

FCC Appendix RF Test Data for 5.2GWIFI

FCC ID : 2BXD2-HHKCSS016YB

Company : Honghui Kuaicang Technology (Shenzhen) Co., Ltd

EUT : Mobile intelligent shelf

Model Number : HHKCSS016YB

Report No. : CTA26072801902

Reviewed By : Eric Wang

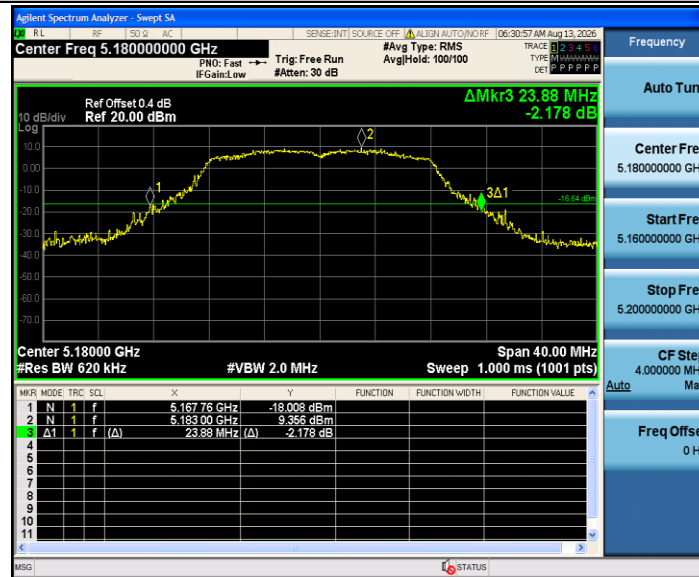
Appendix A1: Emission Bandwidth

Test Result

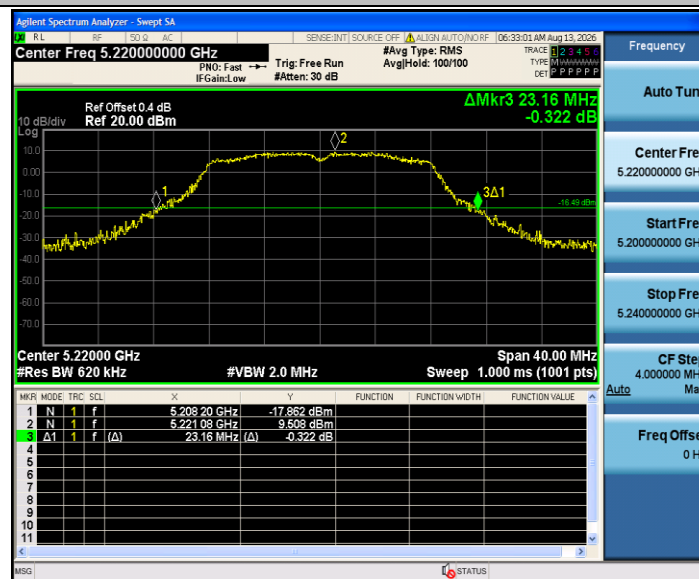
TestMode	Antenna	Freq(MHz)	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	23.880	5167.760	5191.640	---	---
		5220	23.160	5208.200	5231.360	---	---
		5240	23.120	5228.040	5251.160	---	---
11N20SISO	Ant1	5180	24.160	5168.080	5192.240	---	---
		5220	24.120	5208.120	5232.240	---	---
		5240	23.960	5227.640	5251.600	---	---

Test Graphs

11A_Ant1_5180



11A_Ant1_5220



11A_Ant1_5240



11N20SISO_Ant1_5180



11N20SISO_Ant1_5220



11N20SISO_Ant1_5240

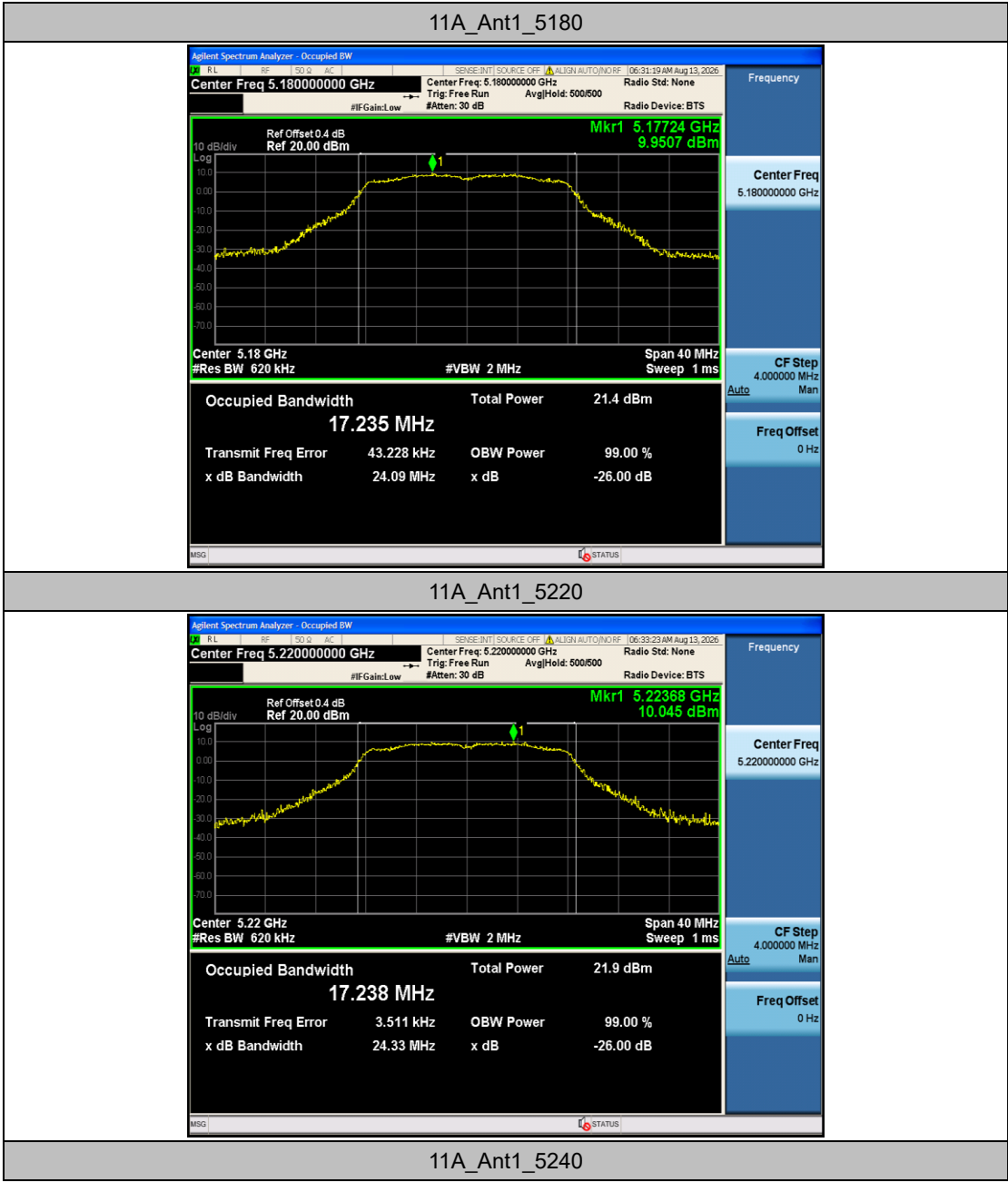


Appendix A2: Occupied channel bandwidth

Test Result

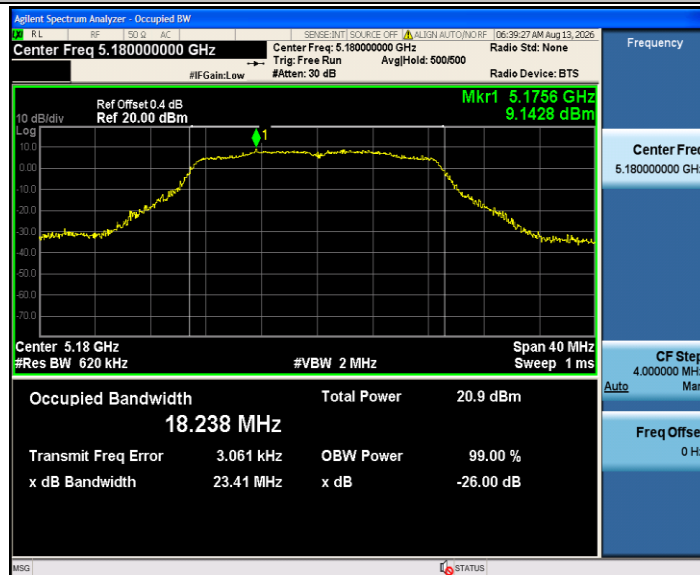
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	17.235	5171.4257	5188.6607	---	---
		5220	17.238	5211.3845	5228.6225	---	---
		5240	17.270	5231.3653	5248.6353	---	---
11N20SISO	Ant1	5180	18.238	5170.8841	5189.1221	---	---
		5220	18.239	5210.8693	5229.1083	---	---
		5240	18.330	5230.8154	5249.1454	---	---

