Appendix D

RF Test Data for B1WIFI(Conducted Measurement)

Product Name: Carplay BOX

Trade Mark: KOWANKIT

Test Model: K6 MINI

Environmental Conditions

Temperature:	25.6° C
Relative Humidity:	52.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Emiya lin
Supervised by:	Simba Haung

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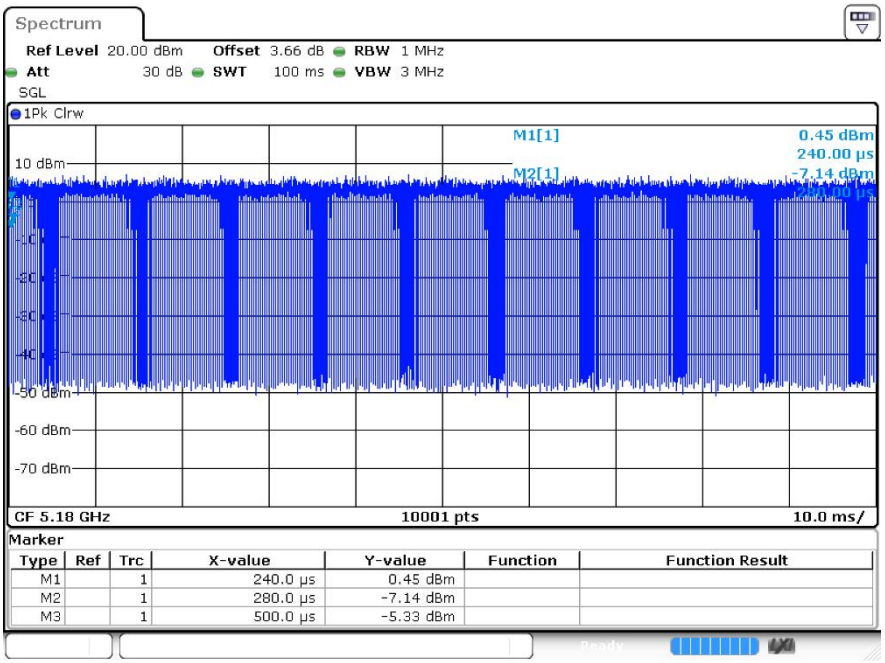
1 Duty Cycle

1.1 Test Result

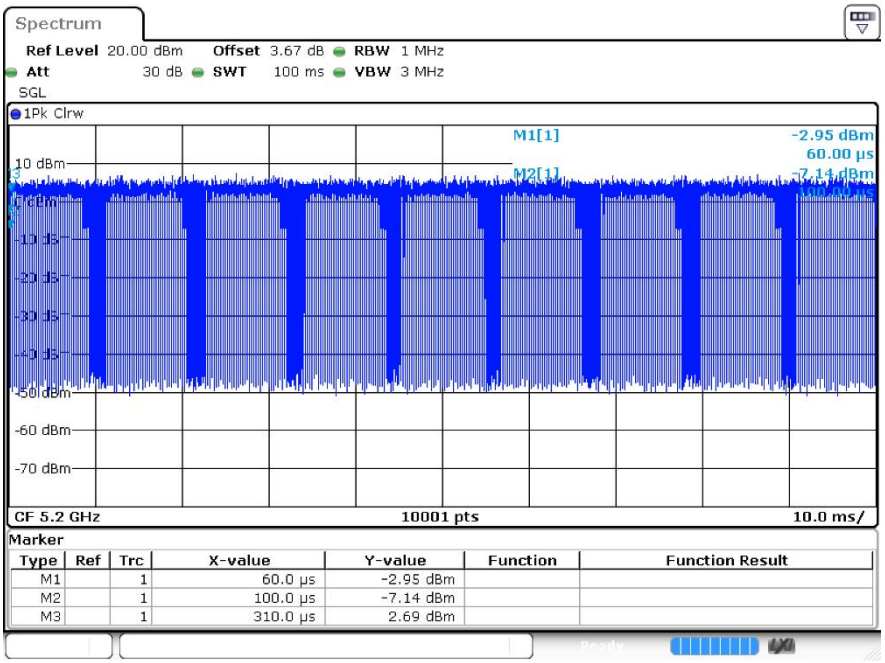
Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
a	5180	Ant1	86.83	0.61	4.55
a	5200	Ant1	86.94	0.61	4.76
a	5240	Ant1	86.91	0.61	4.76
n20	5180	Ant1	87.63	0.57	4.35
n20	5200	Ant1	87.66	0.57	4.17
n20	5240	Ant1	87.63	0.57	4.35
n40	5190	Ant1	88.14	0.55	4
n40	5230	Ant1	88.09	0.55	4.17
ac20	5180	Ant1	87.26	0.59	4.55
ac20	5200	Ant1	86.29	0.64	4.55
ac20	5240	Ant1	87.25	0.59	4.55
ac40	5190	Ant1	86.97	0.61	4.55
ac40	5230	Ant1	87.12	0.6	4.35
ac80	5210	Ant1	87.35	0.59	4.35

