



Appendix RF test data for 5G WIFI (Conducted Measurement)

Product Name: Car Video Box

Trade Mark: N/A

Test Model: GT4S

Environmental Conditions

Temperature:	24.6° C
Relative Humidity:	52.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Aalen.Ye
Supervised by:	Allen Wang



Contents

	Page
COVER PAGE	
1 Duty Cycle.....	3
1.1 Test Result.....	3
1.2 Test Graphs.....	4
2 Maximum Conducted Output Power.....	8
2.1 Test Result.....	8
3 -6dB Bandwidth.....	9
3.1 Test Result.....	9
3.2 Test Graphs.....	10
4 Occupied Channel Bandwidth.....	14
4.1 Test Result.....	14
4.2 Test Graphs.....	15
5 Maximum Power Spectral Density Level.....	19
5.1 Test Result.....	19
5.2 Test Graphs.....	20
6 Frequency Stability.....	24
6.1 Test Result.....	24
7 Conducted RF Spurious Emission.....	27
7.1 Test Result.....	27
7.2 Test Graphs.....	28

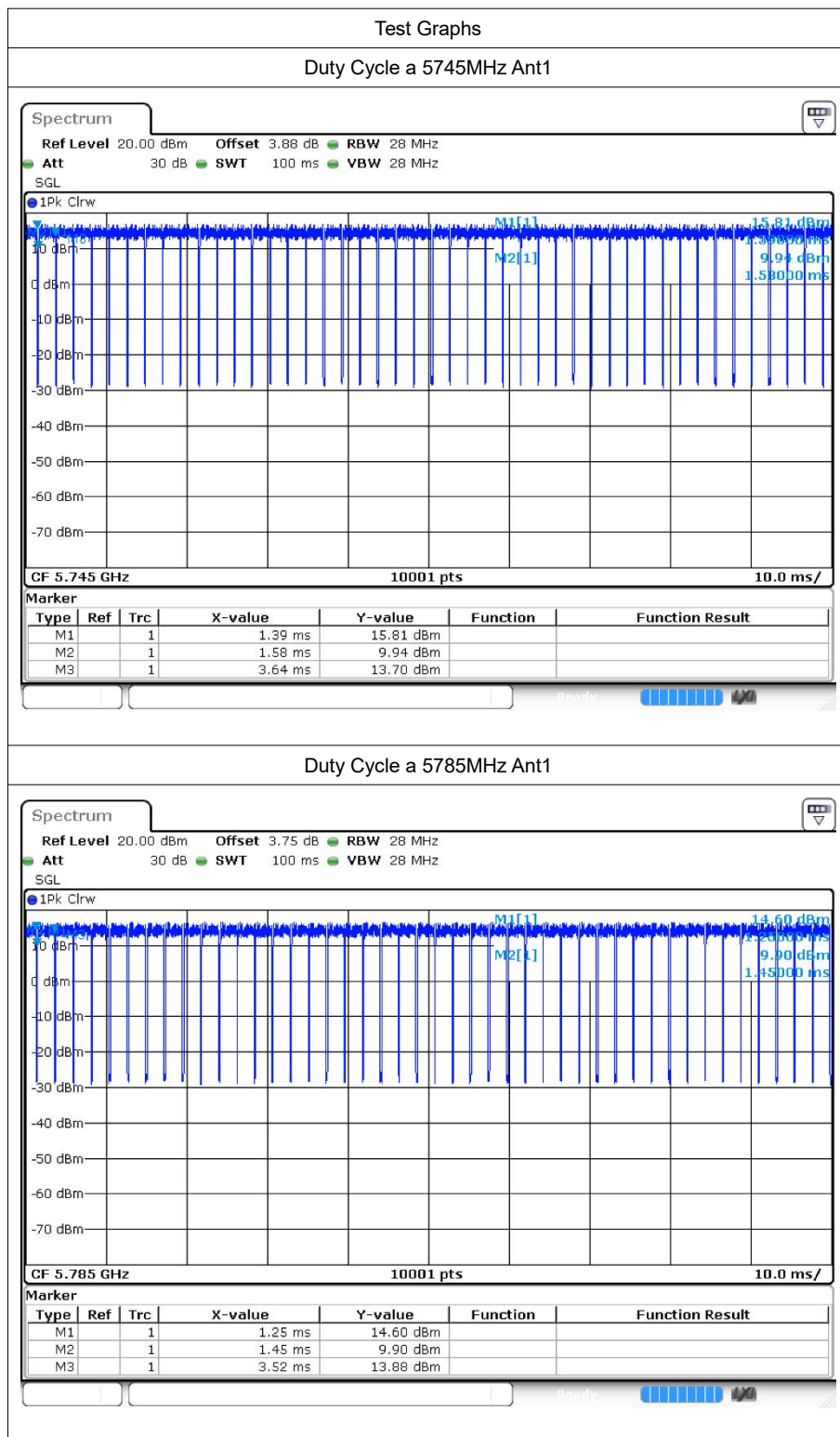
1 Duty Cycle

1.1 Test Result

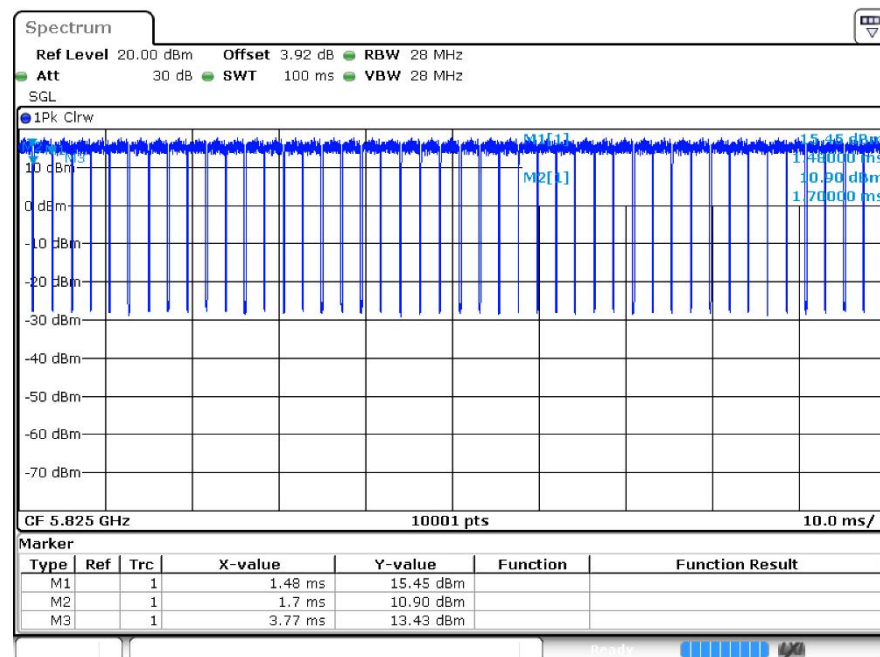
Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
a	5745	Ant1	93.69	0.28	0.49
a	5785	Ant1	92.52	0.34	0.48
a	5825	Ant1	93.12	0.31	0.48
n20	5745	Ant1	92.85	0.32	0.52
n20	5785	Ant1	93.03	0.31	0.52
n20	5825	Ant1	92.8	0.32	0.52
n40	5755	Ant1	86.07	0.65	1.06
n40	5795	Ant1	86.35	0.64	1.06