Test Graphs

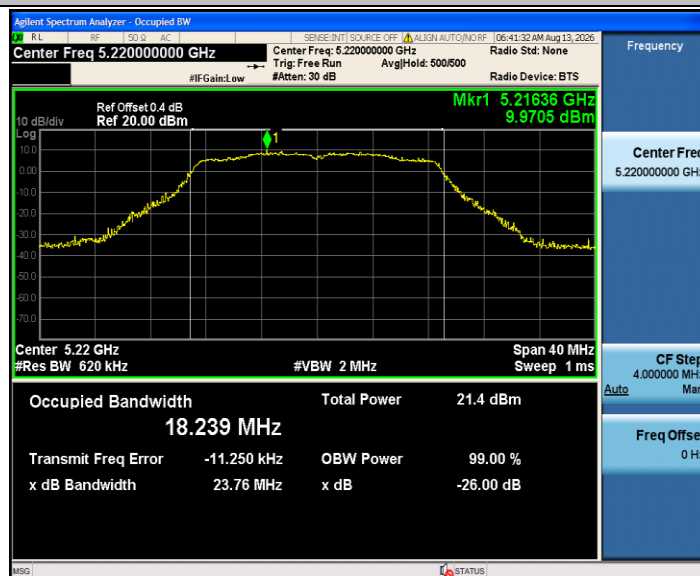




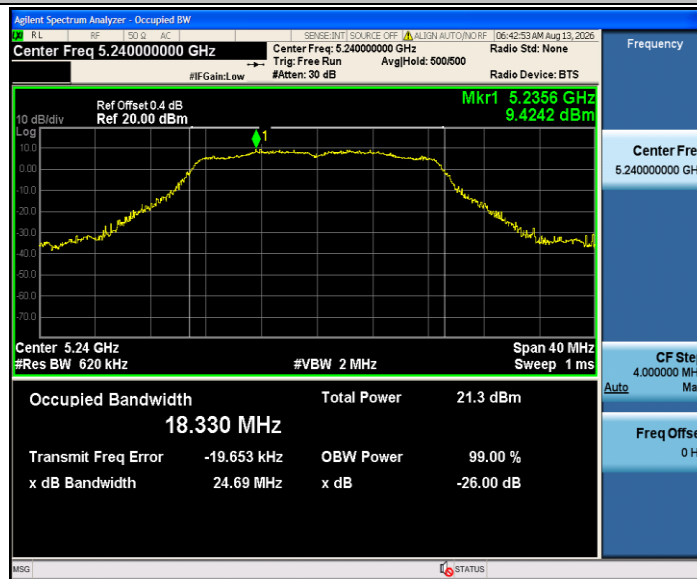
11N20SISO_Ant1_5180



11N20SISO_Ant1_5220



11N20SISO_Ant1_5240

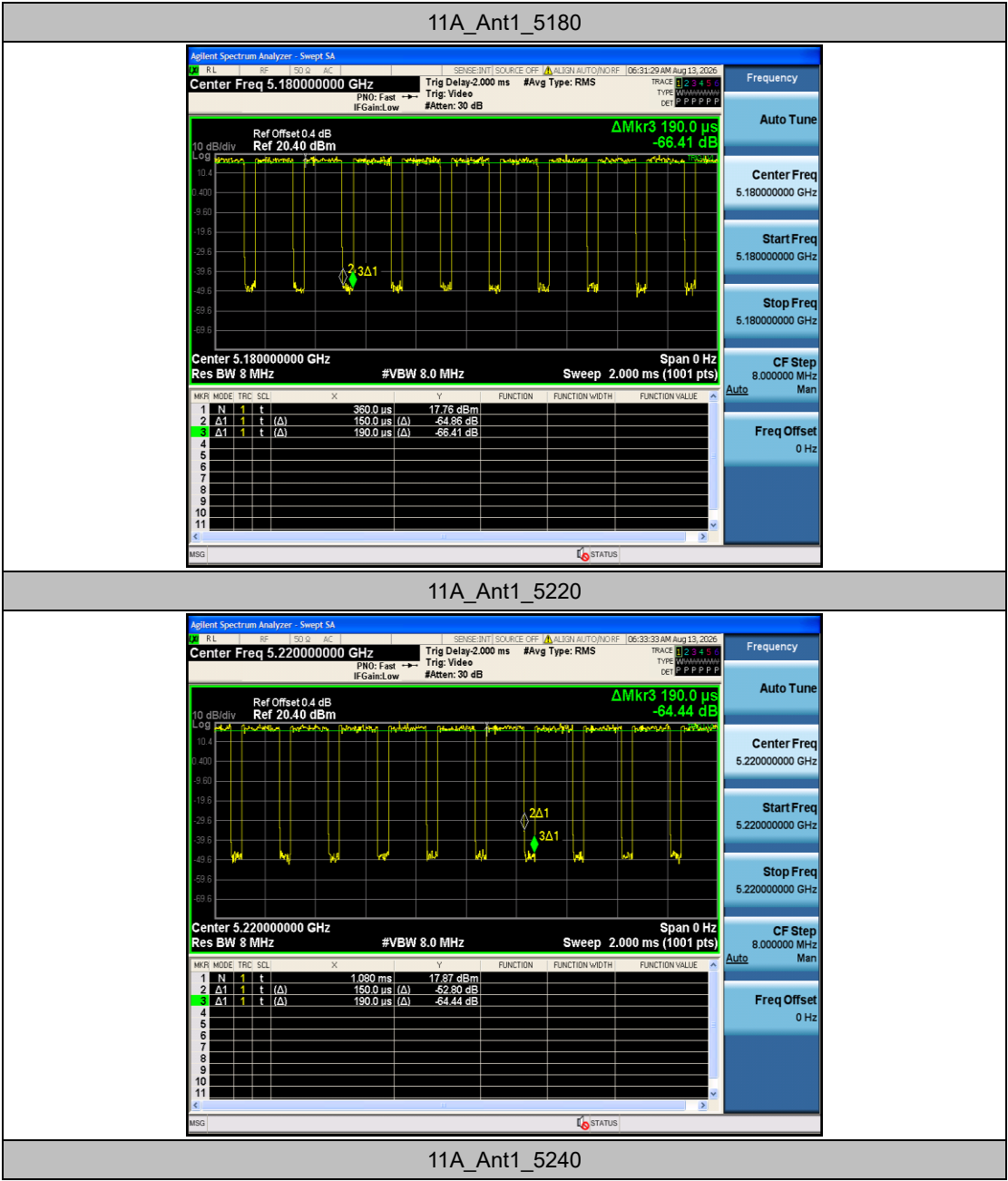


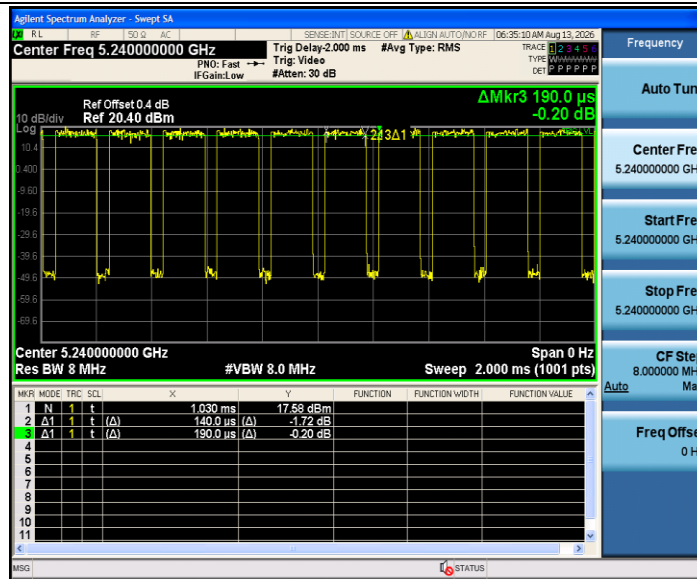
Appendix B: Duty Cycle

Test Result

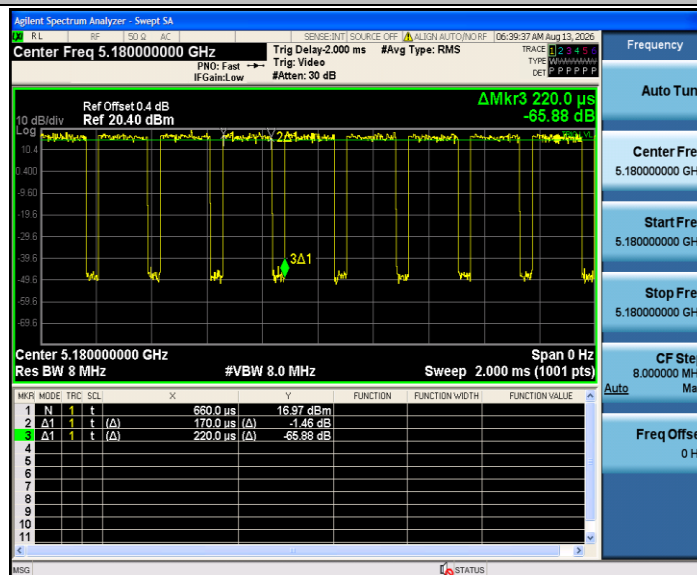
TestMode	Antenna	Freq(MHz)	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	DC Factor [dB]	Limit	Verdict
11A	Ant1	5180	0.15	0.19	78.95	1.03	---	---
		5220	0.15	0.19	78.95	1.03	---	---
		5240	0.14	0.19	73.68	1.33	---	---
11N20SISO	Ant1	5180	0.17	0.22	77.27	1.12	---	---
		5220	0.18	0.23	78.26	1.06	---	---
		5240	0.18	0.23	78.26	1.06	---	---

Test Graphs

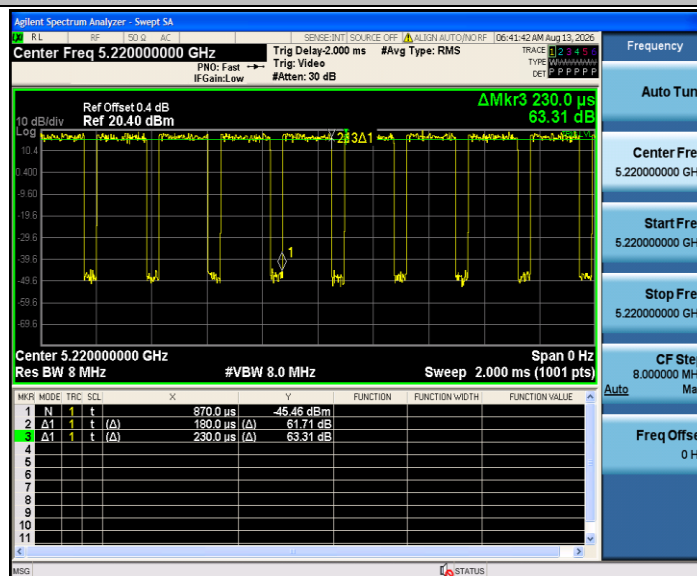




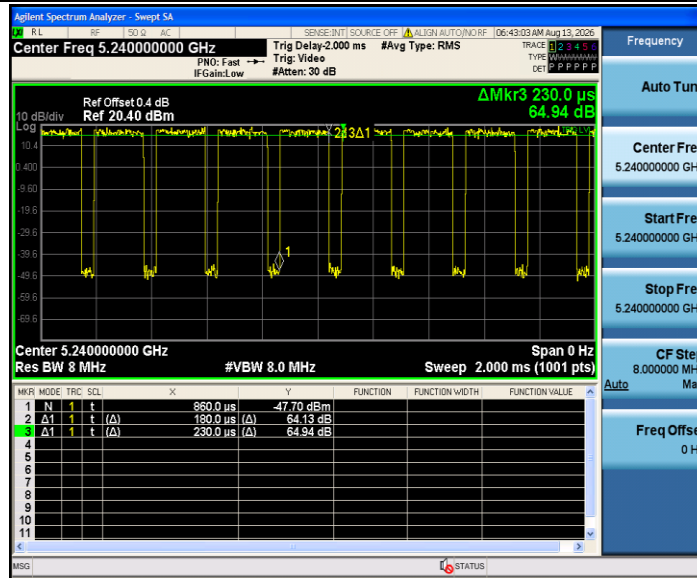
11N20SISO_Ant1_5180



11N20SISO_Ant1_5220



11N20SISO_Ant1_5240



Appendix C: Maximum conducted output power

Test Result

