



Appendix B

RF Test Data for BLE (Conducted Measurement)

Product Name: Motorcycle Audio

Test Model: SHKC7800N

Environmental Conditions

Temperature:	23.8 ° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Bill Zhu
Supervised by:	Li Huan



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B.1 6dB Bandwidth

Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.668	2401.668	2402.336	0.5	PASS
		2440	0.664	2439.668	2440.332	0.5	PASS
		2480	0.668	2479.664	2480.332	0.5	PASS



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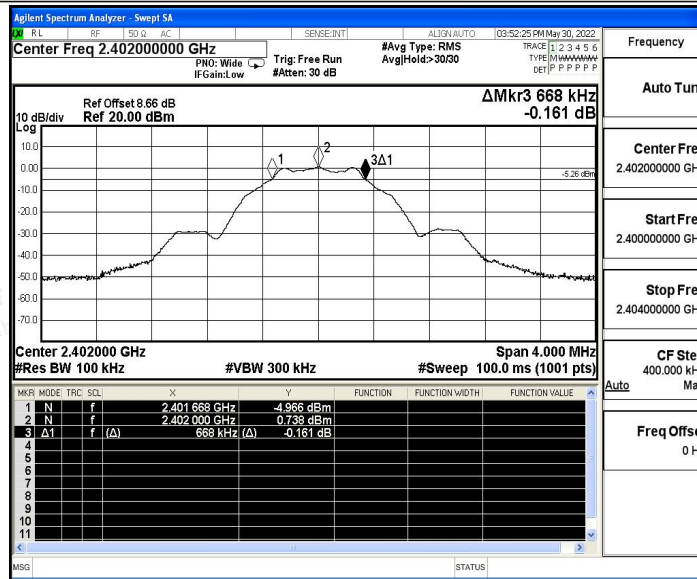
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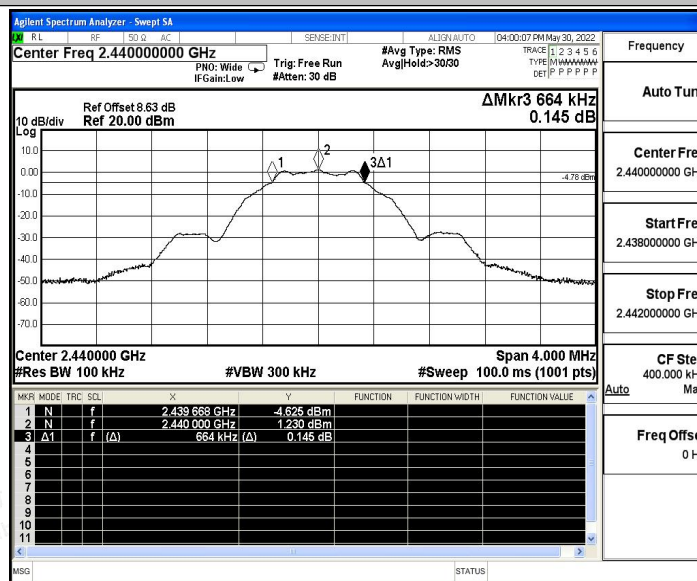


Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

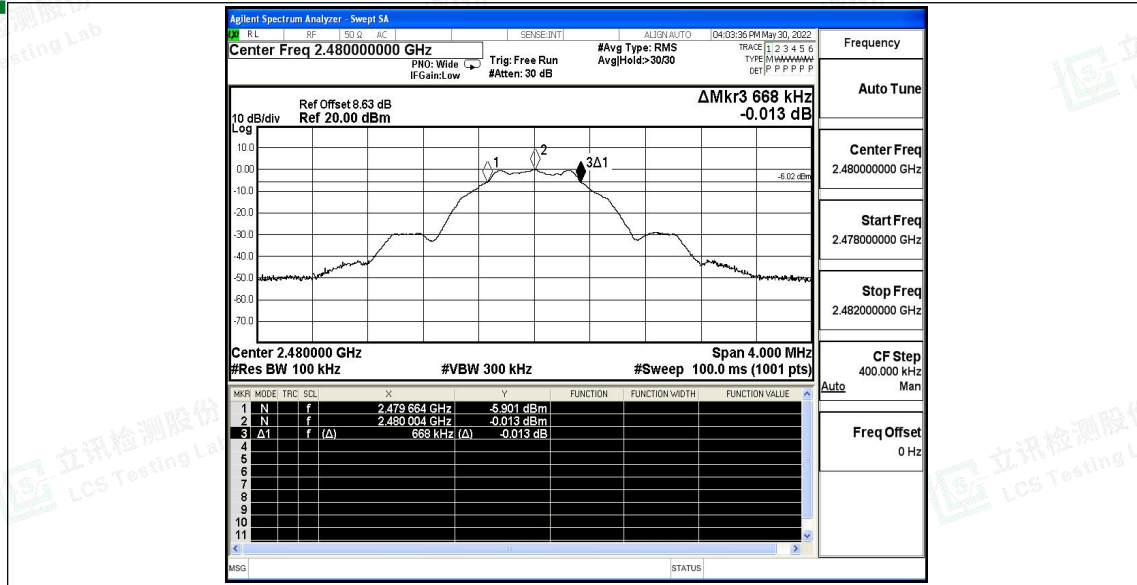


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B.2 Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	1.32	≤30	PASS
		2440	1.78	≤30	PASS
		2480	0.55	≤30	PASS



