



Appendix B

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: Smart Dimmer Switch

Test Model: US01

Environmental Conditions

Temperature:	23.5°C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Nick Peng
	<i>Nick Peng</i>
Supervised by:	Ling Zhu
	<i>Ling Zhu</i>





B.1 DTS Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	9.720	2407.280	2417.000	0.5	PASS
		2437	9.320	2432.240	2441.560	0.5	PASS
		2462	8.680	2457.440	2466.120	0.5	PASS
11G	Ant1	2412	16.400	2403.800	2420.200	0.5	PASS
		2437	16.400	2428.800	2445.200	0.5	PASS
		2462	16.360	2453.840	2470.200	0.5	PASS
11N20SISO	Ant1	2412	17.520	2403.240	2420.760	0.5	PASS
		2437	17.640	2428.200	2445.840	0.5	PASS
		2462	17.600	2453.200	2470.800	0.5	PASS
11N40SISO	Ant1	2422	30.720	2406.560	2437.280	0.5	PASS
		2437	31.680	2421.560	2453.240	0.5	PASS
		2452	31.120	2436.560	2467.680	0.5	PASS



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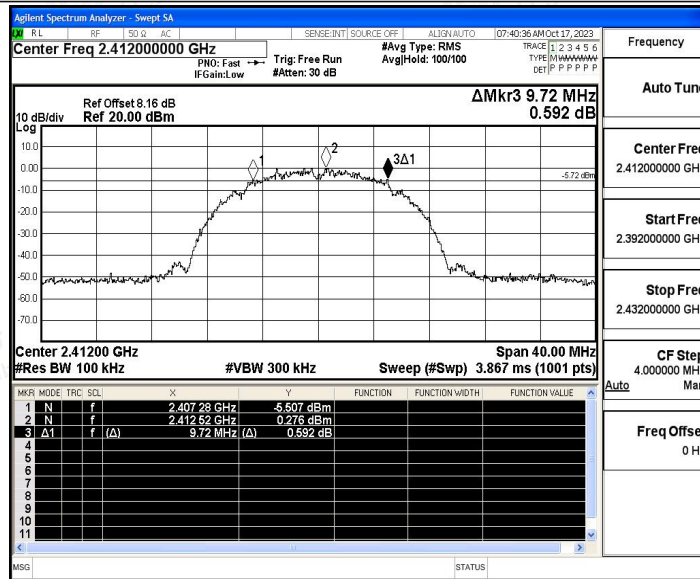
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

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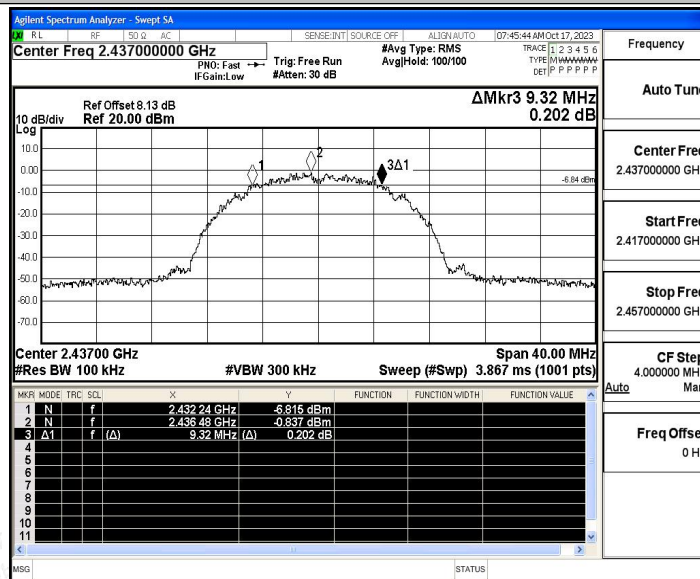


Test Graphs

11B_Ant1_2412



11B_Ant1_2437



11B_Ant1_2462

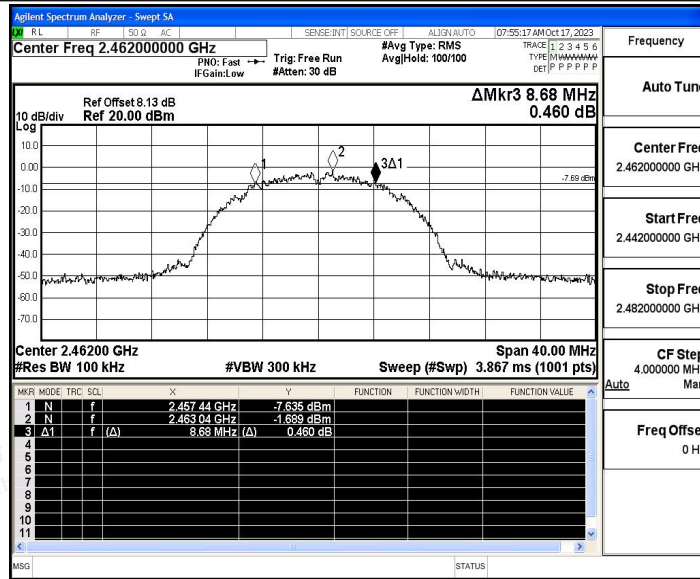


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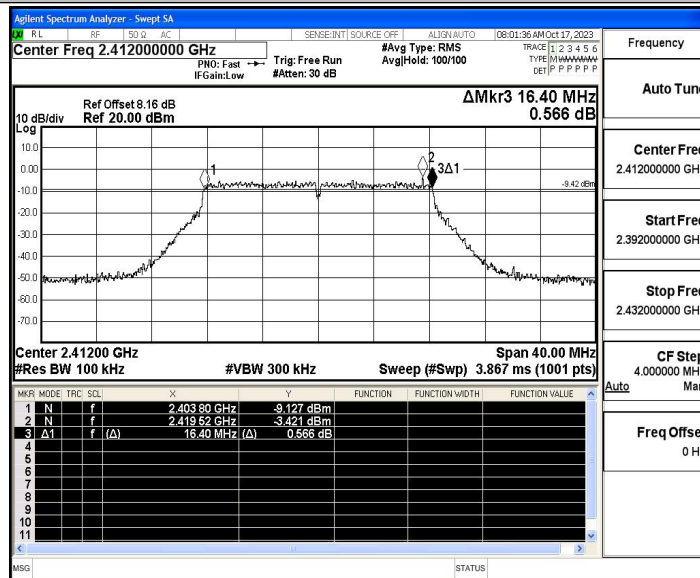
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11G_Ant1_2412



