

Appendix B

RF Test Data for BT LE (Conducted Measurement)

Product Name: massage chair

Test Model: SNLD-MGC023BK

Environmental Conditions

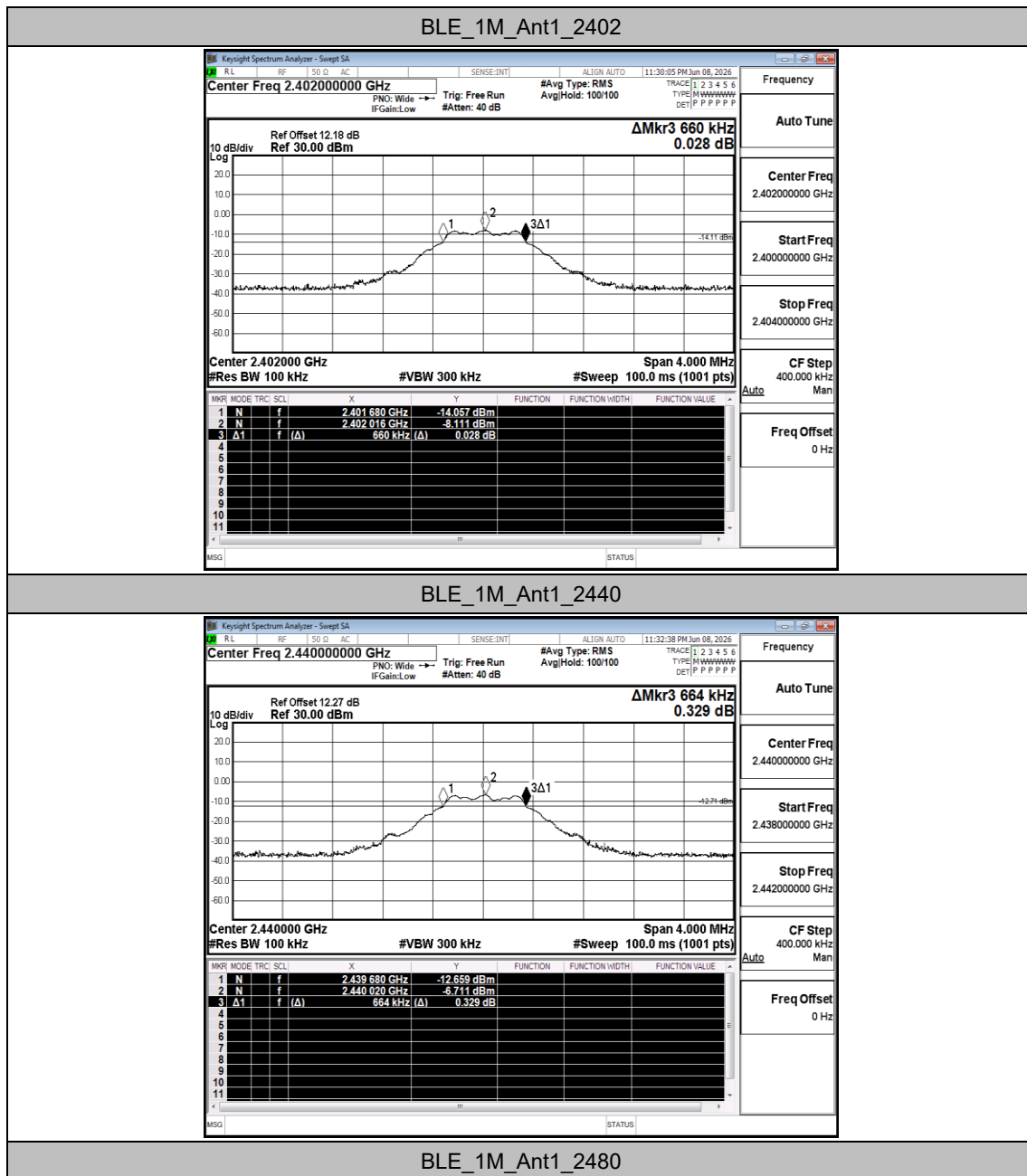
Temperature:	24.1°C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Zhang hai
Supervised by:	Fengliu Tang

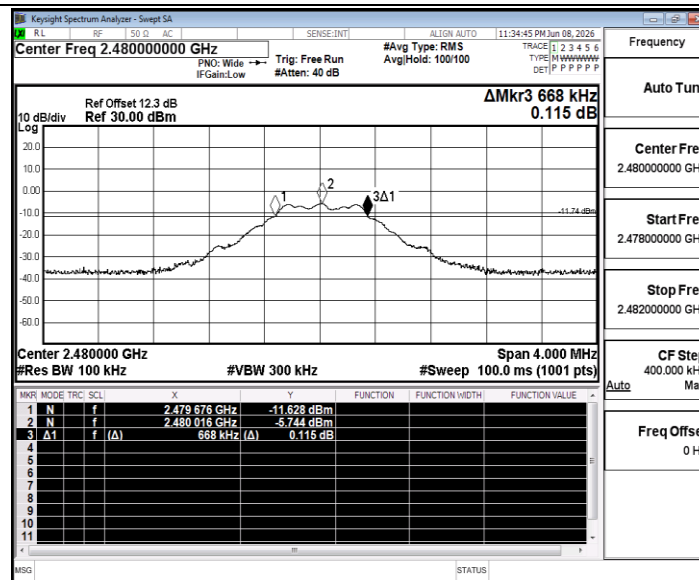
B.1 DTS Bandwidth

Test Result

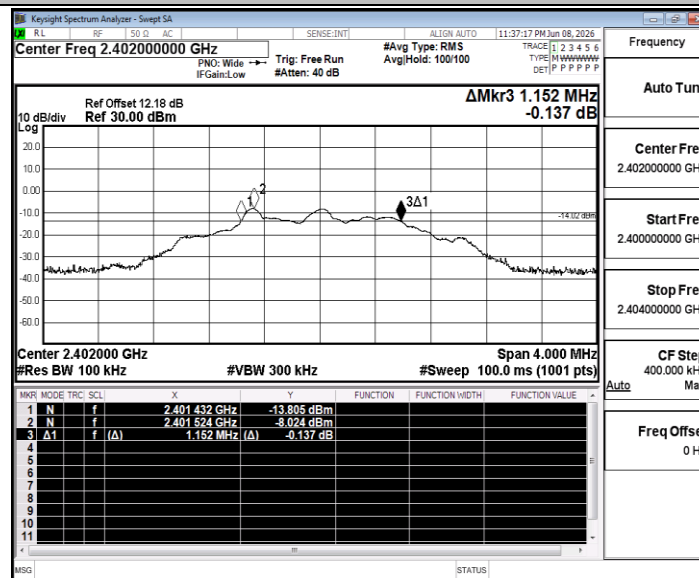
TestMode	Antenna	Freq (MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit [MHz]	Verdict
BLE_1M	Ant1	2402	0.660	2401.680	2402.340	0.5	PASS
		2440	0.664	2439.680	2440.344	0.5	PASS
		2480	0.668	2479.676	2480.344	0.5	PASS
BLE_2M	Ant1	2402	1.152	2401.432	2402.584	0.5	PASS
		2440	1.156	2439.436	2440.592	0.5	PASS
		2480	1.156	2479.436	2480.592	0.5	PASS

