

FCC Appendix RF Test Data for 5GWIFI

FCC ID : 2BT48-MS02

Company : Shenzhen Fotorgear Techonolgy Co.,Ltd.

EUT : Wireless display adapter

Model Number : MS02

Report No. : CTA25123000503

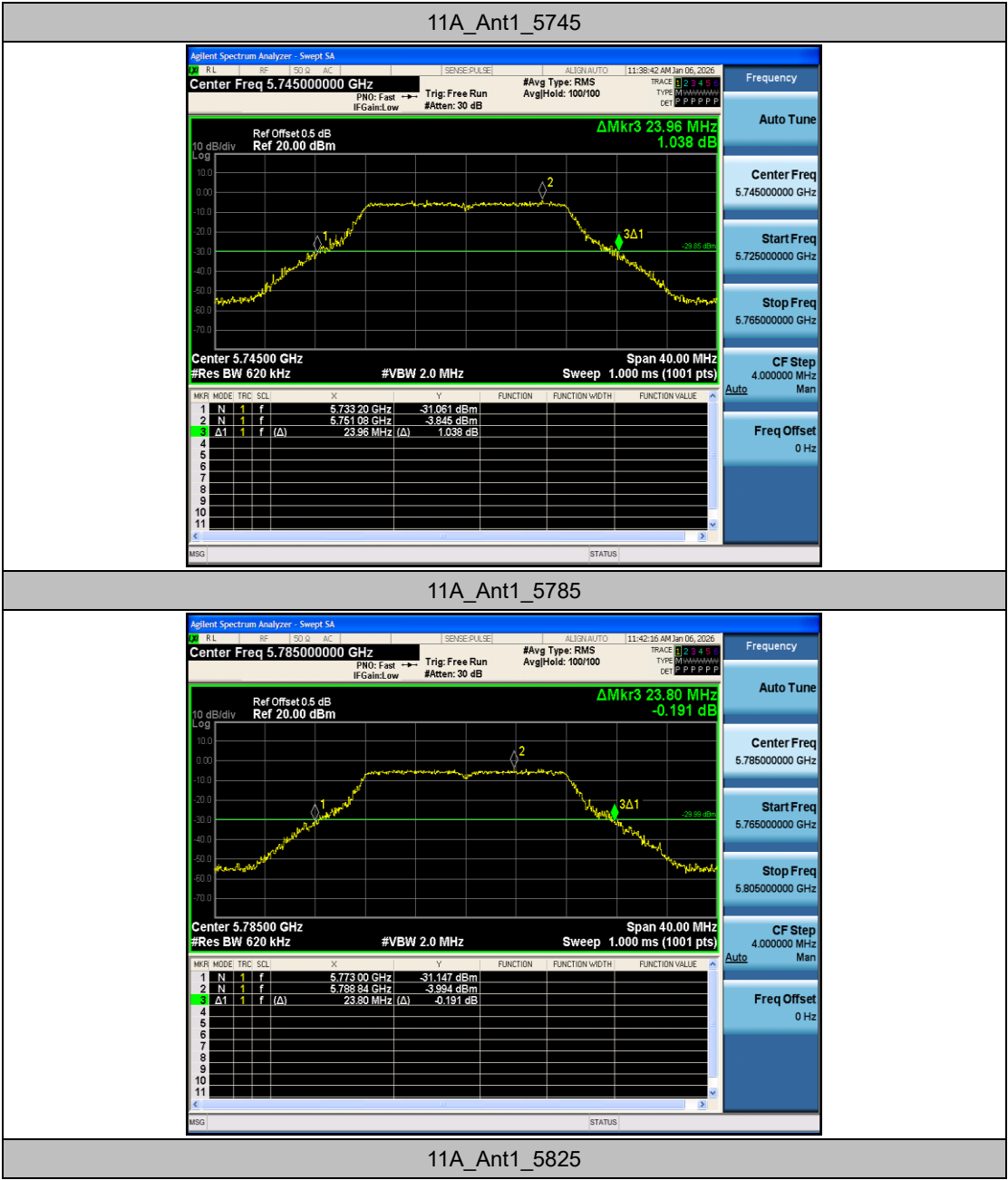
Reviewed By : Eric Wang

Appendix A1: Emission Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	23.960	5733.200	5757.160	---	---
		5785	23.800	5773.000	5796.800	---	---
		5825	24.160	5812.680	5836.840	---	---
11N20SISO	Ant1	5745	24.880	5732.280	5757.160	---	---
		5785	26.080	5771.920	5798.000	---	---
		5825	24.880	5812.280	5837.160	---	---
11N40SISO	Ant1	5755	44.800	5733.000	5777.800	---	---
		5795	44.960	5772.760	5817.720	---	---

