



Appendix C

RF Test Data for 2.4GWIFI(Conducted Measurement)

Product Name: wifi extender

Trade Mark: N/A

Test Model: RPT-024

Environmental Conditions

Temperature:	24.6° C
Relative Humidity:	52.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Emiya lin
Supervised by:	Simba Haung



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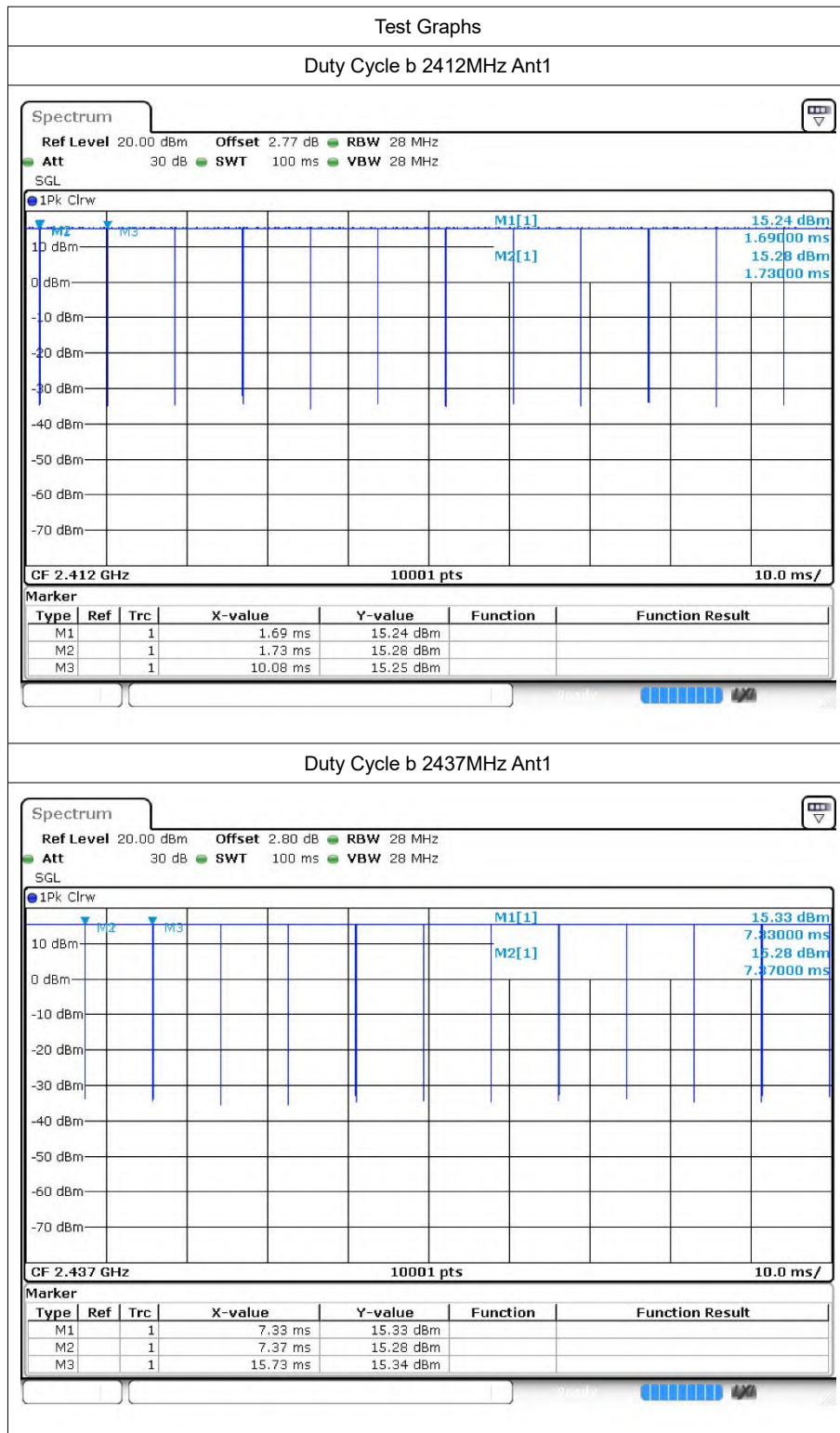


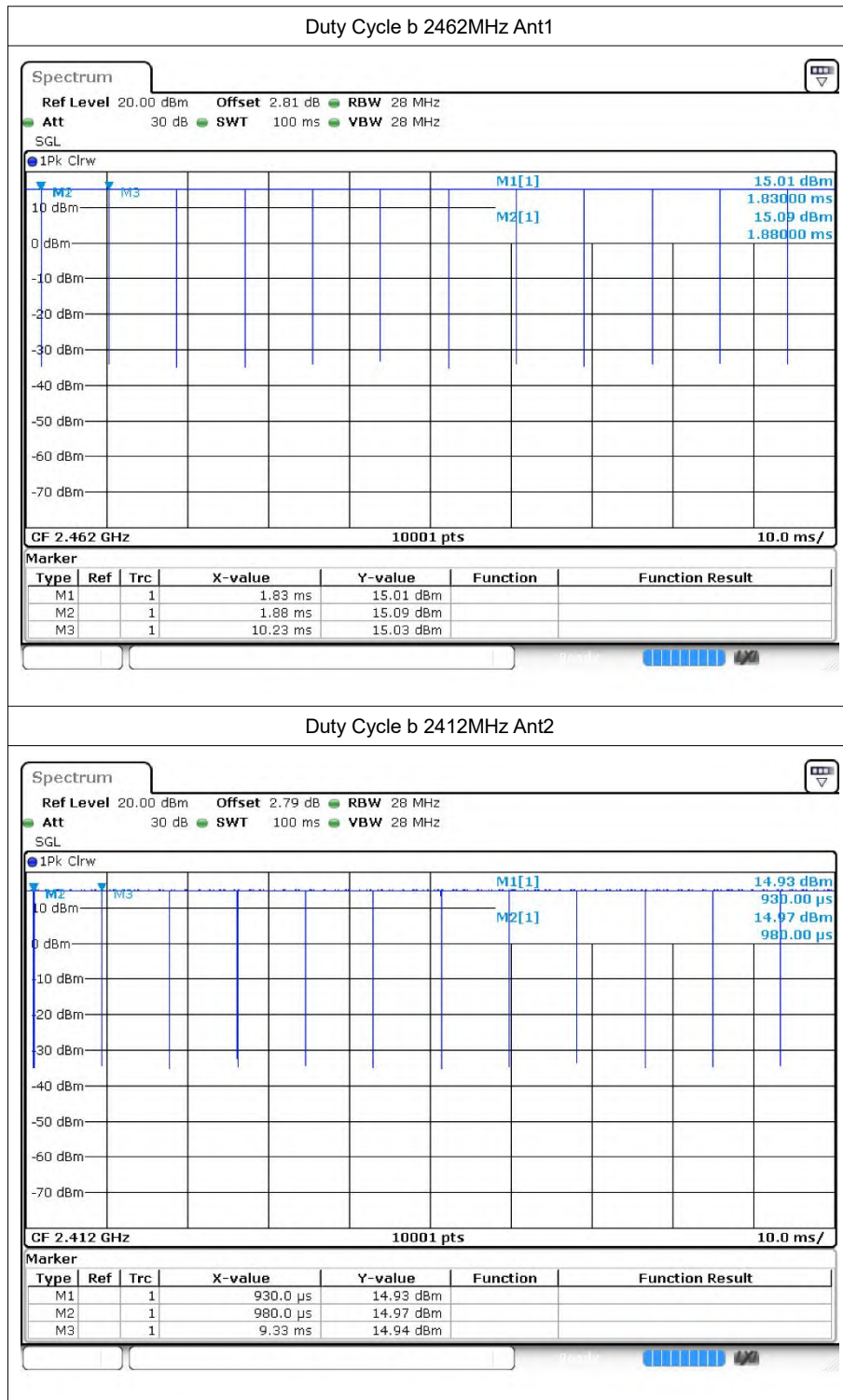
1 Duty Cycle

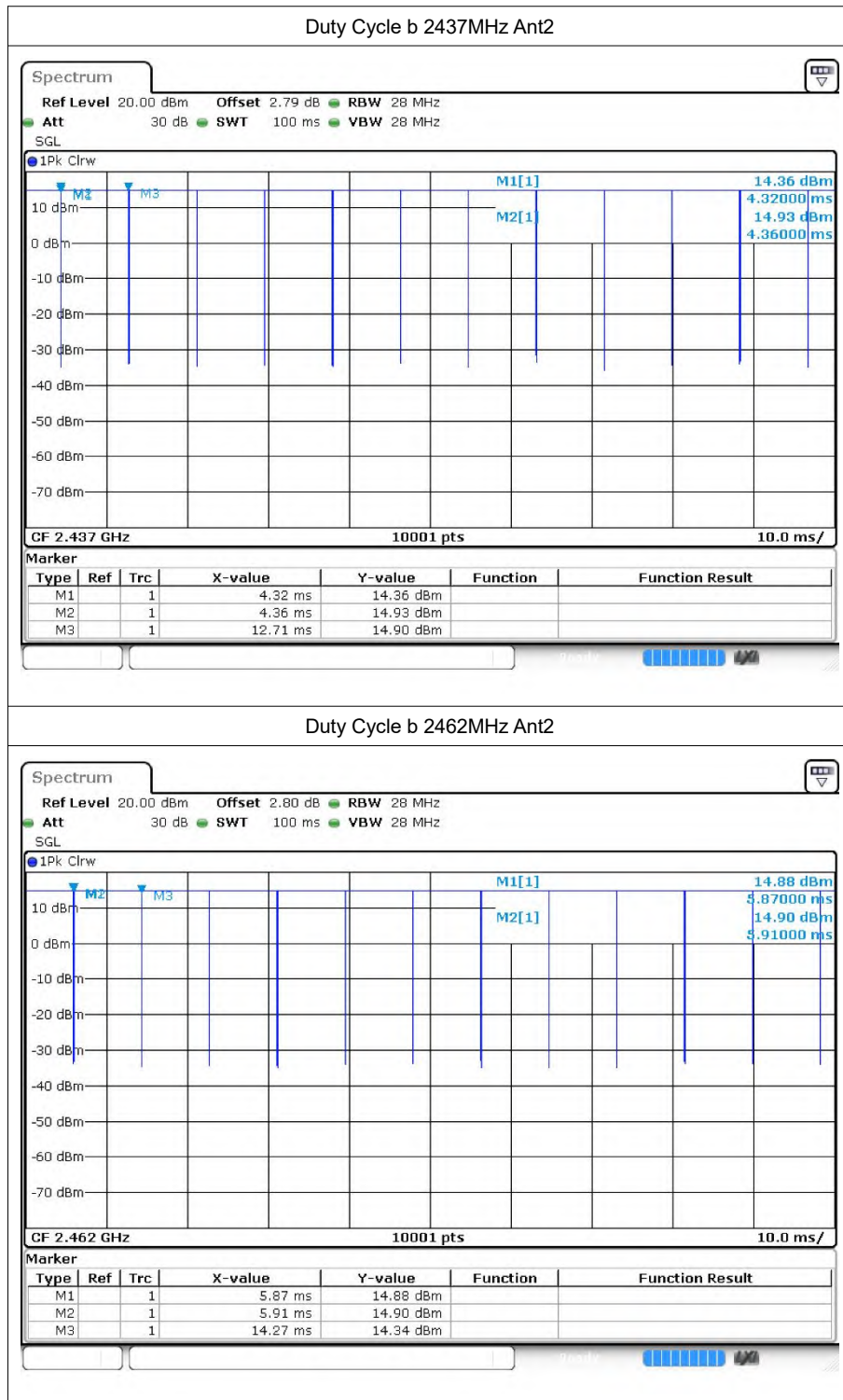
1.1 Test Result

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	99.59	0.02	0.12
b	2412	Ant2	99.58	0.02	0.12
b	2437	Ant2	99.59	0.02	0.12
b	2462	Ant2	99.58	0.02	0.12
g	2412	Ant1	99.6	0.02	0.12
g	2437	Ant1	99.6	0.02	0.12
g	2462	Ant1	99.59	0.02	0.12
g	2412	Ant2	99.58	0.02	0.12
g	2437	Ant2	99.59	0.02	0.12
g	2462	Ant2	99.58	0.02	0.12
n20	2412	Ant1	92.9	0.32	2.27
n20	2437	Ant1	92.94	0.32	2.22
n20	2462	Ant1	92.9	0.32	2.22
n20	2412	Ant2	92.97	0.32	2.22
n20	2437	Ant2	92.87	0.32	2.22
n20	2462	Ant2	92.89	0.32	2.22
n40	2422	Ant1	92.87	0.32	2.27
n40	2437	Ant1	92.92	0.32	2.22
n40	2452	Ant1	92.91	0.32	2.22
n40	2422	Ant2	92.88	0.32	2.22
n40	2437	Ant2	92.88	0.32	2.27
n40	2452	Ant2	92.86	0.32	2.22

