



Appendix B

RF Test Data for BT LE (Conducted Measurement)

Product Name: Bluetooth sky light

Test Model: S006

Environmental Conditions

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





B.1 DTS Bandwidth

Test Result

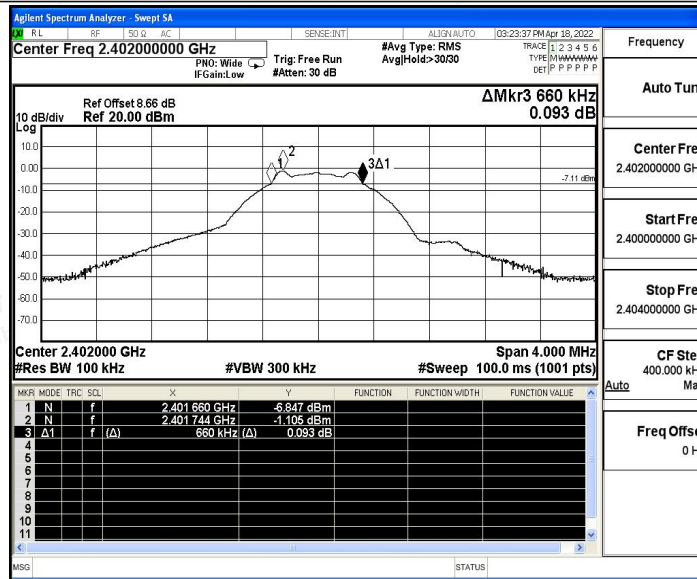
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.660	2401.660	2402.320	0.5	PASS
		2440	0.660	2439.660	2440.320	0.5	PASS
		2480	0.660	2479.660	2480.320	0.5	PASS