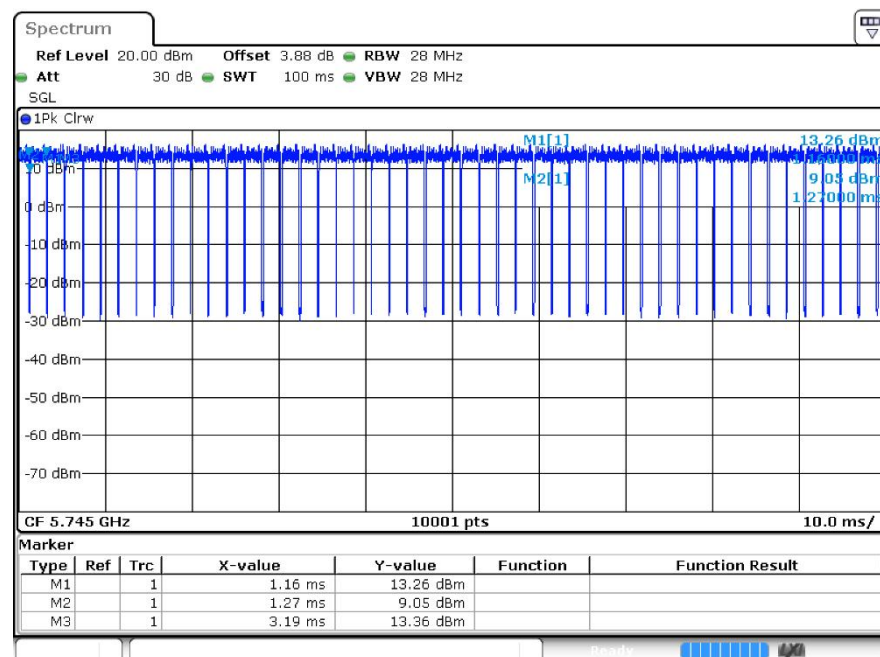
1.2 Test Graphs



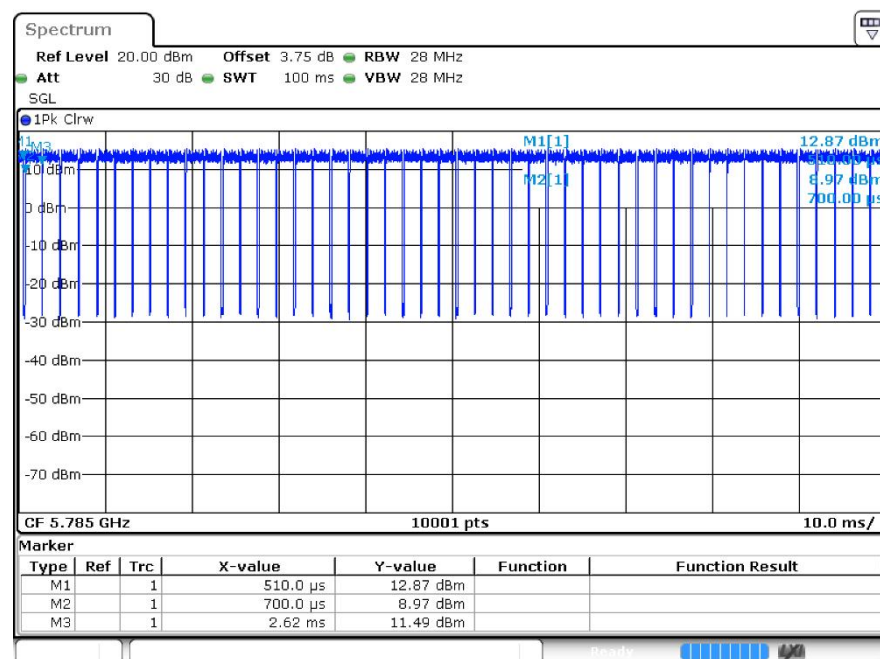
Duty Cycle a 5825MHz Ant1



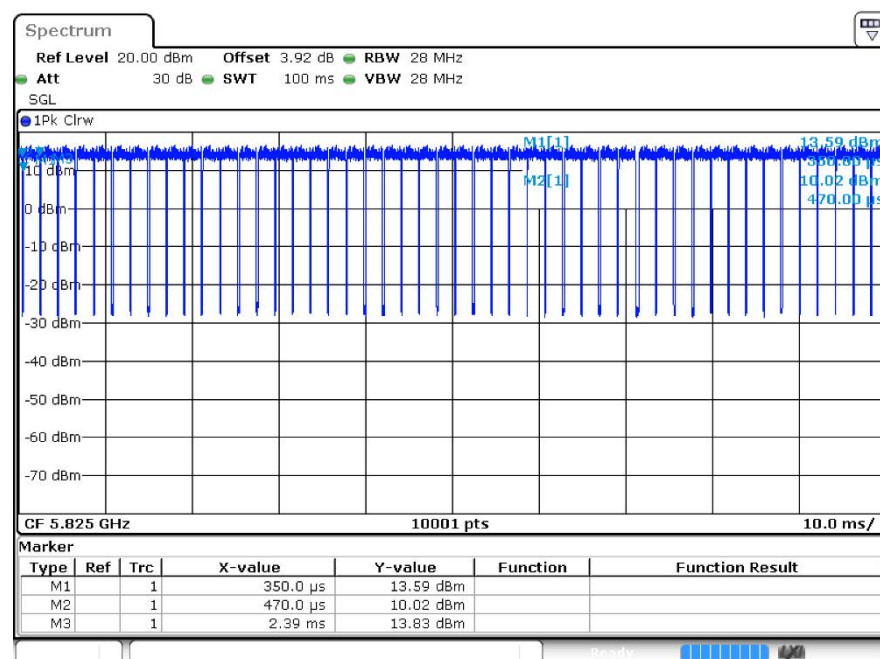
Duty Cycle n20 5745MHz Ant1



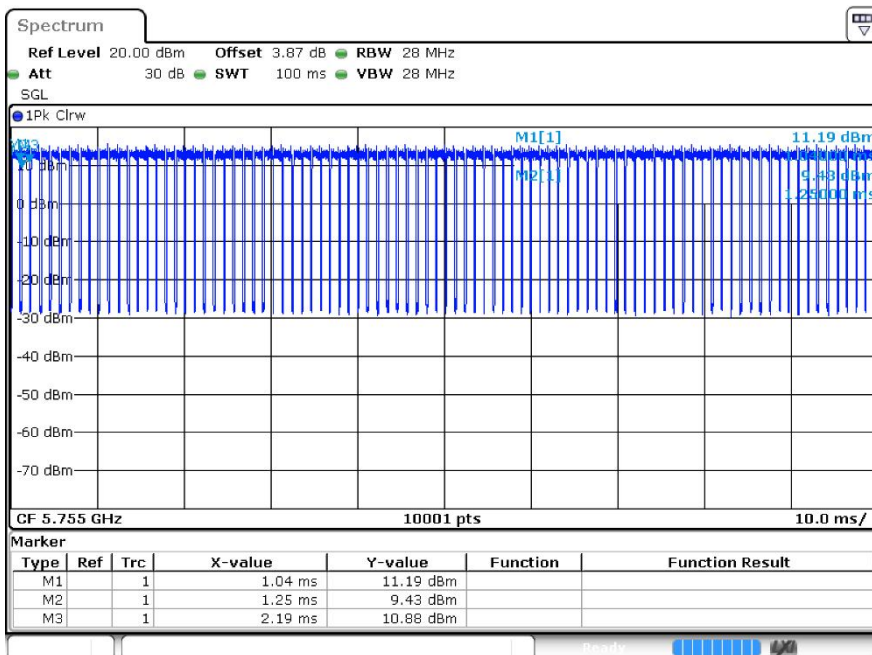
Duty Cycle n20 5785MHz Ant1



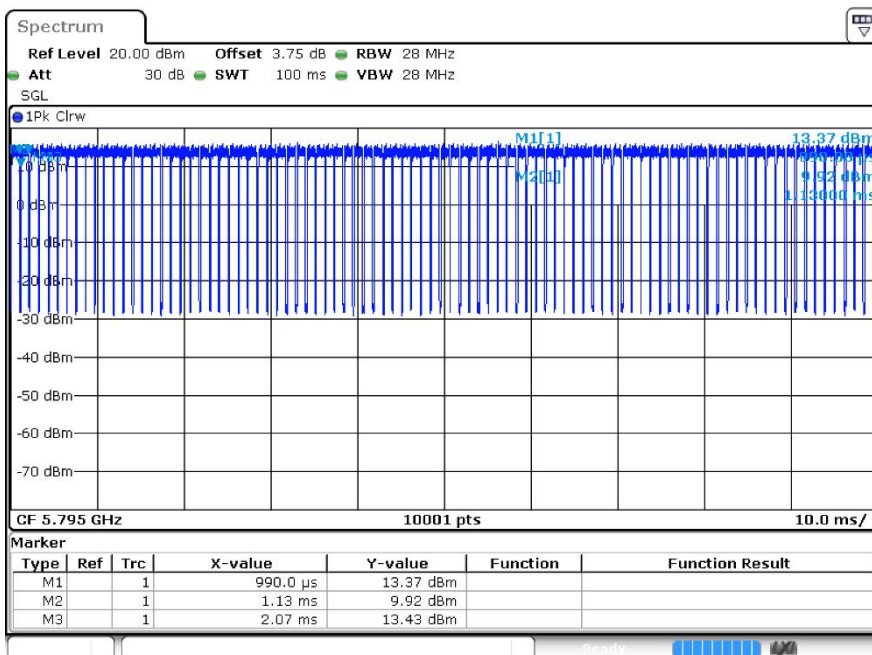
Duty Cycle n20 5825MHz Ant1



Duty Cycle n40 5755MHz Ant1



Duty Cycle n40 5795MHz Ant1



2 Maximum Conducted Output Power

2.1 Test Result

Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
a	5745	Ant1	10.1	30	Pass
a	5785	Ant1	9.96	30	Pass
a	5825	Ant1	11	30	Pass
n20	5745	Ant1	9.14	30	Pass
n20	5785	Ant1	9.07	30	Pass
n20	5825	Ant1	10.01	30	Pass
n40	5755	Ant1	8.3	30	Pass
n40	5795	Ant1	9.44	30	Pass

Note:

The duty factor has been compensated into the result.

