



Appendix B

RF Test Data for BT LE (Conducted Measurement)

Product Name: LiberLive C1

Test Model: LiberLive C1

Environmental Conditions

Temperature:	23.8 ° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	<i>Taylor Hu</i> Taylor Hu
Supervised by:	<i>Li Huan</i> Li Huan





B.1 DTS Bandwidth

Test Result

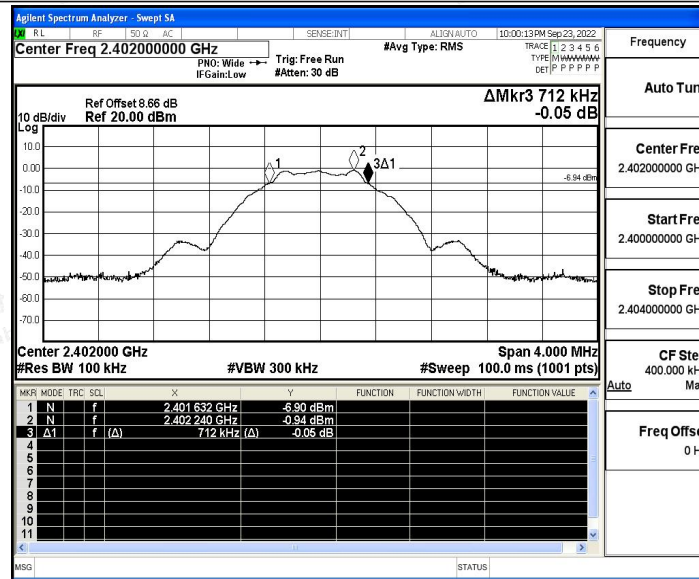
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.712	2401.632	2402.344	0.5	PASS
		2440	0.712	2439.632	2440.344	0.5	PASS
		2480	0.712	2479.632	2480.344	0.5	PASS



