



Appendix B

RF Test Data for BT LE (Conducted Measurement)

Product Name: ROCKIN ROLLER 360

Test Model: MNRR360

Environmental Conditions

Temperature:	23.5° C
Relative Humidity:	53.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Taylor Hu
Supervised by:	Li Huan



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Scan code to check authenticity



B.1 DTS Bandwidth

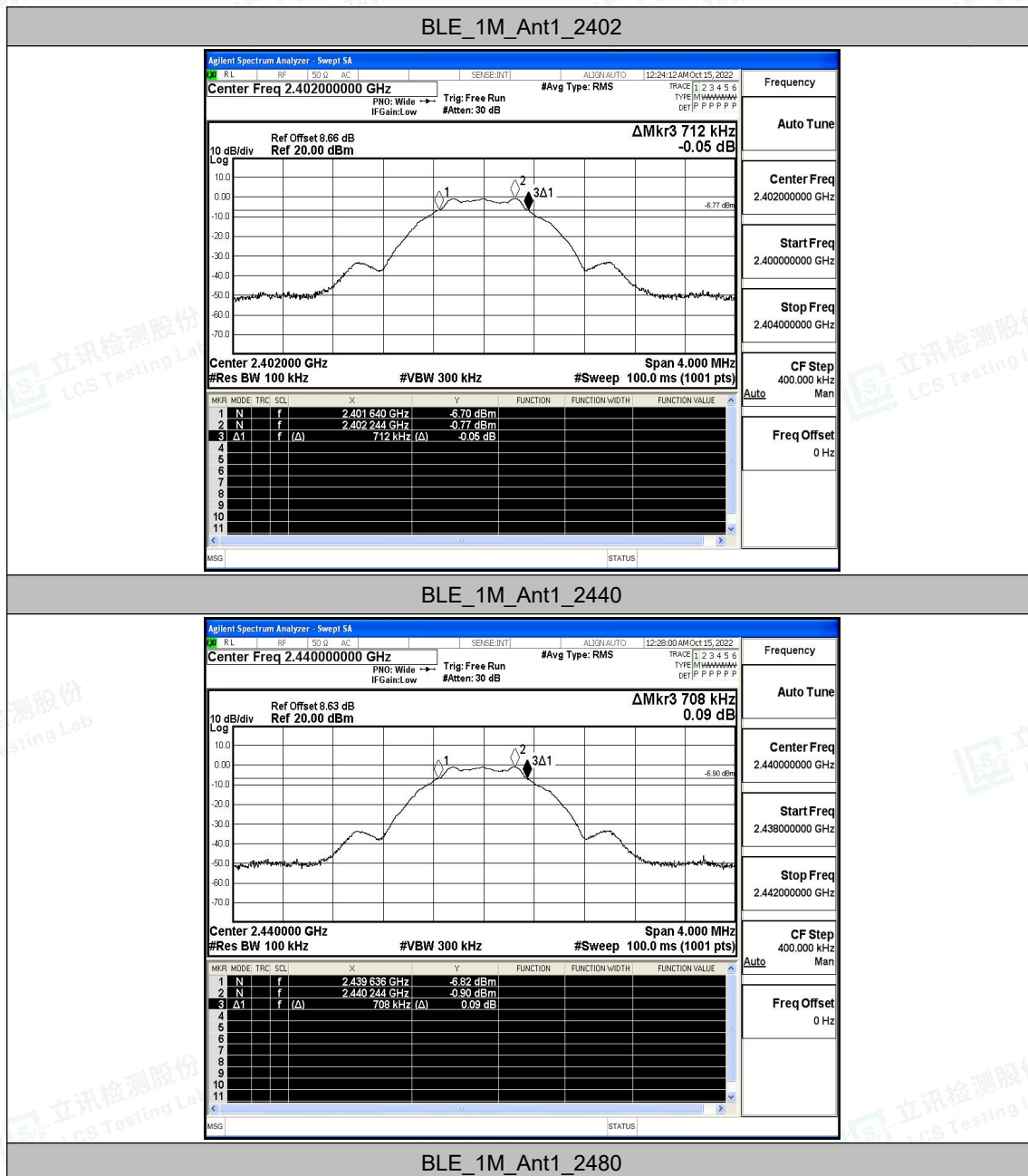
Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.712	2401.640	2402.352	0.5	PASS
		2440	0.708	2439.636	2440.344	0.5	PASS
		2480	0.712	2479.636	2480.348	0.5	PASS





Test Graphs

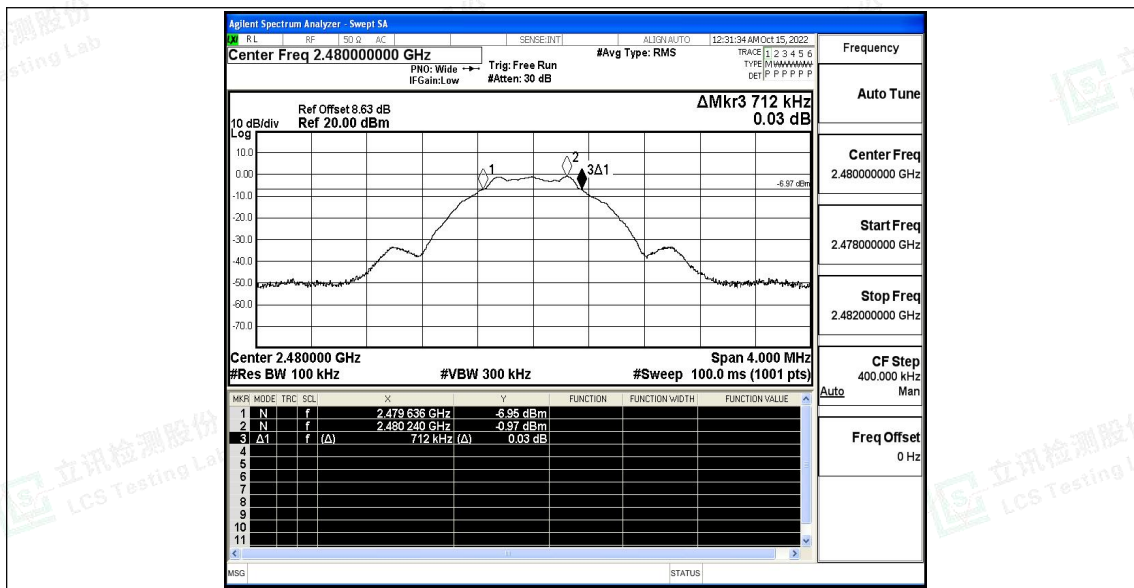


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B.2 Occupied Channel Bandwidth

