



Appendix B

RF Test Data for BLE (Conducted Measurement)

Product Name: Laptop computer

Test Model: DS133

Environmental Conditions

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





B.1 6dB Bandwidth

Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.664	2401.672	2402.336	0.5	PASS
		2440	0.664	2439.676	2440.340	0.5	PASS
		2480	0.660	2479.676	2480.336	0.5	PASS





Test Graphs

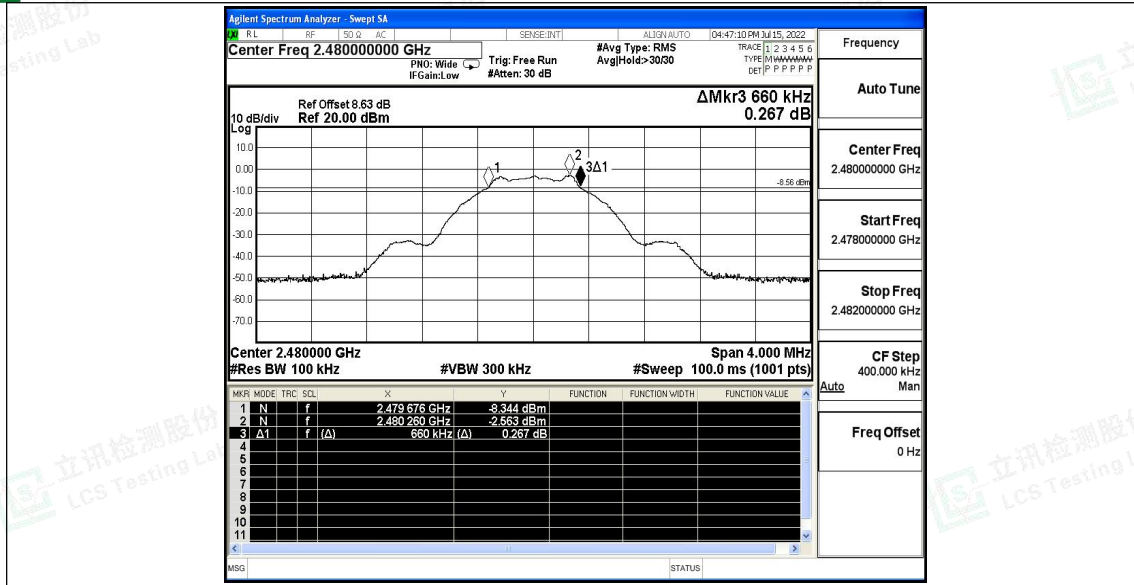


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B.2 Maximum conducted output power

