



Appendix E

RF Test Data for 5.8GWIFI(Conducted Measurement)

Product Name: Mini PC

Trade Mark: Blackview

Test Model: MP100

Environmental Conditions

Temperature:	24.6° 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

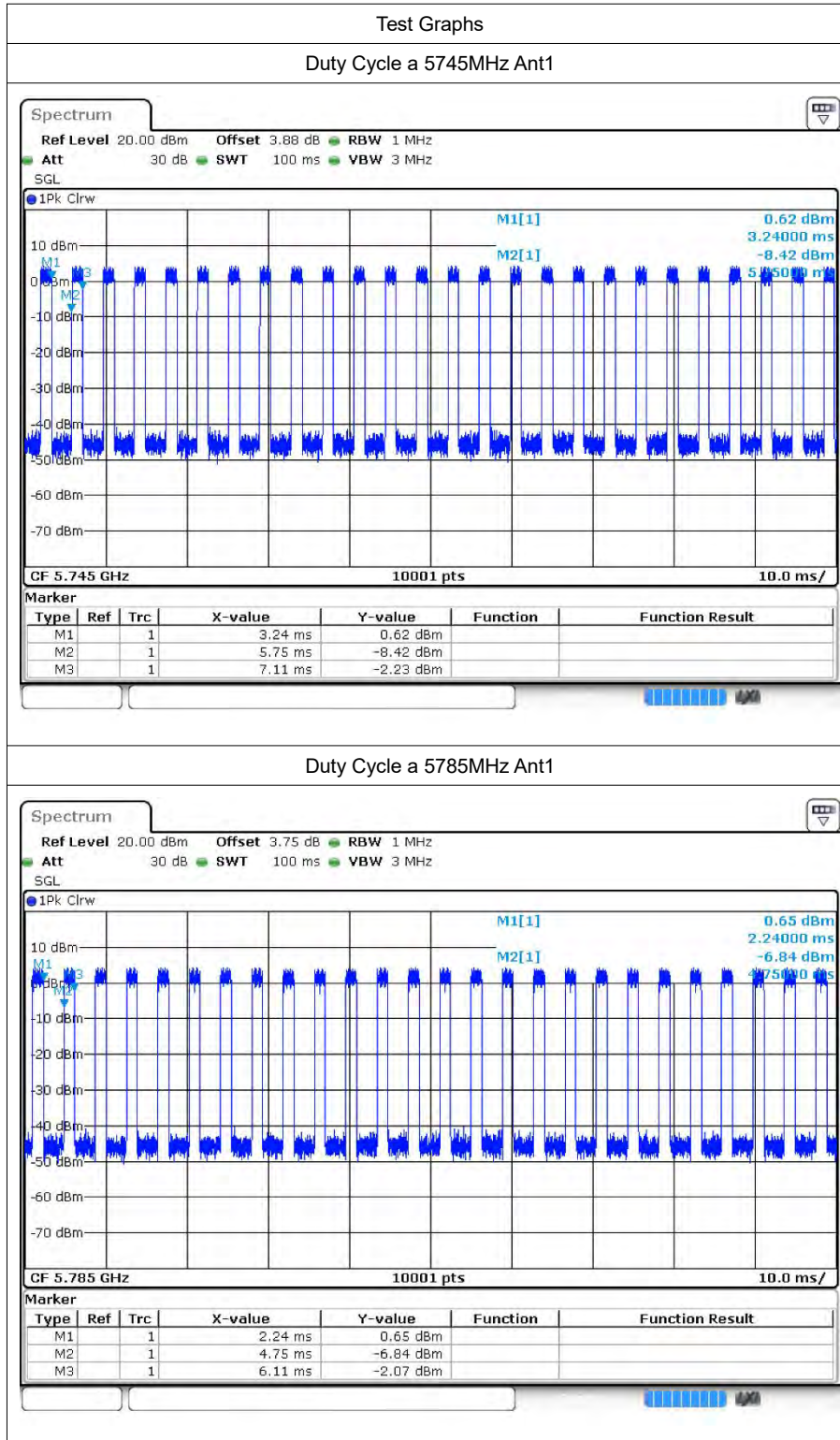
1.1 Test Result

Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
a	5745	Ant1	35.62	4.48	0.74
a	5785	Ant1	35.62	4.48	0.74
a	5825	Ant1	35.62	4.48	0.74
a	5745	Ant2	35.68	4.48	0.74
a	5785	Ant2	35.21	4.53	0.74
a	5825	Ant2	35.62	4.48	0.74
n20	5745	Ant1	34.43	4.63	0.79
n20	5785	Ant1	34.64	4.6	0.79
n20	5825	Ant1	33.91	4.7	0.79
n20	5745	Ant2	33.34	4.77	0.79
n20	5785	Ant2	34.13	4.67	0.79
n20	5825	Ant2	34.54	4.62	0.79
n40	5755	Ant1	20.3	6.93	1.59
n40	5795	Ant1	20.3	6.93	1.67
n40	5755	Ant2	20.56	6.87	1.59
n40	5795	Ant2	20.56	6.87	1.59
ac20	5745	Ant1	33.52	4.75	0.79
ac20	5785	Ant1	34.73	4.59	0.79
ac20	5825	Ant1	34.06	4.68	0.78
ac20	5745	Ant2	34.31	4.65	0.78
ac20	5785	Ant2	33.64	4.73	0.79
ac20	5825	Ant2	34.04	4.68	0.79
ac40	5755	Ant1	20.03	6.98	1.61
ac40	5795	Ant1	20.43	6.9	1.59
ac40	5755	Ant2	20.3	6.93	1.56
ac40	5795	Ant2	20.69	6.84	1.56
ac80	5775	Ant1	10.93	9.61	3.45
ac80	5775	Ant2	11.3	9.47	3.33
ax20	5745	Ant1	32.72	4.85	0.85
ax20	5785	Ant1	31.8	4.98	0.85
ax20	5825	Ant1	31.84	4.97	0.85
ax20	5745	Ant2	32.42	4.89	0.85
ax20	5785	Ant2	31.96	4.95	0.86
ax20	5825	Ant2	31.8	4.98	0.86
ax40	5755	Ant1	19.8	7.03	1.64
ax40	5795	Ant1	19.79	7.04	1.67
ax40	5755	Ant2	20.04	6.98	1.61

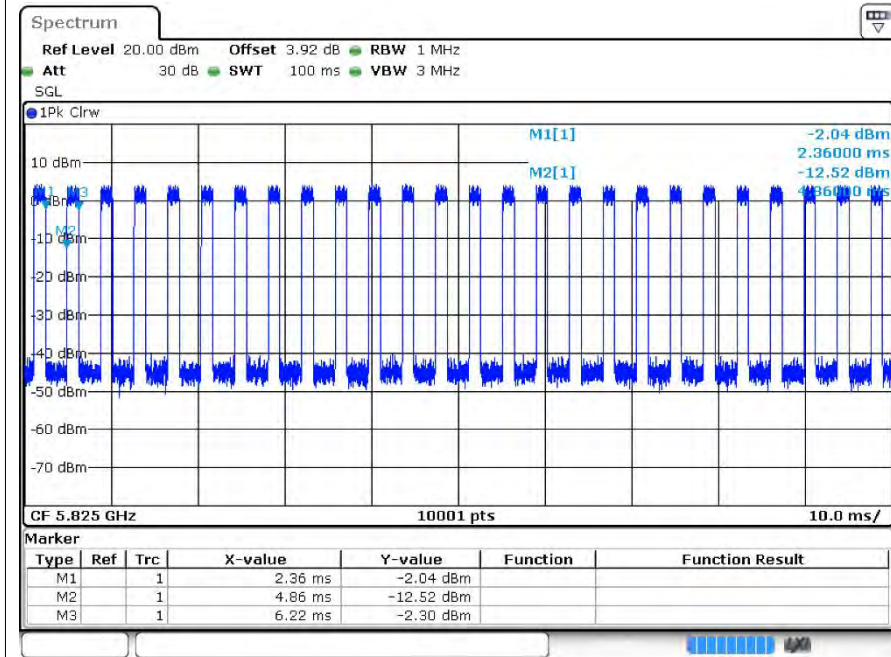


ax40	5795	Ant2	20.05	6.98	1.64
ax80	5775	Ant1	11.49	9.4	3.23
ax80	5775	Ant2	11.76	9.3	3.12

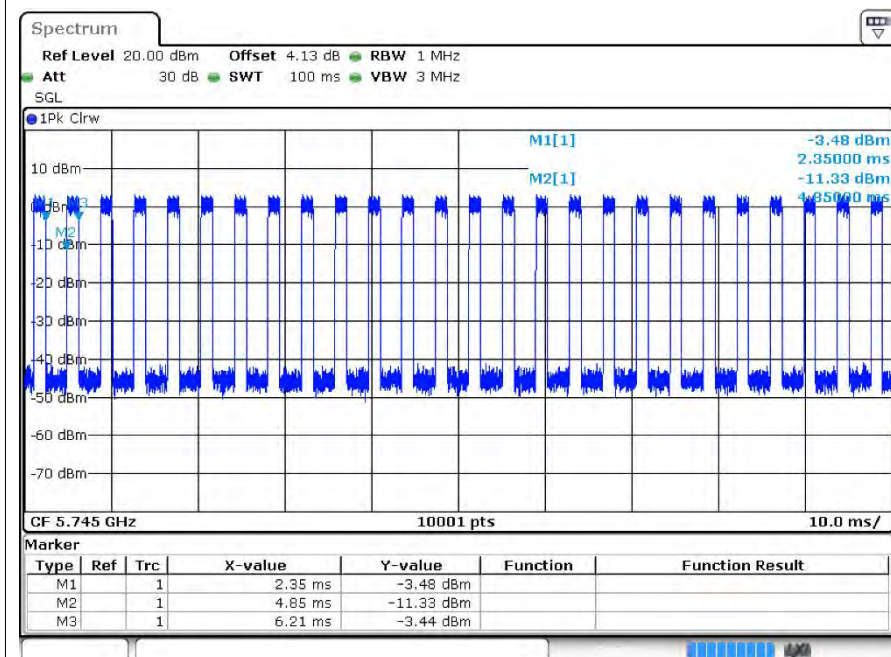
1.2 Test Graphs



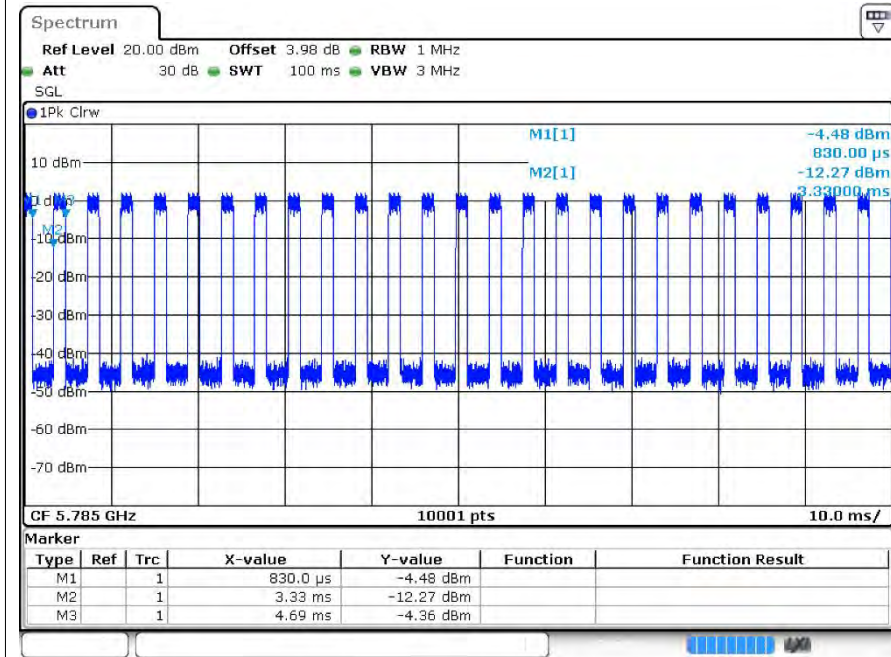
Duty Cycle a 5825MHz Ant1



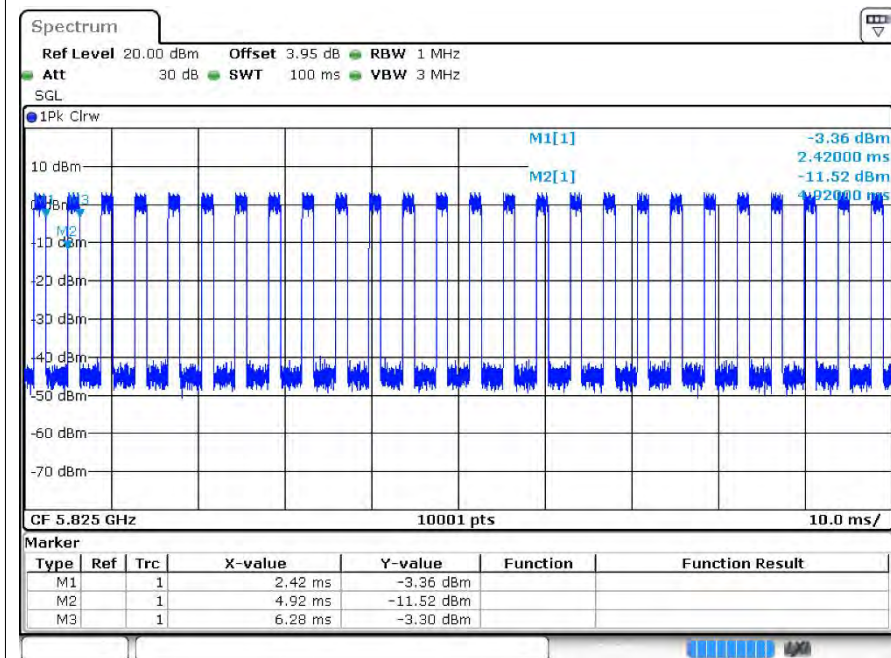
Duty Cycle a 5745MHz Ant2

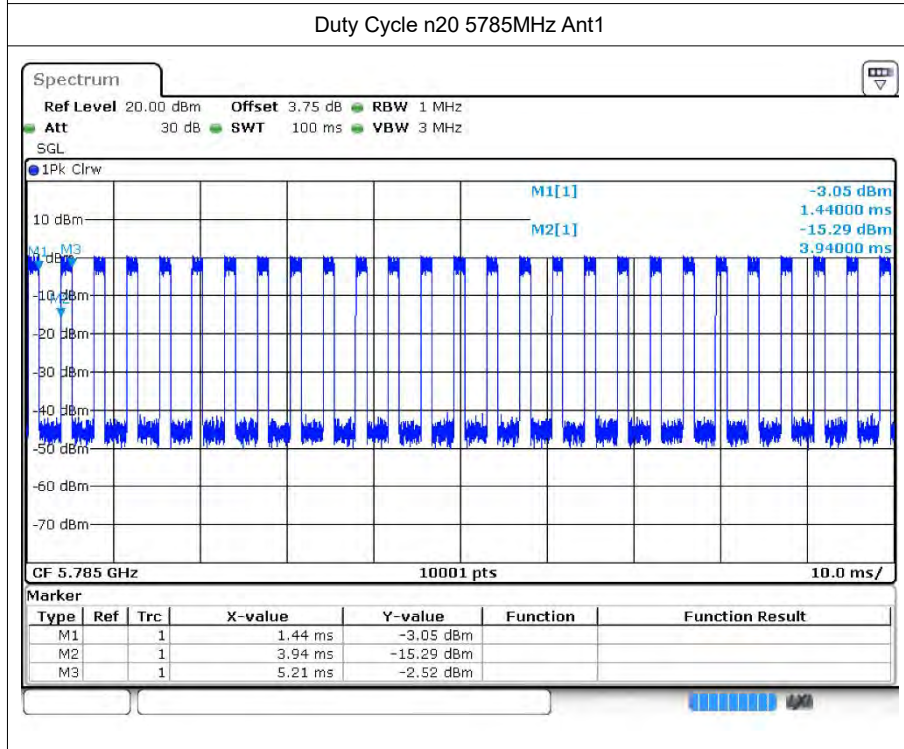
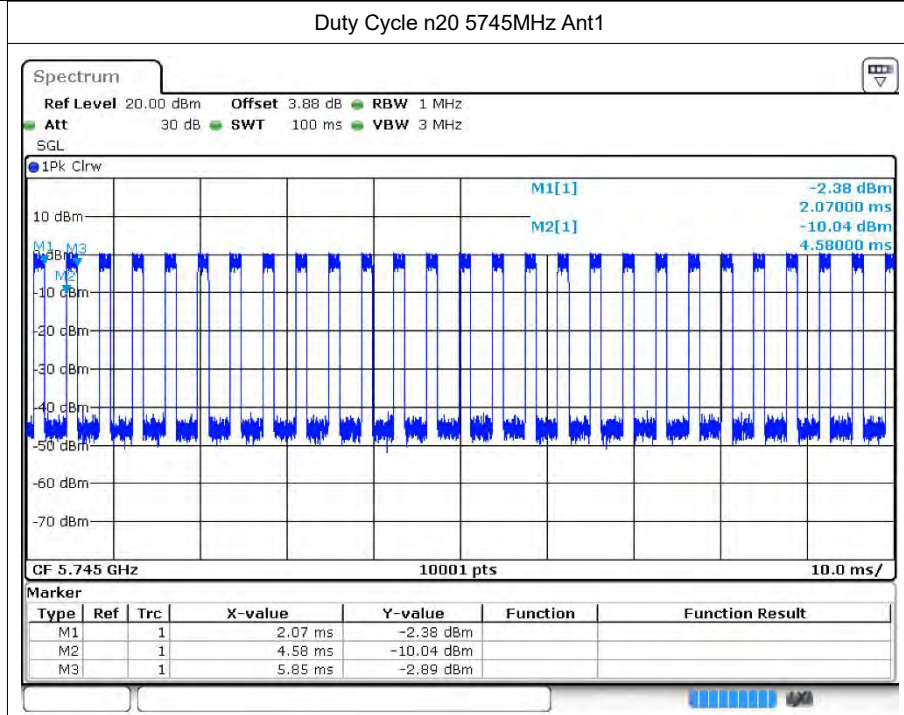


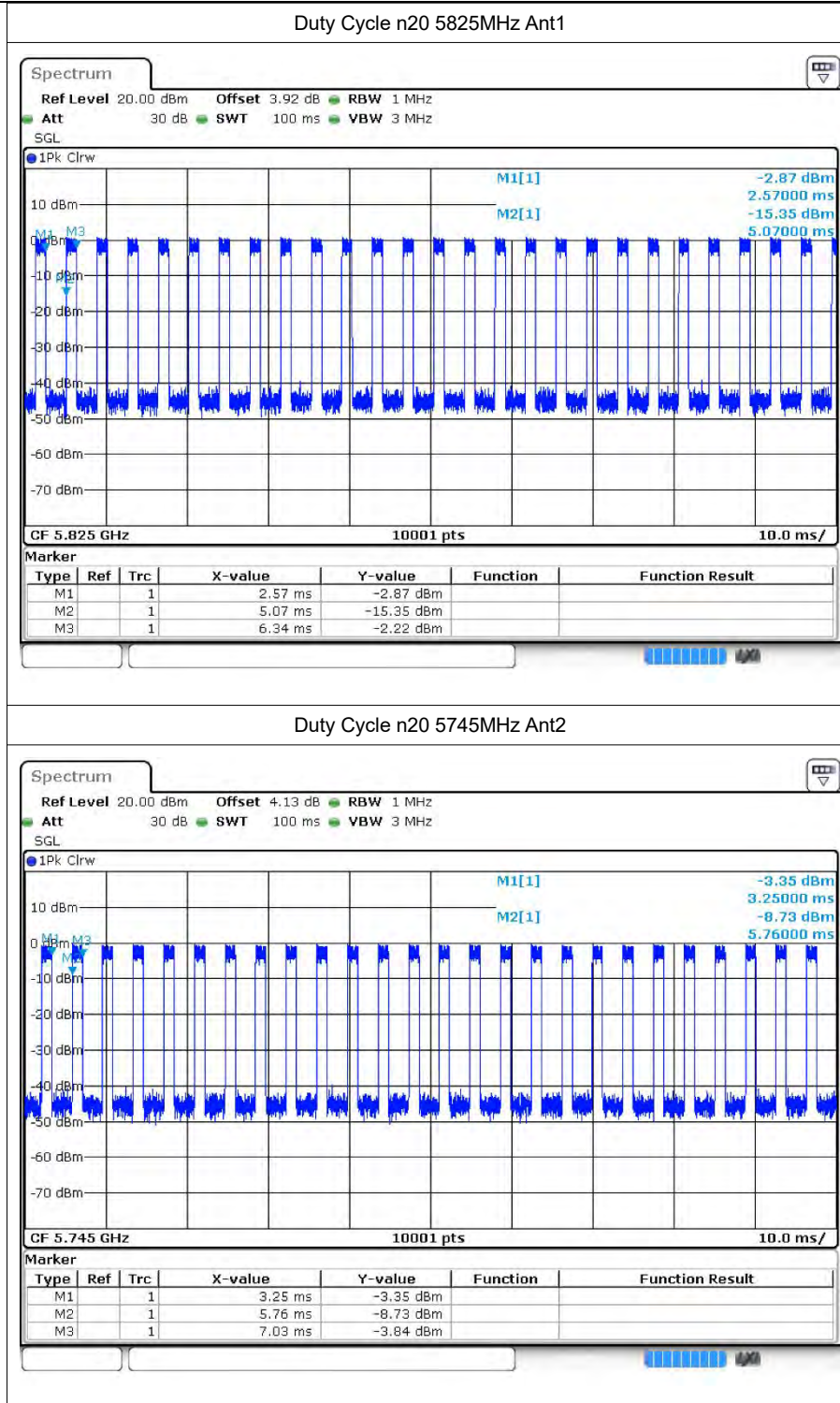
Duty Cycle a 5785MHz Ant2

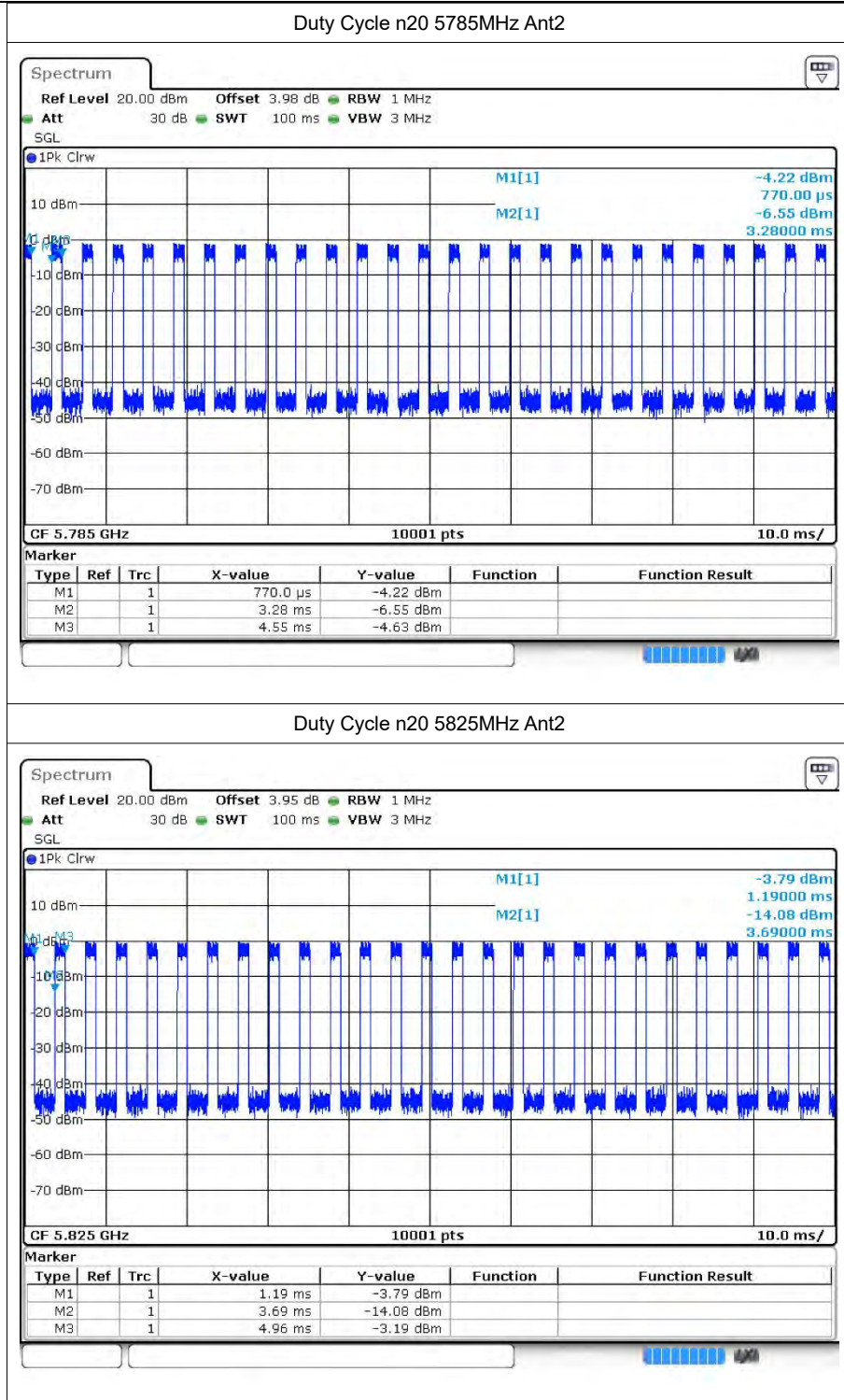


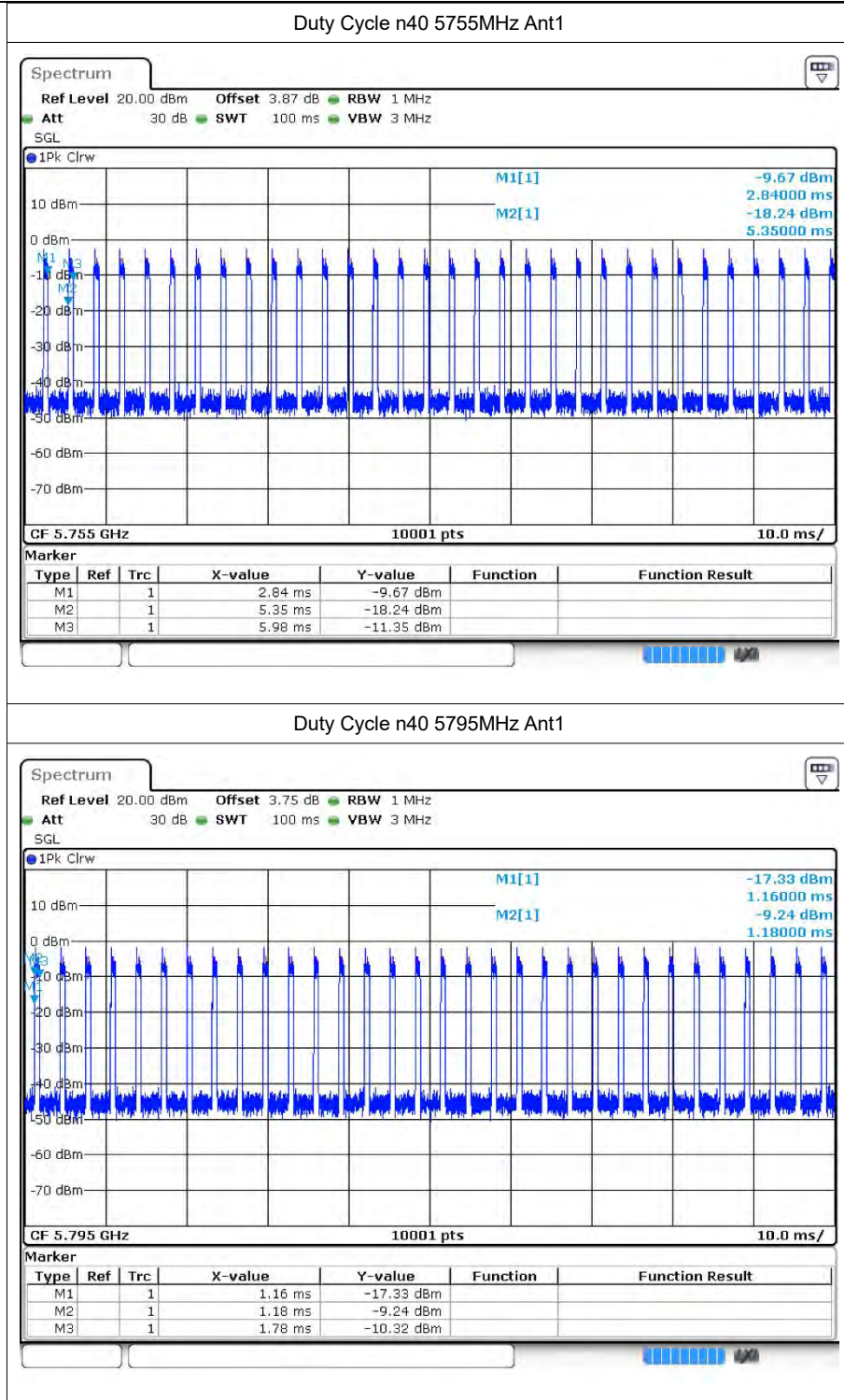
Duty Cycle a 5825MHz Ant2

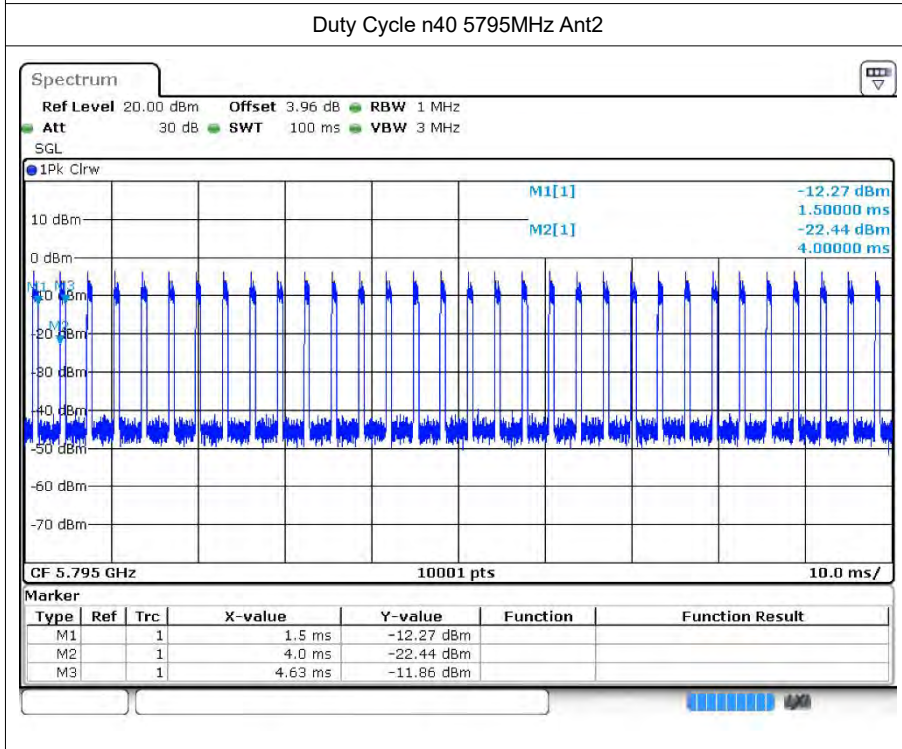
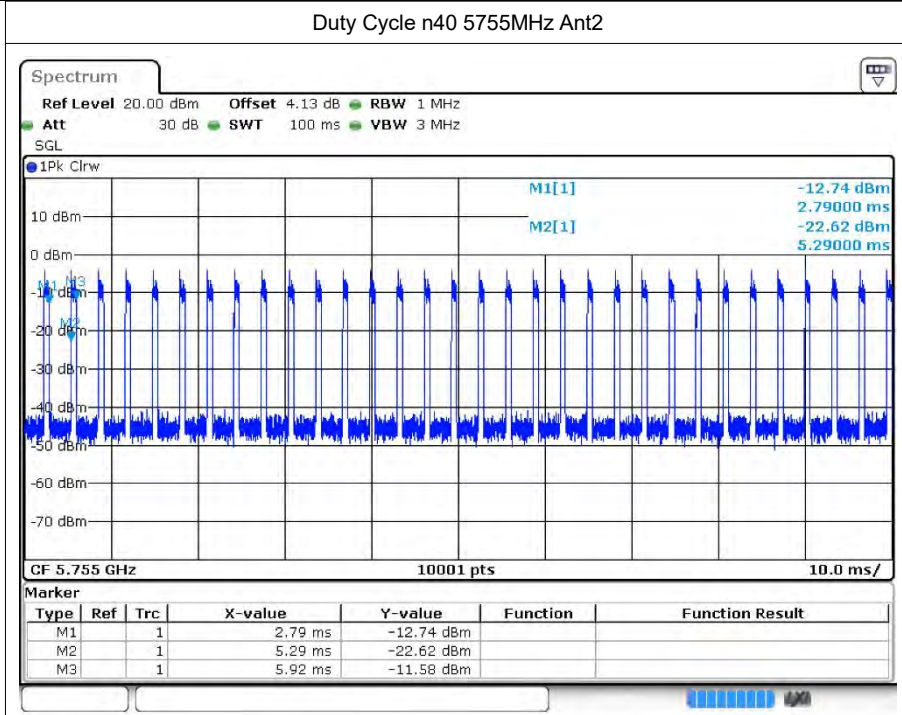