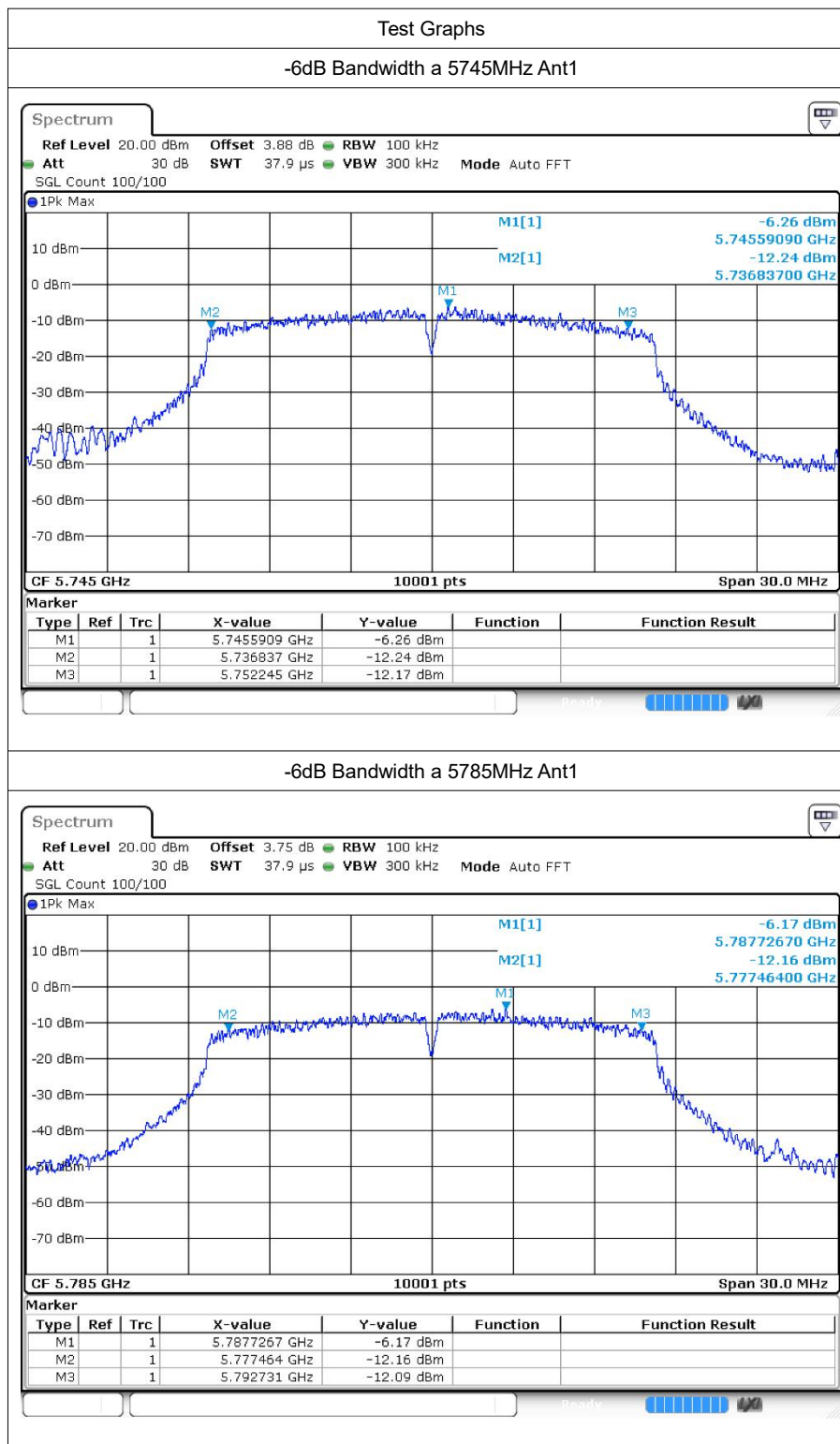


3 -6dB Bandwidth

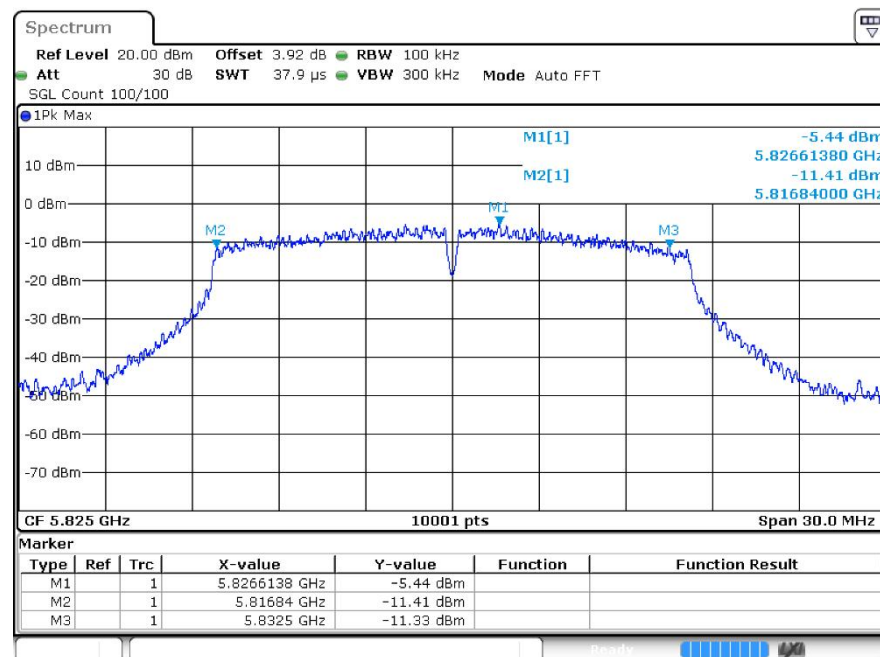
3.1 Test Result

Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
a	5745	Ant1	15.408	0.5	Pass
a	5785	Ant1	15.267	0.5	Pass
a	5825	Ant1	15.66	0.5	Pass
n20	5745	Ant1	14.418	0.5	Pass
n20	5785	Ant1	15.279	0.5	Pass
n20	5825	Ant1	14.397	0.5	Pass
n40	5755	Ant1	31.278	0.5	Pass
n40	5795	Ant1	30.072	0.5	Pass

