



Appendix A

RF Test Data for BLE (Conducted Measurement)

Product Name: Indoor/Outdoor Step Light

Test Model: CBST03BLORB12V

Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Lh Li
	Lh Li
Supervised by:	Libm
	Li Huan





A.1 DTS Bandwidth

Test Result

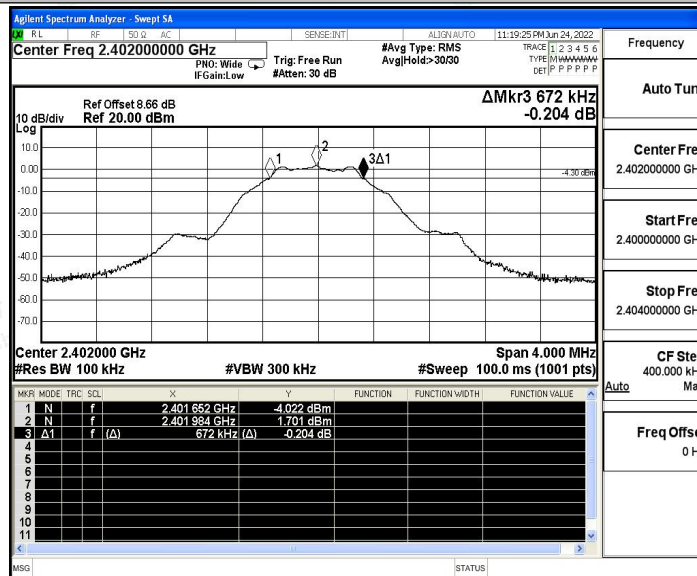
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.672	2401.652	2402.324	0.5	PASS
		2440	0.676	2439.648	2440.324	0.5	PASS
		2480	0.672	2479.648	2480.320	0.5	PASS



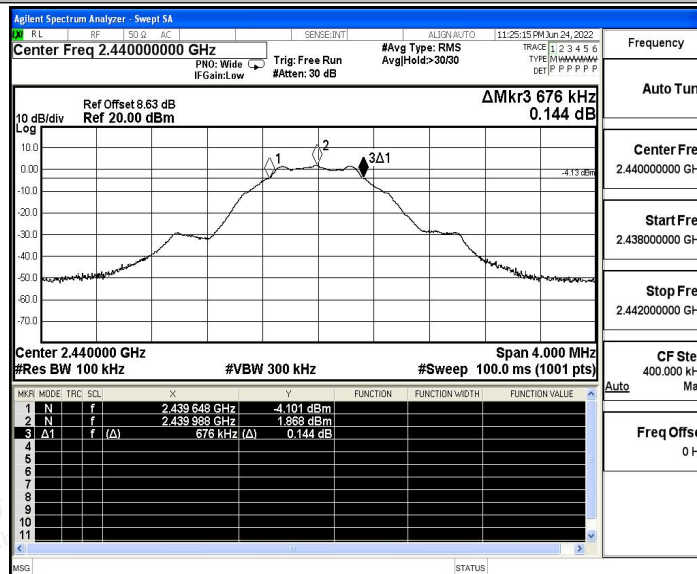


Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440

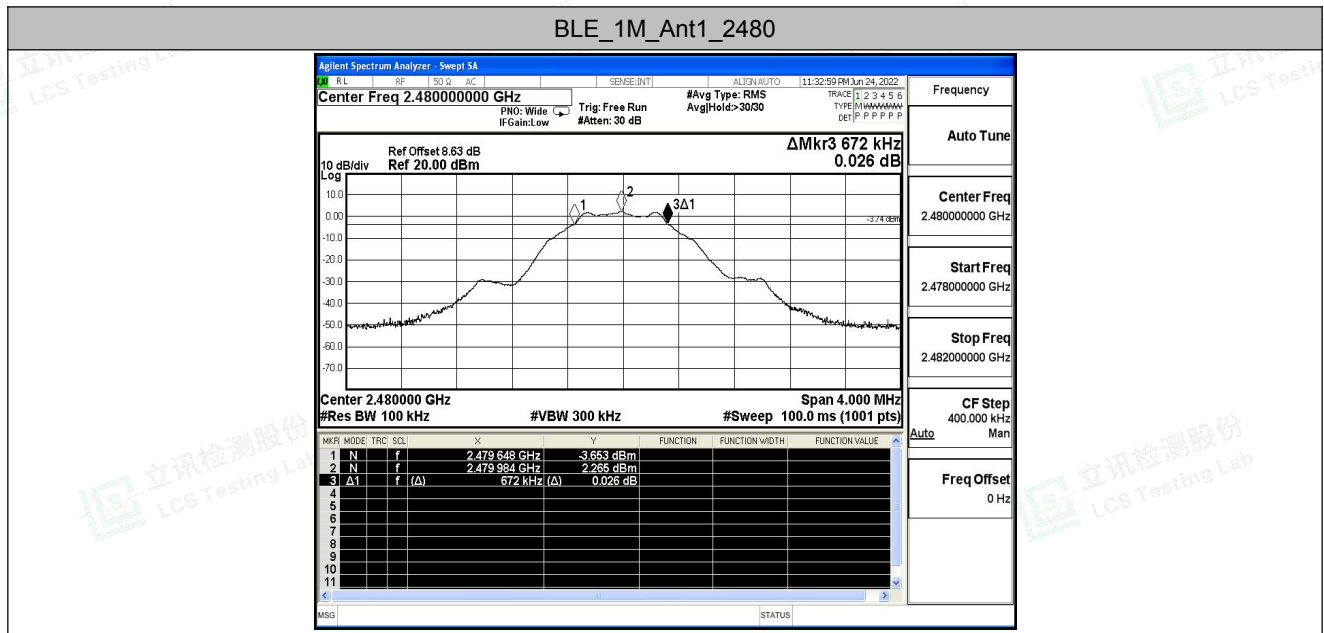


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A.2 Maximum conducted output power

