

RF Test Data for RLAN(5.8G) (Conducted Measurement)

Product Name: Drone

Trade Mark: /

Test Model: 019

FCC ID: 2A45M-XIL019R

Environmental Conditions

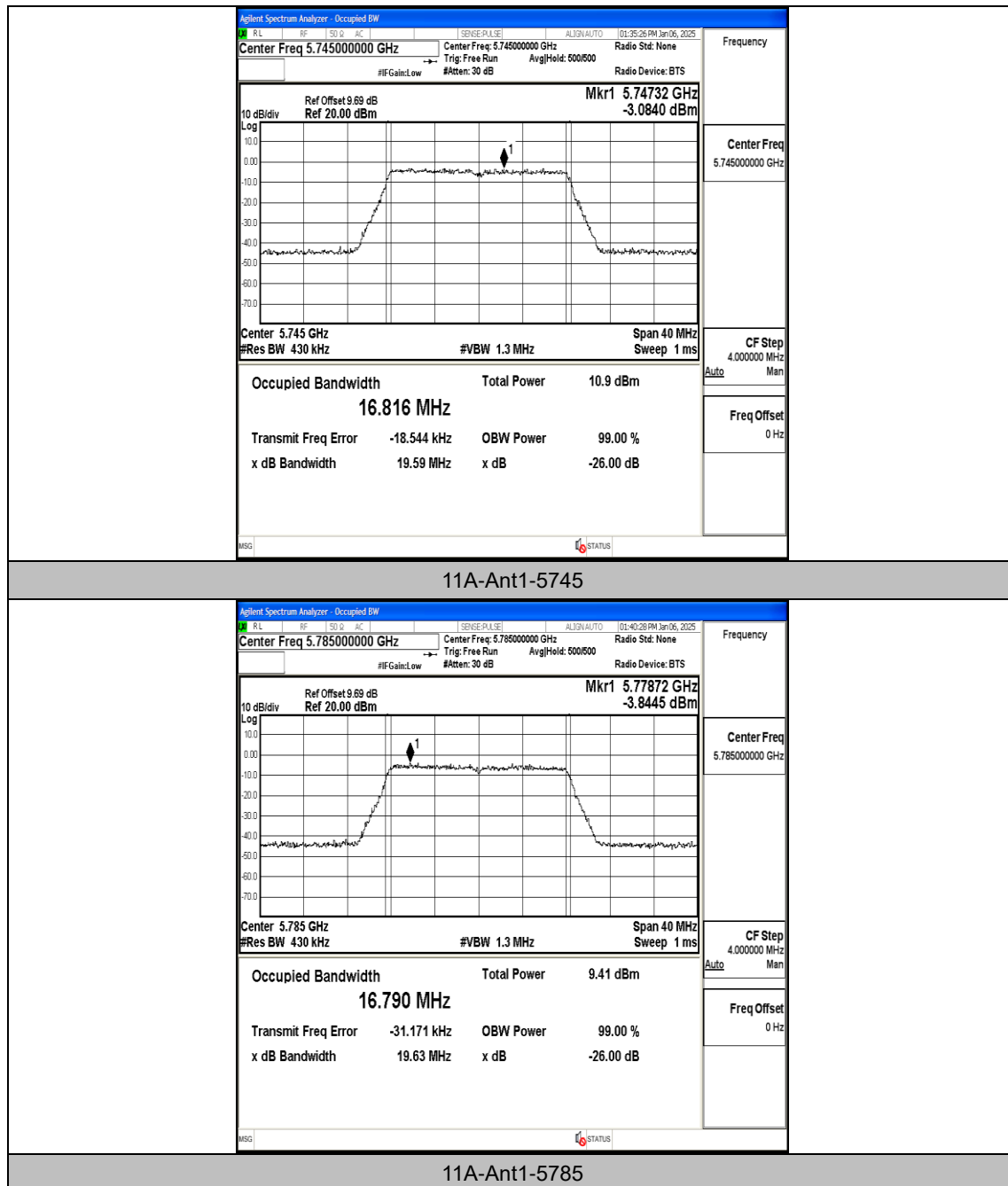
Temperature:	23.5℃
Relative Humidity:	58%
ATM Pressure:	100.0 kPa
Test Engineer:	Allen Lai
Supervised by:	Hugo Chen
NOTE	N/A

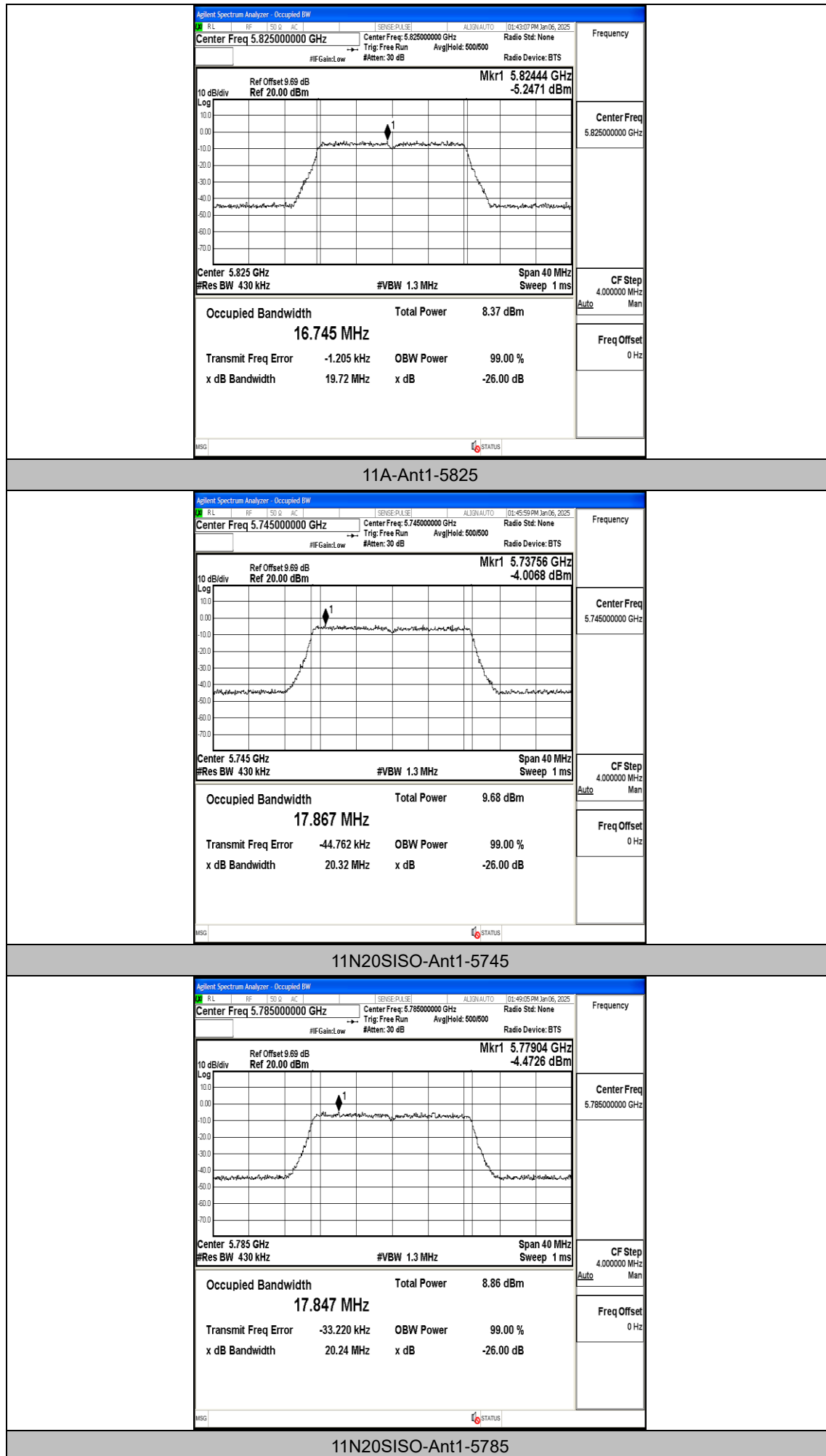
Appendix A2: Occupied channel bandwidth

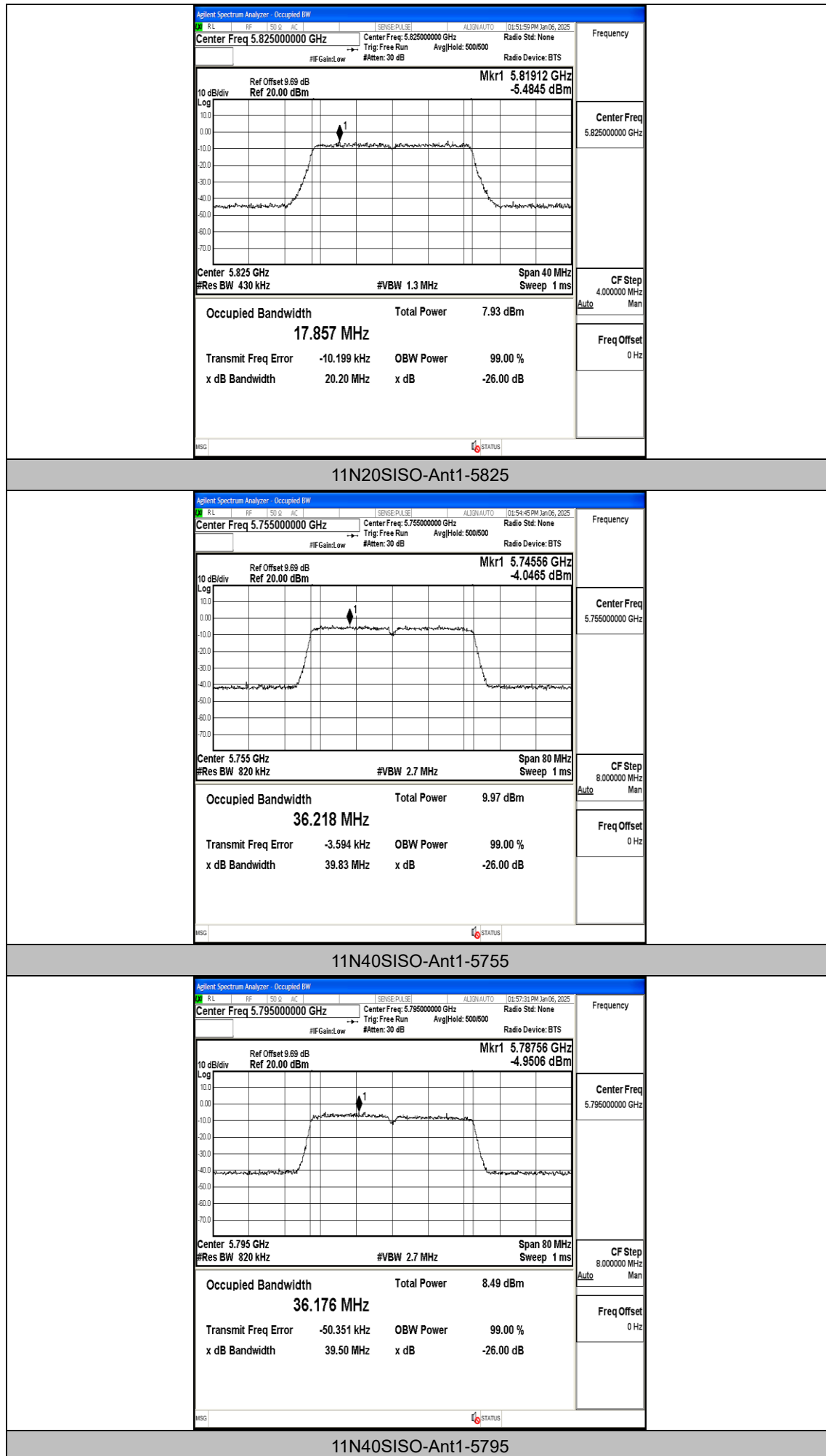
Test Result

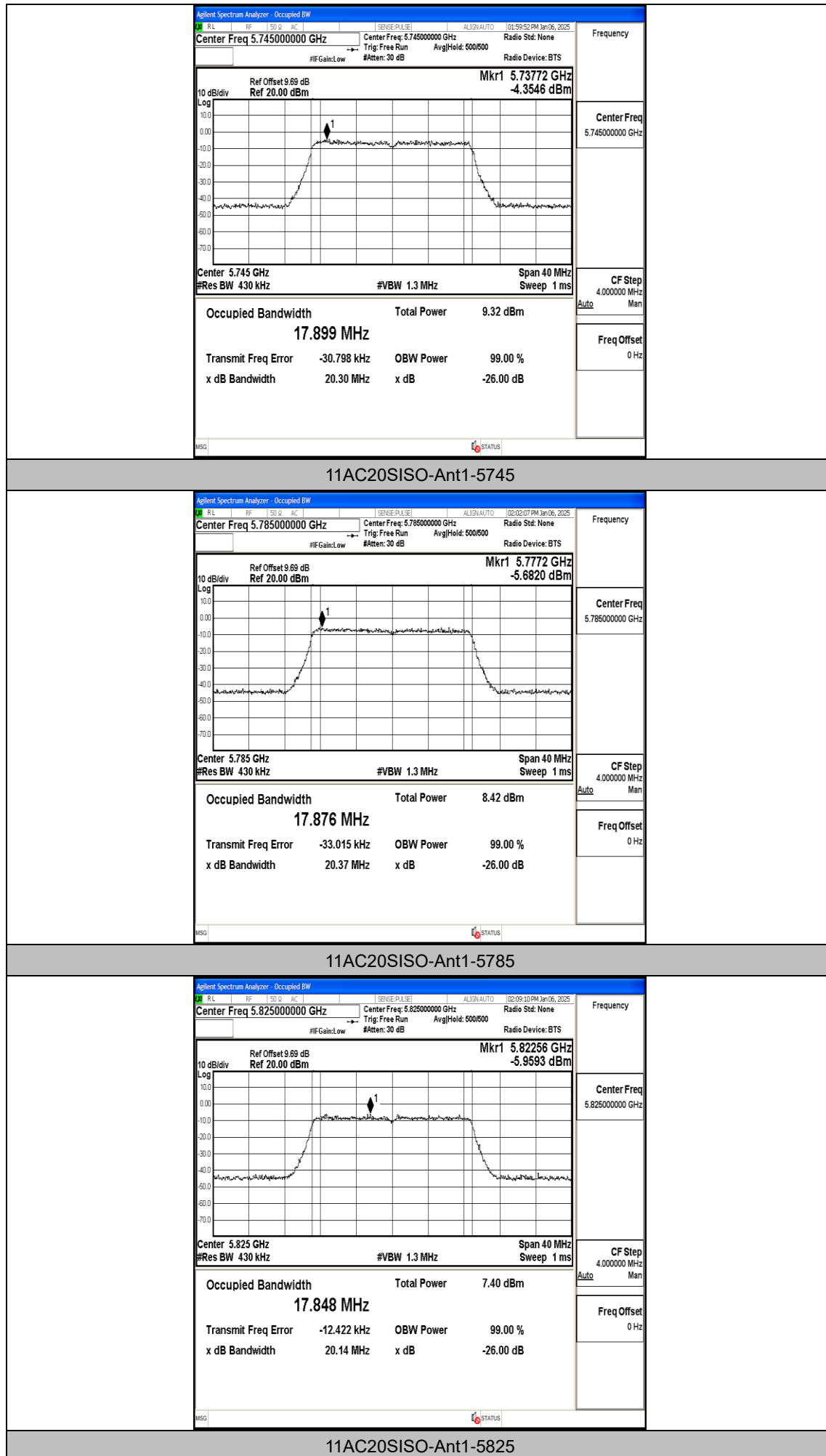
Test Mode	Antenna	Frequency [MHz]	OCB [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
11A	Ant1	5745	16.816	5736.5735	5753.3895	---	---
11A	Ant1	5785	16.790	5776.5738	5793.3638	---	---
11A	Ant1	5825	16.745	5816.6263	5833.3713	---	---
11N20SISO	Ant1	5745	17.867	5736.0217	5753.8887	---	---
11N20SISO	Ant1	5785	17.847	5776.0433	5793.8903	---	---
11N20SISO	Ant1	5825	17.857	5816.0613	5833.9183	---	---
11N40SISO	Ant1	5755	36.218	5736.8874	5773.1054	---	---
11N40SISO	Ant1	5795	36.176	5776.8617	5813.0377	---	---
11AC20SISO	Ant1	5745	17.899	5736.0197	5753.9187	---	---
11AC20SISO	Ant1	5785	17.876	5776.0290	5793.9050	---	---
11AC20SISO	Ant1	5825	17.848	5816.0636	5833.9116	---	---
11AC40SISO	Ant1	5755	36.213	5736.8786	5773.0916	---	---
11AC40SISO	Ant1	5795	36.183	5776.8877	5813.0707	---	---