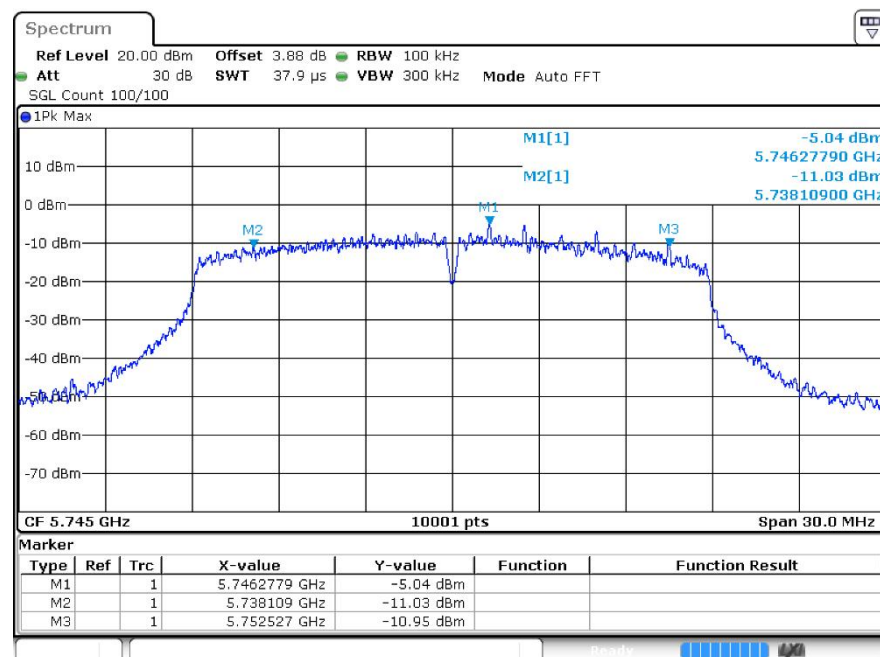
3.2 Test Graphs



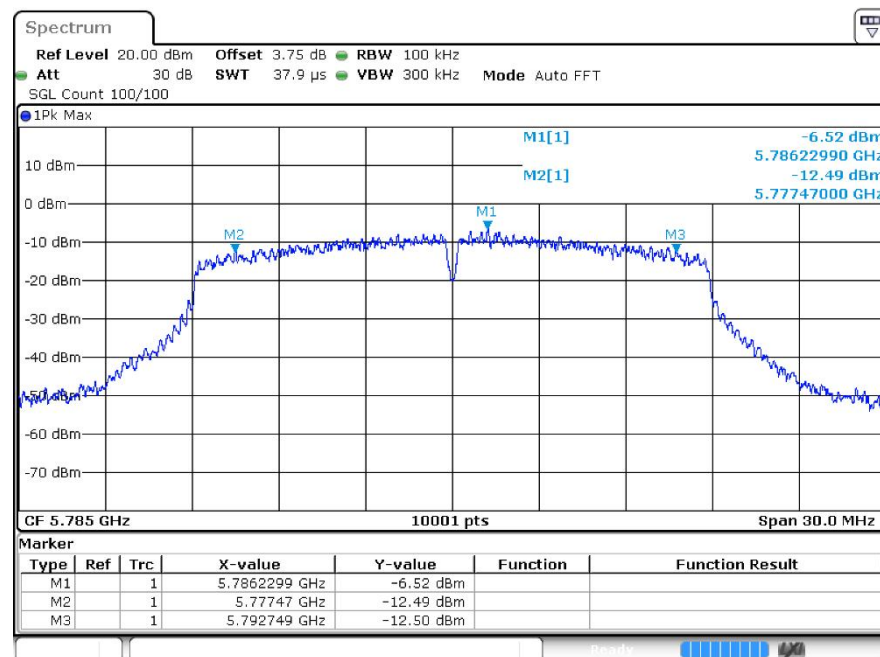
-6dB Bandwidth a 5825MHz Ant1



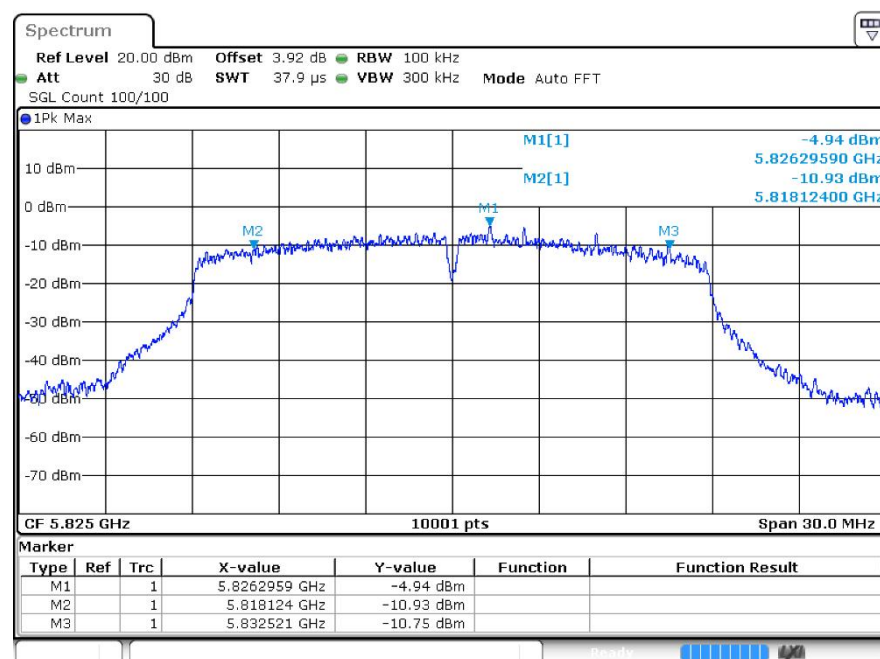
-6dB Bandwidth n20 5745MHz Ant1



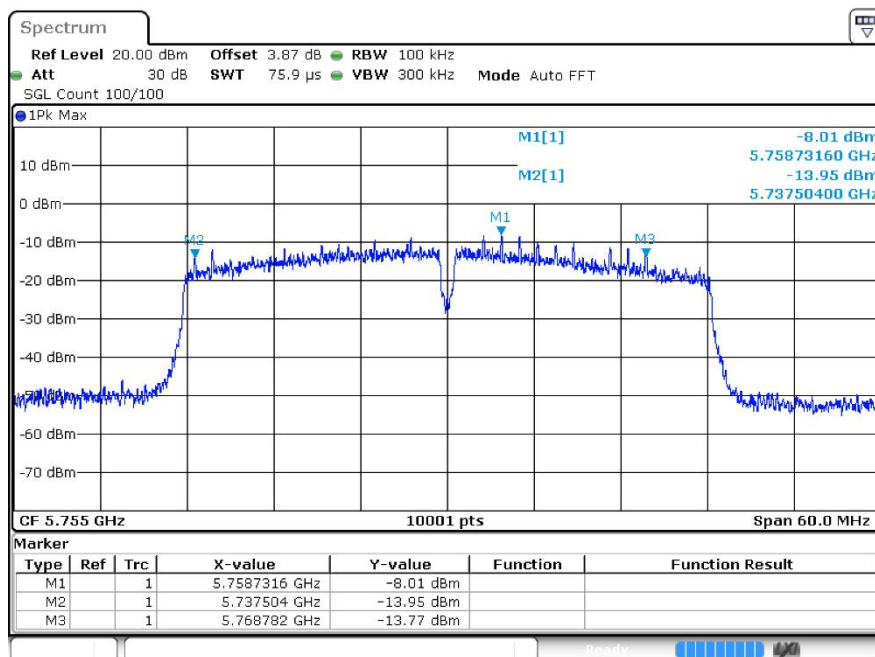
-6dB Bandwidth n20 5785MHz Ant1



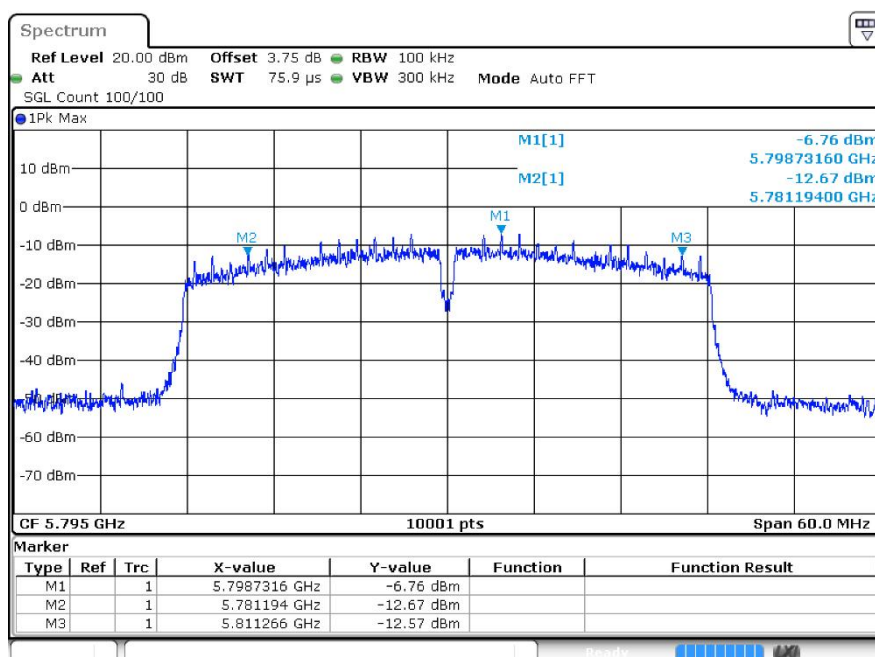
-6dB Bandwidth n20 5825MHz Ant1



-6dB Bandwidth n40 5755MHz Ant1



-6dB Bandwidth n40 5795MHz Ant1



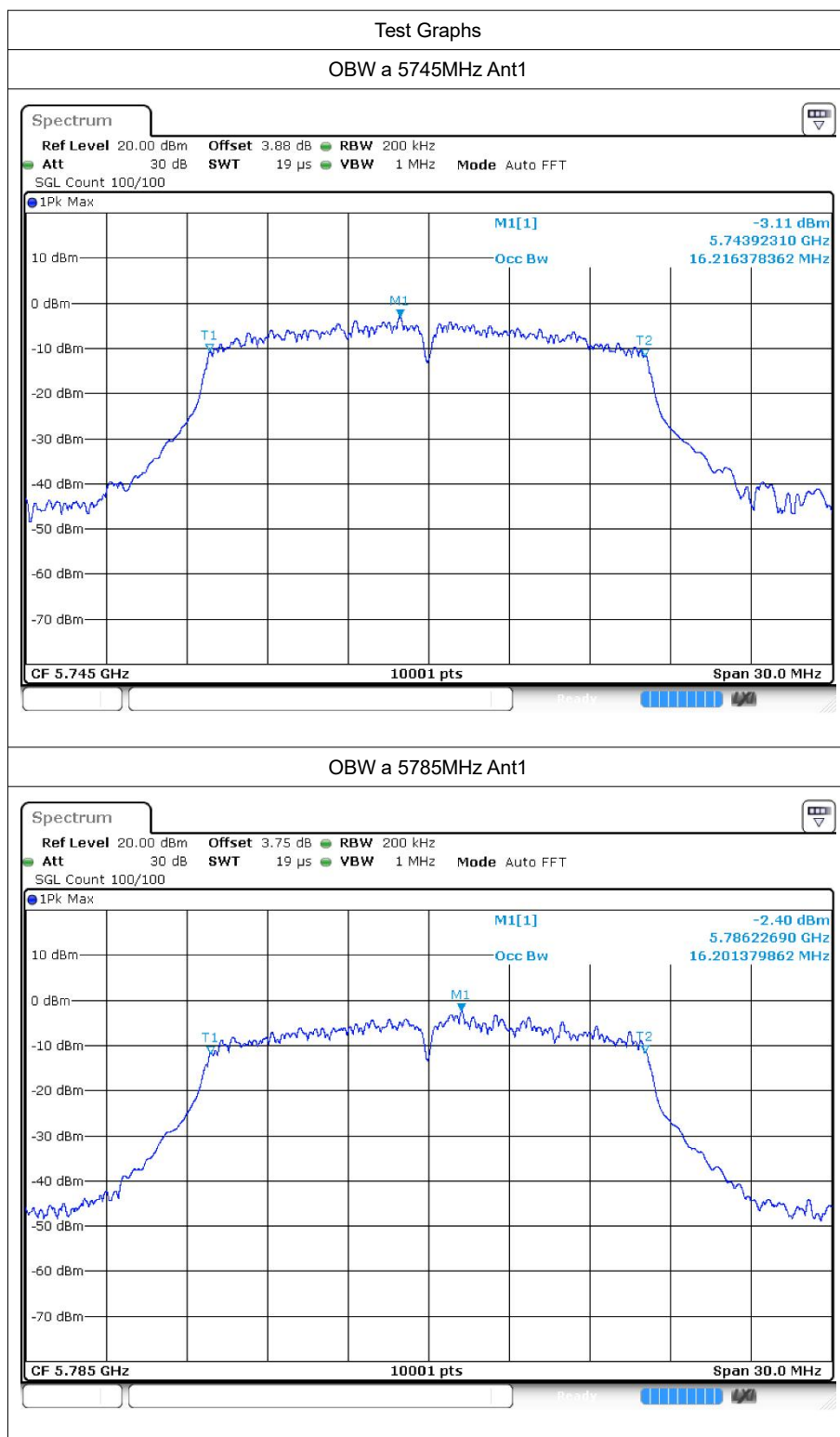


4 Occupied Channel Bandwidth

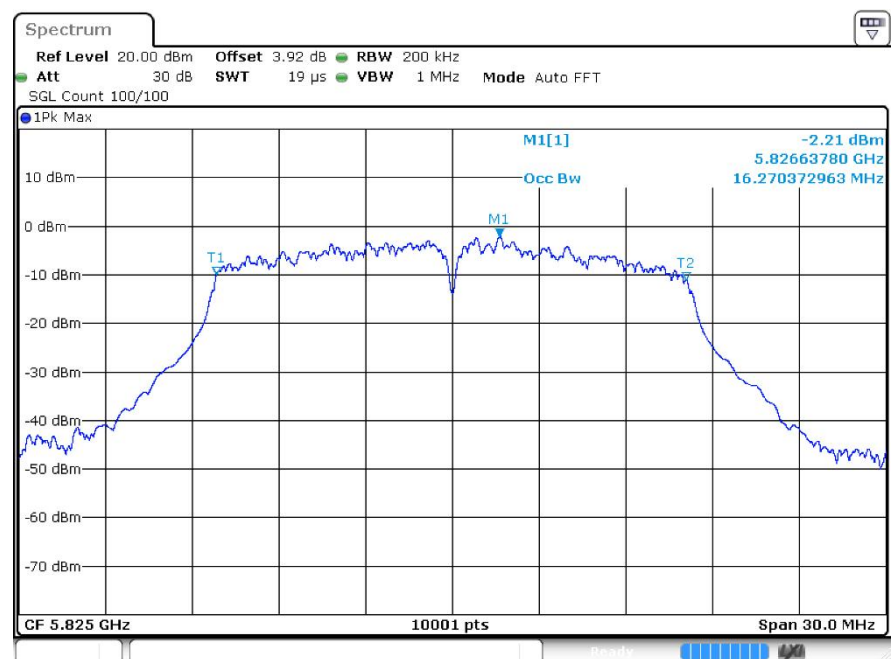
4.1 Test Result

Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
a	5745	Ant1	16.216
a	5785	Ant1	16.201
a	5825	Ant1	16.27
n20	5745	Ant1	17.314
n20	5785	Ant1	17.296
n20	5825	Ant1	17.266
n40	5755	Ant1	35.372
n40	5795	Ant1	35.3