Test Graphs

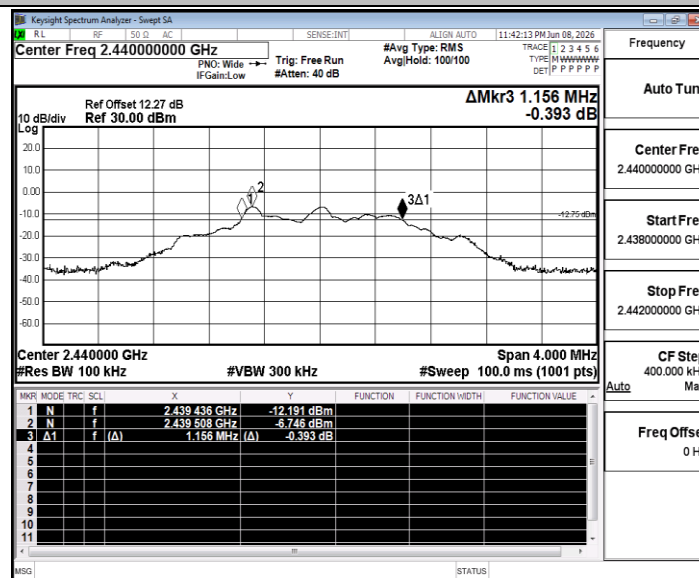




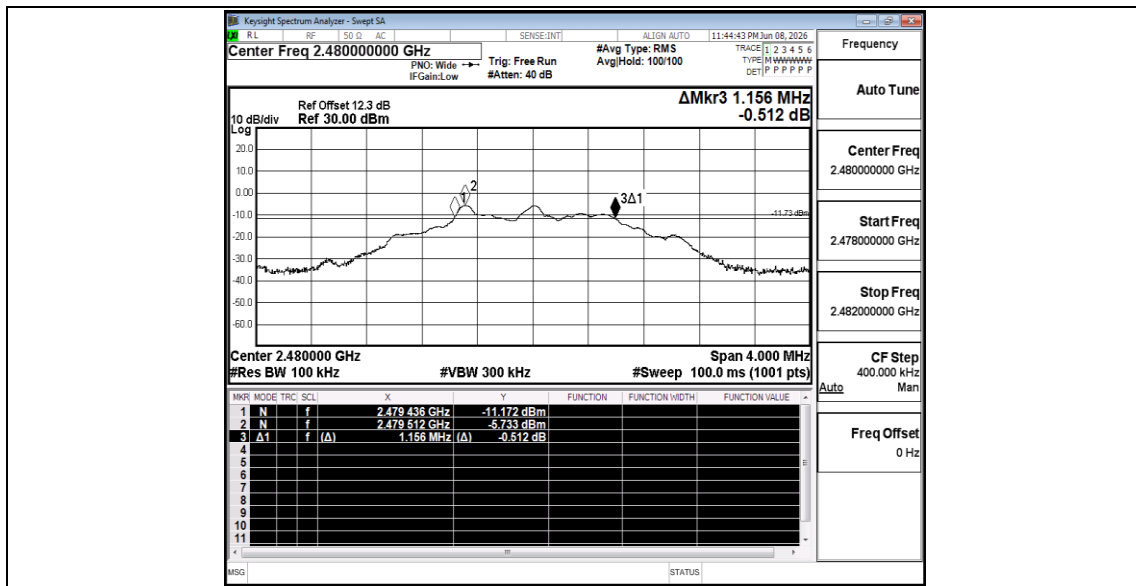
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

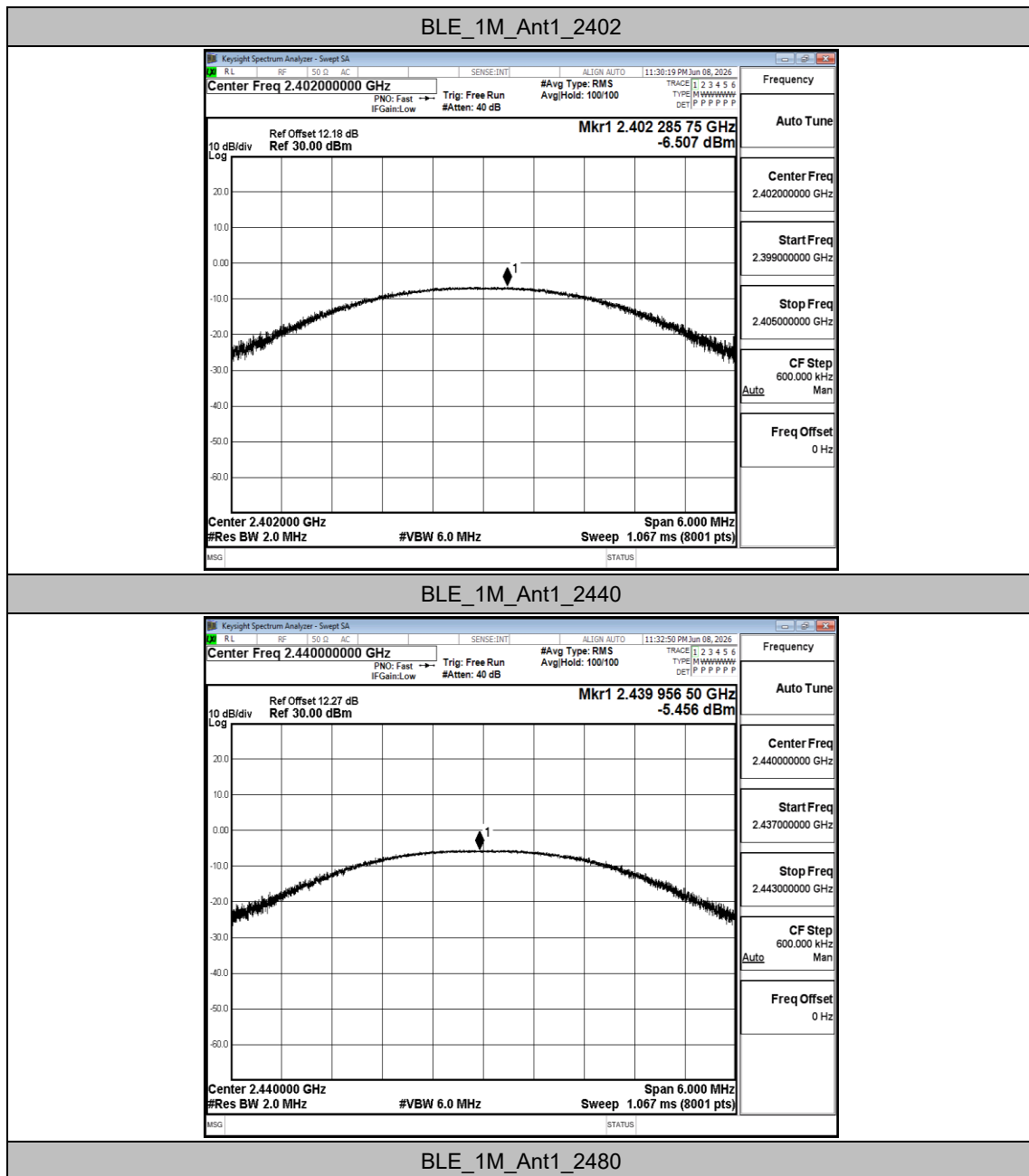


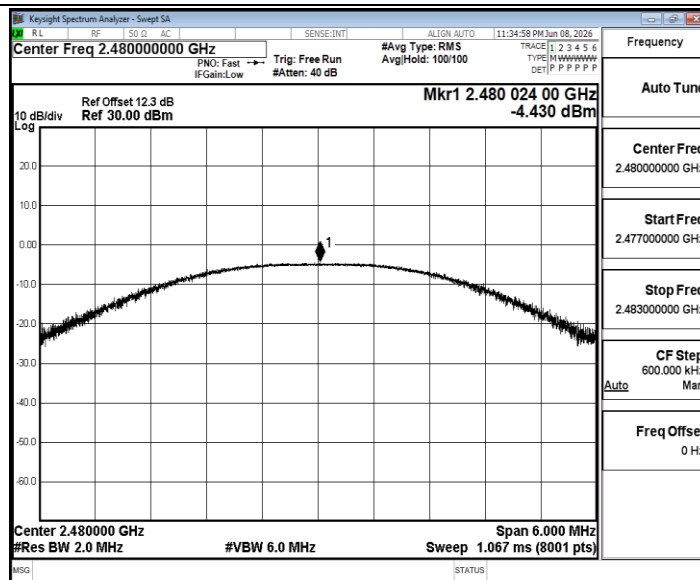
B.2 Maximum Peak conducted output power

Test Result Peak

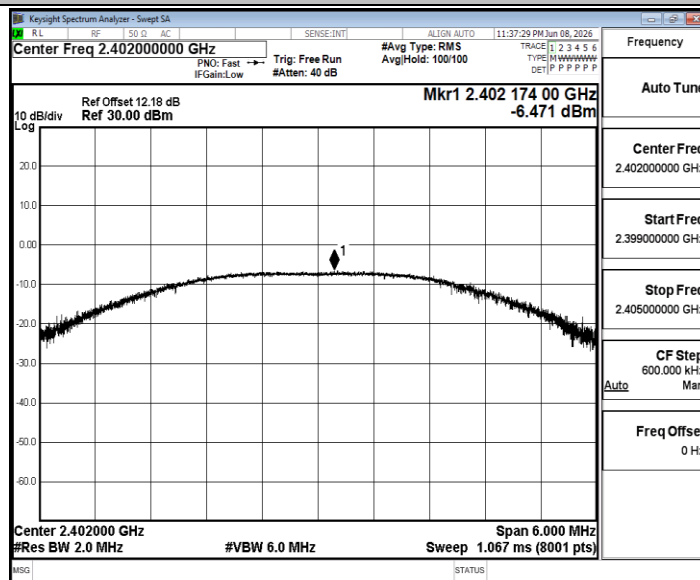
TestMode	Antenna	Freq (MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-6.51	≤30	PASS
		2440	-5.46	≤30	PASS
		2480	-4.43	≤30	PASS
BLE_2M	Ant1	2402	-6.47	≤30	PASS
		2440	-5.42	≤30	PASS
		2480	-4.50	≤30	PASS