Test Result

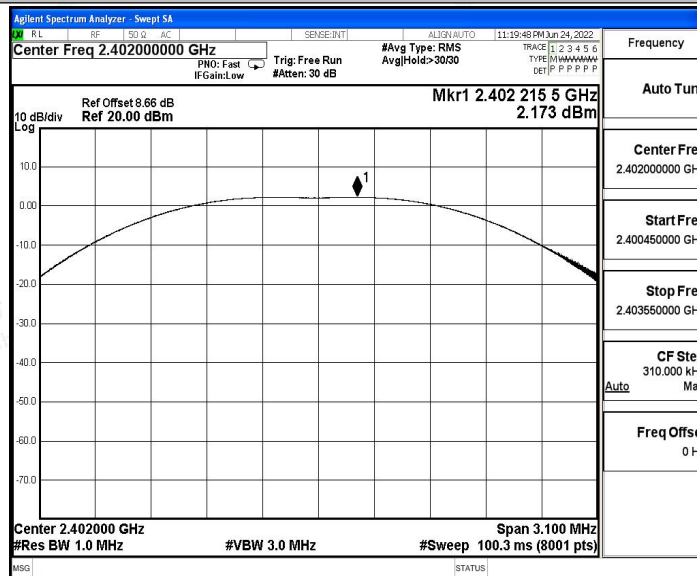
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	2.17	≤30	PASS
		2440	2.35	≤30	PASS
		2480	2.75	≤30	PASS



