

Appendix B

RF Test Data for BT LE(Conducted Measurement)

Product Name: AI Ergonomic Motion Chair

Test Model: HLC-800

Environmental Conditions

Temperature:	24.5°C
Relative Humidity:	53.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Zhang hai
Supervised by:	Fengliu Tang

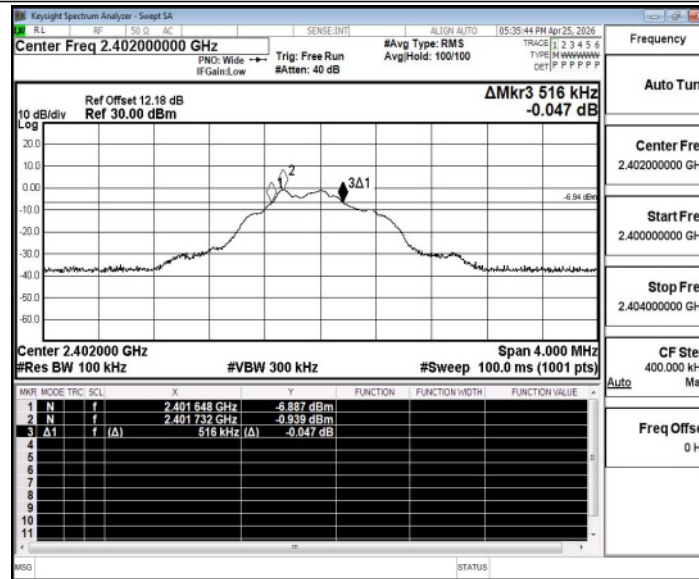
B.1 DTS Bandwidth

Test Result

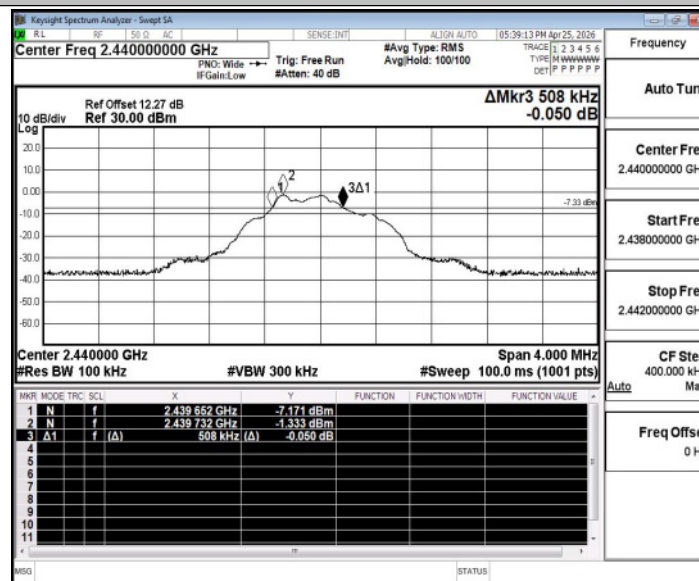
TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.516	2401.648	2402.164	0.5	PASS
		2440	0.508	2439.652	2440.160	0.5	PASS
		2480	0.504	2479.656	2480.160	0.5	PASS
BLE_2M	Ant1	2402	0.844	2401.404	2402.248	0.5	PASS
		2440	0.836	2439.404	2440.240	0.5	PASS
		2480	0.860	2479.396	2480.256	0.5	PASS

