



Appendix C

RF Test Data for 2.4GWIFI (Conducted Measurement)

Product Name: SmartphoneKey Reader

Trade Mark: SmartphoneKey

Test Model: SPK_AC_WIFI_V1.0

Environmental Conditions

Temperature:	24.2° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Emiya Lin
Supervised by:	Simba Huang



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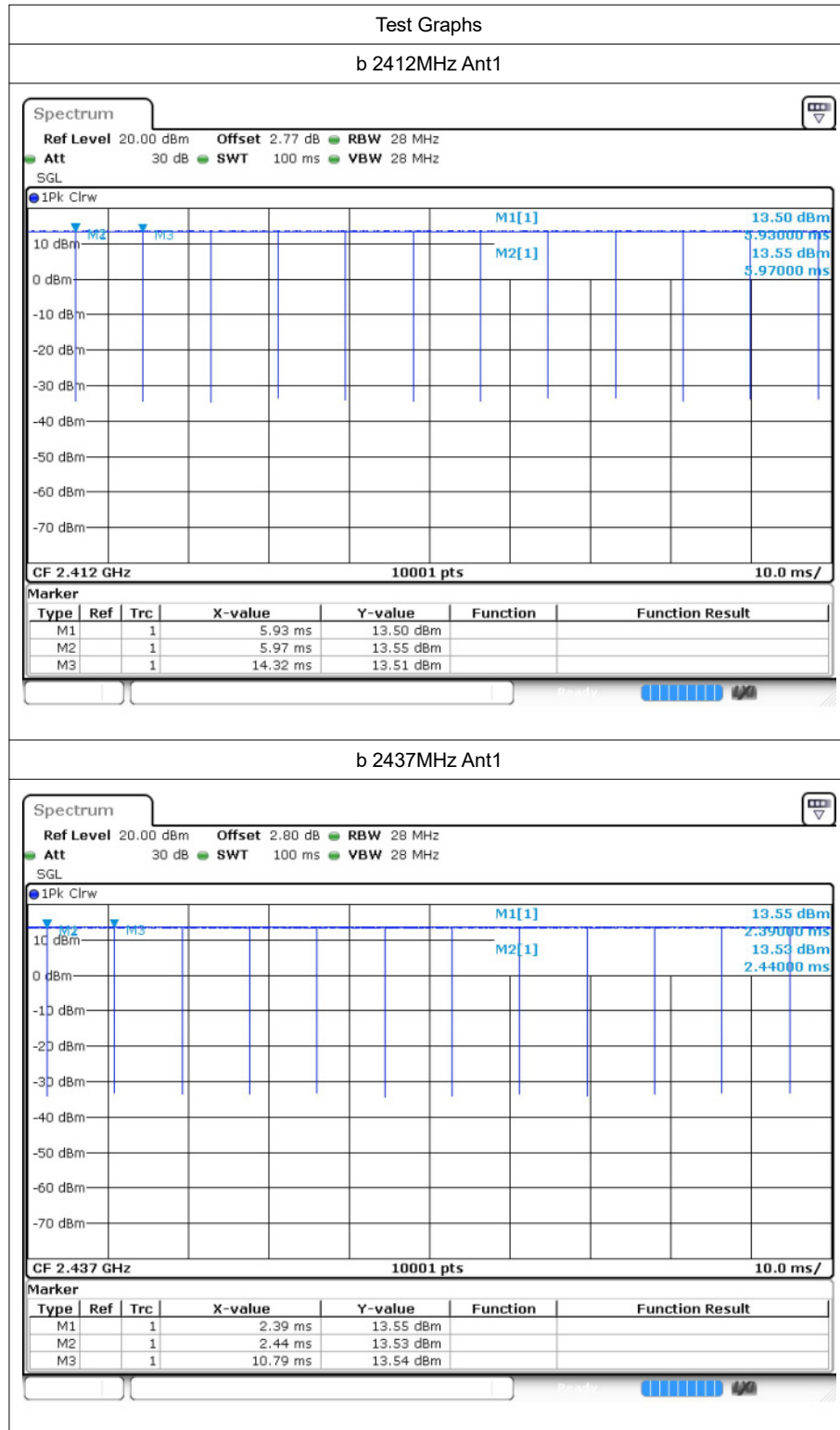