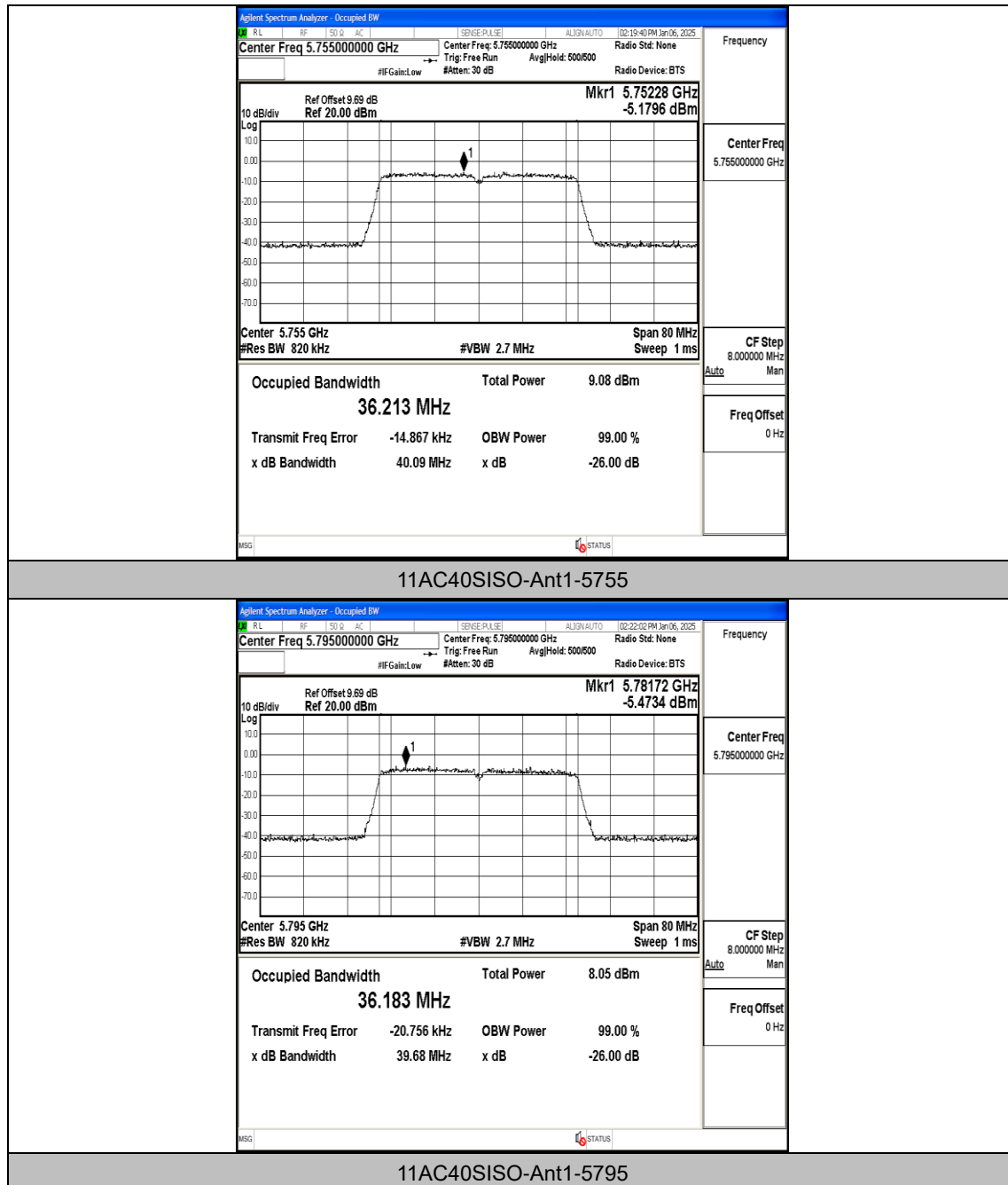
Test Graphs









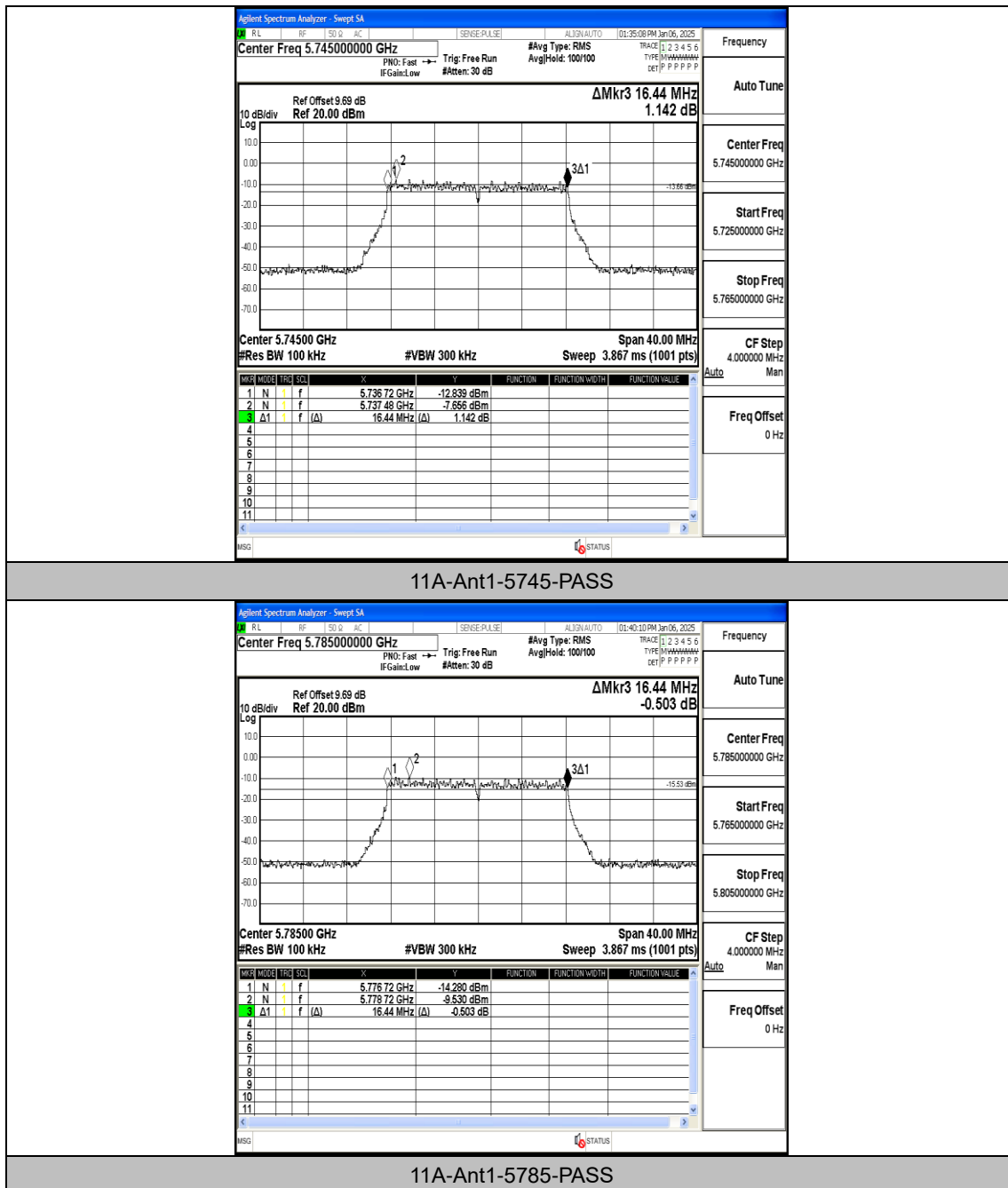


Appendix A: Min emission bandwidth

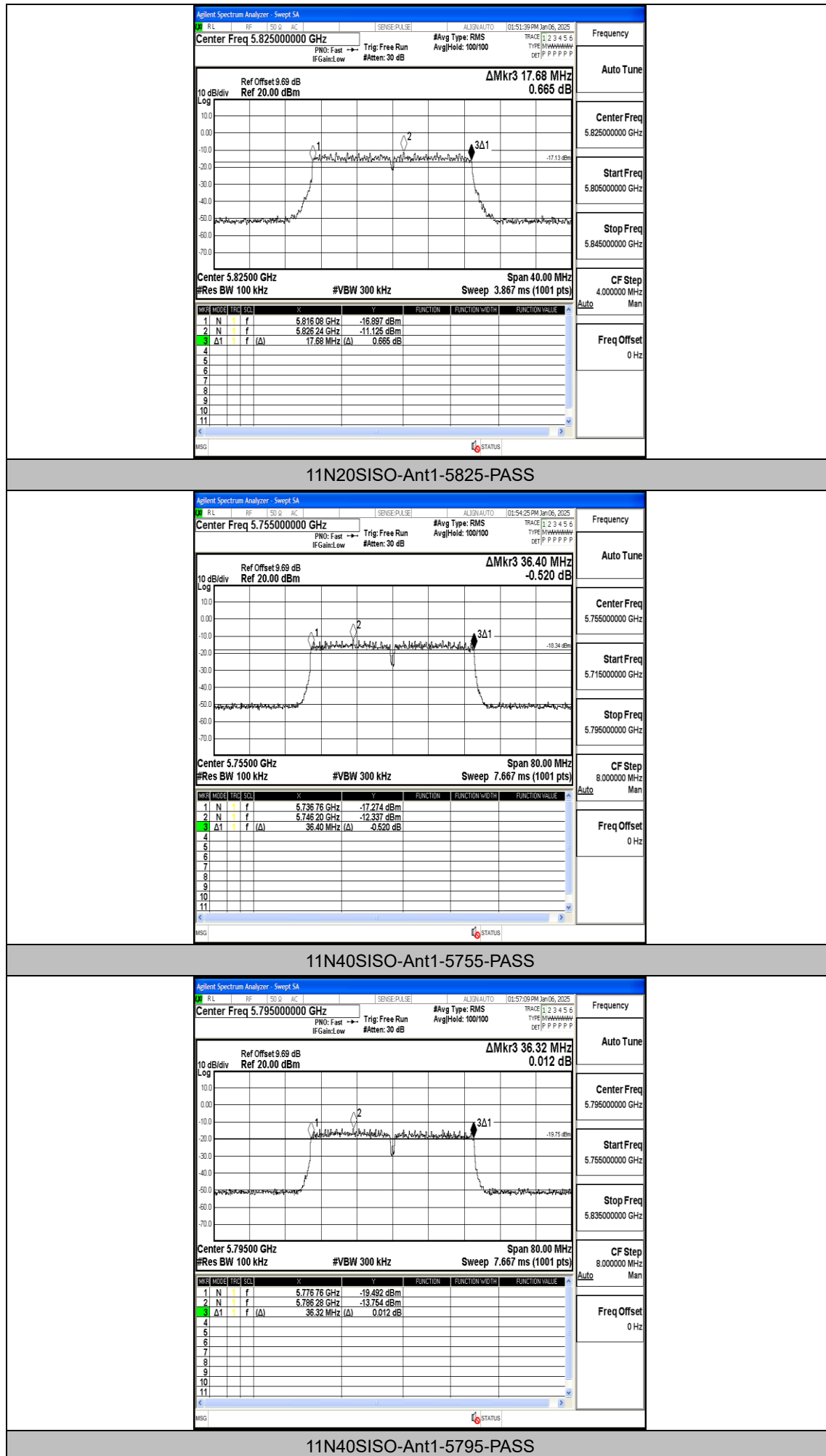
Test Result

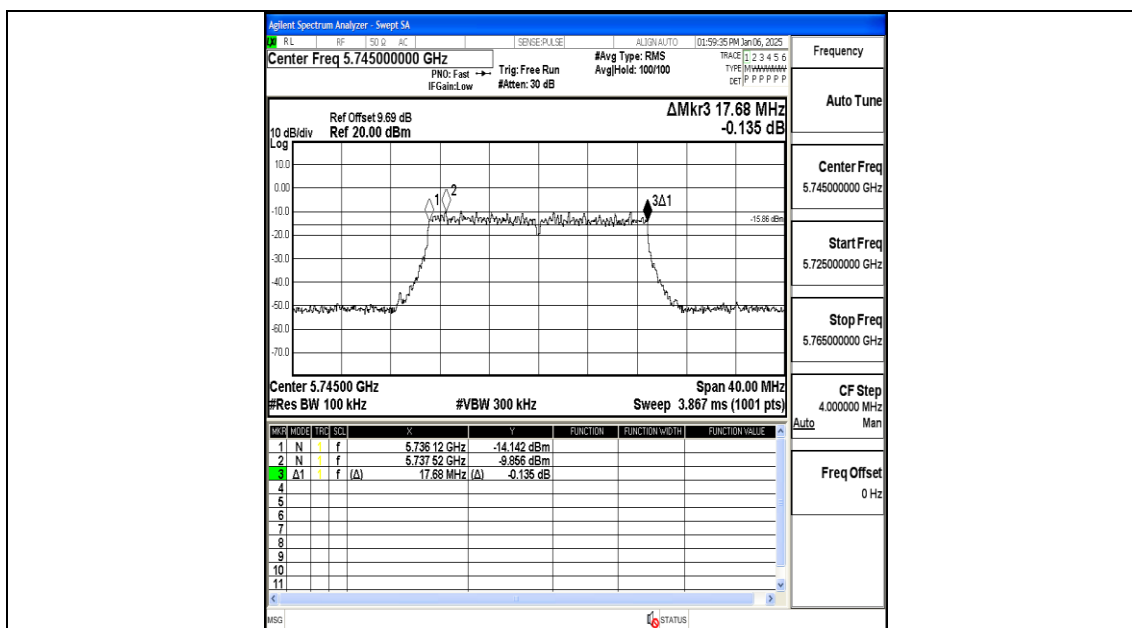
Test Mode	Antenna	Frequency [MHz]	6db EBW [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
11A	Ant1	5745	16.440	5736.720	5753.160	0.5	PASS
11A	Ant1	5785	16.440	5776.720	5793.160	0.5	PASS
11A	Ant1	5825	16.480	5816.720	5833.200	0.5	PASS
11N20SISO	Ant1	5745	17.680	5736.120	5753.800	0.5	PASS
11N20SISO	Ant1	5785	17.680	5776.080	5793.760	0.5	PASS
11N20SISO	Ant1	5825	17.680	5816.080	5833.760	0.5	PASS
11N40SISO	Ant1	5755	36.400	5736.760	5773.160	0.5	PASS
11N40SISO	Ant1	5795	36.320	5776.760	5813.080	0.5	PASS
11AC20SISO	Ant1	5745	17.680	5736.120	5753.800	0.5	PASS
11AC20SISO	Ant1	5785	17.720	5776.080	5793.800	0.5	PASS
11AC20SISO	Ant1	5825	17.680	5816.120	5833.800	0.5	PASS
11AC40SISO	Ant1	5755	36.400	5736.760	5773.160	0.5	PASS
11AC40SISO	Ant1	5795	35.680	5776.840	5812.520	0.5	PASS