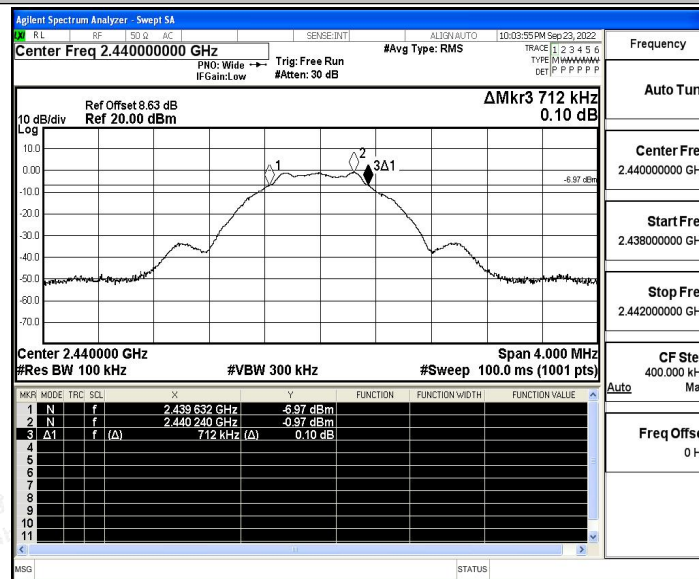


Test Graphs

BLE_1M_Ant1_2402

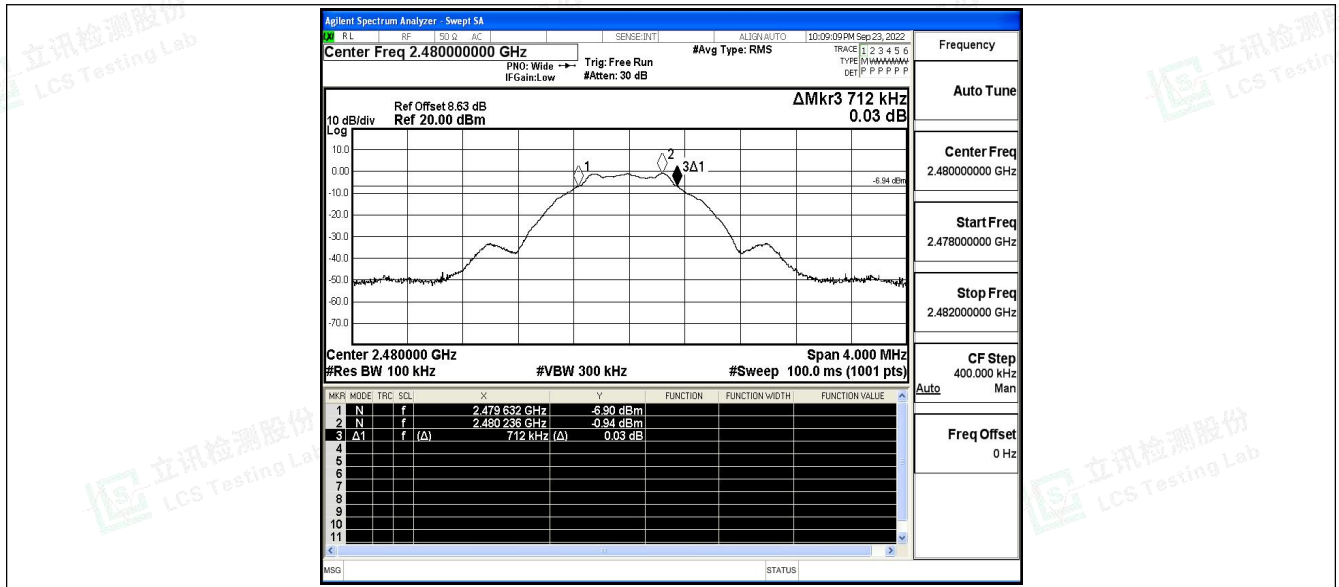


BLE_1M_Ant1_2440



BLE_1M_Ant1_2480







B.2 Maximum conducted output power

Test Result

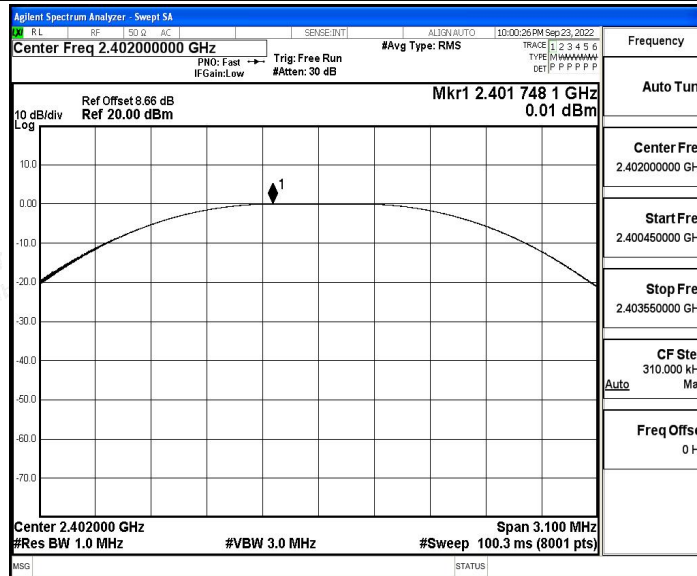
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0.01	≤30	PASS
		2440	0	≤30	PASS
		2480	0.02	≤30	PASS



