



Appendix D

RF Test Data for B1 WIFI(Conducted Measurement)

Product Name: Rugged industrial tablet

Trade Mark: 辰想

Test Model: A11T3

Environmental Conditions

Temperature:	24.6° C
Relative Humidity:	52.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Simba Huang
Supervised by:	Seal Chen



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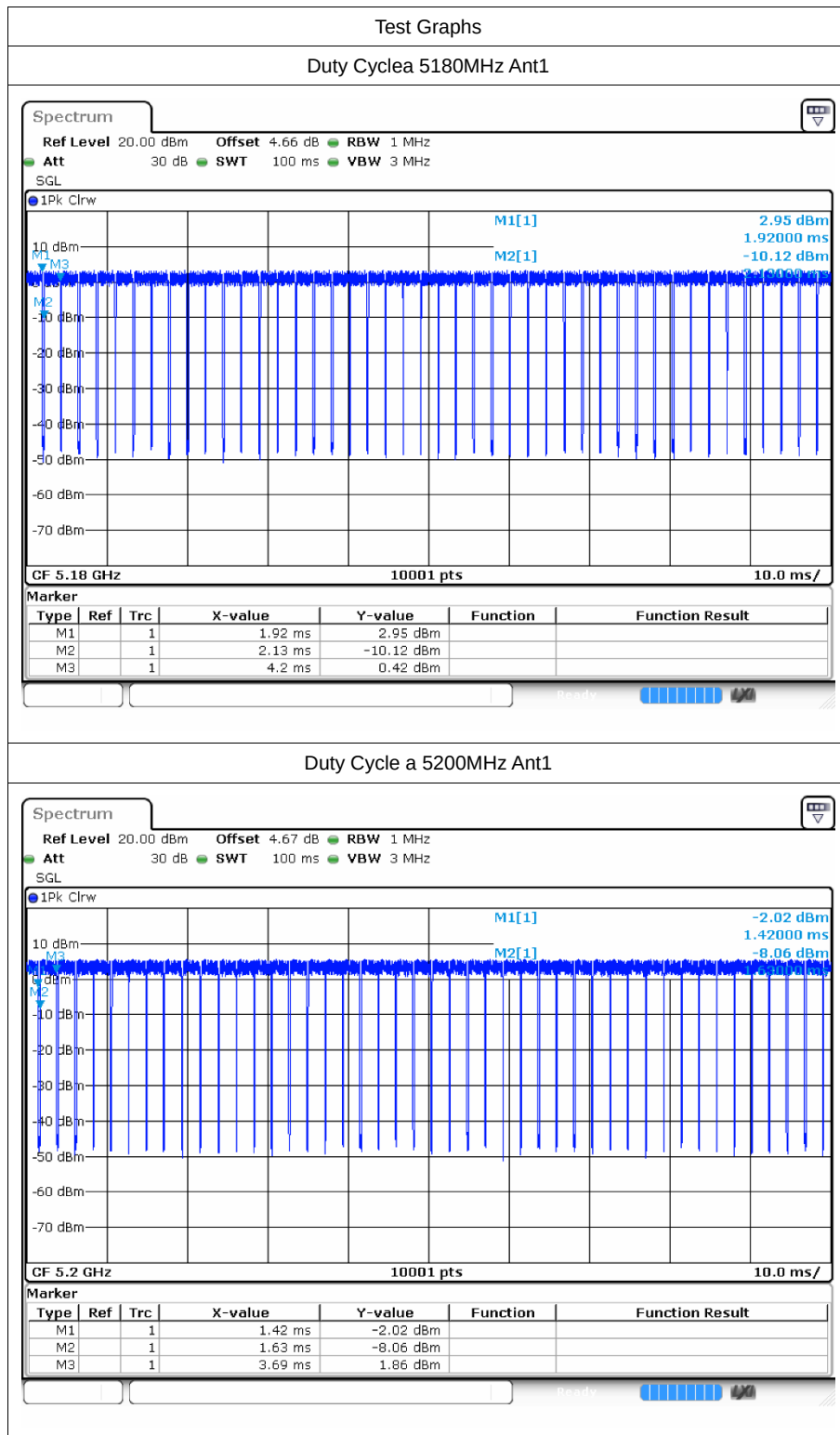


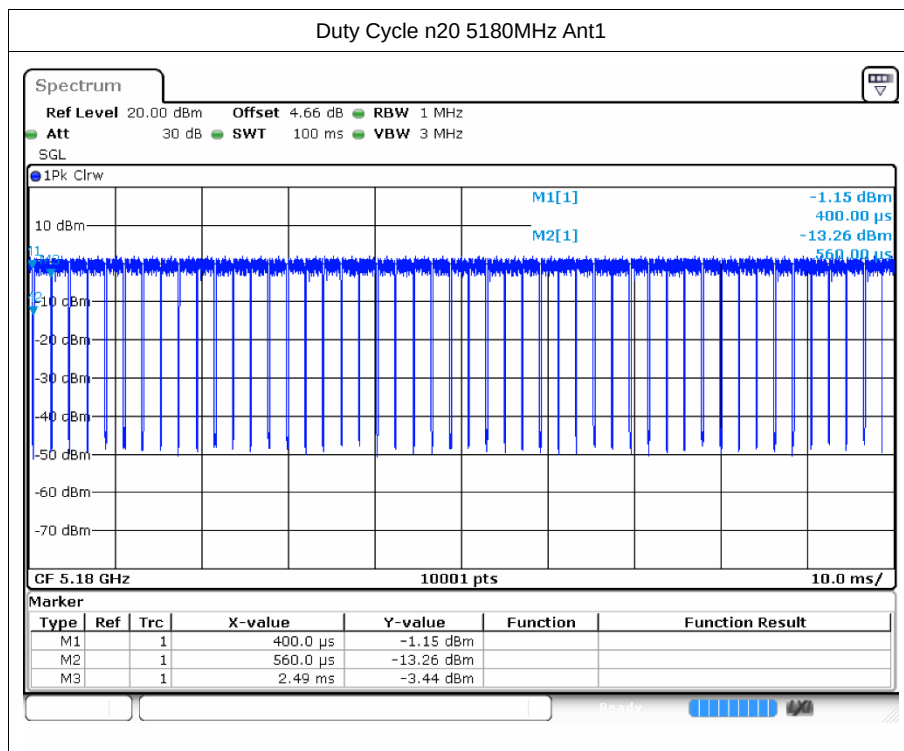
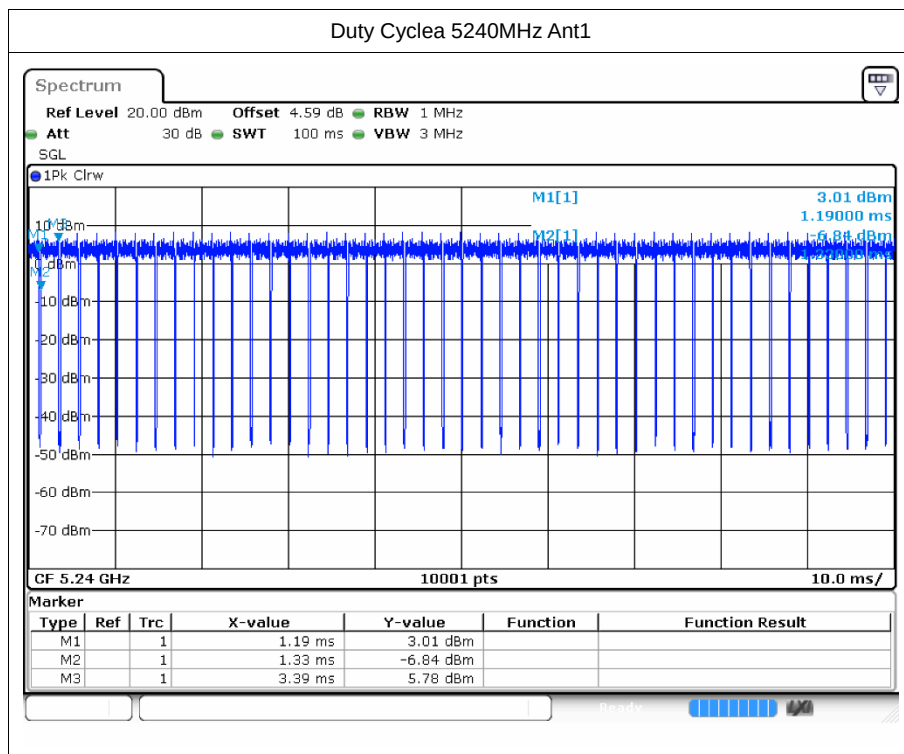
1 Duty Cycle

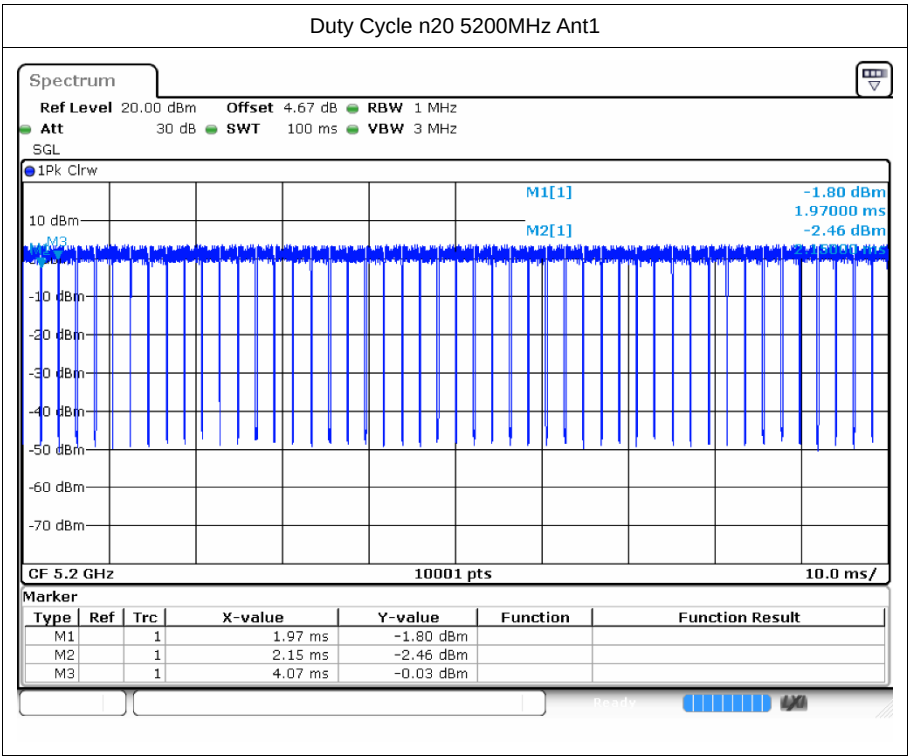
1.1 Test Result

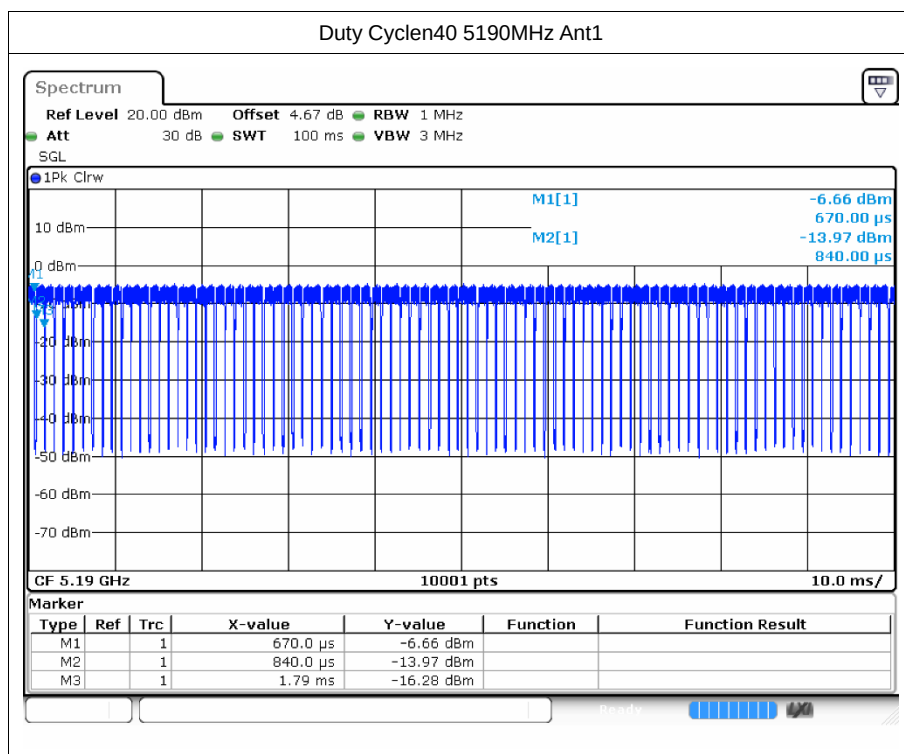
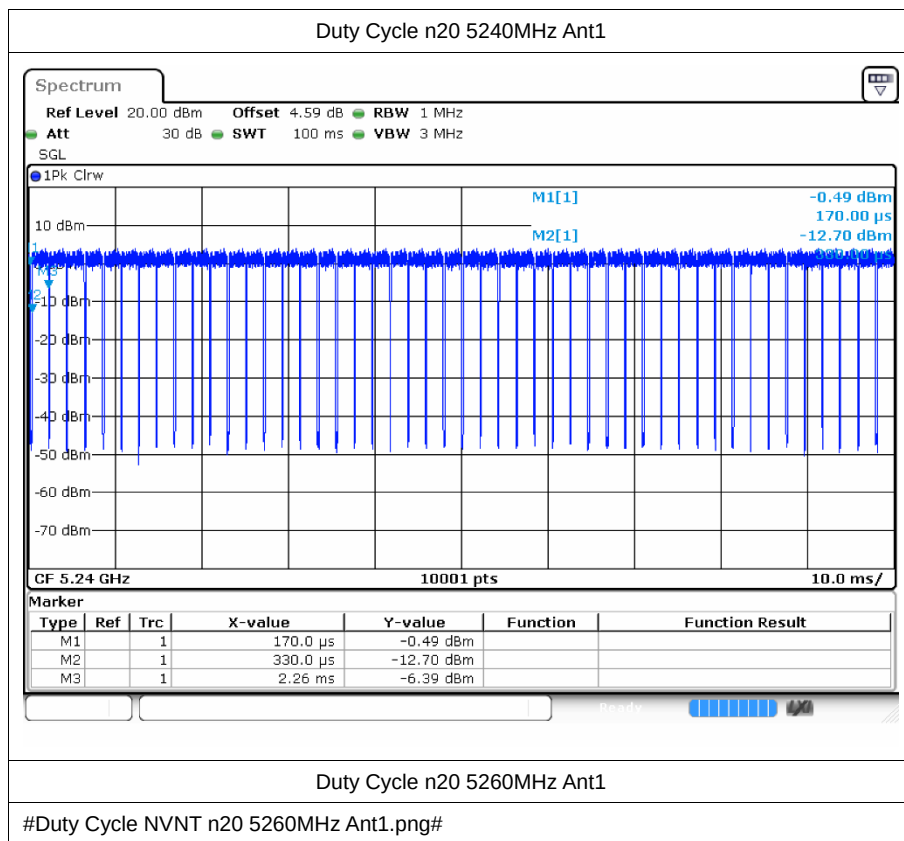
Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
a	5180	Ant1	92.82	0.32	0.48
a	5200	Ant1	93.58	0.29	0.49
a	5240	Ant1	93.4	0.3	0.49
n20	5180	Ant1	92.48	0.34	0.52
n20	5200	Ant1	92.65	0.33	0.52
n20	5240	Ant1	92.84	0.32	0.52
n40	5190	Ant1	86.24	0.64	1.05
n40	5230	Ant1	85.49	0.68	1.05
ac20	5180	Ant1	91.55	0.38	0.52
ac20	5200	Ant1	91.39	0.39	0.52
ac20	5240	Ant1	92.85	0.32	0.52
ac40	5190	Ant1	84.78	0.72	1.04
ac40	5230	Ant1	83.93	0.76	1.04
ac80	5210	Ant1	73	1.37	2.17