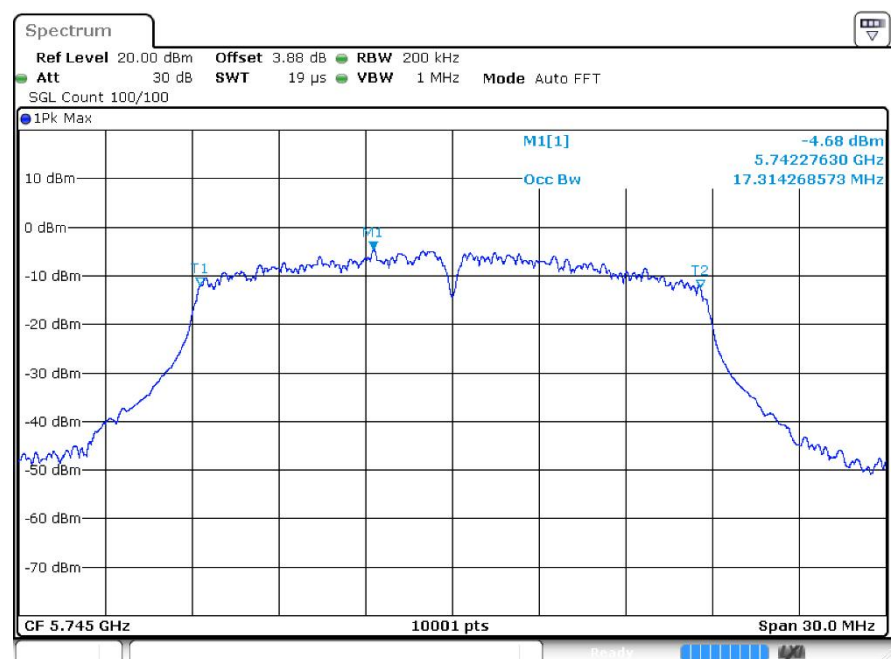
4.2 Test Graphs



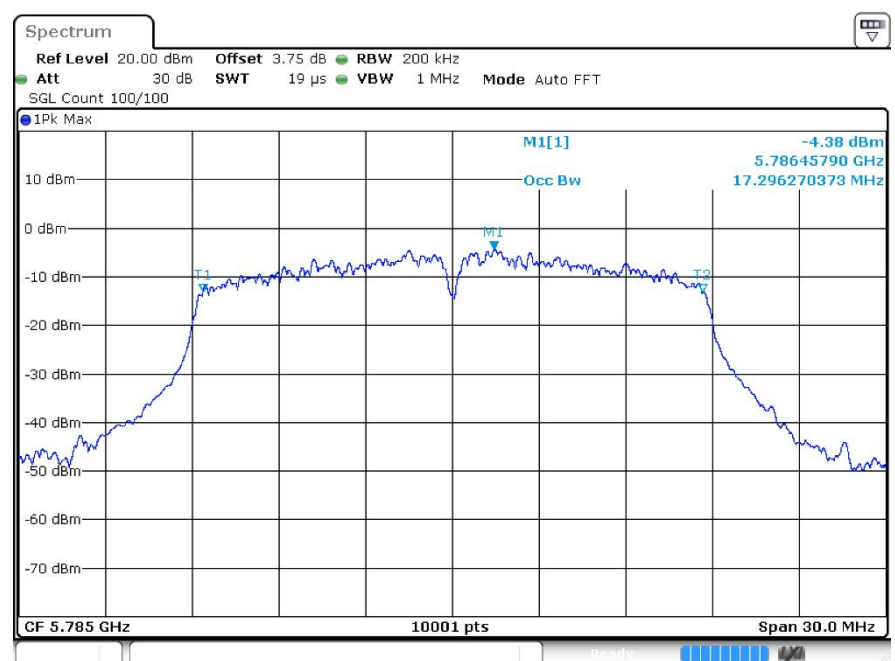
OBW a 5825MHz Ant1



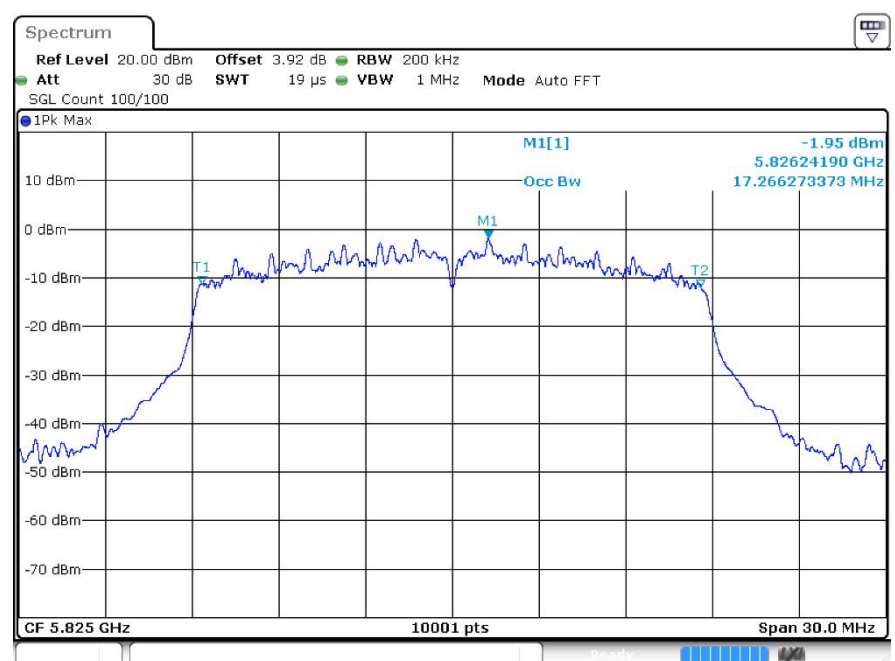
OBW n20 5745MHz Ant1



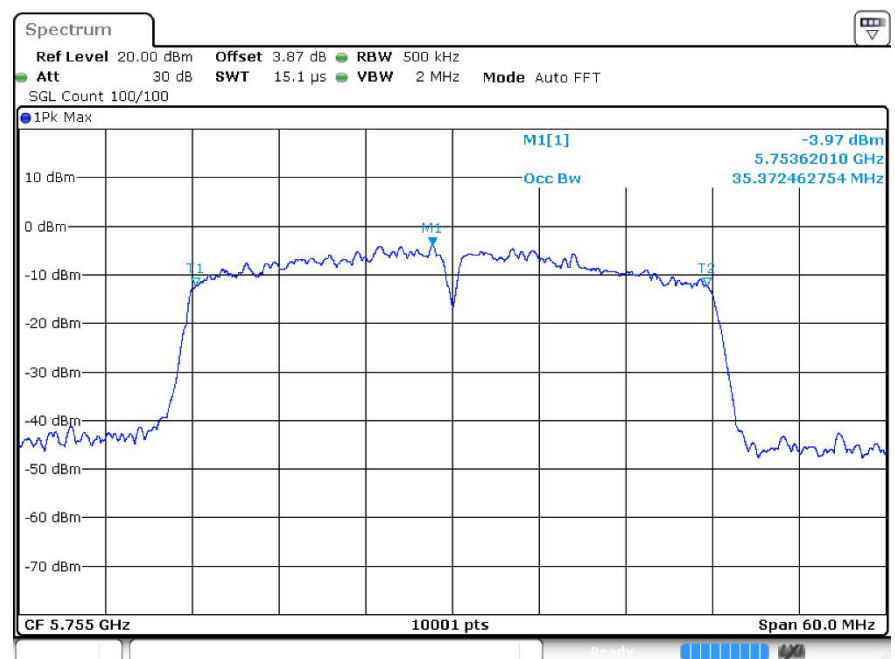
OBW n20 5785MHz Ant1



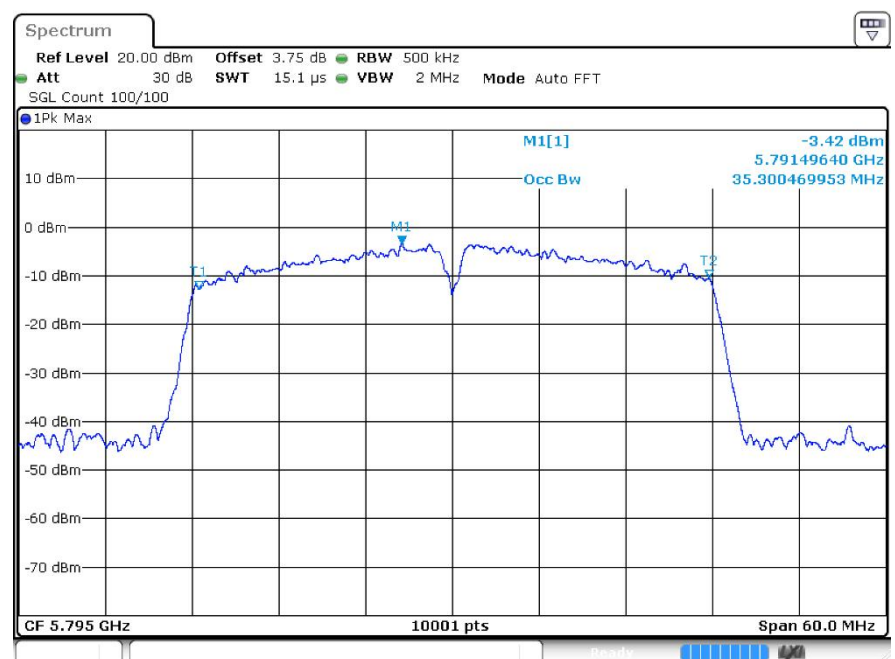
OBW n20 5825MHz Ant1



OBW n40 5755MHz Ant1



OBW n40 5795MHz Ant1



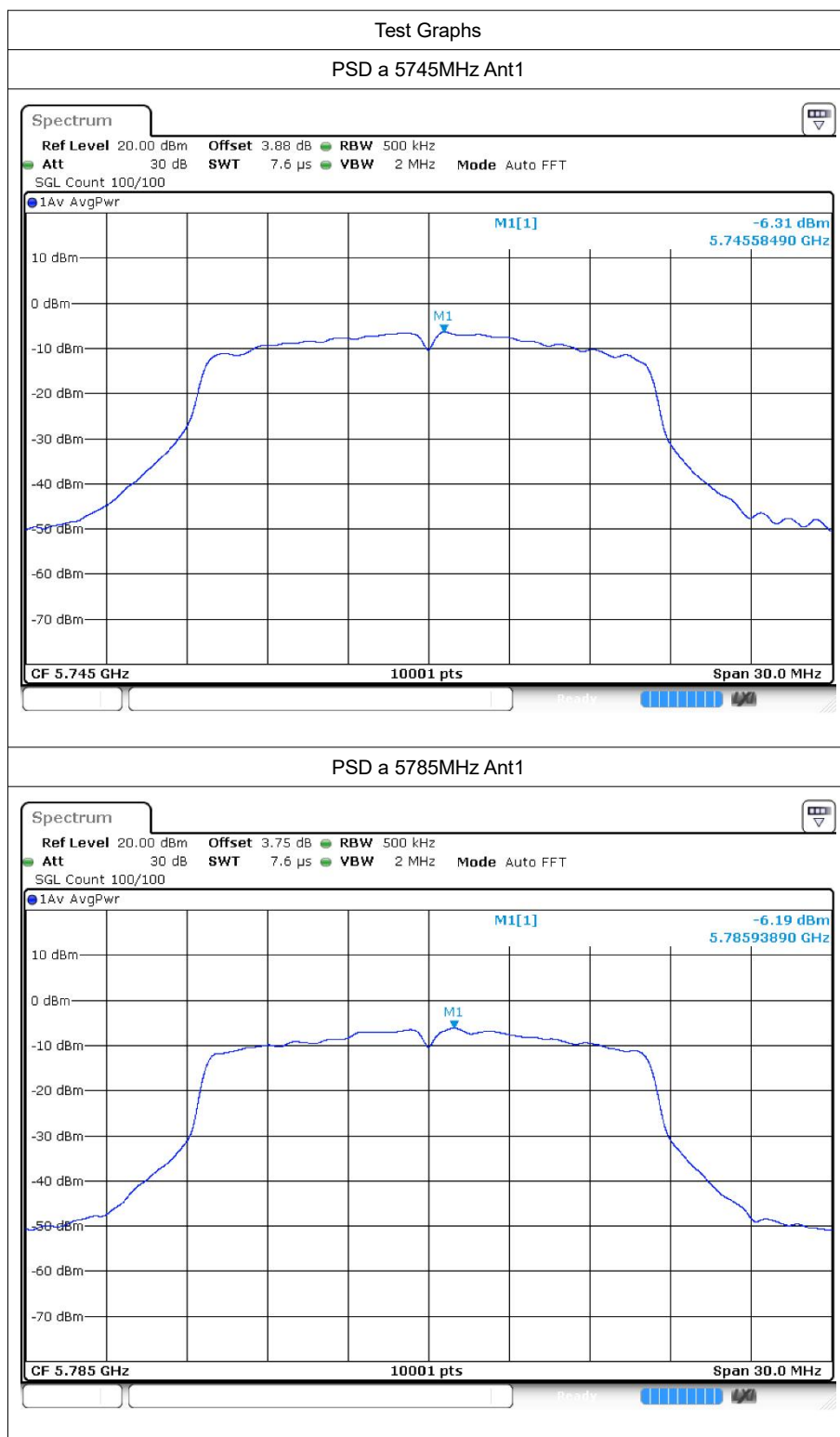


5 Maximum Power Spectral Density Level

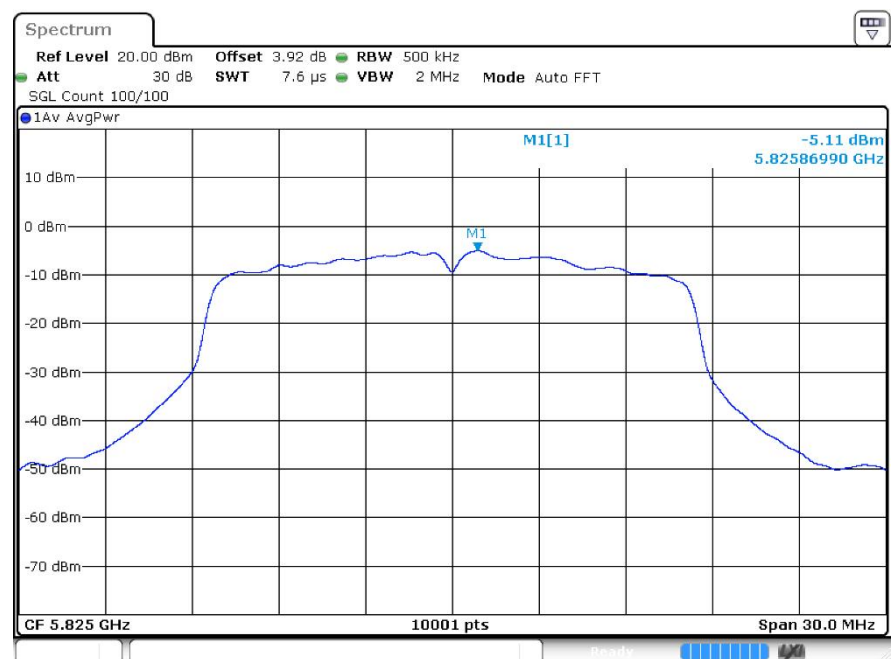
5.1 Test Result

Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm)	Duty Factor (dB)	Total PSD (dBm)	Limit (dBm)	Verdict
a	5745	Ant1	-6.31	0.28	-6.03	30	Pass
a	5785	Ant1	-6.19	0.34	-5.85	30	Pass
a	5825	Ant1	-5.11	0.31	-4.8	30	Pass
n20	5745	Ant1	-7.11	0.32	-6.79	30	Pass
n20	5785	Ant1	-7.02	0.31	-6.71	30	Pass
n20	5825	Ant1	-6.62	0.32	-6.3	30	Pass
n40	5755	Ant1	-11.3	0.63	-10.67	30	Pass
n40	5795	Ant1	-10.27	0.64	-9.63	30	Pass