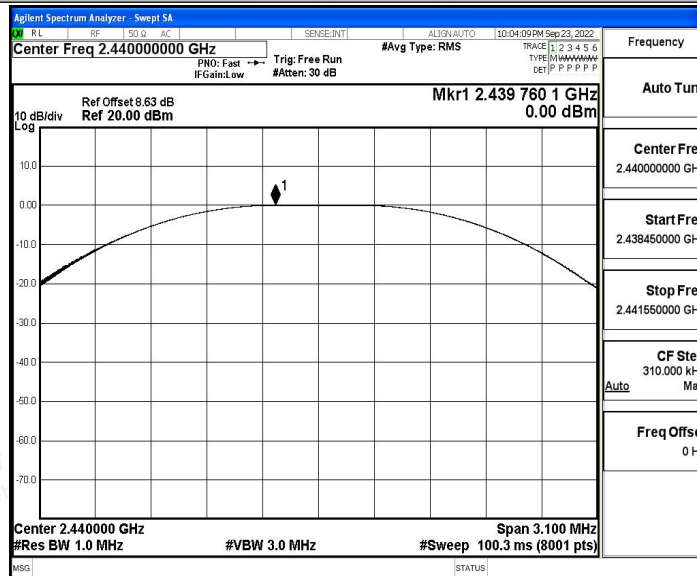


Test Graphs

BLE_1M_Ant1_2402

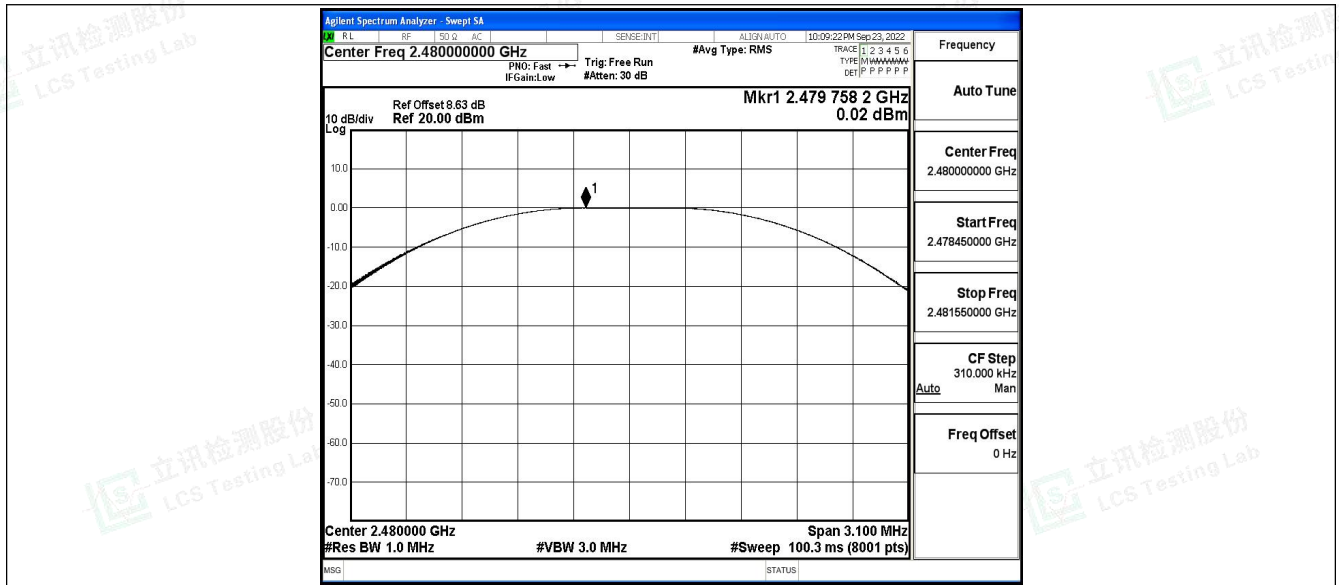


BLE_1M_Ant1_2440



BLE_1M_Ant1_2480







B.3 Maximum power spectral density

Test Result

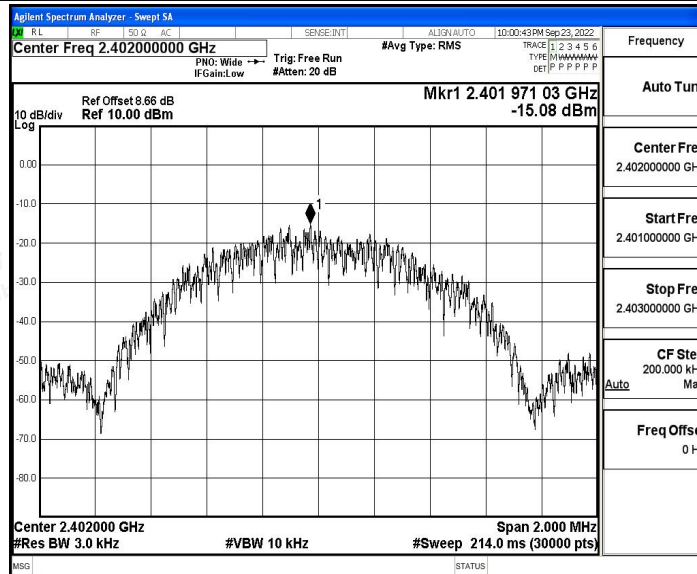
TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-15.08	≤8.00	PASS
		2440	-15.09	≤8.00	PASS
		2480	-15.16	≤8.00	PASS