11G_Ant1_2437

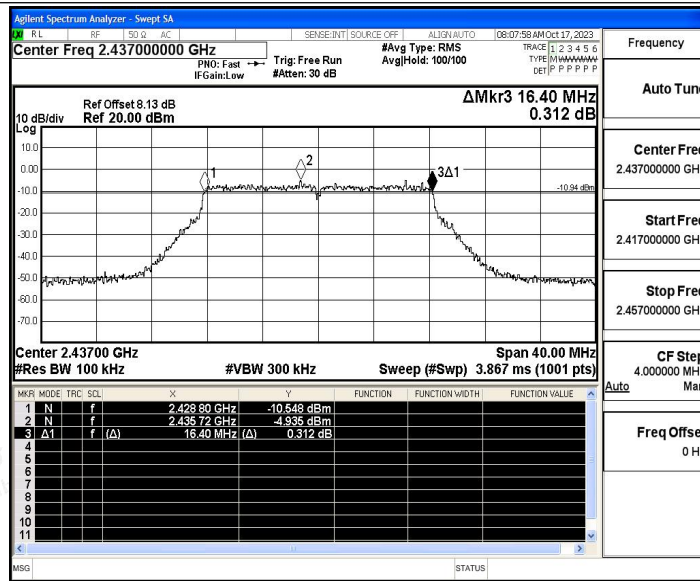


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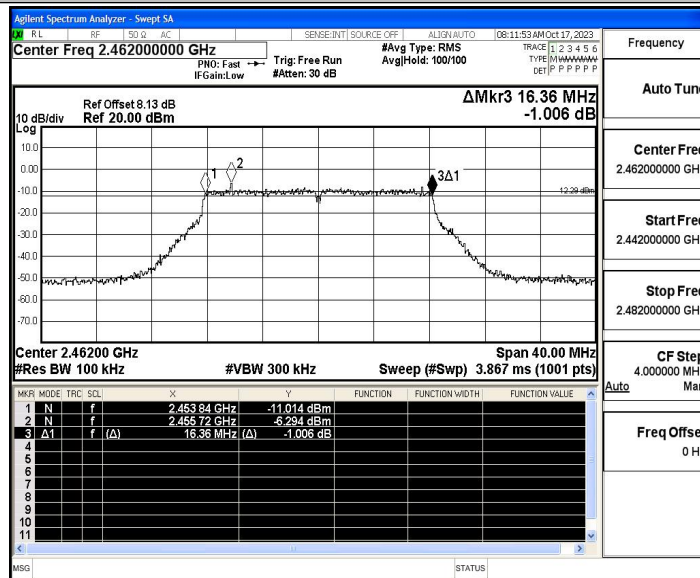
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11G_Ant1_2462



11N20SISO_Ant1_2412

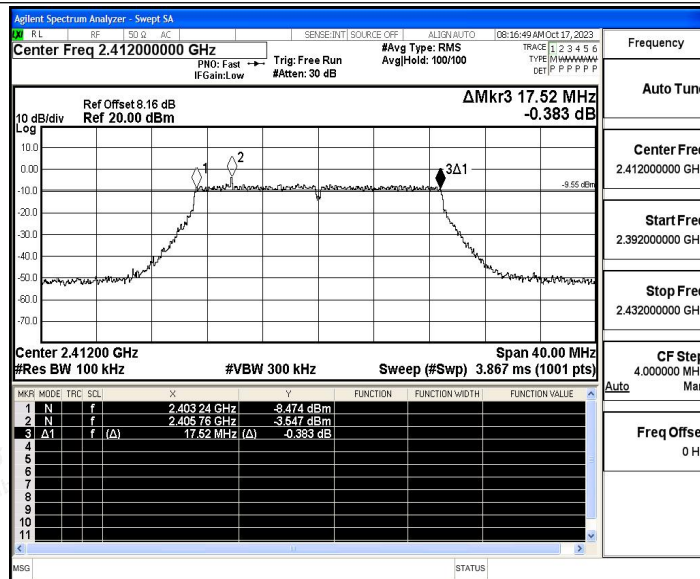


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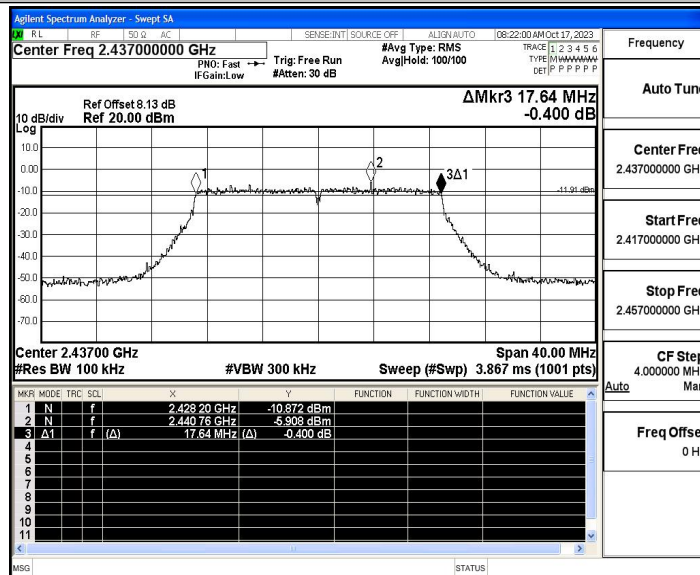
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11N20SISO_Ant1_2437



11N20SISO_Ant1_2462

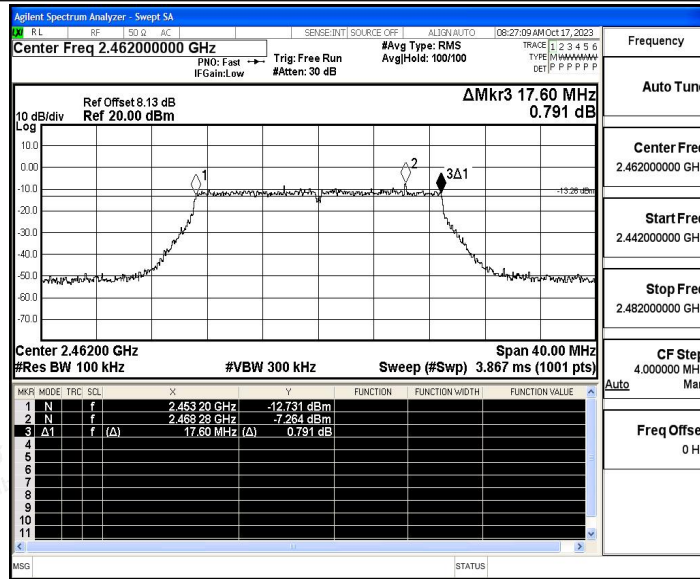


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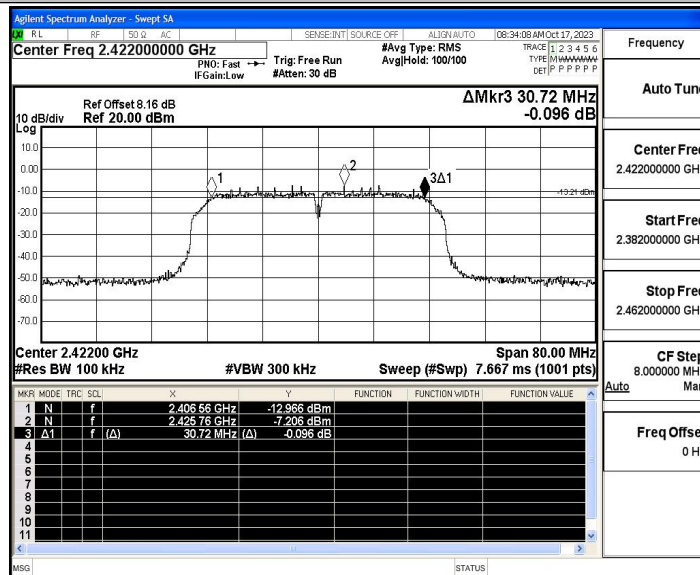
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11N40SISO_Ant1_2422