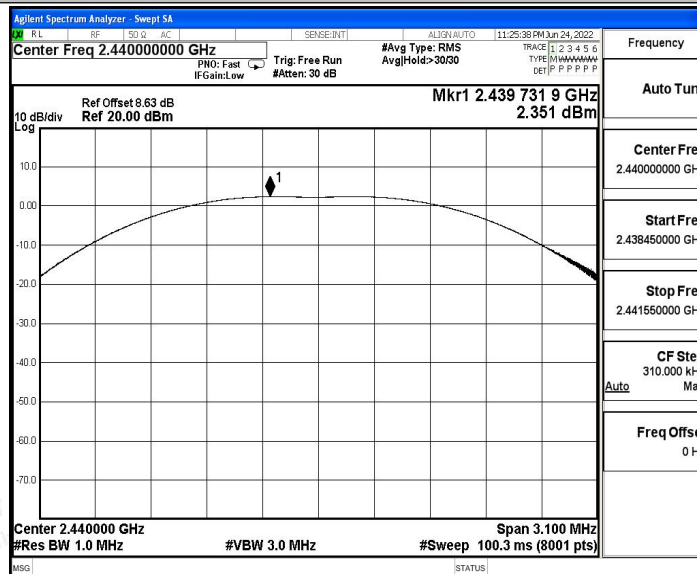


Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440

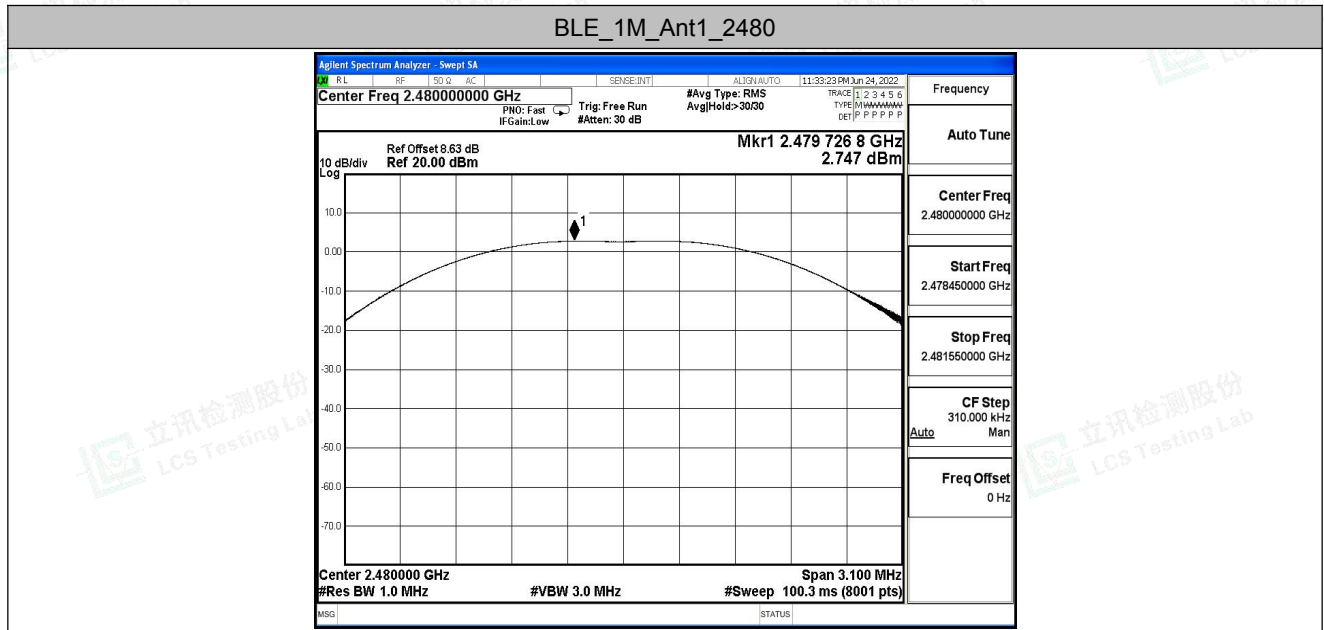


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A.3 Maximum power spectral density

Test Result

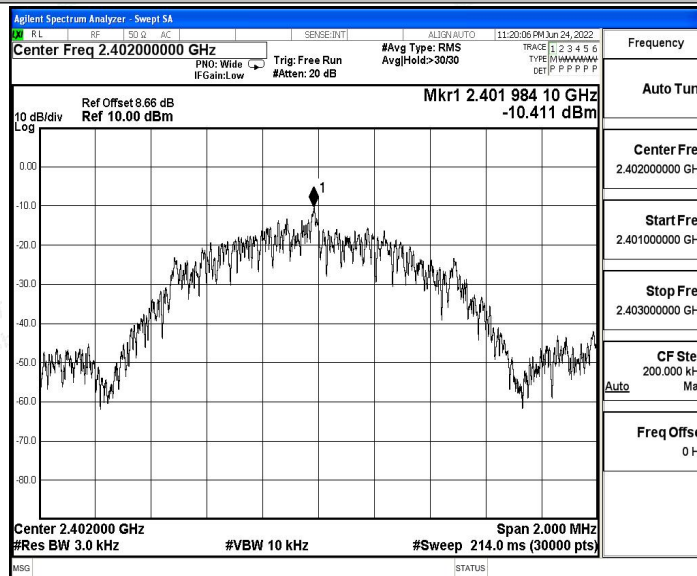
TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-10.41	≤8.00	PASS
		2440	-10.19	≤8.00	PASS
		2480	-9.84	≤8.00	PASS