Test Graphs

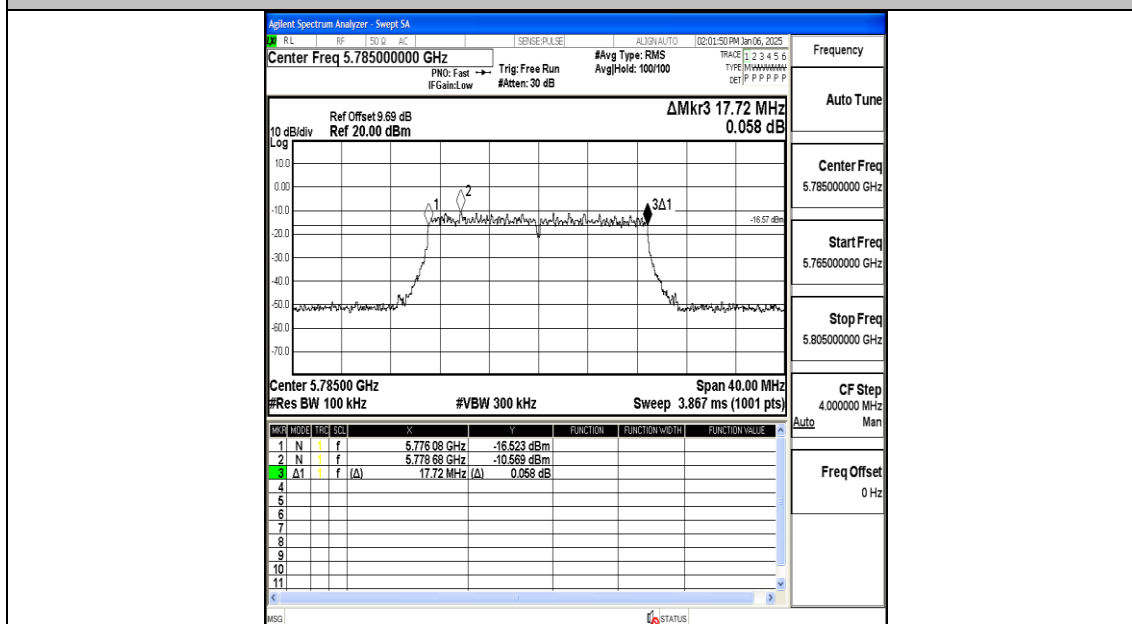




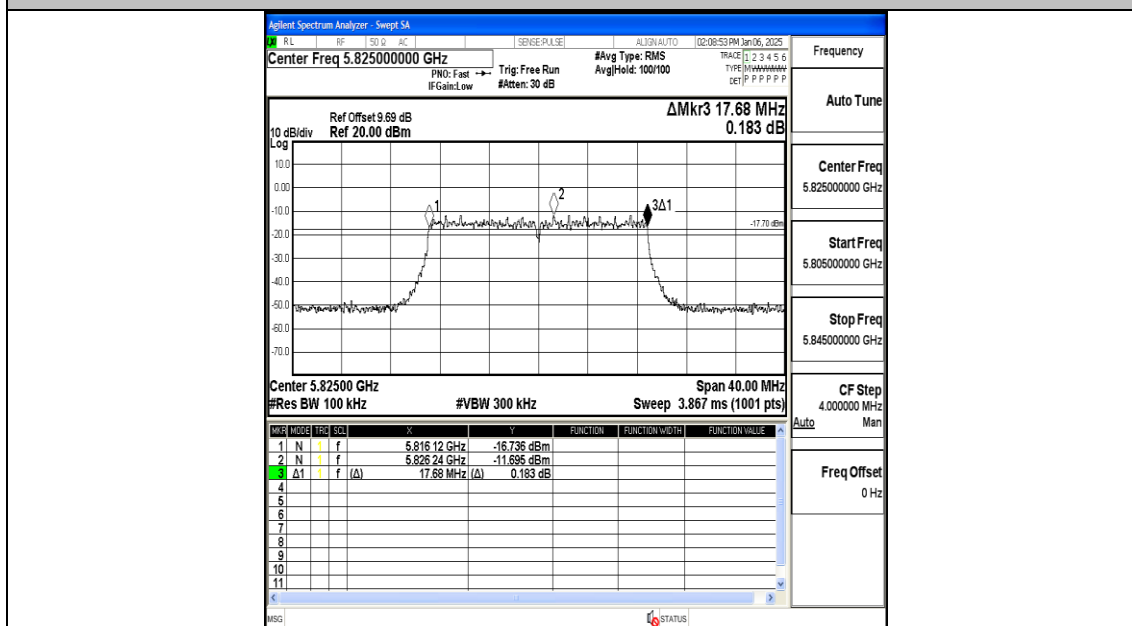




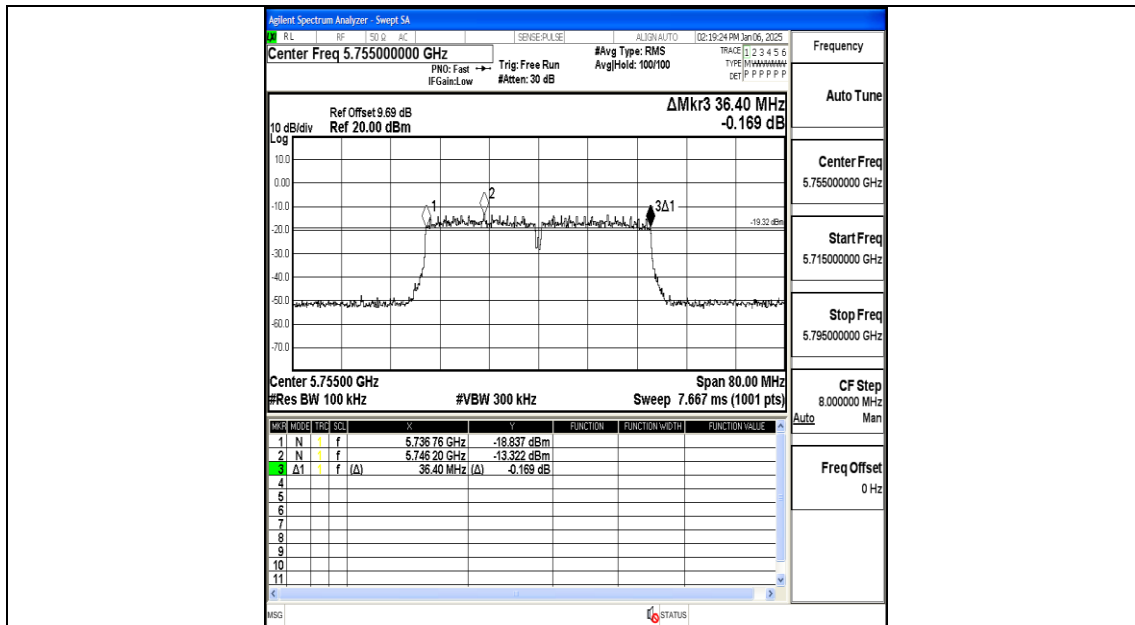
11AC20SISO-Ant1-5745-PASS



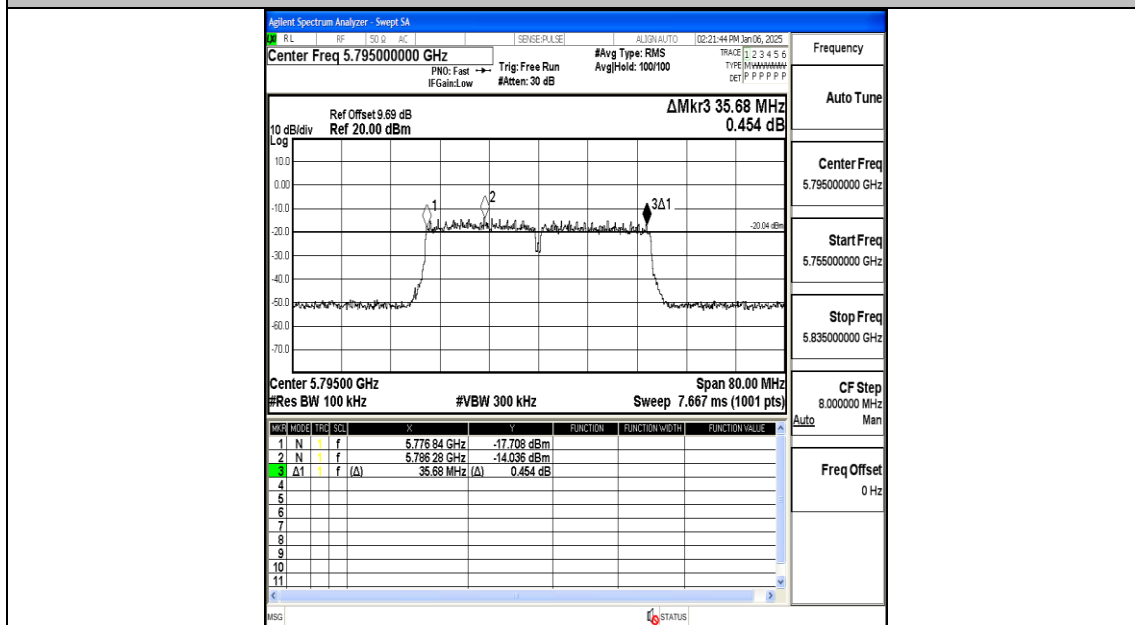
11AC20SISO-Ant1-5785-PASS



11AC20SISO-Ant1-5825-PASS



11AC40SISO-Ant1-5755-PASS



11AC40SISO-Ant1-5795-PASS

Appendix B: Maximum conducted output power

Test Result

Test Mode	Antenna	Frequency [MHz]	Conducted Power [dBm]	Conducted Limit [dBm]	Verdict
11A	Ant1	5745	3.40	≤30.00	PASS
11A	Ant1	5785	2.22	≤30.00	PASS
11A	Ant1	5825	1.21	≤30.00	PASS
11N20SISO	Ant1	5745	2.49	≤30.00	PASS
11N20SISO	Ant1	5785	1.51	≤30.00	PASS
11N20SISO	Ant1	5825	0.70	≤30.00	PASS
11N40SISO	Ant1	5755	2.45	≤30.00	PASS
11N40SISO	Ant1	5795	0.92	≤30.00	PASS
11AC20SISO	Ant1	5745	2.03	≤30.00	PASS
11AC20SISO	Ant1	5785	1.19	≤30.00	PASS
11AC20SISO	Ant1	5825	0.31	≤30.00	PASS
11AC40SISO	Ant1	5755	1.68	≤30.00	PASS
11AC40SISO	Ant1	5795	0.86	≤30.00	PASS

Note: The Duty Cycle Factor is compensated in the result.

Appendix C: Maximum power spectral density

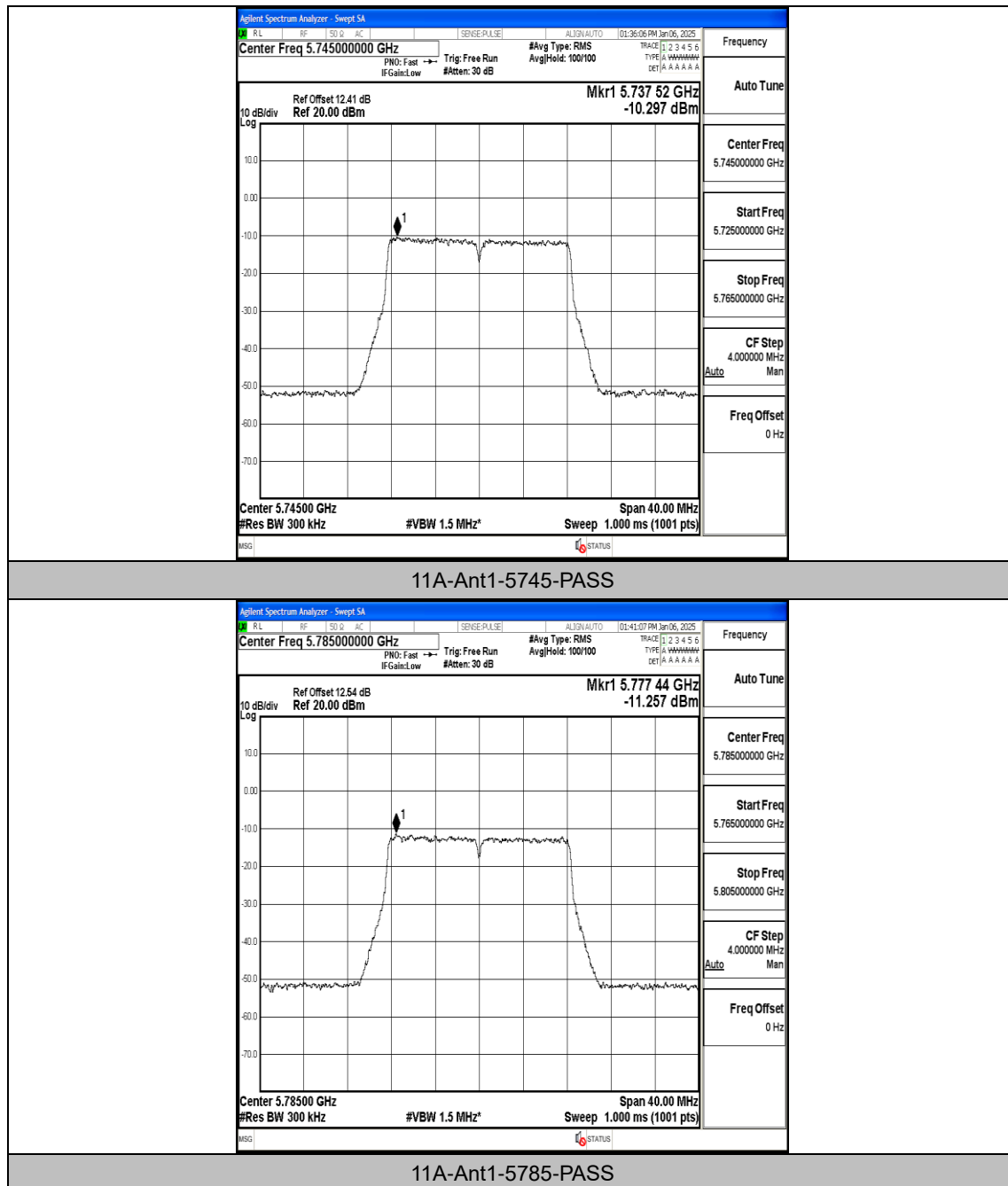
Test Result

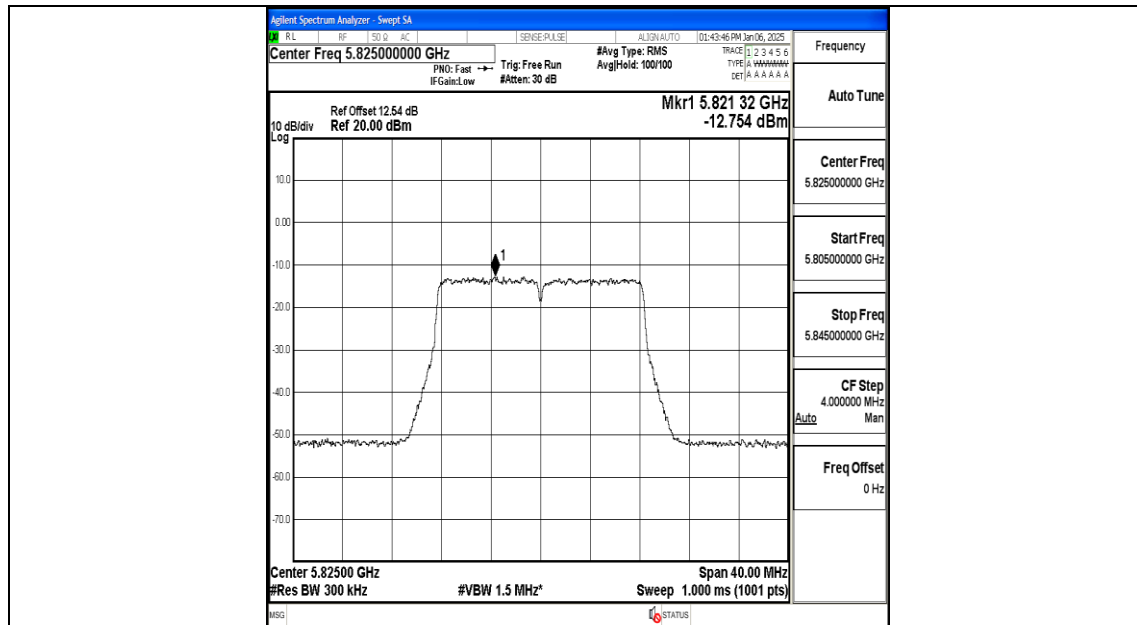
Frequency [MHz]	Test Mode	Antenna	Result [dBm/MHz]	DC Factor [dB]	RBW Factor [dB]	Limit [dBm/MHz]	Verdict
5745	11A	Ant1	-10.30	0.50	2.22	≤30.00	PASS
5785	11A	Ant1	-11.26	0.63	2.22	≤30.00	PASS
5825	11A	Ant1	-12.75	0.63	2.22	≤30.00	PASS
5745	11N20SI SO	Ant1	-10.94	0.69	2.22	≤30.00	PASS
5785	11N20SI SO	Ant1	-12.54	0.56	2.22	≤30.00	PASS
5825	11N20SI SO	Ant1	-13.55	0.56	2.22	≤30.00	PASS
5755	11N40SI SO	Ant1	-14.20	1.18	2.22	≤30.00	PASS
5795	11N40SI SO	Ant1	-15.44	0.97	2.22	≤30.00	PASS
5745	11AC20 SISO	Ant1	-11.82	0.69	2.22	≤30.00	PASS
5785	11AC20 SISO	Ant1	-12.81	0.56	2.22	≤30.00	PASS
5825	11AC20 SISO	Ant1	-13.45	0.69	2.22	≤30.00	PASS
5755	11AC40 SISO	Ant1	-14.54	1.17	2.22	≤30.00	PASS
5795	11AC40 SISO	Ant1	-15.09	1.41	2.22	≤30.00	PASS

Note: 1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.

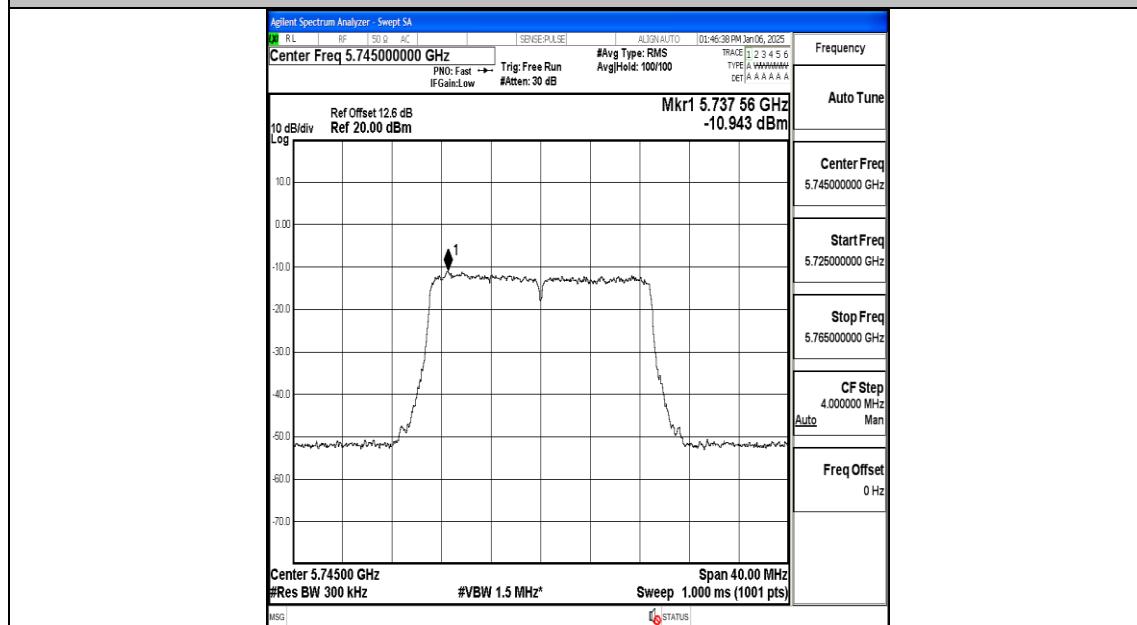
2.The Duty Cycle Factor and RBW Factor is compensated in the graph.