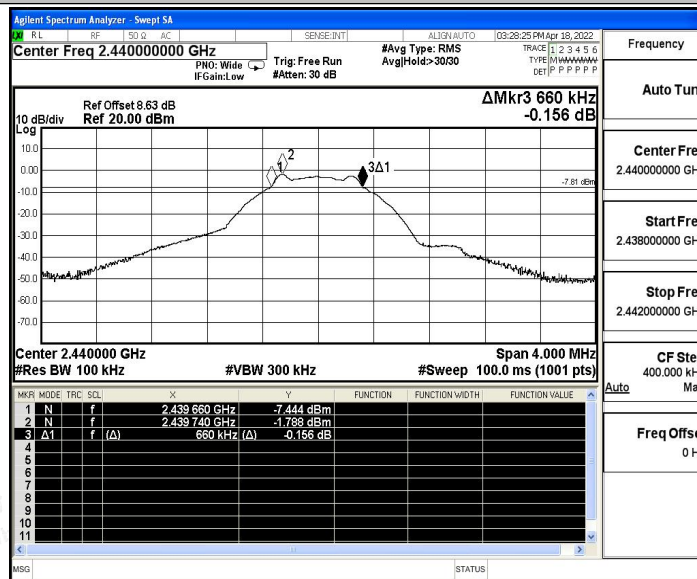


Test Graphs

BLE_1M_Ant1_2402

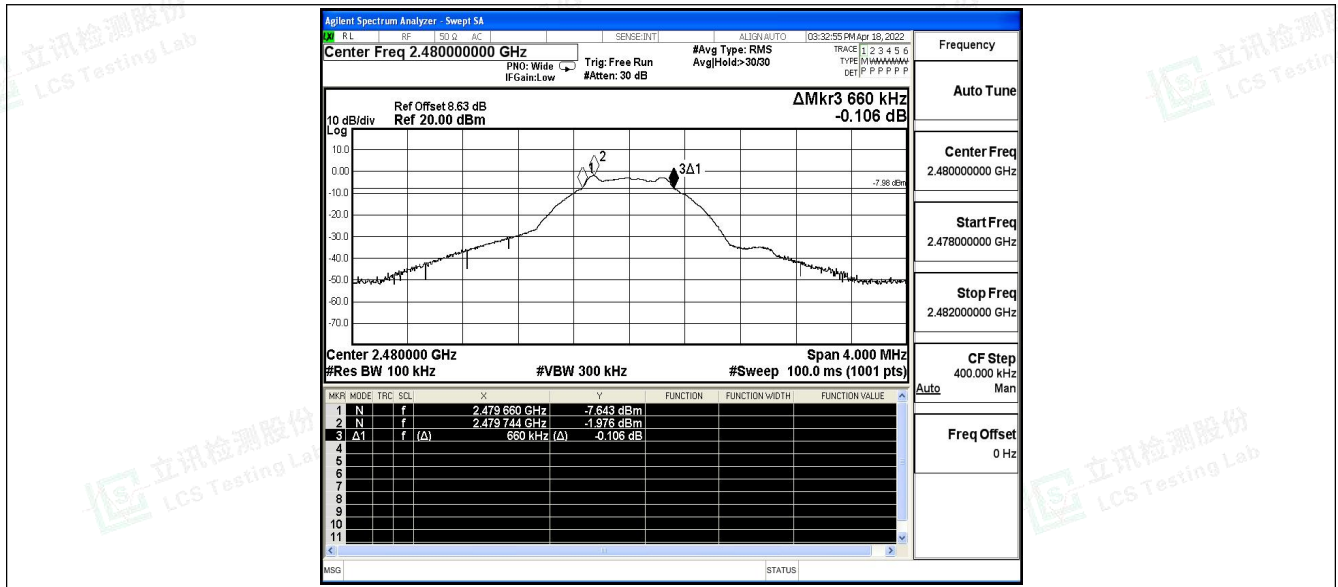


BLE_1M_Ant1_2440



BLE_1M_Ant1_2480







B.2 Maximum peak conducted output power

Test Result

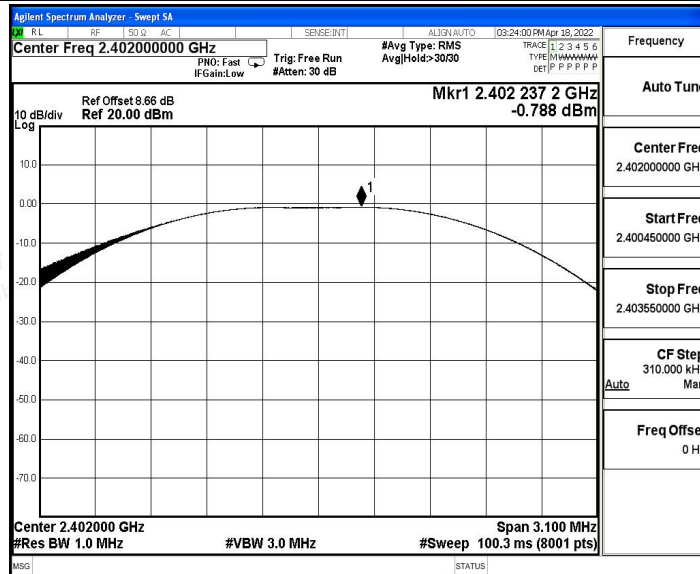
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-0.79	≤30	PASS