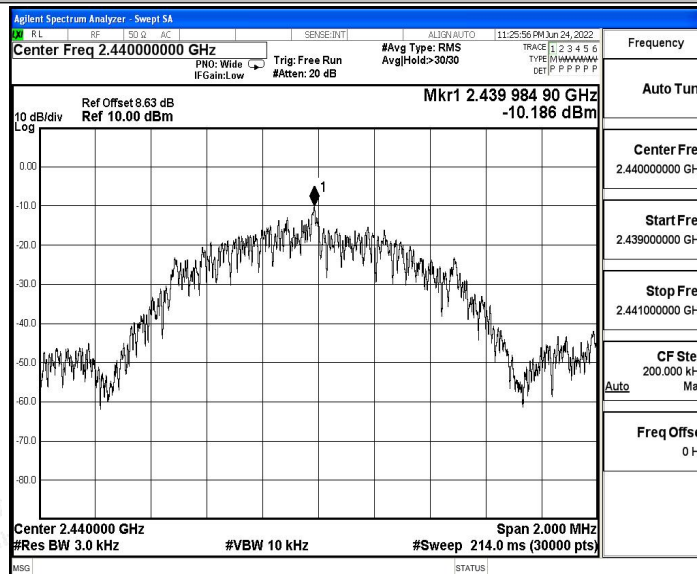


Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440

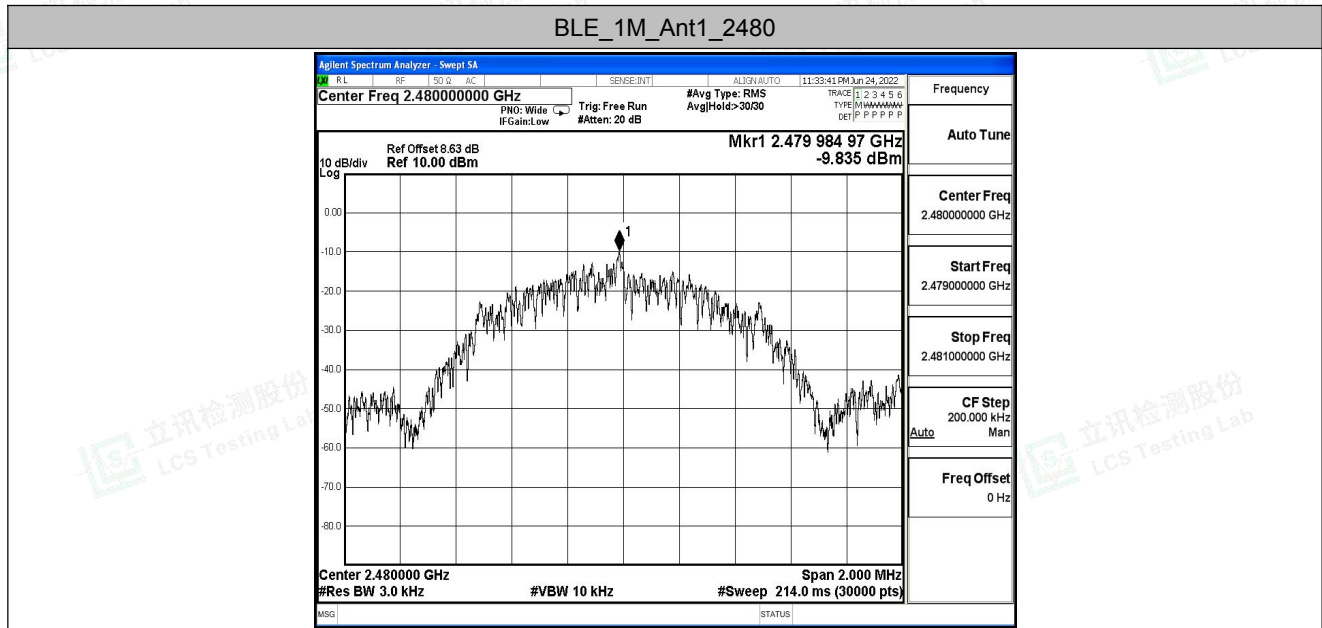


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A.4 Band edge measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	1.76	-42.1	≤-18.25	PASS
		High	2480	2.30	-40.74	≤-17.7	PASS





Test Graphs



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A.5 Conducted Spurious Emission

Test Result

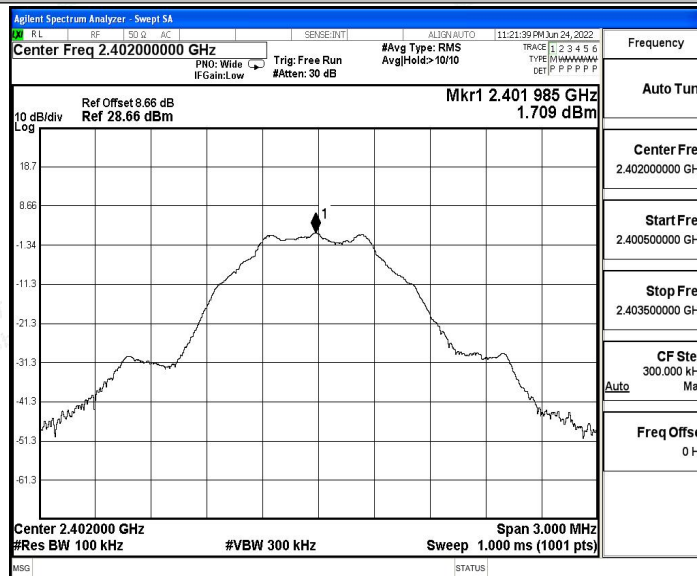
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	1.71	1.71	---	PASS
			30~1000	1.71	-59.2	≤-18.29	PASS
			1000~26500	1.71	-45.16	≤-18.29	PASS
		2440	Reference	1.87	1.87	---	PASS
			30~1000	1.87	-57.09	≤-18.13	PASS
			1000~26500	1.87	-46.34	≤-18.13	PASS
		2480	Reference	2.25	2.25	---	PASS
			30~1000	2.25	-57.35	≤-17.75	PASS
			1000~26500	2.25	-45.95	≤-17.75	PASS



