

FCC Appendix RF Test Data for 5GWIFI

FCC ID : 2BDF3-H1

Company : Shenzhen Xinhaoyuan Technology Co,Ltd

EUT : Wireless HD Transmitter Receiver kit

Model Number : H1

Report No. : CTA25112800101

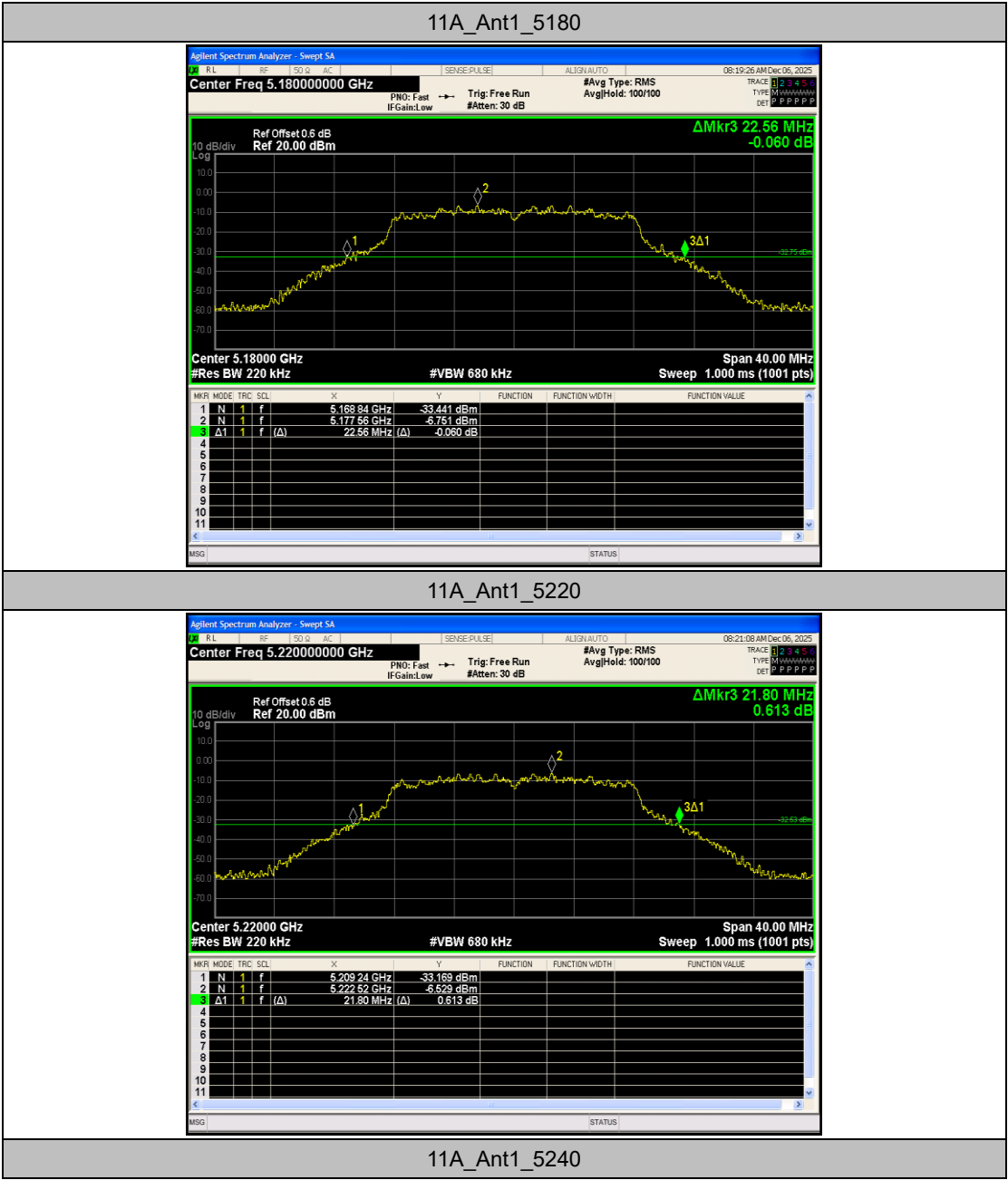
Reviewed By : Eric Wang

Appendix A1: Emission Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	22.560	5168.840	5191.400	---	---
		5220	21.800	5209.240	5231.040	---	---
		5240	22.560	5228.840	5251.400	---	---
		5745	23.480	5732.880	5756.360	---	---
		5785	22.920	5773.160	5796.080	---	---
		5825	23.400	5813.640	5837.040	---	---
11N20SISO	Ant1	5180	22.840	5168.600	5191.440	---	---
		5220	22.560	5208.840	5231.400	---	---
		5240	22.280	5228.800	5251.080	---	---
		5745	23.120	5733.320	5756.440	---	---
		5785	23.280	5773.200	5796.480	---	---
		5825	24.360	5812.880	5837.240	---	---

Test Graphs

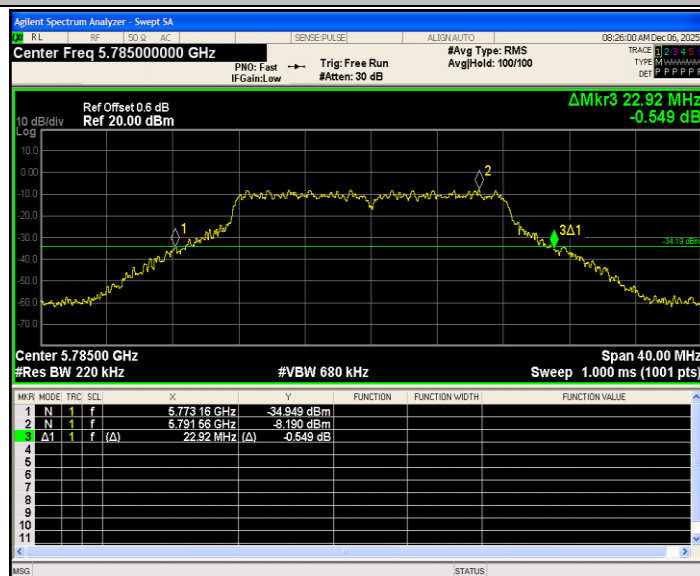




11A_Ant1_5745



11A_Ant1_5785



11A_Ant1_5825



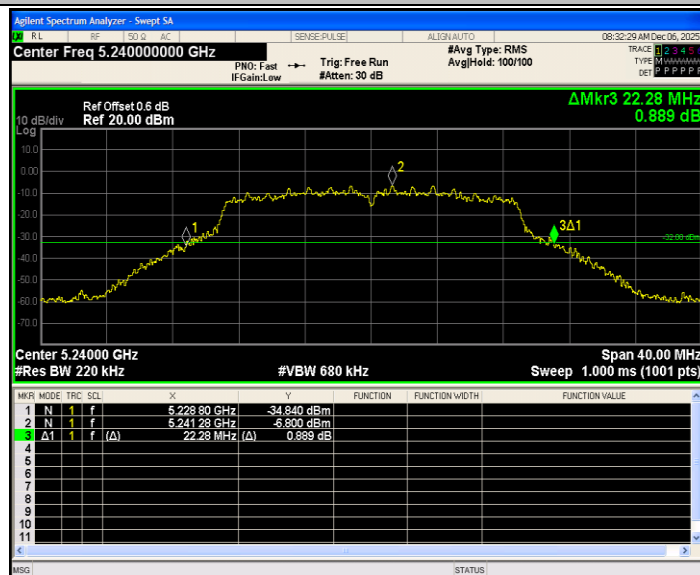
11N20SISO_Ant1_5180



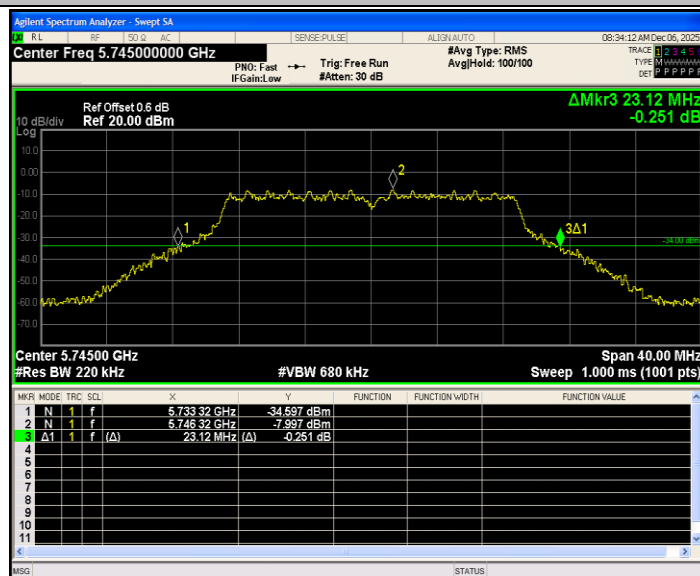
11N20SISO_Ant1_5220



11N20SISO_Ant1_5240



11N20SISO_Ant1_5745



11N20SISO_Ant1_5785



11N20SISO_Ant1_5825

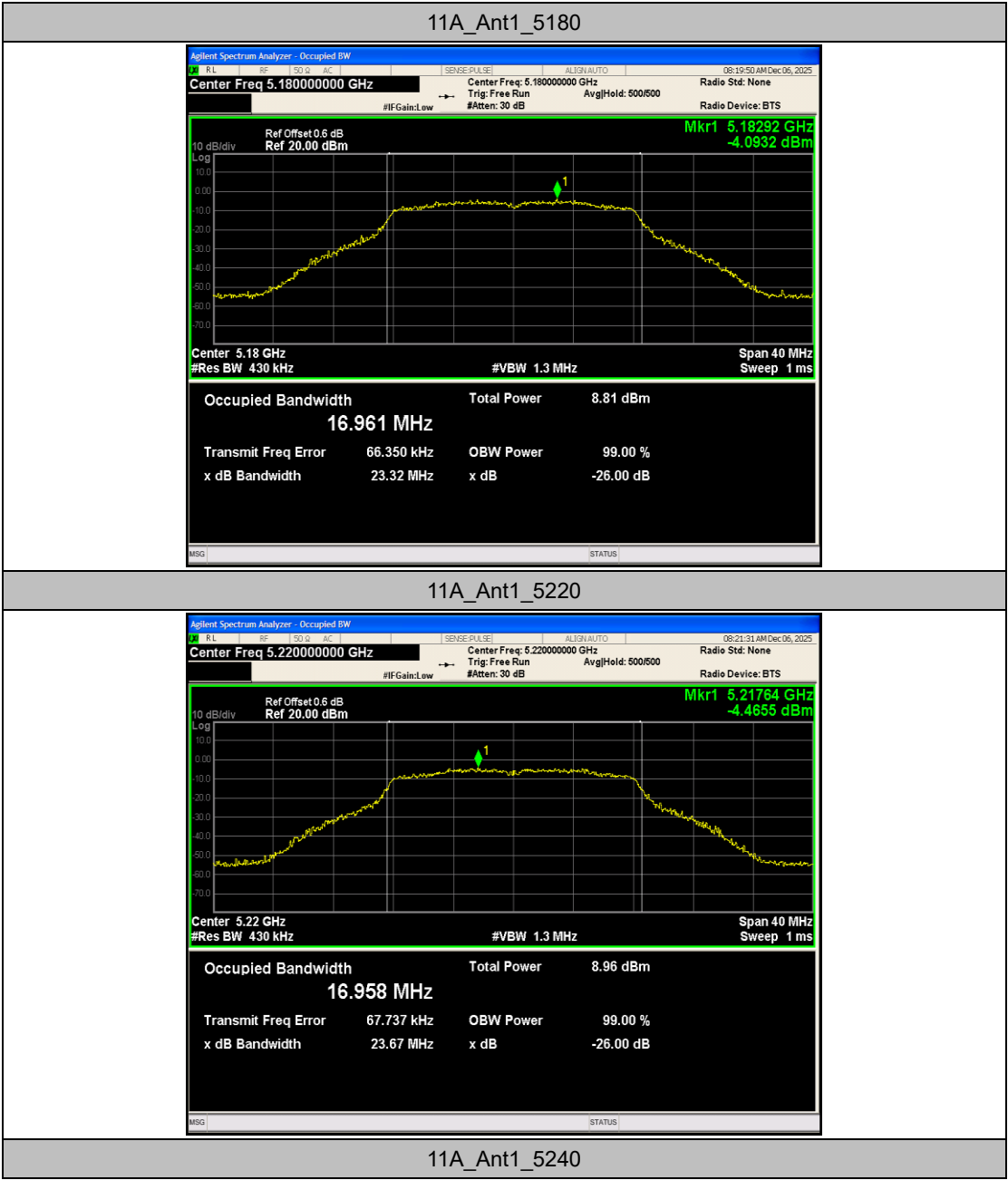


Appendix A2: Occupied channel bandwidth

Test Result

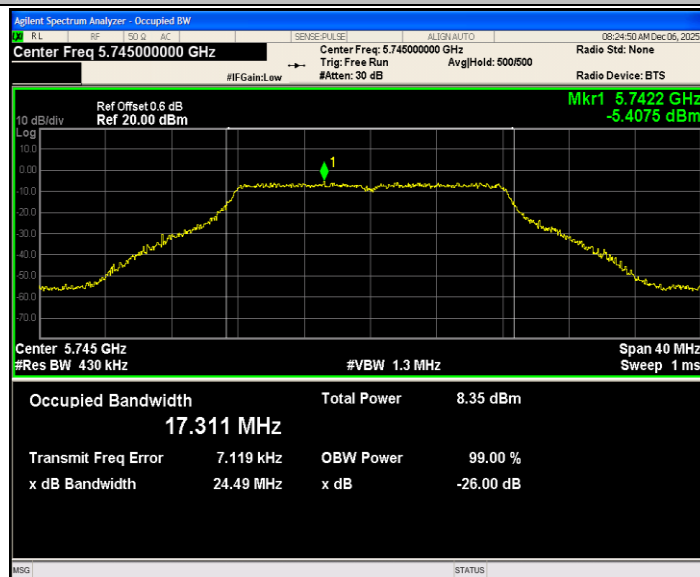
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	16.961	5171.5859	5188.5469	---	---
		5220	16.958	5211.5887	5228.5467	---	---
		5240	16.957	5231.5485	5248.5055	---	---
		5745	17.311	5736.3516	5753.6626	---	---
		5785	17.308	5776.3518	5793.6598	---	---
		5825	17.253	5816.3870	5833.6400	---	---
11N20SISO	Ant1	5180	18.018	5171.0208	5189.0388	---	---
		5220	18.022	5211.0050	5229.0270	---	---
		5240	17.985	5231.0298	5249.0148	---	---
		5745	18.374	5735.8206	5754.1946	---	---
		5785	18.340	5775.8473	5794.1873	---	---
		5825	18.373	5815.7887	5834.1617	---	---