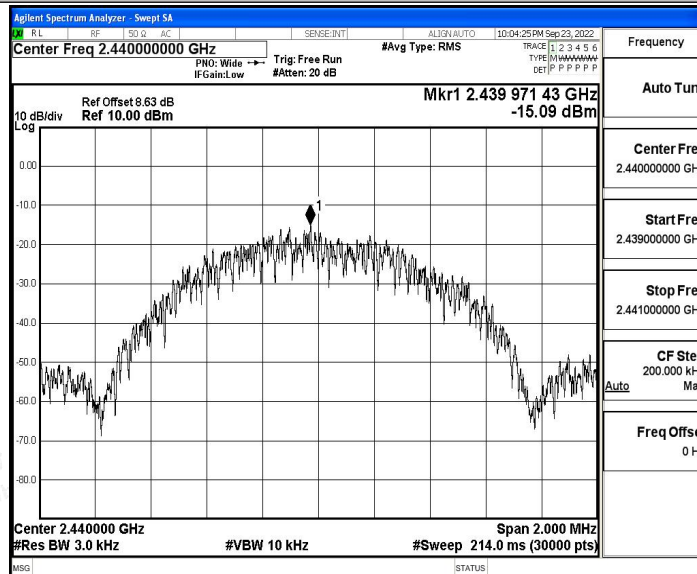


Test Graphs

BLE_1M_Ant1_2402

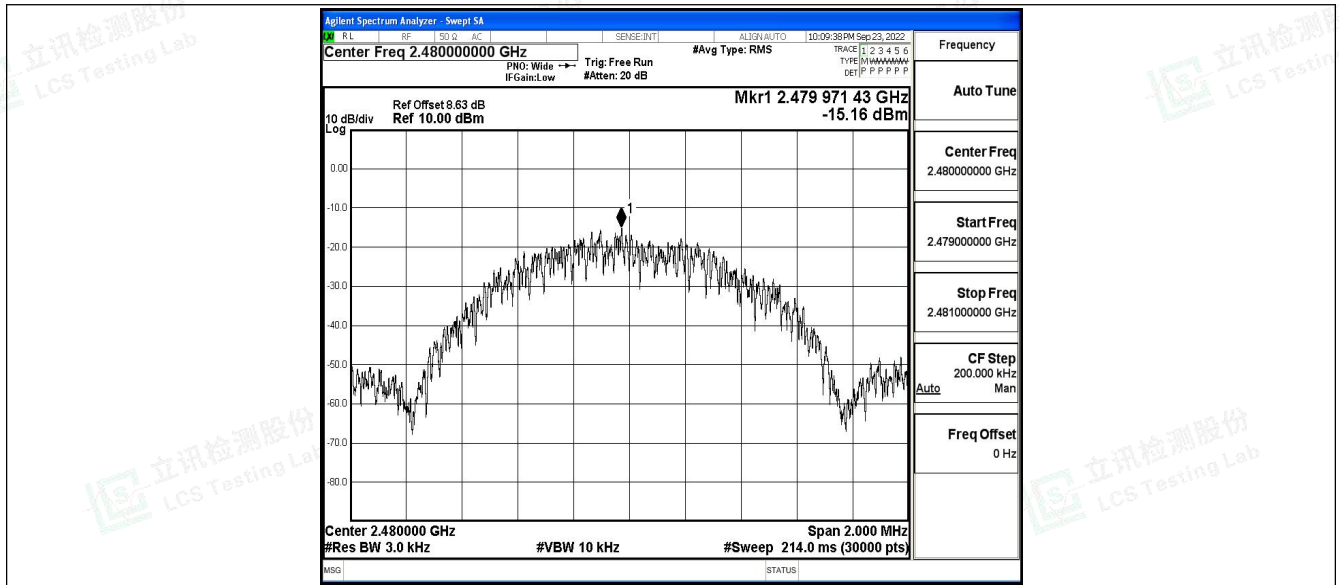


BLE_1M_Ant1_2440



BLE_1M_Ant1_2480







B.4 Band edge measurements

Test Result

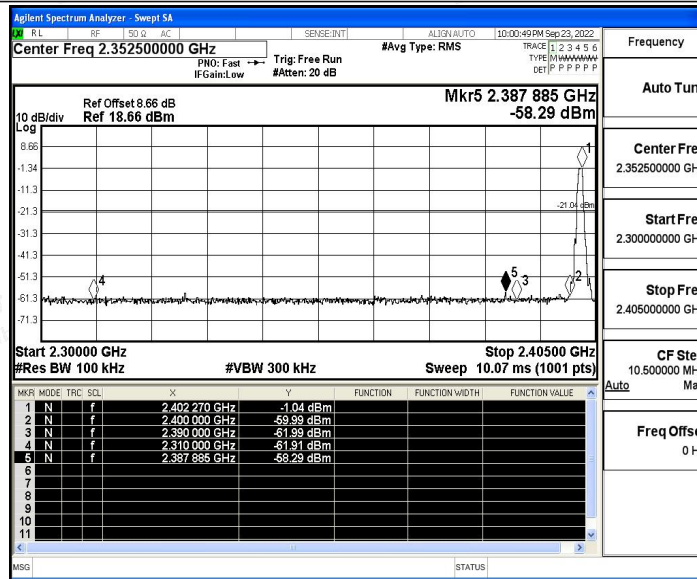
TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-1.04	-58.29	≤-21.04	PASS
		High	2480	-0.71	-58.58	≤-20.71	PASS



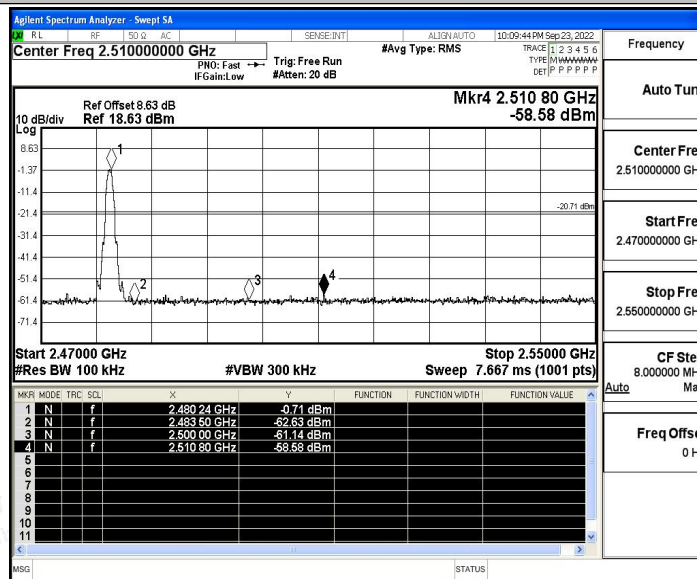


Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480





B.5 Conducted Spurious Emission

Test Result

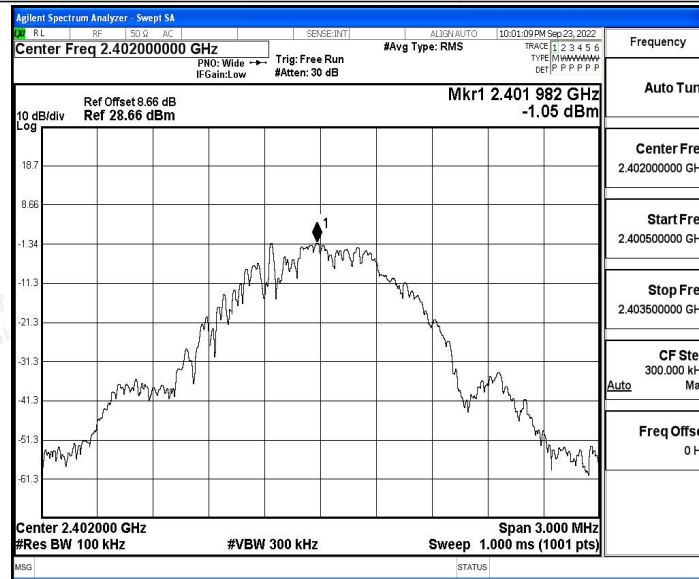
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-1.05	-1.05	---	PASS
			30~1000	-1.05	-60.04	≤-21.05	PASS
			1000~26500	-1.05	-46.04	≤-21.05	PASS
		2440	Reference	-1.33	-1.33	---	PASS
			30~1000	-1.33	-61.06	≤-21.33	PASS
			1000~26500	-1.33	-46.11	≤-21.33	PASS
		2480	Reference	-1.91	-1.91	---	PASS
			30~1000	-1.91	-60.97	≤-21.91	PASS
			1000~26500	-1.91	-45.07	≤-21.91	PASS