Test Graphs Peak

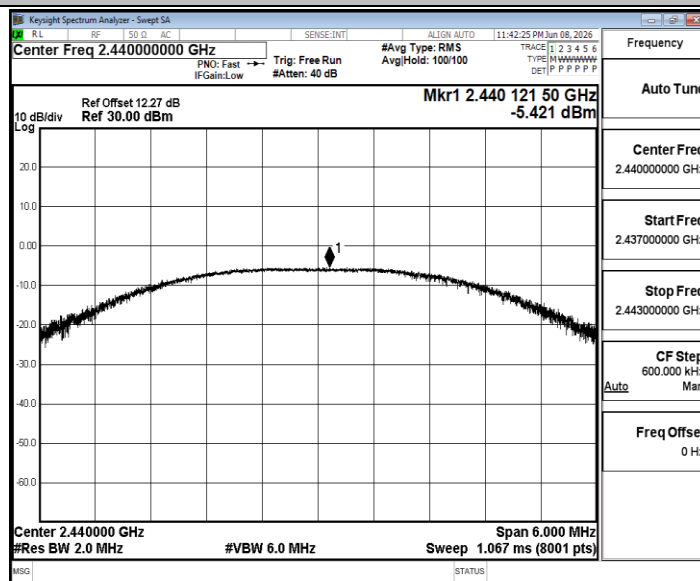




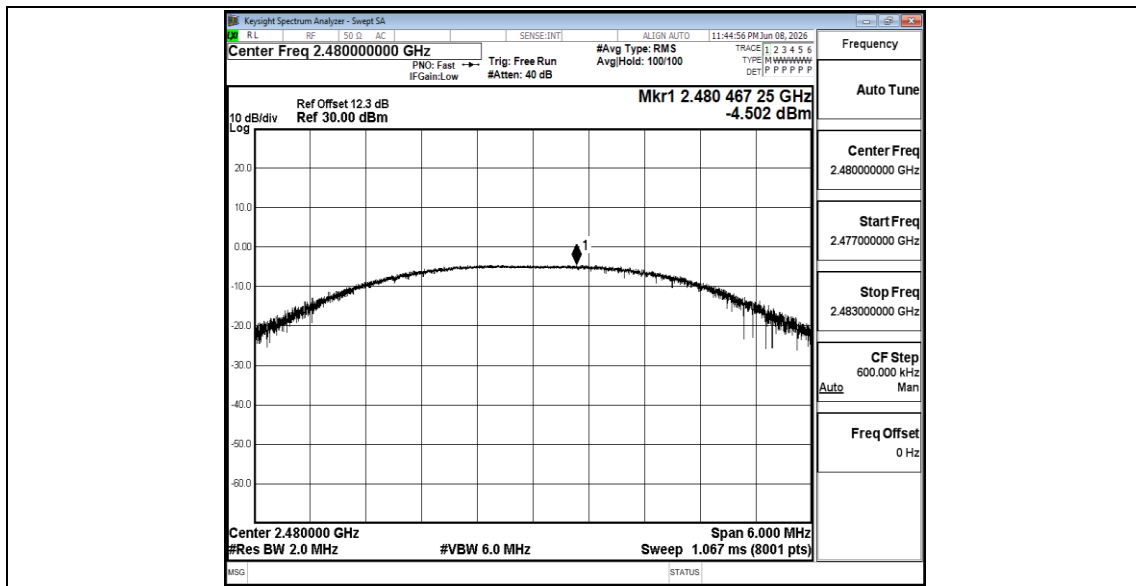
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

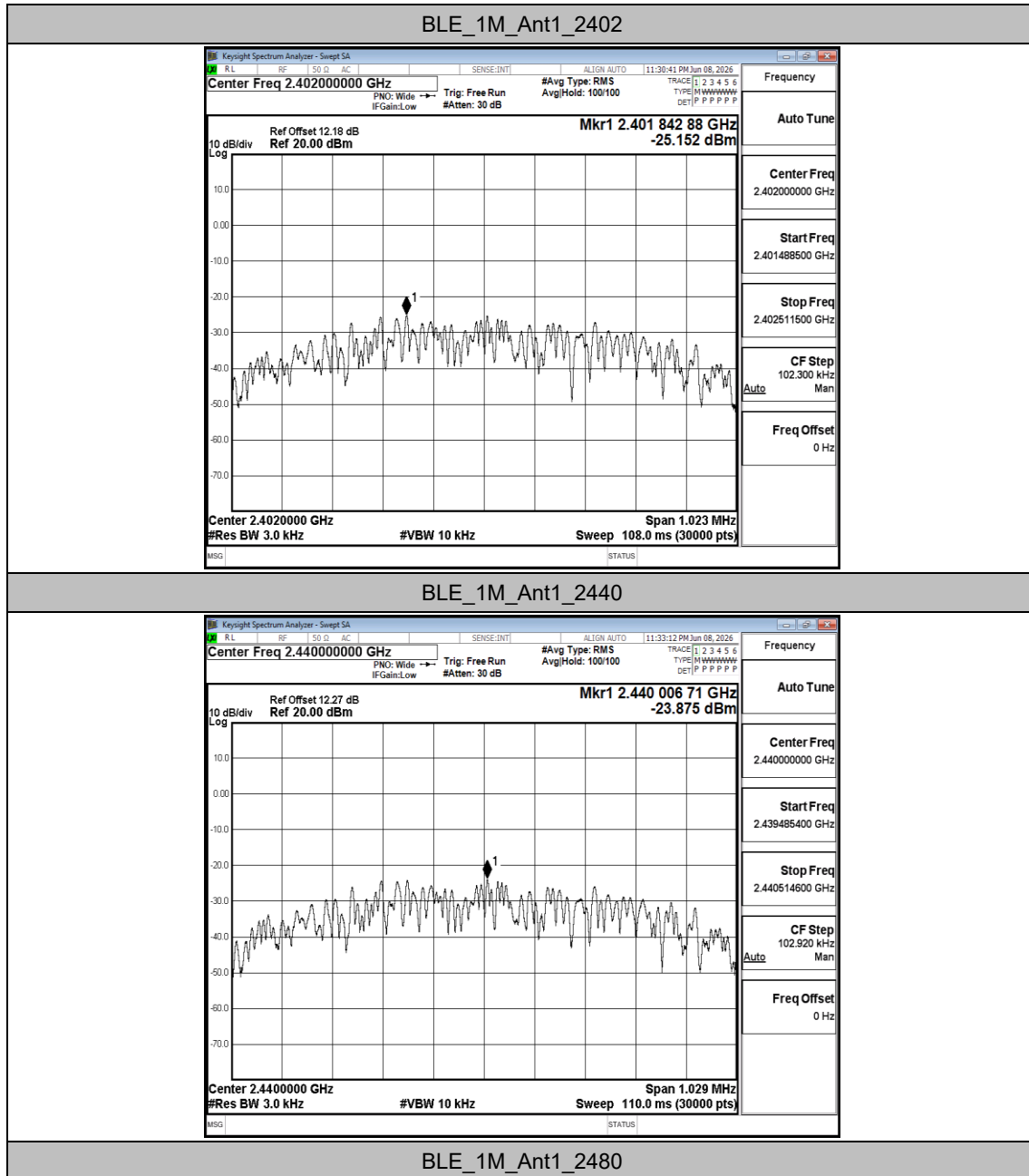


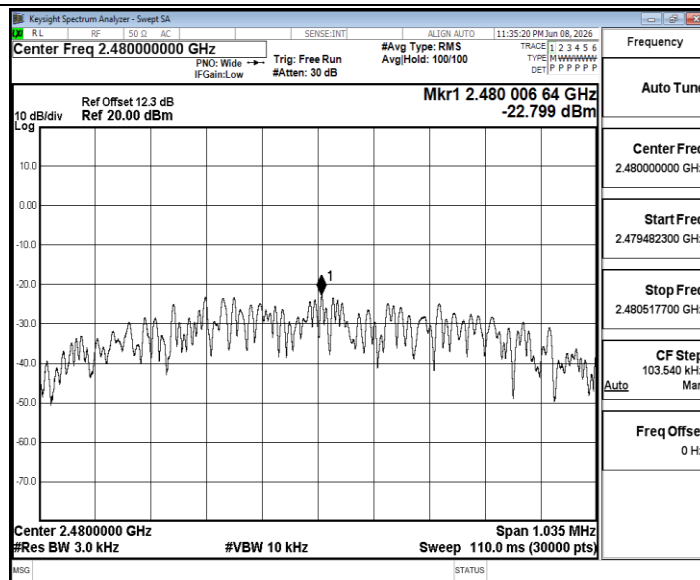
B.3 Maximum power spectral density

Test Result

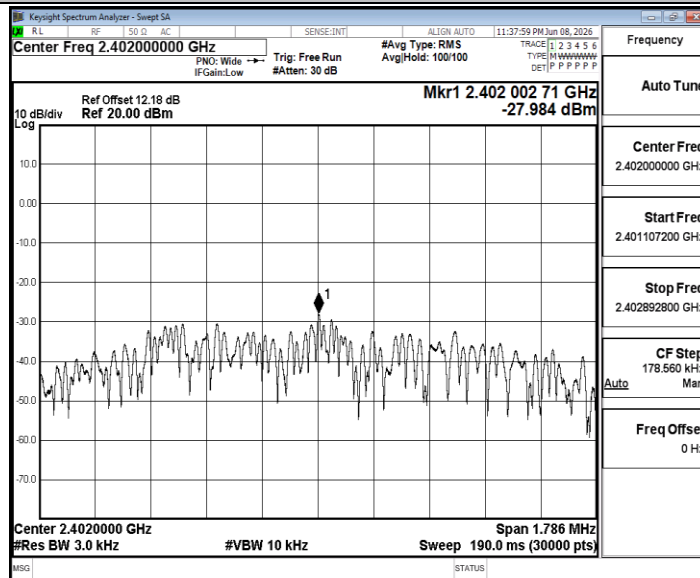
TestMode	Antenna	Freq (MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-25.15	≤8.00	PASS
		2440	-23.88	≤8.00	PASS
		2480	-22.80	≤8.00	PASS
BLE_2M	Ant1	2402	-27.98	≤8.00	PASS
		2440	-26.56	≤8.00	PASS
		2480	-25.41	≤8.00	PASS