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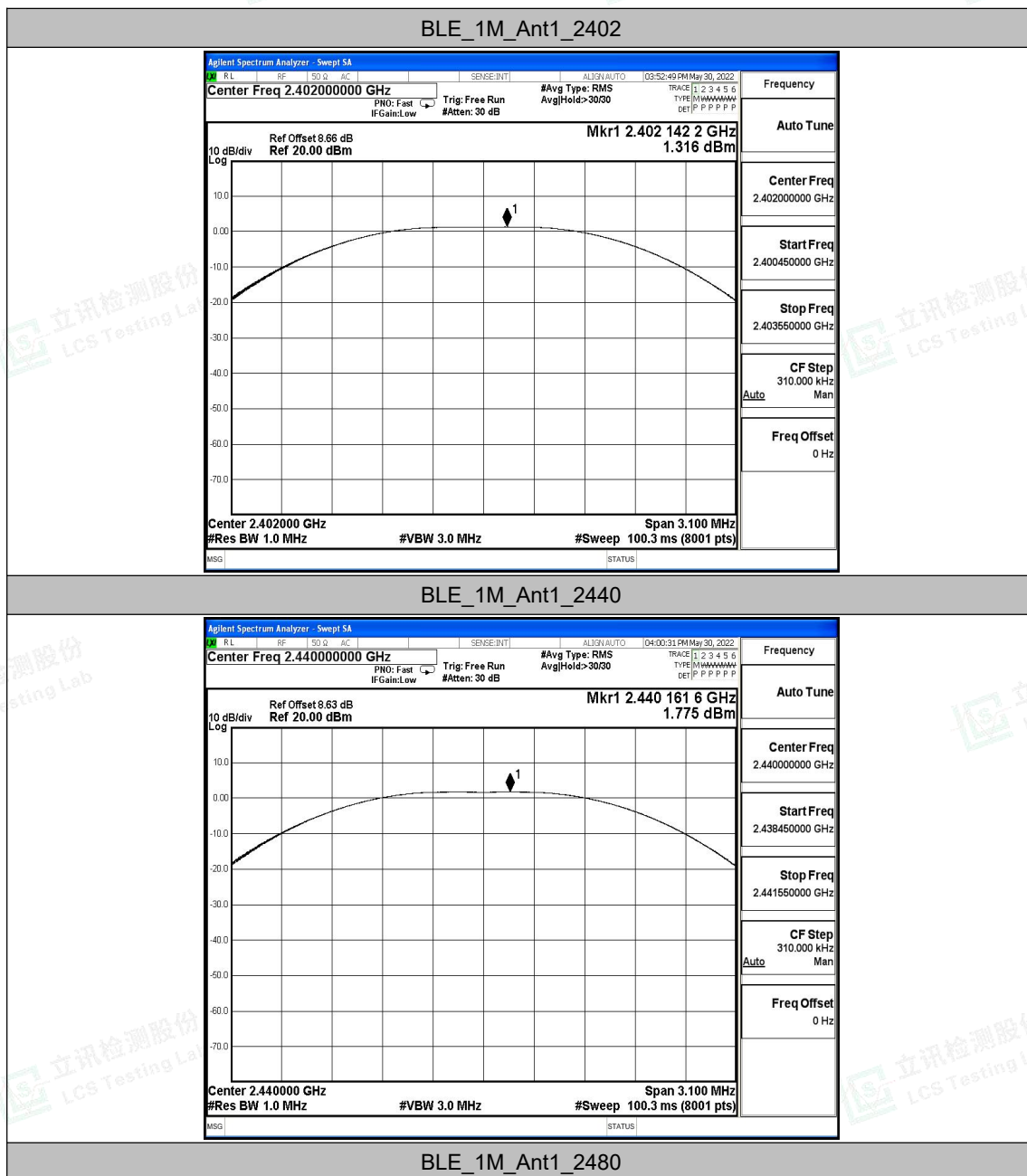
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Test Graphs

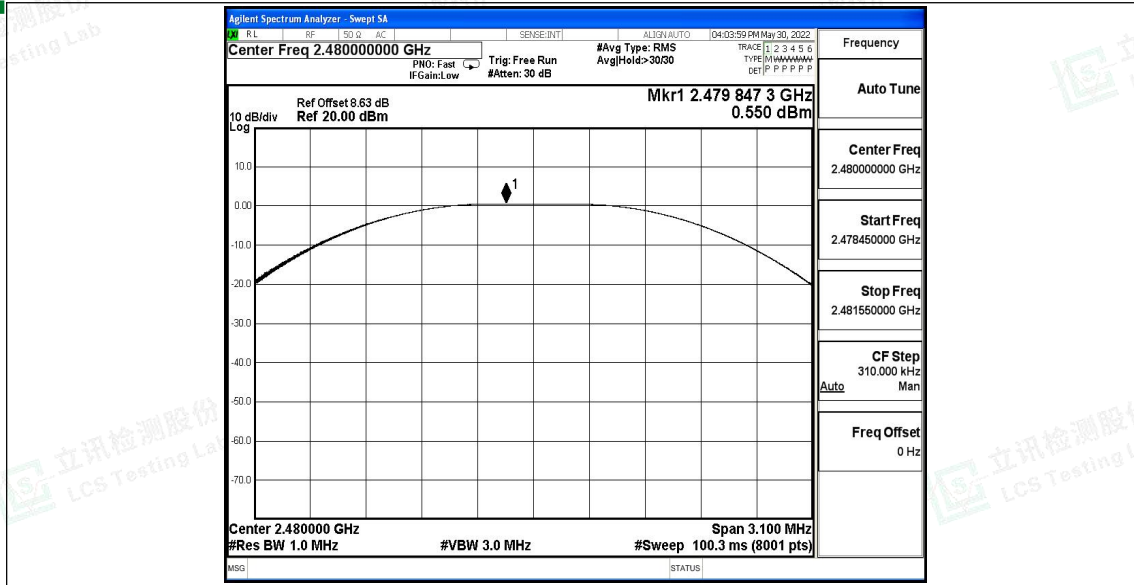


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B.3 Maximum power spectral density

Test Result

TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-13.46	≤8.00	PASS
		2440	-12.98	≤8.00	PASS
		2480	-14.28	≤8.00	PASS