Test Graphs





11N20SISO_Ant1_5745



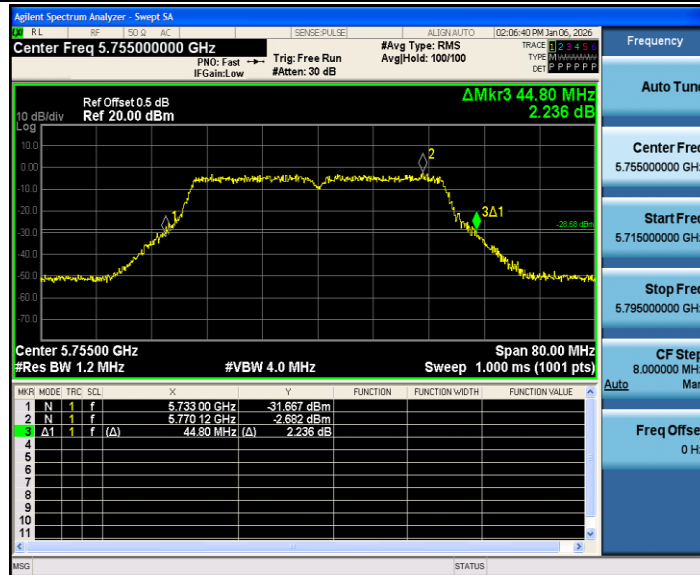
11N20SISO_Ant1_5785



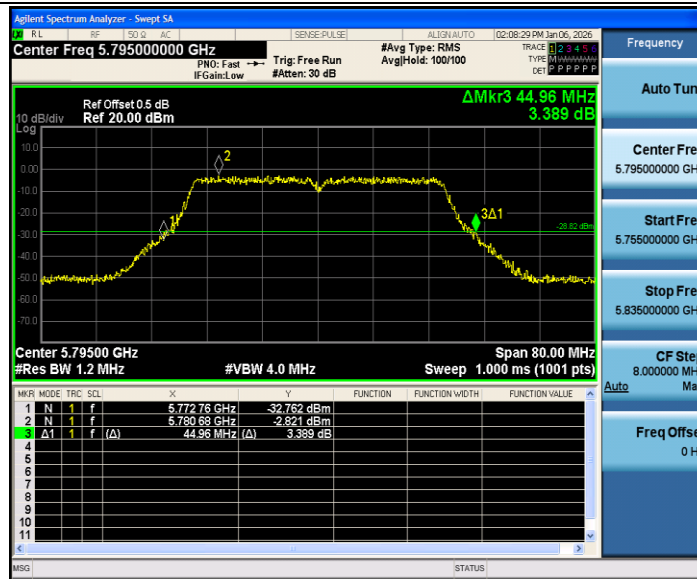
11N20SISO_Ant1_5825



11N40SISO_Ant1_5755



11N40SISO_Ant1_5795



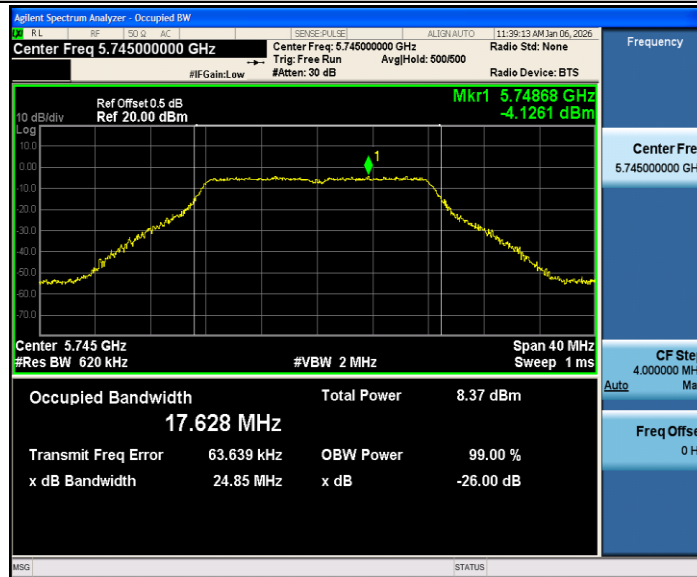
Appendix A2: Occupied channel bandwidth

Test Result

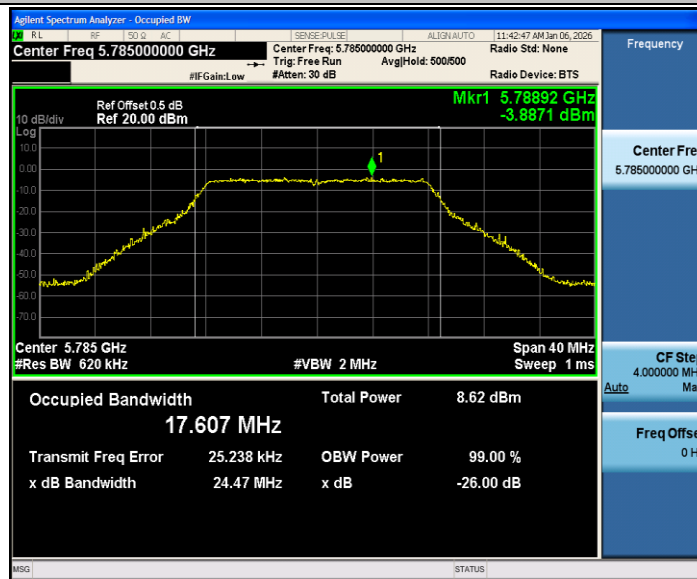
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	17.628	5736.2496	5753.8776	---	---
		5785	17.607	5776.2217	5793.8287	---	---
		5825	17.664	5816.1754	5833.8394	---	---
11N20SISO	Ant1	5745	18.685	5735.6526	5754.3376	---	---
		5785	18.612	5775.6943	5794.3063	---	---
		5825	18.671	5815.6437	5834.3147	---	---
11N40SISO	Ant1	5755	36.959	5736.6321	5773.5911	---	---
		5795	36.913	5776.5788	5813.4918	---	---

