



Appendix E

RF Test Data for 5.8GWIFI(Conducted Measurement)

Product Name: AC1200 Dual Band XPON ONT

Trade Mark: N/A

Test Model: X122

Environmental Conditions

Temperature:	24.6° C
Relative Humidity:	52.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Emiya lin
Supervised by:	Simba Haung



Contents

Page

COVER PAGE

1	Duty Cycle	3
1.1	Test Result	3
1.2	Test Graphs	4
2	Maximum Conducted Output Power	18
2.1	Test Result	18
3	-6dB Bandwidth	20
3.1	Test Result	20
3.2	Test Graphs	21
4	Occupied Channel Bandwidth	35
4.1	Test Result	35
4.2	Test Graphs	36
5	Maximum Power Spectral Density Level	50
5.1	Test Result	50
5.2	Test Graphs	52
6	Frequency Stability	66
6.1	Test Result	66
7	Conducted RF Spurious Emission	73
7.1	Test Result	73
7.2	Test Graphs	74

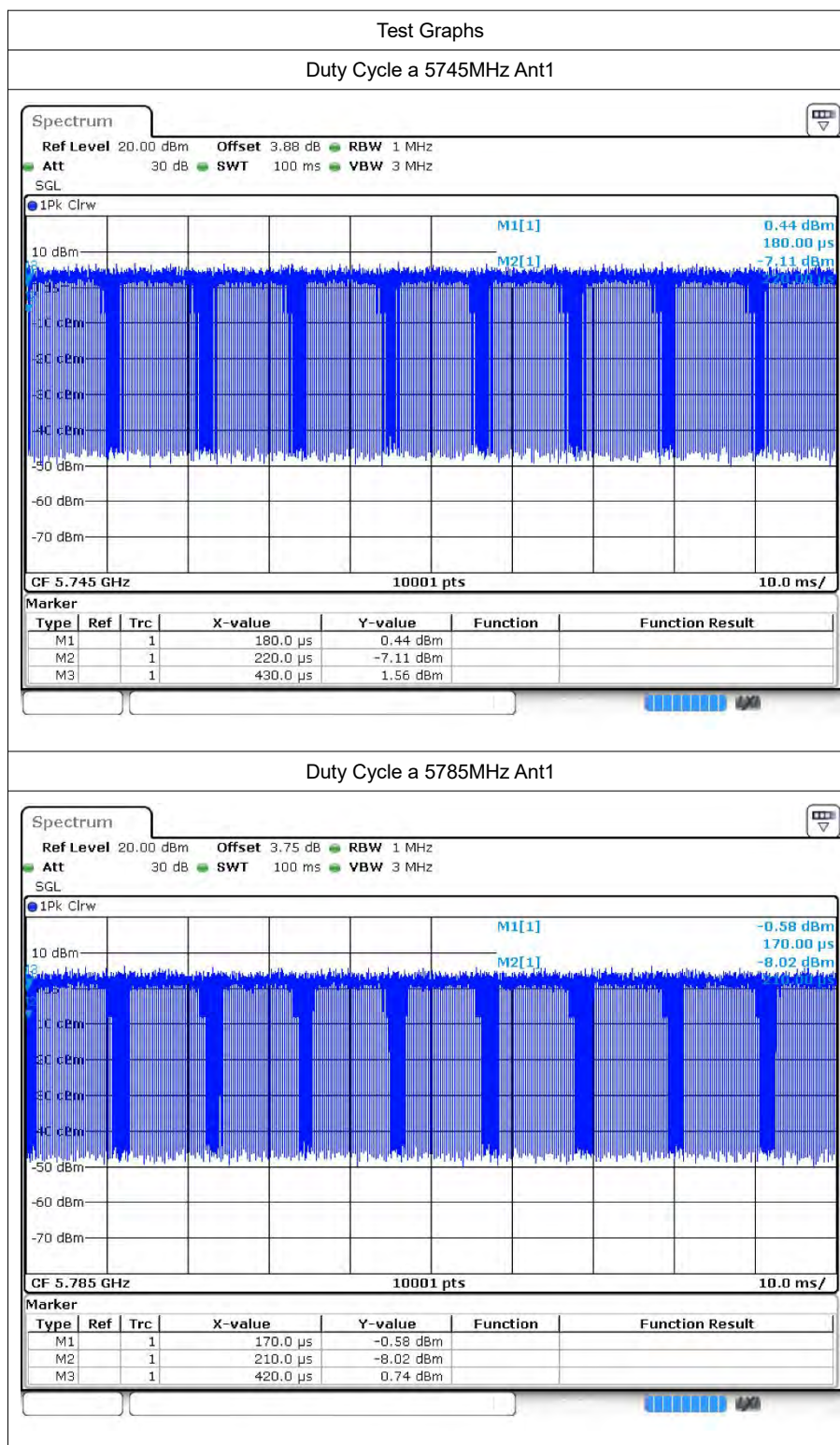


1 Duty Cycle

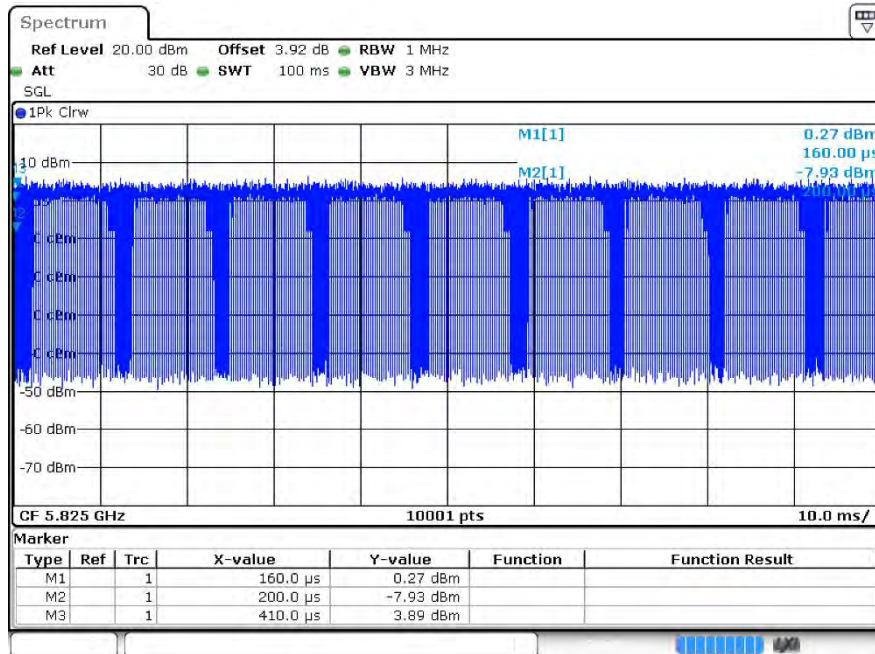
1.1 Test Result

Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
a	5745	Ant1	87.08	0.6	4.76
a	5785	Ant1	87	0.6	4.76
a	5825	Ant1	87.1	0.6	4.76
a	5745	Ant2	87.09	0.6	4.76
a	5785	Ant2	87.13	0.6	4.76
a	5825	Ant2	86.96	0.61	4.55
n20	5745	Ant1	92.92	0.32	2.22
n20	5785	Ant1	92.92	0.32	2.22
n20	5825	Ant1	92.94	0.32	2.22
n20	5745	Ant2	93.05	0.31	2.22
n20	5785	Ant2	92.92	0.32	2.27
n20	5825	Ant2	92.84	0.32	2.22
n40	5755	Ant1	92.98	0.32	2.27
n40	5795	Ant1	92.94	0.32	2.27
n40	5755	Ant2	91.28	0.4	2.27
n40	5795	Ant2	91.28	0.4	2.27
ac20	5745	Ant1	87.19	0.6	4.55
ac20	5785	Ant1	87.18	0.6	4.35
ac20	5825	Ant1	87.19	0.6	4.35
ac20	5745	Ant2	87.22	0.59	4.35
ac20	5785	Ant2	87.2	0.59	4.35
ac20	5825	Ant2	87.24	0.59	4.55
ac40	5755	Ant1	87.41	0.58	4.35
ac40	5795	Ant1	87.33	0.59	4.35
ac40	5755	Ant2	84.43	0.73	4.55
ac40	5795	Ant2	84.28	0.74	4.55
ac80	5775	Ant1	87.43	0.58	4.17
ac80	5775	Ant2	87.36	0.59	4.17