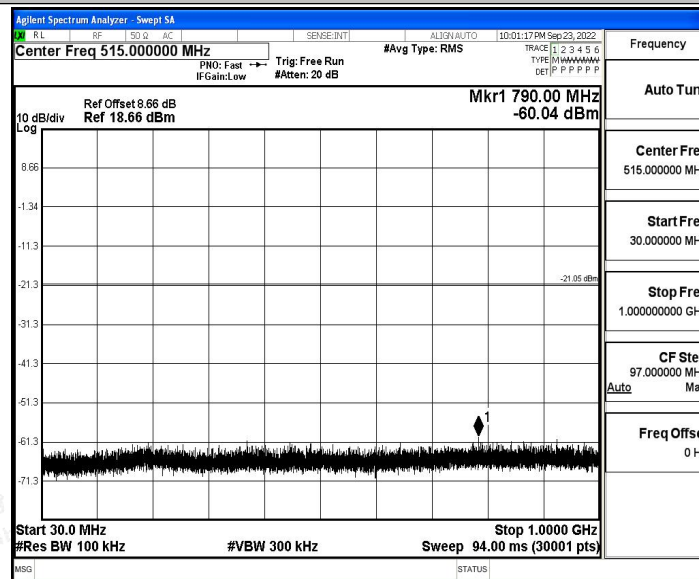


Test Graphs

BLE_1M_Ant1_2402_0~Reference

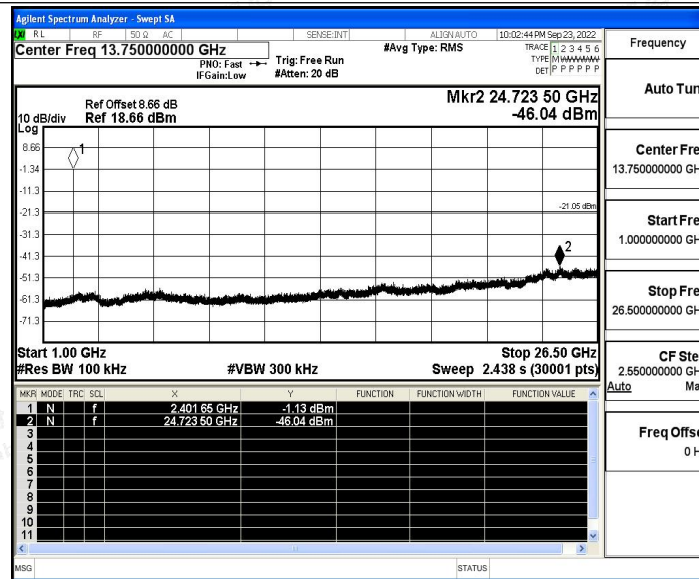


BLE_1M_Ant1_2402_30~1000

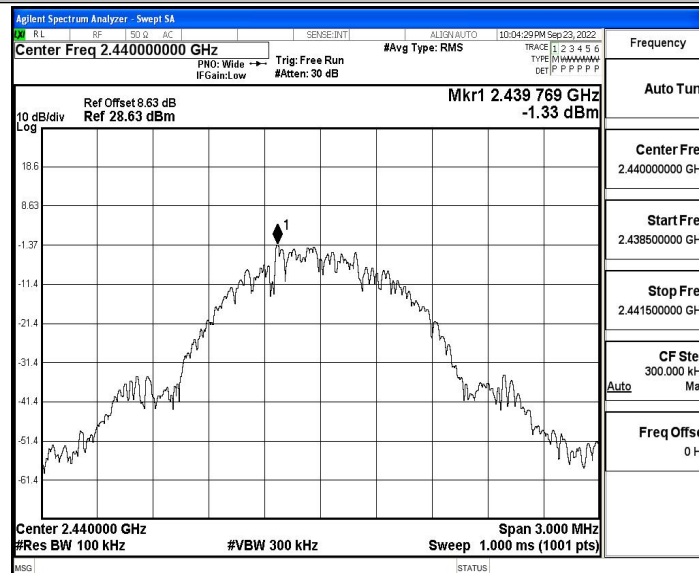


BLE_1M_Ant1_2402_1000~26500



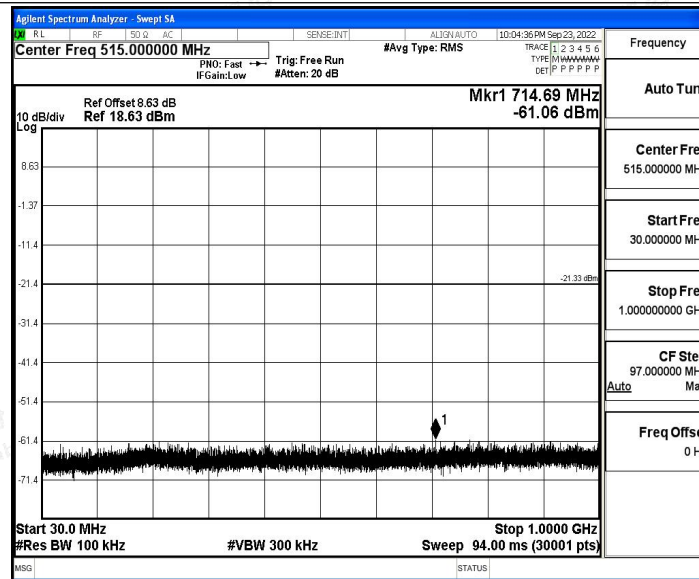


BLE_1M_Ant1_2440_0~Reference

