



Appendix A

RF Test Data for BLE (Conducted Measurement)

Product Name: Smart Floor Light

Test Model: LDWSC6-17-1

Environmental Conditions

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



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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	0.632	2401.676	2402.308	0.5	PASS
		2440	0.704	2439.648	2440.352	0.5	PASS
		2480	0.664	2479.668	2480.332	0.5	PASS



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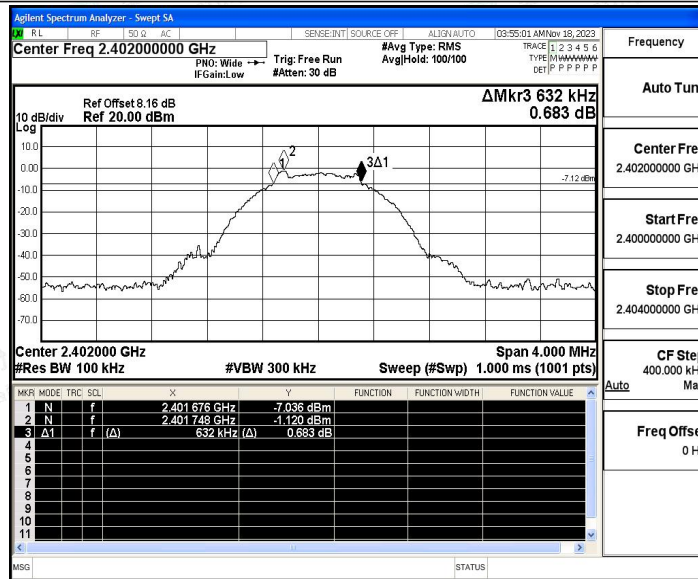
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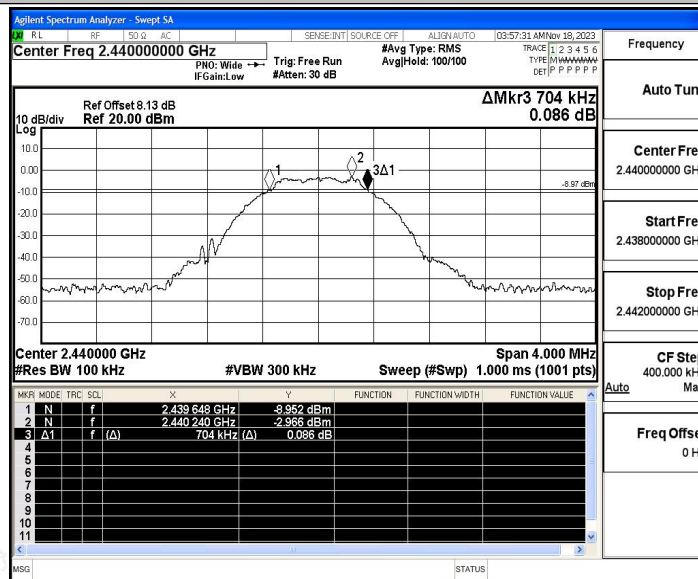


Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

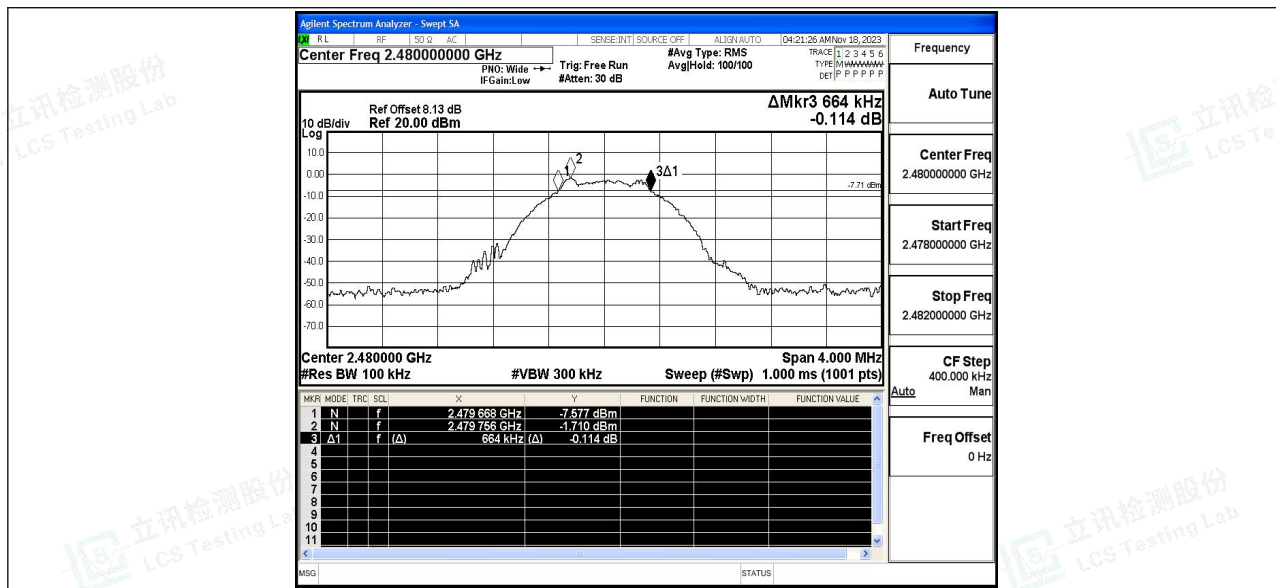


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A.2 Maximum peak conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-0.51	≤30	PASS
		2440	-1.54	≤30	PASS
		2480	-1.1	≤30	PASS



