



Appendix D

RF Test Data for B1 WIFI(Conducted Measurement)

Product Name: AUTOMOTIVE DIAGNOSIS SYSTEM,COMPREHENSIVE TPMS TOOL

Trade Mark: AUTEL

Test Model: MaxiCheck MX900-TS

Environmental Conditions

Temperature:	25.5°C
Relative Humidity:	52.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Simba Huang
Supervised by:	Seal Chen



Contents

	Page
COVER PAGE	
1 Duty Cycle	3
1.1 Test Result	3
1.2 Test Graphs	4
2 Maximum Conducted Output Power	11
2.1 Test Result	11
3 -26dB Bandwidth	12
3.1 Test Result	12
3.2 Test Graphs	13
4 Occupied Channel Bandwidth	20
4.1 Test Result	20
4.2 Test Graphs	21
5 Maximum Power Spectral Density Level	28
5.1 Test Result	28
5.2 Test Graphs	29
6 Frequency Stability	36
6.1 Test Result	36
7 Conducted RF Spurious Emission	40
7.1 Test Result	40
7.2 Test Graphs	41
8 Restrict Band	48
8.1 Test Result	48
8.2 Test Graphs	50



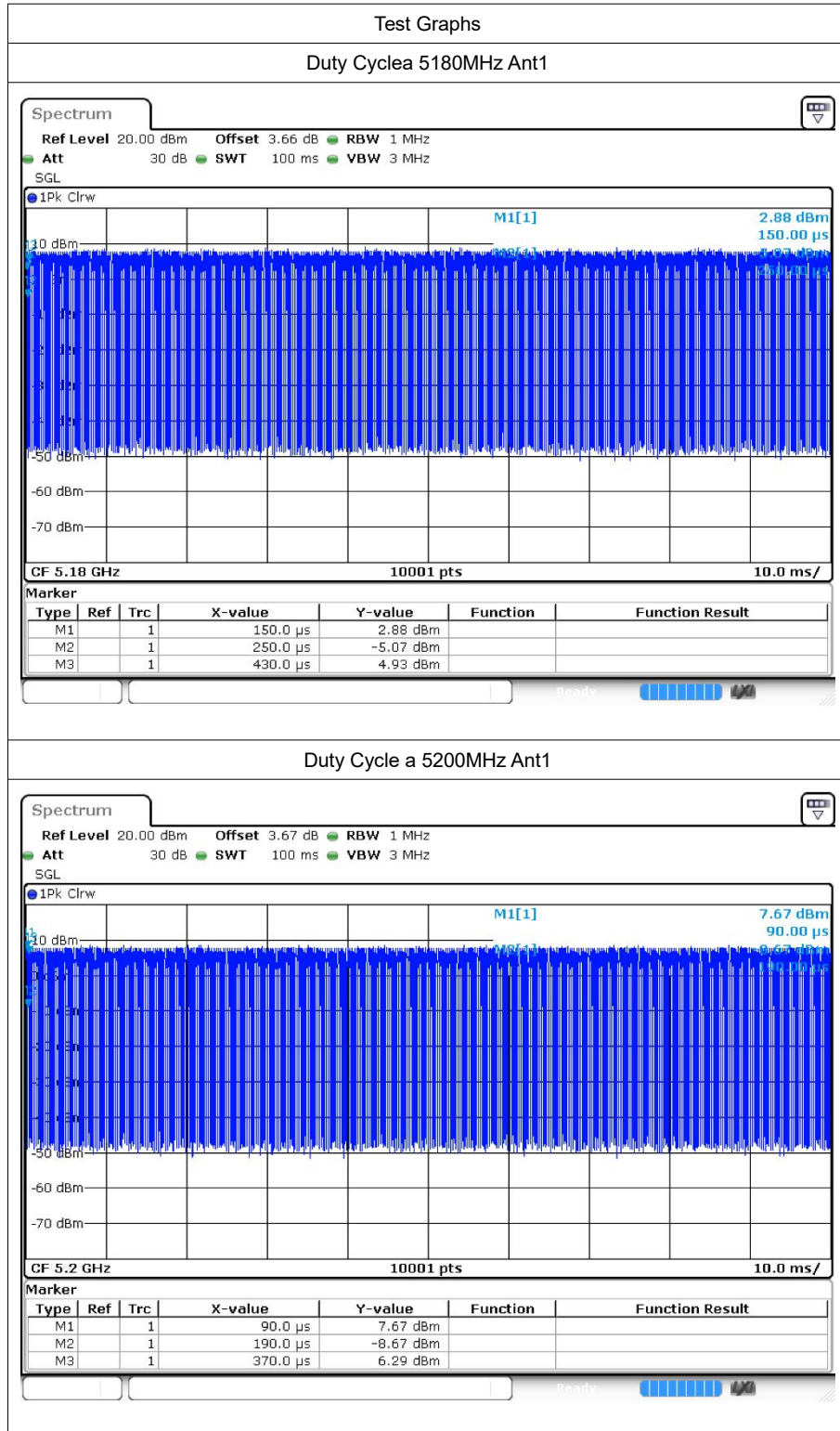
1 Duty Cycle

1.1 Test Result

Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
a	5180	Ant1	67.83	1.69	5.56
a	5200	Ant1	67.75	1.69	5.56
a	5240	Ant1	67.85	1.68	5.26
n20	5180	Ant1	66.49	1.77	5.88
n20	5200	Ant1	66.41	1.78	5.88
n20	5240	Ant1	66.42	1.78	5.88
n40	5190	Ant1	55.4	2.56	10
n40	5230	Ant1	55.59	2.55	10
ac20	5180	Ant1	64.26	1.92	6.67
ac20	5200	Ant1	64.59	1.9	6.67
ac20	5240	Ant1	64.25	1.92	6.25
ac40	5190	Ant1	52.32	2.81	11.11
ac40	5230	Ant1	52.27	2.82	11.11
ac80	5210	Ant1	45.72	3.4	16.67