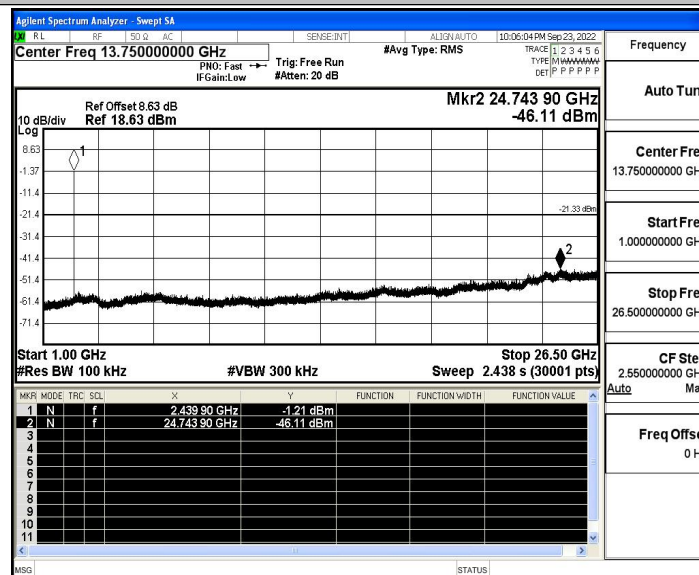


BLE_1M_Ant1_2440_30~1000



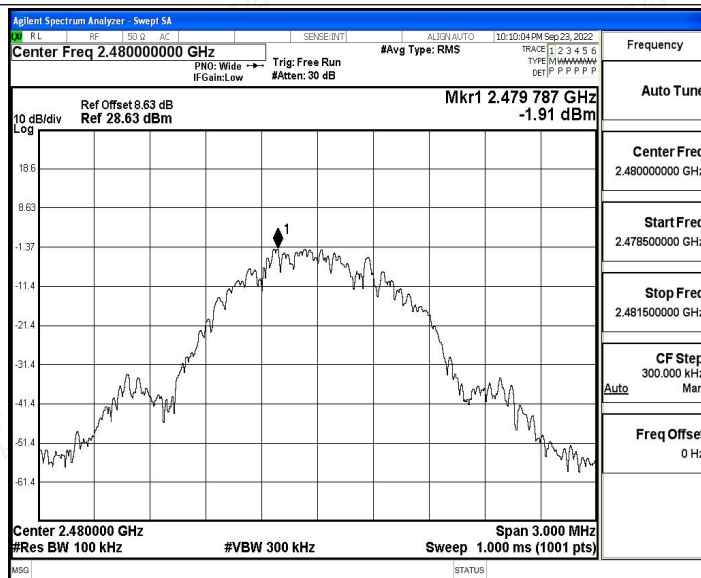


BLE_1M_Ant1_2440_1000~26500

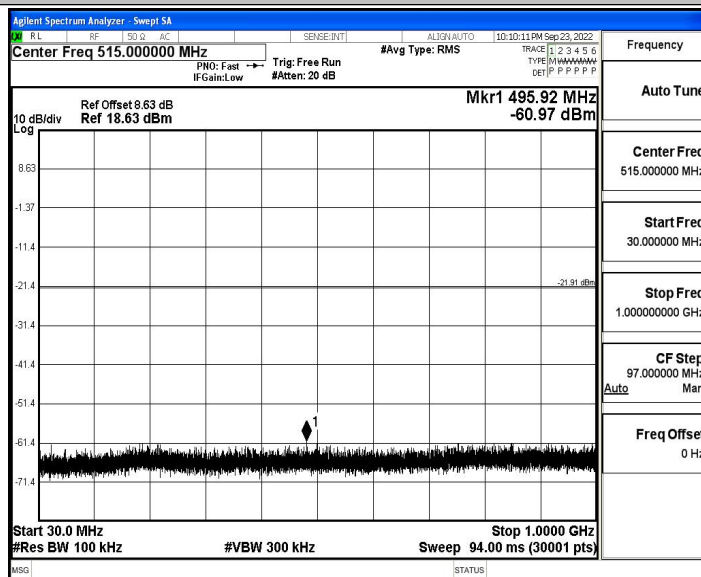


BLE_1M_Ant1_2480_0~Reference



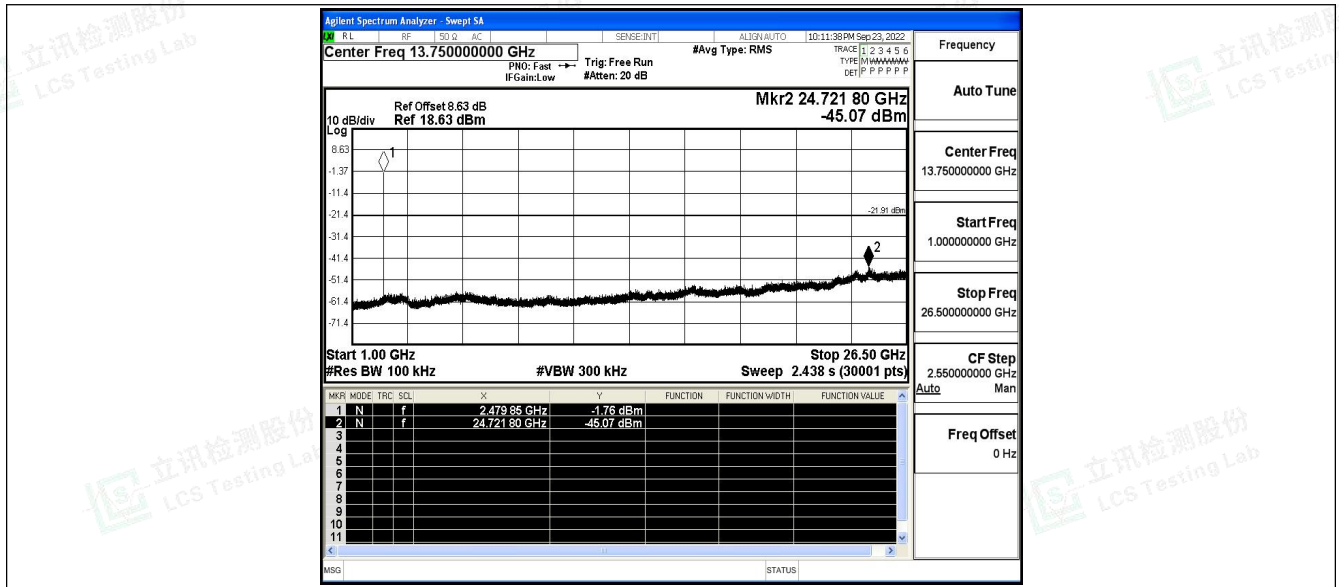


BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500







B.6 Duty Cycle