		2440	-1.49	≤30	PASS
		2480	-1.7	≤30	PASS



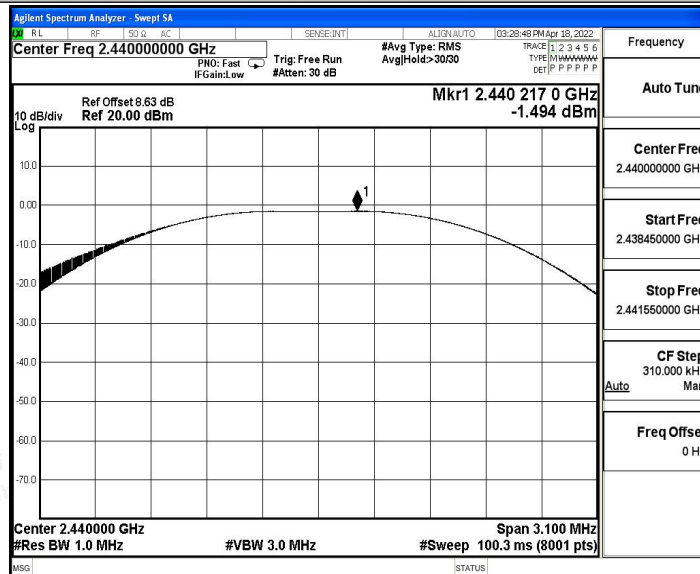


Test Graphs

BLE_1M_Ant1_2402

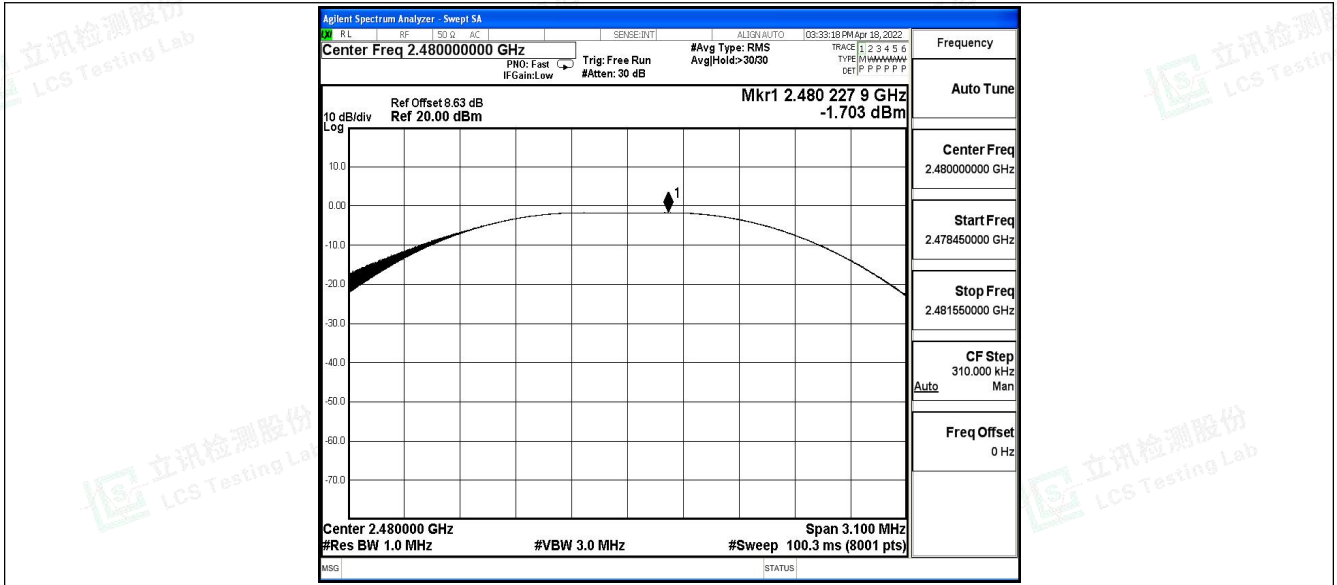


BLE_1M_Ant1_2440



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	-17.2	≤8.00	PASS
		2440	-17.85	≤8.00	PASS
		2480	-18.13	≤8.00	PASS

