



Appendix D

RF Test Data for B1WIFI(Conducted Measurement)

Product Name: carplay and android auto adapter

Trade Mark: marolak

Test Model: Z1

Environmental Conditions

Temperature:	24.6° C
Relative Humidity:	52.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Aalen.Ye
Supervised by:	Allen Wang



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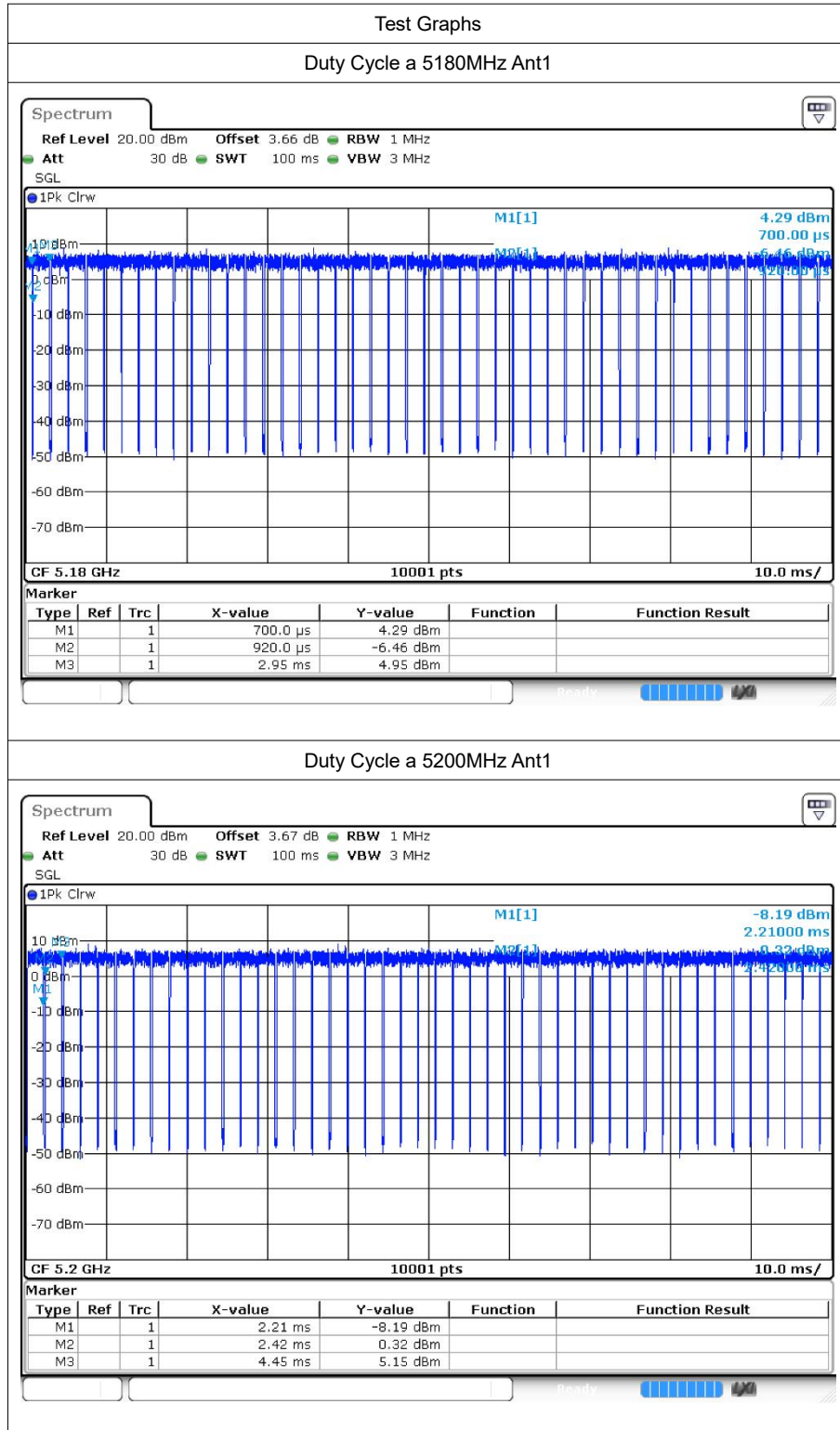


1 Duty Cycle

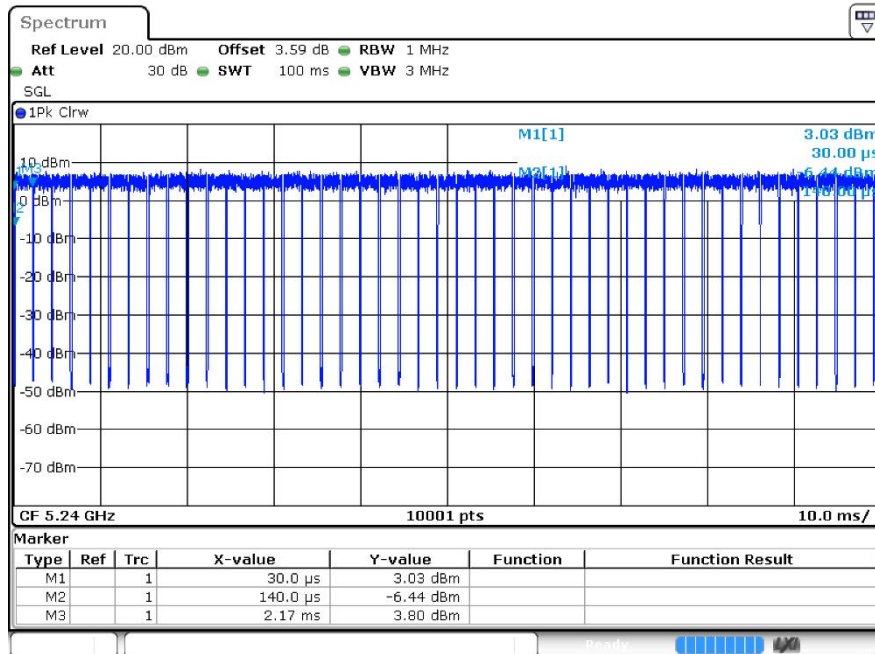
1.1 Test Result

Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
a	5180	Ant1	92.2	0.35	0.49
a	5200	Ant1	93.35	0.3	0.49
a	5240	Ant1	92.71	0.33	0.49
n20	5180	Ant1	91.98	0.36	0.53
n20	5200	Ant1	95.26	0.21	0.53
n20	5240	Ant1	94.63	0.24	0.53
n40	5190	Ant1	85.32	0.69	1.08
n40	5230	Ant1	90.32	0.44	1.08
ac20	5180	Ant1	92.95	0.32	0.53
ac20	5200	Ant1	92.71	0.33	0.53
ac20	5240	Ant1	81.76	0.87	0.53
ac40	5190	Ant1	89.94	0.46	1.06
ac40	5230	Ant1	85.41	0.68	1.08
ax20	5180	Ant1	90.82	0.42	0.68
ax20	5200	Ant1	92.58	0.33	0.68
ax20	5240	Ant1	89.63	0.48	0.68
ax40	5190	Ant1	83.44	0.79	1.3
ax40	5230	Ant1	88.31	0.54	1.32