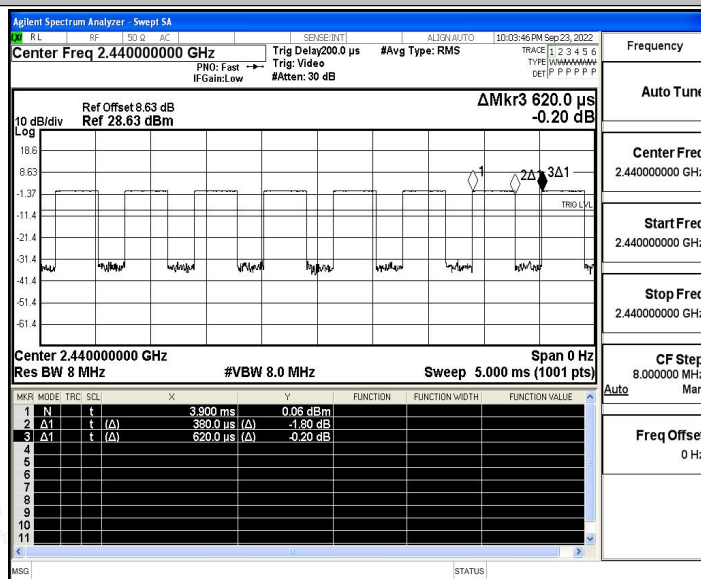
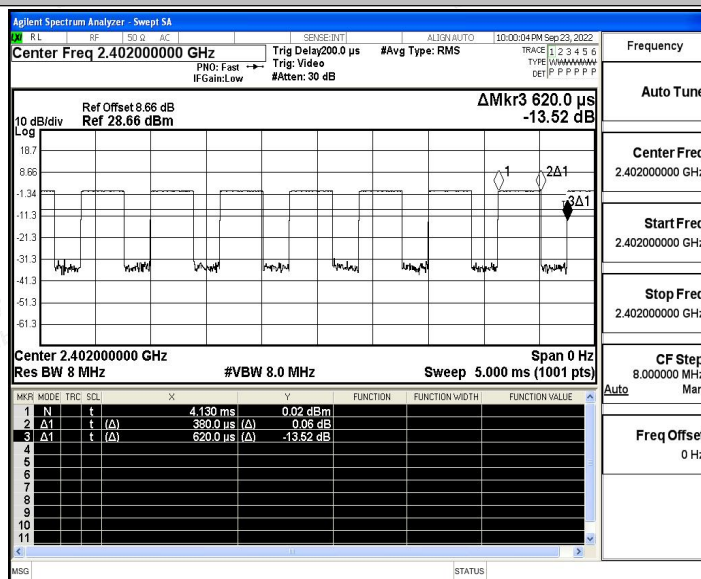
Test Result

TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	1/T	Limit	Verdict
BLE_1M	Ant1	2402	0.38	0.62	0.6129	61.29	2.13	2.63	---	---
		2440	0.38	0.62	0.6129	61.29	2.13	2.63	---	---
		2480	0.39	0.63	0.6190	61.90	2.08	2.56	---	---