Test Graphs

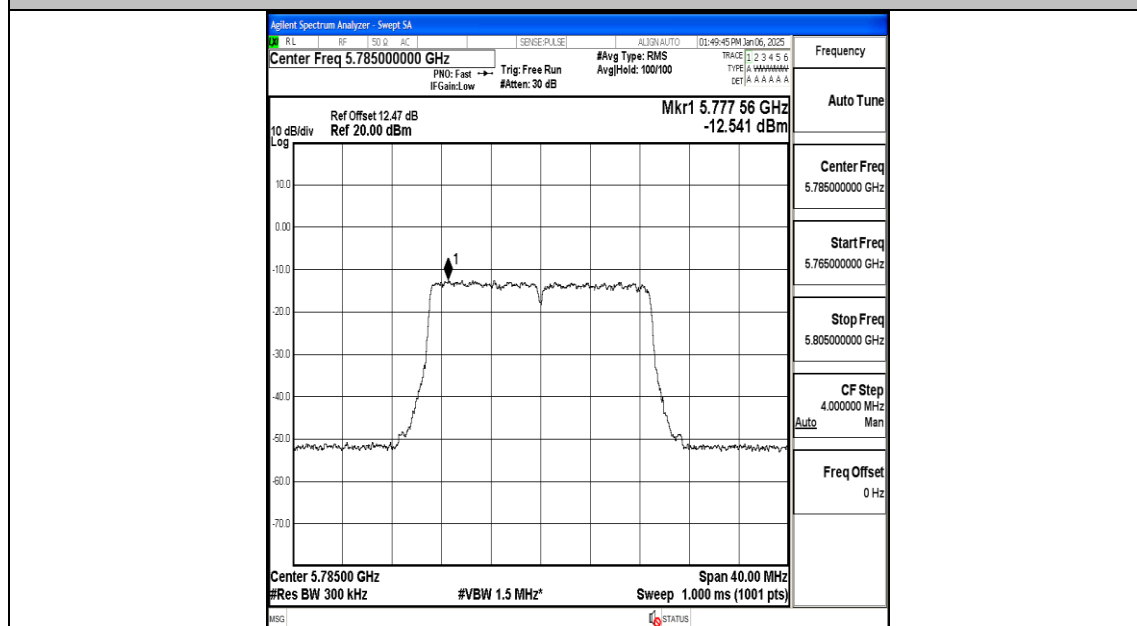




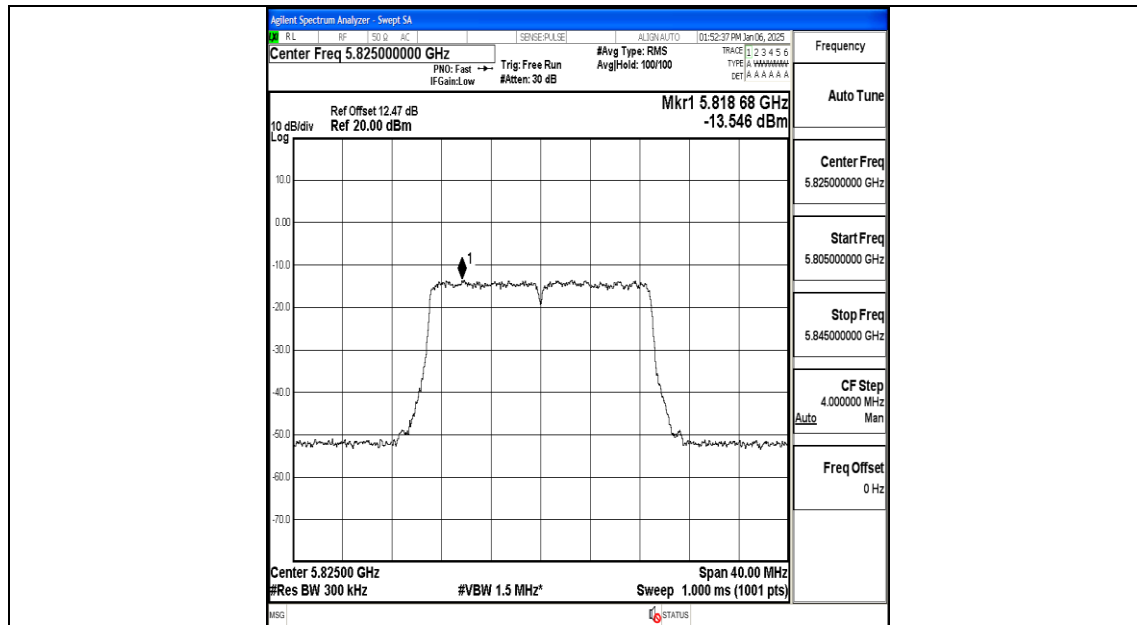
11A-Ant1-5825-PASS



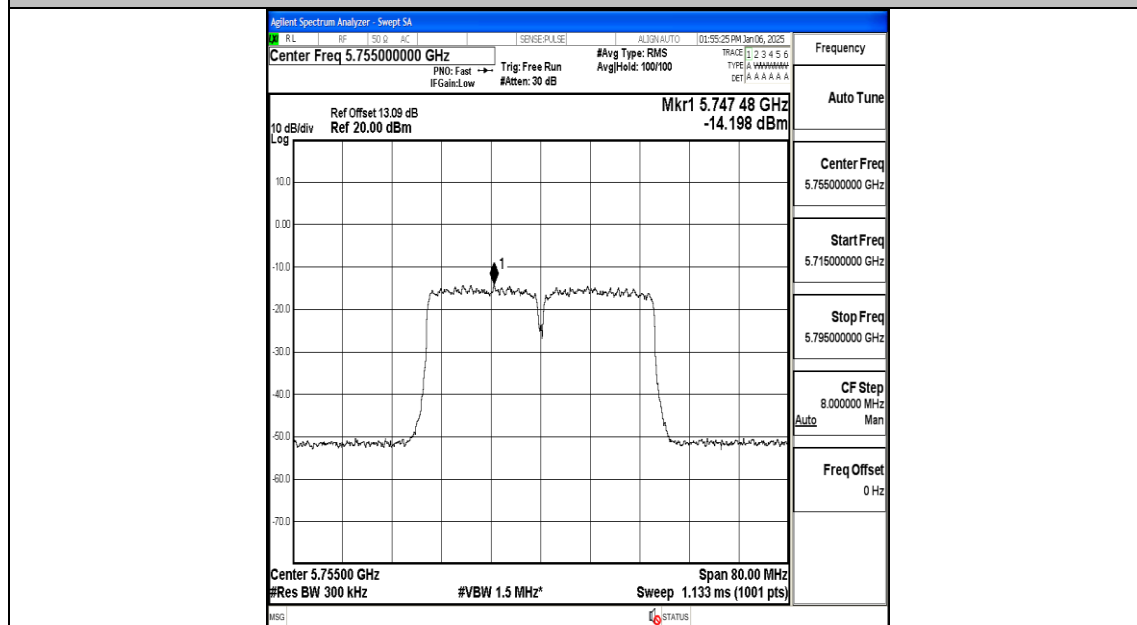
11N20SISO-Ant1-5745-PASS



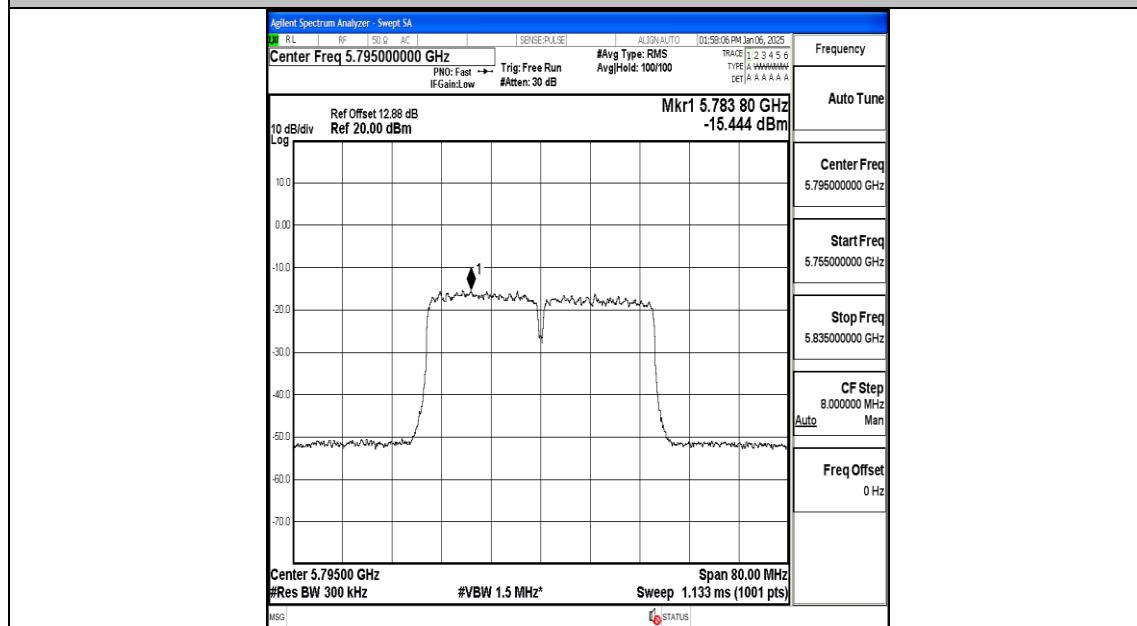
11N20SISO-Ant1-5785-PASS



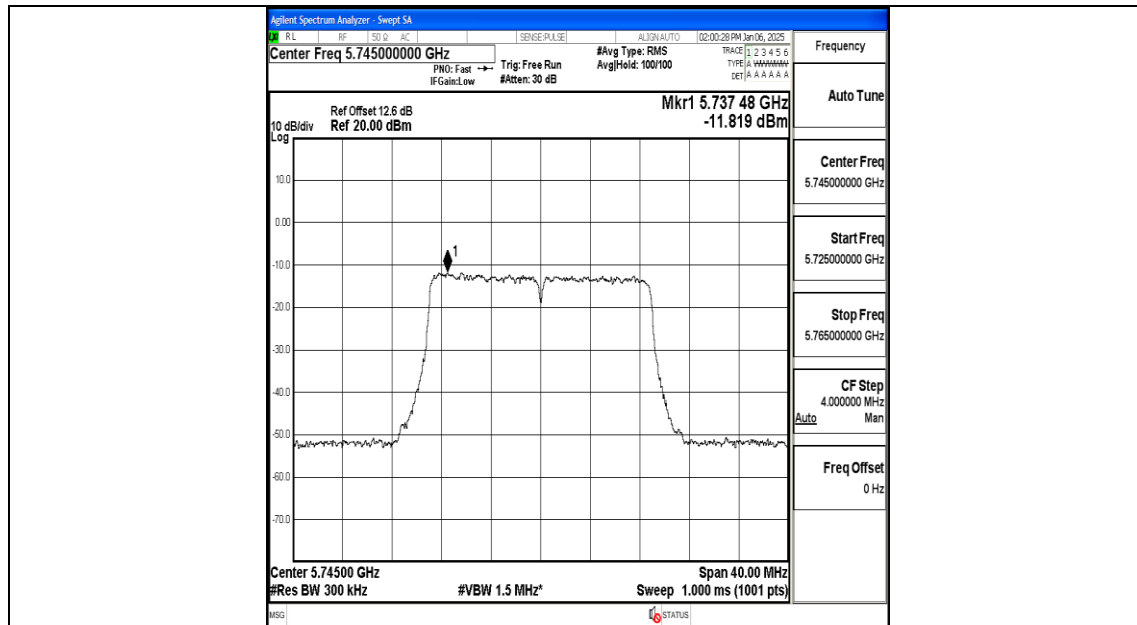
11N20SISO-Ant1-5825-PASS



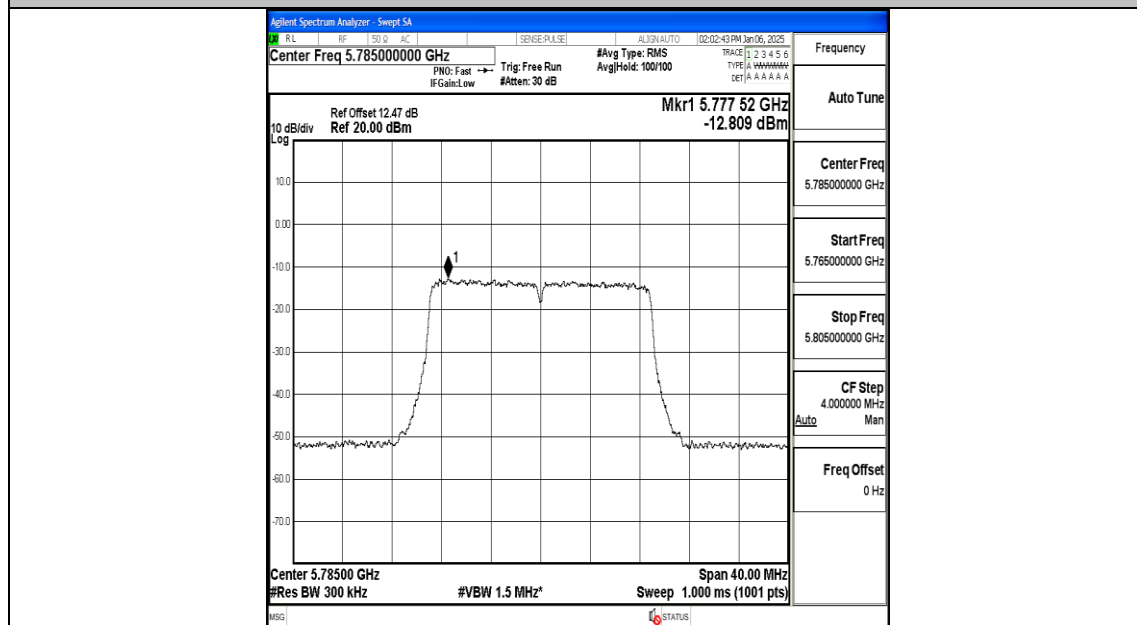
11N40SISO-Ant1-5755-PASS



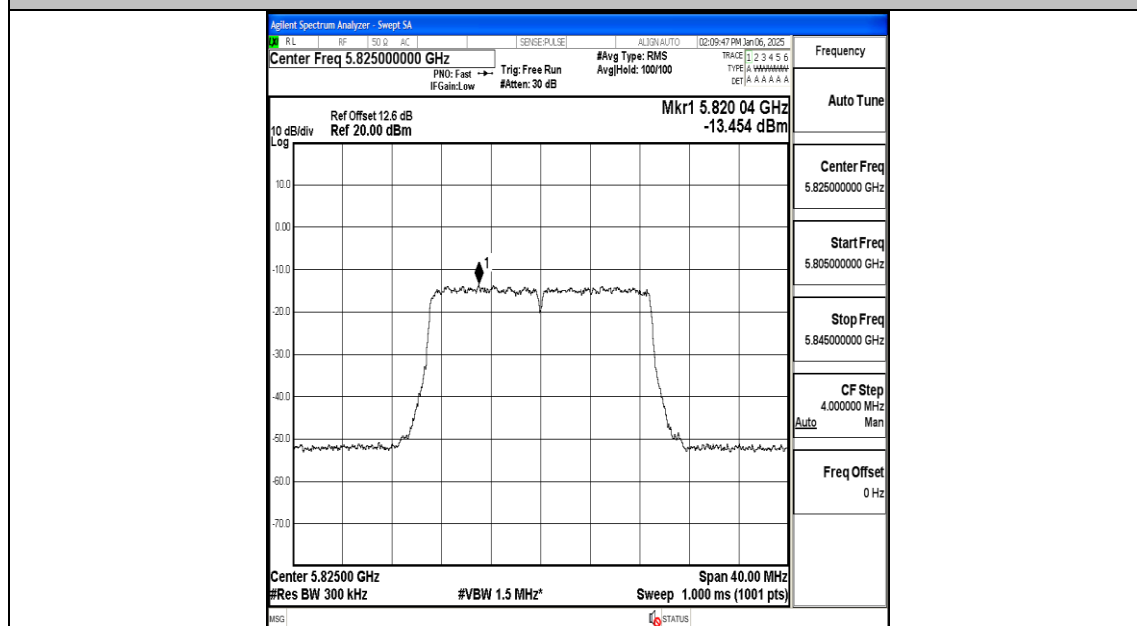
11N40SISO-Ant1-5795-PASS



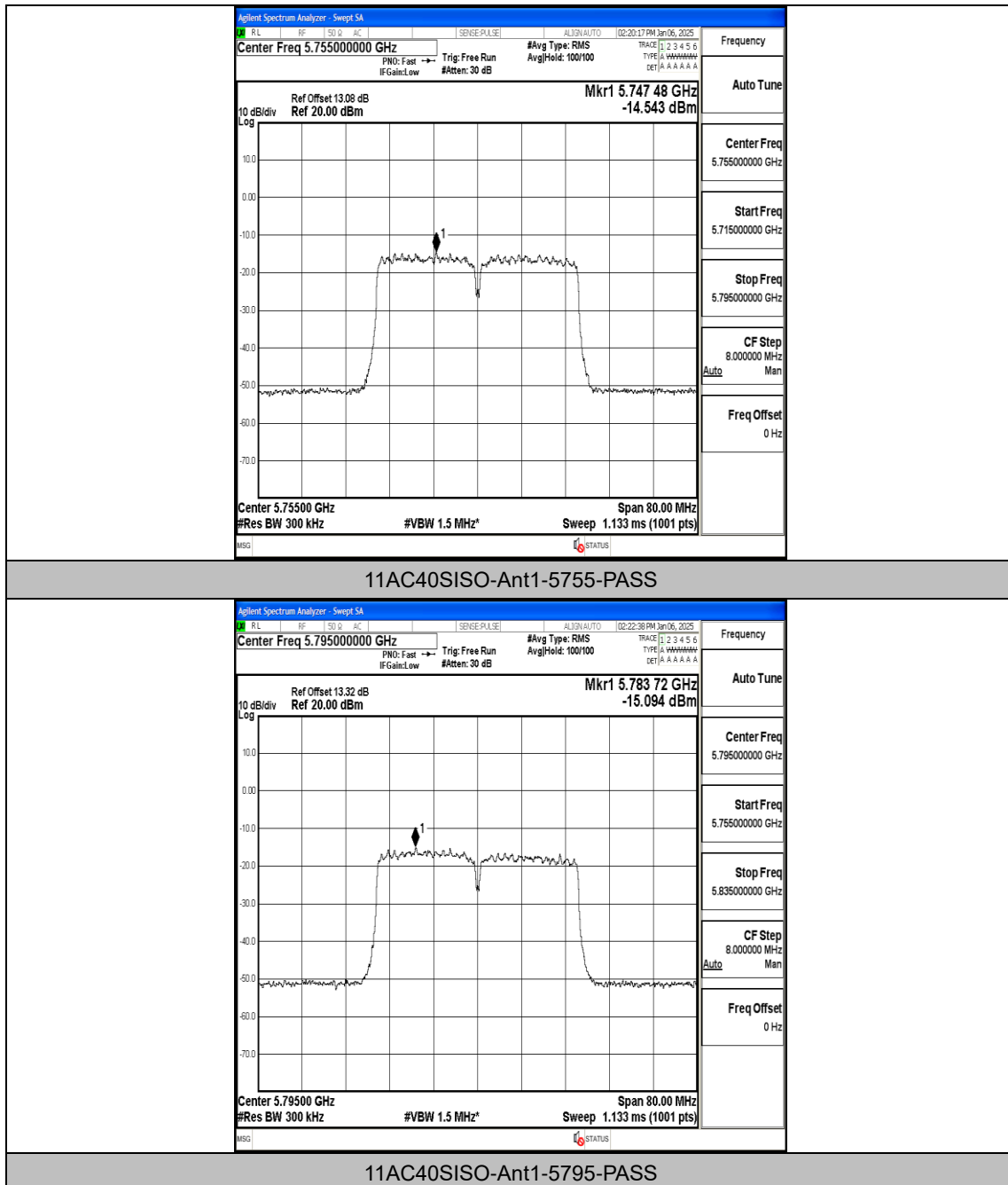
11AC20SISO-Ant1-5745-PASS



11AC20SISO-Ant1-5785-PASS



11AC20SISO-Ant1-5825-PASS



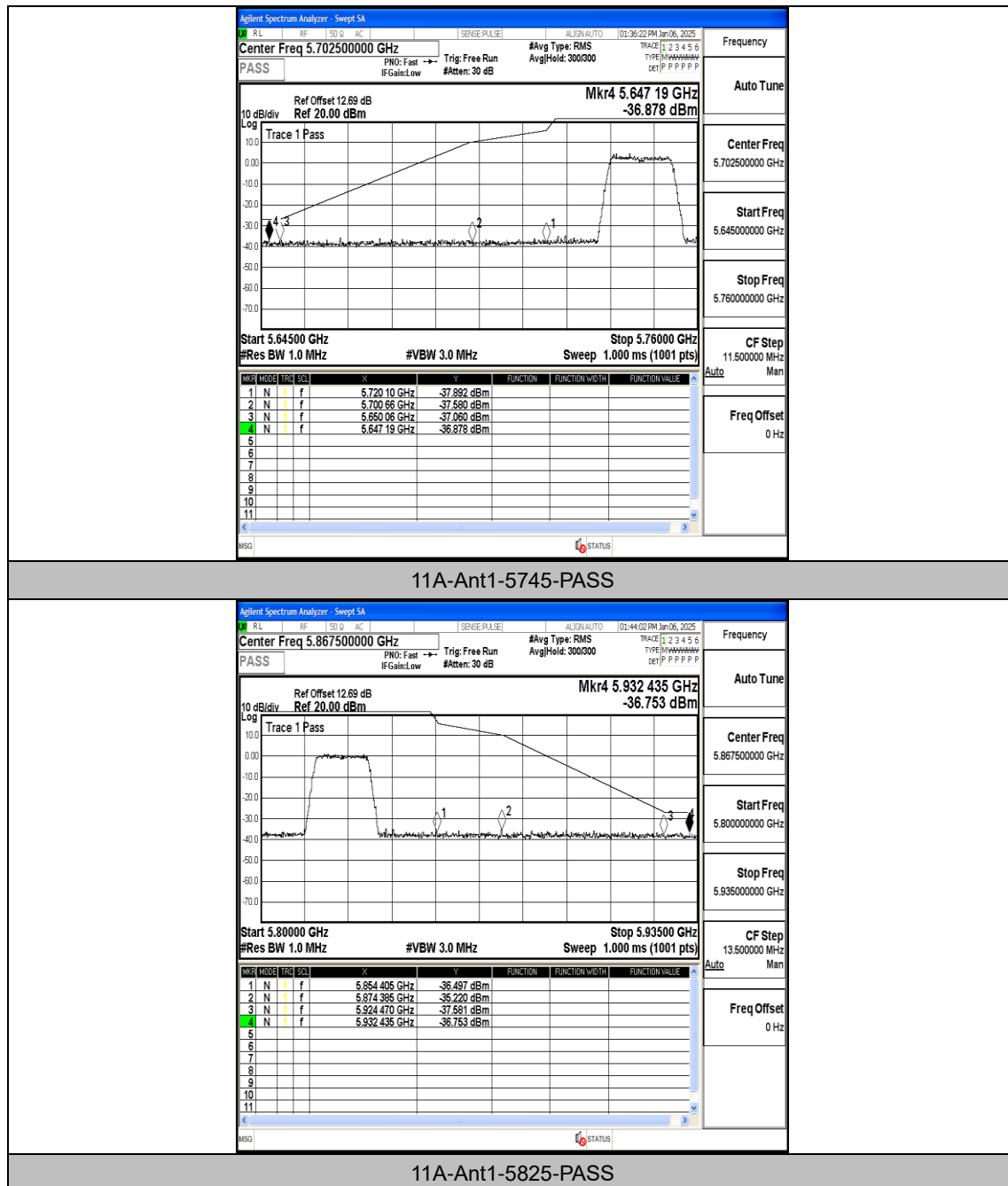
Appendix D: Band edge measurements

Test Result

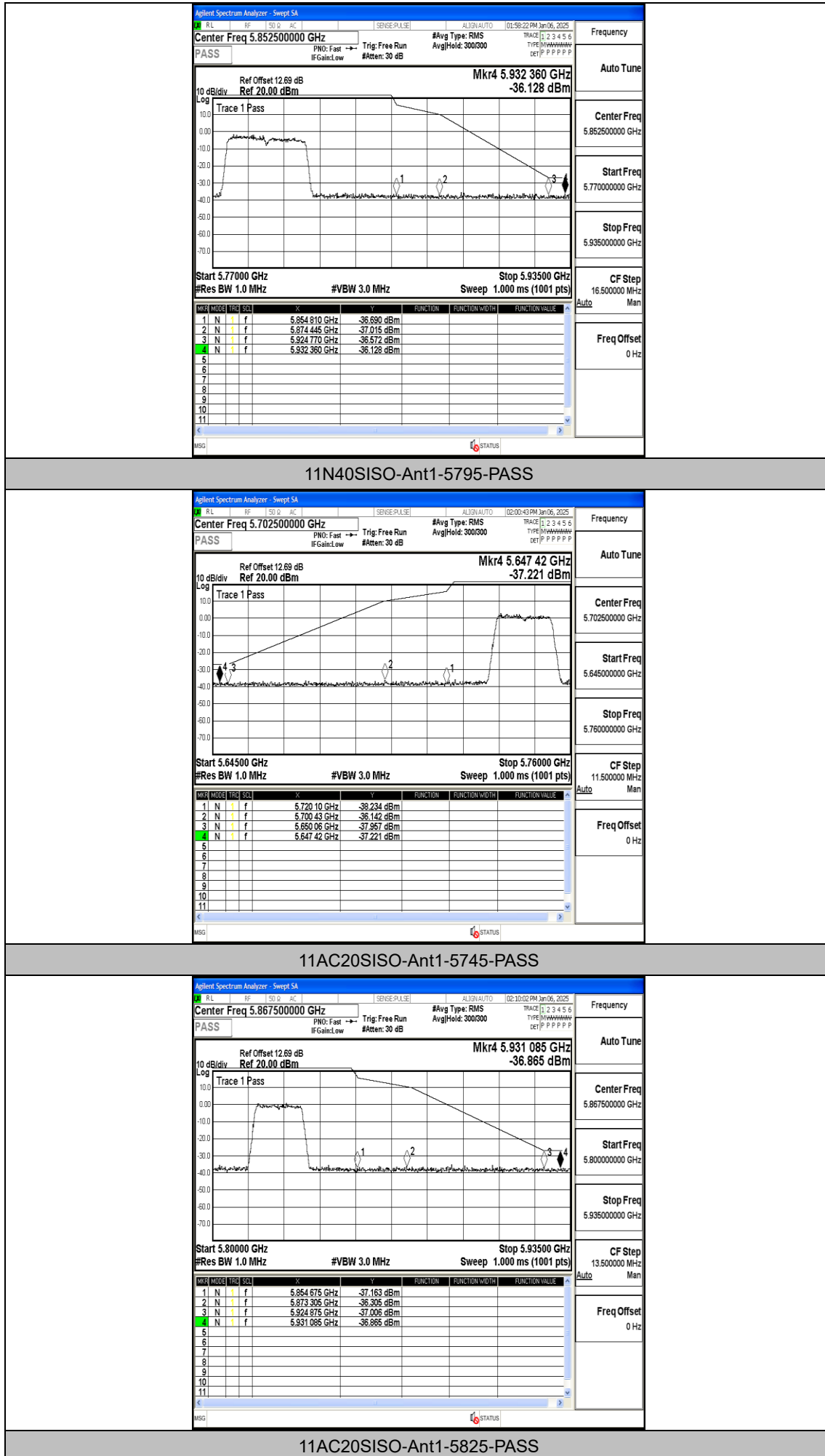
Test Mode	Antenna	Ch. Name	Frequency [MHz]	Freq. Range [MHz]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	Low	5745	5720~5725	-37.89	≤15.82	PASS
11A	Ant1	Low	5745	5700~5720	-37.58	≤10.18	PASS
11A	Ant1	Low	5745	5650~5700	-37.06	≤-26.96	PASS
11A	Ant1	Low	5745	5760~5650	-36.88	≤-27	PASS
11A	Ant1	High	5825	5850~5855	-36.5	≤16.96	PASS
11A	Ant1	High	5825	5855~5875	-35.22	≤10.17	PASS
11A	Ant1	High	5825	5875~5925	-37.58	≤-26.61	PASS
11A	Ant1	High	5825	5925~5935	-36.75	≤-27	PASS
11N20SI SO	Ant1	Low	5745	5720~5725	-36.95	≤16.08	PASS
11N20SI SO	Ant1	Low	5745	5700~5720	-36.61	≤10.02	PASS
11N20SI SO	Ant1	Low	5745	5650~5700	-37.81	≤-26.96	PASS
11N20SI SO	Ant1	Low	5745	5760~5650	-36.83	≤-27	PASS
11N20SI SO	Ant1	High	5825	5850~5855	-36.91	≤15.73	PASS
11N20SI SO	Ant1	High	5825	5855~5875	-35.84	≤10.74	PASS
11N20SI SO	Ant1	High	5825	5875~5925	-37.6	≤-26.61	PASS
11N20SI SO	Ant1	High	5825	5925~5935	-36.34	≤-27	PASS
11N40SI SO	Ant1	Low	5755	5720~5725	-35.99	≤15.74	PASS
11N40SI SO	Ant1	Low	5755	5700~5720	-37.05	≤10.06	PASS
11N40SI SO	Ant1	Low	5755	5650~5700	-37.06	≤-26.50	PASS
11N40SI SO	Ant1	Low	5755	5780~5650	-36.25	≤-27	PASS
11N40SI SO	Ant1	High	5795	5850~5855	-36.69	≤16.03	PASS
11N40SI SO	Ant1	High	5795	5855~5875	-37.02	≤10.16	PASS
11N40SI SO	Ant1	High	5795	5875~5925	-36.57	≤-26.83	PASS
11N40SI SO	Ant1	High	5795	5925~5935	-36.13	≤-27	PASS
11AC20S	Ant1	Low	5745	5720~5725	-38.23	≤15.82	PASS

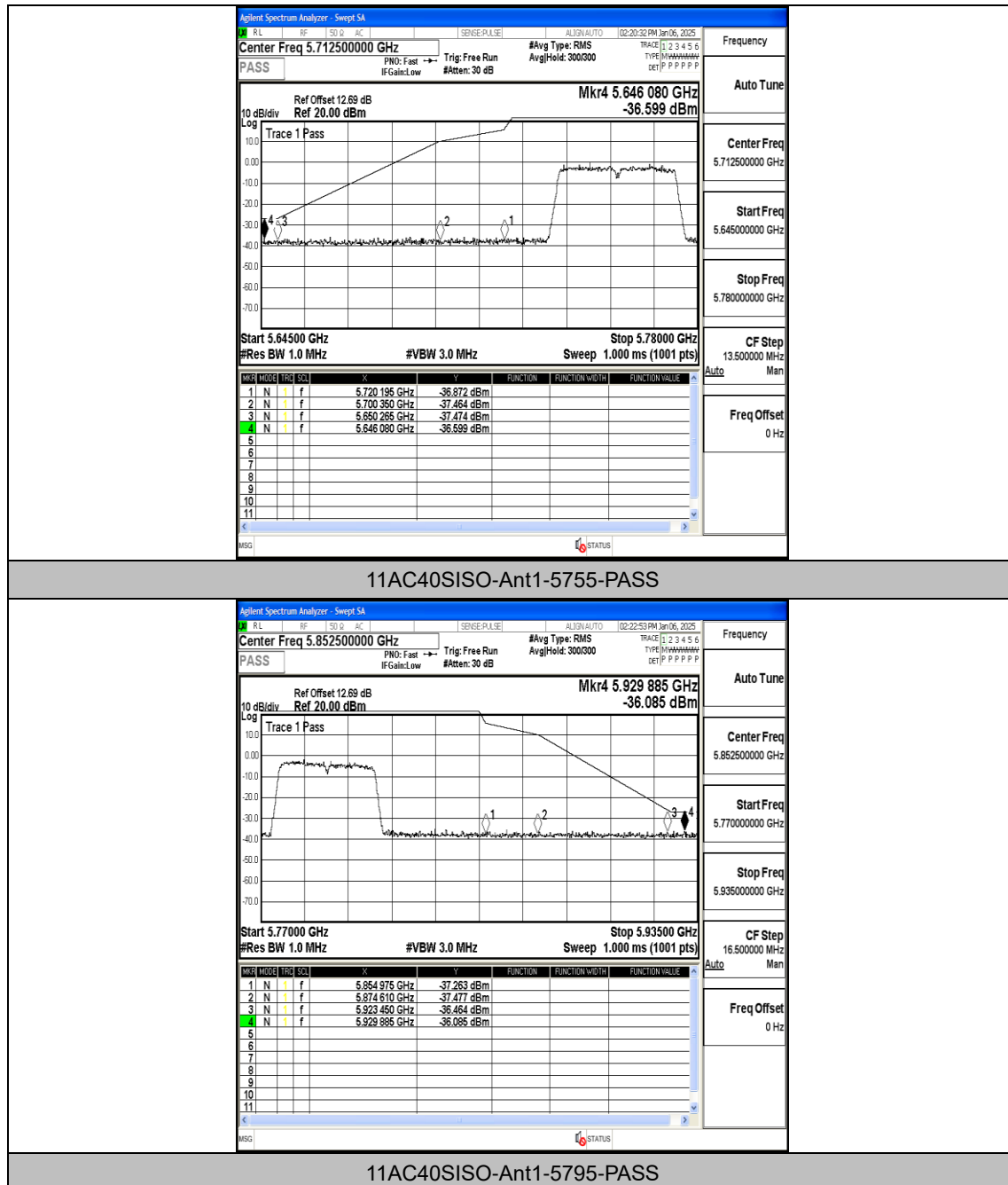
ISO							
11AC20S ISO	Ant1	Low	5745	5700~5720	-36.14	≤ 10.12	PASS
11AC20S ISO	Ant1	Low	5745	5650~5700	-37.96	≤ -26.96	PASS
11AC20S ISO	Ant1	Low	5745	5760~5650	-37.22	≤ -27	PASS
11AC20S ISO	Ant1	High	5825	5850~5855	-37.16	≤ 16.34	PASS
11AC20S ISO	Ant1	High	5825	5855~5875	-36.31	≤ 10.47	PASS
11AC20S ISO	Ant1	High	5825	5875~5925	-37.01	≤ -26.91	PASS
11AC20S ISO	Ant1	High	5825	5925~5935	-36.87	≤ -27	PASS
11AC40S ISO	Ant1	Low	5755	5720~5725	-36.87	≤ 16.04	PASS
11AC40S ISO	Ant1	Low	5755	5650~5700	-37.47	≤ -26.80	PASS
11AC40S ISO	Ant1	Low	5755	5780~5650	-36.6	≤ -27	PASS
11AC40S ISO	Ant1	Low	5755	5700~5720	-37.46	≤ 10.10	PASS
11AC40S ISO	Ant1	High	5795	5850~5855	-37.26	≤ 15.66	PASS
11AC40S ISO	Ant1	High	5795	5855~5875	-37.48	≤ 10.11	PASS
11AC40S ISO	Ant1	High	5795	5875~5925	-36.46	≤ -25.85	PASS
11AC40S ISO	Ant1	High	5795	5925~5935	-36.09	≤ -27	PASS

