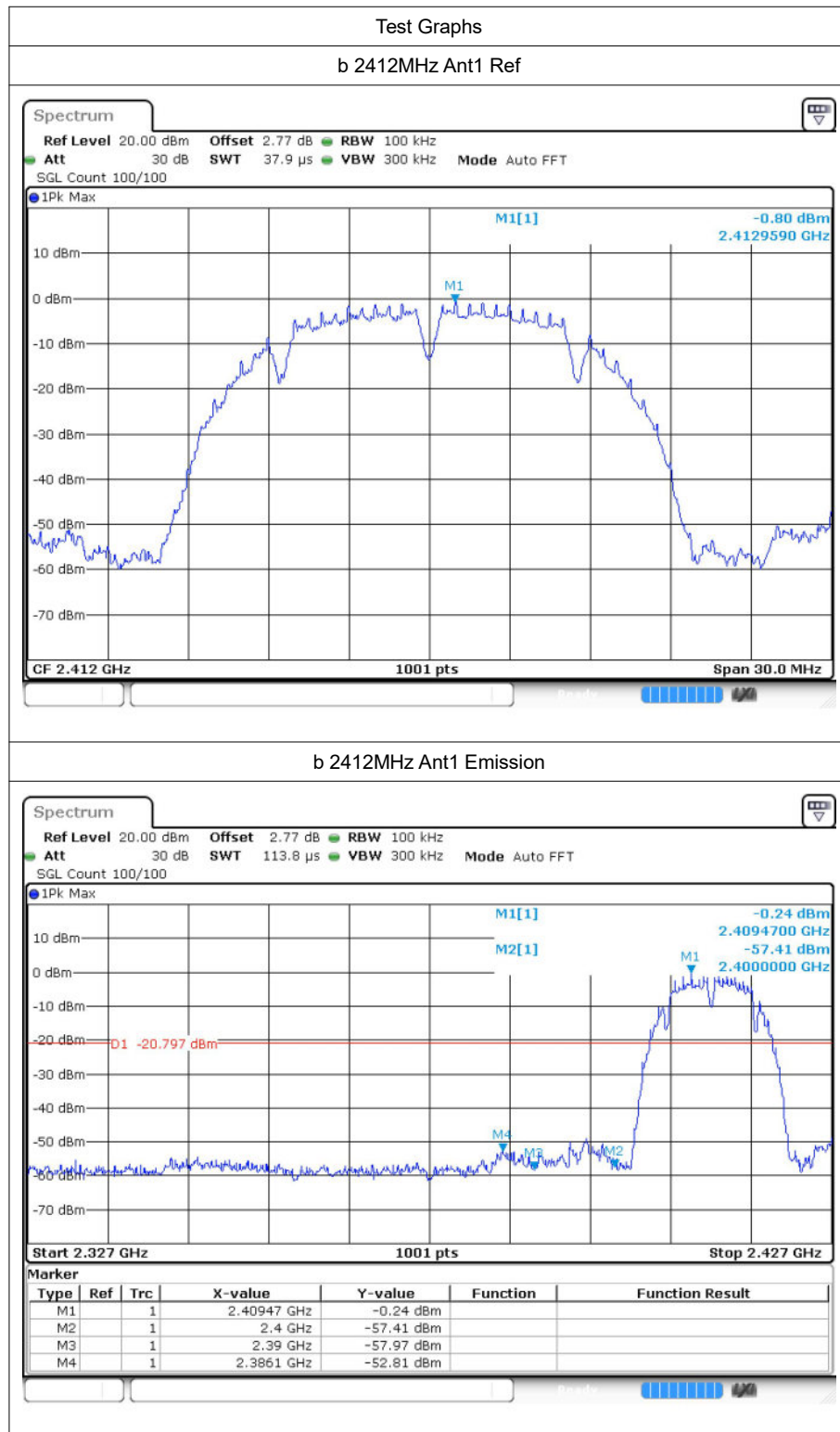


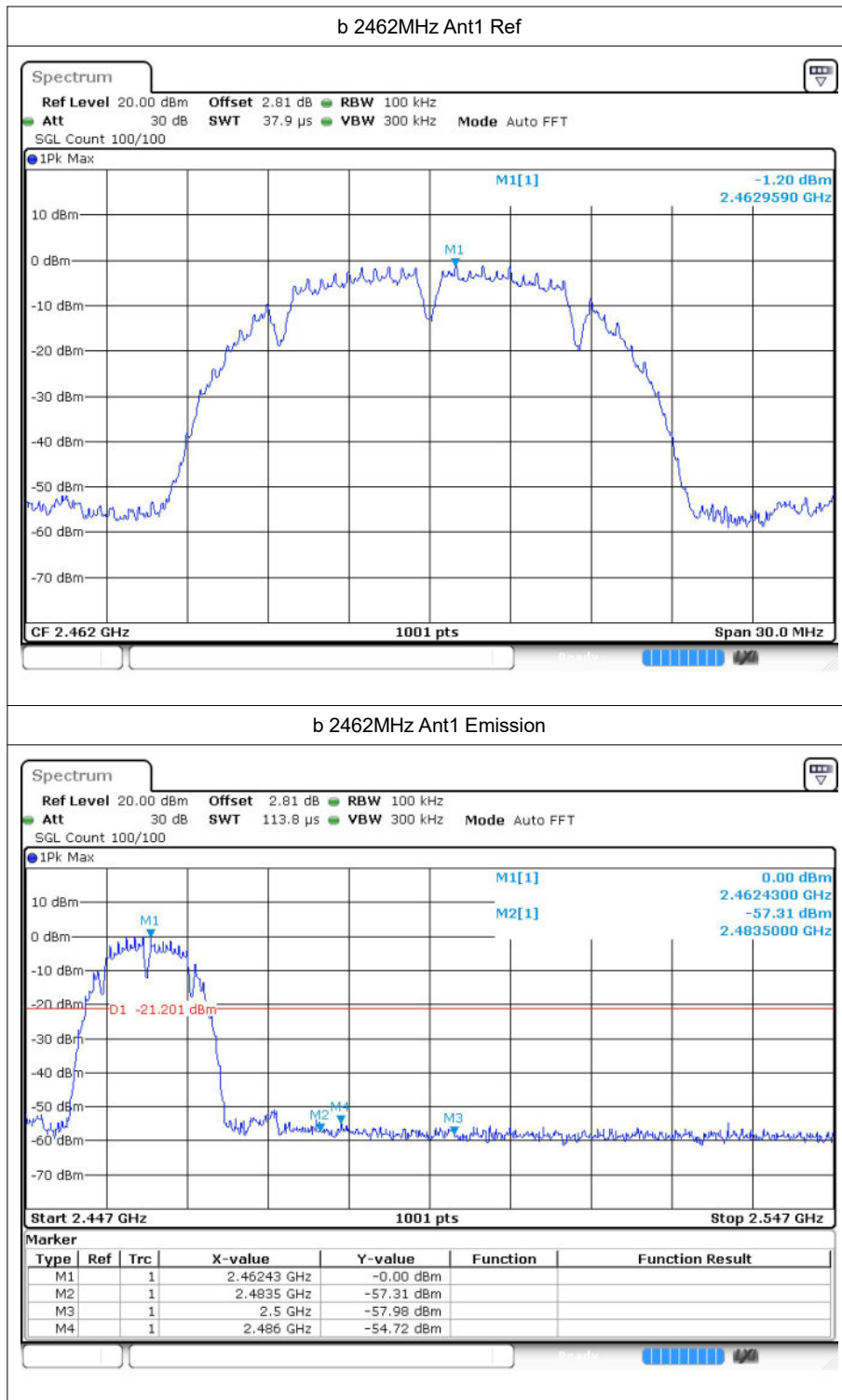
5 Band Edge

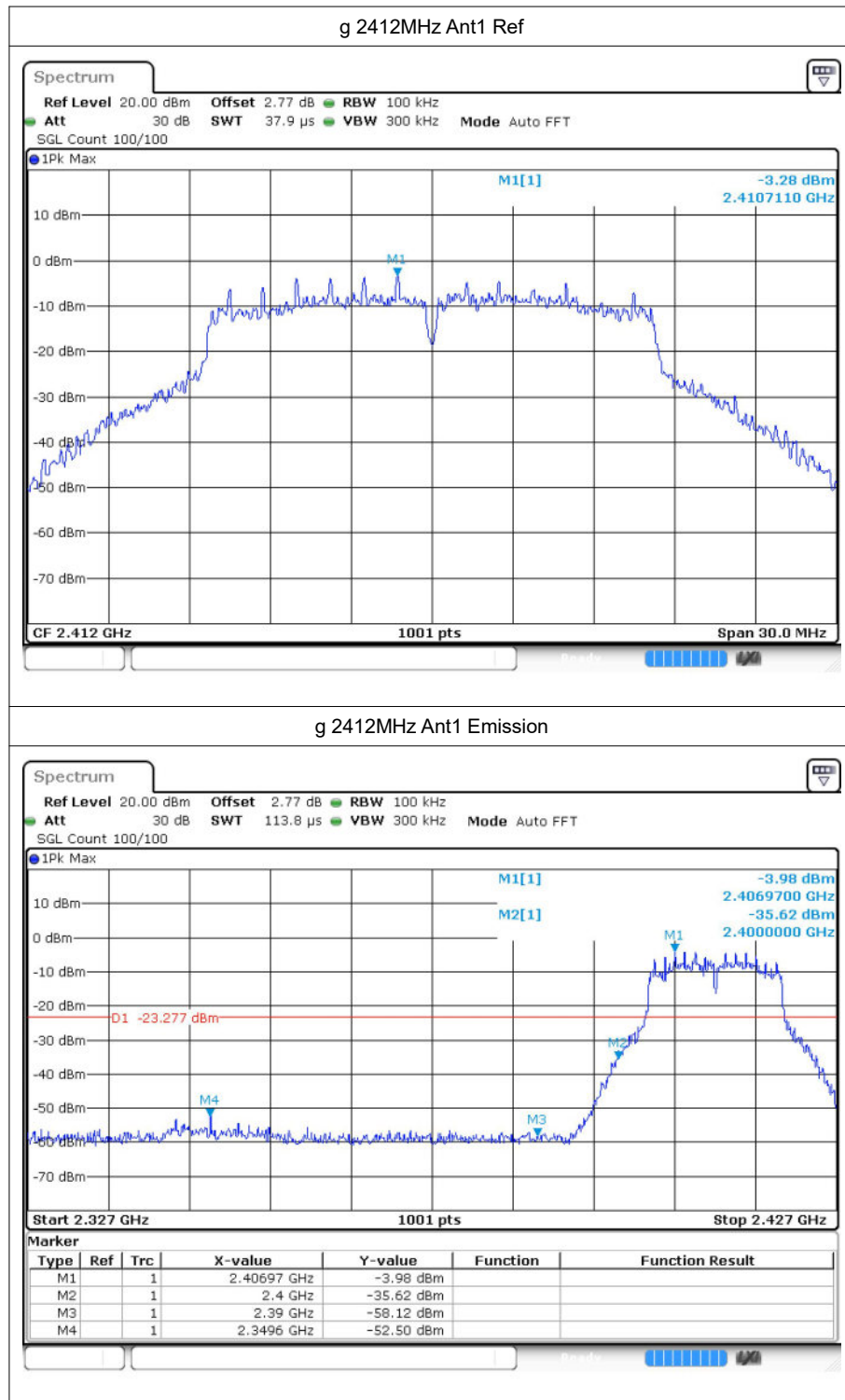
5.1 Test Result

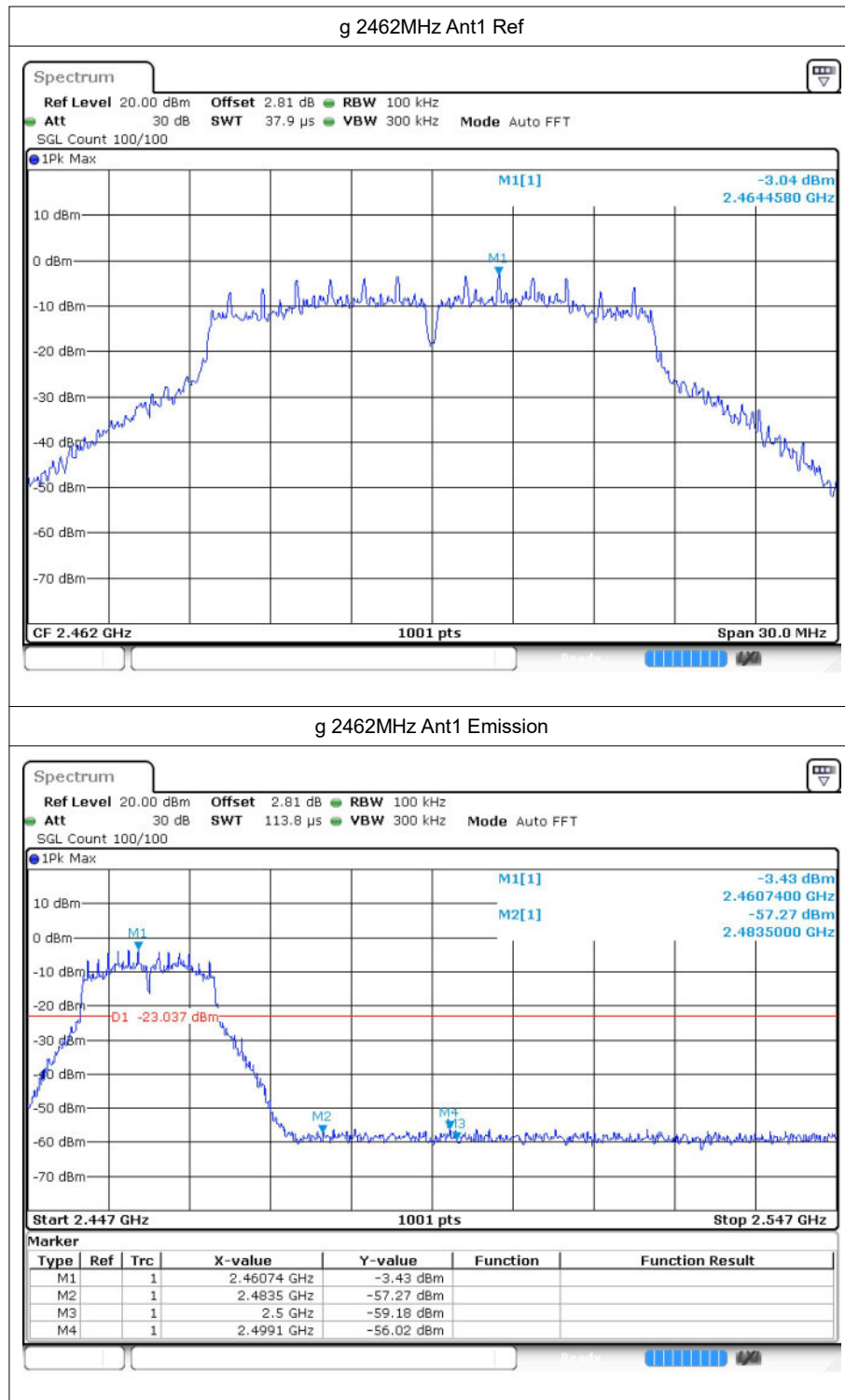
Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
b	2412	Ant1	-52	-20	-52
b	2462	Ant1	-53.51	-20	Pass
g	2412	Ant1	-49.22	-20	Pass
g	2462	Ant1	-52.98	-20	Pass
n20	2412	Ant1	-50.27	-20	Pass
n20	2462	Ant1	-51.85	-20	Pass

