

Appendix C

RF Test Data for 2.4GWIFI(Conducted Measurement)

Product Name: Wifi module

Trade Mark: ACER

Test Model: WXT28M2511

Environmental Conditions

Temperature:	24.3° C
Relative Humidity:	51.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Simba Huang
Supervised by:	Seal Chen

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1 Duty Cycle

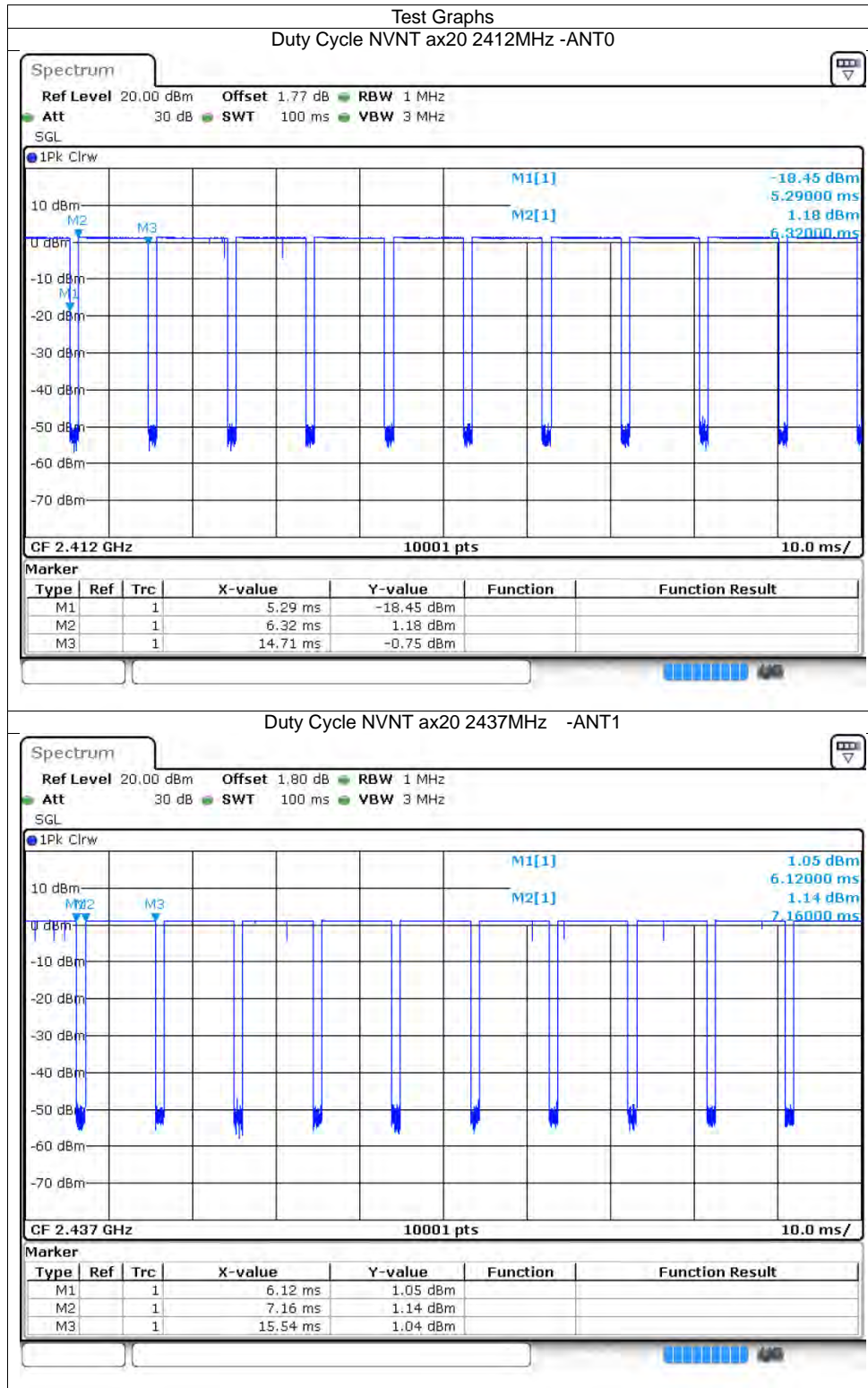
Test Result

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	ax20	2412	ANT0	89.24	0.49	0.12
NVNT	ax20	2437	ANT1	89.74	0.47	0.12
NVNT	ax40	2422	ANT0	60.82	2.16	3.23
NVNT	ax40	2437	ANT1	61.18	2.13	3.23
NVNT	b	2412	ANT0	79.75	0.98	1.19
NVNT	b	2437	ANT1	78.09	1.07	1.18
NVNT	g	2412	ANT0	46.43	3.33	5.26
NVNT	g	2437	ANT1	45.63	3.41	5.26
NVNT	n20	2412	ANT0	46.18	3.36	5.56
NVNT	n20	2437	ANT1	46.17	3.36	5.26
NVNT	n40	2422	ANT0	37.21	4.29	9.09
NVNT	n40	2437	ANT1	38.74	4.12	9.09

Note:

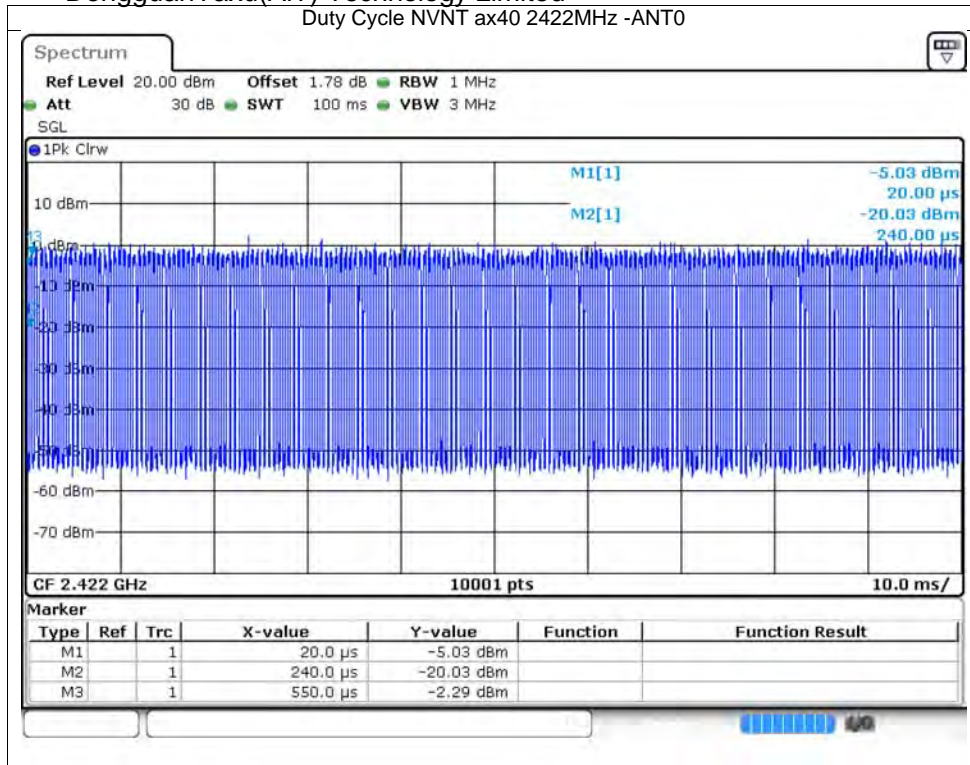
All modes under which configure applicable have been tested and the worst mode test data recording in the test report, if no other mode data.

Test Graphs

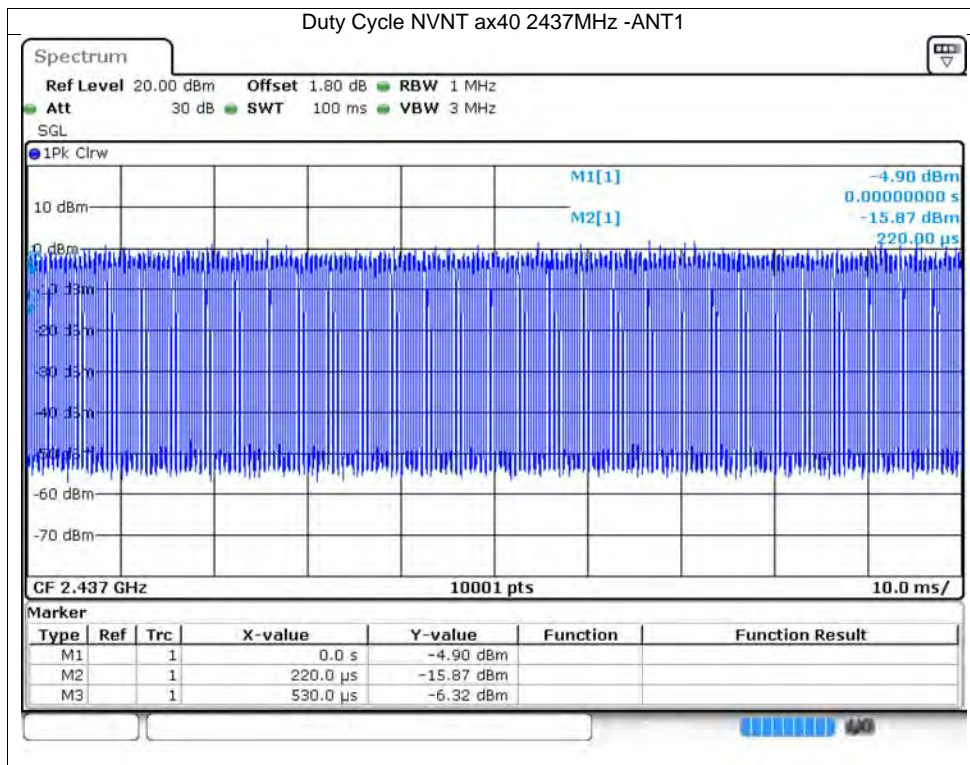


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Duty Cycle NVNT ax40 2422MHz -ANT0

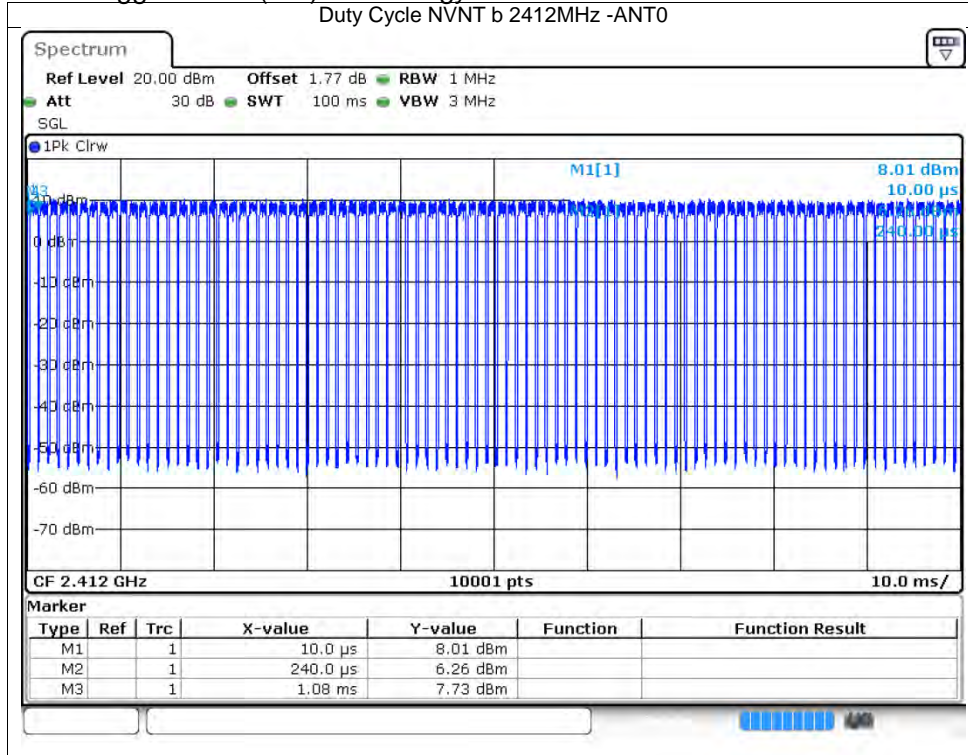


Duty Cycle NVNT ax40 2437MHz -ANT1

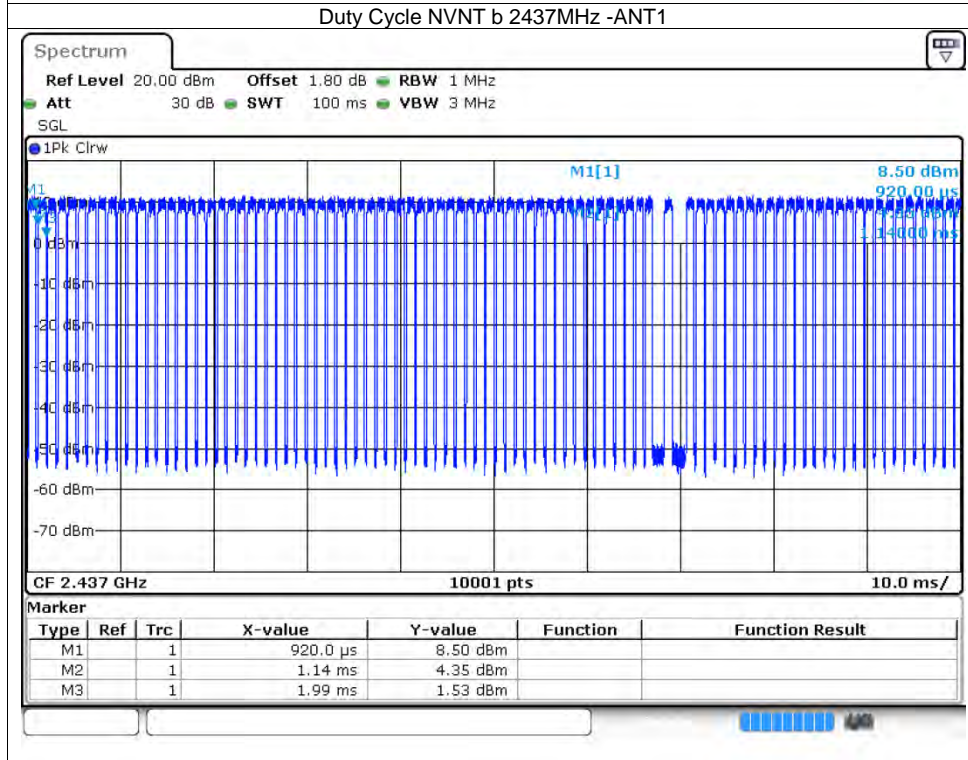


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Duty Cycle NVNT b 2412MHz -ANT0

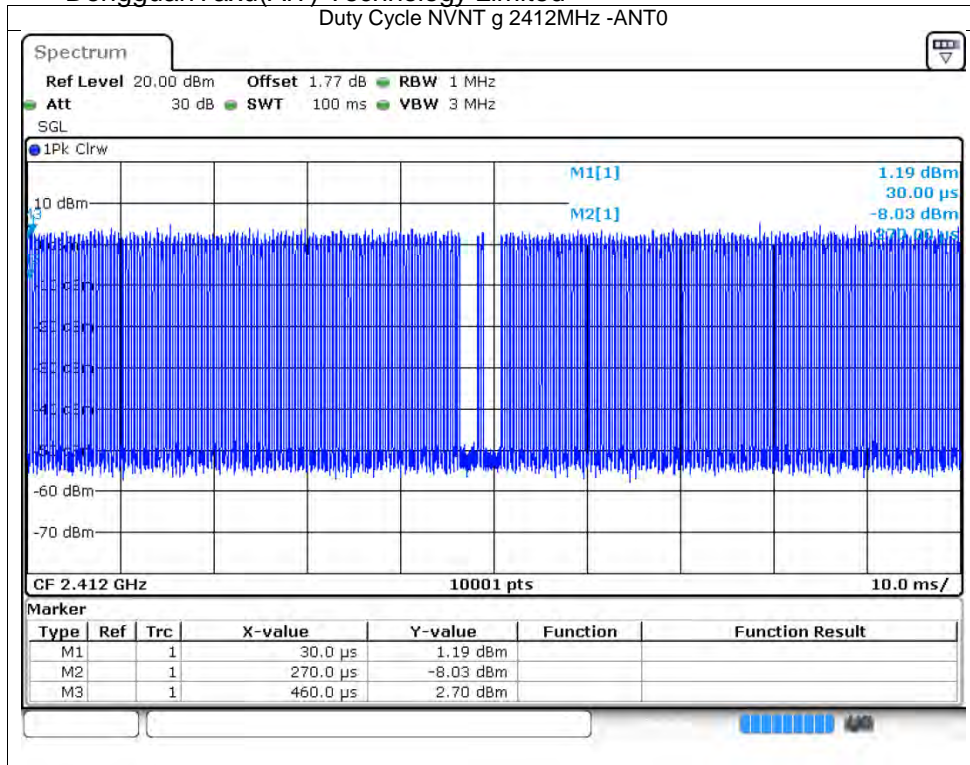


Duty Cycle NVNT b 2437MHz -ANT1

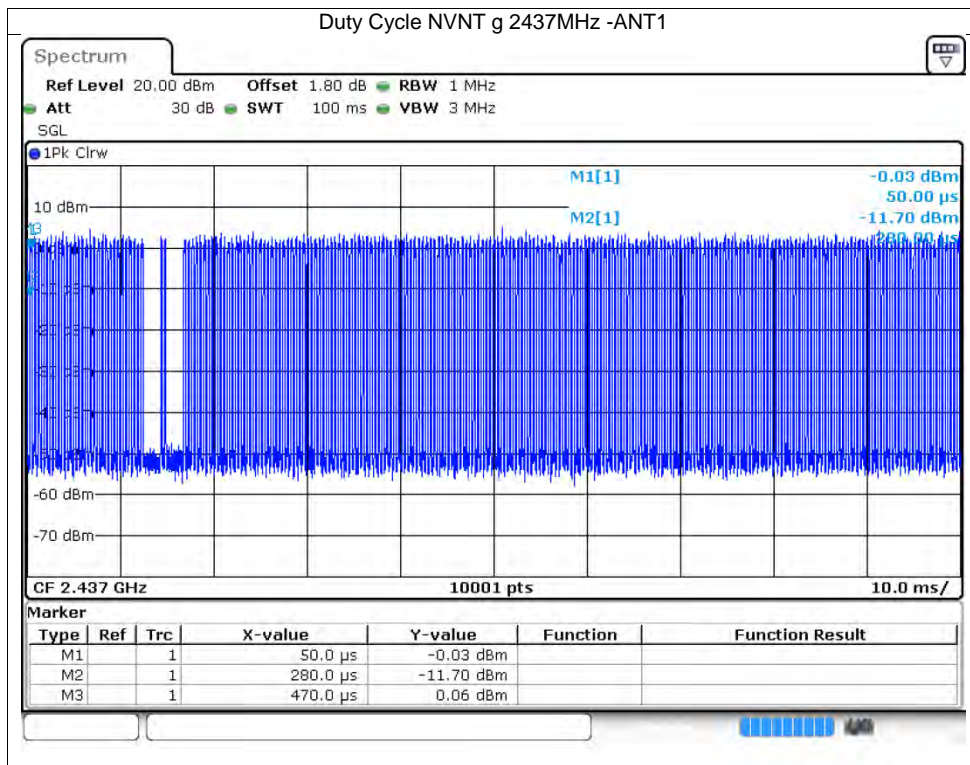


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Duty Cycle NVNT g 2412MHz -ANT0

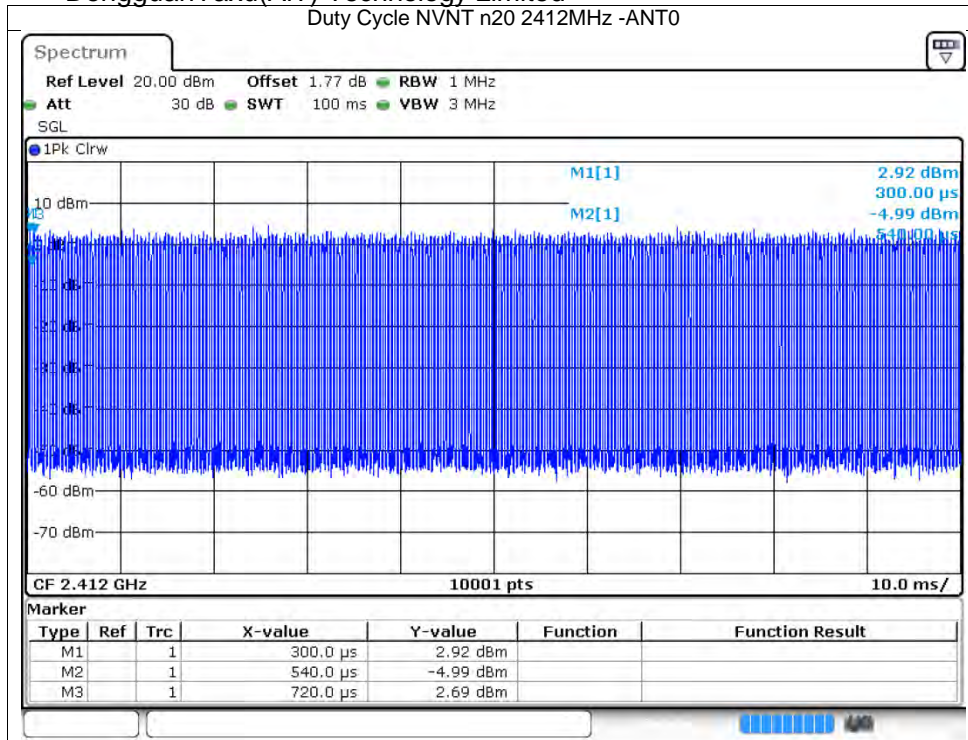


Duty Cycle NVNT g 2437MHz -ANT1

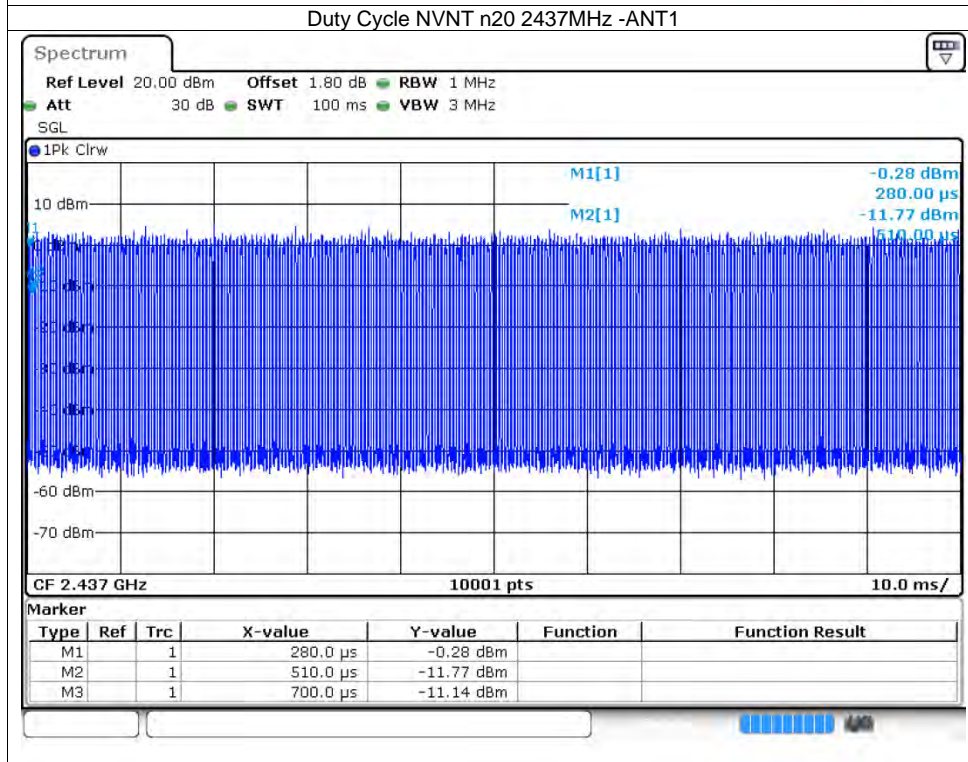


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Duty Cycle NVNT n20 2412MHz -ANT0

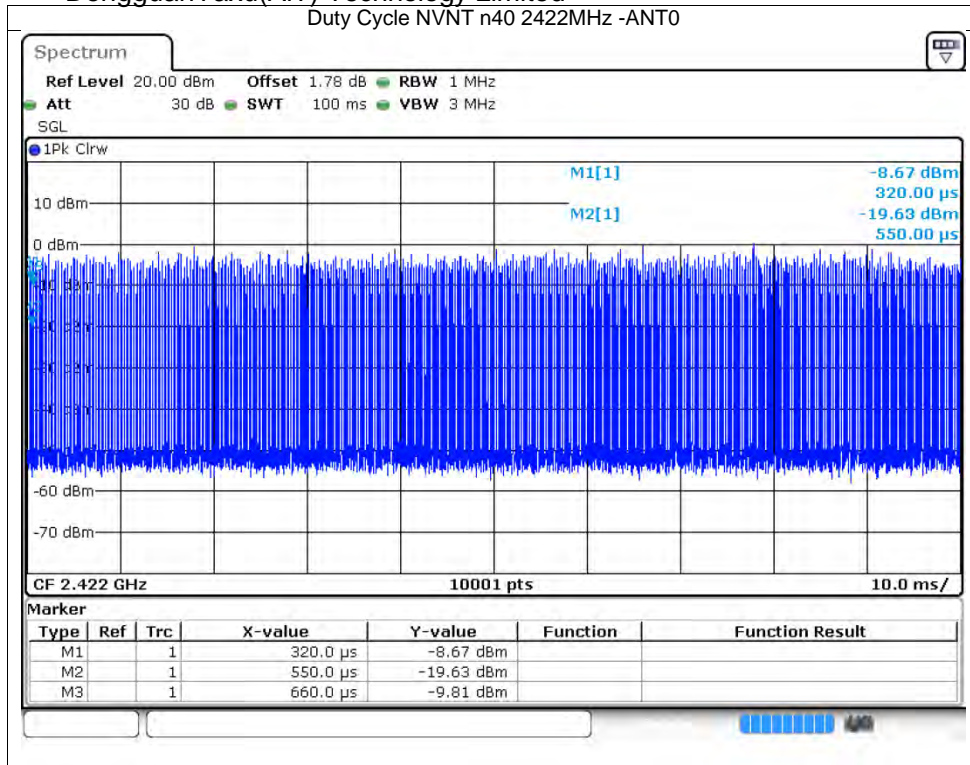


Duty Cycle NVNT n20 2437MHz -ANT1

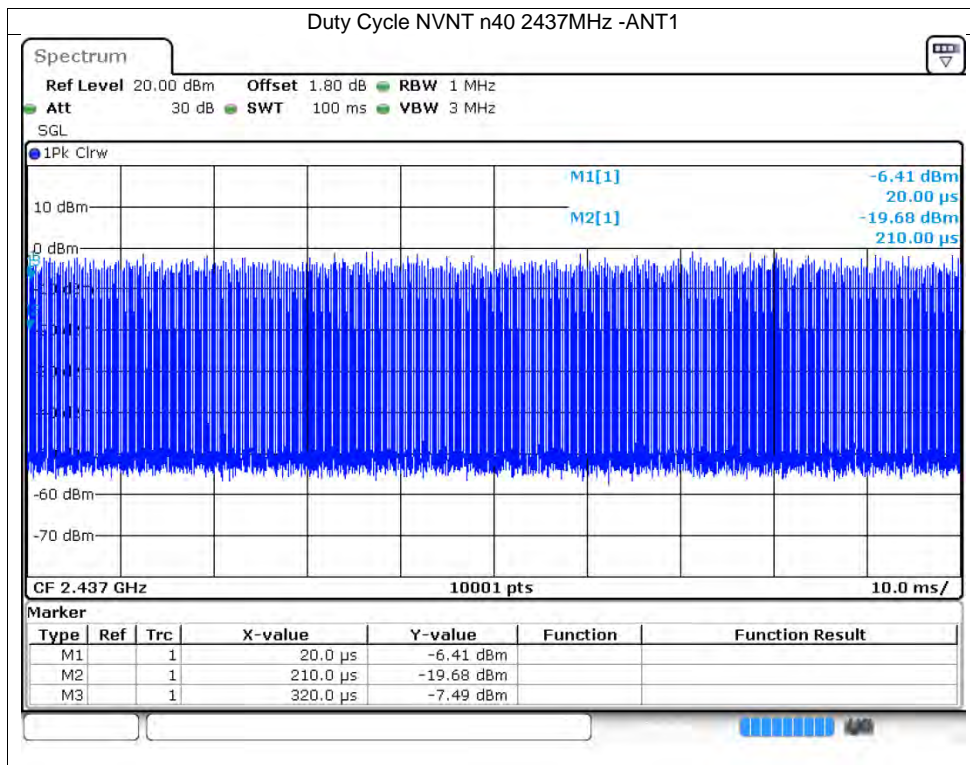


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Duty Cycle NVNT n40 2422MHz -ANT0



Duty Cycle NVNT n40 2437MHz -ANT1



2 Maximum Conducted Output Power

Test Result

Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
b	2412	Ant0	17.31	30	Pass
b	2437	Ant0	18.61	30	Pass
b	2462	Ant0	19.3	30	Pass
b	2412	Ant1	17.55	30	Pass
b	2437	Ant1	19.07	30	Pass
b	2462	Ant1	18.85	30	Pass
g	2412	Ant0	13.77	30	Pass
g	2437	Ant0	13.86	30	Pass
g	2462	Ant0	14.17	30	Pass
g	2412	Ant1	14.02	30	Pass
g	2437	Ant1	13.78	30	Pass
g	2462	Ant1	13.75	30	Pass
n20	2412	Ant0	13.55	30	Pass
n20	2437	Ant0	13.68	30	Pass
n20	2462	Ant0	13.98	30	Pass
n20	2412	Ant1	13.95	30	Pass
n20	2437	Ant1	13.66	30	Pass
n20	2462	Ant1	13.57	30	Pass
n20	2412	Sum	16.76	29.89	Pass
n20	2437	Sum	16.68	29.89	Pass
n20	2462	Sum	16.79	29.89	Pass
n40	2422	Ant0	13.77	30	Pass
n40	2437	Ant0	13.75	30	Pass
n40	2452	Ant0	13.94	30	Pass
n40	2422	Ant1	13.72	30	Pass
n40	2437	Ant1	13.8	30	Pass
n40	2452	Ant1	13.63	30	Pass
n40	2422	Sum	16.76	29.89	Pass
n40	2437	Sum	16.79	29.89	Pass

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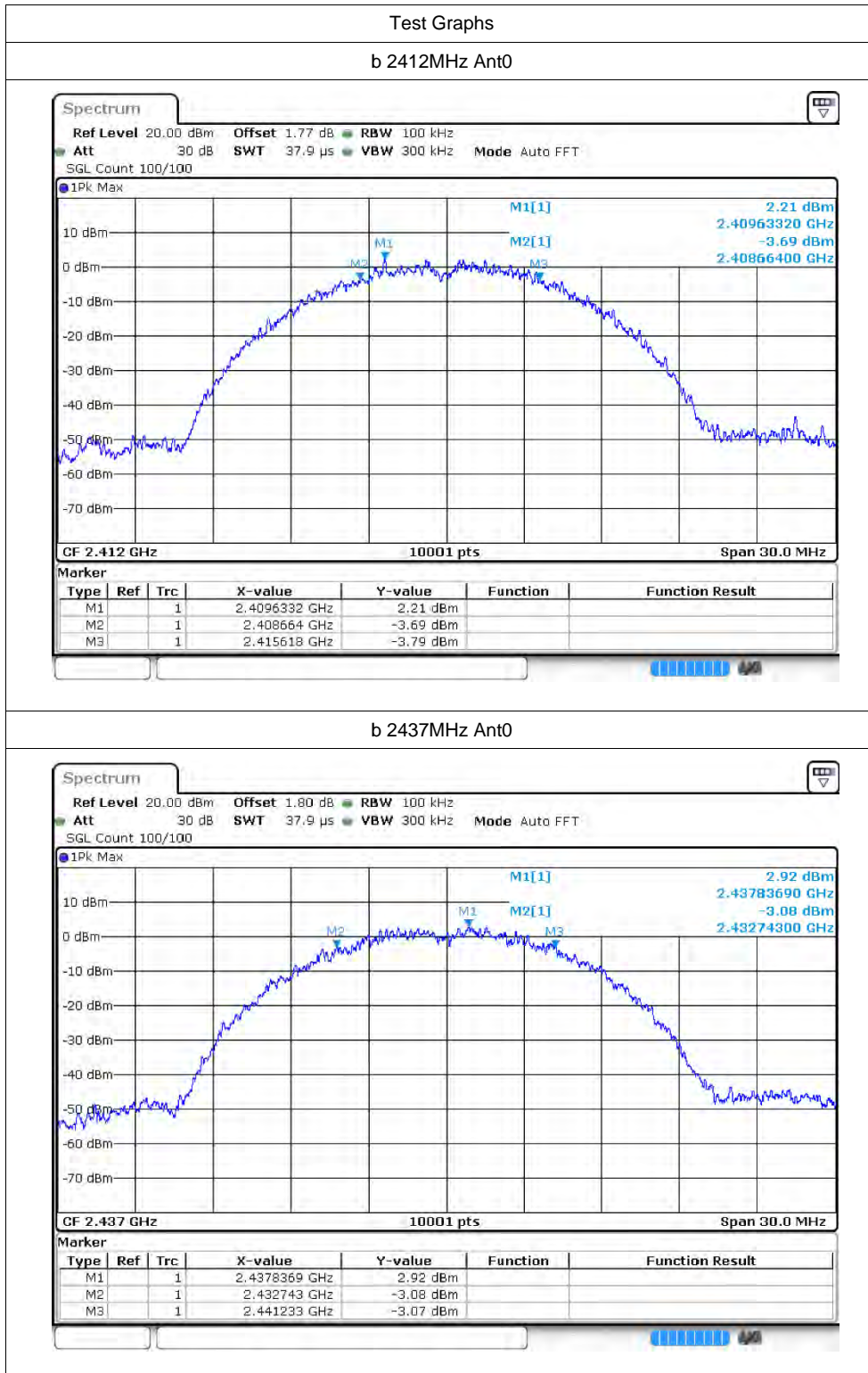
n40	2452	Sum	16.8	29.89	Pass
ax20	2412	Ant0	9.36	30	Pass
ax20	2437	Ant0	9.4	30	Pass
ax20	2462	Ant0	9.59	30	Pass
ax20	2412	Ant1	9.49	30	Pass
ax20	2437	Ant1	9.33	30	Pass
ax20	2462	Ant1	9.22	30	Pass
ax20	2412	Sum	12.44	29.89	Pass
ax20	2437	Sum	12.38	29.89	Pass
ax20	2462	Sum	12.42	29.89	Pass
ax40	2422	Ant0	14.69	30	Pass
ax40	2437	Ant0	14.82	30	Pass
ax40	2452	Ant0	14.94	30	Pass
ax40	2422	Ant1	14.83	30	Pass
ax40	2437	Ant1	14.9	30	Pass
ax40	2452	Ant1	14.94	30	Pass
ax40	2422	Sum	17.77	29.89	Pass
ax40	2437	Sum	17.87	29.89	Pass
ax40	2452	Sum	17.95	29.89	Pass