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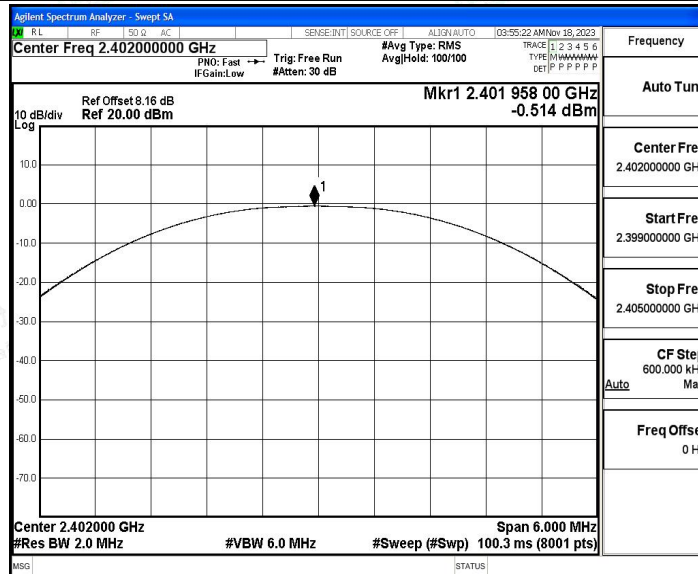
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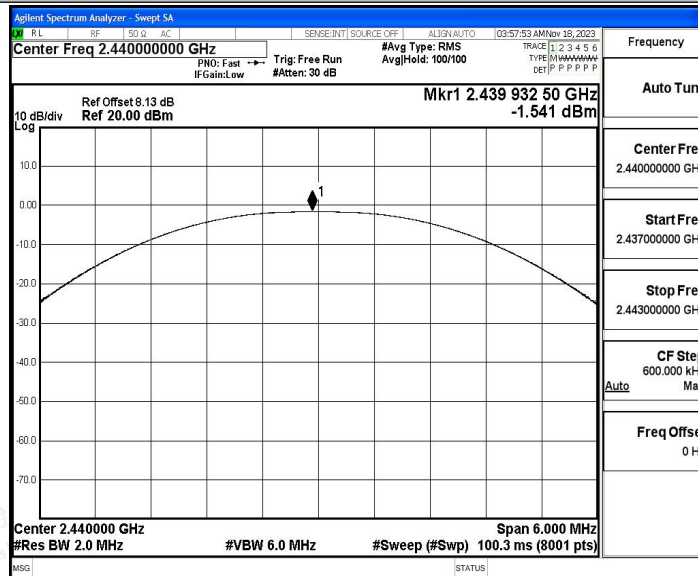


Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

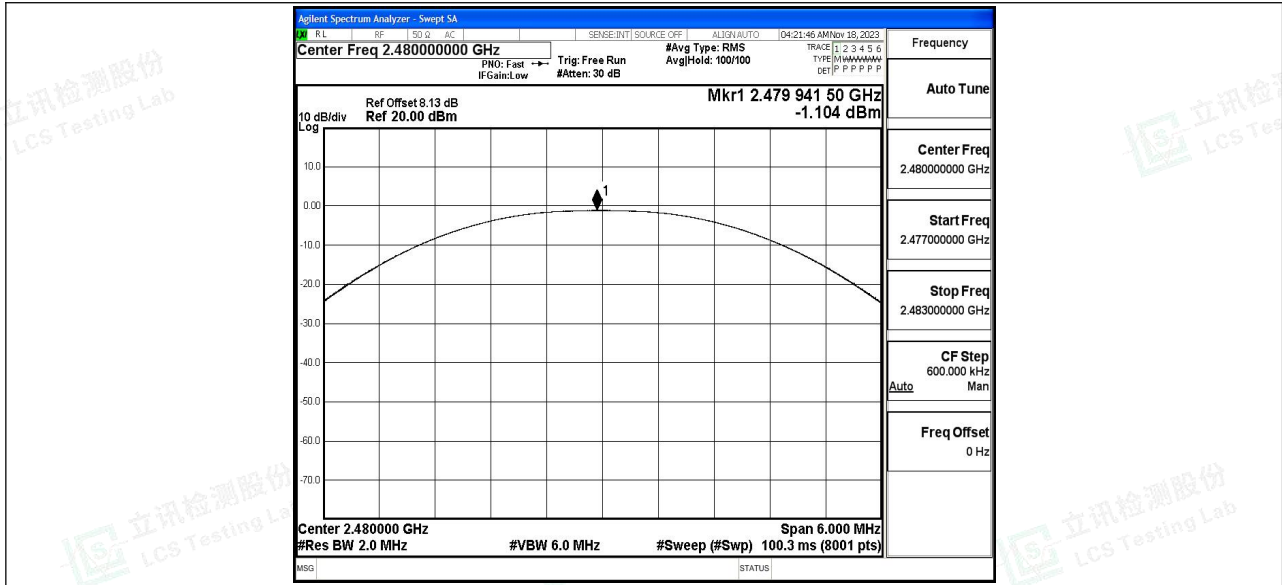


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A.3 Maximum power spectral density

