Appendix E

RF Test Data for 5.8GWIFI(Conducted Measurement)

Product Name: Wireless camera

Trade Mark: N/A

Test Model: IPC03

Environmental Conditions

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

Contents

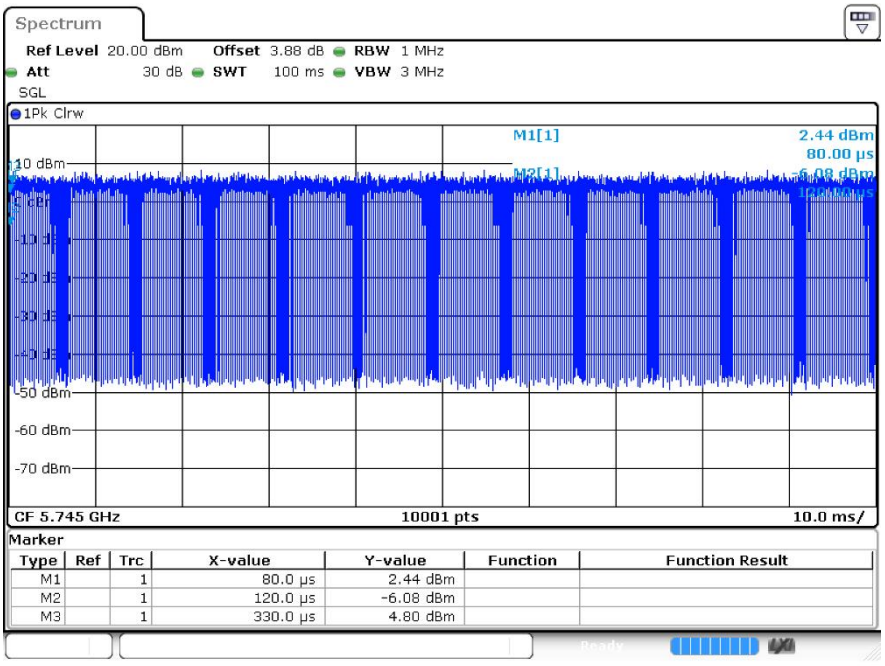
1 Duty Cycle

1.1 Test Result

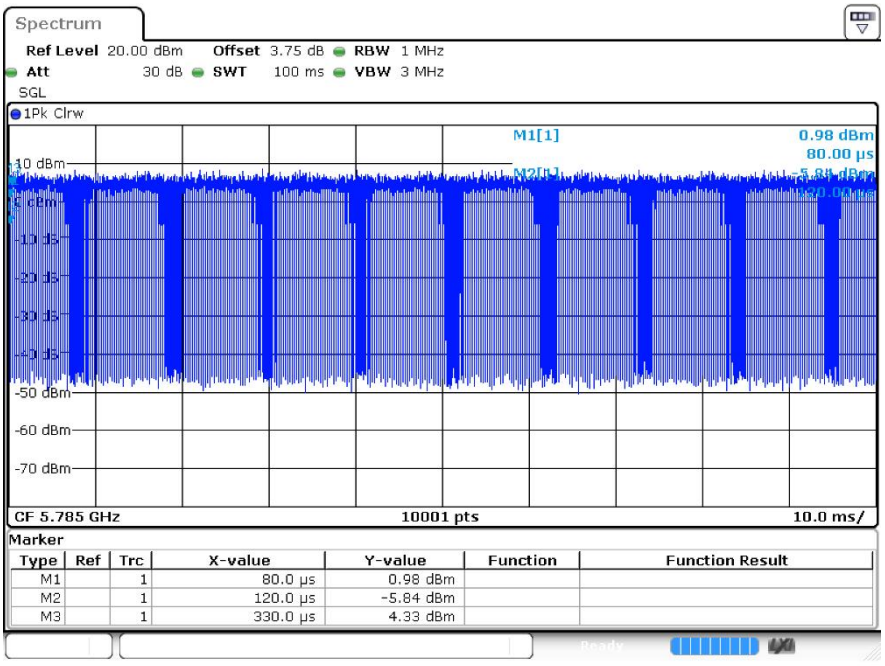
Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
a	5745	Ant1	86.68	0.62	4.76
a	5785	Ant1	86.96	0.61	4.76
a	5825	Ant1	86.63	0.62	4.76
n20	5745	Ant1	87.64	0.57	4.35
n20	5785	Ant1	87.64	0.57	4.35
n20	5825	Ant1	87.62	0.57	4.35
n40	5755	Ant1	88.13	0.55	4.17
n40	5795	Ant1	88.13	0.55	4.17