1.2 Test Graphs

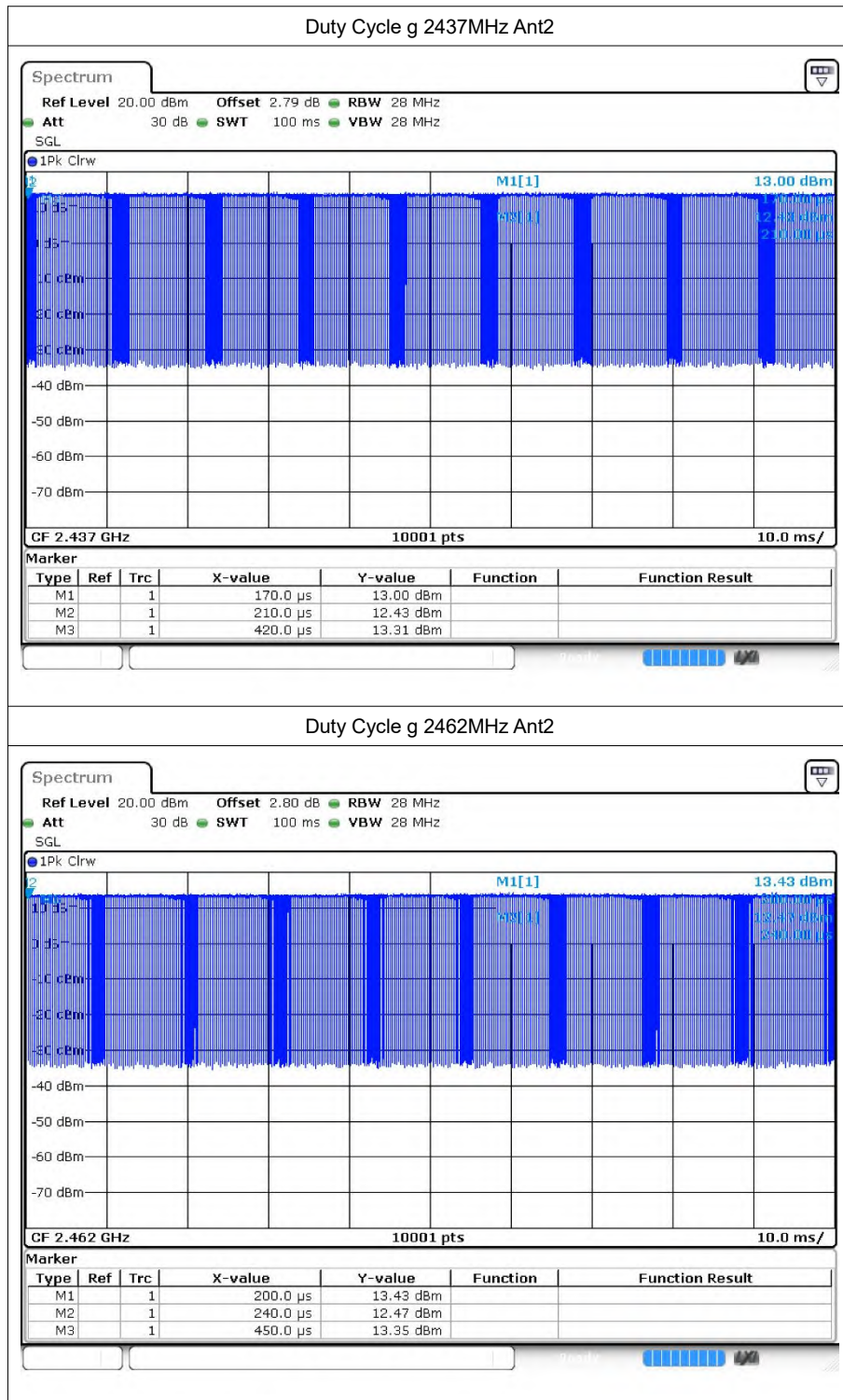












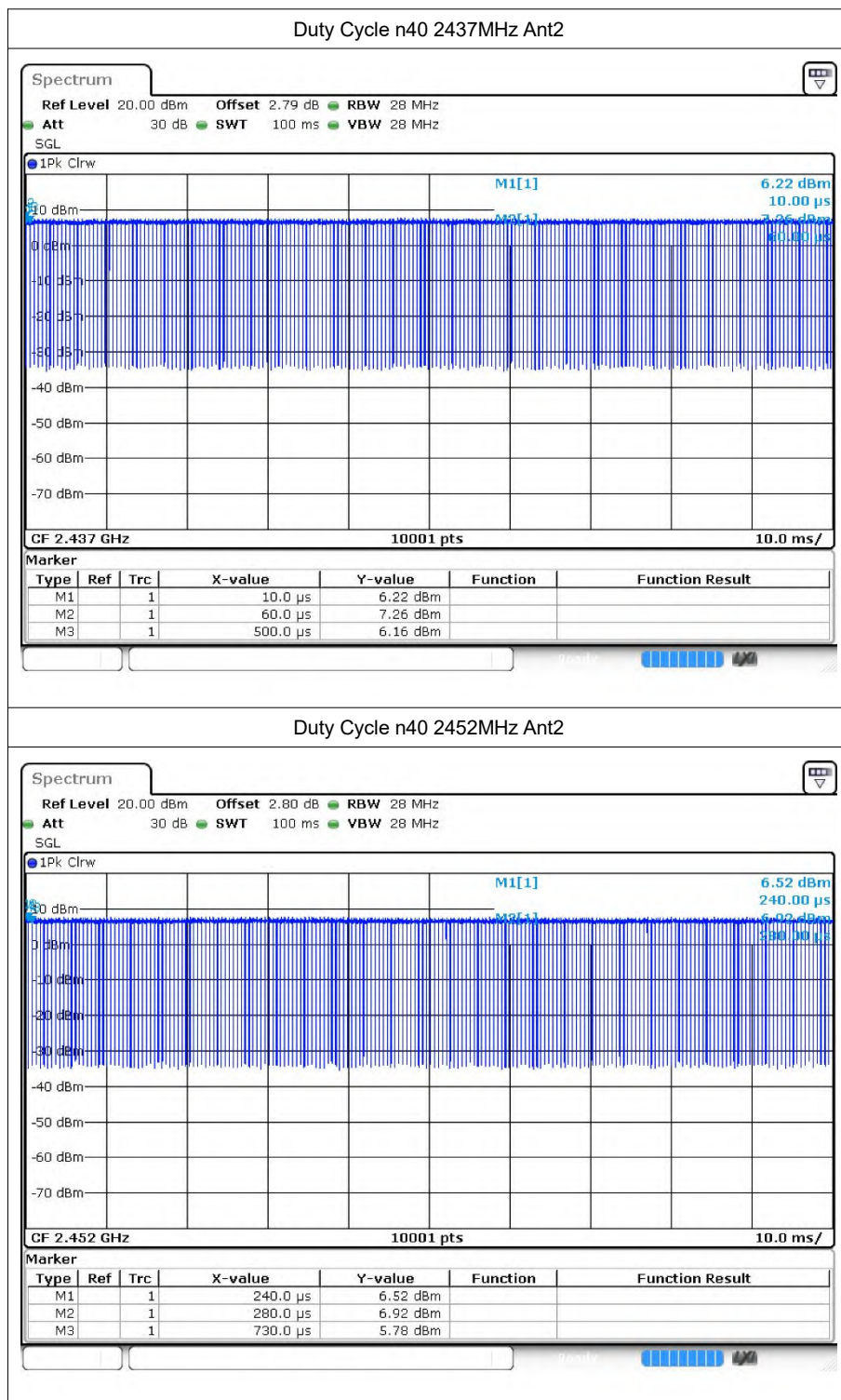












2 Maximum Conducted Output Power

2.1 Test Result

Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
b	2412	Ant1	16.46	30	Pass
b	2437	Ant1	16.44	30	Pass
b	2462	Ant1	16.2	30	Pass
b	2412	Ant2	16.02	30	Pass
b	2437	Ant2	16.14	30	Pass
b	2462	Ant2	15.05	30	Pass
g	2412	Ant1	16.11	30	Pass
g	2437	Ant1	15.98	30	Pass
g	2462	Ant1	15.77	30	Pass
g	2412	Ant2	15.41	30	Pass
g	2437	Ant2	15.37	30	Pass
g	2462	Ant2	15.24	30	Pass
n20	2412	Ant1	11.71	30	Pass
n20	2437	Ant1	11.71	30	Pass
n20	2462	Ant1	11.47	30	Pass
n20	2412	Ant2	11.07	30	Pass
n20	2437	Ant2	11	30	Pass
n20	2462	Ant2	11.01	30	Pass
n40	2422	Ant1	11.33	30	Pass
n40	2437	Ant1	11.39	30	Pass
n40	2452	Ant1	11.15	30	Pass
n40	2422	Ant2	10.74	30	Pass
n40	2437	Ant2	10.66	30	Pass
n40	2452	Ant2	10.51	30	Pass
n20	2412	SUM	14.41	29.94	Pass
n20	2437	SUM	14.38	29.94	Pass
n20	2462	SUM	14.26	29.94	Pass
n40	2422	SUM	14.06	29.94	Pass
n40	2437	SUM	14.05	29.94	Pass
n40	2452	SUM	13.85	29.94	Pass

Note: The MIMO gain of antenna is 6.06 dBi, which exceeds 6 dBi. Limit = 30 - (6.06 - 6) = 29.94 dBm

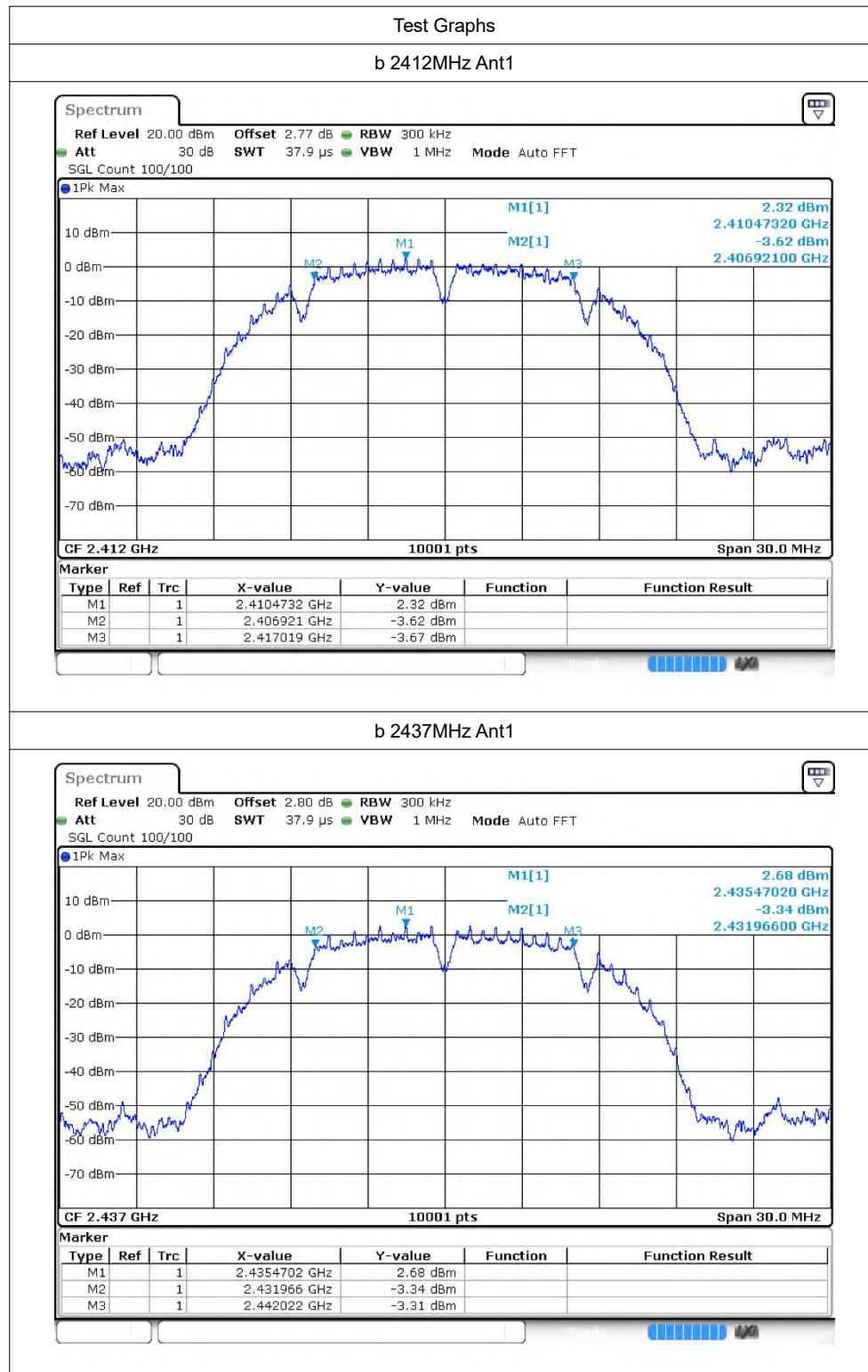


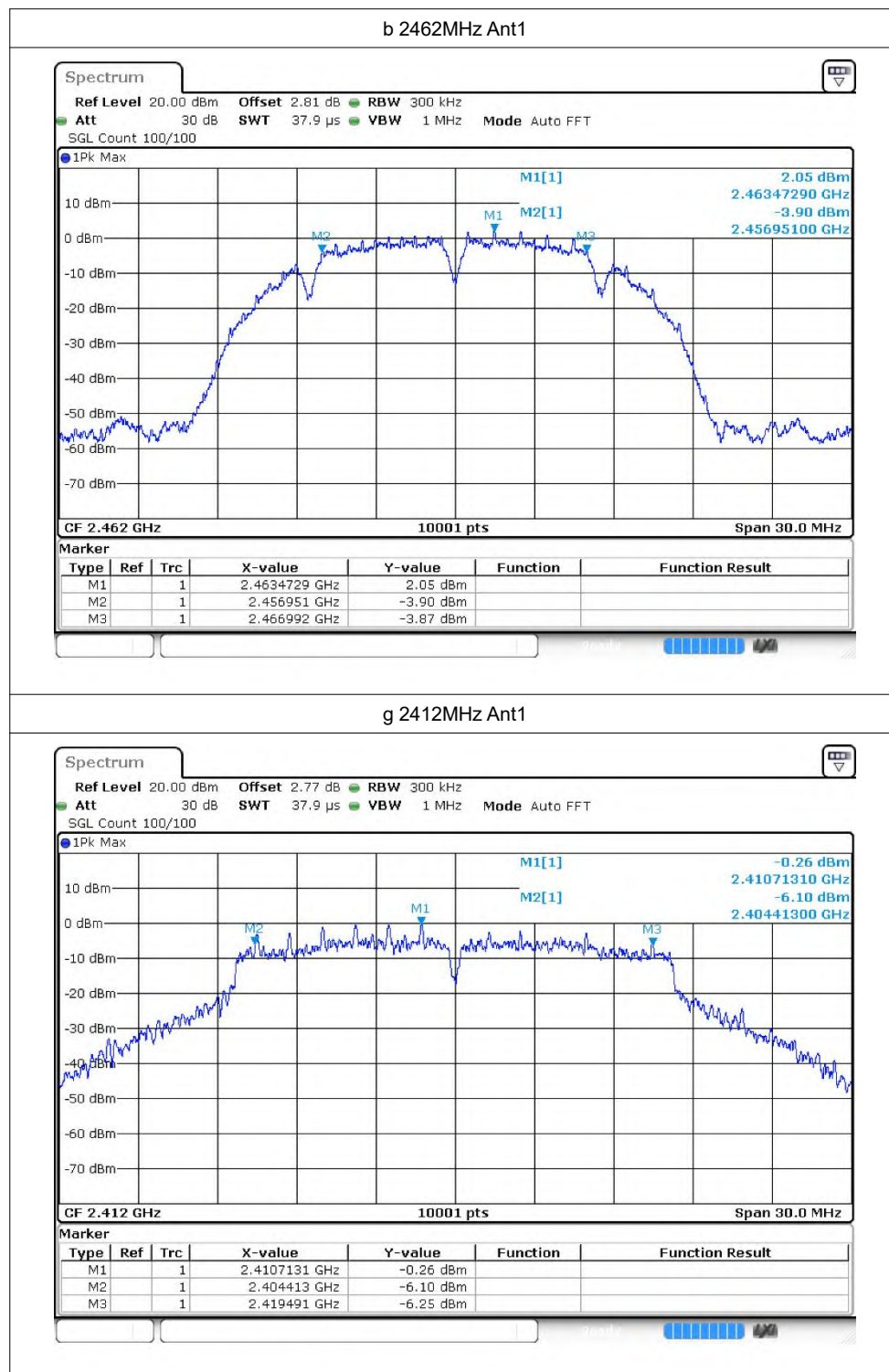
3 -6dB Bandwidth

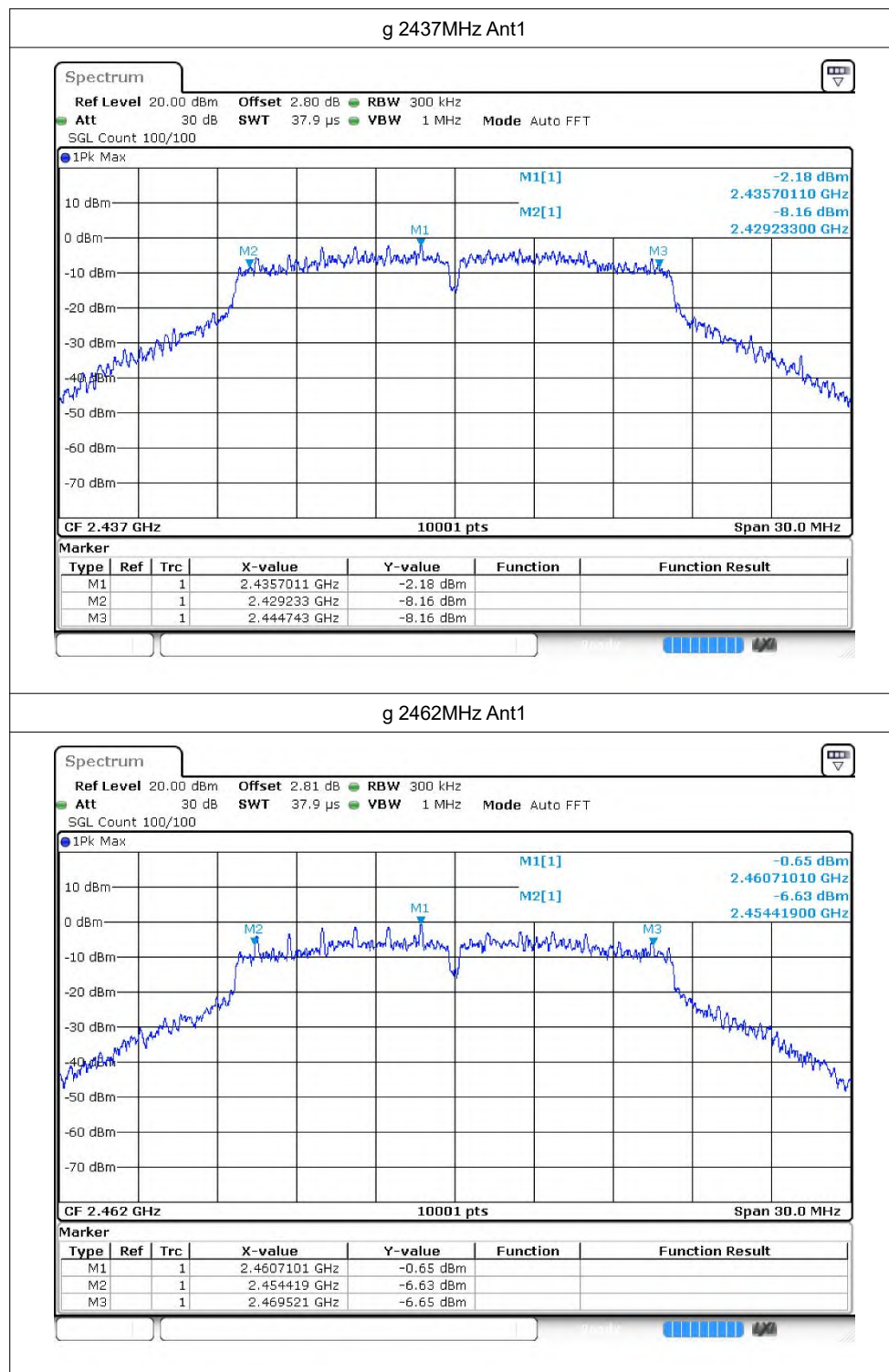
3.1 Test Result

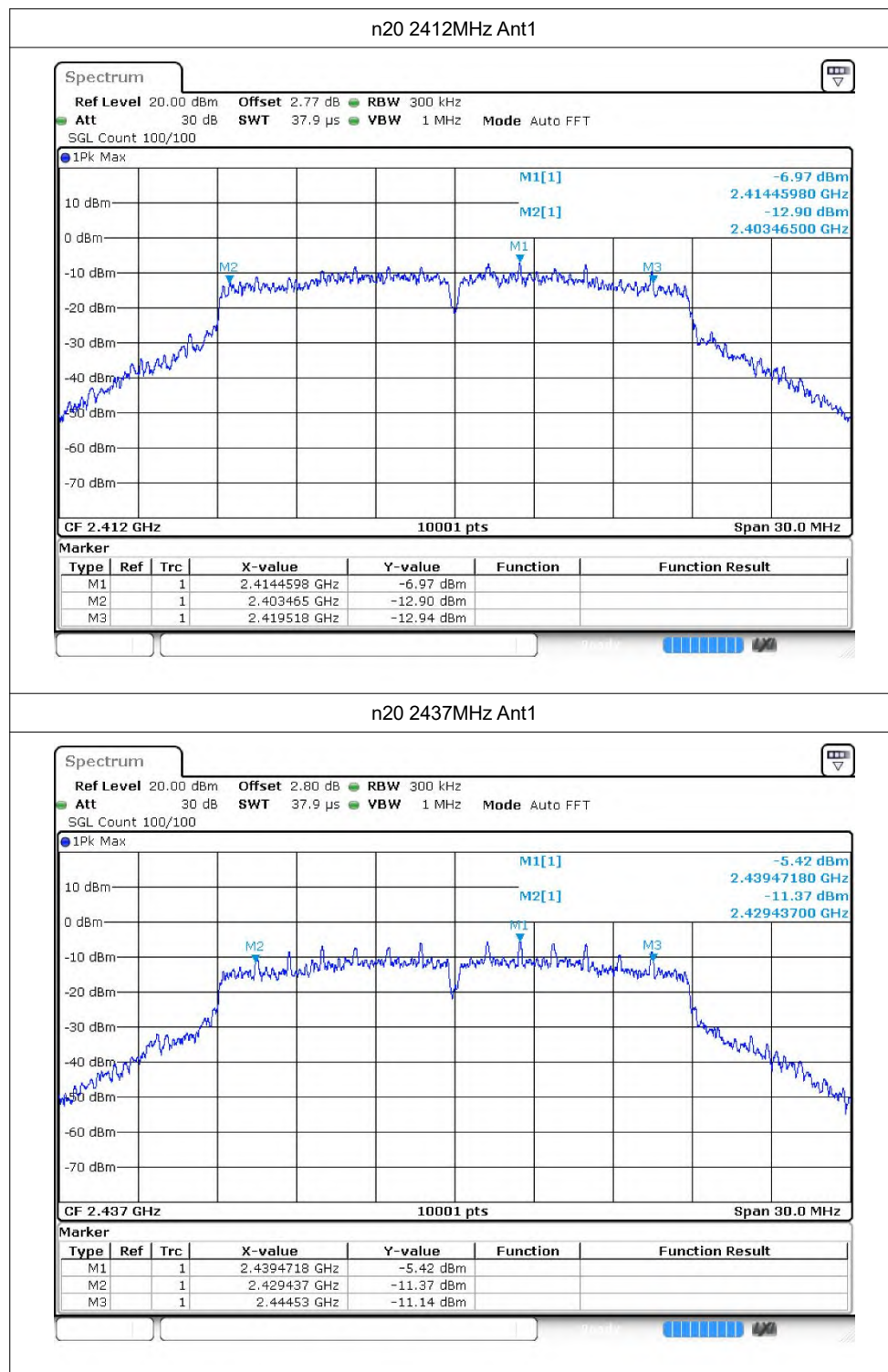
Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
b	2412	Ant1	10.098	0.5	Pass
b	2437	Ant1	10.056	0.5	Pass
b	2462	Ant1	10.041	0.5	Pass
g	2412	Ant1	15.078	0.5	Pass
g	2437	Ant1	15.51	0.5	Pass
g	2462	Ant1	15.102	0.5	Pass
n20	2412	Ant1	16.053	0.5	Pass
n20	2437	Ant1	15.093	0.5	Pass
n20	2462	Ant1	15.09	0.5	Pass
n40	2422	Ant1	31.32	0.5	Pass
n40	2437	Ant1	31.32	0.5	Pass
n40	2452	Ant1	35.076	0.5	Pass
b	2412	Ant2	10.08	0.5	Pass
b	2437	Ant2	10.083	0.5	Pass
b	2462	Ant2	10.053	0.5	Pass
g	2412	Ant2	15.105	0.5	Pass
g	2437	Ant2	13.563	0.5	Pass
g	2462	Ant2	15.093	0.5	Pass
n20	2412	Ant2	15.384	0.5	Pass
n20	2437	Ant2	15.099	0.5	Pass
n20	2462	Ant2	15.093	0.5	Pass
n40	2422	Ant2	31.338	0.5	Pass
n40	2437	Ant2	27.21	0.5	Pass
n40	2452	Ant2	35.046	0.5	Pass

