

RF Test Data for RLAN(5. 8G) (Conducted Measurement)

Product Name: Drone

Trade Mark: /

Test Model: F7MINI 4K

FCC ID: 2A5GP-F7MINI4KYK

Environmental Conditions

Temperature:	23.5℃
Relative Humidity:	58%
ATM Pressure:	100.0 kPa
Test Engineer:	Allen Lai
Supervised by:	Max Zhang
NOTE	N/A

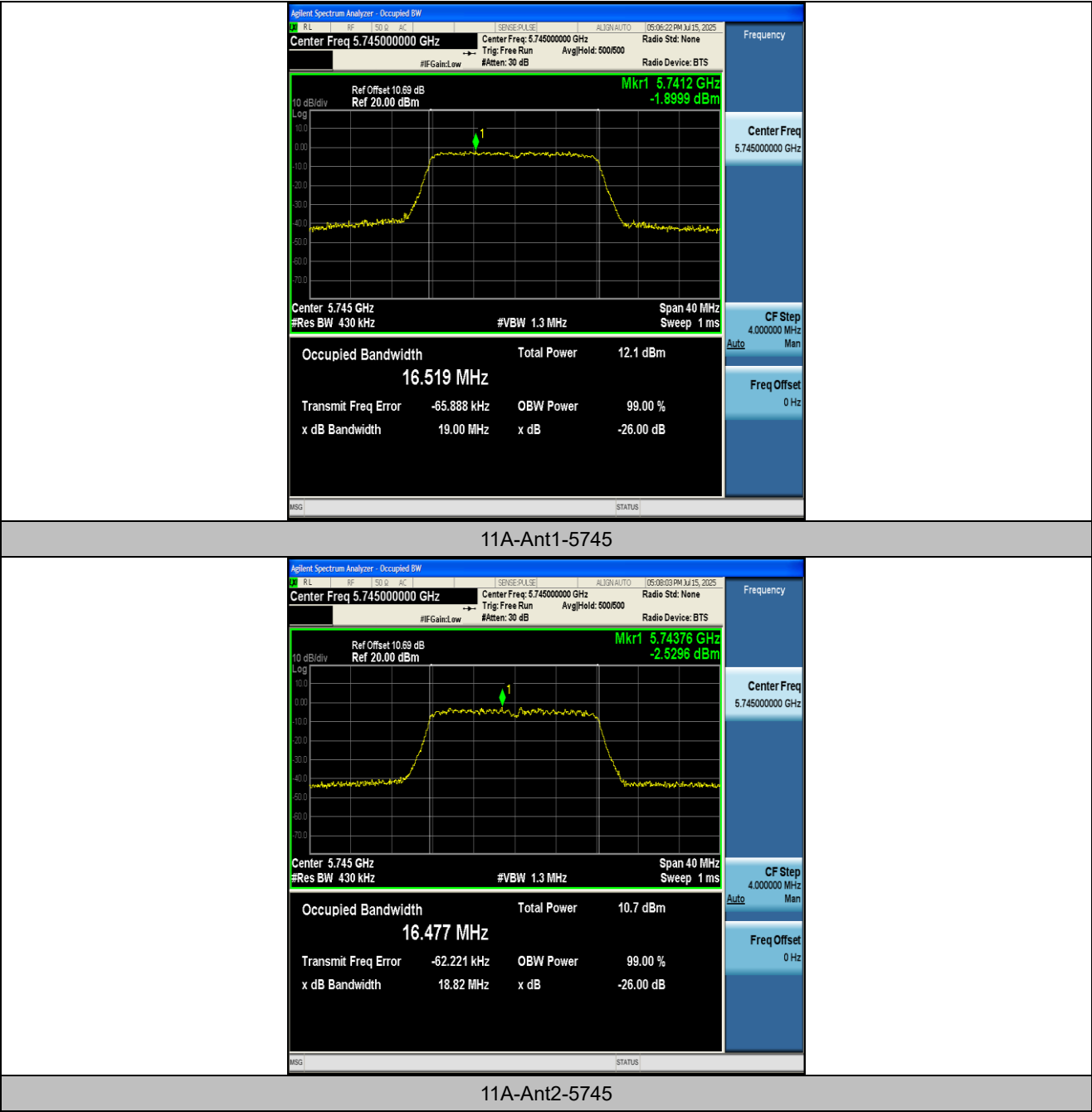
Appendix A2: Occupied channel bandwidth

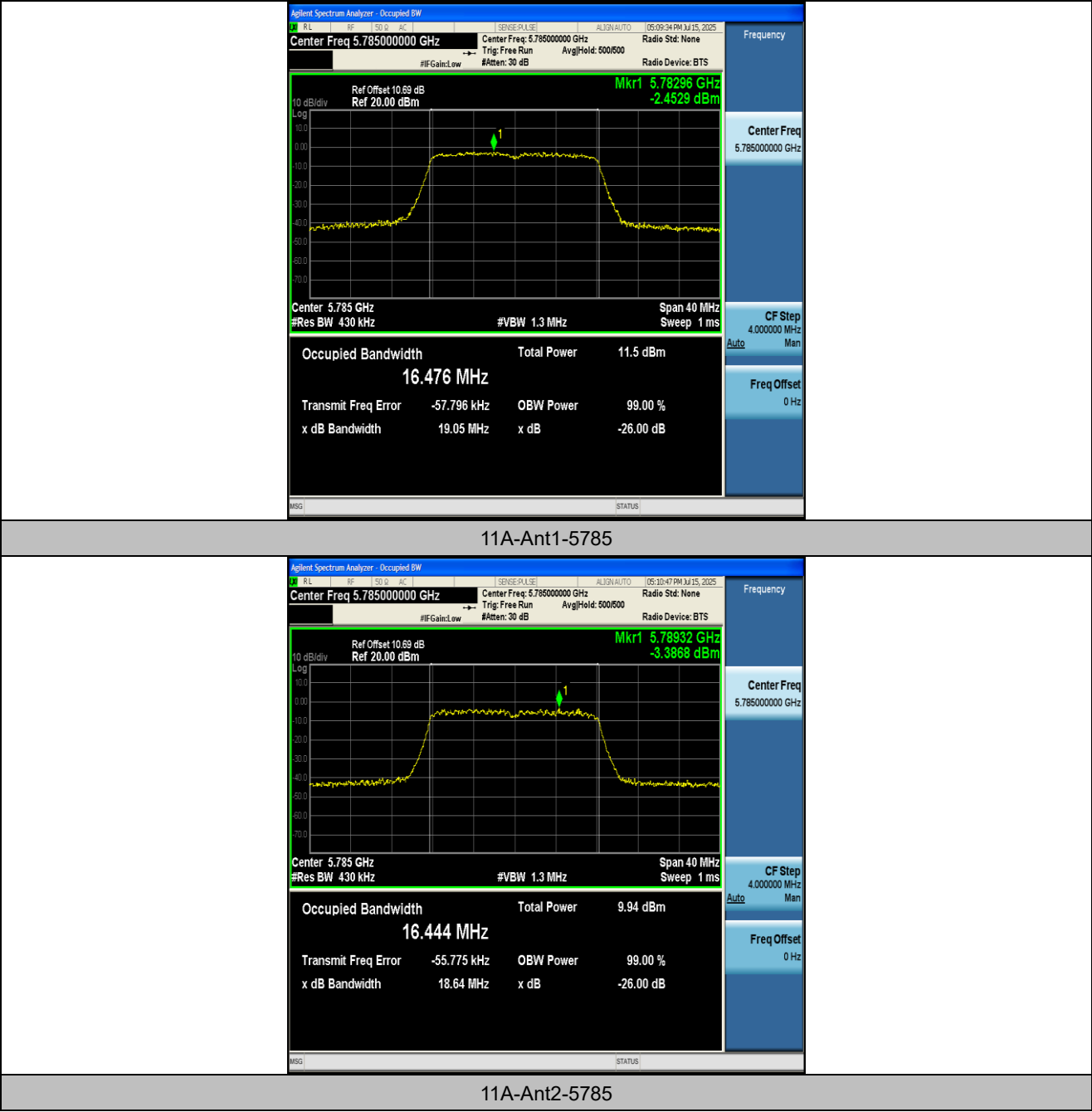
Test Result

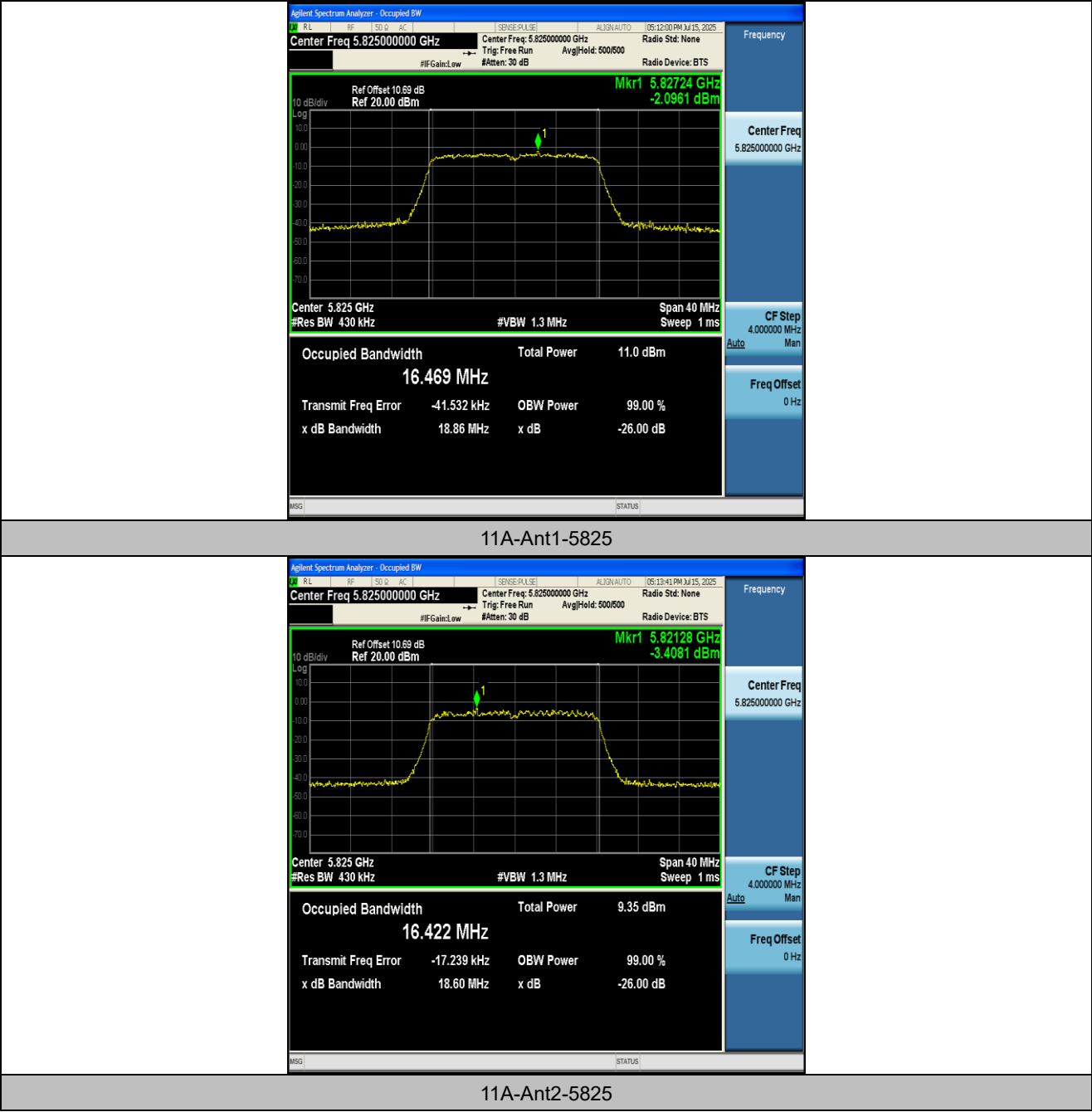
Test Mode	Antenna	Frequency [MHz]	OCB [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
11A	Ant1	5745	16.519	5736.6746	5753.1936	---	---
11A	Ant2	5745	16.477	5736.6993	5753.1763	---	---
11A	Ant1	5785	16.476	5776.7042	5793.1802	---	---