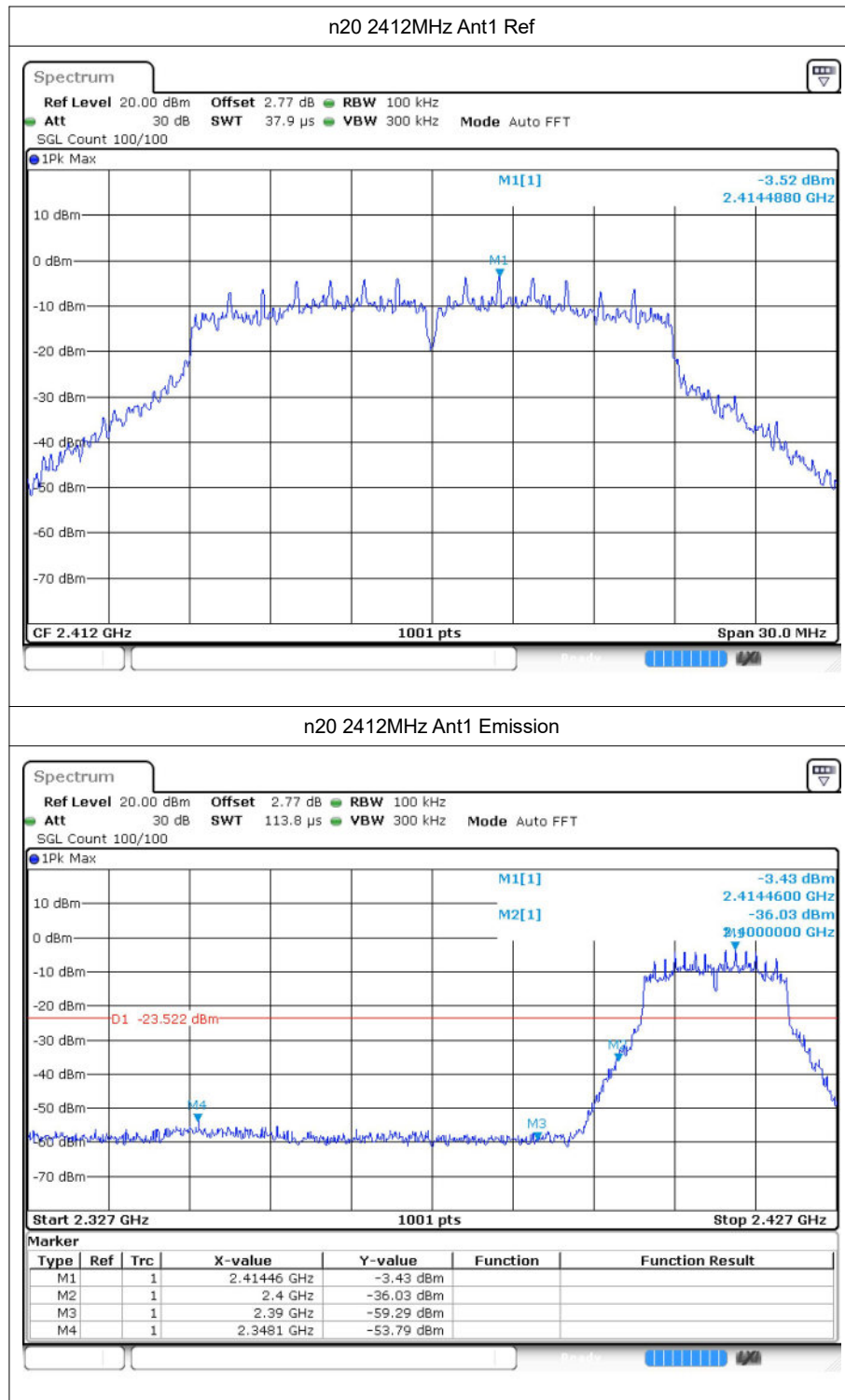
5.2 Test Graphs

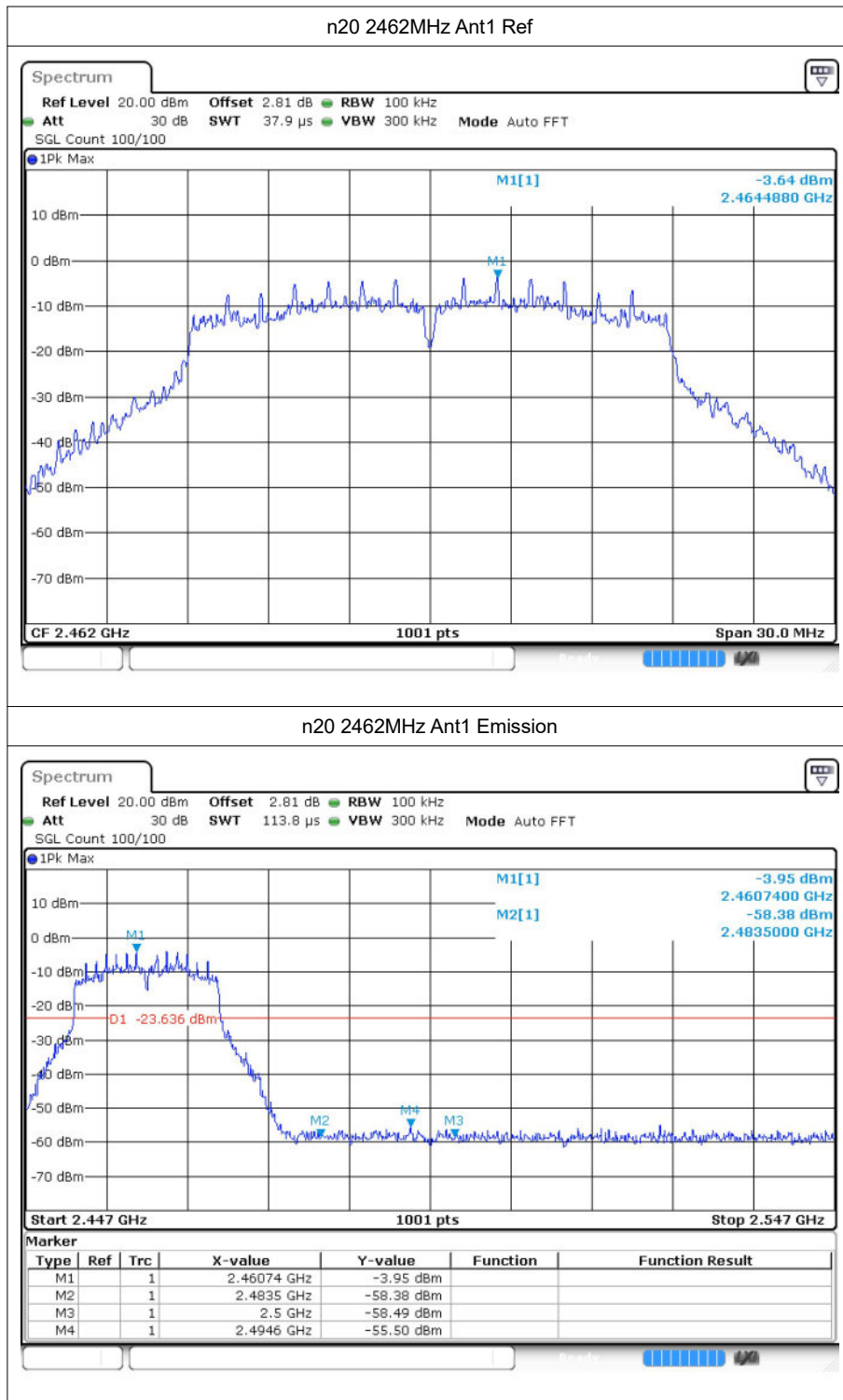












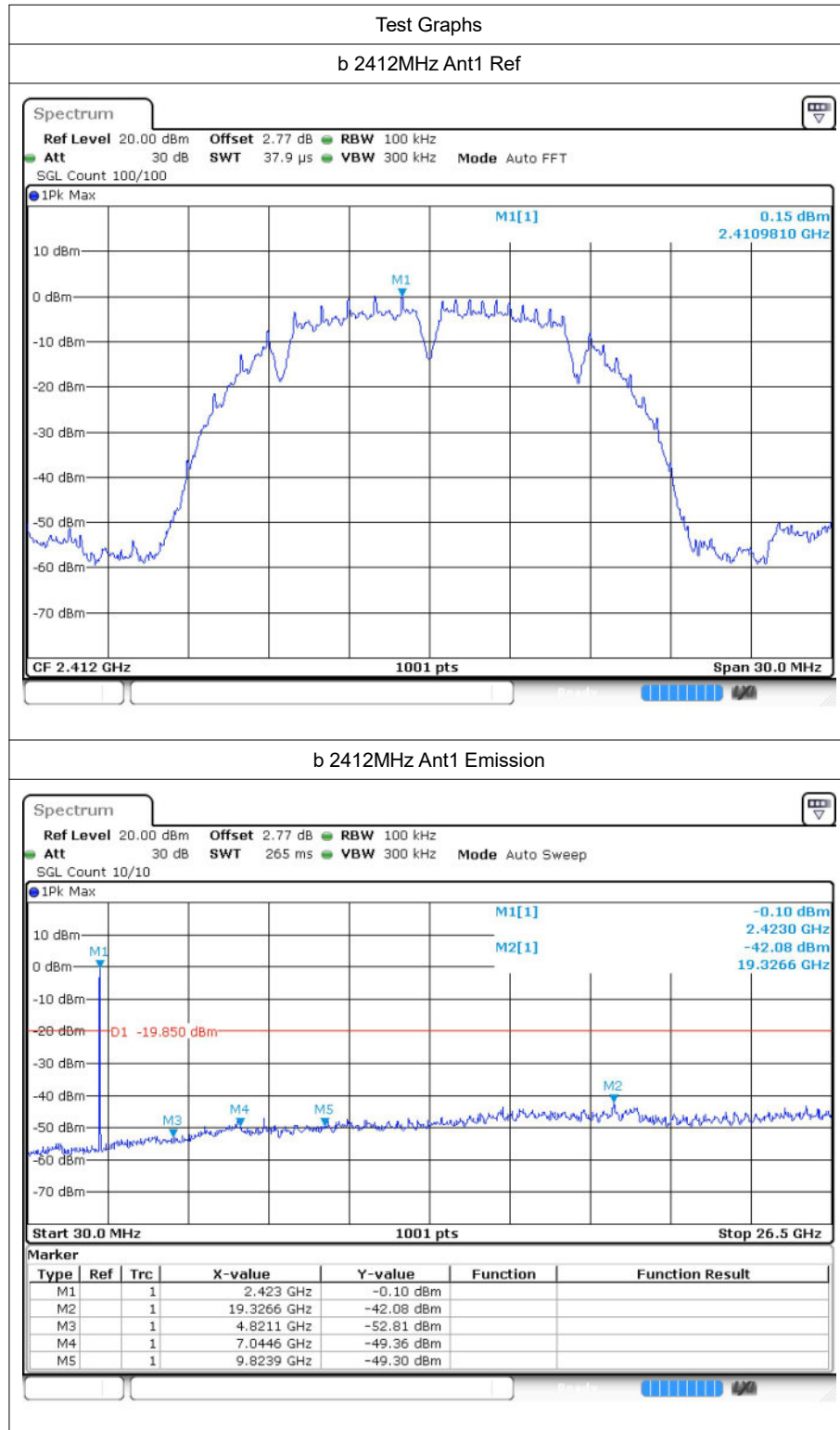


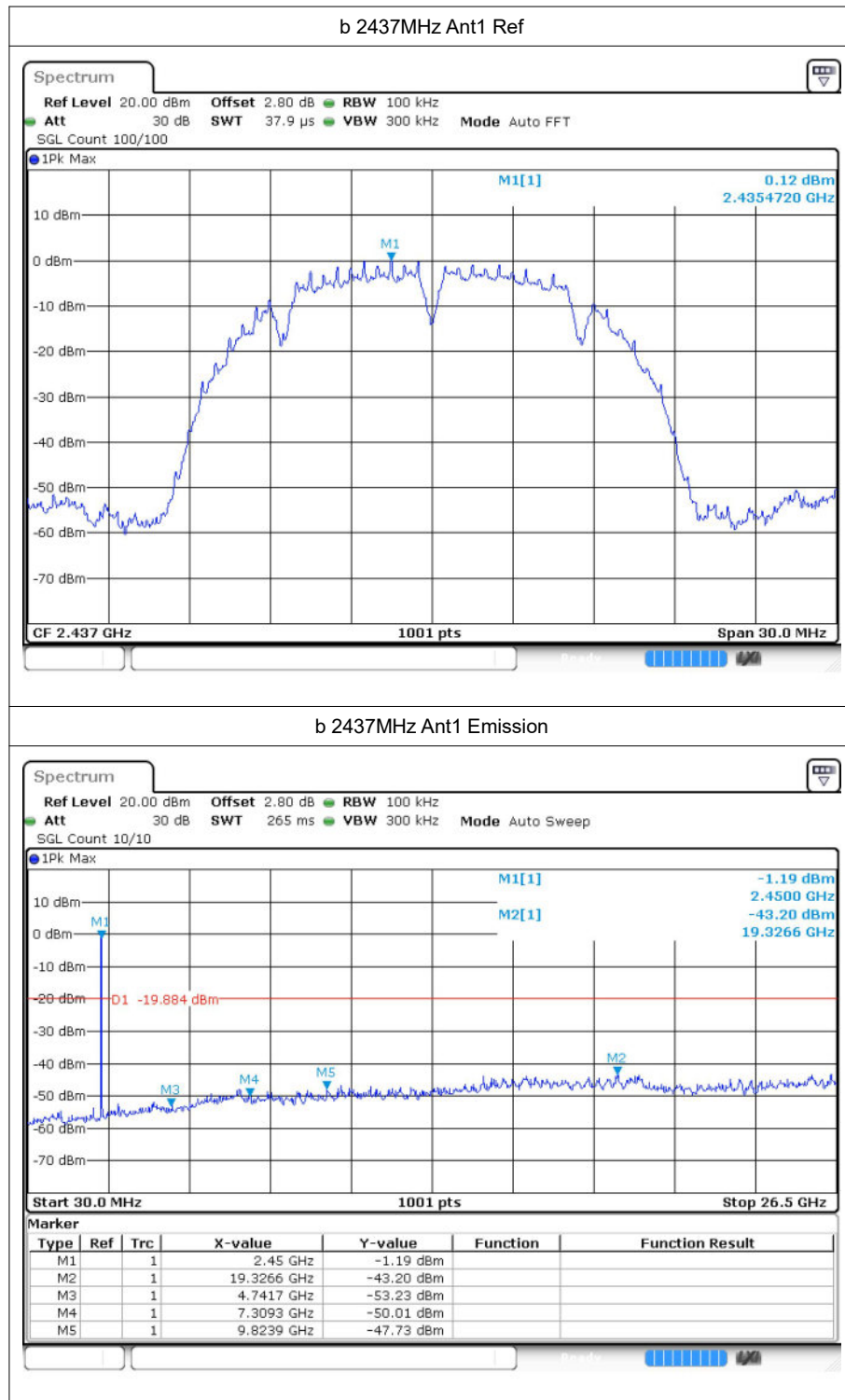
6 Conducted RF Spurious Emission

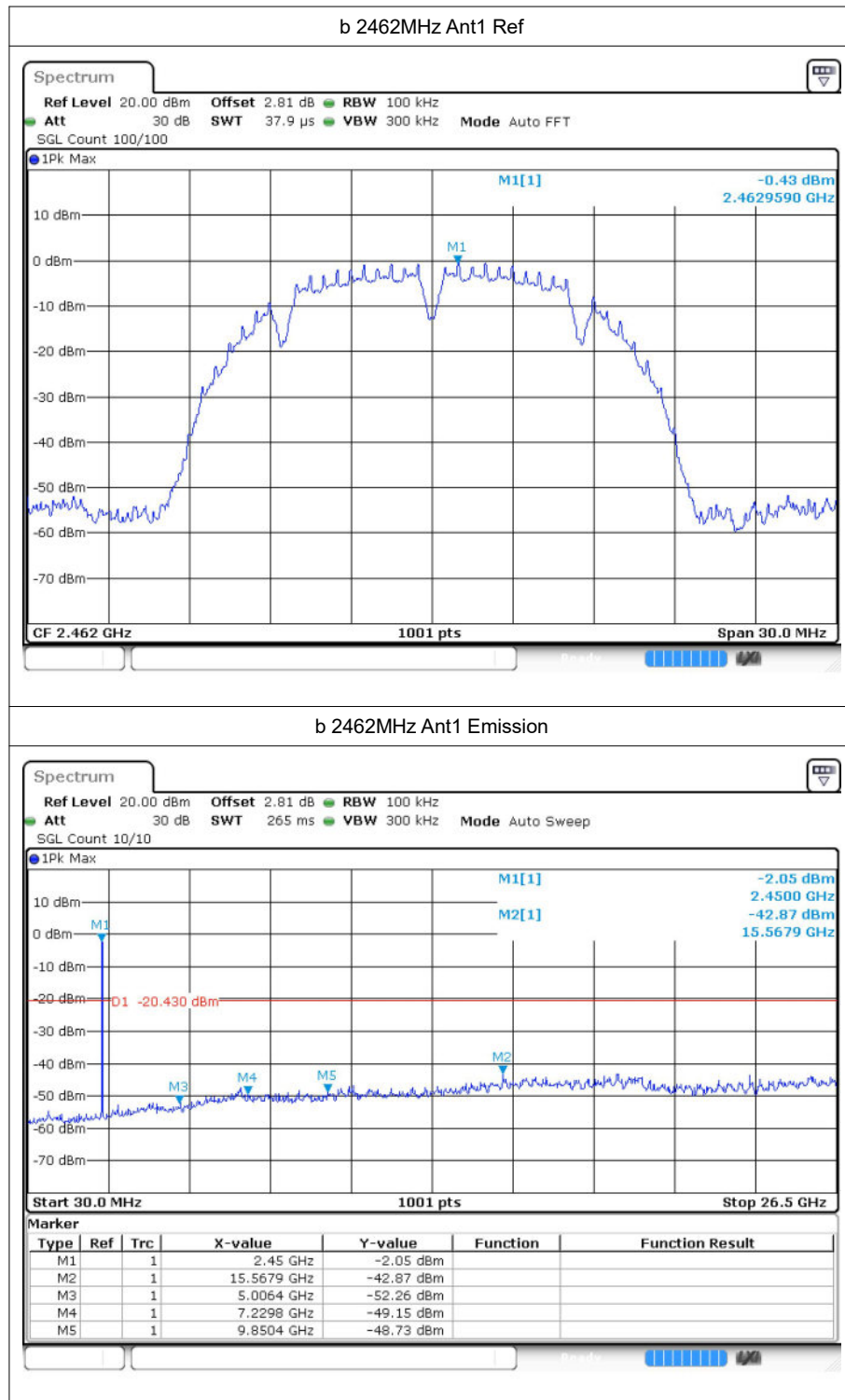
6.1 Test Result

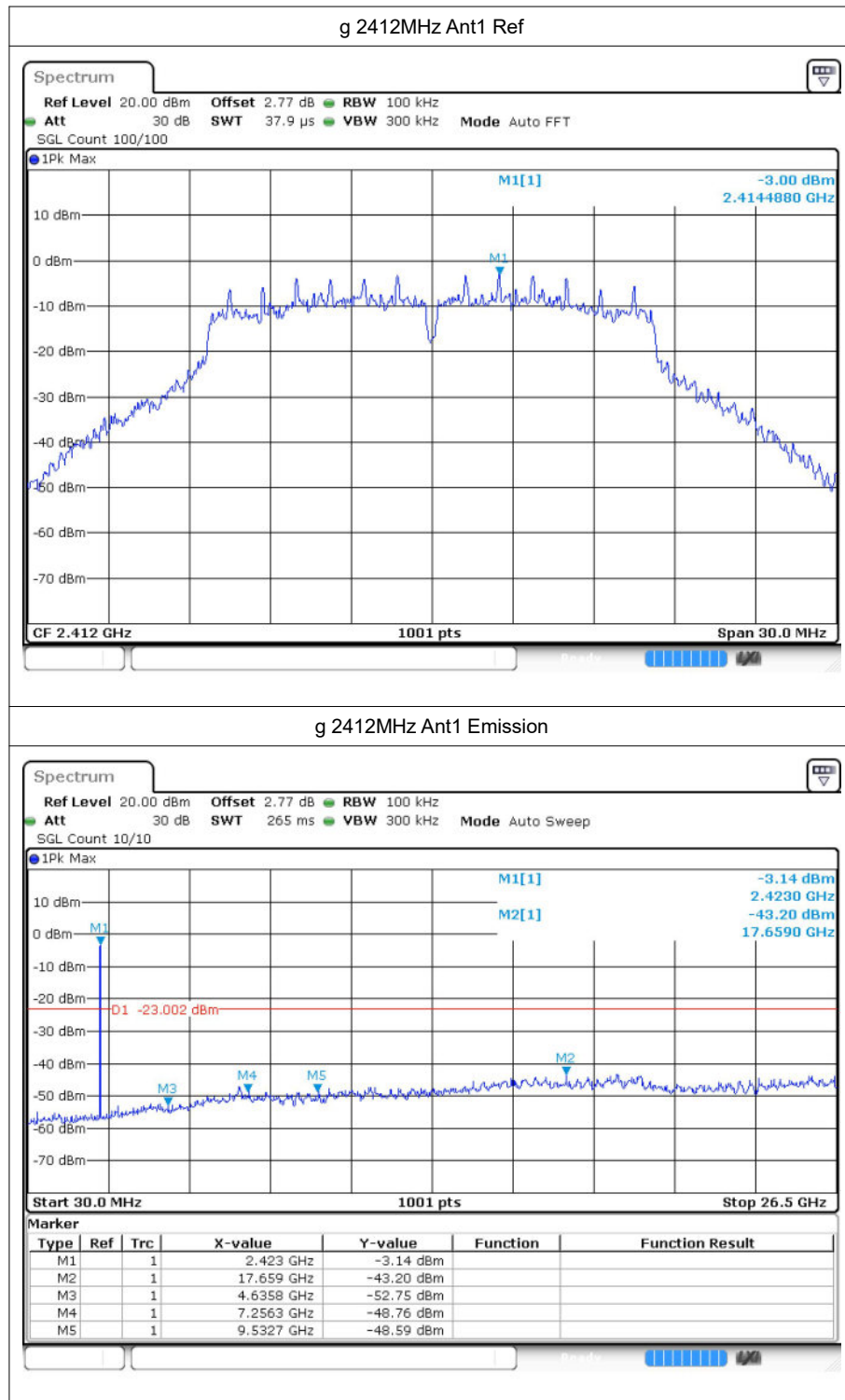
Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
b	2412	Ant1	-42.22	-20	Pass
b	2437	Ant1	-43.32	-20	Pass
b	2462	Ant1	-42.43	-20	Pass
g	2412	Ant1	-40.19	-20	Pass
g	2437	Ant1	-39.98	-20	Pass
g	2462	Ant1	-39.55	-20	Pass
n20	2412	Ant1	-39.46	-20	Pass
n20	2437	Ant1	-39.41	-20	Pass
n20	2462	Ant1	-38.7	-20	Pass