Test Result

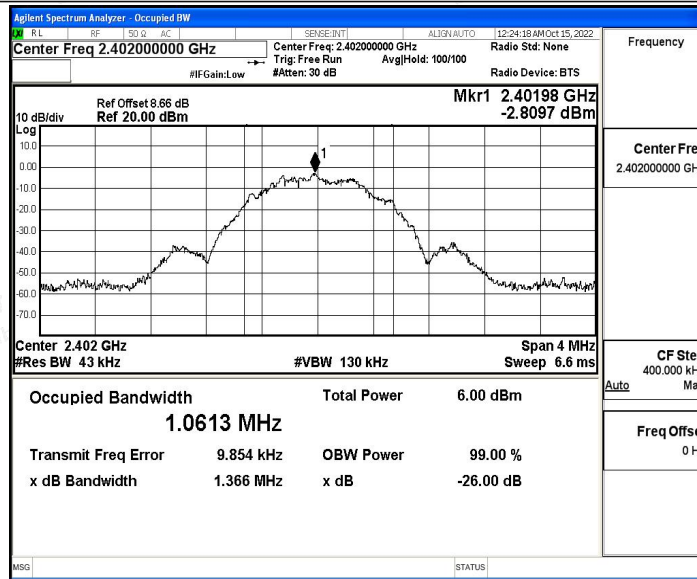
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0613	2401.4792	2402.5405	---	---
		2440	1.0564	2439.4798	2440.5362	---	---
		2480	1.0577	2479.4766	2480.5343	---	---



