Appendix D

RF Test Data for B1-B3WIFI(Conducted Measurement)

Product Name: Mini PC

Trade Mark: Blackview

Test Model: MP100

Environmental Conditions

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

Contents

1 Duty Cycle

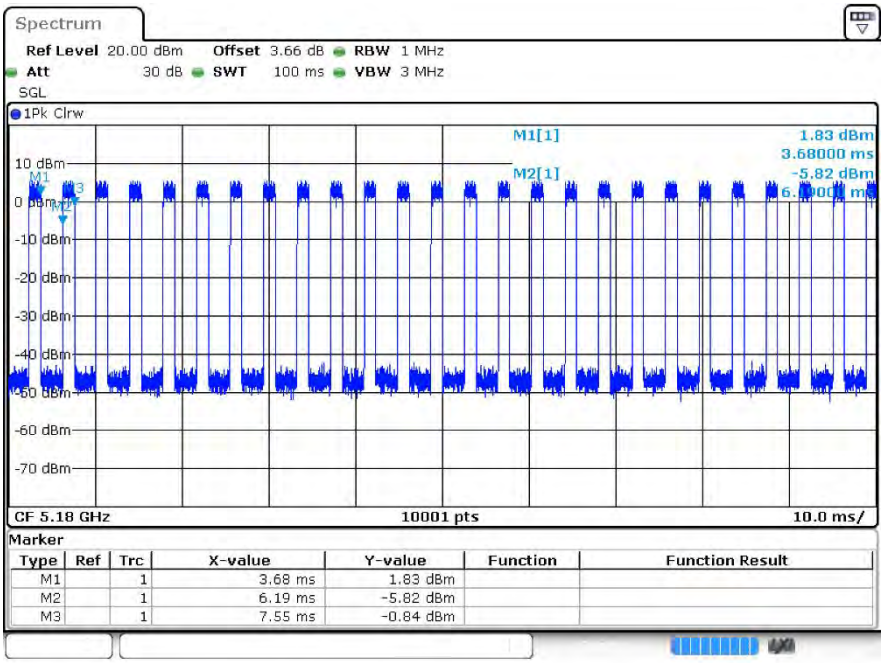
1.1 Test Result

Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
a	5180	Ant1	35.37	4.51	0.74
a	5200	Ant1	35.27	4.53	0.74
a	5240	Ant1	35.27	4.53	0.74
a	5180	Ant2	35.21	4.53	0.74
a	5200	Ant2	35.62	4.48	0.74
a	5240	Ant2	35.28	4.53	0.74
n20	5180	Ant1	33.69	4.73	0.79
n20	5200	Ant1	33.8	4.71	0.79
n20	5240	Ant1	34.59	4.61	0.79
n20	5180	Ant2	34.3	4.65	0.79
n20	5200	Ant2	34.18	4.66	0.79
n20	5240	Ant2	33.4	4.76	0.79
n40	5190	Ant1	20.31	6.92	1.59
n40	5230	Ant1	20.2	6.95	1.59
n40	5190	Ant2	20.55	6.87	1.59
n40	5230	Ant2	20.56	6.87	1.59
ac20	5180	Ant1	33.46	4.76	0.78
ac20	5200	Ant1	34.71	4.6	0.79
ac20	5240	Ant1	33.63	4.73	0.79
ac20	5180	Ant2	34.56	4.61	0.78
ac20	5200	Ant2	34.32	4.64	0.78
ac20	5240	Ant2	34.16	4.67	0.78
ac40	5190	Ant1	20.38	6.91	1.59
ac40	5230	Ant1	20.44	6.9	1.59
ac40	5190	Ant2	20.69	6.84	1.56
ac40	5230	Ant2	20.69	6.84	1.59
ac80	5210	Ant1	10.94	9.61	鋆?
ac80	5210	Ant2	10.97	9.6	3.33
ax20	5180	Ant1	32.74	4.85	0.85
ax20	5200	Ant1	31.94	4.96	0.85
ax20	5240	Ant1	32.68	4.86	0.85
ax20	5180	Ant2	32.57	4.87	0.85
ax20	5200	Ant2	31.83	4.97	0.85
ax20	5240	Ant2	32.73	4.85	0.85
ax40	5190	Ant1	19.79	7.04	1.64
ax40	5230	Ant1	19.79	7.04	1.64
ax40	5190	Ant2	20.03	6.98	1.64

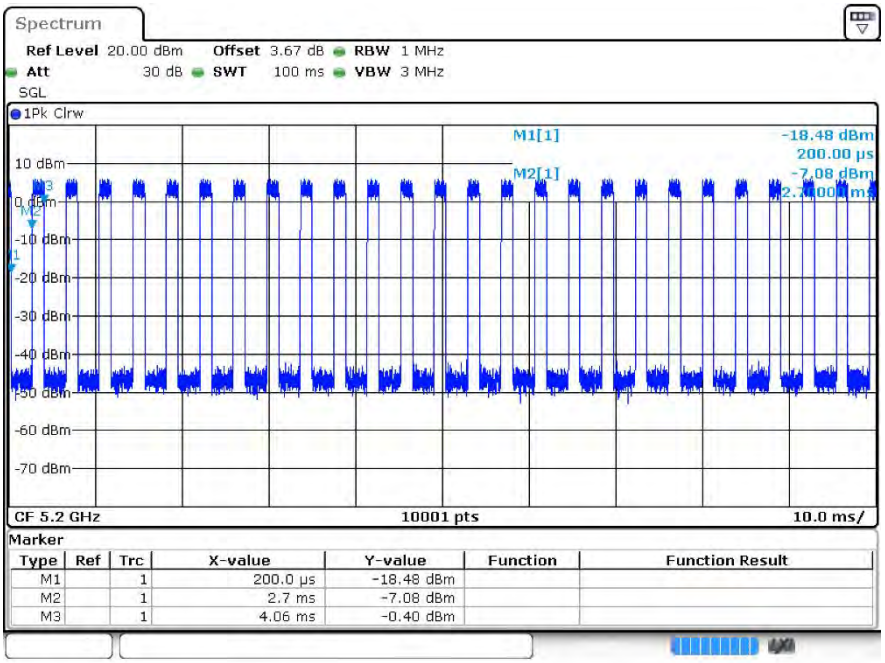
ax40	5230	Ant2	20.04	6.98	1.64
ax80	5210	Ant1	11.69	9.32	3.23
ax80	5210	Ant2	11.44	9.42	3.23