1.2 Test Graphs

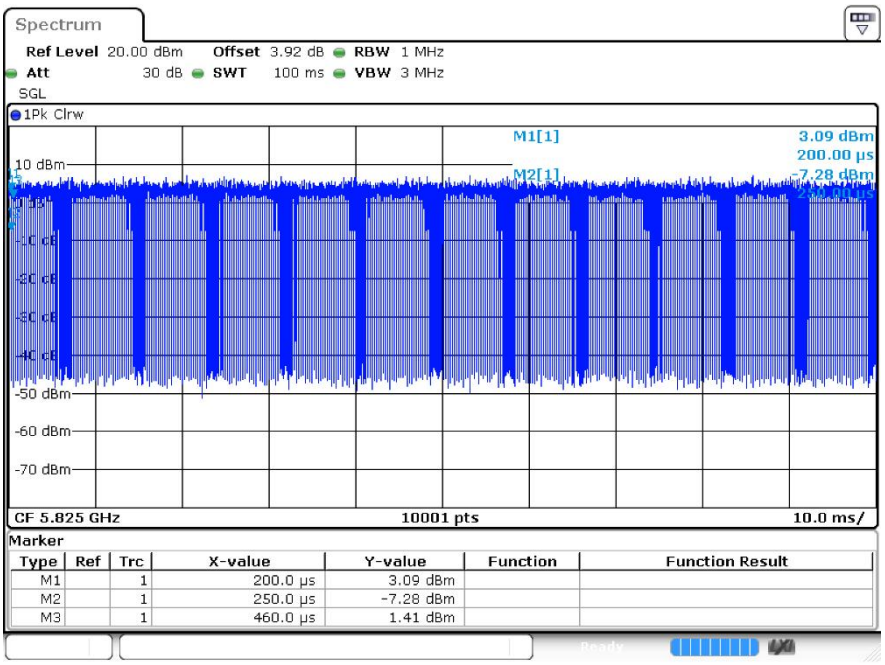
Test Graphs
Duty Cycle a 5745MHz Ant1



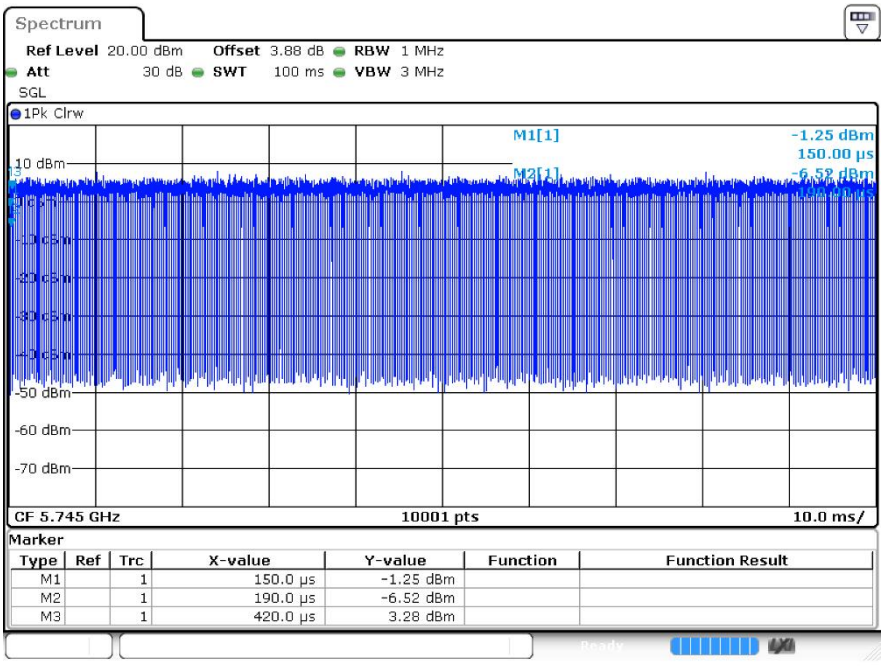
Duty Cycle a 5785MHz Ant1



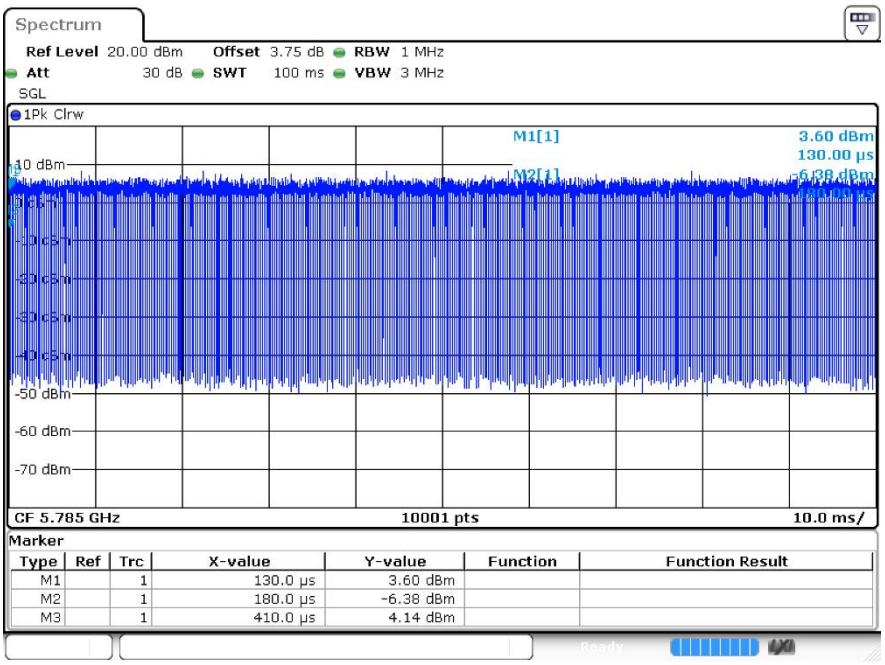
Duty Cycle a 5825MHz Ant1



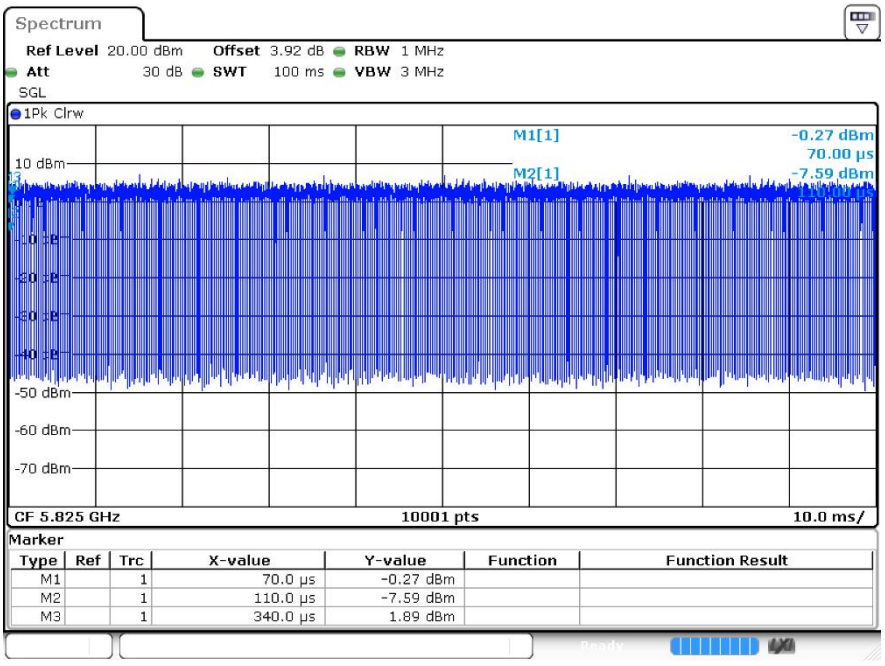
Duty Cycle n20 5745MHz Ant1



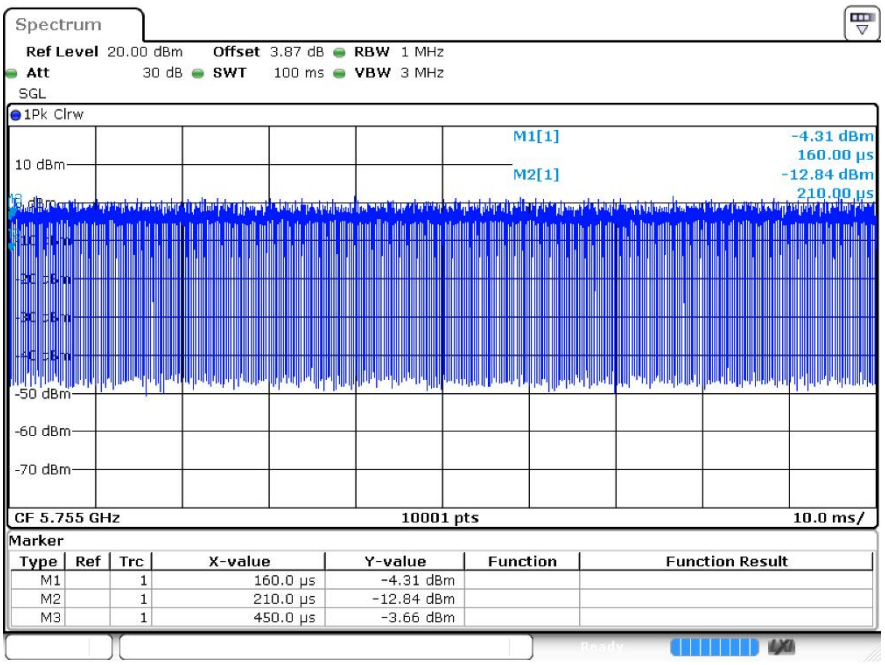
Duty Cycle n20 5785MHz Ant1



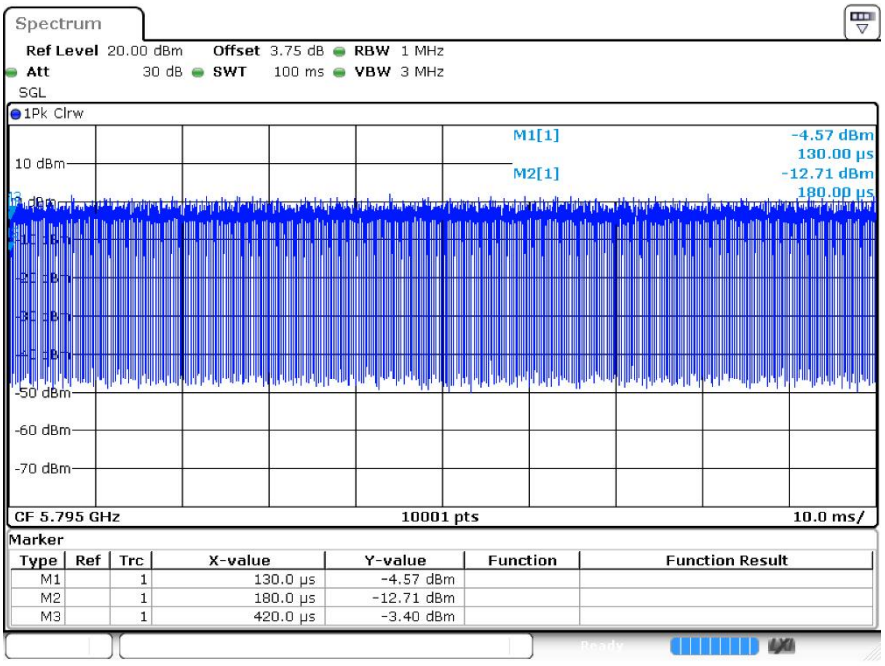
Duty Cycle n20 5825MHz Ant1



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	14.64	30	Pass
a	5785	Ant1	14.94	30	Pass
a	5825	Ant1	13.62	30	Pass
n20	5745	Ant1	14.15	30	Pass
n20	5785	Ant1	14.36	30	Pass