Test Graphs









Appendix E: Frequency Stability

Test Result

Ant1

Frequency (MHz)	Environment Temperature (Degree)	Voltage (VDC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5745	20	4.07	5744.900978	5725 – 5850	PASS
5745	20	3.33	5745.041039	5725 – 5850	PASS
5745	50	3.70	5744.933548	5725 – 5850	PASS
5745	40	3.70	5745.050945	5725 – 5850	PASS
5745	30	3.70	5745.009926	5725 – 5850	PASS
5745	20	3.70	5744.907202	5725 – 5850	PASS
5745	10	3.70	5745.076732	5725 – 5850	PASS
5745	0	3.70	5745.084333	5725 – 5850	PASS
5745	-10	3.70	5744.903159	5725 – 5850	PASS
5745	-20	3.70	5745.033055	5725 – 5850	PASS
5745	-30	3.70	5745.059729	5725 – 5850	PASS

Ant1

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VDC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5785	20	4.07	5784.918658	5725 – 5850	PASS
5785	20	3.33	5784.976167	5725 – 5850	PASS
5785	50	3.70	5785.027551	5725 – 5850	PASS
5785	40	3.70	5784.962090	5725 – 5850	PASS
5785	30	3.70	5784.990629	5725 – 5850	PASS
5785	20	3.70	5784.998354	5725 – 5850	PASS
5785	10	3.70	5785.012681	5725 – 5850	PASS
5785	0	3.70	5785.059765	5725 – 5850	PASS
5785	-10	3.70	5784.912339	5725 – 5850	PASS
5785	-20	3.70	5785.074352	5725 – 5850	PASS
5785	-30	3.70	5784.912952	5725 – 5850	PASS

Ant1

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VDC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5825	20	4.07	5824.902968	5725 – 5850	PASS
5825	20	3.33	5824.910994	5725 – 5850	PASS
5825	50	3.70	5824.955446	5725 – 5850	PASS
5825	40	3.70	5824.950636	5725 – 5850	PASS
5825	30	3.70	5824.982370	5725 – 5850	PASS
5825	20	3.70	5825.085909	5725 – 5850	PASS
5825	10	3.70	5824.906989	5725 – 5850	PASS
5825	0	3.70	5825.008848	5725 – 5850	PASS
5825	-10	3.70	5824.975844	5725 – 5850	PASS
5825	-20	3.70	5824.953194	5725 – 5850	PASS
5825	-30	3.70	5825.032182	5725 – 5850	PASS

Ant1

Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VDC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5755	20	4.07	5755.085781	5725 – 5850	PASS
5755	20	3.33	5755.018576	5725 – 5850	PASS
5755	50	3.70	5754.997551	5725 – 5850	PASS
5755	40	3.70	5755.045244	5725 – 5850	PASS
5755	30	3.70	5755.005085	5725 – 5850	PASS
5755	20	3.70	5754.993754	5725 – 5850	PASS
5755	10	3.70	5755.045784	5725 – 5850	PASS
5755	0	3.70	5754.938192	5725 – 5850	PASS
5755	-10	3.70	5755.050014	5725 – 5850	PASS
5755	-20	3.70	5754.939851	5725 – 5850	PASS
5755	-30	3.70	5755.084397	5725 – 5850	PASS

Ant1

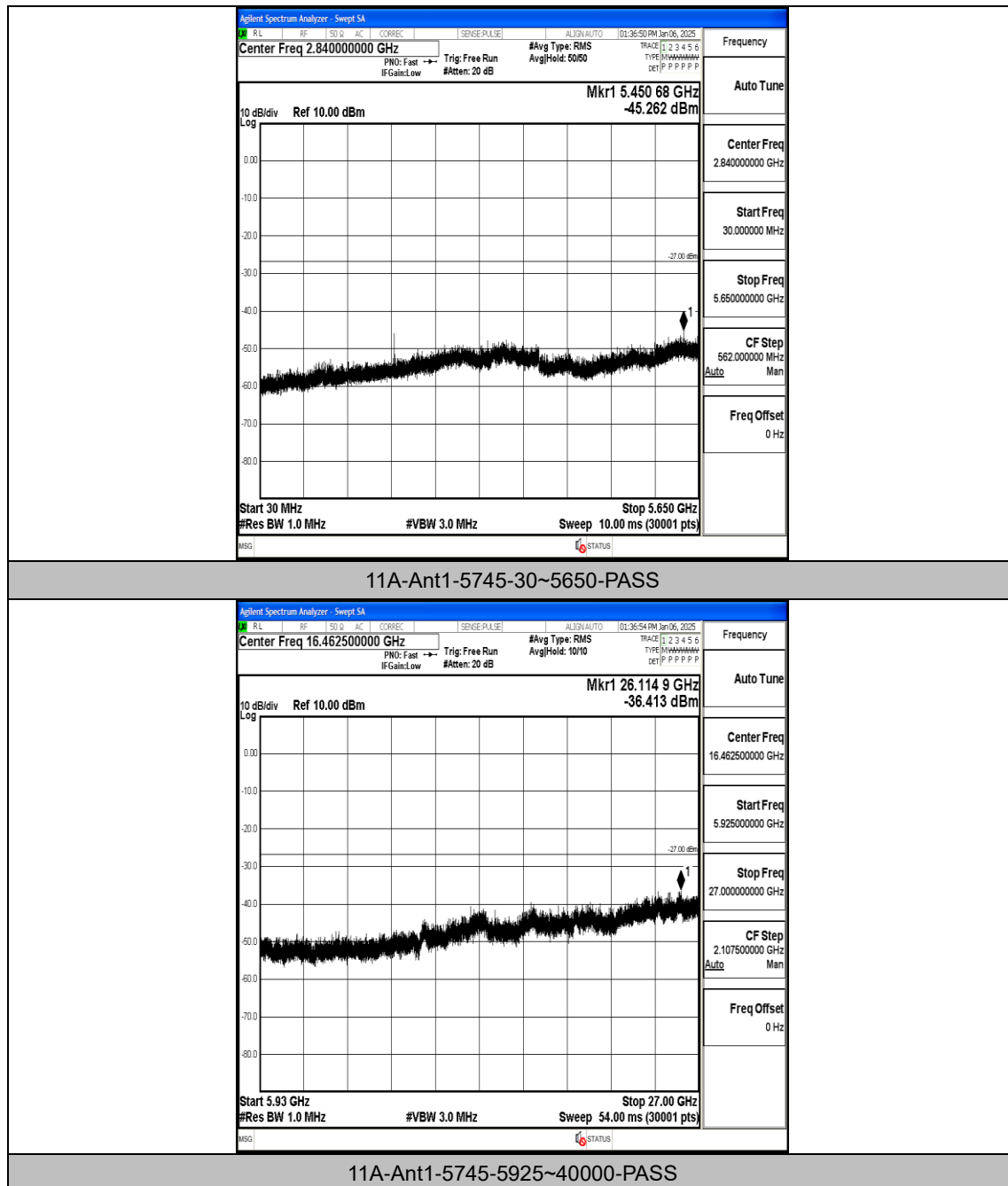
Frequency (MHz)	Enviroment Temperature (Dregree)	Voltage (VDC)	Measured Frequency (MHz)	Limit Range (MHz)	Test Results
5795	20	4.07	5794.976560	5725 – 5850	PASS
5795	20	3.33	5794.980464	5725 – 5850	PASS
5795	50	3.70	5795.053547	5725 – 5850	PASS
5795	40	3.70	5795.071755	5725 – 5850	PASS
5795	30	3.70	5794.989789	5725 – 5850	PASS
5795	20	3.70	5794.909062	5725 – 5850	PASS
5795	10	3.70	5795.070606	5725 – 5850	PASS
5795	0	3.70	5794.943231	5725 – 5850	PASS
5795	-10	3.70	5794.943866	5725 – 5850	PASS
5795	-20	3.70	5795.024793	5725 – 5850	PASS
5795	-30	3.70	5795.006434	5725 – 5850	PASS

