



Appendix A

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: Maxspect Gyre 300CE Series Controller

Test Model: XF330-CE

Environmental Conditions

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



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A.1 DTS Bandwidth

Test Result

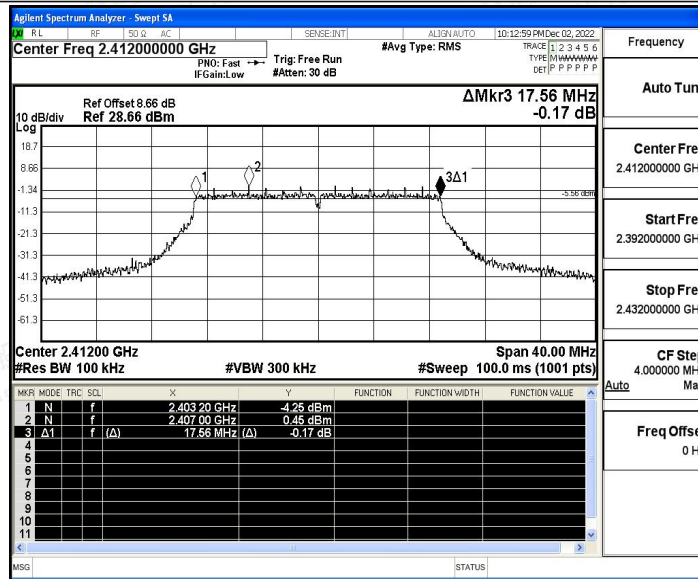
TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11N20SISO	Ant1	2412	17.560	2403.200	2420.760	0.5	PASS
		2437	17.560	2428.200	2445.760	0.5	PASS
		2462	17.560	2453.200	2470.760	0.5	PASS