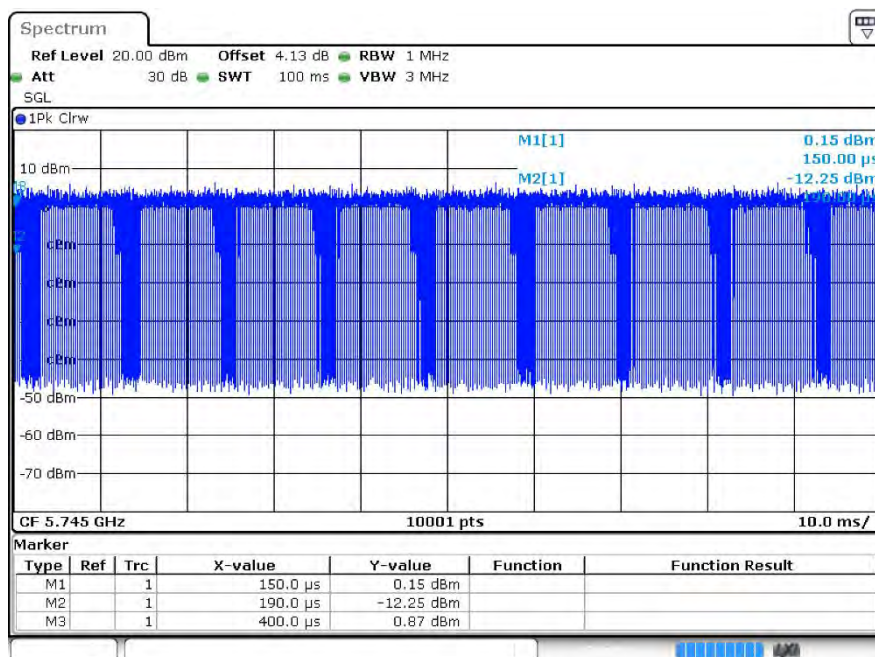
1.2 Test Graphs



Duty Cycle a 5825MHz Ant1

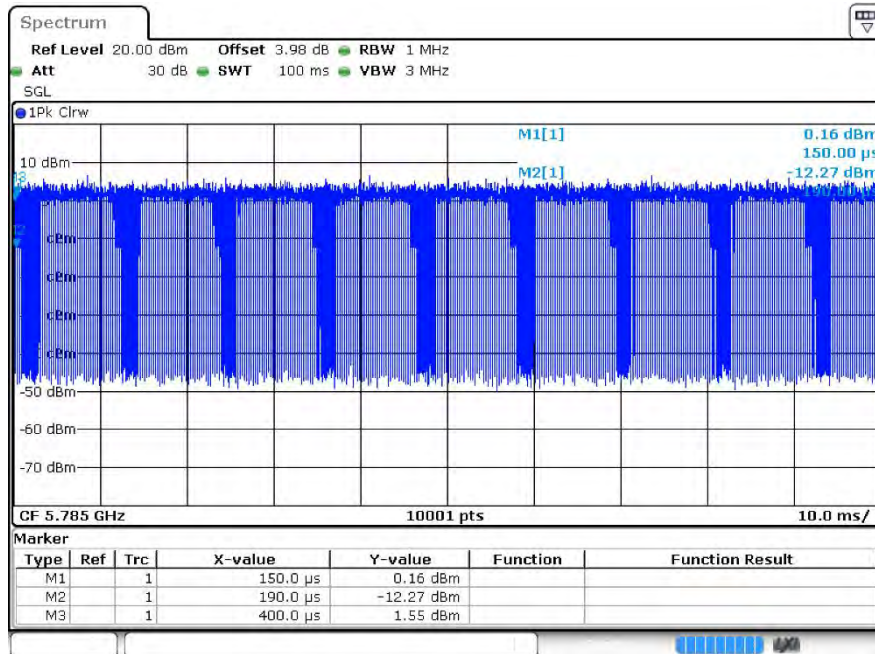


Duty Cycle a 5745MHz Ant2

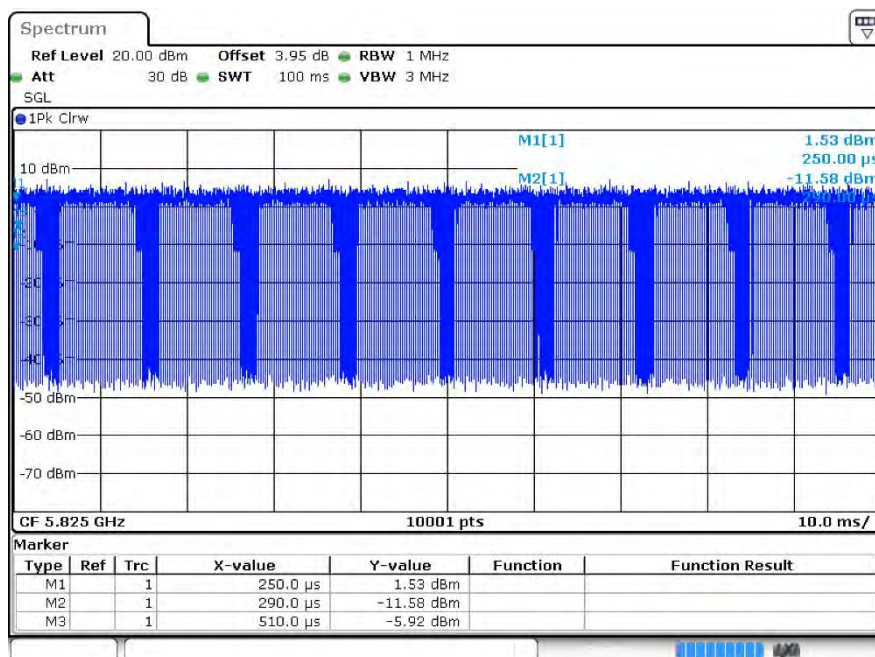




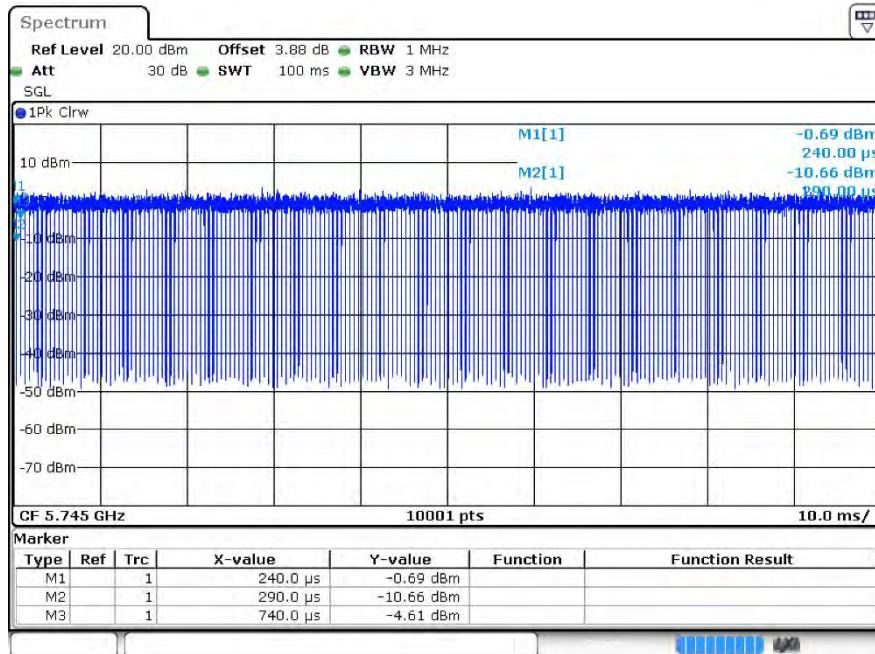
Duty Cycle a 5785MHz Ant2



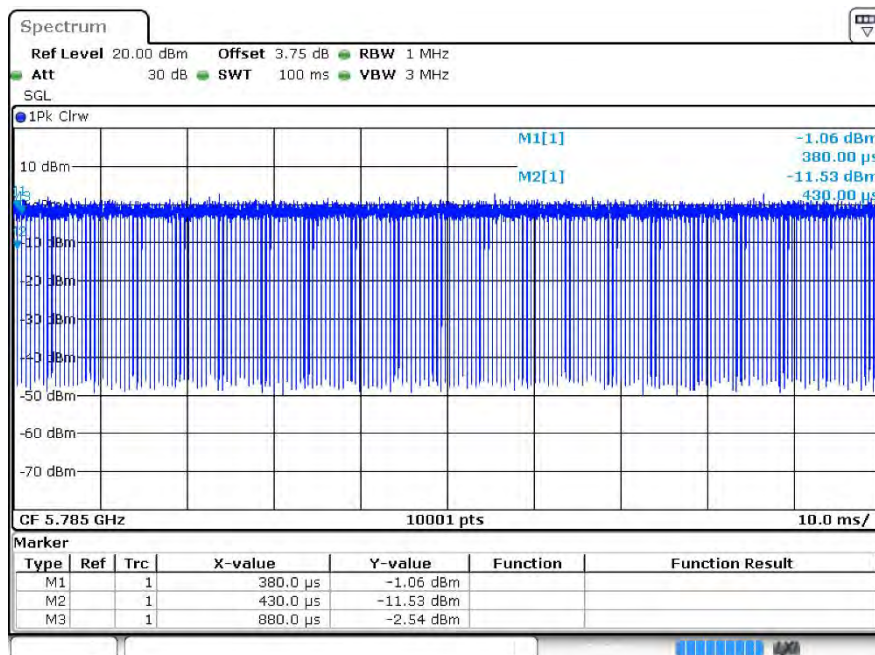
Duty Cycle a 5825MHz Ant2



Duty Cycle n20 5745MHz Ant1

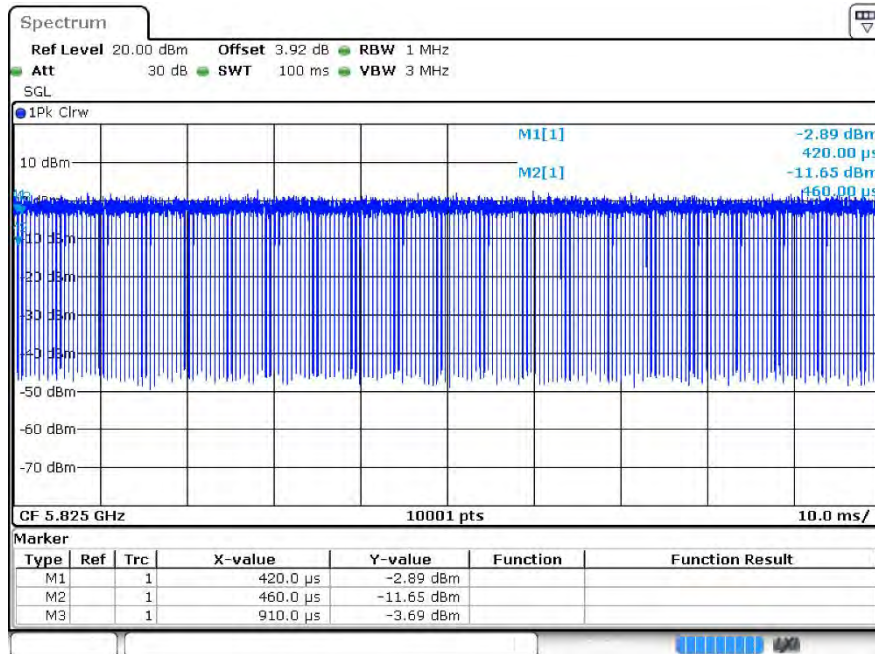


Duty Cycle n20 5785MHz Ant1

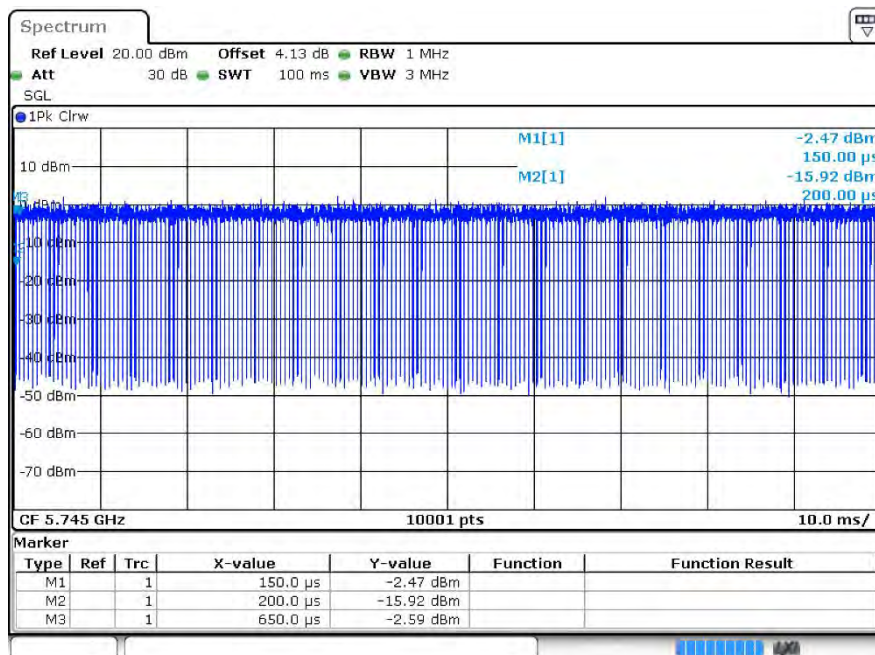




Duty Cycle n20 5825MHz Ant1



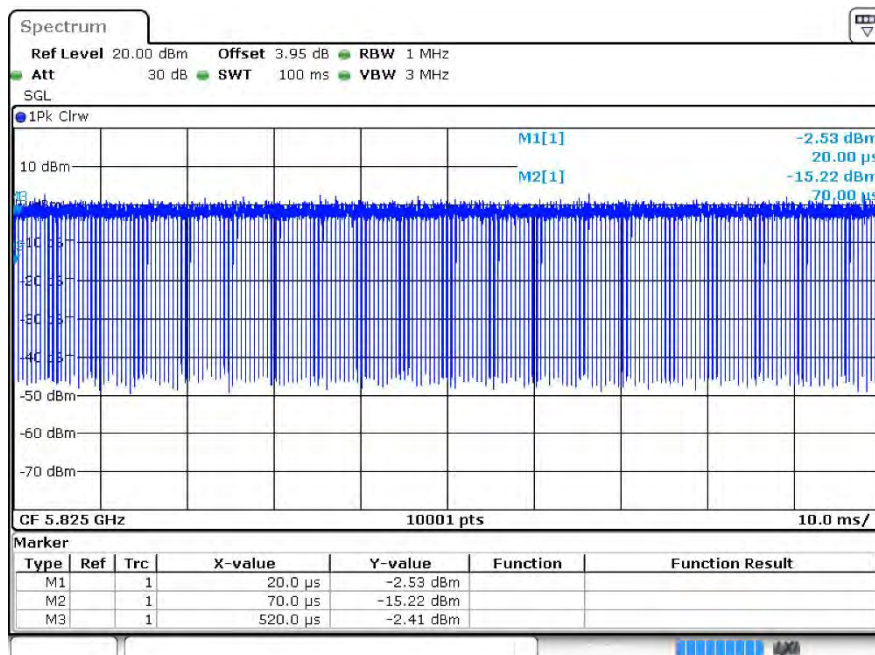
Duty Cycle n20 5745MHz Ant2



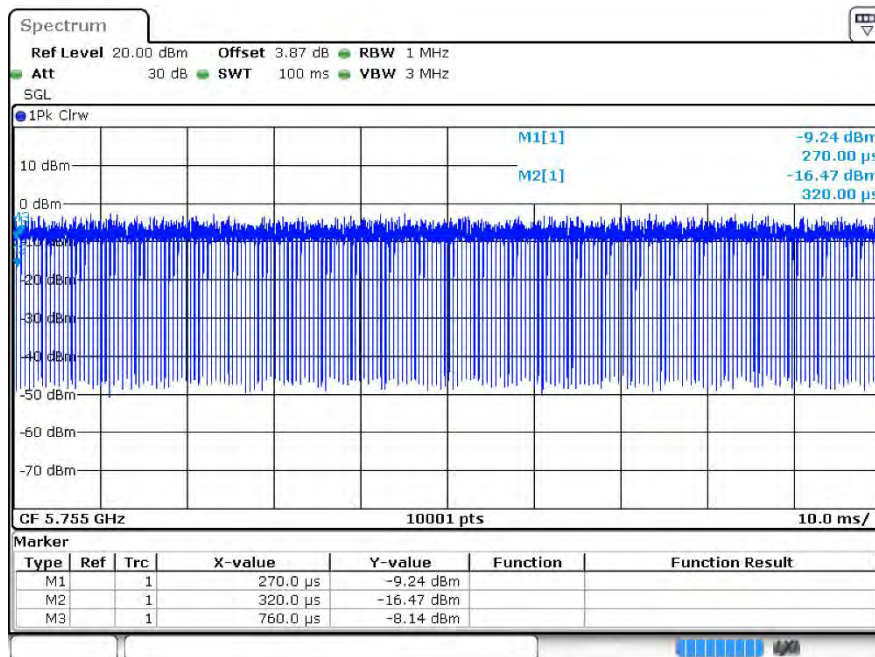
Duty Cycle n20 5785MHz Ant2



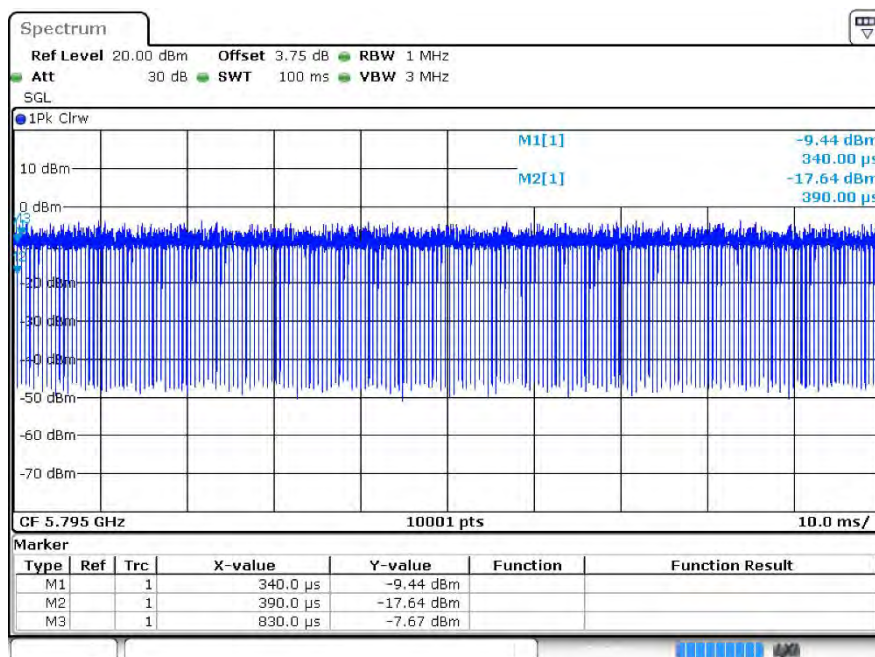
Duty Cycle n20 5825MHz Ant2



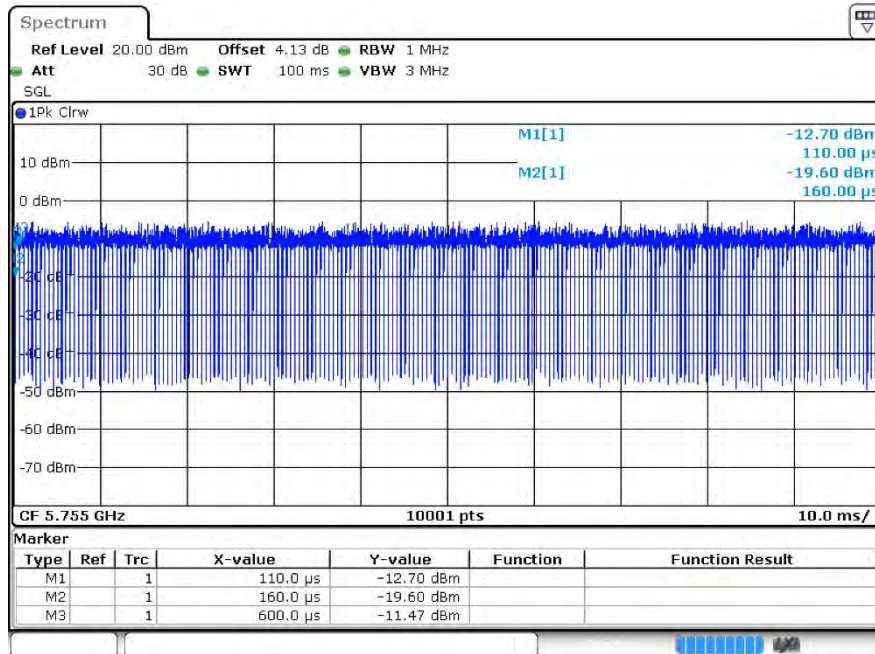
Duty Cycle n40 5755MHz Ant1



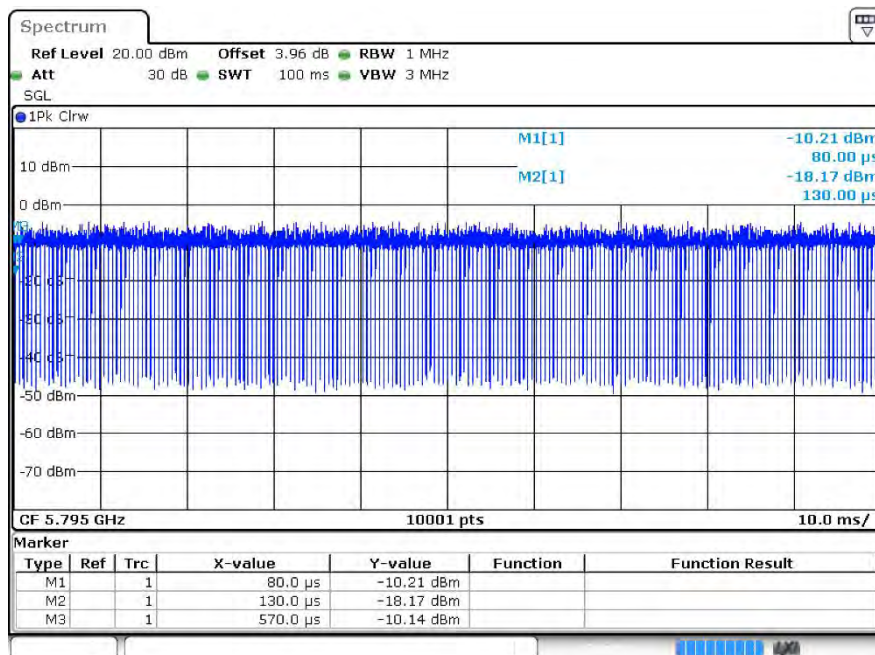
Duty Cycle n40 5795MHz Ant1



Duty Cycle n40 5755MHz Ant2



Duty Cycle n40 5795MHz Ant2

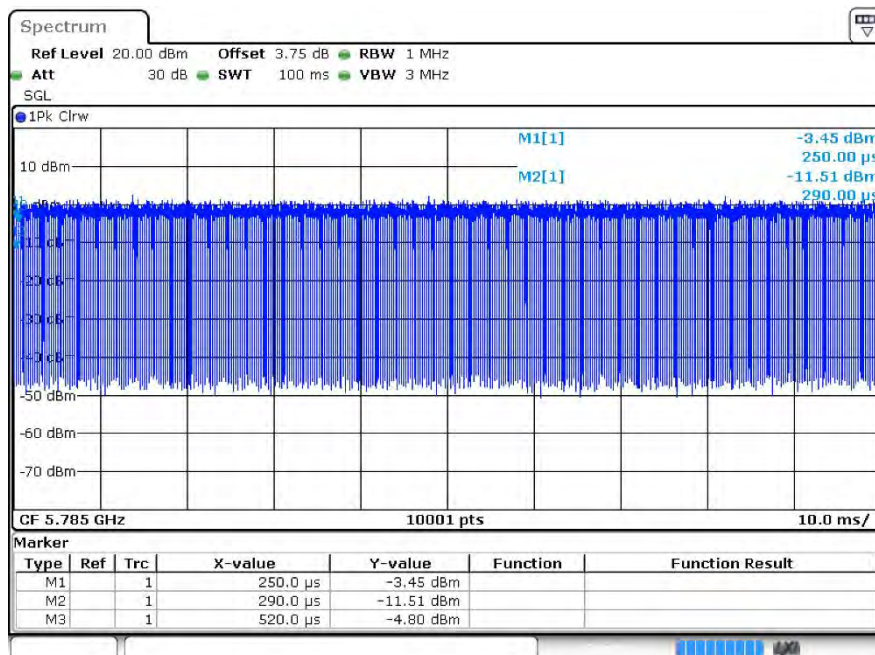




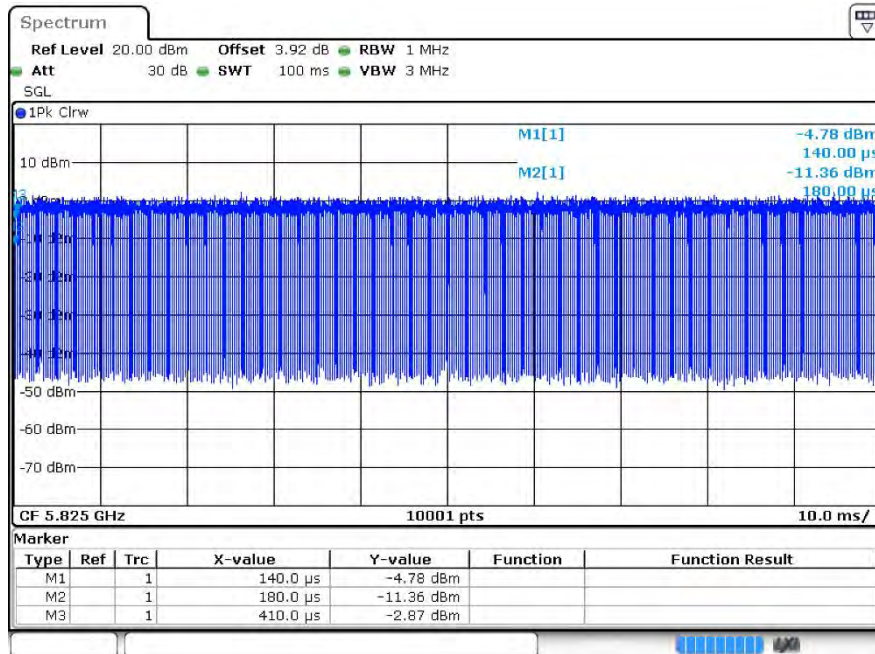
Duty Cycle ac20 5745MHz Ant1



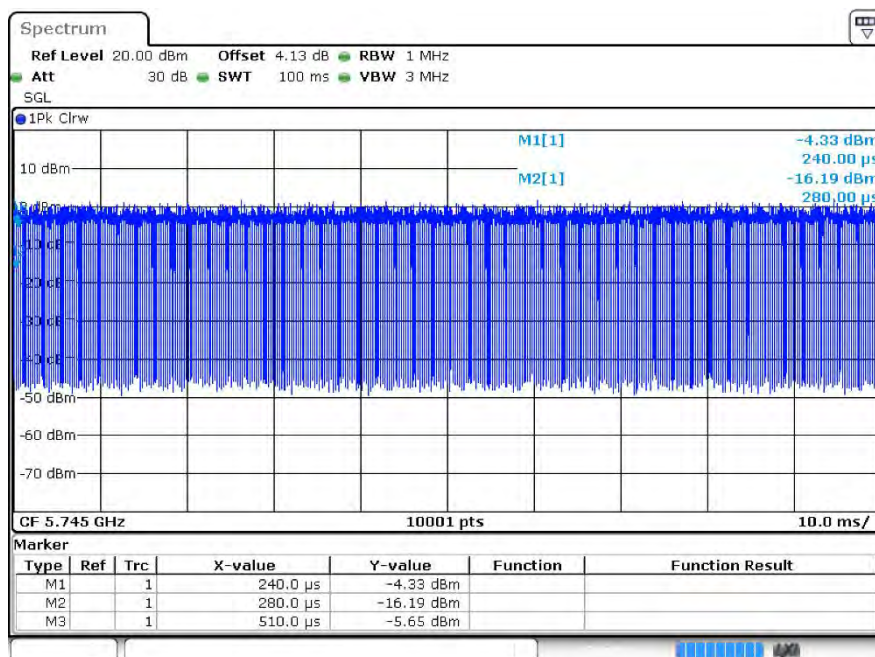
Duty Cycle ac20 5785MHz Ant1



Duty Cycle ac20 5825MHz Ant1



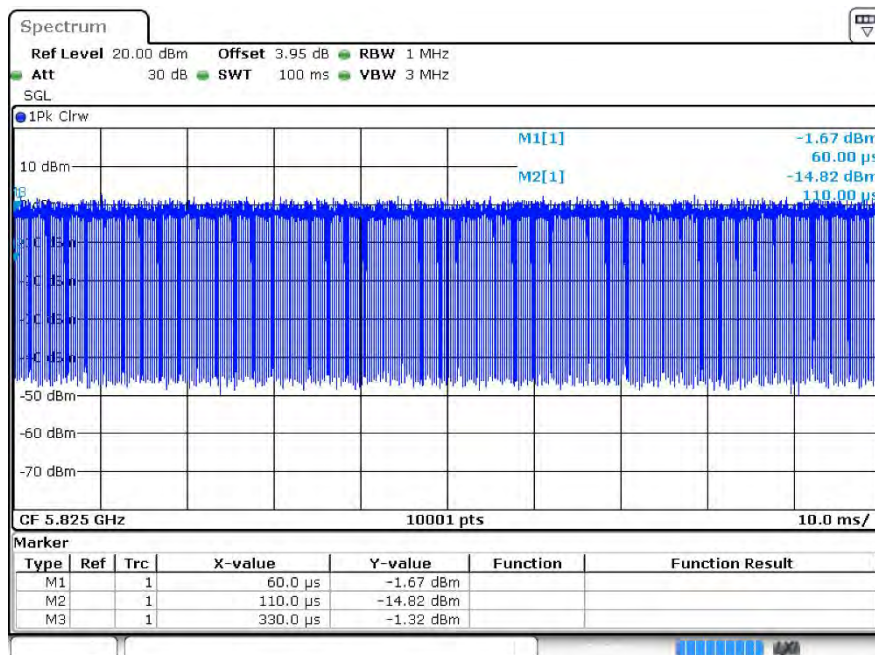
Duty Cycle ac20 5745MHz Ant2



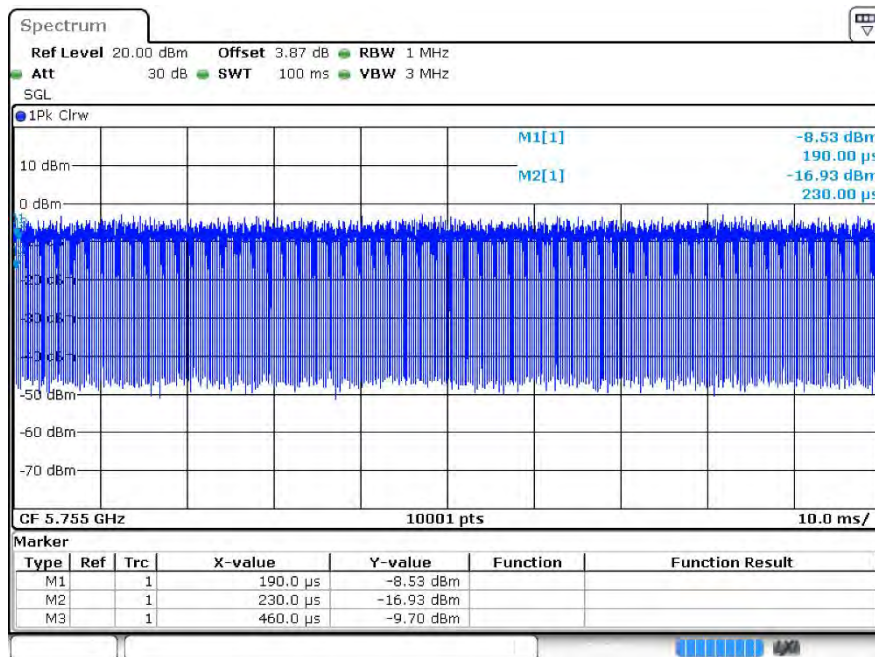
Duty Cycle ac20 5785MHz Ant2



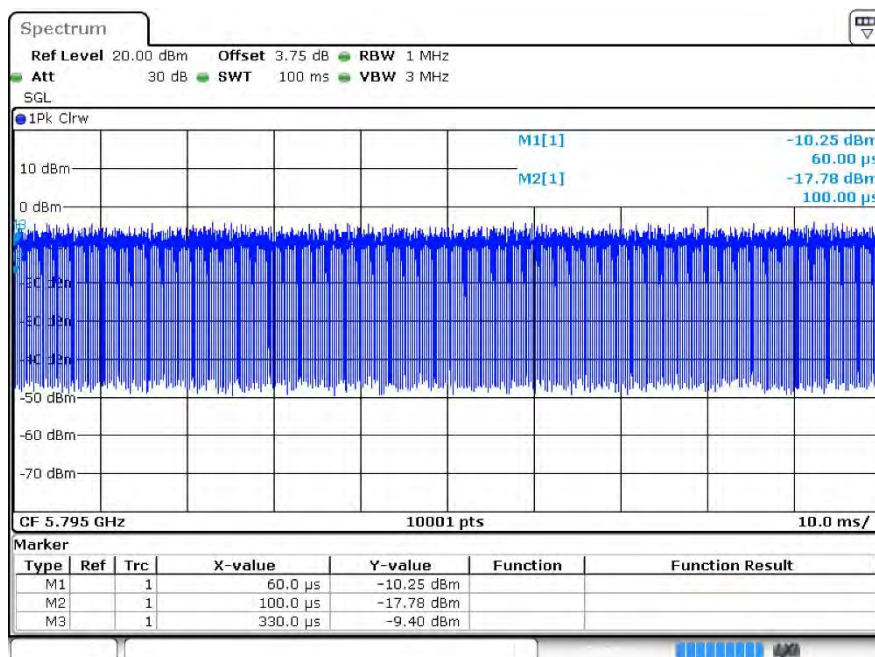
Duty Cycle ac20 5825MHz Ant2



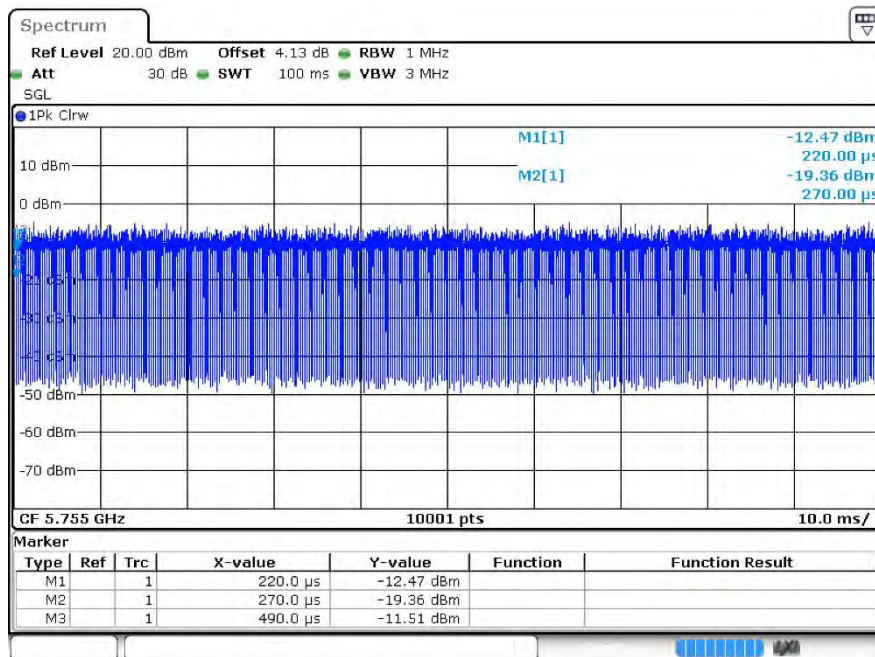
Duty Cycle ac40 5755MHz Ant1



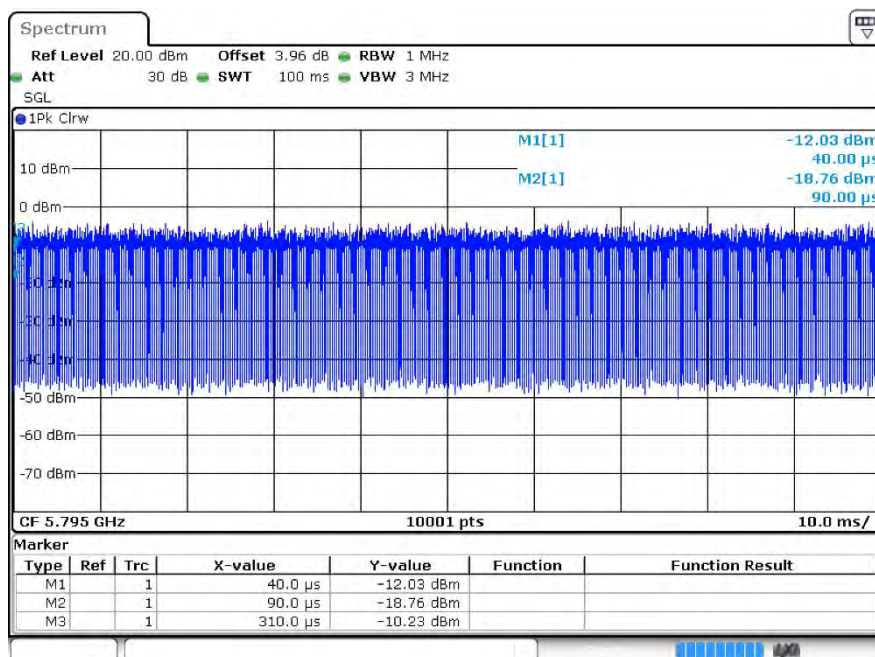