Test Result

TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-16.91	≤8.00	PASS
		2440	-17.92	≤8.00	PASS
		2480	-17.52	≤8.00	PASS



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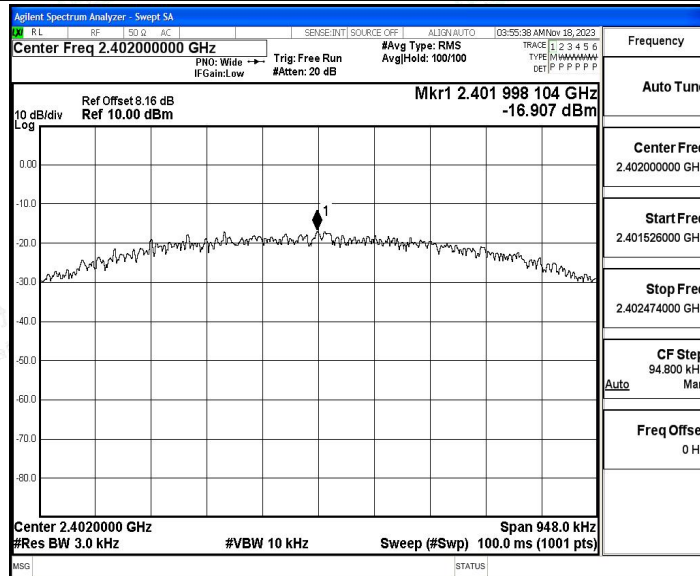
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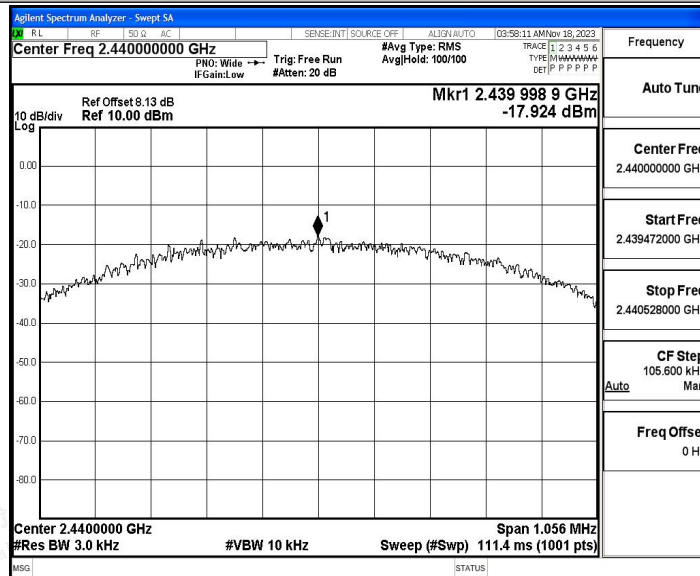


Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

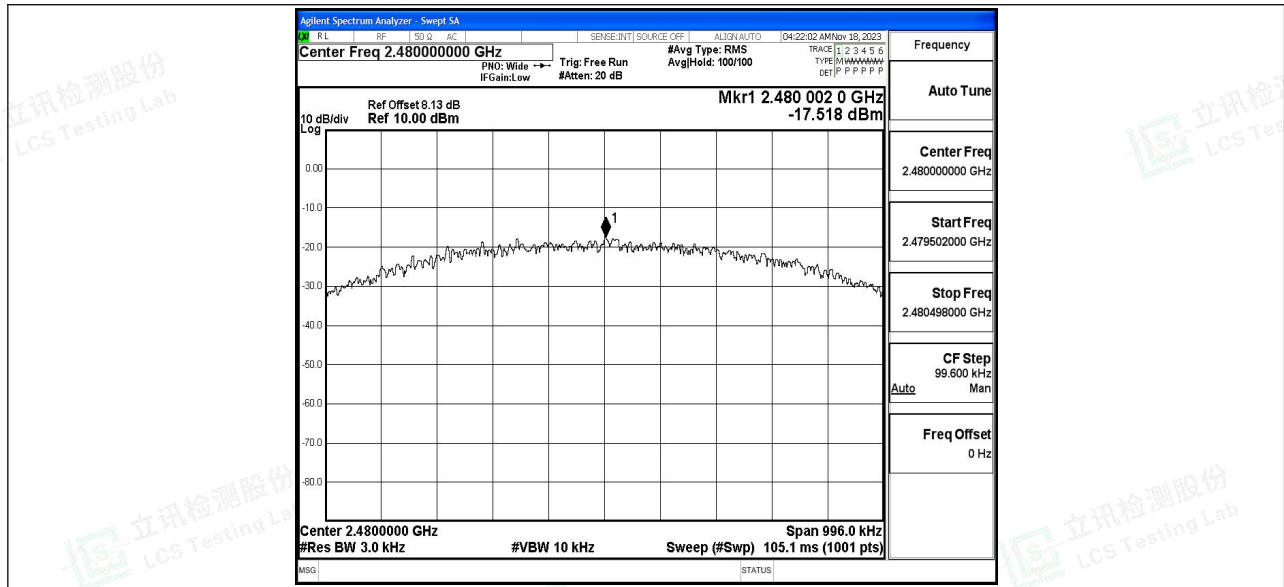


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A.4 Band edge measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-1.07	-50.63	≤ -21.07	PASS
		High	2480	-1.72	-50.34	≤ -21.72	PASS



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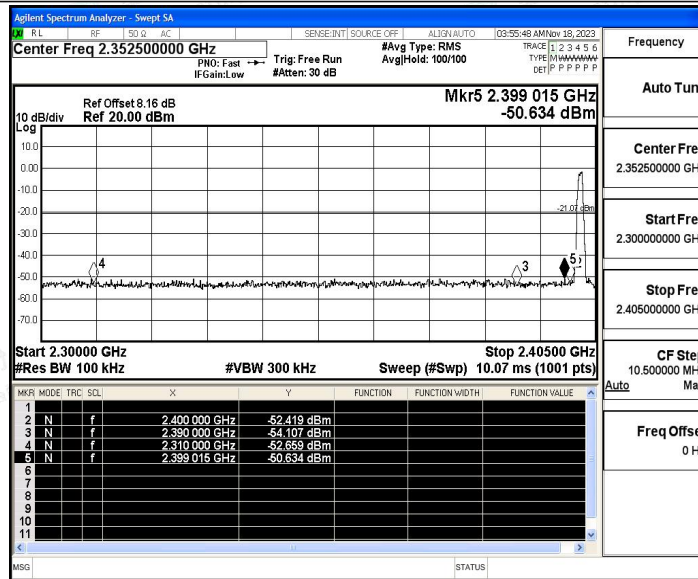
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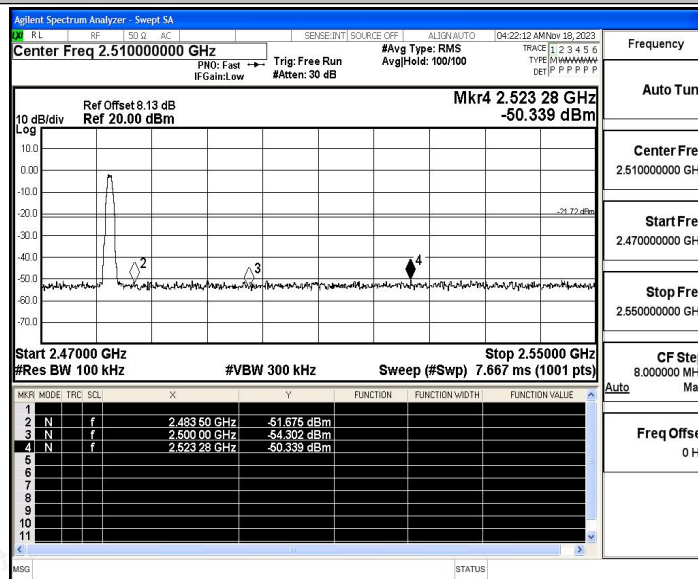


Test Graphs

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	30~1000	-1.07	-62.21	≤-21.07	PASS
			1000~26500	-1.07	-49.64	≤-21.07	PASS
		2440	30~1000	-2.23	-61.92	≤-22.23	PASS
			1000~26500	-2.23	-48	≤-22.23	PASS
		2480	30~1000	-1.72	-61.65	≤-21.72	PASS
			1000~26500	-1.72	-49.33	≤-21.72	PASS



