



Appendix A

RF Test Data for BT LE (Conducted Measurement)

Product Name: Enterprise tracker

Test Model: ETBL1S

Environmental Conditions

Temperature:	23.5℃
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Jack Cheng
Supervised by:	Ling Zhu



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A.1 DTS Bandwidth

Test Result

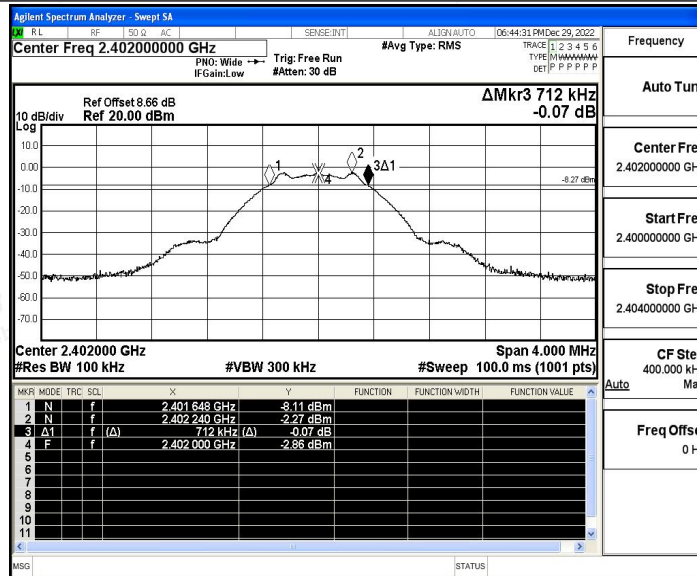
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.712	2401.648	2402.360	0.5	PASS
		2440	0.708	2439.644	2440.352	0.5	PASS
		2480	0.724	2479.640	2480.364	0.5	PASS



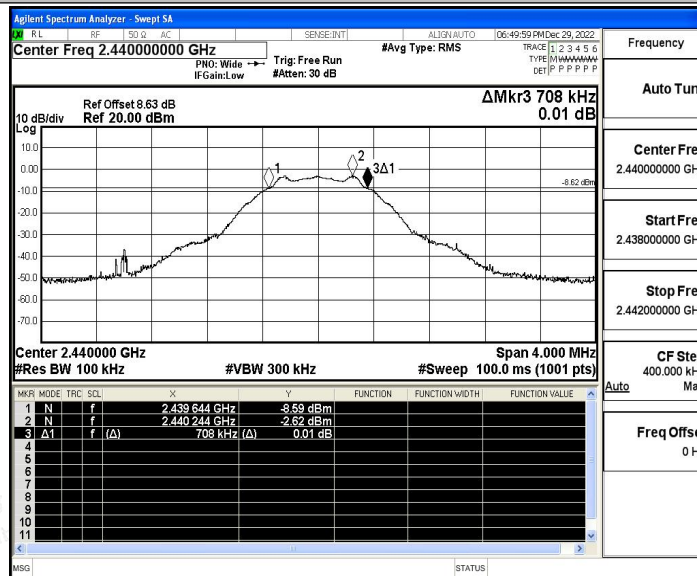


Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

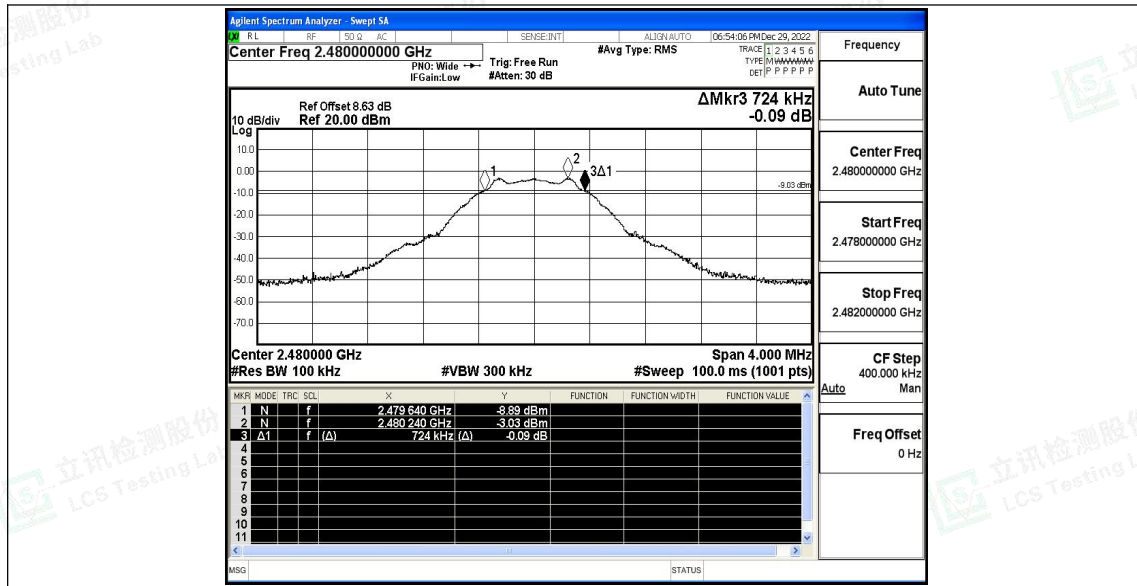


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A.2 Maximum conducted output power