Test Mode	Antenna	Freq(MHz)	Channel Power [dBm]	Duty Cycle [%]	DC Factor [dBm]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	5180	13.40	78.95	1.03	14.43	≤23.98	PASS
		5220	13.92	78.95	1.03	14.95	≤23.98	PASS
		5240	13.94	73.68	1.33	15.27	≤23.98	PASS
11N20SIS O	Ant1	5180	13.11	77.27	1.12	14.23	≤23.98	PASS
		5220	13.65	78.26	1.06	14.71	≤23.98	PASS
		5240	13.50	78.26	1.06	14.56	≤23.98	PASS

Appendix D: Maximum power spectral density

Test Result

TestMode	Antenna	Freq(MHz)	RawData [dBm/MHz]	DC Factor [dBm]	RBW Factor [dBm]	Result [dBm/MHz]	Limit [dBm/MHz]	Verdict
11A	Ant1	5180	3.36	1.03	0.00	4.39	≤11.00	PASS
		5220	3.81	1.03	0.00	4.84	≤11.00	PASS
		5240	4.09	1.33	0.00	5.42	≤11.00	PASS
11N20SISO	Ant1	5180	3.04	1.12	0.00	4.16	≤11.00	PASS
		5220	3.21	1.06	0.00	4.27	≤11.00	PASS
		5240	3.38	1.06	0.00	4.44	≤11.00	PASS

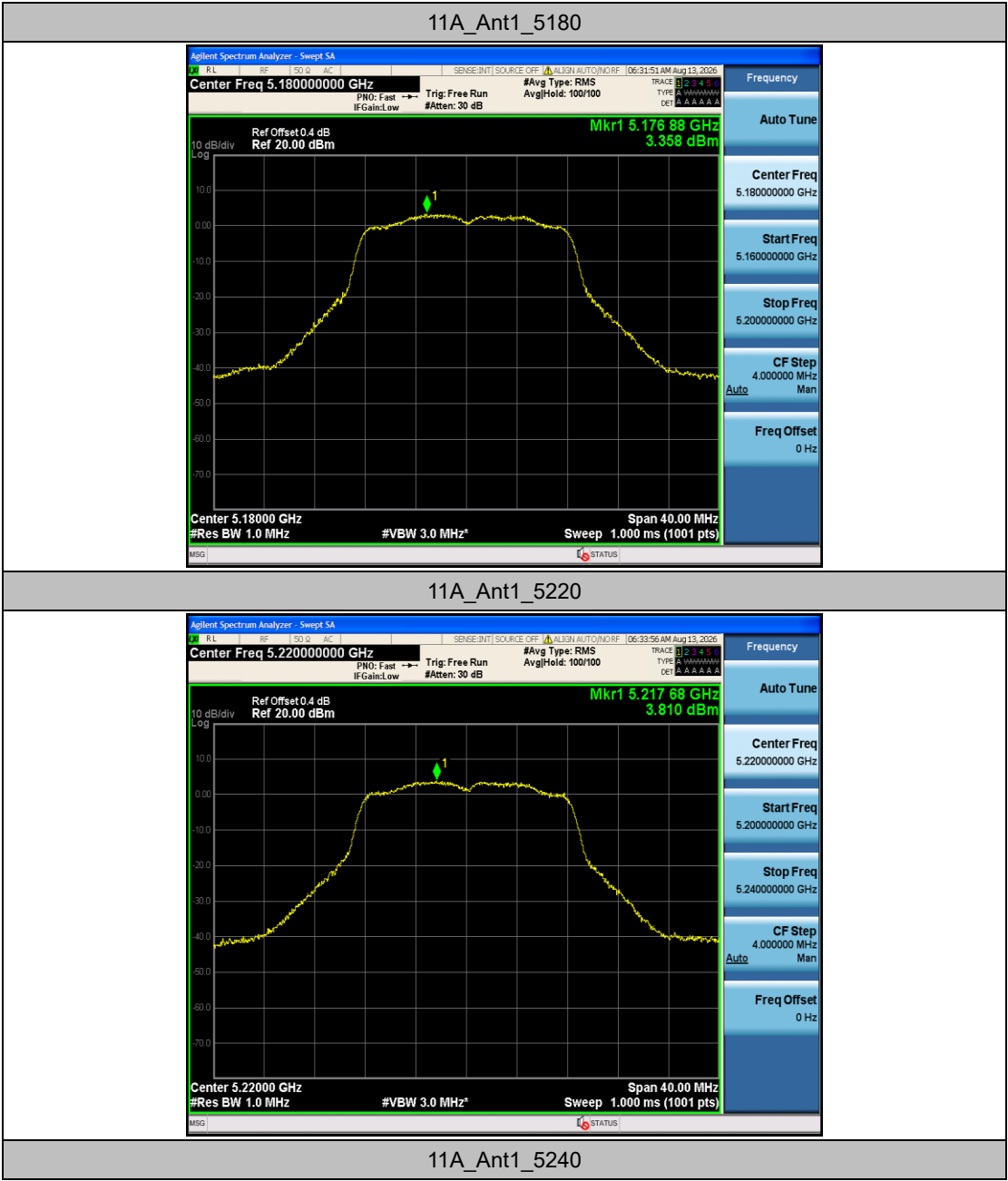
Note:1. $P.S.D(dBm/500KHz) = P.S.D(dBm/300KHz) + 10 \log(500 \text{ kHz}/300KHz) + \text{Duty factor}$.