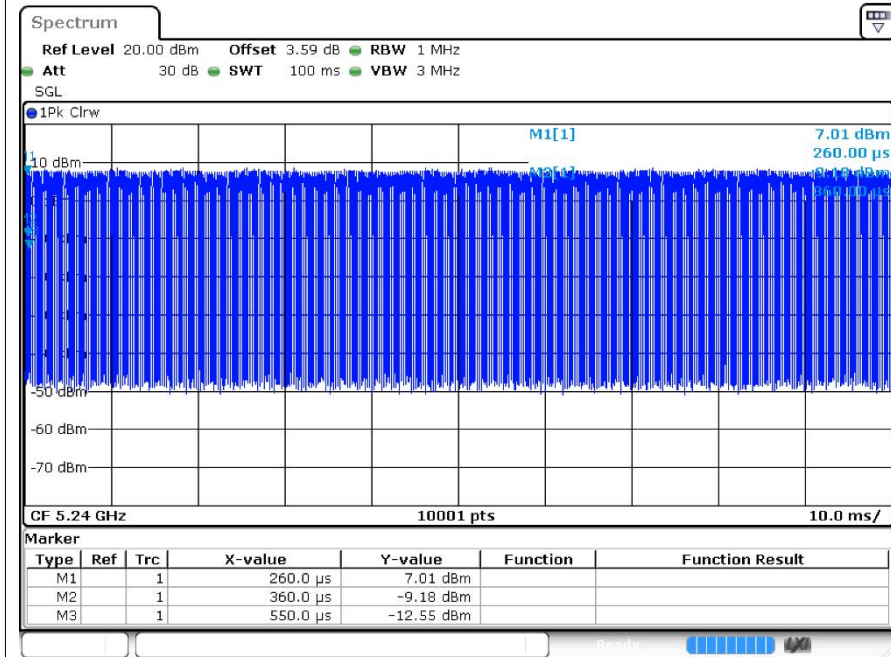


1.2 Test Graphs

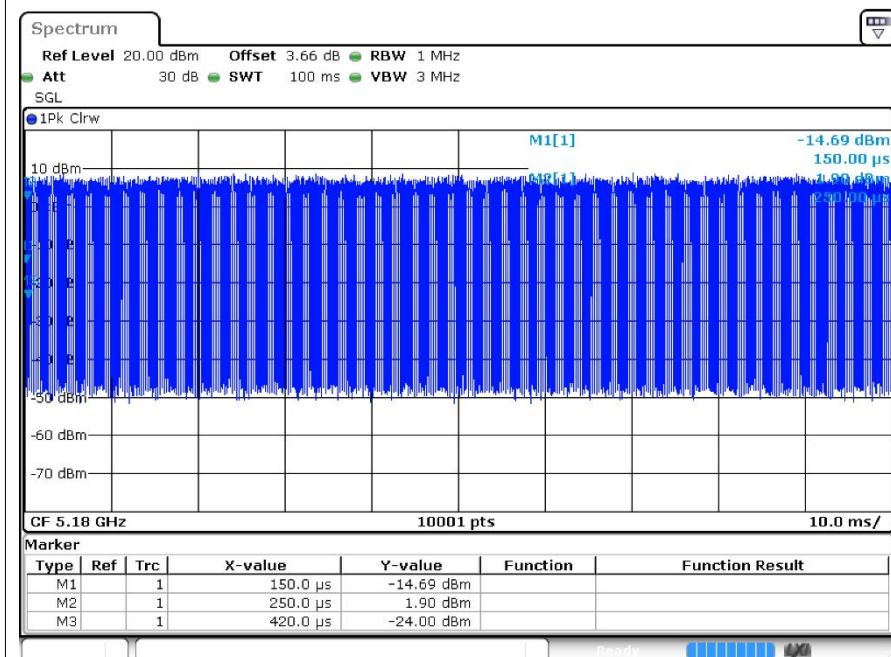


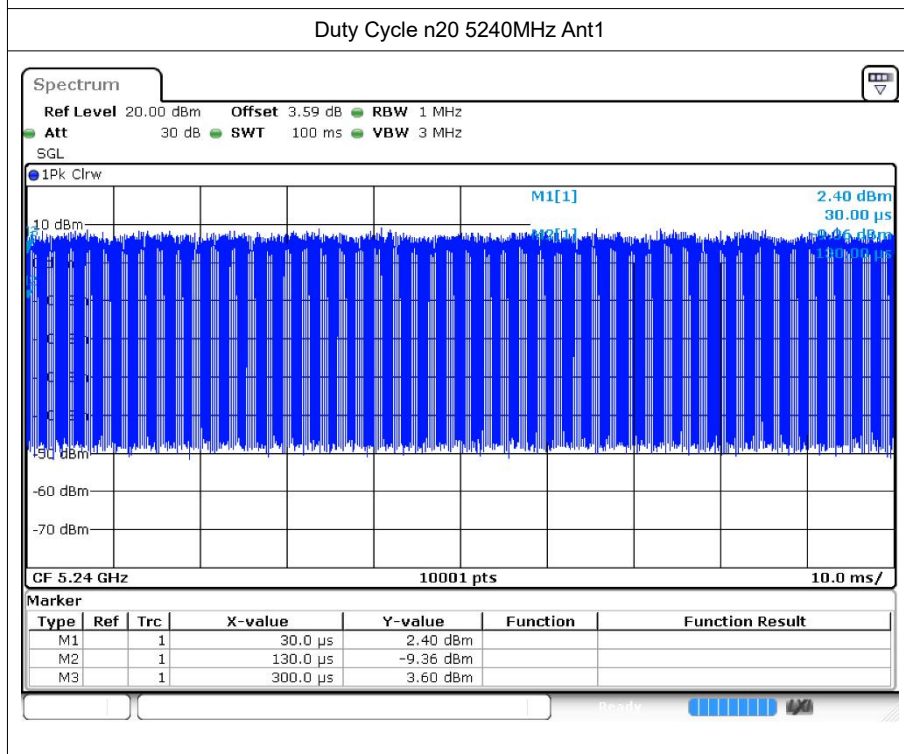
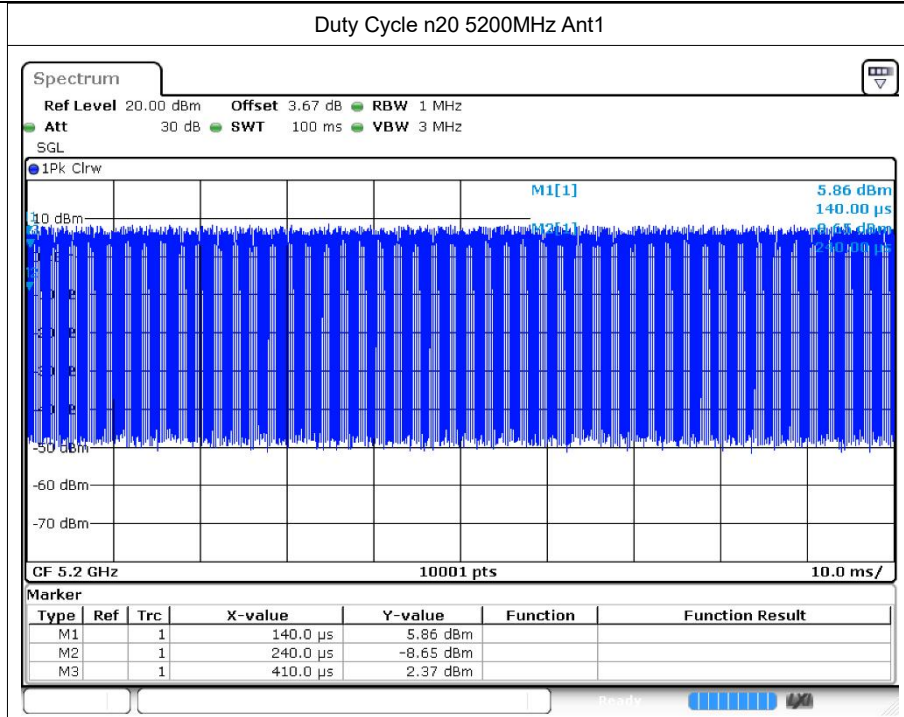