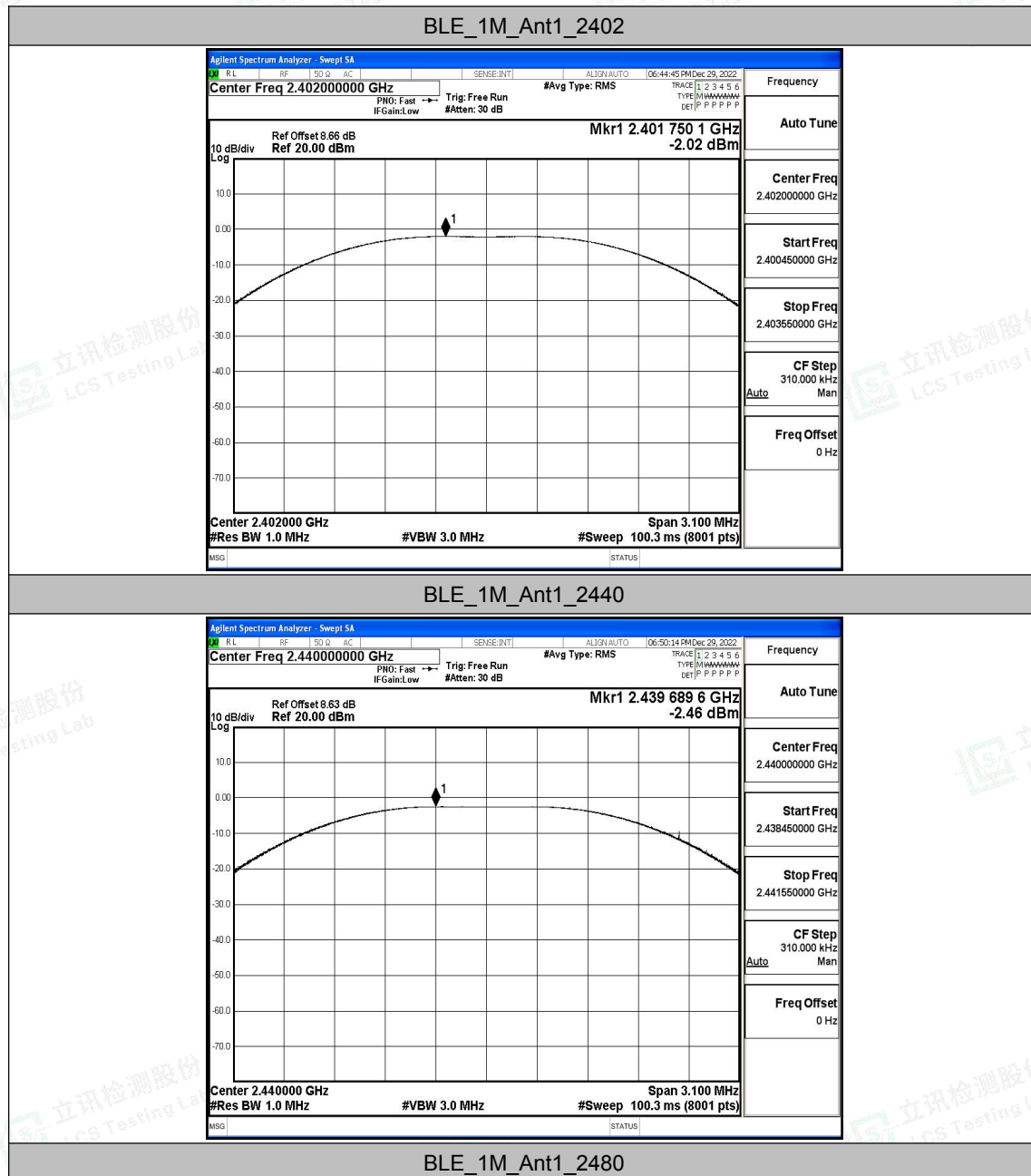
Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-2.02	≤30	PASS
		2440	-2.46	≤30	PASS
		2480	-2.65	≤30	PASS





Test Graphs

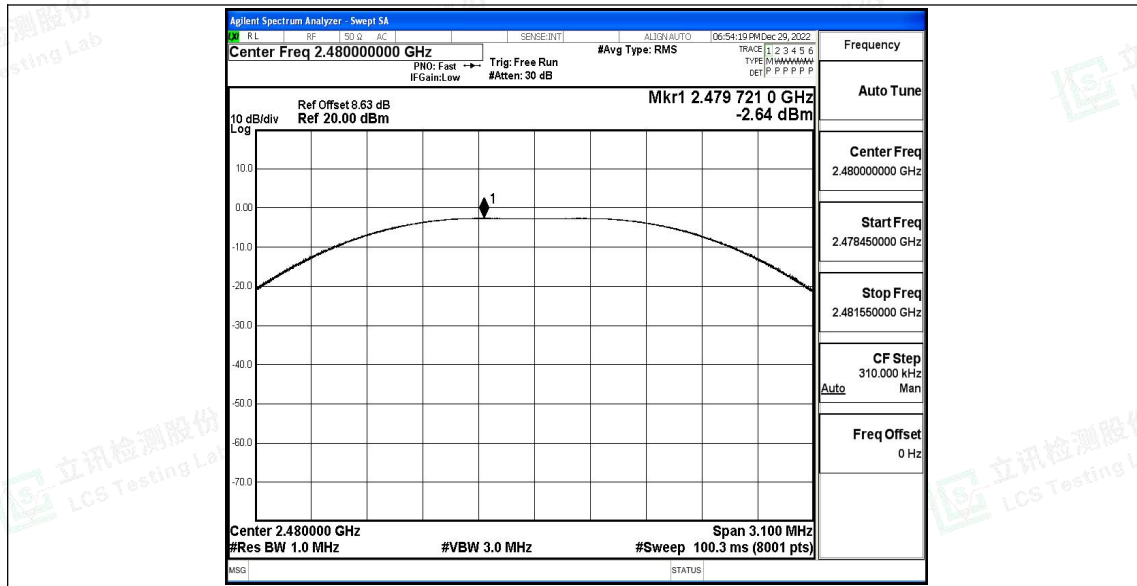


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A.3 Maximum power spectral density