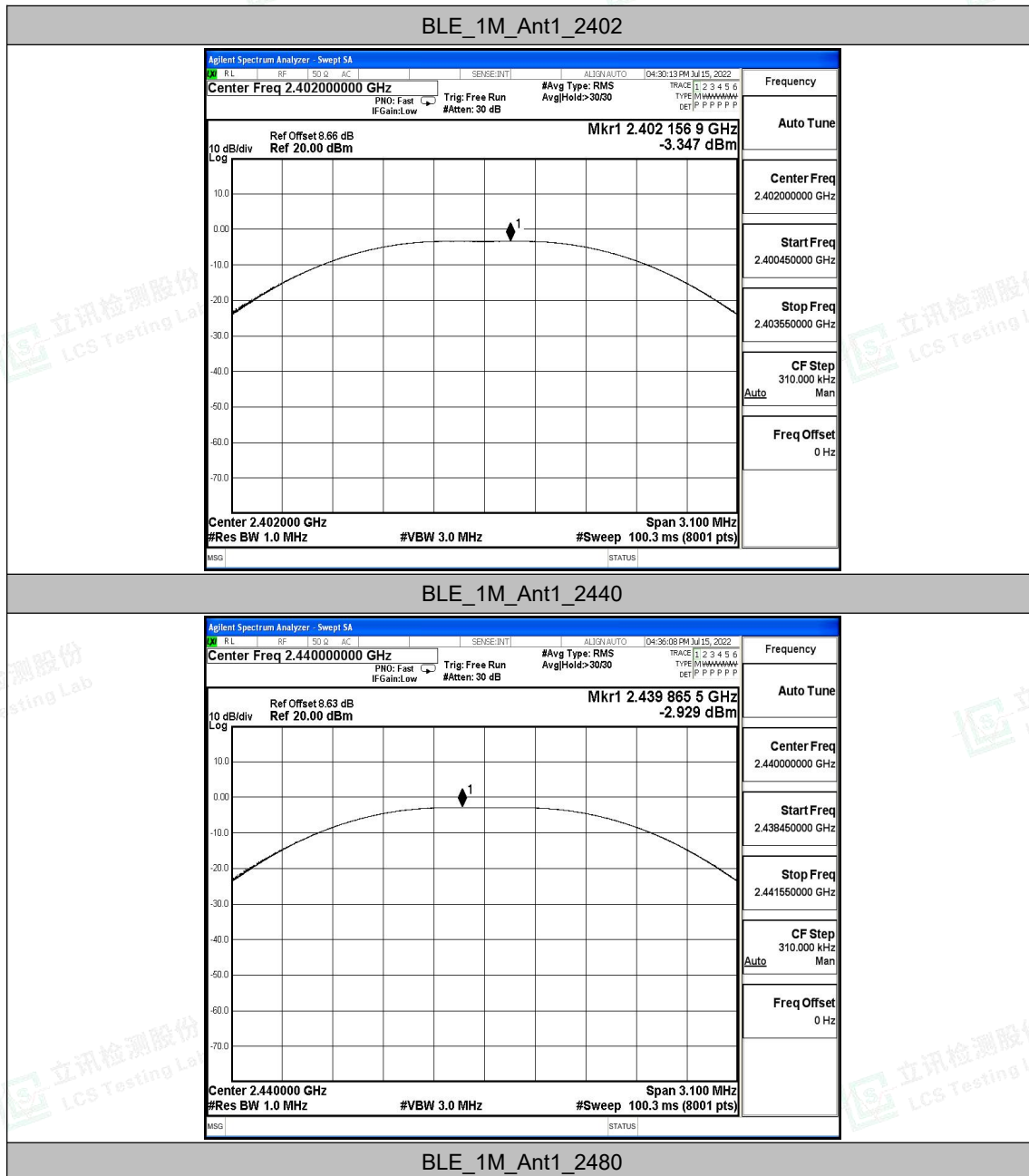
Test Result

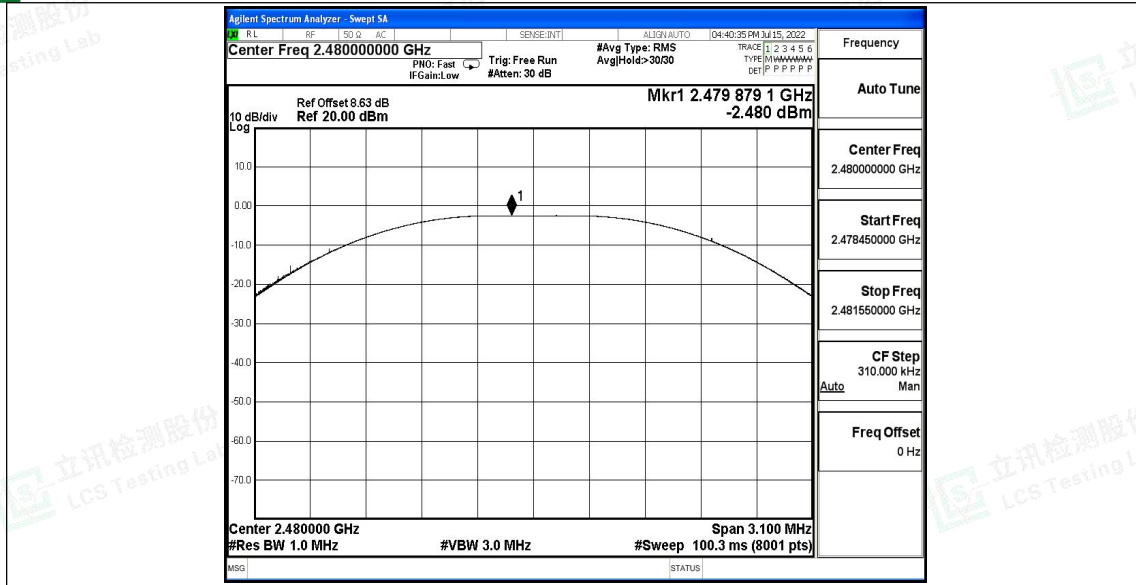
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-3.35	≤30	PASS
		2440	-2.93	≤30	PASS
		2480	-2.48	≤30	PASS





