



Appendix A

RF Test Data for BLE (Conducted Measurement)

Product Name: Wellness Watch

Test Model: KCI00206

Environmental Conditions

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



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A.1 DTS Bandwidth

Test Result

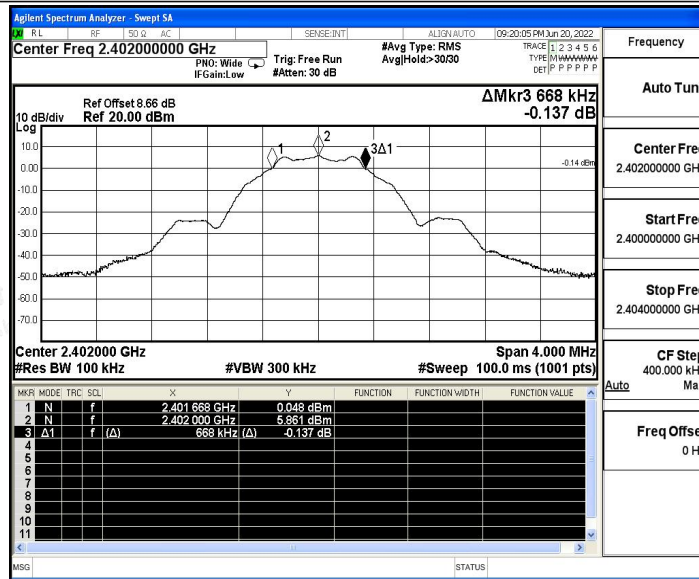
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.668	2401.668	2402.336	0.5	PASS
		2440	0.668	2439.668	2440.336	0.5	PASS
		2480	0.668	2479.664	2480.332	0.5	PASS



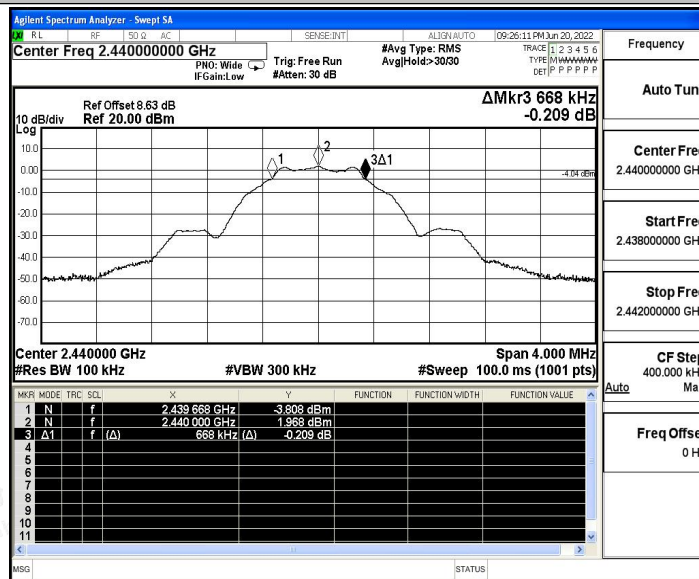


Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

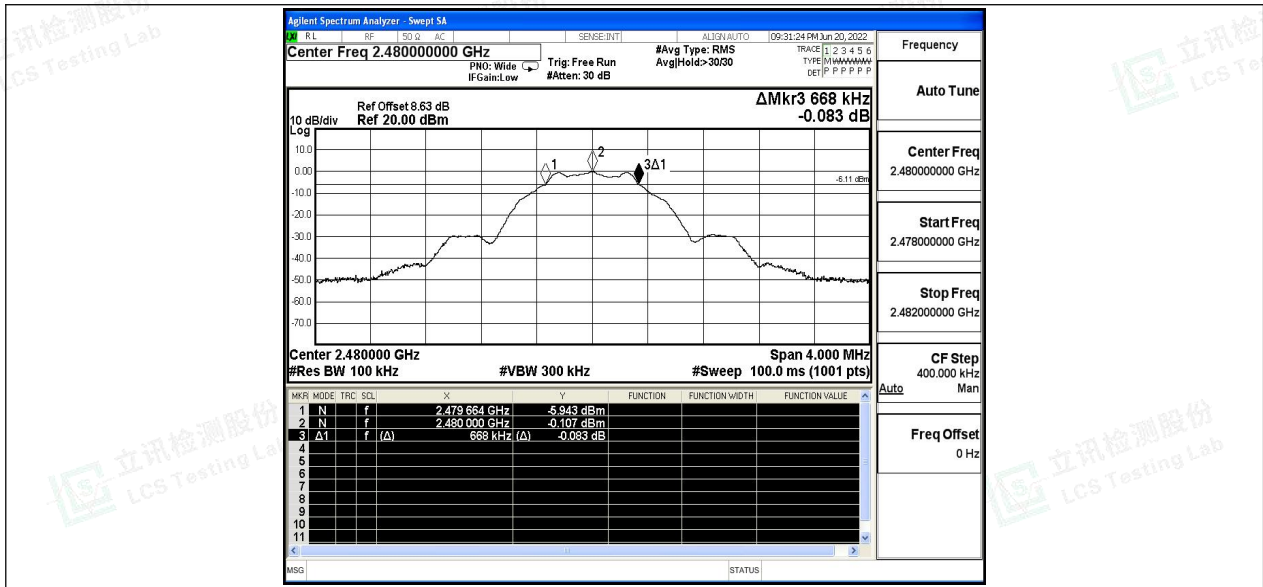


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A.2 Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	1.35	≤30	PASS
		2440	1.68	≤30	PASS
		2480	0.45	≤30	PASS