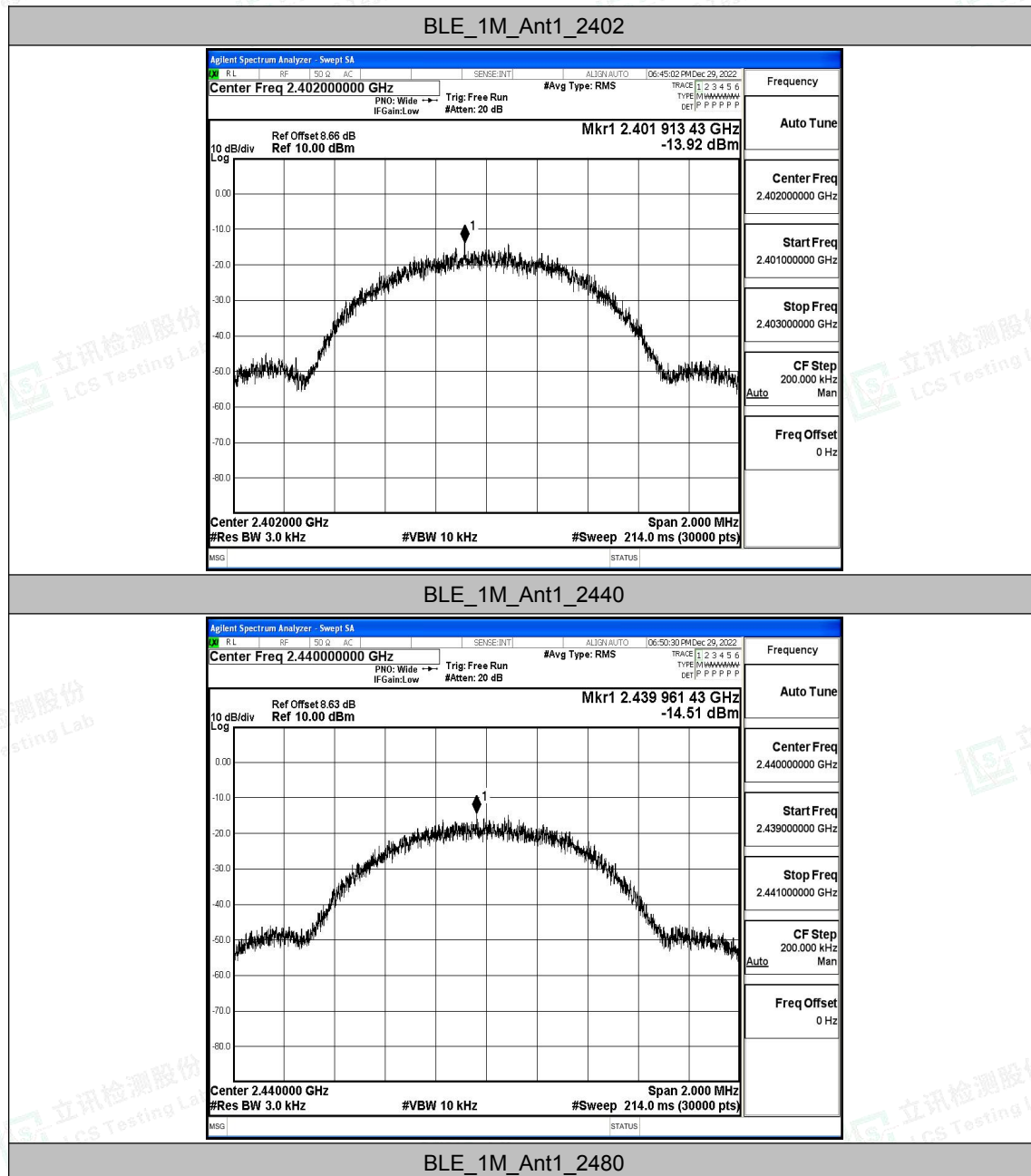
Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-13.92	≤8.00	PASS
		2440	-14.51	≤8.00	PASS
		2480	-15.7	≤8.00	PASS