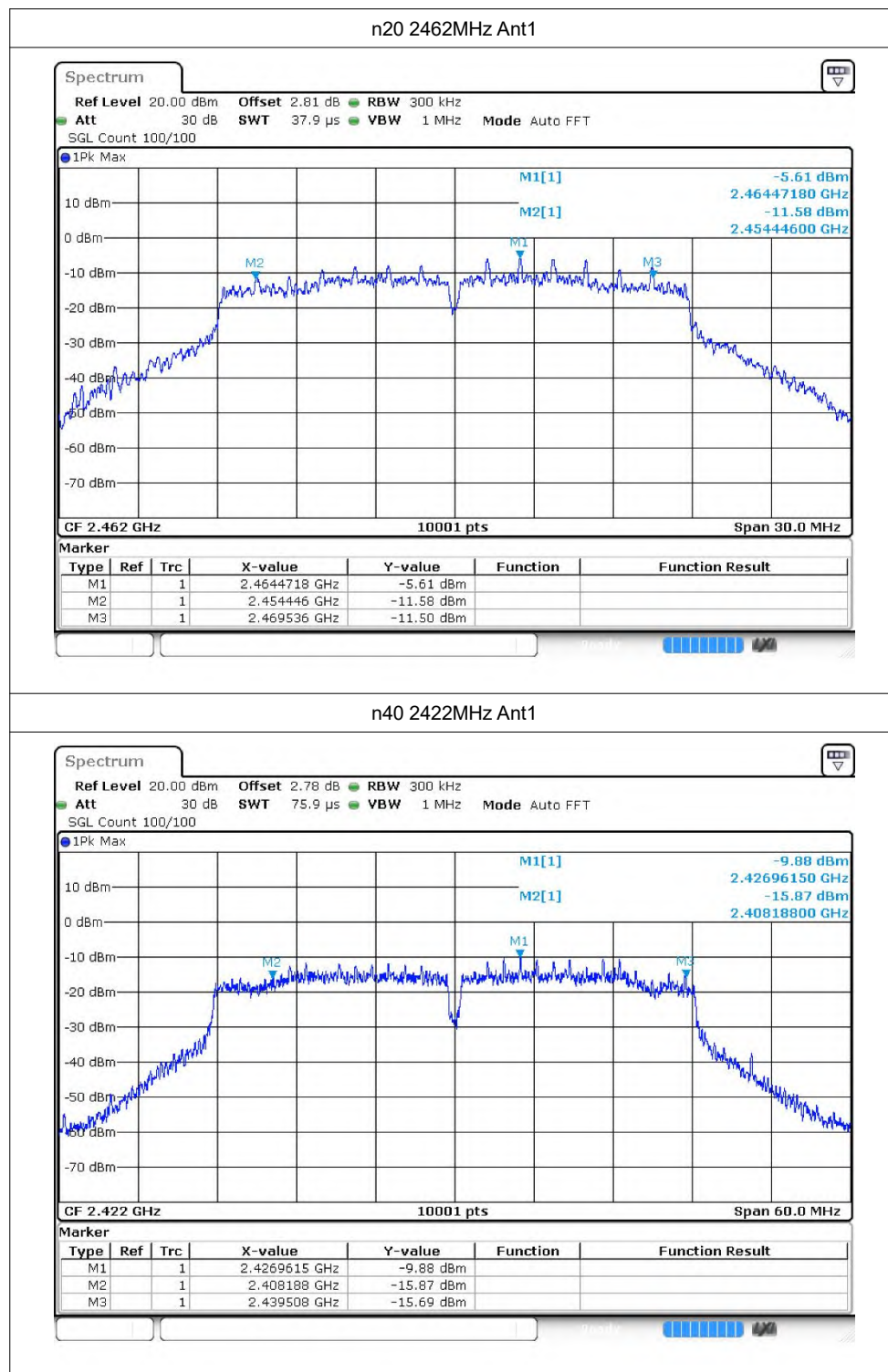
3.2 Test Graphs

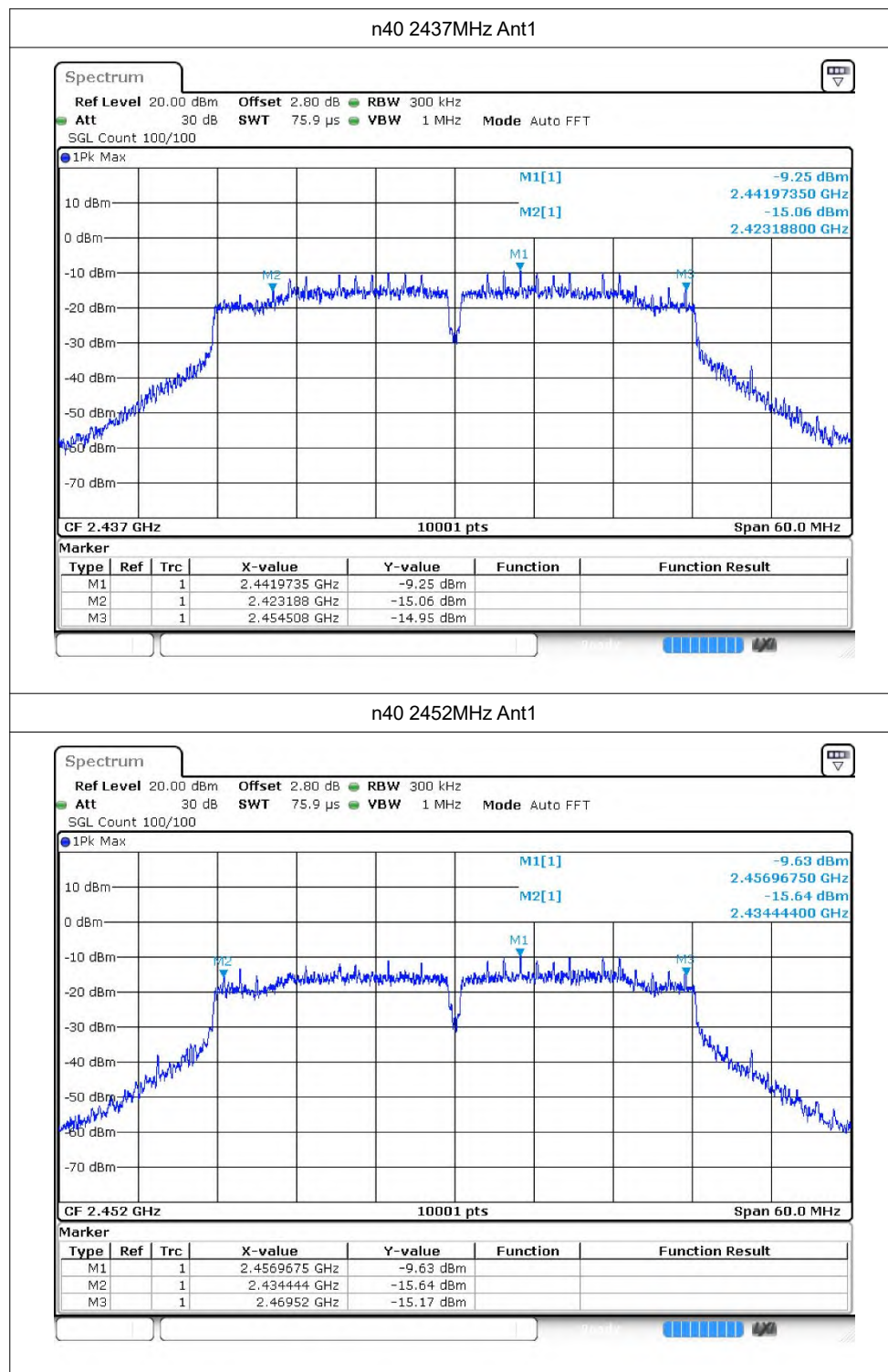




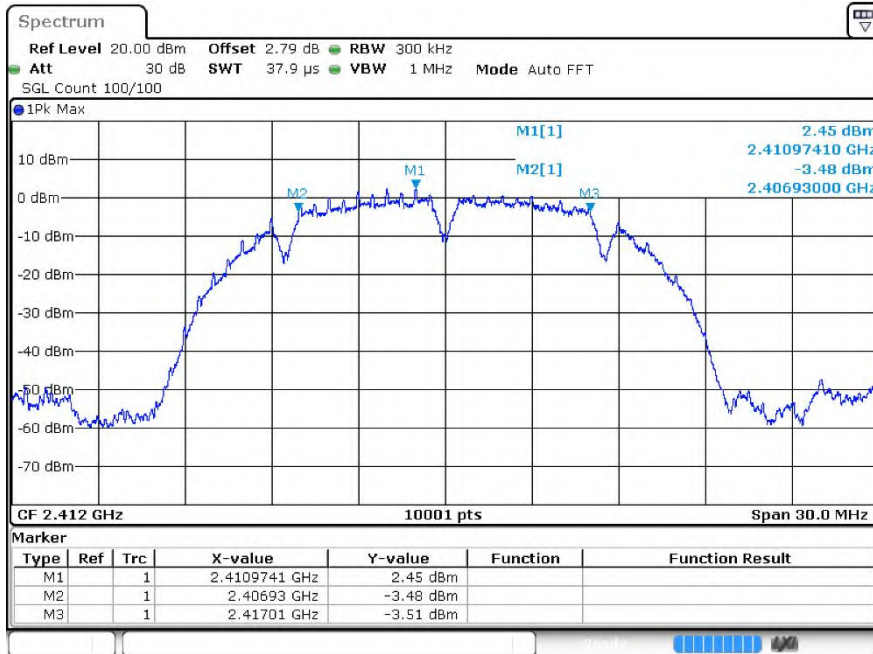




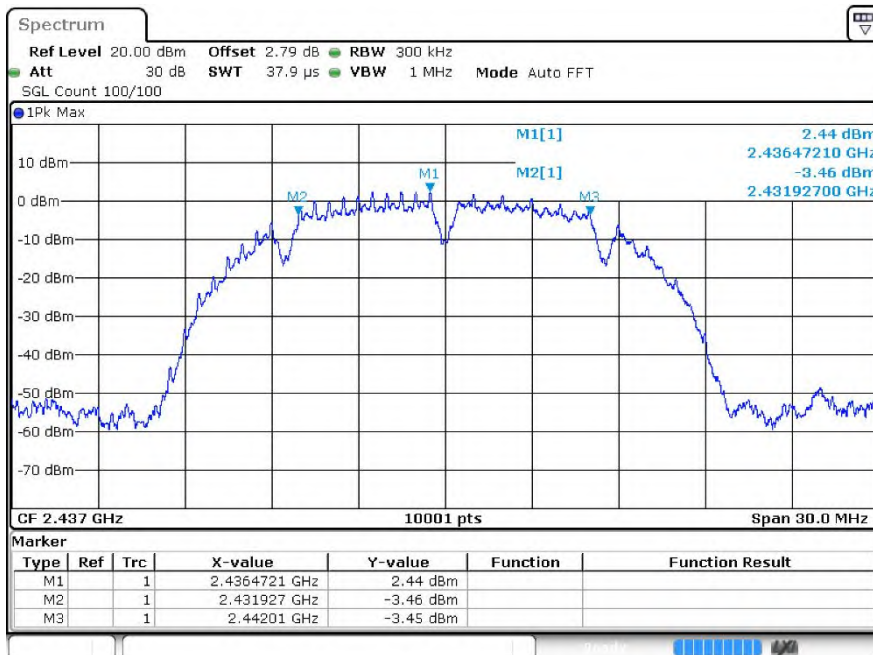




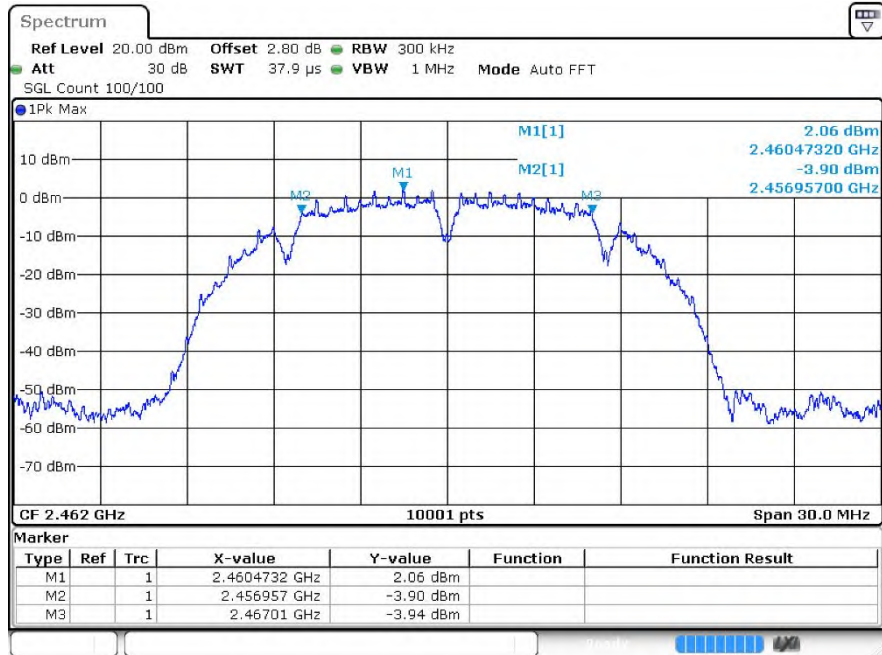
b 2412MHz Ant2



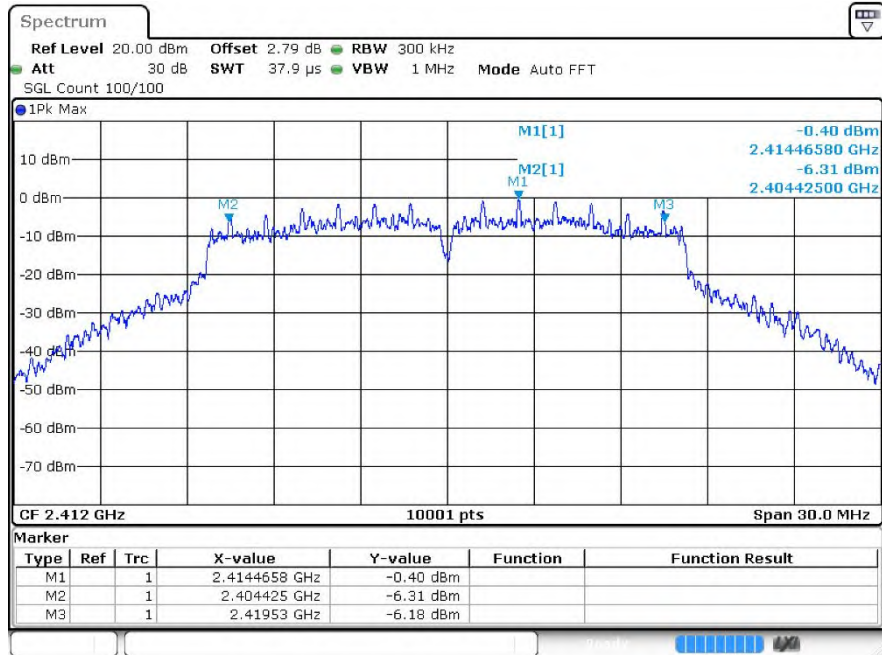
b 2437MHz Ant2



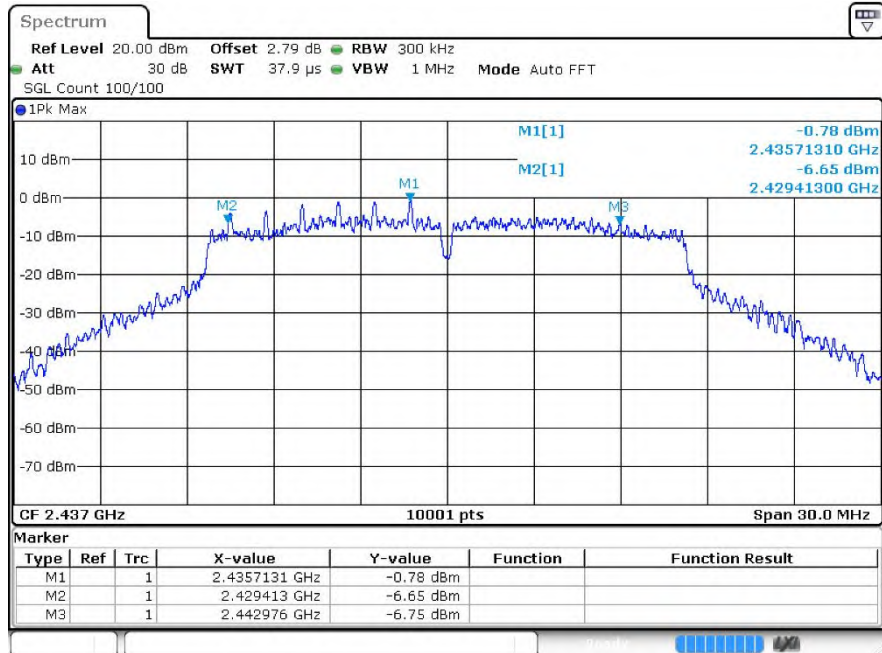
b 2462MHz Ant2



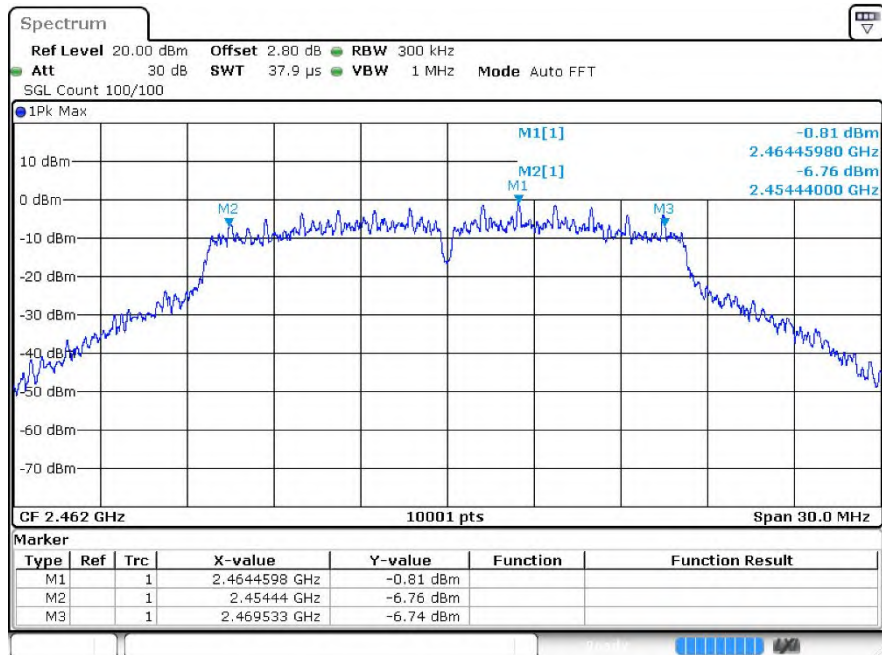
g 2412MHz Ant2

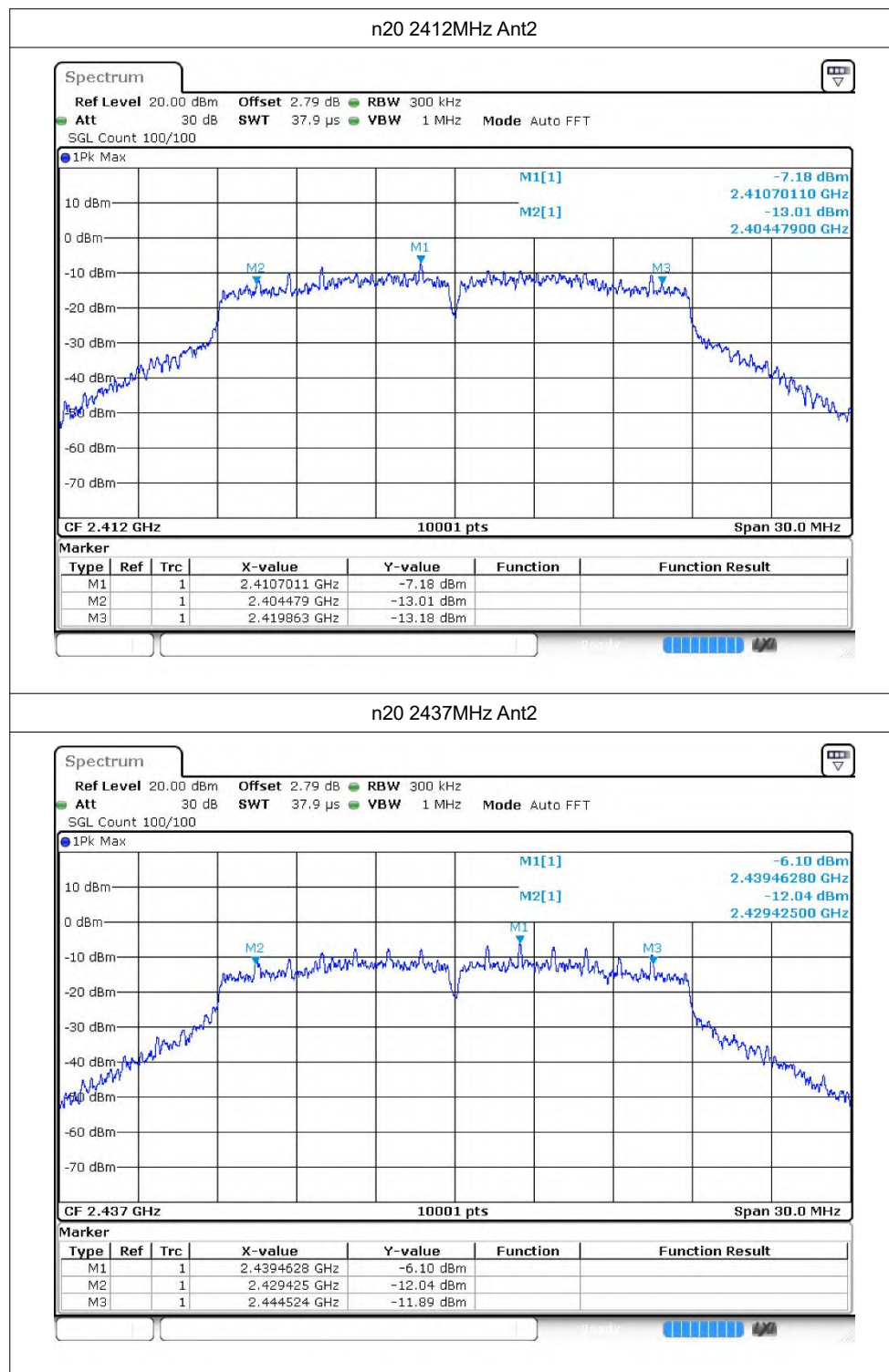


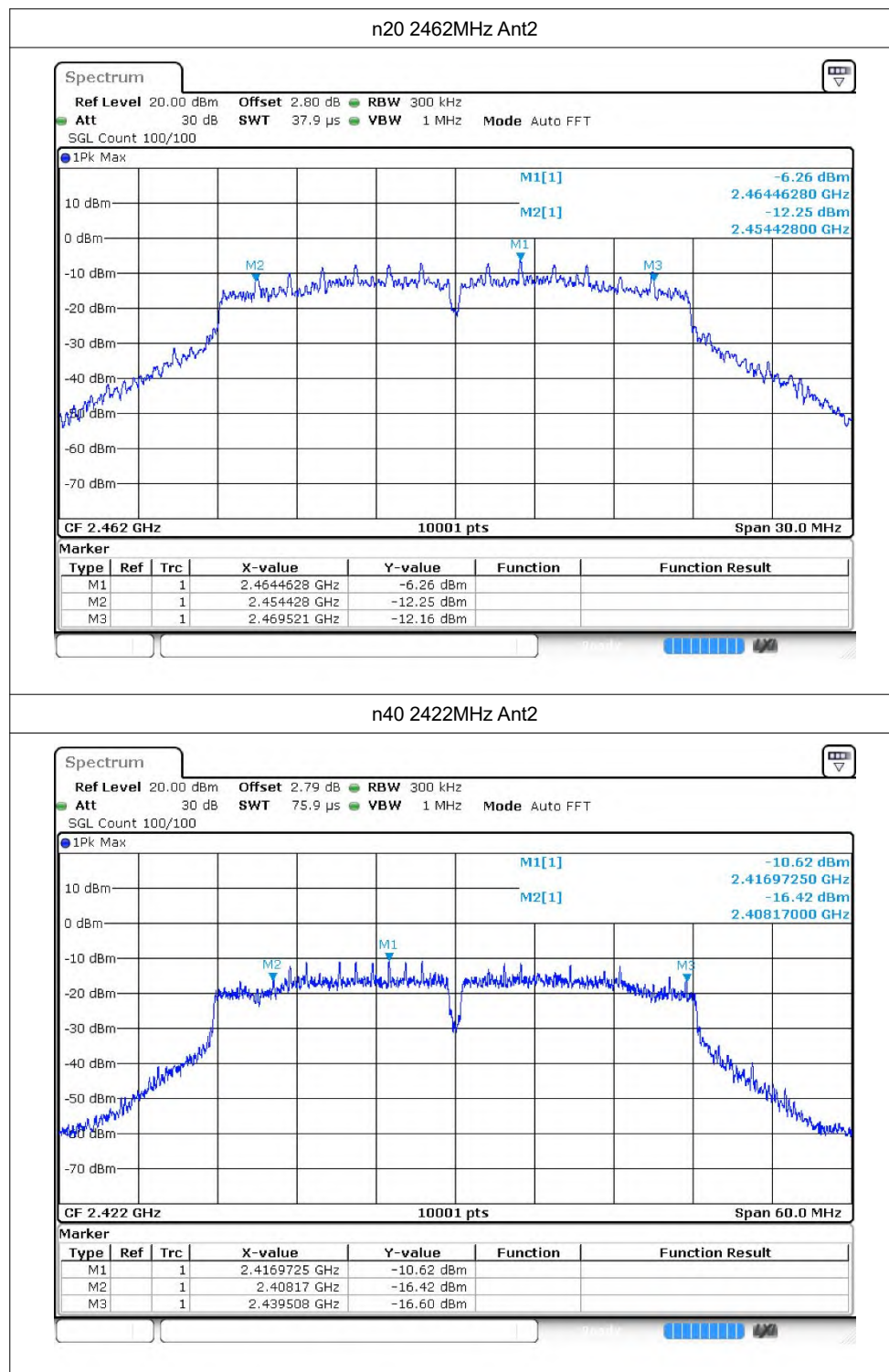
g 2437MHz Ant2

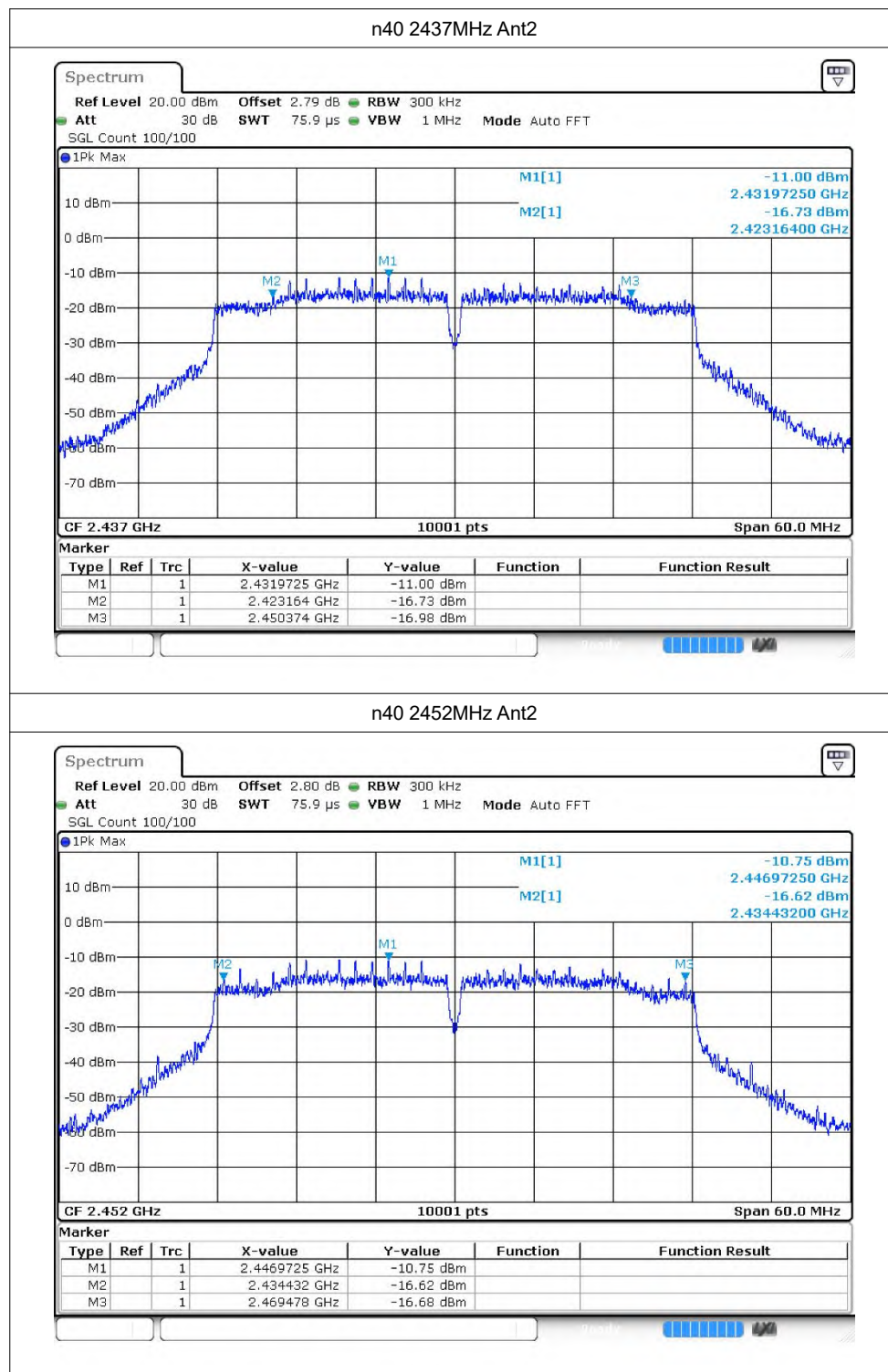


g 2462MHz Ant2









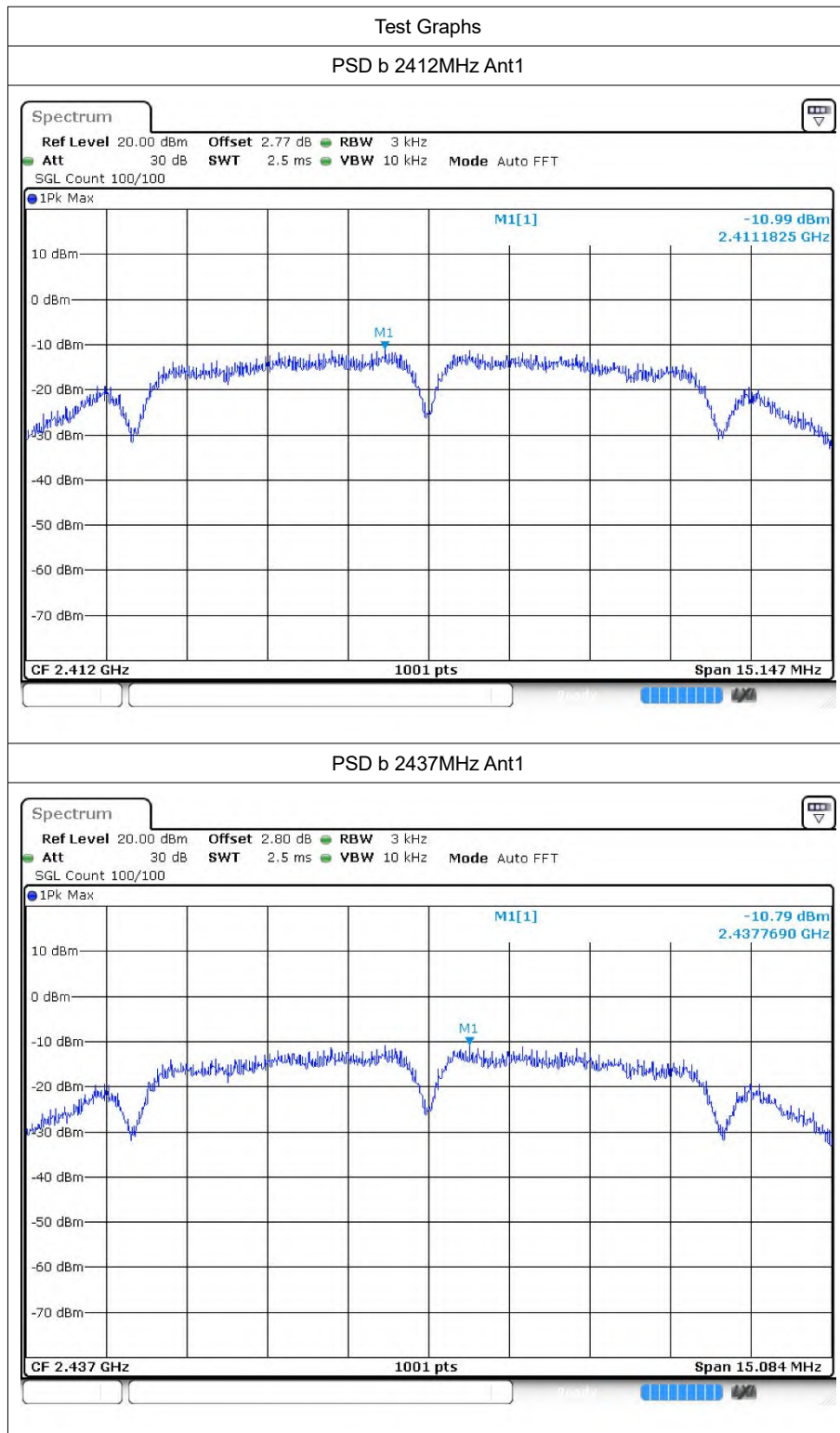