11N40SISO_Ant1_2437

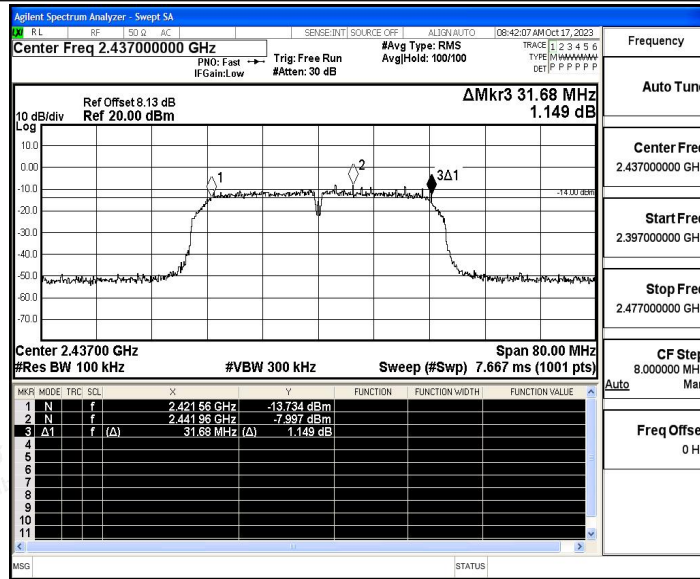


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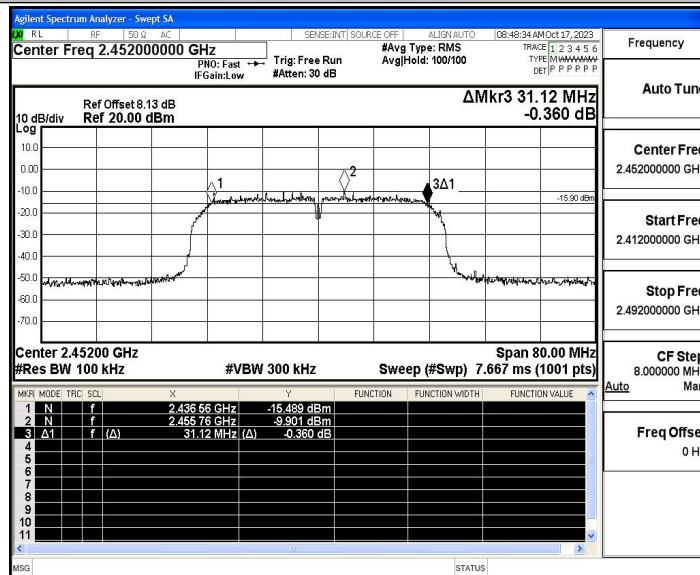
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11N40SISO_Ant1_2452



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B.2 Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	13.025	2405.4391	2418.4641	---	---
		2437	13.099	2430.4462	2443.5452	---	---
		2462	13.142	2455.4334	2468.5754	---	---
11G	Ant1	2412	17.204	2403.3614	2420.5654	---	---
		2437	17.164	2428.4423	2445.6063	---	---
		2462	17.136	2453.4411	2470.5771	---	---
11N20SISO	Ant1	2412	18.174	2402.9059	2421.0799	---	---
		2437	18.162	2427.9222	2446.0842	---	---
		2462	18.154	2452.9336	2471.0876	---	---
11N40SISO	Ant1	2422	34.157	2404.9077	2439.0647	---	---
		2437	34.001	2420.0474	2454.0484	---	---
		2452	34.120	2435.0151	2469.1351	---	---



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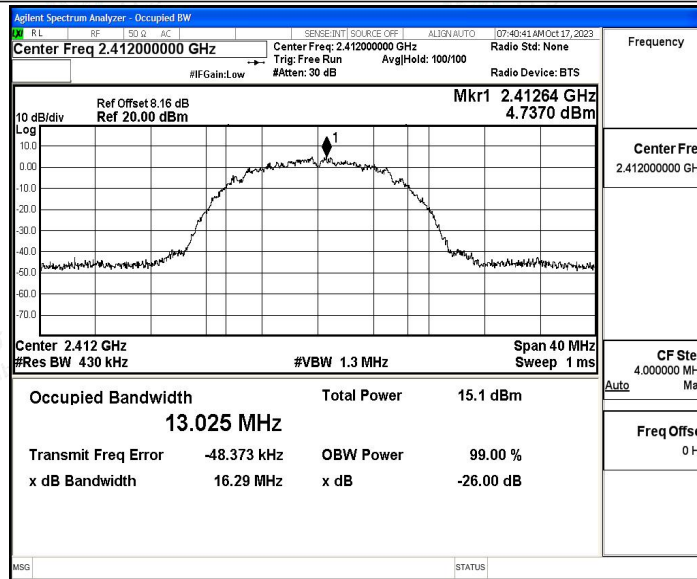
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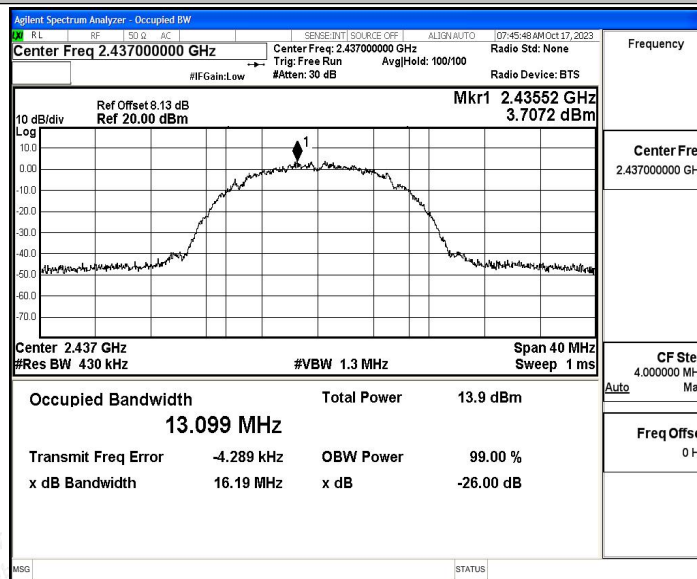