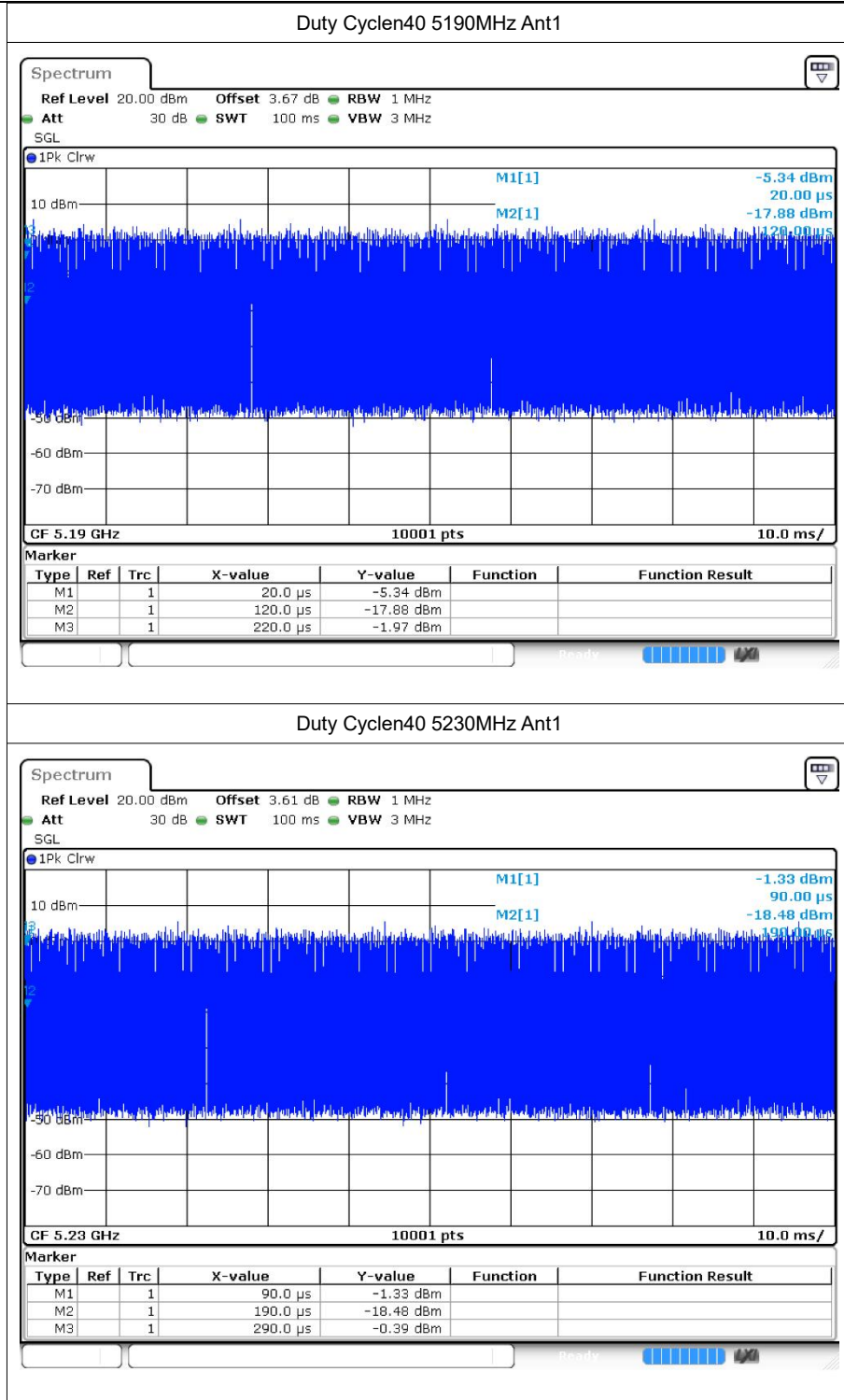
Duty Cyclea 5240MHz Ant1

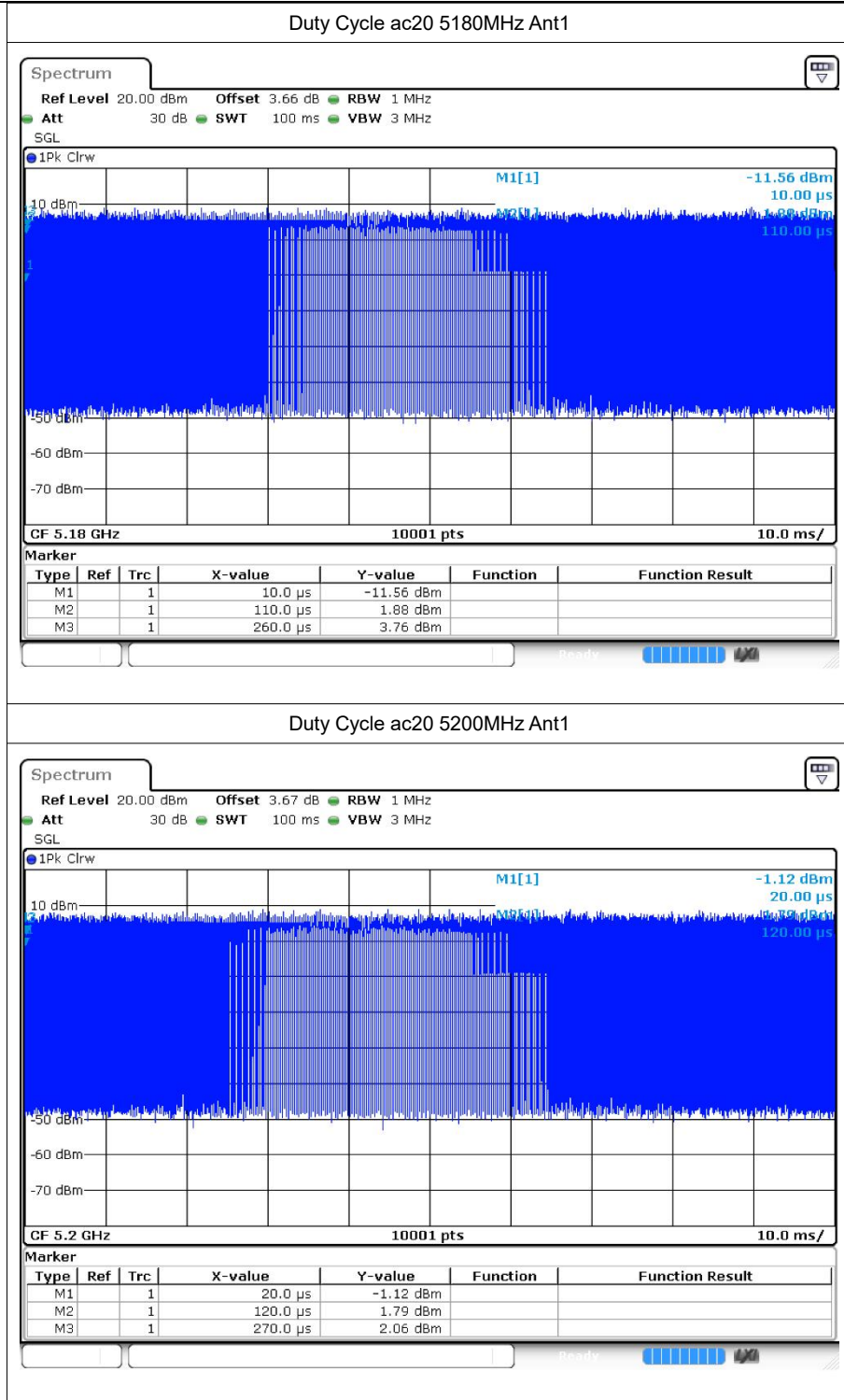


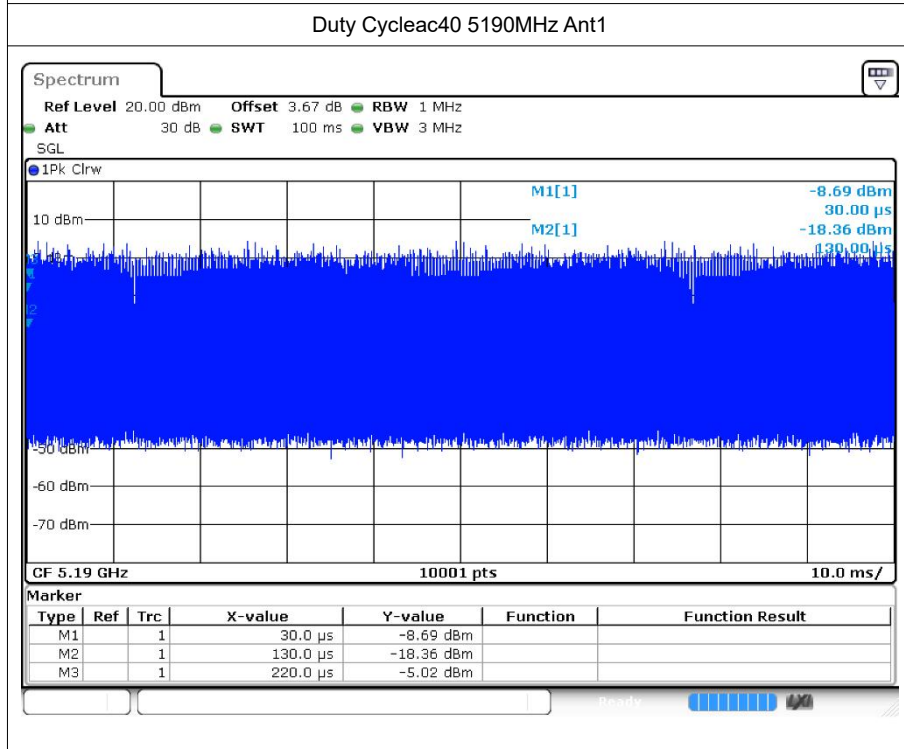
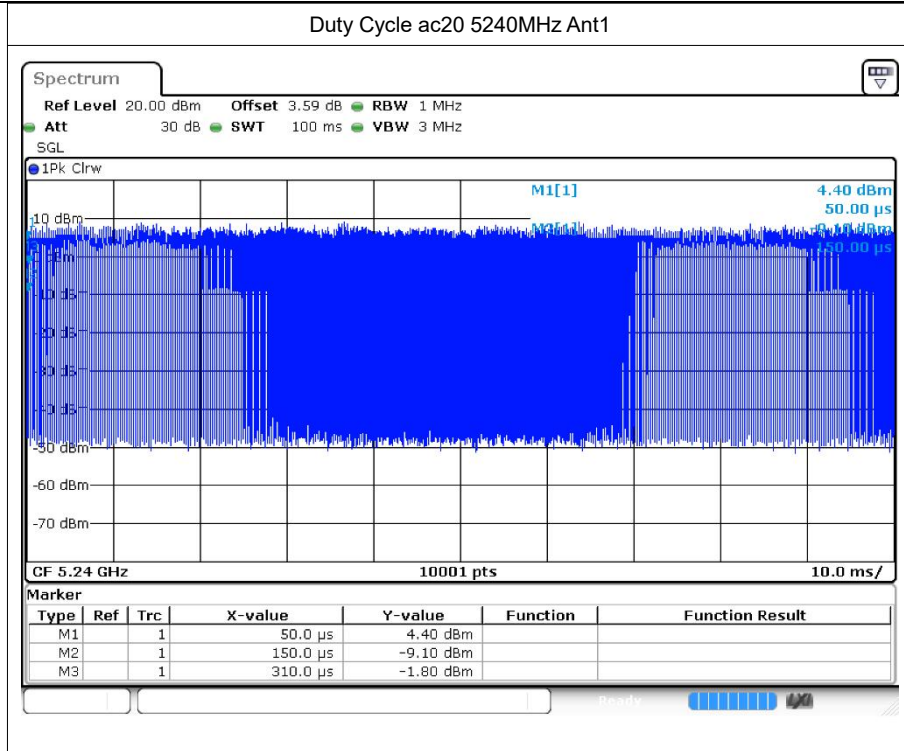
Duty Cycle n20 5180MHz Ant1

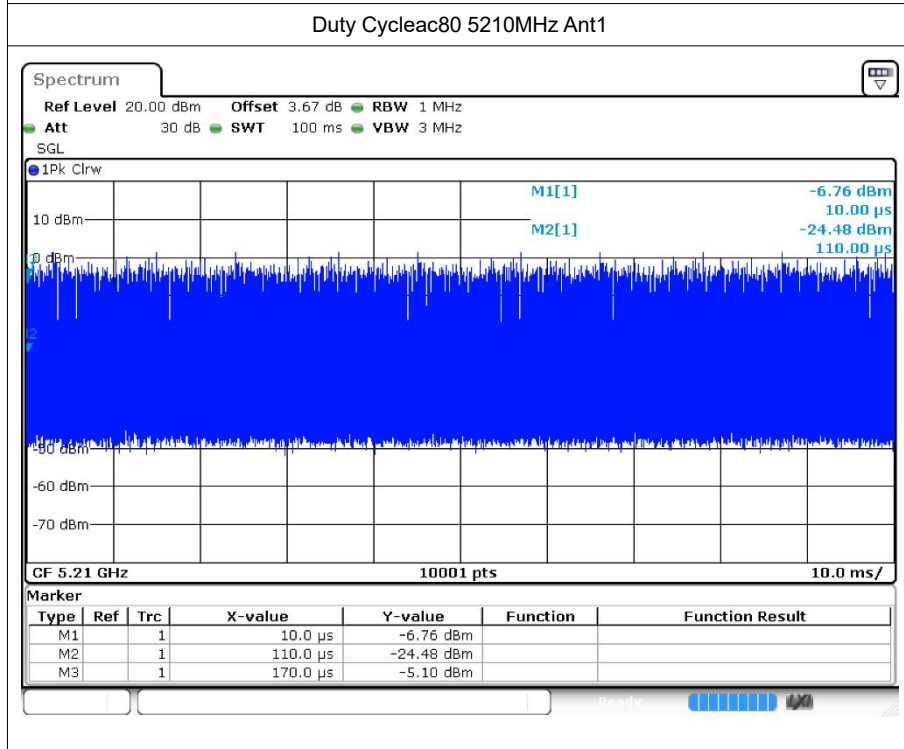
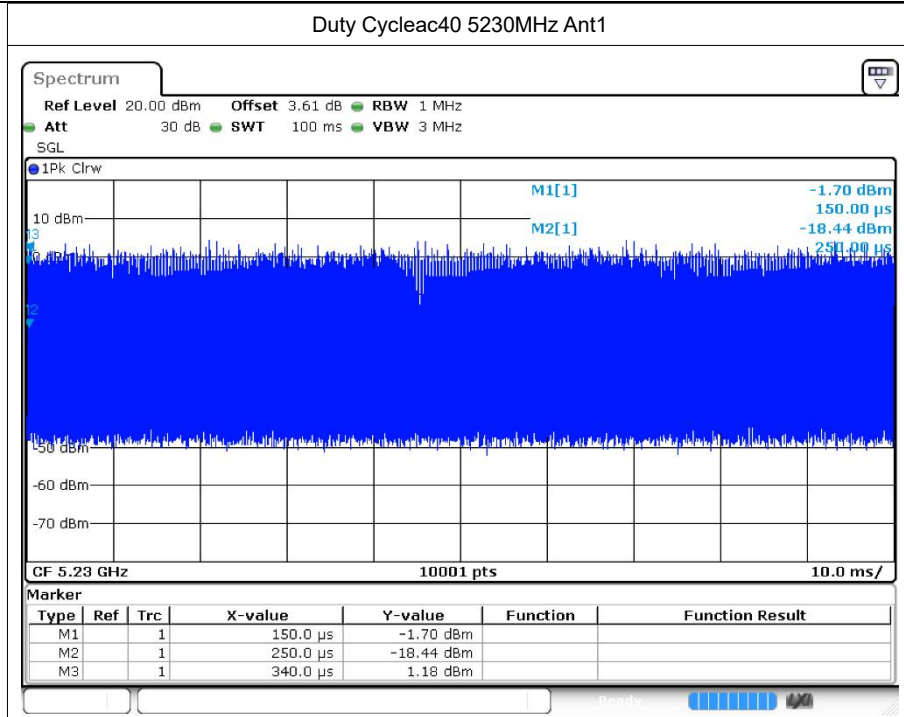












2 Maximum Conducted Output Power

2.1 Test Result

Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
a	5180	Ant1	15.28	24	Pass
a	5200	Ant1	15.02	24	Pass
a	5240	Ant1	15.02	24	Pass
n20	5180	Ant1	14.84	24	Pass
n20	5200	Ant1	14.78	24	Pass
n20	5240	Ant1	14.75	24	Pass
n40	5190	Ant1	15.2	24	Pass
n40	5230	Ant1	15.2	24	Pass
ac20	5180	Ant1	14.77	24	Pass
ac20	5200	Ant1	14.7	24	Pass
ac20	5240	Ant1	14.71	24	Pass
ac40	5190	Ant1	14.14	24	Pass
ac40	5230	Ant1	14.02	24	Pass
ac80	5210	Ant1	13.76	24	Pass

Note:

The duty factor has been compensated into the result.