Test Graphs

11A_Ant1_5745



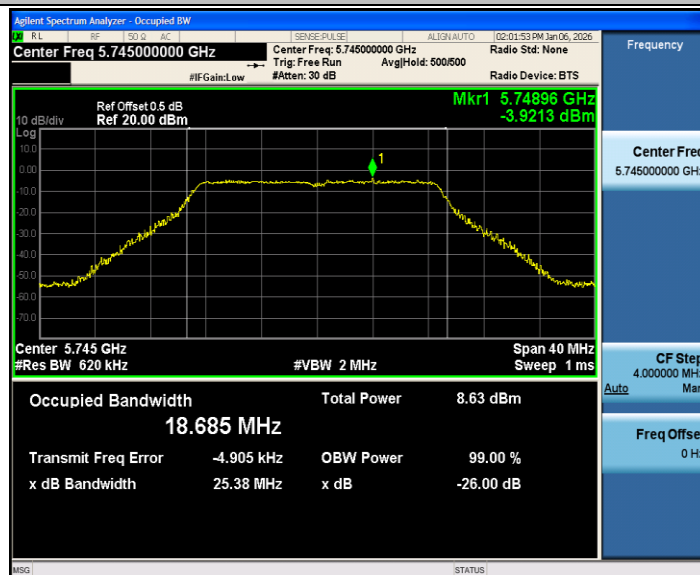
11A_Ant1_5785



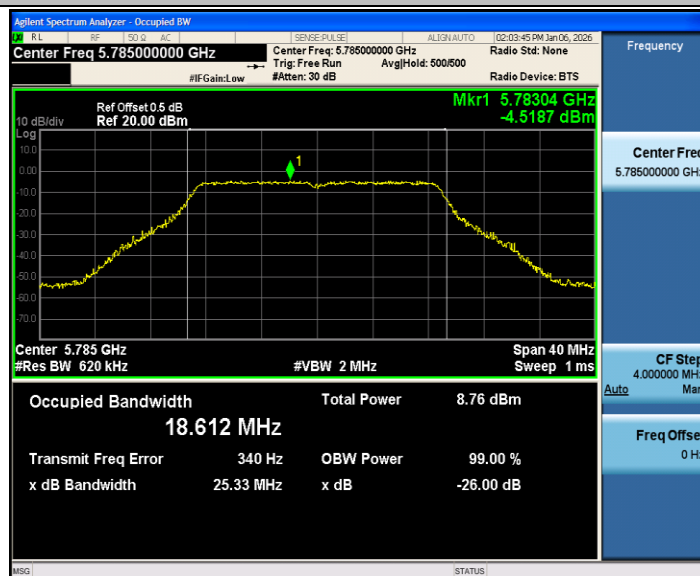
11A_Ant1_5825



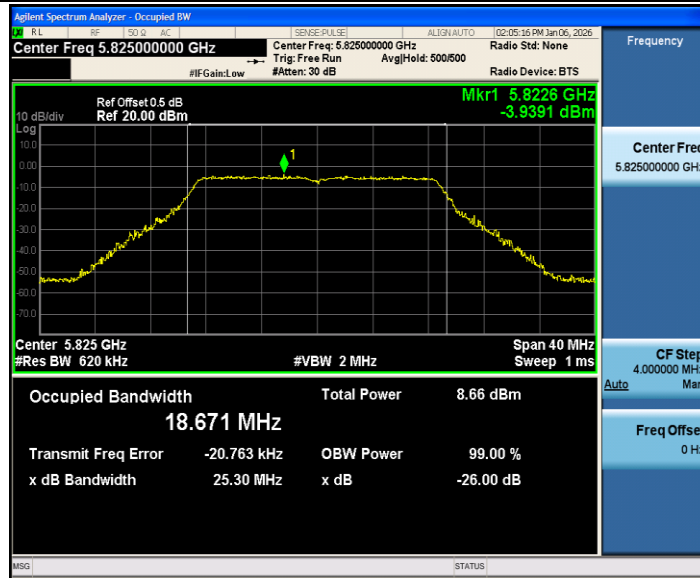
11N20SISO_Ant1_5745



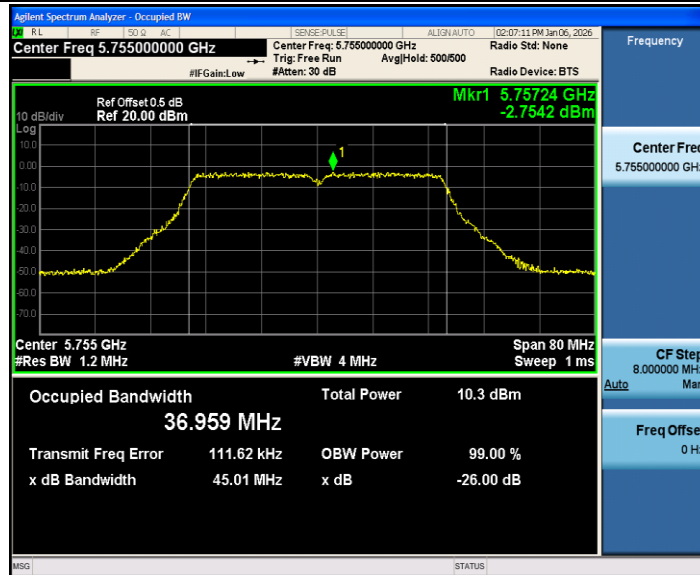
11N20SISO_Ant1_5785



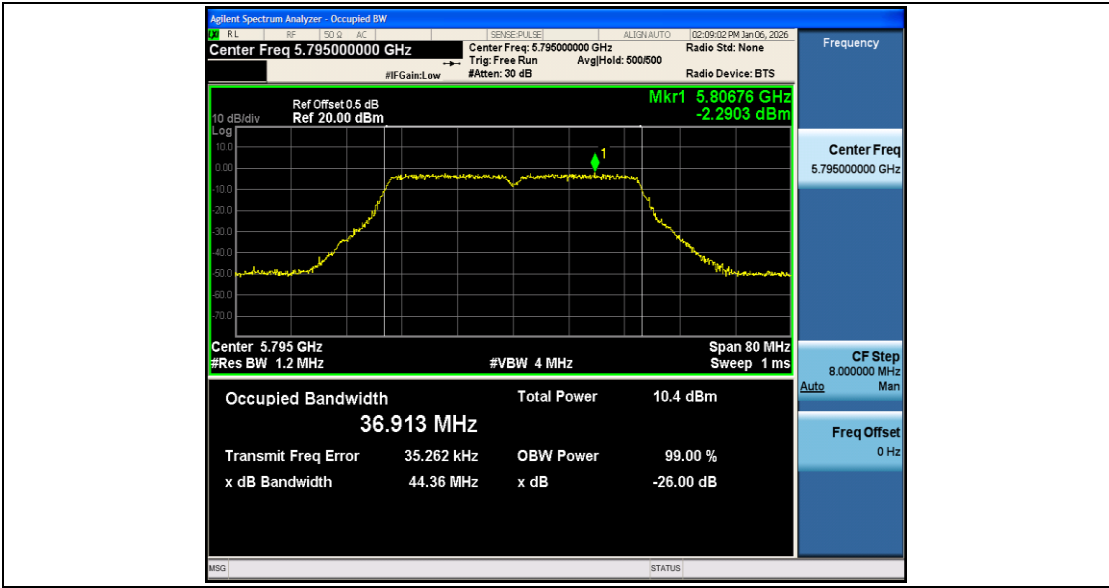
11N20SISO_Ant1_5825



11N40SISO_Ant1_5755



11N40SISO_Ant1_5795

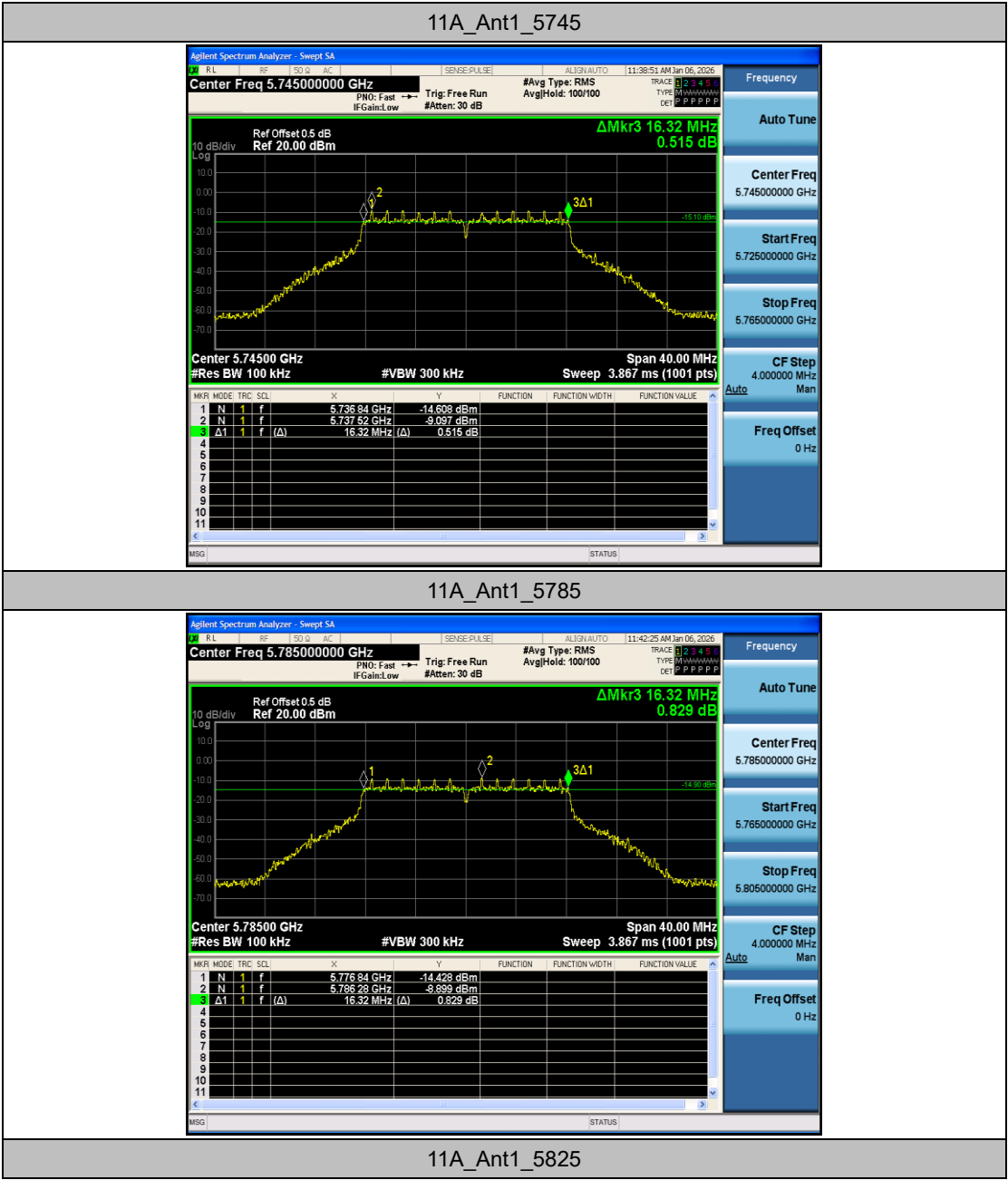


Appendix A3: Min emission bandwidth

Test Result B4

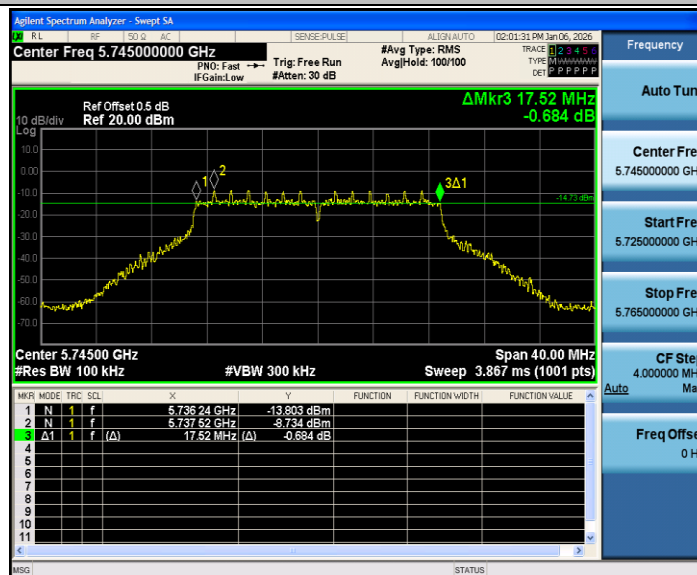
TestMode	Antenna	Freq(MHz)	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	16.320	5736.840	5753.160	0.5	PASS
		5785	16.320	5776.840	5793.160	0.5	PASS
		5825	16.320	5816.840	5833.160	0.5	PASS
11N20SISO	Ant1	5745	17.520	5736.240	5753.760	0.5	PASS
		5785	17.520	5776.240	5793.760	0.5	PASS
		5825	17.520	5816.240	5833.760	0.5	PASS
11N40SISO	Ant1	5755	36.320	5736.840	5773.160	0.5	PASS
		5795	36.320	5776.840	5813.160	0.5	PASS