Test Graphs

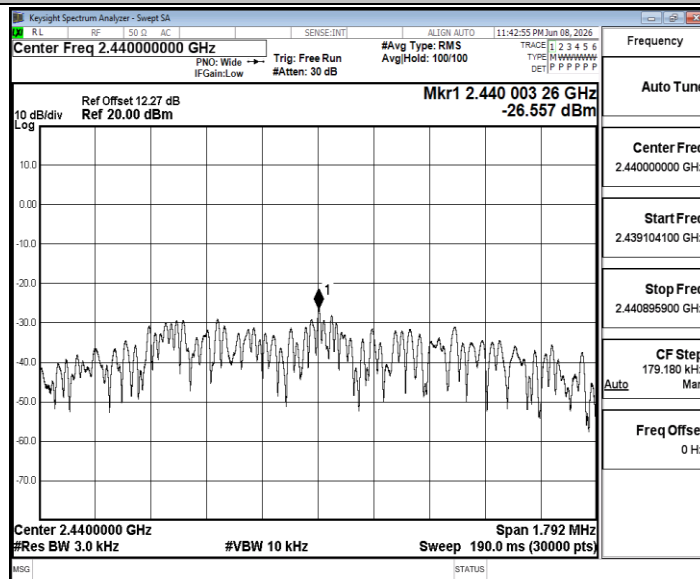




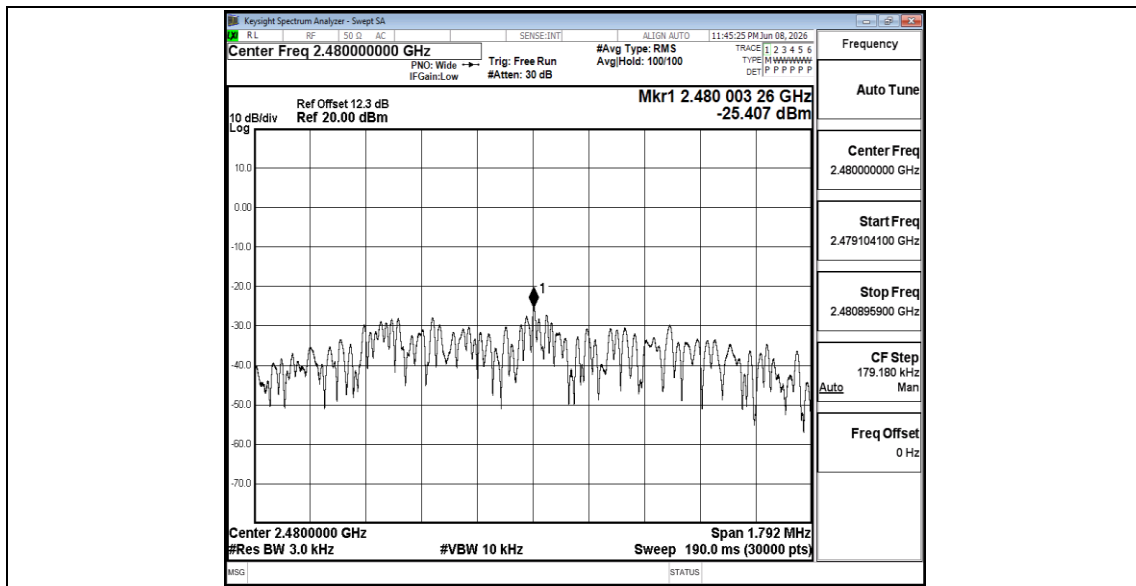
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