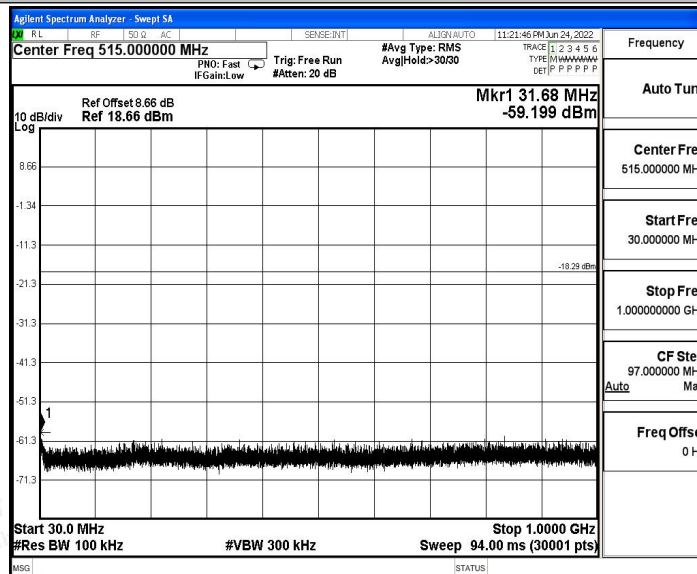


Test Graphs

BLE_1M_Ant1_2402_0~Reference



BLE_1M_Ant1_2402_30~1000



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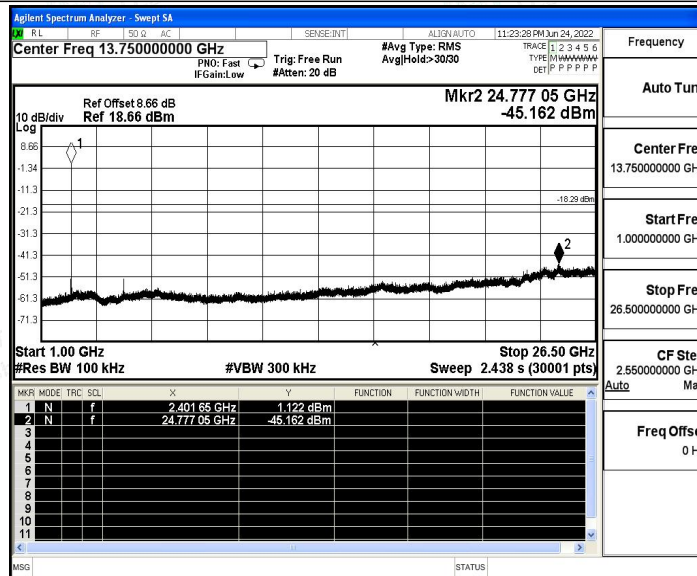
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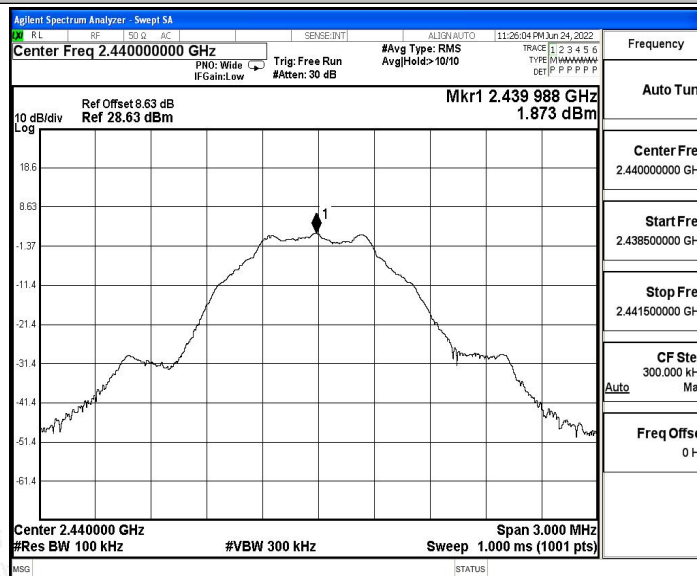
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BLE_1M_Ant1_2402_1000~26500



BLE_1M_Ant1_2440_0~Reference



Shenzhen LCS Compliance Testing Laboratory Ltd.

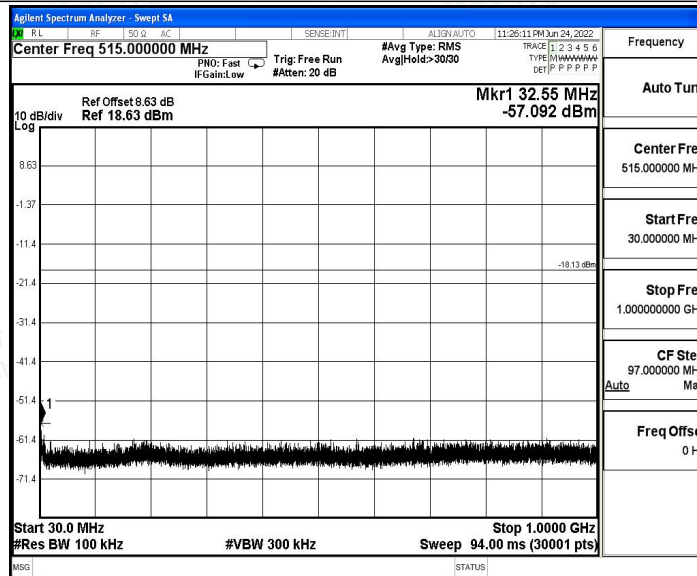
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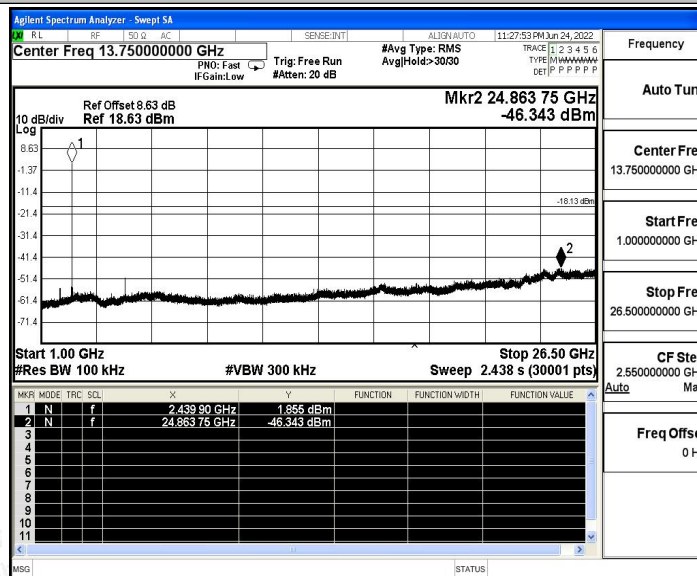
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BLE_1M_Ant1_2440_30~1000



