Appendix B

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: Smart switch

Test Model: SHELLY Plus i4

Environmental Conditions

Temperature:	23.5 ° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Kay Hu
Supervised by:	Li Huan

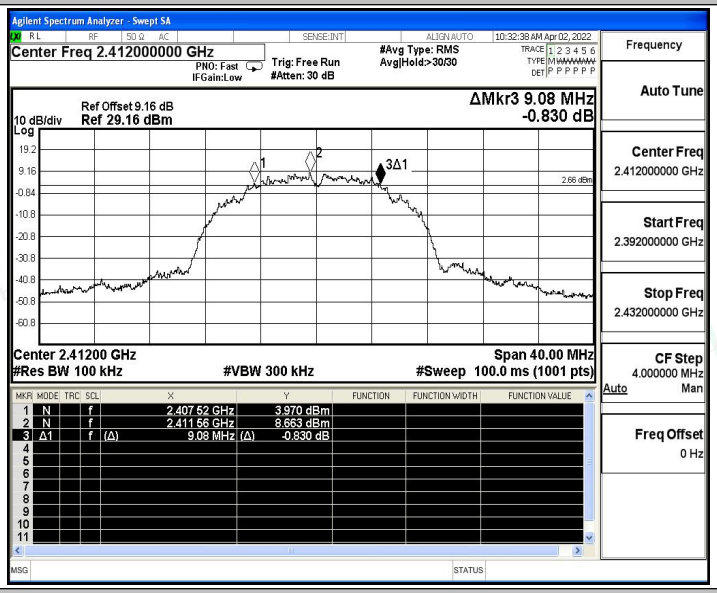
B.1 DTS Bandwidth

Test Result

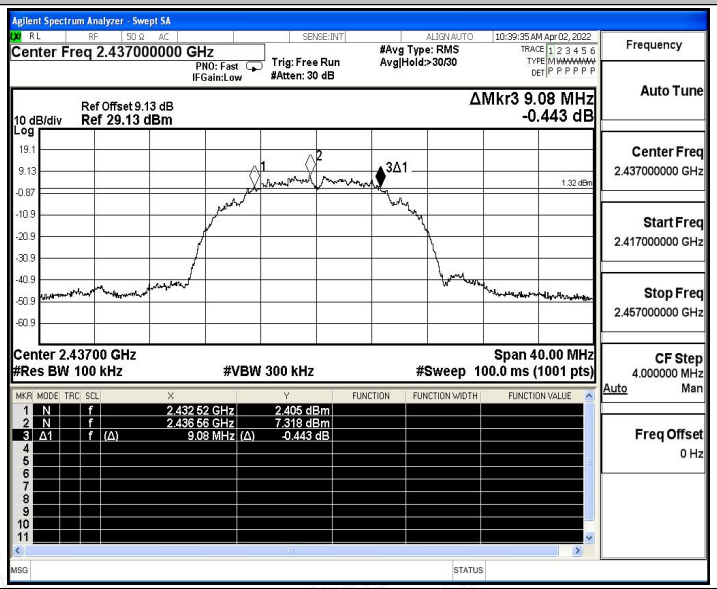
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	9.080	2407.520	2416.600	0.5	PASS
		2437	9.080	2432.520	2441.600	0.5	PASS
		2462	9.080	2457.520	2466.600	0.5	PASS
11G	Ant1	2412	16.400	2403.840	2420.240	0.5	PASS
		2437	16.360	2428.880	2445.240	0.5	PASS
		2462	16.400	2453.840	2470.240	0.5	PASS
11N20SISO	Ant1	2412	17.000	2403.520	2420.520	0.5	PASS
		2437	17.000	2428.520	2445.520	0.5	PASS
		2462	17.000	2453.520	2470.520	0.5	PASS
11N40SISO	Ant1	2422	33.200	2405.520	2438.720	0.5	PASS
		2437	33.280	2420.440	2453.720	0.5	PASS
		2452	32.800	2435.520	2468.320	0.5	PASS

Test Graphs

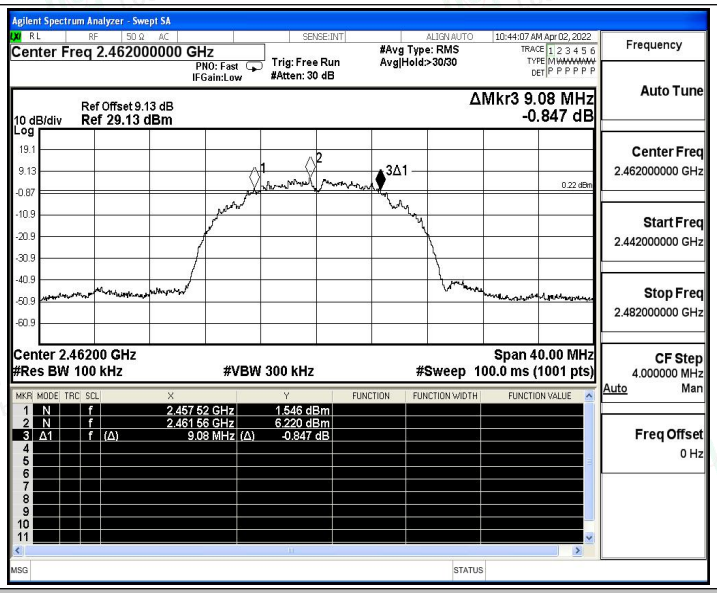
11B_Ant1_2412



11B_Ant1_2437



11B_Ant1_2462



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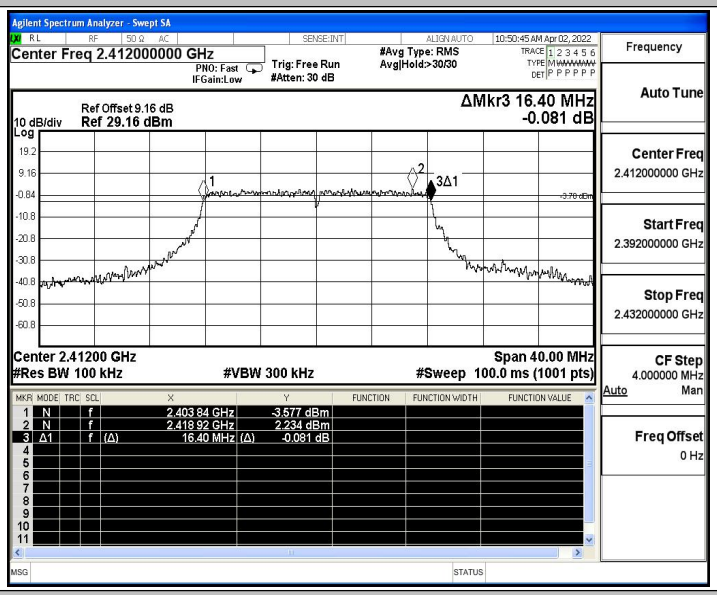