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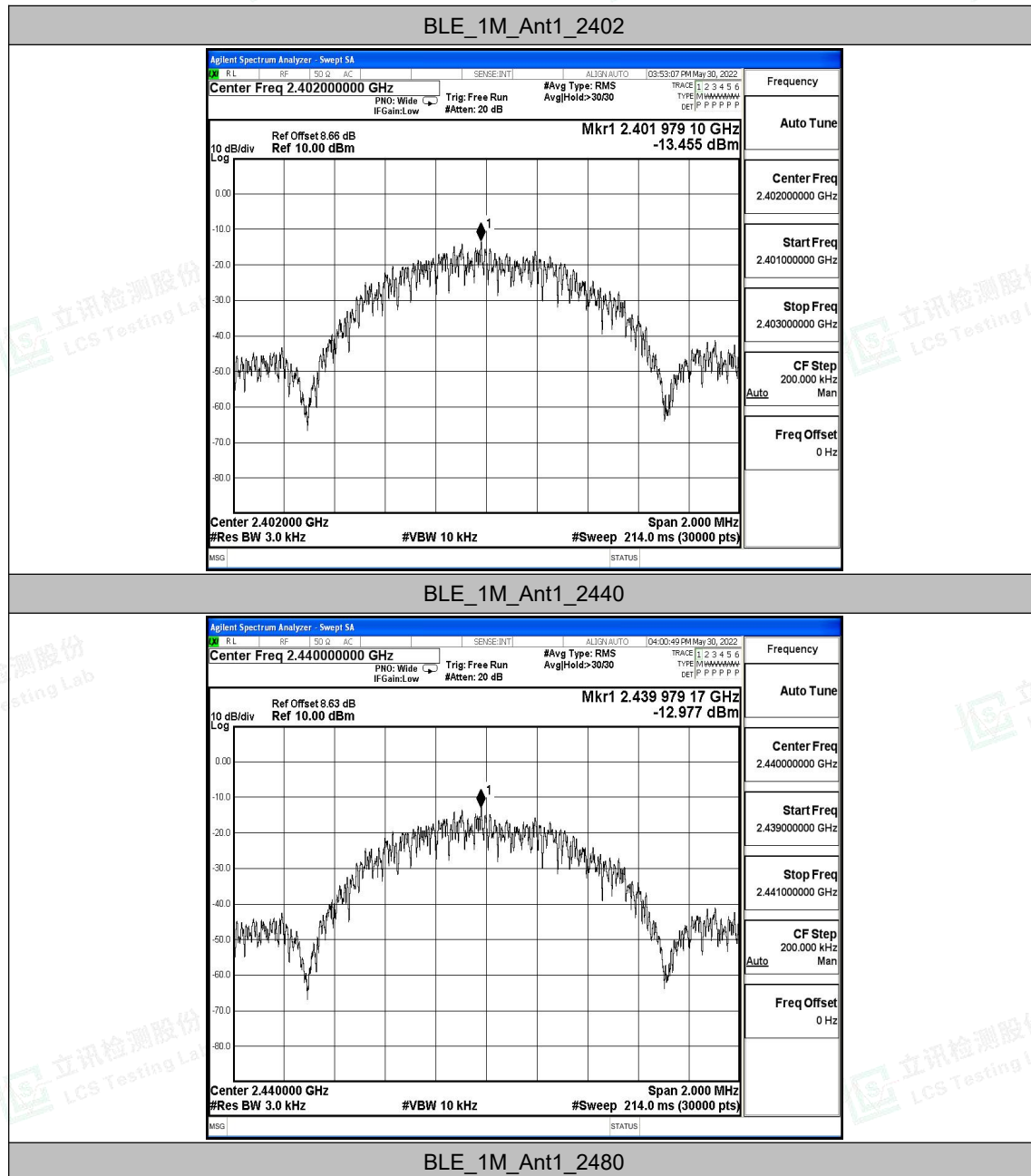
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Test Graphs

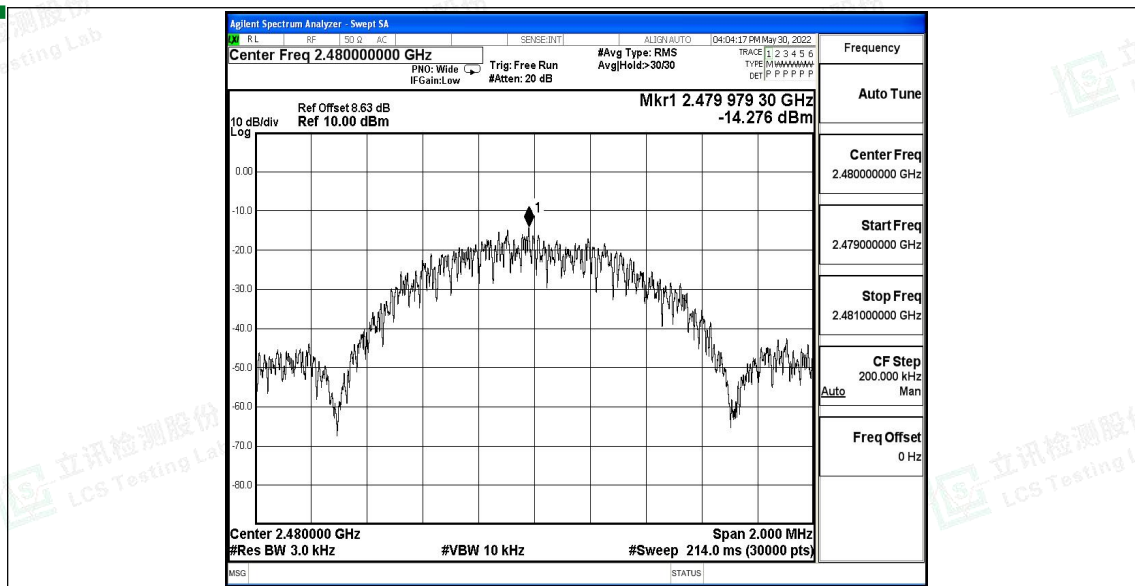


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B.4 Band edge measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	0.88	-48.86	≤-19.12	PASS
		High	2480	0.17	-47.91	≤-19.83	PASS