n20	5825	Ant1	13.05	30	Pass
n40	5755	Ant1	13.92	30	Pass
n40	5795	Ant1	13.85	30	Pass

Note:

The duty factor has been compensated into the result.

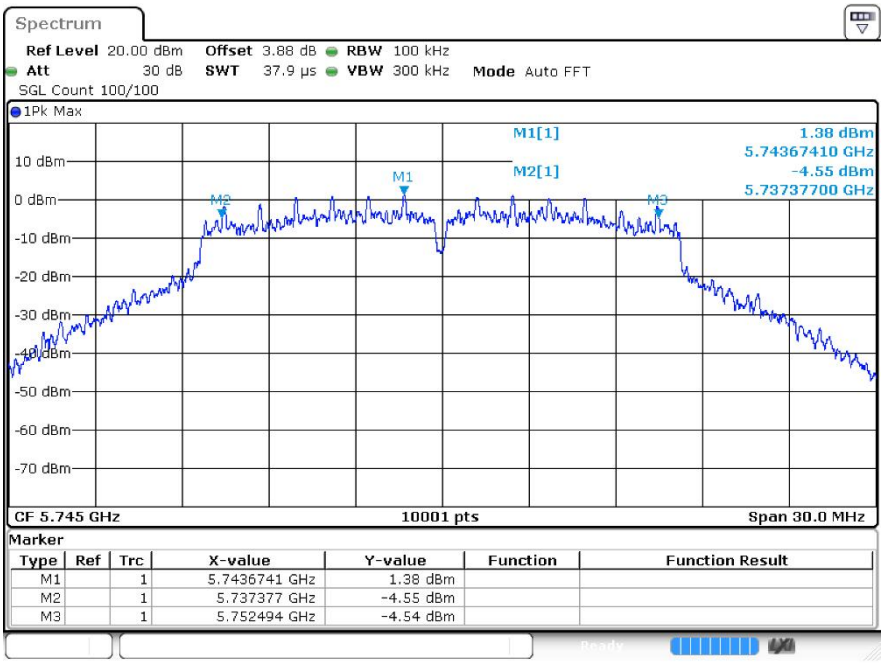
3 -6dB Bandwidth

3.1 Test Result

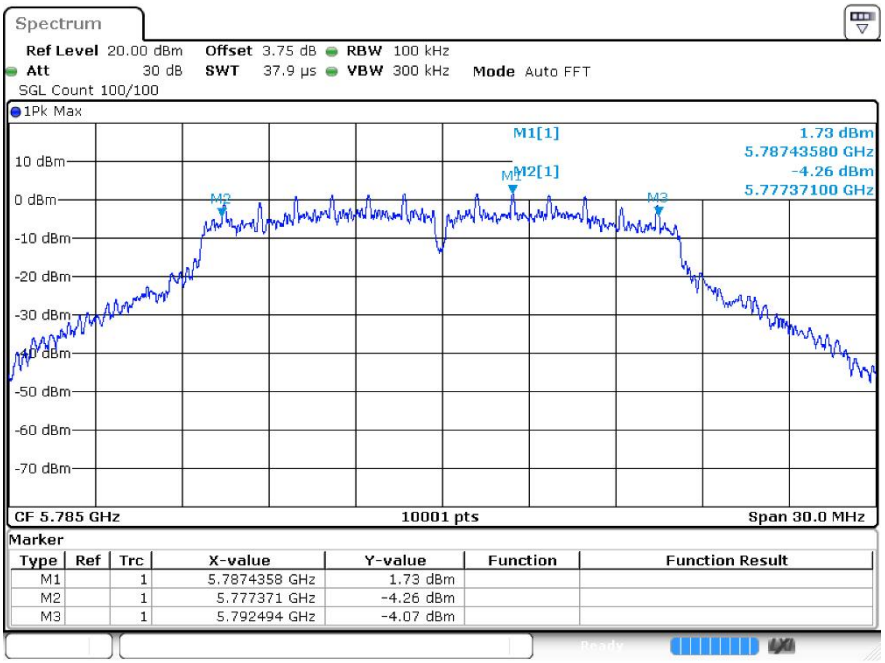
Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
a	5745	Ant1	15.117	0.5	Pass
a	5785	Ant1	15.123	0.5	Pass
a	5825	Ant1	15.117	0.5	Pass
n20	5745	Ant1	15.12	0.5	Pass
n20	5785	Ant1	15.075	0.5	Pass
n20	5825	Ant1	13.2	0.5	Pass
n40	5755	Ant1	31.332	0.5	Pass
n40	5795	Ant1	35.076	0.5	Pass

3.2 Test Graphs

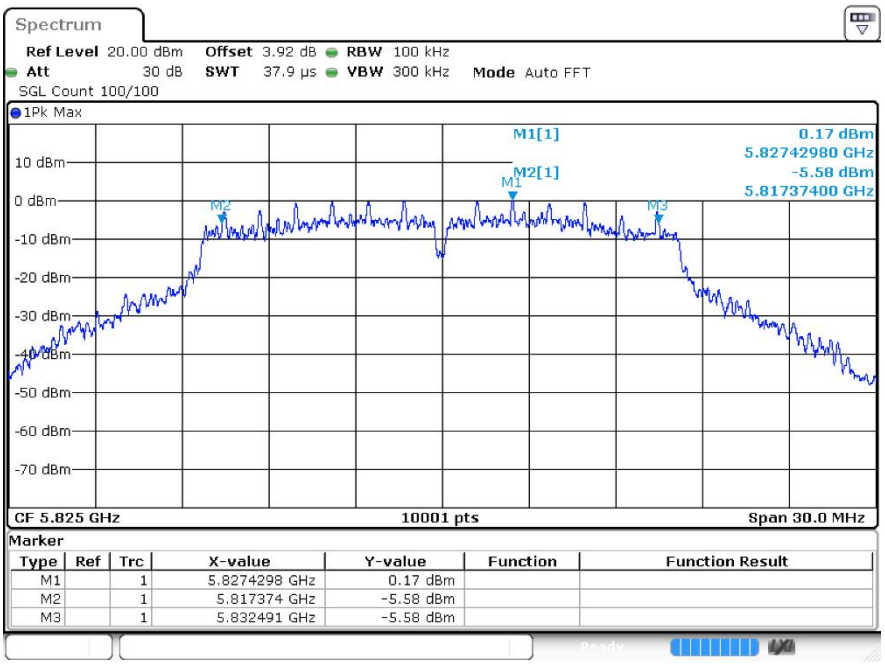
Test Graphs
-6dB Bandwidth a 5745MHz Ant1