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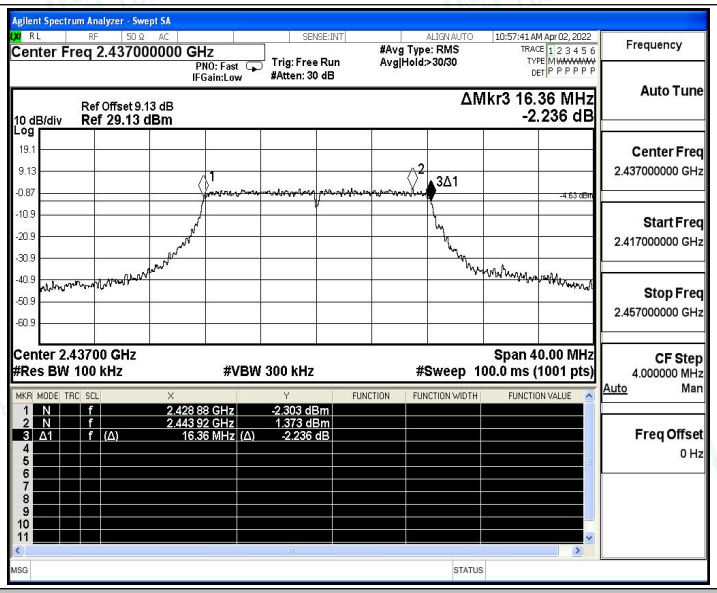

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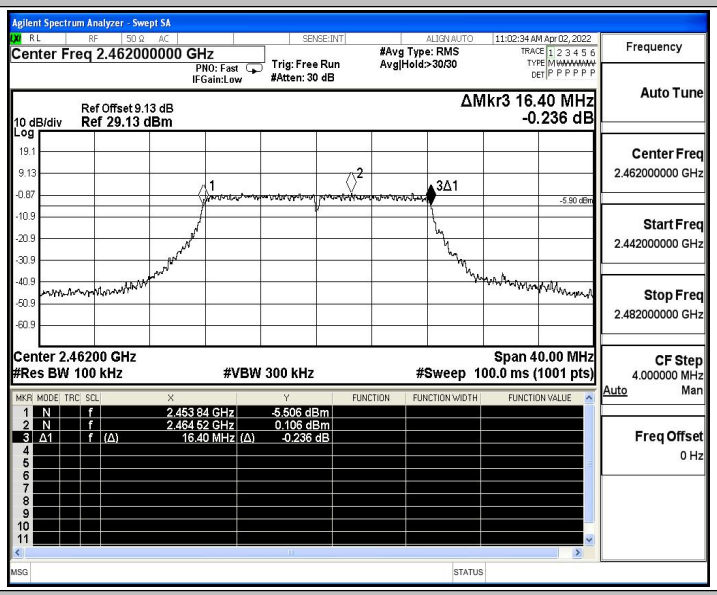

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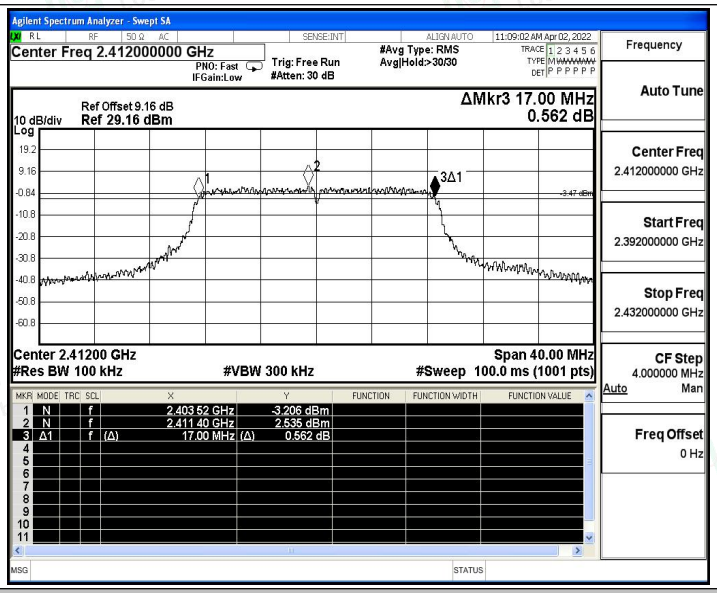

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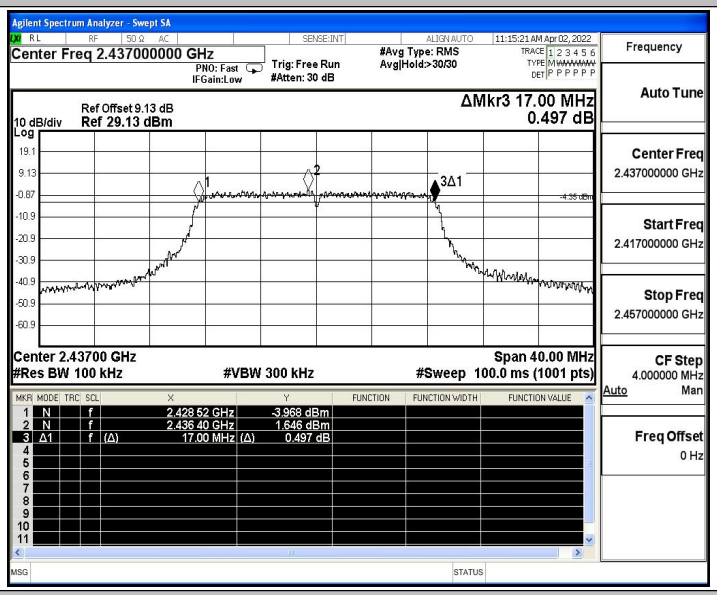