11A	Ant2	5785	16.444	5776.7222	5793.1662	---	---
11A	Ant1	5825	16.469	5816.7240	5833.1930	---	---
11A	Ant2	5825	16.422	5816.7718	5833.1938	---	---

Note: offset(dB) = cable loss(dB) + attenuator factor(dB)

Test Graphs







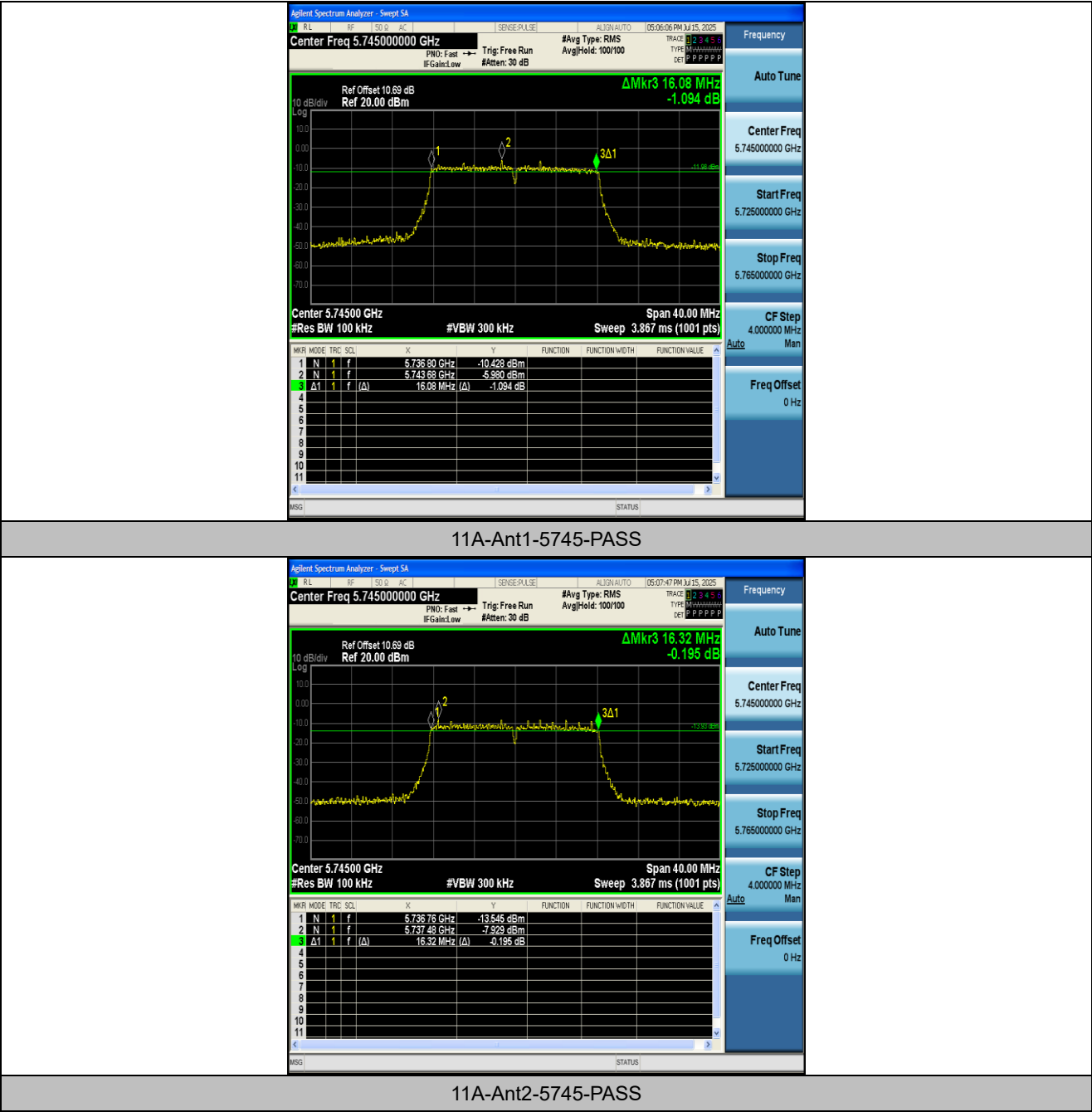
Appendix A: Min emission bandwidth

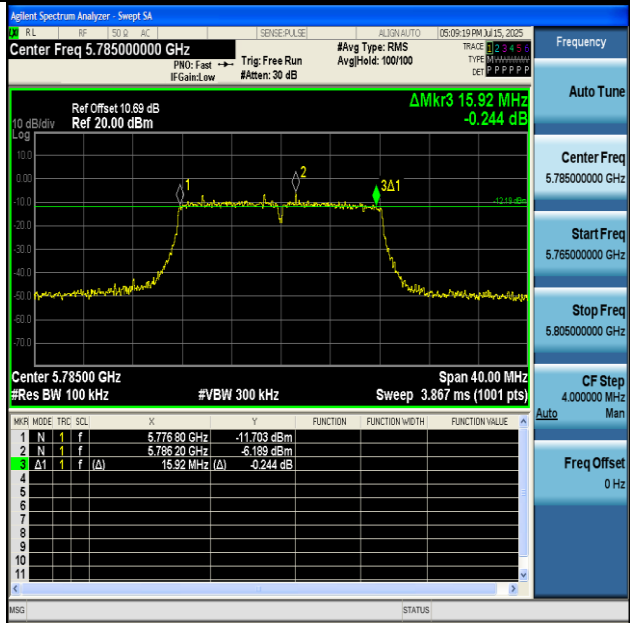
Test Result

Test Mode	Antenna	Frequency [MHz]	6db EBW [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
11A	Ant1	5745	16.080	5736.800	5752.880	0.5	PASS
11A	Ant2	5745	16.320	5736.760	5753.080	0.5	PASS
11A	Ant1	5785	15.920	5776.800	5792.720	0.5	PASS
11A	Ant2	5785	16.360	5776.760	5793.120	0.5	PASS
11A	Ant1	5825	16.000	5816.840	5832.840	0.5	PASS
11A	Ant2	5825	16.320	5816.800	5833.120	0.5	PASS