Test Graphs

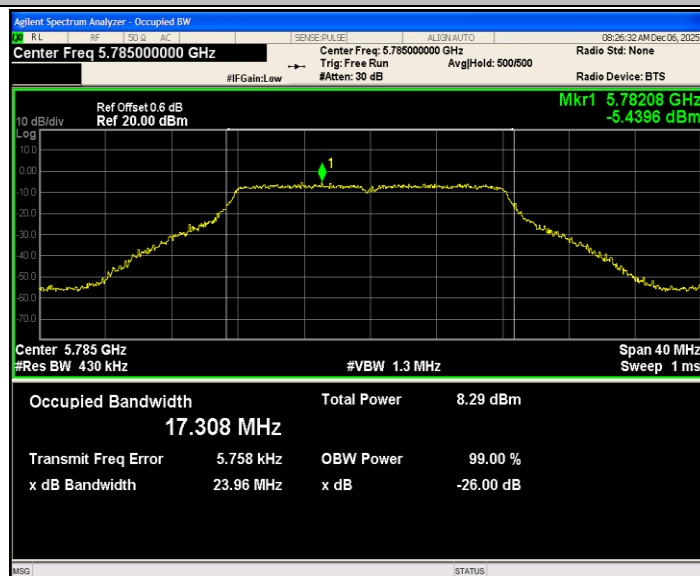




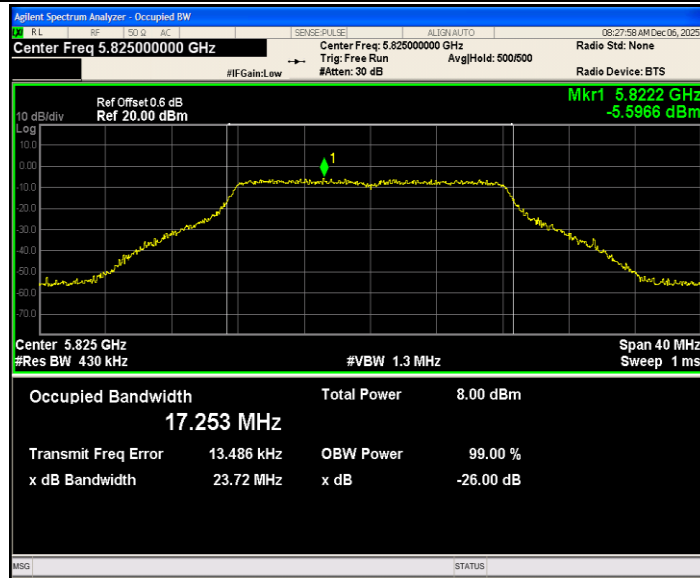
11A_Ant1_5745



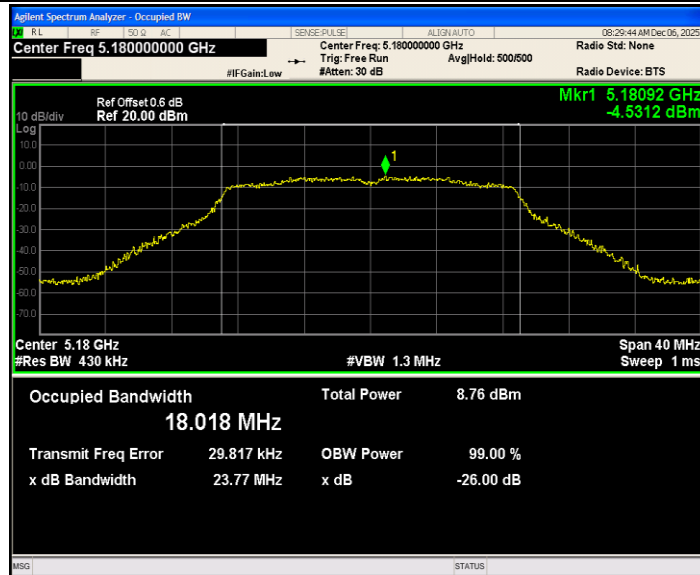
11A_Ant1_5785



11A_Ant1_5825



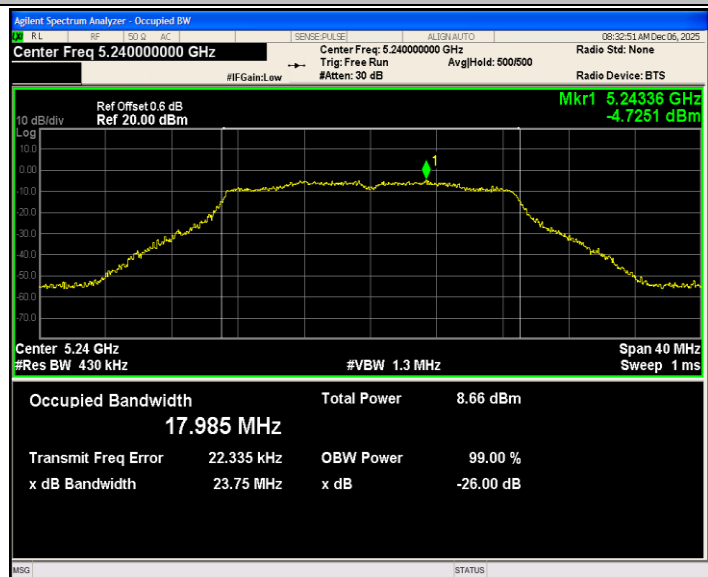
11N20SISO_Ant1_5180



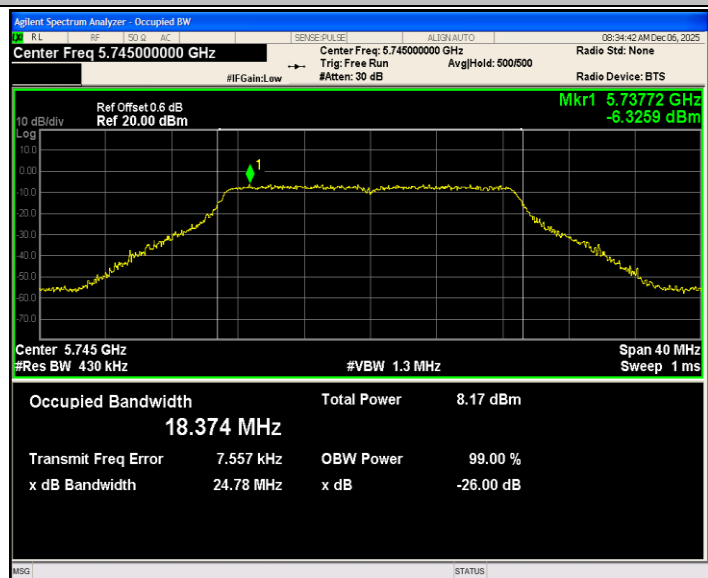
11N20SISO_Ant1_5220



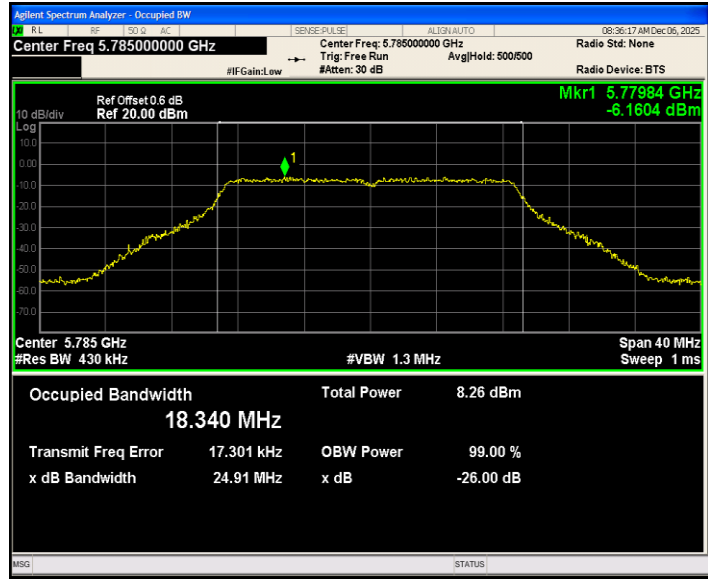
11N20SISO_Ant1_5240



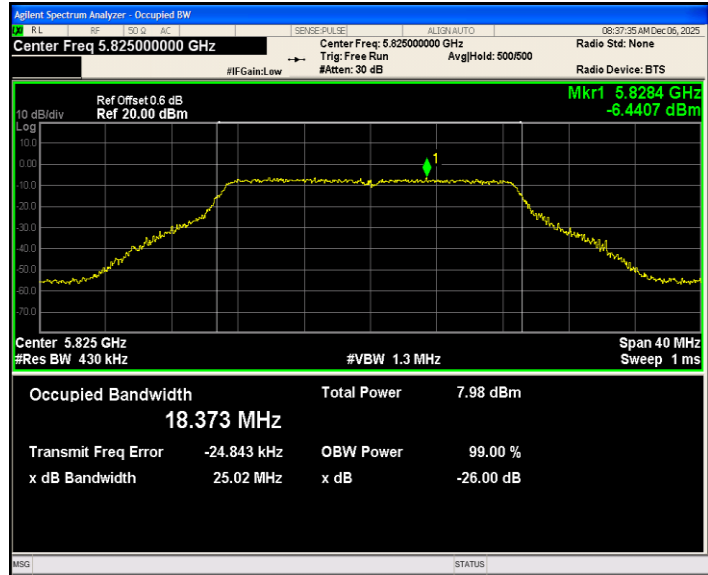
11N20SISO_Ant1_5745



11N20SISO_Ant1_5785



11N20SISO_Ant1_5825

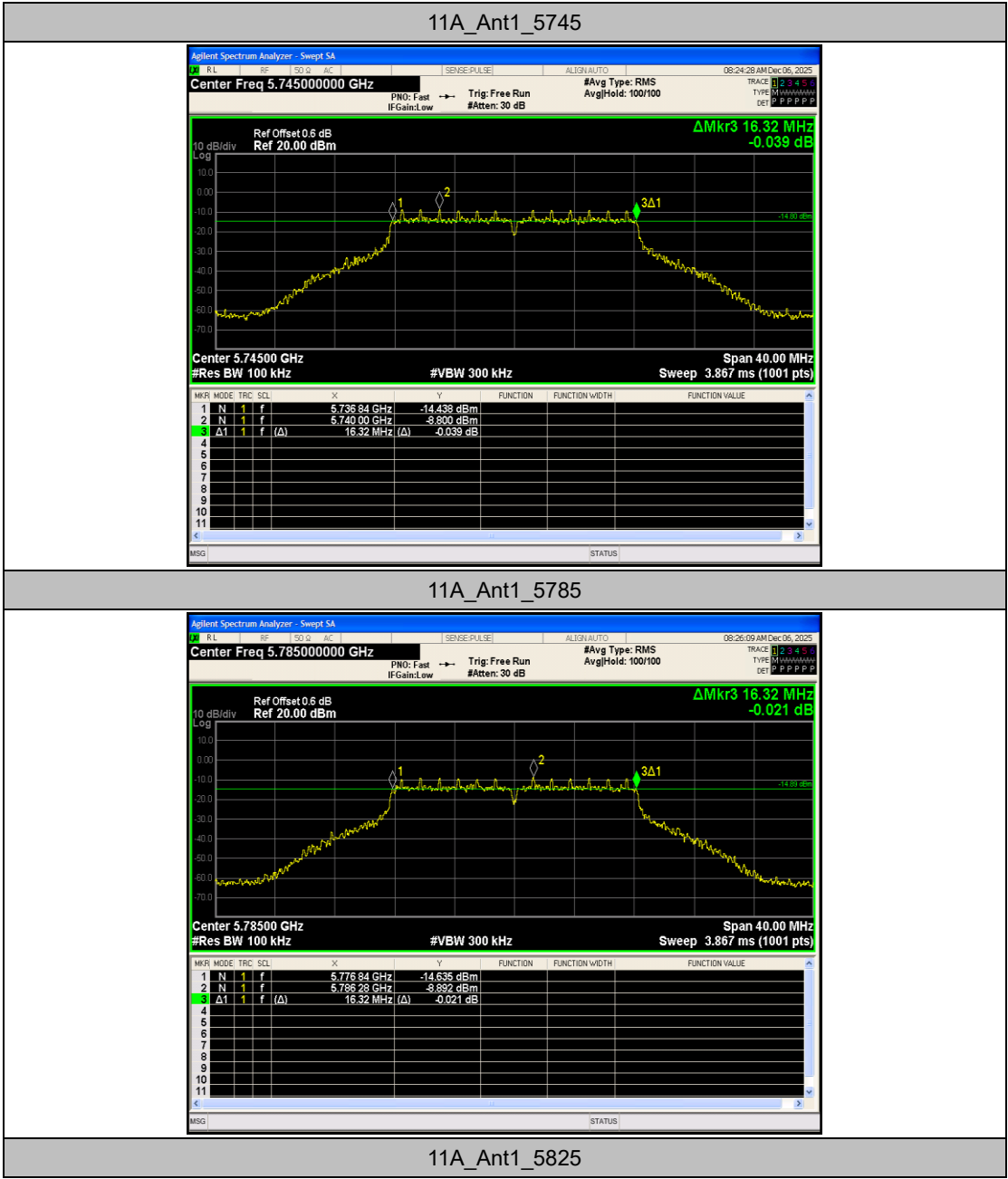


Appendix A3: Min emission bandwidth

Test Result B4

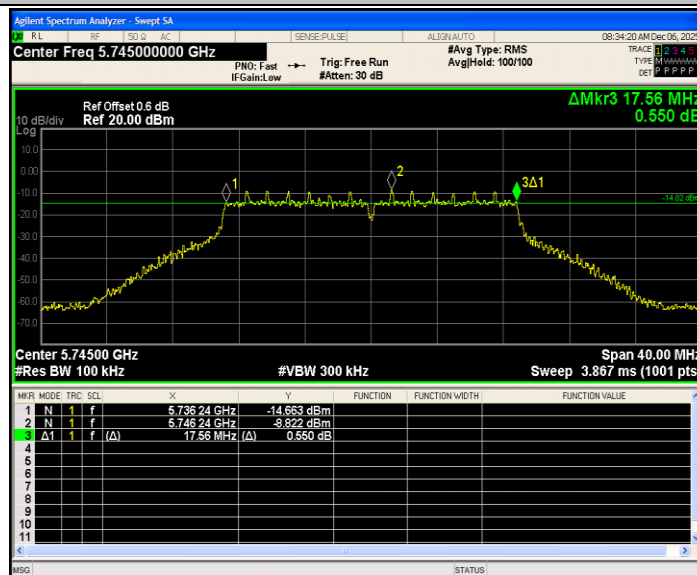
TestMode	Antenna	Freq(MHz)	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	16.320	5736.840	5753.160	0.5	PASS
		5785	16.320	5776.840	5793.160	0.5	PASS
		5825	16.320	5816.840	5833.160	0.5	PASS
11N20SISO	Ant1	5745	17.560	5736.240	5753.800	0.5	PASS
		5785	17.560	5776.240	5793.800	0.5	PASS
		5825	17.520	5816.240	5833.760	0.5	PASS