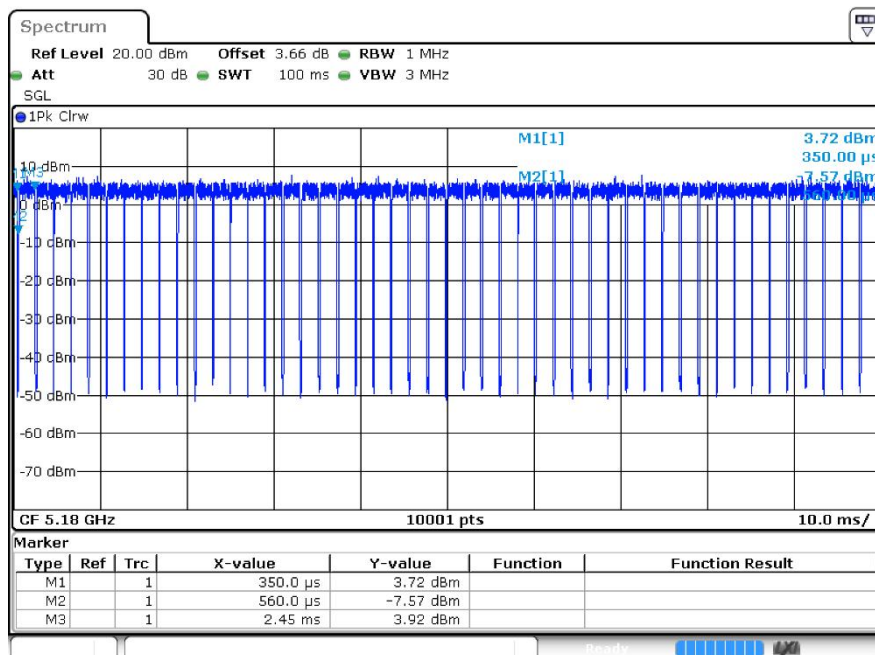
1.2 Test Graphs



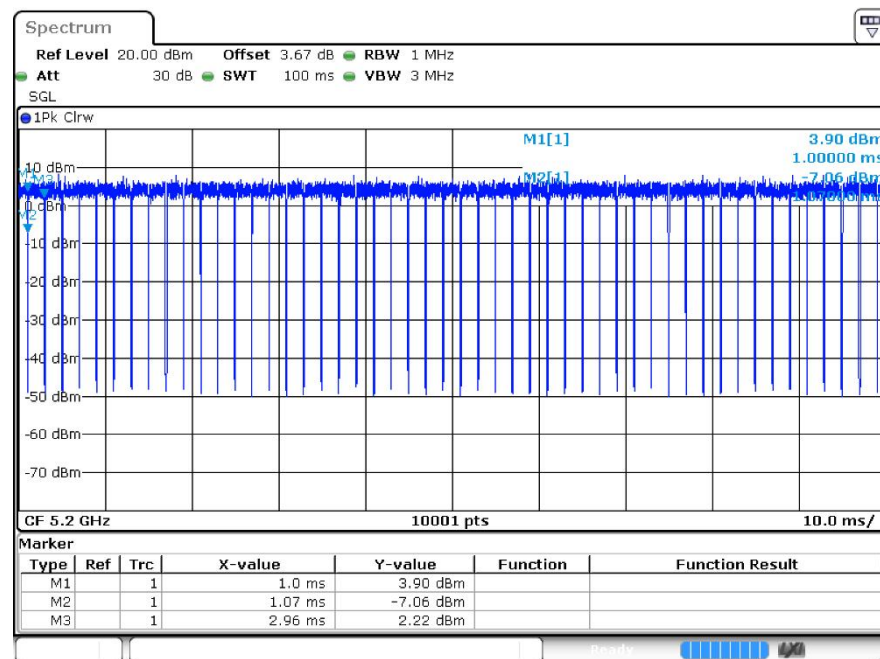
Duty Cycle a 5240MHz Ant1



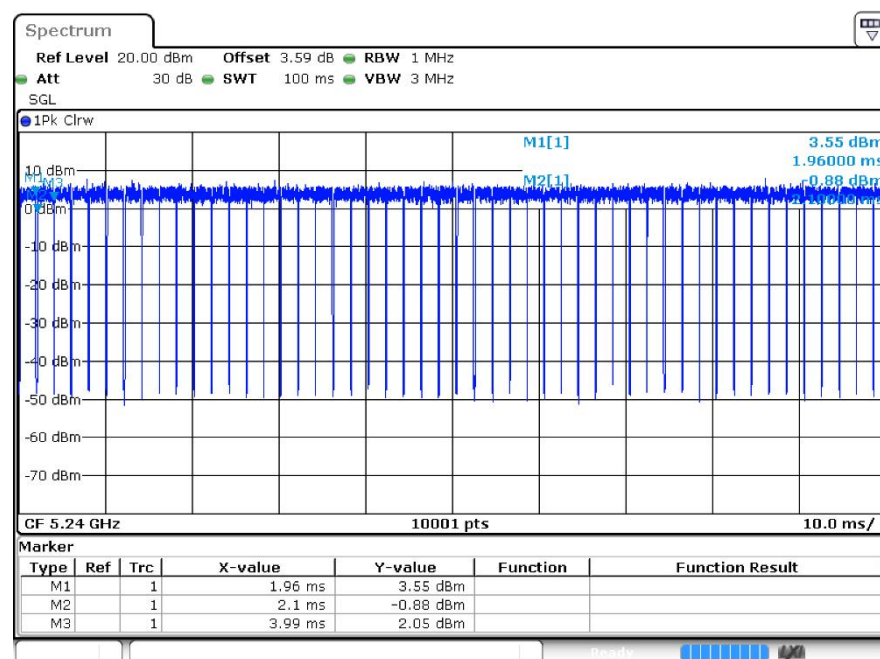
Duty Cycle n20 5180MHz Ant1



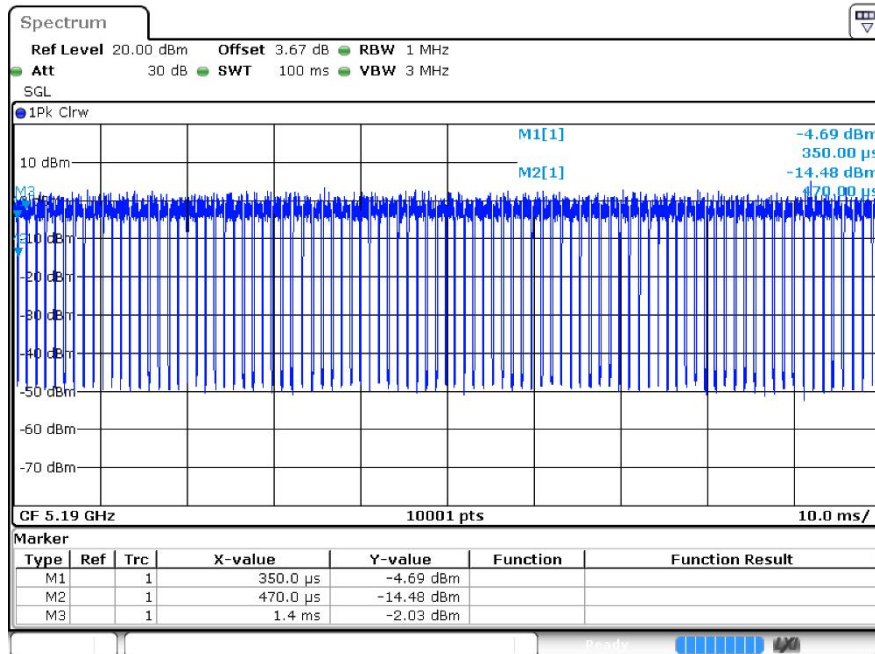
Duty Cycle a n20 5200MHz Ant1



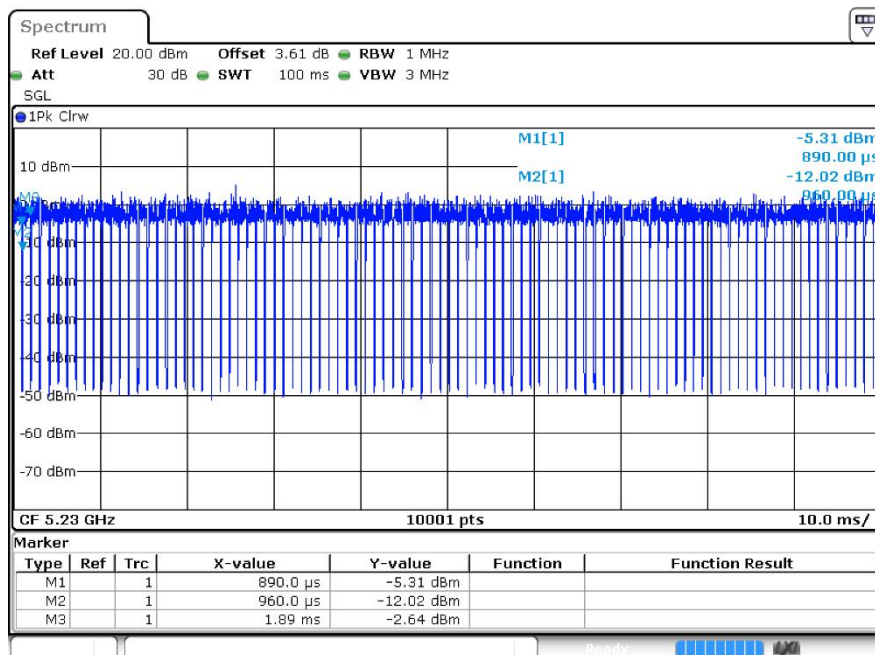
Duty Cycle n20 5240MHz Ant1



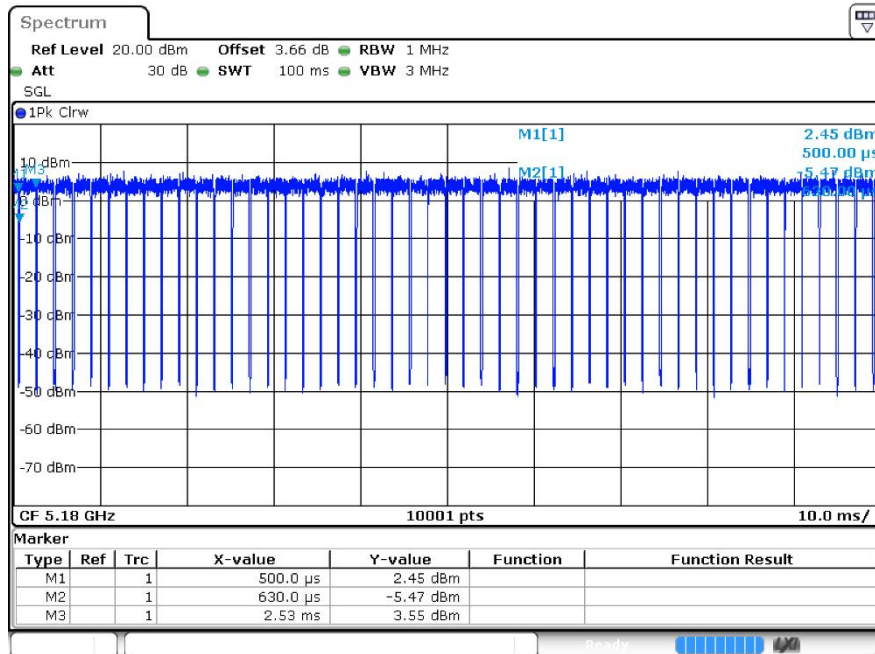
Duty Cycle n40 5190MHz Ant1



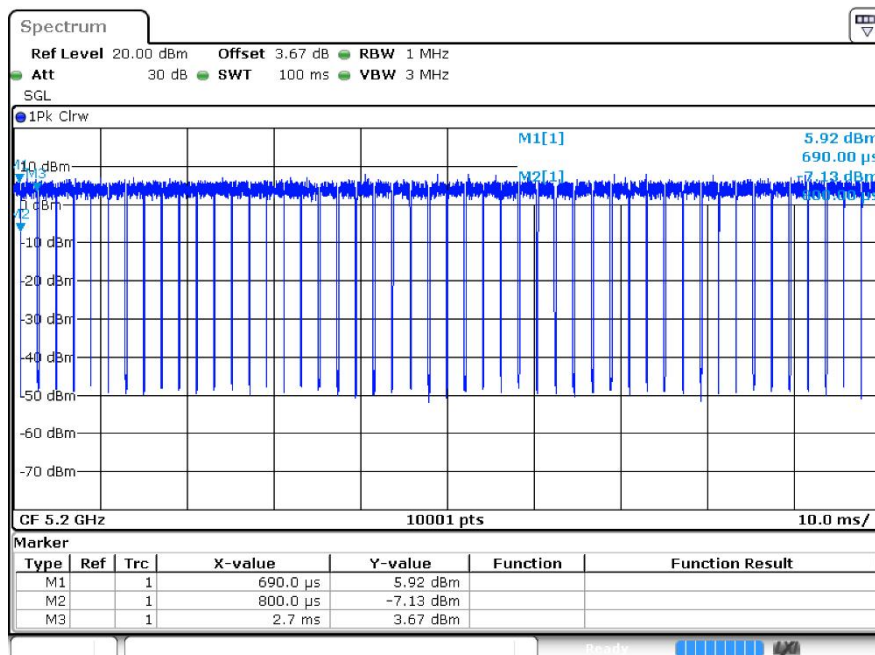
Duty Cycle n40 5230MHz Ant1



Duty Cycle ac20 5180MHz Ant1



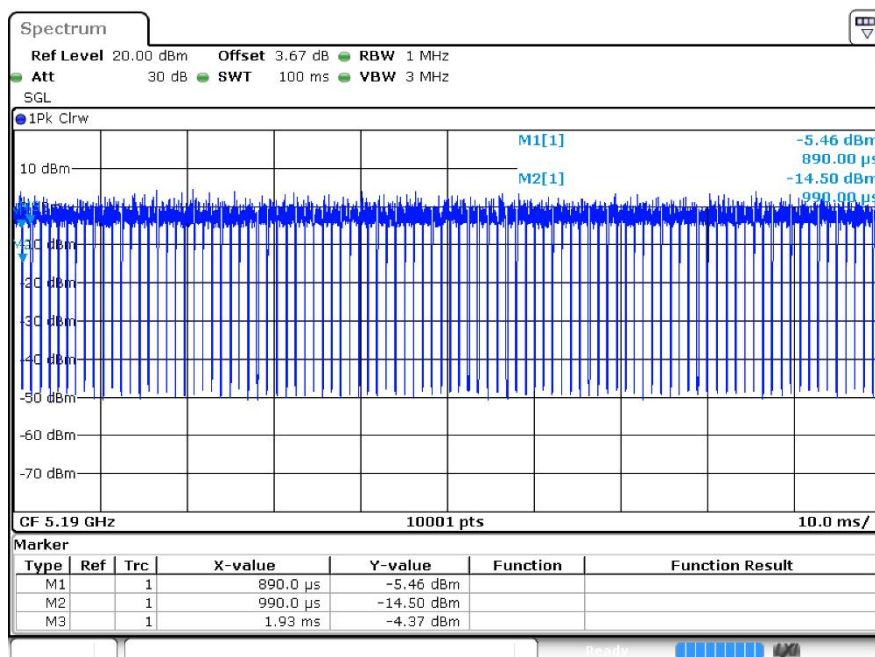
Duty Cycle ac20 5200MHz Ant1

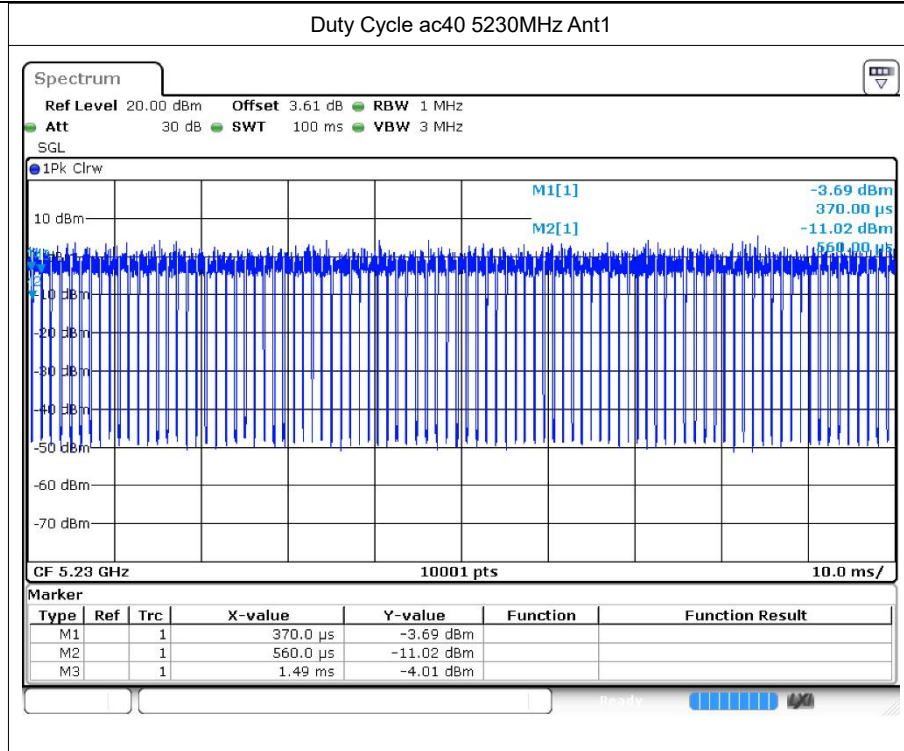


Duty Cycle ac20 5240MHz Ant1

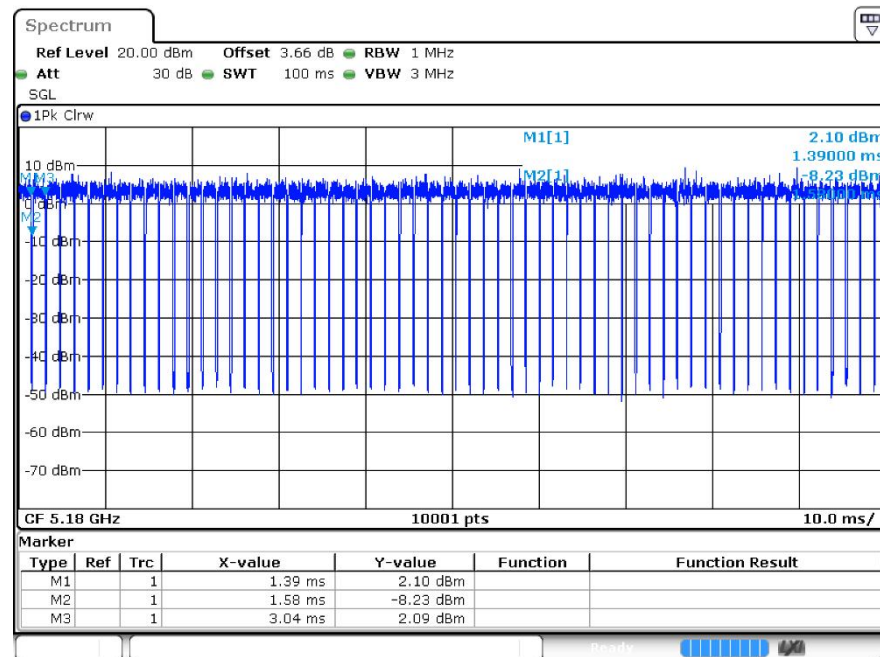


Duty Cycle ac40 5190MHz Ant1

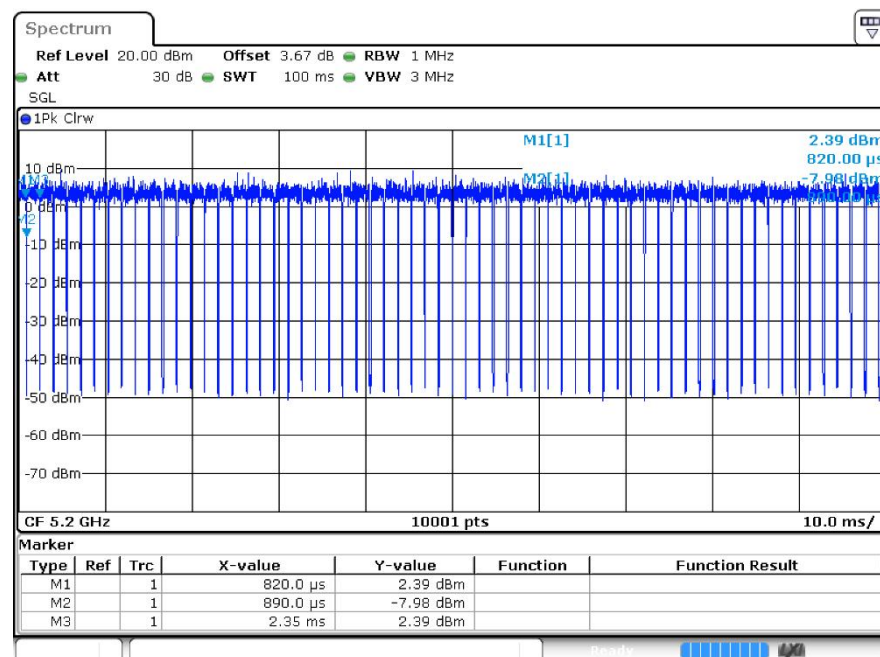




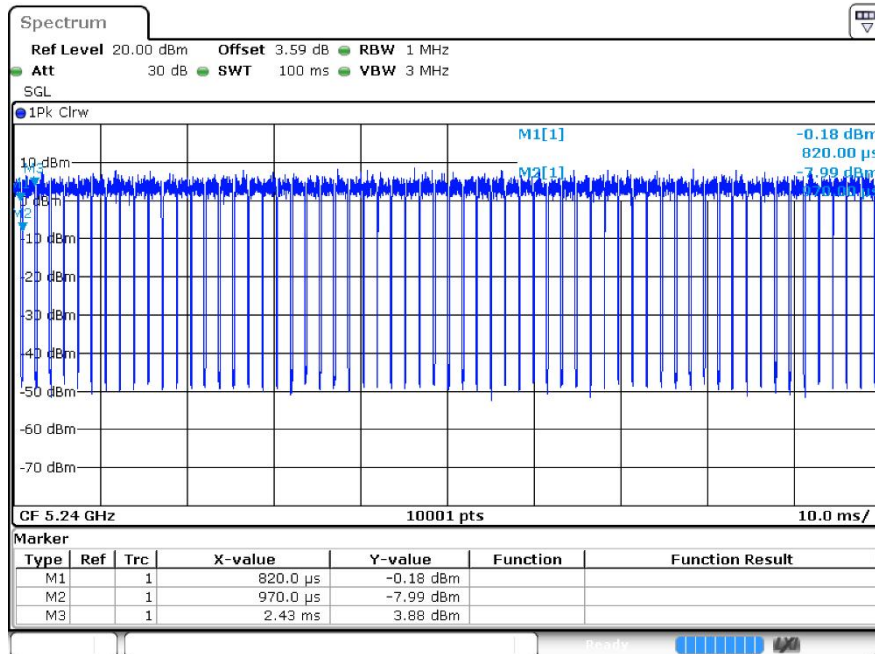
Duty Cycle ax20 5180MHz Ant1