Test Graphs

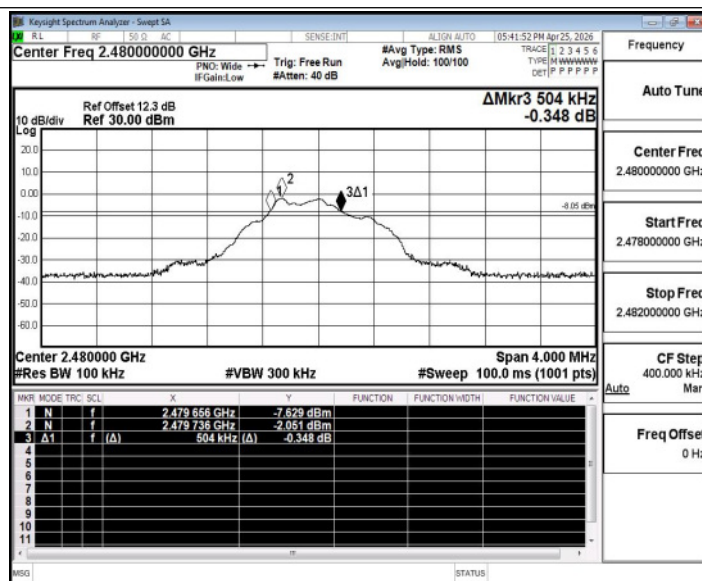
BLE_1M_Ant1_2402



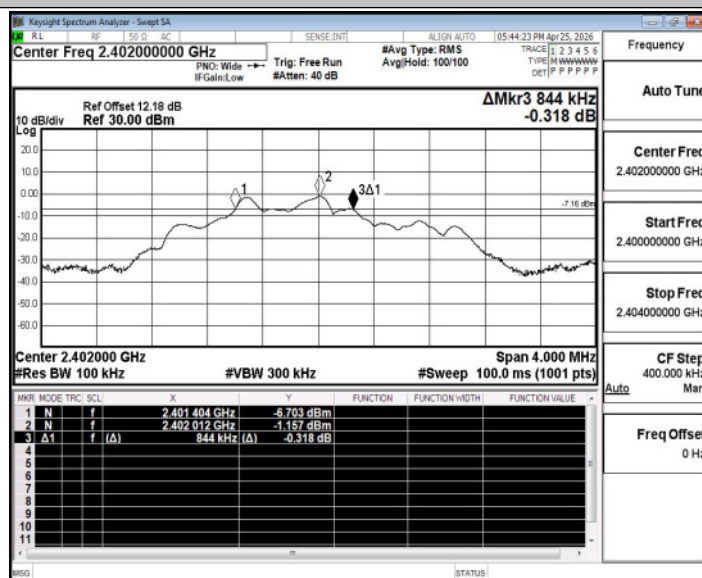
BLE_1M_Ant1_2440



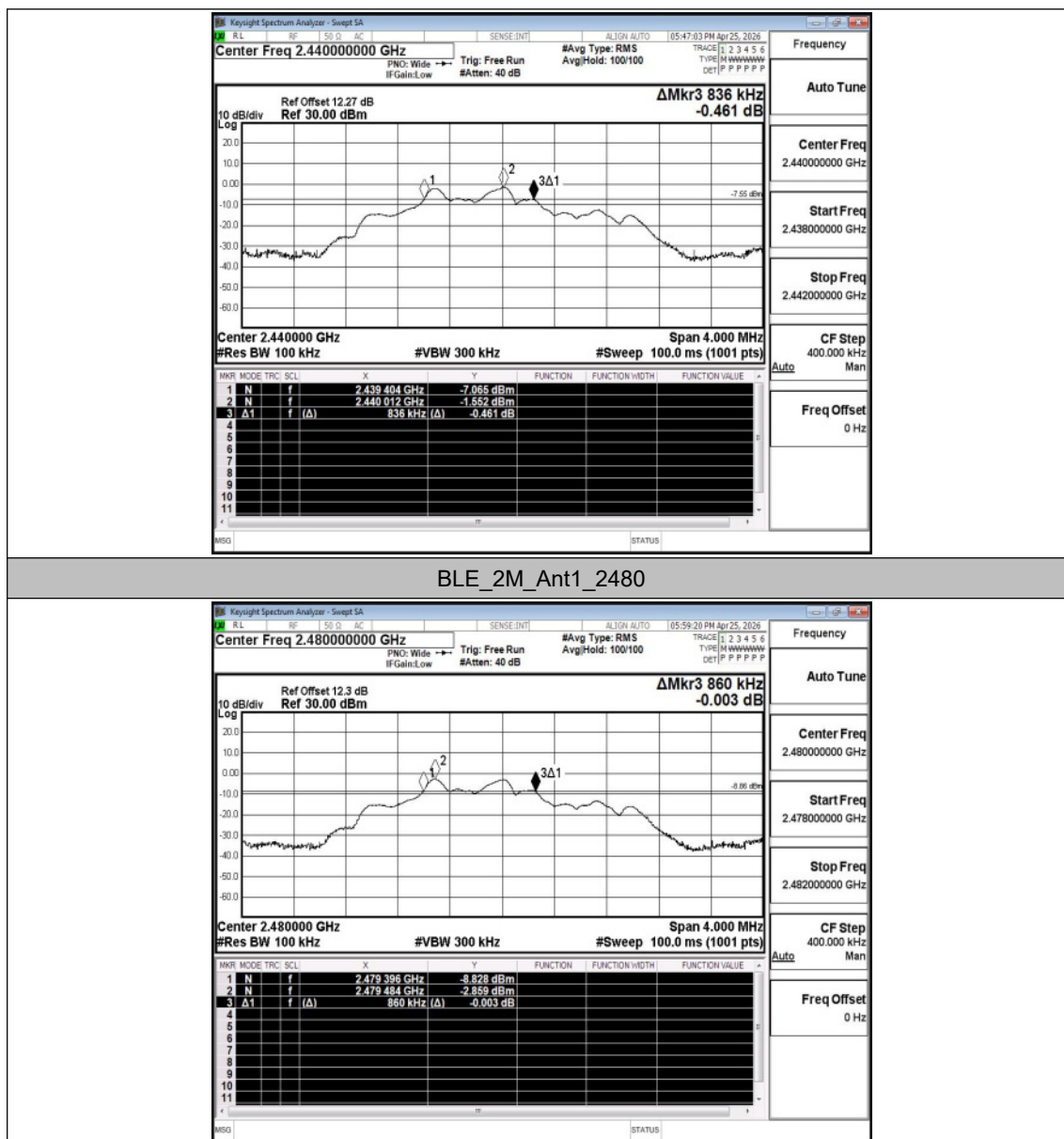
BLE_1M_Ant1_2480



BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



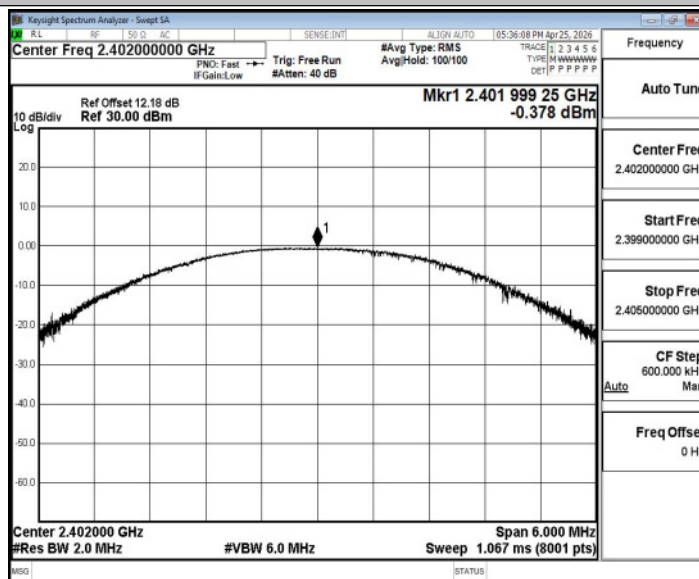
B.2 Maximum Peak conducted output power

Test Result

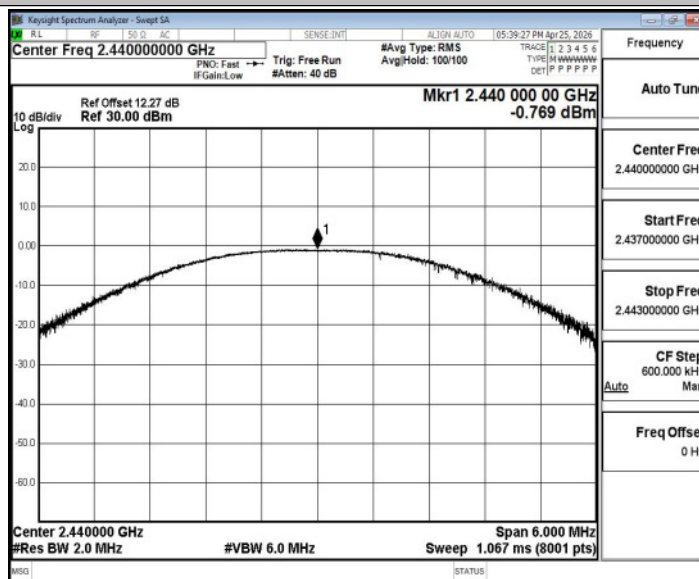
TestMode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-0.38	≤30	PASS
		2440	-0.77	≤30	PASS
		2480	-1.51	≤30	PASS
BLE_2M	Ant1	2402	-0.49	≤30	PASS
		2440	-0.82	≤30	PASS
		2480	-1.14	≤30	PASS

Test Graphs

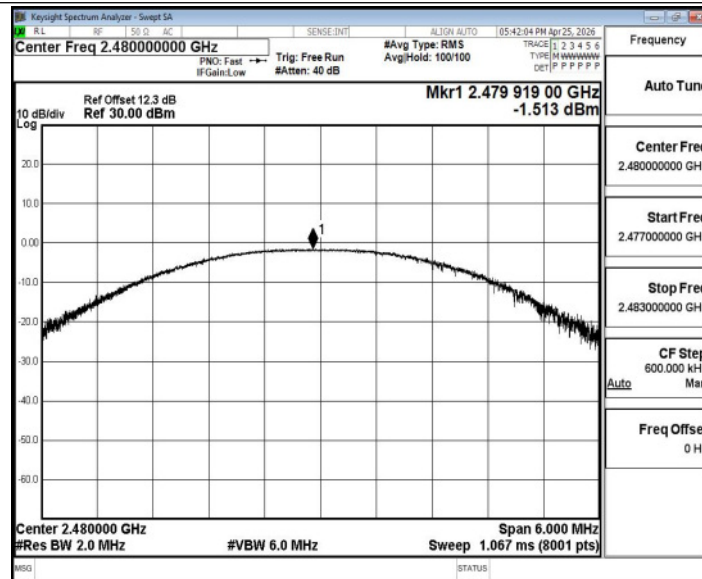
BLE_1M_Ant1_2402



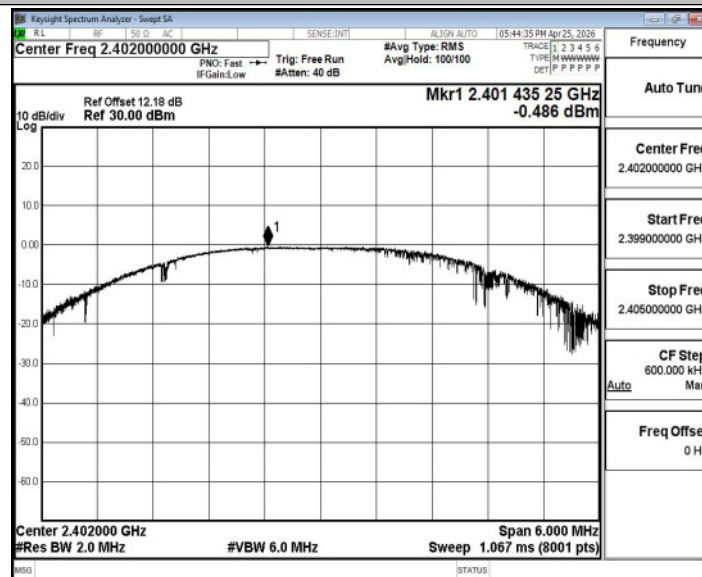
BLE_1M_Ant1_2440



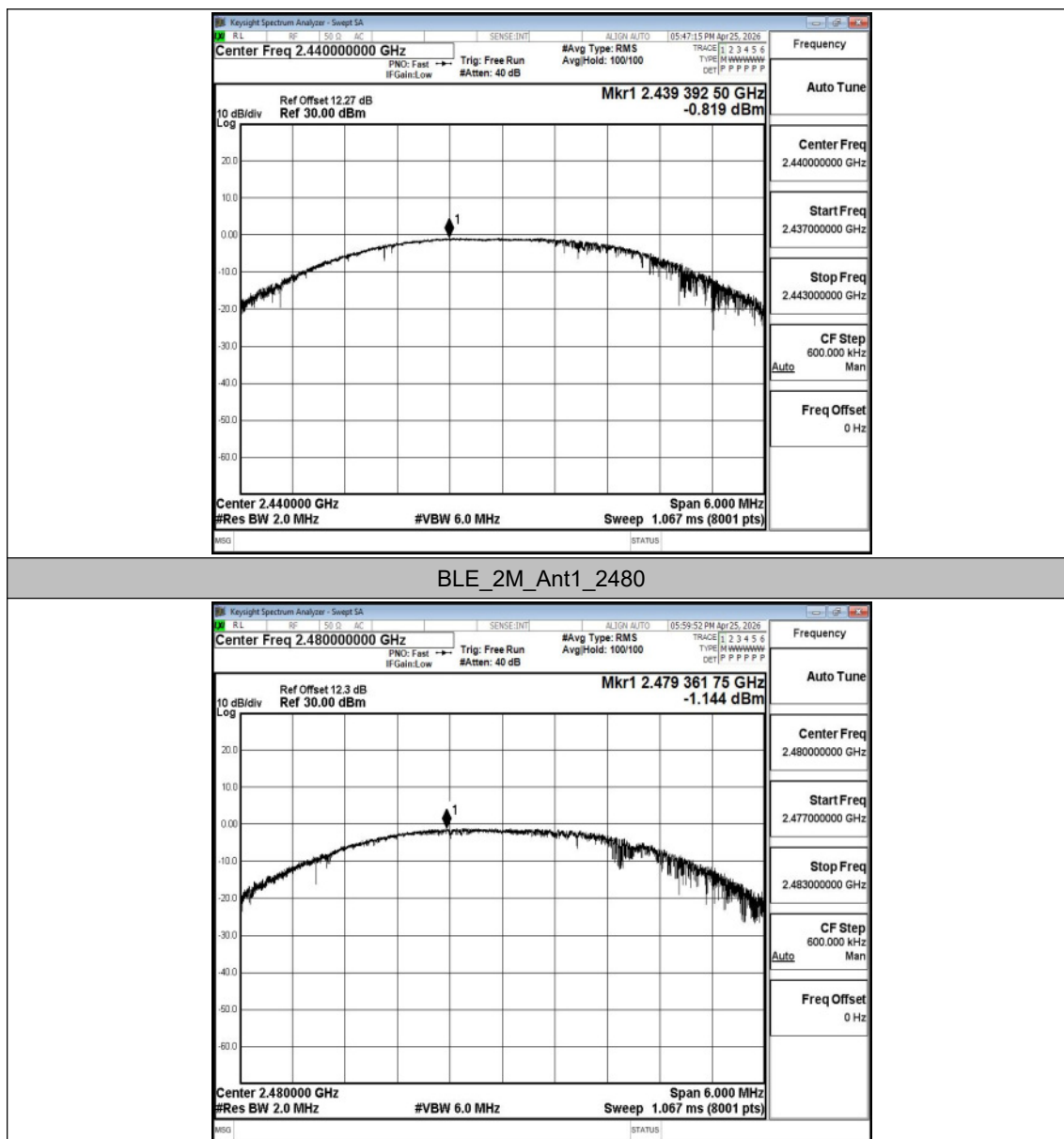
BLE_1M_Ant1_2480



BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



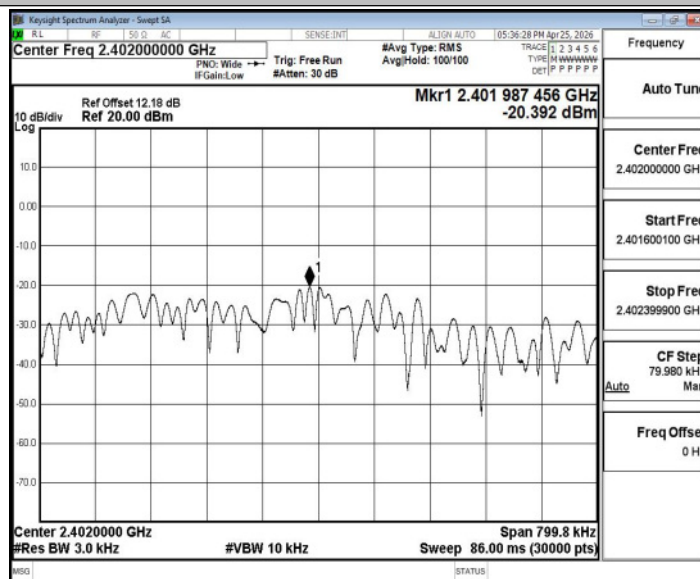
B.3 Maximum power spectral density

Test Result

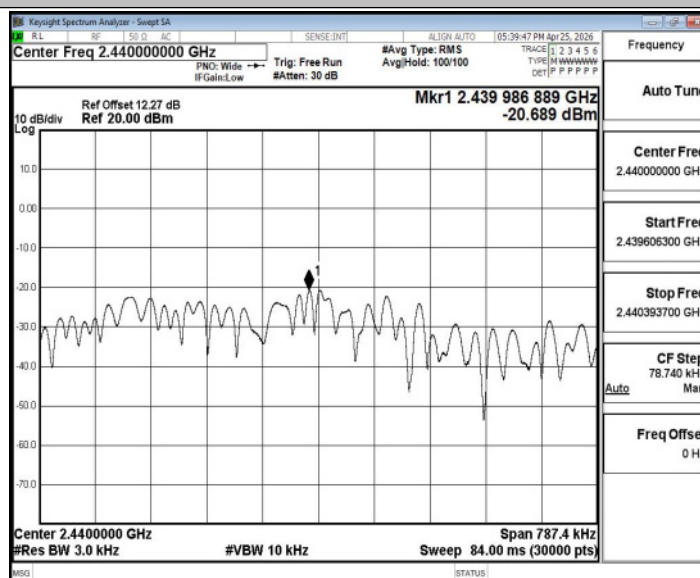
TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-20.39	≤8.00	PASS
		2440	-20.69	≤8.00	PASS
		2480	-20.98	≤8.00	PASS
BLE_2M	Ant1	2402	-21.34	≤8.00	PASS
		2440	-21.92	≤8.00	PASS
		2480	-23.19	≤8.00	PASS