Test Graphs B4

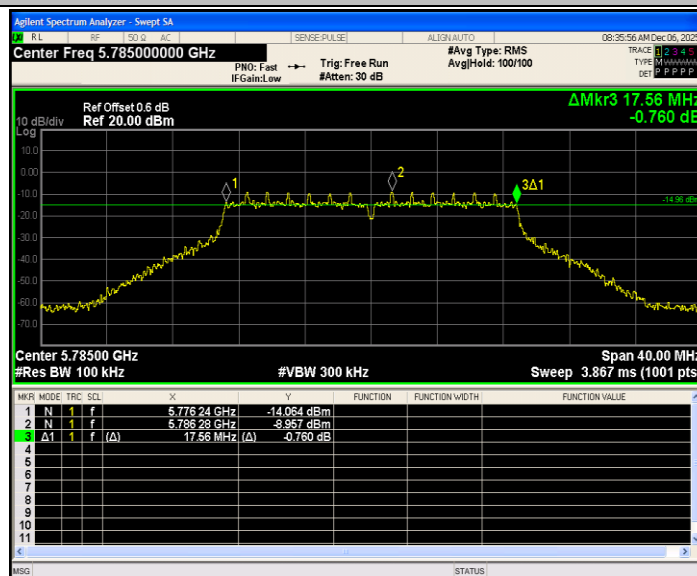




11N20SISO_Ant1_5745



11N20SISO_Ant1_5785



Appendix B: Duty Cycle

Test Result

TestMode	Antenna	Freq(MHz)	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Duty factor(dB)	Limit	Verdict
11A	Ant1	5180	0.14	0.19	73.68	1.33	---	---
		5220	0.14	0.19	73.68	1.33	---	---
		5240	0.15	0.20	75.00	1.25	---	---
		5745	0.15	0.20	75.00	1.25	---	---
		5785	0.15	0.20	75.00	1.25	---	---
		5825	0.15	0.20	75.00	1.25	---	---
11N20SISO	Ant1	5180	0.18	0.23	78.26	1.06	---	---
		5220	0.18	0.23	78.26	1.06	---	---
		5240	0.18	0.23	78.26	1.06	---	---
		5745	0.17	0.22	77.27	1.12	---	---
		5785	0.18	0.23	78.26	1.06	---	---
		5825	0.17	0.22	77.27	1.12	---	---

11A_Ant1_5180

Agilent Spectrum Analyzer - Swept SA

Center Freq 5.180000000 GHz

Ref Offset 0.6 dB
Ref 20.60 dBm

Trig Delay: 2.000 ms
Trig: Video
#Atten: 30 dB

#Avg Type: RMS

08:20:00 AM Dec 06, 2025

Trace 1: 3.5 dBm
Type: WWWWWWWWWW
DET: P P P P P

10 dB/div
Log

Ref 3Δ1

ΔMkr3 190.0 μs
-0.05 dB

Center 5.180000000 GHz
Res BW 8 MHz
#VBW 8.0 MHz
Sweep 5.000 ms (1001 pts)

MKR	MODE	TRIG	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	t	830.0 μs	6.05 dBm			
2	Δ1	1	t (Δ)	140.0 μs (Δ)	-1.03 dB			
3	Δ1	1	t (Δ)	190.0 μs (Δ)	-0.05 dB			
4								
5								
6								
7								
8								
9								
10								
11								

MSG (STATUS)

11A_Ant1_5220

Agilent Spectrum Analyzer - Swept SA

Center Freq 5.220000000 GHz

Ref Offset 0.6 dB
Ref 20.60 dBm

Trig Delay: 2.000 ms
Trig: Video
#Atten: 30 dB

#Avg Type: RMS

08:21:41 AM Dec 06, 2025

Trace 1: 3.5 dBm
Type: WWWWWWWWWW
DET: P P P P P

10 dB/div
Log

Ref 3Δ1

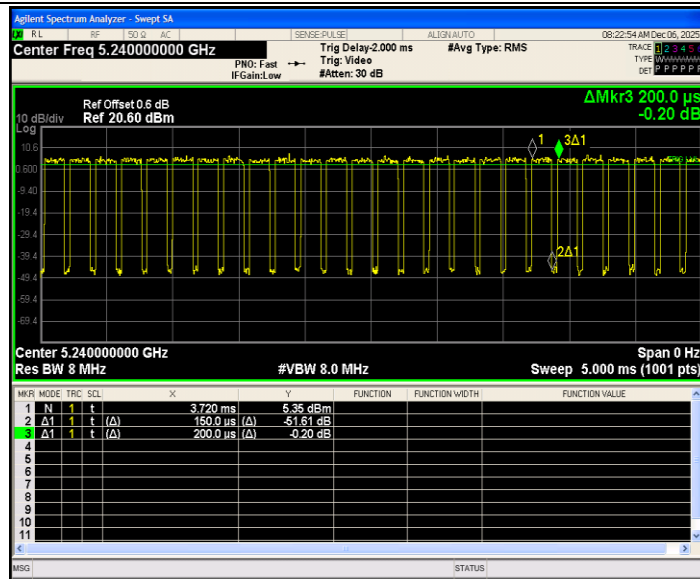
ΔMkr3 190.0 μs
0.00 dB

Center 5.220000000 GHz
Res BW 8 MHz
#VBW 8.0 MHz
Sweep 5.000 ms (1001 pts)

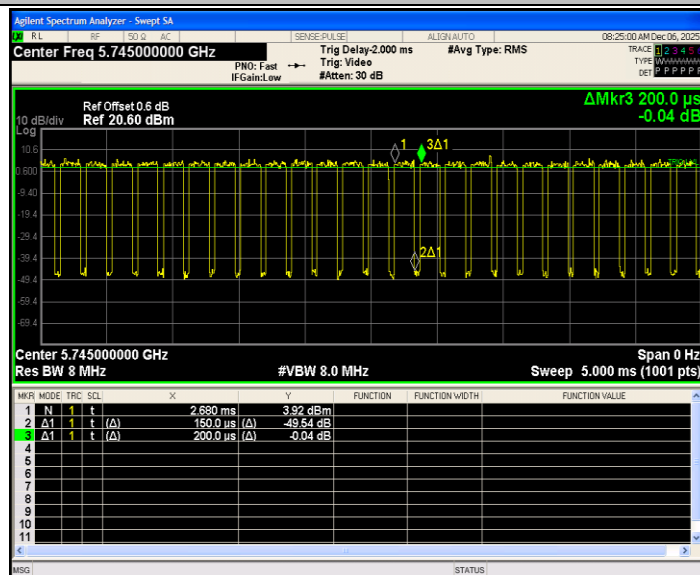
MKR	MODE	TRIG	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	t	3.510 ms	5.53 dBm			
2	Δ1	1	t (Δ)	140.0 μs (Δ)	0.01 dB			
3	Δ1	1	t (Δ)	190.0 μs (Δ)	0.00 dB			
4								
5								
6								
7								
8								
9								
10								
11								

MSG (STATUS)