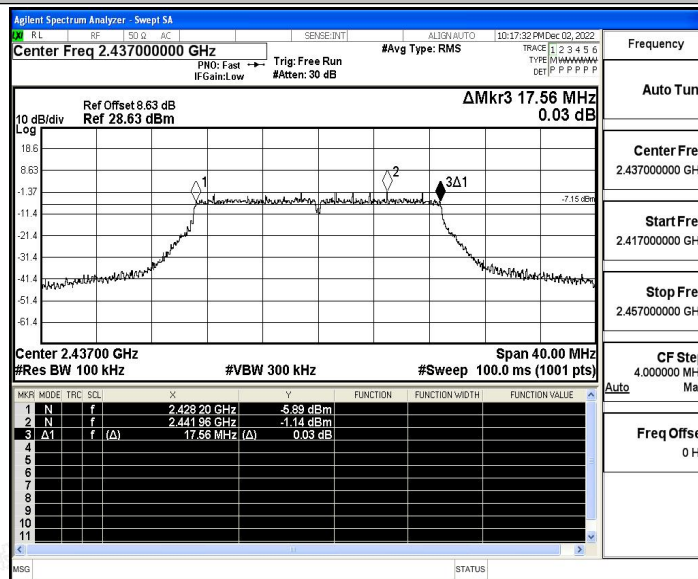


Test Graphs

11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



11N20SISO_Ant1_2462

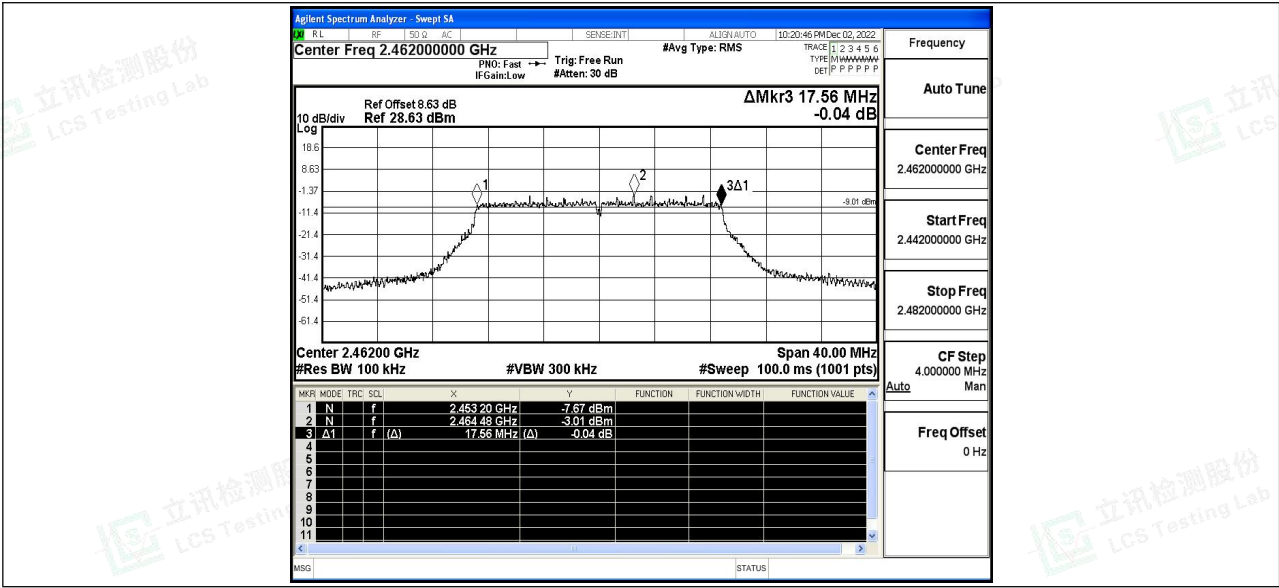


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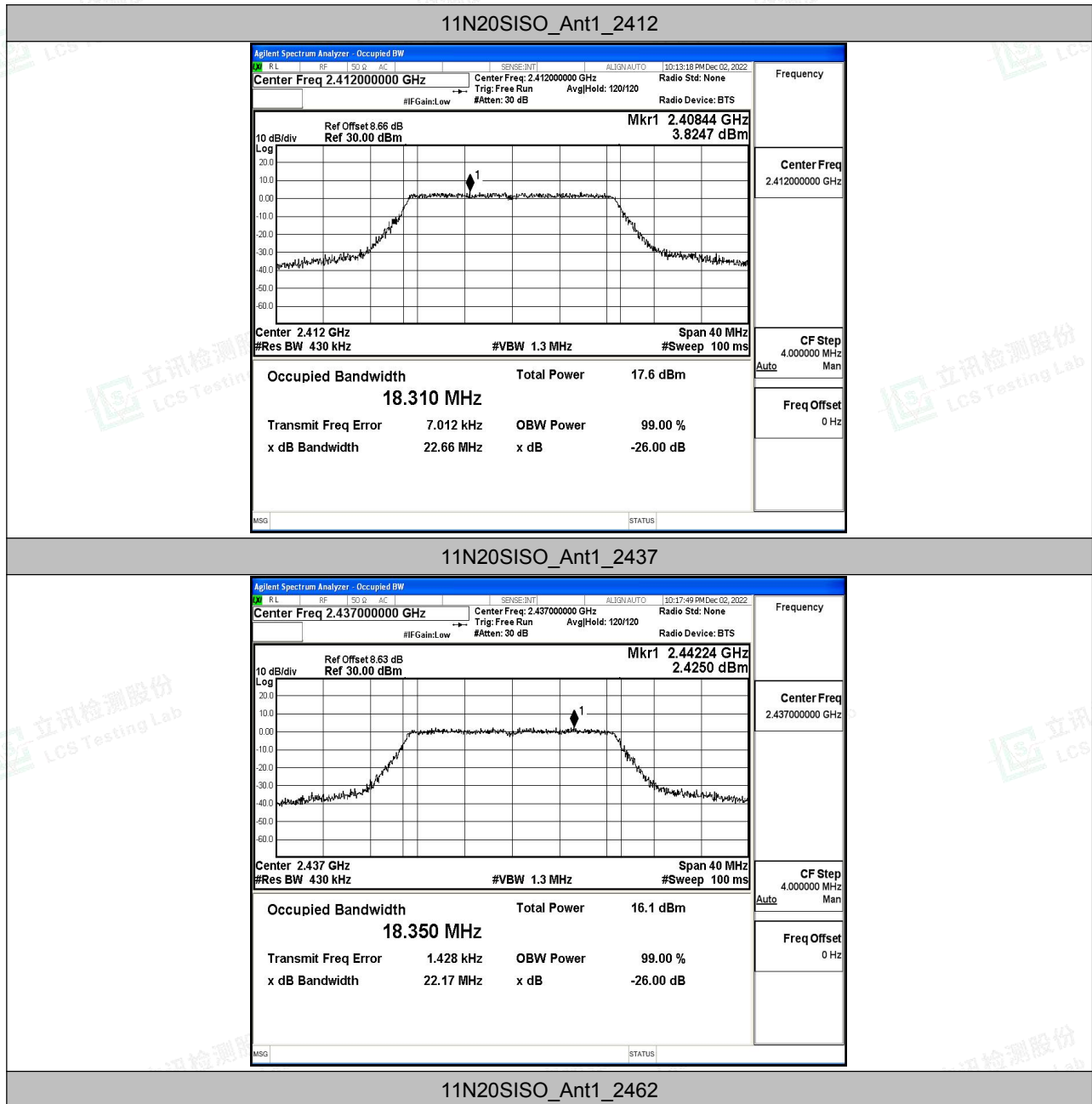
Appendix A2: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11N20SISO	Ant1	2412	18.310	2402.8520	2421.1620	---	---
		2437	18.350	2427.8264	2446.1764	---	---
		2462	18.380	2452.8141	2471.1941	---	---



Test Graphs

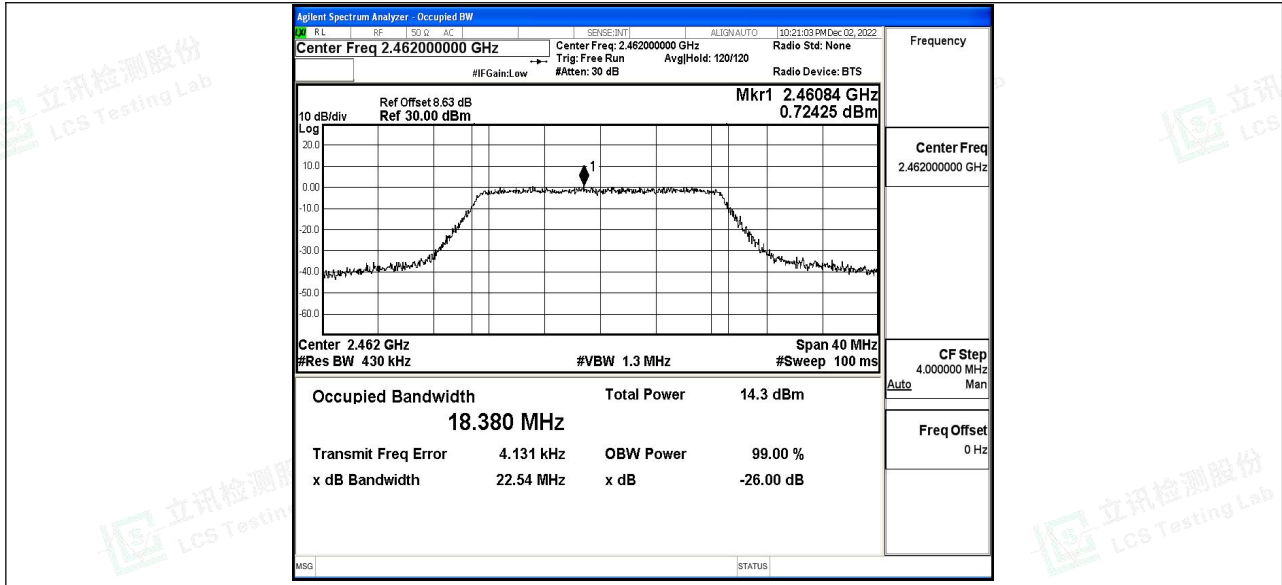


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A.3 Maximum conducted output power