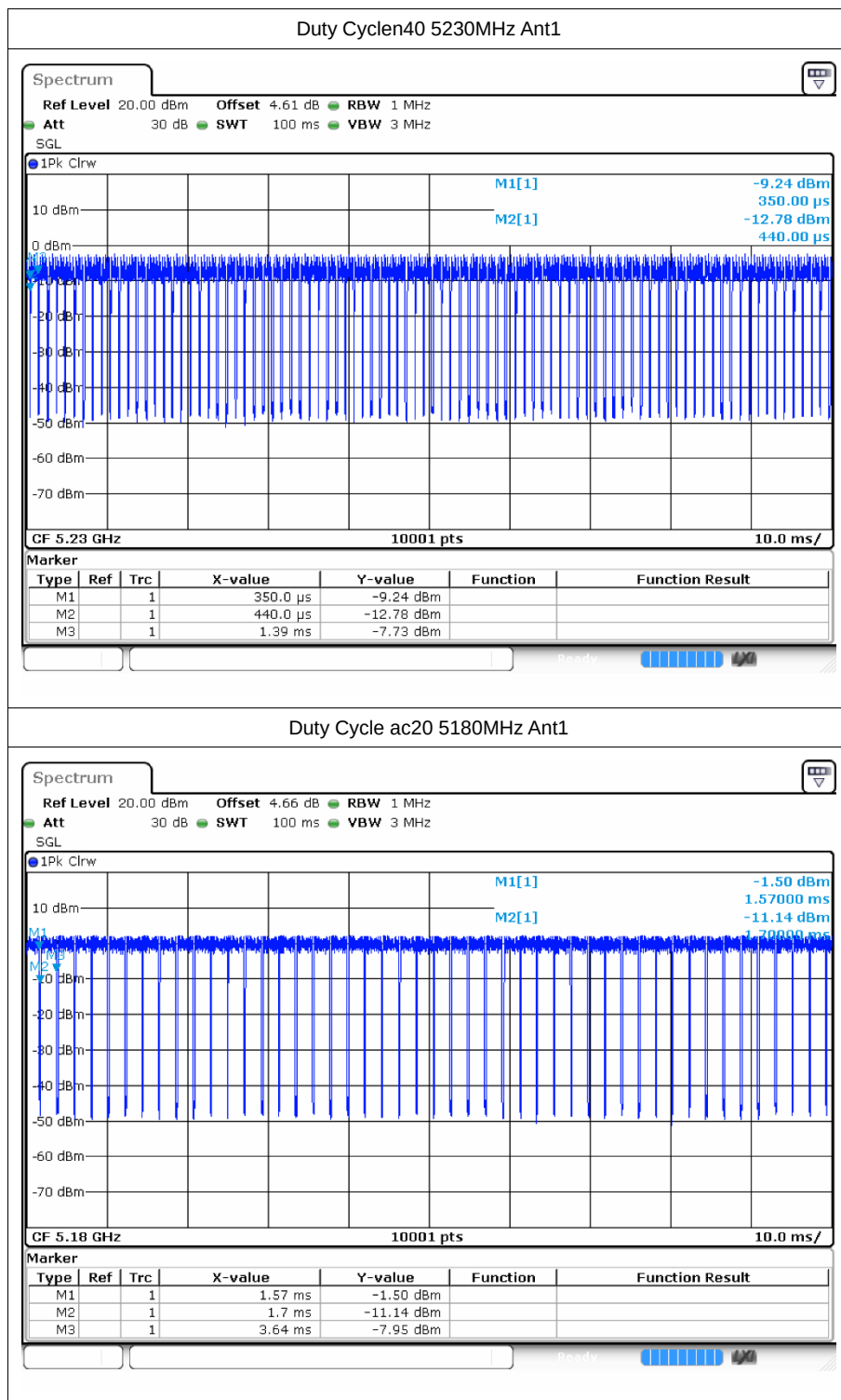
1.2 Test Graphs

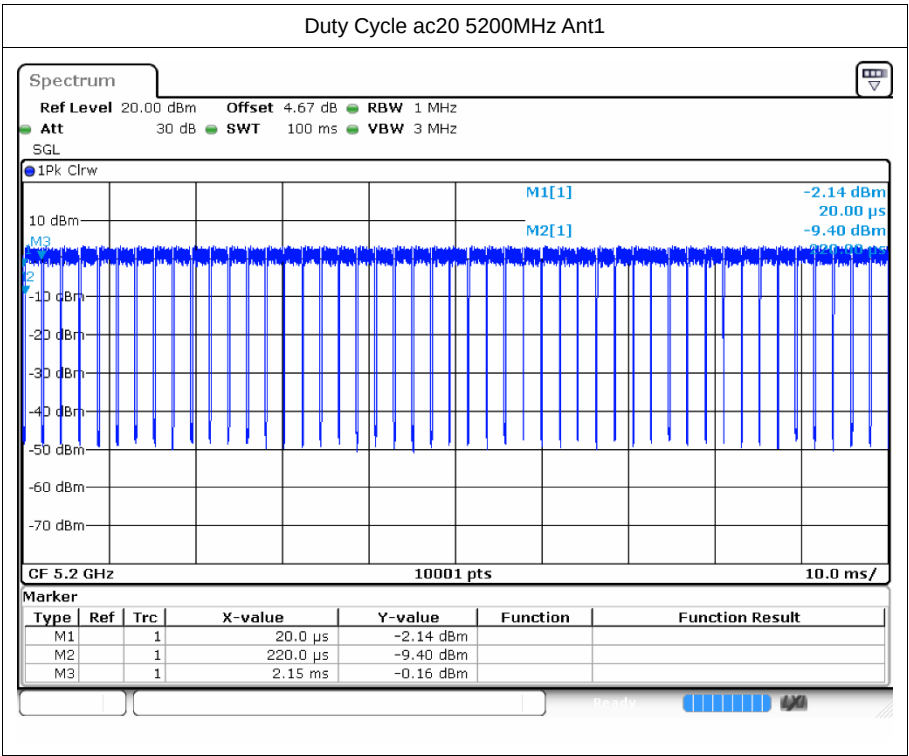


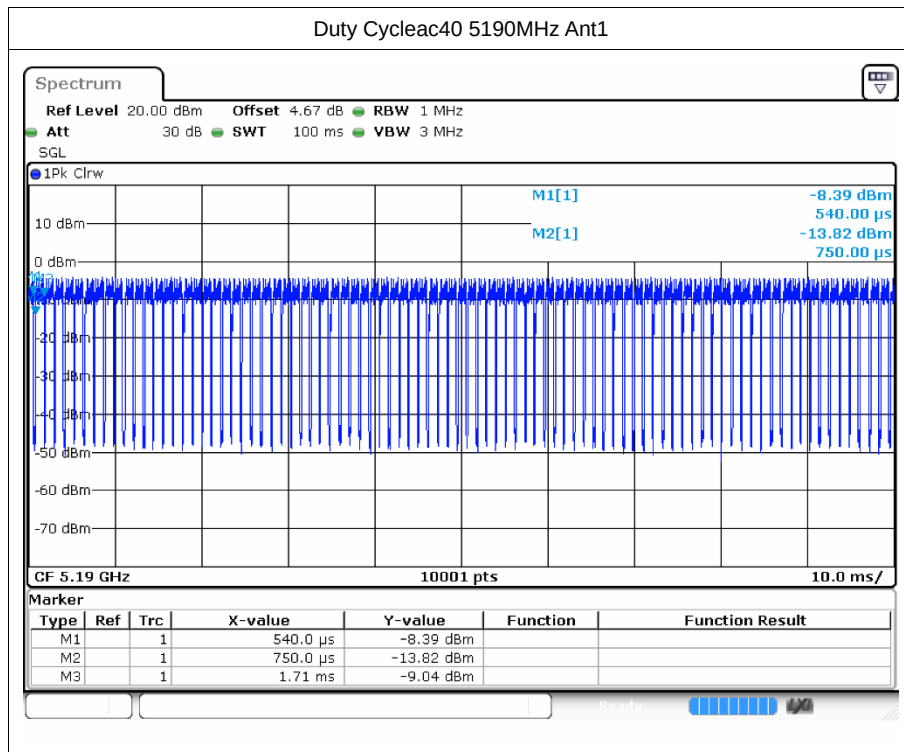
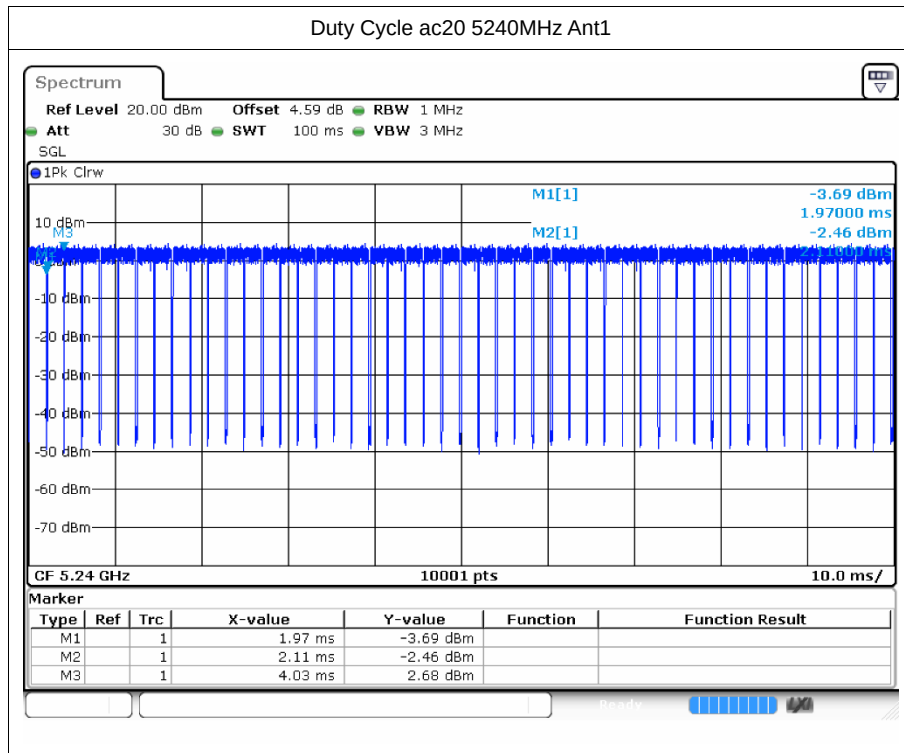


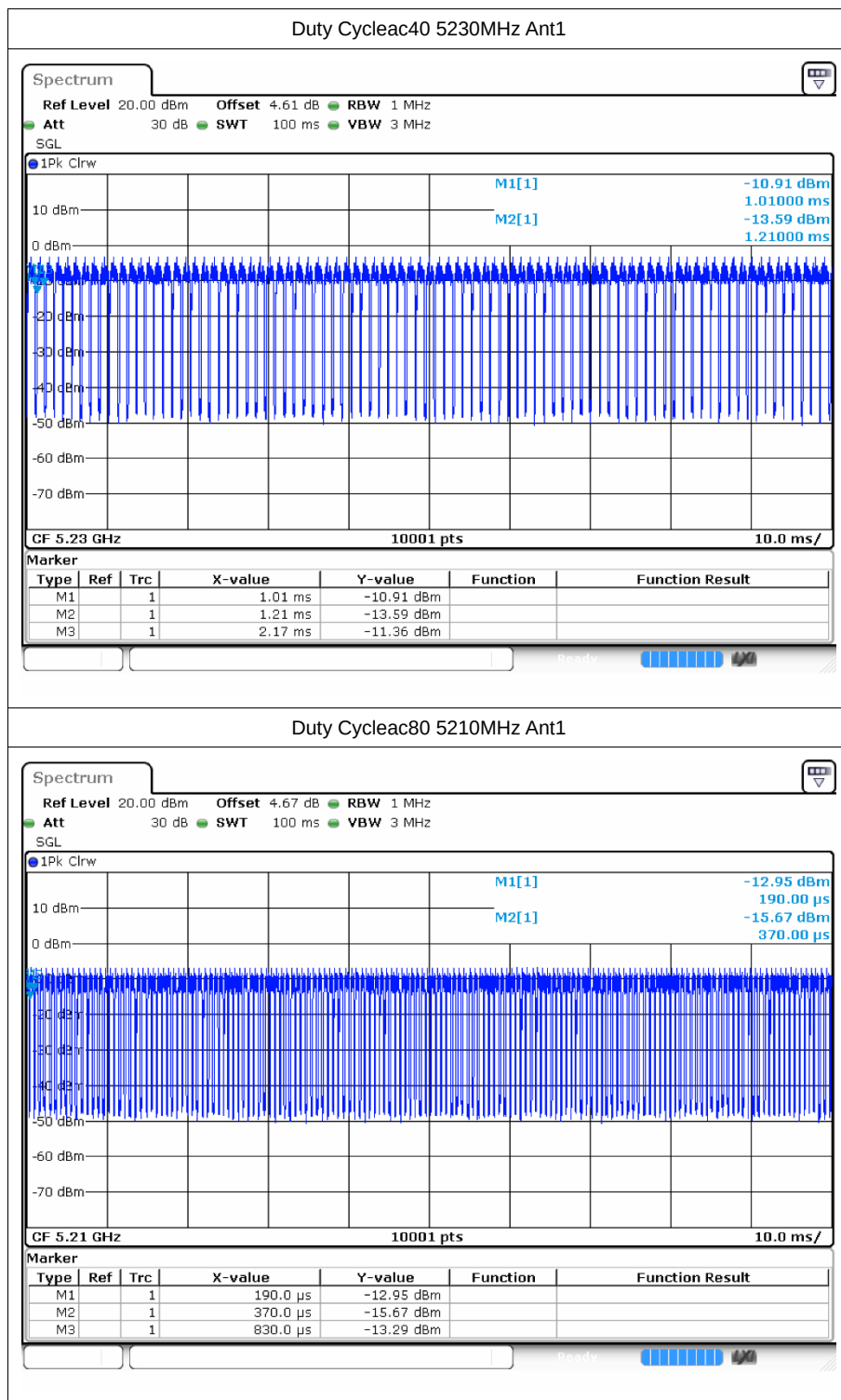














2 Maximum Conducted Output Power

2.1 Test Result

Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Correction Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
a	5180	Ant1	-2.21	0.32	-1.89	24	Pass
a	5200	Ant1	-2.7	0.29	-2.41	24	Pass
a	5240	Ant1	-3.46	0.3	-3.16	24	Pass
n20	5180	Ant1	-1.7	0.34	-1.36	24	Pass
n20	5200	Ant1	-1.91	0.33	-1.58	24	Pass
n20	5240	Ant1	-2.94	0.32	-2.62	24	Pass
n40	5190	Ant1	-1.8	0.64	-1.16	24	Pass
n40	5230	Ant1	-3.1	0.68	-2.42	24	Pass
ac20	5180	Ant1	-1.54	0.38	-1.16	24	Pass
ac20	5200	Ant1	-1.62	0.39	-1.23	24	Pass
ac20	5240	Ant1	-1.81	0.32	-1.49	24	Pass
ac40	5190	Ant1	-2.67	0.72	-1.95	24	Pass
ac40	5230	Ant1	-1.77	0.76	-1.01	24	Pass
ac80	5210	Ant1	-3.04	1.37	-1.67	24	Pass



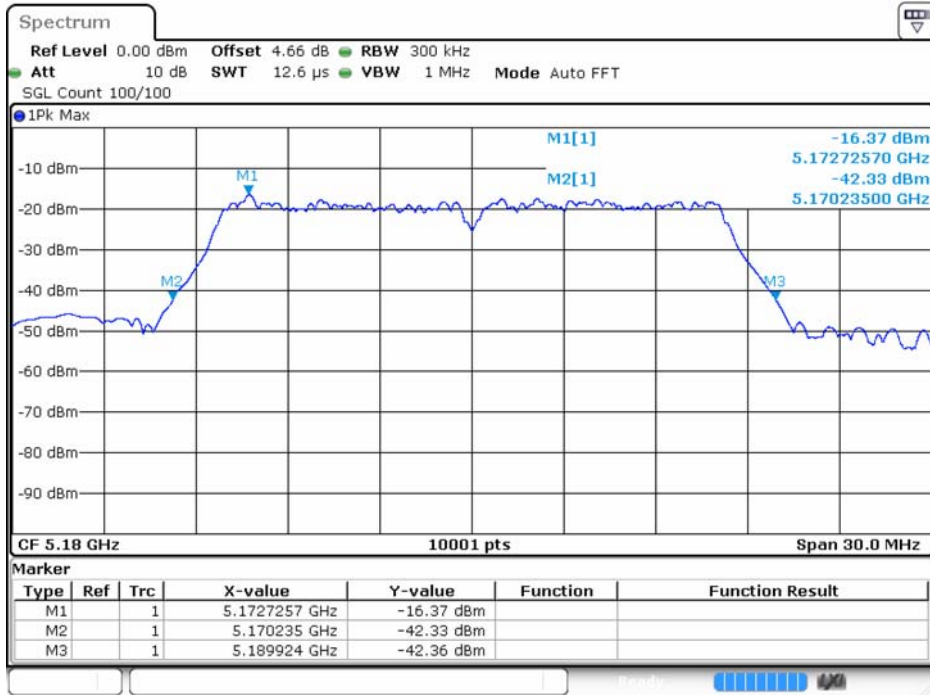
3 -26dB Bandwidth

3.1 Test Result

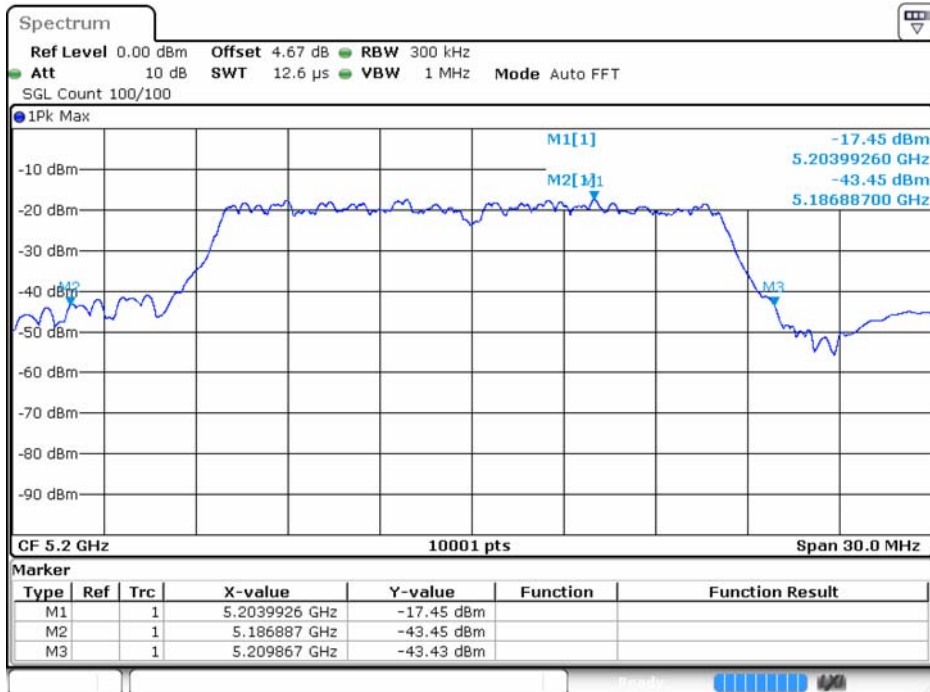
Condition	Mode	Frequency (MHz)	Antenna	-26 dB Bandwidth (MHz)	Limit -26 dB Bandwidth (MHz)	Verdict
NVNT	a	5180	Ant1	19.689	0.5	Pass
NVNT	a	5200	Ant1	22.98	0.5	Pass
NVNT	a	5240	Ant1	20.019	0.5	Pass
NVNT	n20	5180	Ant1	20.361	0.5	Pass
NVNT	n20	5200	Ant1	20.31	0.5	Pass
NVNT	n20	5240	Ant1	22.458	0.5	Pass
NVNT	n40	5190	Ant1	40.2	0.5	Pass
NVNT	n40	5230	Ant1	42.786	0.5	Pass
NVNT	ac20	5180	Ant1	22.845	0.5	Pass
NVNT	ac20	5200	Ant1	20.022	0.5	Pass
NVNT	ac20	5240	Ant1	19.959	0.5	Pass
NVNT	ac40	5190	Ant1	39.774	0.5	Pass
NVNT	ac40	5230	Ant1	40.65	0.5	Pass
NVNT	ac80	5210	Ant1	78.276	0.5	Pass