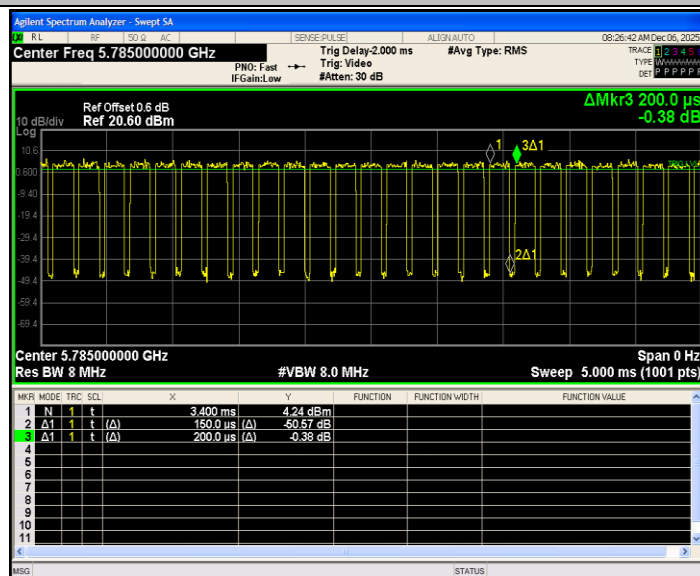
11A_Ant1_5240



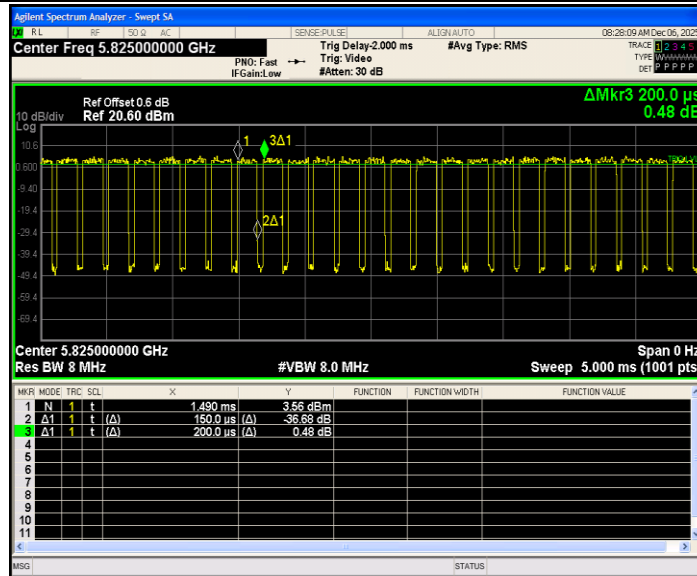
11A_Ant1_5745



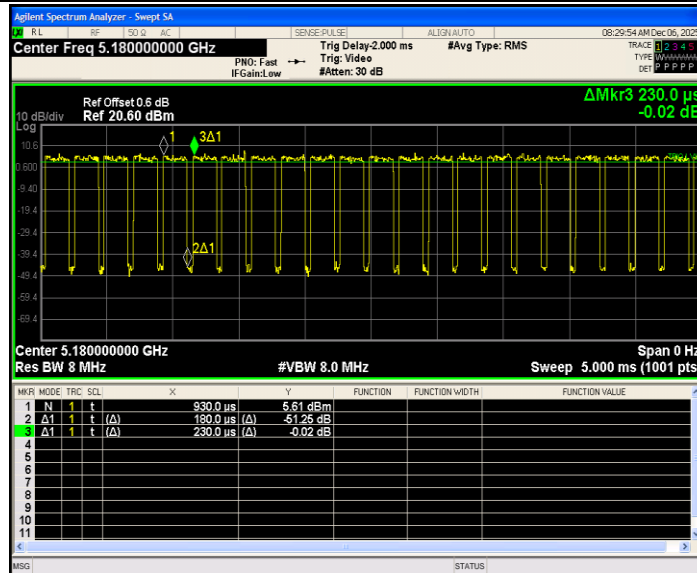
11A_Ant1_5785



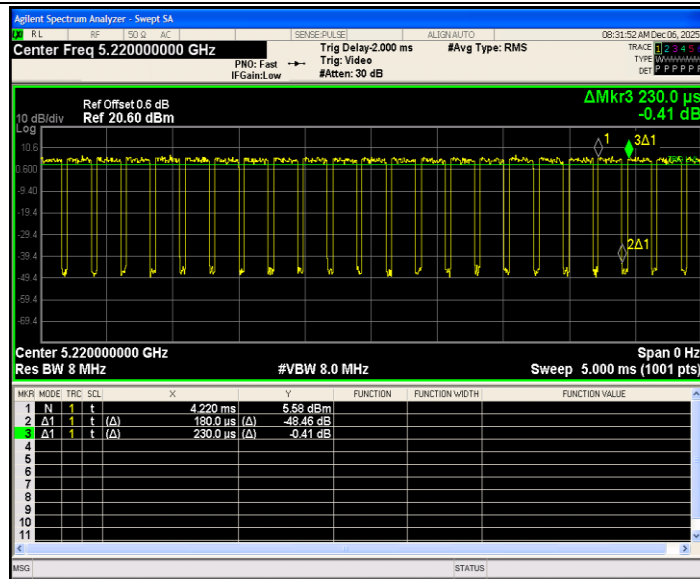
11A_Ant1_5825



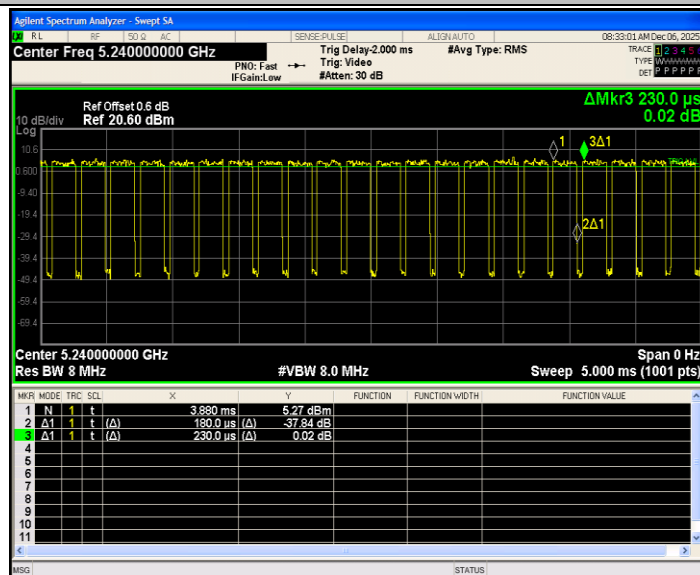
11N20SISO_Ant1_5180



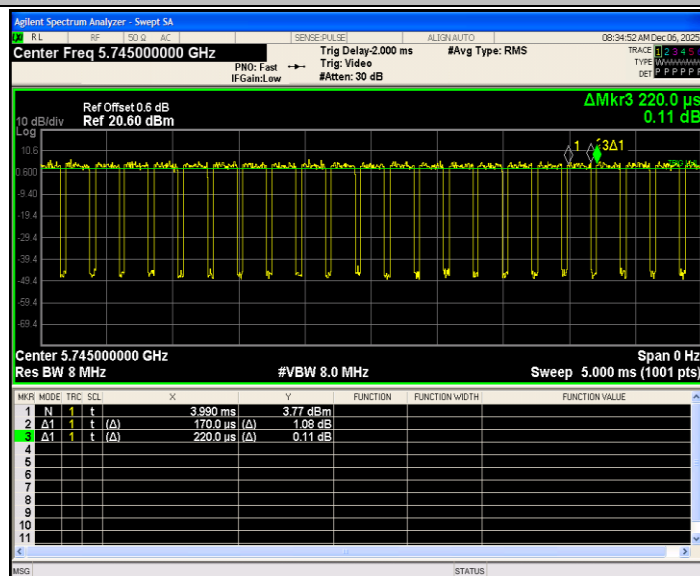
11N20SISO_Ant1_5220



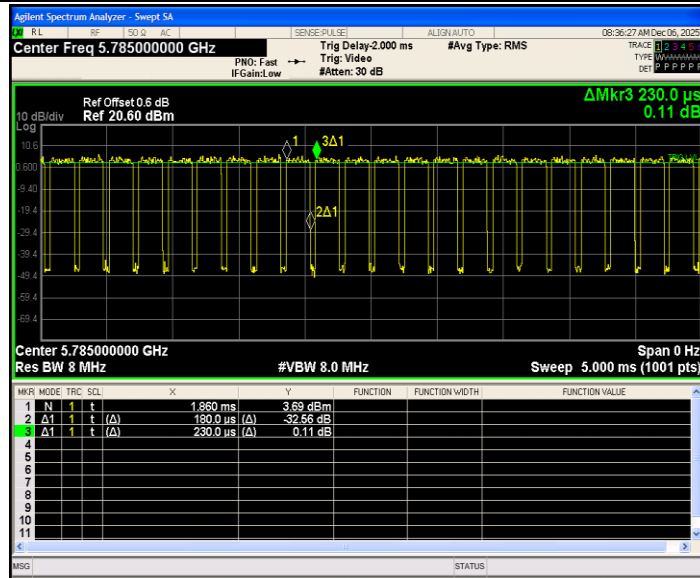
11N20SISO_Ant1_5240



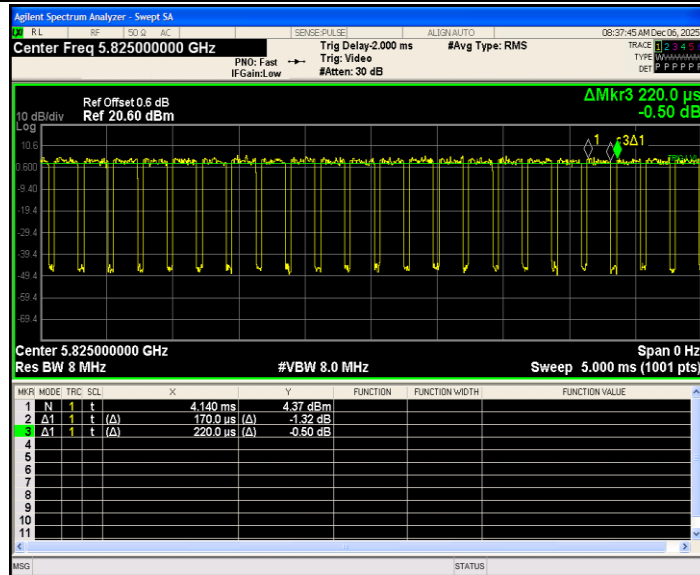
11N20SISO_Ant1_5745



11N20SISO_Ant1_5785



11N20SISO_Ant1_5825



Appendix C: Maximum conducted output power

Test Result Channel Power

Test Mode	Antenna	Freq(MHz)	Channel Power [dBm]	Duty Cycle [%]	DC Factor [dBm]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	5180	0.98	73.68	1.33	2.31	≤23.98	PASS
		5220	1.08	73.68	1.33	2.41	≤23.98	PASS
		5240	0.96	75.00	1.25	2.21	≤23.98	PASS
		5745	0.55	75.00	1.25	1.80	≤30.00	PASS
		5785	0.42	75.00	1.25	1.67	≤30.00	PASS
		5825	0.15	75.00	1.25	1.40	≤30.00	PASS
11N20SISO	Ant1	5180	1.09	78.26	1.06	2.15	≤23.98	PASS
		5220	1.08	78.26	1.06	2.14	≤23.98	PASS
		5240	0.98	78.26	1.06	2.04	≤23.98	PASS
		5745	0.50	77.27	1.12	1.62	≤30.00	PASS
		5785	0.61	78.26	1.06	1.67	≤30.00	PASS
		5825	0.32	77.27	1.12	1.44	≤30.00	PASS

Appendix D: Maximum power spectral density

Test Result

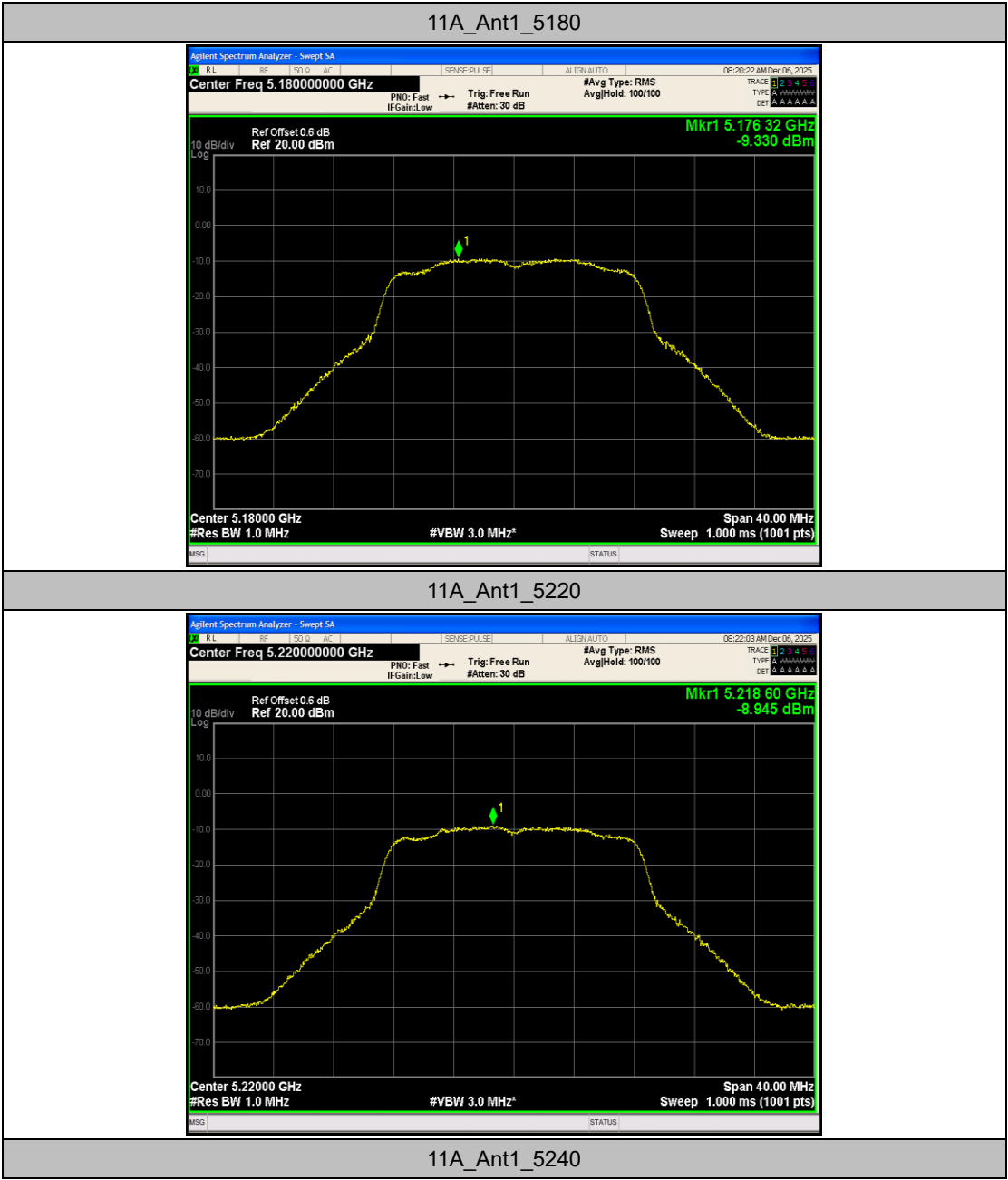
TestMode	Antenna	Freq(MHz)	Result [dBm/1MHz] For 5.2G	RBW Factor (dB)	Duty factor (dB)	Result [dBm/MHz] For 5.2G	Limit[dBm/MHz] For 5.2G	Verdict
			Result [dBm/300KHz] For 5.8G			Result [dBm/500kHz] For 5.8G	Limit[dBm/500kHz] For 5.8G	
11A	Ant1	5180	-9.330	/	1.33	-8.00	≤11.00	PASS
		5220	-8.945	/	1.33	-7.62	≤11.00	PASS
		5240	-9.140	/	1.25	-7.89	≤11.00	PASS
		5745	-14.950	2.22	1.25	-11.48	≤30.00	PASS
		5785	-15.095	2.22	1.25	-11.63	≤30.00	PASS
		5825	-15.596	2.22	1.25	-12.13	≤30.00	PASS
11N20SISO	Ant1	5180	-9.090	/	1.06	-8.03	≤11.00	PASS
		5220	-9.098	/	1.06	-8.04	≤11.00	PASS
		5240	-9.300	/	1.06	-8.24	≤11.00	PASS
		5745	-15.155	2.22	1.12	-11.82	≤30.00	PASS
		5785	-14.688	2.22	1.06	-11.41	≤30.00	PASS
		5825	-15.363	2.22	1.12	-12.02	≤30.00	PASS

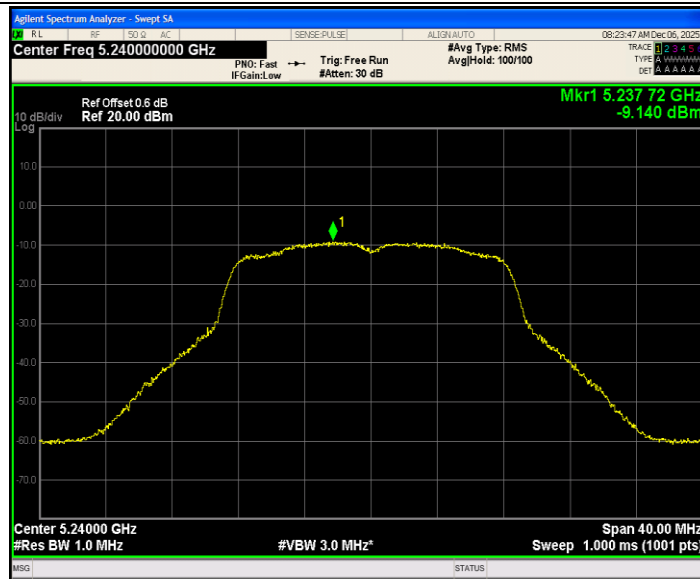
Note: 1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.

P.S.D(dBm/500KHz)= P.S.D(dBm/300KHz)+10 log (500 kHz/300KHz).

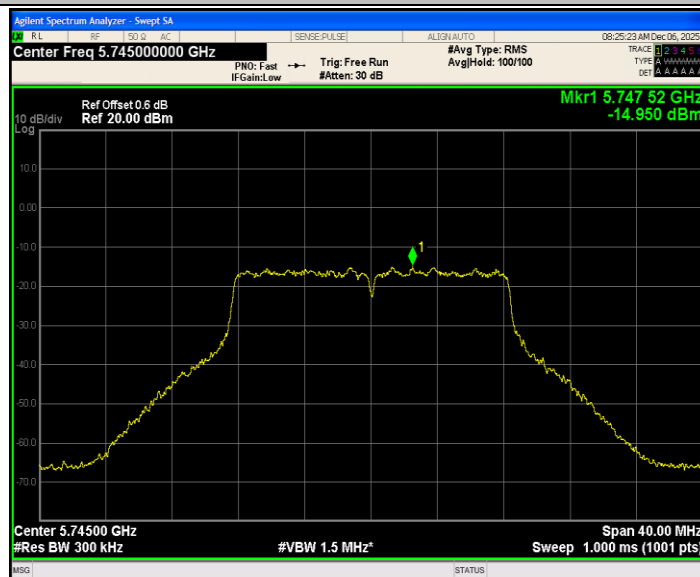
2. RBW factor= 10 log (500 KHz /300 KHz) = 2.22 dB