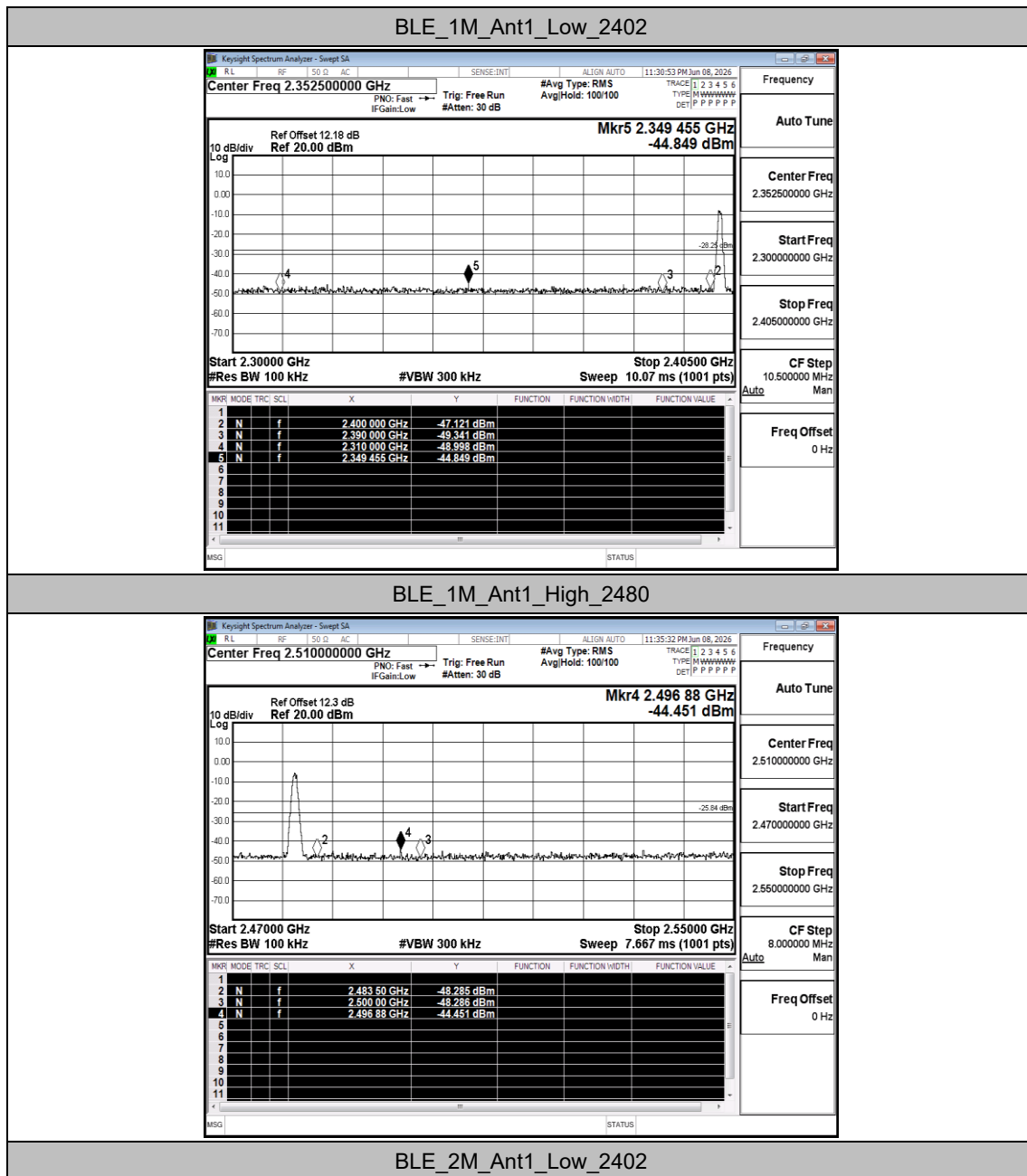


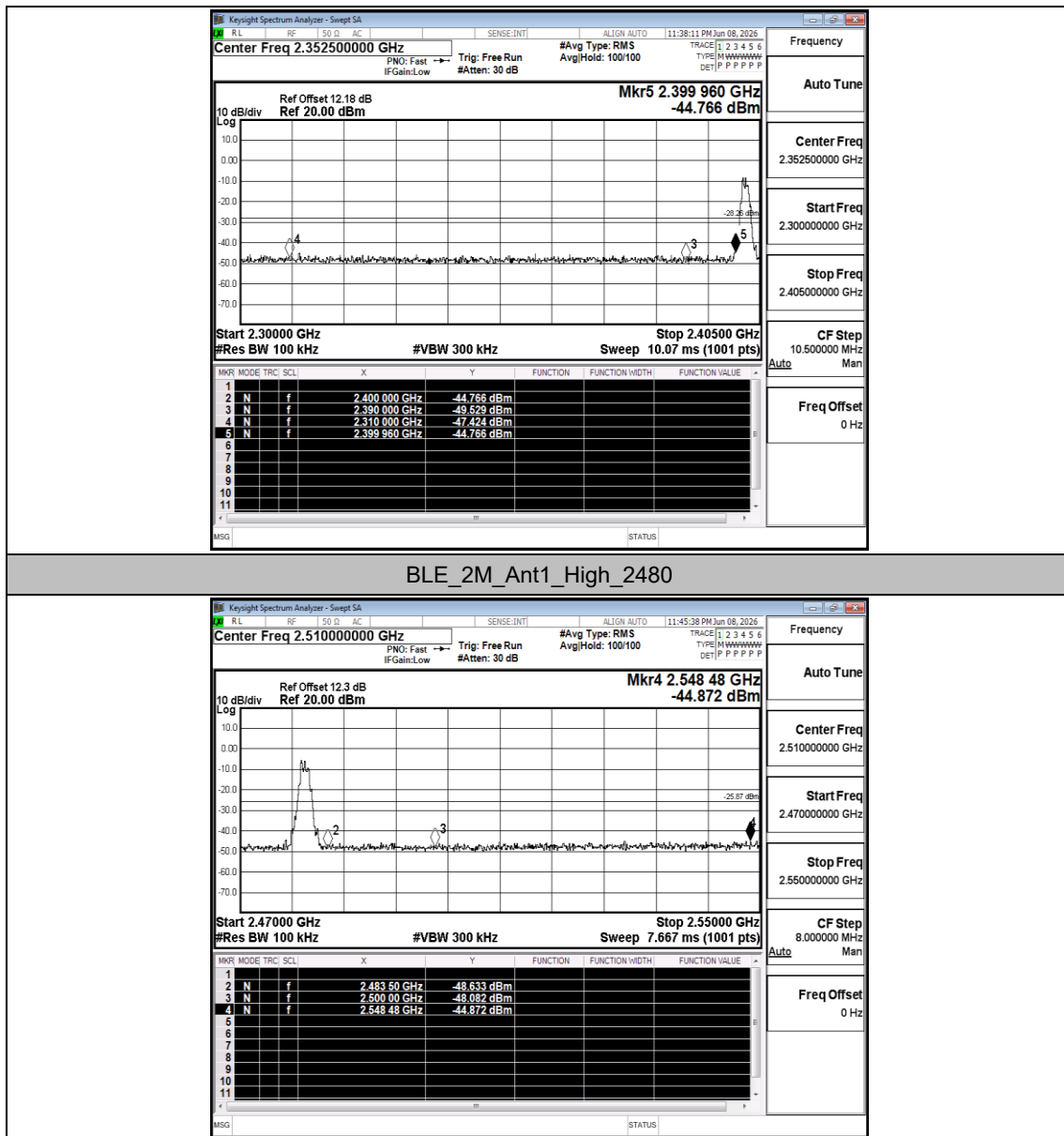
B.4 Band edge measurements

Test Result

TestMode	Antenna	ChName	Freq (MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-8.25	-44.85	≤-28.25	PASS
		High	2480	-5.84	-44.45	≤-25.84	PASS
BLE_2M	Ant1	Low	2402	-8.26	-44.77	≤-28.26	PASS
		High	2480	-5.87	-44.87	≤-25.87	PASS

Test Graphs



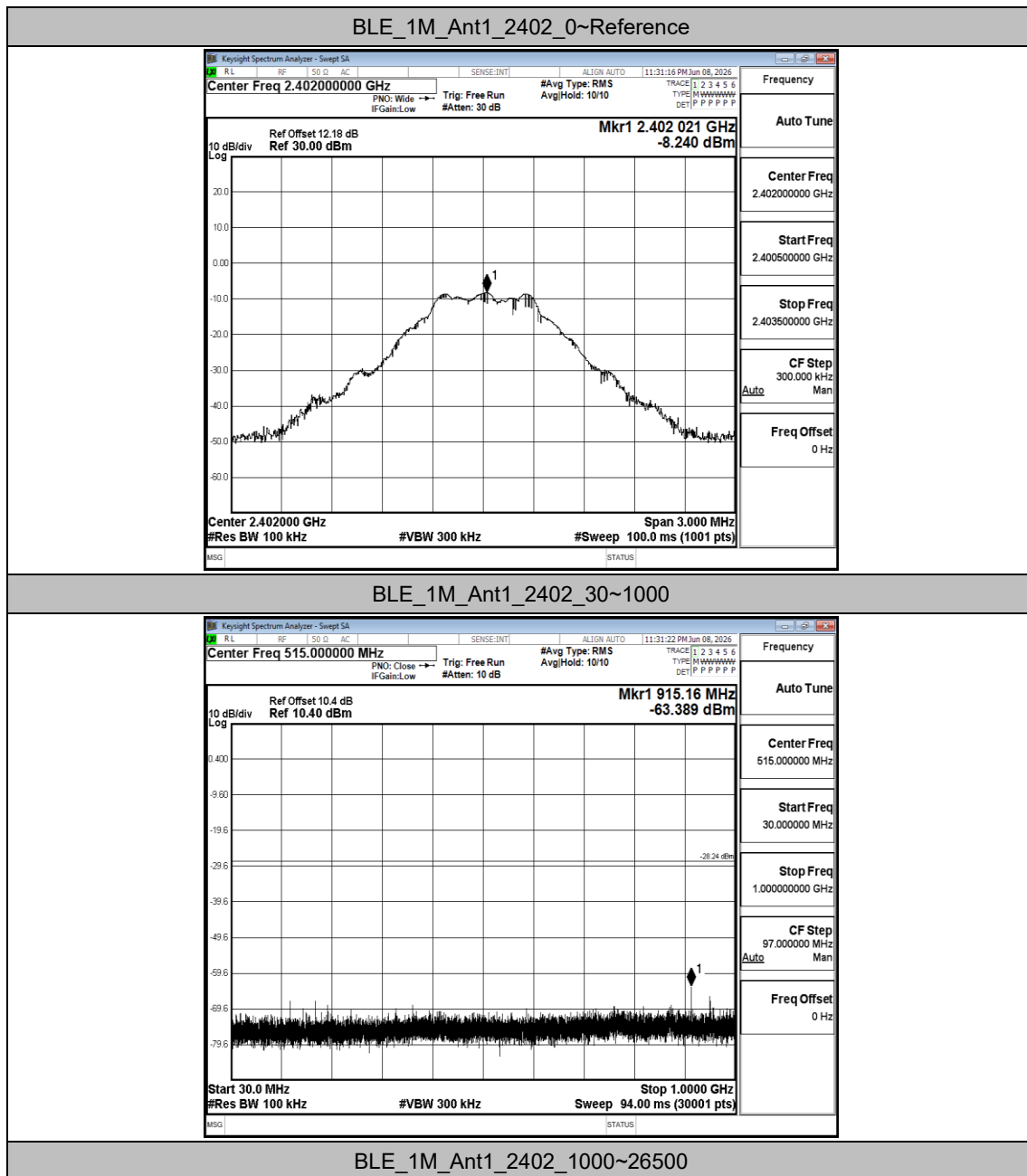


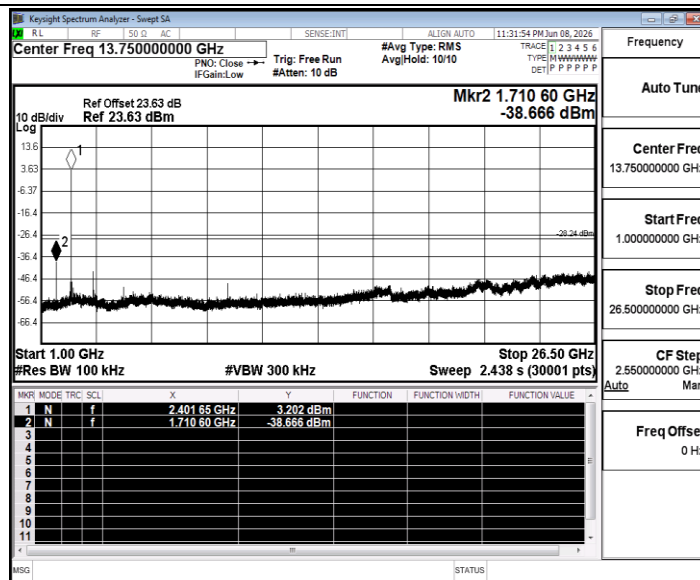
B.5 Conducted Spurious Emission

Test Result

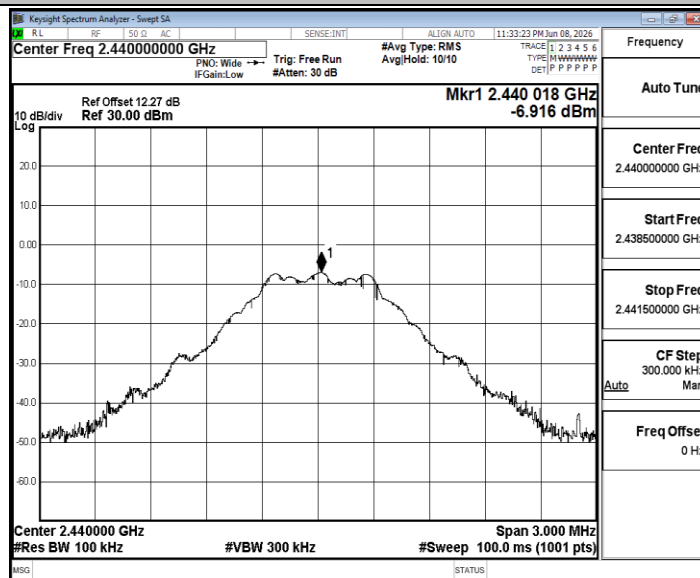
TestMode	Antenna	Freq (MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-8.24	-8.24	---	PASS
			30~1000	-8.24	-63.39	≤-28.24	PASS
			1000~26500	-8.24	-38.67	≤-28.24	PASS
		2440	Reference	-6.92	-6.92	---	PASS
			30~1000	-6.92	-65.86	≤-26.92	PASS
			1000~26500	-6.92	-35.73	≤-26.92	PASS
		2480	Reference	-5.84	-5.84	---	PASS
			30~1000	-5.84	-65.93	≤-25.84	PASS
			1000~26500	-5.84	-38.27	≤-25.84	PASS
BLE_2M	Ant1	2402	Reference	-8.11	-8.11	---	PASS
			30~1000	-8.11	-56.09	≤-28.11	PASS
			1000~26500	-8.11	-37.11	≤-28.11	PASS
		2440	Reference	-6.90	-6.90	---	PASS
			30~1000	-6.90	-59.37	≤-26.9	PASS
			1000~26500	-6.90	-37.48	≤-26.9	PASS
		2480	Reference	-5.83	-5.83	---	PASS
			30~1000	-5.83	-57.43	≤-25.83	PASS
			1000~26500	-5.83	-37.03	≤-25.83	PASS