Test Graphs B4





11N20SISO_Ant1_5745



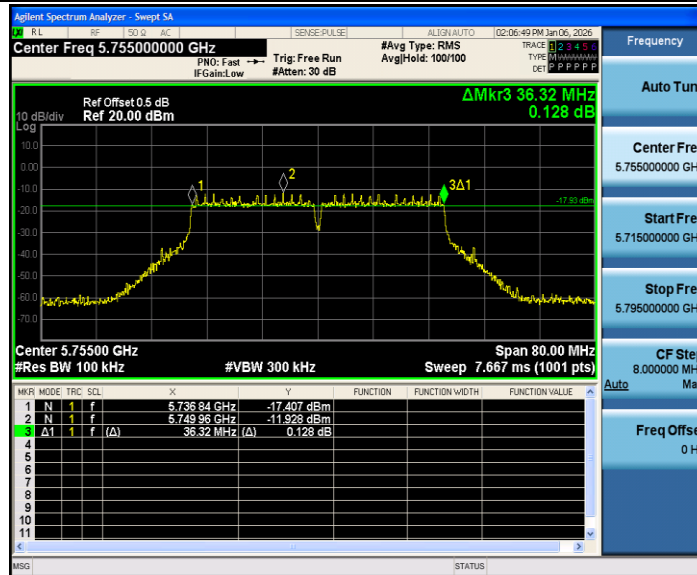
11N20SISO_Ant1_5785



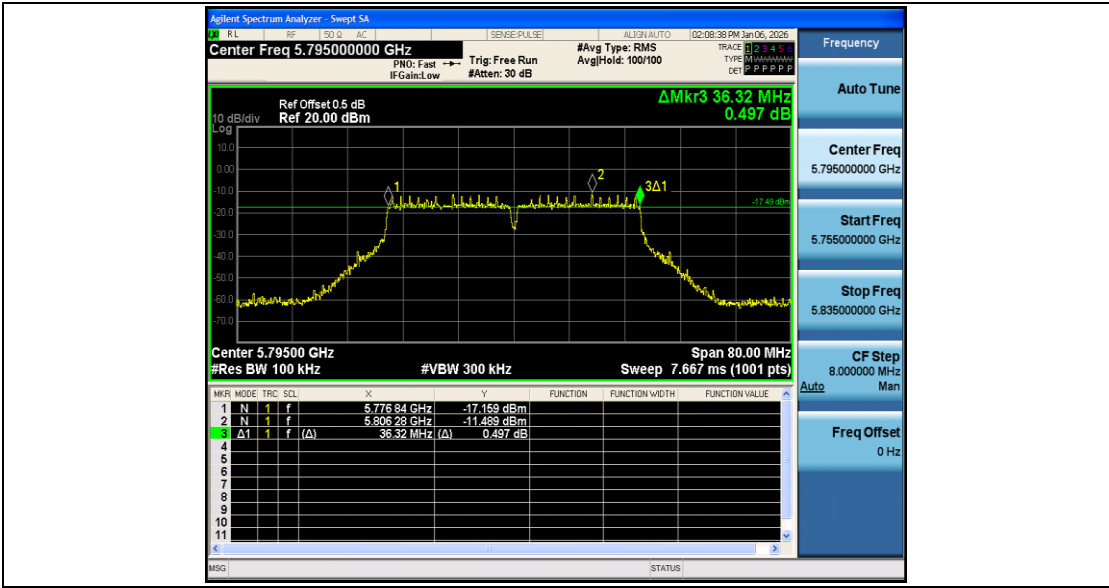
11N20SISO_Ant1_5825



11N40SISO_Ant1_5755



11N40SISO_Ant1_5795



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	5745	0.15	0.19	78.95	1.03	---	---
		5785	0.15	0.20	75.00	1.25	---	---
		5825	0.15	0.20	75.00	1.25	---	---
11N20SISO	Ant1	5745	0.18	0.23	78.26	1.06	---	---
		5785	0.18	0.23	78.26	1.06	---	---
		5825	0.18	0.22	81.82	0.87	---	---
11N40SISO	Ant1	5755	0.18	0.23	78.26	1.06	---	---
		5795	0.18	0.22	81.82	0.87	---	---

11A_Ant1_5745

Agilent Spectrum Analyzer - Swept SA

Center Freq 5.745000000 GHz

Trig Delay: 2.000 ms #Avg Type: RMS

Ref Offset 0.5 dB Ref 20.50 dBm

IF Gain: Low #Atten: 30 dB

ΔMkr3 190.0 μs -41.09 dB

Center 5.745000000 GHz Res BW 8 MHz #VBW 8.0 MHz Sweep 2.000 ms (1001 pts)

Span 0 Hz

CF Step 8.000000 MHz

Freq Offset 0 Hz

MFR	MODE	TRIG	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	t	830.0 μs	-5.23 dBm			
2	Δ1	1	t	150.0 μs	-22.50 dB			
3	Δ1	1	t	190.0 μs	-41.09 dB			

11A_Ant1_5785

Agilent Spectrum Analyzer - Swept SA

Center Freq 5.785000000 GHz

Trig Delay: 2.000 ms #Avg Type: RMS

Ref Offset 0.5 dB Ref 20.50 dBm

IF Gain: Low #Atten: 30 dB

ΔMkr3 200.0 μs 50.87 dB

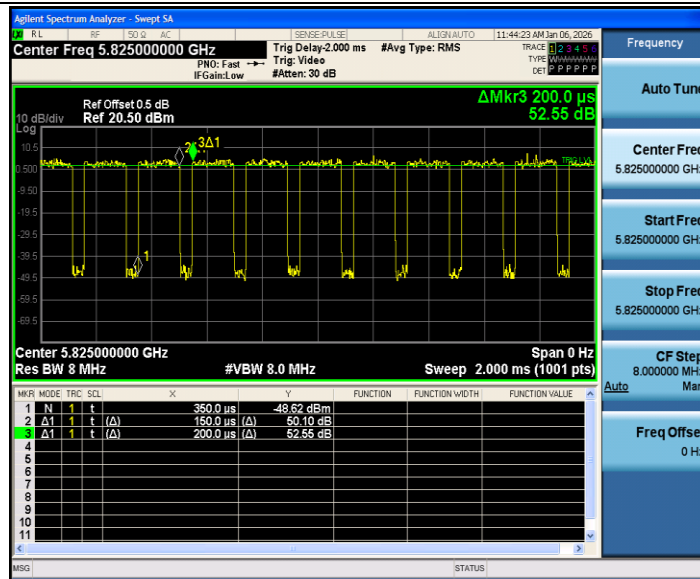
Center 5.785000000 GHz Res BW 8 MHz #VBW 8.0 MHz Sweep 2.000 ms (1001 pts)