Test Graphs

11B_Ant1_2412



11B_Ant1_2437



11B_Ant1_2462

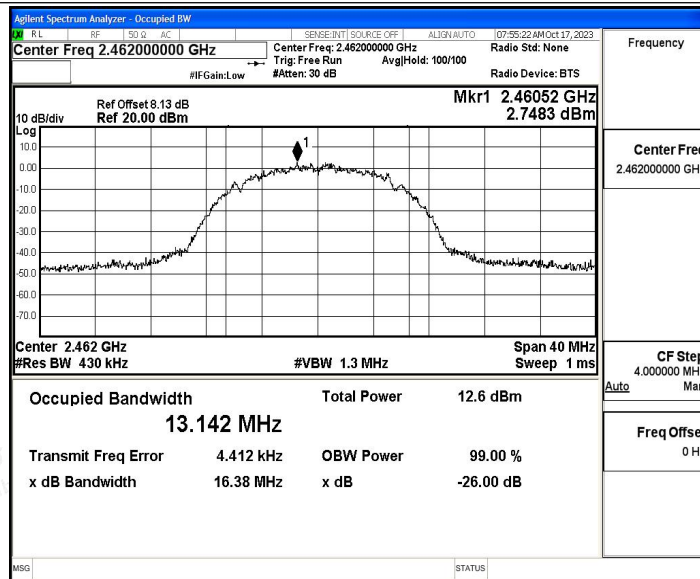


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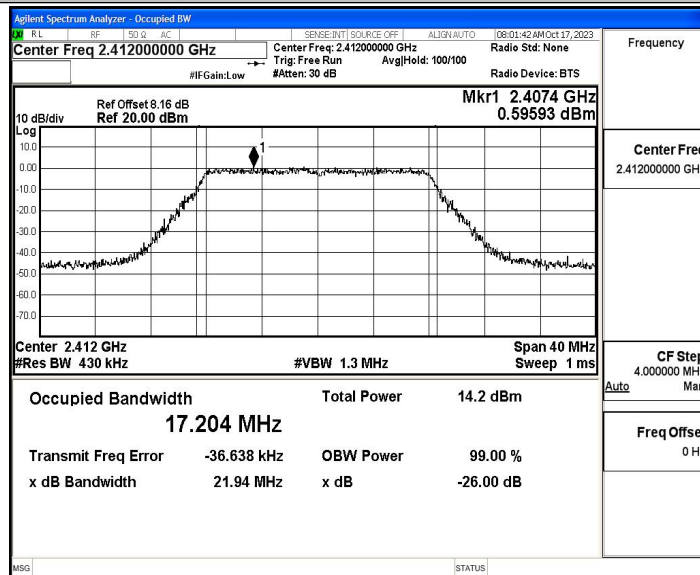
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11G_Ant1_2412



11G_Ant1_2437

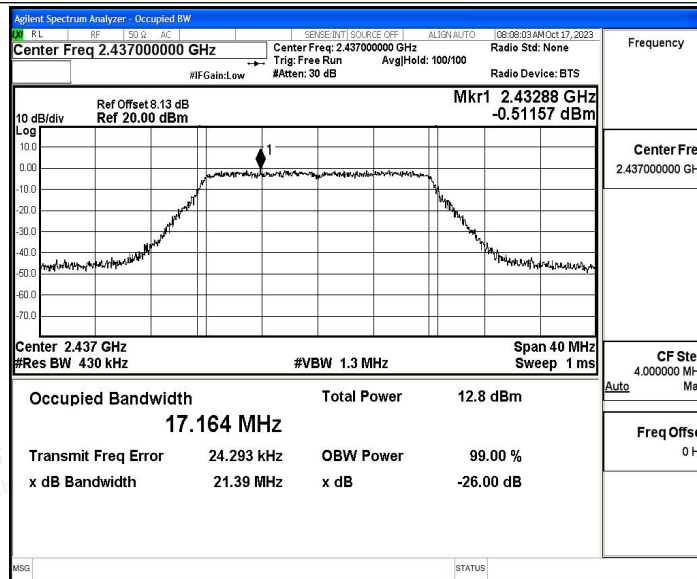


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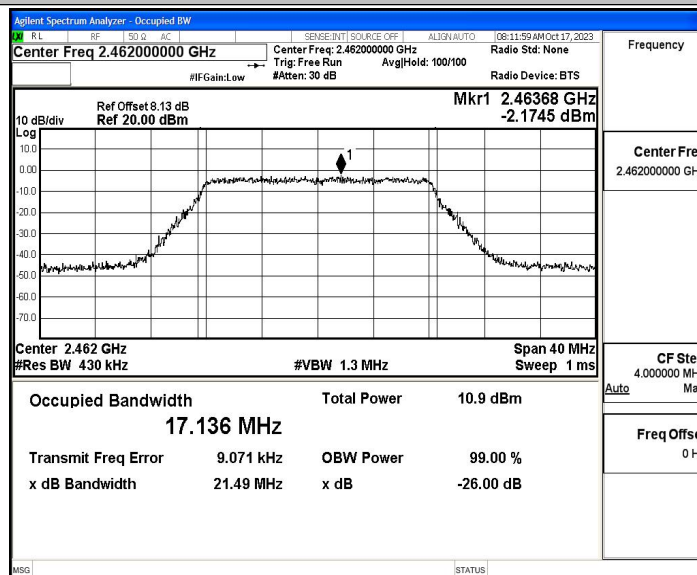
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11N20SISO_Ant1_2412