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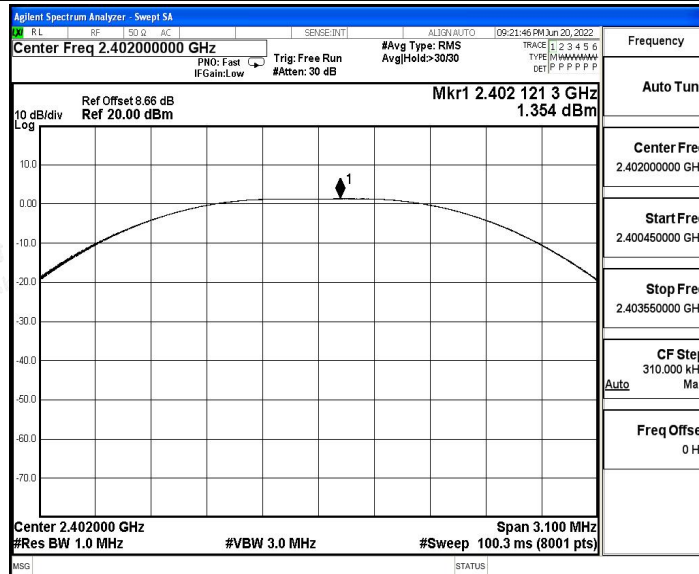
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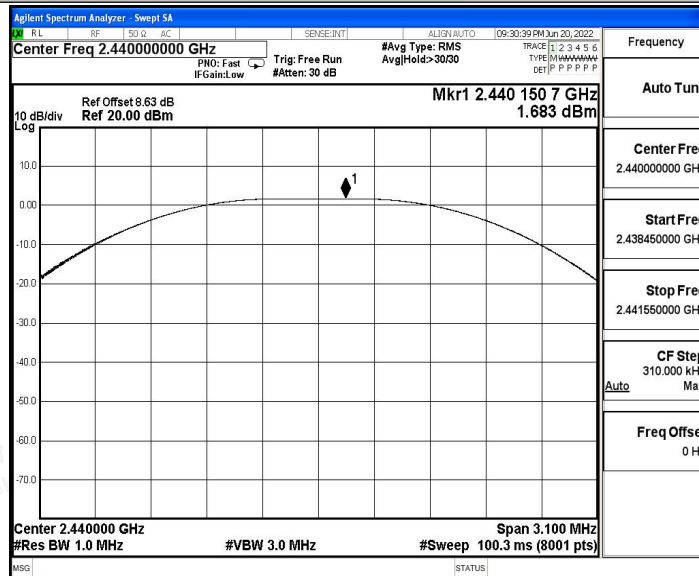


Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

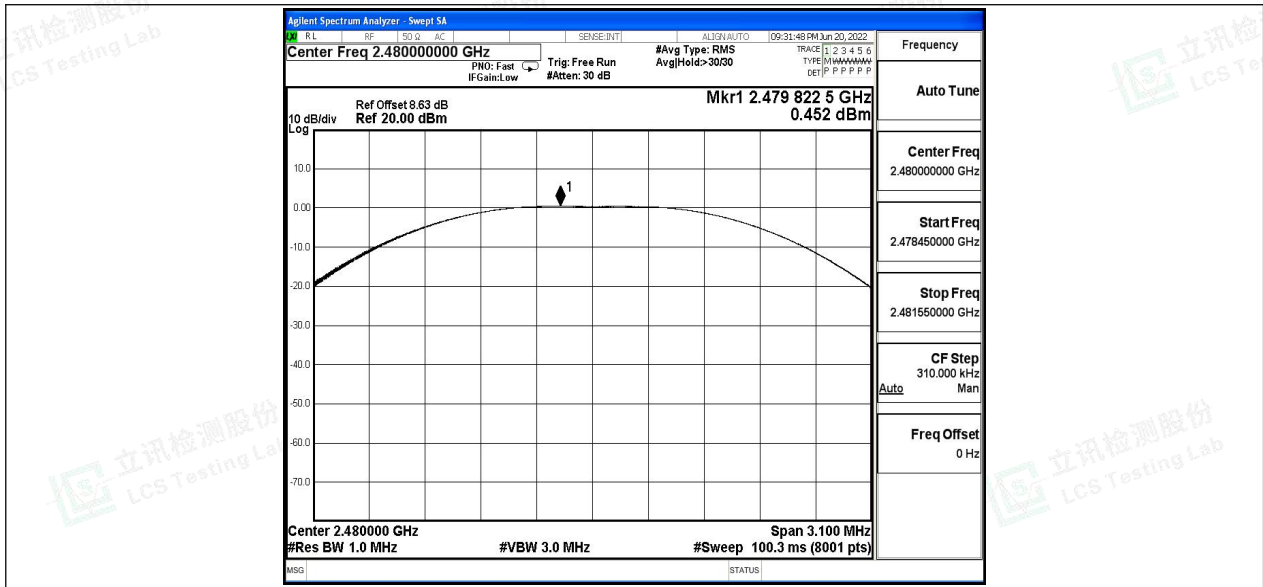


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A.3 Maximum power spectral density

Test Result

TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-13.5	≤8.00	PASS
		2440	-12.21	≤8.00	PASS
		2480	-14.39	≤8.00	PASS



