



Appendix C

RF Test Data for 2.4GWIFI (Conducted Measurement)

Product Name: Smart Energy Monitor

Trade Mark:BITUO TECHNIK

Test Model: SPM01-D2TW

Environmental Conditions

Temperature:	25.5° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Simba Huang
Supervised by:	Seal Chen



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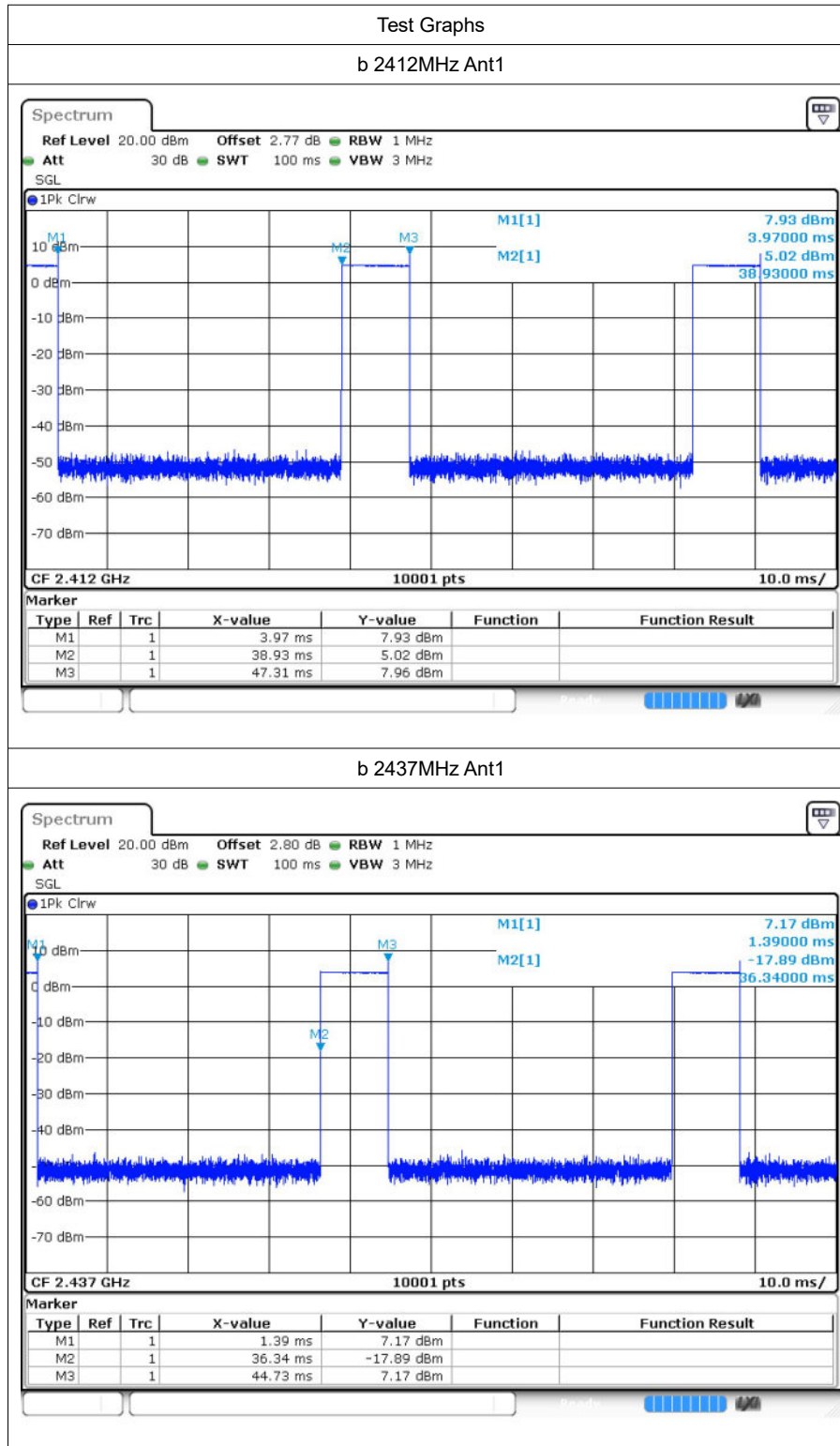
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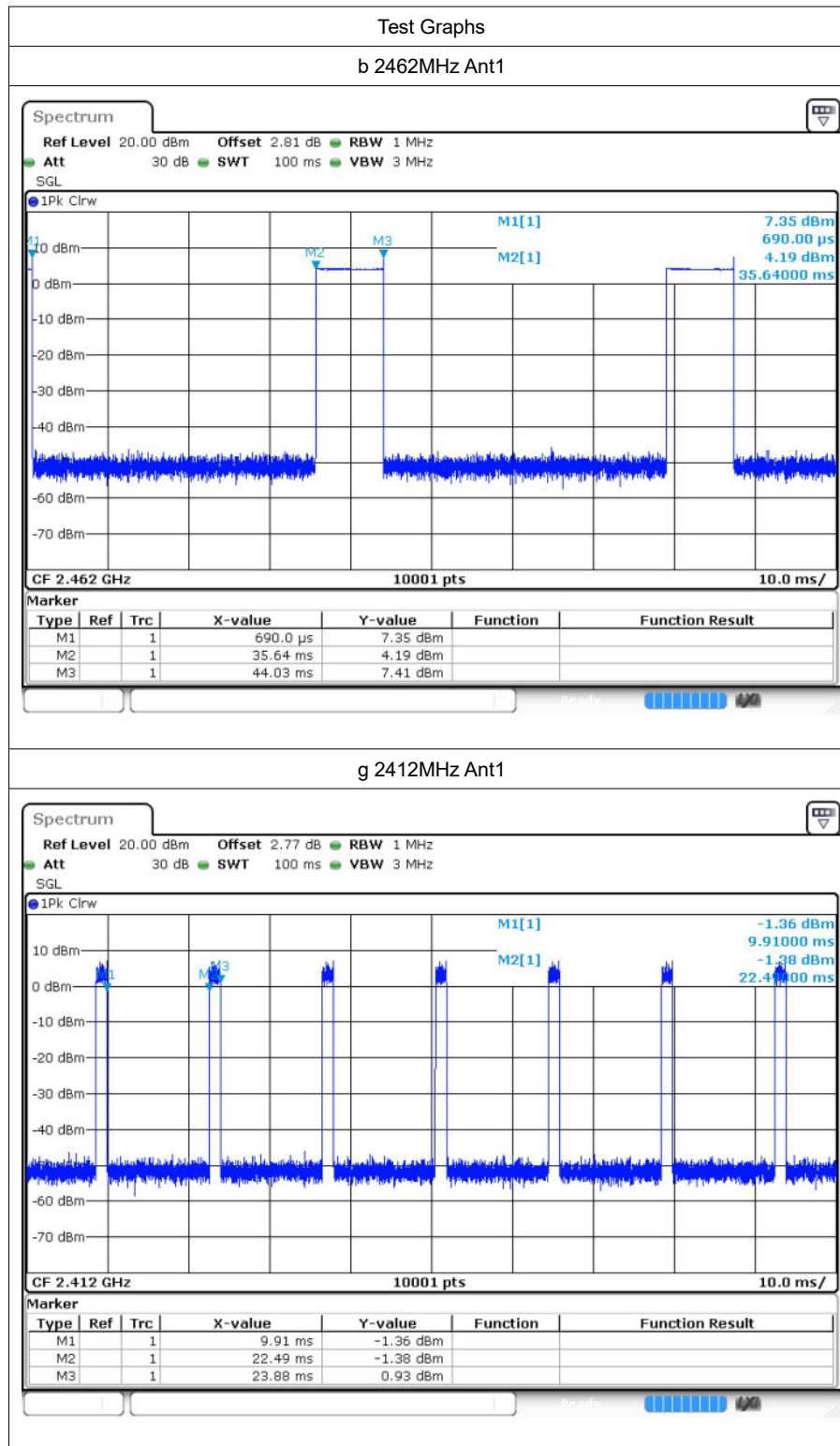
1 Duty Cycle