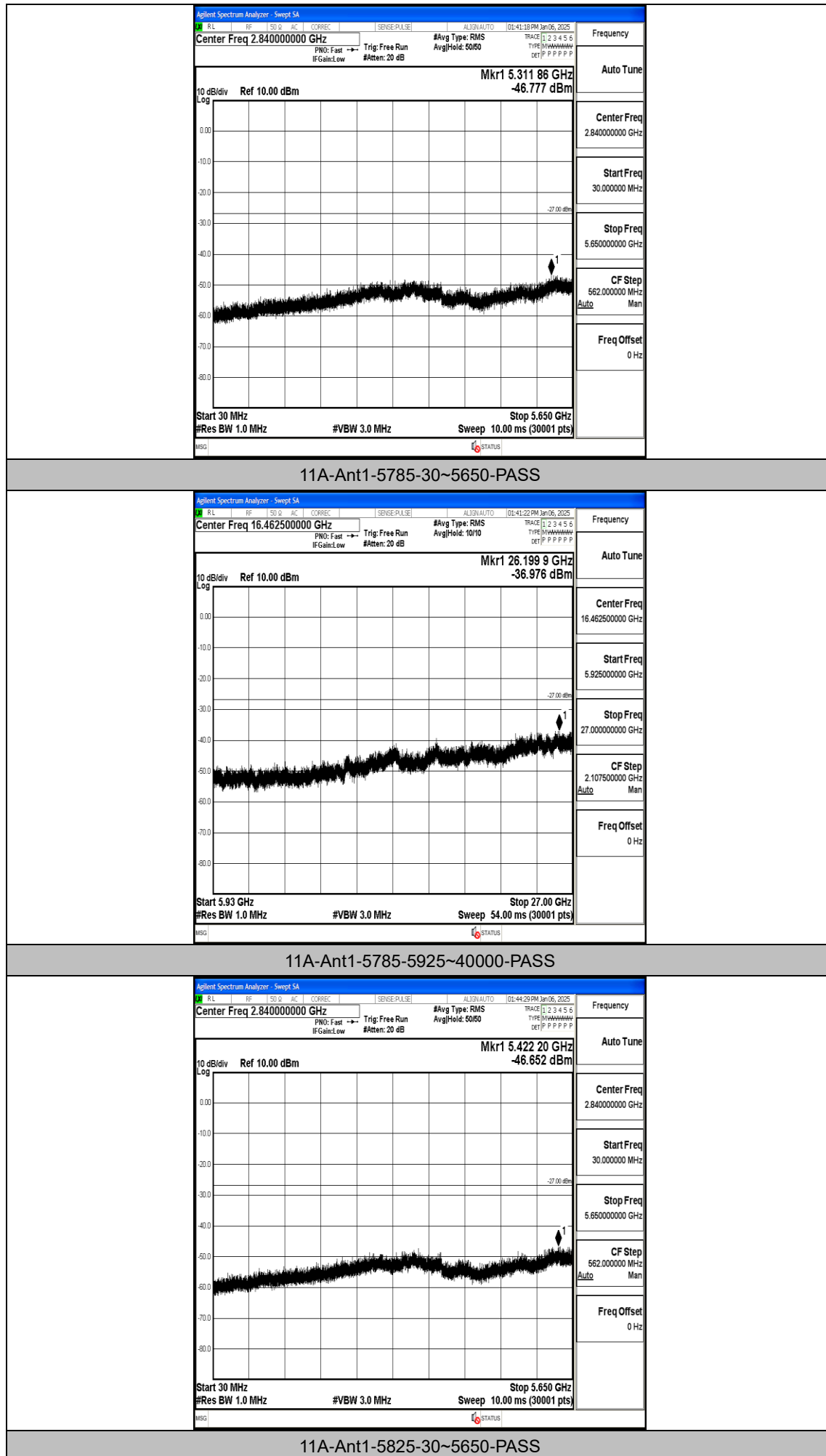
Appendix F: Conducted Spurious Emission

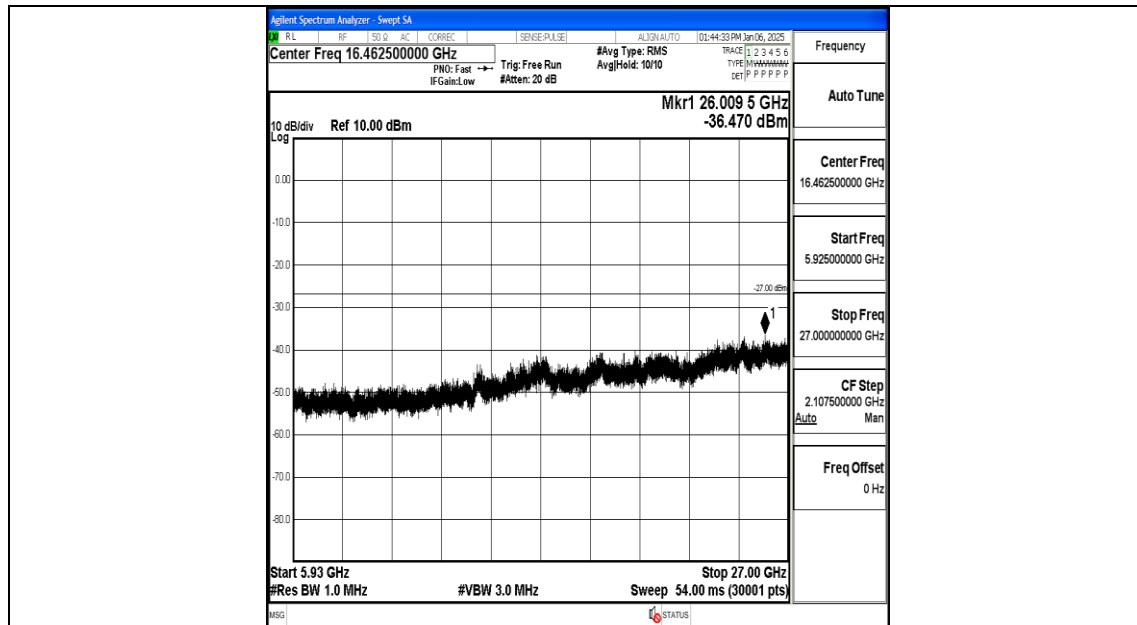
Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	Max. Fre [MHz]	Max. Level [dBm]	Limit [dBm]	Verdict
11A	Ant1	5745	30~5650	5450.68	-45.26	≤-27	PASS
11A	Ant1	5745	5925~40000	26114.85	-36.41	≤-27	PASS
11A	Ant1	5785	30~5650	5311.86	-46.78	≤-27	PASS
11A	Ant1	5785	5925~40000	26199.85	-36.98	≤-27	PASS
11A	Ant1	5825	30~5650	5422.2	-46.65	≤-27	PASS
11A	Ant1	5825	5925~40000	26009.48	-36.47	≤-27	PASS
11N20SISO	Ant1	5745	30~5650	5563.45	-46.35	≤-27	PASS
11N20SISO	Ant1	5745	5925~40000	26075.51	-36.76	≤-27	PASS
11N20SISO	Ant1	5785	30~5650	836.28	-44.16	≤-27	PASS
11N20SISO	Ant1	5785	5925~40000	25141.19	-37.3	≤-27	PASS
11N20SISO	Ant1	5825	30~5650	2458.59	-39.92	≤-27	PASS
11N20SISO	Ant1	5825	5925~40000	26898.14	-36.09	≤-27	PASS
11N40SISO	Ant1	5755	30~5650	5347.08	-46.09	≤-27	PASS
11N40SISO	Ant1	5755	5925~40000	26881.28	-35.07	≤-27	PASS
11N40SISO	Ant1	5795	30~5650	5441.31	-46.83	≤-27	PASS
11N40SISO	Ant1	5795	5925~40000	25082.18	-35.84	≤-27	PASS
11AC20SISO	Ant1	5745	30~5650	5436.07	-46.59	≤-27	PASS
11AC20SISO	Ant1	5745	5925~40000	26958.55	-36.34	≤-27	PASS
11AC20SISO	Ant1	5785	30~5650	5375.37	-46.79	≤-27	PASS
11AC20SISO	Ant1	5785	5925~40000	25989.81	-36.93	≤-27	PASS
11AC20SISO	Ant1	5825	30~5650	5383.24	-46.39	≤-27	PASS
11AC20SISO	Ant1	5825	5925~40000	26100.1	-36.84	≤-27	PASS
11AC40SISO	Ant1	5755	30~5650	5402.35	-46.5	≤-27	PASS
11AC40SISO	Ant1	5755	5925~40000	25586.57	-36.33	≤-27	PASS
11AC40SISO	Ant1	5795	30~5650	5440.19	-45.91	≤-27	PASS
11AC40SISO	Ant1	5795	5925~40000	26097.99	-36.07	≤-27	PASS