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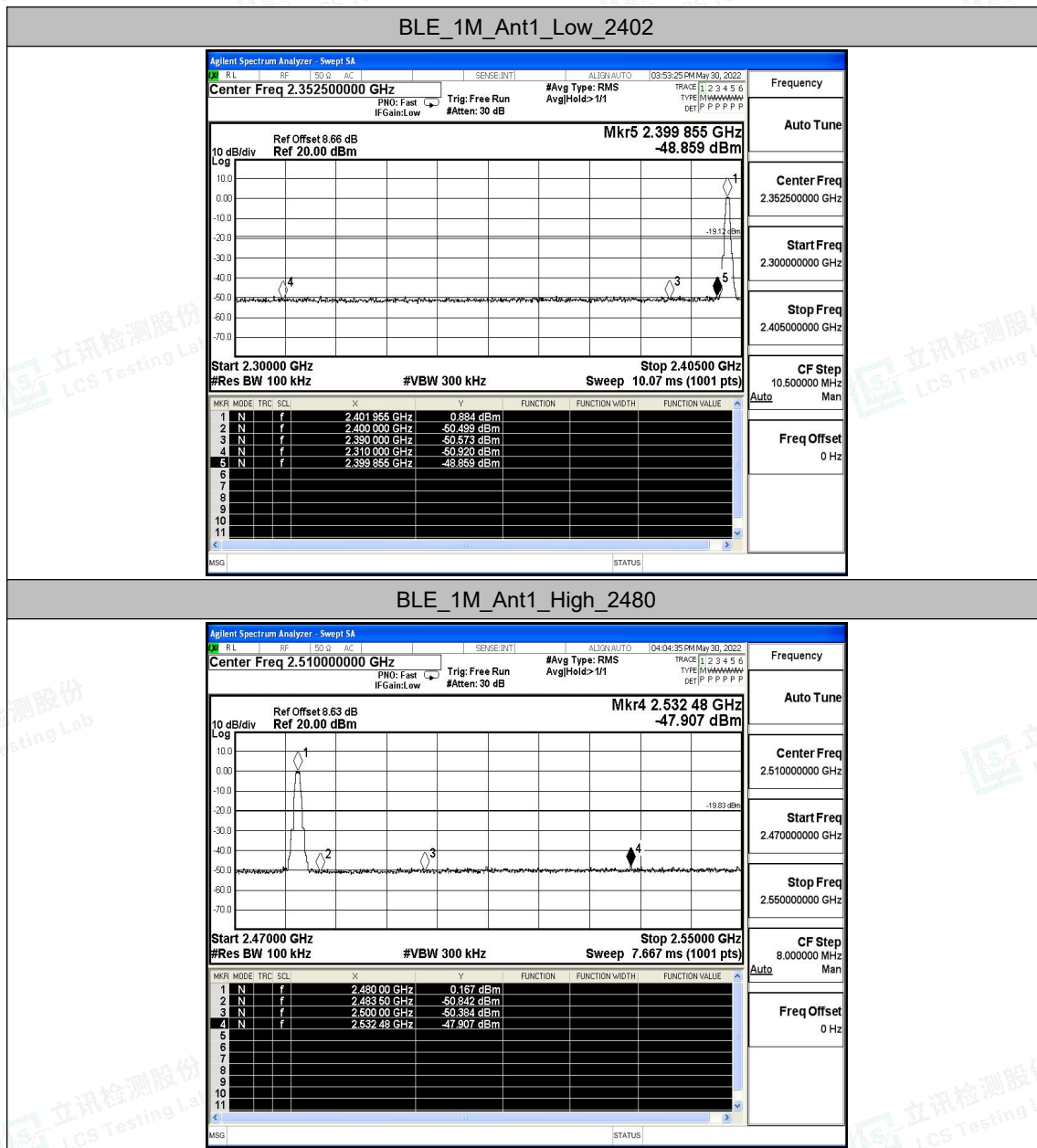
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Test Graphs



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B.5 Conducted Spurious Emission

Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	0.77	0.77	---	PASS
			30~1000	0.77	-56.31	≤-19.23	PASS
			1000~26500	0.77	-44.93	≤-19.23	PASS
		2440	Reference	1.25	1.25	---	PASS
			30~1000	1.25	-56.79	≤-18.75	PASS
			1000~26500	1.25	-46.7	≤-18.75	PASS
		2480	Reference	0.00	0.00	---	PASS
			30~1000	0.00	-57.92	≤-20	PASS
			1000~26500	0.00	-46.5	≤-20	PASS