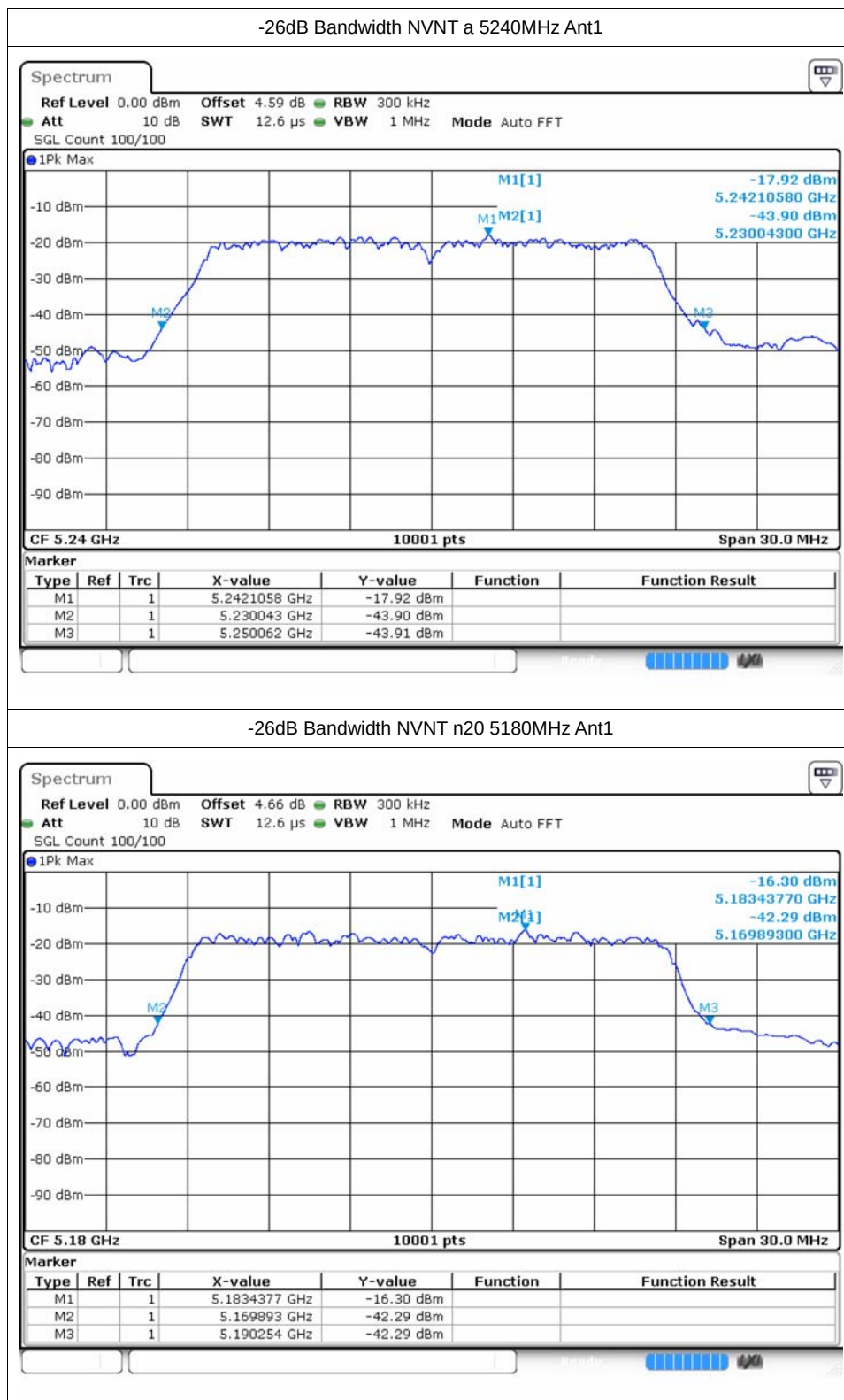
Test Graphs

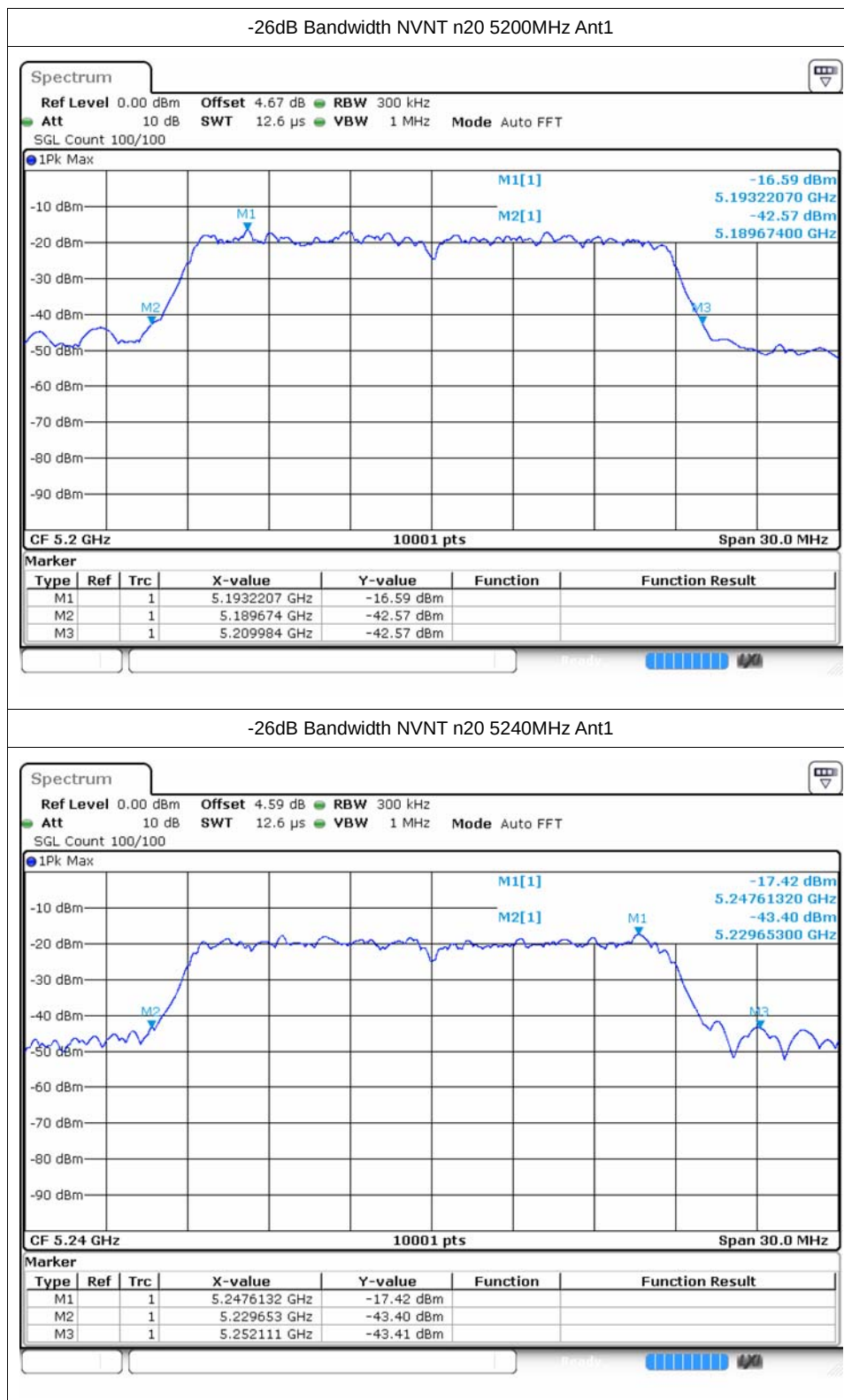
-26dB Bandwidth NVNT a 5180MHz Ant1

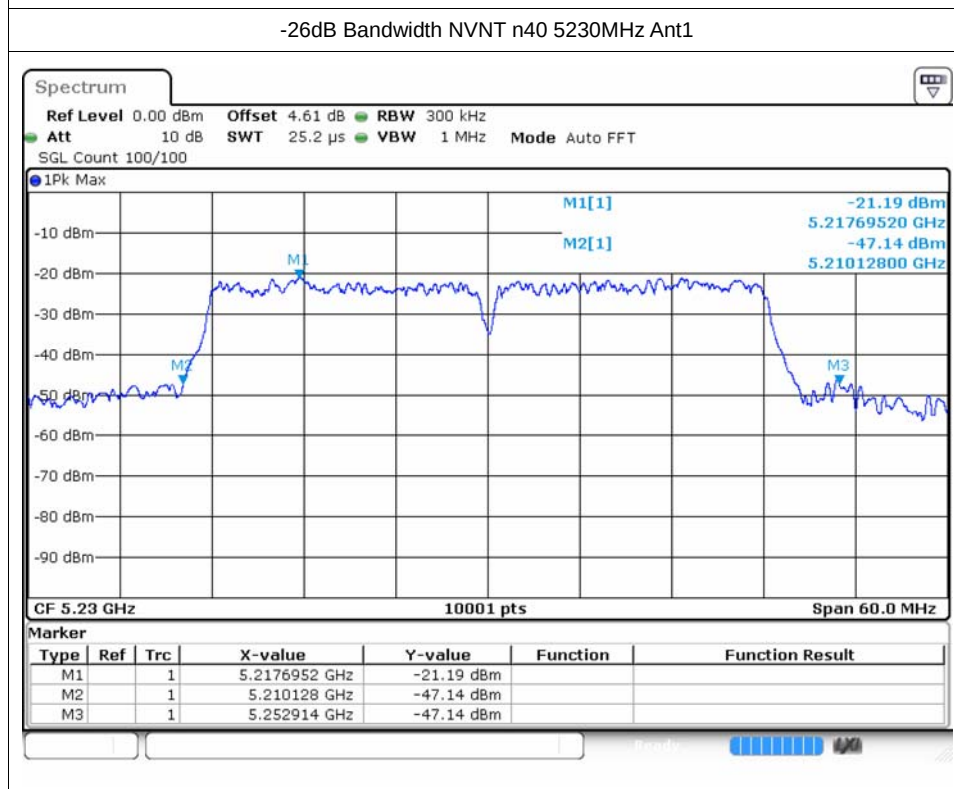
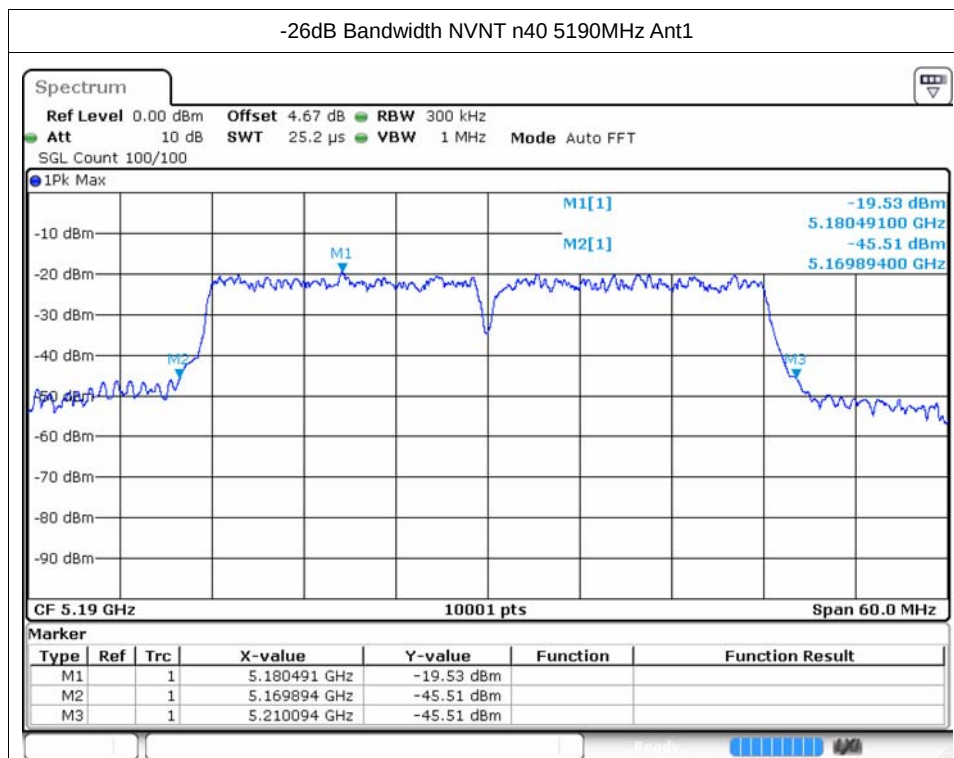


