



Appendix D

RF Test Data for B1-B3 WIFI(Conducted Measurement)

Product Name: Smart Electronic Blackboard

Trade Mark: INDOTA

Test Model: IN-TVH4K

Environmental Conditions

Temperature:	25.3° C
Relative Humidity:	52.2%
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.....	6
2	Maximum Conducted Output Power	52
2.1	Test Result	52
3	-26dB Bandwidth.....	55
3.1	Test Result	55
3.2	Test Graphs.....	58
4	Occupied Channel Bandwidth	104
4.1	Test Result	104
4.2	Test Graphs.....	107
5	Maximum Power Spectral Density Level	153
5.1	Test Result	153
5.2	Test Graphs.....	156
6	Frequency Stability.....	202
6.1	Test Result	202
7	Conducted RF Spurious Emission.....	213
7.1	Test Result	213
7.2	Test Graphs.....	216
8	Restrict Band	262
8.1	Test Result	262
8.2	Test Graphs.....	272



1 Duty Cycle

1.1 Test Result

Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
a	5180	Ant1	86.92	0.61	4.55
a	5200	Ant1	86.84	0.61	4.76
a	5240	Ant1	86.94	0.61	4.55
a	5260	Ant1	87.16	0.6	4.76
a	5280	Ant1	86.93	0.61	4.76
a	5320	Ant1	87.05	0.6	4.76
a	5500	Ant1	87.05	0.6	4.55
a	5600	Ant1	87.1	0.6	4.76
a	5700	Ant1	86.95	0.61	4.76
a	5180	Ant2	87.21	0.59	4.55
a	5200	Ant2	87.05	0.6	4.76
a	5240	Ant2	87.1	0.6	4.76
a	5260	Ant2	86.95	0.61	4.76
a	5280	Ant2	87.01	0.6	4.76
a	5320	Ant2	87.13	0.6	4.76
a	5500	Ant2	87.11	0.6	4.76
a	5600	Ant2	87.09	0.6	4.55
a	5700	Ant2	86.96	0.61	4.55
n20	5180	Ant1	93.03	0.31	2.22
n20	5200	Ant1	93.05	0.31	2.22
n20	5240	Ant1	93.02	0.31	2.22
n20	5260	Ant1	93.03	0.31	2.22
n20	5280	Ant1	92.86	0.32	2.27
n20	5320	Ant1	93.03	0.31	2.22
n20	5500	Ant1	93.02	0.31	2.22
n20	5600	Ant1	93.04	0.31	2.22
n20	5700	Ant1	93.01	0.31	2.22
n20	5180	Ant2	93.07	0.31	2.22
n20	5200	Ant2	93.09	0.31	2.22
n20	5240	Ant2	93.06	0.31	2.22
n20	5260	Ant2	93.01	0.31	2.22
n20	5280	Ant2	93.06	0.31	2.27
n20	5320	Ant2	93.05	0.31	2.22
n20	5500	Ant2	93.08	0.31	2.22
n20	5600	Ant2	93.06	0.31	2.22
n20	5700	Ant2	93.08	0.31	2.22
n40	5190	Ant1	92.97	0.32	2.27

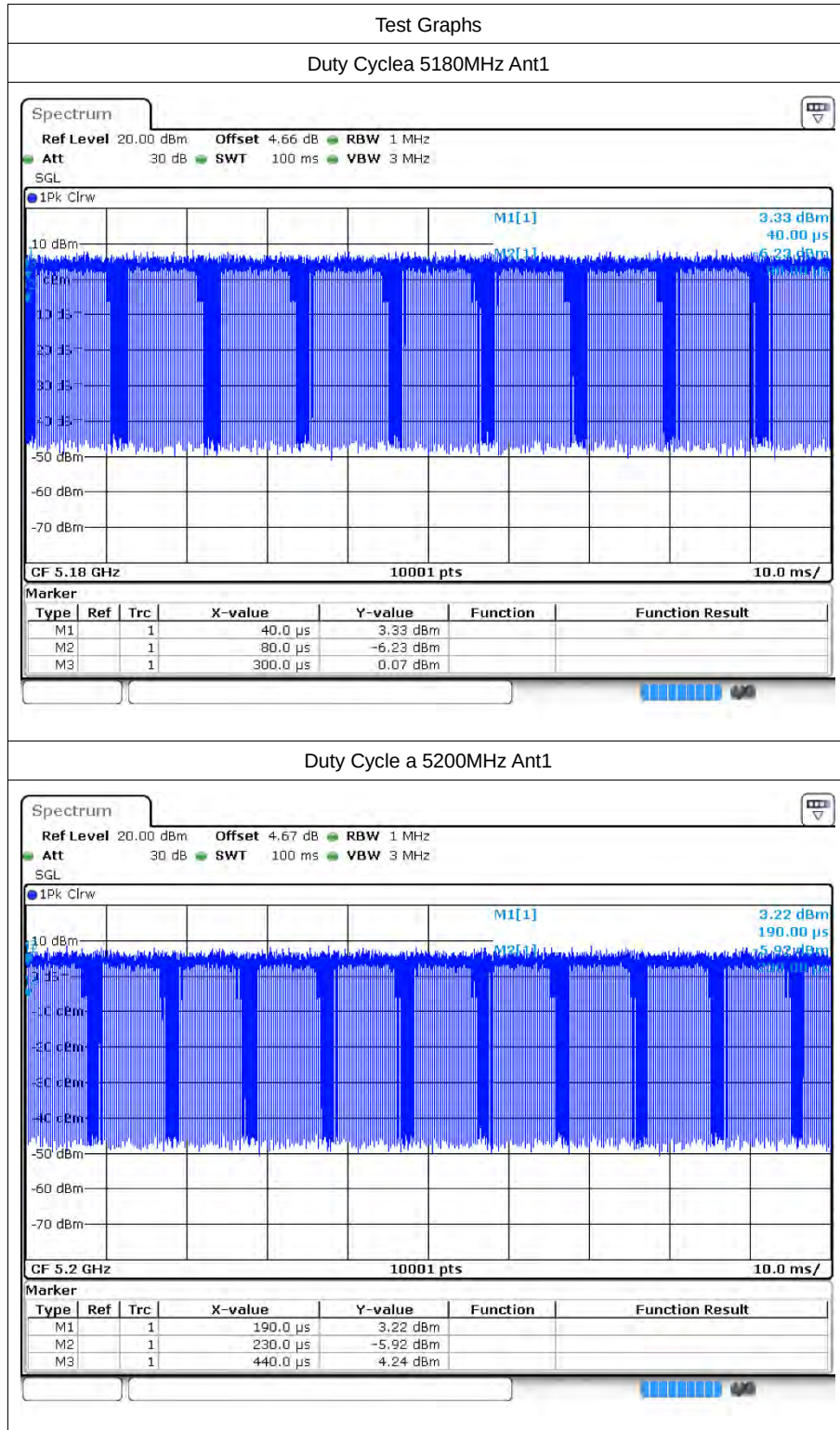


n40	5230	Ant1	92.93	0.32	2.22
n40	5270	Ant1	92.98	0.32	2.22
n40	5310	Ant1	92.94	0.32	2.27
n40	5510	Ant1	92.98	0.32	2.22
n40	5670	Ant1	92.96	0.32	2.27
n40	5190	Ant2	91.41	0.39	2.27
n40	5230	Ant2	91.42	0.39	2.27
n40	5270	Ant2	91.52	0.38	2.33
n40	5310	Ant2	92.7	0.33	2.27
n40	5510	Ant2	92.89	0.32	2.22
n40	5670	Ant2	92.89	0.32	2.27
ac20	5180	Ant1	87.01	0.6	4.55
ac20	5200	Ant1	87.08	0.6	4.55
ac20	5240	Ant1	87.23	0.59	4.35
ac20	5260	Ant1	87.24	0.59	4.55
ac20	5280	Ant1	87.06	0.6	4.55
ac20	5320	Ant1	87.06	0.6	4.35
ac20	5500	Ant1	85.16	0.7	4.55
ac20	5600	Ant1	87.08	0.6	4.55
ac20	5700	Ant1	87.23	0.59	4.35
ac20	5180	Ant2	87.06	0.6	4.55
ac20	5200	Ant2	87.11	0.6	4.55
ac20	5240	Ant2	87.11	0.6	4.55
ac20	5260	Ant2	87.15	0.6	4.35
ac20	5280	Ant2	85.16	0.7	4.55
ac20	5320	Ant2	87.16	0.6	4.35
ac20	5500	Ant2	87.25	0.59	4.55
ac20	5600	Ant2	87.46	0.58	4.35
ac20	5700	Ant2	87.31	0.59	4.55
ac40	5190	Ant1	87.27	0.59	4.35
ac40	5230	Ant1	87.25	0.59	4.55
ac40	5310	Ant1	87.25	0.59	4.35
ac40	5270	Ant1	87.17	0.6	4.35
ac40	5510	Ant1	87.16	0.6	4.35
ac40	5670	Ant1	87.4	0.58	4.35
ac40	5190	Ant2	84.48	0.73	4.55
ac40	5230	Ant2	84.34	0.74	4.55
ac40	5270	Ant2	85.06	0.7	4.55
ac40	5310	Ant2	86.53	0.63	4.35
ac40	5510	Ant2	87.35	0.59	4.35
ac40	5670	Ant2	87.06	0.6	4.35
ac80	5210	Ant1	87.47	0.58	4.35
ac80	5290	Ant1	87.37	0.59	4.35

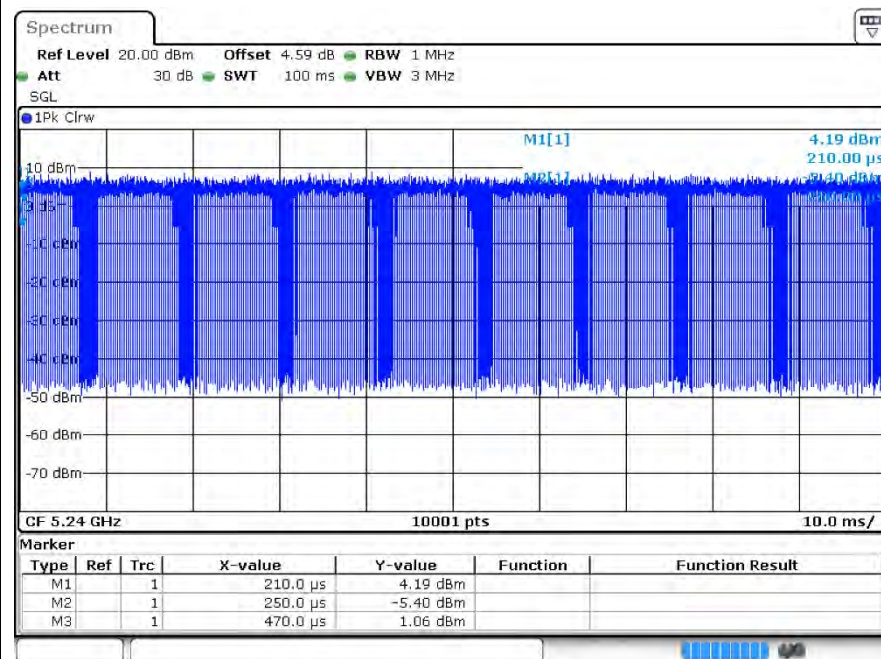


ac80	5530	Ant1	87.57	0.58	4.17
ac80	5610	Ant1	87.47	0.58	4.17
ac80	5210	Ant2	84.63	0.72	4.55
ac80	5530	Ant2	87.4	0.58	4.35
ac80	5610	Ant2	87.4	0.58	4.35

1.2 Test Graphs



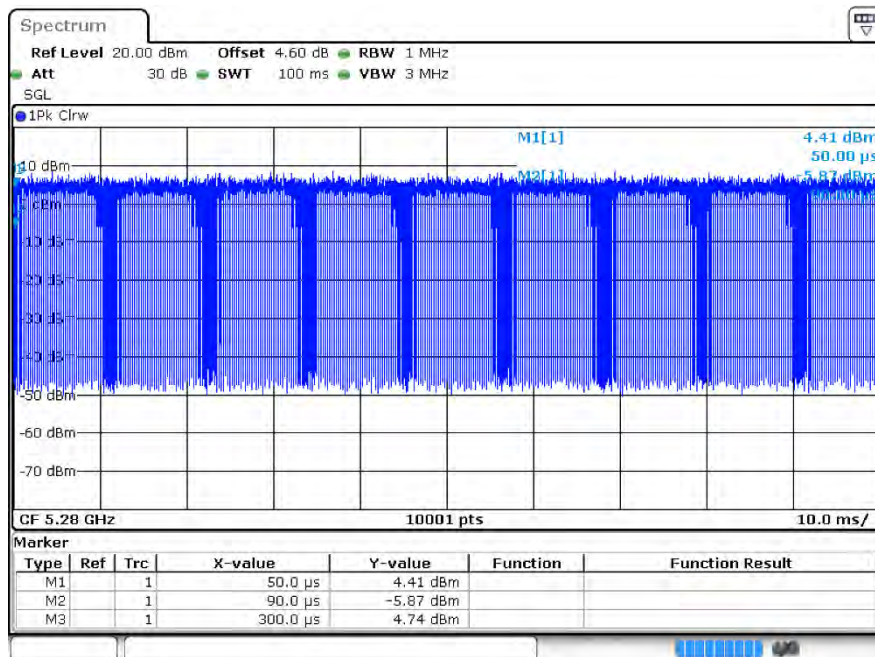
Duty Cyclea 5240MHz Ant1



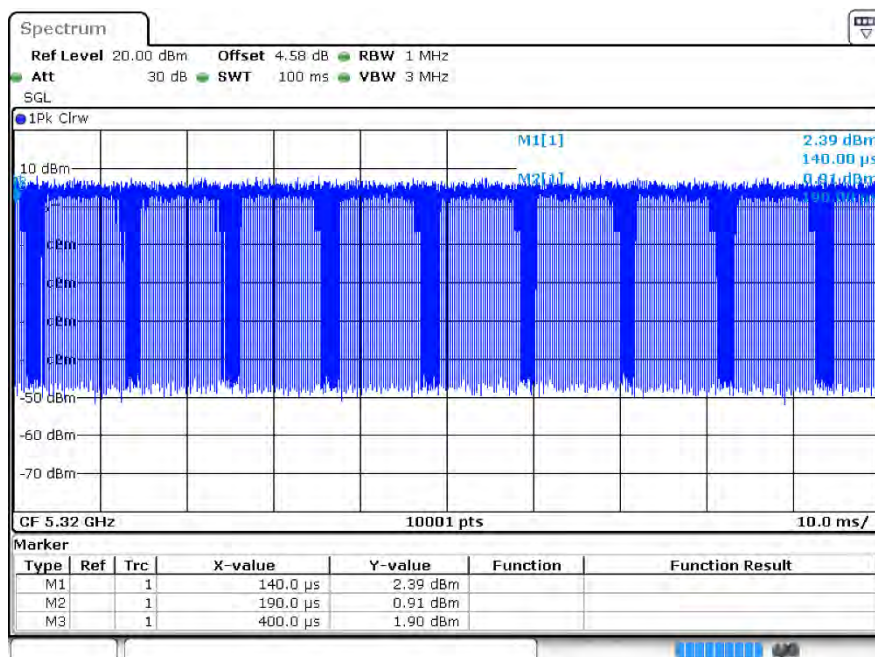
Duty Cycle a 5260MHz Ant1



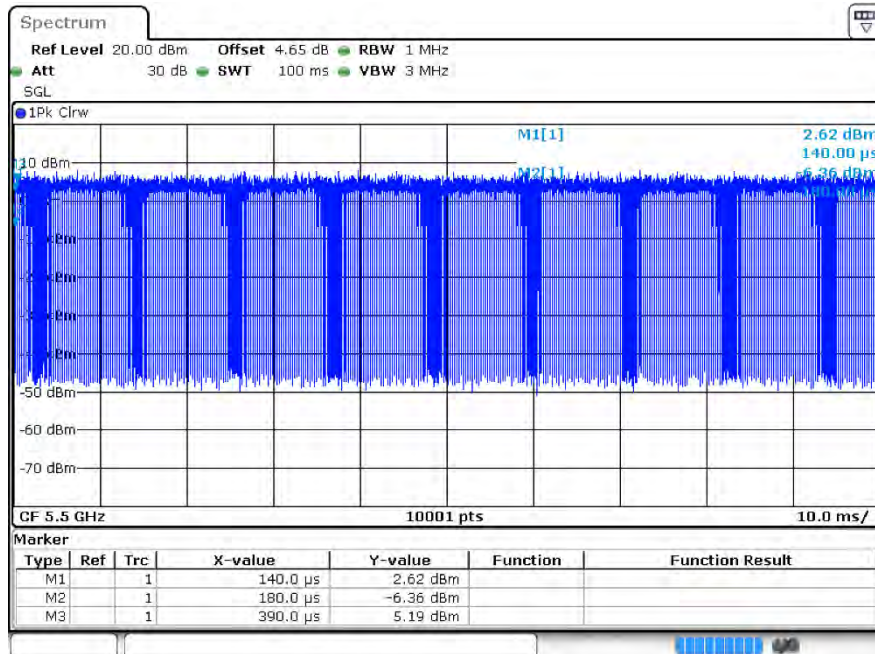
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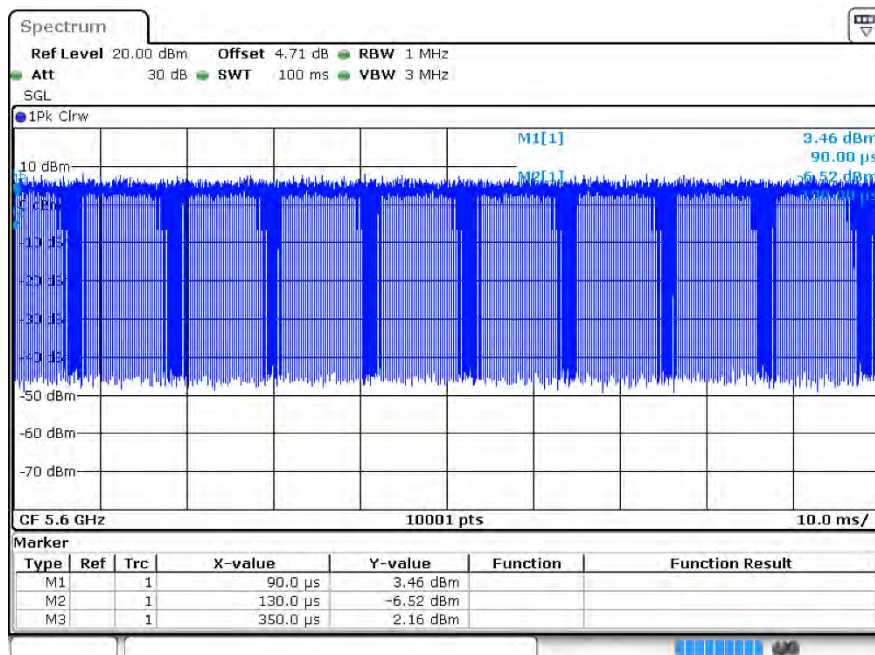
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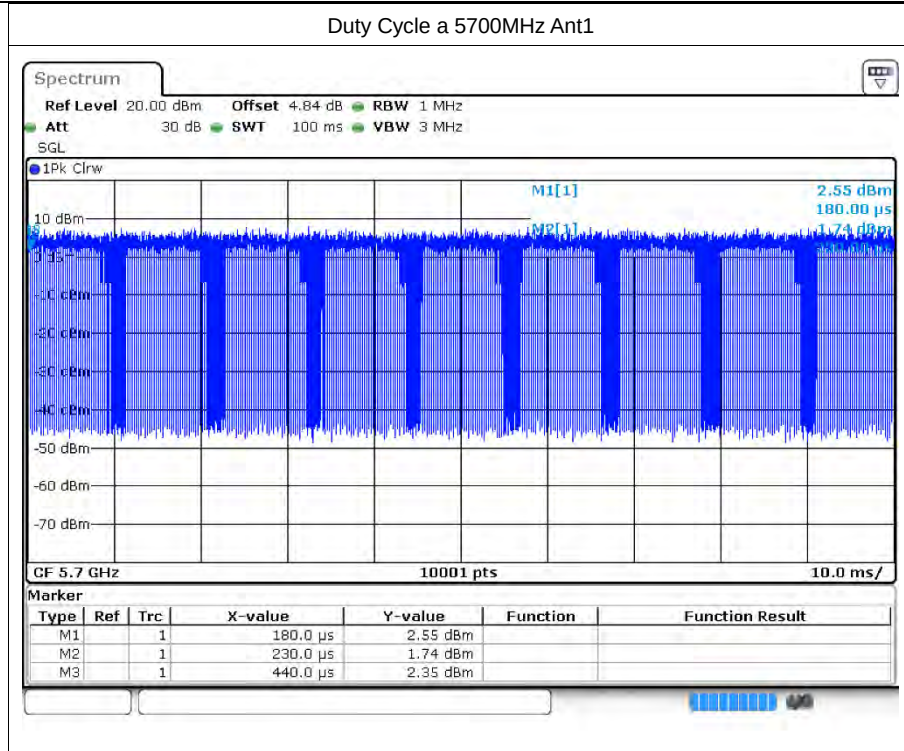