BLE_1M_Ant1_2440_1000~26500



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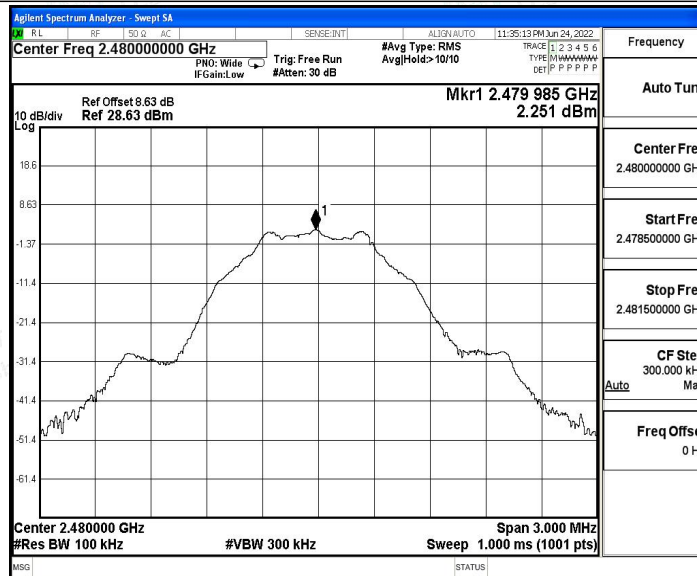
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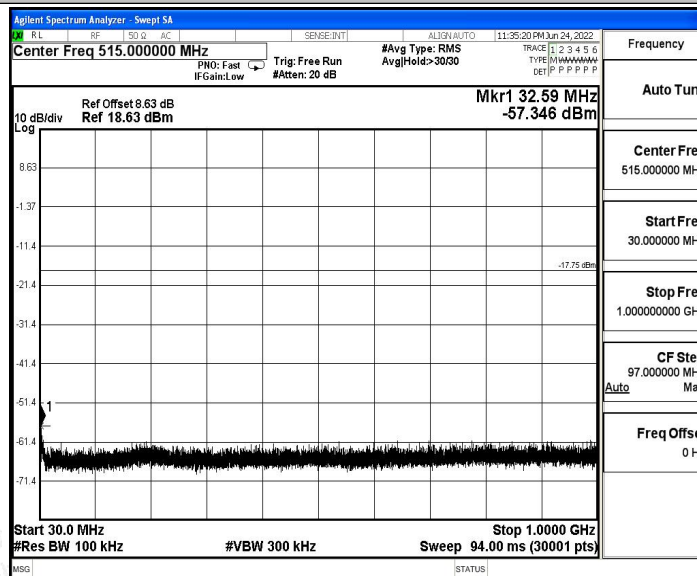
Scan code to check authenticity



BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



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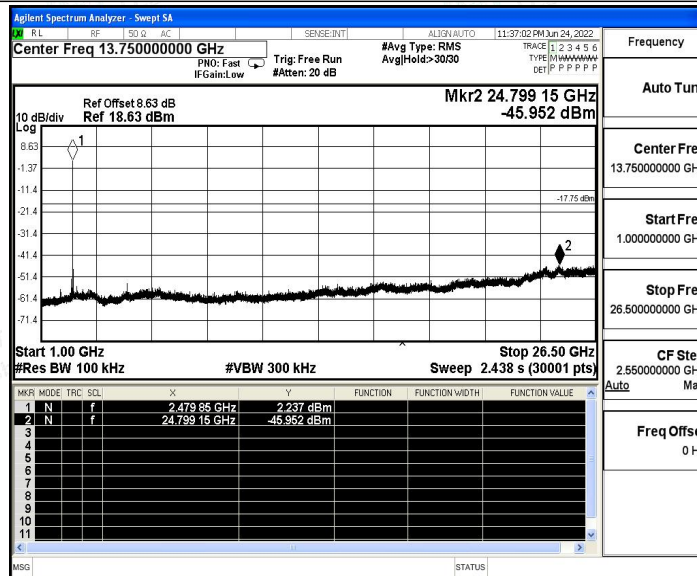
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BLE_1M_Ant1_2480_1000~26500



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A.6 Duty Cycle

Test Result

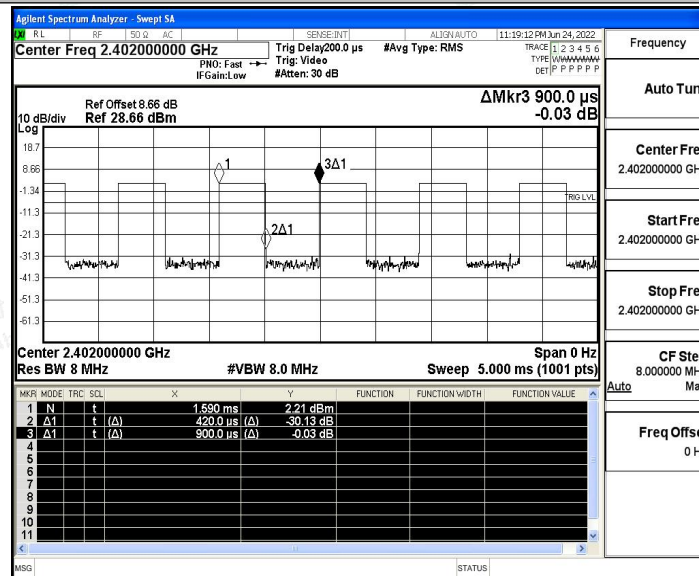
TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	1/T	Limit	Verdict
BLE_1M	Ant1	2402	0.42	0.90	0.4667	46.67	3.31	2.38	---	---
		2440	0.42	0.90	0.4667	46.67	3.31	2.38	---	---
		2480	0.42	0.90	0.4667	46.67	3.31	2.38	---	---