1.2 Test Graphs

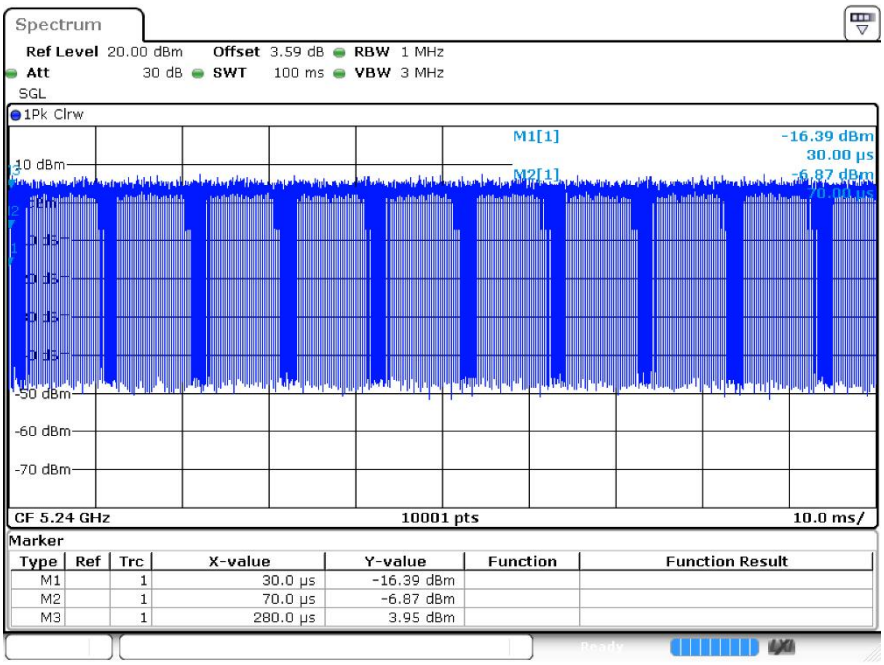
Test Graphs
Duty Cycle a 5180MHz Ant1



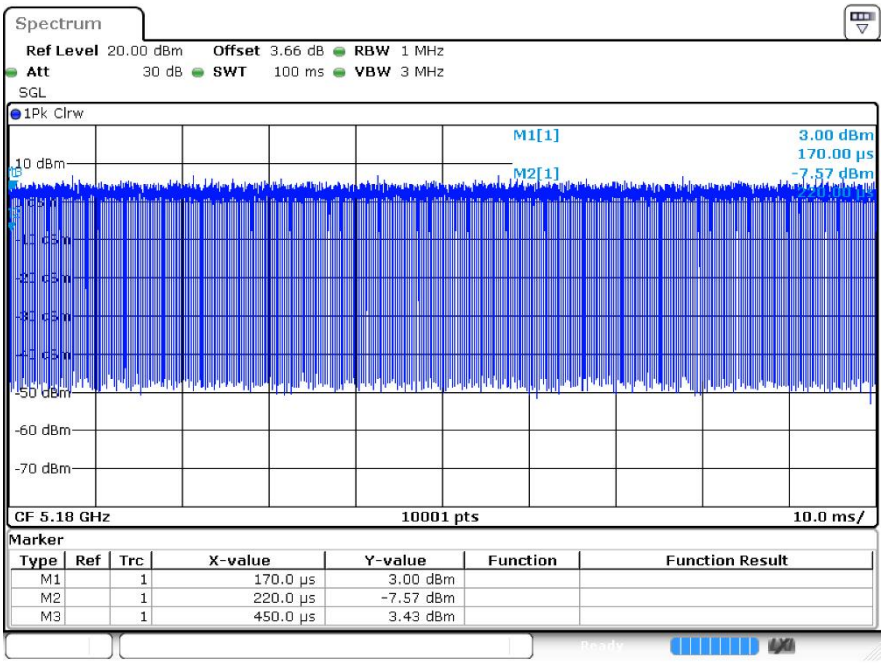
Duty Cycle a 5200MHz Ant1



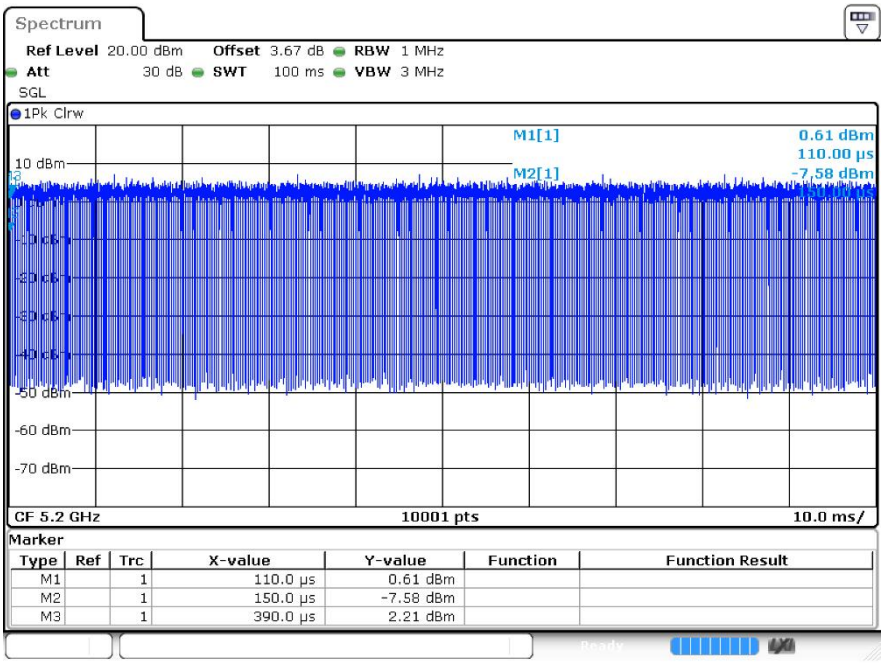
Duty Cycle a 5240MHz Ant1



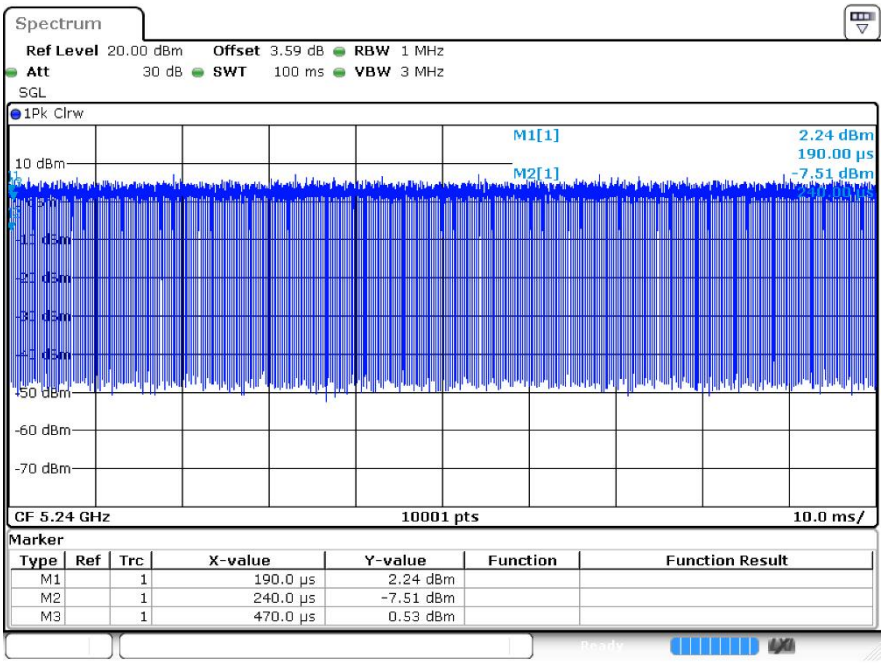
Duty Cycle n20 5180MHz Ant1



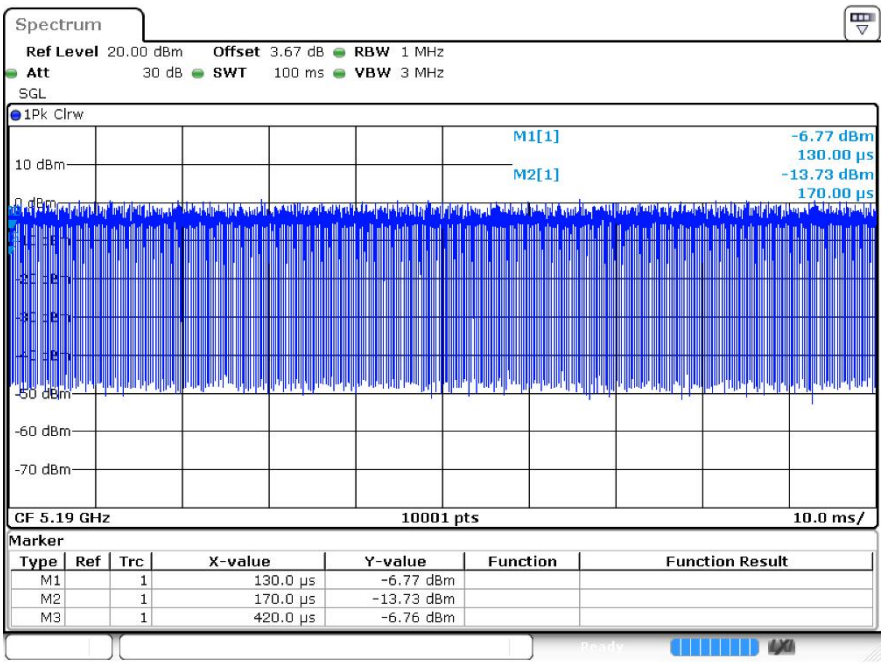
Duty Cycle n20 5200MHz Ant1



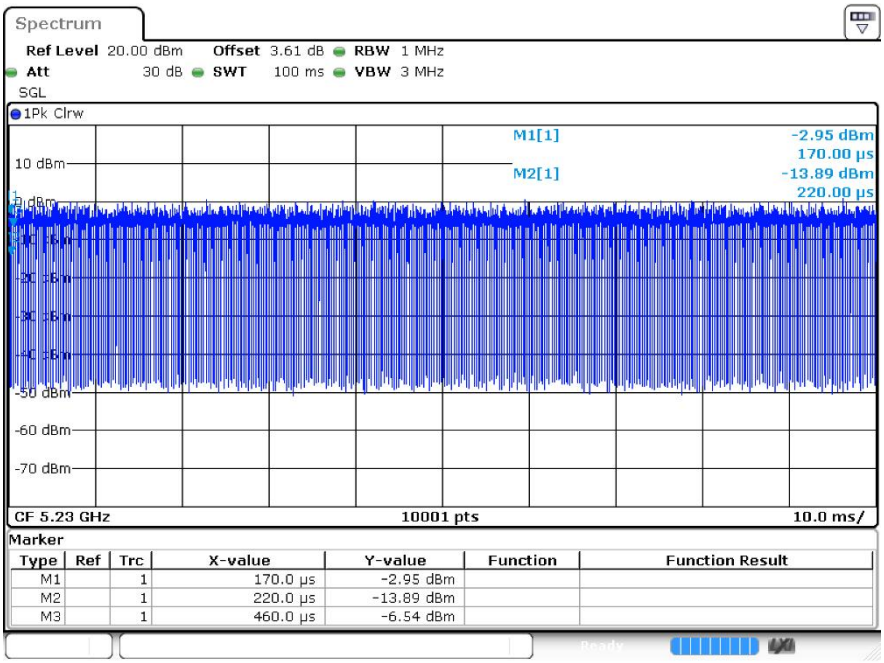
Duty Cycle n20 5240MHz Ant1



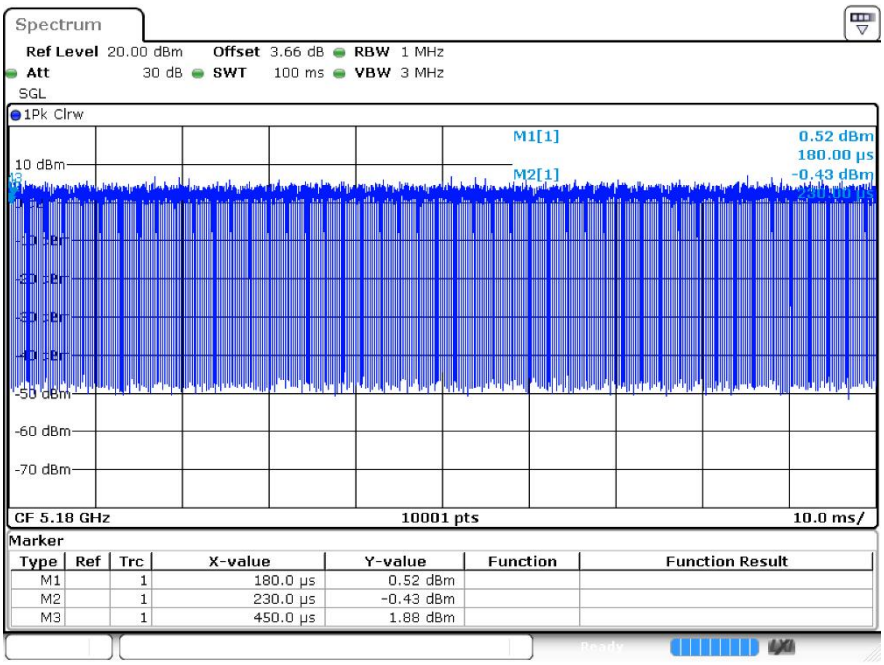
Duty Cycle n40 5190MHz Ant1



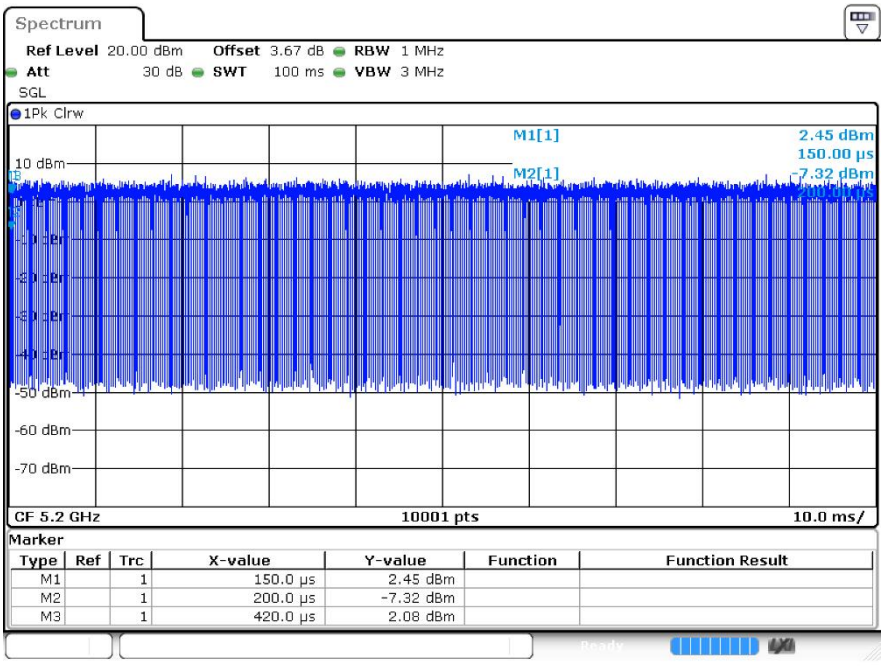
Duty Cycle n40 5230MHz Ant1



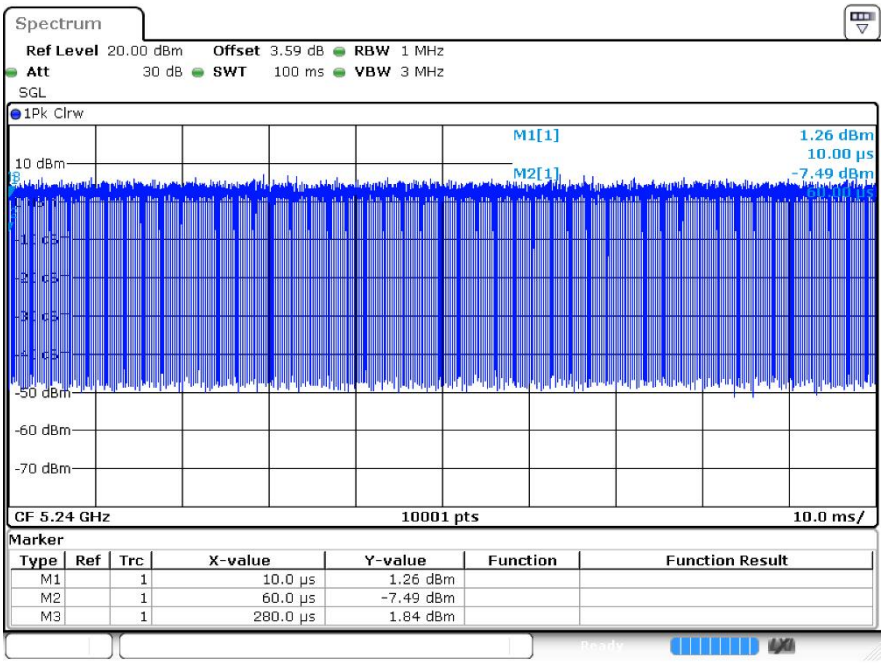
Duty Cycle ac20 5180MHz Ant1



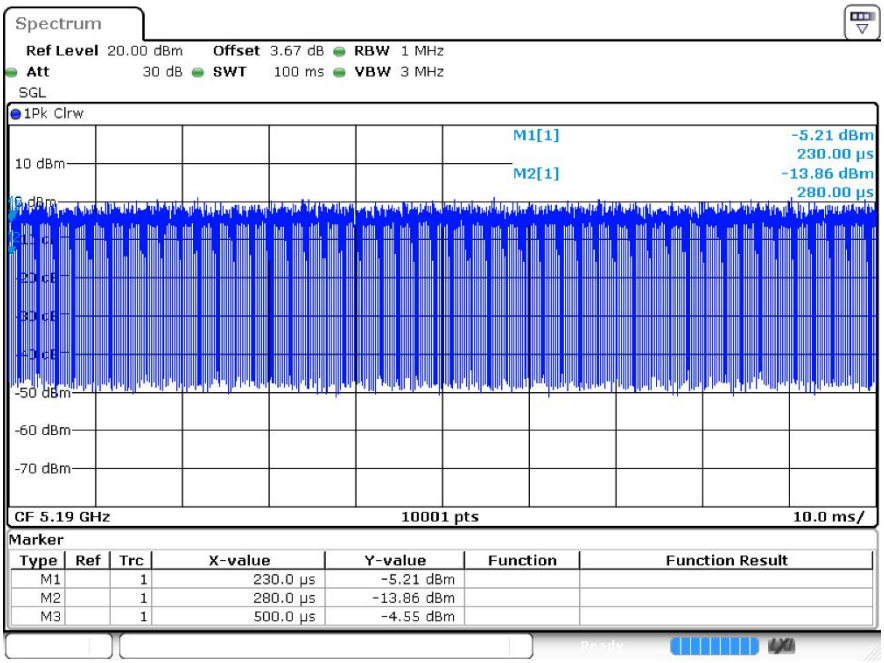
Duty Cycle ac20 5200MHz Ant1