Test Graphs

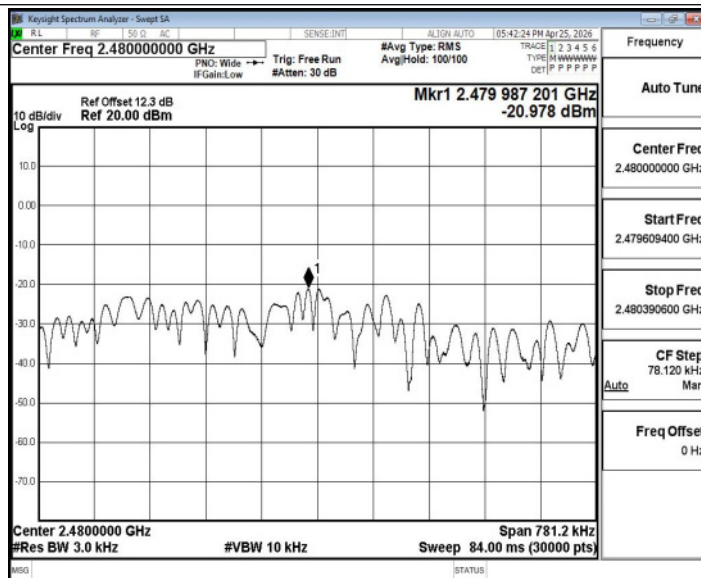
BLE_1M_Ant1_2402



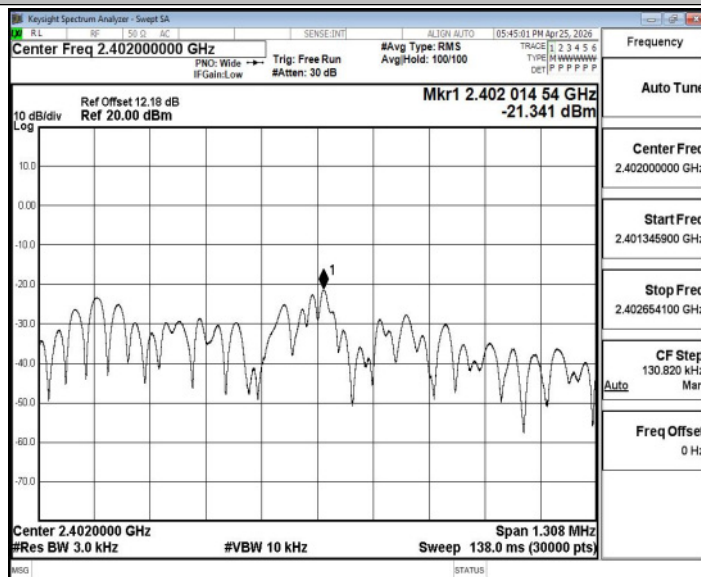
BLE_1M_Ant1_2440



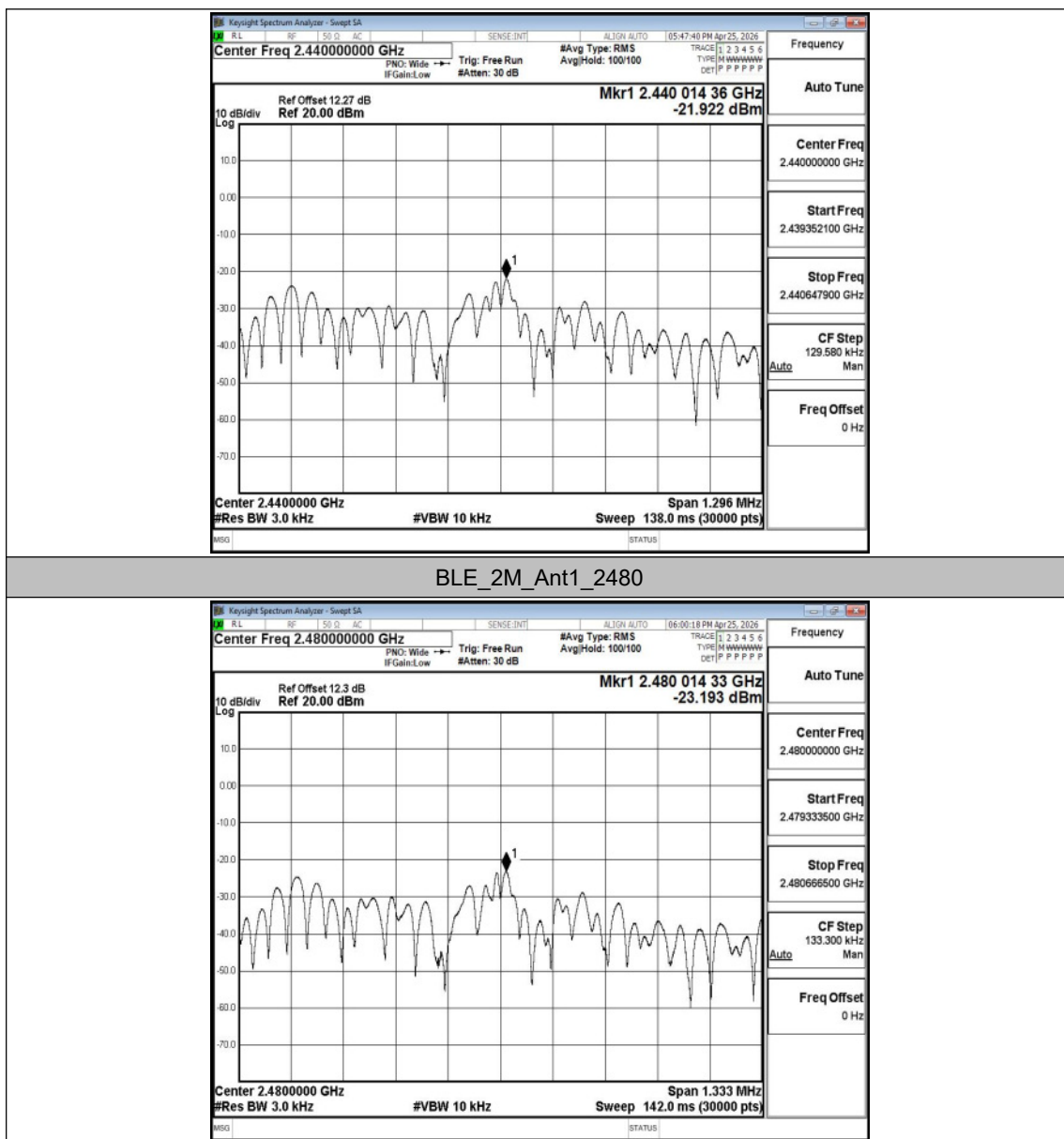
BLE_1M_Ant1_2480



BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



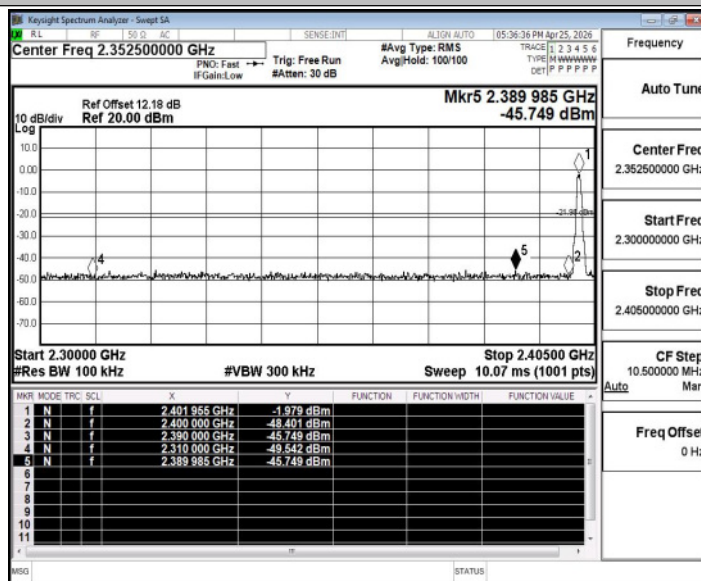
B.4 Band edge measurements

Test Result

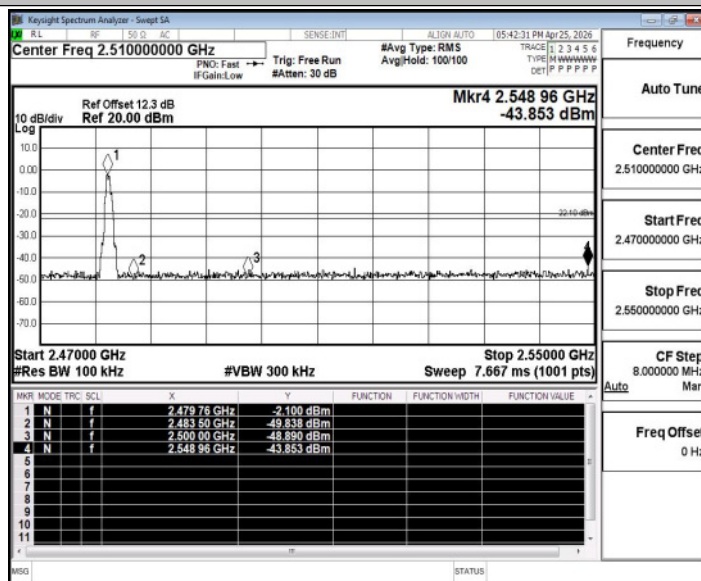
TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-1.98	-45.75	≤ -21.98	PASS
		High	2480	-2.10	-43.85	≤ -22.1	PASS
BLE_2M	Ant1	Low	2402	-2.05	-34.37	≤ -22.05	PASS
		High	2480	-3.47	-44.74	≤ -23.47	PASS