4 Maximum Power Spectral Density Level

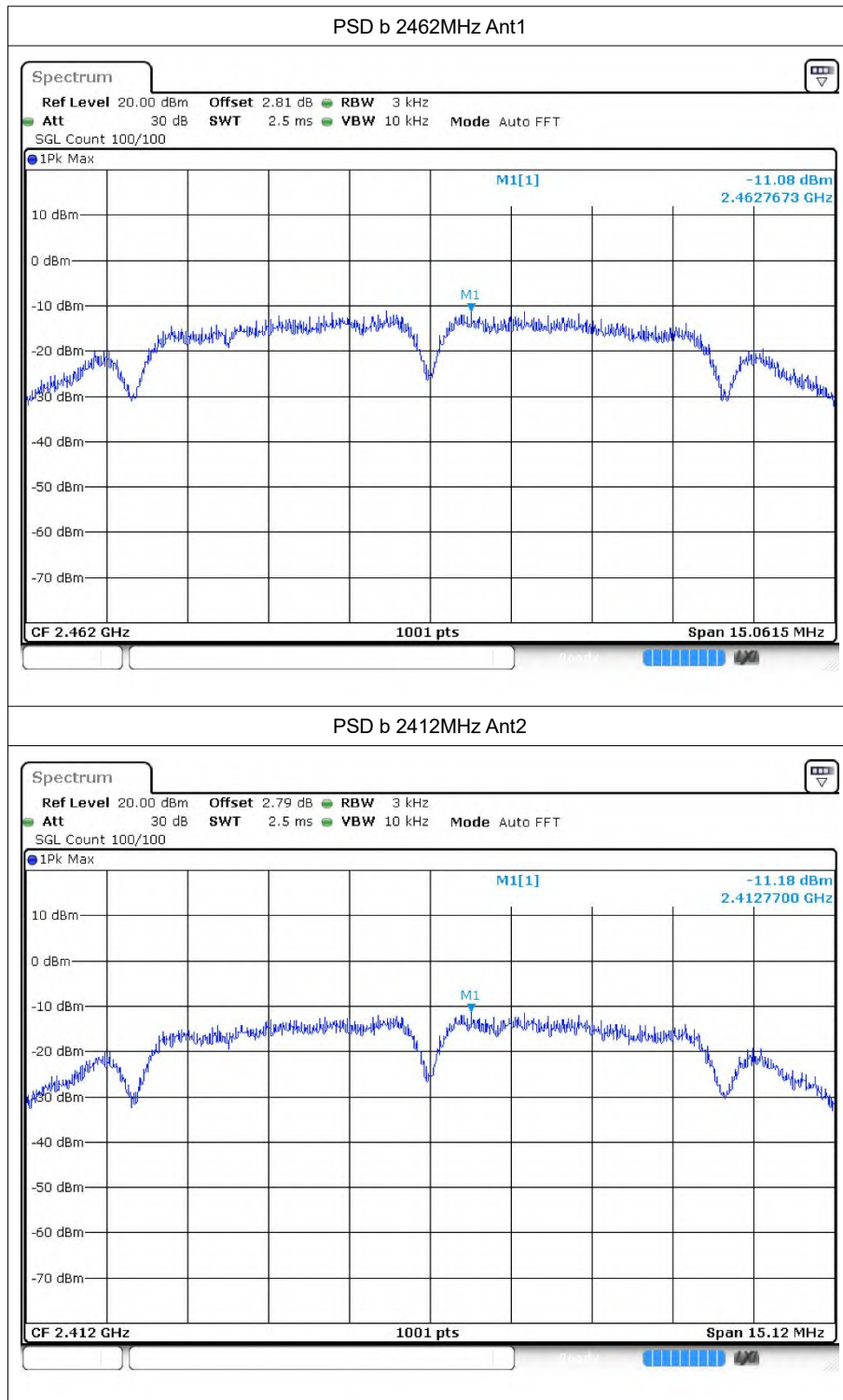
4.1 Test Result

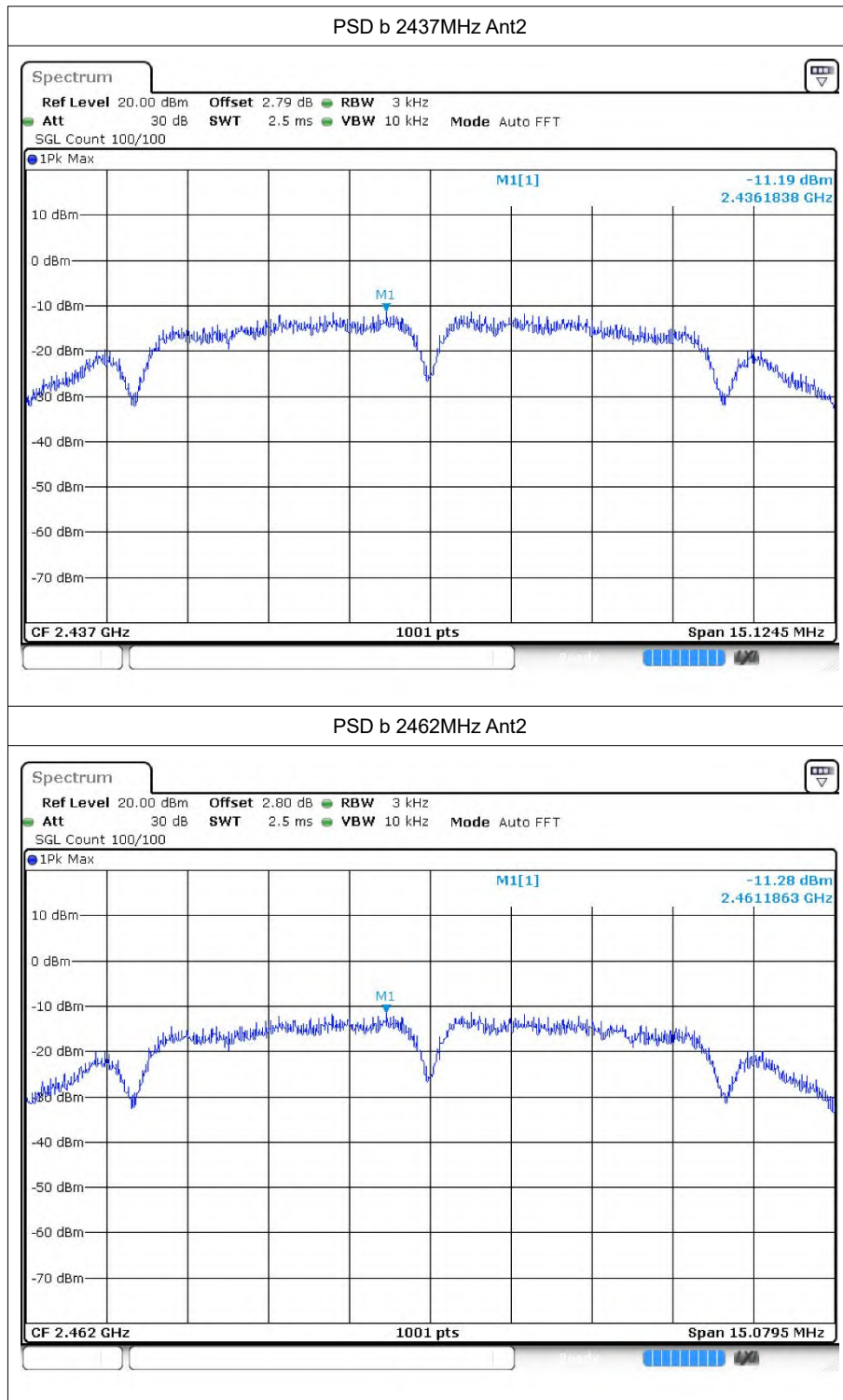
Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3-100kHz)	Limit (dBm/3kHz)	Verdict
b	2412	Ant1	-10.99	≤8	Pass
b	2437	Ant1	-10.79	≤8	Pass
b	2462	Ant1	-11.08	≤8	Pass
b	2412	Ant2	-11.18	≤8	Pass
b	2437	Ant2	-11.19	≤8	Pass
b	2462	Ant2	-11.28	≤8	Pass
g	2412	Ant1	-14.75	≤8	Pass
g	2437	Ant1	-13.59	≤8	Pass
g	2462	Ant1	-14.36	≤8	Pass
g	2412	Ant2	-15.19	≤8	Pass
g	2437	Ant2	-15.42	≤8	Pass
g	2462	Ant2	-14.65	≤8	Pass
n20	2412	Ant1	-19.52	≤8	Pass
n20	2437	Ant1	-19.6	≤8	Pass