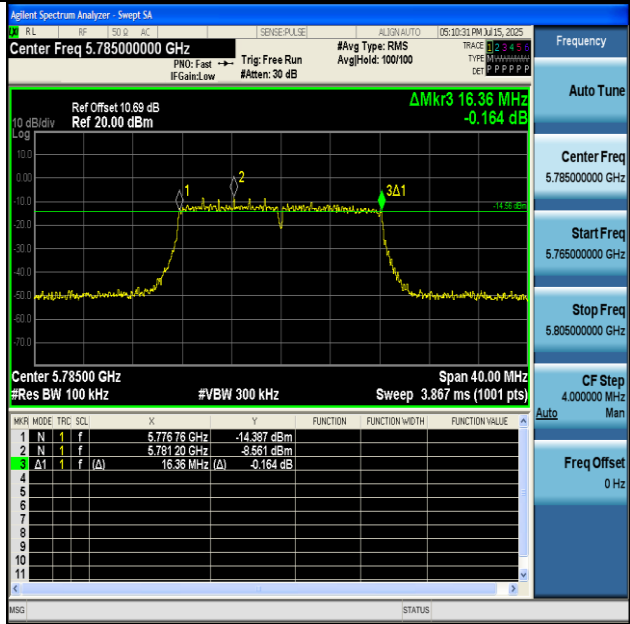
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)

Test Graphs

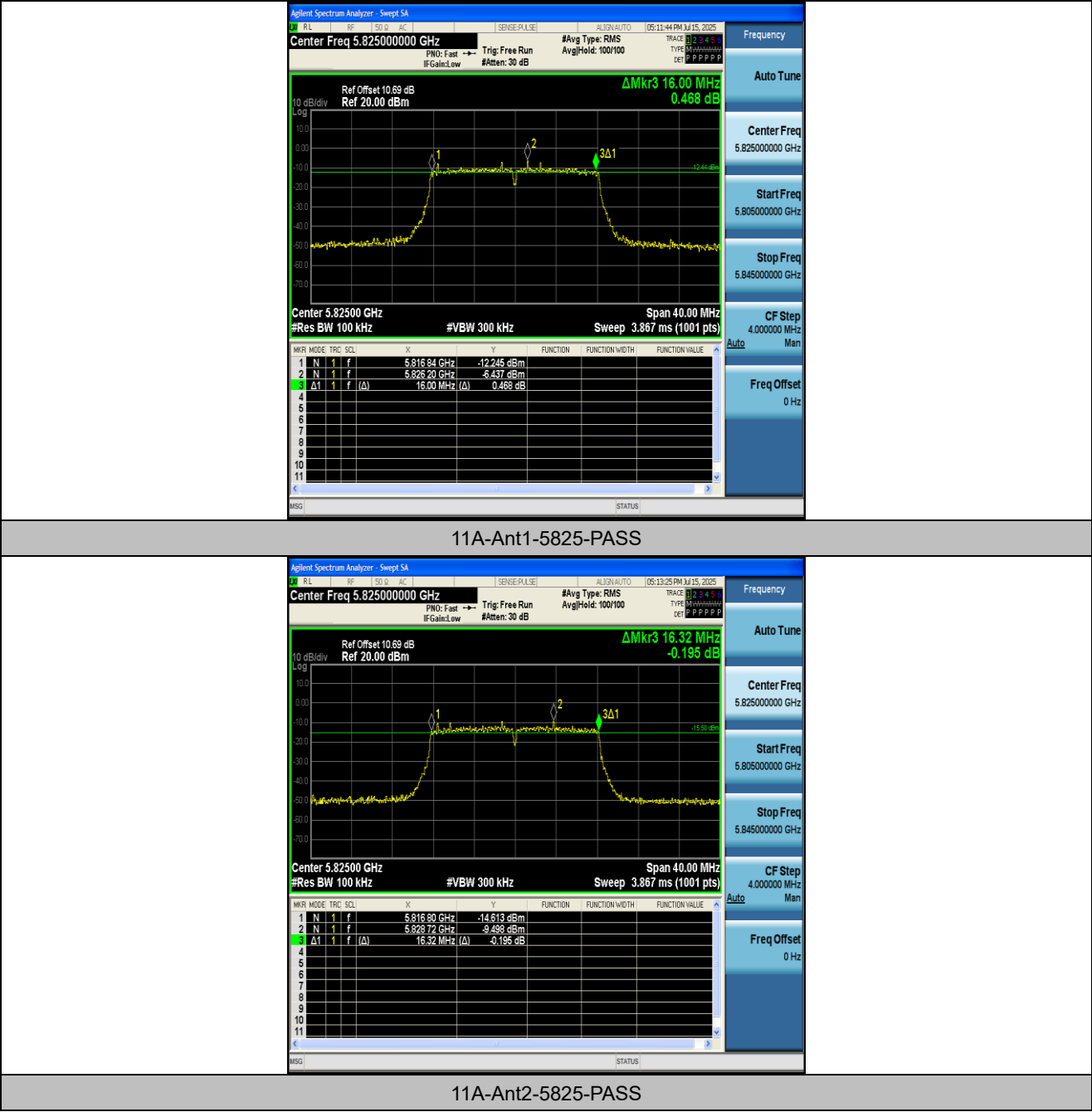




11A-Ant1-5785-PASS



11A-Ant2-5785-PASS



Appendix B: Maximum conducted output power

Test Result

Test Mode	Antenna	Frequency [MHz]	Conducted Power [dBm]	Conducted Limit [dBm]	Verdict
11A	Ant1	5745	5.46	≤30.00	PASS
11A	Ant2	5745	3.57	≤30.00	PASS
11A	Ant1	5785	4.98	≤30.00	PASS
11A	Ant2	5785	2.89	≤30.00	PASS
11A	Ant1	5825	4.52	≤30.00	PASS
11A	Ant2	5825	2.33	≤30.00	PASS