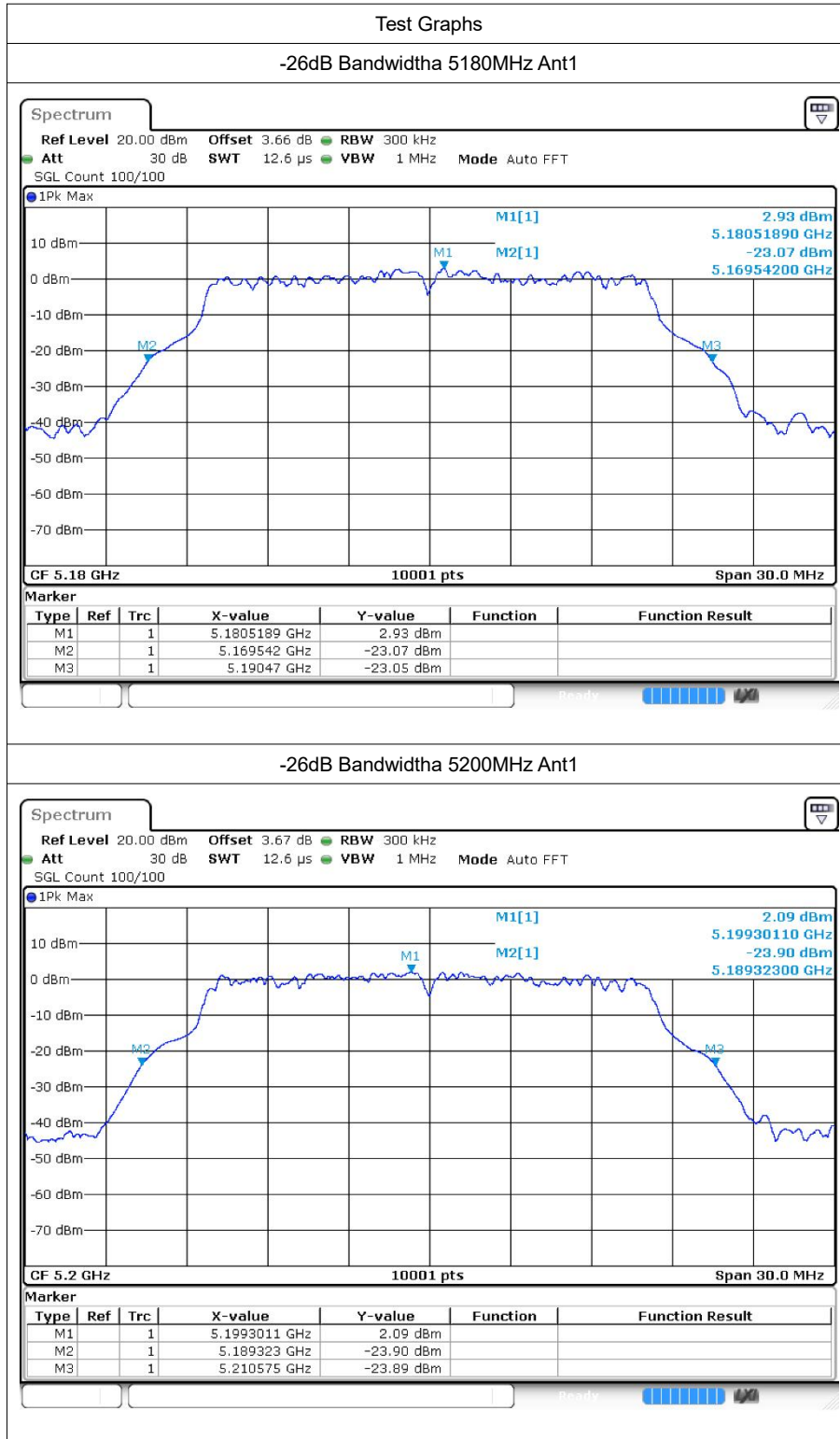
3 -26dB Bandwidth

3.1 Test Result

Mode	Frequency (MHz)	Antenna	-26 dB Bandwidth (MHz)	Limit -26 dB Bandwidth (MHz)	Verdict
a	5180	Ant1	20.928	0.5	Pass
a	5200	Ant1	21.252	0.5	Pass
a	5240	Ant1	20.937	0.5	Pass
n20	5180	Ant1	21.72	0.5	Pass
n20	5200	Ant1	21.069	0.5	Pass
n20	5240	Ant1	21.123	0.5	Pass
n40	5190	Ant1	39.174	0.5	Pass
n40	5230	Ant1	38.772	0.5	Pass
ac20	5180	Ant1	21.006	0.5	Pass
ac20	5200	Ant1	21.18	0.5	Pass
ac20	5240	Ant1	21.141	0.5	Pass
ac40	5190	Ant1	39.018	0.5	Pass
ac40	5230	Ant1	39.174	0.5	Pass
ac80	5210	Ant1	78.612	0.5	Pass