Test Graphs







B.3 Maximum power spectral density

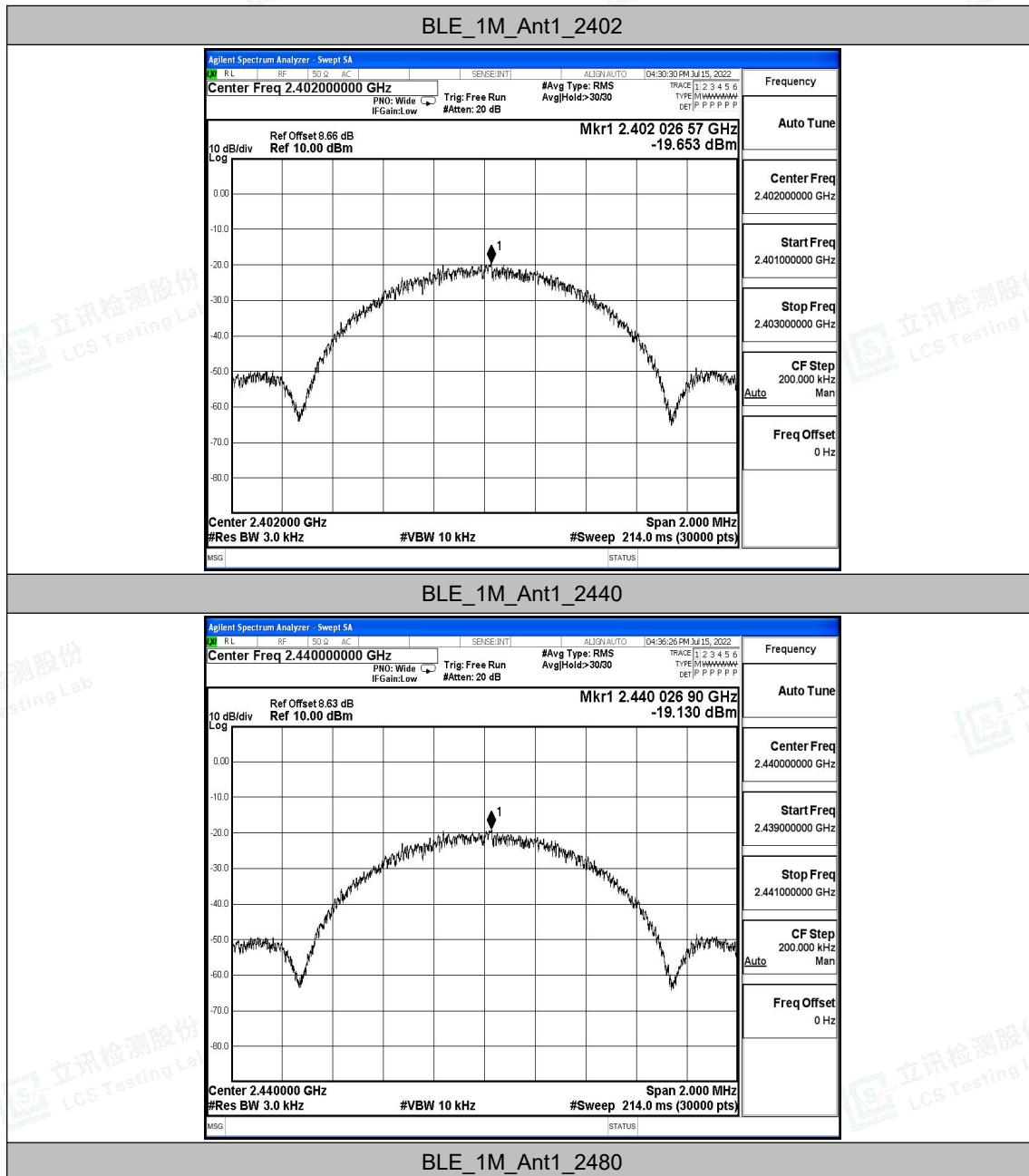
Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-19.65	≤8.00	PASS
		2440	-19.13	≤8.00	PASS
		2480	-18.82	≤8.00	PASS