n20	2462	Ant1	-20.53	≤8	Pass
n20	2412	Ant2	-20.62	≤8	Pass
n20	2437	Ant2	-21.13	≤8	Pass
n20	2462	Ant2	-21.34	≤8	Pass
n40	2422	Ant1	-23.9	≤8	Pass
n40	2437	Ant1	-23.16	≤8	Pass
n40	2452	Ant1	-22.46	≤8	Pass
n40	2422	Ant2	-24.12	≤8	Pass
n40	2437	Ant2	-25.14	≤8	Pass
n40	2452	Ant2	-23.98	≤8	Pass
n20	2412	SUM	-17.02	≤7.94	Pass
n20	2437	SUM	-17.29	≤7.94	Pass
n20	2462	SUM	-17.91	≤7.94	Pass
n40	2422	SUM	-21.00	≤7.94	Pass
n40	2437	SUM	-21.03	≤7.94	Pass
n40	2452	SUM	-20.14	≤7.94	Pass

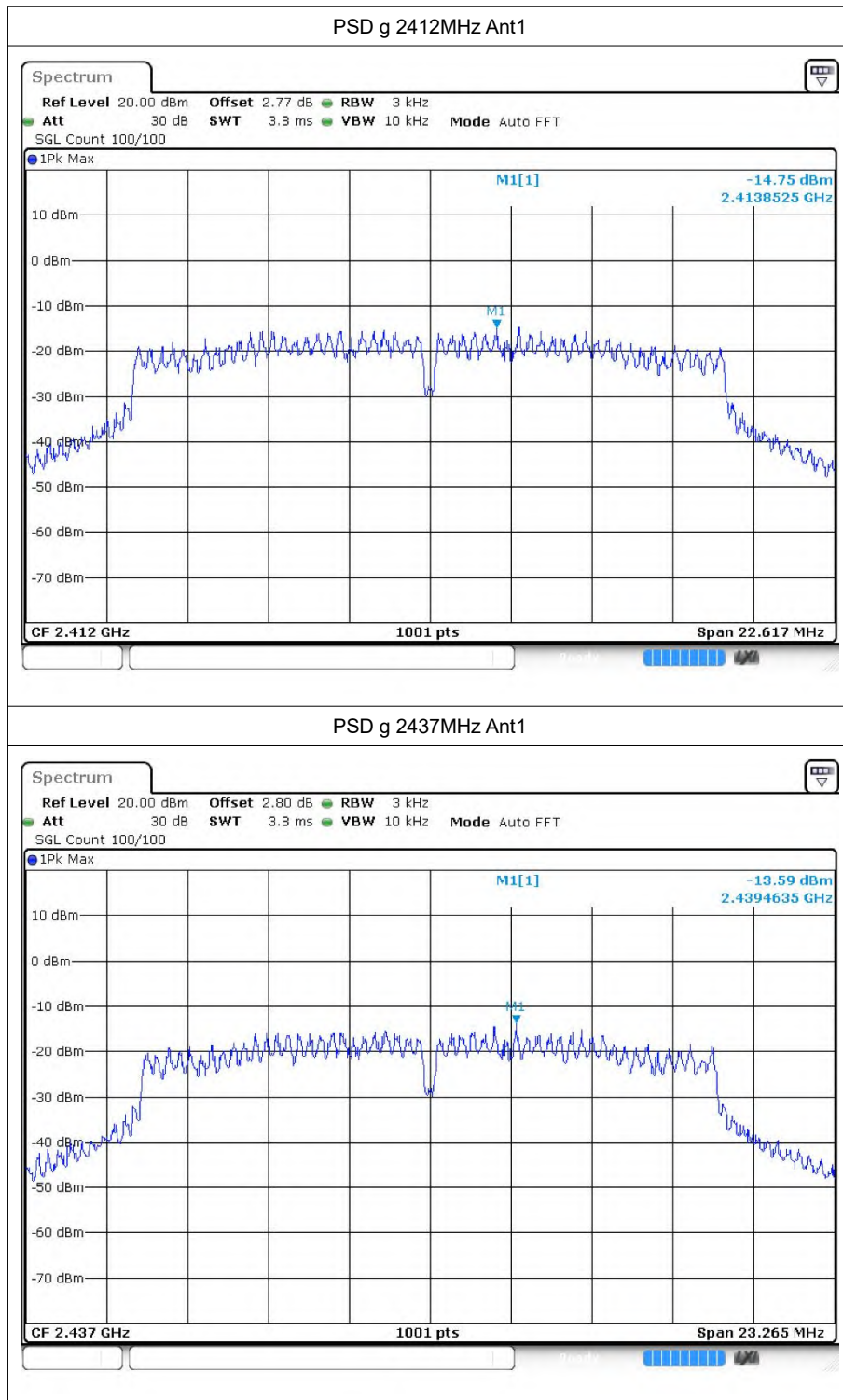
Note: The MIMO gain of antenna is 6.06 dBi, which exceeds 6 dBi. Limit = 8 - (6.06 - 6) = 7.94 dBm