Duty Cycle ac40 5795MHz Ant1



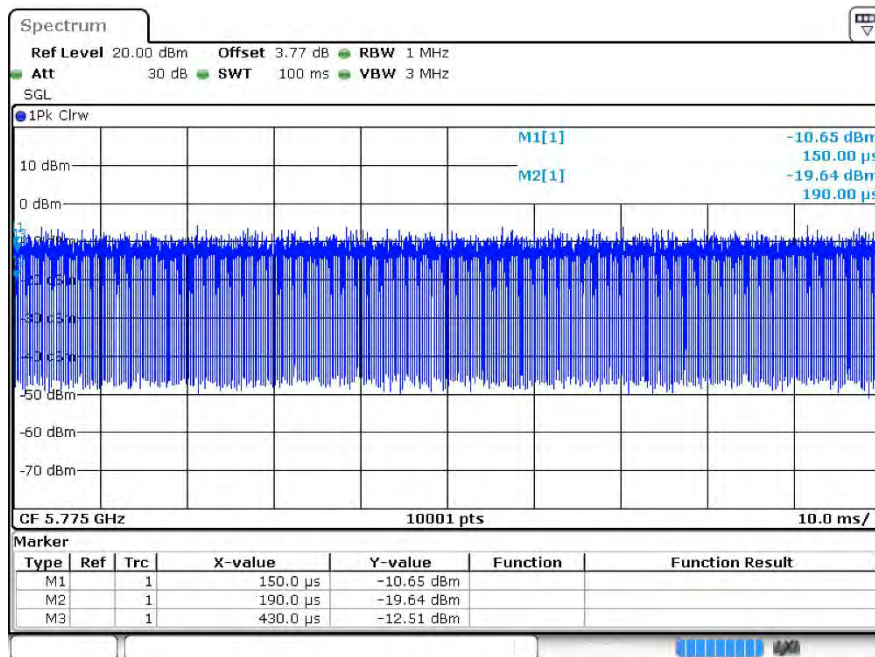
Duty Cycle ac40 5755MHz Ant2



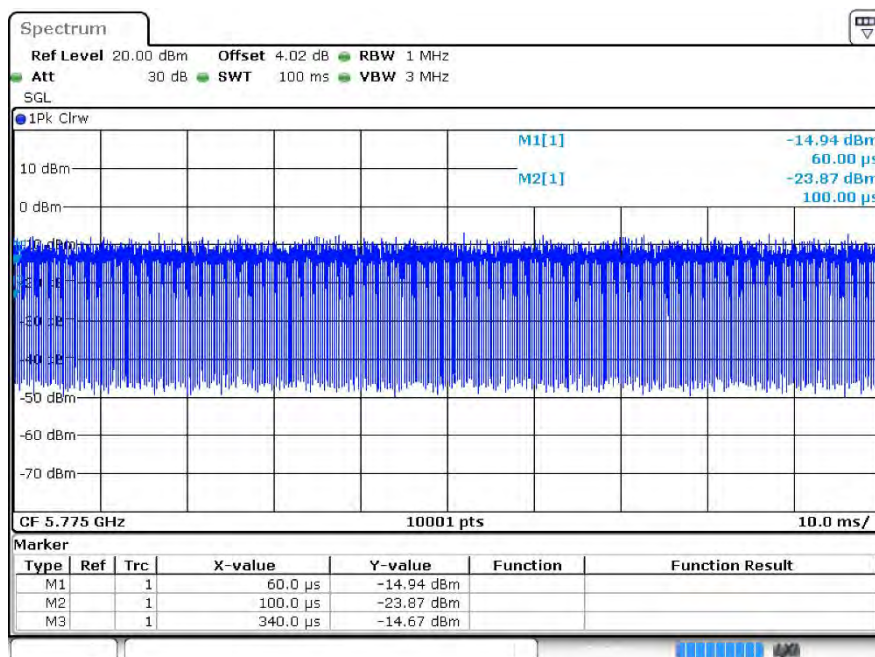
Duty Cycle ac40 5795MHz Ant2



Duty Cycle ac80 5775MHz Ant1



Duty Cycle ac80 5775MHz Ant2



2 Maximum Conducted Output Power

2.1 Test Result

Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
a	5745	Ant1	13.29	30	Pass
a	5785	Ant1	12.55	30	Pass
a	5825	Ant1	12.55	30	Pass
a	5745	Ant2	12.34	30	Pass
a	5785	Ant2	12.4	30	Pass
a	5825	Ant2	13.02	30	Pass
n20	5745	Ant1	9.68	30	Pass
n20	5745	Ant2	8.26	30	Pass
n20	5745	Sum	12.05	27.49	Pass
n20	5785	Ant1	9.02	30	Pass
n20	5785	Ant2	8.35	30	Pass
n20	5785	Sum	11.65	27.49	Pass
n20	5825	Ant1	8.92	30	Pass
n20	5825	Ant2	8.95	30	Pass
n20	5825	Sum	11.92	27.49	Pass
n40	5755	Ant1	9.39	30	Pass
n40	5755	Ant2	7.42	30	Pass
n40	5755	Sum	11.51	27.49	Pass
n40	5795	Ant1	8.52	30	Pass
n40	5795	Ant2	7.98	30	Pass
n40	5795	Sum	11.22	27.49	Pass
ac20	5745	Ant1	9.69	30	Pass
ac20	5745	Ant2	8.6	30	Pass
ac20	5745	Sum	12.2	27.49	Pass
ac20	5785	Ant1	8.85	30	Pass
ac20	5785	Ant2	8.67	30	Pass
ac20	5785	Sum	11.81	27.49	Pass
ac20	5825	Ant1	8.91	30	Pass
ac20	5825	Ant2	9.21	30	Pass
ac20	5825	Sum	12.05	27.49	Pass
ac40	5755	Ant1	9.39	30	Pass
ac40	5755	Ant2	7.67	30	Pass
ac40	5755	Sum	11.61	27.49	Pass
ac40	5795	Ant1	8.43	30	Pass
ac40	5795	Ant2	8.24	30	Pass
ac40	5795	Sum	11.37	27.49	Pass



ac80	5775	Ant1	8.49	30	Pass
ac80	5775	Ant2	7.73	30	Pass
ac80	5775	Sum	11.27	27.49	Pass

Note:

The duty factor has been compensated into the result.