Test Graphs

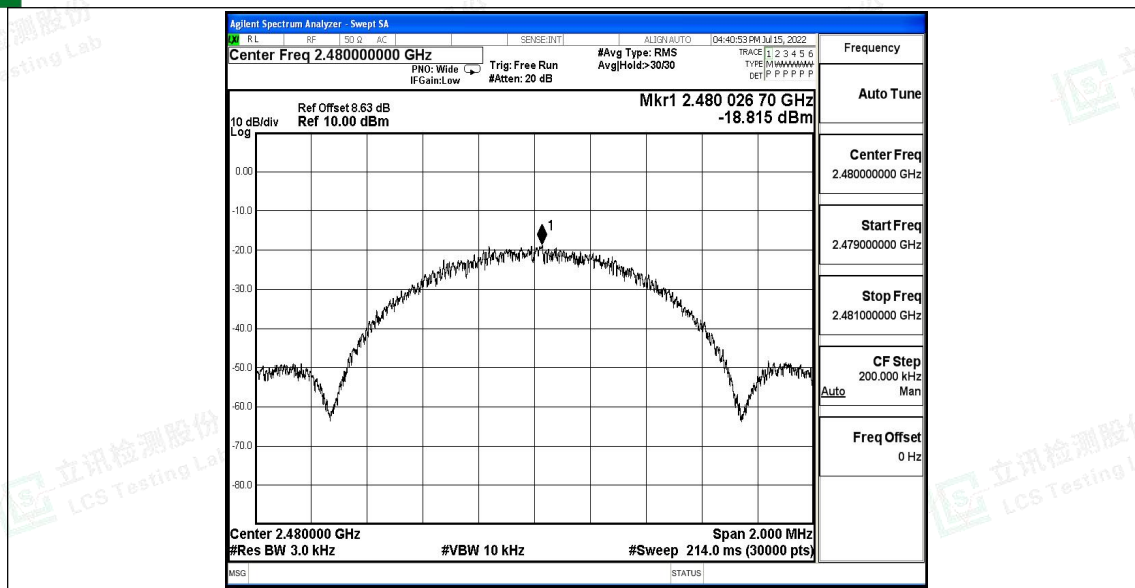


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B.4 Band edge measurements

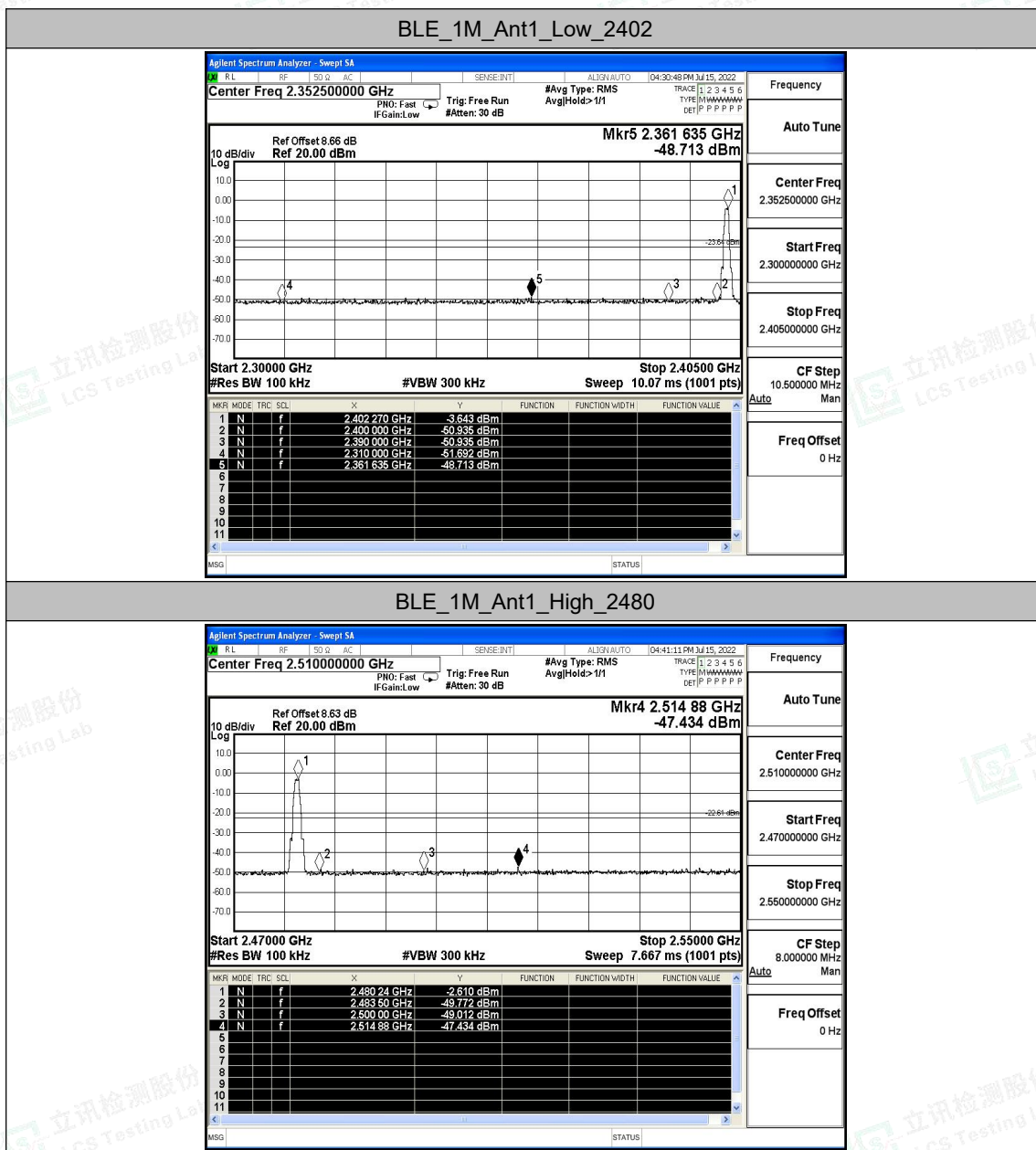
Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-3.64	-48.71	≤-23.64	PASS
		High	2480	-2.61	-47.43	≤-22.61	PASS





Test Graphs



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B.5 Conducted Spurious Emission