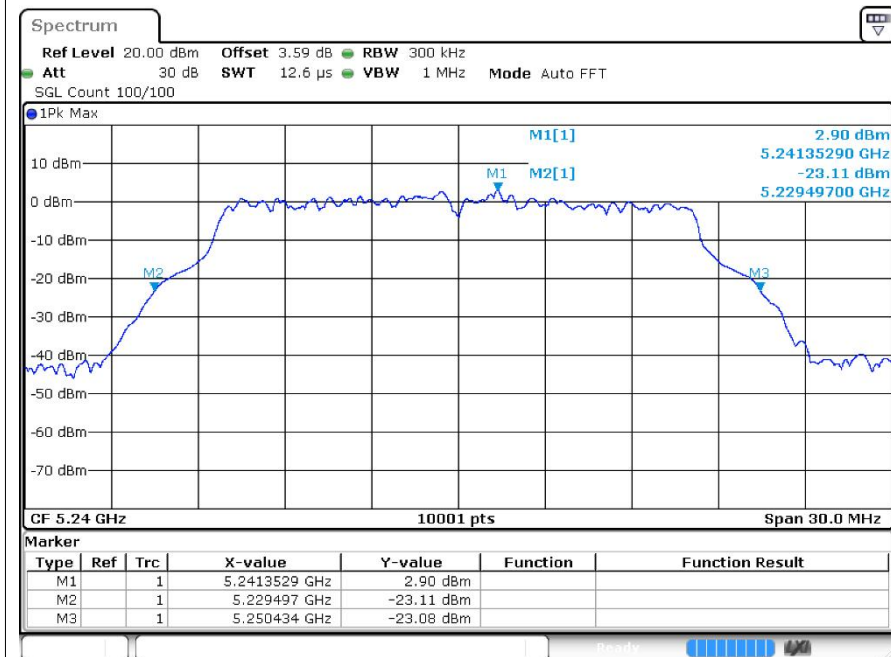


3.2 Test Graphs

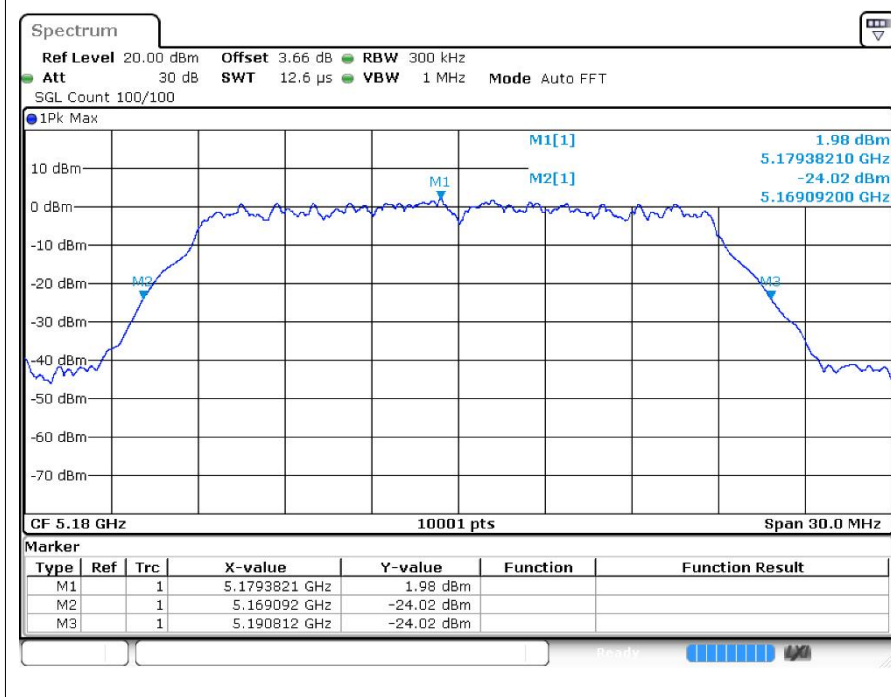




-26dB Bandwidtha 5240MHz Ant1

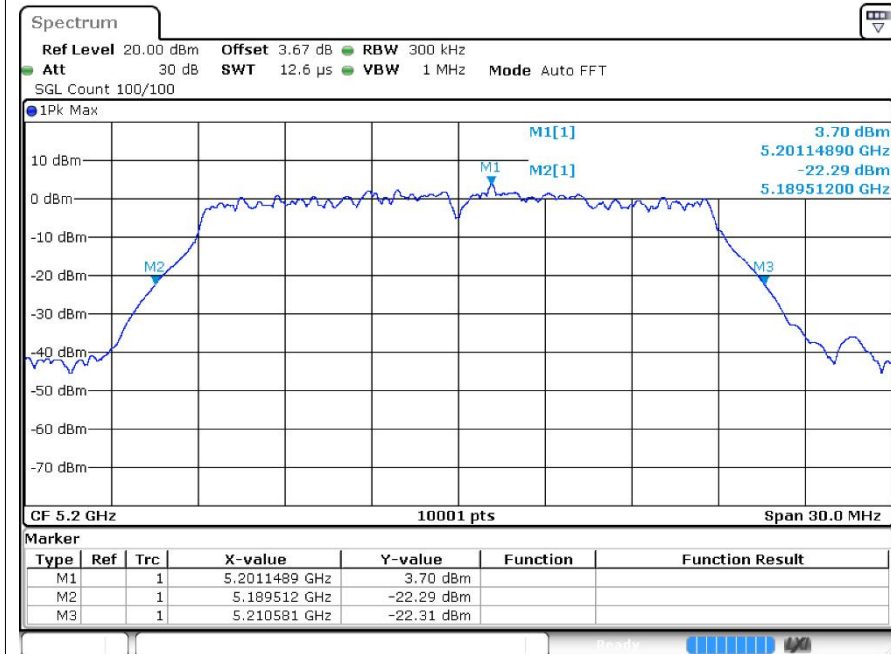


-26dB Bandwidth n20 5180MHz Ant1

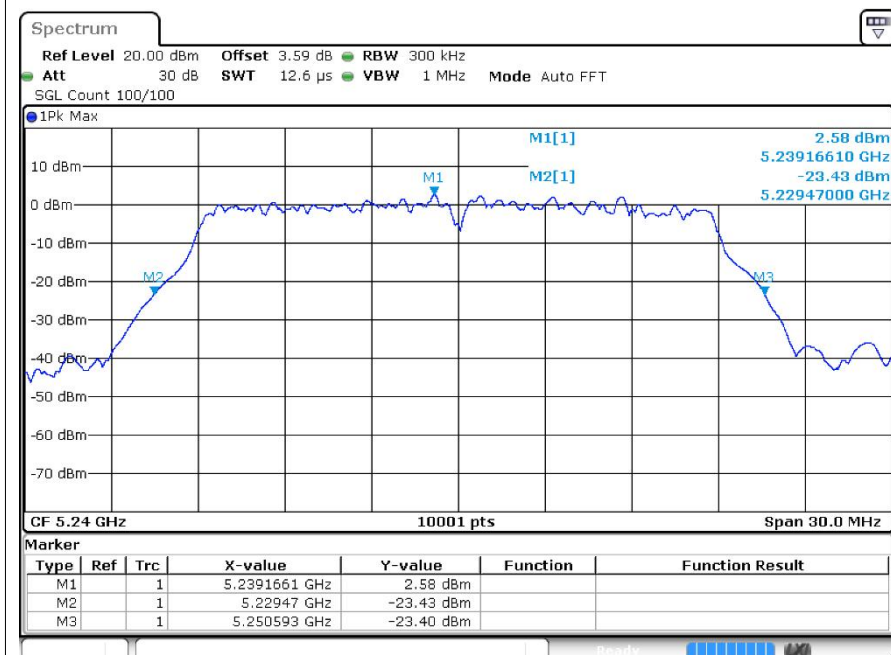




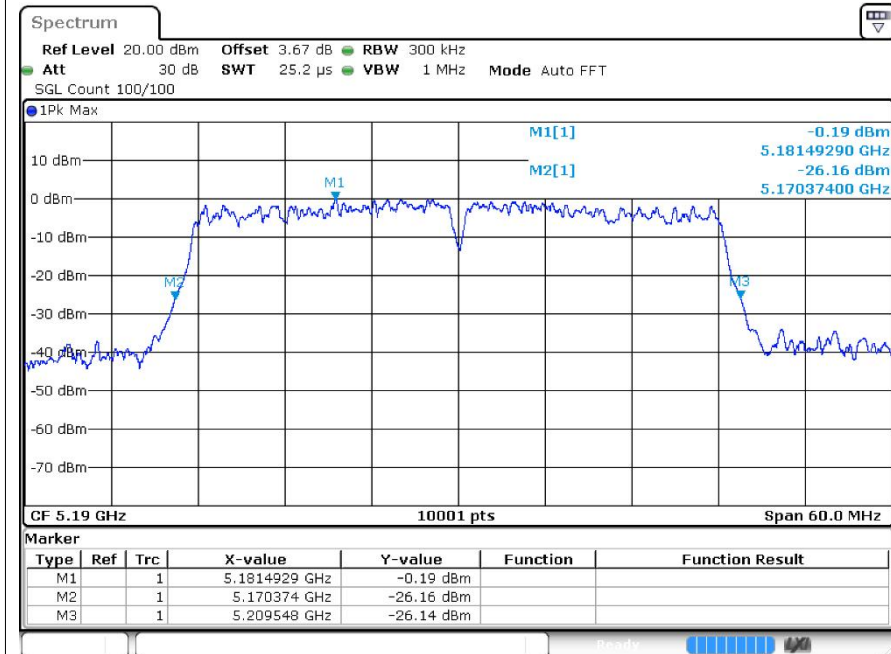
-26dB Bandwidth n20 5200MHz Ant1



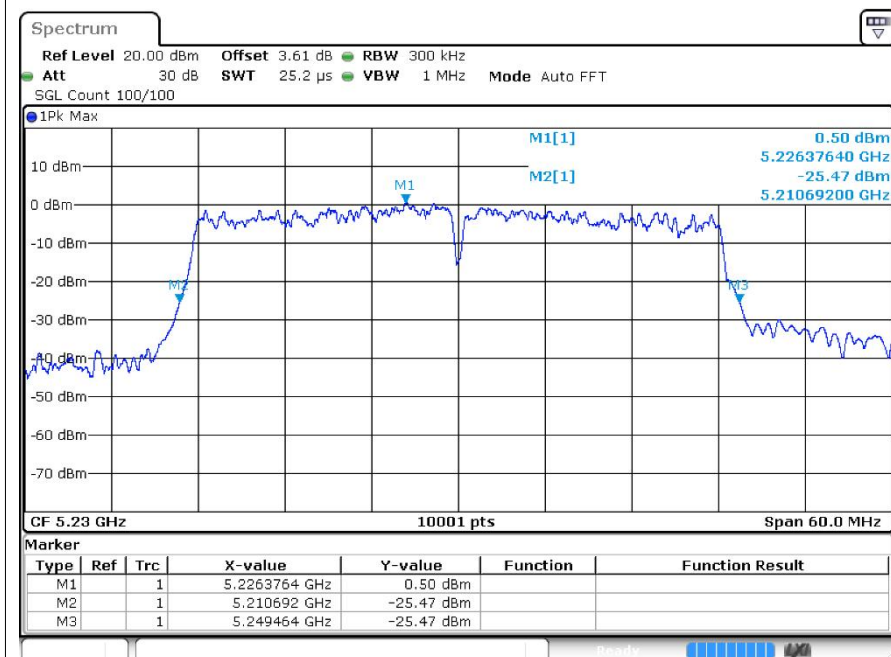
-26dB Bandwidth n20 5240MHz Ant1



-26dB Bandwidth40 5190MHz Ant1