1.2 Test Graphs

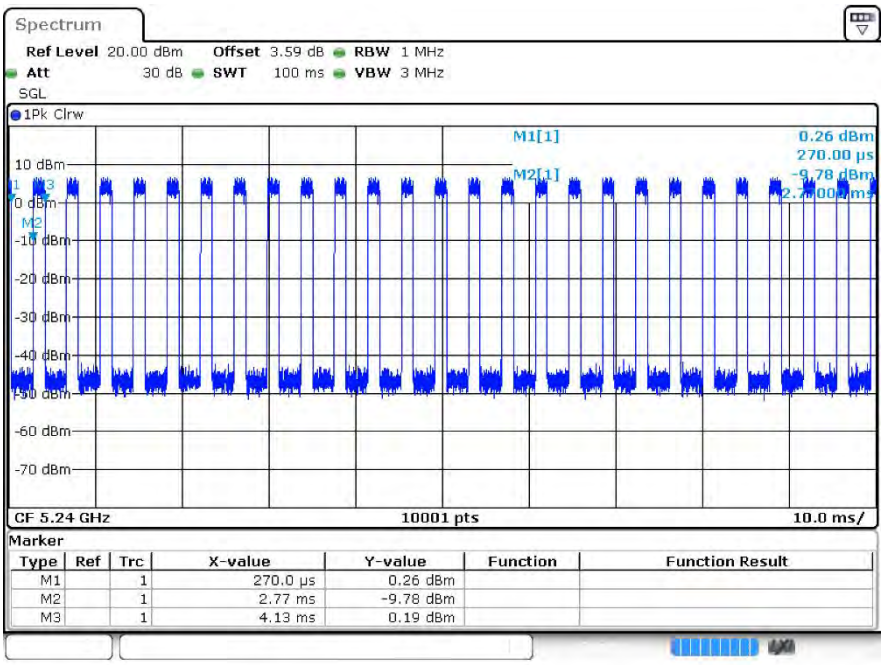
Test Graphs
Duty Cyclea 5180MHz Ant1



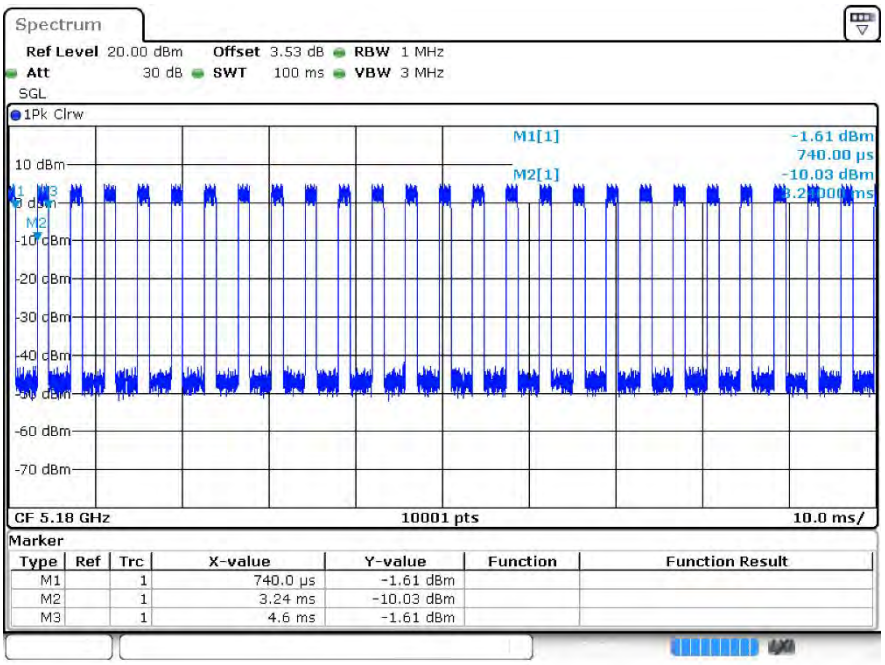
Duty Cycle a 5200MHz Ant1



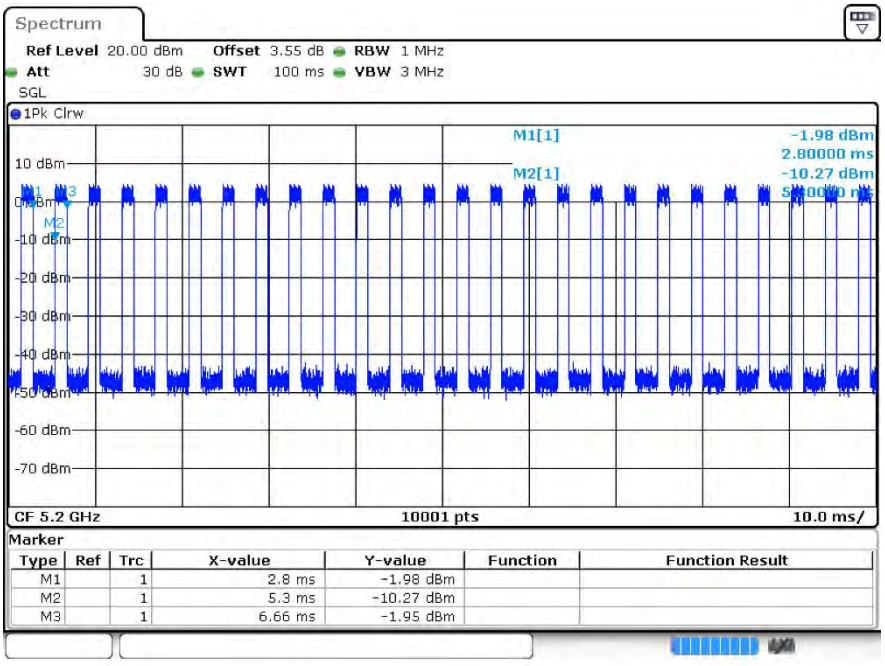
Duty Cyclea 5240MHz Ant1



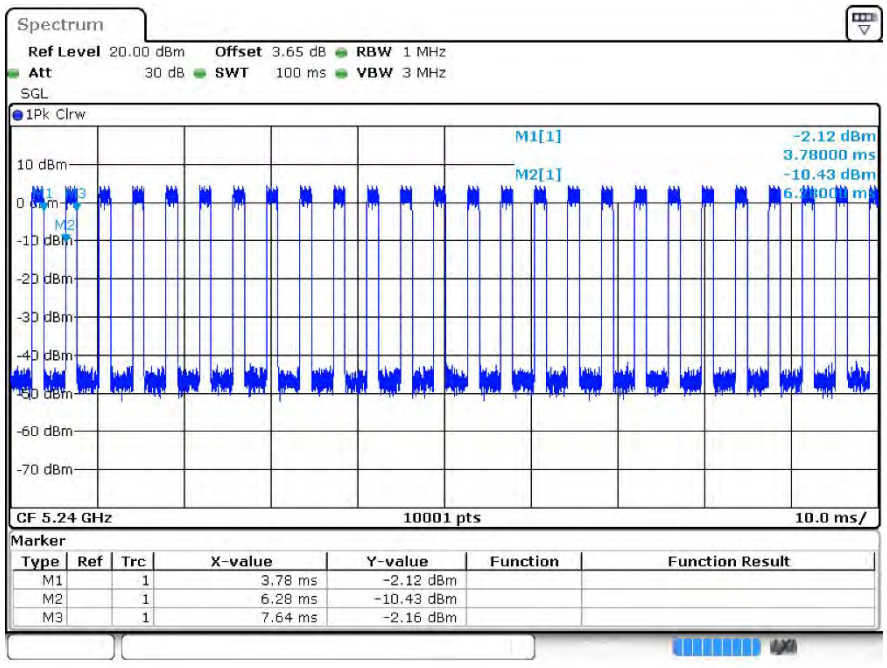
Duty Cyclea 5180MHz Ant2



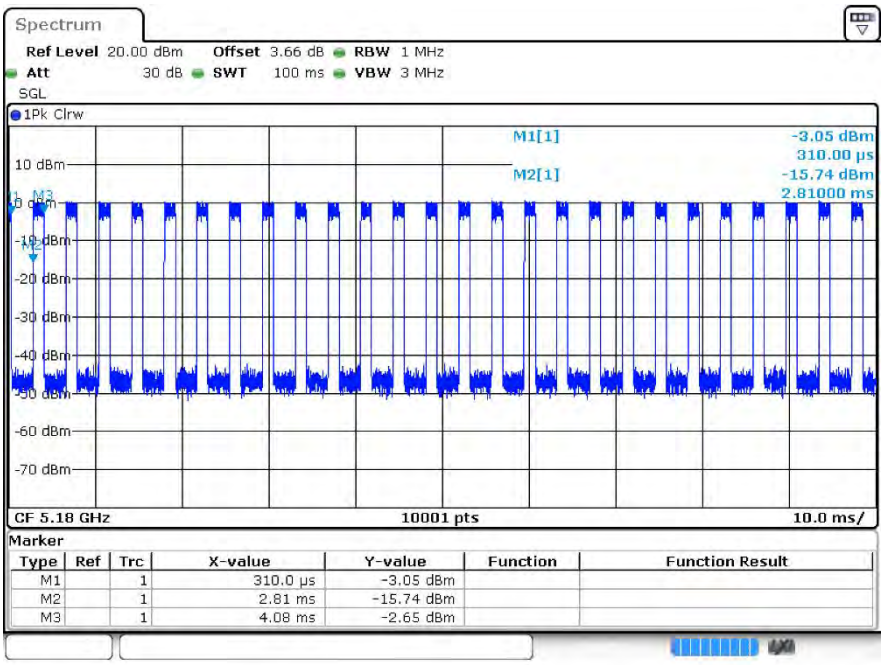
Duty Cycle a 5200MHz Ant2



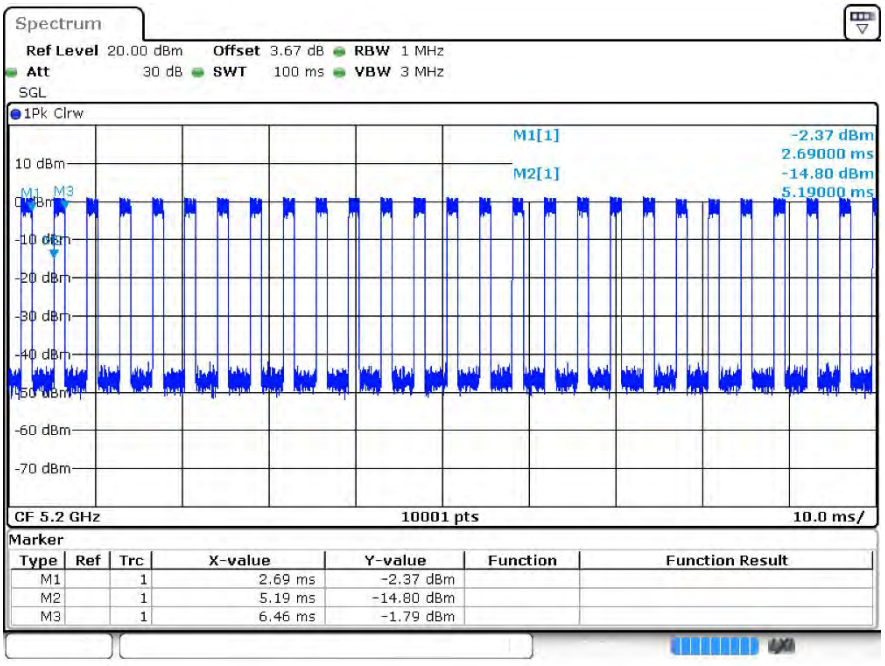
Duty Cyclea 5240MHz Ant2



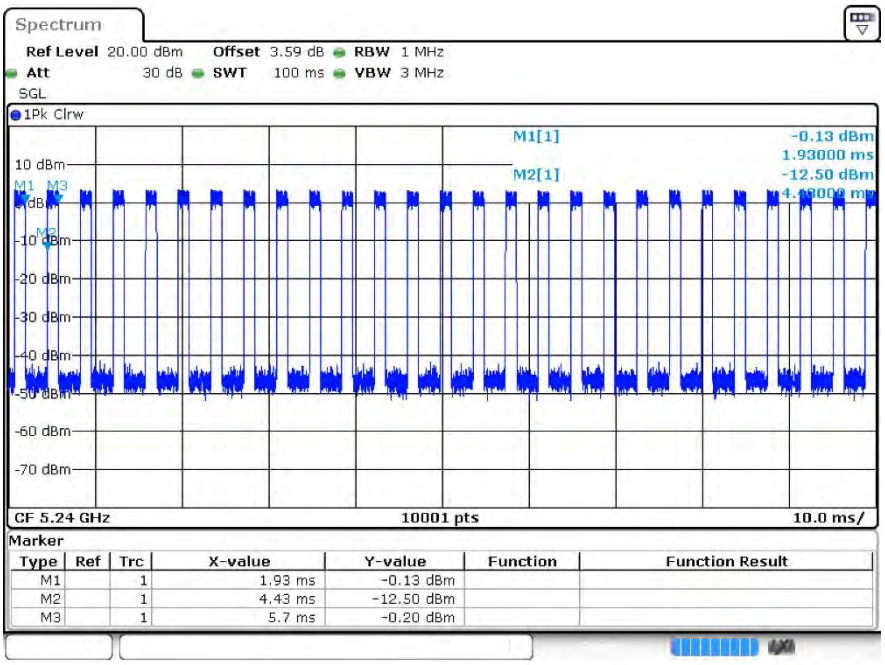
Duty Cycle n20 5180MHz Ant1



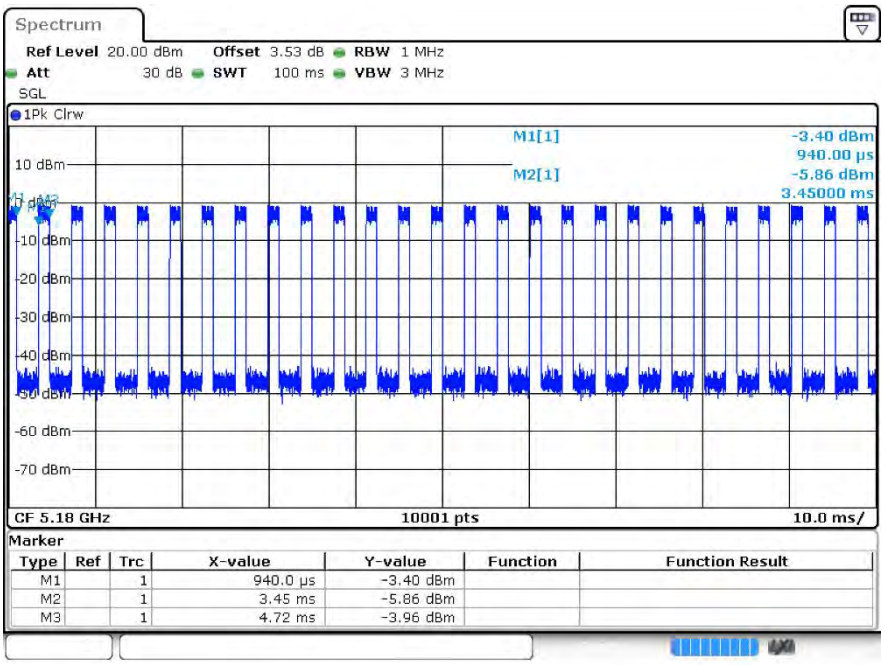
Duty Cycle n20 5200MHz Ant1



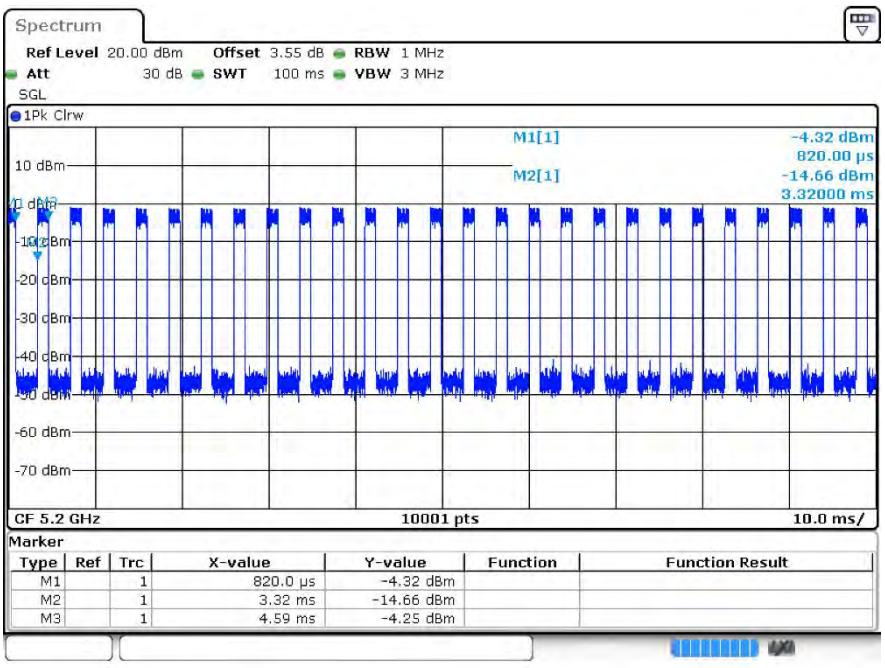
Duty Cycle n20 5240MHz Ant1



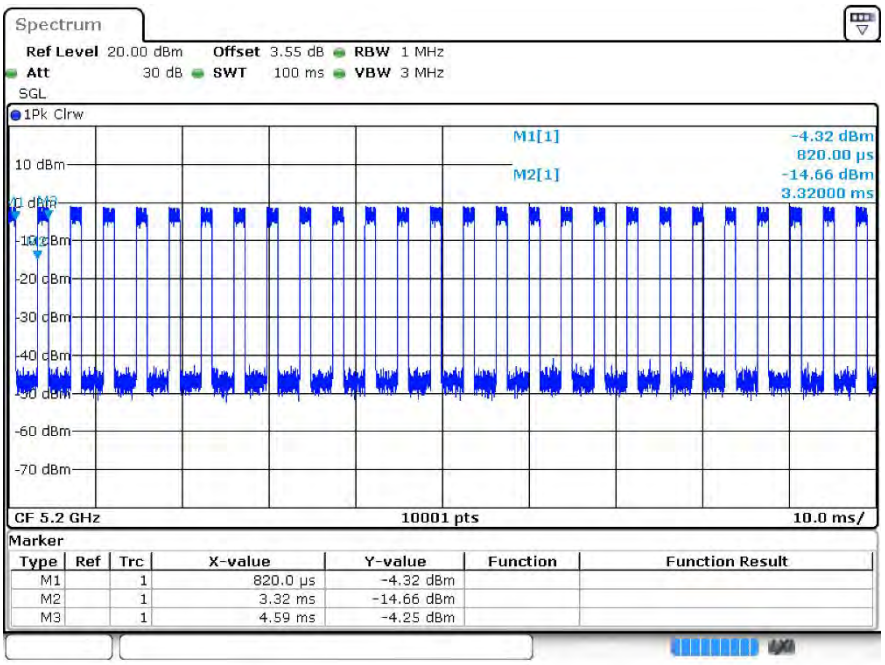
Duty Cycle n20 5180MHz Ant2



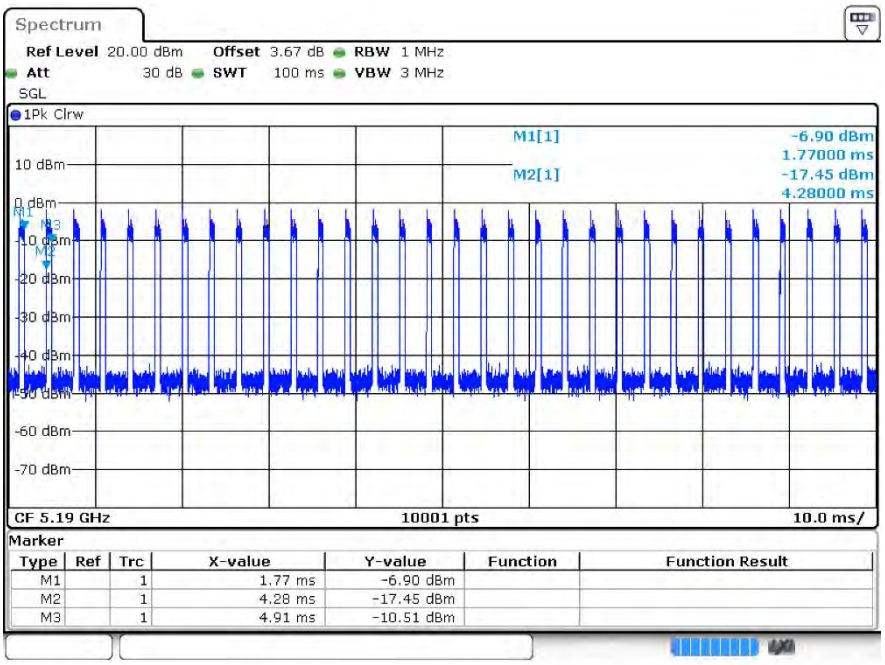
Duty Cycle n20 5200MHz Ant2



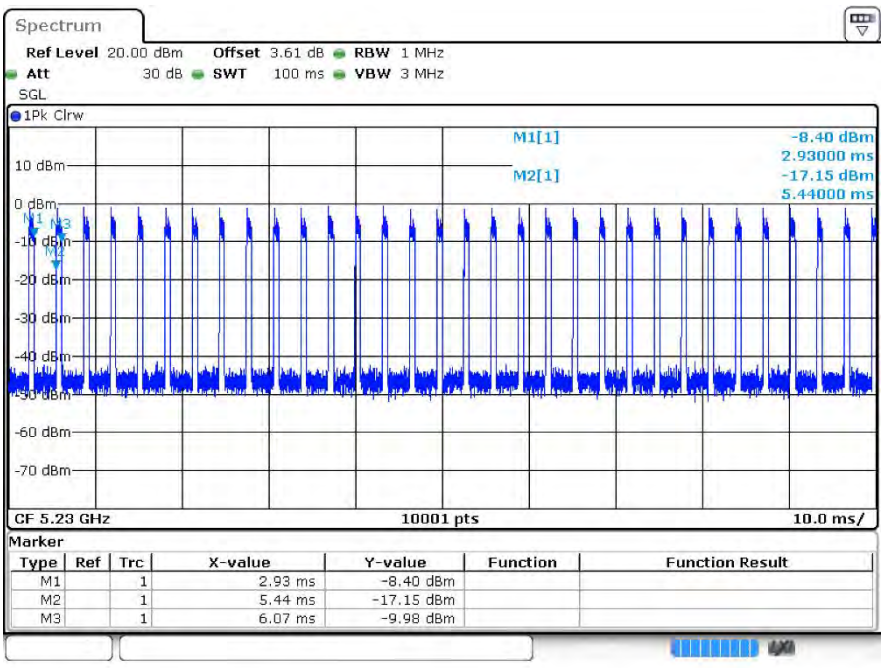
Duty Cycle n20 5200MHz Ant2



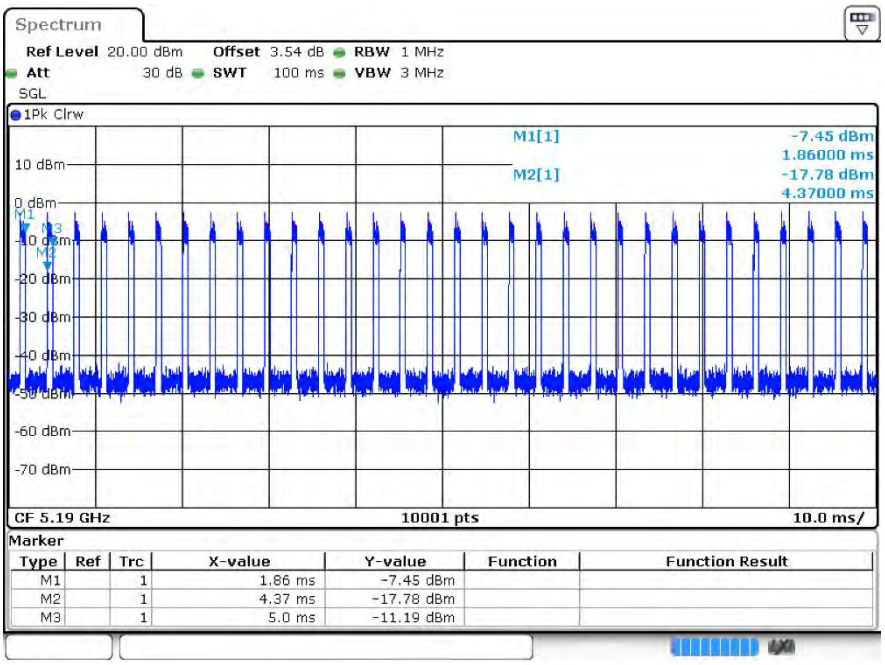
Duty Cyclen40 5190MHz Ant1



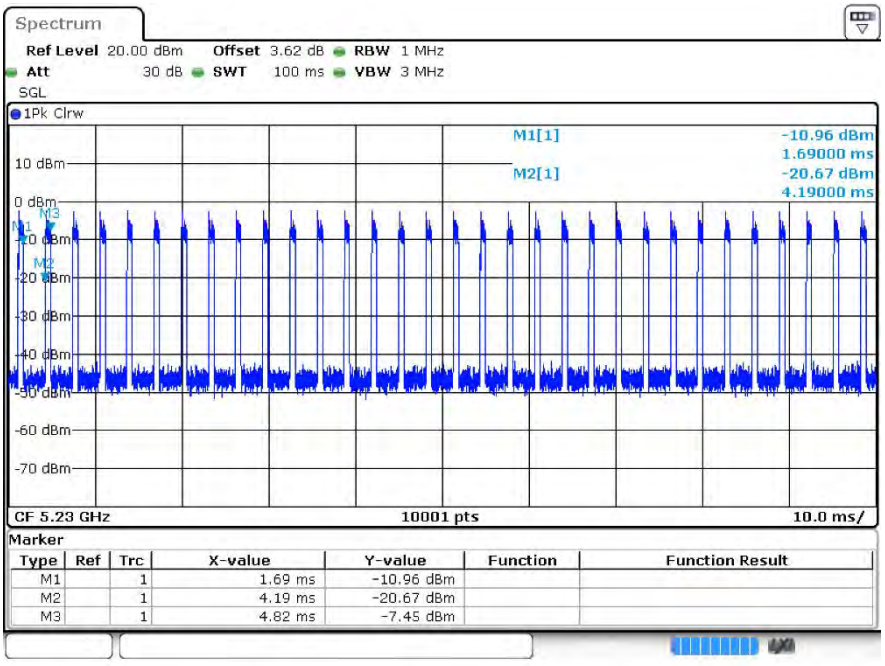
Duty Cyclen40 5230MHz Ant1



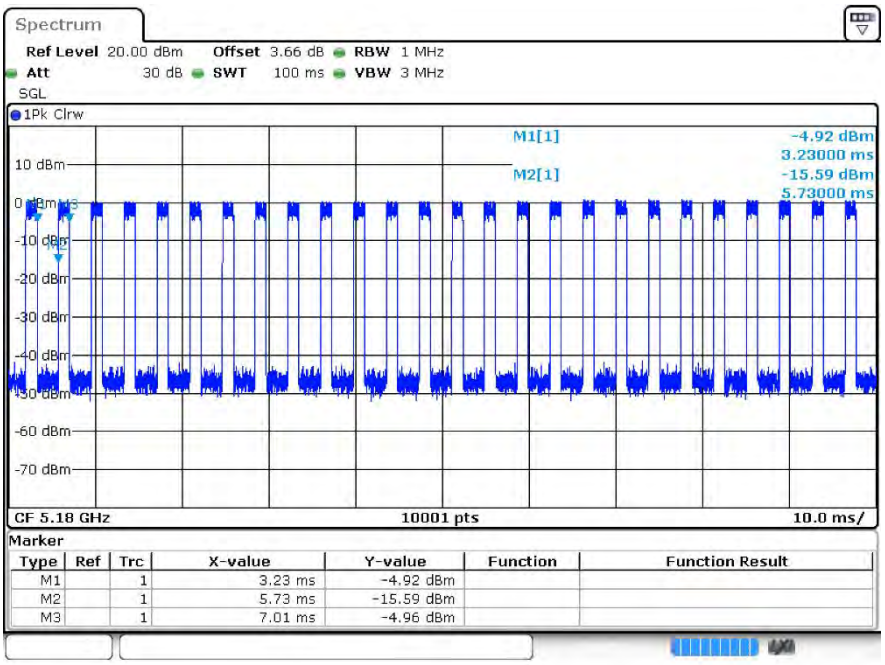
Duty Cyclen40 5190MHz Ant2



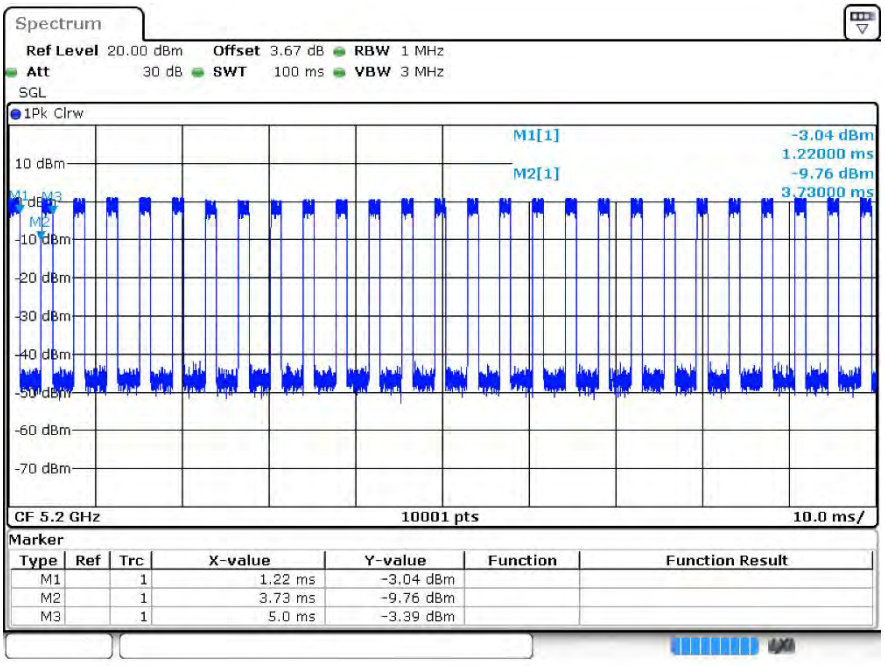
Duty Cyclen40 5230MHz Ant2



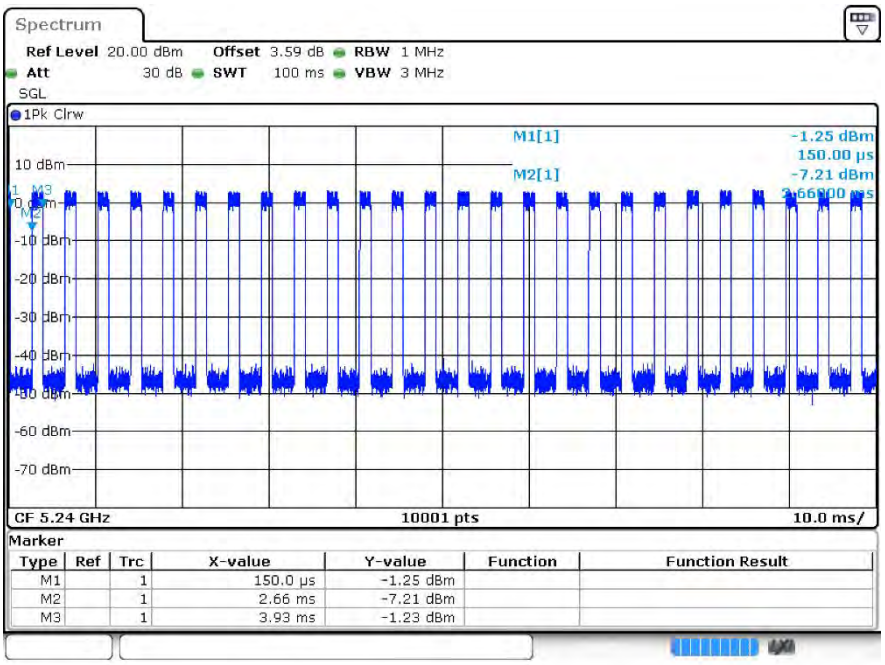
Duty Cycle ac20 5180MHz Ant1



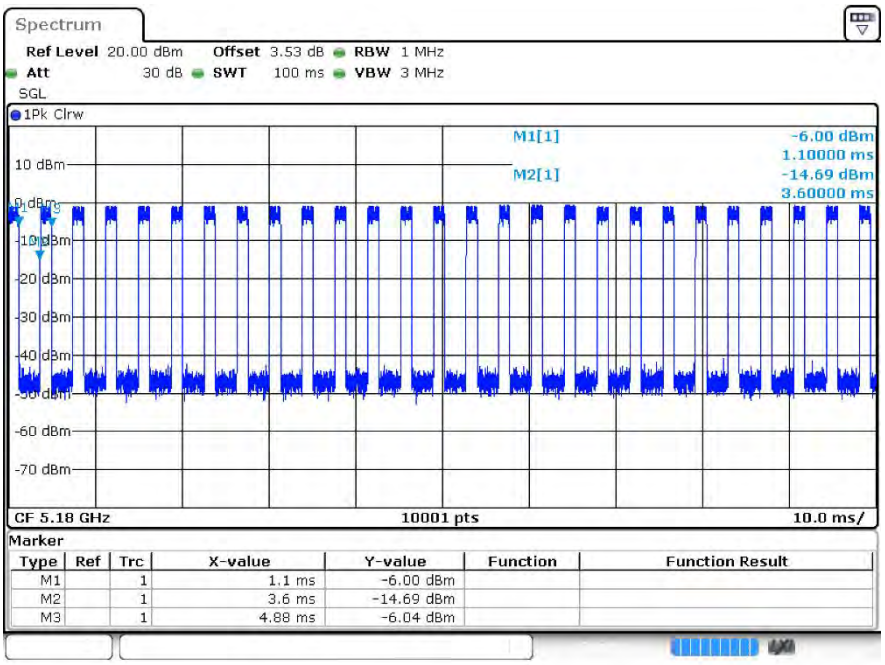
Duty Cycle ac20 5200MHz Ant1



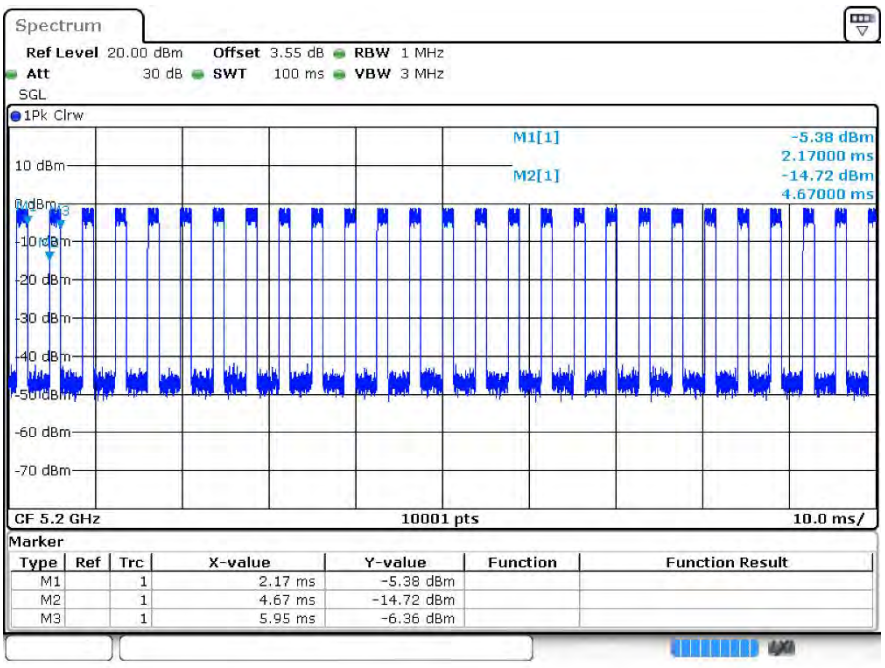
Duty Cycle ac20 5240MHz Ant1



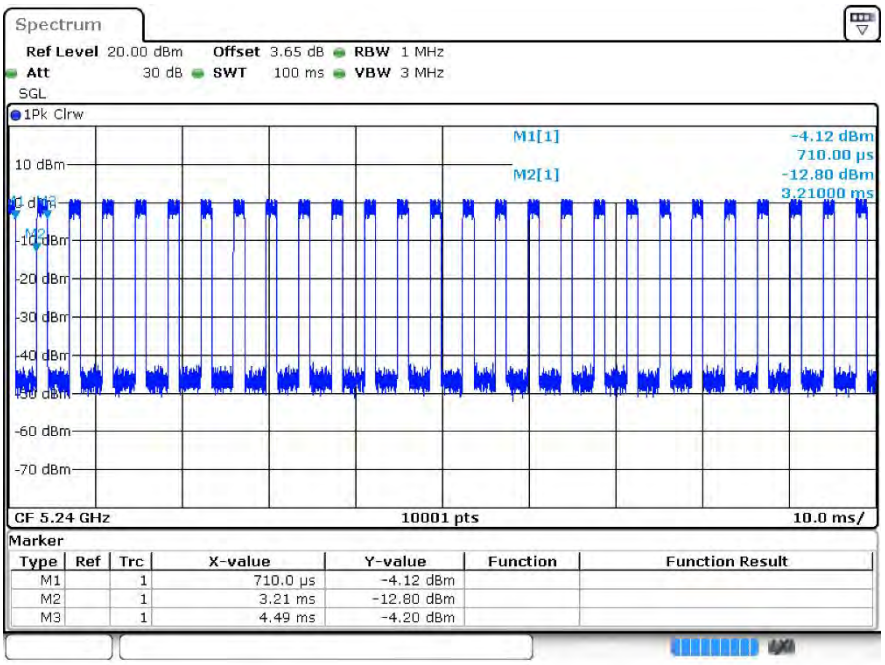
Duty Cycle ac20 5180MHz Ant2



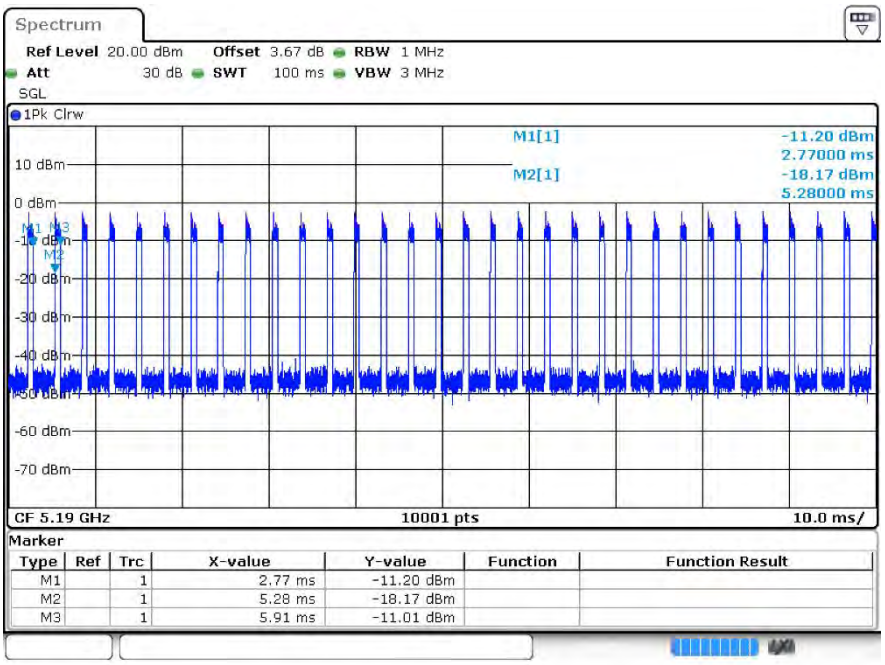
Duty Cycle ac20 5200MHz Ant2



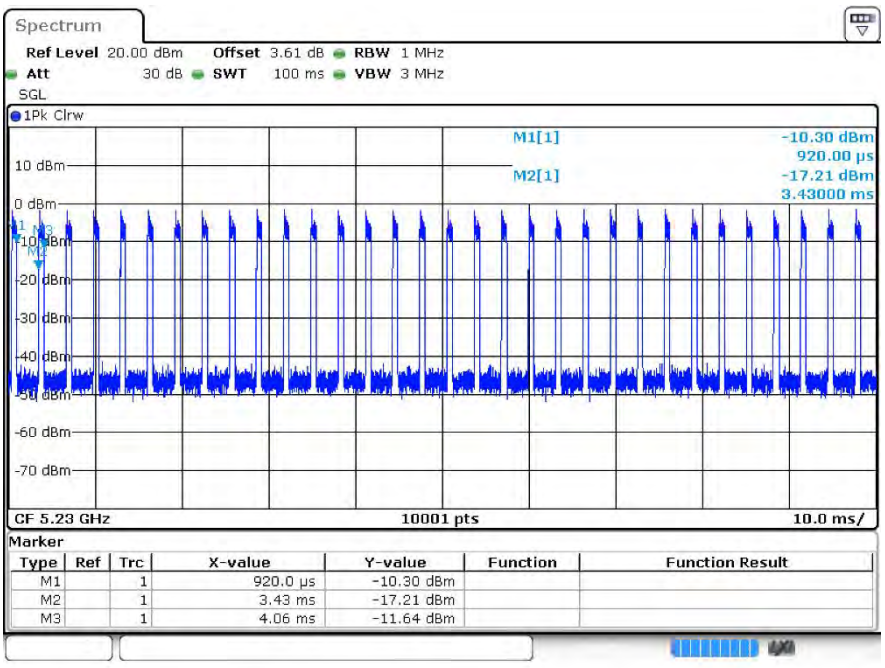
Duty Cycle ac20 5240MHz Ant2



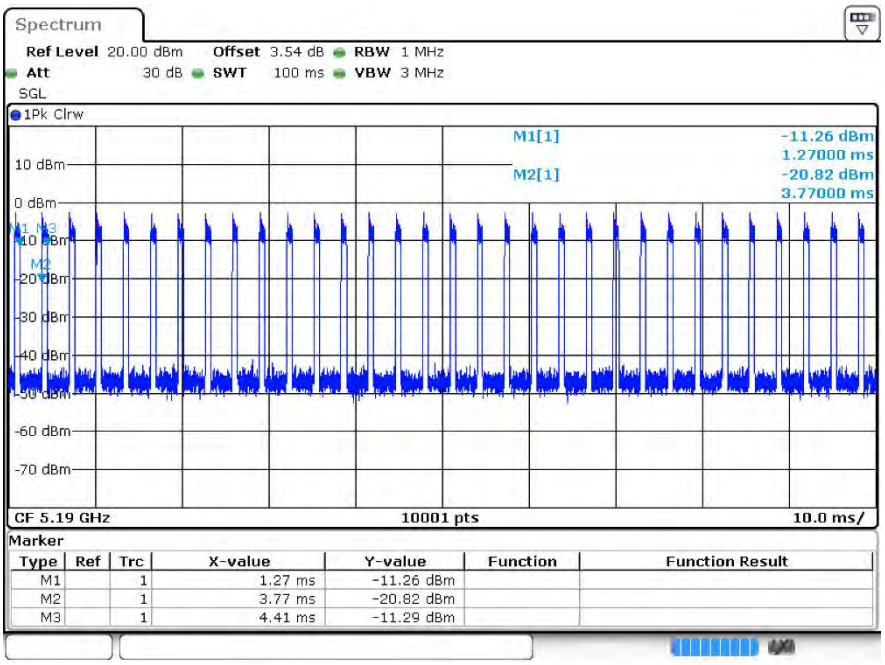
Duty Cycleac40 5190MHz Ant1



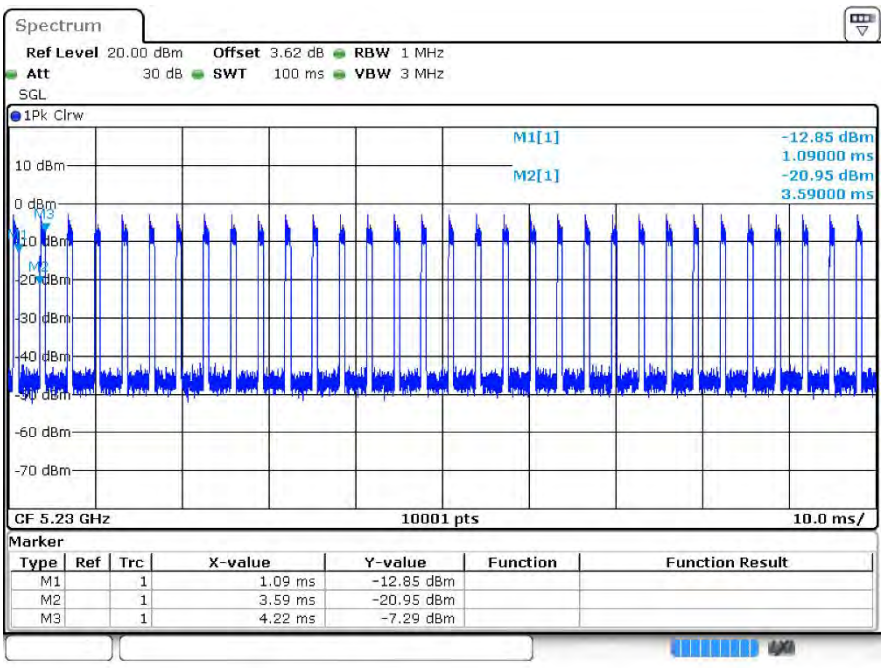
Duty Cycleac40 5230MHz Ant1



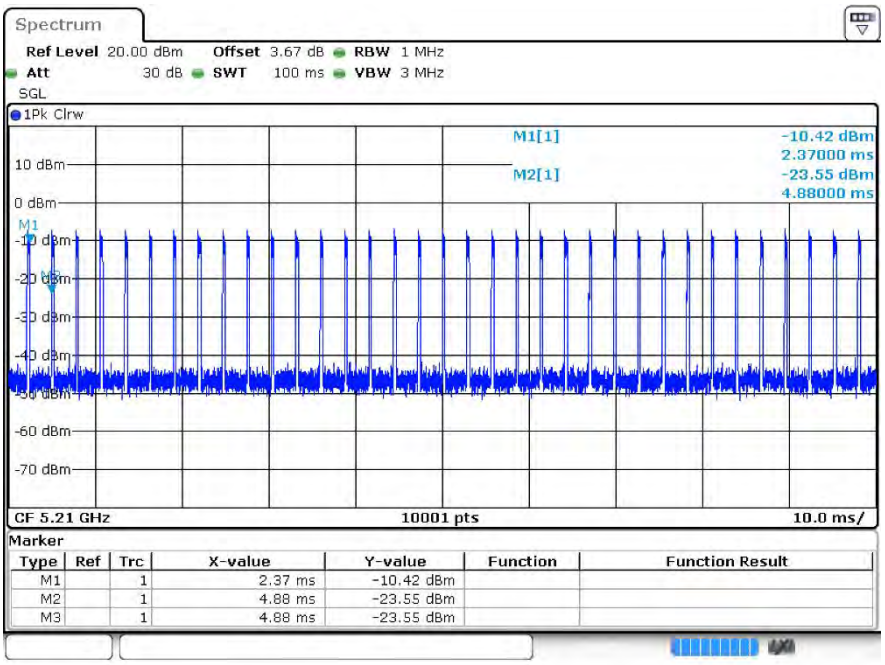
Duty Cycleac40 5190MHz Ant2



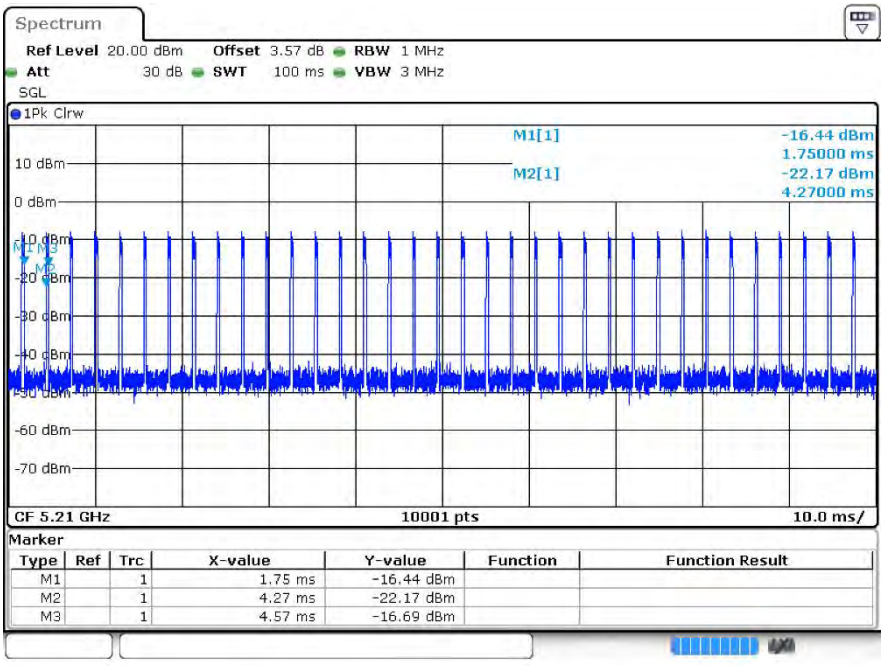
Duty Cycleac40 5230MHz Ant2



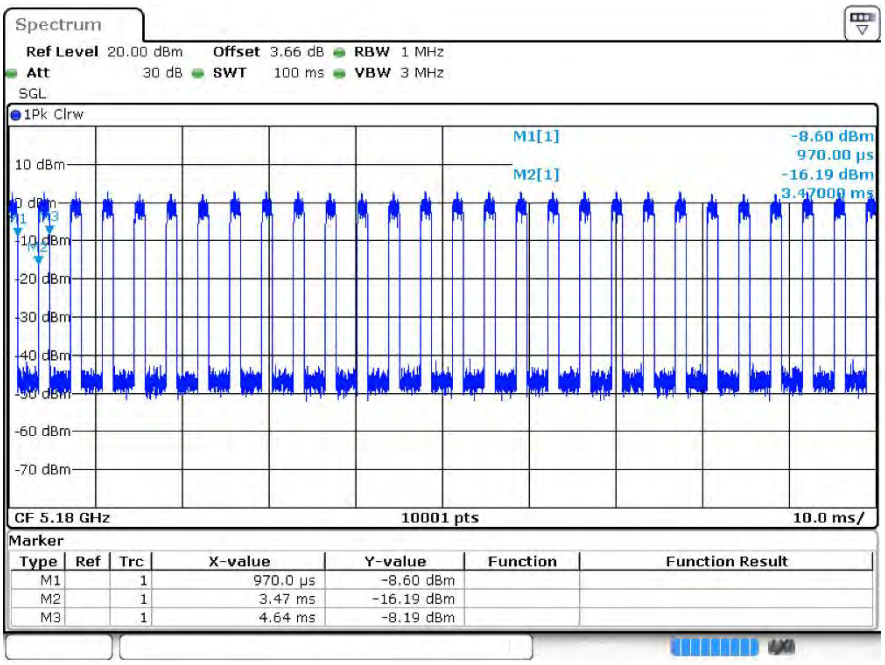
Duty Cycleac80 5210MHz Ant1



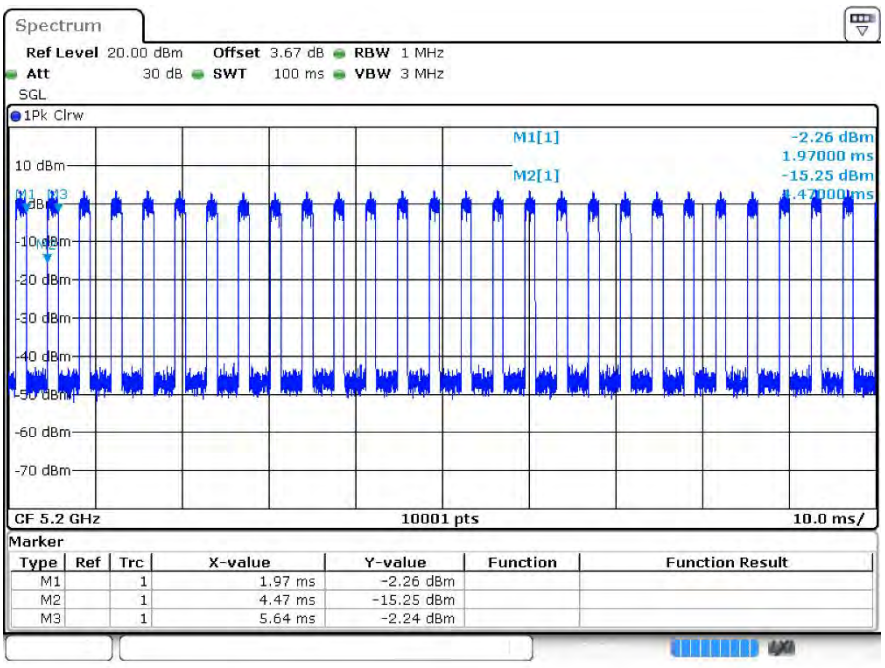
Duty Cycleac80 5210MHz Ant2



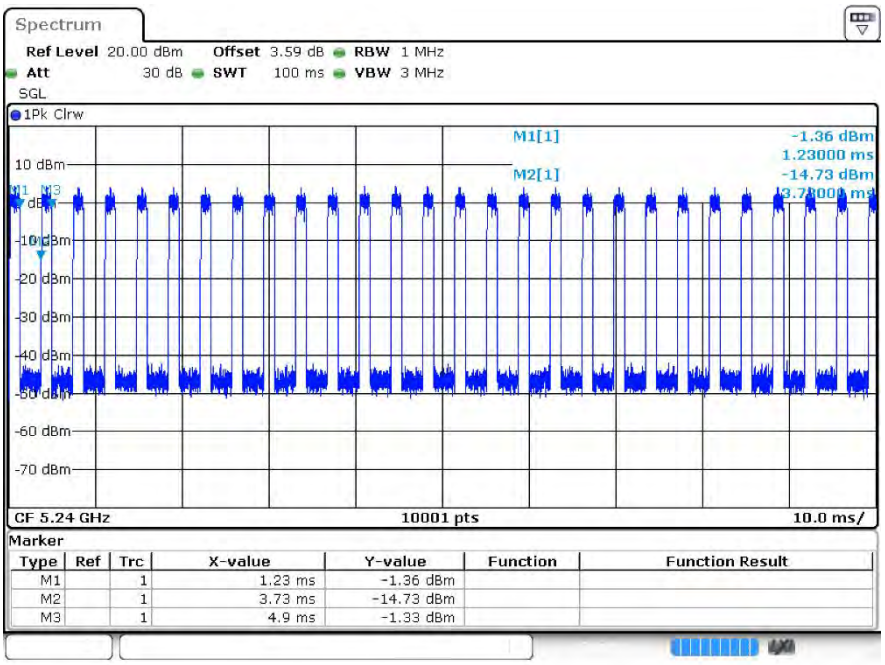