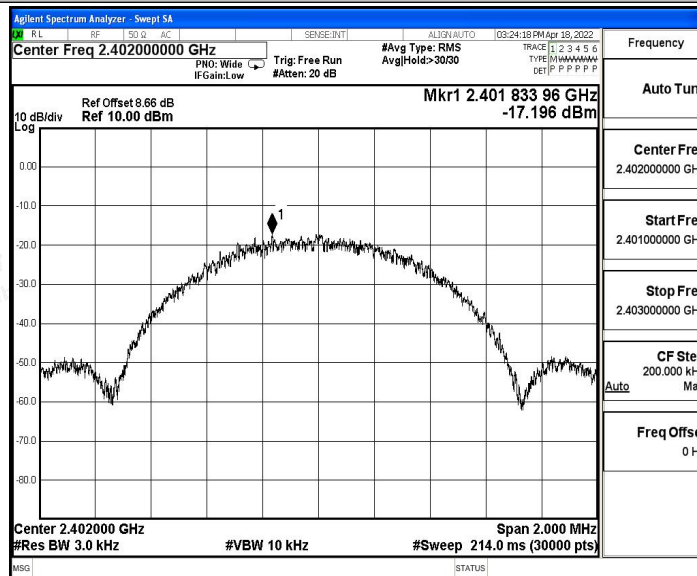


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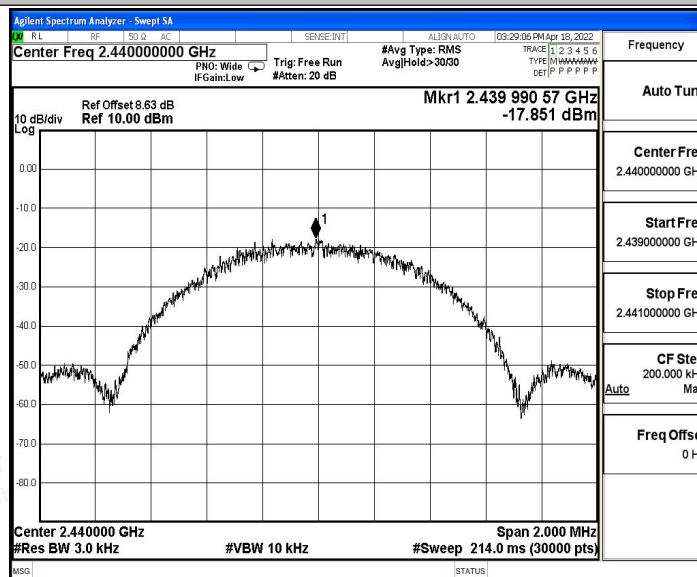