Test Result Peak

TestMode	Antenna	Freq(MHz)	Conducted Power [dBm]	Conducted Limit[dBm]	Verdict
11N20SISO	Ant1	2412	16.79	≤30.00	PASS
		2437	16.82	≤30.00	PASS
		2462	16.75	≤30.00	PASS





A.4 Maximum power spectral density

Test Result

TestMode	Antenna	Freq(MHz)	Result [dBm/3-100kHz]	Limit [dBm/3kHz]	Gain [dBi]	EIRP [dBm/3-100kHz]	Limit [dBm/3kHz]	Verdict
11N20SISO	Ant1	2412	-21.26	≤8.00	3.0	-18.26	---	PASS
		2437	-21.55	≤8.00	3.0	-18.55	---	PASS
		2462	-21.87	≤8.00	3.0	-18.87	---	PASS



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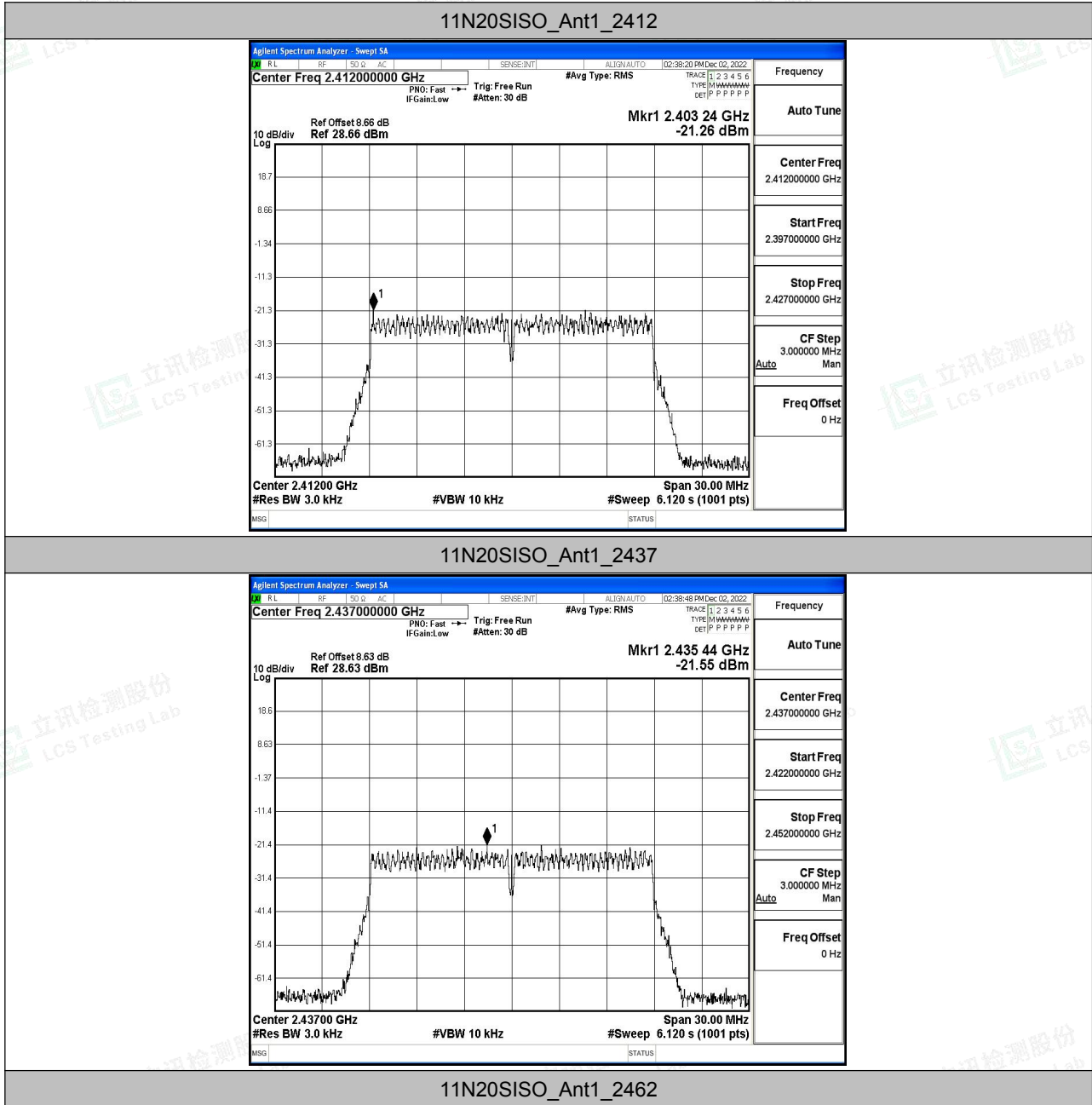
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Test Graphs