Test Graphs

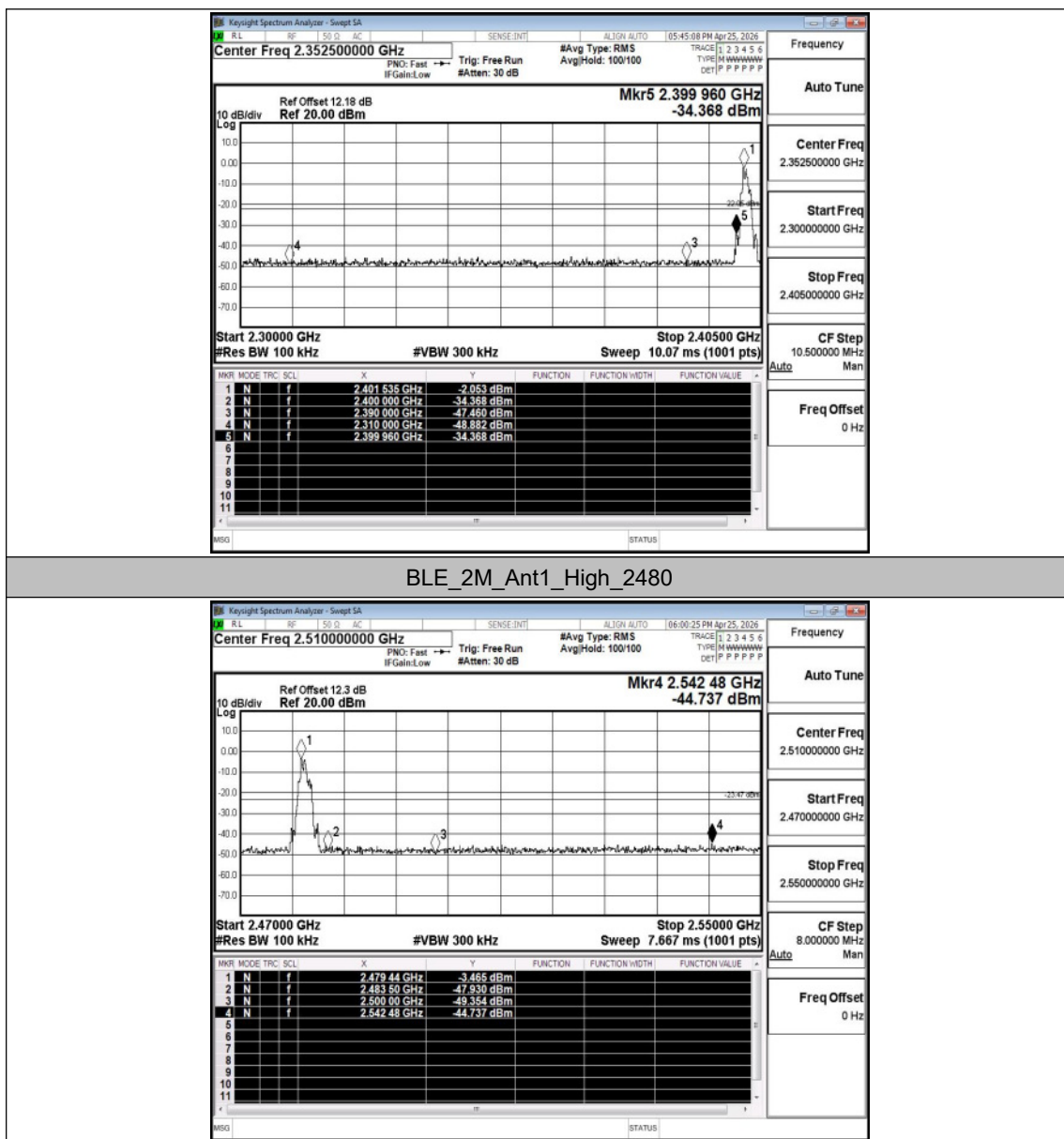
BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480



BLE_2M_Ant1_Low_2402

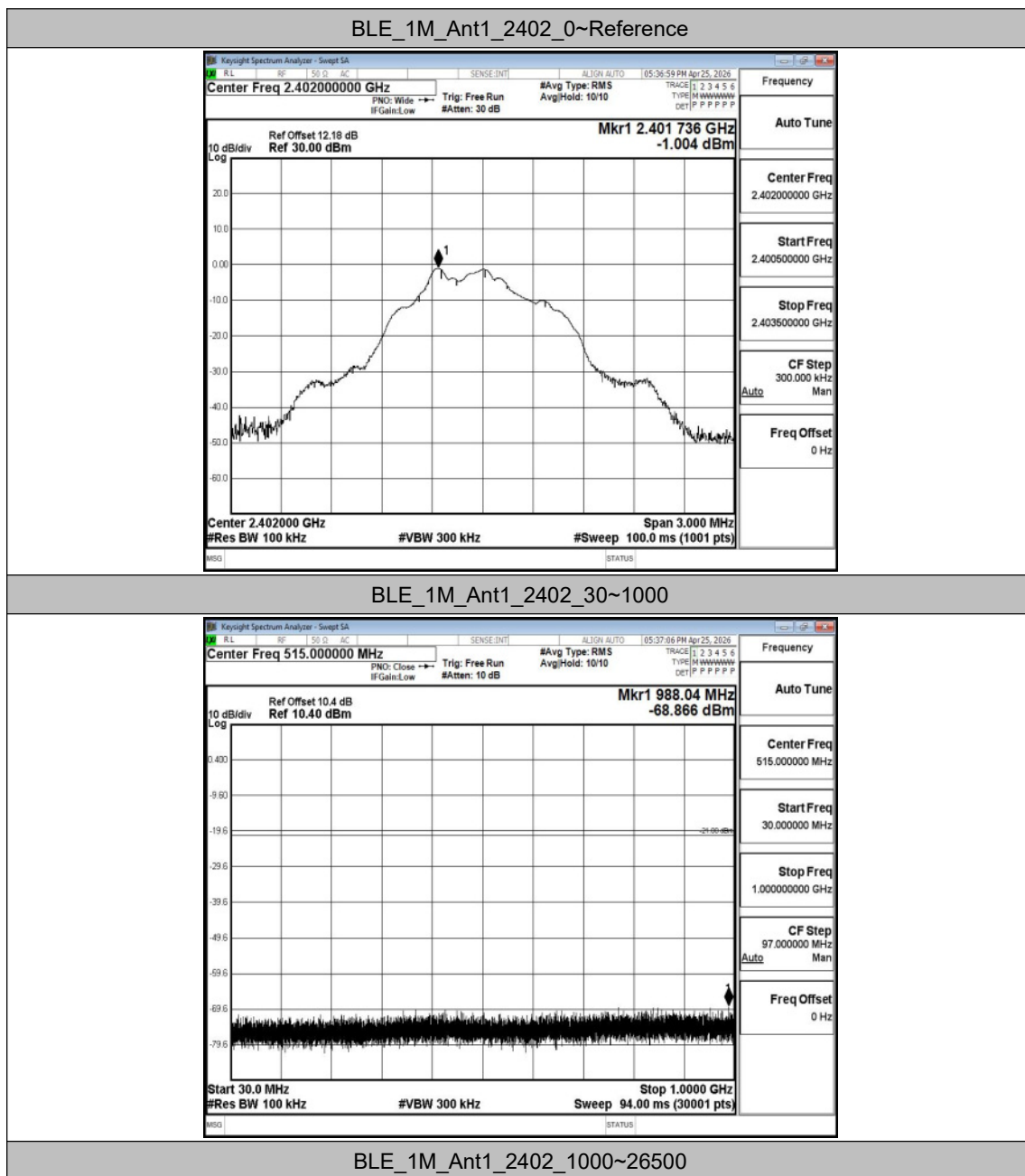


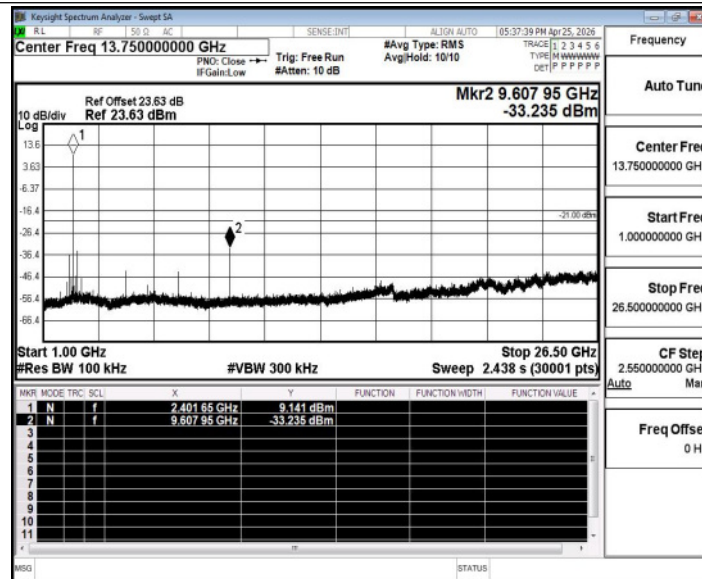
B.5 Conducted Spurious Emission

Test Result

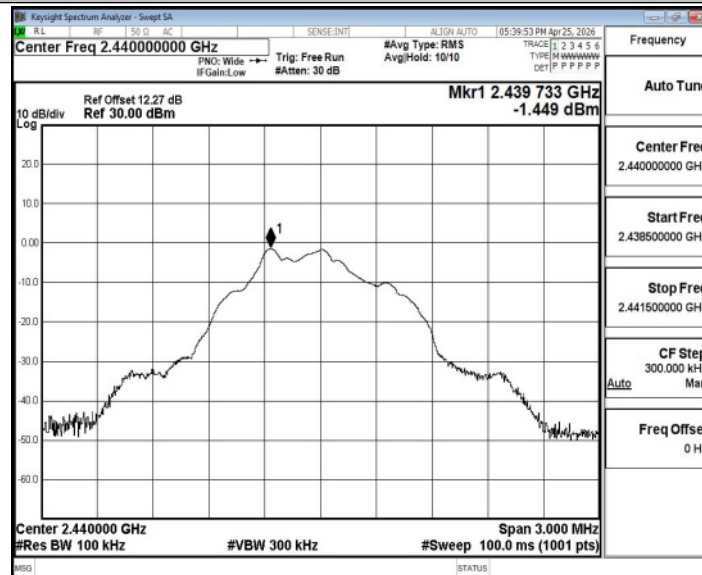
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-1.00	-1.00	---	PASS
			30~1000	-1.00	-68.87	≤-21	PASS
			1000~26500	-1.00	-33.24	≤-21	PASS
		2440	Reference	-1.45	-1.45	---	PASS
			30~1000	-1.45	-69.25	≤-21.45	PASS
			1000~26500	-1.45	-32.81	≤-21.45	PASS
		2480	Reference	-1.88	-1.88	---	PASS
			30~1000	-1.88	-68.74	≤-21.88	PASS
			1000~26500	-1.88	-33.29	≤-21.88	PASS
BLE_2M	Ant1	2402	Reference	-1.51	-1.51	---	PASS
			30~1000	-1.51	-68.72	≤-21.51	PASS
			1000~26500	-1.51	-35.18	≤-21.51	PASS
		2440	Reference	-1.67	-1.67	---	PASS
			30~1000	-1.67	-69.03	≤-21.67	PASS
			1000~26500	-1.67	-33.66	≤-21.67	PASS
		2480	Reference	-3.00	-3.00	---	PASS
			30~1000	-3.00	-68.72	≤-23	PASS
			1000~26500	-3.00	-34.5	≤-23	PASS