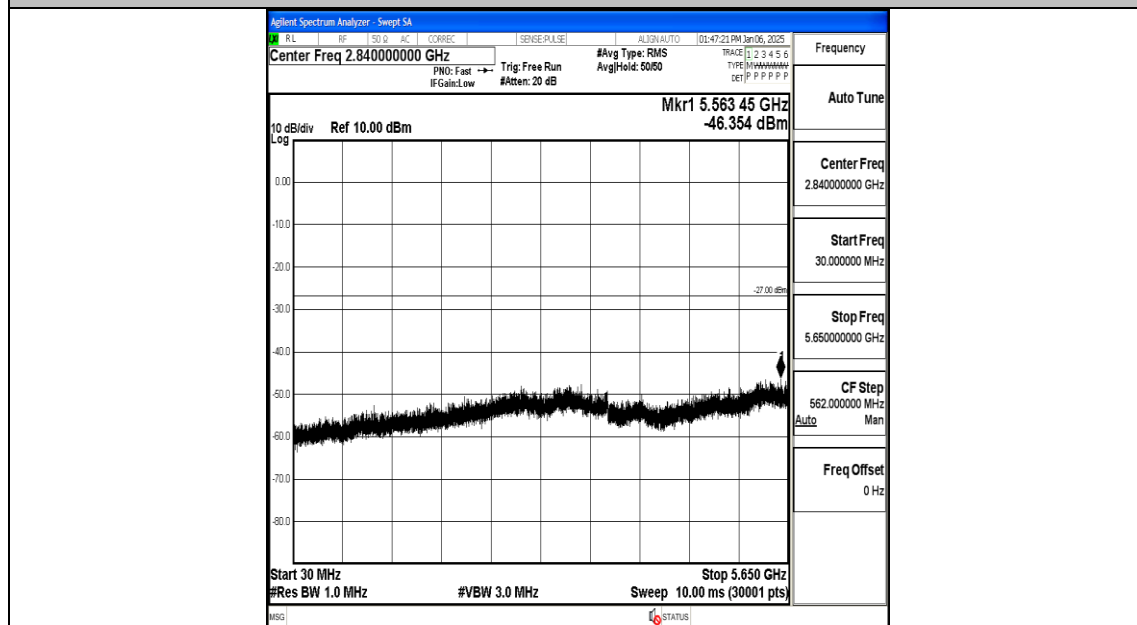
Test Graphs



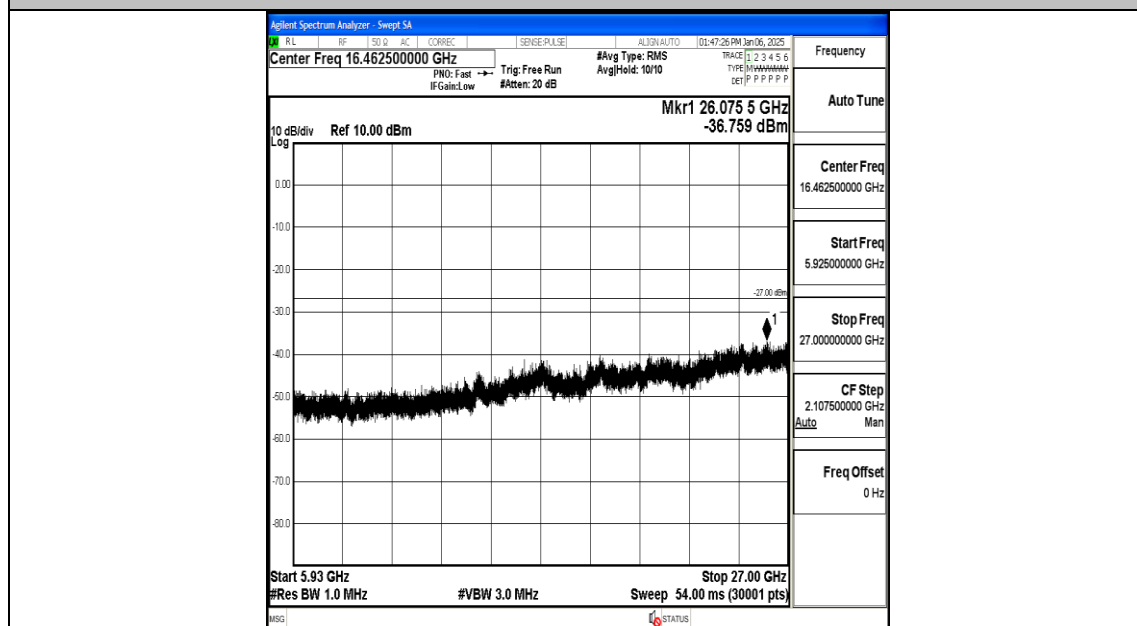




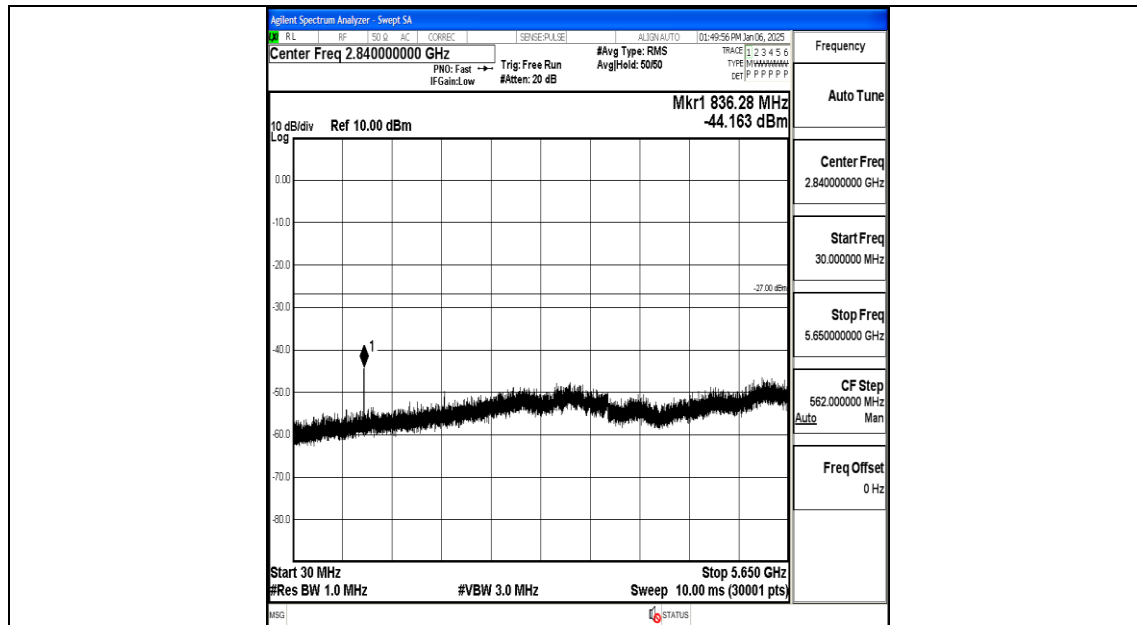
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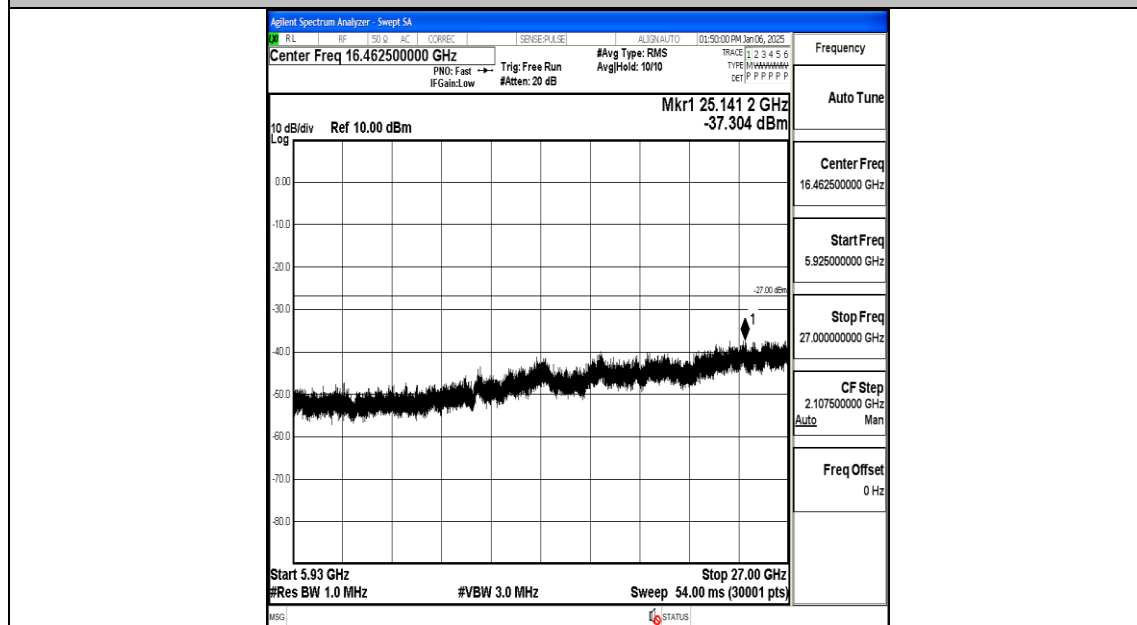
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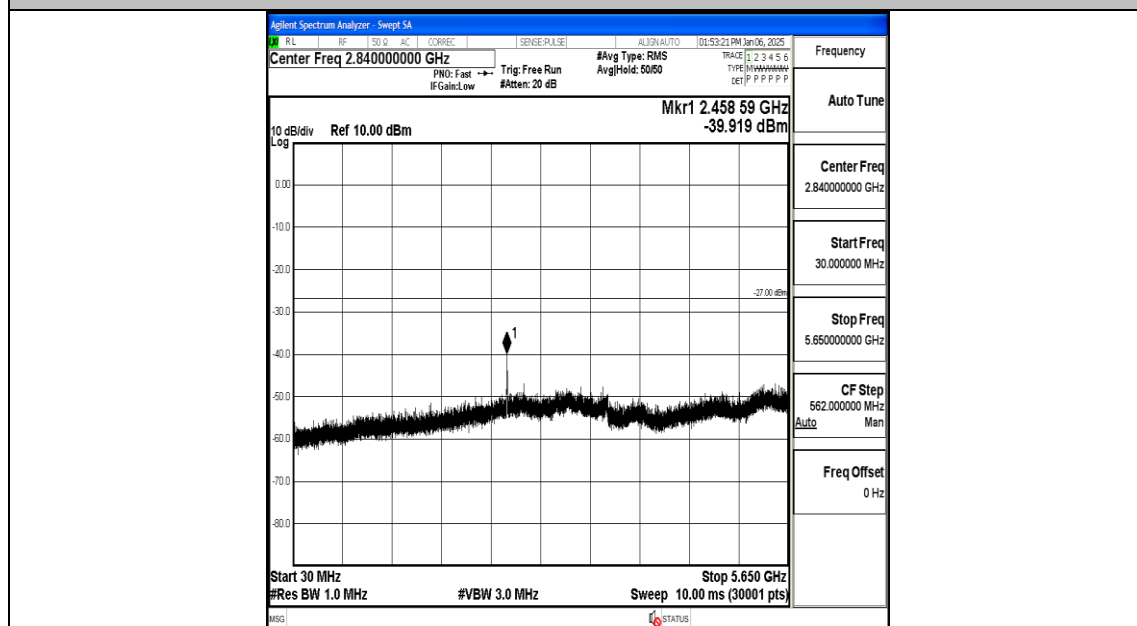
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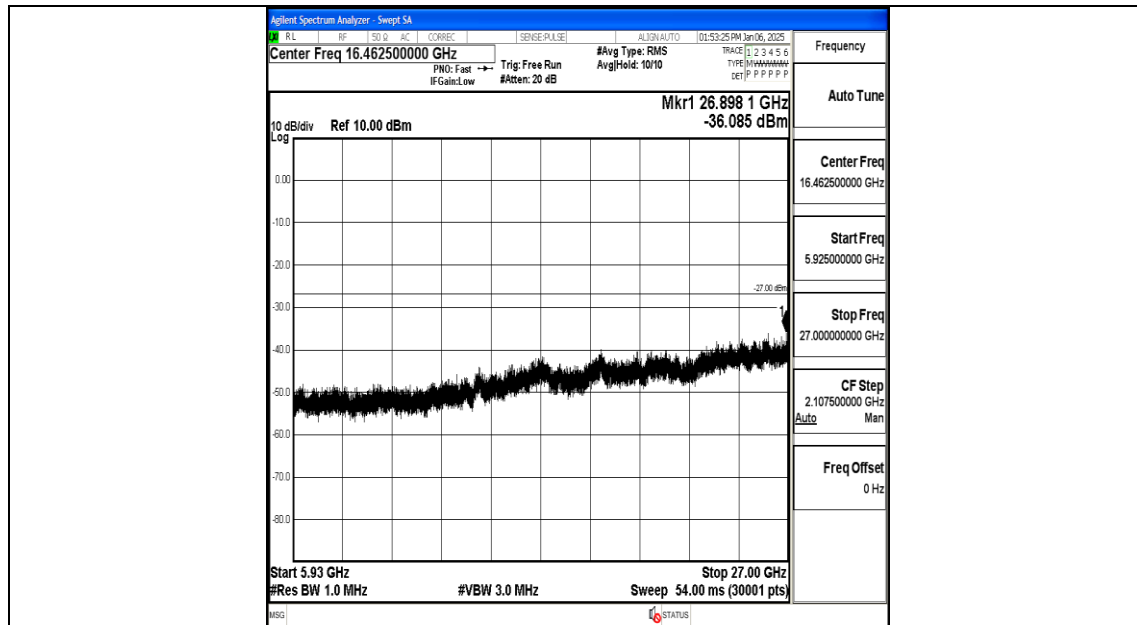
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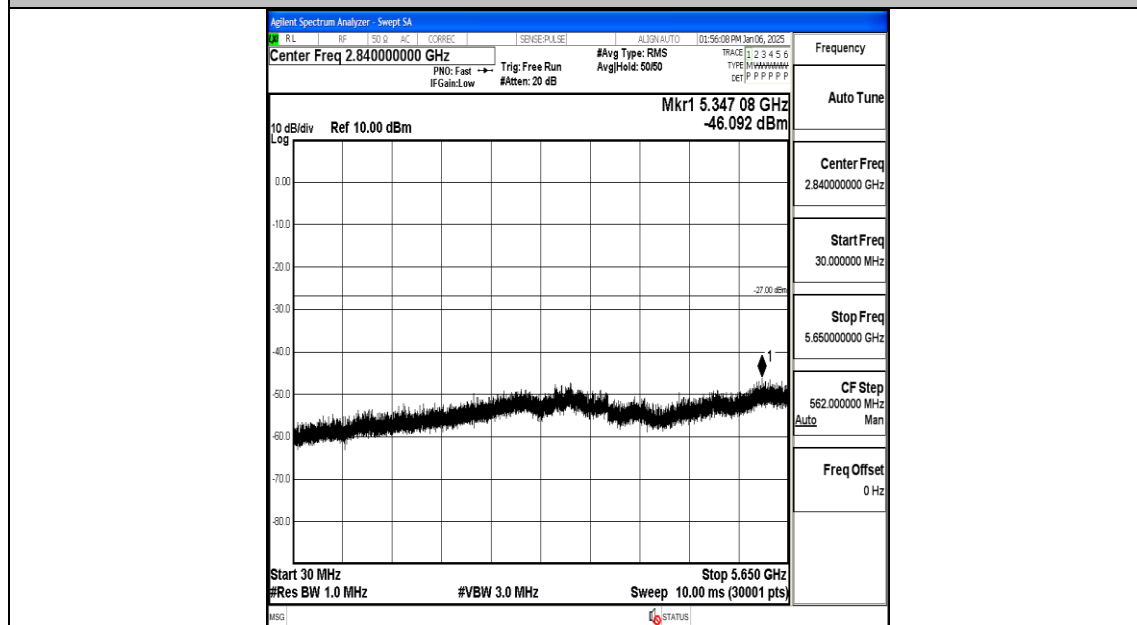
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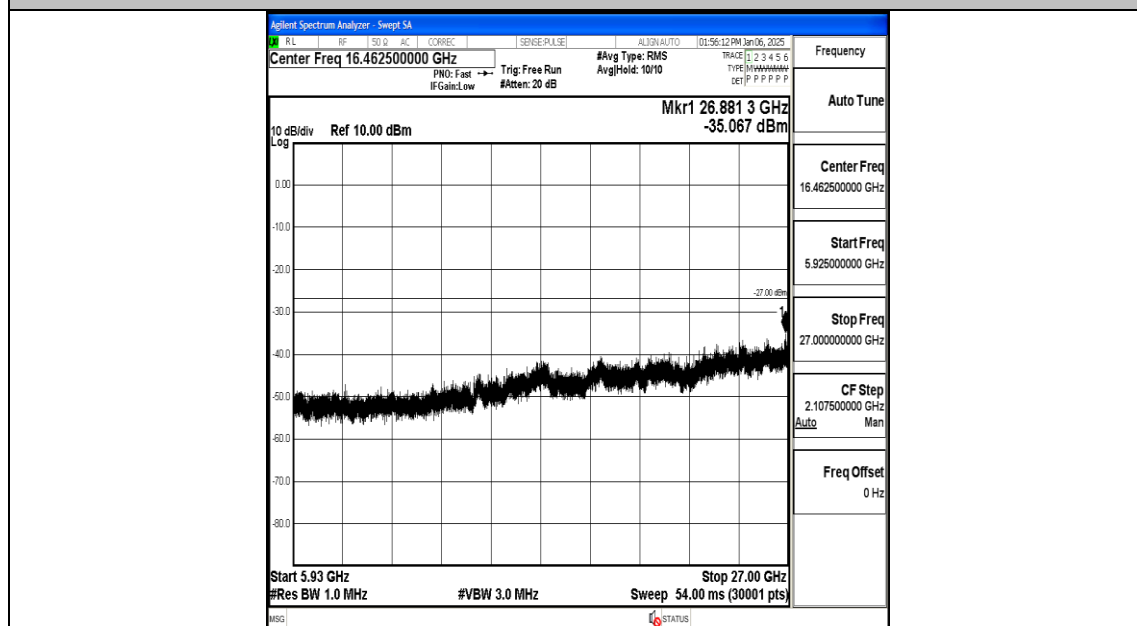
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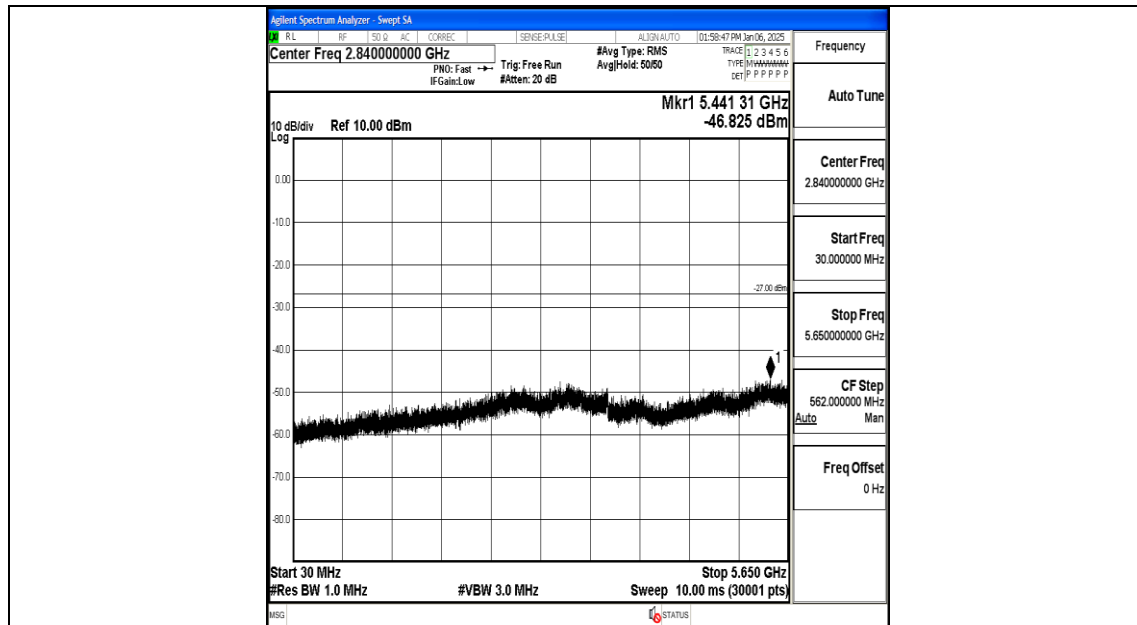
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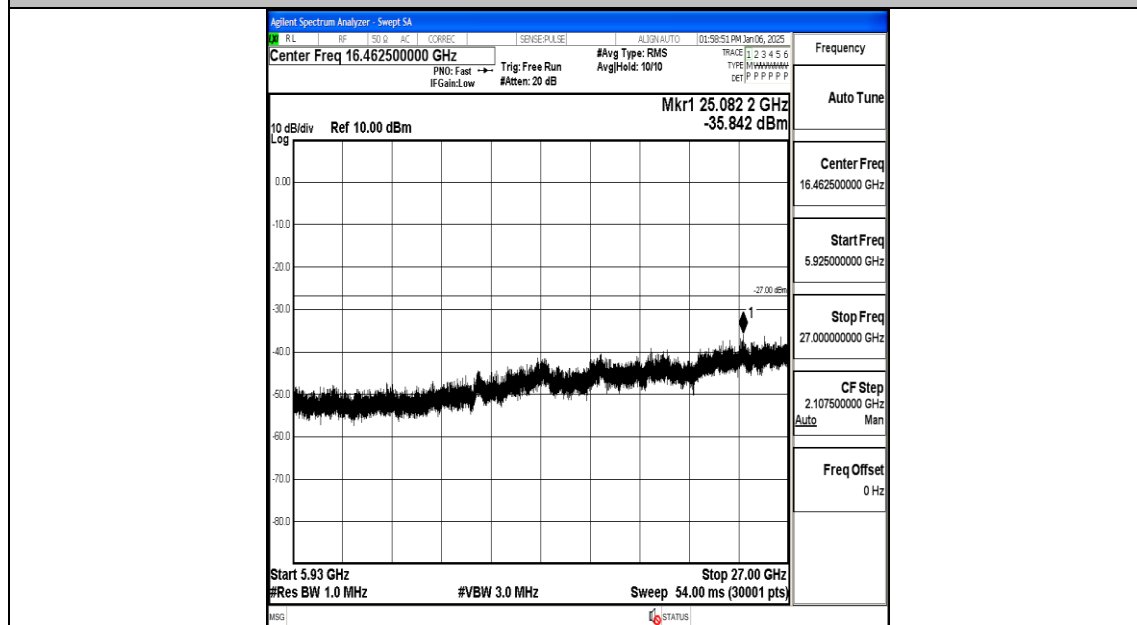
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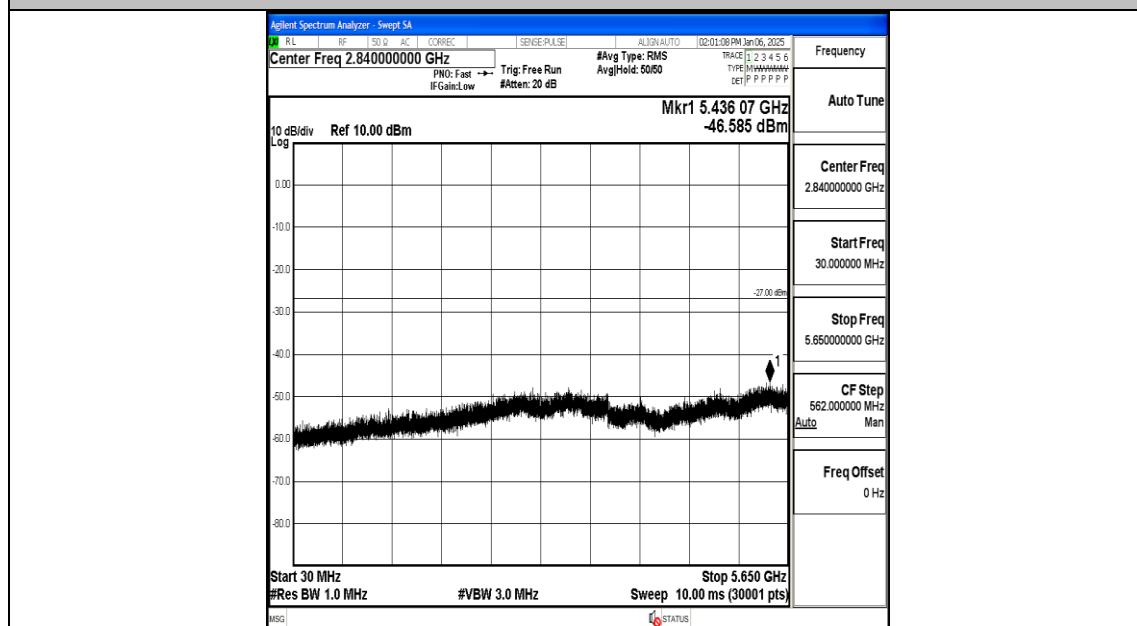
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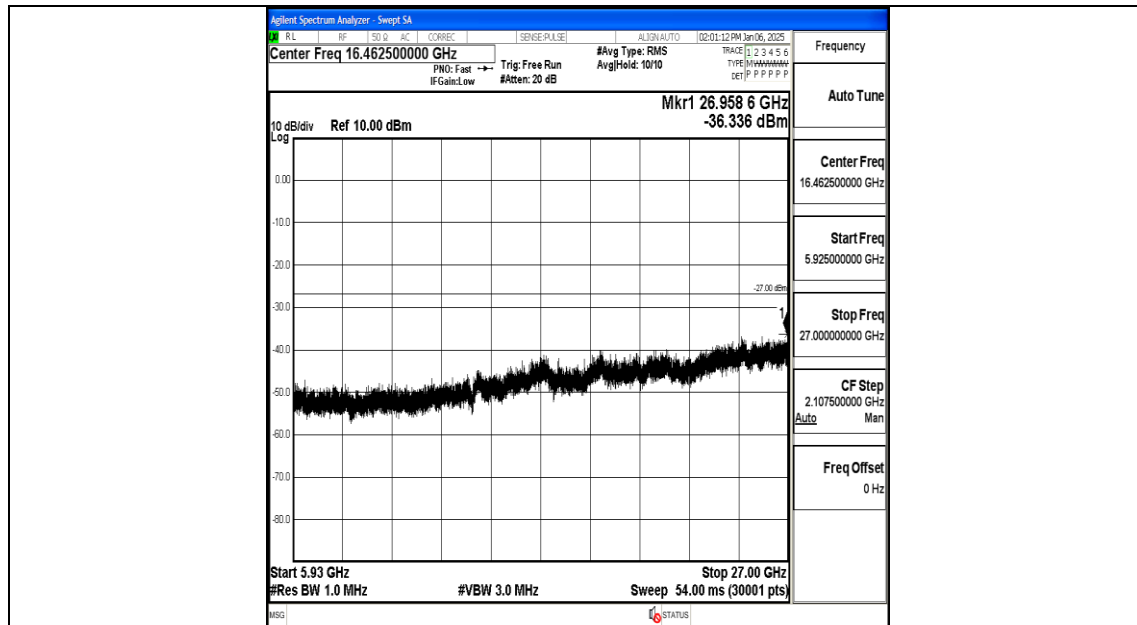
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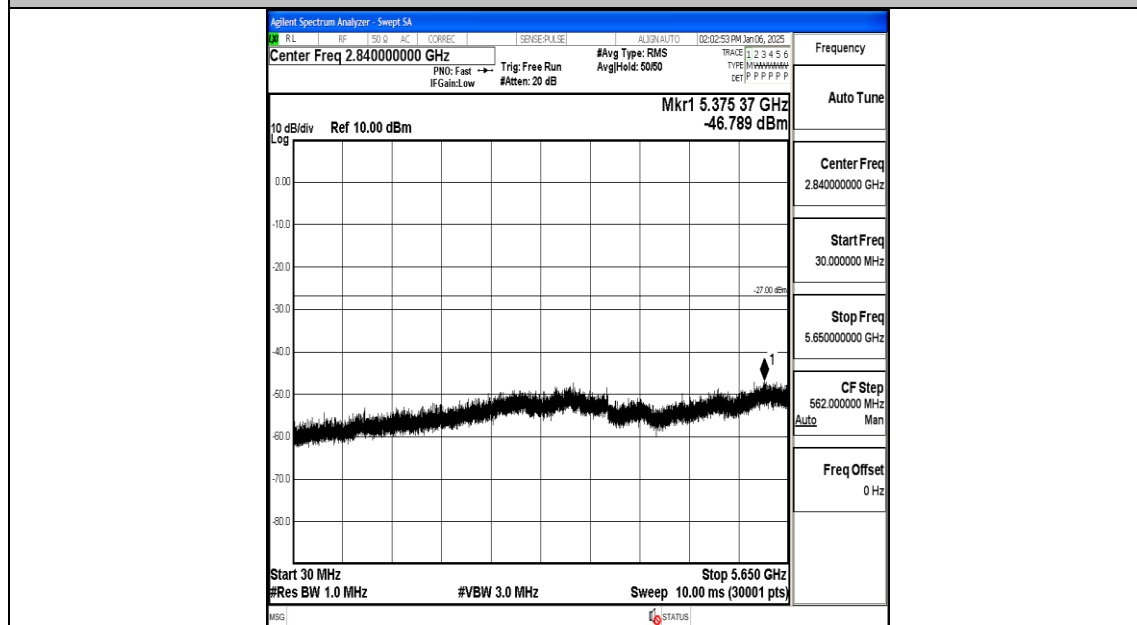
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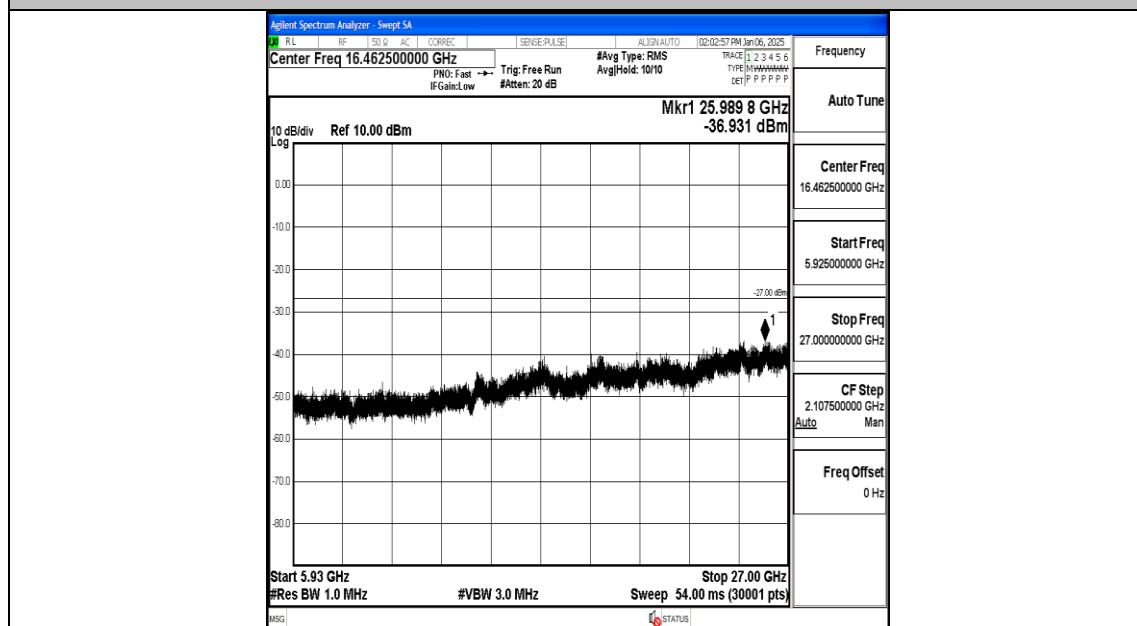
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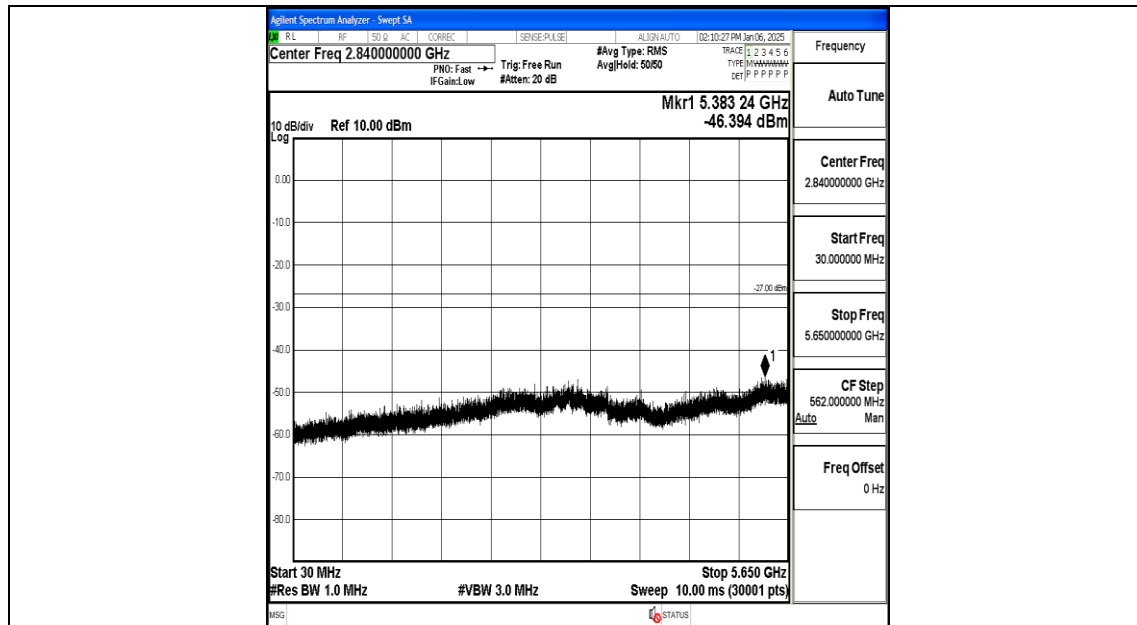