Test Graphs

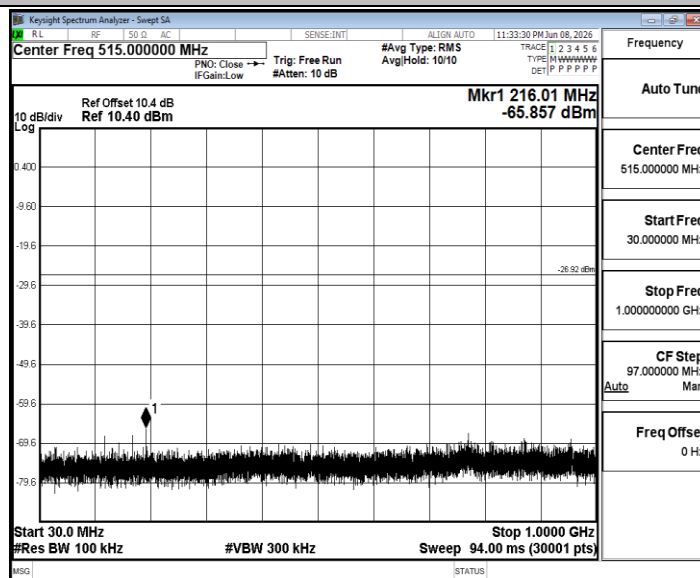




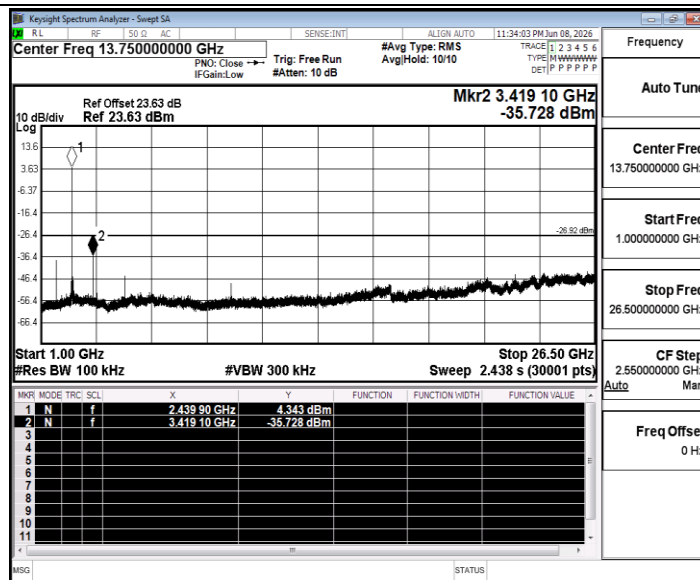
BLE_1M_Ant1_2440_0~Reference



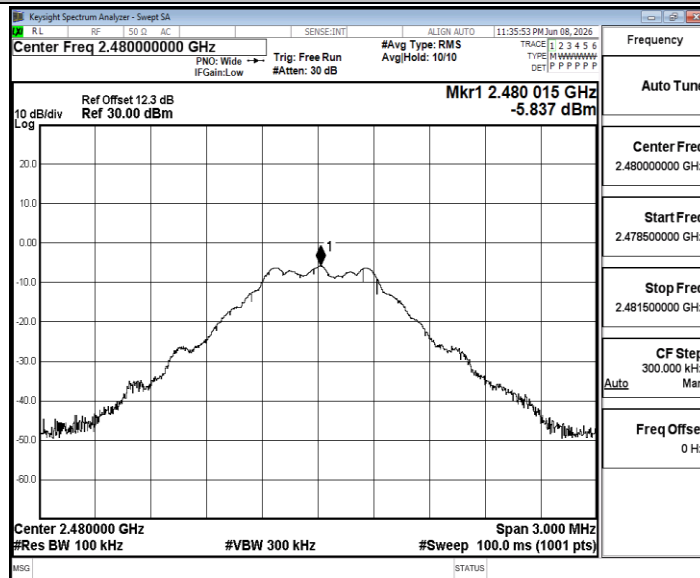
BLE_1M_Ant1_2440_30~1000



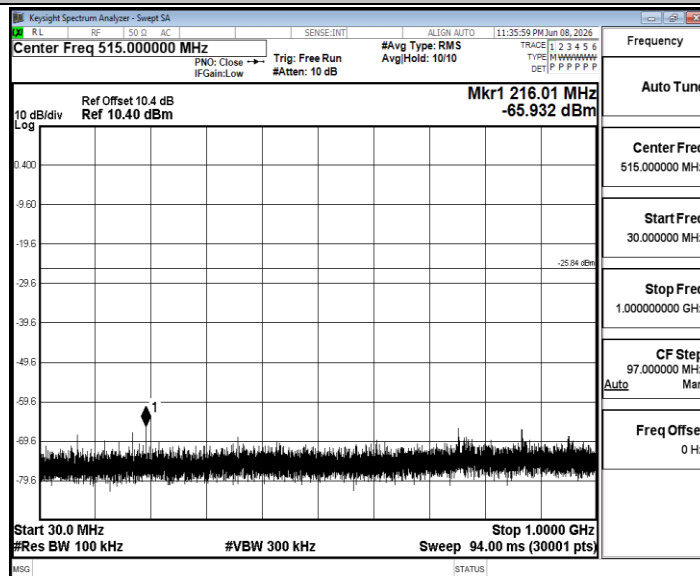
BLE_1M_Ant1_2440_1000~26500



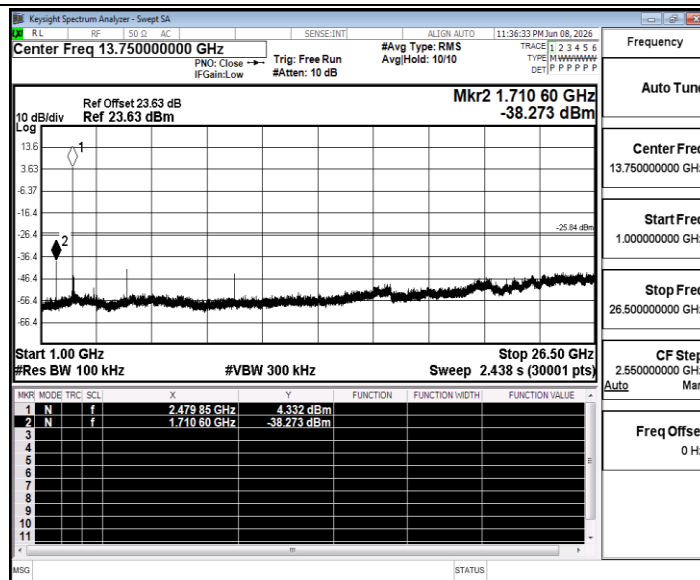
BLE_1M_Ant1_2480_0~Reference



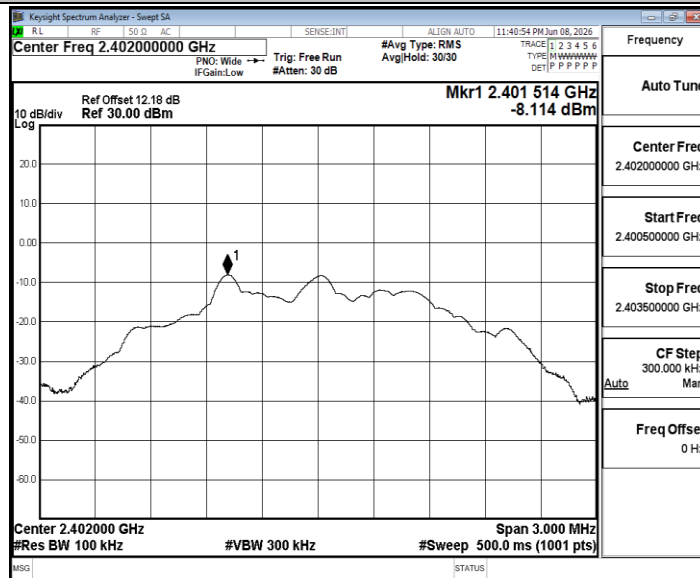
BLE_1M_Ant1_2480_30~1000



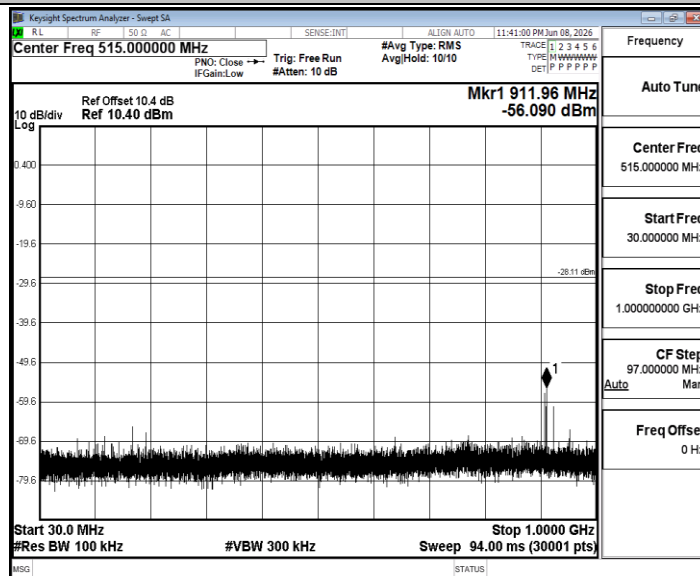
BLE_1M_Ant1_2480_1000~26500



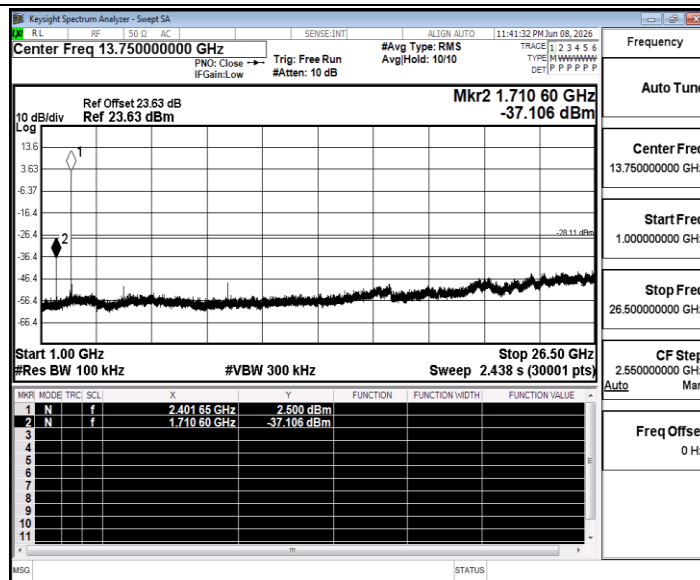