Duty Cyclea 5500MHz Ant1

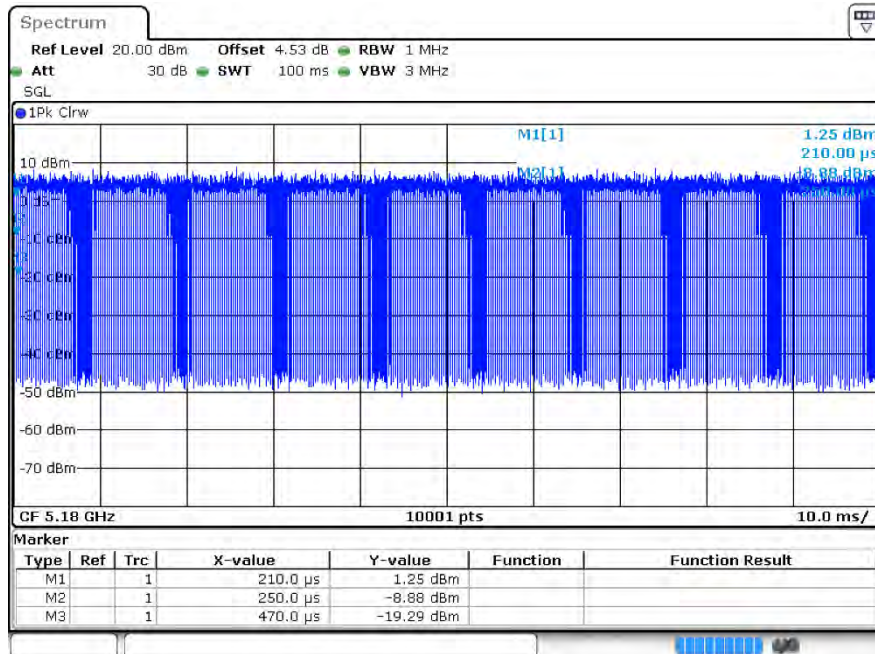


Duty Cycle a 5600MHz Ant1





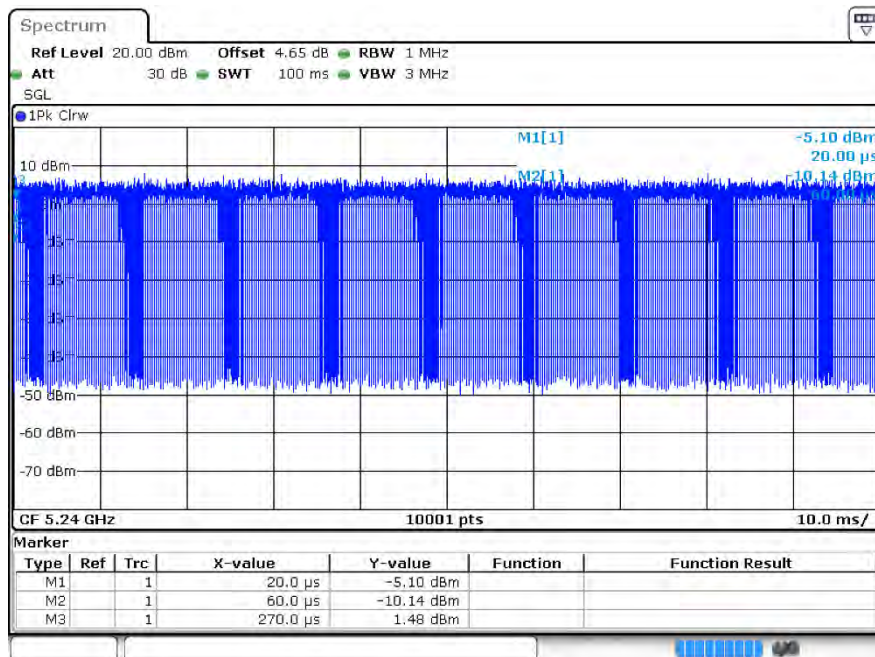
Duty Cyclea 5180MHz Ant2



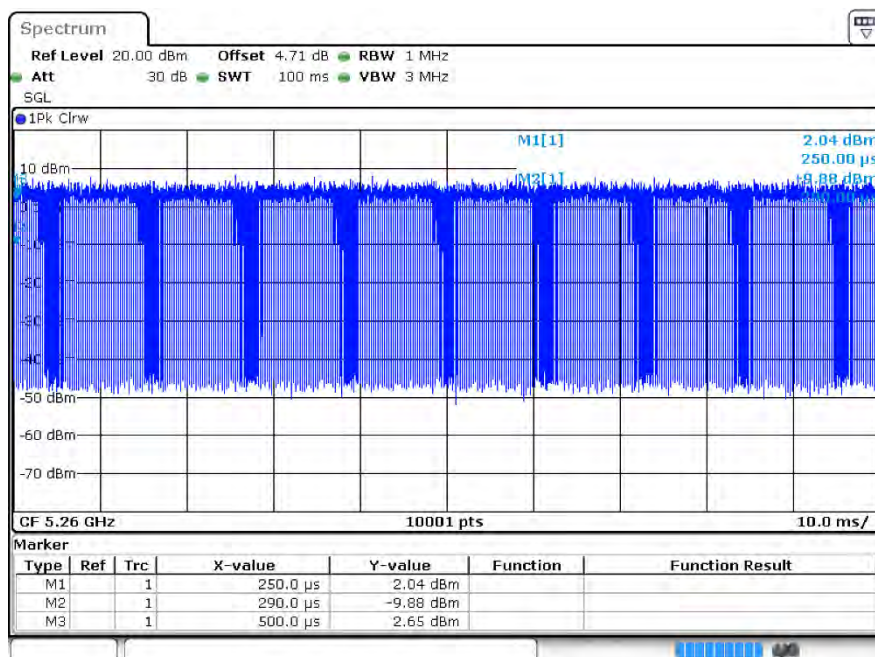
Duty Cycle a 5200MHz Ant2



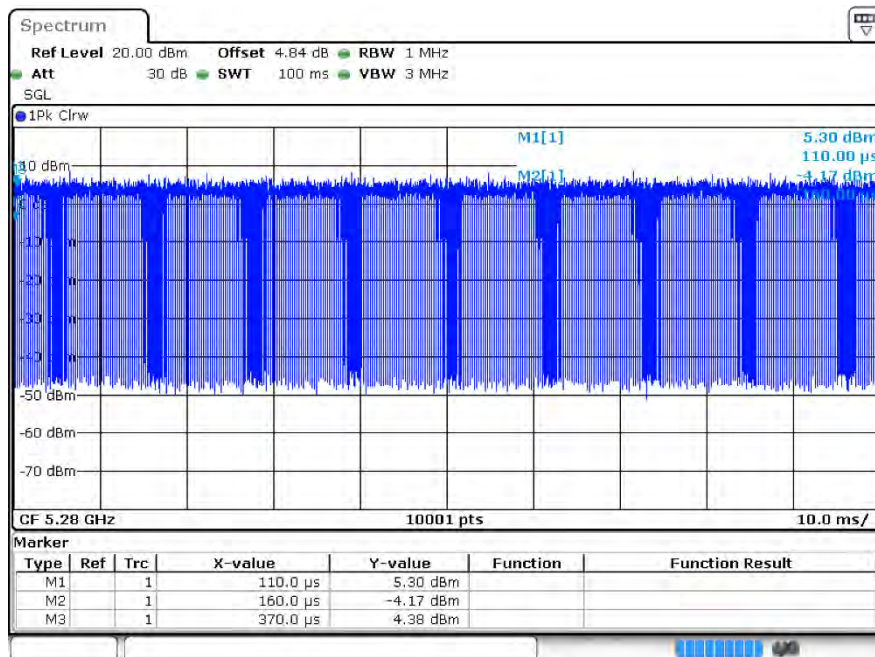
Duty Cyclea 5240MHz Ant2



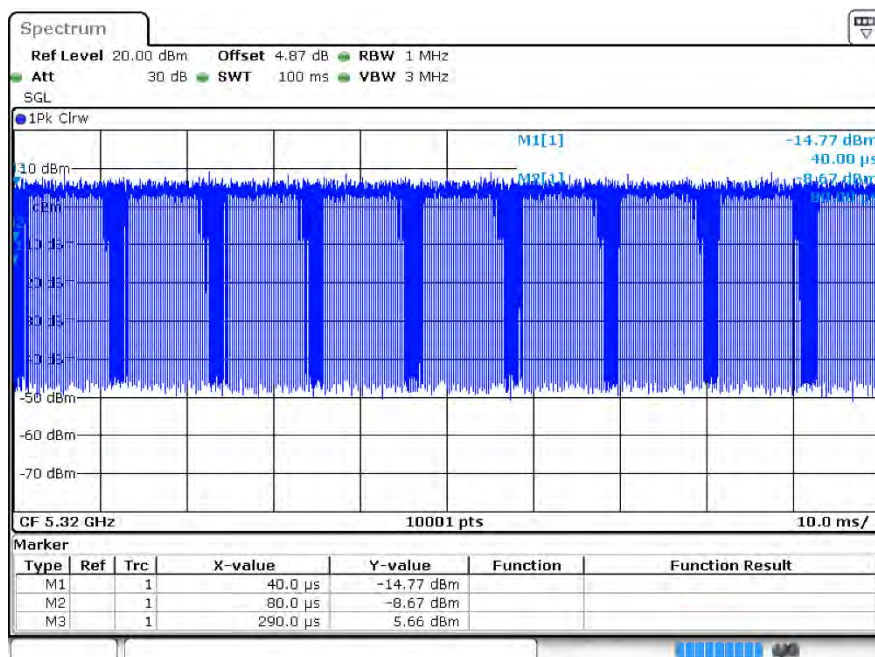
Duty Cycle a 5260MHz Ant2



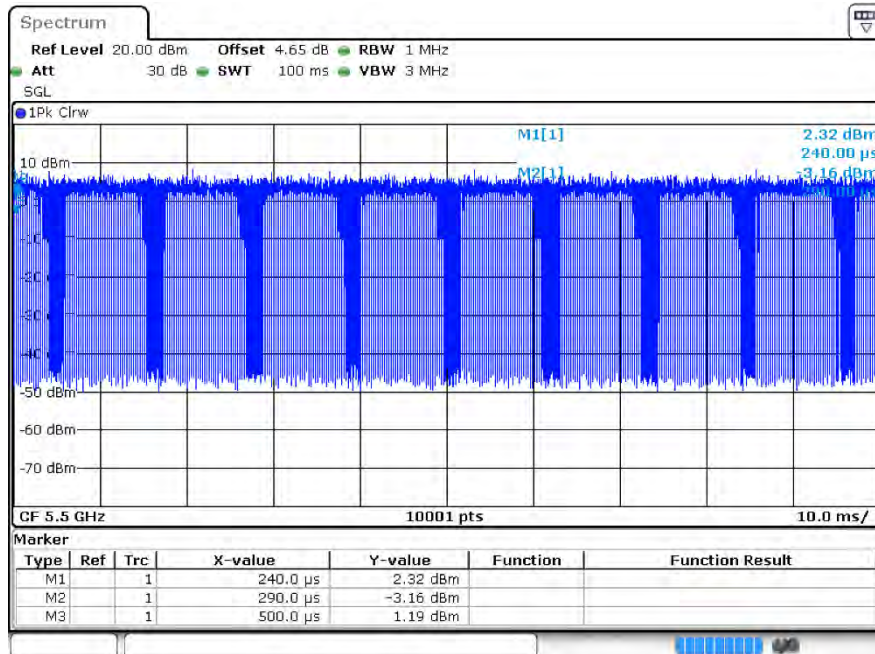
Duty Cyclea 5280MHz Ant2



Duty Cycle a 5320MHz Ant2

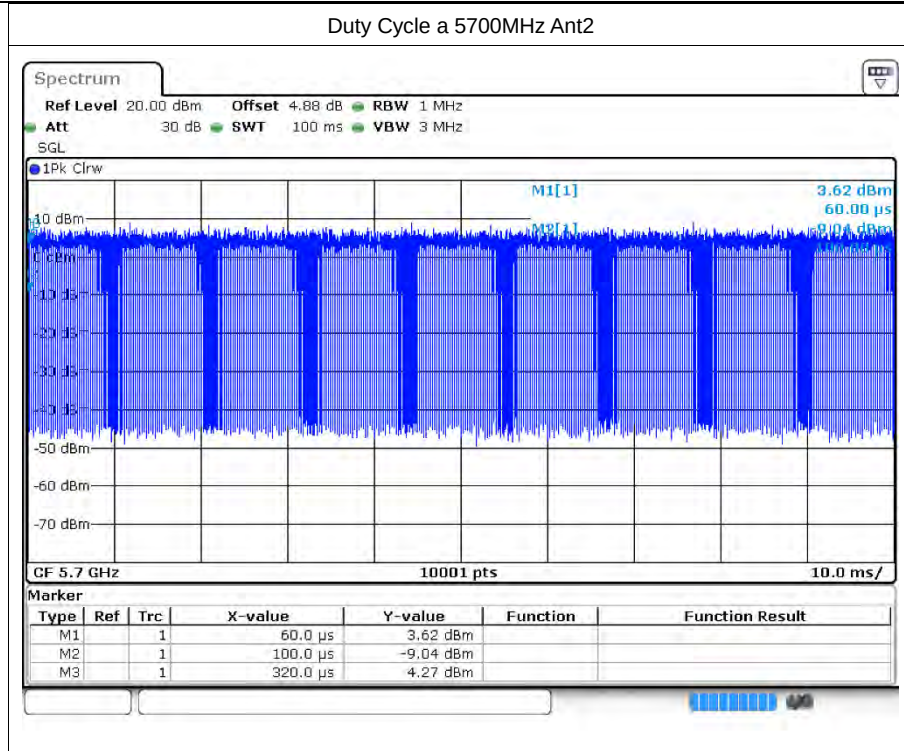


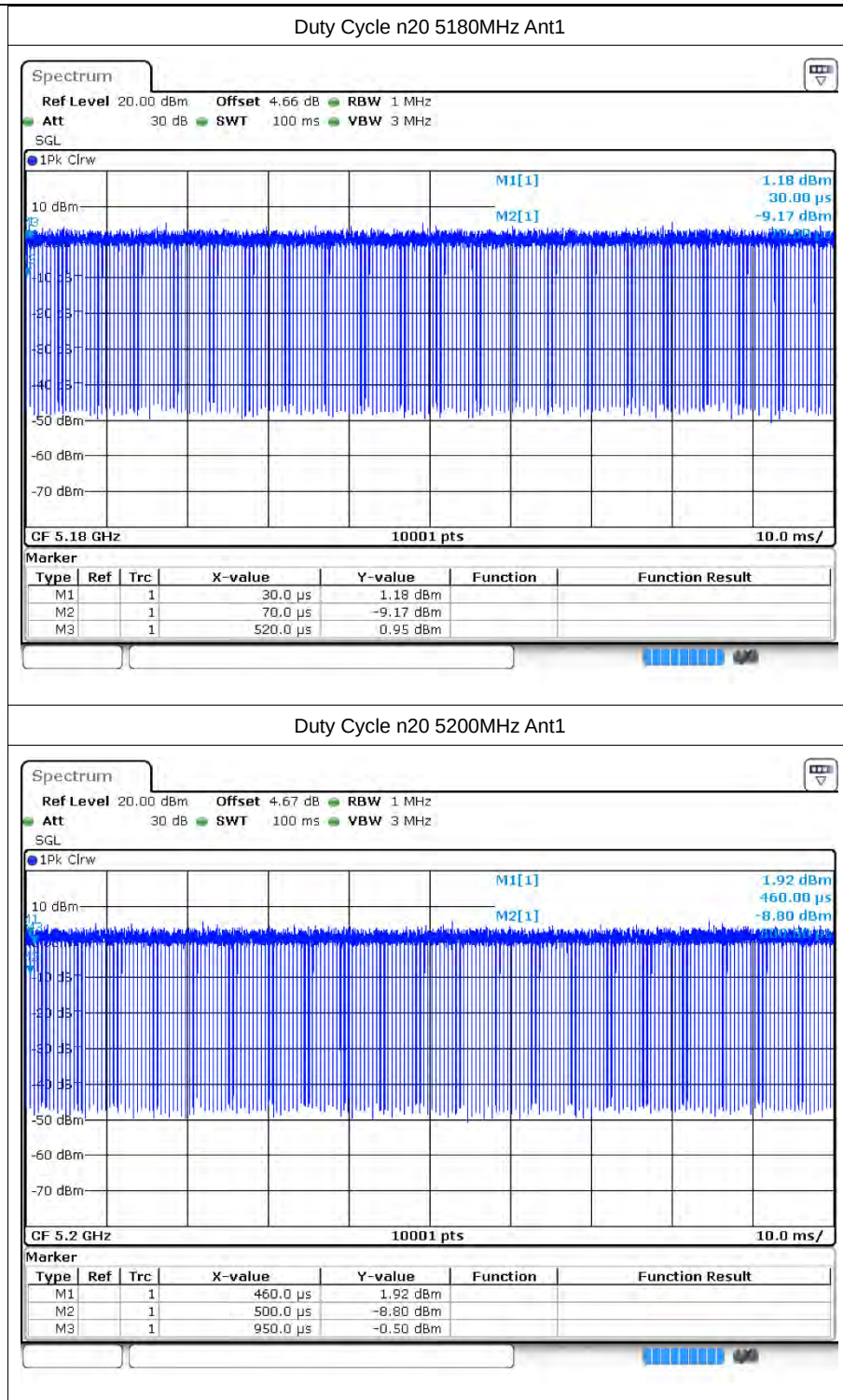
Duty Cyclea 5500MHz Ant2