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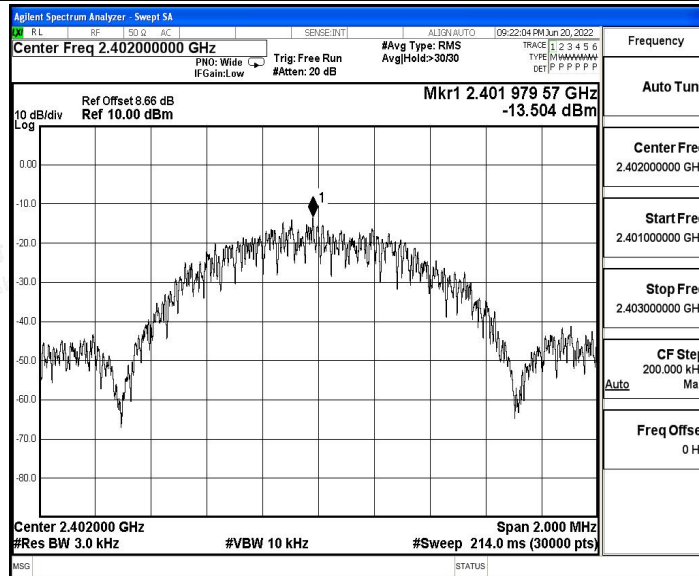
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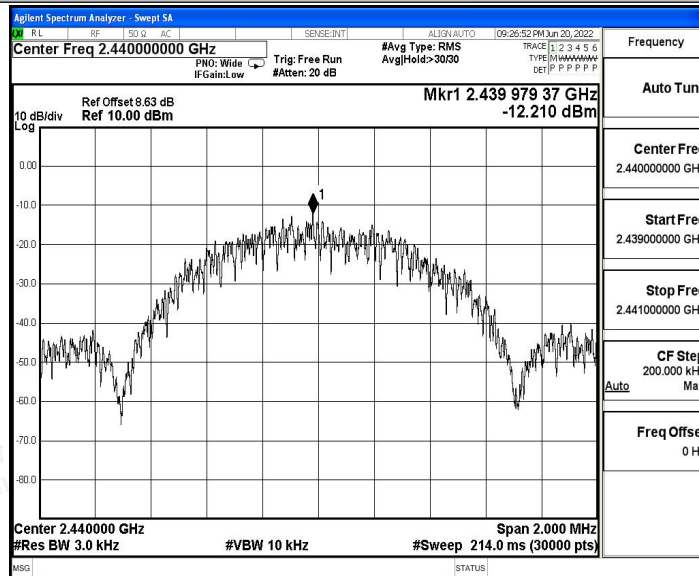


Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

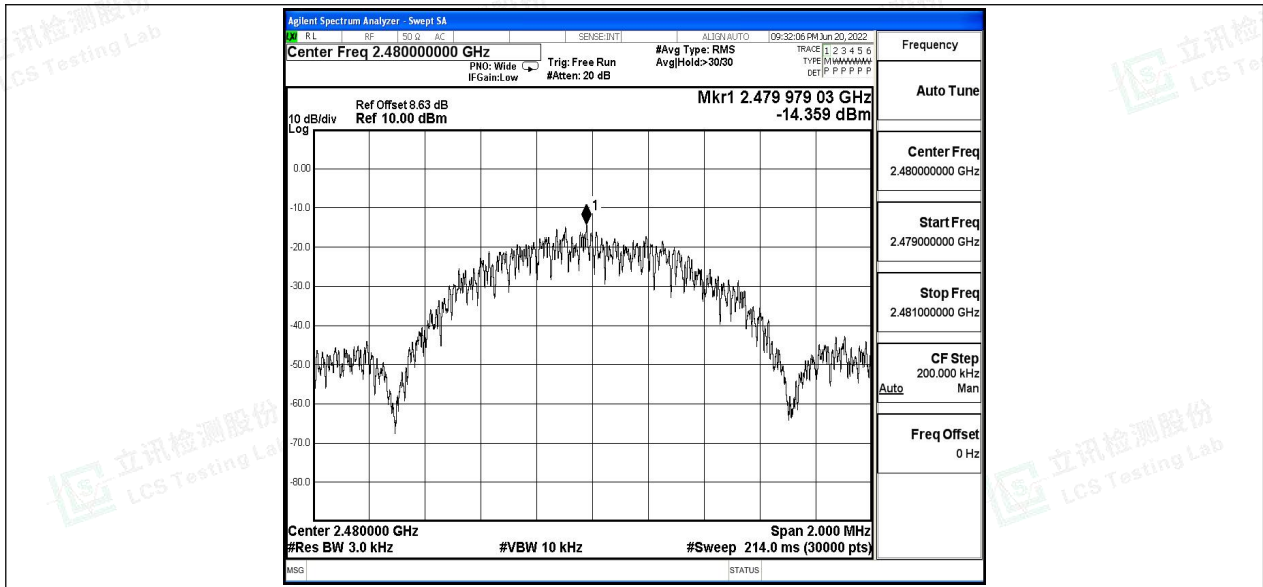


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A.4 Band edge measurements

Test Result

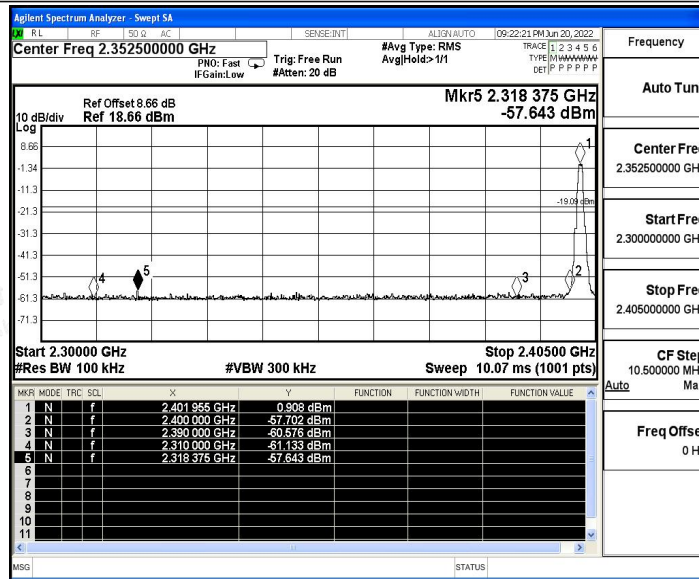
TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	0.91	-57.64	≤-19.09	PASS
		High	2480	0.02	-57.73	≤-19.98	PASS



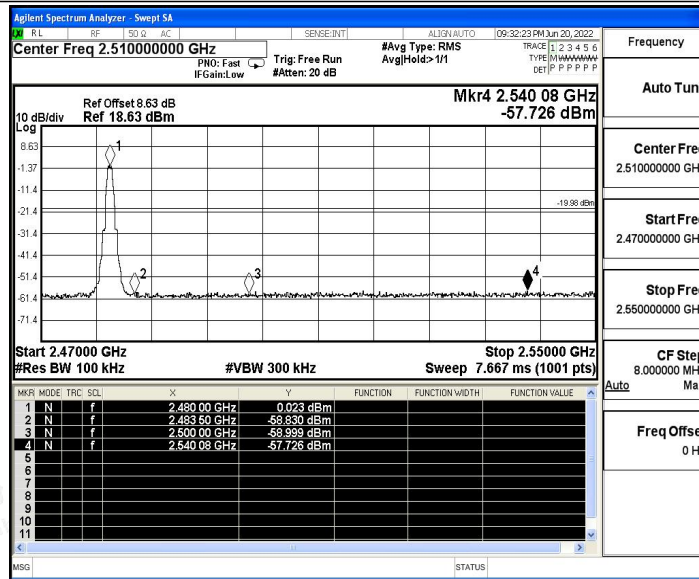


Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480



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A.5 Conducted Spurious Emission

Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	0.80	0.80	---	PASS
			30~1000	0.80	-60.33	≤ -19.2	PASS
			1000~26500	0.80	-45.7	≤ -19.2	PASS
		2440	Reference	1.98	1.98	---	PASS
			30~1000	1.98	-60.41	≤ -18.02	PASS
			1000~26500	1.98	-45.99	≤ -18.02	PASS
		2480	Reference	-0.10	-0.10	---	PASS
			30~1000	-0.10	-60.66	≤ -20.1	PASS
			1000~26500	-0.10	-46.31	≤ -20.1	PASS



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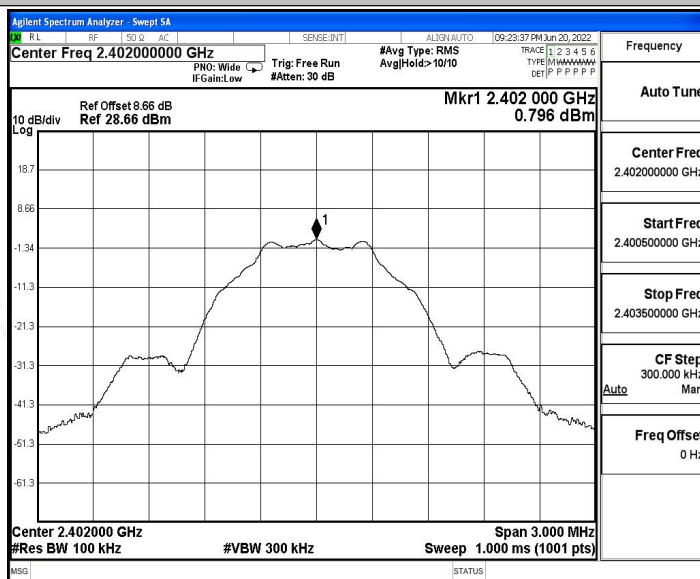
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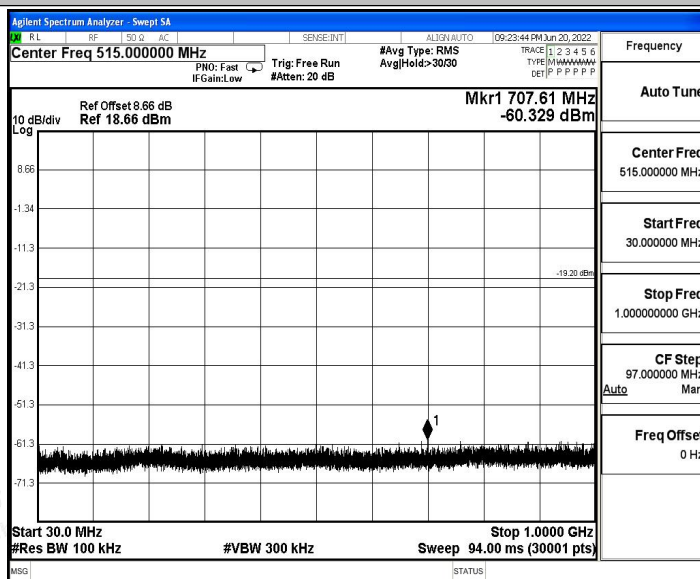