Note:

For MIMO mode:

Directional gain= $10\log[(10^{G1/20}+10^{G2/20})^2/2]$ dBi=8.51dBi

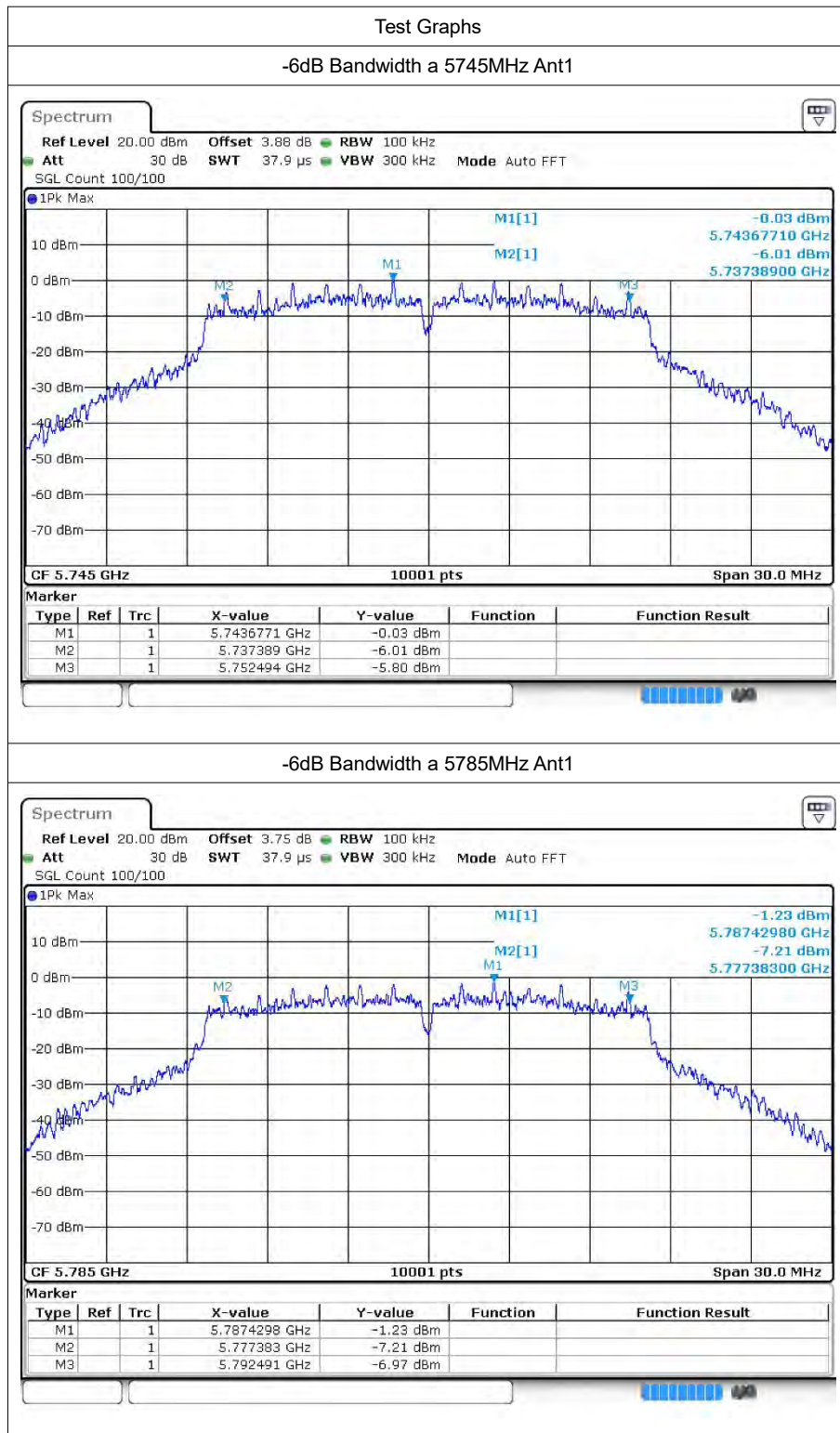
Limit = $30-(8.51-6)=27.49$ dBm for POWER

3 -6dB Bandwidth

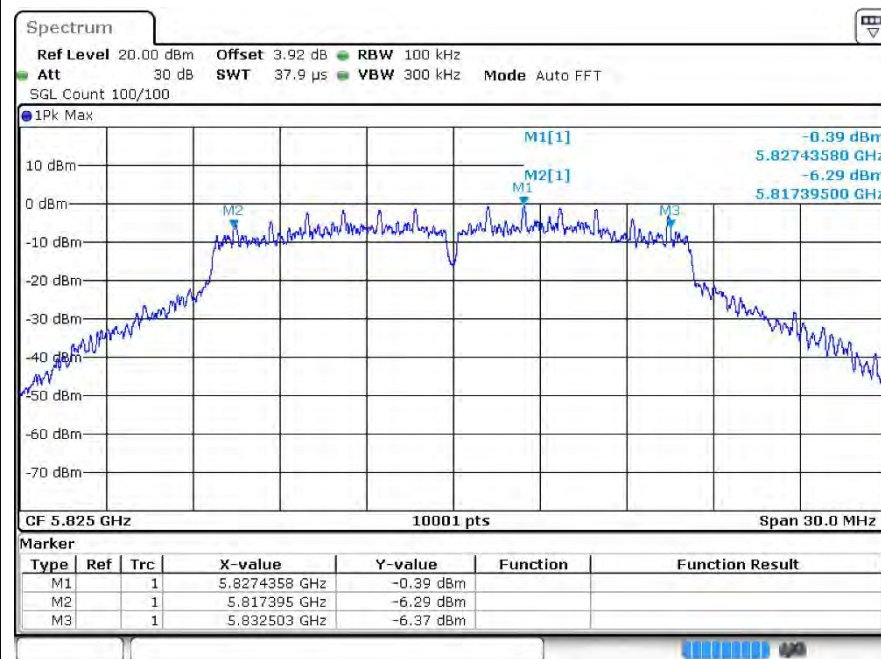
3.1 Test Result

Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
a	5745	Ant1	15.105	0.5	Pass
a	5785	Ant1	15.108	0.5	Pass
a	5825	Ant1	15.108	0.5	Pass
n20	5745	Ant1	15.096	0.5	Pass
n20	5785	Ant1	15.111	0.5	Pass
n20	5825	Ant1	15.12	0.5	Pass
n40	5755	Ant1	35.04	0.5	Pass
n40	5795	Ant1	31.32	0.5	Pass
ac20	5745	Ant1	15.111	0.5	Pass
ac20	5785	Ant1	15.033	0.5	Pass
ac20	5825	Ant1	15.108	0.5	Pass
ac40	5755	Ant1	33.816	0.5	Pass
ac40	5795	Ant1	35.082	0.5	Pass
ac80	5775	Ant1	72.54	0.5	Pass
a	5745	Ant2	15.117	0.5	Pass
a	5785	Ant2	15.099	0.5	Pass
a	5825	Ant2	15.111	0.5	Pass
n20	5745	Ant2	15.108	0.5	Pass
n20	5785	Ant2	15.066	0.5	Pass
n20	5825	Ant2	15.096	0.5	Pass
n40	5755	Ant2	35.082	0.5	Pass
n40	5795	Ant2	31.332	0.5	Pass
ac20	5745	Ant2	16.632	0.5	Pass
ac20	5785	Ant2	15.108	0.5	Pass
ac20	5825	Ant2	15.111	0.5	Pass
ac40	5755	Ant2	33.828	0.5	Pass
ac40	5795	Ant2	35.04	0.5	Pass
ac80	5775	Ant2	75.06	0.5	Pass