Duty Cycle ax20 5180MHz Ant1



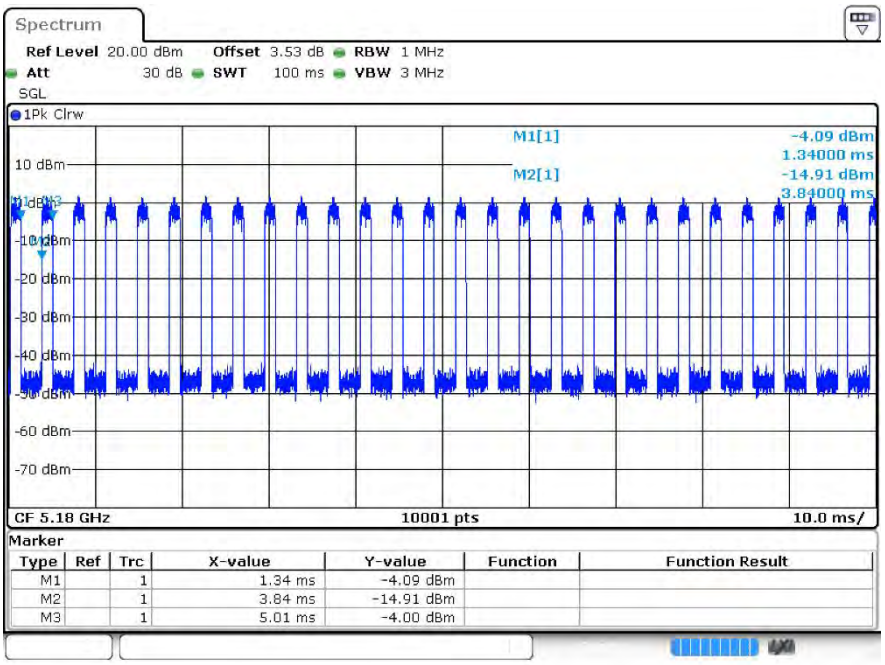
Duty Cycle ax20 5200MHz Ant1



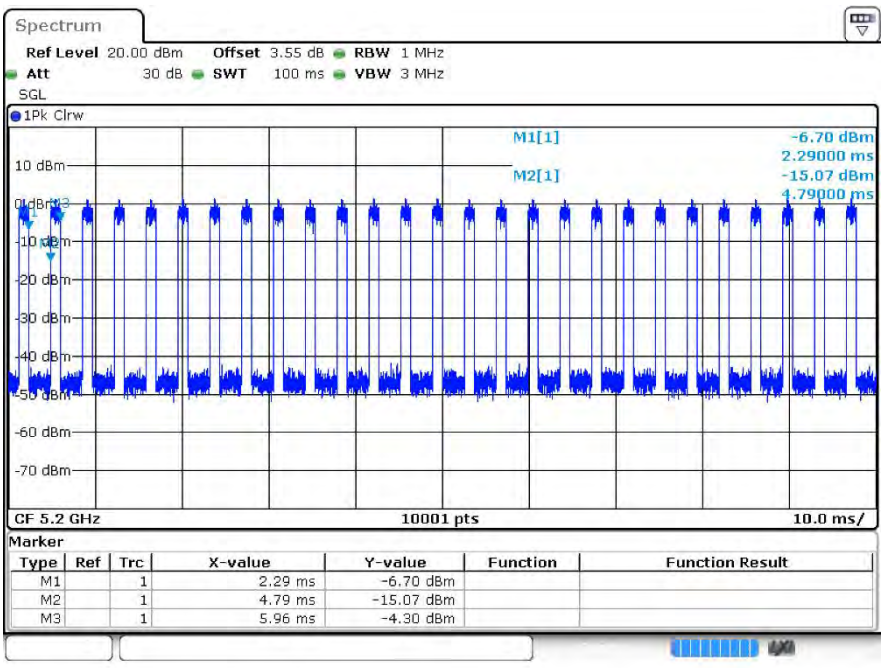
Duty Cycle ax20 5240MHz Ant1



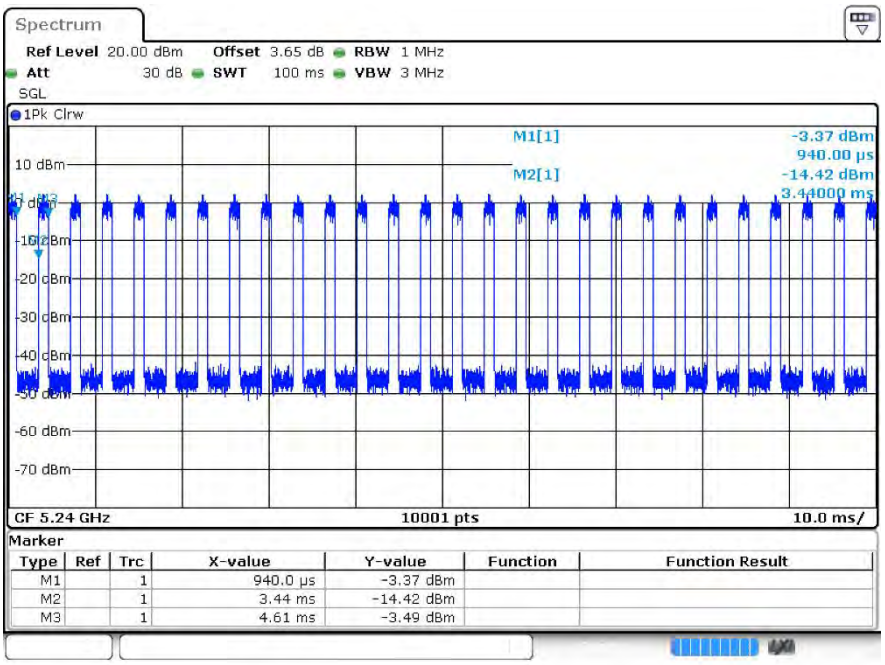
Duty Cycle ax20 5180MHz Ant2



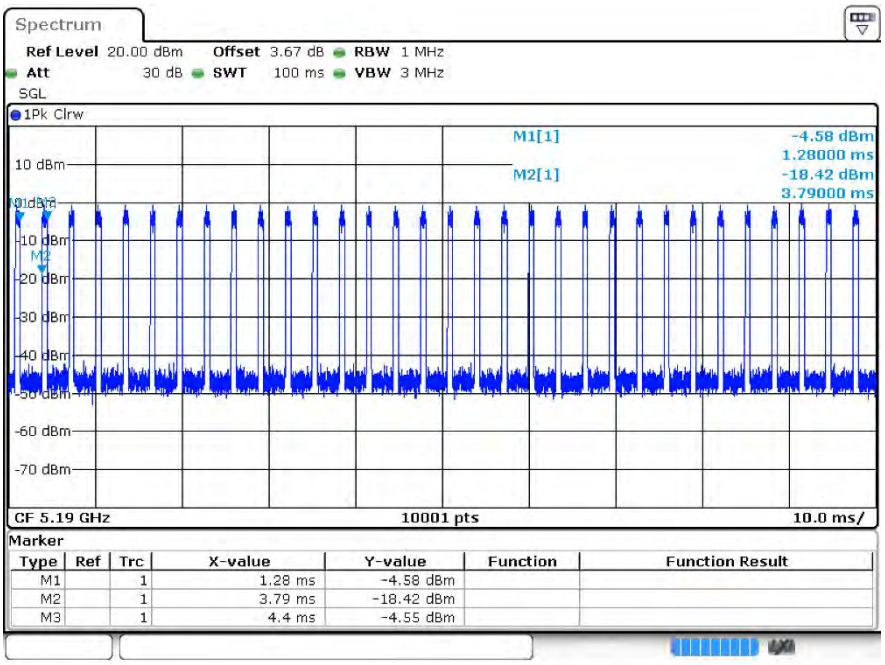
Duty Cycle ax20 5200MHz Ant2



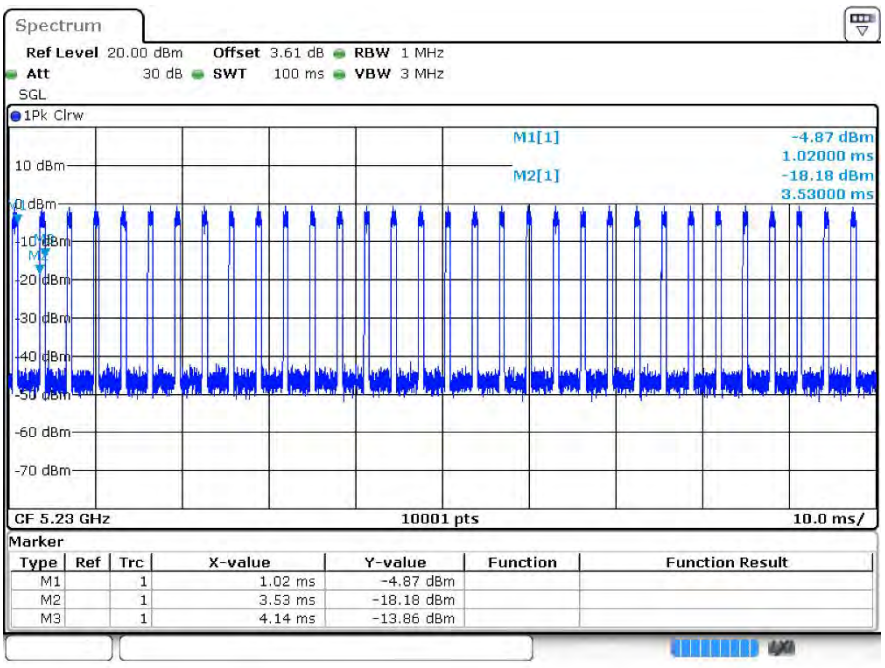
Duty Cycle ax20 5240MHz Ant2



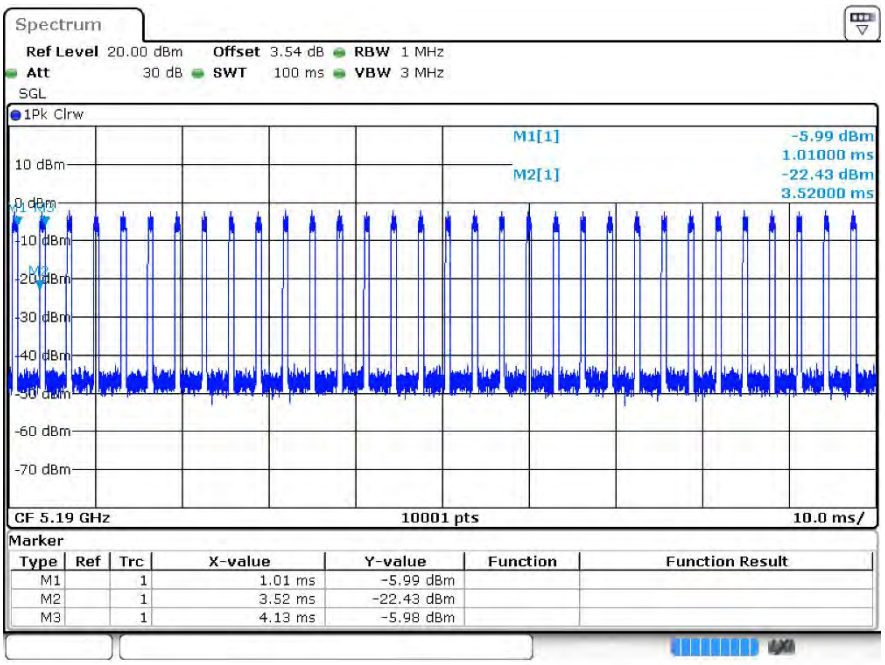
Duty Cycleax40 5190MHz Ant1



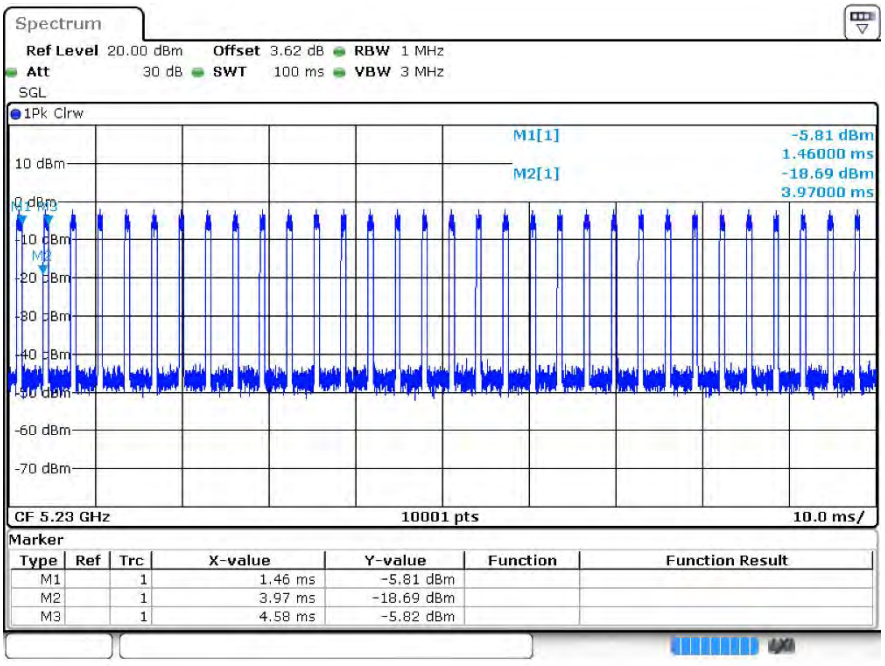
Duty Cycleax40 5230MHz Ant1



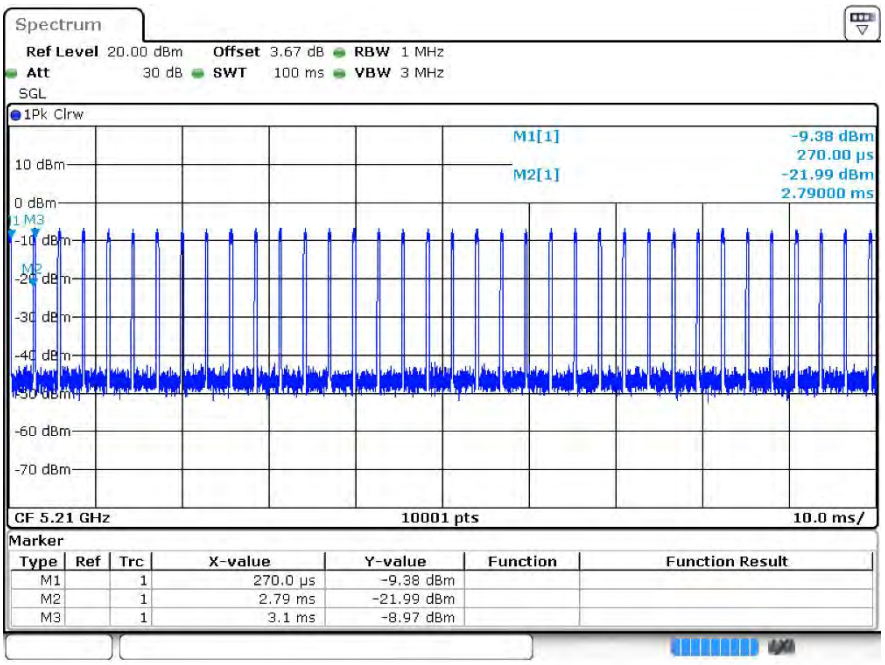
Duty Cycleax40 5190MHz Ant2



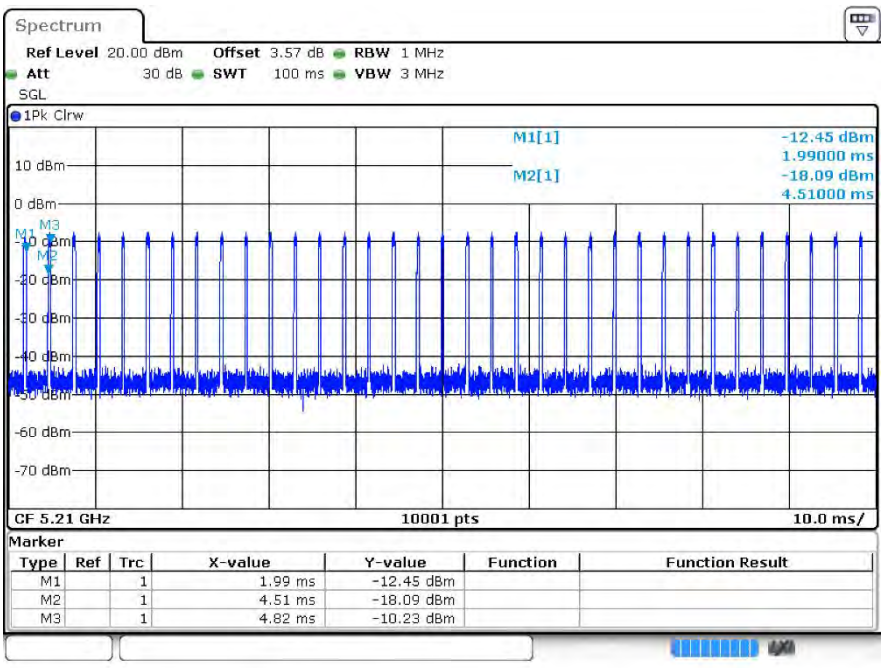
Duty Cycleax40 5230MHz Ant2



Duty Cycleax80 5210MHz Ant1



Duty Cycleax80 5210MHz Ant2



2 Maximum Conducted Output Power

2.1 Test Result

Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
a	5180	Ant1	13.03	24	Pass
a	5200	Ant1	13.38	24	Pass
a	5240	Ant1	13.95	24	Pass
a	5180	Ant2	12.14	24	Pass
a	5200	Ant2	11.81	24	Pass
a	5240	Ant2	11.7	24	Pass
n20	5180	Ant1	8.55	24	Pass
n20	5180	Ant2	7.38	24	Pass
n20	5180	Sum	11.01	22.63	Pass
n20	5200	Ant1	9.05	24	Pass
n20	5200	Ant2	7.15	24	Pass
n20	5200	Sum	11.21	22.63	Pass
n20	5240	Ant1	11.31	24	Pass
n20	5240	Ant2	9.15	24	Pass
n20	5240	Sum	13.37	22.63	Pass
n40	5190	Ant1	9.13	24	Pass
n40	5190	Ant2	8.72	24	Pass
n40	5190	Sum	11.94	22.63	Pass
n40	5230	Ant1	9.9	24	Pass
n40	5230	Ant2	8.72	24	Pass
n40	5230	Sum	12.36	22.63	Pass
ac20	5180	Ant1	8.7	24	Pass
ac20	5180	Ant2	7.58	24	Pass
ac20	5180	Sum	11.19	22.63	Pass
ac20	5200	Ant1	9.07	24	Pass
ac20	5200	Ant2	7.16	24	Pass
ac20	5200	Sum	11.23	22.63	Pass
ac20	5240	Ant1	11.09	24	Pass
ac20	5240	Ant2	9.02	24	Pass
ac20	5240	Sum	13.19	22.63	Pass
ac40	5190	Ant1	9.12	24	Pass
ac40	5190	Ant2	8.8	24	Pass
ac40	5190	Sum	11.97	22.63	Pass
ac40	5230	Ant1	9.83	24	Pass
ac40	5230	Ant2	8.67	24	Pass

ac40	5230	Sum	12.30	22.63	Pass
ac80	5210	Ant1	8.8	24	Pass
ac80	5210	Ant2	7.82	24	Pass
ac80	5210	Sum	11.35	22.63	Pass
ax20	5180	Ant1	9.38	24	Pass
ax20	5180	Ant2	8.23	24	Pass
ax20	5180	Sum	11.85	22.63	Pass
ax20	5200	Ant1	9.75	24	Pass
ax20	5200	Ant2	7.97	24	Pass