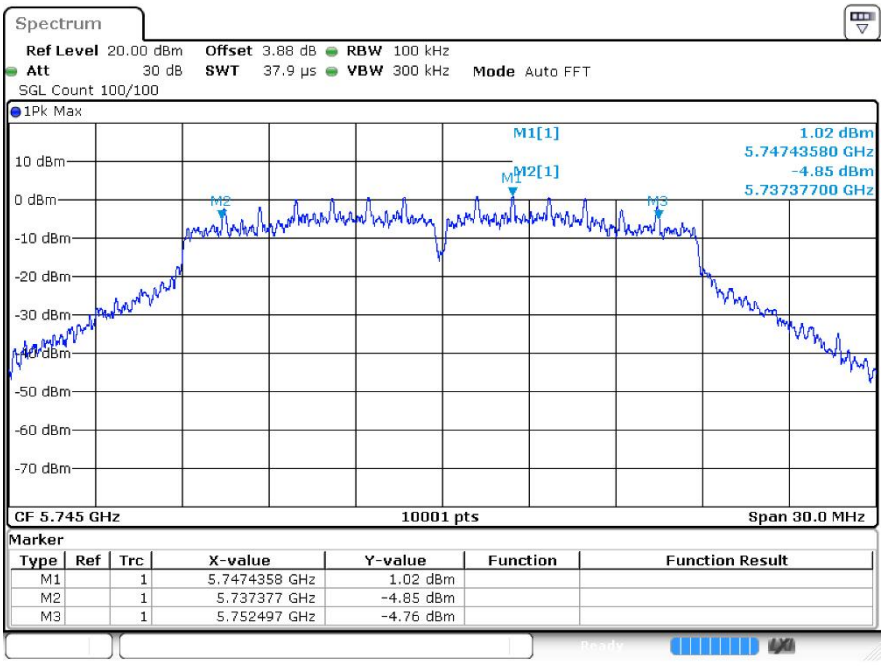
-6dB Bandwidth a 5785MHz Ant1



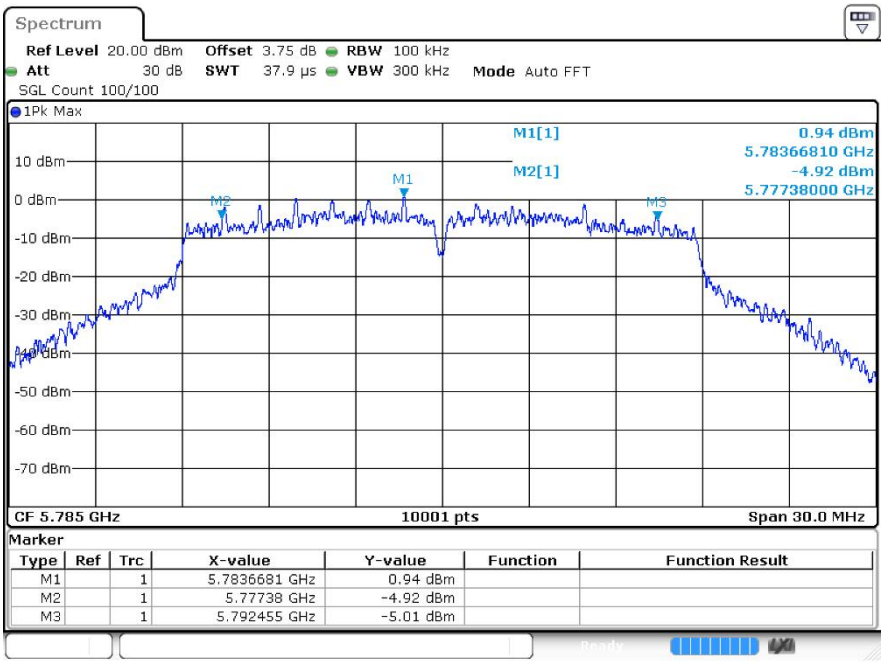
-6dB Bandwidth a 5825MHz Ant1



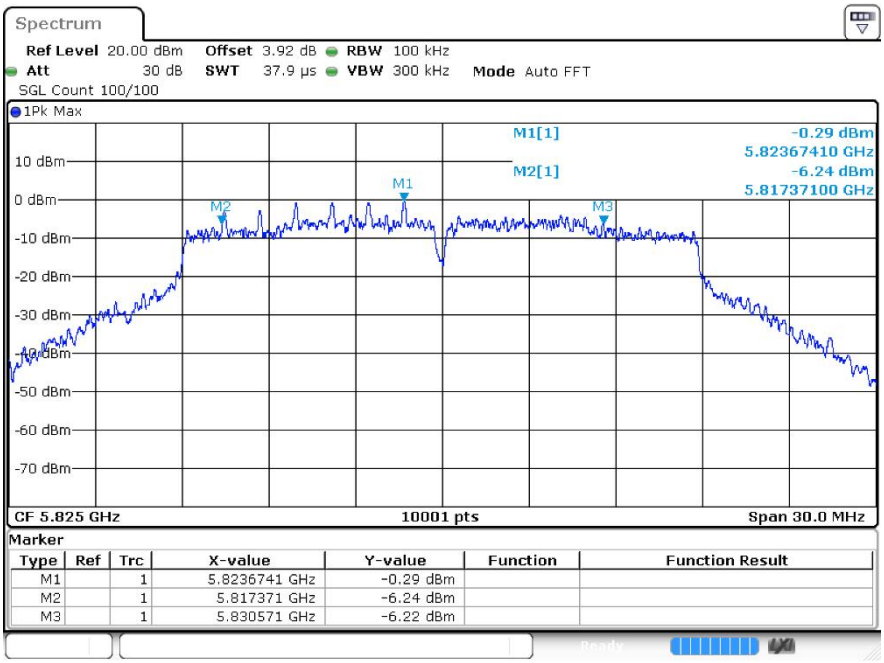
-6dB Bandwidth n20 5745MHz Ant1



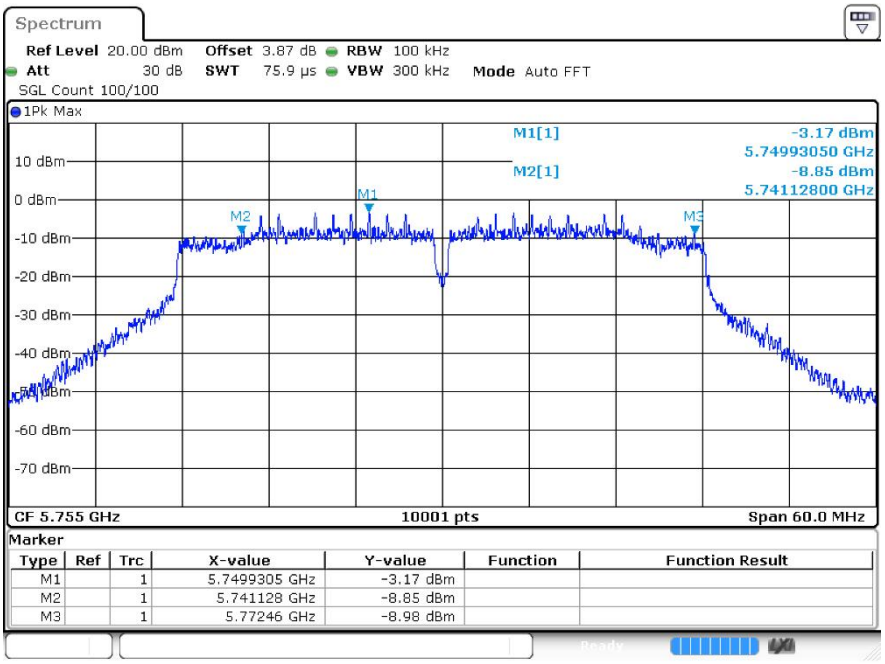
-6dB Bandwidth n20 5785MHz Ant1



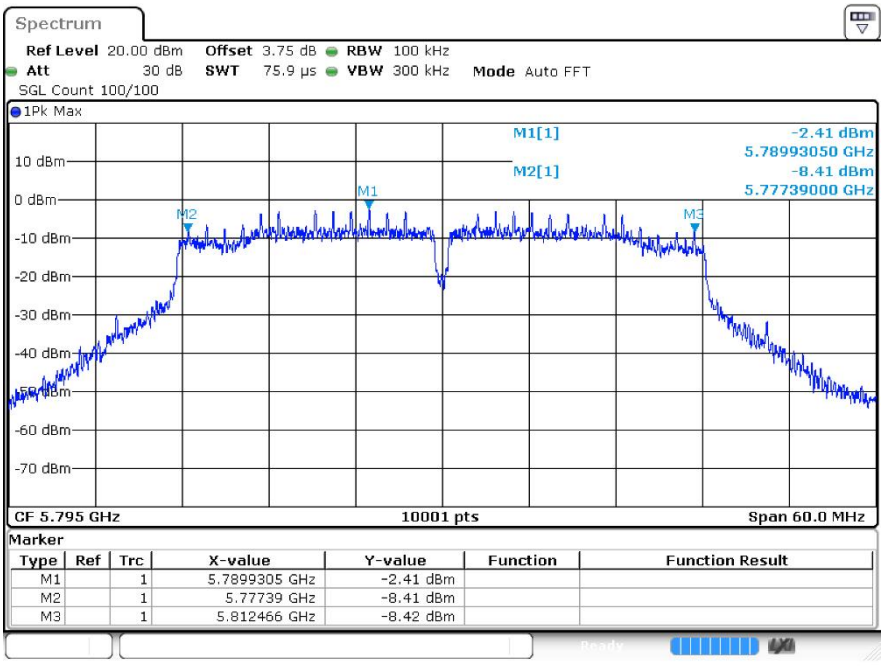
-6dB Bandwidth n20 5825MHz Ant1



-6dB Bandwidth n40 5755MHz Ant1



-6dB Bandwidth n40 5795MHz Ant1

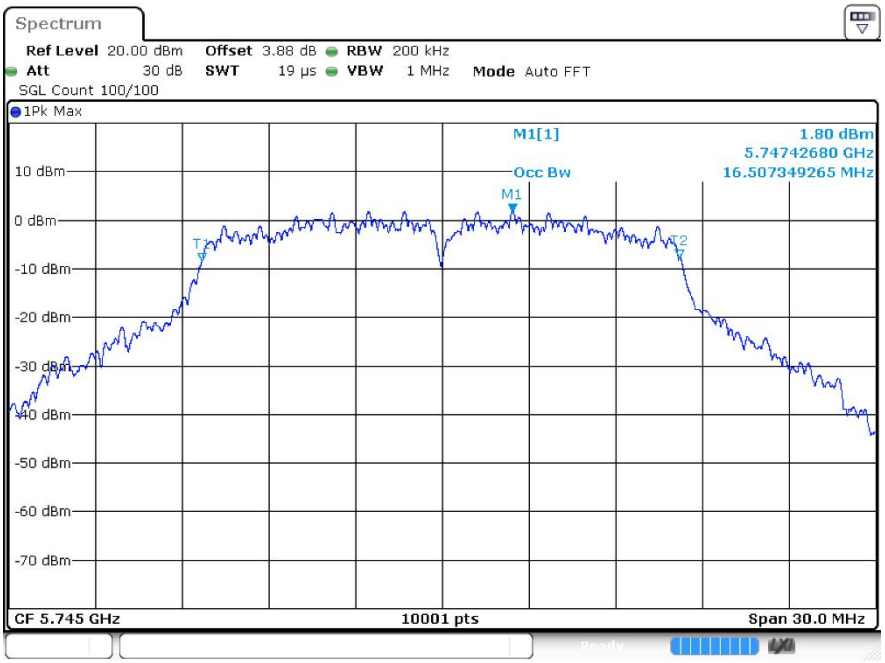
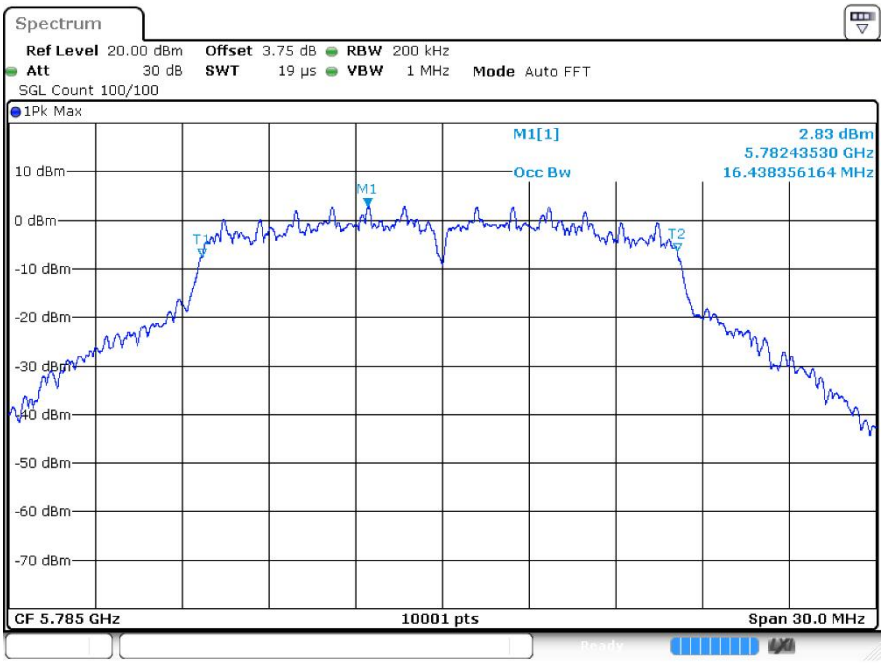


4 Occupied Channel Bandwidth

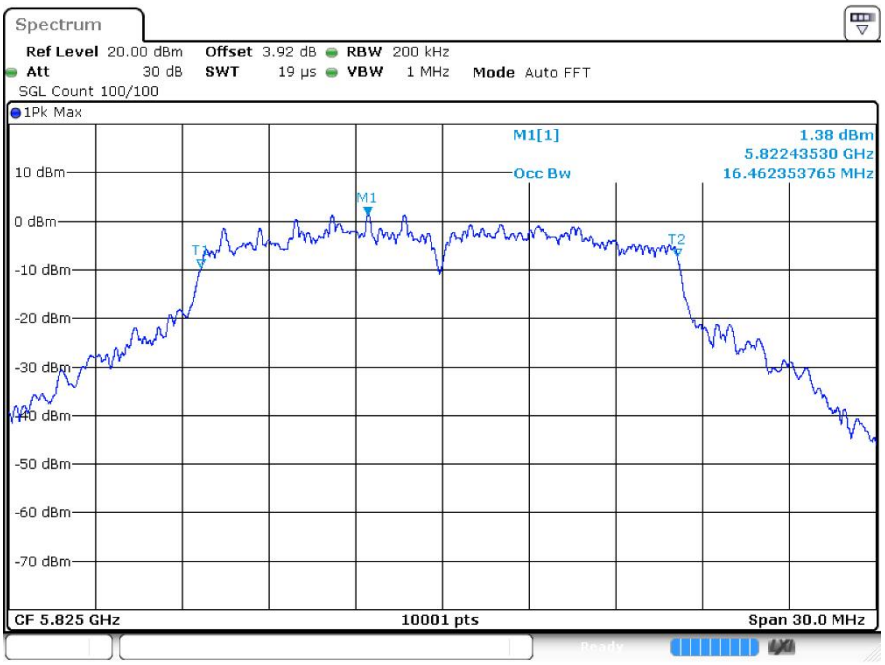
4.1 Test Result

Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
a	5745	Ant1	16.507
a	5785	Ant1	16.438
a	5825	Ant1	16.462
n20	5745	Ant1	17.674
n20	5785	Ant1	17.623
n20	5825	Ant1	17.704
n40	5755	Ant1	35.978
n40	5795	Ant1	35.858