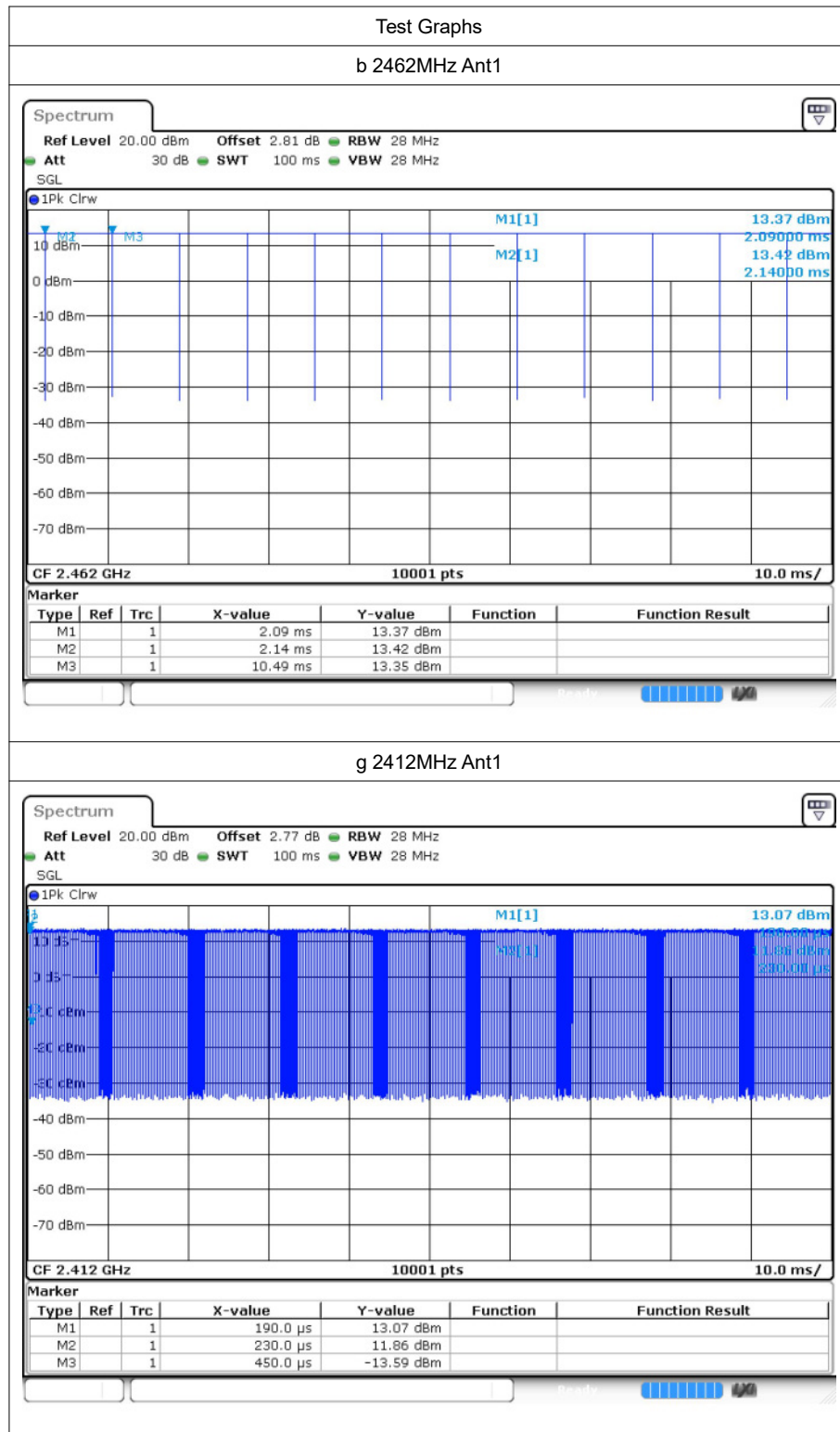
1 Duty Cycle

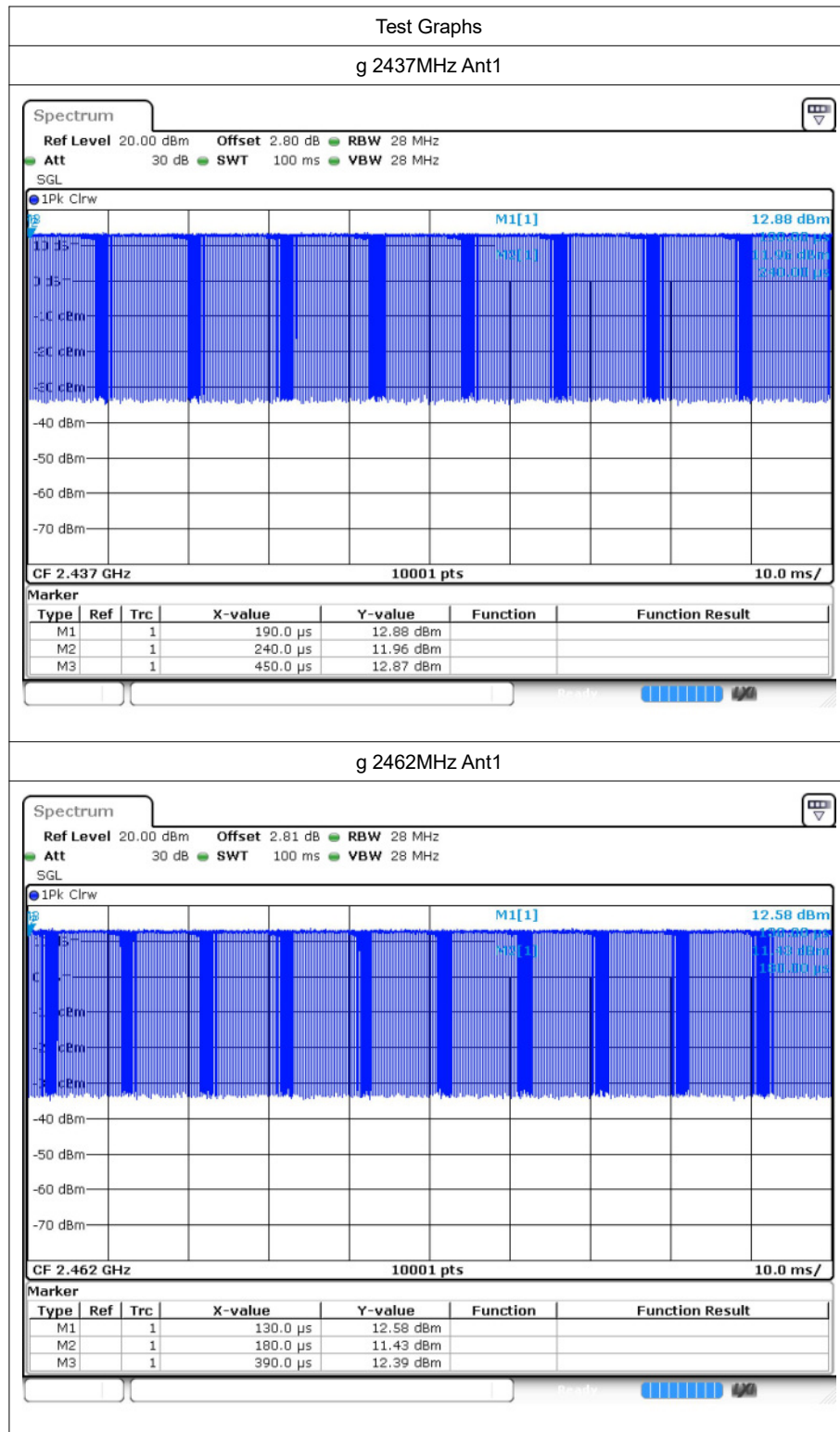
1.1 Test Result

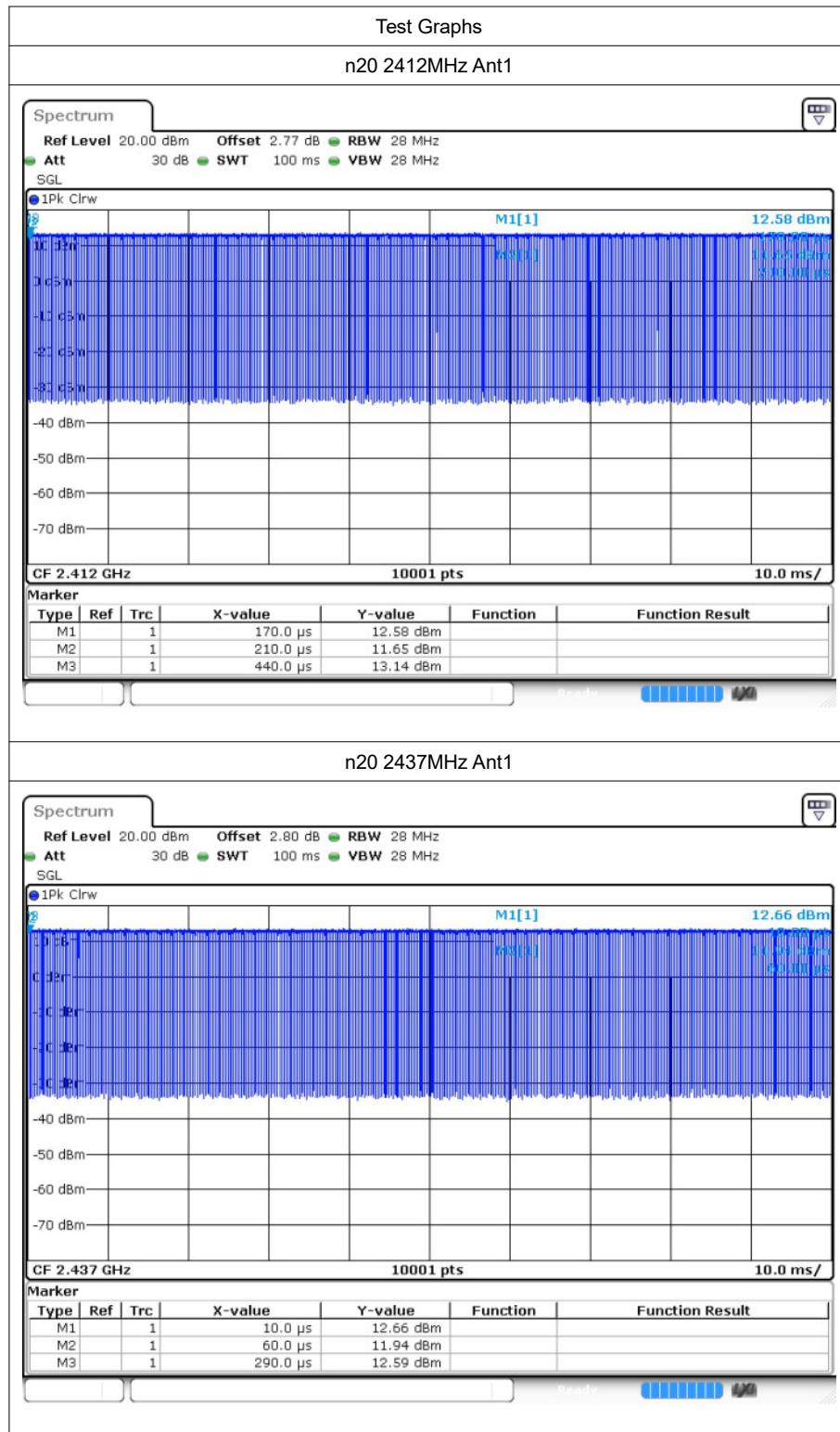
Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor	1/T (kHz)
b	2412	Ant1	99.6	0.02	0.12
b	2437	Ant1	99.6	0.02	0.12
b	2462	Ant1	99.59	0.02	0.12
g	2412	Ant1	86.92	0.61	4.55
g	2437	Ant1	86.91	0.61	4.76
g	2462	Ant1	86.7	0.62	4.76
n20	2412	Ant1	87.42	0.58	4.35
n20	2437	Ant1	87.52	0.58	4.35
n20	2462	Ant1	87.52	0.58	4.35
n40	2422	Ant1	87.96	0.56	4.17
n40	2437	Ant1	88	0.56	4
n40	2452	Ant1	87.97	0.56	4.17
ax20	2412	Ant1	86.94	0.61	4.35
ax20	2437	Ant1	86.97	0.61	4.35
ax20	2462	Ant1	86.99	0.61	4.55
ax40	2422	Ant1	86.97	0.61	4.35
ax40	2437	Ant1	86.65	0.62	4.35
ax40	2452	Ant1	87.05	0.6	4.55