Test Graphs

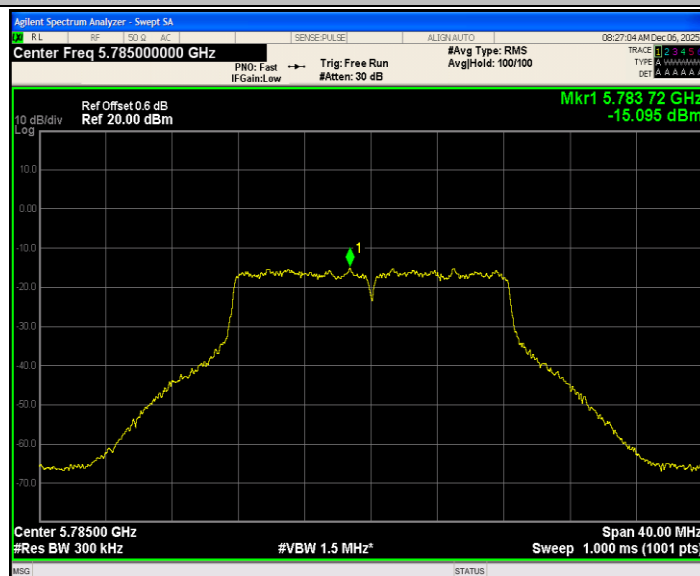




11A_Ant1_5745



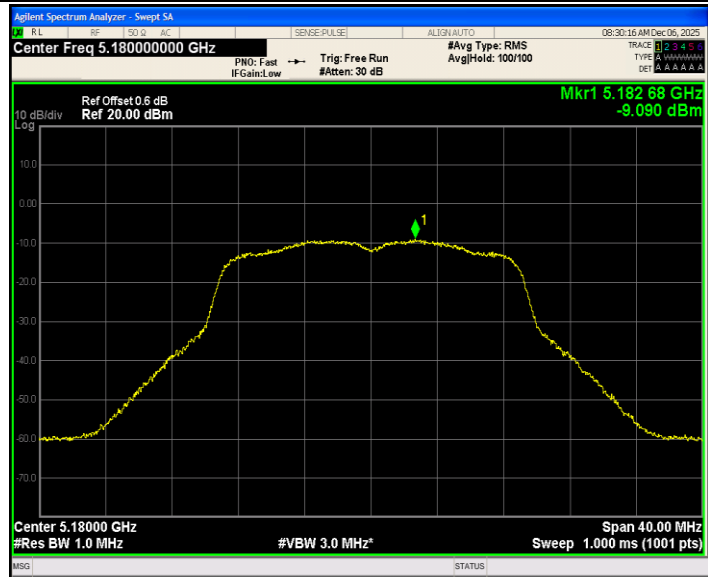
11A_Ant1_5785



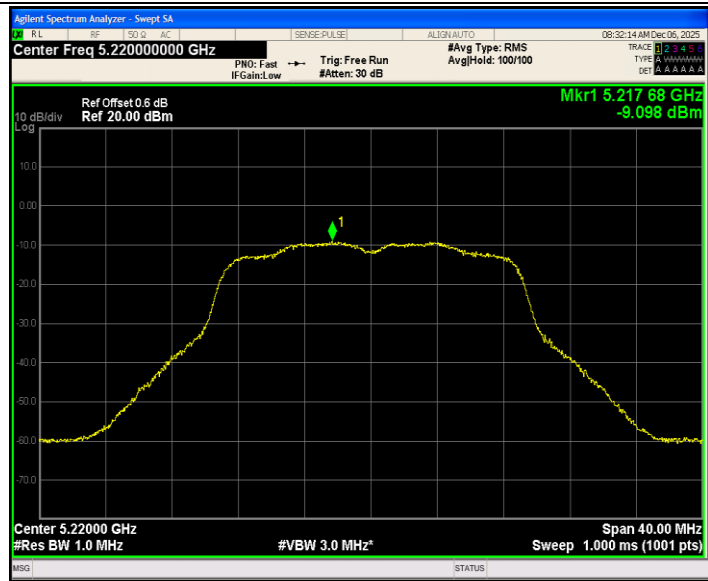
11A_Ant1_5825



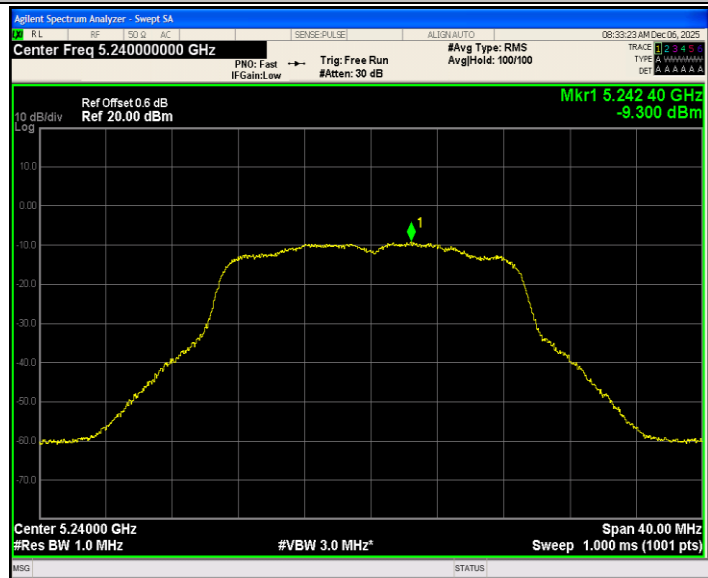
11N20SISO_Ant1_5180



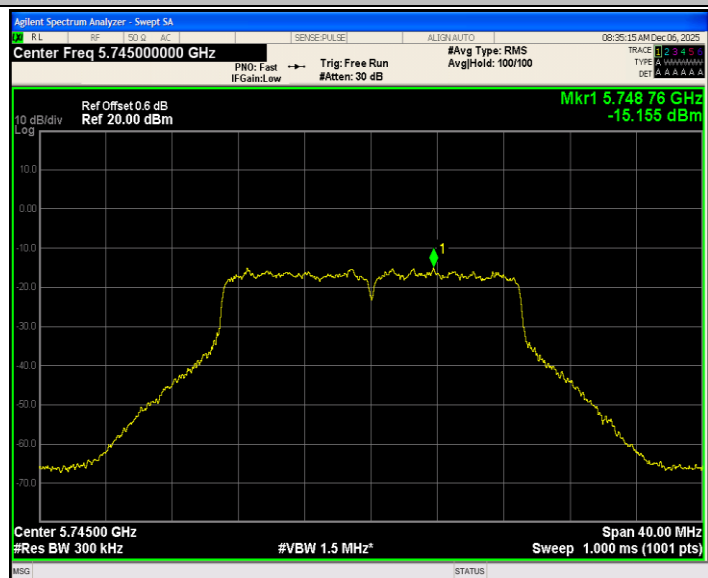
11N20SISO_Ant1_5220



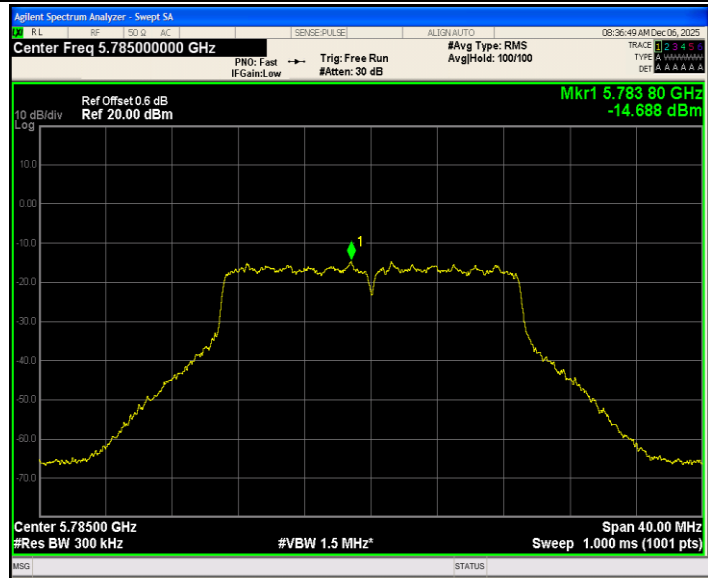
11N20SISO_Ant1_5240



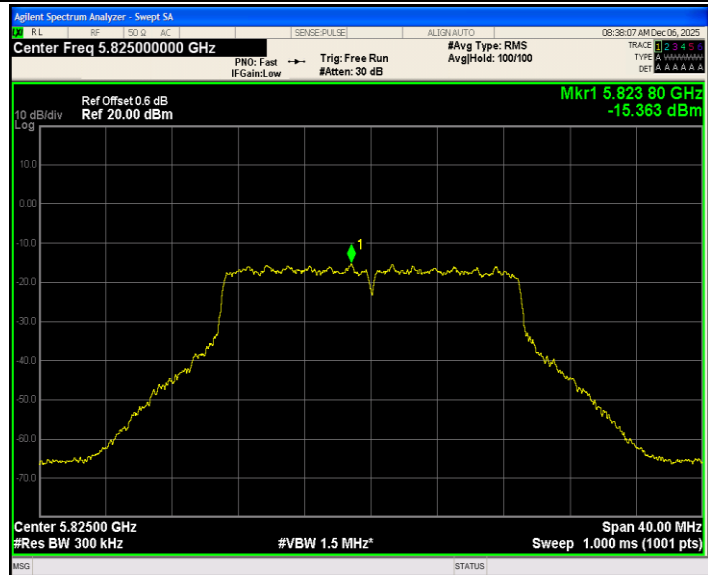
11N20SISO_Ant1_5745



11N20SISO_Ant1_5785



11N20SISO_Ant1_5825



Appendix E: Band edge measurements

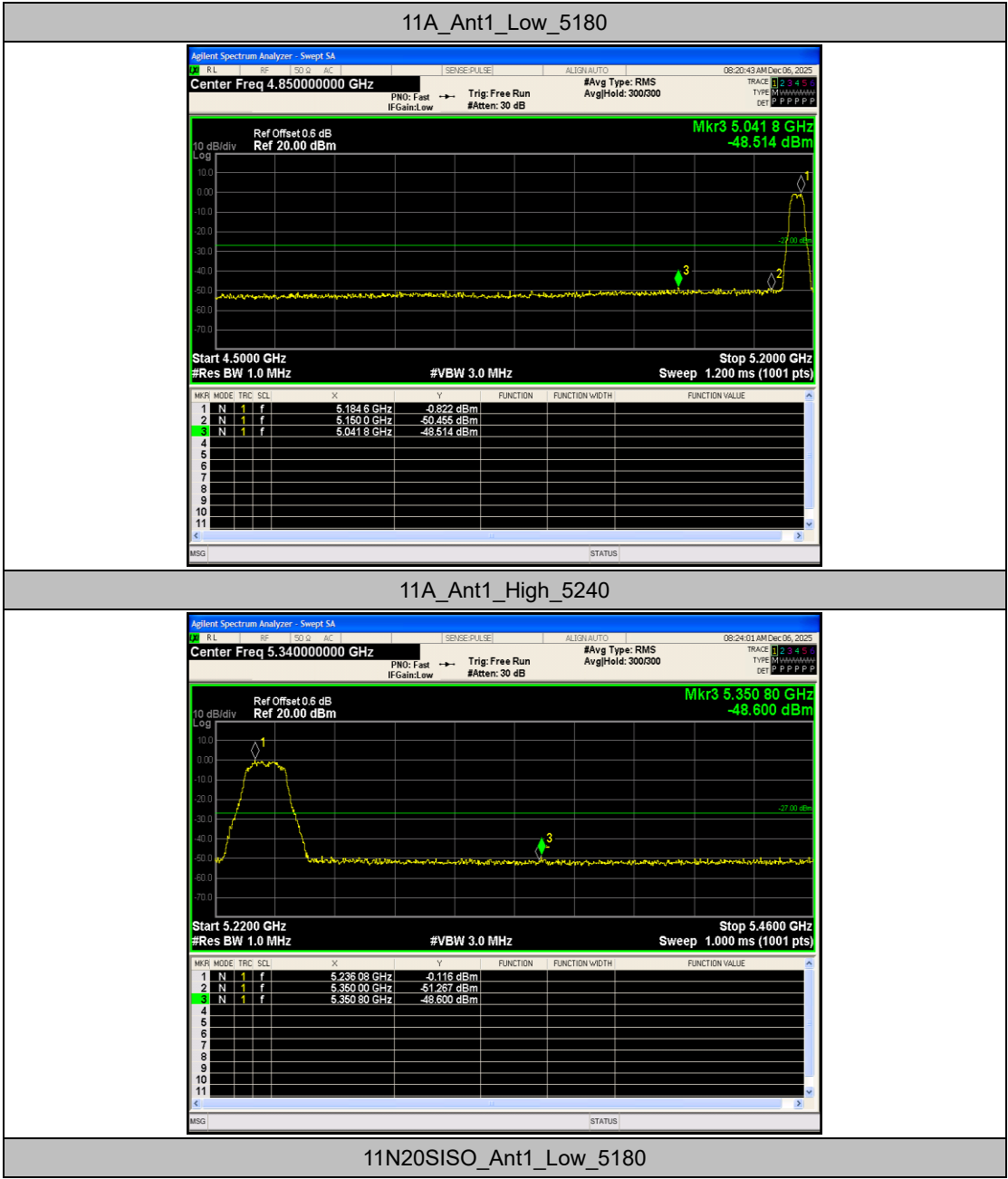
Test Result B1

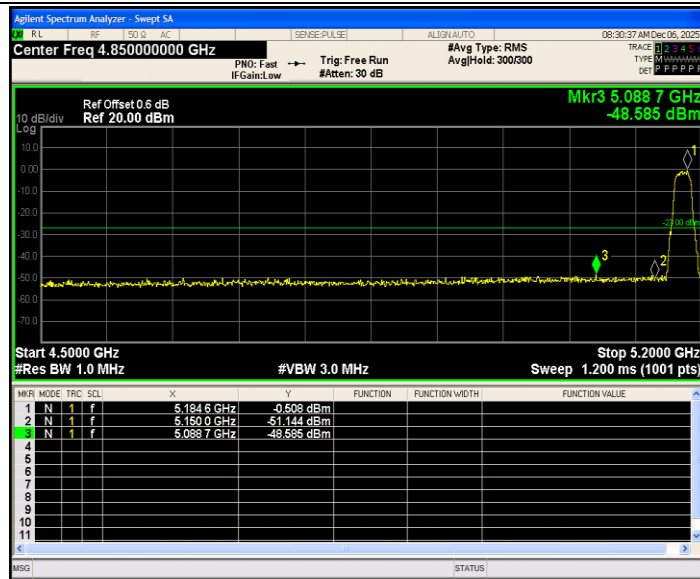
TestMode	Antenna	ChName	Freq(MHz)	Result[dBm]	Antenna Gain (dBi)	EIRP [dBm]	Limit[dBm]	Verdict
11A	Ant1	Low	5180	-48.51	0.65	-47.86	≤-27	PASS
		High	5240	-48.6	0.65	-47.95	≤-27	PASS
11N20SISO	Ant1	Low	5180	-48.59	0.65	-47.94	≤-27	PASS
		High	5240	-48.92	0.65	-48.27	≤-27	PASS