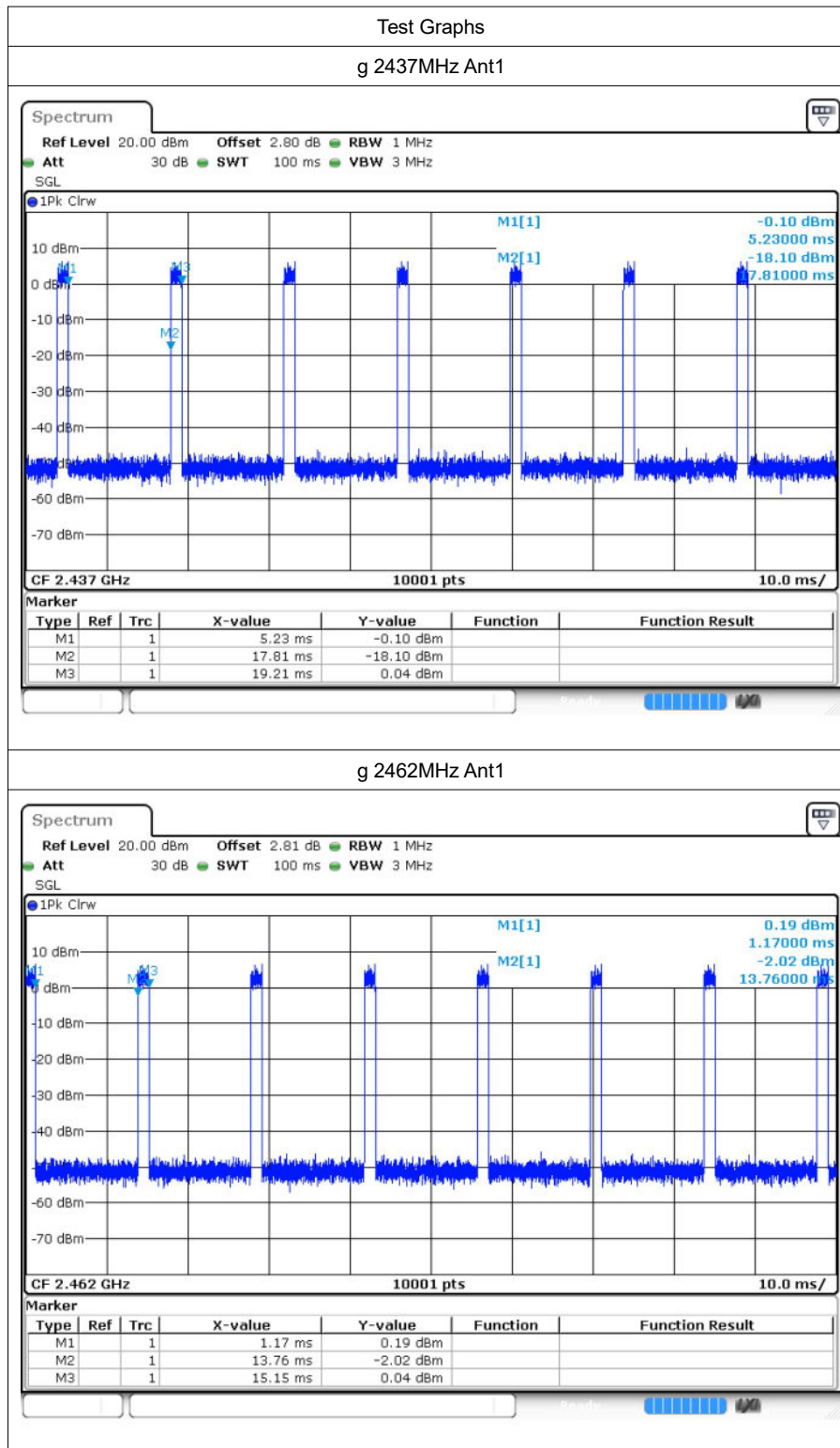
1.1 Test Result

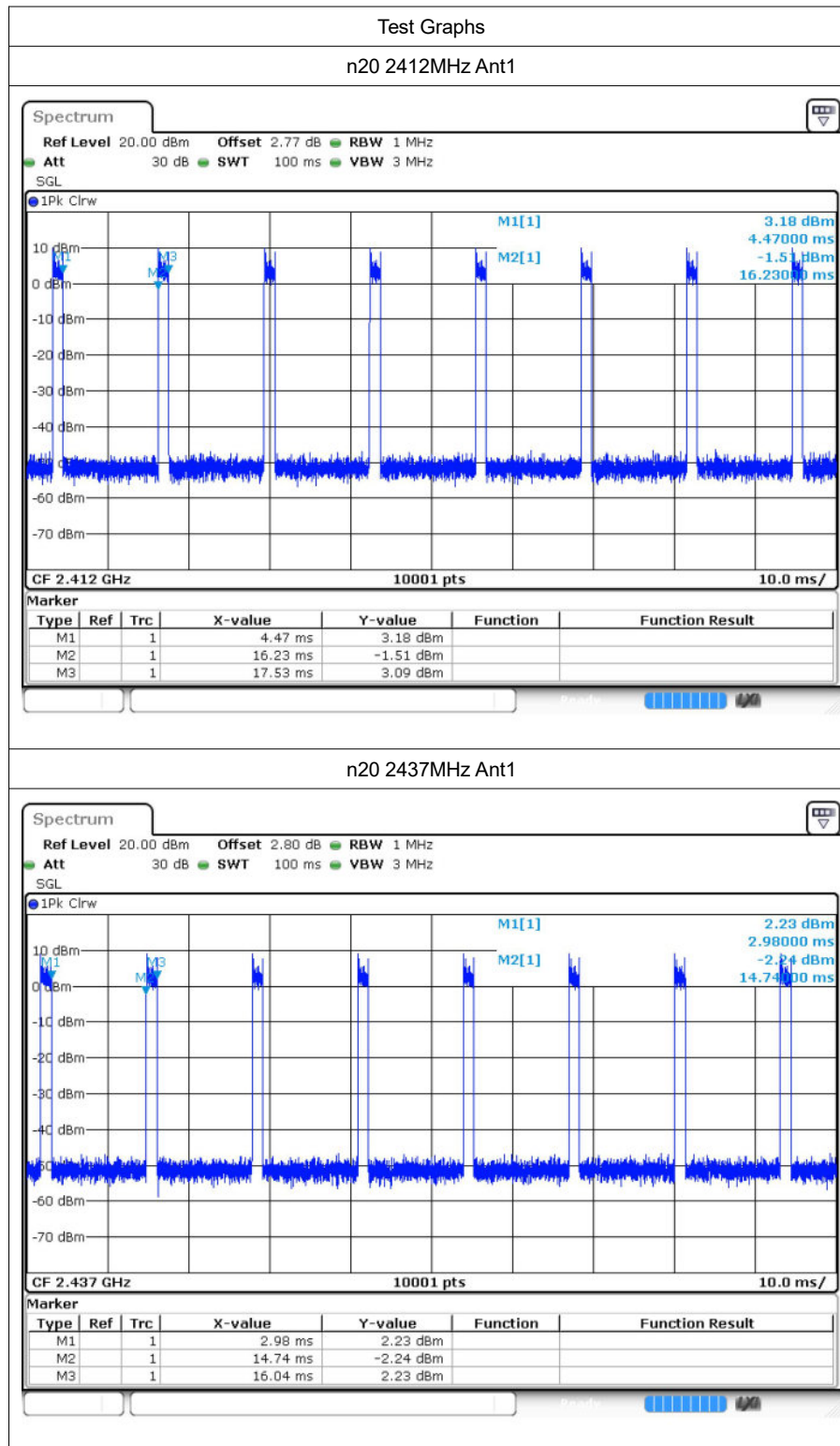
Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	1/T (kHz)
b	2412	Ant1	20.76	0.12
b	2437	Ant1	18.19	0.12
b	2462	Ant1	17.5	0.12
g	2412	Ant1	9.83	0.72
g	2437	Ant1	9.84	0.71
g	2462	Ant1	11.01	0.72
n20	2412	Ant1	10.5	0.77
n20	2437	Ant1	10.5	0.77
n20	2462	Ant1	9.19	0.77
n40	2422	Ant1	9.91	1.54
n40	2437	Ant1	9.92	1.54
n40	2452	Ant1	10.57	1.54

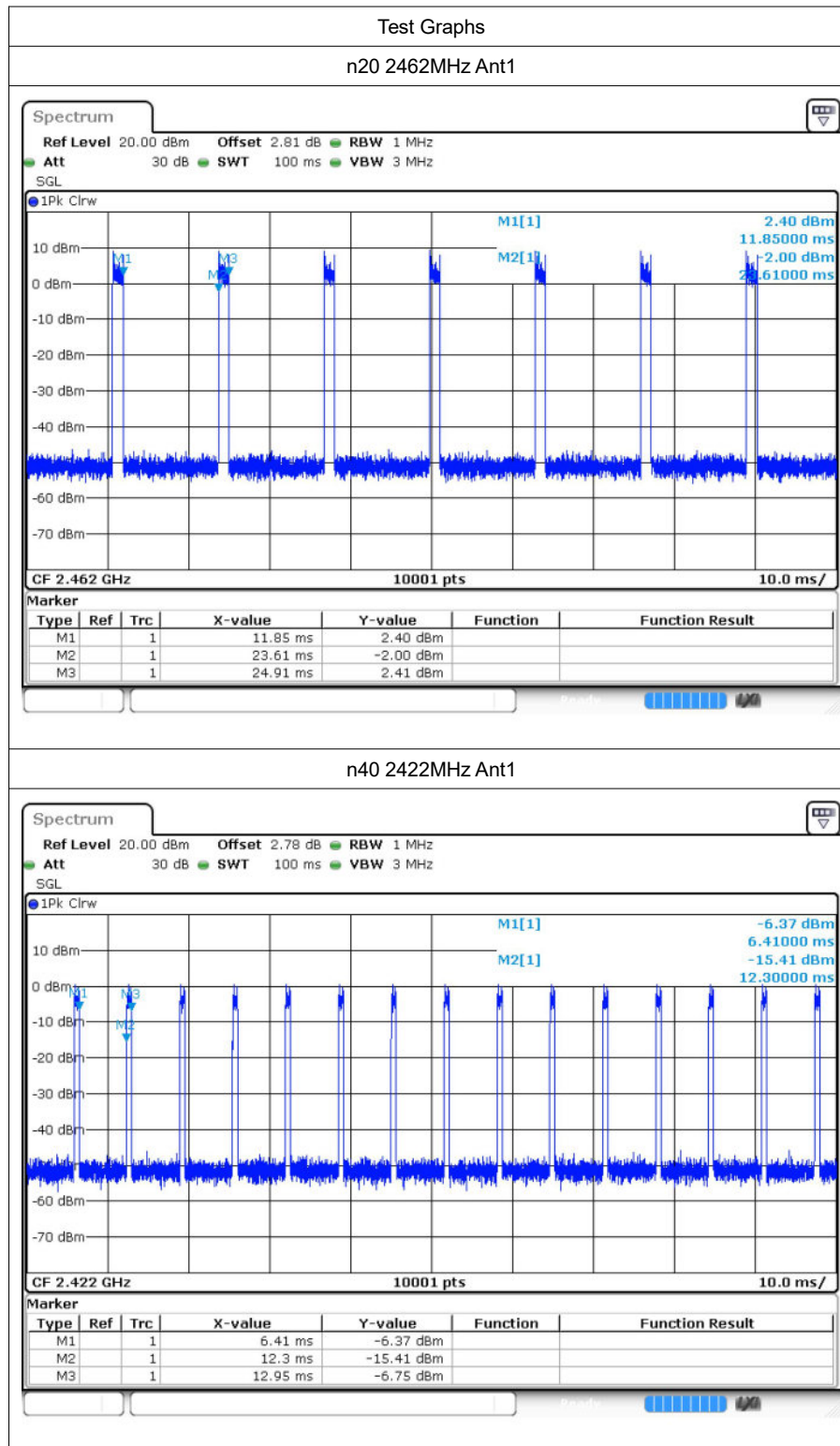
1.2 Test Graphs

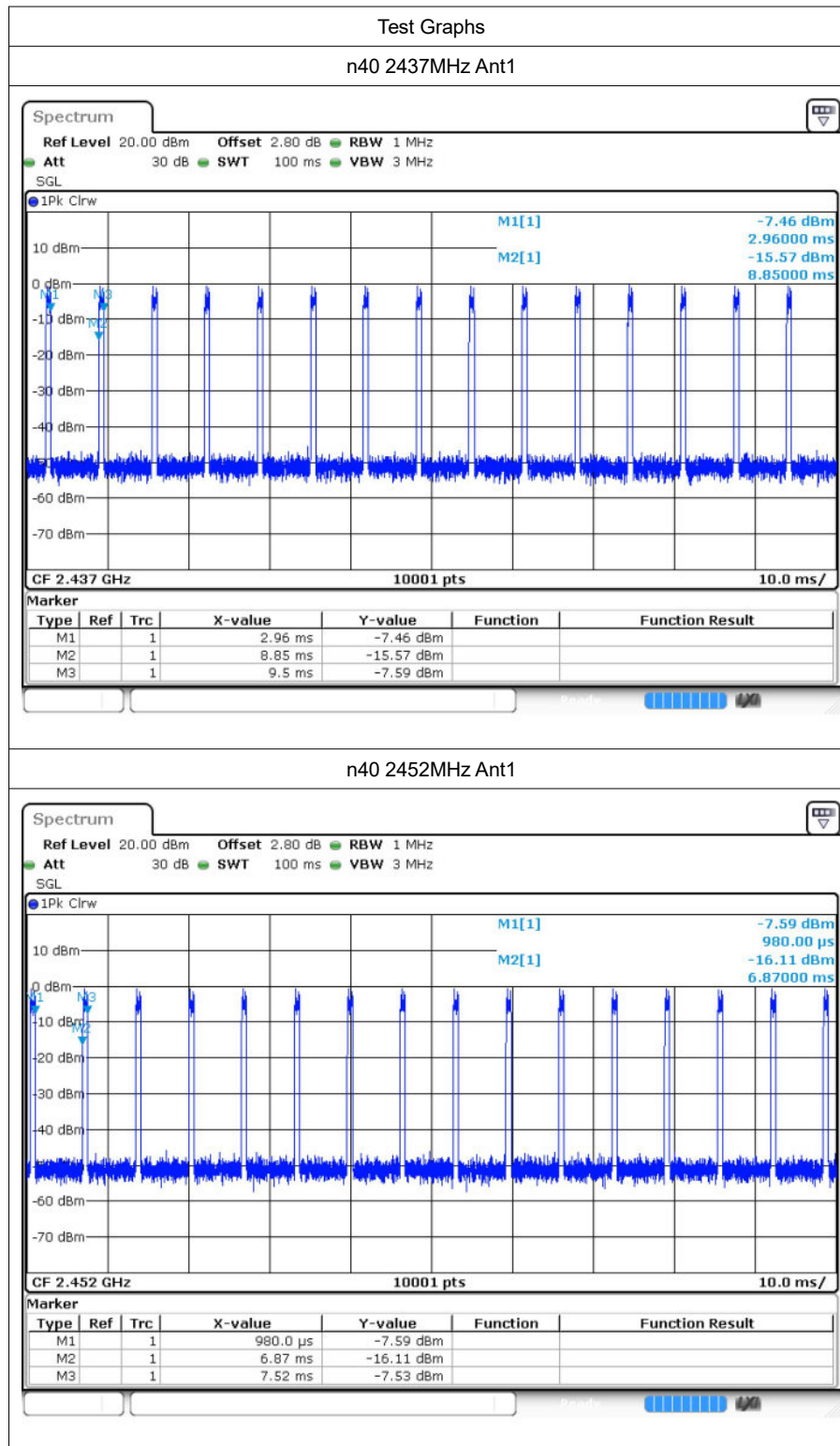














2 Maximum Conducted Output Power

2.1 Test Result

Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
b	2412	Ant1	15.58	30	Pass
b	2437	Ant1	14.98	30	Pass
b	2462	Ant1	15.05	30	Pass
g	2412	Ant1	14.81	30	Pass
g	2437	Ant1	14.04	30	Pass
g	2462	Ant1	13.96	30	Pass
n20	2412	Ant1	14.79	30	Pass
n20	2437	Ant1	14.37	30	Pass
n20	2462	Ant1	14.28	30	Pass
n40	2422	Ant1	14.66	30	Pass
n40	2437	Ant1	14.15	30	Pass
n40	2452	Ant1	14.08	30	Pass