Appendix C: Maximum power spectral density

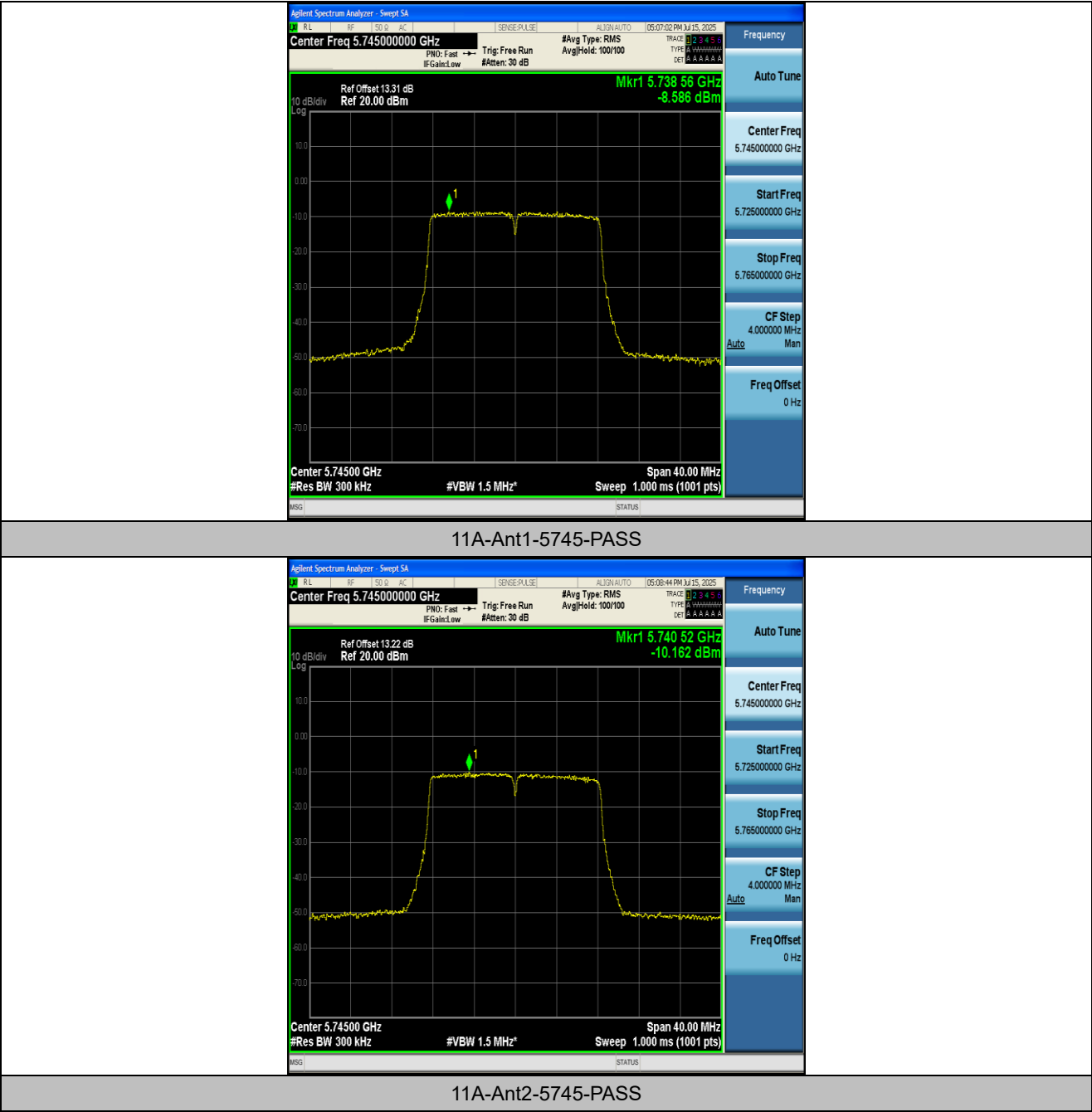
Test Result

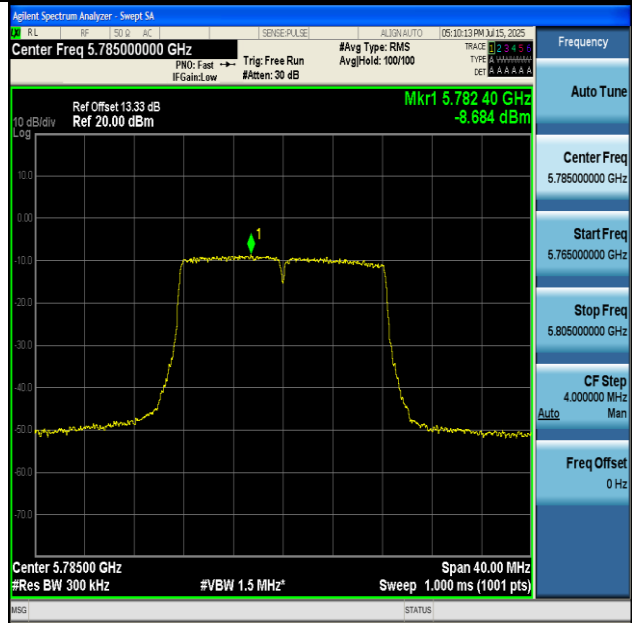
Frequency [MHz]	Test Mode	Antenna	Result [dBm/300K Hz]	RBW Factor [dB]	Result [dBm/500K Hz]	Limit [dBm/500K Hz]	Verdict
5745	11A	Ant1	-8.59	2.22	-6.37	≤30.00	PASS
5745	11A	Ant2	-10.16	2.22	-7.94	≤30.00	PASS
5785	11A	Ant1	-8.68	2.22	-6.46	≤30.00	PASS
5785	11A	Ant2	-10.66	2.22	-8.44	≤30.00	PASS
5825	11A	Ant1	-8.97	2.22	-6.75	≤30.00	PASS
5825	11A	Ant2	-11.59	2.22	-9.37	≤30.00	PASS

Note: offset(dB) = cable loss(dB) + attenuator factor(dB) + Duty Cycle Factor(dB)

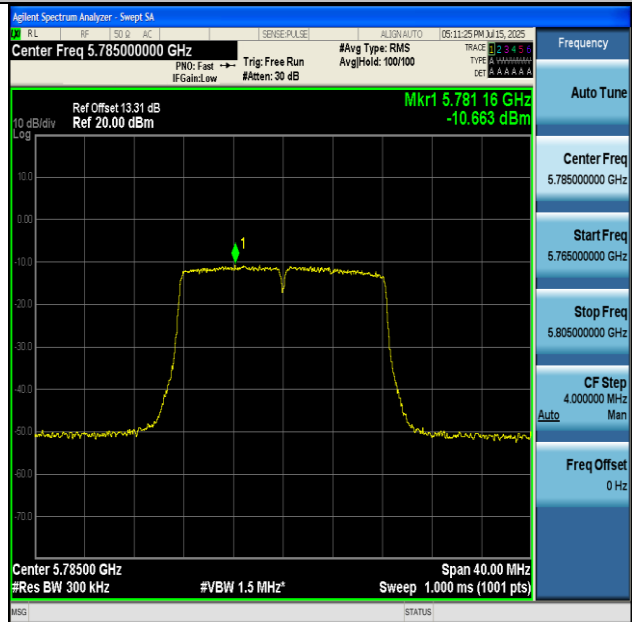
Result[dBm/500KHz] = Result[dBm/300KHz] + RBW Factor[dB]