Duty Cycle a 5600MHz Ant2



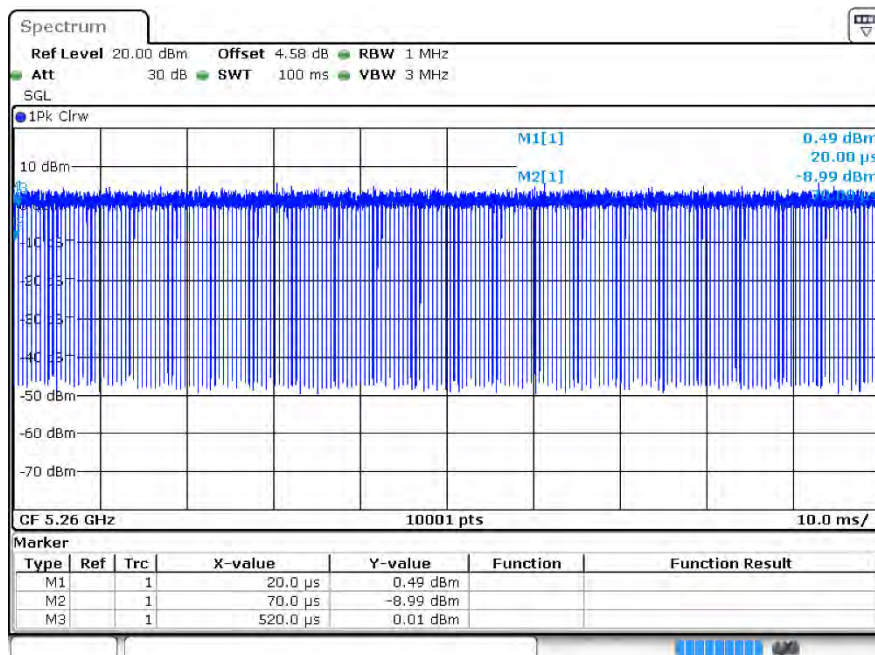




Duty Cycle n20 5240MHz Ant1



Duty Cycle n20 5260MHz Ant1

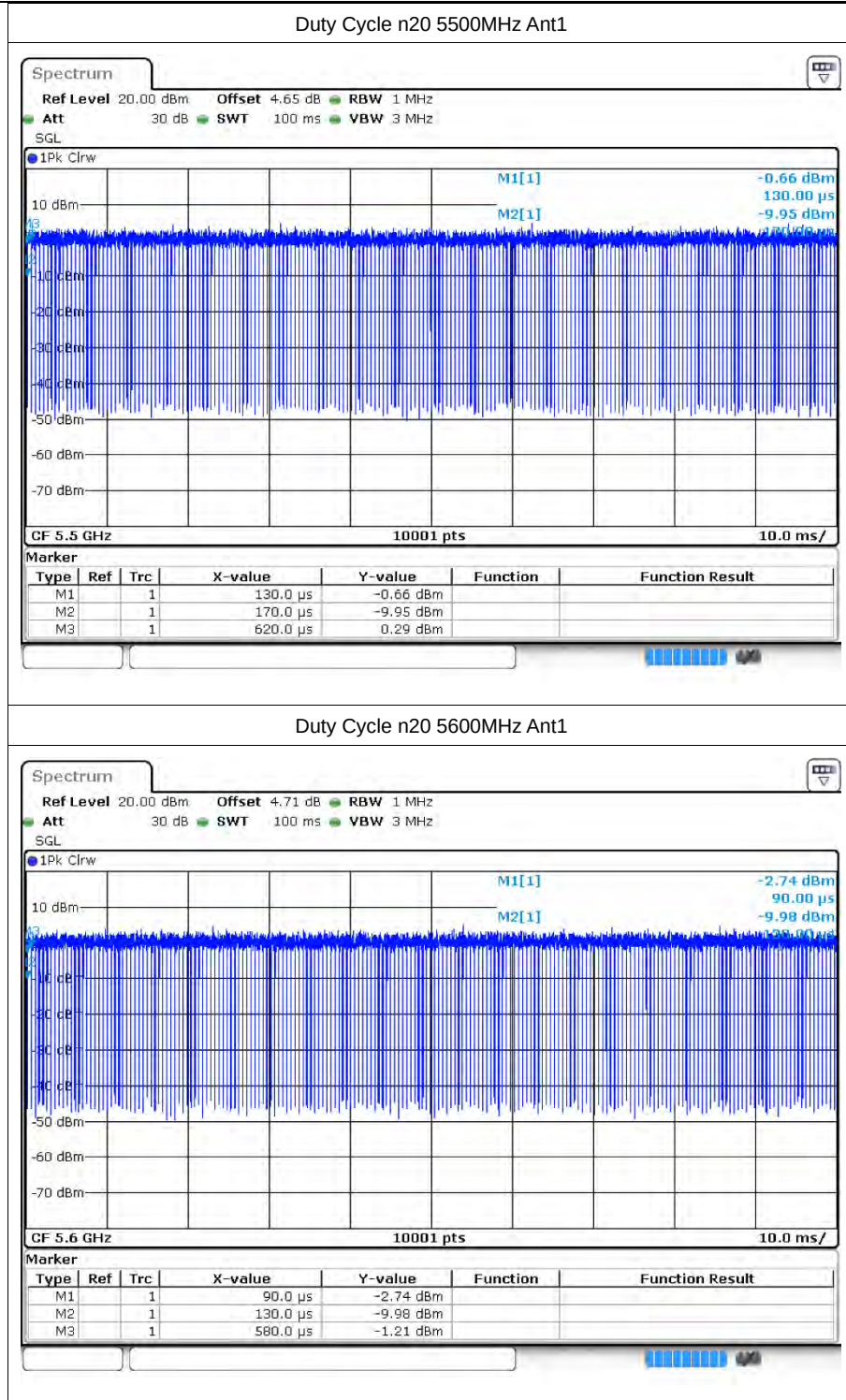


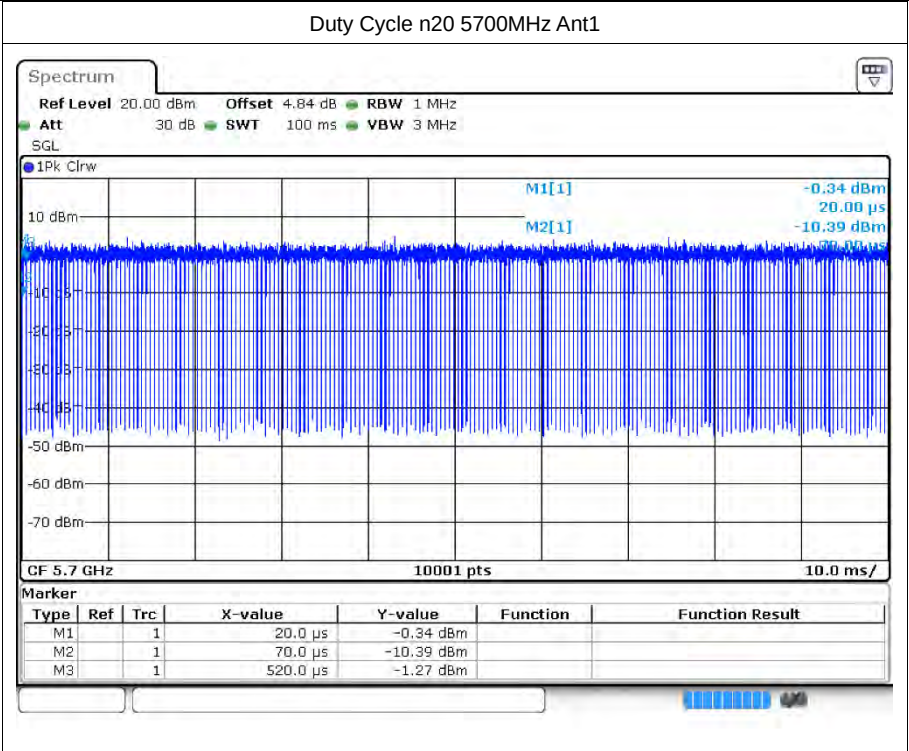
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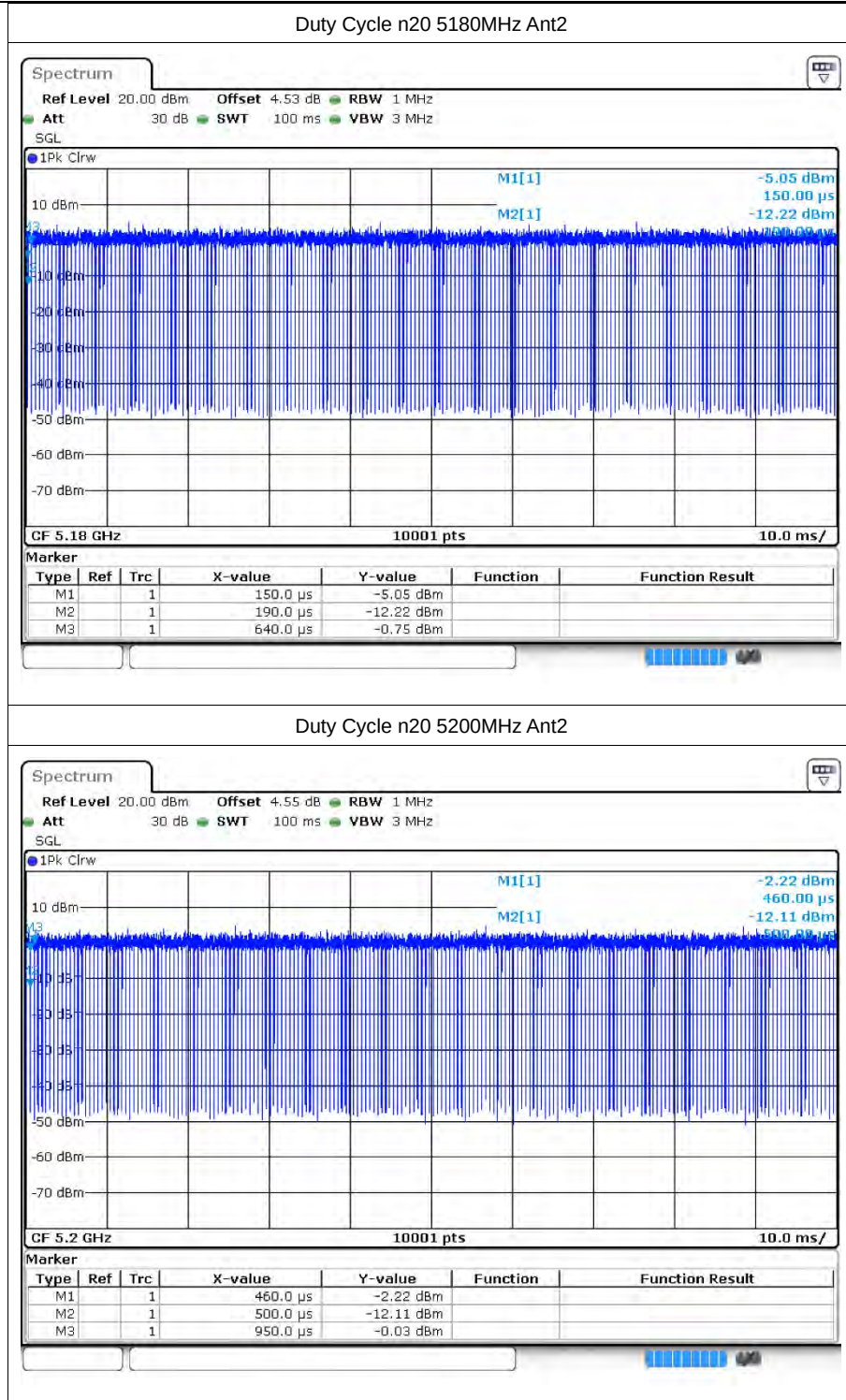


Duty Cycle n20 5320MHz Ant1







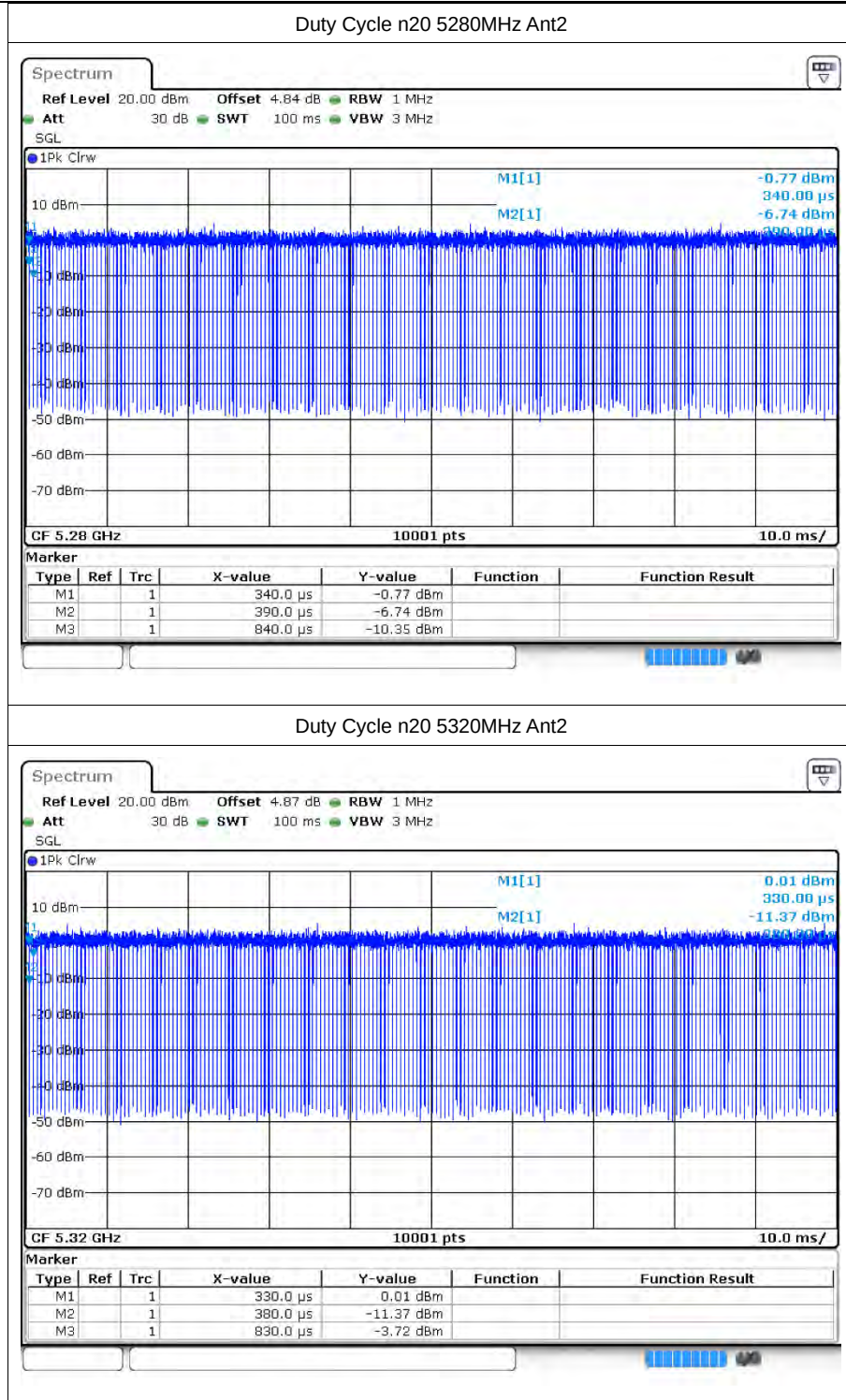


Duty Cycle n20 5240MHz Ant2

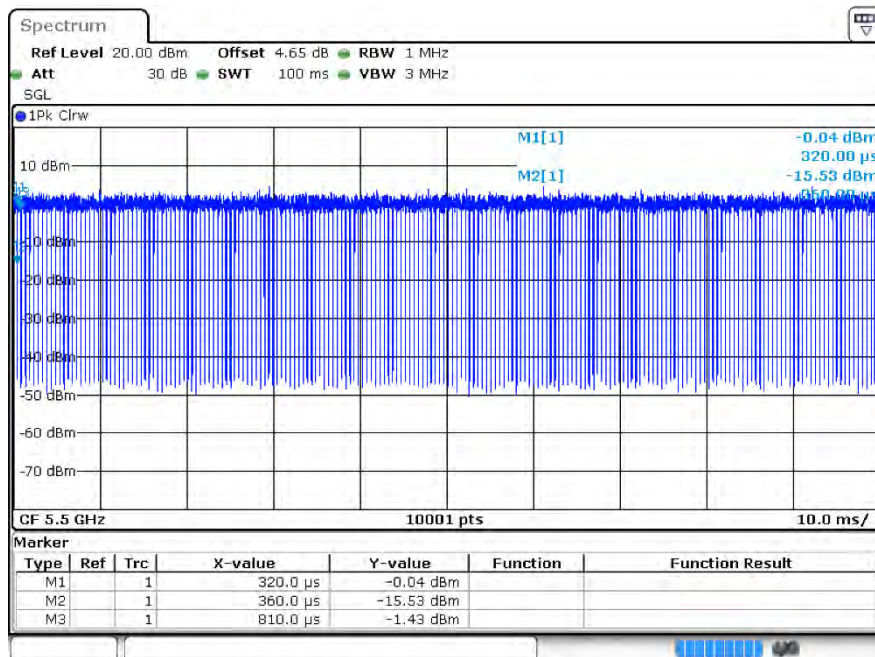


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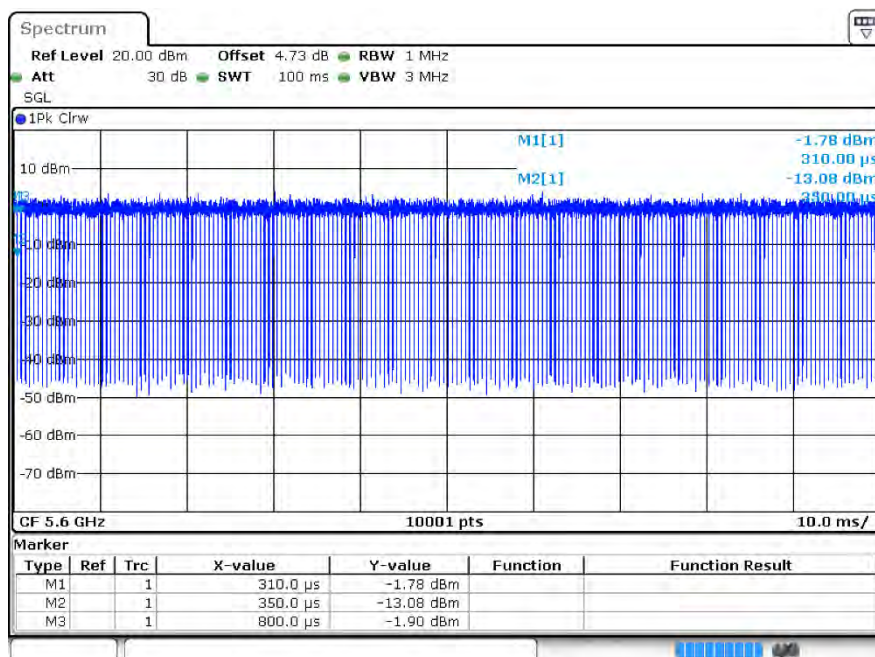