Test Graphs

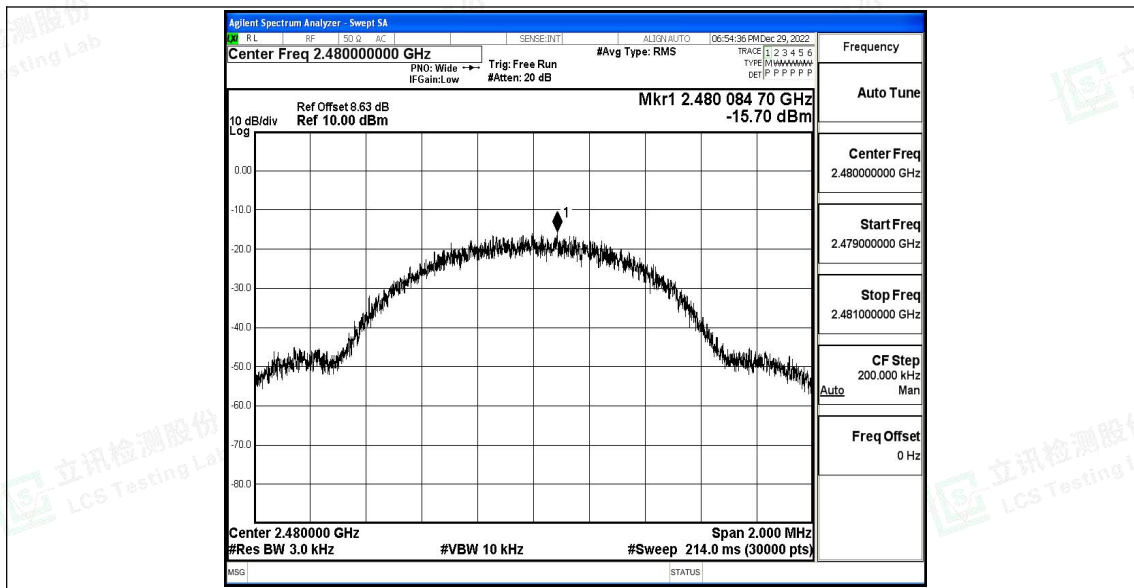


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A.4 Band edge measurements

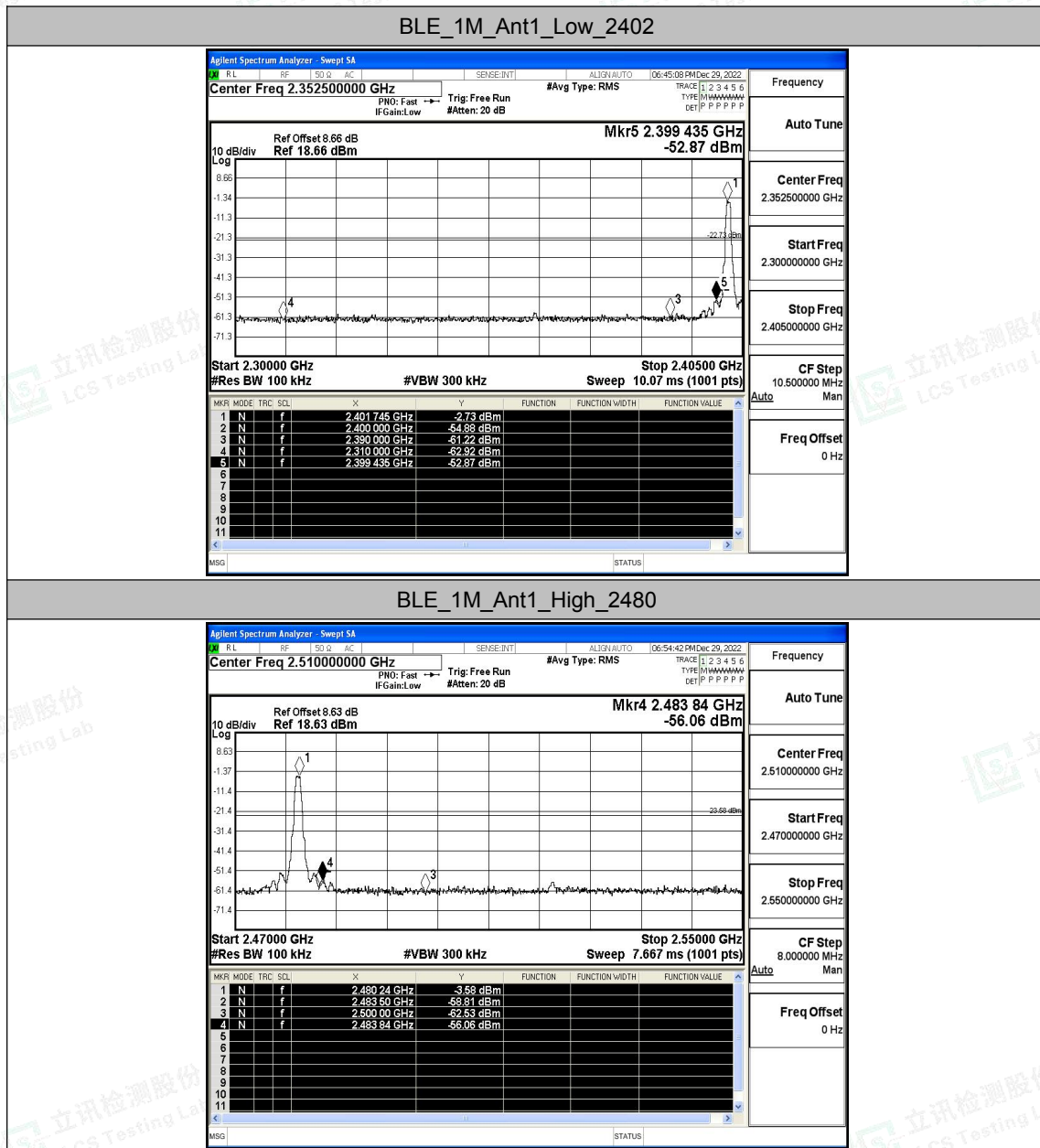
Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-2.73	-52.87	≤ -22.73	PASS
		High	2480	-3.58	-56.06	≤ -23.58	PASS





Test Graphs



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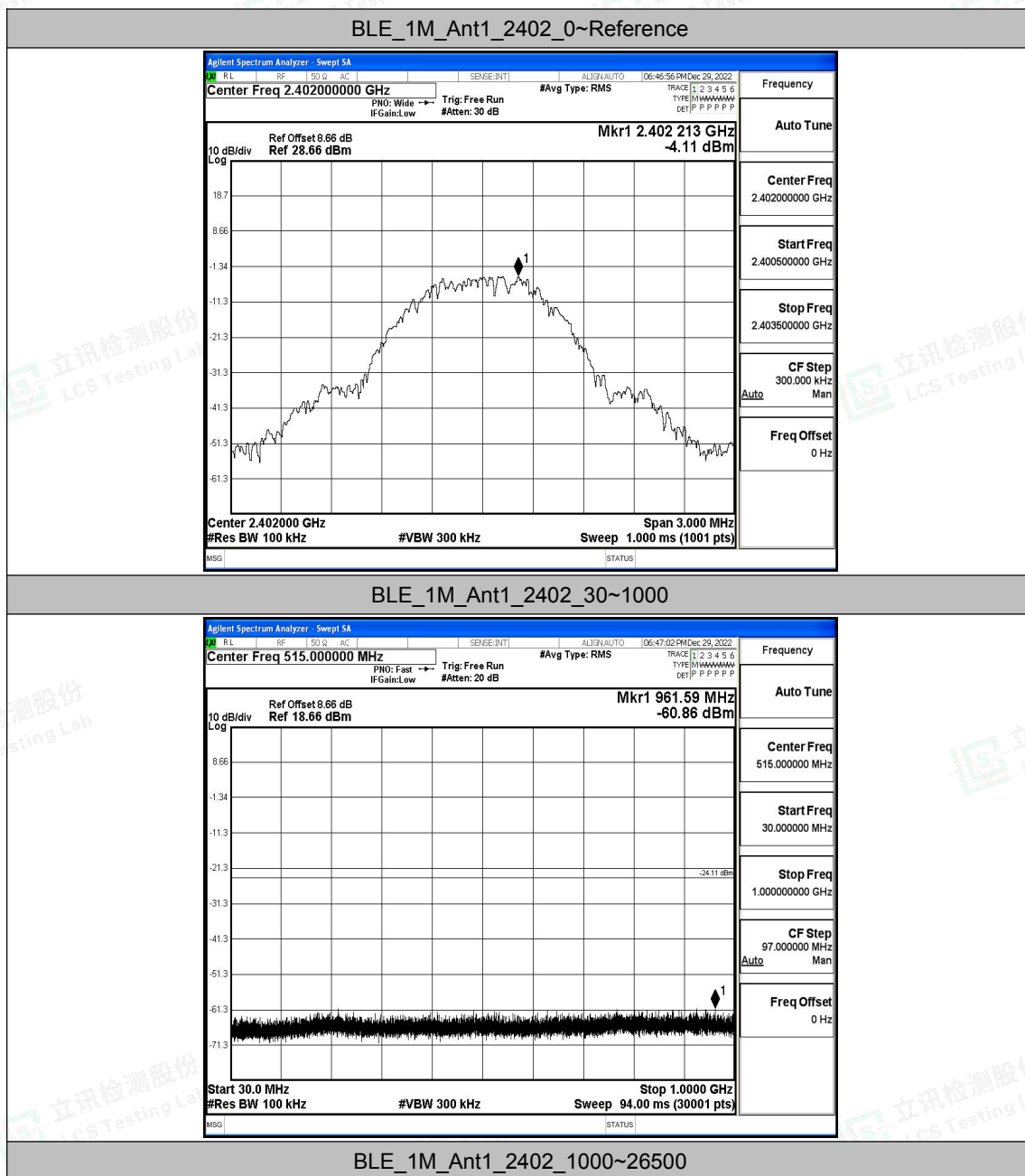
A.5 Conducted Spurious Emission