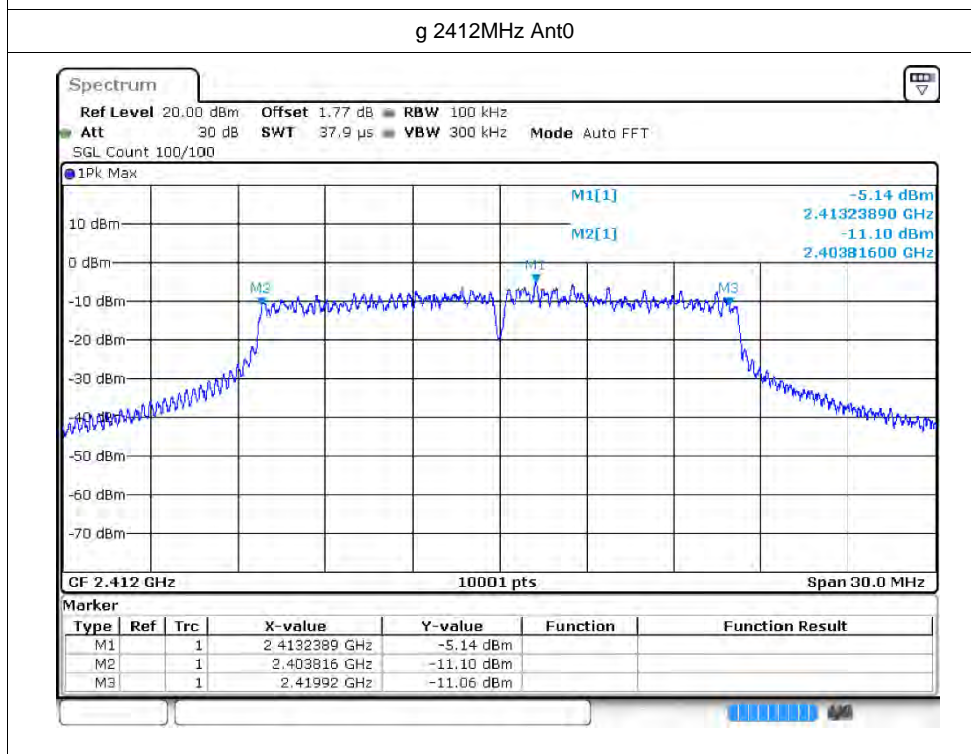
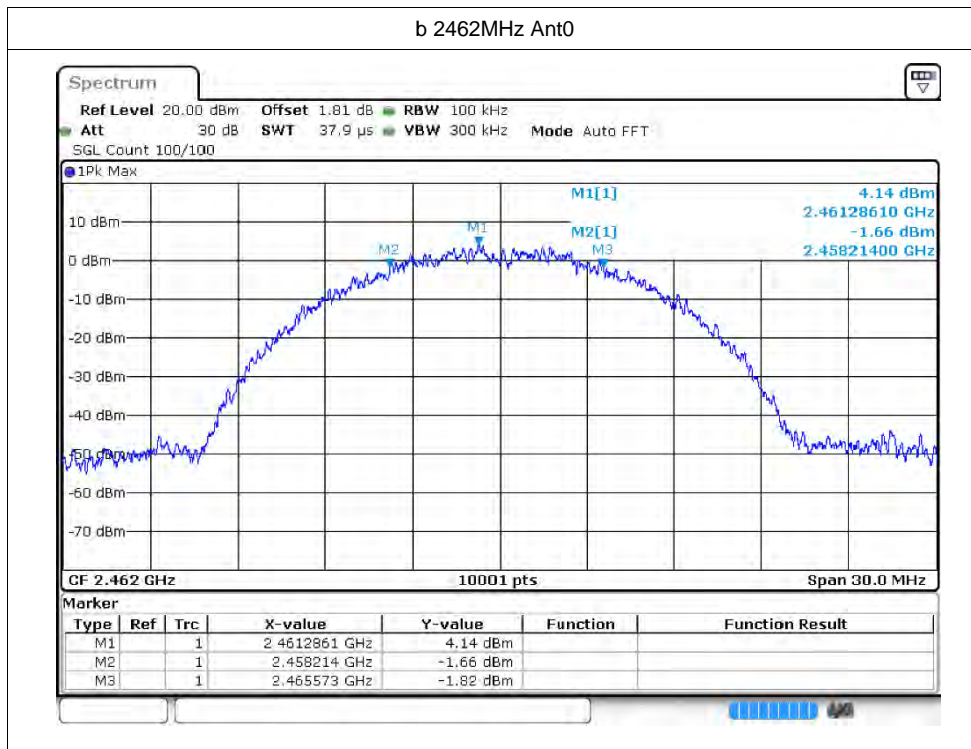
3 -6dB Bandwidth

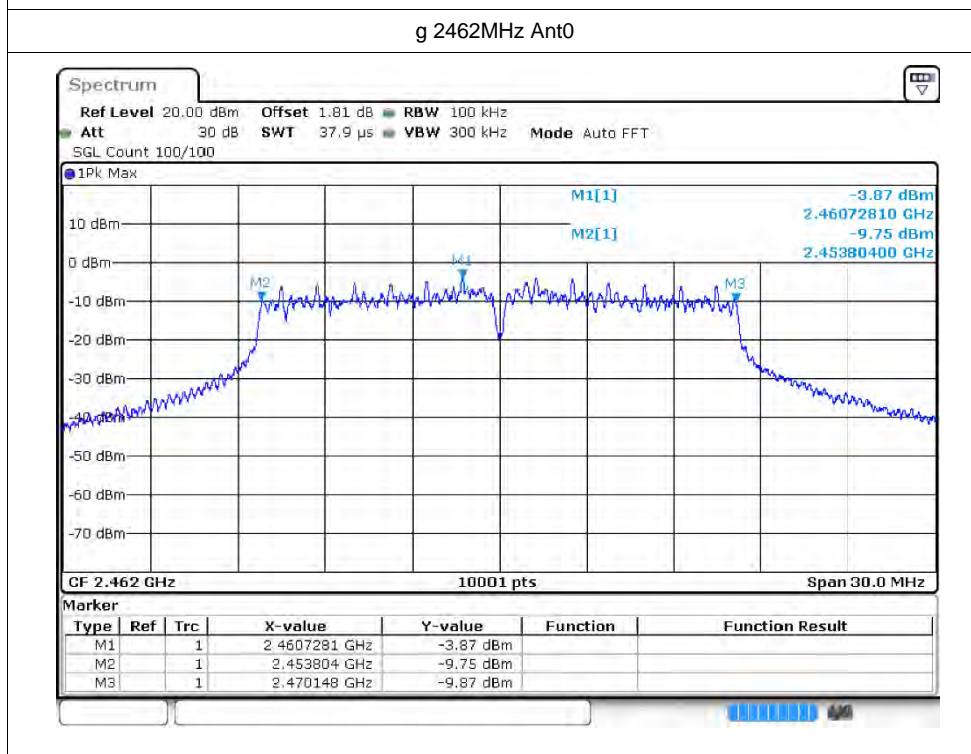
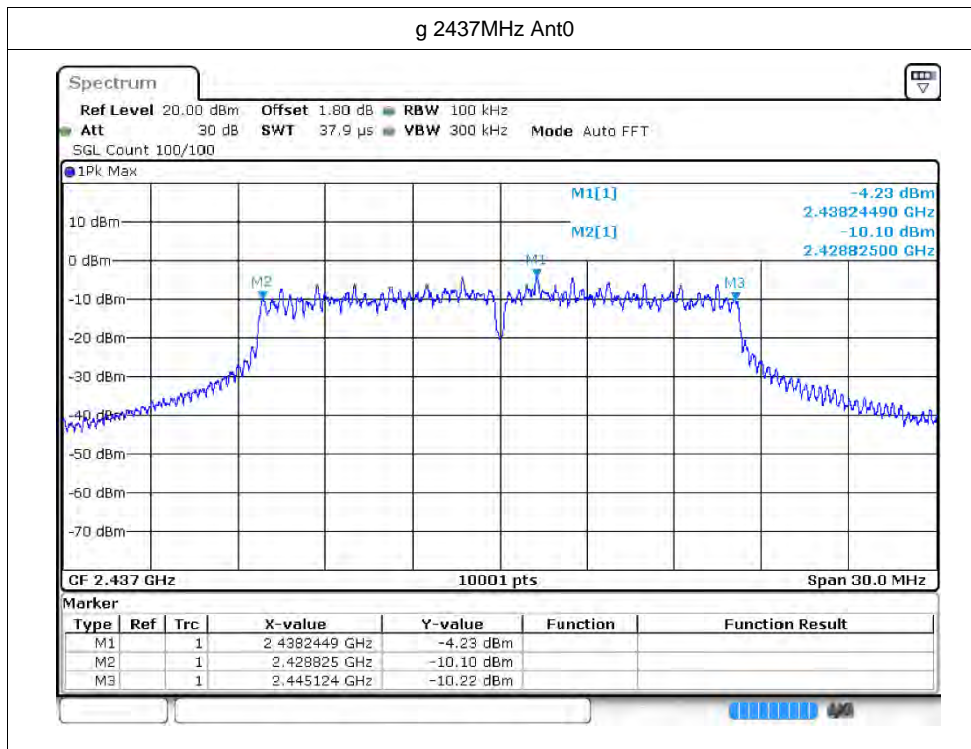
Test Result

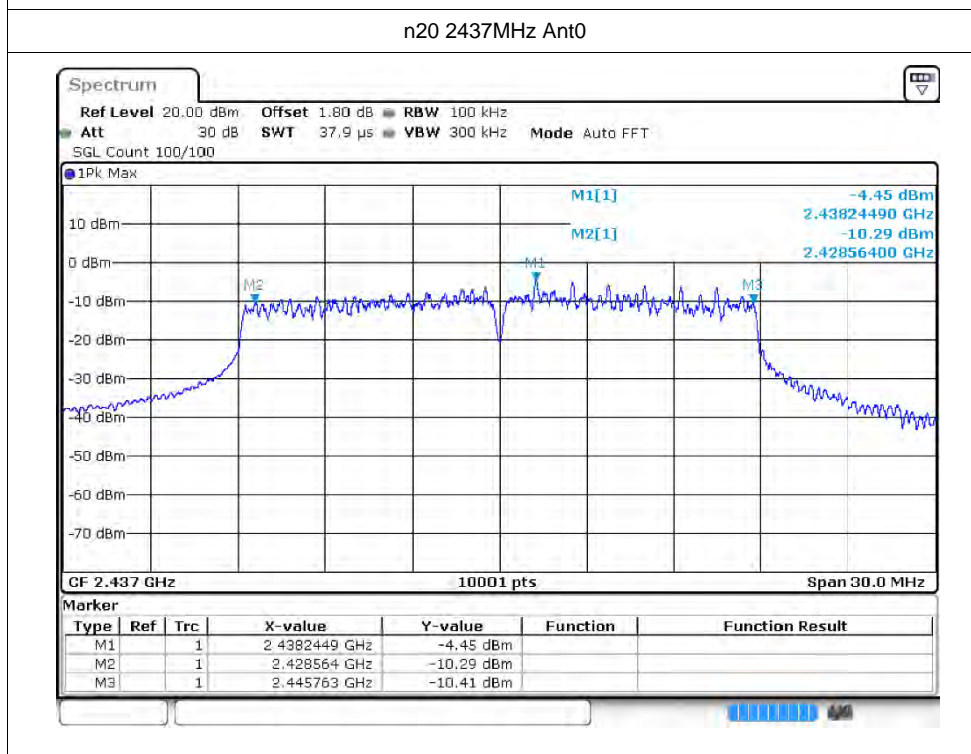
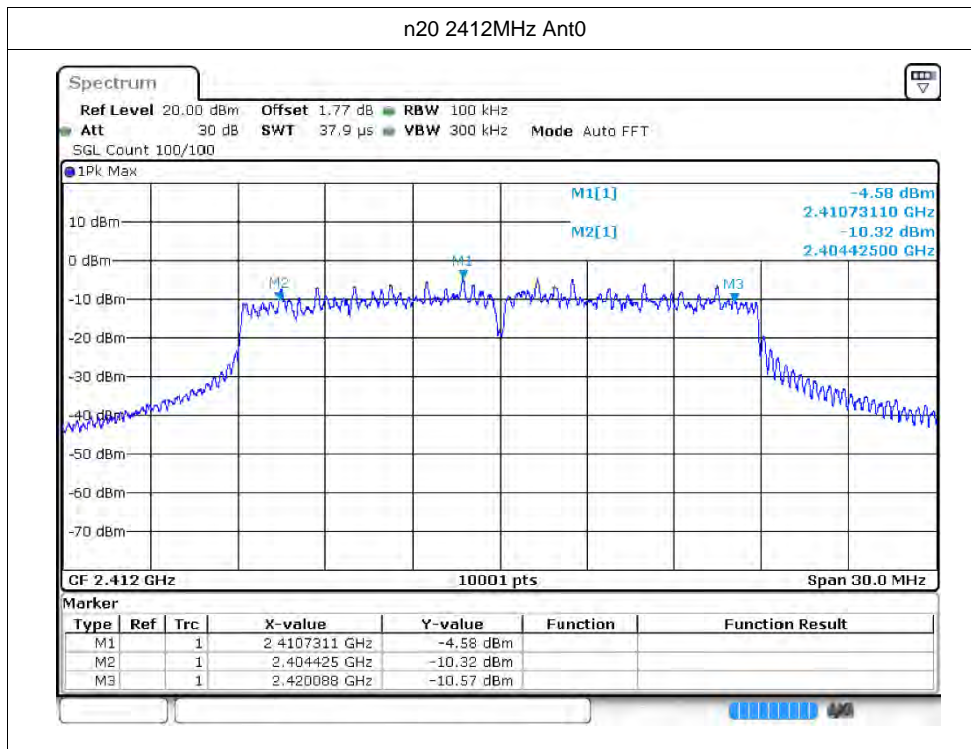
Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
b	2412	Ant0	6.954	0.5	Pass
b	2437	Ant0	8.49	0.5	Pass
b	2462	Ant0	7.359	0.5	Pass
g	2412	Ant0	16.104	0.5	Pass
g	2437	Ant0	16.299	0.5	Pass
g	2462	Ant0	16.344	0.5	Pass
n20	2412	Ant0	15.663	0.5	Pass
n20	2437	Ant0	17.199	0.5	Pass
n20	2462	Ant0	17.538	0.5	Pass
n40	2422	Ant0	35.052	0.5	Pass
n40	2437	Ant0	33.858	0.5	Pass
n40	2452	Ant0	27.93	0.5	Pass
ax20	2412	Ant0	17.79	0.5	Pass
ax20	2437	Ant0	17.805	0.5	Pass
ax20	2462	Ant0	17.793	0.5	Pass
ax40	2422	Ant0	37.65	0.5	Pass
ax40	2437	Ant0	37.59	0.5	Pass
ax40	2452	Ant0	37.344	0.5	Pass
b	2412	Ant1	8.136	0.5	Pass
b	2437	Ant1	8.052	0.5	Pass
b	2462	Ant1	7.854	0.5	Pass
g	2412	Ant1	15.633	0.5	Pass
g	2437	Ant1	16.101	0.5	Pass
g	2462	Ant1	16.395	0.5	Pass
n20	2412	Ant1	16.092	0.5	Pass
n20	2437	Ant1	17.289	0.5	Pass
n20	2462	Ant1	17.286	0.5	Pass
n40	2422	Ant1	35.094	0.5	Pass
n40	2437	Ant1	31.356	0.5	Pass
n40	2452	Ant1	35.064	0.5	Pass
ax20	2412	Ant1	16.881	0.5	Pass
ax20	2437	Ant1	16.545	0.5	Pass
ax20	2462	Ant1	17.559	0.5	Pass
ax40	2422	Ant1	36.276	0.5	Pass
ax40	2437	Ant1	36.03	0.5	Pass
ax40	2452	Ant1	37.338	0.5	Pass

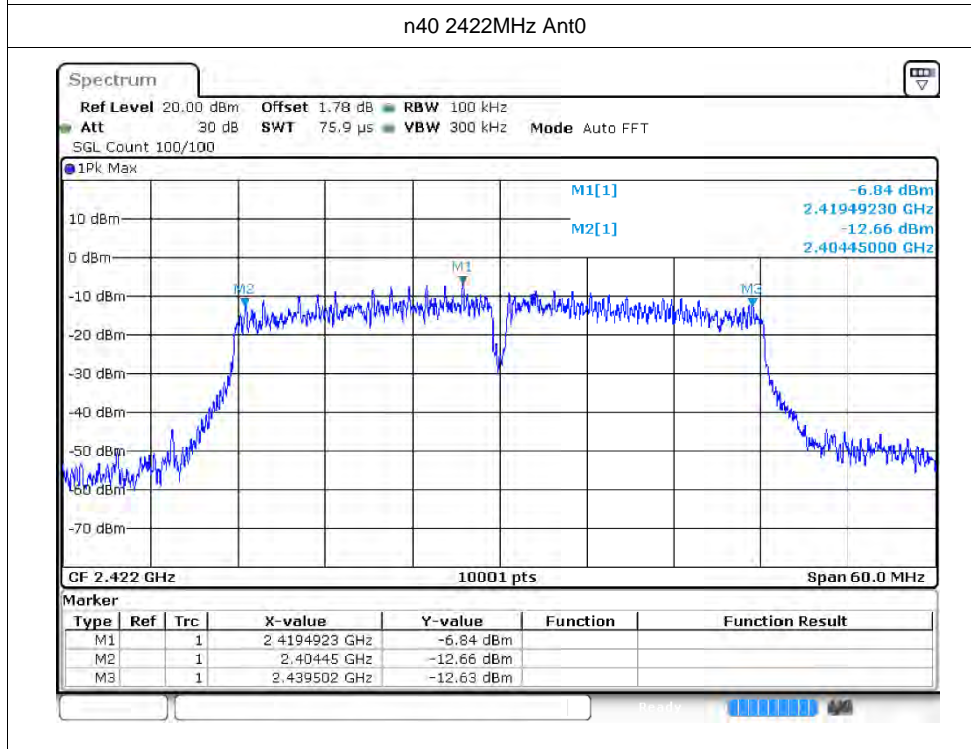
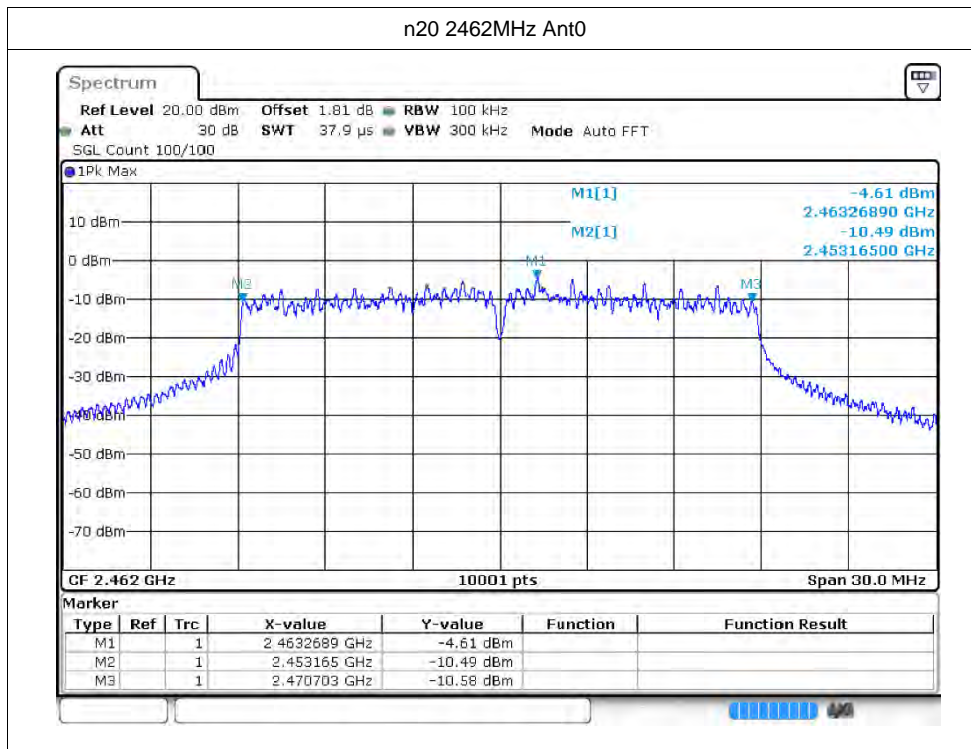
Test Graphs

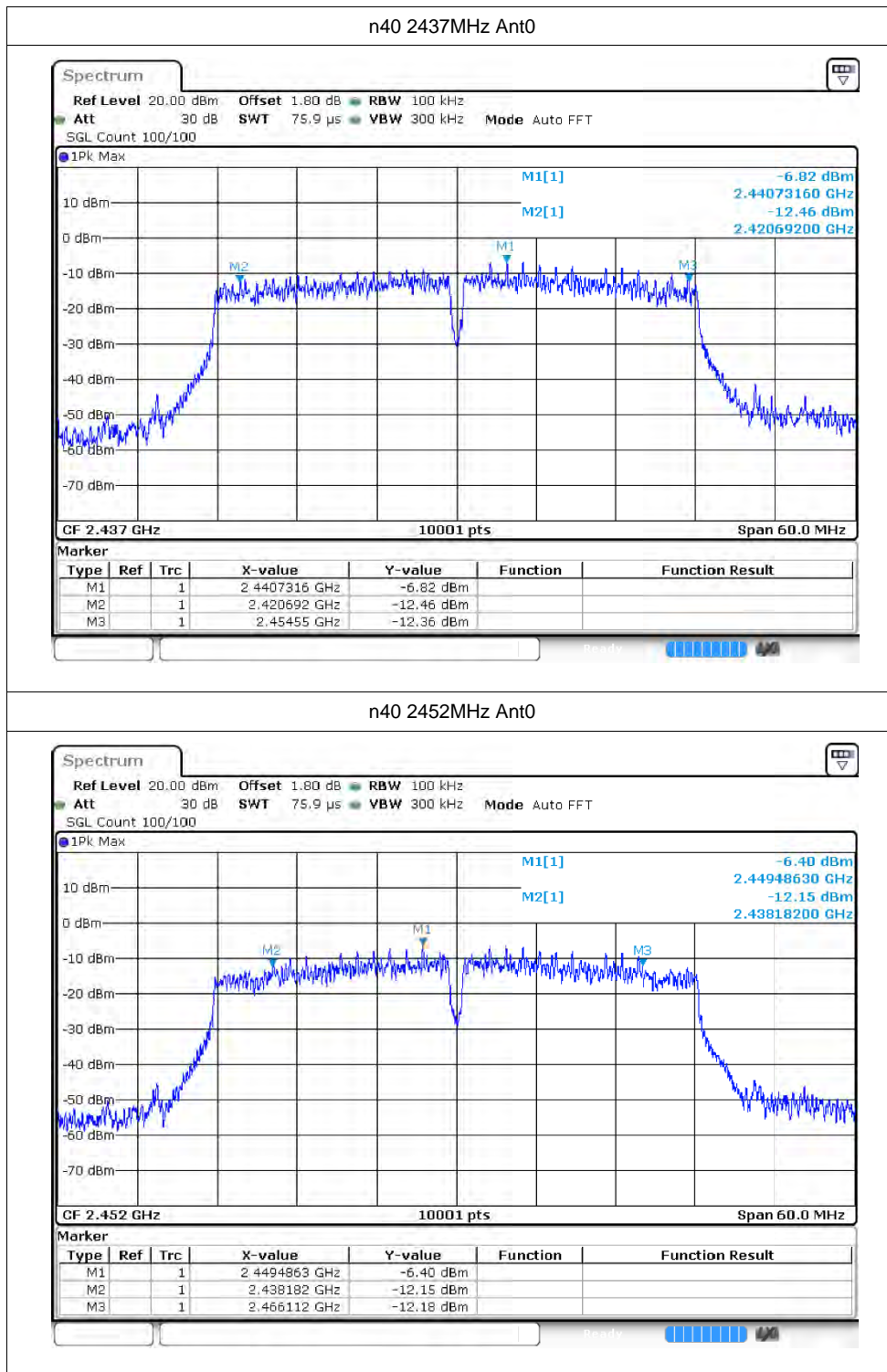




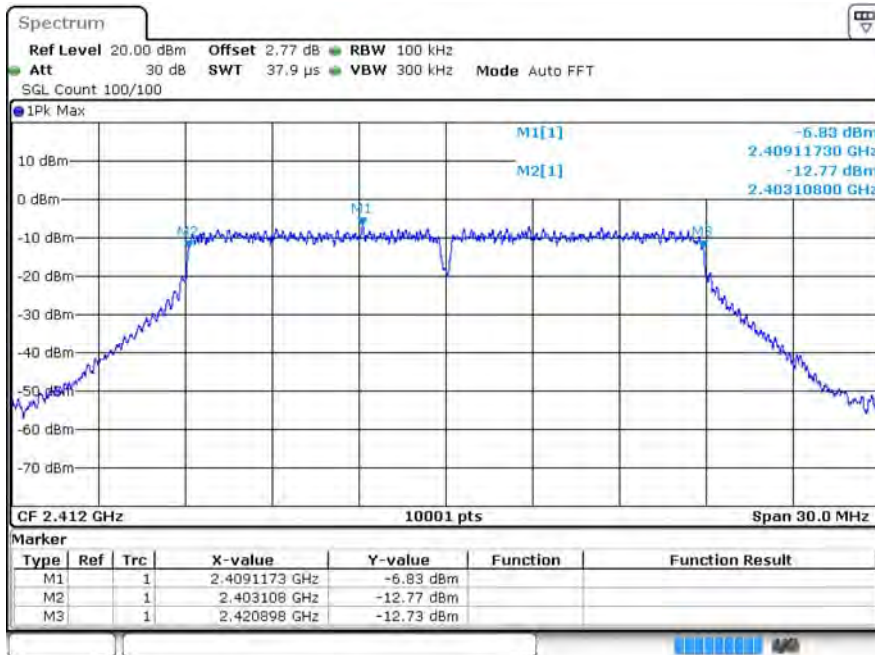




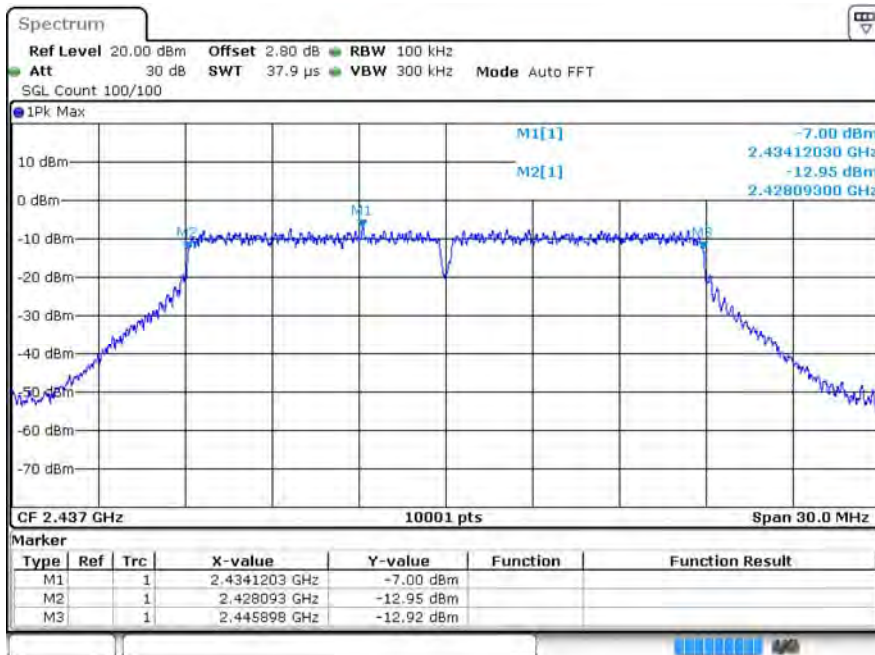


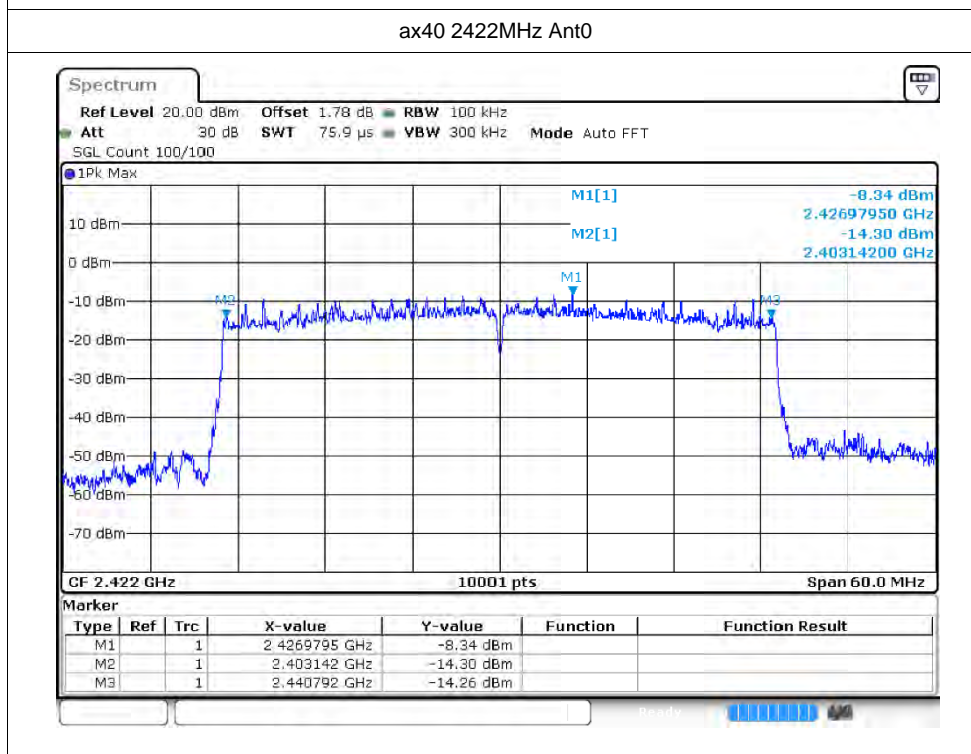
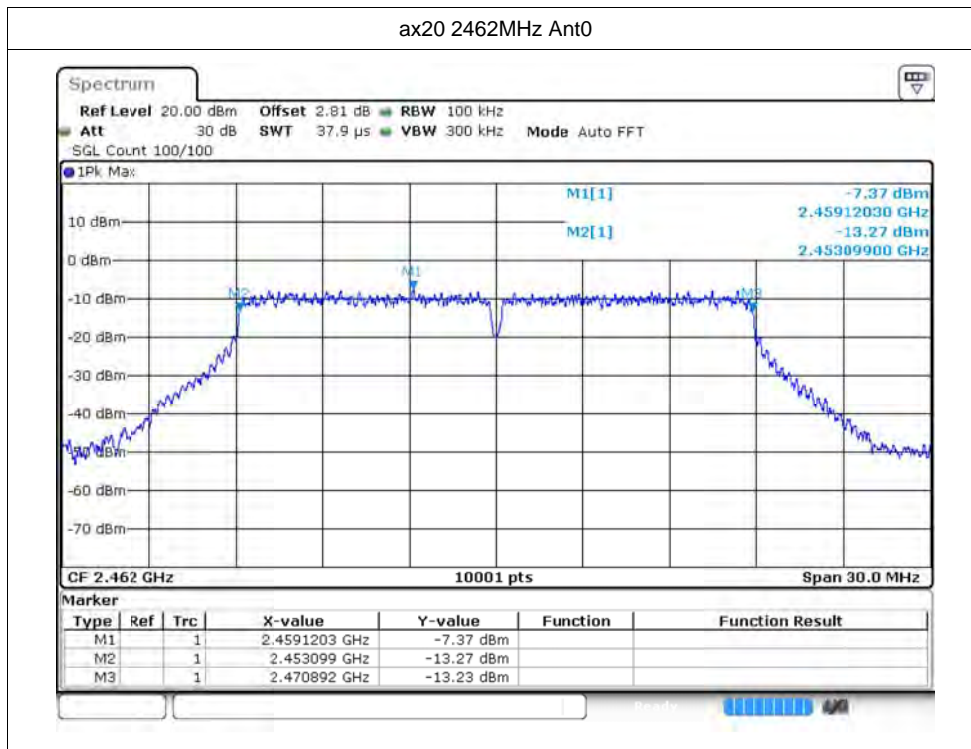