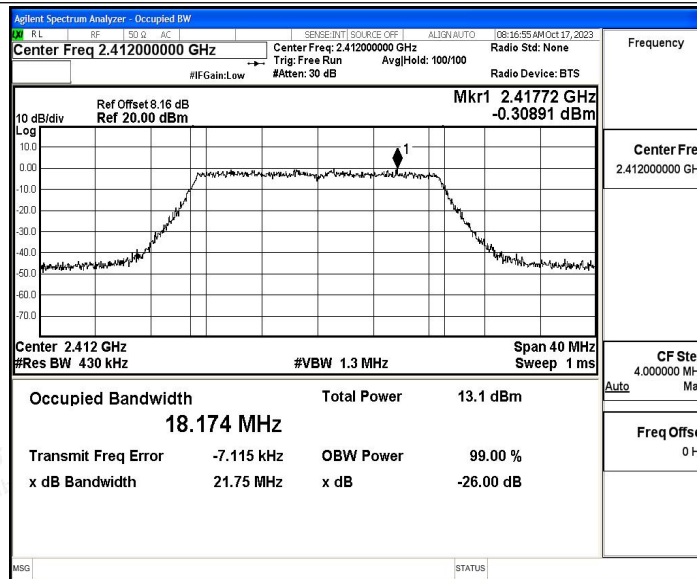


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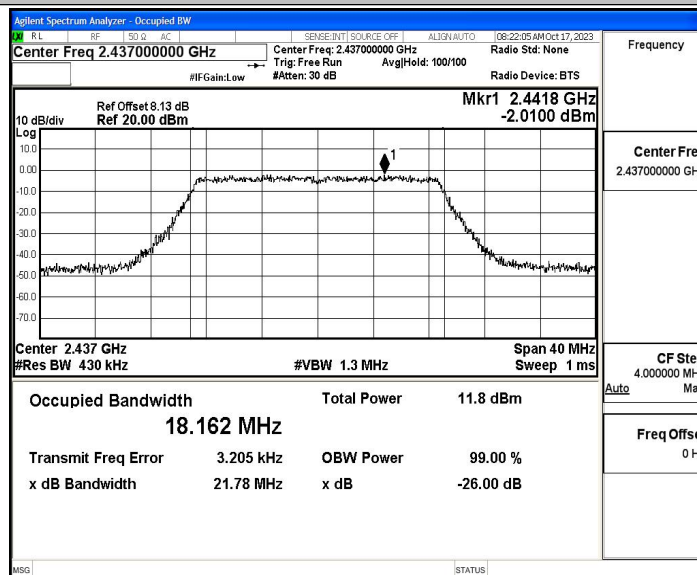
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11N20SISO_Ant1_2437



11N20SISO_Ant1_2462

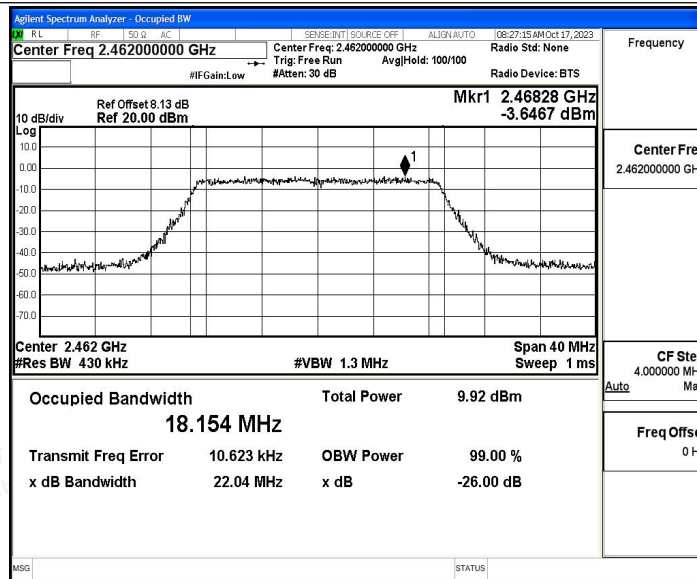


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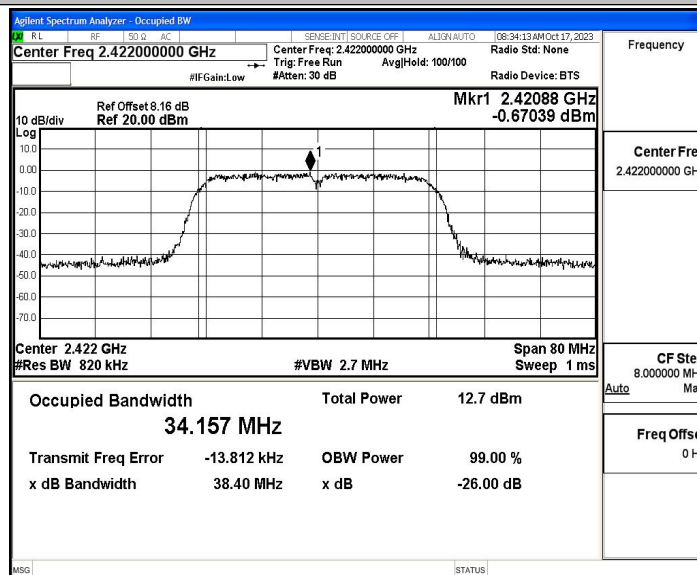
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11N40SISO_Ant1_2422