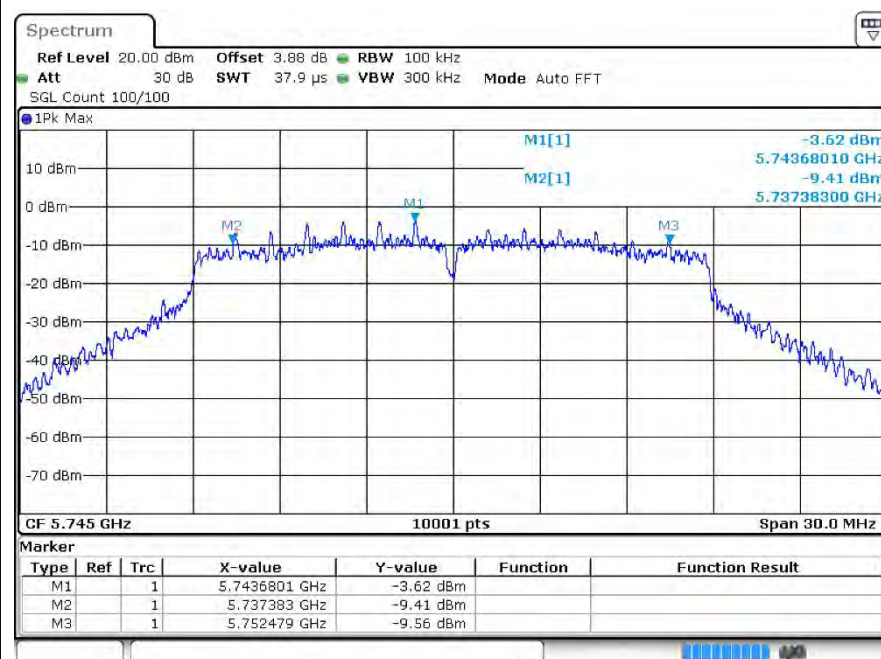
3.2 Test Graphs



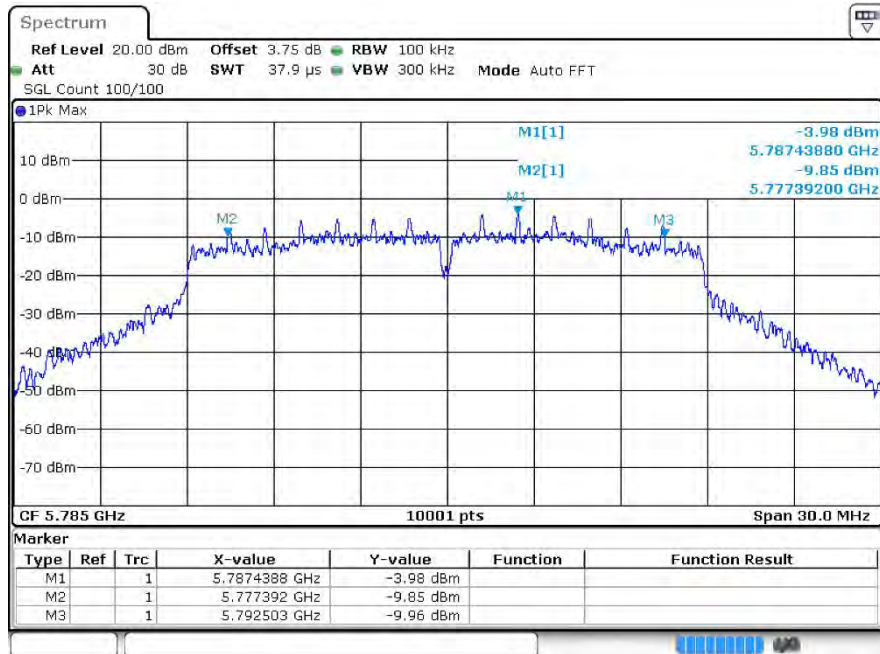
-6dB Bandwidth a 5825MHz Ant1



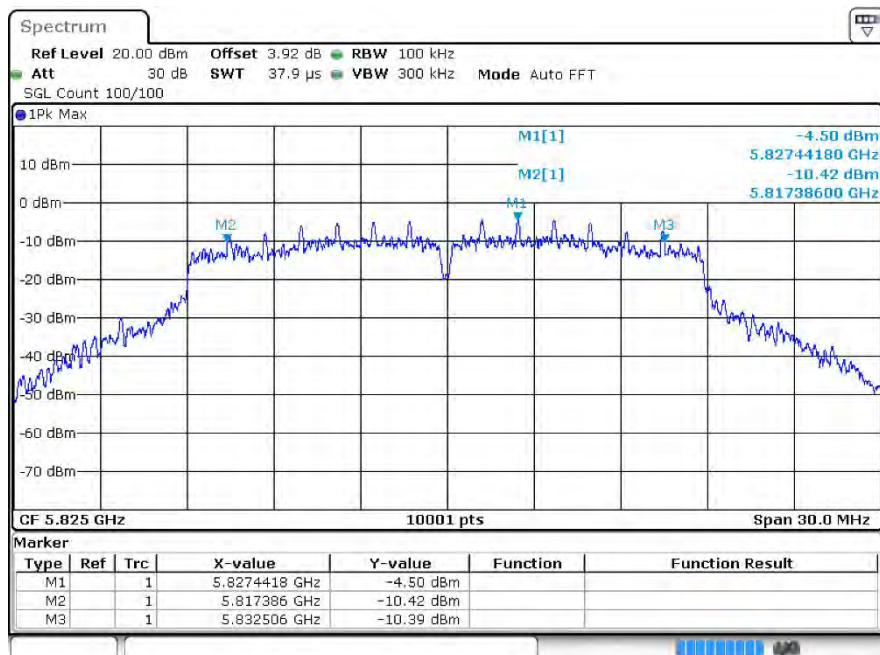
-6dB Bandwidth n20 5745MHz Ant1



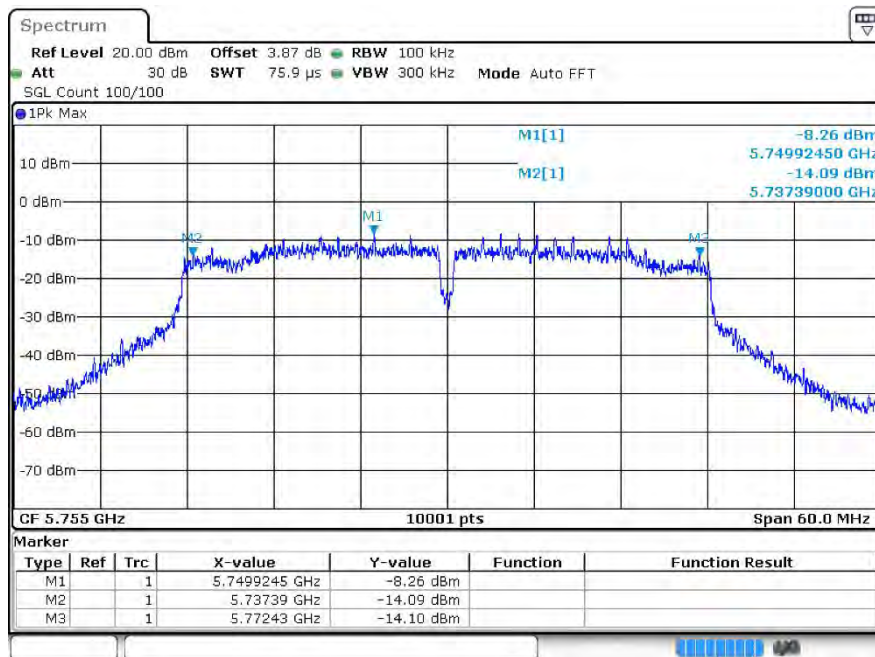
-6dB Bandwidth n20 5785MHz Ant1



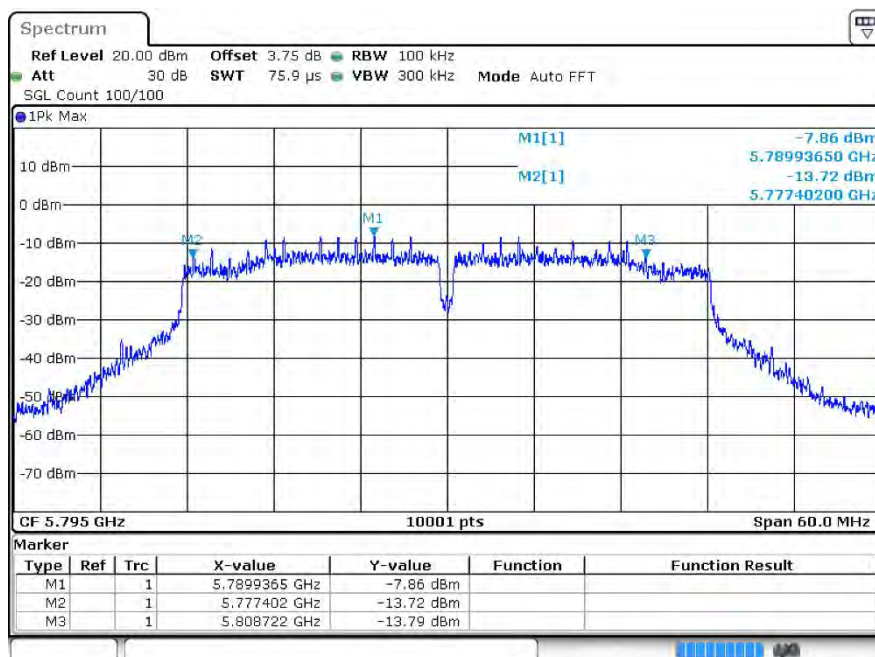
-6dB Bandwidth n20 5825MHz Ant1



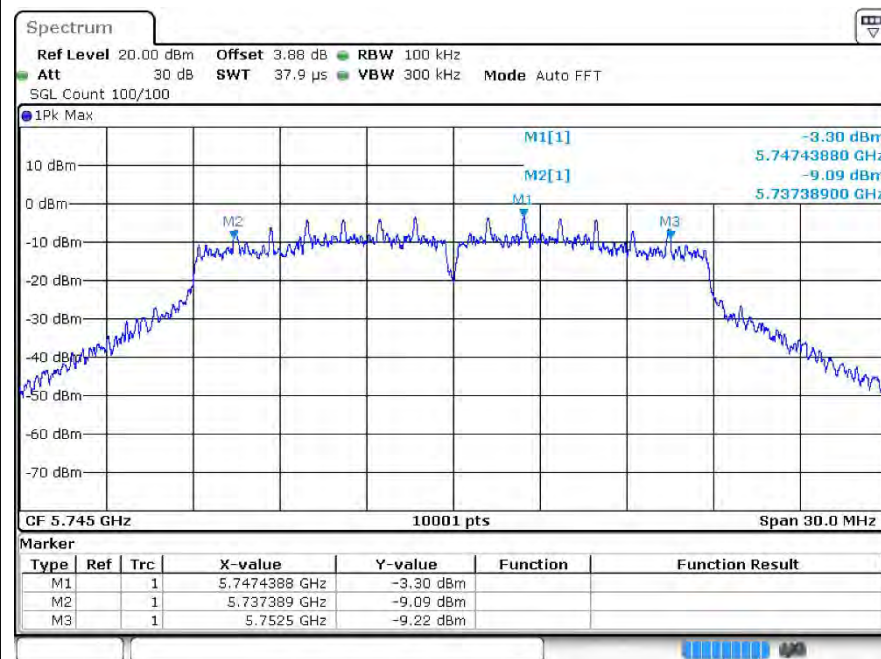
-6dB Bandwidth n40 5755MHz Ant1



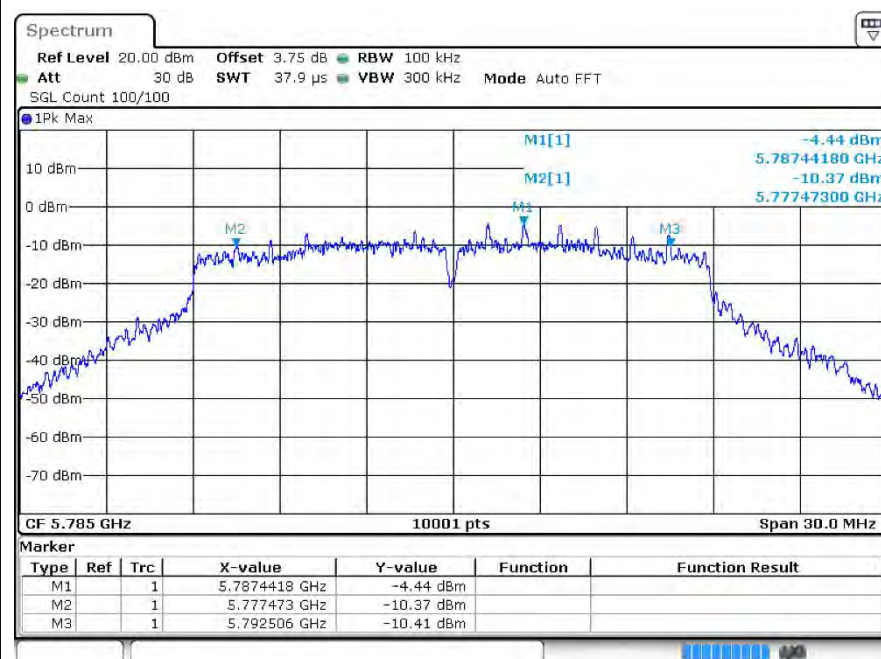
-6dB Bandwidth n40 5795MHz Ant1



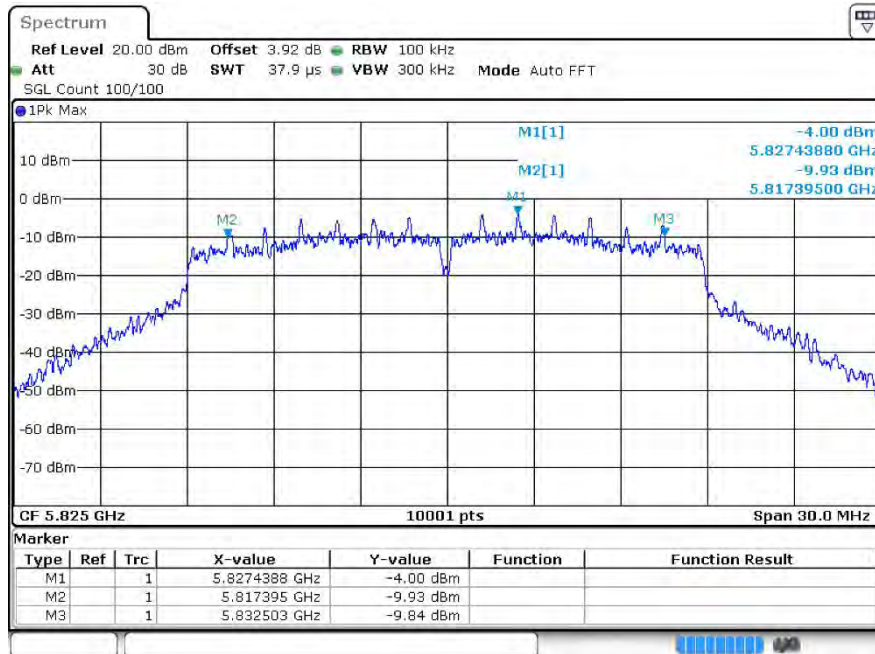
-6dB Bandwidth ac20 5745MHz Ant1



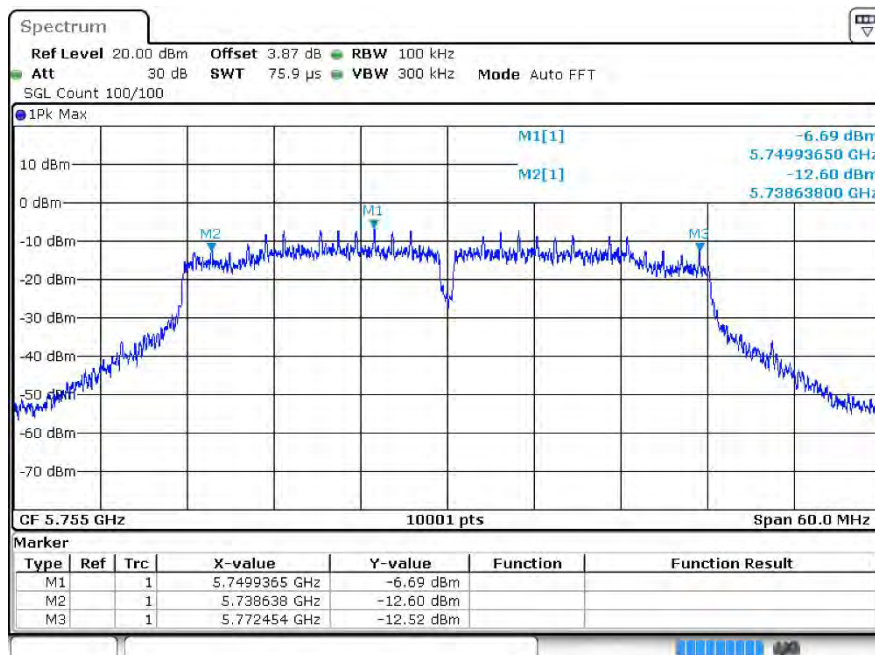
-6dB Bandwidth ac20 5785MHz Ant1



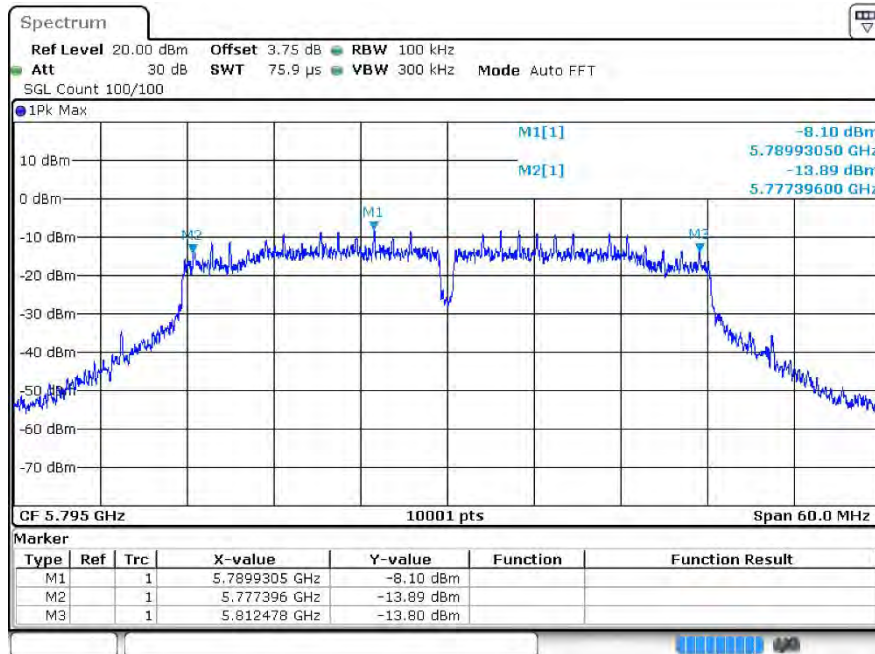
-6dB Bandwidth ac20 5825MHz Ant1



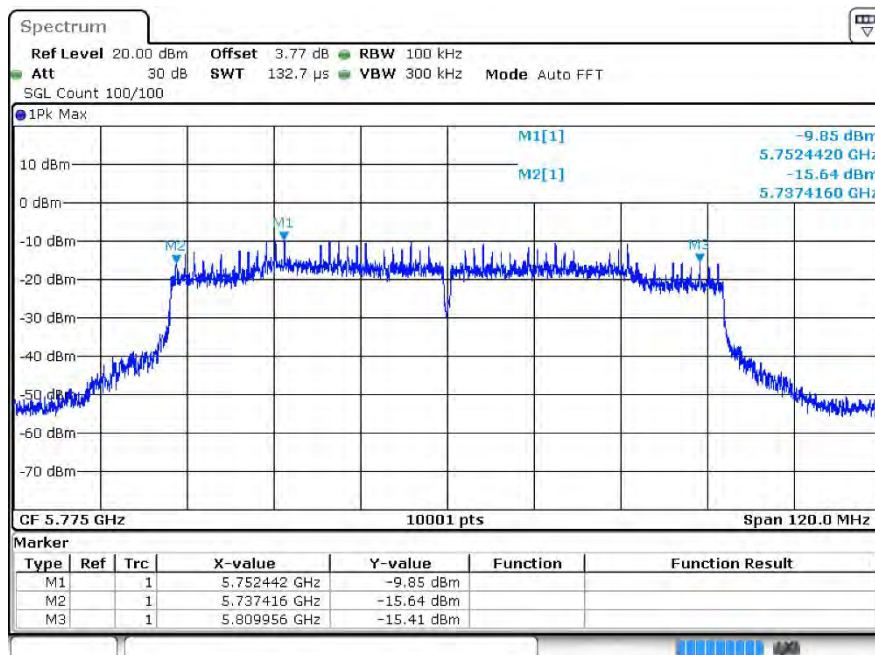
-6dB Bandwidth ac40 5755MHz Ant1



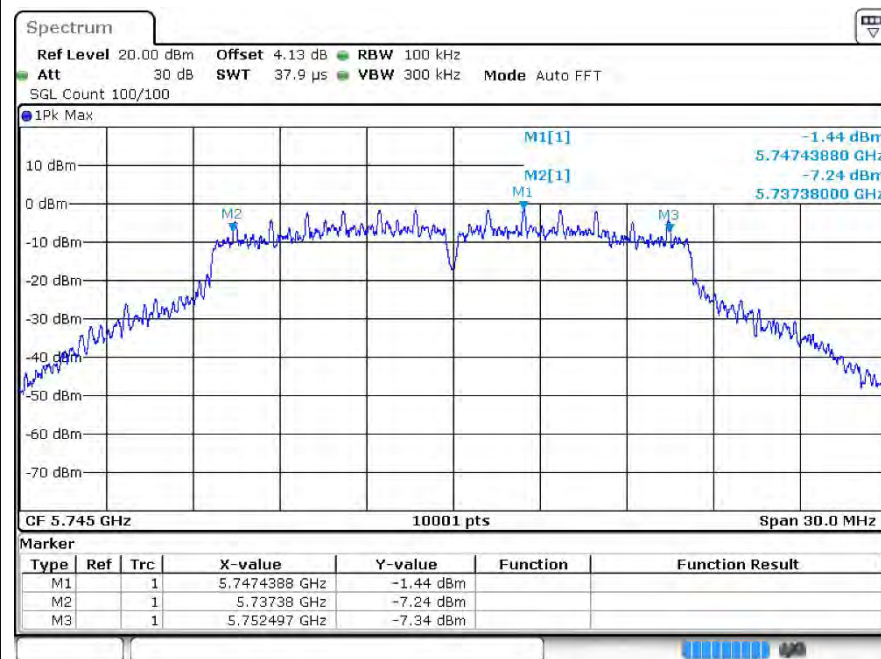
-6dB Bandwidth ac40 5795MHz Ant1