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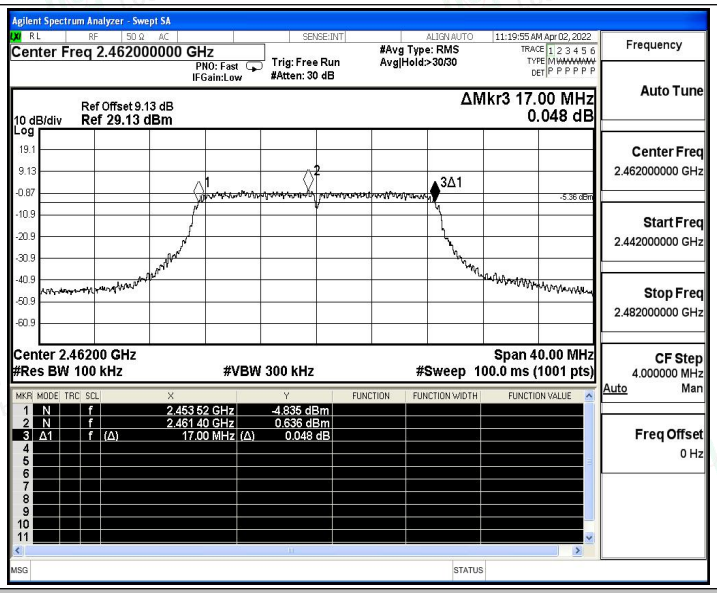
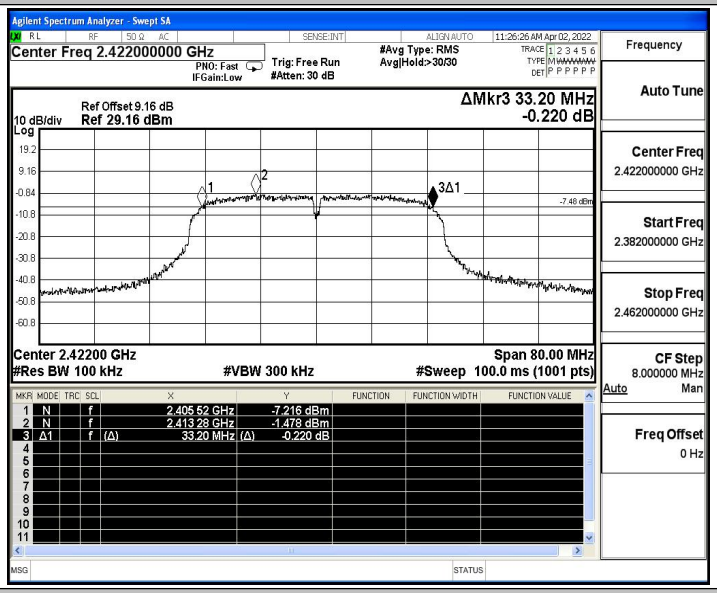


11N40SISO_Ant1_2422



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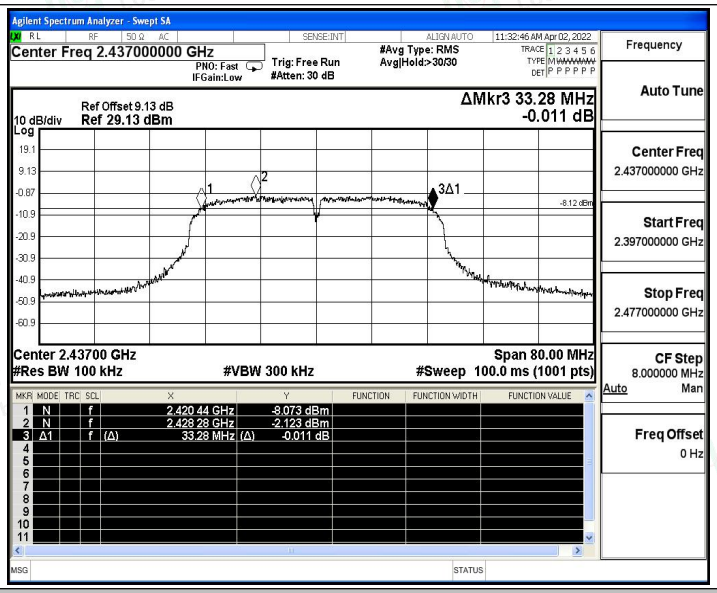
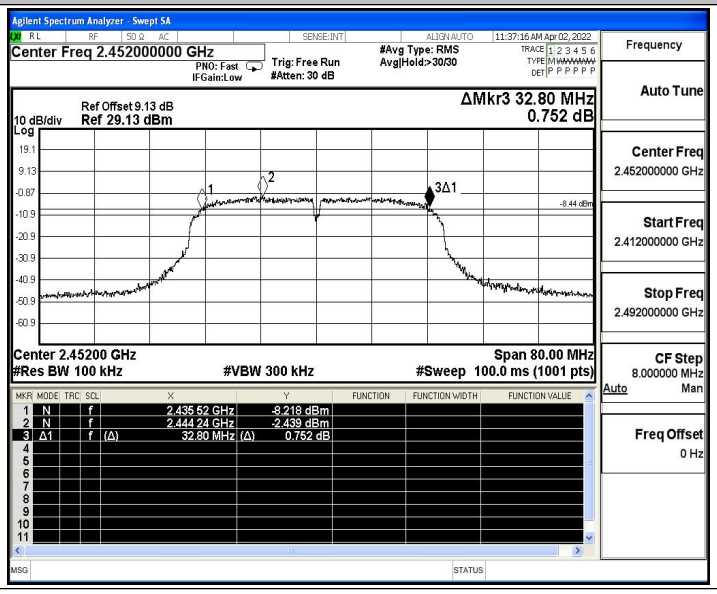