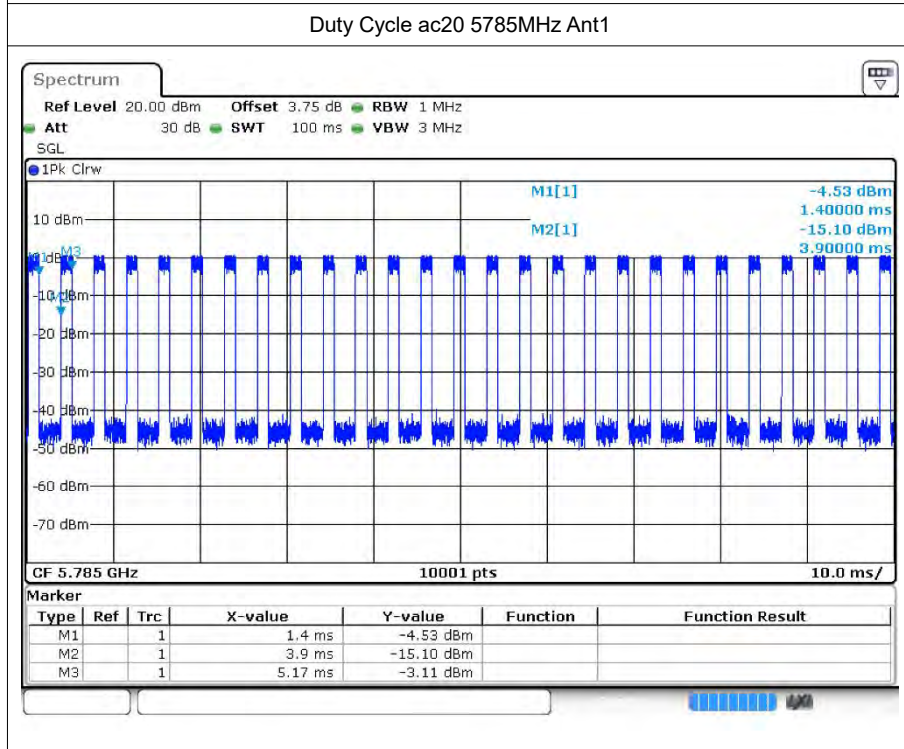
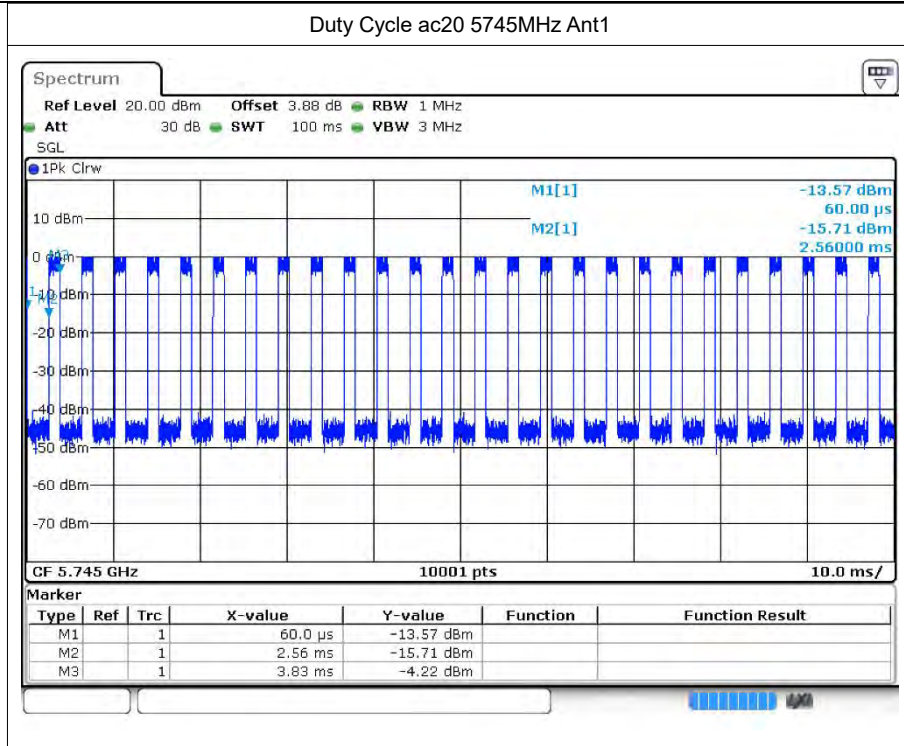


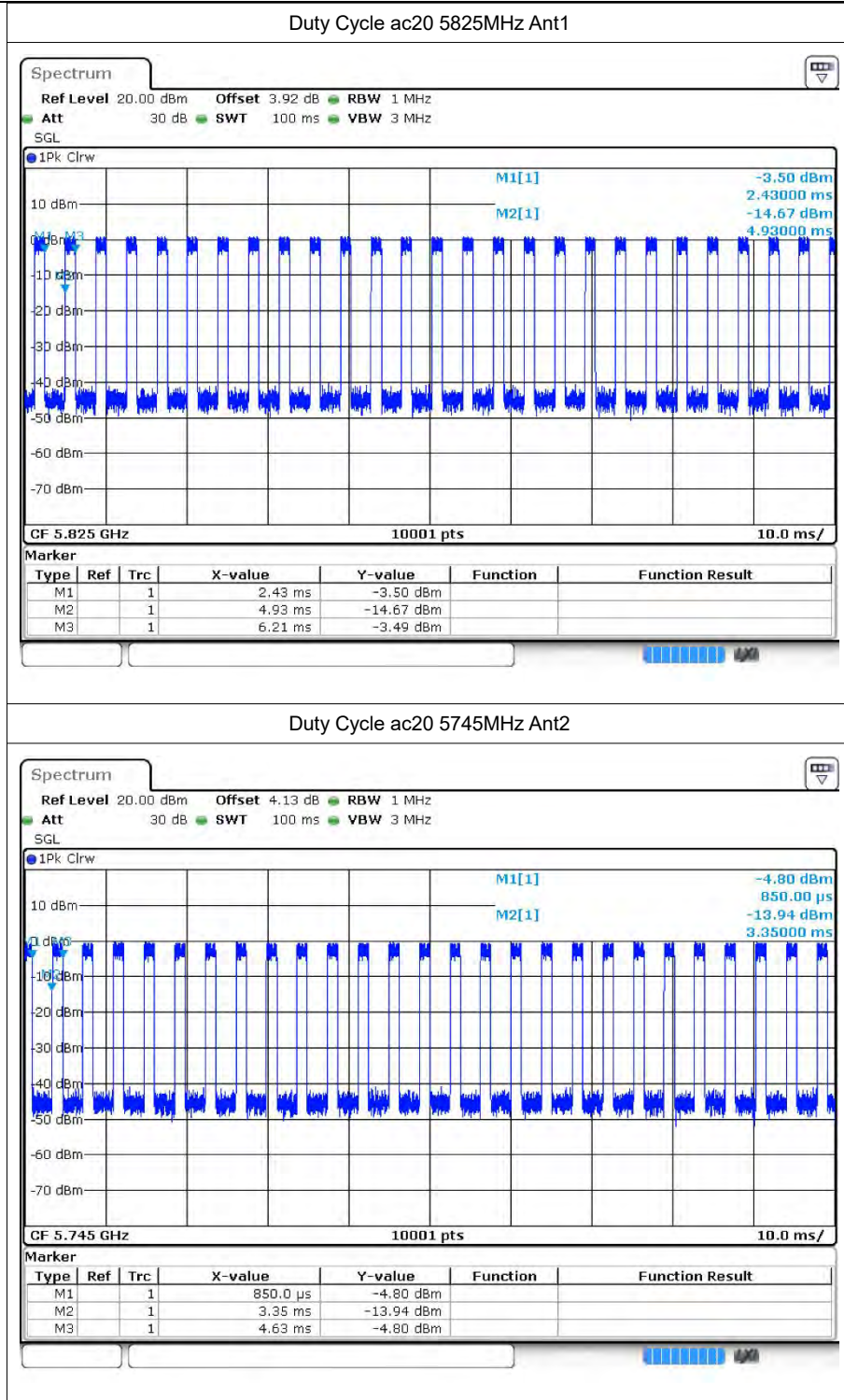


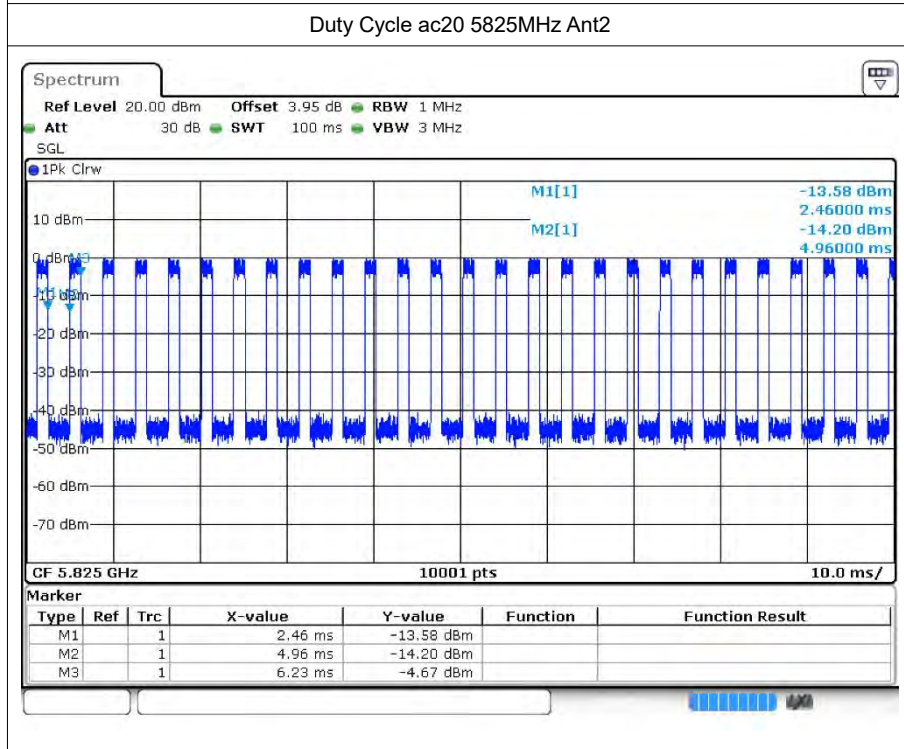
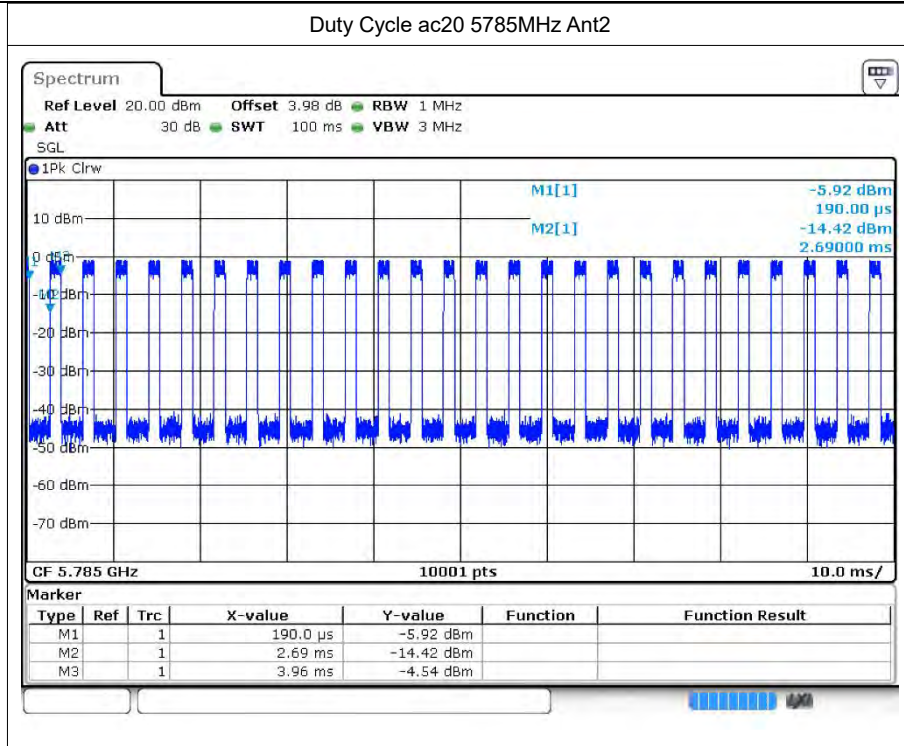


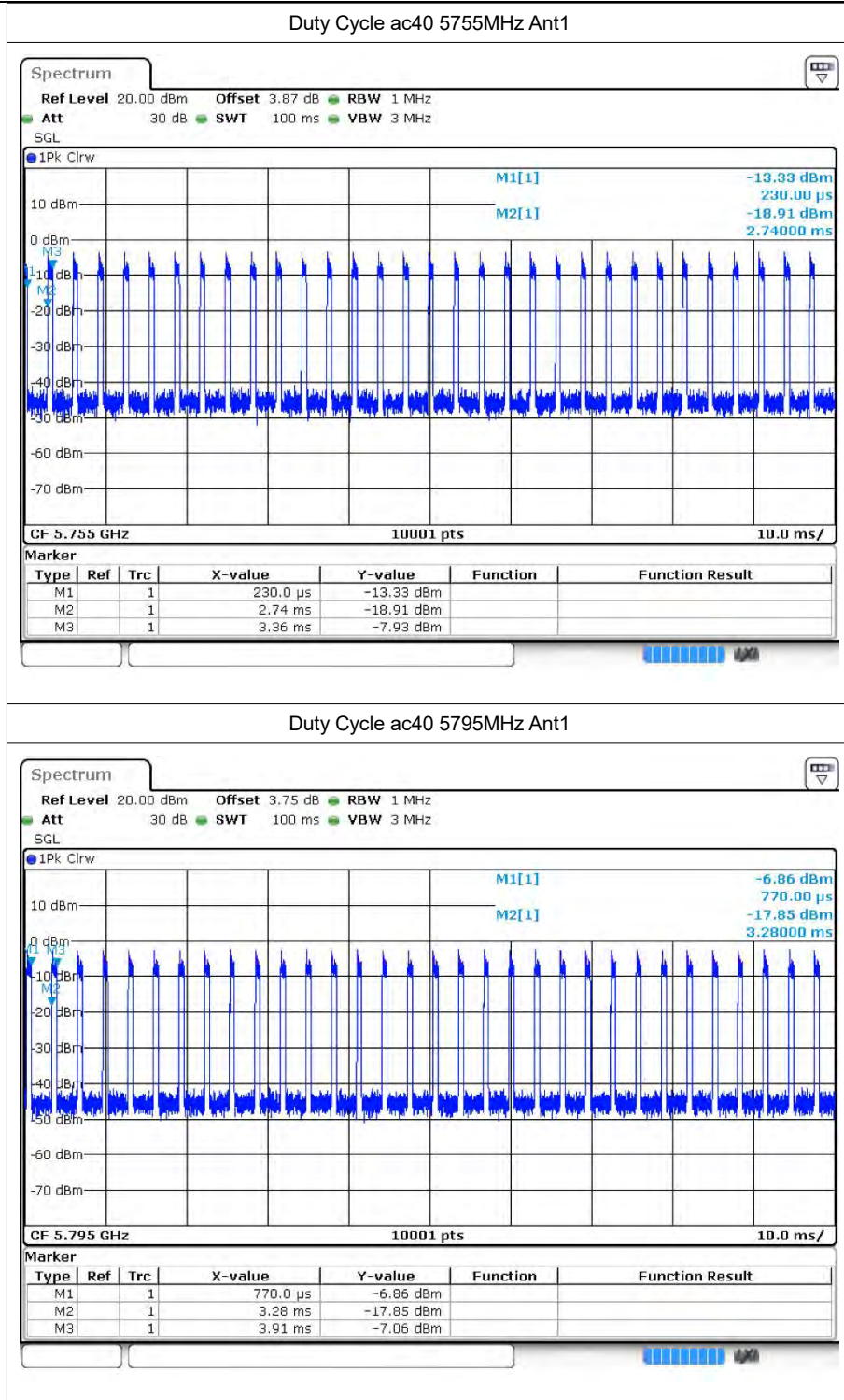


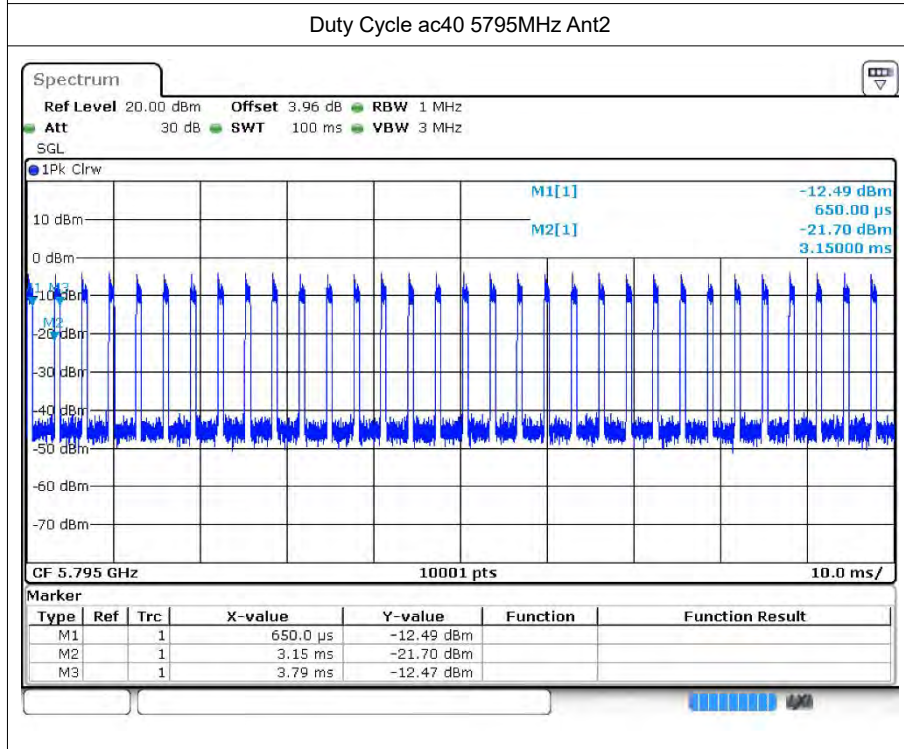
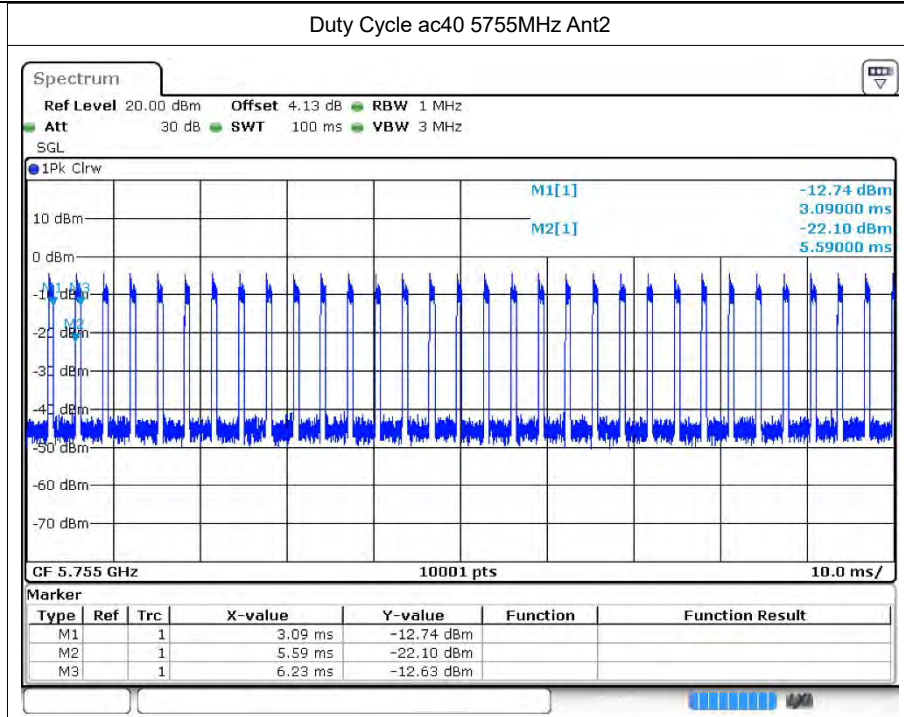


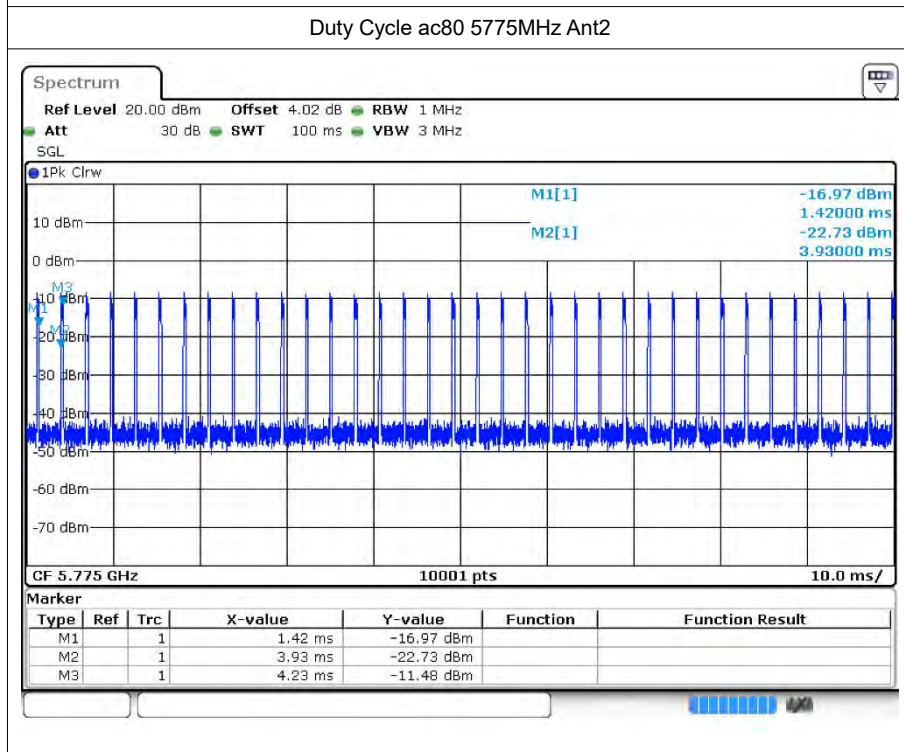
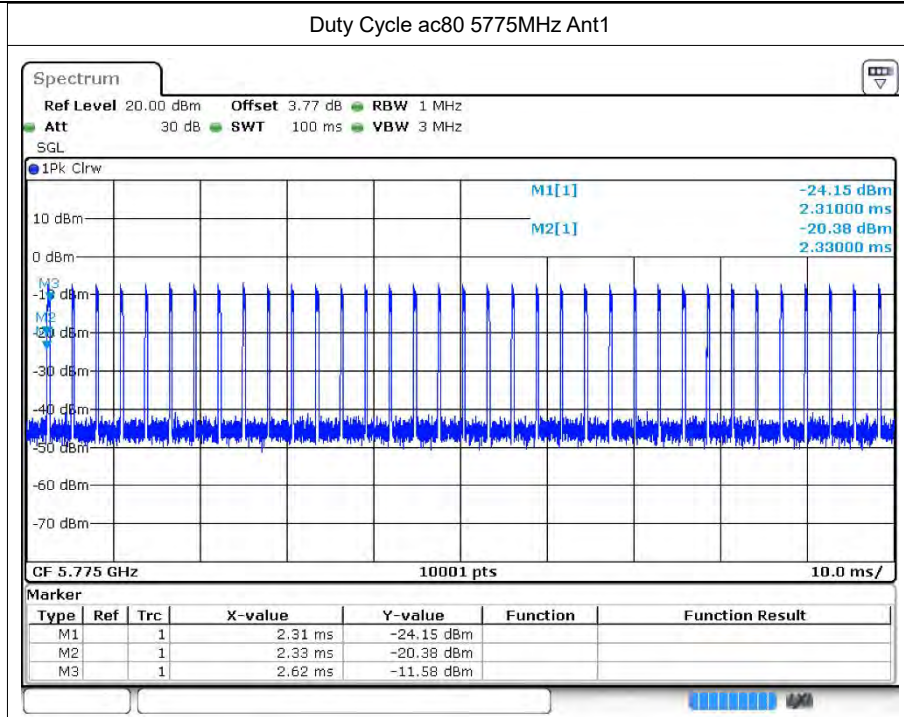


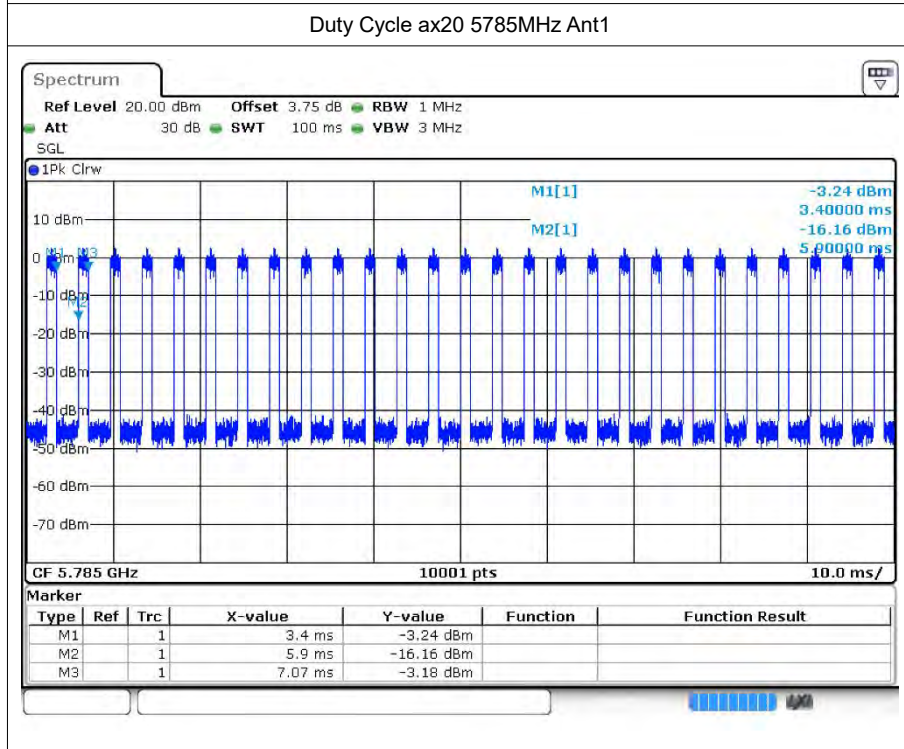
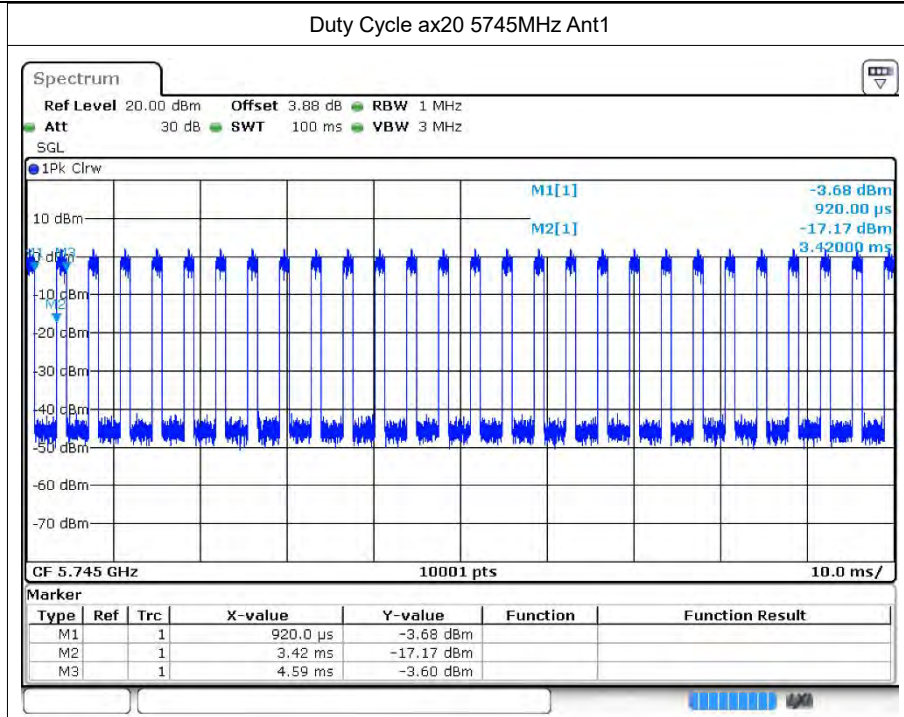


