



Appendix D

RF Test Data for B1WIFI(Conducted Measurement)

Product Name: projector

Trade Mark: HAPPRUN

Test Model: JQ820

Environmental Conditions

Temperature:	25.4° C
Relative Humidity:	52.5%
ATM Pressure:	100.0 kPa
Test Engineer:	Emiya lin
Supervised by:	Simba Haung



Contents

Page

COVER PAGE

1	Duty Cycle	3
1.1	Test Result	3
1.2	Test Graphs	4
2	Maximum Conducted Output Power	14
2.1	Test Result	14
3	-26dB Bandwidth	15
3.1	Test Result	15
3.2	Test Graphs	16
4	Occupied Channel Bandwidth	26
4.1	Test Result	26
4.2	Test Graphs	27
5	Maximum Power Spectral Density Level	37
5.1	Test Result	37
5.2	Test Graphs	38
6	Frequency Stability	48
6.1	Test Result	48
7	Conducted RF Spurious Emission	53
7.1	Test Result	53
7.2	Test Graphs	54
8	Restrict Band	64
8.1	Test Result	64
8.2	Test Graphs	67

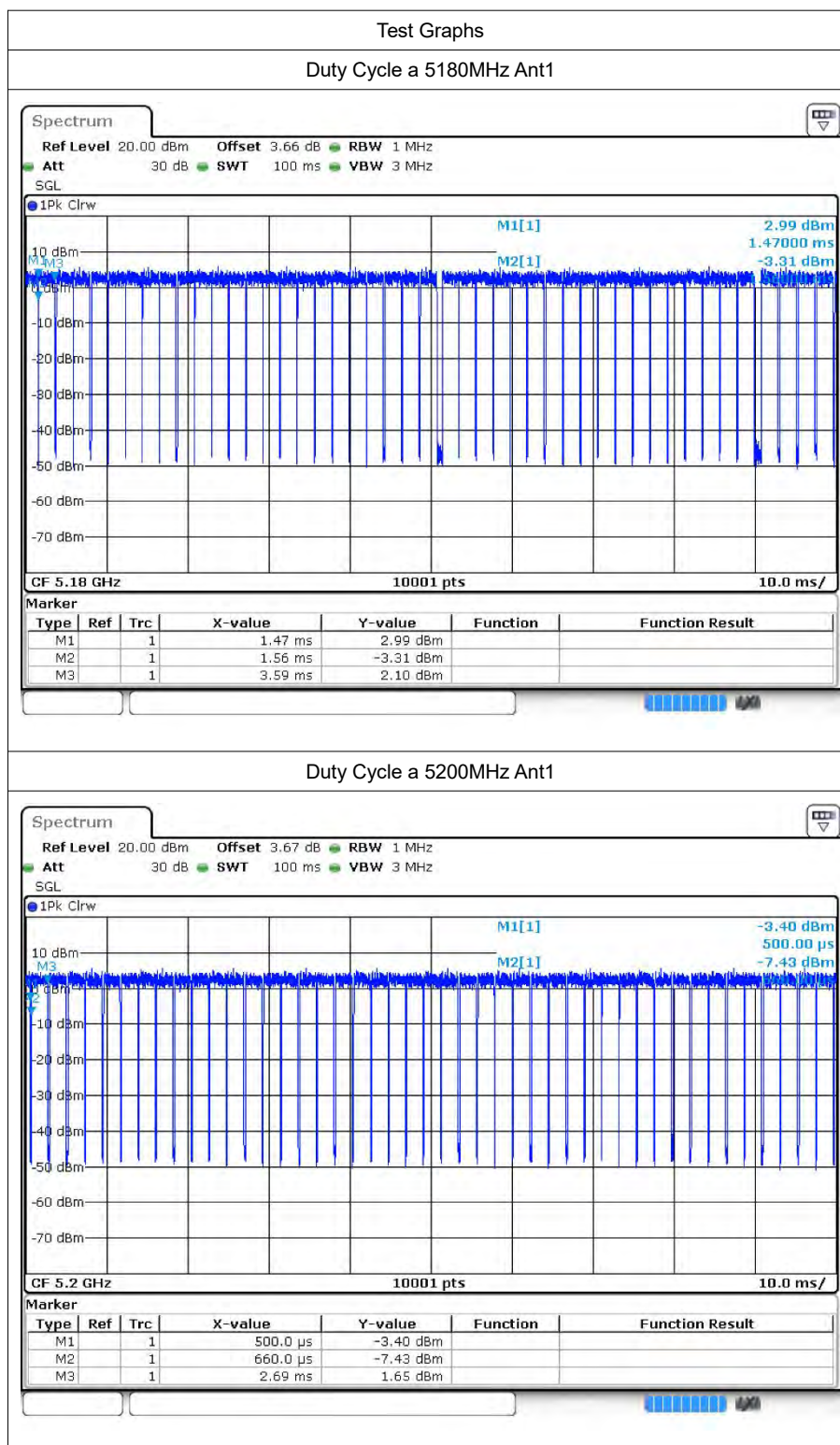


1 Duty Cycle

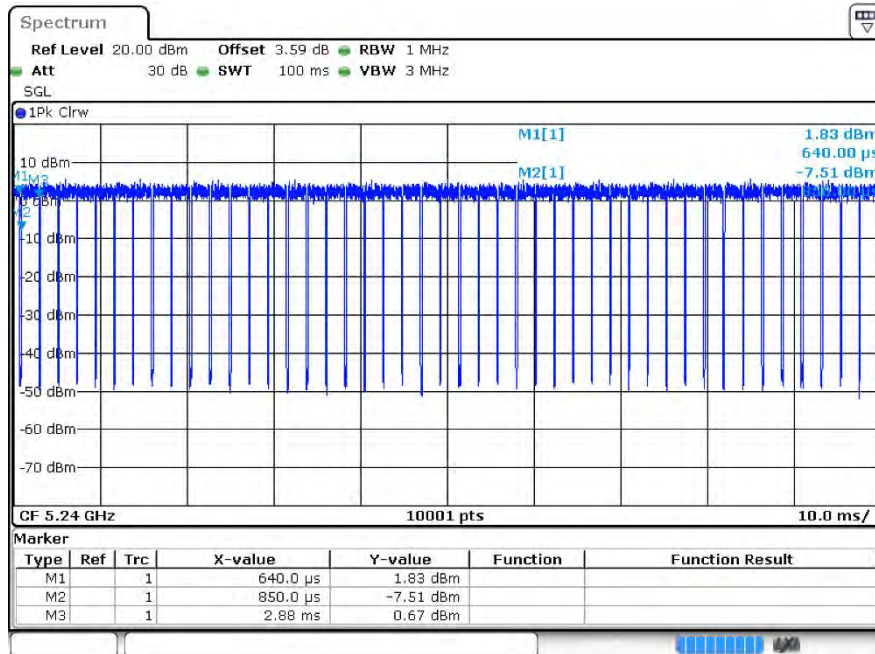
1.1 Test Result

Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
a	5180	Ant1	93.58	0.29	0.49
a	5200	Ant1	92.63	0.33	0.49
a	5240	Ant1	92.85	0.32	0.49
n20	5180	Ant1	92.7	0.33	0.53
n20	5200	Ant1	94.44	0.25	0.53
n20	5240	Ant1	95.35	0.21	0.53
n40	5190	Ant1	90.14	0.45	1.08
n40	5230	Ant1	85.37	0.69	1.08
ac20	5180	Ant1	95.39	0.2	0.53
ac20	5200	Ant1	95.21	0.21	0.53
ac20	5240	Ant1	95.47	0.2	0.53
ac40	5190	Ant1	85.22	0.69	1.08
ac40	5230	Ant1	87.95	0.56	1.06
ax20	5180	Ant1	94.12	0.26	0.68
ax20	5200	Ant1	93.91	0.27	0.68
ax20	5240	Ant1	93.66	0.28	0.68
ax40	5190	Ant1	97.55	0.11	0.26
ax40	5230	Ant1	95.76	0.19	0.26

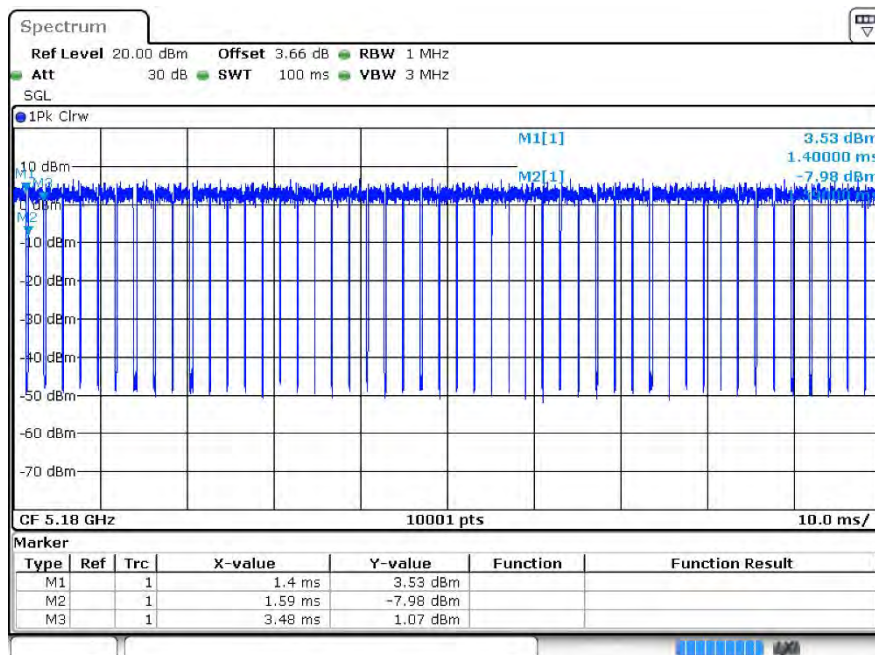
1.2 Test Graphs



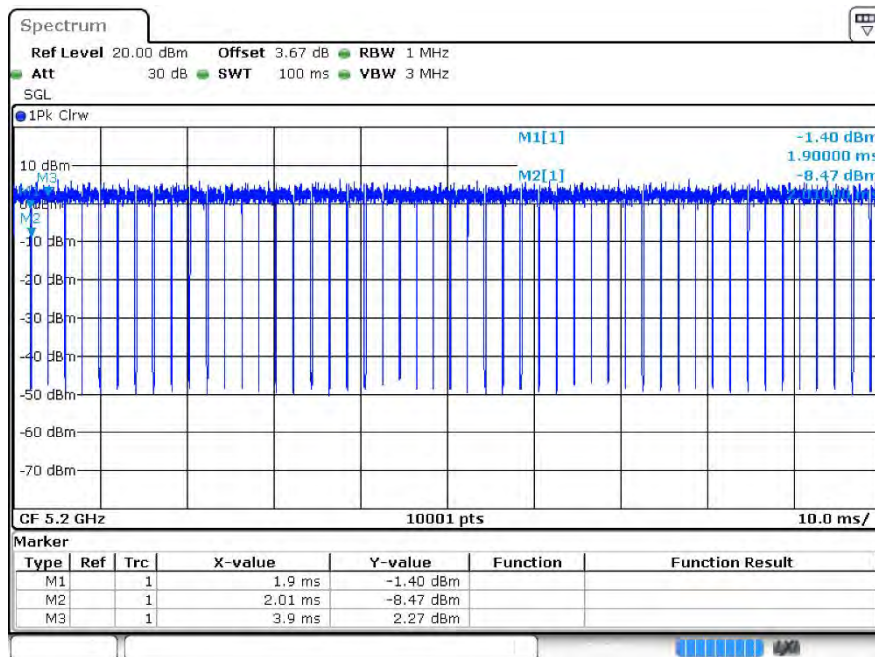
Duty Cycle a 5240MHz Ant1



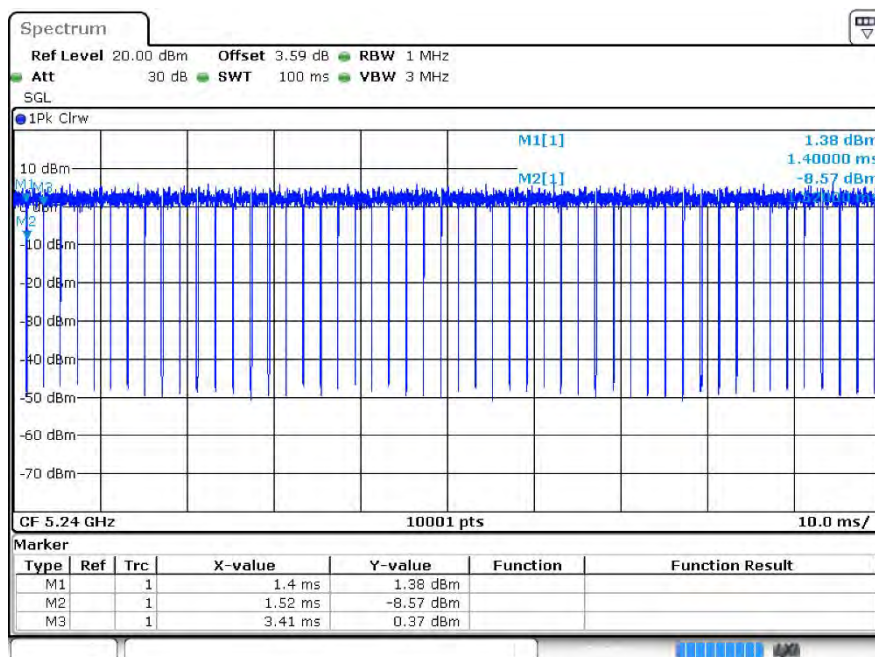
Duty Cycle n20 5180MHz Ant1

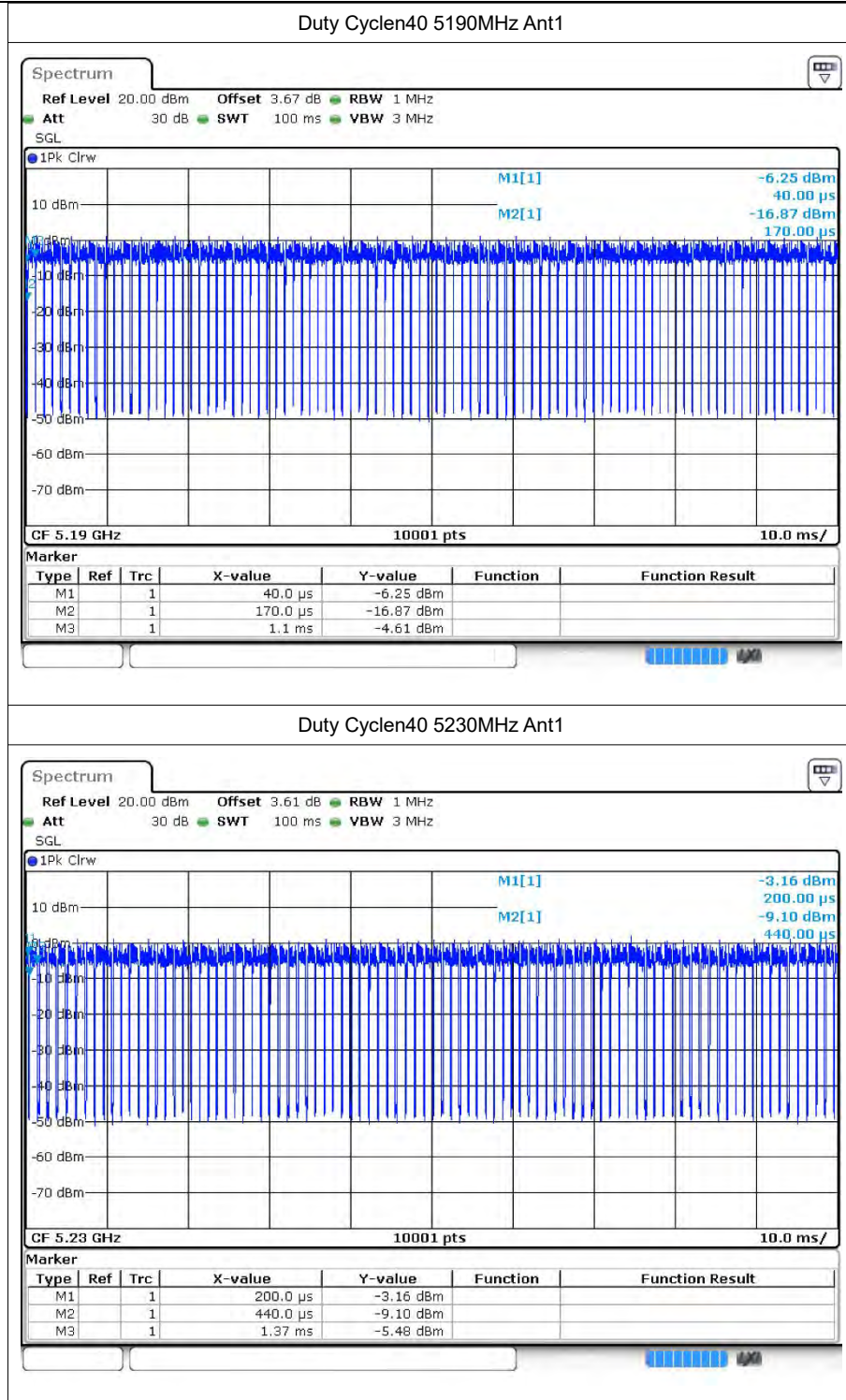


Duty Cycle a n20 5200MHz Ant1



Duty Cycle n20 5240MHz Ant1

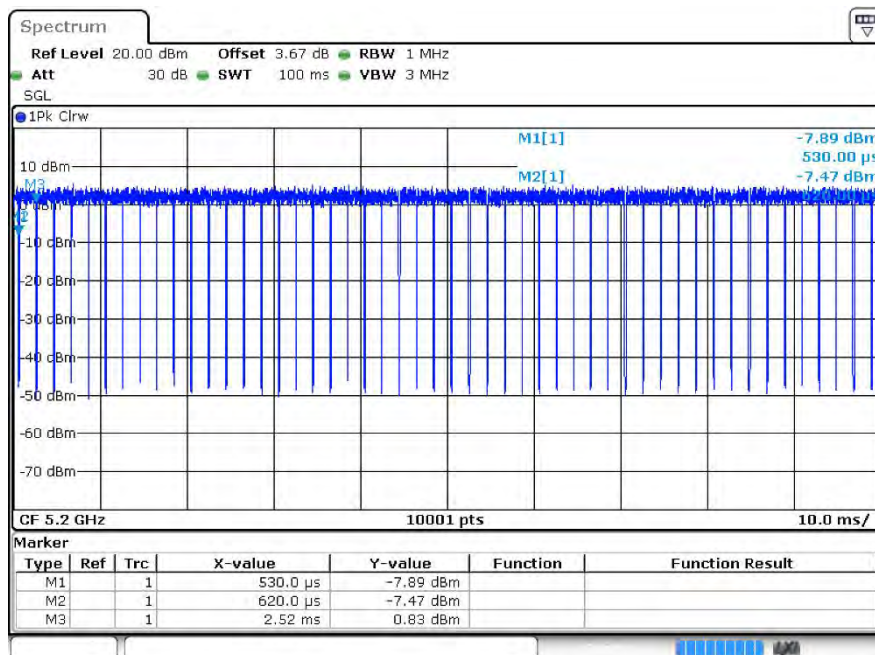




Duty Cycle ac20 5180MHz Ant1



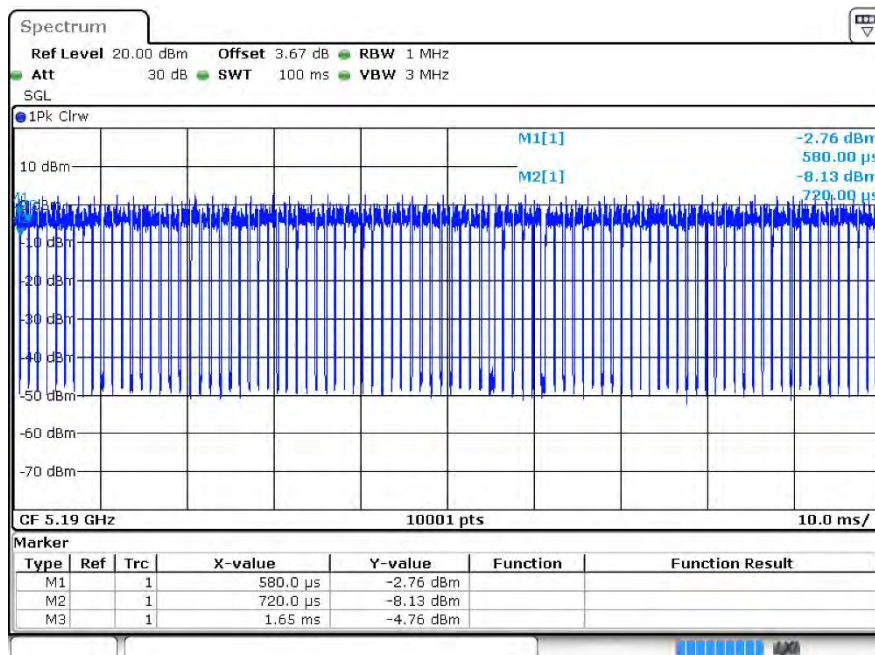
Duty Cycle ac20 5200MHz Ant1

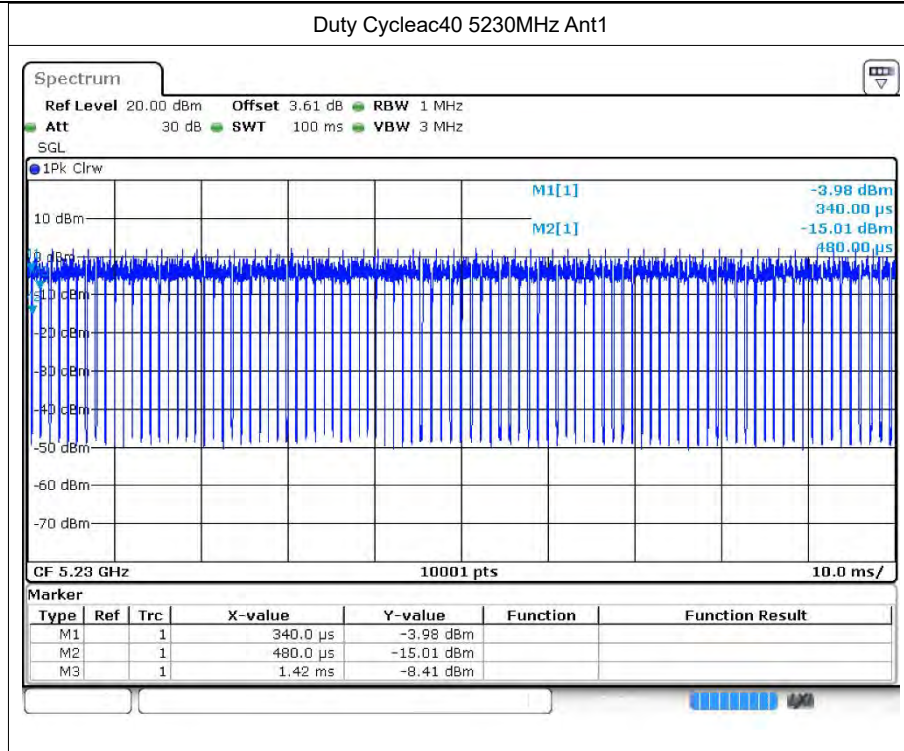


Duty Cycle ac20 5240MHz Ant1

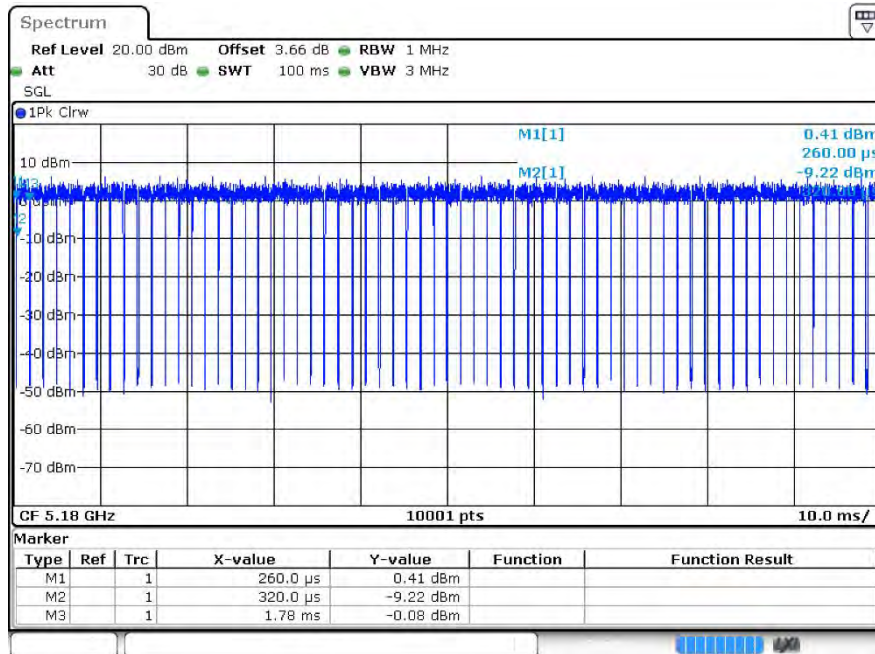


Duty Cycleac40 5190MHz Ant1

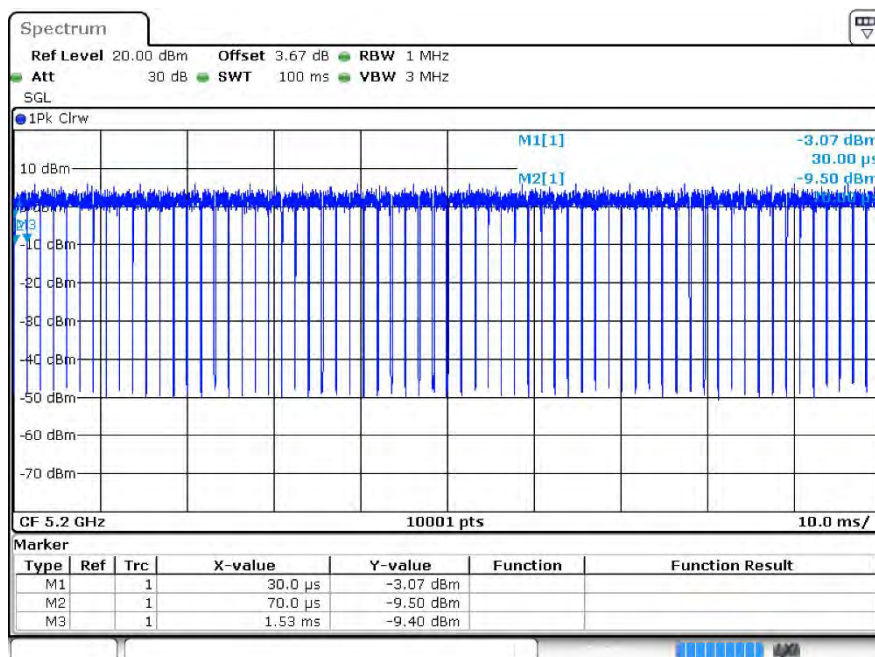




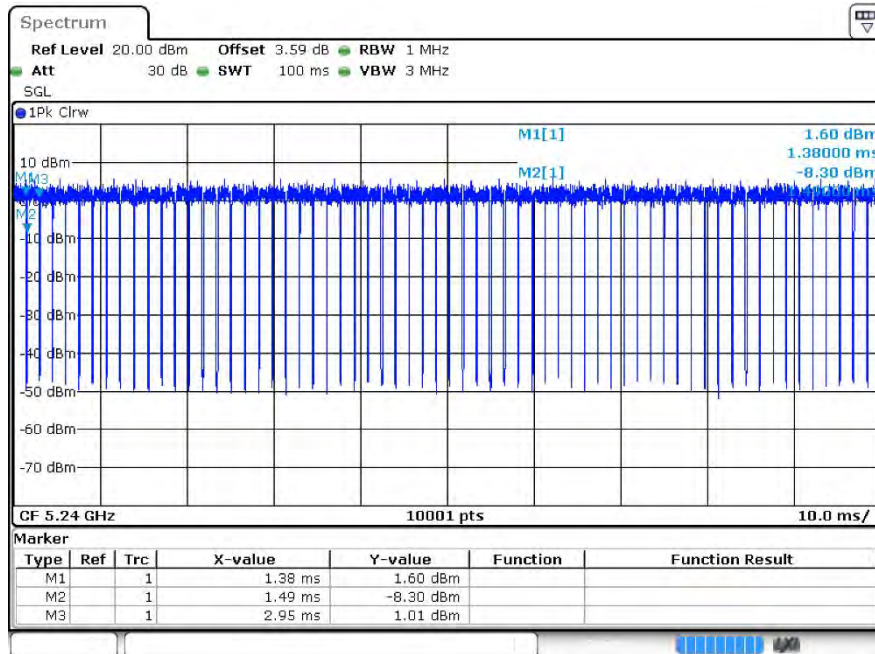
Duty Cycle ax20 5180MHz Ant1



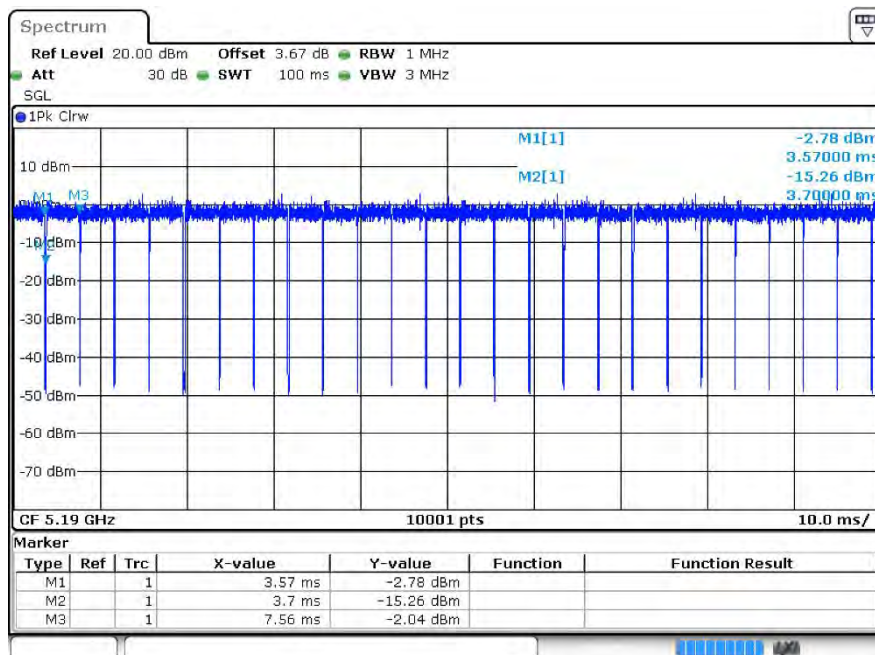
Duty Cycle ax20 5200MHz Ant1

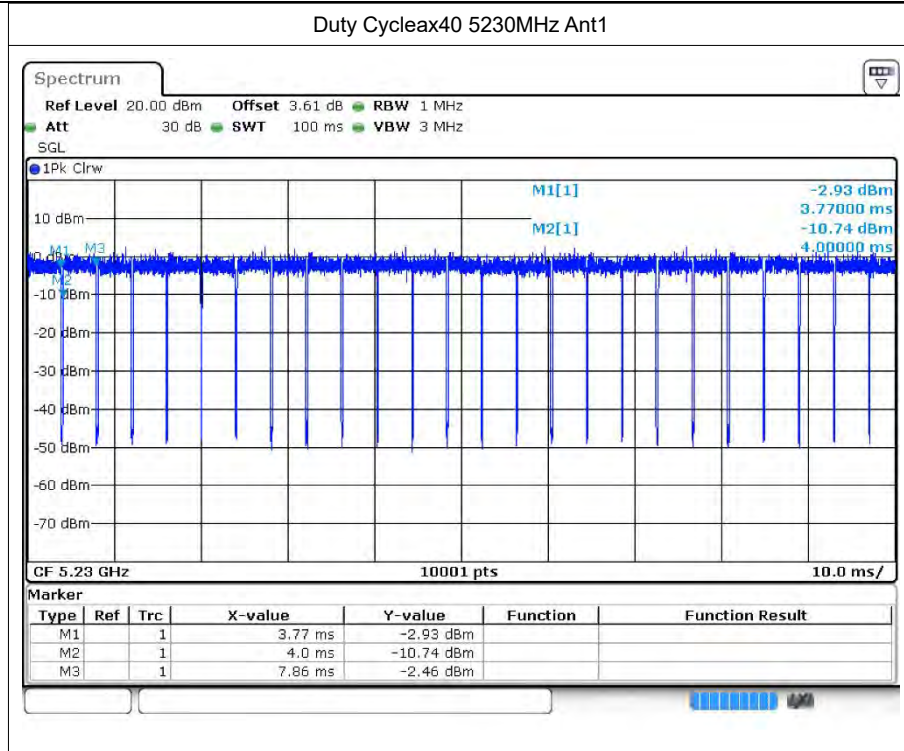


Duty Cycle ax20 5240MHz Ant1



Duty Cycleax40 5190MHz Ant1





2 Maximum Conducted Output Power

2.1 Test Result

Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
a	5180	Ant1	13.28	24	Pass
a	5200	Ant1	12.85	24	Pass
a	5240	Ant1	12.76	24	Pass
n20	5180	Ant1	13.64	24	Pass
n20	5200	Ant1	12.85	24	Pass
n20	5240	Ant1	12.88	24	Pass
n40	5190	Ant1	13.11	24	Pass
n40	5230	Ant1	12.88	24	Pass
ac20	5180	Ant1	13.35	24	Pass
ac20	5200	Ant1	12.81	24	Pass
ac20	5240	Ant1	12.68	24	Pass
ac40	5190	Ant1	13.09	24	Pass
ac40	5230	Ant1	12.93	24	Pass
ax20	5180	Ant1	13.38	24	Pass
ax20	5200	Ant1	13.04	24	Pass
ax20	5240	Ant1	12.84	24	Pass
ax40	5190	Ant1	12.79	24	Pass
ax40	5230	Ant1	12.63	24	Pass