11N40SISO_Ant1_2452



B.2 Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	2412	23.89	≤30.00	PASS
		2437	22.53	≤30.00	PASS
		2462	21.35	≤30.00	PASS
11G	Ant1	2412	23.52	≤30.00	PASS
		2437	22.64	≤30.00	PASS
		2462	21.57	≤30.00	PASS
11N20SISO	Ant1	2412	23.70	≤30.00	PASS
		2437	22.72	≤30.00	PASS
		2462	21.74	≤30.00	PASS
11N40SISO	Ant1	2422	23.24	≤30.00	PASS
		2437	22.60	≤30.00	PASS
		2452	22.07	≤30.00	PASS

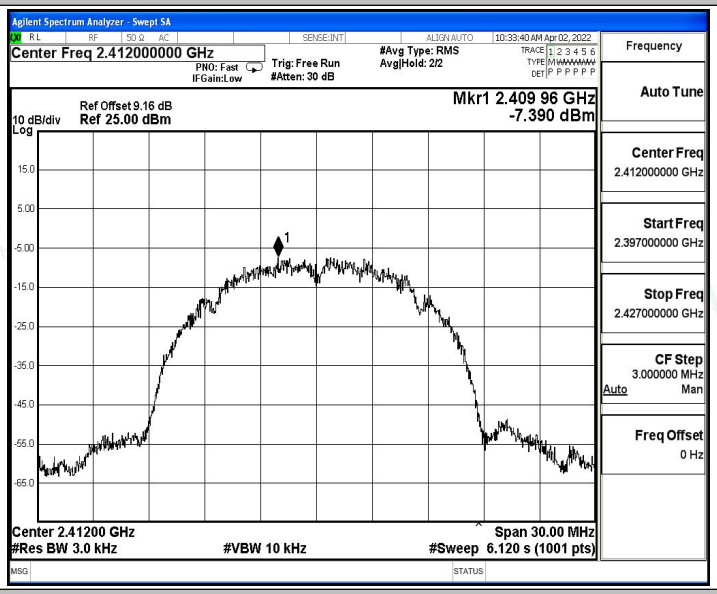
B.3 Maximum power spectral density

Test Result

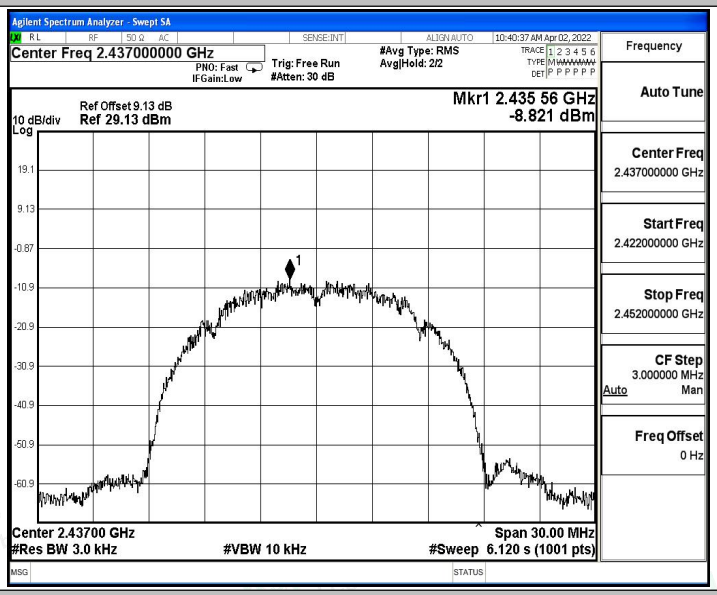
TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-7.39	≤8.00	PASS
		2437	-8.82	≤8.00	PASS
		2462	-9.82	≤8.00	PASS
11G	Ant1	2412	-12.31	≤8.00	PASS
		2437	-13	≤8.00	PASS
		2462	-14.13	≤8.00	PASS
11N20SISO	Ant1	2412	-12.68	≤8.00	PASS
		2437	-13.62	≤8.00	PASS
		2462	-14.66	≤8.00	PASS
11N40SISO	Ant1	2422	-13.56	≤8.00	PASS
		2437	-15.61	≤8.00	PASS
		2452	-15.49	≤8.00	PASS