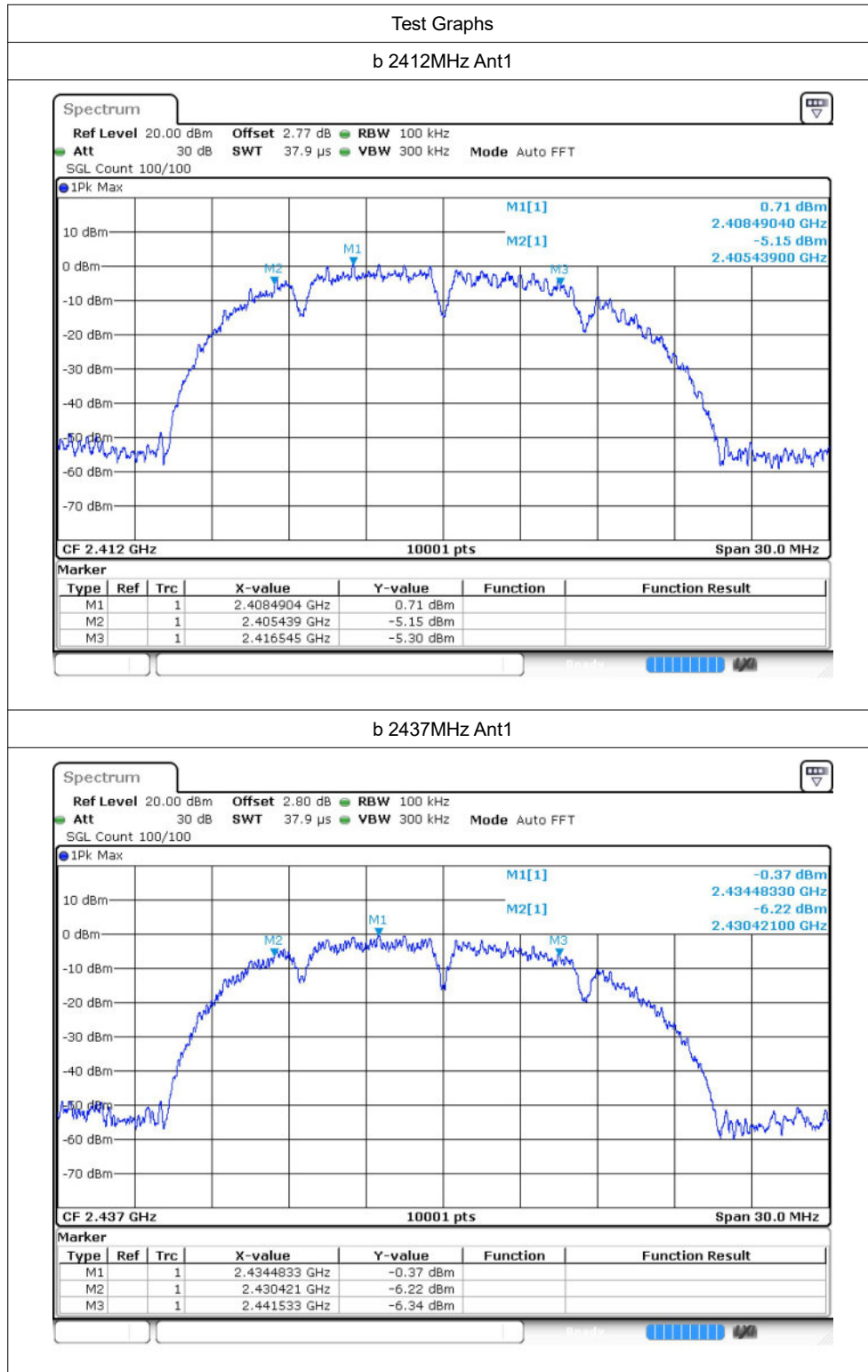


3 -6dB Bandwidth

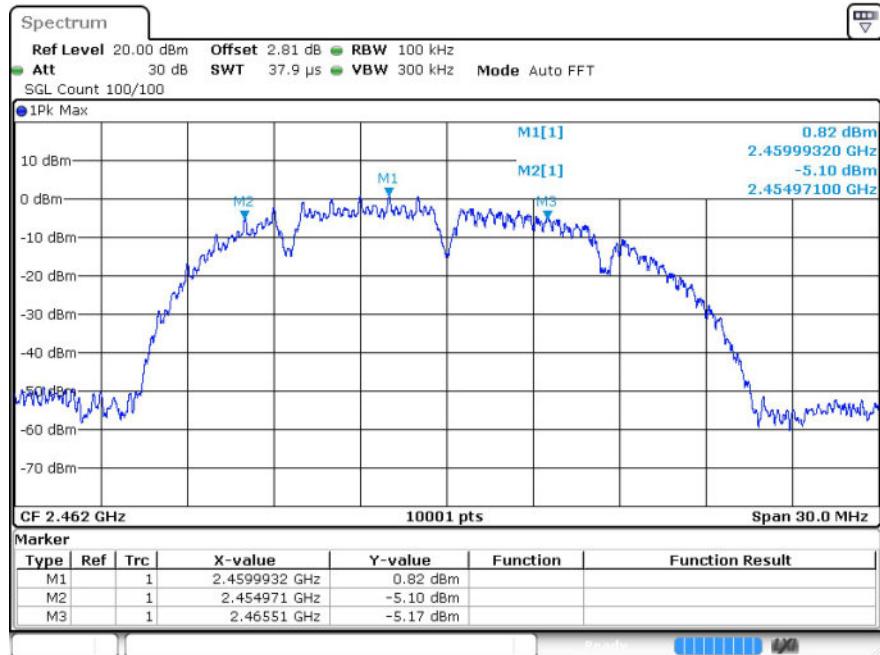
3.1 Test Result

Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
b	2412	Ant1	11.106	0.5	Pass
b	2437	Ant1	11.112	0.5	Pass
b	2462	Ant1	10.539	0.5	Pass
g	2412	Ant1	16.563	0.5	Pass
g	2437	Ant1	17.043	0.5	Pass
g	2462	Ant1	16.704	0.5	Pass
n20	2412	Ant1	17.613	0.5	Pass
n20	2437	Ant1	17.655	0.5	Pass
n20	2462	Ant1	18.018	0.5	Pass
n40	2422	Ant1	36.03	0.5	Pass
n40	2437	Ant1	36.03	0.5	Pass
n40	2452	Ant1	34.668	0.5	Pass