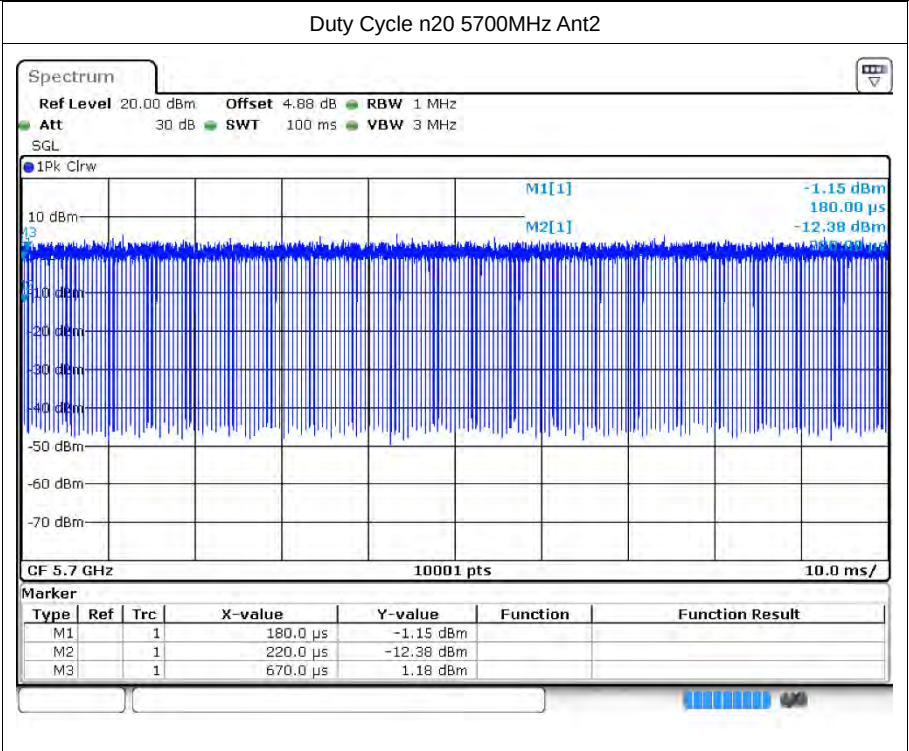


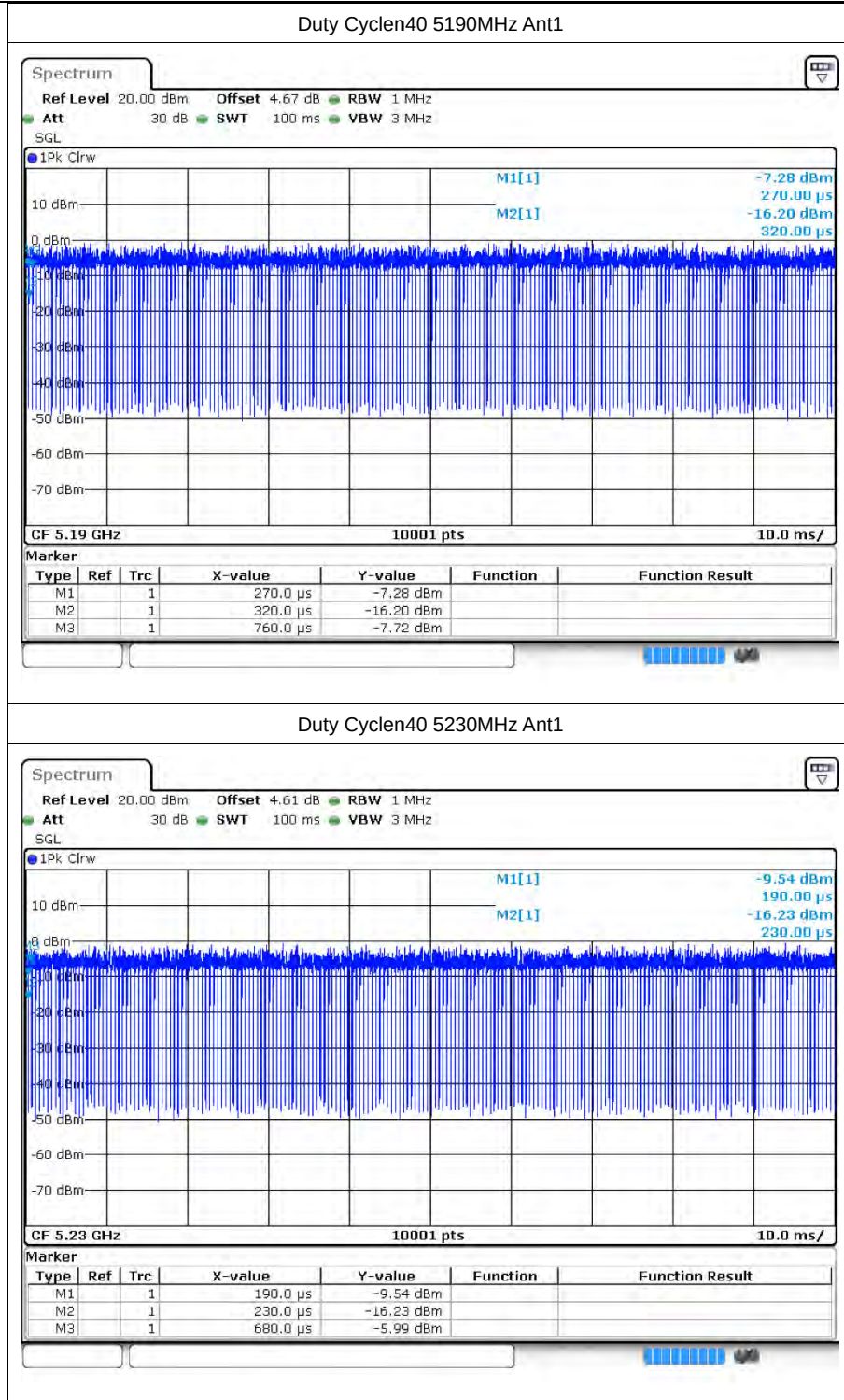
Duty Cycle n20 5500MHz Ant2



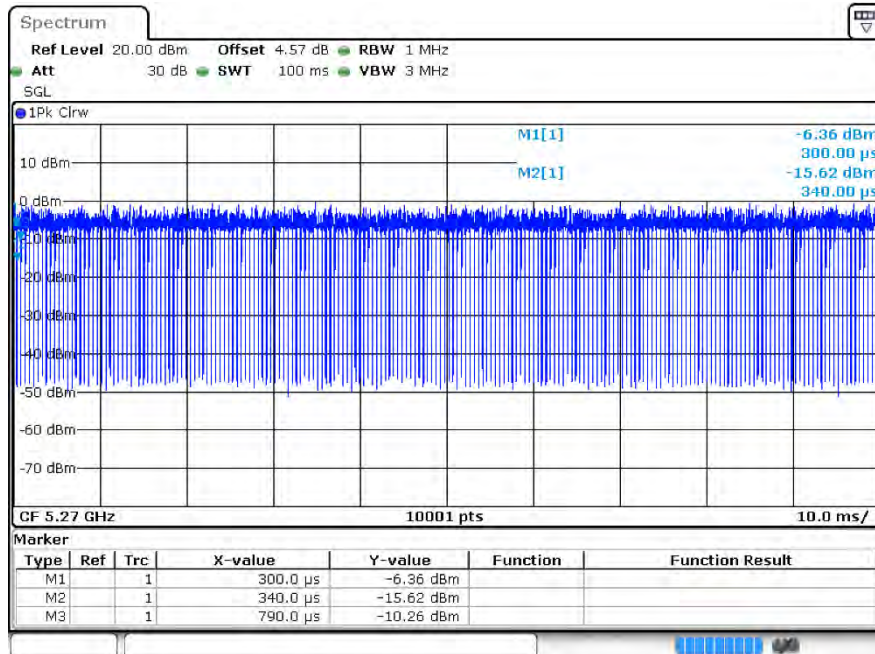
Duty Cycle n20 5600MHz Ant2



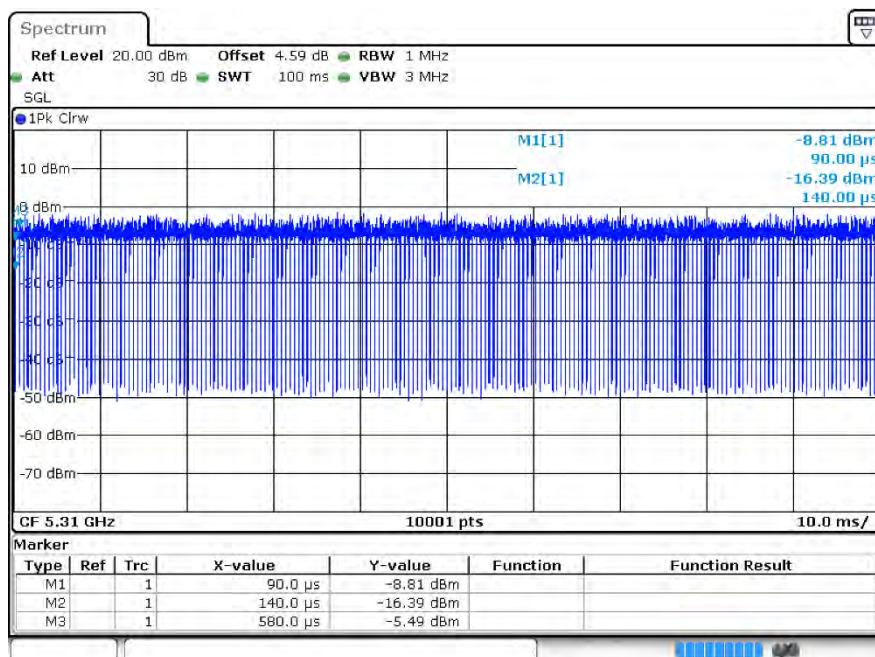


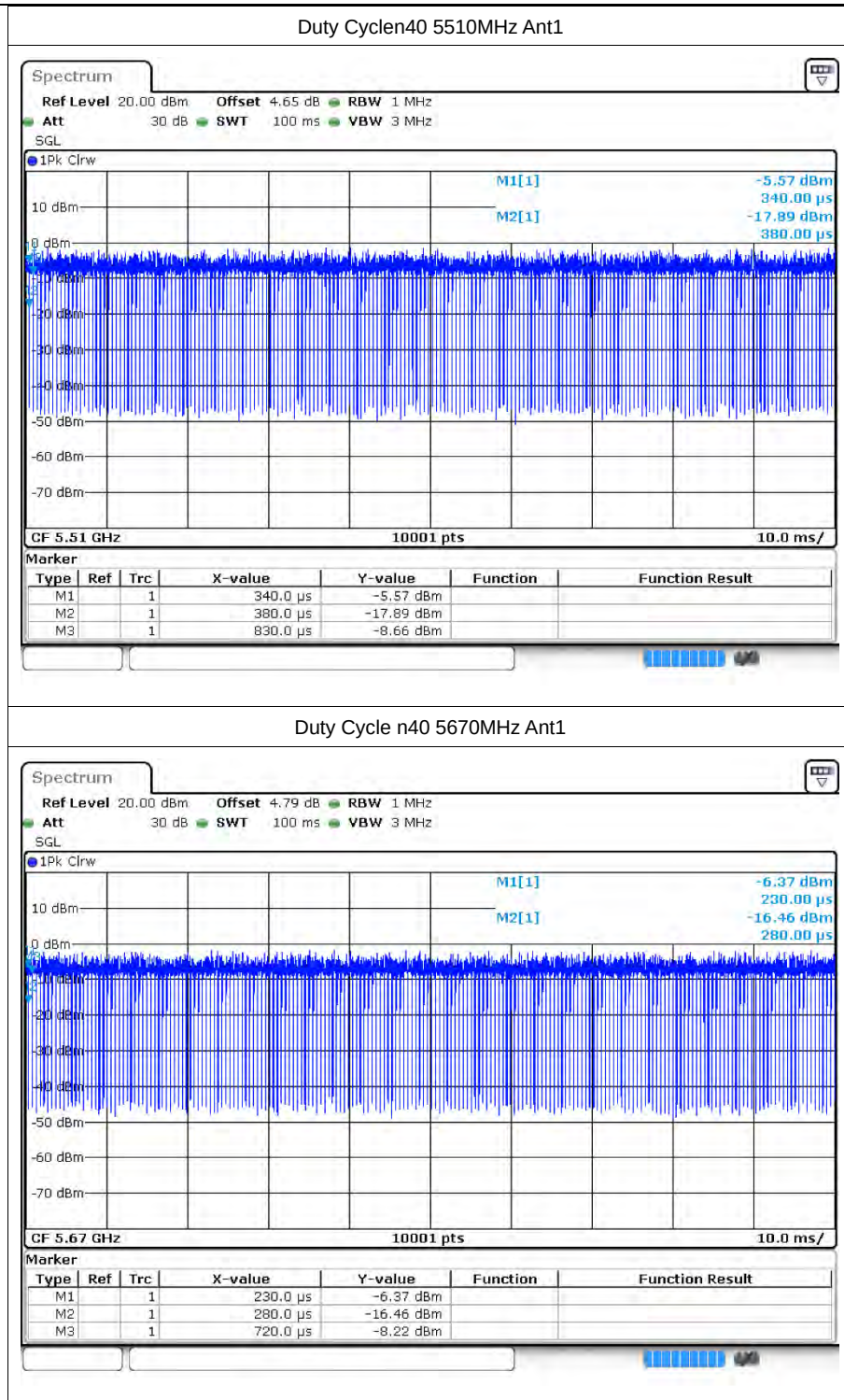


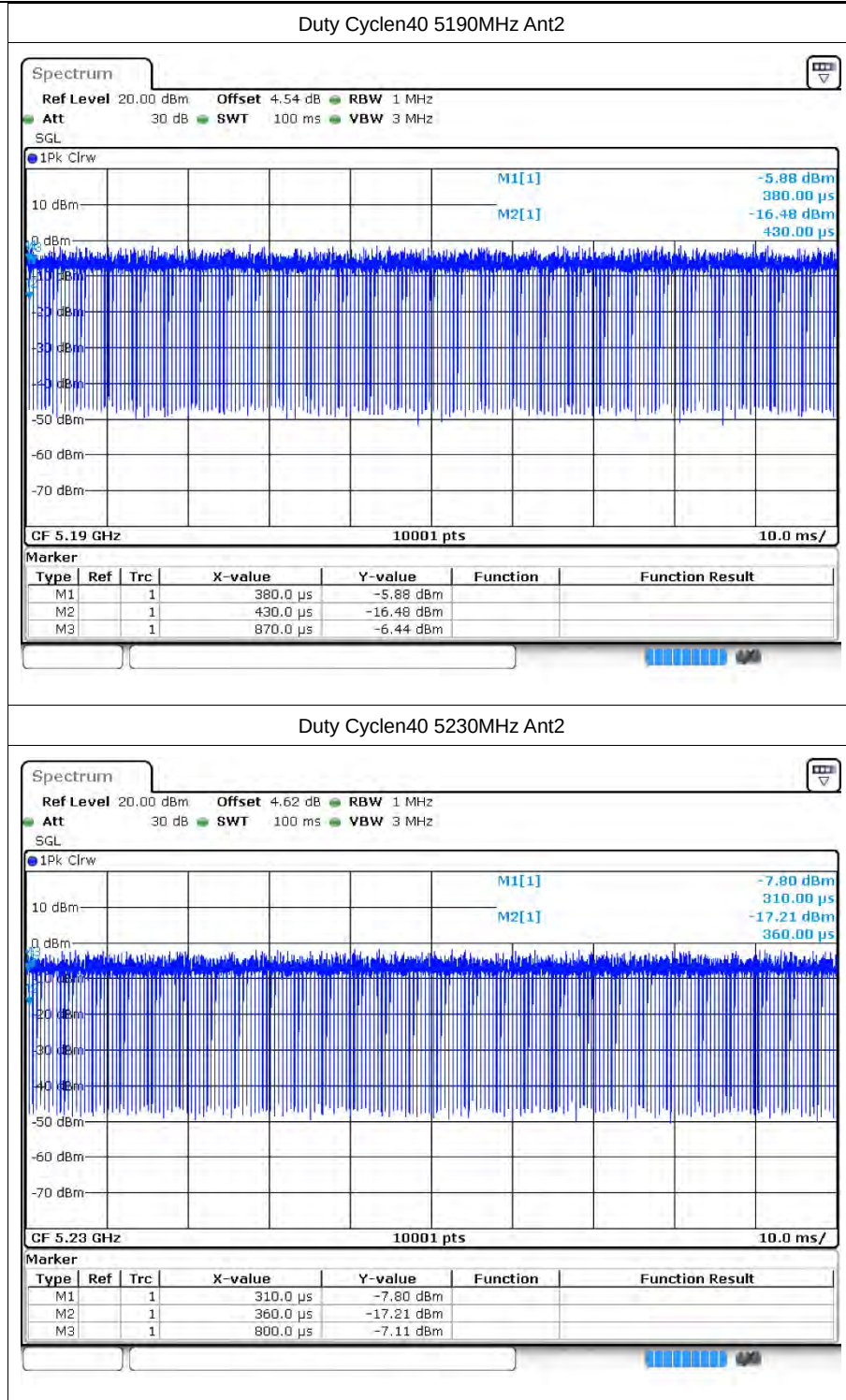
Duty Cyclen40 5270MHz Ant1



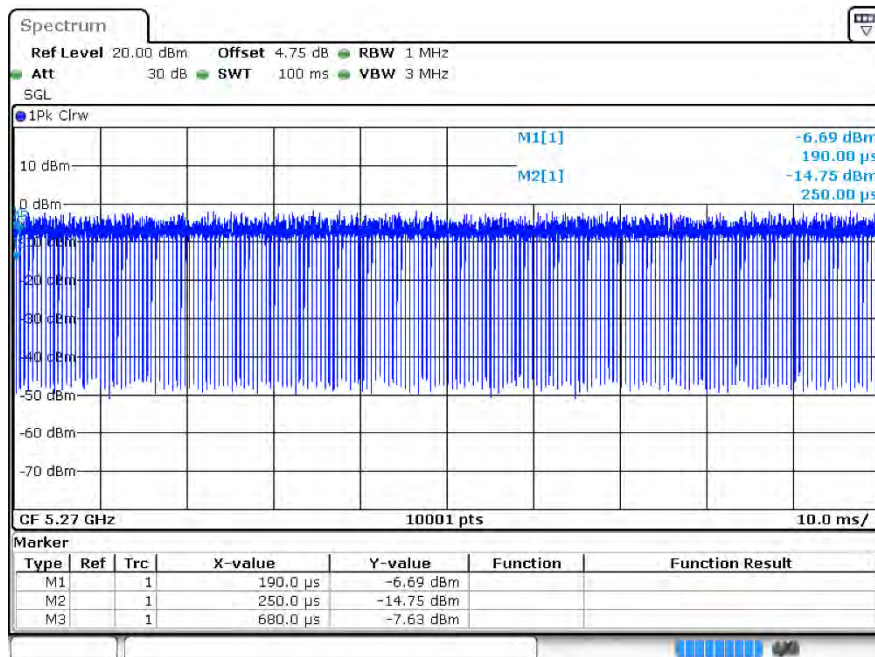
Duty Cycle n40 5310MHz Ant1



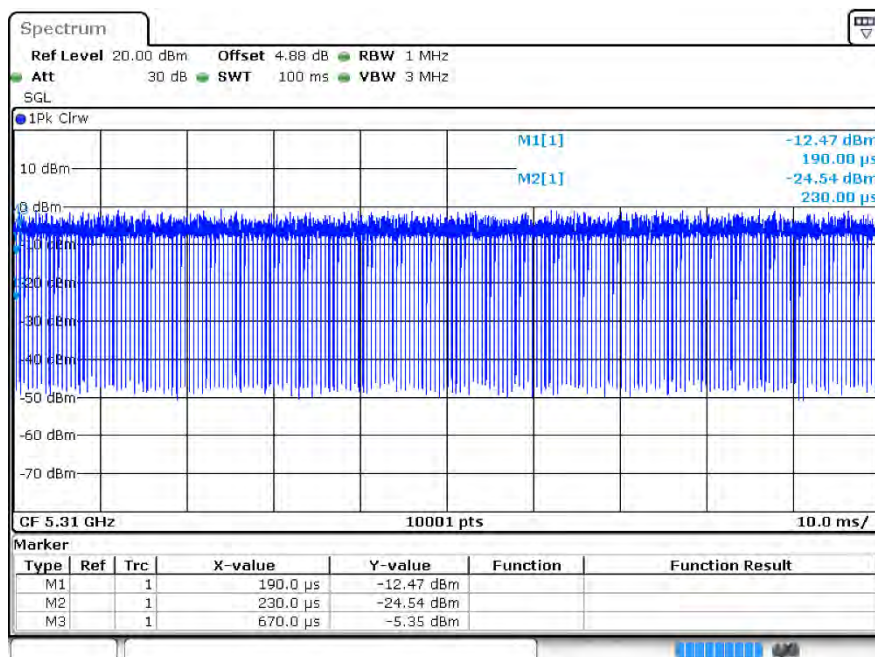




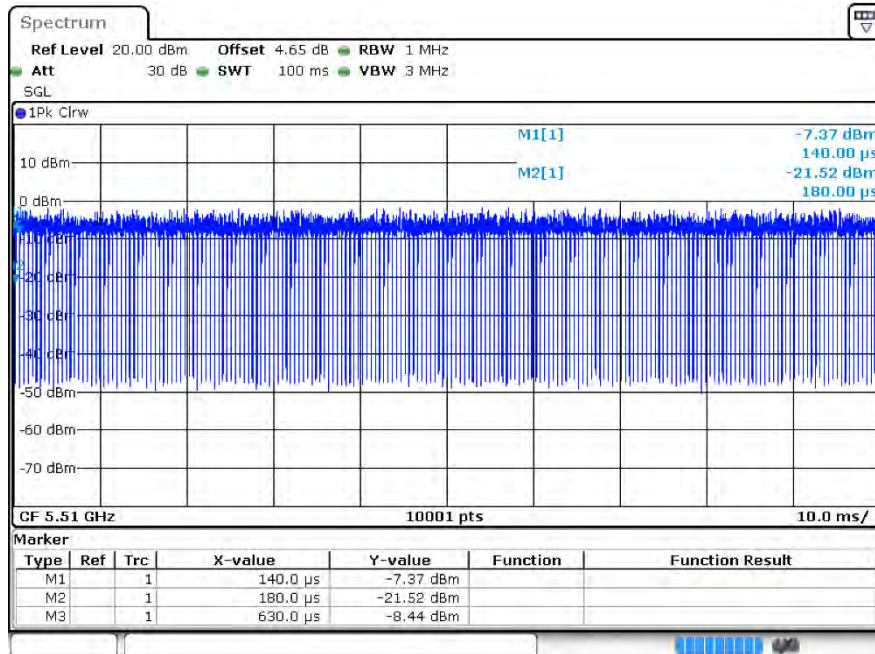
Duty Cycle n40 5270MHz Ant2



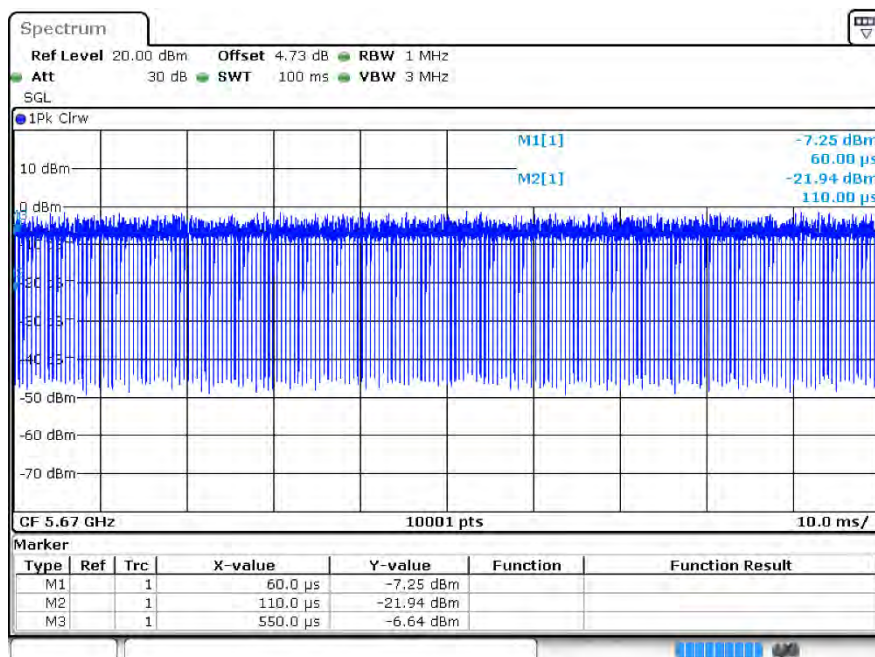
Duty Cycle n40 5310MHz Ant2



Duty Cyclen40 5510MHz Ant2



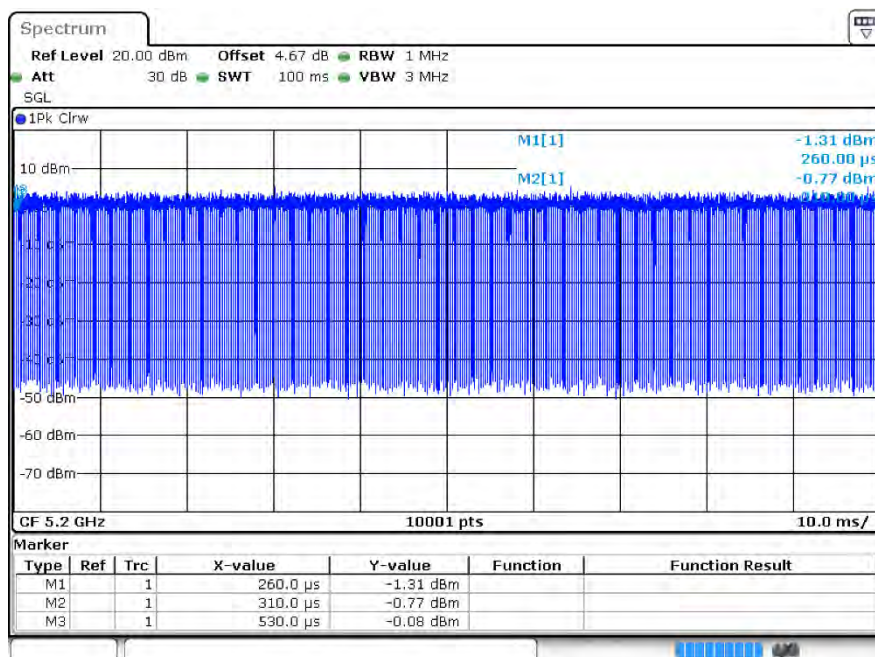
Duty Cycle n40 5670MHz Ant2



Duty Cycle ac20 5180MHz Ant1



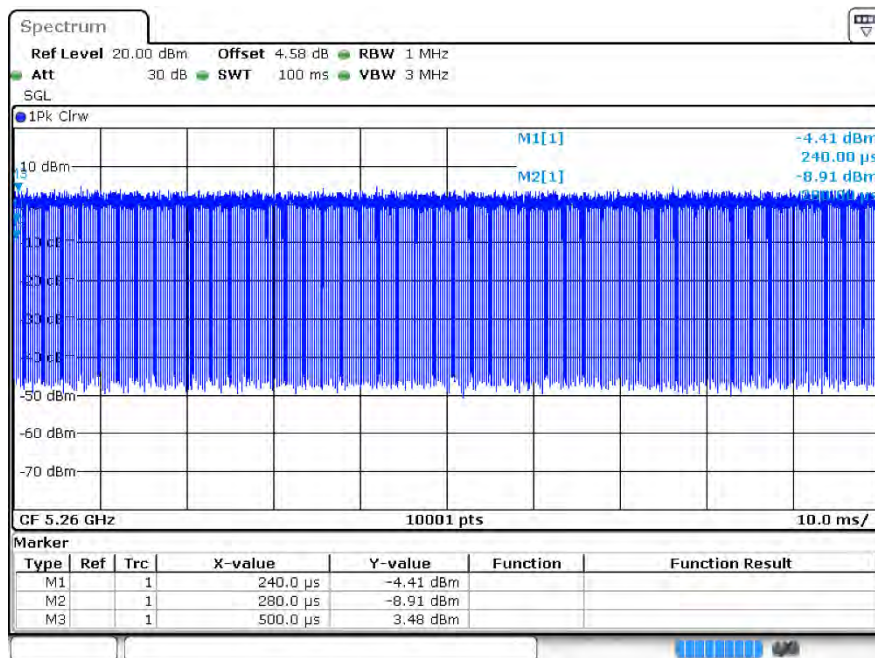
Duty Cycle ac20 5200MHz Ant1



Duty Cycle ac20 5240MHz Ant1

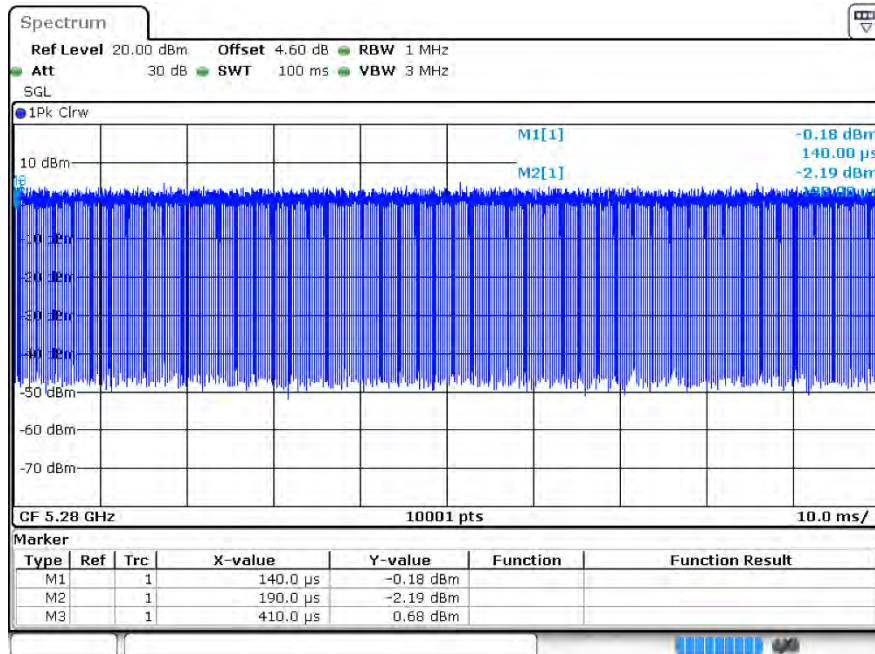


Duty Cycle ac20 5260MHz Ant1





Duty Cycle ac20 5280MHz Ant1



Duty Cycle ac20 5320MHz Ant1

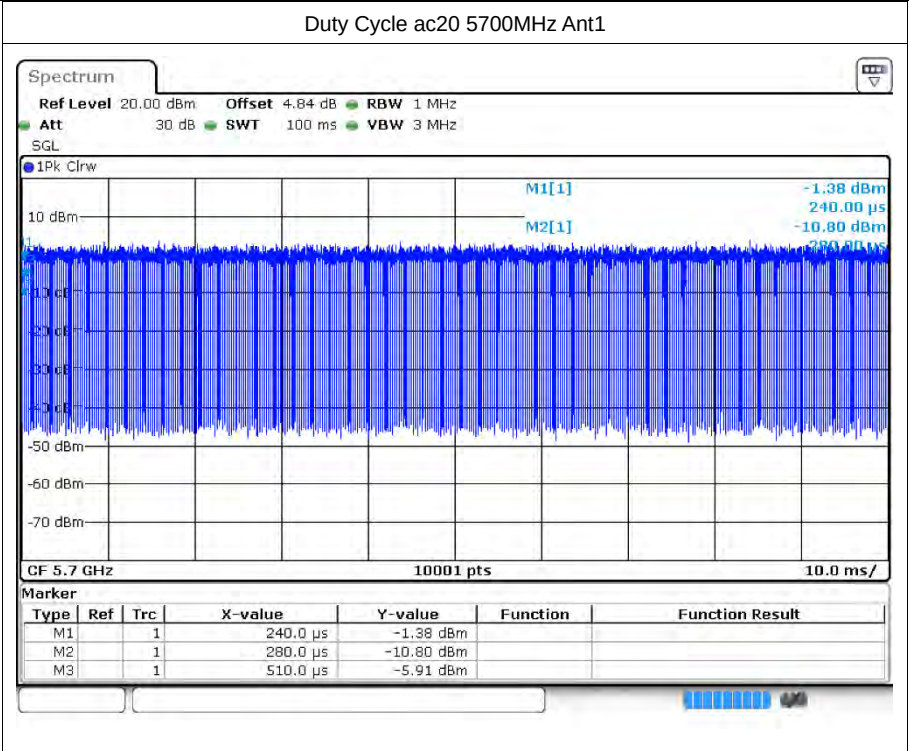


Duty Cycle ac20 5500MHz Ant1



Duty Cycle ac20 5600MHz Ant1

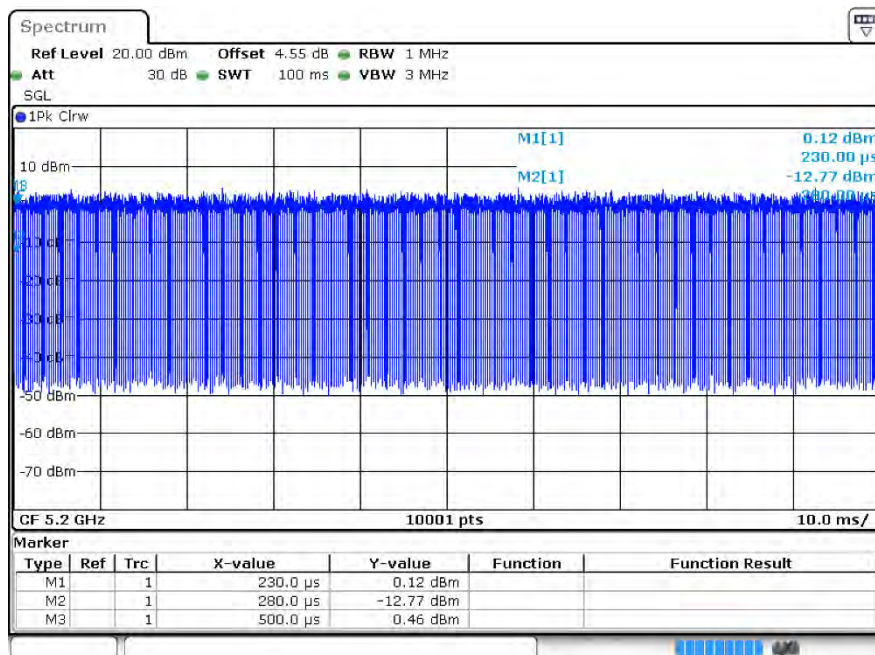




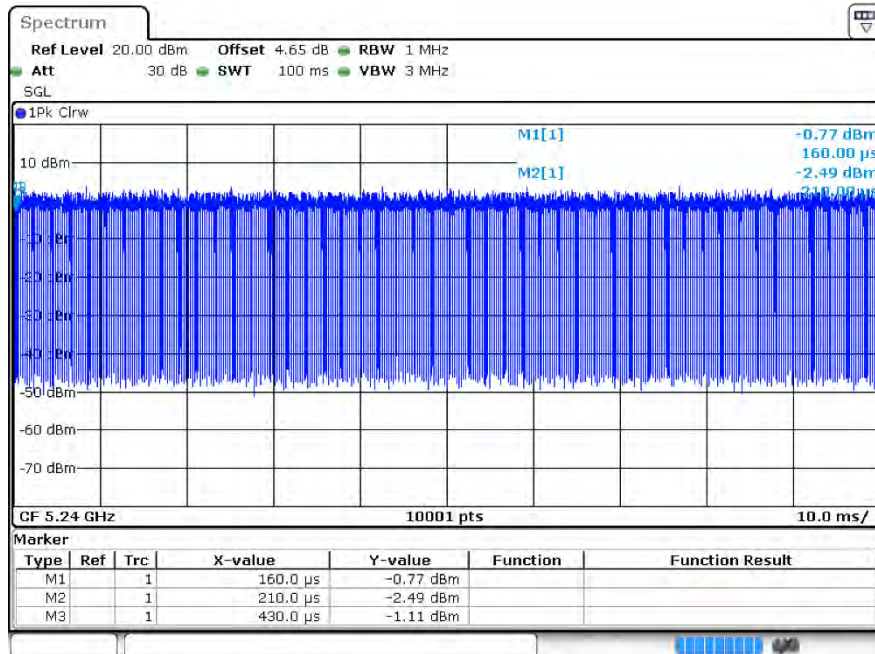
Duty Cycle ac20 5180MHz Ant2



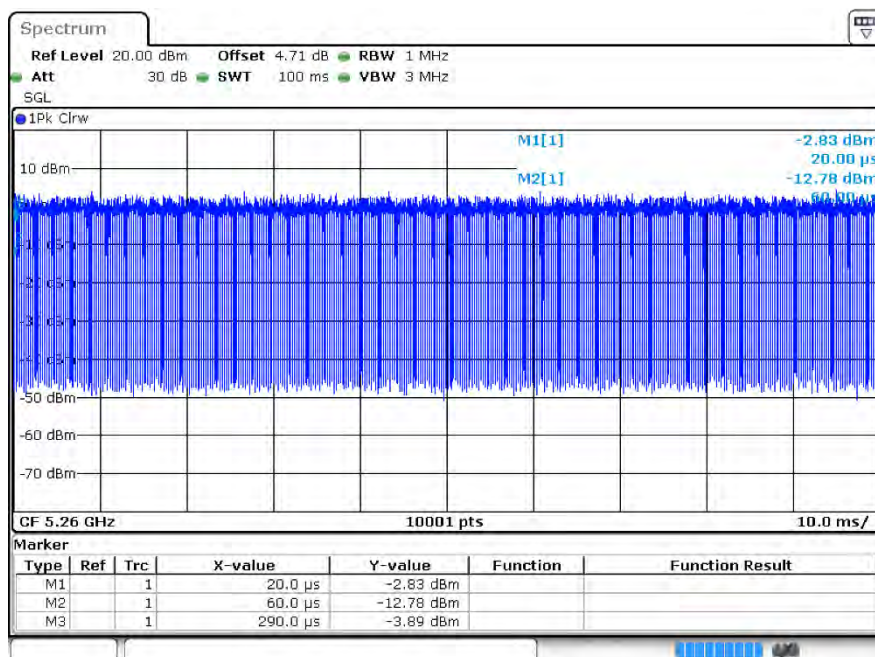
Duty Cycle ac20 5200MHz Ant2



Duty Cycle ac20 5240MHz Ant2



Duty Cycle ac20 5260MHz Ant2





Duty Cycle ac20 5280MHz Ant2



Duty Cycle ac20 5320MHz Ant2

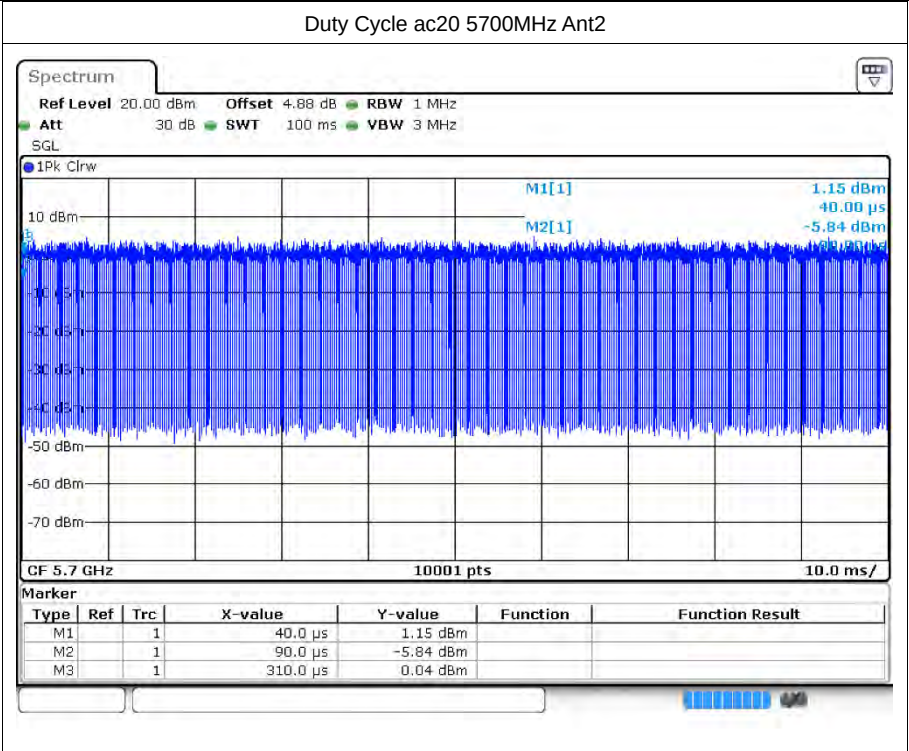


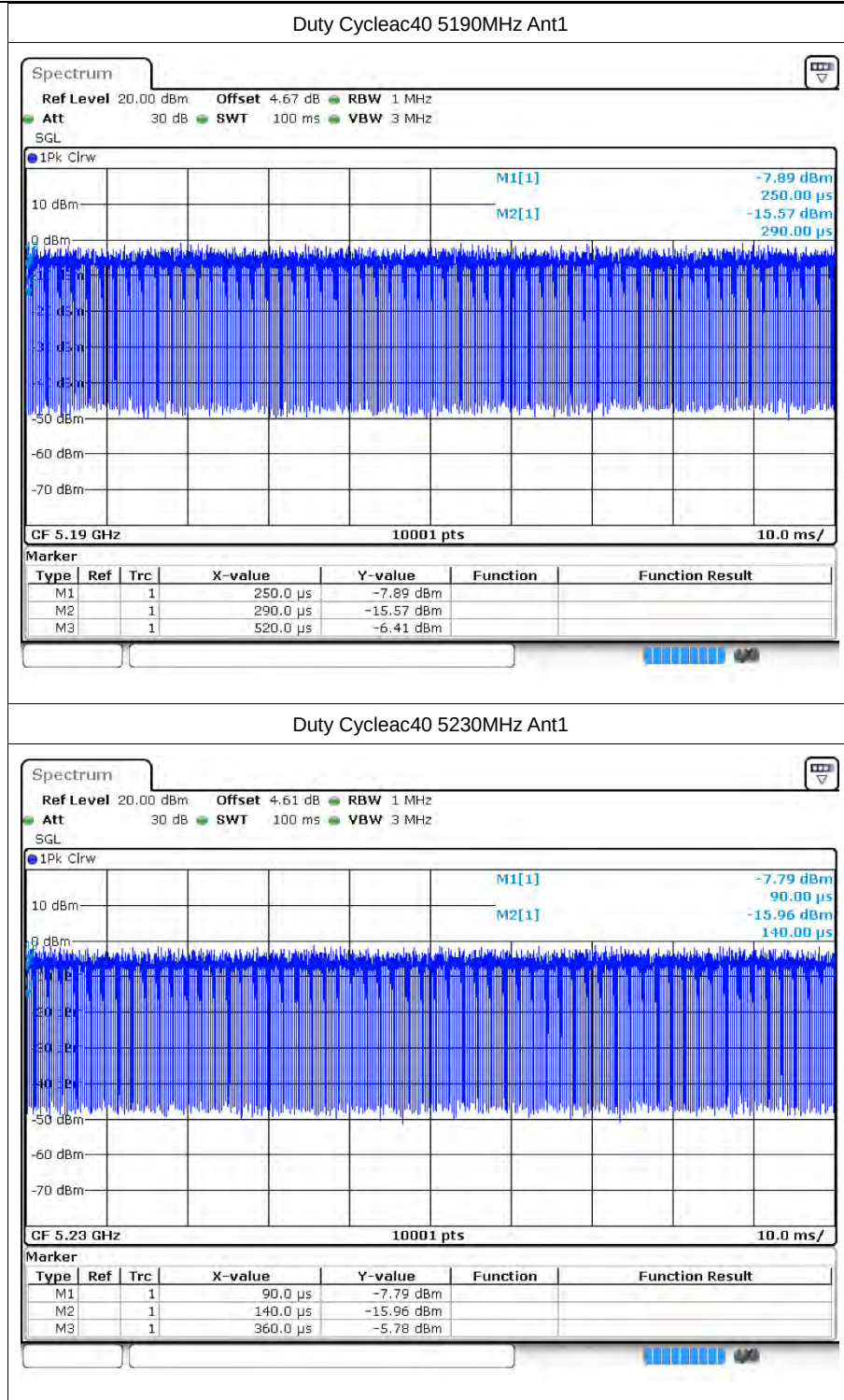
Duty Cycle ac20 5500MHz Ant2



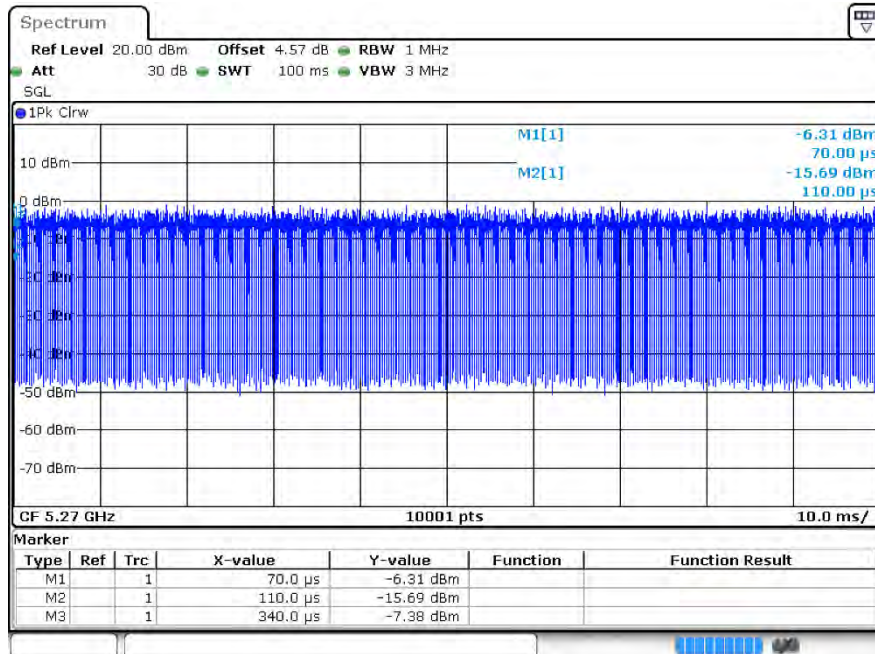
Duty Cycle ac20 5600MHz Ant2



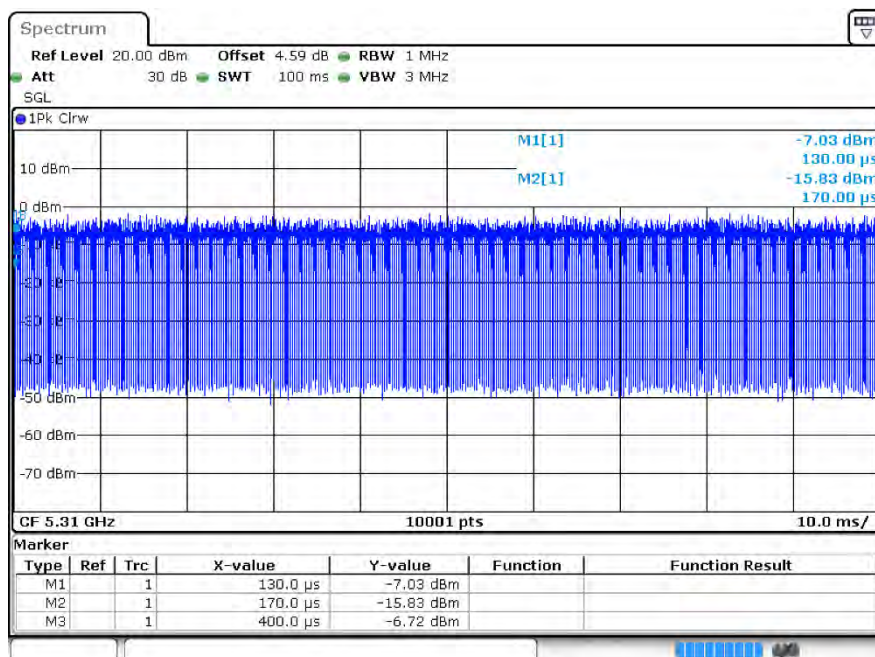


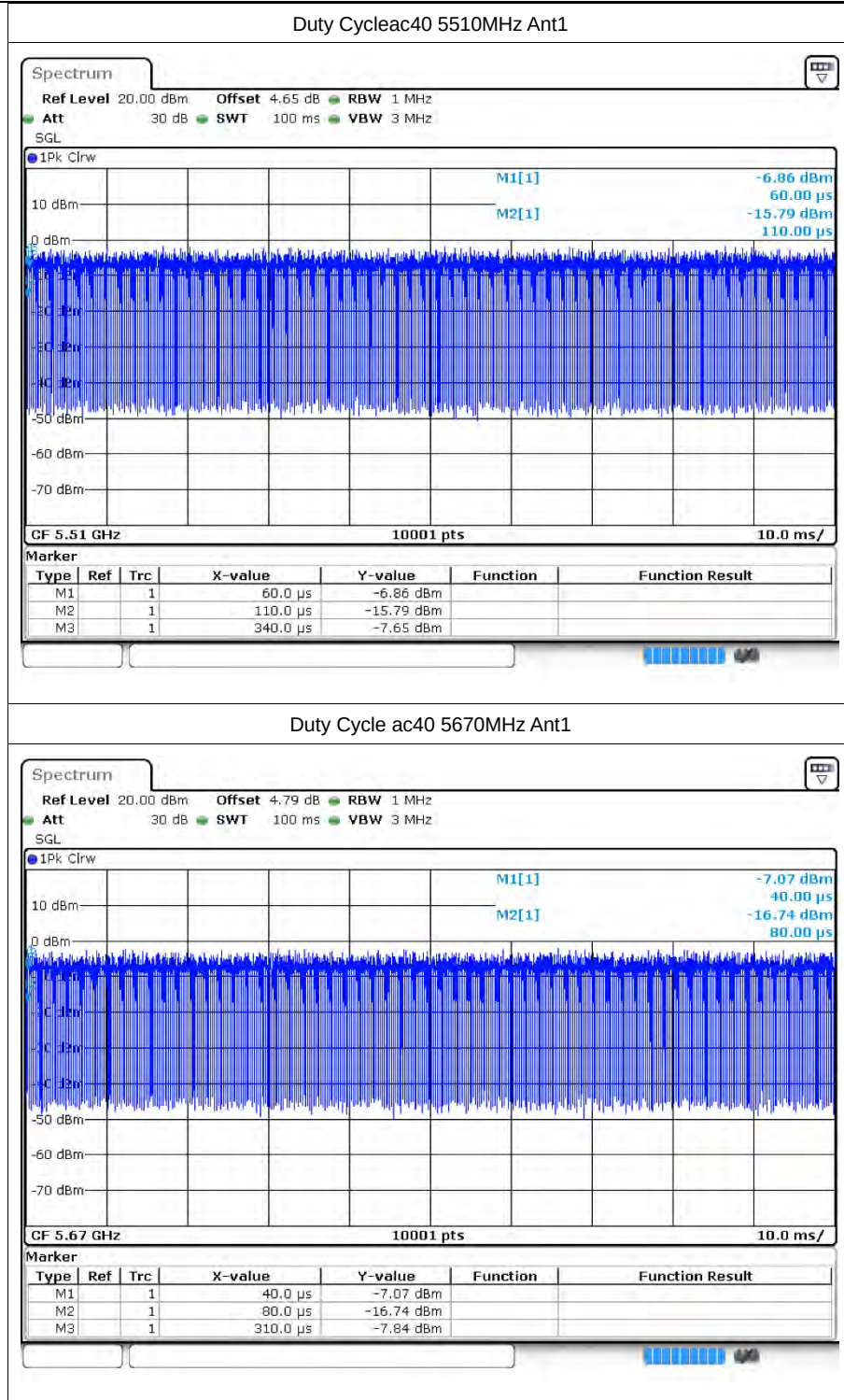


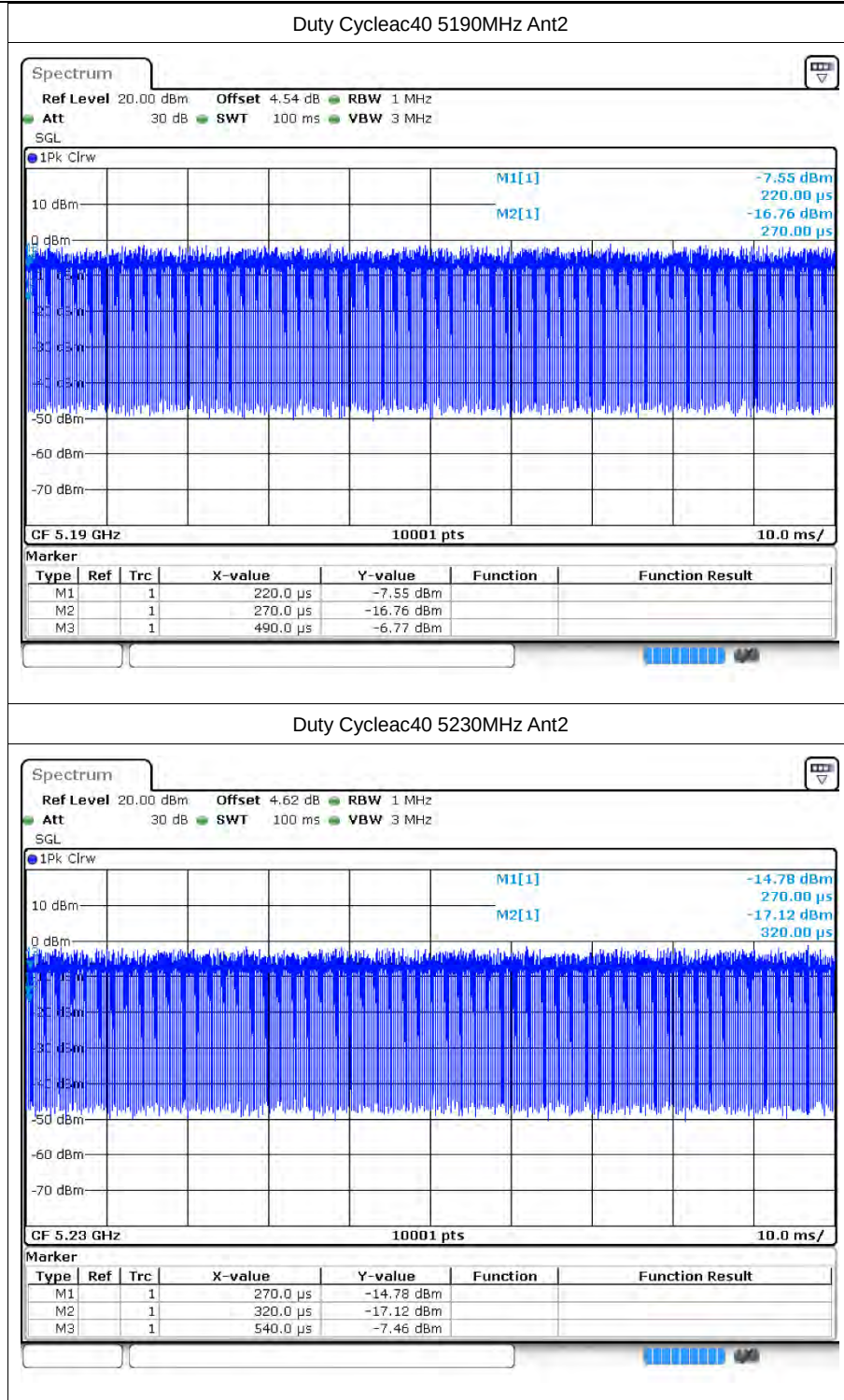
Duty Cycle ac40 5270MHz Ant1



Duty Cycle ac40 5310MHz Ant1





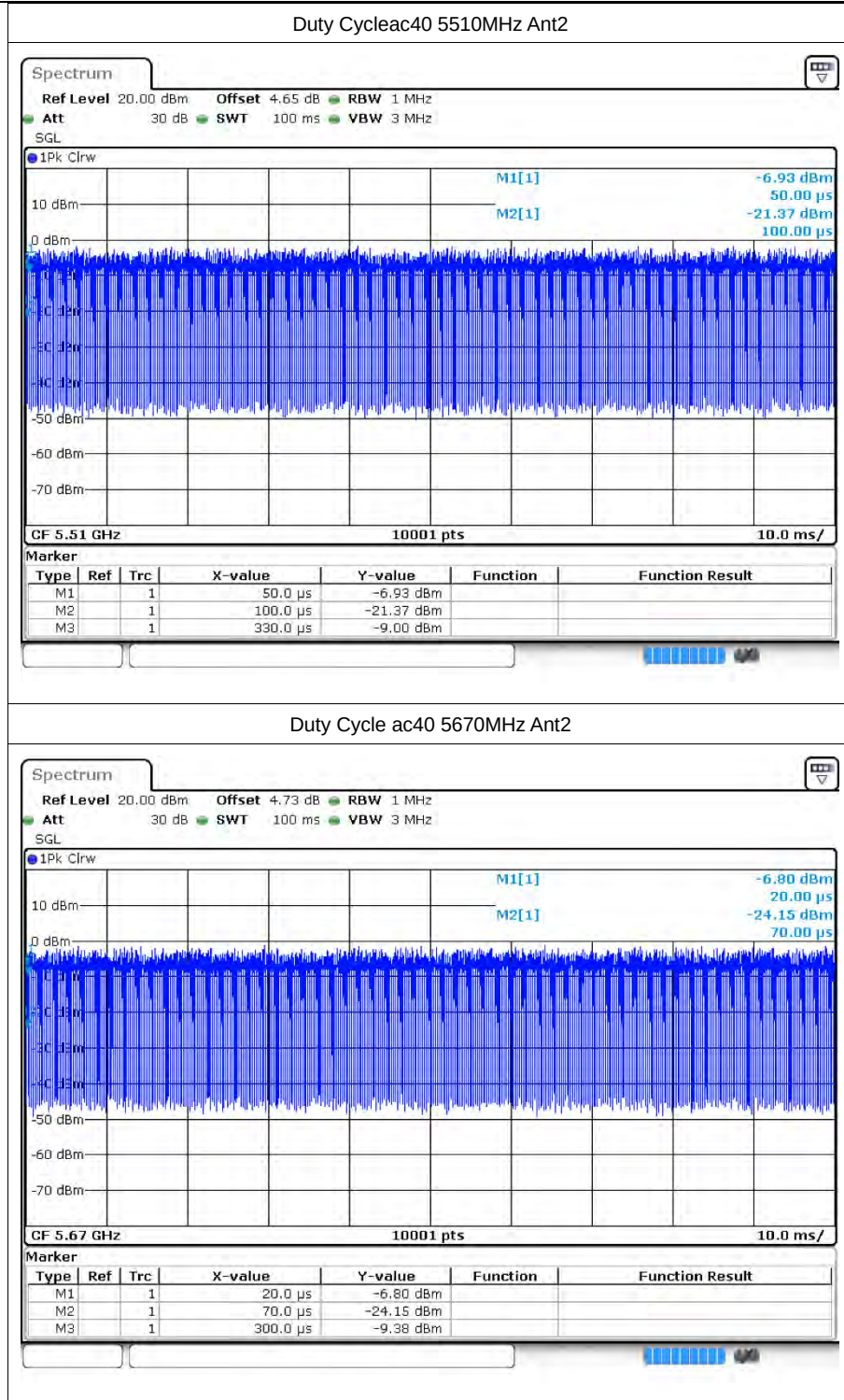


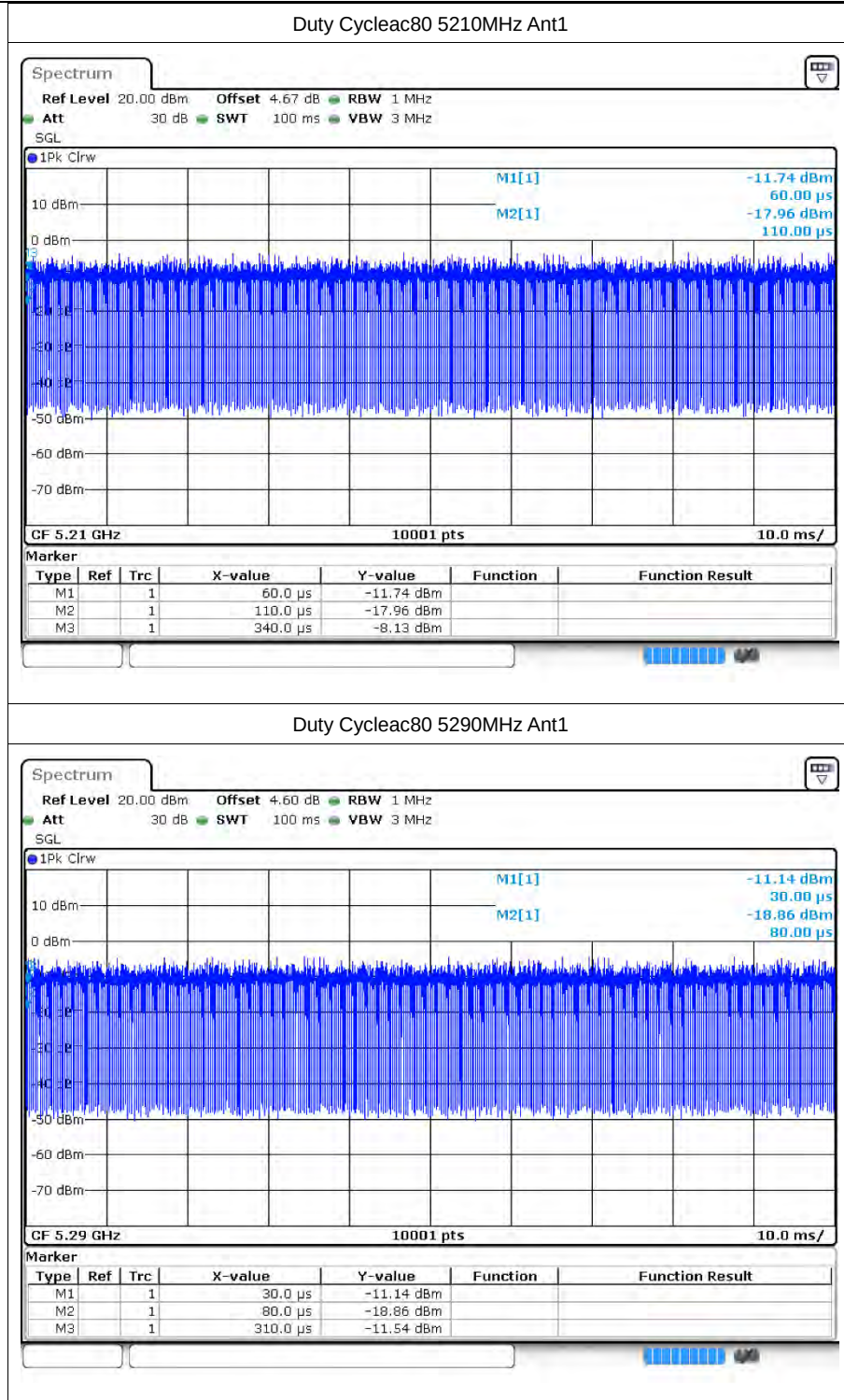
Duty Cycle ac40 5270MHz Ant2



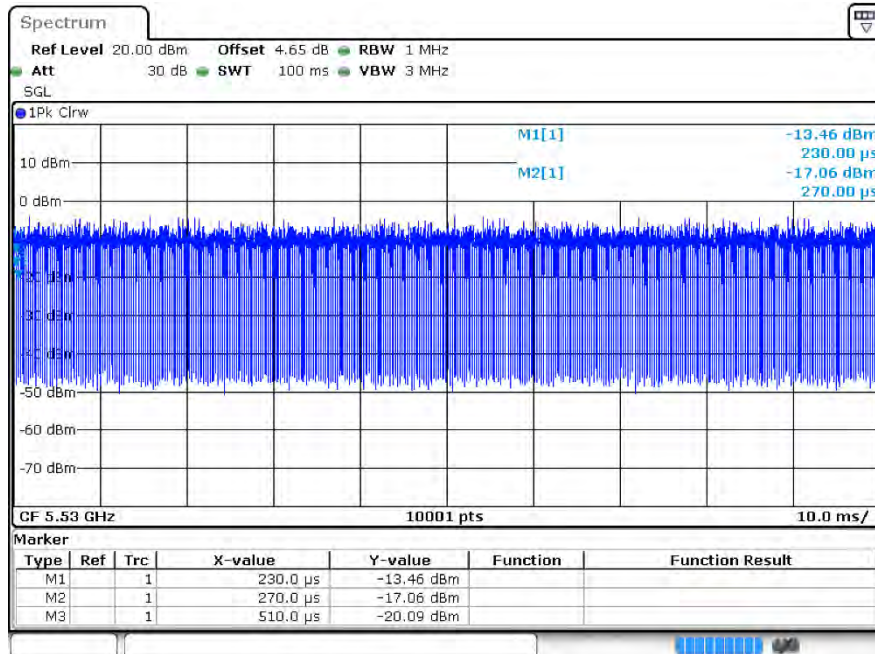
Duty Cycle ac40 5310MHz Ant2



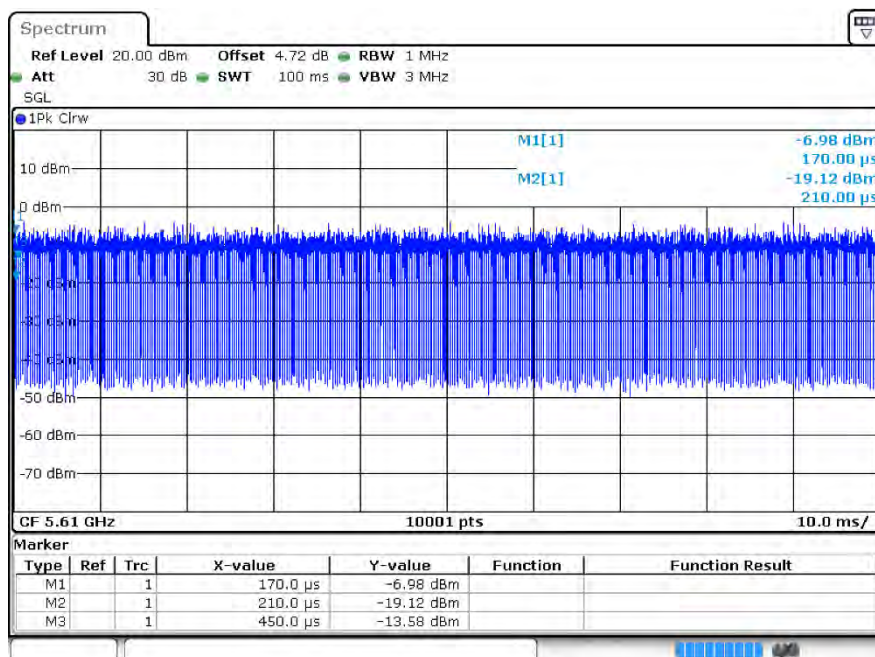


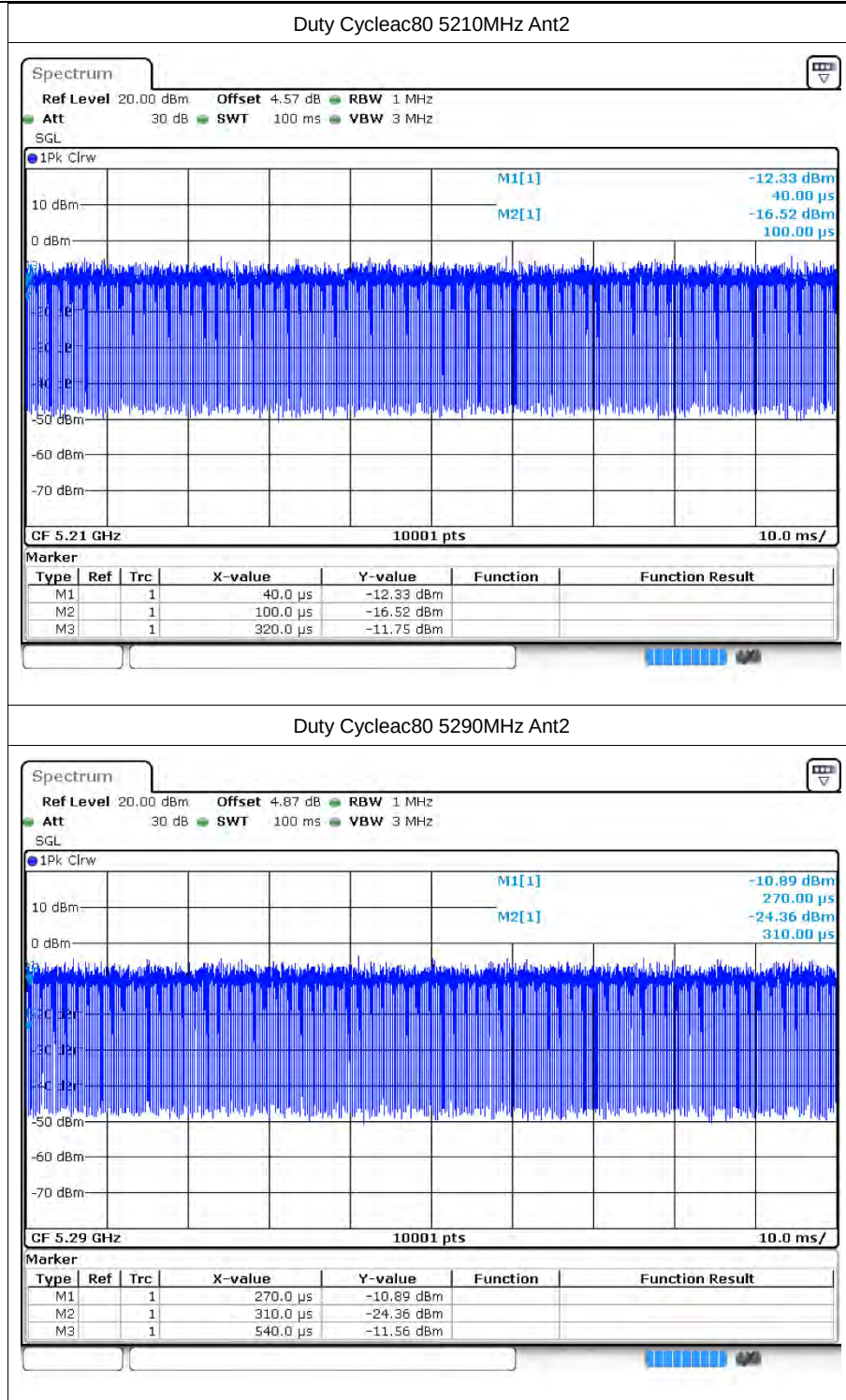


Duty Cycle ac80 5530MHz Ant1