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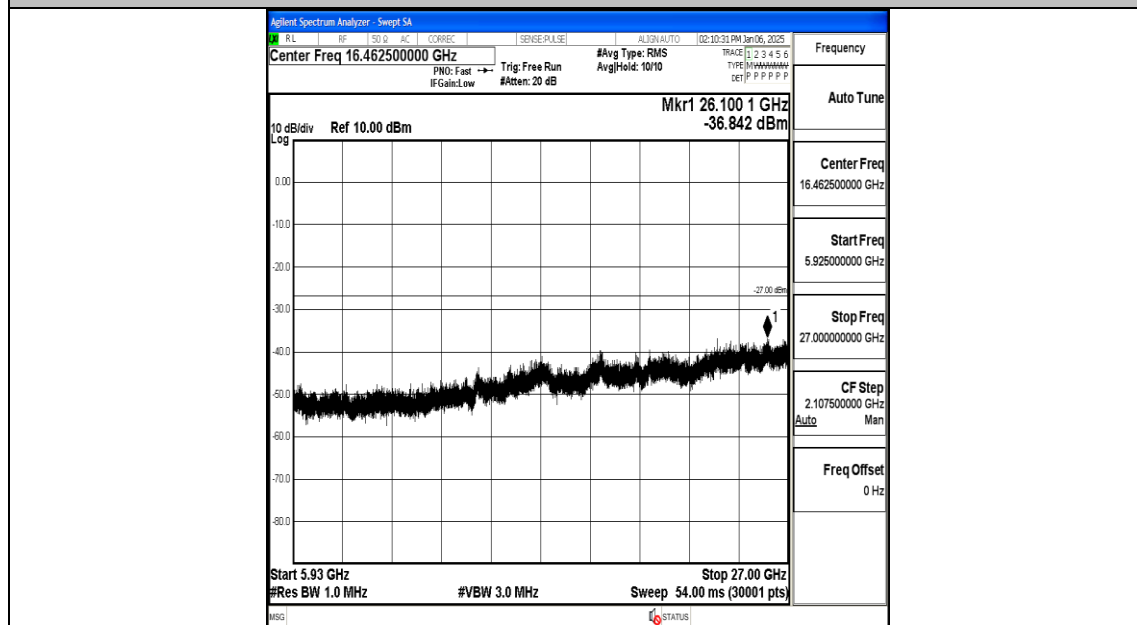
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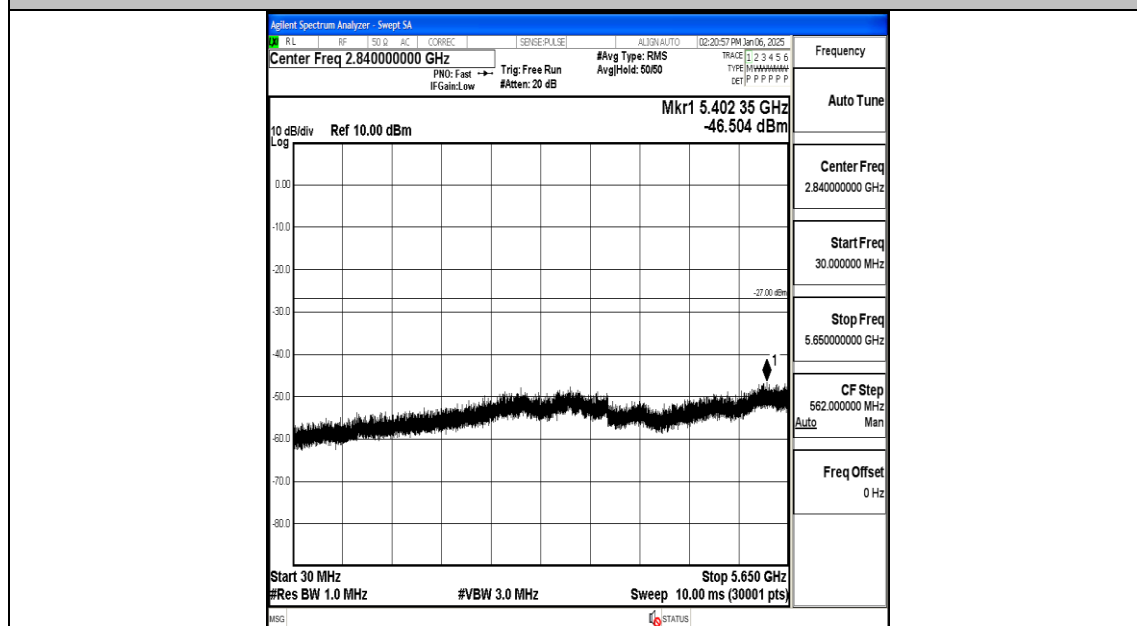
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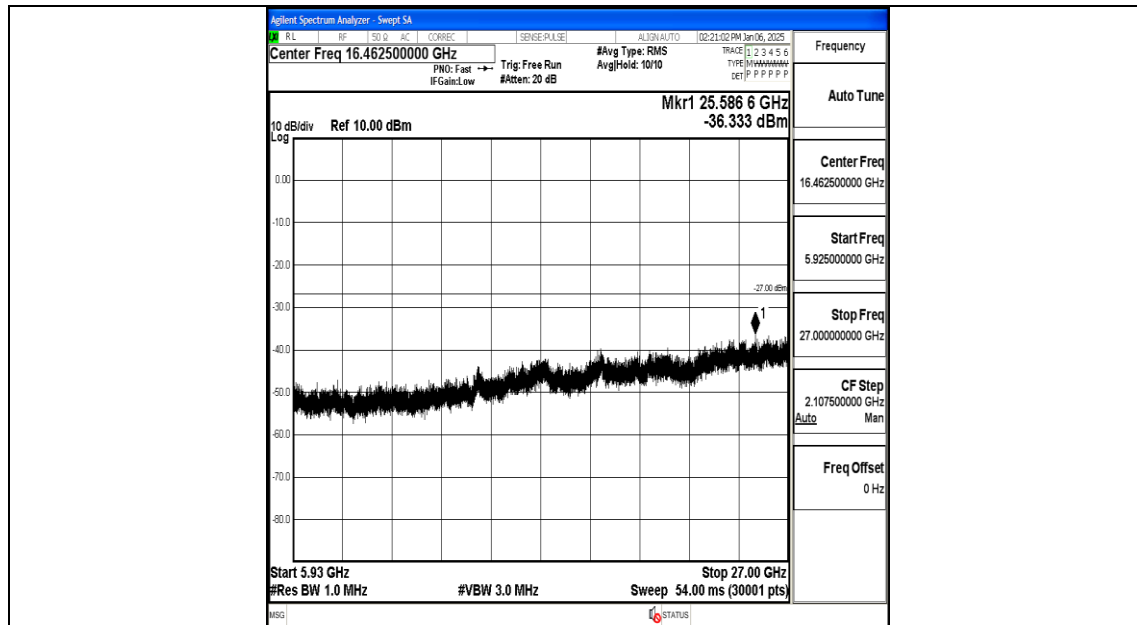
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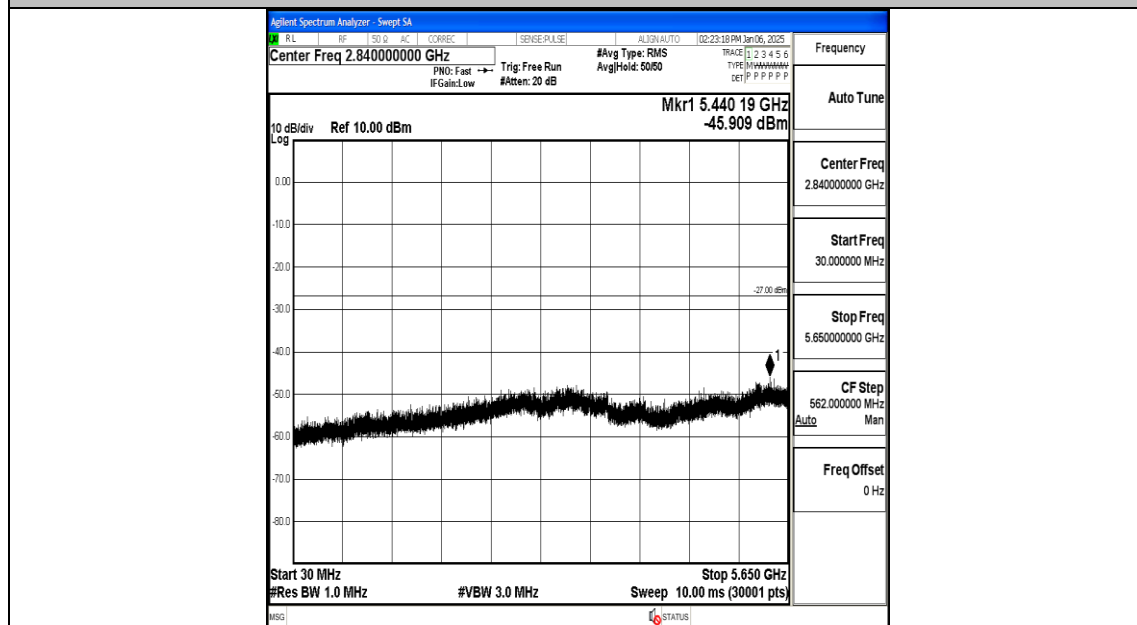
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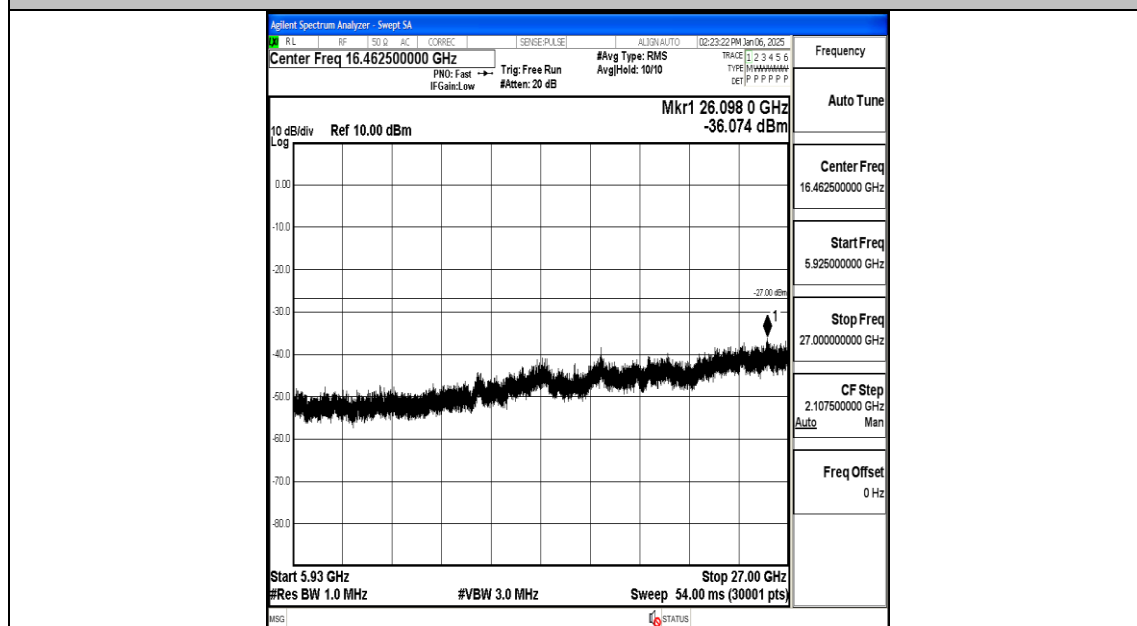
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11AC40SISO-Ant1-5755-5925~40000-PASS



11AC40SISO-Ant1-5795-30~5650-PASS



11AC40SISO-Ant1-5795-5925~40000-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	0.33	0.37	89.19	0.50	3.03
11A	Ant1	5785	0.32	0.37	86.49	0.63	3.13
11A	Ant1	5825	0.32	0.37	86.49	0.63	3.13
11N20SISO	Ant1	5745	0.29	0.34	85.29	0.69	3.45
11N20SISO	Ant1	5785	0.29	0.33	87.88	0.56	3.45
11N20SISO	Ant1	5825	0.29	0.33	87.88	0.56	3.45
11N40SISO	Ant1	5755	0.16	0.21	76.19	1.18	6.25
11N40SISO	Ant1	5795	0.16	0.20	80.00	0.97	6.25
11AC20SISO	Ant1	5745	0.29	0.34	85.29	0.69	3.45
11AC20SISO	Ant1	5785	0.29	0.33	87.88	0.56	3.45
11AC20SISO	Ant1	5825	0.29	0.34	85.29	0.69	3.45
11AC40SISO	Ant1	5755	0.13	0.17	76.47	1.17	7.69
11AC40SISO	Ant1	5795	0.13	0.18	72.22	1.41	7.69

Test Graphs