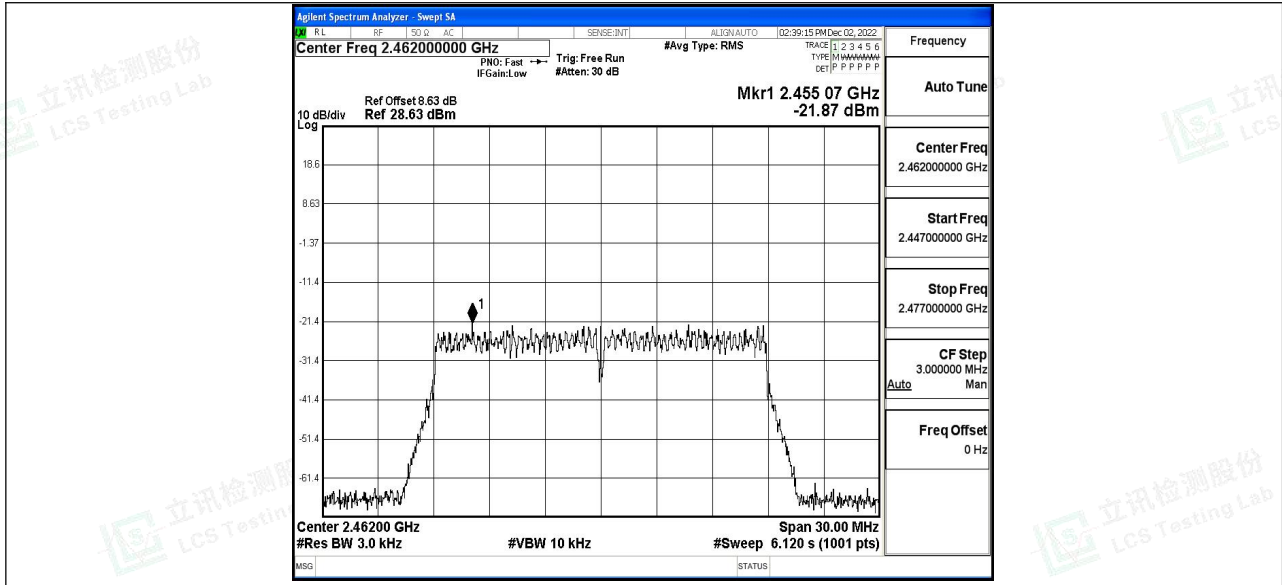


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A.5 Band edge measurements

Test Result

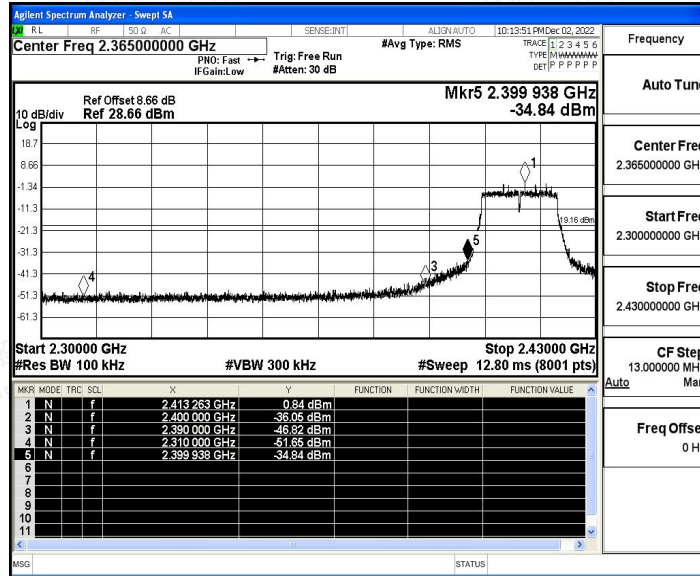
TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11N20SISO	Ant1	Low	2412	0.84	-34.84	≤-19.16	PASS
		High	2462	-2.65	-45.32	≤-22.65	PASS



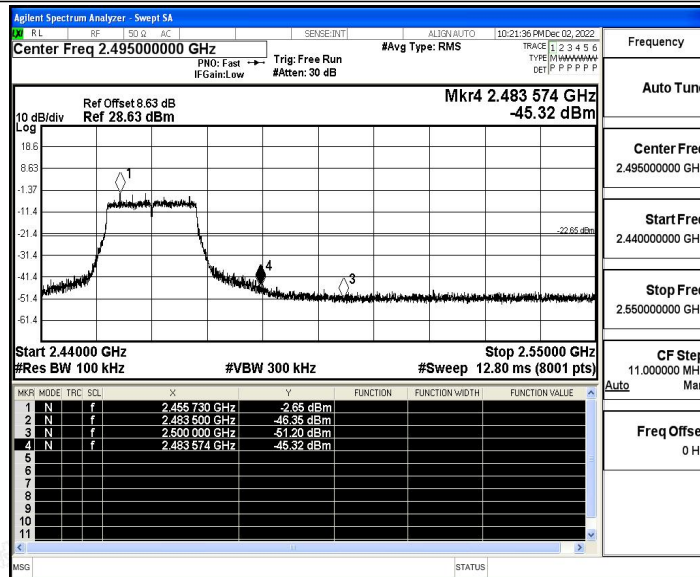


Test Graphs

11N20SISO_Ant1_Low_2412



11N20SISO_Ant1_High_2462



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A.6 Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11N20SISO	Ant1	2412	Reference	-0.92	-0.92	---	PASS
			30~1000	-0.92	-60.06	≤ -20.92	PASS
			1000~26500	-0.92	-46.28	≤ -20.92	PASS
		2437	Reference	-4.44	-4.44	---	PASS
			30~1000	-4.44	-60.7	≤ -24.44	PASS
			1000~26500	-4.44	-46.17	≤ -24.44	PASS
		2462	Reference	-3.14	-3.14	---	PASS
			30~1000	-3.14	-60.43	≤ -23.14	PASS
			1000~26500	-3.14	-46.37	≤ -23.14	PASS