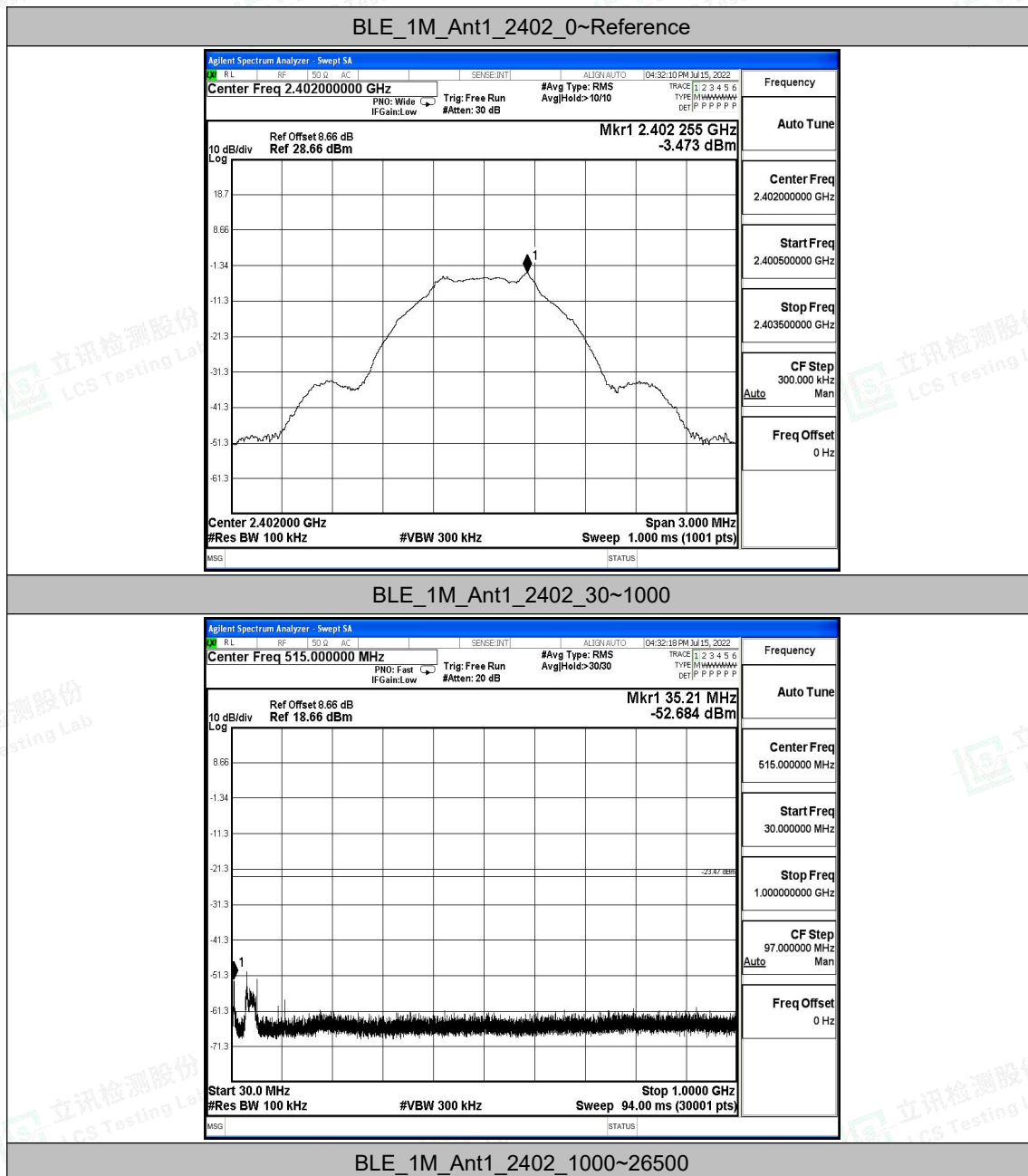
Test Result

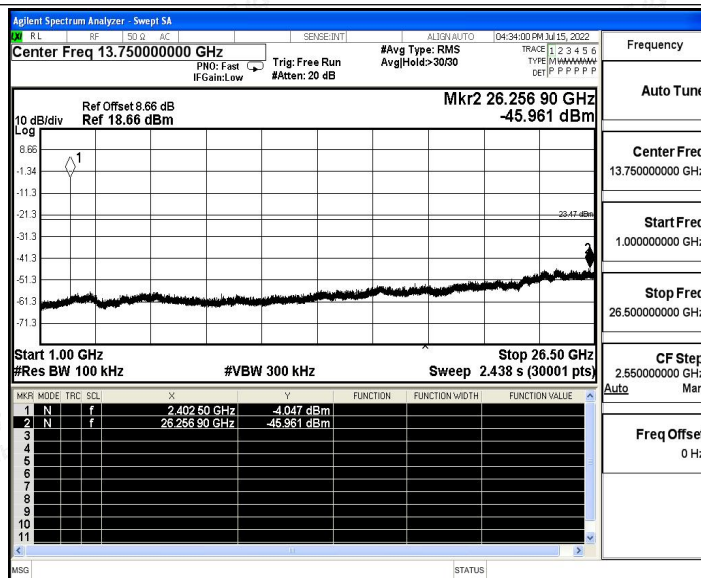
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-3.47	-3.47	---	PASS
			30~1000	-3.47	-52.68	≤-23.47	PASS
			1000~26500	-3.47	-45.96	≤-23.47	PASS
		2440	Reference	-3.08	-3.08	---	PASS
			30~1000	-3.08	-51.83	≤-23.08	PASS
			1000~26500	-3.08	-46.17	≤-23.08	PASS
		2480	Reference	-2.65	-2.65	---	PASS
			30~1000	-2.65	-52.25	≤-22.65	PASS
			1000~26500	-2.65	-45.87	≤-22.65	PASS