Test Graphs

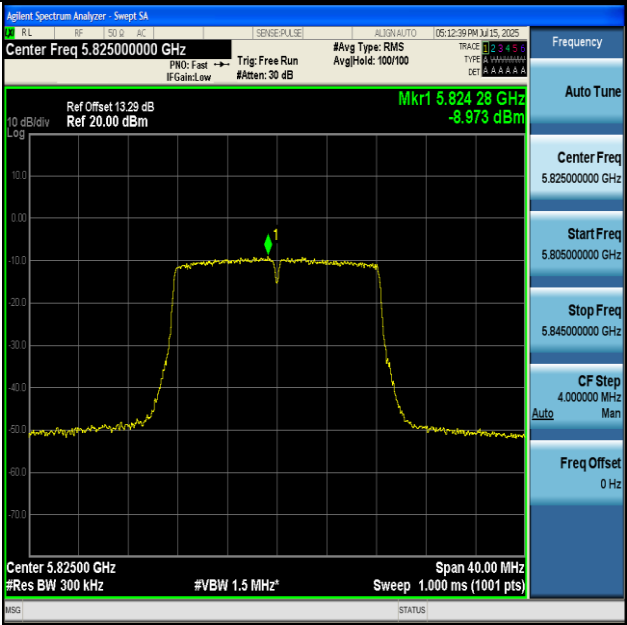




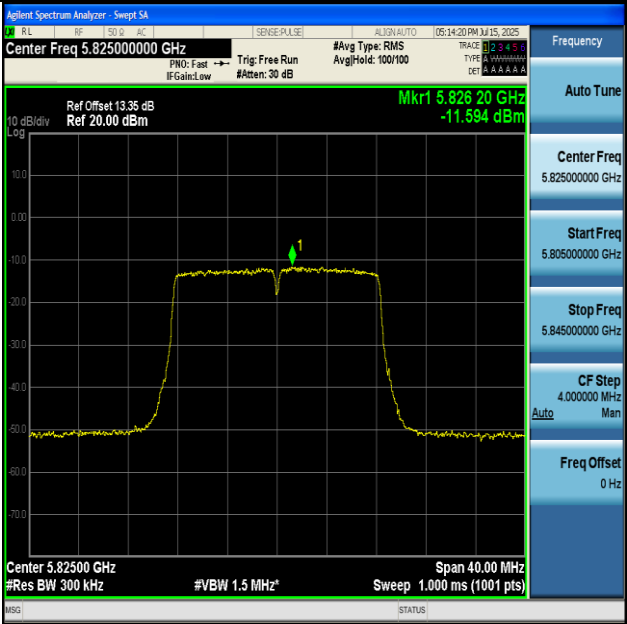
11A-Ant1-5785-PASS



11A-Ant2-5785-PASS



11A-Ant1-5825-PASS



11A-Ant2-5825-PASS

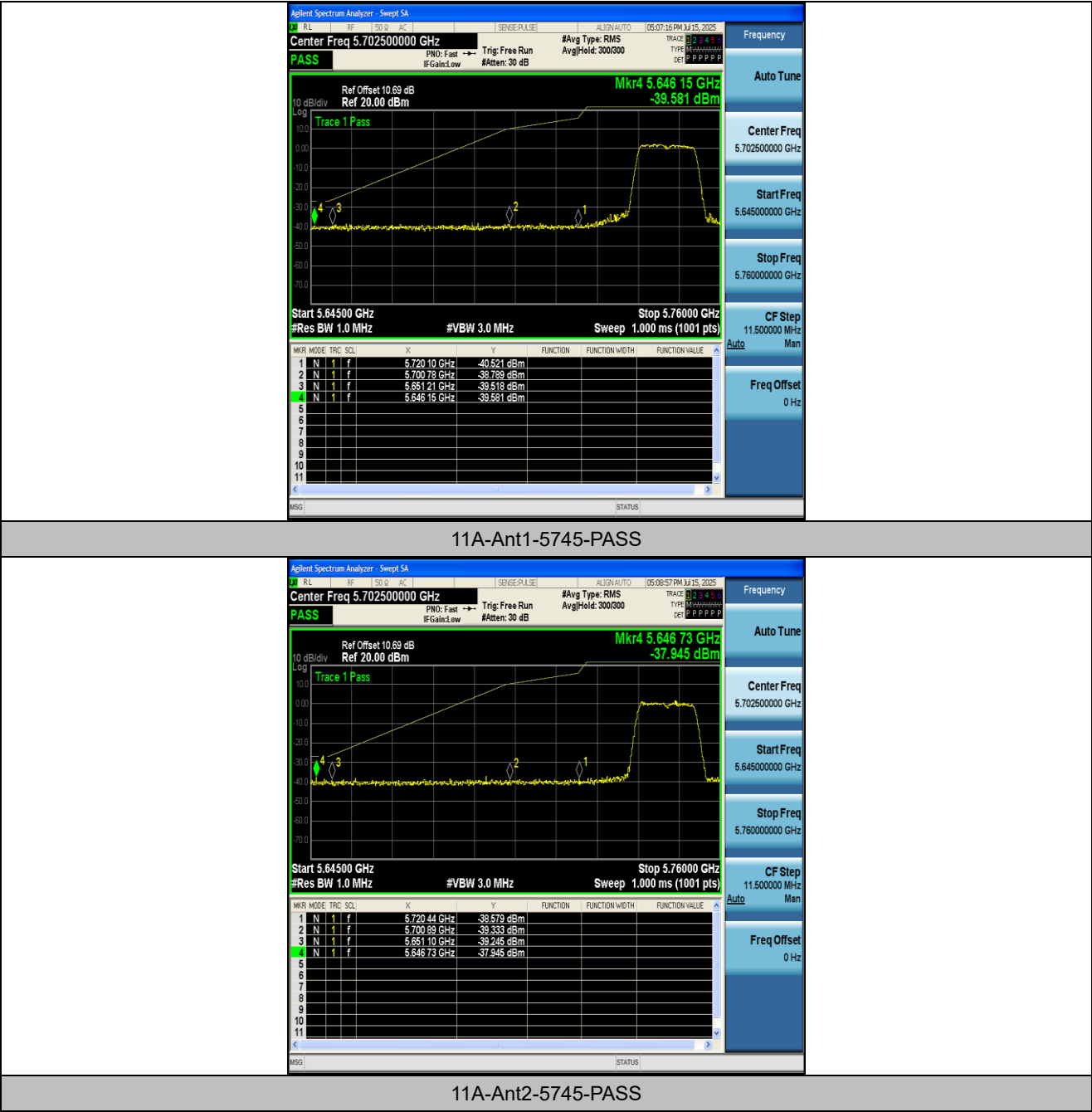
Appendix D: Band edge measurements

Test Result

Test Mode	Antenna	Ch. Name	Frequency [MHz]	Freq. Range [MHz]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	Low	5745	5720~5725	-40.52	≤15.82	PASS
11A	Ant1	Low	5745	5700~5720	-38.79	≤10.22	PASS
11A	Ant1	Low	5745	5650~5700	-39.52	≤-26.10	PASS
11A	Ant1	Low	5745	5760~5650	-39.58	≤-27	PASS
11A	Ant2	Low	5745	5720~5725	-38.58	≤16.60	PASS
11A	Ant2	Low	5745	5700~5720	-39.33	≤10.25	PASS
11A	Ant2	Low	5745	5650~5700	-39.25	≤-26.19	PASS
11A	Ant2	Low	5745	5760~5650	-37.95	≤-27	PASS
11A	Ant1	High	5825	5850~5855	-39.25	≤16.03	PASS
11A	Ant1	High	5825	5855~5875	-38.46	≤10.02	PASS
11A	Ant1	High	5825	5875~5925	-38.68	≤-25.81	PASS
11A	Ant1	High	5825	5925~5935	-38.53	≤-27	PASS
11A	Ant2	High	5825	5850~5855	-38.53	≤16.03	PASS
11A	Ant2	High	5825	5855~5875	-38.3	≤10.06	PASS
11A	Ant2	High	5825	5875~5925	-39.1	≤-26.81	PASS
11A	Ant2	High	5825	5925~5935	-37.96	≤-27	PASS

Note: offset(dB) = cable loss(dB) + attenuator factor(dB)+antenna(dBi)

Test Graphs





11A-Ant1-5825-PASS



11A-Ant2-5825-PASS

Appendix E: Frequency Stability

Test Result

Ant1

Frequency (MHz)	Environment Temperature (Degree)	Voltage (VDC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5745	20	8.14	5744.900978	5725 – 5850	PASS
5745	20	6.66	5745.041039	5725 – 5850	PASS
5745	50	7.40	5744.933548	5725 – 5850	PASS
5745	40	7.40	5745.050945	5725 – 5850	PASS
5745	30	7.40	5745.009926	5725 – 5850	PASS
5745	20	7.40	5744.907202	5725 – 5850	PASS
5745	10	7.40	5745.076732	5725 – 5850	PASS
5745	0	7.40	5745.084333	5725 – 5850	PASS
5745	-10	7.40	5744.903159	5725 – 5850	PASS
5745	-20	7.40	5745.033055	5725 – 5850	PASS
5745	-30	7.40	5745.059729	5725 – 5850	PASS

Ant2

Frequency (MHz)	Environment Temperature (Degree)	Voltage (VDC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5745	20	8.14	5744.940474	5725 – 5850	PASS
5745	20	6.66	5744.916013	5725 – 5850	PASS
5745	50	7.40	5745.005464	5725 – 5850	PASS
5745	40	7.40	5744.999666	5725 – 5850	PASS
5745	30	7.40	5744.912172	5725 – 5850	PASS
5745	20	7.40	5745.005382	5725 – 5850	PASS
5745	10	7.40	5745.021796	5725 – 5850	PASS
5745	0	7.40	5744.910254	5725 – 5850	PASS
5745	-10	7.40	5745.072852	5725 – 5850	PASS
5745	-20	7.40	5744.909069	5725 – 5850	PASS
5745	-30	7.40	5744.965065	5725 – 5850	PASS

Ant1

Frequency (MHz)	Environment Temperature (Degree)	Voltage (VDC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5785	20	8.14	5784.918658	5725 – 5850	PASS
5785	20	6.66	5784.976167	5725 – 5850	PASS
5785	50	7.40	5785.027551	5725 – 5850	PASS
5785	40	7.40	5784.962090	5725 – 5850	PASS
5785	30	7.40	5784.990629	5725 – 5850	PASS
5785	20	7.40	5784.998354	5725 – 5850	PASS
5785	10	7.40	5785.012681	5725 – 5850	PASS
5785	0	7.40	5785.059765	5725 – 5850	PASS
5785	-10	7.40	5784.912339	5725 – 5850	PASS
5785	-20	7.40	5785.074352	5725 – 5850	PASS
5785	-30	7.40	5784.912952	5725 – 5850	PASS

Ant2

Frequency (MHz)	Environment Temperature (Degree)	Voltage (VDC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5785	20	8.14	5785.055904	5725 – 5850	PASS
5785	20	6.66	5785.023417	5725 – 5850	PASS
5785	50	7.40	5784.982052	5725 – 5850	PASS
5785	40	7.40	5785.092825	5725 – 5850	PASS
5785	30	7.40	5785.091799	5725 – 5850	PASS
5785	20	7.40	5785.069784	5725 – 5850	PASS
5785	10	7.40	5784.950614	5725 – 5850	PASS
5785	0	7.40	5785.077447	5725 – 5850	PASS
5785	-10	7.40	5785.042768	5725 – 5850	PASS
5785	-20	7.40	5784.974367	5725 – 5850	PASS
5785	-30	7.40	5785.003993	5725 – 5850	PASS

Ant1

Frequency (MHz)	Environment Temperature (Degree)	Voltage (VDC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5825	20	8.14	5824.902968	5725 – 5850	PASS
5825	20	6.66	5824.910994	5725 – 5850	PASS
5825	50	7.40	5824.955446	5725 – 5850	PASS
5825	40	7.40	5824.950636	5725 – 5850	PASS
5825	30	7.40	5824.982370	5725 – 5850	PASS
5825	20	7.40	5825.085909	5725 – 5850	PASS
5825	10	7.40	5824.906989	5725 – 5850	PASS
5825	0	7.40	5825.008848	5725 – 5850	PASS
5825	-10	7.40	5824.975844	5725 – 5850	PASS
5825	-20	7.40	5824.953194	5725 – 5850	PASS
5825	-30	7.40	5825.032182	5725 – 5850	PASS

Ant2

Frequency (MHz)	Environment Temperature (Degree)	Voltage (VDC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5825	20	8.14	5824.940325	5725 – 5850	PASS
5825	20	6.66	5825.074161	5725 – 5850	PASS
5825	50	7.40	5825.026472	5725 – 5850	PASS
5825	40	7.40	5824.983524	5725 – 5850	PASS
5825	30	7.40	5824.918209	5725 – 5850	PASS
5825	20	7.40	5825.060073	5725 – 5850	PASS
5825	10	7.40	5825.005428	5725 – 5850	PASS
5825	0	7.40	5824.983522	5725 – 5850	PASS
5825	-10	7.40	5825.083726	5725 – 5850	PASS
5825	-20	7.40	5824.988826	5725 – 5850	PASS
5825	-30	7.40	5825.095740	5725 – 5850	PASS