Note:

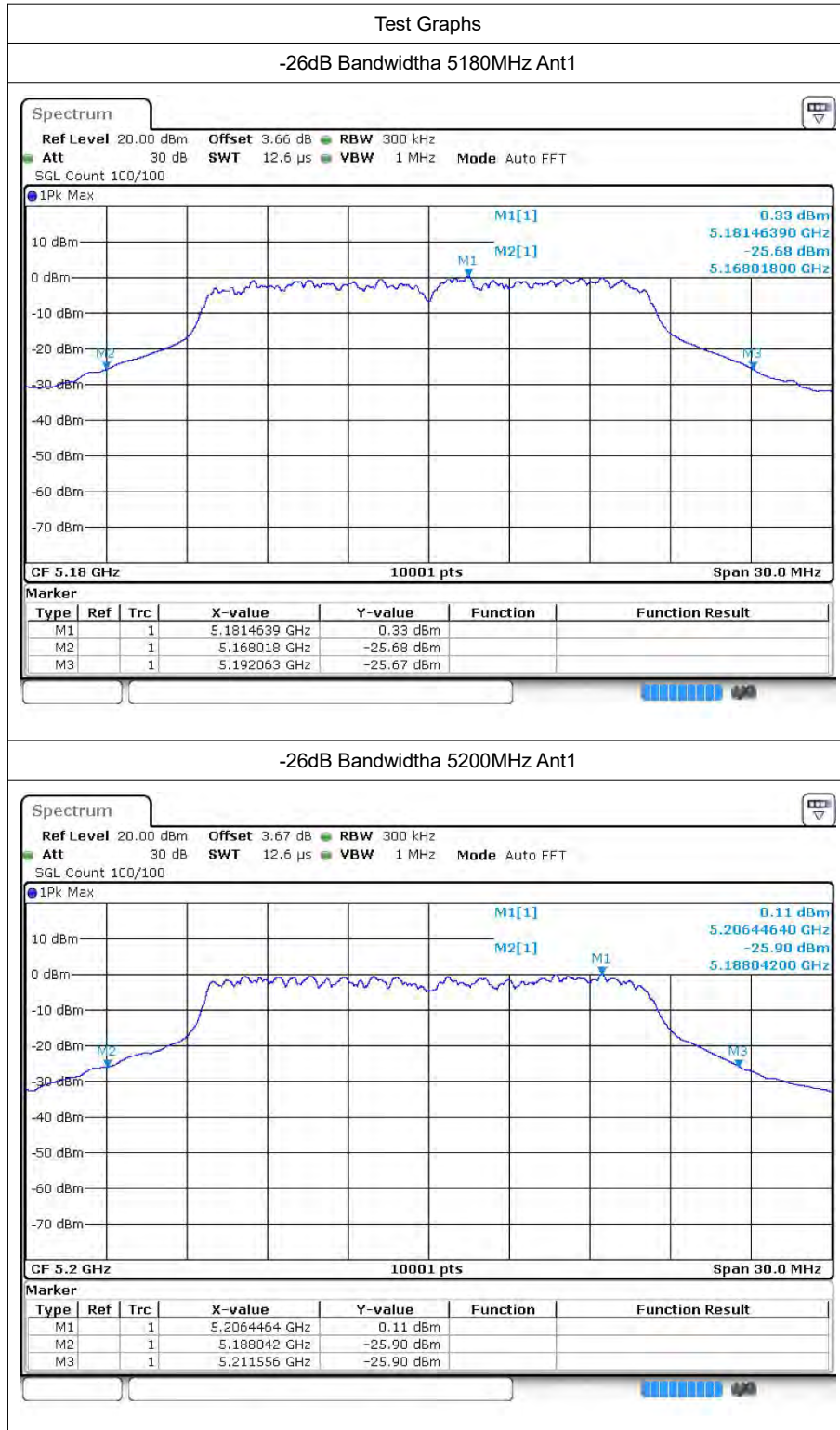
The duty factor has been compensated into the result.

3 -26dB Bandwidth

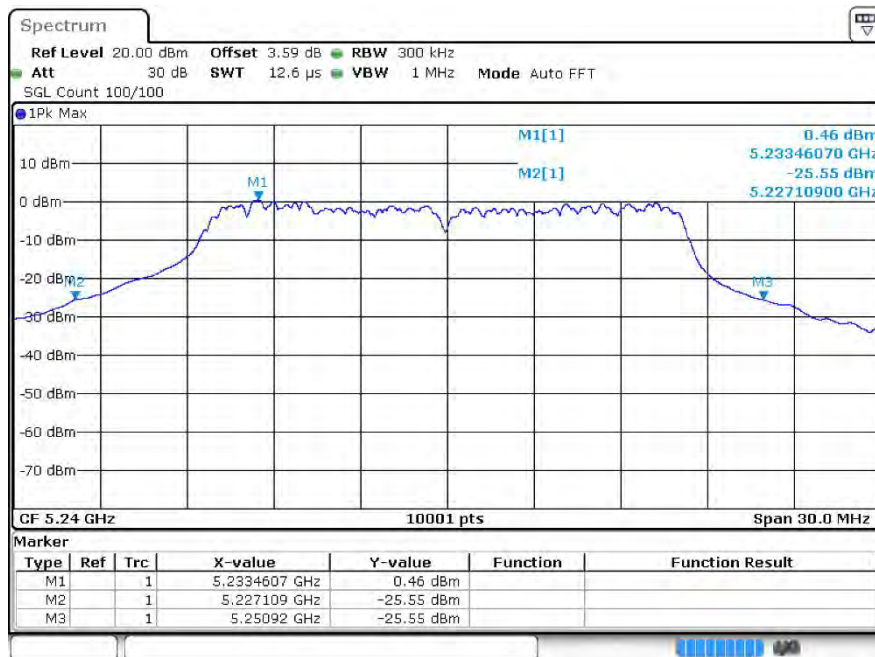
3.1 Test Result

Mode	Frequency (MHz)	Antenna	-26 dB Bandwidth (MHz)	Limit -26 dB Bandwidth (MHz)	Verdict
a	5180	Ant1	24.045	0.5	Pass
a	5200	Ant1	23.514	0.5	Pass
a	5240	Ant1	23.811	0.5	Pass
n20	5180	Ant1	24.552	0.5	Pass
n20	5200	Ant1	25.182	0.5	Pass
n20	5240	Ant1	24.297	0.5	Pass
n40	5190	Ant1	44.022	0.5	Pass
n40	5230	Ant1	43.98	0.5	Pass
ac20	5180	Ant1	23.358	0.5	Pass
ac20	5200	Ant1	25.119	0.5	Pass
ac20	5240	Ant1	23.856	0.5	Pass
ac40	5190	Ant1	43.35	0.5	Pass
ac40	5230	Ant1	44.886	0.5	Pass
ax20	5180	Ant1	24.57	0.5	Pass
ax20	5200	Ant1	23.166	0.5	Pass
ax20	5240	Ant1	23.778	0.5	Pass
ax40	5190	Ant1	40.218	0.5	Pass
ax40	5230	Ant1	42.018	0.5	Pass