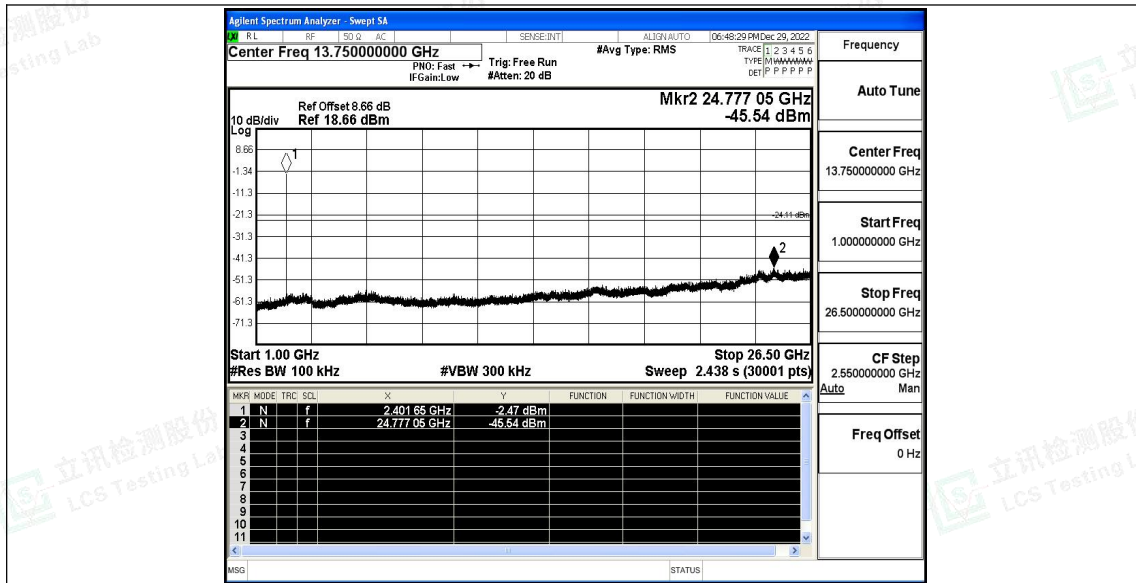
Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-4.11	-4.11	---	PASS
			30~1000	-4.11	-60.86	≤-24.11	PASS
			1000~26500	-4.11	-45.54	≤-24.11	PASS
		2440	Reference	-3.94	-3.94	---	PASS
			30~1000	-3.94	-61.24	≤-23.94	PASS
			1000~26500	-3.94	-44.98	≤-23.94	PASS
		2480	Reference	-3.71	-3.71	---	PASS
			30~1000	-3.71	-60.46	≤-23.71	PASS
			1000~26500	-3.71	-45.65	≤-23.71	PASS