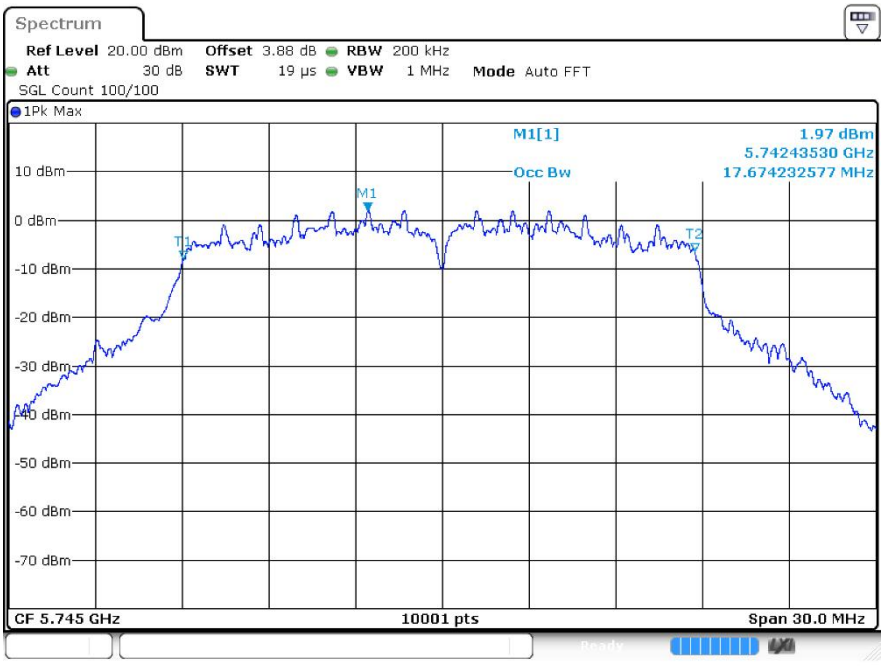
4.2 Test Graphs

Test Graphs
OBW a 5745MHz Ant1

OBW a 5785MHz Ant1


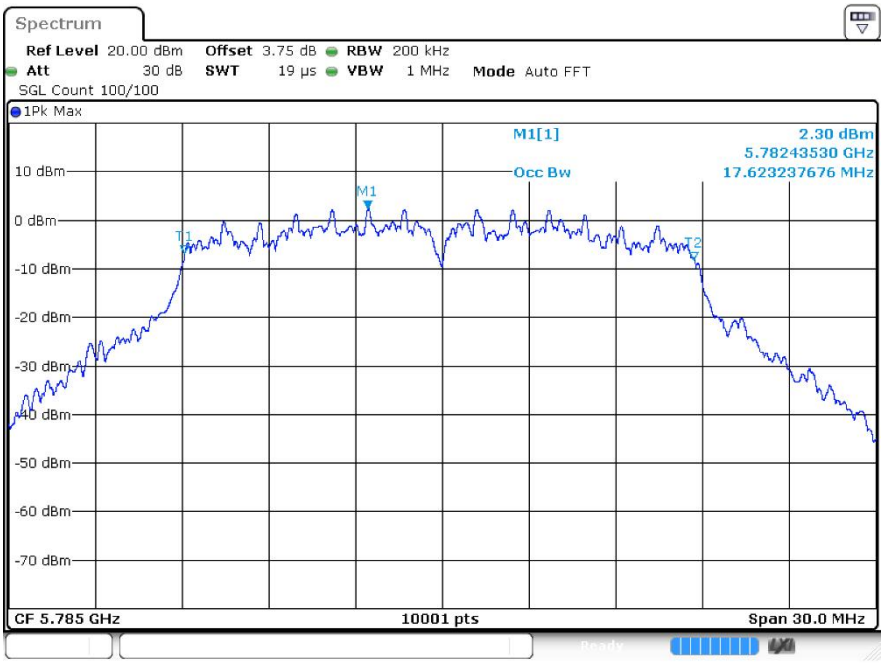
OBW a 5825MHz Ant1



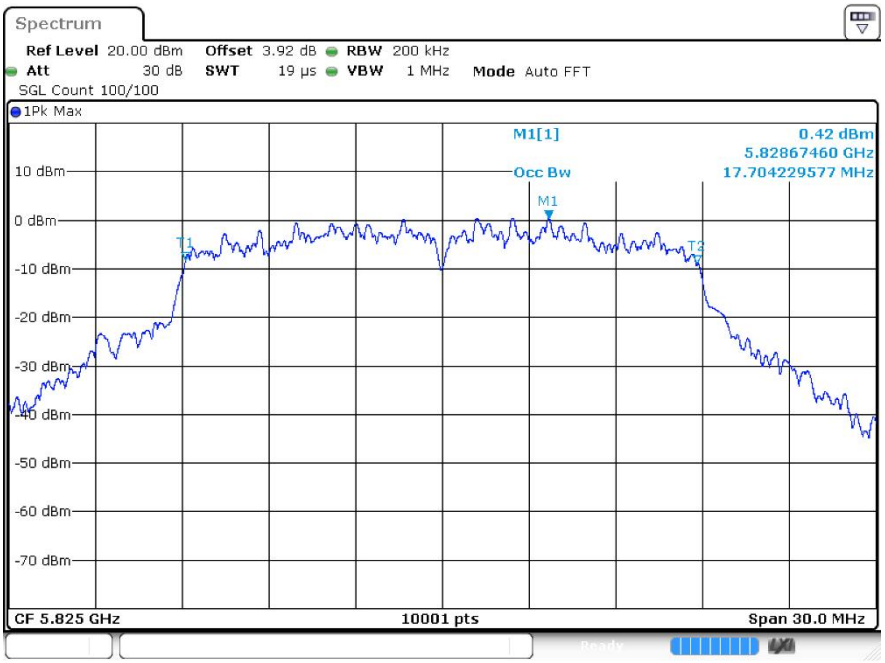
OBW n20 5745MHz Ant1



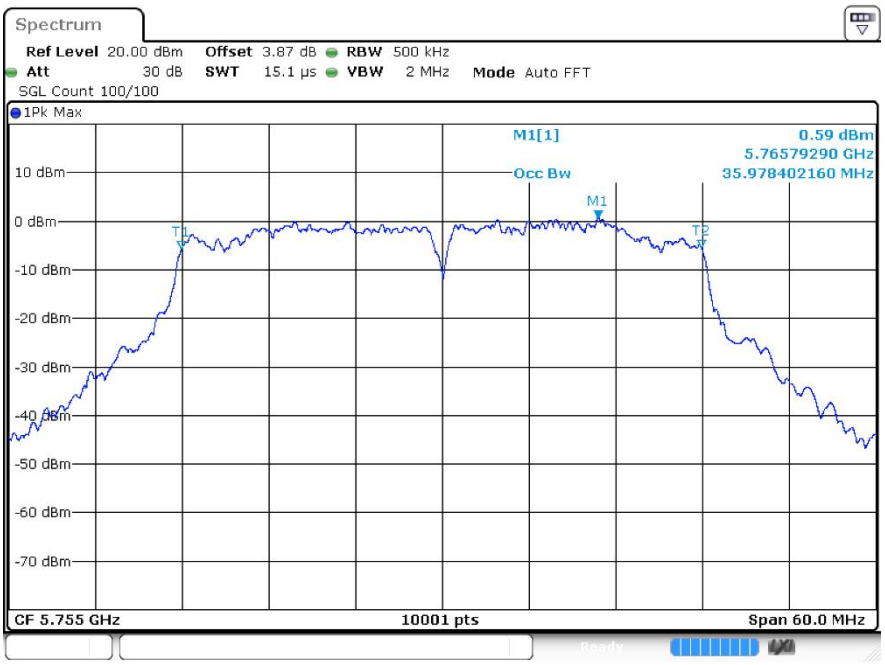
OBW n20 5785MHz Ant1



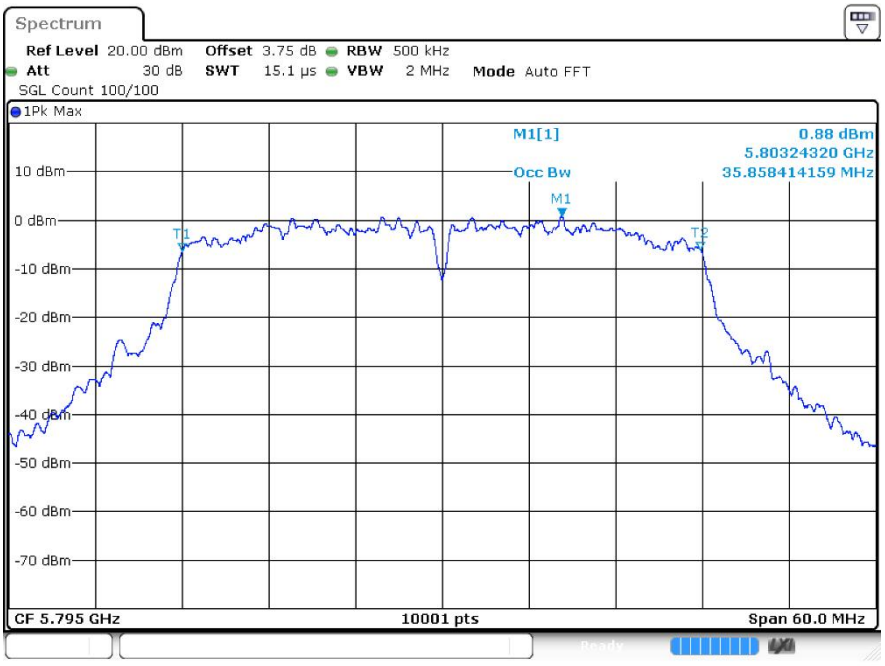
OBW n20 5825MHz Ant1



OBW n40 5755MHz Ant1



OBW n40 5795MHz Ant1

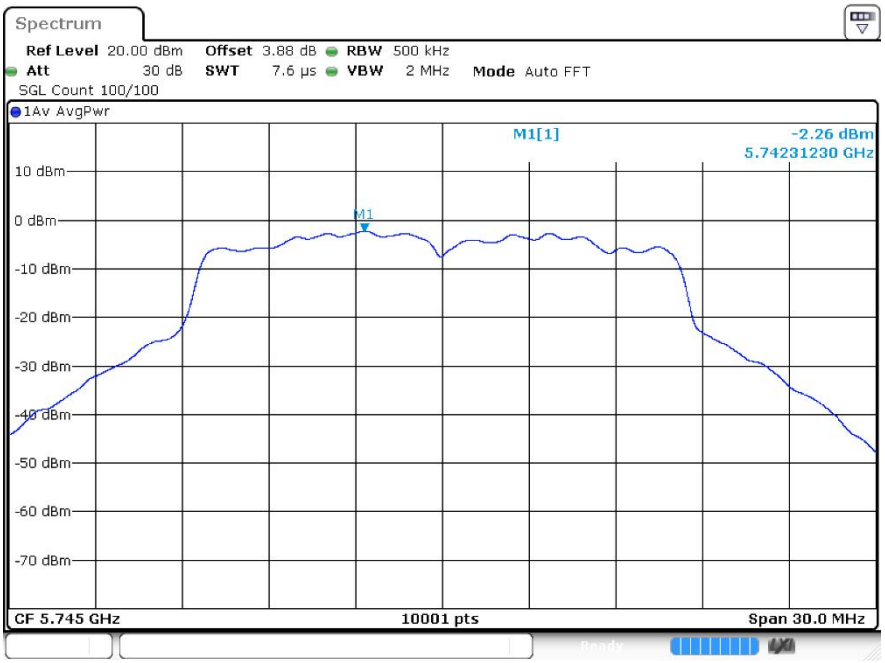
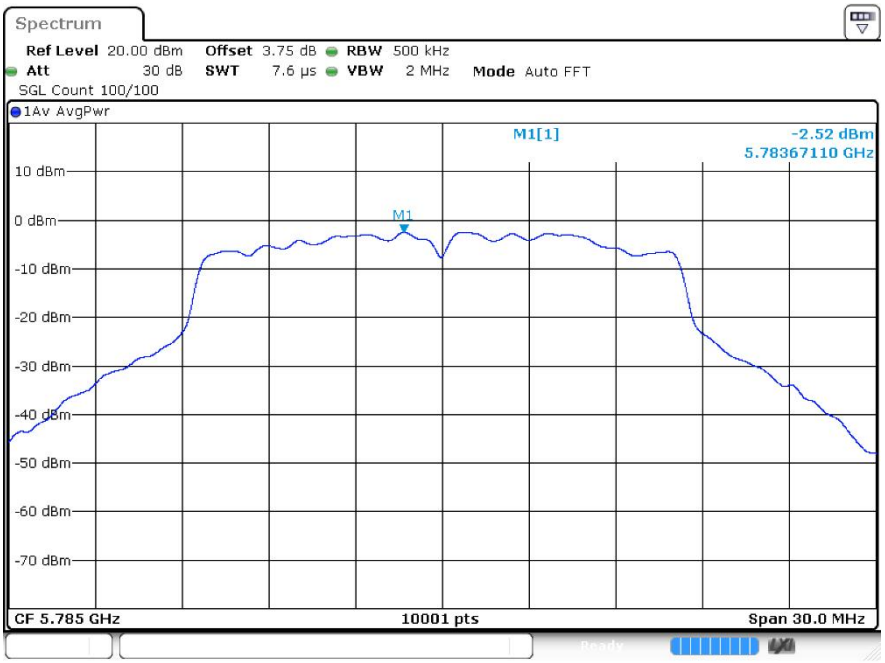


5 Maximum Power Spectral Density Level

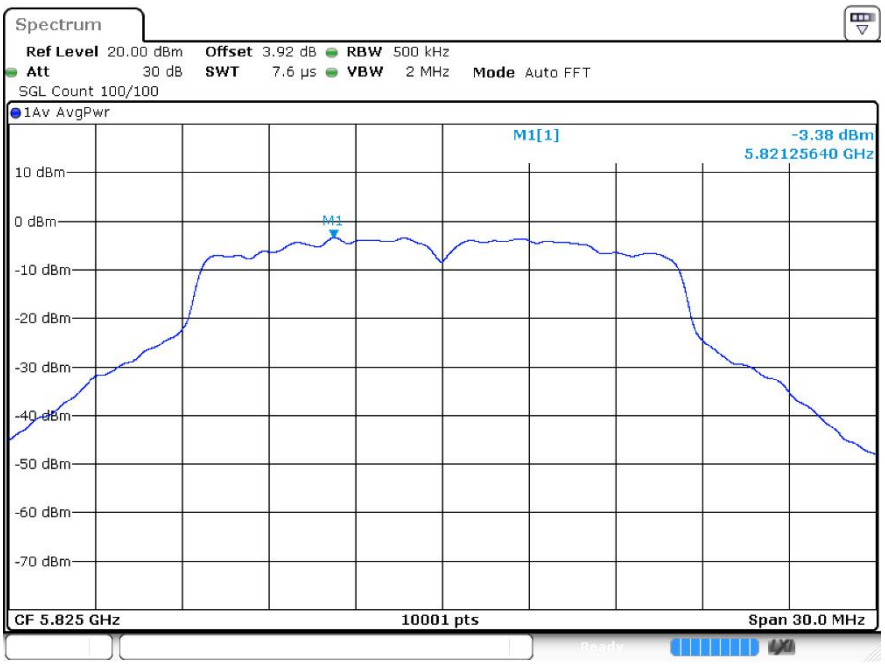
5.1 Test Result

Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm)	Duty Factor (dB)	Total PSD (dBm)	Limit (dBm)	Verdict
a	5745	Ant1	-2.26	0.62	-1.64	30	Pass
a	5785	Ant1	-2.52	0.61	-1.91	30	Pass
a	5825	Ant1	-3.38	0.62	-2.76	30	Pass
n20	5745	Ant1	-3.39	0.57	-2.82	30	Pass
n20	5785	Ant1	-2.69	0.57	-2.12	30	Pass
n20	5825	Ant1	-4.08	0.57	-3.51	30	Pass
n40	5755	Ant1	-6.52	0.55	-5.97	30	Pass
n40	5795	Ant1	-6.49	0.55	-5.94	30	Pass