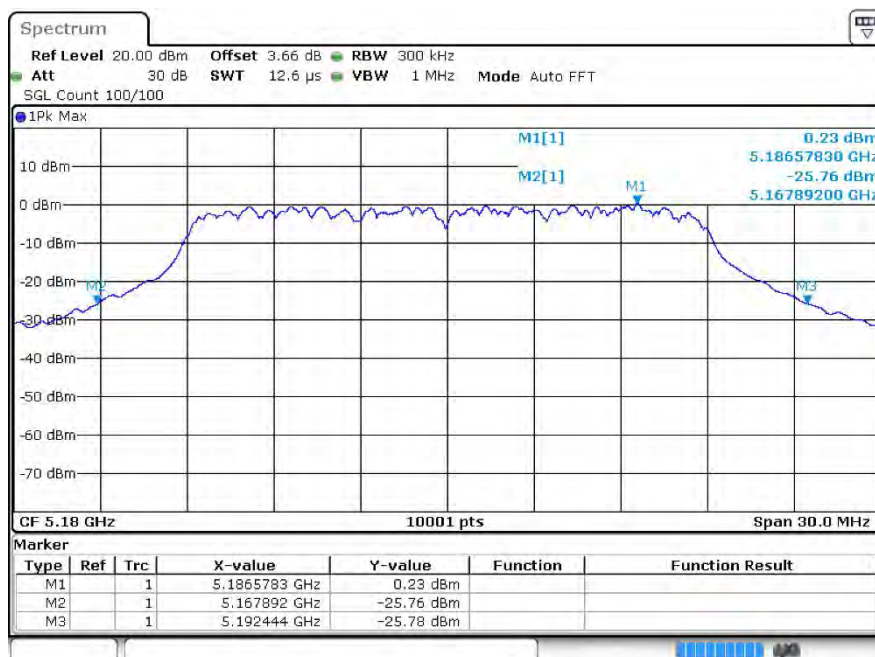
3.2 Test Graphs



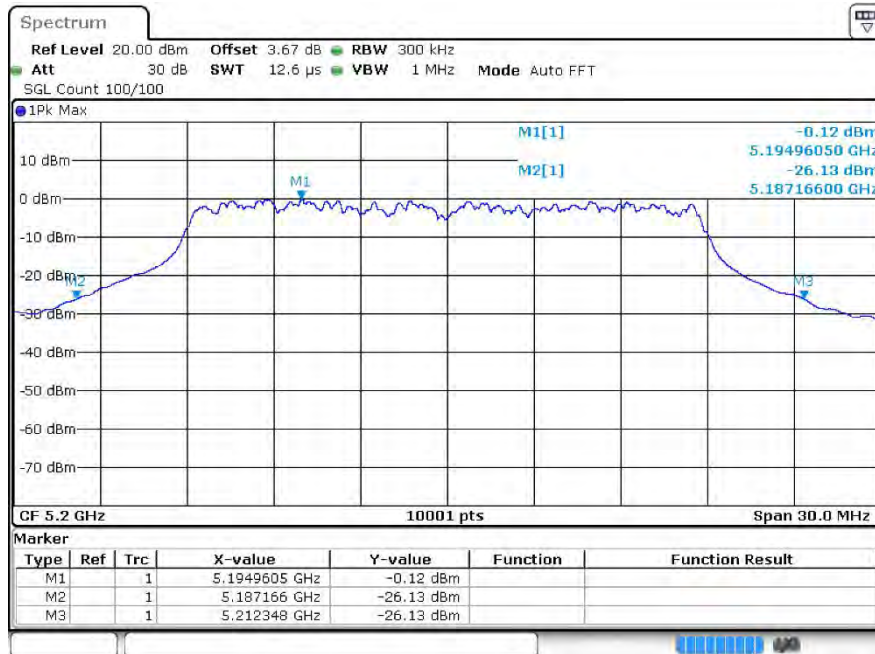
-26dB Bandwidtha 5240MHz Ant1



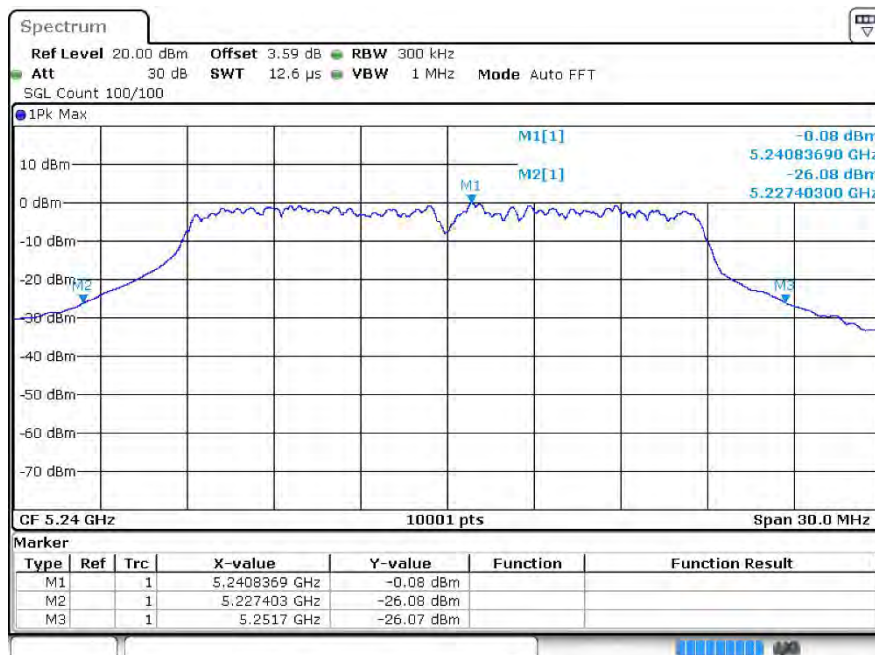
-26dB Bandwidth n20 5180MHz Ant1



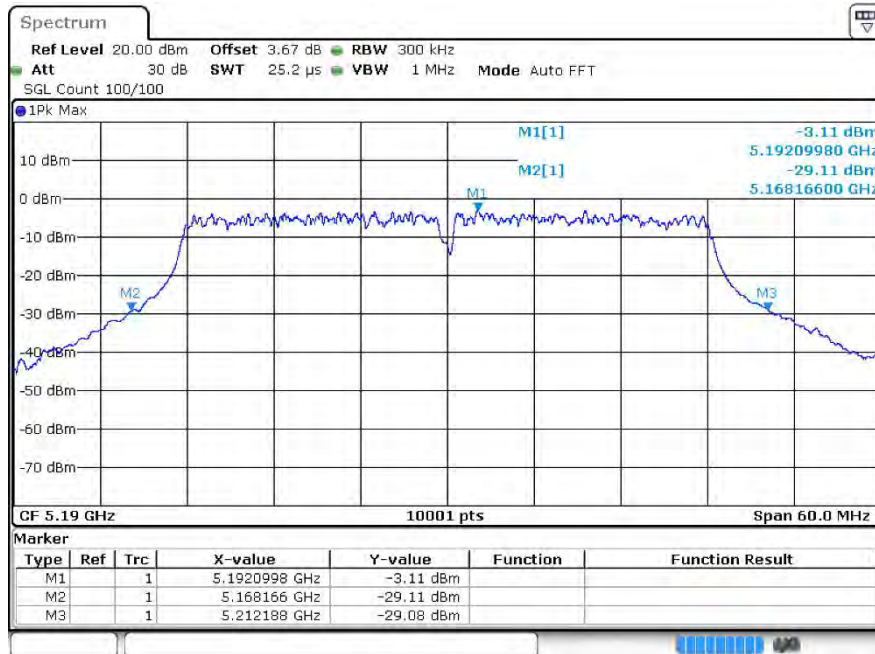
-26dB Bandwidth n20 5200MHz Ant1



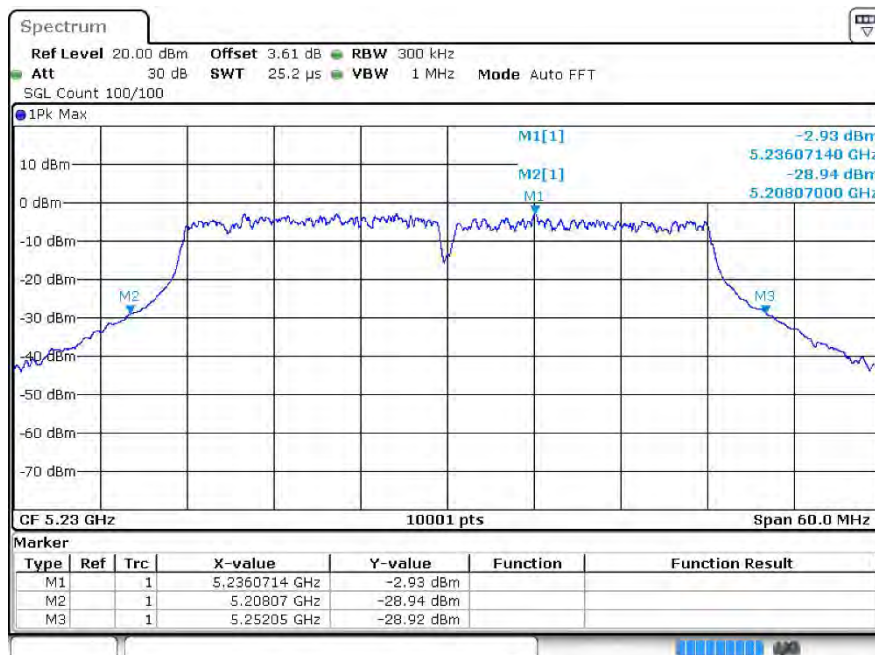
-26dB Bandwidth n20 5240MHz Ant1



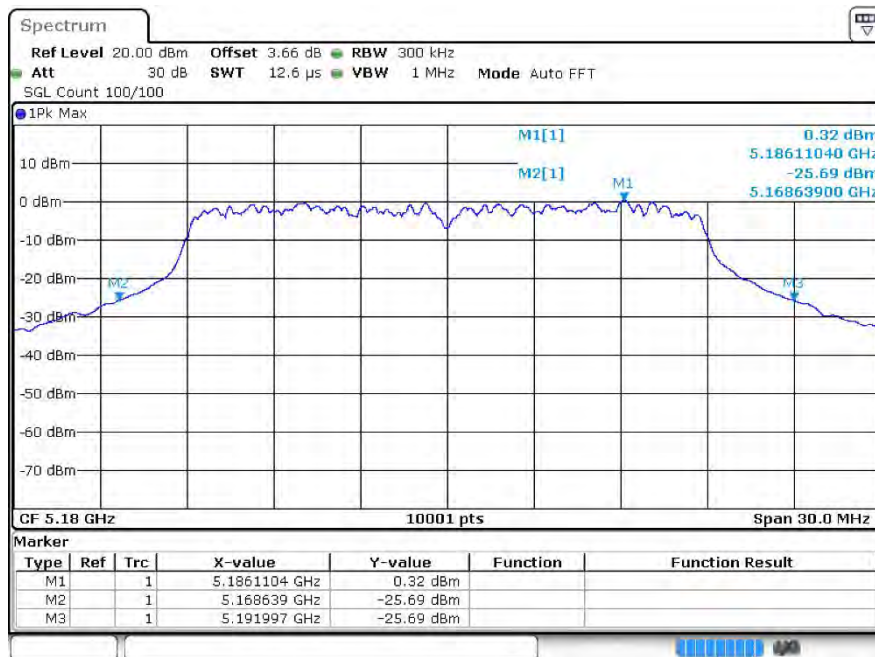
-26dB Bandwidthn40 5190MHz Ant1



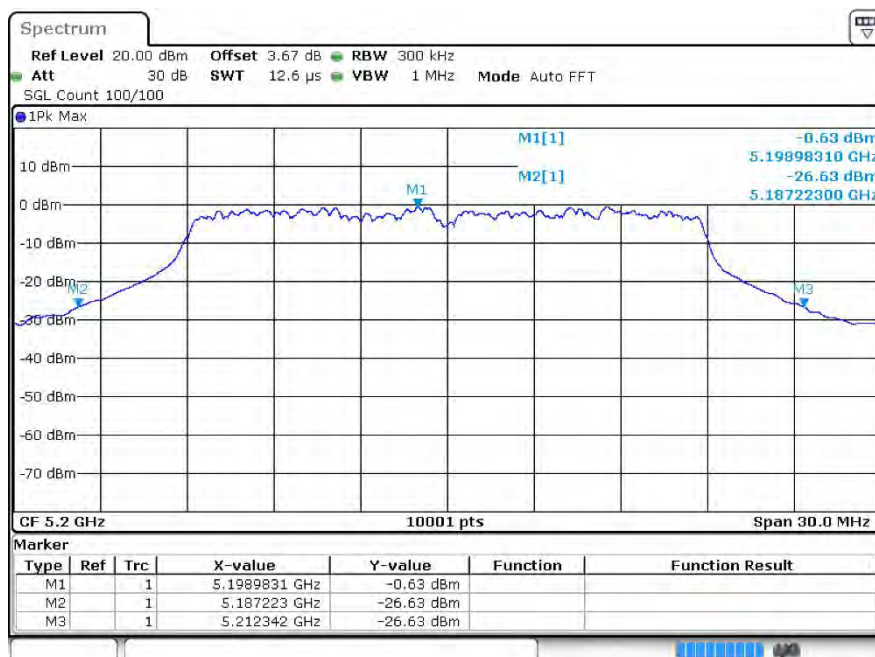
-26dB Bandwidthn40 5230MHz Ant1



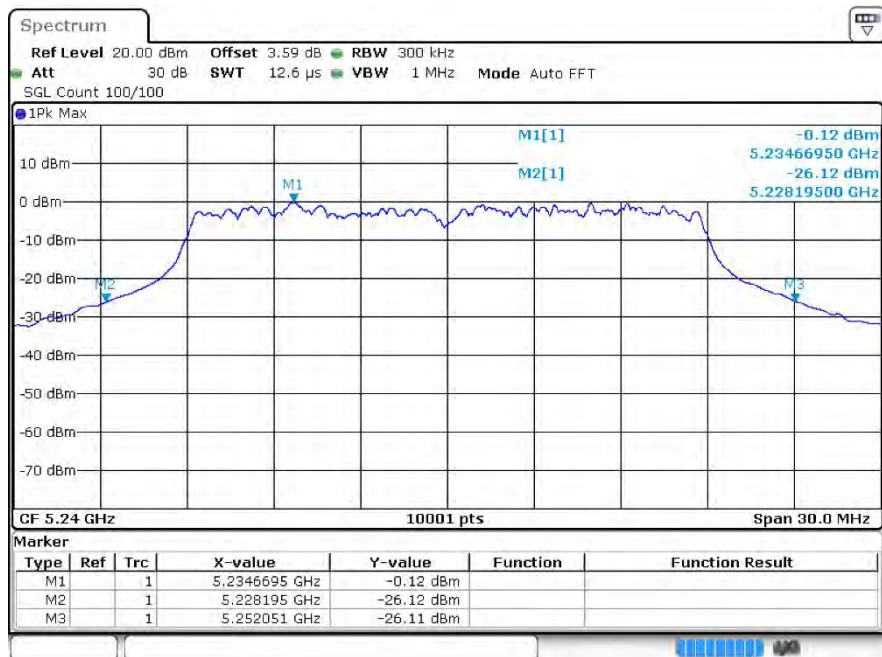
-26dB Bandwidth ac20 5180MHz Ant1



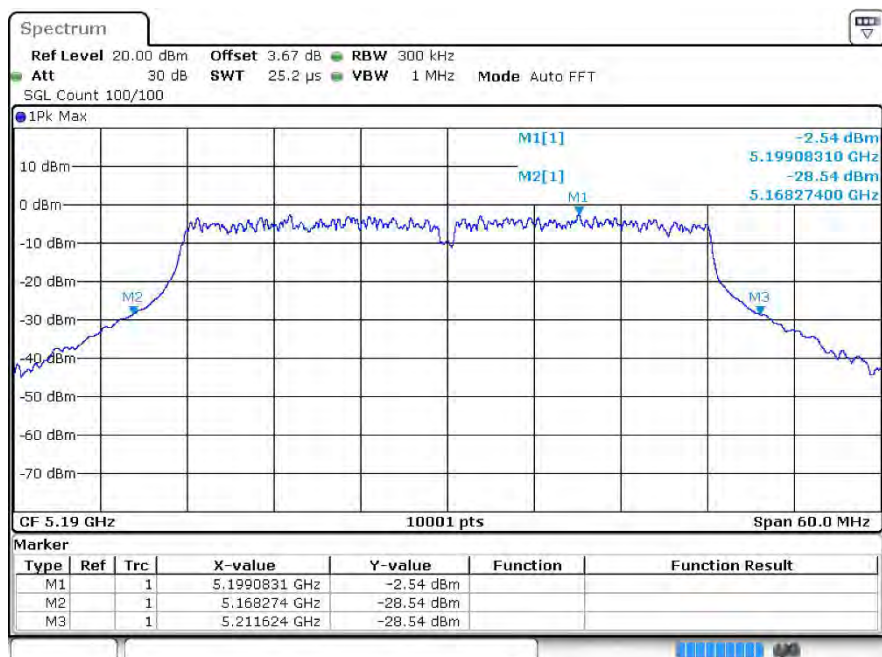
-26dB Bandwidth ac20 5200MHz Ant1

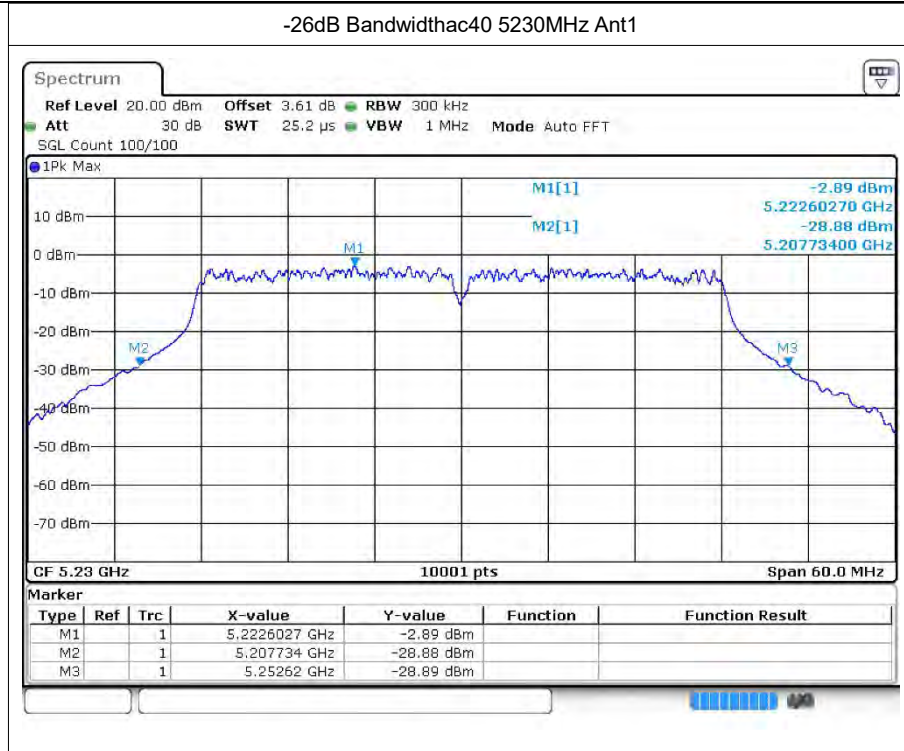


-26dB Bandwidth ac20 5240MHz Ant1

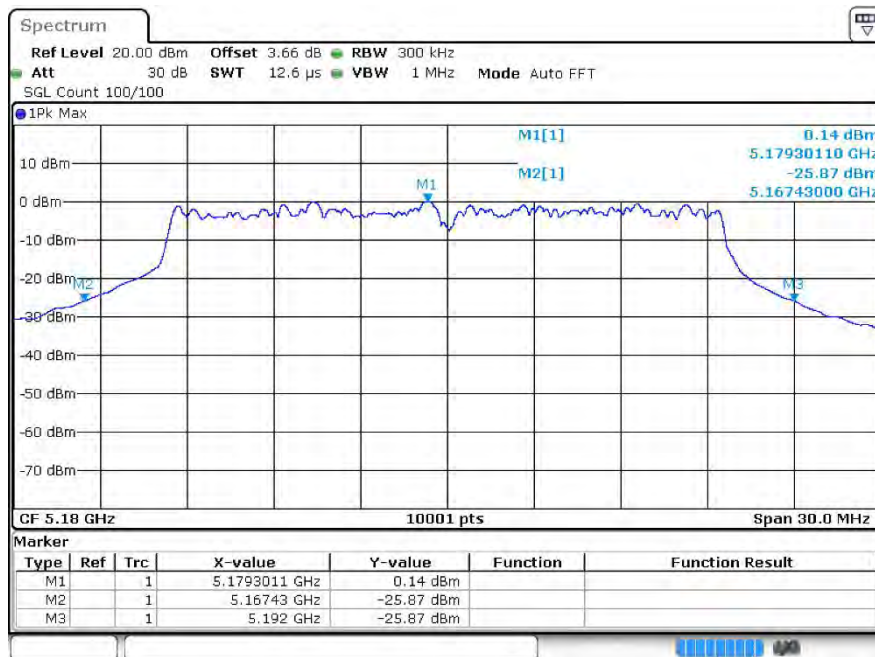


-26dB Bandwidthac40 5190MHz Ant1

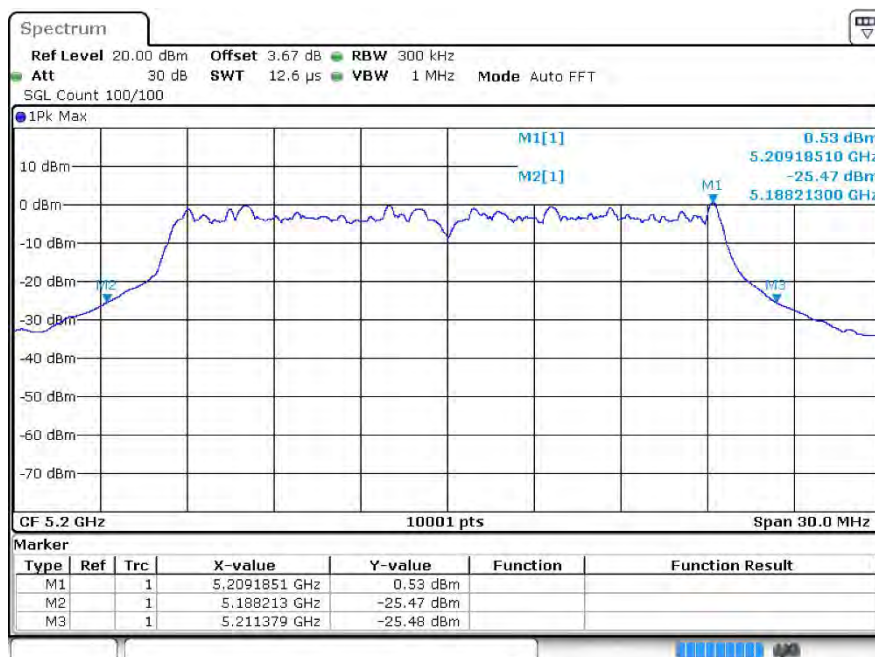




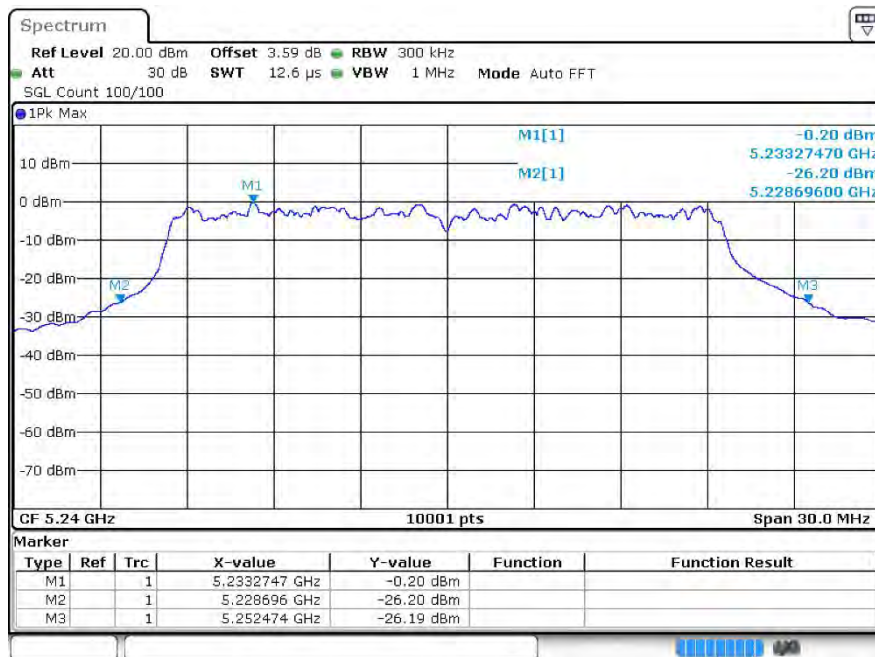
-26dB Bandwidth ax20 5180MHz Ant1



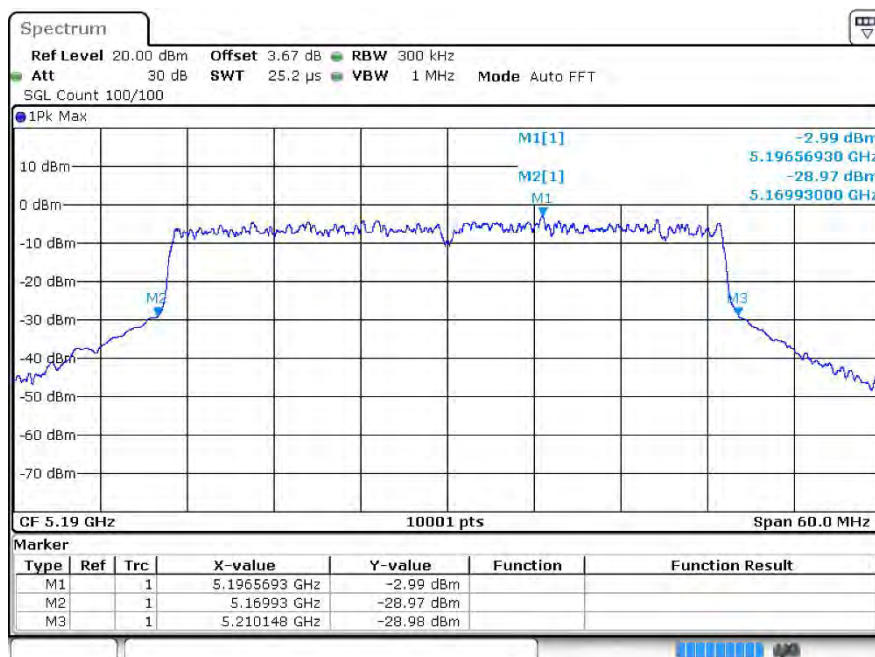
-26dB Bandwidth ax20 5200MHz Ant1

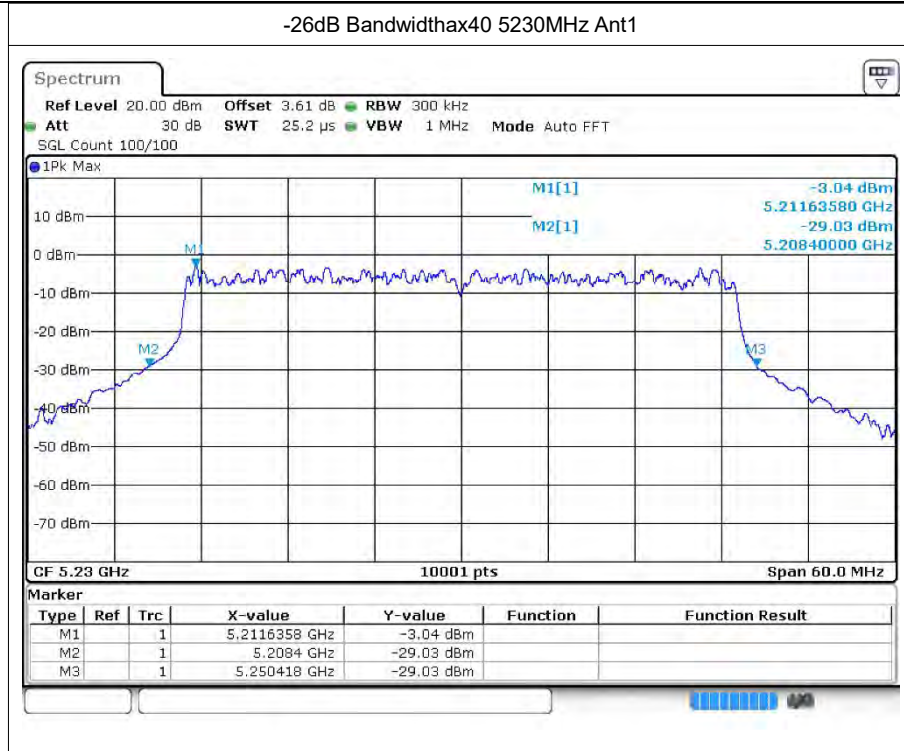


-26dB Bandwidth ax20 5240MHz Ant1



-26dB Bandwidthax40 5190MHz Ant1





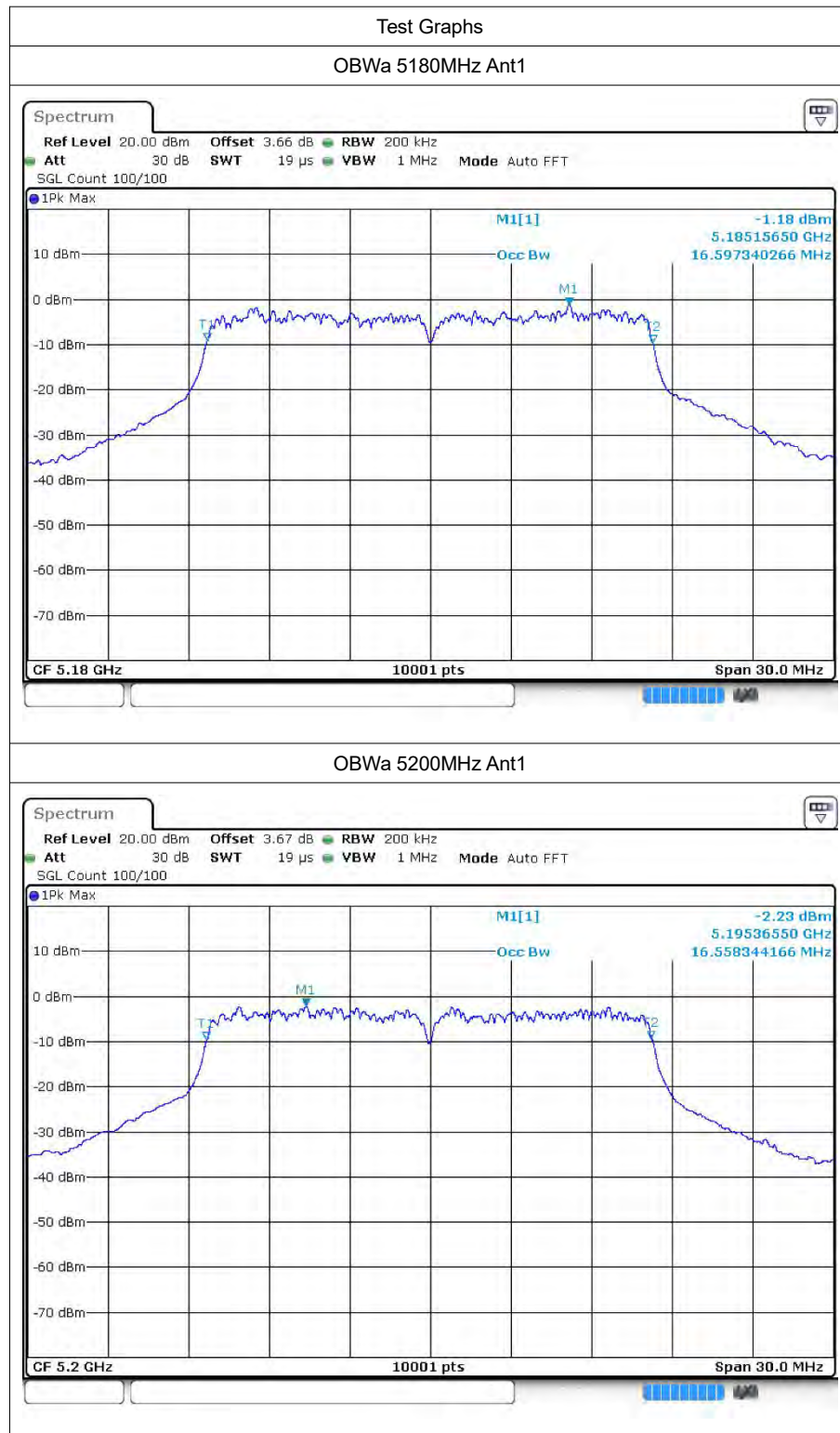


4 Occupied Channel Bandwidth

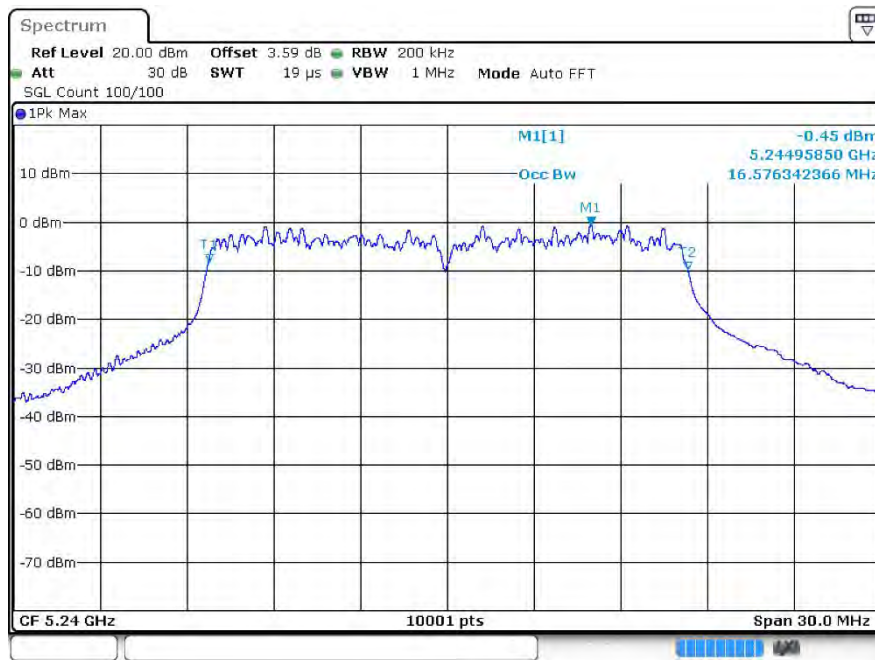
4.1 Test Result

Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
a	5180	Ant1	16.597
a	5200	Ant1	16.558
a	5240	Ant1	16.576
n20	5180	Ant1	18.172
n20	5200	Ant1	17.971
n20	5240	Ant1	17.938
n40	5190	Ant1	36.608
n40	5230	Ant1	36.74
ac20	5180	Ant1	17.839
ac20	5200	Ant1	18.121
ac20	5240	Ant1	18.004
ac40	5190	Ant1	36.548
ac40	5230	Ant1	36.41
ax20	5180	Ant1	19.195
ax20	5200	Ant1	19.144
ax20	5240	Ant1	19.189
ax40	5190	Ant1	38.06
ax40	5230	Ant1	37.724

