

Appendix B

RF Test Data for 5.2GWIFI (Conducted Measurement)

Product Name: Mini Projector

Test Model: A1

Environmental Conditions

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





B.1 Emission Bandwidth

Test Result

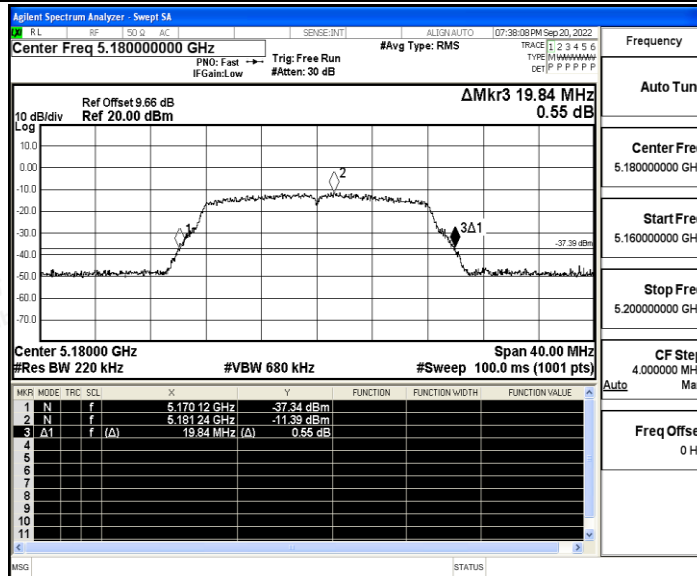
TestMode	Antenna	Frequency[MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	19.840	5170.120	5189.960	---	---
		5220	19.920	5210.000	5229.920	---	---
		5240	20.040	5229.920	5249.960	---	---