BLE_2M_Ant1_2402_0~Reference



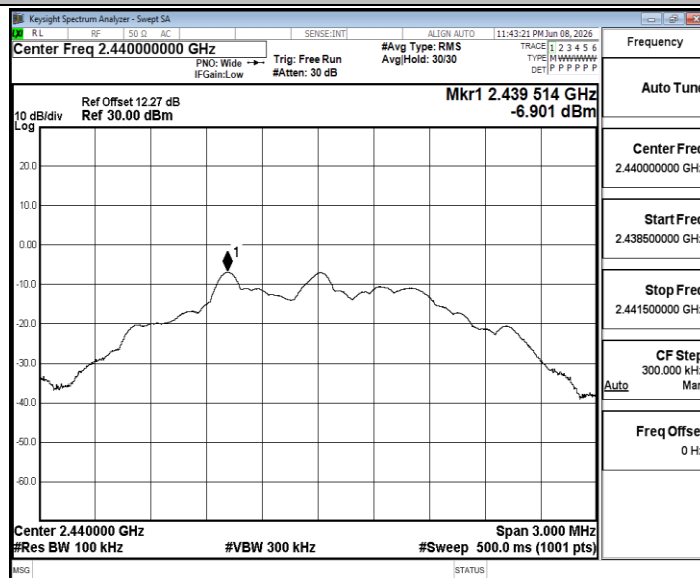
BLE_2M_Ant1_2402_30~1000



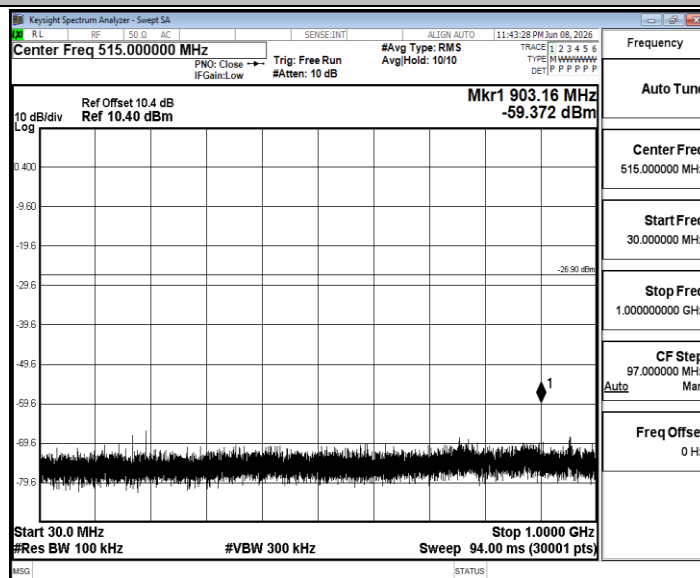
BLE_2M_Ant1_2402_1000~26500



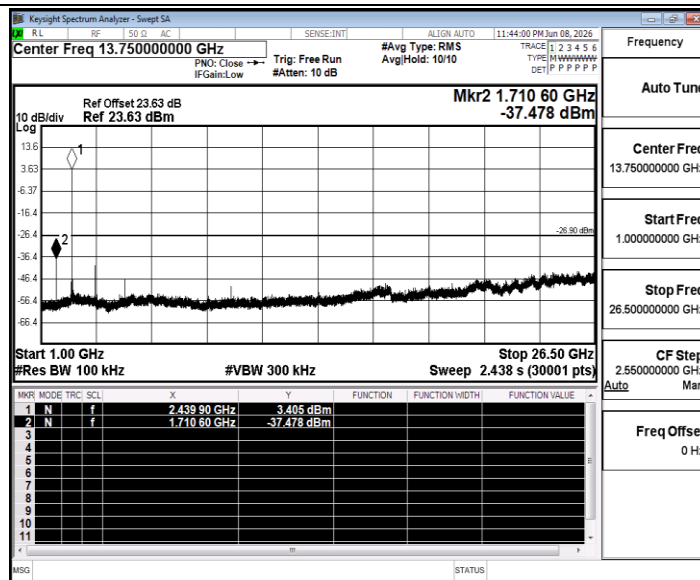
BLE_2M_Ant1_2440_0~Reference



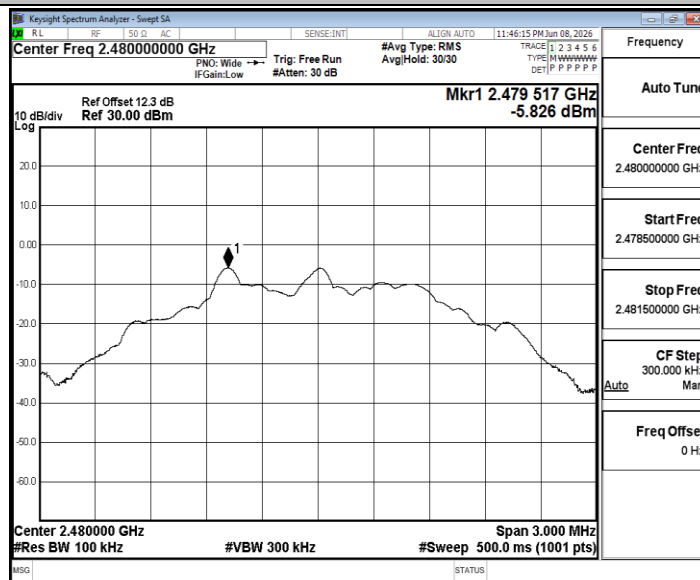
BLE_2M_Ant1_2440_30~1000



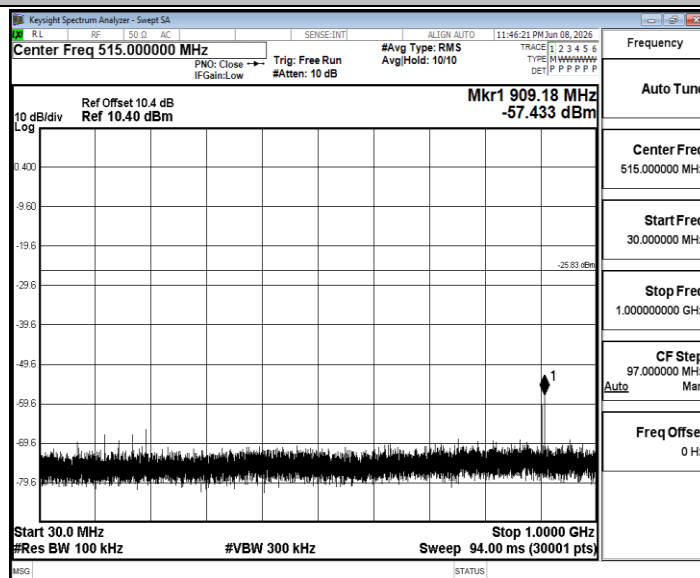
BLE_2M_Ant1_2440_1000~26500



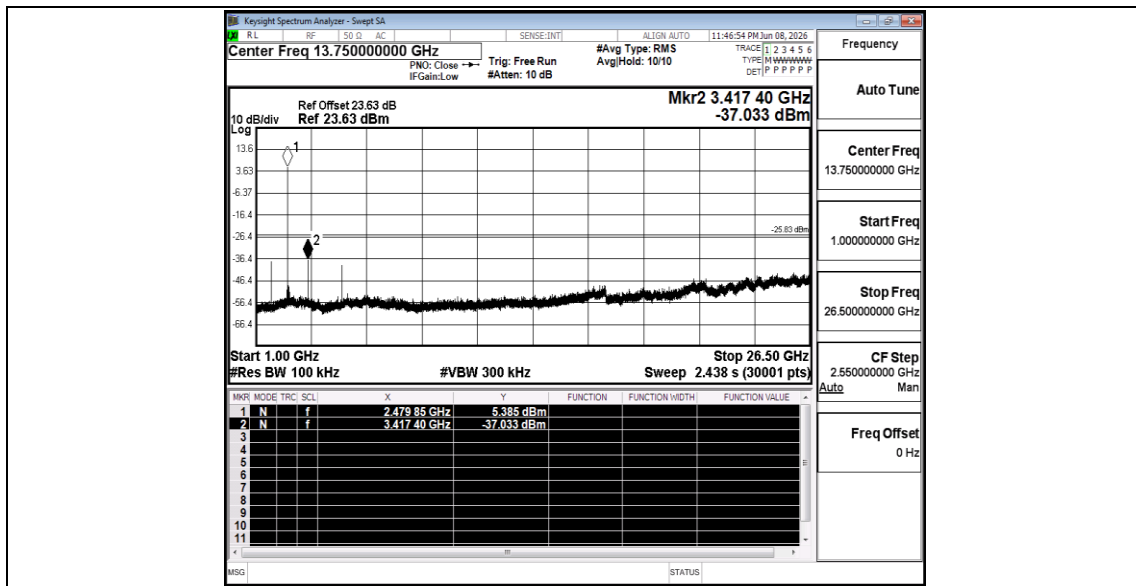
BLE_2M_Ant1_2480_0~Reference



BLE_2M_Ant1_2480_30~1000



BLE_2M_Ant1_2480_1000~26500