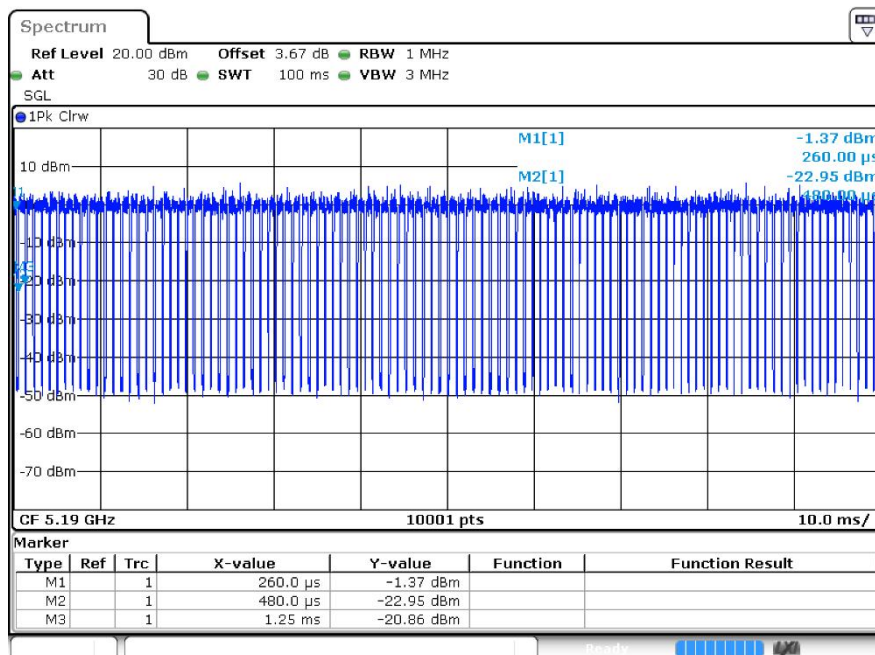
Duty Cycle ax20 5200MHz Ant1

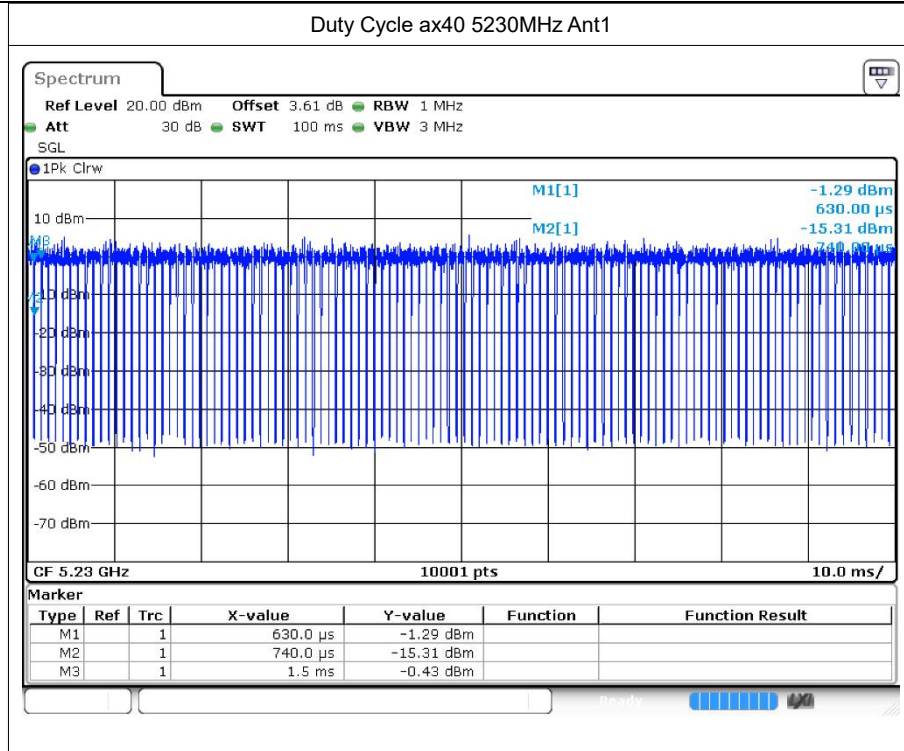


Duty Cycle ax20 5240MHz Ant1



Duty Cycle ax40 5190MHz Ant1





2 Maximum Conducted Output Power

2.1 Test Result

Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
a	5180	Ant1	14.73	24	Pass
a	5200	Ant1	14.76	24	Pass
a	5240	Ant1	14.63	24	Pass
n20	5180	Ant1	13.83	24	Pass
n20	5200	Ant1	14.01	24	Pass
n20	5240	Ant1	13.66	24	Pass
n40	5190	Ant1	14.02	24	Pass
n40	5230	Ant1	13.78	24	Pass
ac20	5180	Ant1	13.91	24	Pass
ac20	5200	Ant1	13.98	24	Pass
ac20	5240	Ant1	13.68	24	Pass
ac40	5190	Ant1	14.03	24	Pass
ac40	5230	Ant1	14.08	24	Pass
ax20	5180	Ant1	13.89	24	Pass
ax20	5200	Ant1	14.08	24	Pass
ax20	5240	Ant1	13.92	24	Pass
ax40	5190	Ant1	13.82	24	Pass
ax40	5230	Ant1	14.03	24	Pass

Note:

The duty factor has been compensated into the result.