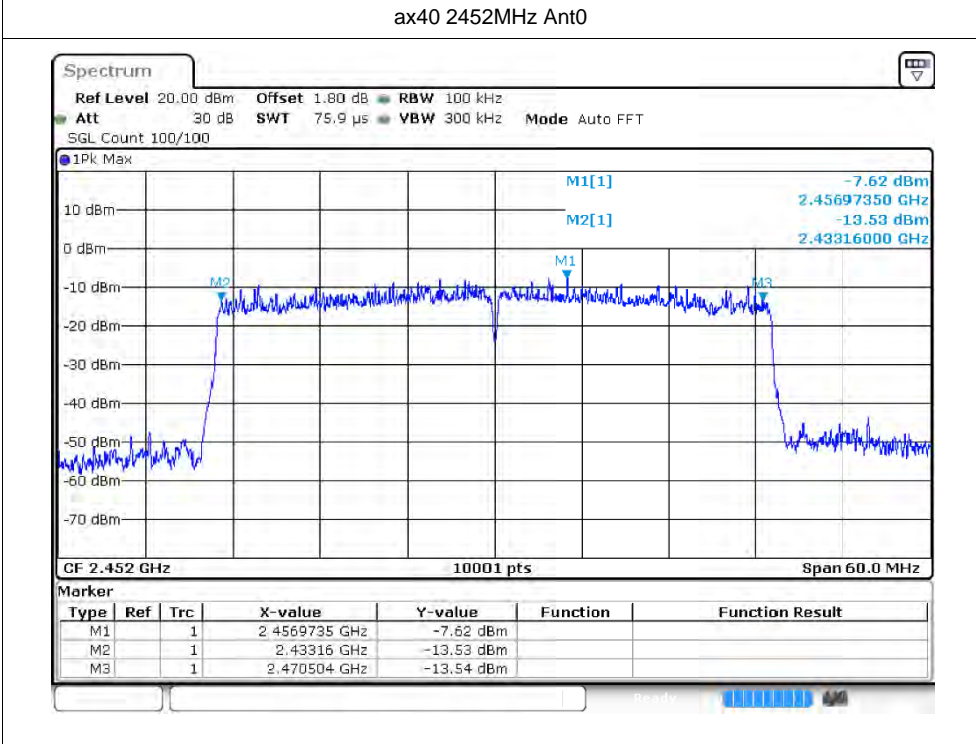
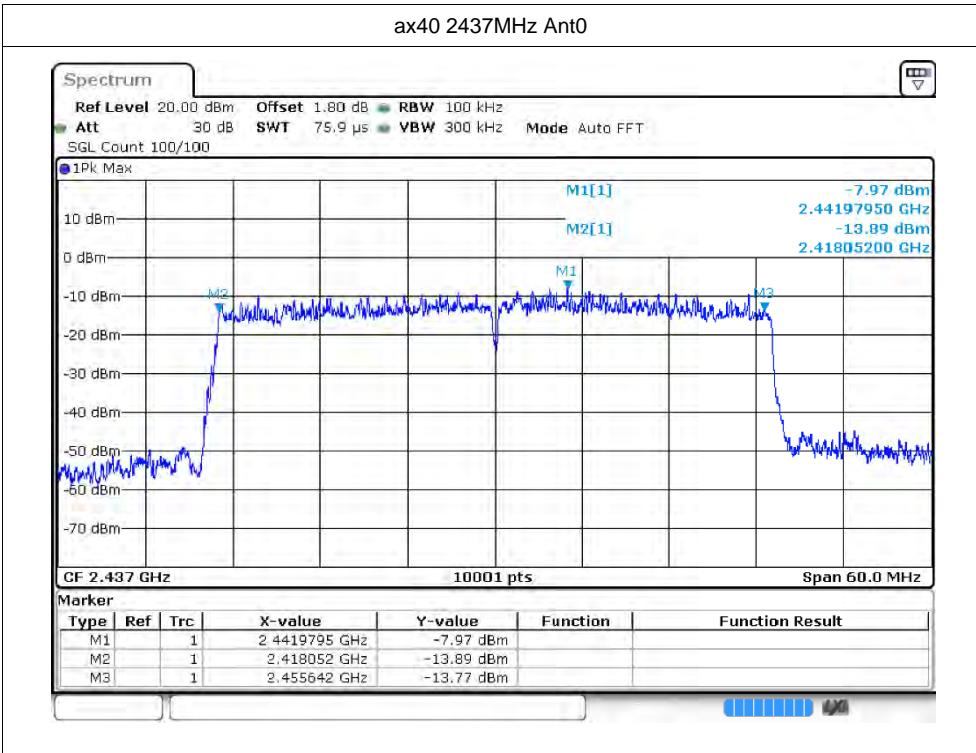
ax20 2412MHz Ant0



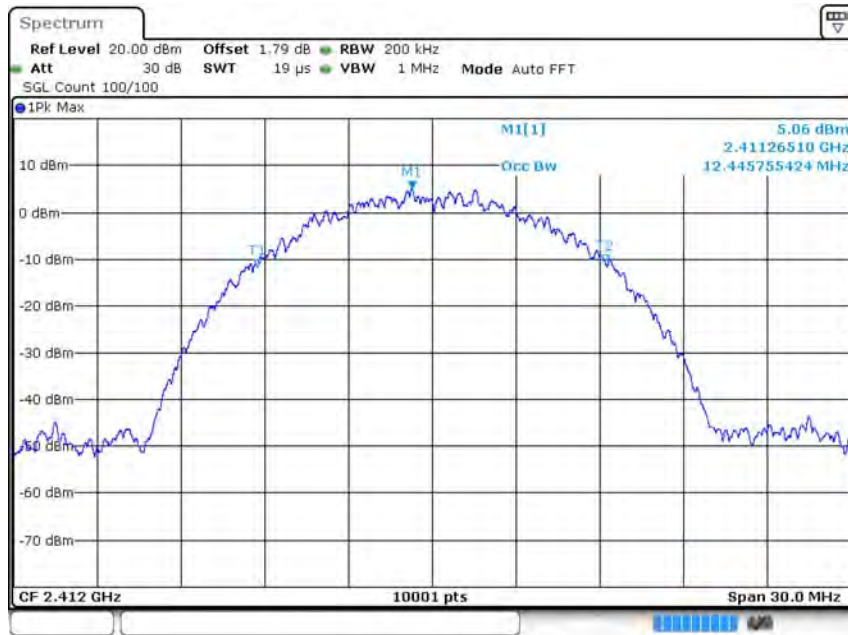
ax20 2437MHz Ant0



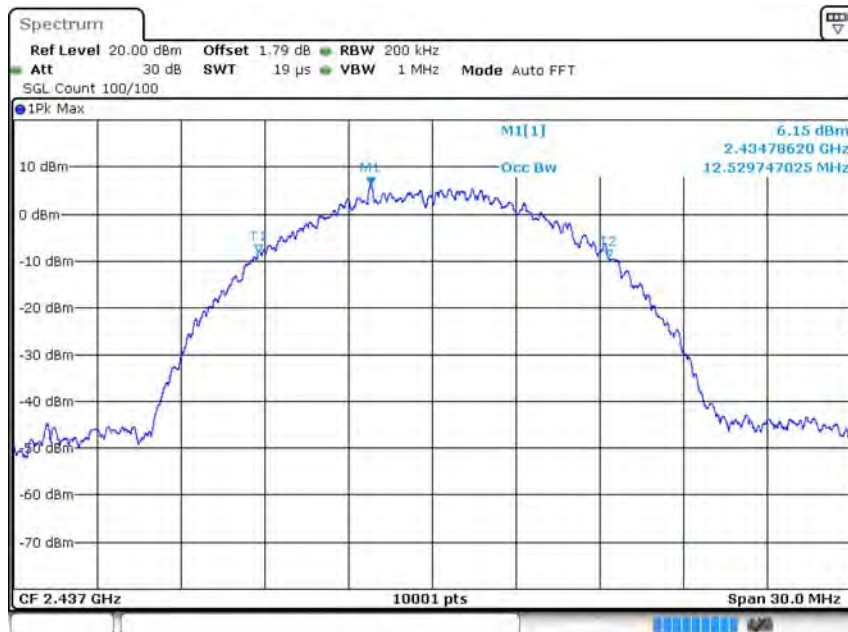




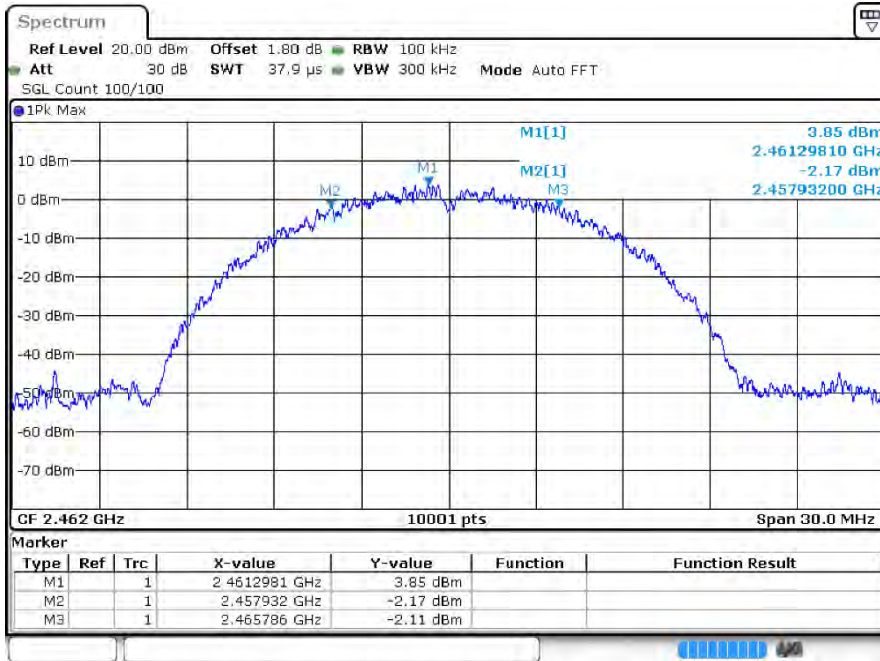
b 2412MHz Ant1



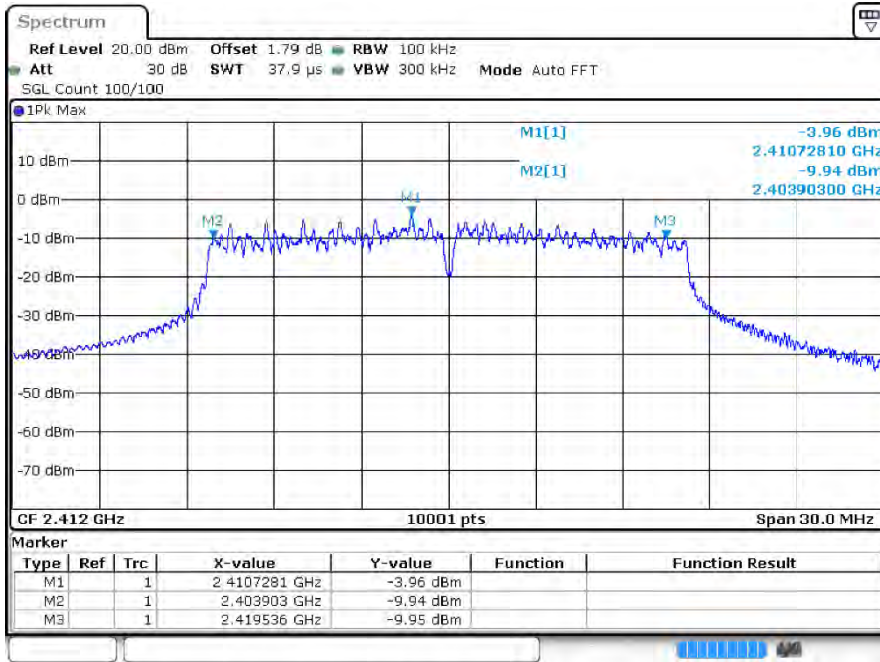
b 2437MHz Ant1



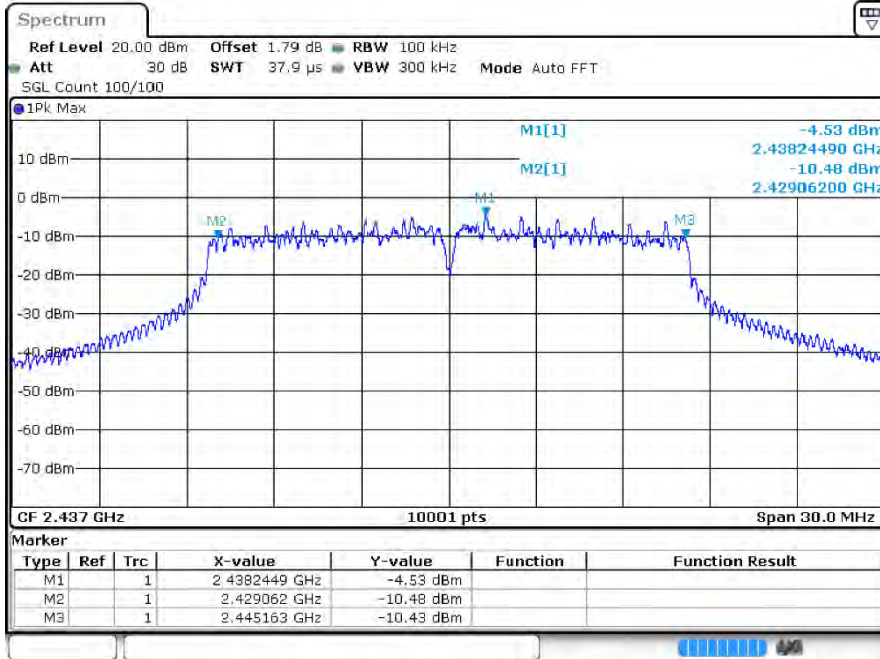
b 2462MHz Ant1



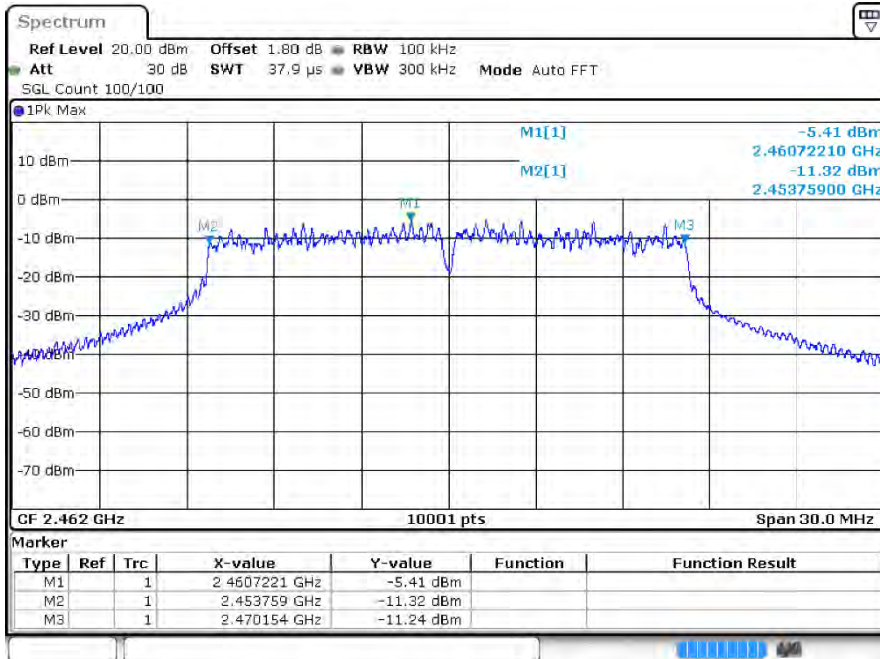
g 2412MHz Ant1

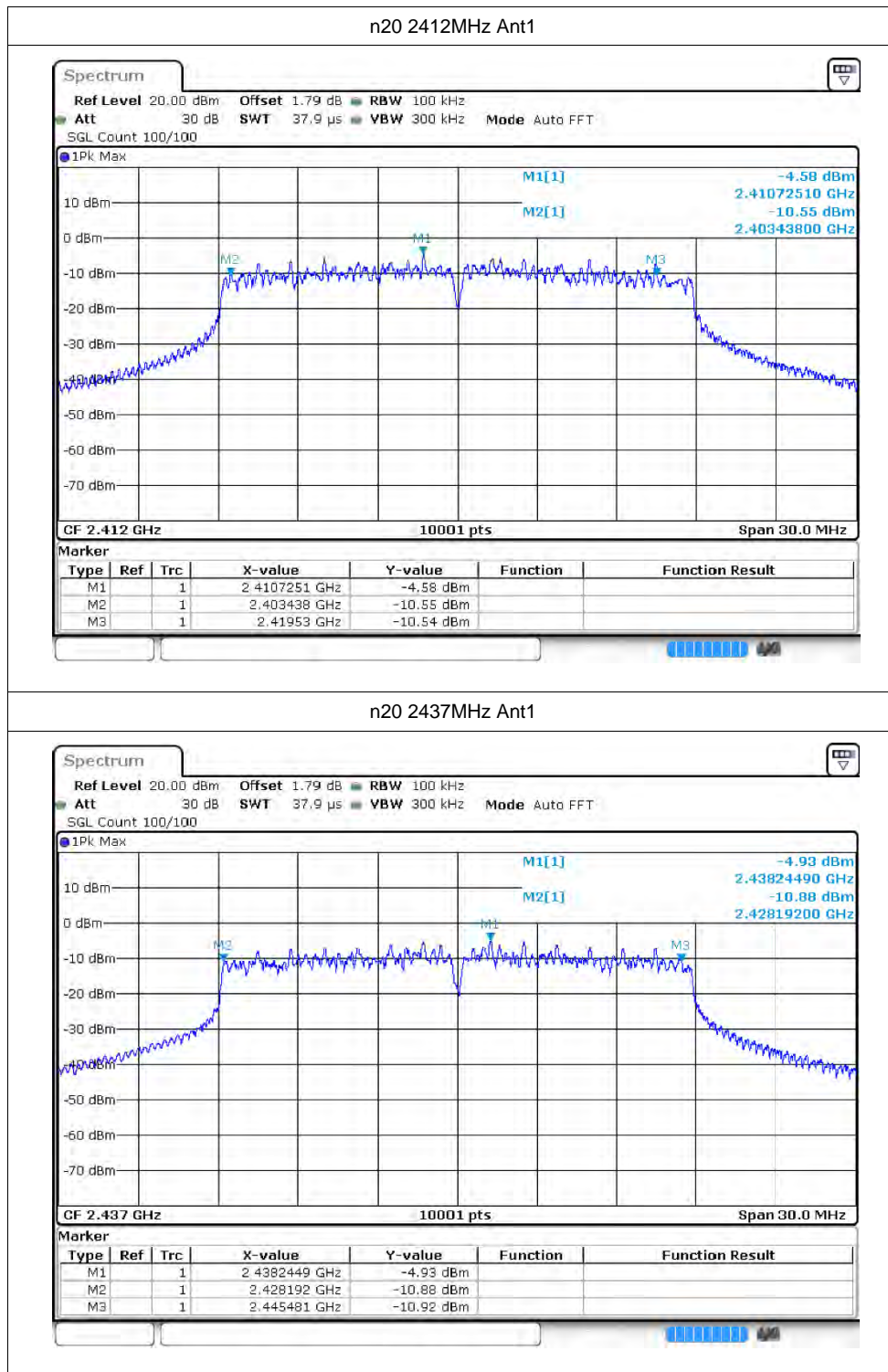


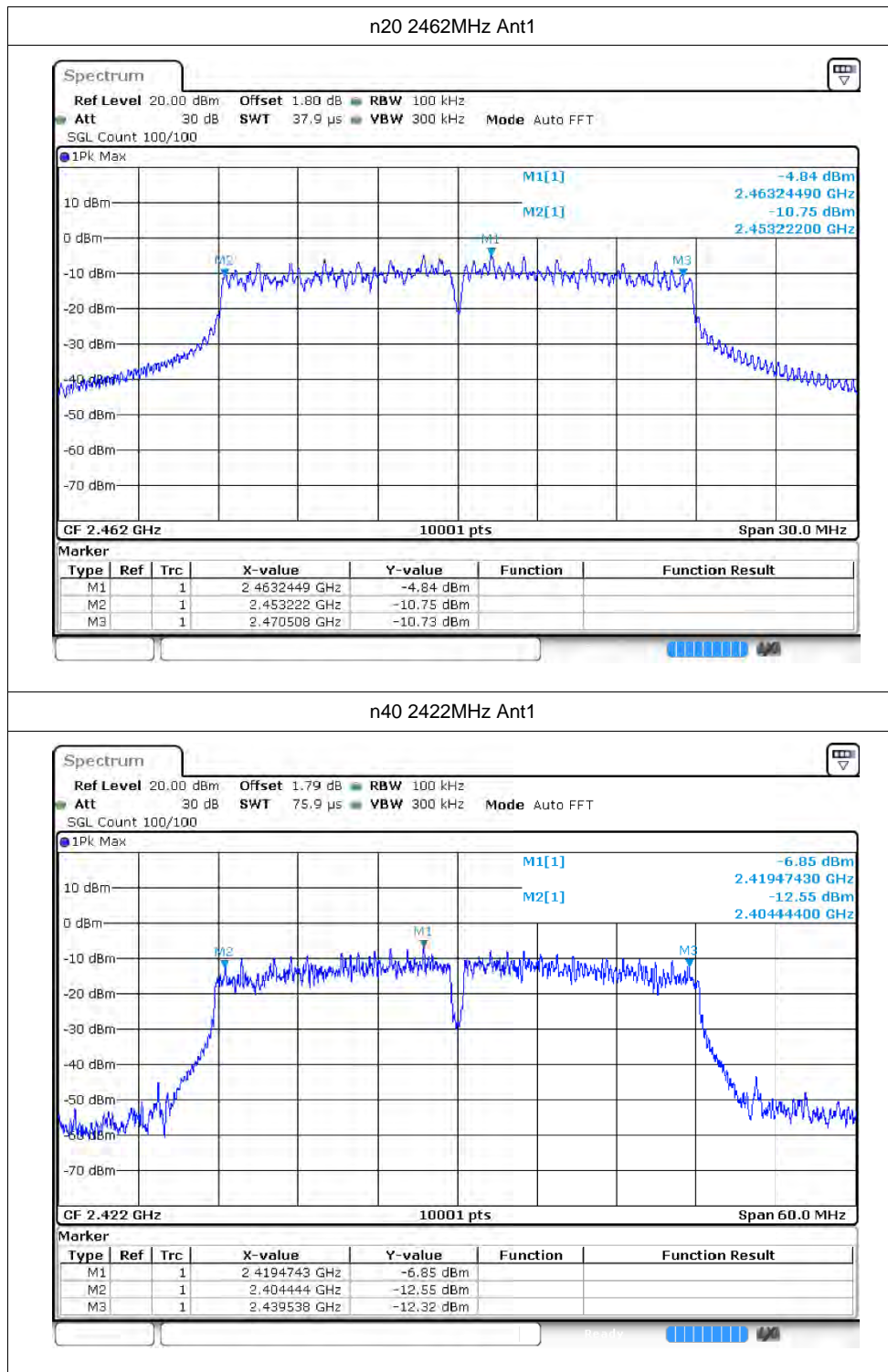
g 2437MHz Ant1



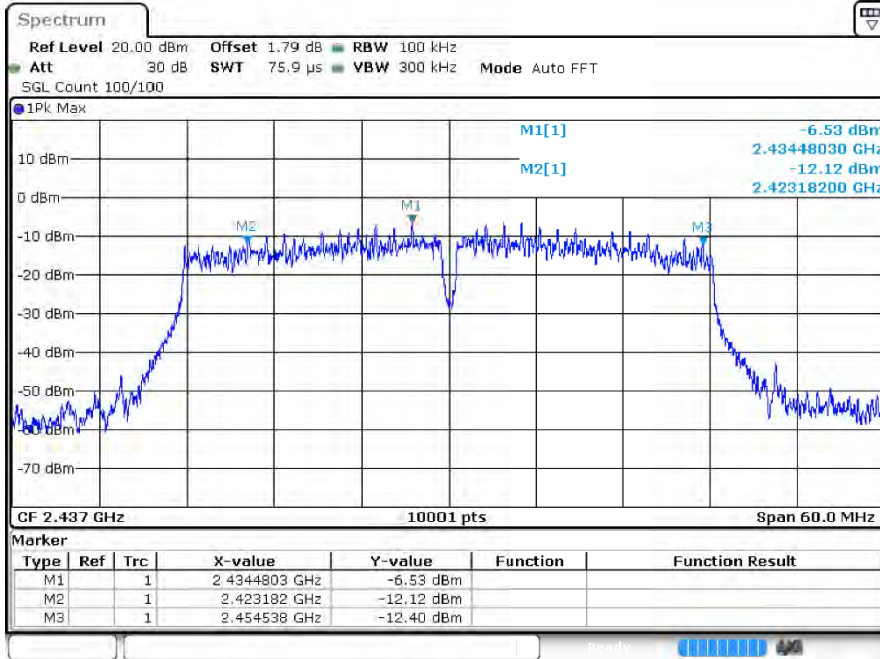
g 2462MHz Ant1



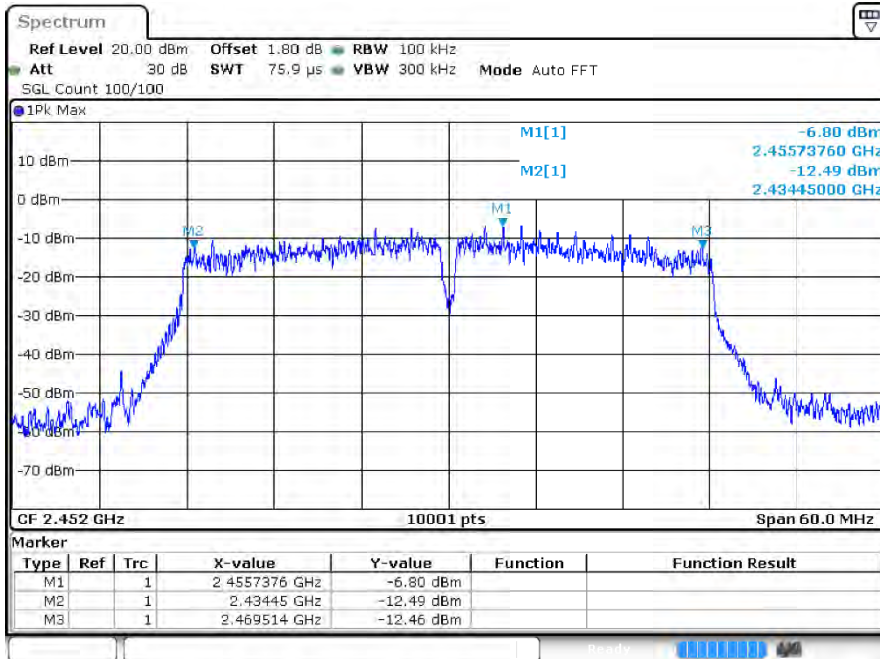




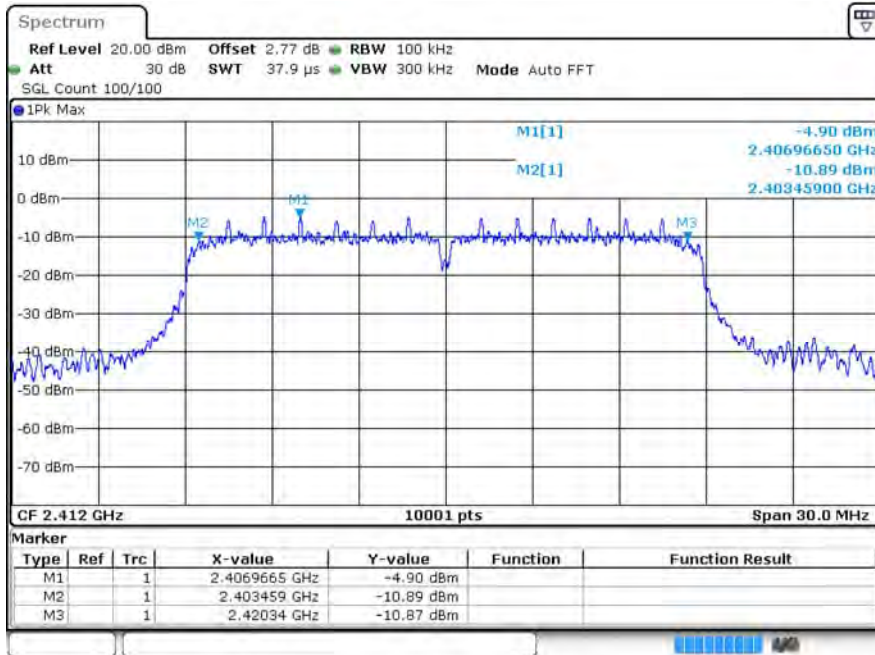
n40 2437MHz Ant1



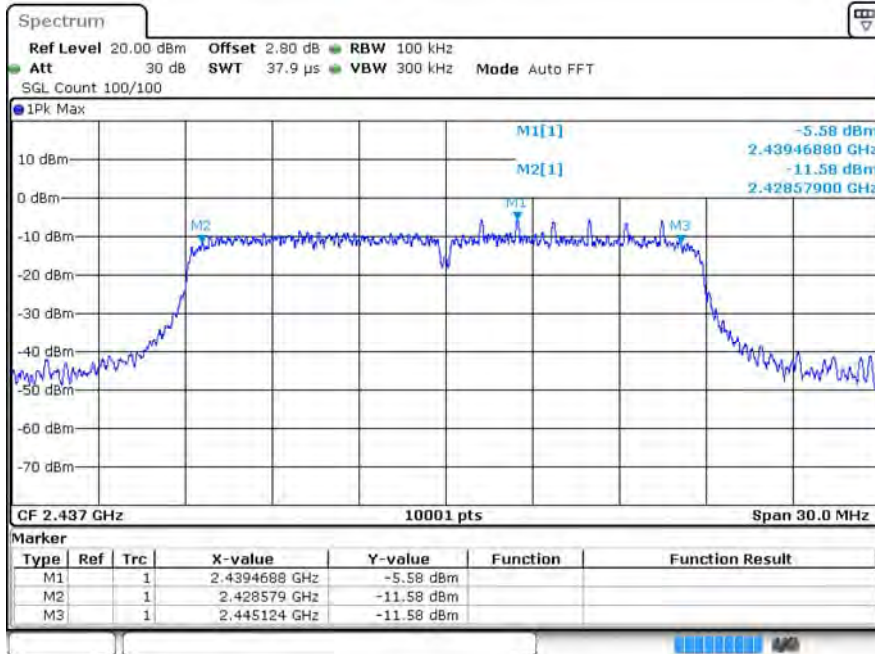
n40 2452MHz Ant1

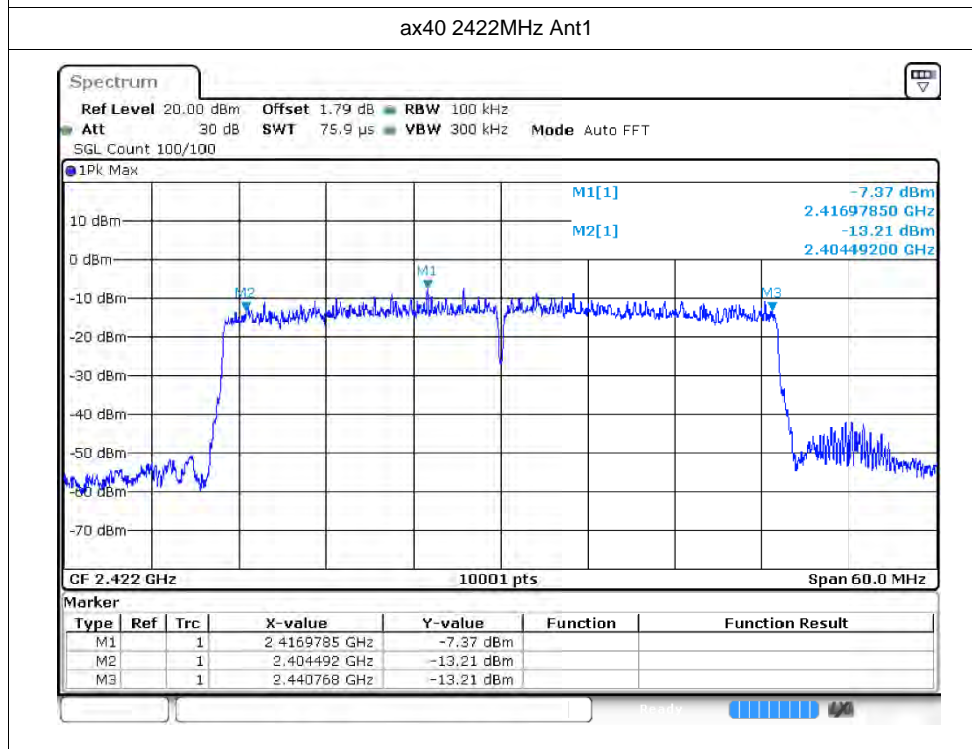
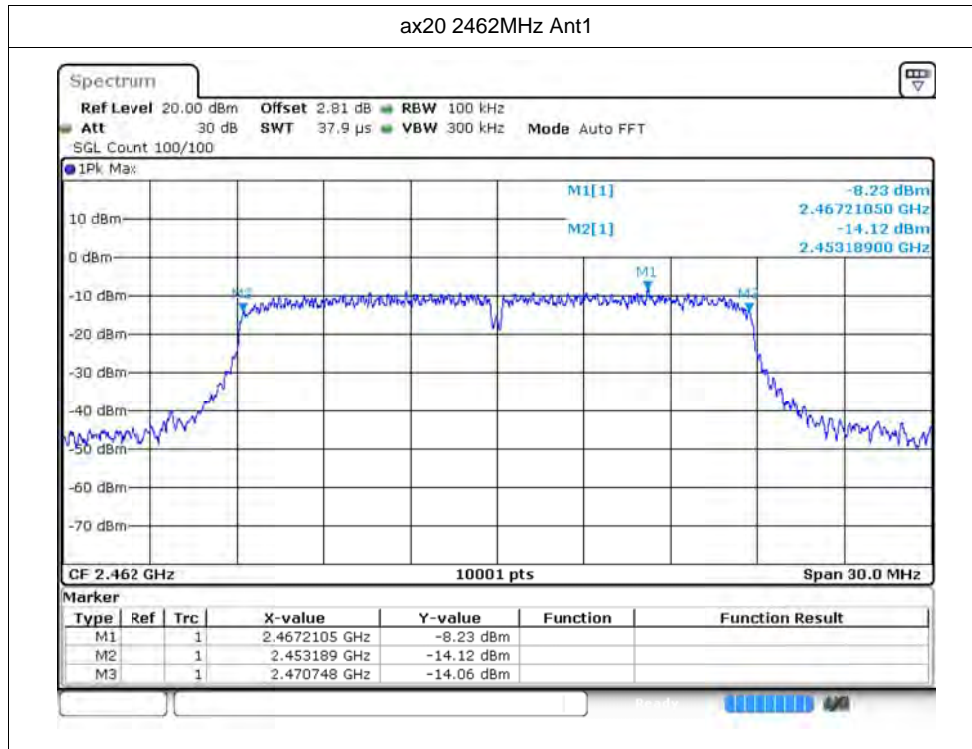