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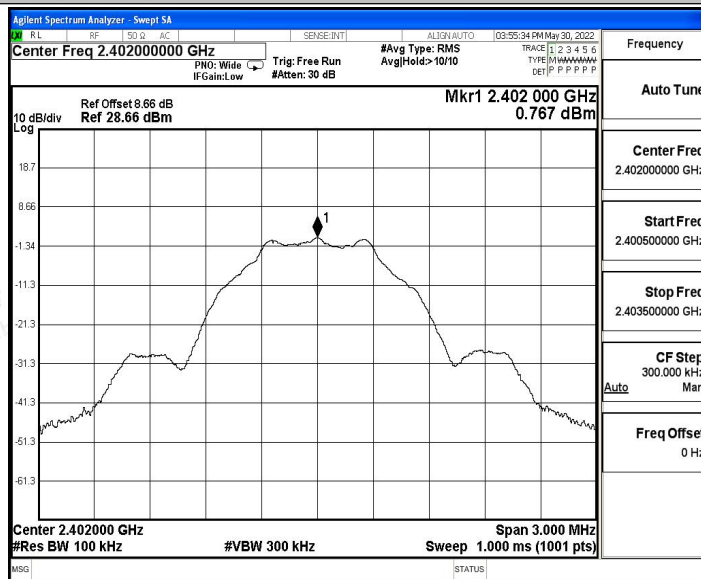
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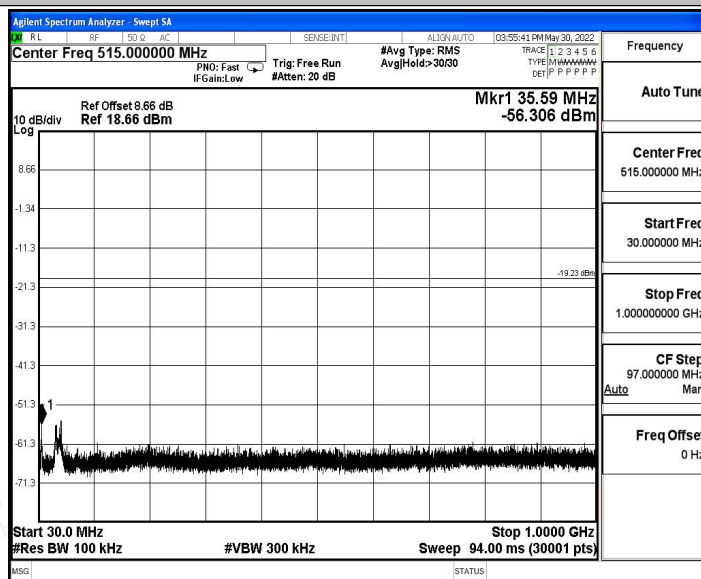


Test Graphs

BLE_1M_Ant1_2402_0~Reference



BLE_1M_Ant1_2402_30~1000



BLE_1M_Ant1_2402_1000~26500

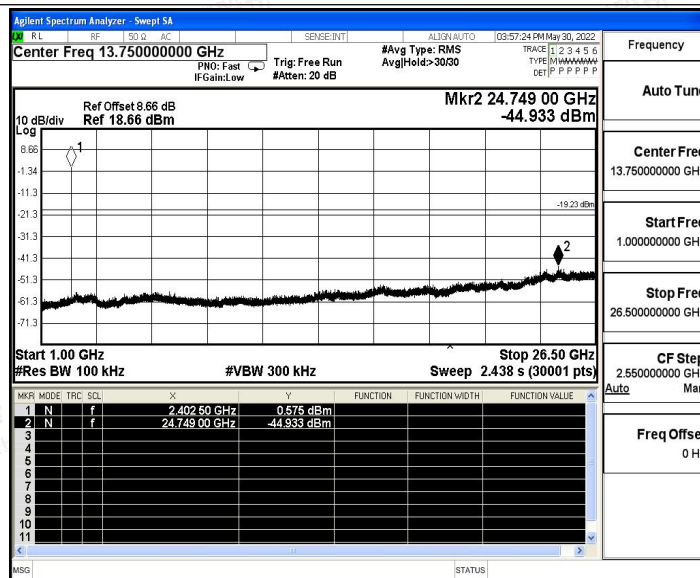


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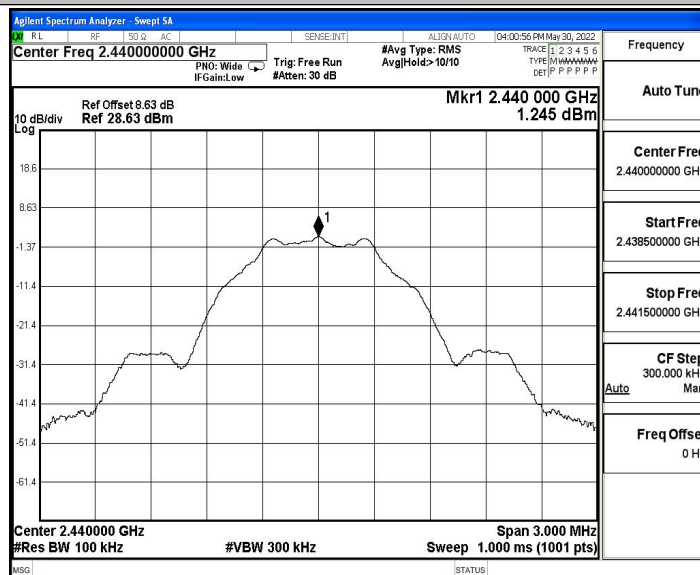
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BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000