3 -26dB Bandwidth

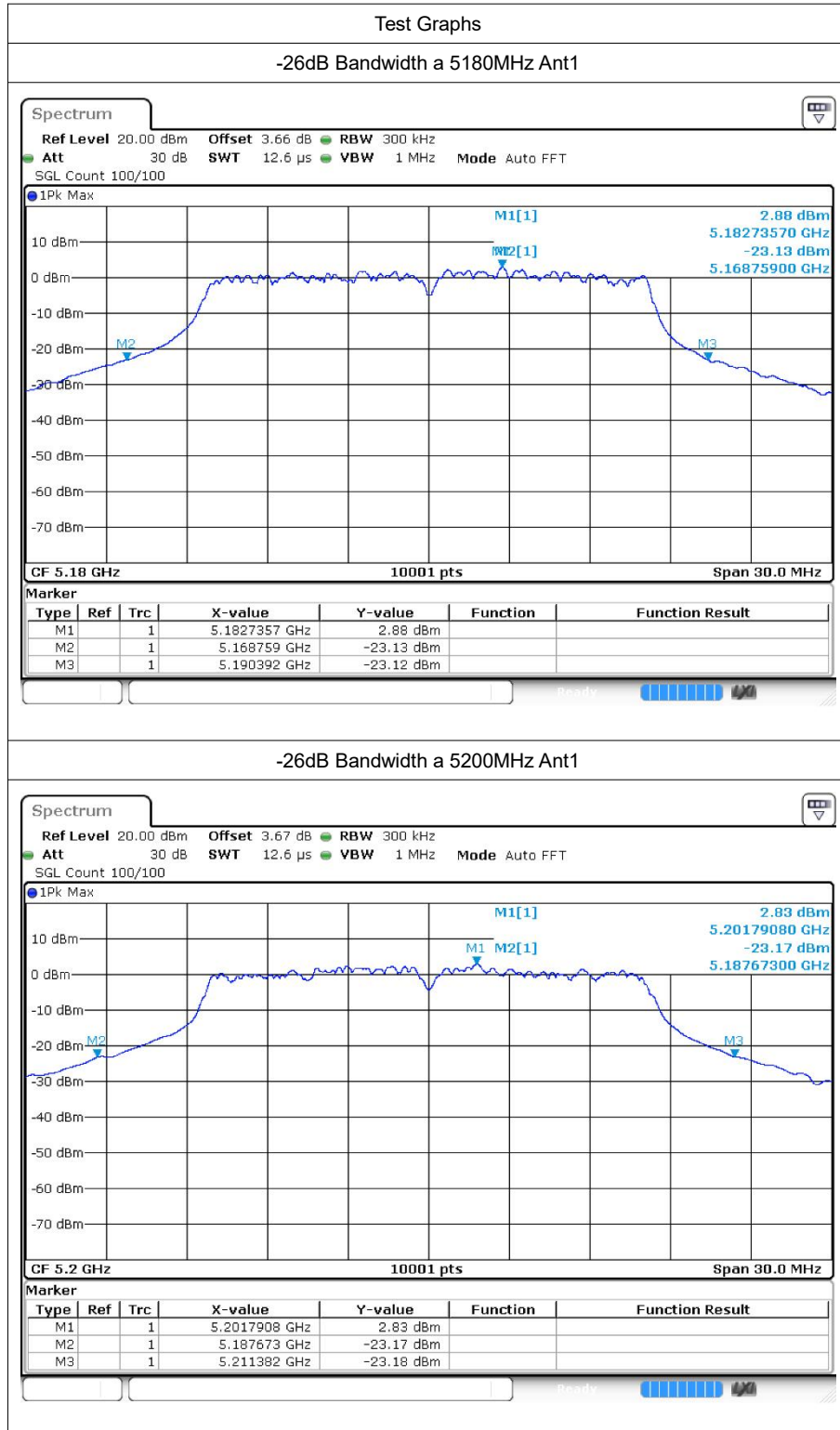
3.1 Test Result

Mode	Frequency (MHz)	Antenna	-26 dB Bandwidth (MHz)	Limit -26 dB Bandwidth (MHz)	Verdict
a	5180	Ant1	21.633	0.5	Pass
a	5200	Ant1	23.709	0.5	Pass
a	5240	Ant1	24.897	0.5	Pass
n20	5180	Ant1	24.771	0.5	Pass
n20	5200	Ant1	24.231	0.5	Pass
n20	5240	Ant1	25.284	0.5	Pass
n40	5190	Ant1	43.68	0.5	Pass
n40	5230	Ant1	41.622	0.5	Pass
ac20	5180	Ant1	24.402	0.5	Pass
ac20	5200	Ant1	25.716	0.5	Pass
ac20	5240	Ant1	23.826	0.5	Pass
ac40	5190	Ant1	41.418	0.5	Pass
ac40	5230	Ant1	41.796	0.5	Pass
ax20	5180	Ant1	21.312	0.5	Pass
ax20	5200	Ant1	23.304	0.5	Pass
ax20	5240	Ant1	23.757	0.5	Pass
ax40	5190	Ant1	41.634	0.5	Pass
ax40	5230	Ant1	42.744	0.5	Pass

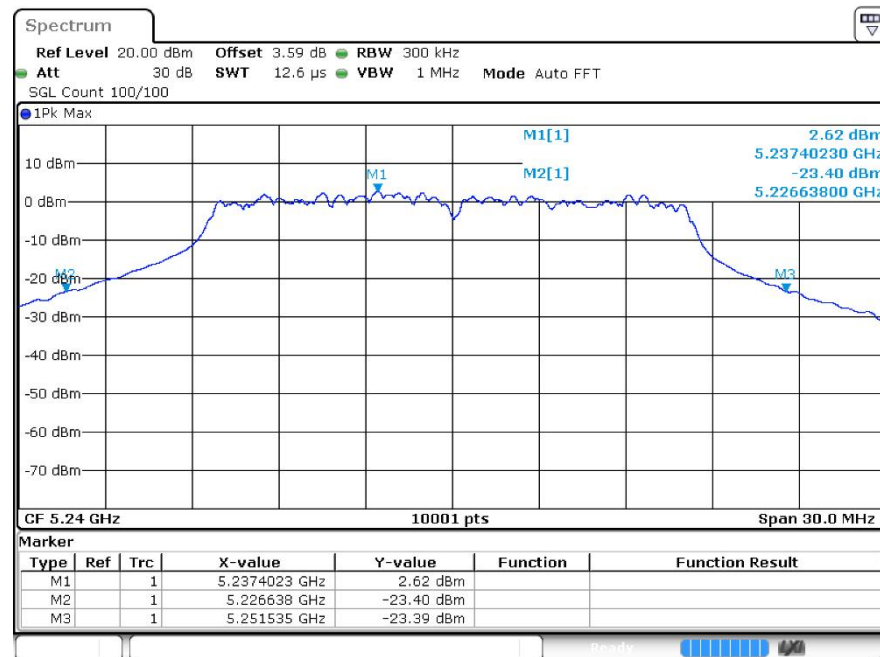
Note:

The duty factor has been compensated into the result.