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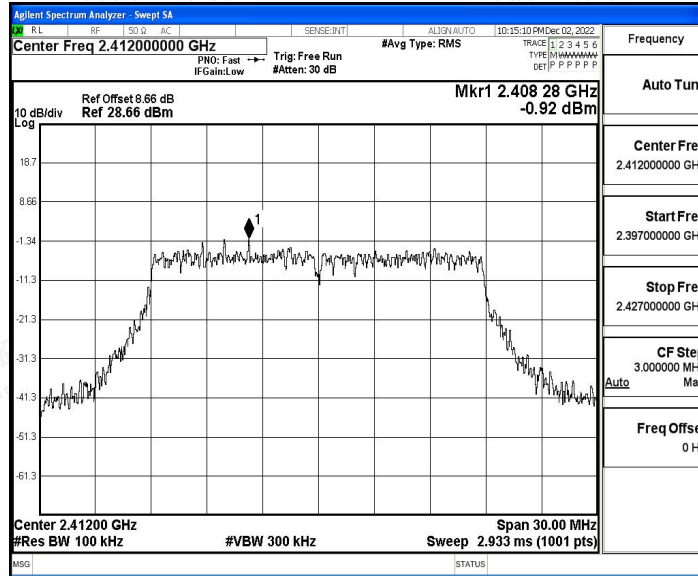
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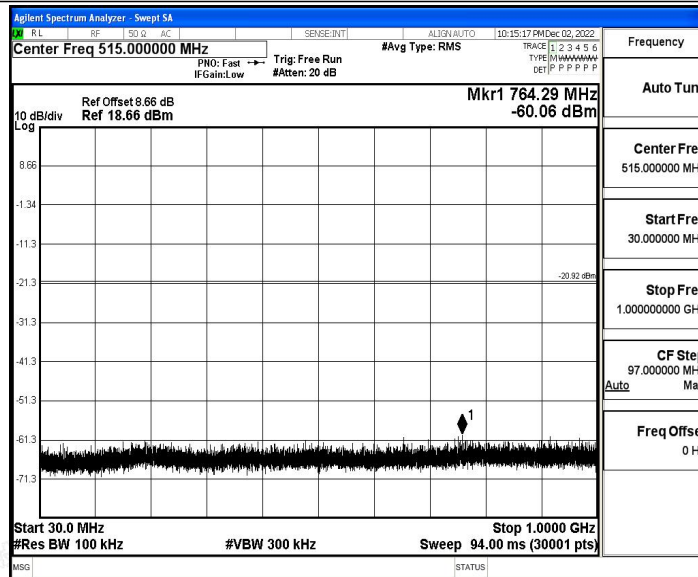


Test Graphs

11N20SISO_Ant1_2412_0~Reference



11N20SISO_Ant1_2412_30~1000



11N20SISO_Ant1_2412_1000~26500

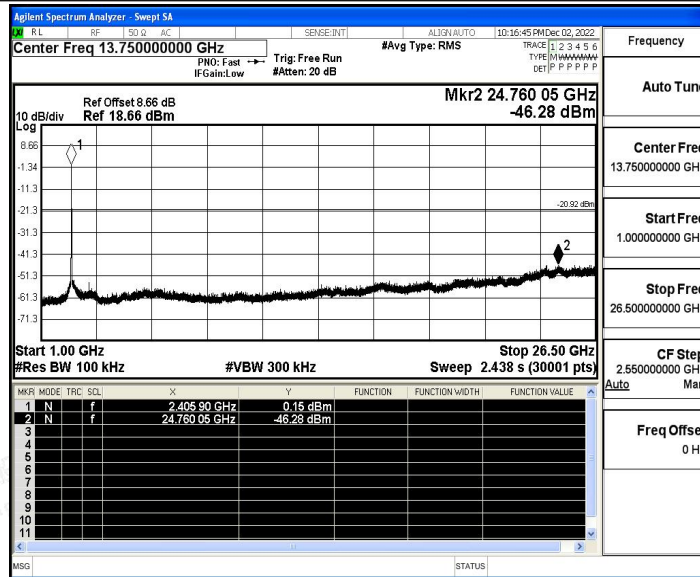


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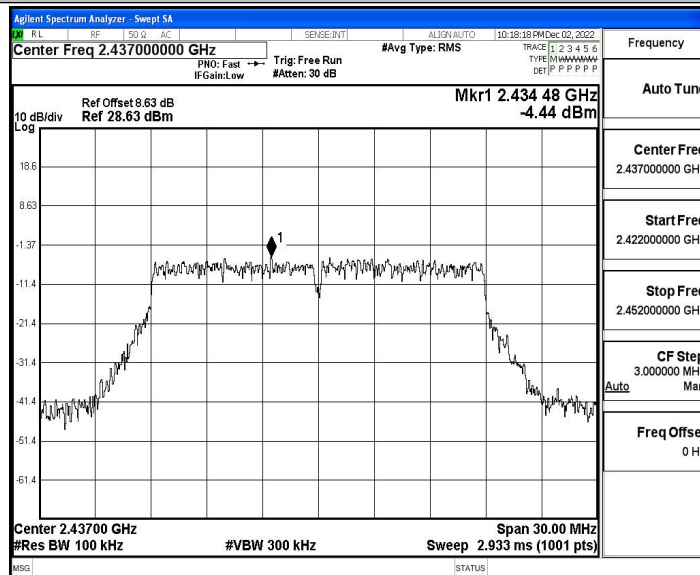
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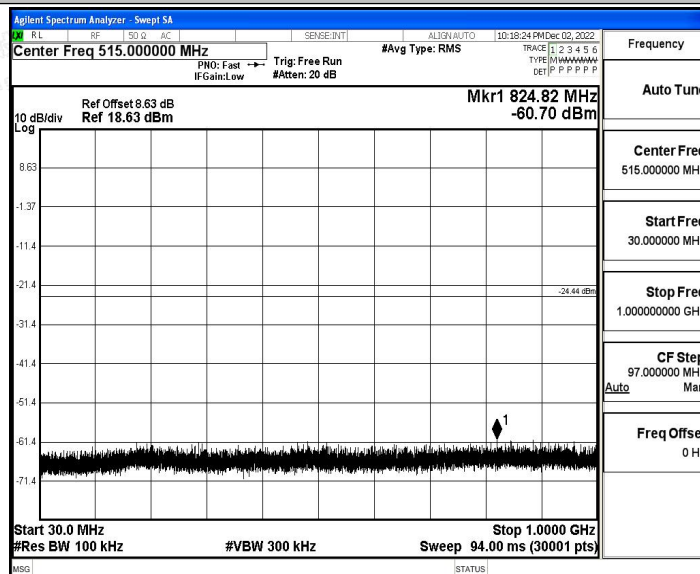
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11N20SISO_Ant1_2437_0~Reference