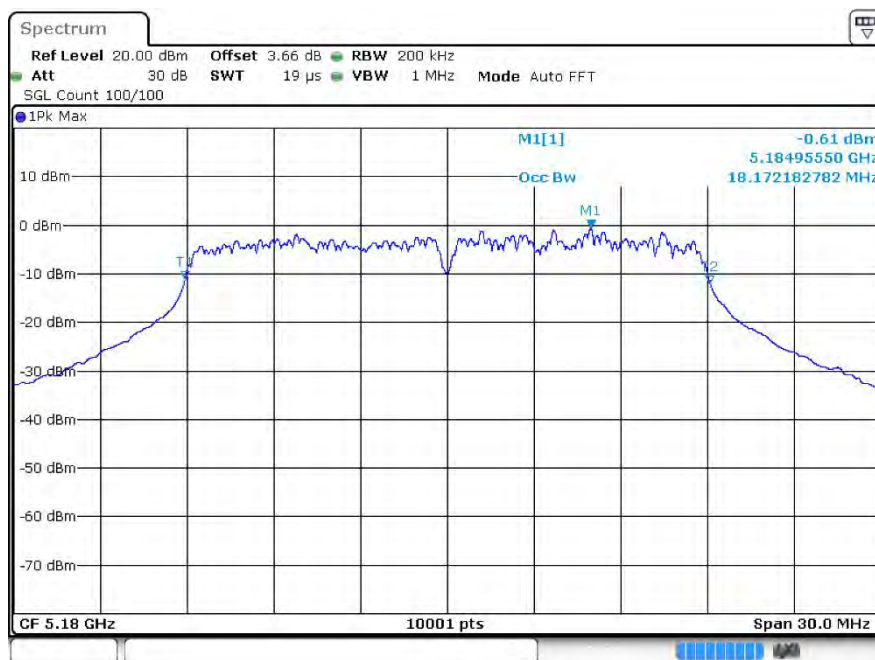
4.2 Test Graphs



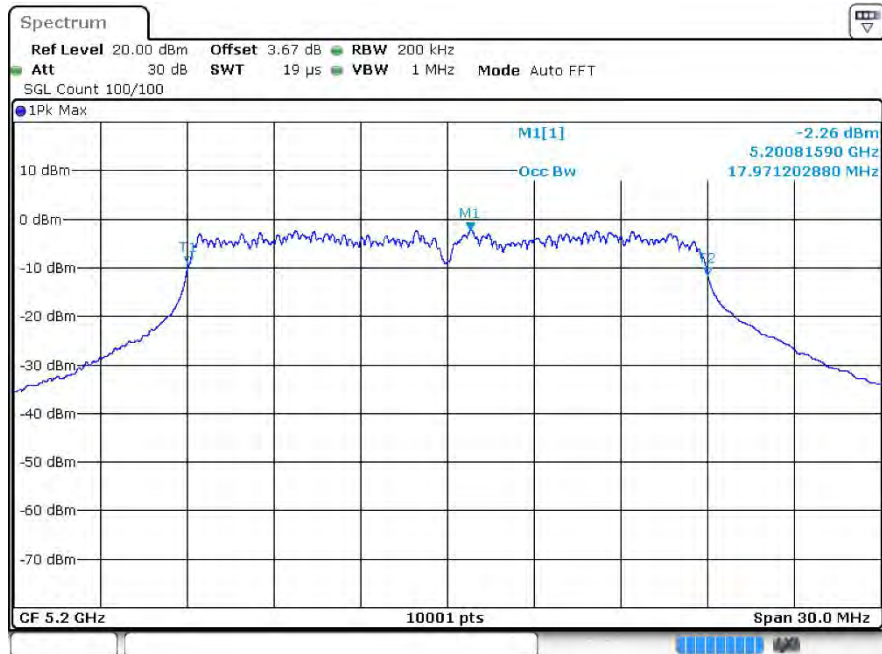
OBWa 5240MHz Ant1



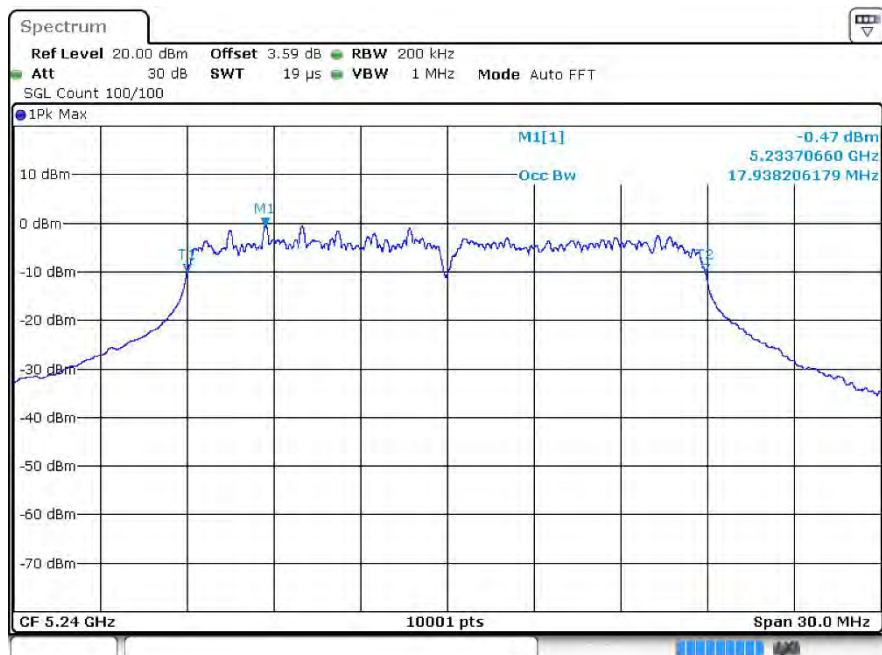
OBW n20 5180MHz Ant1



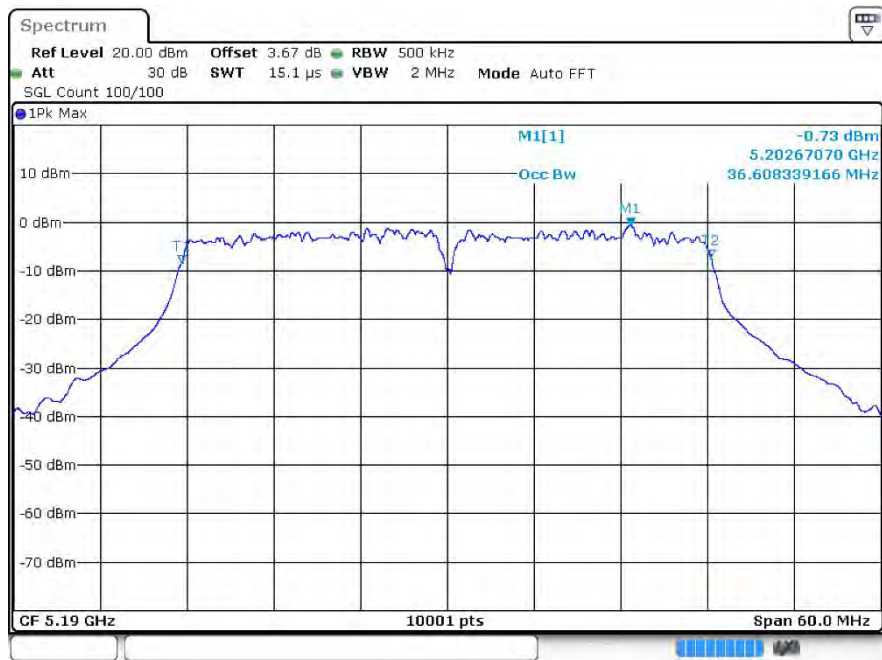
OBW n20 5200MHz Ant1



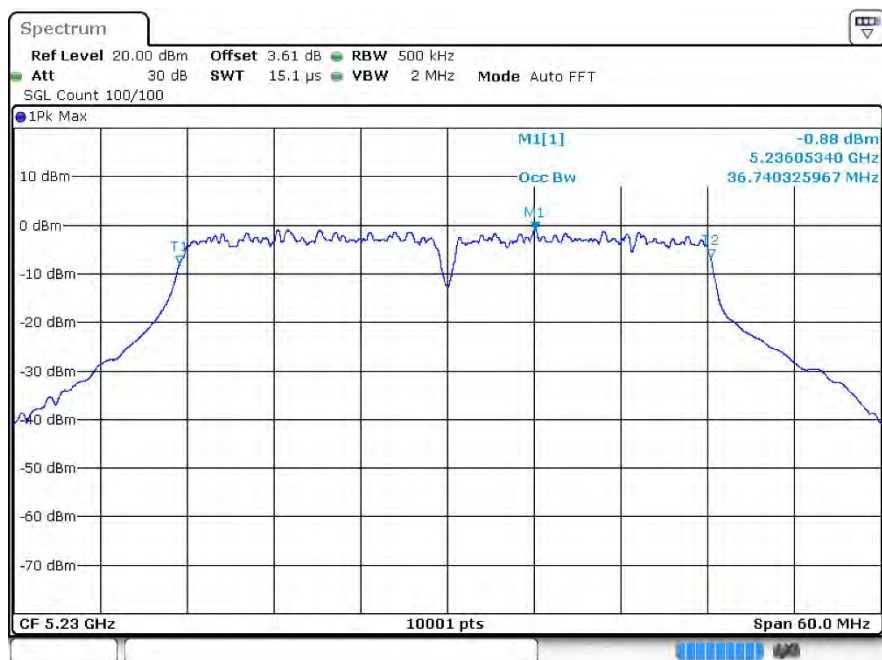
OBW n20 5240MHz Ant1



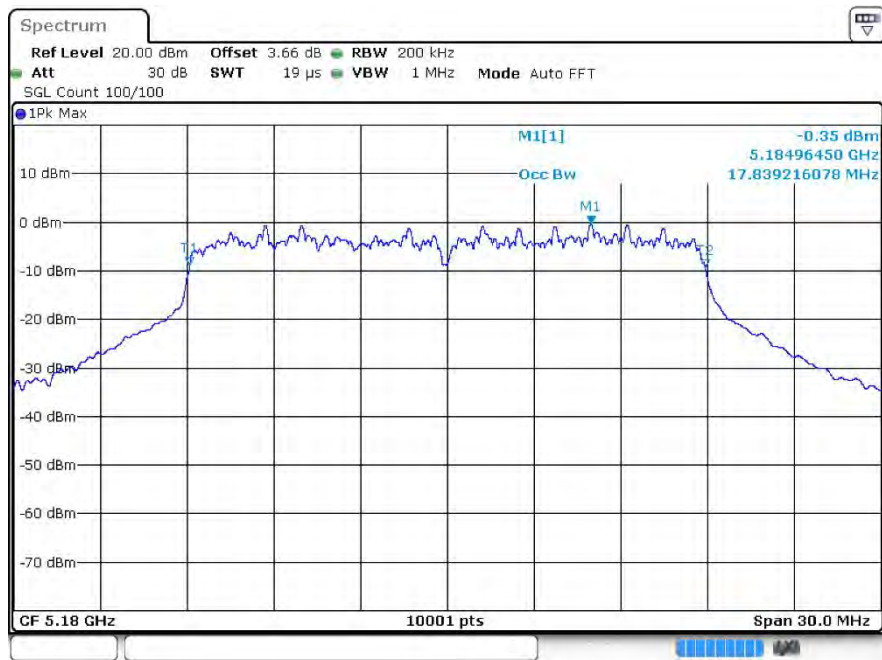
OBWn40 5190MHz Ant1



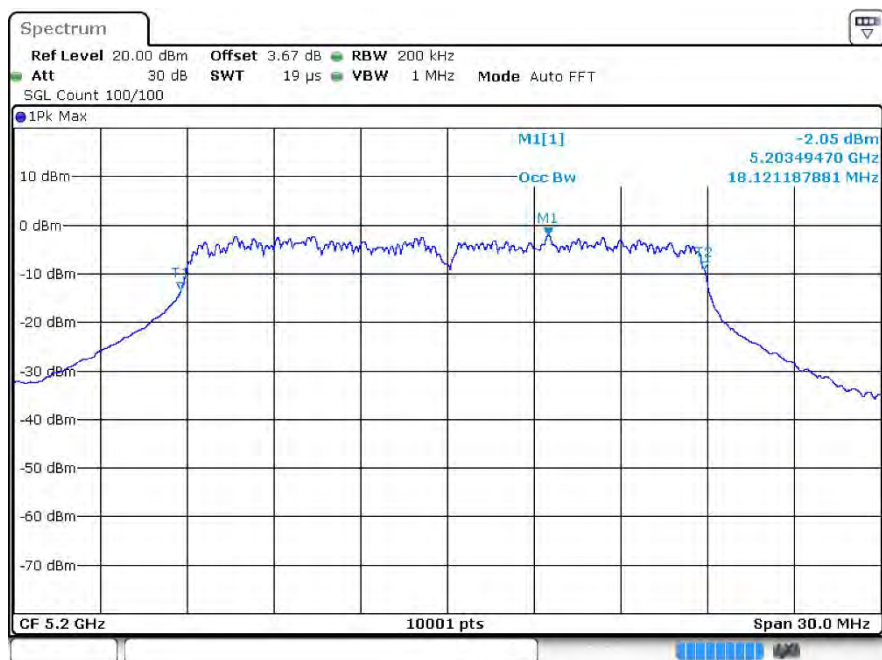
OBWn40 5230MHz Ant1



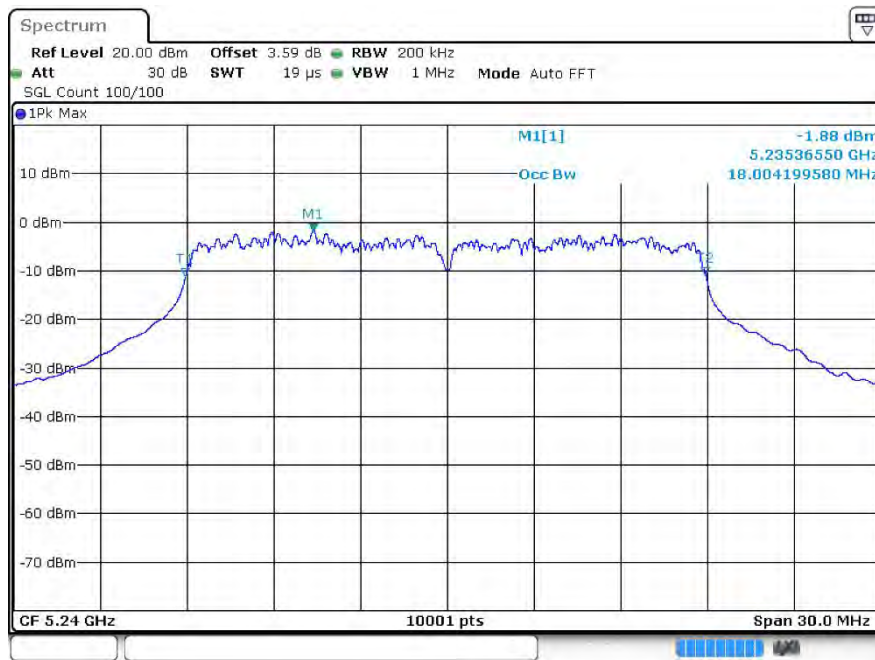
OBW ac20 5180MHz Ant1



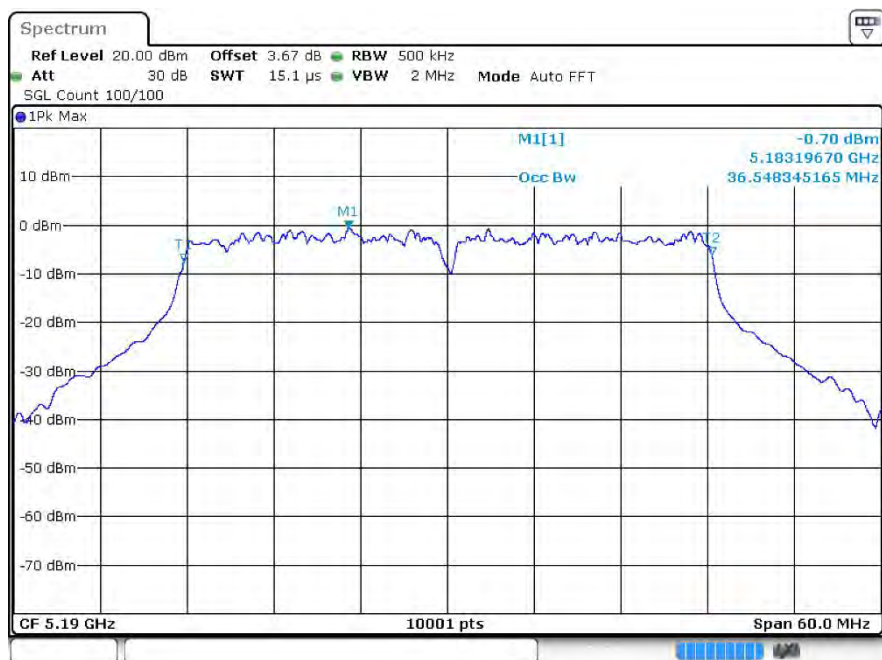
OBW ac20 5200MHz Ant1

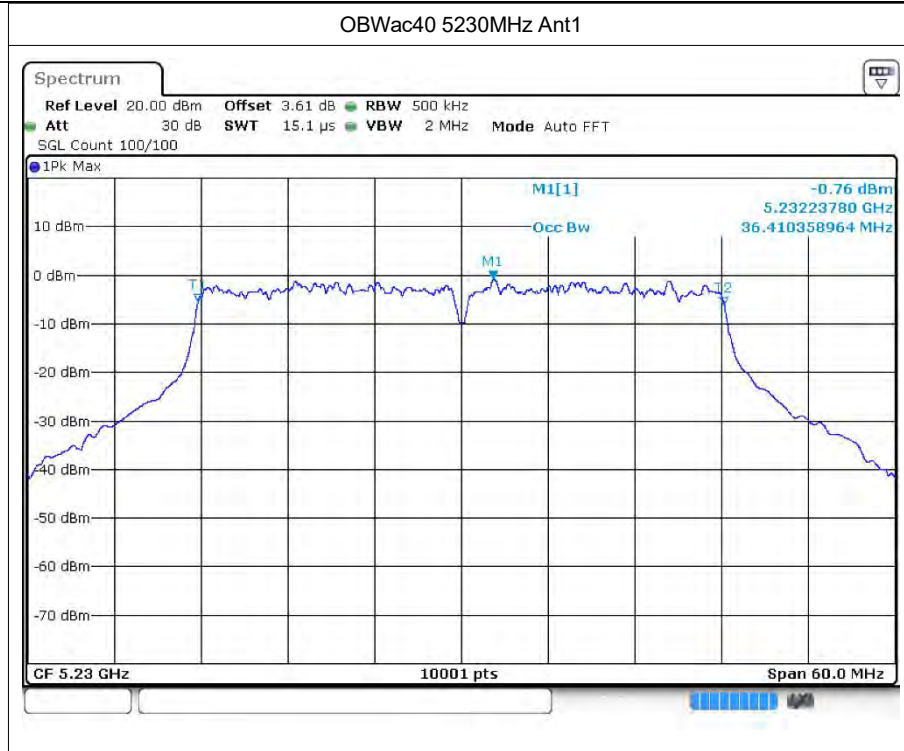


OBW ac20 5240MHz Ant1

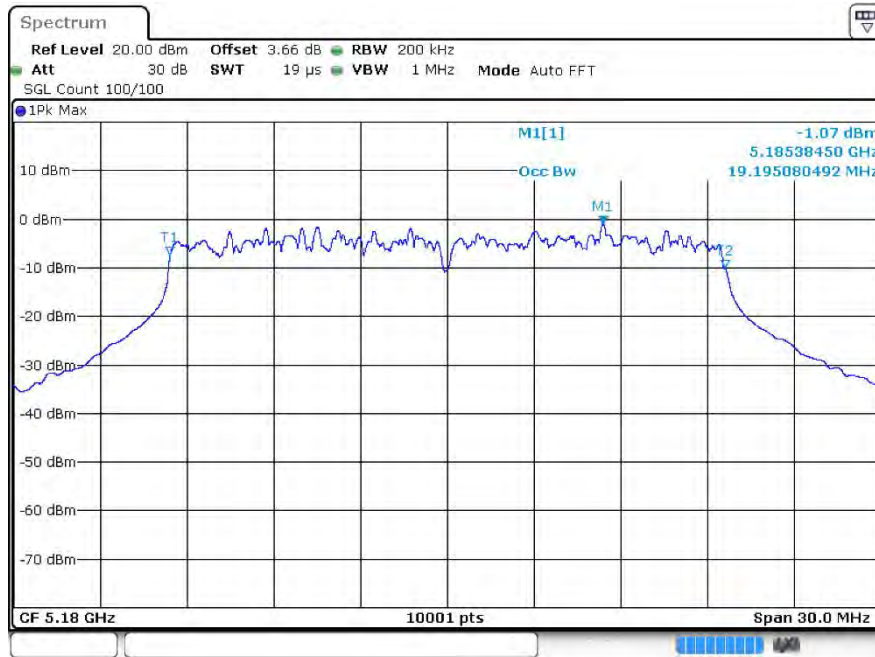


OBWac40 5190MHz Ant1

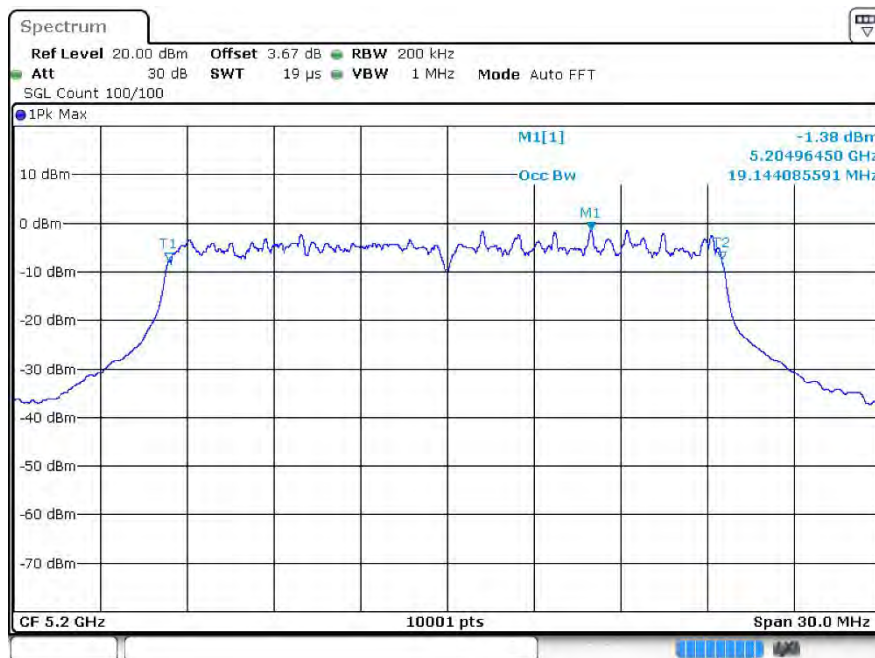




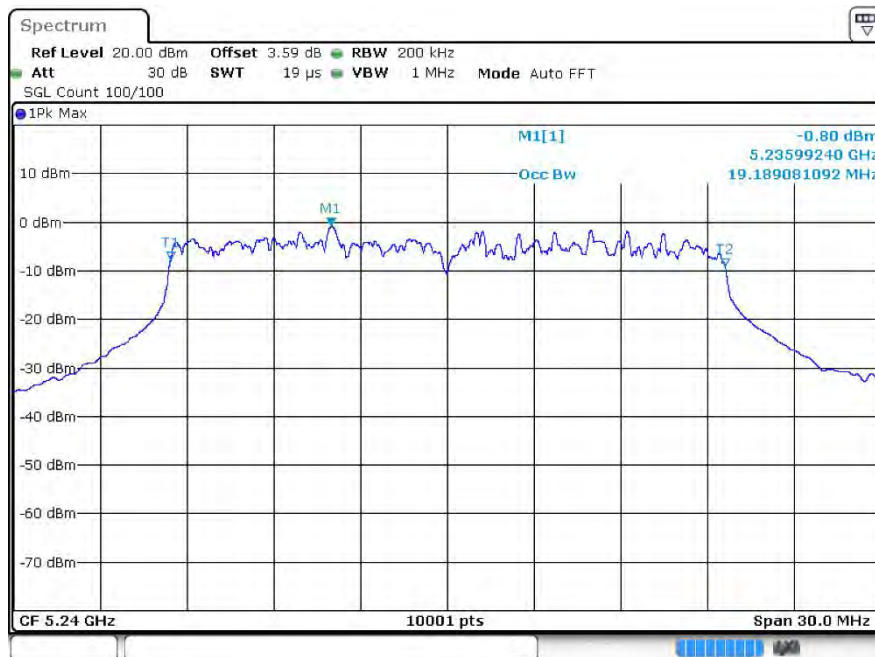
OBW ax20 5180MHz Ant1



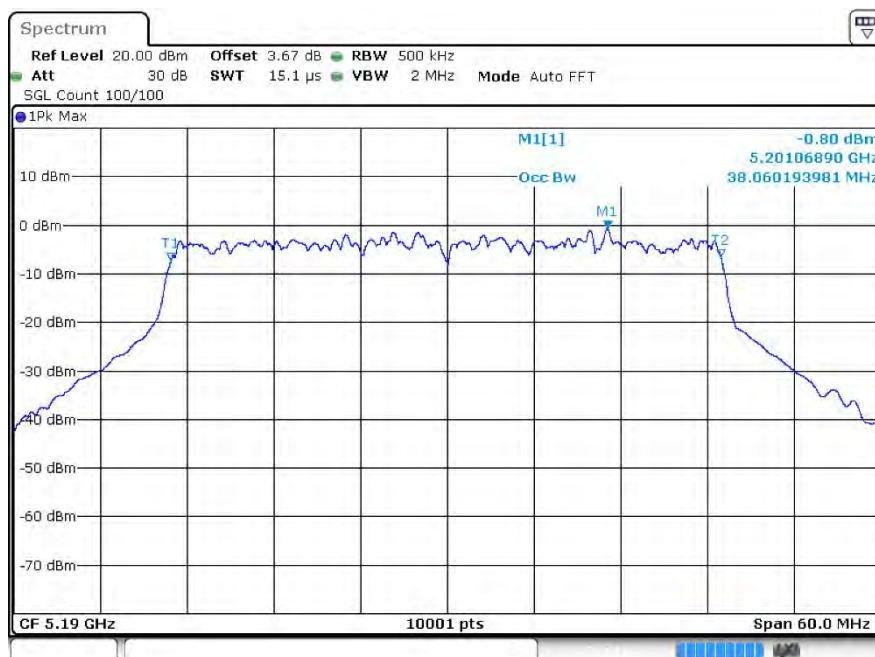
OBW ax20 5200MHz Ant1

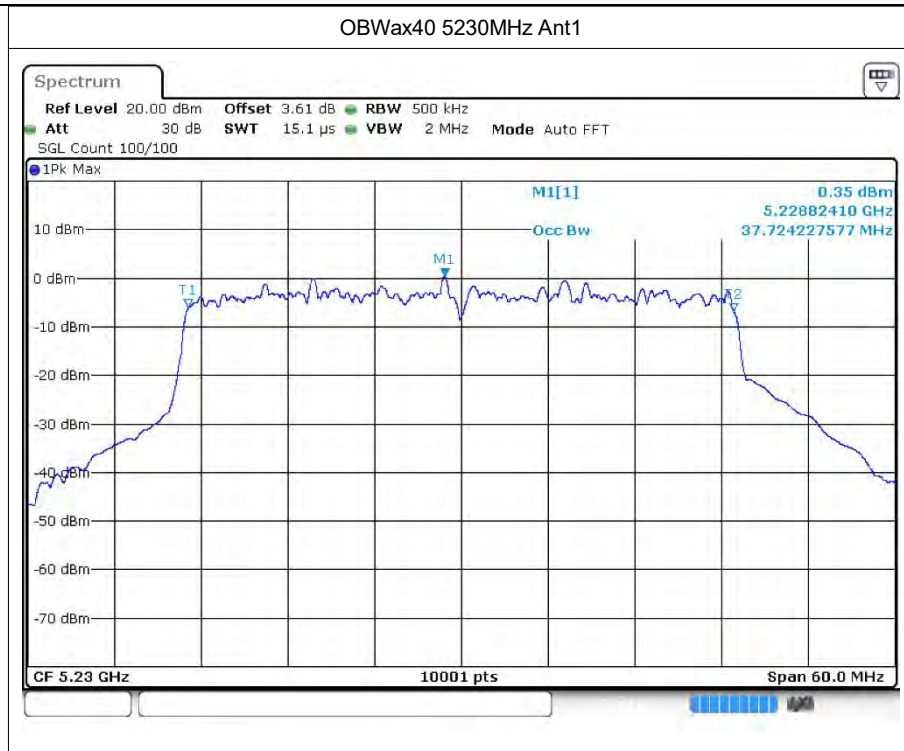


OBW ax20 5240MHz Ant1



OBWax40 5190MHz Ant1



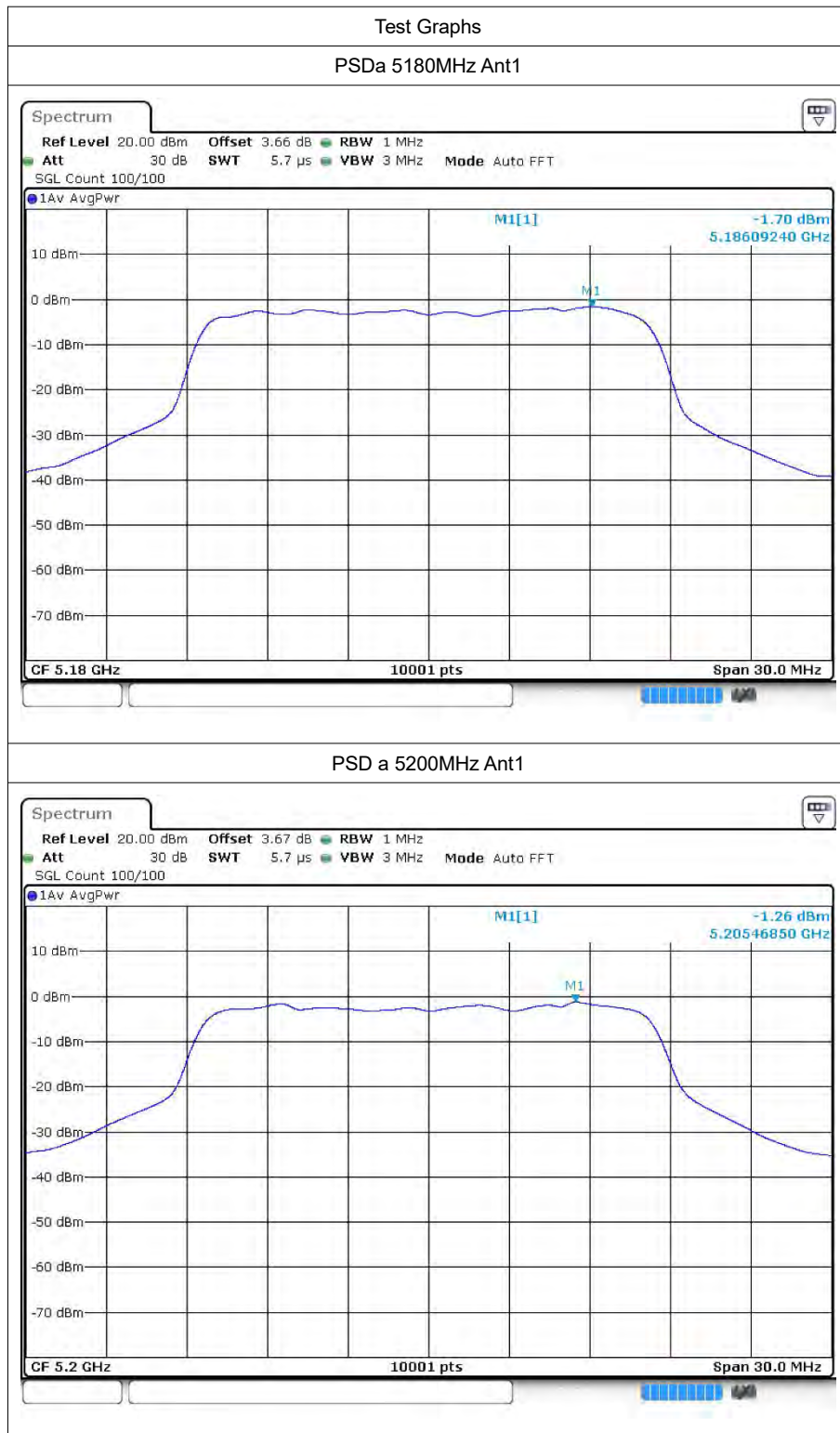


5 Maximum Power Spectral Density Level

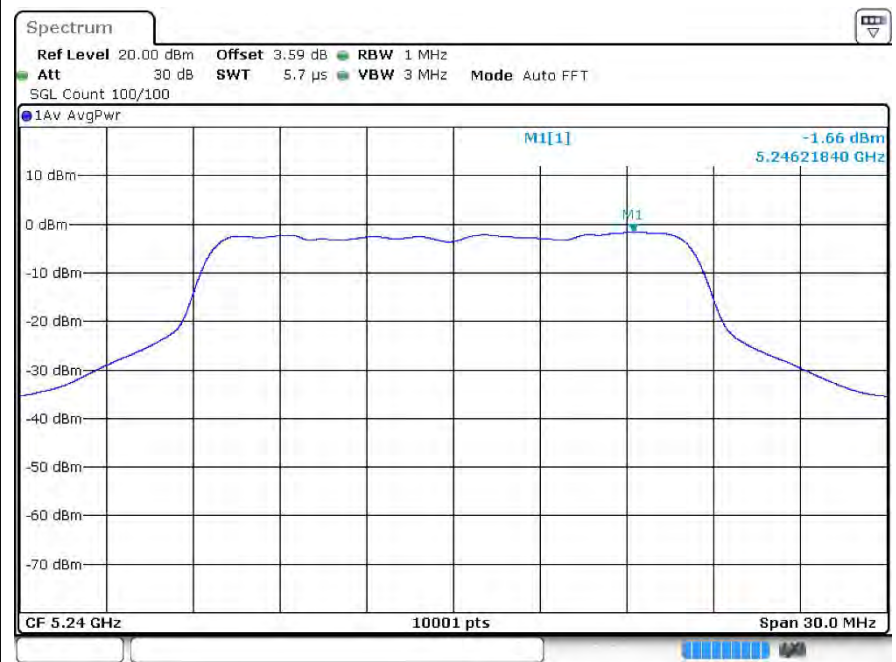
5.1 Test Result

Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm)	Duty Factor (dB)	Total PSD (dBm)	Limit (dBm)	Verdict
a	5180	Ant1	-1.7	0.29	-1.41	11	Pass
a	5200	Ant1	-1.26	0.33	-0.93	11	Pass
a	5240	Ant1	-1.66	0.32	-1.34	11	Pass
n20	5180	Ant1	-2.72	0.33	-2.39	11	Pass
n20	5200	Ant1	-2.21	0.25	-1.96	11	Pass
n20	5240	Ant1	-2.04	0.21	-1.83	11	Pass
n40	5190	Ant1	-4.96	0.45	-4.51	11	Pass
n40	5230	Ant1	-4.97	0.69	-4.28	11	Pass
ac20	5180	Ant1	-1.67	0.2	-1.47	11	Pass
ac20	5200	Ant1	-1.94	0.21	-1.73	11	Pass
ac20	5240	Ant1	-2.06	0.2	-1.86	11	Pass
ac40	5190	Ant1	-5.3	0.69	-4.61	11	Pass
ac40	5230	Ant1	-5.05	0.56	-4.49	11	Pass
ax20	5180	Ant1	-3.21	0.26	-2.95	11	Pass
ax20	5200	Ant1	-3.13	0.27	-2.86	11	Pass
ax20	5240	Ant1	-3.15	0.28	-2.87	11	Pass
ax40	5190	Ant1	-6.56	0.11	-6.45	11	Pass
ax40	5230	Ant1	-6.16	0.19	-5.97	11	Pass