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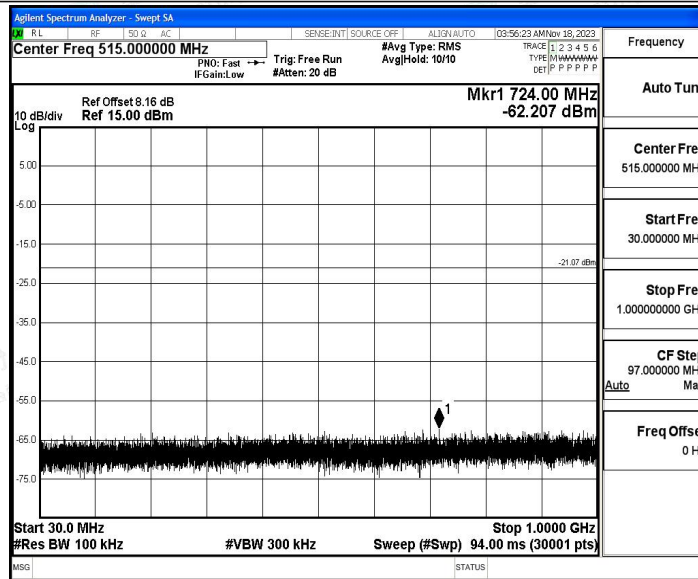
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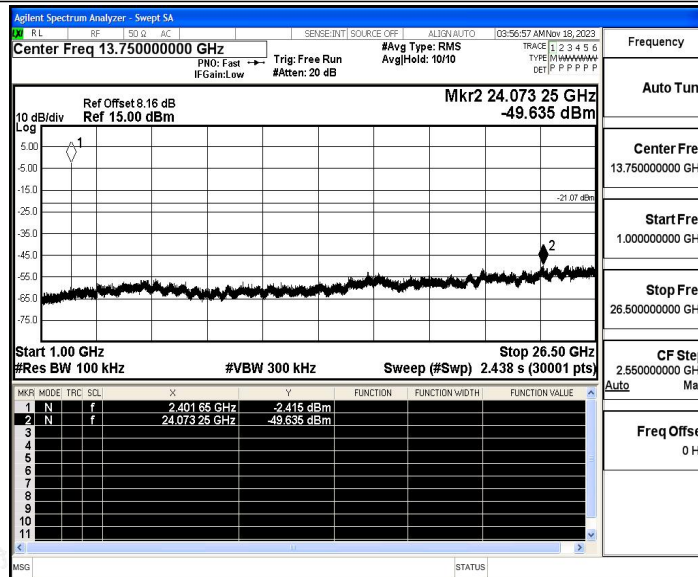


Test Graphs

BLE_1M_Ant1_2402_30~1000



BLE_1M_Ant1_2402_1000~26500



BLE_1M_Ant1_2440_30~1000

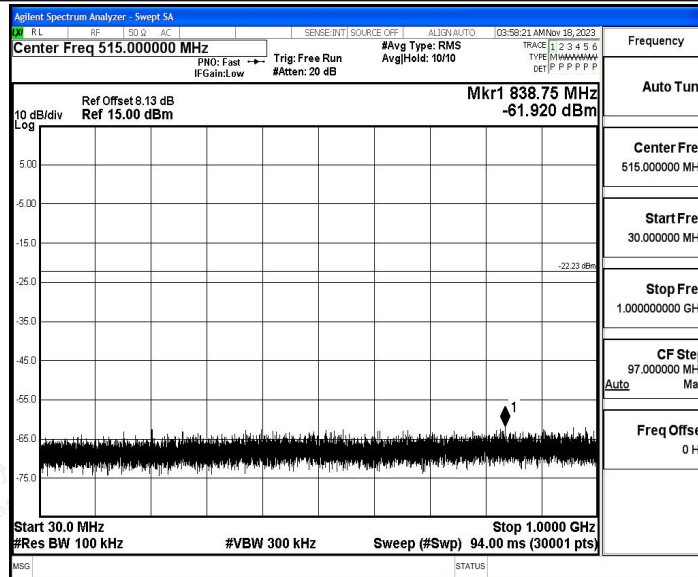


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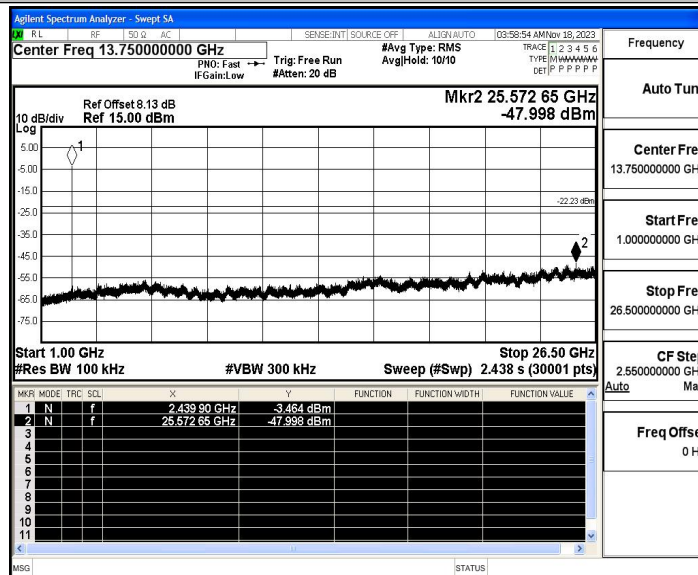
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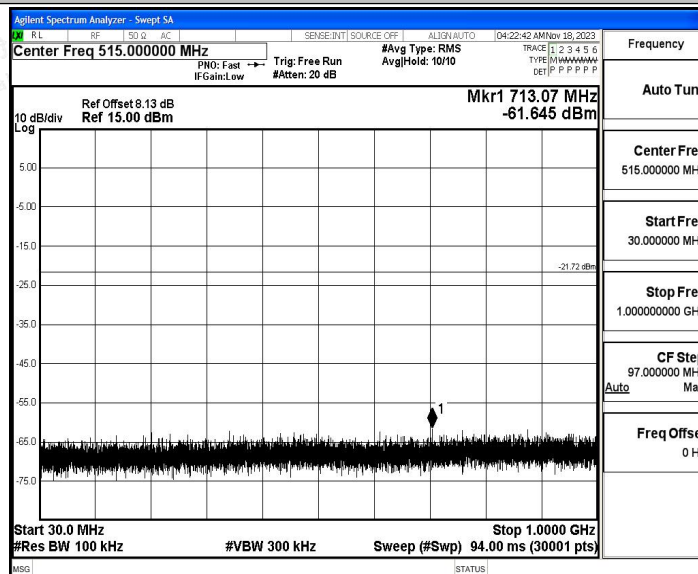
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BLE_1M_Ant1_2440_1000~26500