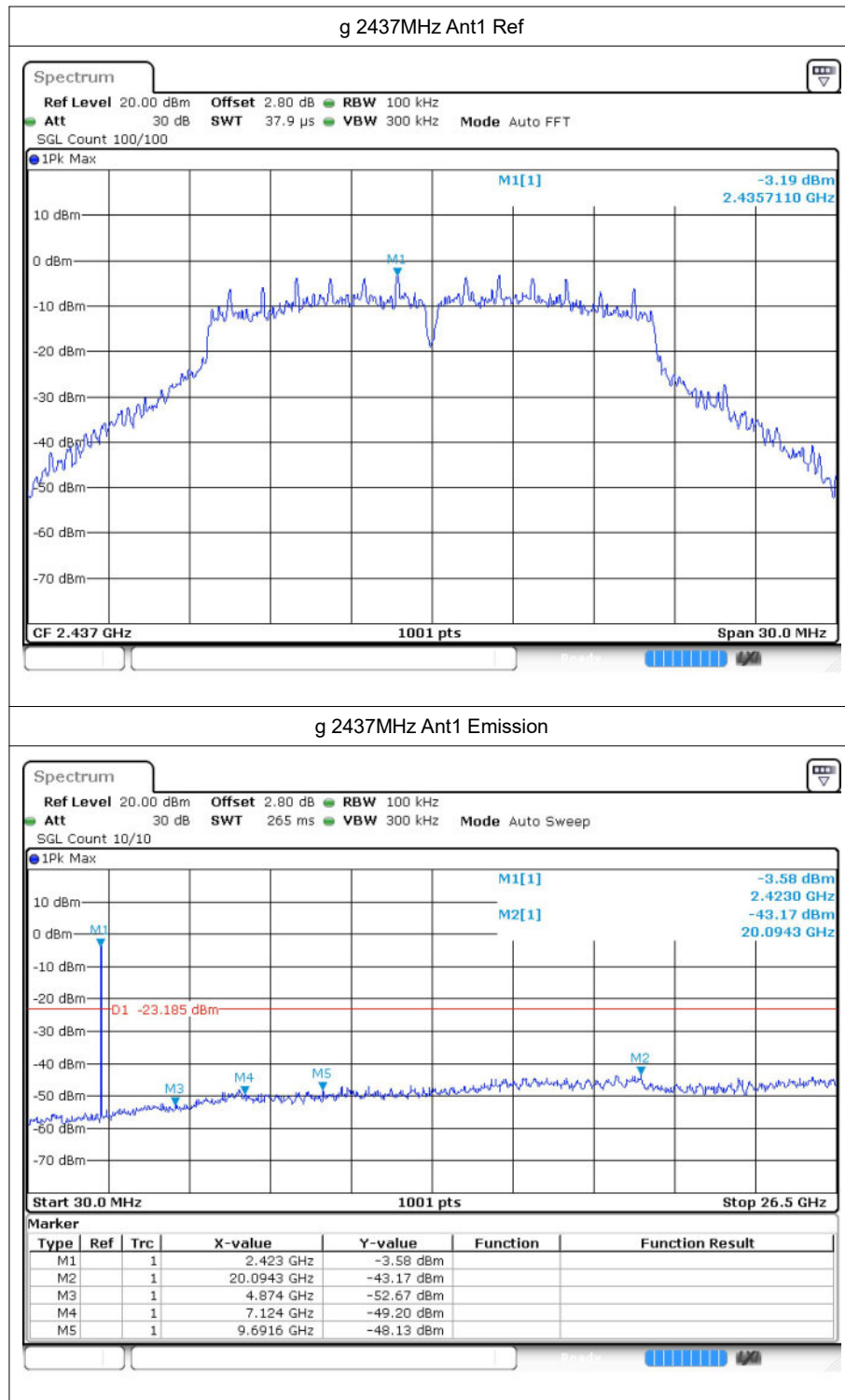
6.2 Test Graphs

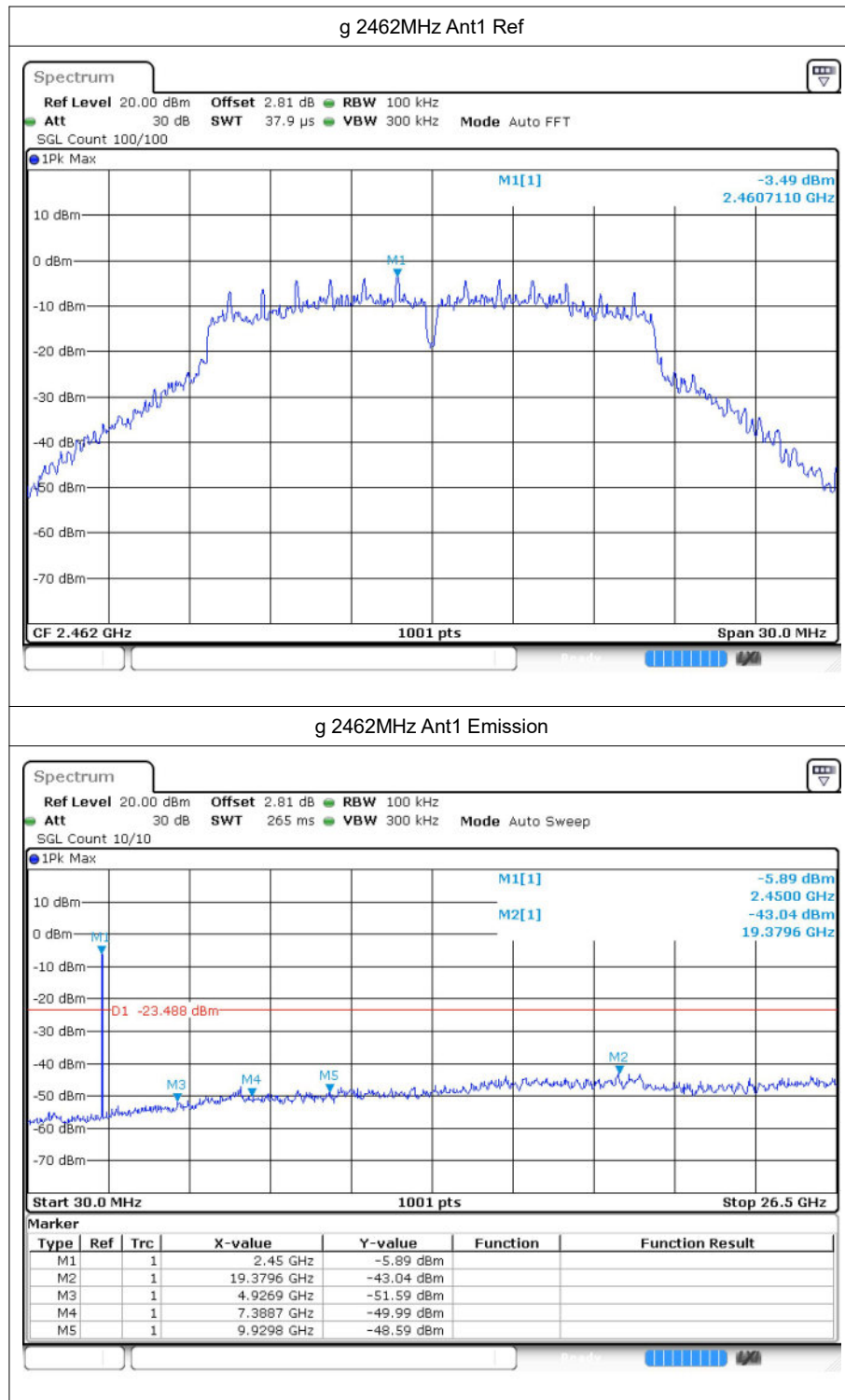


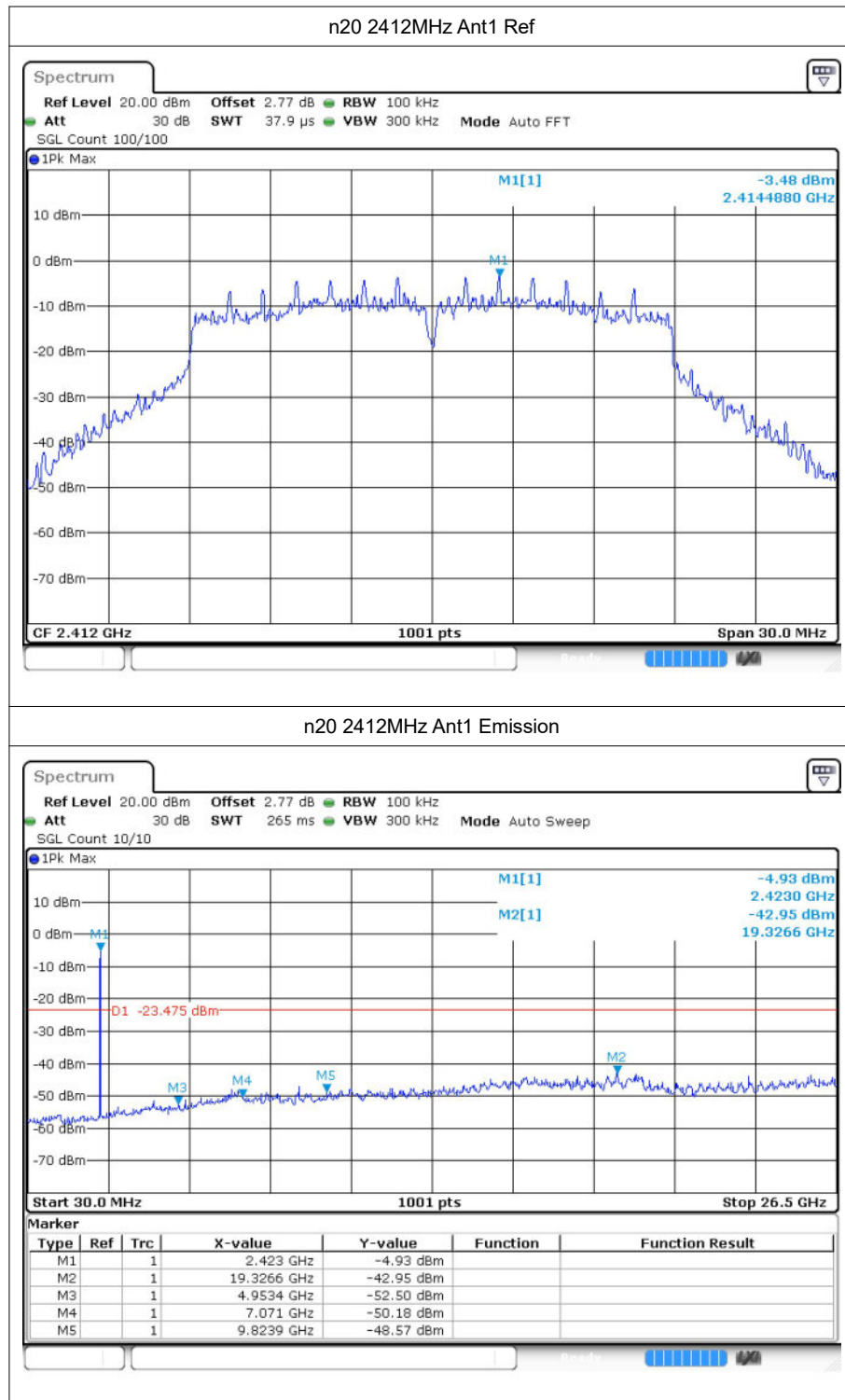


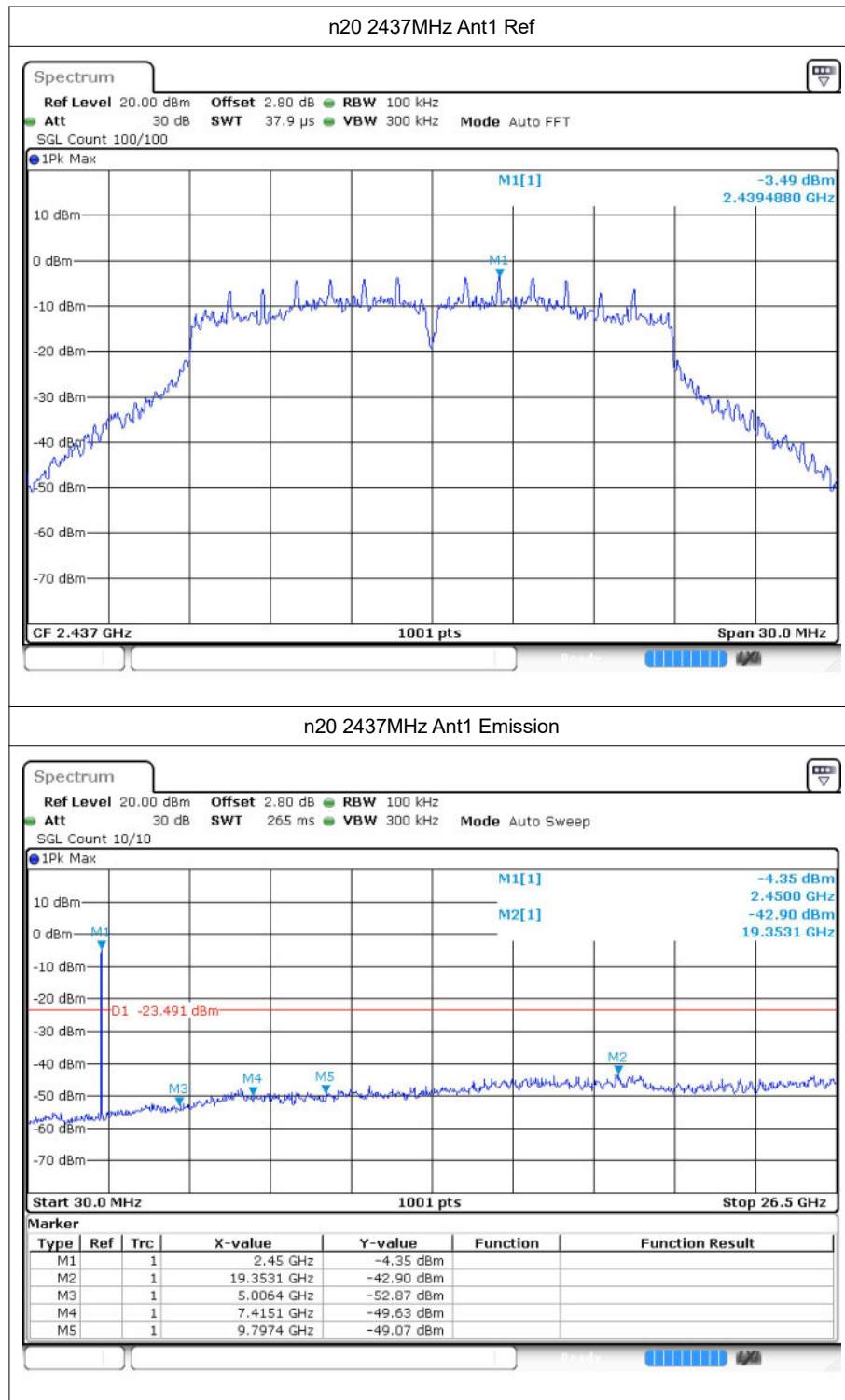


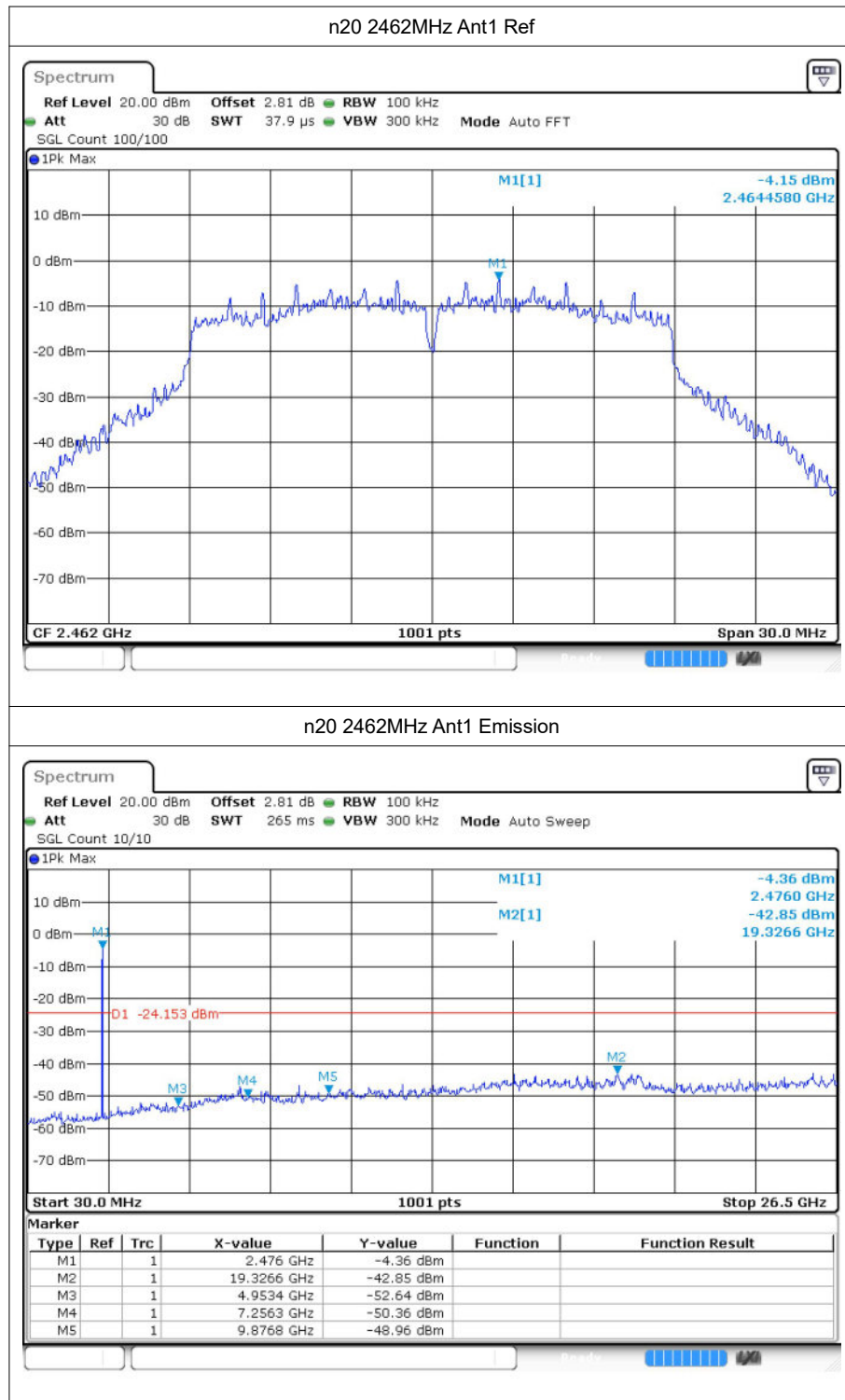














7 Restrict Band

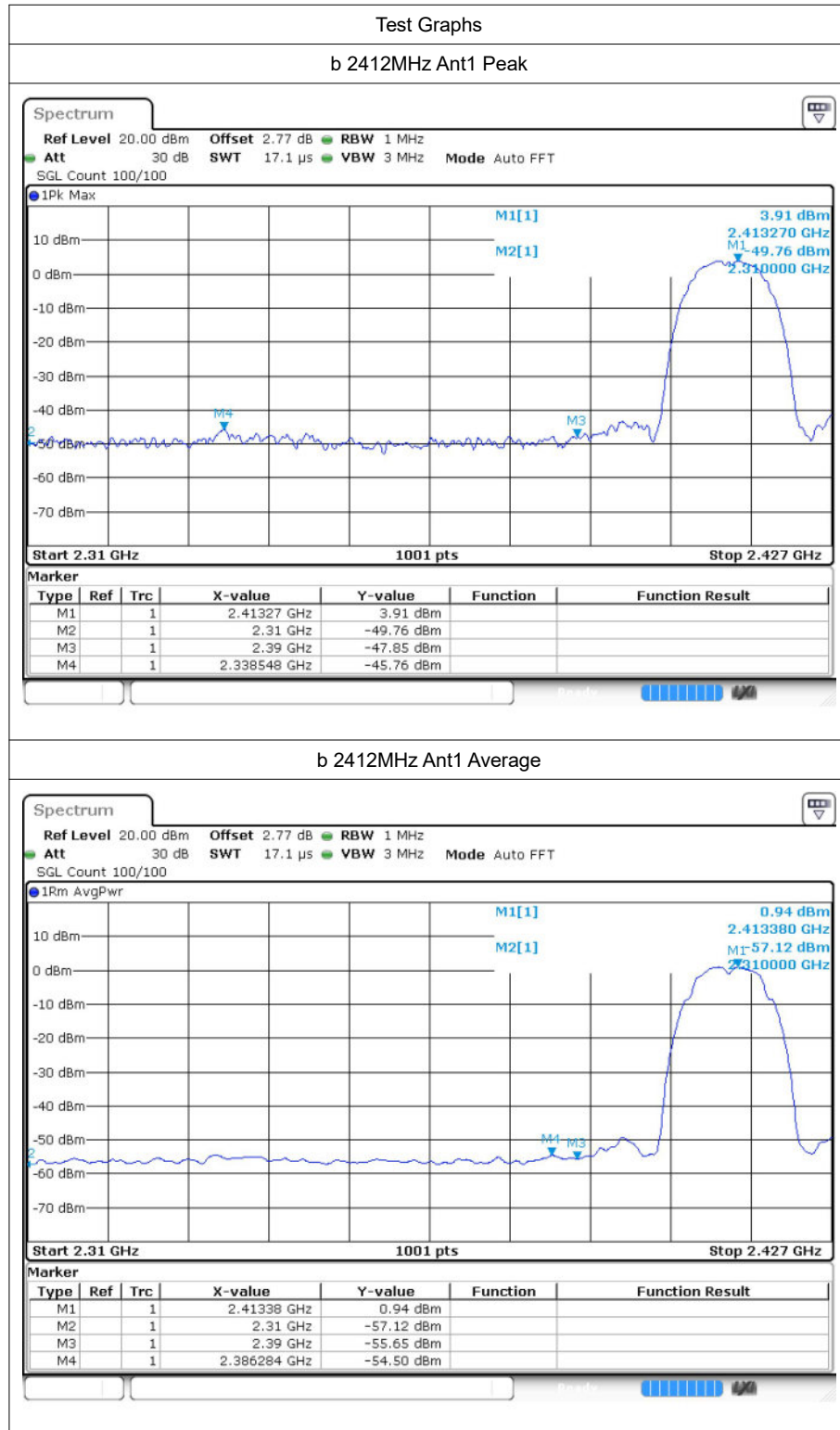
7.1 Test Result

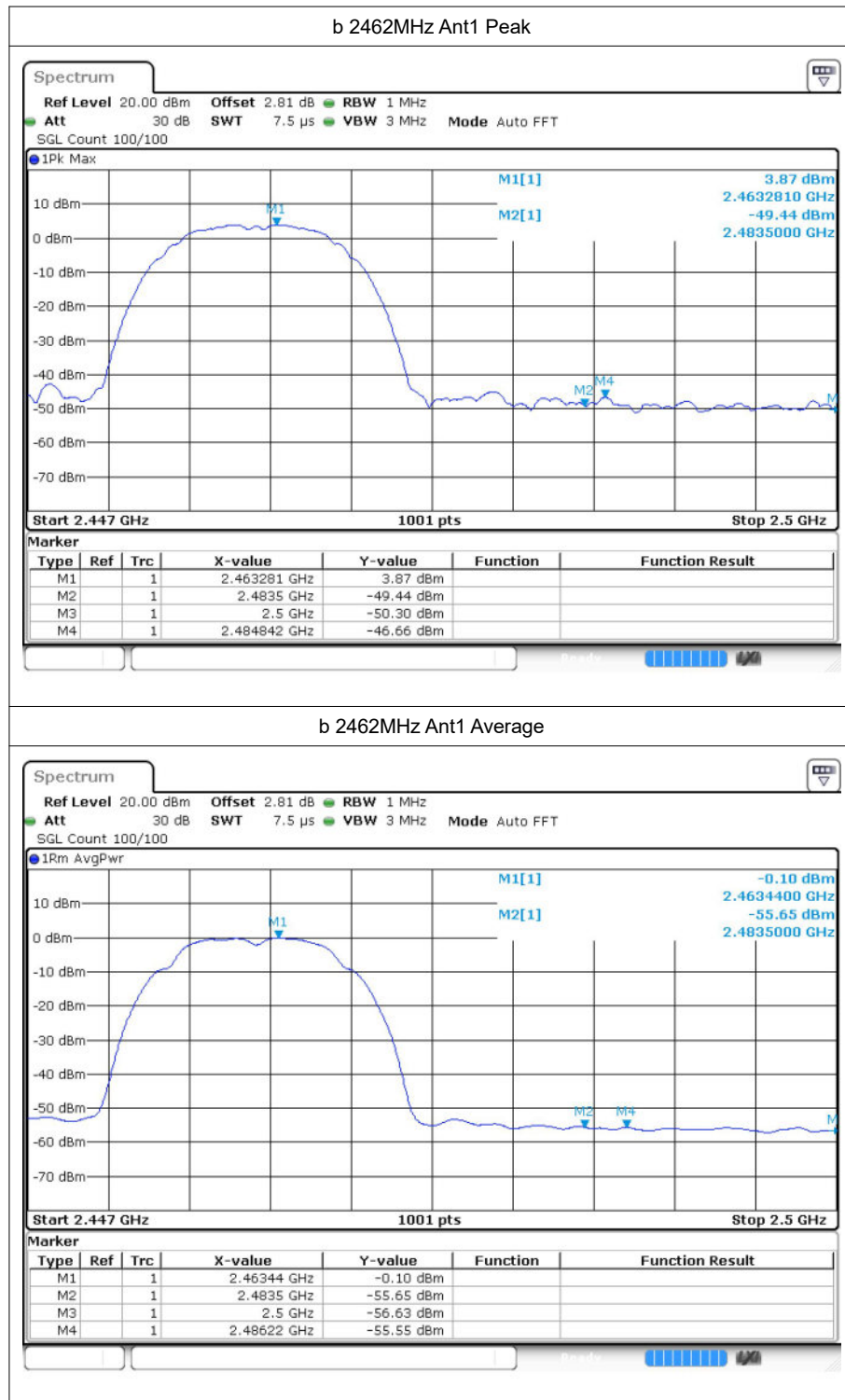
Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
b	2412	Ant1	2310	-46.6	3	51.66	Peak	74	Pass
b	2412	Ant1	2310	-55.05	3	43.21	Average	54	Pass
b	2412	Ant1	2385.582	-41.64	3	56.62	Peak	74	Pass
b	2412	Ant1	2386.284	-49.34	3	48.92	Average	54	Pass
b	2412	Ant1	2390	-44	3	54.26	Peak	74	Pass
b	2412	Ant1	2390	-53.65	3	44.61	Average	54	Pass