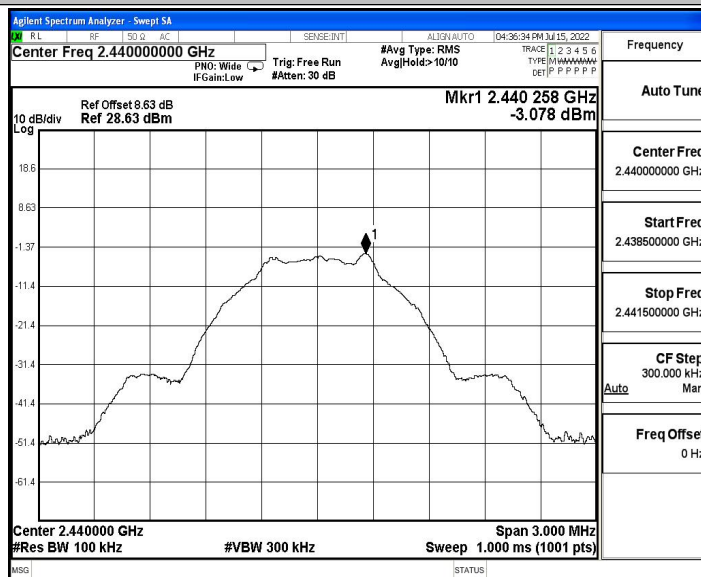


Test Graphs



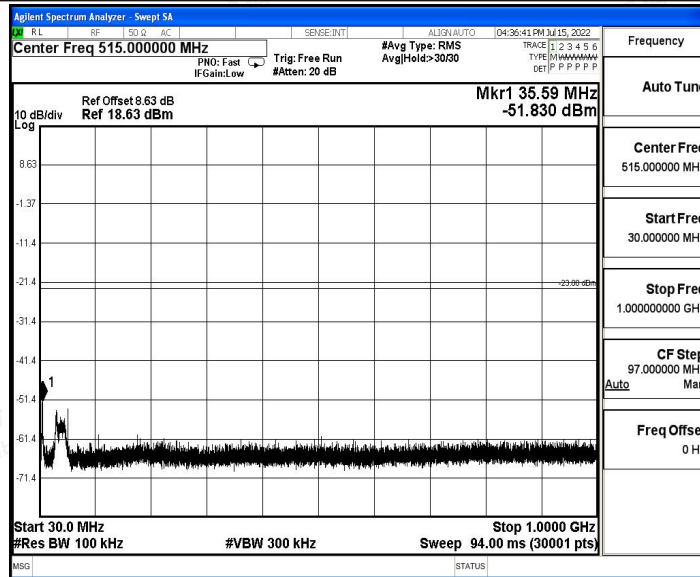


BLE_1M_Ant1_2440_0~Reference

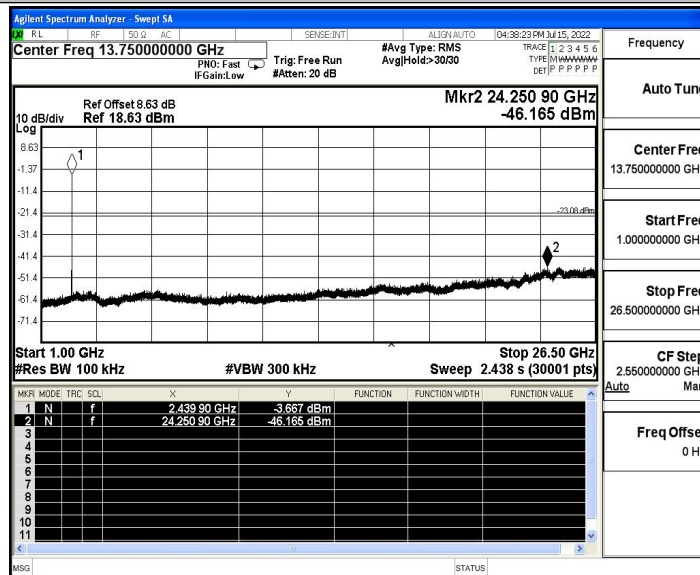


BLE_1M_Ant1_2440_30~1000



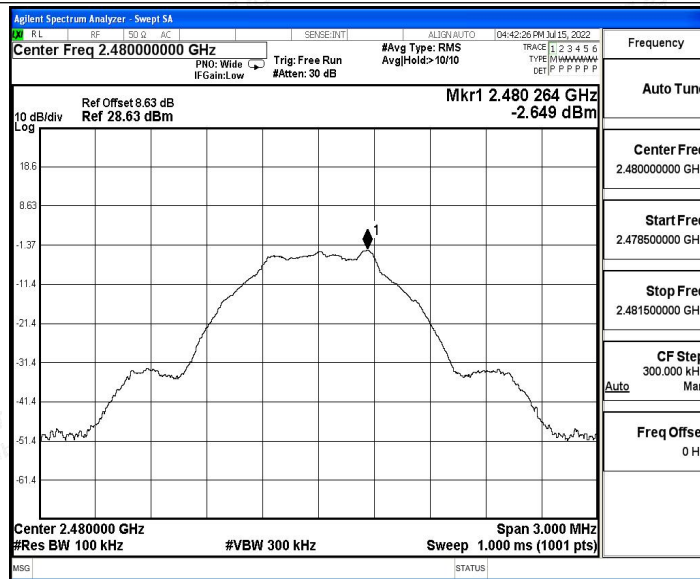


BLE_1M_Ant1_2440_1000~26500

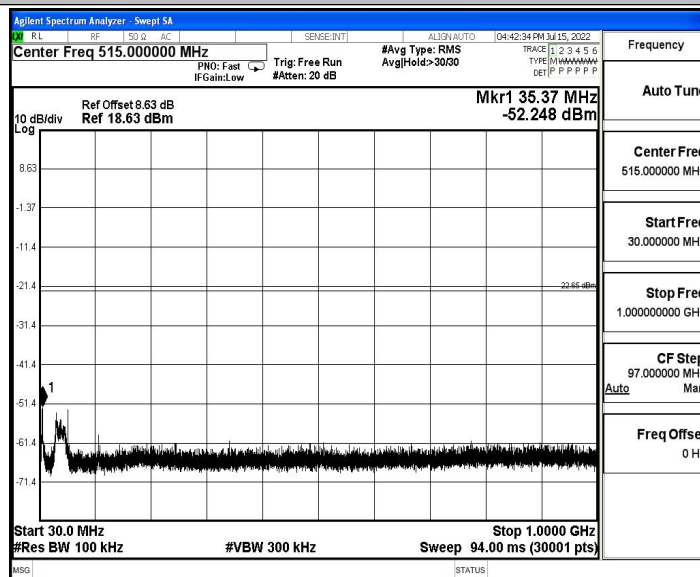


BLE_1M_Ant1_2480_0~Reference



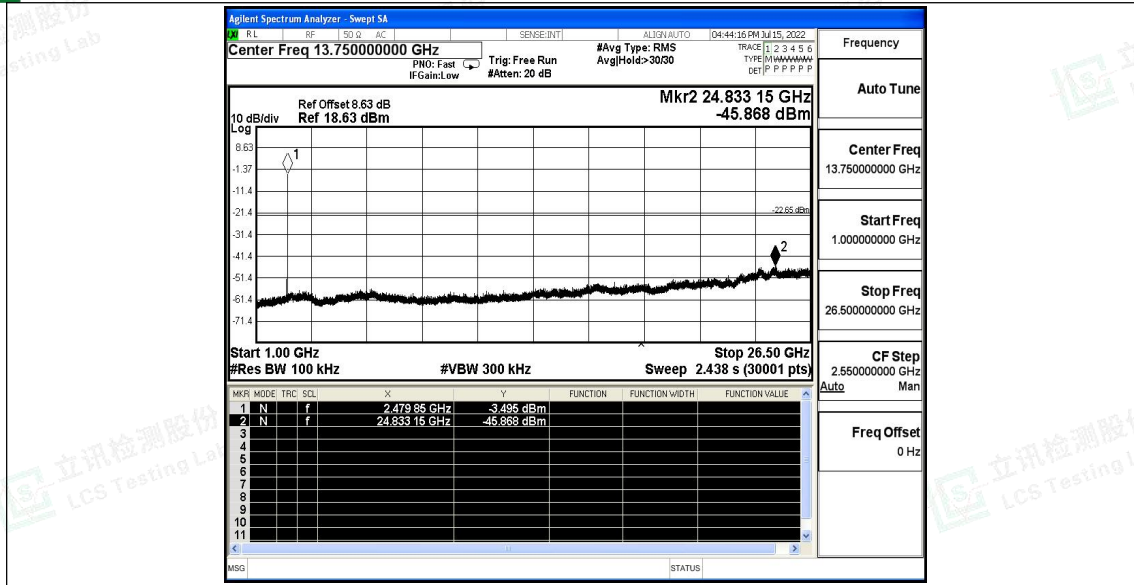


BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500





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B.6 Duty Cycle

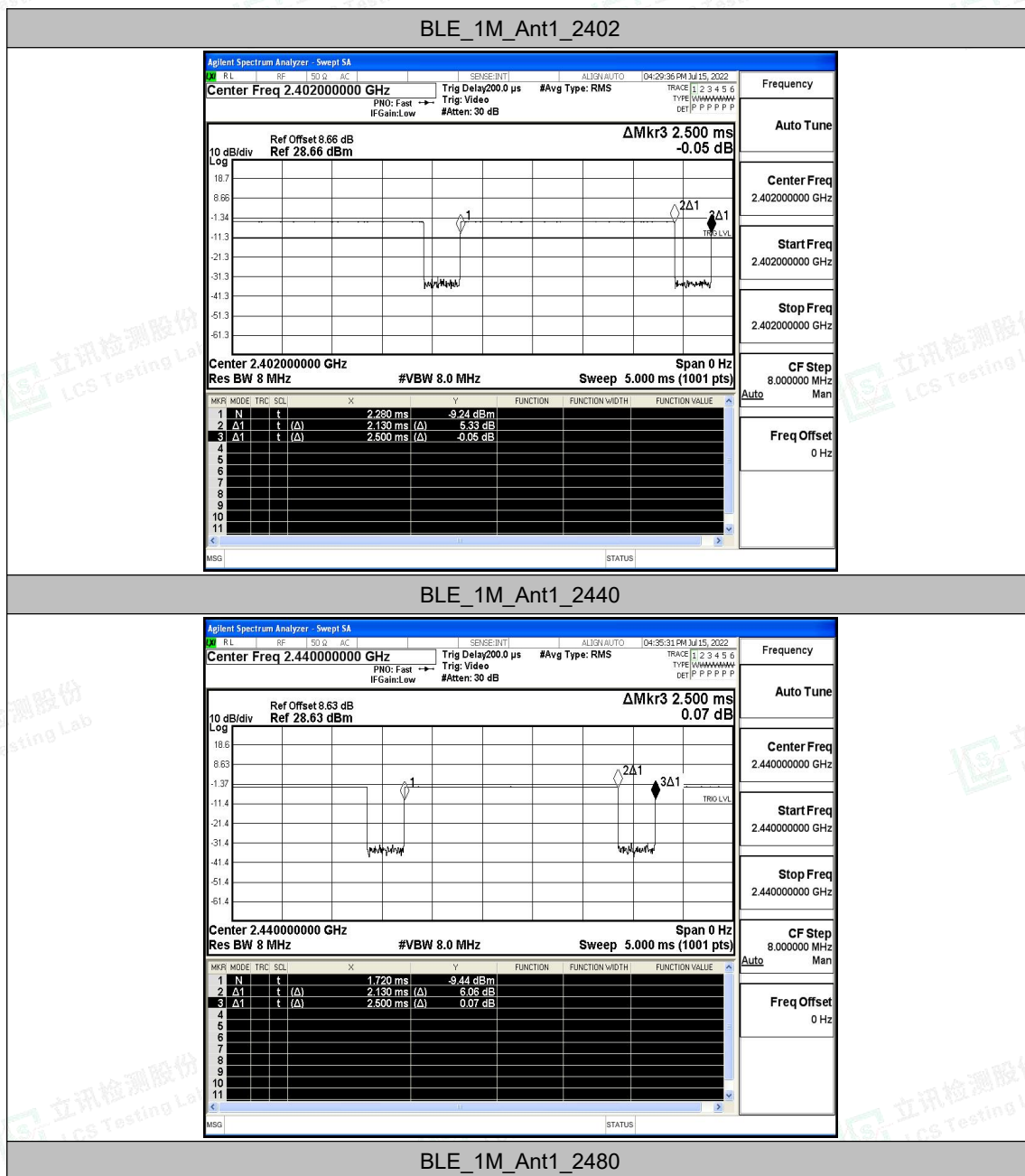