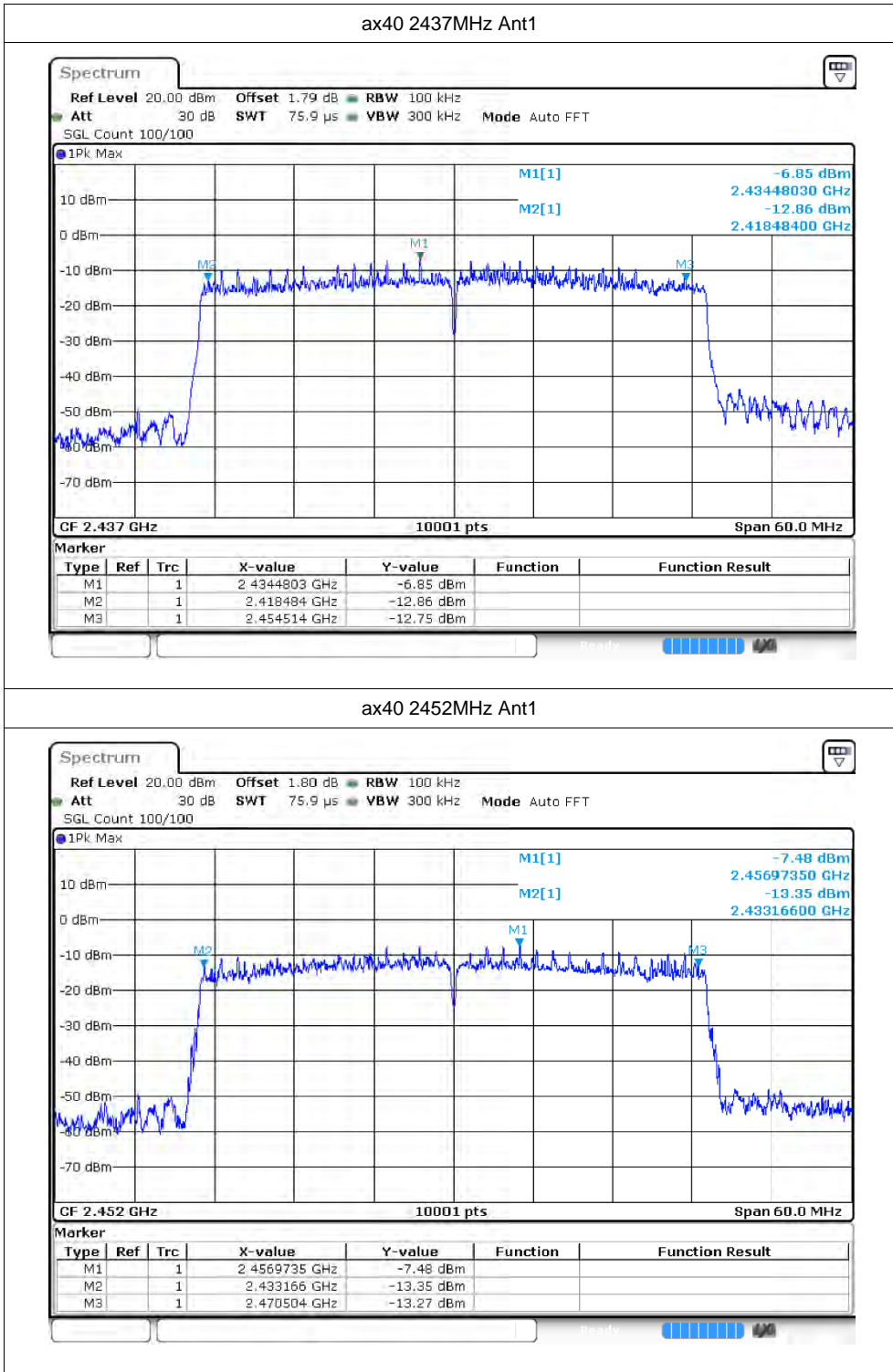
ax20 2412MHz Ant1



ax20 2437MHz Ant1







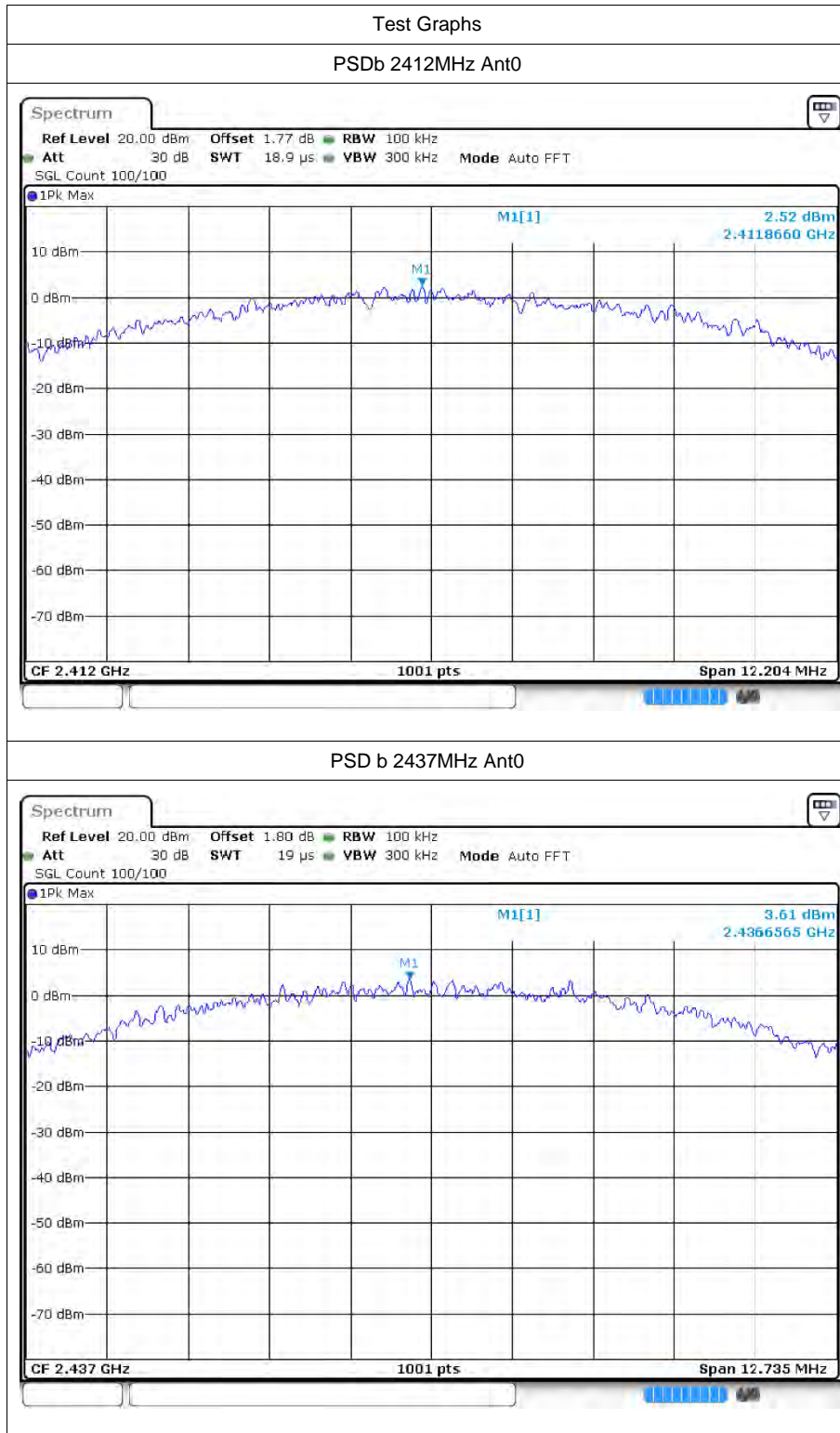
4 Maximum Power Spectral Density Level

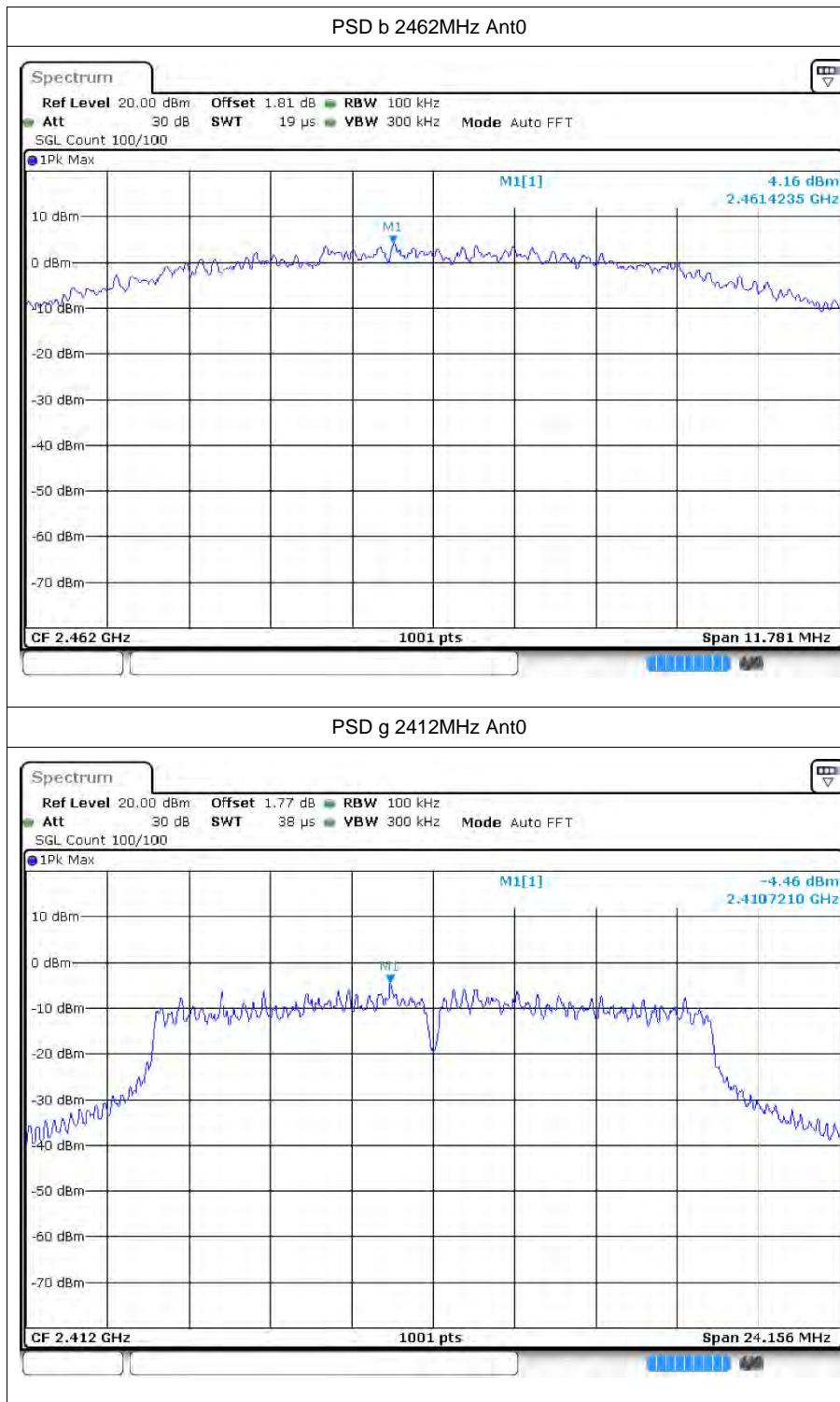
Test Result

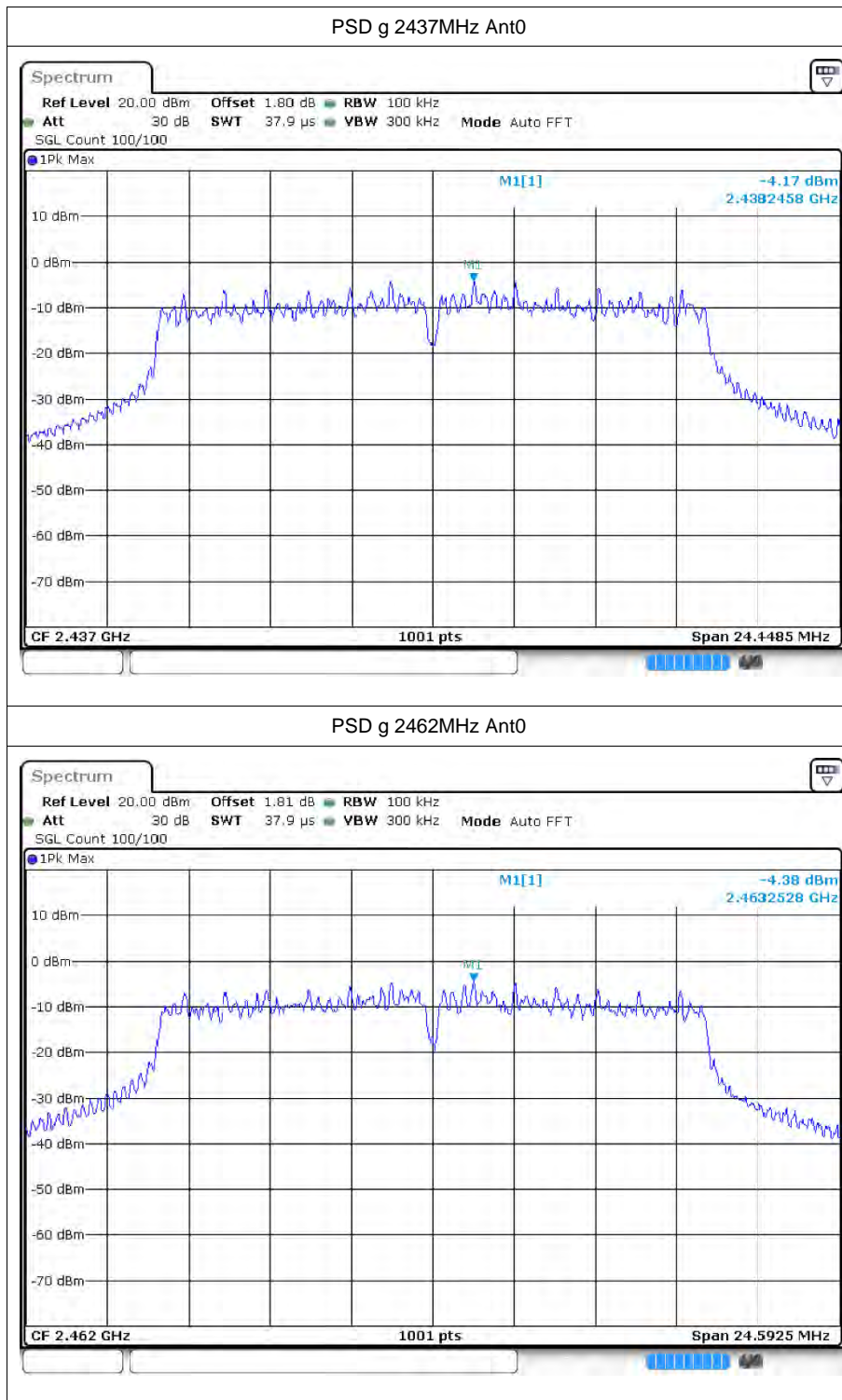
ode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
b	2412	Ant0	2.52	≤8	Pass
b	2437	Ant0	3.61	≤8	Pass
b	2462	Ant0	4.16	≤8	Pass
g	2412	Ant0	-4.46	≤8	Pass
g	2437	Ant0	-4.17	≤8	Pass
g	2462	Ant0	-4.38	≤8	Pass
n20	2412	Ant0	-18.64	≤8	Pass
n20	2437	Ant0	-18.66	≤8	Pass
n20	2462	Ant0	-18.38	≤8	Pass
n40	2422	Ant0	-7.31	≤8	Pass
n40	2437	Ant0	-7.17	≤8	Pass
n40	2452	Ant0	-6.02	≤8	Pass
ax20	2412	Ant0	-2.52	≤8	Pass
ax20	2437	Ant0	-1.71	≤8	Pass
ax20	2462	Ant0	-2.82	≤8	Pass
ax40	2422	Ant0	-6.86	≤8	Pass
ax40	2437	Ant0	-7.08	≤8	Pass
ax40	2452	Ant0	-7.12	≤8	Pass
b	2412	Ant1	2.7	≤8	Pass
b	2437	Ant1	3.84	≤8	Pass
b	2462	Ant1	3.21	≤8	Pass
g	2412	Ant1	-3.95	≤8	Pass
g	2437	Ant1	-4.28	≤8	Pass
g	2462	Ant1	-4.36	≤8	Pass
n20	2412	Ant1	-4.2	≤8	Pass
n20	2437	Ant1	-4.4	≤8	Pass
n20	2462	Ant1	-4.55	≤8	Pass
n40	2422	Ant1	-6.42	≤8	Pass
n40	2437	Ant1	-6.47	≤8	Pass
n40	2452	Ant1	-6.32	≤8	Pass
ax20	2412	Ant1	-1.94	≤8	Pass
ax20	2437	Ant1	-3.62	≤8	Pass
ax20	2462	Ant1	-2.67	≤8	Pass

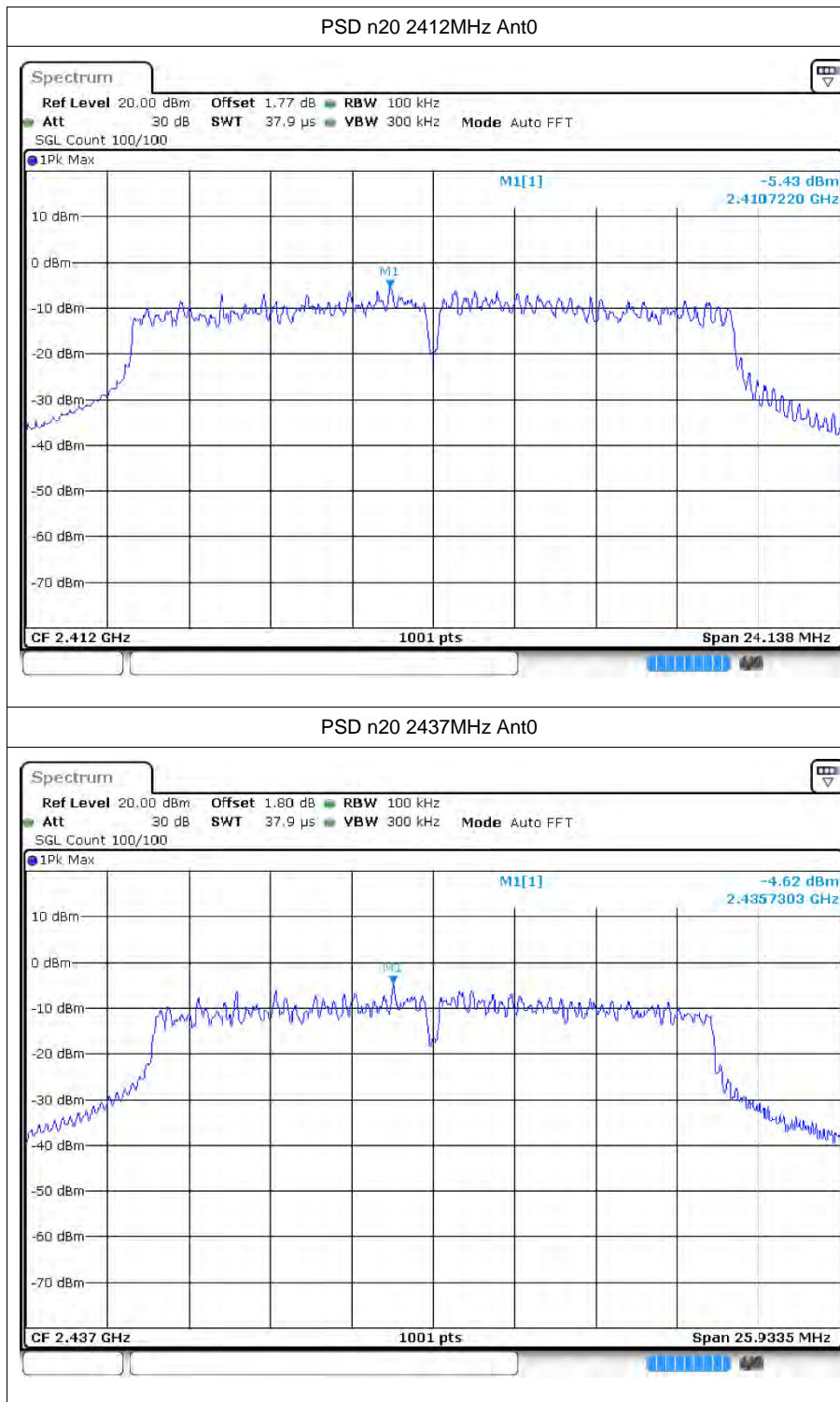
ax40	2422	Ant1	-6.92	≤ 8	Pass
ax40	2437	Ant1	-7.25	≤ 8	Pass
ax40	2452	Ant1	-6.42	≤ 8	Pass
n20	2412	Sum	-5.43	≤ 7.89	Pass
n20	2437	Sum	-4.62	≤ 7.89	Pass
n20	2462	Sum	-4.1	≤ 7.89	Pass
n40	2422	Sum	-1.761	≤ 7.89	Pass
n40	2437	Sum	-1.498	≤ 7.89	Pass
n40	2452	Sum	-1.309	≤ 7.89	Pass
ax20	2412	Sum	0.790	≤ 7.89	Pass
ax20	2437	Sum	0.449	≤ 7.89	Pass
ax20	2462	Sum	0.266	≤ 7.89	Pass
ax40	2422	Sum	-3.880	≤ 7.89	Pass
ax40	2437	Sum	-4.154	≤ 7.89	Pass
ax40	2452	Sum	-3.746	≤ 7.89	Pass