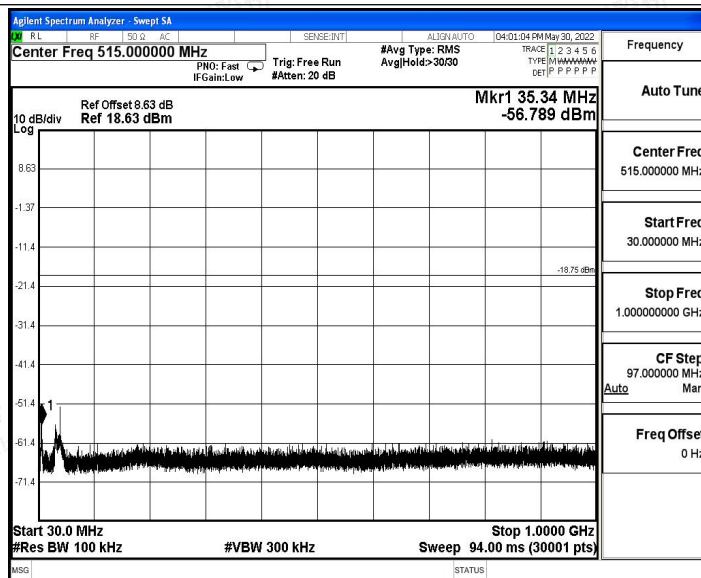


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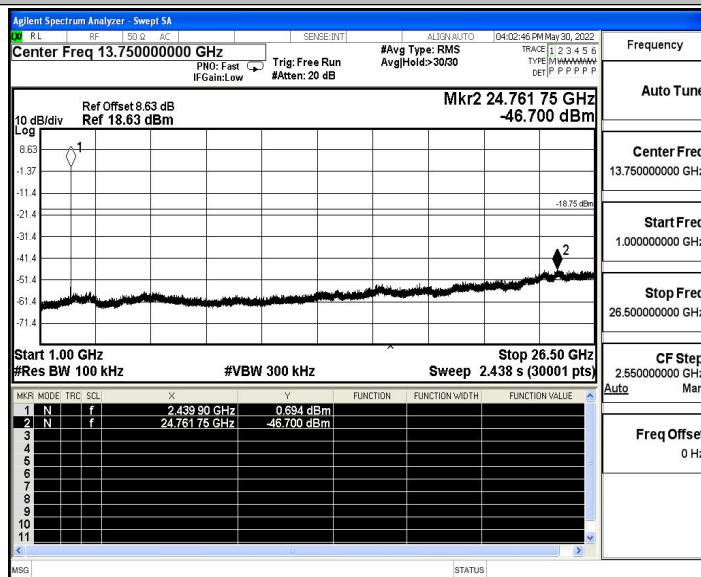
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BLE_1M_Ant1_2440_1000~26500



BLE_1M_Ant1_2480_0~Reference

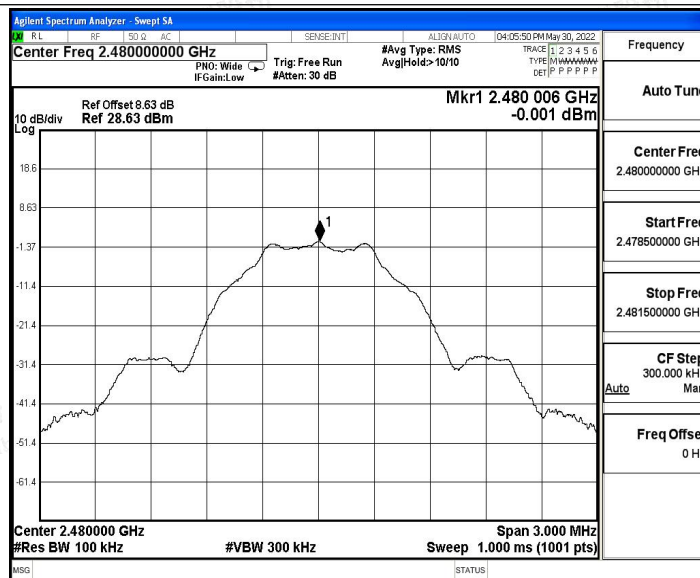


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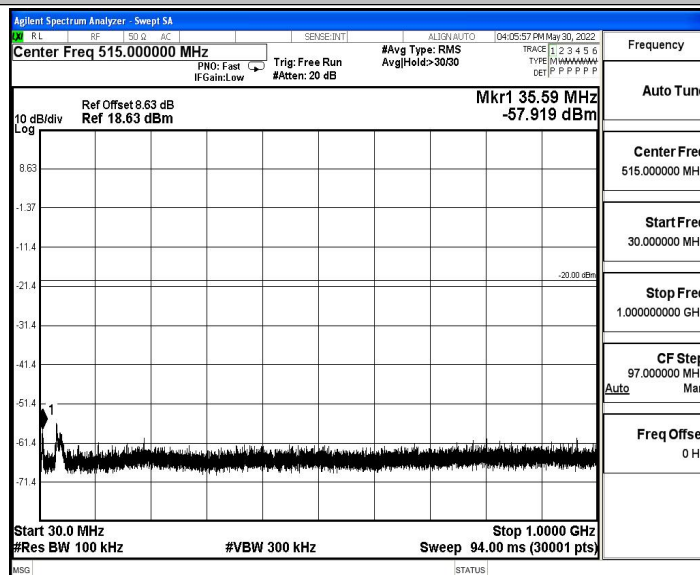
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BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500