Test Graphs

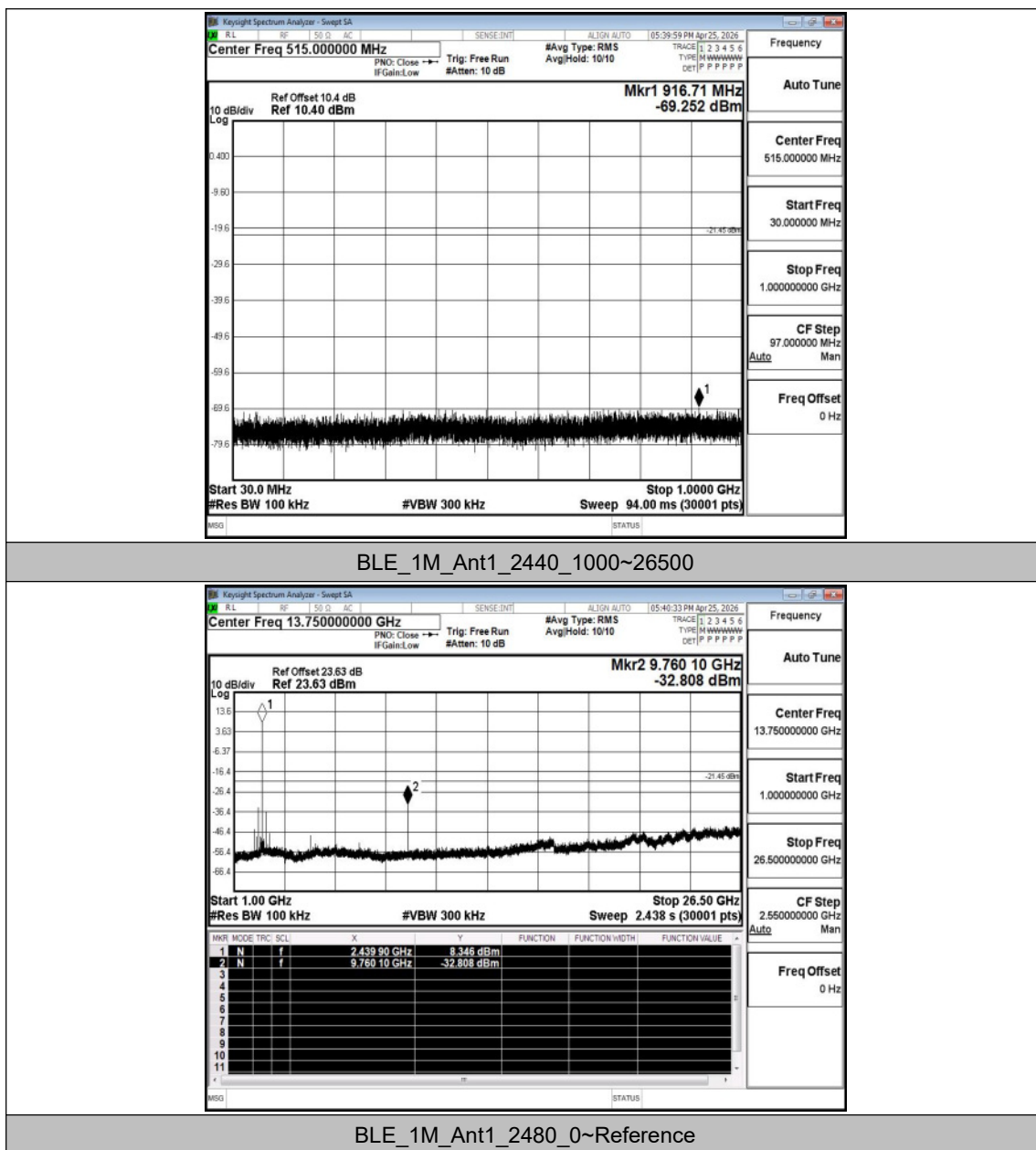


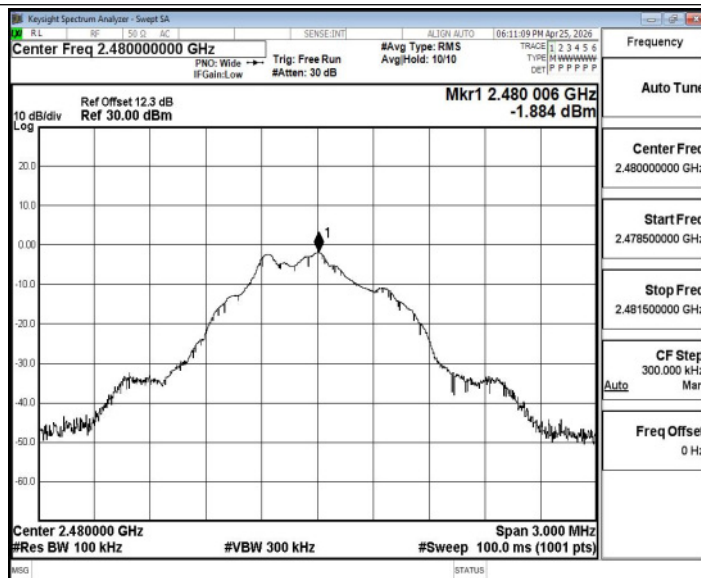


BLE_1M_Ant1_2440_0~Reference

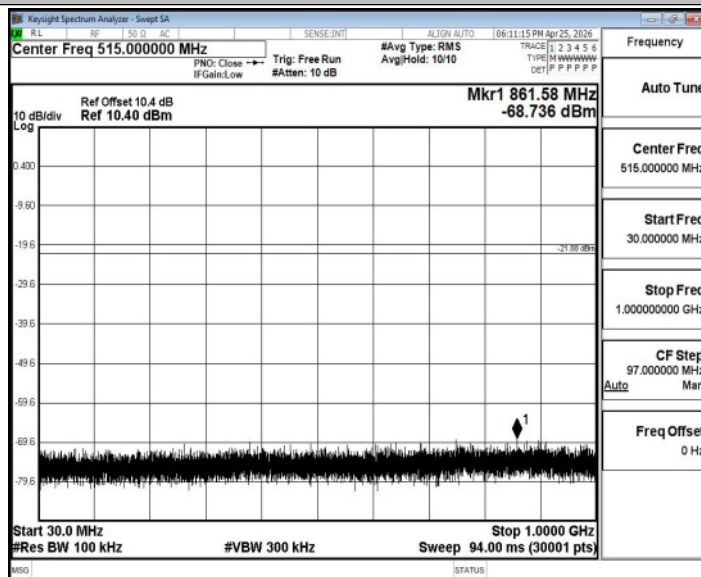


BLE_1M_Ant1_2440_30~1000

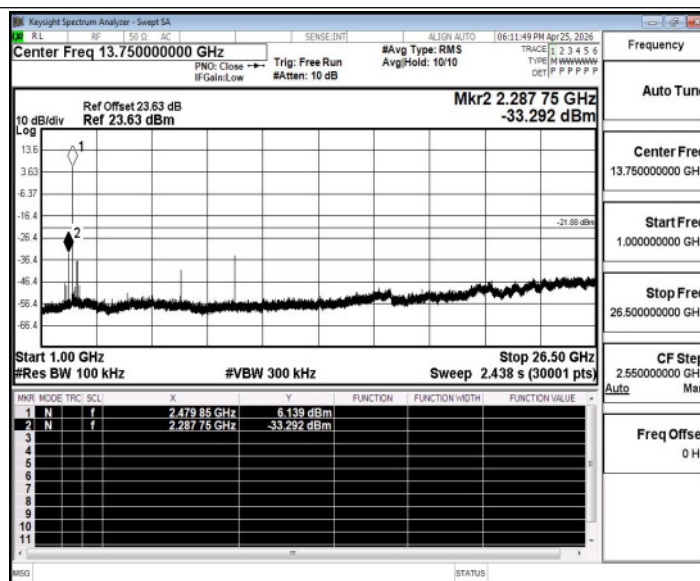




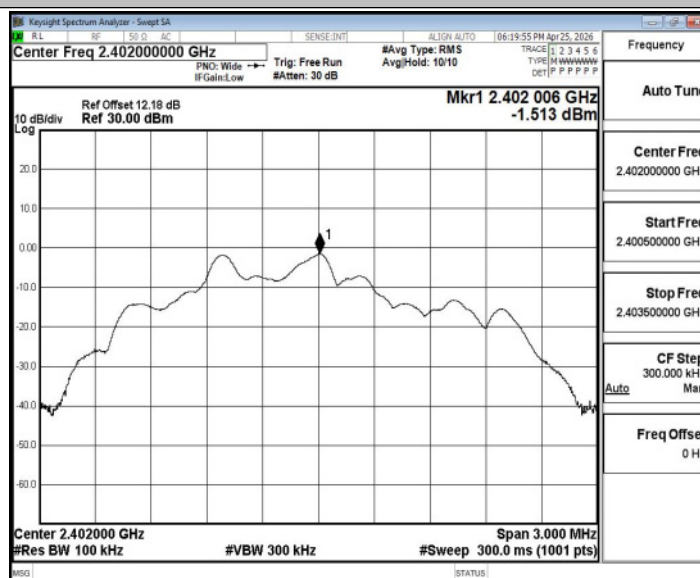
BLE_1M_Ant1_2480_30~1000



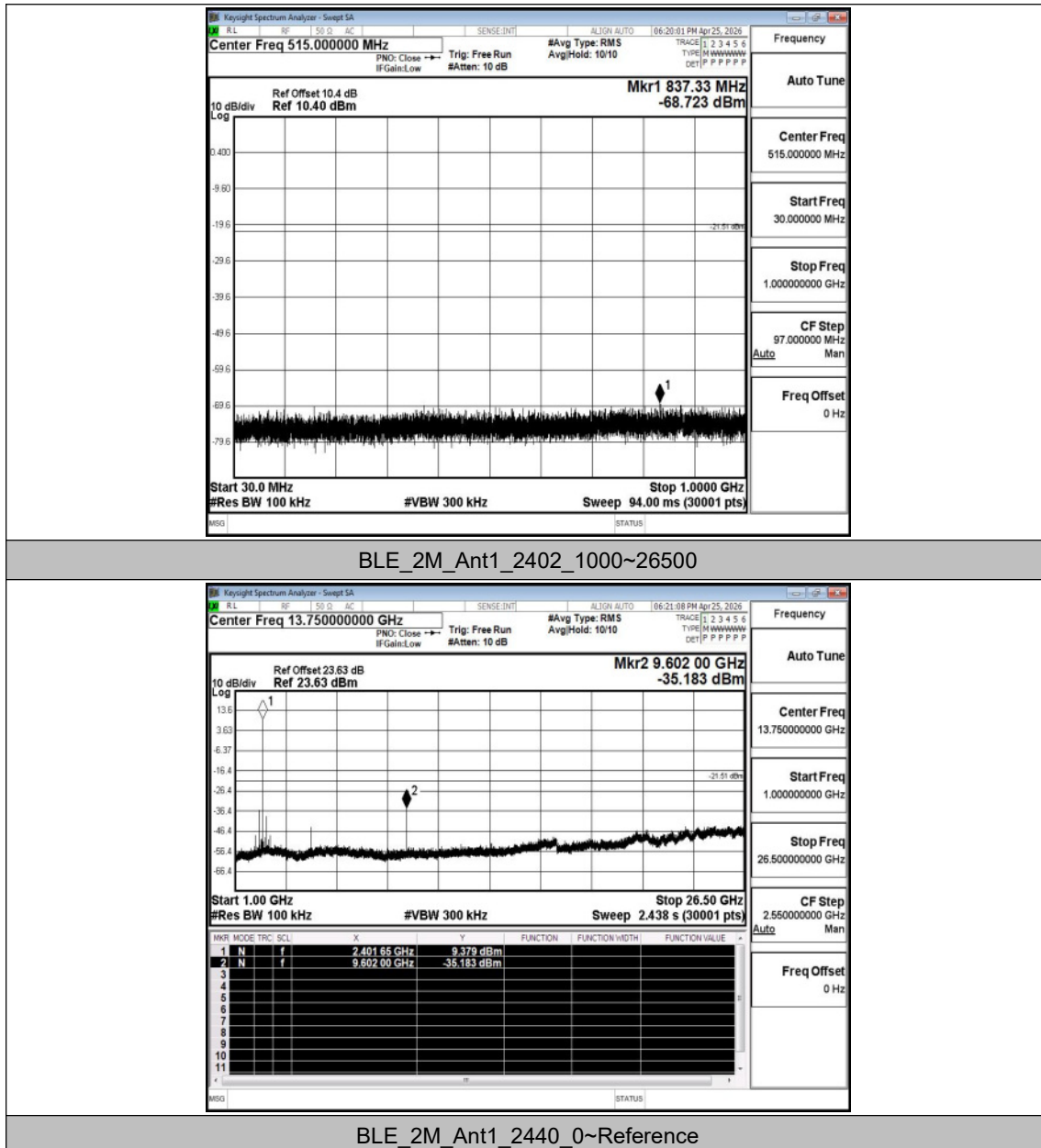
BLE_1M_Ant1_2480_1000~26500

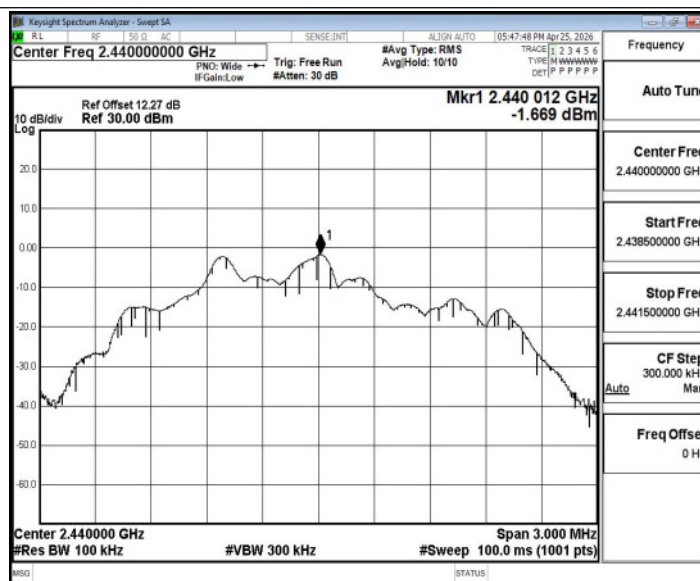


BLE_2M_Ant1_2402_0~Reference

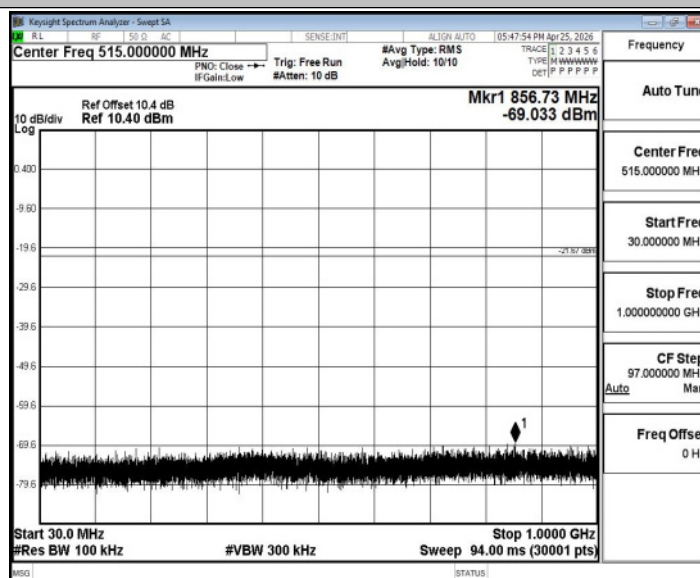


BLE_2M_Ant1_2402_30~1000

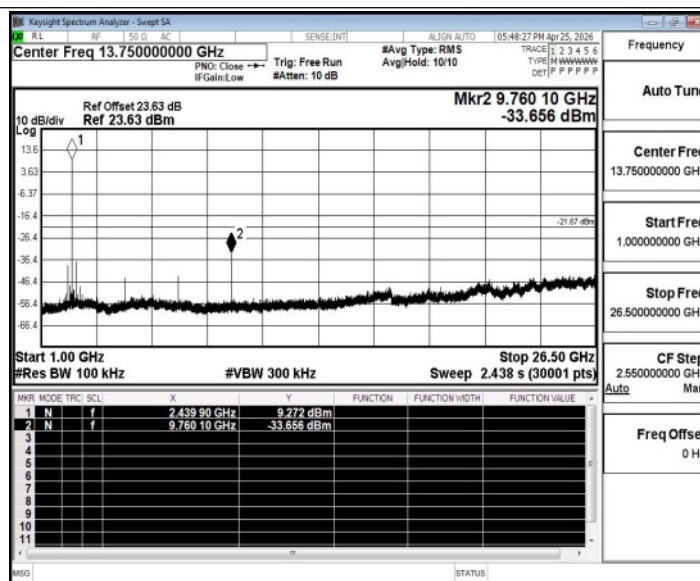




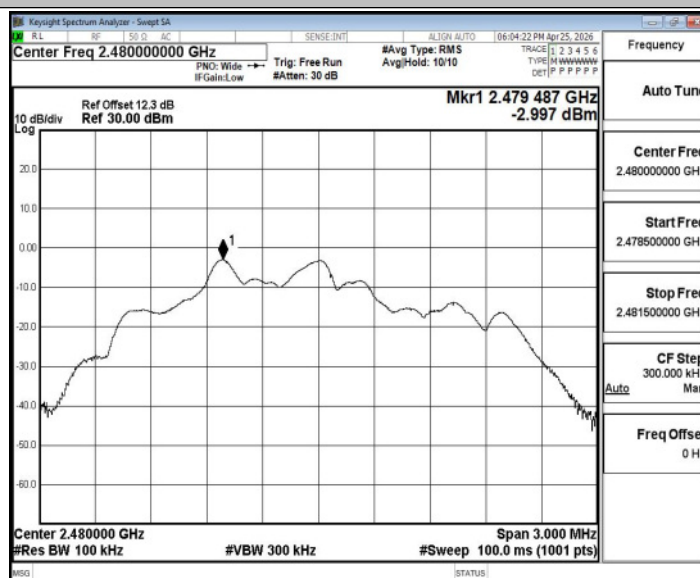