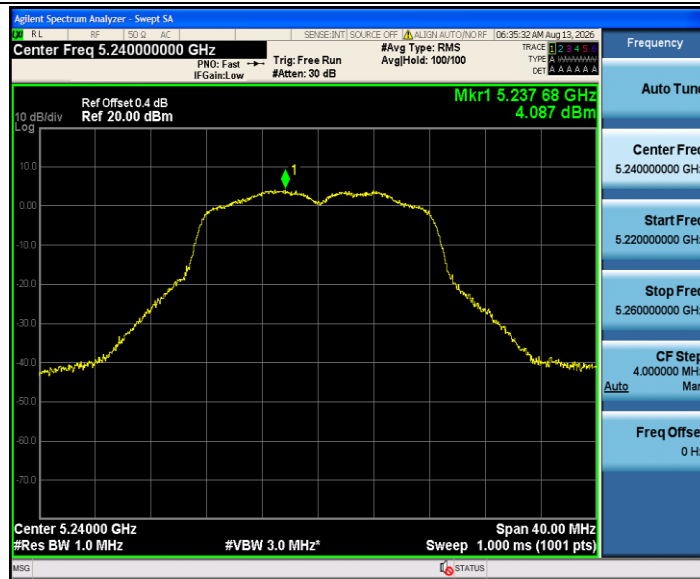
2. $RBW \text{ factor} = 10 \log(500 \text{ KHz} / 300 \text{ KHz}) = 2.22 \text{ dB}$

3. $EIRP \text{ P.S.D}(dBm/MHz) = \text{Result P.S.D}(dBm/MHz) + \text{Duty factor} + \text{Antenna Gain}$