ax20	5200	Sum	11.96	22.63	Pass
ax20	5240	Ant1	10.49	24	Pass
ax20	5240	Ant2	8.62	24	Pass
ax20	5240	Sum	12.67	22.63	Pass
ax40	5190	Ant1	9.98	24	Pass
ax40	5190	Ant2	8.62	24	Pass
ax40	5190	Sum	12.36	22.63	Pass
ax40	5230	Ant1	9.85	24	Pass
ax40	5230	Ant2	8.68	24	Pass
ax40	5230	Sum	12.31	22.63	Pass
ax80	5210	Ant1	9.03	24	Pass
ax80	5210	Ant2	8.07	24	Pass
ax80	5210	Sum	11.59	22.63	Pass

Note:

The duty factor has been compensated into the result.

For MIMO mode:

Directional gain=10log[(10G1/20+10G2/20) 2/2] =7.37dBi

Limit =24-(7.37-6)=22.63dBm for POWER

3 -26dB Bandwidth

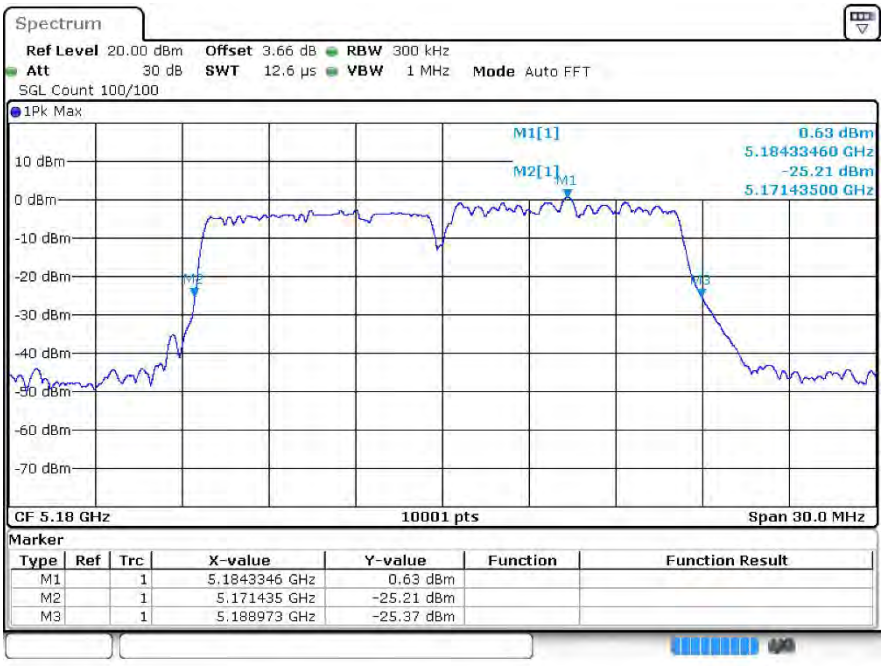
3.1 Test Result

Mode	Frequency (MHz)	Antenna	-26 dB Bandwidth (MHz)	Limit -26 dB Bandwidth (MHz)	Verdict
a	5180	Ant1	17.538	0.5	Pass
a	5200	Ant1	18.297	0.5	Pass
a	5240	Ant1	18.111	0.5	Pass
n20	5180	Ant1	19.014	0.5	Pass
n20	5200	Ant1	19.248	0.5	Pass
n20	5240	Ant1	19.494	0.5	Pass
n40	5190	Ant1	38.112	0.5	Pass
n40	5230	Ant1	38.628	0.5	Pass
ac20	5180	Ant1	19.284	0.5	Pass
ac20	5200	Ant1	19.104	0.5	Pass
ac20	5240	Ant1	19.473	0.5	Pass
ac40	5190	Ant1	38.43	0.5	Pass
ac40	5230	Ant1	38.106	0.5	Pass
ac80	5210	Ant1	81.06	0.5	Pass
ax20	5180	Ant1	20.07	0.5	Pass
ax20	5200	Ant1	20.022	0.5	Pass
ax20	5240	Ant1	20.244	0.5	Pass
ax40	5190	Ant1	39.168	0.5	Pass
ax40	5230	Ant1	39.216	0.5	Pass
ax80	5210	Ant1	78.984	0.5	Pass
a	5180	Ant2	18.477	0.5	Pass
a	5200	Ant2	18.111	0.5	Pass
a	5240	Ant2	18.42	0.5	Pass
n20	5180	Ant2	19.089	0.5	Pass
n20	5200	Ant2	19.77	0.5	Pass
n20	5240	Ant2	19.38	0.5	Pass
n40	5190	Ant2	38.1	0.5	Pass
n40	5230	Ant2	37.824	0.5	Pass
ac20	5180	Ant2	19.563	0.5	Pass
ac20	5200	Ant2	19.479	0.5	Pass
ac20	5240	Ant2	19.245	0.5	Pass
ac40	5190	Ant2	37.89	0.5	Pass
ac40	5230	Ant2	38.202	0.5	Pass
ac80	5210	Ant2	78.948	0.5	Pass
ax20	5180	Ant2	20.394	0.5	Pass
ax20	5200	Ant2	20.094	0.5	Pass
ax20	5240	Ant2	20.253	0.5	Pass

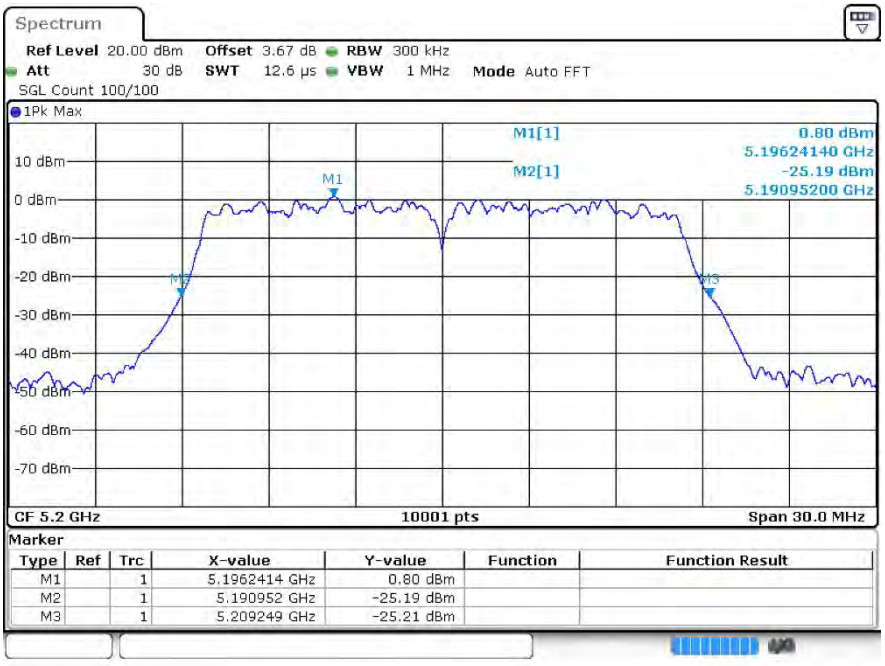
ax40	5190	Ant2	39.114	0.5	Pass
ax40	5230	Ant2	39.39	0.5	Pass
ax80	5210	Ant2	80.652	0.5	Pass

3.2 Test Graphs

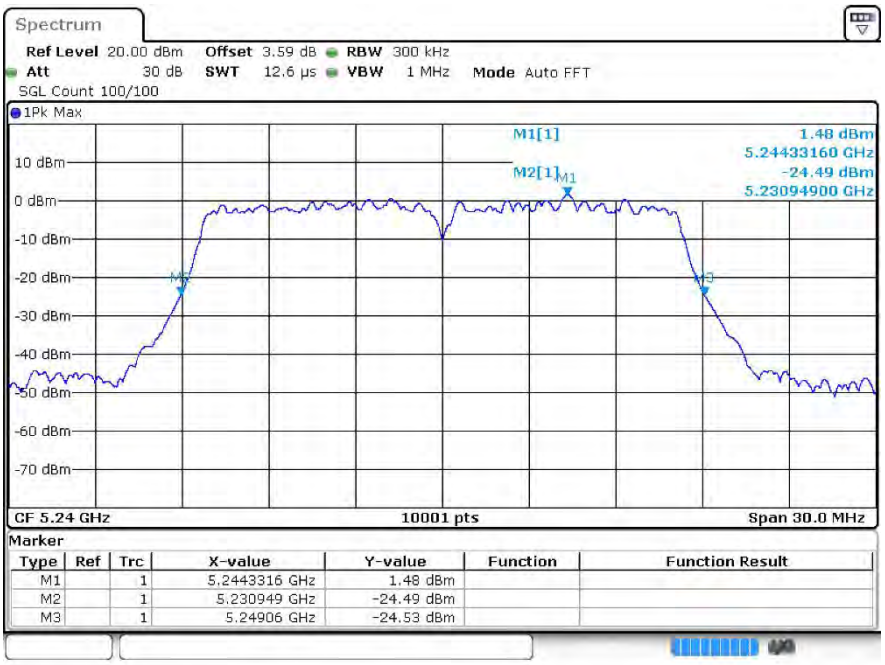
Test Graphs
-26dB Bandwidtha 5180MHz Ant1