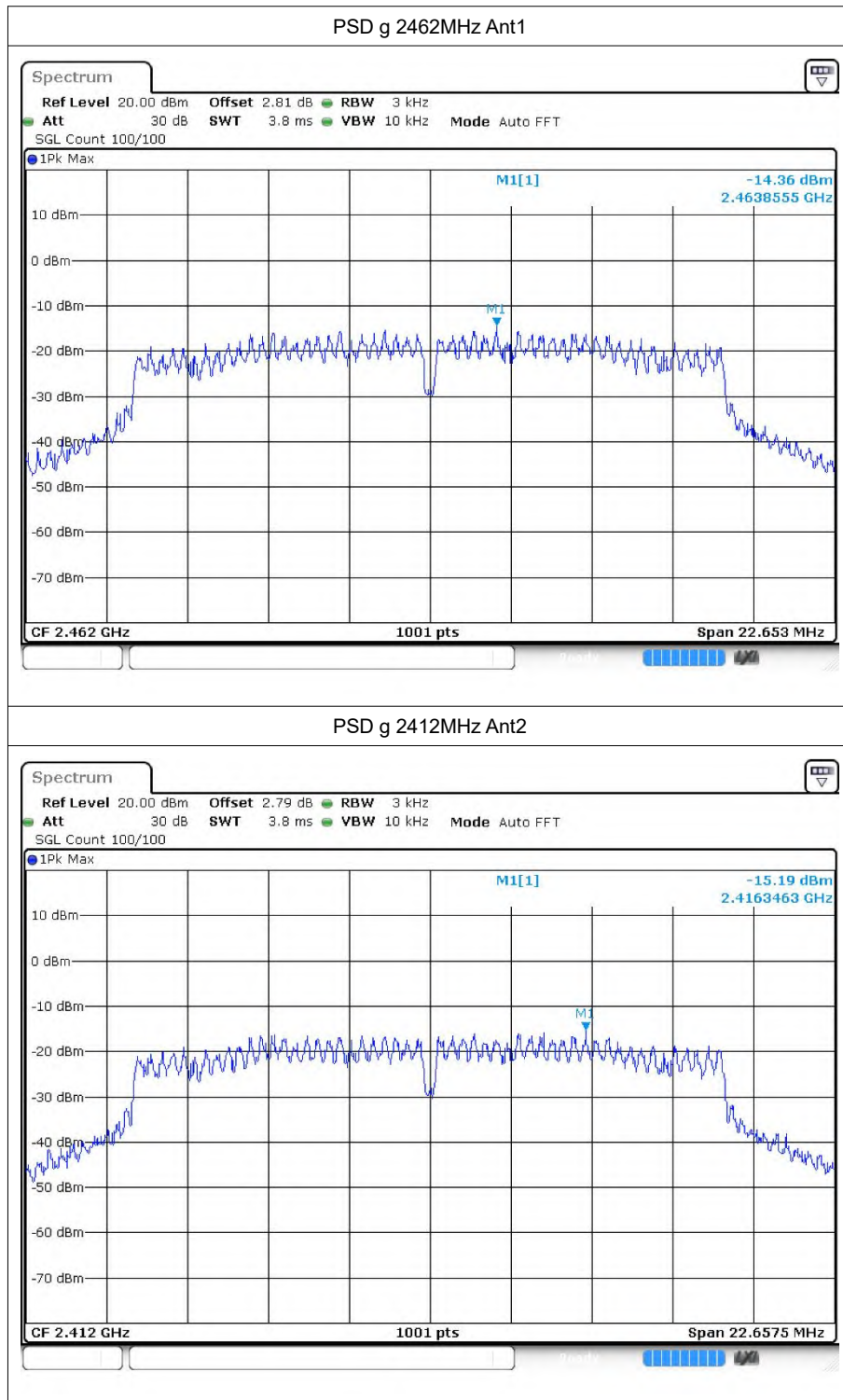
4.2 Test Graphs

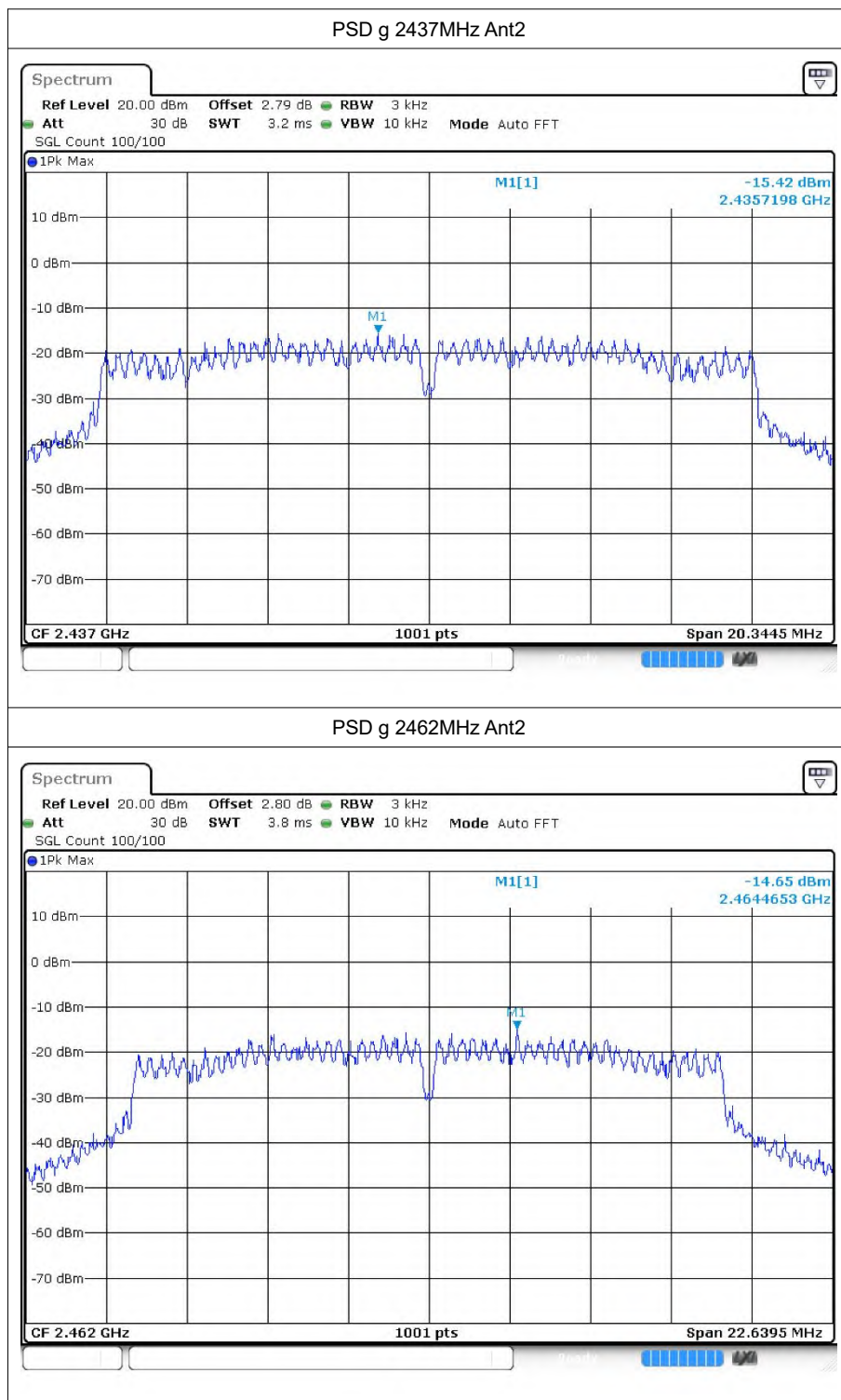


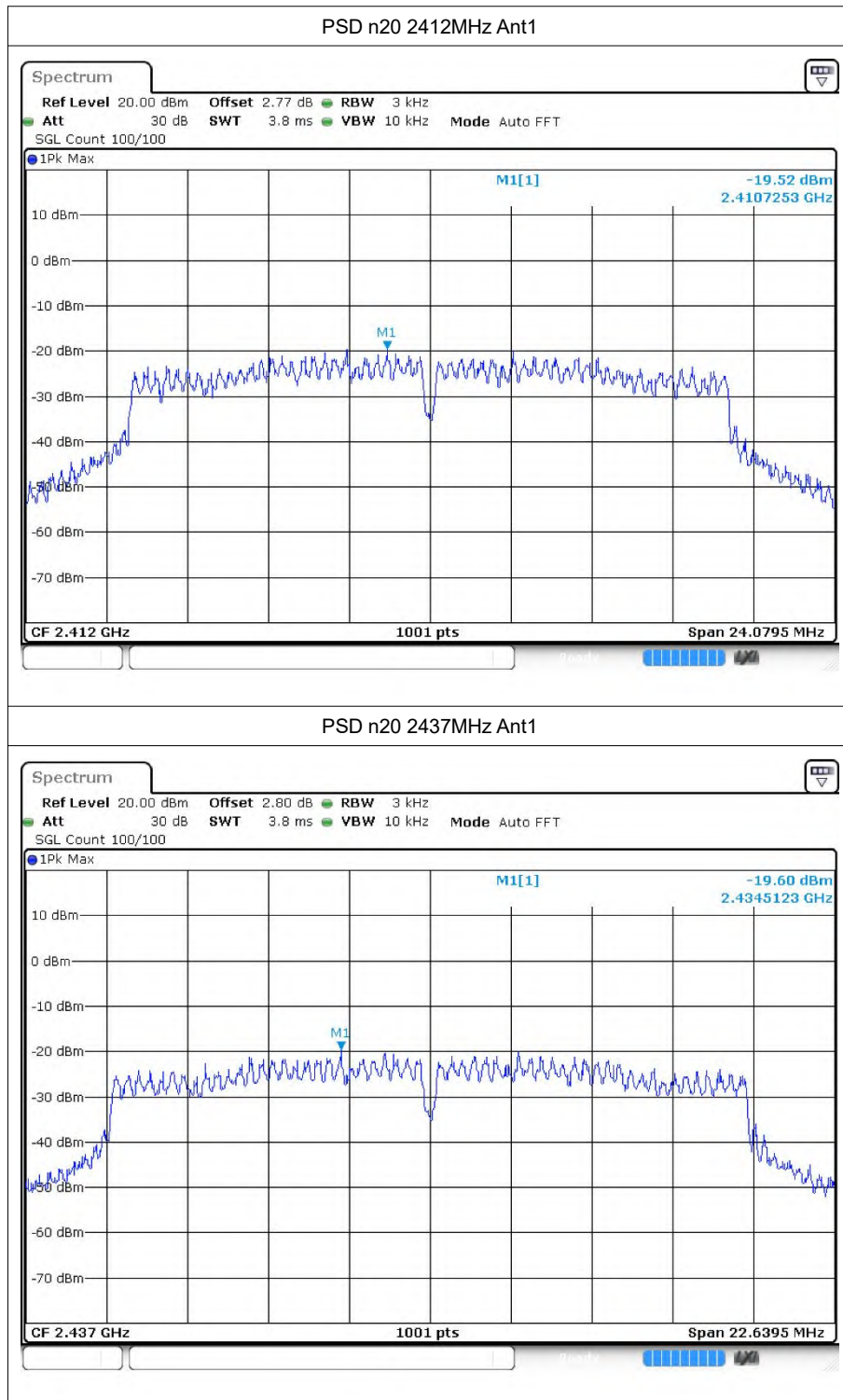


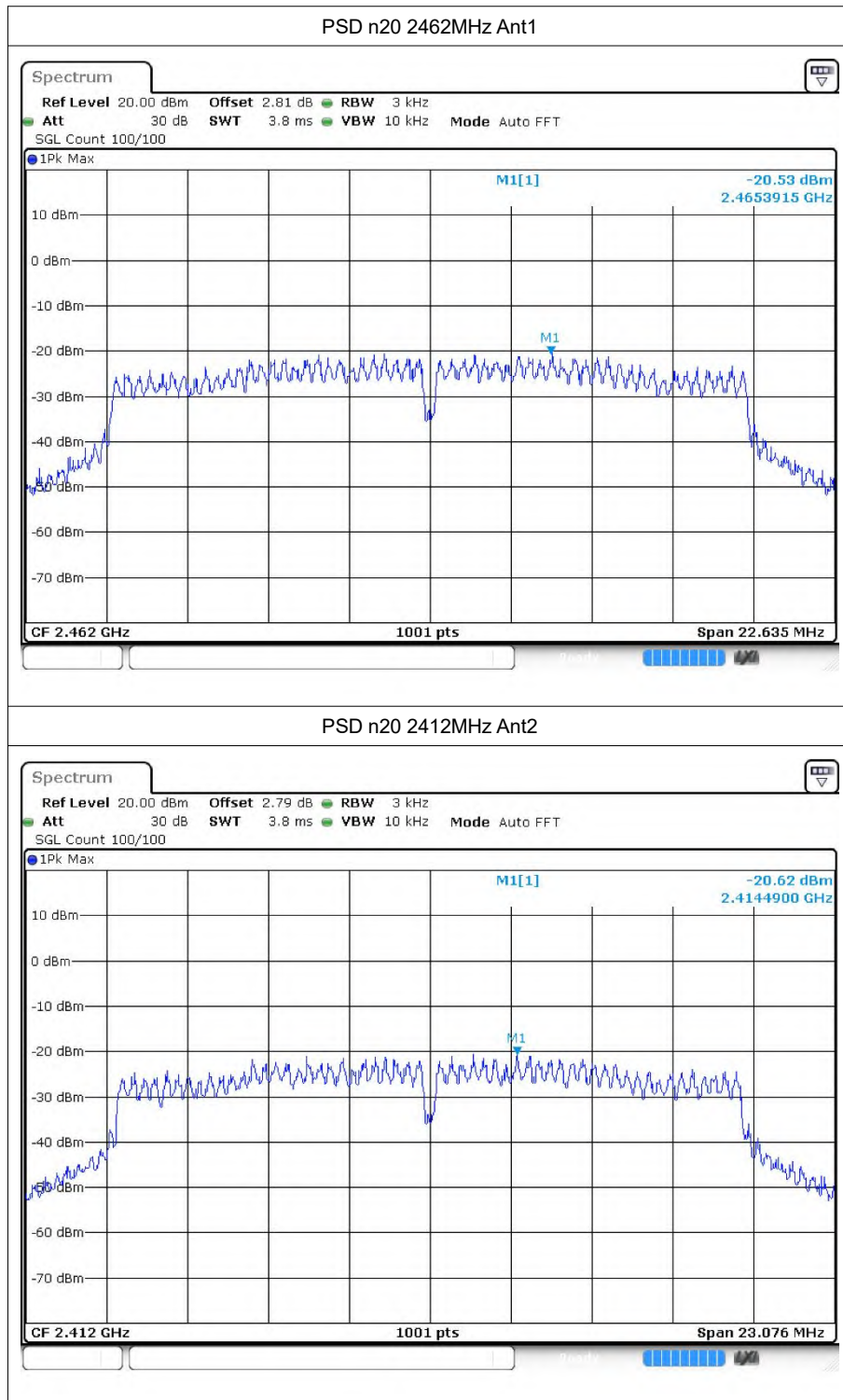


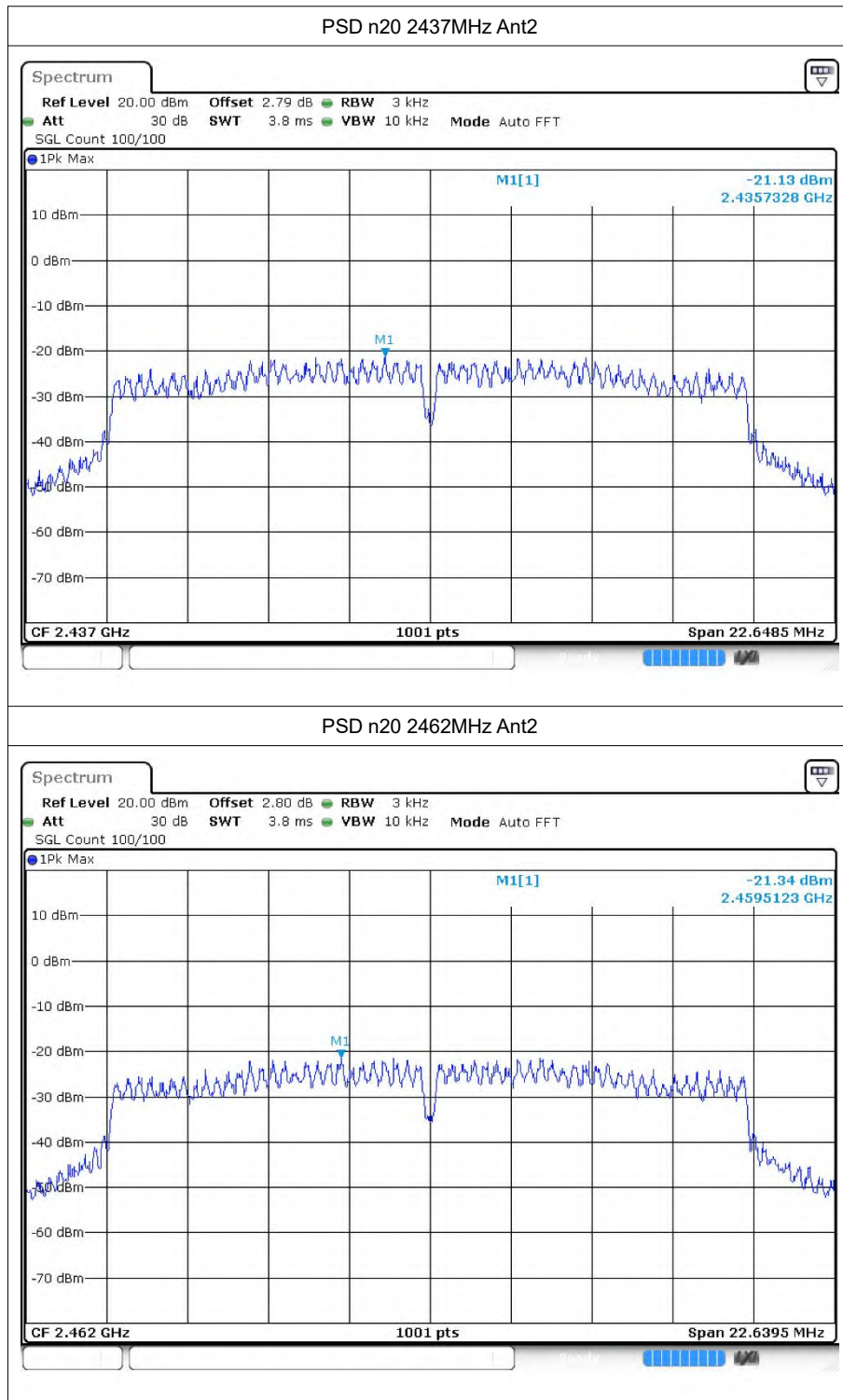


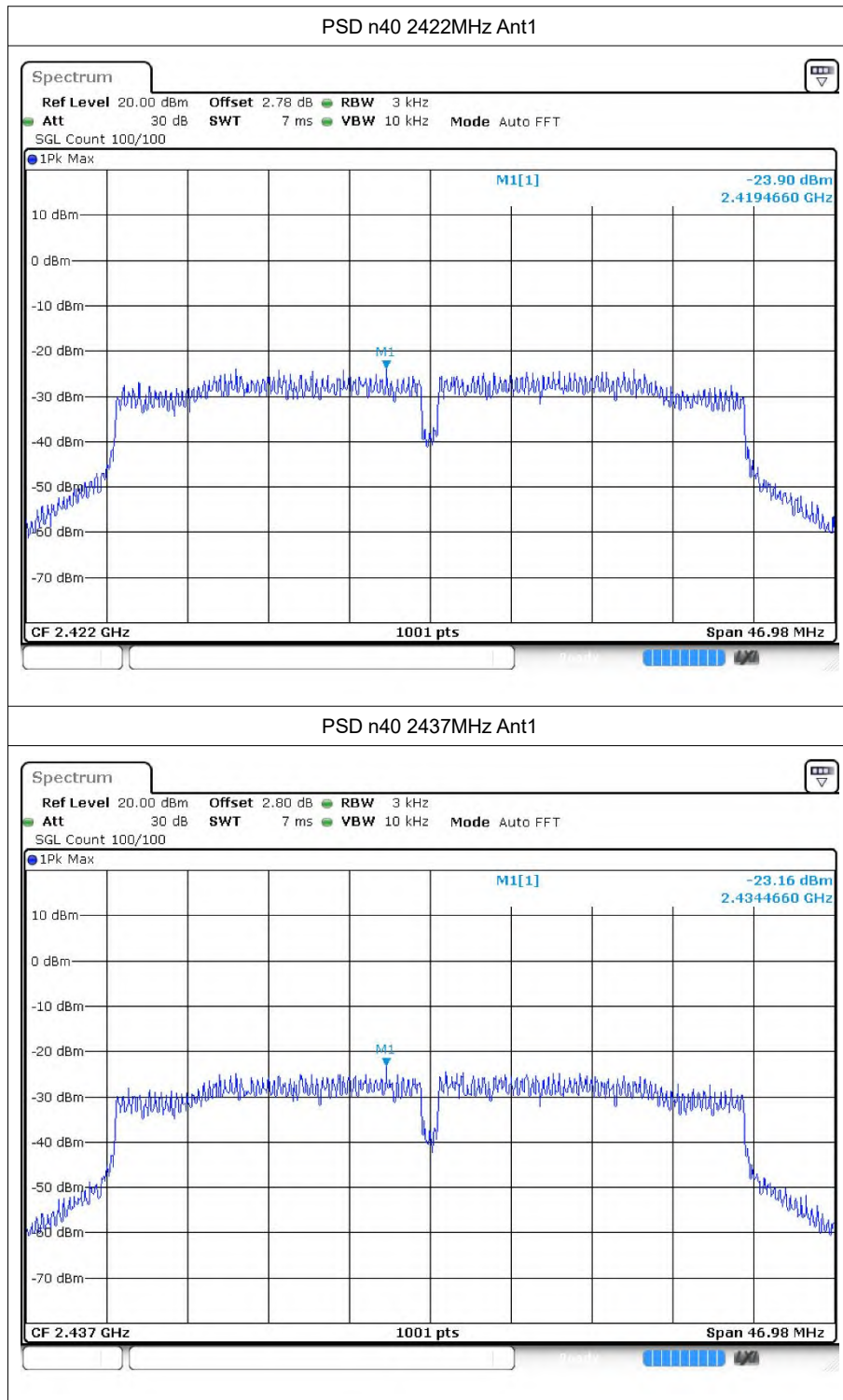


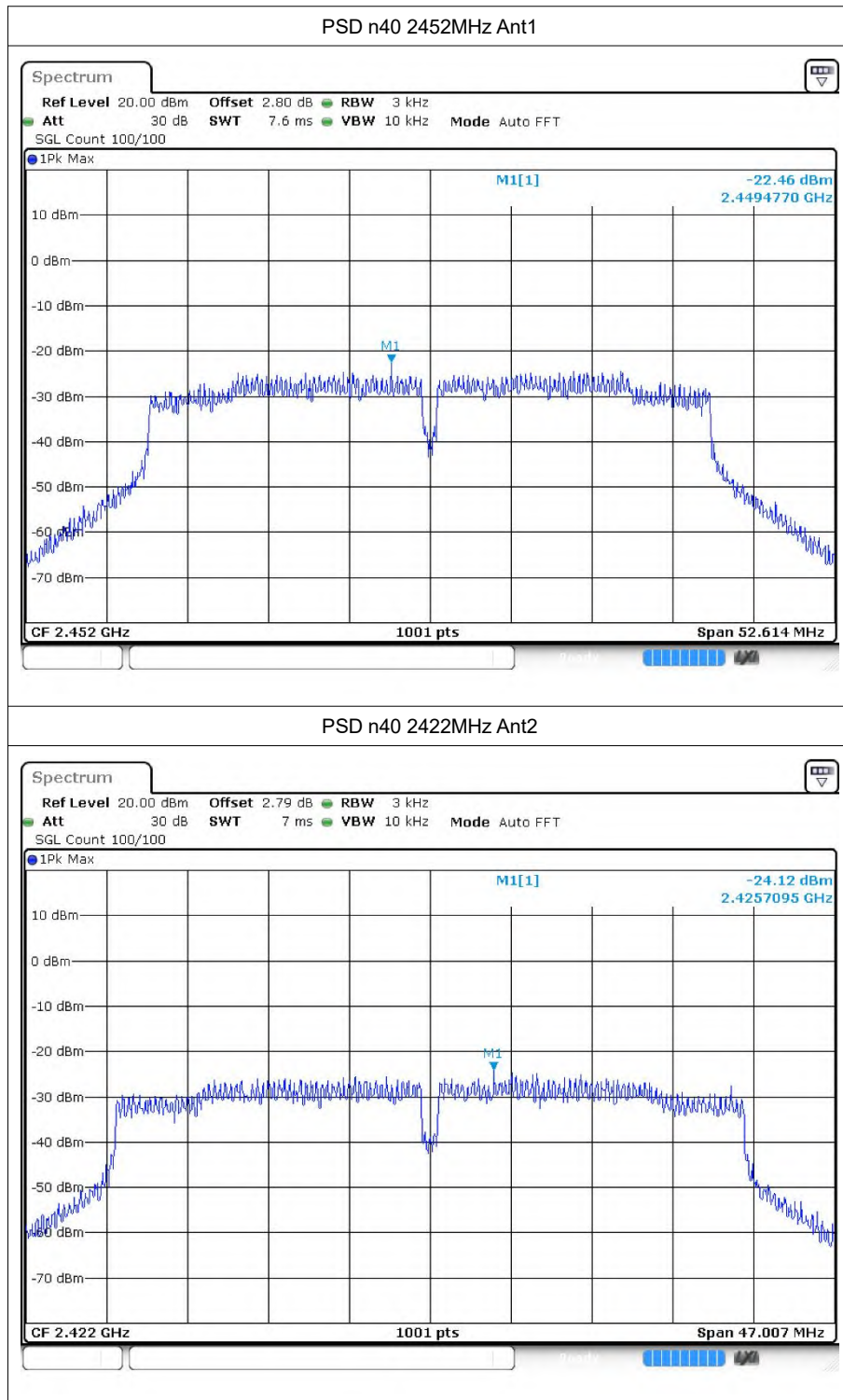


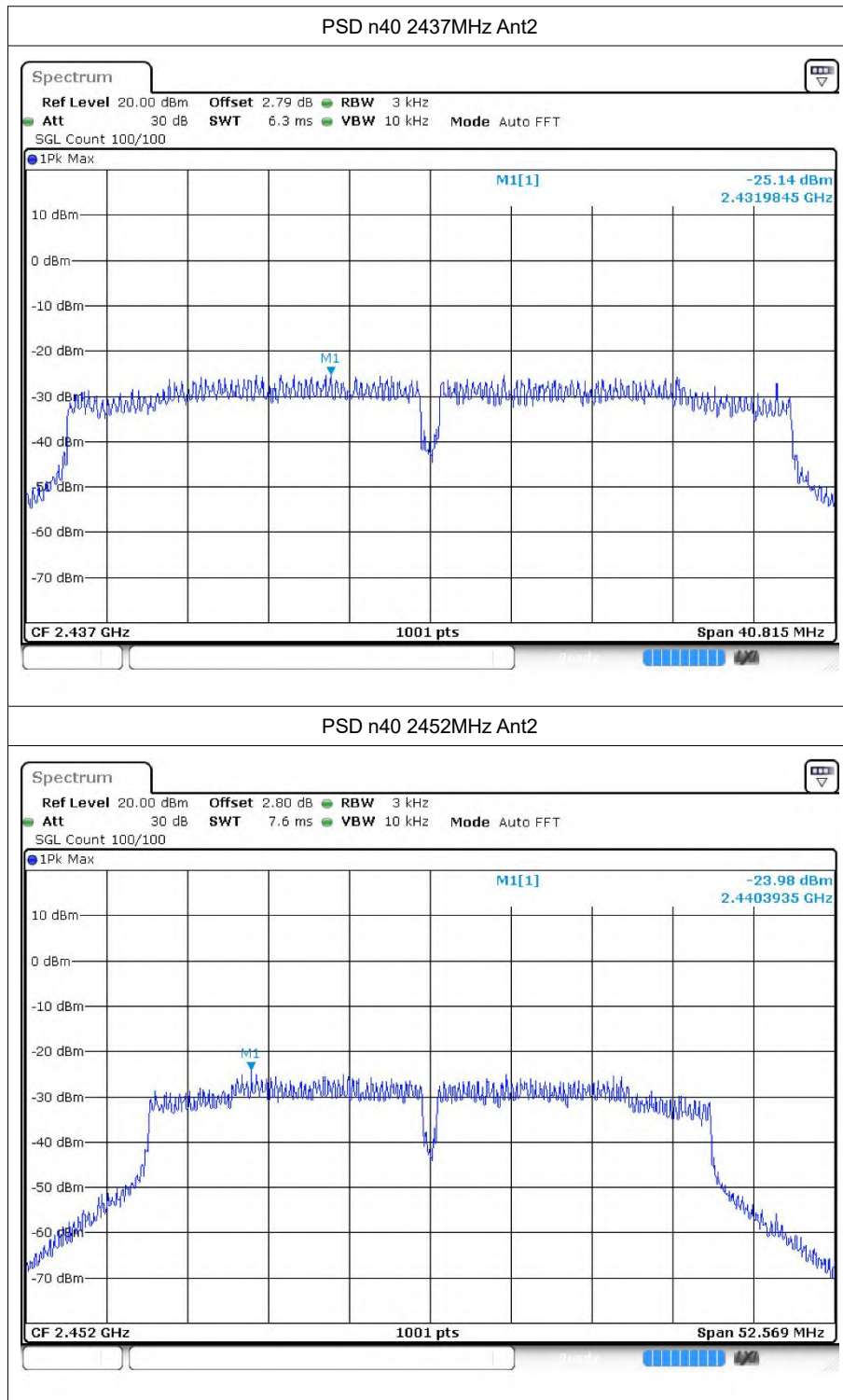












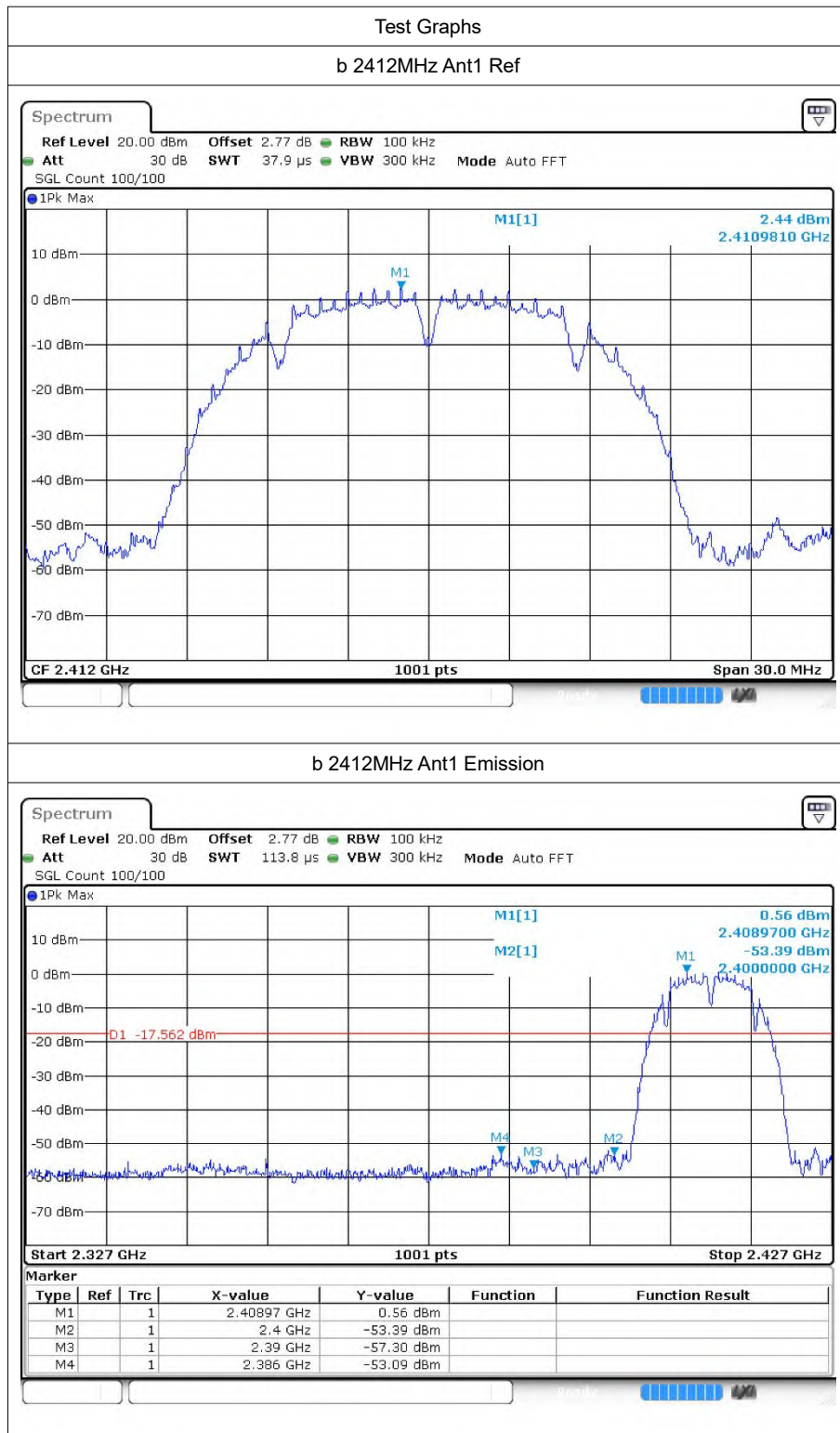


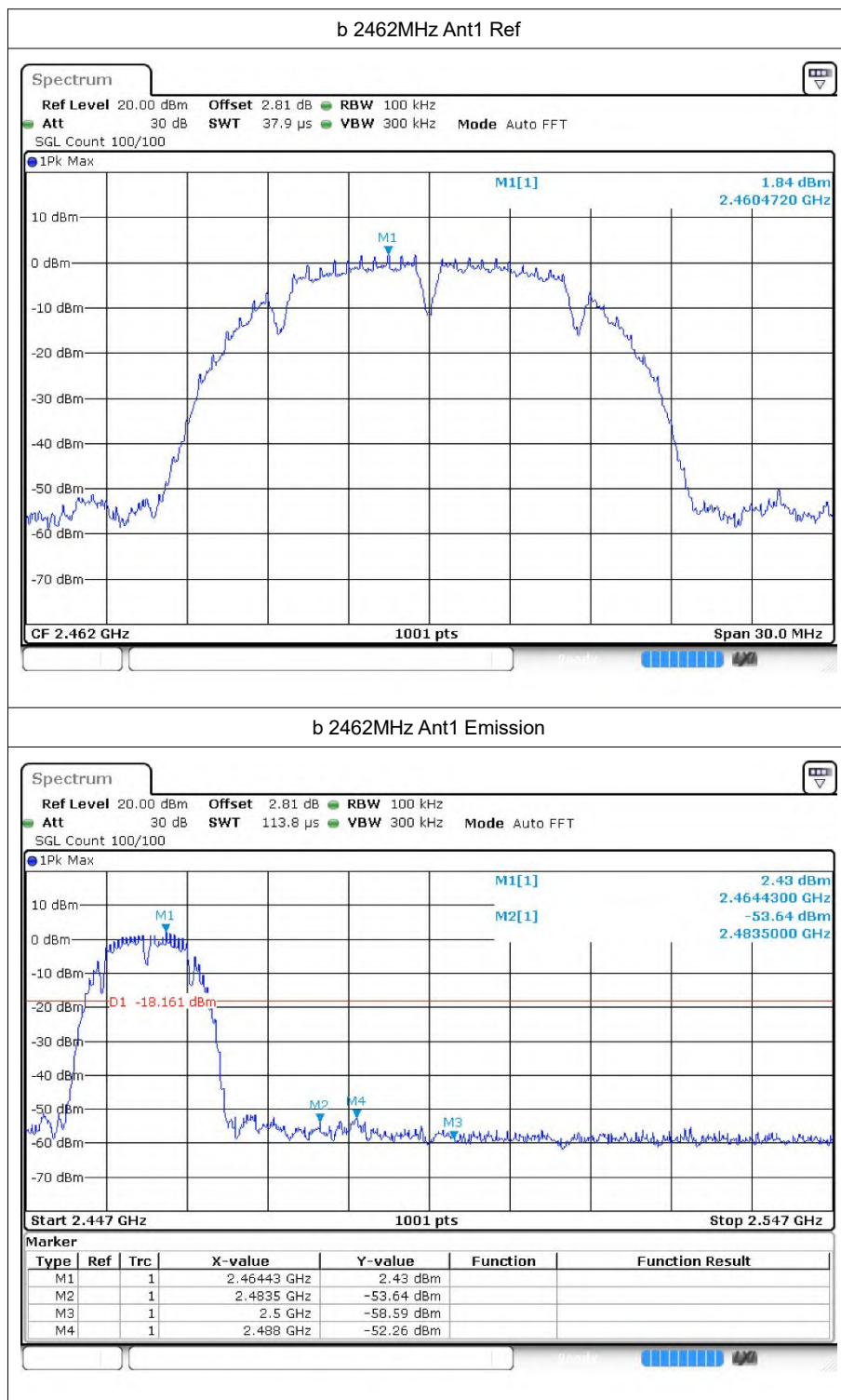