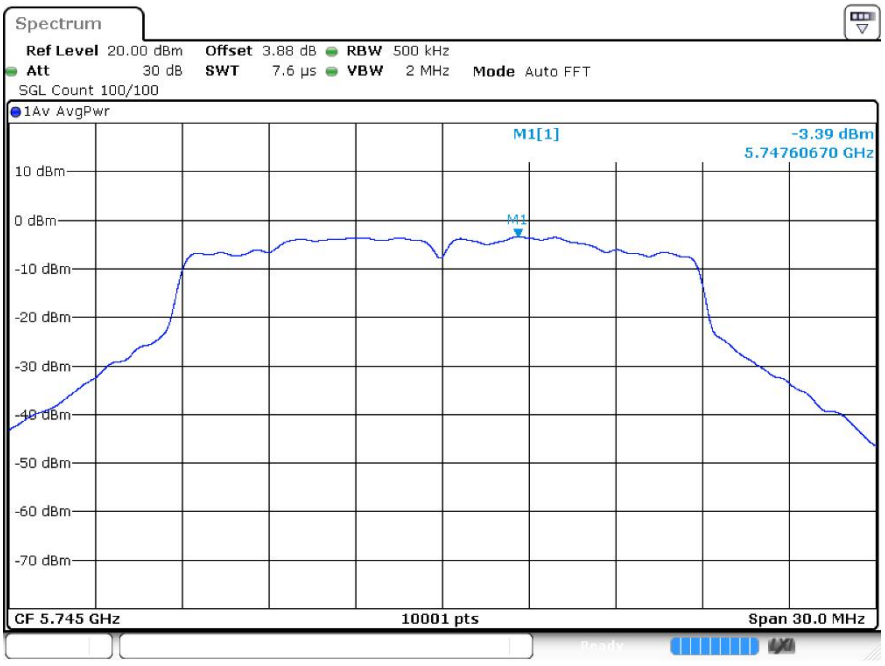
5.2 Test Graphs

Test Graphs
PSD a 5745MHz Ant1

PSD a 5785MHz Ant1


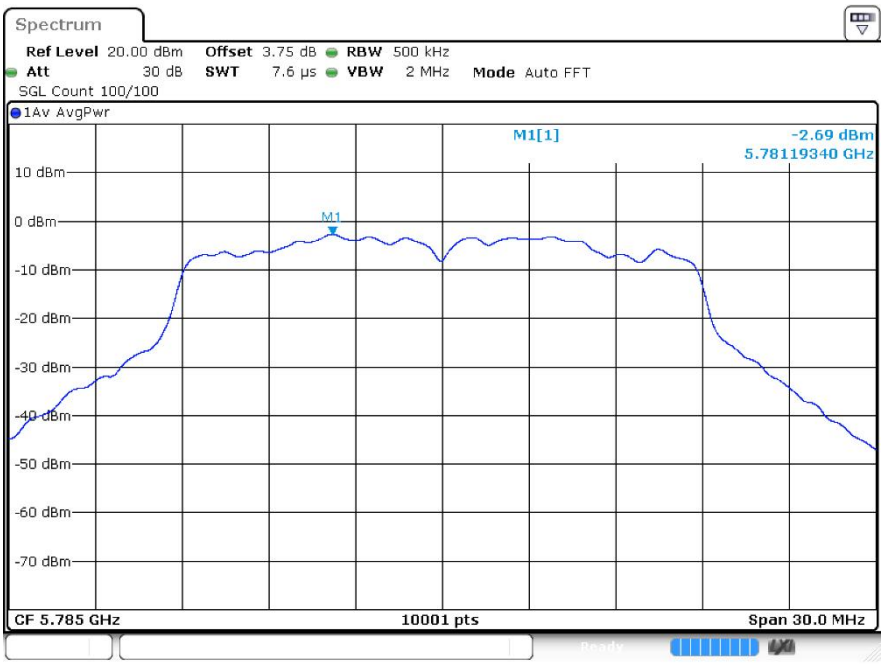
PSD a 5825MHz Ant1



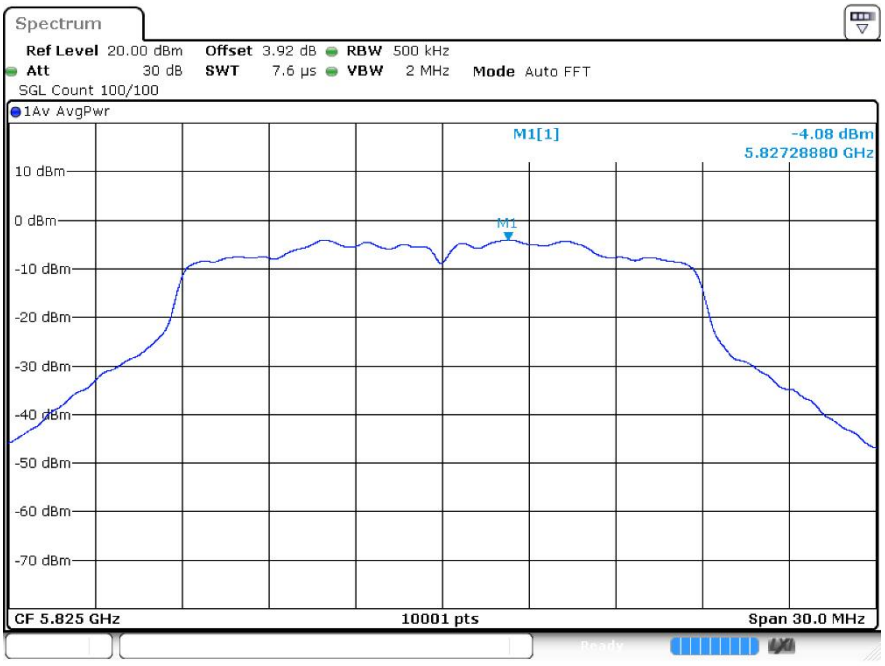
PSD n20 5745MHz Ant1



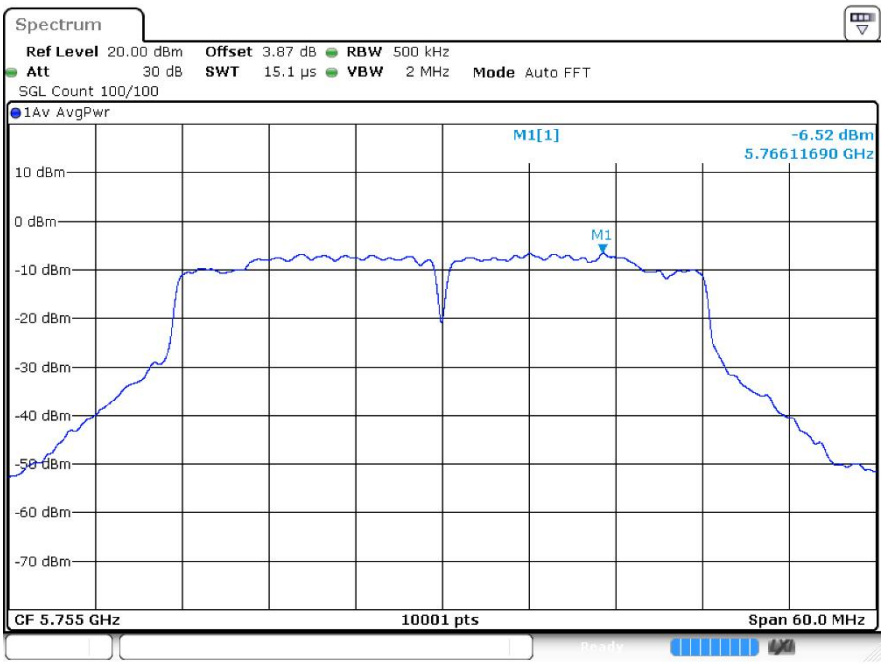
PSD n20 5785MHz Ant1



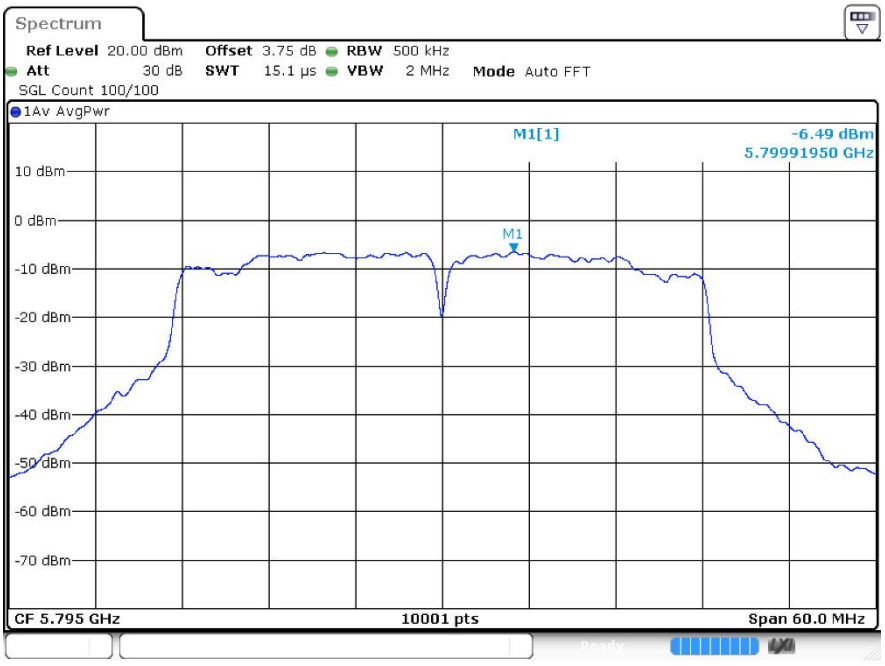
PSD n20 5825MHz Ant1



PSD n40 5755MHz Ant1



PSD n40 5795MHz 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	5745	Ant1	5744.92	-80000	-13.93	25	Pass
20C 120V	a	5745	Ant1	5744.94	-60000	-10.44	25	Pass
20C 138V	a	5745	Ant1	5744.94	-60000	-10.44	25	Pass
-20C 120V	a	5745	Ant1	5744.92	-80000	-13.93	25	Pass
-10C 120V	a	5745	Ant1	5744.94	-60000	-10.44	25	Pass
0C 120V	a	5745	Ant1	5744.94	-60000	-10.44	25	Pass
10C 120V	a	5745	Ant1	5744.94	-60000	-10.44	25	Pass
30C 120V	a	5745	Ant1	5744.94	-60000	-10.44	25	Pass
40C 120V	a	5745	Ant1	5744.94	-60000	-10.44	25	Pass
50C 120V	a	5745	Ant1	5744.92	-80000	-13.93	25	Pass
20C 102V	a	5785	Ant1	5784.94	-60000	-10.37	25	Pass
20C 120V	a	5785	Ant1	5784.94	-60000	-10.37	25	Pass
20C 138V	a	5785	Ant1	5784.96	-40000	-6.91	25	Pass
-20C 120V	a	5785	Ant1	5784.92	-80000	-13.83	25	Pass
-10C 120V	a	5785	Ant1	5784.96	-40000	-6.91	25	Pass
0C 120V	a	5785	Ant1	5784.94	-60000	-10.37	25	Pass
10C 120V	a	5785	Ant1	5784.94	-60000	-10.37	25	Pass
30C 120V	a	5785	Ant1	5784.92	-80000	-13.83	25	Pass
40C 120V	a	5785	Ant1	5784.92	-80000	-13.83	25	Pass
50C 120V	a	5785	Ant1	5784.92	-80000	-13.83	25	Pass
20C 102V	a	5825	Ant1	5824.94	-60000	-10.3	25	Pass
20C 120V	a	5825	Ant1	5824.92	-80000	-13.73	25	Pass
20C 138V	a	5825	Ant1	5824.94	-60000	-10.3	25	Pass
-20C 120V	a	5825	Ant1	5824.94	-60000	-10.3	25	Pass
-10C 120V	a	5825	Ant1	5824.94	-60000	-10.3	25	Pass
0C 120V	a	5825	Ant1	5824.92	-80000	-13.73	25	Pass
10C 120V	a	5825	Ant1	5824.92	-80000	-13.73	25	Pass
30C 120V	a	5825	Ant1	5824.94	-60000	-10.3	25	Pass
40C 120V	a	5825	Ant1	5824.94	-60000	-10.3	25	Pass
50C 120V	a	5825	Ant1	5824.96	-40000	-6.87	25	Pass
20C 102V	n20	5745	Ant1	5744.9	-100000	-17.41	25	Pass
20C 120V	n20	5745	Ant1	5744.94	-60000	-10.44	25	Pass
20C 138V	n20	5745	Ant1	5744.96	-40000	-6.96	25	Pass
-20C 120V	n20	5745	Ant1	5744.92	-80000	-13.93	25	Pass

-10C 120V	n20	5745	Ant1	5744.94	-60000	-10.44	25	Pass
0C 120V	n20	5745	Ant1	5744.92	-80000	-13.93	25	Pass
10C 120V	n20	5745	Ant1	5744.94	-60000	-10.44	25	Pass
30C 120V	n20	5745	Ant1	5744.96	-40000	-6.96	25	Pass
40C 120V	n20	5745	Ant1	5744.9	-100000	-17.41	25	Pass
50C 120V	n20	5745	Ant1	5744.96	-40000	-6.96	25	Pass