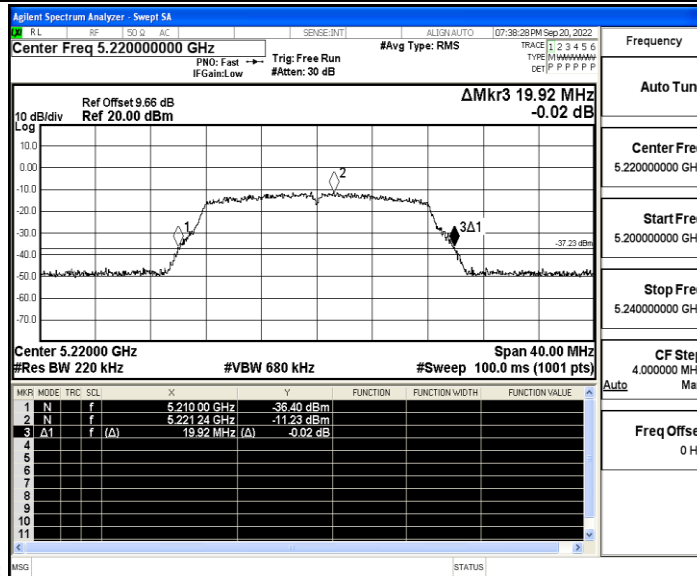


Test Graphs

11A_Ant1_5180



11A_Ant1_5220



11A_Ant1_5240

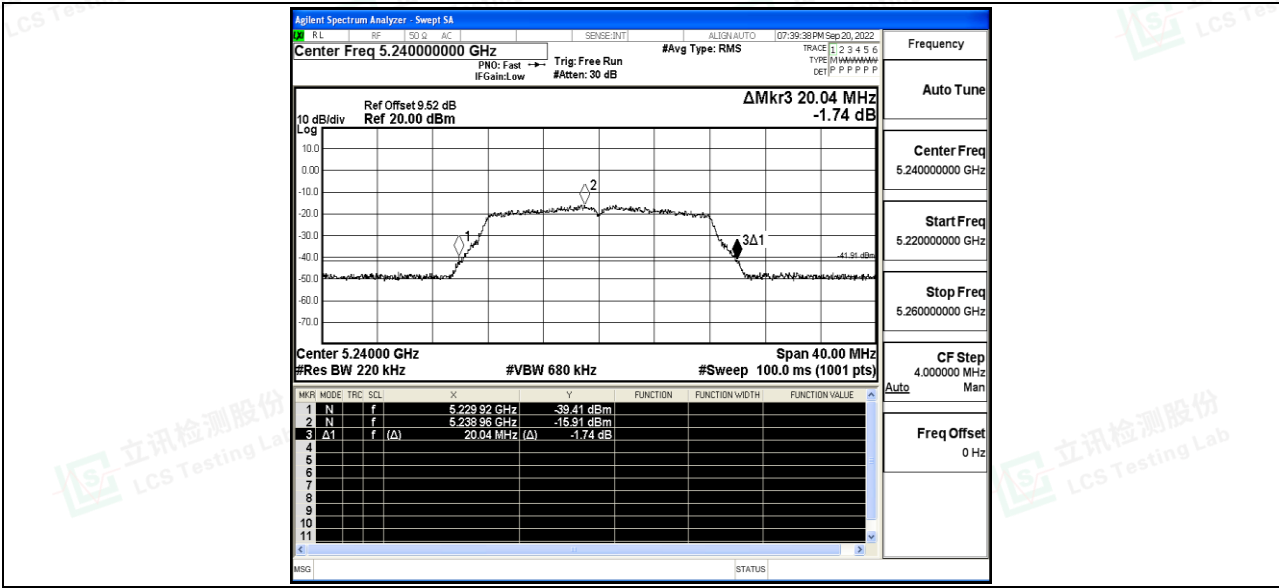


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B.2 Maximum conducted output power

Test Result Channel Power

Test Mode	Antenna	Frequency[MHz]	Channel Power [dBm]	Duty Cycle [%]	DC Factor [dBm]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	5180	9.43	96.53	0.15	9.58	≤23.98	PASS
		5220	9.82	96.55	0.15	9.97	≤23.98	PASS
		5240	10.25	96.53	0.15	10.40	≤23.98	PASS

Note: The Duty Cycle Factor is compensated in the graph.



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B.3 Maximum power spectral density

Test Result

TestMode	Antenna	Frequency[MHz]	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5180	-0.83	≤11.00	PASS
		5220	-0.41	≤11.00	PASS
		5240	-0.08	≤11.00	PASS

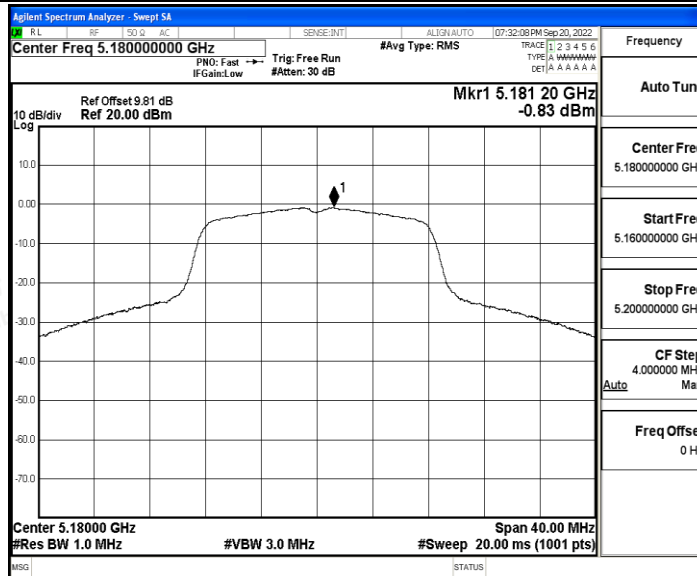
Note: 1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.
2.The Duty Cycle Factor and RBW Factor is compensated in the graph.