Span 0 Hz

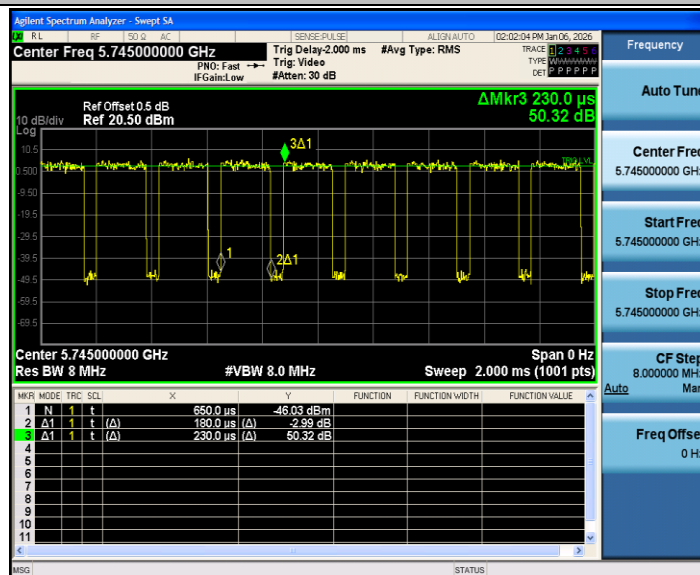
CF Step 8.000000 MHz

Freq Offset 0 Hz

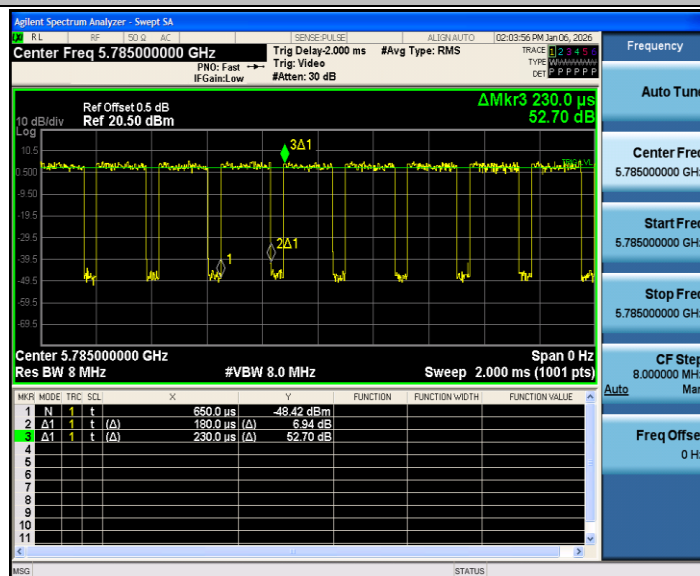
MFR	MODE	TRIG	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	t	1.380 ms	-46.56 dBm			
2	Δ1	1	t	150.0 μs	51.80 dB			
3	Δ1	1	t	200.0 μs	50.87 dB			



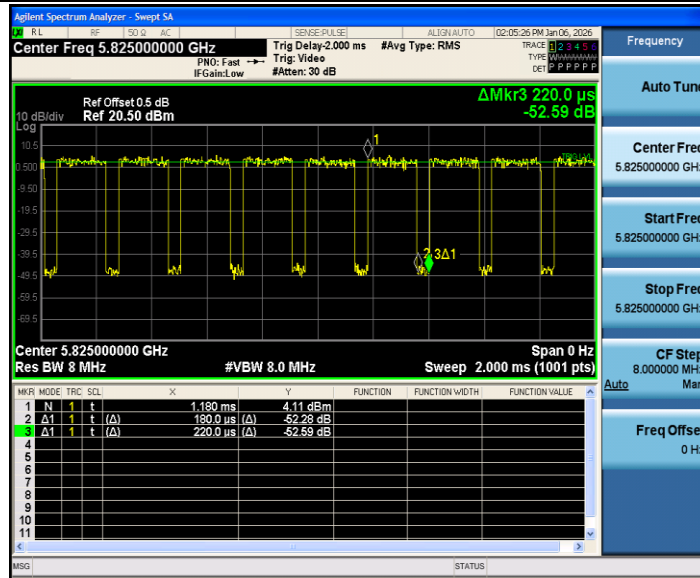
11N20SISO_Ant1_5745



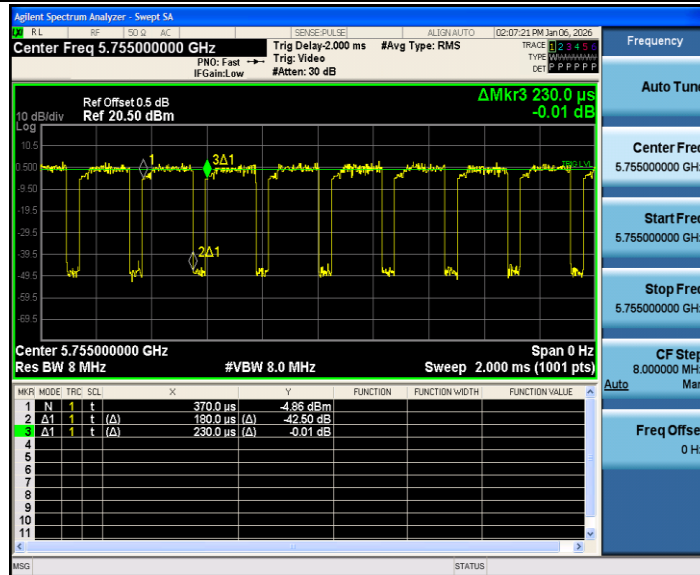
11N20SISO_Ant1_5785



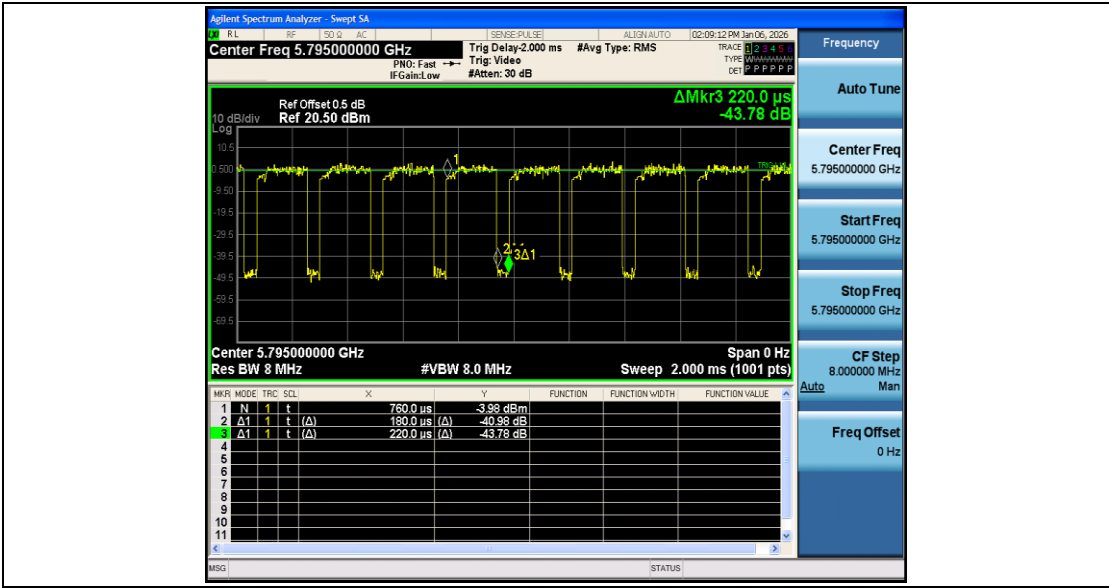
11N20SISO_Ant1_5825



11N40SISO_Ant1_5755



11N40SISO_Ant1_5795



Appendix C: Maximum conducted output power

Test Mode	Antenna	Freq(MHz)	Channel Power [dBm]	Duty Cycle [%]	DC Factor [dBm]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	5745	0.38	78.95	1.03	1.41	≤30.00	PASS
		5785	0.66	75.00	1.25	1.91	≤30.00	PASS
		5825	0.43	75.00	1.25	1.68	≤30.00	PASS
11N20SISO	Ant1	5745	0.73	78.26	1.06	1.79	≤30.00	PASS
		5785	0.87	78.26	1.06	1.93	≤30.00	PASS
		5825	0.77	81.82	0.87	1.64	≤30.00	PASS
11N40SISO	Ant1	5755	0.84	78.26	1.06	1.90	≤30.00	PASS
		5795	1.21	81.82	0.87	2.08	≤30.00	PASS