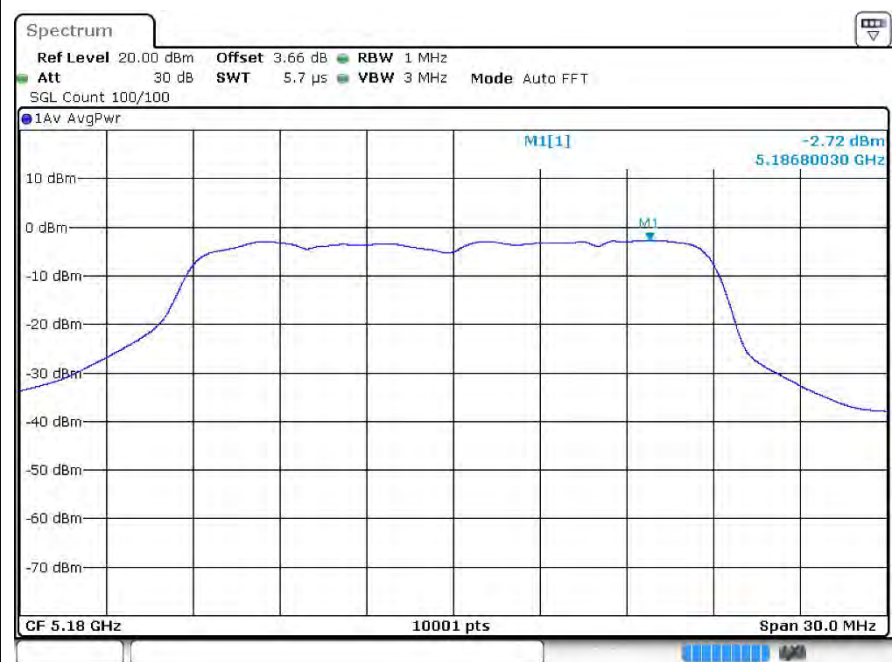
5.2 Test Graphs



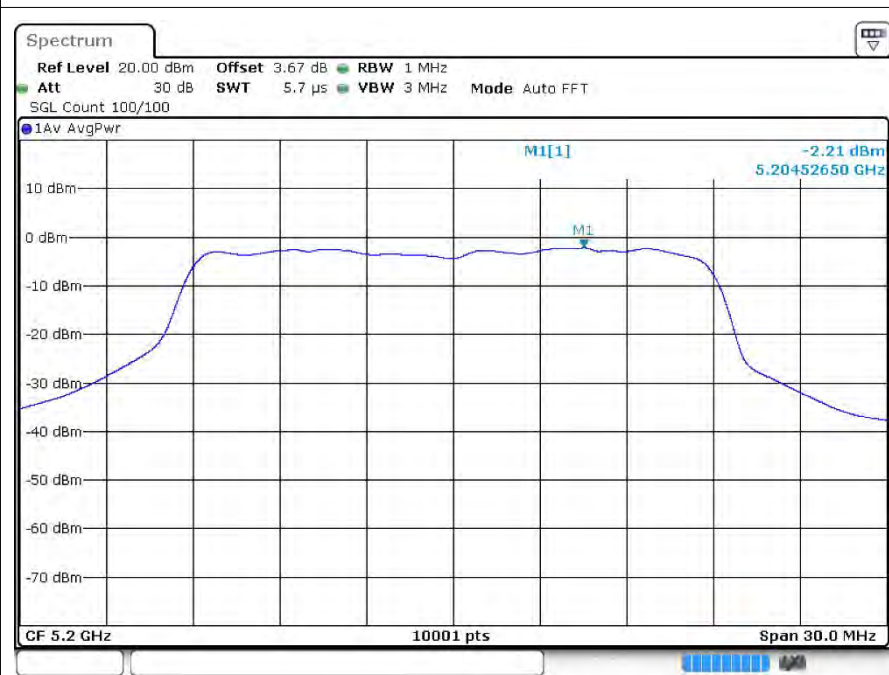
PSDa 5240MHz Ant1



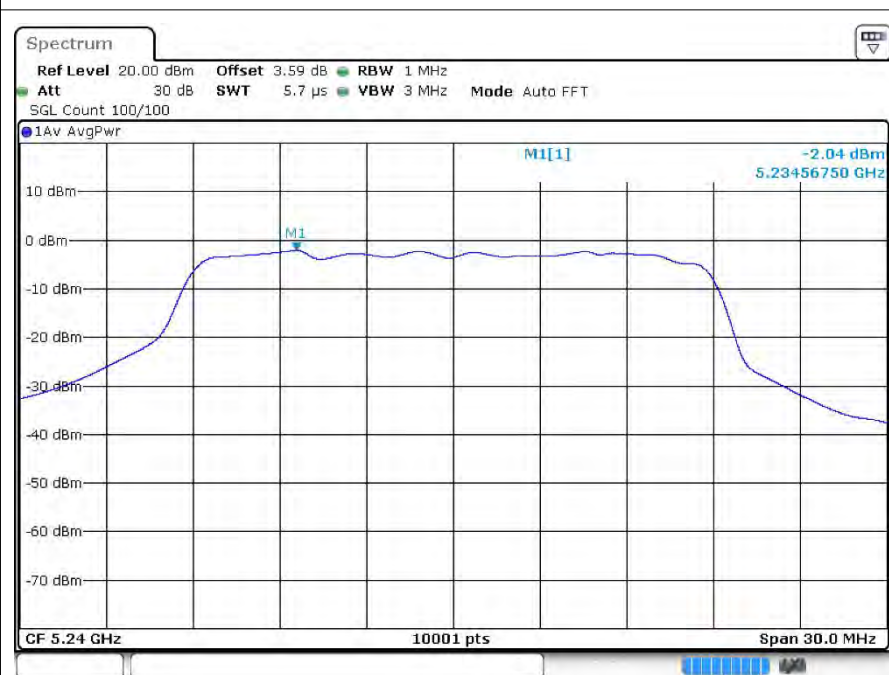
PSD n20 5180MHz Ant1



PSD n20 5200MHz Ant1



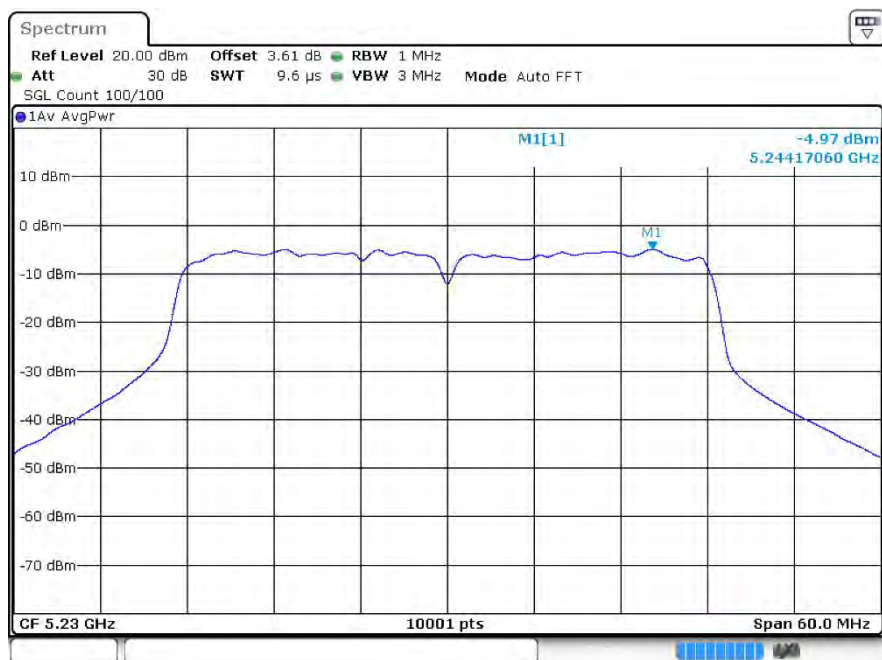
PSD n20 5240MHz Ant1



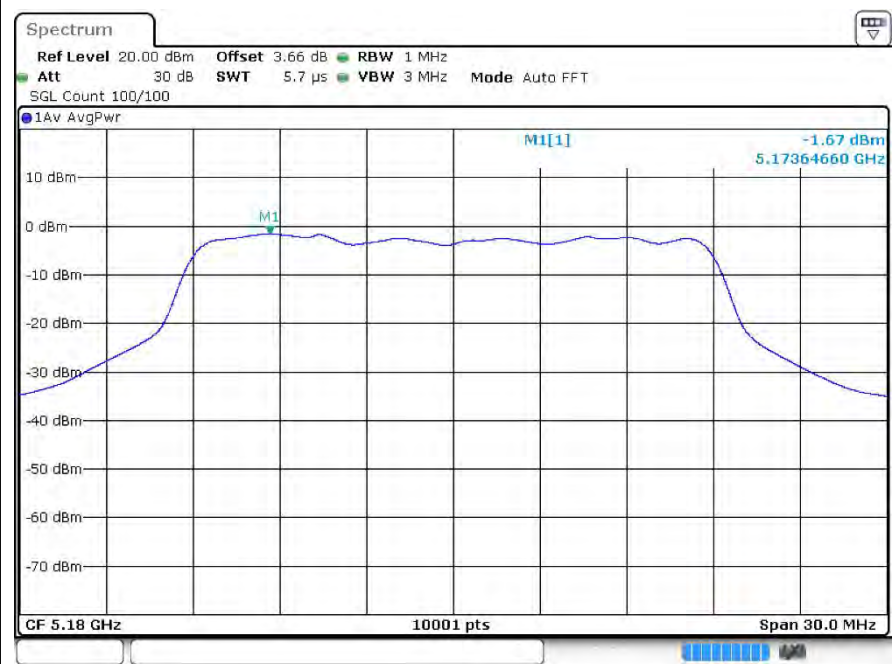
PSDn40 5190MHz Ant1



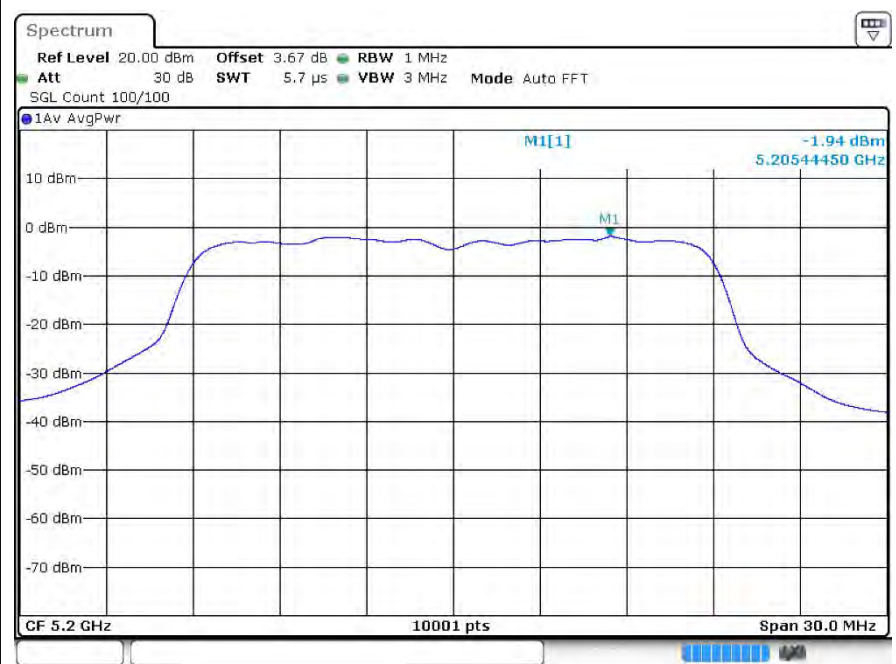
PSDn40 5230MHz Ant1



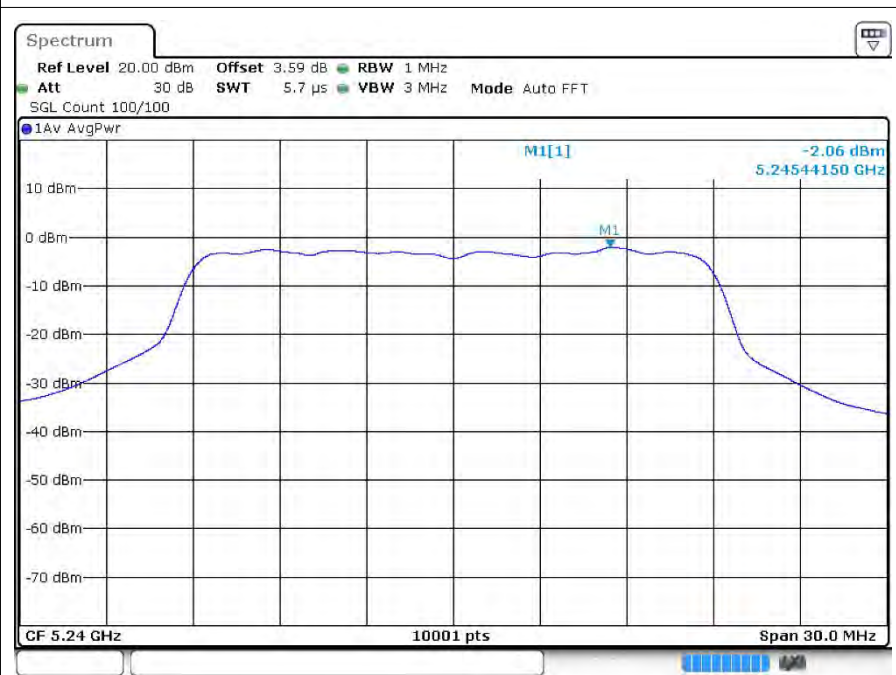
PSD ac20 5180MHz Ant1



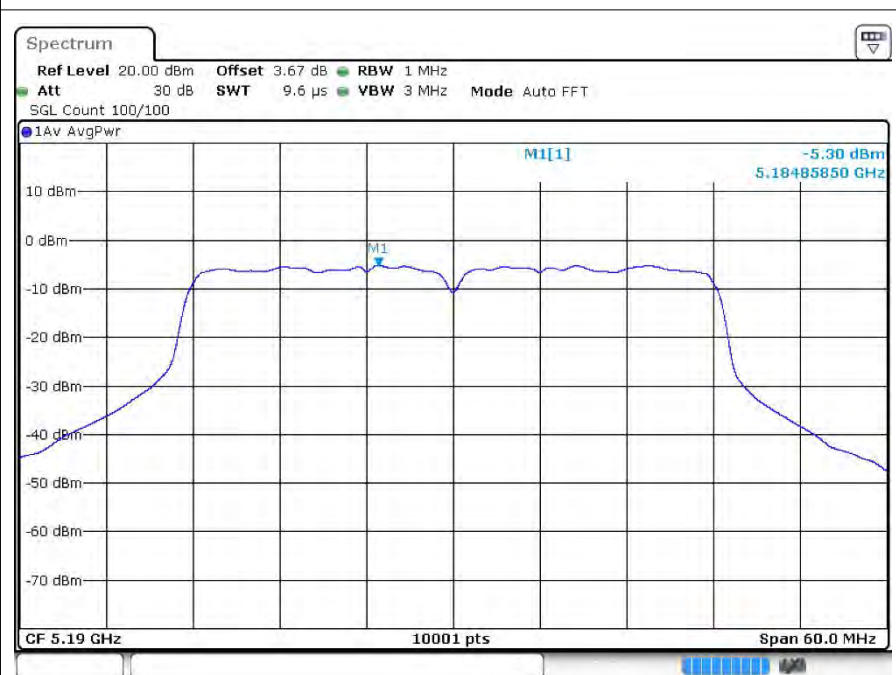
PSD ac20 5200MHz Ant1

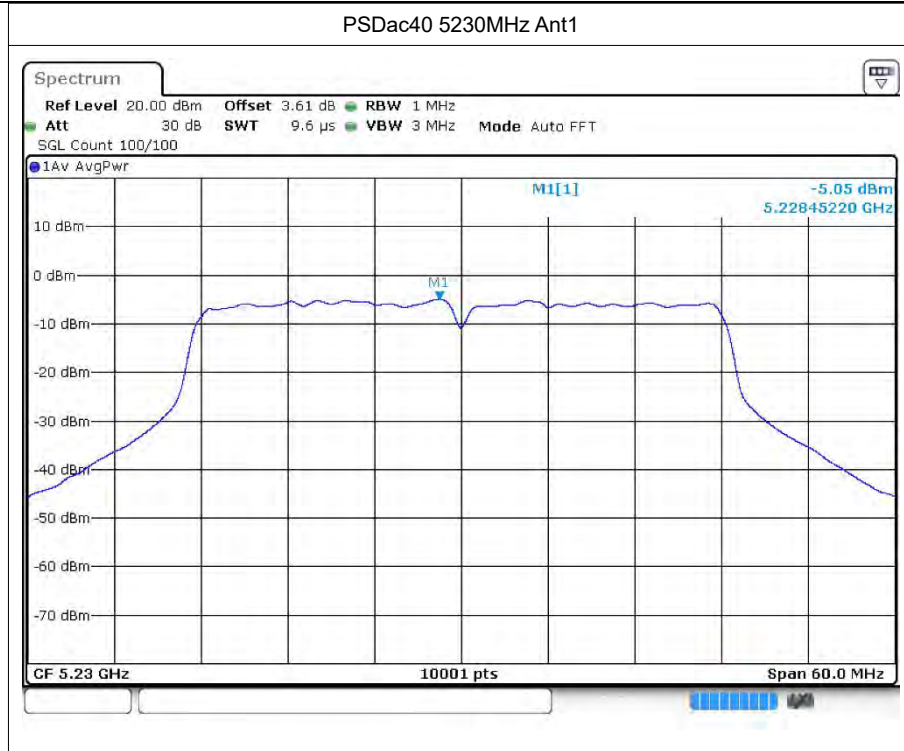


PSD ac20 5240MHz Ant1

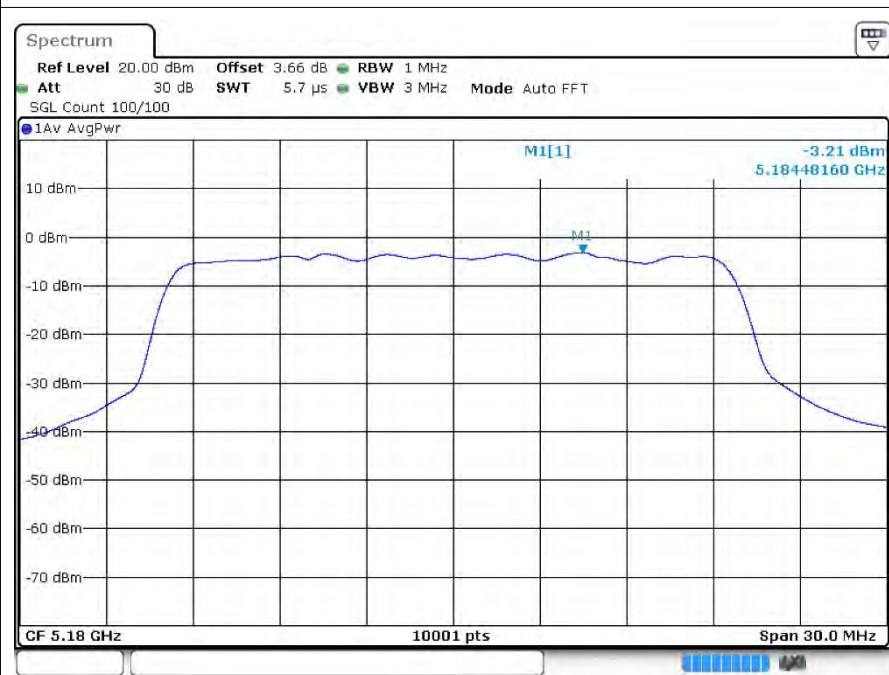


PSDac40 5190MHz Ant1

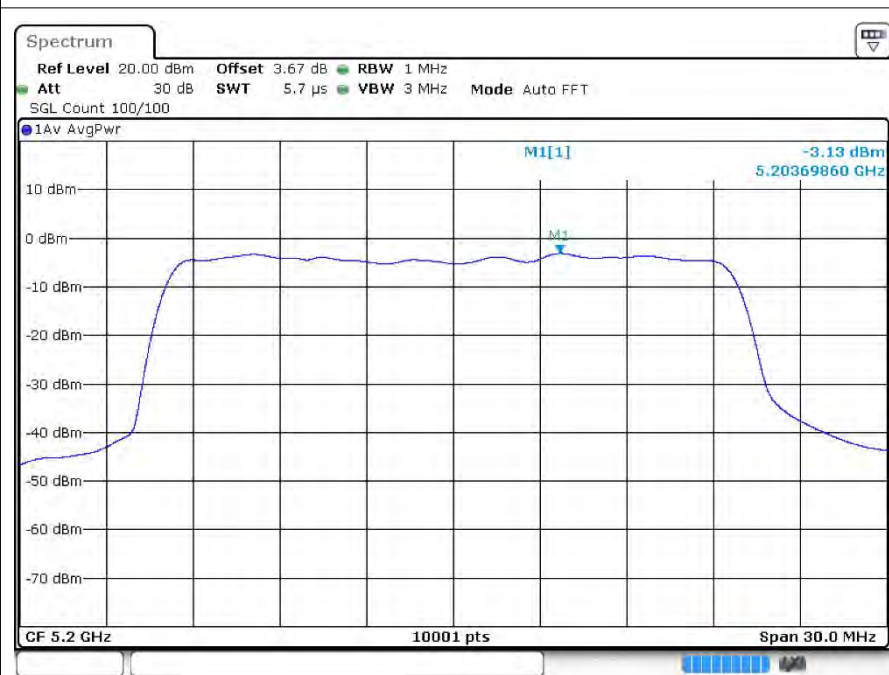




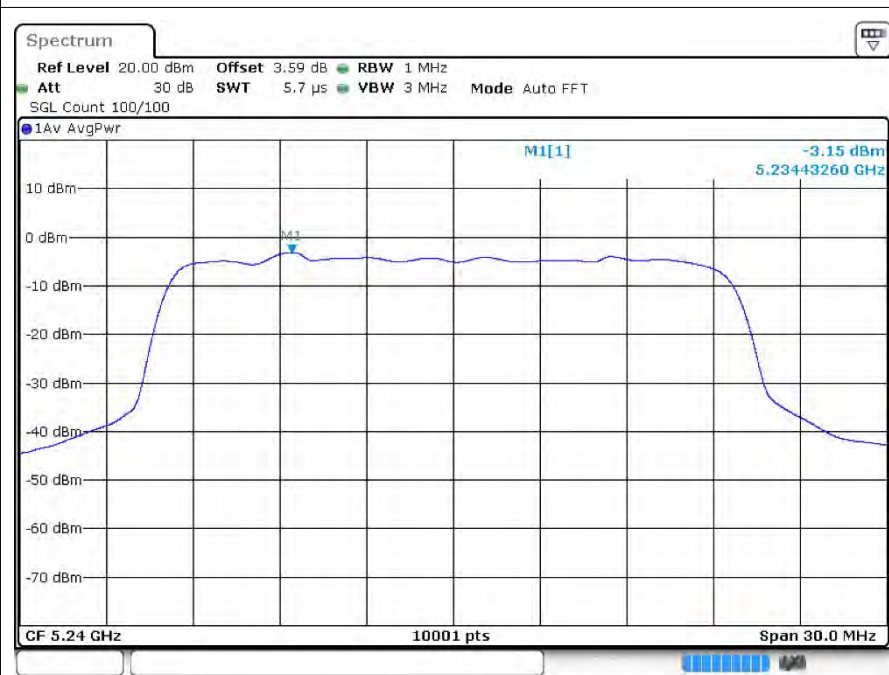
PSD ax20 5180MHz Ant1



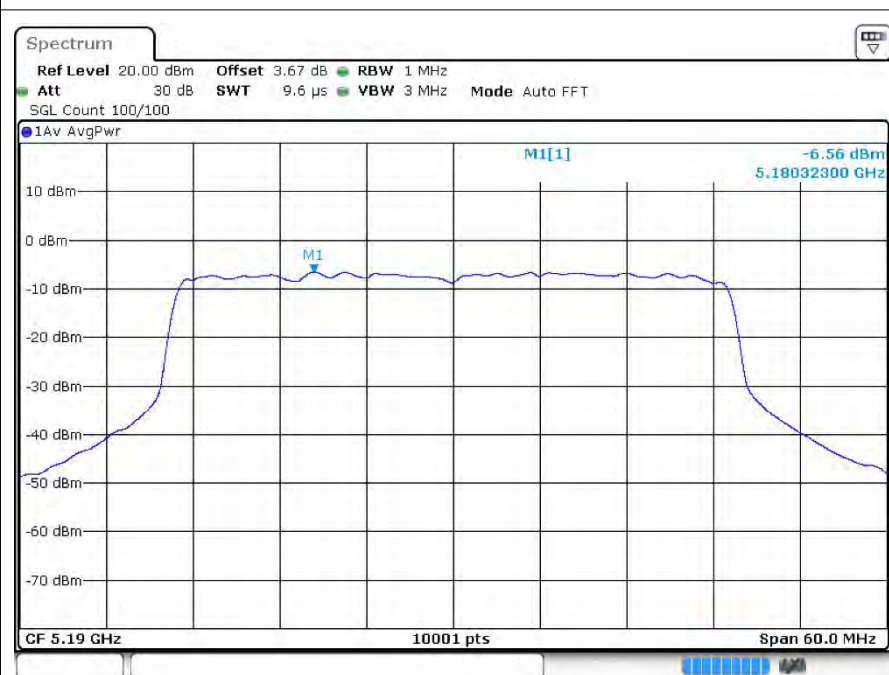
PSD ax20 5200MHz Ant1

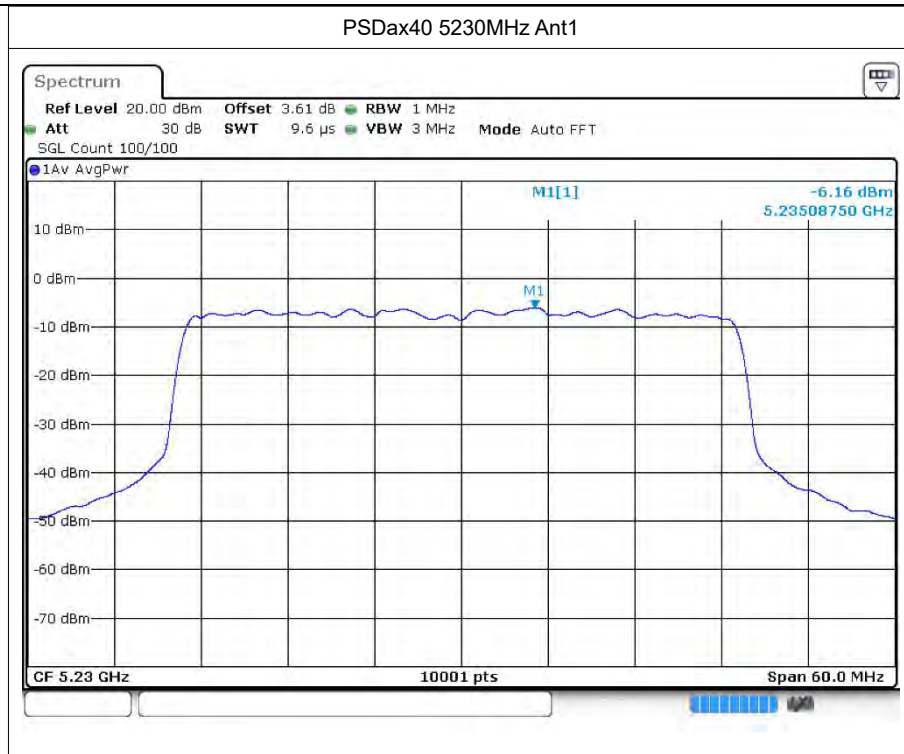


PSD ax20 5240MHz Ant1



PSDax40 5190MHz Ant1







6 Frequency Stability

6.1 Test Result

Condition	Mode	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
20C 102V	a	5180	Ant1	5179.96	-40000	-7.72	25	Pass
20C 120V	a	5180	Ant1	5179.98	-20000	-3.86	25	Pass
20C 138V	a	5180	Ant1	5179.96	-40000	-7.72	25	Pass
-20C 120V	a	5180	Ant1	5179.96	-40000	-7.72	25	Pass
-10C 120V	a	5180	Ant1	5179.96	-40000	-7.72	25	Pass
0C 120V	a	5180	Ant1	5179.96	-40000	-7.72	25	Pass
10C 120V	a	5180	Ant1	5179.96	-40000	-7.72	25	Pass
30C 120V	a	5180	Ant1	5179.96	-40000	-7.72	25	Pass
40C 120V	a	5180	Ant1	5179.98	-20000	-3.86	25	Pass
50C 120V	a	5180	Ant1	5179.98	-20000	-3.86	25	Pass
20C 102V	a	5200	Ant1	5199.98	-20000	-3.85	25	Pass
20C 120V	a	5200	Ant1	5199.98	-20000	-3.85	25	Pass
20C 138V	a	5200	Ant1	5199.96	-40000	-7.69	25	Pass
-20C 120V	a	5200	Ant1	5199.96	-40000	-7.69	25	Pass
-10C 120V	a	5200	Ant1	5199.96	-40000	-7.69	25	Pass
0C 120V	a	5200	Ant1	5199.96	-40000	-7.69	25	Pass
10C 120V	a	5200	Ant1	5199.96	-40000	-7.69	25	Pass
30C 120V	a	5200	Ant1	5199.96	-40000	-7.69	25	Pass
40C 120V	a	5200	Ant1	5199.98	-20000	-3.85	25	Pass
20C 102V	a	5200	Ant1	5199.98	-20000	-3.85	25	Pass
20C 102V	a	5240	Ant1	5239.96	-40000	-7.63	25	Pass
20C 120V	a	5240	Ant1	5239.98	-20000	-3.82	25	Pass
20C 138V	a	5240	Ant1	5239.96	-40000	-7.63	25	Pass
-20C 120V	a	5240	Ant1	5239.96	-40000	-7.63	25	Pass
-10C 120V	a	5240	Ant1	5239.96	-40000	-7.63	25	Pass
0C 120V	a	5240	Ant1	5239.96	-40000	-7.63	25	Pass
10C 120V	a	5240	Ant1	5239.96	-40000	-7.63	25	Pass
30C 120V	a	5240	Ant1	5239.96	-40000	-7.63	25	Pass
40C 120V	a	5240	Ant1	5239.98	-20000	-3.82	25	Pass
50C 120V	a	5240	Ant1	5239.96	-40000	-7.63	25	Pass
20C 102V	n20	5180	Ant1	5179.96	-40000	-7.72	25	Pass
20C 120V	n20	5180	Ant1	5179.96	-40000	-7.72	25	Pass
20C 138V	n20	5180	Ant1	5179.98	-20000	-3.86	25	Pass
-20C 120V	n20	5180	Ant1	5179.96	-40000	-7.72	25	Pass
-10C 120V	n20	5180	Ant1	5179.96	-40000	-7.72	25	Pass
0C 120V	n20	5180	Ant1	5179.96	-40000	-7.72	25	Pass



10C 120V	n20	5180	Ant1	5179.98	-20000	-3.86	25	Pass
30C 120V	n20	5180	Ant1	5179.98	-20000	-3.86	25	Pass
40C 120V	n20	5180	Ant1	5179.96	-40000	-7.72	25	Pass
50C 120V	n20	5180	Ant1	5179.96	-40000	-7.72	25	Pass
20C 102V	n20	5200	Ant1	5199.98	-20000	-3.85	25	Pass
20C 120V	n20	5200	Ant1	5199.98	-20000	-3.85	25	Pass
20C 138V	n20	5200	Ant1	5199.96	-40000	-7.69	25	Pass
-20C 120V	n20	5200	Ant1	5199.98	-20000	-3.85	25	Pass
-10C 120V	n20	5200	Ant1	5199.96	-40000	-7.69	25	Pass
0C 120V	n20	5200	Ant1	5199.98	-20000	-3.85	25	Pass
10C 120V	n20	5200	Ant1	5199.96	-40000	-7.69	25	Pass
30C 120V	n20	5200	Ant1	5199.96	-40000	-7.69	25	Pass
40C 120V	n20	5200	Ant1	5199.96	-40000	-7.69	25	Pass
50C 120V	n20	5200	Ant1	5199.96	-40000	-7.69	25	Pass
20C 102V	n20	5240	Ant1	5239.98	-20000	-3.82	25	Pass
20C 120V	n20	5240	Ant1	5239.96	-40000	-7.63	25	Pass
20C 138V	n20	5240	Ant1	5239.98	-20000	-3.82	25	Pass
-20C 120V	n20	5240	Ant1	5239.96	-40000	-7.63	25	Pass
-10C 120V	n20	5240	Ant1	5239.94	-60000	-11.45	25	Pass
0C 120V	n20	5240	Ant1	5239.94	-60000	-11.45	25	Pass
10C 120V	n20	5240	Ant1	5239.98	-20000	-3.82	25	Pass
30C 120V	n20	5240	Ant1	5239.98	-20000	-3.82	25	Pass
40C 120V	n20	5240	Ant1	5239.98	-20000	-3.82	25	Pass
50C 120V	n20	5240	Ant1	5239.98	-20000	-3.82	25	Pass
20C 102V	n40	5190	Ant1	5189.96	-40000	-7.71	25	Pass
20C 120V	n40	5190	Ant1	5189.96	-40000	-7.71	25	Pass
20C 138V	n40	5190	Ant1	5189.96	-40000	-7.71	25	Pass
-20C 120V	n40	5190	Ant1	5189.96	-40000	-7.71	25	Pass
-10C 120V	n40	5190	Ant1	5189.96	-40000	-7.71	25	Pass
0C 120V	n40	5190	Ant1	5189.96	-40000	-7.71	25	Pass
10C 120V	n40	5190	Ant1	5189.96	-40000	-7.71	25	Pass
30C 120V	n40	5190	Ant1	5189.96	-40000	-7.71	25	Pass
40C 120V	n40	5190	Ant1	5189.96	-40000	-7.71	25	Pass
50C 120V	n40	5190	Ant1	5189.96	-40000	-7.71	25	Pass
20C 102V	n40	5230	Ant1	5229.96	-40000	-7.65	25	Pass
20C 120V	n40	5230	Ant1	5229.96	-40000	-7.65	25	Pass
20C 138V	n40	5230	Ant1	5229.96	-40000	-7.65	25	Pass
-20C 120V	n40	5230	Ant1	5229.96	-40000	-7.65	25	Pass
-10C 120V	n40	5230	Ant1	5229.96	-40000	-7.65	25	Pass
0C 120V	n40	5230	Ant1	5229.96	-40000	-7.65	25	Pass
10C 120V	n40	5230	Ant1	5229.96	-40000	-7.65	25	Pass
30C 120V	n40	5230	Ant1	5229.96	-40000	-7.65	25	Pass
40C 120V	n40	5230	Ant1	5229.96	-40000	-7.65	25	Pass



50C 120V	n40	5230	Ant1	5229.96	-40000	-7.65	25	Pass
20C 102V	ac20	5180	Ant1	5179.96	-40000	-7.72	25	Pass
20C 120V	ac20	5180	Ant1	5179.98	-20000	-3.86	25	Pass
20C 138V	ac20	5180	Ant1	5179.96	-40000	-7.72	25	Pass
-20C 120V	ac20	5180	Ant1	5179.94	-60000	-11.58	25	Pass
-10C 120V	ac20	5180	Ant1	5179.96	-40000	-7.72	25	Pass
0C 120V	ac20	5180	Ant1	5179.96	-40000	-7.72	25	Pass
10C 120V	ac20	5180	Ant1	5179.98	-20000	-3.86	25	Pass
30C 120V	ac20	5180	Ant1	5179.96	-40000	-7.72	25	Pass
40C 120V	ac20	5180	Ant1	5179.98	-20000	-3.86	25	Pass
50C 120V	ac20	5180	Ant1	5179.96	-40000	-7.72	25	Pass
20C 102V	ac20	5200	Ant1	5199.98	-20000	-3.85	25	Pass
20C 120V	ac20	5200	Ant1	5199.96	-40000	-7.69	25	Pass
20C 138V	ac20	5200	Ant1	5199.98	-20000	-3.85	25	Pass
-20C 120V	ac20	5200	Ant1	5199.98	-20000	-3.85	25	Pass
-10C 120V	ac20	5200	Ant1	5199.94	-60000	-11.54	25	Pass
0C 120V	ac20	5200	Ant1	5199.98	-20000	-3.85	25	Pass
10C 120V	ac20	5200	Ant1	5199.94	-60000	-11.54	25	Pass
30C 120V	ac20	5200	Ant1	5199.96	-40000	-7.69	25	Pass
40C 120V	ac20	5200	Ant1	5199.96	-40000	-7.69	25	Pass
50C 120V	ac20	5200	Ant1	5199.98	-20000	-3.85	25	Pass
20C 102V	ac20	5240	Ant1	5239.94	-60000	-11.45	25	Pass
20C 120V	ac20	5240	Ant1	5239.96	-40000	-7.63	25	Pass
20C 138V	ac20	5240	Ant1	5239.96	-40000	-7.63	25	Pass
-20C 120V	ac20	5240	Ant1	5239.96	-40000	-7.63	25	Pass
-10C 120V	ac20	5240	Ant1	5239.96	-40000	-7.63	25	Pass
0C 120V	ac20	5240	Ant1	5239.94	-60000	-11.45	25	Pass
10C 120V	ac20	5240	Ant1	5239.96	-40000	-7.63	25	Pass
30C 120V	ac20	5240	Ant1	5239.96	-40000	-7.63	25	Pass
40C 120V	ac20	5240	Ant1	5240	0	0	25	Pass
50C 120V	ac20	5240	Ant1	5239.98	-20000	-3.82	25	Pass
20C 102V	ac40	5190	Ant1	5189.96	-40000	-7.71	25	Pass
20C 120V	ac40	5190	Ant1	5189.96	-40000	-7.71	25	Pass
20C 138V	ac40	5190	Ant1	5189.96	-40000	-7.71	25	Pass
-20C 120V	ac40	5190	Ant1	5189.96	-40000	-7.71	25	Pass
-10C 120V	ac40	5190	Ant1	5189.96	-40000	-7.71	25	Pass
0C 120V	ac40	5190	Ant1	5189.96	-40000	-7.71	25	Pass
10C 120V	ac40	5190	Ant1	5189.92	-80000	-15.41	25	Pass
30C 120V	ac40	5190	Ant1	5189.96	-40000	-7.71	25	Pass
40C 120V	ac40	5190	Ant1	5189.96	-40000	-7.71	25	Pass
50C 120V	ac40	5190	Ant1	5189.96	-40000	-7.71	25	Pass
20C 102V	ac40	5230	Ant1	5229.96	-40000	-7.65	25	Pass
20C 120V	ac40	5230	Ant1	5229.96	-40000	-7.65	25	Pass



20C 138V	ac40	5230	Ant1	5229.96	-40000	-7.65	25	Pass
-20C 120V	ac40	5230	Ant1	5230	0	0	25	Pass
-10C 120V	ac40	5230	Ant1	5229.96	-40000	-7.65	25	Pass
0C 120V	ac40	5230	Ant1	5229.96	-40000	-7.65	25	Pass
10C 120V	ac40	5230	Ant1	5229.96	-40000	-7.65	25	Pass
30C 120V	ac40	5230	Ant1	5229.92	-80000	-15.3	25	Pass
40C 120V	ac40	5230	Ant1	5229.96	-40000	-7.65	25	Pass
50C 120V	ac40	5230	Ant1	5229.96	-40000	-7.65	25	Pass
20C 102V	ax20	5180	Ant1	5179.98	-20000	-3.86	25	Pass
20C 120V	ax20	5180	Ant1	5179.98	-20000	-3.86	25	Pass
20C 138V	ax20	5180	Ant1	5179.98	-20000	-3.86	25	Pass
-20C 120V	ax20	5180	Ant1	5179.96	-40000	-7.72	25	Pass
-10C 120V	ax20	5180	Ant1	5179.98	-20000	-3.86	25	Pass
0C 120V	ax20	5180	Ant1	5179.98	-20000	-3.86	25	Pass
10C 120V	ax20	5180	Ant1	5179.96	-40000	-7.72	25	Pass
30C 120V	ax20	5180	Ant1	5179.96	-40000	-7.72	25	Pass
40C 120V	ax20	5180	Ant1	5179.96	-40000	-7.72	25	Pass
50C 120V	ax20	5180	Ant1	5179.98	-20000	-3.86	25	Pass
20C 102V	ax20	5200	Ant1	5199.98	-20000	-3.85	25	Pass
20C 120V	ax20	5200	Ant1	5199.96	-40000	-7.69	25	Pass
20C 138V	ax20	5200	Ant1	5199.98	-20000	-3.85	25	Pass
-20C 120V	ax20	5200	Ant1	5199.96	-40000	-7.69	25	Pass
-10C 120V	ax20	5200	Ant1	5199.96	-40000	-7.69	25	Pass
0C 120V	ax20	5200	Ant1	5199.98	-20000	-3.85	25	Pass
10C 120V	ax20	5200	Ant1	5199.98	-20000	-3.85	25	Pass
30C 120V	ax20	5200	Ant1	5199.98	-20000	-3.85	25	Pass
40C 120V	ax20	5200	Ant1	5199.96	-40000	-7.69	25	Pass
50C 120V	ax20	5200	Ant1	5199.96	-40000	-7.69	25	Pass
20C 102V	ax20	5240	Ant1	5239.98	-20000	-3.82	25	Pass
20C 120V	ax20	5240	Ant1	5239.96	-40000	-7.63	25	Pass
20C 138V	ax20	5240	Ant1	5239.98	-20000	-3.82	25	Pass
-20C 120V	ax20	5240	Ant1	5239.94	-60000	-11.45	25	Pass
-10C 120V	ax20	5240	Ant1	5239.98	-20000	-3.82	25	Pass
0C 120V	ax20	5240	Ant1	5239.98	-20000	-3.82	25	Pass
10C 120V	ax20	5240	Ant1	5239.96	-40000	-7.63	25	Pass
30C 120V	ax20	5240	Ant1	5239.96	-40000	-7.63	25	Pass
40C 120V	ax20	5240	Ant1	5239.96	-40000	-7.63	25	Pass
50C 120V	ax20	5240	Ant1	5239.96	-40000	-7.63	25	Pass
20C 102V	ax40	5190	Ant1	5190	0	0	25	Pass
20C 120V	ax40	5190	Ant1	5190	0	0	25	Pass
20C 138V	ax40	5190	Ant1	5189.96	-40000	-7.71	25	Pass
-20C 120V	ax40	5190	Ant1	5190	0	0	25	Pass
-10C 120V	ax40	5190	Ant1	5190	0	0	25	Pass