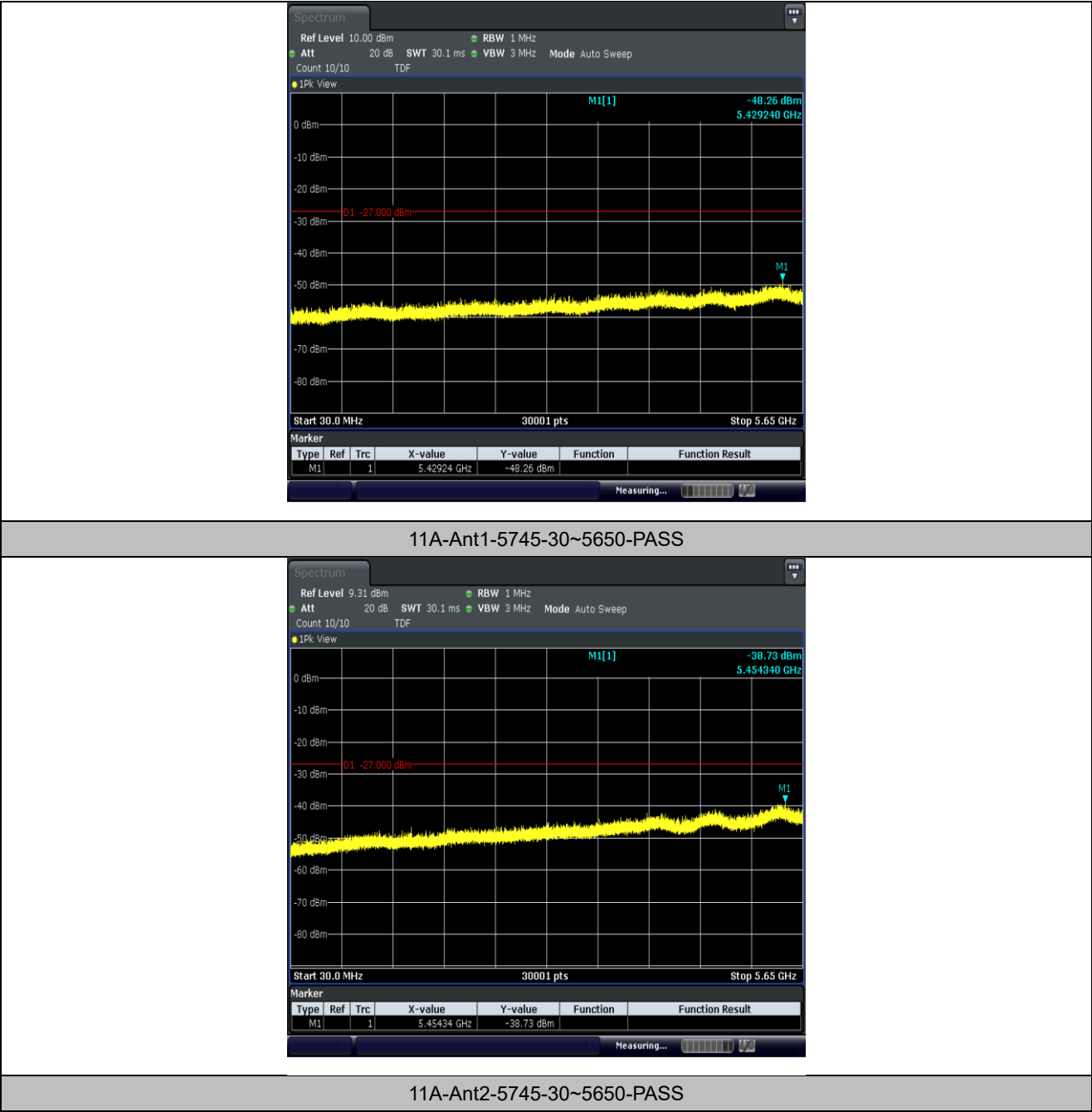
Appendix F: Conducted Spurious Emission

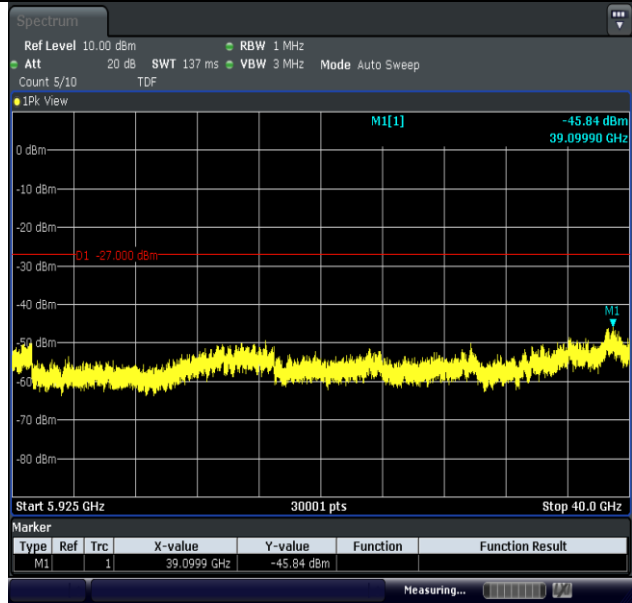
Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	Max. Fre [MHz]	Max. Level [dBm]	Limit [dBm]	Verdict
11A	Ant1	5745	30~5650	5429.24	-48.26	≤-27	PASS
11A	Ant2	5745	30~5650	5454.34	-38.73	≤-27	PASS
11A	Ant1	5745	5925~40000	39099.9	-45.84	≤-27	PASS
11A	Ant2	5745	5925~40000	5963	-42.03	≤-27	PASS
11A	Ant1	5785	30~5650	5337.44	-49.46	≤-27	PASS
11A	Ant2	5785	30~5650	5334.82	-39.44	≤-27	PASS
11A	Ant1	5785	5925~40000	38748.9	-46.21	≤-27	PASS
11A	Ant2	5785	5925~40000	5980.1	-41.37	≤-27	PASS
11A	Ant1	5825	30~5650	5386.52	-49.22	≤-27	PASS
11A	Ant2	5825	30~5650	5388.4	-39.53	≤-27	PASS
11A	Ant1	5825	5925~40000	39114.6	-46.26	≤-27	PASS
11A	Ant2	5825	5925~40000	5969.9	-41.45	≤-27	PASS

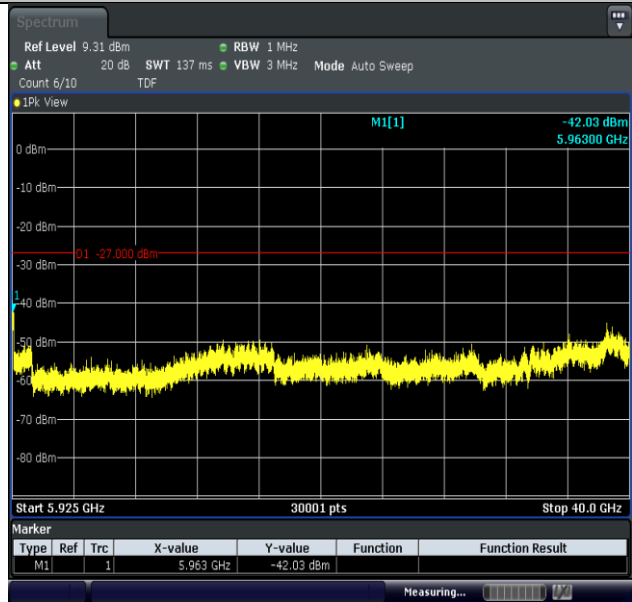
Note: offset(dB) in Reference test plots = cable loss(dB) + attenuator factor(dB); For spurious emissions plots from 30MHz to 40 GHz, the cable loss and attenuator factors have been set in the 'TDF' of the Spectrum Analyzer during the test.