Appendix D: Maximum power spectral density

Test Result

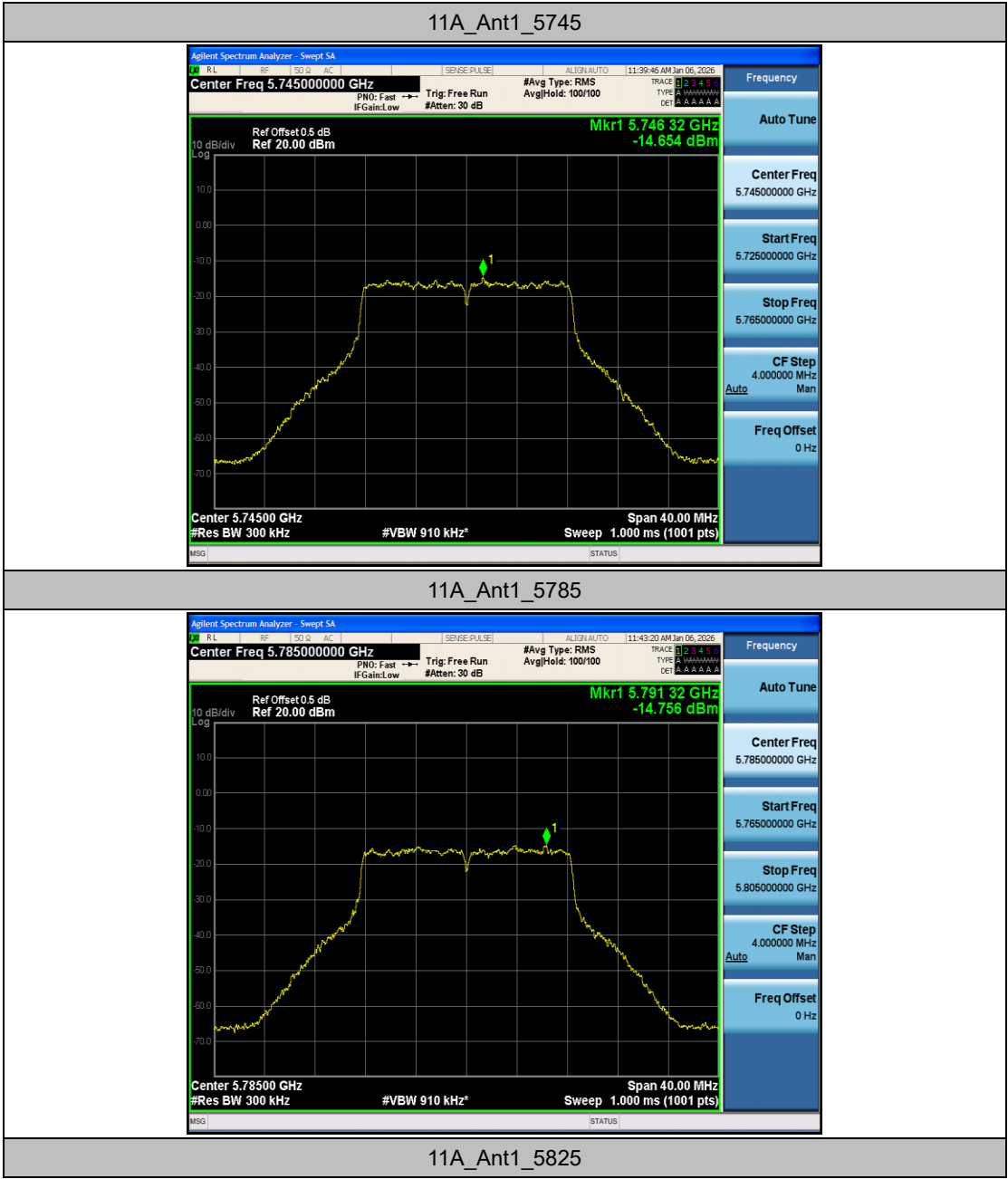
TestMode	Antenna	Freq(MHz)	Result [dBm/300KHz]	RBW Factor (dB)	Duty factor (dB)	Result [dBm/500KHz]	Limit [dBm/500KHz)	Verdict
11A	Ant1	5745	-14.654	2.22	1.03	-11.40	≤30.00	PASS
		5785	-14.756	2.22	1.25	-11.29	≤30.00	PASS
		5825	-14.529	2.22	1.25	-11.06	≤30.00	PASS
11N20SISO	Ant1	5745	-14.658	2.22	1.06	-11.38	≤30.00	PASS
		5785	-14.772	2.22	1.06	-11.49	≤30.00	PASS
		5825	-15.058	2.22	0.87	-11.97	≤30.00	PASS
11N40SISO	Ant1	5755	-17.901	2.22	1.06	-14.62	≤30.00	PASS
		5795	-17.624	2.22	0.87	-14.53	≤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).

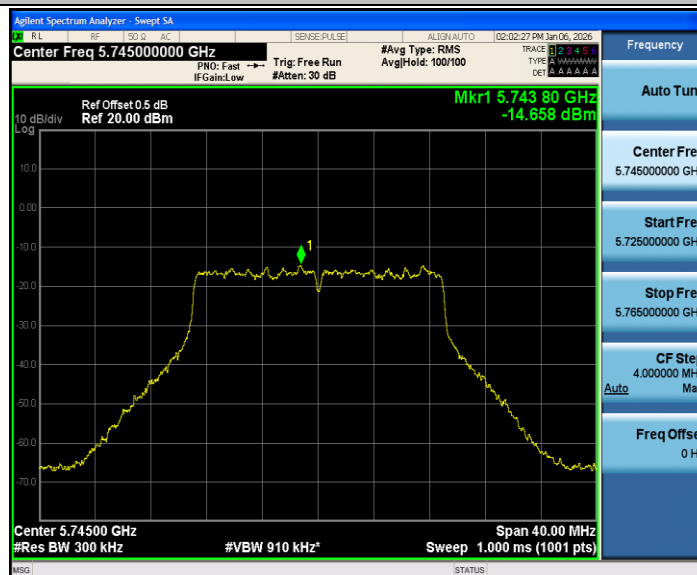
2. RBW factor= 10 log (500 KHz /300 KHz) = 2.22 dB