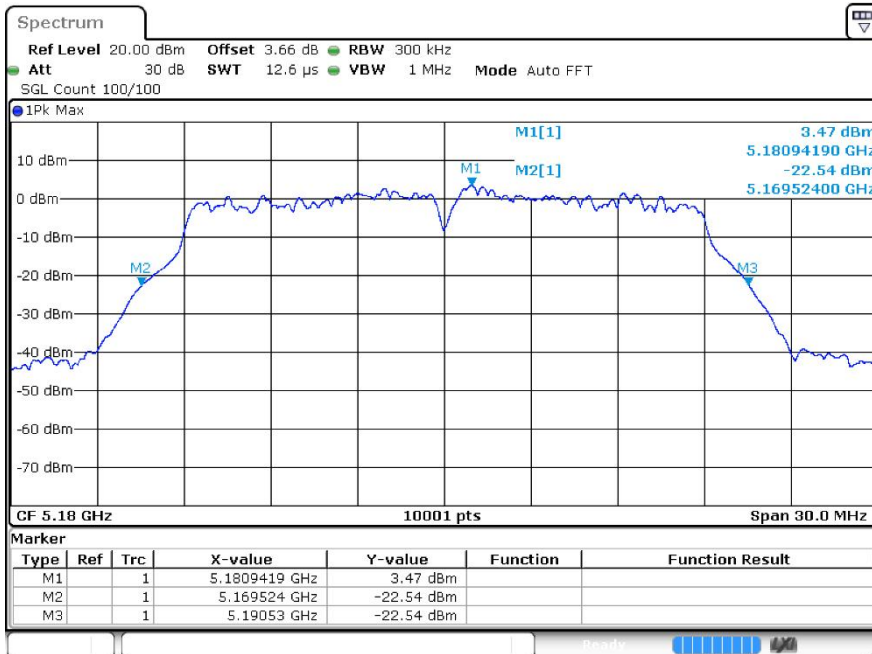


-26dB Bandwidth40 5230MHz Ant1

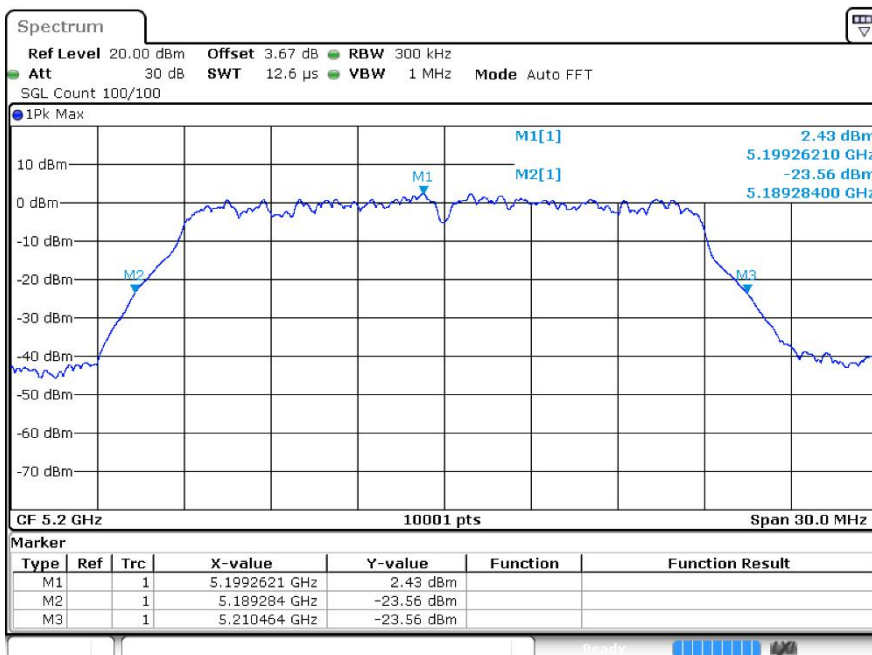




-26dB Bandwidth ac20 5180MHz Ant1

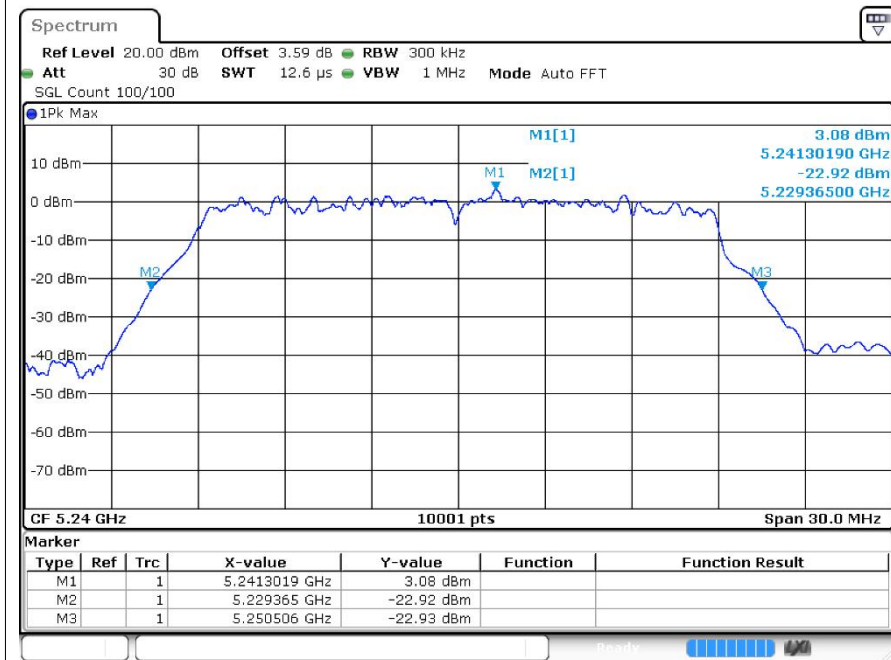


-26dB Bandwidth ac20 5200MHz Ant1

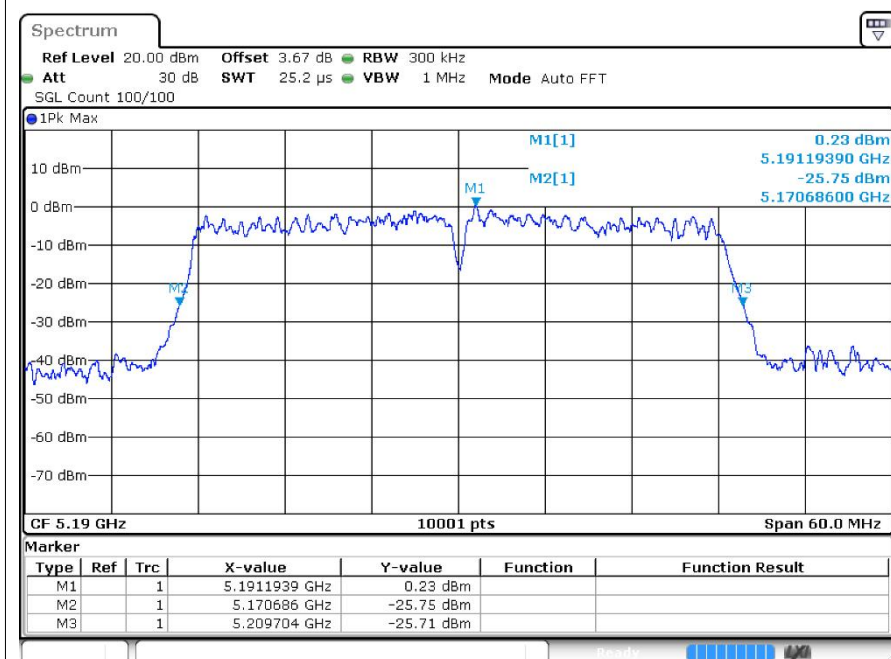




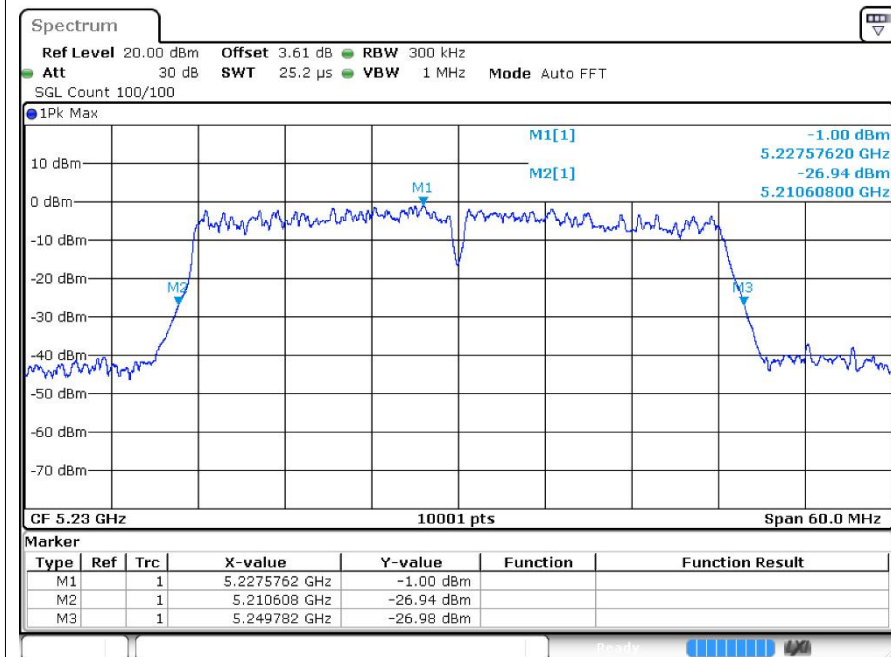
-26dB Bandwidth ac20 5240MHz Ant1



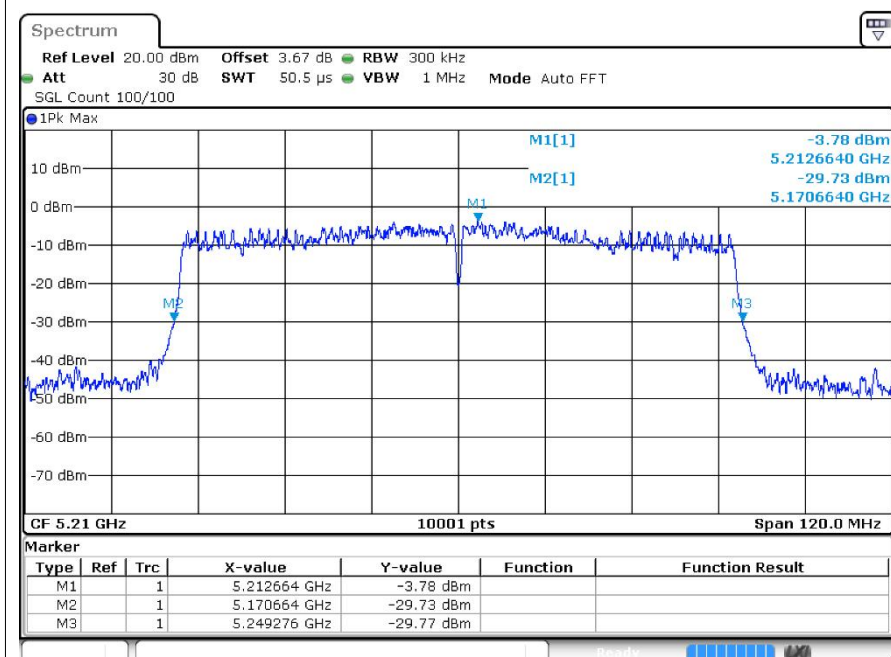
-26dB Bandwidth ac40 5190MHz Ant1



-26dB Bandwidthac40 5230MHz Ant1