BLE_1M_Ant1_2480_30~1000



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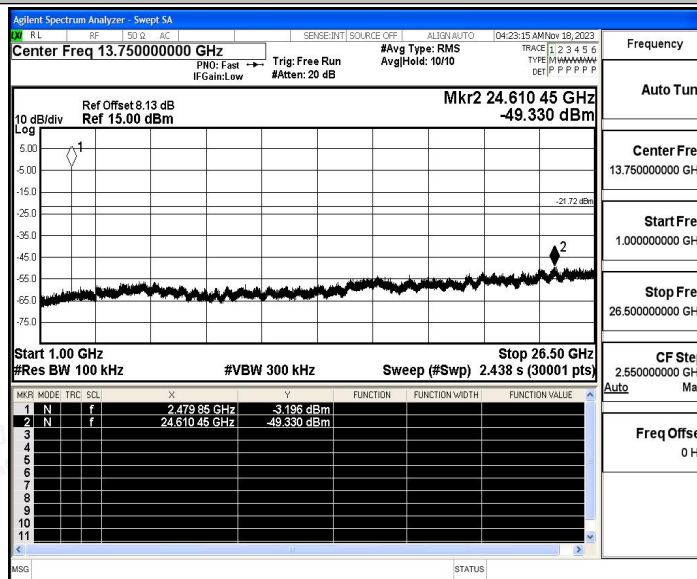
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BLE_1M_Ant1_2480_1000~26500



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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	1.63	1.87	0.8736	87.36	0.59	0.61	---	---
		2440	1.63	1.87	0.8739	87.39	0.59	0.61	---	---
		2480	1.63	1.87	0.8739	87.39	0.59	0.61	---	---



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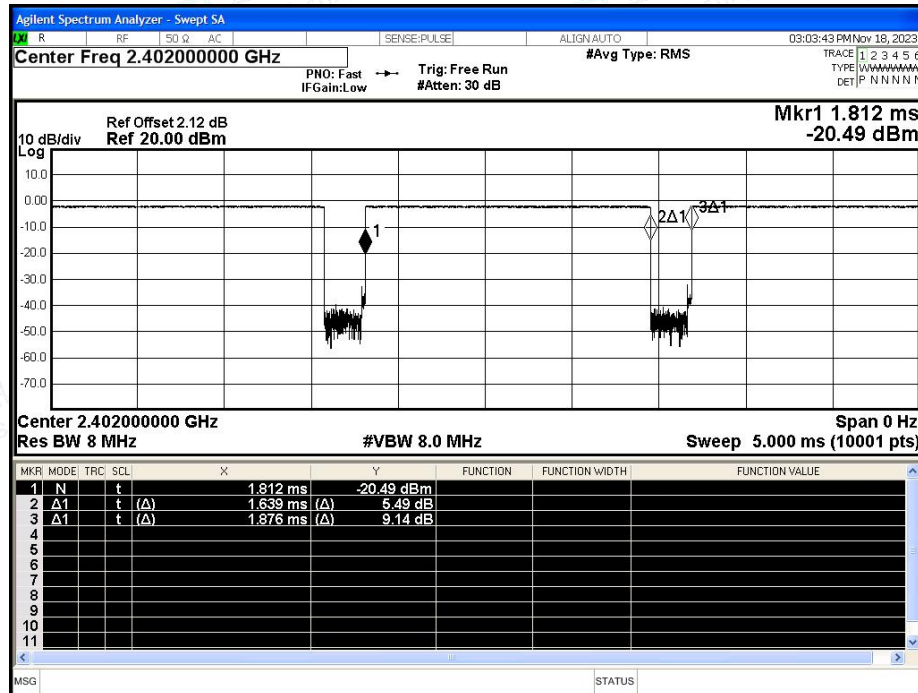
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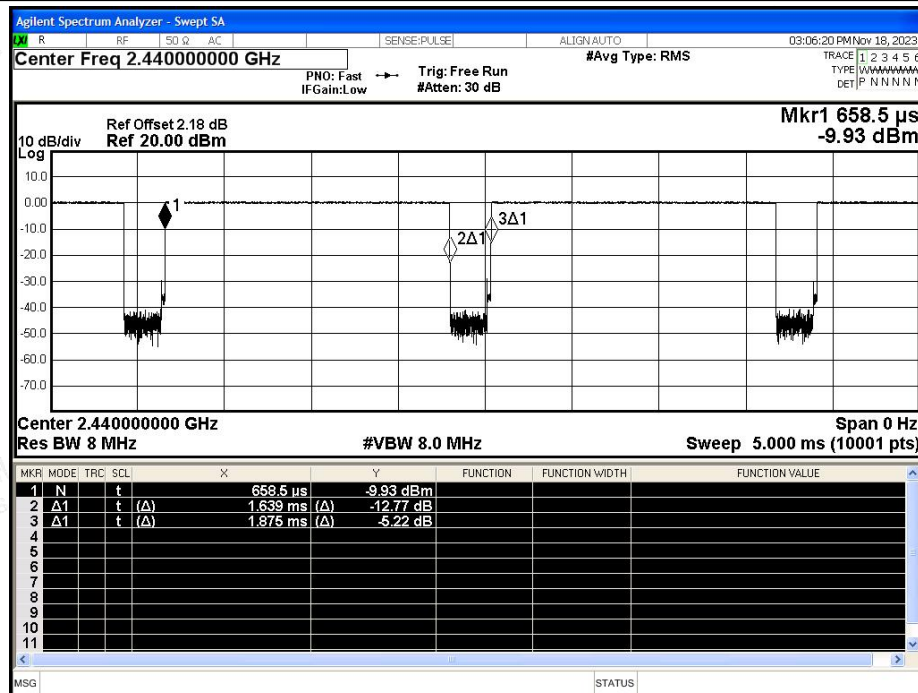


Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

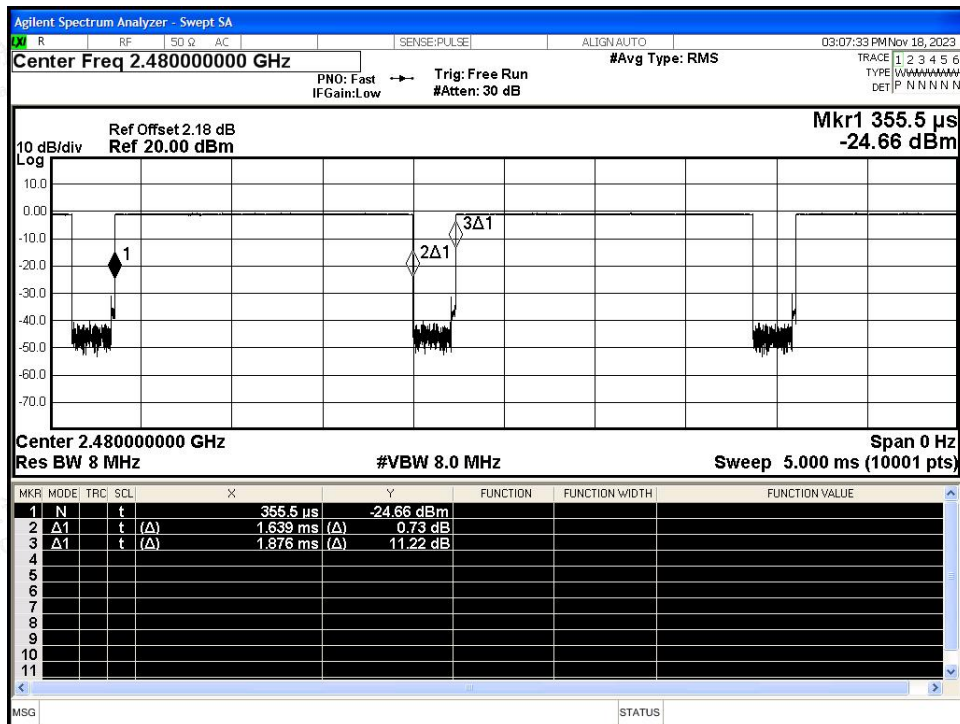


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A.7 Emissions in Restricted Bands