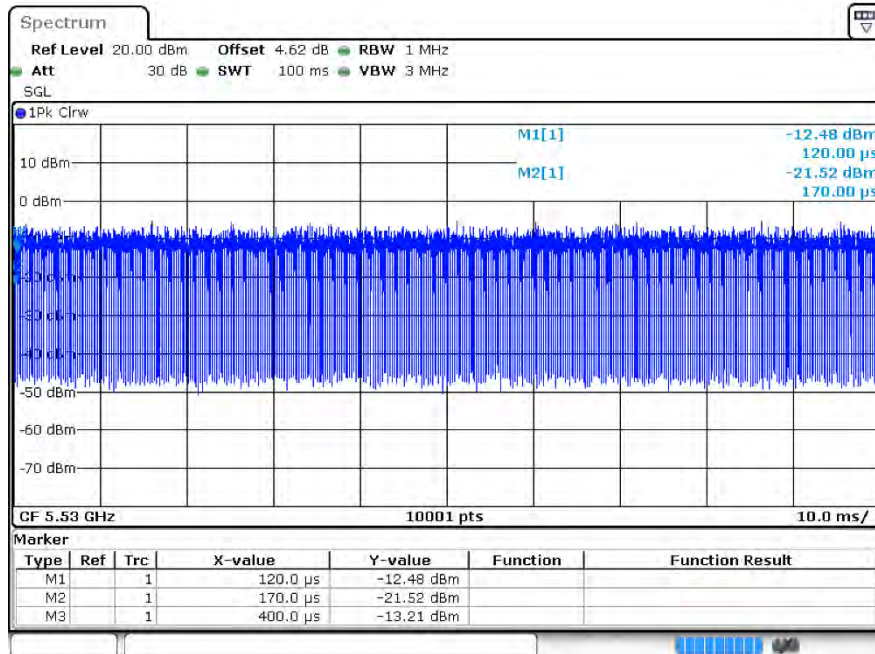


Duty Cycle ac80 5610MHz Ant1

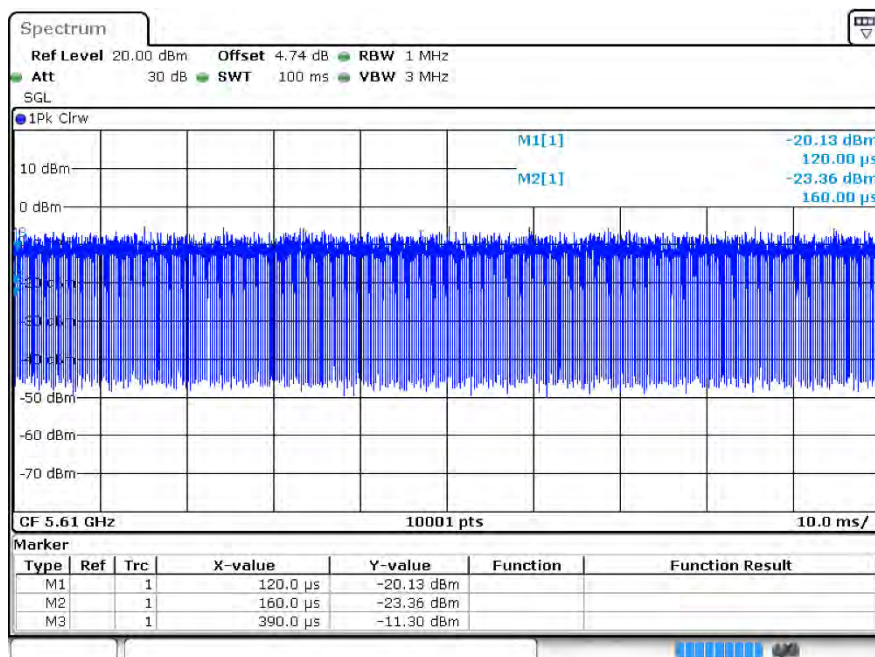




Duty Cycle ac80 5530MHz Ant2



Duty Cycle ac80 5610MHz Ant2





2 Maximum Conducted Output Power

2.1 Test Result

Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
a	5180	Ant1	14.64	24	Pass
a	5200	Ant1	14.63	24	Pass
a	5240	Ant1	15.06	24	Pass
a	5260	Ant1	15.17	24	Pass
a	5280	Ant1	14.79	24	Pass
a	5320	Ant1	14.23	24	Pass
a	5500	Ant1	14.42	24	Pass
a	5600	Ant1	14.33	24	Pass
a	5700	Ant1	14.26	24	Pass
a	5180	Ant2	14.71	24	Pass
a	5200	Ant2	14.47	24	Pass
a	5240	Ant2	13.9	24	Pass
a	5260	Ant2	14	24	Pass
a	5280	Ant2	14.24	24	Pass
a	5320	Ant2	14.76	24	Pass
a	5500	Ant2	14.02	24	Pass
a	5600	Ant2	13.62	24	Pass
a	5700	Ant2	14.72	24	Pass
n20	5180	Ant1	11.51	24	Pass
n20	5180	Ant2	11.08	24	Pass
n20	5180	Sum	14.41	22.49	Pass
n20	5200	Ant1	11.76	24	Pass
n20	5200	Ant2	10.79	24	Pass
n20	5200	Sum	14.34	22.49	Pass
n20	5240	Ant1	11.79	24	Pass
n20	5240	Ant2	10.42	24	Pass
n20	5240	Sum	14.11	22.49	Pass
n20	5280	Ant1	11.34	24	Pass
n20	5280	Ant2	10.71	24	Pass
n20	5280	Sum	14.03	22.49	Pass
n20	5320	Ant1	10.85	24	Pass
n20	5320	Ant2	11.26	24	Pass
n20	5320	Sum	14	22.49	Pass
n20	5500	Ant1	11.03	24	Pass
n20	5500	Ant2	10.61	24	Pass
n20	5500	Sum	13.86	22.49	Pass



n20	5600	Ant1	10.94	24	Pass
n20	5600	Ant2	10.09	24	Pass
n20	5600	Sum	13.5	22.49	Pass
n20	5700	Ant1	10.81	24	Pass
n20	5700	Ant2	11.31	24	Pass
n20	5700	Sum	14.05	22.49	Pass
n40	5190	Ant1	11.58	24	Pass
n40	5190	Ant2	10.93	24	Pass
n40	5190	Sum	14.34	22.49	Pass
n40	5230	Ant1	11.36	24	Pass
n40	5230	Ant2	10.52	24	Pass
n40	5230	Sum	13.97	22.49	Pass
n40	5270	Ant1	11.51	24	Pass
n40	5270	Ant2	10.62	24	Pass
n40	5270	Sum	14.1	22.49	Pass
n40	5310	Ant1	10.66	24	Pass
n40	5310	Ant2	11.2	24	Pass
n40	5310	Sum	13.95	22.49	Pass
n40	5510	Ant1	10.87	24	Pass
n40	5510	Ant2	10.44	24	Pass
n40	5510	Sum	13.67	22.49	Pass
n40	5670	Ant1	10.54	24	Pass
n40	5670	Ant2	10.92	24	Pass
n40	5670	Sum	13.74	22.49	Pass
ac20	5180	Ant1	11.57	24	Pass
ac20	5180	Ant2	11.29	24	Pass
ac20	5180	Sum	14.44	22.49	Pass
ac20	5200	Ant1	11.61	24	Pass
ac20	5200	Ant2	10.91	24	Pass