Test Result

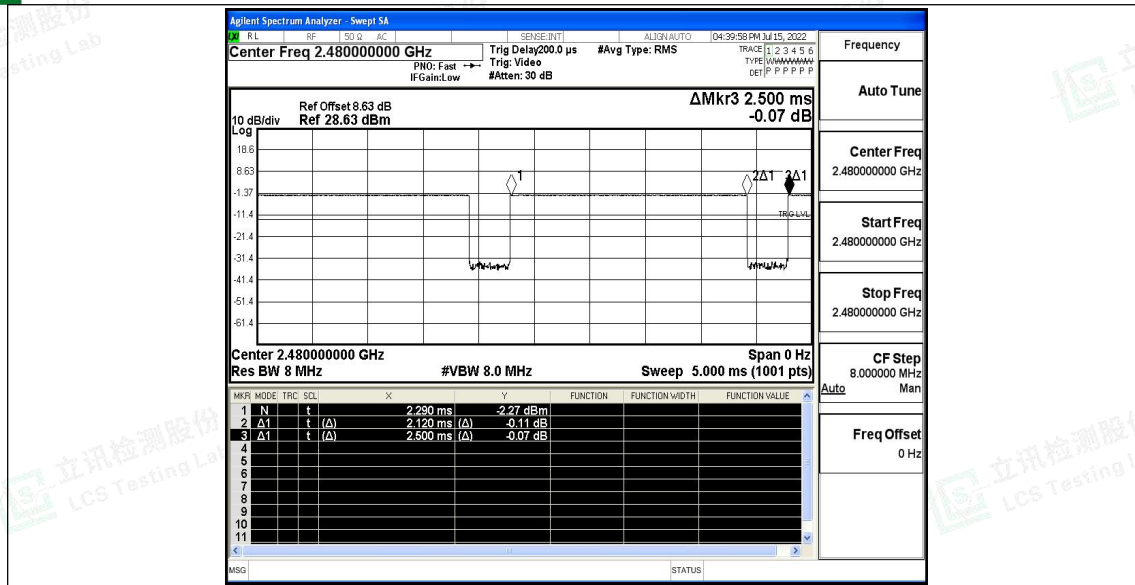
TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	1/T	Limit	Verdict
BLE_1M	Ant1	2402	2.13	2.50	0.8520	85.20	0.70	0.47	---	---
		2440	2.13	2.50	0.8520	85.20	0.70	0.47	---	---
		2480	2.12	2.50	0.8480	84.80	0.72	0.47	---	---





Test Graphs







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	-48.18	≤-41.20	47.02	≤54	PASS
				AV	2387.465	-47.72	≤-41.20	47.48	≤54	PASS
				AV	2390.000	-47.84	≤-41.20	47.36	≤54	PASS
				Peak	2310.000	-38.54	≤-21.20	56.66	≤74	PASS