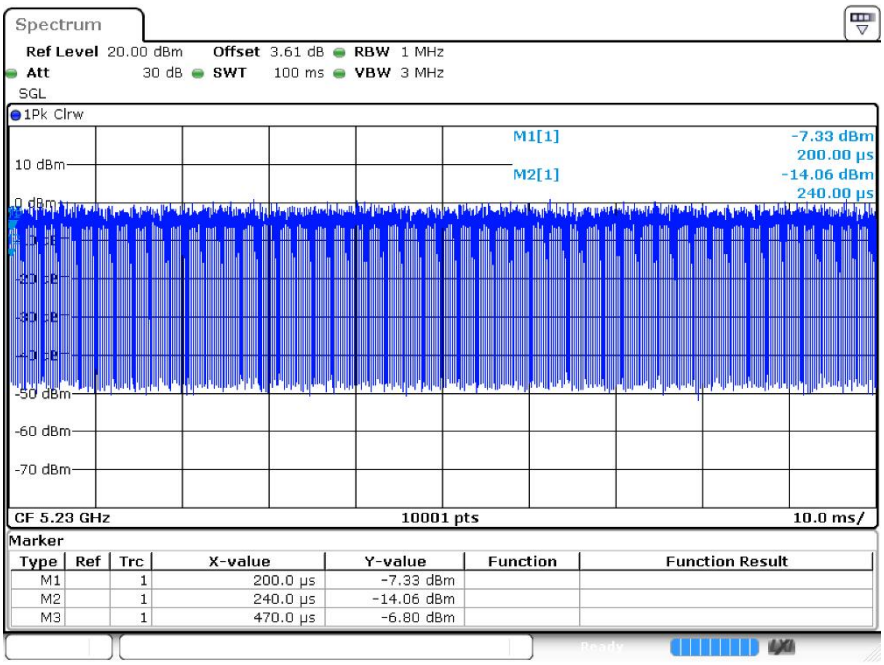
Duty Cycle ac20 5240MHz Ant1



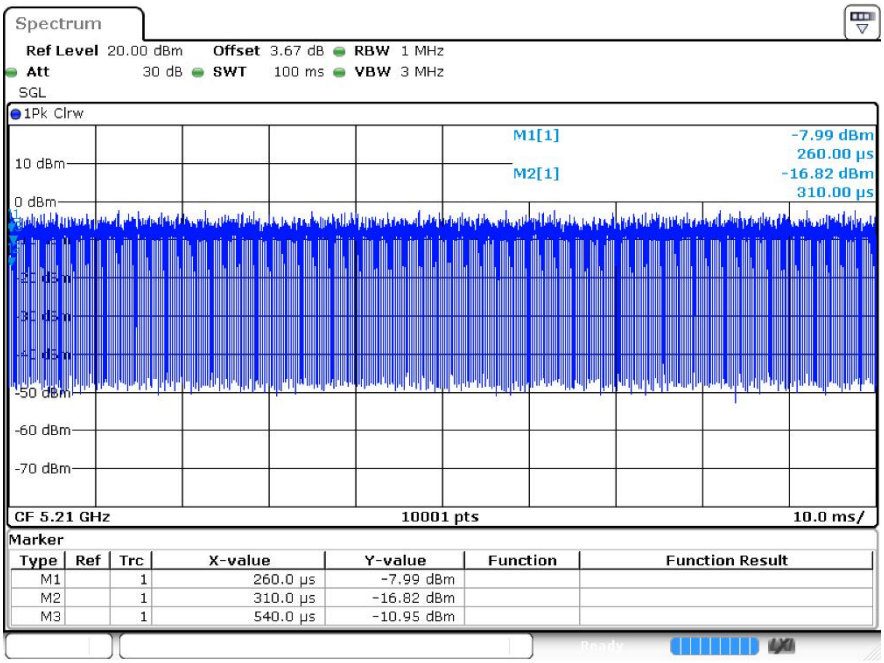
Duty Cycle ac40 5190MHz Ant1



Duty Cycle ac40 5230MHz Ant1



Duty Cycle ac80 5210MHz Ant1



2 Maximum Conducted Output Power

2.1 Test Result

Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
a	5180	Ant1	13.51	24	Pass
a	5200	Ant1	13.6	24	Pass
a	5240	Ant1	13.73	24	Pass
n20	5180	Ant1	12.89	24	Pass
n20	5200	Ant1	13.01	24	Pass
n20	5240	Ant1	13.12	24	Pass
n40	5190	Ant1	12.64	24	Pass
n40	5230	Ant1	12.75	24	Pass
ac20	5180	Ant1	12.89	24	Pass
ac20	5200	Ant1	13.05	24	Pass
ac20	5240	Ant1	13.22	24	Pass
ac40	5190	Ant1	12.8	24	Pass
ac40	5230	Ant1	12.66	24	Pass
ac80	5210	Ant1	12.48	24	Pass

Note:

The duty factor has been compensated into the result.