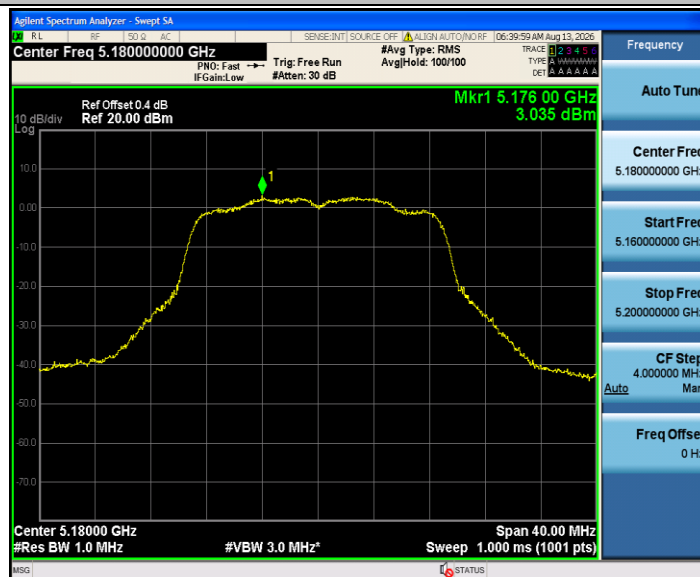
4. Note:Offset=cable loss

Test Graphs

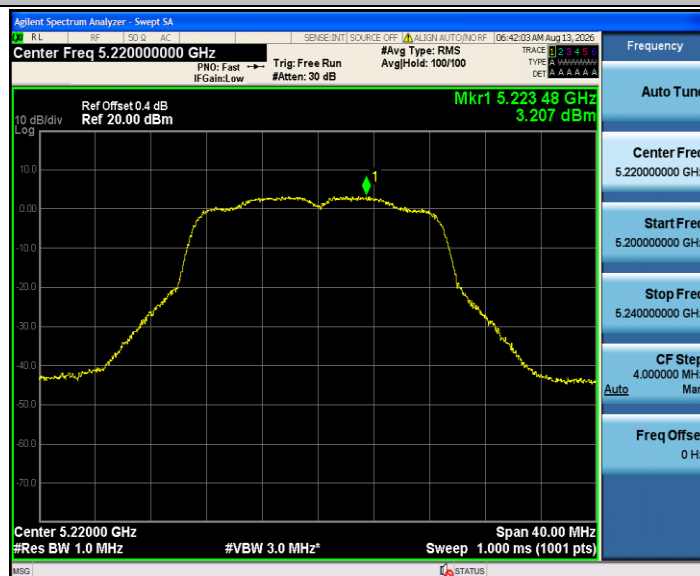




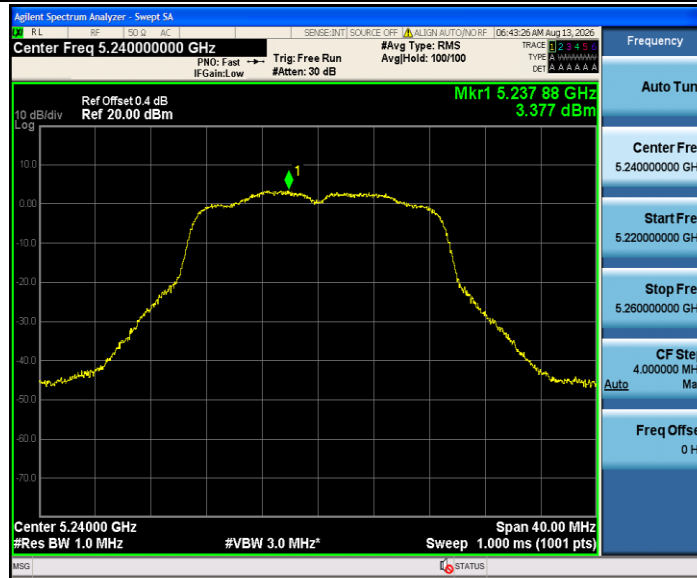
11N20SISO_Ant1_5180



11N20SISO_Ant1_5220



11N20SISO_Ant1_5240

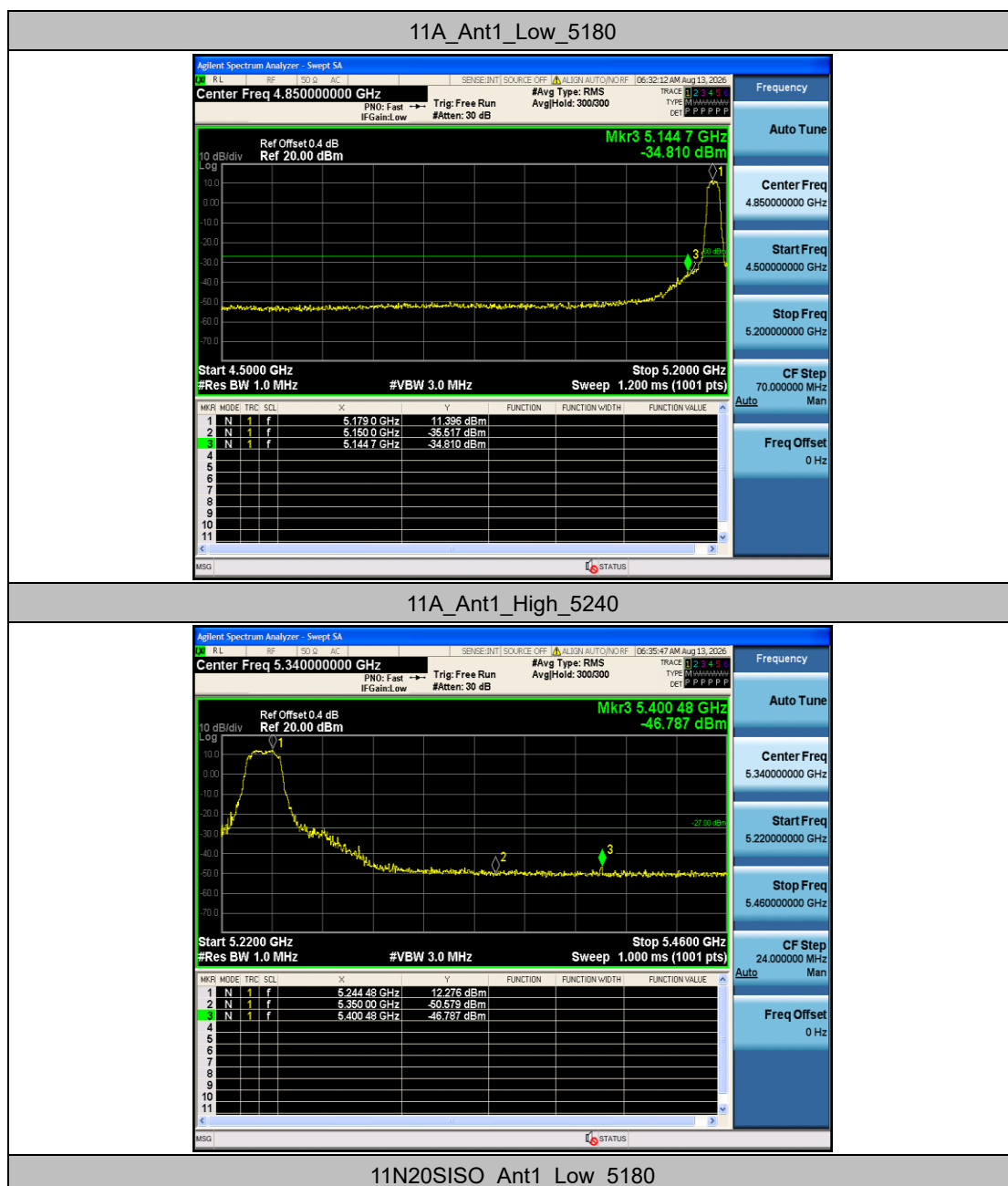


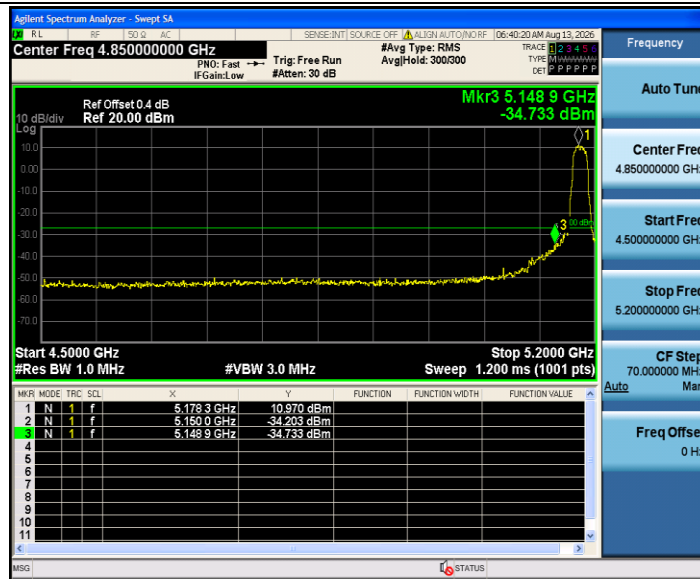
Appendix E: Band edge measurements

Test Result B1

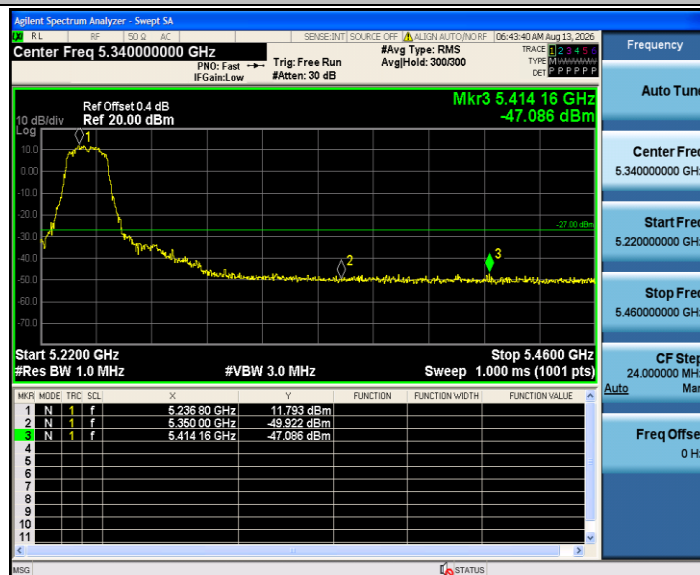
TestMode	Antenna	ChName	Freq(MHz)	Result[dBm]	Limit[dBm]	Verdict
11A	Ant1	Low	5180	-34.81	≤ -27	PASS
		High	5240	-46.79	≤ -27	PASS
11N20SISO	Ant1	Low	5180	-34.73	≤ -27	PASS
		High	5240	-47.09	≤ -27	PASS