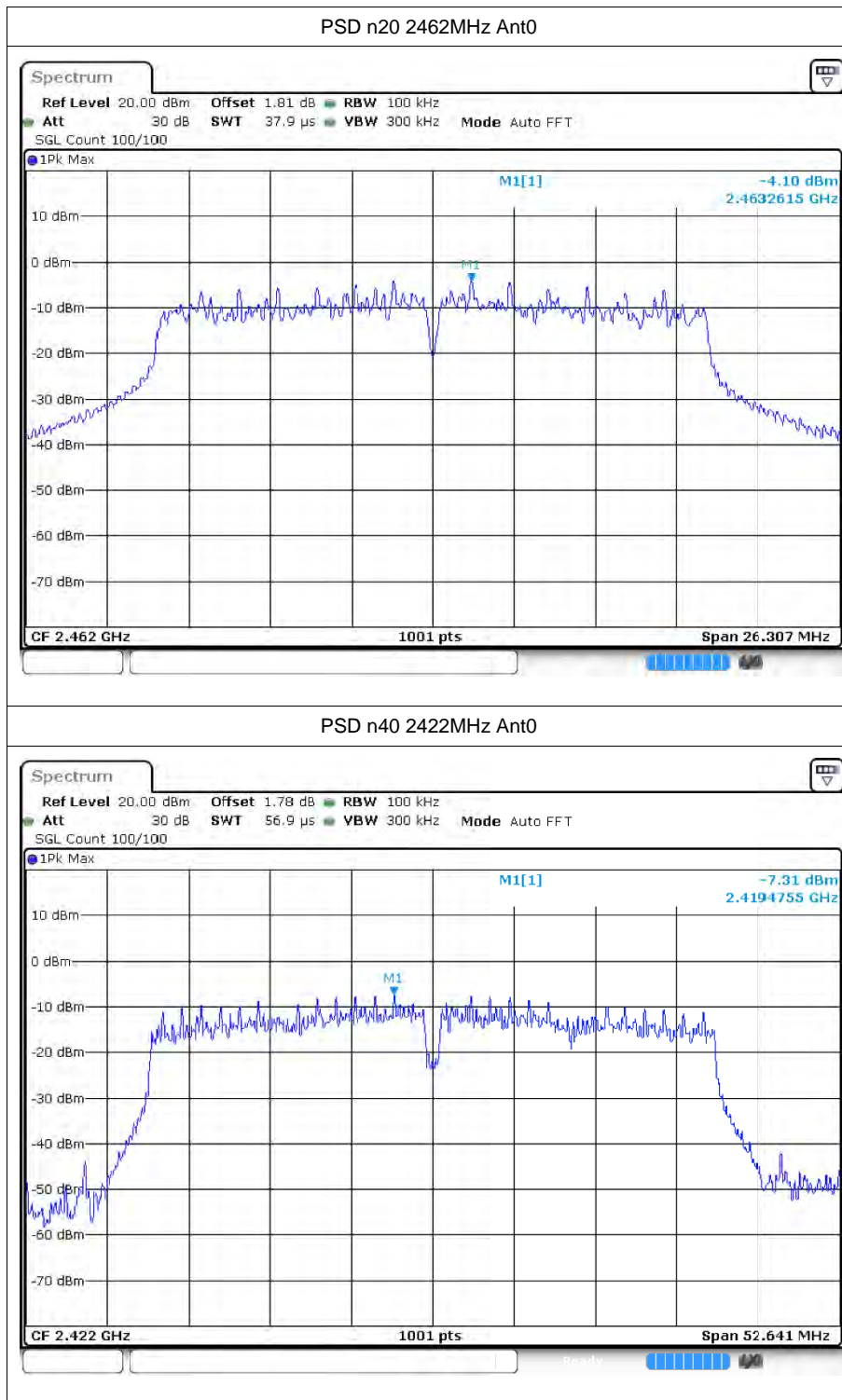
Test Graphs

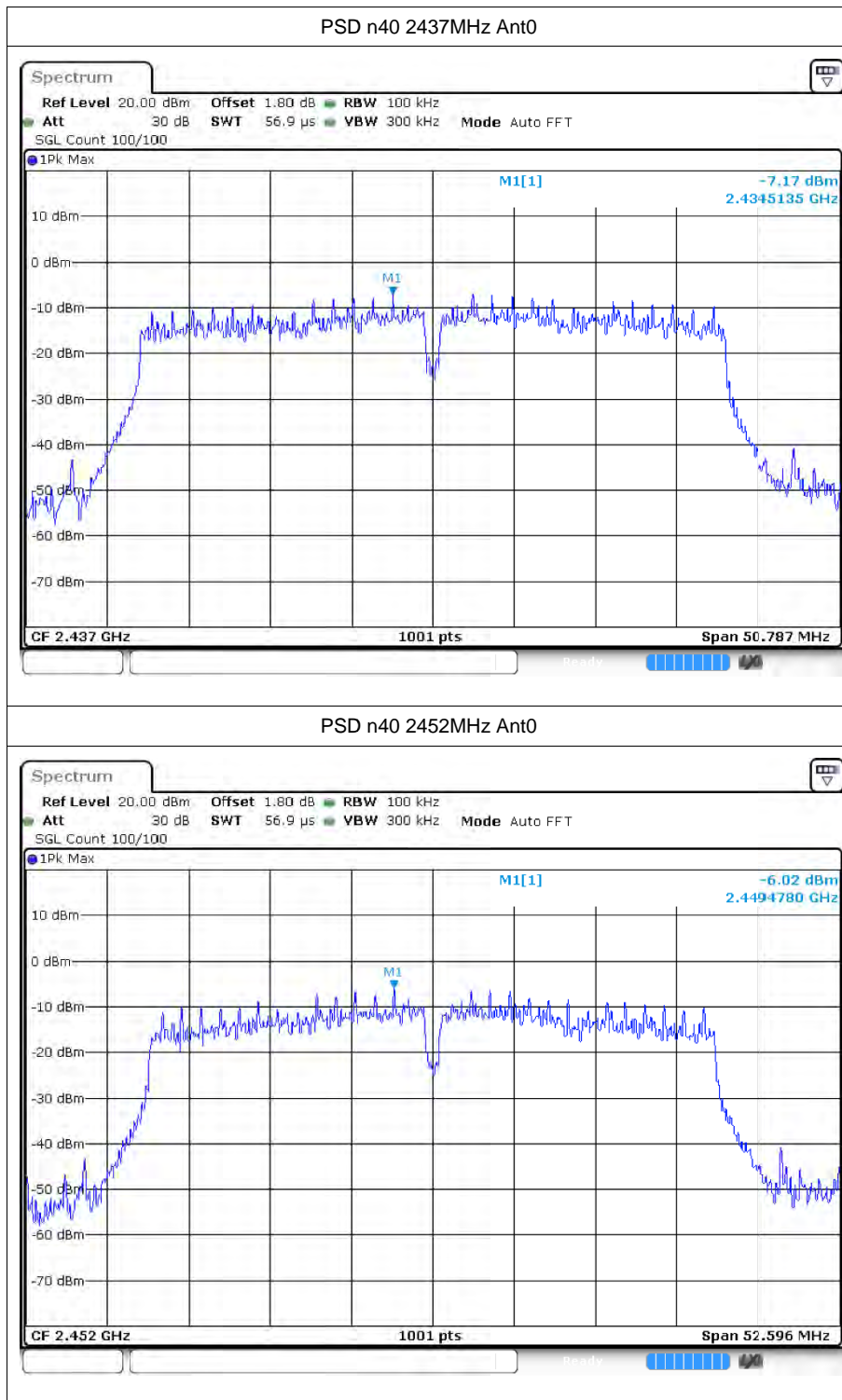




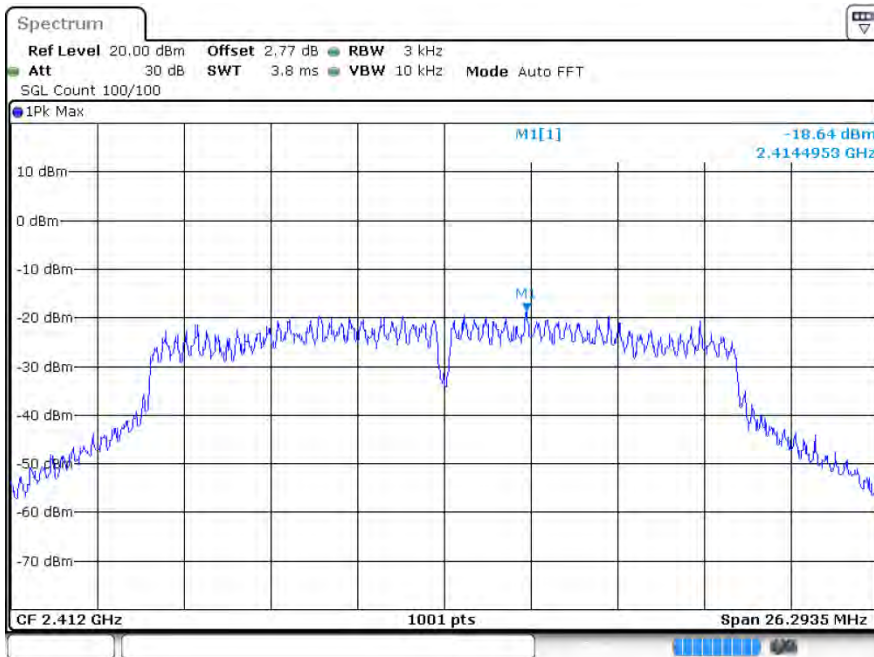




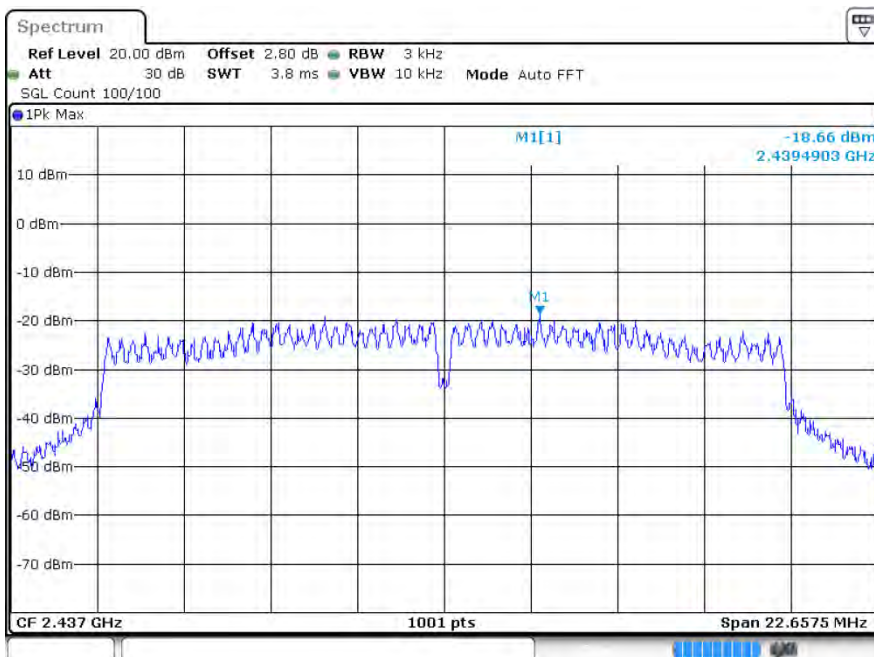


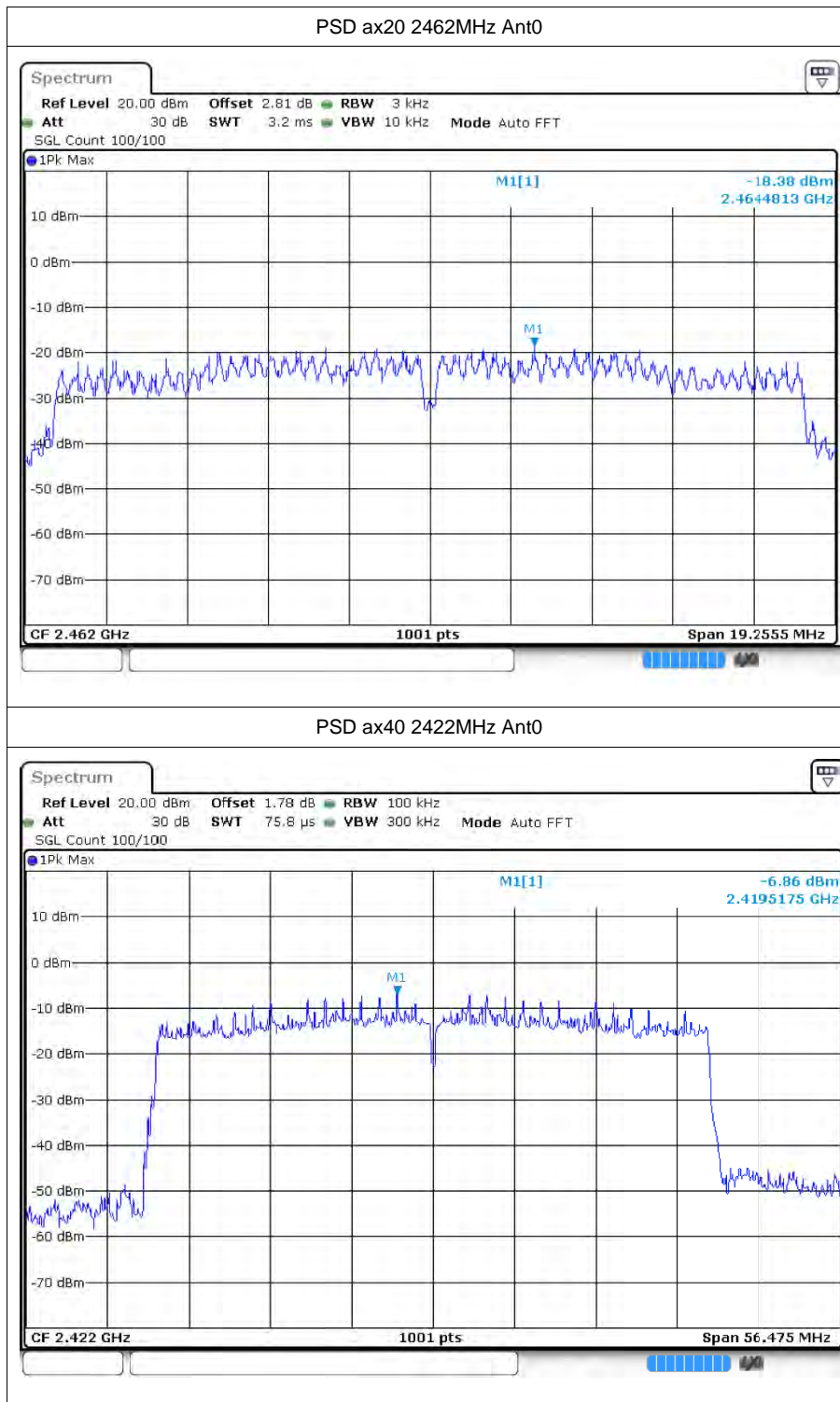


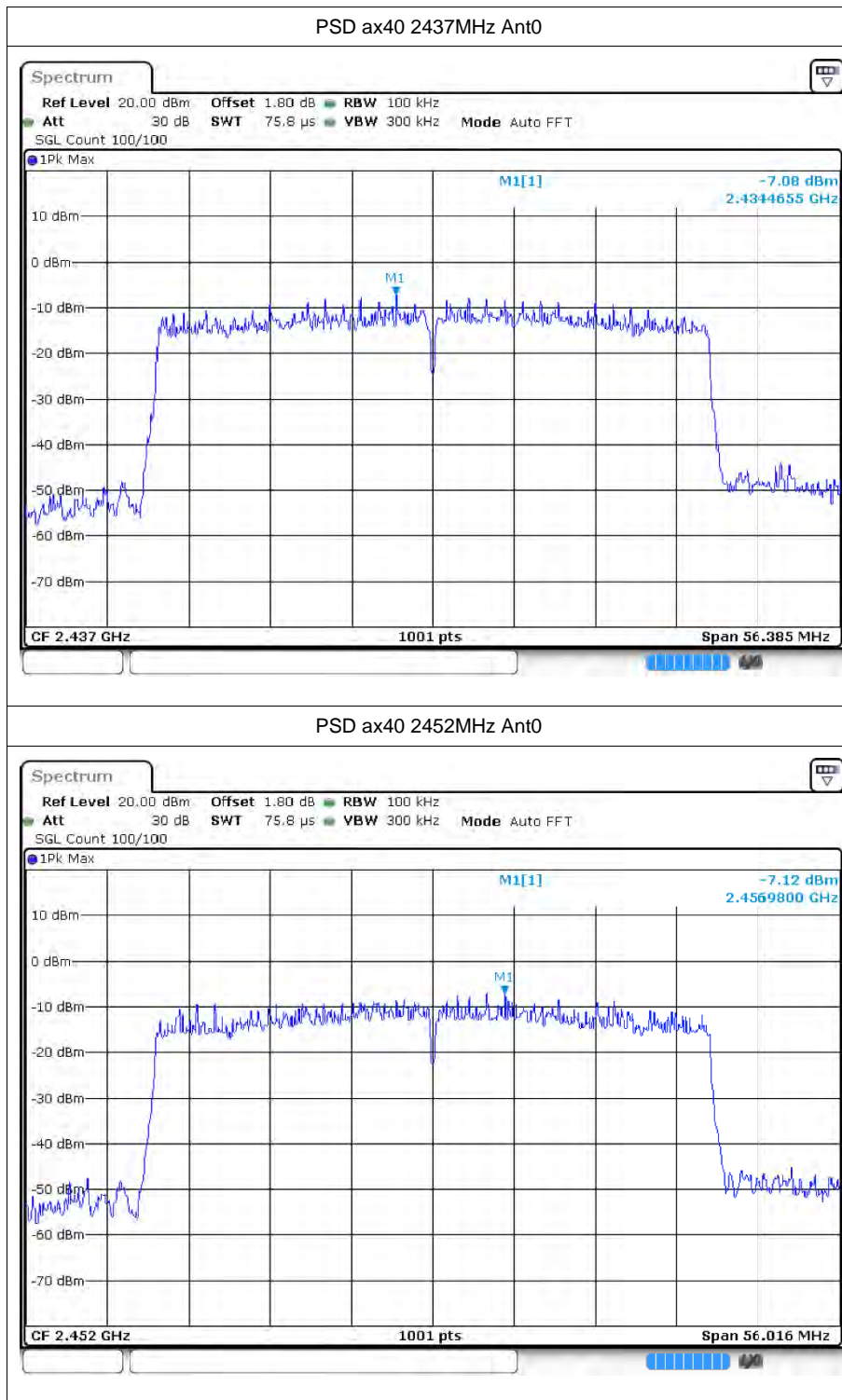
PSD ax20 2412MHz Ant0

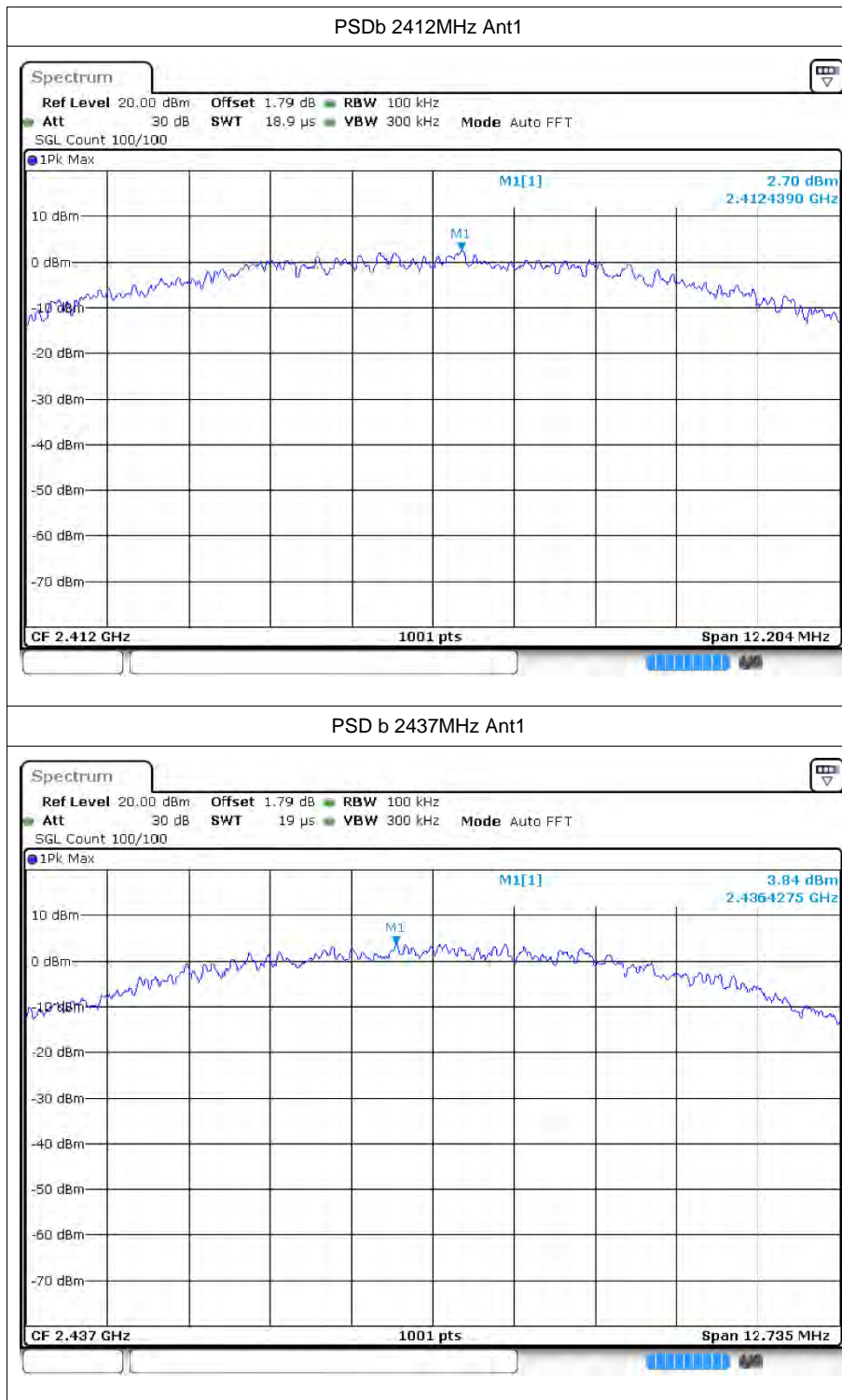


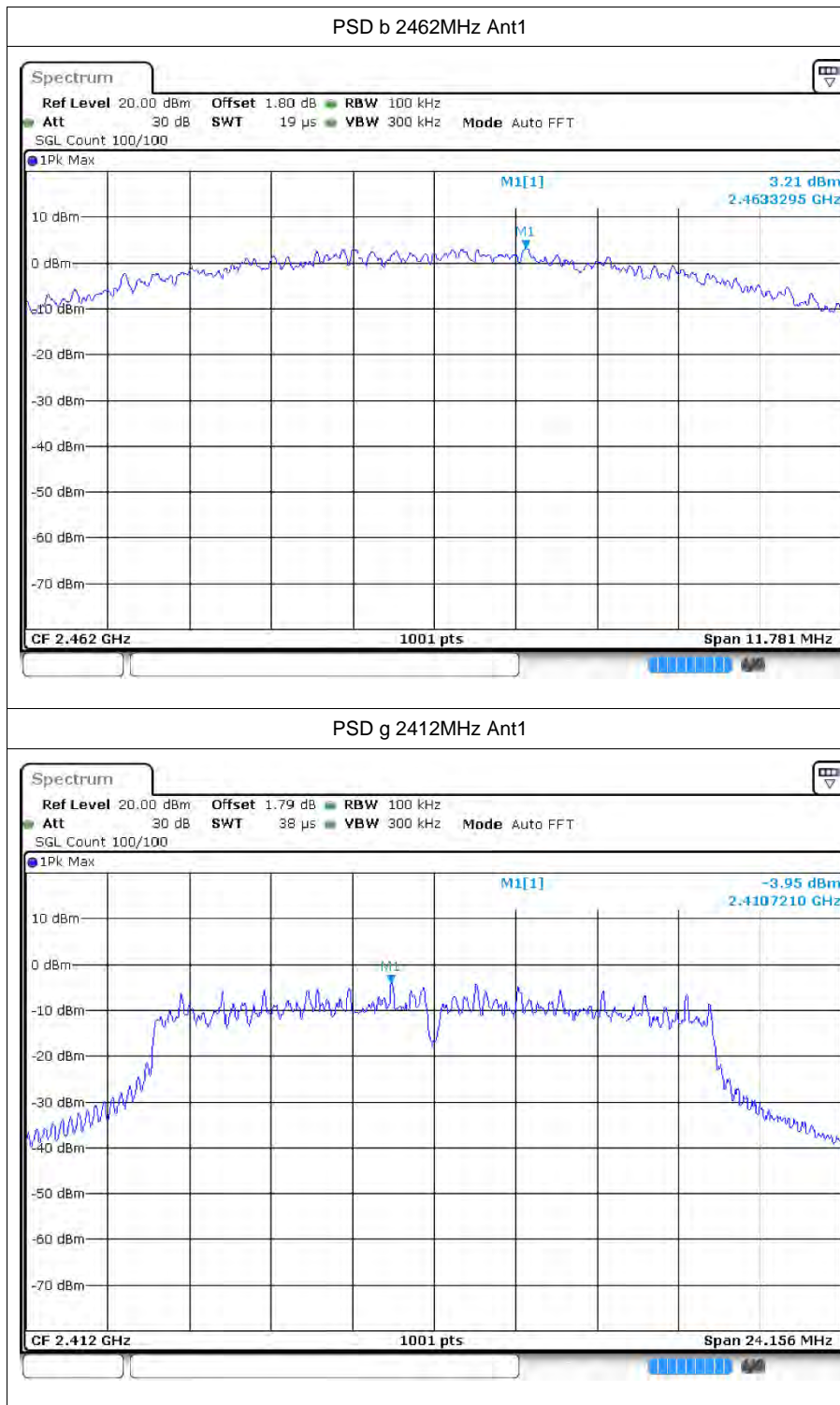
PSD ax20 2437MHz Ant0

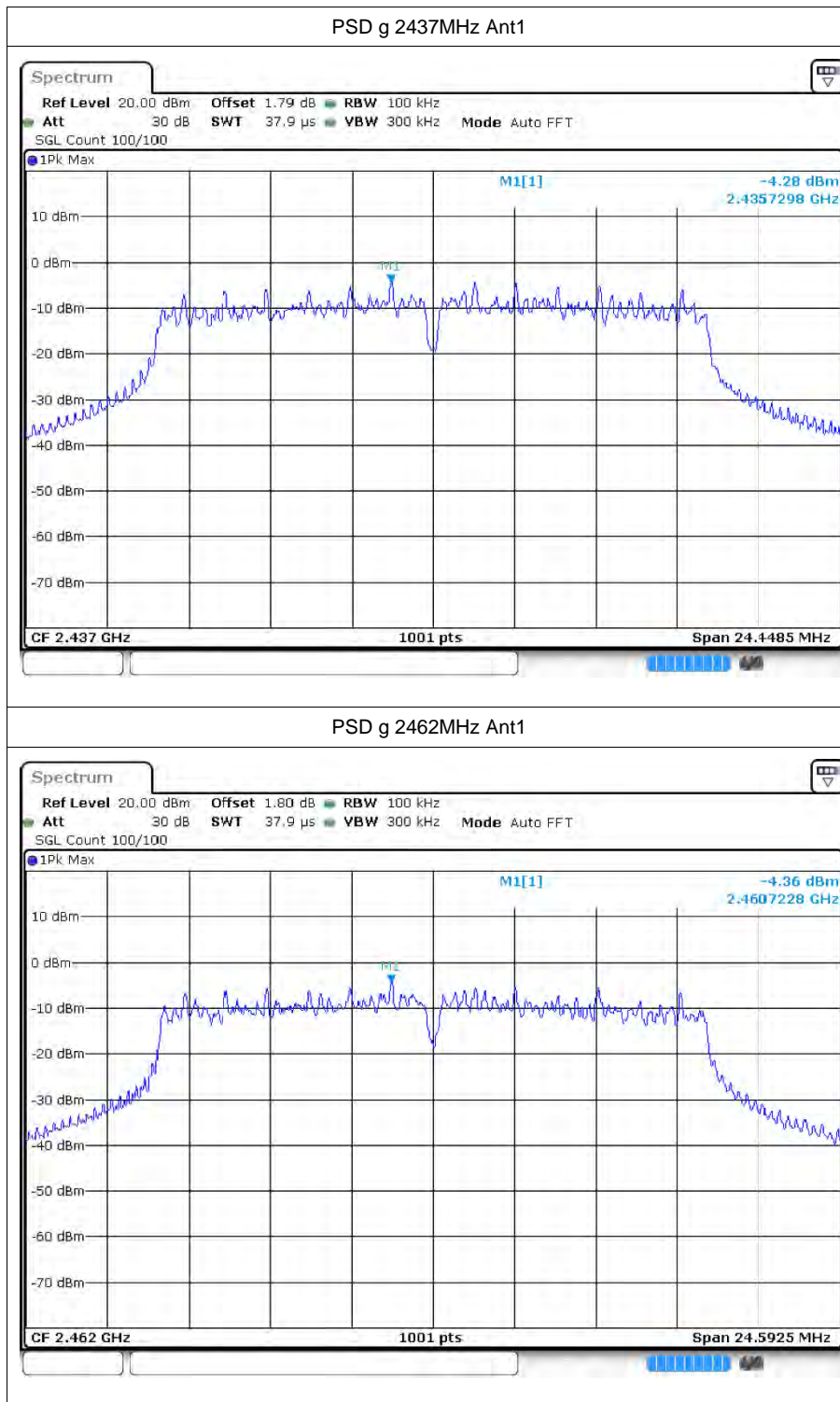


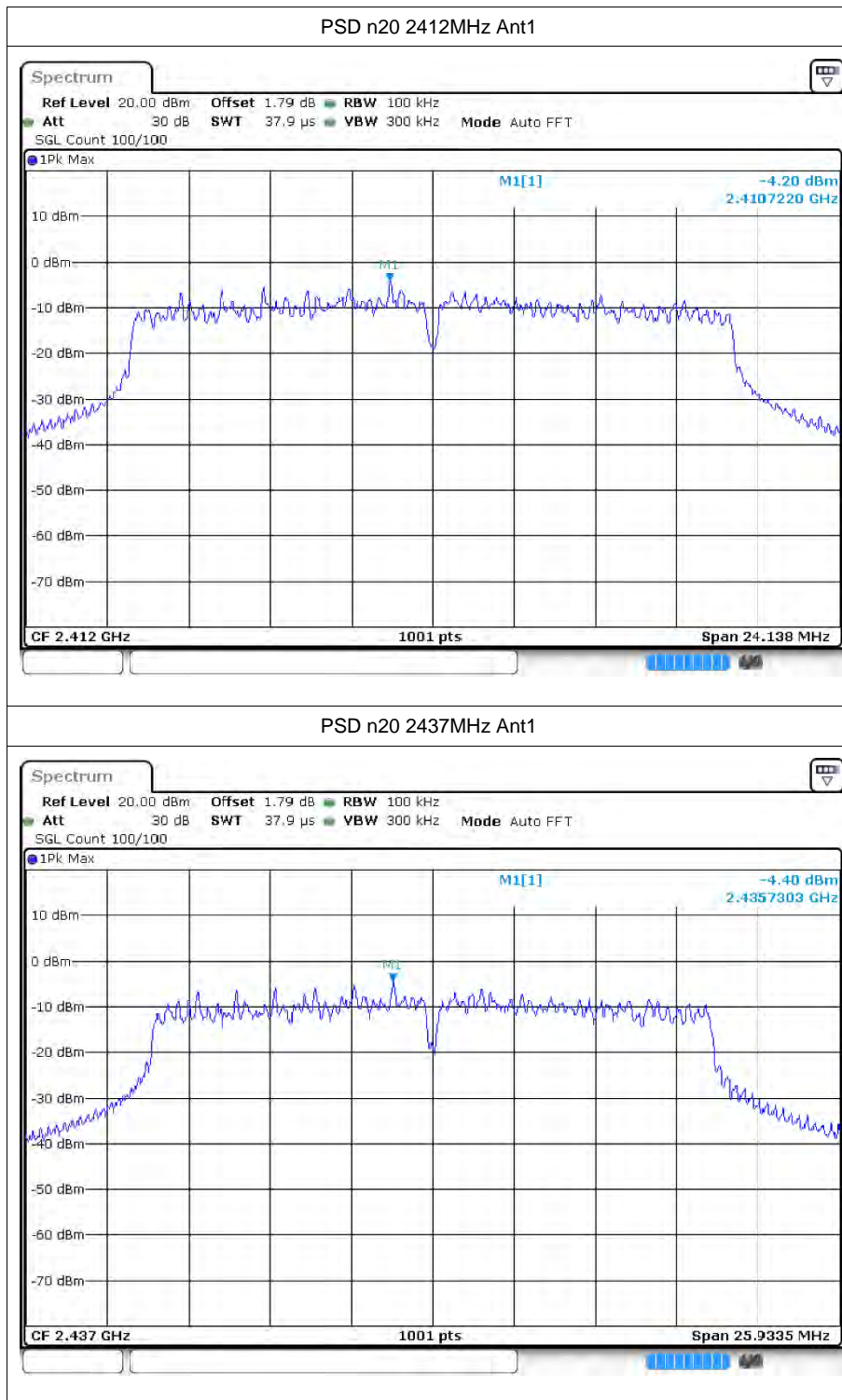


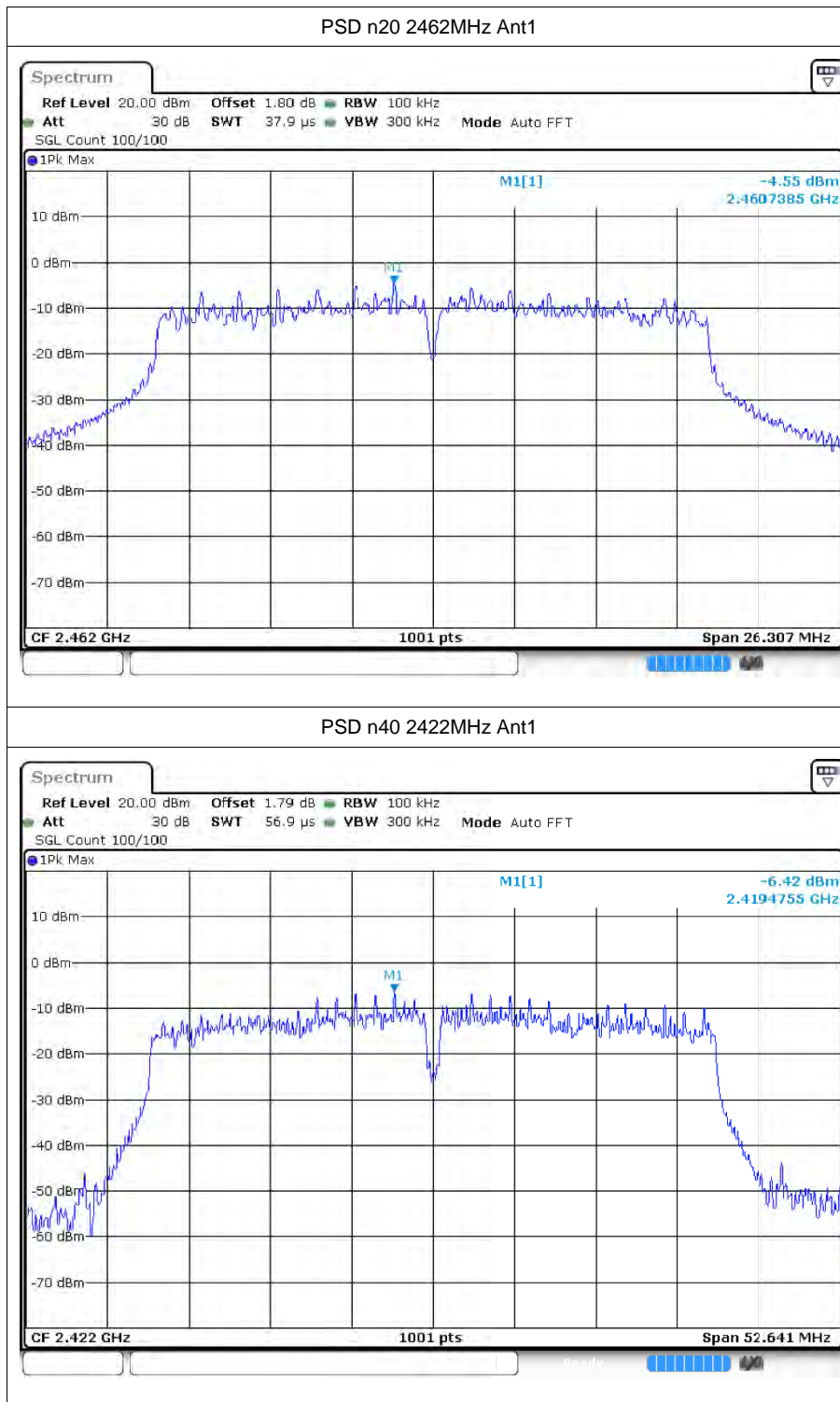


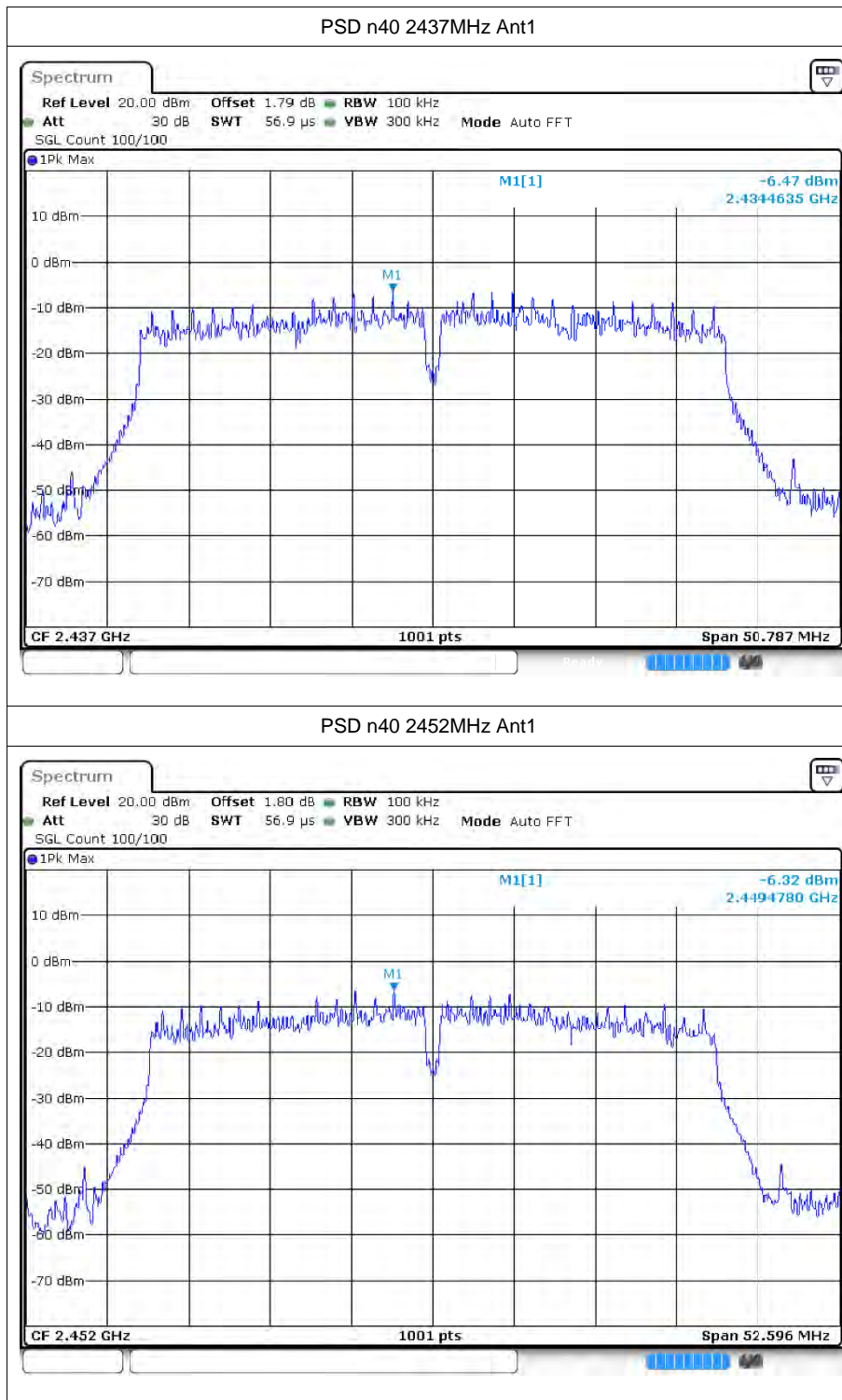




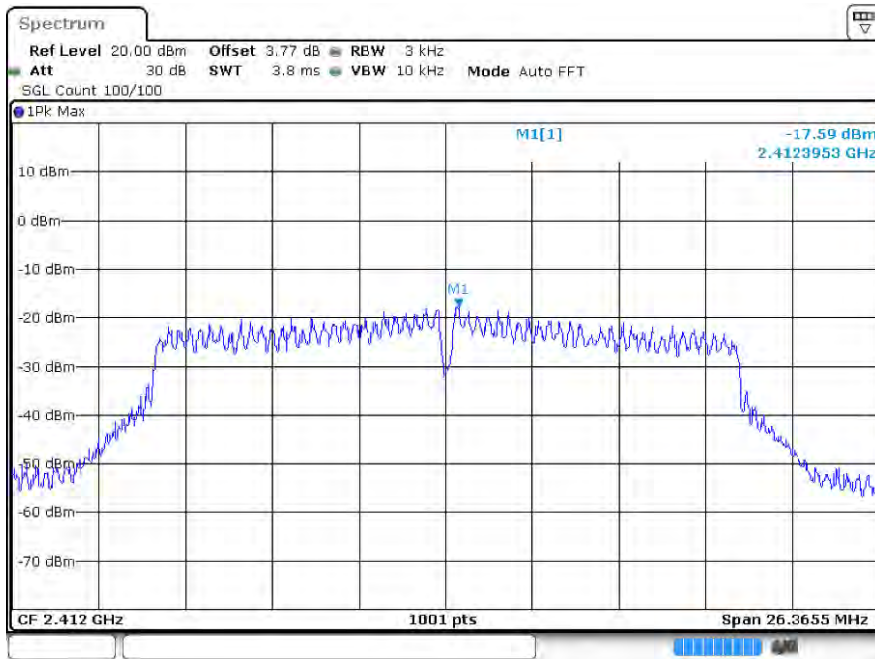




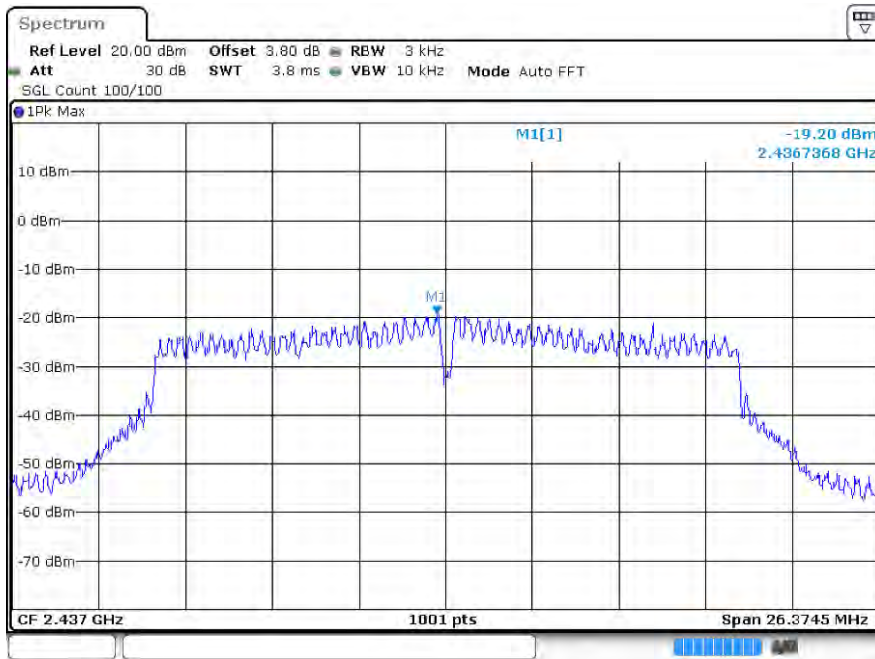


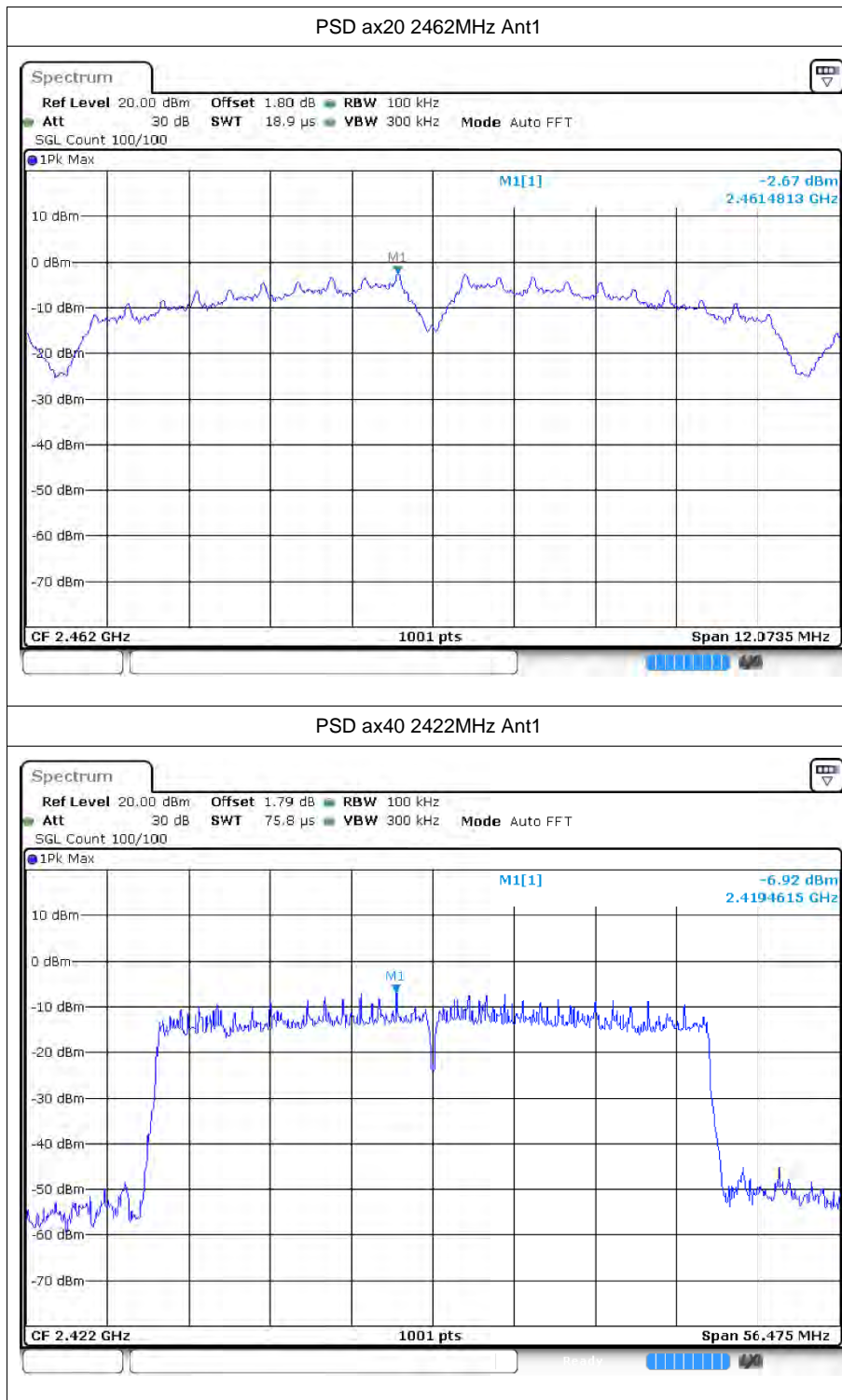


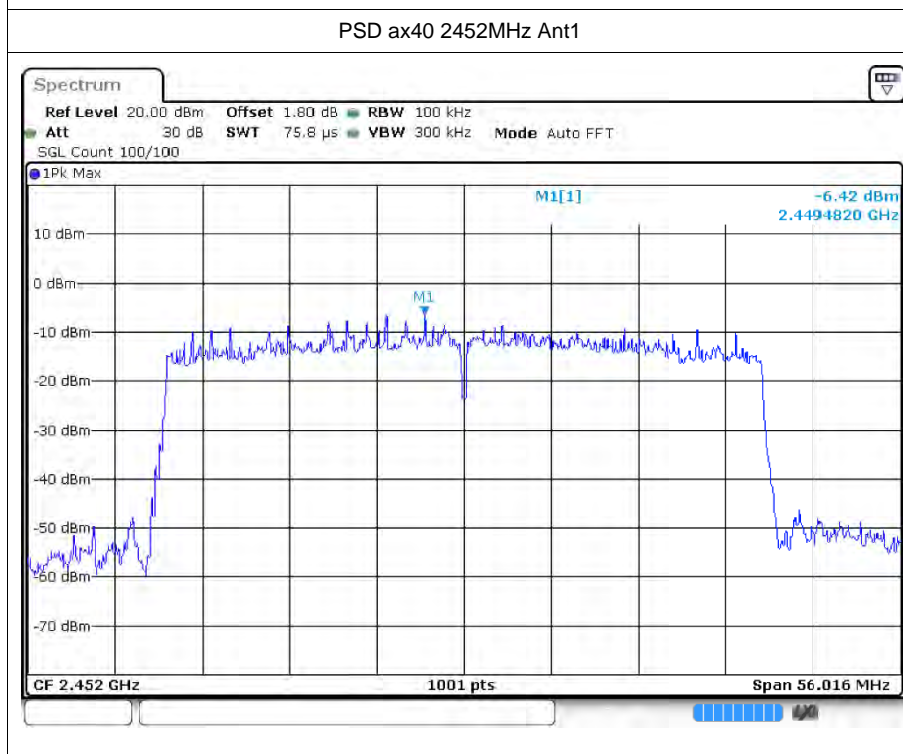
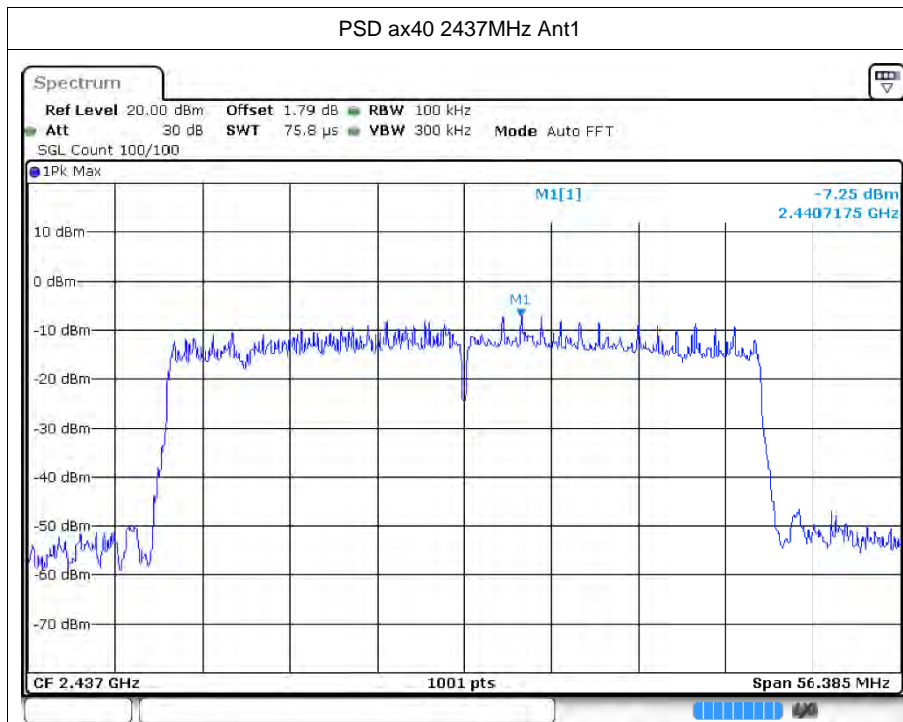
PSD ax20 2412MHz Ant1



PSD ax20 2437MHz Ant1





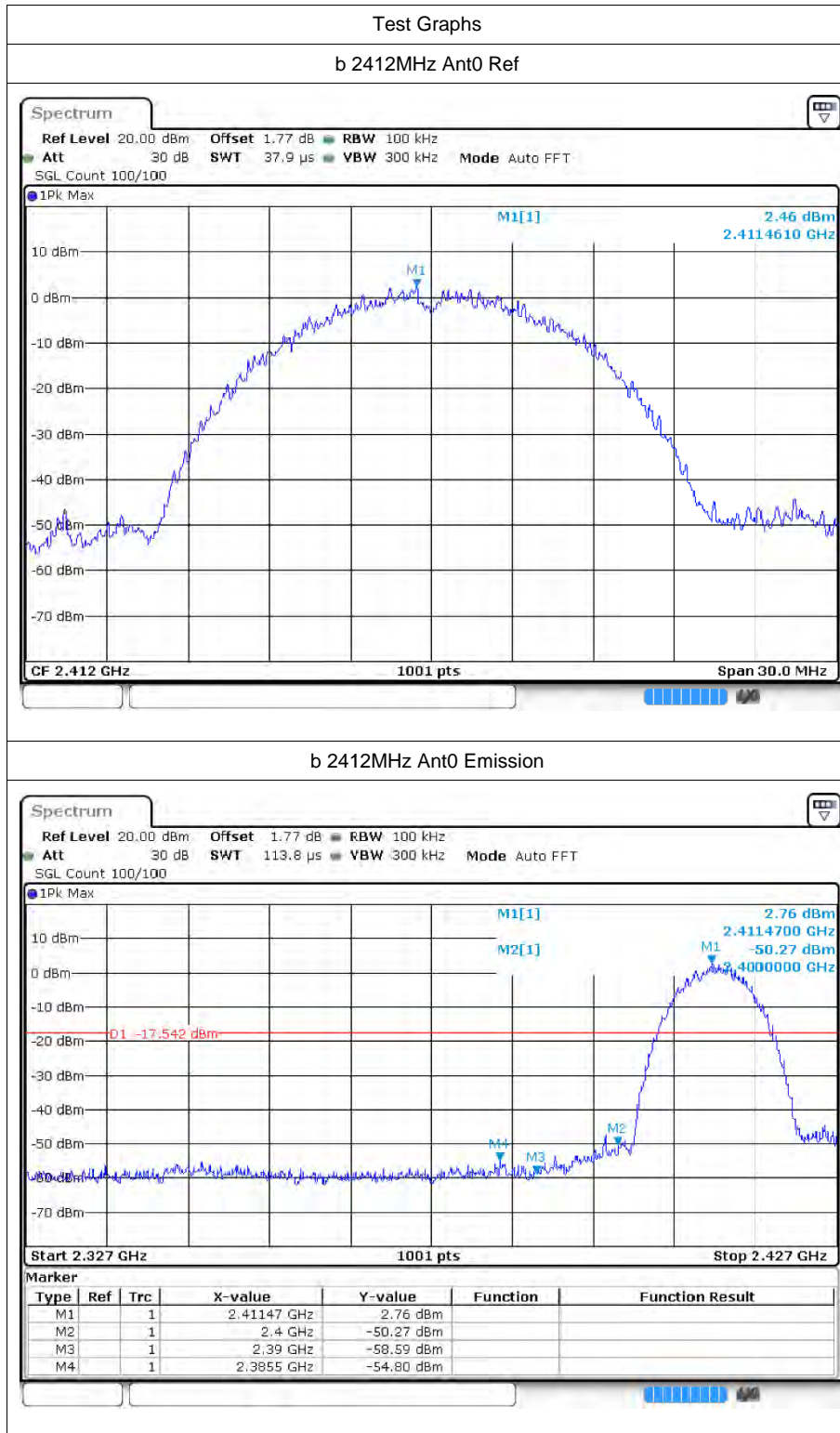


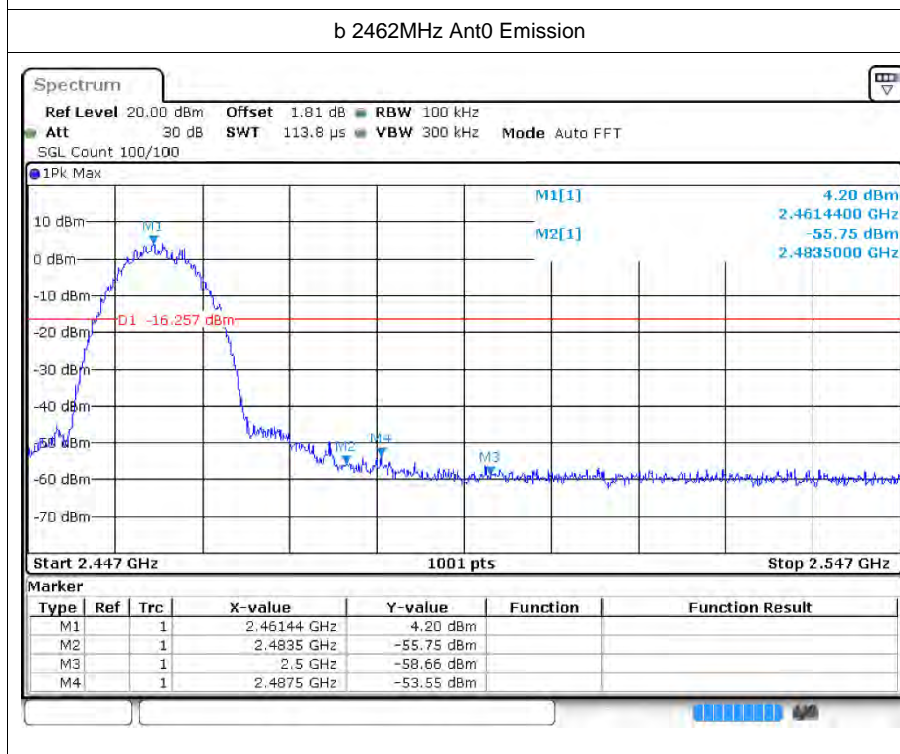
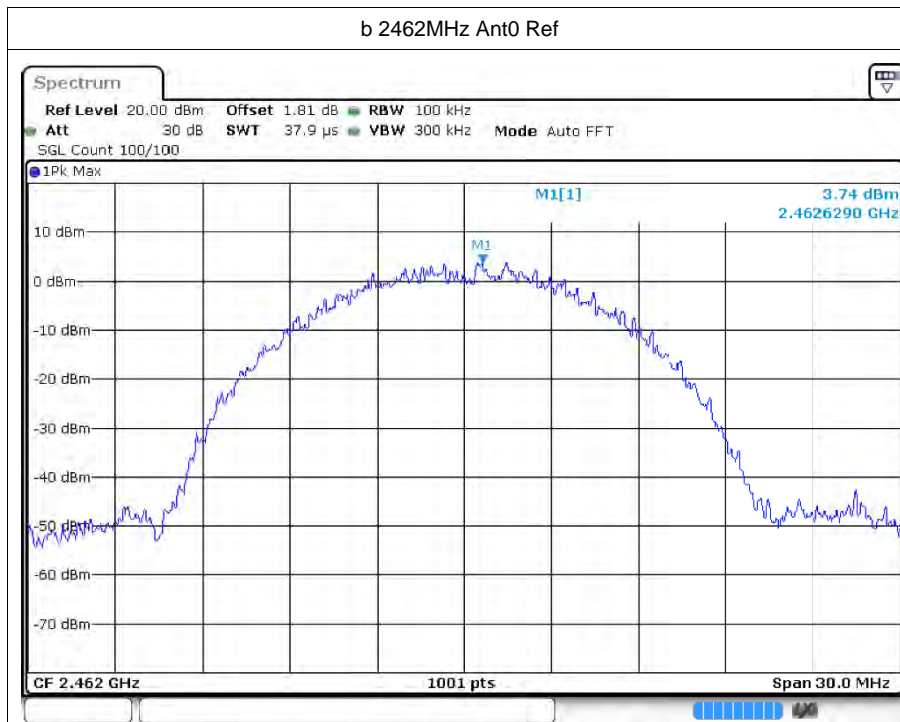
5 Band Edge

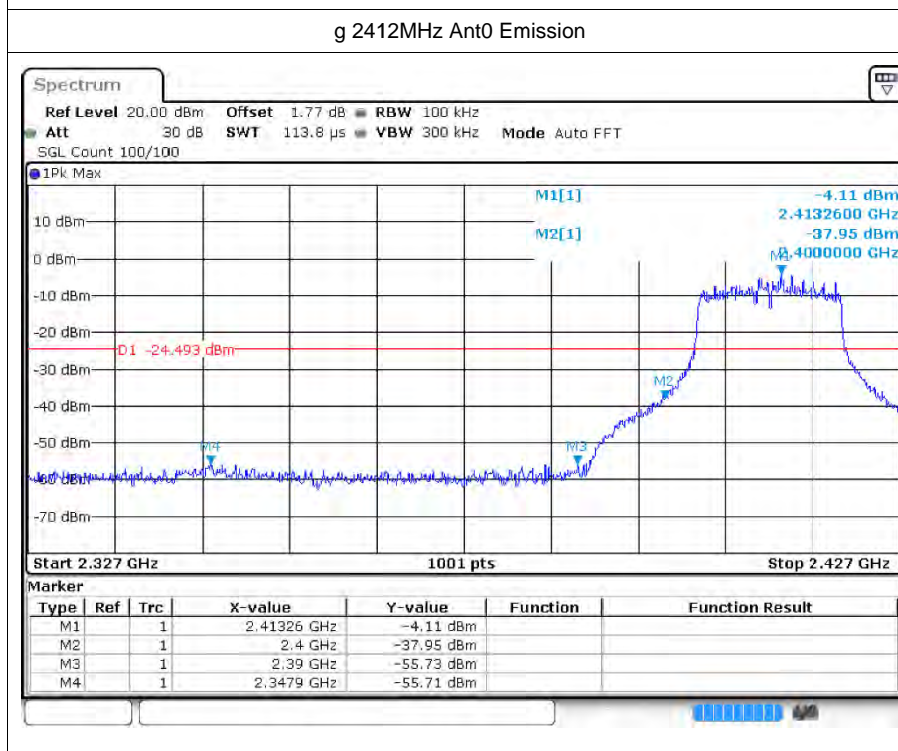
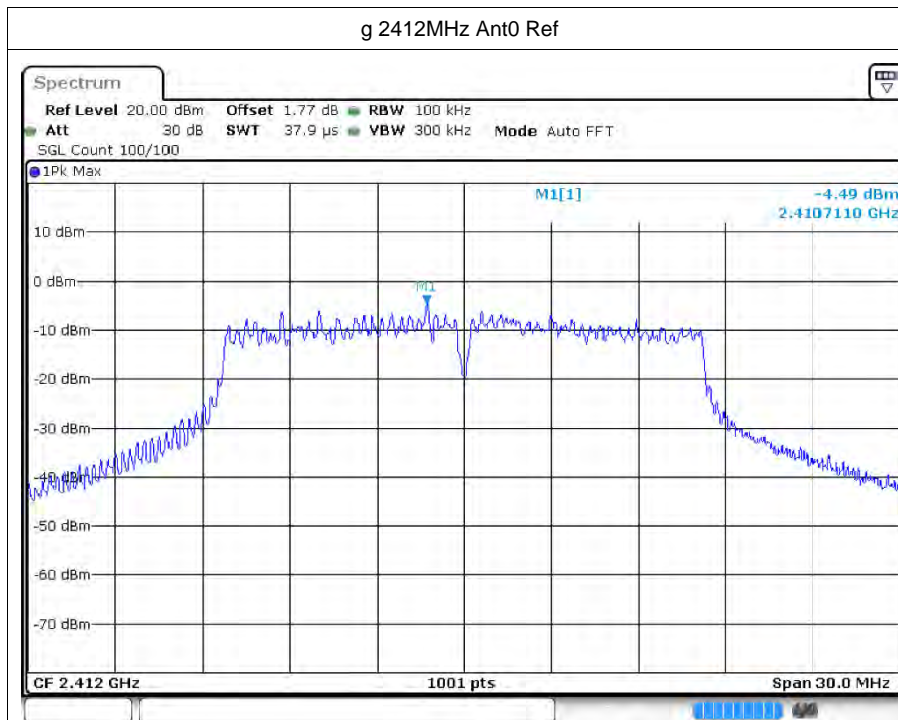