11N20SISO_Ant1_2437_30~1000



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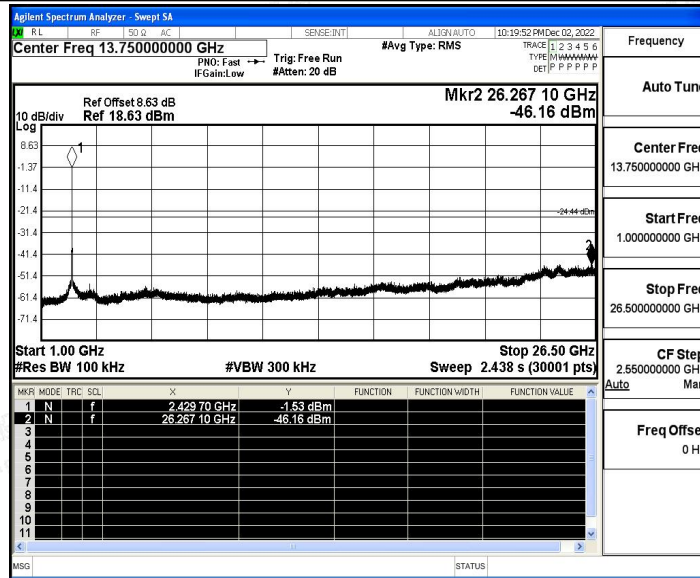
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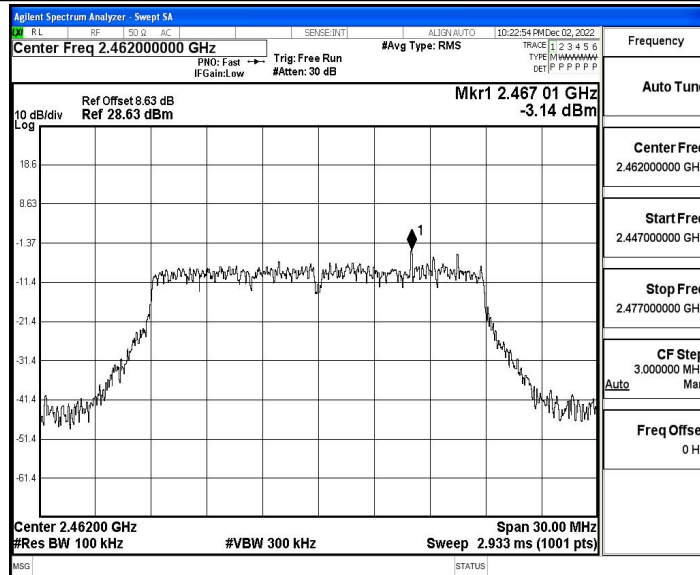
Scan code to check authenticity