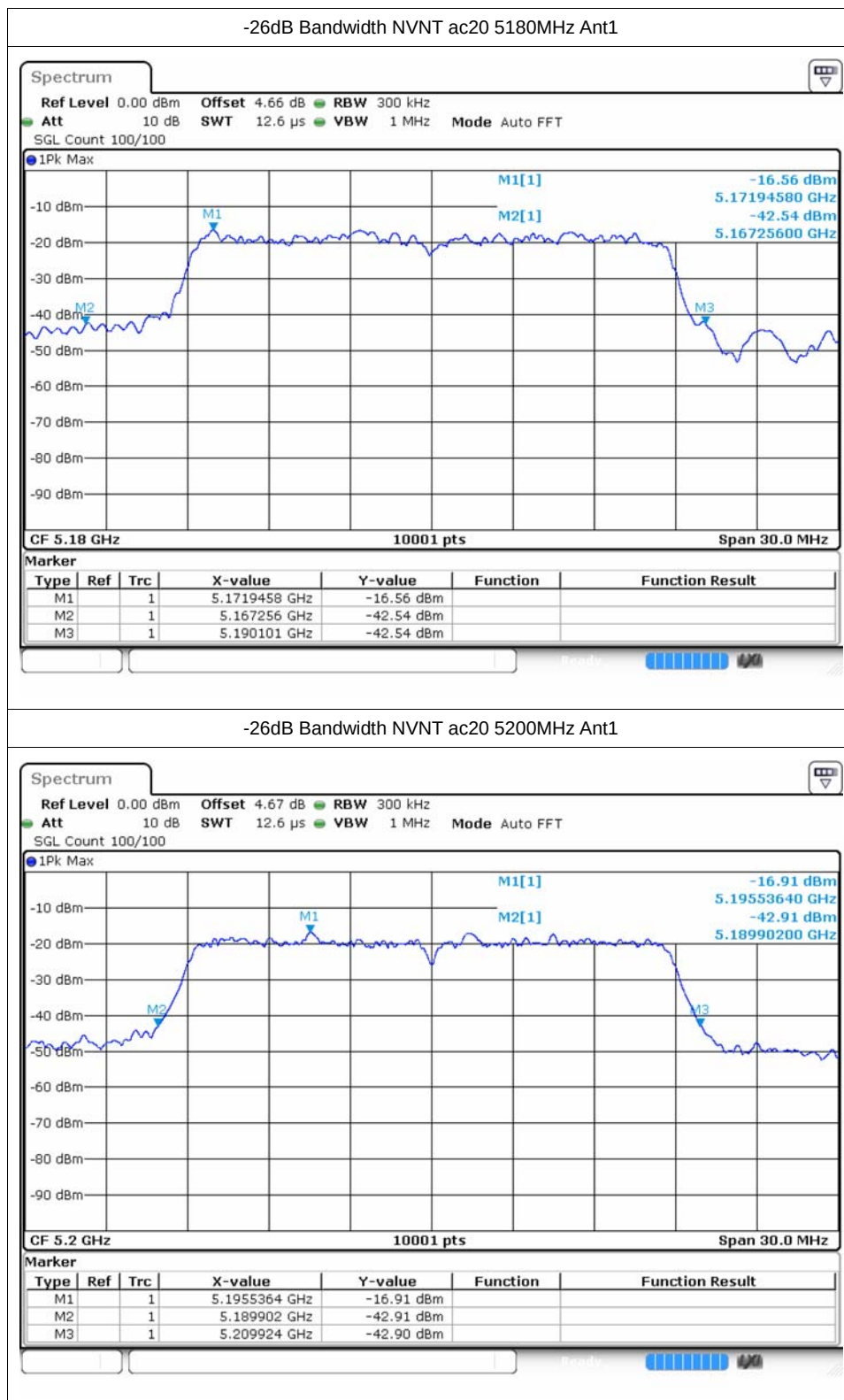
-26dB Bandwidth NVNT a 5200MHz Ant1

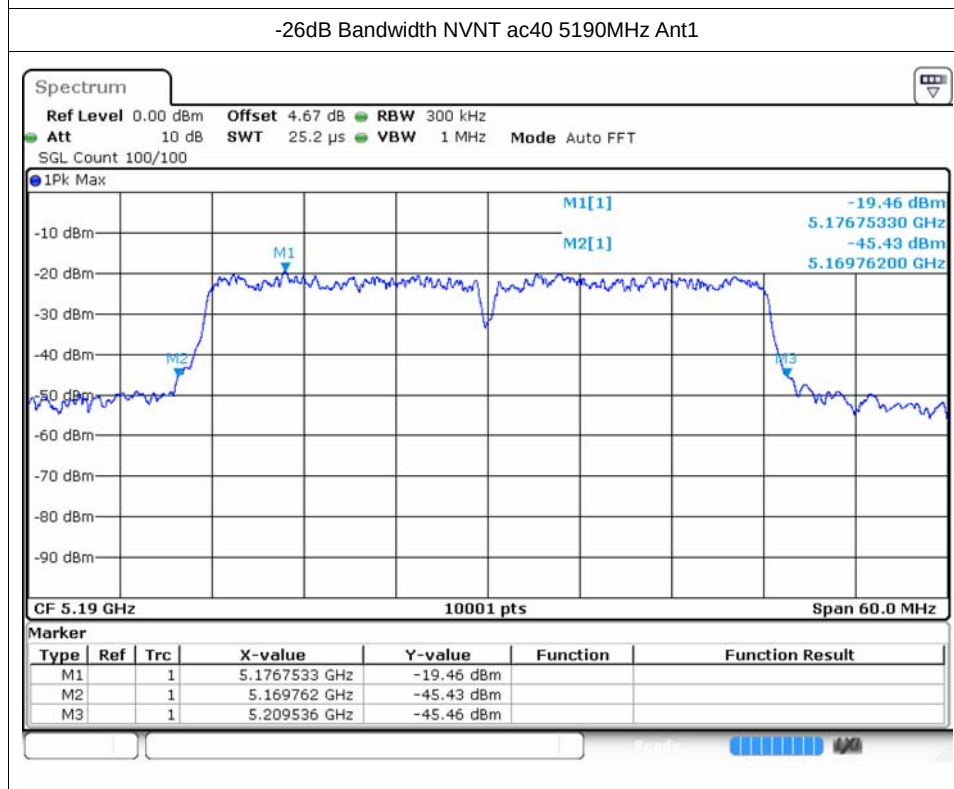
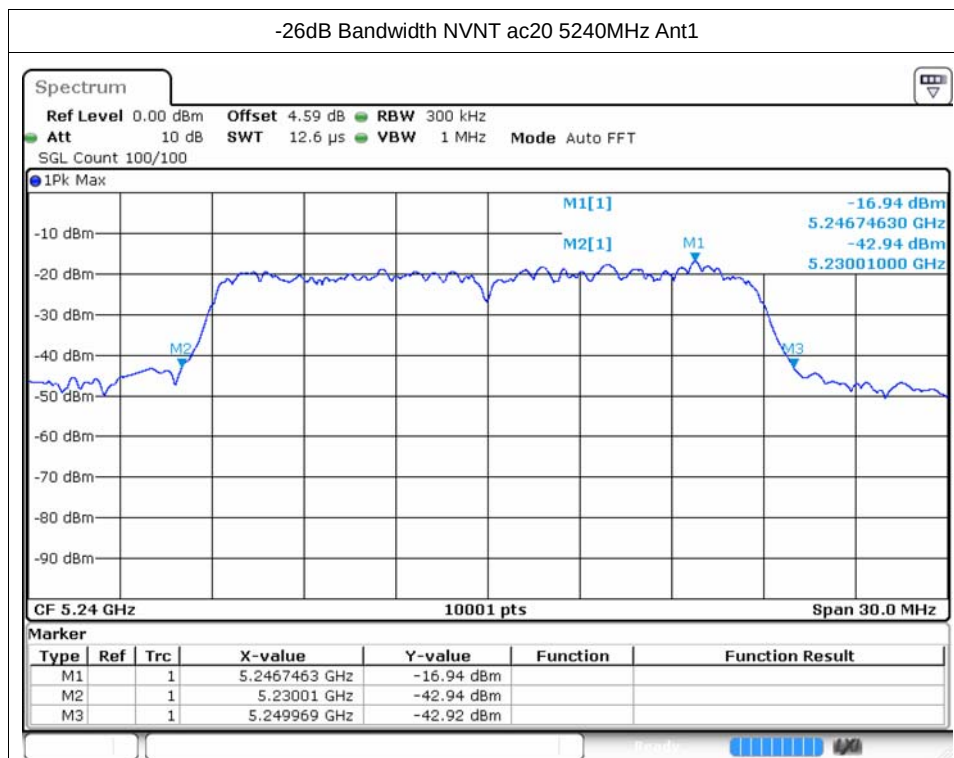


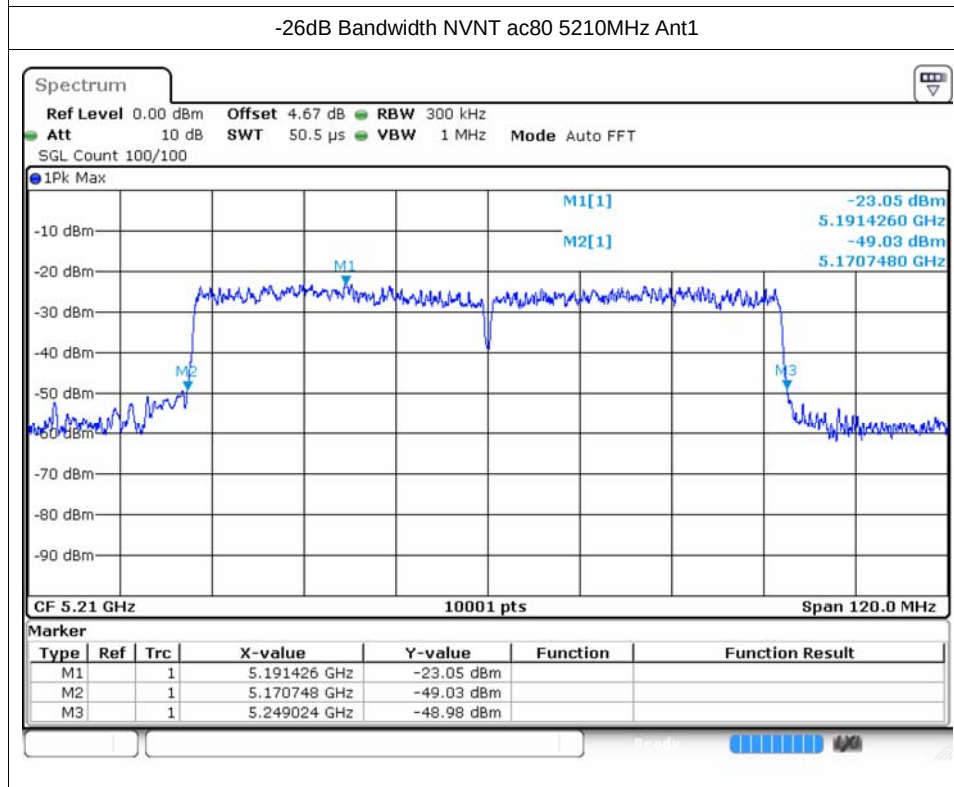
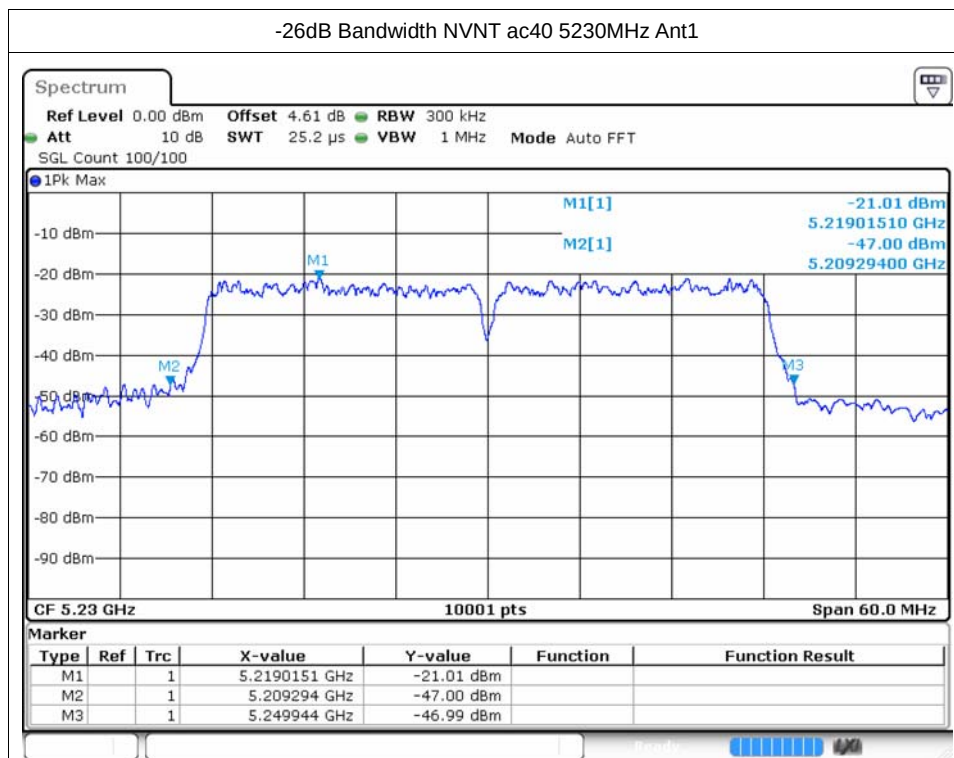