Test Graphs

BLE_1M_Ant1_2402_0~Reference



BLE_1M_Ant1_2402_30~1000



BLE_1M_Ant1_2402_1000~26500

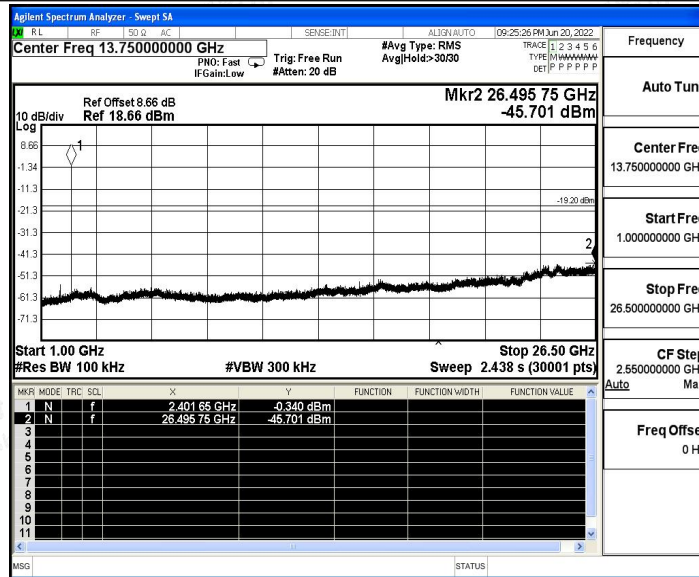


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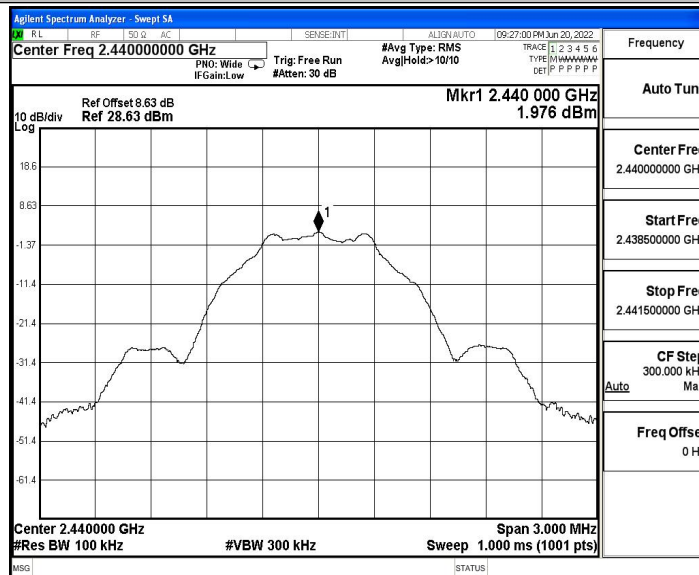
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BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000

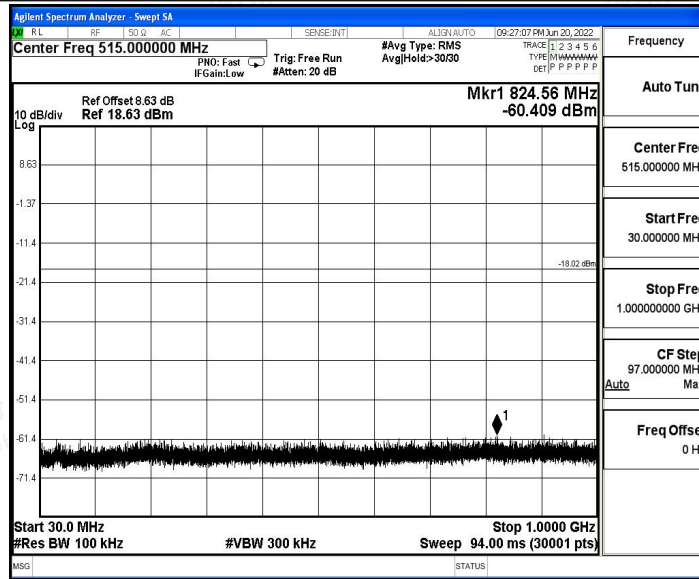


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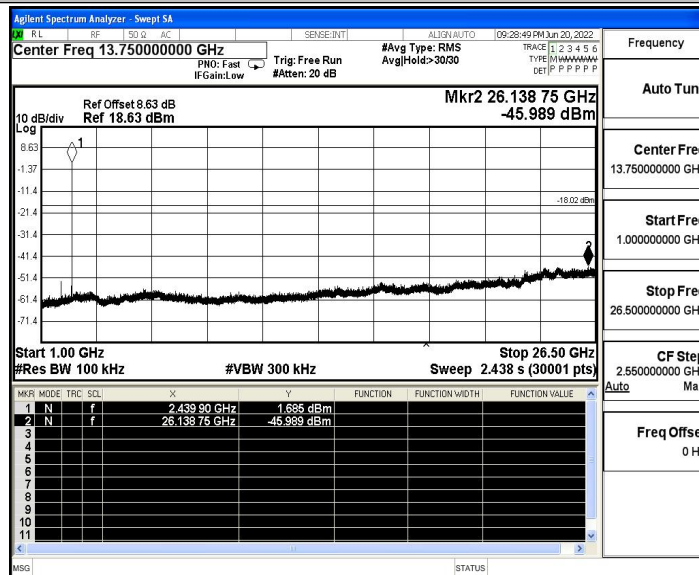
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BLE_1M_Ant1_2440_1000~26500