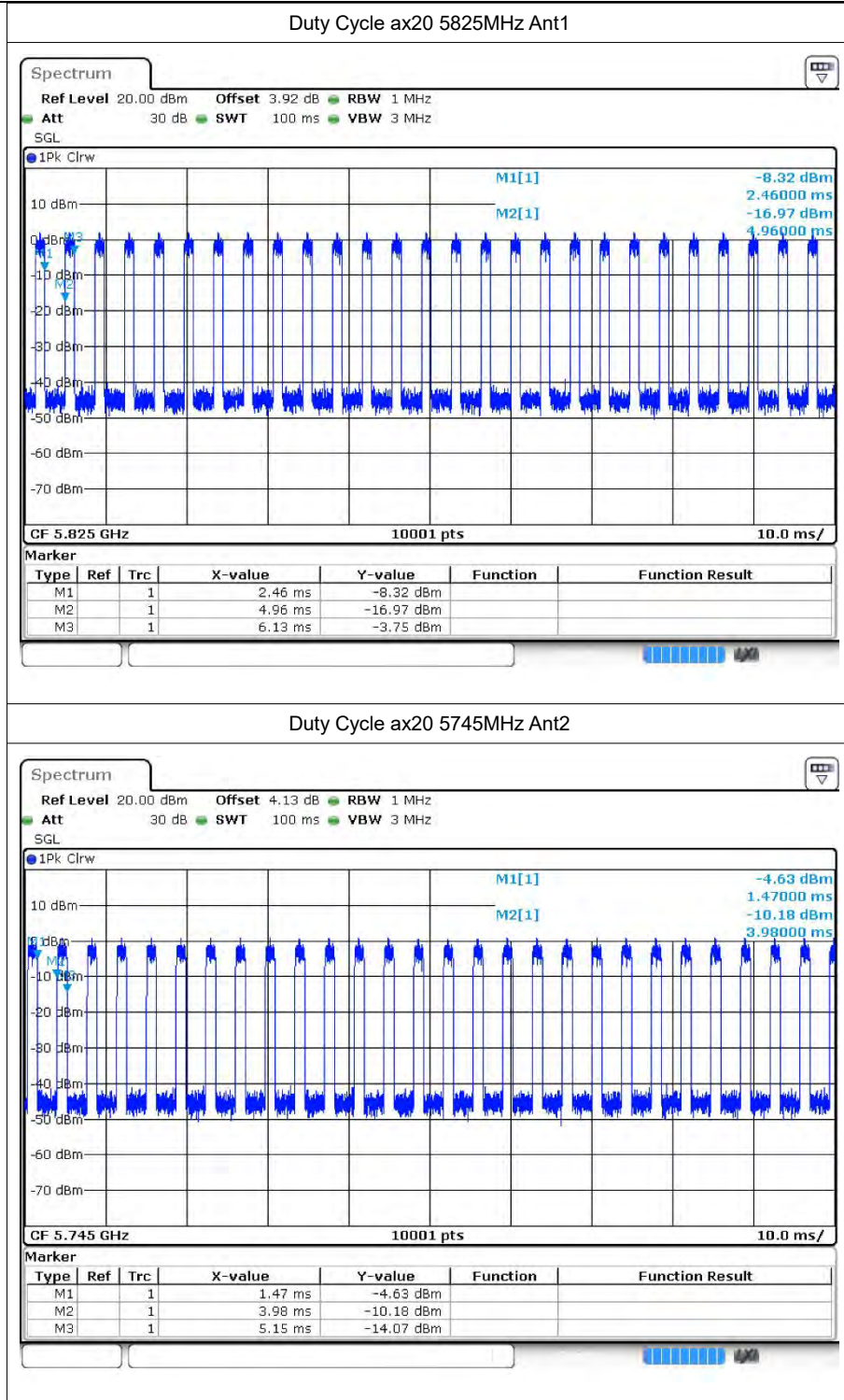


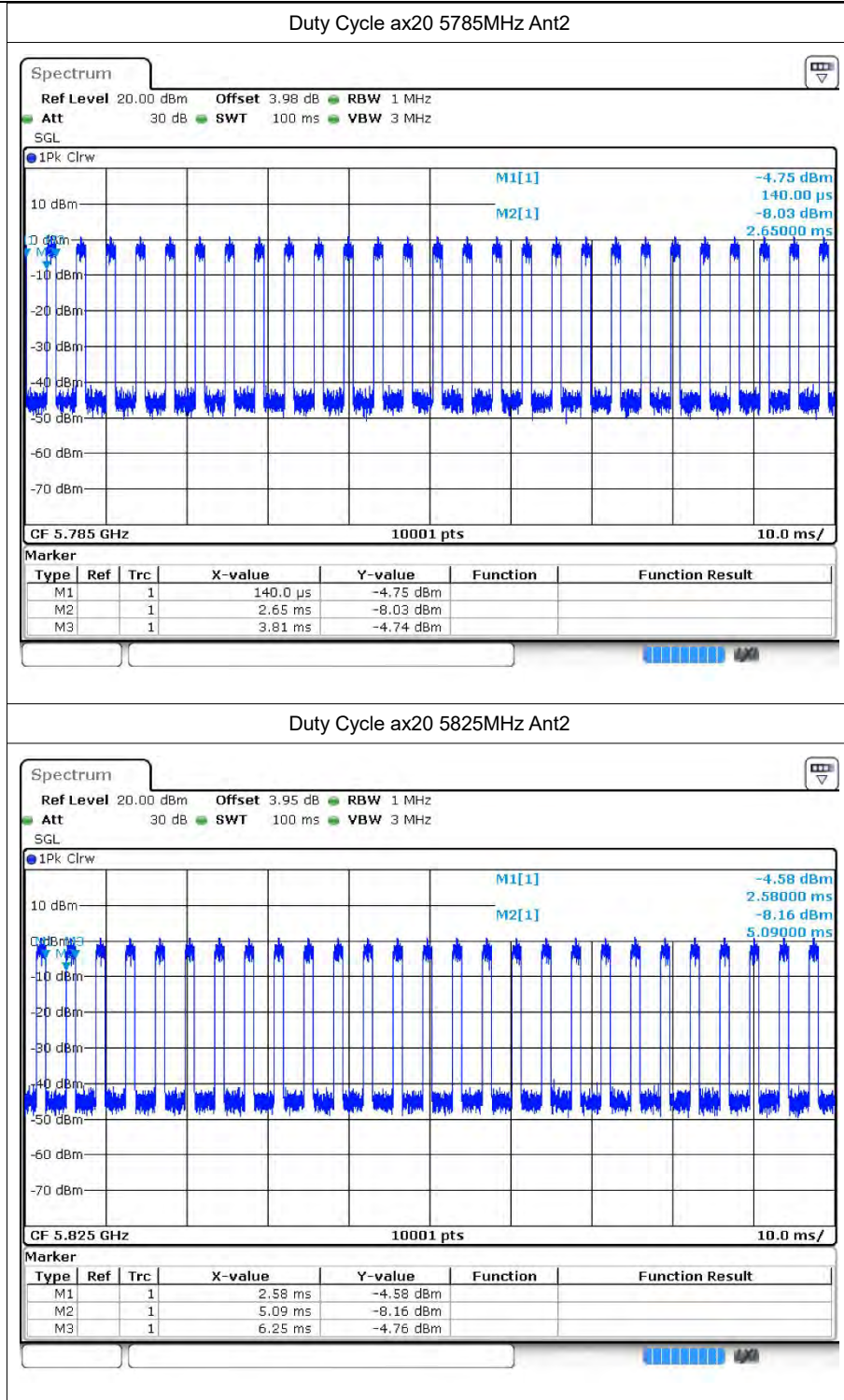


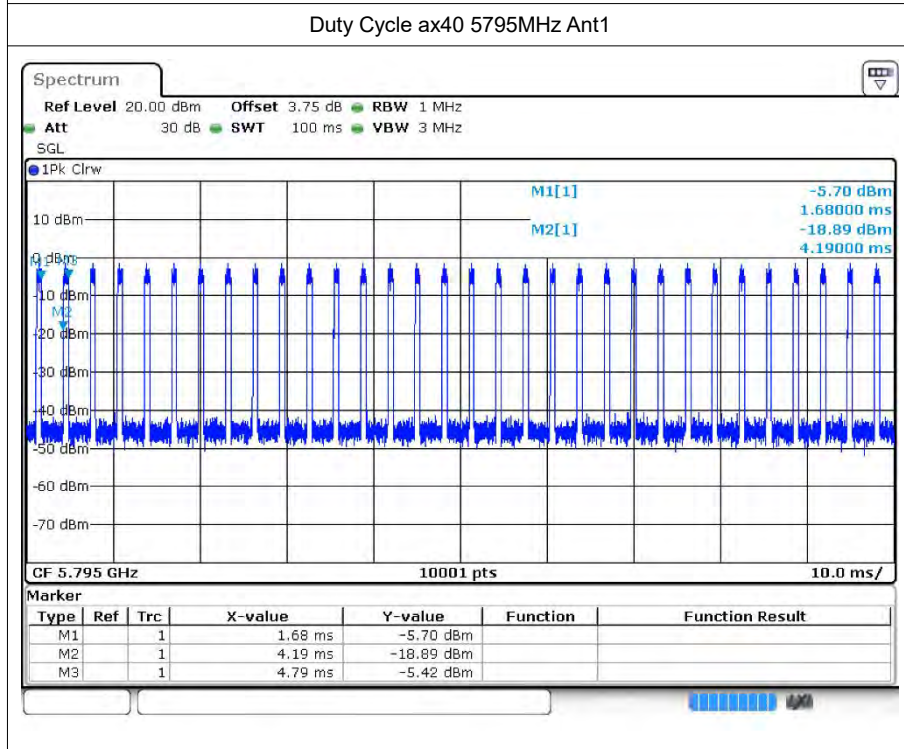
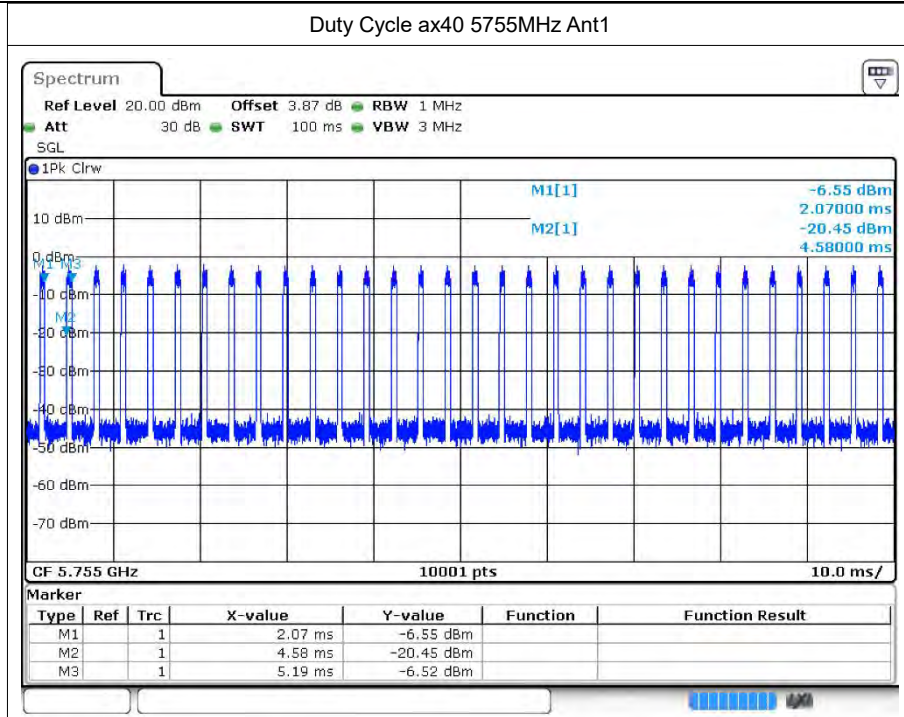


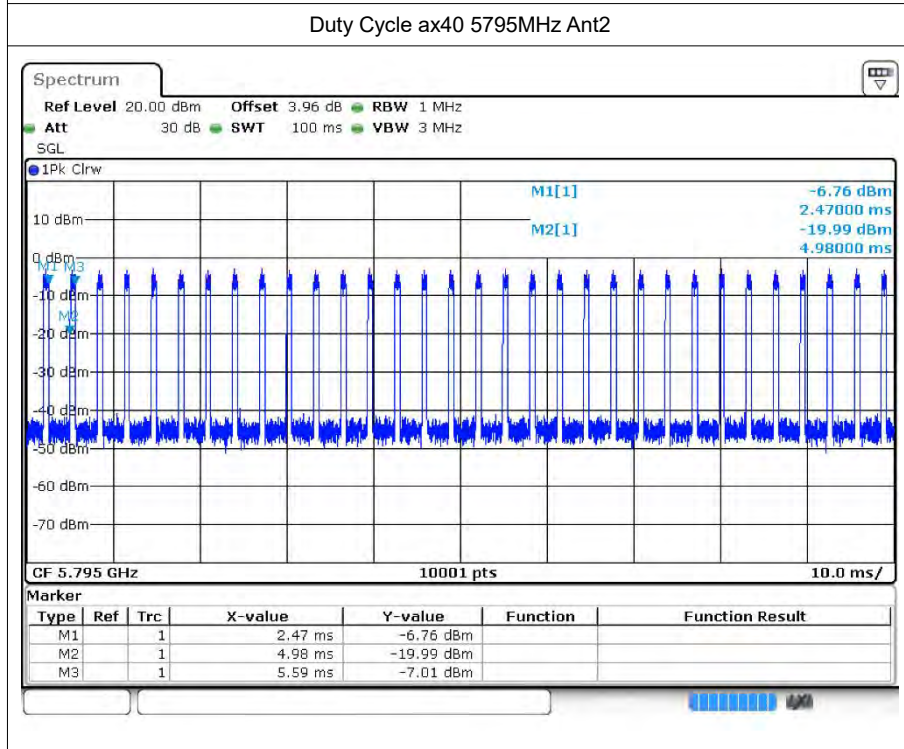
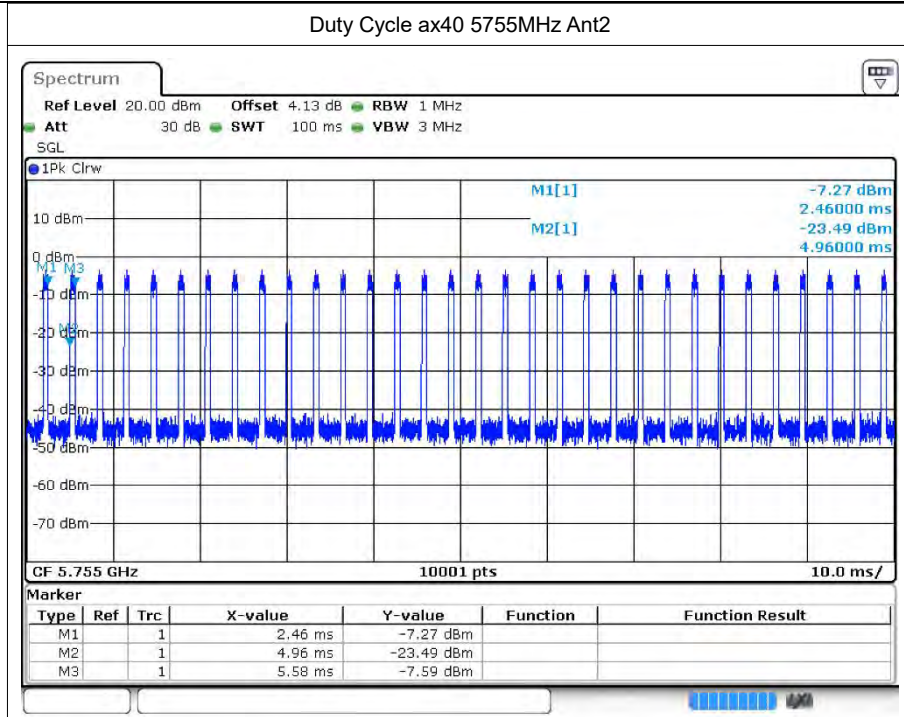












2 Maximum Conducted Output Power

2.1 Test Result

Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
a	5745	Ant1	11.84	30	Pass
a	5785	Ant1	11.92	30	Pass
a	5825	Ant1	11.69	30	Pass
a	5745	Ant2	10.13	30	Pass
a	5785	Ant2	9.4	30	Pass
a	5825	Ant2	10.42	30	Pass
n20	5745	Ant1	8.65	30	Pass
n20	5745	Ant2	7.67	30	Pass
n20	5745	Sum	11.20	27.07	Pass
n20	5785	Ant1	8.74	30	Pass
n20	5785	Ant2	6.9	30	Pass
n20	5785	Sum	10.93	27.07	Pass
n20	5825	Ant1	8.95	30	Pass
n20	5825	Ant2	7.91	30	Pass
n20	5825	Sum	11.47	27.07	Pass
n40	5755	Ant1	8.54	30	Pass
n40	5755	Ant2	7.28	30	Pass
n40	5755	Sum	10.97	27.07	Pass
n40	5795	Ant1	9.15	30	Pass
n40	5795	Ant2	7.57	30	Pass
n40	5795	Sum	11.44	27.07	Pass
ac20	5745	Ant1	8.41	30	Pass
ac20	5745	Ant2	7.84	30	Pass
ac20	5745	Sum	11.14	27.07	Pass
ac20	5785	Ant1	9.05	30	Pass
ac20	5785	Ant2	7.31	30	Pass
ac20	5785	Sum	11.28	27.07	Pass
ac20	5825	Ant1	9.2	30	Pass
ac20	5825	Ant2	7.88	30	Pass
ac20	5825	Sum	11.60	27.07	Pass
ac40	5755	Ant1	8.22	30	Pass
ac40	5755	Ant2	7.52	30	Pass
ac40	5755	Sum	10.89	27.07	Pass
ac40	5795	Ant1	8.98	30	Pass
ac40	5795	Ant2	7.5	30	Pass
ac40	5795	Sum	11.31	27.07	Pass



ac80	5775	Ant1	7.12	30	Pass
ac80	5775	Ant2	7	30	Pass
ac80	5775	Sum	10.07	27.07	Pass
ax20	5745	Ant1	8.62	30	Pass
ax20	5745	Ant2	7.35	30	Pass
ax20	5745	Sum	11.04	27.07	Pass
ax20	5785	Ant1	9.2	30	Pass
ax20	5785	Ant2	7.05	30	Pass
ax20	5785	Sum	11.27	27.07	Pass
ax20	5825	Ant1	8.78	30	Pass
ax20	5825	Ant2	7.45	30	Pass
ax20	5825	Sum	11.18	27.07	Pass
ax40	5755	Ant1	8.48	30	Pass
ax40	5755	Ant2	7.54	30	Pass
ax40	5755	Sum	11.05	27.07	Pass
ax40	5795	Ant1	9.14	30	Pass
ax40	5795	Ant2	7.92	30	Pass
ax40	5795	Sum	11.58	27.07	Pass
ax80	5775	Ant1	7.23	30	Pass
ax80	5775	Ant2	7.51	30	Pass
ax80	5775	Sum	10.38	27.07	Pass

Note:

The duty factor has been compensated into the result.

For MIMO mode:

$$\text{Directional gain} = 10 \log[(10^{G1/20} + 10^{G2/20})^2 / 2] = 8.93 \text{ dBi}$$

$$\text{Limit} = 30 - (8.93 - 6) = 27.07 \text{ dBm for POWER}$$

3 -6dB Bandwidth

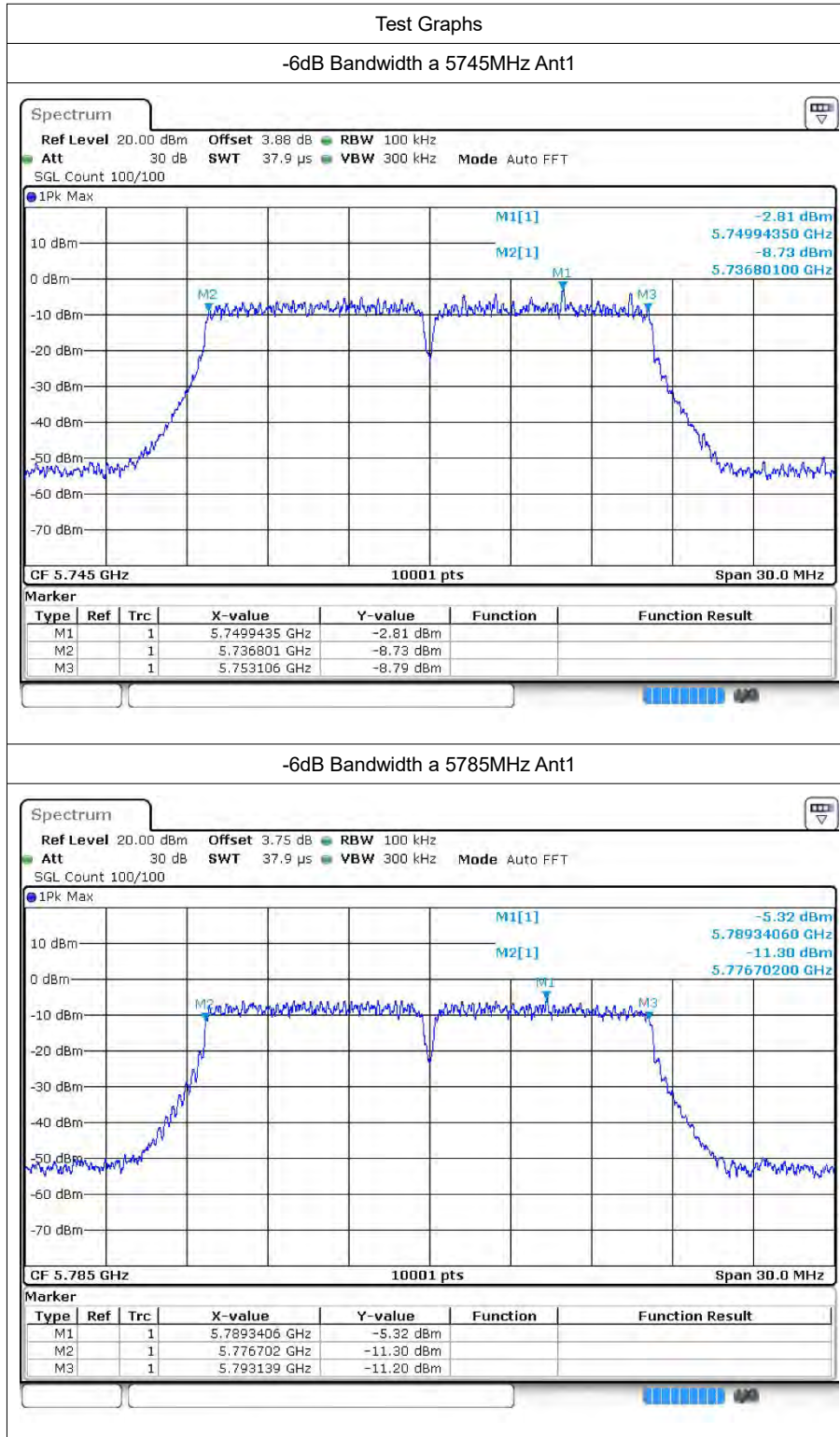
3.1 Test Result

Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
a	5745	Ant1	16.305	0.5	Pass
a	5785	Ant1	16.437	0.5	Pass
a	5825	Ant1	16.059	0.5	Pass
n20	5745	Ant1	17.562	0.5	Pass
n20	5785	Ant1	16.026	0.5	Pass
n20	5825	Ant1	17.598	0.5	Pass
n40	5755	Ant1	36.348	0.5	Pass
n40	5795	Ant1	32.172	0.5	Pass
ac20	5745	Ant1	16.8	0.5	Pass
ac20	5785	Ant1	17.541	0.5	Pass
ac20	5825	Ant1	17.574	0.5	Pass
ac40	5755	Ant1	36.342	0.5	Pass
ac40	5795	Ant1	36.336	0.5	Pass
ac80	5775	Ant1	66.276	0.5	Pass
ax20	5745	Ant1	19.053	0.5	Pass
ax20	5785	Ant1	17.49	0.5	Pass
ax20	5825	Ant1	18.891	0.5	Pass
ax40	5755	Ant1	38.07	0.5	Pass
ax40	5795	Ant1	37.95	0.5	Pass
ax80	5775	Ant1	74.568	0.5	Pass
a	5745	Ant2	16.449	0.5	Pass
a	5785	Ant2	16.332	0.5	Pass
a	5825	Ant2	16.506	0.5	Pass
n20	5745	Ant2	17.628	0.5	Pass
n20	5785	Ant2	17.634	0.5	Pass
n20	5825	Ant2	17.535	0.5	Pass
n40	5755	Ant2	35.718	0.5	Pass
n40	5795	Ant2	36.318	0.5	Pass
ac20	5745	Ant2	16.542	0.5	Pass
ac20	5785	Ant2	17.631	0.5	Pass
ac20	5825	Ant2	17.583	0.5	Pass
ac40	5755	Ant2	35.688	0.5	Pass
ac40	5795	Ant2	36.33	0.5	Pass
ac80	5775	Ant2	75.348	0.5	Pass
ax20	5745	Ant2	18.999	0.5	Pass
ax20	5785	Ant2	18.687	0.5	Pass

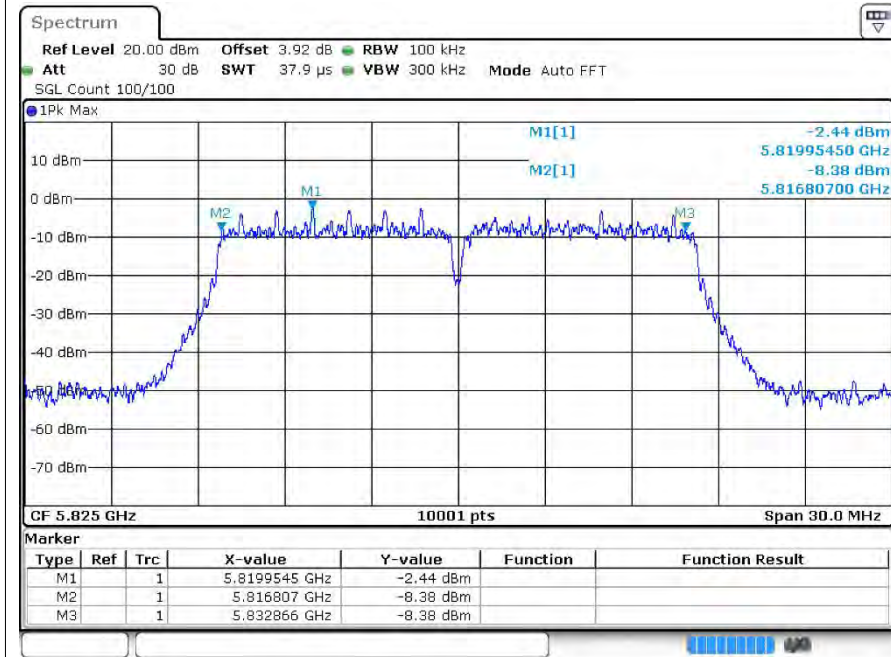


ax20	5825	Ant2	18.024	0.5	Pass
ax40	5755	Ant2	37.608	0.5	Pass
ax40	5795	Ant2	38.058	0.5	Pass
ax80	5775	Ant2	73.248	0.5	Pass