Test Graphs B1





11N20SISO_Ant1_High_5240

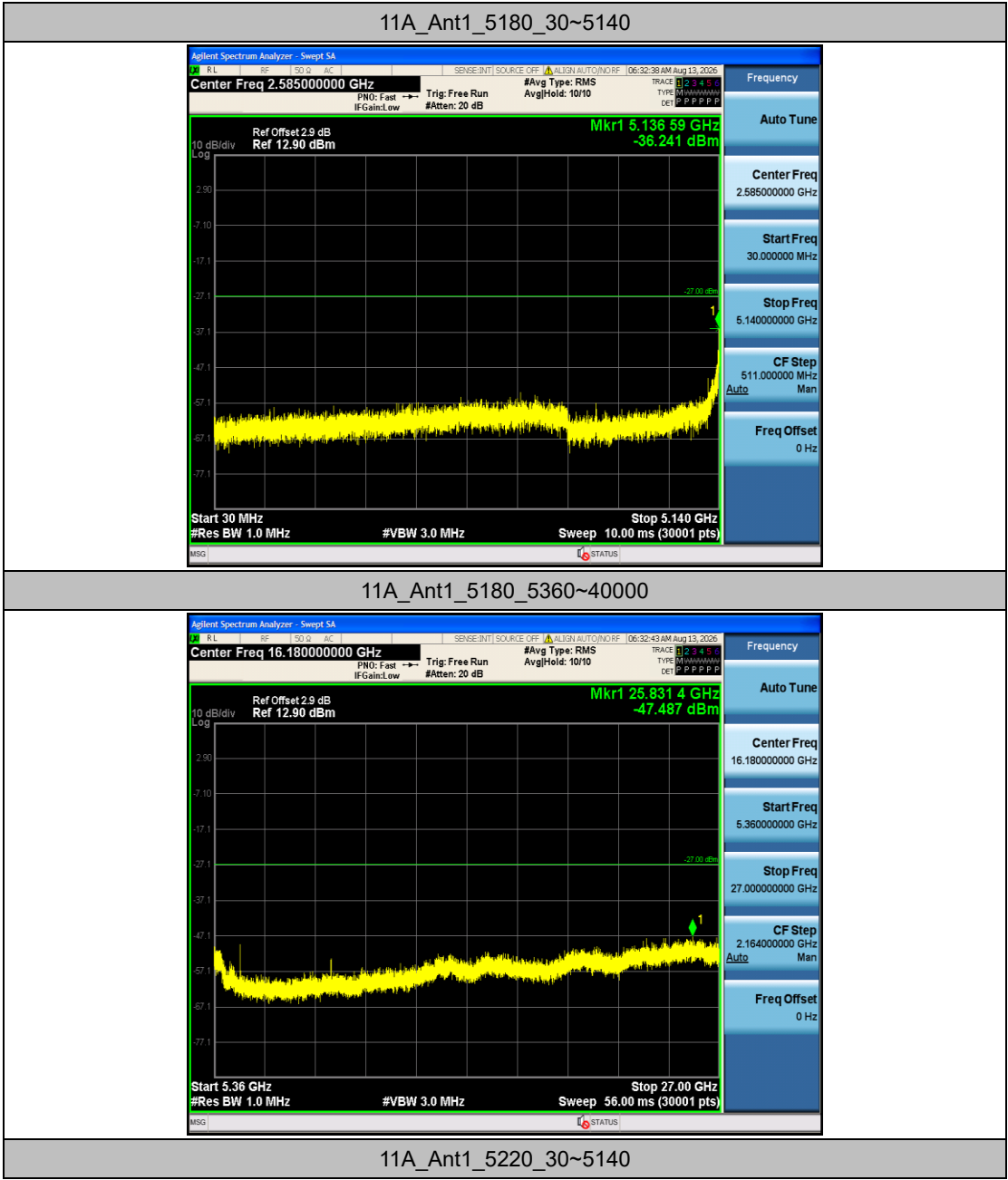


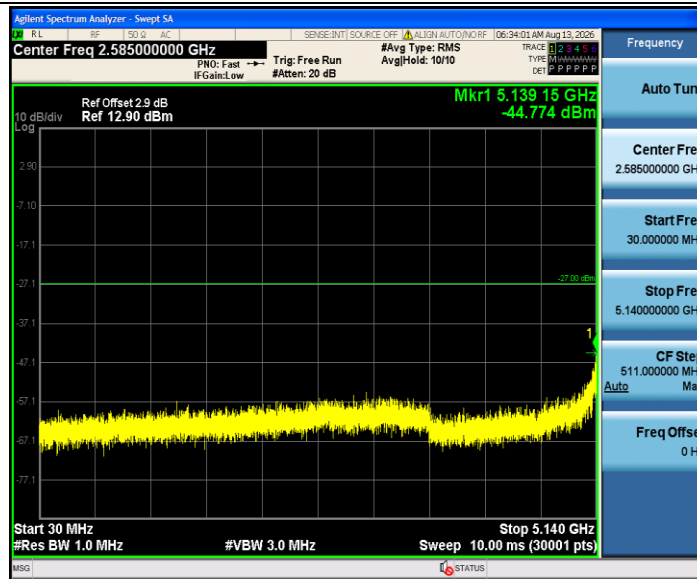
Appendix F: Conducted Spurious Emission

Test Result

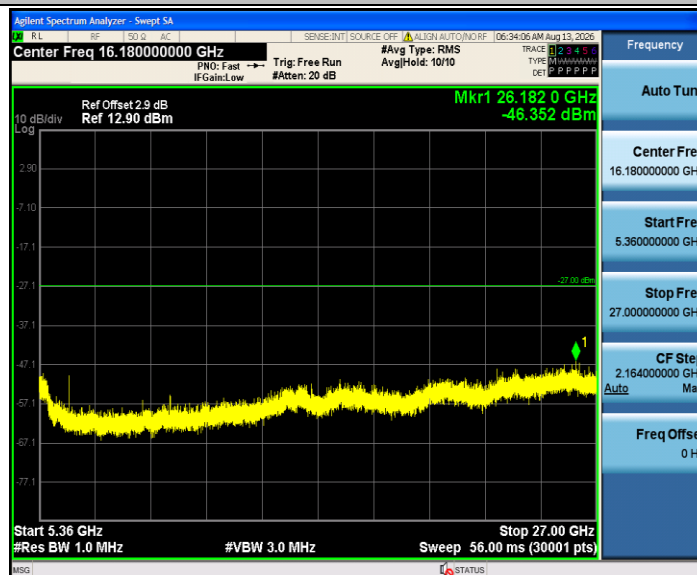
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	Max. Fre [MHz]	Max. Level [dBm]	Limit [dBm]	Verdict
11A	Ant1	5180	30~5140	5136.59	-36.24	≤-27	PASS
			5360~40000	25831.44	-47.49	≤-27	PASS
		5220	30~5140	5139.15	-44.77	≤-27	PASS
			5360~40000	26182.01	-46.35	≤-27	PASS
		5240	30~5140	5115.13	-46.68	≤-27	PASS
			5360~40000	26104.83	-47.55	≤-27	PASS
11N20SISO	Ant1	5180	30~5140	5140	-37.19	≤-27	PASS
			5360~40000	25492.41	-46.98	≤-27	PASS
		5220	30~5140	5101.68	-47.28	≤-27	PASS
			5360~40000	25784.55	-46.51	≤-27	PASS
		5240	30~5140	5135.91	-46.62	≤-27	PASS
			5360~40000	25672.75	-46.99	≤-27	PASS