BLE_2M_Ant1_2440_30~1000



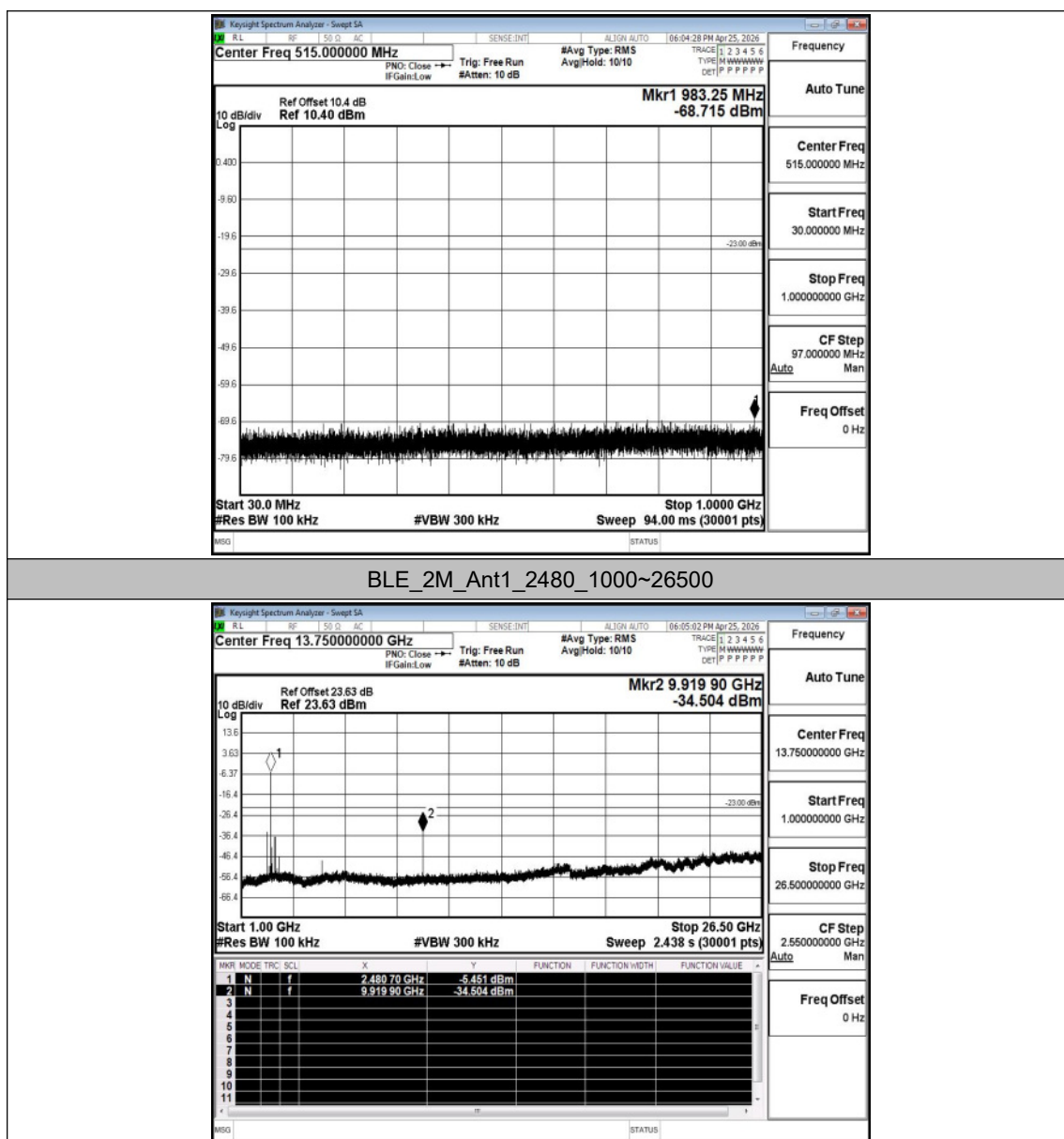
BLE_2M_Ant1_2440_1000~26500



BLE_2M_Ant1_2480_0~Reference



BLE_2M_Ant1_2480_30~1000



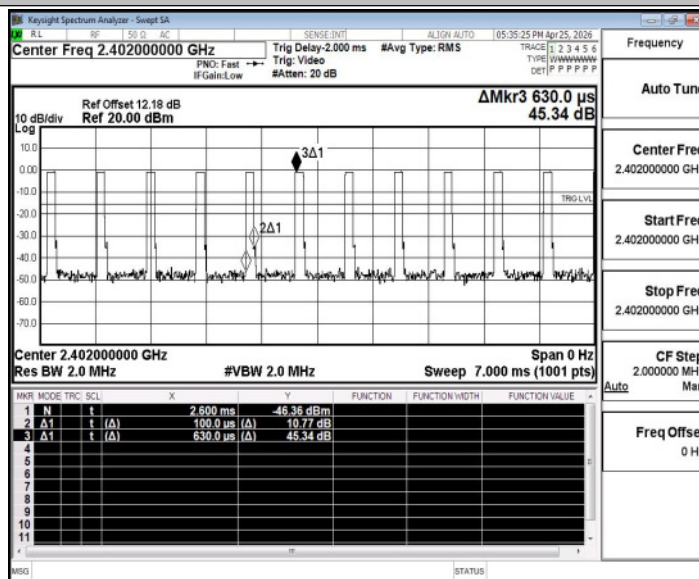
B.6 Duty Cycle

Test Result

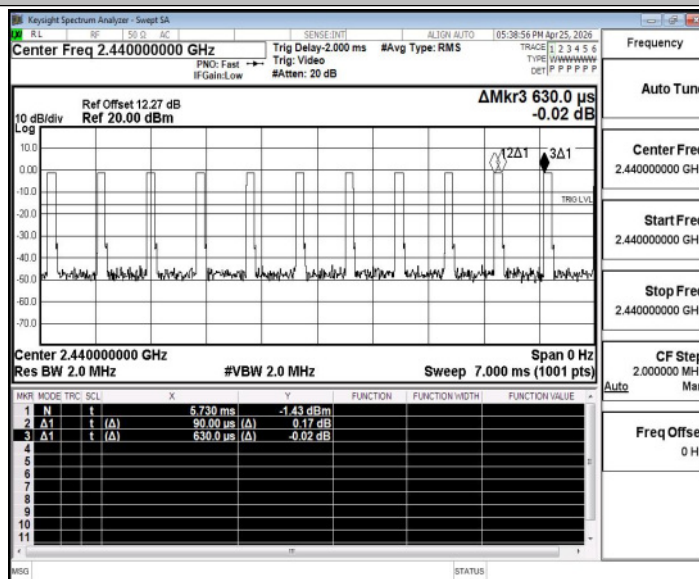
TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	0.10	0.63	0.1587	15.87	7.99	---	---
		2440	0.09	0.63	0.1429	14.29	8.45	---	---
		2480	0.09	0.63	0.1429	14.29	8.45	---	---
BLE_2M	Ant1	2402	0.05	0.62	0.0806	8.06	10.94	---	---
		2440	0.05	0.62	0.0806	8.06	10.94	---	---
		2480	0.09	0.63	0.1429	14.29	8.45	---	---