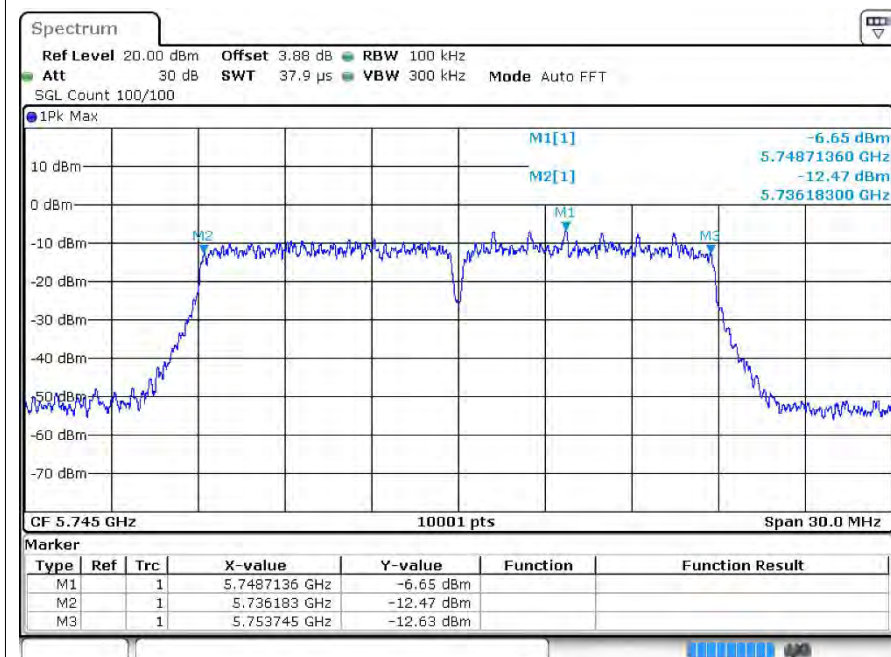
3.2 Test Graphs



-6dB Bandwidth a 5825MHz Ant1

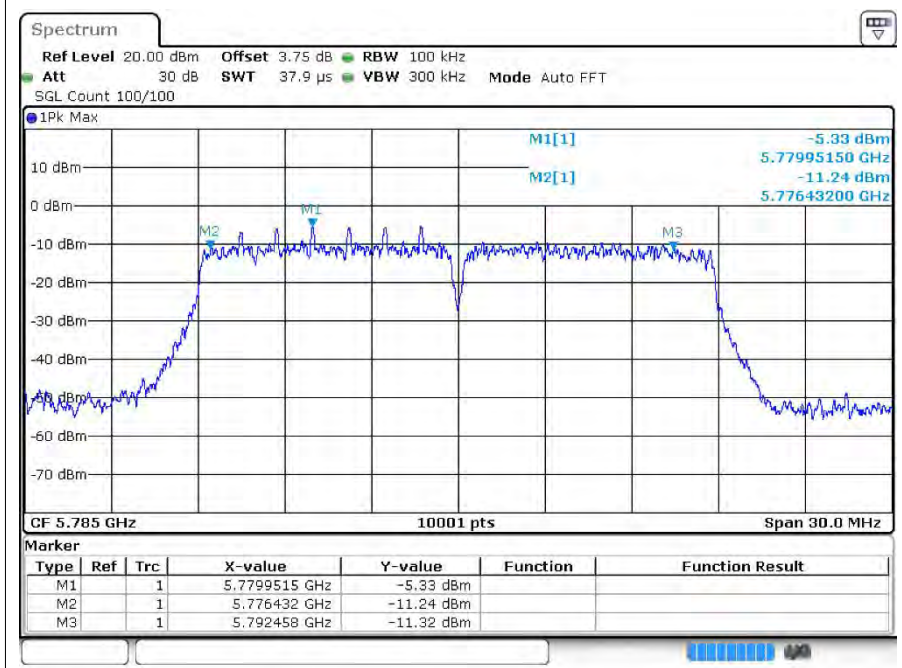


-6dB Bandwidth n20 5745MHz Ant1

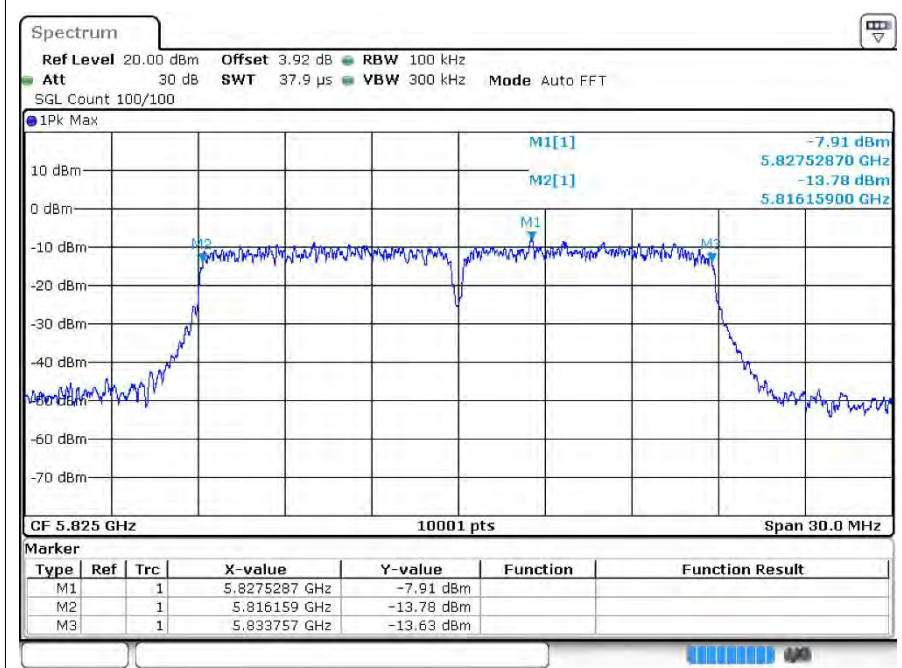




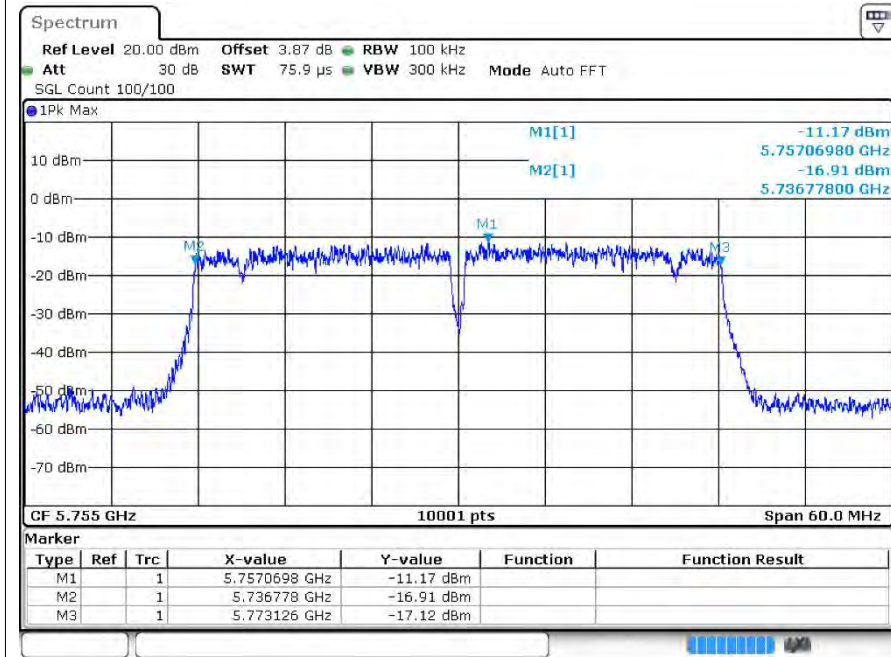
-6dB Bandwidth n20 5785MHz Ant1



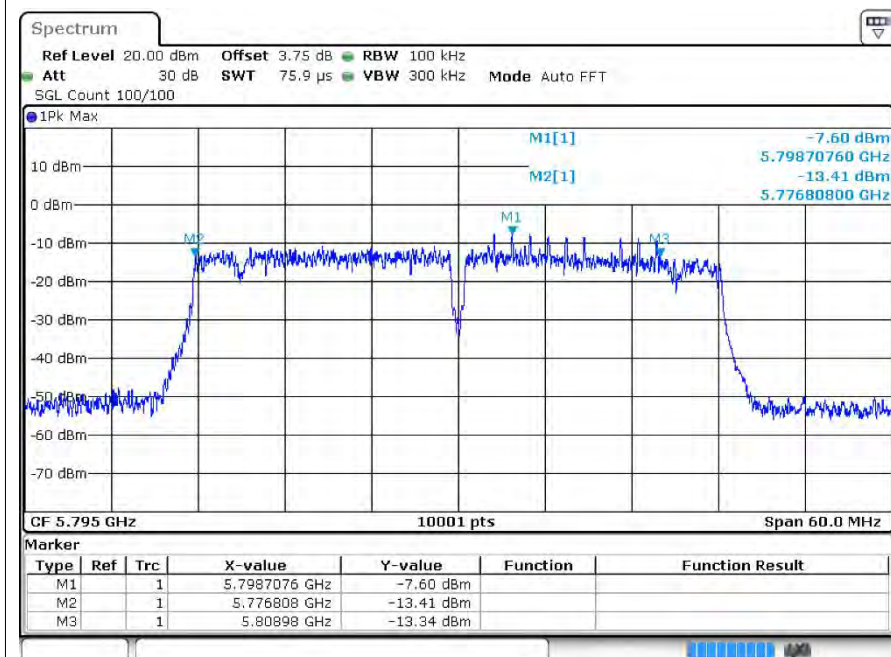
-6dB Bandwidth n20 5825MHz Ant1



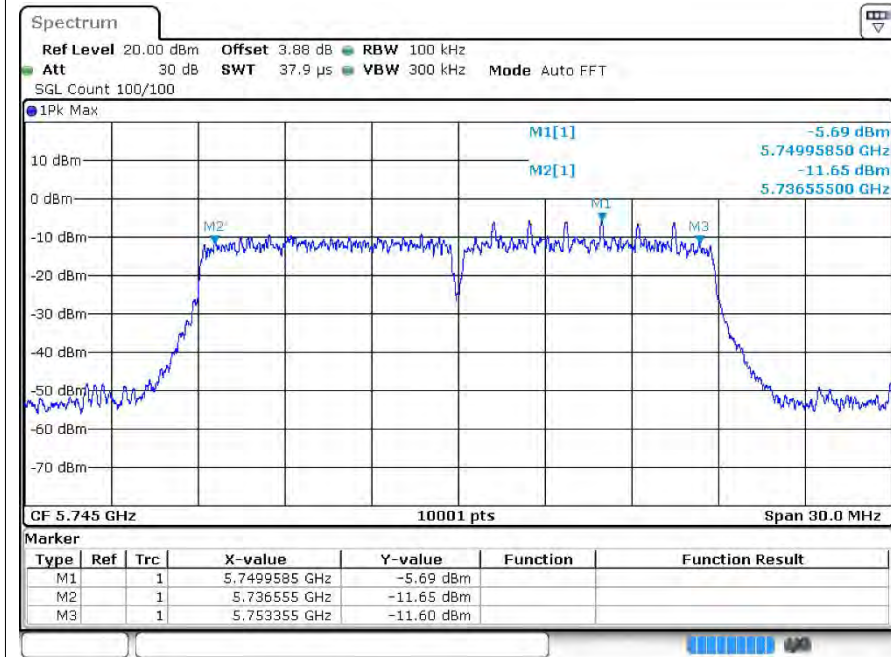
-6dB Bandwidth n40 5755MHz Ant1



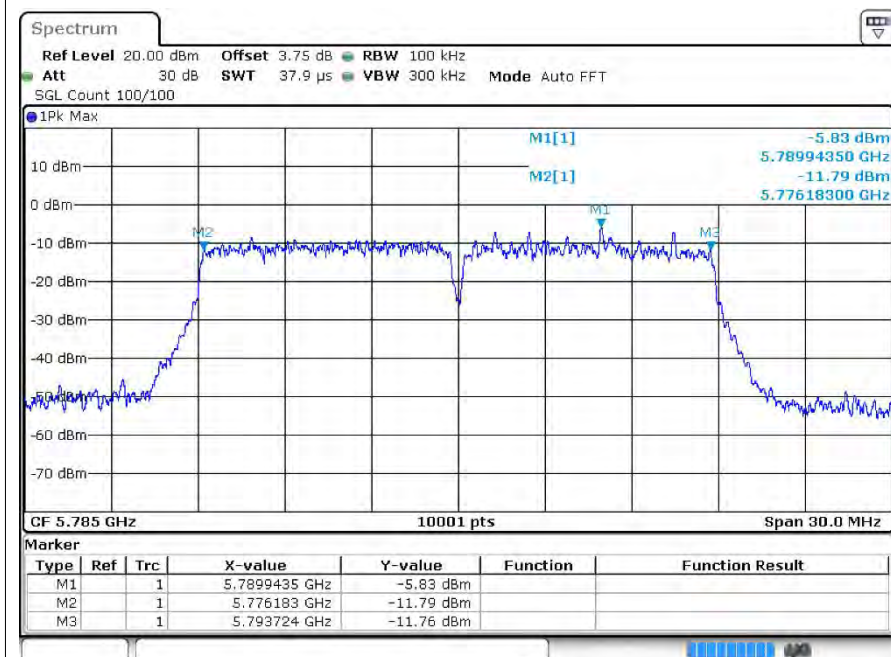
-6dB Bandwidth n40 5795MHz Ant1



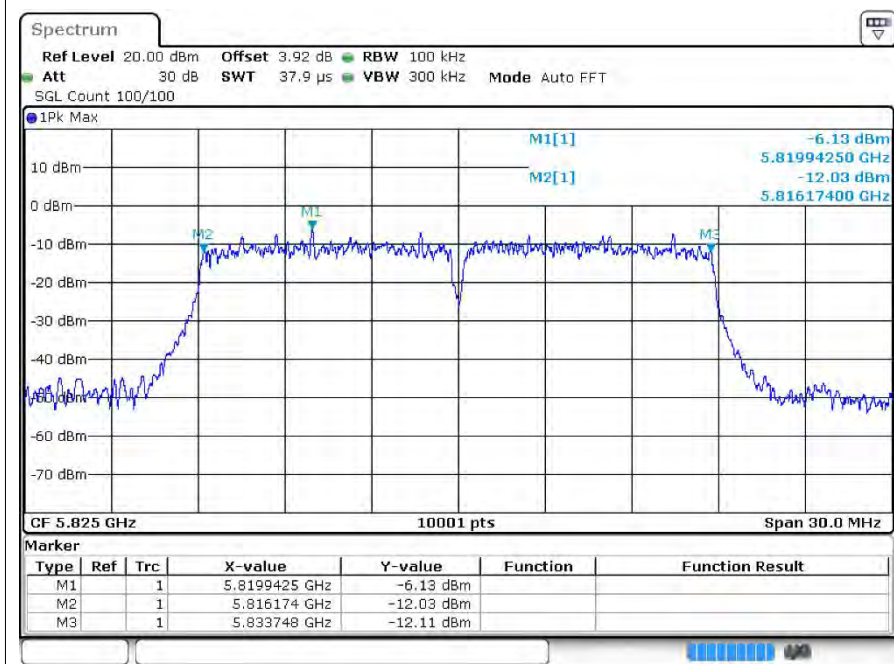
-6dB Bandwidth ac20 5745MHz Ant1



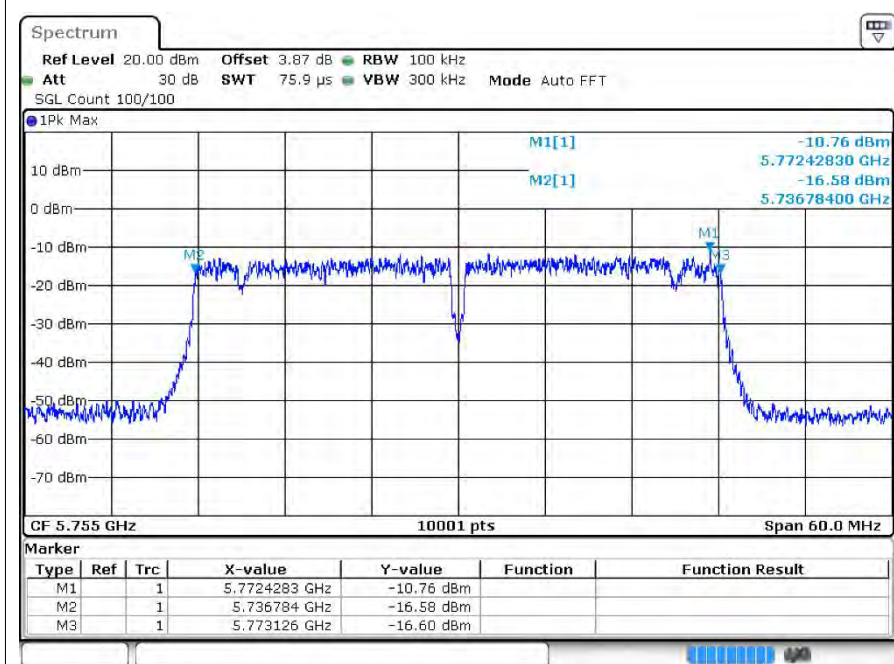
-6dB Bandwidth ac20 5785MHz Ant1



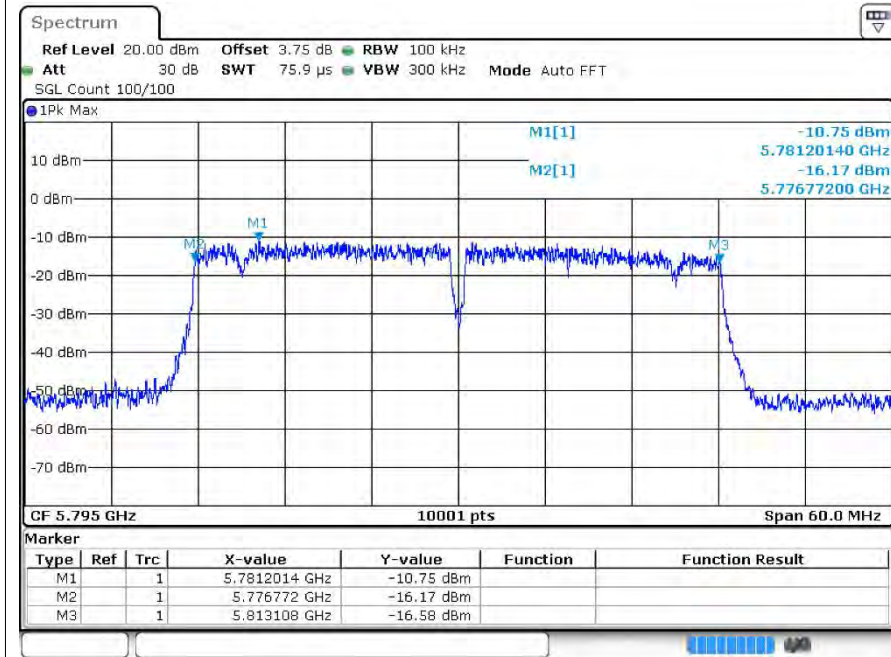
-6dB Bandwidth ac20 5825MHz Ant1



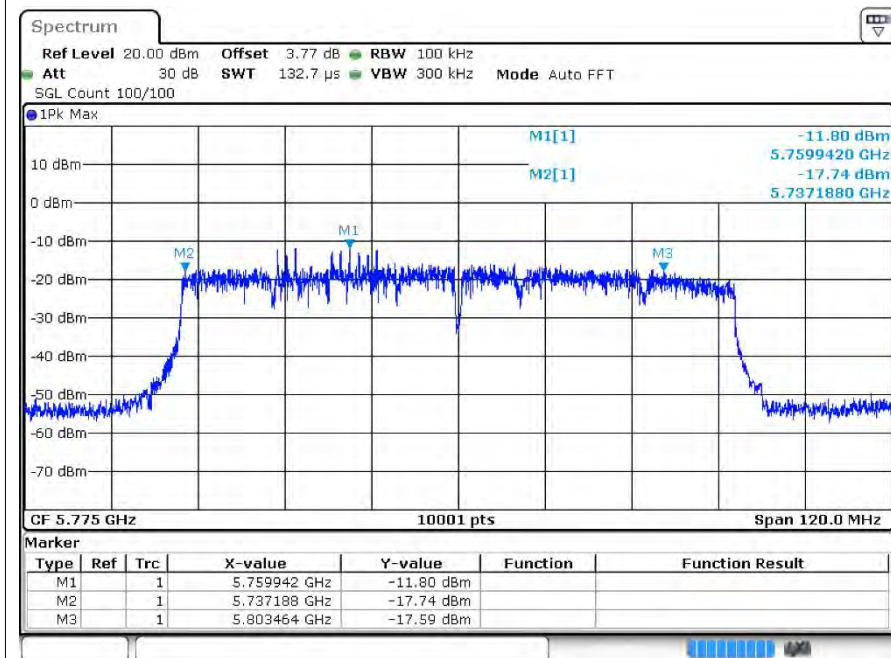
-6dB Bandwidth ac40 5755MHz Ant1



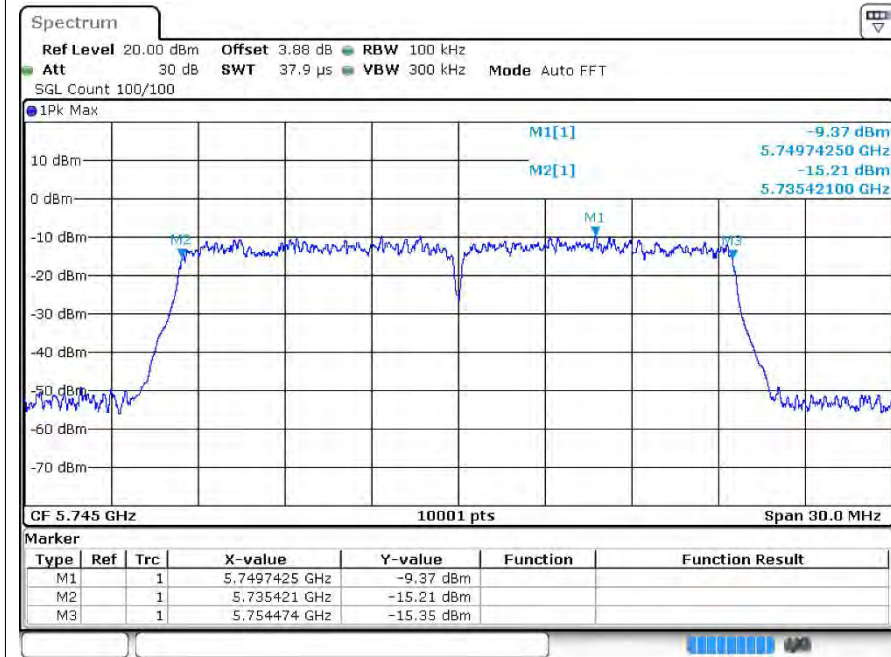
-6dB Bandwidth ac40 5795MHz Ant1



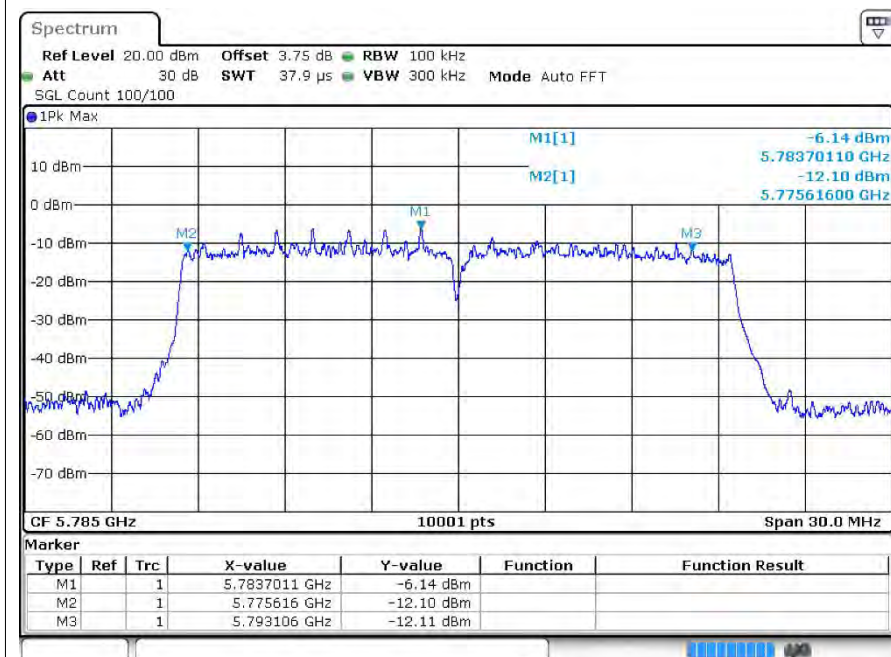
-6dB Bandwidth ac80 5775MHz Ant1



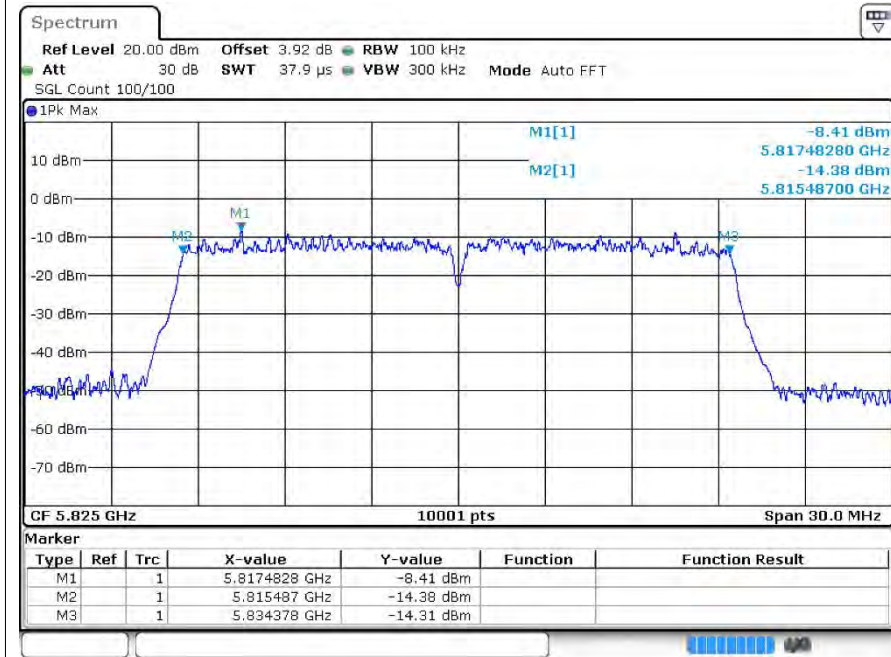
-6dB Bandwidth ax20 5745MHz Ant1



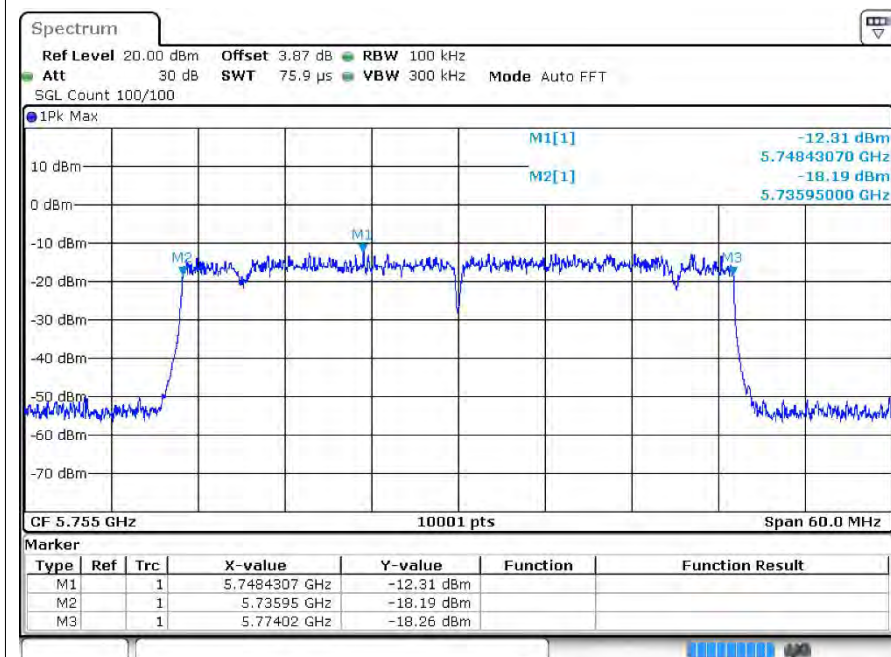
-6dB Bandwidth ax20 5785MHz Ant1



-6dB Bandwidth ax20 5825MHz Ant1

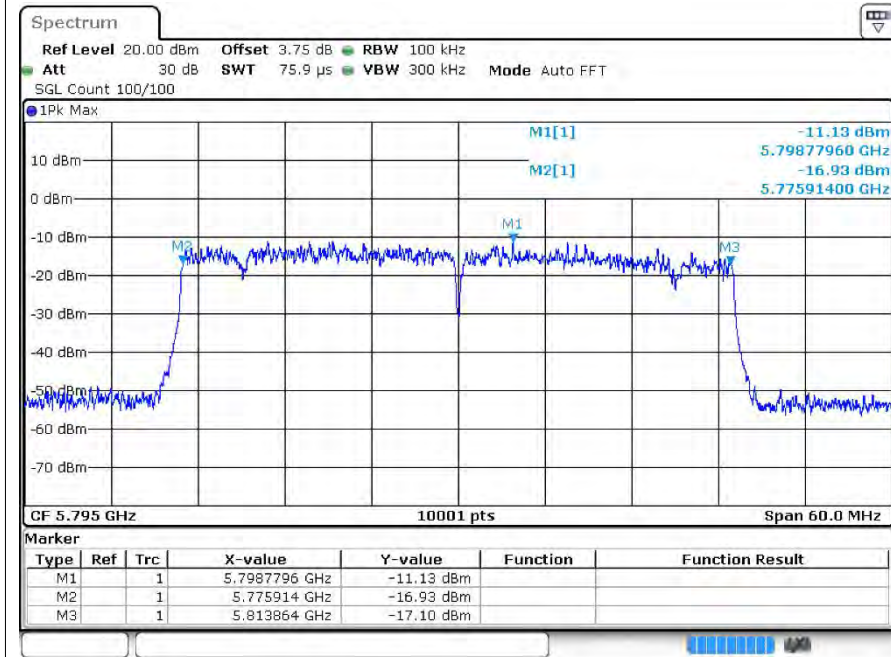


-6dB Bandwidth ax40 5755MHz Ant1

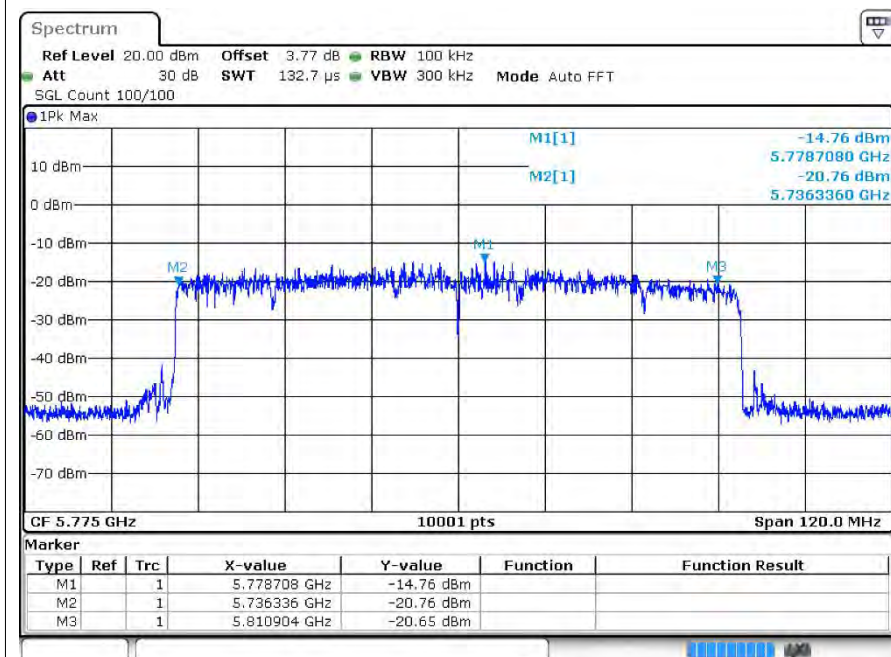