20C 102V	n20	5785	Ant1	5784.94	-60000	-10.37	25	Pass
20C 120V	n20	5785	Ant1	5784.96	-40000	-6.91	25	Pass
20C 138V	n20	5785	Ant1	5784.94	-60000	-10.37	25	Pass
-20C 120V	n20	5785	Ant1	5784.92	-80000	-13.83	25	Pass
-10C 120V	n20	5785	Ant1	5784.94	-60000	-10.37	25	Pass
0C 120V	n20	5785	Ant1	5784.92	-80000	-13.83	25	Pass
10C 120V	n20	5785	Ant1	5784.96	-40000	-6.91	25	Pass
30C 120V	n20	5785	Ant1	5784.92	-80000	-13.83	25	Pass
40C 120V	n20	5785	Ant1	5784.94	-60000	-10.37	25	Pass
50C 120V	n20	5785	Ant1	5784.96	-40000	-6.91	25	Pass
20C 102V	n20	5825	Ant1	5824.96	-40000	-6.87	25	Pass
20C 120V	n20	5825	Ant1	5824.92	-80000	-13.73	25	Pass
20C 138V	n20	5825	Ant1	5824.9	-100000	-17.17	25	Pass
-20C 120V	n20	5825	Ant1	5824.94	-60000	-10.3	25	Pass
-10C 120V	n20	5825	Ant1	5824.94	-60000	-10.3	25	Pass
0C 120V	n20	5825	Ant1	5824.92	-80000	-13.73	25	Pass
10C 120V	n20	5825	Ant1	5824.9	-100000	-17.17	25	Pass
30C 120V	n20	5825	Ant1	5824.94	-60000	-10.3	25	Pass
40C 120V	n20	5825	Ant1	5824.9	-100000	-17.17	25	Pass
50C 120V	n20	5825	Ant1	5824.92	-80000	-13.73	25	Pass
20C 102V	n40	5755	Ant1	5754.88	-120000	-20.85	25	Pass
20C 120V	n40	5755	Ant1	5754.92	-80000	-13.9	25	Pass
20C 138V	n40	5755	Ant1	5754.92	-80000	-13.9	25	Pass
-20C 120V	n40	5755	Ant1	5754.92	-80000	-13.9	25	Pass
-10C 120V	n40	5755	Ant1	5755	0	0	25	Pass
0C 120V	n40	5755	Ant1	5754.92	-80000	-13.9	25	Pass
10C 120V	n40	5755	Ant1	5754.92	-80000	-13.9	25	Pass
30C 120V	n40	5755	Ant1	5754.96	-40000	-6.95	25	Pass
40C 120V	n40	5755	Ant1	5754.92	-80000	-13.9	25	Pass
50C 120V	n40	5755	Ant1	5754.96	-40000	-6.95	25	Pass
20C 102V	n40	5795	Ant1	5794.92	-80000	-13.81	25	Pass
20C 120V	n40	5795	Ant1	5794.92	-80000	-13.81	25	Pass
20C 138V	n40	5795	Ant1	5794.92	-80000	-13.81	25	Pass
-20C 120V	n40	5795	Ant1	5794.92	-80000	-13.81	25	Pass
-10C 120V	n40	5795	Ant1	5794.92	-80000	-13.81	25	Pass
0C 120V	n40	5795	Ant1	5794.92	-80000	-13.81	25	Pass
10C 120V	n40	5795	Ant1	5794.92	-80000	-13.81	25	Pass

30C 120V	n40	5795	Ant1	5794.88	-120000	-20.71	25	Pass
40C 120V	n40	5795	Ant1	5794.88	-120000	-20.71	25	Pass
50C 120V	n40	5795	Ant1	5794.88	-120000	-20.71	25	Pass

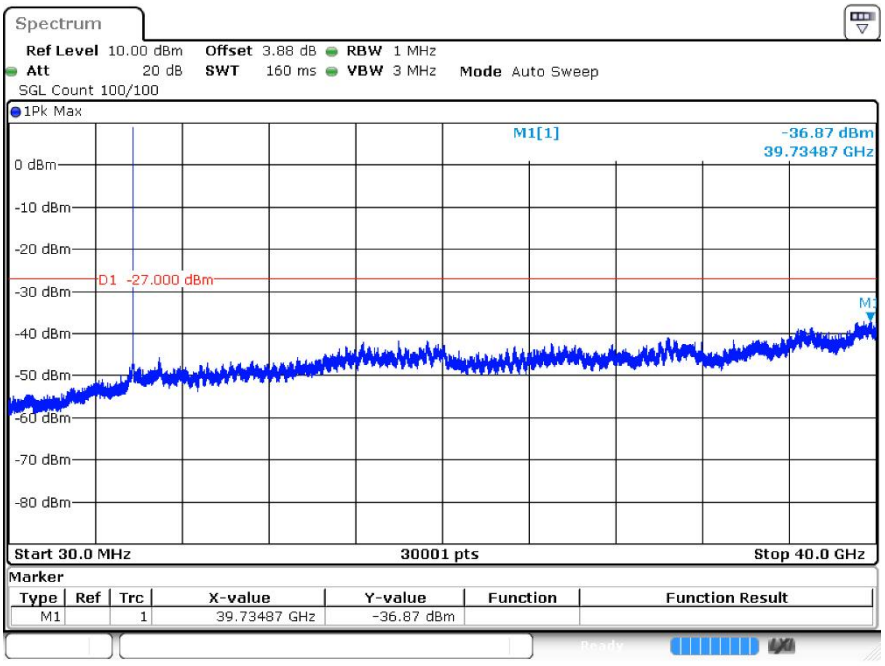
7 Conducted RF Spurious Emission

7.1 Test Result

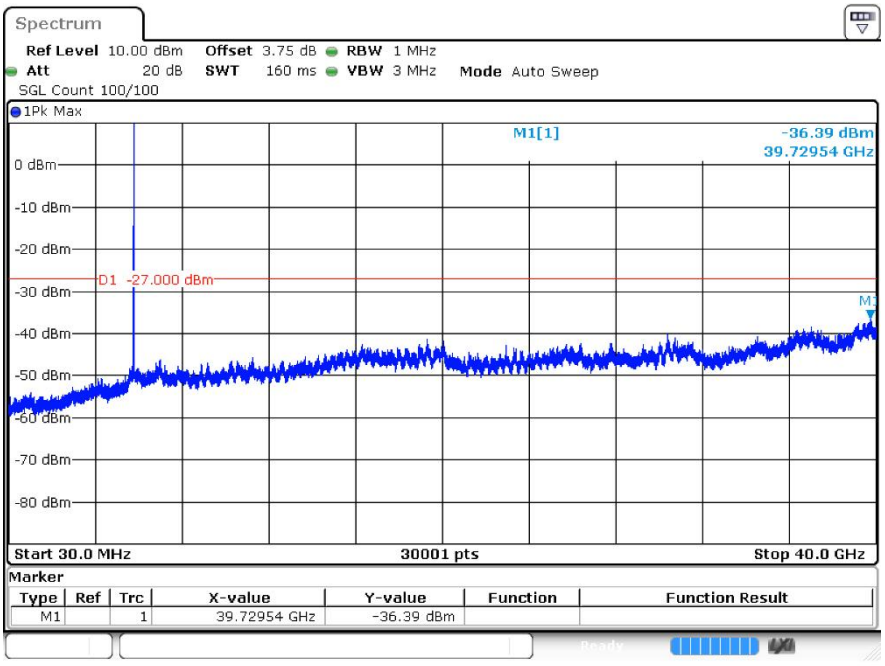
Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
a	5745	Ant1	-36.86	-27	Pass
a	5785	Ant1	-36.38	-27	Pass
a	5825	Ant1	-36.67	-27	Pass
n20	5745	Ant1	-36.18	-27	Pass
n20	5785	Ant1	-36.78	-27	Pass
n20	5825	Ant1	-37	-27	Pass
n40	5755	Ant1	-36.15	-27	Pass
n40	5795	Ant1	-37.09	-27	Pass