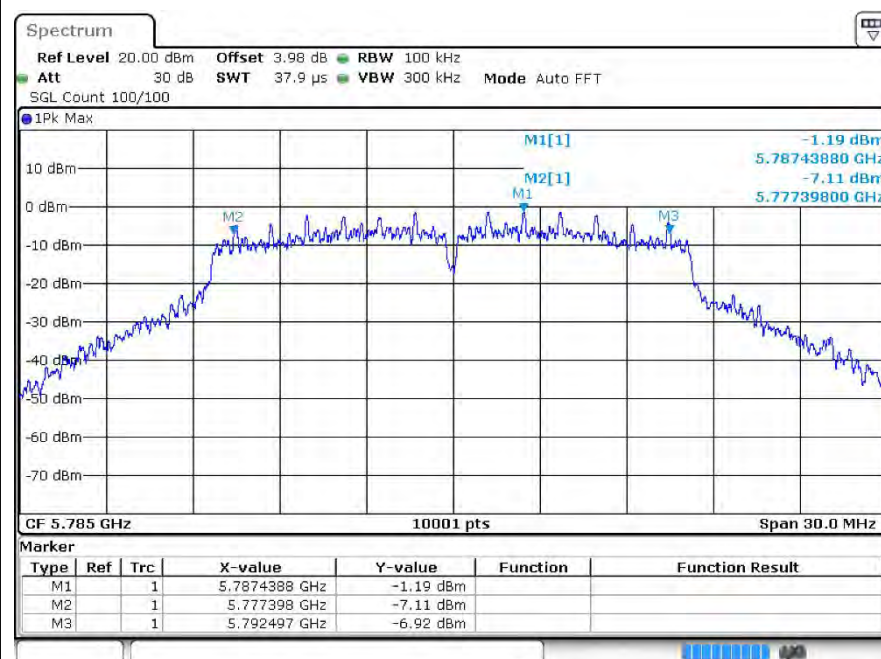
-6dB Bandwidth ac80 5775MHz Ant1



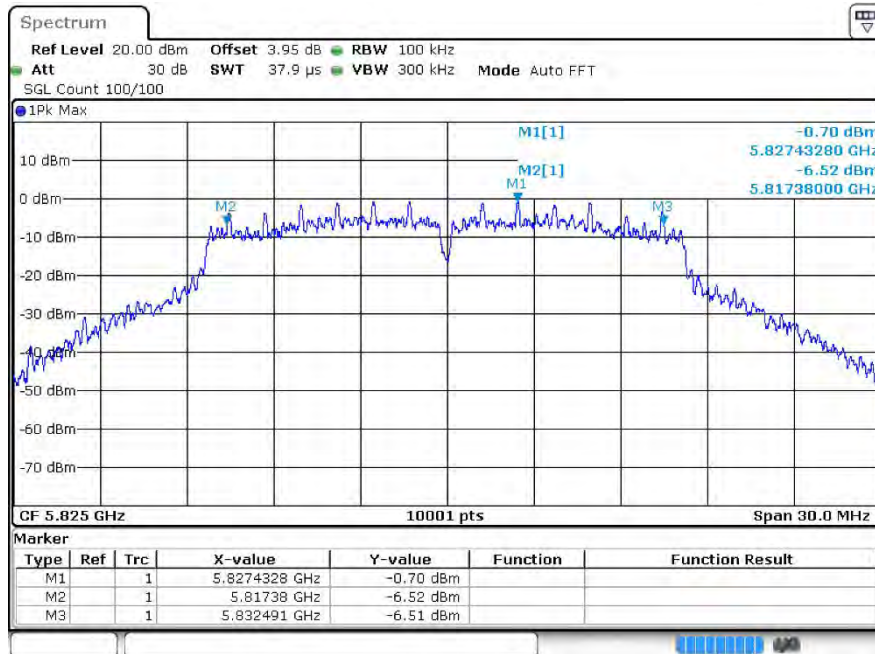
-6dB Bandwidth a 5745MHz Ant2



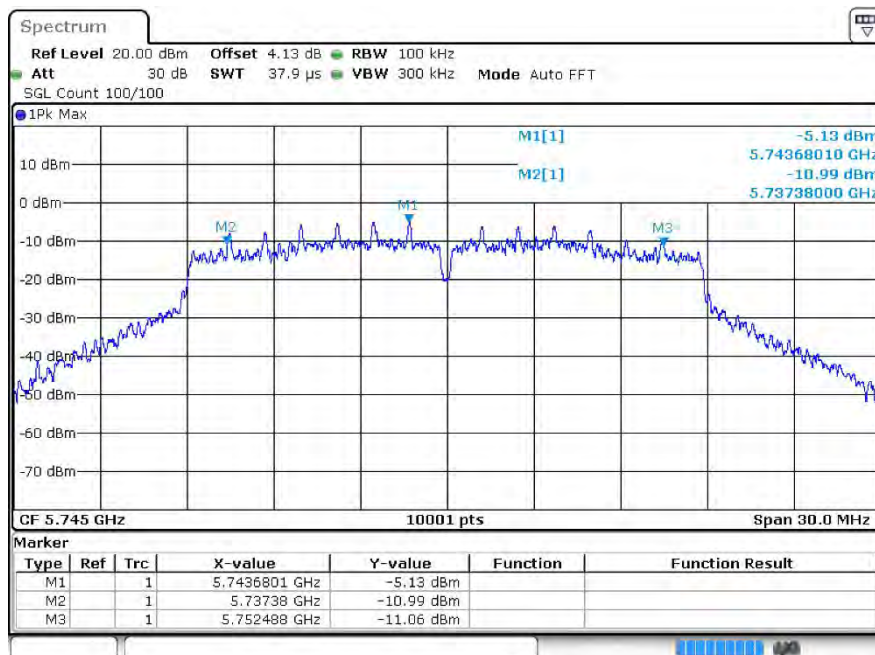
-6dB Bandwidth a 5785MHz Ant2



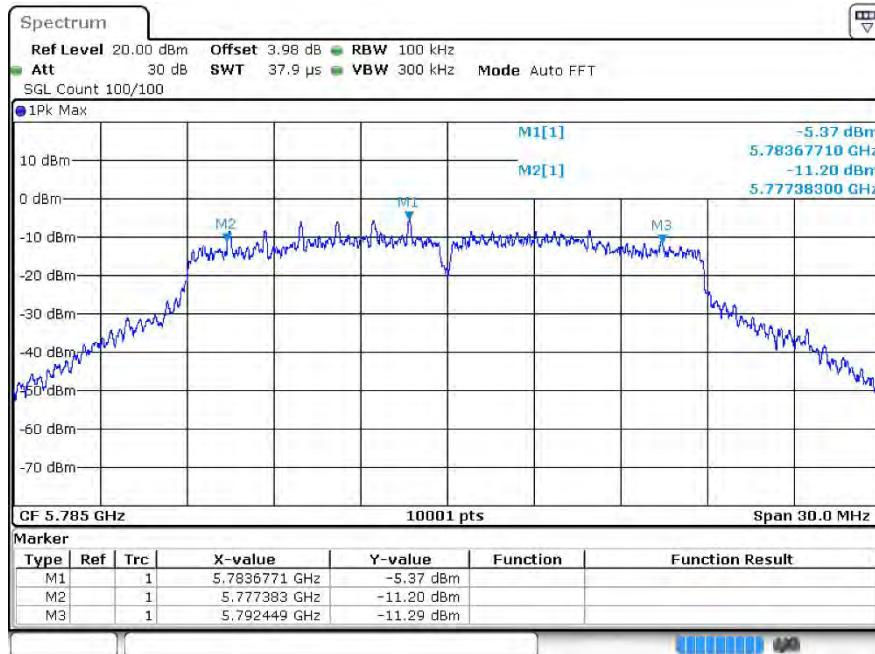
-6dB Bandwidth a 5825MHz Ant2



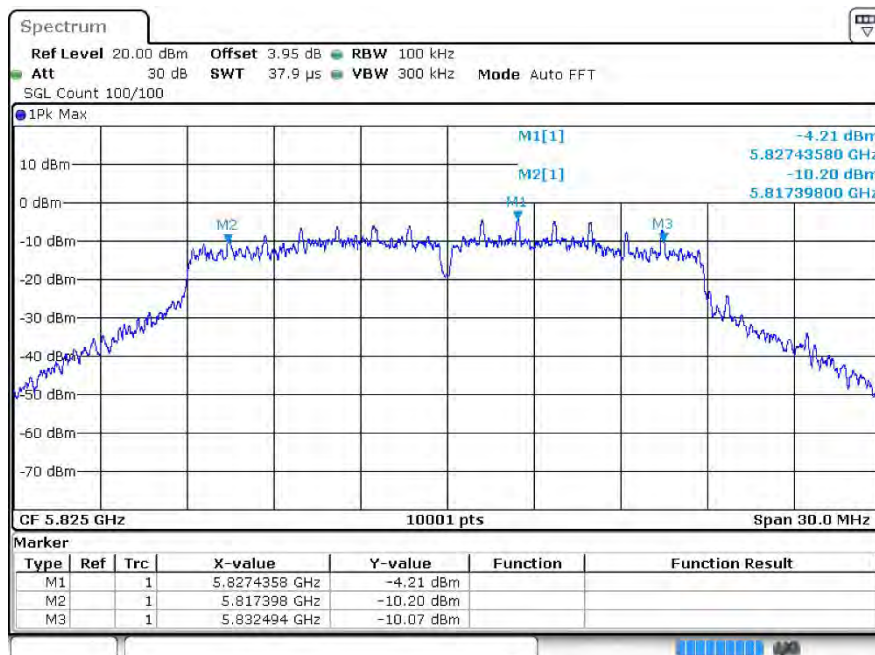
-6dB Bandwidth n20 5745MHz Ant2



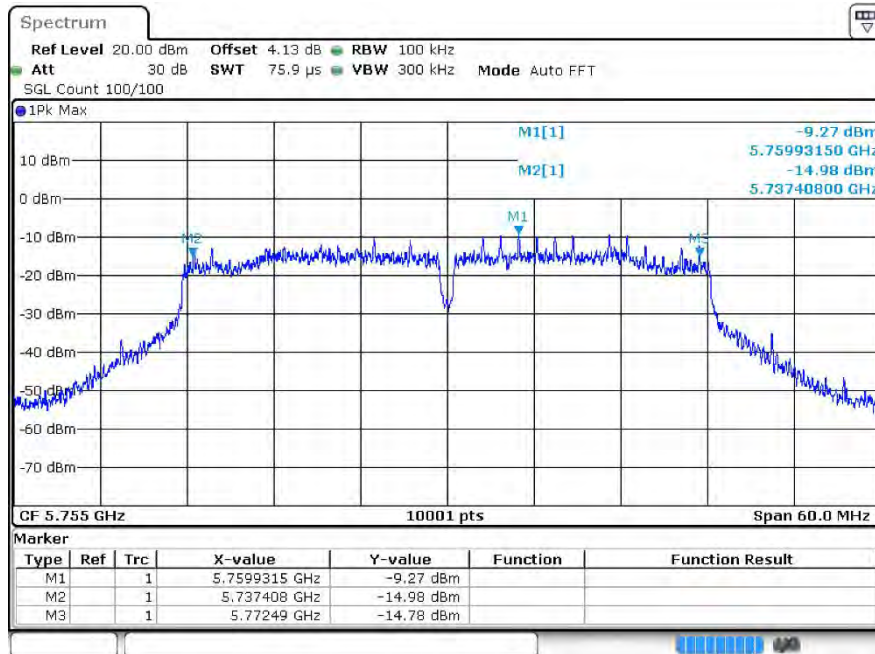
-6dB Bandwidth n20 5785MHz Ant2



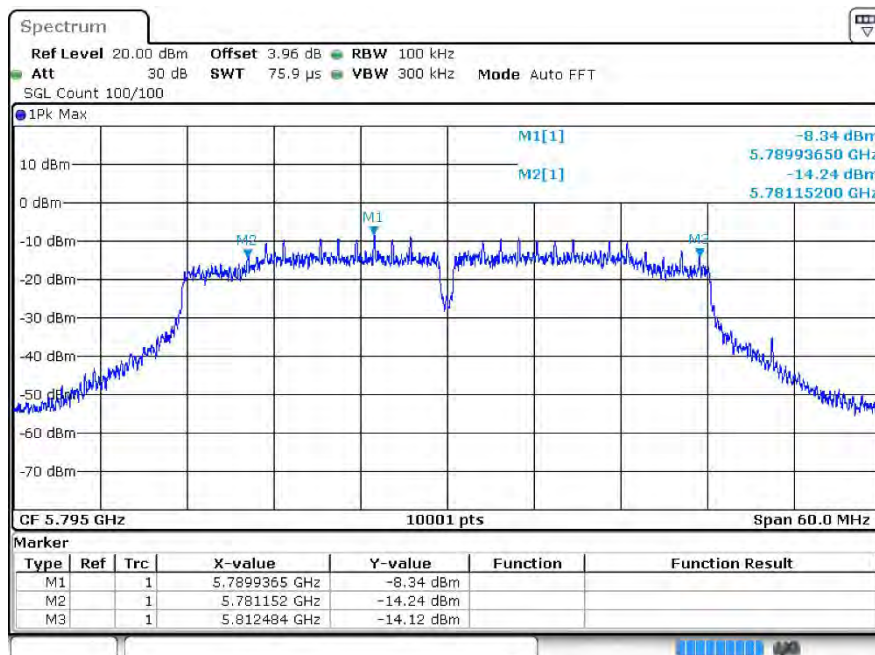
-6dB Bandwidth n20 5825MHz Ant2



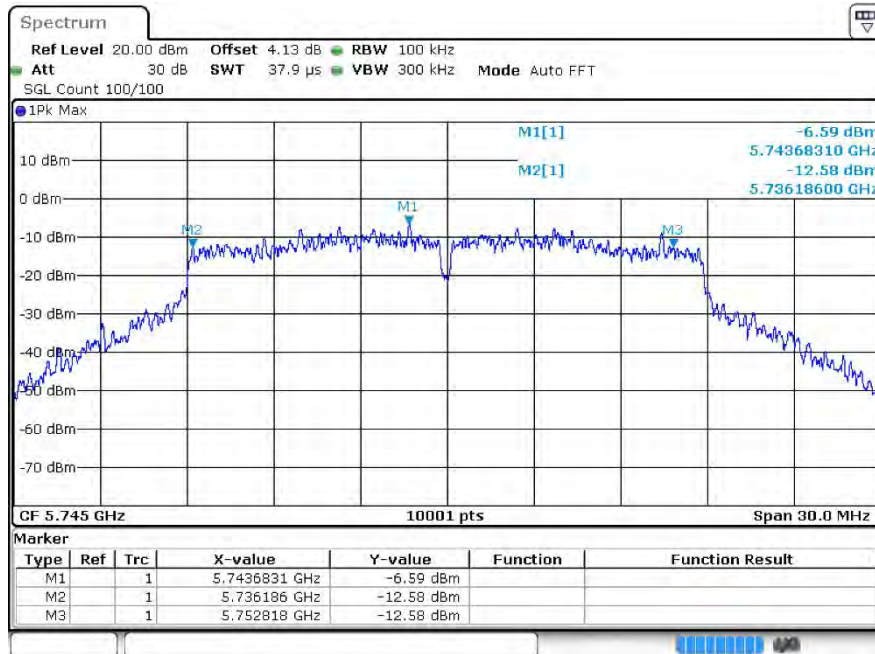
-6dB Bandwidth n40 5755MHz Ant2



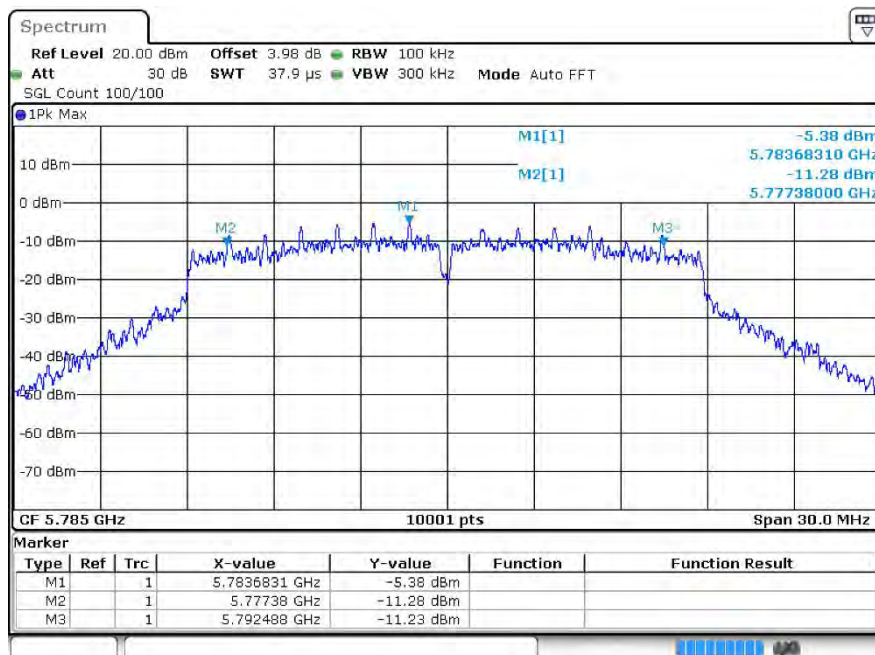
-6dB Bandwidth n40 5795MHz Ant2



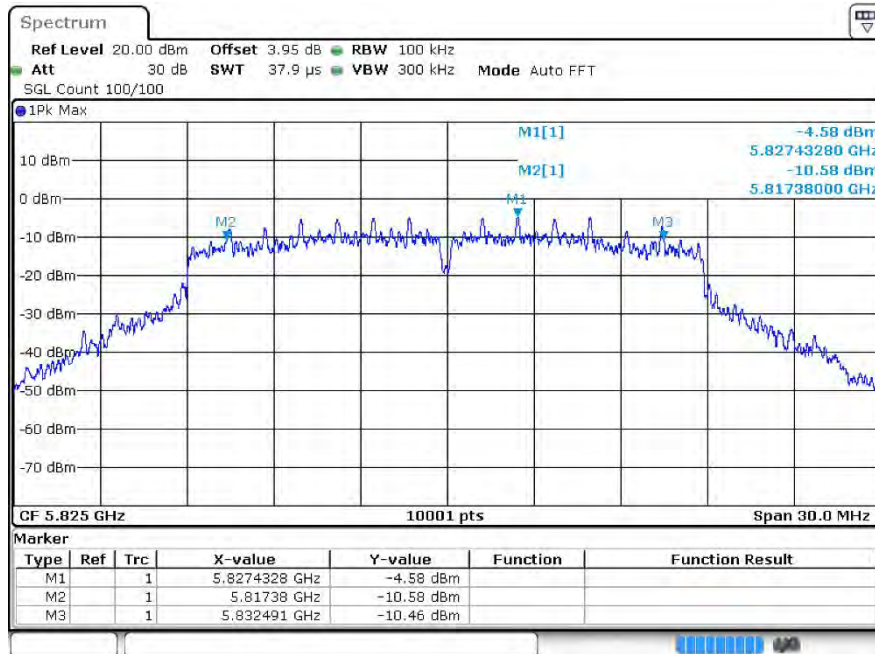
-6dB Bandwidth ac20 5745MHz Ant2



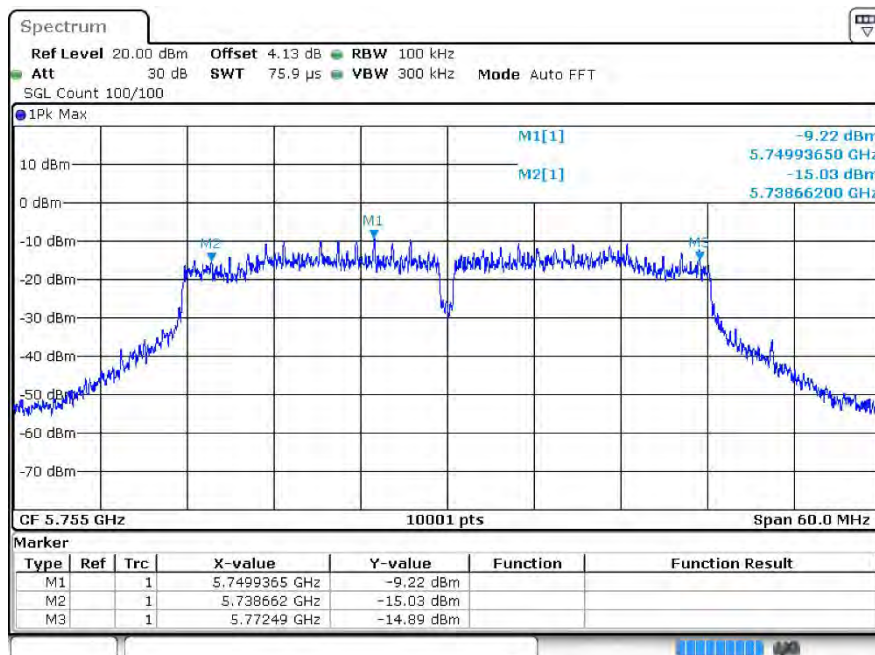
-6dB Bandwidth ac20 5785MHz Ant2



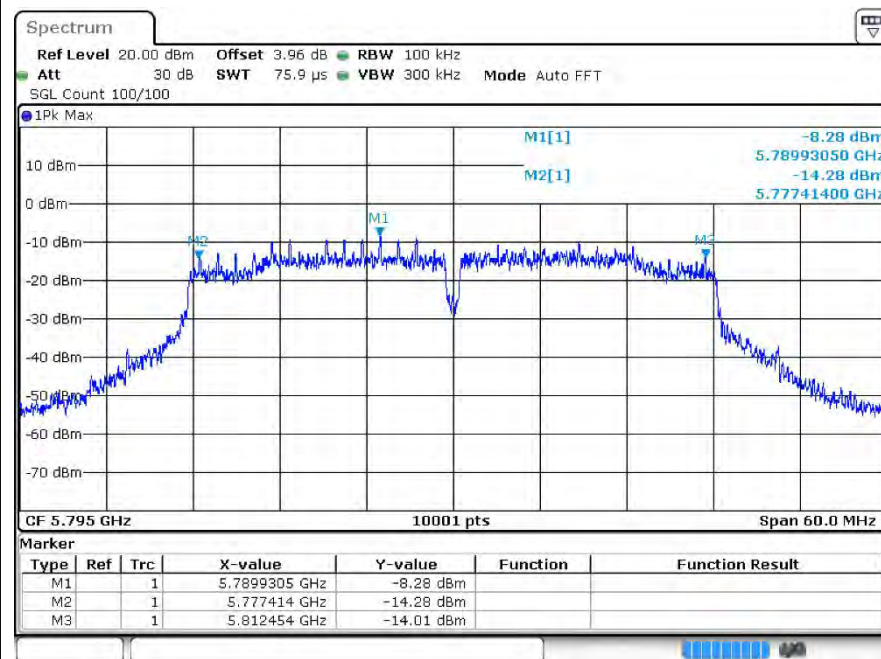
-6dB Bandwidth ac20 5825MHz Ant2