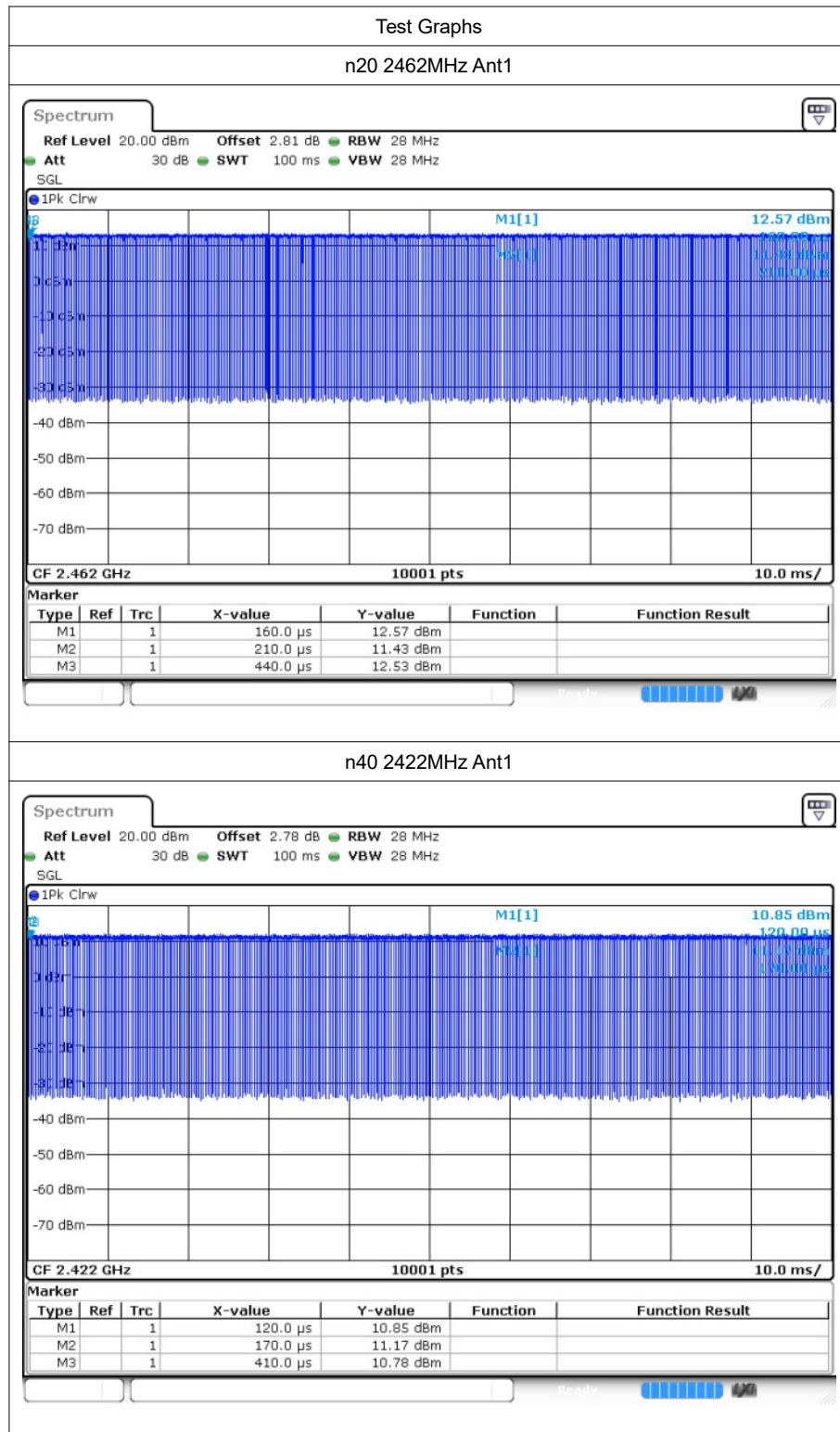
1.2 Test Graphs

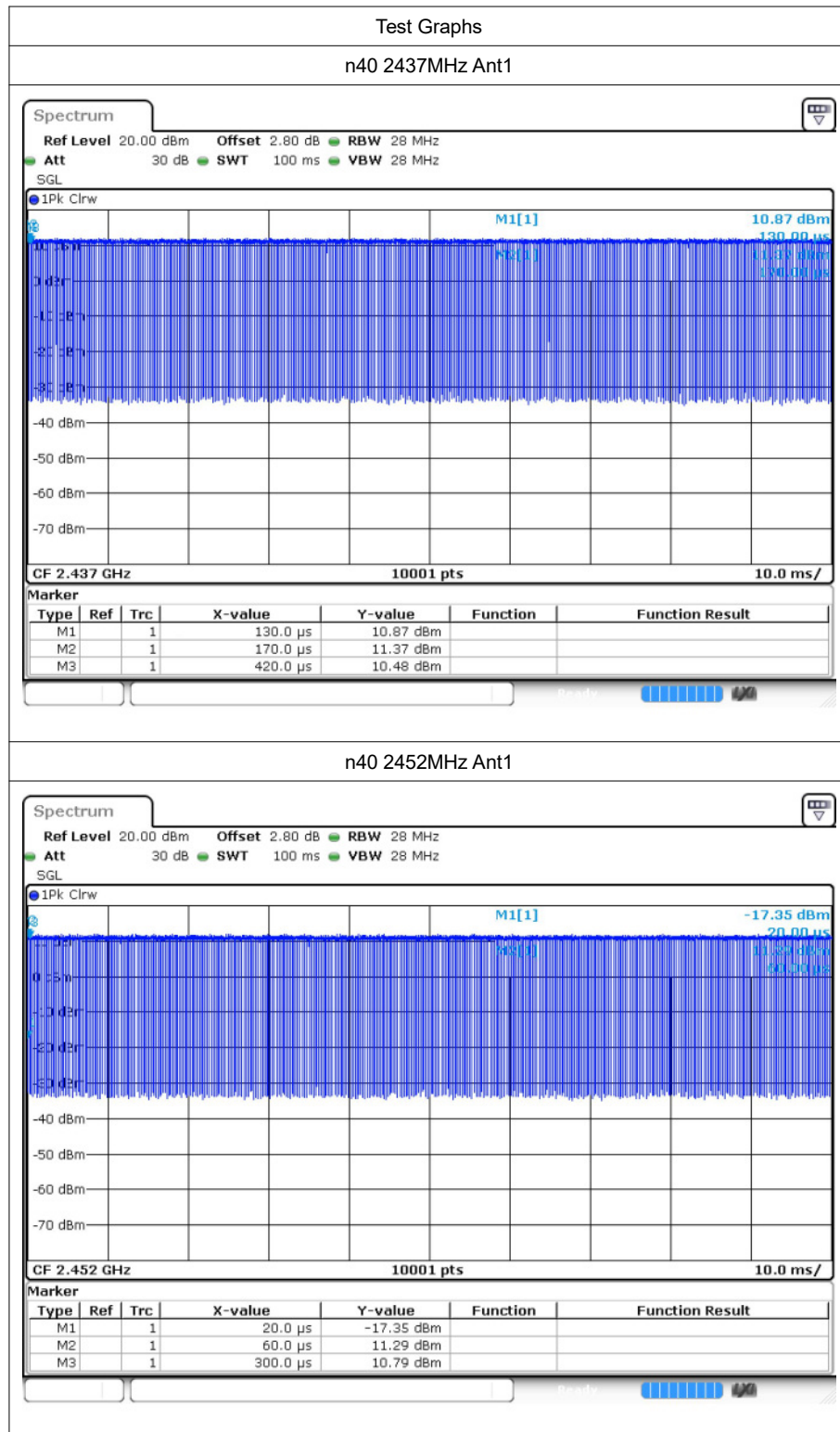


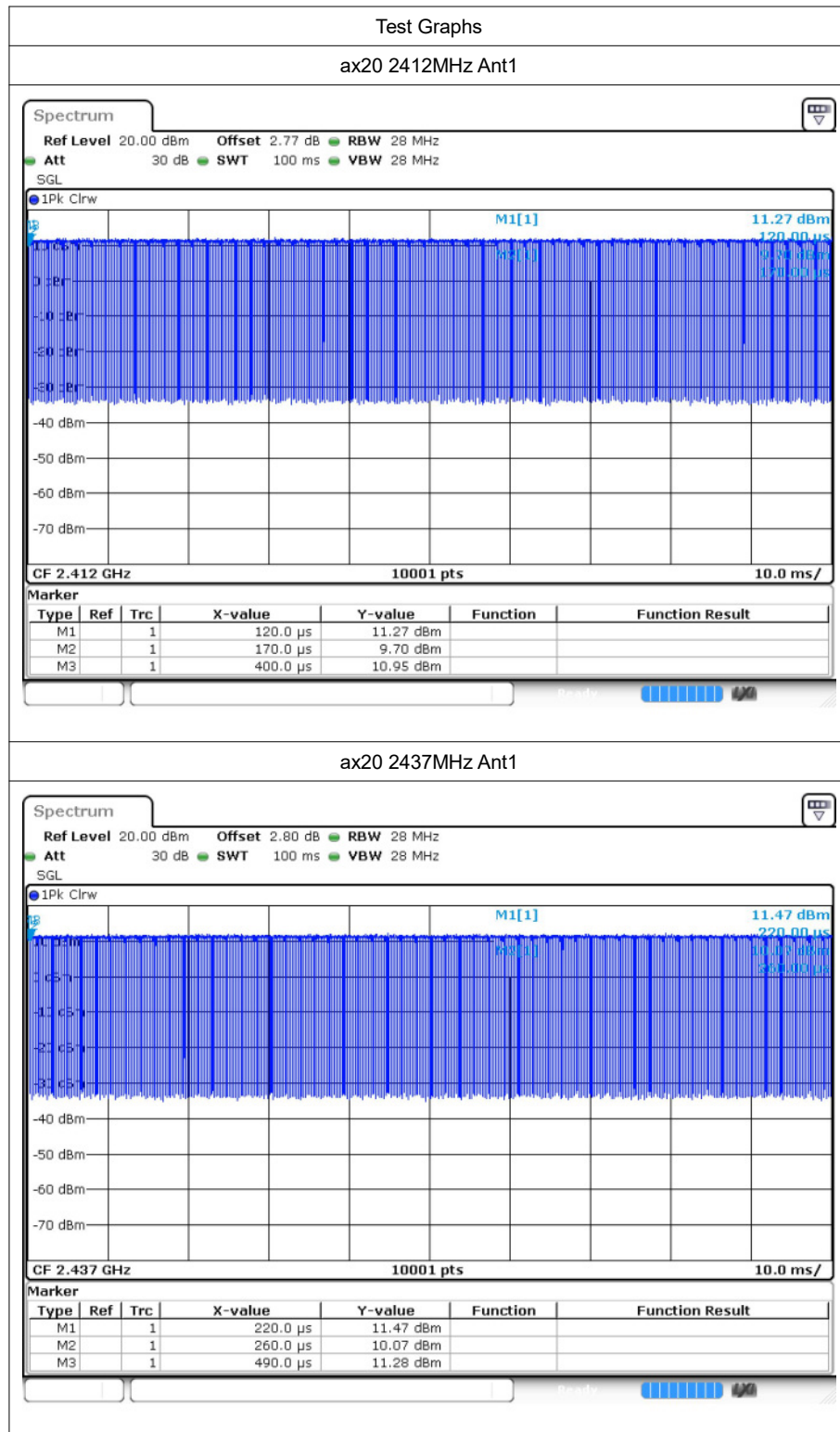


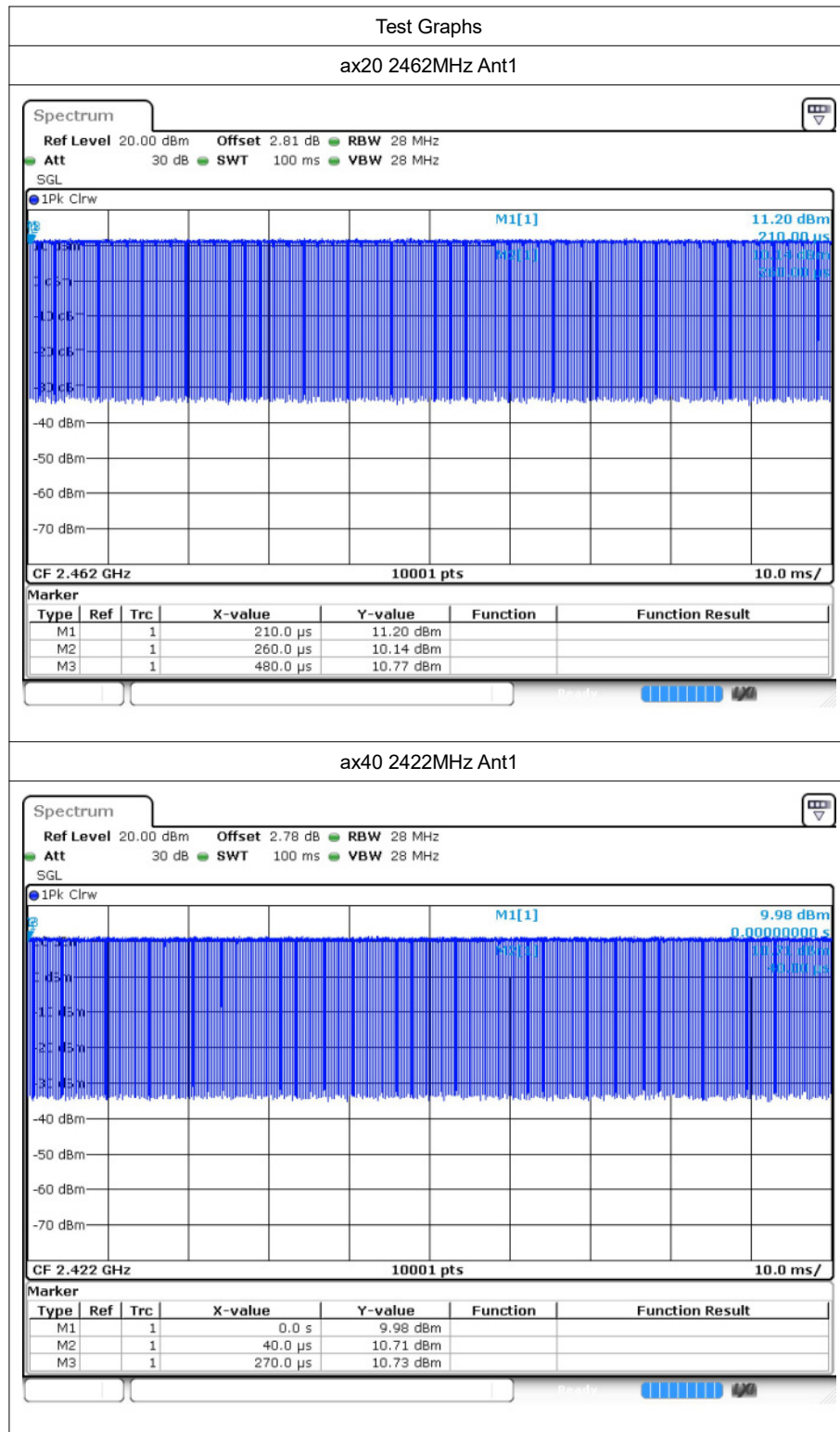


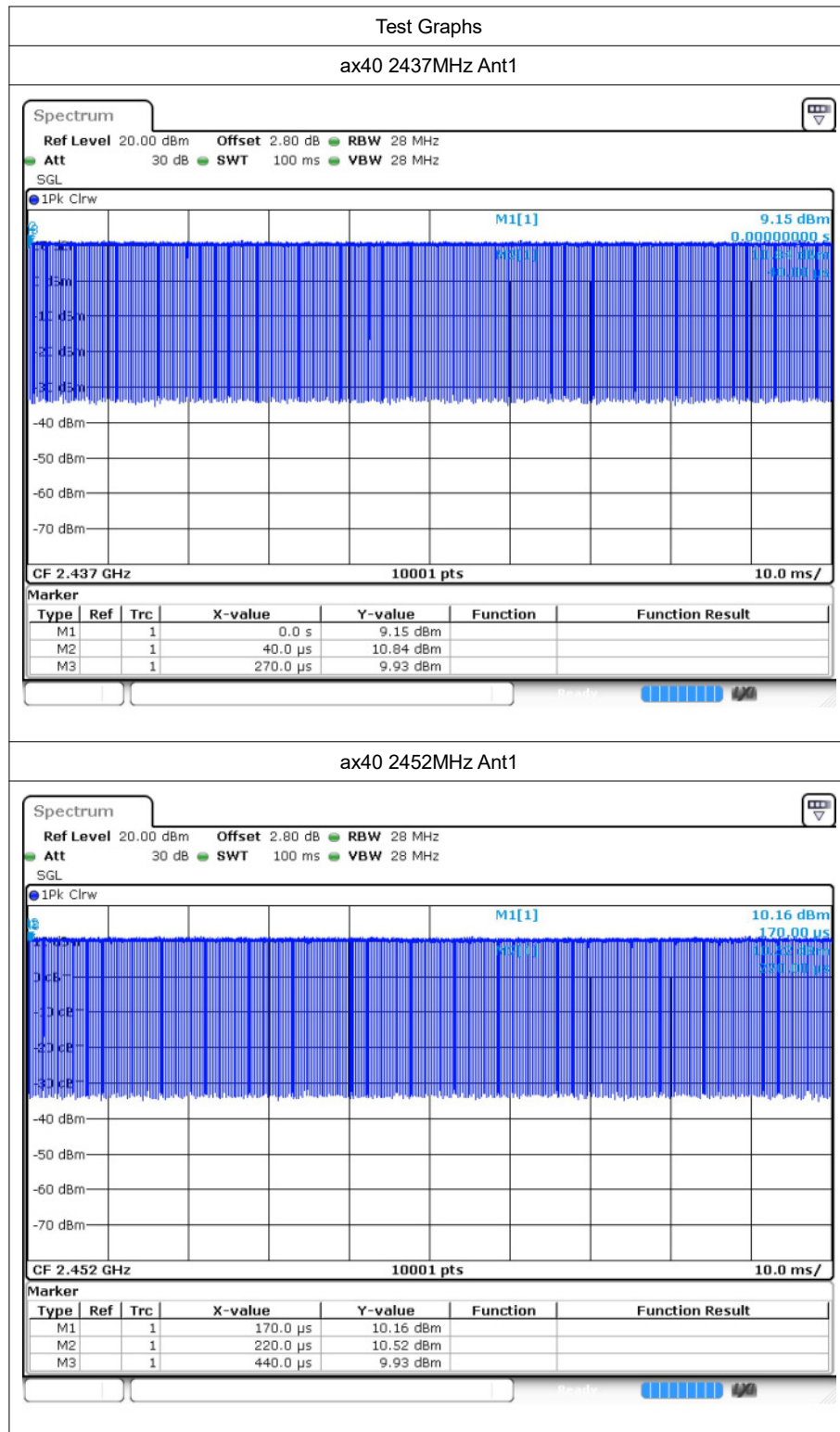












2 Maximum Conducted Output Power

2.1 Test Result

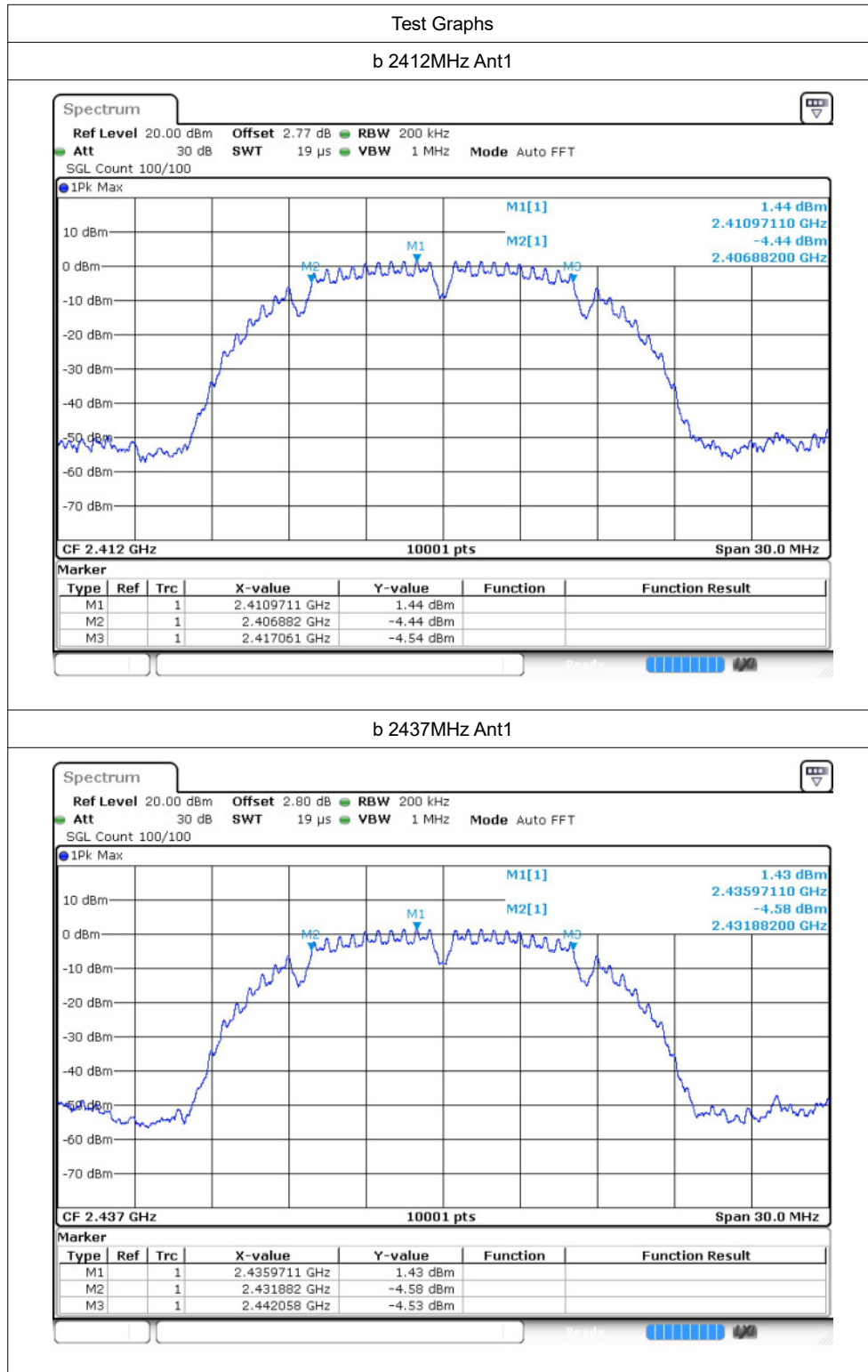
Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
b	2412	Ant1	14.73	30	Pass
b	2437	Ant1	14.66	30	Pass
b	2462	Ant1	14.52	30	Pass
g	2412	Ant1	14.33	30	Pass
g	2437	Ant1	14.69	30	Pass