7.2 Test Graphs

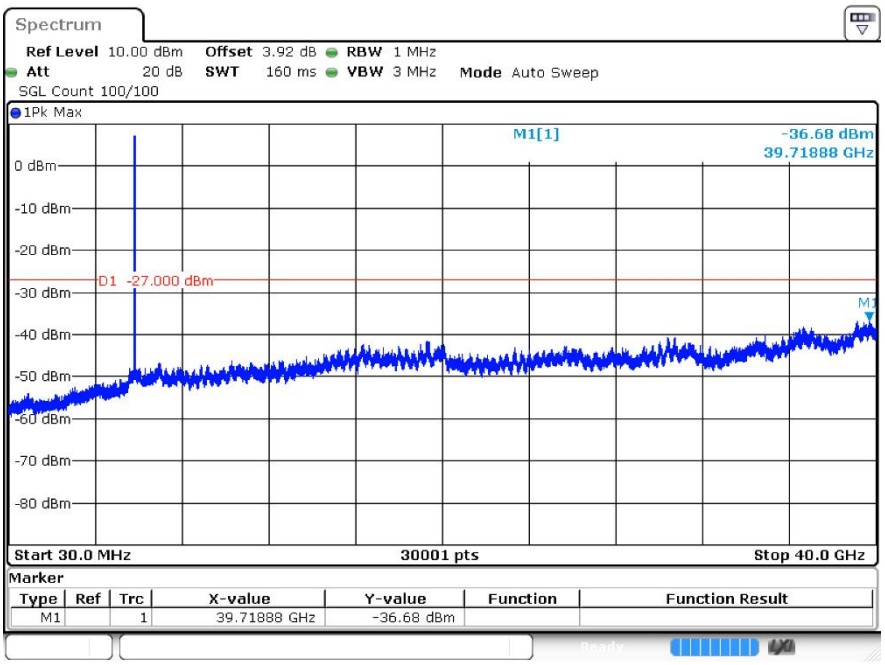
Test Graphs
Tx. Spurious a 5745MHz Ant1 Emission



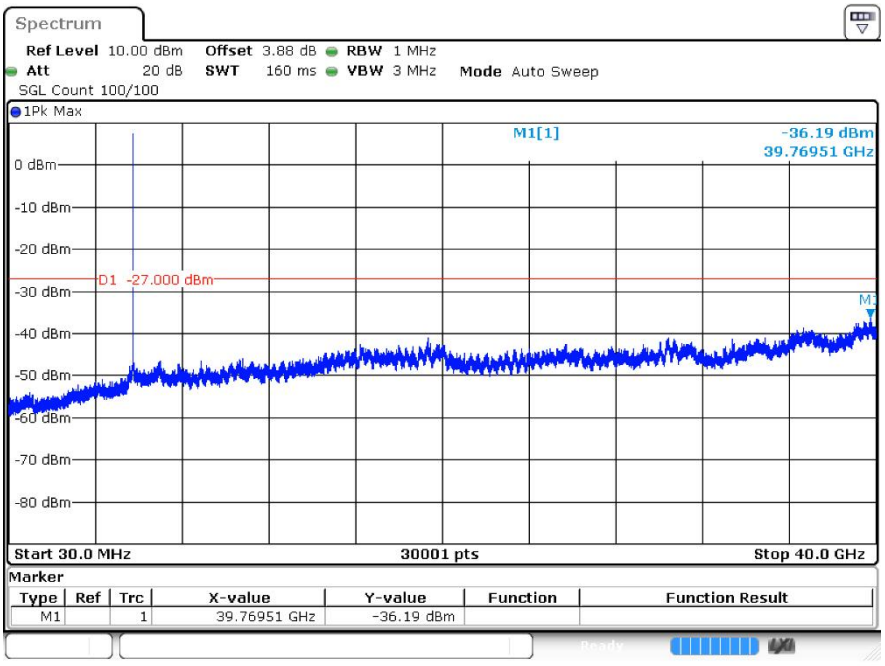
Tx. Spurious a 5785MHz Ant1 Emission



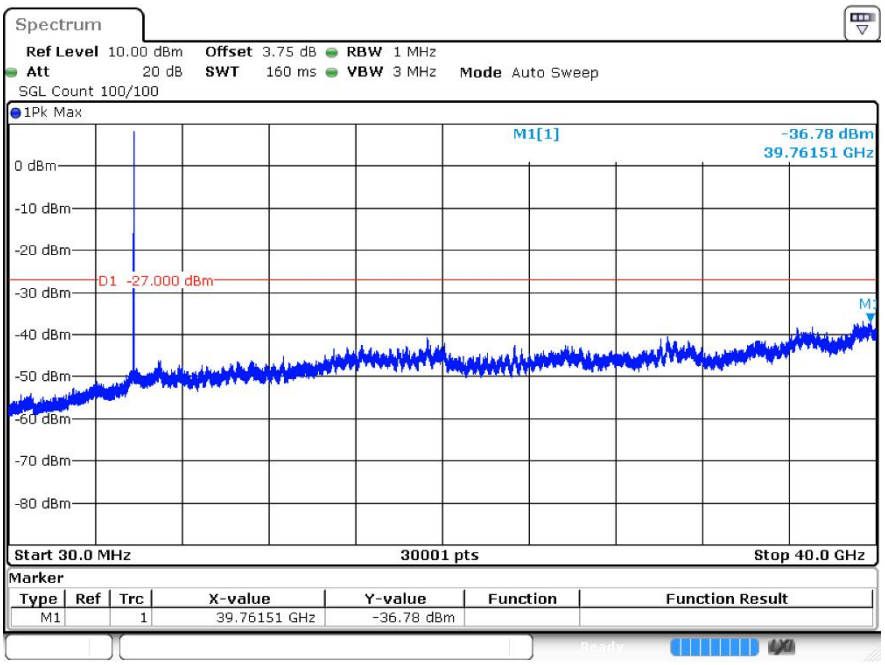
Tx. Spurious a 5825MHz Ant1 Emission



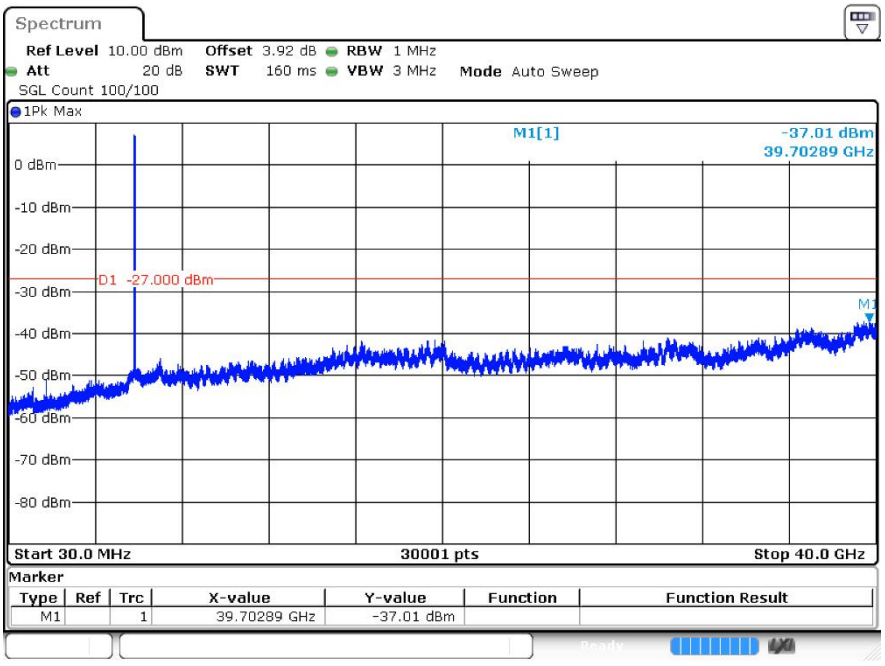
Tx. Spurious n20 5745MHz Ant1 Emission



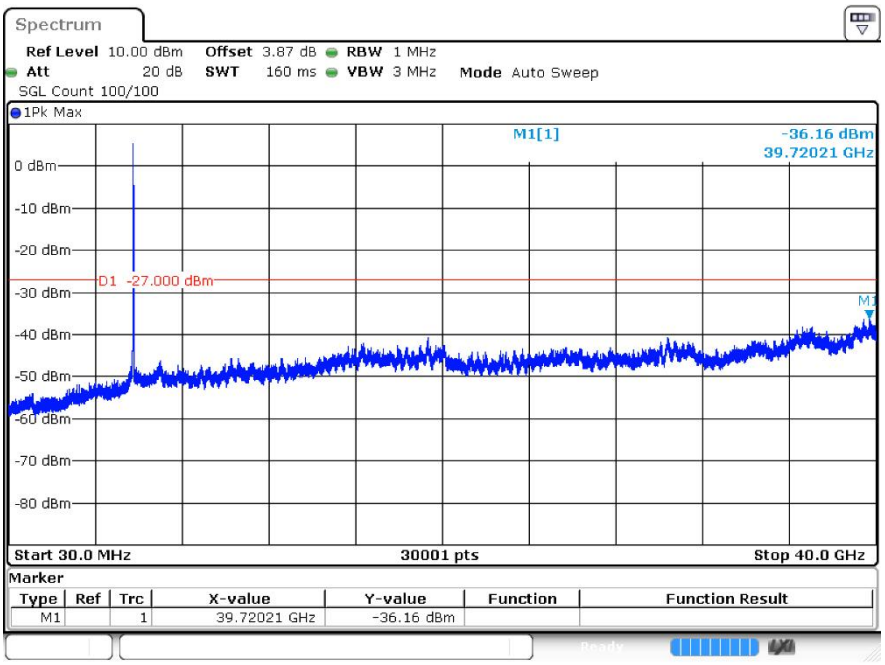
Tx. Spurious n20 5785MHz Ant1 Emission



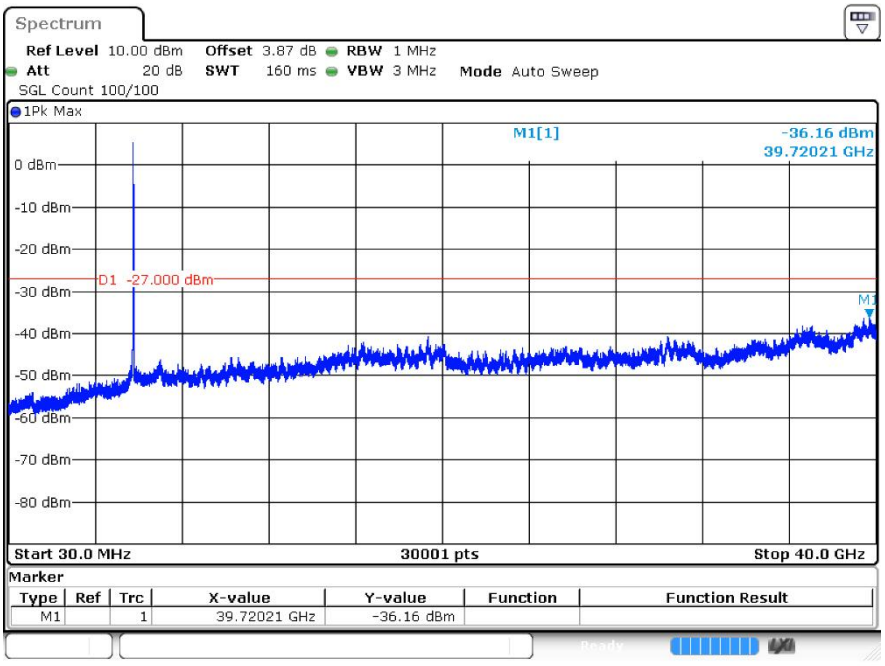
Tx. Spurious n20 5825MHz Ant1 Emission



Tx. Spurious n40 5755MHz Ant1 Emission



Tx. Spurious n40 5795MHz Ant1 Emission



---The End---