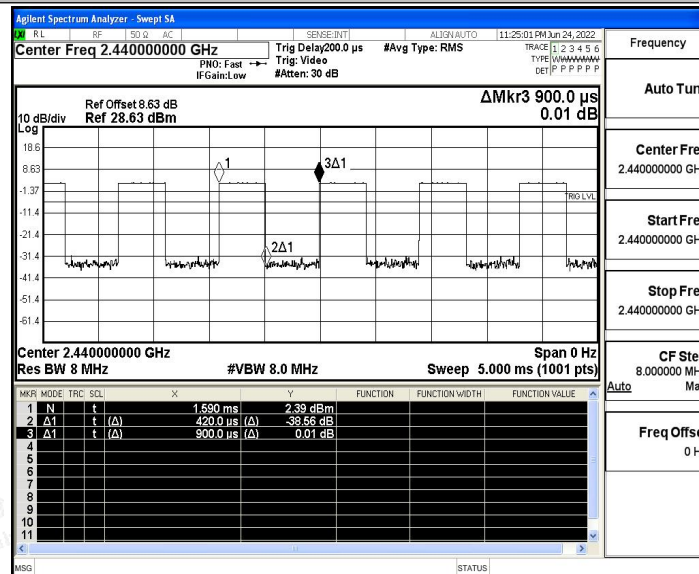


Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440

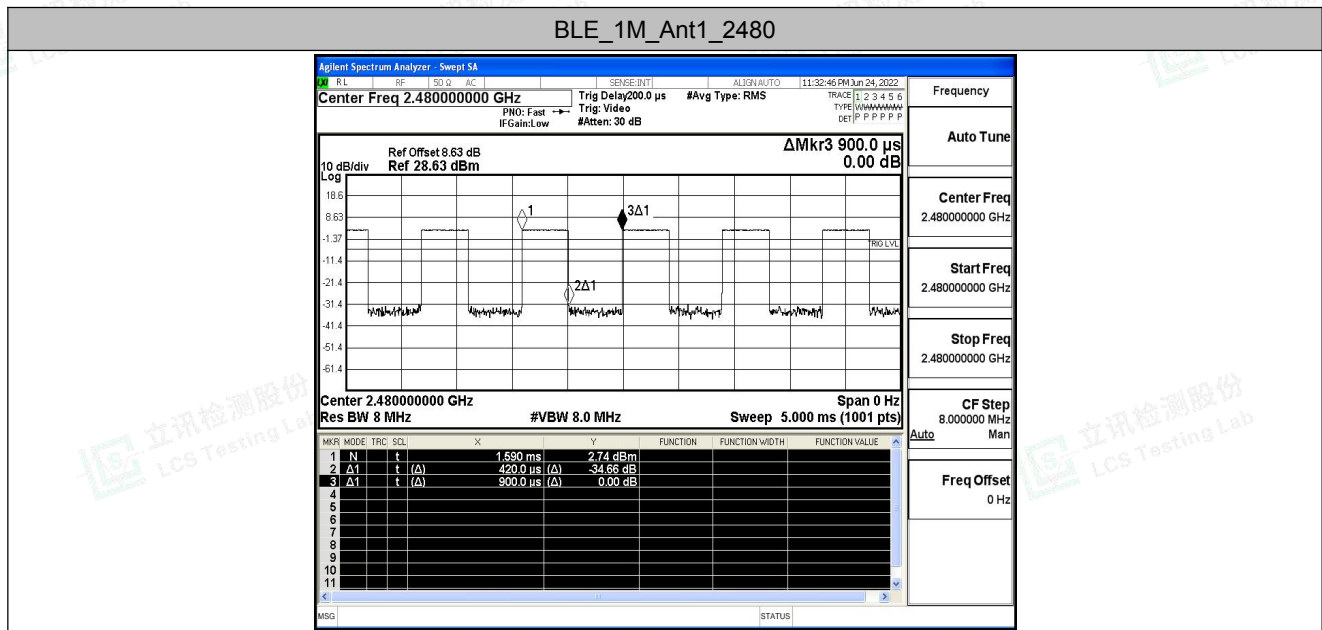


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A.7 Emissions in Restricted Bands