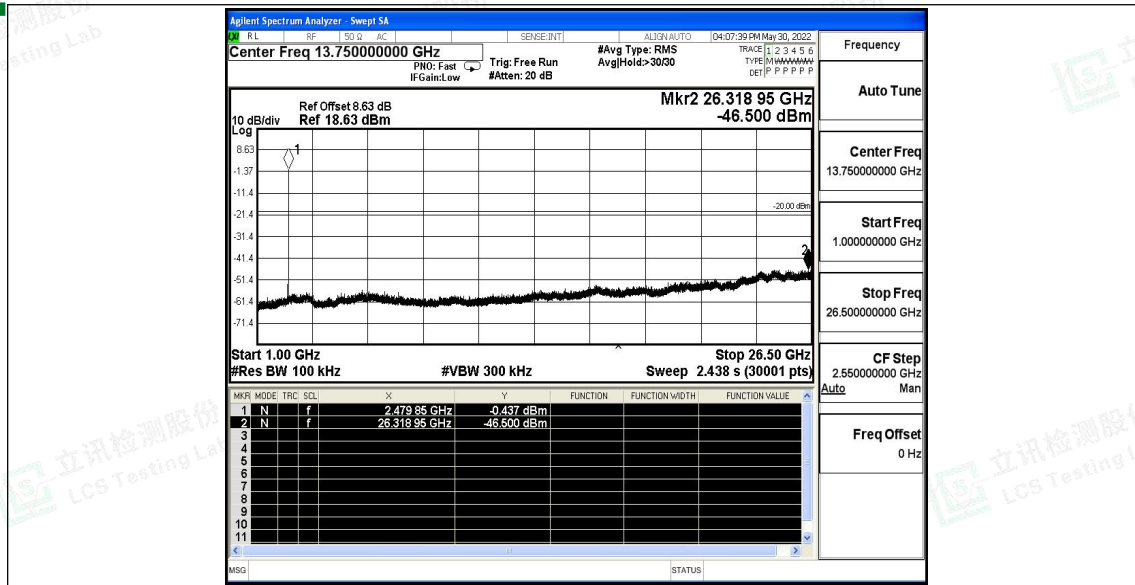


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B.6 Duty Cycle

Test Result

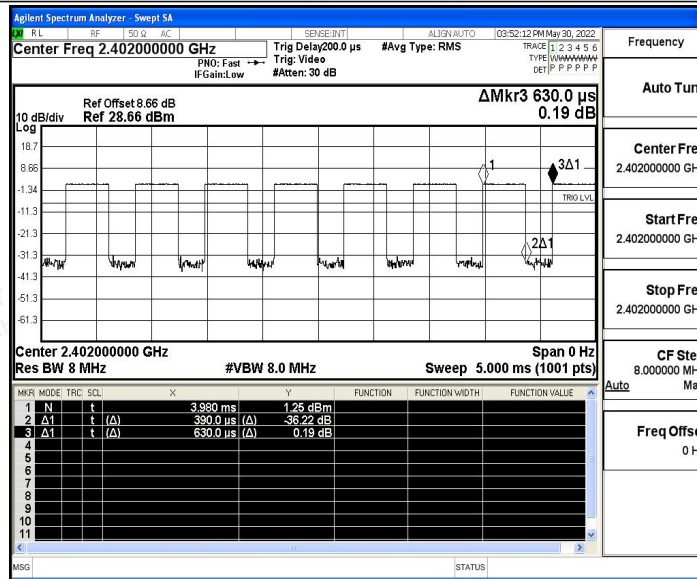
TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	1/T	Limit	Verdict
BLE_1M	Ant1	2402	0.39	0.63	0.6190	61.90	2.08	2.56	---	---
		2440	0.38	0.63	0.6032	60.32	2.20	2.63	---	---
		2480	0.38	0.63	0.6032	60.32	2.20	2.63	---	---



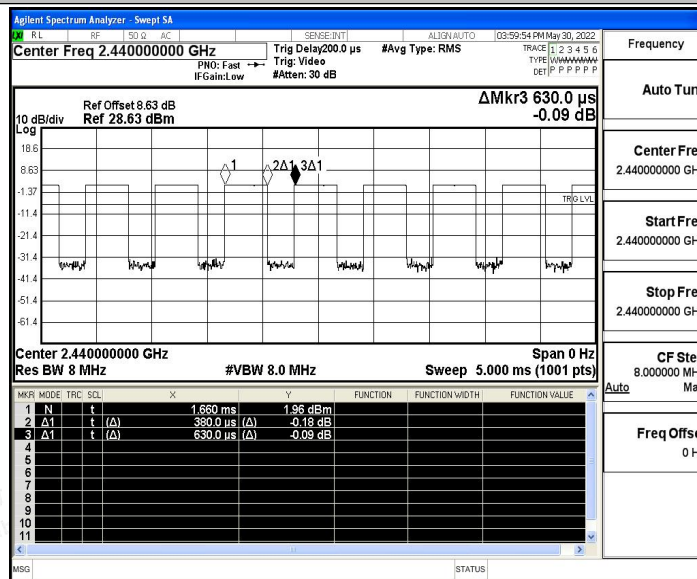


Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

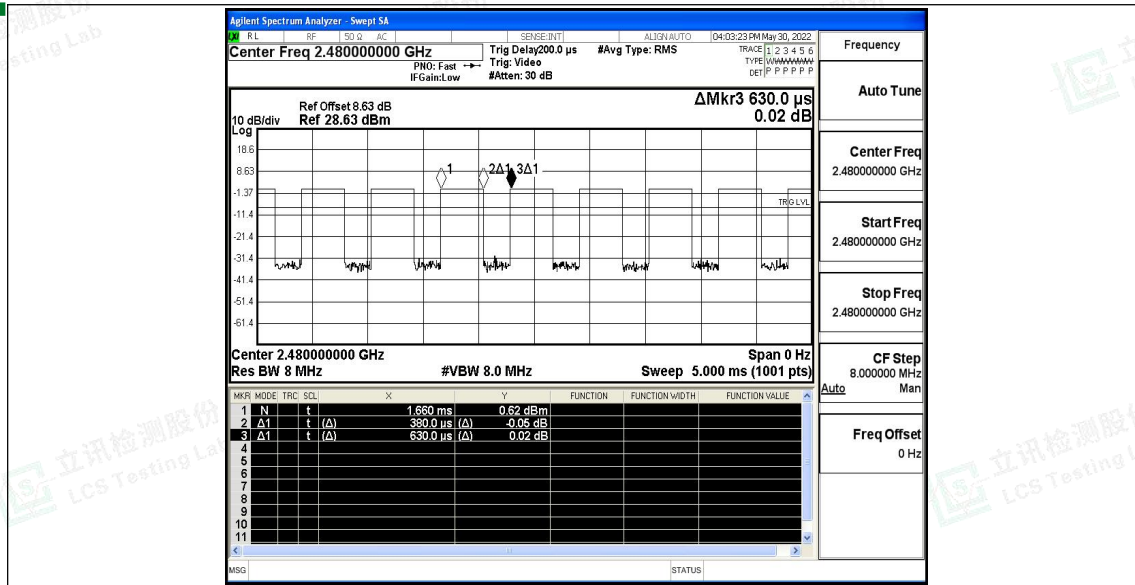


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B.7 Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-47.57	≤-41.20	47.63	≤54	PASS
				AV	2388.830	-46.91	≤-41.20	48.29	≤54	PASS
				AV	2390.000	-47.34	≤-41.20	47.86	≤54	PASS
				Peak	2310.000	-38.6	≤-21.20	56.60	≤74	PASS
				Peak	2374.970	-36.95	≤-21.20	58.25	≤74	PASS
				Peak	2390.000	-38.82	≤-21.20	56.38	≤74	PASS
		High	2480	AV	2483.500	-46.44	≤-41.20	48.76	≤54	PASS
				AV	2497.280	-46.25	≤-41.20	48.95	≤54	PASS
				AV	2500.000	-46.5	≤-41.20	48.70	≤54	PASS
				Peak	2483.500	-38.9	≤-21.20	56.30	≤74	PASS
				Peak	2493.120	-36.5	≤-21.20	58.70	≤74	PASS
				Peak	2500.000	-38.09	≤-21.20	57.11	≤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.