Test Graphs

BLE_1M_Ant1_2402

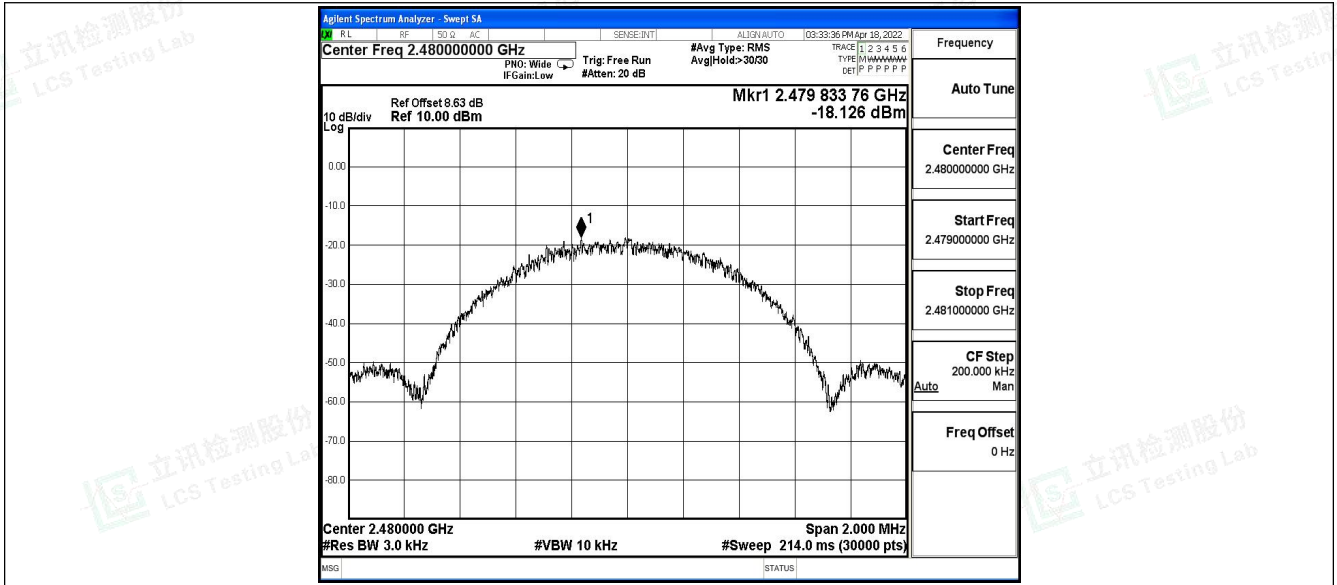


BLE_1M_Ant1_2440



BLE_1M_Ant1_2480







B.4 Band edge measurements

Test Result

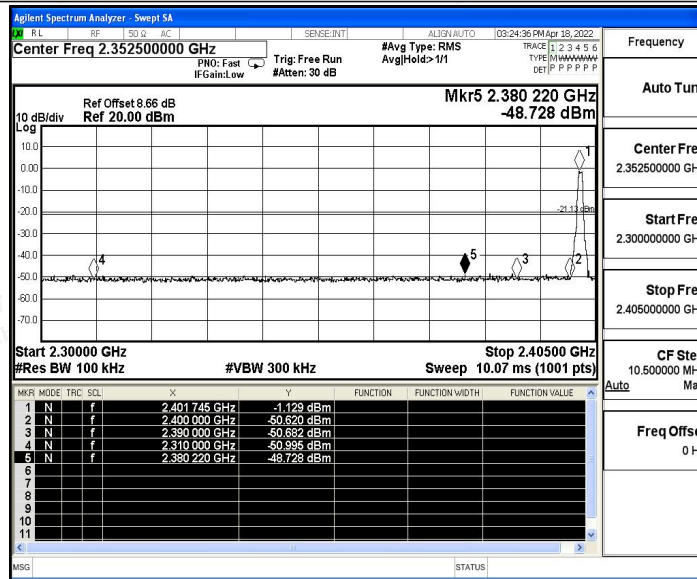
TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-1.13	-48.73	≤ -21.13	PASS
		High	2480	-1.94	-47.72	≤ -21.94	PASS



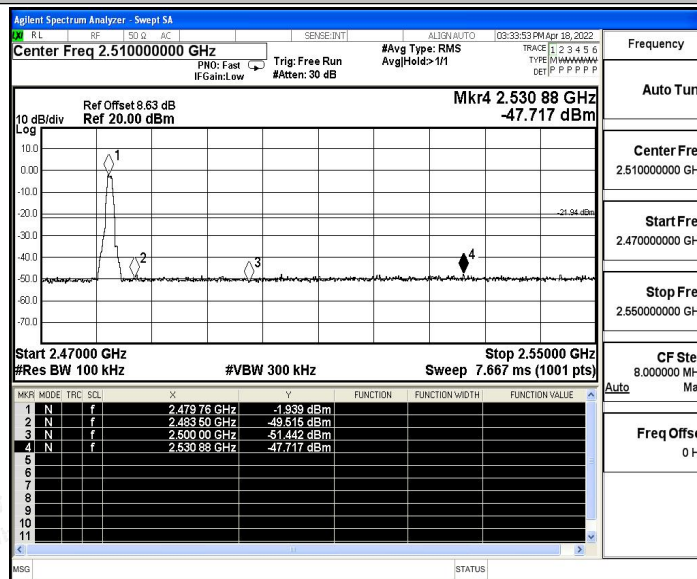


Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480





B.5 Conducted Spurious Emission

Test Result

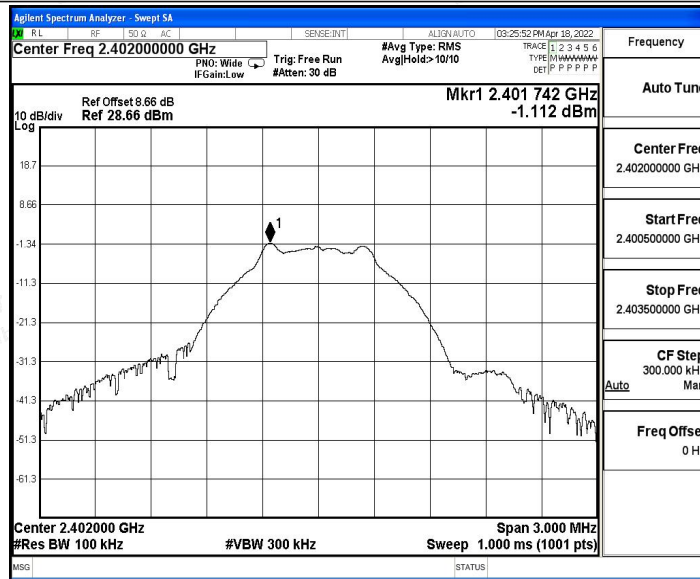
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-1.11	-1.11	---	PASS
			30~1000	-1.11	-60.52	≤-21.11	PASS
			1000~26500	-1.11	-46.02	≤-21.11	PASS
		2440	Reference	-1.78	-1.78	---	PASS
			30~1000	-1.78	-60.64	≤-21.78	PASS
			1000~26500	-1.78	-46.18	≤-21.78	PASS
		2480	Reference	-1.96	-1.96	---	PASS
			30~1000	-1.96	-60.26	≤-21.96	PASS
			1000~26500	-1.96	-45.57	≤-21.96	PASS