-26dB Bandwidthac80 5210MHz Ant1





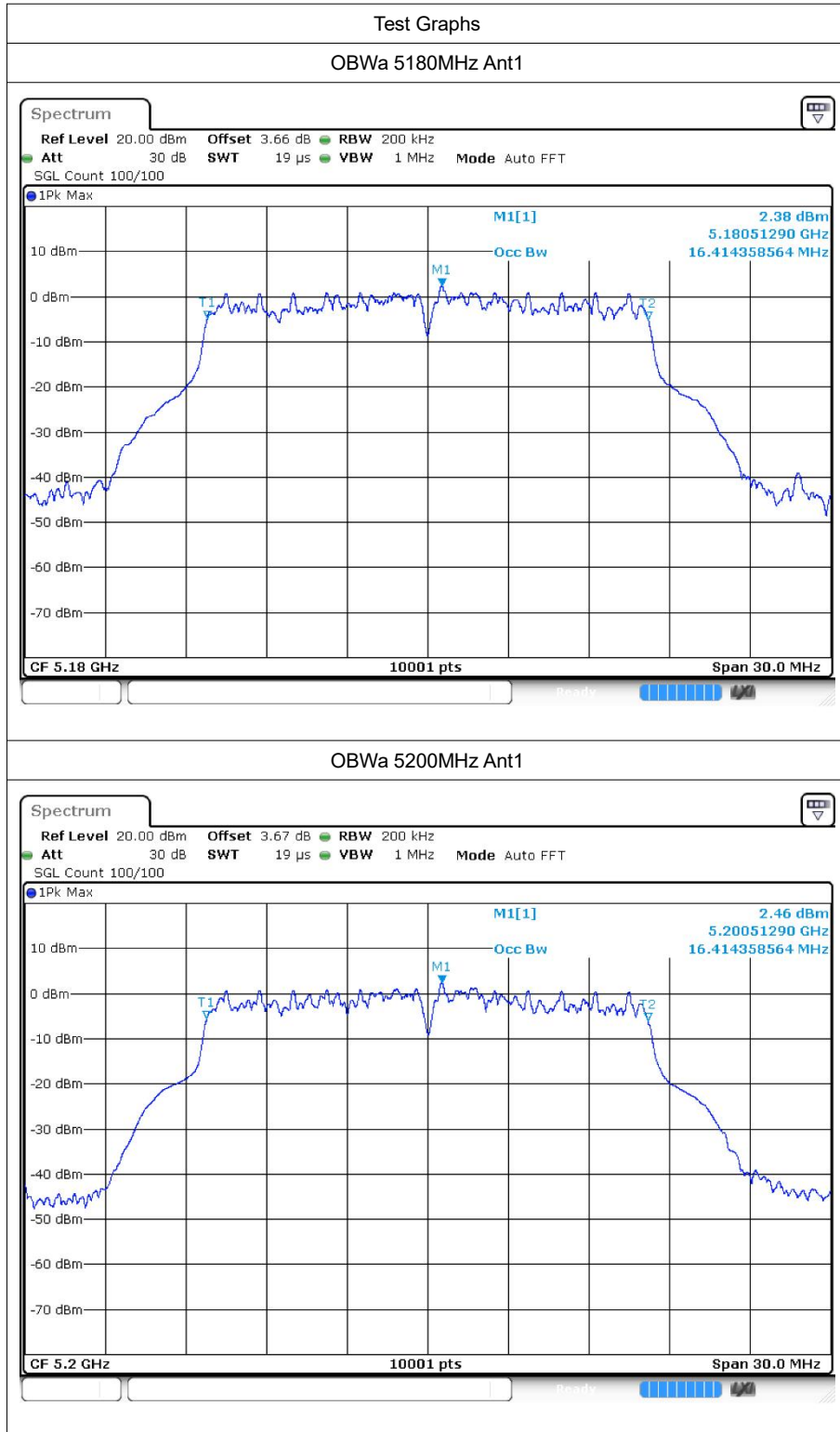
4 Occupied Channel Bandwidth

4.1 Test Result

Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
a	5180	Ant1	16.414
a	5200	Ant1	16.414
a	5240	Ant1	16.396
n20	5180	Ant1	17.719
n20	5200	Ant1	17.695
n20	5240	Ant1	17.653
n40	5190	Ant1	36.044
n40	5230	Ant1	36.092
ac20	5180	Ant1	17.635
ac20	5200	Ant1	17.695
ac20	5240	Ant1	17.653
ac40	5190	Ant1	36.224
ac40	5230	Ant1	36.152
ac80	5210	Ant1	75.304