b	2462	Ant1	2483.5	-43.94	3	54.32	Peak	74	54.32
b	2462	Ant1	2483.5	-54.28	3	43.98	Average	54	Pass
b	2462	Ant1	2487.969	-41.19	3	57.07	Peak	74	Pass
b	2462	Ant1	2488.181	-53.48	3	44.78	Average	54	Pass
b	2462	Ant1	2500	-46.16	3	52.1	Peak	74	Pass
b	2462	Ant1	2500	-55.12	3	43.14	Average	54	Pass
g	2412	Ant1	2310	-45.99	3	52.27	Peak	74	Pass
g	2412	Ant1	2310	-54.43	3	43.83	Average	54	Pass
g	2412	Ant1	2337.729	-42.46	3	55.8	Peak	74	Pass
g	2412	Ant1	2338.782	-51.97	3	46.29	Average	54	Pass
g	2412	Ant1	2390	-47.7	3	54.26	Peak	74	Pass
g	2412	Ant1	2390	-54.56	3	43.7	Average	54	Pass
g	2462	Ant1	2483.5	-45.94	3	52.32	Peak	74	Pass
g	2462	Ant1	2483.5	-53.17	3	45.09	Average	54	Pass
g	2462	Ant1	2487.969	-43.49	3	54.77	Peak	74	Pass
g	2462	Ant1	2483.517	-53.17	3	45.09	Average	54	Pass
g	2462	Ant1	2500	-45.46	3	52.1	Peak	74	Pass
g	2462	Ant1	2500	-53.82	3	44.44	Average	54	Pass
n20	2412	Ant1	2310	-48.14	3	50.12	Peak	74	Pass
n20	2412	Ant1	2310	-53.85	3	44.41	Average	54	Pass
n20	2412	Ant1	2350.365	-42.9	3	55.36	Peak	74	Pass
n20	2412	Ant1	2336.676	-51.99	3	46.27	Average	54	Pass
n20	2412	Ant1	2390	-46.46	3	51.8	Peak	74	Pass
n20	2412	Ant1	2390	-54.64	3	43.62	Average	54	Pass
n20	2462	Ant1	2483.5	-44.85	3	53.41	Peak	74	Pass
n20	2462	Ant1	2483.5	-53.79	3	44.47	Average	54	Pass
n20	2462	Ant1	2495.442	-44.22	3	54.04	Peak	74	Pass
n20	2462	Ant1	2495.707	-53.24	3	45.02	Average	54	Pass