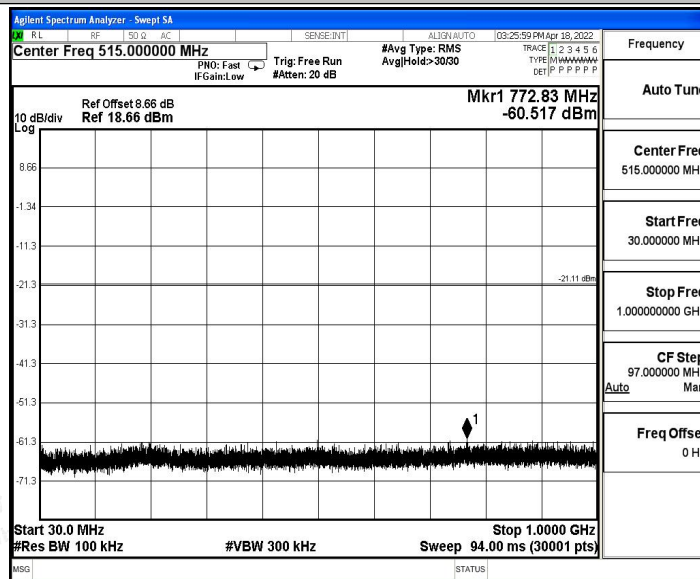


Test Graphs

BLE_1M_Ant1_2402_0~Reference

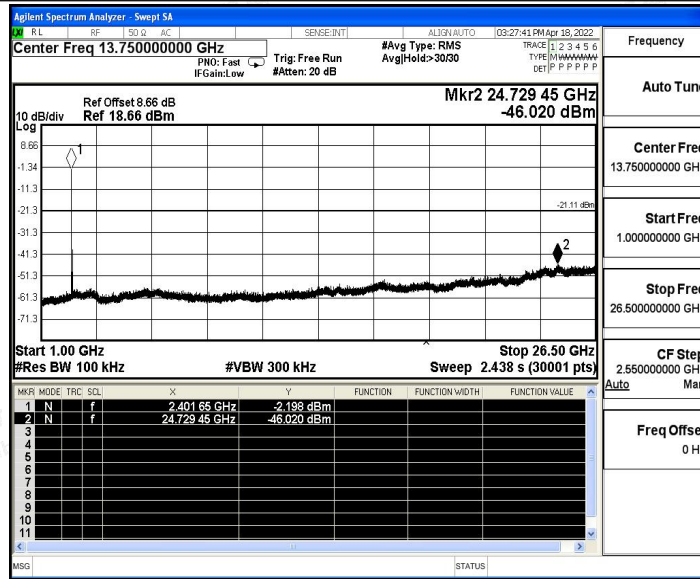


BLE_1M_Ant1_2402_30~1000

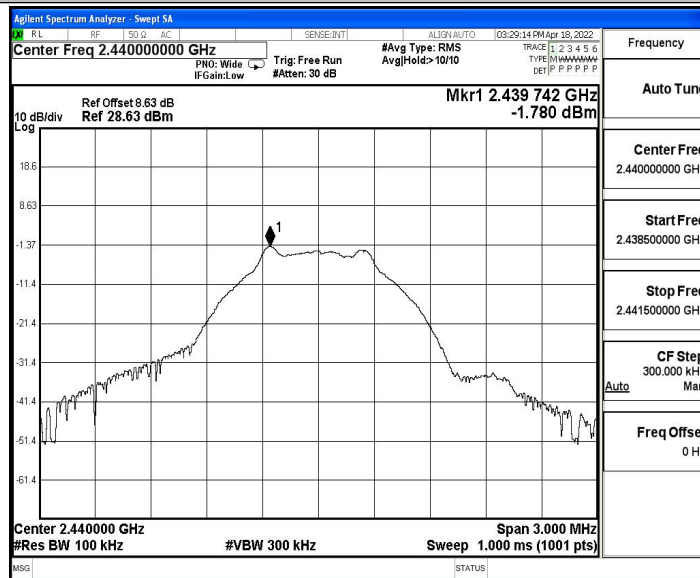


BLE_1M_Ant1_2402_1000~26500



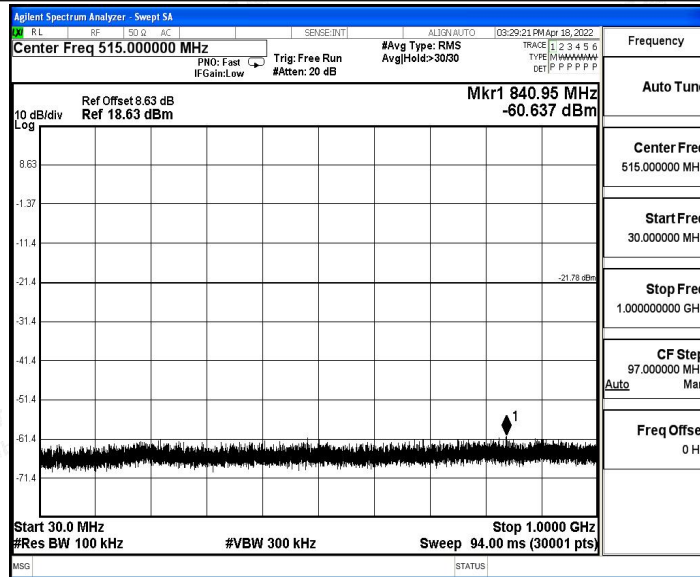


BLE_1M_Ant1_2440_0~Reference

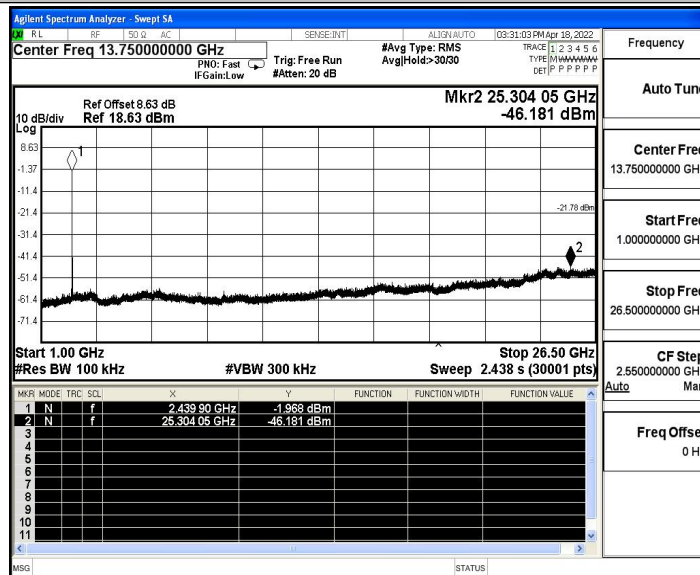


BLE_1M_Ant1_2440_30~1000



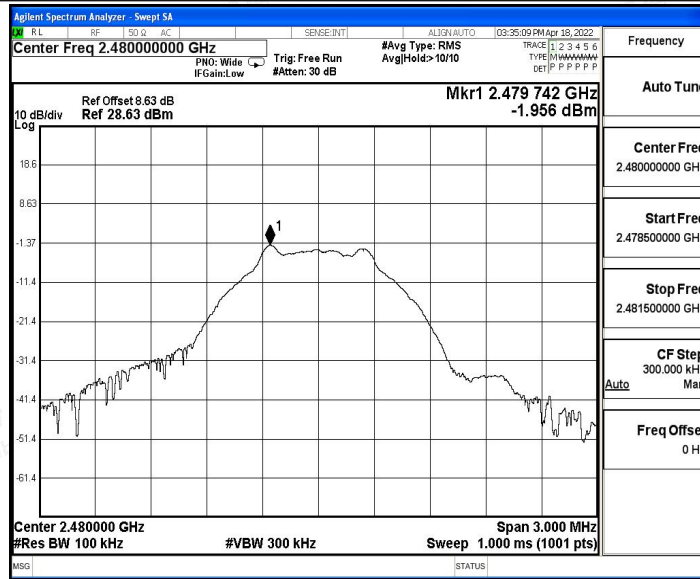


BLE_1M_Ant1_2440_1000~26500

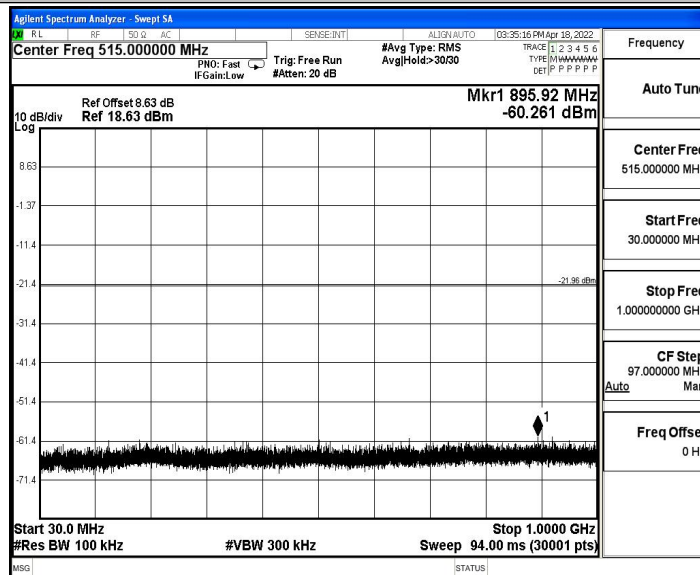