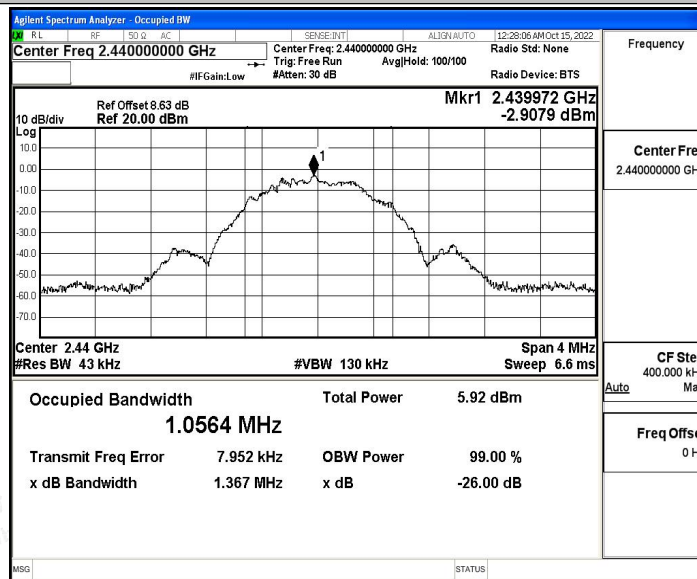


Test Graphs

BLE_1M_Ant1_2402

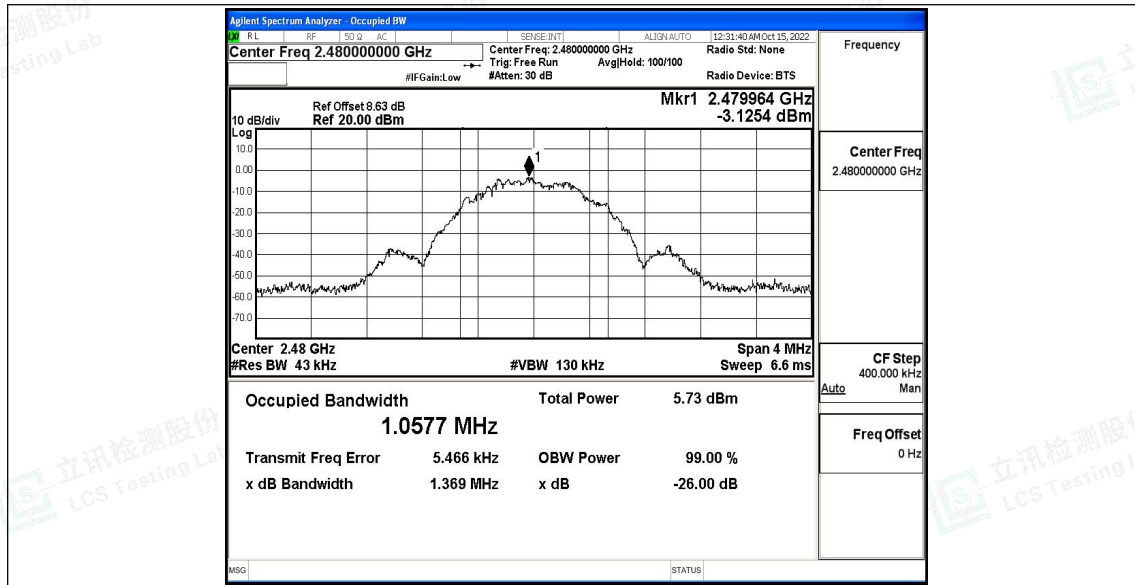


BLE_1M_Ant1_2440



BLE_1M_Ant1_2480







B.3 Maximum conducted output power

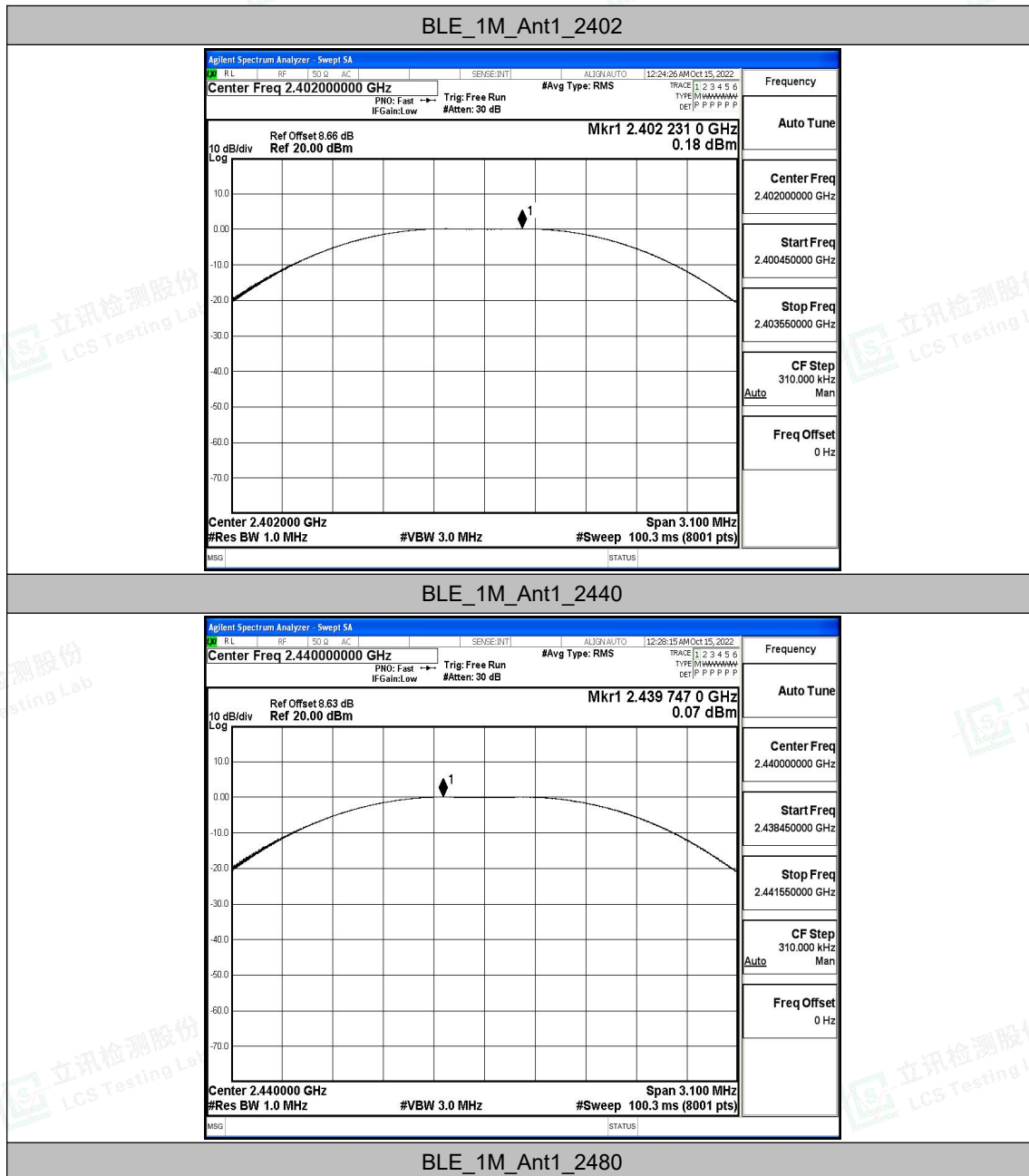
Test Result

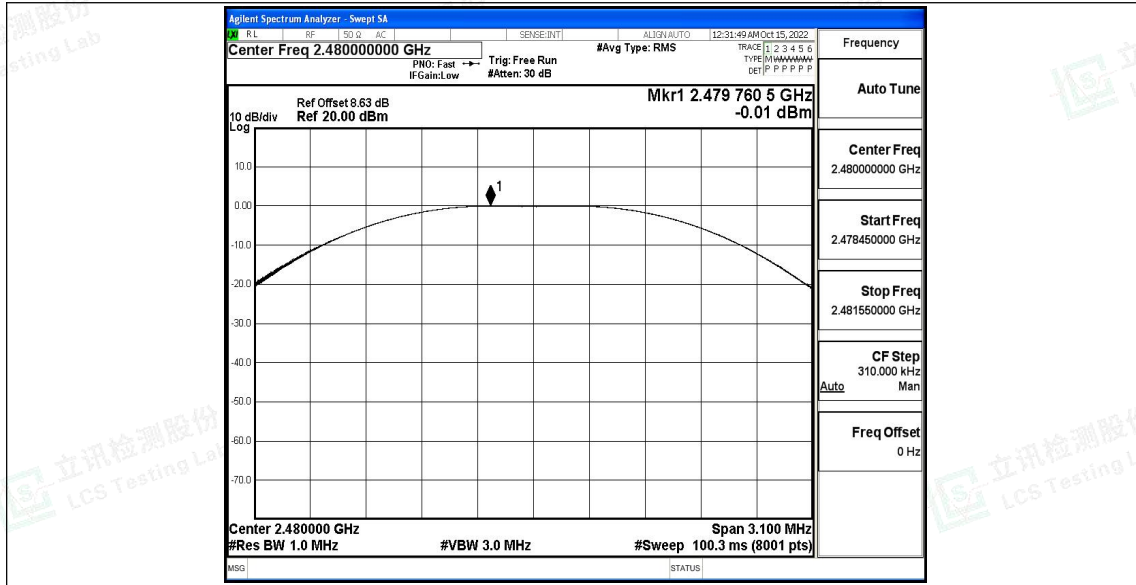
TestMode	Antenna	Channel	Result [dBm]	Limit [dBm]	Antenna Gain (dBi)	EIRP [dBm]	EIRP Limit [dBm]	Verdict
BLE_1M	Ant1	2402	0.18	≤30	3.64	3.82	≤36	PASS
		2440	0.07	≤30	3.64	3.71	≤36	PASS
		2480	-0.01	≤30	3.64	3.63	≤36	PASS