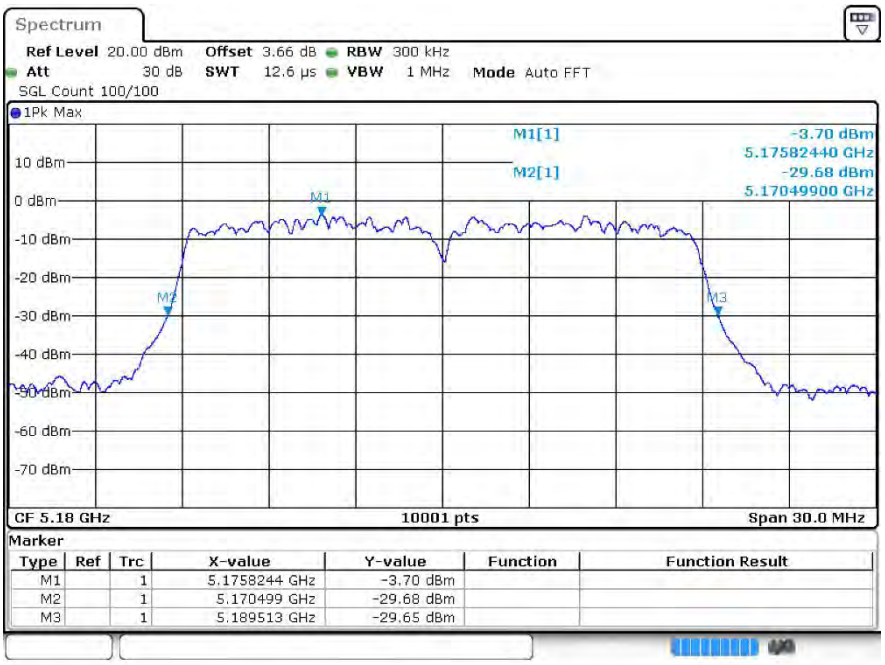
-26dB Bandwidtha 5200MHz Ant1



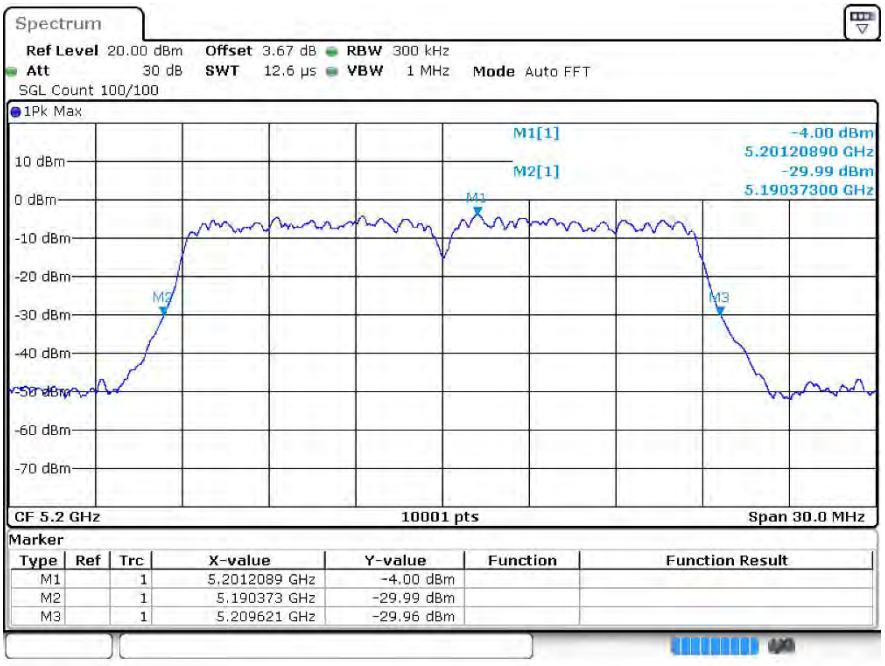
-26dB Bandwidtha 5240MHz Ant1



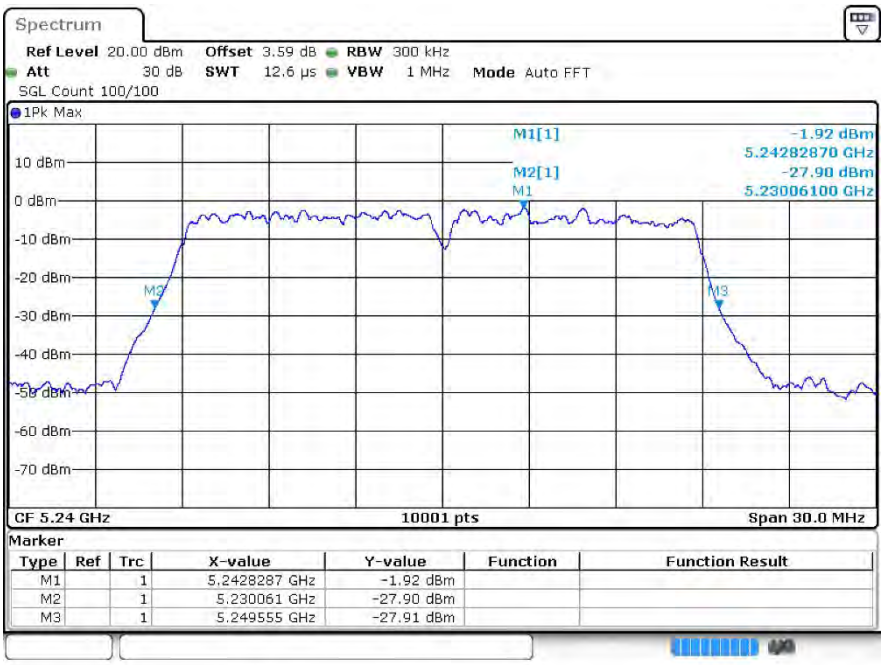
-26dB Bandwidth n20 5180MHz Ant1



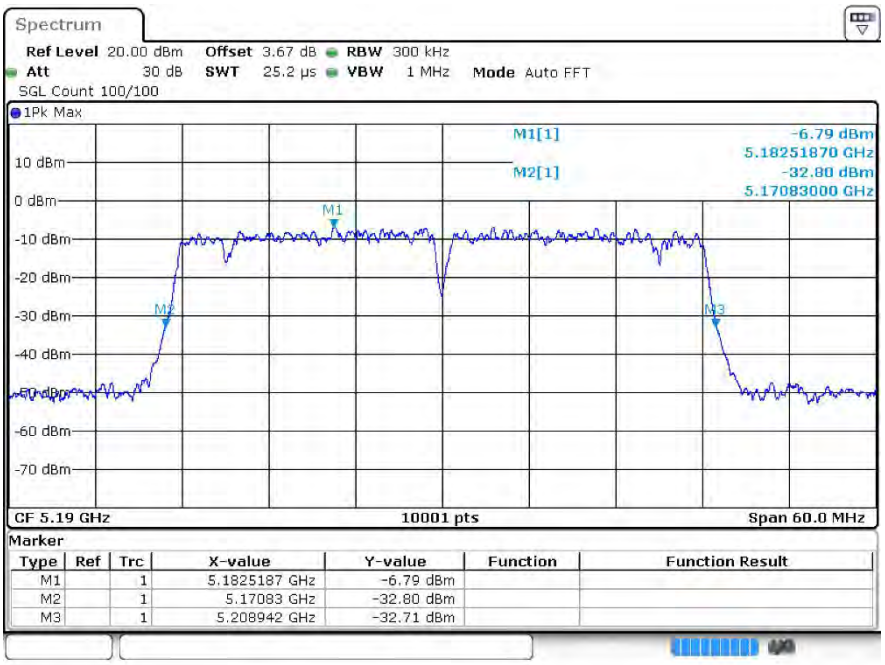
-26dB Bandwidth n20 5200MHz Ant1



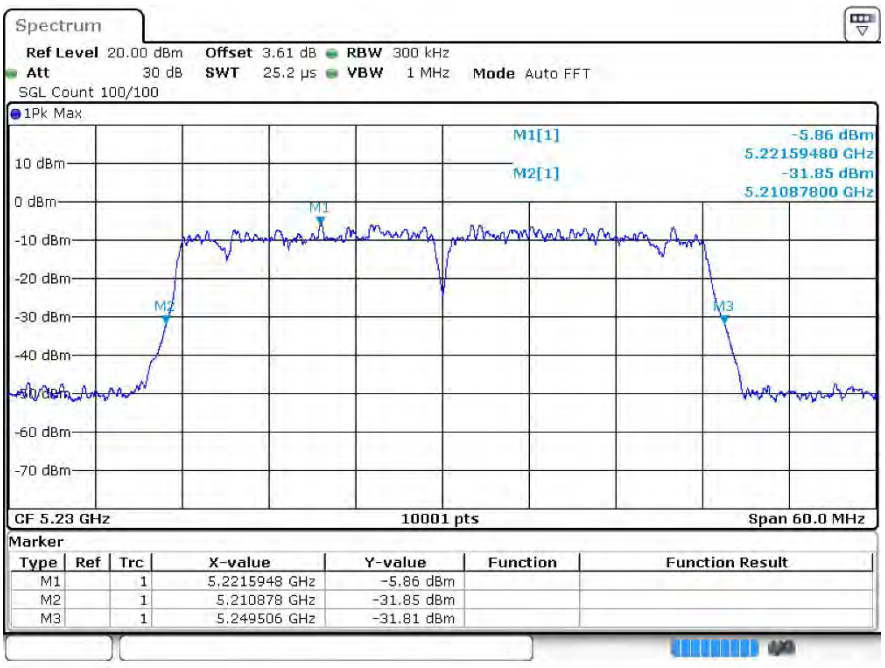
-26dB Bandwidth n20 5240MHz Ant1



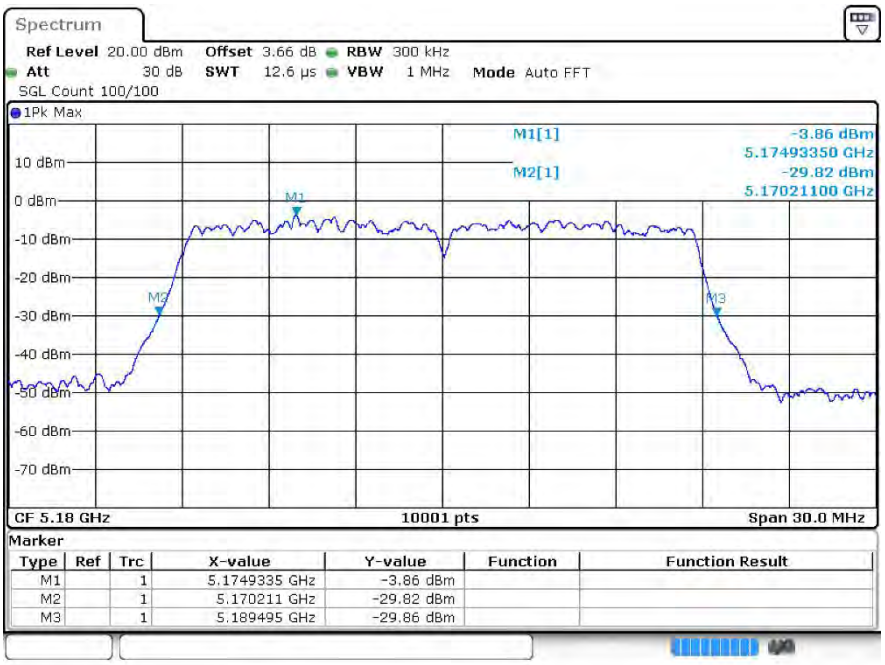
-26dB Bandwidthn40 5190MHz Ant1



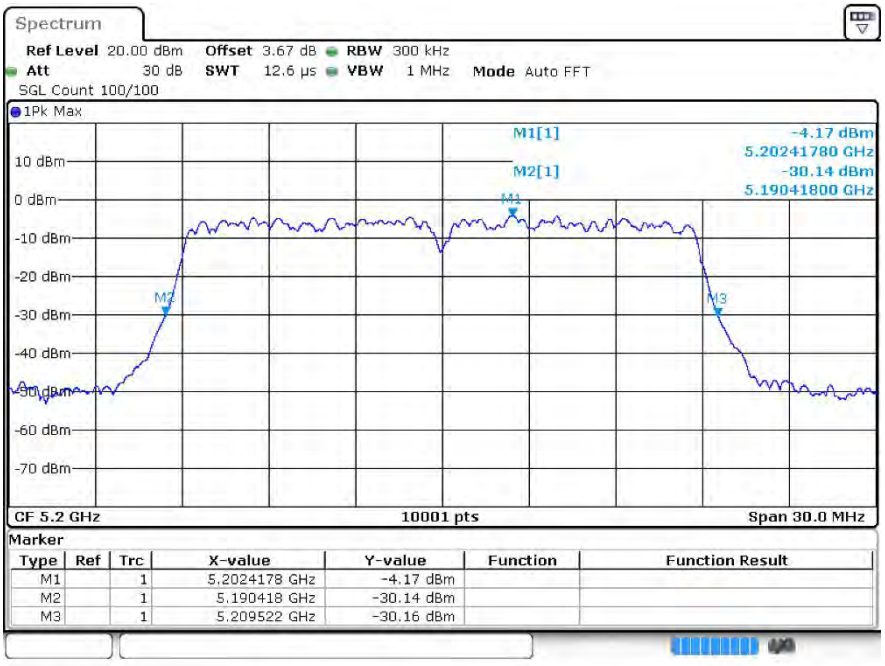
-26dB Bandwidthn40 5230MHz Ant1



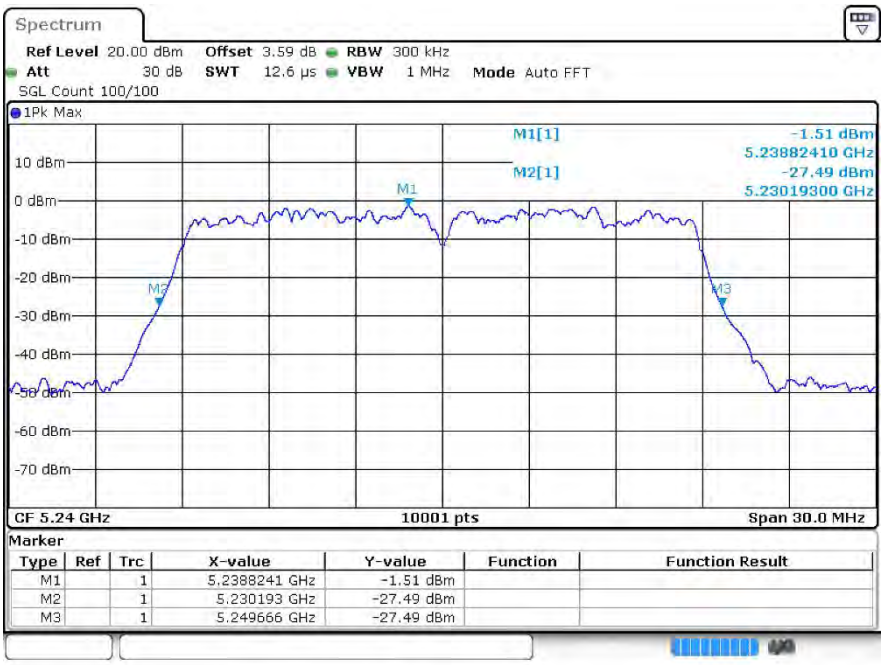
-26dB Bandwidth ac20 5180MHz Ant1



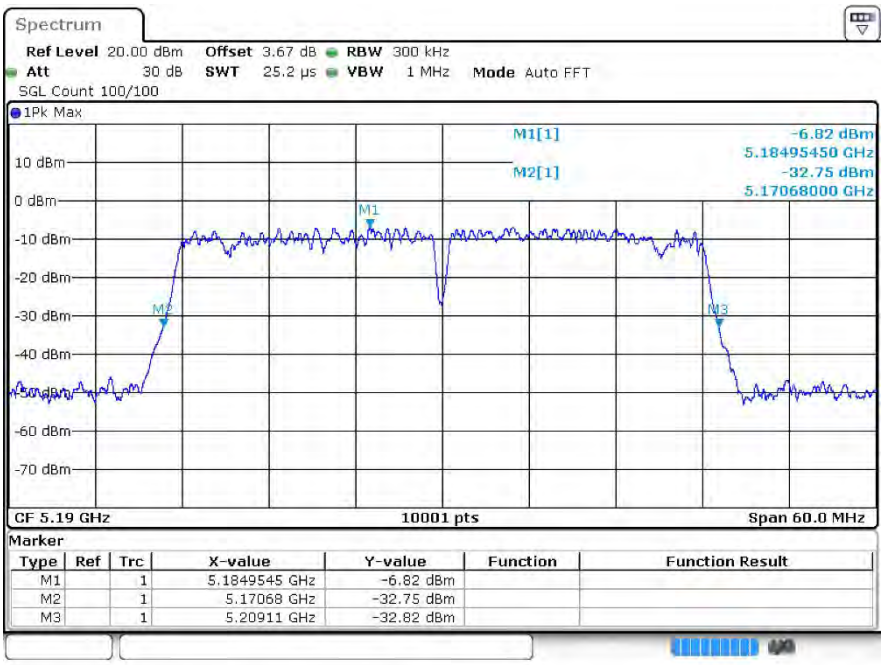
-26dB Bandwidth ac20 5200MHz Ant1



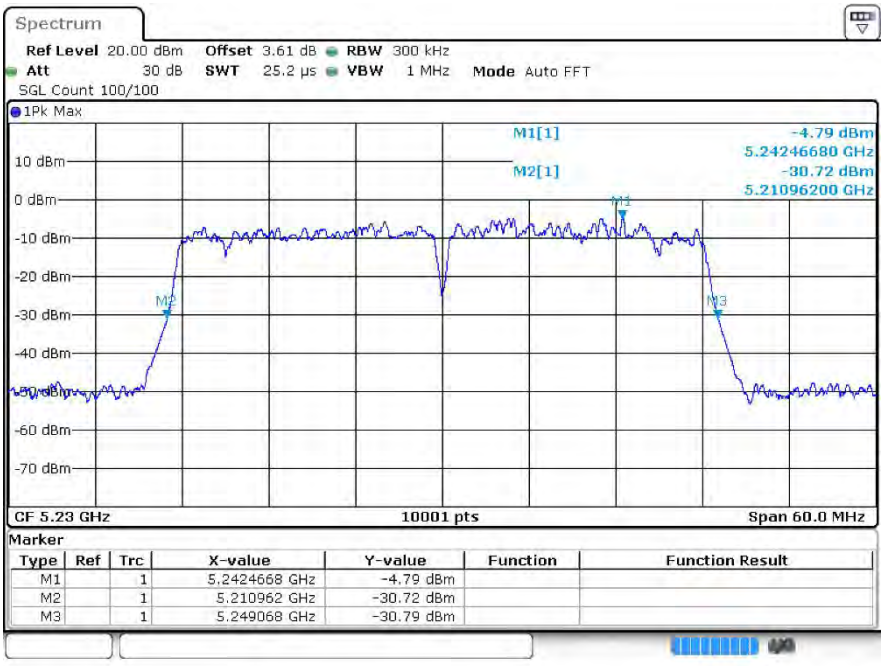
-26dB Bandwidth ac20 5240MHz Ant1



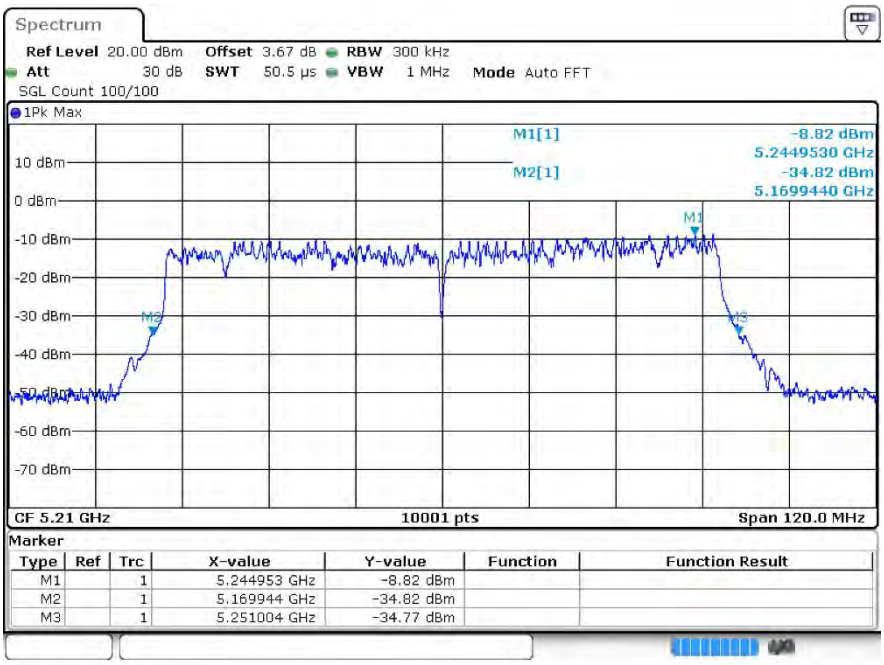
-26dB Bandwidthac40 5190MHz Ant1



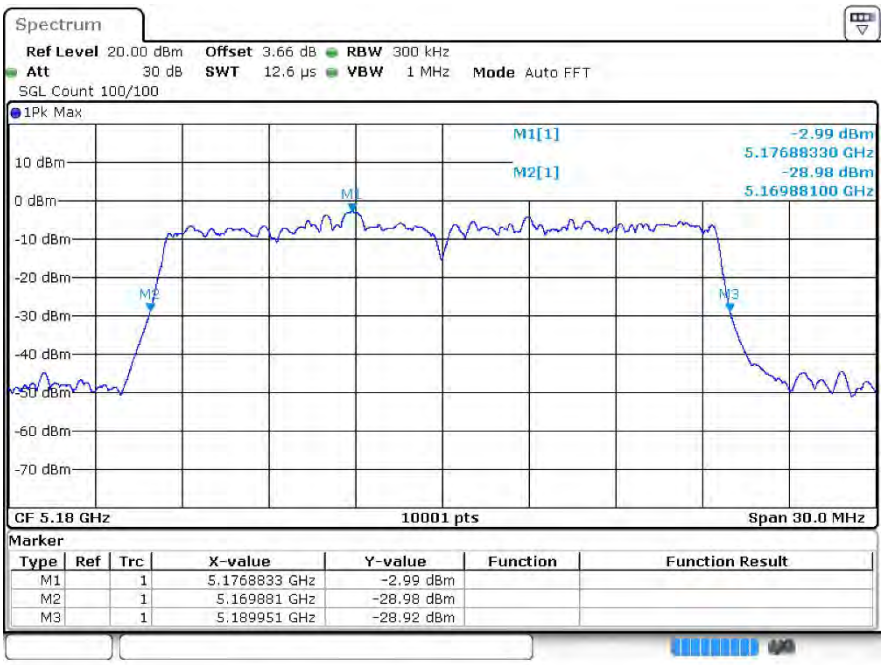
-26dB Bandwidthac40 5230MHz Ant1



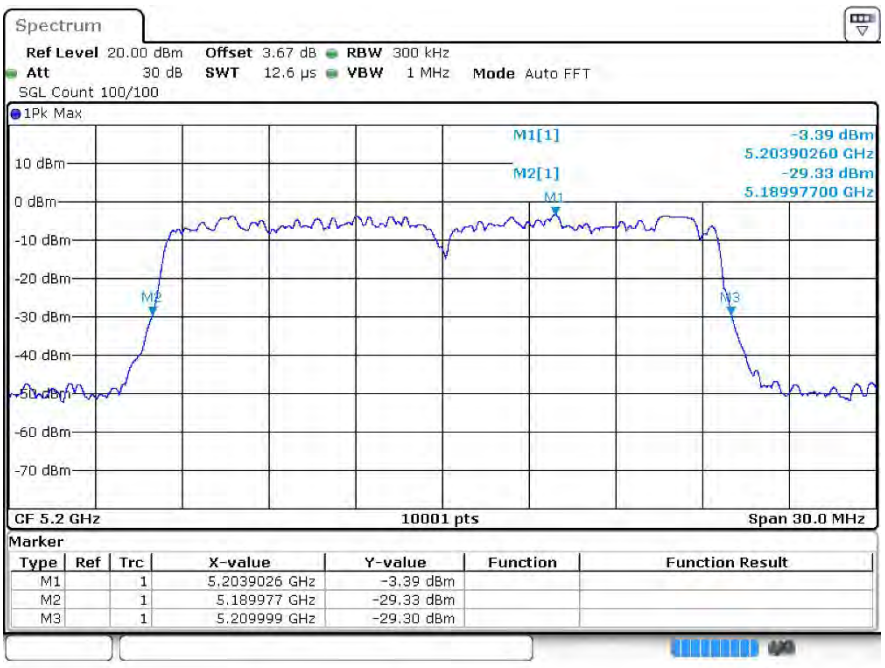
-26dB Bandwidthac80 5210MHz Ant1



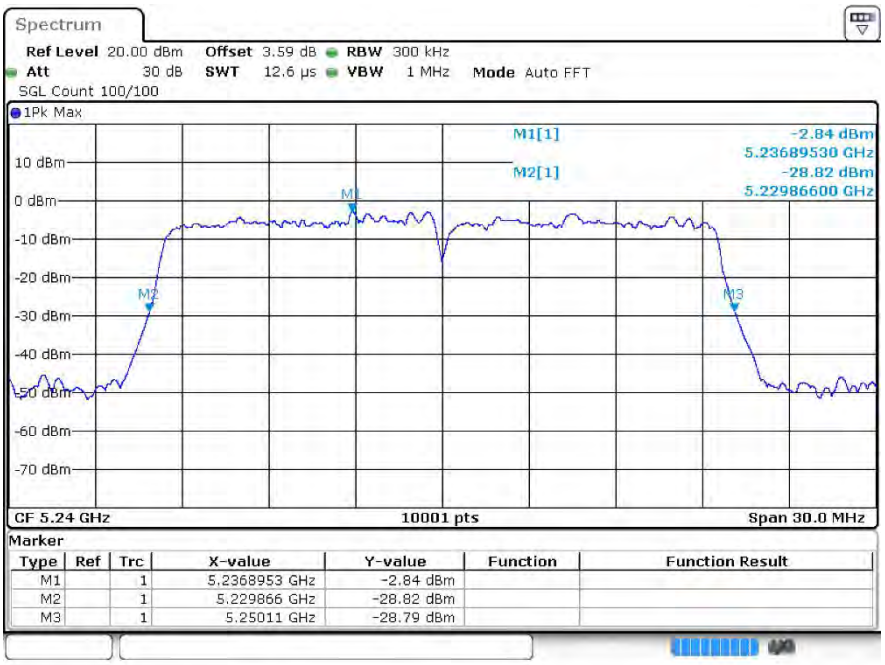
-26dB Bandwidth ax20 5180MHz Ant1



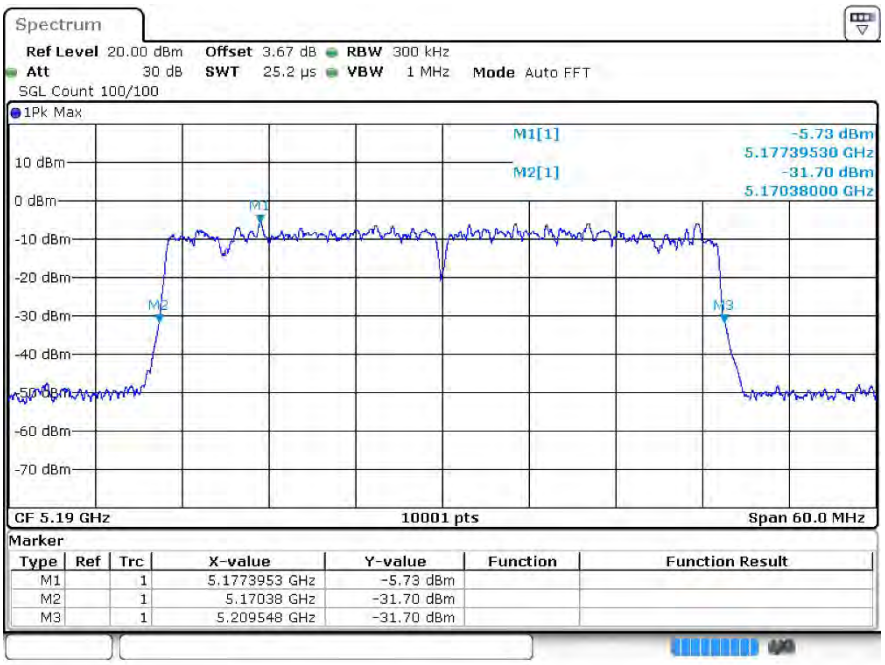
-26dB Bandwidth ax20 5200MHz Ant1



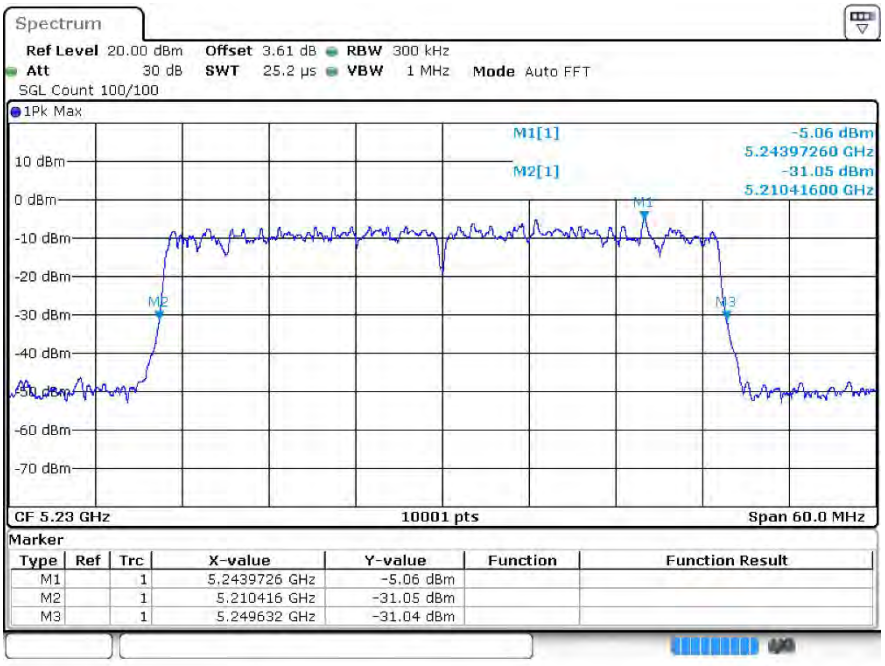
-26dB Bandwidth ax20 5240MHz Ant1



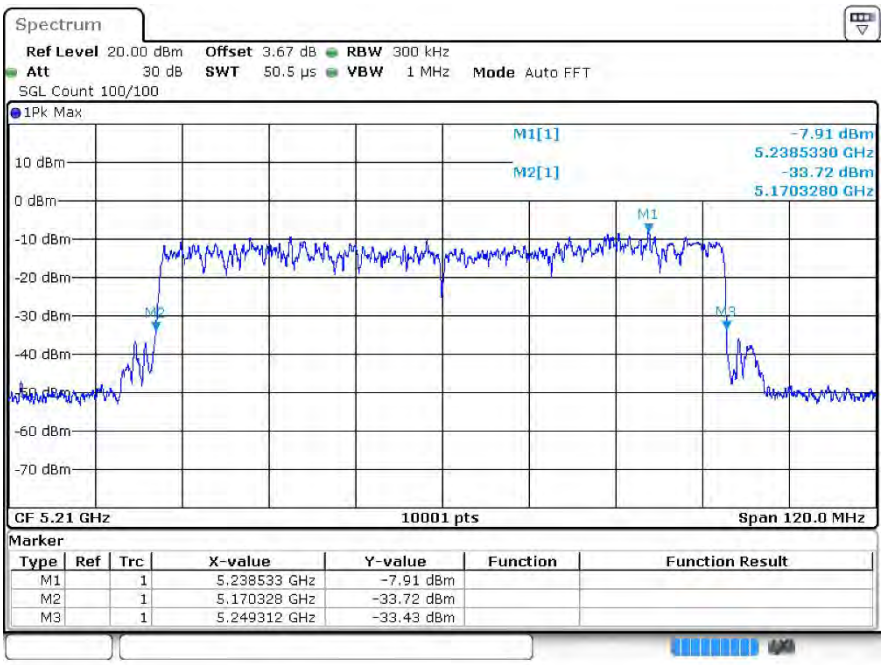
-26dB Bandwidthax40 5190MHz Ant1



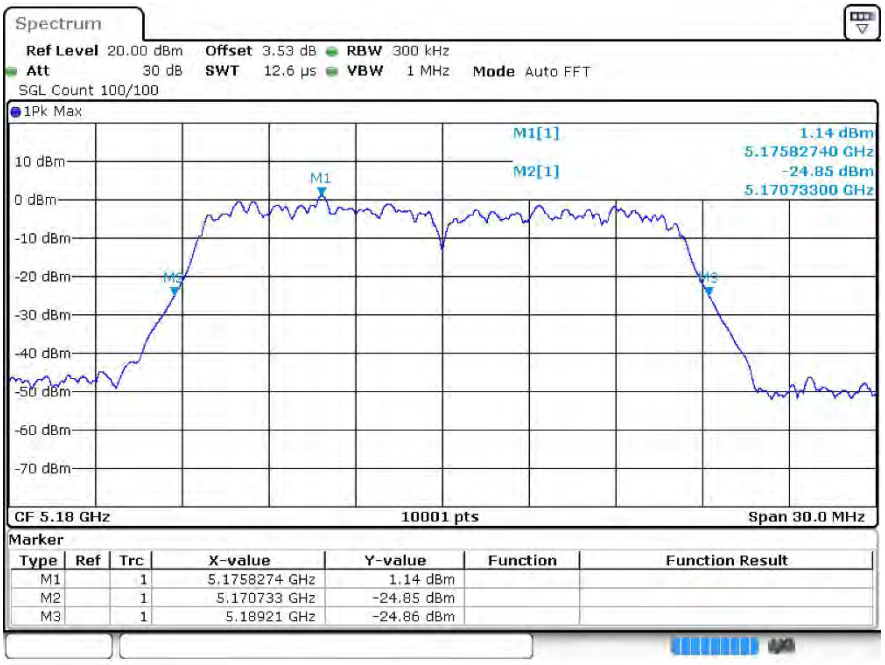
-26dB Bandwidthax40 5230MHz Ant1



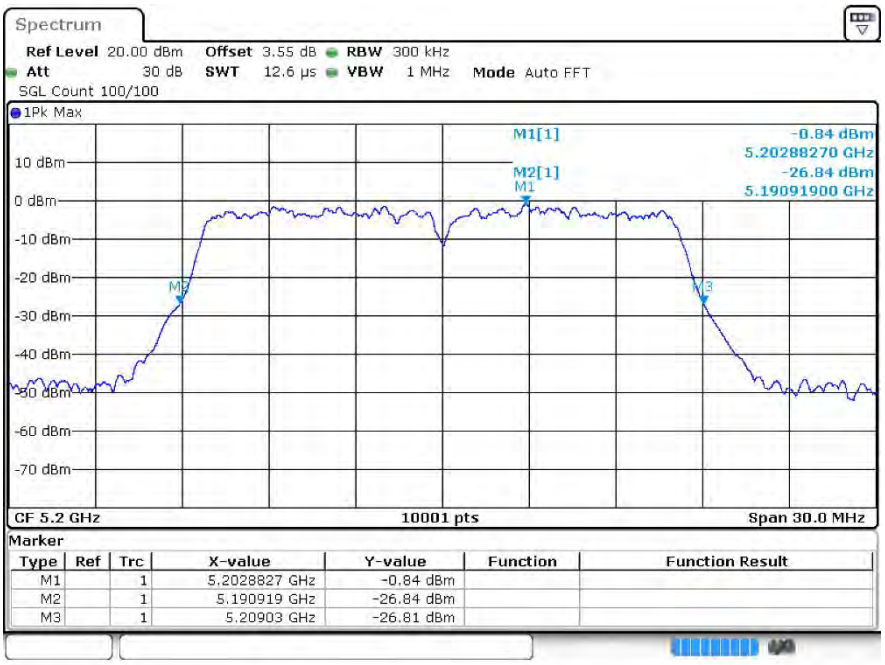
-26dB Bandwidthax80 5210MHz Ant1



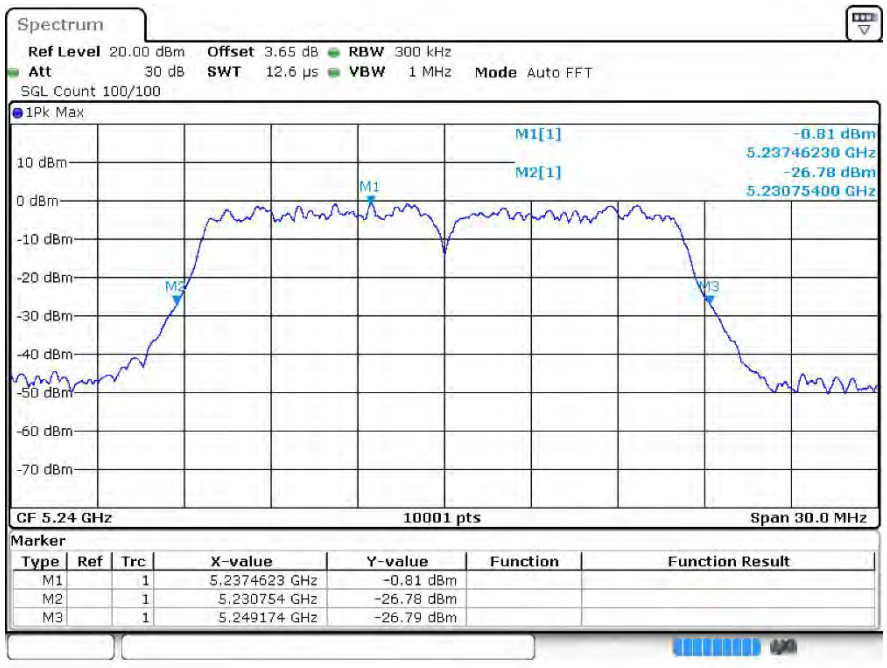
-26dB Bandwidtha 5180MHz Ant2



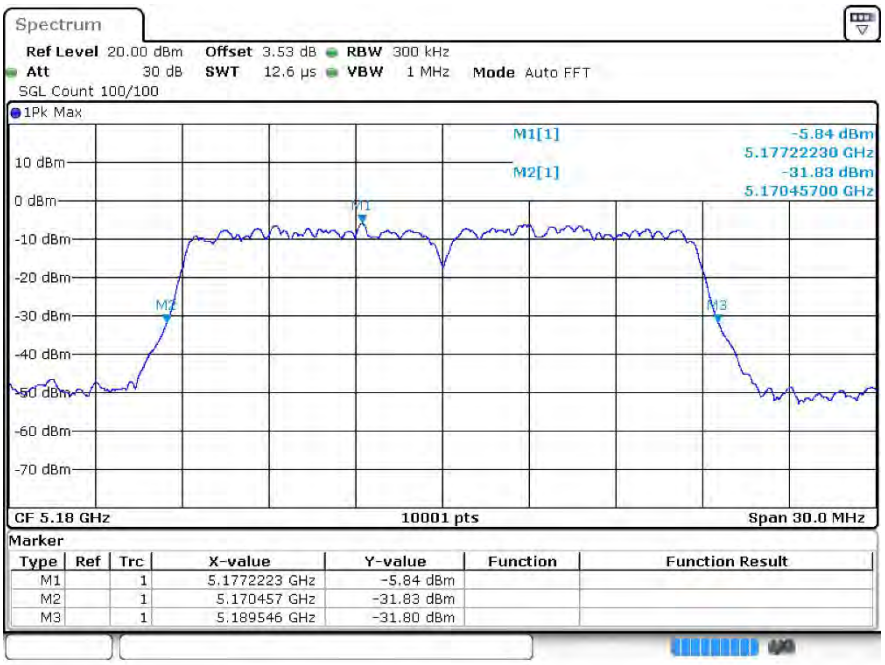
-26dB Bandwidtha 5200MHz Ant2



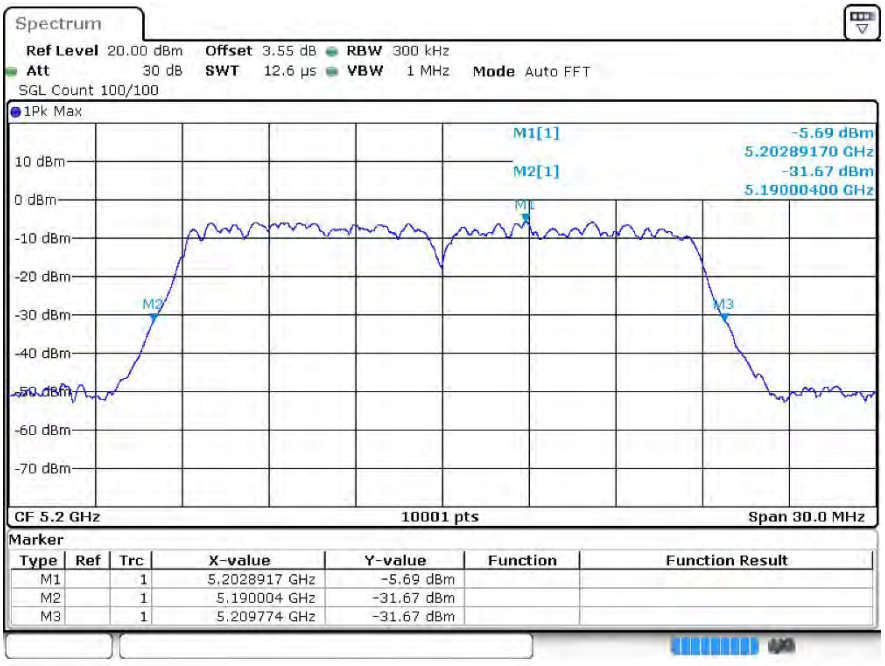
-26dB Bandwidtha 5240MHz Ant2



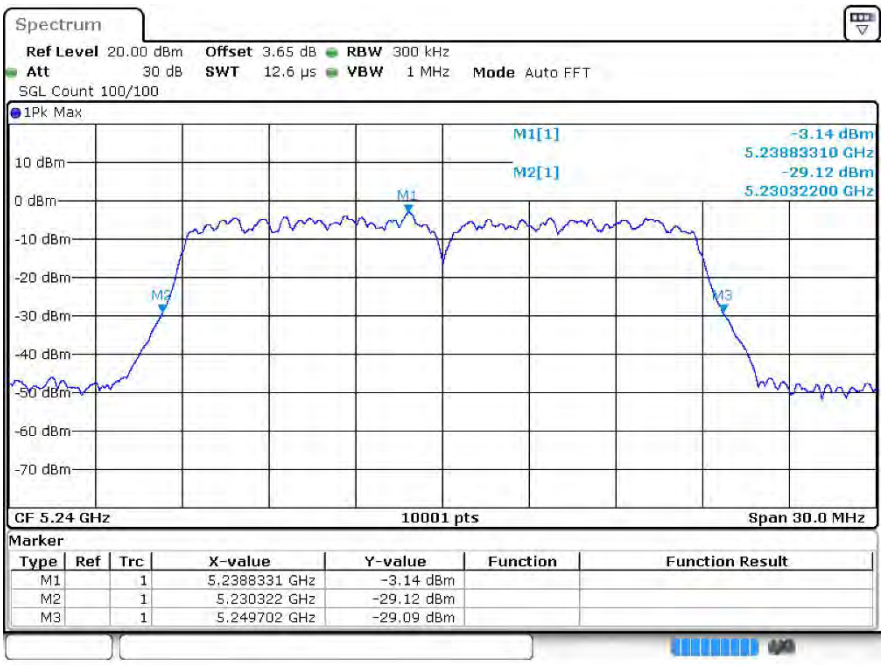
-26dB Bandwidth n20 5180MHz Ant2



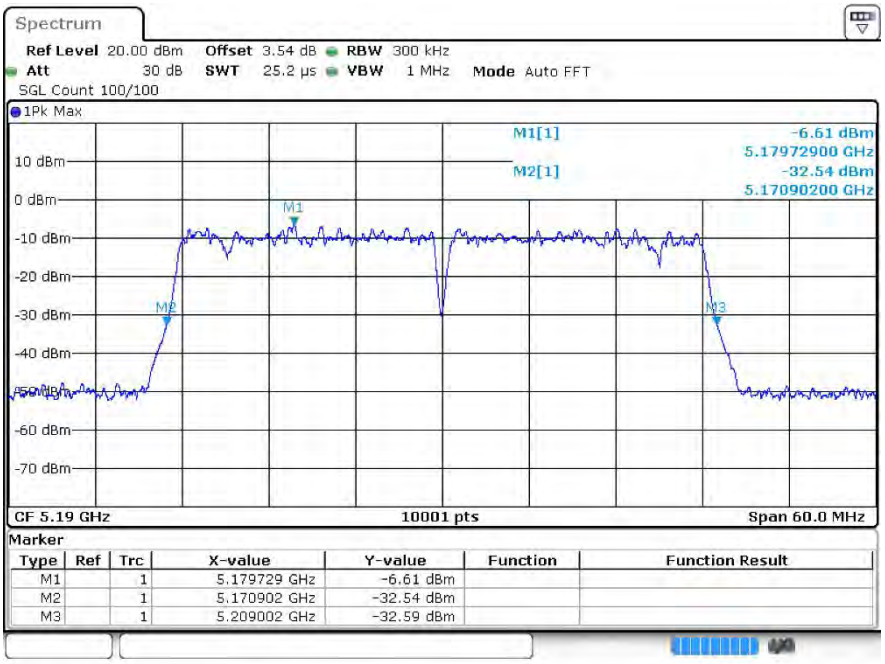
-26dB Bandwidth n20 5200MHz Ant2



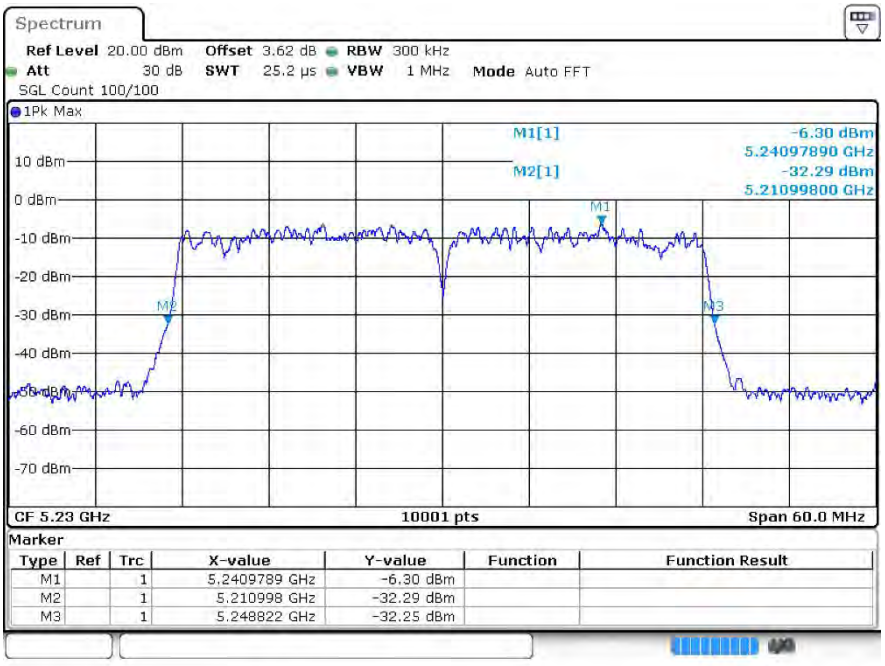
-26dB Bandwidth n20 5240MHz Ant2



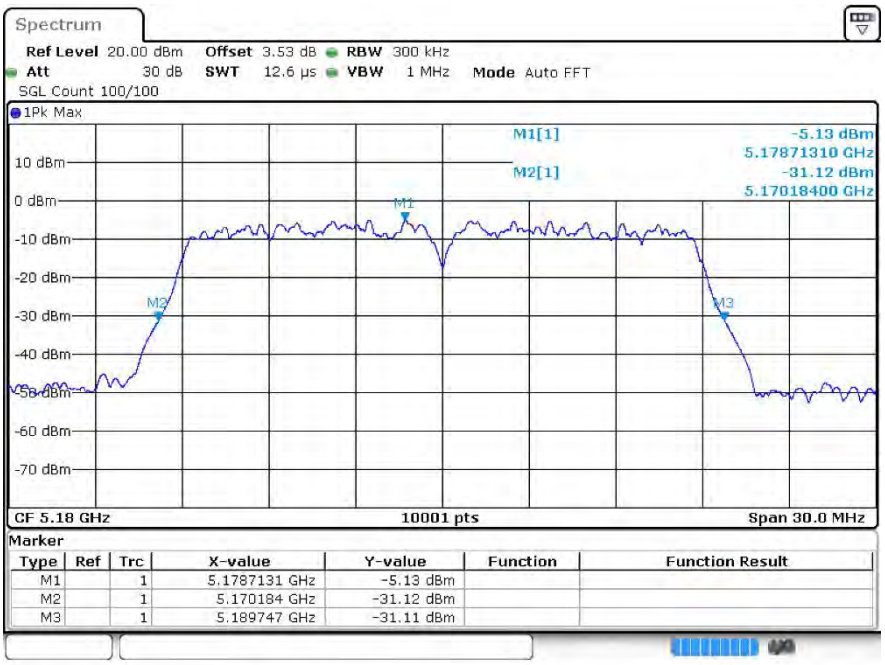
-26dB Bandwidthn40 5190MHz Ant2