BLE_1M_Ant1_2480_0~Reference

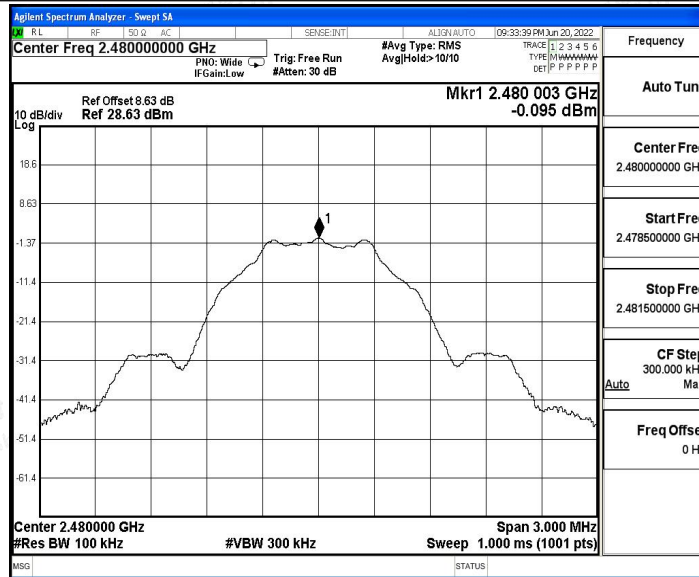


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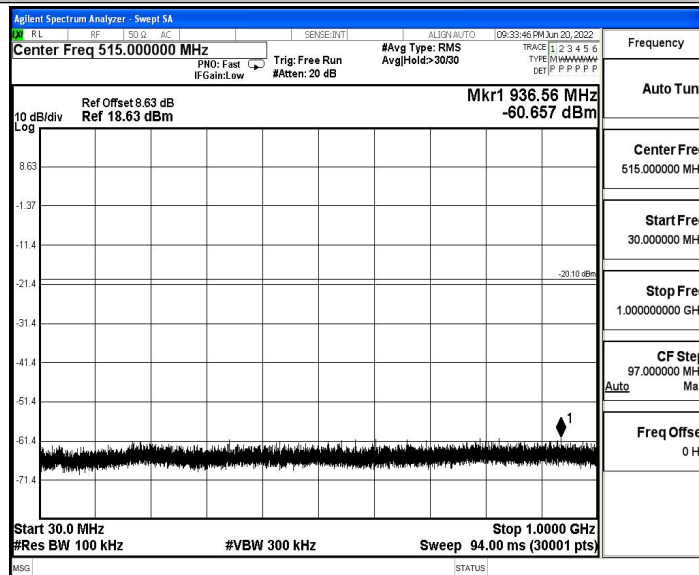
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BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500