5 Band Edge

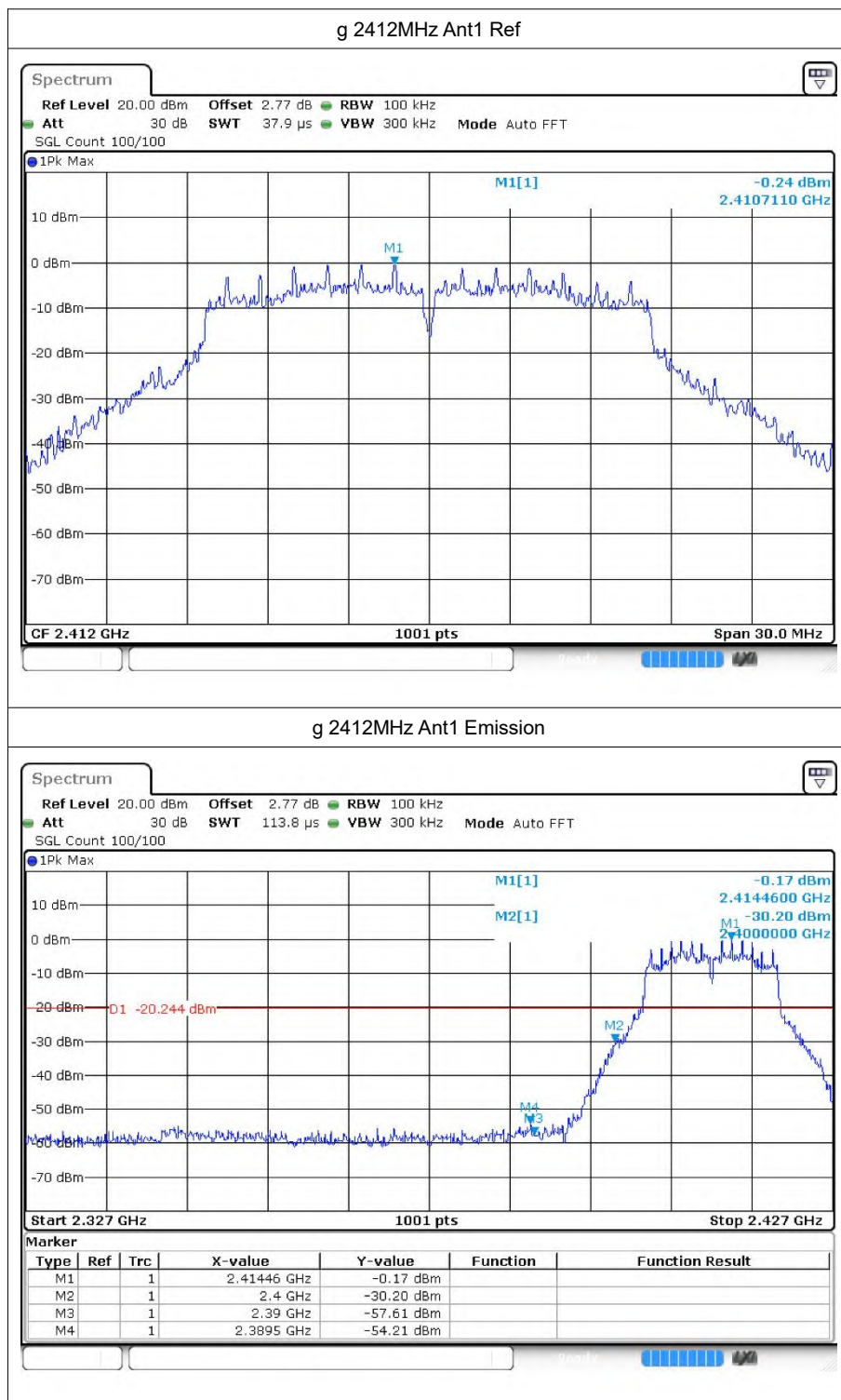
5.1 Test Result

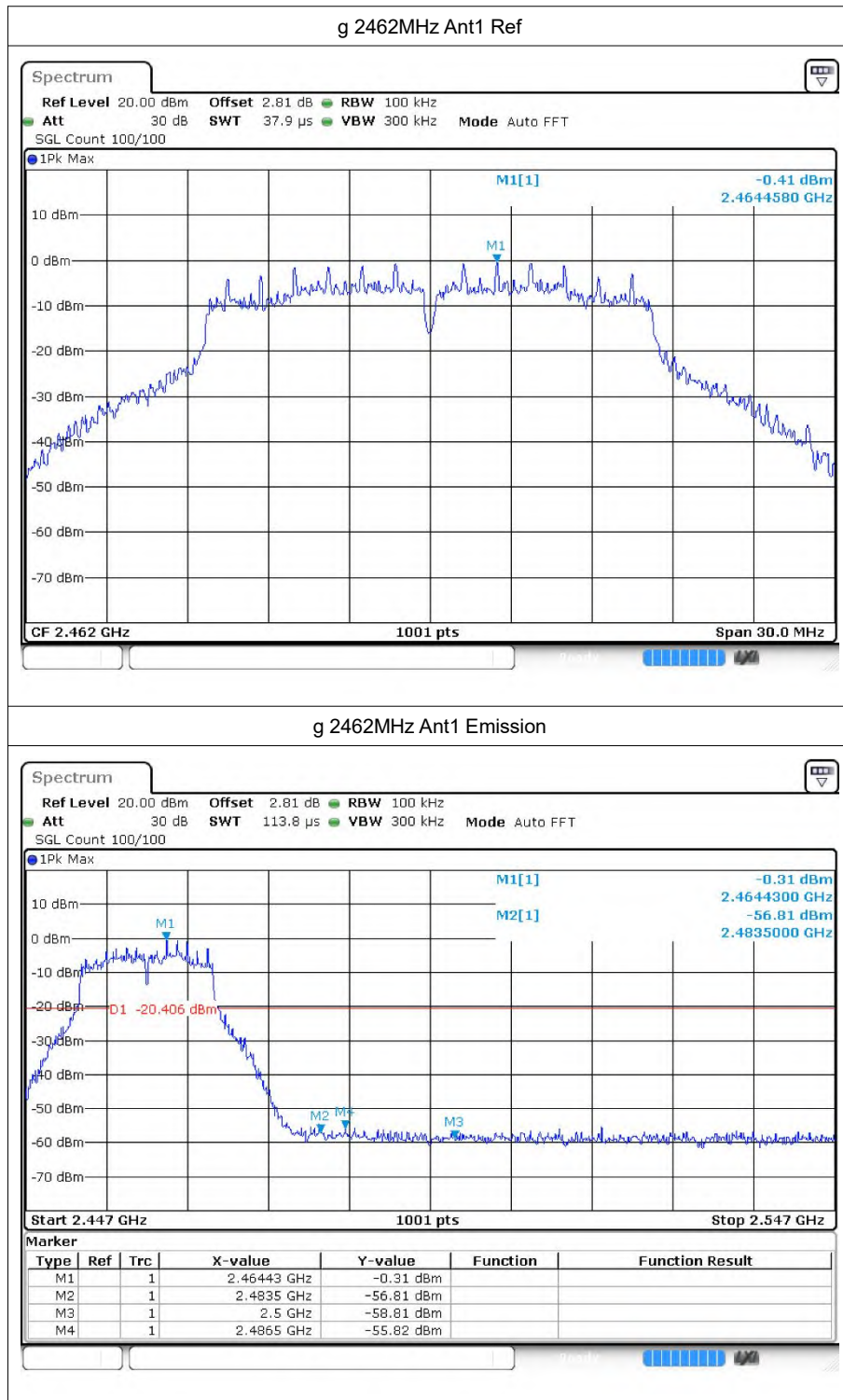
Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
b	2412	Ant1	-55.53	-20	Pass
b	2462	Ant1	-54.09	-20	Pass
g	2412	Ant1	-53.96	-20	Pass
g	2462	Ant1	-55.41	-20	Pass
n20	2412	Ant1	-48.48	-20	Pass
n20	2462	Ant1	-50.11	-20	Pass
n40	2422	Ant1	-45.72	-20	Pass
n40	2452	Ant1	-46.23	-20	Pass
b	2412	Ant2	-55.08	-20	Pass