Test Result

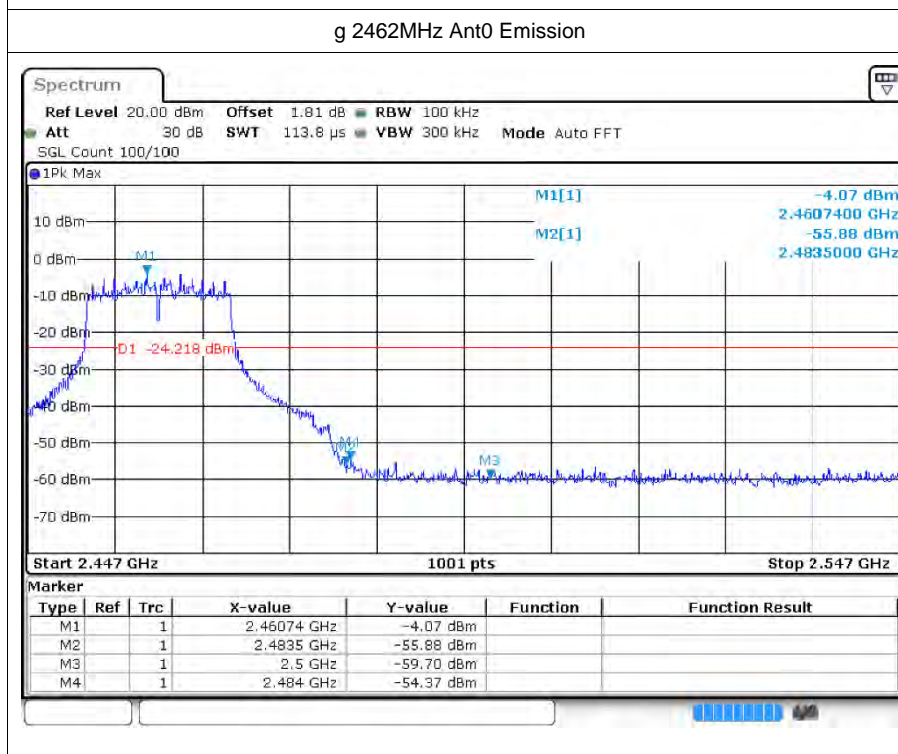
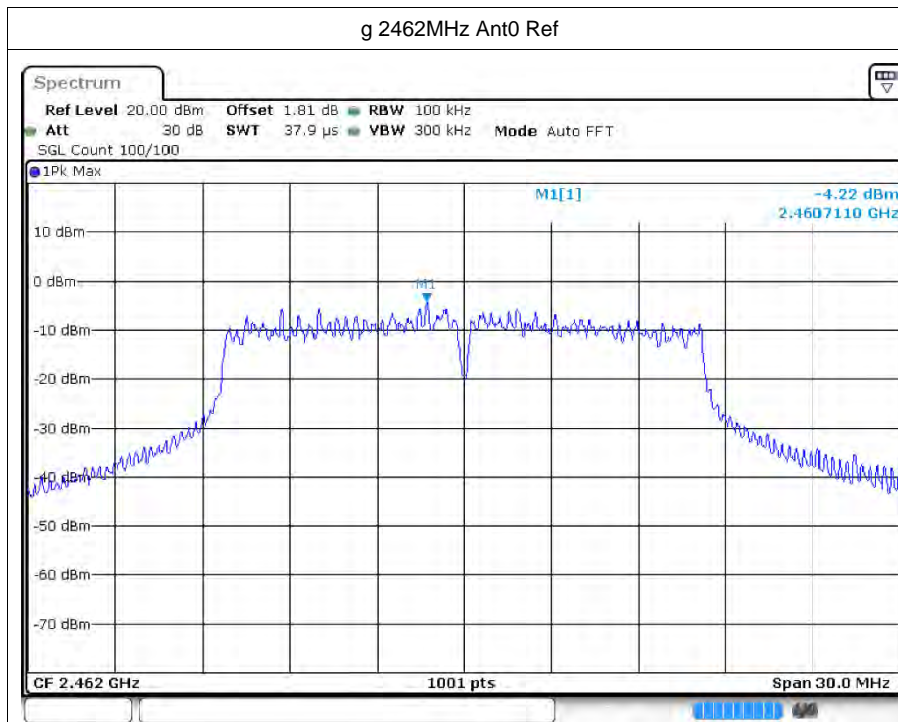
Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
b	2412	Ant0	-57.26	-20	-57.26
b	2462	Ant0	-57.29	-20	Pass
g	2412	Ant0	-51.22	-20	Pass
g	2462	Ant0	-50.14	-20	Pass
n20	2412	Ant0	-50	-20	Pass
n20	2462	Ant0	-50.1	-20	Pass
n40	2422	Ant0	-45.54	-20	Pass
n40	2452	Ant0	-41.9	-20	Pass
ax20	2412	Ant0	-37.42	-20	Pass
ax20	2462	Ant0	-40.24	-20	Pass
ax40	2422	Ant0	-45.32	-20	Pass
ax40	2452	Ant0	-39.51	-20	Pass
b	2412	Ant1	-58.21	-20	-58.21
b	2462	Ant1	-59.01	-20	Pass
g	2412	Ant1	-51.47	-20	Pass
g	2462	Ant1	-52.08	-20	Pass
n20	2412	Ant1	-51.18	-20	Pass
n20	2462	Ant1	-51.46	-20	Pass
n40	2422	Ant1	-47.64	-20	Pass
n40	2452	Ant1	-43.65	-20	Pass
ax20	2412	Ant1	-36.78	-20	Pass
ax20	2462	Ant1	-35.93	-20	Pass
ax40	2422	Ant1	-47.58	-20	Pass
ax40	2452	Ant1	-43.84	-20	Pass

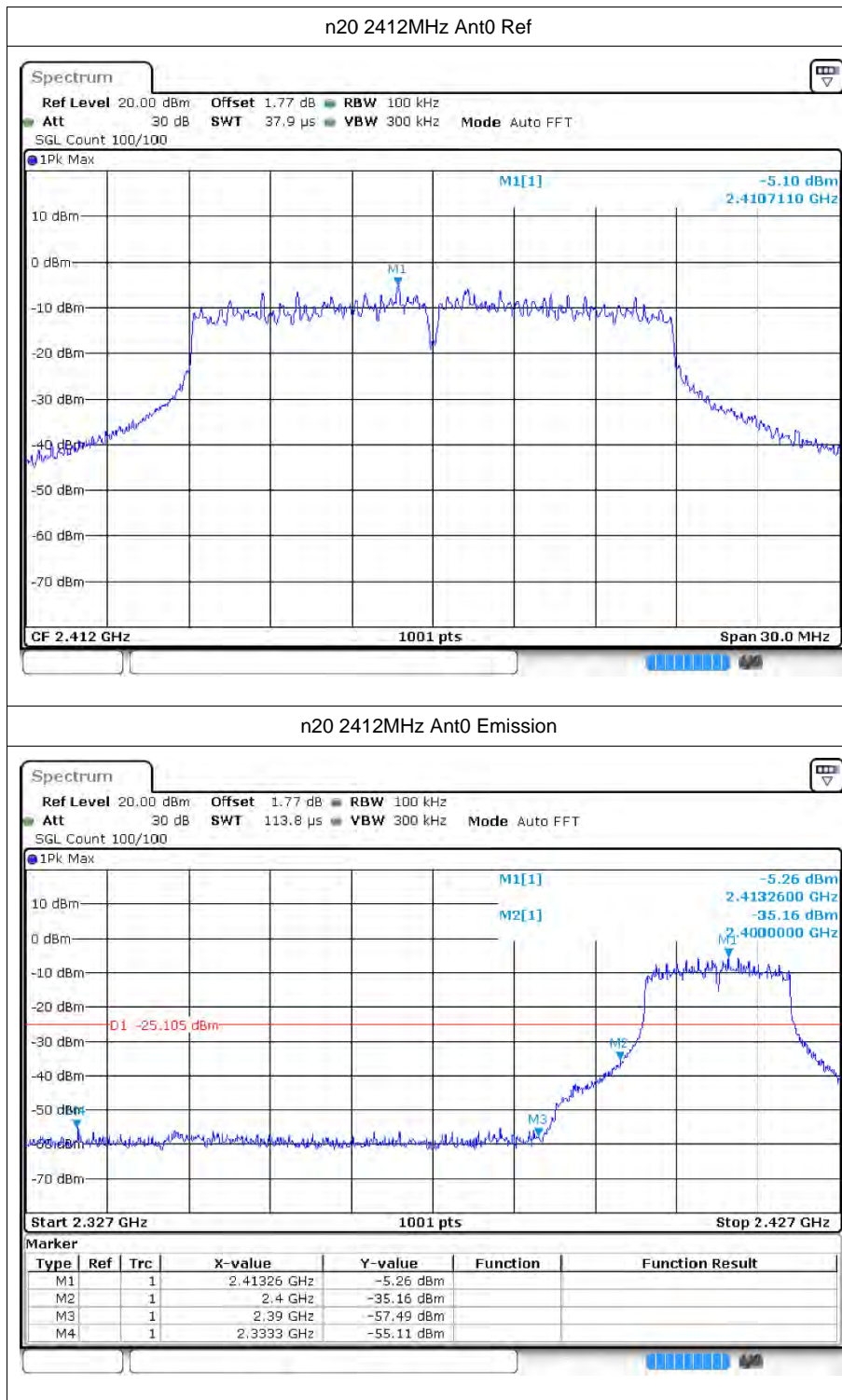
Test Graphs

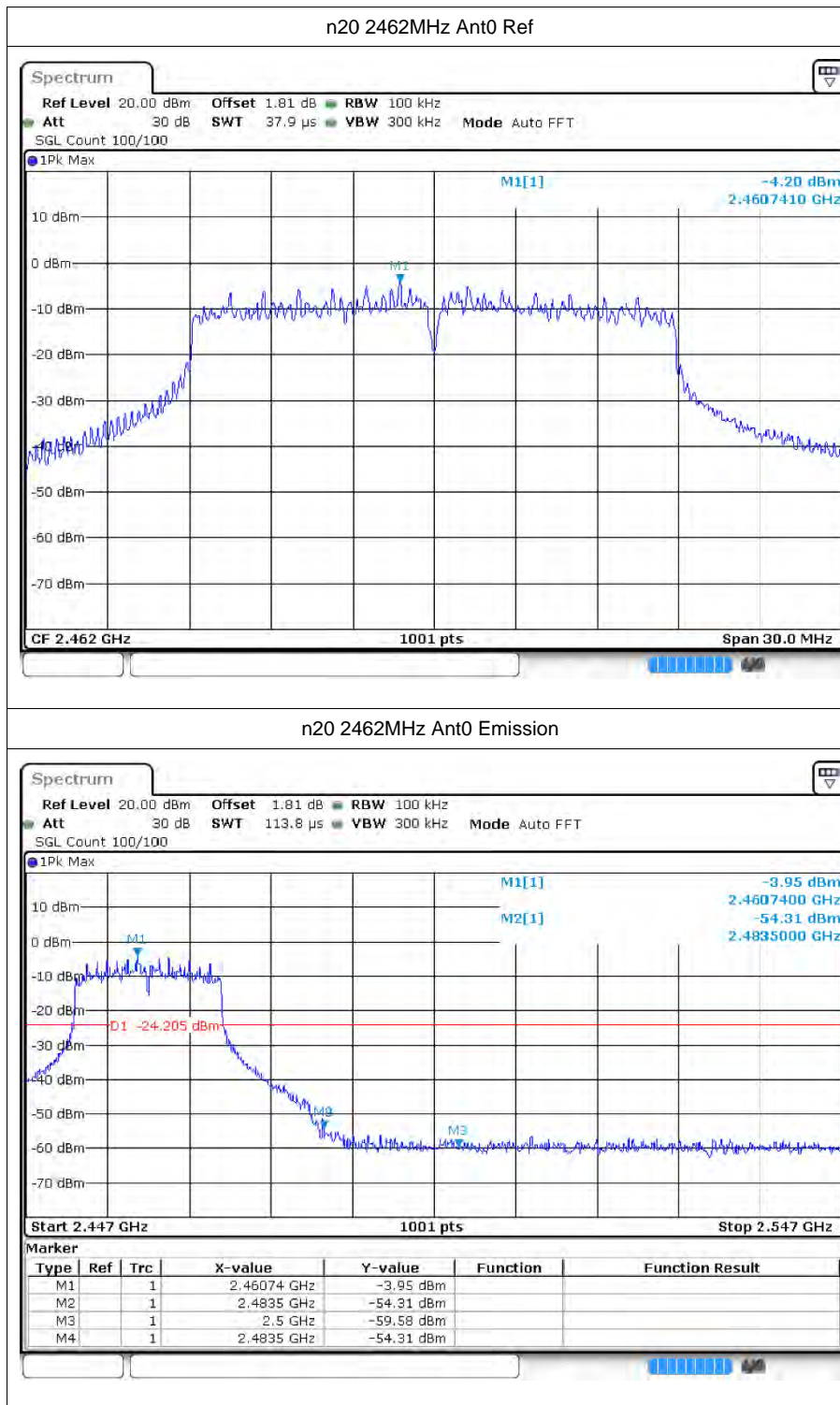


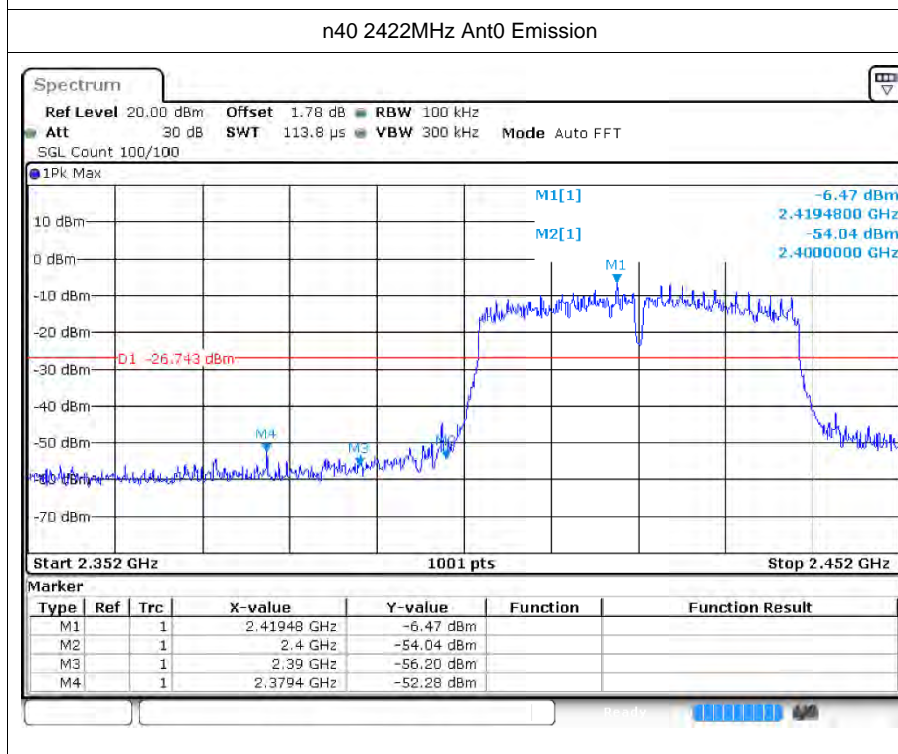
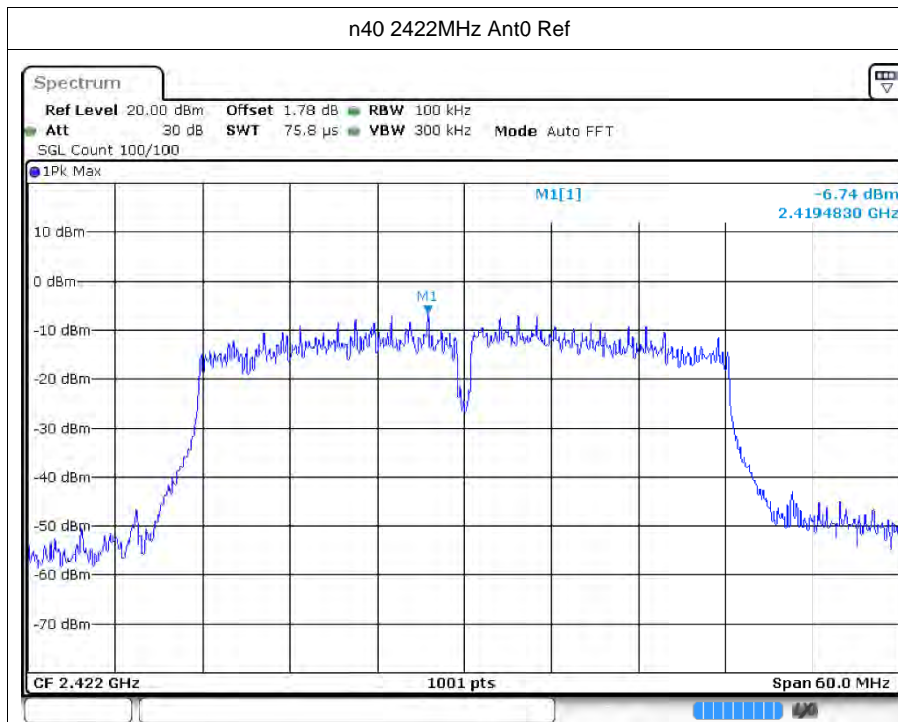