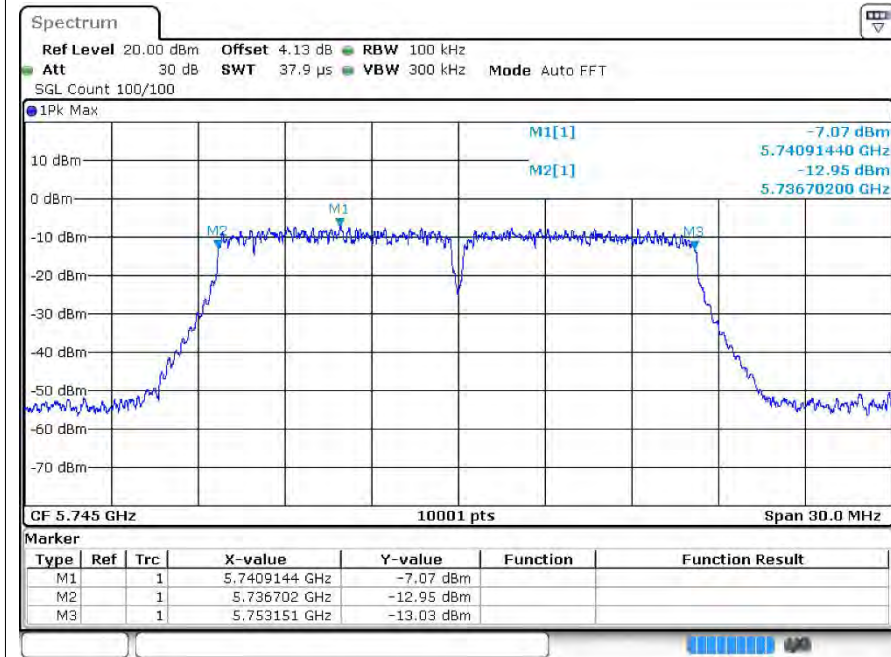
-6dB Bandwidth ax40 5795MHz Ant1



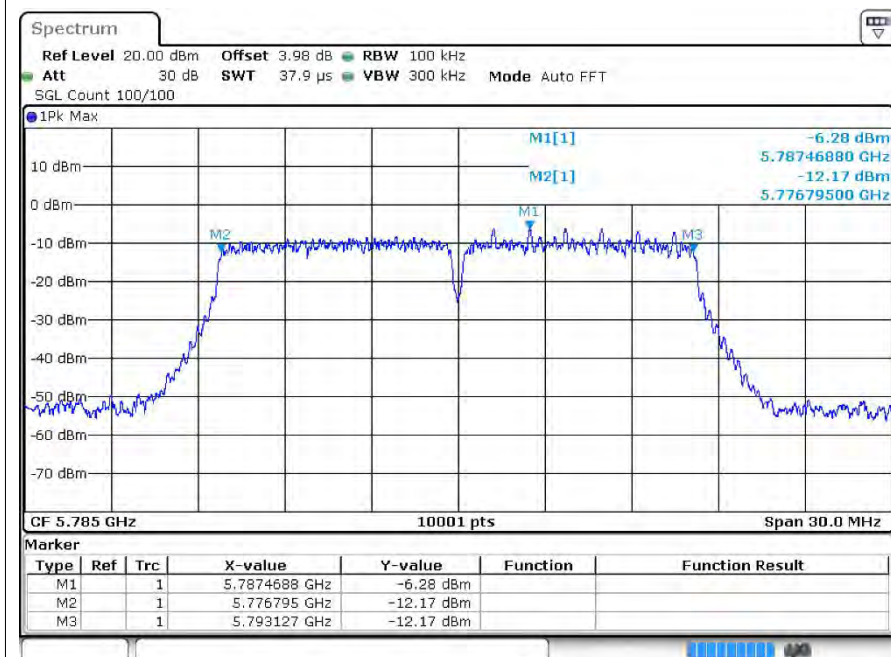
-6dB Bandwidth ax80 5775MHz Ant1



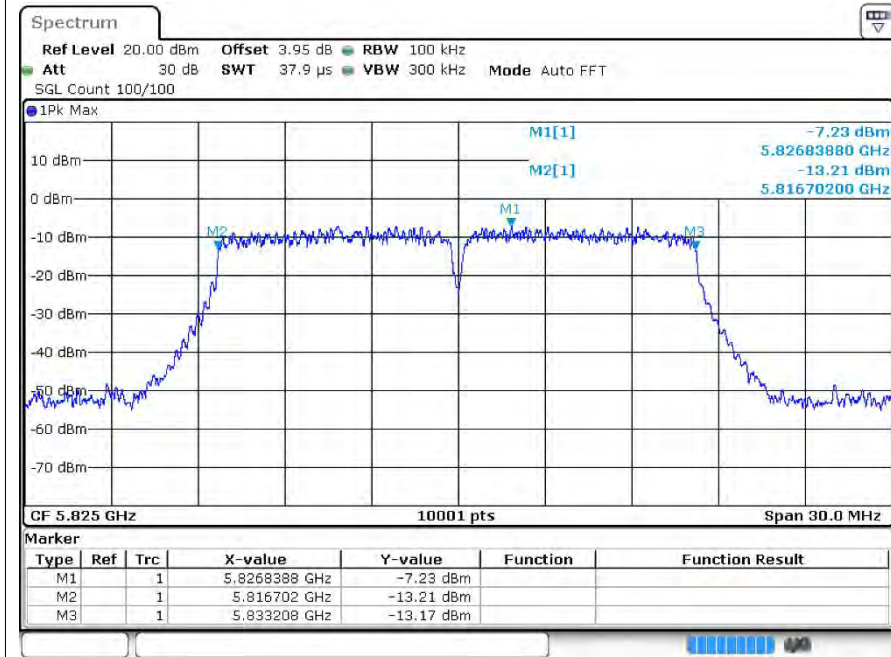
-6dB Bandwidth a 5745MHz Ant2



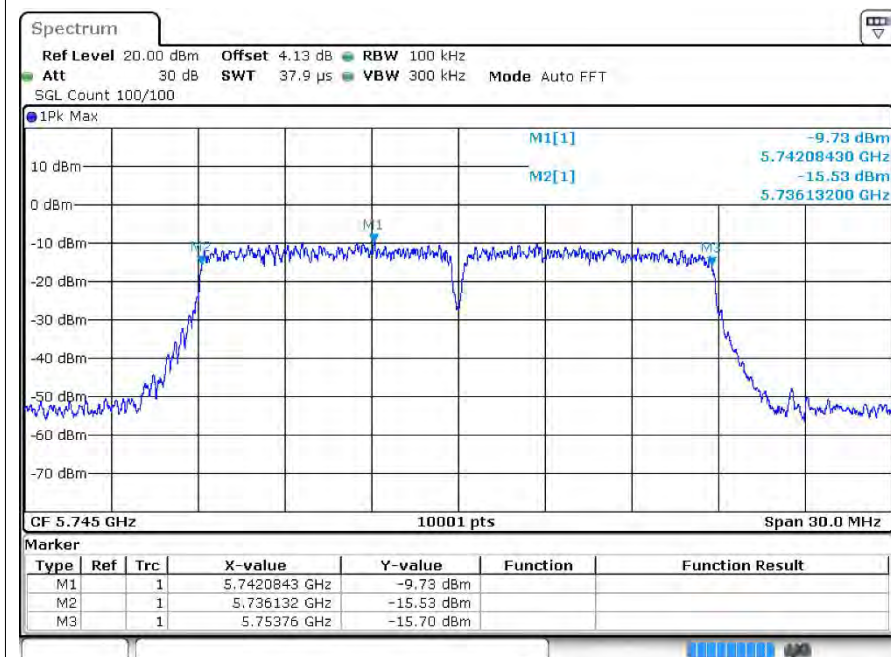
-6dB Bandwidth a 5785MHz Ant2



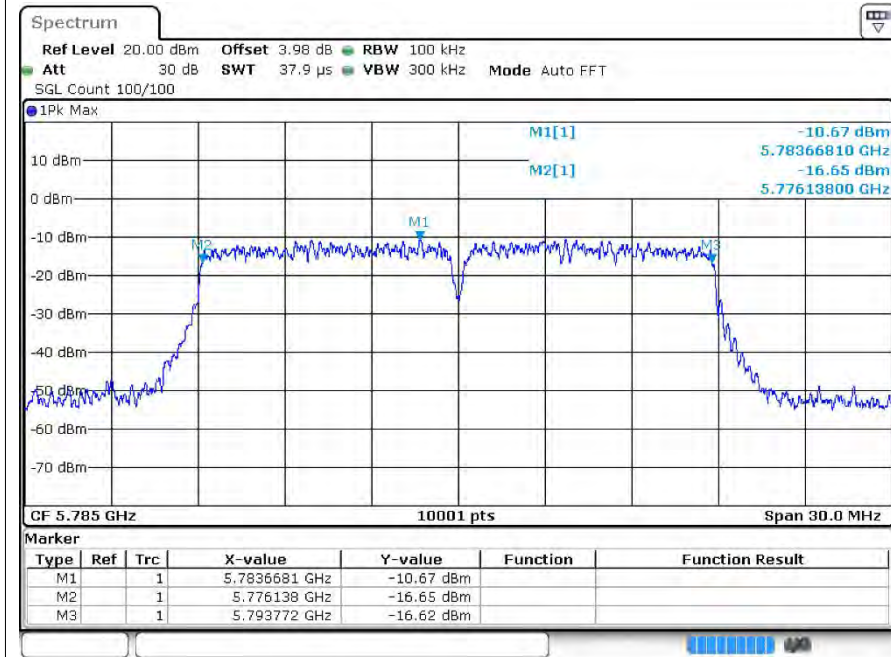
-6dB Bandwidth a 5825MHz Ant2



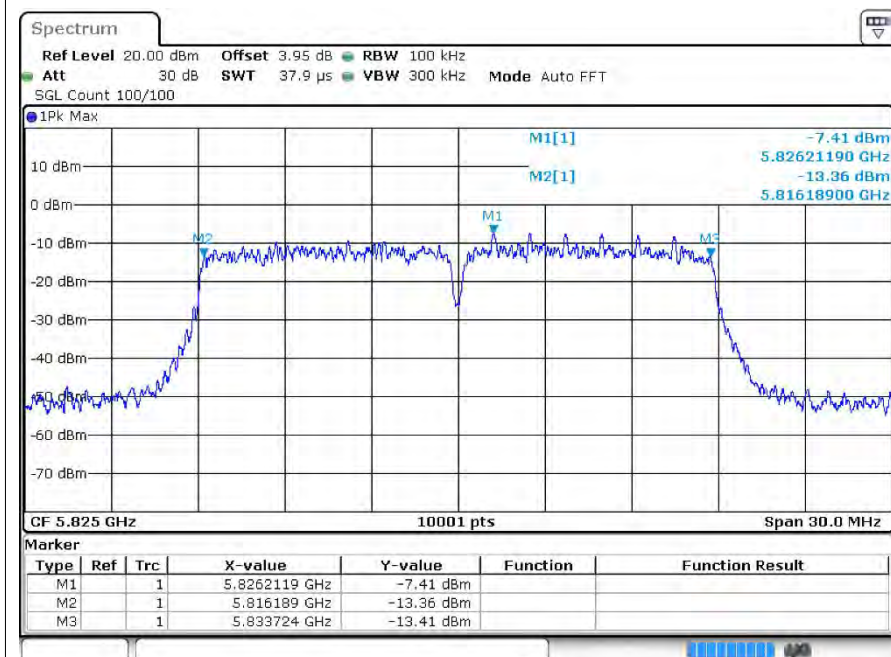
-6dB Bandwidth n20 5745MHz Ant2



-6dB Bandwidth n20 5785MHz Ant2

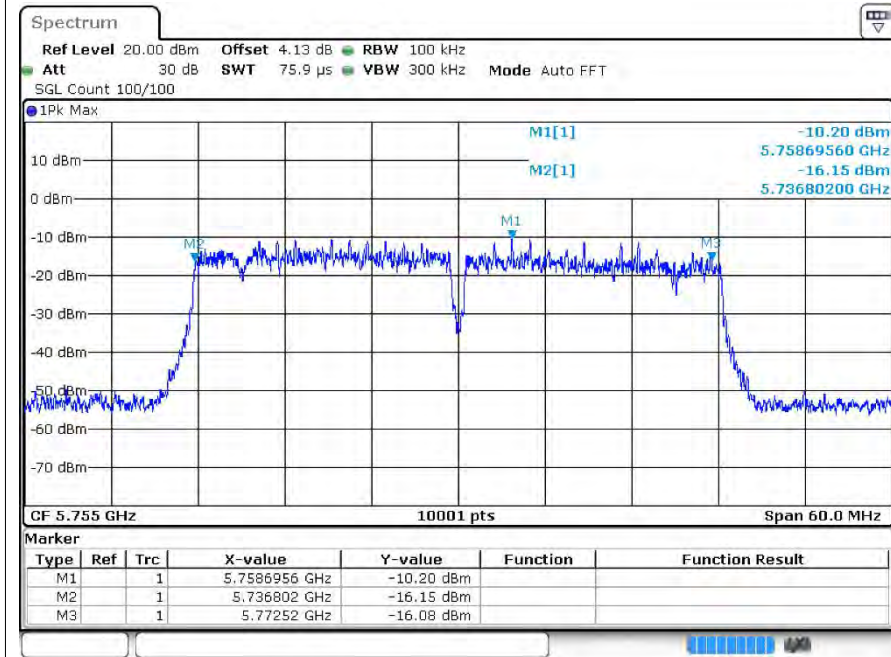


-6dB Bandwidth n20 5825MHz Ant2

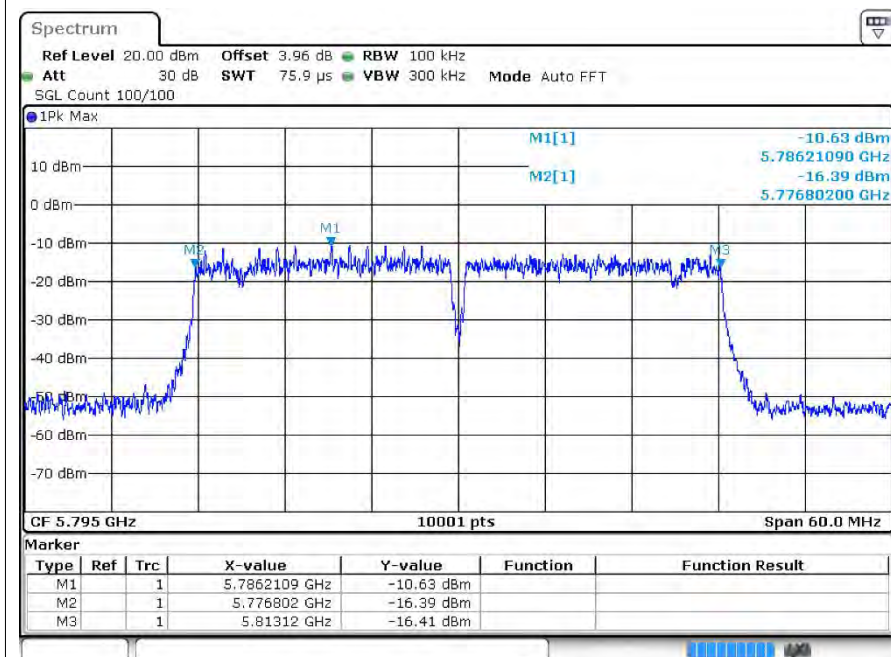




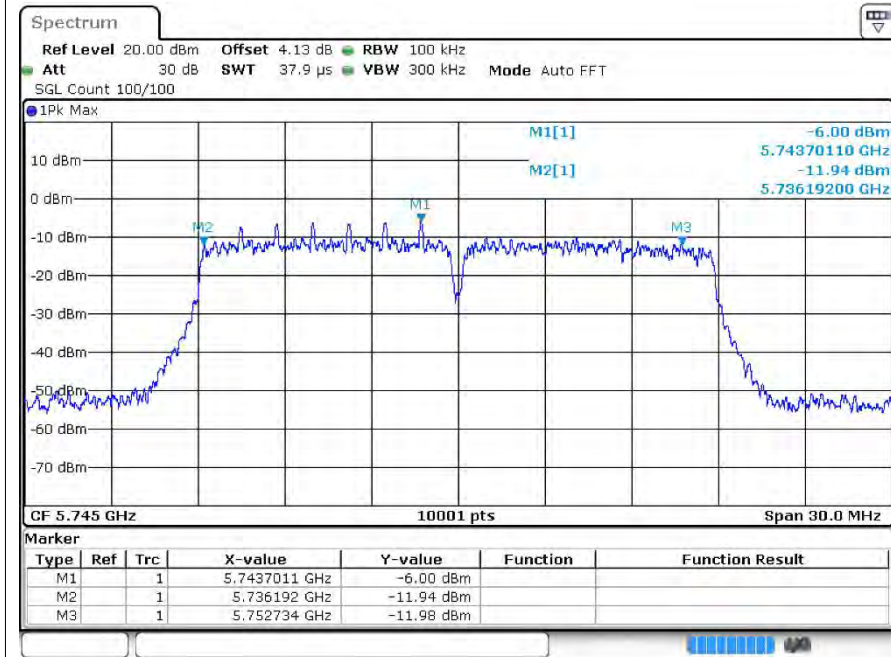
-6dB Bandwidth n40 5755MHz Ant2



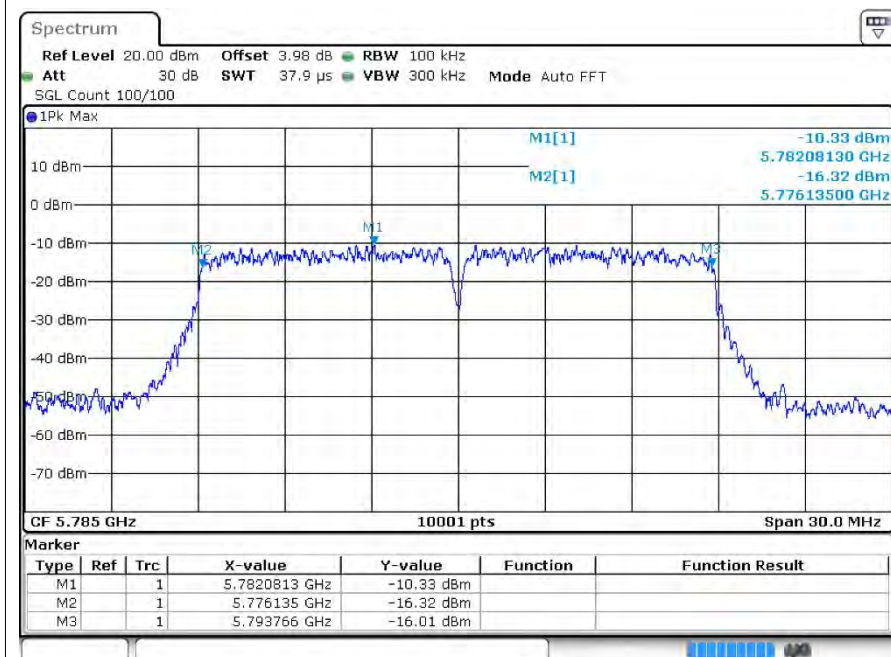
-6dB Bandwidth n40 5795MHz Ant2



-6dB Bandwidth ac20 5745MHz Ant2

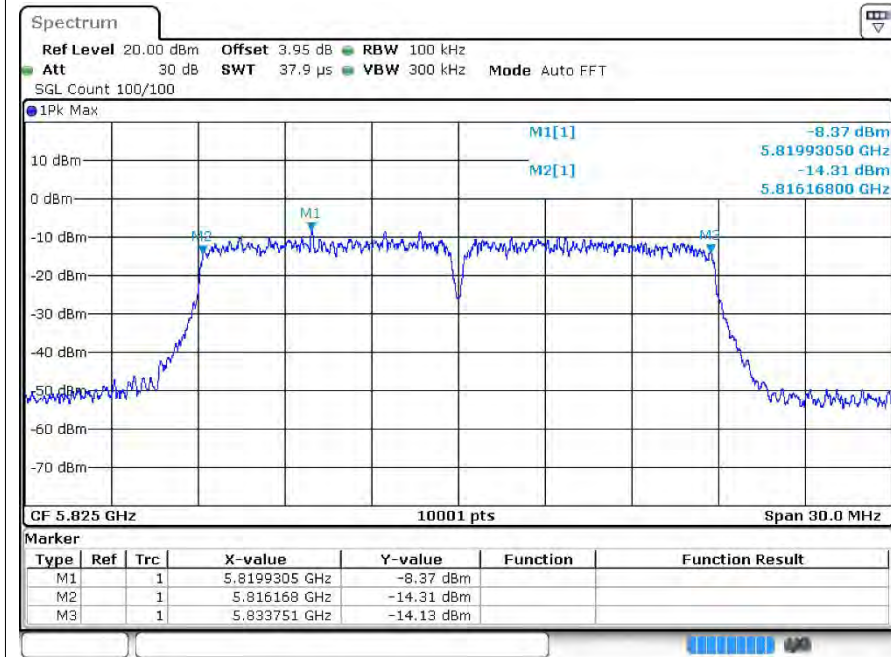


-6dB Bandwidth ac20 5785MHz Ant2

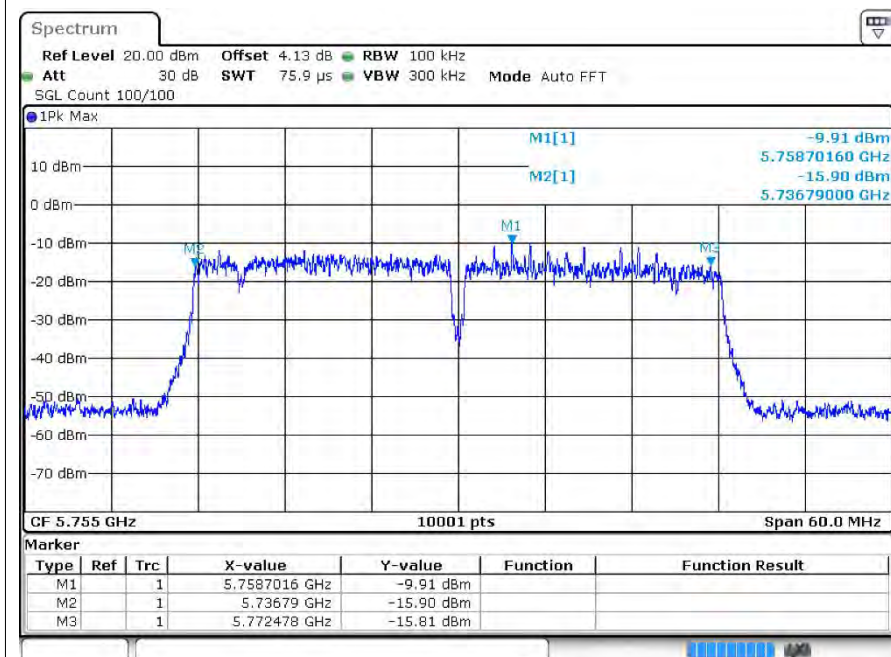




-6dB Bandwidth ac20 5825MHz Ant2

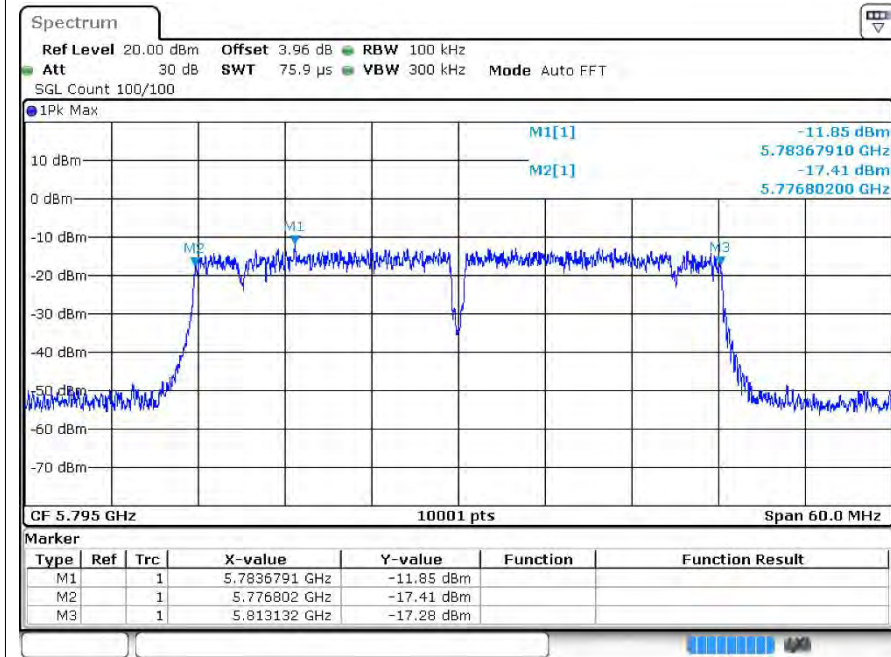


-6dB Bandwidth ac40 5755MHz Ant2

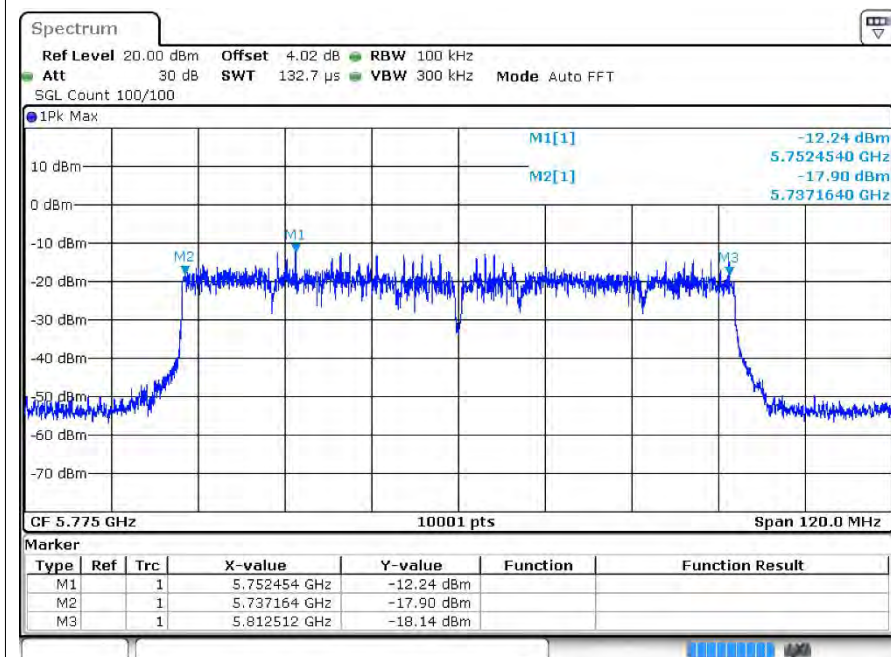




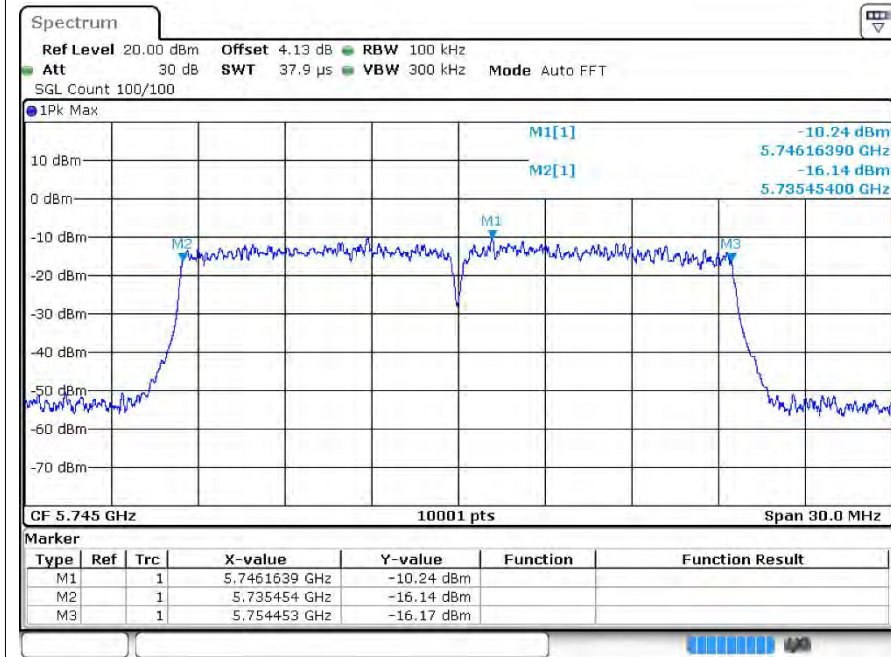
-6dB Bandwidth ac40 5795MHz Ant2



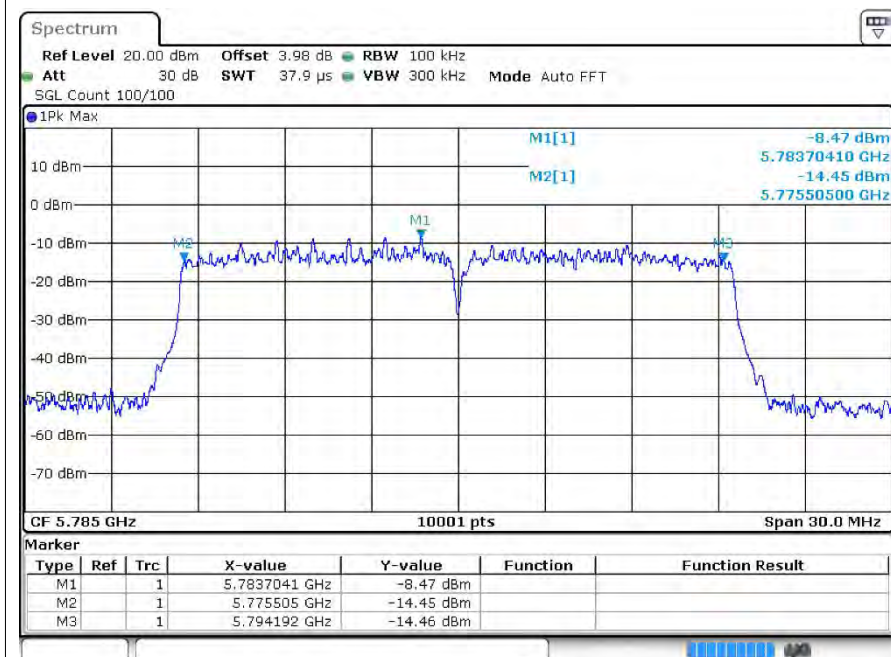
-6dB Bandwidth ac80 5775MHz Ant2



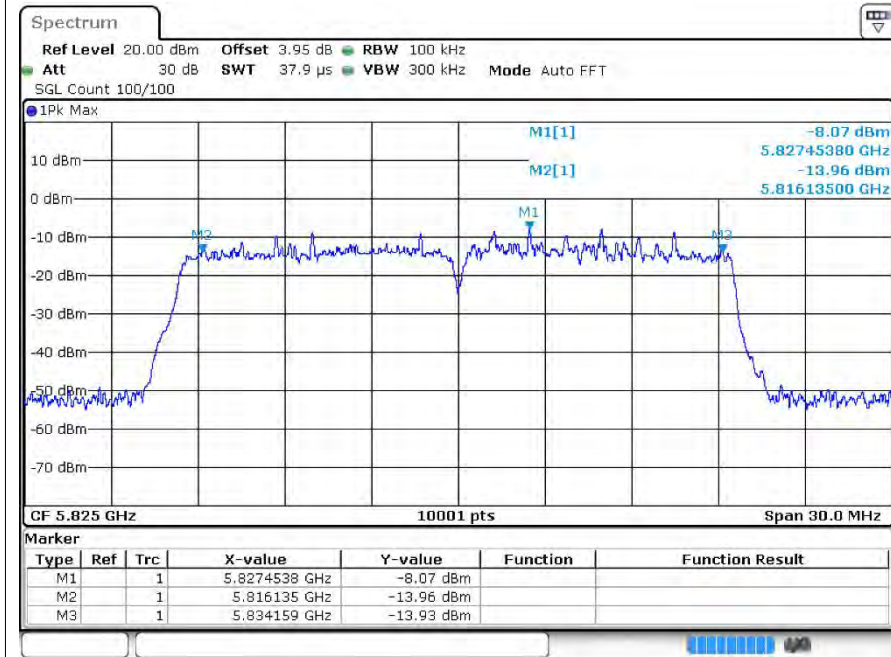
-6dB Bandwidth ax20 5745MHz Ant2



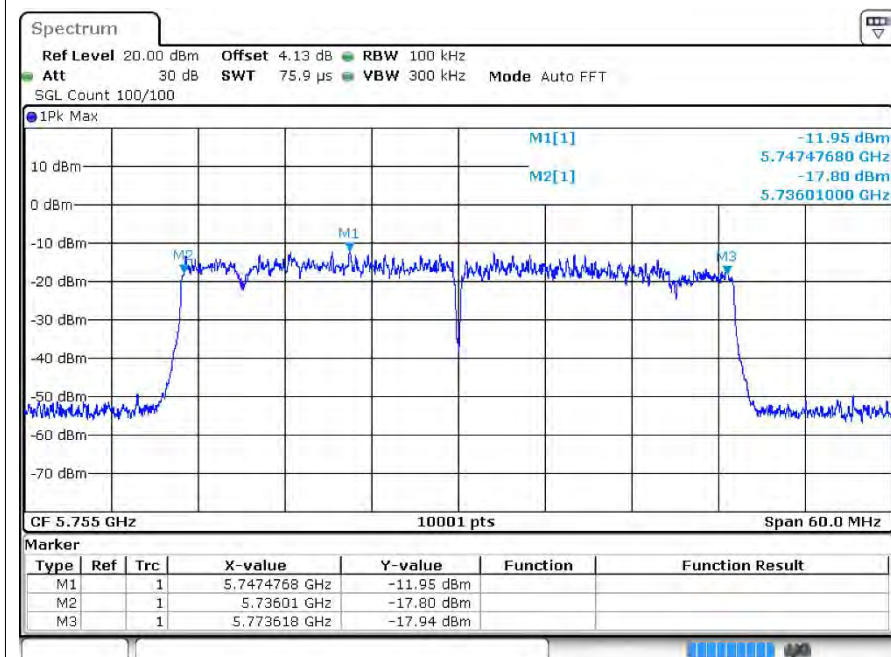