Test Graphs







B.4 Maximum power spectral density

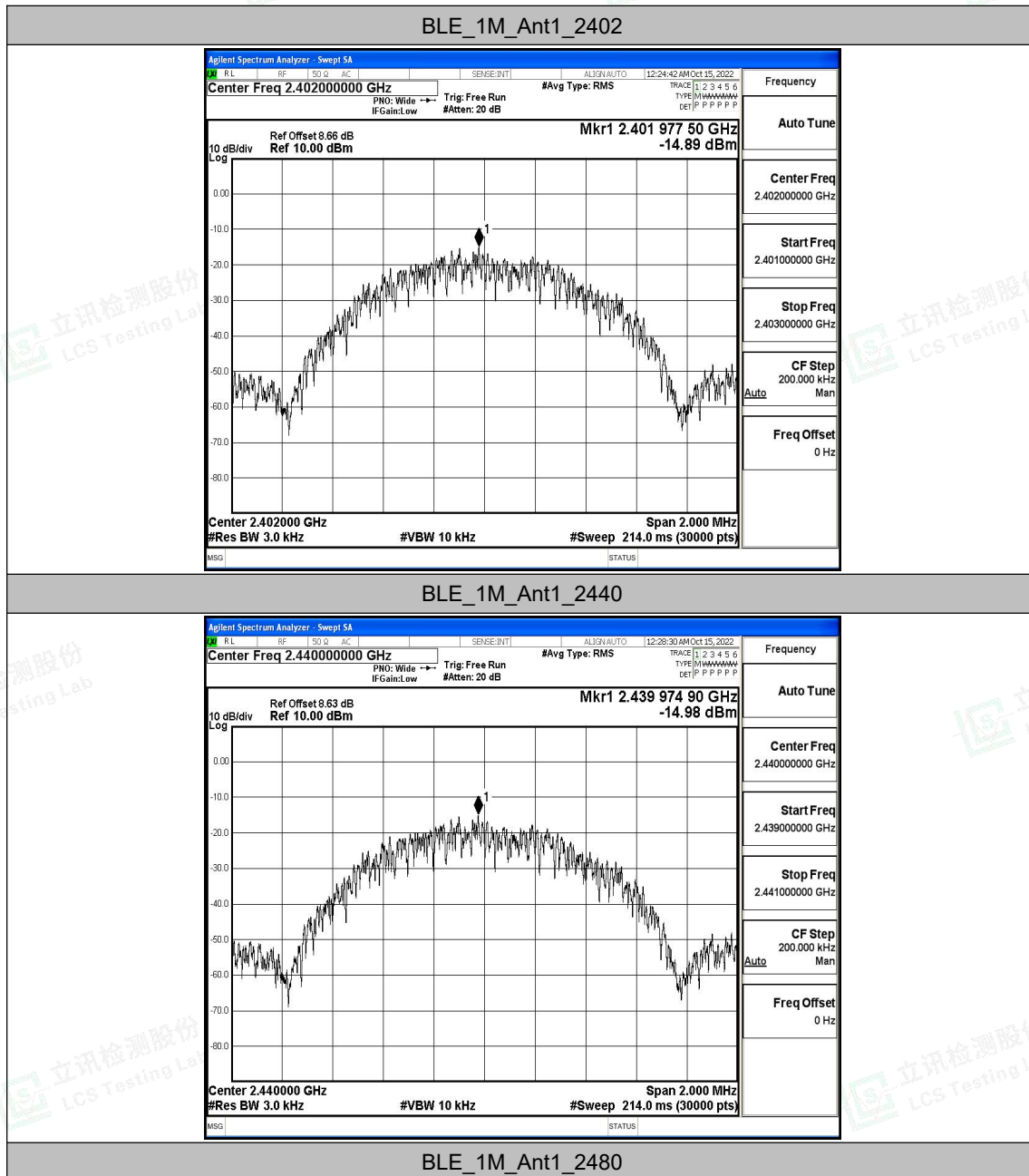
Test Result

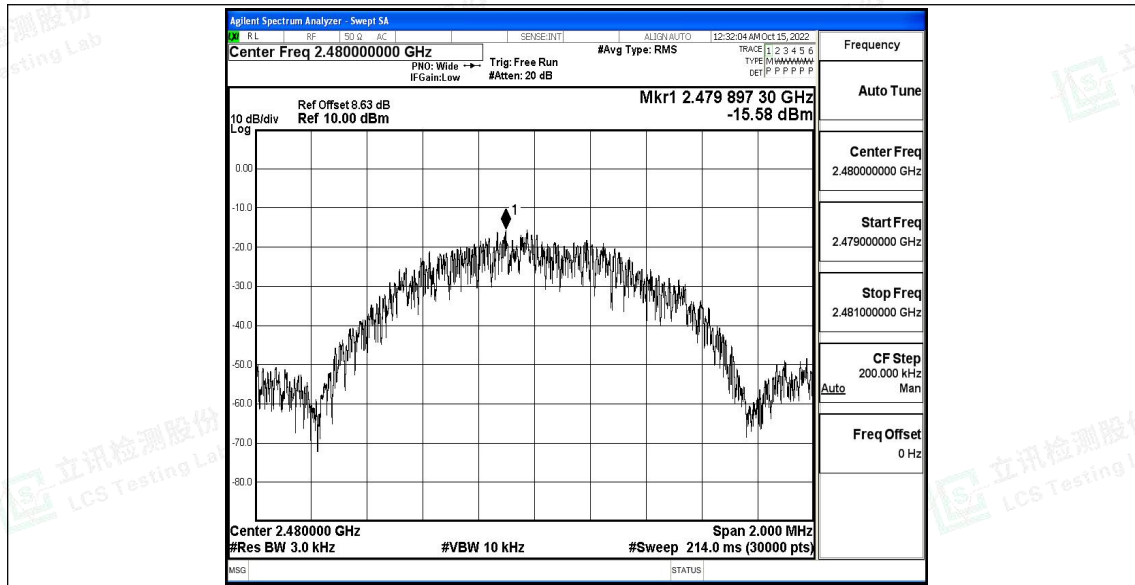
TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-14.89	≤8.00	PASS
		2440	-14.98	≤8.00	PASS
		2480	-15.58	≤8.00	PASS





Test Graphs







B.5 Band edge measurements

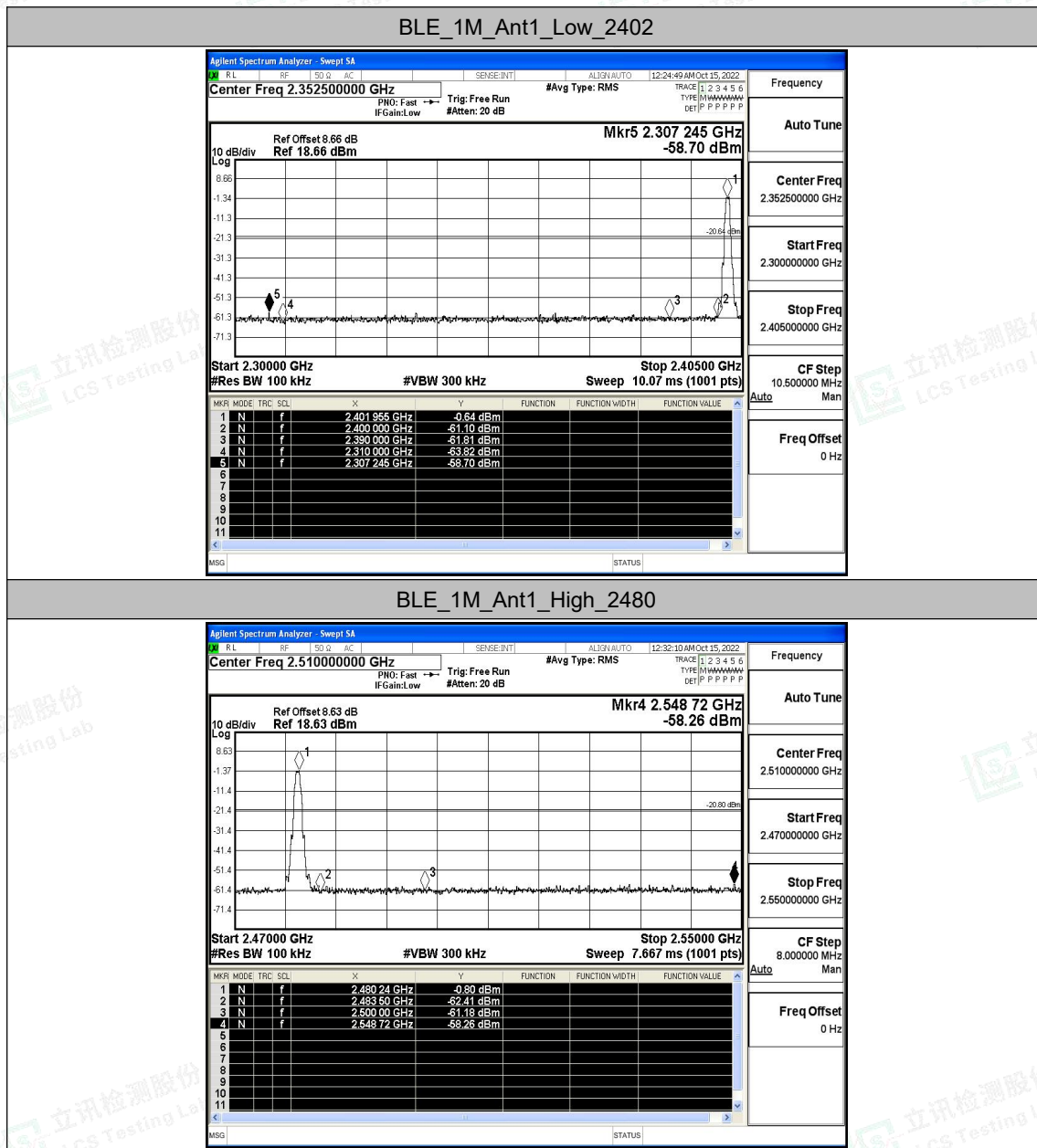
Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-0.64	-58.7	≤-20.64	PASS
		High	2480	-0.80	-58.26	≤-20.8	PASS