Test Result B4

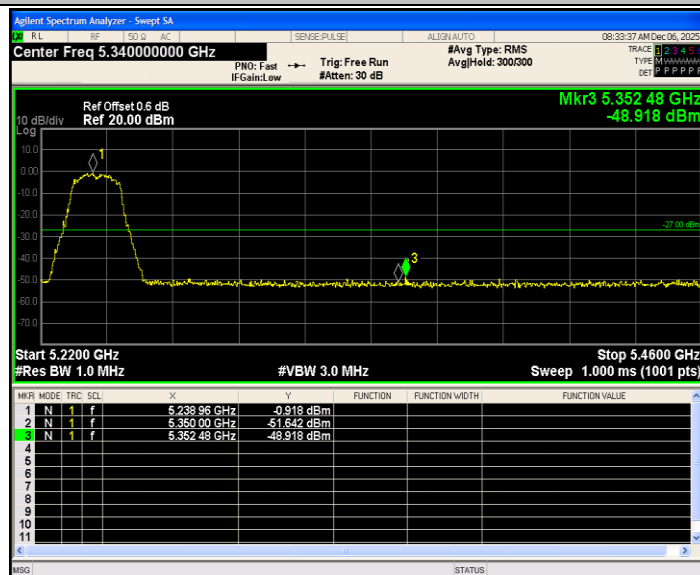
TestMode	Antenna	ChName	Freq(MHz)	FreqRange [MHz]	Result [dBm]	Antenna Gain (dBi)	EIRP [dBm]	Limit [dBm]	Verdict
11A	Ant1	Low	5745	5650~5700	-49.73	0.72	-49.01	≤-26.70	PASS
				5700~5720	-51.14	0.72	-50.42	≤10.09	PASS
				5720~5725	-51.04	0.72	-50.32	≤15.82	PASS
				5760~5650	-50.93	0.72	-50.21	≤-27	PASS
		High	5825	5850~5855	-51.96	0.72	-51.24	≤15.73	PASS
				5855~5875	-50.79	0.72	-50.07	≤10.13	PASS
				5875~5925	-49.31	0.72	-48.59	≤-25.21	PASS
				5925~5935	-50.1	0.72	-49.38	≤-27	PASS
11N20SISO	Ant1	Low	5745	5650~5700	-52.09	0.72	-51.37	≤-26.96	PASS
				5700~5720	-50.83	0.72	-50.11	≤10.15	PASS
				5720~5725	-50.53	0.72	-49.81	≤15.82	PASS
				5760~5650	-50.41	0.72	-49.69	≤-27	PASS
		High	5825	5850~5855	-51.25	0.72	-50.53	≤15.73	PASS
				5855~5875	-49.1	0.72	-48.38	≤11.65	PASS
				5875~5925	-50.4	0.72	-49.68	≤-26.11	PASS
				5925~5935	-50.1	0.72	-49.38	≤-27	PASS