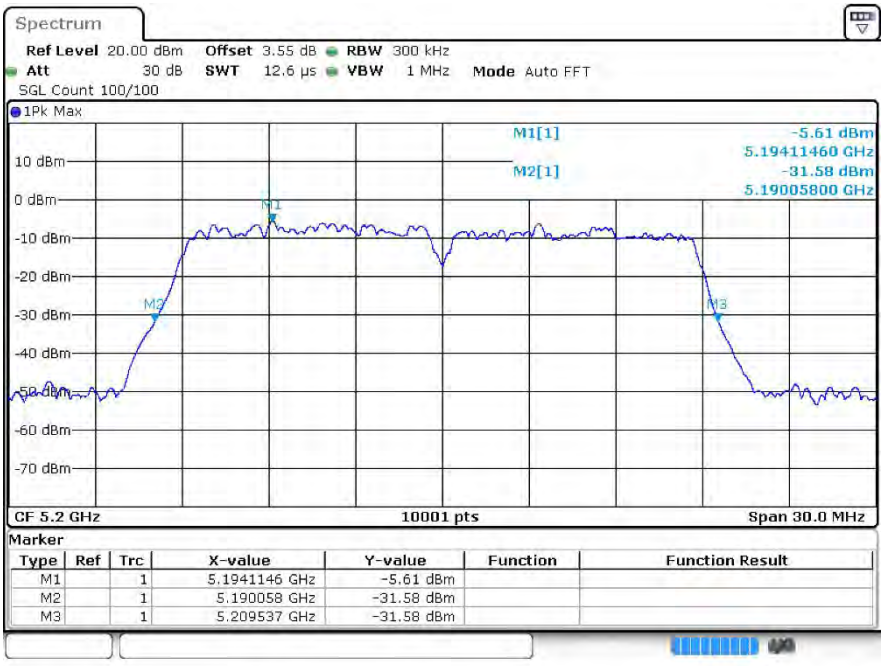
-26dB Bandwidthn40 5230MHz Ant2



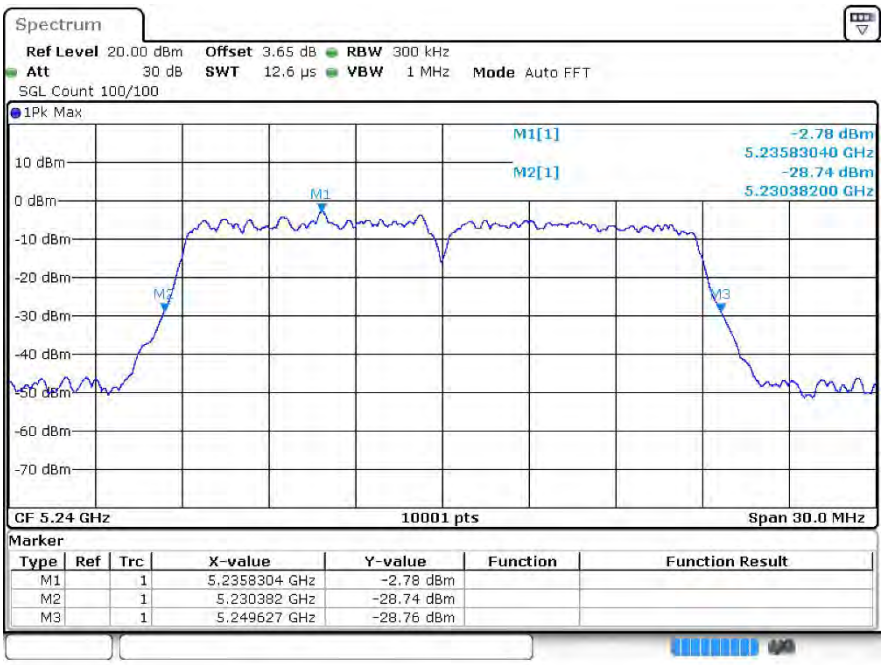
-26dB Bandwidth ac20 5180MHz Ant2



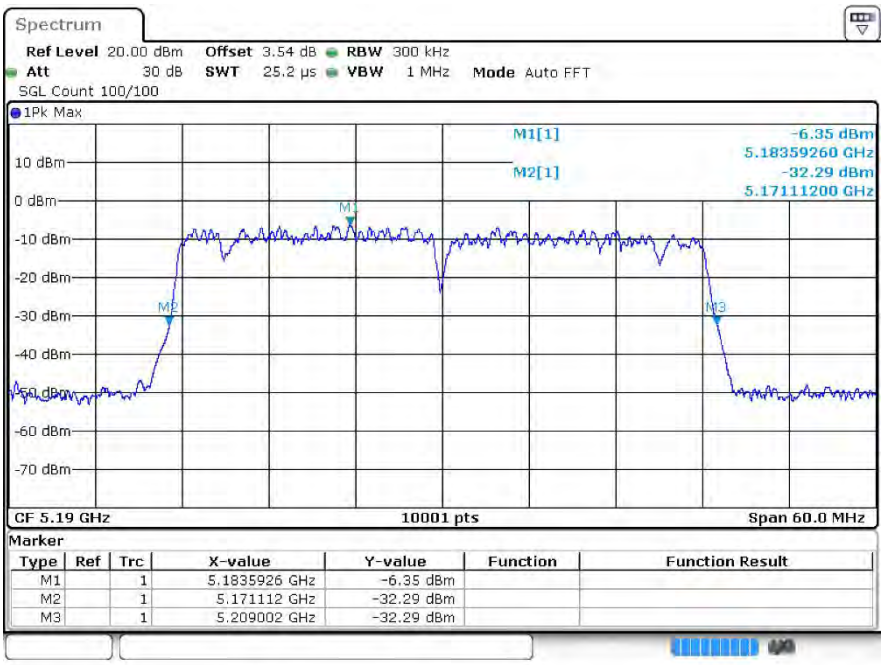
-26dB Bandwidth ac20 5200MHz Ant2



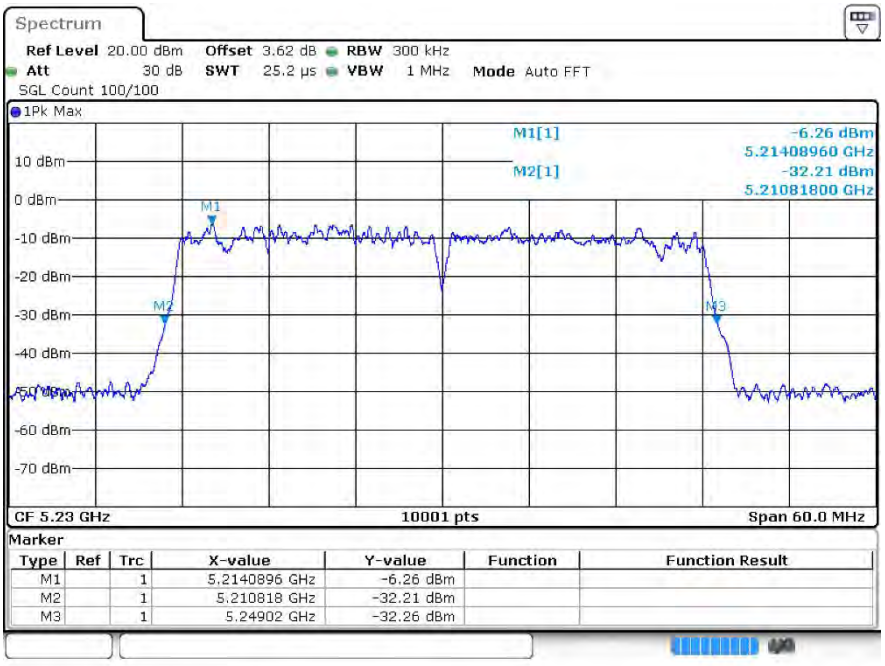
-26dB Bandwidth ac20 5240MHz Ant2



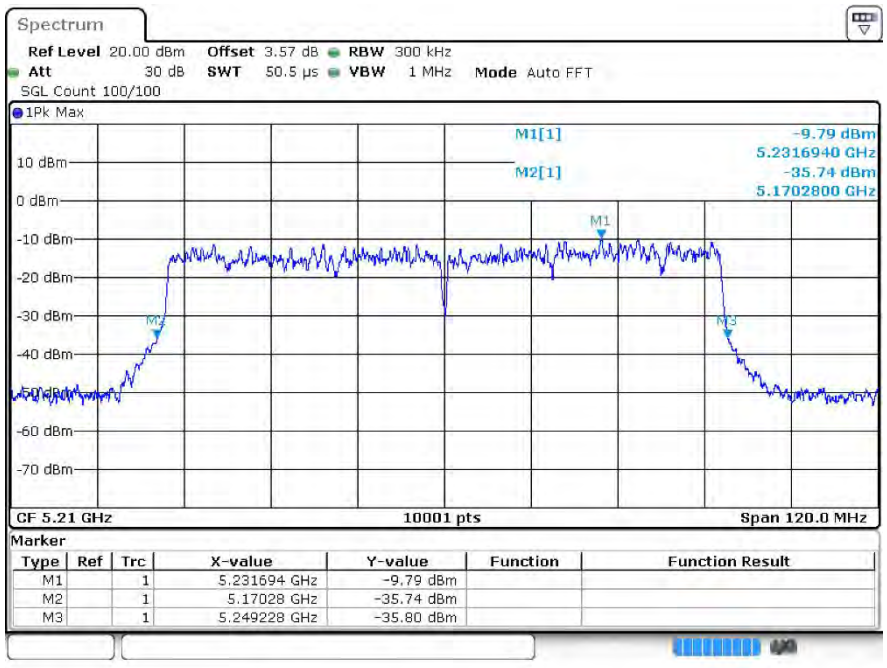
-26dB Bandwidthac40 5190MHz Ant2



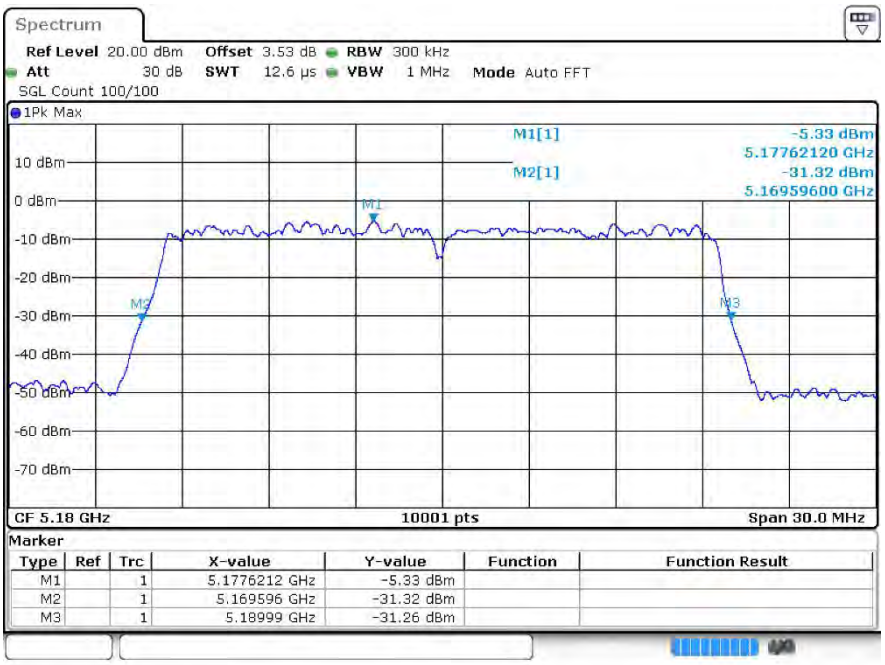
-26dB Bandwidthac40 5230MHz Ant2



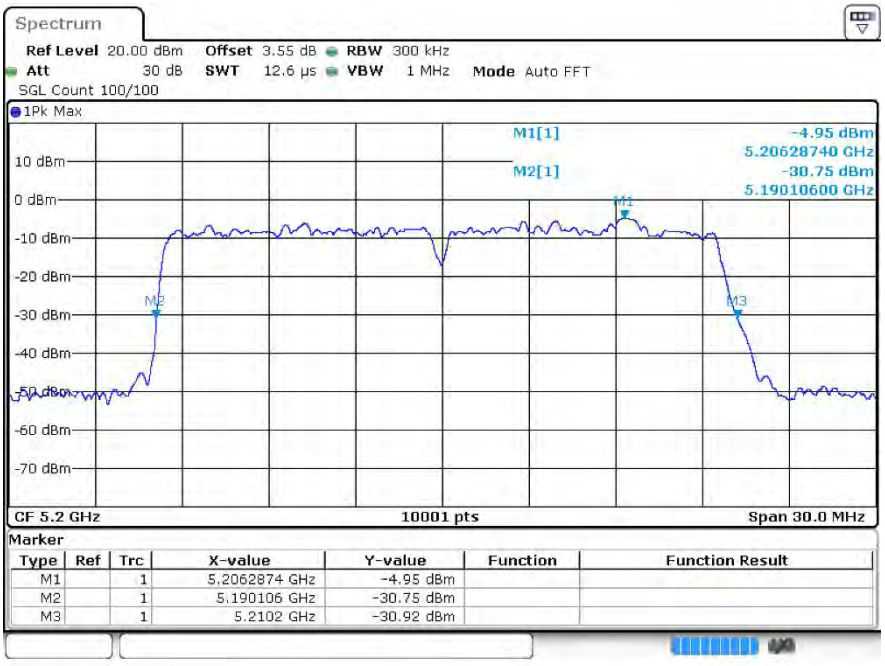
-26dB Bandwidthac80 5210MHz Ant2



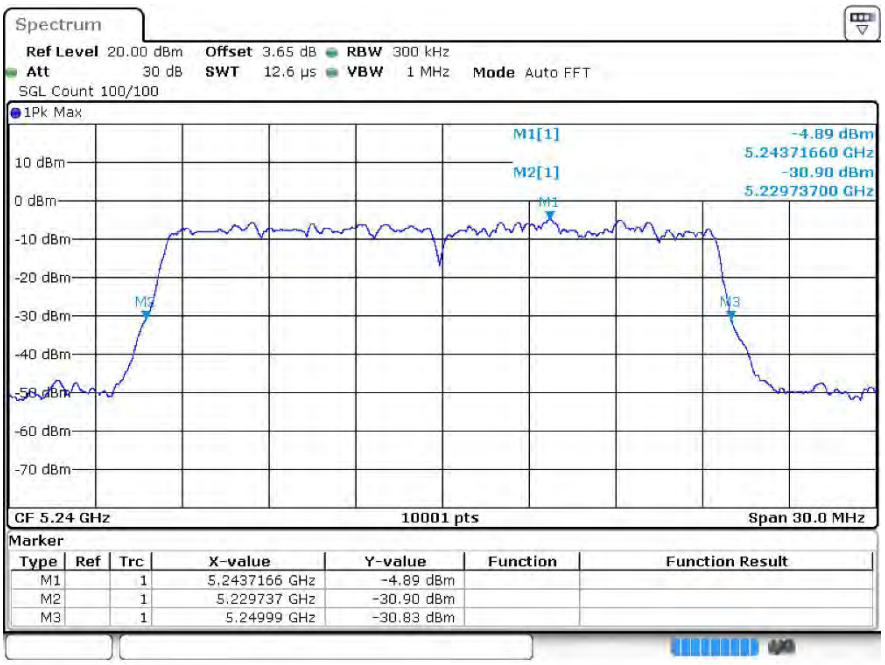
-26dB Bandwidth ax20 5180MHz Ant2



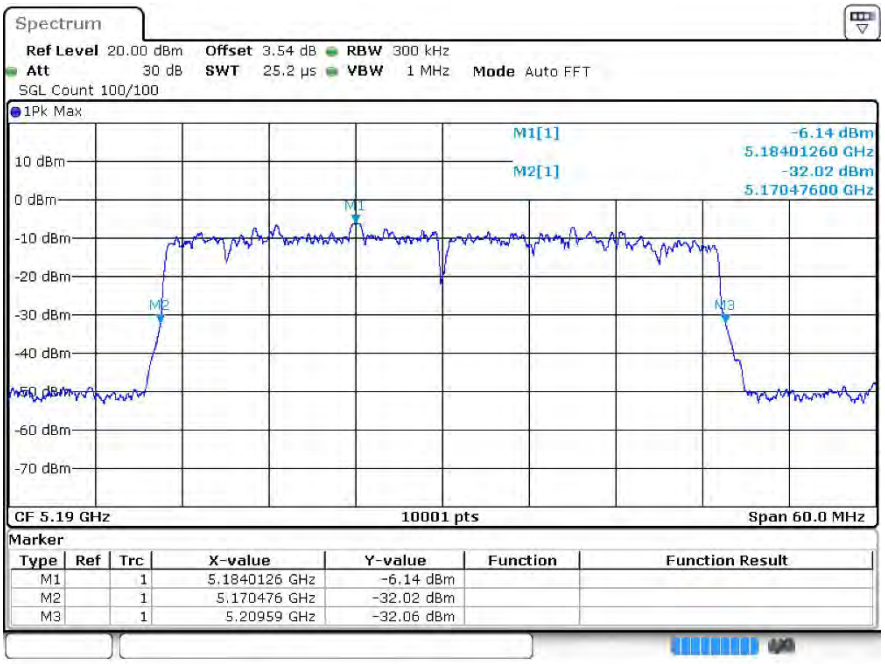
-26dB Bandwidth ax20 5200MHz Ant2



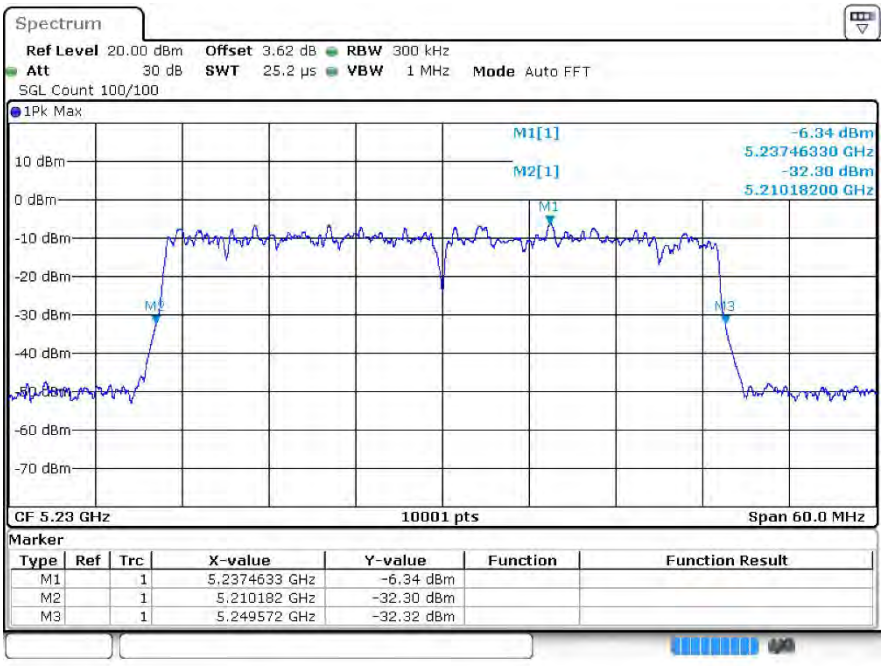
-26dB Bandwidth ax20 5240MHz Ant2



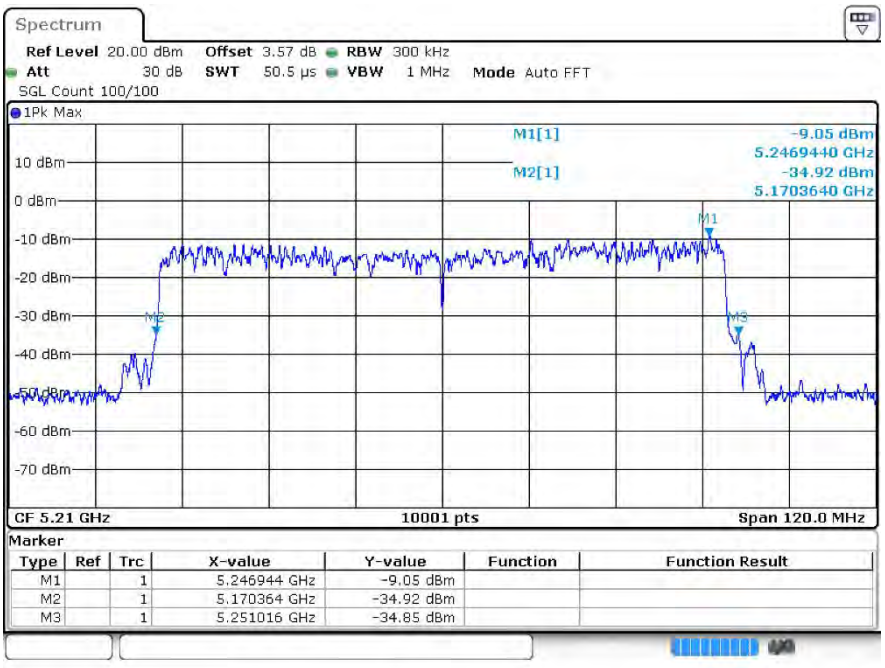
-26dB Bandwidthax40 5190MHz Ant2



-26dB Bandwidthax40 5230MHz Ant2



-26dB Bandwidthax80 5210MHz Ant2



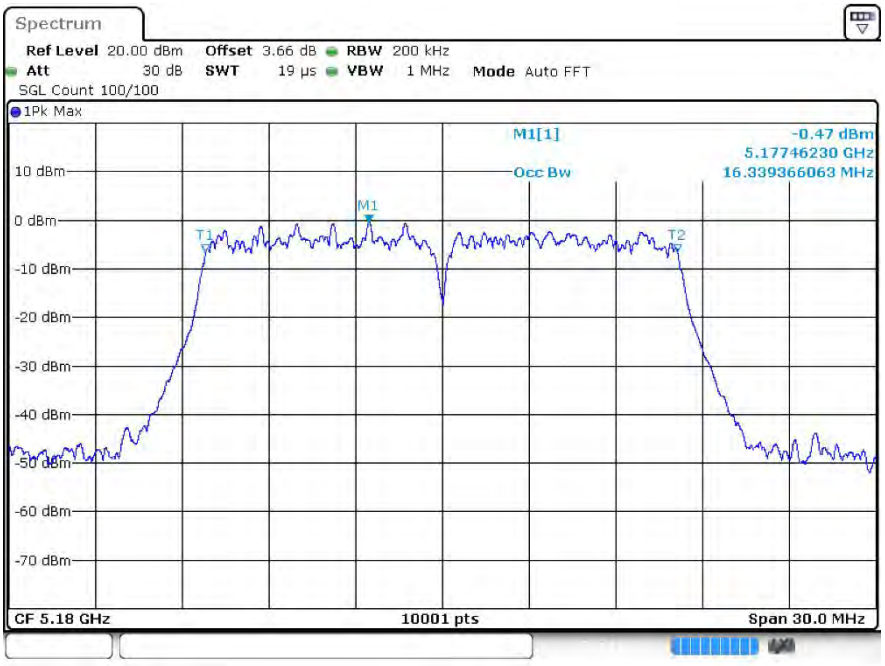
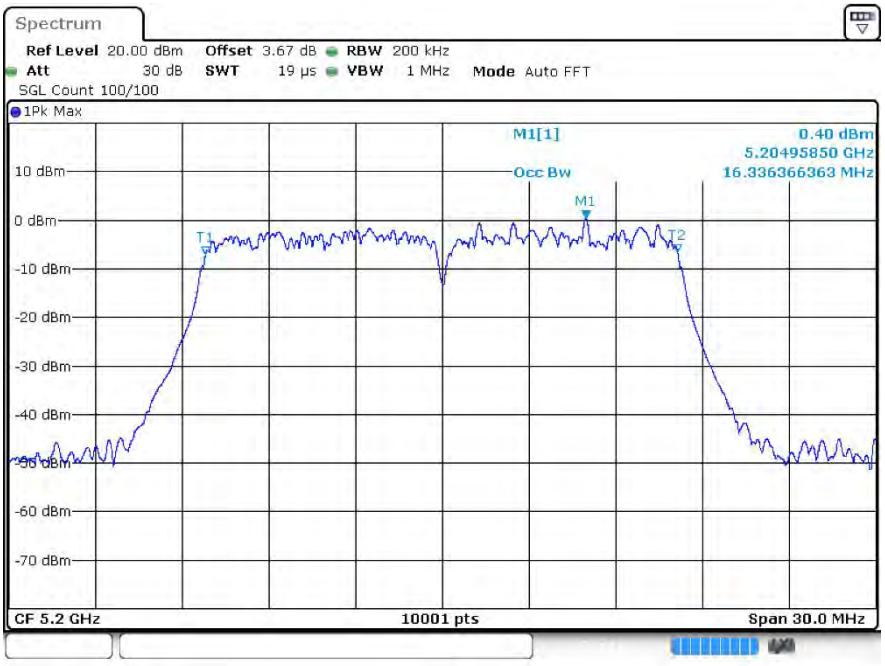
4 Occupied Channel Bandwidth

4.1 Test Result

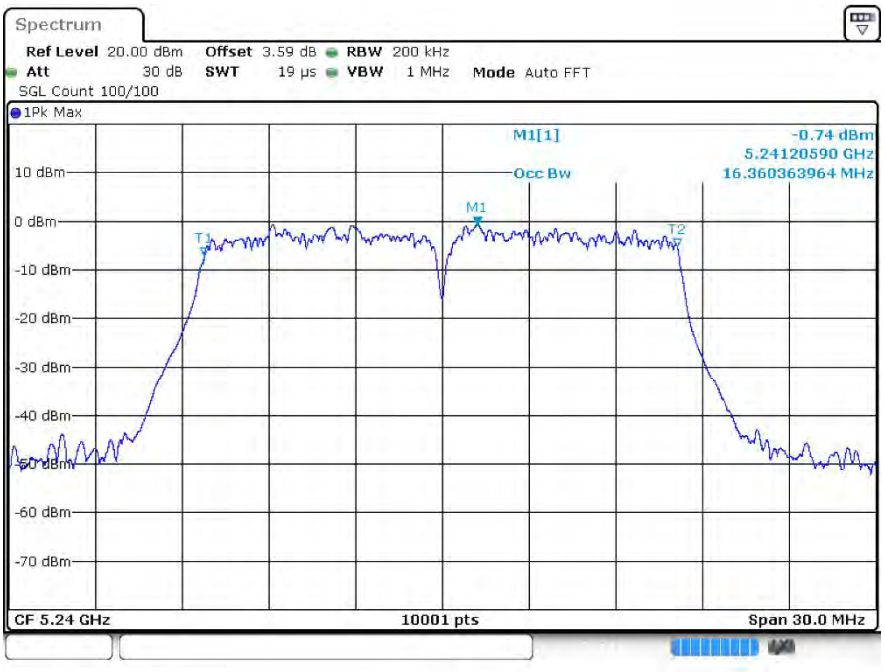
Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
a	5180	Ant1	16.339
a	5200	Ant1	16.336
a	5240	Ant1	16.36
n20	5180	Ant1	17.554
n20	5200	Ant1	17.542
n20	5240	Ant1	17.5
n40	5190	Ant1	36.068
n40	5230	Ant1	36.008
ac20	5180	Ant1	17.554
ac20	5200	Ant1	17.497
ac20	5240	Ant1	17.536
ac40	5190	Ant1	35.948
ac40	5230	Ant1	36.092
ac80	5210	Ant1	76
ax20	5180	Ant1	18.886
ax20	5200	Ant1	18.793
ax20	5240	Ant1	18.88
ax40	5190	Ant1	37.658
ax40	5230	Ant1	37.772
ax80	5210	Ant1	77.44
a	5180	Ant2	16.342
a	5200	Ant2	16.333
a	5240	Ant2	16.42
n20	5180	Ant2	17.521
n20	5200	Ant2	17.533
n20	5240	Ant2	17.527
n40	5190	Ant2	36.188
n40	5230	Ant2	36.044
ac20	5180	Ant2	17.548
ac20	5200	Ant2	17.491
ac20	5240	Ant2	17.563
ac40	5190	Ant2	36.146
ac40	5230	Ant2	36.098
ac80	5210	Ant2	76.384
ax20	5180	Ant2	18.844
ax20	5200	Ant2	18.904

ax20	5240	Ant2	18.943
ax40	5190	Ant2	37.76
ax40	5230	Ant2	37.598
ax80	5210	Ant2	77.308