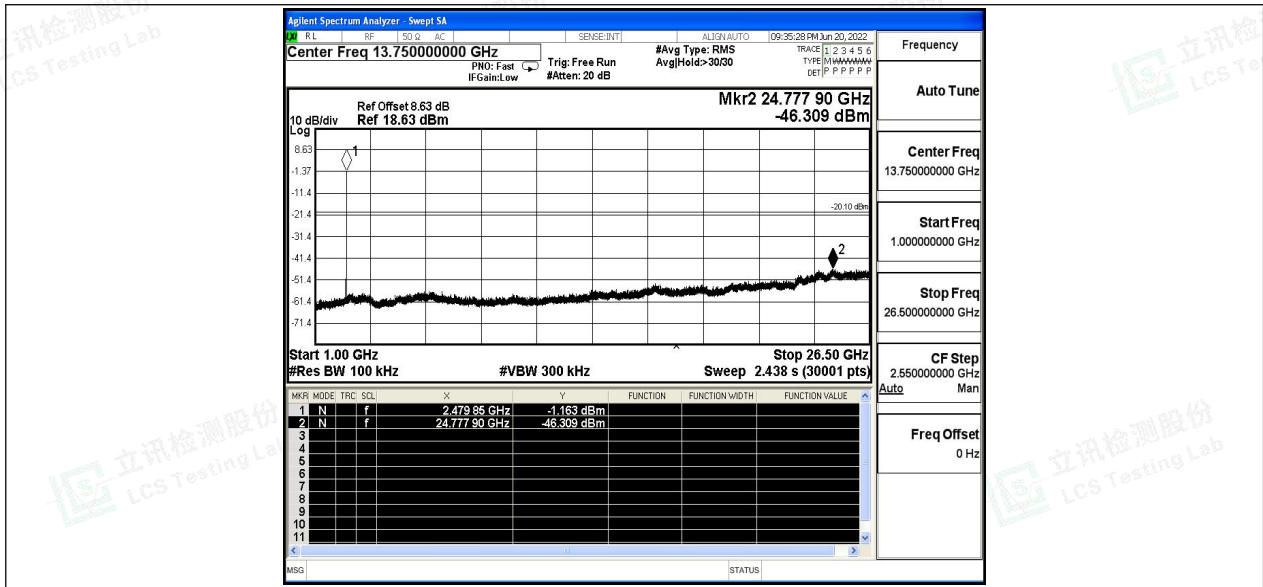


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A.6 Duty Cycle

Test Result

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



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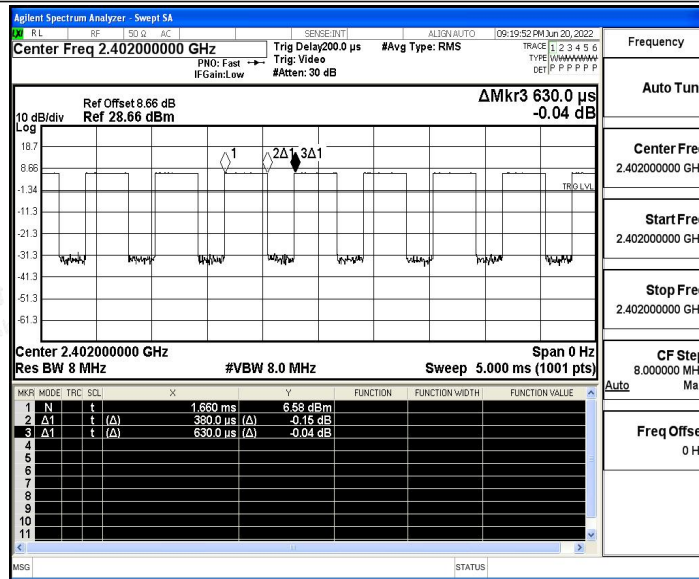
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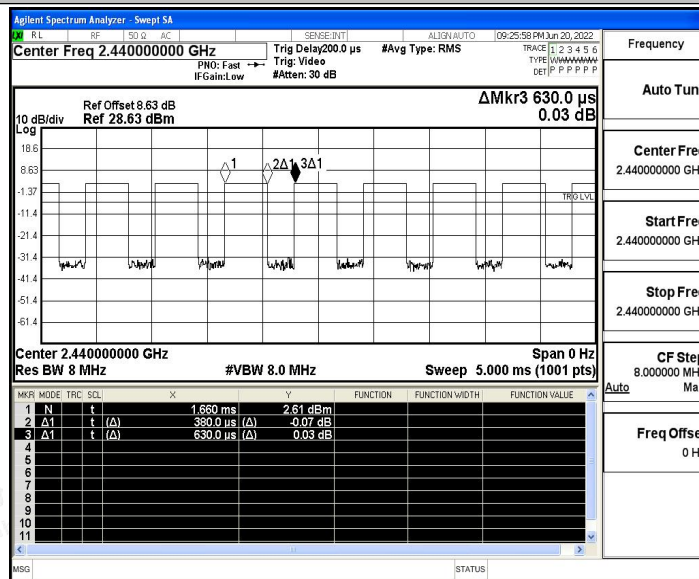


Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

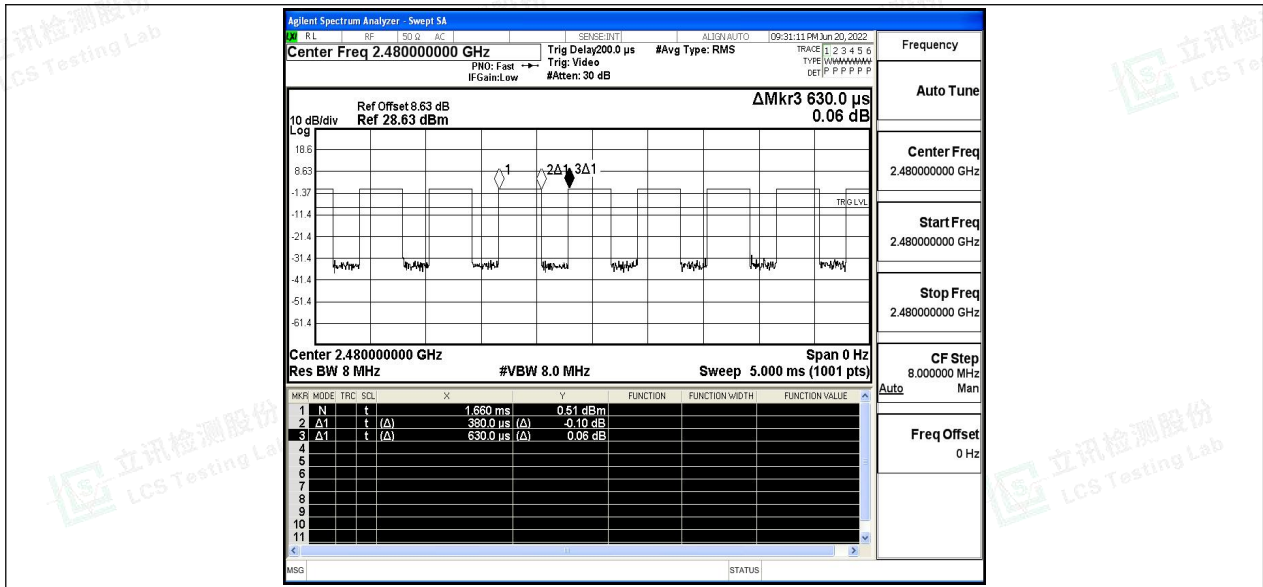


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A.7 Emissions in Restricted Bands