Test Graphs

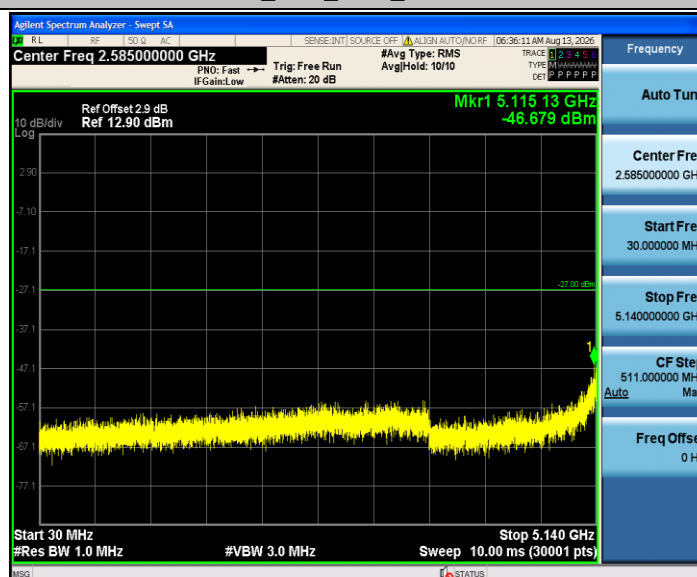




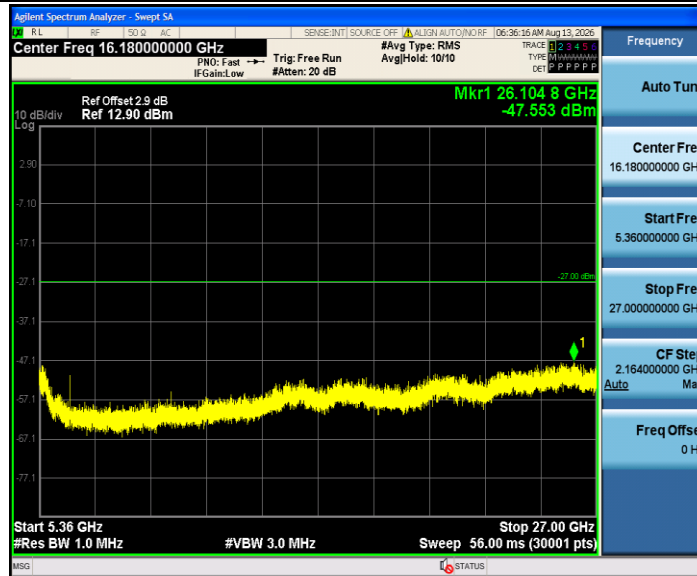
11A_Ant1_5220_5360~40000



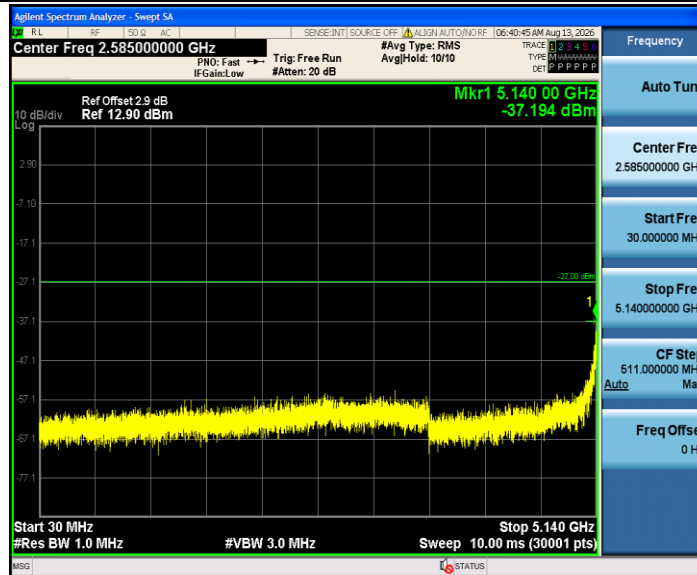
11A_Ant1_5240_30~5140



11A_Ant1_5240_5360~40000



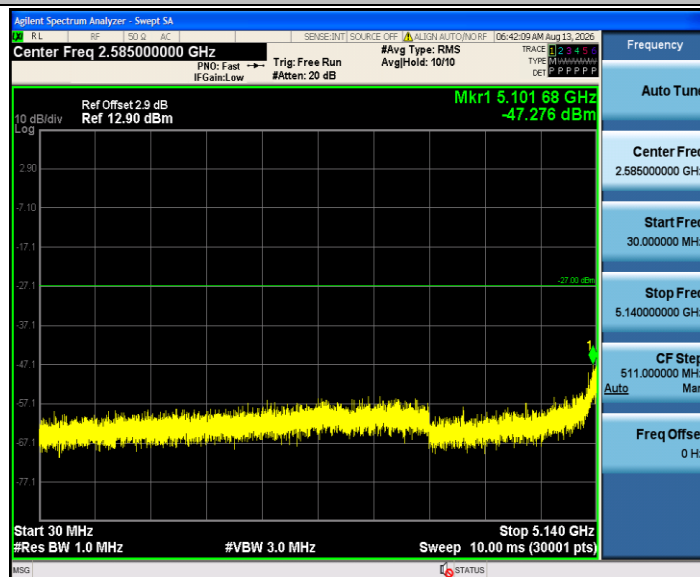
11N20SISO_Ant1_5180_30~5140



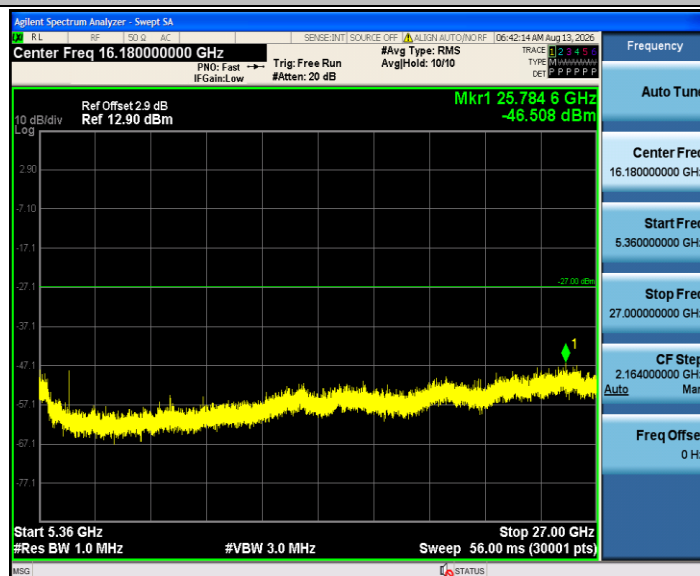
11N20SISO_Ant1_5180_5360~40000



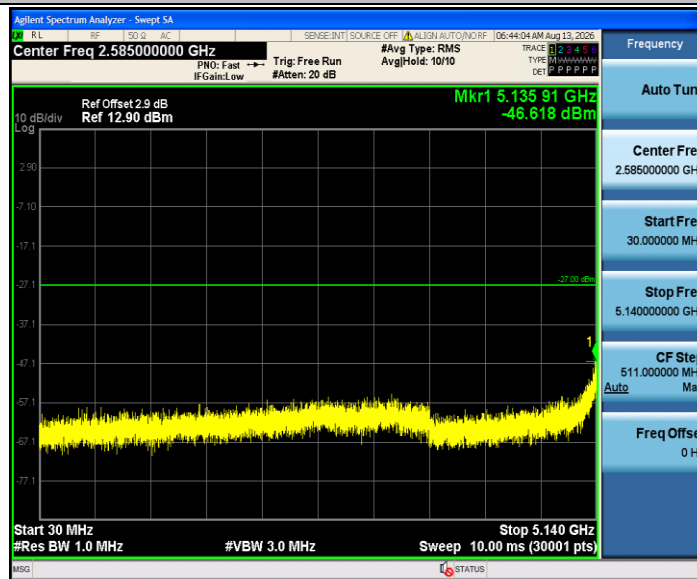
11N20SISO_Ant1_5220_30~5140



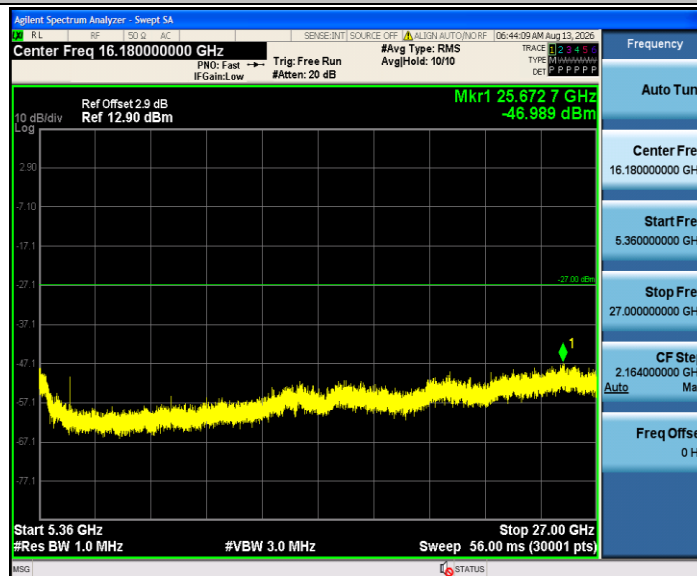
11N20SISO_Ant1_5220_5360~40000



11N20SISO_Ant1_5240_30~5140



11N20SISO_Ant1_5240_5360~40000



Appendix G: Emissions in Restricted Bands

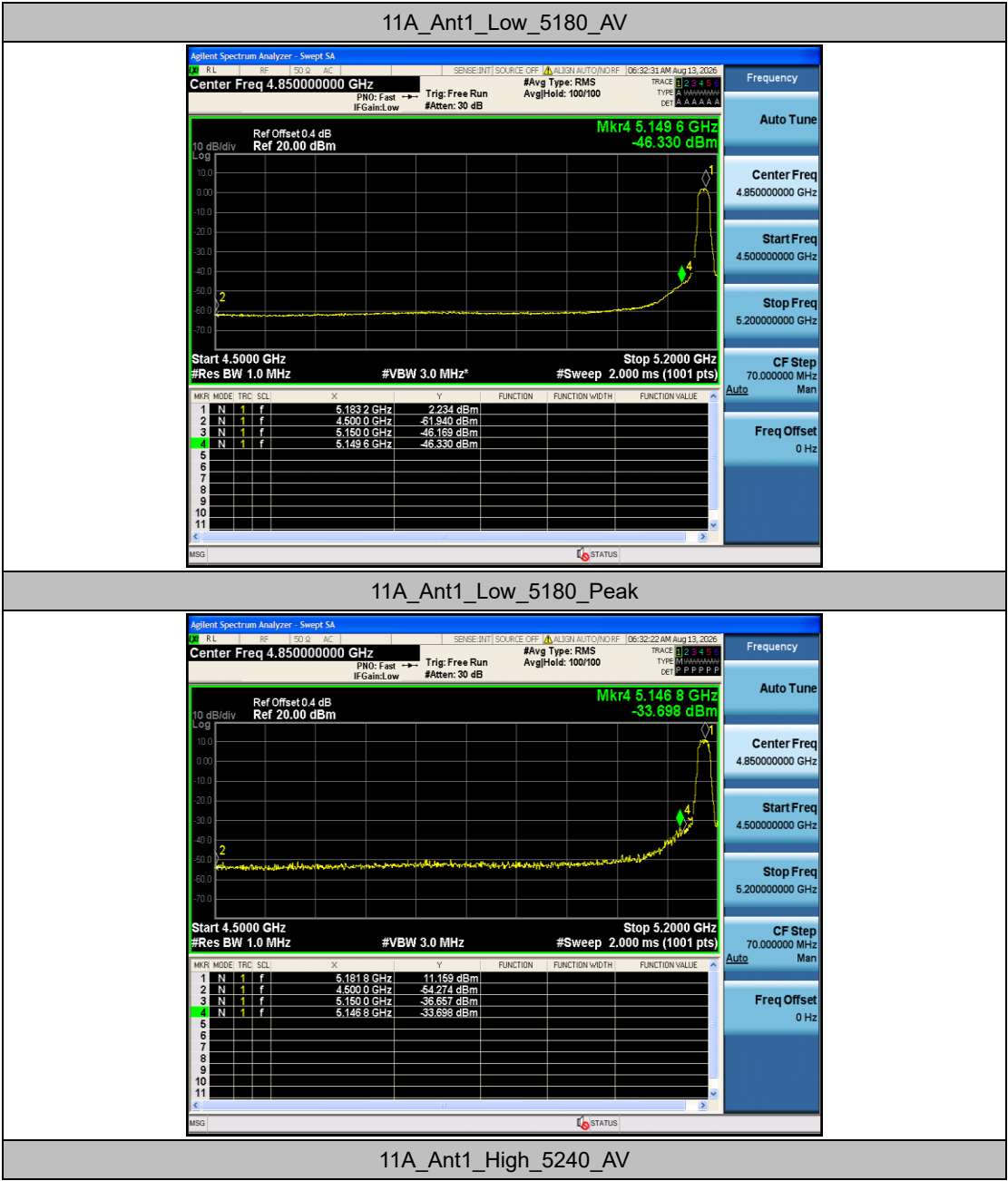
Test Result

TestMode	Antenna	ChName	Freq(MHz)	Detector	Freq [MHz]	Result [dBm]	Gain [dB]	DC Factor [dB]	EIRP [dBm]	Limit [dBm]	Verdict
11A	Ant1	Low	5180	AV	4500.000	-61.94	2.00	1.03	-58.91	≤-41.20	PASS
				AV	5149.600	-46.33	2.00	1.03	-43.3	≤-41.20	PASS
				AV	5150.000	-46.17	2.00	1.03	-43.14	≤-41.20	PASS
				Peak	4500.000	-54.27	2.00	0.00	-52.27	≤-27.00	PASS
				Peak	5146.800	-33.7	2.00	0.00	-31.7	≤-27.00	PASS
				Peak	5150.000	-36.66	2.00	0.00	-34.66	≤-27.00	PASS
		High	5240	AV	5350.000	-59.3	2.00	1.33	-55.97	≤-41.20	PASS
				AV	5352.720	-58.33	2.00	1.33	-55	≤-41.20	PASS
				AV	5460.000	-59.84	2.00	1.33	-56.51	≤-41.20	PASS