b	2462	Ant2	-58.07	-20	Pass
g	2412	Ant2	-54.52	-20	Pass
g	2462	Ant2	-54.64	-20	Pass
n20	2412	Ant2	-48.14	-20	Pass
n20	2462	Ant2	-49.45	-20	Pass
n40	2422	Ant2	-46.23	-20	Pass
n40	2452	Ant2	-45.54	-20	Pass

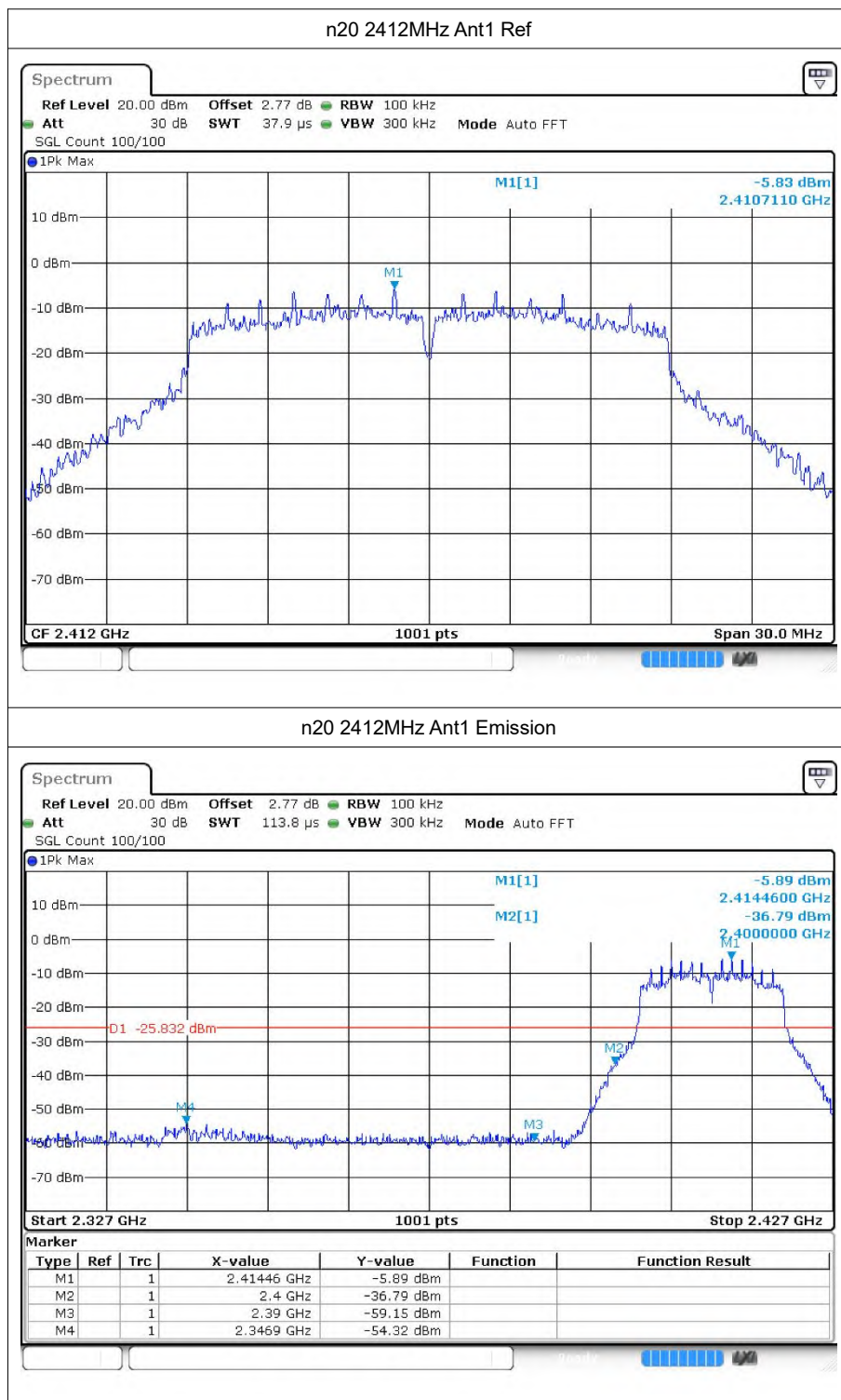
5.2 Test Graphs

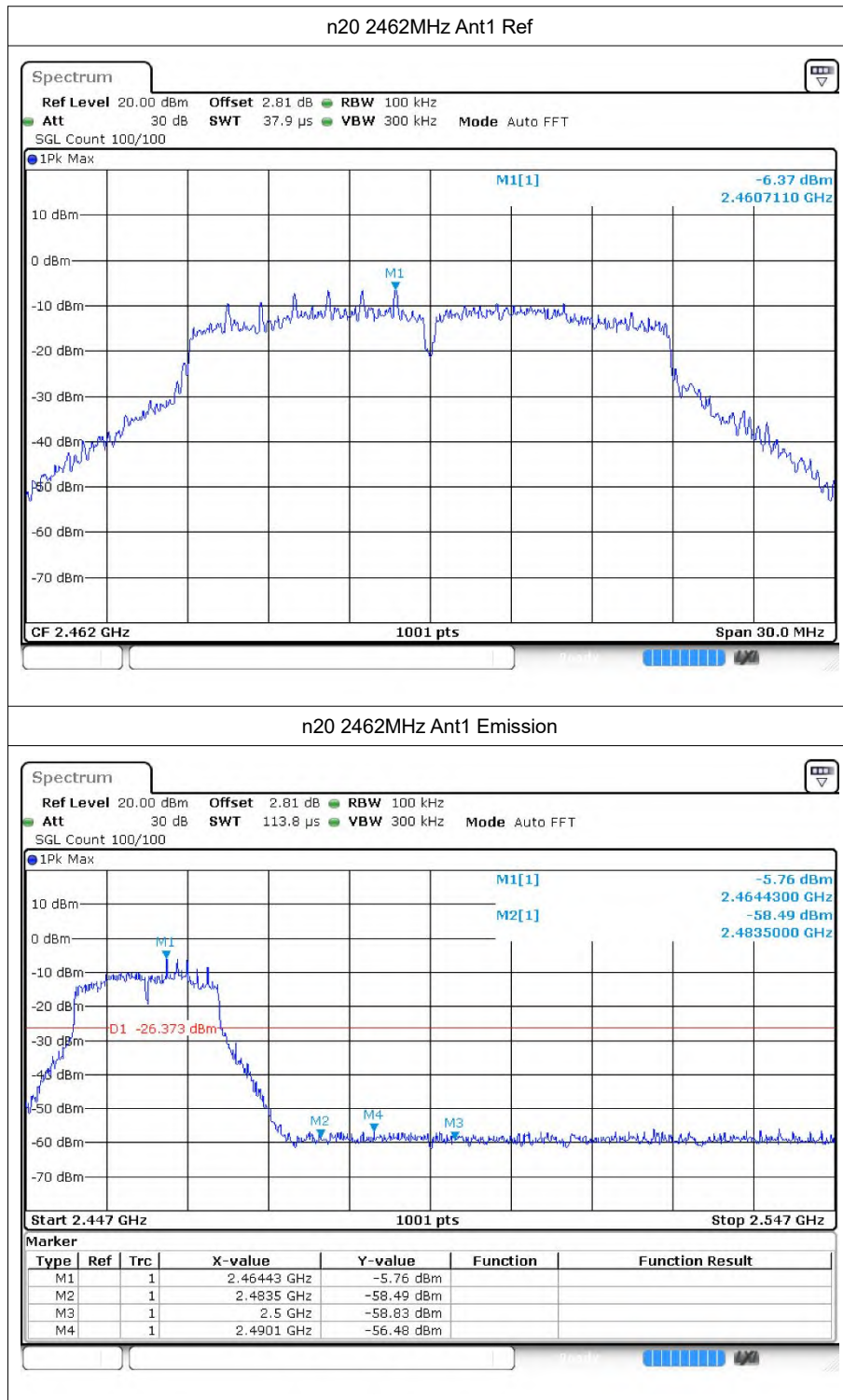


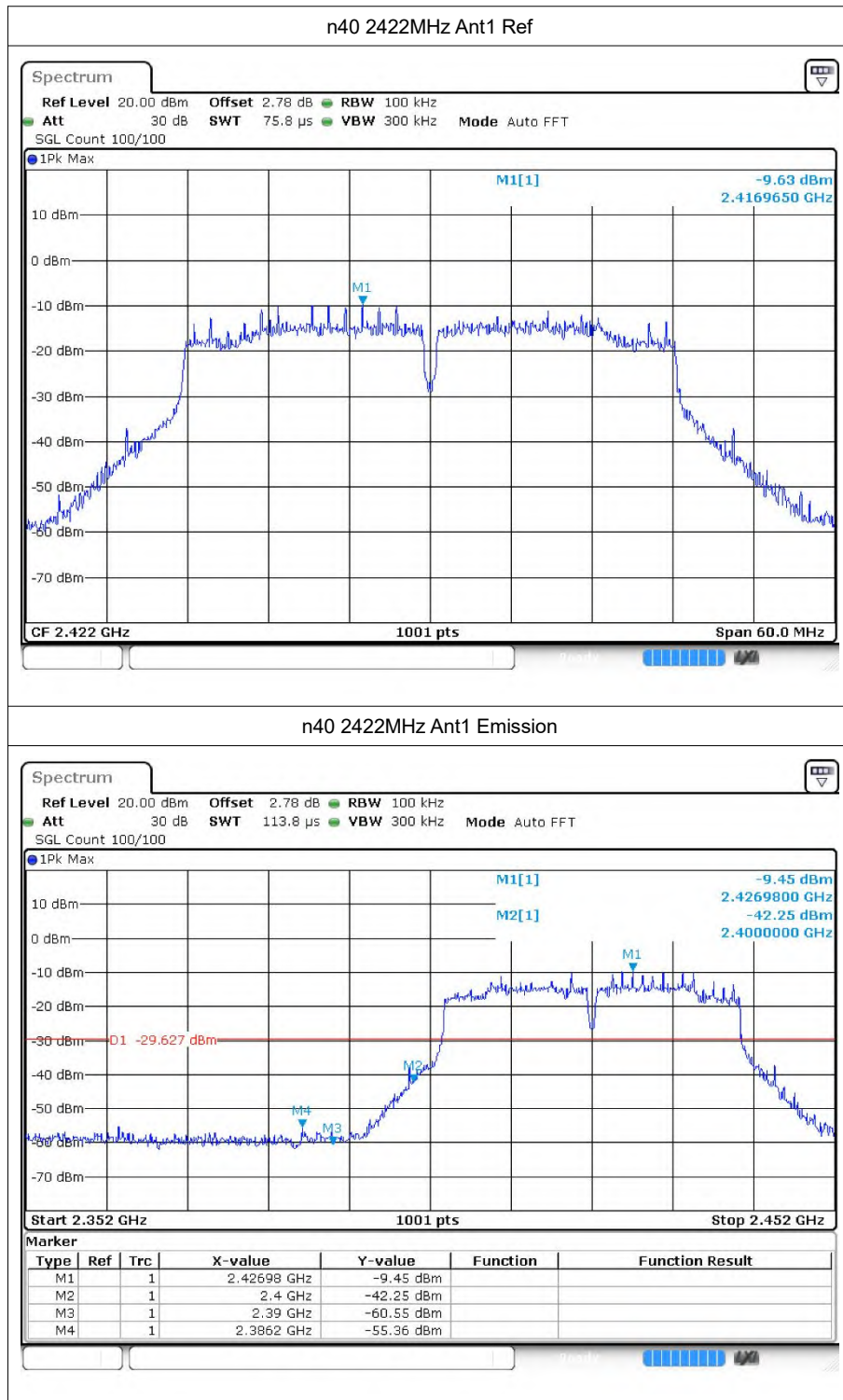


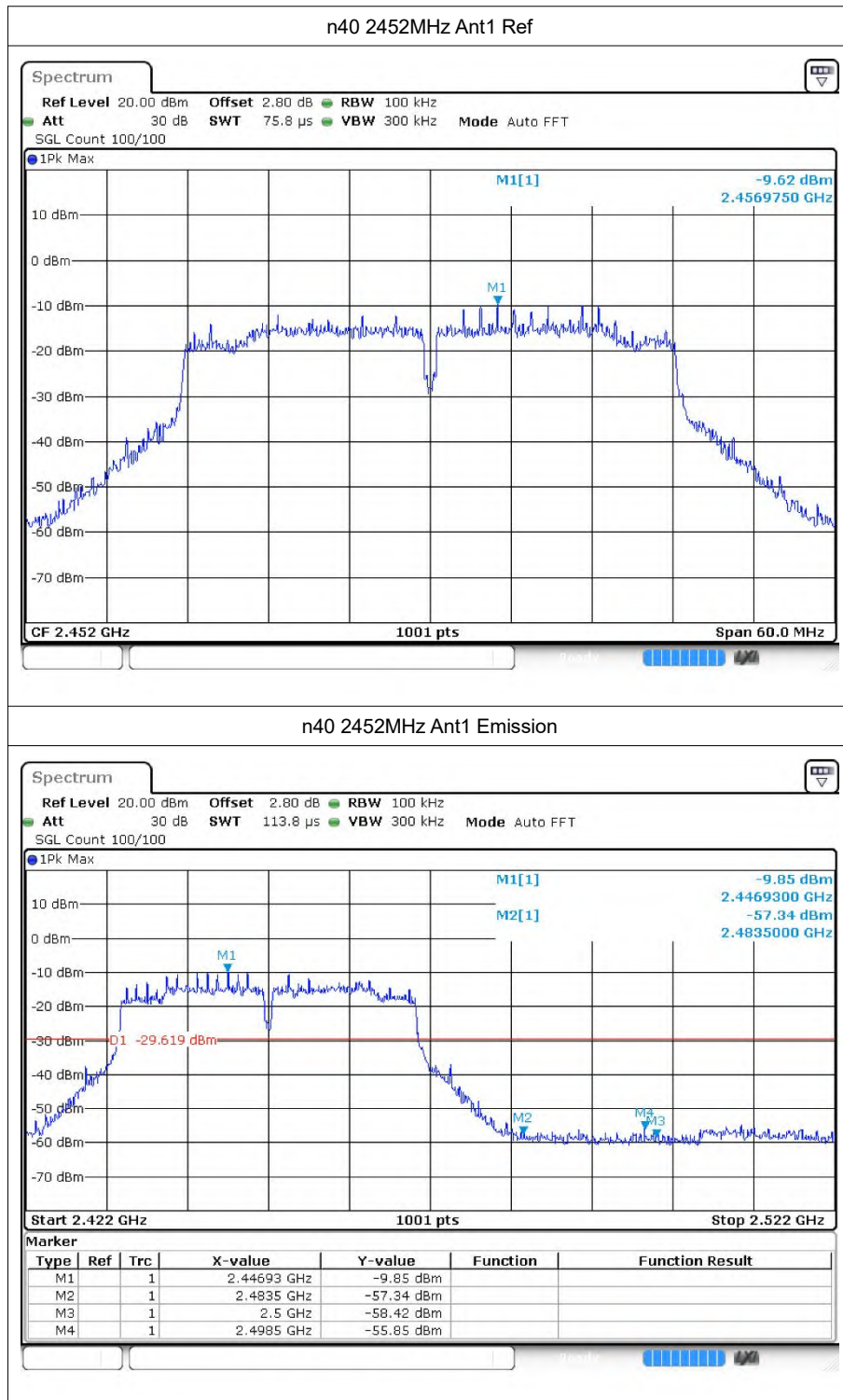












b 2412MHz Ant2 Ref



b 2412MHz Ant2 Emission