3 -26dB Bandwidth

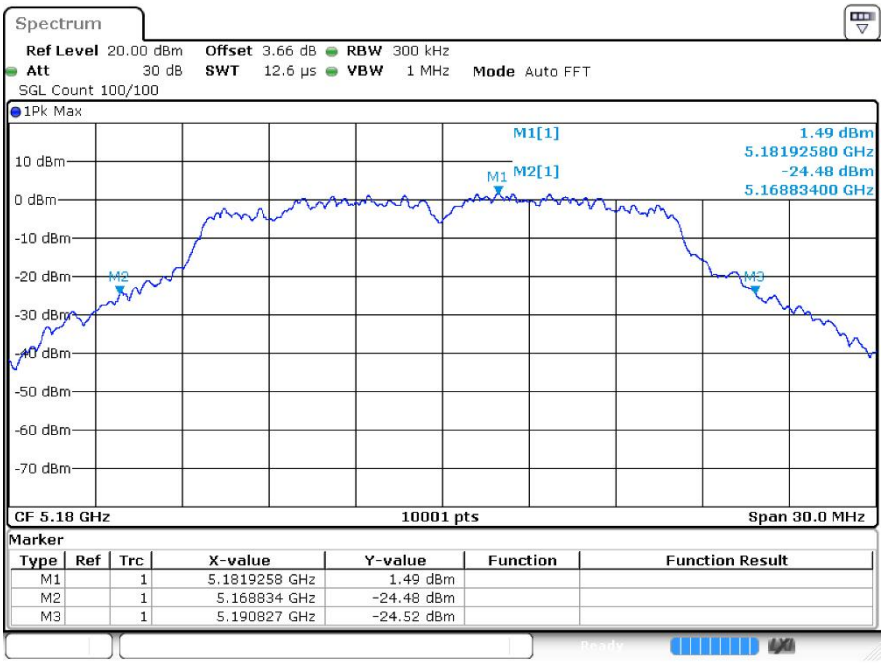
3.1 Test Result

Mode	Frequency (MHz)	Antenna	-26 dB Bandwidth (MHz)	Limit -26 dB Bandwidth (MHz)	Verdict
a	5180	Ant1	21.993	0.5	Pass
a	5200	Ant1	23.463	0.5	Pass
a	5240	Ant1	22.332	0.5	Pass
n20	5180	Ant1	22.623	0.5	Pass
n20	5200	Ant1	22.485	0.5	Pass
n20	5240	Ant1	21.93	0.5	Pass
n40	5190	Ant1	40.638	0.5	Pass
n40	5230	Ant1	41.682	0.5	Pass
ac20	5180	Ant1	22.263	0.5	Pass
ac20	5200	Ant1	22.77	0.5	Pass
ac20	5240	Ant1	22.698	0.5	Pass
ac40	5190	Ant1	43.41	0.5	Pass
ac40	5230	Ant1	41.832	0.5	Pass
ac80	5210	Ant1	83.316	0.5	Pass