ac20	5200	Sum	14.28	22.49	Pass
ac20	5240	Ant1	11.38	24	Pass
ac20	5240	Ant2	10.54	24	Pass
ac20	5240	Sum	13.99	22.49	Pass
ac20	5280	Ant1	11.18	24	Pass
ac20	5280	Ant2	10.88	24	Pass
ac20	5280	Sum	14.04	22.49	Pass
ac20	5320	Ant1	10.47	24	Pass
ac20	5320	Ant2	11.49	24	Pass
ac20	5320	Sum	14.02	22.49	Pass
ac20	5500	Ant1	10.82	24	Pass
ac20	5500	Ant2	10.65	24	Pass
ac20	5500	Sum	13.75	22.49	Pass
ac20	5600	Ant1	10.65	24	Pass



ac20	5600	Ant2	10.19	24	Pass
ac20	5600	Sum	13.44	22.49	Pass
ac20	5700	Ant1	10.64	24	Pass
ac20	5700	Ant2	11.45	24	Pass
ac20	5700	Sum	14.07	22.49	Pass
ac40	5190	Ant1	11.68	24	Pass
ac40	5190	Ant2	11.14	24	Pass
ac40	5190	Sum	14.43	22.49	Pass
ac40	5230	Ant1	11.43	24	Pass
ac40	5230	Ant2	10.83	24	Pass
ac40	5230	Sum	14.15	22.49	Pass
ac40	5270	Ant1	11.37	24	Pass
ac40	5270	Ant2	10.93	24	Pass
ac40	5270	Sum	14.17	22.49	Pass
ac40	5310	Ant1	10.66	24	Pass
ac40	5310	Ant2	11.64	24	Pass
ac40	5310	Sum	14.19	22.49	Pass
ac40	5510	Ant1	10.84	24	Pass
ac40	5510	Ant2	10.83	24	Pass
ac40	5510	Sum	13.85	22.49	Pass
ac40	5670	Ant1	10.47	24	Pass
ac40	5670	Ant2	11.25	24	Pass
ac40	5670	Sum	13.89	22.49	Pass
ac80	5210	Ant1	10.65	24	Pass
ac80	5210	Ant2	10.46	24	Pass
ac80	5210	Sum	13.57	22.49	Pass
ac80	5290	Ant1	10.18	24	Pass
ac80	5290	Ant2	10.63	24	Pass
ac80	5290	Sum	13.42	22.49	Pass
ac80	5530	Ant1	9.95	24	Pass
ac80	5530	Ant2	10.12	24	Pass
ac80	5530	Sum	13.05	22.49	Pass
ac80	5610	Ant1	9.88	24	Pass
ac80	5610	Ant2	9.95	24	Pass
ac80	5610	Sum	12.93	22.49	Pass



3 -26dB Bandwidth

3.1 Test Result

Mode	Frequency (MHz)	Antenna	-26 dB Bandwidth (MHz)	Limit -26 dB Bandwidth (MHz)	Verdict
a	5180	Ant1	22.944	0.5	Pass
a	5200	Ant1	22.56	0.5	Pass
a	5240	Ant1	22.29	0.5	Pass
a	5260	Ant1	22.587	0.5	Pass
a	5280	Ant1	21.843	0.5	Pass
a	5320	Ant1	22.647	0.5	Pass
a	5500	Ant1	22.371	0.5	Pass
a	5600	Ant1	21.33	0.5	Pass
a	5700	Ant1	21.978	0.5	Pass
n20	5180	Ant1	22.404	0.5	Pass
n20	5200	Ant1	23.658	0.5	Pass
n20	5240	Ant1	22.251	0.5	Pass
n20	5280	Ant1	22.122	0.5	Pass
n20	5320	Ant1	24.432	0.5	Pass
n20	5500	Ant1	22.764	0.5	Pass
n20	5600	Ant1	22.884	0.5	Pass
n20	5700	Ant1	22.821	0.5	Pass
n40	5190	Ant1	41.664	0.5	Pass