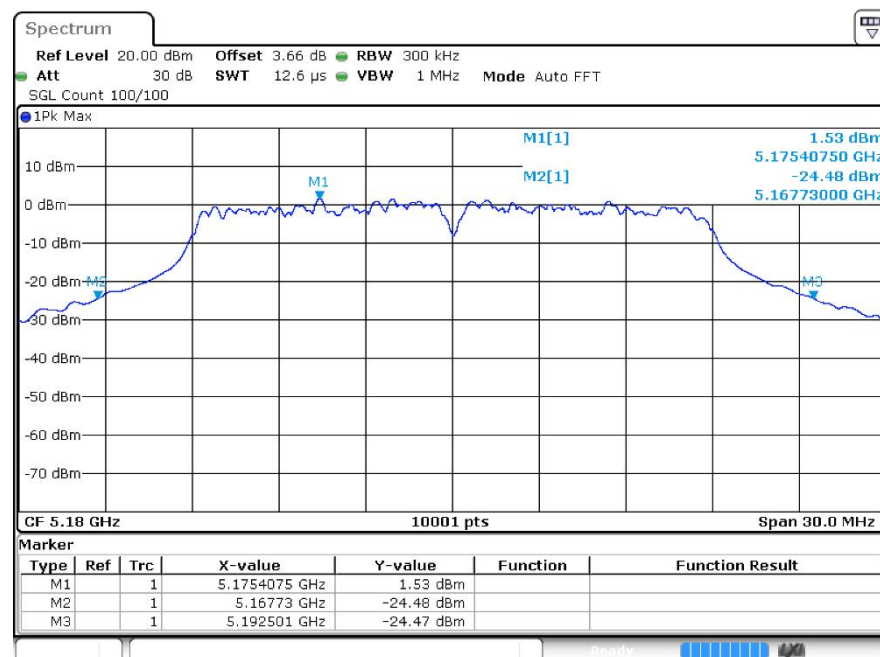
3.2 Test Graphs



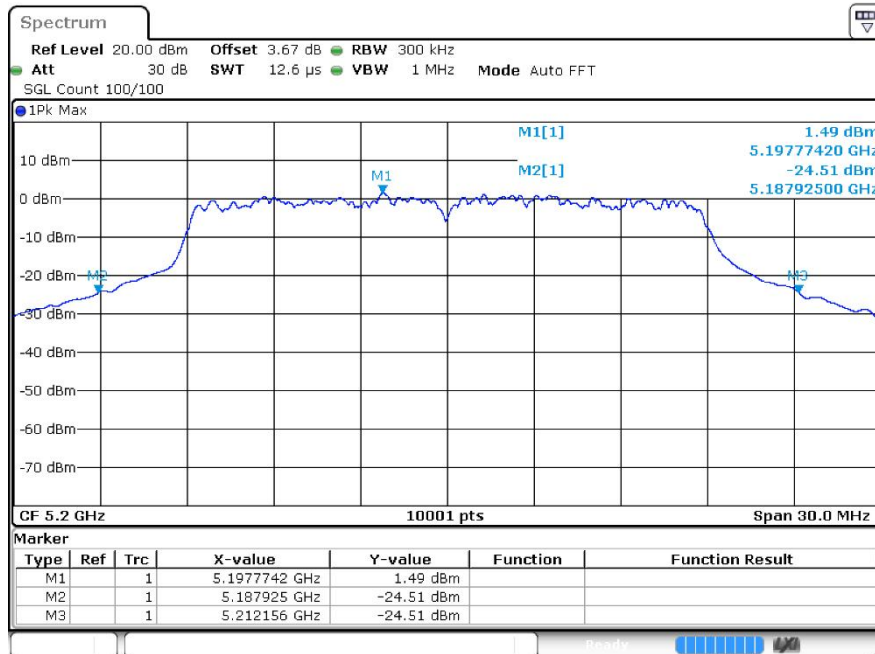
-26dB Bandwidth a 5240MHz Ant1



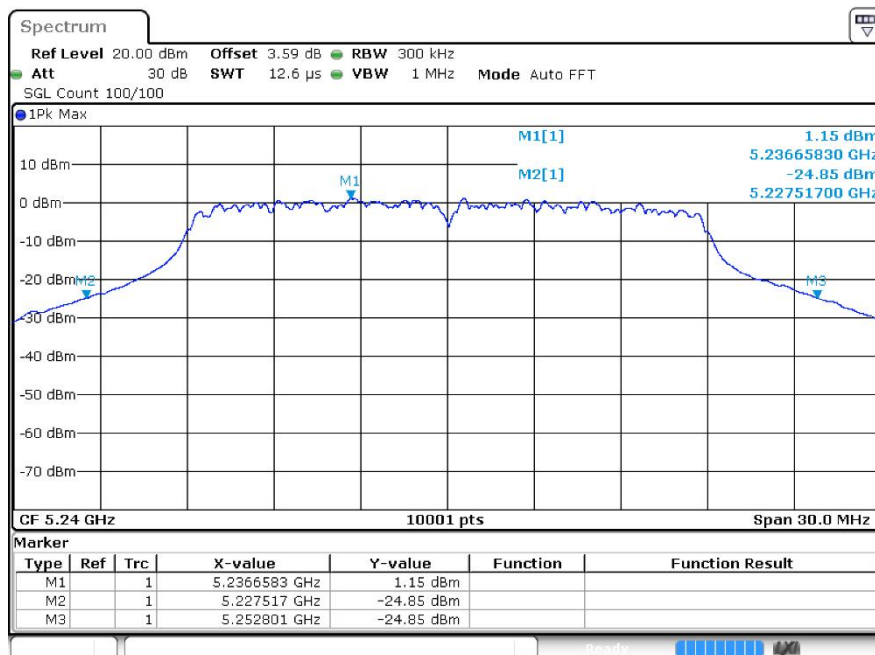
-26dB Bandwidth n20 5180MHz Ant1



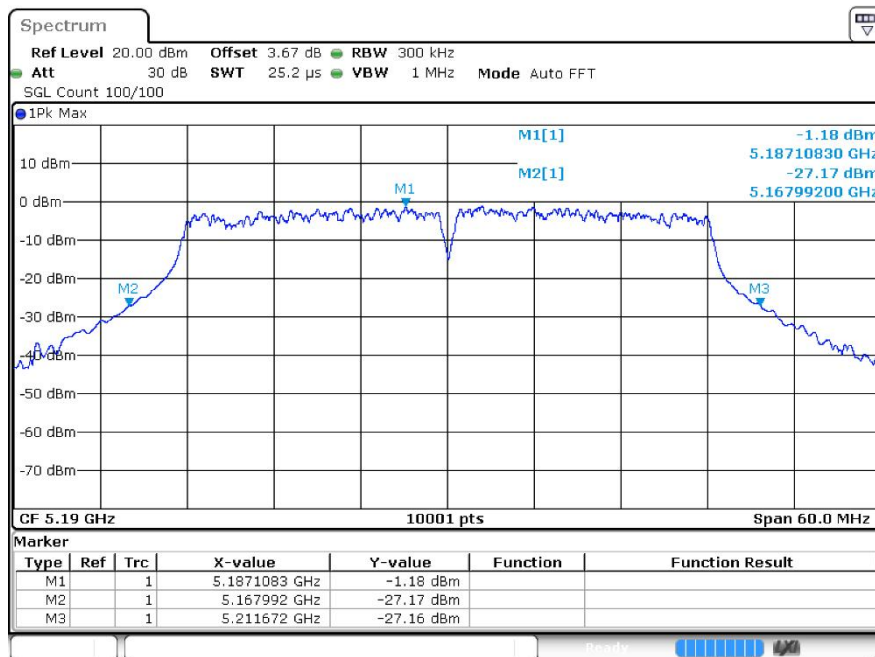
-26dB Bandwidth n20 5200MHz Ant1



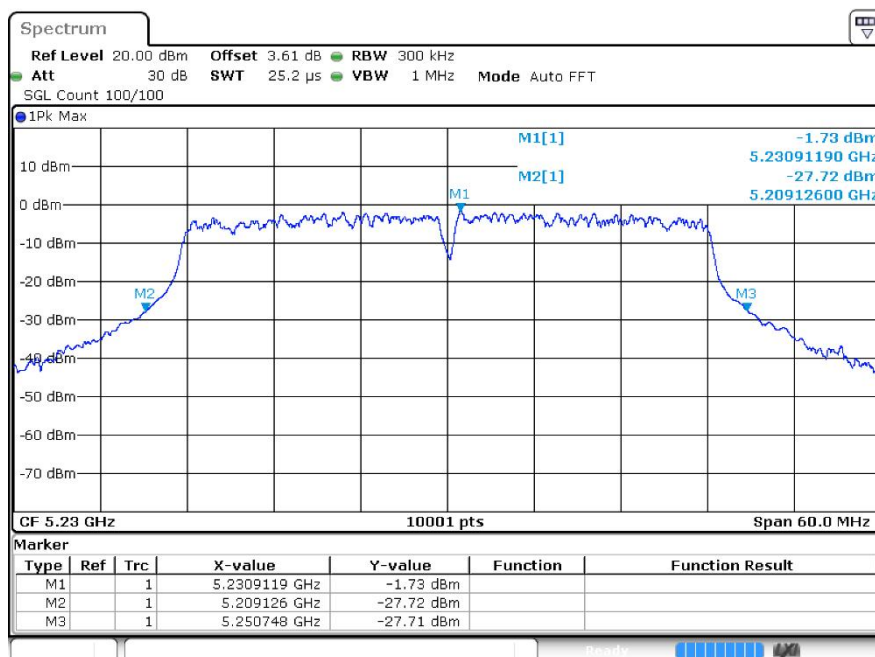
-26dB Bandwidth n20 5240MHz Ant1



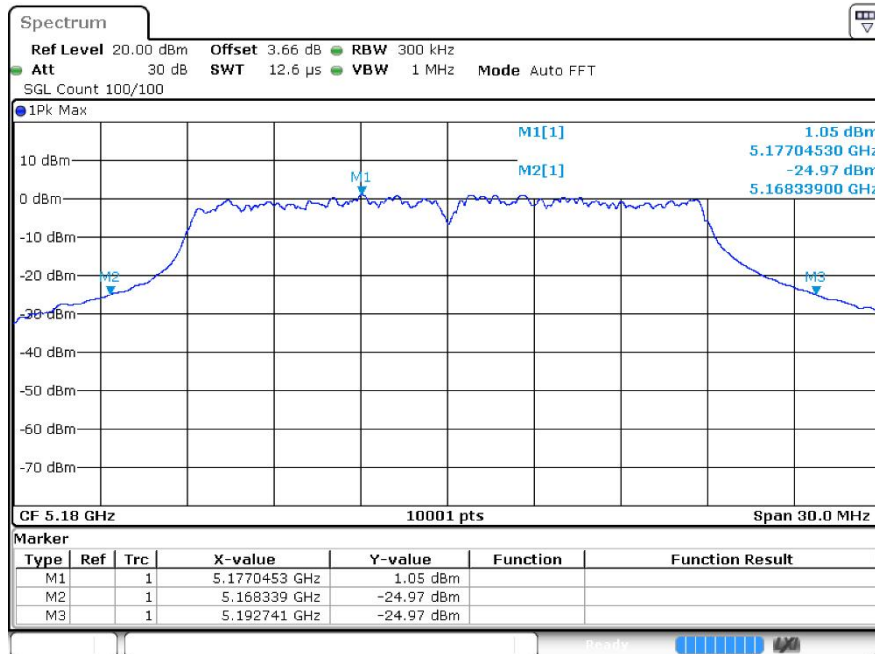
-26dB Bandwidth n40 5190MHz Ant1



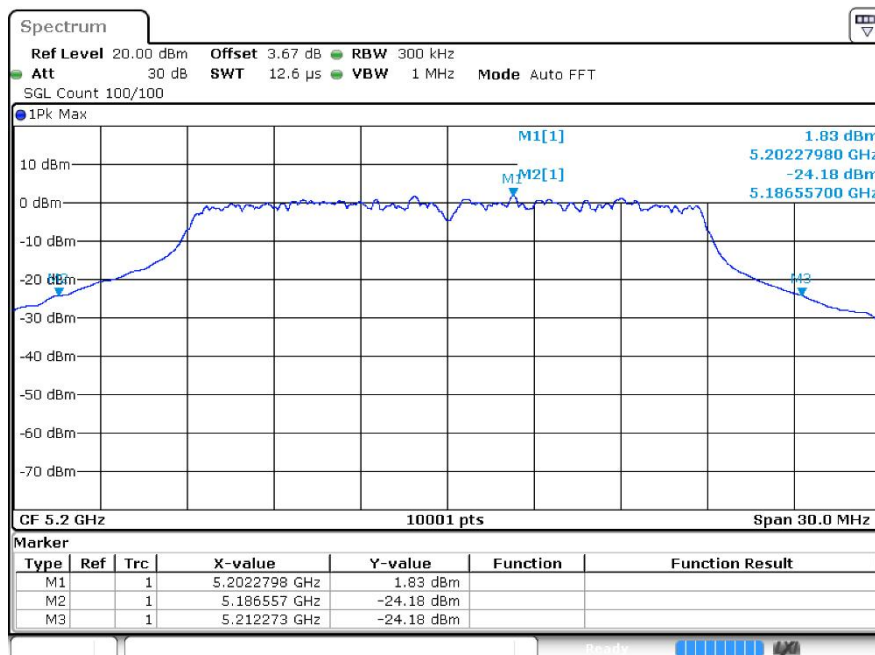
-26dB Bandwidth n40 5230MHz Ant1



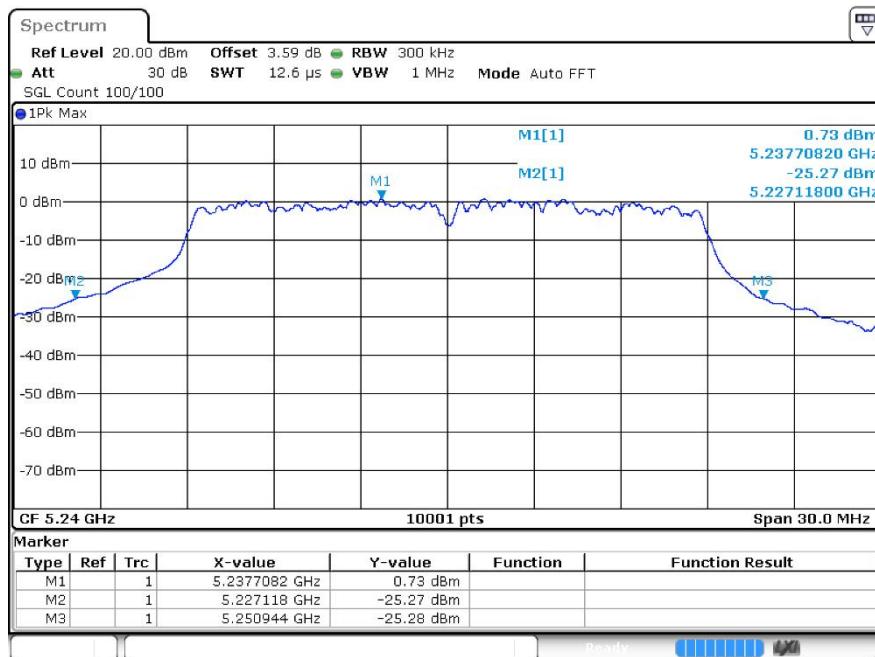