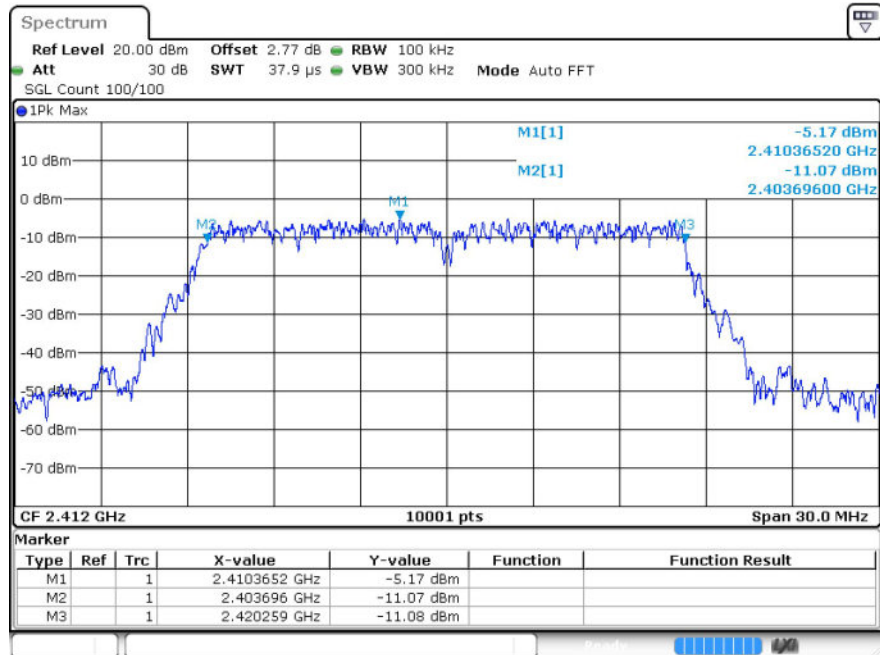
3.2 Test Graphs



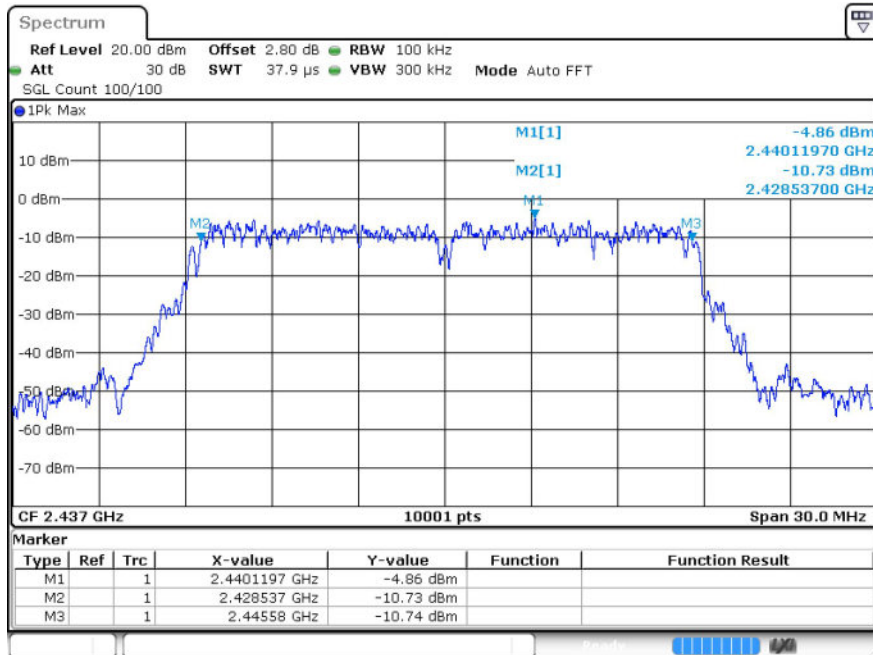
b 2462MHz Ant1



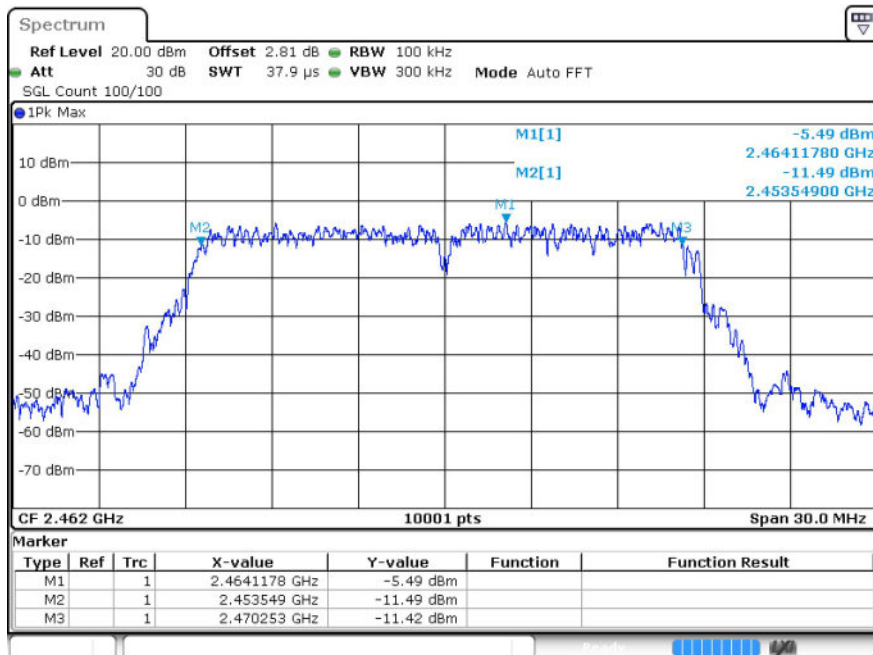
g 2412MHz Ant1

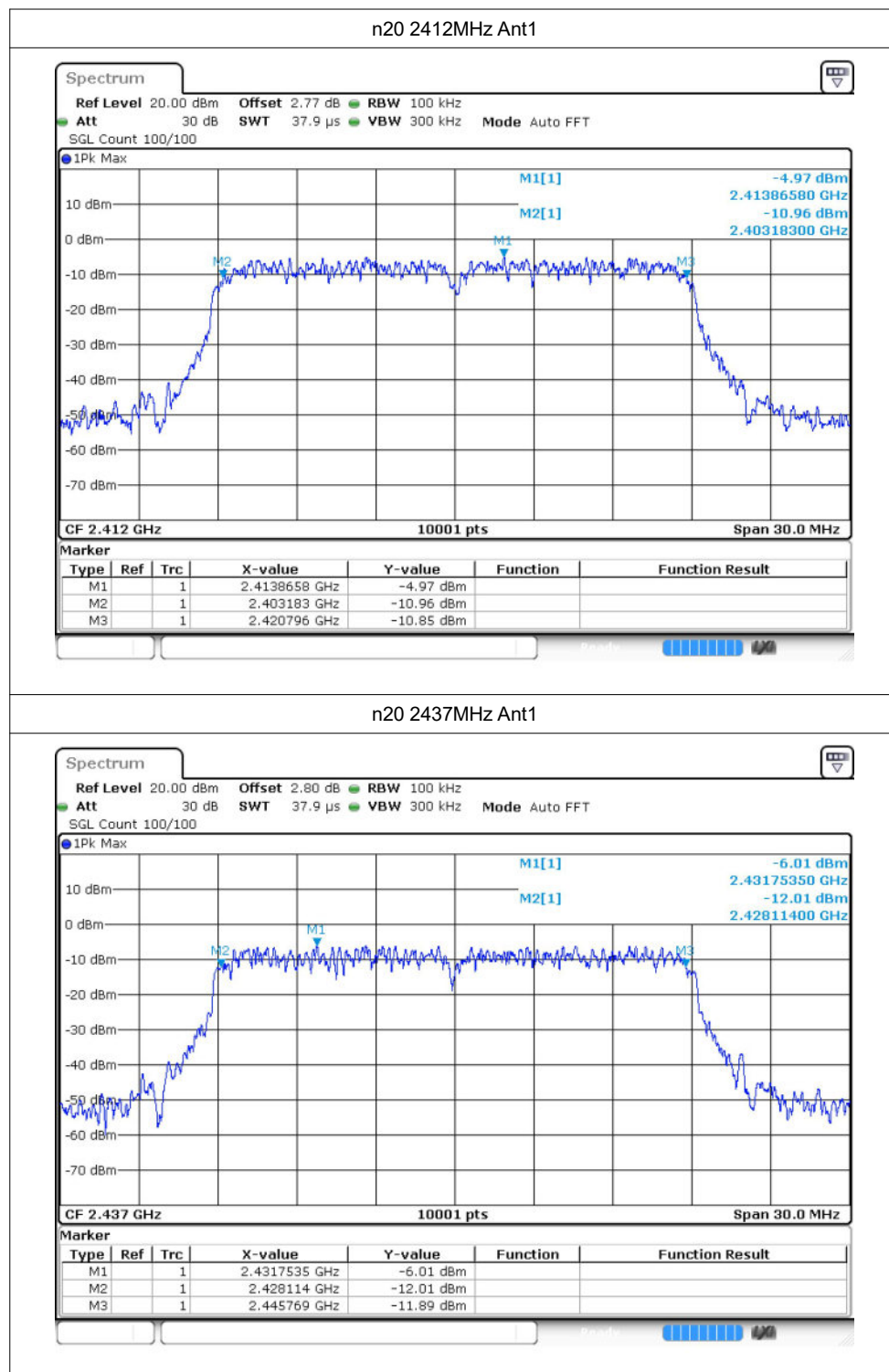


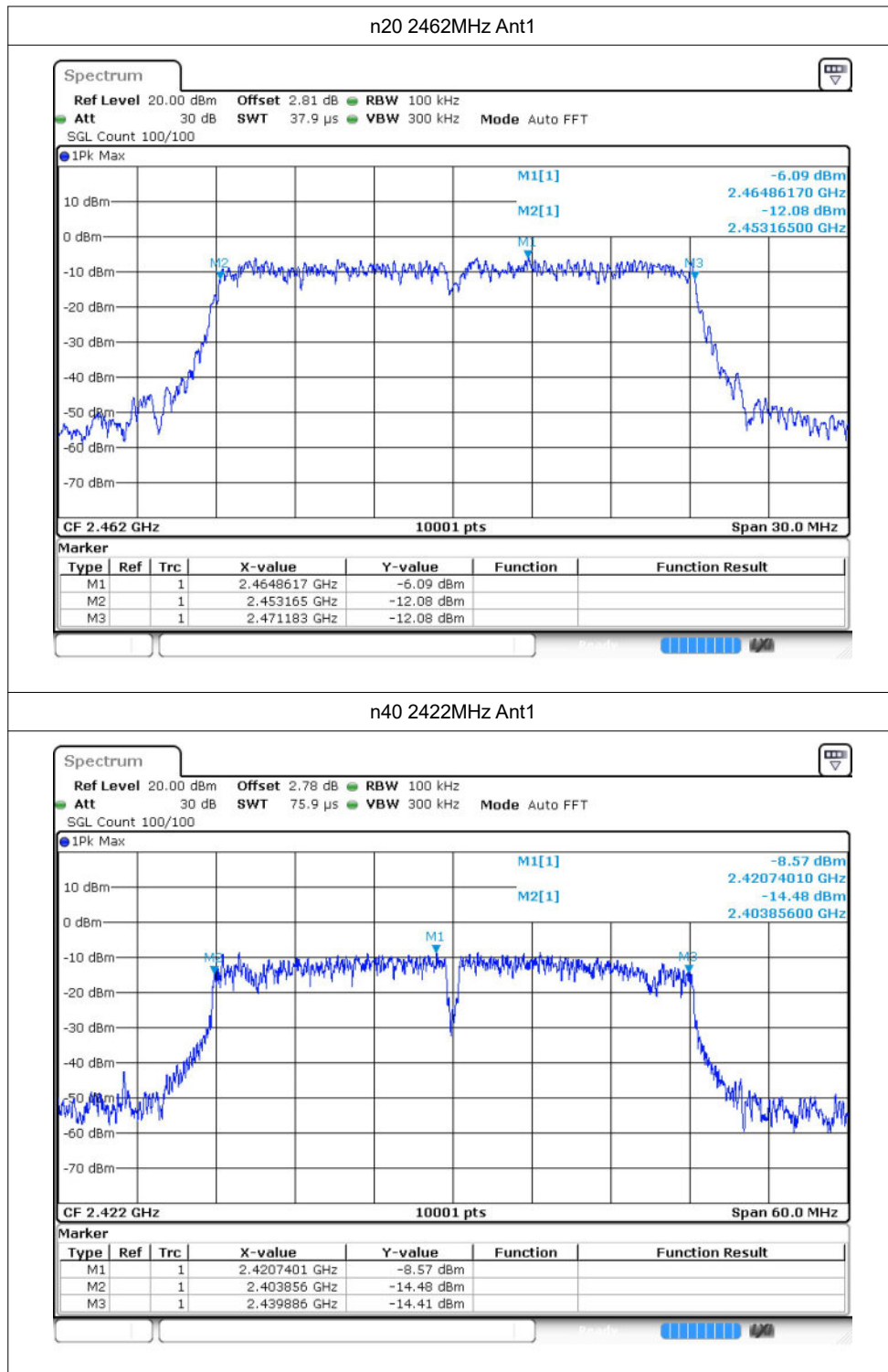
g 2437MHz Ant1



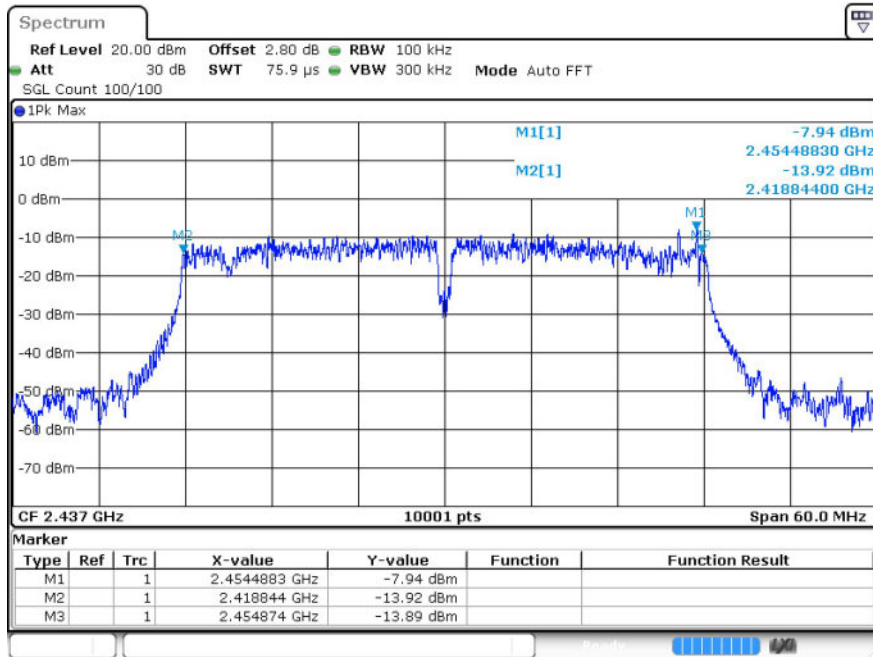