11N40SISO_Ant1_2437

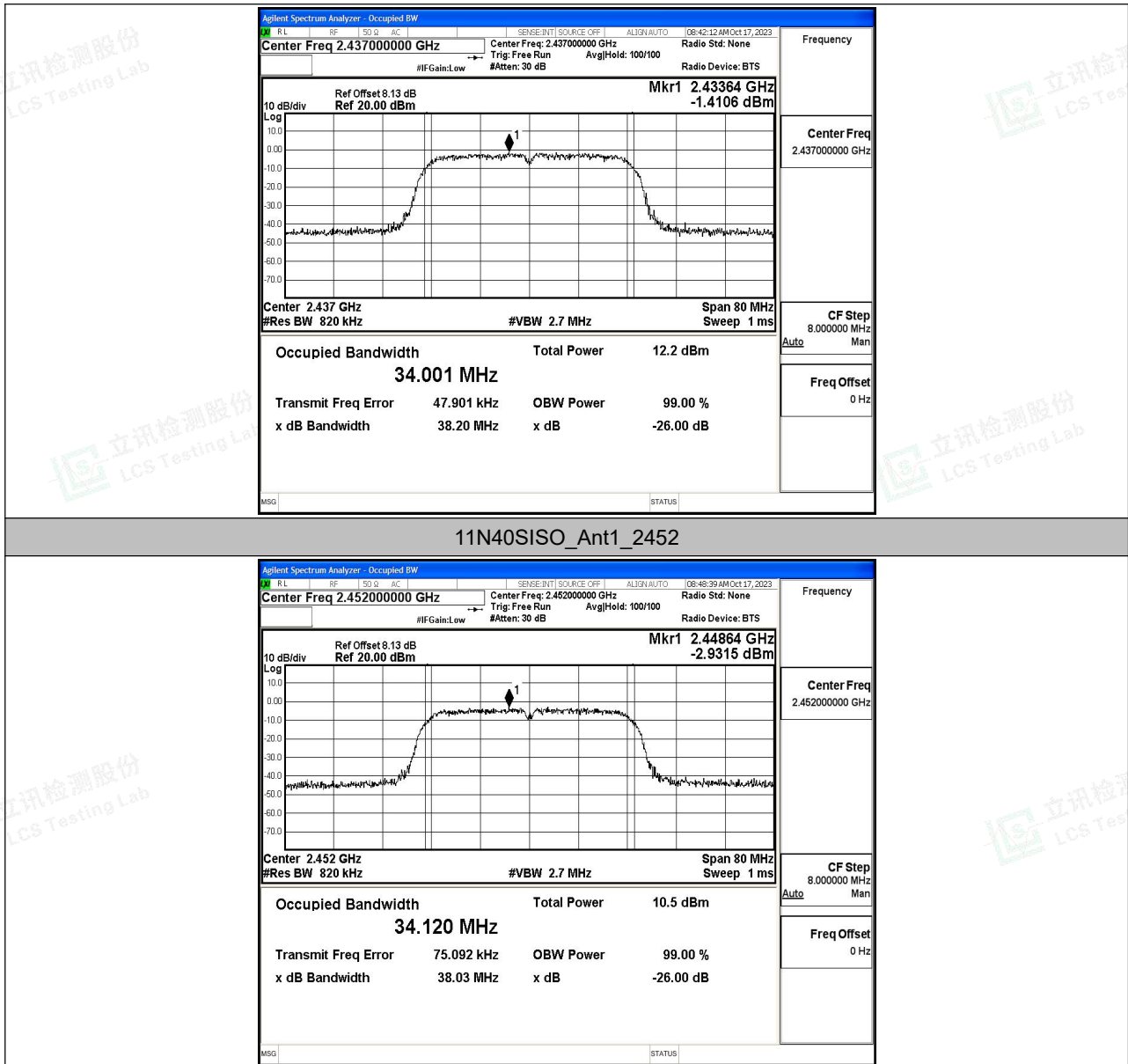


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B.3 Maximum Peak Conducted Output Power

Test Result Peak

TestMode	Antenna	Freq(MHz)	Peak Power[dBm]	Conducted Limit[dBm]	Verdict
11B	Ant1	2412	14.89	≤30.00	PASS
		2437	13.74	≤30.00	PASS
		2462	12.37	≤30.00	PASS
11G	Ant1	2412	15.06	≤30.00	PASS
		2437	13.80	≤30.00	PASS
		2462	11.78	≤30.00	PASS
11N20SISO	Ant1	2412	14.04	≤30.00	PASS
		2437	12.68	≤30.00	PASS
		2462	10.70	≤30.00	PASS
11N40SISO	Ant1	2422	13.21	≤30.00	PASS
		2437	12.61	≤30.00	PASS
		2452	10.78	≤30.00	PASS

EIRP

Condition	Mode	Frequency (MHz)	Antenna	Maximum Peak Output Power [dBm]	Antenna Gain	Report EIRP Power(dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	14.89	-1.29	13.6	36	Pass
NVNT	b	2437	Ant1	13.74	-1.29	12.45	36	Pass
NVNT	b	2462	Ant1	12.37	-1.29	11.08	36	Pass
NVNT	g	2412	Ant1	15.06	-1.29	13.77	36	Pass
NVNT	g	2437	Ant1	13.80	-1.29	12.51	36	Pass
NVNT	g	2462	Ant1	11.78	-1.29	10.49	36	Pass
NVNT	n20	2412	Ant1	14.04	-1.29	12.75	36	Pass
NVNT	n20	2437	Ant1	12.68	-1.29	11.39	36	Pass
NVNT	n20	2462	Ant1	10.70	-1.29	9.41	36	Pass
NVNT	n40	2422	Ant1	13.21	-1.29	11.92	36	Pass
NVNT	n40	2437	Ant1	12.61	-1.29	11.32	36	Pass
NVNT	n40	2452	Ant1	10.78	-1.29	9.49	36	Pass



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B.4 Maximum power spectral density

Test Result

TestMode	Antenna	Freq(MHz)	Result [dBm/3kHz]	Limit [dBm/3kHz]	Verdict
11B	Ant1	2412	-14.06	≤8.00	PASS
		2437	-14.05	≤8.00	PASS
		2462	-14.89	≤8.00	PASS
11G	Ant1	2412	-16.76	≤8.00	PASS
		2437	-17.8	≤8.00	PASS
		2462	-17.41	≤8.00	PASS
11N20SISO	Ant1	2412	-17.24	≤8.00	PASS
		2437	-18.74	≤8.00	PASS
		2462	-18.58	≤8.00	PASS
11N40SISO	Ant1	2422	-19.63	≤8.00	PASS
		2437	-19.37	≤8.00	PASS
		2452	-19.18	≤8.00	PASS



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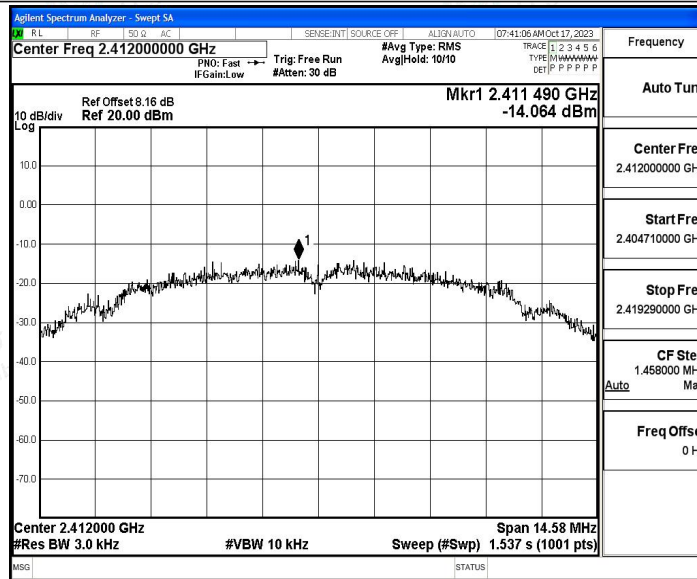
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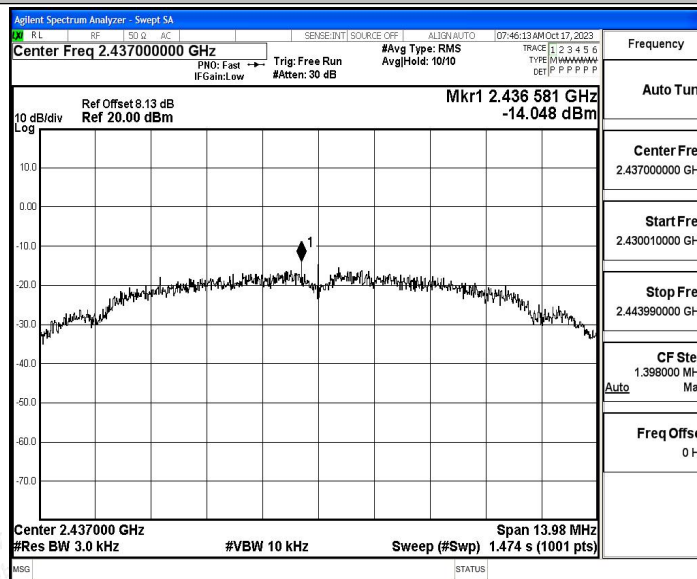