Test Graphs

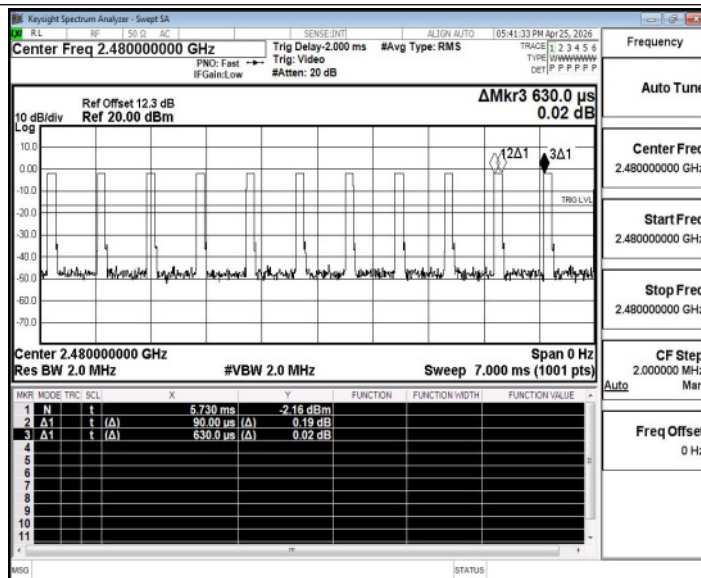
BLE_1M_Ant1_2402



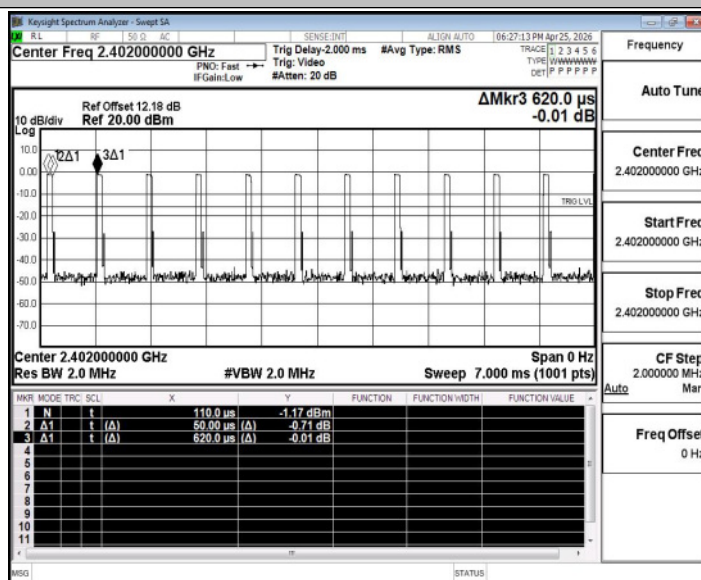
BLE_1M_Ant1_2440



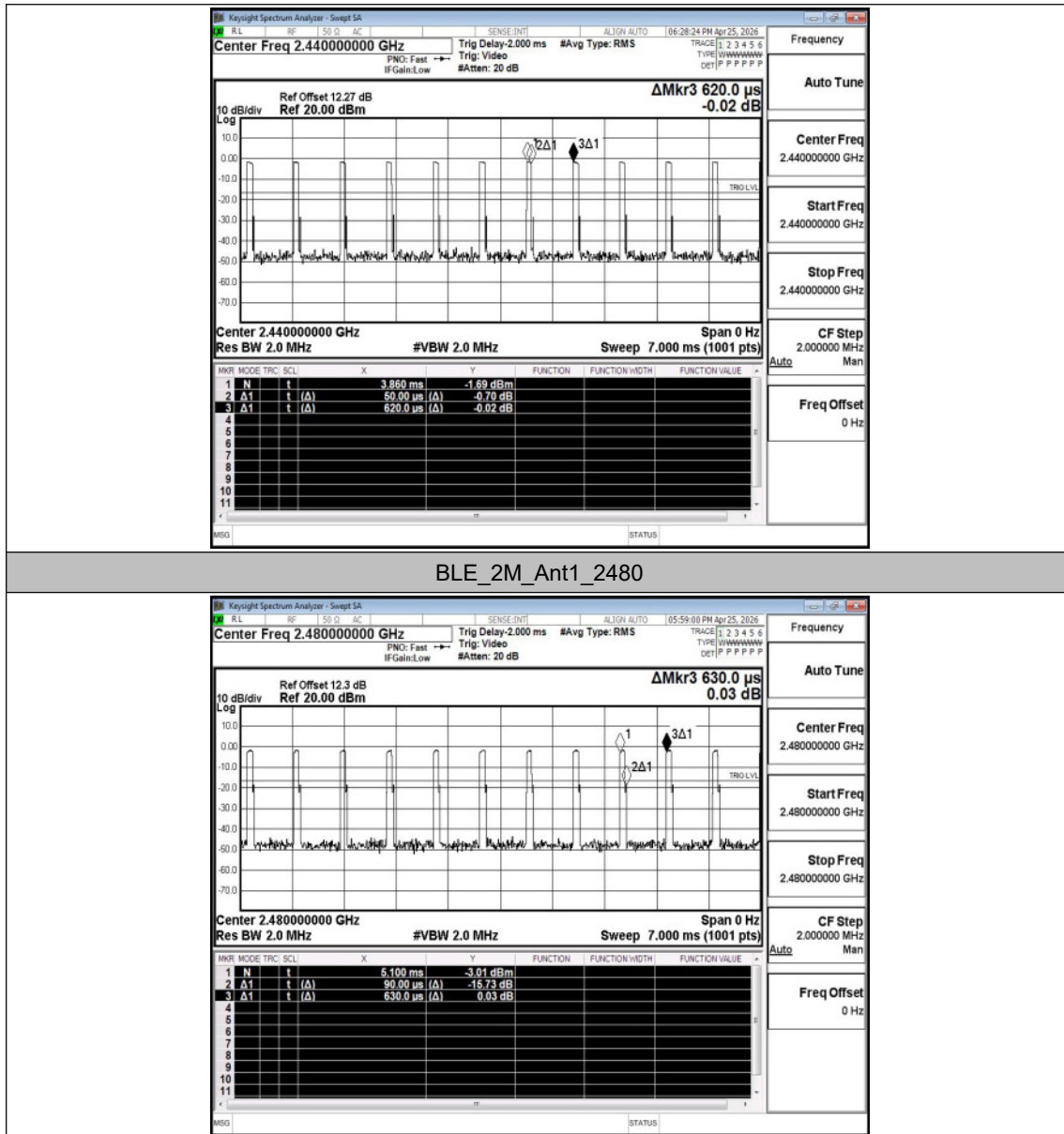
BLE_1M_Ant1_2480



BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



B.7 Emissions in Restricted Bands

Test Result

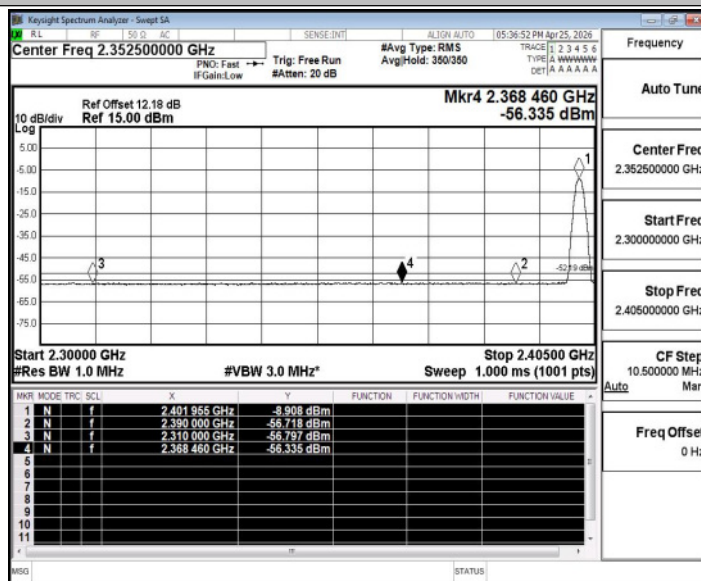
TestMode	Antenna	ChName	Freq(MHz)	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Gain [dBi]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-56.8	≤-52.19	3.00	7.99	49.39	≤54	PASS
				AV	2368.460	-56.33	≤-52.19	3.00	7.99	49.86	≤54	PASS
				AV	2390.000	-56.72	≤-52.19	3.00	7.99	49.47	≤54	PASS
				Peak	2310.000	-48.68	≤-24.20	3.00	0.00	49.52	≤74	PASS
				Peak	2376.440	-44.95	≤-24.20	3.00	0.00	53.25	≤74	PASS
				Peak	2390.000	-48.24	≤-24.20	3.00	0.00	49.96	≤74	PASS
		High	2480	AV	2483.500	-56.61	≤-52.65	3.00	8.45	50.04	≤54	PASS
				AV	2496.720	-56	≤-52.65	3.00	8.45	50.65	≤54	PASS
				AV	2500.000	-56.49	≤-52.65	3.00	8.45	50.16	≤54	PASS
				Peak	2483.500	-46.29	≤-24.20	3.00	0.00	51.91	≤74	PASS
				Peak	2486.080	-45.07	≤-24.20	3.00	0.00	53.13	≤74	PASS
				Peak	2500.000	-47.4	≤-24.20	3.00	0.00	50.80	≤74	PASS