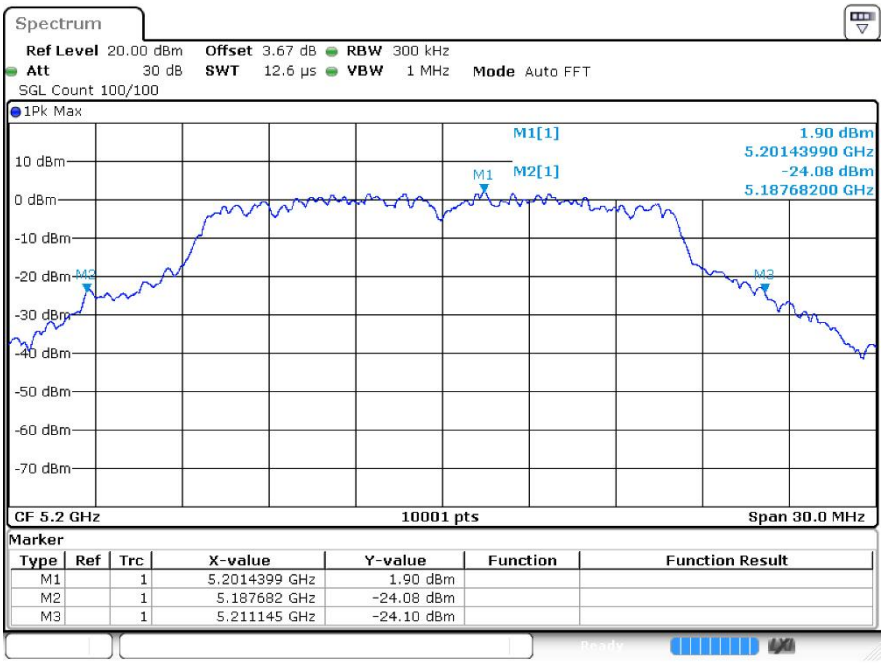
3.2 Test Graphs

Test Graphs

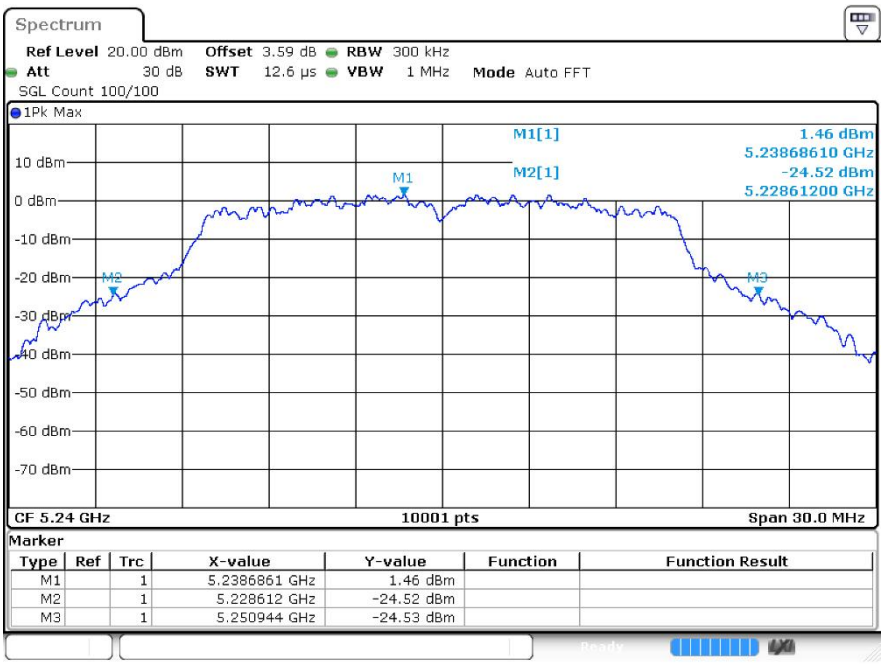
-26dB Bandwidth a 5180MHz Ant1



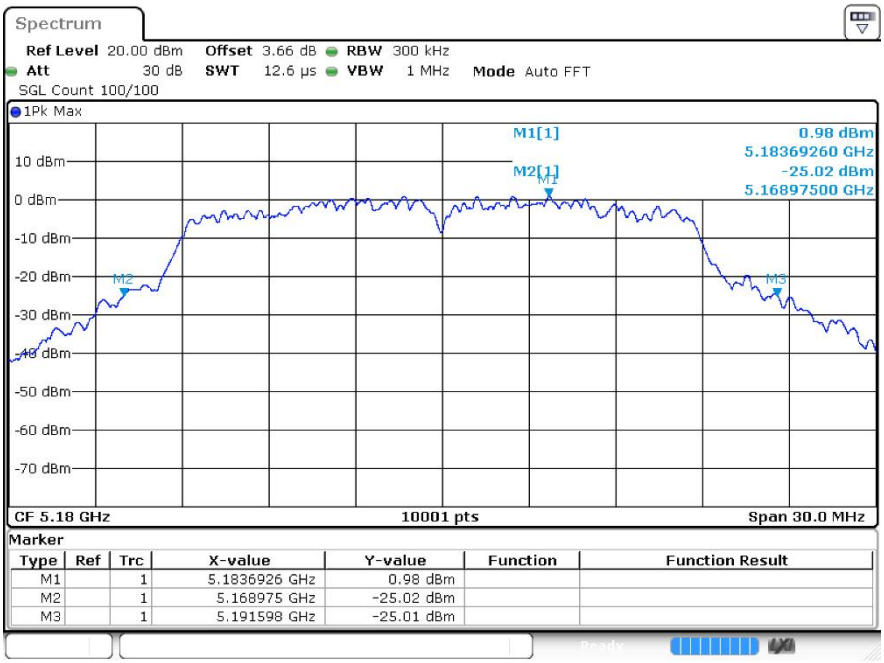
-26dB Bandwidth a 5200MHz Ant1



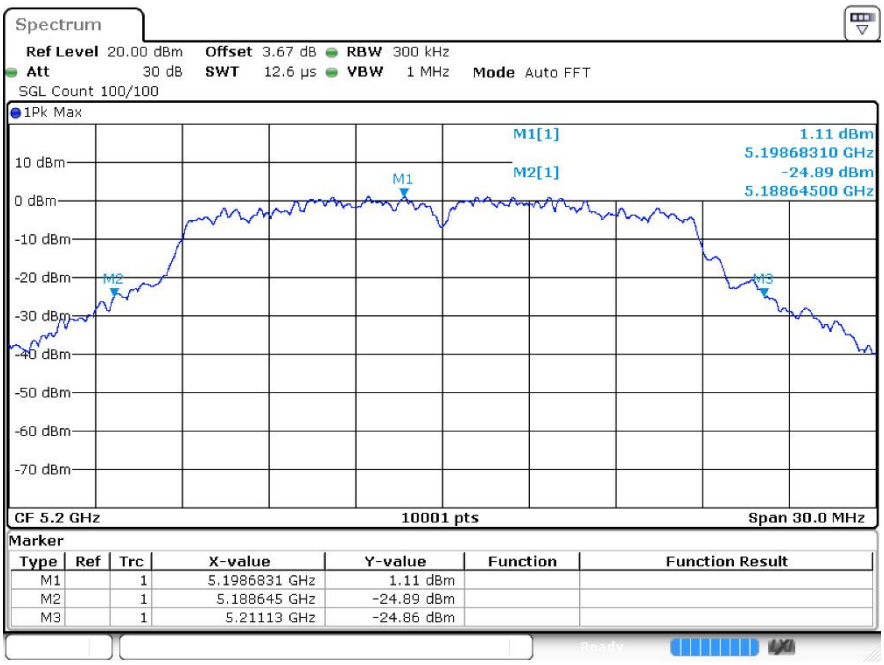
-26dB Bandwidth a 5240MHz Ant1



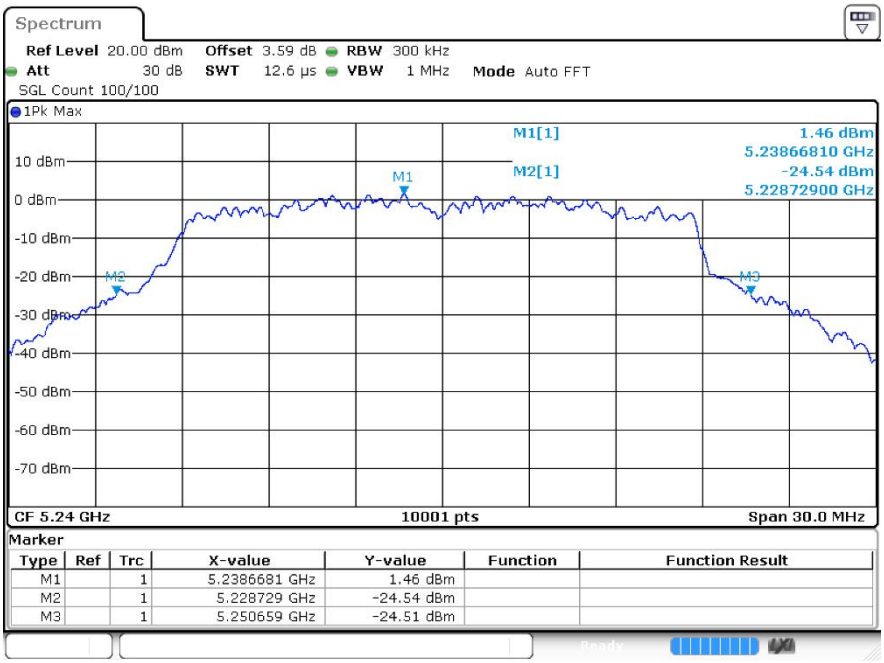
-26dB Bandwidth n20 5180MHz Ant1



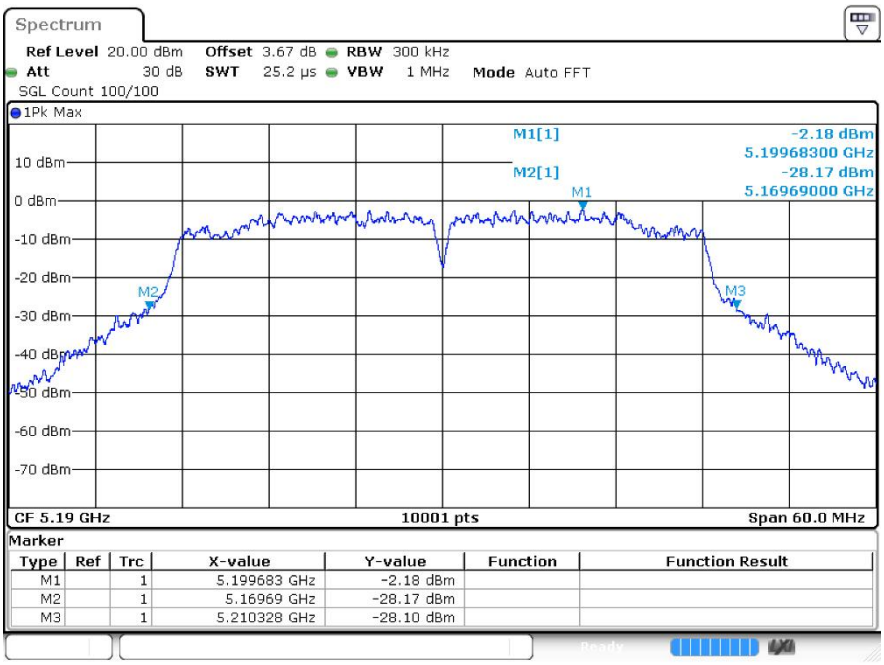
-26dB Bandwidth n20 5200MHz Ant1



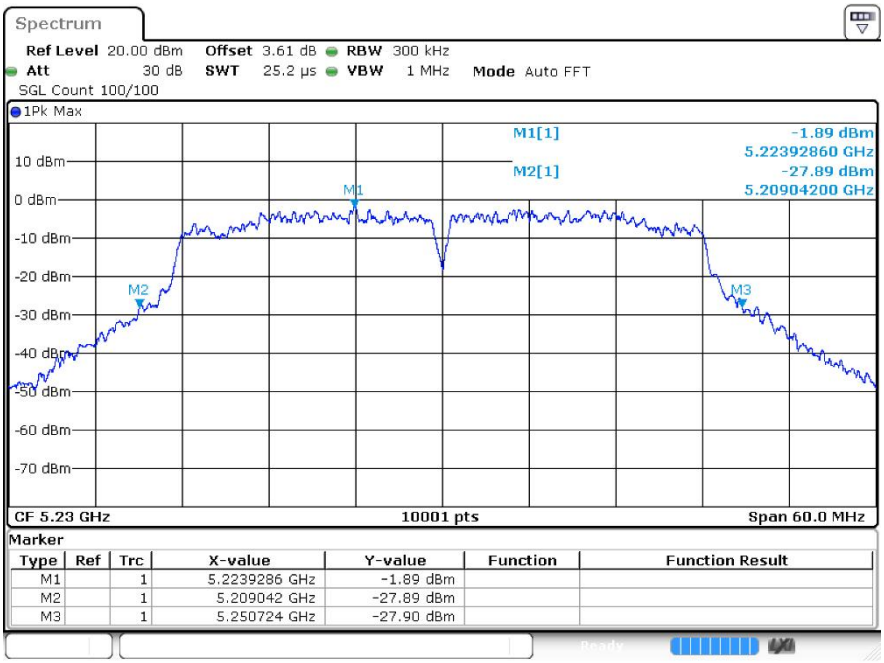
-26dB Bandwidth n20 5240MHz Ant1