Test Graphs

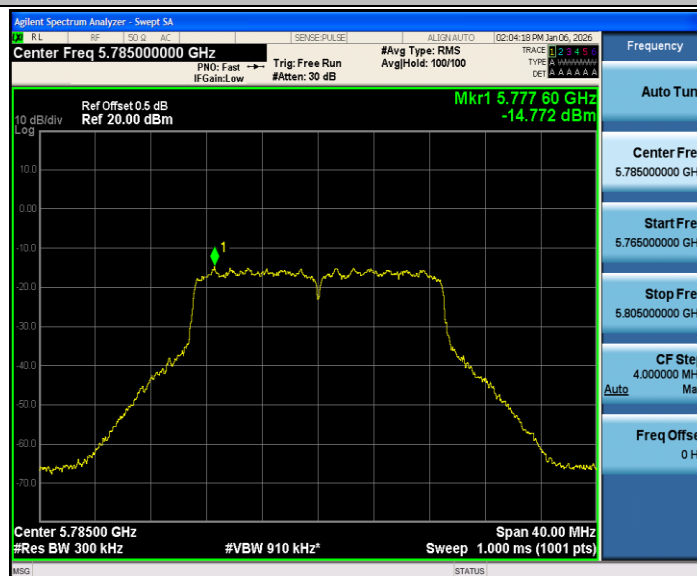




11N20SISO_Ant1_5745



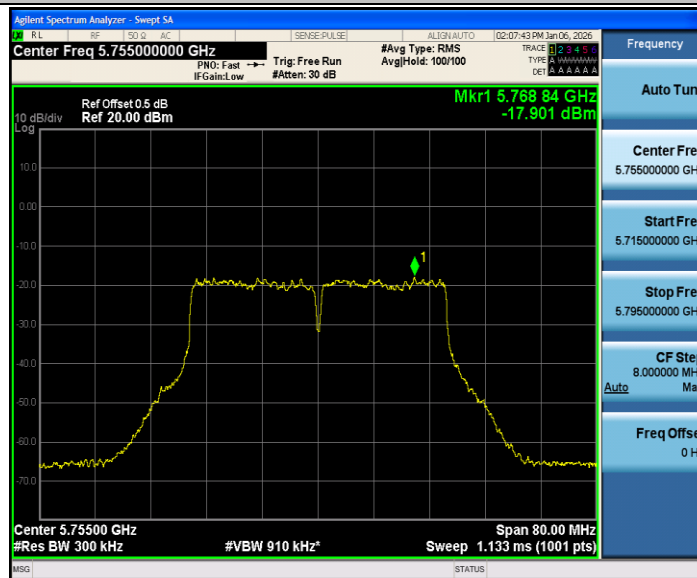
11N20SISO_Ant1_5785



11N20SISO_Ant1_5825



11N40SISO_Ant1_5755



11N40SISO_Ant1_5795



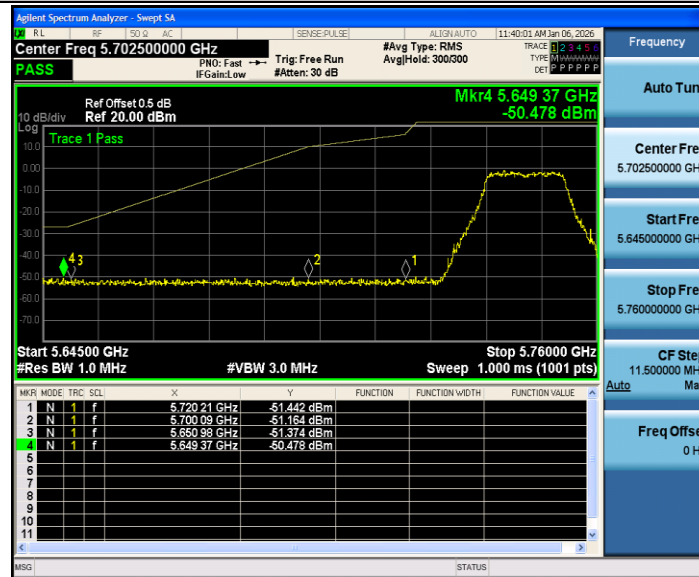
Appendix E: Band edge measurements

Test Result B4

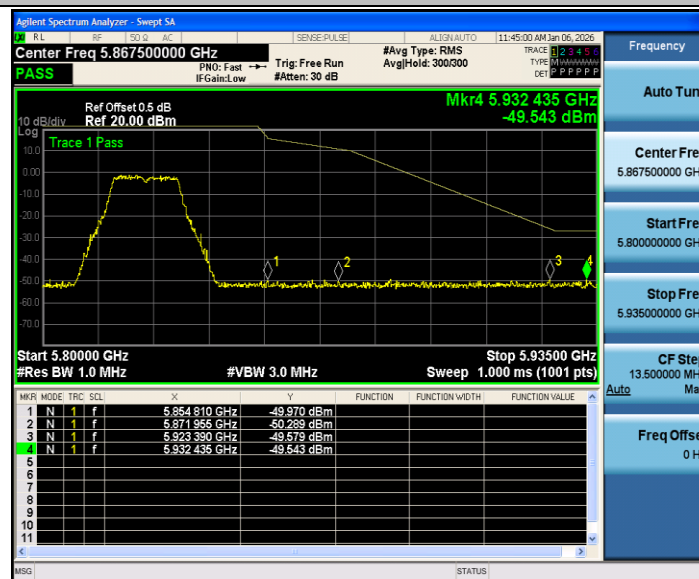
TestMode	Antenna	ChName	Freq(MHz)	FreqRange [MHz]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	Low	5745	5650~5700	-51.37	≤-26.27	PASS
				5700~5720	-51.16	≤10.02	PASS
				5720~5725	-51.44	≤16.08	PASS
				5760~5650	-50.48	≤-27	PASS
		High	5825	5850~5855	-49.97	≤16.03	PASS
				5855~5875	-50.29	≤10.85	PASS
				5875~5925	-49.58	≤-25.81	PASS
				5925~5935	-49.54	≤-27	PASS
11N20SI SO	Ant1	Low	5745	5650~5700	-52.08	≤-26.96	PASS
				5700~5720	-50.3	≤10.93	PASS
				5720~5725	-51.06	≤16.87	PASS
				5760~5650	-50.2	≤-27	PASS
		High	5825	5850~5855	-51.95	≤15.73	PASS
				5855~5875	-50.01	≤10.13	PASS
				5875~5925	-49.82	≤-26.51	PASS
				5925~5935	-50.4	≤-27	PASS
11N40SI SO	Ant1	Low	5755	5650~5700	-51.2	≤-26.70	PASS
				5700~5720	-51.6	≤10.17	PASS
				5720~5725	-50.45	≤16.97	PASS
				5780~5650	-51.43	≤-27	PASS
		High	5795	5850~5855	-51.11	≤15.66	PASS
				5855~5875	-50.07	≤11.54	PASS
				5875~5925	-51.68	≤-26.95	PASS
				5925~5935	-49.05	≤-27	PASS