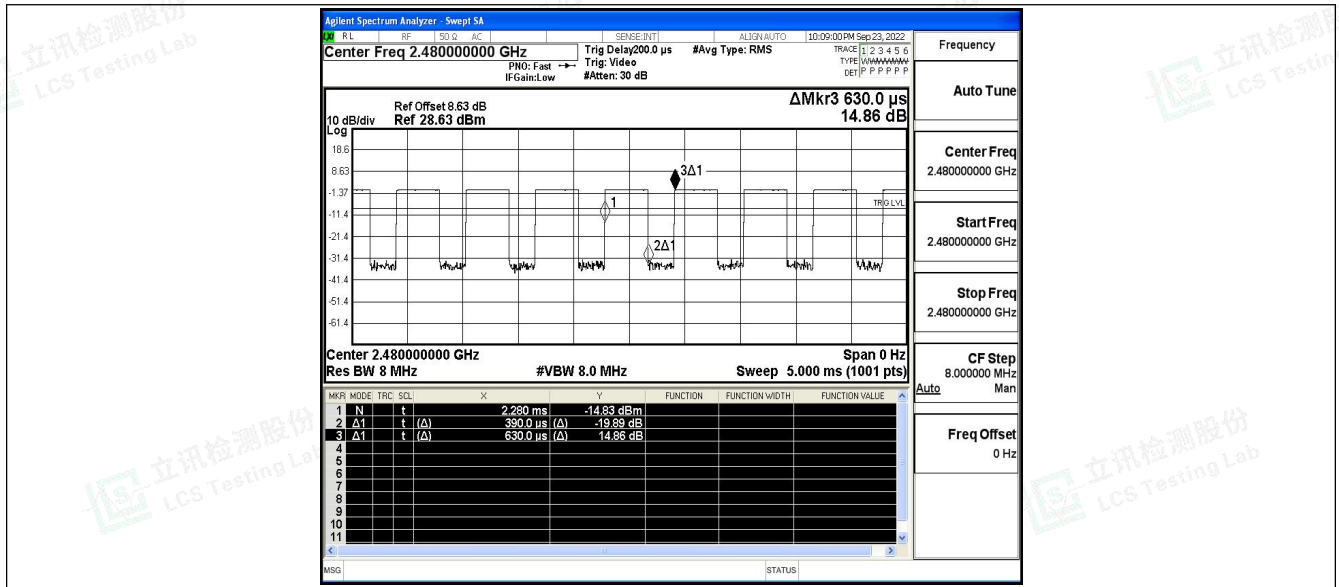




Test Graphs



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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	-57.5	≤-41.20	37.70	≤54	PASS
				AV	2386.730	-56.44	≤-41.20	38.76	≤54	PASS
				AV	2390.000	-57.27	≤-41.20	37.93	≤54	PASS
				Peak	2310.000	-50.06	≤-21.20	45.14	≤74	PASS
				Peak	2376.230	-47.97	≤-21.20	47.23	≤74	PASS
				Peak	2390.000	-52.47	≤-21.20	42.73	≤74	PASS
		High	2480	AV	2483.500	-53.53	≤-41.20	41.67	≤54	PASS
				AV	2483.520	-53.53	≤-41.20	41.67	≤54	PASS
				AV	2500.000	-56.46	≤-41.20	38.74	≤54	PASS
				Peak	2483.500	-50.22	≤-21.20	44.98	≤74	PASS
				Peak	2497.040	-47.48	≤-21.20	47.72	≤74	PASS
				Peak	2500.000	-51.37	≤-21.20	43.83	≤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.

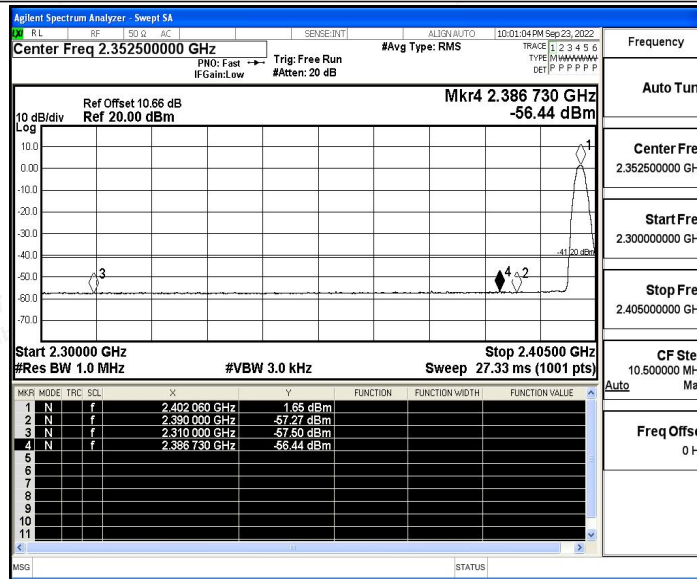


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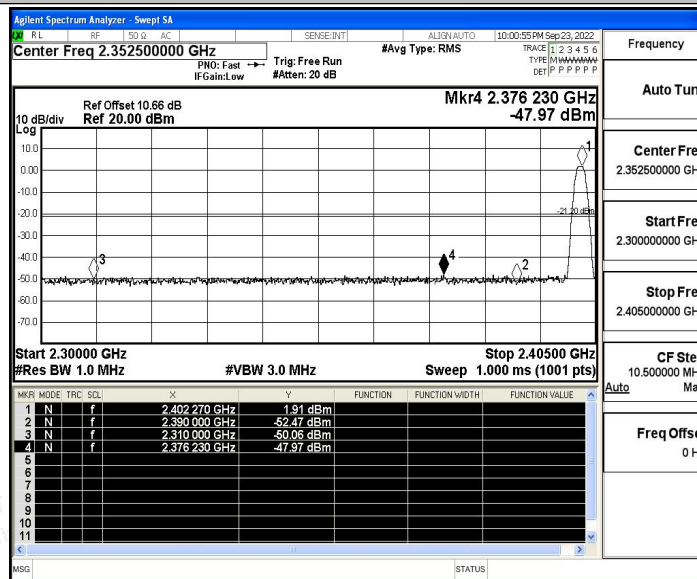


Test Graphs

BLE_1M_Ant1_Low_2402_AV

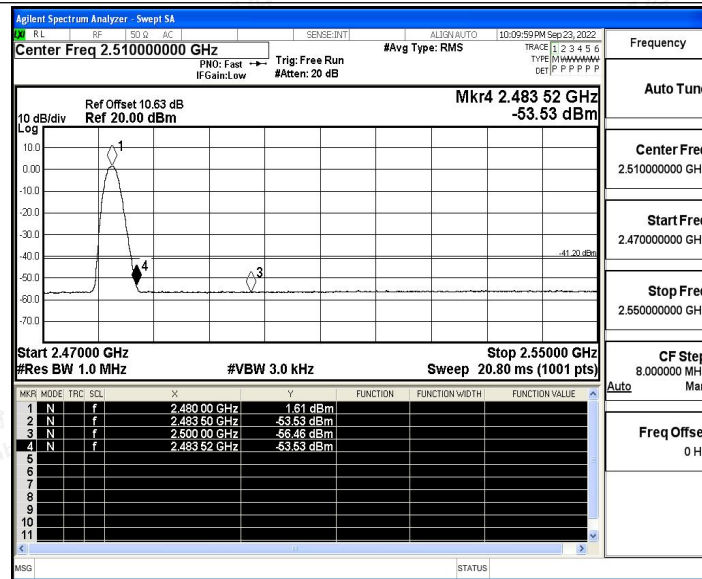


BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV





BLE_1M_Ant1_High_2480_Peak