BLE_2M	Ant1	Low	2402	AV	2310.000	-57.05	≤-55.14	3.00	10.94	52.09	≤54	PASS
				AV	2357.015	-56.36	≤-55.14	3.00	10.94	52.78	≤54	PASS
				AV	2390.000	-56.75	≤-55.14	3.00	10.94	52.39	≤54	PASS
				Peak	2310.000	-48.44	≤-24.20	3.00	0.00	49.76	≤74	PASS
				Peak	2377.910	-44.99	≤-24.20	3.00	0.00	53.21	≤74	PASS
				Peak	2390.000	-47.49	≤-24.20	3.00	0.00	50.71	≤74	PASS
		High	2480	AV	2483.500	-56.55	≤-52.65	3.00	8.45	50.10	≤54	PASS
				AV	2485.840	-55.65	≤-52.65	3.00	8.45	51.00	≤54	PASS
				AV	2500.000	-56.21	≤-52.65	3.00	8.45	50.44	≤54	PASS
				Peak	2483.500	-44.43	≤-24.20	3.00	0.00	53.77	≤74	PASS
				Peak	2483.680	-38.5	≤-24.20	3.00	0.00	59.70	≤74	PASS
				Peak	2500.000	-48.72	≤-24.20	3.00	0.00	49.48	≤74	PASS

Note:

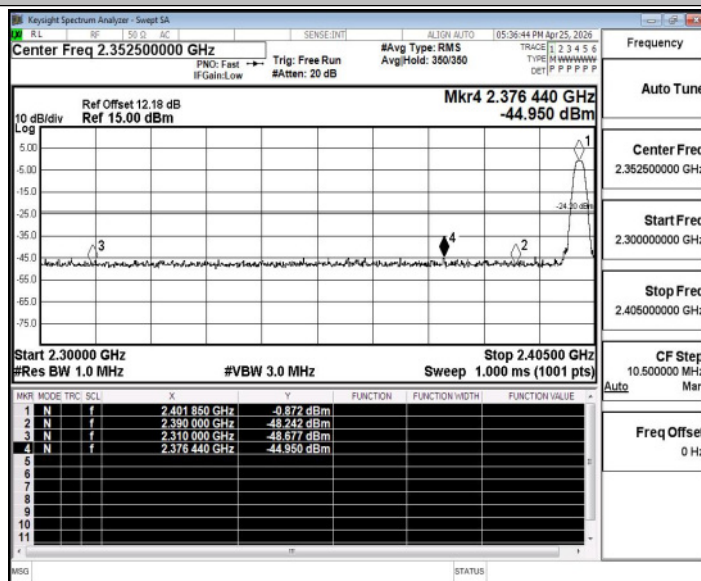
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

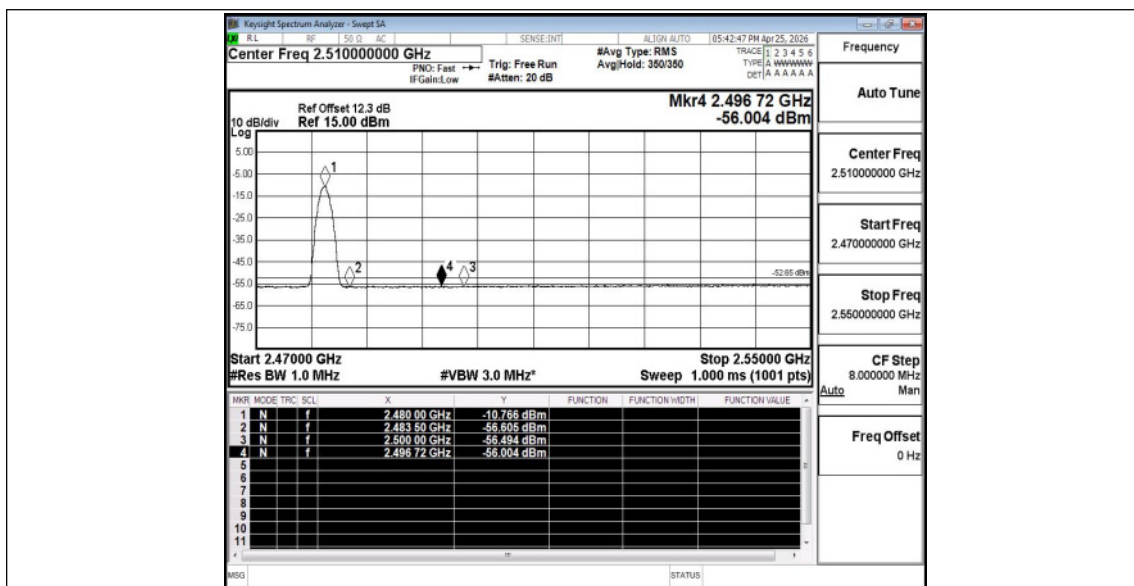
BLE_1M_Ant1_Low_2402_AV



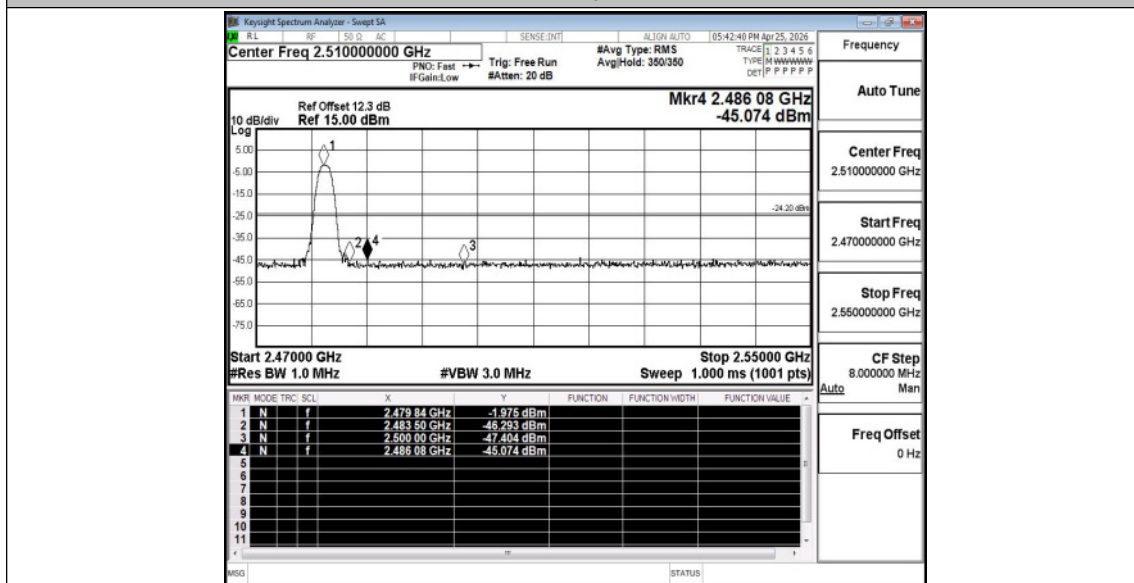
BLE_1M_Ant1_Low_2402_Peak



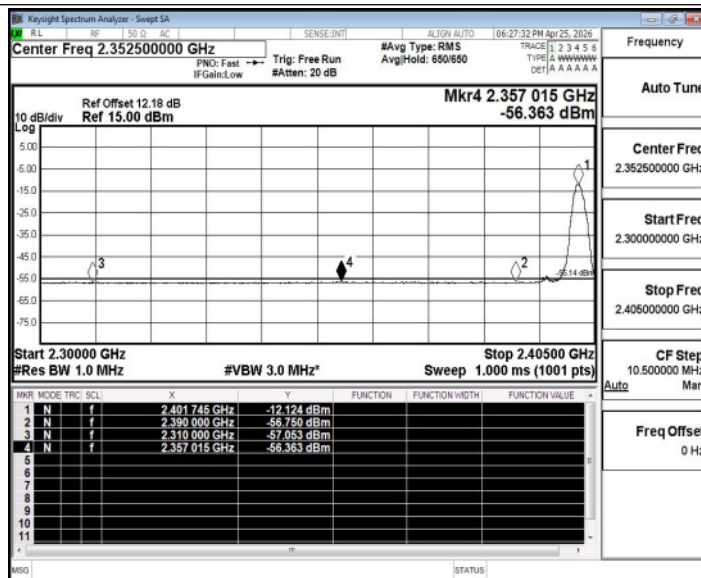
BLE_1M_Ant1_High_2480_AV



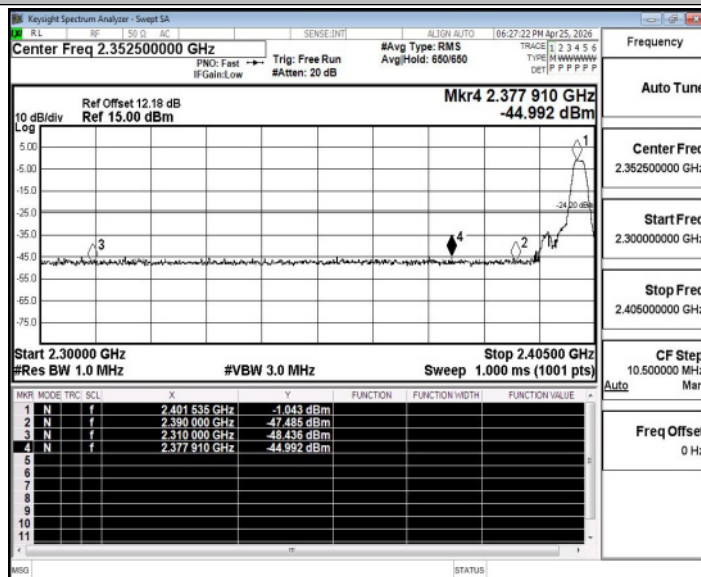
BLE_1M_Ant1_High_2480_Peak



BLE_2M_Ant1_Low_2402_AV



BLE_2M_Ant1_Low_2402_Peak



BLE_2M_Ant1_High_2480_AV