Test Graphs B1

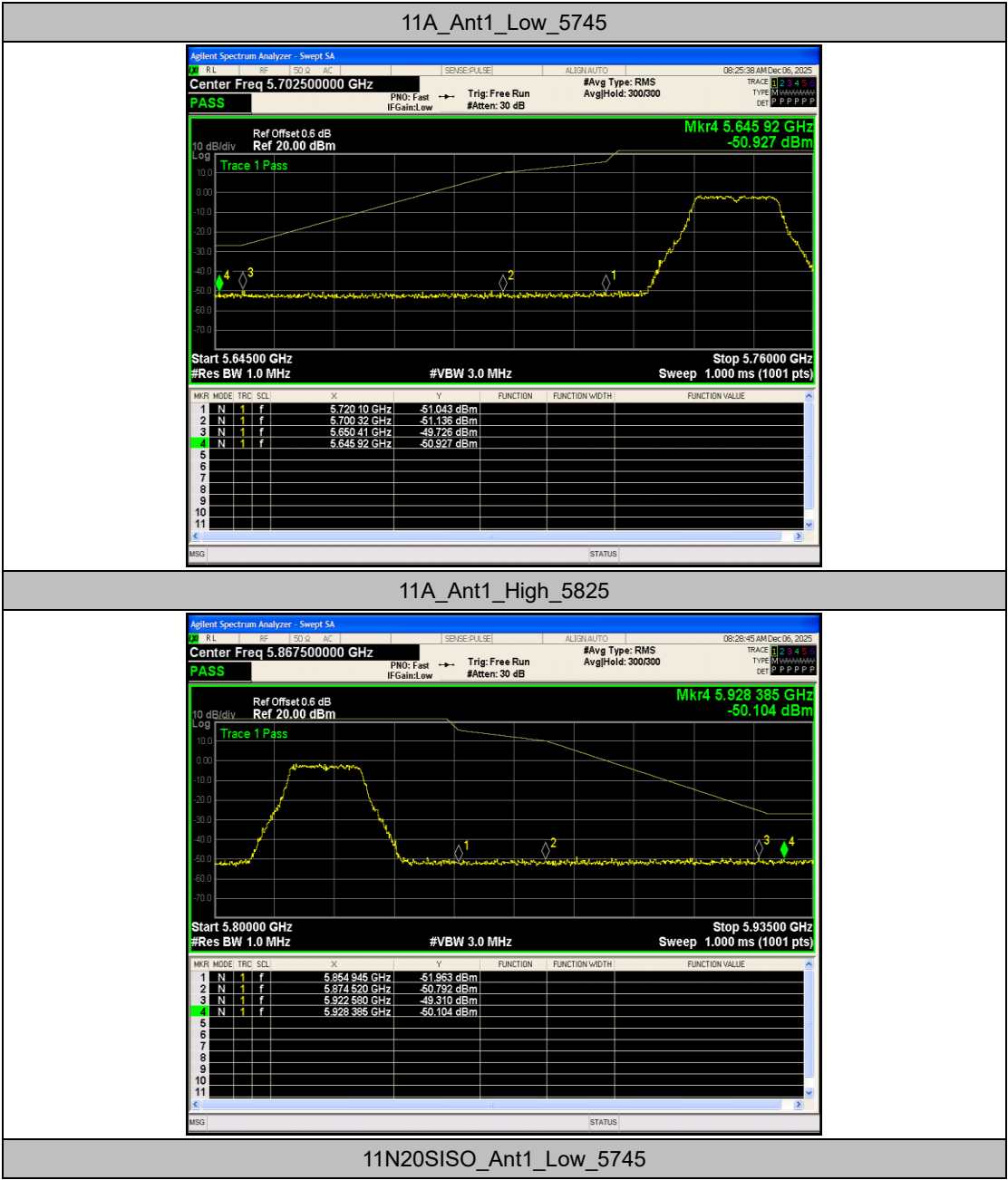


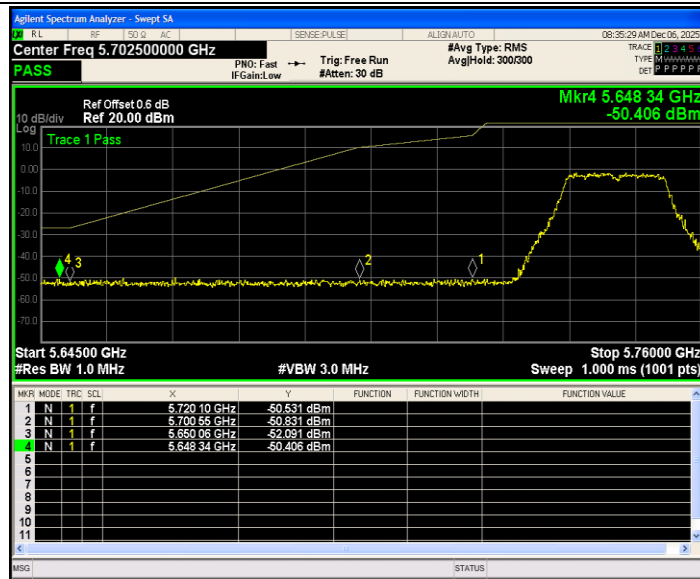


11N20SISO_Ant1_High_5240

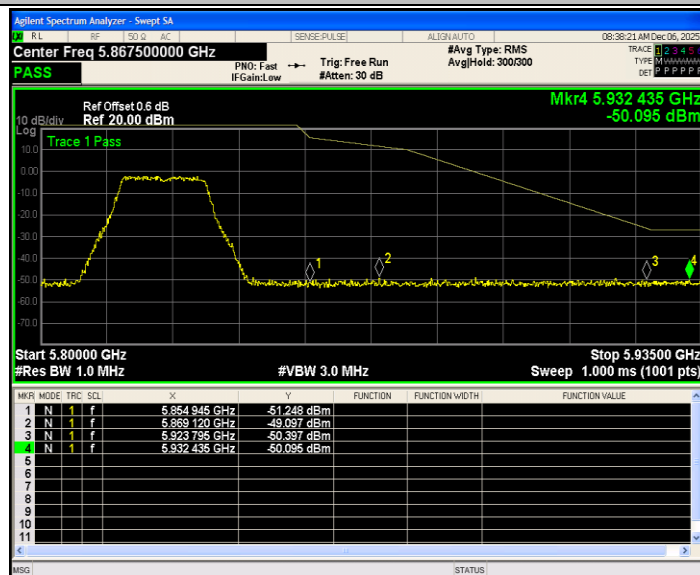


Test Graphs B4





11N20SISO_Ant1_High_5825

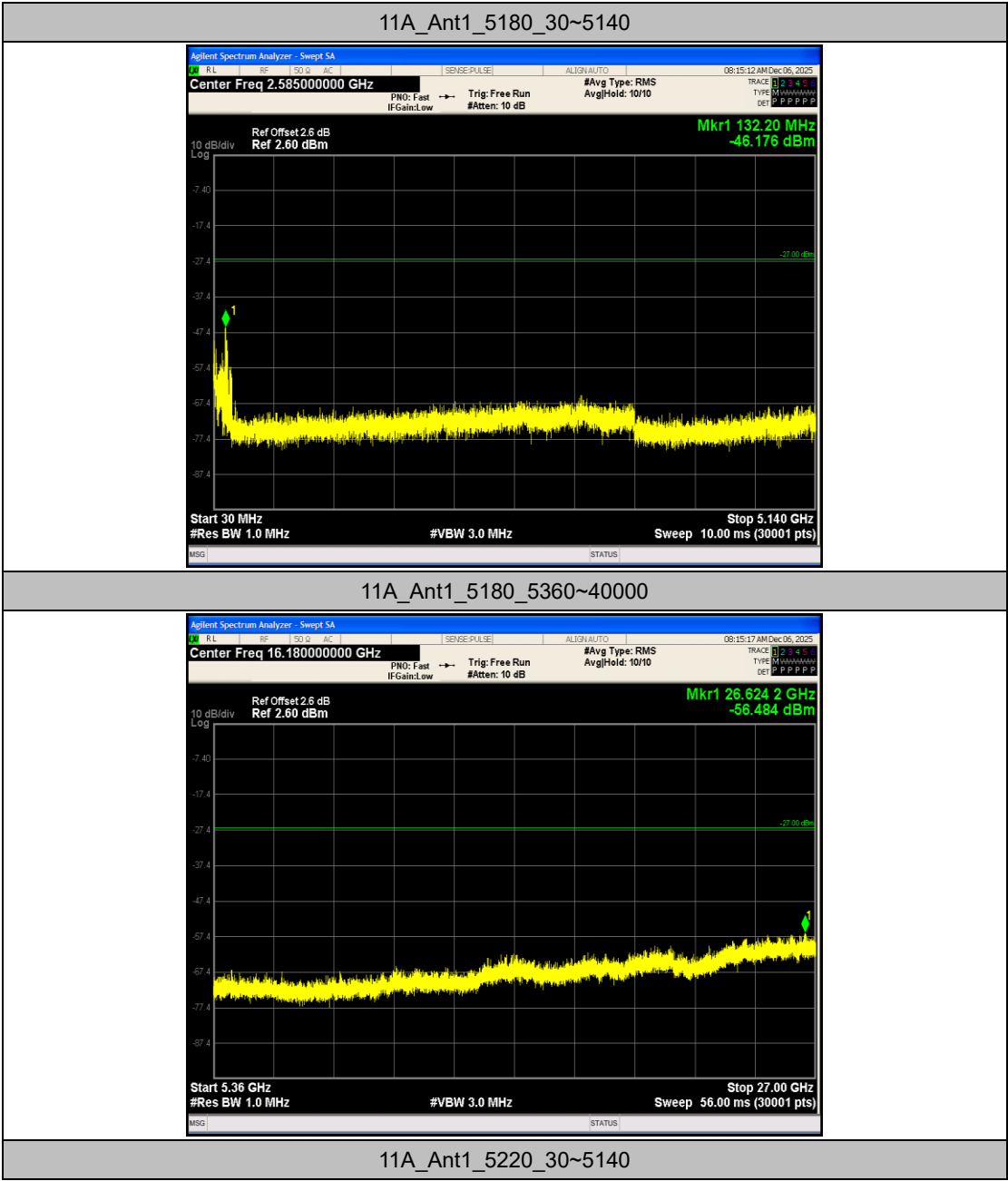


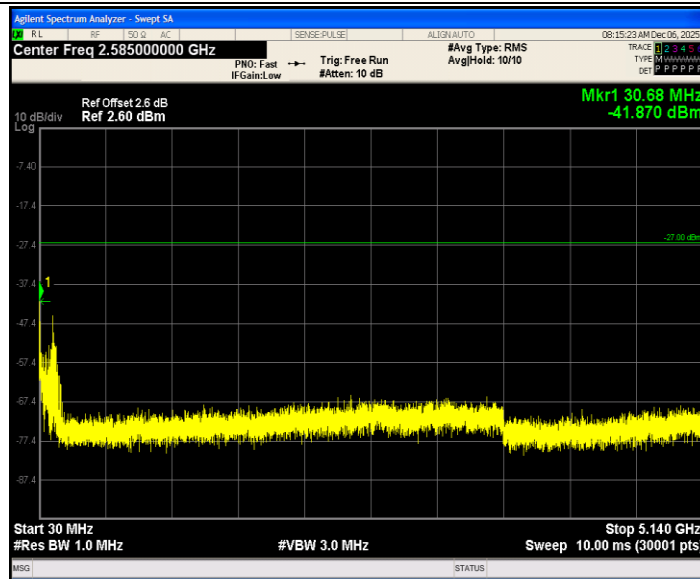
Appendix F: Conducted Spurious Emission

Test Result

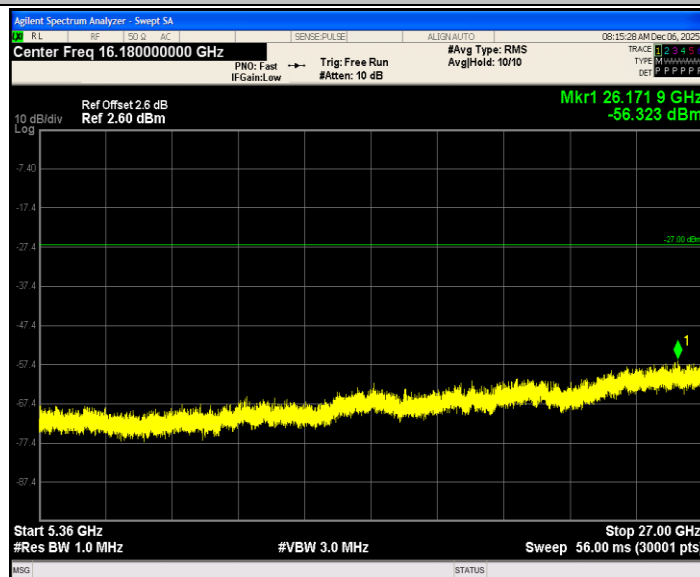
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	Max. Fre [MHz]	Max. Level [dBm]	Antenna Gain (dBi)	EIRP [dBm]	Limit [dBm]	Verdict
11A	Ant1	5180	30~5140	132.2	-46.18	0.65	-45.53	≤-27	PASS
			5360~40000	26624.19	-56.48	0.65	-55.83	≤-27	PASS
		5220	30~5140	30.68	-41.87	0.65	-41.22	≤-27	PASS
			5360~40000	26171.91	-56.32	0.65	-55.67	≤-27	PASS
		5240	30~5140	33.41	-46.05	0.65	-45.4	≤-27	PASS
			5360~40000	26233.22	-56.61	0.65	-55.96	≤-27	PASS
		5745	30~5650	133.03	-43.68	0.72	-42.96	≤-27	PASS
			5925~40000	26543.38	-55.57	0.72	-54.85	≤-27	PASS
		5785	30~5650	133.78	-44.14	0.72	-43.42	≤-27	PASS
			5925~40000	26164.73	-56.07	0.72	-55.35	≤-27	PASS
11N20SISO	Ant1	5180	30~5140	134.07	-44.53	0.65	-43.88	≤-27	PASS
			5360~40000	26919.93	-56.27	0.65	-55.62	≤-27	PASS
		5220	30~5140	136.97	-47.56	0.65	-46.91	≤-27	PASS
			5360~40000	26114.92	-55.79	0.65	-55.14	≤-27	PASS
		5240	30~5140	134.24	-46.22	0.65	-45.57	≤-27	PASS
			5360~40000	24732.13	-55.76	0.65	-55.11	≤-27	PASS
		5745	30~5650	143.34	-48.84	0.72	-48.12	≤-27	PASS
			5925~40000	26544.78	-54.35	0.72	-53.63	≤-27	PASS
		5785	30~5650	134.16	-45.45	0.72	-44.73	≤-27	PASS
			5925~40000	24529.31	-55.92	0.72	-55.2	≤-27	PASS
		5825	30~5650	131.91	-44.73	0.72	-44.01	≤-27	PASS
			5925~40000	26537.76	-56.06	0.72	-55.34	≤-27	PASS

Test Graphs

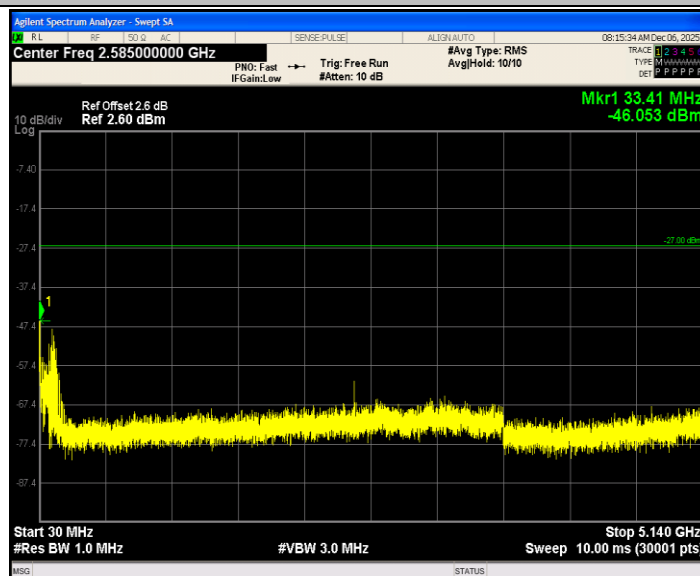




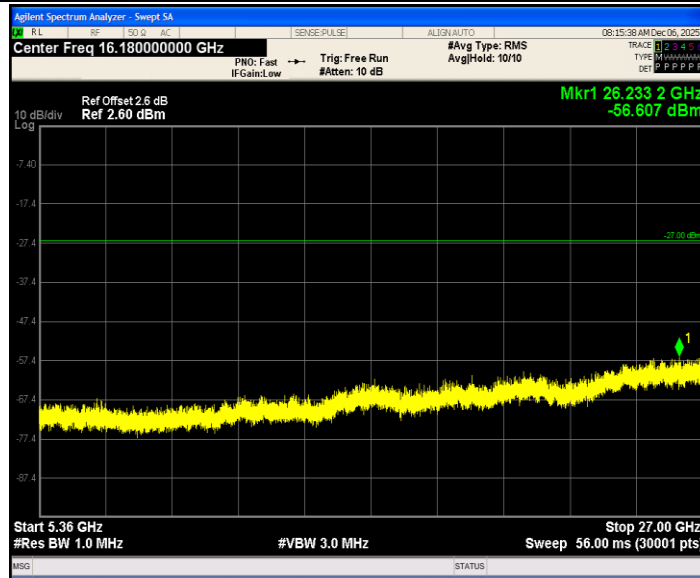
11A_Ant1_5220_5360~40000



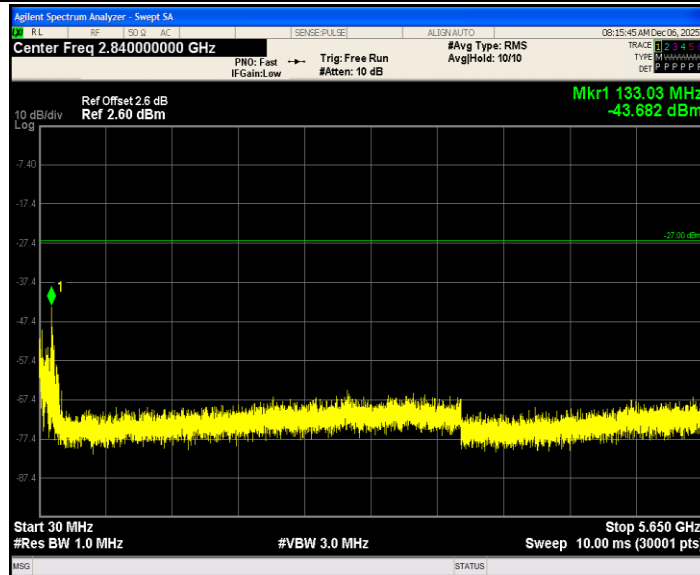
11A_Ant1_5240_30~5140



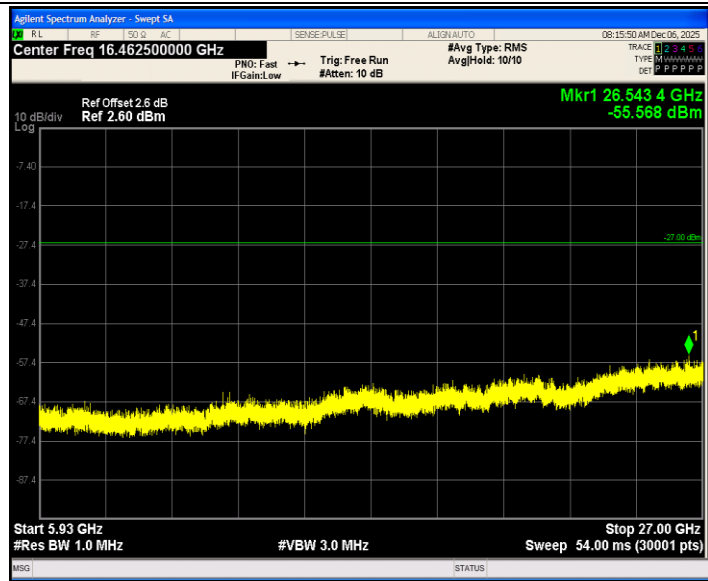
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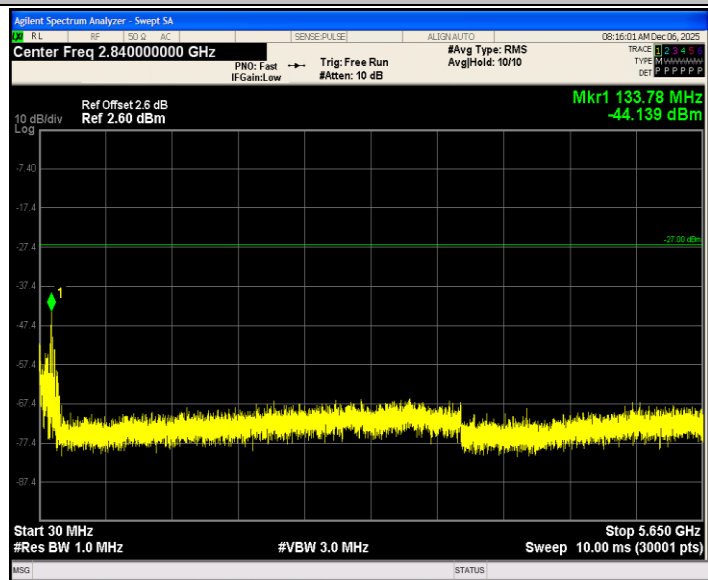
11A_Ant1_5745_30~5650