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	-57.11	≤-41.20	38.09	≤54	PASS
				AV	2386.730	-56.27	≤-41.20	38.93	≤54	PASS
				AV	2390.000	-56.71	≤-41.20	38.49	≤54	PASS
				Peak	2310.000	-47.95	≤-21.20	47.25	≤74	PASS
				Peak	2383.265	-46.61	≤-21.20	48.59	≤74	PASS
				Peak	2390.000	-48.11	≤-21.20	47.09	≤74	PASS
		High	2480	AV	2483.500	-52.98	≤-41.20	42.22	≤54	PASS
				AV	2483.520	-53.04	≤-41.20	42.16	≤54	PASS
				AV	2500.000	-56.19	≤-41.20	39.01	≤54	PASS
				Peak	2483.500	-47.05	≤-21.20	48.15	≤74	PASS
				Peak	2497.440	-45.69	≤-21.20	49.51	≤74	PASS
				Peak	2500.000	-47.68	≤-21.20	47.52	≤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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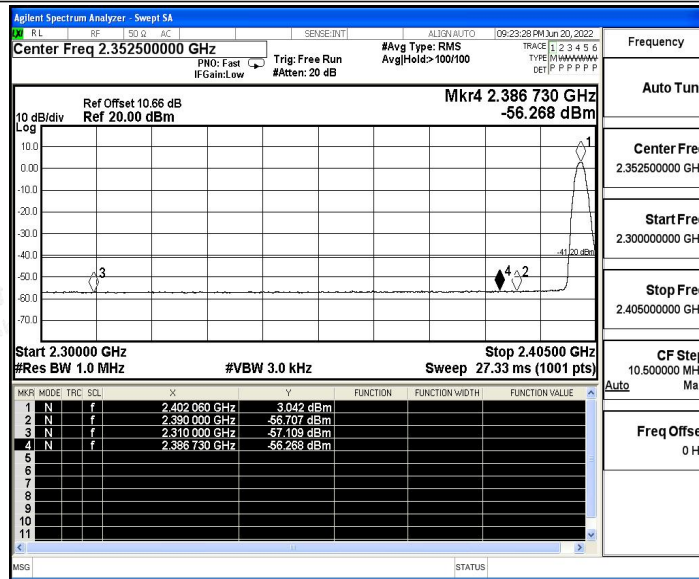
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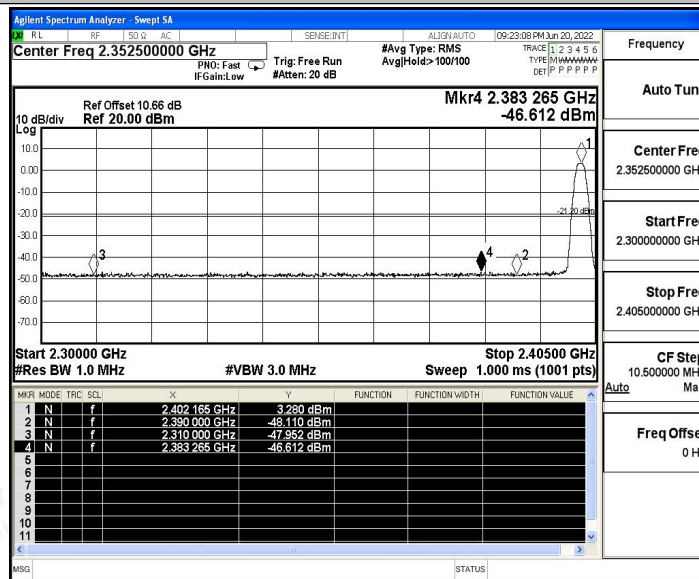


Test Graphs

BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV

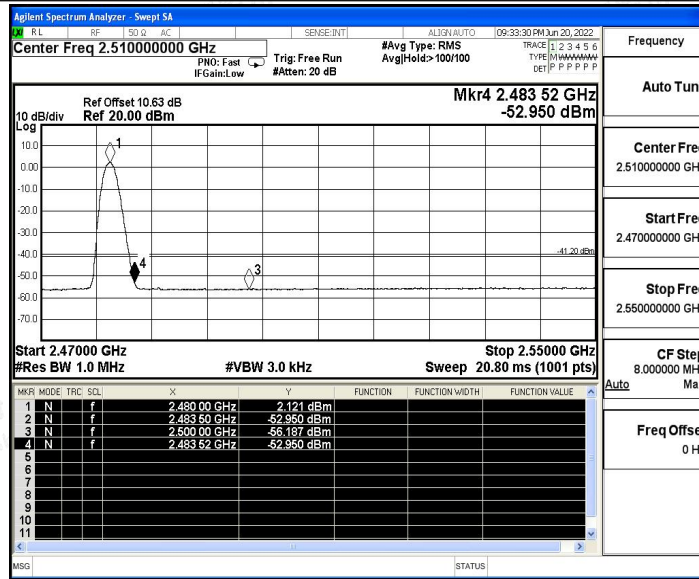


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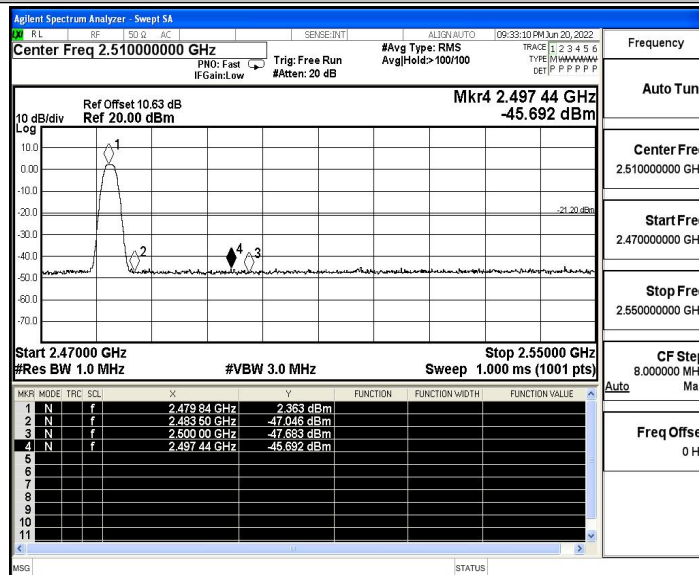
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BLE_1M_Ant1_High_2480_Peak



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