-26dB Bandwidth ac20 5180MHz Ant1



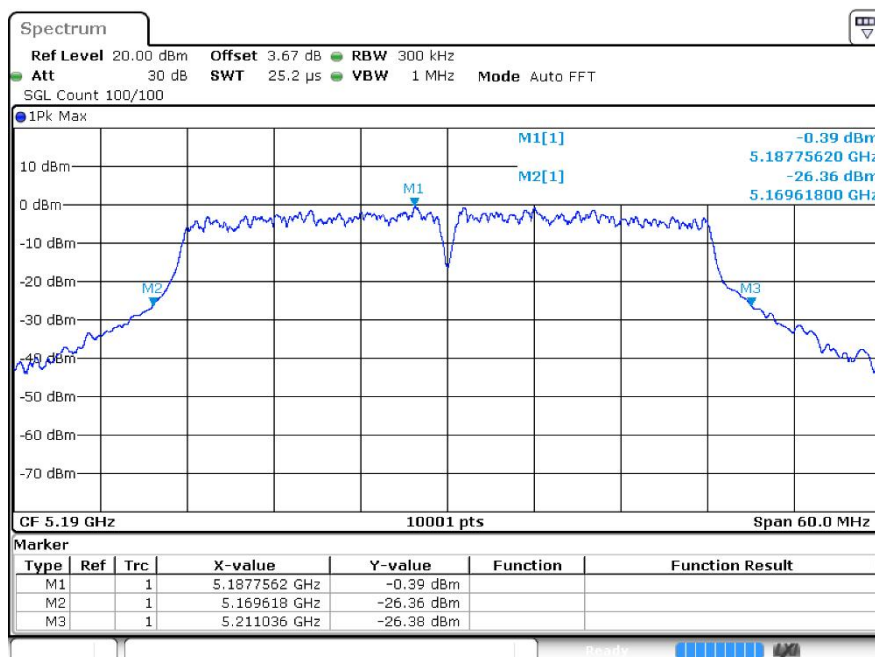
-26dB Bandwidth ac20 5200MHz Ant1

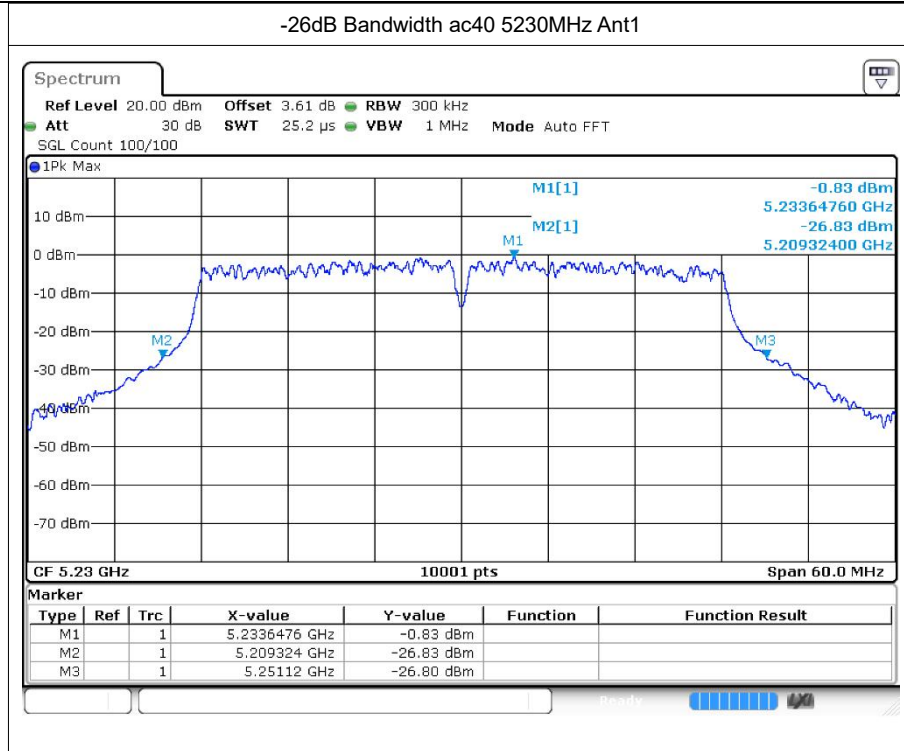


-26dB Bandwidth ac20 5240MHz Ant1

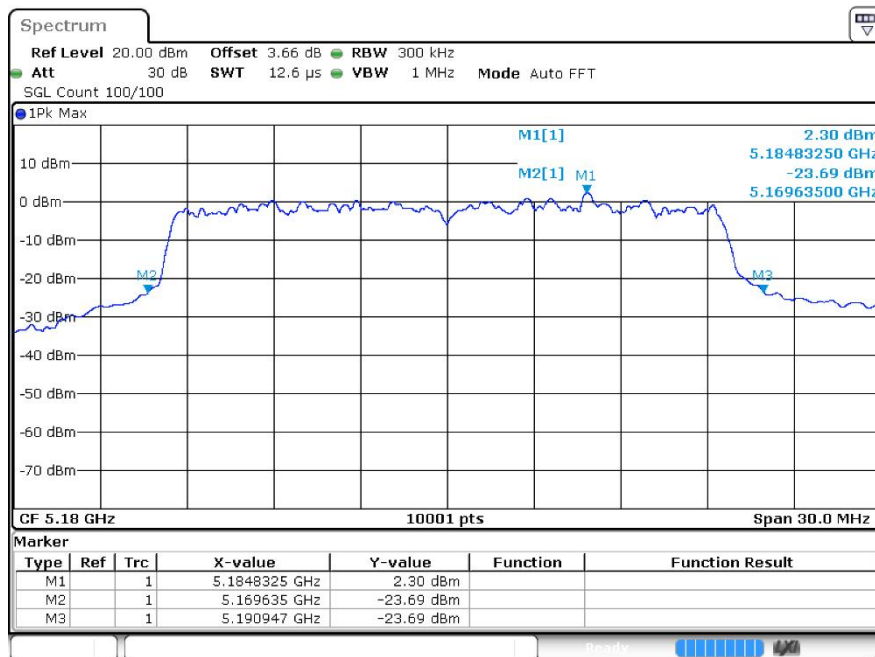


-26dB Bandwidth ac40 5190MHz Ant1

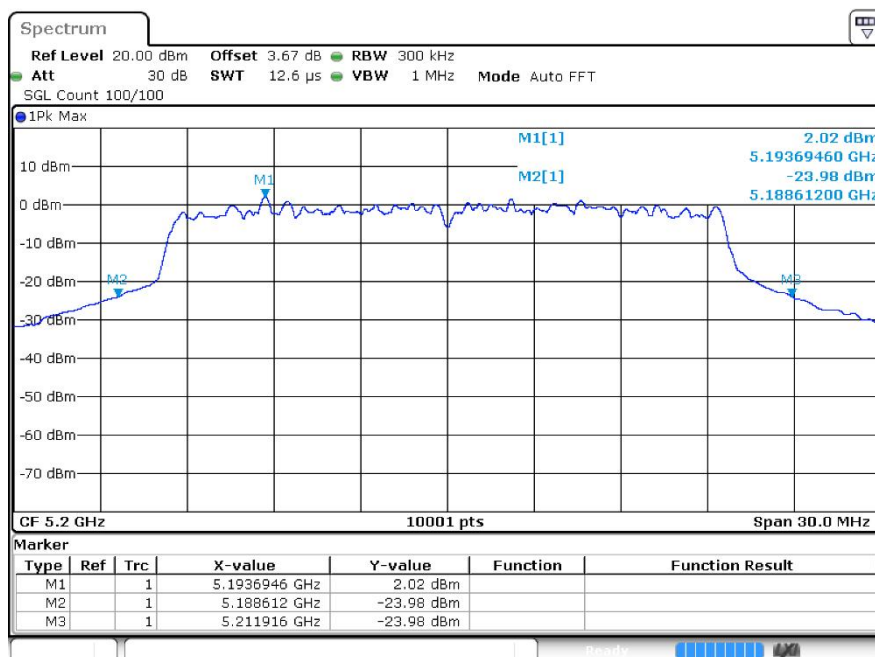




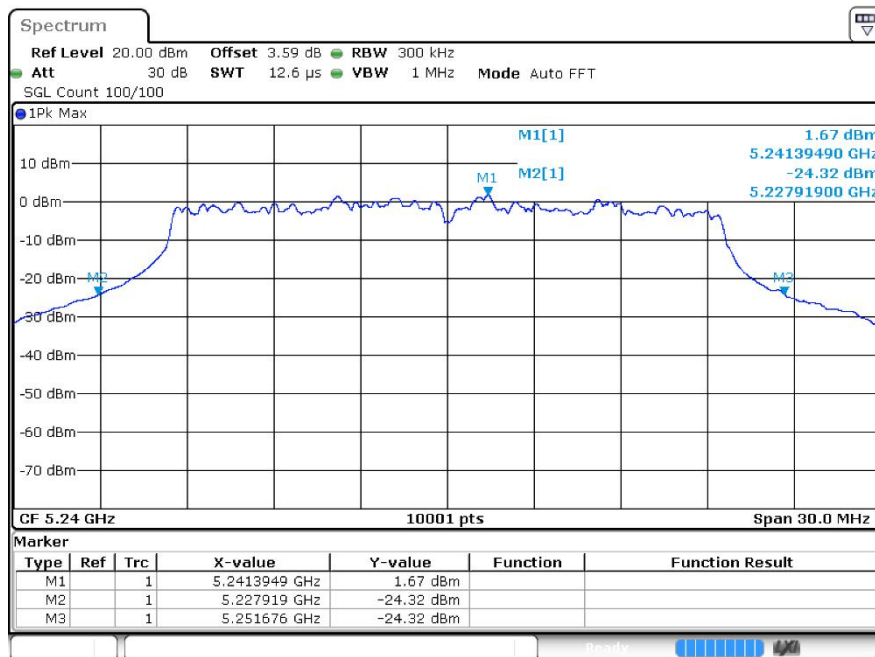
-26dB Bandwidth ax20 5180MHz Ant1



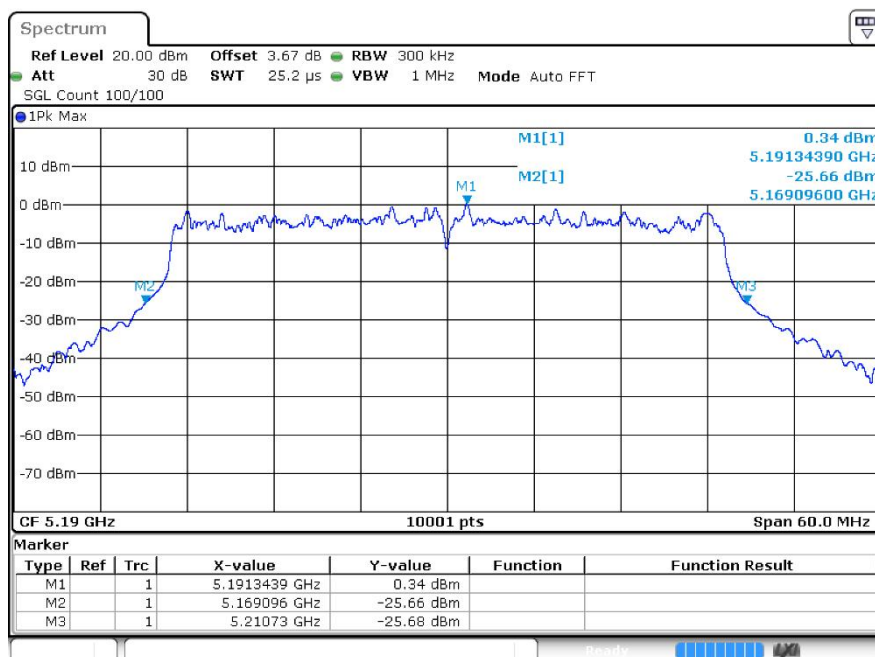
-26dB Bandwidth ax20 5200MHz Ant1

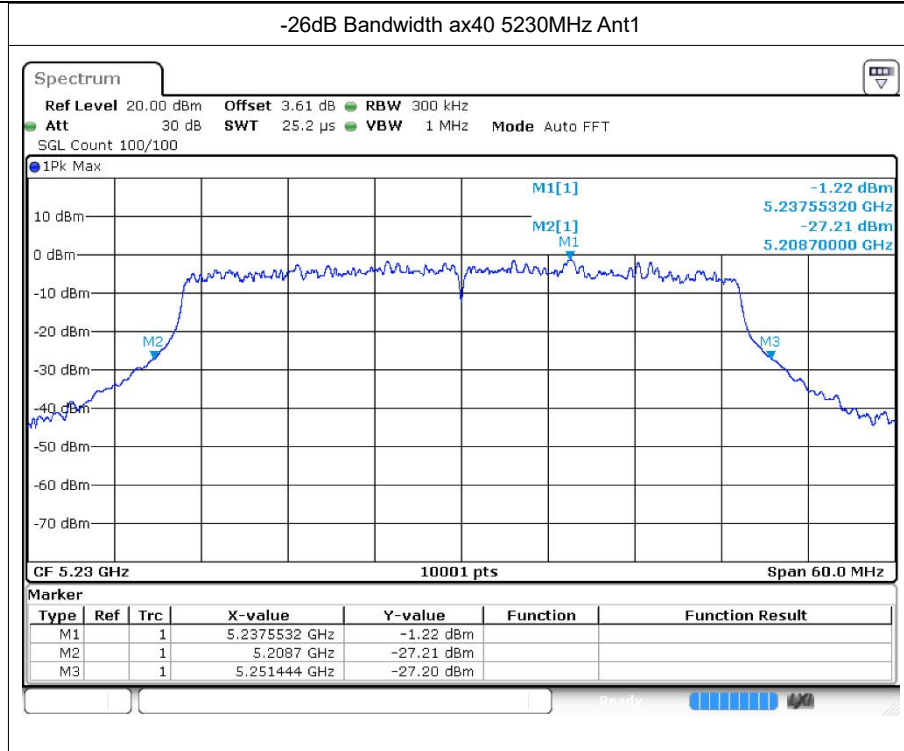


-26dB Bandwidth ax20 5240MHz Ant1



-26dB Bandwidth ax40 5190MHz Ant1