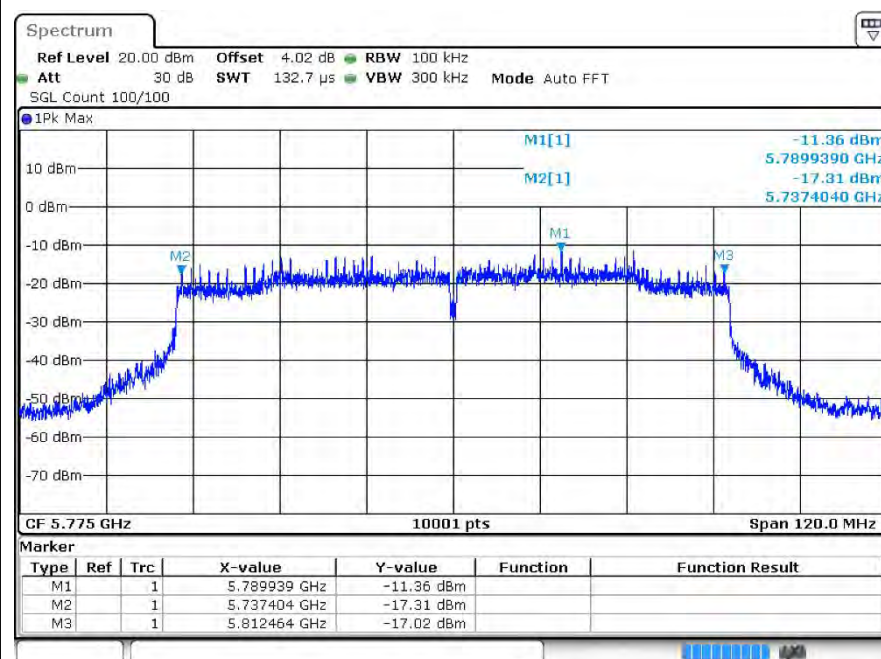
-6dB Bandwidth ac40 5755MHz Ant2



-6dB Bandwidth ac40 5795MHz Ant2



-6dB Bandwidth ac80 5775MHz Ant2

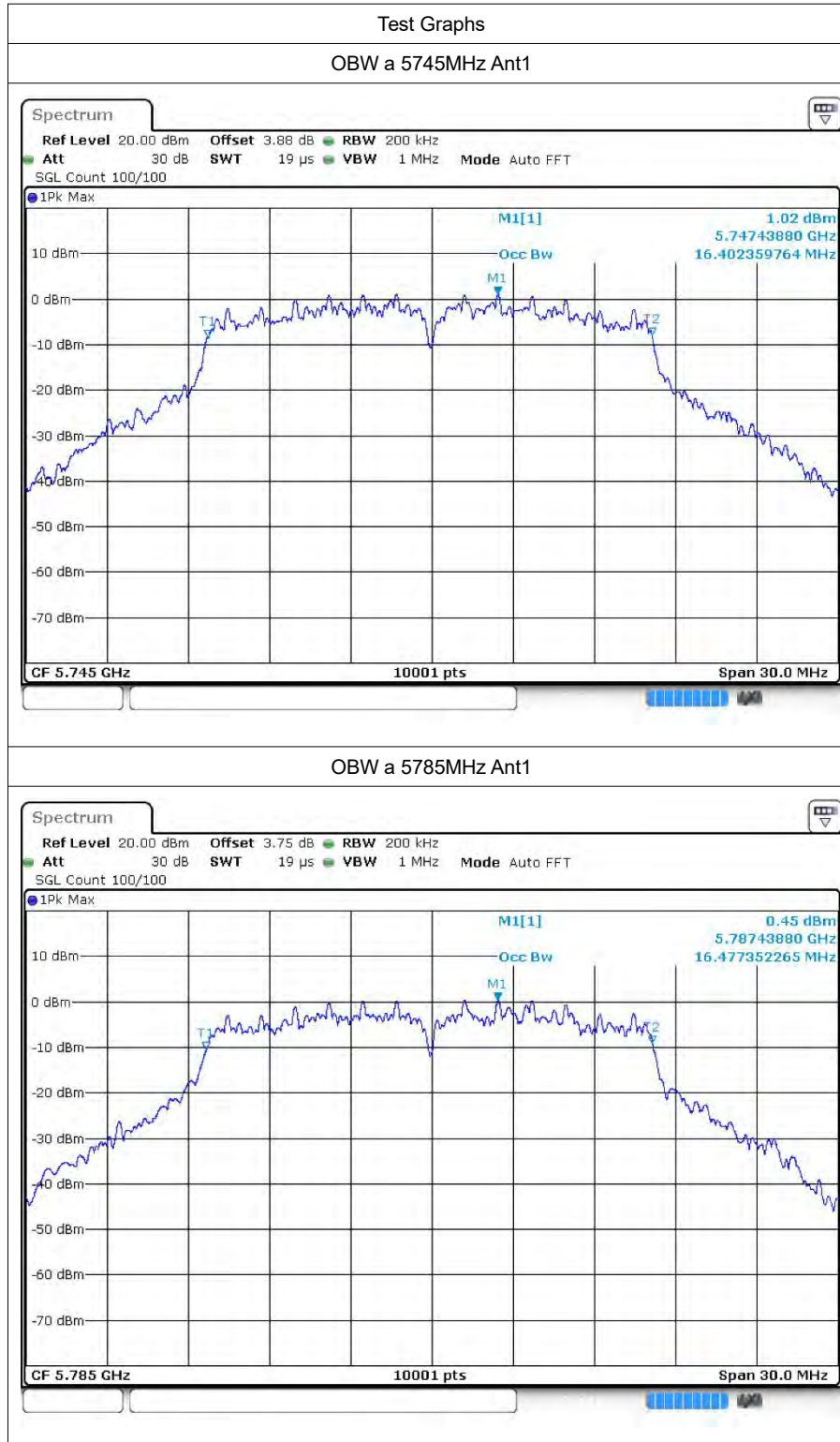


4 Occupied Channel Bandwidth

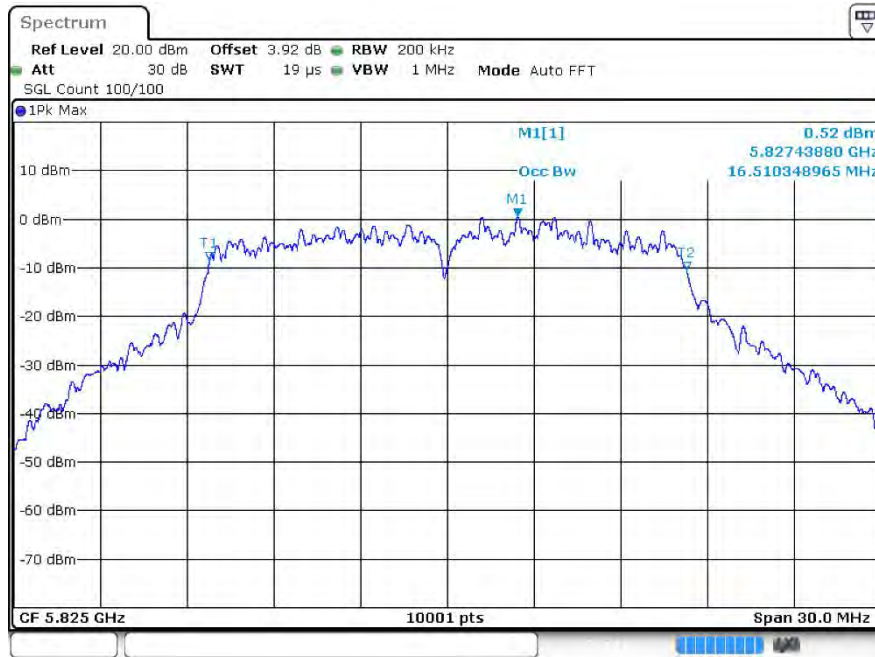
4.1 Test Result

Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
a	5745	Ant1	16.402
a	5785	Ant1	16.477
a	5825	Ant1	16.51
n20	5745	Ant1	17.617
n20	5785	Ant1	17.644
n20	5825	Ant1	17.59
n40	5755	Ant1	35.972
n40	5795	Ant1	36.014
ac20	5745	Ant1	17.566
ac20	5785	Ant1	17.635
ac20	5825	Ant1	17.572
ac40	5755	Ant1	35.942
ac40	5795	Ant1	36.008
ac80	5775	Ant1	75.364
a	5745	Ant2	16.459
a	5785	Ant2	16.471
a	5825	Ant2	16.462
n20	5745	Ant2	17.644
n20	5785	Ant2	17.623
n20	5825	Ant2	17.575
n40	5755	Ant2	36.212
n40	5795	Ant2	35.936
ac20	5745	Ant2	17.611
ac20	5785	Ant2	17.584
ac20	5825	Ant2	17.59
ac40	5755	Ant2	36.164
ac40	5795	Ant2	36.2
ac80	5775	Ant2	75.124