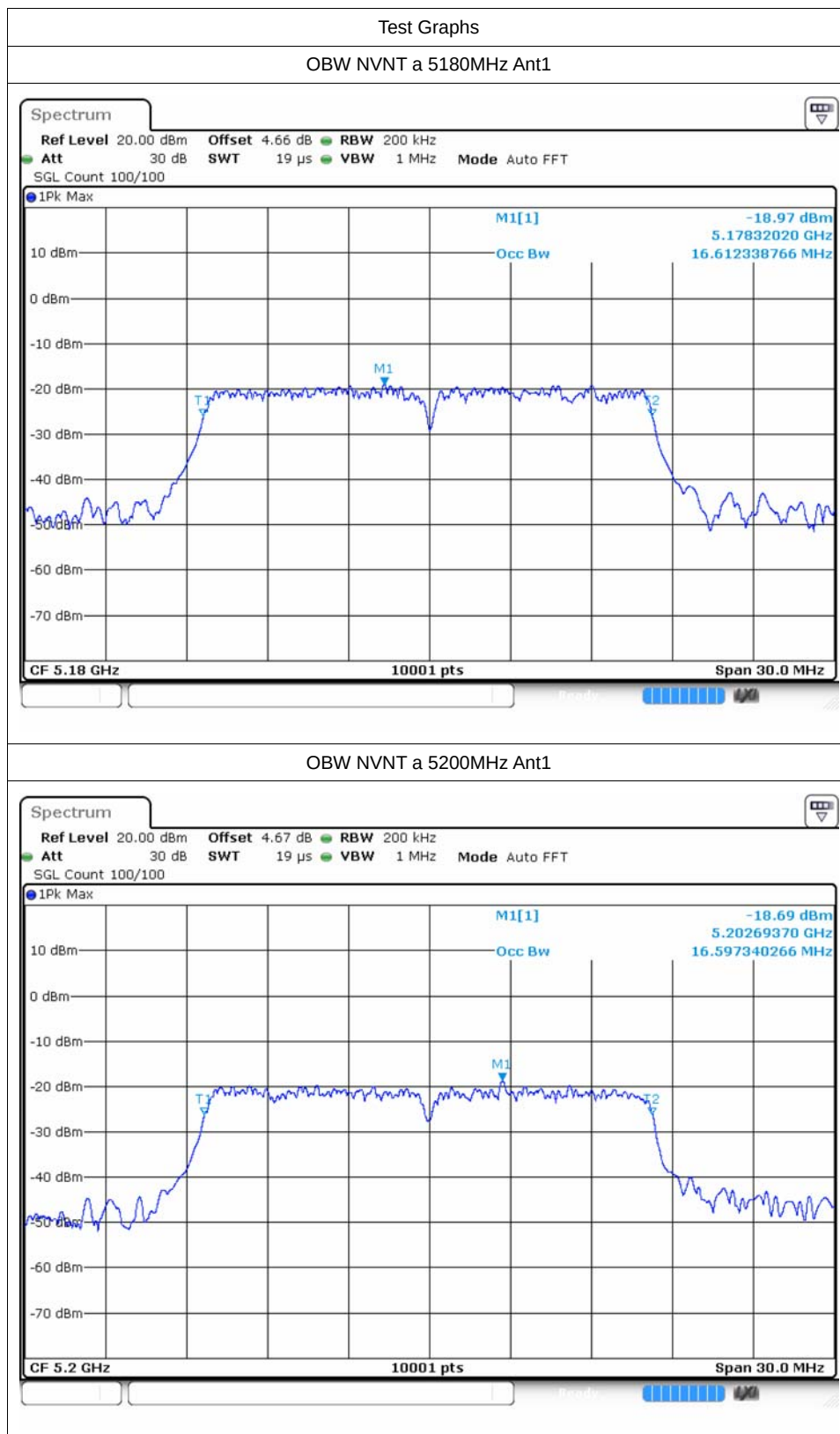


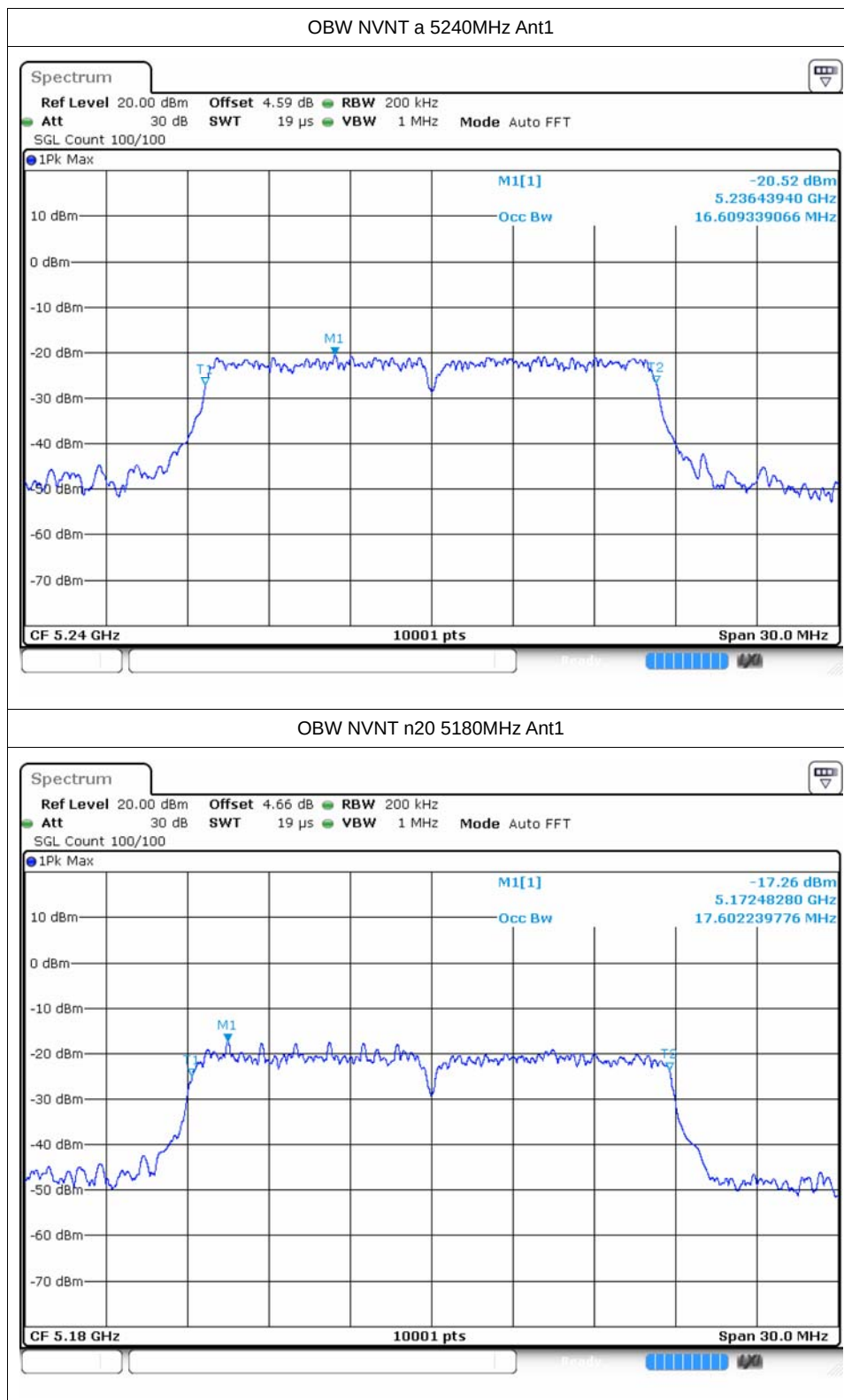


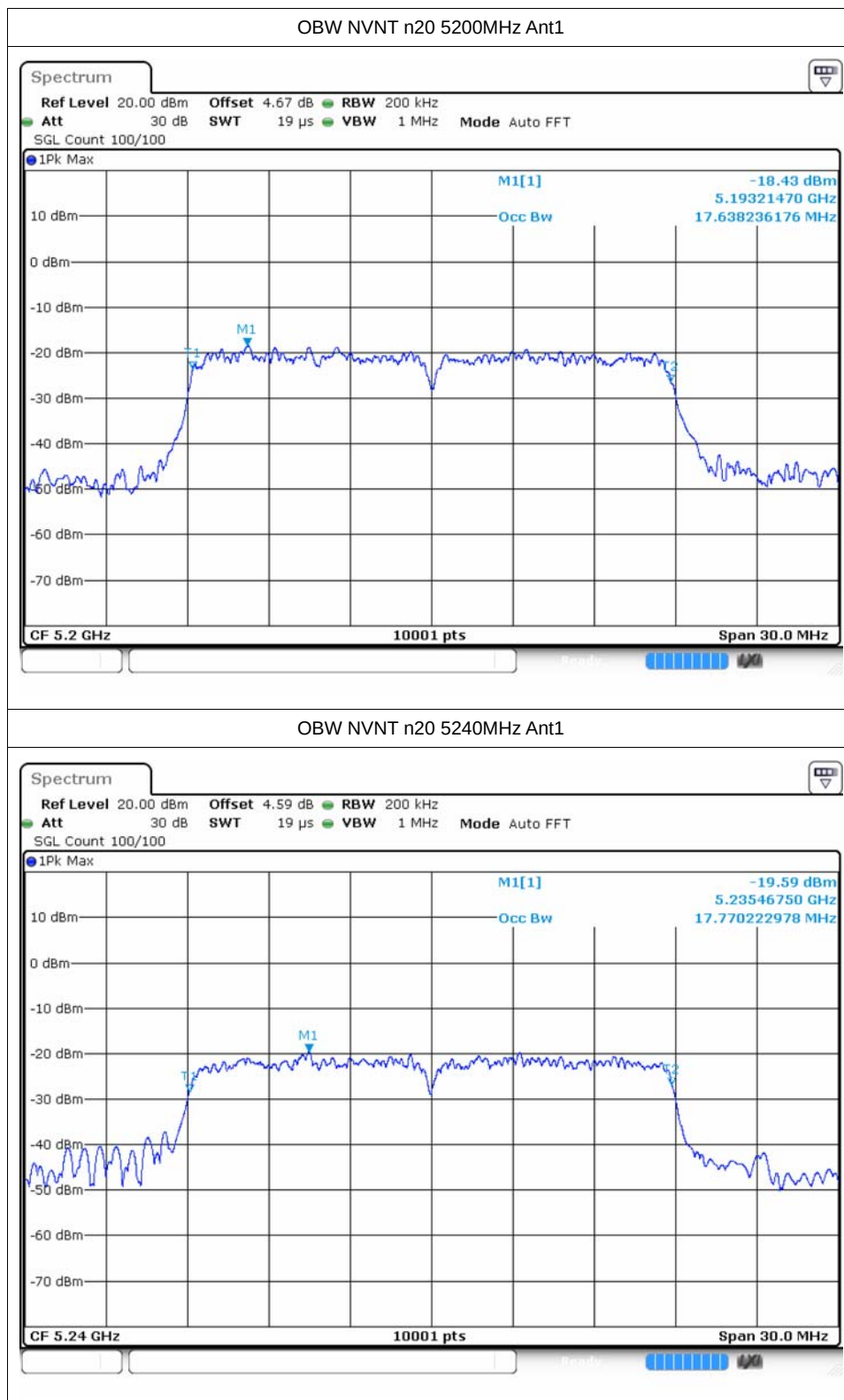
4 Occupied Channel Bandwidth

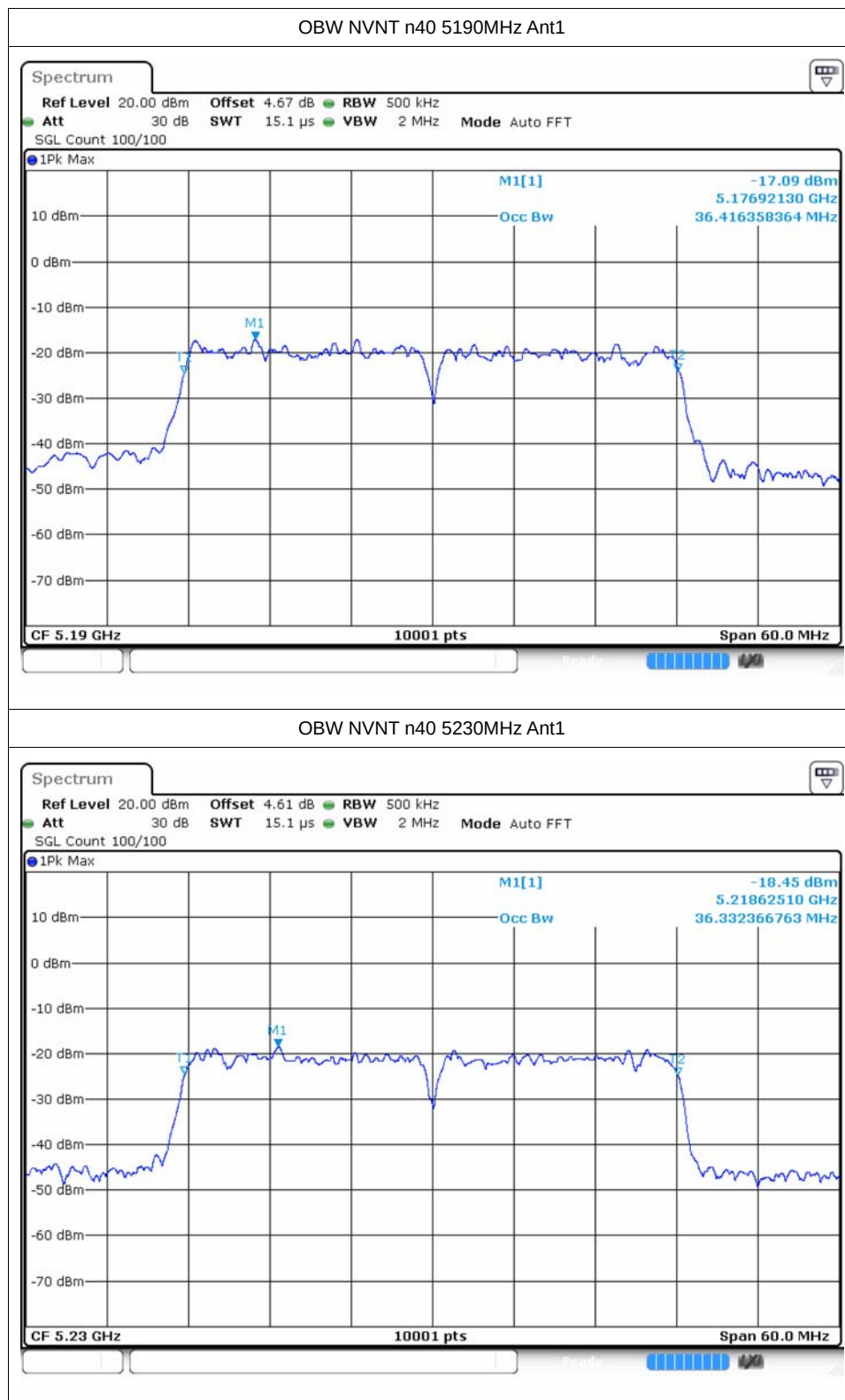
4.1 Test Result

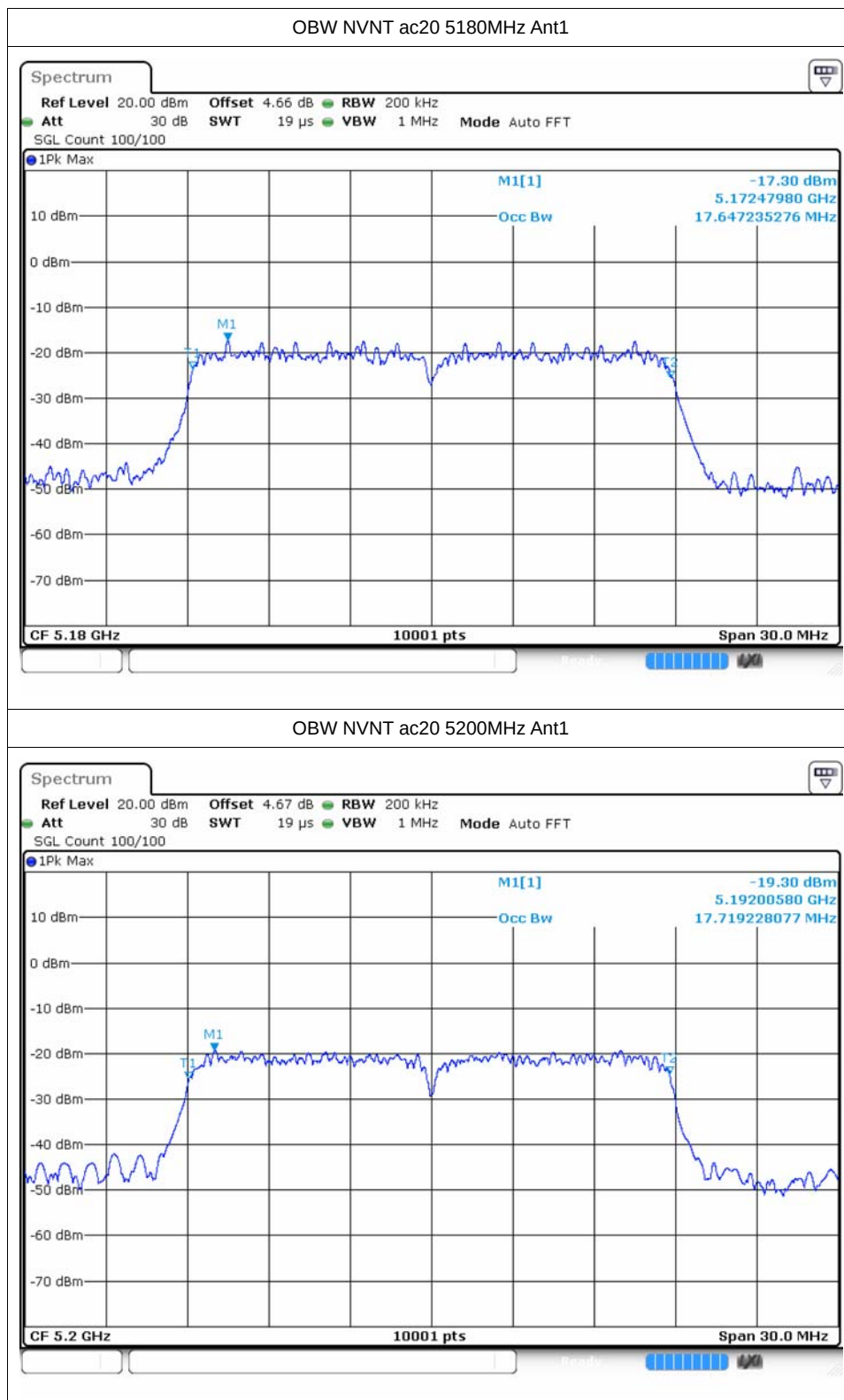
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	a	5180	Ant1	16.612
NVNT	a	5200	Ant1	16.597
NVNT	a	5240	Ant1	16.609
NVNT	n20	5180	Ant1	17.602
NVNT	n20	5200	Ant1	17.638
NVNT	n20	5240	Ant1	17.77
NVNT	n40	5190	Ant1	36.416
NVNT	n40	5230	Ant1	36.332
NVNT	ac20	5180	Ant1	17.647
NVNT	ac20	5200	Ant1	17.719
NVNT	ac20	5240	Ant1	17.662
NVNT	ac40	5190	Ant1	36.392
NVNT	ac40	5230	Ant1	36.26
NVNT	ac80	5210	Ant1	75.88