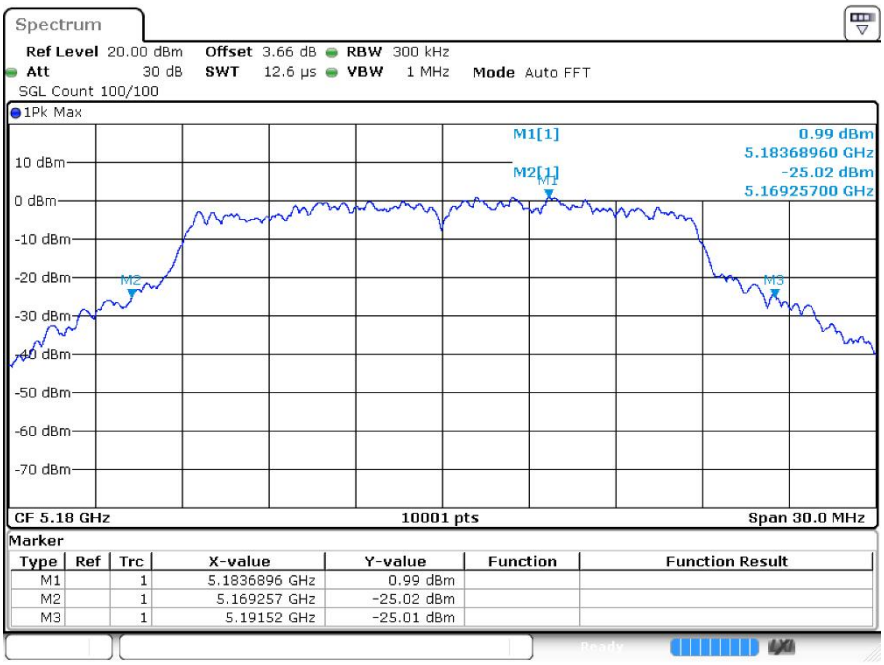
-26dB Bandwidth n40 5190MHz Ant1



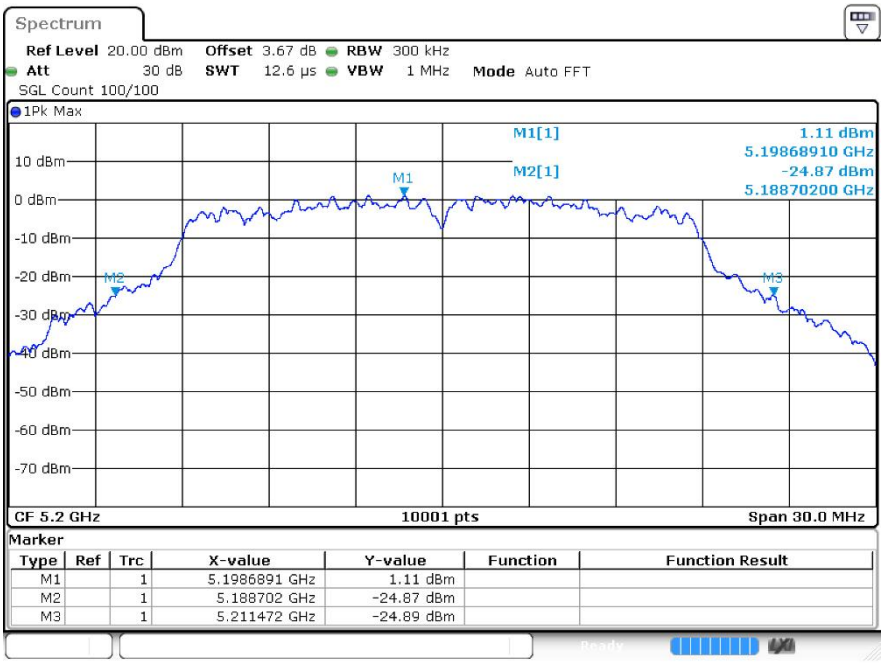
-26dB Bandwidth n40 5230MHz Ant1



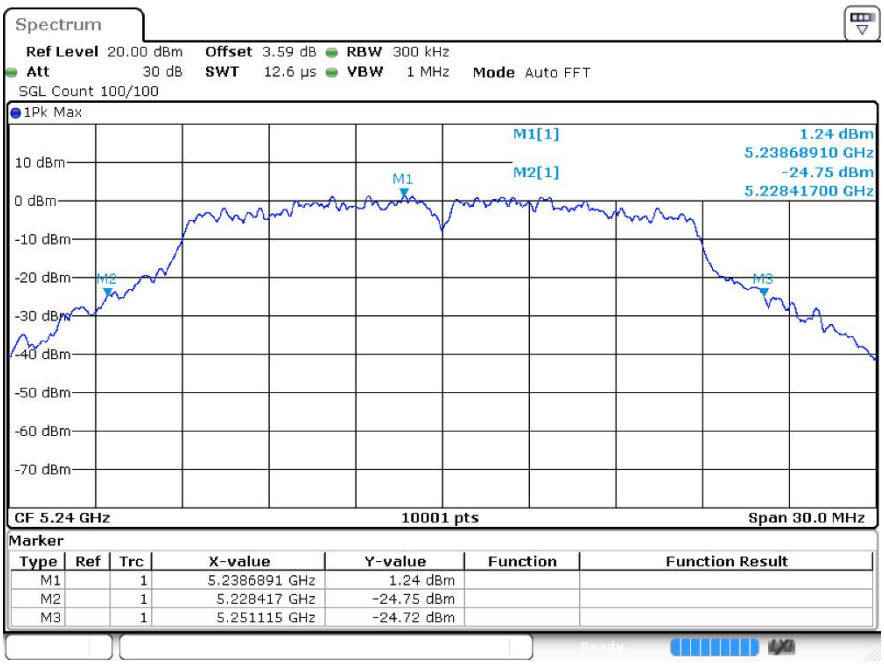
-26dB Bandwidth ac20 5180MHz Ant1



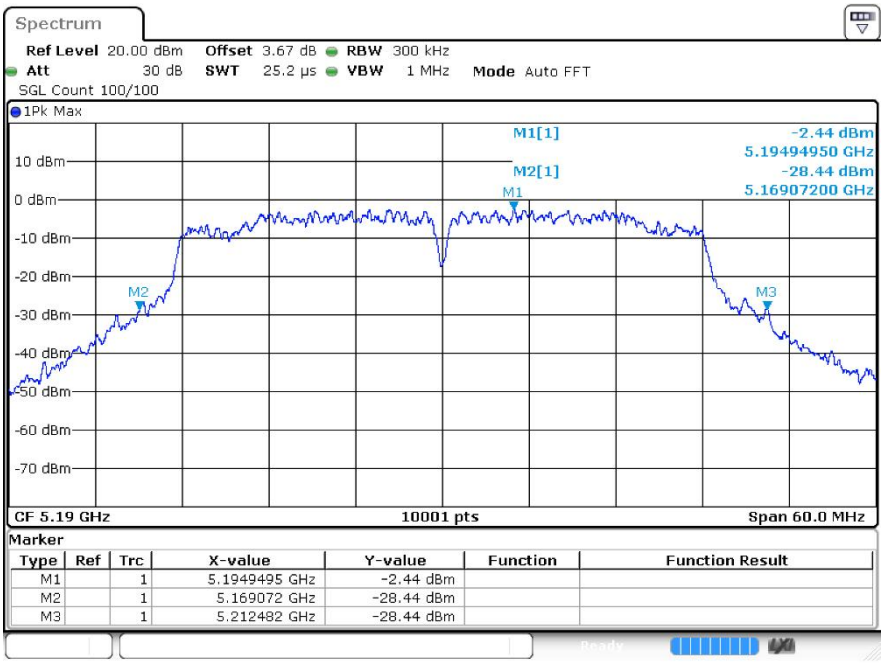
-26dB Bandwidth ac20 5200MHz Ant1



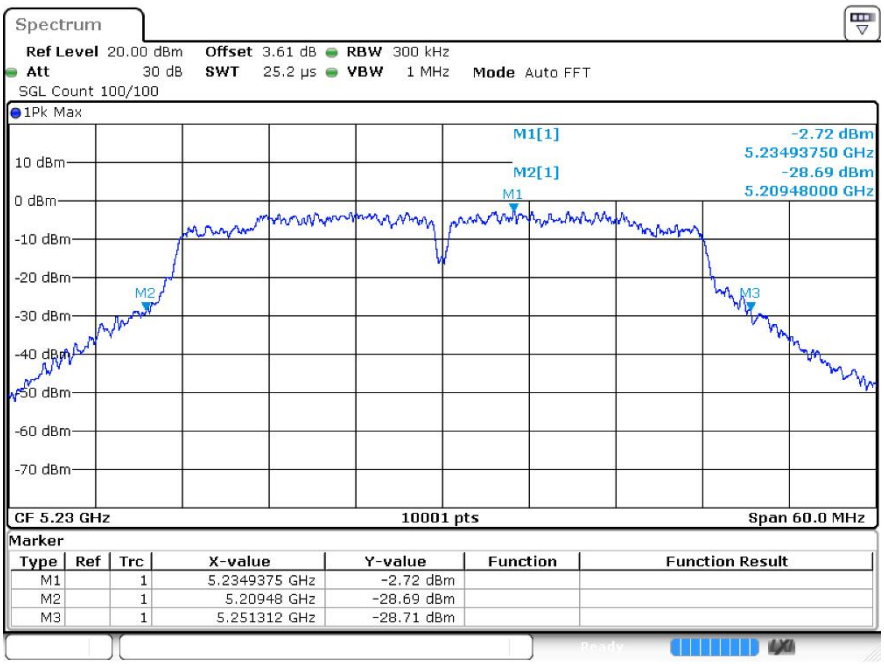
-26dB Bandwidth ac20 5240MHz Ant1



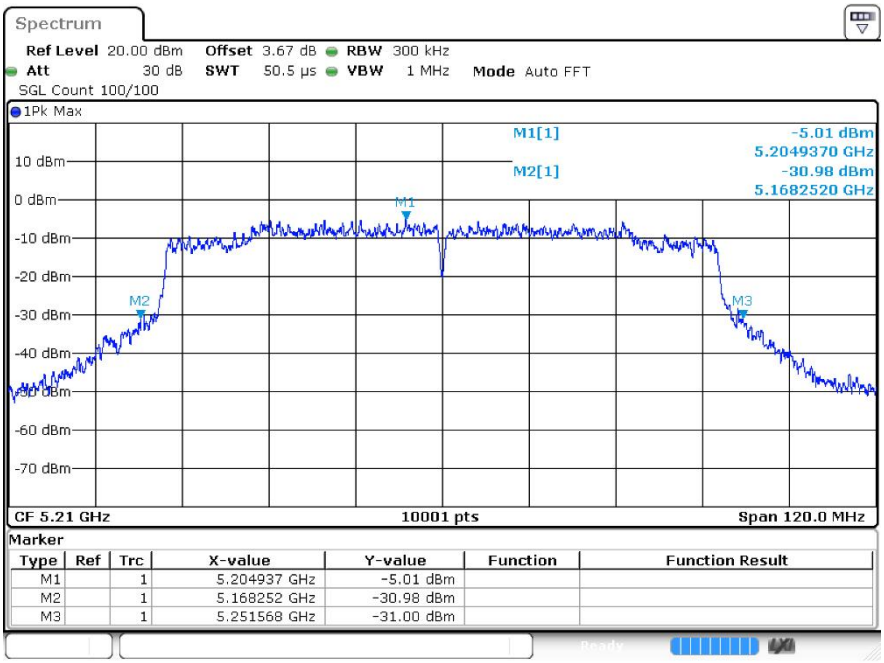
-26dB Bandwidth ac40 5190MHz Ant1



-26dB Bandwidth ac40 5230MHz Ant1