Test Graphs





B.6 Conducted Spurious Emission

Test Result

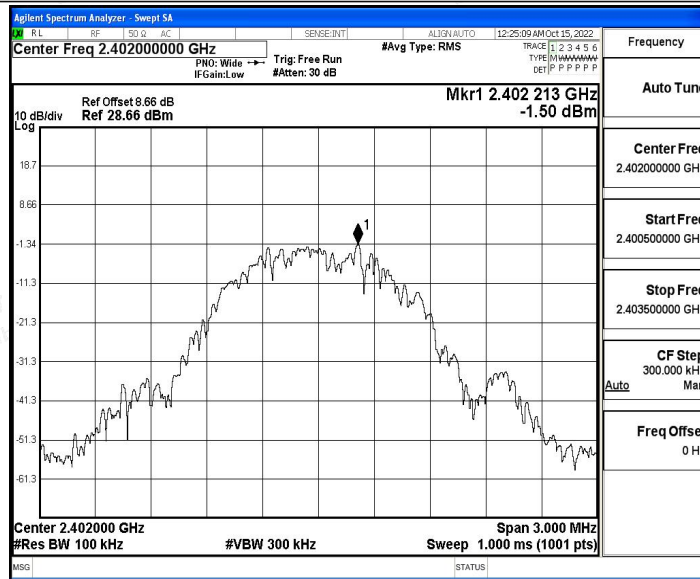
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-1.50	-1.50	---	PASS
			30~1000	-1.50	-59.18	≤-21.5	PASS
			1000~26500	-1.50	-45.34	≤-21.5	PASS
		2440	Reference	-0.91	-0.91	---	PASS
			30~1000	-0.91	-59.27	≤-20.91	PASS
			1000~26500	-0.91	-46.16	≤-20.91	PASS
		2480	Reference	-2.33	-2.33	---	PASS
			30~1000	-2.33	-60.91	≤-22.33	PASS
			1000~26500	-2.33	-46.26	≤-22.33	PASS