g	2462	Ant1	14.64	30	Pass
n20	2412	Ant1	14.87	30	Pass
n20	2437	Ant1	14.79	30	Pass
n20	2462	Ant1	14.56	30	Pass
n40	2422	Ant1	14.61	30	Pass
n40	2437	Ant1	14.52	30	Pass
n40	2452	Ant1	14.37	30	Pass
ax20	2412	Ant1	14.63	30	Pass
ax20	2437	Ant1	14.61	30	Pass
ax20	2462	Ant1	14.41	30	Pass
ax40	2422	Ant1	14.31	30	Pass
ax40	2437	Ant1	14.25	30	Pass
ax40	2452	Ant1	14.12	30	Pass

3 -6dB Bandwidth

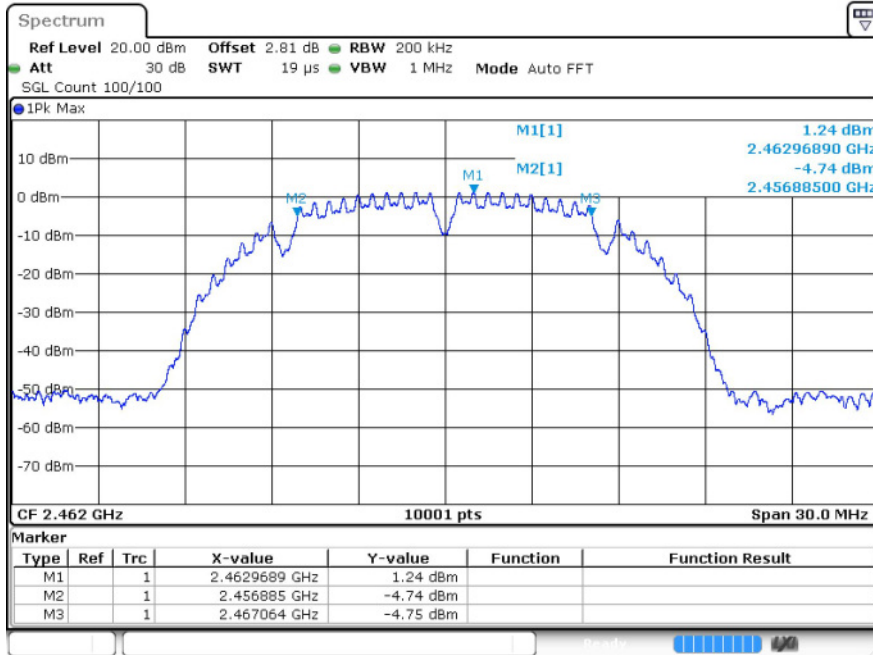
3.1 Test Result

Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
b	2412	Ant1	10.179	0.5	Pass
b	2437	Ant1	10.176	0.5	Pass
b	2462	Ant1	10.179	0.5	Pass
g	2412	Ant1	15.207	0.5	Pass
g	2437	Ant1	15.861	0.5	Pass
g	2462	Ant1	15.345	0.5	Pass
n20	2412	Ant1	15.189	0.5	Pass
n20	2437	Ant1	15.783	0.5	Pass
n20	2462	Ant1	15.21	0.5	Pass
n40	2422	Ant1	36.03	0.5	Pass
n40	2437	Ant1	35.856	0.5	Pass
n40	2452	Ant1	35.898	0.5	Pass
ax20	2412	Ant1	18.099	0.5	Pass
ax20	2437	Ant1	17.268	0.5	Pass
ax20	2462	Ant1	18.204	0.5	Pass
ax40	2422	Ant1	37.026	0.5	Pass
ax40	2437	Ant1	34.392	0.5	Pass
ax40	2452	Ant1	37.008	0.5	Pass