-26dB Bandwidth ac80 5210MHz Ant1



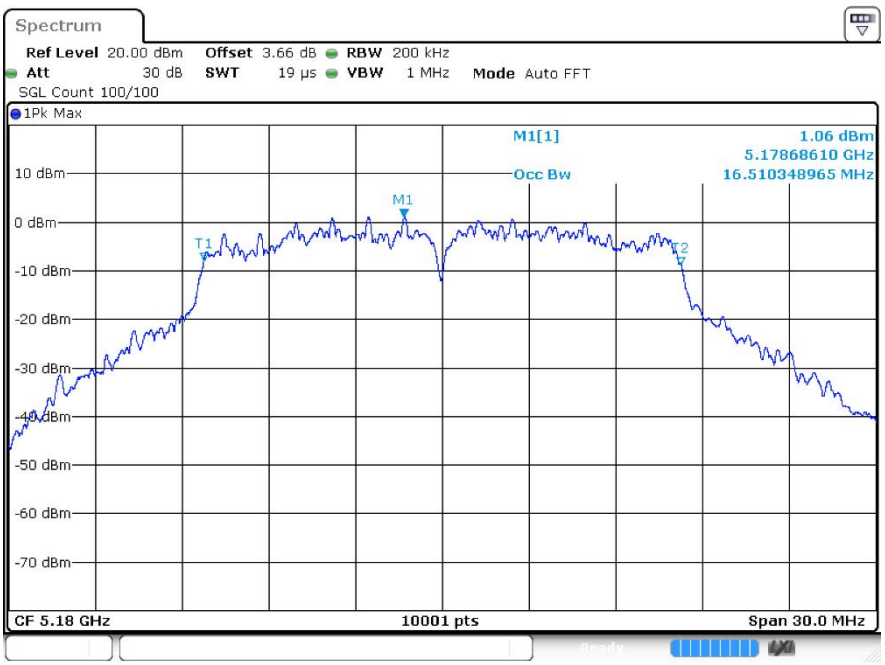
4 Occupied Channel Bandwidth

4.1 Test Result

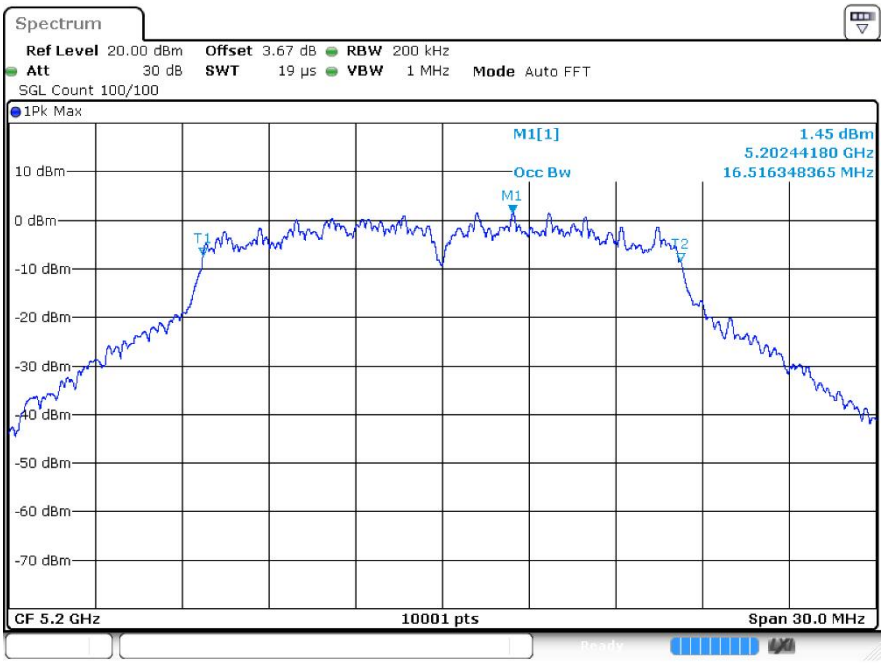
Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
a	5180	Ant1	16.51
a	5200	Ant1	16.516
a	5240	Ant1	16.498
n20	5180	Ant1	17.611
n20	5200	Ant1	17.554
n20	5240	Ant1	17.572
n40	5190	Ant1	36.026
n40	5230	Ant1	36.062
ac20	5180	Ant1	17.668
ac20	5200	Ant1	17.641
ac20	5240	Ant1	17.584
ac40	5190	Ant1	36.014
ac40	5230	Ant1	36.068
ac80	5210	Ant1	74.993