-6dB Bandwidth ax20 5785MHz Ant2



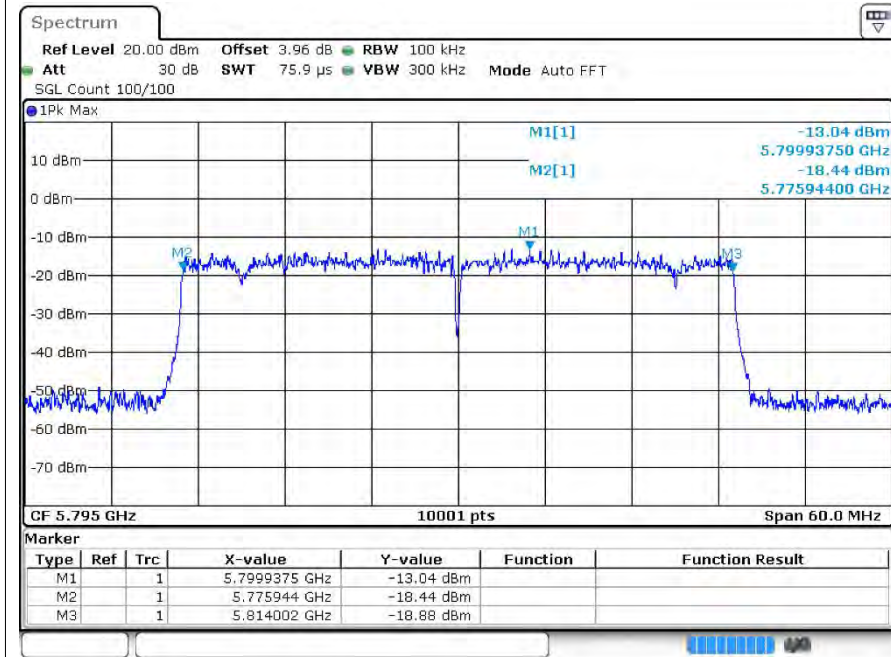
-6dB Bandwidth ax20 5825MHz Ant2



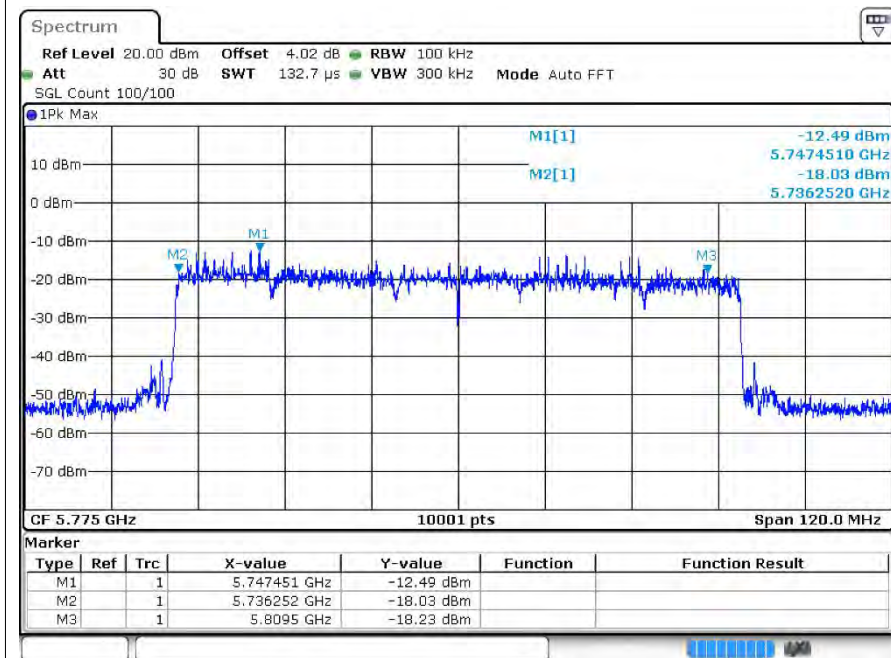
-6dB Bandwidth ax40 5755MHz Ant2



-6dB Bandwidth ax40 5795MHz Ant2



-6dB Bandwidth ax80 5775MHz Ant2



4 Occupied Channel Bandwidth

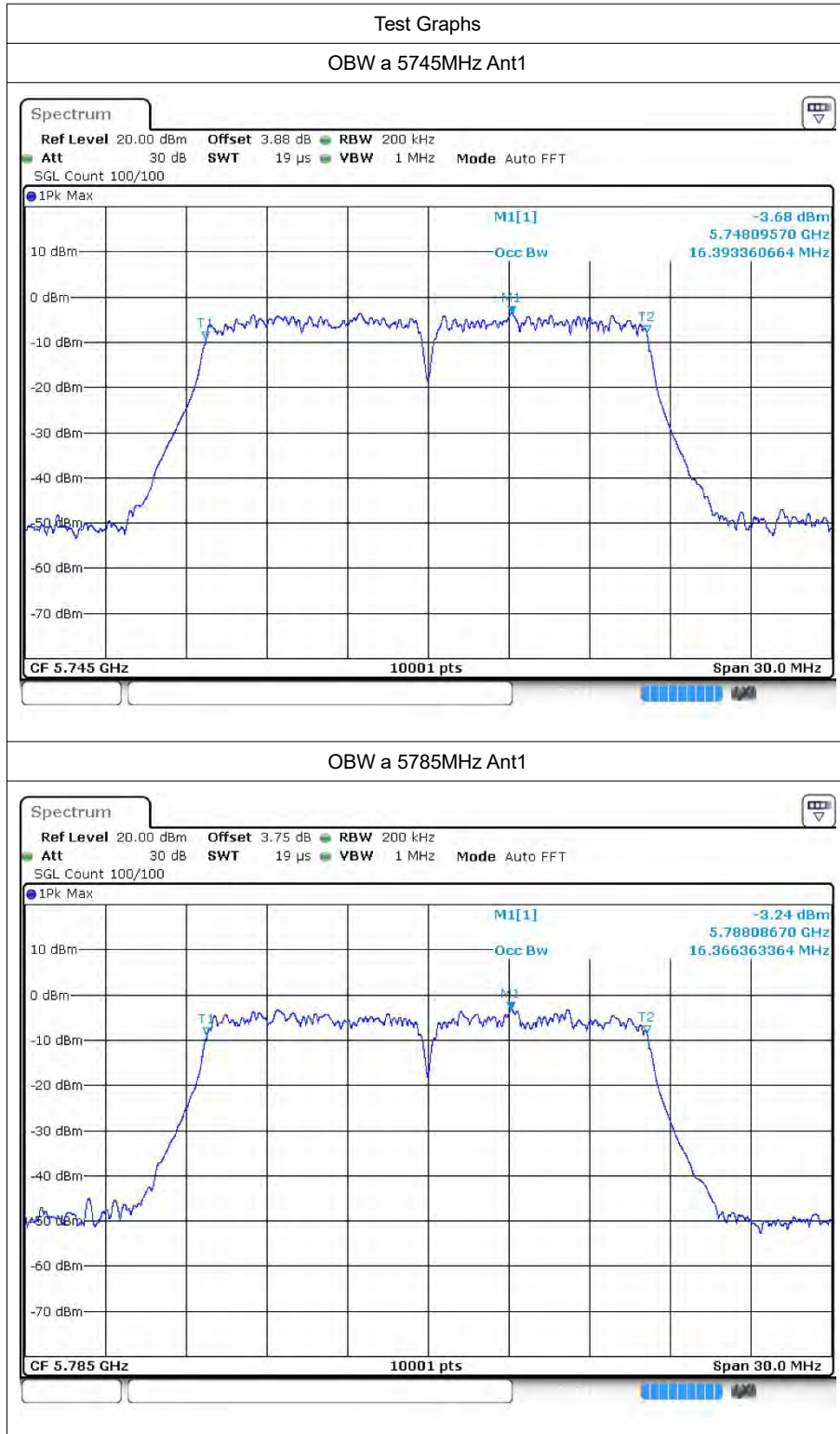
4.1 Test Result

Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
a	5745	Ant1	16.393
a	5785	Ant1	16.366
a	5825	Ant1	16.336
n20	5745	Ant1	17.512
n20	5785	Ant1	17.521
n20	5825	Ant1	17.521
n40	5755	Ant1	36.002
n40	5795	Ant1	35.942
ac20	5745	Ant1	17.518
ac20	5785	Ant1	17.56
ac20	5825	Ant1	17.53
ac40	5755	Ant1	36.14
ac40	5795	Ant1	35.996
ac80	5775	Ant1	75.412
ax20	5745	Ant1	18.91
ax20	5785	Ant1	18.889
ax20	5825	Ant1	18.892
ax40	5755	Ant1	37.628
ax40	5795	Ant1	37.754
ax80	5775	Ant1	76.072
a	5745	Ant2	16.297
a	5785	Ant2	16.372
a	5825	Ant2	16.357
n20	5745	Ant2	17.491
n20	5785	Ant2	17.548
n20	5825	Ant2	17.512
n40	5755	Ant2	36.134
n40	5795	Ant2	36.194
ac20	5745	Ant2	17.545
ac20	5785	Ant2	17.557
ac20	5825	Ant2	17.533
ac40	5755	Ant2	36.074
ac40	5795	Ant2	36.116
ac80	5775	Ant2	75.832
ax20	5745	Ant2	18.841
ax20	5785	Ant2	18.892

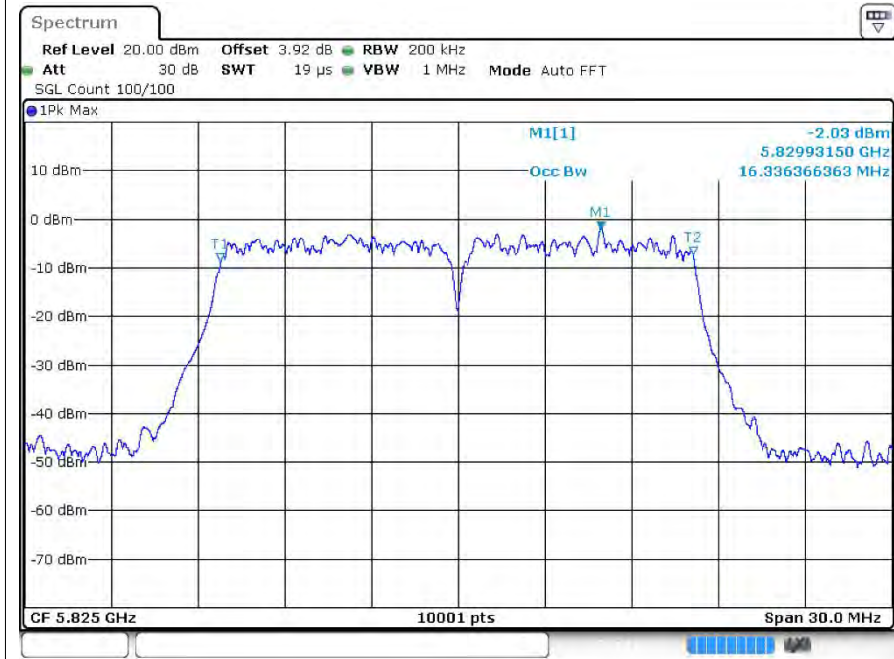


ax20	5825	Ant2	18.88
ax40	5755	Ant2	37.76
ax40	5795	Ant2	37.688
ax80	5775	Ant2	77.368