g 2462MHz Ant1



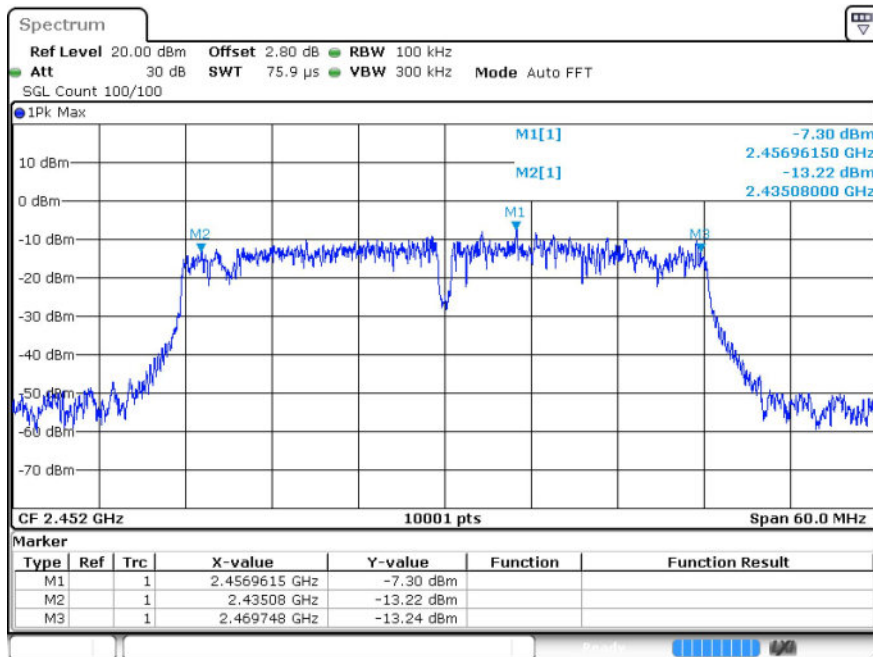




n40 2437MHz Ant1



n40 2452MHz Ant1



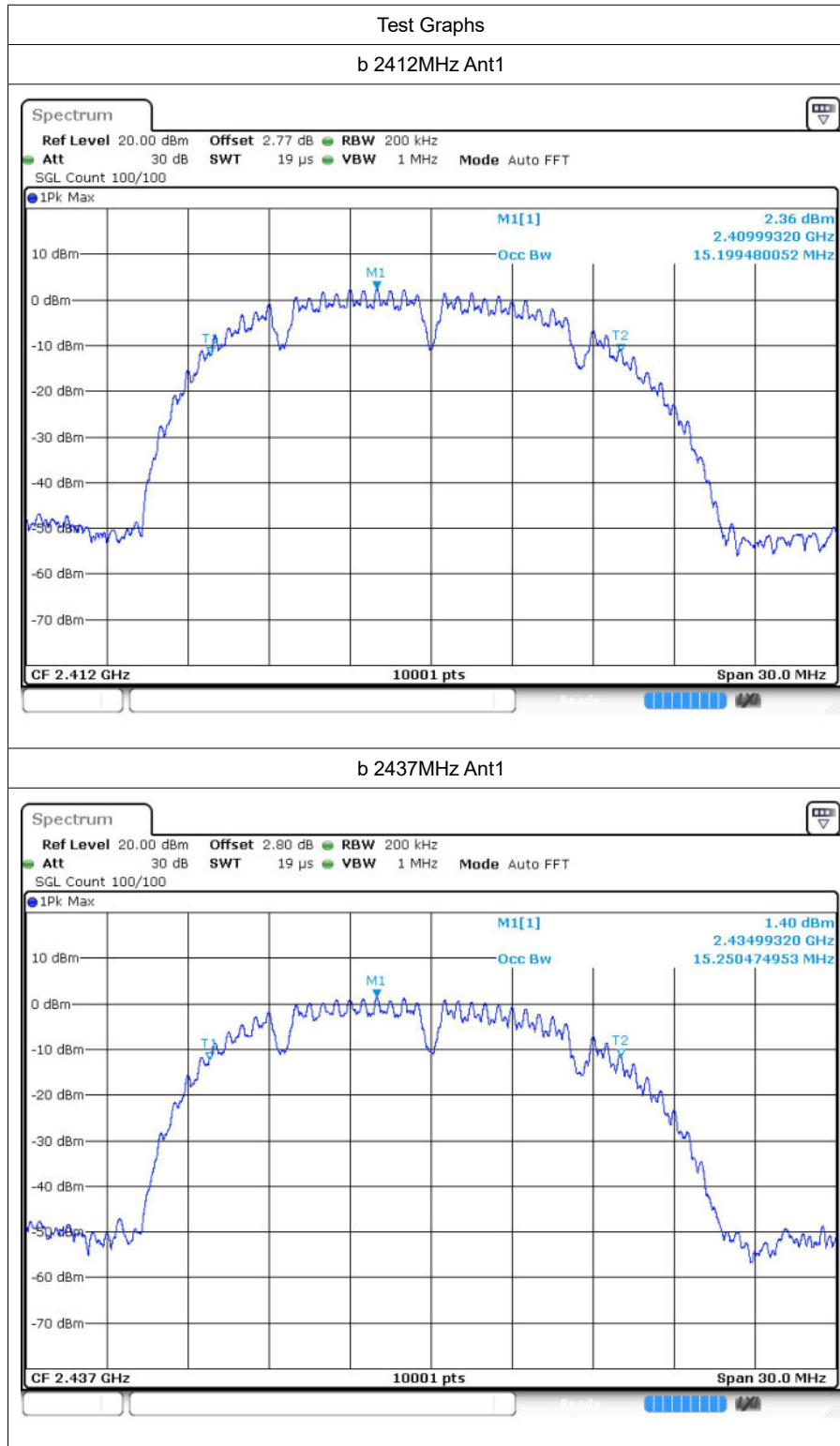


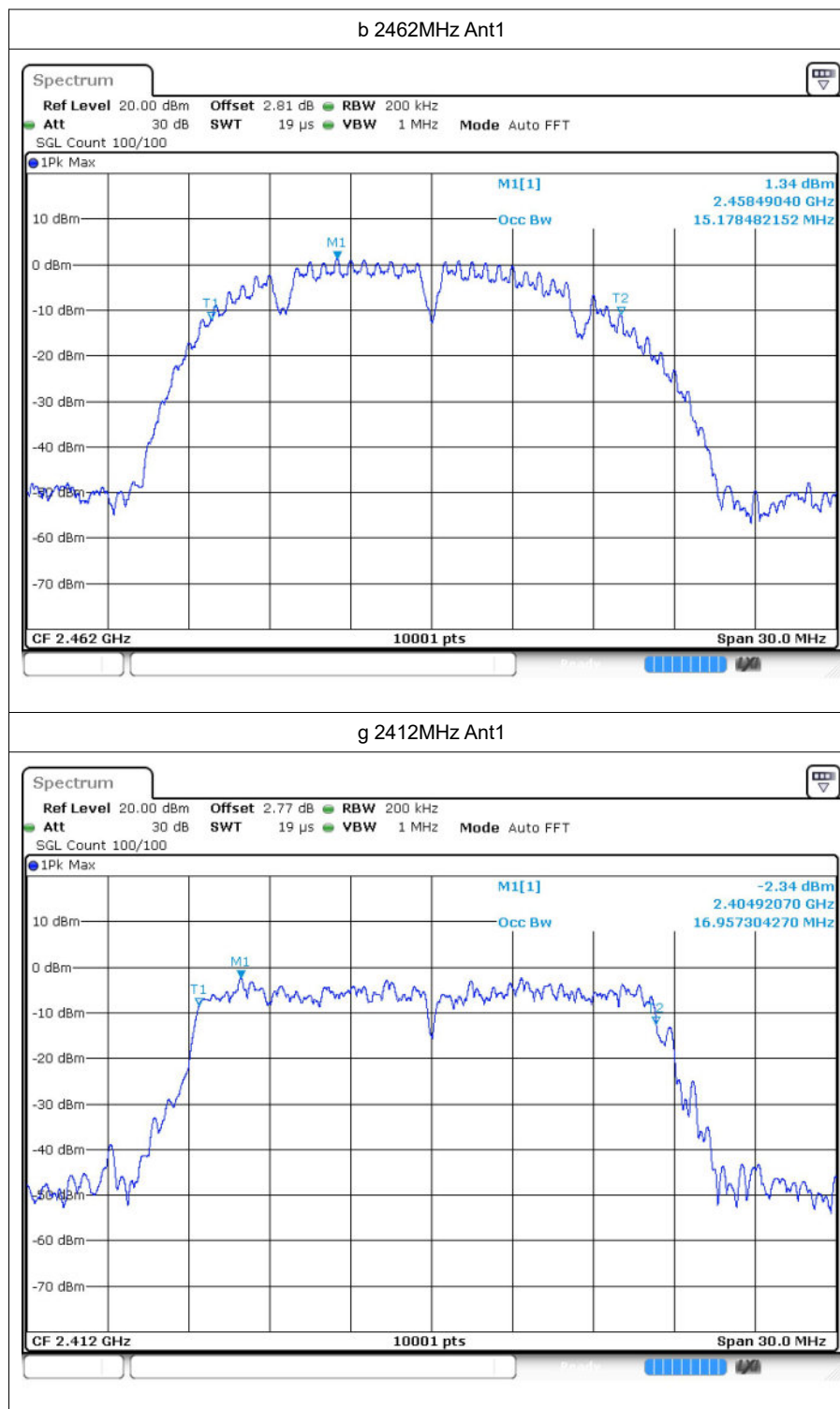
4 Occupied Channel Bandwidth

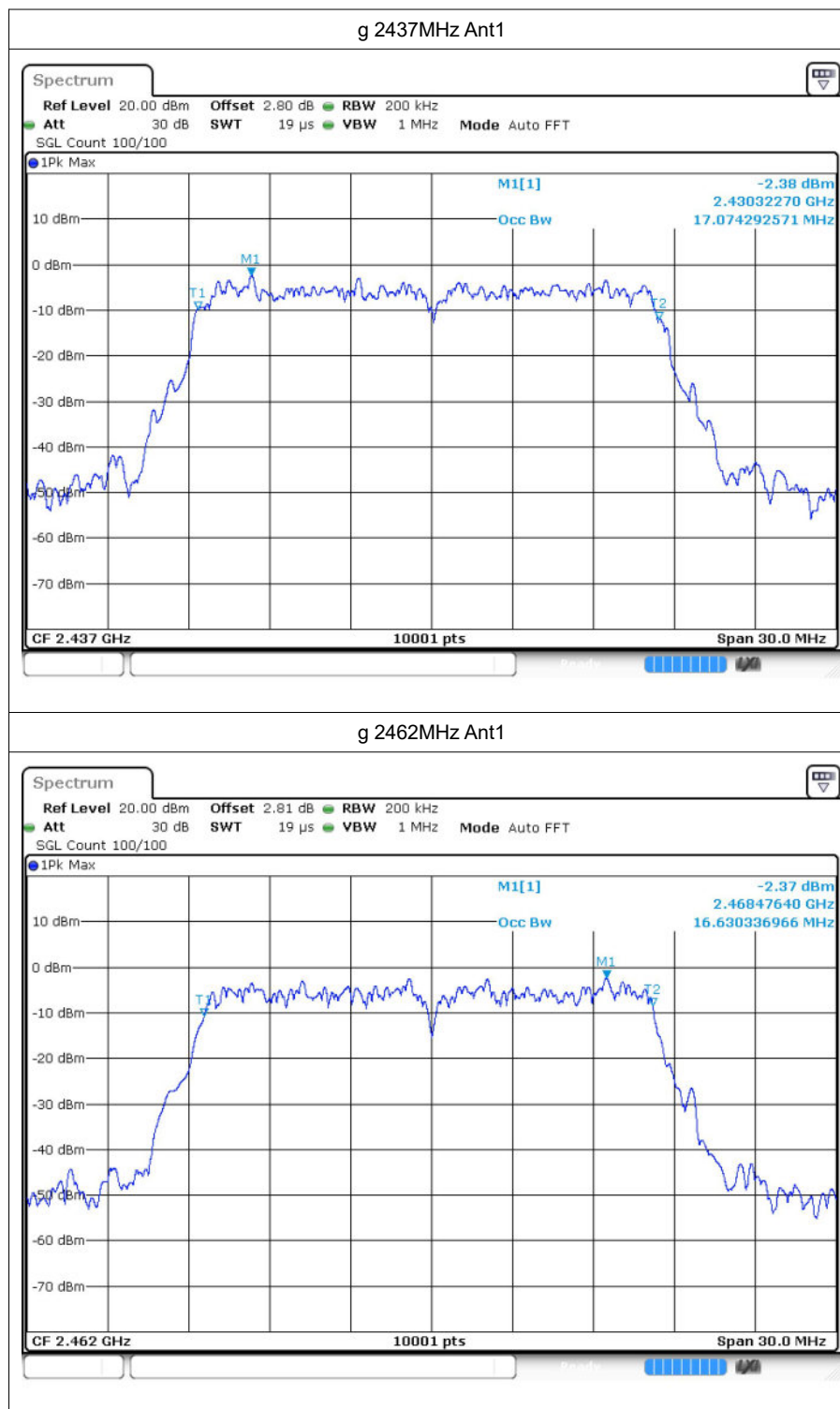
4.1 Test Result

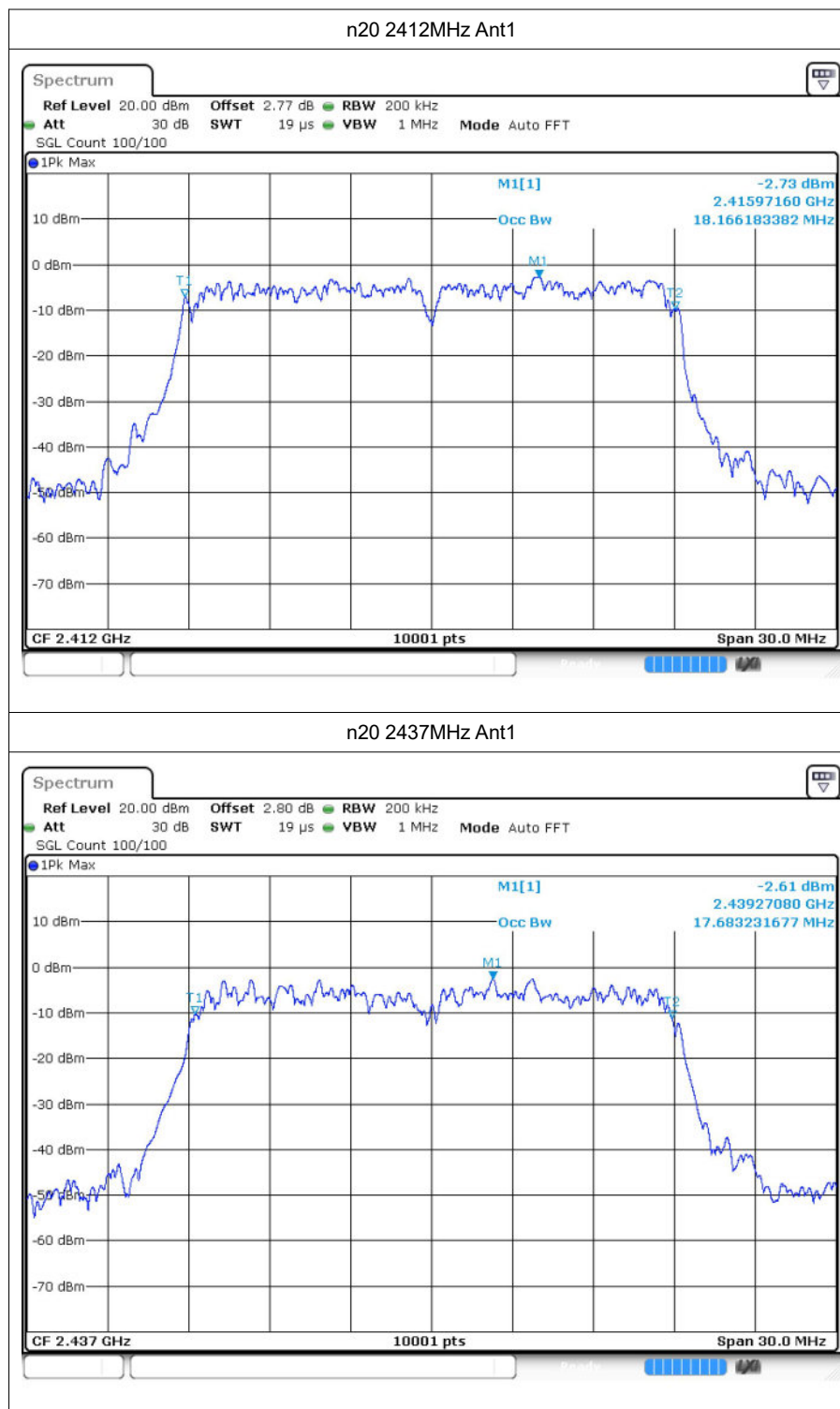
Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
b	2412	Ant1	15.199
b	2437	Ant1	15.25
b	2462	Ant1	15.178
g	2412	Ant1	16.957
g	2437	Ant1	17.074
g	2462	Ant1	16.63
n20	2412	Ant1	18.166
n20	2437	Ant1	17.683
n20	2462	Ant1	17.944
n40	2422	Ant1	35.78
n40	2437	Ant1	36.272
n40	2452	Ant1	35.732