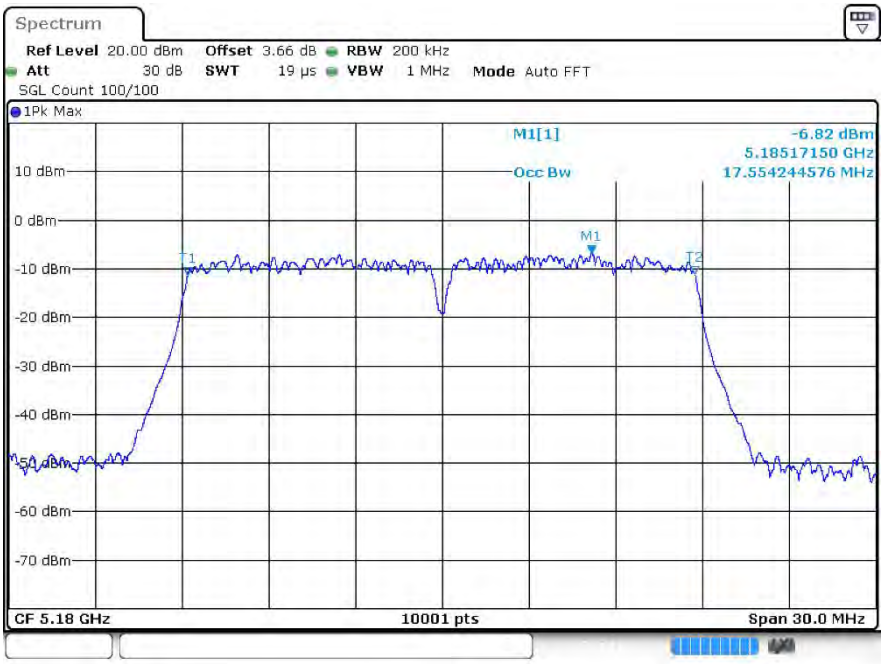
4.2 Test Graphs

Test Graphs
OBWa 5180MHz Ant1

OBWa 5200MHz Ant1


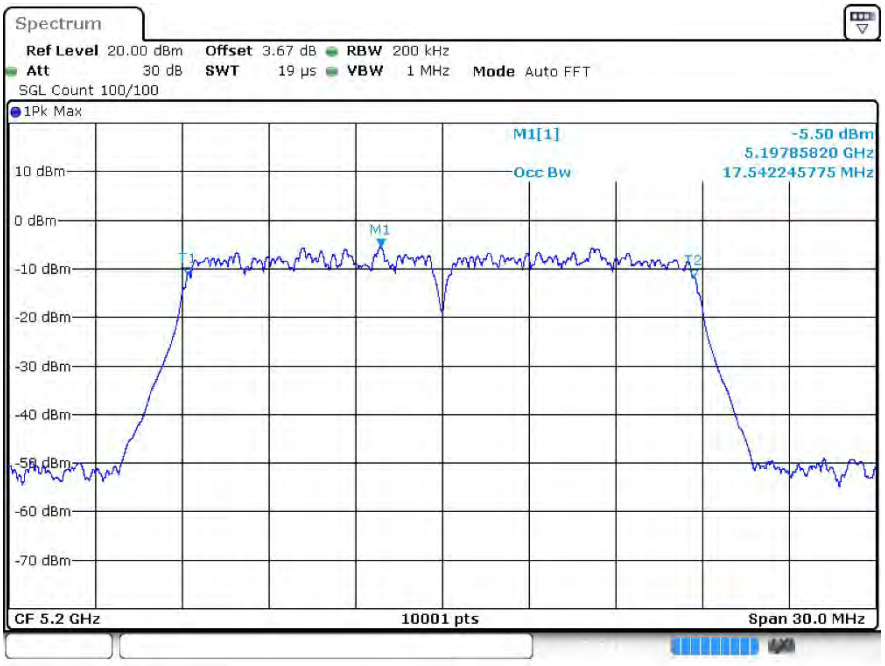
OBWa 5240MHz Ant1



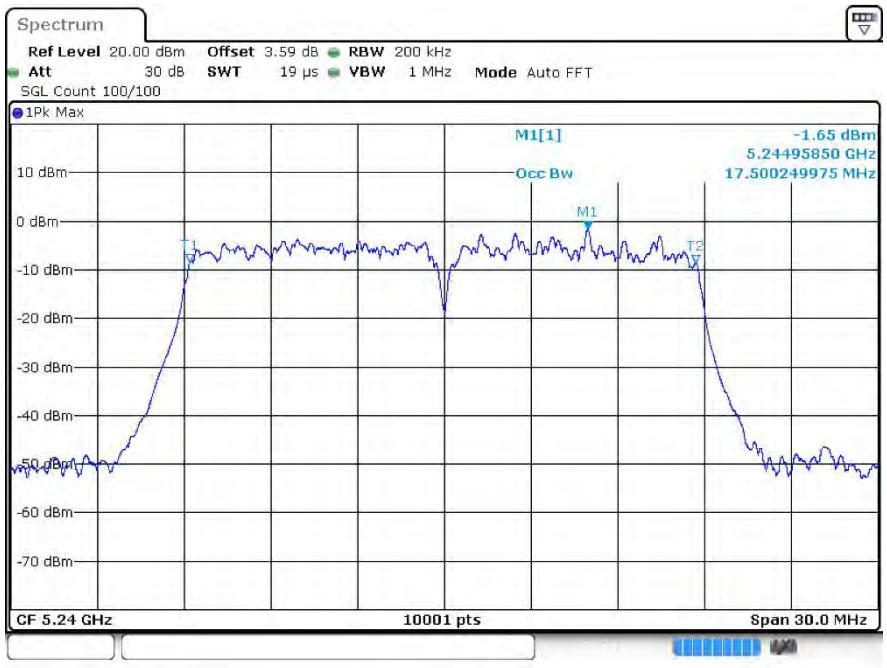
OBW n20 5180MHz Ant1



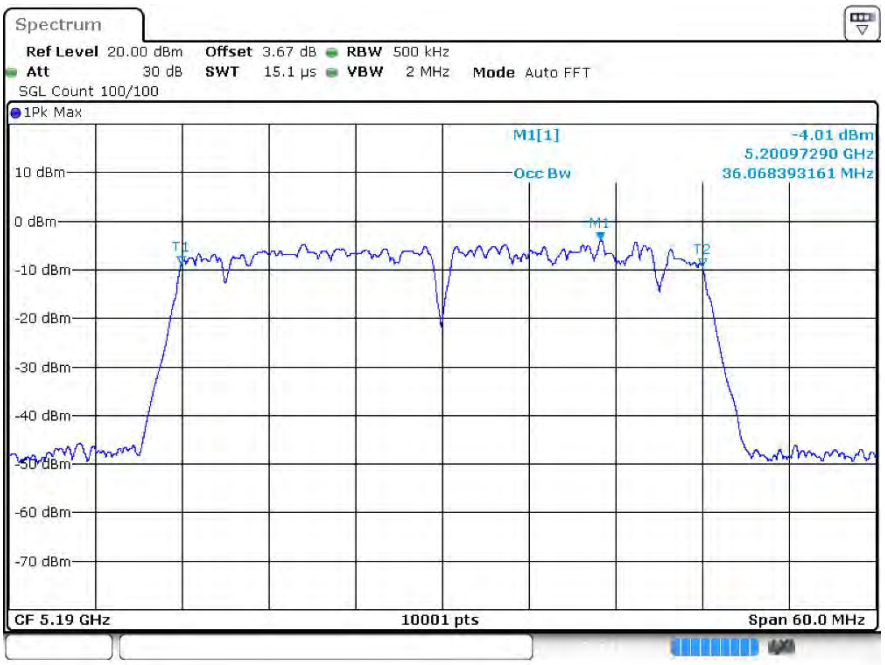
OBW n20 5200MHz Ant1



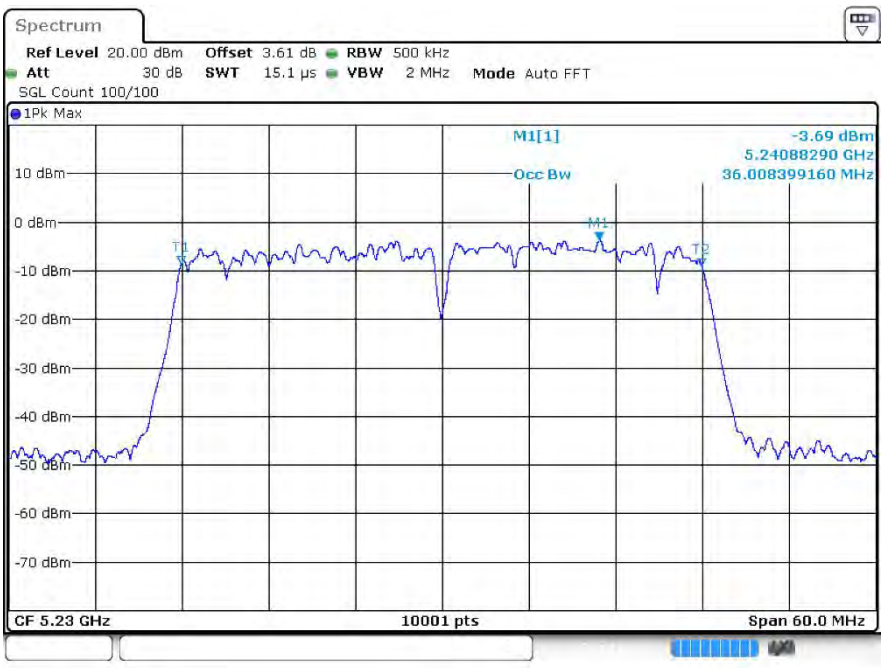
OBW n20 5240MHz Ant1



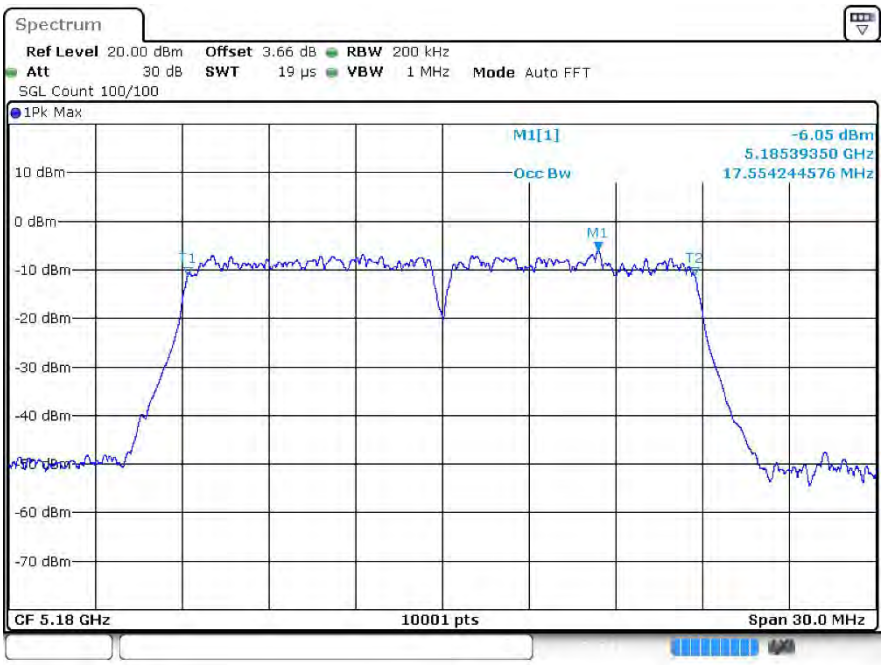
OBWn40 5190MHz Ant1



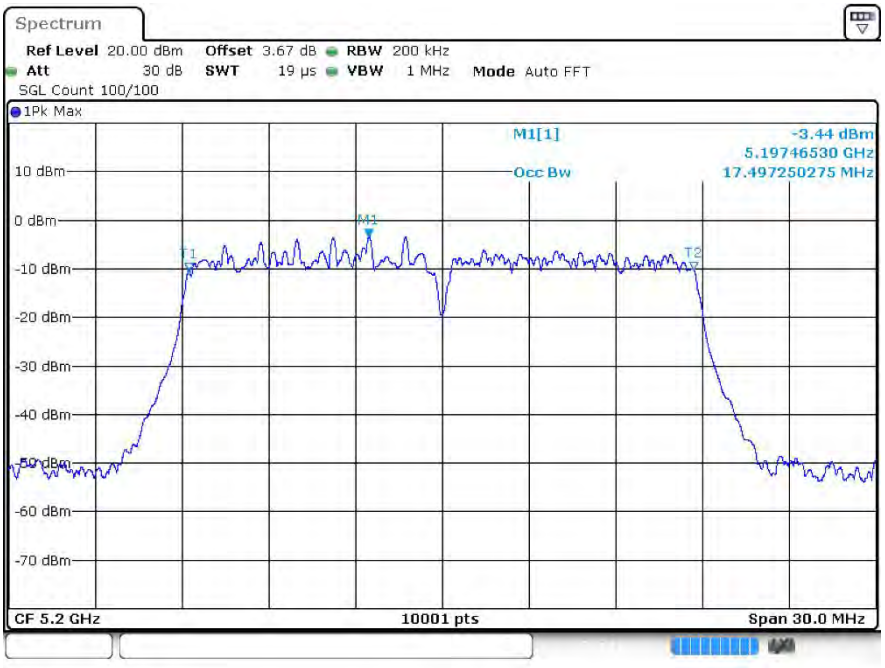
OBWn40 5230MHz Ant1



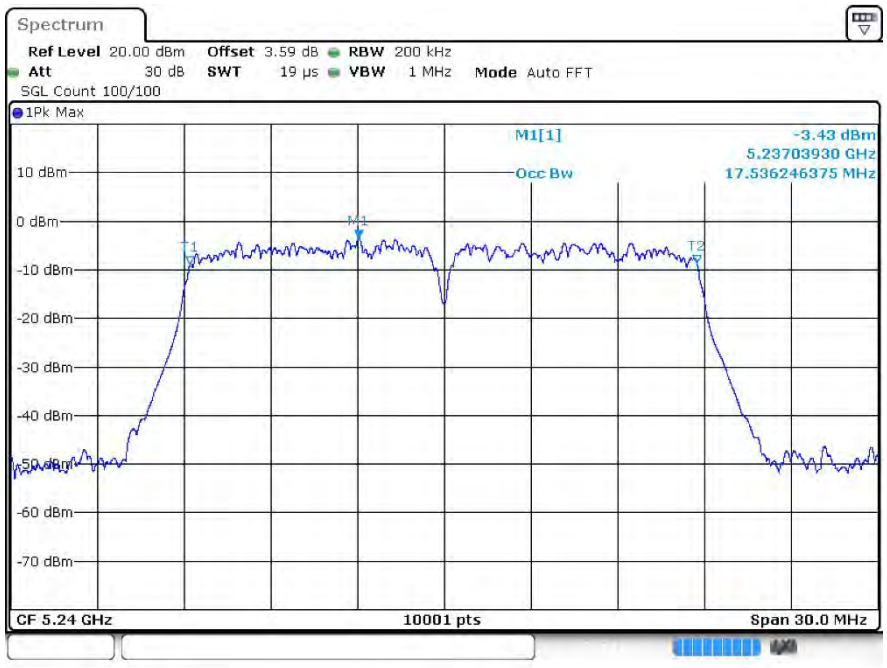
OBW ac20 5180MHz Ant1



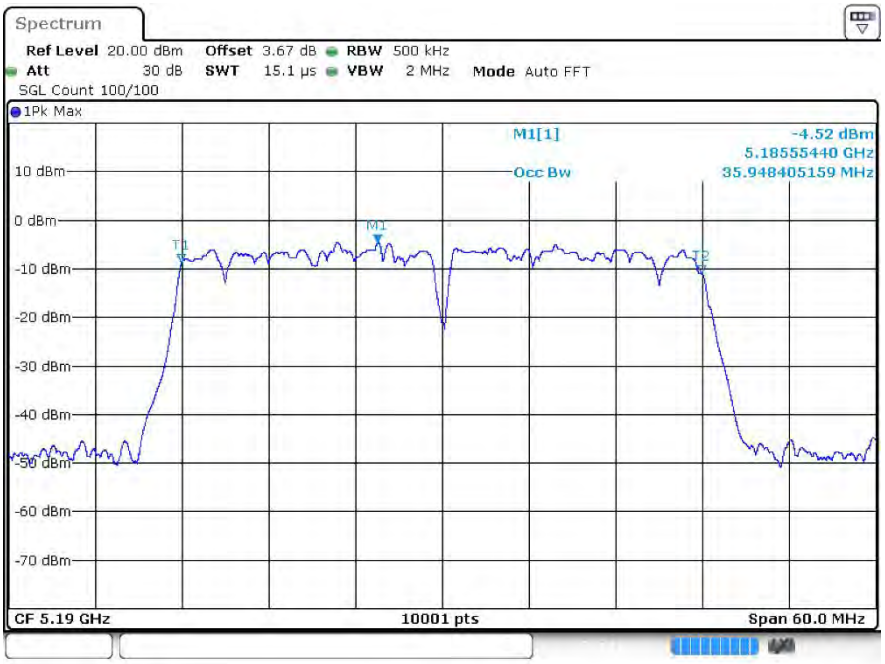
OBW ac20 5200MHz Ant1



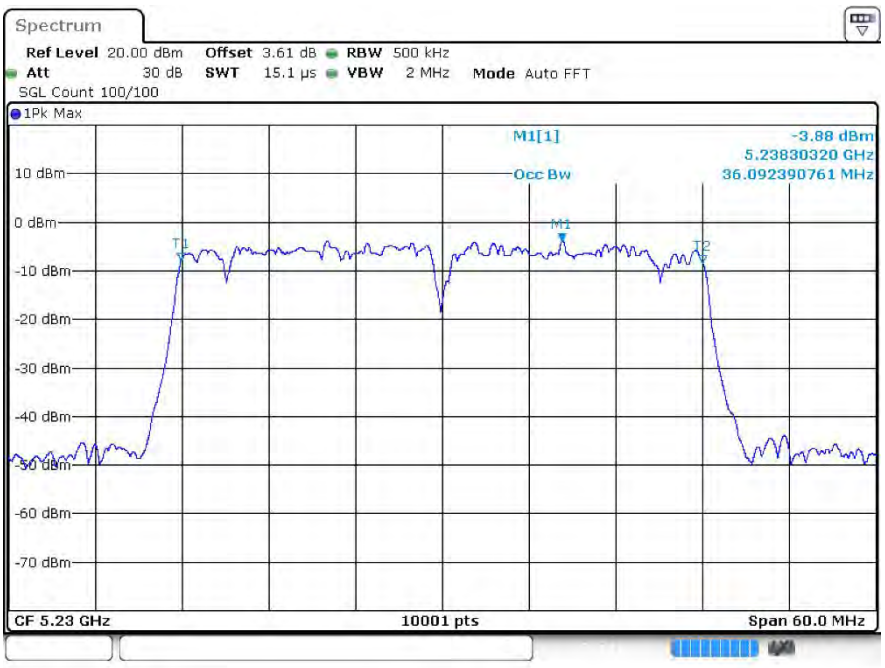
OBW ac20 5240MHz Ant1



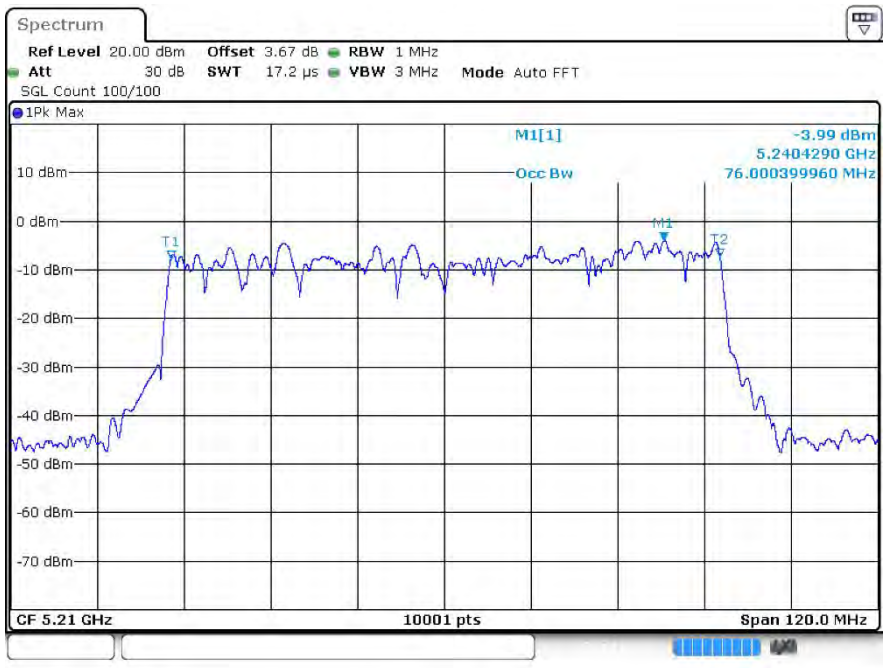
OBWac40 5190MHz Ant1



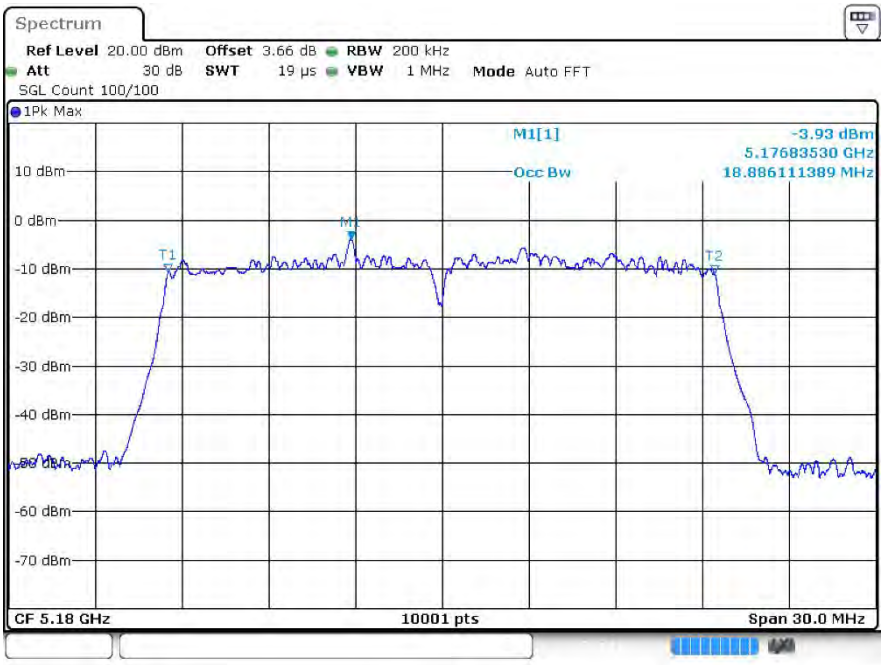
OBWac40 5230MHz Ant1



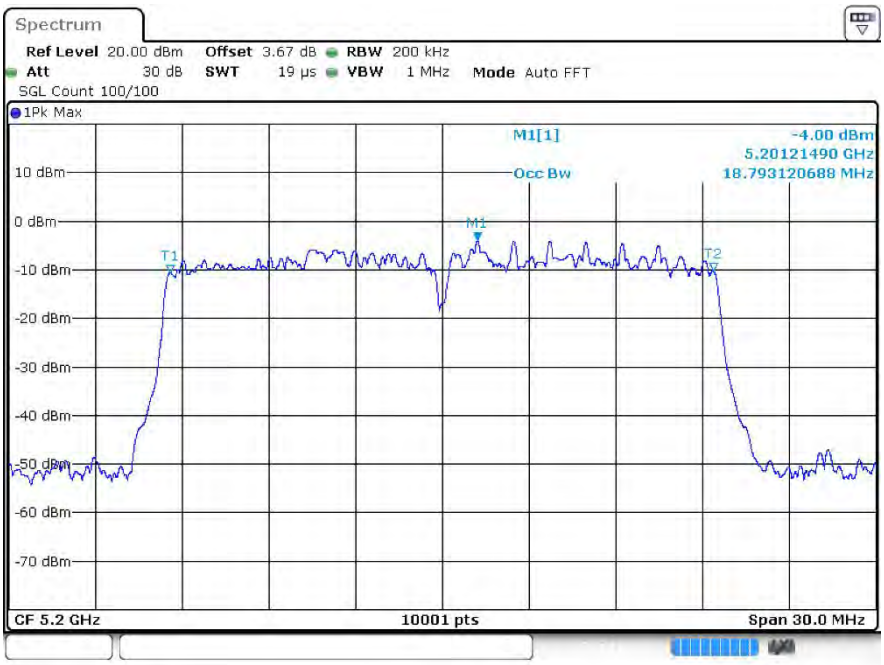
OBWac80 5210MHz Ant1



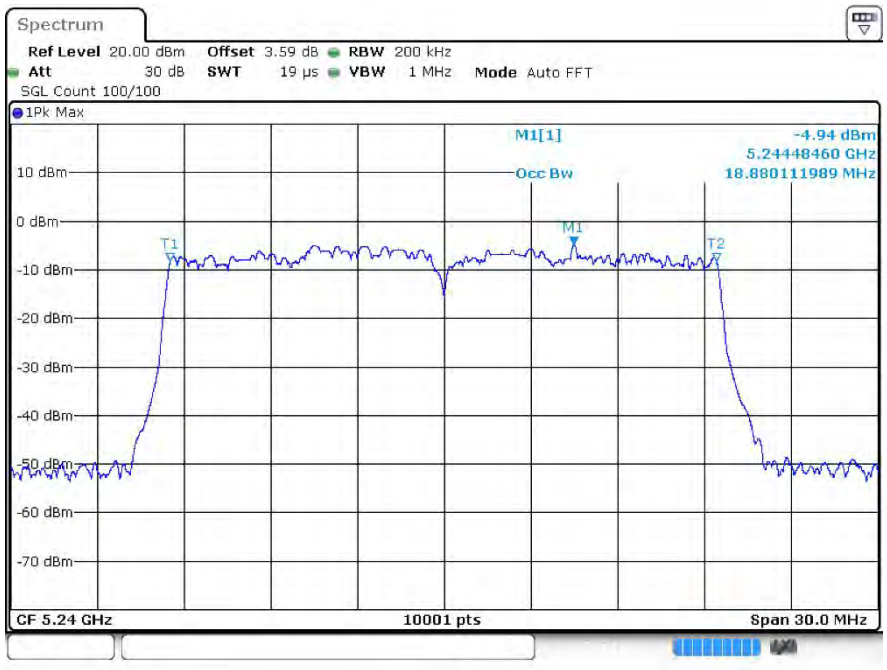
OBW ax20 5180MHz Ant1



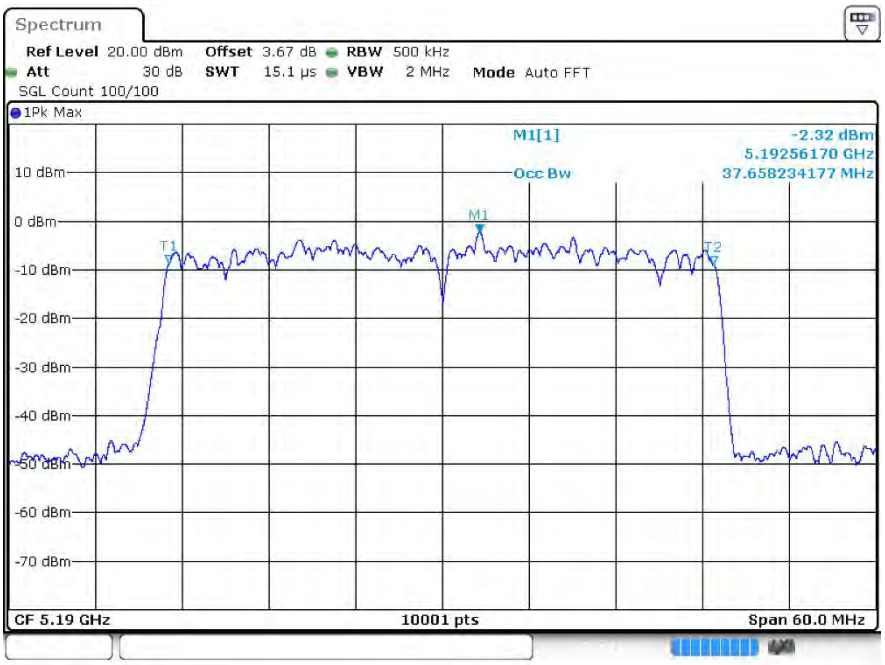
OBW ax20 5200MHz Ant1



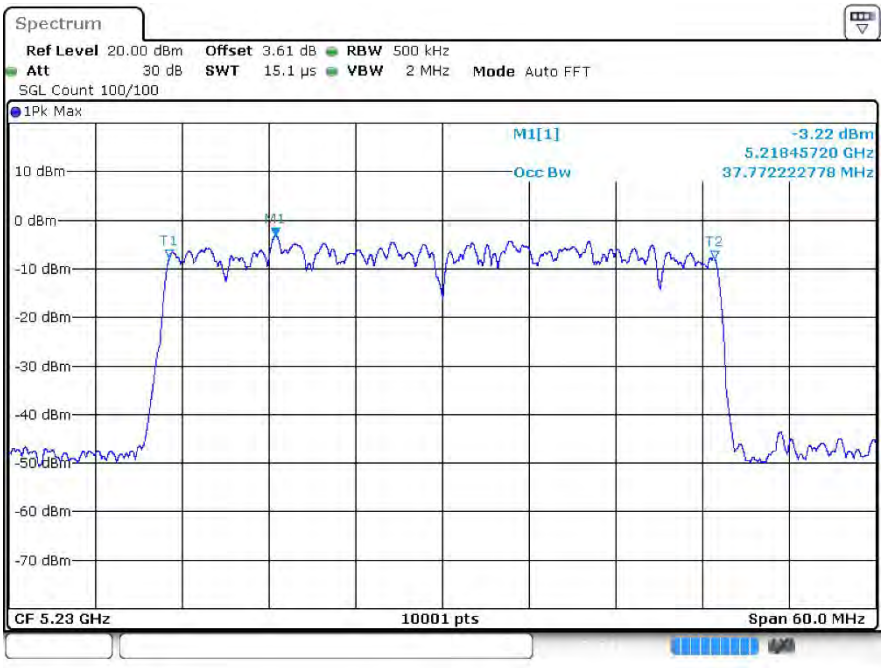
OBW ax20 5240MHz Ant1



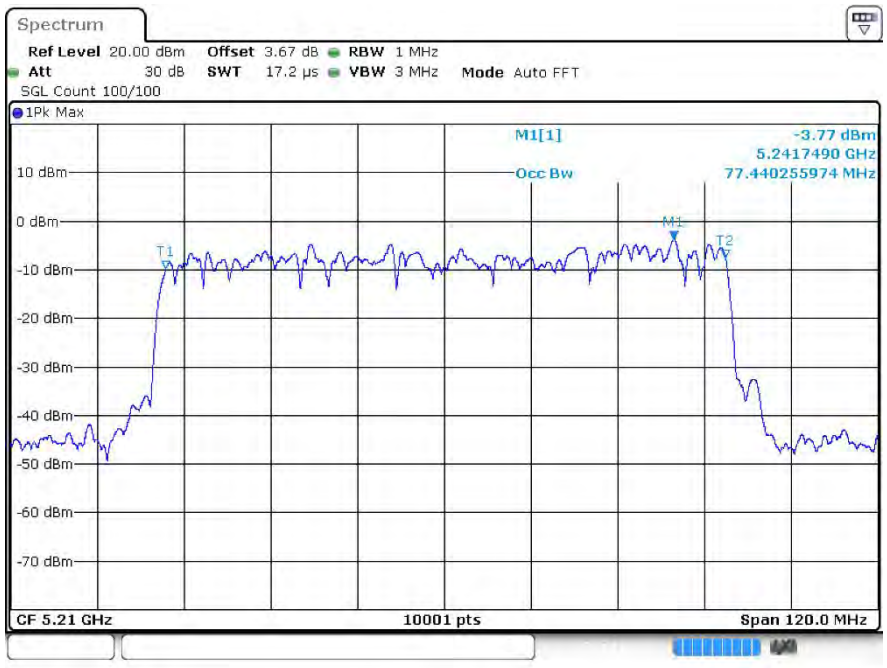
OBWax40 5190MHz Ant1



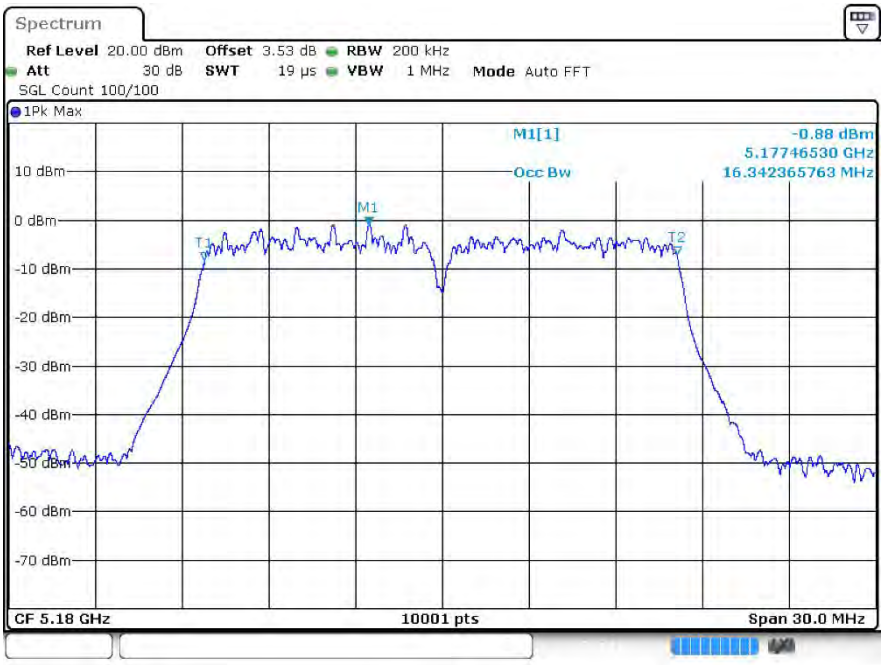
OBWax40 5230MHz Ant1



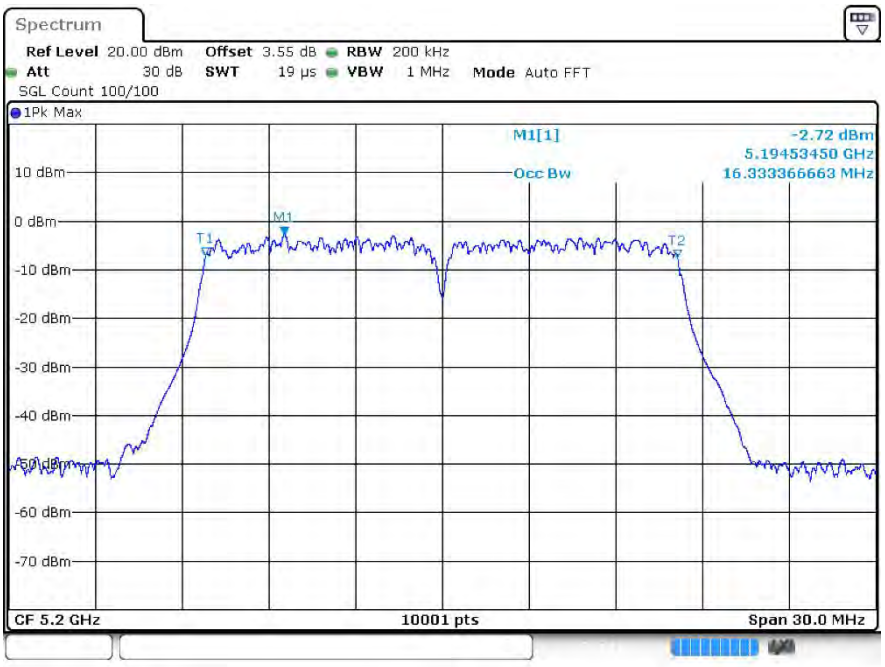
OBWax80 5210MHz Ant1



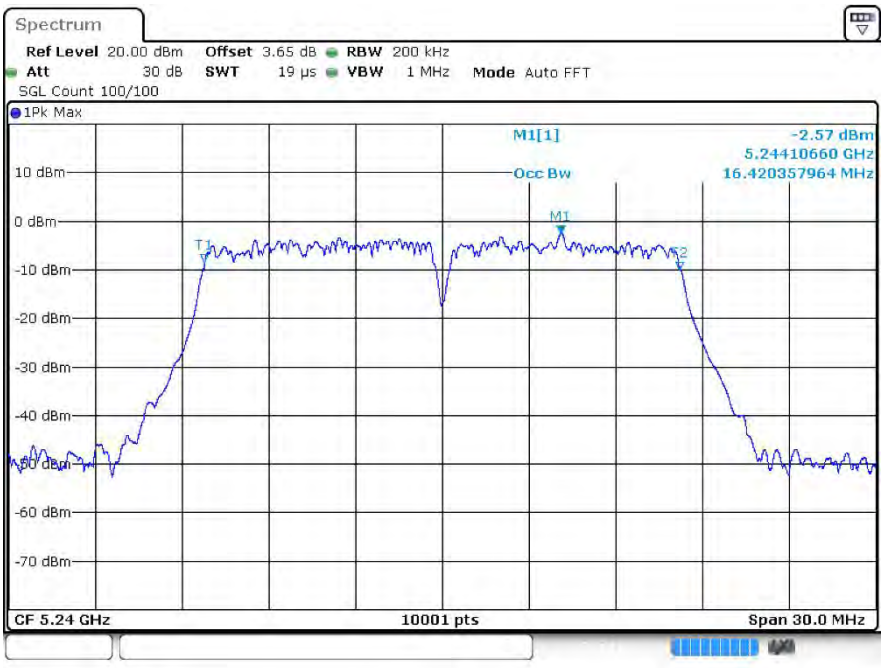
OBWa 5180MHz Ant2



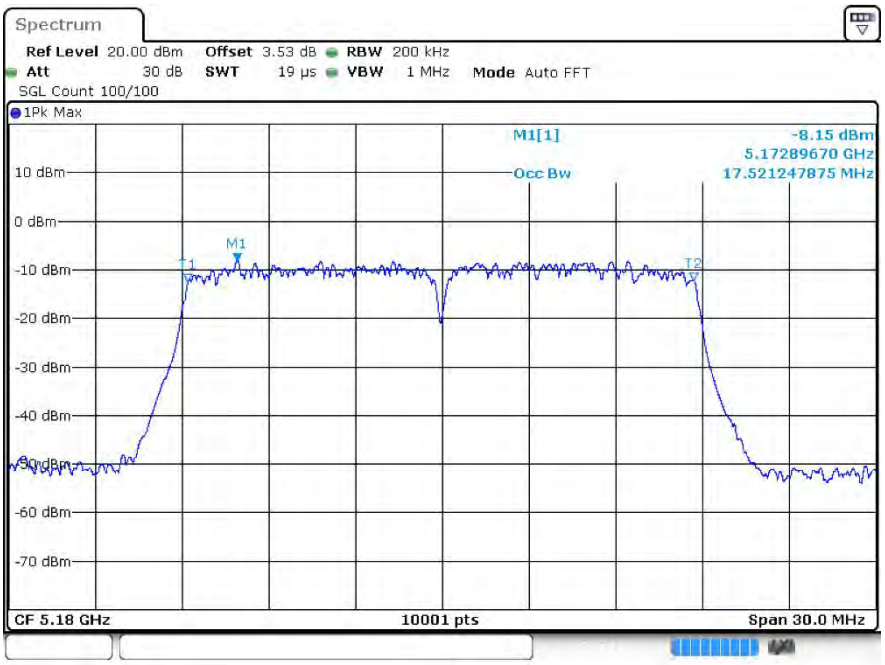
OBWa 5200MHz Ant2



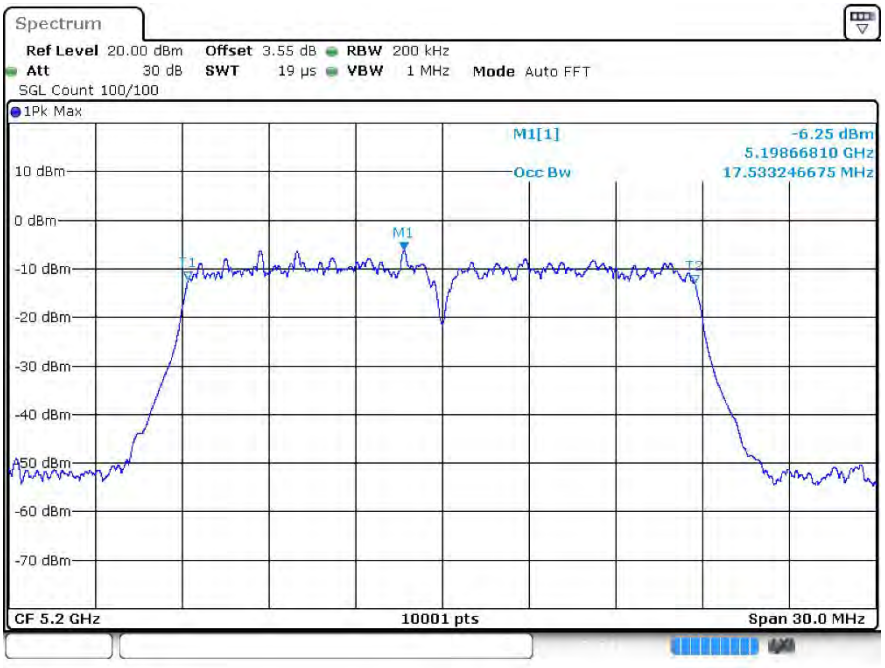
OBWa 5240MHz Ant2



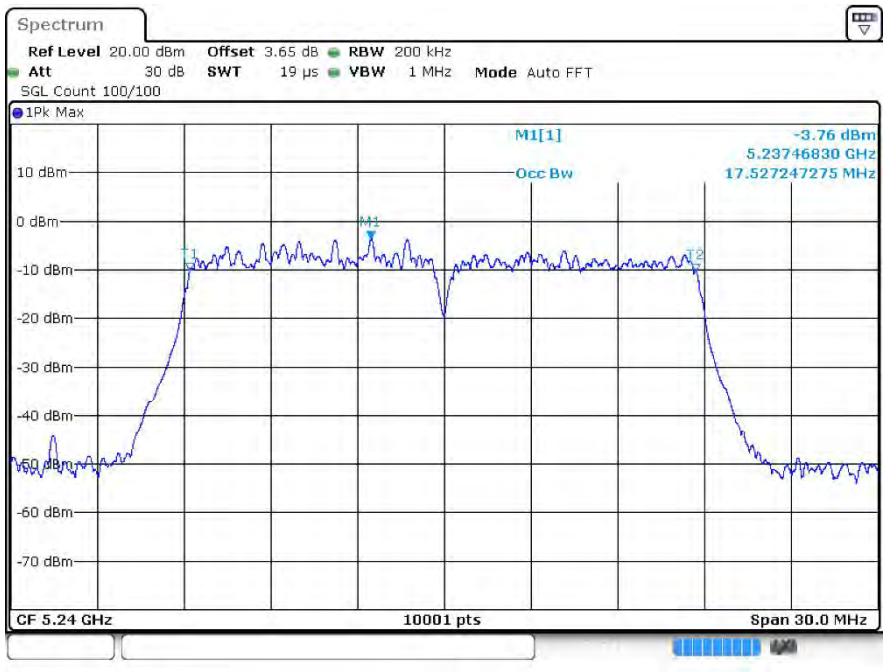
OBW n20 5180MHz Ant2



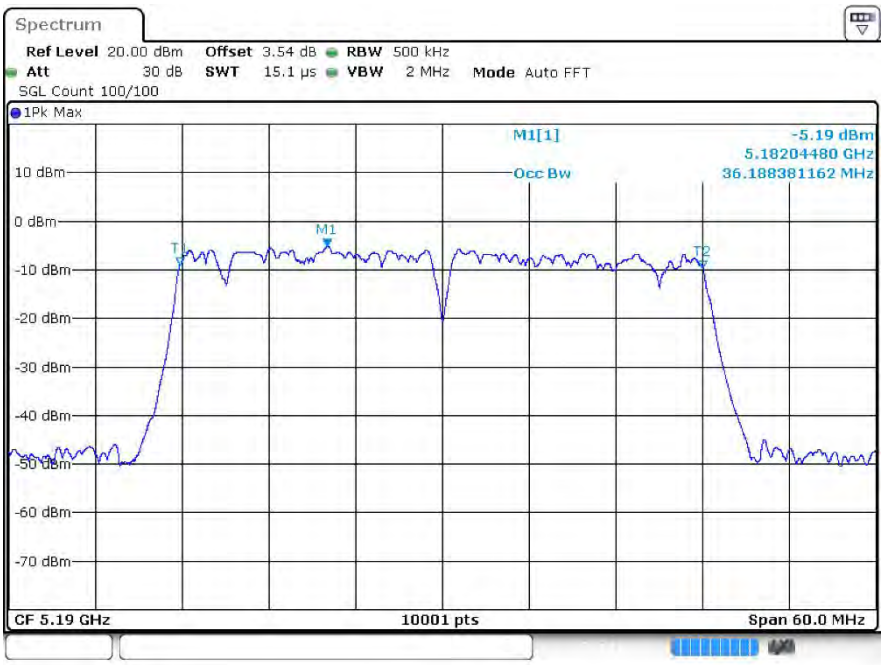
OBW n20 5200MHz Ant2



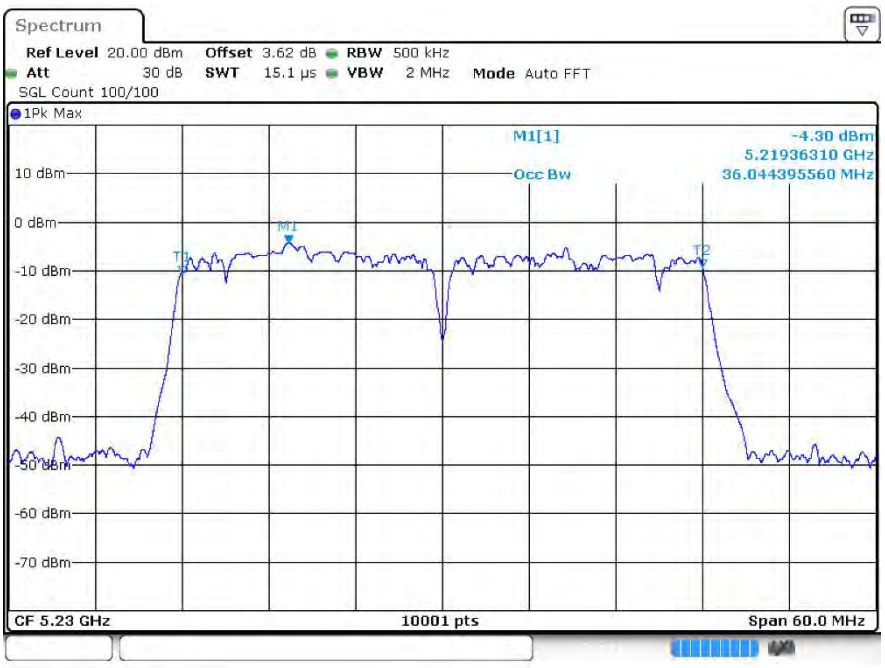
OBW n20 5240MHz Ant2



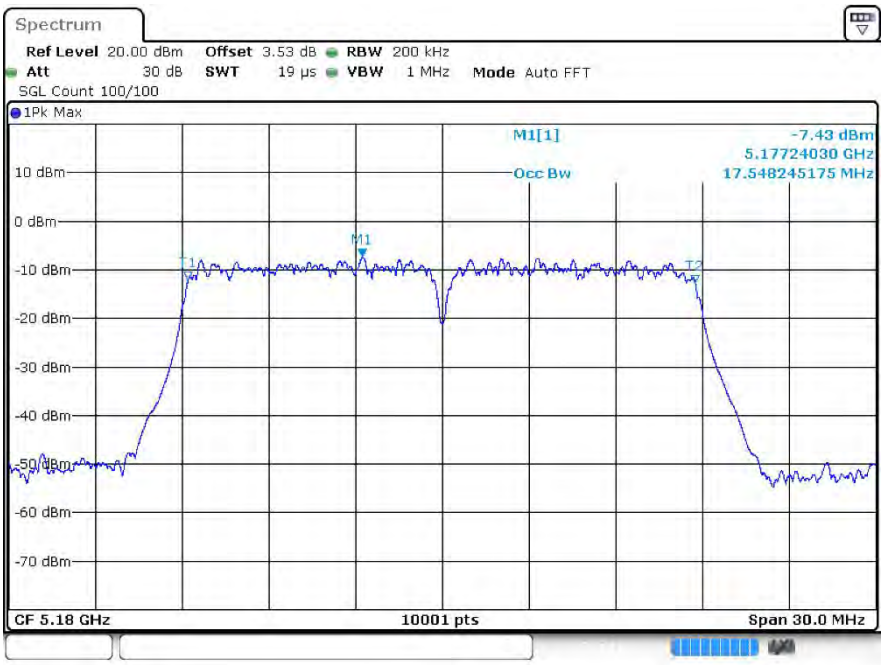
OBWn40 5190MHz Ant2



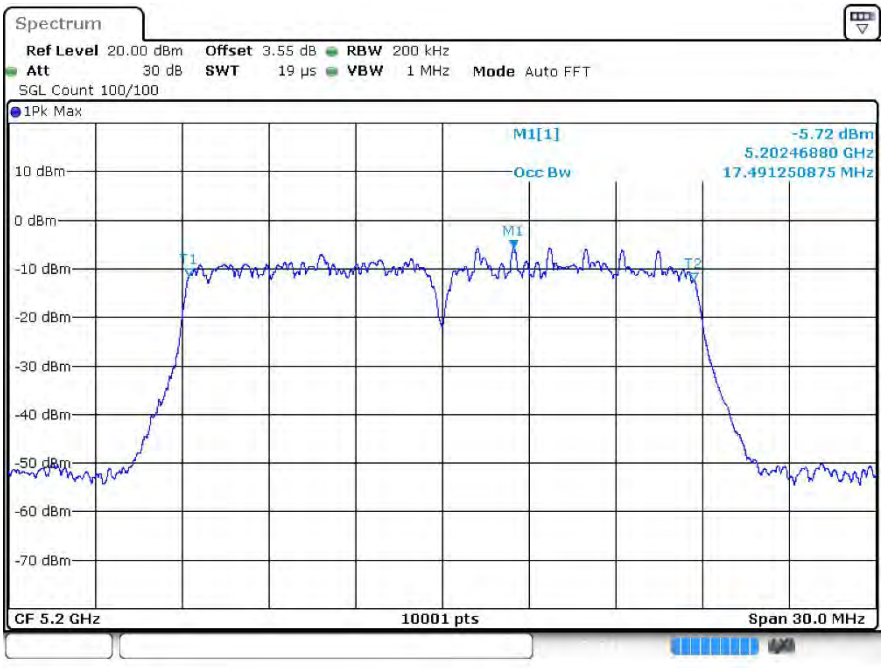
OBWn40 5230MHz Ant2



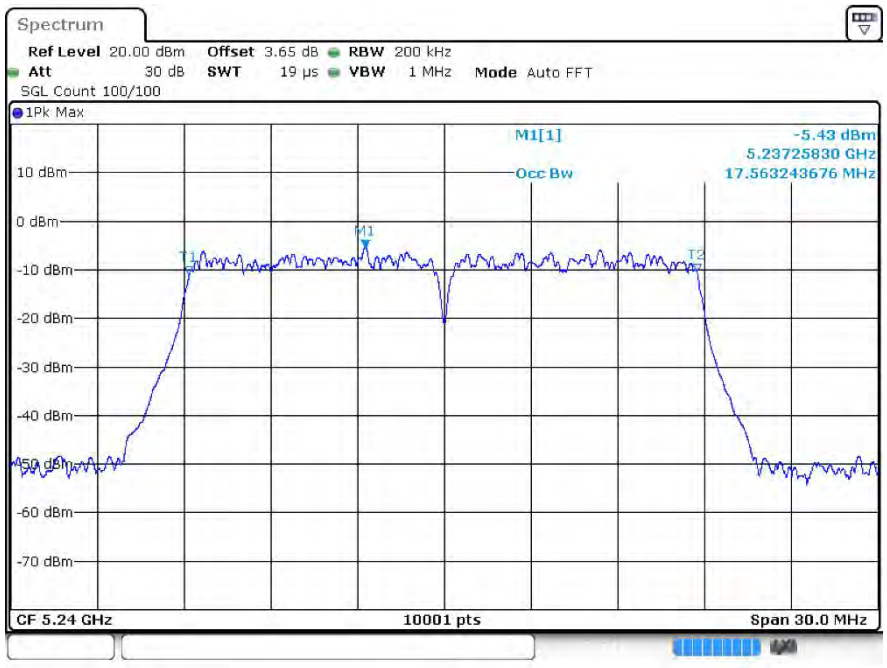
OBW ac20 5180MHz Ant2



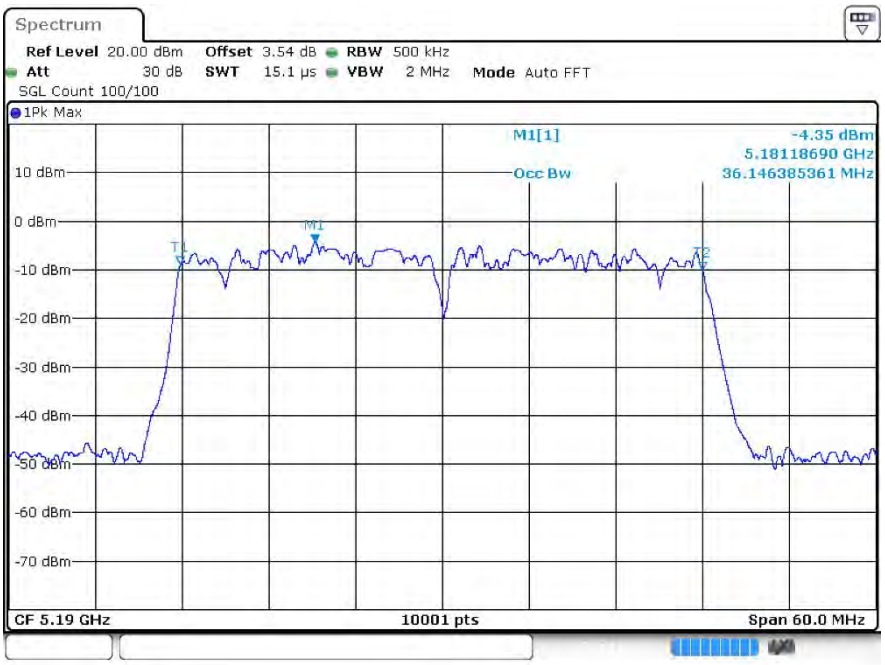
OBW ac20 5200MHz Ant2



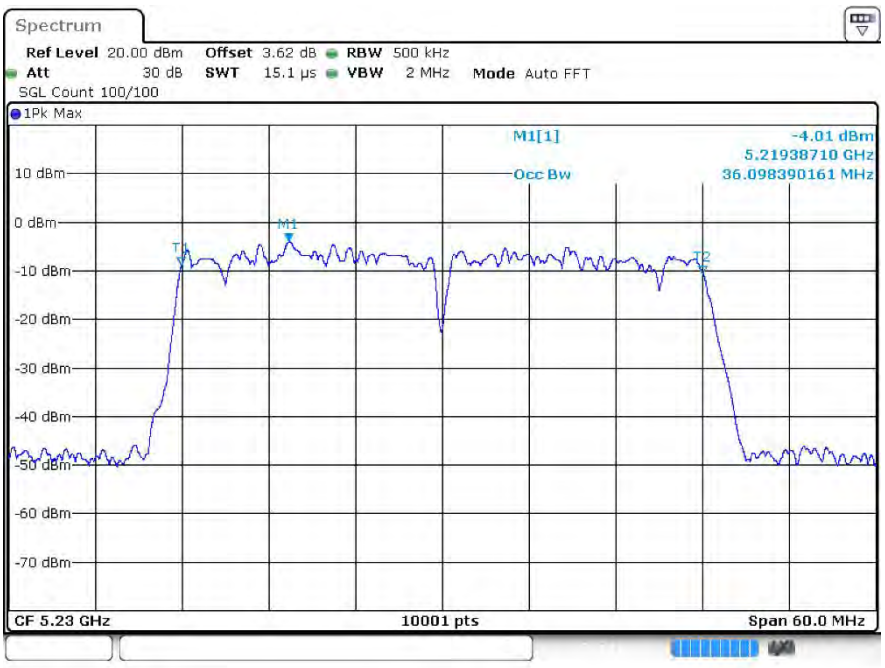
OBW ac20 5240MHz Ant2



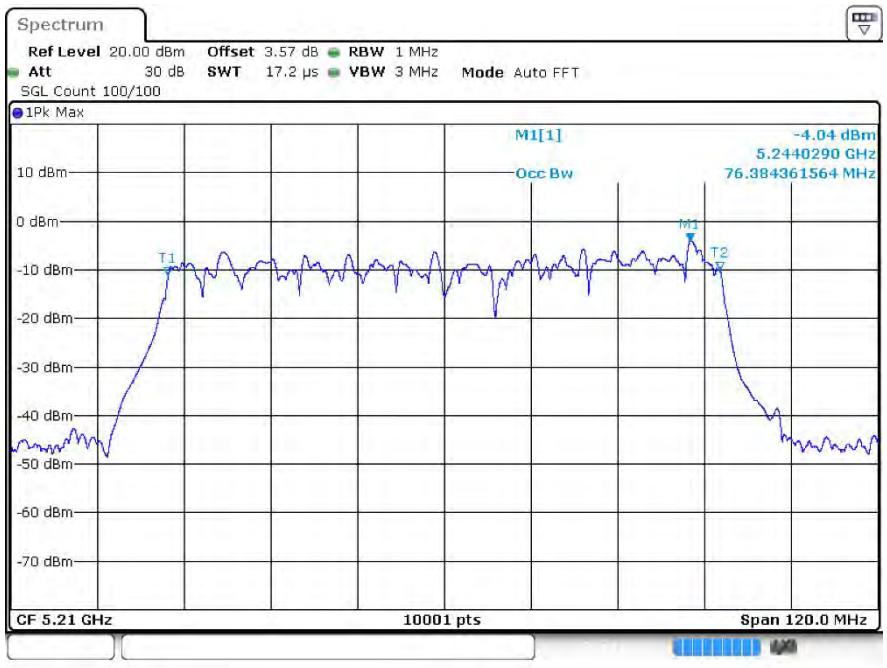
OBWac40 5190MHz Ant2



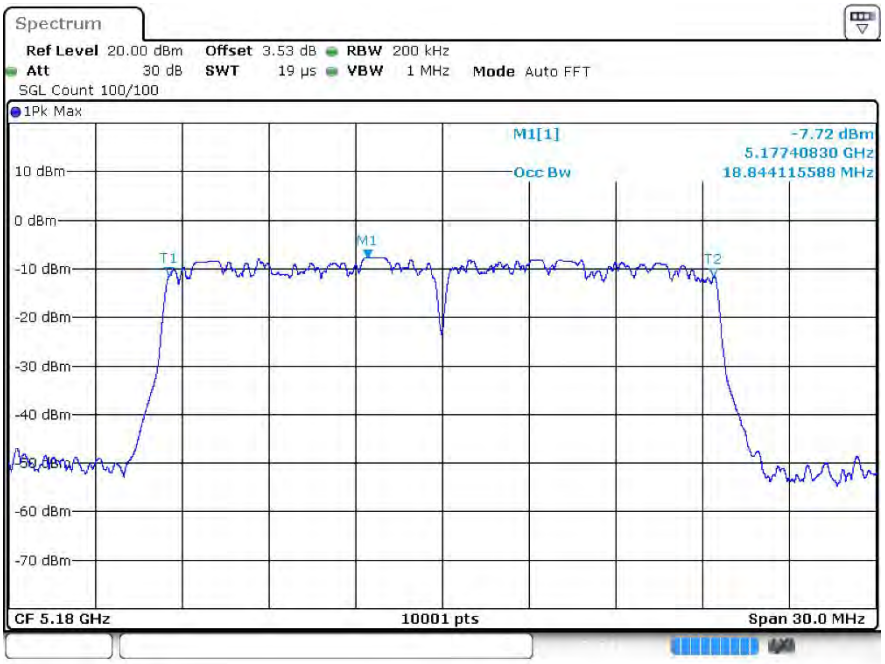
OBWac40 5230MHz Ant2



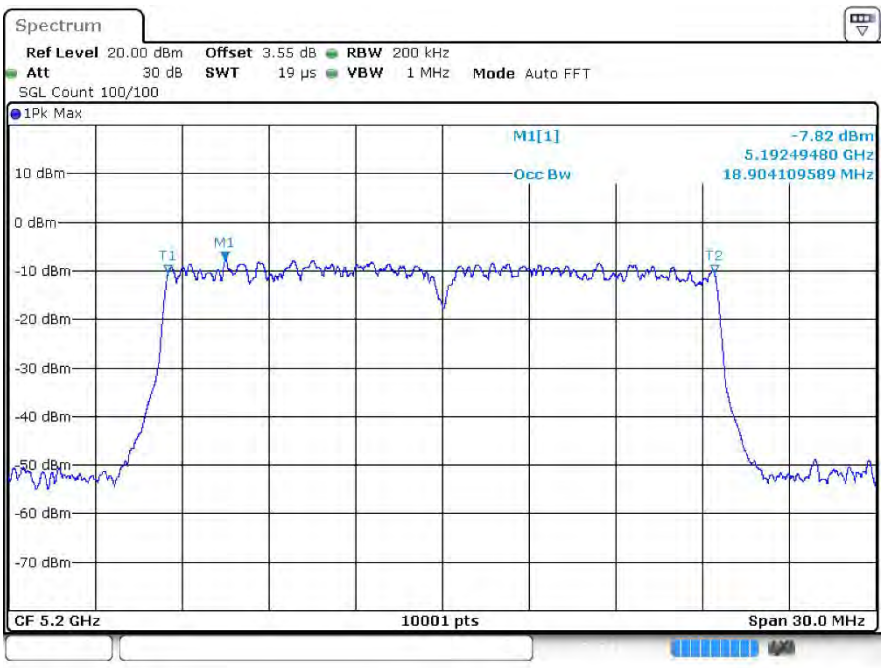
OBWac80 5210MHz Ant2



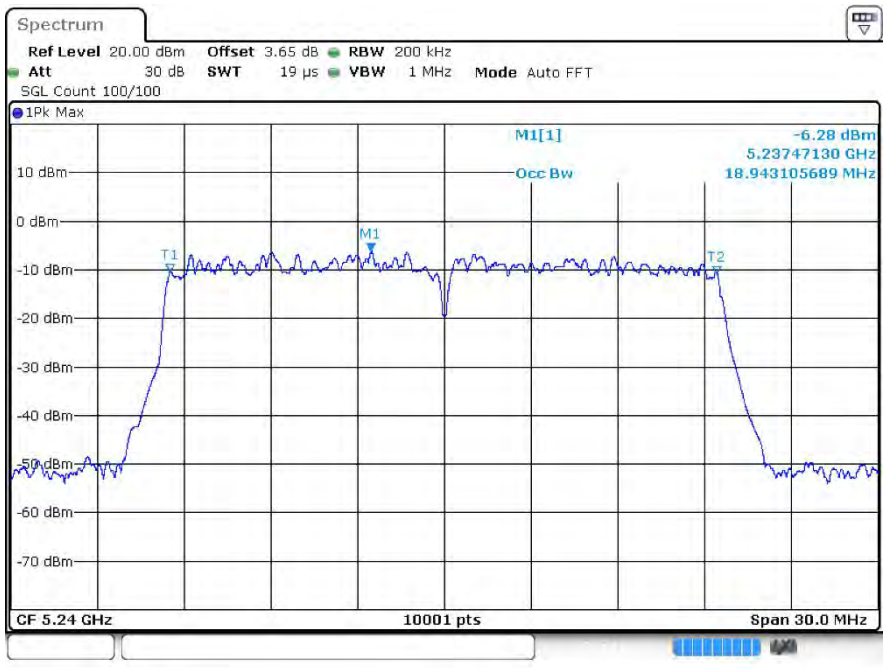
OBW ax20 5180MHz Ant2



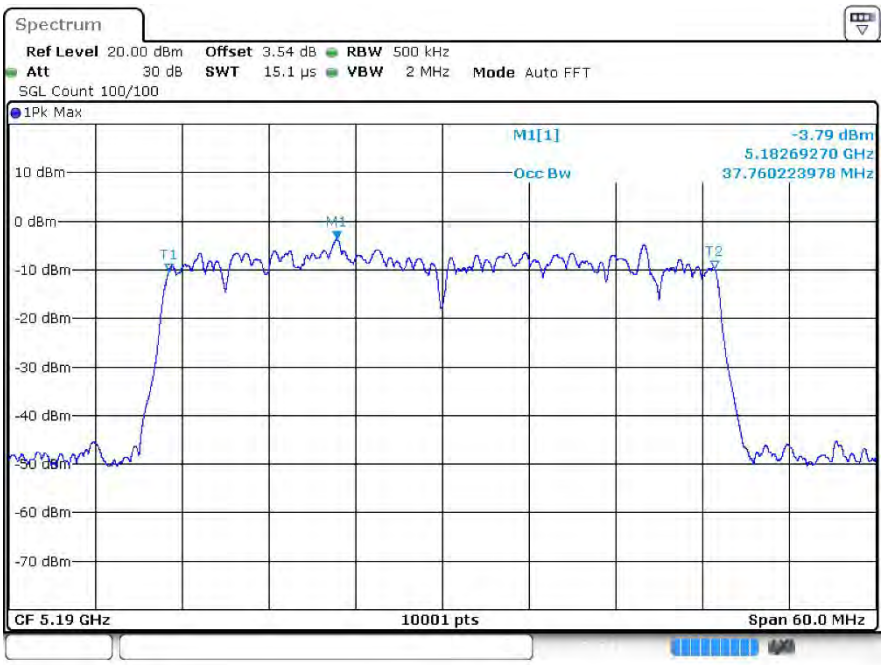
OBW ax20 5200MHz Ant2



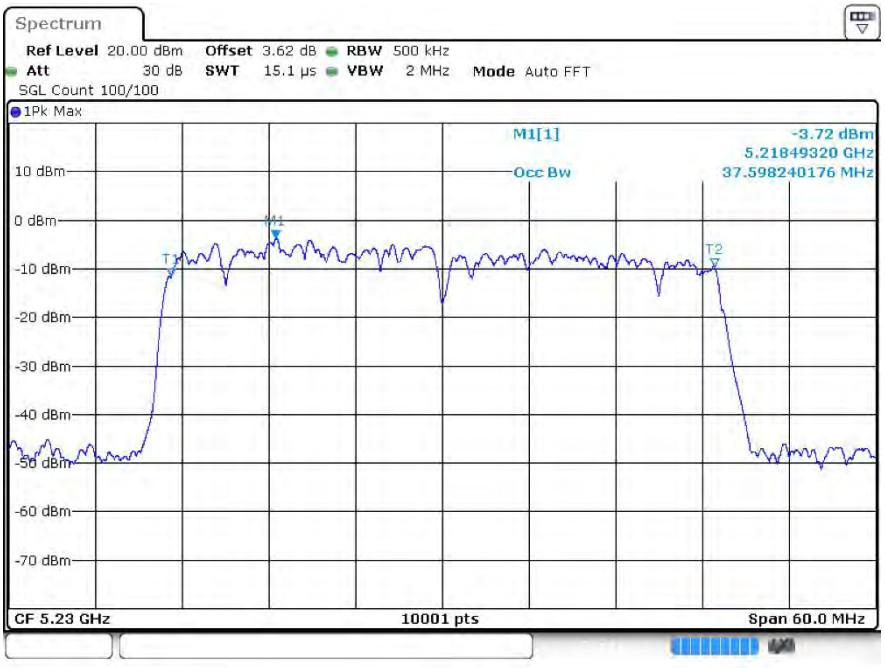
OBW ax20 5240MHz Ant2



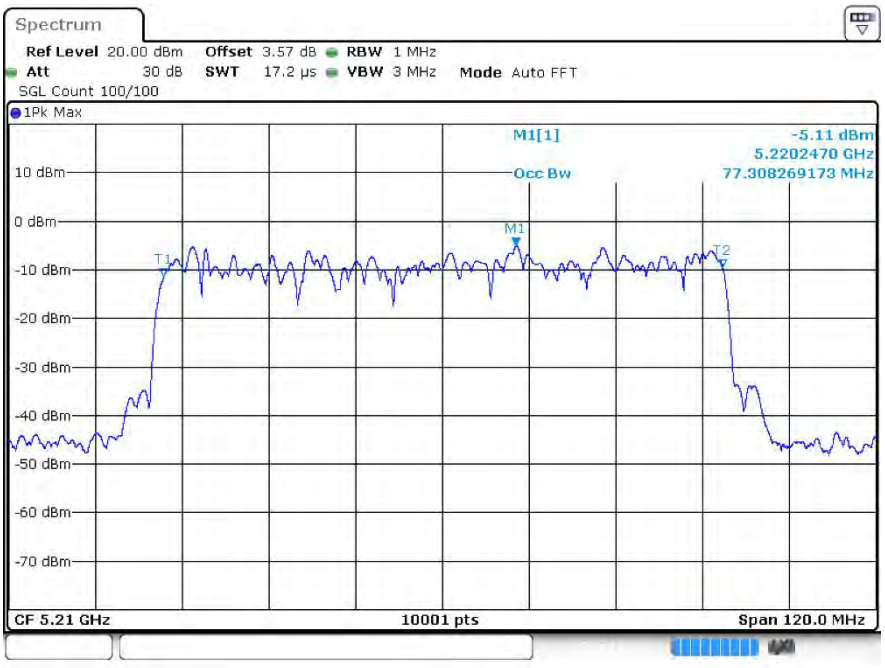
OBWax40 5190MHz Ant2



OBWax40 5230MHz Ant2



OBWax80 5210MHz Ant2



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	-4.89	4.51	-0.38	11	Pass