Test Graphs

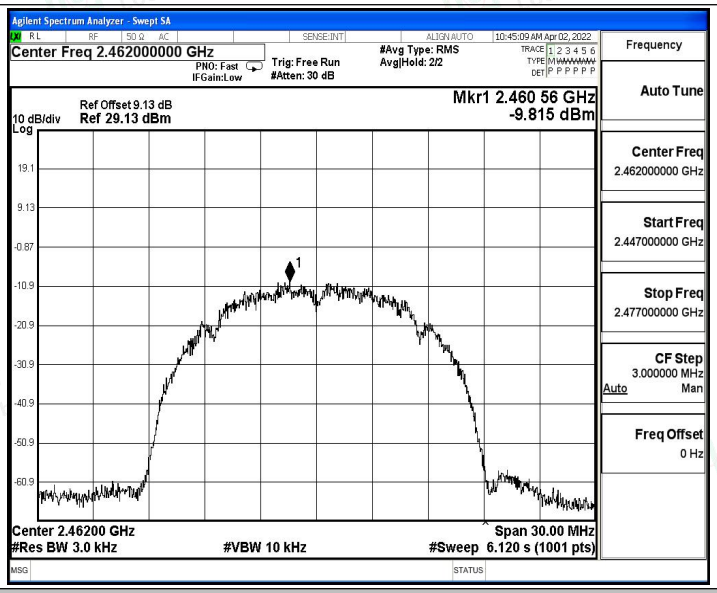
11B_Ant1_2412



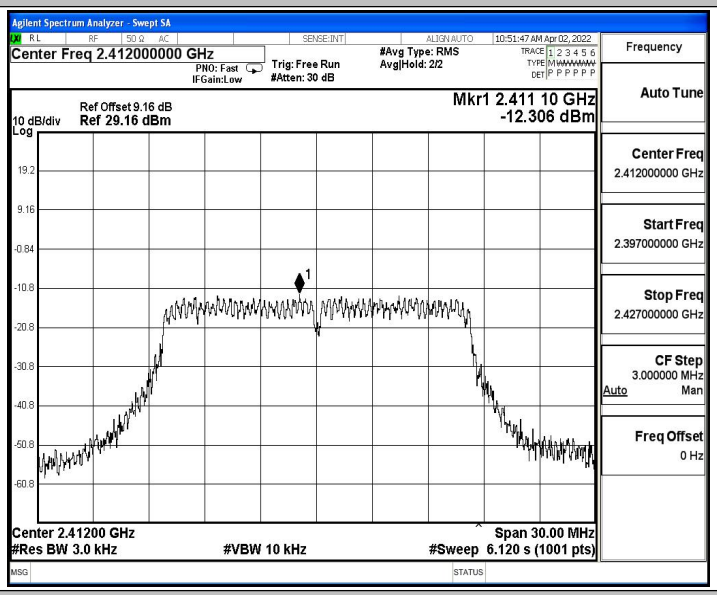
11B_Ant1_2437



11B_Ant1_2462



11G_Ant1_2412



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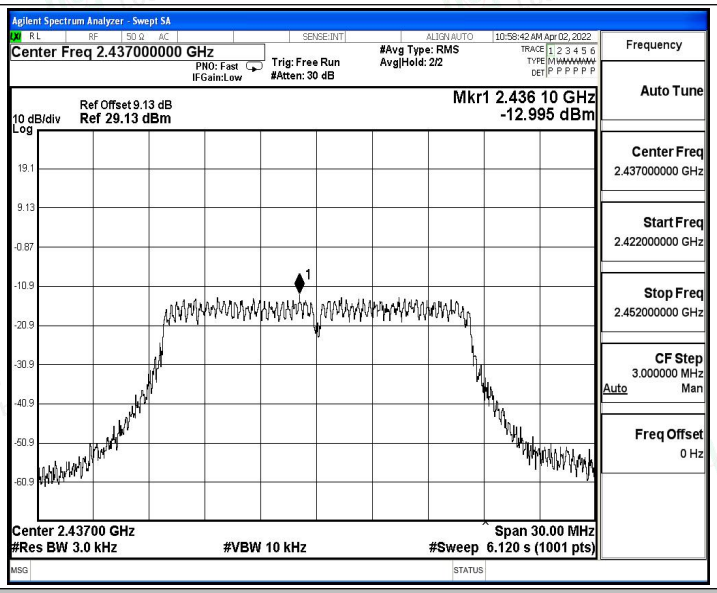

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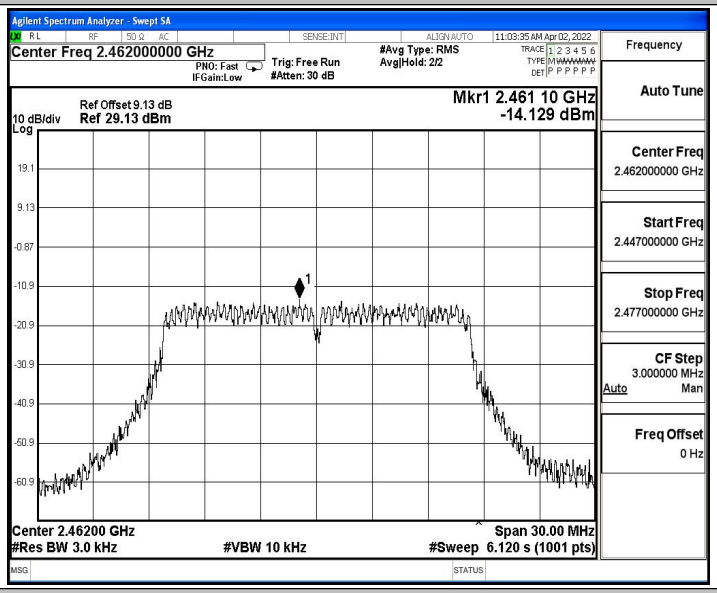

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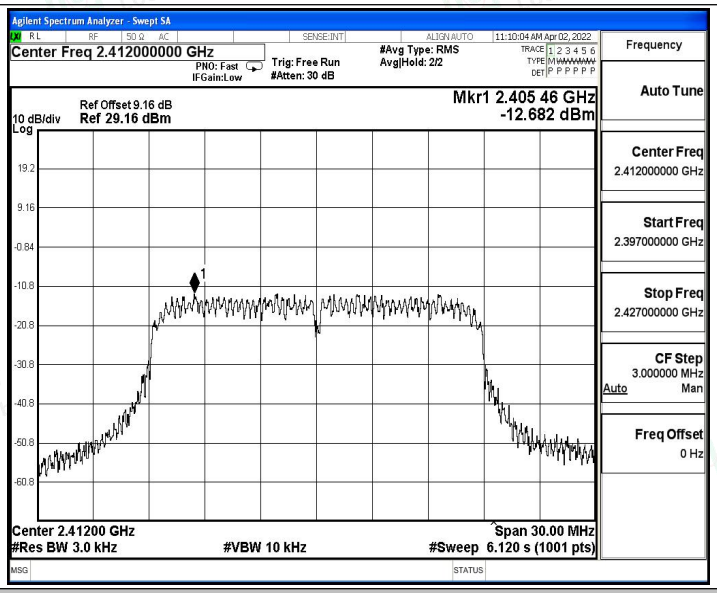

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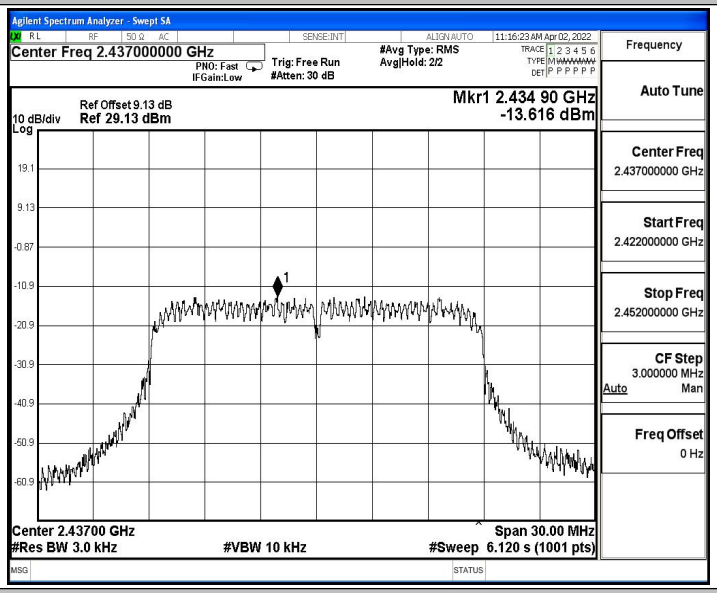