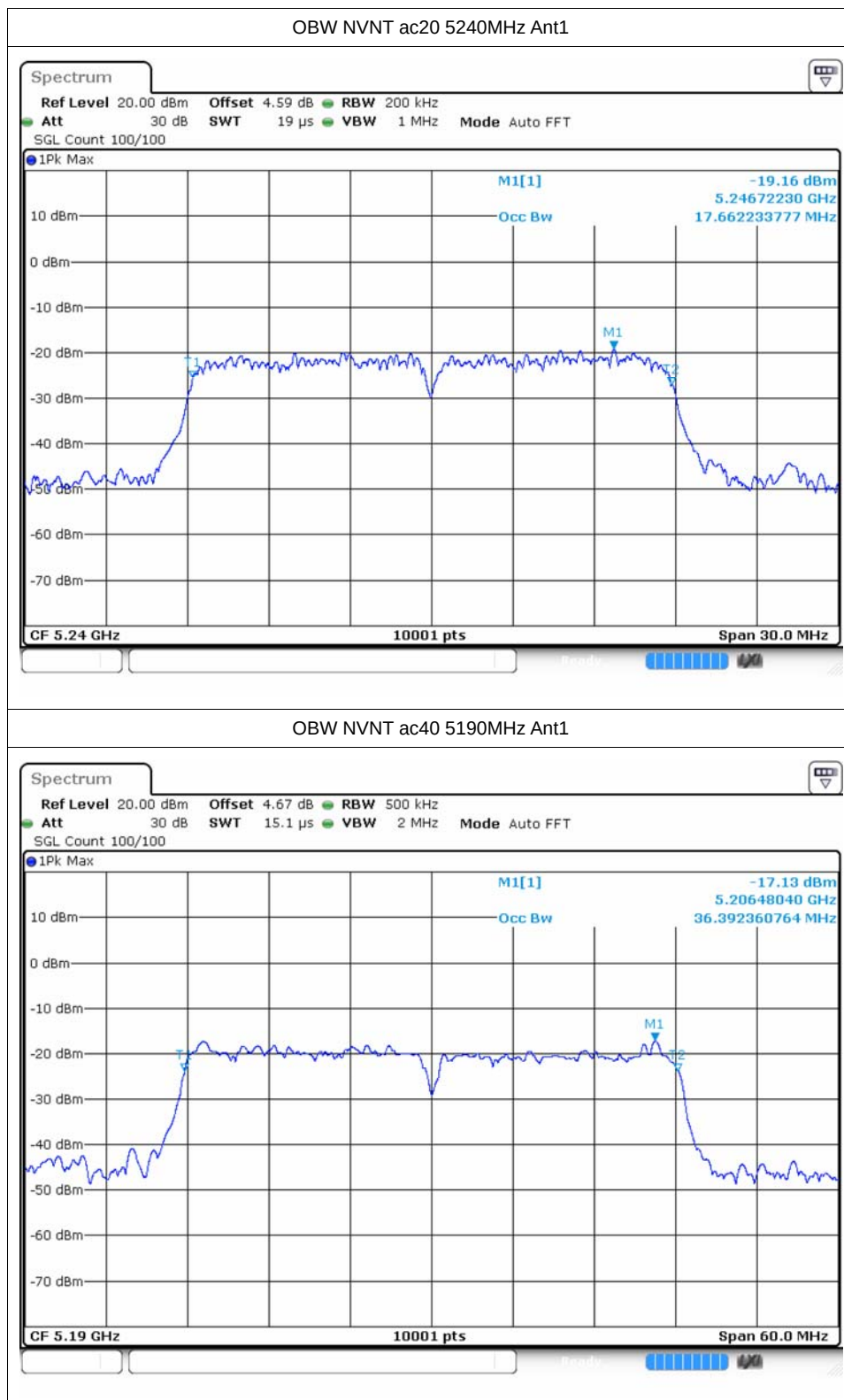


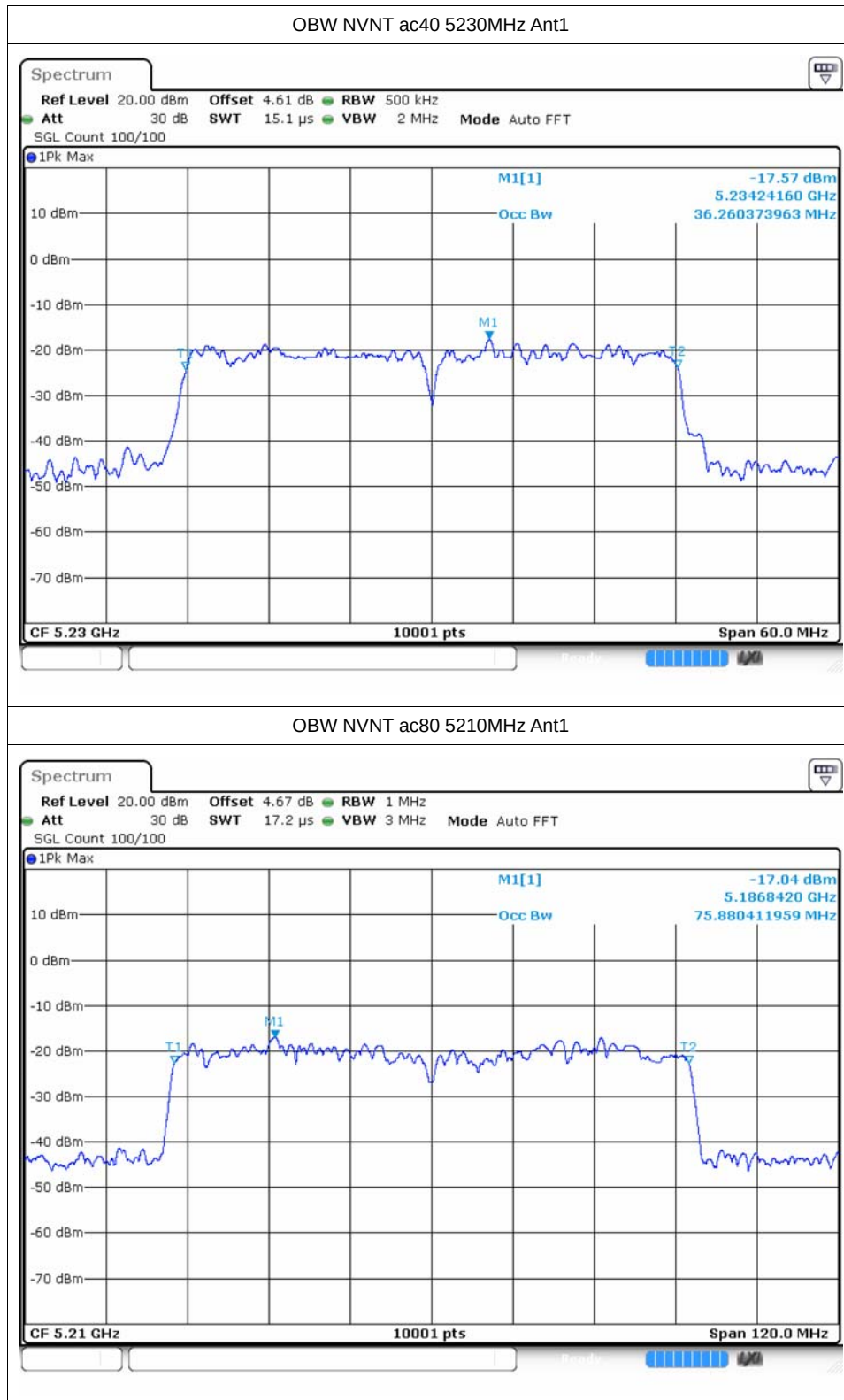














5 Maximum Power Spectral Density Level

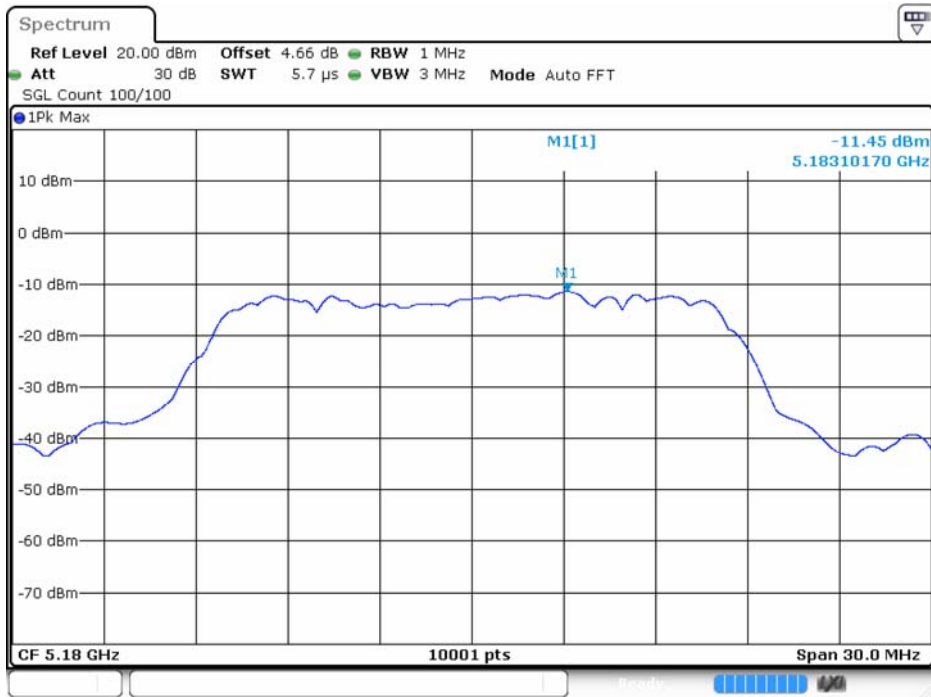
5.1 Test Result

Maximum Power Spectral Density Level

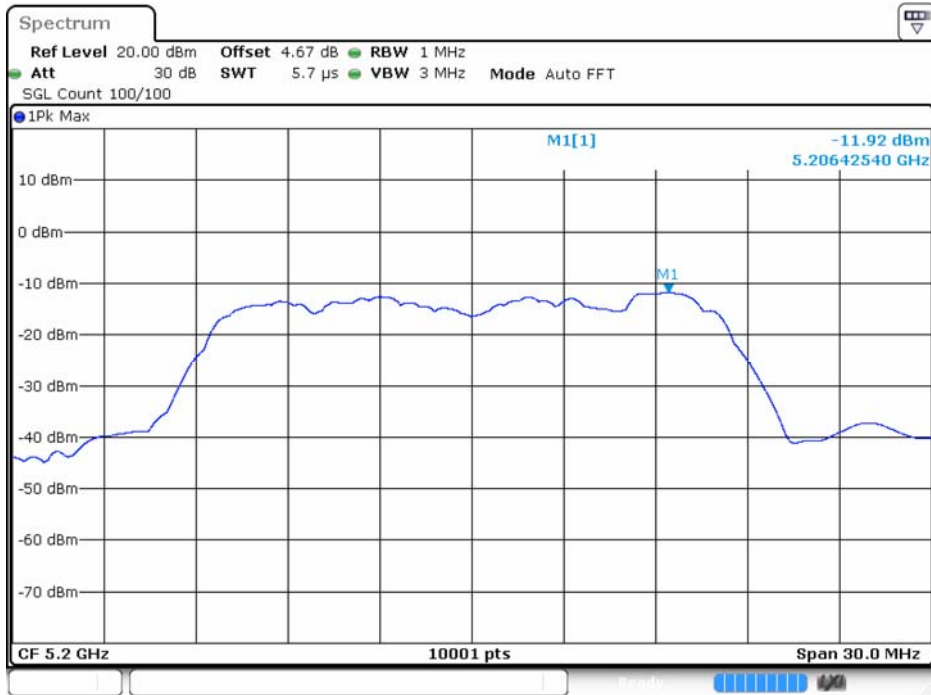
Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm)	Duty Factor (dB)	Total PSD (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	Ant1	-11.45	0.32	-11.13	11	Pass
NVNT	a	5200	Ant1	-11.92	0.29	-11.63	11	Pass
NVNT	a	5240	Ant1	-12.36	0.3	-12.06	11	Pass
NVNT	n20	5180	Ant1	-11.33	0.34	-10.99	11	Pass
NVNT	n20	5200	Ant1	-11.6	0.33	-11.27	11	Pass
NVNT	n20	5240	Ant1	-11.72	0.32	-11.4	11	Pass
NVNT	n40	5190	Ant1	-13.78	0.64	-13.14	11	Pass
NVNT	n40	5230	Ant1	-14.91	0.68	-14.23	11	Pass
NVNT	ac20	5180	Ant1	-10.19	0.38	-9.81	11	Pass
NVNT	ac20	5200	Ant1	-11.05	0.39	-10.66	11	Pass
NVNT	ac20	5240	Ant1	-11.77	0.32	-11.45	11	Pass
NVNT	ac40	5190	Ant1	-13.83	0.72	-13.11	11	Pass
NVNT	ac40	5230	Ant1	-15.02	0.76	-14.26	11	Pass
NVNT	ac80	5210	Ant1	-16.69	1.37	-15.32	11	Pass