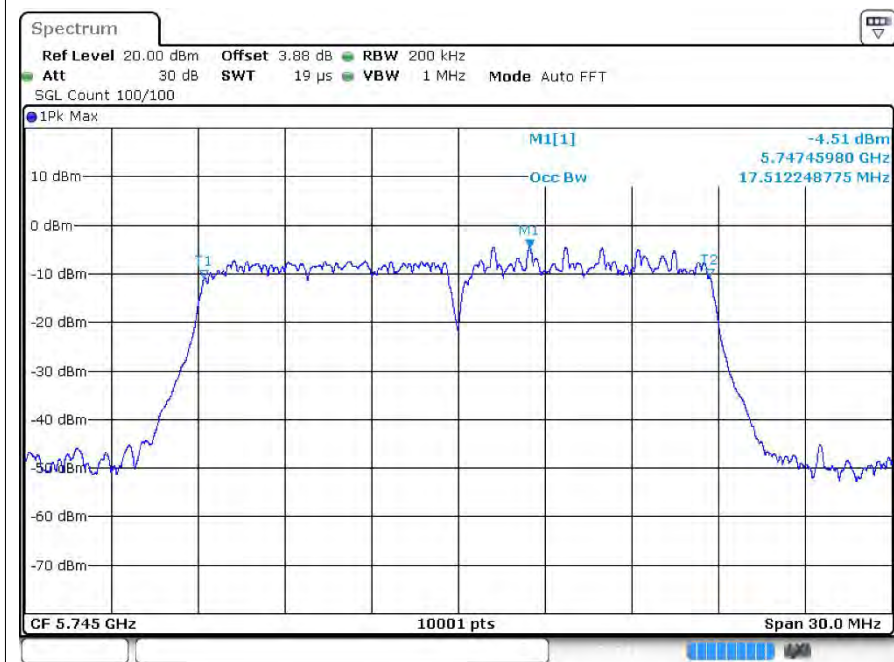
4.2 Test Graphs



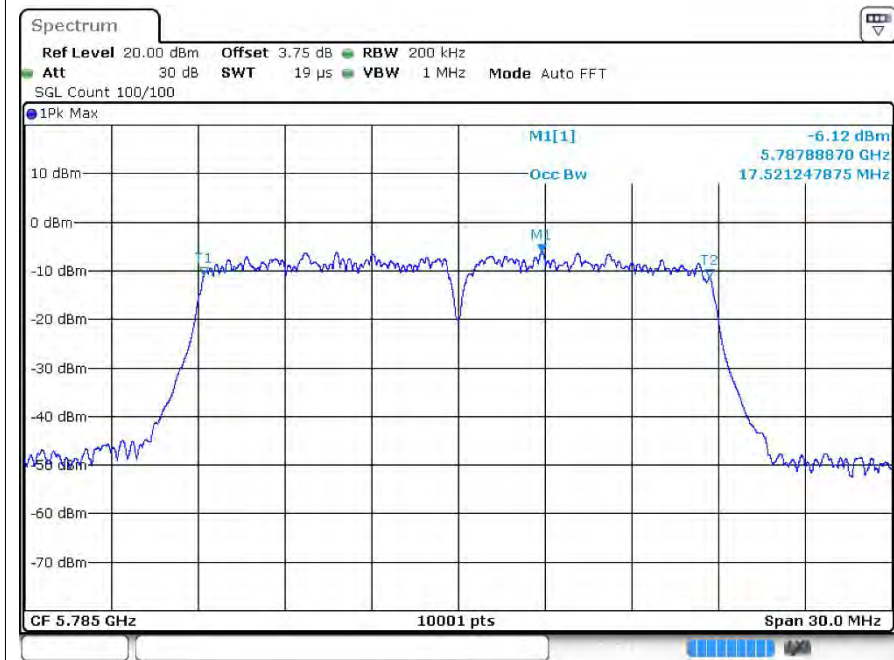
OBW a 5825MHz Ant1



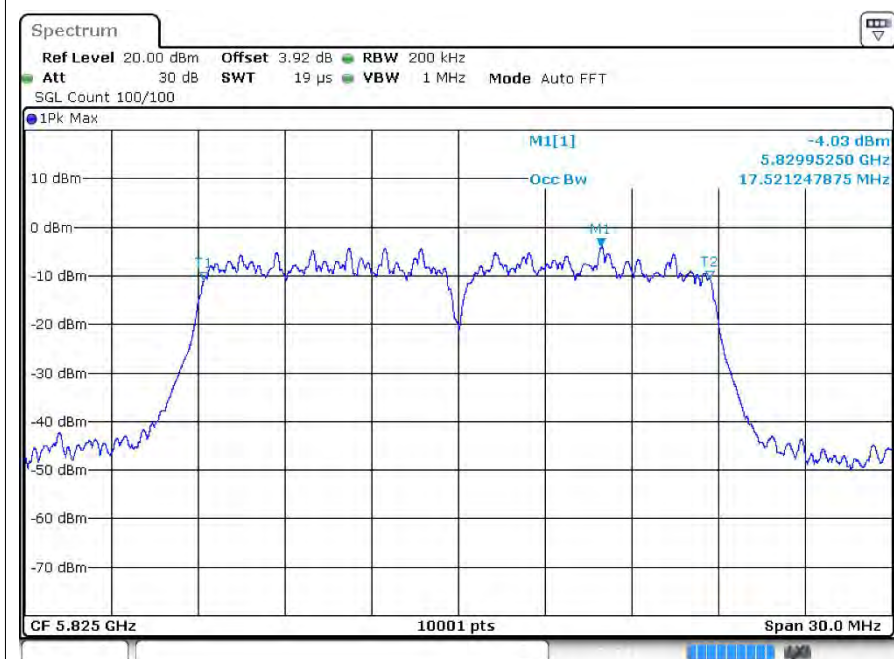
OBW n20 5745MHz Ant1



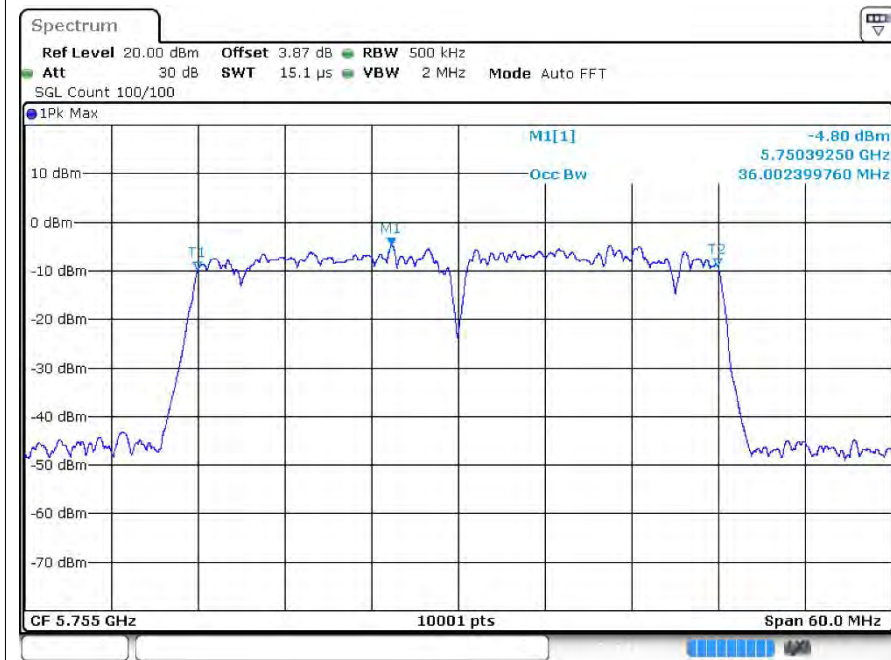
OBW n20 5785MHz Ant1



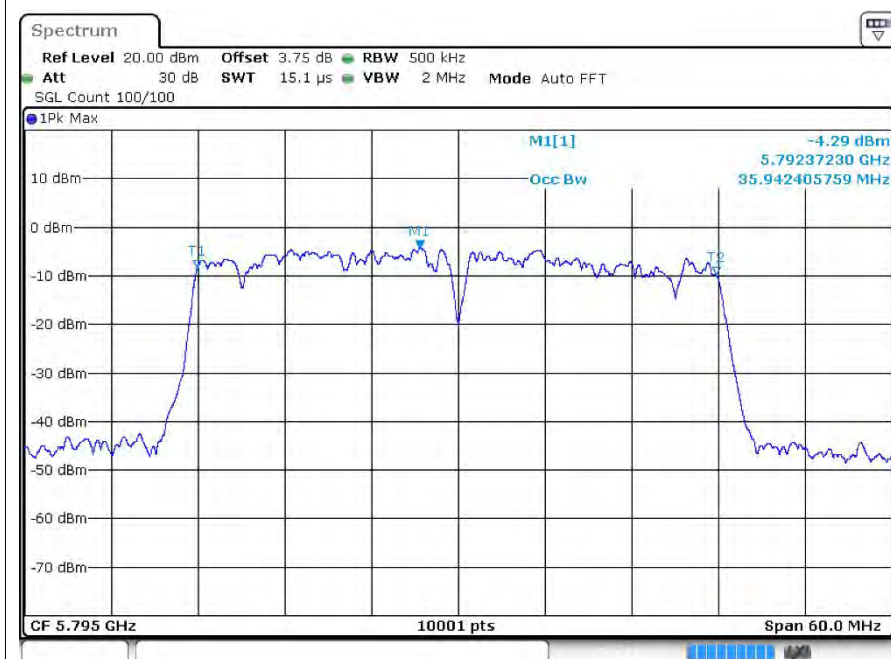
OBW n20 5825MHz Ant1



OBW n40 5755MHz Ant1

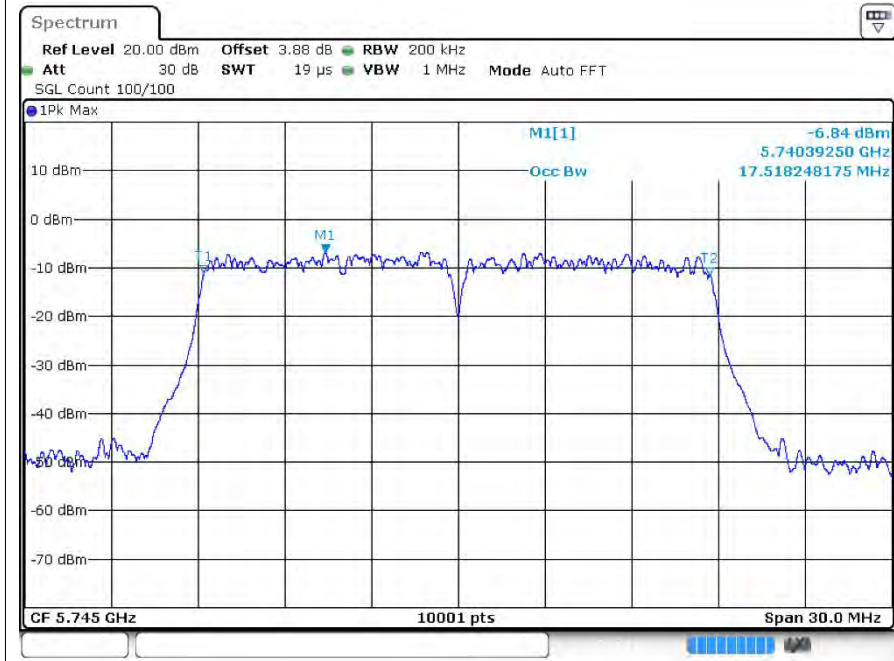


OBW n40 5795MHz Ant1

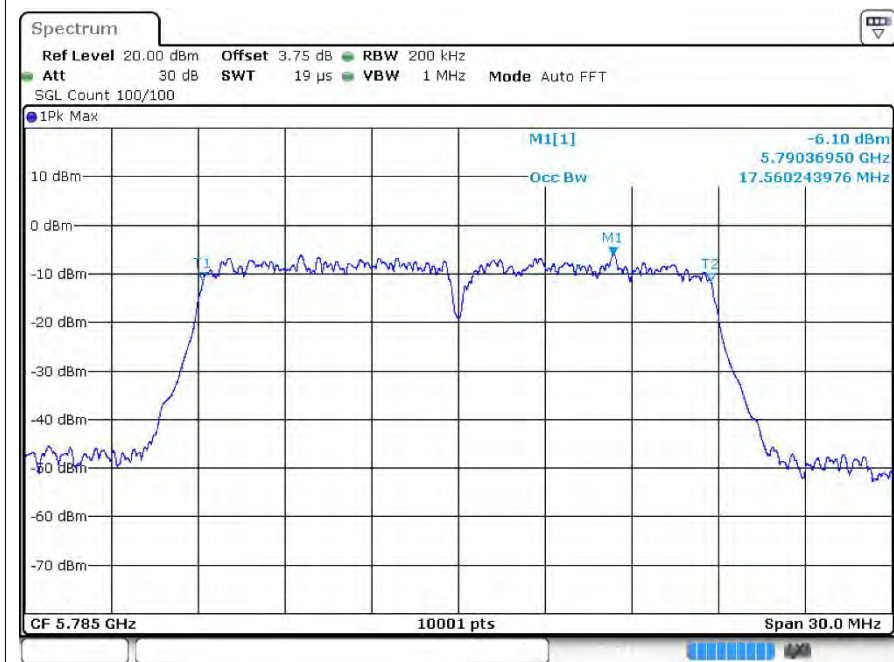




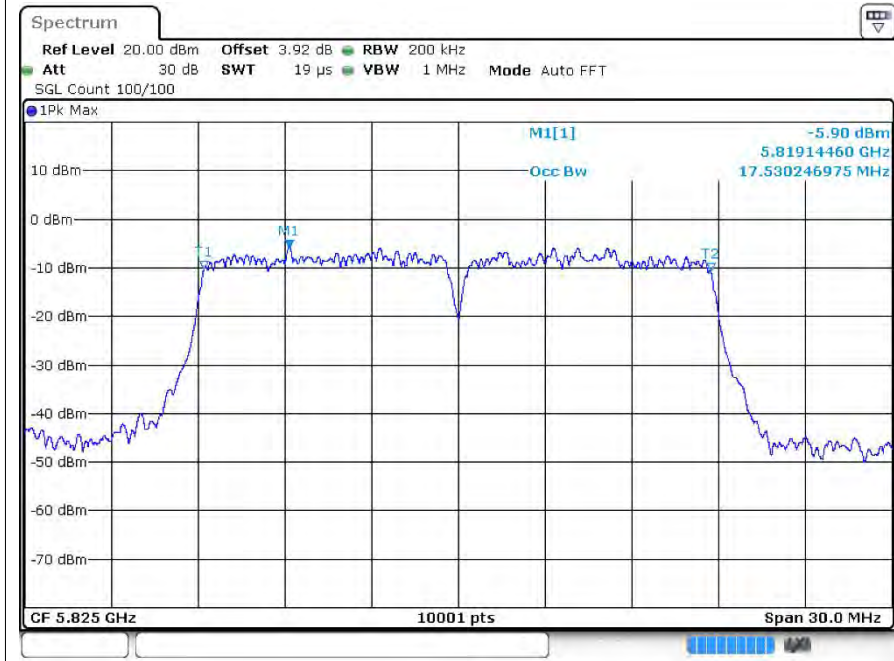
OBW ac20 5745MHz Ant1



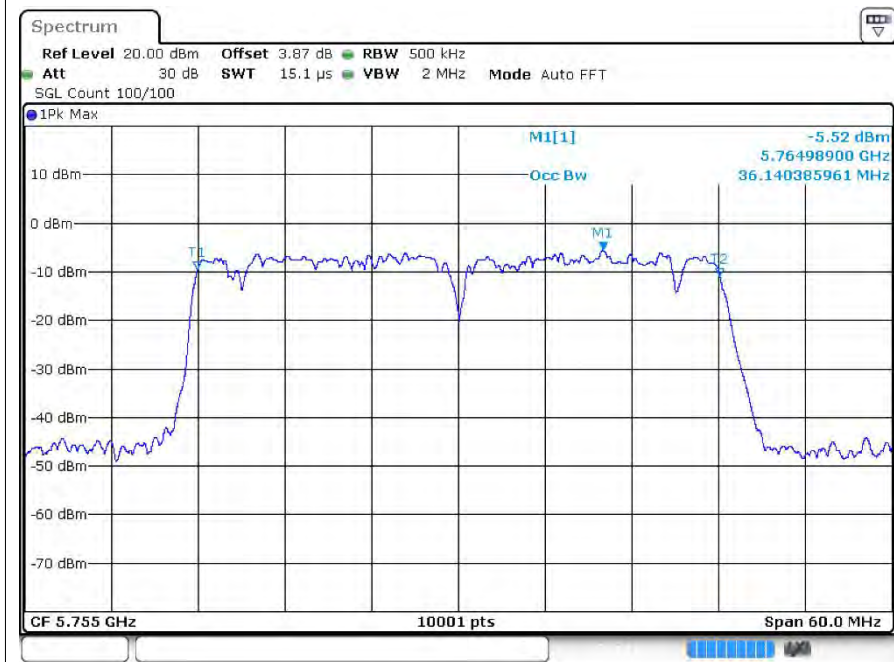
OBW ac20 5785MHz Ant1



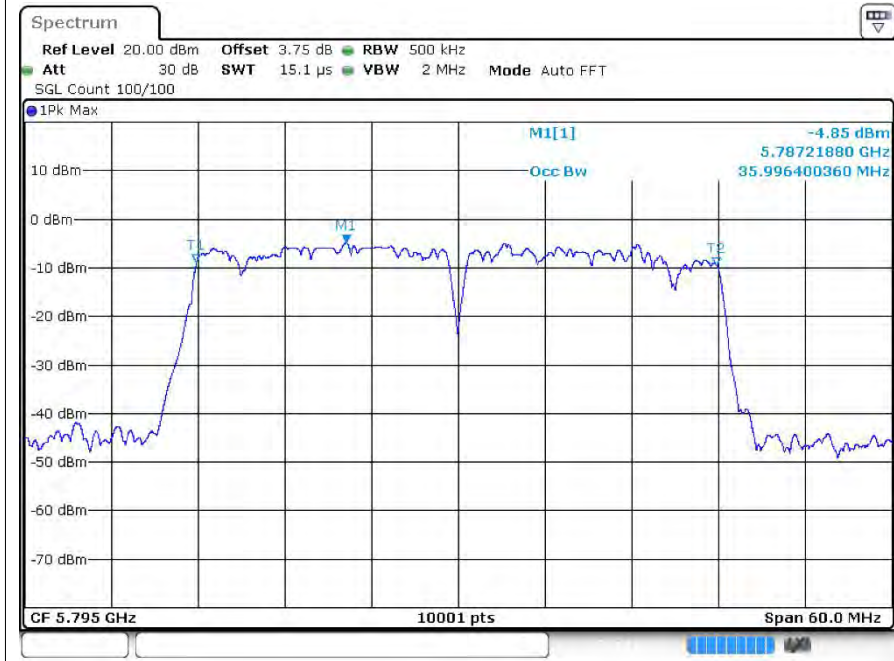
OBW ac20 5825MHz Ant1



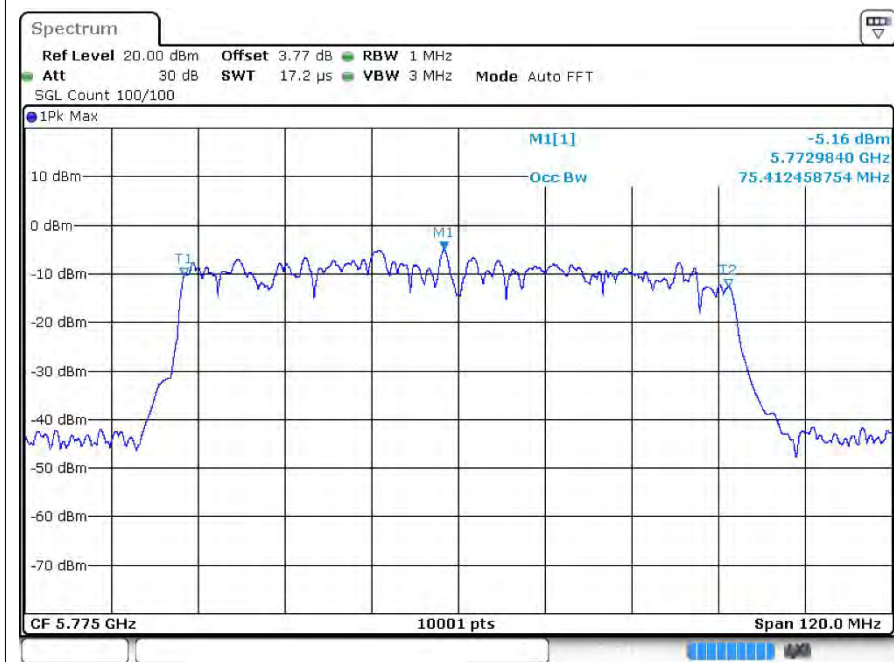
OBW ac40 5755MHz Ant1



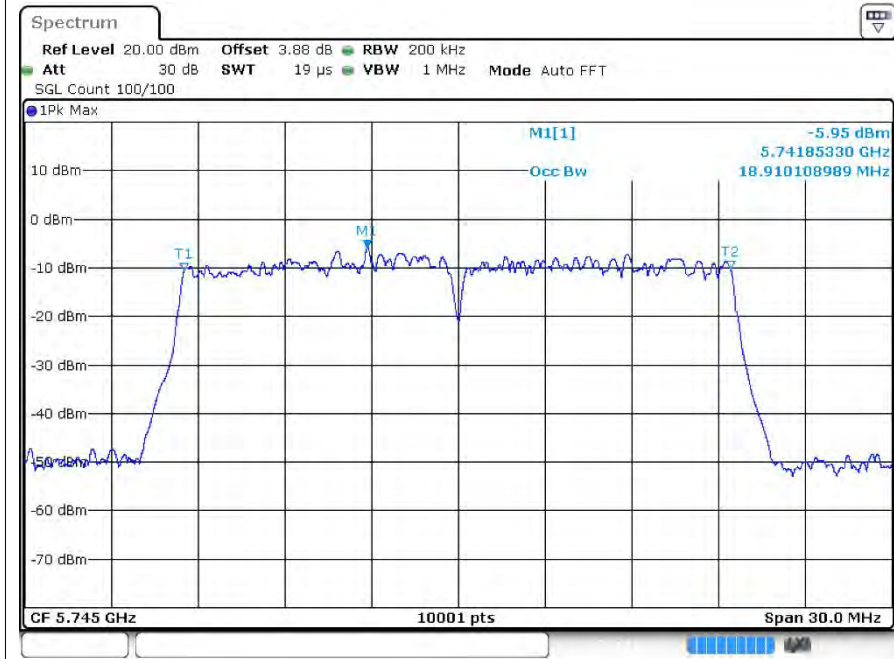
OBW ac40 5795MHz Ant1



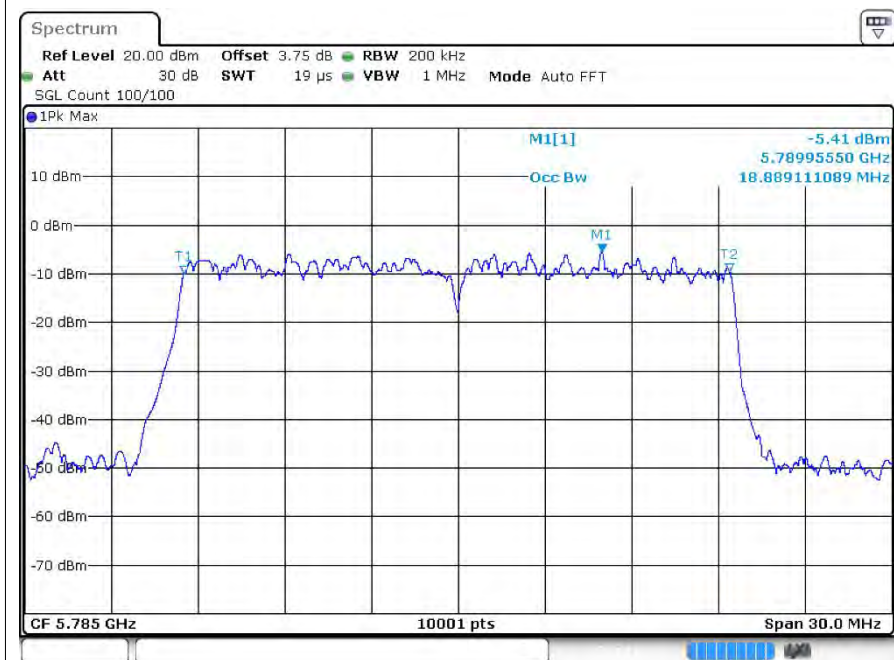
OBW ac80 5775MHz Ant1



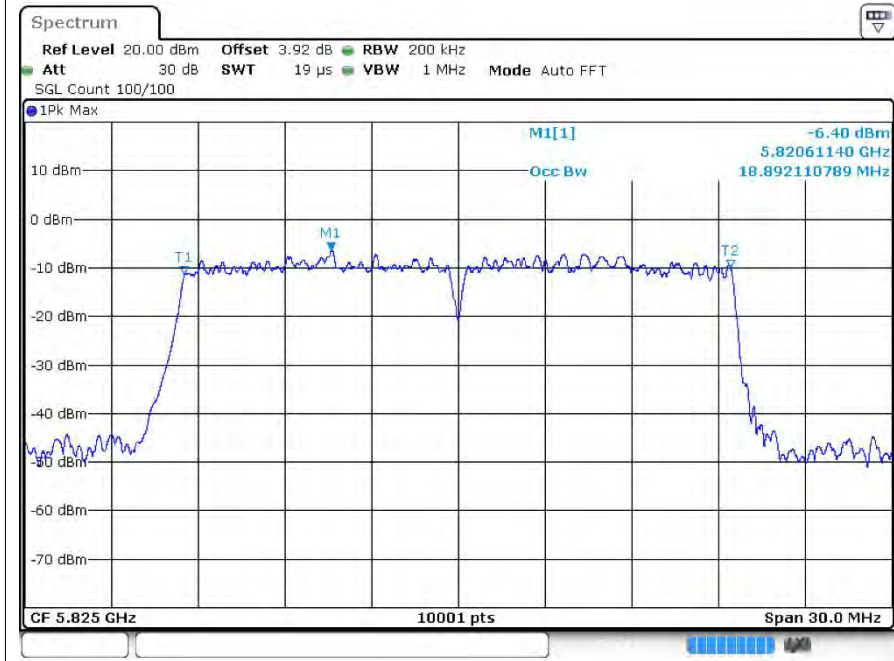
OBW ax20 5745MHz Ant1



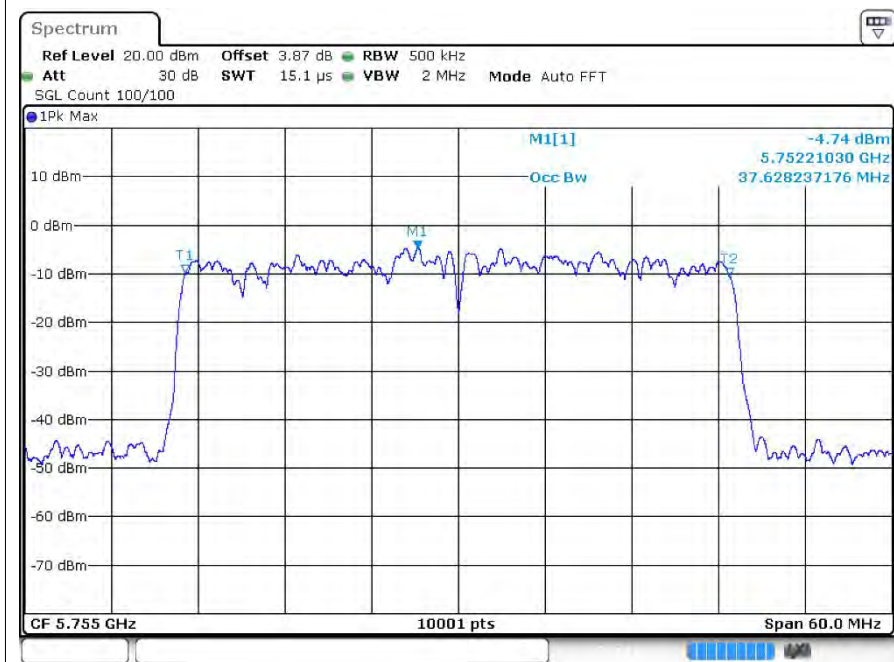
OBW ax20 5785MHz Ant1



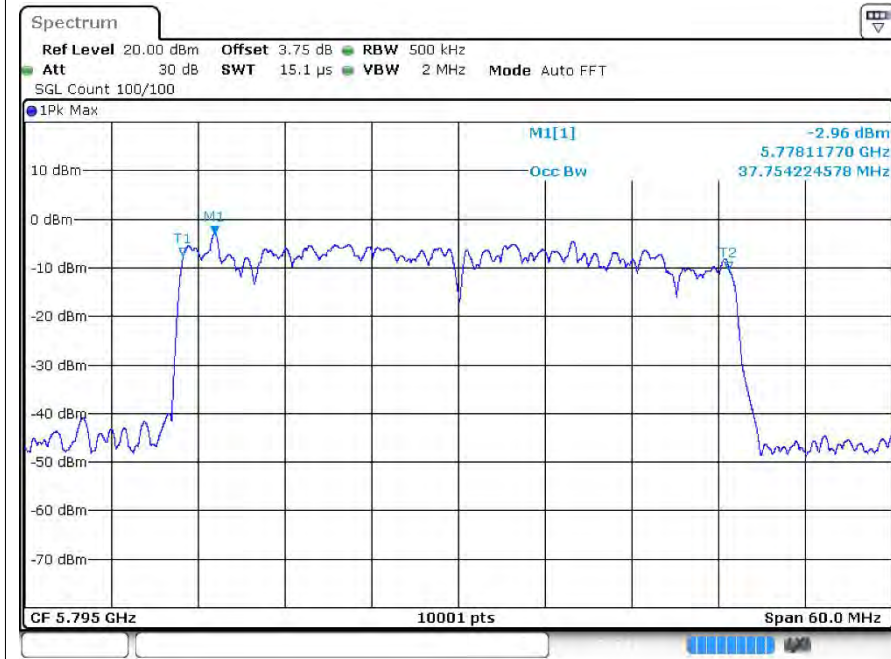
OBW ax20 5825MHz Ant1



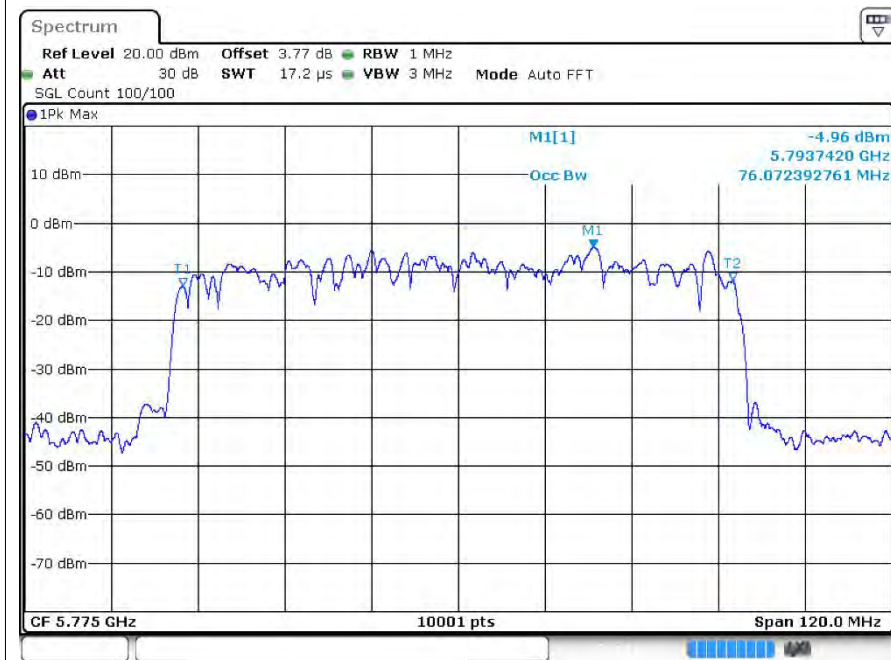
OBW ax40 5755MHz Ant1



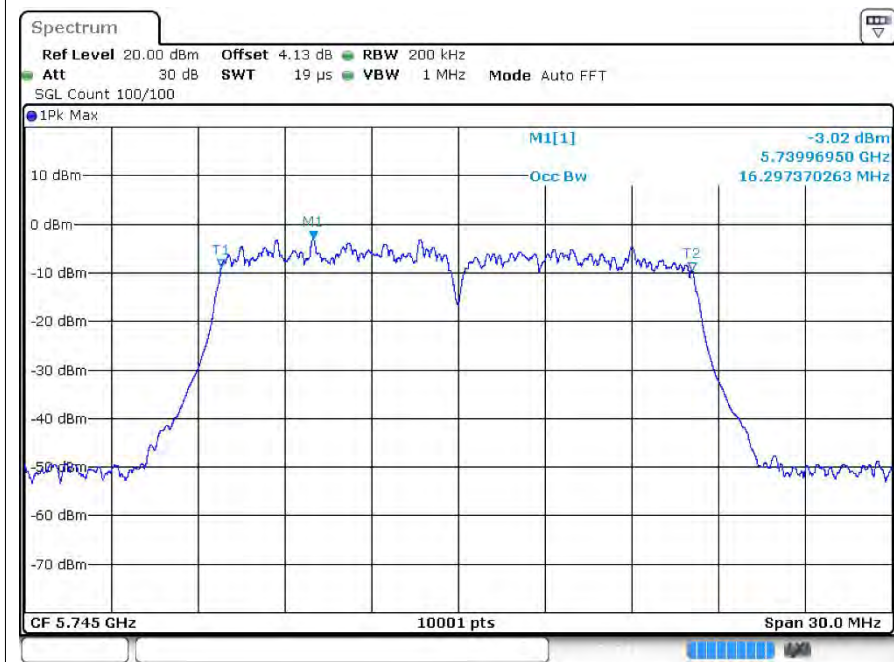
OBW ax40 5795MHz Ant1



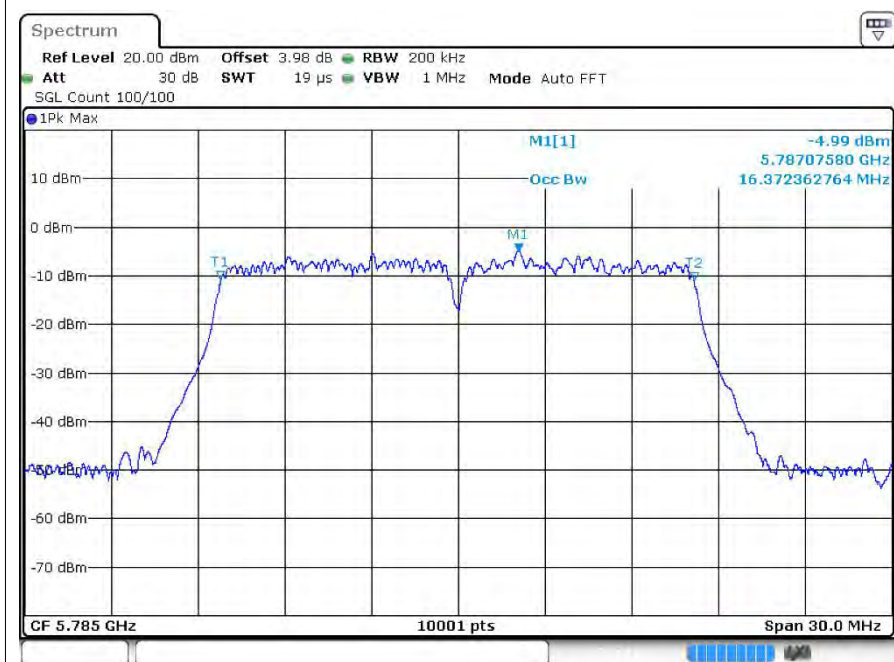
OBW ax80 5775MHz Ant1



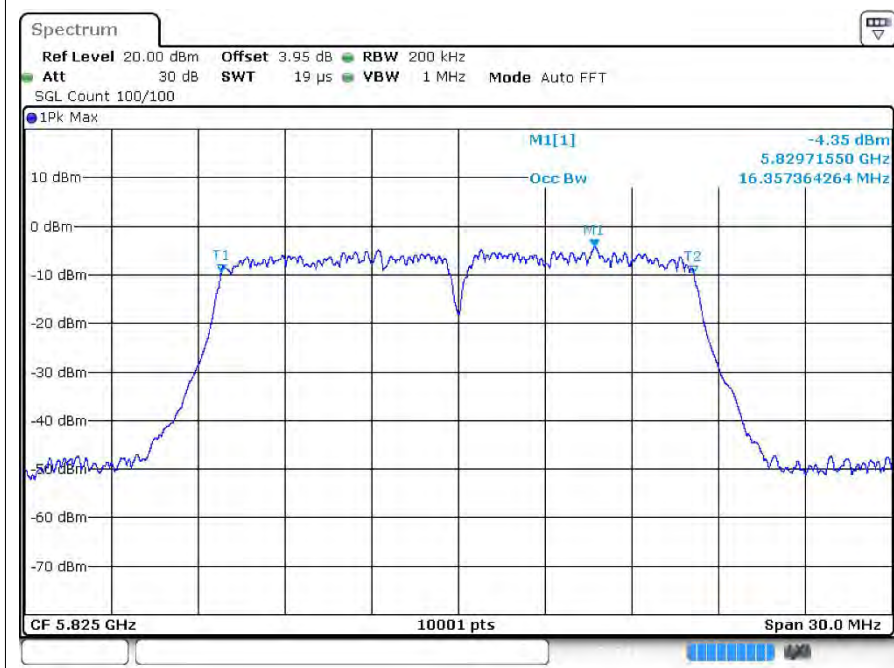
OBW a 5745MHz Ant2



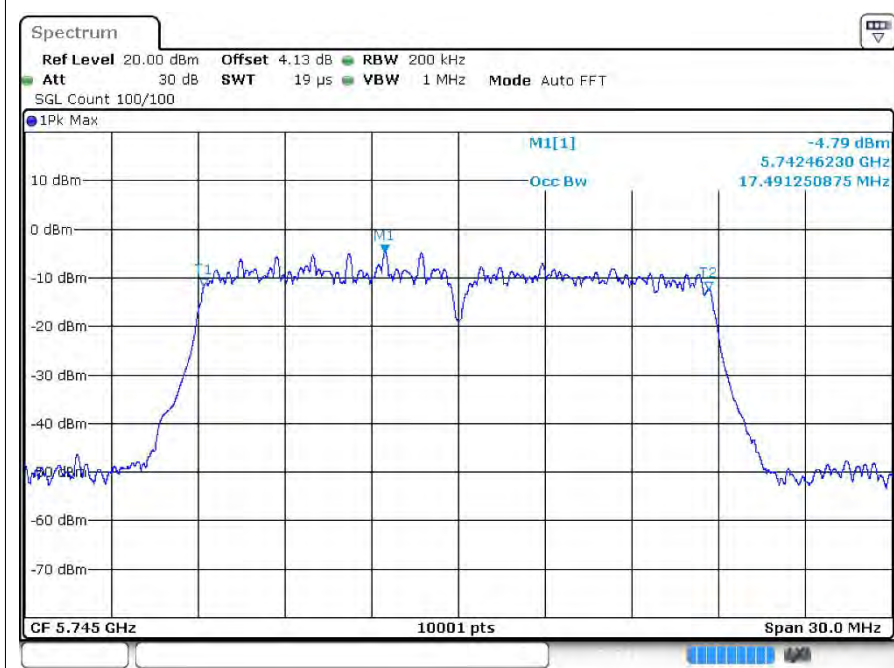
OBW a 5785MHz Ant2



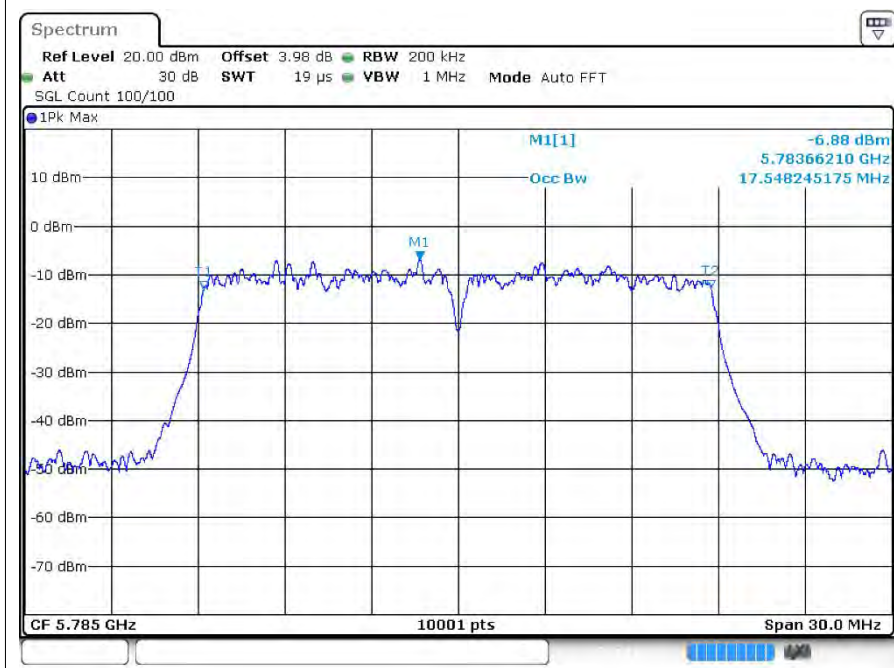
OBW a 5825MHz Ant2



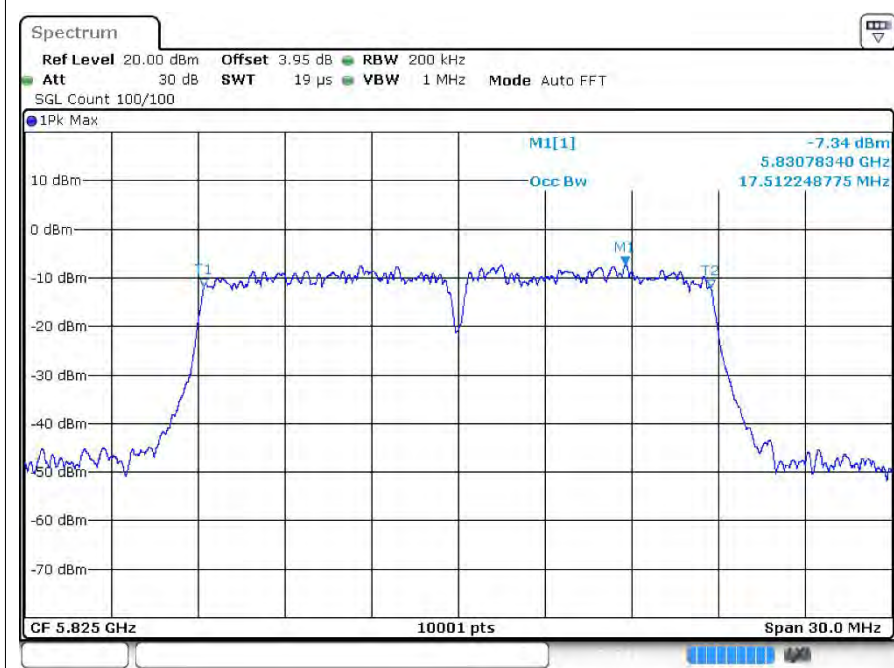
OBW n20 5745MHz Ant2



OBW n20 5785MHz Ant2

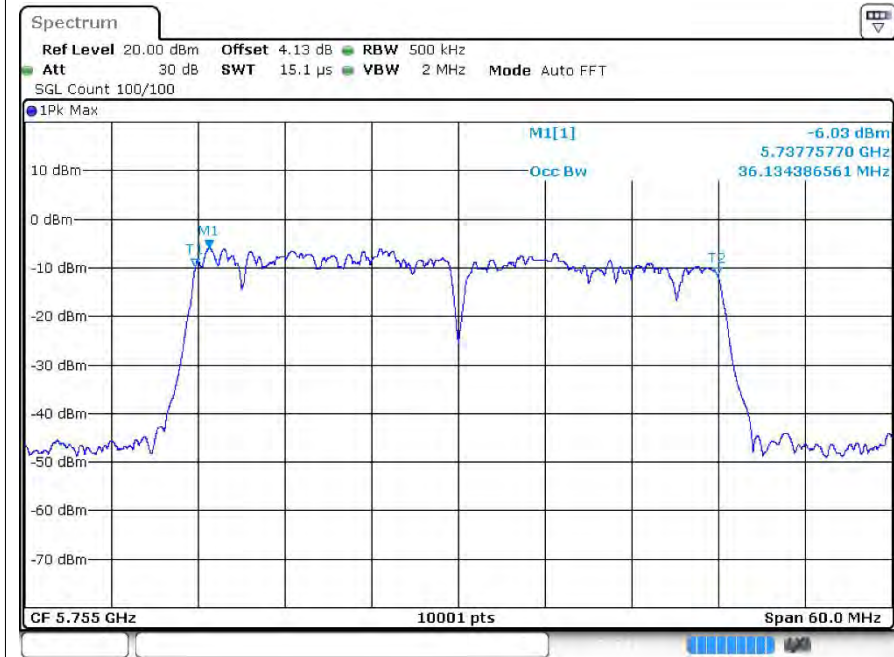


OBW n20 5825MHz Ant2

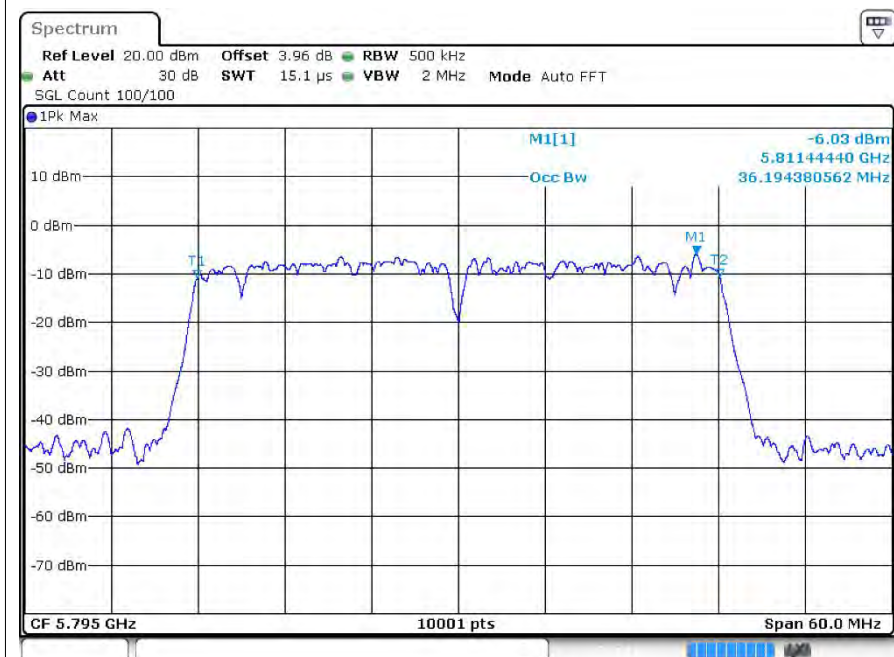




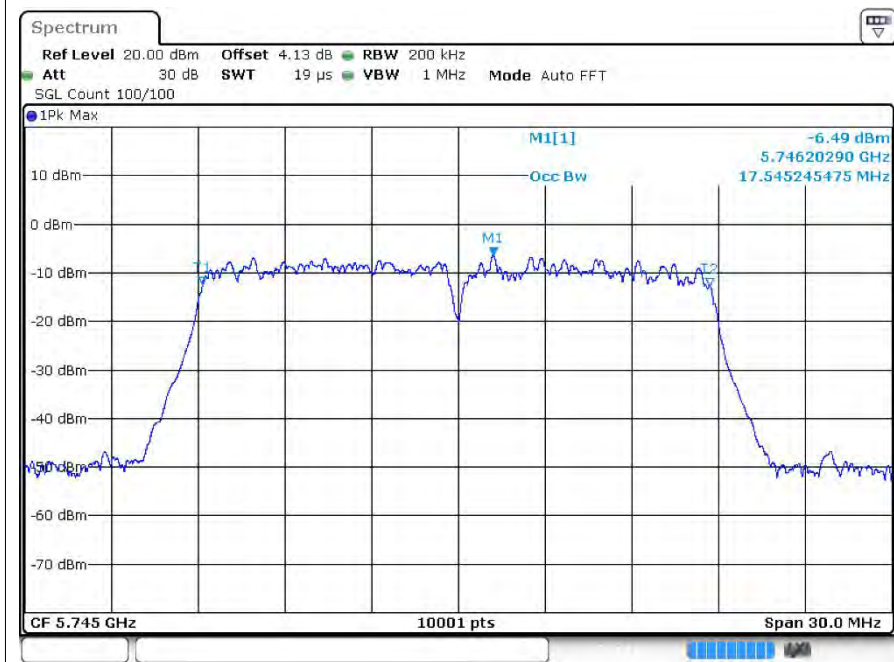
OBW n40 5755MHz Ant2



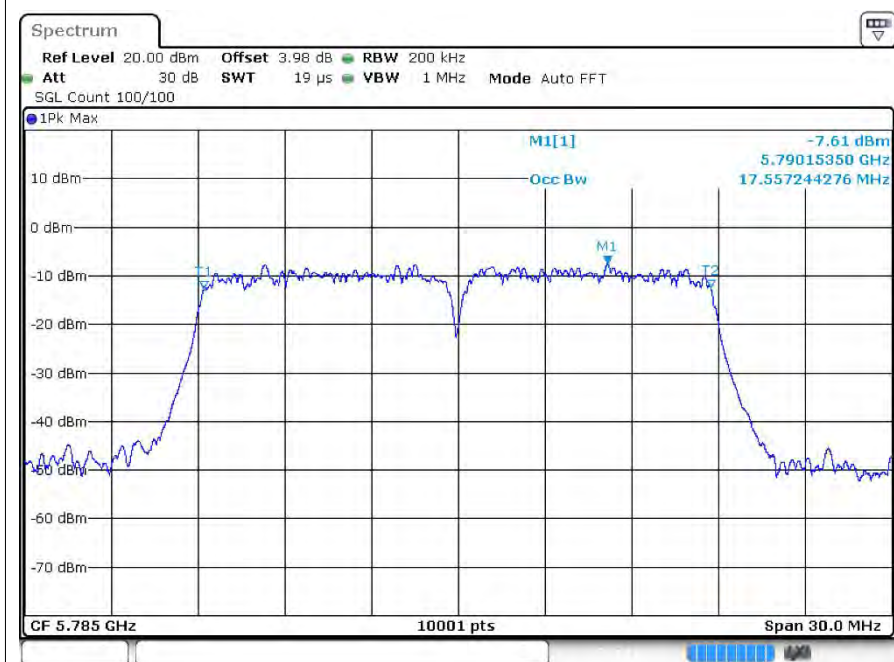
OBW n40 5795MHz Ant2



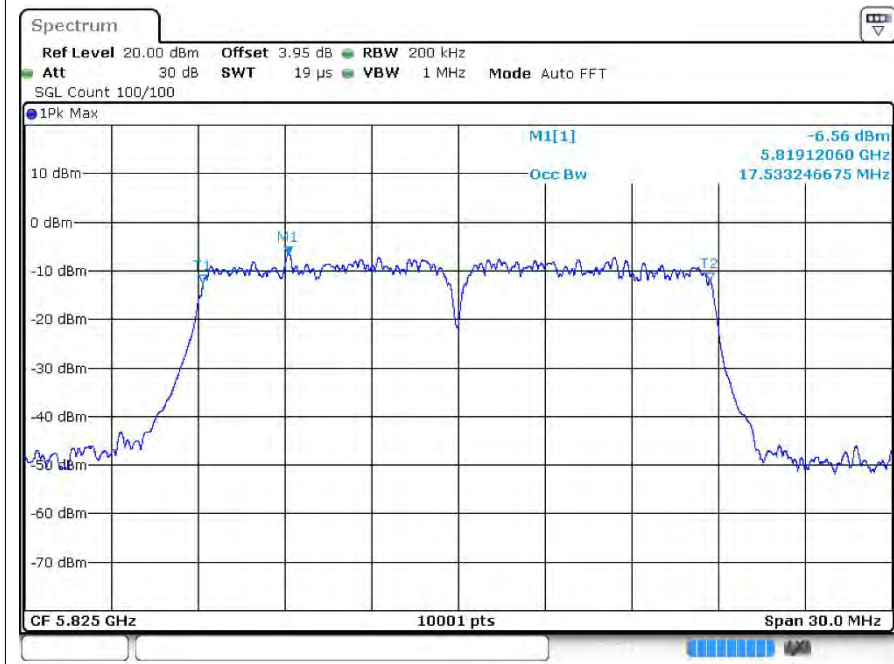
OBW ac20 5745MHz Ant2



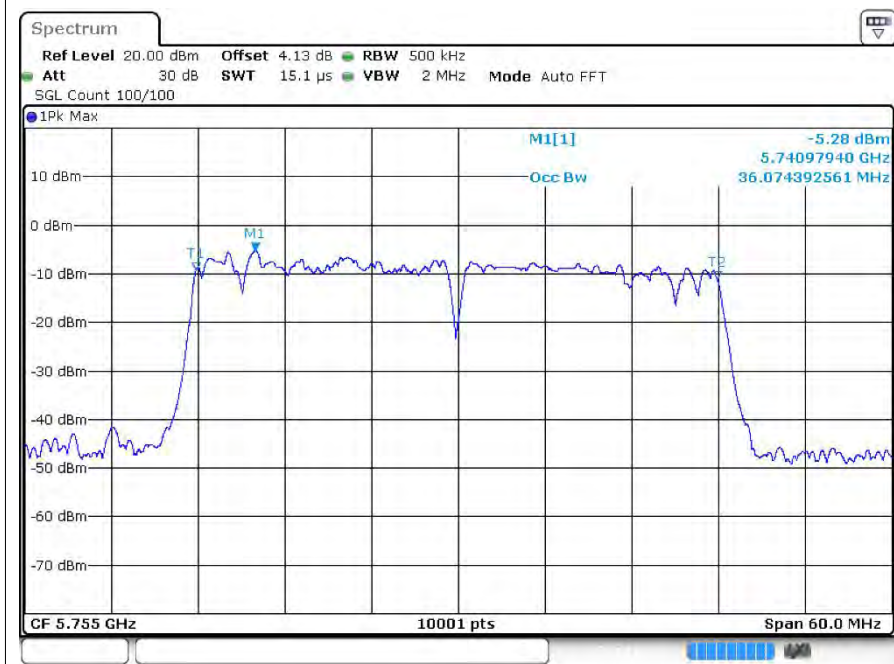
OBW ac20 5785MHz Ant2



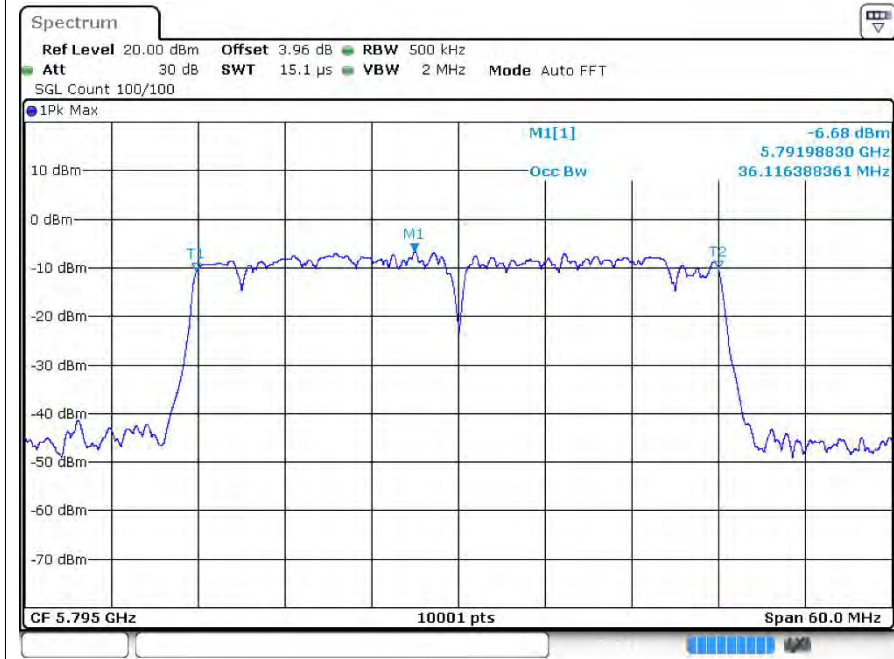
OBW ac20 5825MHz Ant2



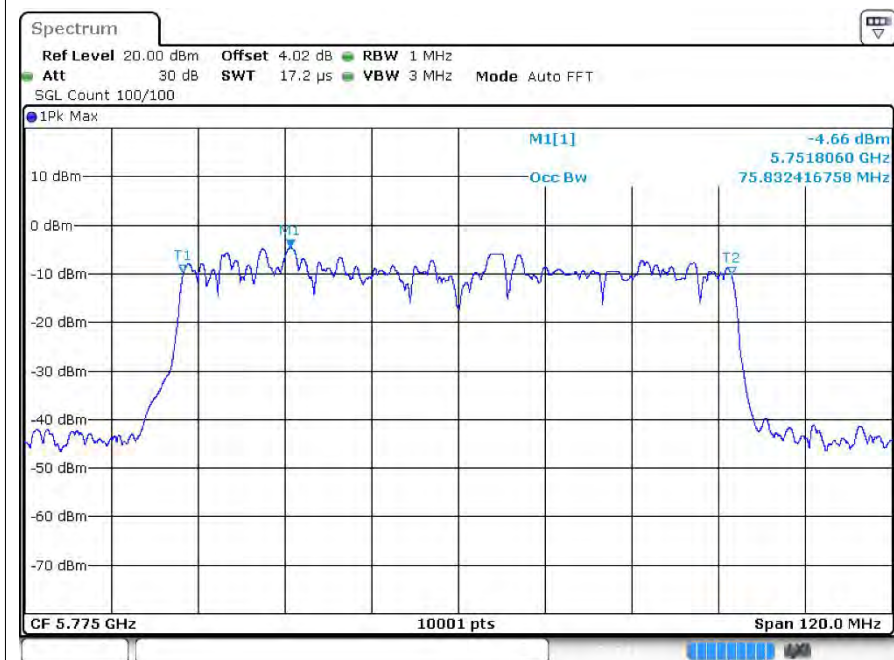
OBW ac40 5755MHz Ant2



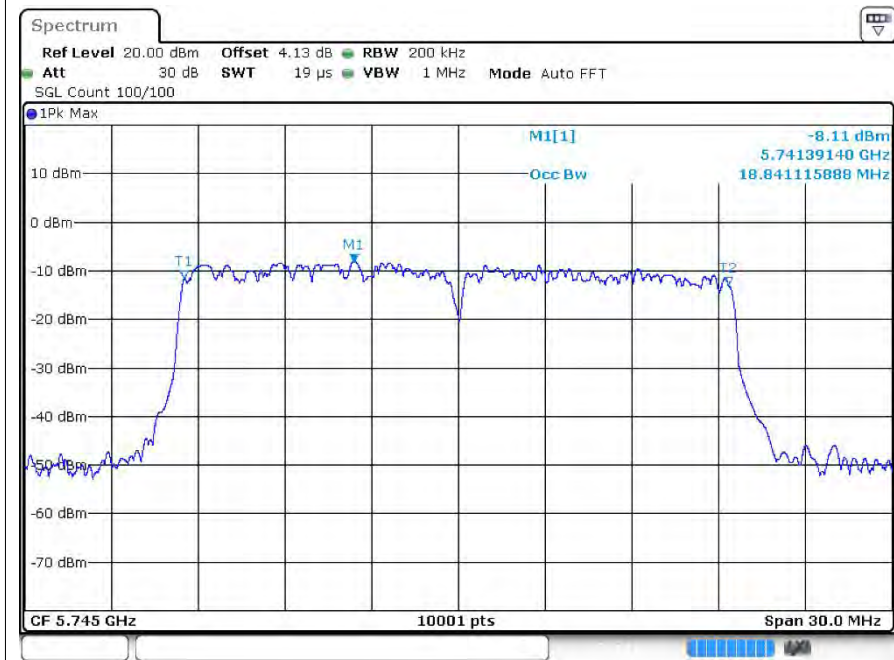
OBW ac40 5795MHz Ant2



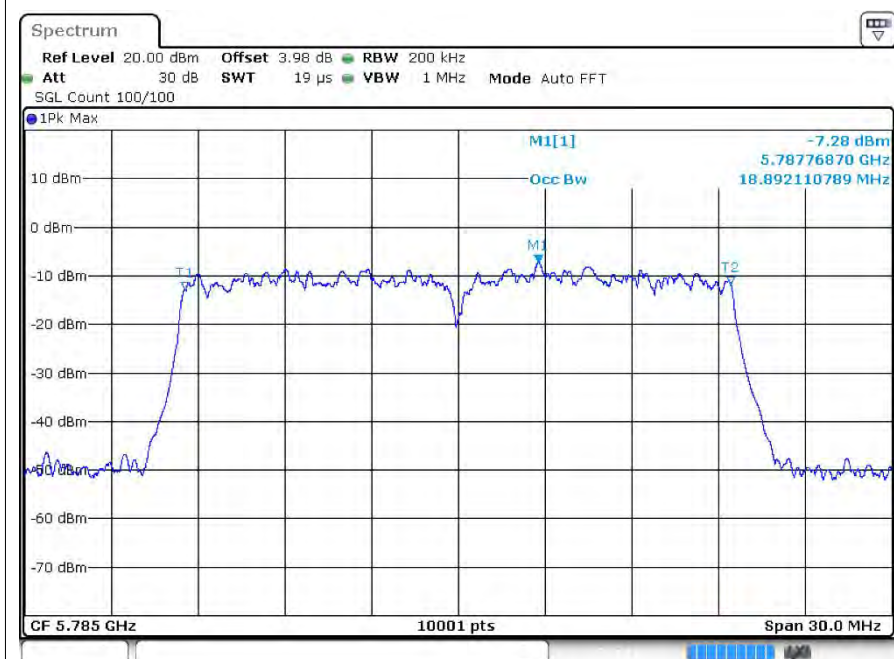
OBW ac80 5775MHz Ant2



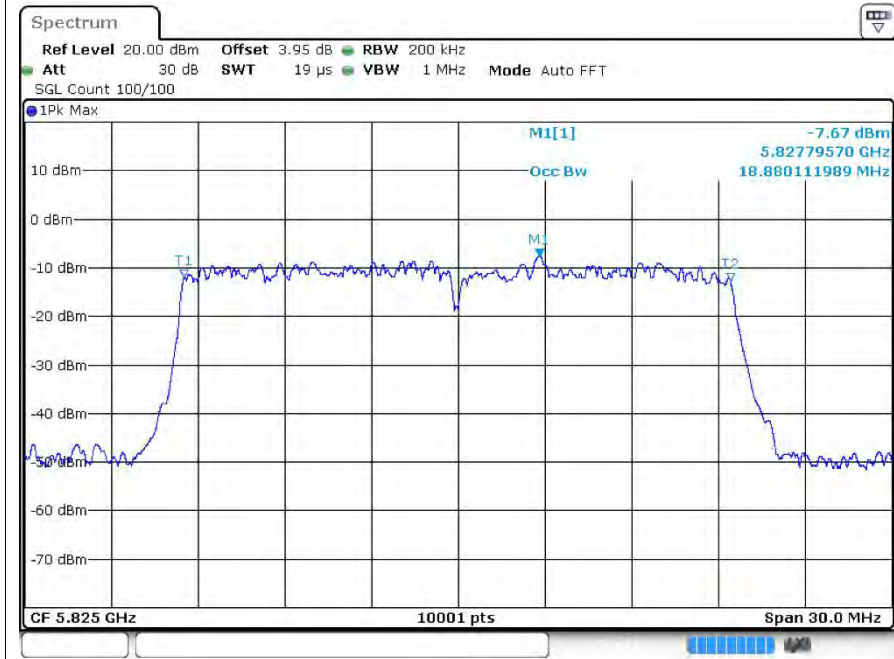
OBW ax20 5745MHz Ant2



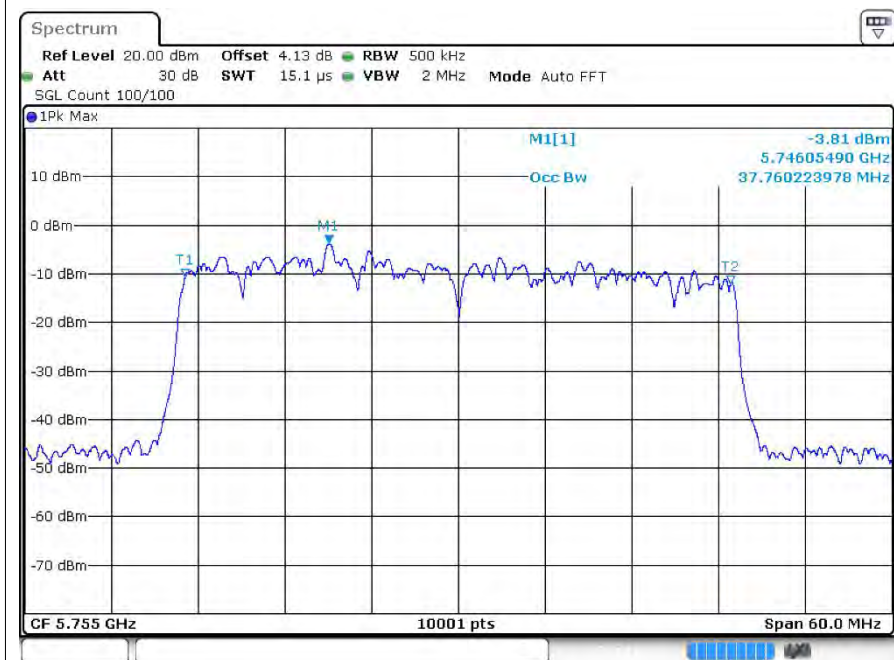
OBW ax20 5785MHz Ant2



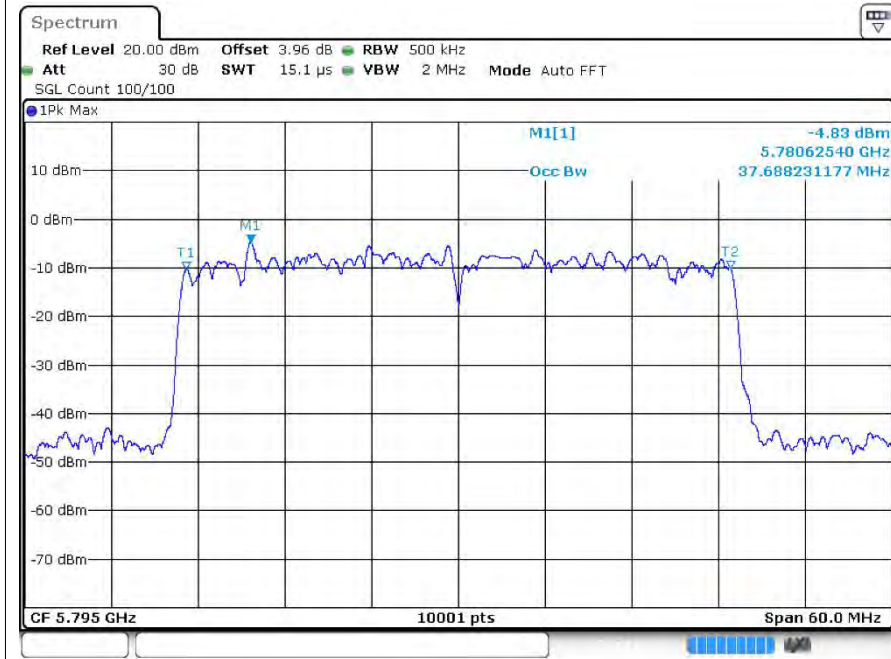
OBW ax20 5825MHz Ant2



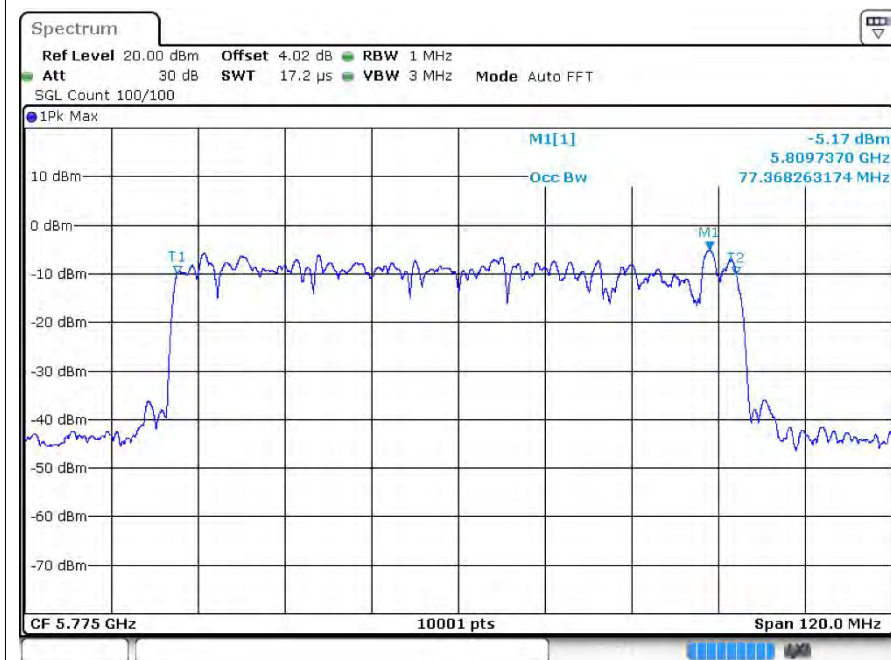
OBW ax40 5755MHz Ant2



OBW ax40 5795MHz Ant2



OBW ax80 5775MHz Ant2