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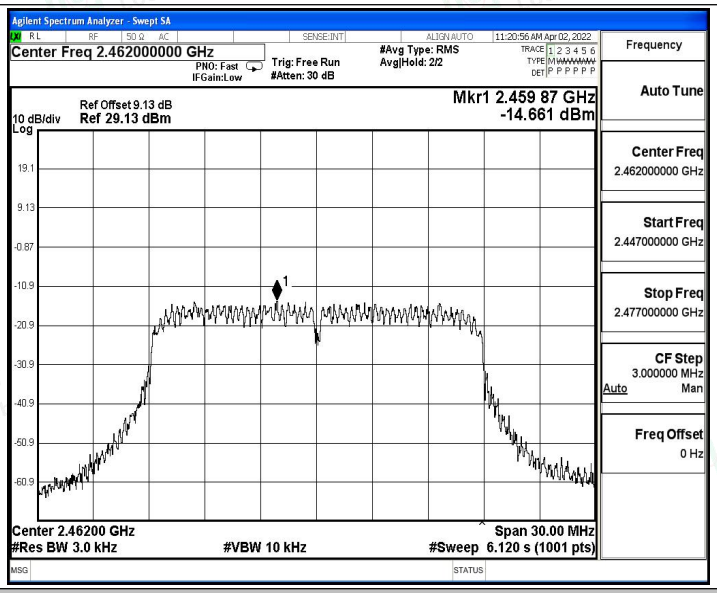

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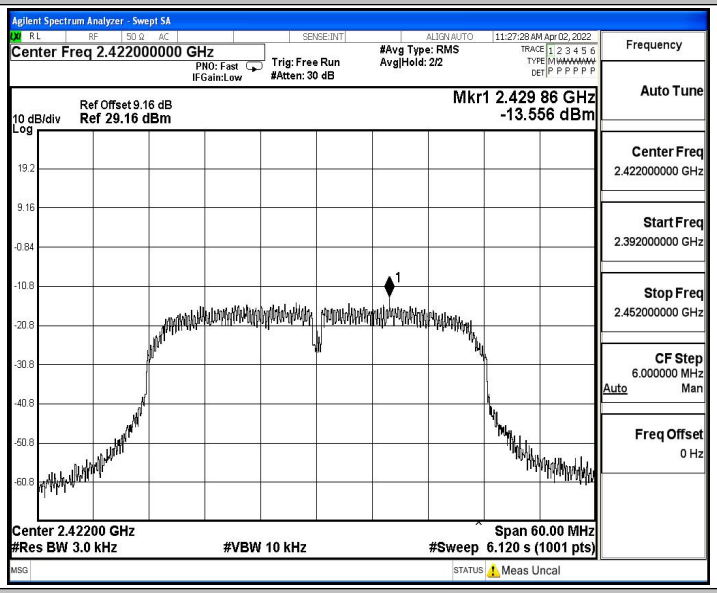

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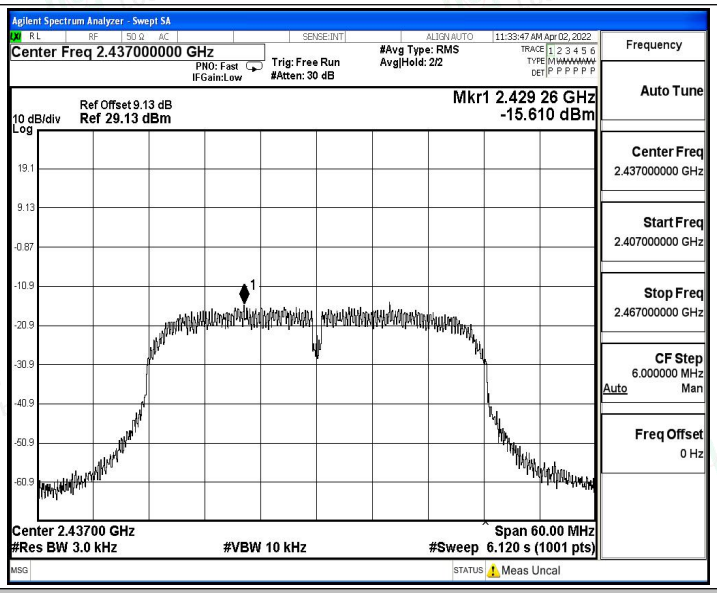
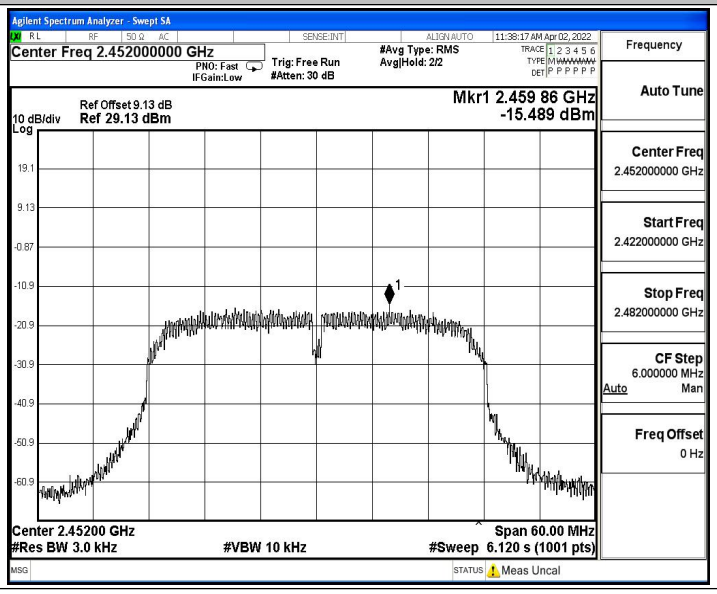