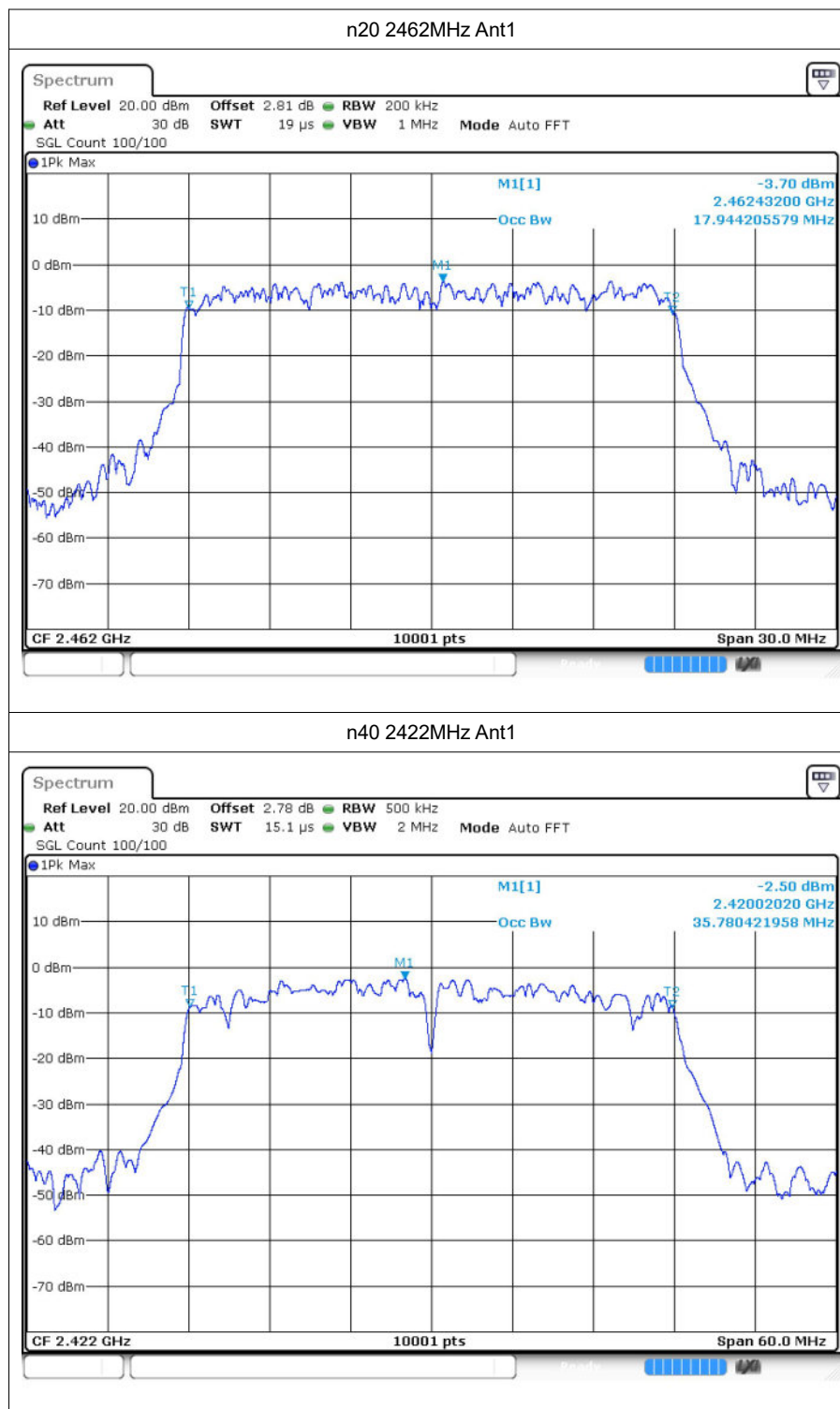
4.2 Test Graphs

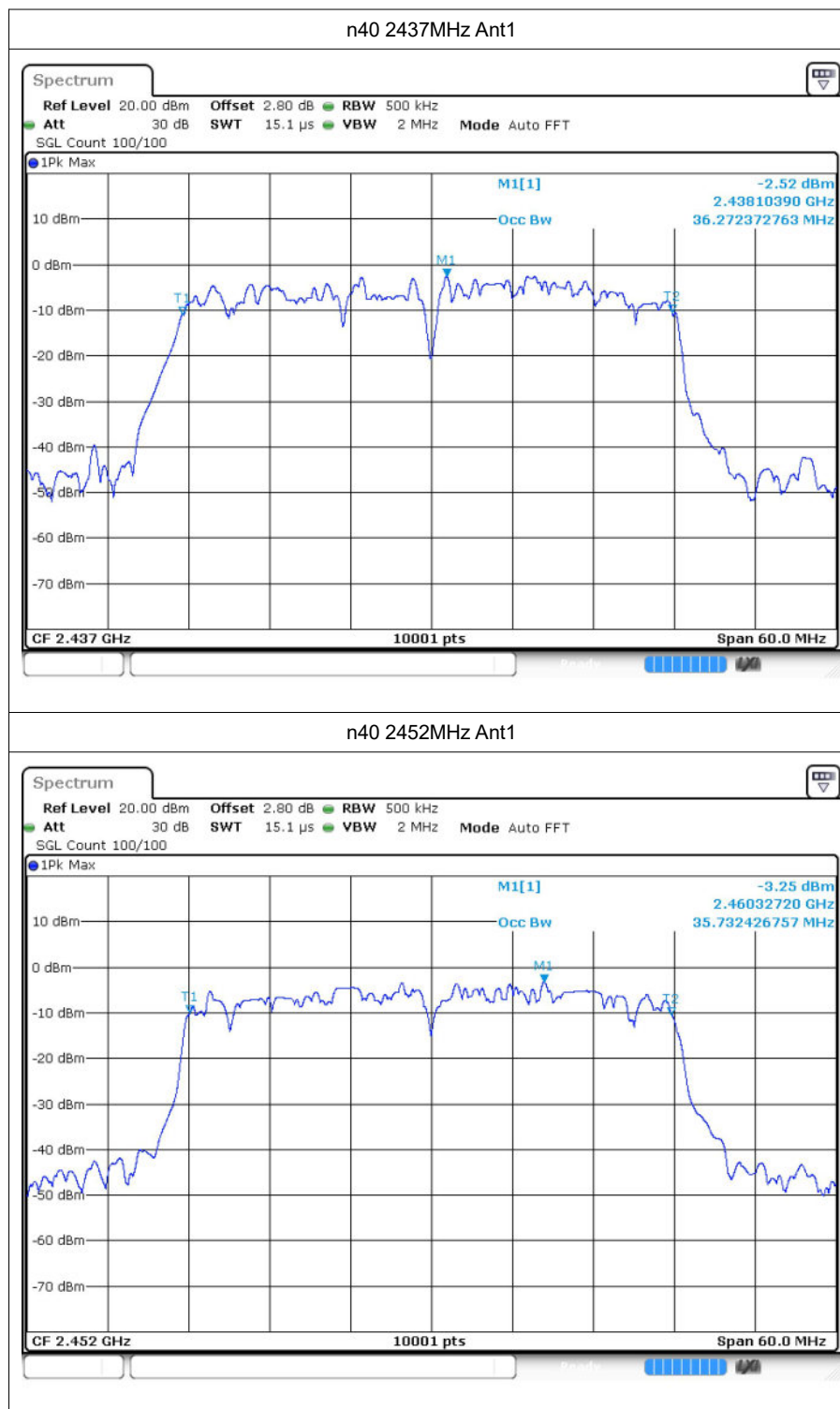










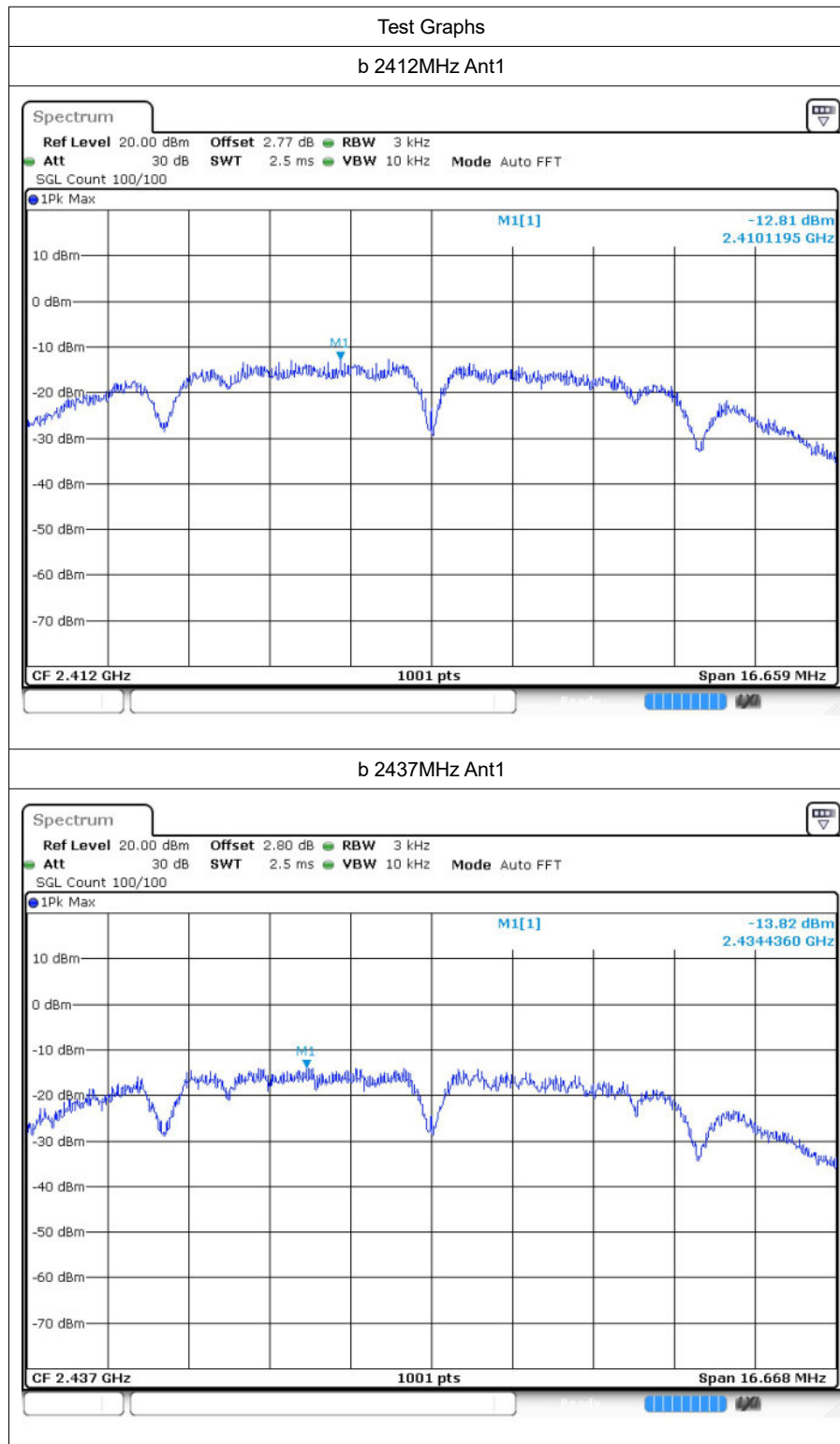


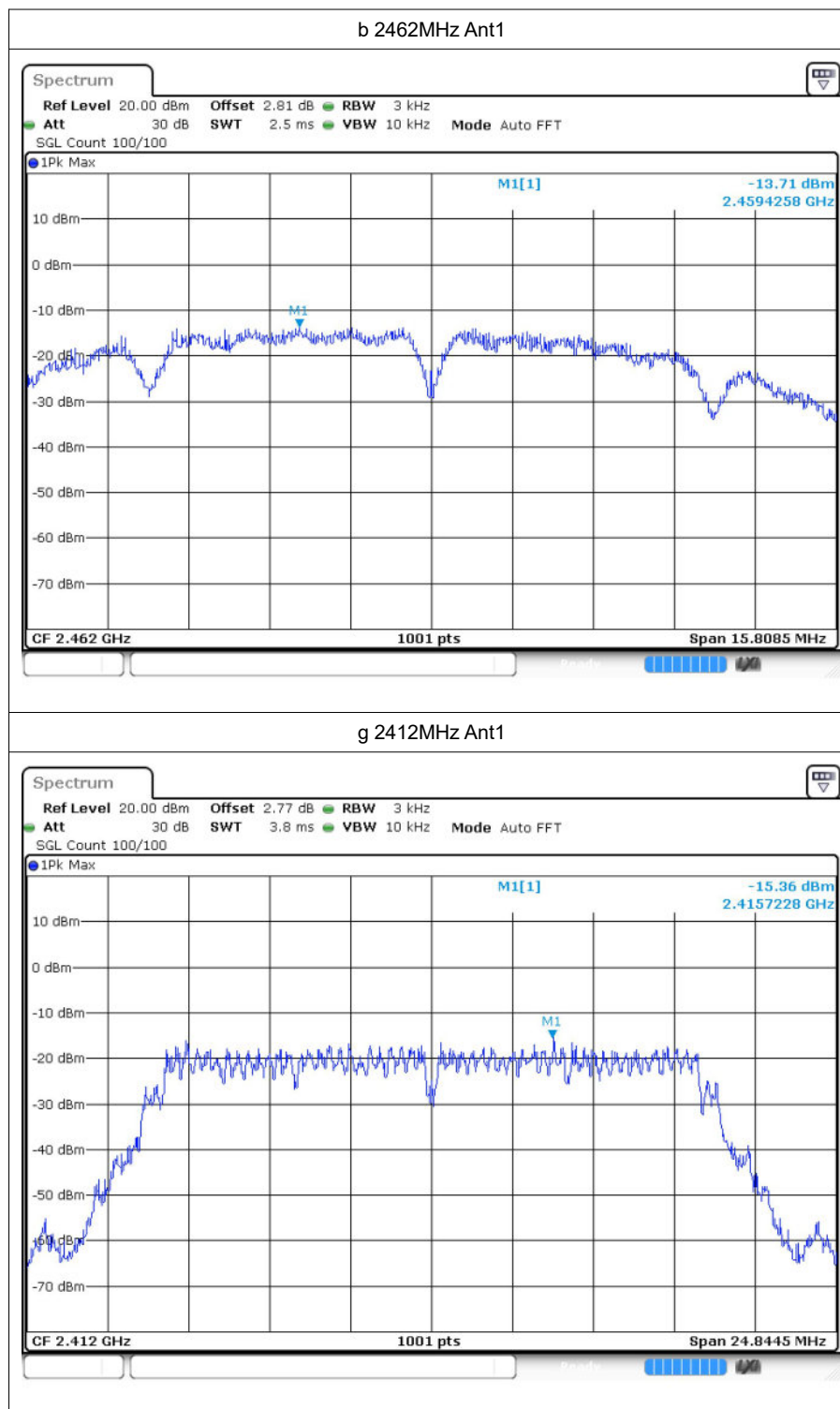
5 Maximum Power Spectral Density Level

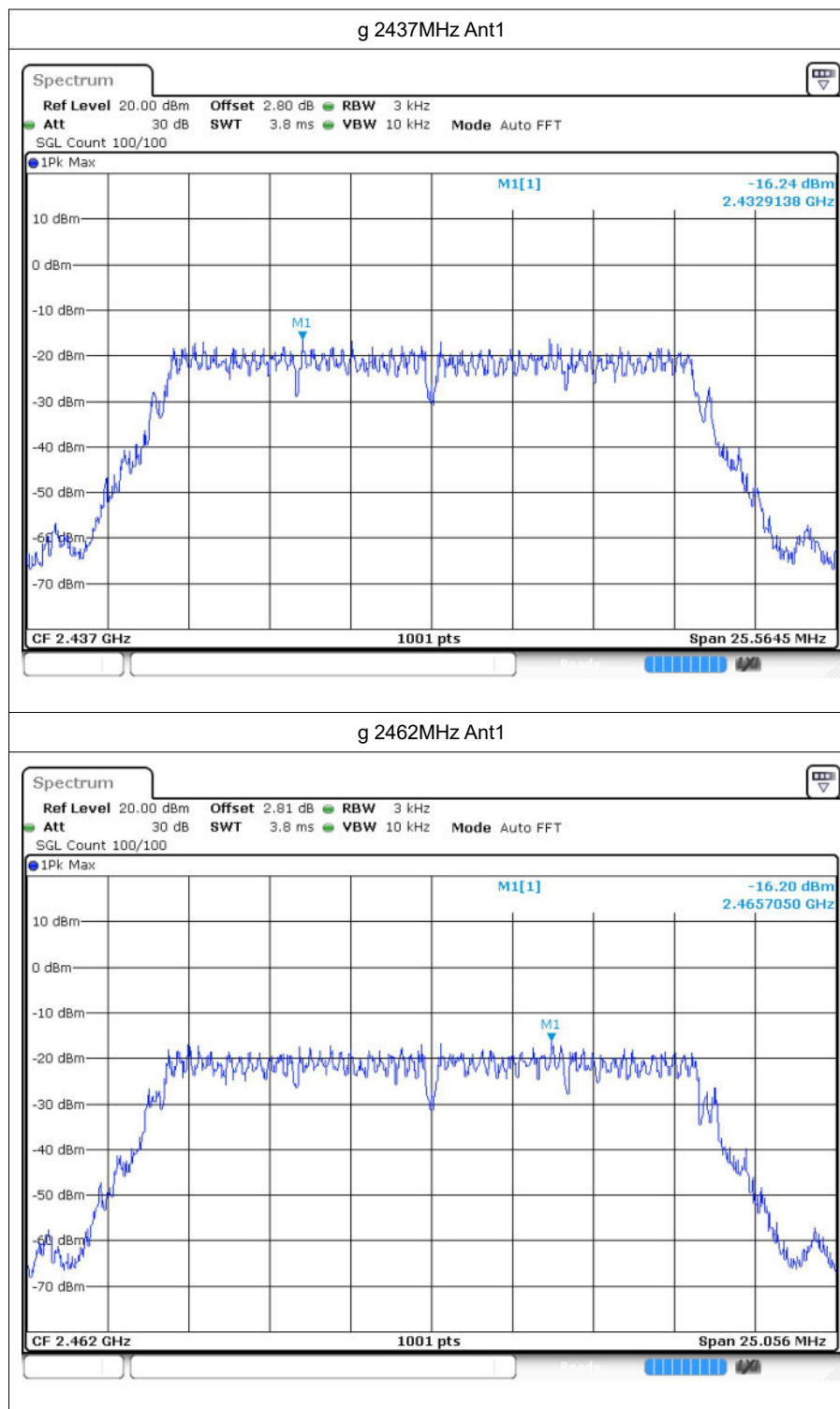
5.1 Test Result

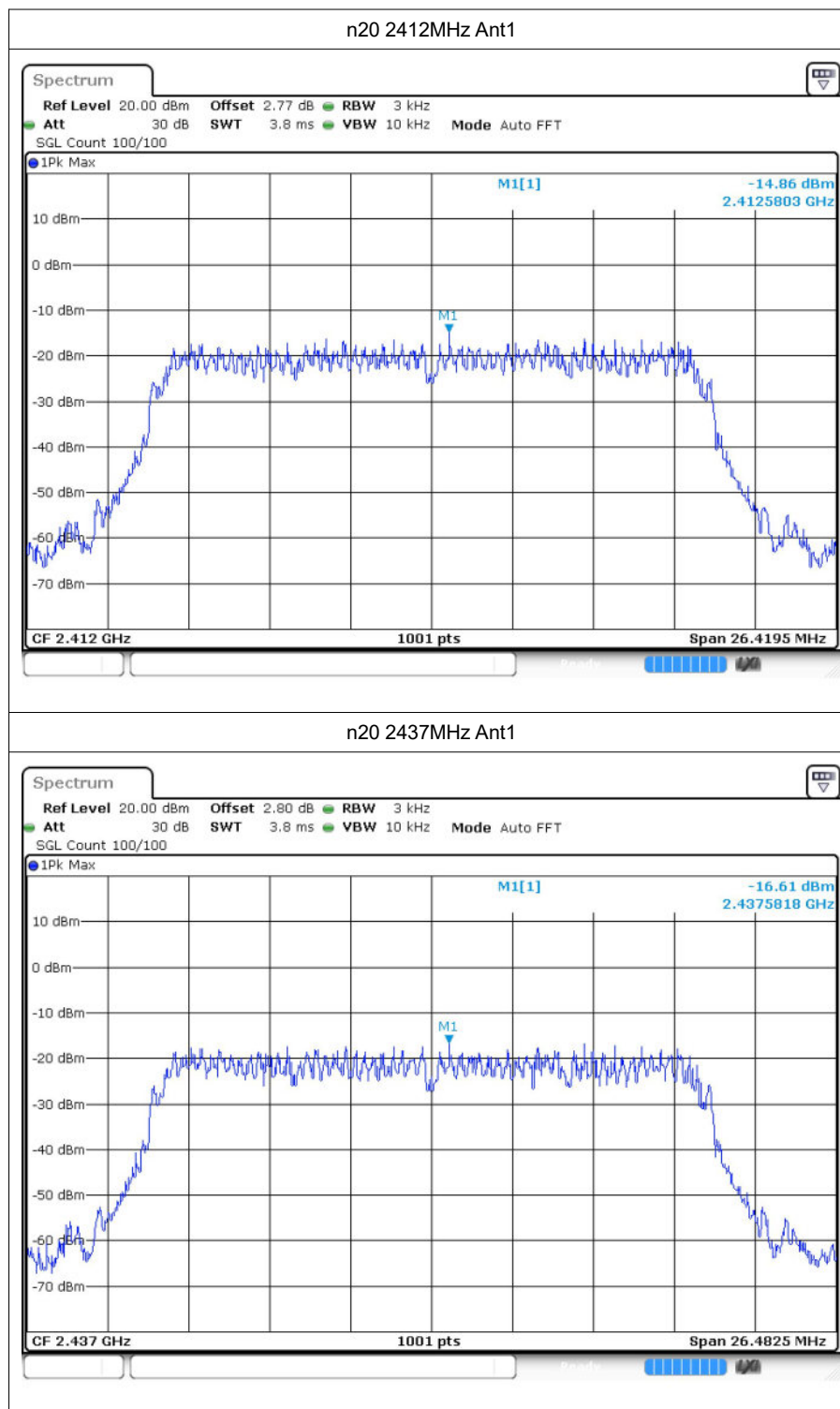
Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3-100kHz)	Limit (dBm/3kHz)	Verdict
b	2412	Ant1	-12.81	≤8	Pass
b	2437	Ant1	-13.82	≤8	Pass
b	2462	Ant1	-13.71	≤8	Pass
g	2412	Ant1	-15.36	≤8	Pass
g	2437	Ant1	-16.24	≤8	Pass
g	2462	Ant1	-16.2	≤8	Pass
n20	2412	Ant1	-14.86	≤8	Pass