n40	5230	Ant1	42.09	0.5	Pass
n40	5270	Ant1	41.478	0.5	Pass
n40	5310	Ant1	42.516	0.5	Pass
n40	5510	Ant1	42.276	0.5	Pass
n40	5670	Ant1	42.168	0.5	Pass
ac20	5180	Ant1	23.133	0.5	Pass
ac20	5200	Ant1	22.71	0.5	Pass
ac20	5240	Ant1	22.512	0.5	Pass
ac20	5260	Ant1	22.893	0.5	Pass
ac20	5280	Ant1	22.695	0.5	Pass
ac20	5320	Ant1	23.376	0.5	Pass
ac20	5500	Ant1	21.516	0.5	Pass
ac20	5600	Ant1	22.098	0.5	Pass
ac20	5700	Ant1	23.217	0.5	Pass
ac40	5190	Ant1	42.282	0.5	Pass
ac40	5230	Ant1	41.424	0.5	Pass
ac40	5270	Ant1	41.07	0.5	Pass
ac40	5310	Ant1	42.684	0.5	Pass
ac40	5510	Ant1	42.84	0.5	Pass

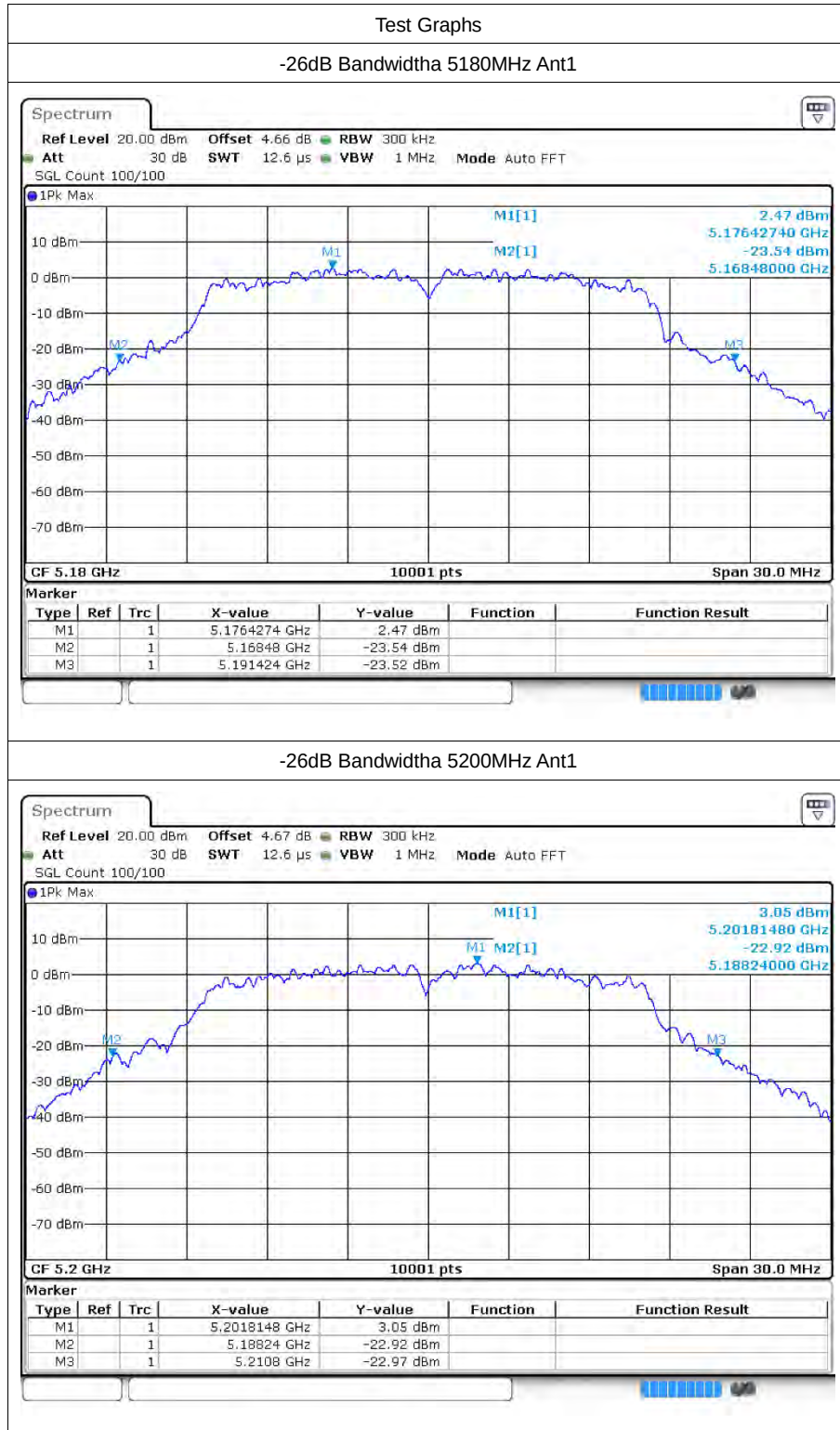


ac40	5670	Ant1	42.684	0.5	Pass
ac80	5210	Ant1	84.036	0.5	Pass
ac80	5290	Ant1	84.552	0.5	Pass
ac80	5530	Ant1	82.692	0.5	Pass
ac80	5610	Ant1	82.836	0.5	Pass
a	5180	Ant2	21.618	0.5	Pass
a	5200	Ant2	21.18	0.5	Pass
a	5240	Ant2	21.924	0.5	Pass
a	5260	Ant2	22.473	0.5	Pass
a	5280	Ant2	21.849	0.5	Pass
a	5320	Ant2	22.251	0.5	Pass
a	5500	Ant2	22.182	0.5	Pass
a	5600	Ant2	22.407	0.5	Pass
a	5700	Ant2	21.744	0.5	Pass
n20	5180	Ant2	22.398	0.5	Pass
n20	5200	Ant2	23.454	0.5	Pass
n20	5240	Ant2	22.713	0.5	Pass
n20	5280	Ant2	22.638	0.5	Pass
n20	5320	Ant2	22.698	0.5	Pass
n20	5500	Ant2	22.752	0.5	Pass
n20	5600	Ant2	23.739	0.5	Pass
n20	5700	Ant2	23.067	0.5	Pass
n40	5190	Ant2	40.926	0.5	Pass
n40	5230	Ant2	42.006	0.5	Pass
n40	5270	Ant2	41.46	0.5	Pass
n40	5310	Ant2	41.946	0.5	Pass
n40	5510	Ant2	41.844	0.5	Pass
n40	5670	Ant2	41.754	0.5	Pass
ac20	5180	Ant2	22.368	0.5	Pass
ac20	5200	Ant2	24.291	0.5	Pass
ac20	5240	Ant2	22.767	0.5	Pass
ac20	5260	Ant2	23.679	0.5	Pass
ac20	5280	Ant2	22.515	0.5	Pass
ac20	5320	Ant2	23.103	0.5	Pass
ac20	5500	Ant2	22.395	0.5	Pass
ac20	5600	Ant2	23.16	0.5	Pass
ac20	5700	Ant2	22.383	0.5	Pass
ac40	5190	Ant2	40.692	0.5	Pass
ac40	5230	Ant2	41.22	0.5	Pass
ac40	5270	Ant2	41.928	0.5	Pass
ac40	5310	Ant2	41.004	0.5	Pass
ac40	5510	Ant2	42.402	0.5	Pass
ac40	5670	Ant2	40.83	0.5	Pass

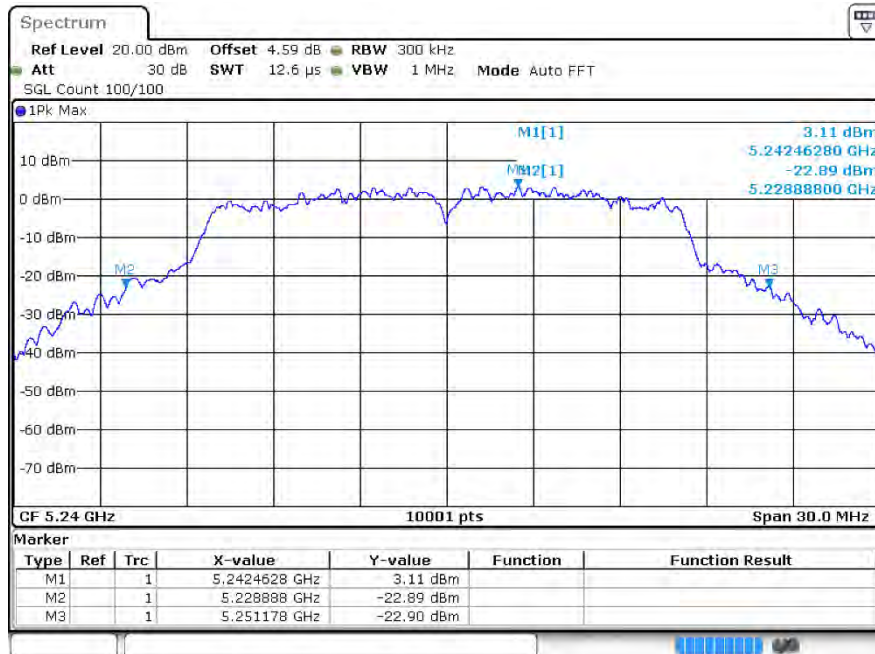


ac80	5210	Ant2	81.216	0.5	Pass
ac80	5290	Ant2	82.956	0.5	Pass
ac80	5530	Ant2	82.428	0.5	Pass
ac80	5610	Ant2	82.536	0.5	Pass