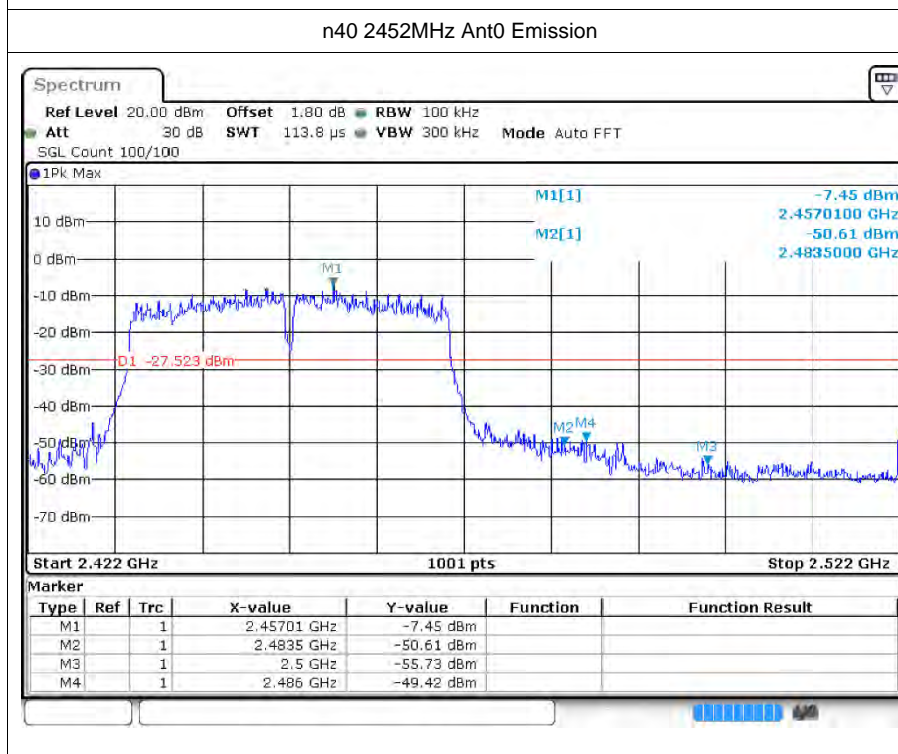
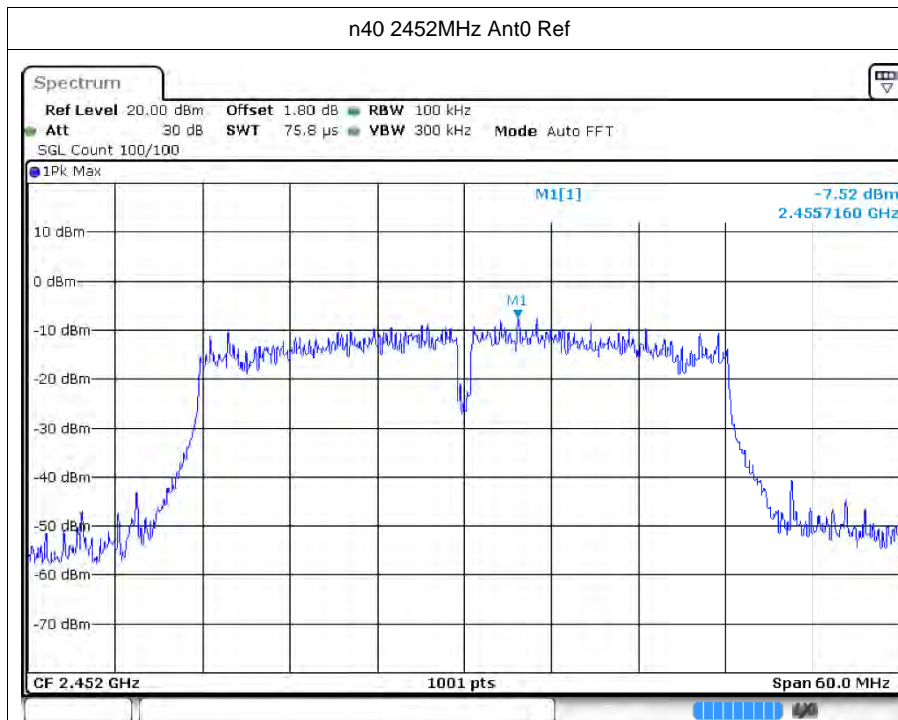




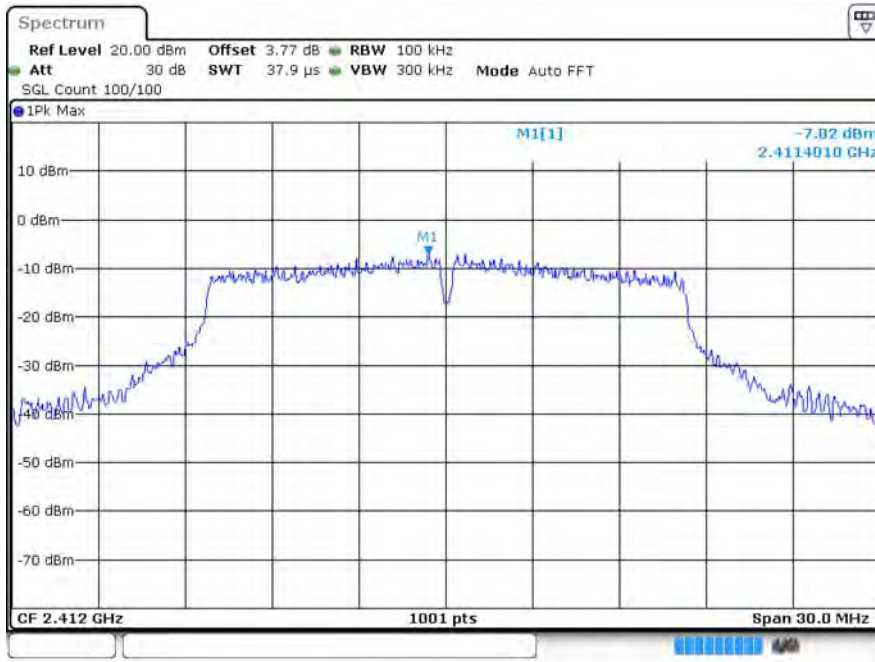






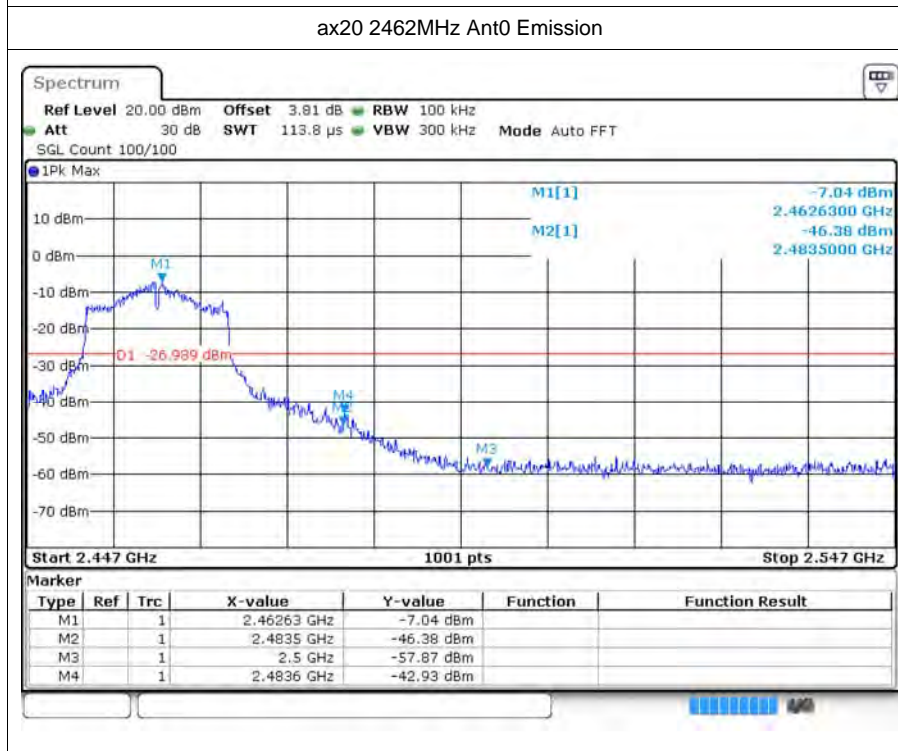
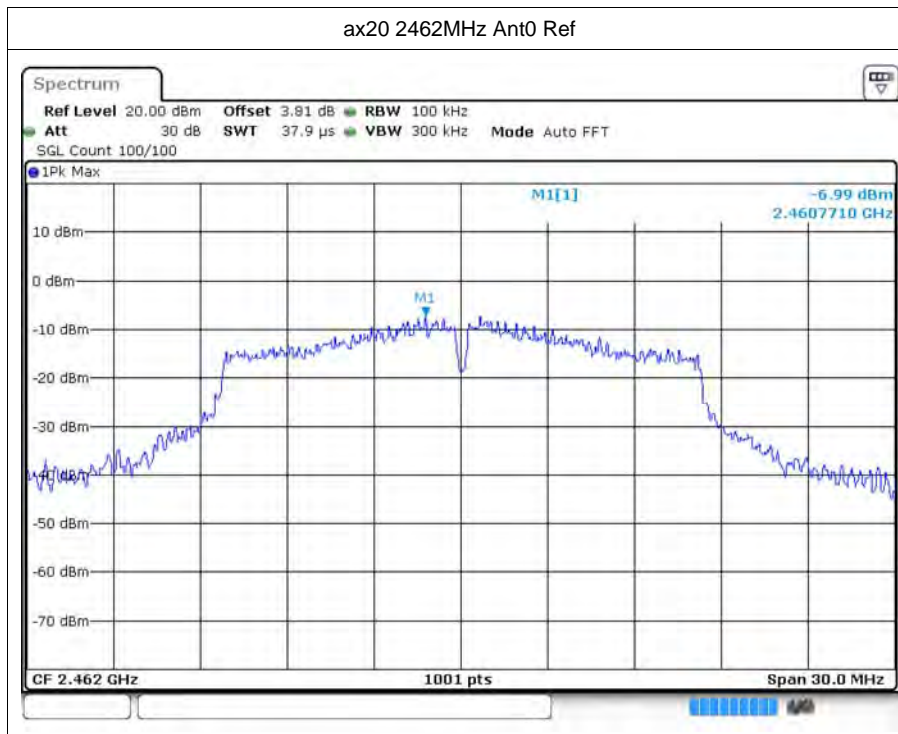


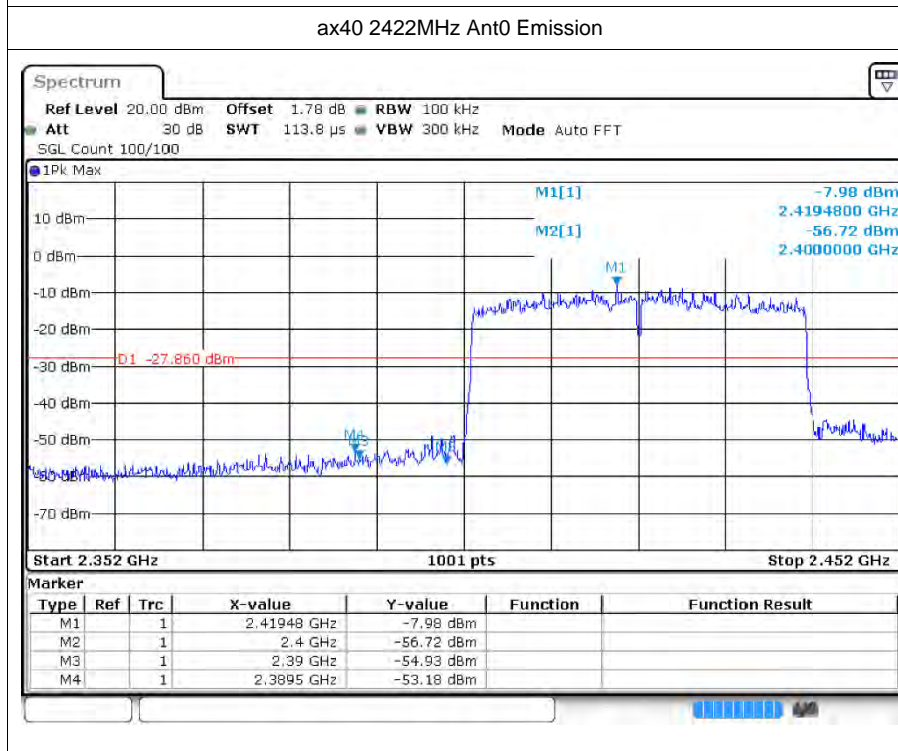
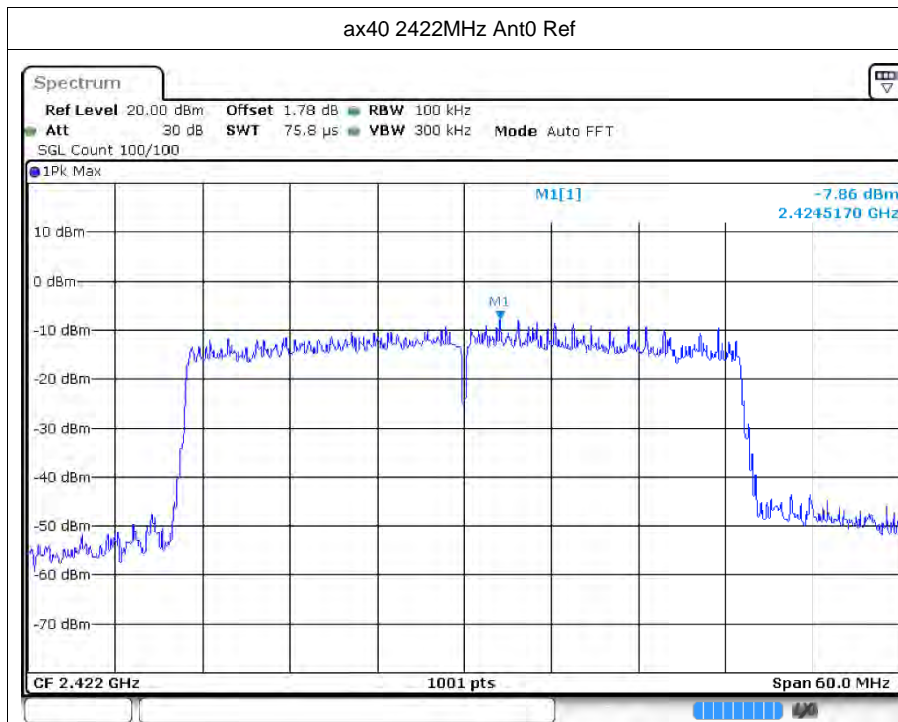
ax20 2412MHz Ant0 Ref

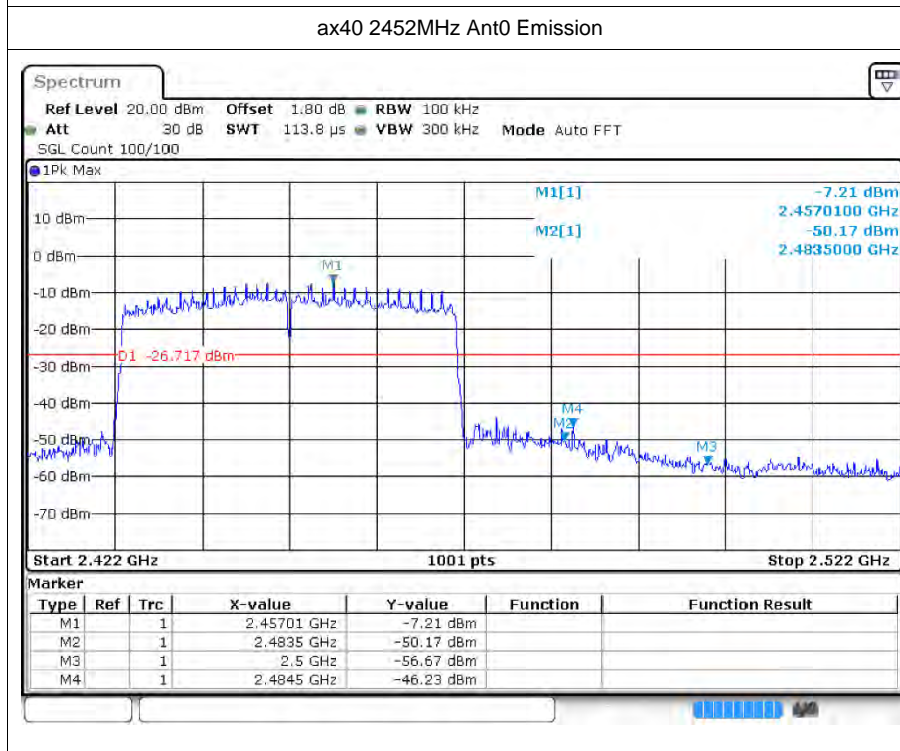
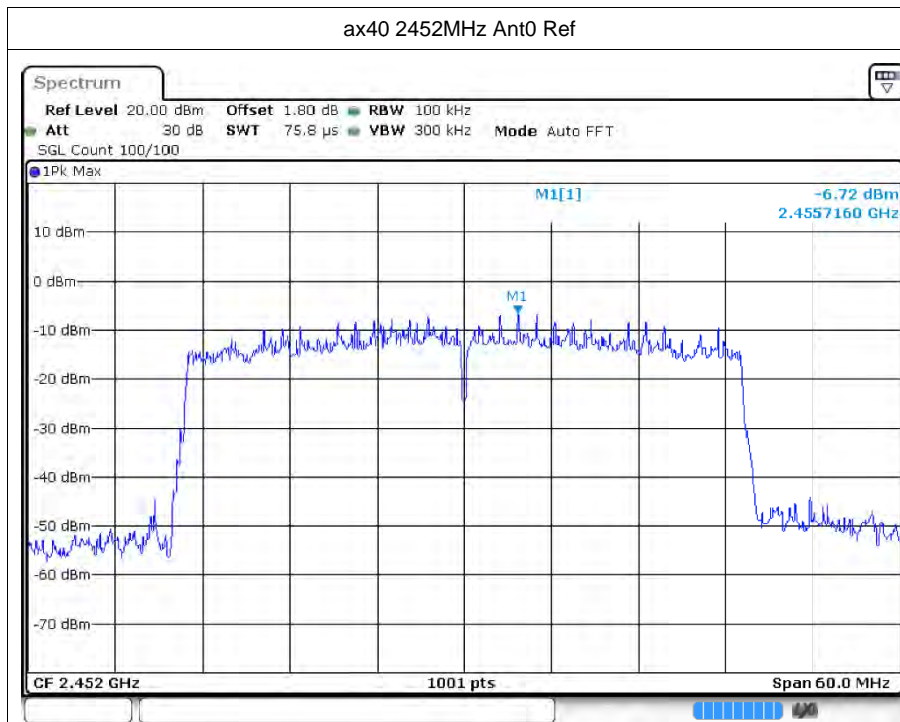


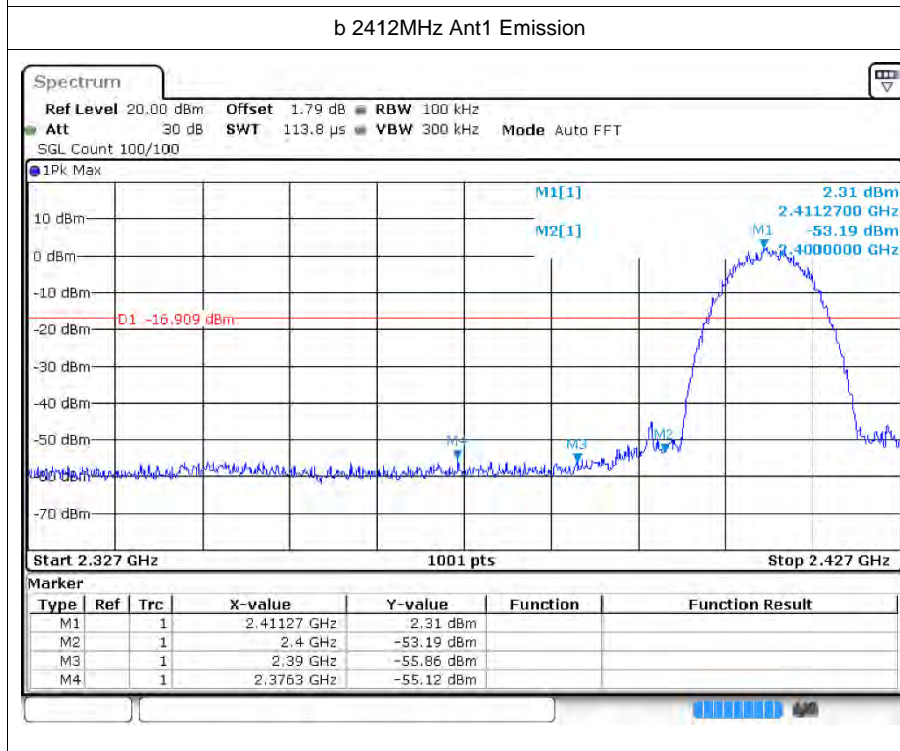
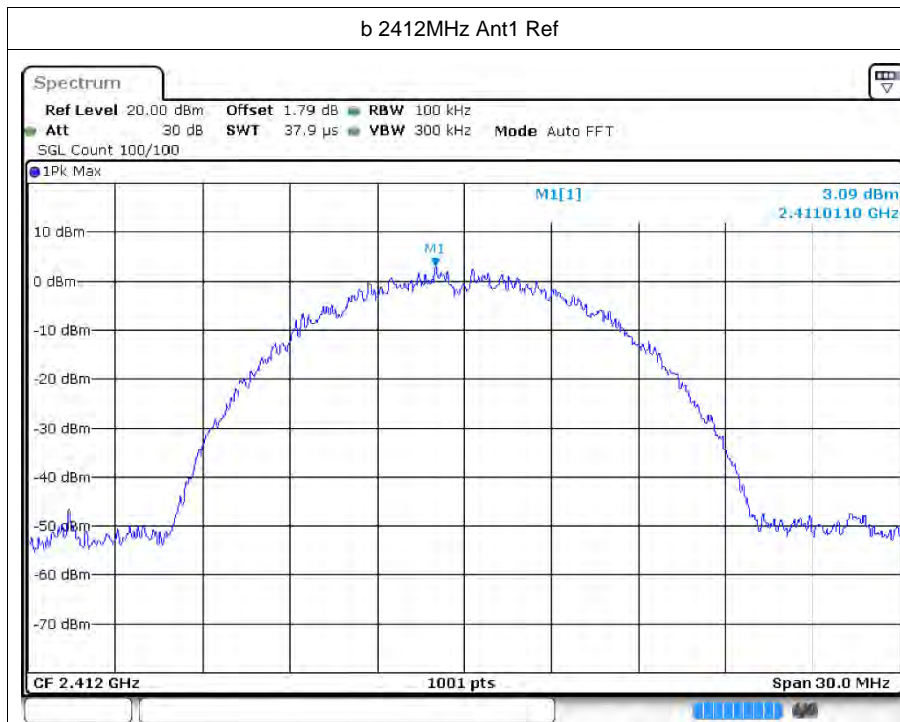
ax20 2412MHz Ant0 Emission

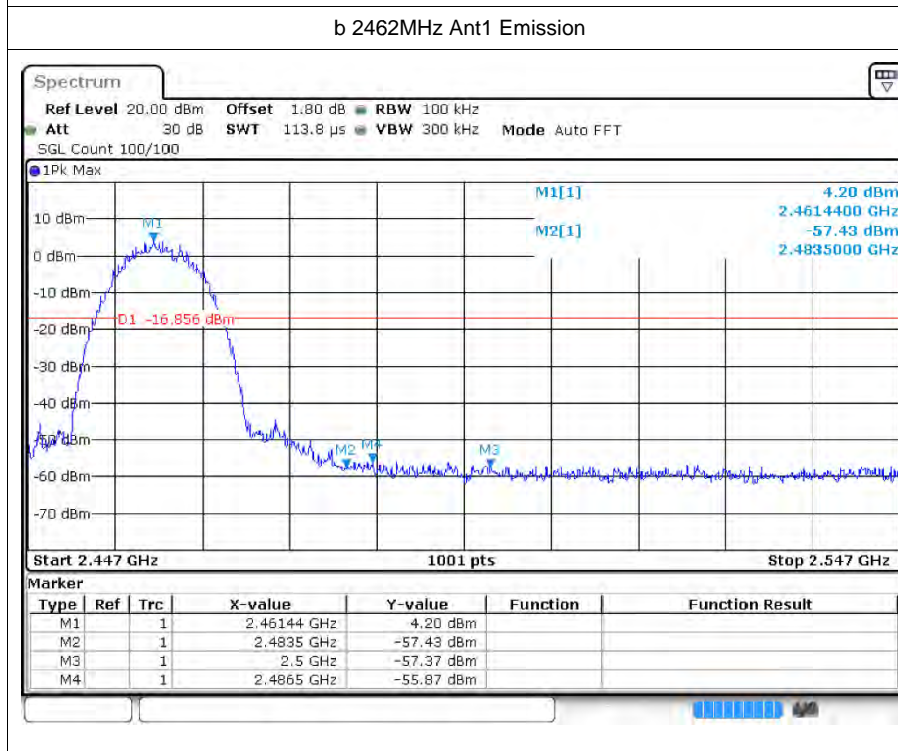
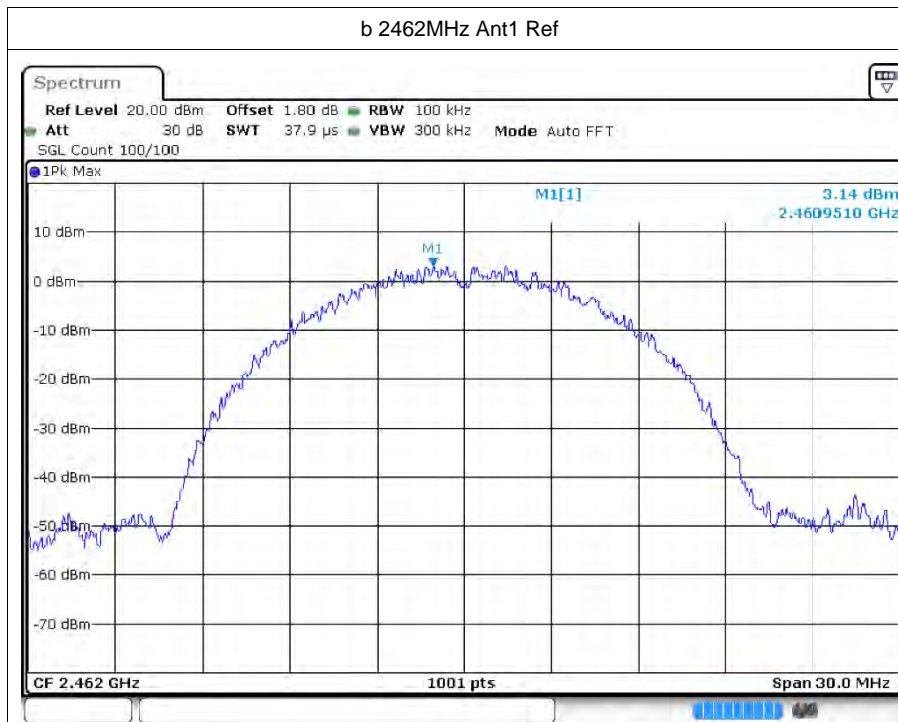


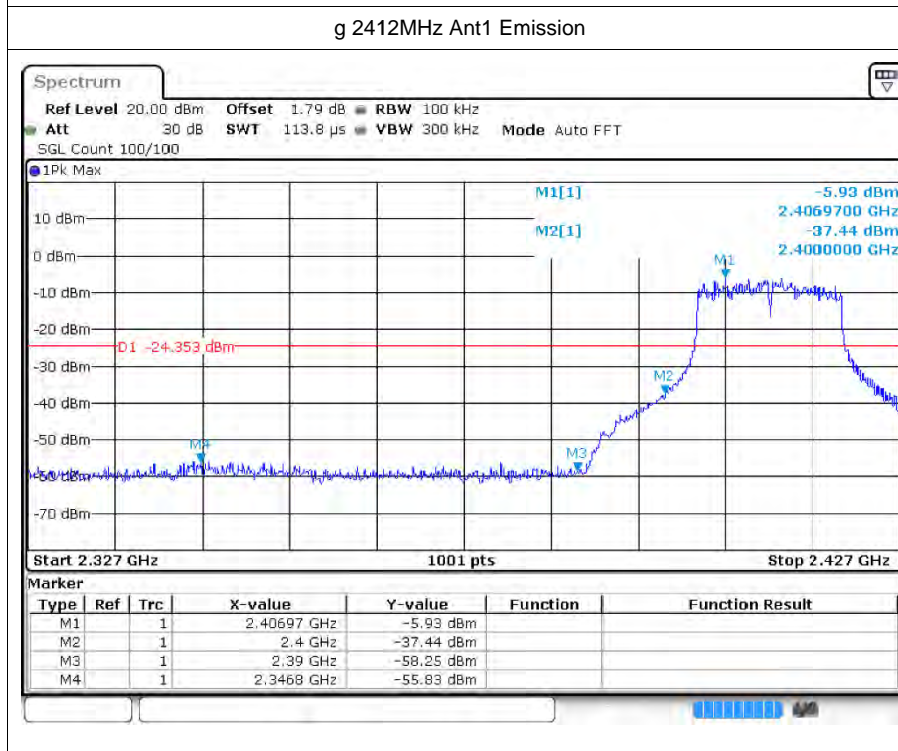
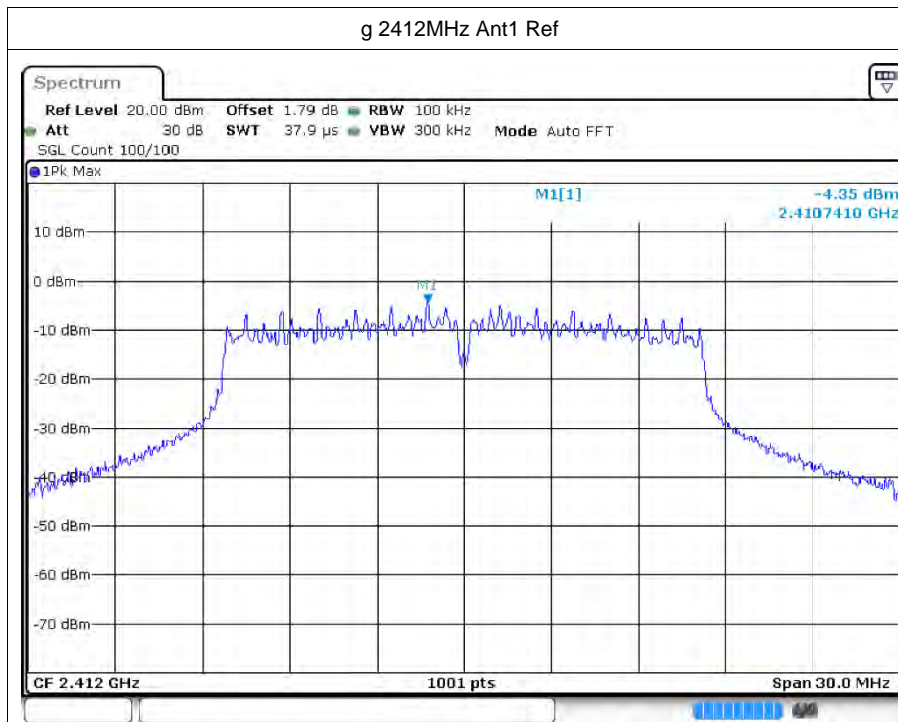