Test Graphs

11B_Ant1_2412



11B_Ant1_2437



11B_Ant1_2462

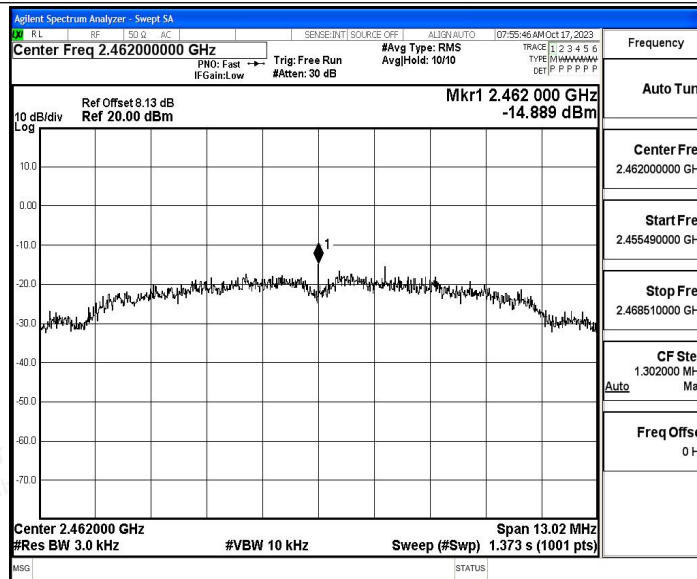


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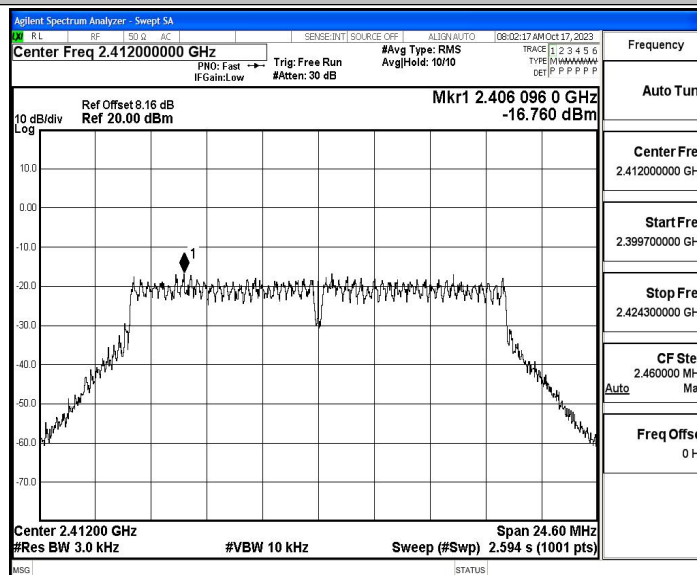
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11G_Ant1_2412



11G_Ant1_2437

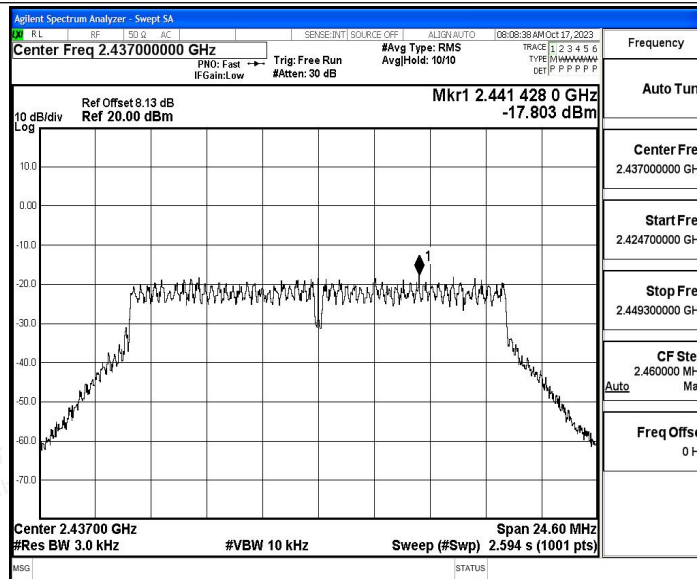


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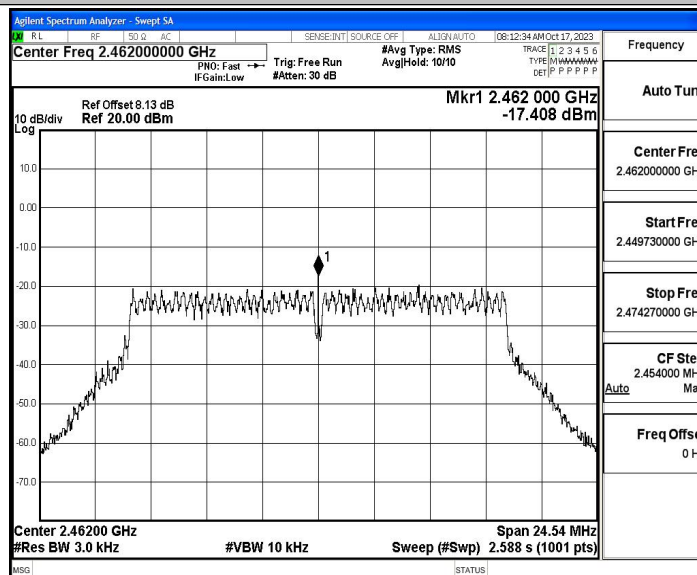
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11G_Ant1_2462



11N20SISO_Ant1_2412

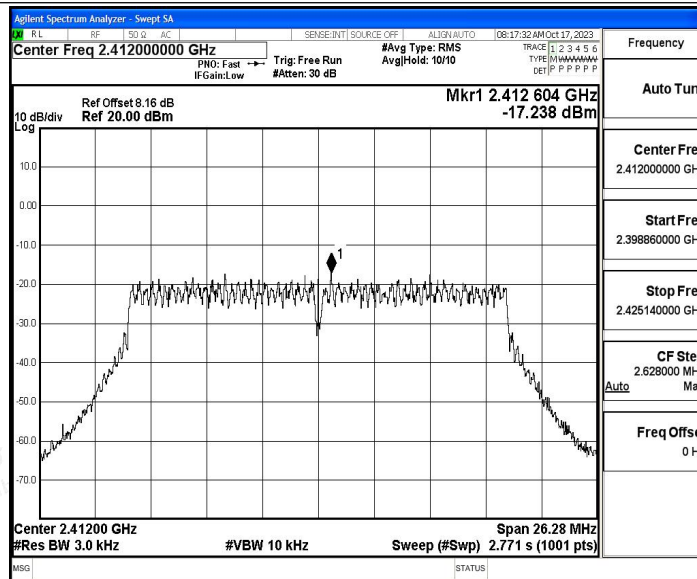


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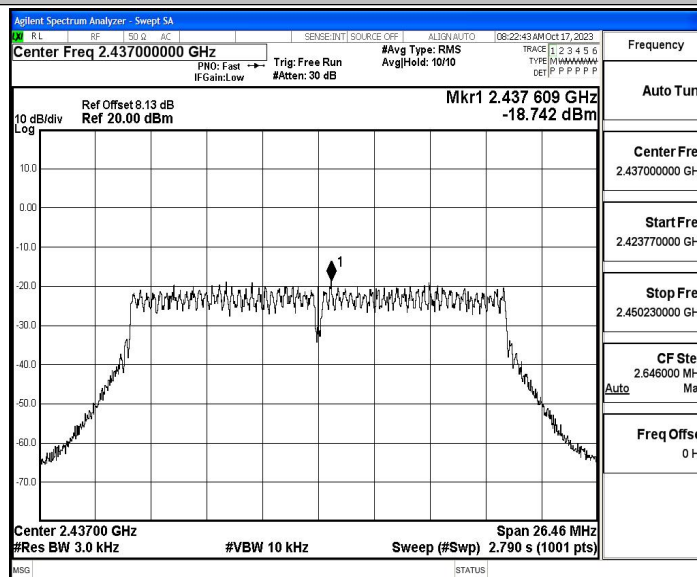
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11N20SISO_Ant1_2437