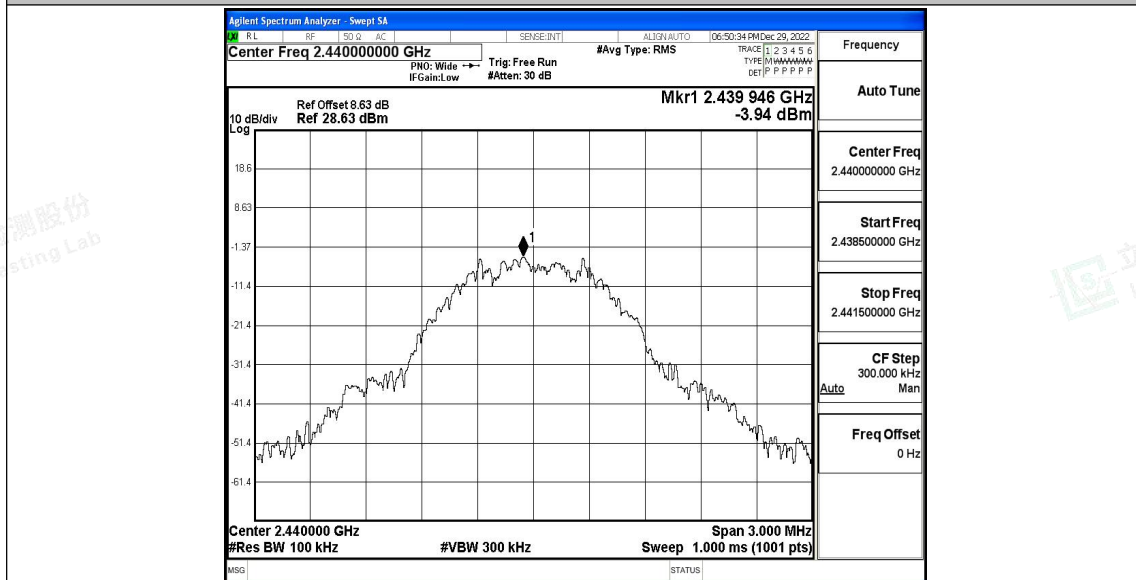


Test Graphs



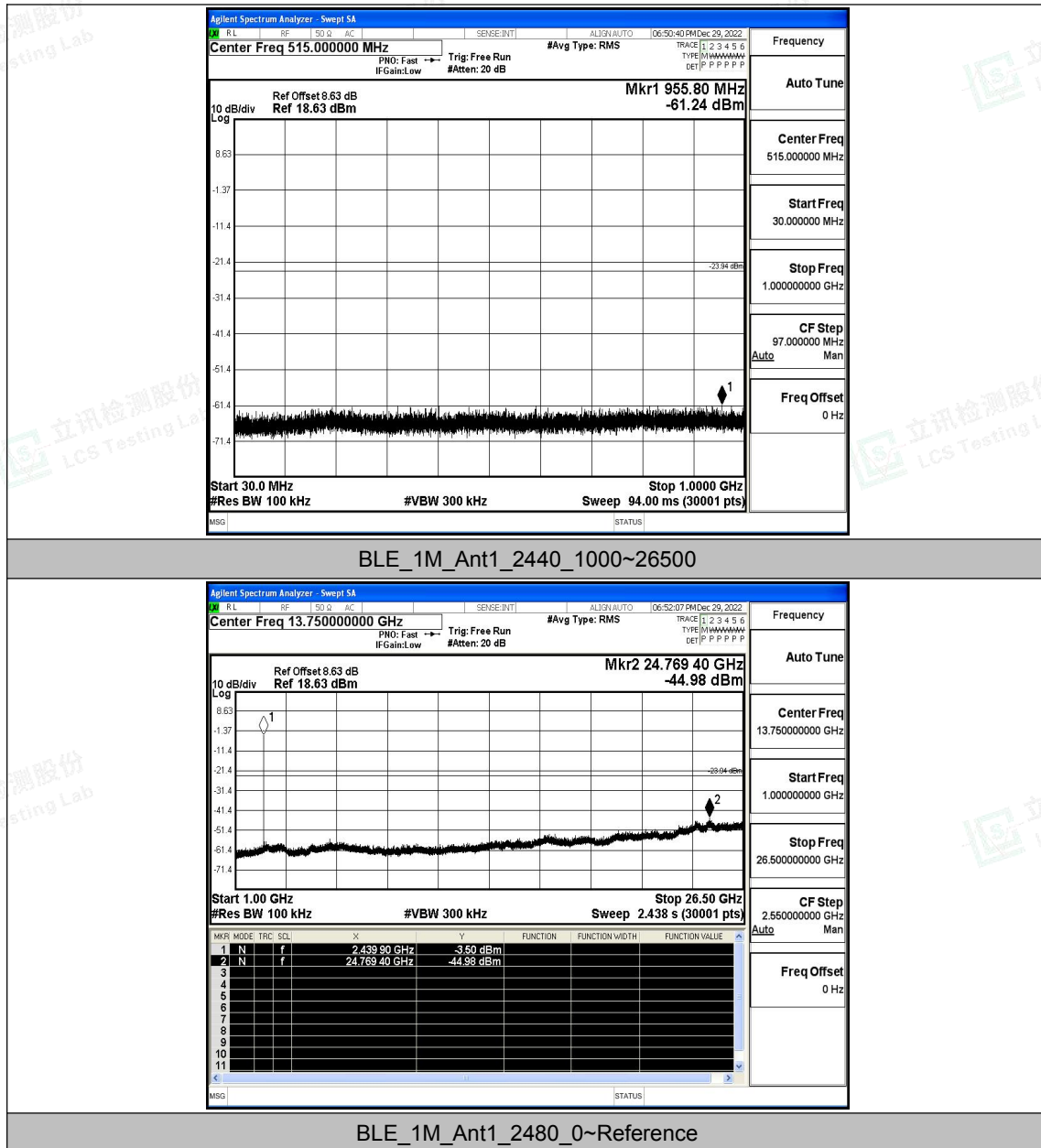


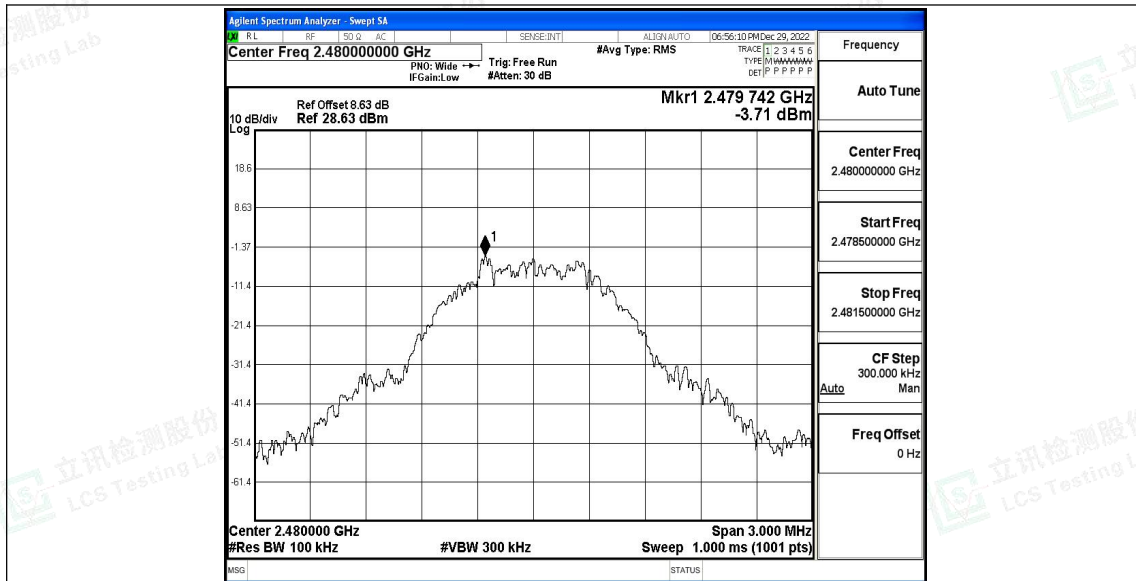
BLE_1M_Ant1_2440_0~Reference



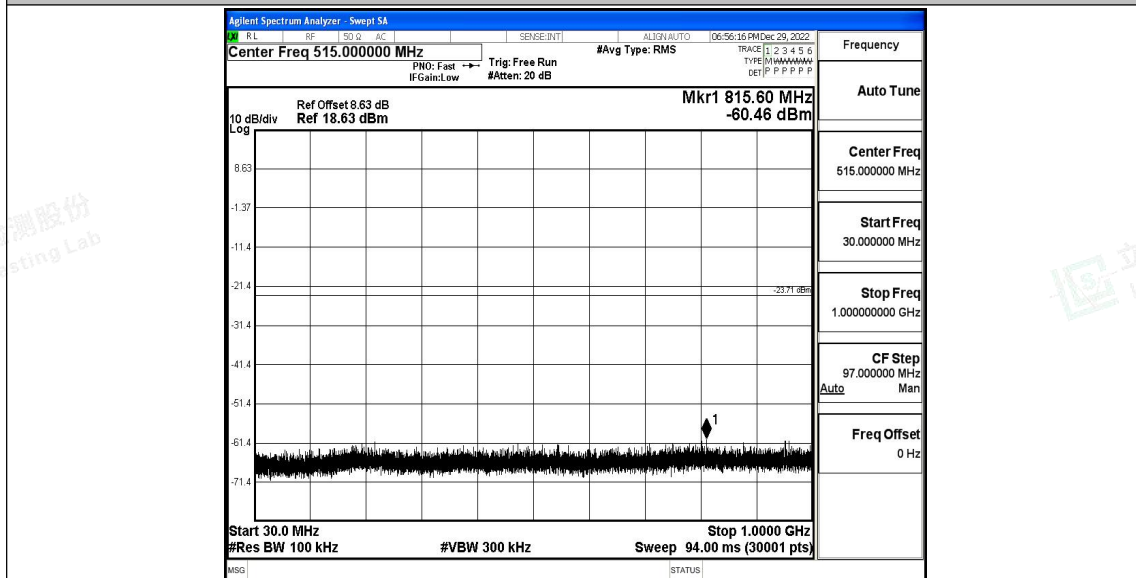
BLE_1M_Ant1_2440_30~1000





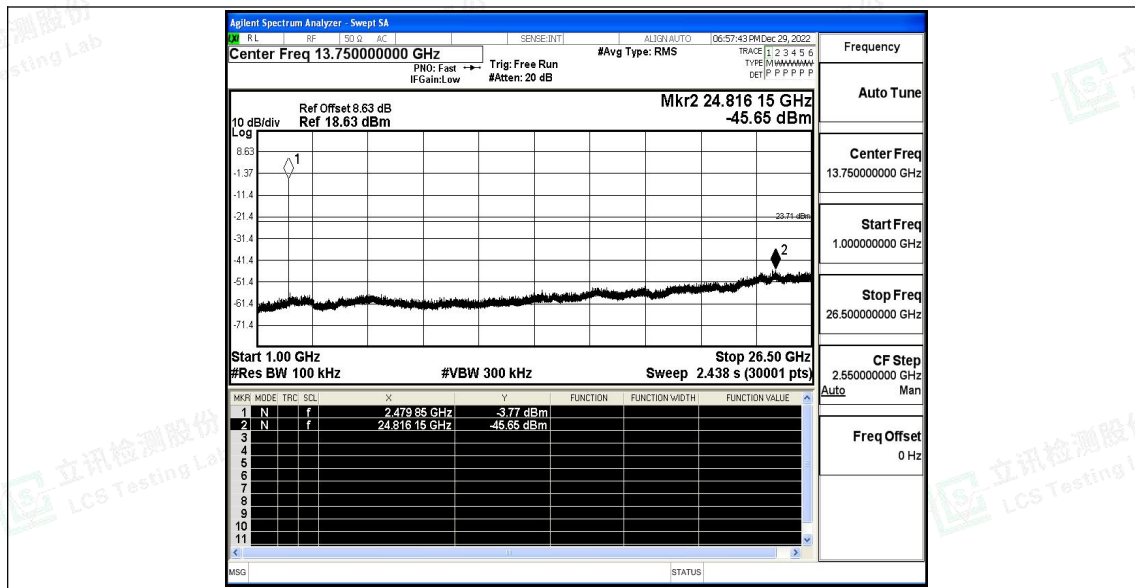


BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500