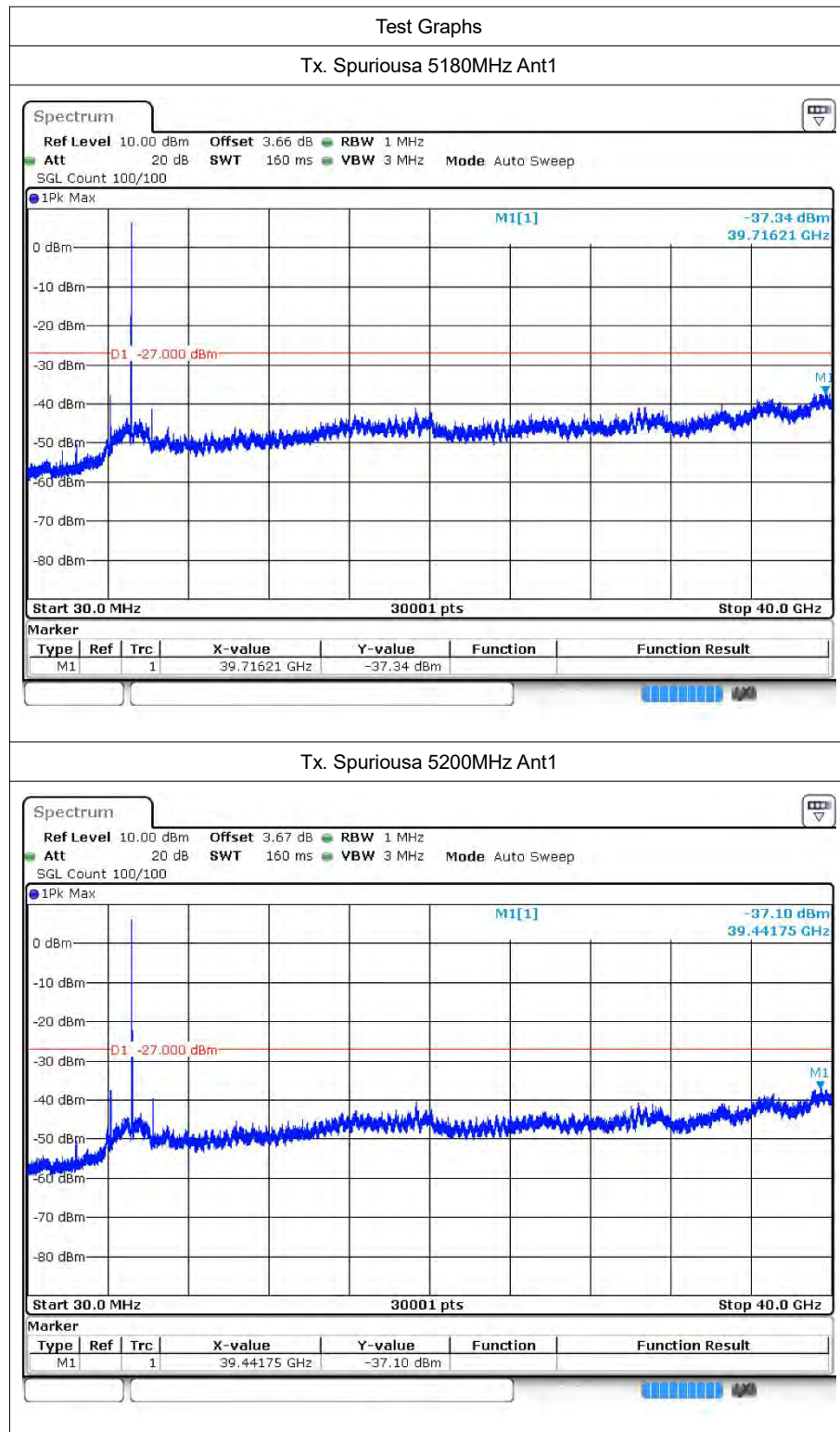
0C 120V	ax40	5190	Ant1	5190	0	0	25	Pass
10C 120V	ax40	5190	Ant1	5189.96	-40000	-7.71	25	Pass
30C 120V	ax40	5190	Ant1	5189.96	-40000	-7.71	25	Pass
40C 120V	ax40	5190	Ant1	5190	0	0	25	Pass
50C 120V	ax40	5190	Ant1	5189.96	-40000	-7.71	25	Pass
20C 102V	ax40	5230	Ant1	5230	0	0	25	Pass
20C 120V	ax40	5230	Ant1	5229.92	-80000	-15.3	25	Pass
20C 138V	ax40	5230	Ant1	5230	0	0	25	Pass
-20C 120V	ax40	5230	Ant1	5229.96	-40000	-7.65	25	Pass
-10C 120V	ax40	5230	Ant1	5229.96	-40000	-7.65	25	Pass
0C 120V	ax40	5230	Ant1	5229.96	-40000	-7.65	25	Pass
10C 120V	ax40	5230	Ant1	5230	0	0	25	Pass
30C 120V	ax40	5230	Ant1	5229.92	-80000	-15.3	25	Pass
40C 120V	ax40	5230	Ant1	5230	0	0	25	Pass
50C 120V	ax40	5230	Ant1	5229.96	-40000	-7.65	25	Pass

7 Conducted RF Spurious Emission

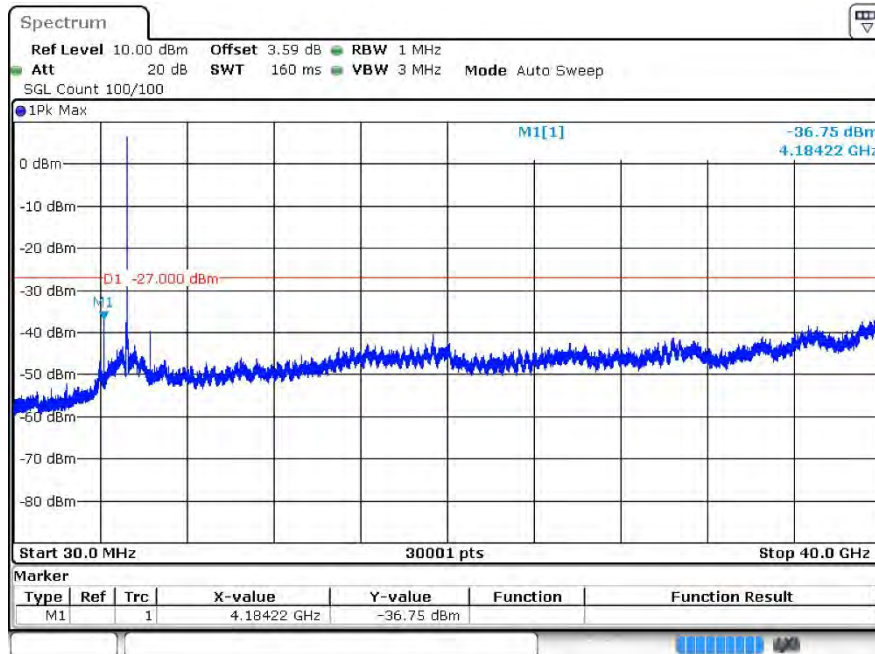
7.1 Test Result

Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
a	5180	Ant1	-37.33	-27	Pass
a	5200	Ant1	-37.09	-27	Pass
a	5240	Ant1	-36.74	-27	Pass
n20	5180	Ant1	-36.78	-27	Pass
n20	5200	Ant1	-37.01	-27	Pass
n20	5240	Ant1	-36.86	-27	Pass
n40	5190	Ant1	-33.86	-27	Pass
n40	5230	Ant1	-33.84	-27	Pass
ac20	5180	Ant1	-36.18	-27	Pass
ac20	5200	Ant1	-36.45	-27	Pass
ac20	5240	Ant1	-36.56	-27	Pass
ac40	5190	Ant1	-33.7	-27	Pass
ac40	5230	Ant1	-33.4	-27	Pass
ax20	5180	Ant1	-36.07	-27	Pass
ax20	5200	Ant1	-36.38	-27	Pass
ax20	5240	Ant1	-36.45	-27	Pass
ax40	5190	Ant1	-35.22	-27	Pass
ax40	5230	Ant1	-33.57	-27	Pass