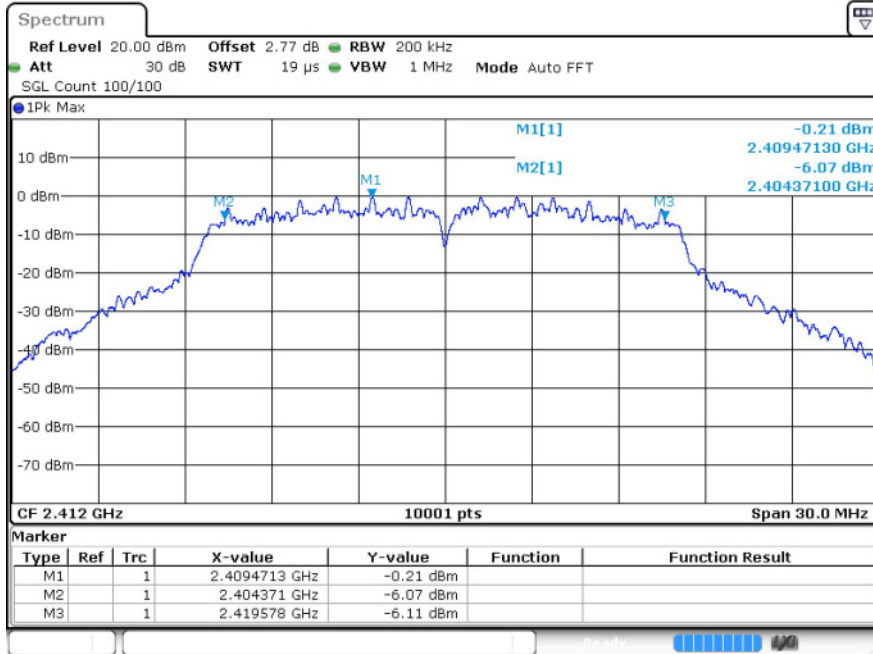
3.2 Test Graphs



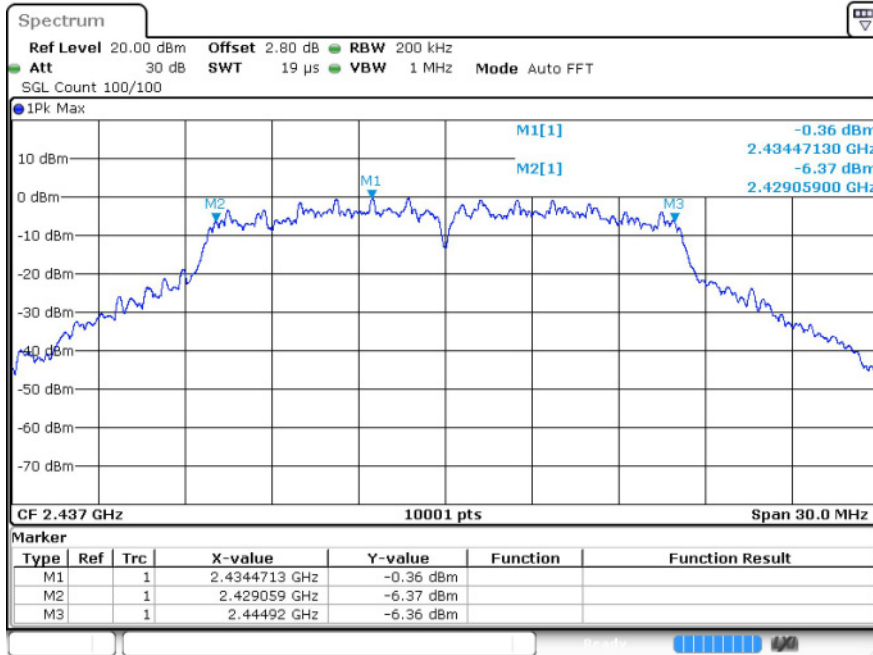
b 2462MHz Ant1



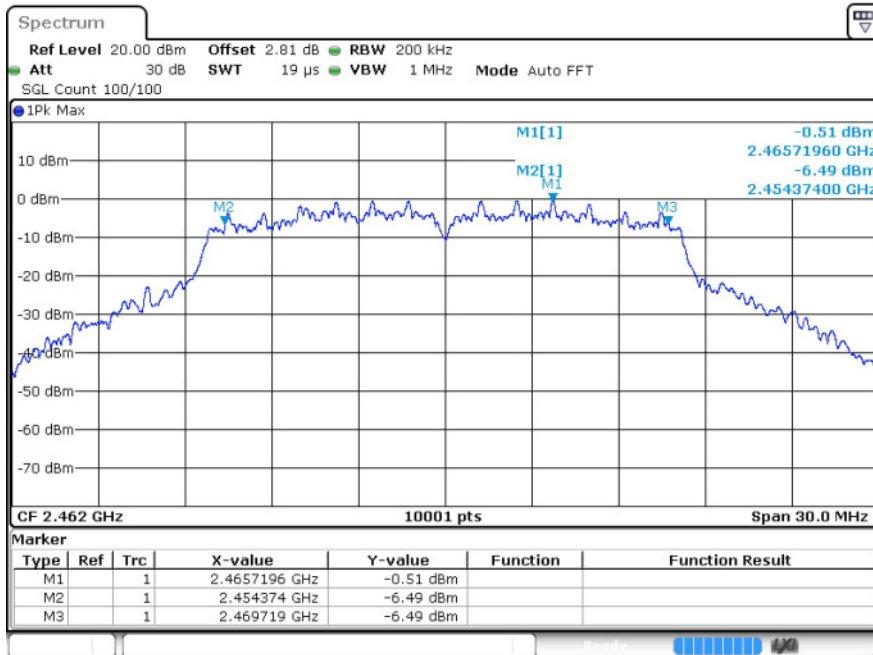
g 2412MHz Ant1

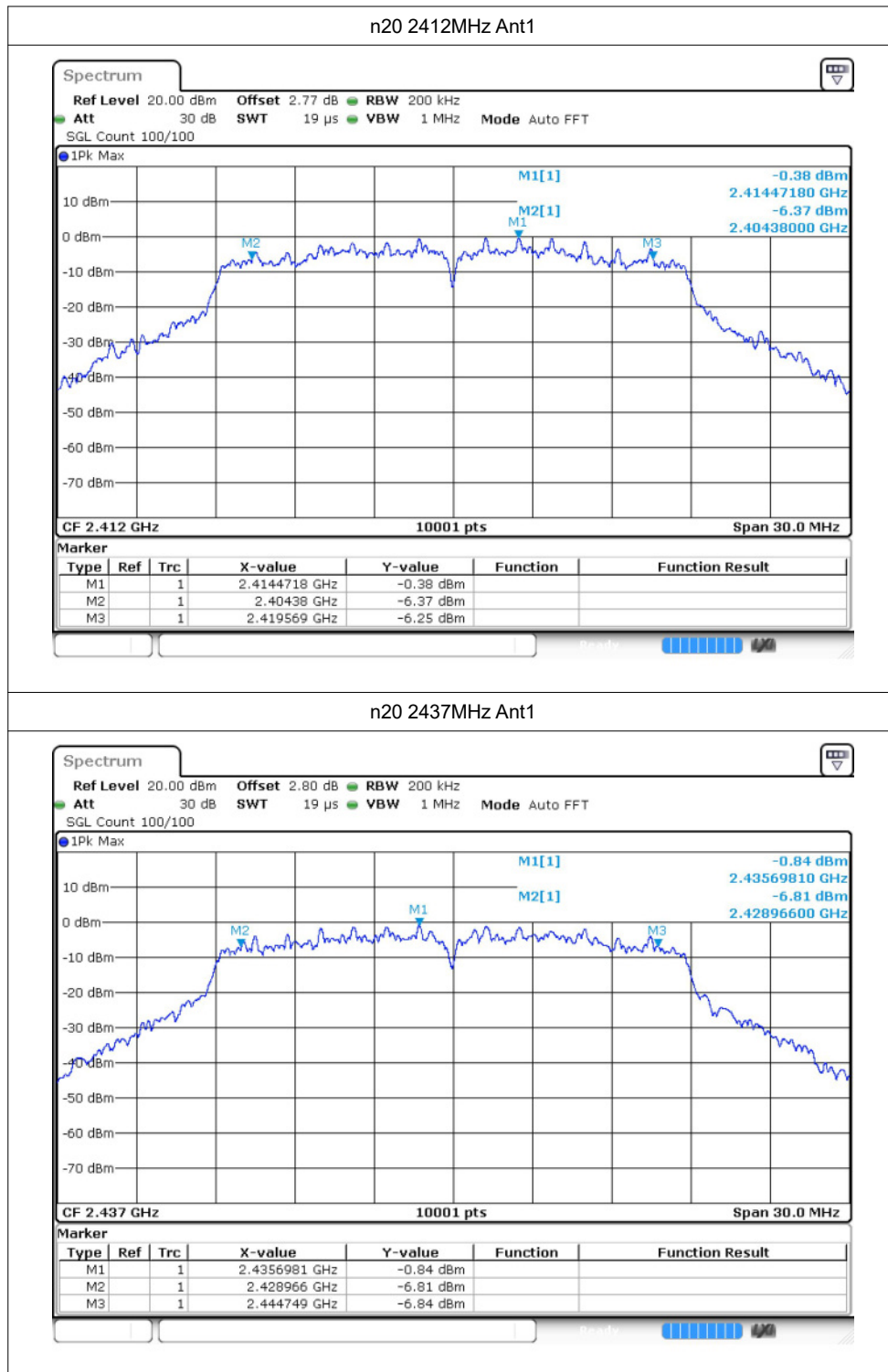


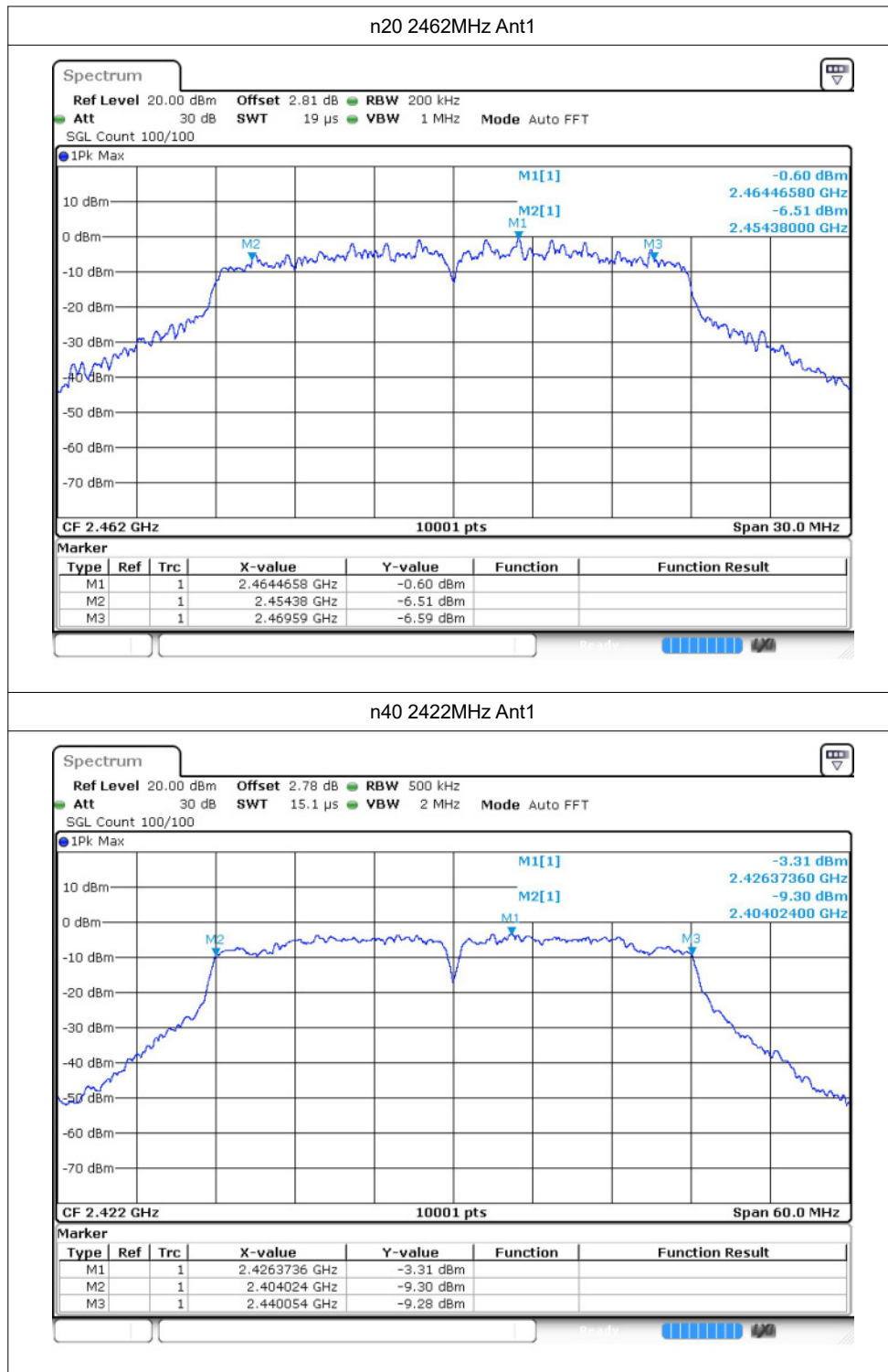
g 2437MHz Ant1



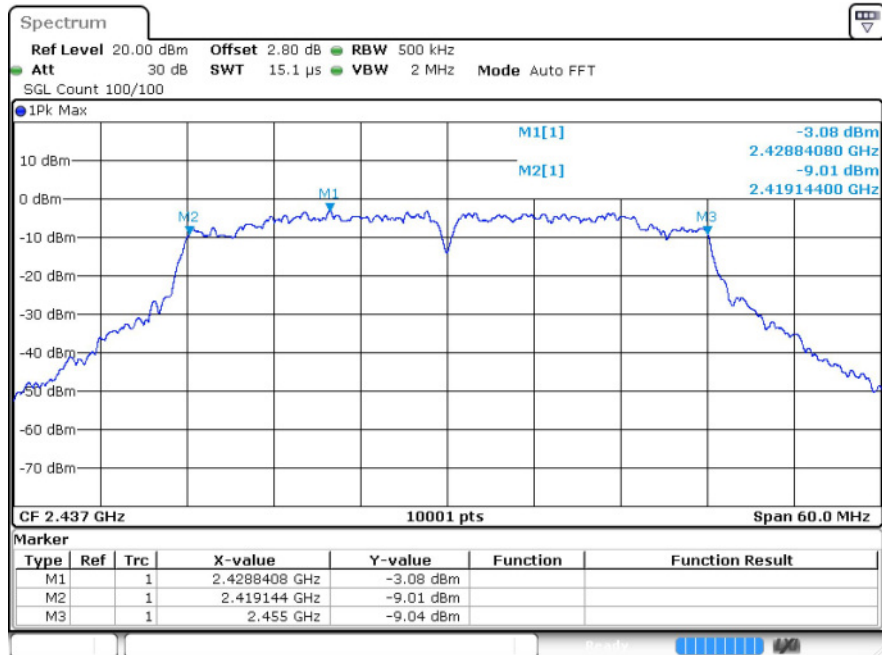
g 2462MHz Ant1



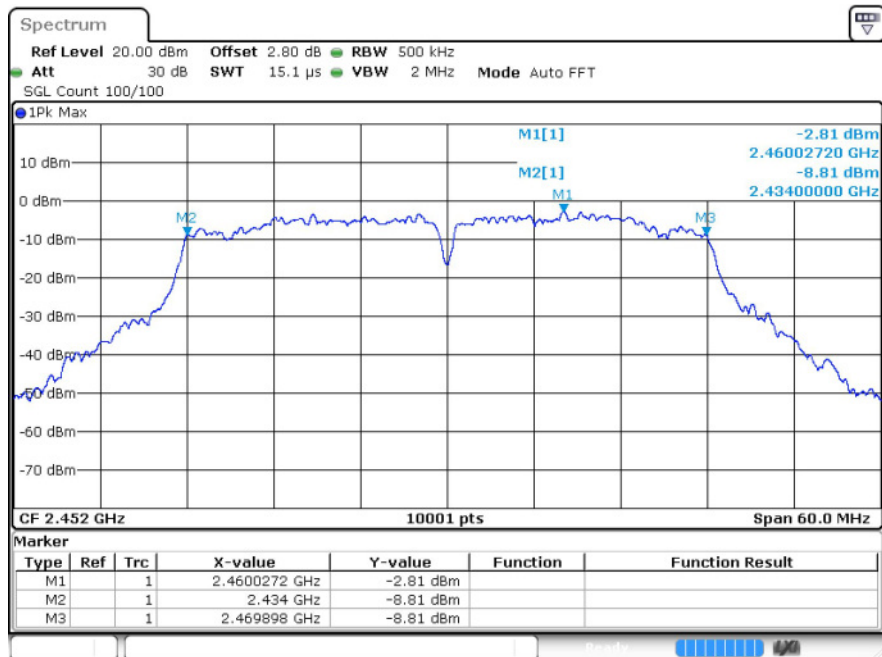