BLE_1M_Ant1_2480_0~Reference



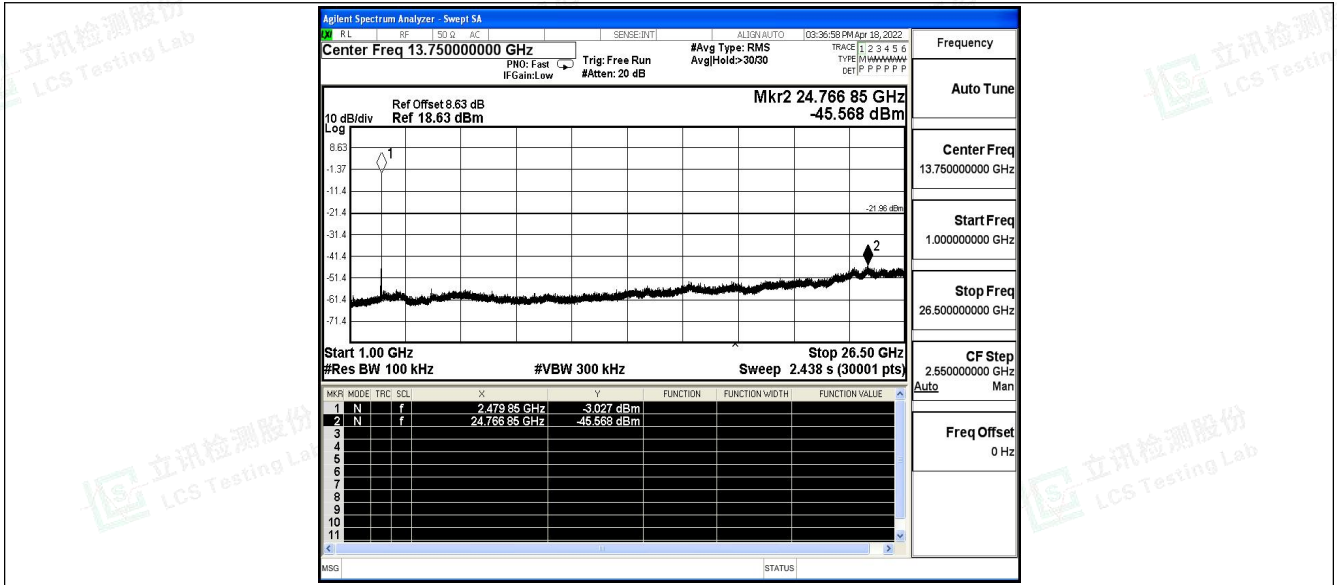


BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500







B.6 Duty Cycle

Test Result

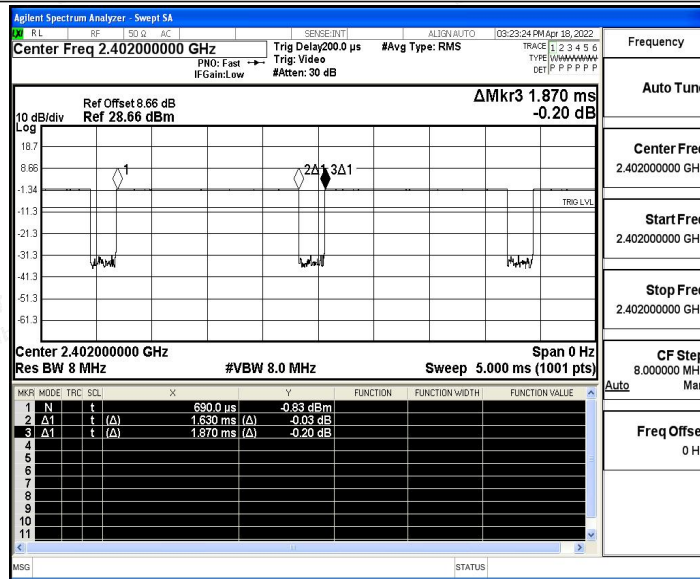
TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Minimum VBW(KHz)	Limit	Verdict
BLE_1M	Ant1	2402	1.63	1.87	0.8717	87.17	0.60	0.613	---	---
		2440	1.64	1.88	0.8723	87.23	0.59	0.610	---	---
		2480	1.63	1.87	0.8717	87.17	0.60	0.613	---	---