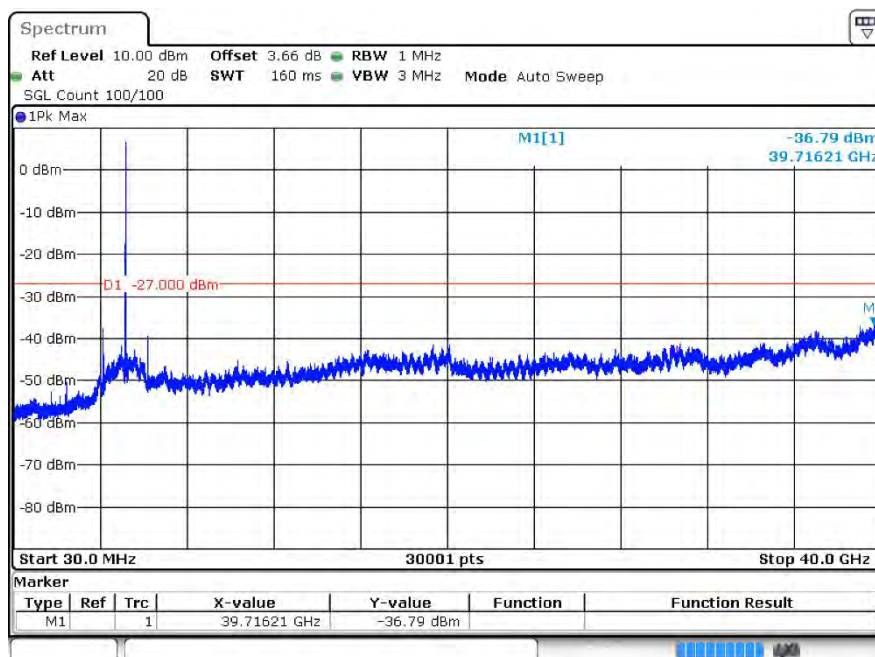
7.2 Test Graphs



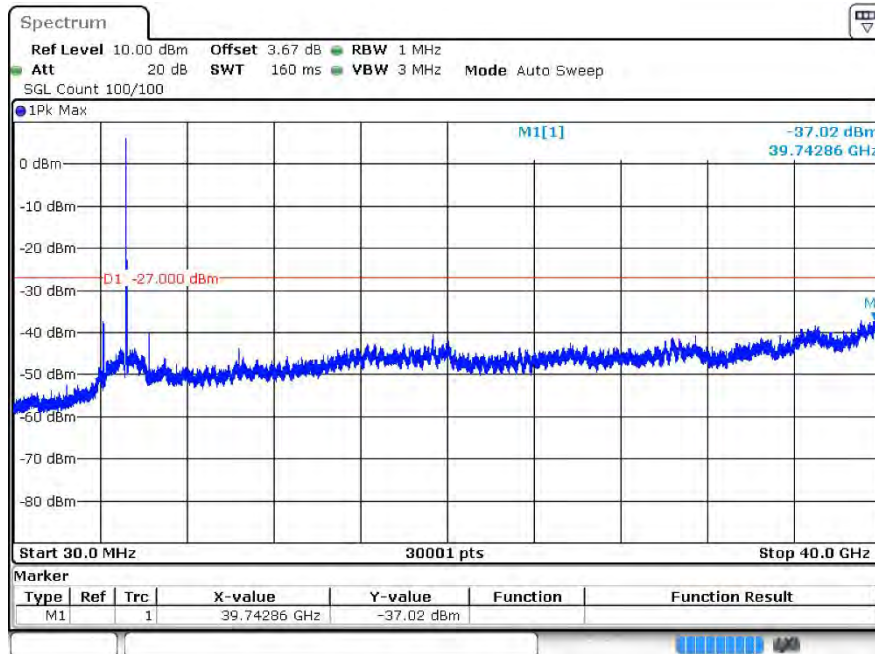
Tx. Spurious 5240MHz Ant1



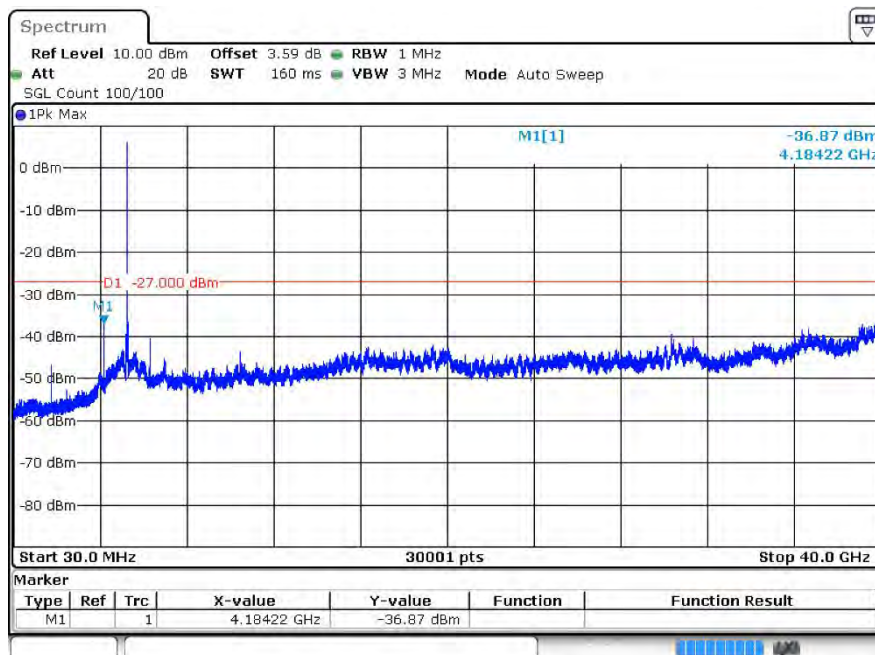
Tx. Spurious n20 5180MHz Ant1



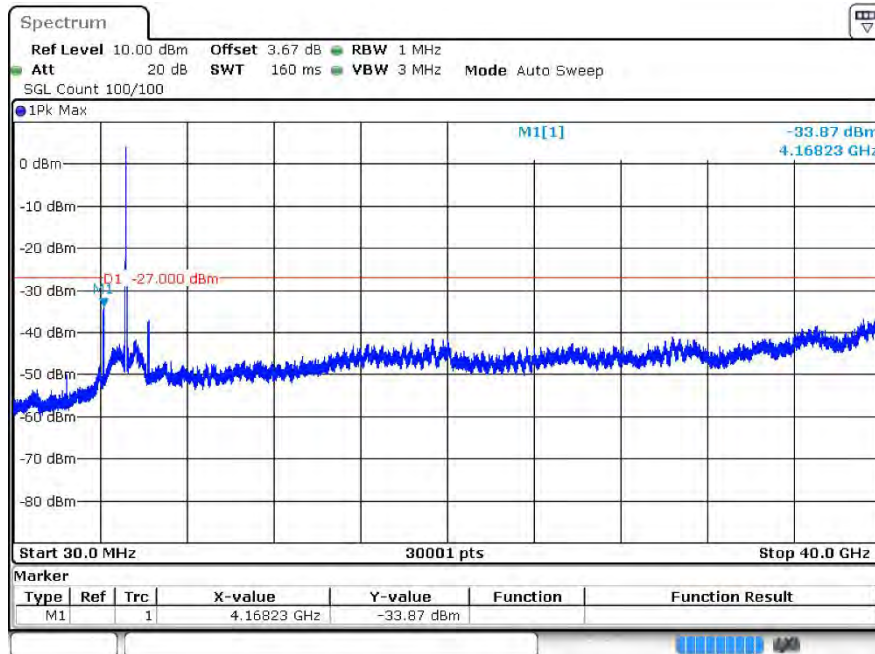
Tx. Spurious n20 5200MHz Ant1



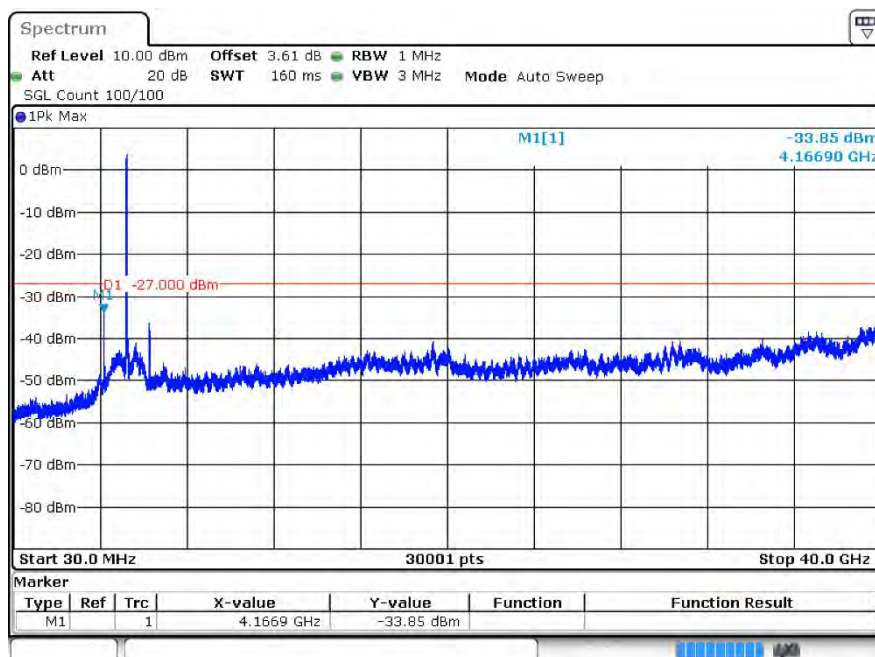
Tx. Spurious n20 5240MHz Ant1



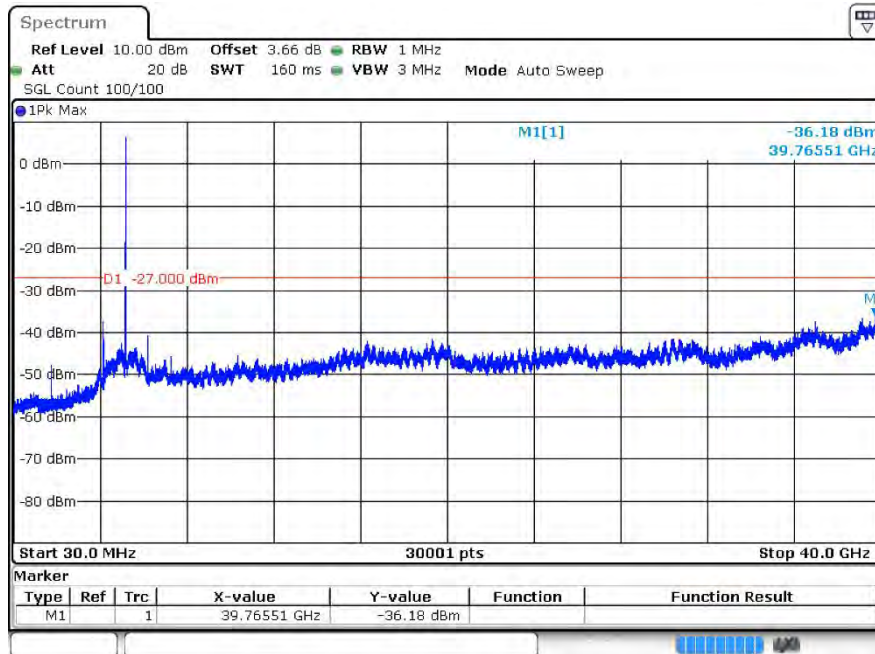
Tx. Spuriousn40 5190MHz Ant1



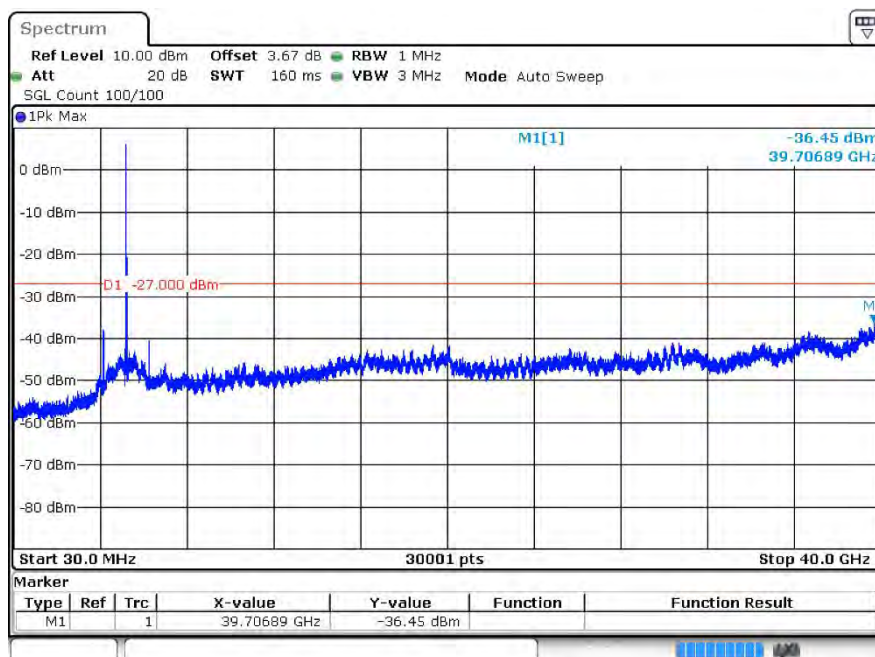
Tx. Spuriousn40 5230MHz Ant1



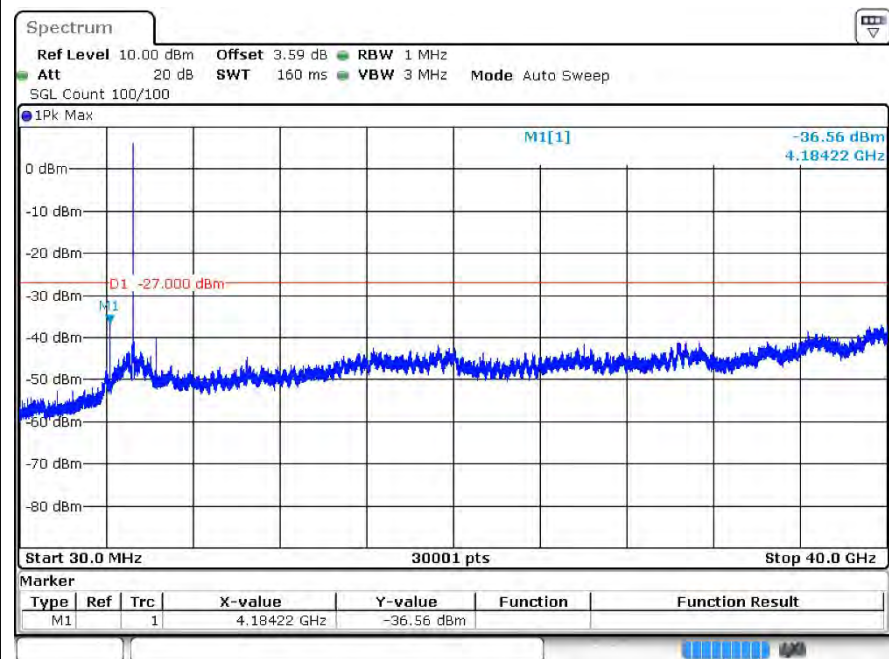
Tx. Spurious ac20 5180MHz Ant1



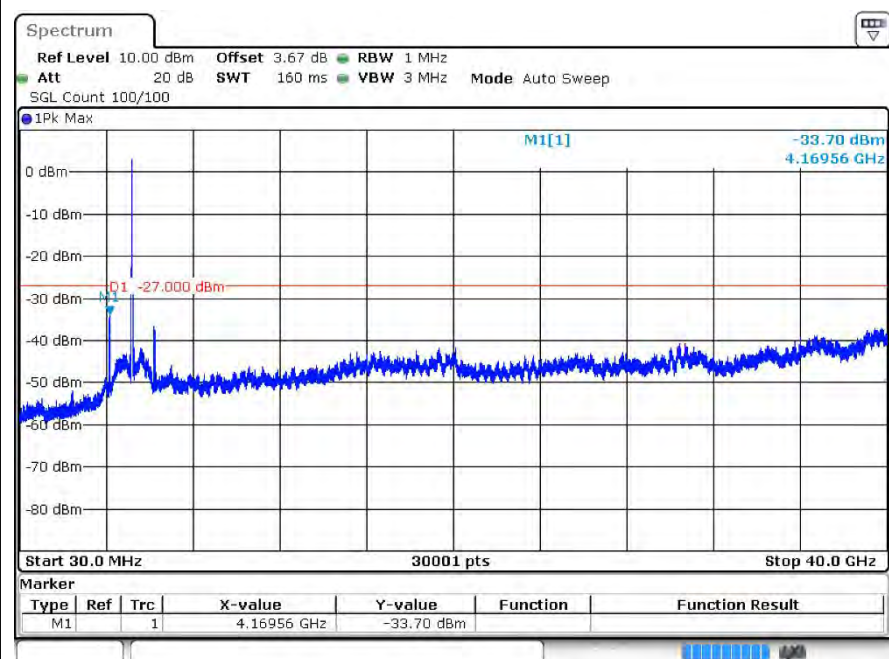
Tx. Spurious ac20 5200MHz Ant1

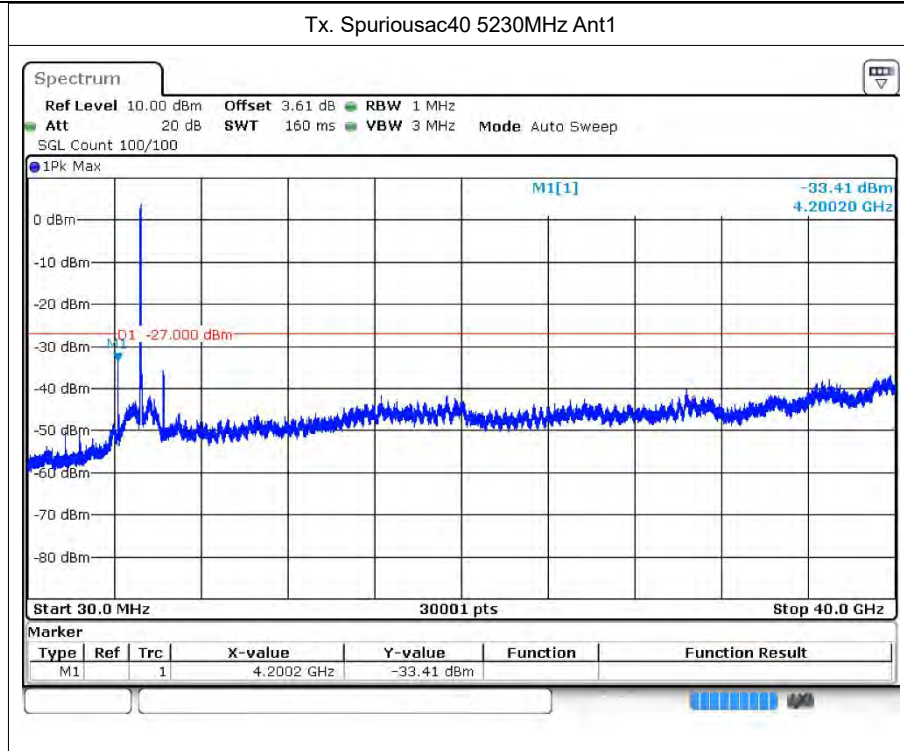


Tx. Spurious ac20 5240MHz Ant1

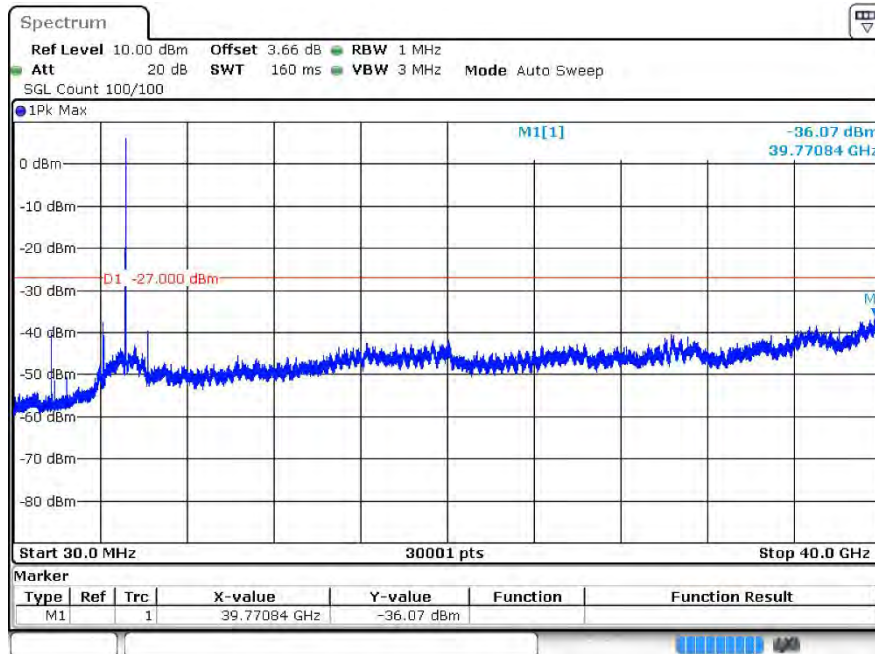


Tx. Spuriousac40 5190MHz Ant1

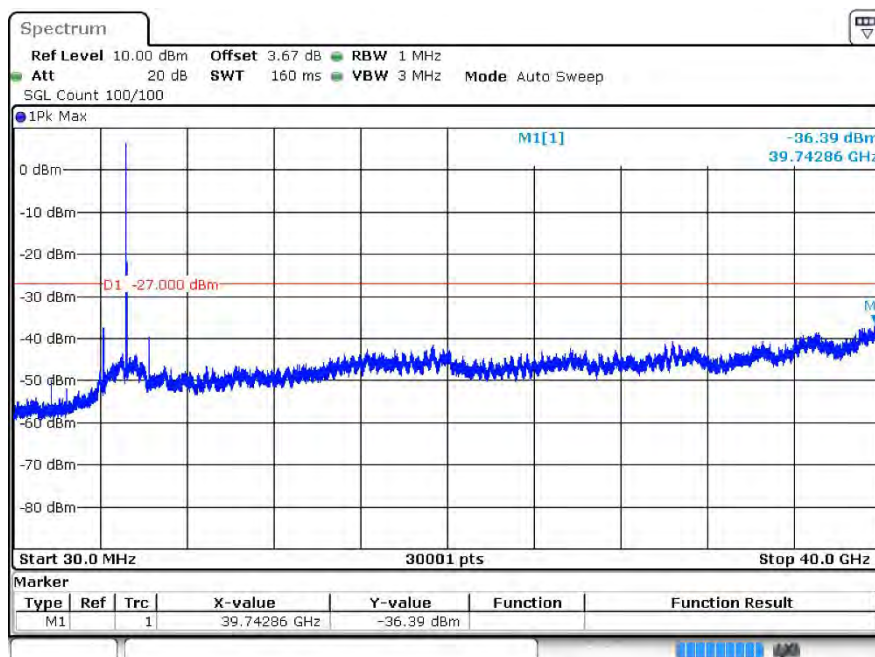




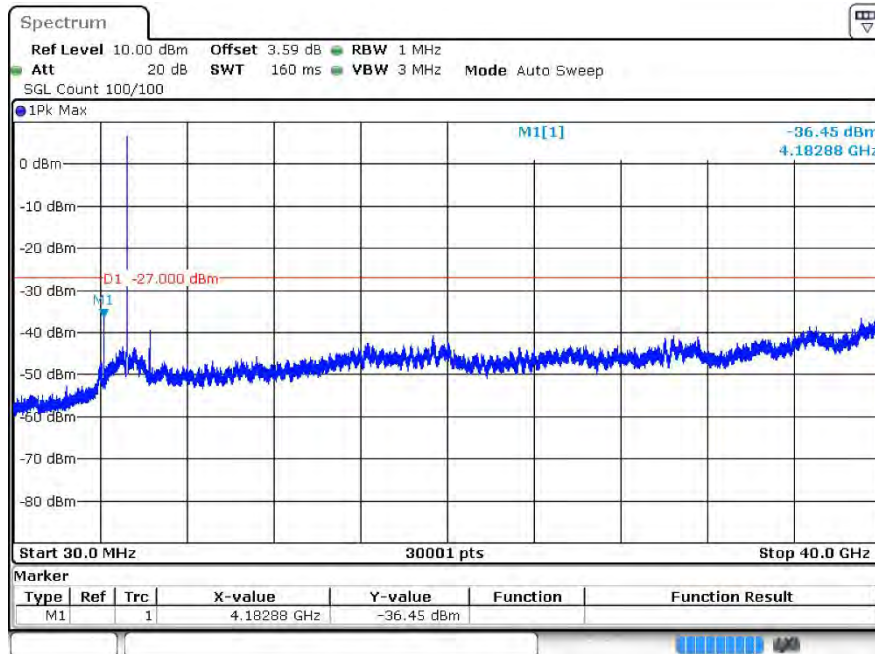
Tx. Spurious ax20 5180MHz Ant1



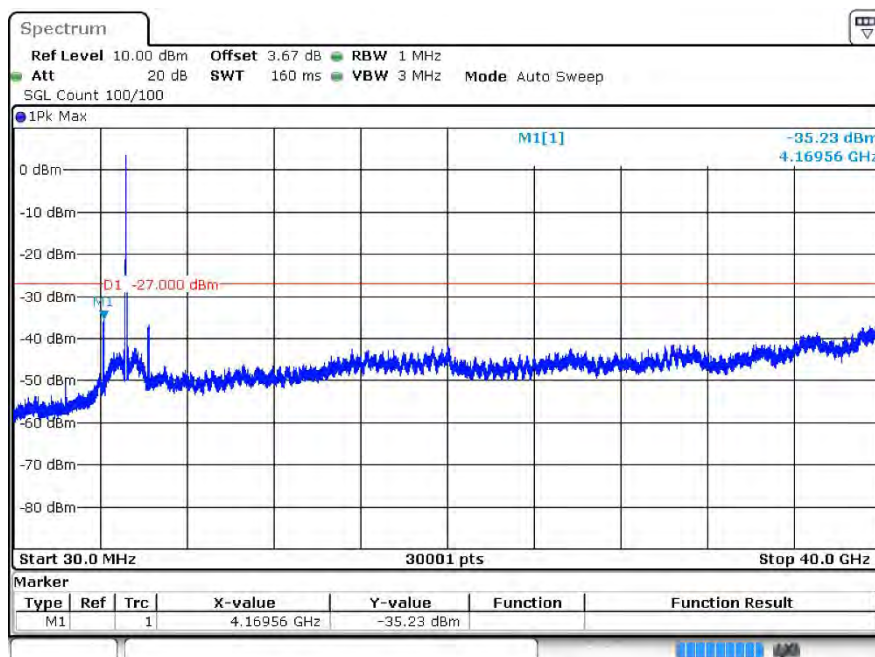
Tx. Spurious ax20 5200MHz Ant1

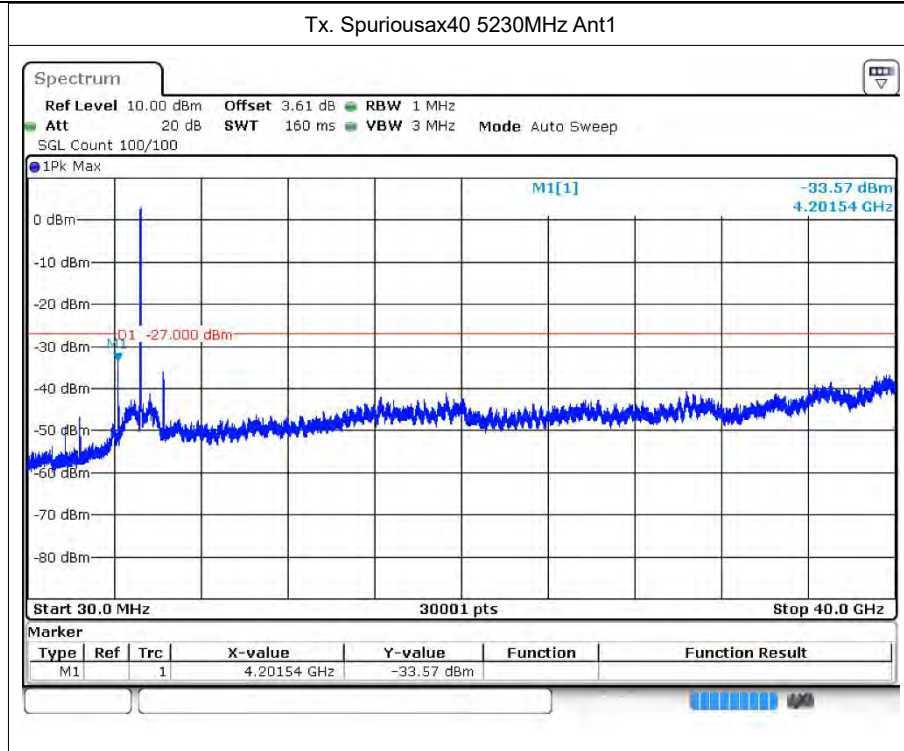


Tx. Spurious ax20 5240MHz Ant1



Tx. Spuriousax40 5190MHz Ant1







8 Restrict Band

8.1 Test Result

Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
a	5180	Ant1	4500	-42.81	2	-	54.42	Peak	68.2	Pass
a	5180	Ant1	4500	-53.24	2	0.29	44.28	Average	54	Pass
a	5180	Ant1	4929.8	-39.89	2	-	57.34	Peak	68.2	Pass
a	5180	Ant1	4953.6	-50.45	2	0.29	47.07	Average	54	Pass
a	5180	Ant1	5150	-43.51	2	-	53.72	Peak	68.2	Pass
a	5180	Ant1	5150	-51.98	2	0.29	45.54	Average	54	Pass
a	5240	Ant1	5350	-43.27	2	-	53.96	Peak	68.2	Pass
a	5240	Ant1	5350	-51.83	2	0.32	45.72	Average	54	Pass
a	5240	Ant1	5452.32	-39.62	2	-	57.61	Peak	68.2	Pass
a	5240	Ant1	5449.2	-49.4	2	0.32	48.15	Average	54	Pass
a	5240	Ant1	5460	-43.97	2	-	53.26	Peak	68.2	Pass
a	5240	Ant1	5460	-51.24	2	0.32	46.31	Average	54	Pass
n20	5180	Ant1	4500	-44.63	2	-	52.6	Peak	68.2	Pass
n20	5180	Ant1	4500	-52.69	2	0.33	44.87	Average	54	Pass
n20	5180	Ant1	4939.6	-40.33	2	-	56.9	Peak	68.2	Pass
n20	5180	Ant1	4967.6	-50.03	2	0.33	47.53	Average	54	Pass
n20	5180	Ant1	5150	-44.33	2	-	52.9	Peak	68.2	Pass
n20	5180	Ant1	5150	-51.73	2	0.33	45.83	Average	54	Pass
n20	5240	Ant1	5350	-45.74	2	-	51.49	Peak	68.2	Pass
n20	5240	Ant1	5350	-51.5	2	0.21	45.94	Average	54	Pass
n20	5240	Ant1	5368.32	-41.56	2	-	55.67	Peak	68.2	Pass
n20	5240	Ant1	5450.4	-49.45	2	0.21	47.99	Average	54	Pass
n20	5240	Ant1	5460	-42.54	2	-	54.69	Peak	68.2	Pass
n20	5240	Ant1	5460	-51.35	2	0.21	46.09	Average	54	Pass
n40	5190	Ant1	4500	-44.72	2	-	52.51	Peak	68.2	Pass
n40	5190	Ant1	4500	-51.94	2	0.45	45.74	Average	54	Pass
n40	5190	Ant1	4791.27	-40.13	2	-	57.1	Peak	68.2	Pass
n40	5190	Ant1	5078.16	-49.69	2	0.45	47.99	Average	54	Pass
n40	5190	Ant1	5150	-41.3	2	-	55.93	Peak	68.2	Pass
n40	5190	Ant1	5150	-51.42	2	0.45	46.26	Average	54	Pass
n40	5230	Ant1	5350	-43.64	2	-	53.59	Peak	68.2	Pass
n40	5230	Ant1	5350	-51.74	2	0.69	46.18	Average	54	Pass
n40	5230	Ant1	5450.55	-40.74	2	-	56.49	Peak	68.2	Pass
n40	5230	Ant1	5449.47	-49.61	2	0.69	48.31	Average	54	Pass
n40	5230	Ant1	5460	-45.55	2	-	51.68	Peak	68.2	Pass
n40	5230	Ant1	5460	-51.37	2	0.69	46.55	Average	54	Pass

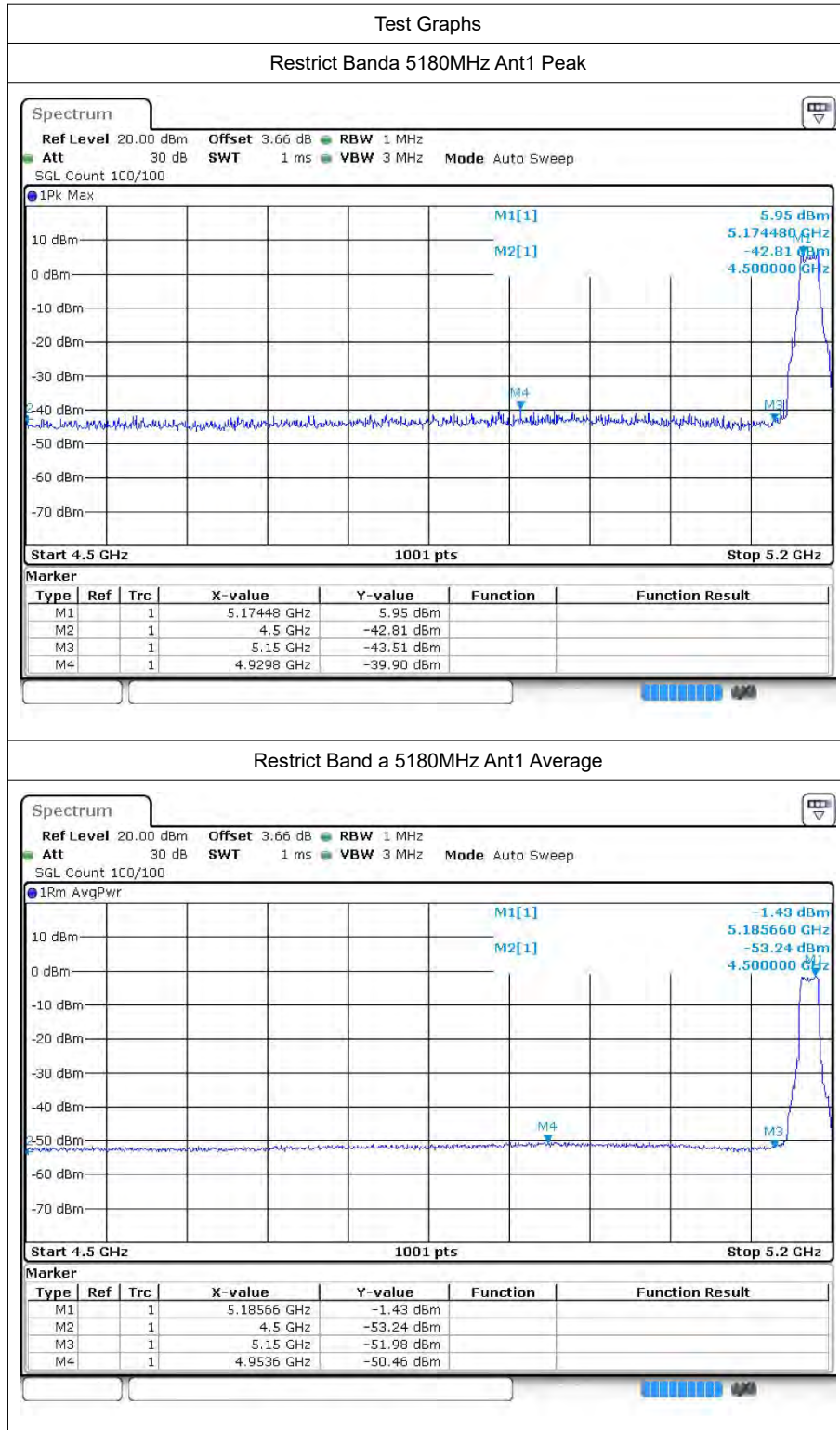


ac20	5180	Ant1	4500	-44.21	2	-	53.02	Peak	68.2	Pass
ac20	5180	Ant1	4500	-52.74	2	0.2	44.69	Average	54	Pass
ac20	5180	Ant1	5149.6	-37.88	2	-	59.35	Peak	68.2	Pass
ac20	5180	Ant1	4924.9	-50.26	2	0.2	47.17	Average	54	Pass
ac20	5180	Ant1	5150	-38.67	2	-	58.56	Peak	68.2	Pass
ac20	5180	Ant1	5150	-50.97	2	0.2	46.46	Average	54	Pass
ac20	5240	Ant1	5350	-42.13	2	-	55.1	Peak	68.2	Pass
ac20	5240	Ant1	5350	-51.34	2	0.2	46.09	Average	54	Pass
ac20	5240	Ant1	5450.88	-39.81	2	-	57.42	Peak	68.2	Pass
ac20	5240	Ant1	5450.16	-49.76	2	0.2	47.67	Average	54	Pass
ac20	5240	Ant1	5460	-44.02	2	-	53.21	Peak	68.2	Pass
ac20	5240	Ant1	5460	-51.47	2	0.2	45.96	Average	54	Pass
ac40	5190	Ant1	4500	-44.09	2	-	53.14	Peak	68.2	Pass
ac40	5190	Ant1	4500	-51.26	2	0.69	46.66	Average	54	Pass
ac40	5190	Ant1	5148.97	-38.42	2	-	58.81	Peak	68.2	Pass
ac40	5190	Ant1	5078.16	-49.18	2	0.69	48.74	Average	54	Pass
ac40	5190	Ant1	5150	-38.39	2	-	58.84	Peak	68.2	Pass
ac40	5190	Ant1	5150	-51.19	2	0.69	46.73	Average	54	Pass
ac40	5230	Ant1	5350	-44.33	2	-	52.9	Peak	68.2	Pass
ac40	5230	Ant1	5350	-51.02	2	0.56	46.77	Average	54	Pass
ac40	5230	Ant1	5452.17	-40.85	2	-	56.38	Peak	68.2	Pass
ac40	5230	Ant1	5449.2	-48.69	2	0.56	49.1	Average	54	Pass
ac40	5230	Ant1	5460	-44.99	2	-	52.24	Peak	68.2	Pass
ac40	5230	Ant1	5460	-51.27	2	0.56	46.52	Average	54	Pass
ax20	5180	Ant1	4500	-43.48	2	-	53.75	Peak	68.2	Pass
ax20	5180	Ant1	4500	-52.34	2	0.26	45.15	Average	54	Pass
ax20	5180	Ant1	4994.2	-40.08	2	-	57.15	Peak	68.2	Pass
ax20	5180	Ant1	4967.6	-50.05	2	0.26	47.44	Average	54	Pass
ax20	5180	Ant1	5150	-43.99	2	-	53.24	Peak	68.2	Pass
ax20	5180	Ant1	5150	-52.07	2	0.26	45.42	Average	54	Pass
ax20	5240	Ant1	5350	-45.08	2	-	52.15	Peak	68.2	Pass
ax20	5240	Ant1	5350	-51.74	2	0.28	45.77	Average	54	Pass
ax20	5240	Ant1	5364.96	-40.45	2	-	56.78	Peak	68.2	Pass
ax20	5240	Ant1	5446.56	-49.44	2	0.28	48.07	Average	54	Pass
ax20	5240	Ant1	5460	-45.33	2	-	51.9	Peak	68.2	Pass
ax20	5240	Ant1	5460	-50.77	2	0.28	46.74	Average	54	Pass
ax40	5190	Ant1	4500	-42.87	2	-	54.36	Peak	68.2	Pass
ax40	5190	Ant1	4500	-52.09	2	0.11	45.25	Average	54	Pass
ax40	5190	Ant1	4943.11	-39.75	2	-	57.48	Peak	68.2	Pass
ax40	5190	Ant1	5078.89	-49.47	2	0.11	47.87	Average	54	Pass
ax40	5190	Ant1	5150	-42.74	2	-	54.49	Peak	68.2	Pass
ax40	5190	Ant1	5150	-51.73	2	0.11	45.61	Average	54	Pass
ax40	5230	Ant1	5350	-42.94	2	-	54.29	Peak	68.2	Pass

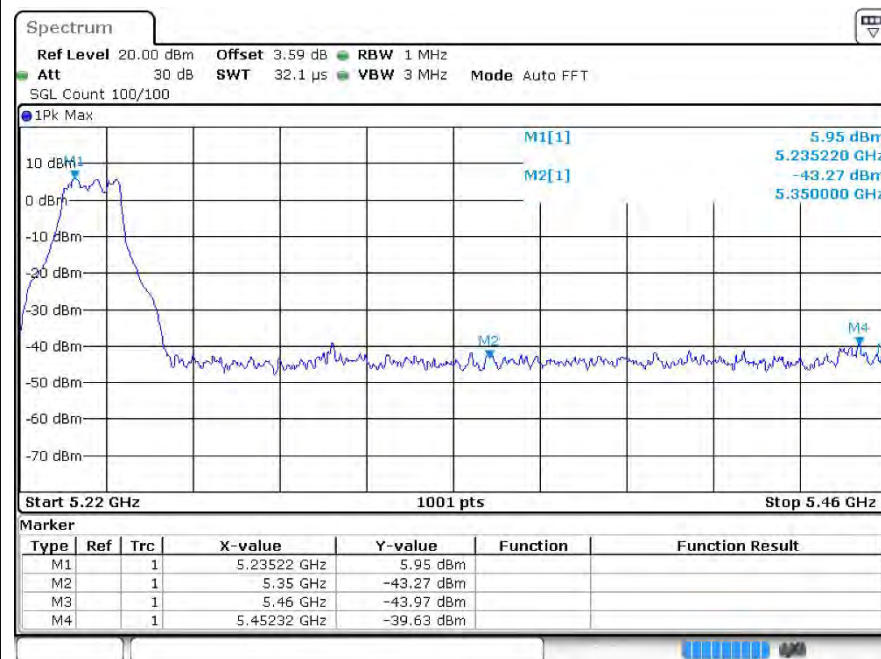


ax40	5230	Ant1	5350	-51.39	2	0.19	46.03	Average	54	Pass
ax40	5230	Ant1	5449.74	-40.55	2	-	56.68	Peak	68.2	Pass
ax40	5230	Ant1	5447.31	-49.32	2	0.19	48.1	Average	54	Pass
ax40	5230	Ant1	5460	-42.27	2	-	54.96	Peak	68.2	Pass
ax40	5230	Ant1	5460	-51.05	2	0.19	46.37	Average	54	Pass