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	-47.61	≤-41.20	47.59	≤54	PASS
				AV	2389.355	-46.29	≤-41.20	48.91	≤54	PASS
				AV	2390.000	-46.39	≤-41.20	48.81	≤54	PASS
				Peak	2310.000	-38.54	≤-21.20	56.66	≤74	PASS
				Peak	2389.775	-31.59	≤-21.20	63.61	≤74	PASS
				Peak	2390.000	-32.38	≤-21.20	62.82	≤74	PASS
		High	2480	AV	2483.500	-41.23	≤-41.20	53.97	≤54	PASS
				AV	2483.520	-41.23	≤-41.20	53.97	≤54	PASS
				AV	2500.000	-46.67	≤-41.20	48.53	≤54	PASS
				Peak	2483.500	-23.79	≤-21.20	71.41	≤74	PASS
				Peak	2483.840	-23.76	≤-21.20	71.44	≤74	PASS
				Peak	2500.000	-34.99	≤-21.20	60.21	≤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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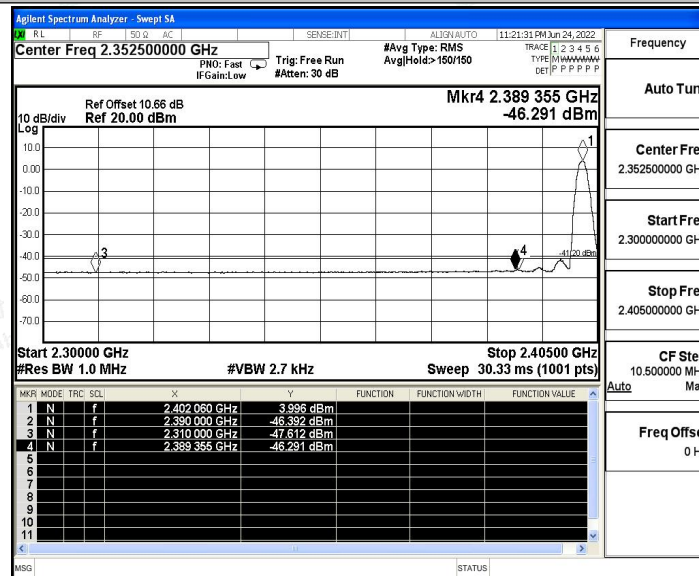
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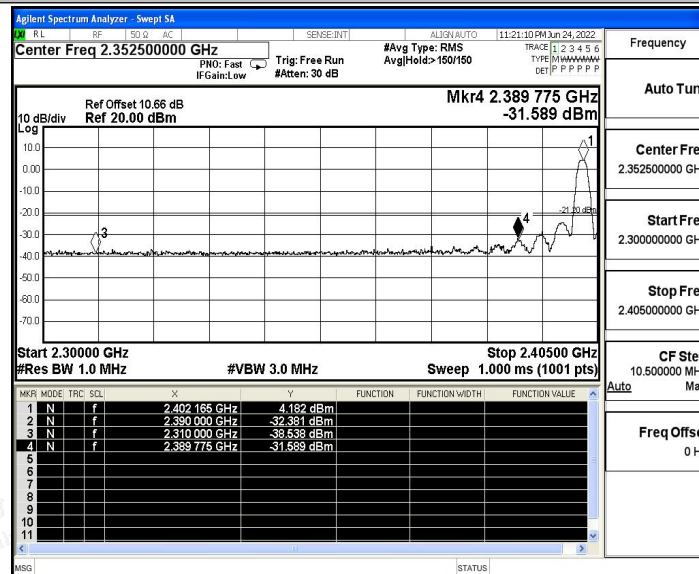


Test Graphs

BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



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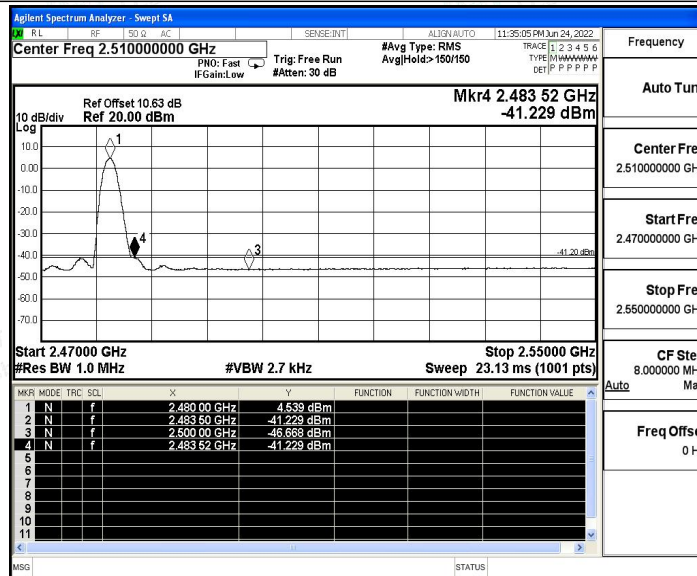
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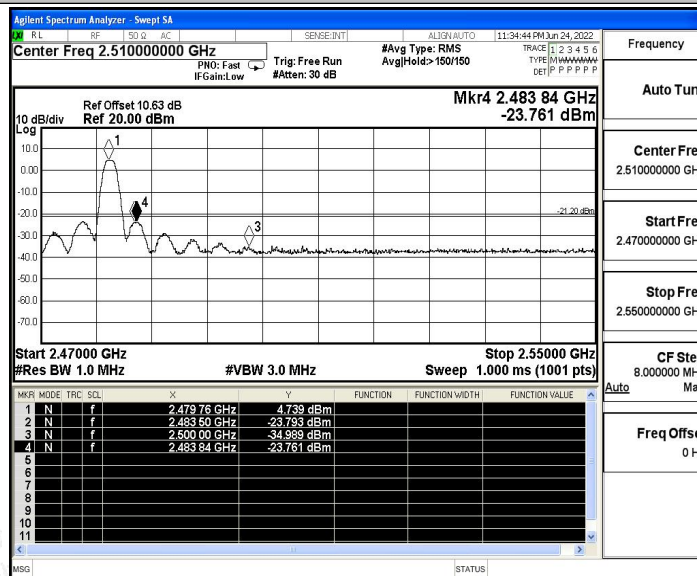
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BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak



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