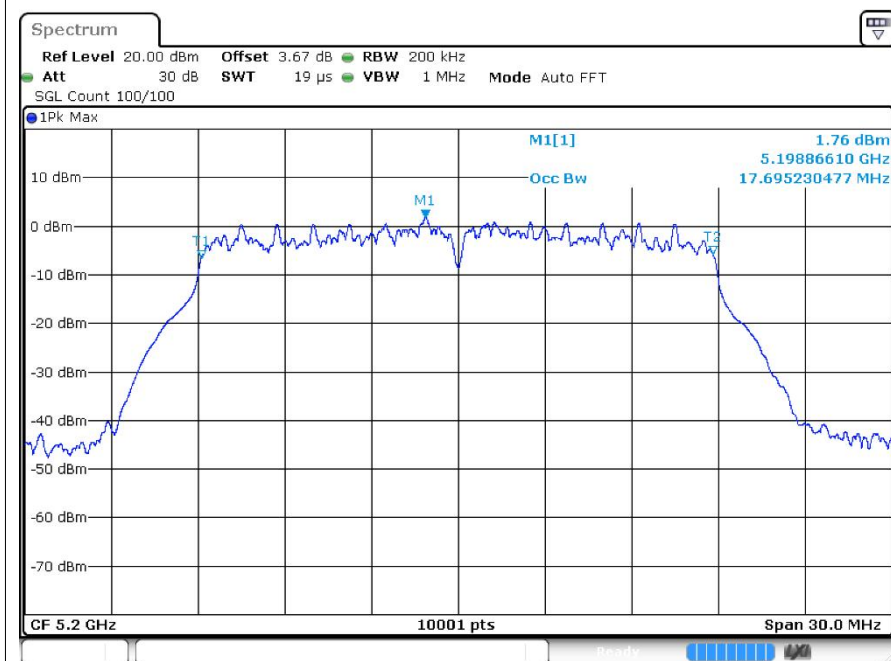


4.2 Test Graphs

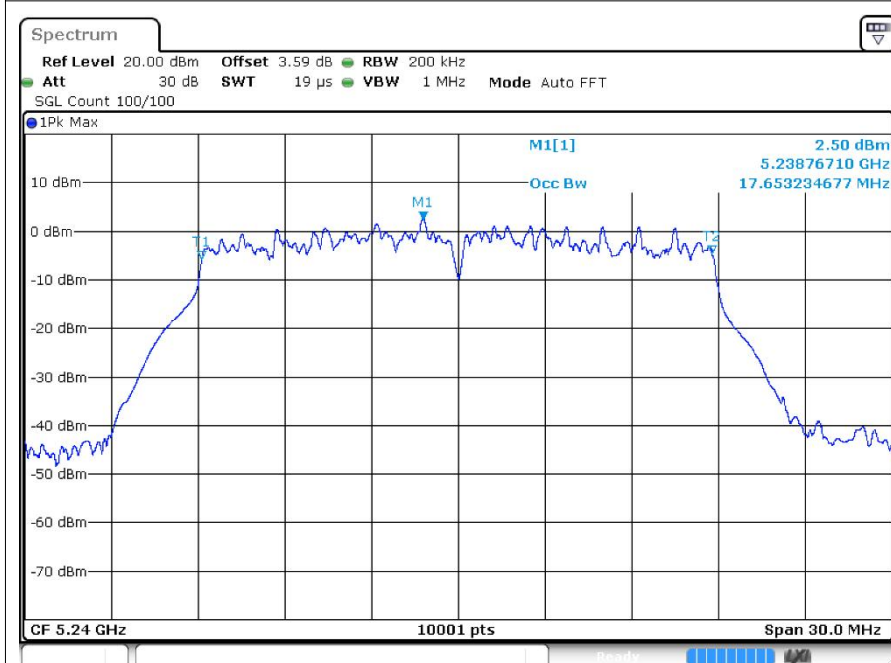




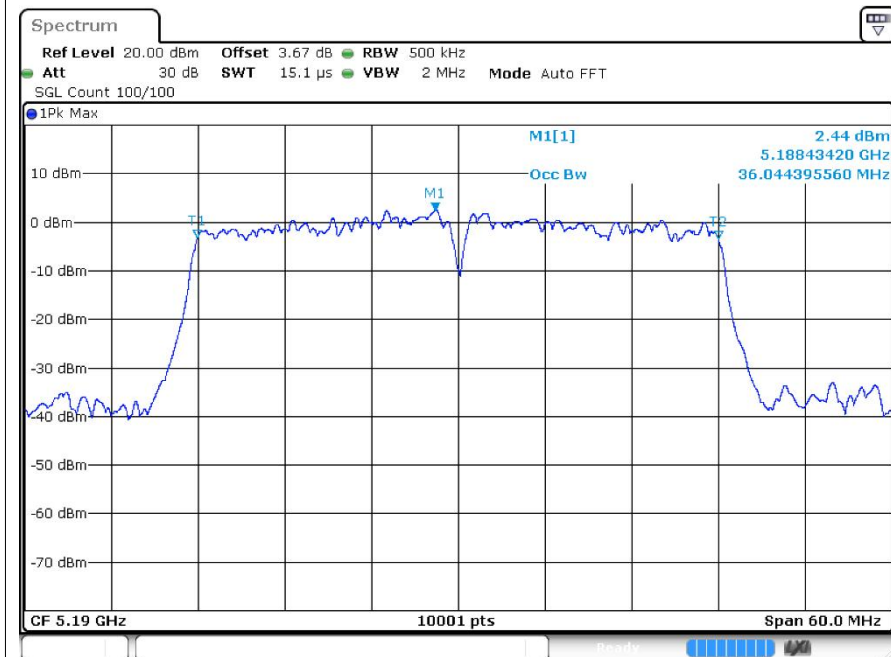
OBW n20 5200MHz Ant1



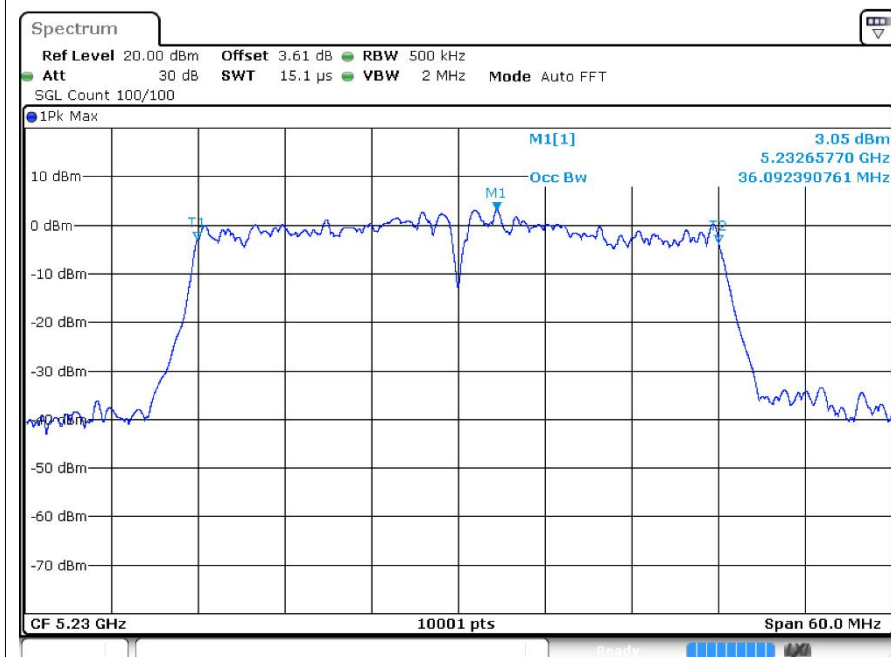
OBW n20 5240MHz Ant1



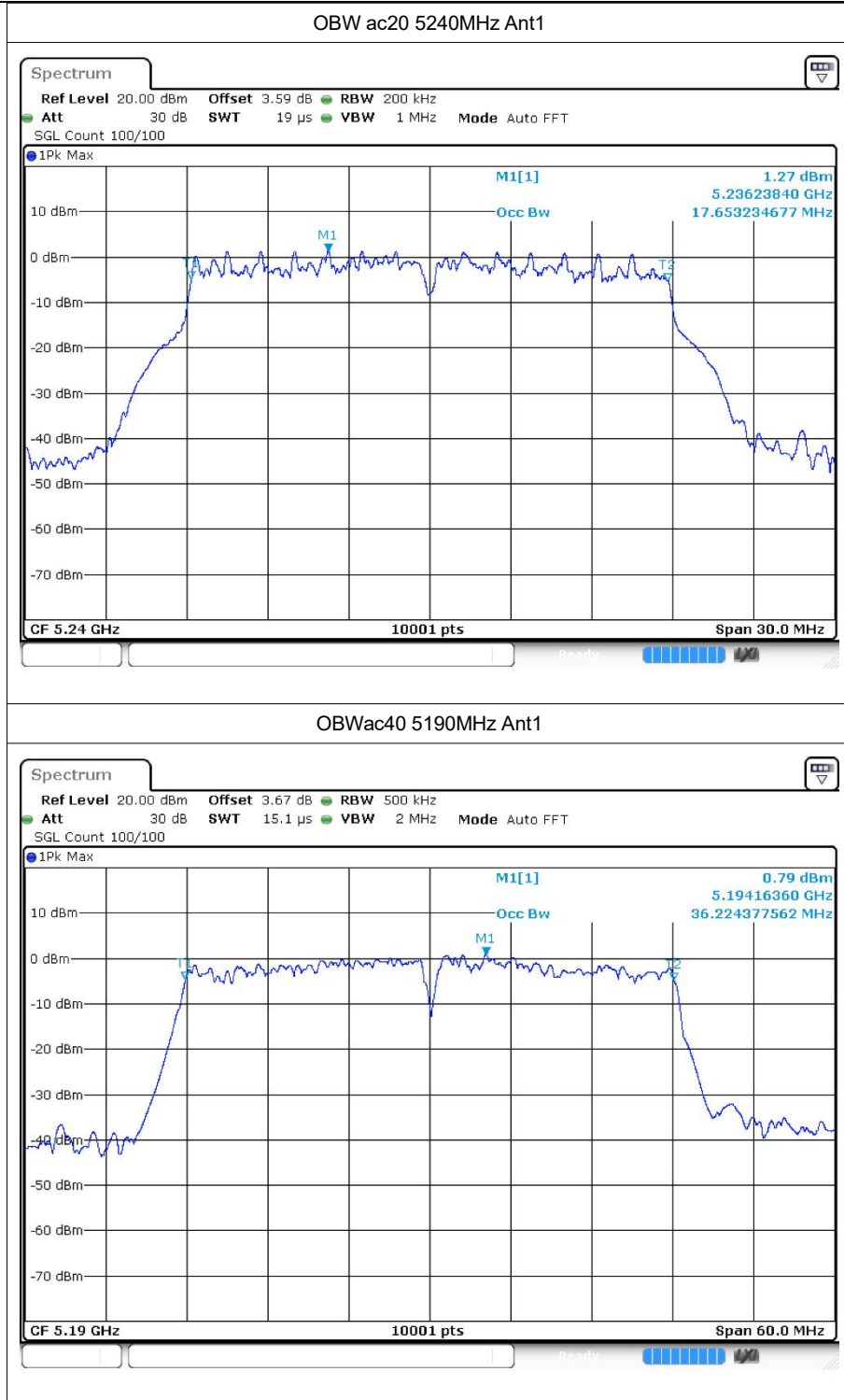
OBWn40 5190MHz Ant1



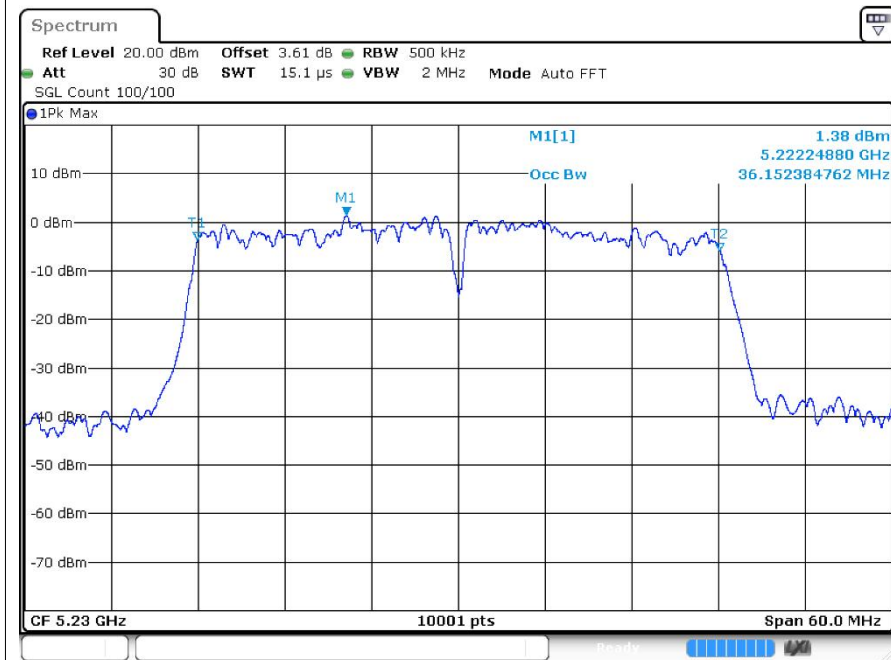
OBWn40 5230MHz Ant1



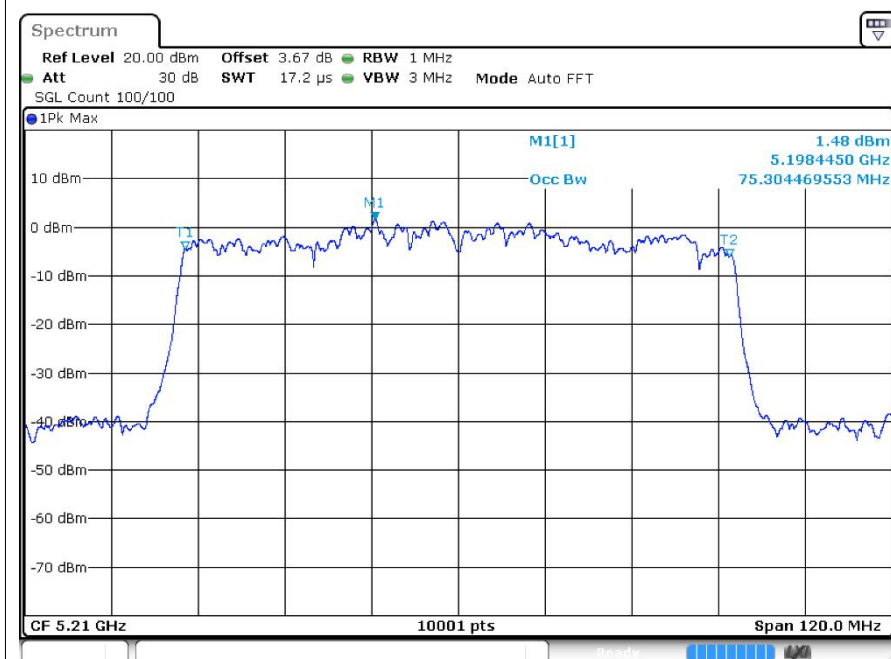




OBWac40 5230MHz Ant1



OBWac80 5210MHz Ant1



5 Maximum Power Spectral Density Level

5.1 Test Result

Mode	Frequency (MHz)	Antenna	Total PSD (dBm)	Limit (dBm)	Verdict
a	5180	Ant1	9.12	11	Pass
a	5200	Ant1	8.2	11	Pass
a	5240	Ant1	8.03	11	Pass
n20	5180	Ant1	8.21	11	Pass
n20	5200	Ant1	7.31	11	Pass
n20	5240	Ant1	7.55	11	Pass
n40	5190	Ant1	4.89	11	Pass
n40	5230	Ant1	4.98	11	Pass
ac20	5180	Ant1	7.28	11	Pass
ac20	5200	Ant1	7.86	11	Pass
ac20	5240	Ant1	7.23	11	Pass
ac40	5190	Ant1	4.07	11	Pass
ac40	5230	Ant1	3.4	11	Pass
ac80	5210	Ant1	1.88	11	Pass

Note:

The duty factor has been compensated into the result.

5.2 Test Graphs