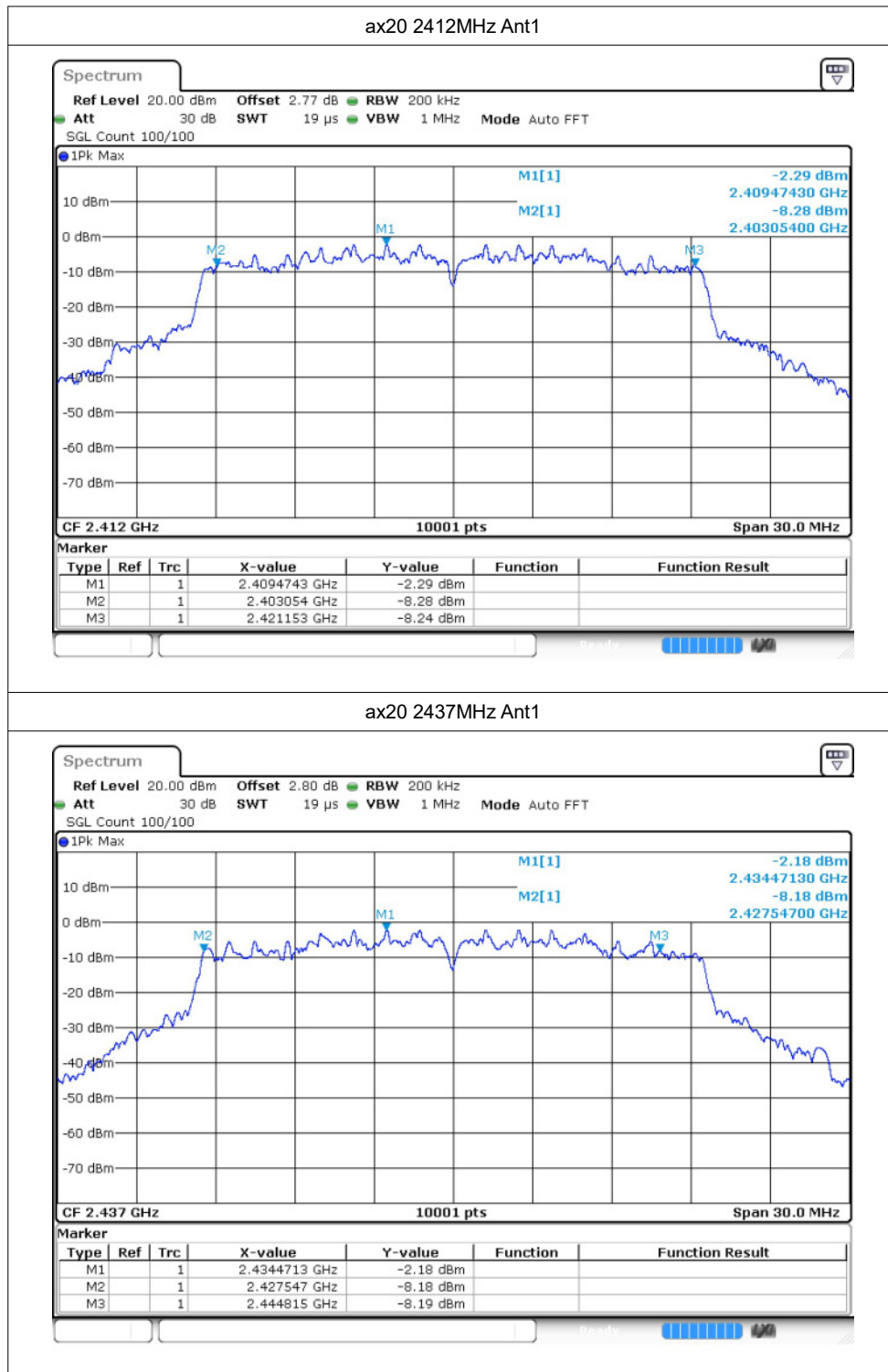


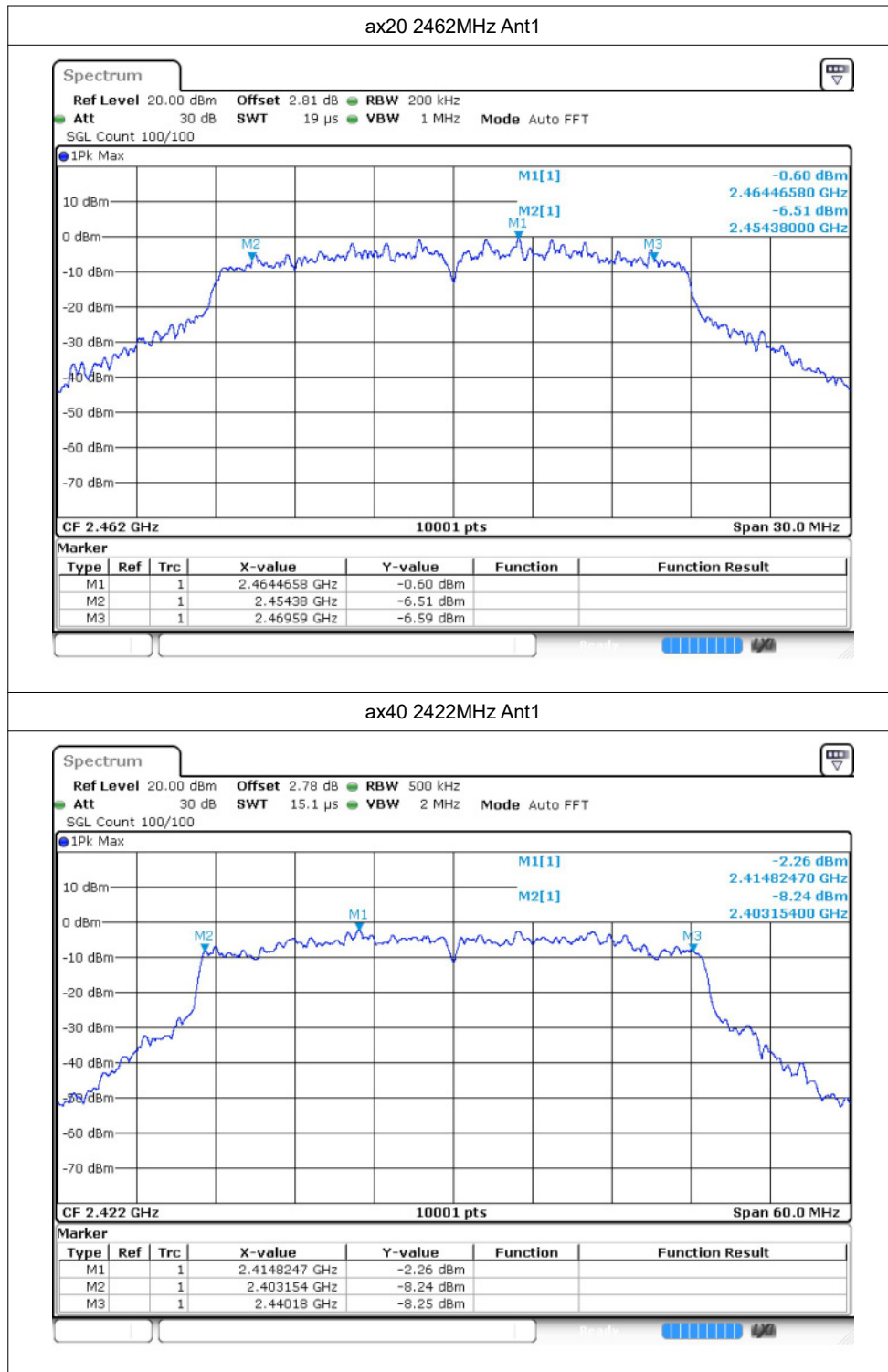
n40 2437MHz Ant1



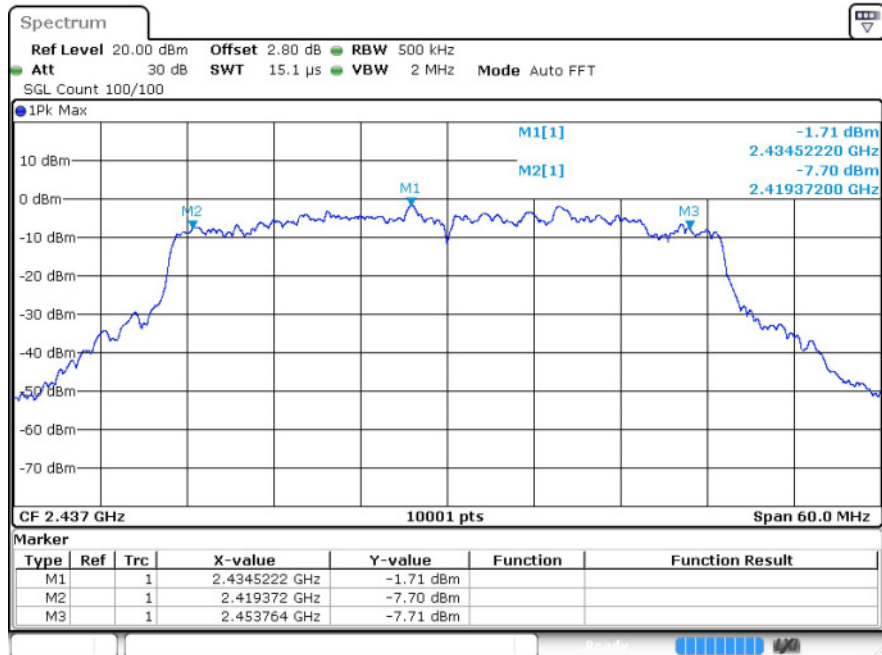
n40 2452MHz Ant1



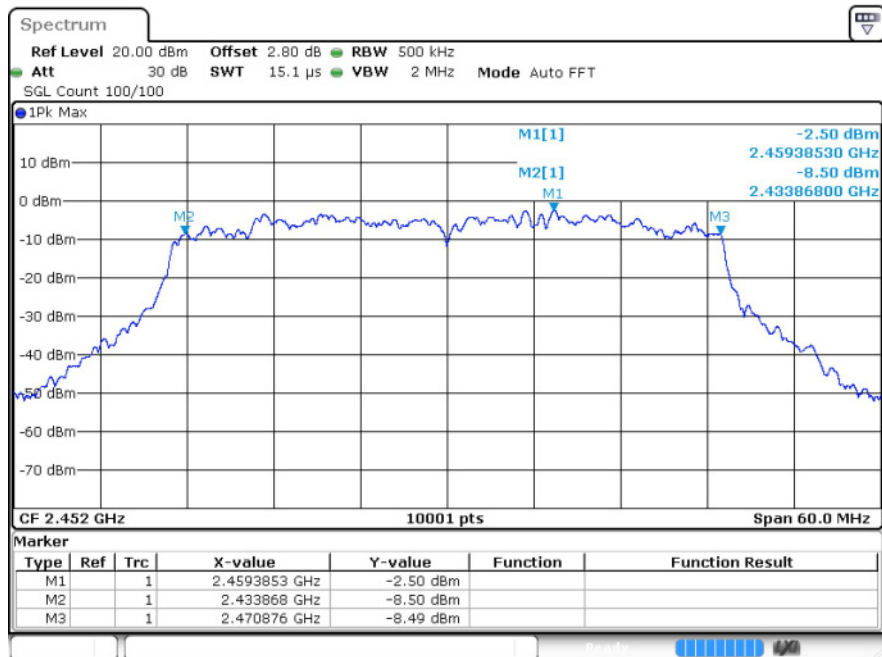




ax40 2437MHz Ant1



ax40 2452MHz 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	-12.61	≤8	Pass
b	2437	Ant1	-12.49	≤8	Pass
b	2462	Ant1	-12.81	≤8	Pass
g	2412	Ant1	-16.43	≤8	Pass
g	2437	Ant1	-16.39	≤8	Pass
g	2462	Ant1	-16.68	≤8	Pass
n20	2412	Ant1	-15.59	≤8	Pass
n20	2437	Ant1	-15.53	≤8	Pass
n20	2462	Ant1	-15.35	≤8	Pass
n40	2422	Ant1	-19.99	≤8	Pass
n40	2437	Ant1	-20.33	≤8	Pass
n40	2452	Ant1	-20.12	≤8	Pass
ax20	2412	Ant1	-3.41	≤8	Pass
ax20	2437	Ant1	-3.09	≤8	Pass
ax20	2462	Ant1	-3.27	≤8	Pass
ax40	2422	Ant1	-6.76	≤8	Pass
ax40	2437	Ant1	-7.94	≤8	Pass
ax40	2452	Ant1	-7.01	≤8	Pass

4.2 Test Graphs