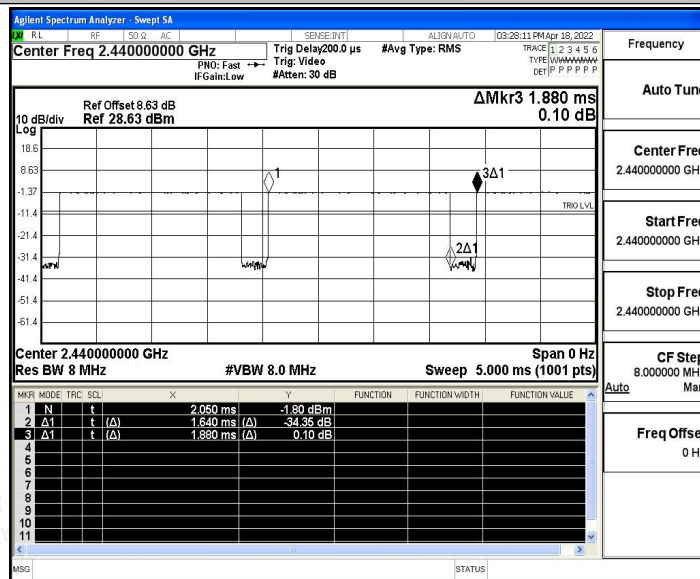


Test Graphs

BLE_1M_Ant1_2402

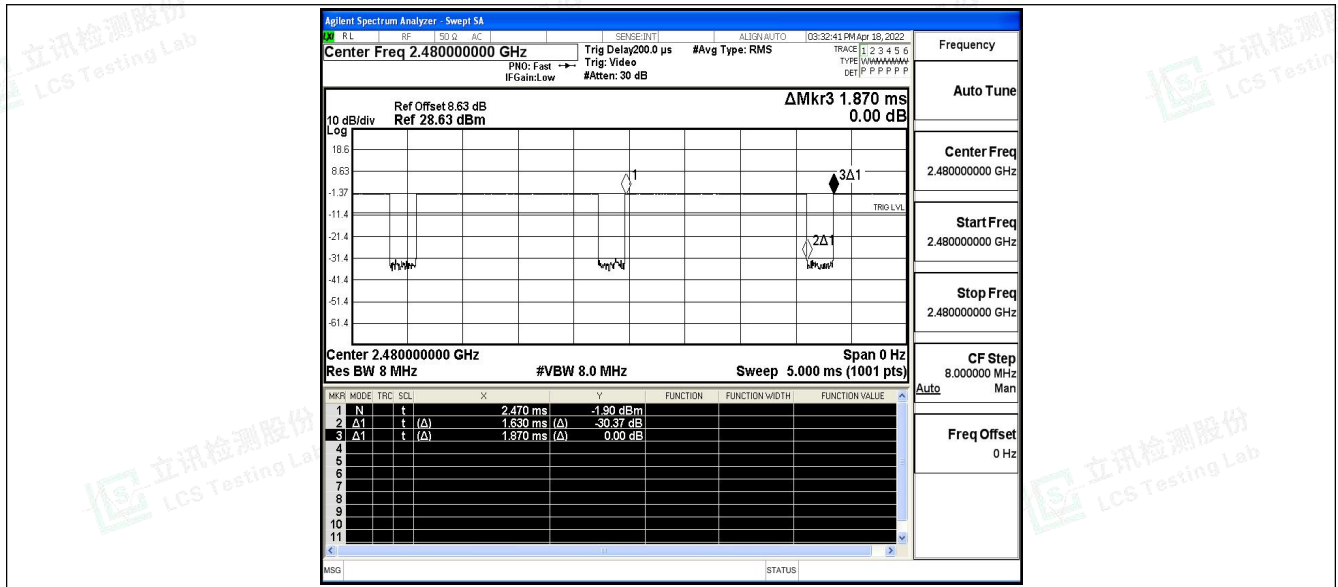


BLE_1M_Ant1_2440



BLE_1M_Ant1_2480







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	-48.09	≤-41.20	47.11	≤54	PASS
				AV	2388.305	-47.53	≤-41.20	47.67	≤54	PASS
				AV	2390.000	-47.59	≤-41.20	47.61	≤54	PASS
				Peak	2310.000	-39.1	≤-21.20	56.10	≤74	PASS
				Peak	2375.495	-36.68	≤-21.20	58.52	≤74	PASS
				Peak	2390.000	-38.69	≤-21.20	56.51	≤74	PASS
		High	2480	AV	2483.500	-46.92	≤-41.20	48.28	≤54	PASS
				AV	2483.520	-46.92	≤-41.20	48.28	≤54	PASS
				AV	2500.000	-47.09	≤-41.20	48.11	≤54	PASS
				Peak	2483.500	-38.34	≤-21.20	56.86	≤74	PASS
				Peak	2487.920	-36.24	≤-21.20	58.96	≤74	PASS
				Peak	2500.000	-37.4	≤-21.20	57.80	≤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.

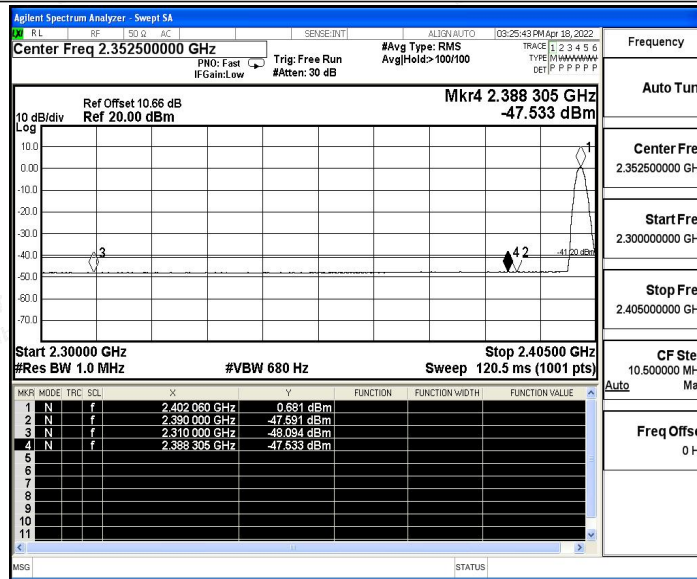


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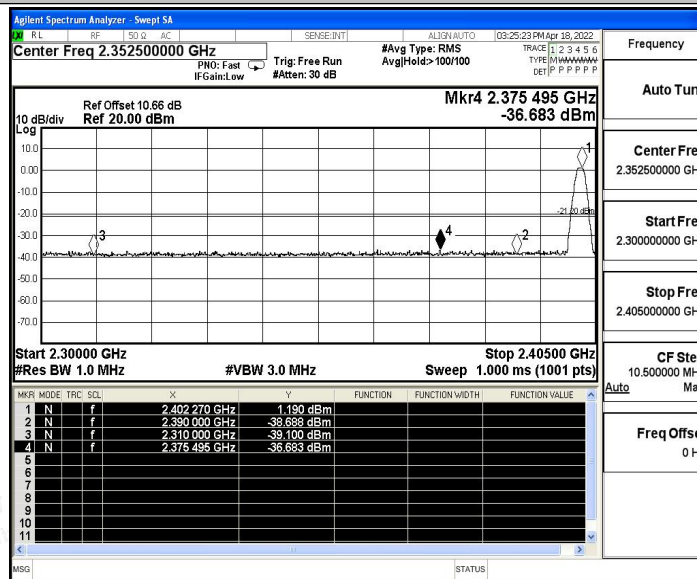


Test Graphs

BLE_1M_Ant1_Low_2402_AV

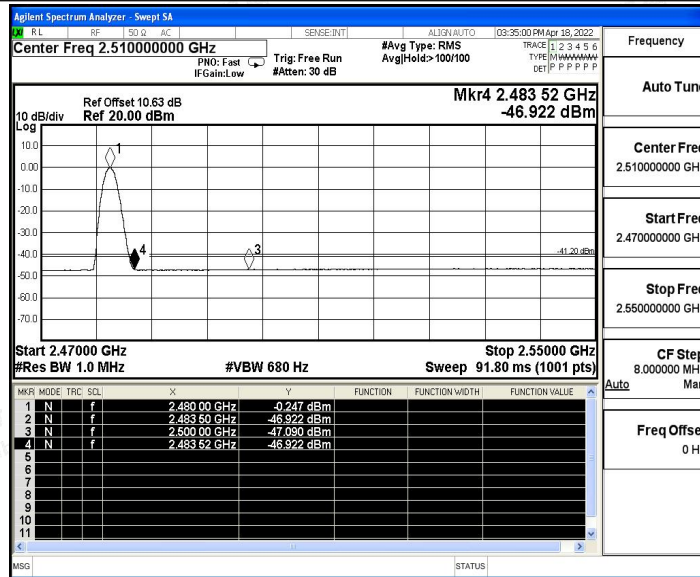


BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV





BLE_1M_Ant1_High_2480_Peak