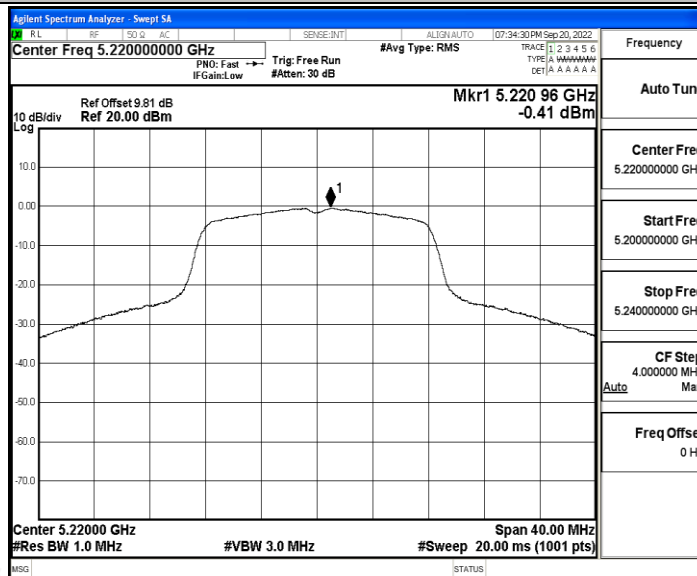


Test Graphs

11A_Ant1_5180



11A_Ant1_5220



11A_Ant1_5240

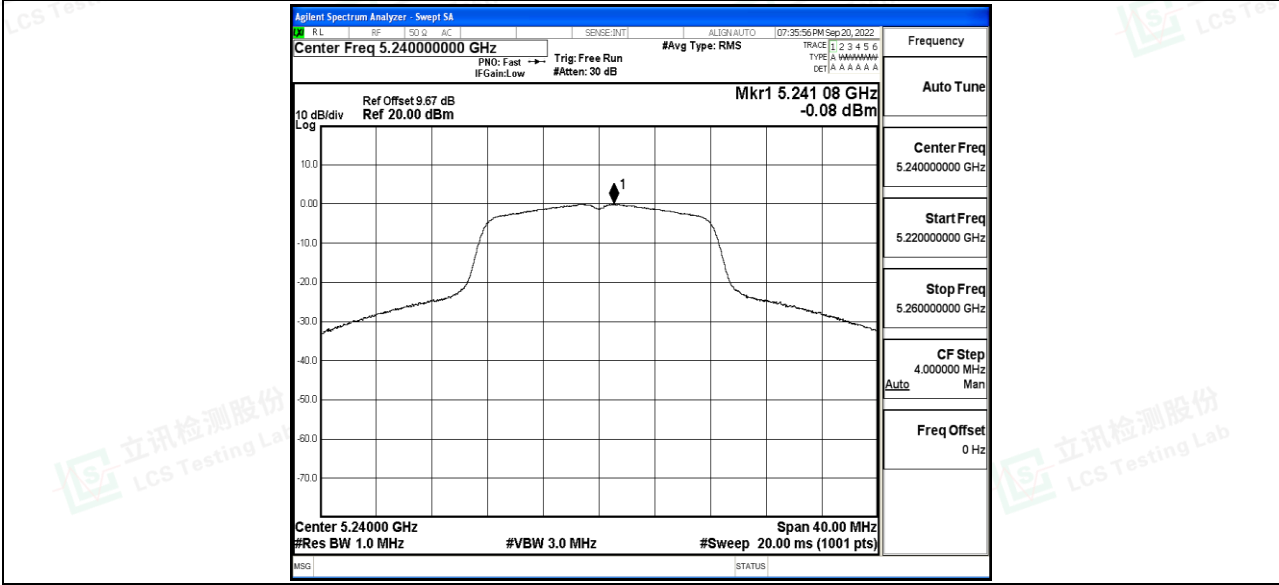


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B.4 Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Frequenc y[MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
11A	Ant1	Low	5180	AV	4500.000	-48.66	≤-41.20	46.54	≤54	PASS
				AV	4882.200	-46.6	≤-41.20	48.60	≤54	PASS
				AV	5150.000	-47.34	≤-41.20	47.86	≤54	PASS
				Peak	4500.000	-46.91	≤-21.20	48.29	≤74	PASS
				Peak	5032.700	-38.62	≤-21.20	56.58	≤74	PASS
				Peak	5150.000	-44.7	≤-21.20	50.50	≤74	PASS
		High	5240	AV	5350.000	-47.69	≤-41.20	47.51	≤54	PASS
				AV	5403.120	-47.16	≤-41.20	48.04	≤54	PASS
				AV	5460.000	-47.72	≤-41.20	47.48	≤54	PASS
				Peak	5350.000	-50.6	≤-21.20	44.60	≤74	PASS
				Peak	5356.080	-39.09	≤-21.20	56.11	≤74	PASS
				Peak	5460.000	-42.01	≤-21.20	53.19	≤74	PASS

Note:

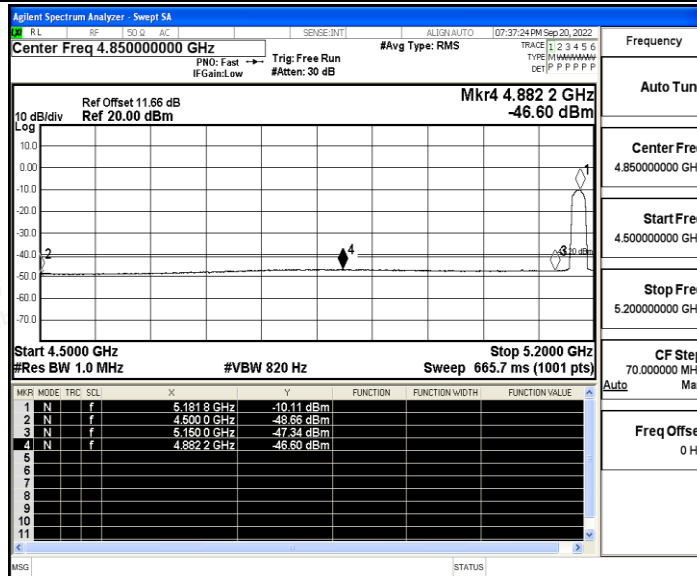
1. The Antenna Gain is compensated in the graph.
2. For transmitters operating in 5150-5350 GHz band and 5470-5725 GHz band: The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