Test Graphs B4

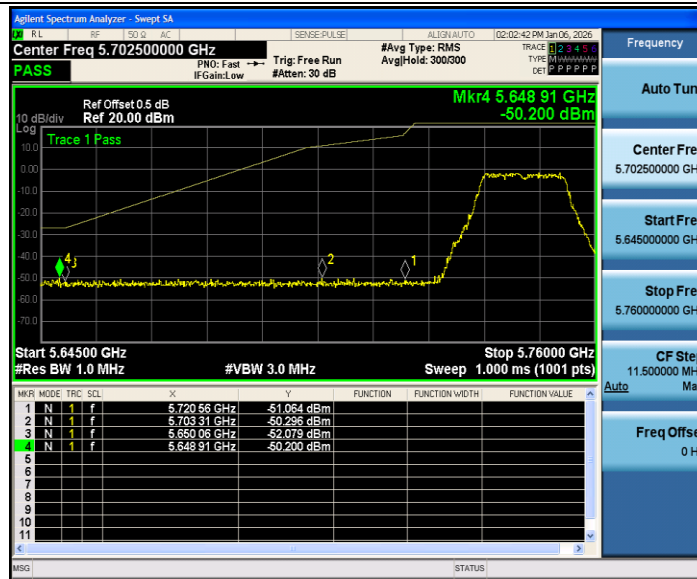
11A_Ant1_Low_5745



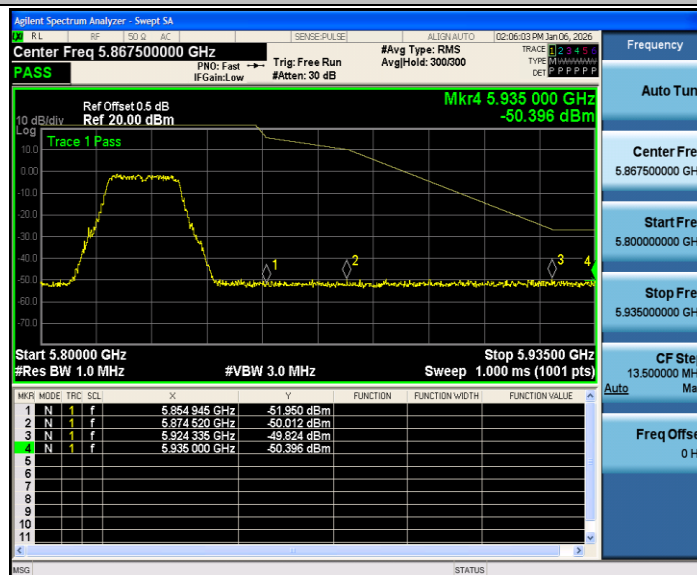
11A_Ant1_High_5825



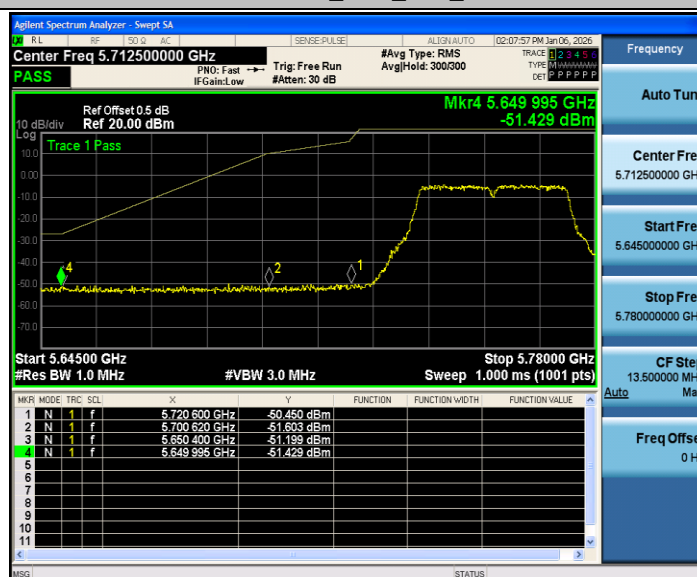
11N20SISO_Ant1_Low_5745



11N20SISO_Ant1_High_5825



11N40SISO_Ant1_Low_5755



11N40SISO_Ant1_High_5795

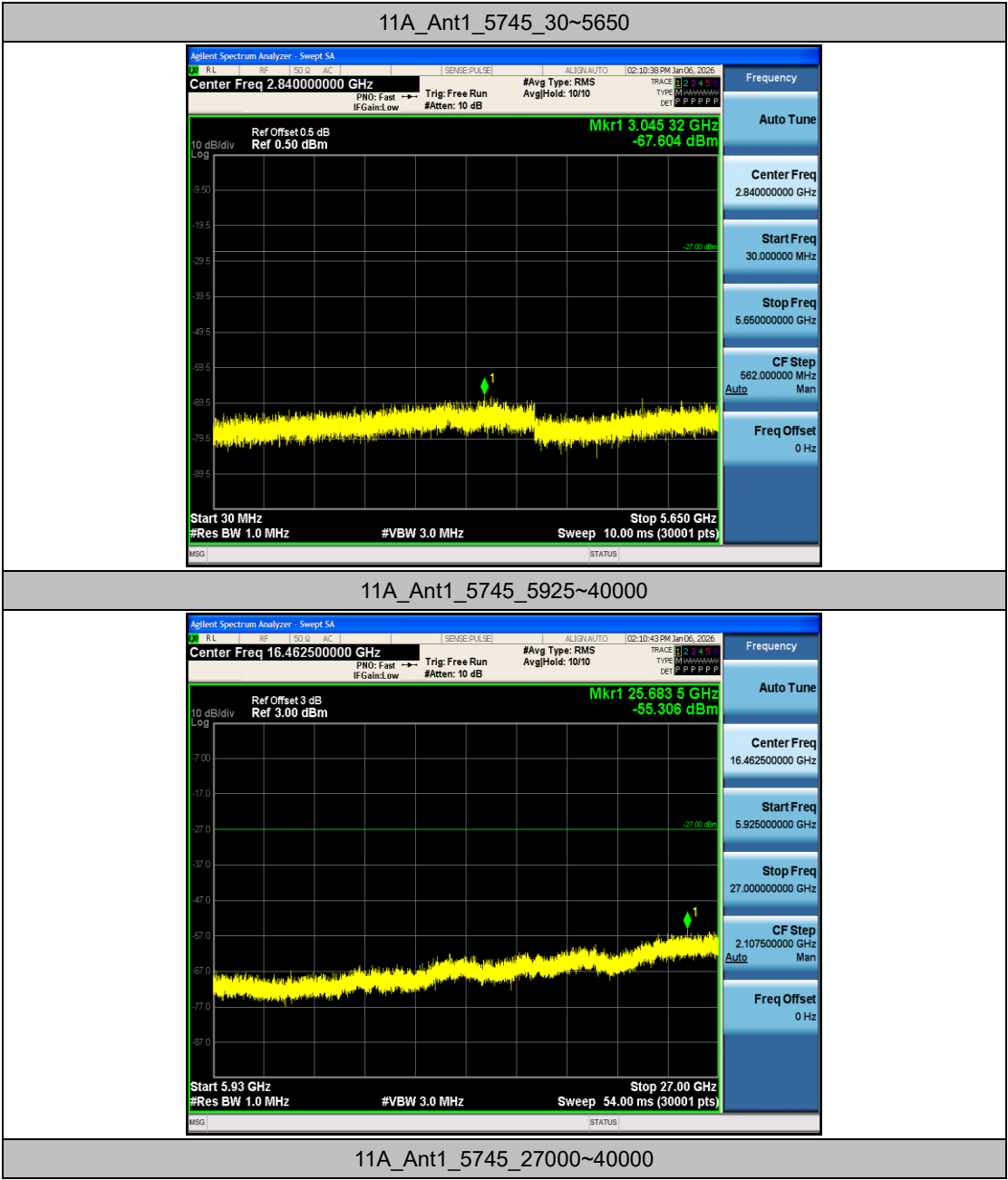


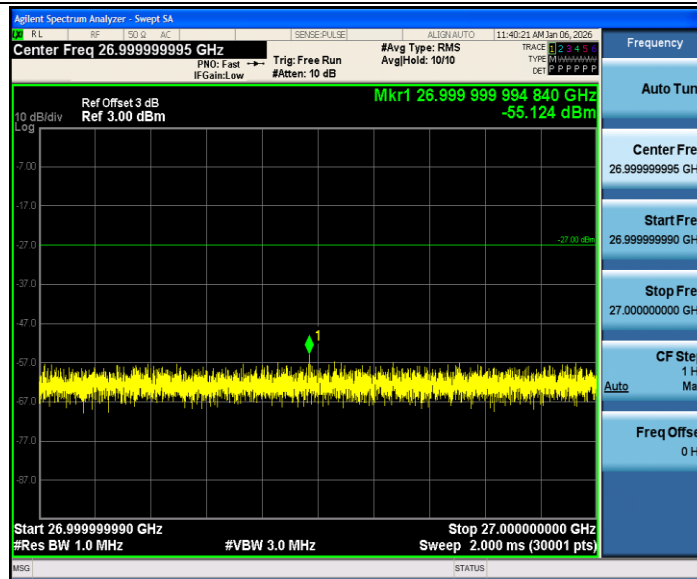
Appendix F: Conducted Spurious Emission

Test Result

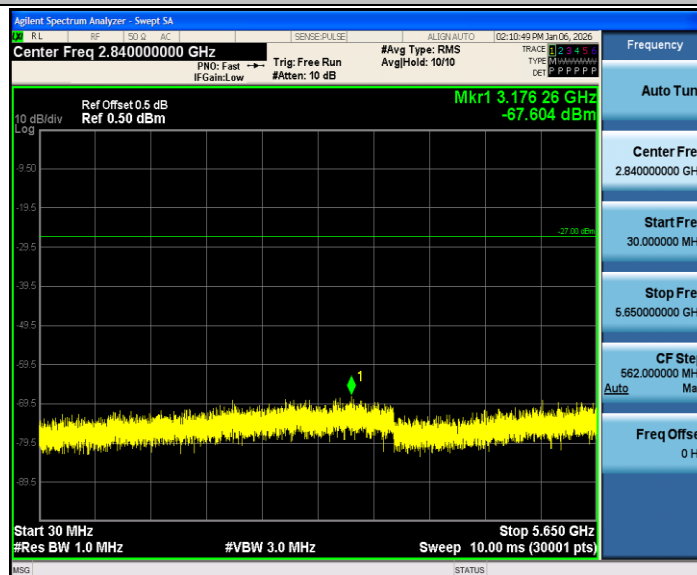
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	Max. Fre [MHz]	Max. Level [dBm]	Limit [dBm]	Verdict
11A	Ant1	5745	30~5650	3045.32	-67.6	≤-27	PASS
			5925~40000	25683.52	-55.31	≤-27	PASS
			27000~40000	27000	-55.12	≤-27	PASS
		5785	30~5650	3176.26	-67.6	≤-27	PASS
			5925~40000	26533.54	-55.42	≤-27	PASS
		5825	30~5650	3167.27	-66.88	≤-27	PASS
			5925~40000	25739.72	-55.16	≤-27	PASS
11N20SISO	Ant1	5745	30~5650	2539.14	-68.2	≤-27	PASS
			5925~40000	26988.76	-55.59	≤-27	PASS
		5785	30~5650	3140.86	-66.91	≤-27	PASS
			5925~40000	26619.95	-55.57	≤-27	PASS
		5825	30~5650	3235.27	-67.56	≤-27	PASS
			5925~40000	25646.28	-54.88	≤-27	PASS
11N40SISO	Ant1	5755	30~5650	2664.28	-68.09	≤-27	PASS
			5925~40000	25748.15	-55.57	≤-27	PASS
		5795	30~5650	3165.4	-67.57	≤-27	PASS
			5925~40000	26983.84	-55.1	≤-27	PASS

Test Graphs





11A_Ant1_5785_30~5650



11A_Ant1_5785_5925~40000