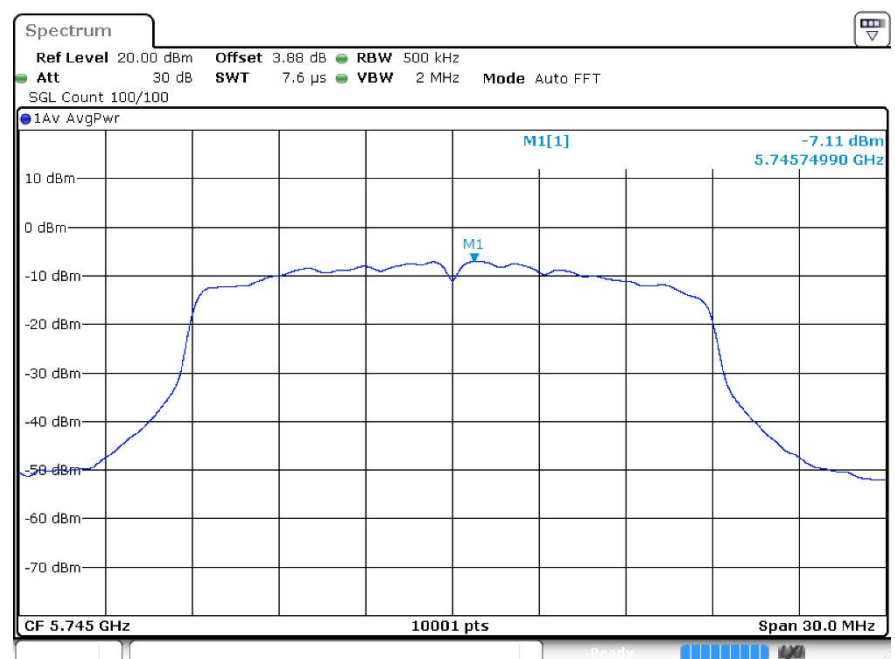
5.2 Test Graphs

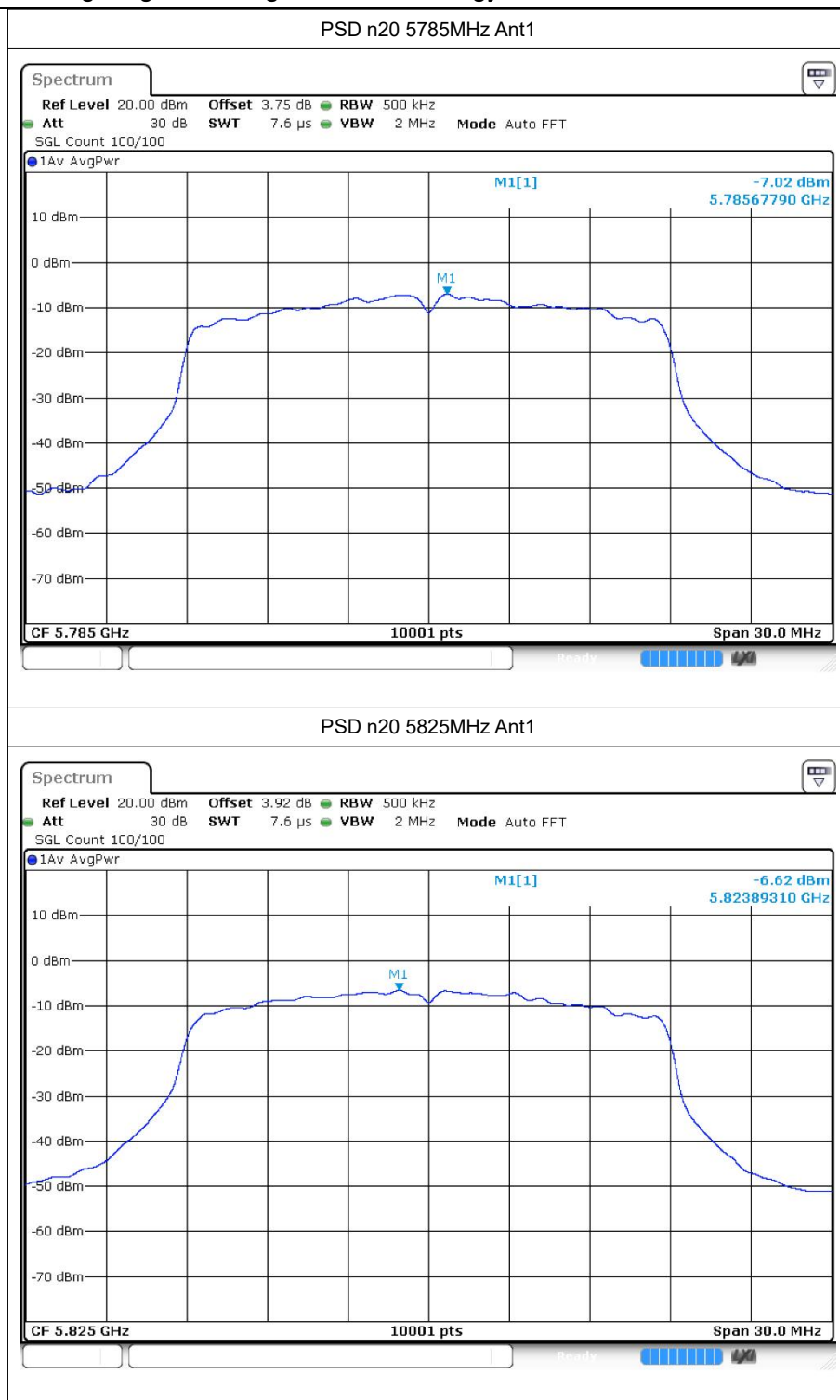


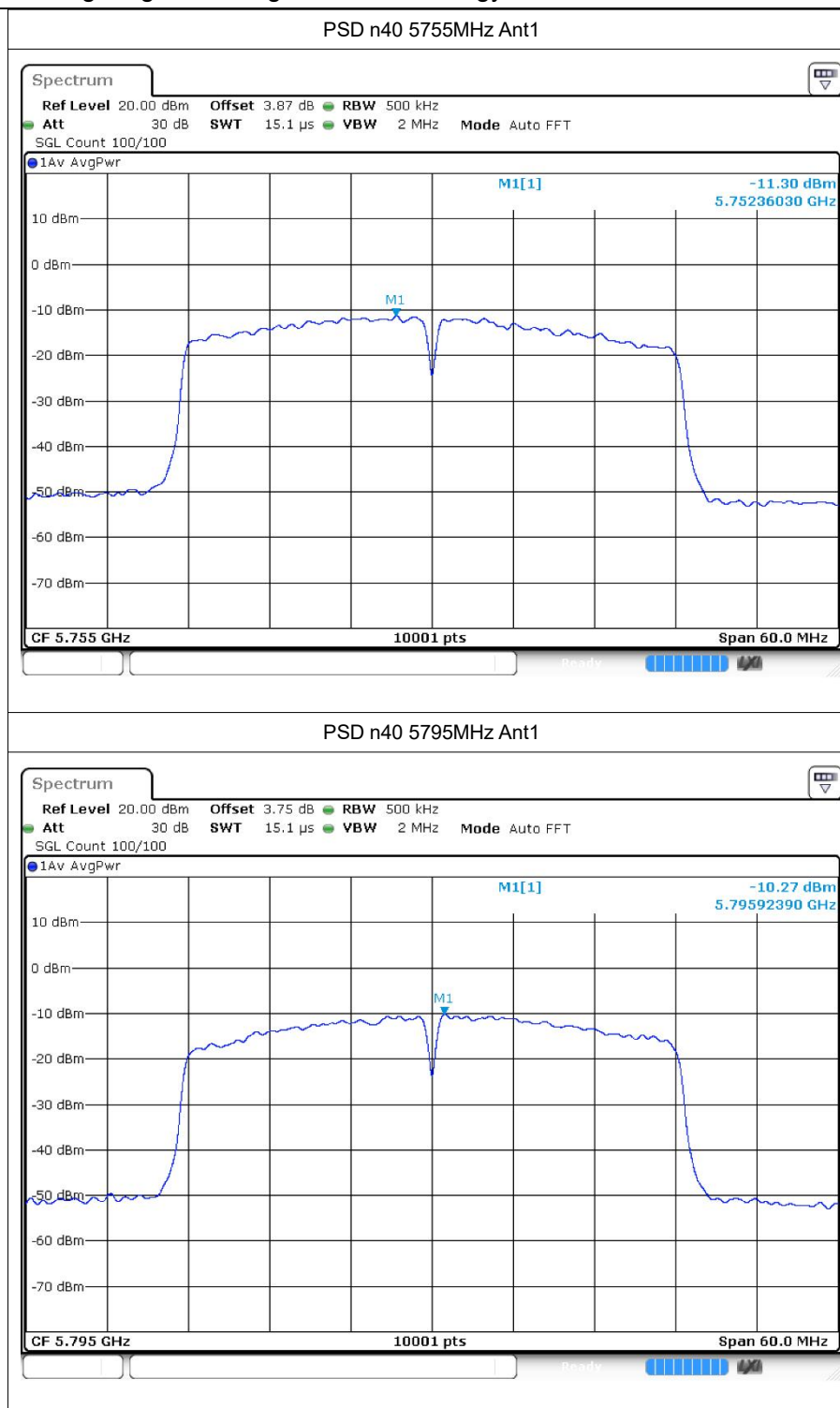
PSD a 5825MHz Ant1



PSD n20 5745MHz 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 4.5V	a	5745	Ant1	5744.98	-20000	-3.48	25	Pass
20C 5.0V	a	5745	Ant1	5744.98	-20000	-3.48	25	Pass
20C 5.5V	a	5745	Ant1	5744.96	-40000	-6.96	25	Pass
-20C 5.0V	a	5745	Ant1	5744.96	-40000	-6.96	25	Pass
-10C 5.0V	a	5745	Ant1	5744.96	-40000	-6.96	25	Pass
0C 5.0V	a	5745	Ant1	5744.96	-40000	-6.96	25	Pass
10C 5.0V	a	5745	Ant1	5744.96	-40000	-6.96	25	Pass
30C 5.0V	a	5745	Ant1	5744.94	-60000	-10.44	25	Pass
40C 5.0V	a	5745	Ant1	5744.94	-60000	-10.44	25	Pass
50C 5.0V	a	5745	Ant1	5744.96	-40000	-6.96	25	Pass
20C 4.5V	a	5785	Ant1	5785.02	20000	3.46	25	Pass
20C 5.0V	a	5785	Ant1	5785	0	0	25	Pass
20C 5.5V	a	5785	Ant1	5784.98	-20000	-3.46	25	Pass
-20C 5.0V	a	5785	Ant1	5784.98	-20000	-3.46	25	Pass
-10C 5.0V	a	5785	Ant1	5784.96	-40000	-6.91	25	Pass
0C 5.0V	a	5785	Ant1	5785	0	0	25	Pass
10C 5.0V	a	5785	Ant1	5785	0	0	25	Pass
30C 5.0V	a	5785	Ant1	5785	0	0	25	Pass
40C 5.0V	a	5785	Ant1	5785	0	0	25	Pass
50C 5.0V	a	5785	Ant1	5785	0	0	25	Pass
20C 4.5V	a	5825	Ant1	5824.96	-40000	-6.87	25	Pass
20C 5.0V	a	5825	Ant1	5824.96	-40000	-6.87	25	Pass
20C 5.5V	a	5825	Ant1	5824.96	-40000	-6.87	25	Pass
-20C 5.0V	a	5825	Ant1	5824.96	-40000	-6.87	25	Pass
-10C 5.0V	a	5825	Ant1	5825	0	0	25	Pass
0C 5.0V	a	5825	Ant1	5824.98	-20000	-3.43	25	Pass
10C 5.0V	a	5825	Ant1	5824.98	-20000	-3.43	25	Pass
30C 5.0V	a	5825	Ant1	5824.96	-40000	-6.87	25	Pass
40C 5.0V	a	5825	Ant1	5825	0	0	25	Pass
50C 5.0V	a	5825	Ant1	5824.98	-20000	-3.43	25	Pass
20C 4.5V	n20	5745	Ant1	5745	0	0	25	Pass
20C 5.0V	n20	5745	Ant1	5745	0	0	25	Pass
20C 5.5V	n20	5745	Ant1	5744.96	-40000	-6.96	25	Pass
-20C 5.0V	n20	5745	Ant1	5745	0	0	25	Pass
-10C 5.0V	n20	5745	Ant1	5744.98	-20000	-3.48	25	Pass
0C 5.0V	n20	5745	Ant1	5744.98	-20000	-3.48	25	Pass



10C 5.0V	n20	5745	Ant1	5745	0	0	25	Pass
30C 5.0V	n20	5745	Ant1	5744.98	-20000	-3.48	25	Pass
40C 5.0V	n20	5745	Ant1	5744.96	-40000	-6.96	25	Pass
50C 5.0V	n20	5745	Ant1	5744.92	-80000	-13.93	25	Pass
20C 4.5V	n20	5785	Ant1	5785.02	20000	3.46	25	Pass
20C 5.0V	n20	5785	Ant1	5785	0	0	25	Pass