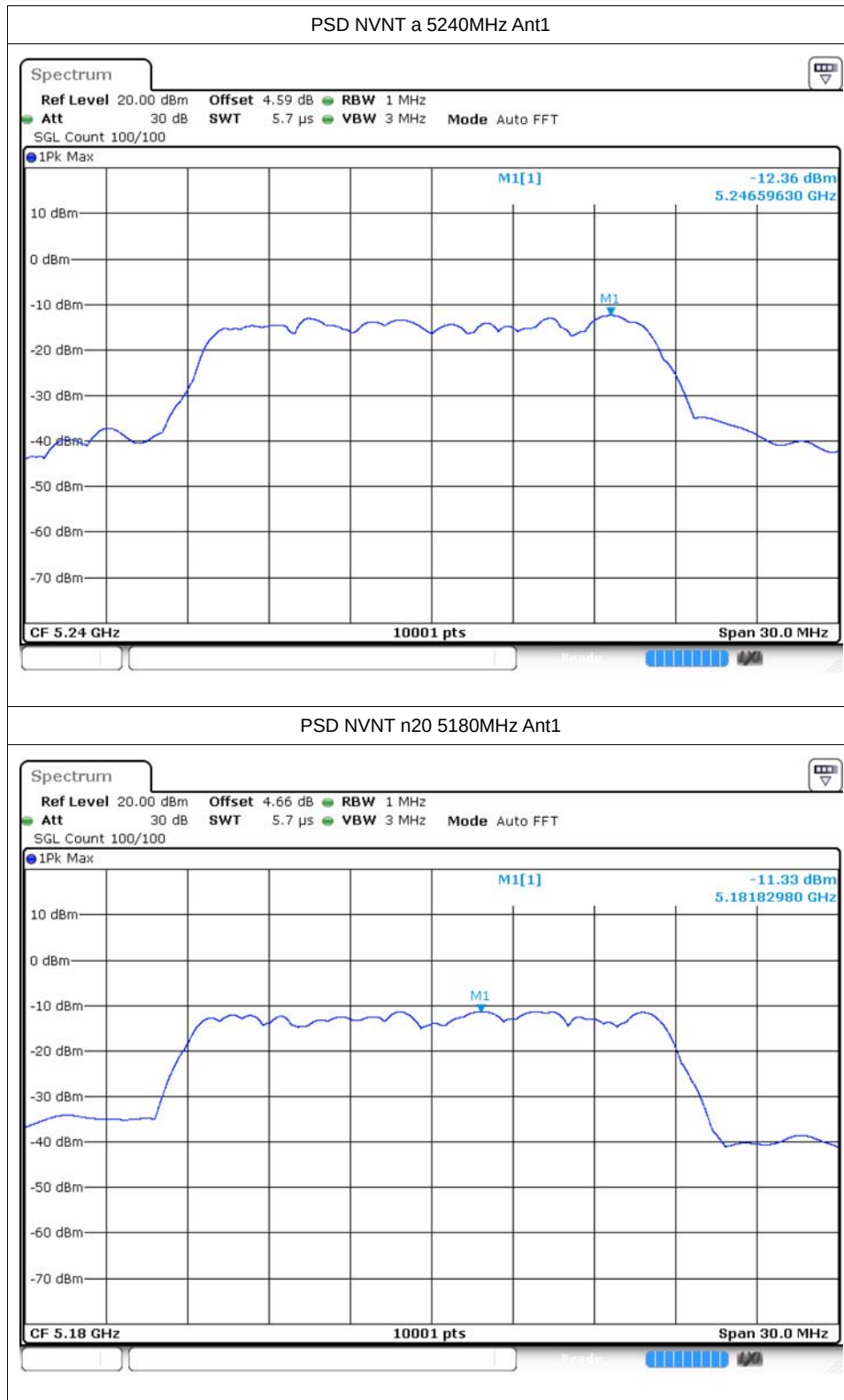
Test Graphs

PSD NVNT a 5180MHz Ant1

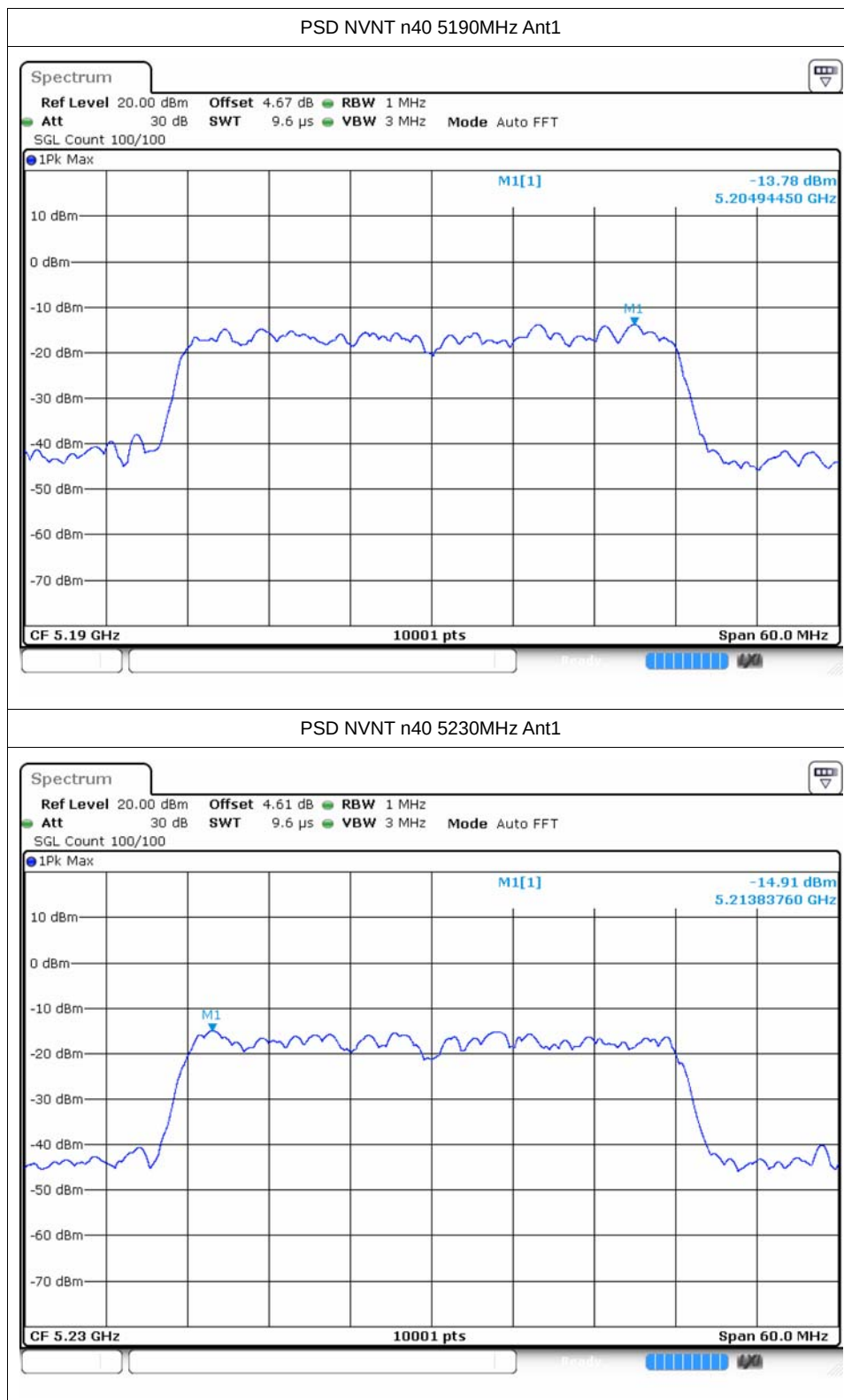


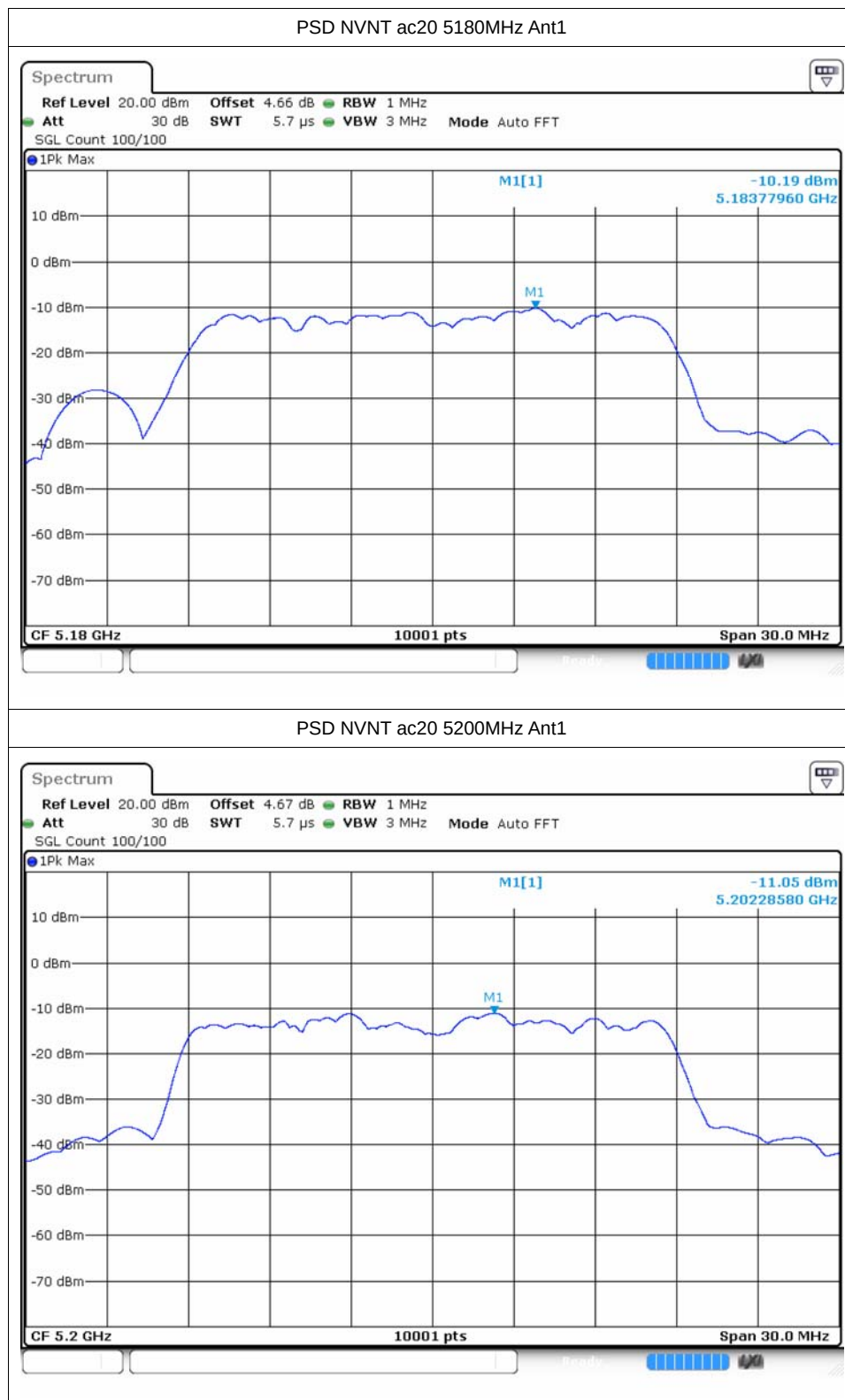
PSD NVNT a 5200MHz Ant1



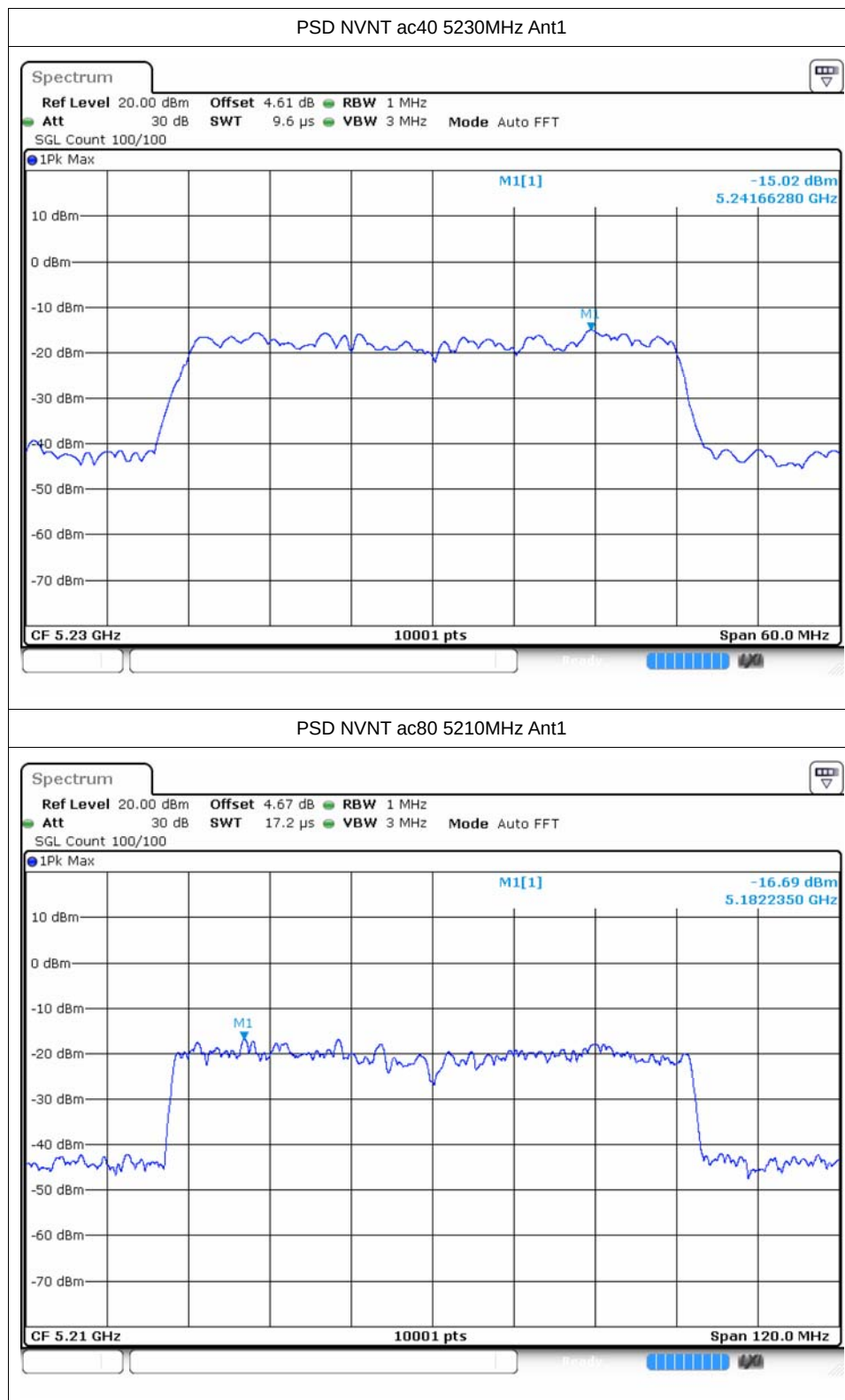














6 Frequency Stability

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	5180.02	20000	3.86	25	Pass
20C 120V	a	5180	Ant1	5180.02	20000	3.86	25	Pass
20C 138V	a	5180	Ant1	5180.02	20000	3.86	25	Pass
-20C 120V	a	5180	Ant1	5180.02	20000	3.86	25	Pass
-10C 120V	a	5180	Ant1	5180.04	40000	7.72	25	Pass
0C 120V	a	5180	Ant1	5180.04	40000	7.72	25	Pass
10C 120V	a	5180	Ant1	5180.02	20000	3.86	25	Pass
30C 120V	a	5180	Ant1	5180.02	20000	3.86	25	Pass
40C 120V	a	5180	Ant1	5180.02	20000	3.86	25	Pass
50C 120V	a	5180	Ant1	5180	0	0	25	Pass
20C 102V	n40	5190	Ant1	5190.08	80000	15.41	25	Pass
20C 120V	n40	5190	Ant1	5190.04	40000	7.71	25	Pass
20C 138V	n40	5190	Ant1	5190.04	40000	7.71	25	Pass
-20C 120V	n40	5190	Ant1	5190	0	0	25	Pass
-10C 120V	n40	5190	Ant1	5190.04	40000	7.71	25	Pass
0C 120V	n40	5190	Ant1	5190.04	40000	7.71	25	Pass
10C 120V	n40	5190	Ant1	5190.04	40000	7.71	25	Pass
30C 120V	n40	5190	Ant1	5190.04	40000	7.71	25	Pass
40C 120V	n40	5190	Ant1	5190.04	40000	7.71	25	Pass
50C 120V	n40	5190	Ant1	5190.04	40000	7.71	25	Pass
20C 102V	ac80	5210	Ant1	5210.24	240000	46.07	25	Pass
20C 120V	ac80	5210	Ant1	5210	0	0	25	Pass
20C 138V	ac80	5210	Ant1	5210.24	240000	46.07	25	Pass
-20C 120V	ac80	5210	Ant1	5210	0	0	25	Pass
-10C 120V	ac80	5210	Ant1	5210	0	0	25	Pass
0C 120V	ac80	5210	Ant1	5210	0	0	25	Pass
10C 120V	ac80	5210	Ant1	5210	0	0	25	Pass
30C 120V	ac80	5210	Ant1	5210	0	0	25	Pass
40C 120V	ac80	5210	Ant1	5210.24	240000	46.07	25	Pass
50C 120V	ac80	5210	Ant1	5210	0	0	25	Pass

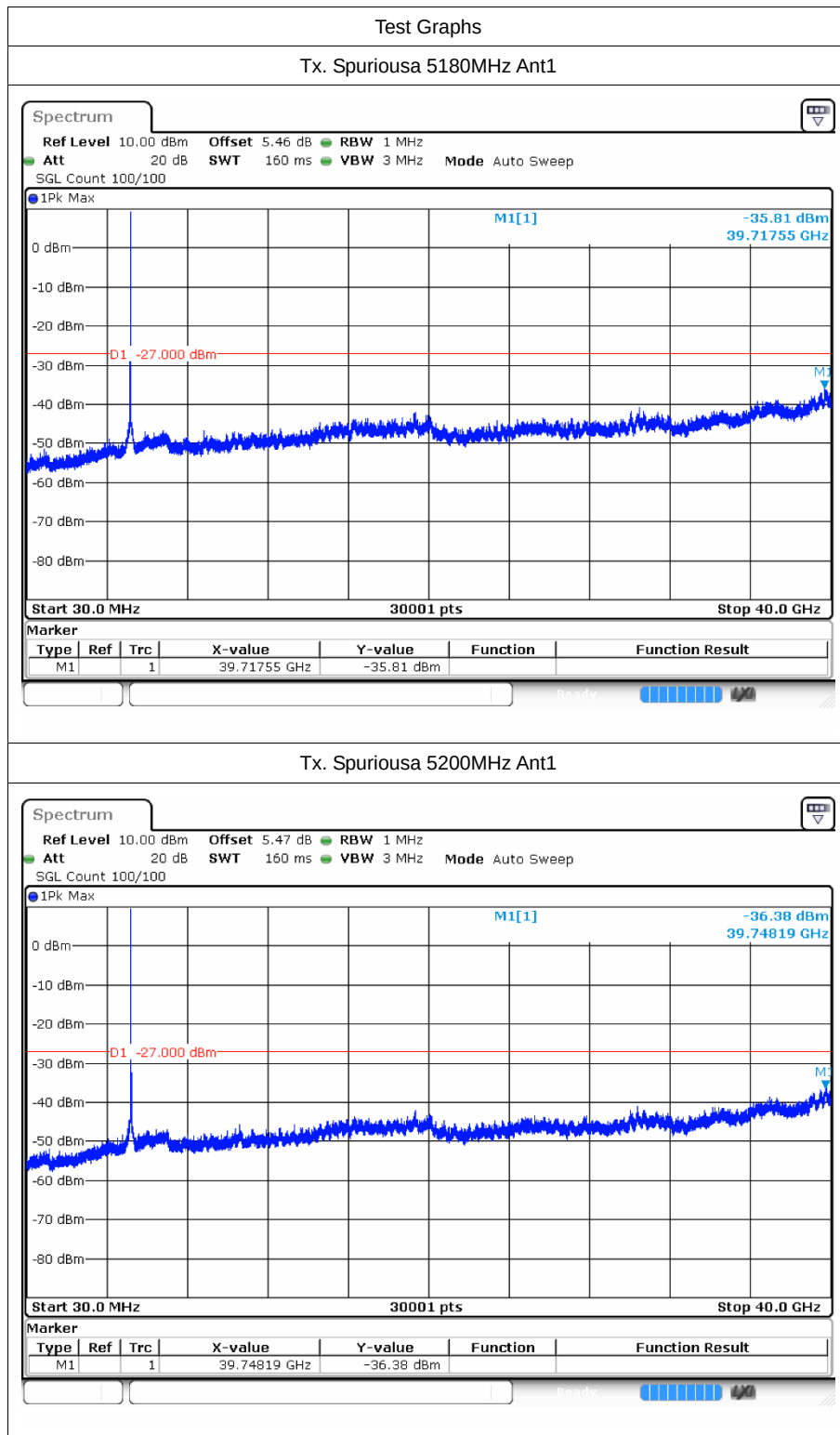
7 Conducted RF Spurious Emission

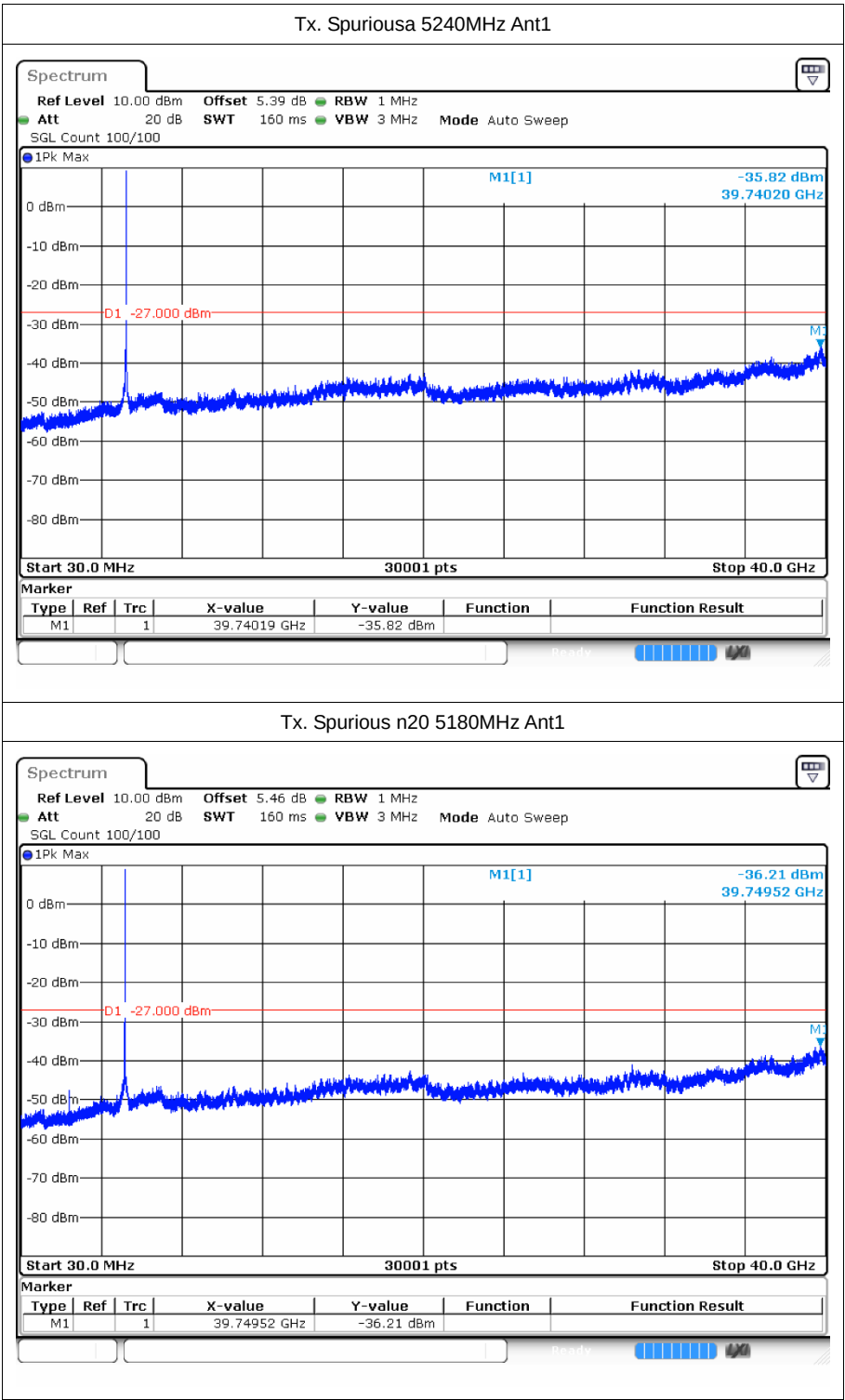
7.1 Test Result

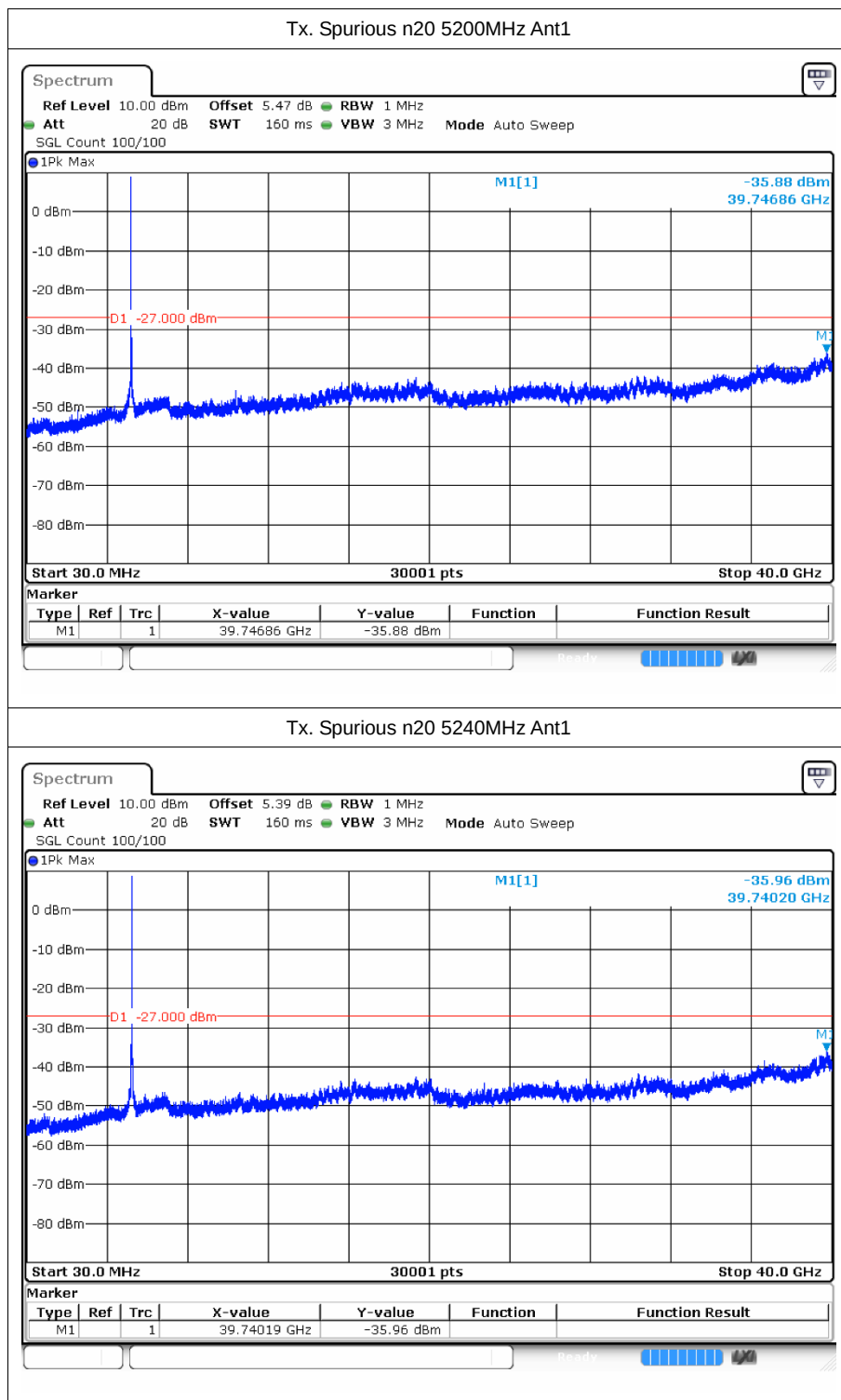
Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
a	5180	Ant1	-35.81	-27	Pass
a	5200	Ant1	-36.37	-27	Pass
a	5240	Ant1	-35.82	-27	Pass
n20	5180	Ant1	-36.21	-27	Pass
n20	5200	Ant1	-35.87	-27	Pass
n20	5240	Ant1	-35.95	-27	Pass
n40	5190	Ant1	-36.44	-27	Pass
n40	5230	Ant1	-35.45	-27	Pass
ac20	5180	Ant1	-35.6	-27	Pass
ac20	5200	Ant1	-35.35	-27	Pass
ac20	5240	Ant1	-36.43	-27	Pass
ac40	5190	Ant1	-35.79	-27	Pass
ac40	5230	Ant1	-35.99	-27	Pass
ac80	5210	Ant1	-35.18	-27	Pass

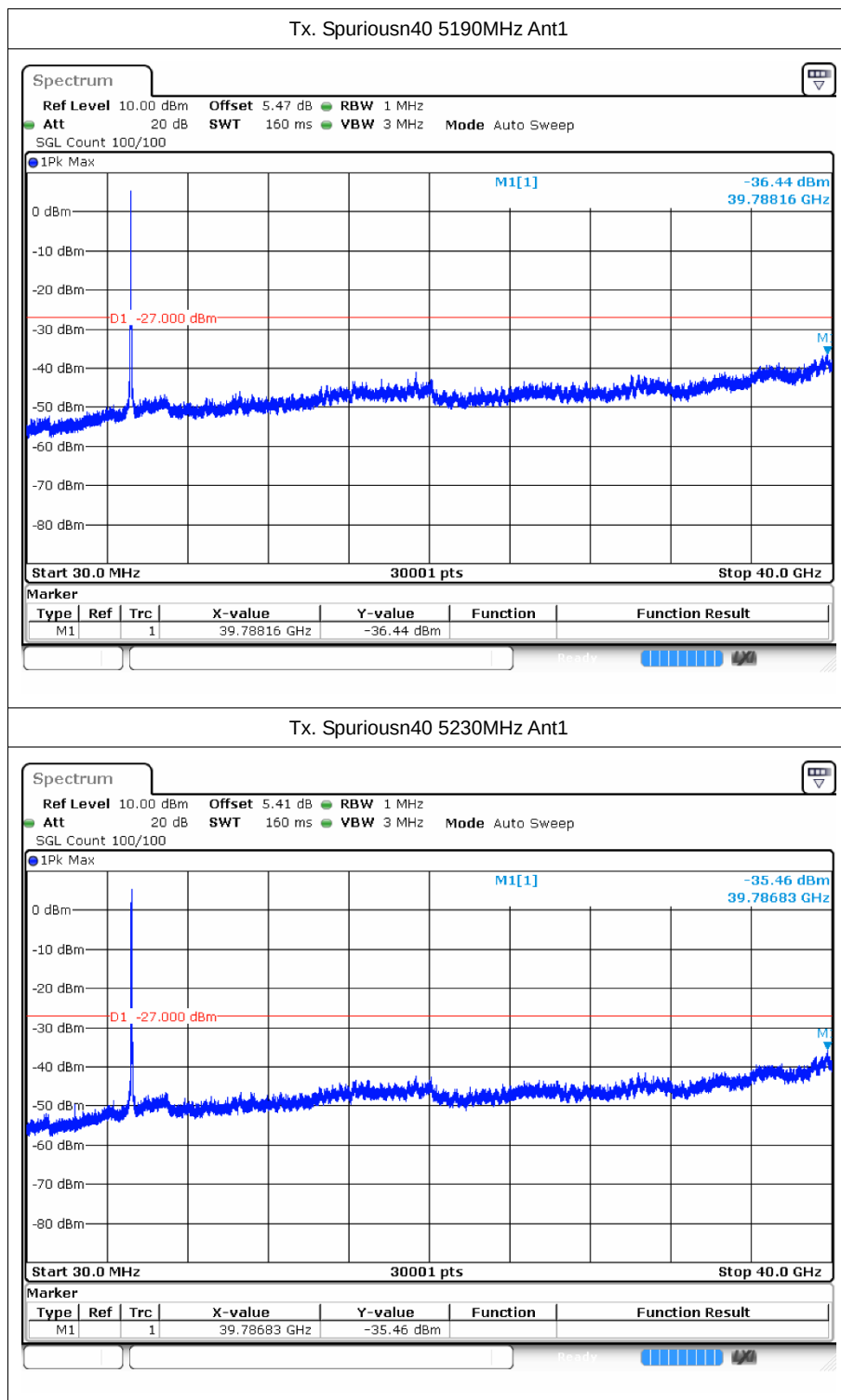
Remark: 1) The antenna gain has been compensated into the plot.