Test Result

TestMode	Antenna	Channel	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-49.15	≤-41.20	46.05	≤54	PASS
				AV	2372.975	-48.61	≤-41.20	46.59	≤54	PASS
				AV	2390.000	-48.76	≤-41.20	46.44	≤54	PASS
				Peak	2310.000	-41.95	≤-21.20	53.25	≤74	PASS
				Peak	2384.945	-38.58	≤-21.20	56.62	≤74	PASS
				Peak	2390.000	-42.43	≤-21.20	52.77	≤74	PASS
		High	2480	AV	2483.500	-48.26	≤-41.20	46.94	≤54	PASS
				AV	2483.520	-48.26	≤-41.20	46.94	≤54	PASS
				AV	2500.000	-48.67	≤-41.20	46.53	≤54	PASS
				Peak	2483.500	-40.72	≤-21.20	54.48	≤74	PASS
				Peak	2484.080	-38.11	≤-21.20	57.09	≤74	PASS
				Peak	2500.000	-42.73	≤-21.20	52.47	≤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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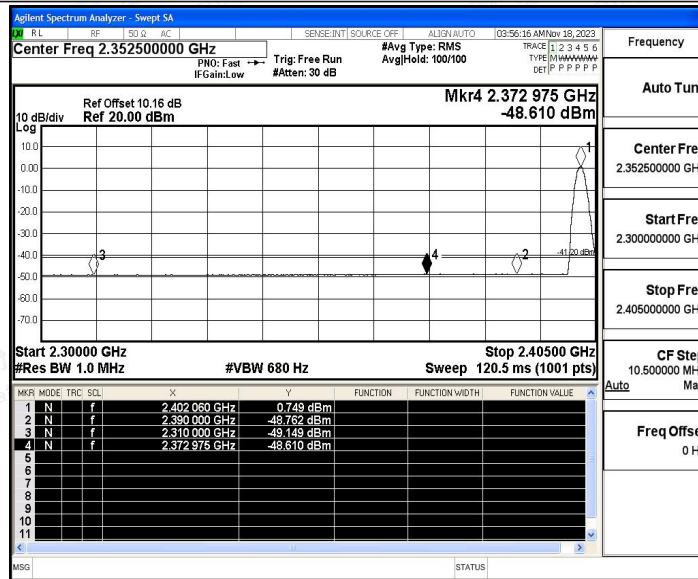
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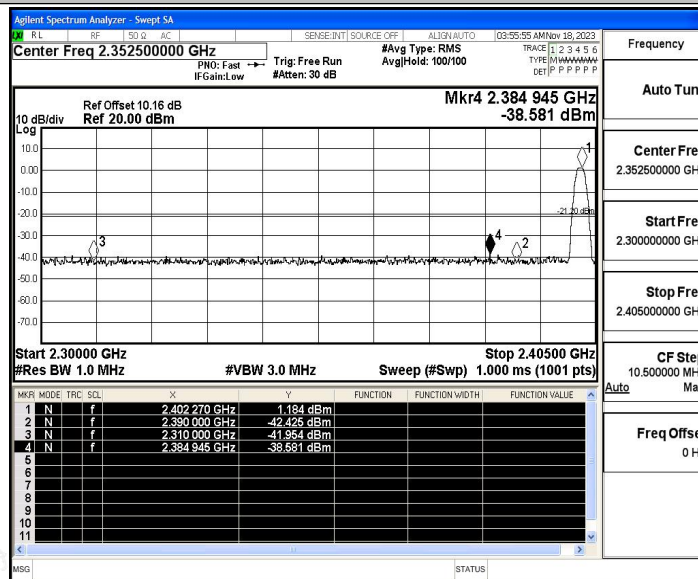


Test Graphs

BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV

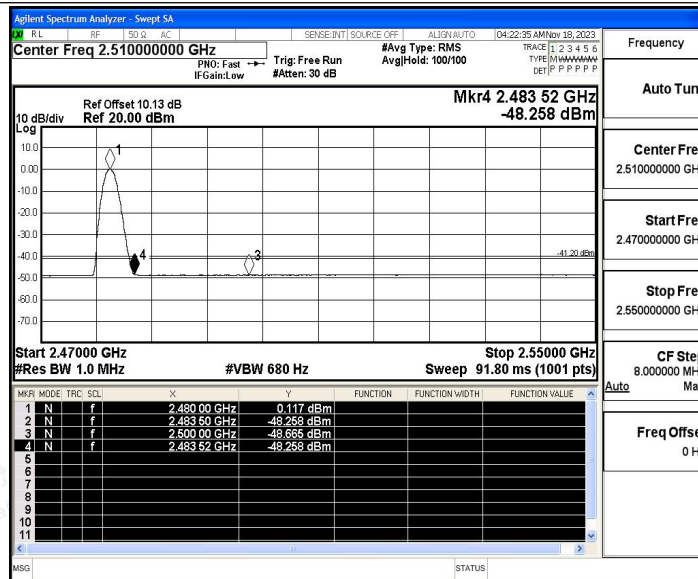


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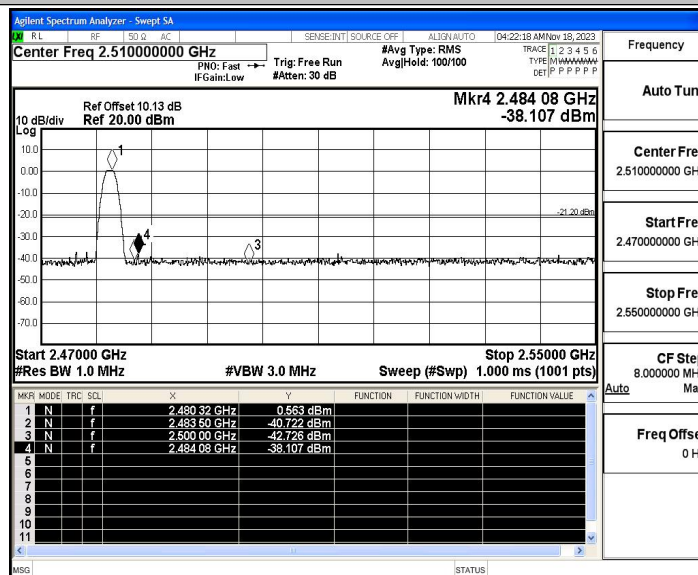
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BLE_1M_Ant1_High_2480_Peak



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