11N20SISO_Ant1_2437_1000~26500



11N20SISO_Ant1_2462_0~Reference



11N20SISO_Ant1_2462_30~1000

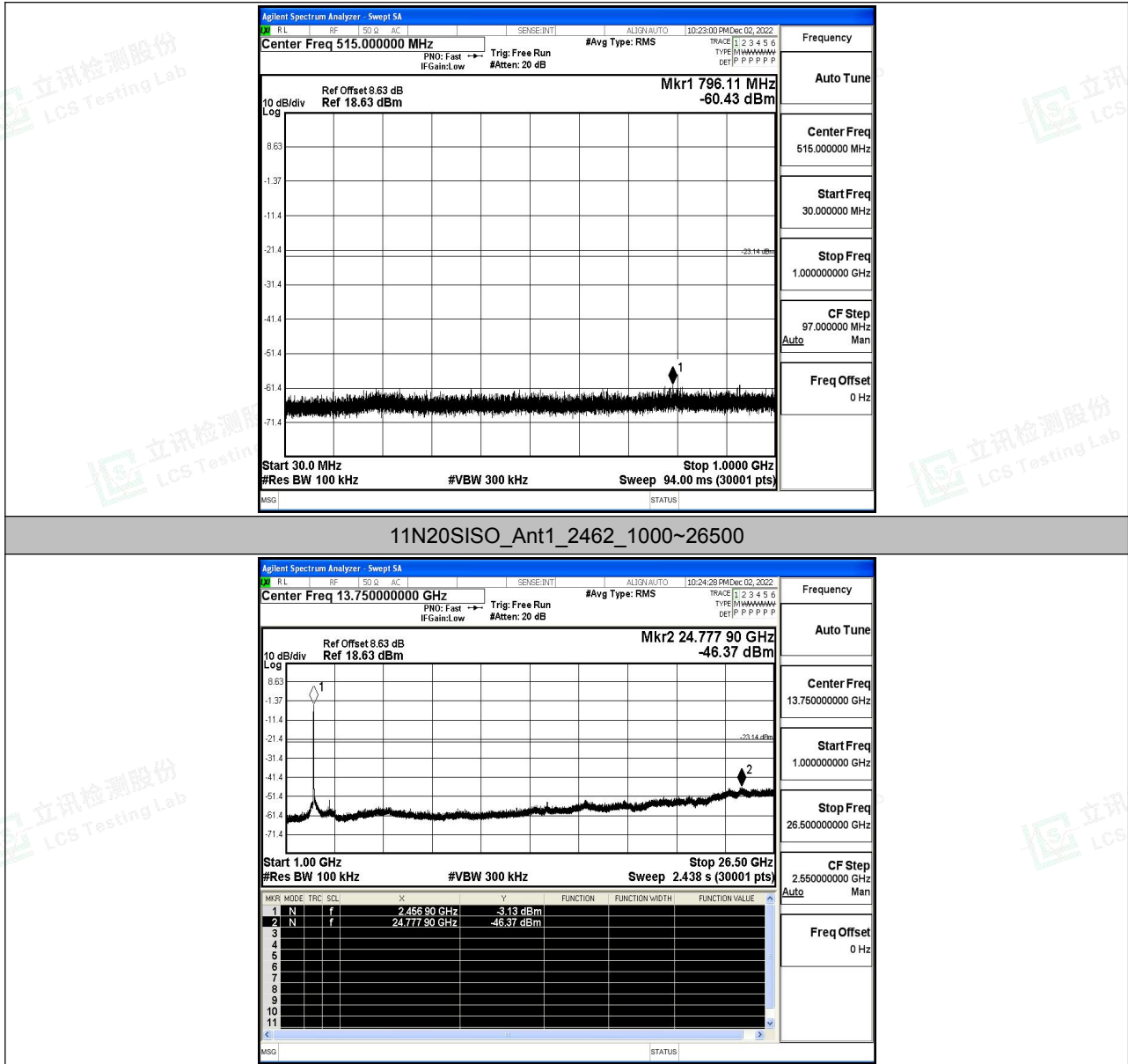


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A.7 Duty Cycle

Test Result

TestMode	Antenna	Freq(MHz)	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Factor	1/T(kHz)
11N20SISO	Ant1	2412	5.08	5.11	99.41	0.03	0.20
		2437	5.08	5.11	99.41	0.03	0.20
		2462	5.08	5.10	99.61	0.02	0.20





Test Graphs

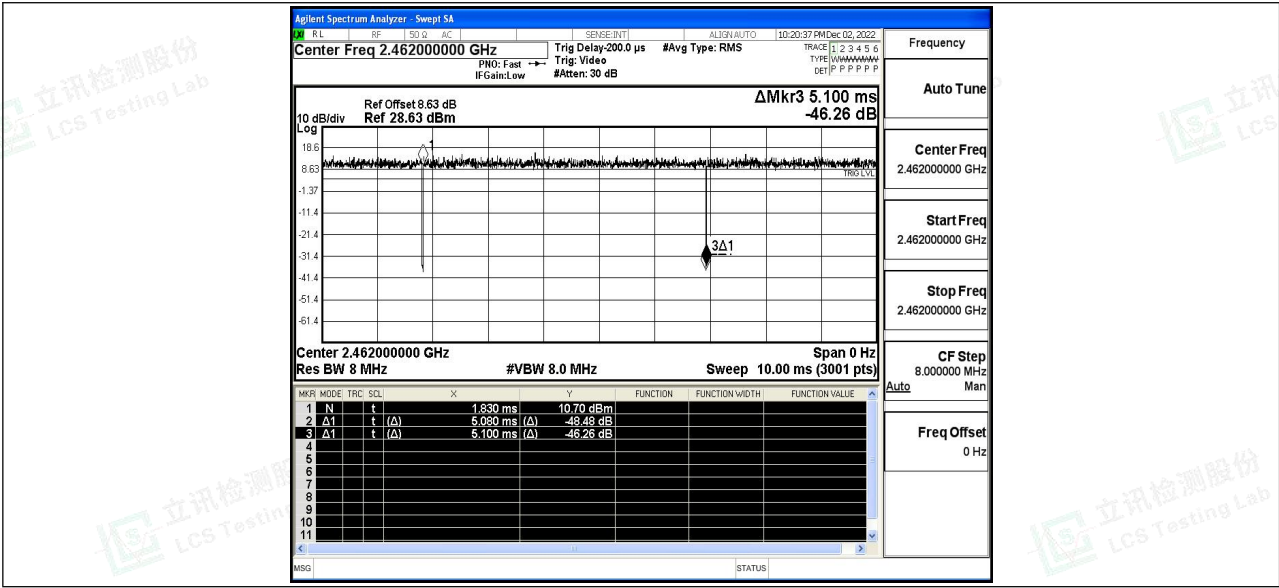


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A.8 Emissions in Restricted Bands

Test Result

TestMode	Antenna	Channel Name	Freq (MHz)	Detector	Freq [MHz]	Result [dBm]	Gain [dBi]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
11N20SISO	Ant1	Low	2412	AV	2310.000	-58.46	3.0	≤ -41.20	39.80	≤ 54	PASS
				AV	2389.830	-56.13	3.0	≤ -41.20	42.13	≤ 54	PASS
				AV	2390.000	-56.18	3.0	≤ -41.20	42.08	≤ 54	PASS
				Peak	2310.000	-48.43	3.0	≤ -21.20	49.83	≤ 74	PASS
				Peak	2387.750	-44.56	3.0	≤ -21.20	53.70	≤ 74	PASS
				Peak	2390.000	-44.65	3.0	≤ -21.20	53.61	≤ 74	PASS
		High	2462	AV	2483.500	-56.24	3.0	≤ -41.20	42.02	≤ 54	PASS
				AV	2484.660	-56.19	3.0	≤ -41.20	42.07	≤ 54	PASS
				AV	2500.000	-56.7	3.0	≤ -41.20	41.56	≤ 54	PASS
				Peak	2483.500	-45.69	3.0	≤ -21.20	52.57	≤ 74	PASS
				Peak	2483.670	-44.75	3.0	≤ -21.20	53.51	≤ 74	PASS
				Peak	2500.000	-45.45	3.0	≤ -21.20	52.81	≤ 74	PASS