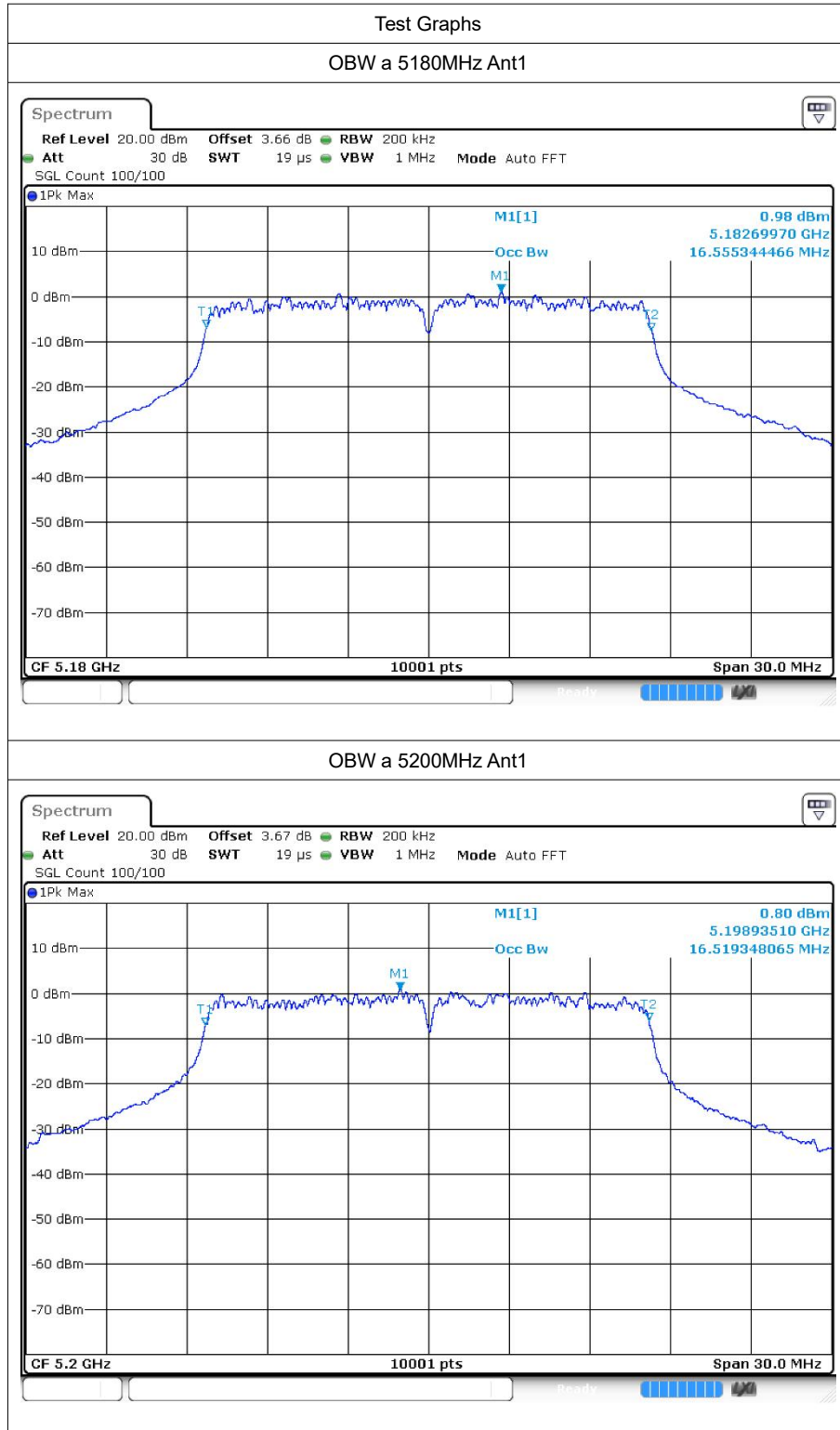


4 Occupied Channel Bandwidth

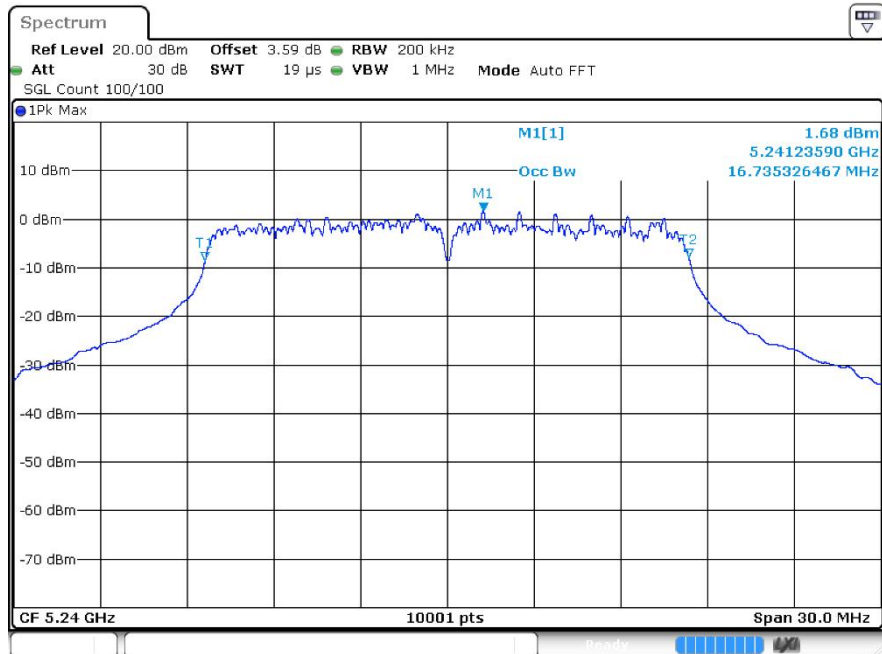
4.1 Test Result

Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
a	5180	Ant1	16.555
a	5200	Ant1	16.519
a	5240	Ant1	16.735
n20	5180	Ant1	17.935
n20	5200	Ant1	17.815
n20	5240	Ant1	17.716
n40	5190	Ant1	36.86
n40	5230	Ant1	36.458
ac20	5180	Ant1	17.794
ac20	5200	Ant1	17.647
ac20	5240	Ant1	17.803
ac40	5190	Ant1	36.326
ac40	5230	Ant1	36.392
ax20	5180	Ant1	19.024
ax20	5200	Ant1	19.024
ax20	5240	Ant1	19.075
ax40	5190	Ant1	37.862
ax40	5230	Ant1	38