Test Graphs

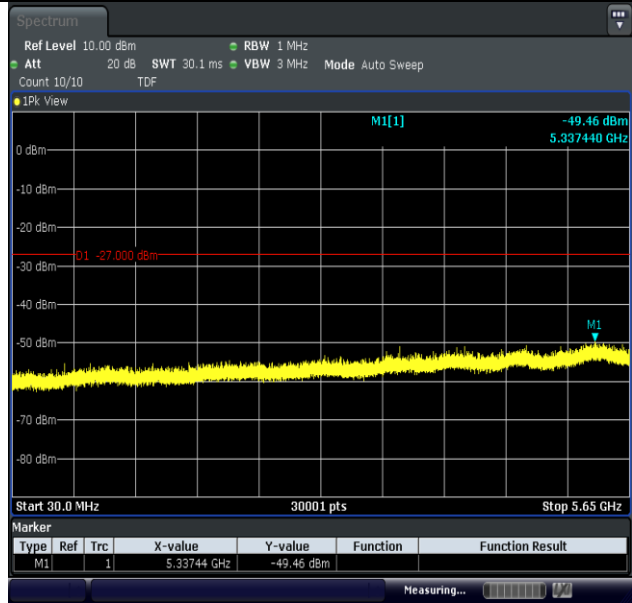




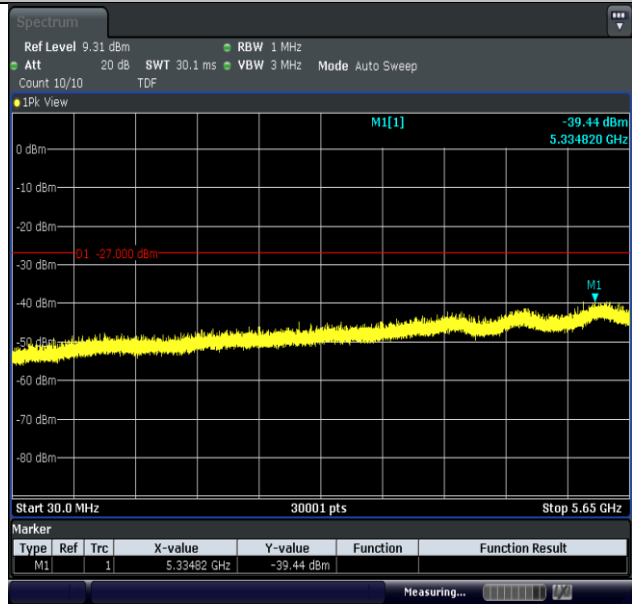
11A-Ant1-5745-5925~40000-PASS



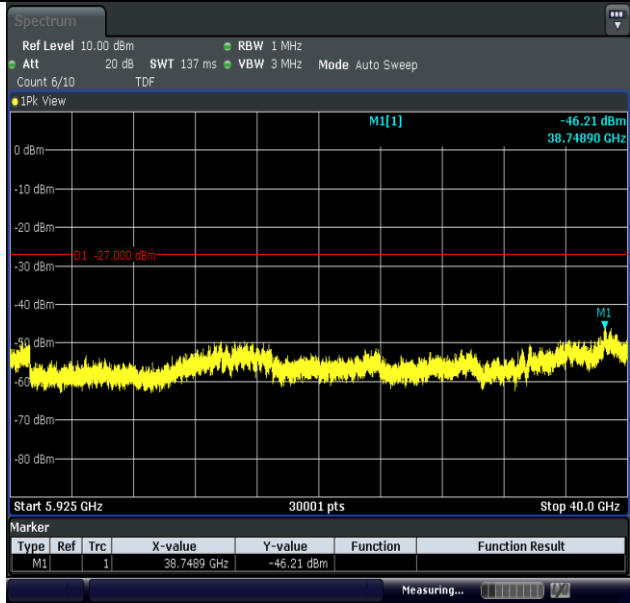
11A-Ant2-5745-5925~40000-PASS



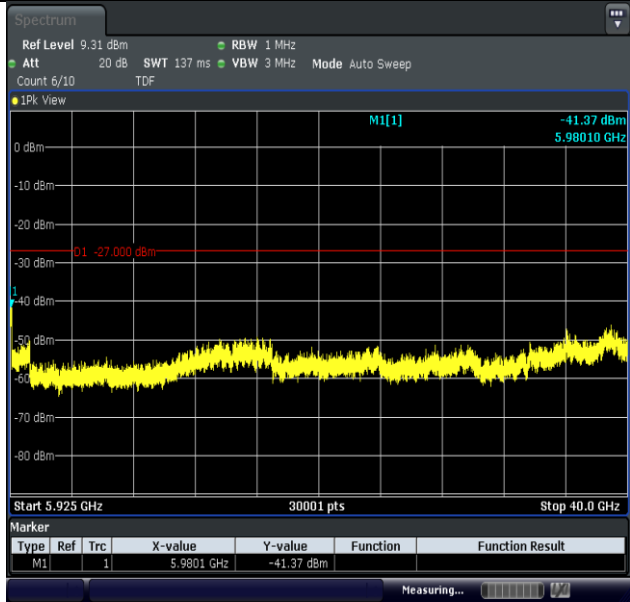
11A-Ant1-5785-30~5650-PASS



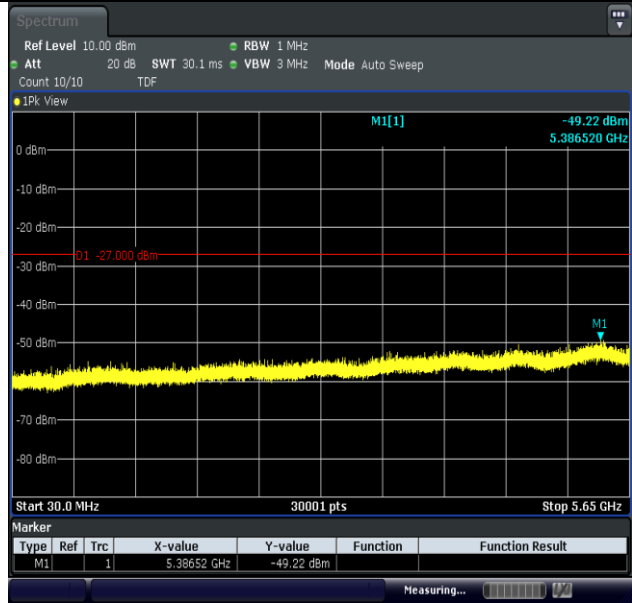
11A-Ant2-5785-30~5650-PASS



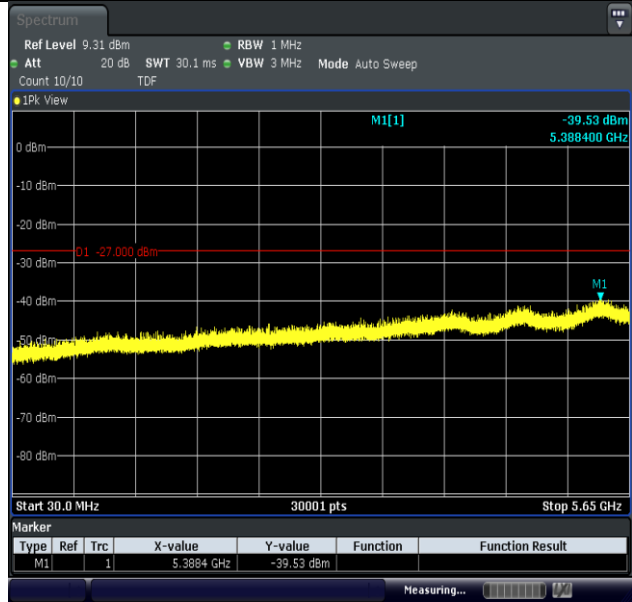
11A-Ant1-5785-5925~40000-PASS



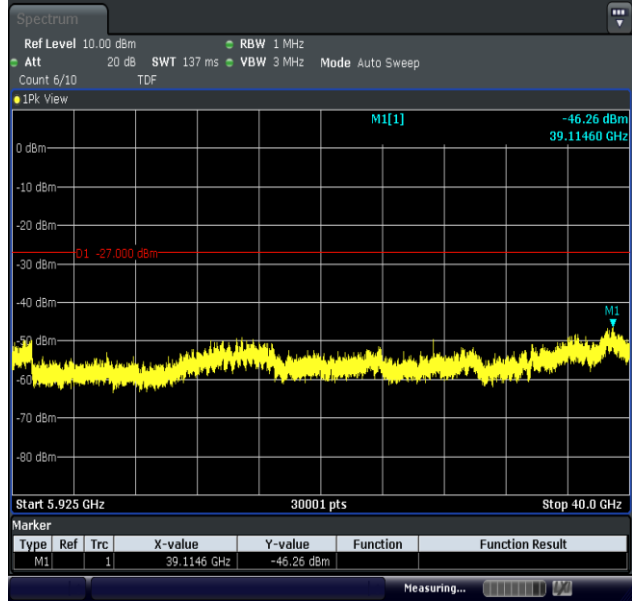
11A-Ant2-5785-5925~40000-PASS



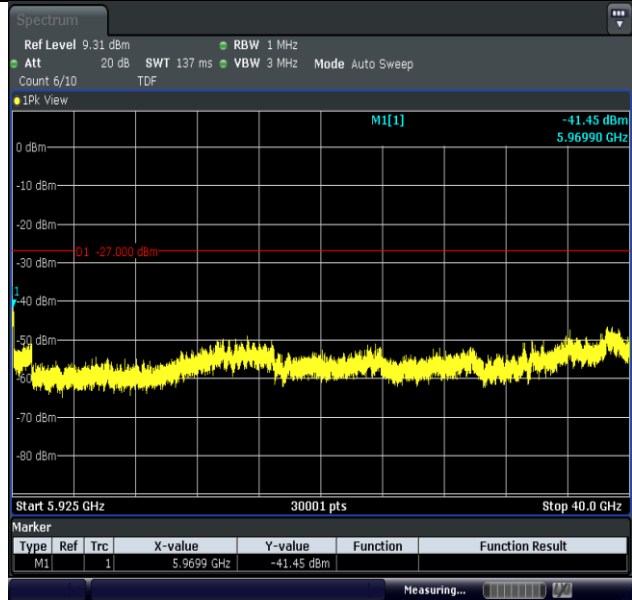
11A-Ant1-5825-30~5650-PASS



11A-Ant2-5825-30~5650-PASS



11A-Ant1-5825-5925~40000-PASS



11A-Ant2-5825-5925~40000-PASS

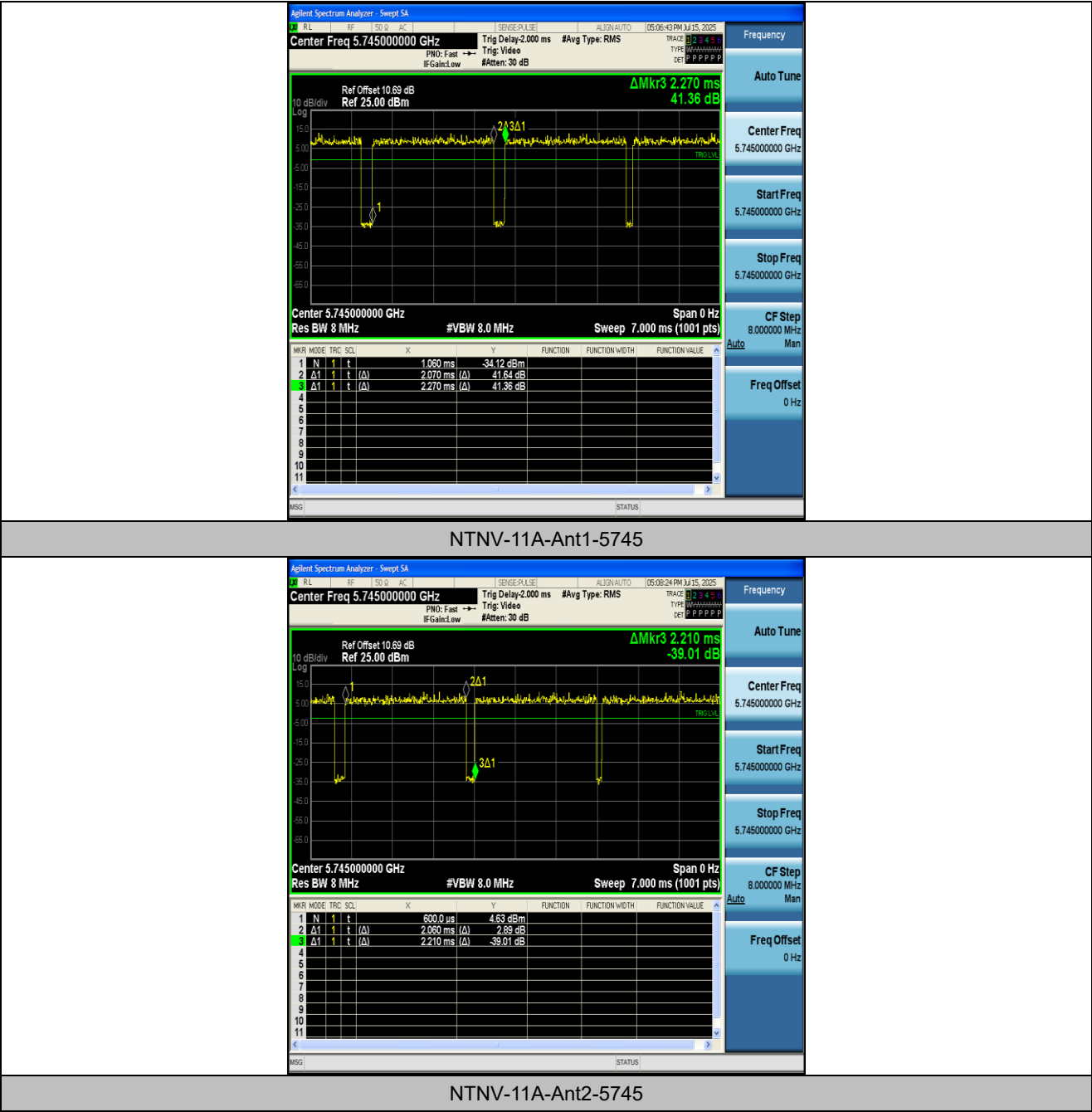