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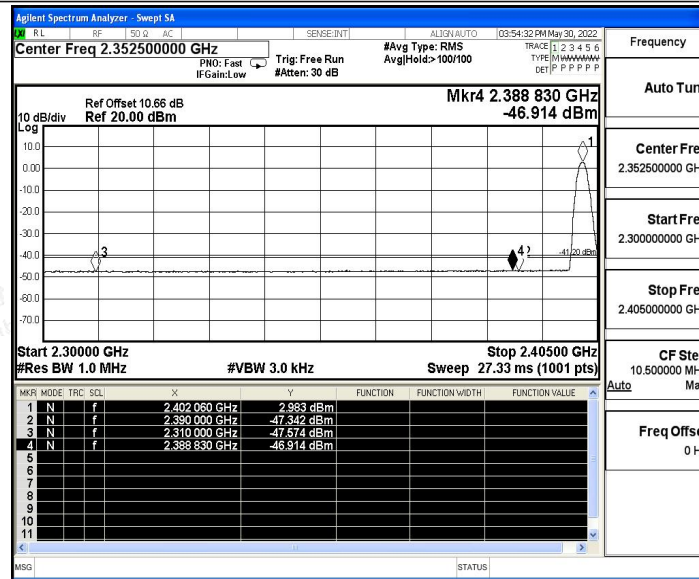
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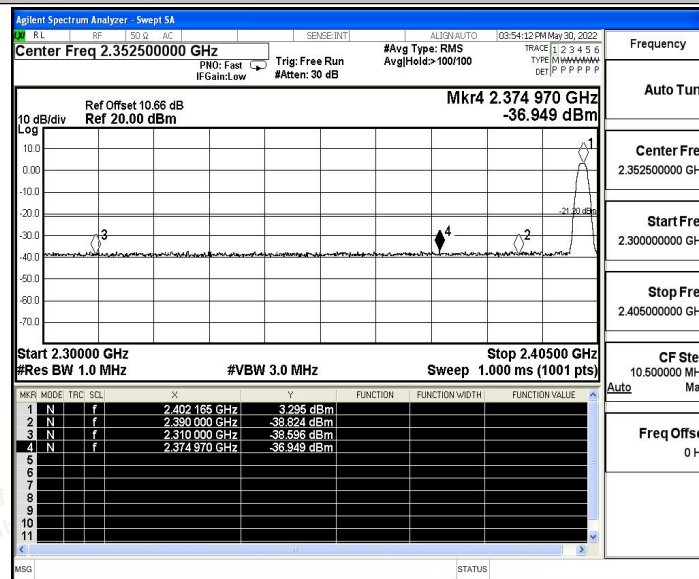


Test Graphs

BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV

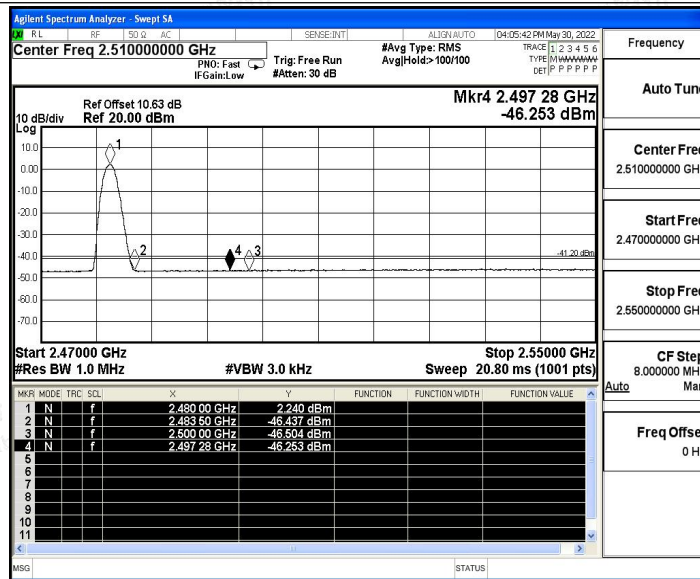


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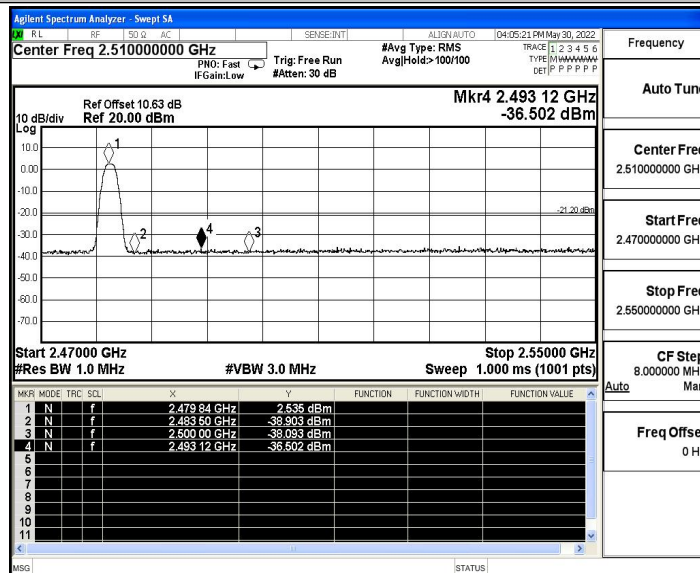
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BLE_1M_Ant1_High_2480_Peak



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