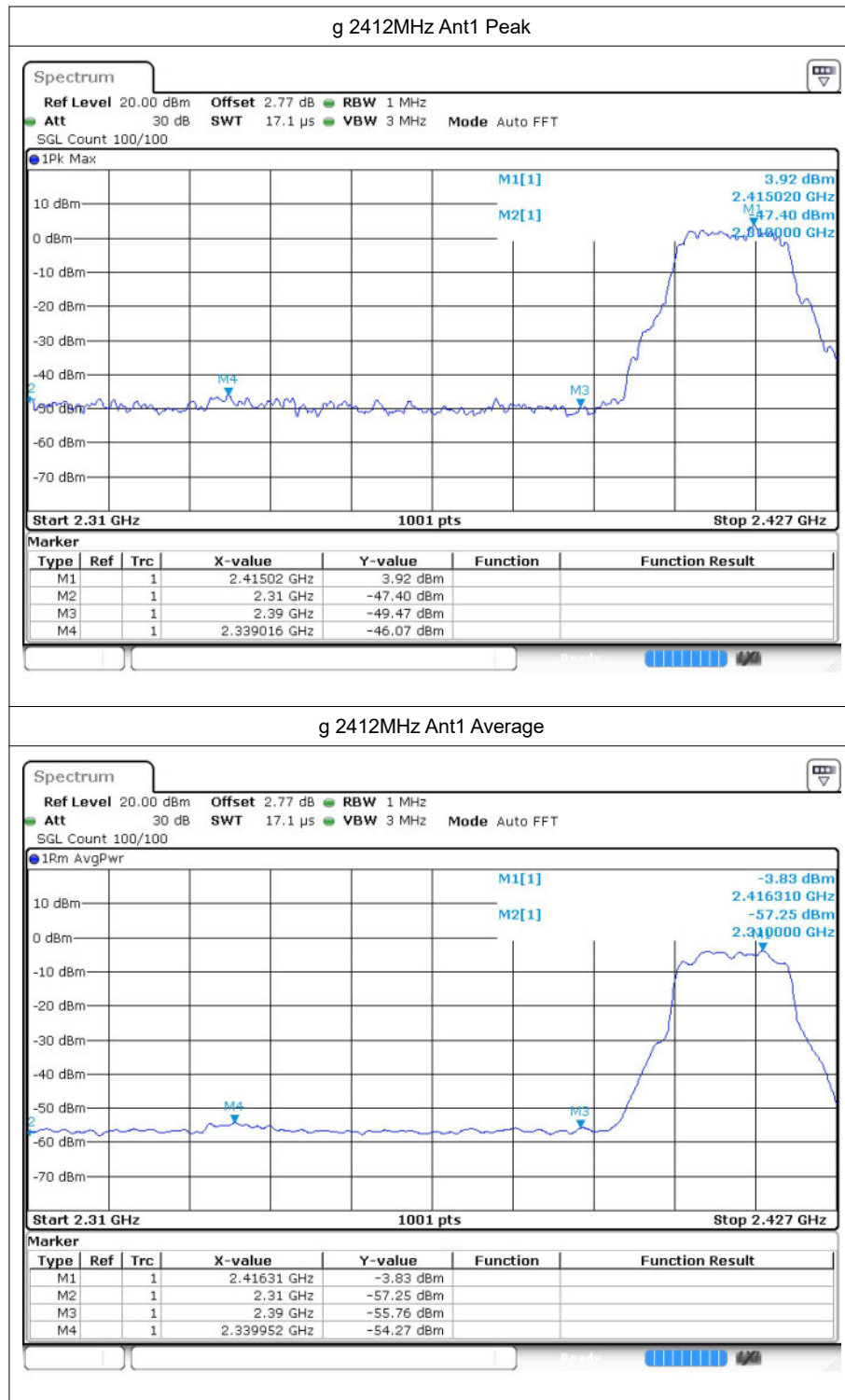


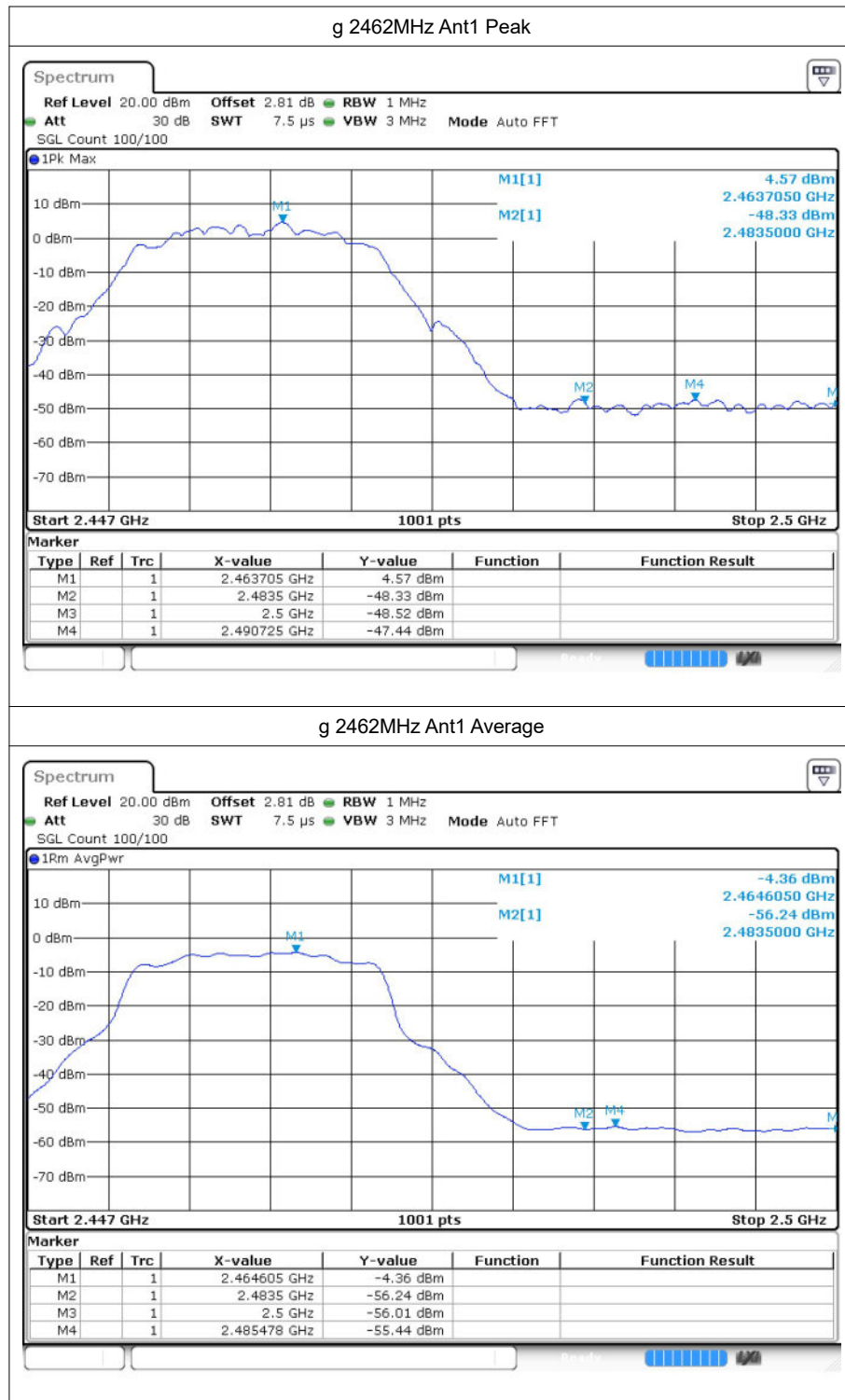
n20	2462	Ant1	2500	-46.85	3	51.41	Peak	74	Pass
n20	2462	Ant1	2500	-54.34	3	43.92	Average	54	Pass

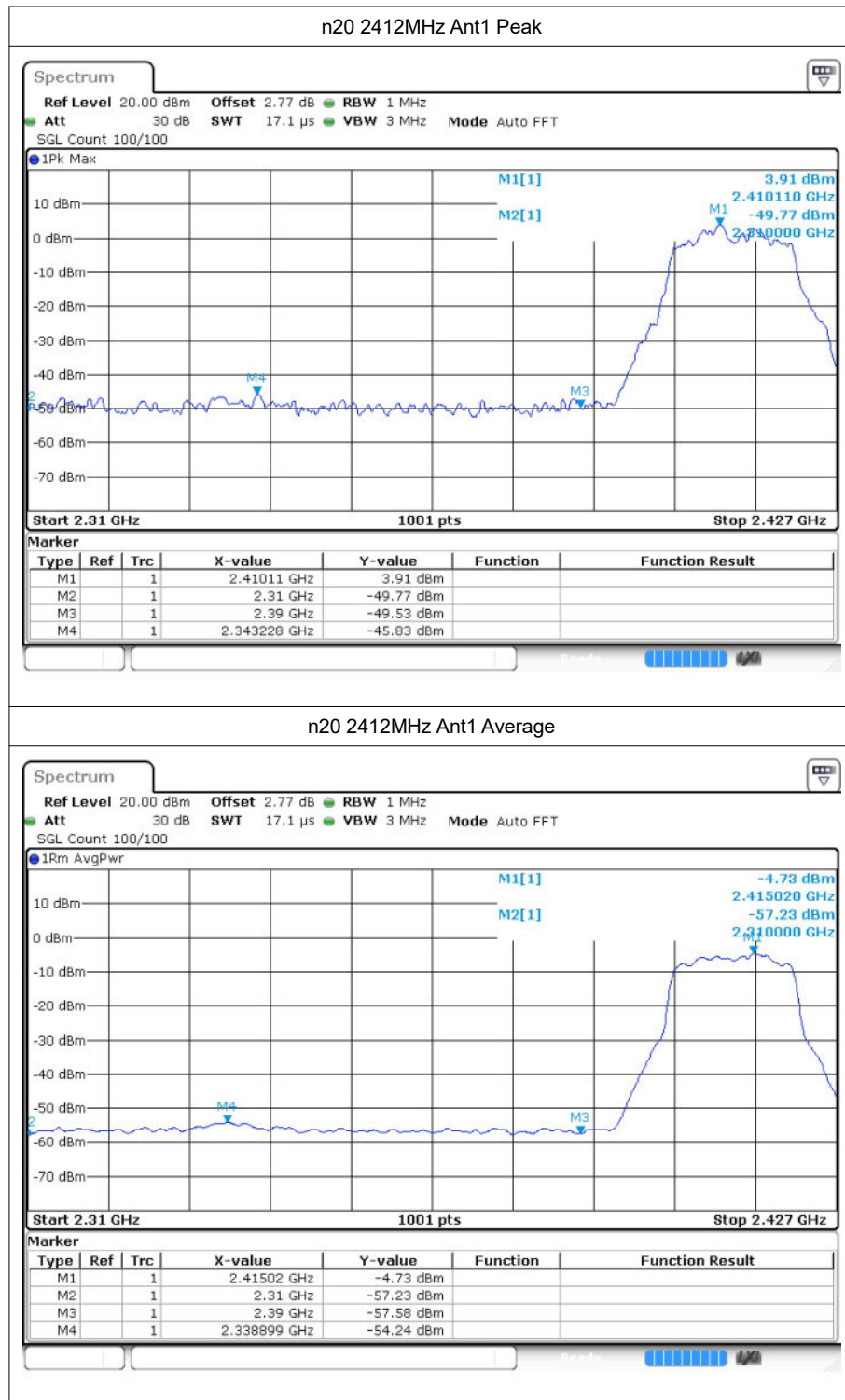
7.2 Test Graphs

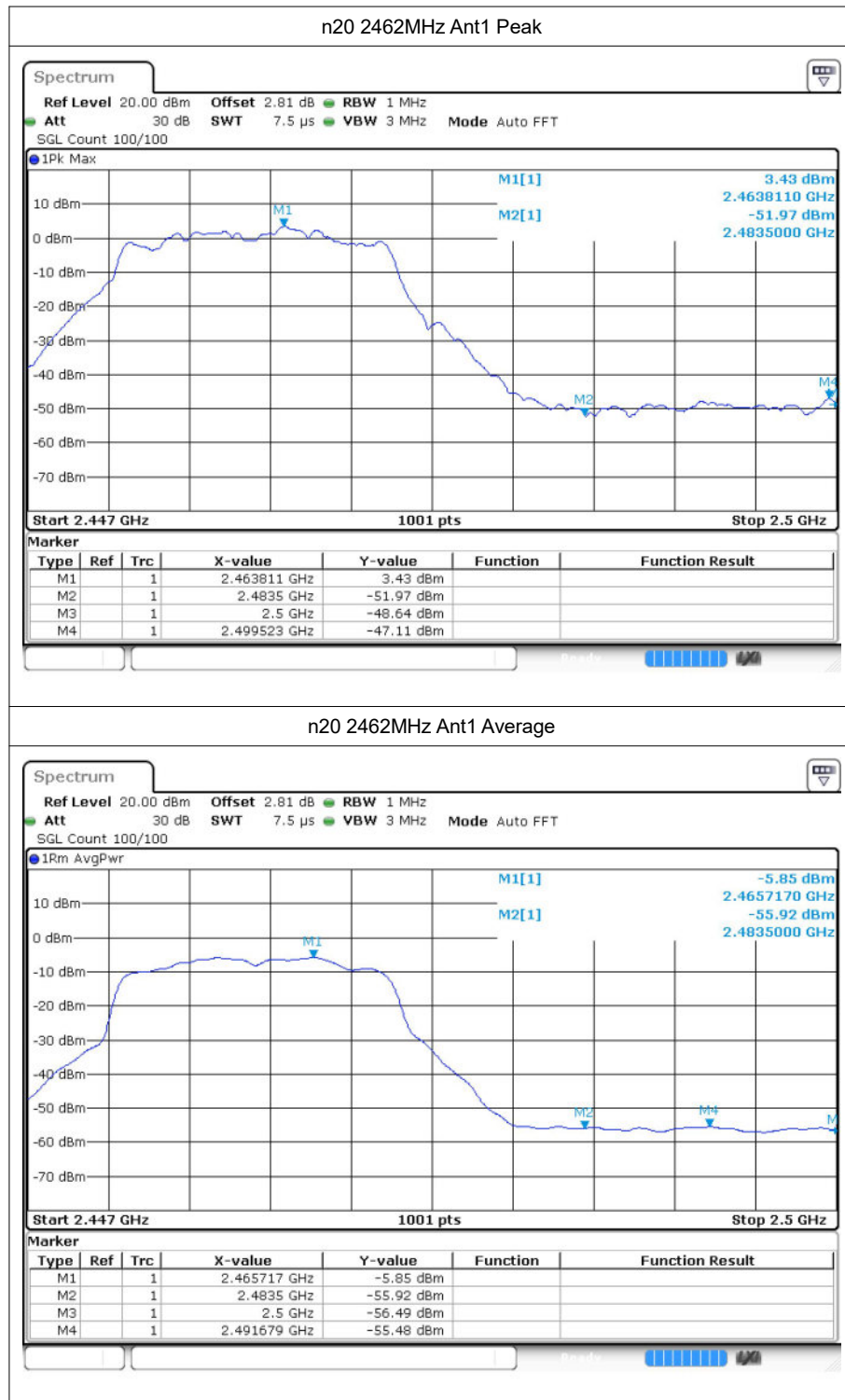












---The End---