				Peak	5350.000	-50.15	2.00	0.00	-48.15	≤-27.00	PASS
				Peak	5399.280	-46.87	2.00	0.00	-44.87	≤-27.00	PASS
				Peak	5460.000	-51.51	2.00	0.00	-49.51	≤-27.00	PASS
11N20SI SO	Ant1	Low	5180	AV	4500.000	-62.47	2.00	1.12	-59.35	≤-41.20	PASS
				AV	5149.600	-46.06	2.00	1.12	-42.94	≤-41.20	PASS
				AV	5150.000	-45.15	2.00	1.12	-42.03	≤-41.20	PASS
				Peak	4500.000	-53.86	2.00	0.00	-51.86	≤-27.00	PASS
				Peak	5147.500	-35.83	2.00	0.00	-33.83	≤-27.00	PASS
				Peak	5150.000	-32.75	2.00	0.00	-30.75	≤-27.00	PASS
		High	5240	AV	5350.000	-58.54	2.00	1.06	-55.48	≤-41.20	PASS
				AV	5352.000	-58.31	2.00	1.06	-55.25	≤-41.20	PASS
				AV	5460.000	-60.22	2.00	1.06	-57.16	≤-41.20	PASS
				Peak	5350.000	-49.66	2.00	0.00	-47.66	≤-27.00	PASS
				Peak	5400.240	-47.22	2.00	0.00	-45.22	≤-27.00	PASS
				Peak	5460.000	-51.41	2.00	0.00	-49.41	≤-27.00	PASS

Note:

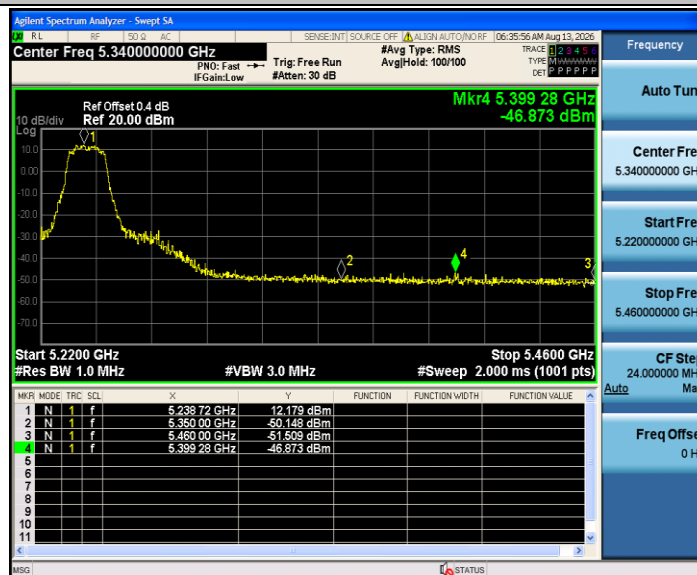
- For transmitters operating in 5150-5350 GHz band and 5470-5725 GHz band: The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

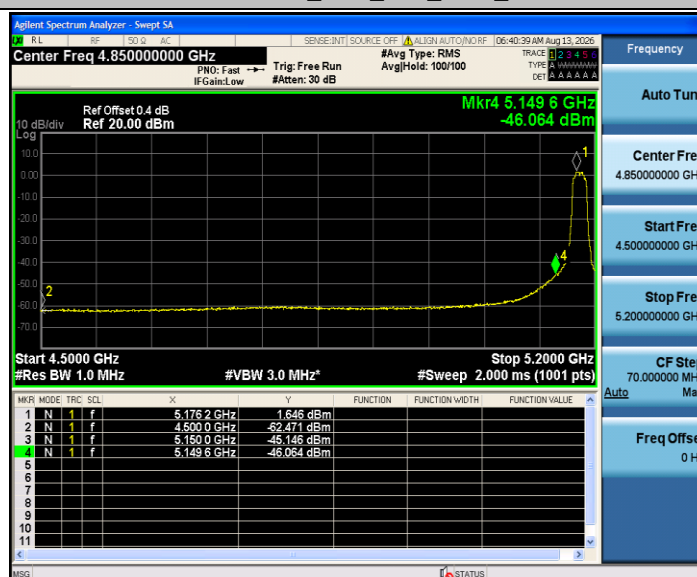




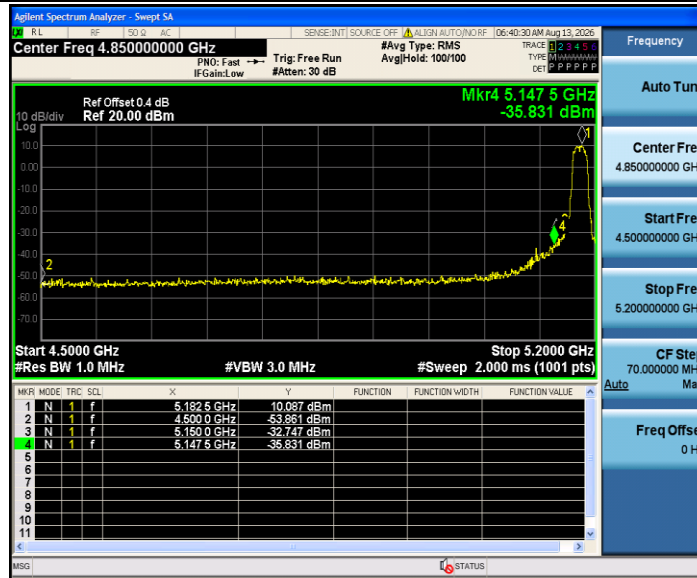
11A_Ant1_High_5240_Peak



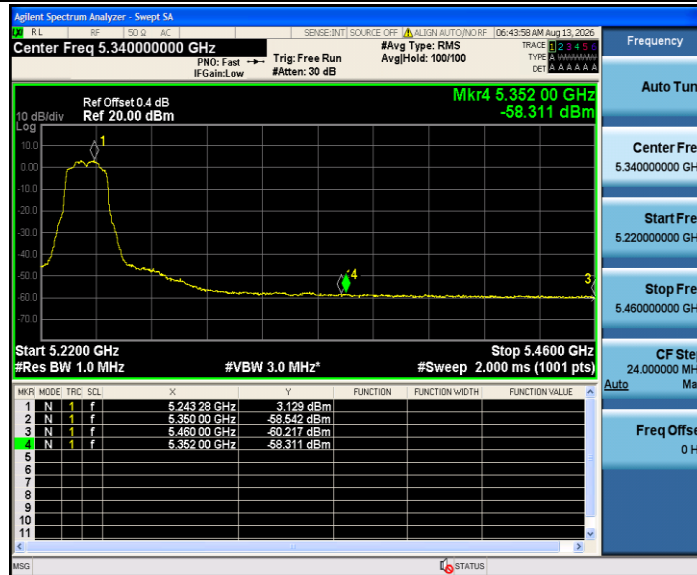
11N20SISO_Ant1_Low_5180_AV



11N20SISO_Ant1_Low_5180_Peak



11N20SISO_Ant1_High_5240_AV



11N20SISO_Ant1_High_5240_Peak