4.2 Test Graphs

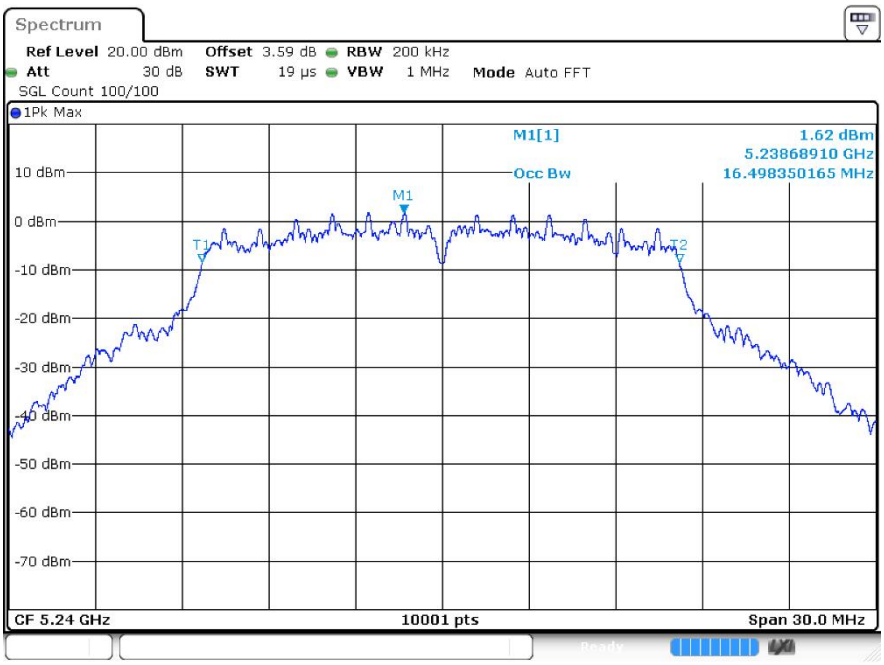
Test Graphs
OBW a 5180MHz Ant1



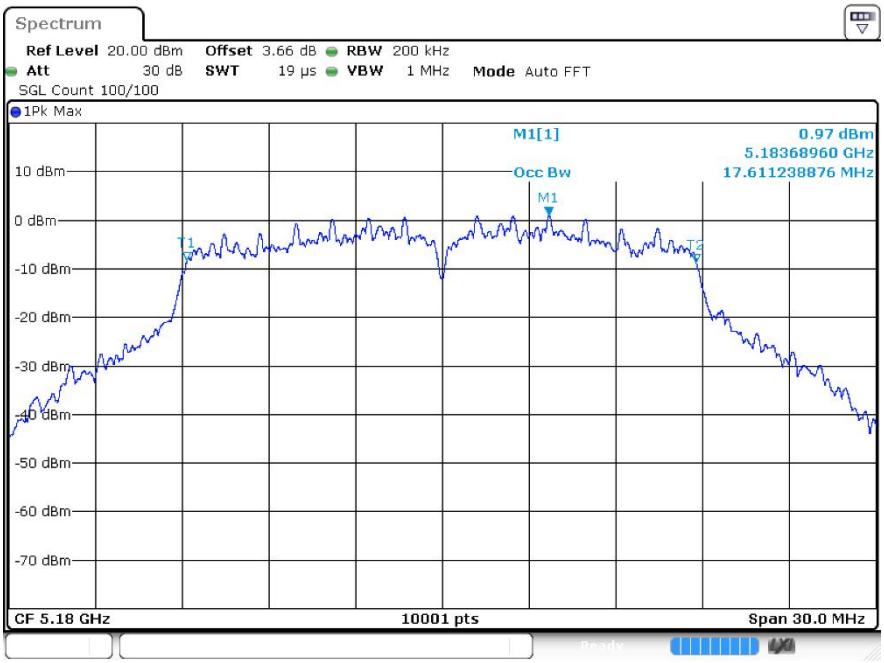
OBW a 5200MHz Ant1



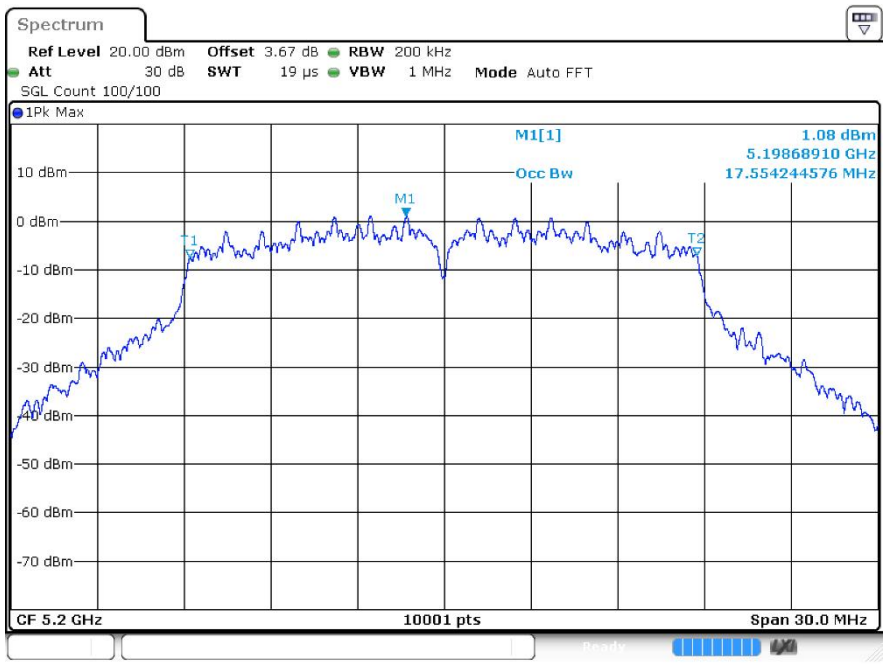
OBW a 5240MHz Ant1



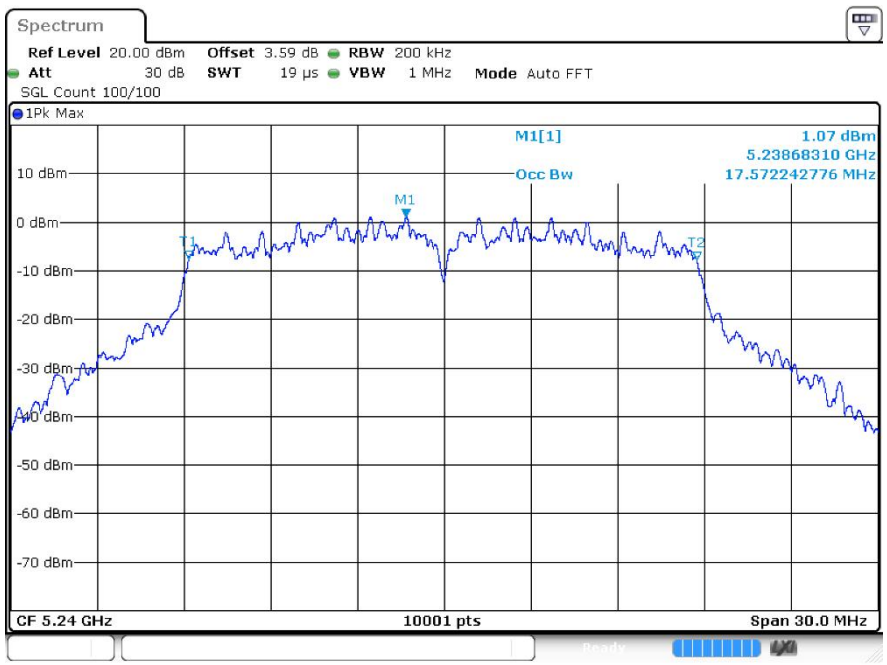
OBW n20 5180MHz Ant1



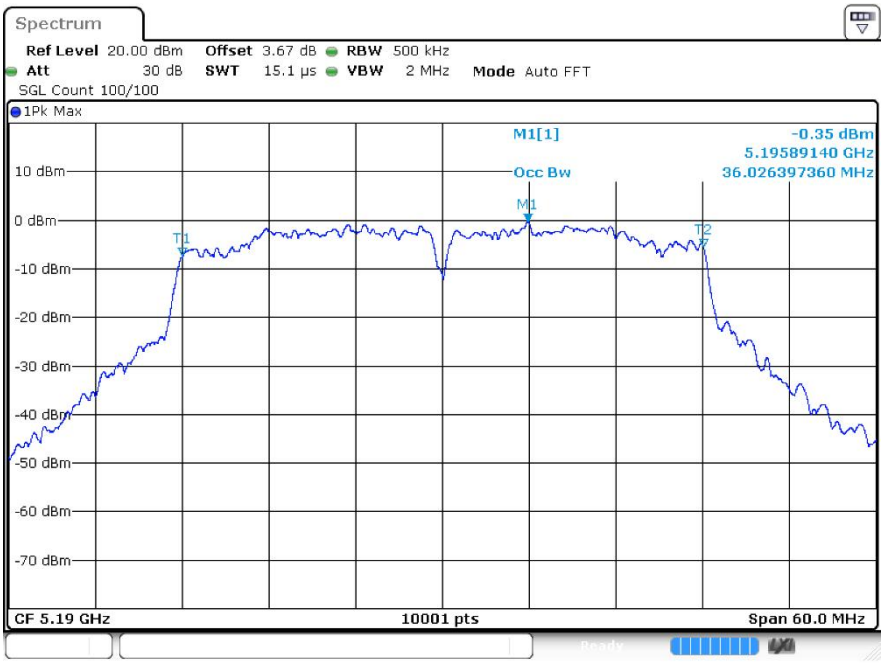
OBW n20 5200MHz Ant1



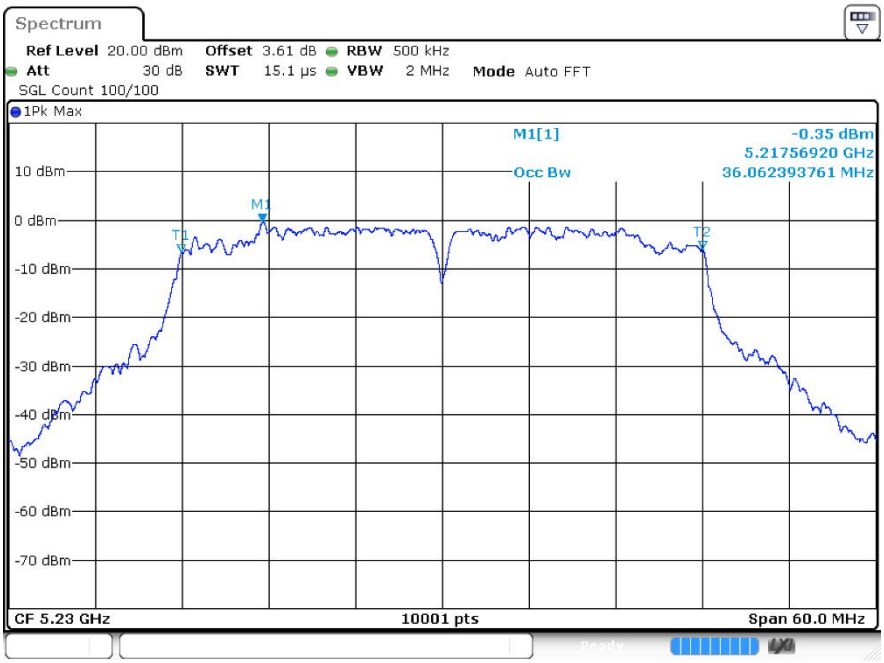
OBW n20 5240MHz Ant1



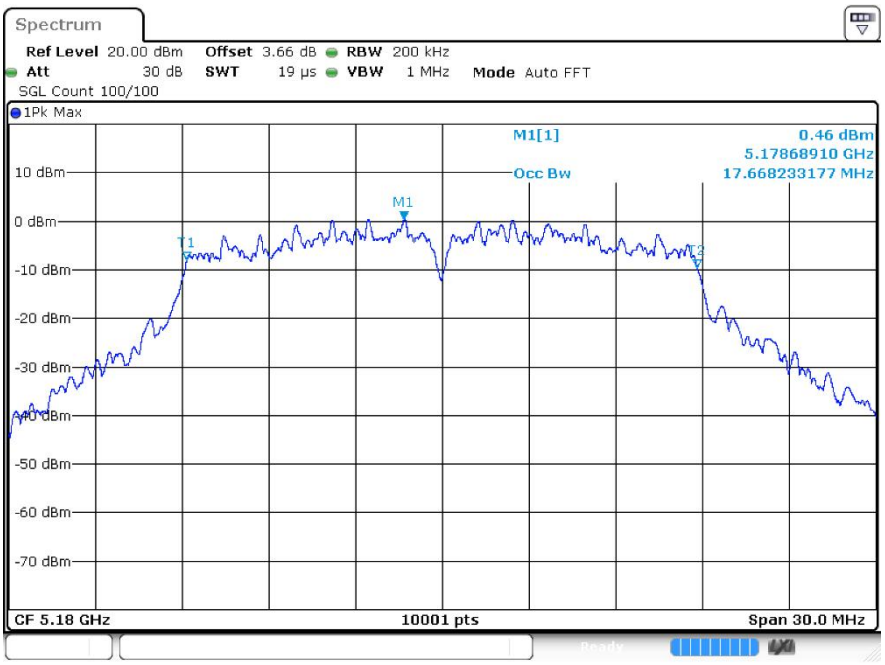
OBW n40 5190MHz Ant1



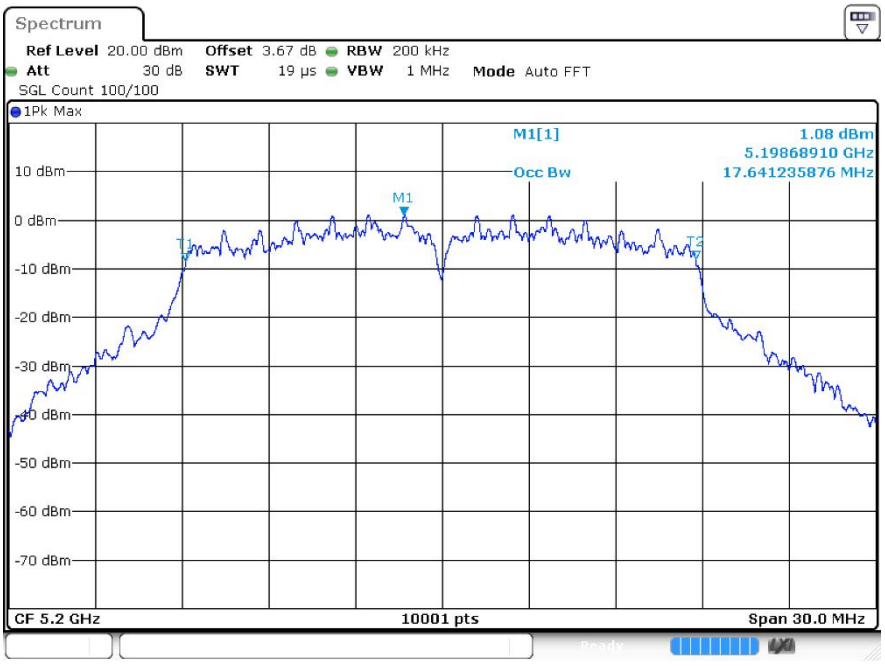
OBW n40 5230MHz Ant1



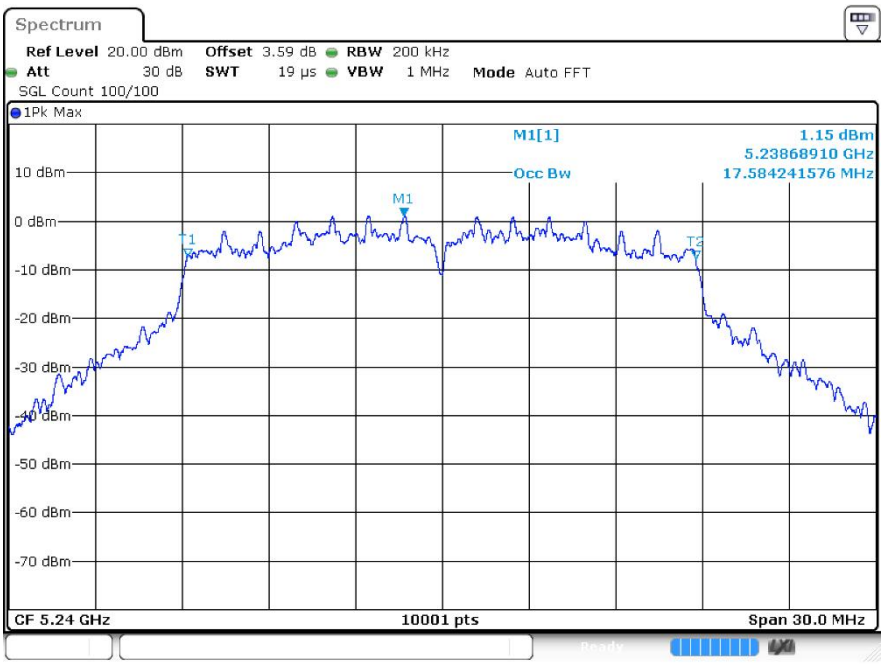
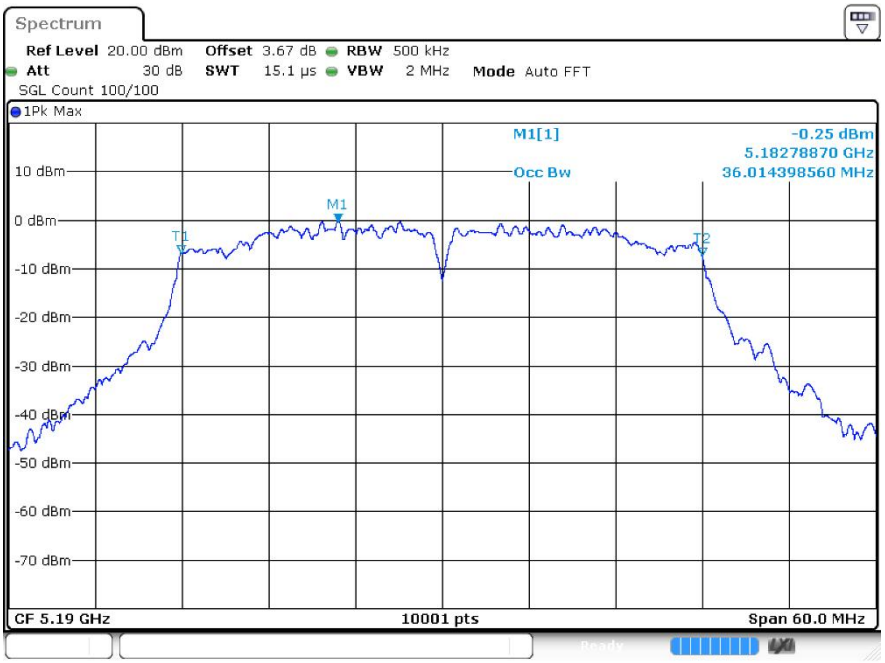
OBW ac20 5180MHz Ant1



OBW ac20 5200MHz Ant1



OBW ac20 5240MHz Ant1



OBW ac40 5190MHz Ant1