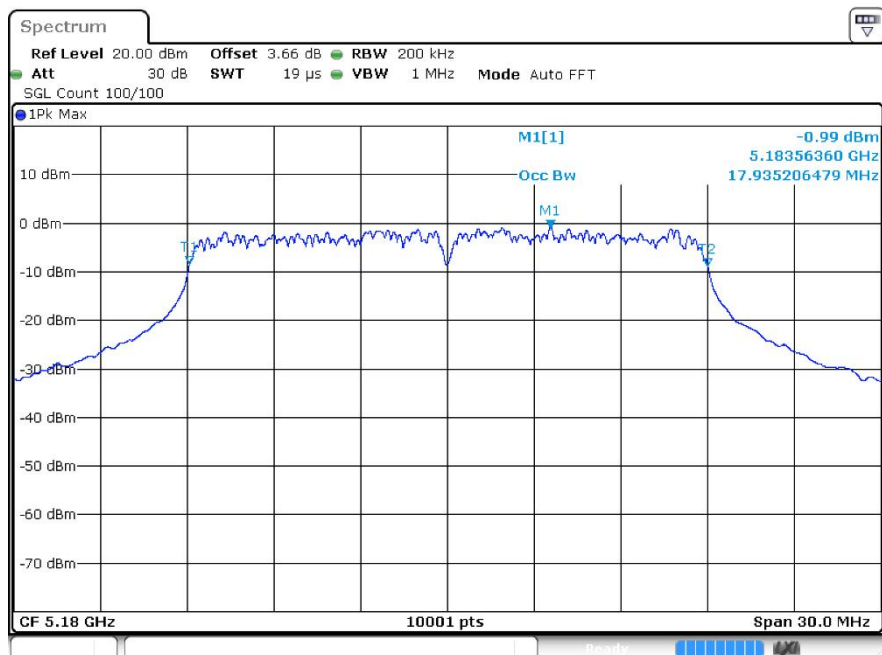
4.2 Test Graphs



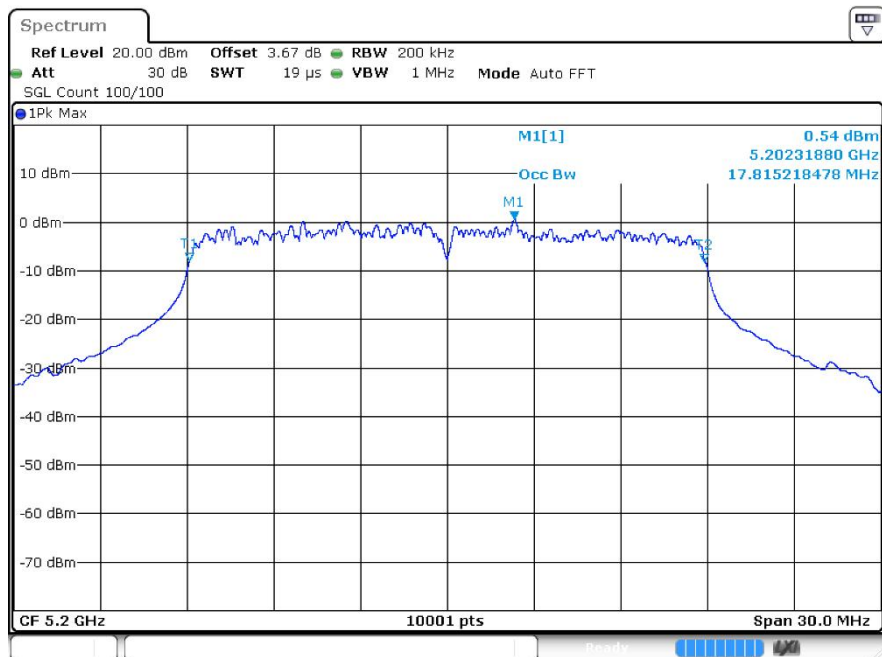
OBW a 5240MHz Ant1



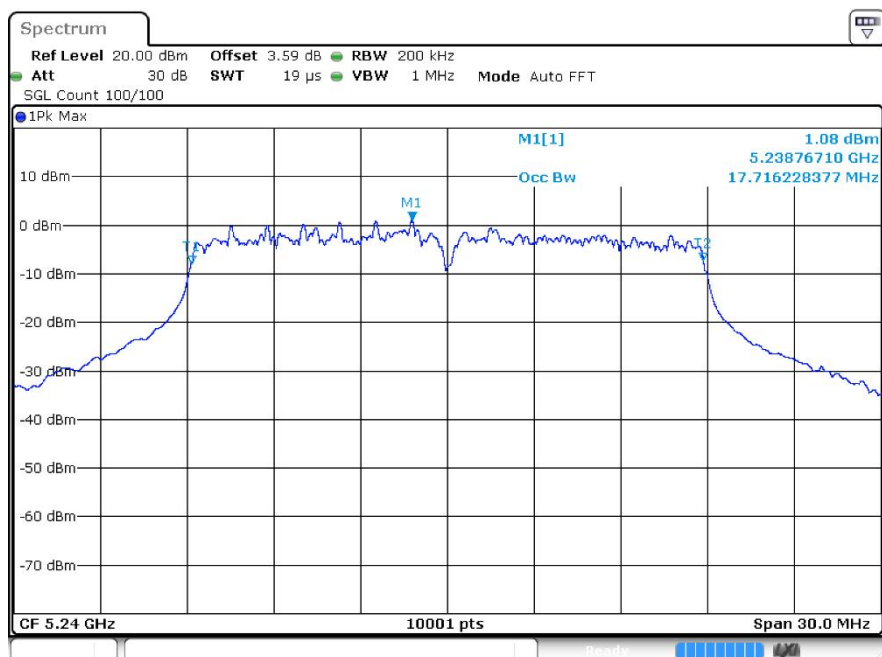
OBW n20 5180MHz Ant1



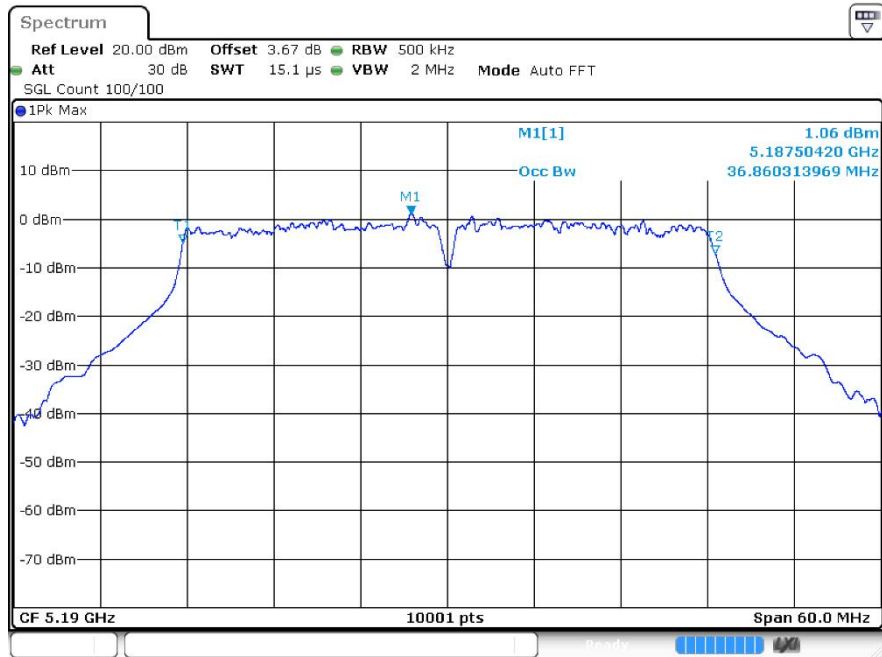
OBW n20 5200MHz Ant1



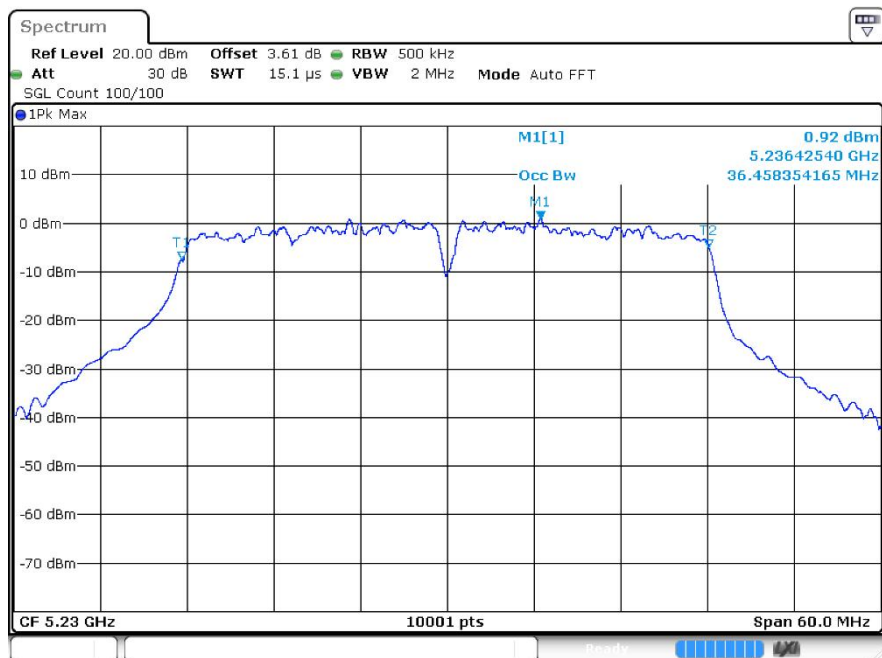
OBW n20 5240MHz Ant1



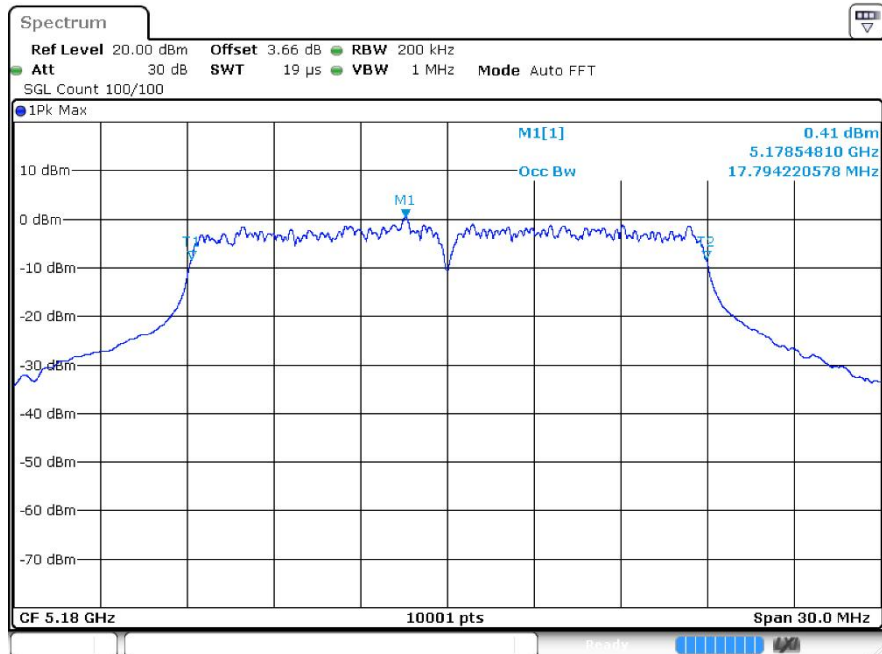
OBW n40 5190MHz Ant1



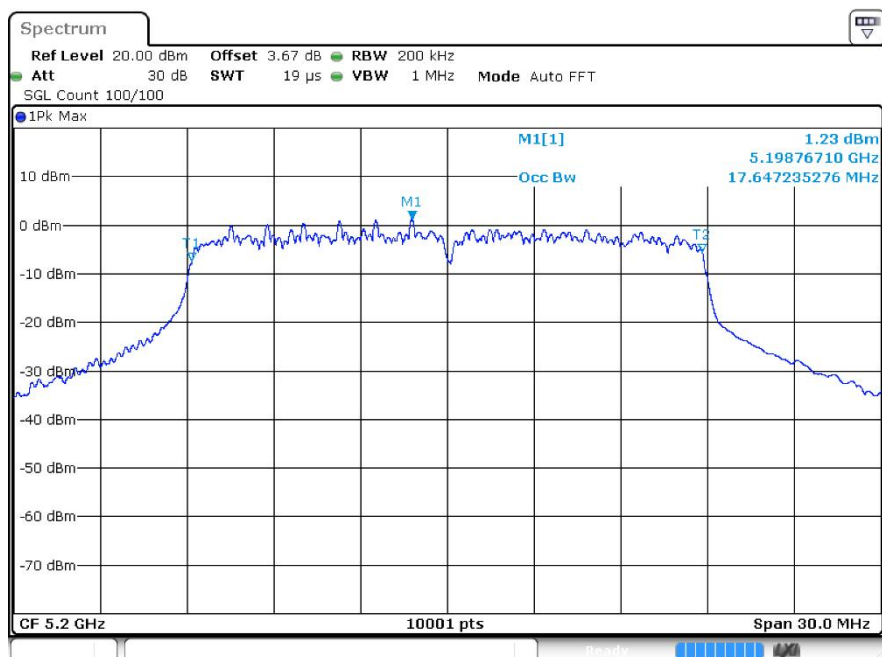
OBW n40 5230MHz Ant1



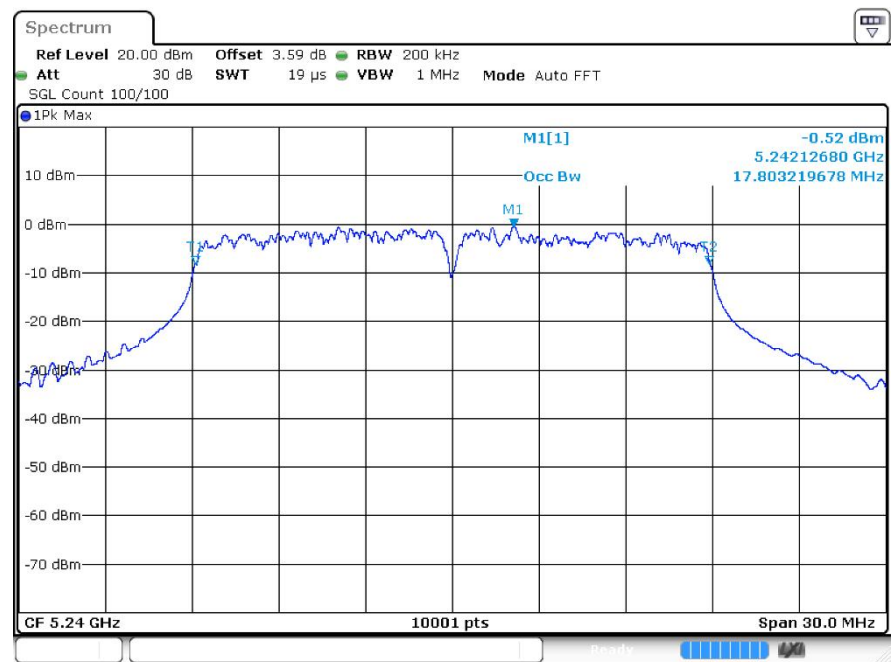
OBW ac20 5180MHz Ant1



OBW ac20 5200MHz Ant1



OBW ac20 5240MHz Ant1



OBW ac40 5190MHz Ant1