11N20SISO_Ant1_2462

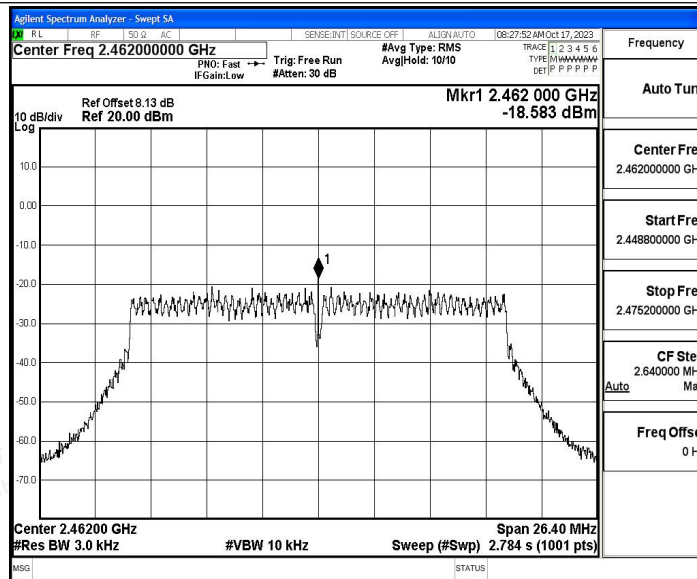


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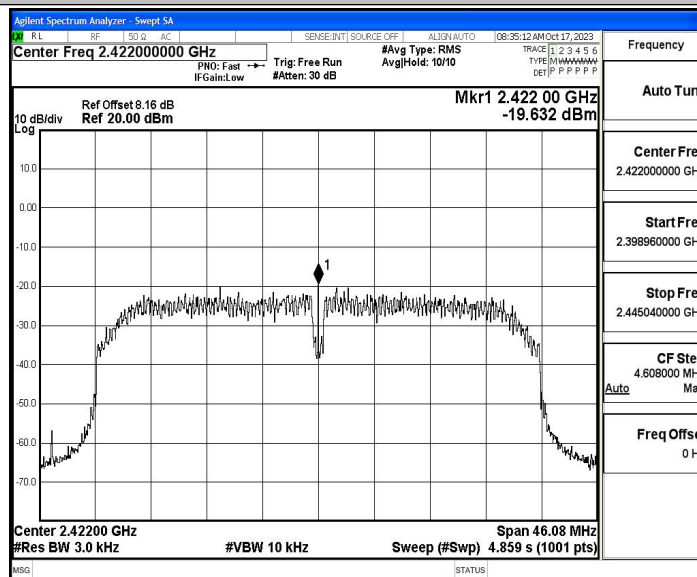
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11N40SISO_Ant1_2422



11N40SISO_Ant1_2437

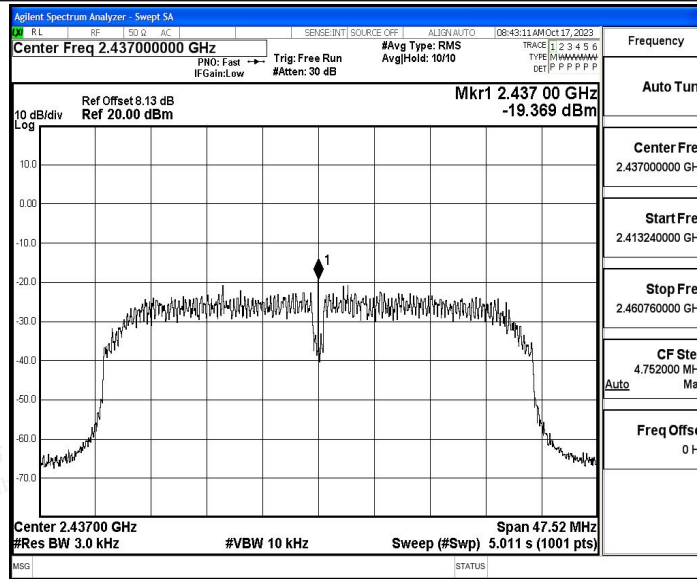


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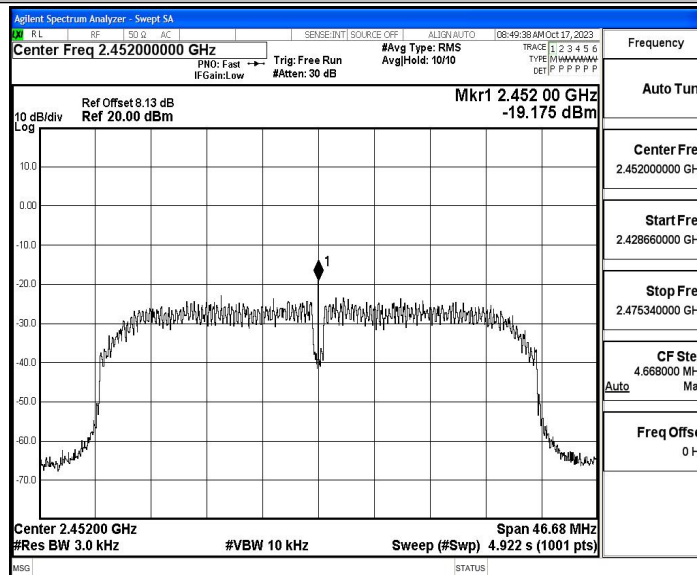
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11N40SISO_Ant1_2452



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B.5 Band edge measurements

Test Result

TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	-0.15	-47.49	≤ -20.15	PASS
		High	2462	-2.13	-47.97	≤ -22.13	PASS
11G	Ant1	Low	2412	-2.50	-43.36	≤ -22.5	PASS
		High	2462	-6.32	-47.24	≤ -26.32	PASS
11N20SISO	Ant1	Low	2412	-4.51	-44.16	≤ -24.51	PASS
		High	2462	-7.48	-48.58	≤ -27.48	PASS
11N40SISO	Ant1	Low	2422	-8.10	-48.08	≤ -28.1	PASS
		High	2452	-10.11	-49.35	≤ -30.11	PASS



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