5 Maximum Power Spectral Density Level

5.1 Test Result

Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm)	Duty Factor (dB)	Total PSD (dBm)	Limit (dBm)	Verdict
a	5745	Ant1	-8.6	4.48	-4.12	30	Pass
a	5785	Ant1	-8.97	4.48	-4.49	30	Pass
a	5825	Ant1	-9.14	4.48	-4.66	30	Pass
a	5745	Ant2	-10.49	4.48	-6.01	30	Pass
a	5785	Ant2	-11.59	4.53	-7.06	30	Pass
a	5825	Ant2	-10.17	4.48	-5.69	30	Pass
n20	5745	Ant1	-11.8	4.63	-7.17	30	Pass
n20	5745	Ant2	-13.7	4.77	-8.93	30	Pass
n20	5745	Sum	-	-	-4.95	27.07	Pass
n20	5785	Ant1	-12.98	4.6	-8.38	30	Pass
n20	5785	Ant2	-14.08	4.67	-9.41	30	Pass
n20	5785	Sum	-	-	-5.85	27.07	Pass
n20	5825	Ant1	-11.29	4.7	-6.59	30	Pass
n20	5825	Ant2	-13.66	4.62	-9.04	30	Pass
n20	5825	Sum	-	-	-4.63	27.07	Pass
n40	5755	Ant1	-17.46	6.93	-10.53	30	Pass
n40	5755	Ant2	-17.65	6.87	-10.78	30	Pass
n40	5755	Sum	-	-	-7.64	27.07	Pass
n40	5795	Ant1	-16.4	6.93	-9.47	30	Pass
n40	5795	Ant2	-18.07	6.87	-11.2	30	Pass
n40	5795	Sum	-	-	-7.24	27.07	Pass
ac20	5745	Ant1	-12.77	4.75	-8.02	30	Pass
ac20	5745	Ant2	-13.33	4.65	-8.68	30	Pass
ac20	5745	Sum	-	-	-5.33	27.07	Pass
ac20	5785	Ant1	-11.76	4.59	-7.17	30	Pass
ac20	5785	Ant2	-13.67	4.73	-8.94	30	Pass
ac20	5785	Sum	-	-	-4.96	27.07	Pass
ac20	5825	Ant1	-12	4.68	-7.32	30	Pass
ac20	5825	Ant2	-13.13	4.68	-8.45	30	Pass
ac20	5825	Sum	-	-	-4.84	27.07	Pass
ac40	5755	Ant1	-16.79	6.98	-9.81	30	Pass
ac40	5755	Ant2	-17.28	6.93	-10.35	30	Pass
ac40	5755	Sum	-	-	-7.06	27.07	Pass
ac40	5795	Ant1	-16.45	6.9	-9.55	30	Pass



ac40	5795	Ant2	-18.55	6.84	-11.71	30	Pass
ac40	5795	Sum	-	-	-7.49	27.07	Pass
ac80	5775	Ant1	-21.76	9.61	-12.15	30	Pass
ac80	5775	Ant2	-22.5	9.47	-13.03	30	Pass
ac80	5775	Sum	-	-	-9.56	27.07	Pass
ax20	5745	Ant1	-14.51	4.85	-9.66	30	Pass
ax20	5745	Ant2	-14.33	4.89	-9.44	30	Pass
ax20	5745	Sum	-	-	-6.54	27.07	Pass
ax20	5785	Ant1	-13.48	4.98	-8.5	30	Pass
ax20	5785	Ant2	-2.27	0	-2.27	30	Pass
ax20	5785	Sum	-	-	-1.34	27.07	Pass
ax20	5825	Ant1	-13.87	4.97	-8.9	30	Pass
ax20	5825	Ant2	-14.89	4.98	-9.91	30	Pass
ax20	5825	Sum	-	-	-6.37	27.07	Pass
ax40	5755	Ant1	-18.02	7.03	-10.99	30	Pass
ax40	5755	Ant2	-18.59	6.98	-11.61	30	Pass
ax40	5755	Sum	-	-	-7.79	27.07	Pass
ax40	5795	Ant1	-16.96	7.04	-9.92	30	Pass
ax40	5795	Ant2	-18.93	6.98	-11.95	30	Pass
ax40	5795	Sum	-	-	-7.81	27.07	Pass
ax80	5775	Ant1	-22.59	9.4	-13.19	30	Pass
ax80	5775	Ant2	-22.51	9.3	-13.21	30	Pass
ax80	5775	Sum	-	-	-10.19	27.07	Pass

For MIMO mode:

Directional gain= $10\log[(10^{G1/20}+10^{G2/20})^2/2]$ =8.93 dBi

Limit =30-(8.93-6)=27.07dBm for PSD

5.2 Test Graphs