A.6 Duty Cycle

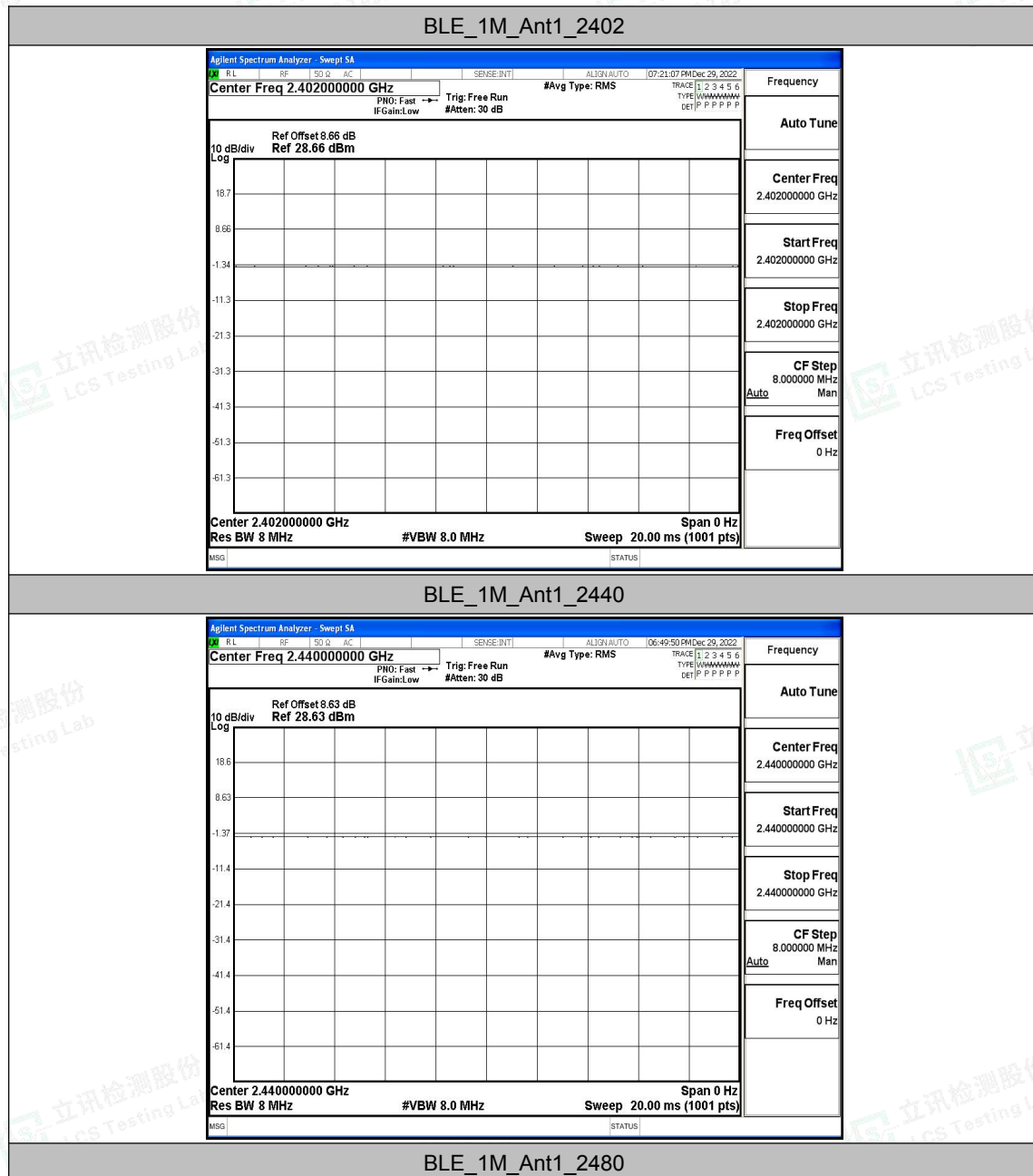
Test Result

TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	1/T	Limit	Verdict
BLE_1M	Ant1	2402	0.00	0.00	0.00	100	0.00	0.01	---	---
		2440	0.00	0.00	0.00	100	0.00	0.01	---	---
		2480	0.00	0.00	0.00	100	0.00	0.01	---	---