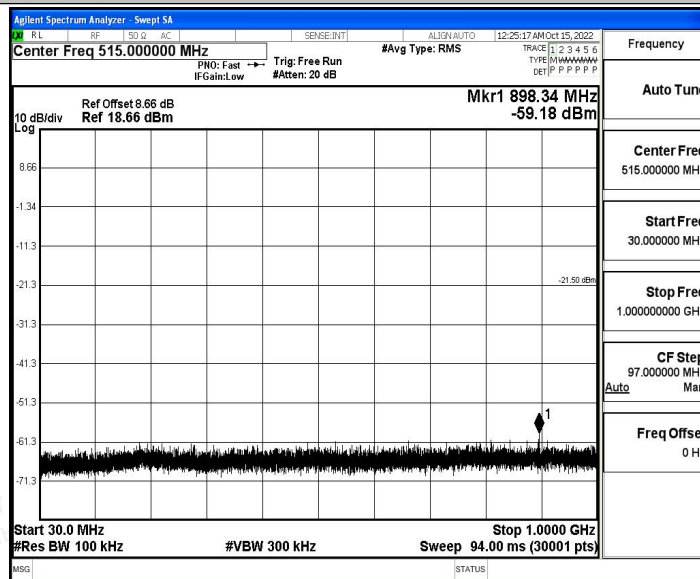


Test Graphs

BLE_1M_Ant1_2402_0~Reference

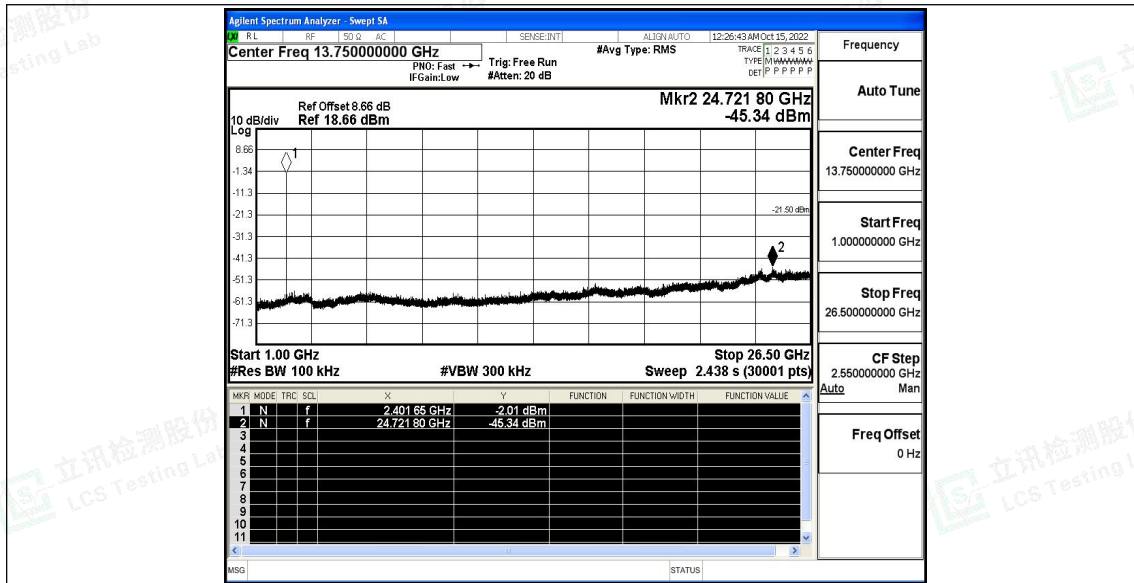


BLE_1M_Ant1_2402_30~1000

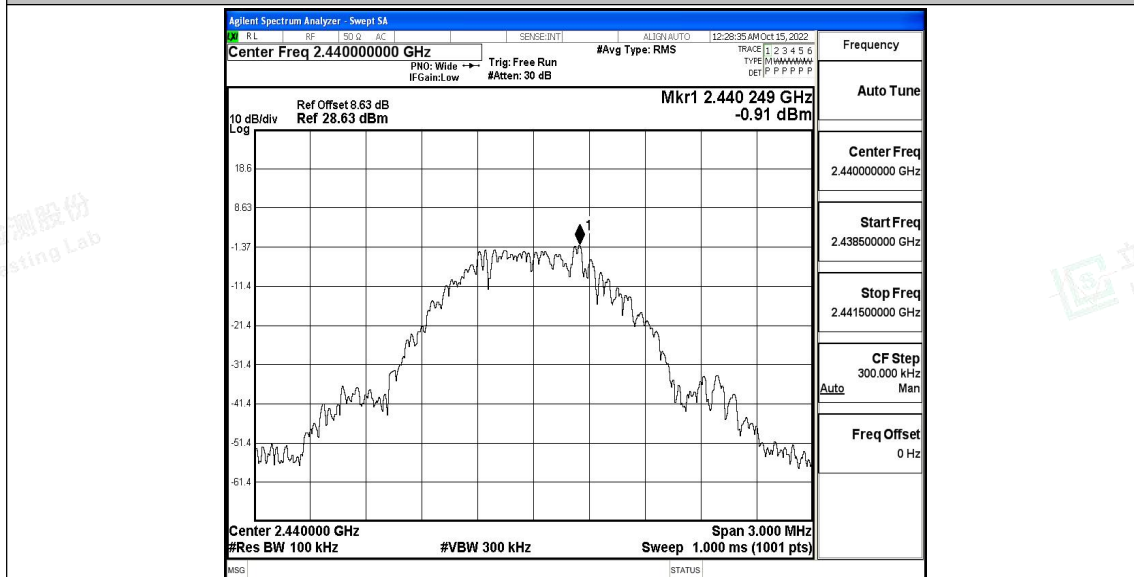


BLE_1M_Ant1_2402_1000~26500