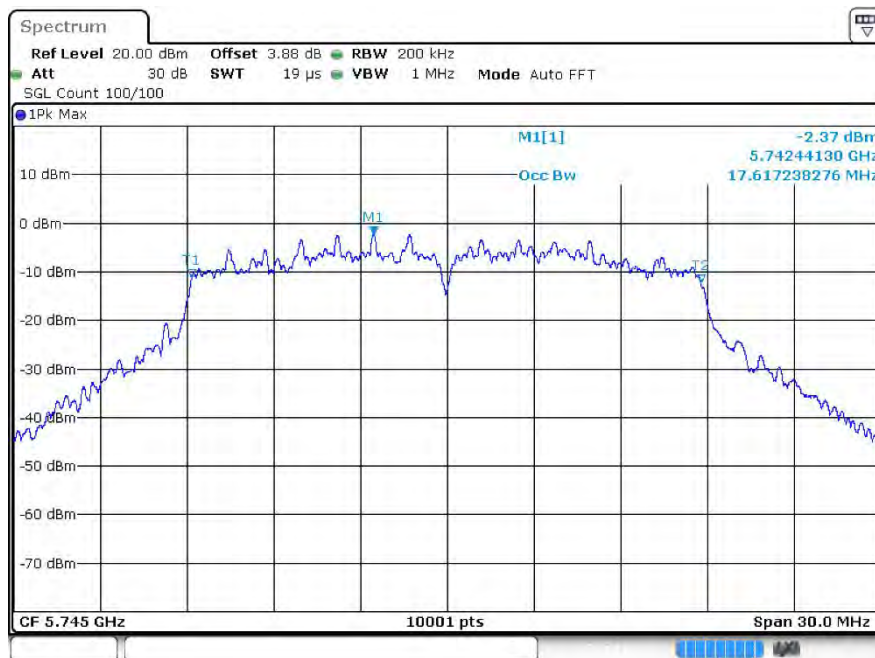
4.2 Test Graphs



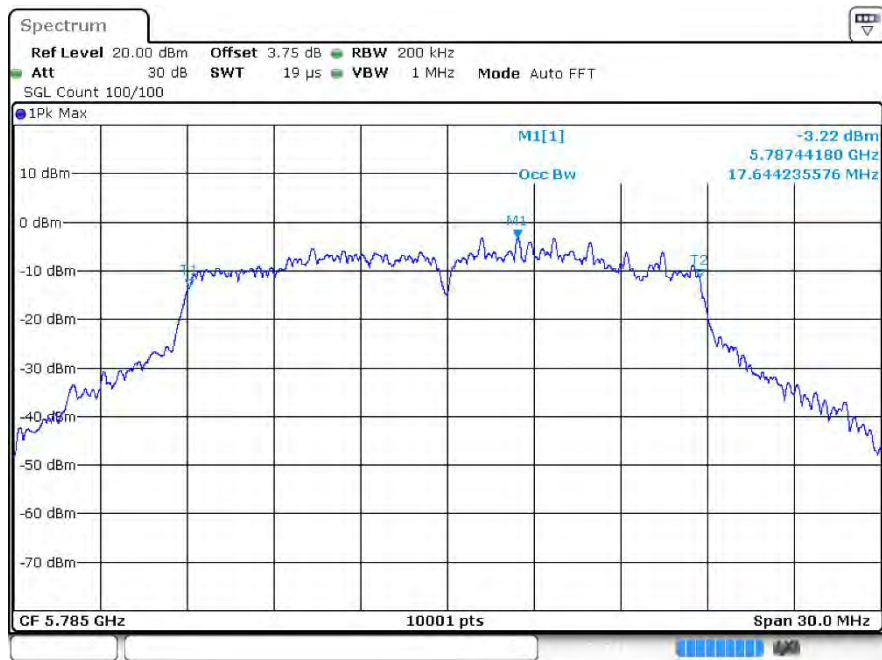
OBW a 5825MHz Ant1



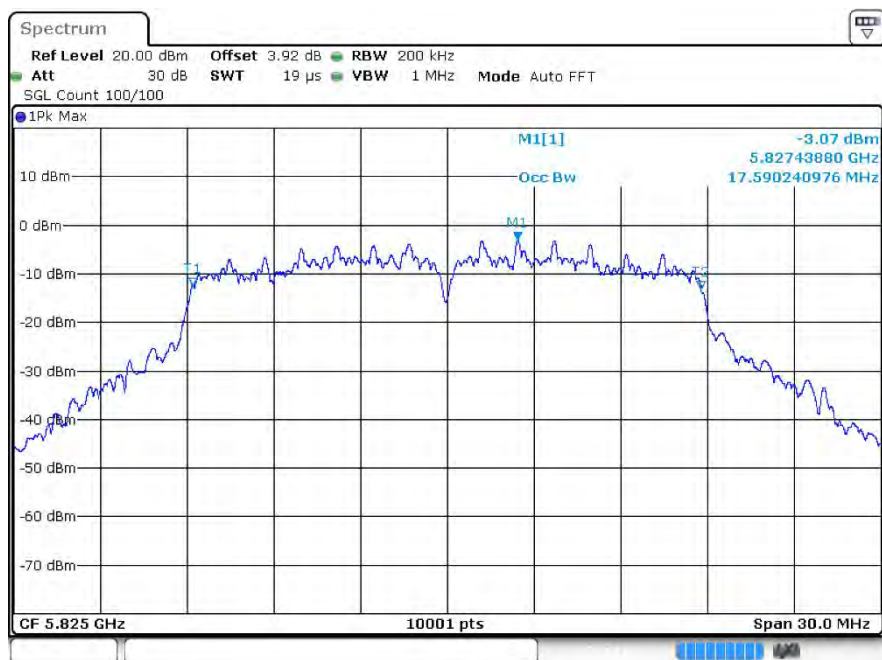
OBW n20 5745MHz Ant1



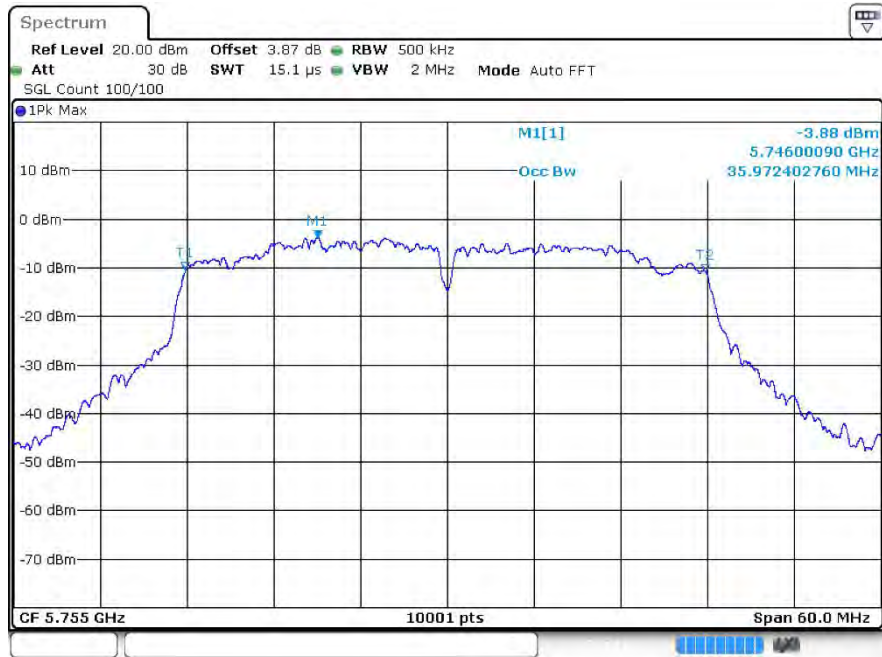
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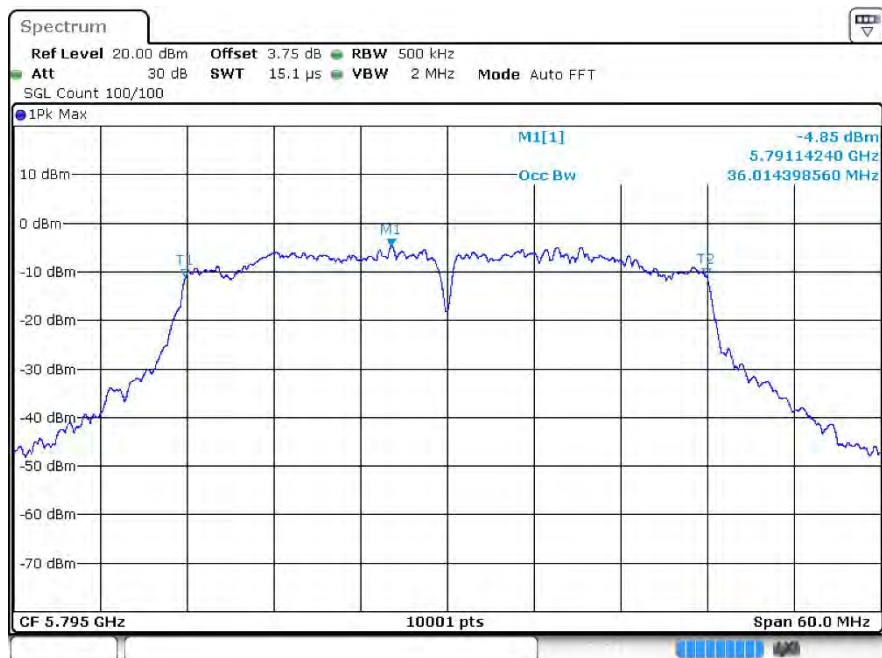
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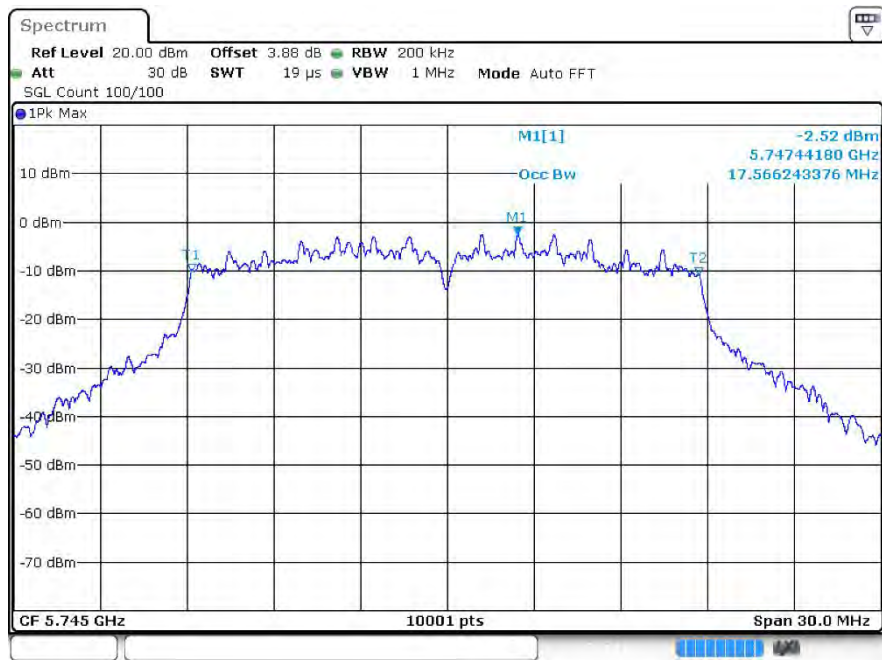
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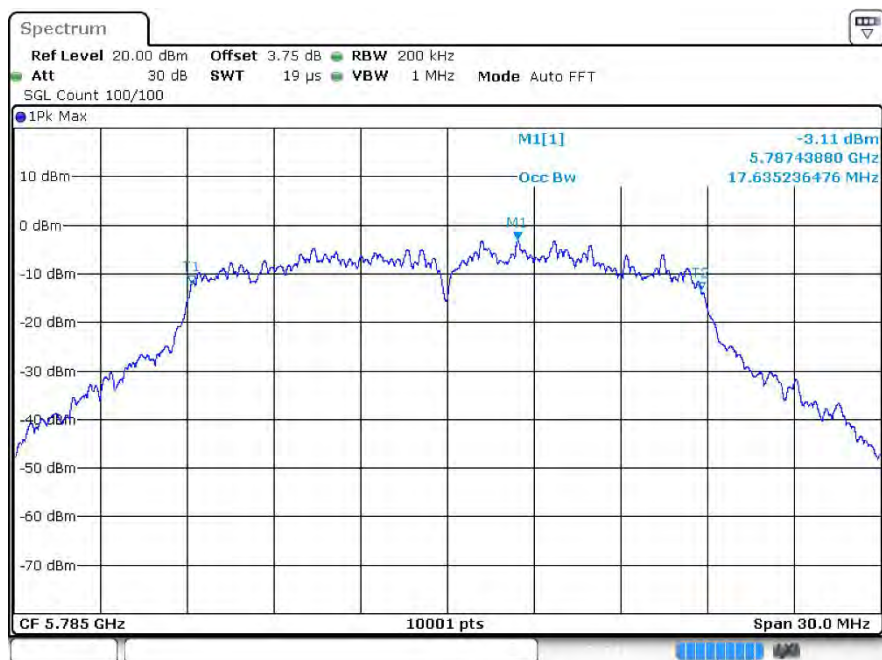
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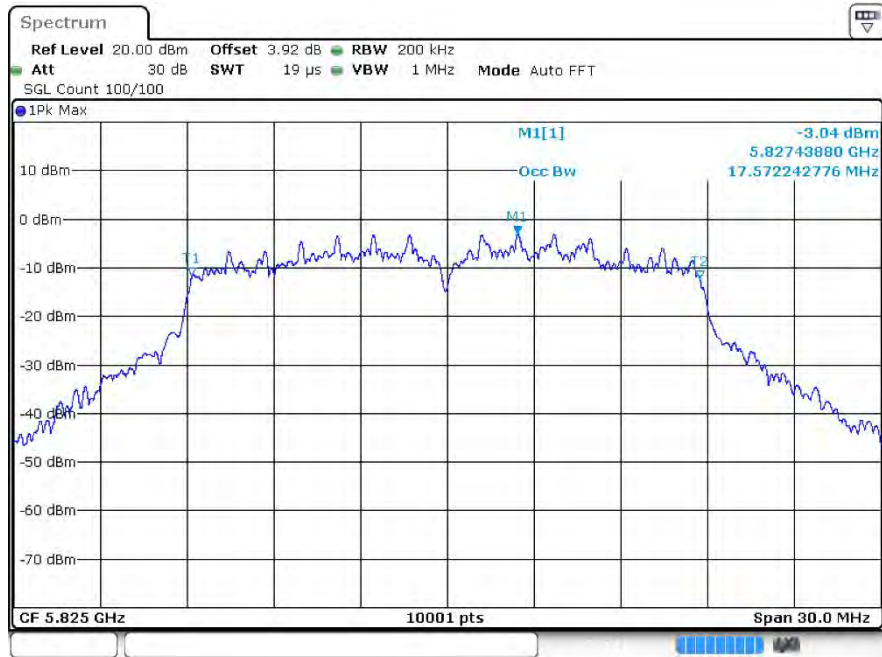
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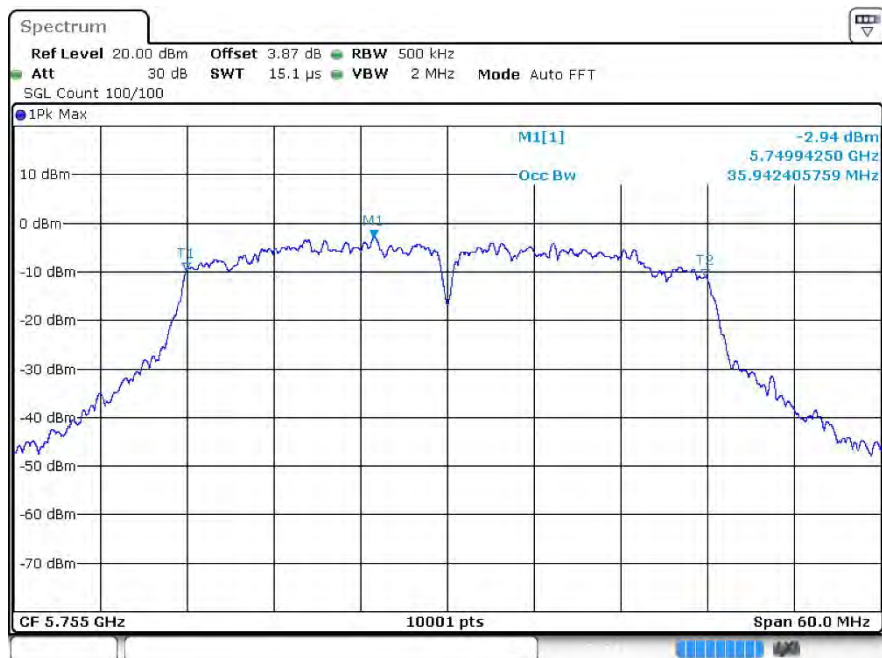
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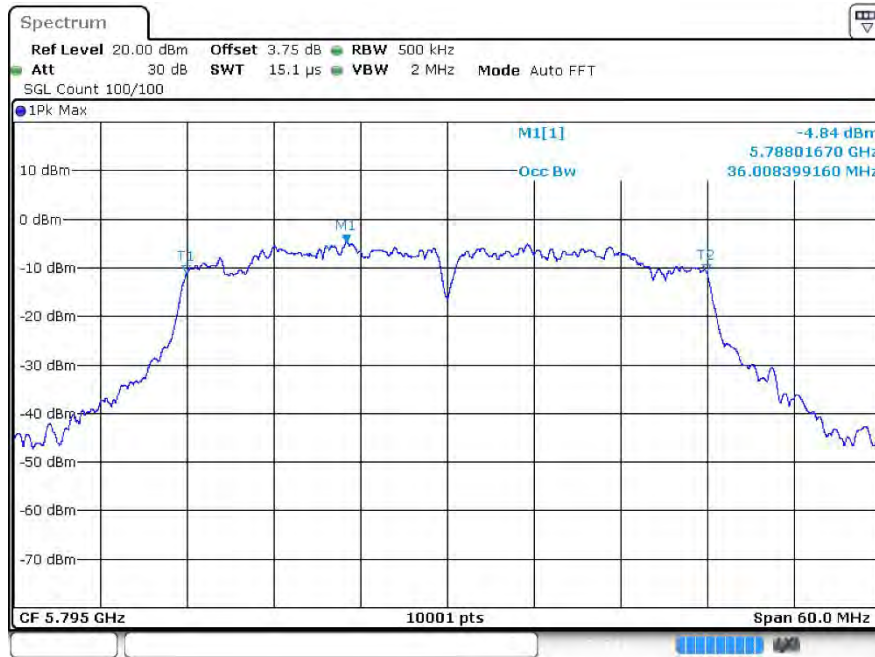
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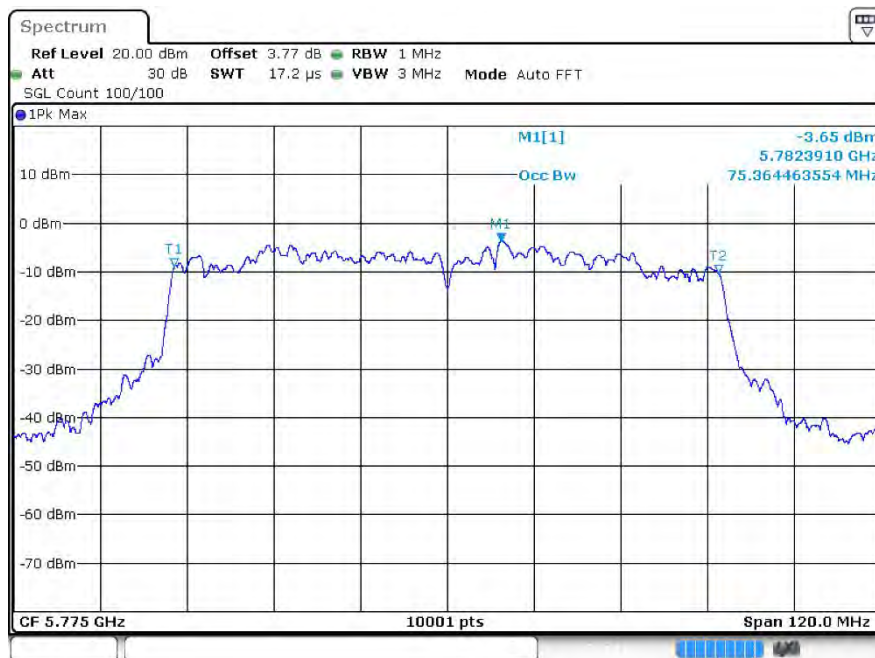
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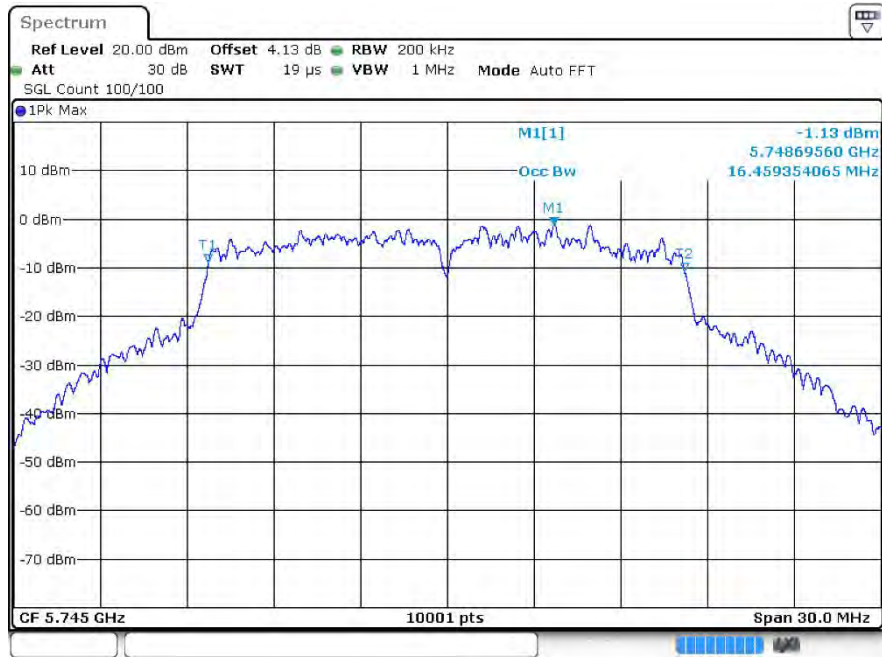
OBW ac40 5795MHz Ant1



OBW ac80 5775MHz Ant1



OBW a 5745MHz Ant2



OBW a 5785MHz Ant2