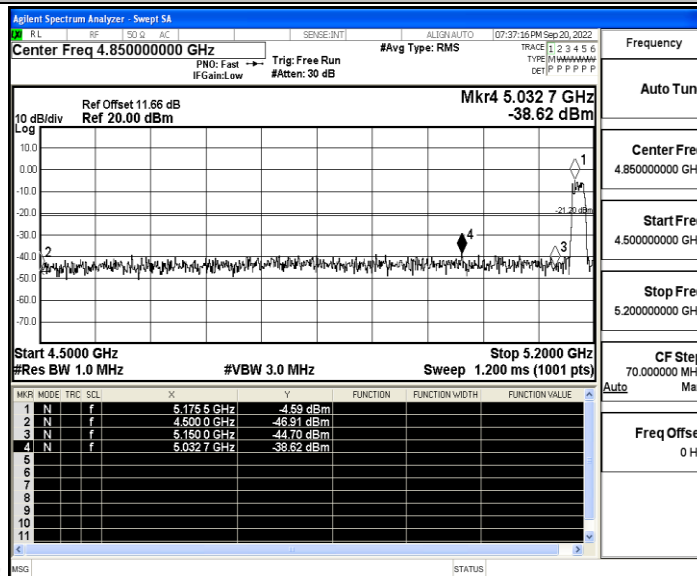


Test Graphs

11A_Ant1_Low_5180_AV



11A_Ant1_Low_5180_Peak



11A_Ant1_High_5240_AV

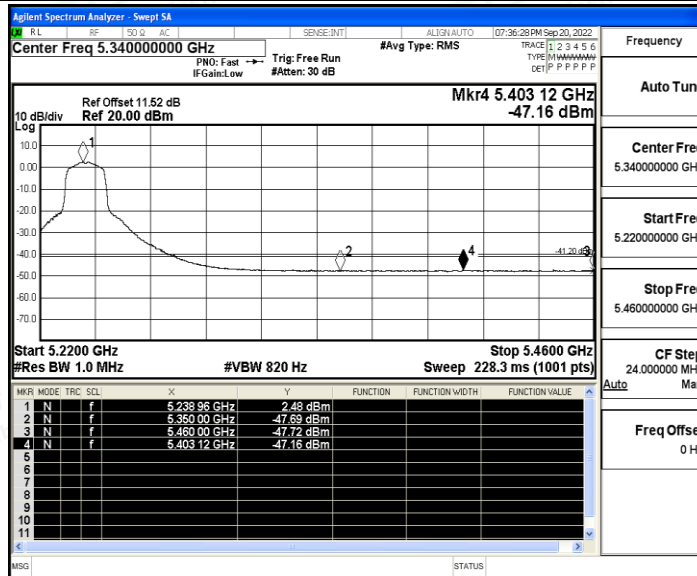


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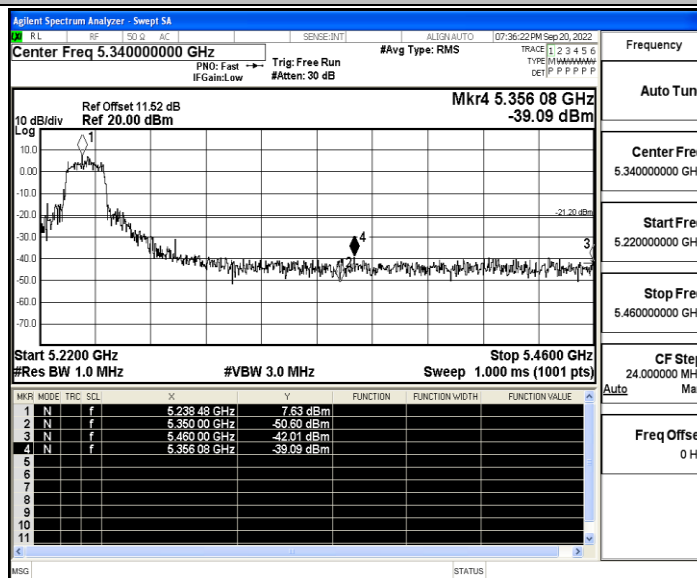
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11A_Ant1_High_5240_Peak



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B.5 Frequency Stability

Test Result

Voltage								
TestMode	Antenna	Frequenc y[MHz]	Voltage [Vdc]	Temperat ure (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11A	Ant1	5180	NV	NT	-20000.00	-3.861004	20	PASS
			LV	NT	40000.00	7.722008	20	PASS
			HV	NT	20000.00	3.861004	20	PASS
		5220	NV	NT	0.00	0.000000	20	PASS
			LV	NT	40000.00	7.662835	20	PASS
			HV	NT	-20000.00	-3.831418	20	PASS
		5240	NV	NT	20000.00	3.816794	20	PASS
			LV	NT	-20000.00	-3.816794	20	PASS
			HV	NT	20000.00	3.816794	20	PASS

Temperature								
TestMode	Antenna	Frequenc y[MHz]	Voltage [Vdc]	Temperat ure (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11A	Ant1	5180	NV	-30	20000.00	3.861004	20	PASS
			NV	-20	0.00	0.000000	20	PASS
			NV	-10	20000.00	3.861004	20	PASS
			NV	0	20000.00	3.861004	20	PASS
			NV	10	20000.00	3.861004	20	PASS
			NV	20	20000.00	3.861004	20	PASS
			NV	30	-20000.00	-3.861004	20	PASS
			NV	40	20000.00	3.861004	20	PASS
			NV	50	-20000.00	-3.861004	20	PASS
		5220	NV	-30	20000.00	3.831418	20	PASS
			NV	-20	-20000.00	-3.831418	20	PASS
			NV	-10	20000.00	3.831418	20	PASS
			NV	0	20000.00	3.831418	20	PASS
			NV	10	20000.00	3.831418	20	PASS
			NV	20	0.00	0.000000	20	PASS
			NV	30	0.00	0.000000	20	PASS
			NV	40	-20000.00	-3.831418	20	PASS
			NV	50	0.00	0.000000	20	PASS
		5240	NV	-30	0.00	0.000000	20	PASS
			NV	-20	0.00	0.000000	20	PASS
			NV	-10	0.00	0.000000	20	PASS



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			NV	0	20000.00	3.816794	20	PASS
			NV	10	20000.00	3.816794	20	PASS
			NV	20	0.00	0.000000	20	PASS
			NV	30	0.00	0.000000	20	PASS
			NV	40	20000.00	3.816794	20	PASS
			NV	50	20000.00	3.816794	20	PASS





B.6 Duty Cycle

Test Result

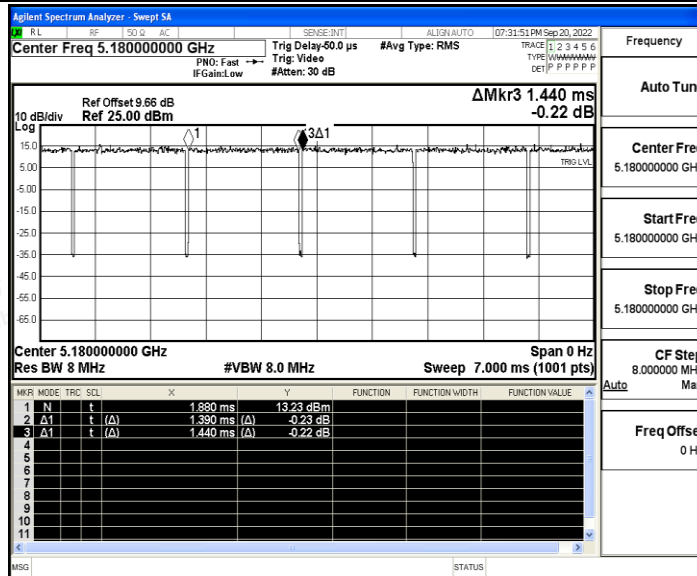
TestMode	Antenna	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Factor	1/T
11A	Ant1	5180	1.39	1.44	96.53	0.15	0.72
		5220	1.40	1.45	96.55	0.15	0.71
		5240	1.39	1.44	96.53	0.15	0.72