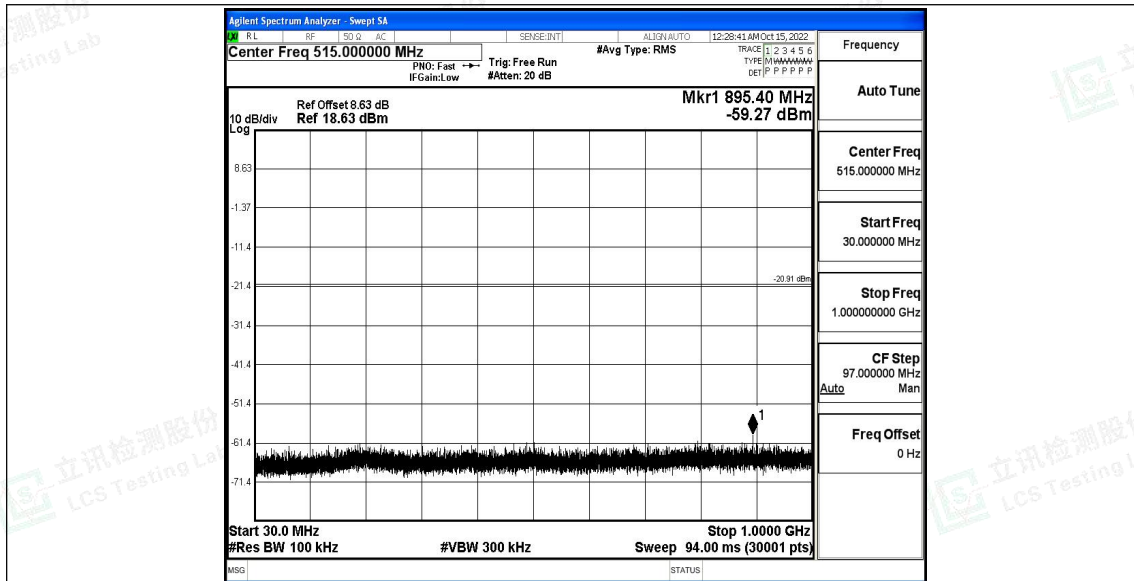


BLE_1M_Ant1_2440_0~Reference

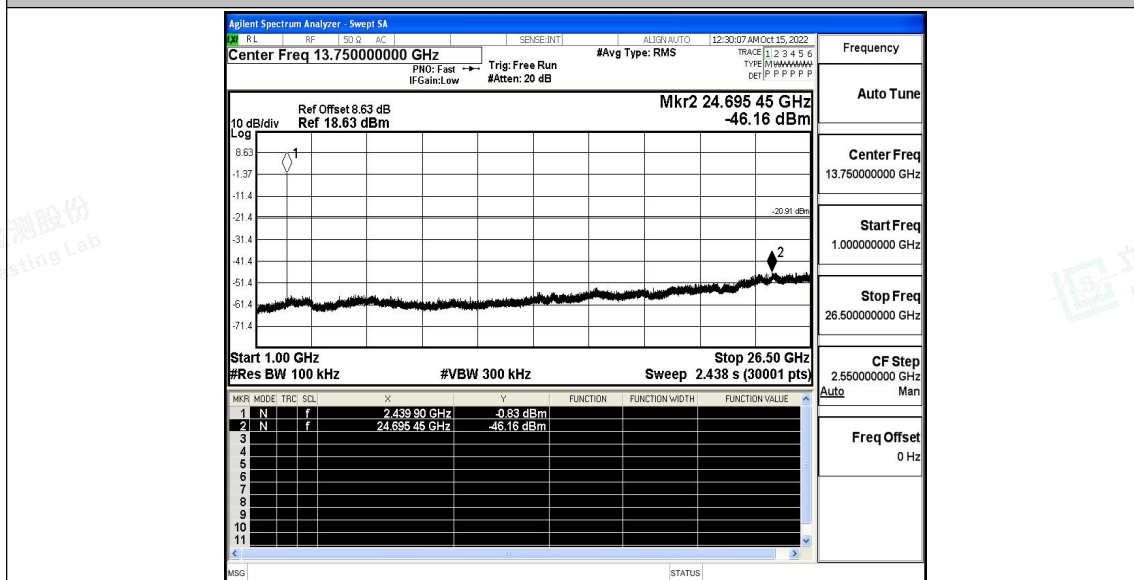


BLE_1M_Ant1_2440_30~1000



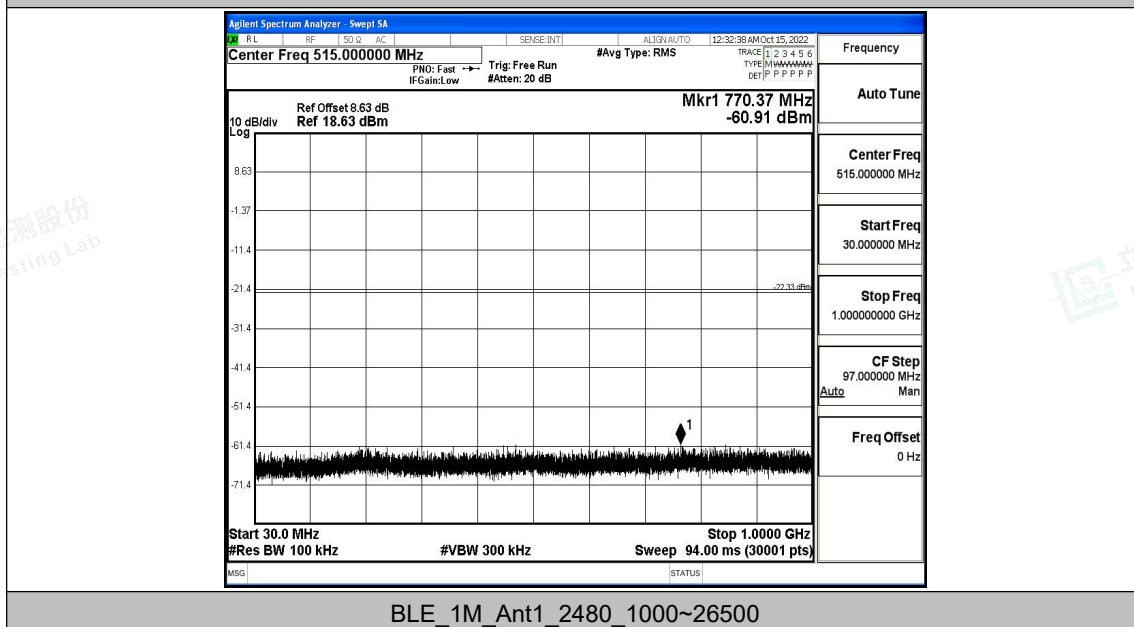
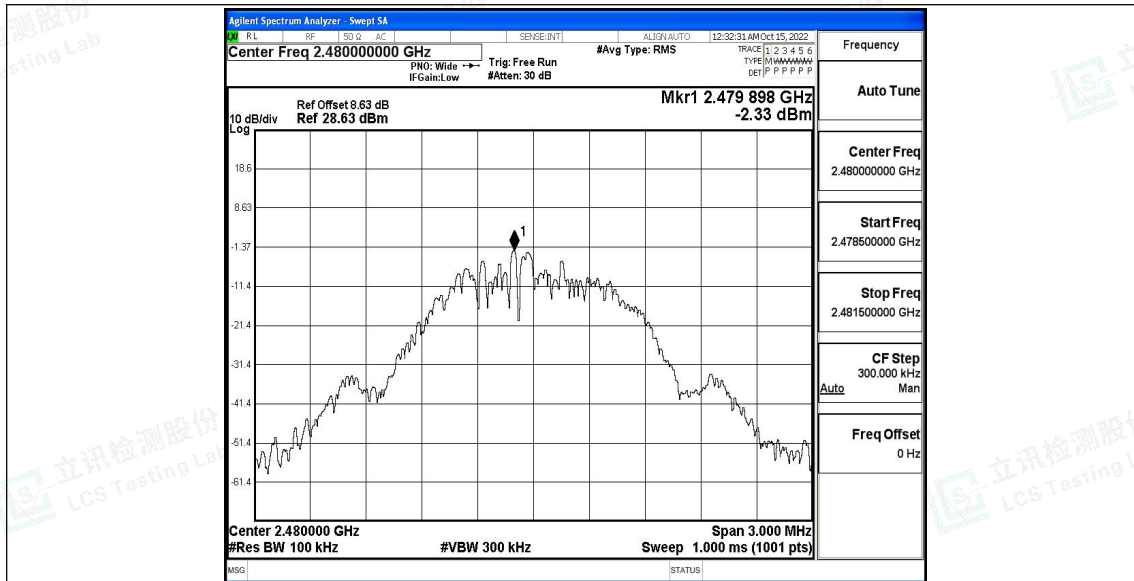