Test Graphs

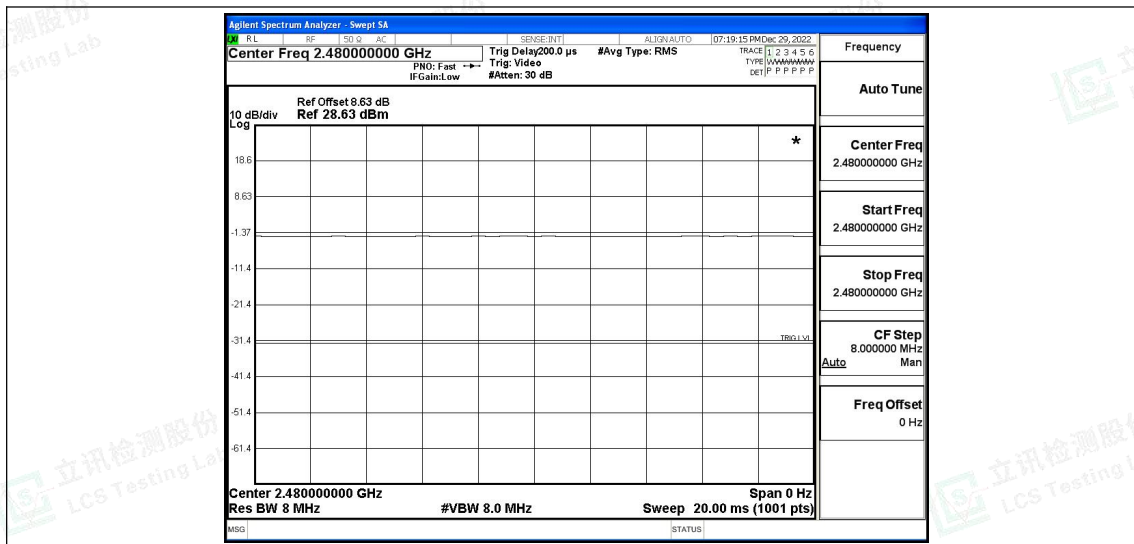


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A.7 Emissions in Restricted Bands

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	-58.56	≤-41.20	36.64	≤54	PASS
				AV	2362.055	-56.57	≤-41.20	38.63	≤54	PASS
				AV	2390.000	-58.01	≤-41.20	37.19	≤54	PASS
				Peak	2310.000	-53.34	≤-21.20	41.86	≤74	PASS
				Peak	2357.750	-47.91	≤-21.20	47.29	≤74	PASS
				Peak	2390.000	-53.97	≤-21.20	41.23	≤74	PASS
		High	2480	AV	2483.500	-52.2	≤-41.20	43.00	≤54	PASS
				AV	2483.520	-52.2	≤-41.20	43.00	≤54	PASS
				AV	2500.000	-57.53	≤-41.20	37.67	≤54	PASS
				Peak	2483.500	-46.74	≤-21.20	48.46	≤74	PASS
				Peak	2484.320	-45.98	≤-21.20	49.22	≤74	PASS
				Peak	2500.000	-52.26	≤-21.20	42.94	≤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.

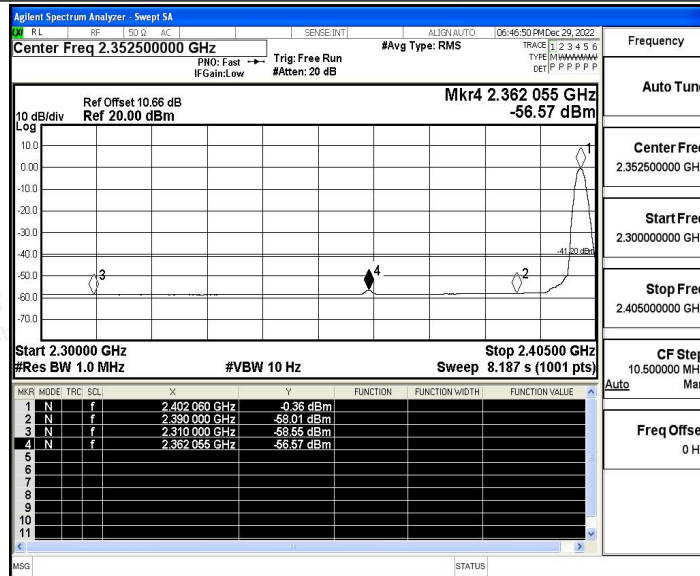


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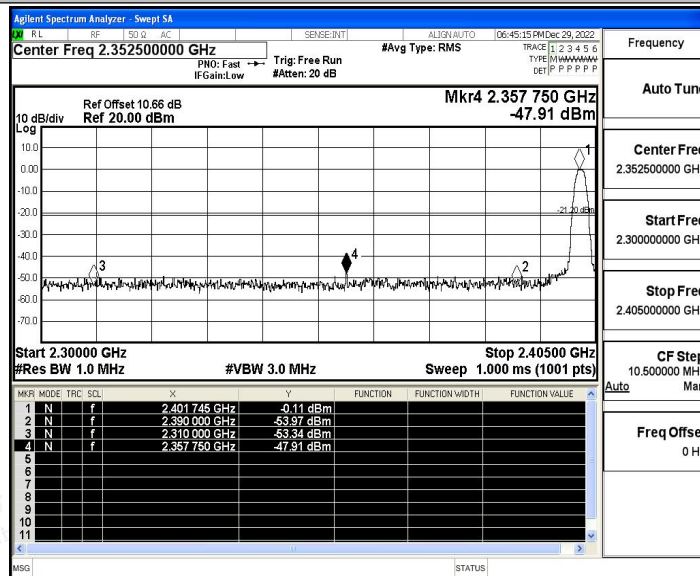


Test Graphs

BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



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