20C 5.5V	n20	5785	Ant1	5785	0	0	25	Pass
-20C 5.0V	n20	5785	Ant1	5785.02	20000	3.46	25	Pass
-10C 5.0V	n20	5785	Ant1	5785	0	0	25	Pass
0C 5.0V	n20	5785	Ant1	5785	0	0	25	Pass
10C 5.0V	n20	5785	Ant1	5784.98	-20000	-3.46	25	Pass
30C 5.0V	n20	5785	Ant1	5784.98	-20000	-3.46	25	Pass
40C 5.0V	n20	5785	Ant1	5785	0	0	25	Pass
50C 5.0V	n20	5785	Ant1	5785	0	0	25	Pass
20C 4.5V	n20	5825	Ant1	5824.98	-20000	-3.43	25	Pass
20C 5.0V	n20	5825	Ant1	5824.98	-20000	-3.43	25	Pass
20C 5.5V	n20	5825	Ant1	5824.98	-20000	-3.43	25	Pass
-20C 5.0V	n20	5825	Ant1	5825	0	0	25	Pass
-10C 5.0V	n20	5825	Ant1	5824.98	-20000	-3.43	25	Pass
0C 5.0V	n20	5825	Ant1	5825	0	0	25	Pass
10C 5.0V	n20	5825	Ant1	5824.86	-140000	-24.03	25	Pass
30C 5.0V	n20	5825	Ant1	5824.98	-20000	-3.43	25	Pass
40C 5.0V	n20	5825	Ant1	5824.96	-40000	-6.87	25	Pass
50C 5.0V	n20	5825	Ant1	5825	0	0	25	Pass
20C 4.5V	n40	5755	Ant1	5754.96	-40000	-6.95	25	Pass
20C 5.0V	n40	5755	Ant1	5754.96	-40000	-6.95	25	Pass
20C 5.5V	n40	5755	Ant1	5755	0	0	25	Pass
-20C 5.0V	n40	5755	Ant1	5755	0	0	25	Pass
-10C 5.0V	n40	5755	Ant1	5754.96	-40000	-6.95	25	Pass
0C 5.0V	n40	5755	Ant1	5754.96	-40000	-6.95	25	Pass
10C 5.0V	n40	5755	Ant1	5755	0	0	25	Pass
30C 5.0V	n40	5755	Ant1	5755.04	40000	6.95	25	Pass
40C 5.0V	n40	5755	Ant1	5754.96	-40000	-6.95	25	Pass
50C 5.0V	n40	5755	Ant1	5755	0	0	25	Pass
20C 4.5V	n40	5795	Ant1	5795	0	0	25	Pass
20C 5.0V	n40	5795	Ant1	5795	0	0	25	Pass
20C 5.5V	n40	5795	Ant1	5795	0	0	25	Pass
-20C 5.0V	n40	5795	Ant1	5795	0	0	25	Pass
-10C 5.0V	n40	5795	Ant1	5795	0	0	25	Pass
0C 5.0V	n40	5795	Ant1	5794.96	-40000	-6.9	25	Pass
10C 5.0V	n40	5795	Ant1	5795.04	40000	6.9	25	Pass
30C 5.0V	n40	5795	Ant1	5795	0	0	25	Pass
40C 5.0V	n40	5795	Ant1	5795	0	0	25	Pass



50C 5.0V	n40	5795	Ant1	5795	0	0	25	Pass
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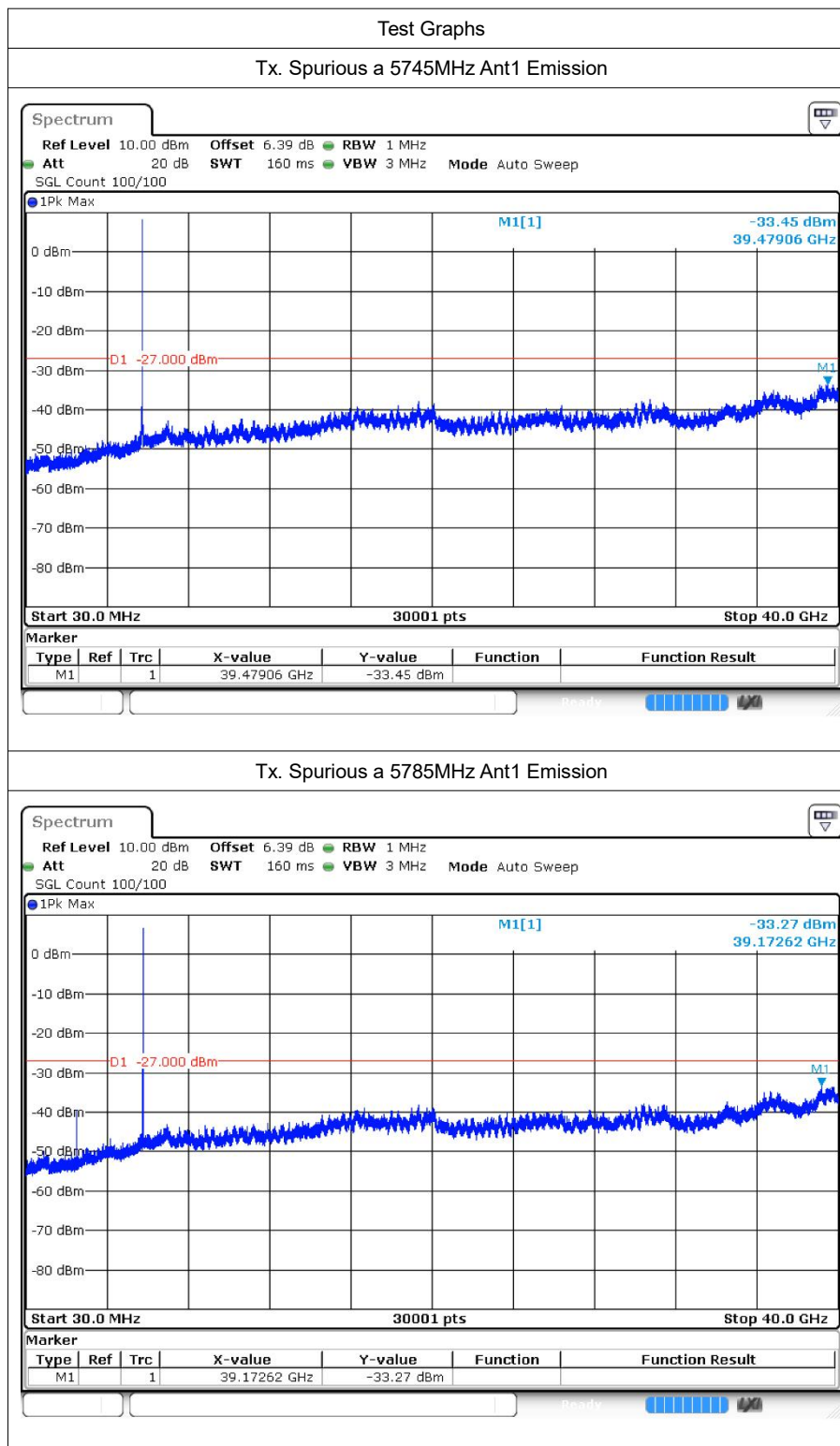


7 Conducted RF Spurious Emission

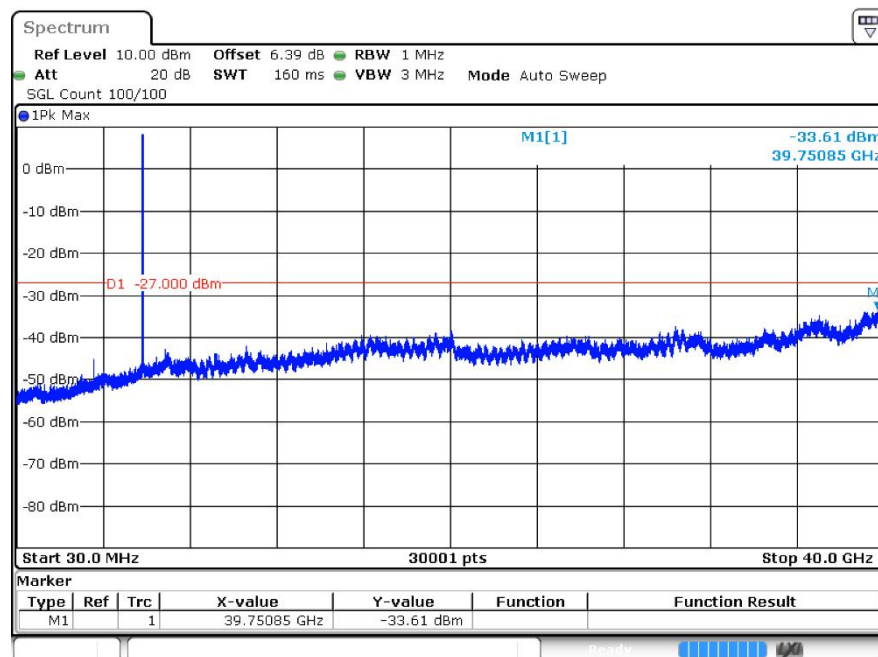
7.1 Test Result

Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
a	5745	Ant1	-33.45	-27	Pass
a	5785	Ant1	-33.26	-27	Pass
a	5825	Ant1	-33.61	-27	Pass
n20	5745	Ant1	-33.16	-27	Pass
n20	5785	Ant1	-33.3	-27	Pass
n20	5825	Ant1	-33.41	-27	Pass
n40	5755	Ant1	-32.92	-27	Pass
n40	5795	Ant1	-33.08	-27	Pass