11N40SISO_Ant1_2452



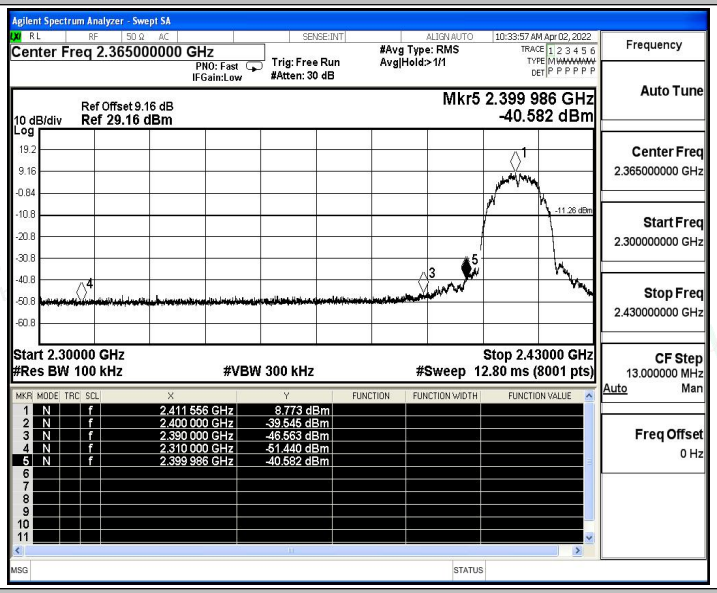
B.4 Band edge measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	8.74	-40.58	≤-11.26	PASS
		High	2462	6.27	-47.24	≤-13.73	PASS
11G	Ant1	Low	2412	2.52	-33.65	≤-17.48	PASS
		High	2462	0.28	-45.86	≤-19.72	PASS
11N20SISO	Ant1	Low	2412	2.62	-32.94	≤-17.39	PASS
		High	2462	0.46	-47.04	≤-19.54	PASS
11N40SISO	Ant1	Low	2422	-0.91	-35.55	≤-20.91	PASS
		High	2452	-2.37	-43.38	≤-22.37	PASS

Test Graphs

11B_Ant1_Low_2412



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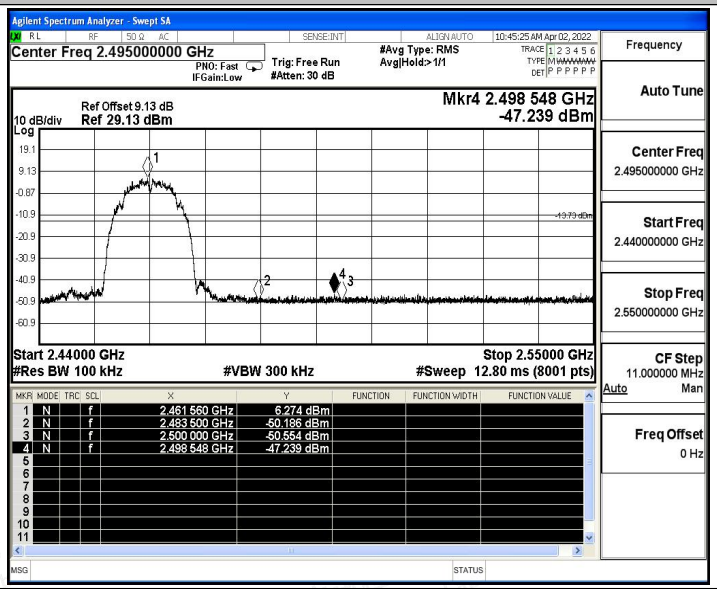
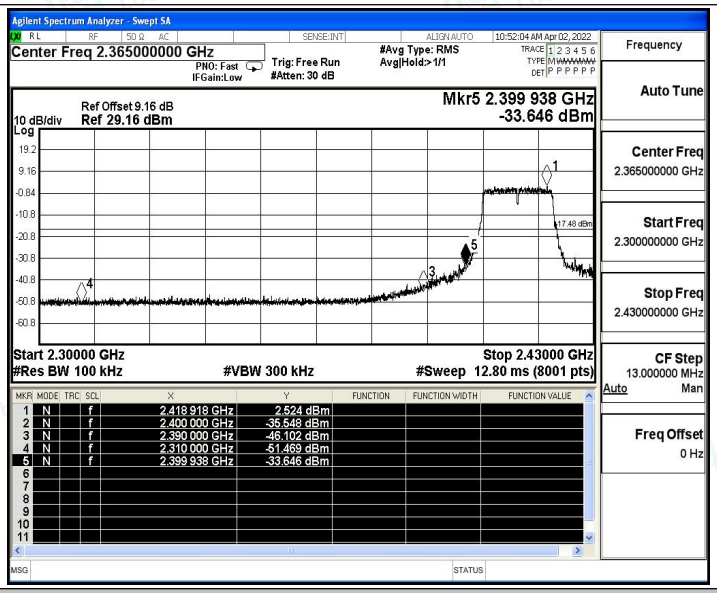


11G_Ant1_Low_2412



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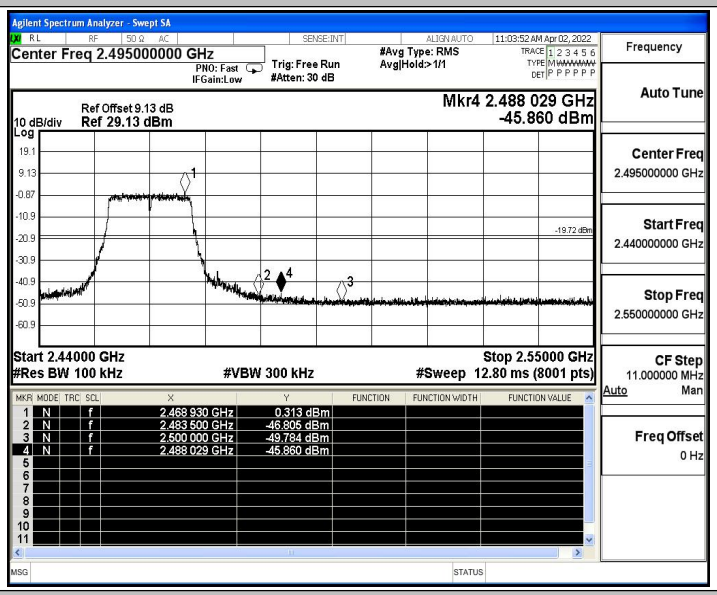