Note:

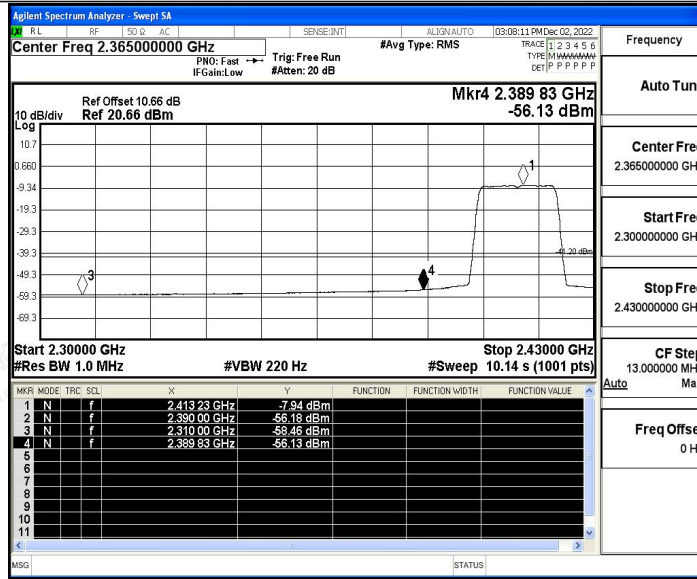
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



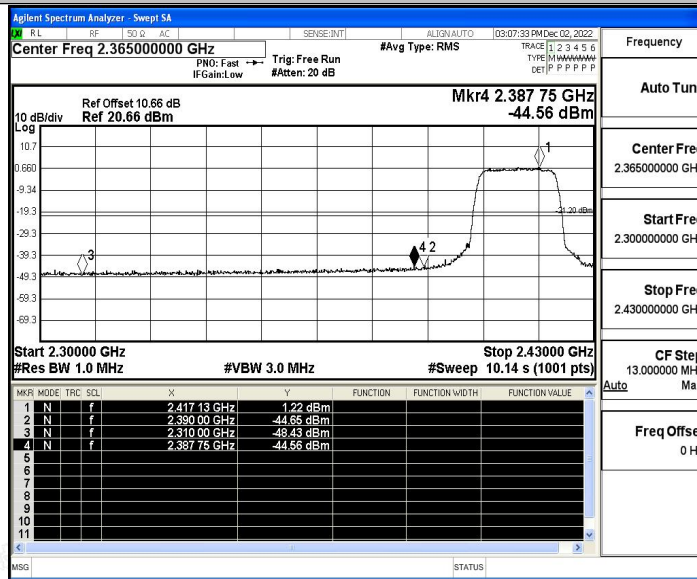


Test Graphs

11N20SISO_Ant1_Low_2412_AV



11N20SISO_Ant1_Low_2412_Peak



11N20SISO_Ant1_High_2462_AV

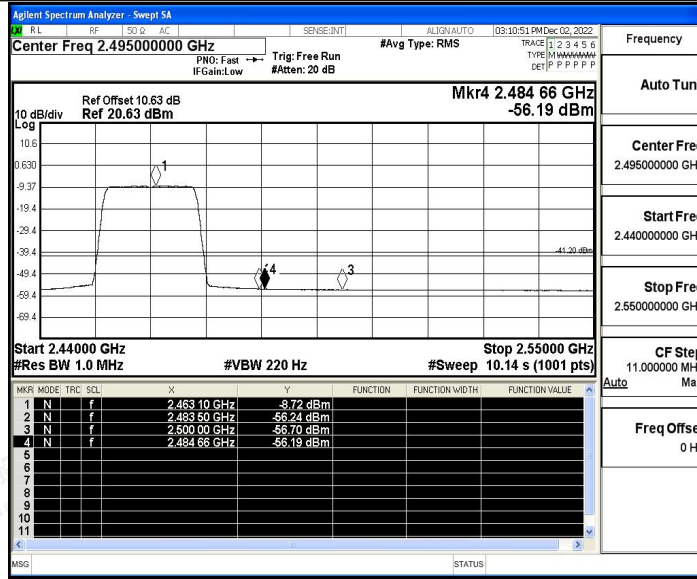


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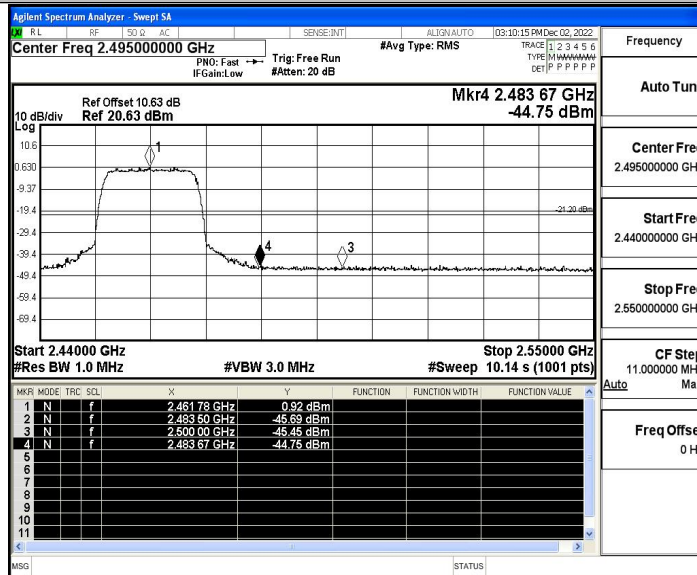
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11N20SISO_Ant1_High_2462_Peak



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