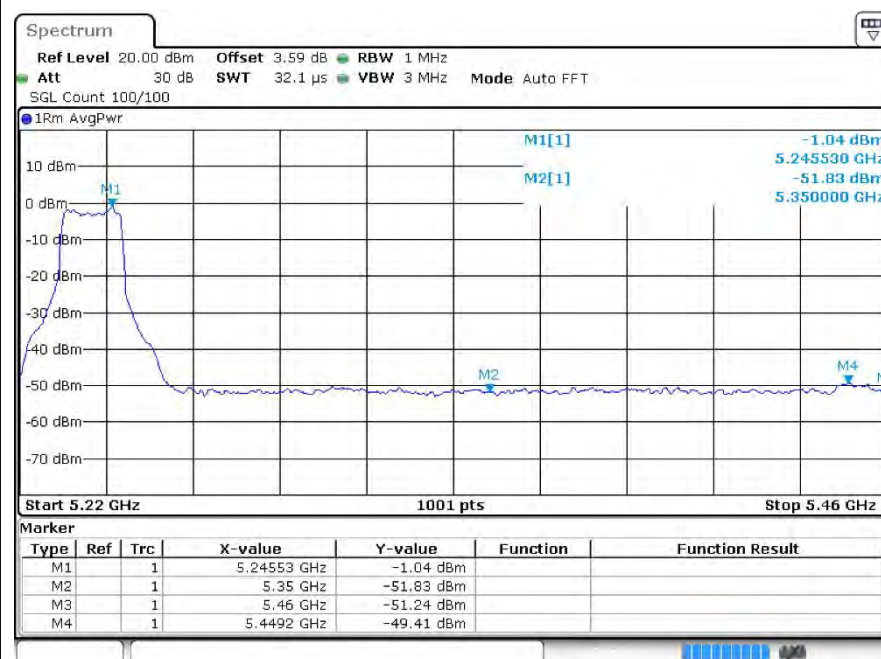
8.2 Test Graphs



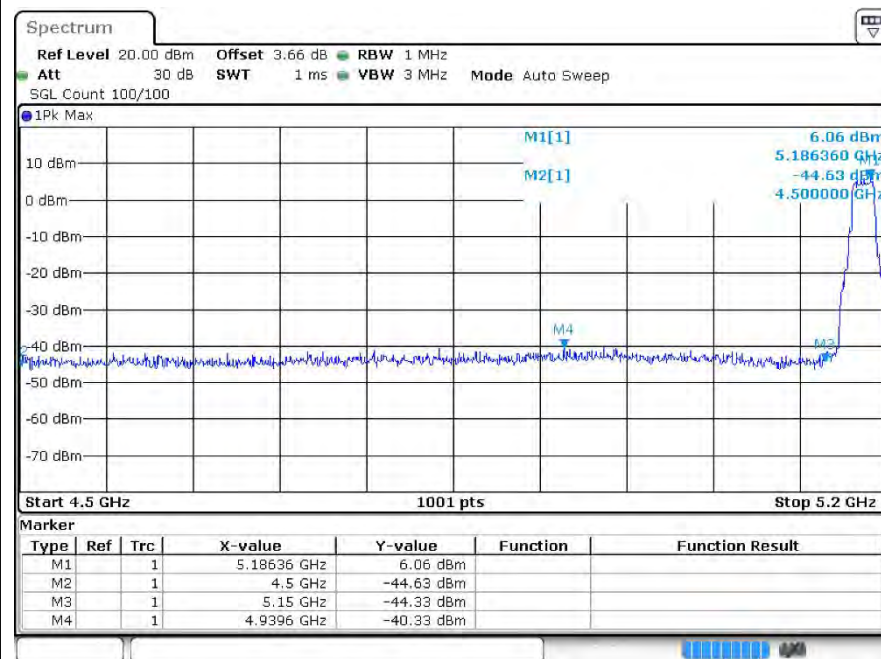
Restrict Banda 5240MHz Ant1 Peak



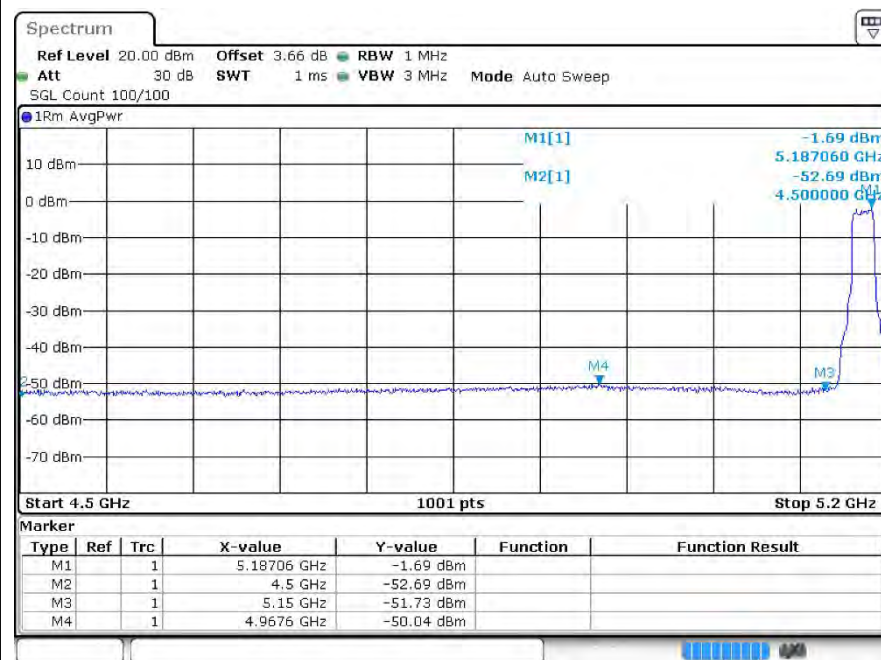
Restrict Band a 5240MHz Ant1 Average



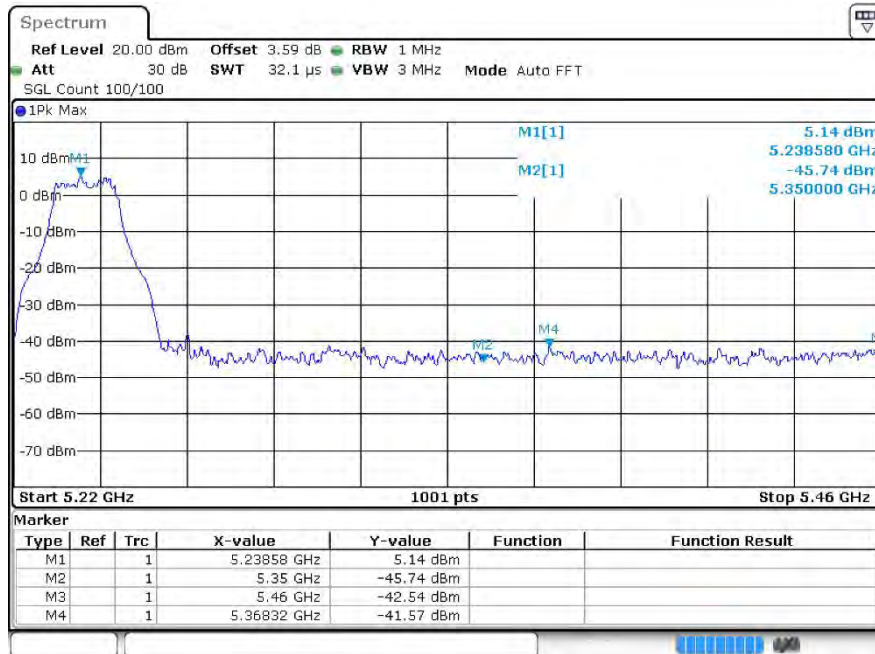
Restrict Bandn20 5180MHz Ant1 Peak



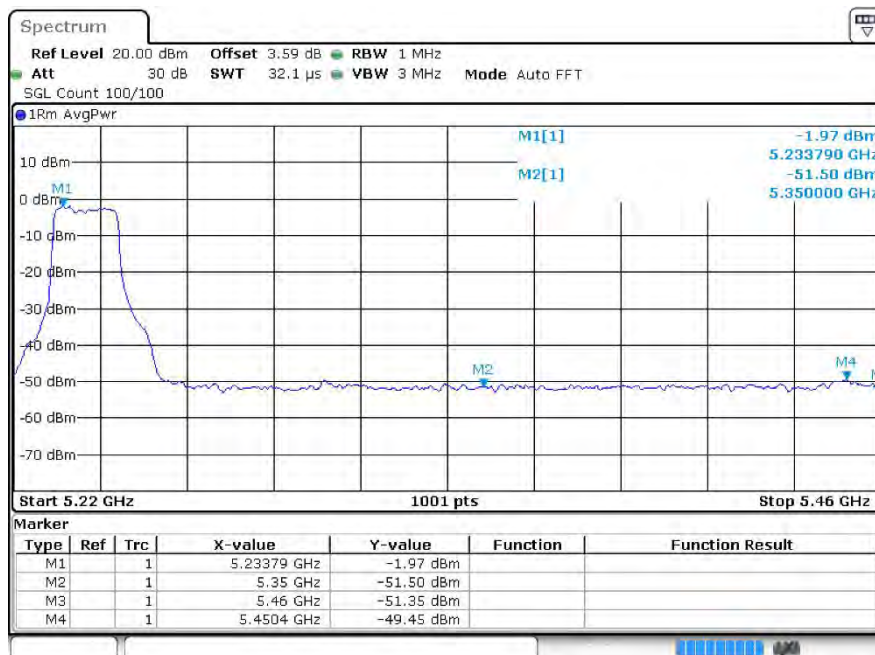
Restrict Band n20 5180MHz Ant1 Average



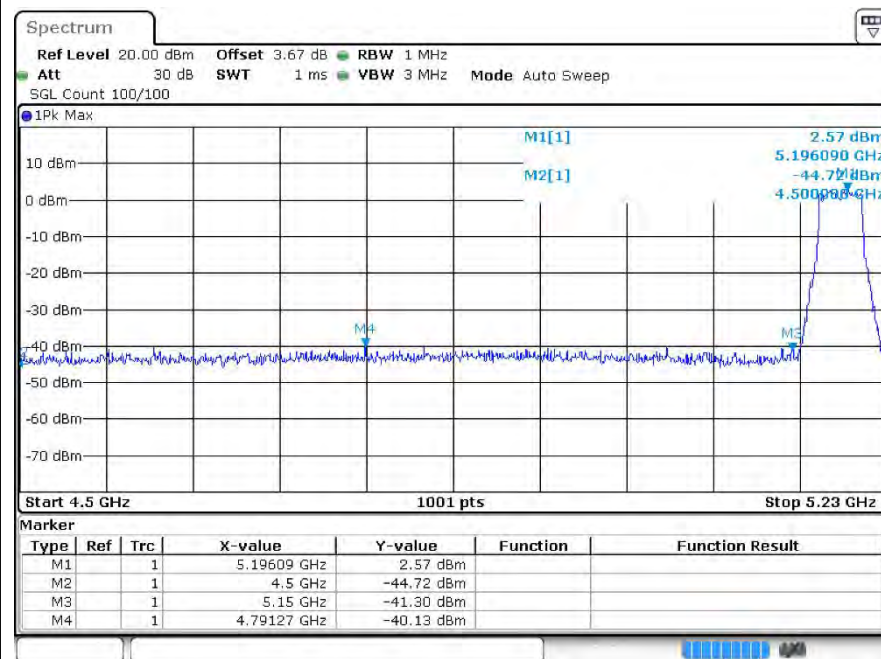
Restrict Bandn20 5240MHz Ant1 Peak



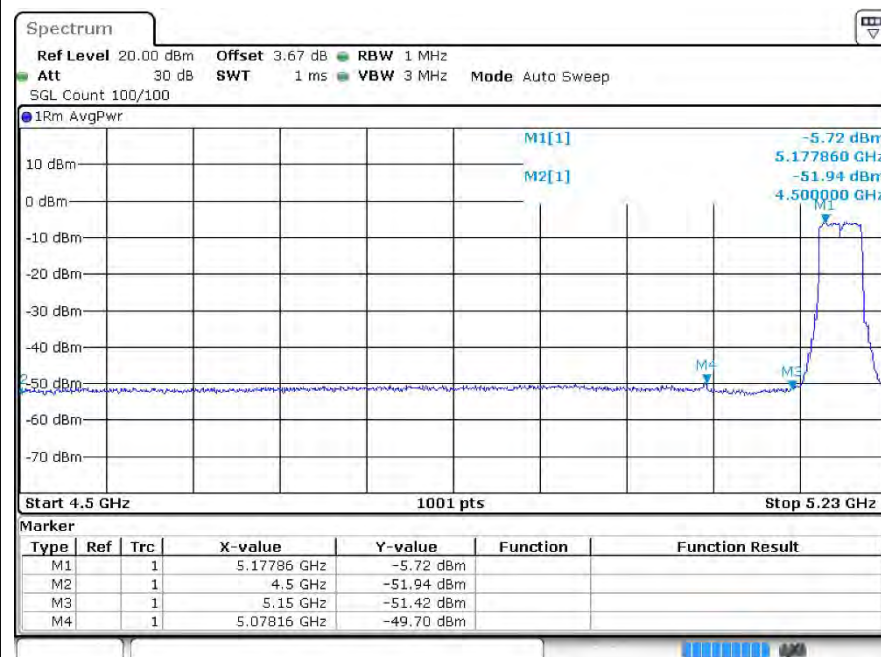
Restrict Band n20 5240MHz Ant1 Average



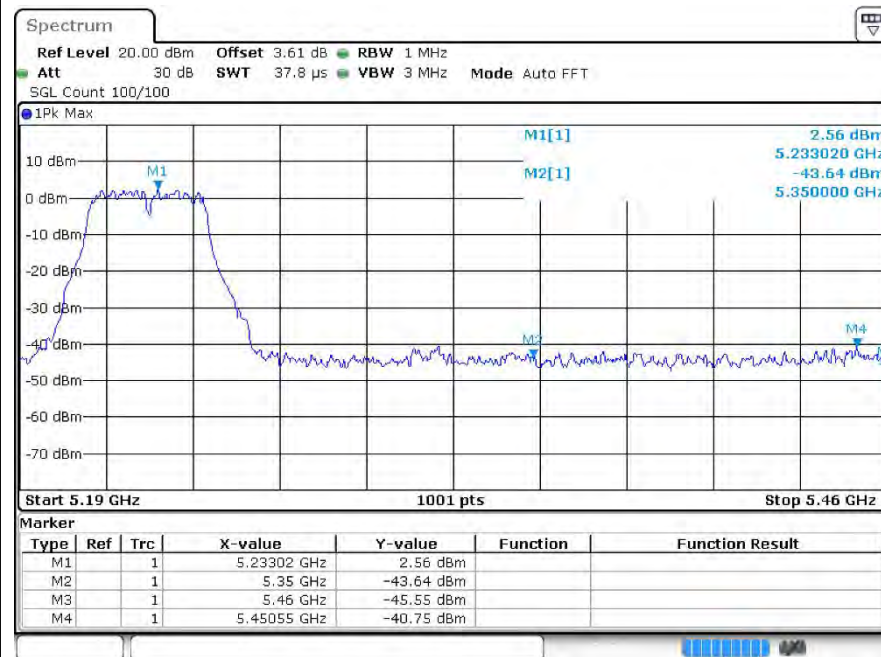
Restrict Bandn40 5190MHz Ant1 Peak



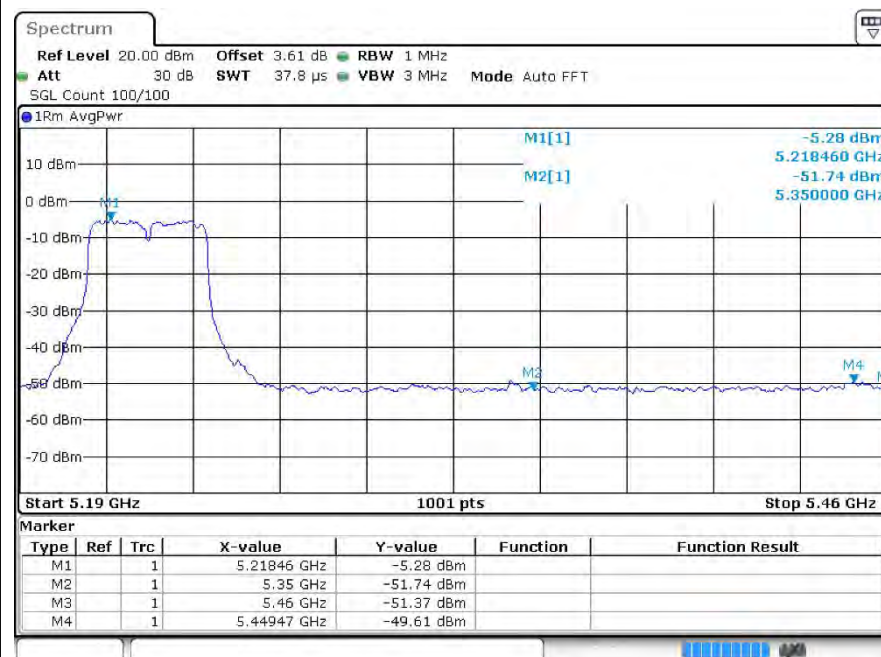
Restrict Band n40 5190MHz Ant1 Average



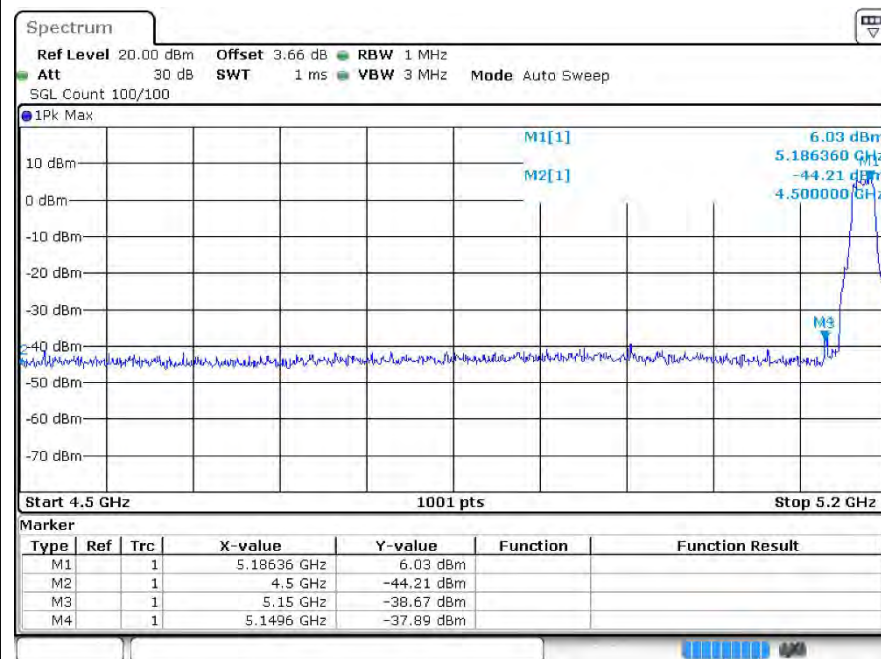
Restrict Bandn40 5230MHz Ant1 Peak



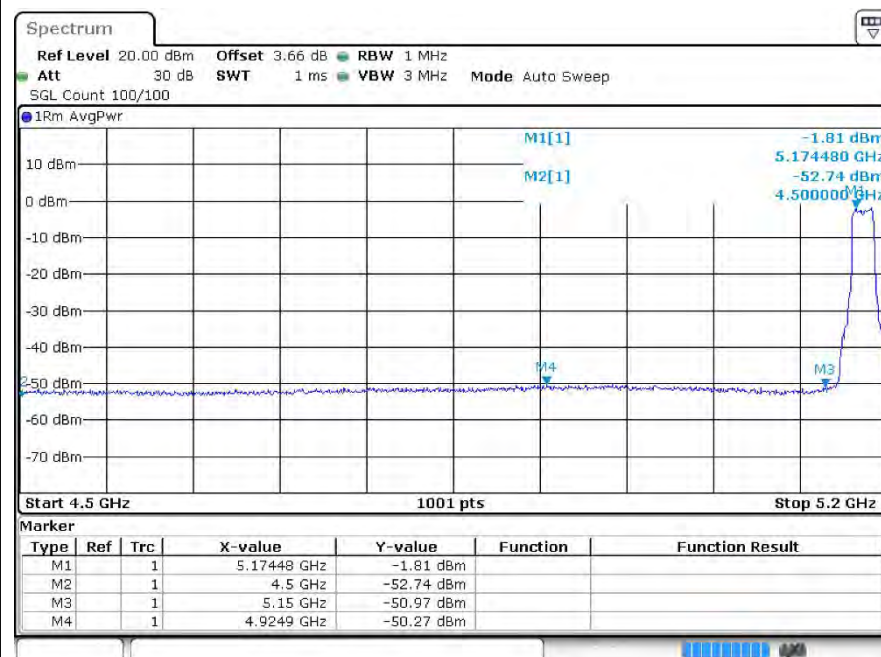
Restrict Band n40 5230MHz Ant1 Average



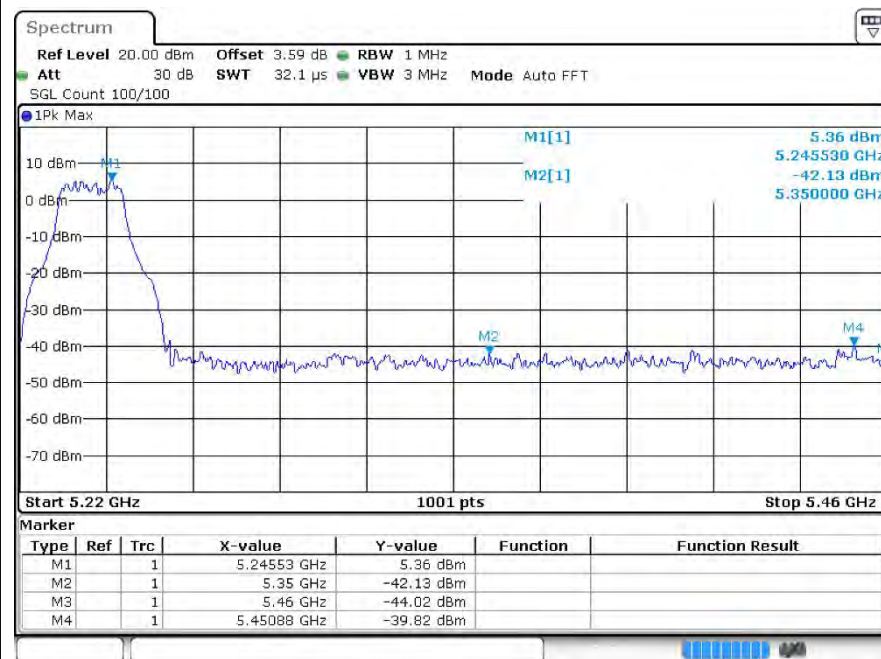
Restrict Bandac20 5180MHz Ant1 Peak



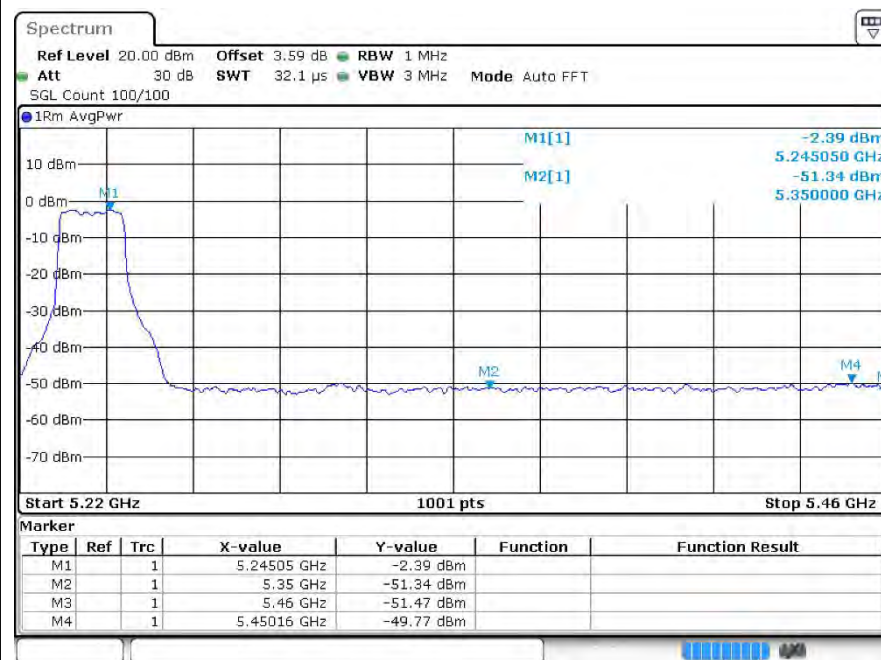
Restrict Band ac20 5180MHz Ant1 Average



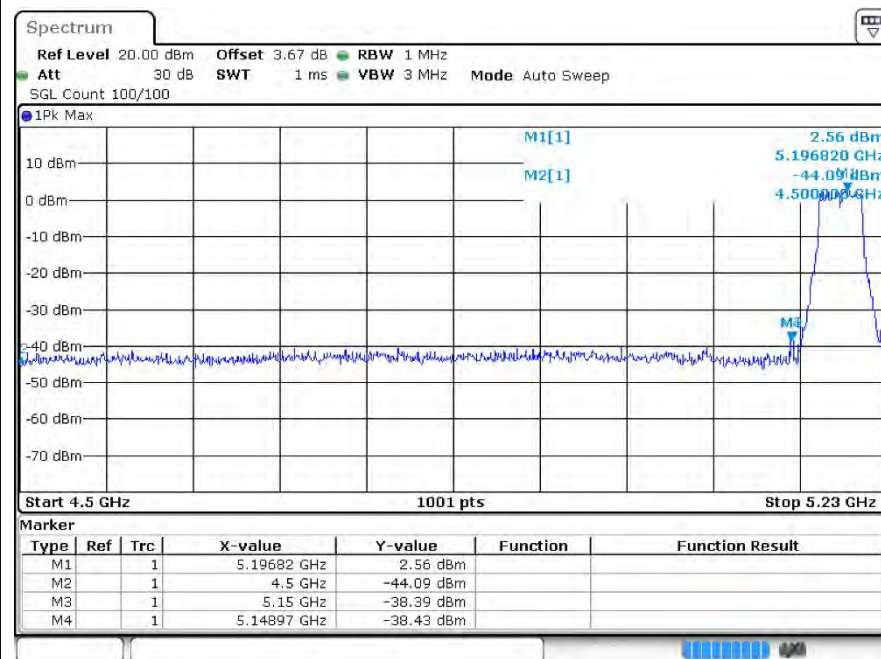
Restrict Bandac20 5240MHz Ant1 Peak



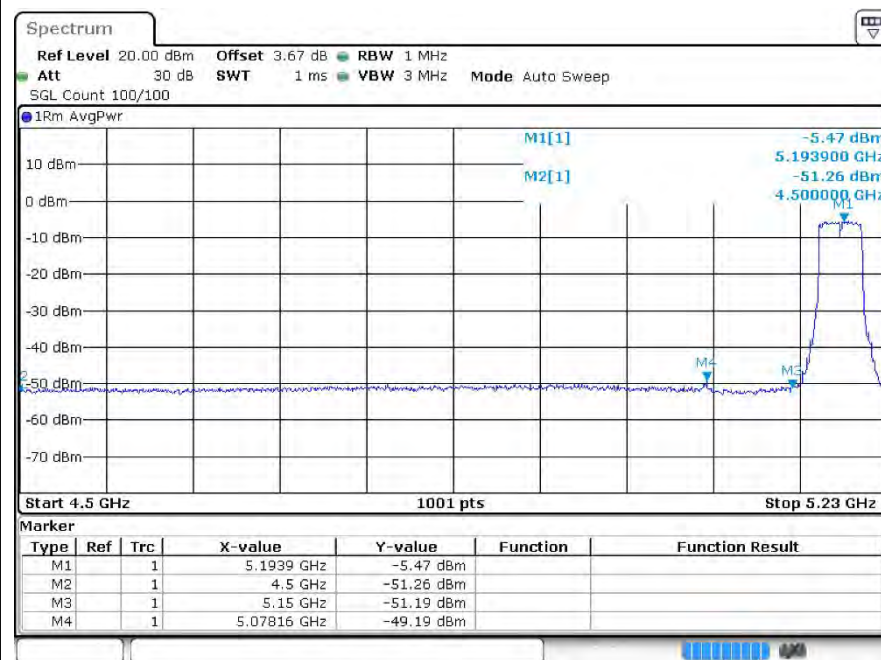
Restrict Band ac20 5240MHz Ant1 Average



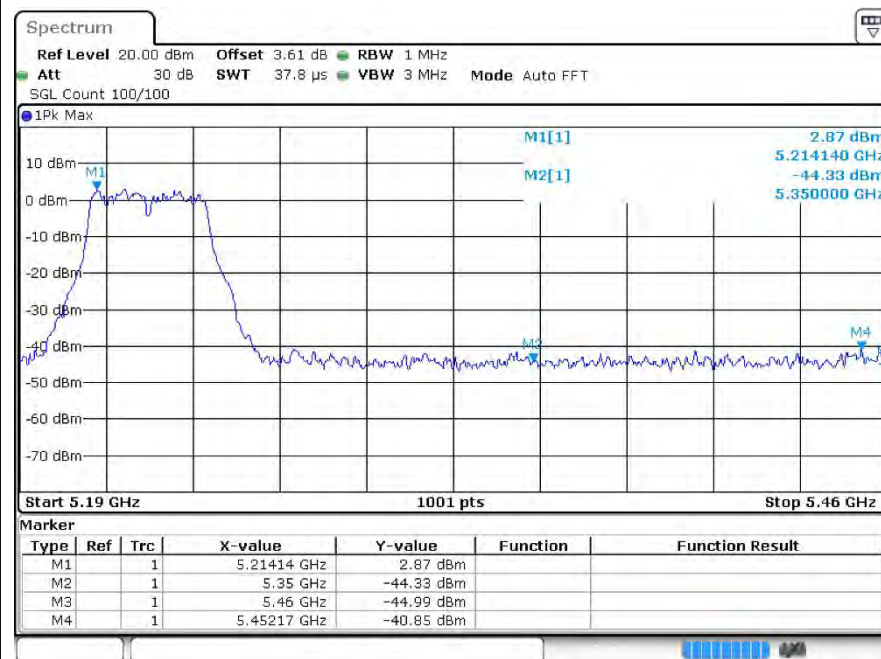
Restrict Bandac40 5190MHz Ant1 Peak



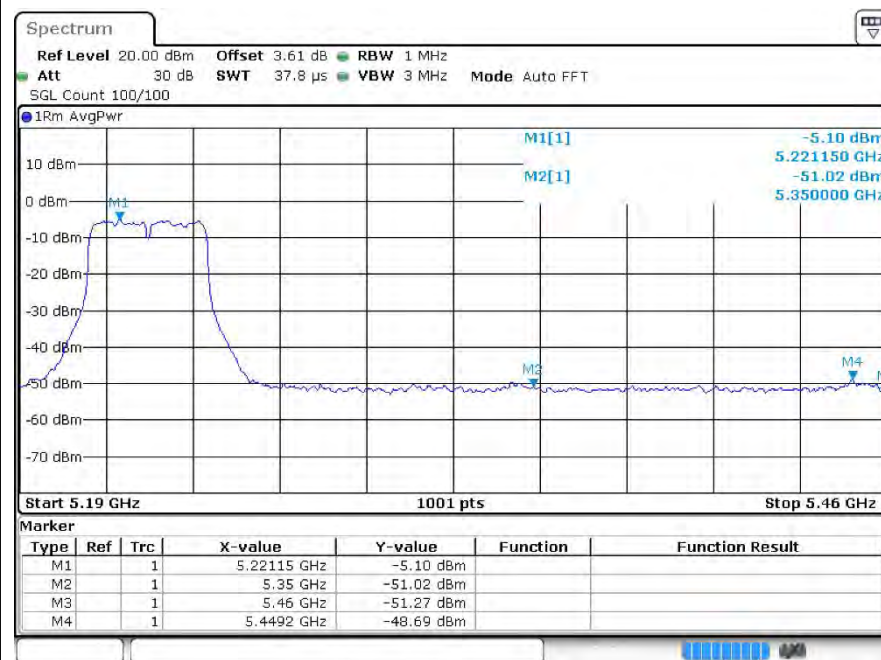
Restrict Band ac40 5190MHz Ant1 Average



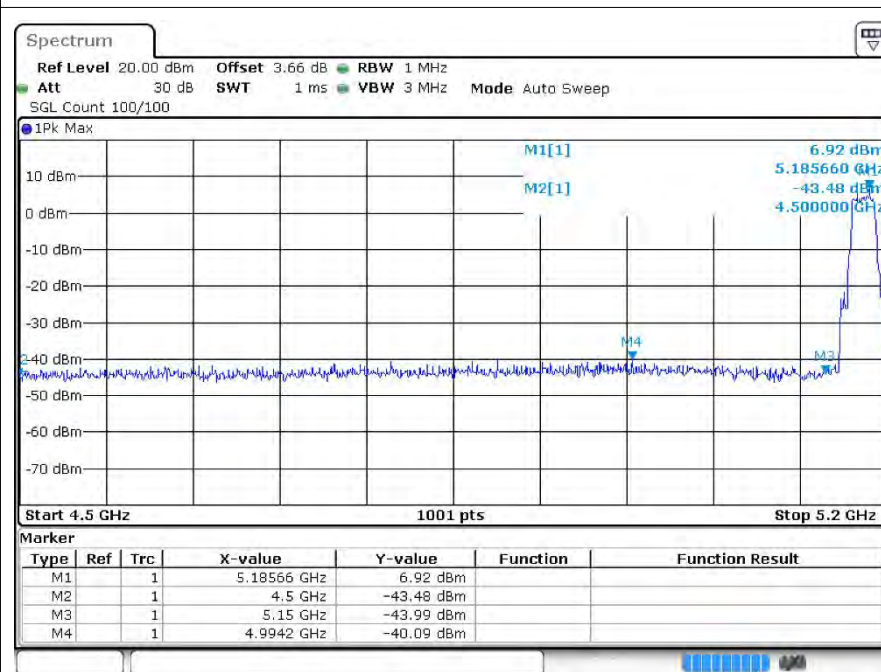
Restrict Bandac40 5230MHz Ant1 Peak



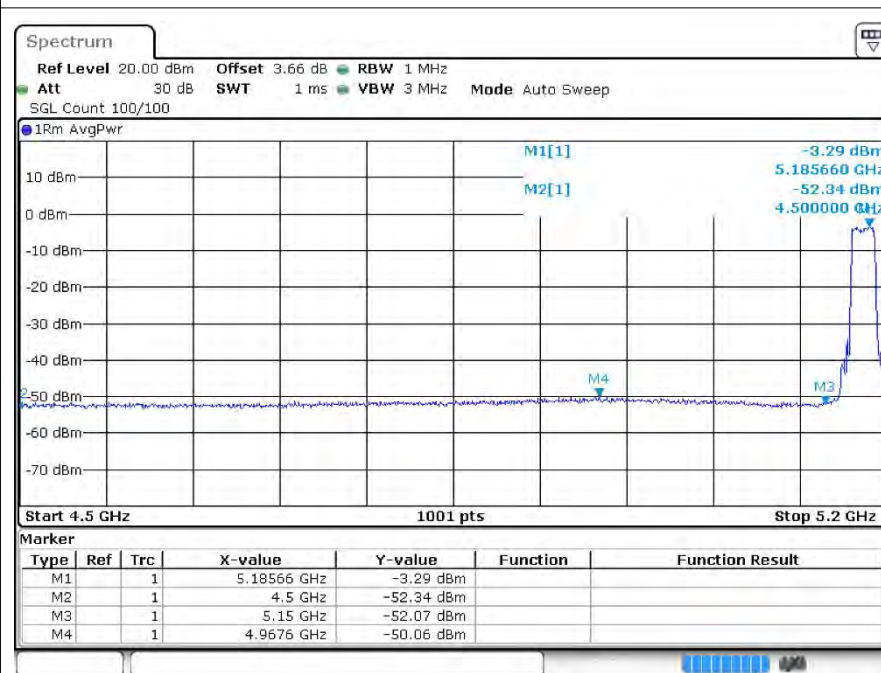
Restrict Band ac40 5230MHz Ant1 Average



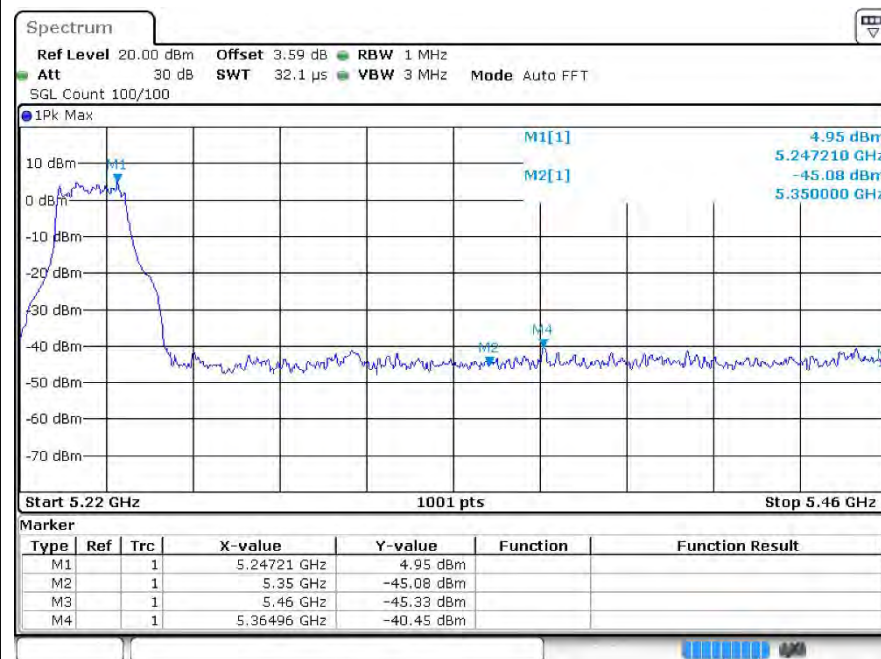
Restrict Bandax20 5180MHz Ant1 Peak



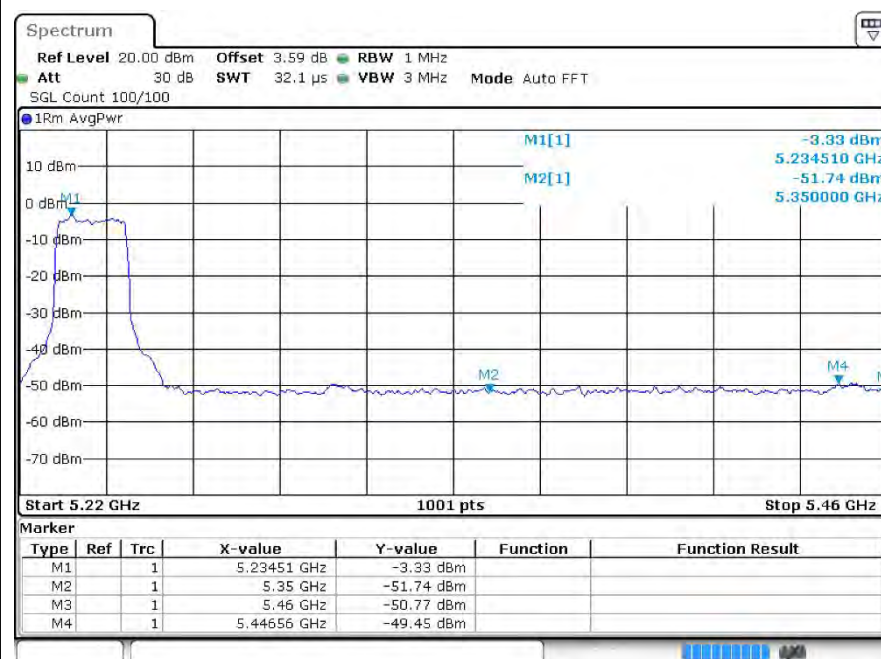
Restrict Band ax20 5180MHz Ant1 Average



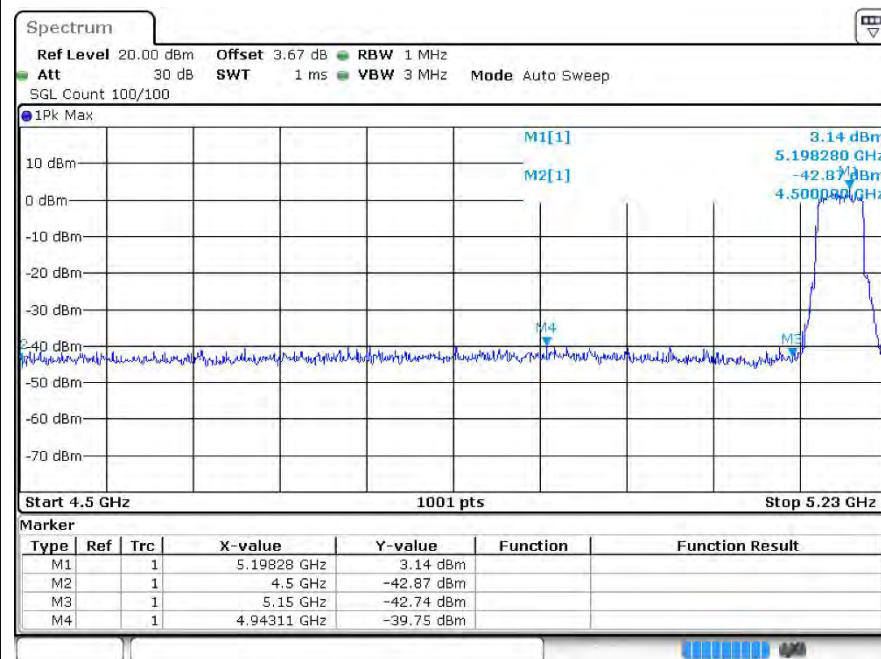
Restrict Bandax20 5240MHz Ant1 Peak



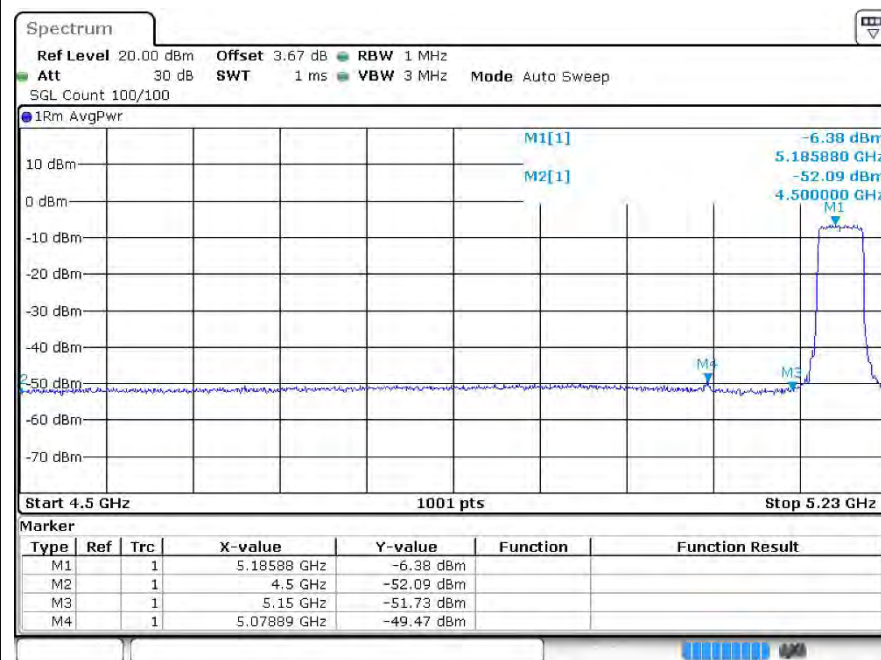
Restrict Band ax20 5240MHz Ant1 Average



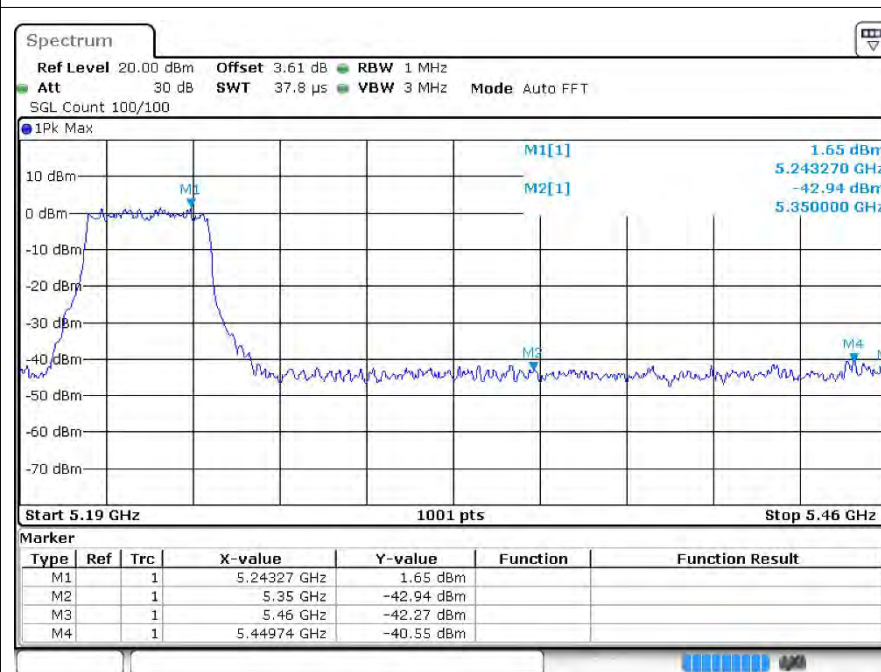
Restrict Bandax40 5190MHz Ant1 Peak



Restrict Band ax40 5190MHz Ant1 Average



Restrict Bandax40 5230MHz Ant1 Peak



Restrict Band ax40 5230MHz Ant1 Average