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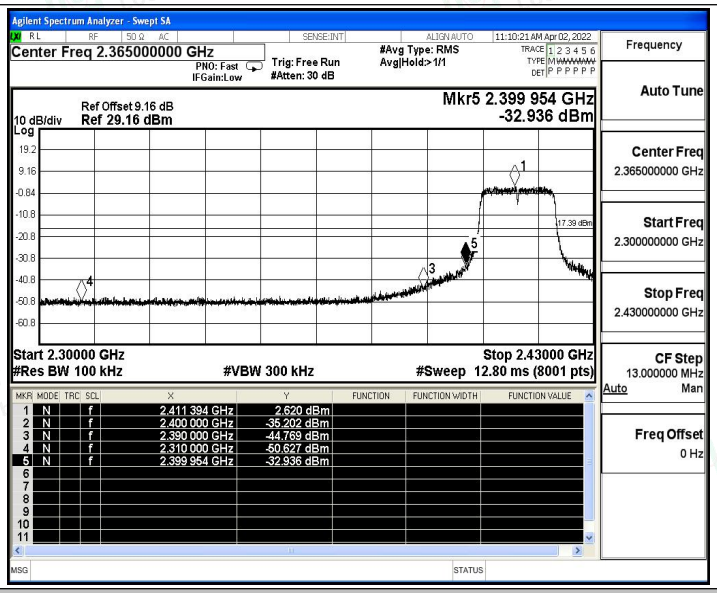

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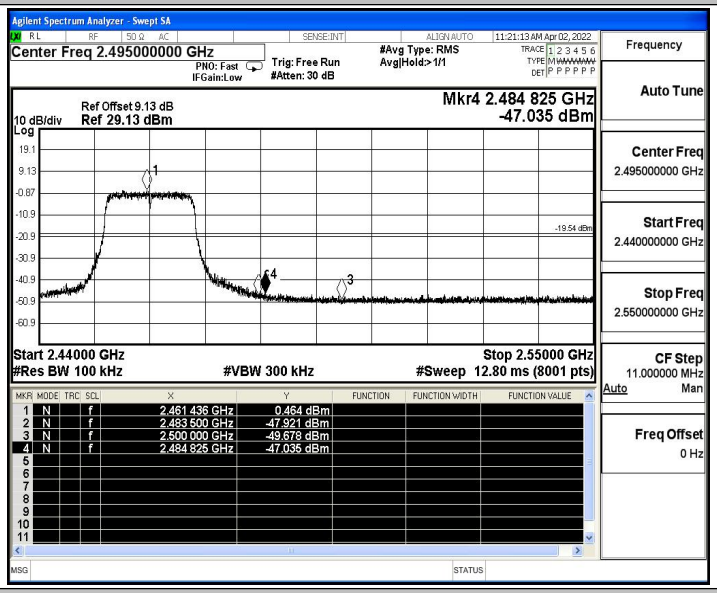

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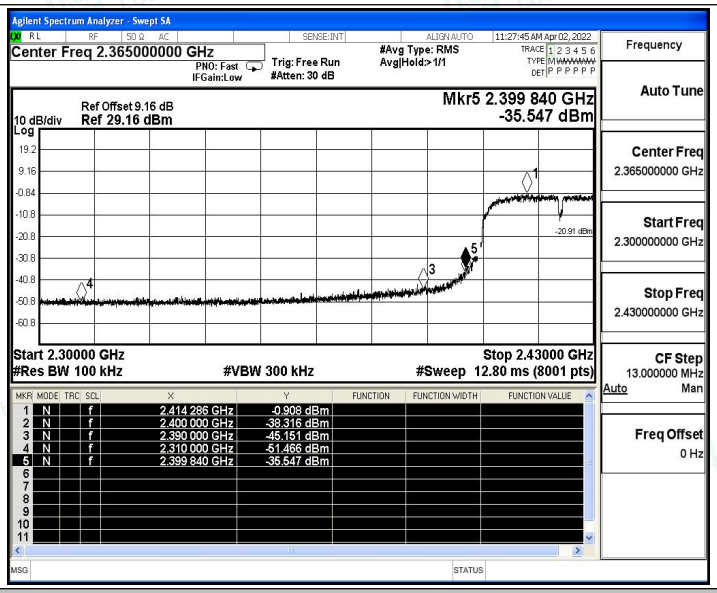
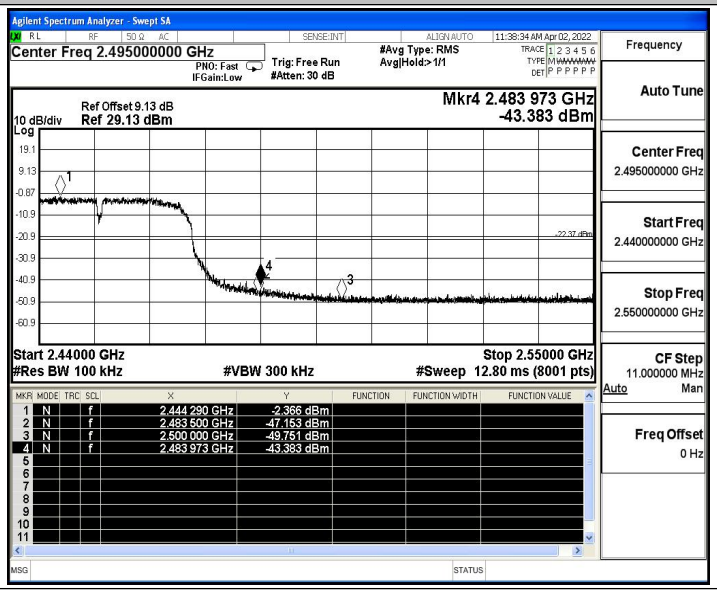
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