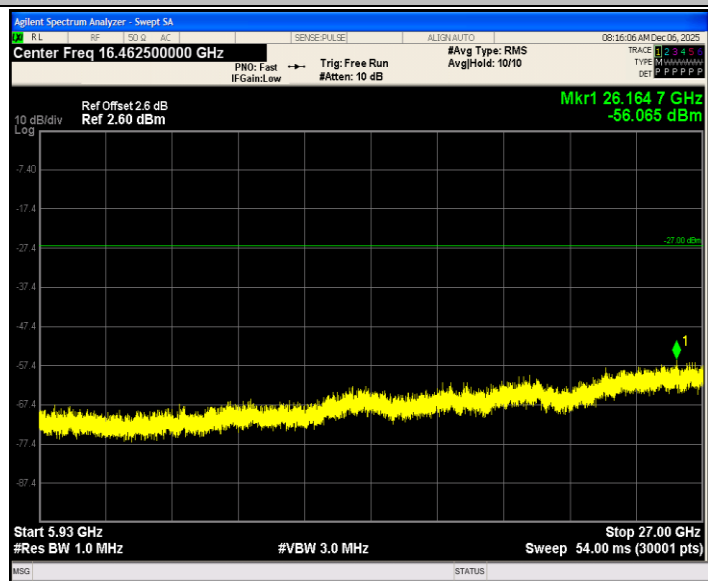
11A_Ant1_5745_5925~40000



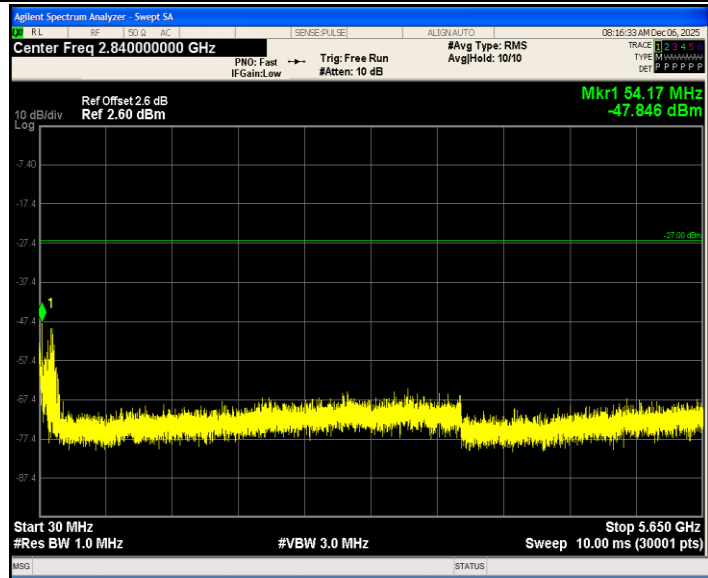
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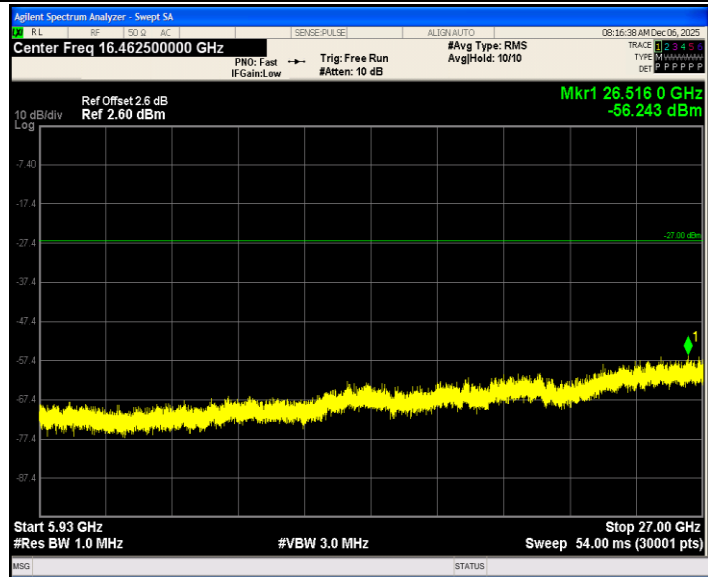
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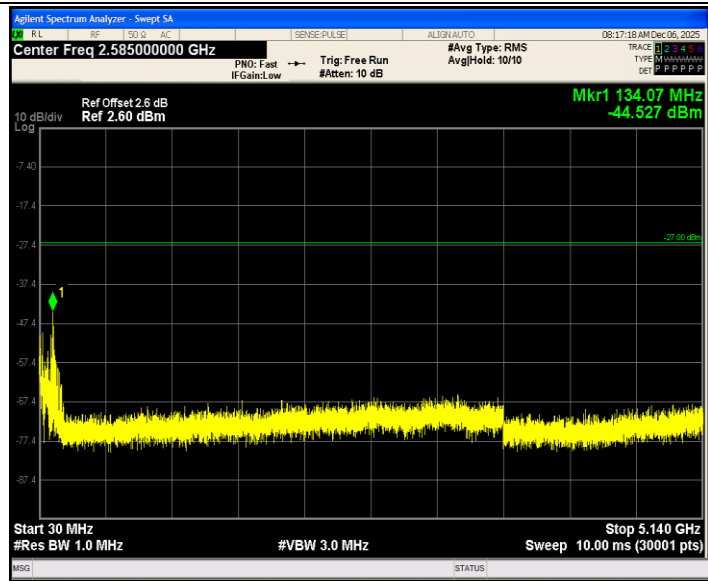
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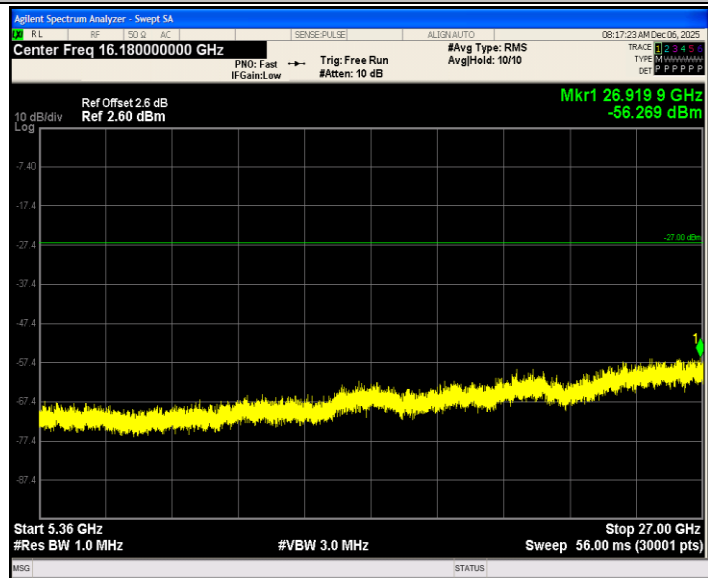
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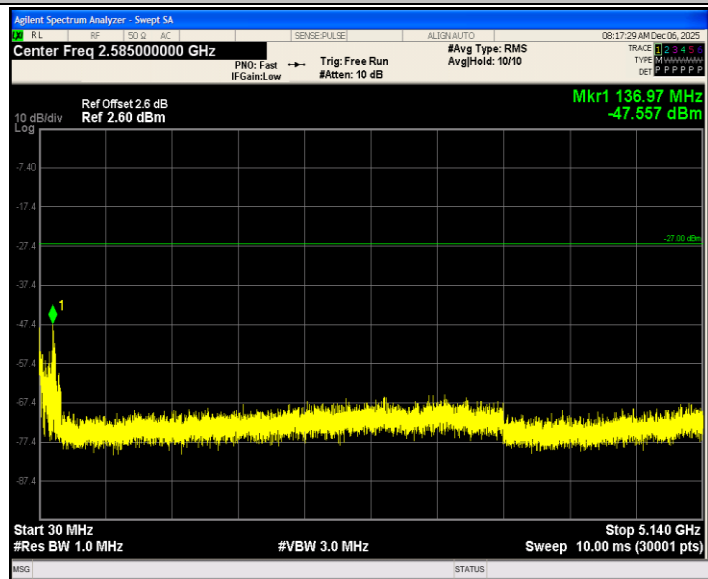
11N20SISO_Ant1_5180_30~5140



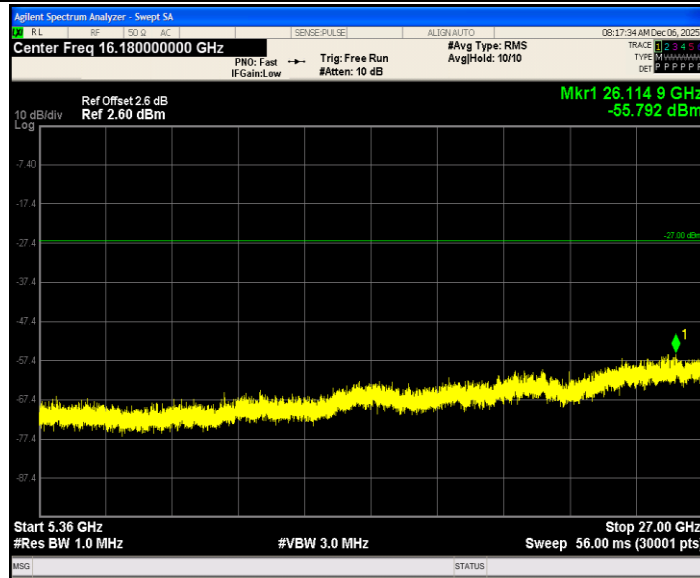
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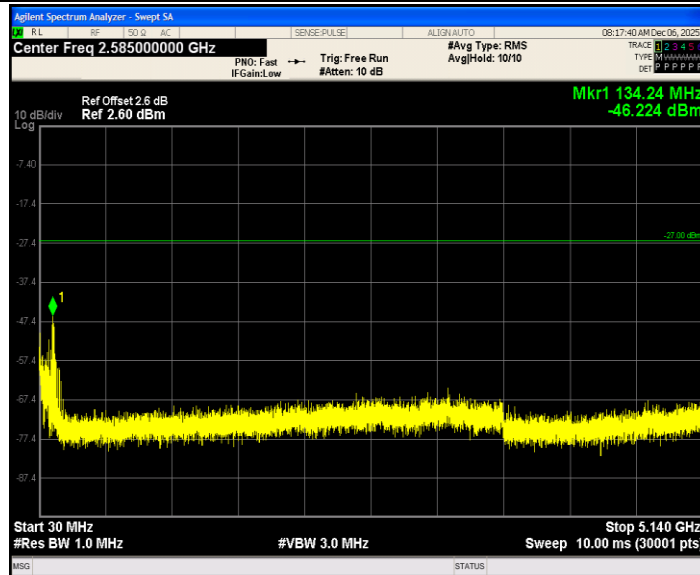
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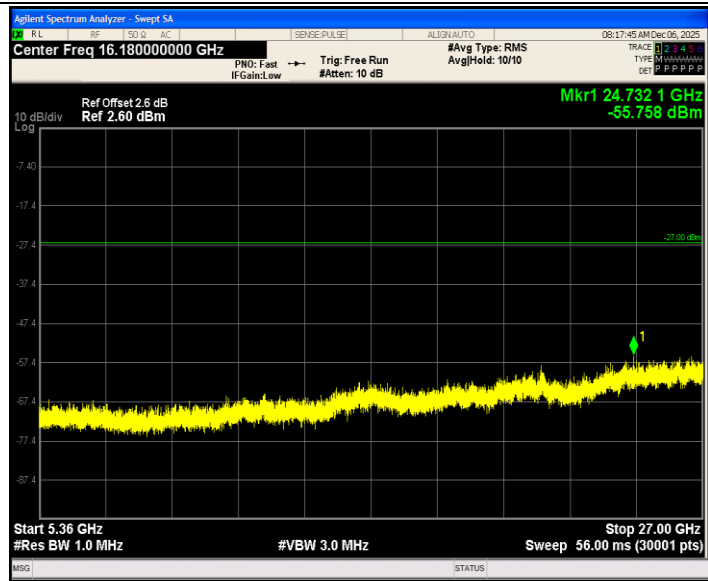
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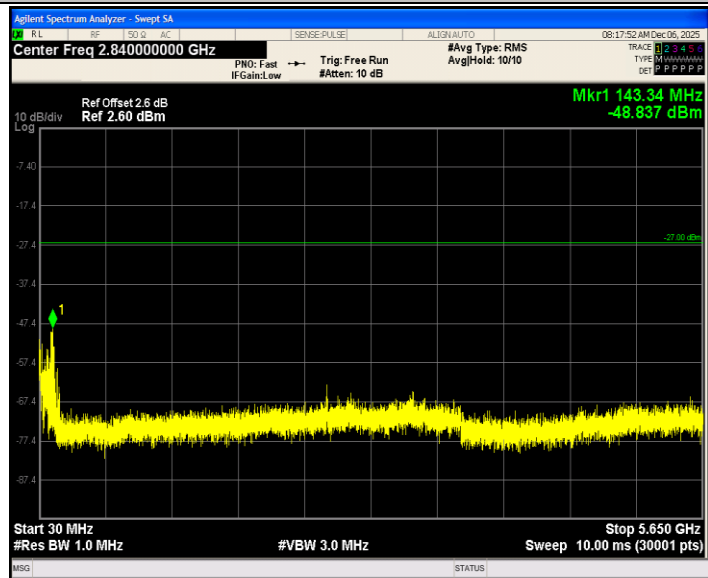
11N20SISO_Ant1_5240_30~5140



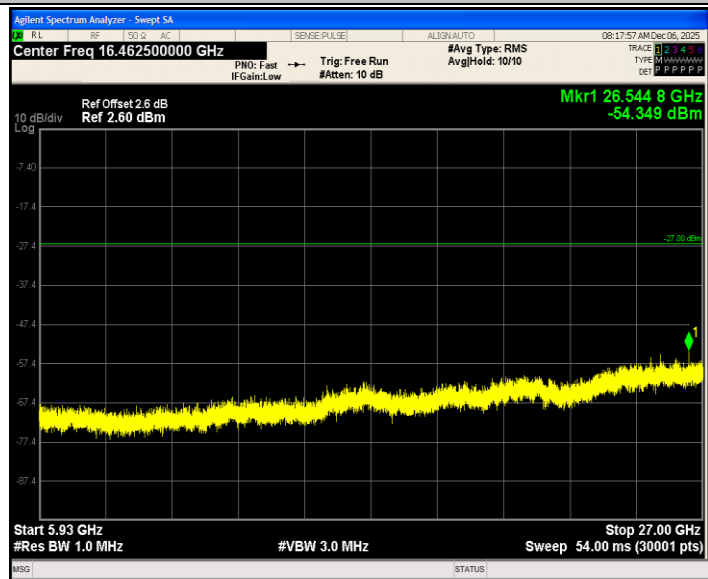
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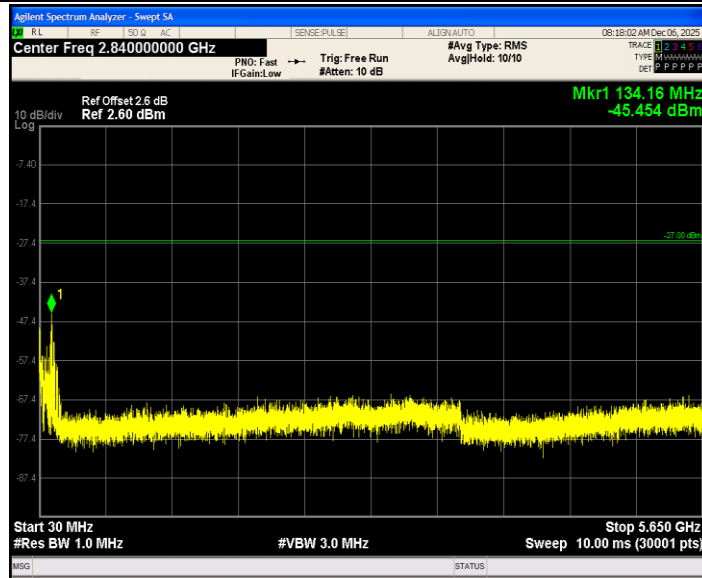
11N20SISO_Ant1_5745_30~5650



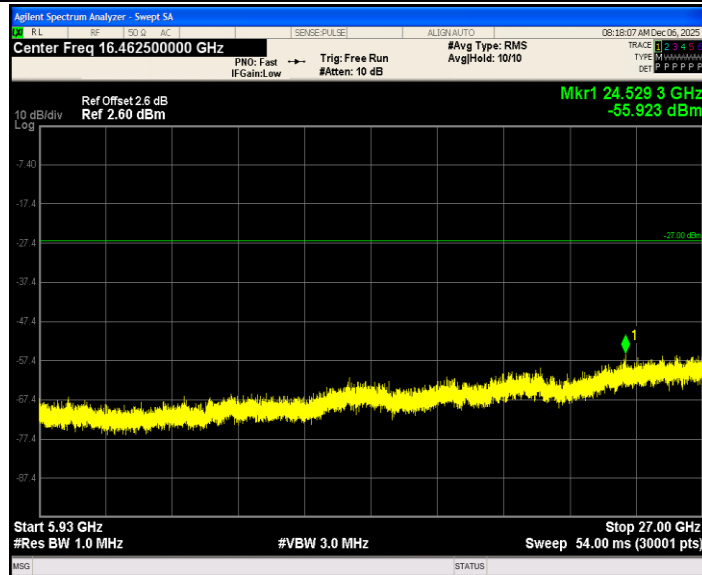
11N20SISO_Ant1_5745_5925~40000



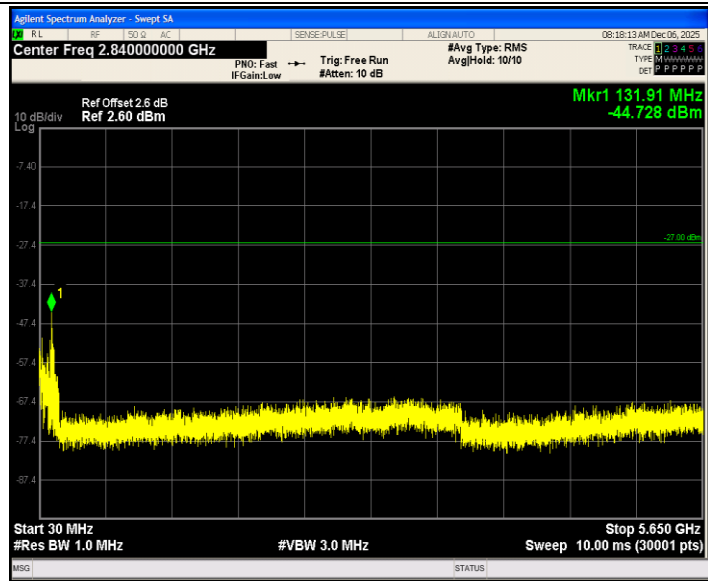
11N20SISO_Ant1_5785_30~5650



11N20SISO_Ant1_5785_5925~40000



11N20SISO_Ant1_5825_30~5650



11N20SISO_Ant1_5825_5925~40000