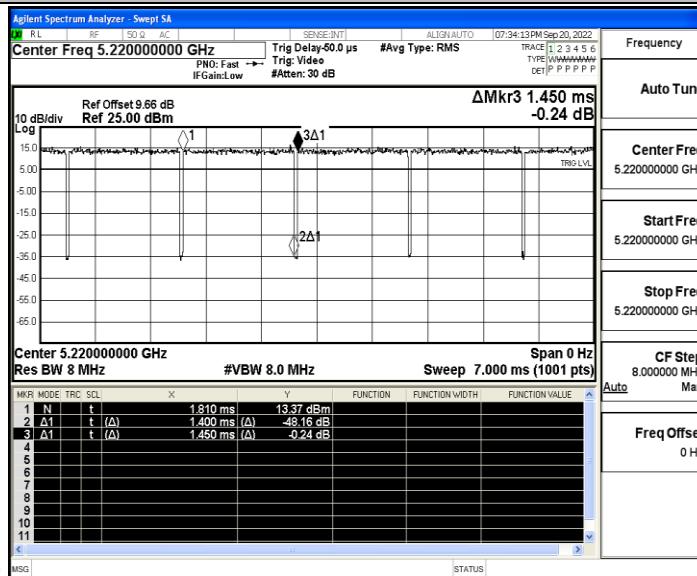


Test Graphs

11A_Ant1_5180



11A_Ant1_5220



11A_Ant1_5240

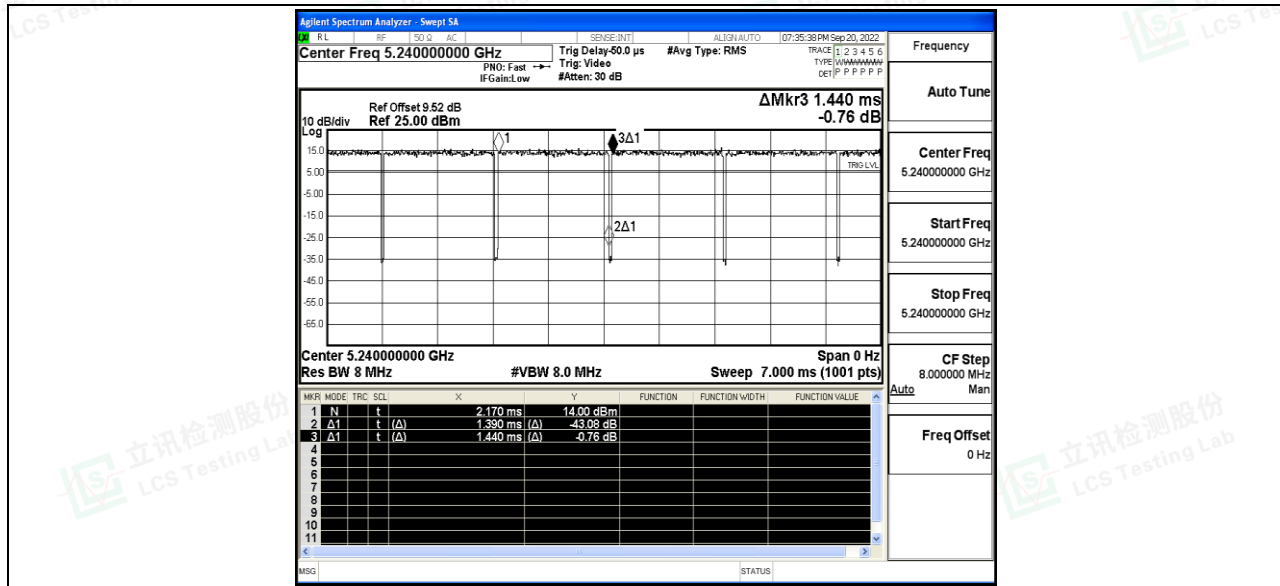


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