				Peak	2383.370	-36.54	≤-21.20	58.66	≤74	PASS
				Peak	2390.000	-38.83	≤-21.20	56.37	≤74	PASS
		High	2480	AV	2483.500	-47.19	≤-41.20	48.01	≤54	PASS
				AV	2498.960	-47.04	≤-41.20	48.16	≤54	PASS
				AV	2500.000	-47.28	≤-41.20	47.92	≤54	PASS
				Peak	2483.500	-38.45	≤-21.20	56.75	≤74	PASS
				Peak	2499.840	-35.62	≤-21.20	59.58	≤74	PASS
				Peak	2500.000	-38	≤-21.20	57.20	≤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

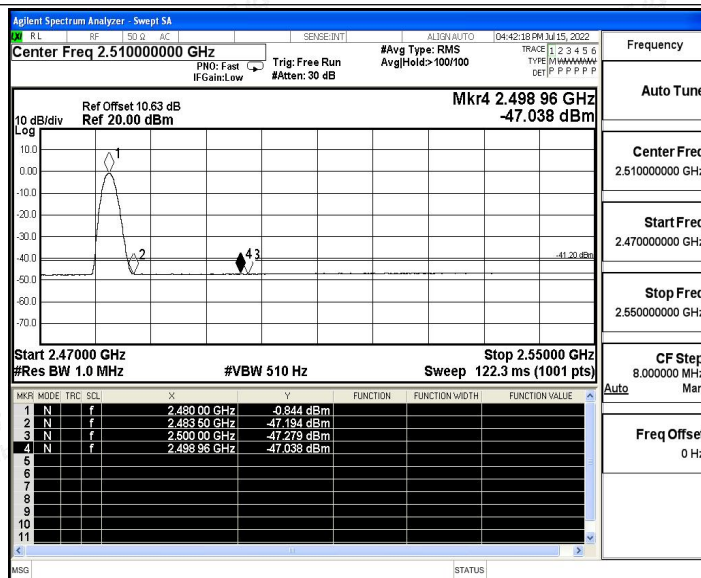


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BLE_1M_Ant1_High_2480_Peak