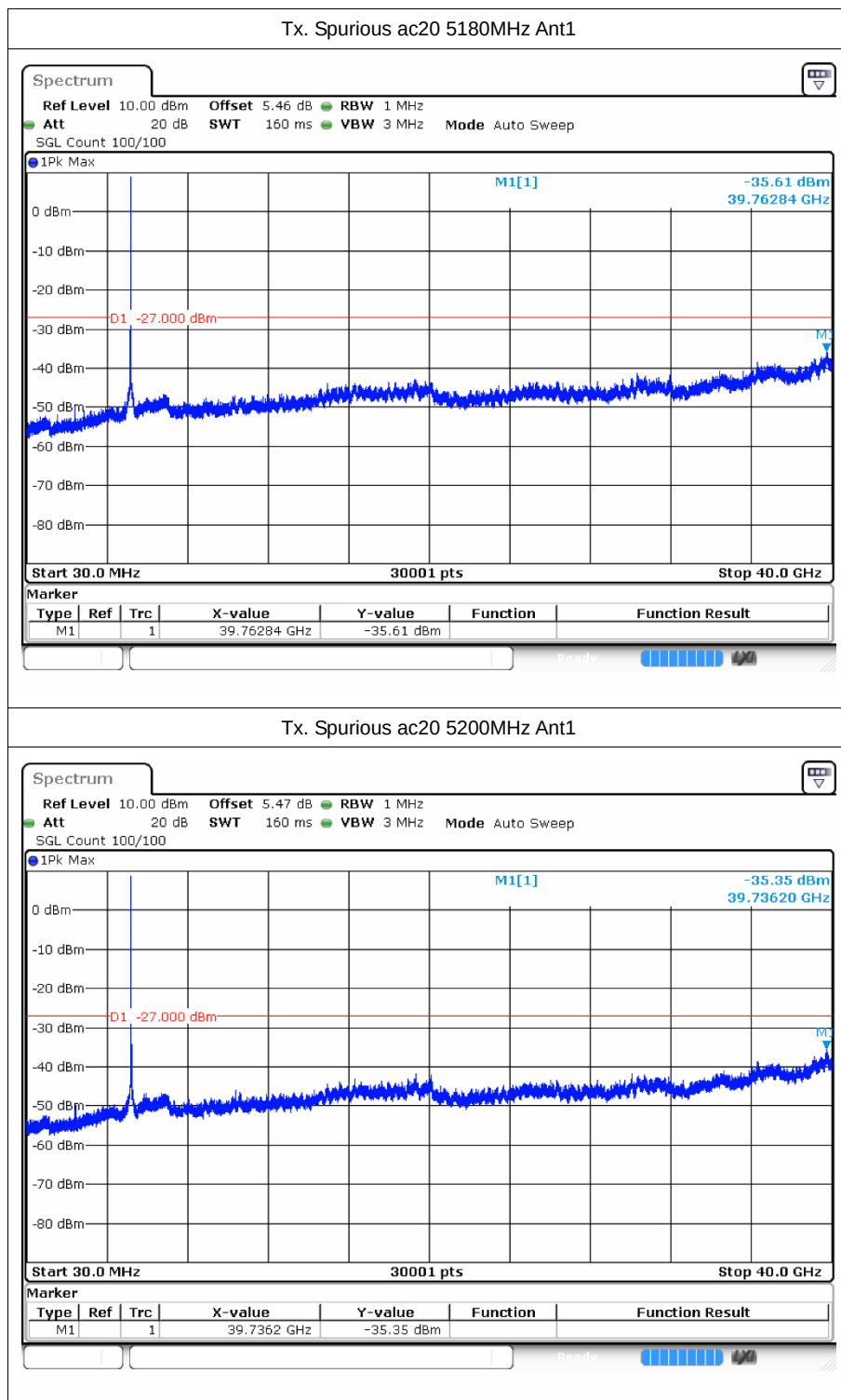
7.2 Test Graphs

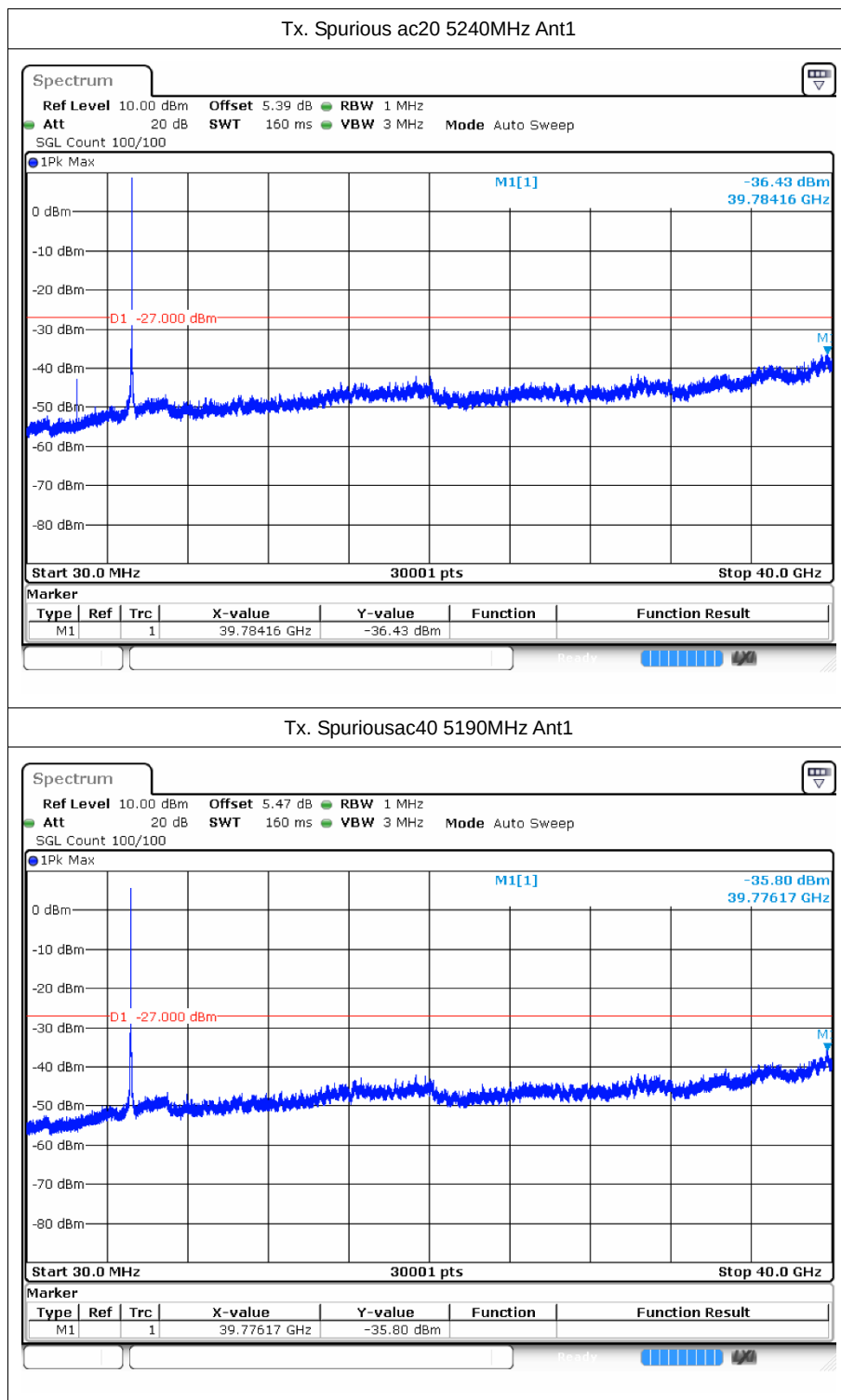


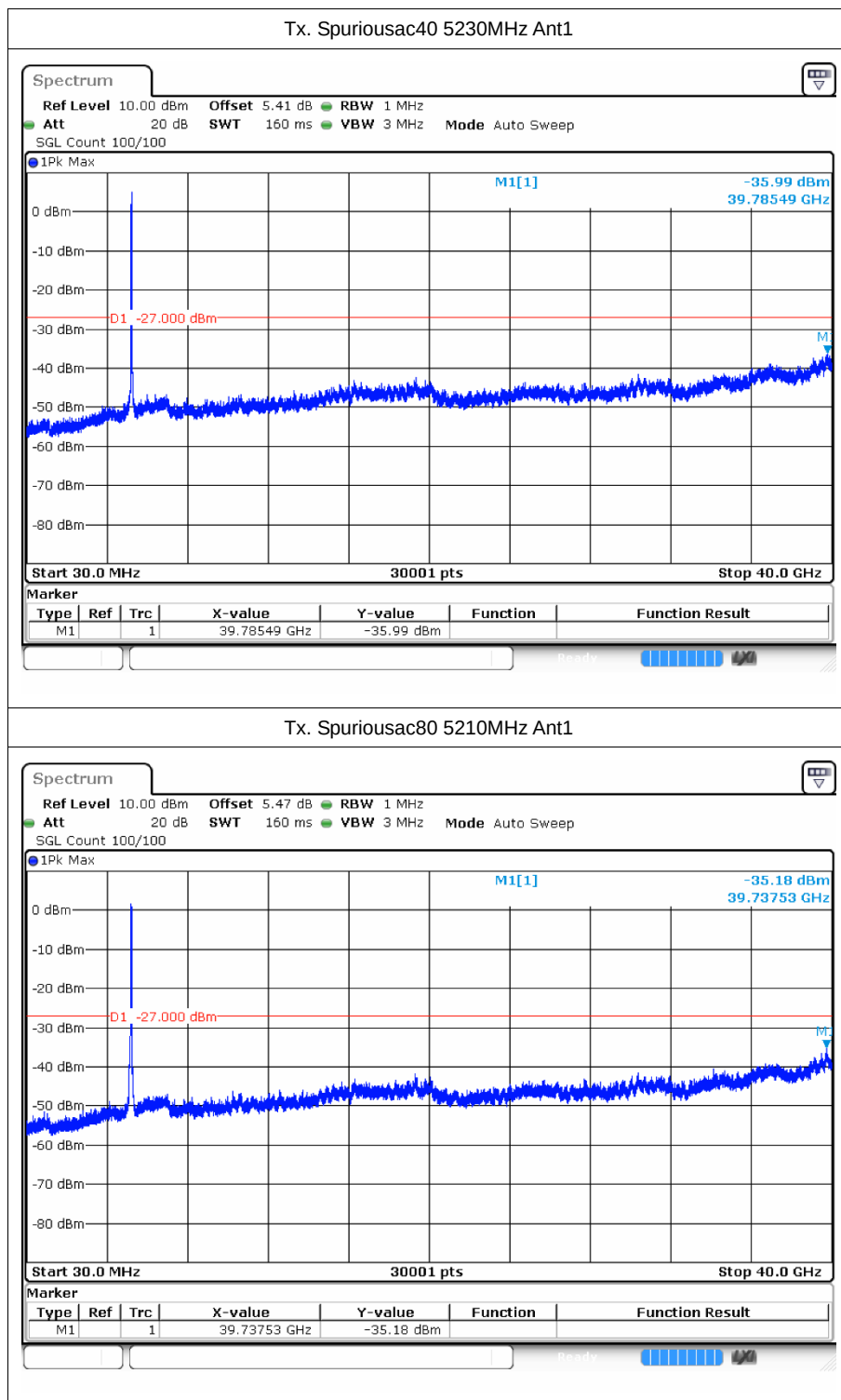














8 Restrict Band

8.1 Test Result

Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
a	5180	Ant1	4500	-42.7	2.56	55.09	Peak	68.2	Pass
a	5180	Ant1	4500	-52.04	2.56	45.75	Average	54	Pass
a	5180	Ant1	5078.2	-38.76	2.56	59.03	Peak	68.2	Pass
a	5180	Ant1	4963.4	-49.42	2.56	48.37	Average	54	Pass
a	5180	Ant1	5150	-40.95	2.56	56.84	Peak	68.2	Pass
a	5180	Ant1	5150	-51.32	2.56	46.47	Average	54	Pass
a	5240	Ant1	5350	-43.24	2.56	54.55	Peak	68.2	Pass
a	5240	Ant1	5350	-51.24	2.56	46.55	Average	54	Pass
a	5240	Ant1	5451.36	-37.72	2.56	60.07	Peak	68.2	Pass
a	5240	Ant1	5447.28	-49.77	2.56	48.02	Average	54	Pass
a	5240	Ant1	5460	-43.23	2.56	54.56	Peak	68.2	Pass
a	5240	Ant1	5460	-51.31	2.56	46.48	Average	54	Pass
n20	5180	Ant1	4500	-41.53	2.56	56.26	Peak	68.2	Pass
n20	5180	Ant1	4500	-51.62	2.56	46.17	Average	54	Pass
n20	5180	Ant1	4757.6	-39.13	2.56	58.66	Peak	68.2	Pass
n20	5180	Ant1	4963.4	-49.2	2.56	48.59	Average	54	Pass
n20	5180	Ant1	5150	-41.3	2.56	56.49	Peak	68.2	Pass
n20	5180	Ant1	5150	-51.48	2.56	46.31	Average	54	Pass
n20	5240	Ant1	5350	-42.06	2.56	55.73	Peak	68.2	Pass
n20	5240	Ant1	5350	-51.22	2.56	46.57	Average	54	Pass
n20	5240	Ant1	5448.96	-38.52	2.56	59.27	Peak	68.2	Pass
n20	5240	Ant1	5447.04	-49.51	2.56	48.28	Average	54	Pass
n20	5240	Ant1	5460	-39.76	2.56	58.03	Peak	68.2	Pass
n20	5240	Ant1	5460	-51.29	2.56	46.5	Average	54	Pass
n40	5190	Ant1	4500	-42.14	2.56	55.65	Peak	68.2	Pass
n40	5190	Ant1	4500	-51.53	2.56	46.26	Average	54	Pass
n40	5190	Ant1	4574.46	-38.57	2.56	59.22	Peak	68.2	Pass
n40	5190	Ant1	4965.01	-48.8	2.56	48.99	Average	54	Pass
n40	5190	Ant1	5150	-39.72	2.56	58.07	Peak	68.2	Pass
n40	5190	Ant1	5150	-49.8	2.56	47.99	Average	54	Pass
n40	5230	Ant1	5350	-42.97	2.56	54.82	Peak	68.2	Pass
n40	5230	Ant1	5350	-50.87	2.56	46.92	Average	54	Pass
n40	5230	Ant1	5449.47	-39.1	2.56	58.69	Peak	68.2	Pass
n40	5230	Ant1	5447.31	-49.2	2.56	48.59	Average	54	Pass



n40	5230	Ant1	5460	-42.11	2.56	55.68	Peak	68.2	Pass
n40	5230	Ant1	5460	-50.5	2.56	47.29	Average	54	Pass
ac20	5180	Ant1	4500	-41.63	2.56	56.16	Peak	68.2	Pass
ac20	5180	Ant1	4500	-51.9	2.56	45.89	Average	54	Pass
ac20	5180	Ant1	5007.5	-37.79	2.56	60	Peak	68.2	Pass
ac20	5180	Ant1	4966.2	-49.35	2.56	48.44	Average	54	Pass
ac20	5180	Ant1	5150	-41.21	2.56	56.58	Peak	68.2	Pass
ac20	5180	Ant1	5150	-51.37	2.56	46.42	Average	54	Pass
ac20	5240	Ant1	5350	-41.76	2.56	56.03	Peak	68.2	Pass
ac20	5240	Ant1	5350	-51.34	2.56	46.45	Average	54	Pass
ac20	5240	Ant1	5354.16	-39.64	2.56	58.15	Peak	68.2	Pass
ac20	5240	Ant1	5446.8	-49.54	2.56	48.25	Average	54	Pass
ac20	5240	Ant1	5460	-41.16	2.56	56.63	Peak	68.2	Pass
ac20	5240	Ant1	5460	-51.16	2.56	46.63	Average	54	Pass
ac40	5190	Ant1	4500	-41.37	2.56	56.42	Peak	68.2	Pass
ac40	5190	Ant1	4500	-51.45	2.56	46.34	Average	54	Pass
ac40	5190	Ant1	4830.69	-37.79	2.56	60	Peak	68.2	Pass
ac40	5190	Ant1	4964.28	-48.81	2.56	48.98	Average	54	Pass
ac40	5190	Ant1	5150	-41.62	2.56	56.17	Peak	68.2	Pass
ac40	5190	Ant1	5150	-49.85	2.56	47.94	Average	54	Pass
ac40	5230	Ant1	5350	-42.85	2.56	54.94	Peak	68.2	Pass
ac40	5230	Ant1	5350	-51.03	2.56	46.76	Average	54	Pass
ac40	5230	Ant1	5460	-39.55	2.56	58.24	Peak	68.2	Pass
ac40	5230	Ant1	5448.66	-48.96	2.56	48.83	Average	54	Pass
ac40	5230	Ant1	5460	-39.55	2.56	58.24	Peak	68.2	Pass
ac40	5230	Ant1	5460	-50.7	2.56	47.09	Average	54	Pass
ac80	5210	Ant1	5350	-43.21	2.56	54.58	Peak	68.2	Pass
ac80	5210	Ant1	5350	-51.2	2.56	46.59	Average	54	Pass
ac80	5210	Ant1	5447.13	-37.83	2.56	59.96	Peak	68.2	Pass
ac80	5210	Ant1	5448.12	-48.64	2.56	49.15	Average	54	Pass
ac80	5210	Ant1	5460	-42.25	2.56	55.54	Peak	68.2	Pass
ac80	5210	Ant1	5460	-50.63	2.56	47.16	Average	54	Pass

8.2 Test Graphs