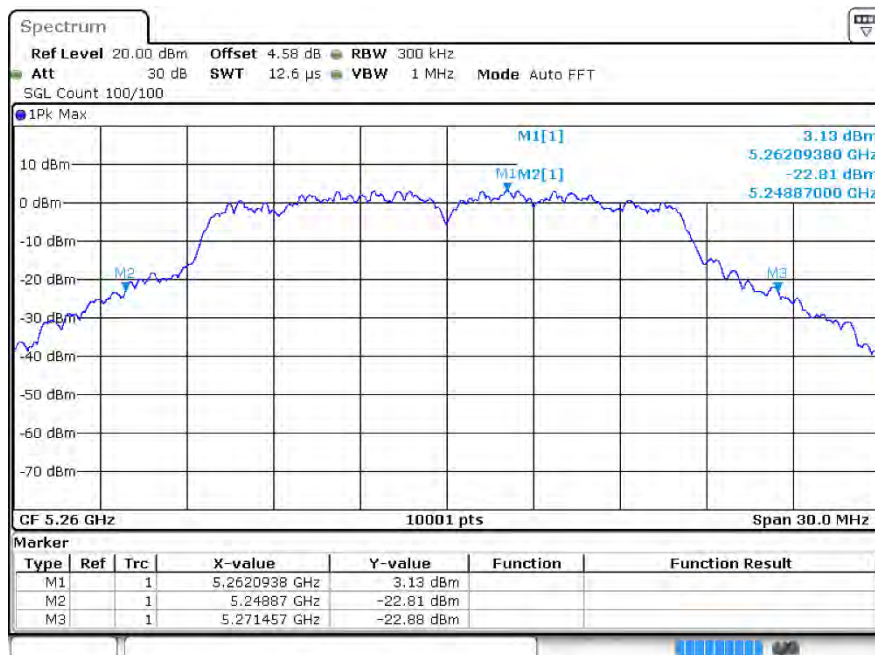
3.2 Test Graphs



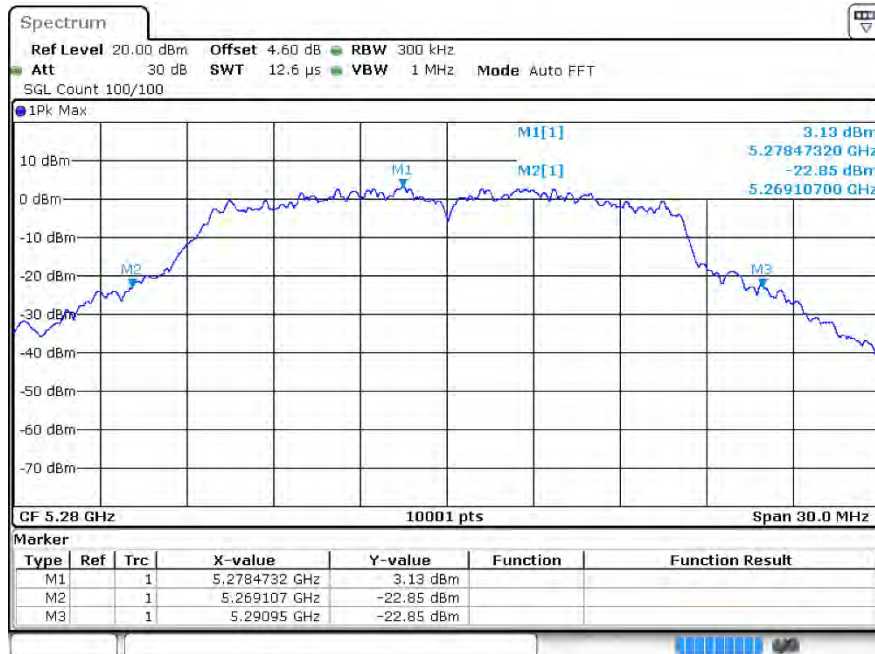
-26dB Bandwidtha 5240MHz Ant1



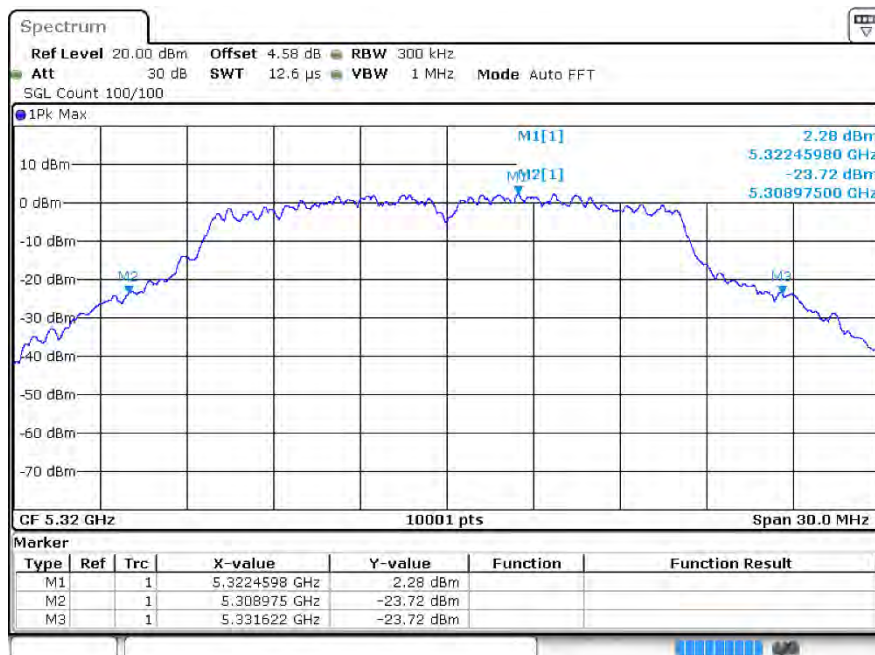
-26dB Bandwidtha 5260MHz Ant1



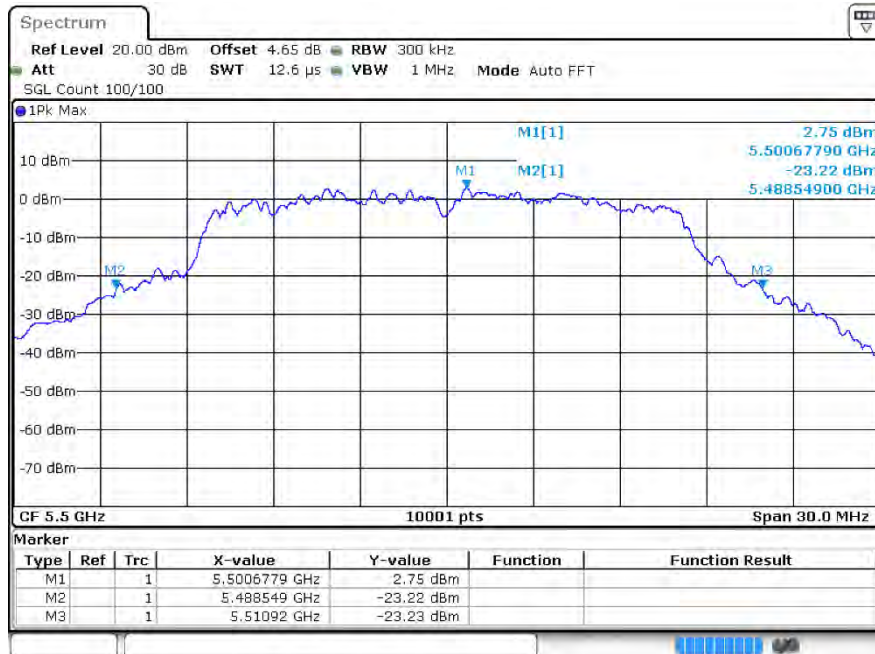
-26dB Bandwidtha 5280MHz Ant1



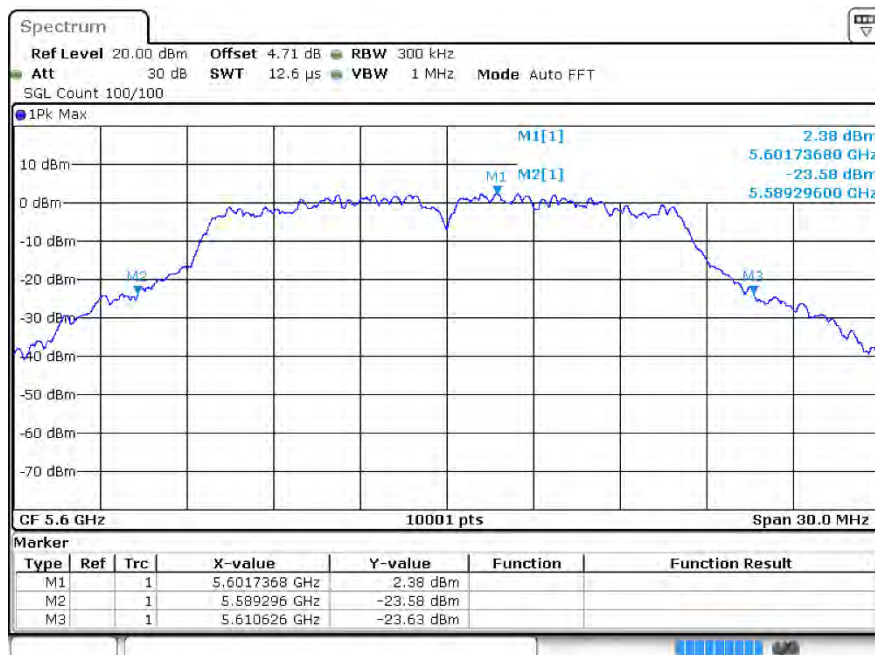
-26dB Bandwidth a 5320MHz Ant1

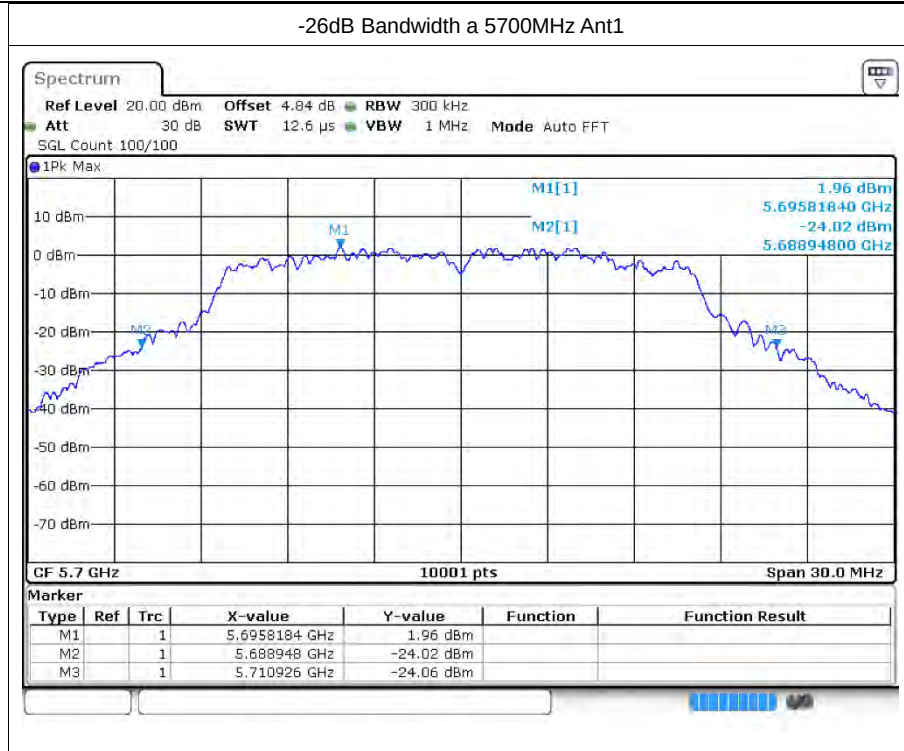


-26dB Bandwidtha 5500MHz Ant1

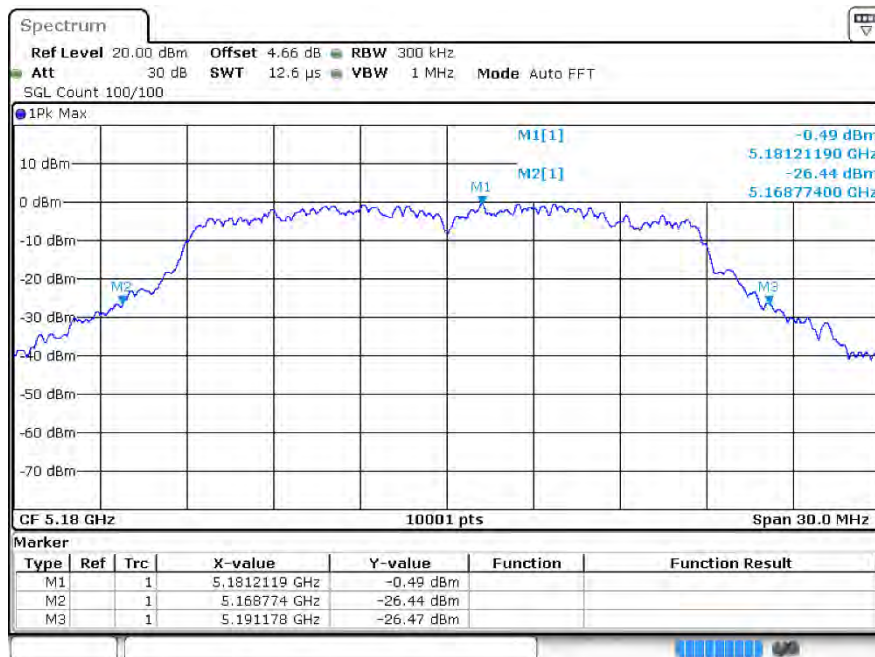


-26dB Bandwidtha 5600MHz Ant1

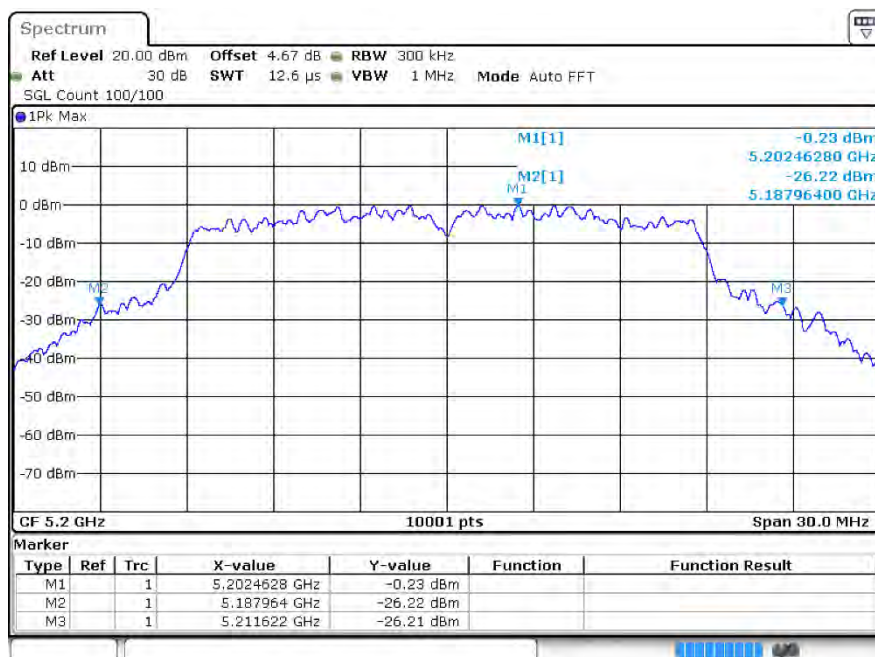




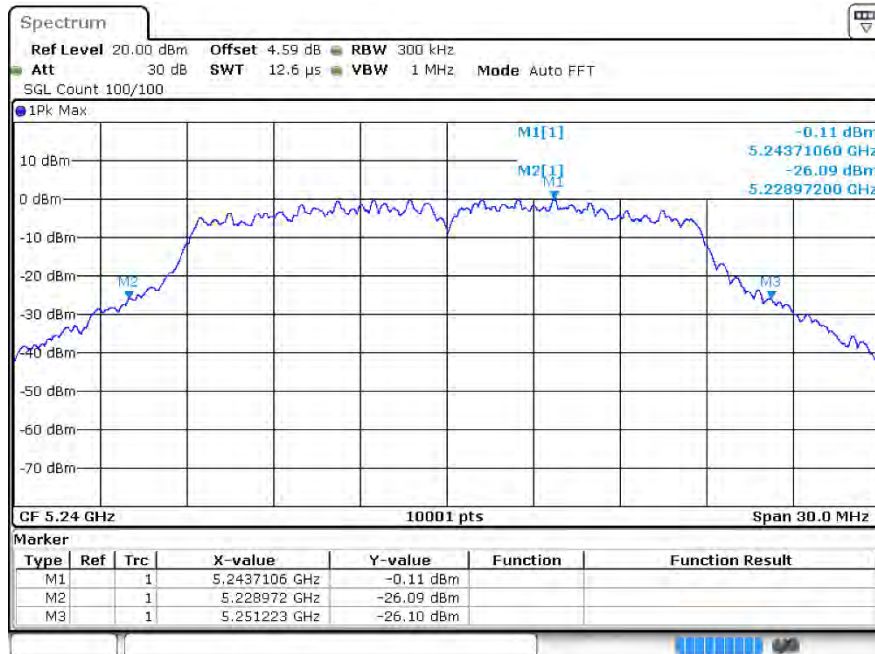
-26dB Bandwidth n20 5180MHz Ant1



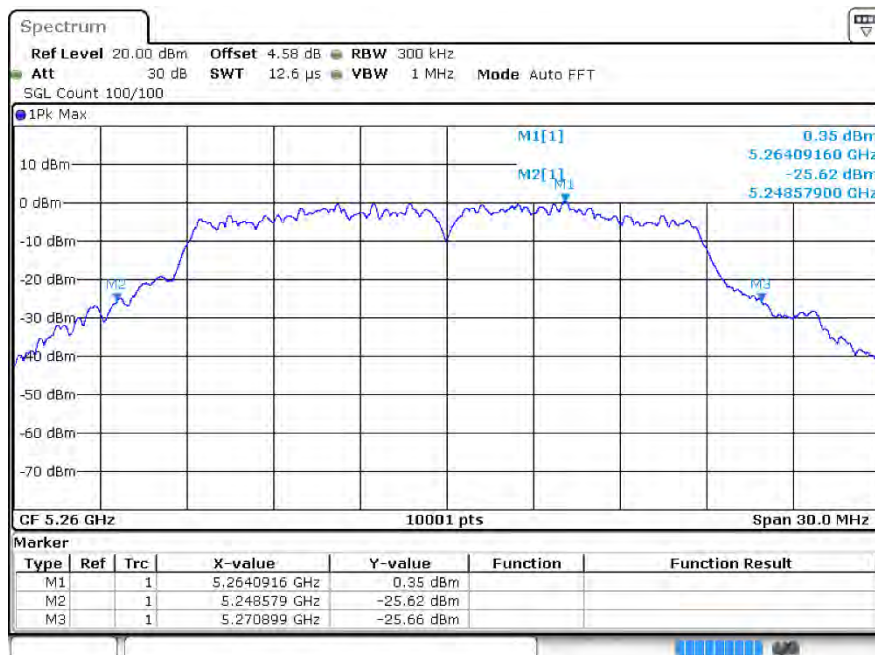
-26dB Bandwidth n20 5200MHz Ant1



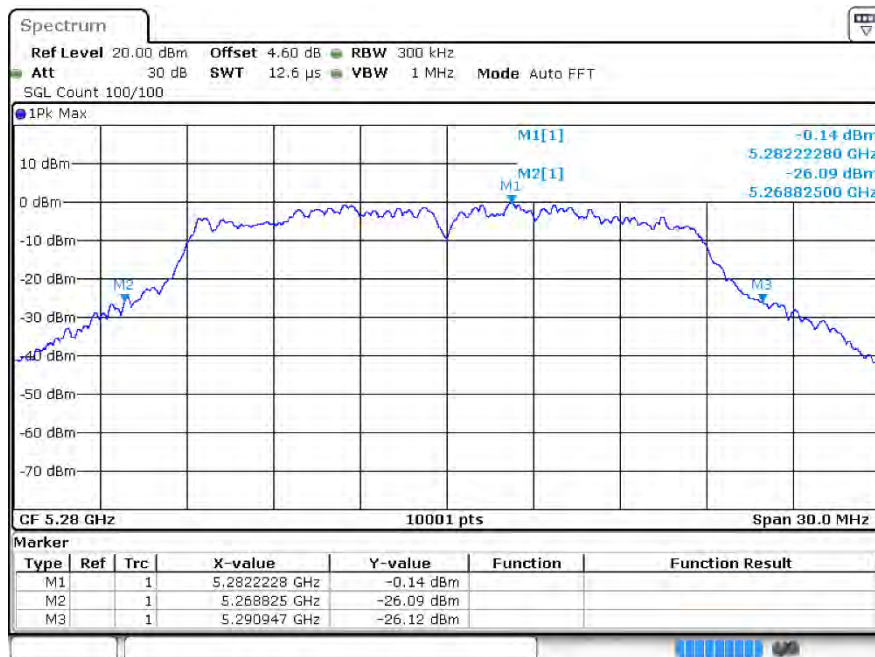
-26dB Bandwidth n20 5240MHz Ant1



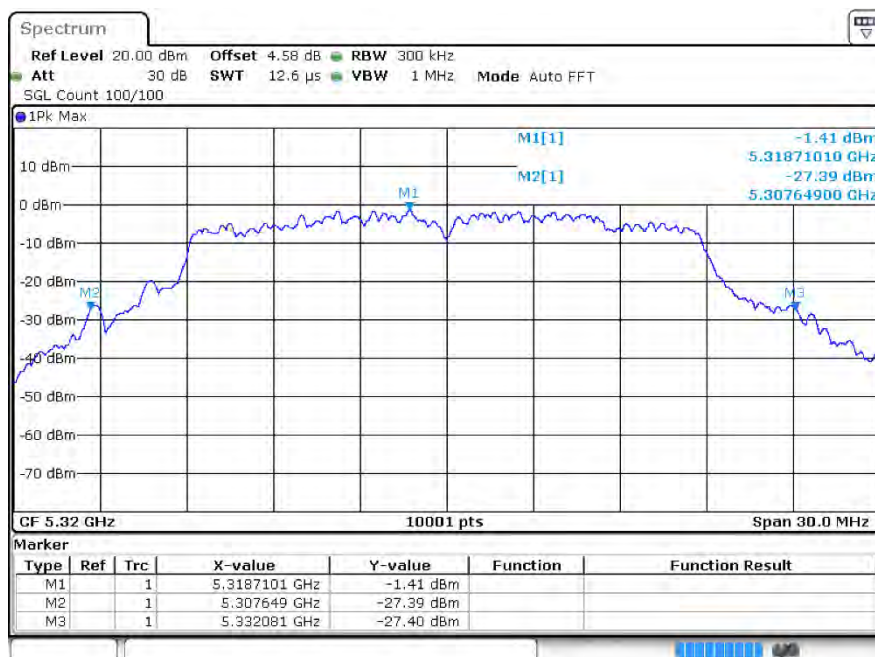
-26dB Bandwidth n20 5260MHz Ant1



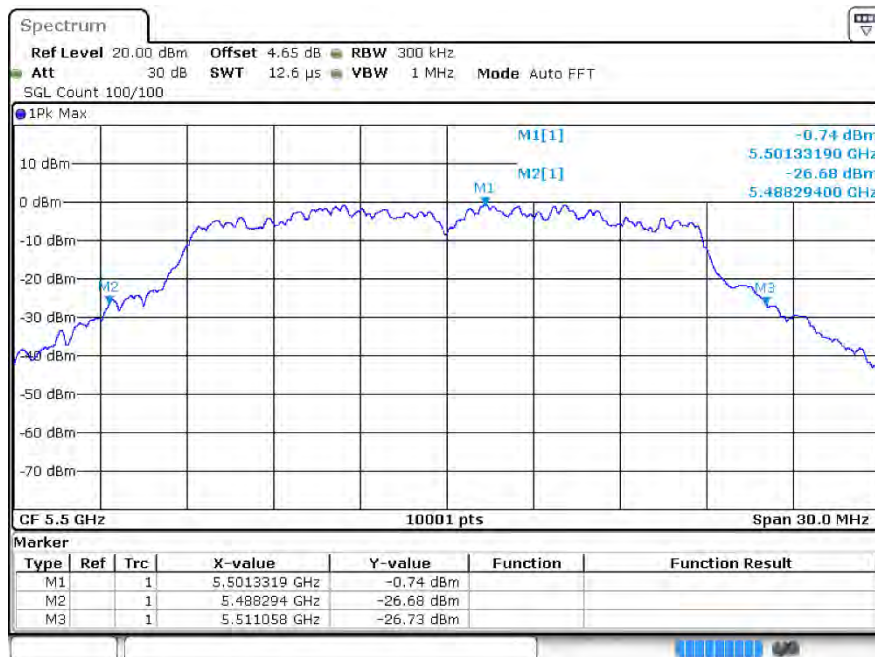
-26dB Bandwidth n20 5280MHz Ant1



-26dB Bandwidth n20 5320MHz Ant1



-26dB Bandwidth n20 5500MHz Ant1



-26dB Bandwidth n20 5600MHz Ant1