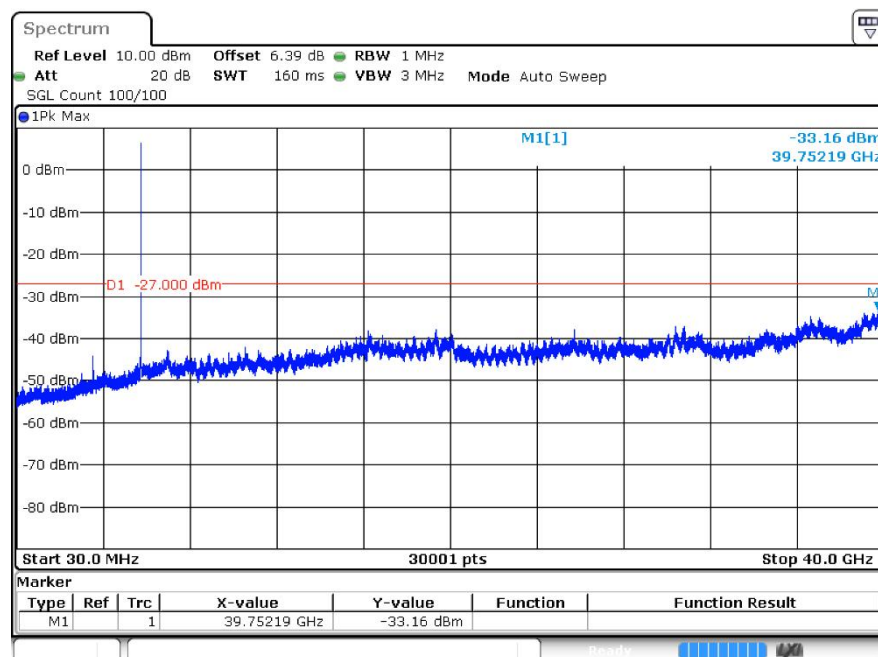
7.2 Test Graphs



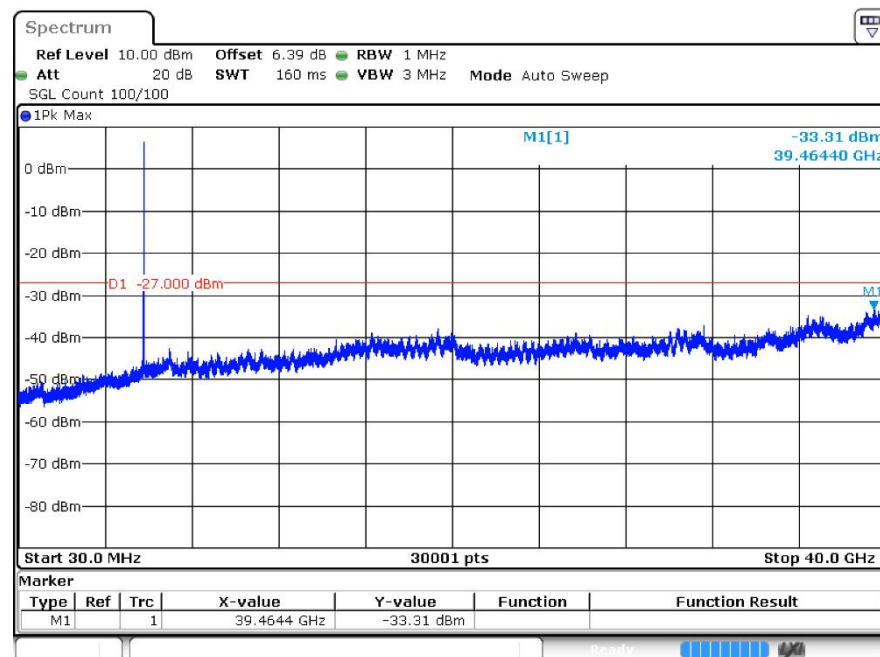
Tx. Spurious a 5825MHz Ant1 Emission



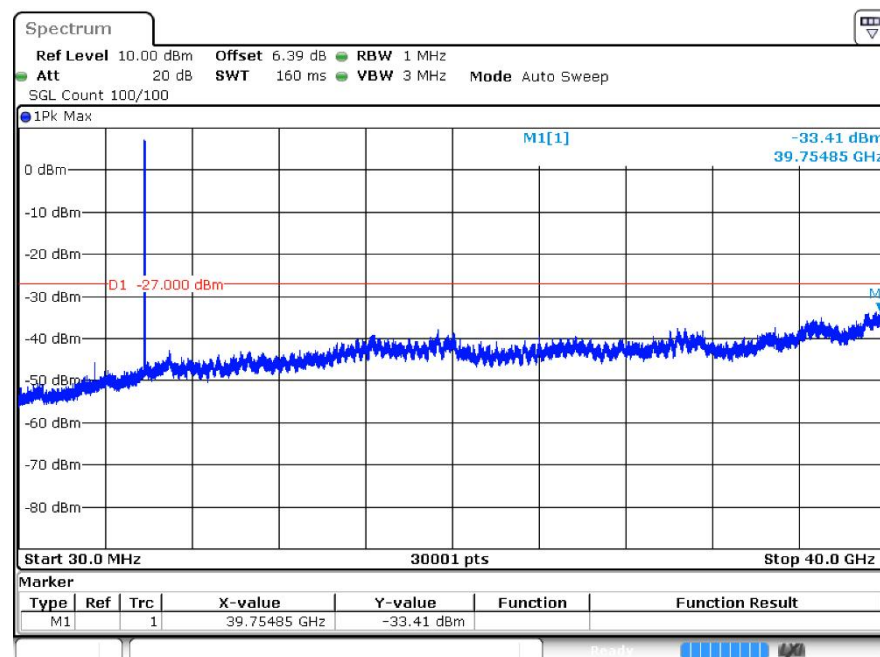
Tx. Spurious n20 5745MHz Ant1 Emission



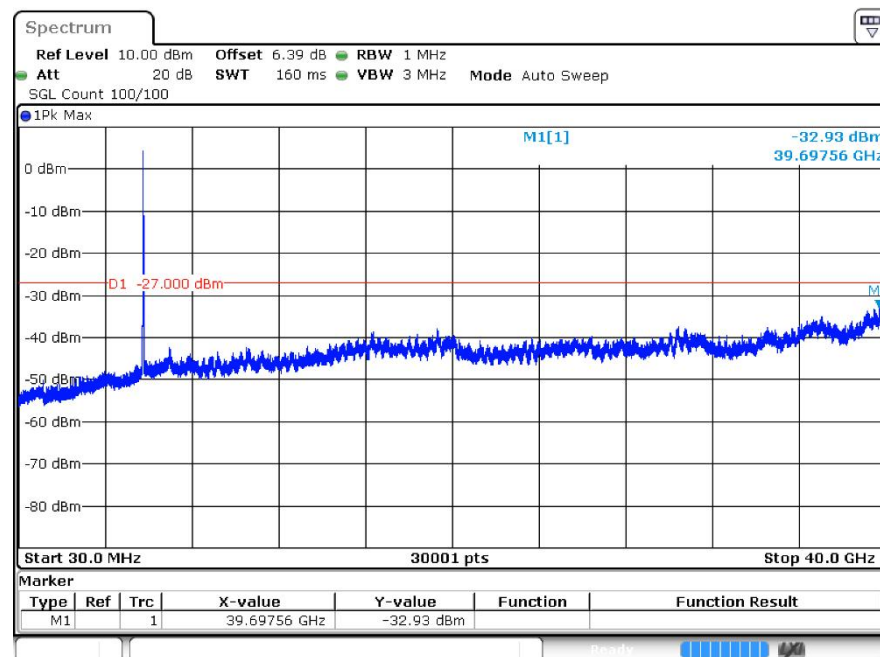
Tx. Spurious n20 5785MHz Ant1 Emission



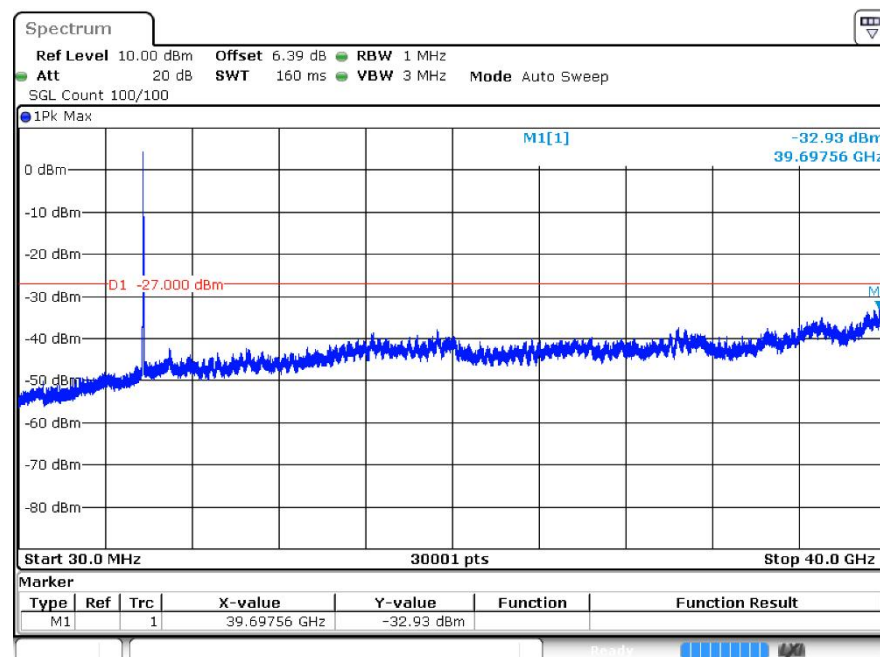
Tx. Spurious n20 5825MHz Ant1 Emission



Tx. Spurious n40 5755MHz Ant1 Emission



Tx. Spurious n40 5795MHz Ant1 Emission



---The End---