a	5200	Ant1	-4.4	4.53	0.13	11	Pass
a	5240	Ant1	-3.8	4.53	0.73	11	Pass
a	5180	Ant2	-5.32	4.53	-0.79	11	Pass
a	5200	Ant2	-6.42	4.48	-1.94	11	Pass
a	5240	Ant2	-6.23	4.53	-1.7	11	Pass
n20	5180	Ant1	-8.9	4.73	-4.17	11	Pass
n20	5180	Ant2	-10.53	4.65	-5.88	11	Pass
n20	5180	Sum	-	-	-1.93	9.63	Pass
n20	5200	Ant1	-8.94	4.71	-4.23	11	Pass
n20	5200	Ant2	-10.18	4.66	-5.52	11	Pass
n20	5200	Sum	-	-	-1.82	9.63	Pass
n20	5240	Ant1	-7.13	4.61	-2.52	11	Pass
n20	5240	Ant2	-9.38	4.76	-4.62	11	Pass
n20	5240	Sum	-	-	-0.43	9.63	Pass
n40	5190	Ant1	-13.16	6.92	-6.24	11	Pass
n40	5190	Ant2	-13.34	6.87	-6.47	11	Pass
n40	5190	Sum	-	-	-3.34	9.63	Pass
n40	5230	Ant1	-13.36	6.95	-6.41	11	Pass
n40	5230	Ant2	-14.02	6.87	-7.15	11	Pass
n40	5230	Sum	-	-	-3.75	9.63	Pass
ac20	5180	Ant1	-9.86	4.76	-5.1	11	Pass
ac20	5180	Ant2	-10.65	4.61	-6.04	11	Pass
ac20	5180	Sum	-	-	-2.53	9.63	Pass
ac20	5200	Ant1	-9.94	4.6	-5.34	11	Pass
ac20	5200	Ant2	-10.2	4.64	-5.56	11	Pass
ac20	5200	Sum	-	-	-2.44	9.63	Pass
ac20	5240	Ant1	-7.18	4.73	-2.45	11	Pass
ac20	5240	Ant2	-10.04	4.67	-5.37	11	Pass
ac20	5240	Sum	-	-	-0.66	9.63	Pass
ac40	5190	Ant1	-13.38	6.91	-6.47	11	Pass
ac40	5190	Ant2	-13.98	6.84	-7.14	11	Pass
ac40	5190	Sum	-	-	-3.78	9.63	Pass
ac40	5230	Ant1	-12.63	6.9	-5.73	11	Pass
ac40	5230	Ant2	-13.69	6.84	-6.85	11	Pass
ac40	5230	Sum	-	-	-3.24	9.63	Pass

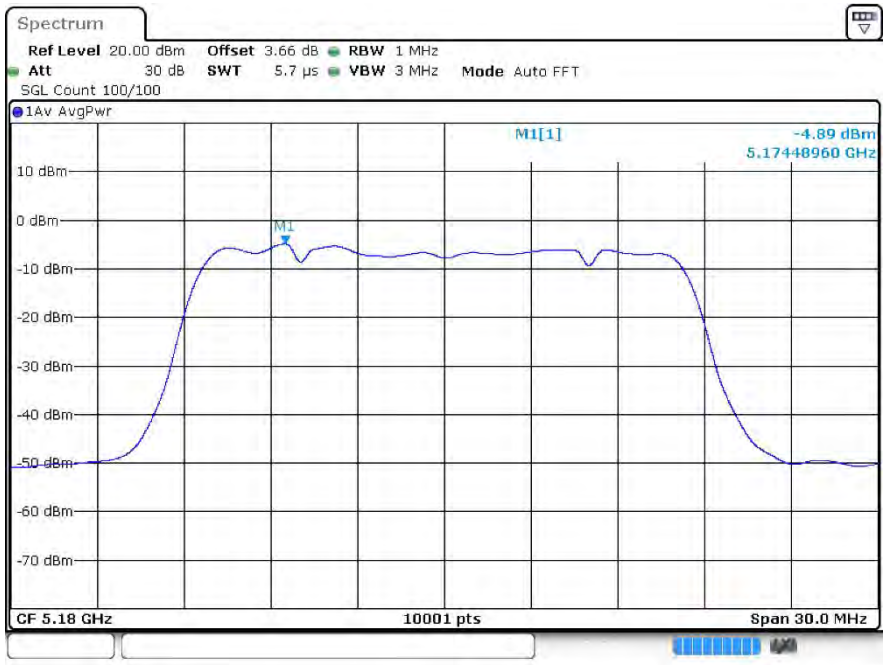
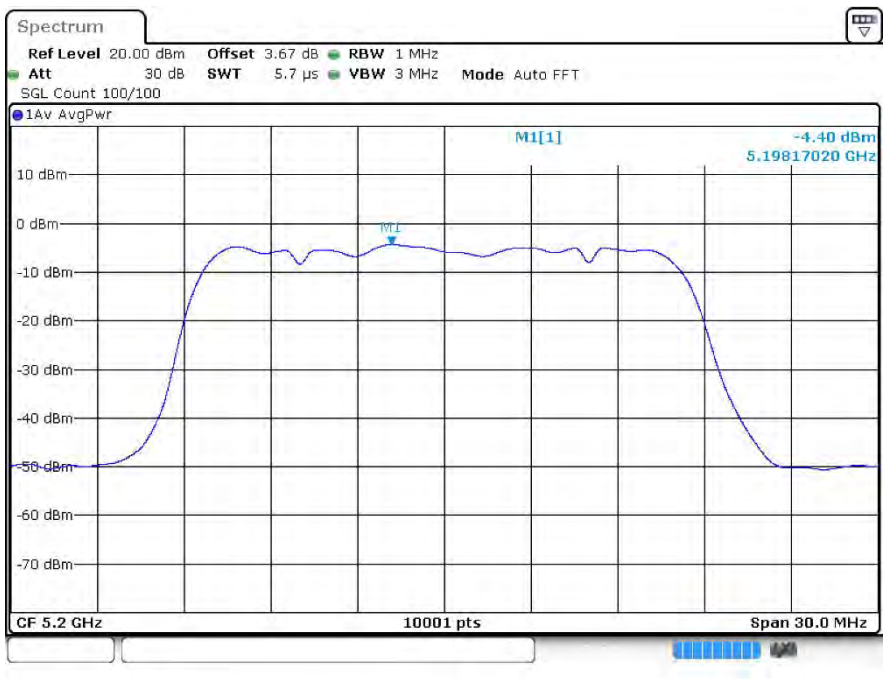
ac80	5210	Ant1	-17.45	9.61	-7.84	11	Pass
ac80	5210	Ant2	-18.48	9.6	-8.88	11	Pass
ac80	5210	Sum	-	-	-5.32	9.63	Pass
ax20	5180	Ant1	-9.58	4.85	-4.73	11	Pass
ax20	5180	Ant2	-11.61	4.87	-6.74	11	Pass
ax20	5180	Sum	-	-	-2.61	9.63	Pass
ax20	5200	Ant1	-8.9	4.96	-3.94	11	Pass
ax20	5200	Ant2	-11.49	4.97	-6.52	11	Pass
ax20	5200	Sum	-	-	-2.03	9.63	Pass
ax20	5240	Ant1	-8.5	4.86	-3.64	11	Pass
ax20	5240	Ant2	-10.44	4.85	-5.59	11	Pass
ax20	5240	Sum	-	-	-1.50	9.63	Pass
ax40	5190	Ant1	-13.4	7.04	-6.36	11	Pass
ax40	5190	Ant2	-15.73	6.98	-8.75	11	Pass
ax40	5190	Sum	-	-	-4.38	9.63	Pass
ax40	5230	Ant1	-13.52	7.04	-6.48	11	Pass
ax40	5230	Ant2	-14.44	6.98	-7.46	11	Pass
ax40	5230	Sum	-	-	-3.93	9.63	Pass
ax80	5210	Ant1	-17.83	9.32	-8.51	11	Pass
ax80	5210	Ant2	-20.16	9.42	-10.74	11	Pass
ax80	5210	Sum	-	-	-6.47	9.63	Pass

For MIMO mode:

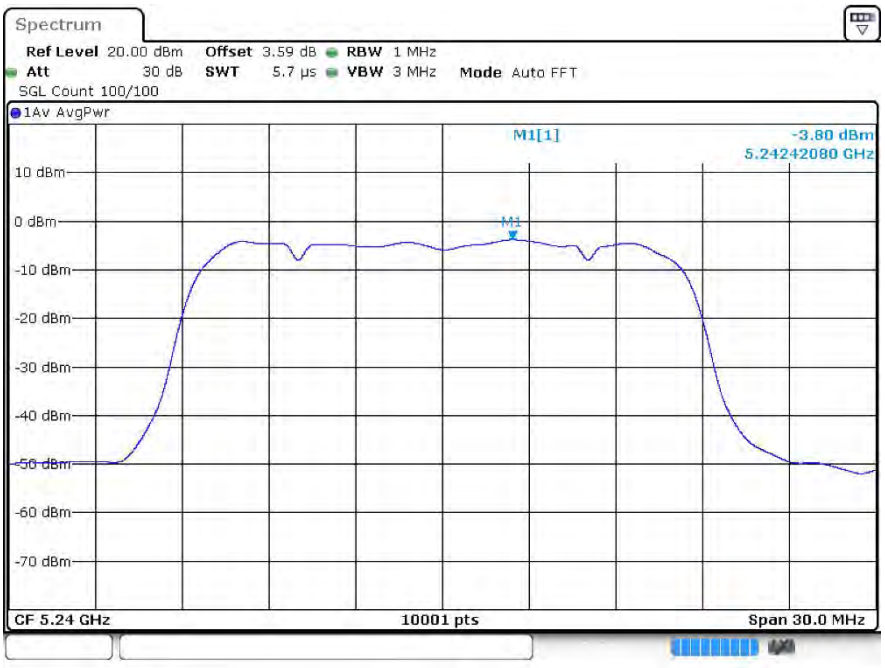
Directional gain=10log[(10G1/20+10G2/20) 2/2] =7.37dBi

Limit =11-(7.37-6)=9.63dBm for PSD

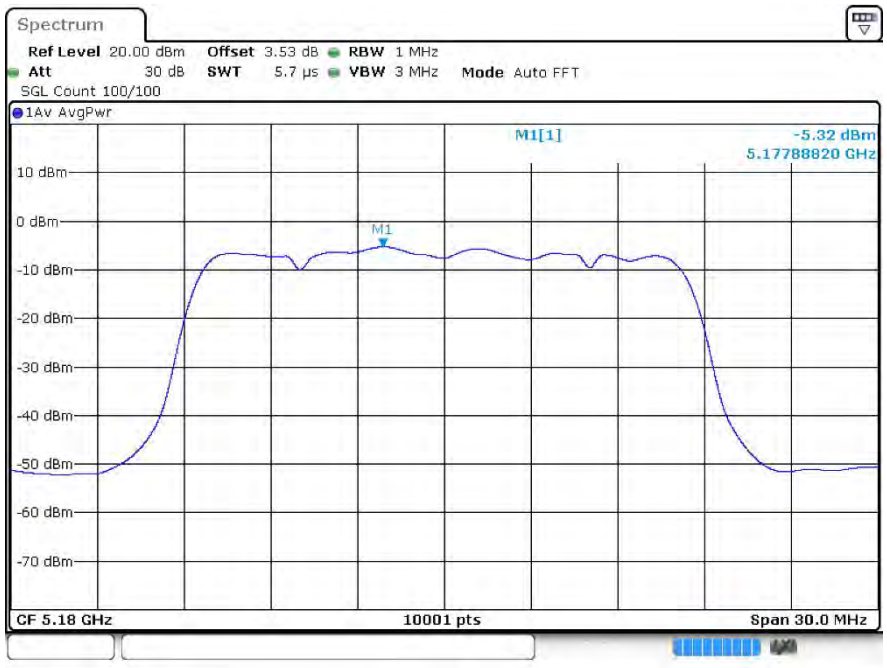
5.2 Test Graphs

Test Graphs
PSDa 5180MHz Ant1

PSD a 5200MHz Ant1


PSDa 5240MHz Ant1



PSDa 5180MHz Ant2



PSD a 5200MHz Ant2