n20	2437	Ant1	-16.61	≤8	Pass
n20	2462	Ant1	-17.36	≤8	Pass
n40	2422	Ant1	-18.51	≤8	Pass
n40	2437	Ant1	-20.71	≤8	Pass
n40	2452	Ant1	-19.71	≤8	Pass

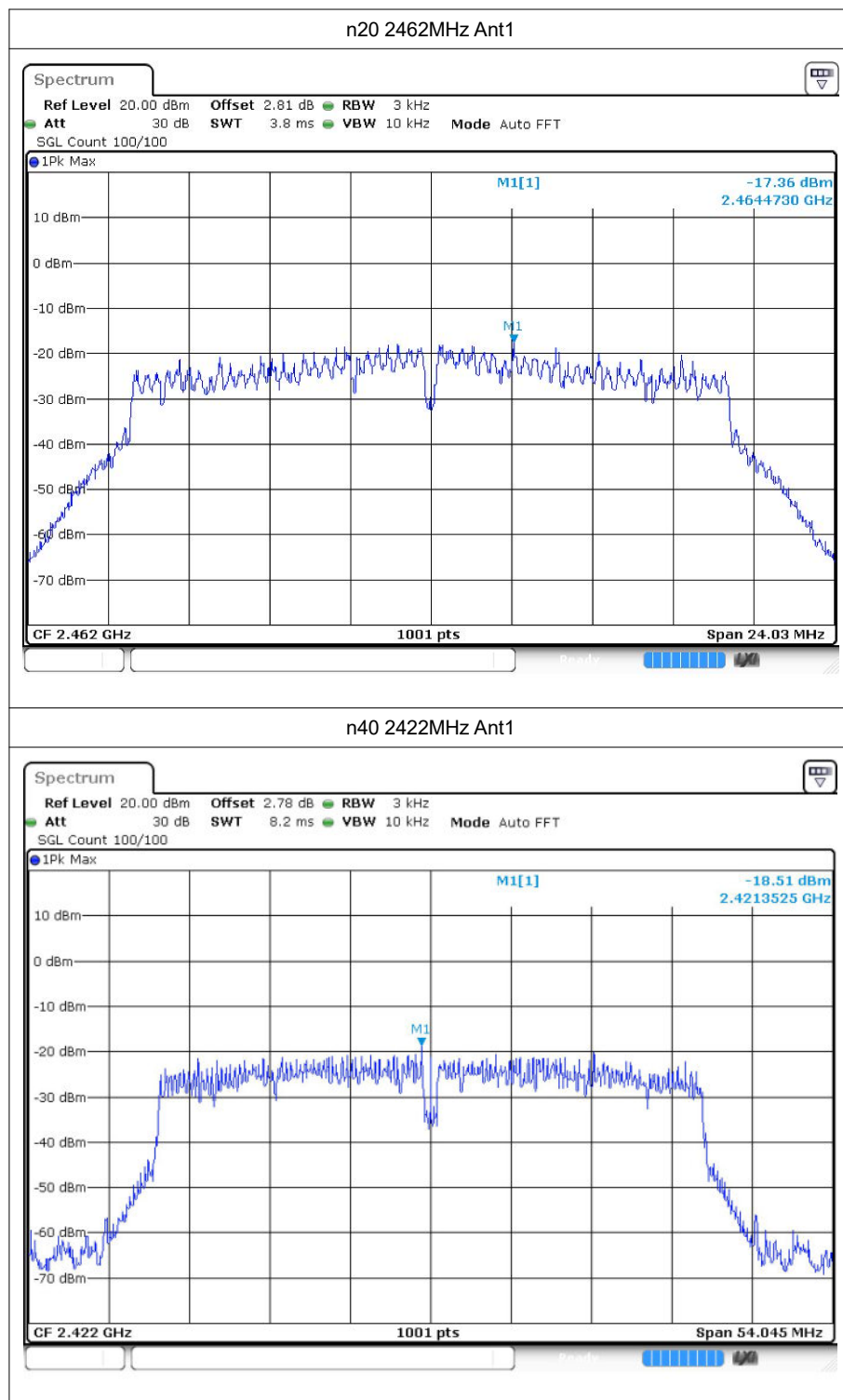
5.2 Test Graphs

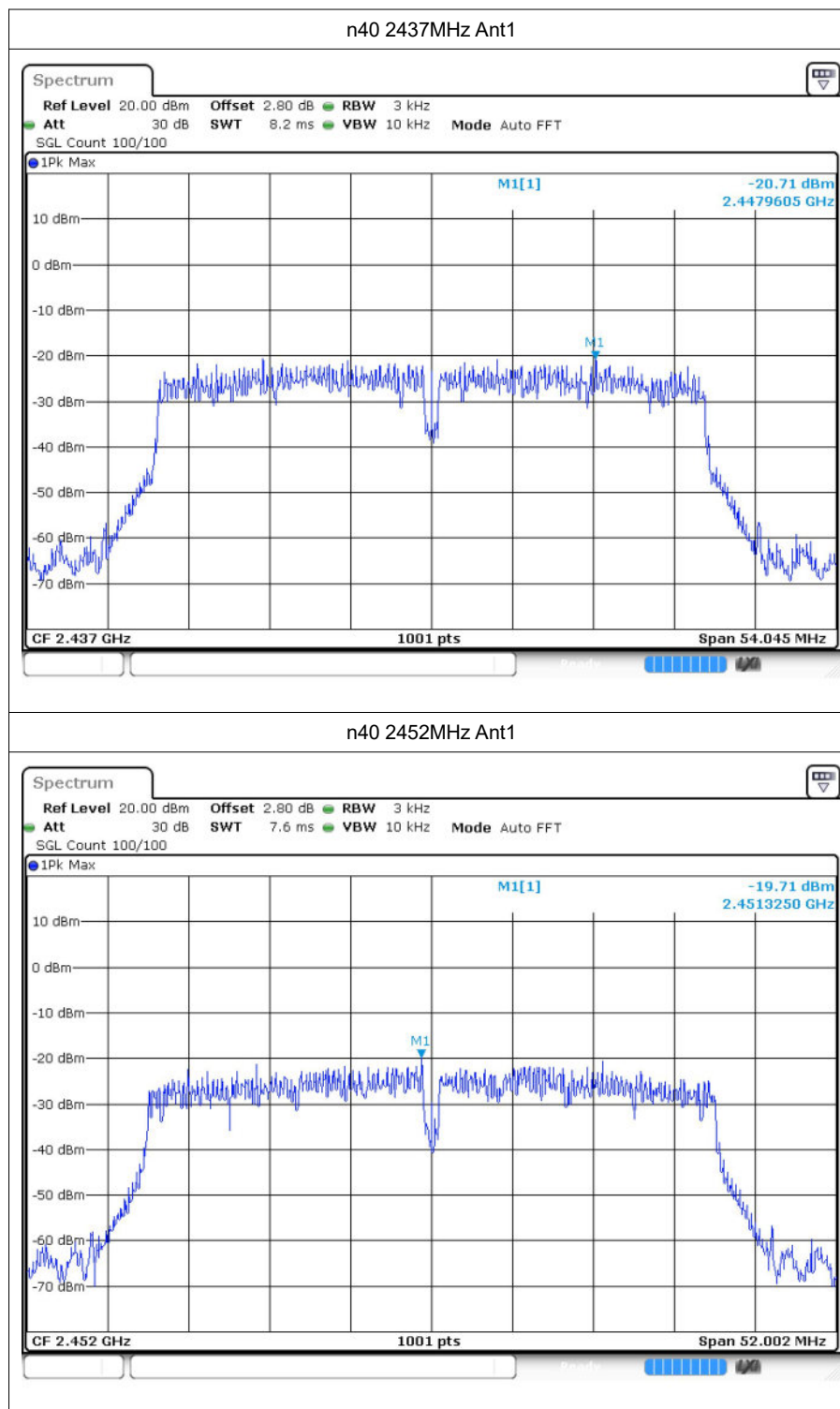














6 Band Edge

6.1 Test Result

Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
b	2412	Ant1	-54.13	-20	-54.13
b	2462	Ant1	-54.29	-20	Pass
g	2412	Ant1	-49.29	-20	Pass
g	2462	Ant1	-50.4	-20	Pass
n20	2412	Ant1	-47.82	-20	Pass
n20	2462	Ant1	-50.88	-20	Pass
n40	2422	Ant1	-41.88	-20	Pass
n40	2452	Ant1	-45.14	-20	Pass

6.2 Test Graphs