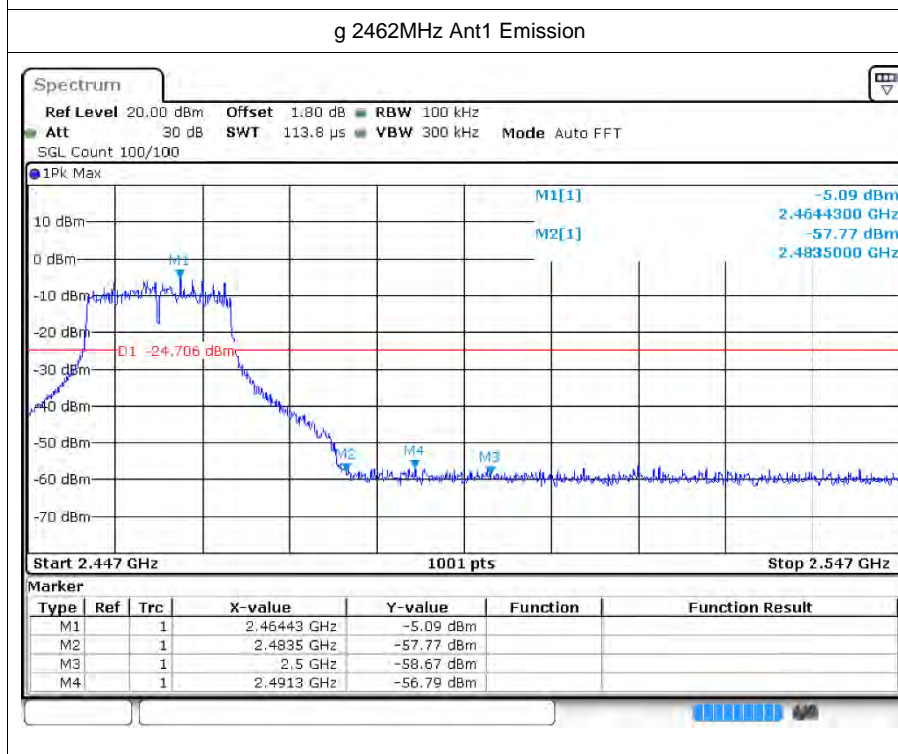
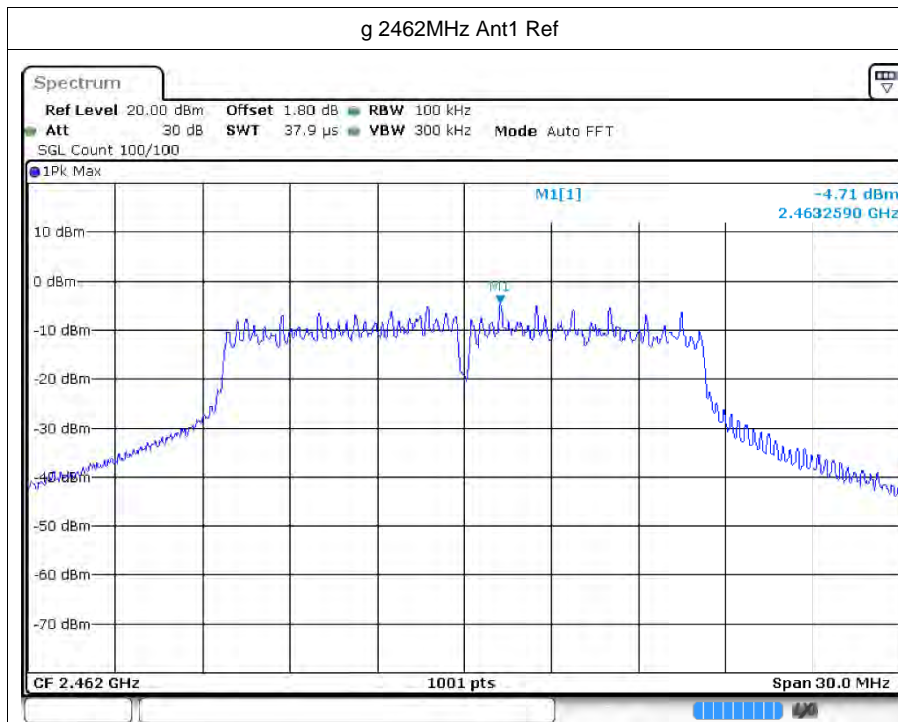


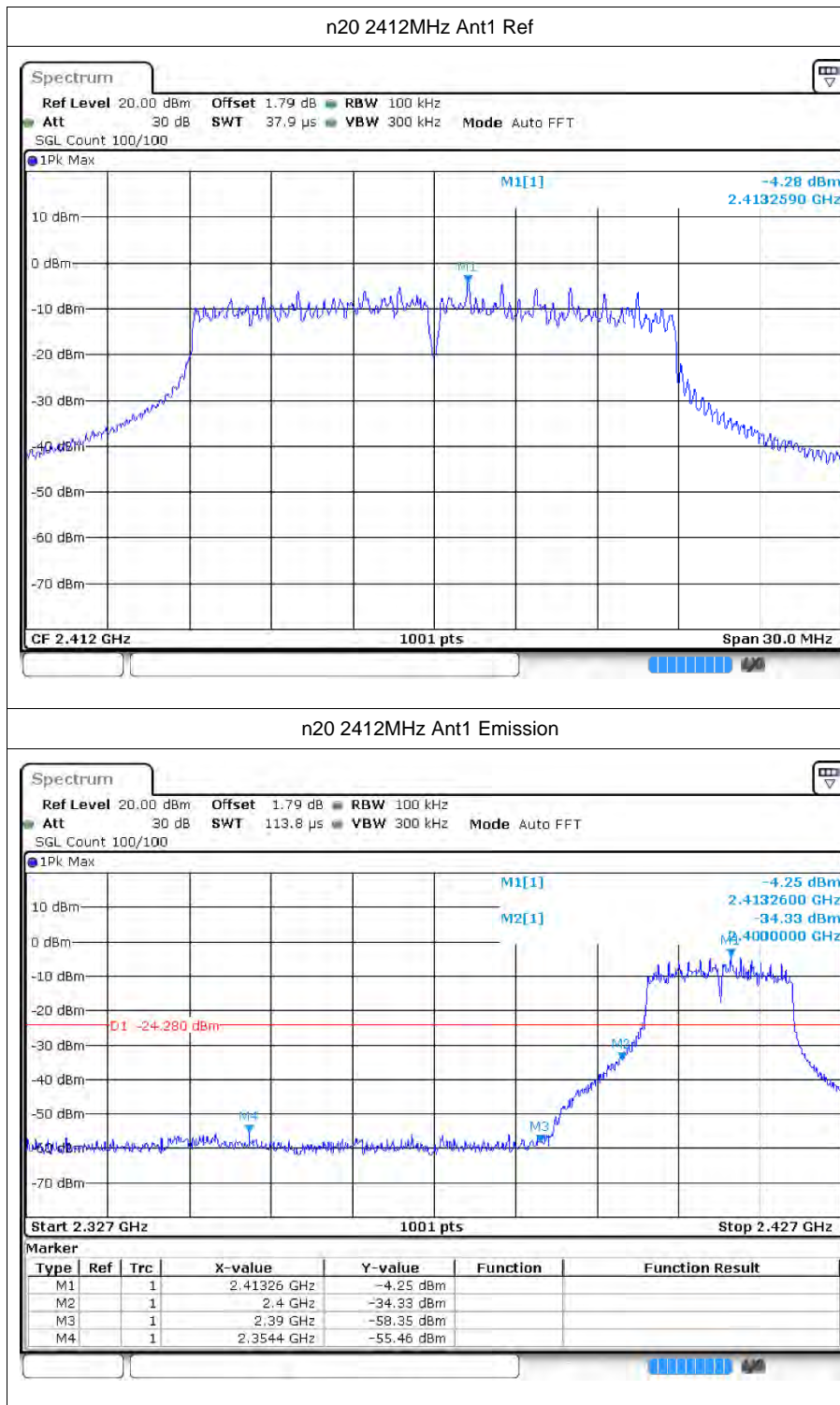


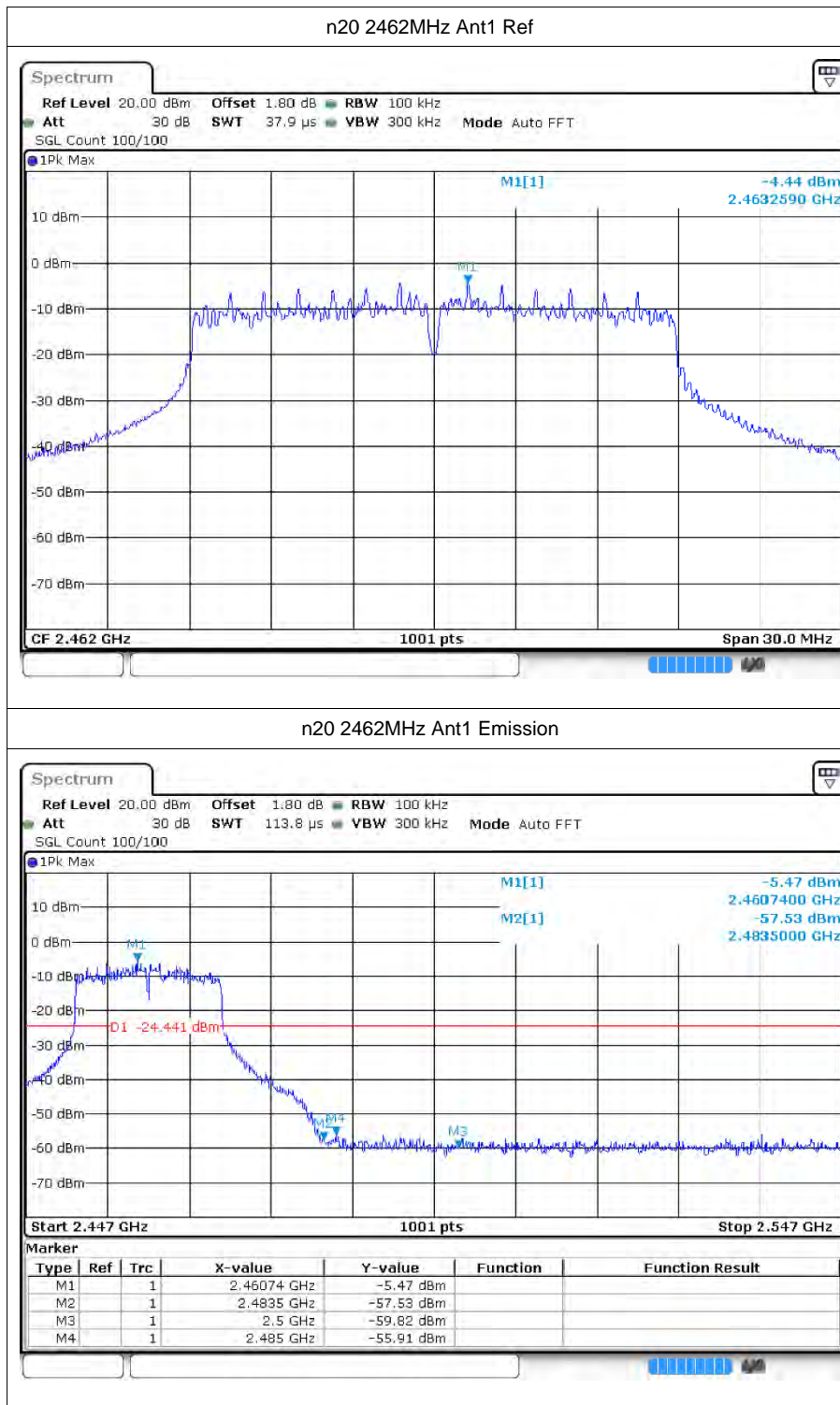


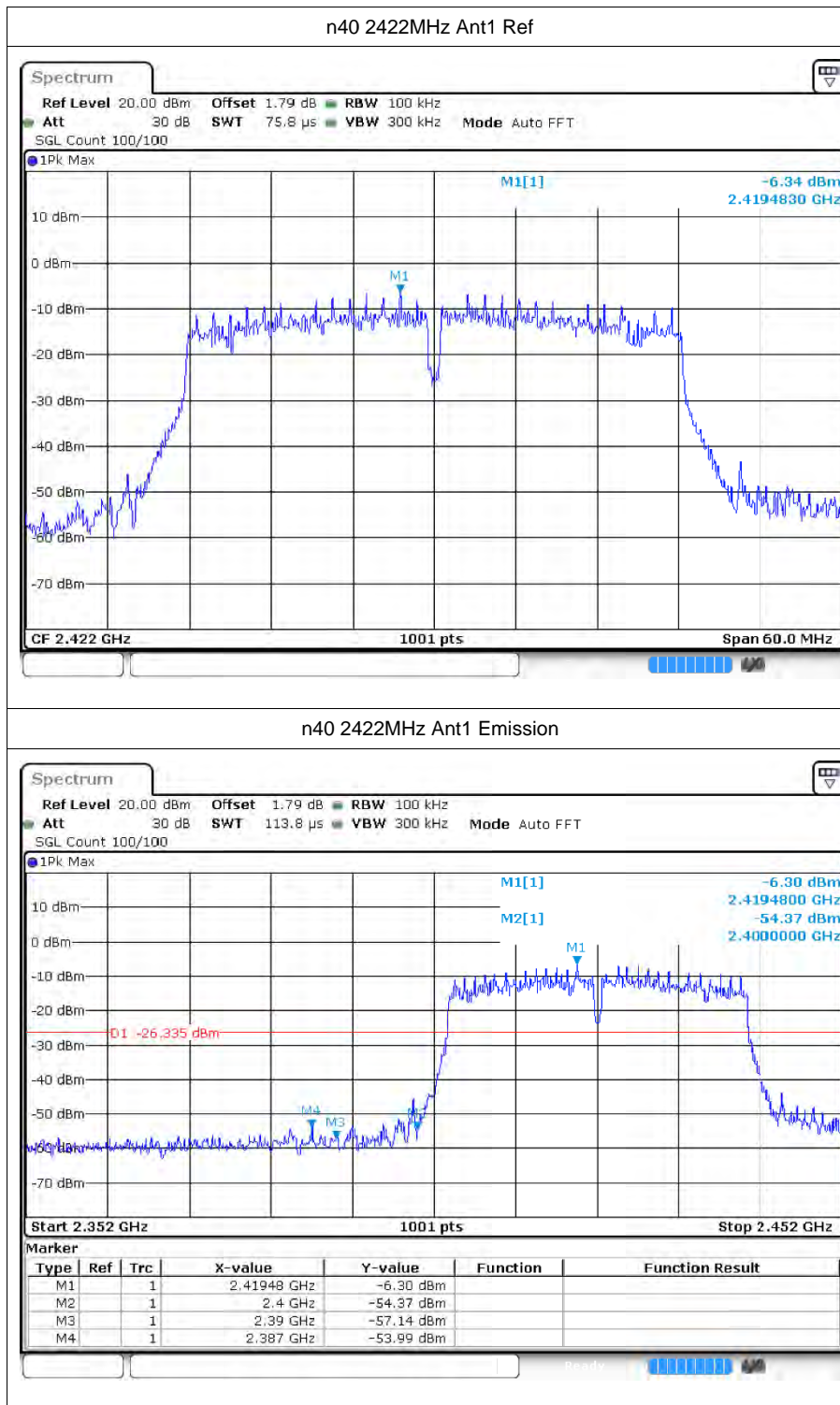


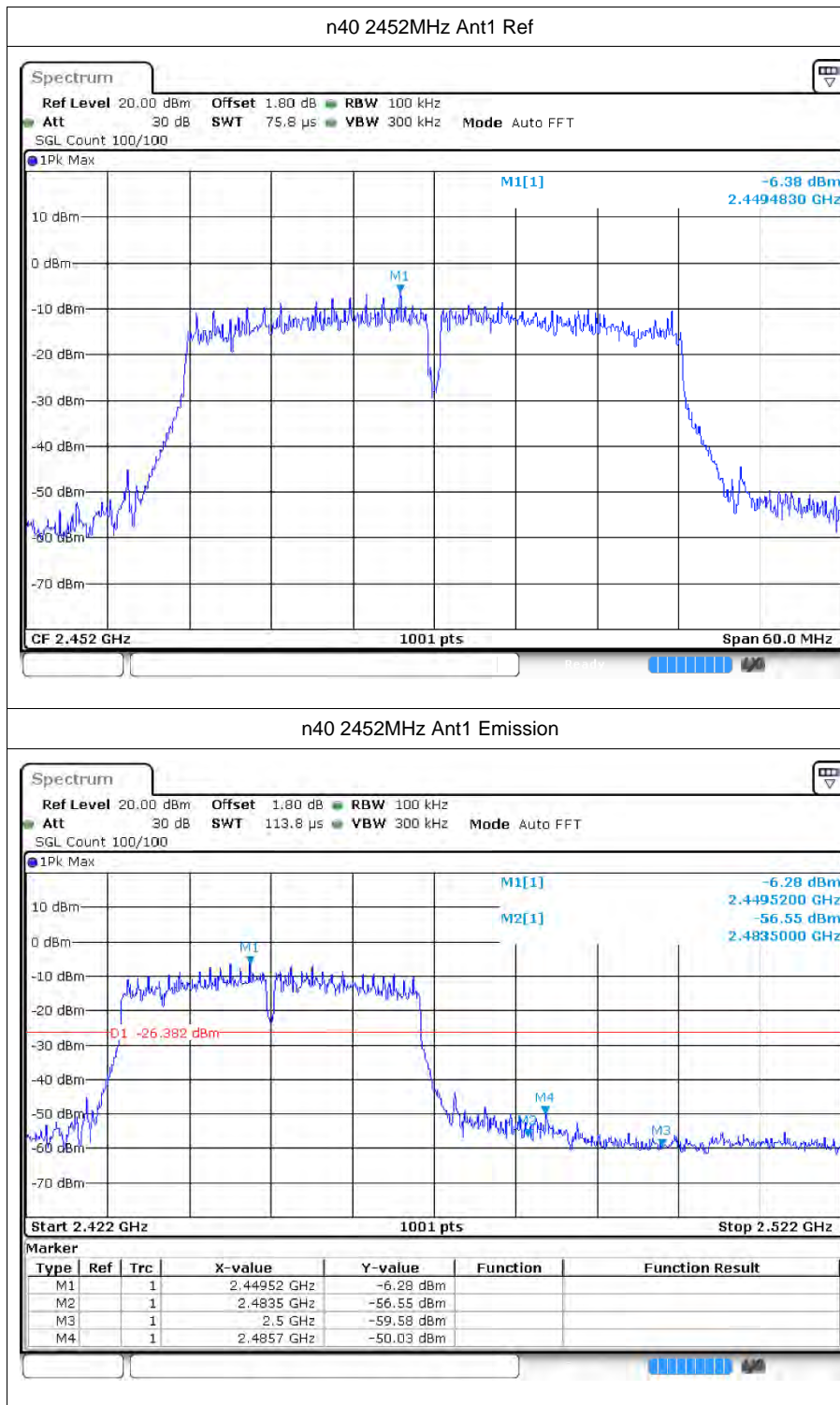




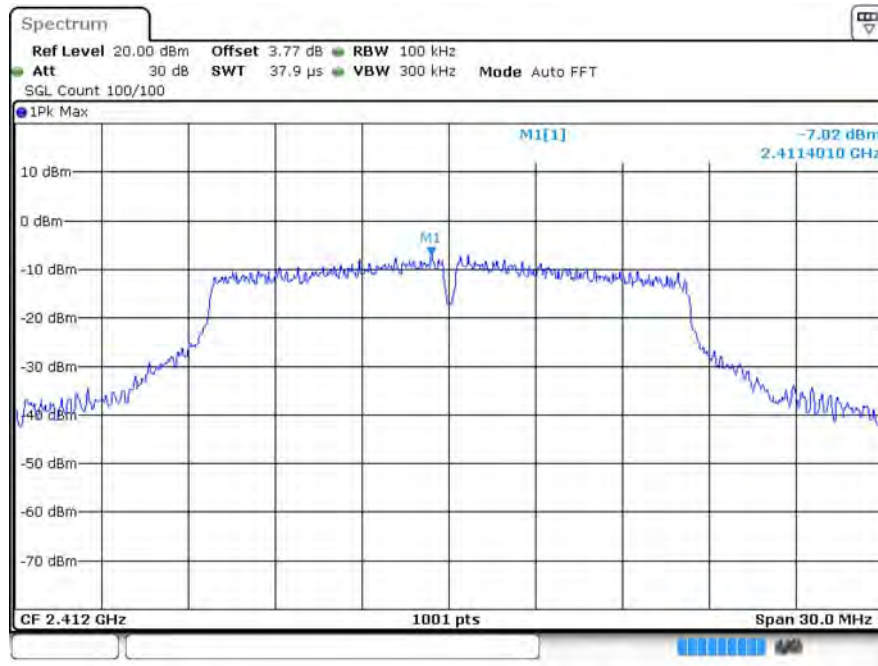






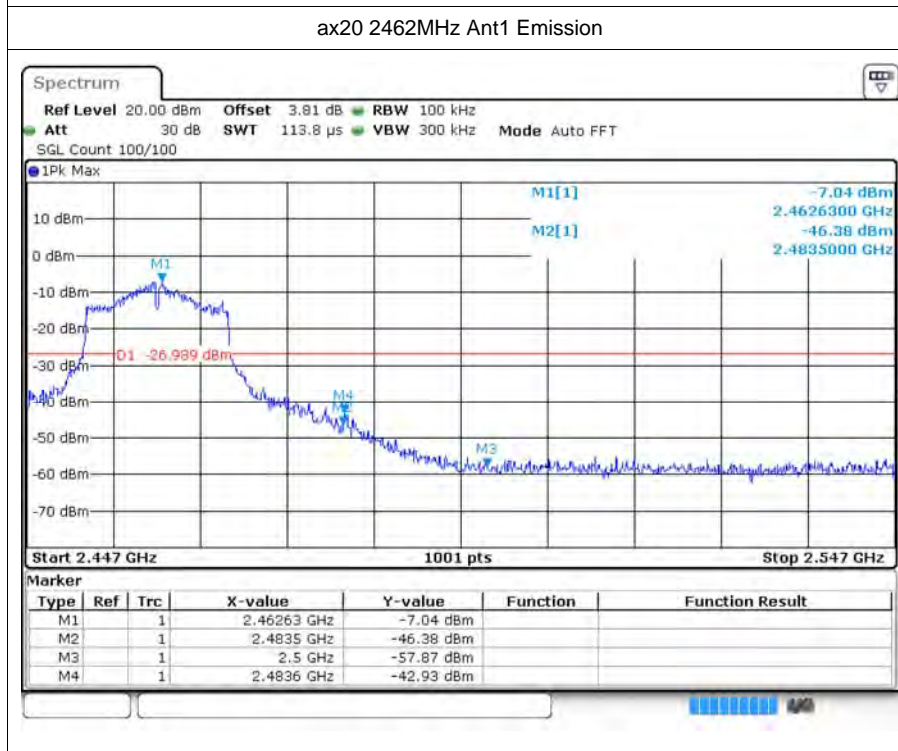
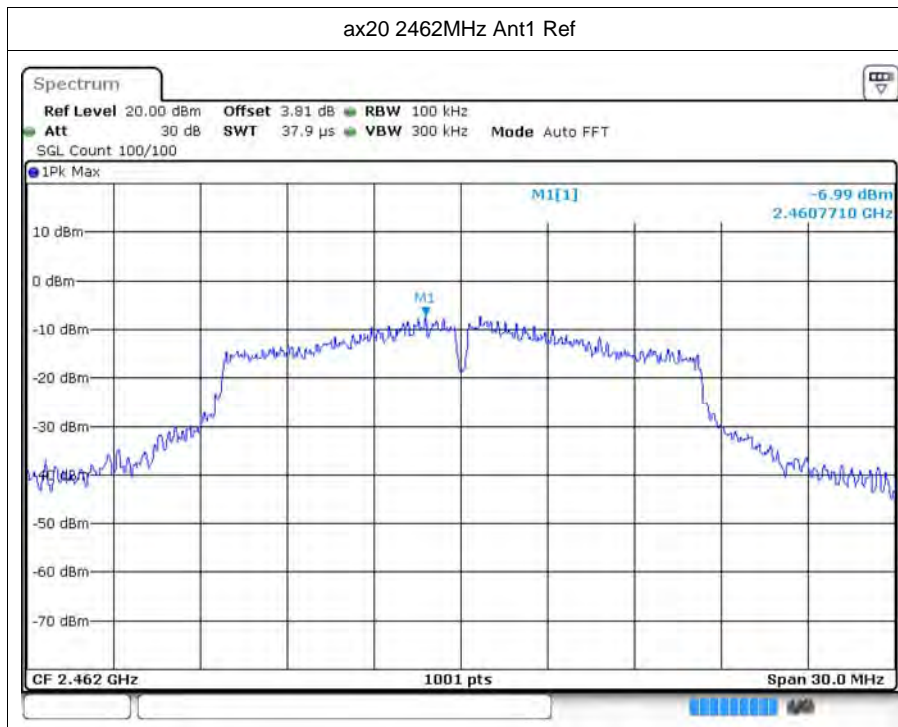


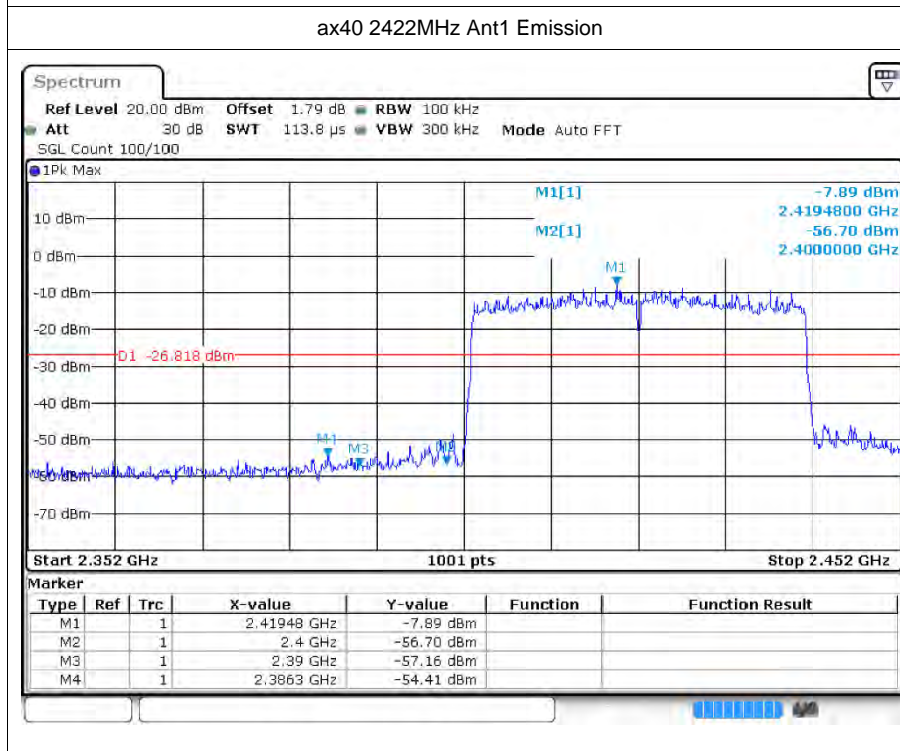
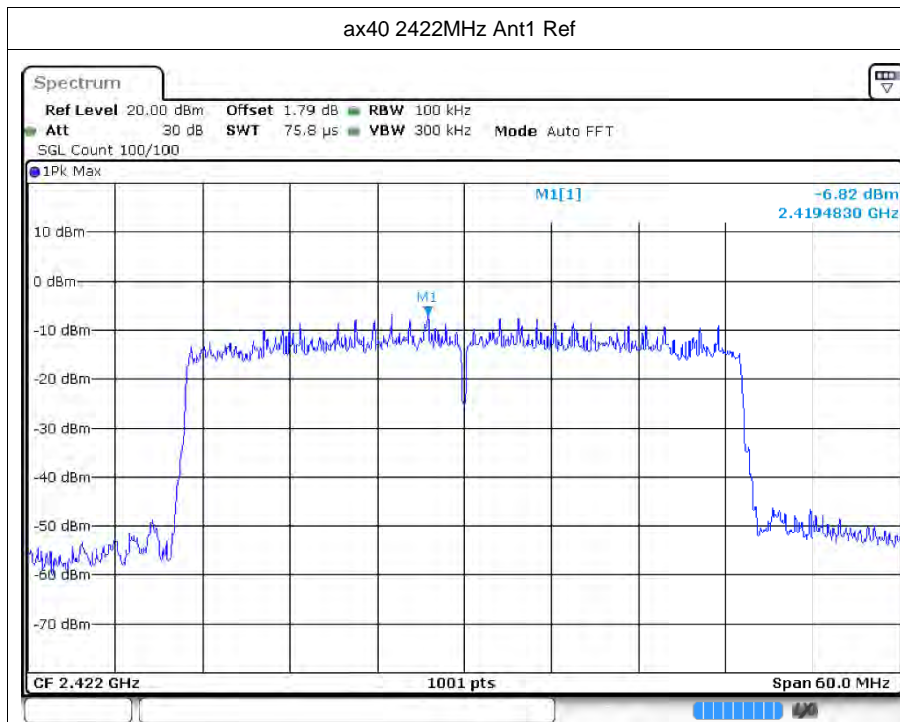
ax20 2412MHz Ant1 Ref

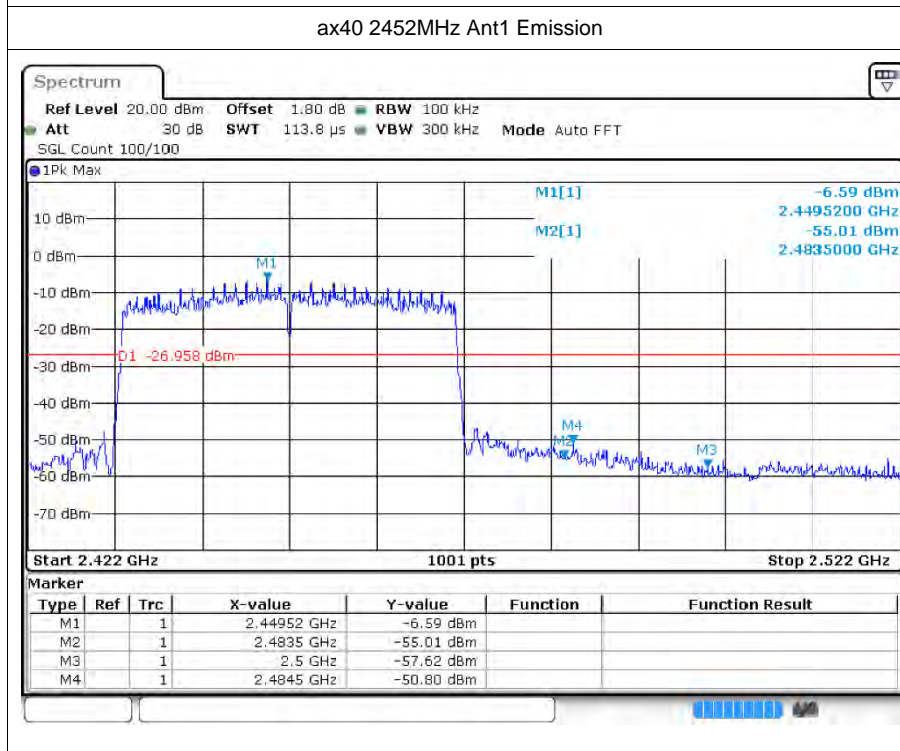
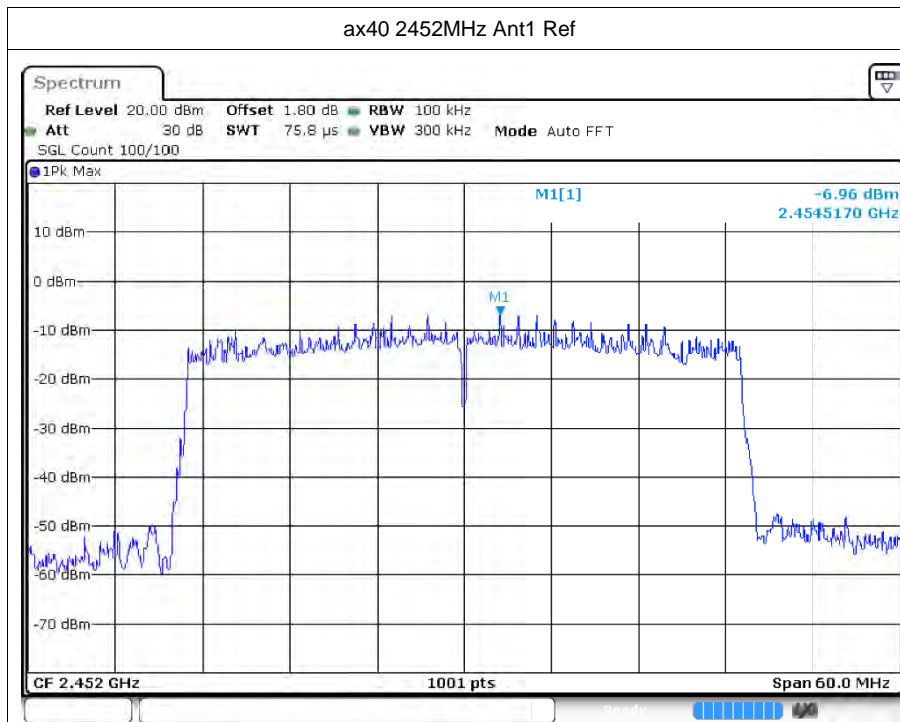


ax20 2412MHz Ant1 Emission









6 Conducted RF Spurious Emission

Test Result

Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
b	2412	Ant0	-46.22	-20	Pass
b	2437	Ant0	-47.39	-20	Pass
b	2462	Ant0	-48	-20	Pass
g	2412	Ant0	-37.21	-20	Pass
g	2437	Ant0	-39.88	-20	Pass
g	2462	Ant0	-39.7	-20	Pass
n20	2412	Ant0	-39.87	-20	Pass
n20	2437	Ant0	-40.34	-20	Pass
n20	2462	Ant0	-39.32	-20	Pass
n40	2422	Ant0	-37.58	-20	Pass
n40	2437	Ant0	-37.33	-20	Pass
n40	2452	Ant0	-37.45	-20	Pass
ax20	2412	Ant0	-39.83	-20	Pass
ax20	2437	Ant0	-37.82	-20	Pass
ax20	2462	Ant0	-37.63	-20	Pass
ax40	2422	Ant0	-35.36	-20	Pass
ax40	2437	Ant0	-36.76	-20	Pass
ax40	2452	Ant0	-37.1	-20	Pass
b	2412	Ant1	-43.73	-20	Pass
b	2437	Ant1	-47.59	-20	Pass
b	2462	Ant1	-47.64	-20	Pass
g	2412	Ant1	-39.65	-20	Pass
g	2437	Ant1	-40.09	-20	Pass
g	2462	Ant1	-39.71	-20	Pass
n20	2412	Ant1	-40.04	-20	Pass
n20	2437	Ant1	-39.26	-20	Pass
n20	2462	Ant1	-39.95	-20	Pass
n40	2422	Ant1	-38.2	-20	Pass
n40	2437	Ant1	-37.57	-20	Pass
n40	2452	Ant1	-38.01	-20	Pass
ax20	2412	Ant1	-37.99	-20	Pass
ax20	2437	Ant1	-38.39	-20	Pass
ax20	2462	Ant1	-38.1	-20	Pass
ax40	2422	Ant1	-35.76	-20	Pass

ax40	2437	Ant1	-35.69	-20	Pass
ax40	2452	Ant1	-36.95	-20	Pass