Appendix G: Duty Cycle

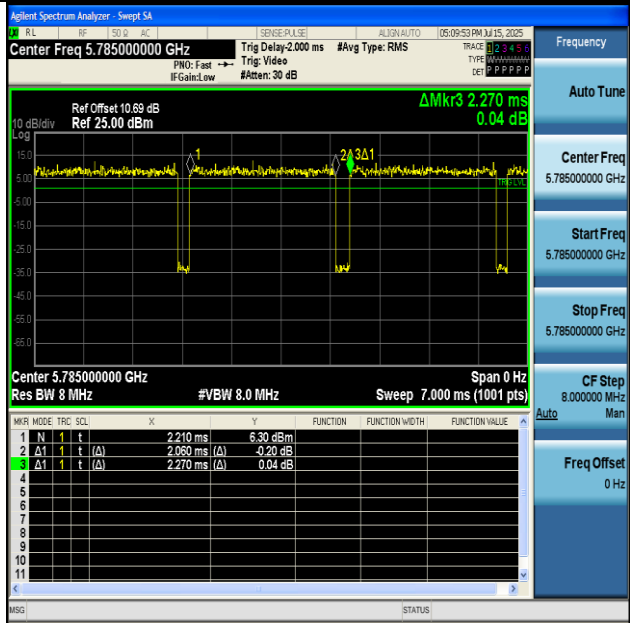
Test Result

Test Mode	Antenna	Frequency [MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Dc. Factor [%]	1/T
11A	Ant1	5745	2.07	2.27	91.19	0.40	0.48
11A	Ant2	5745	2.06	2.21	93.21	0.31	0.49
11A	Ant1	5785	2.06	2.27	90.75	0.42	0.49
11A	Ant2	5785	2.06	2.26	91.15	0.40	0.49
11A	Ant1	5825	2.06	2.25	91.56	0.38	0.49
11A	Ant2	5825	2.07	2.29	90.39	0.44	0.48

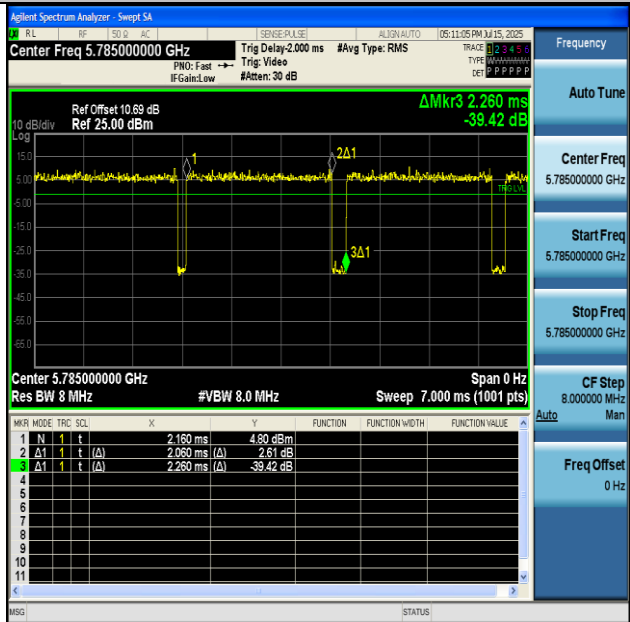
Note: offset(dB) = cable loss(dB) + attenuator factor(dB)

Test Graphs

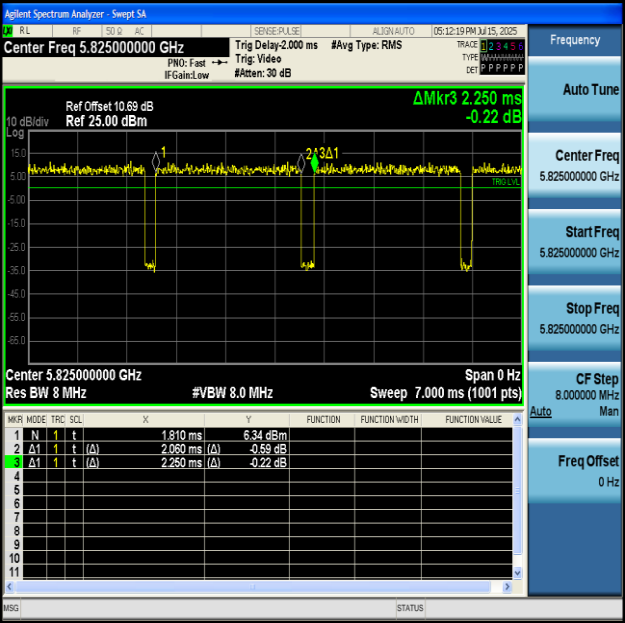




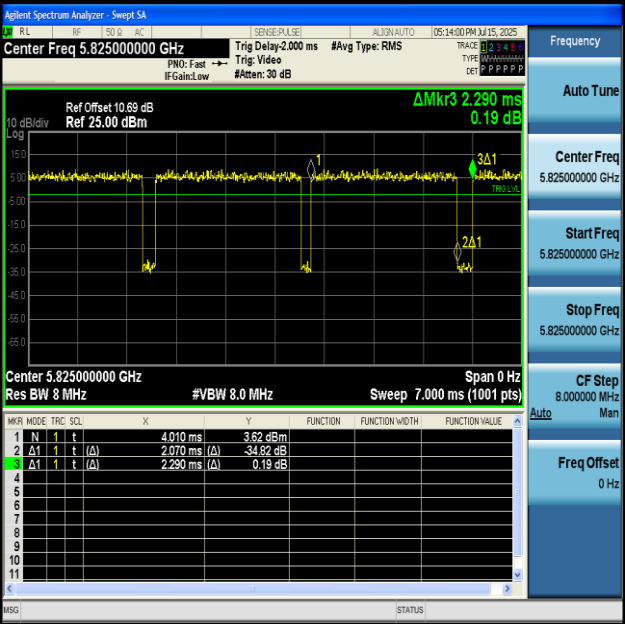
NTNV-11A-Ant1-5785



NTNV-11A-Ant2-5785



NTNV-11A-Ant1-5825



NTNV-11A-Ant2-5825