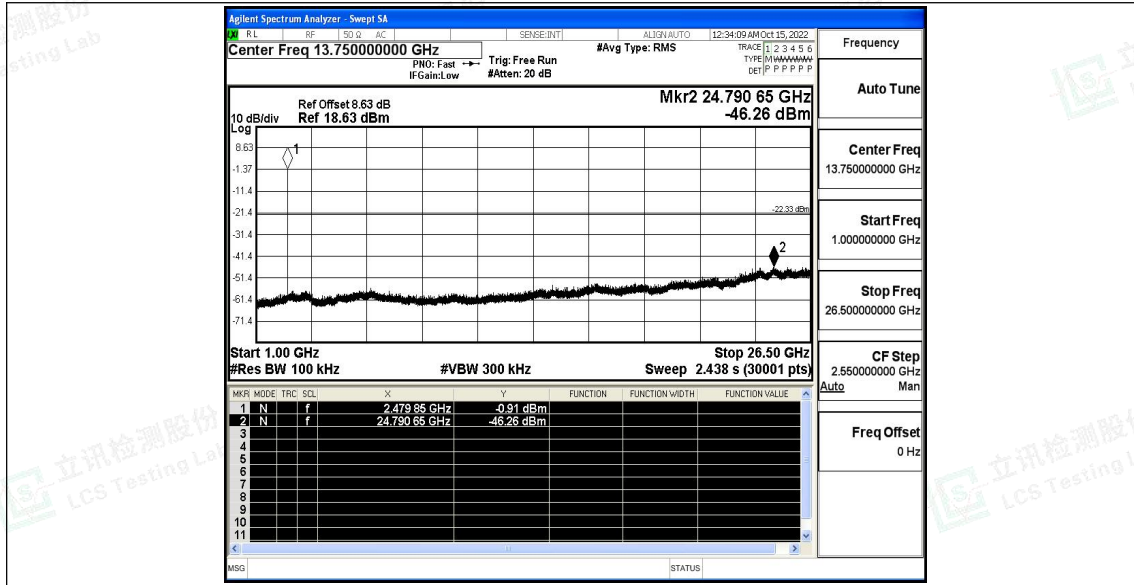
BLE_1M_Ant1_2440_1000~26500



BLE_1M_Ant1_2480_0~Reference









B.7 Duty Cycle

Test Result

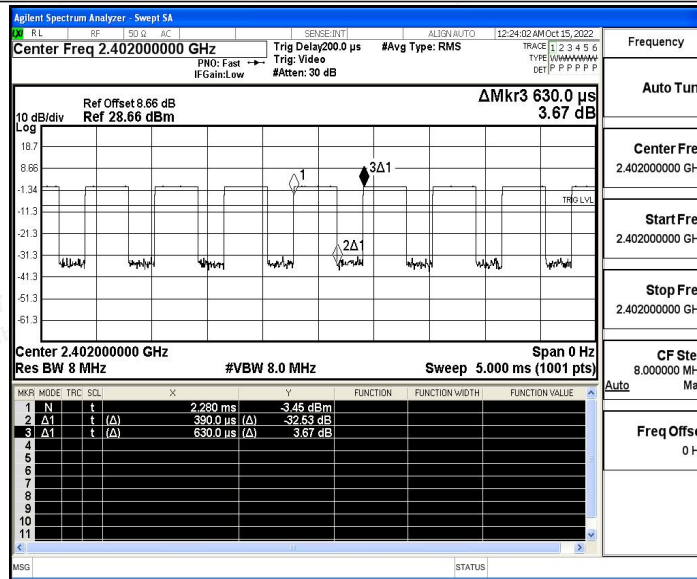
TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	1/T	Limit	Verdict
BLE_1M	Ant1	2402	0.39	0.63	0.6190	61.90	2.08	2.56	---	---
		2440	0.39	0.63	0.6190	61.90	2.08	2.56	---	---
		2480	0.38	0.62	0.6129	61.29	2.13	2.63	---	---



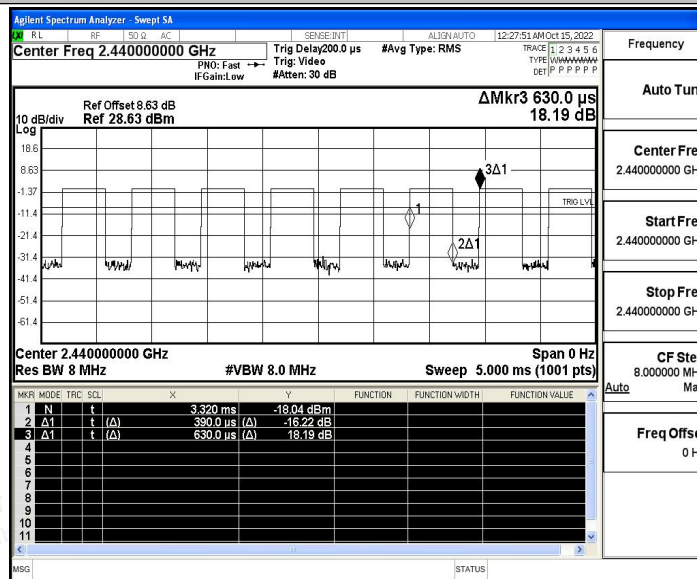


Test Graphs

BLE_1M_Ant1_2402

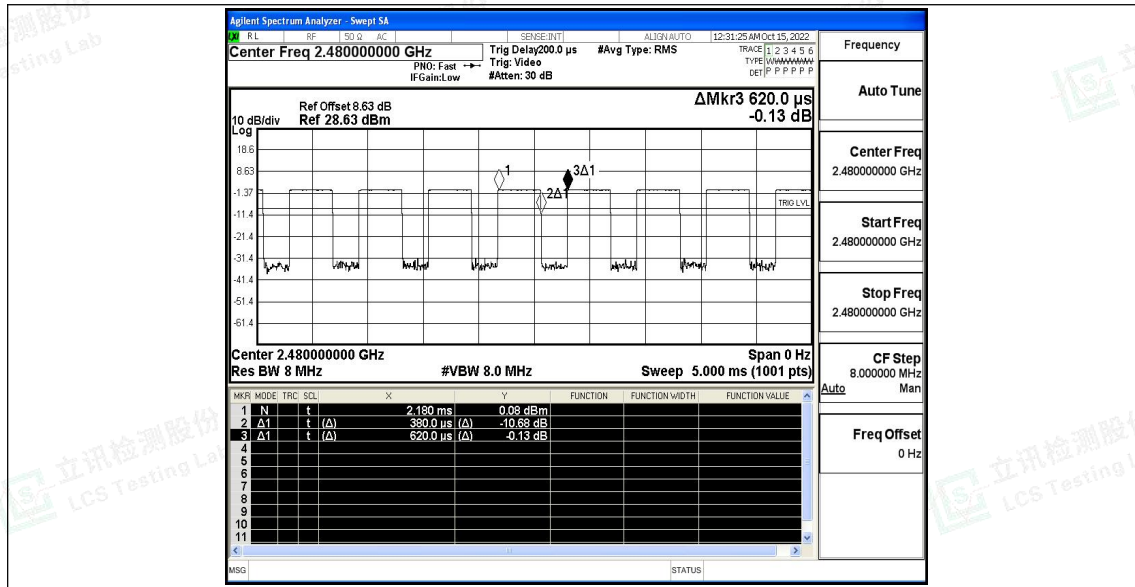


BLE_1M_Ant1_2440



BLE_1M_Ant1_2480







B.8 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	-57.52	≤-41.20	37.68	≤54	PASS
				AV	2389.985	-56.81	≤-41.20	38.39	≤54	PASS
				AV	2390.000	-56.81	≤-41.20	38.39	≤54	PASS
				Peak	2310.000	-51.84	≤-21.20	43.36	≤74	PASS
				Peak	2365.520	-48.14	≤-21.20	47.06	≤74	PASS
				Peak	2390.000	-51.61	≤-21.20	43.59	≤74	PASS
		High	2480	AV	2483.500	-53.66	≤-41.20	41.54	≤54	PASS
				AV	2483.520	-53.66	≤-41.20	41.54	≤54	PASS
				AV	2500.000	-56.55	≤-41.20	38.65	≤54	PASS
				Peak	2483.500	-49.45	≤-21.20	45.75	≤74	PASS
				Peak	2489.040	-47.51	≤-21.20	47.69	≤74	PASS
				Peak	2500.000	-49.88	≤-21.20	45.32	≤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