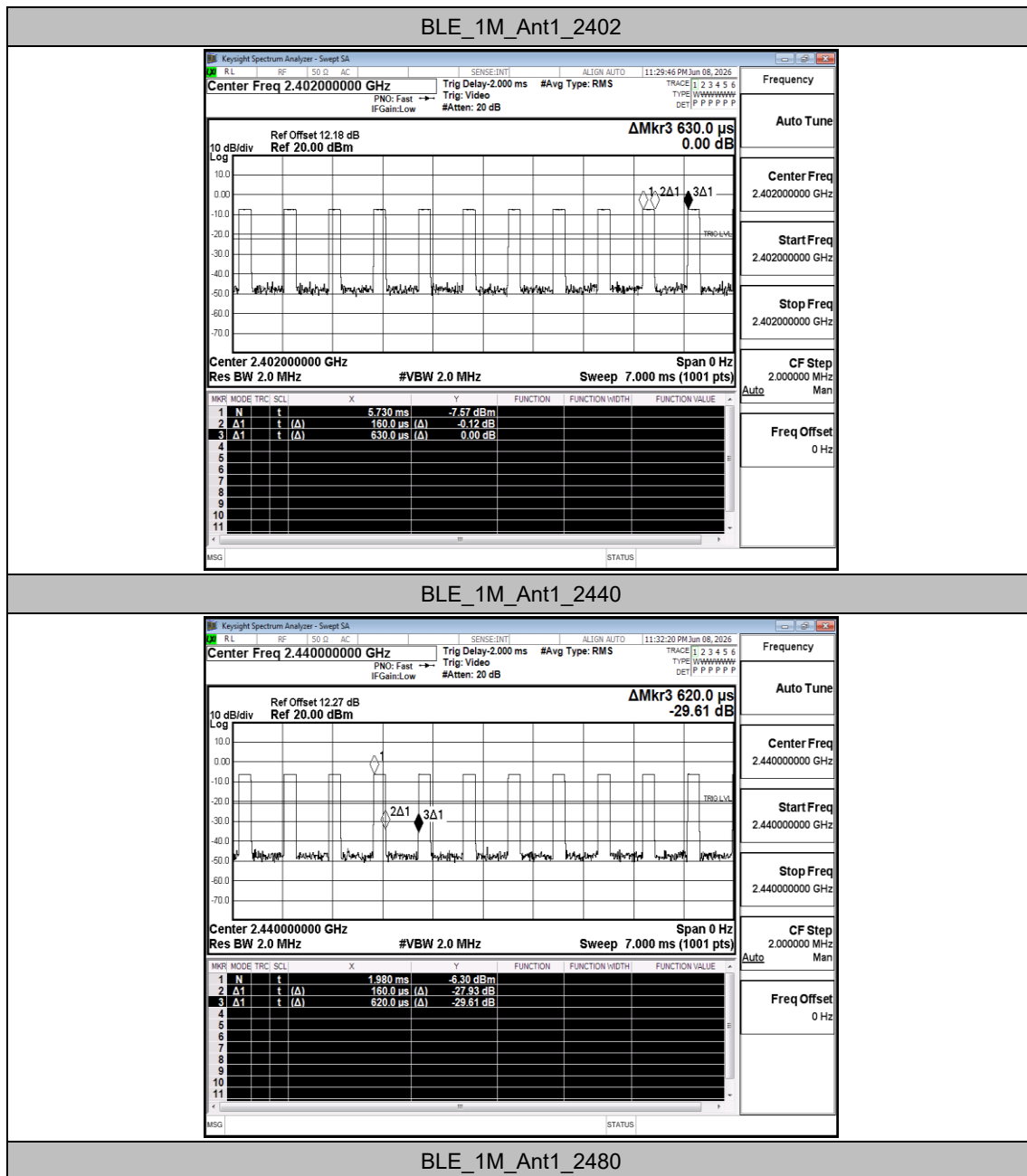


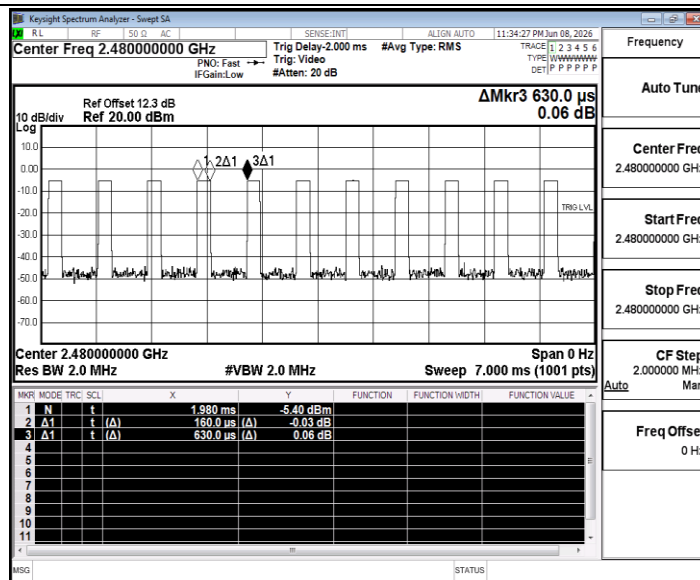
B.6 Duty Cycle

Test Result

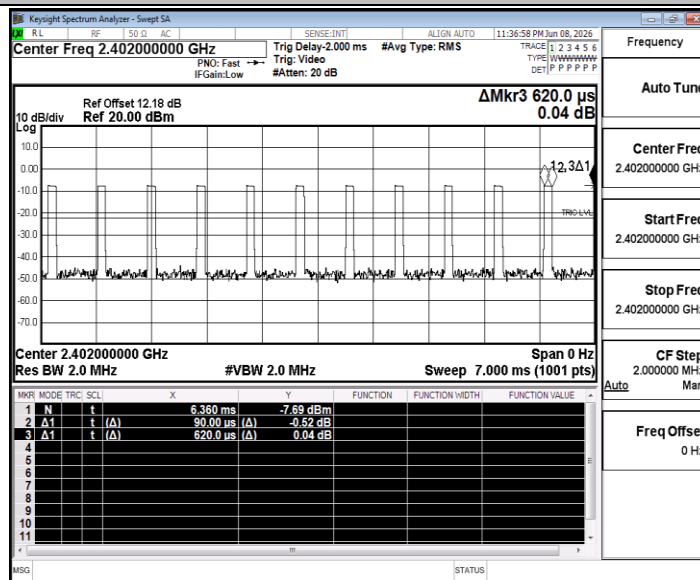
TestMode	Antenna	Freq (MHz)	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	0.16	0.63	0.2540	25.40	5.95	---	---
		2440	0.16	0.62	0.2581	25.81	5.88	---	---
		2480	0.16	0.63	0.2540	25.40	5.95	---	---
BLE_2M	Ant1	2402	0.09	0.62	0.1452	14.52	8.38	---	---
		2440	0.09	0.62	0.1452	14.52	8.38	---	---
		2480	0.09	0.62	0.1452	14.52	8.38	---	---

Test Graphs

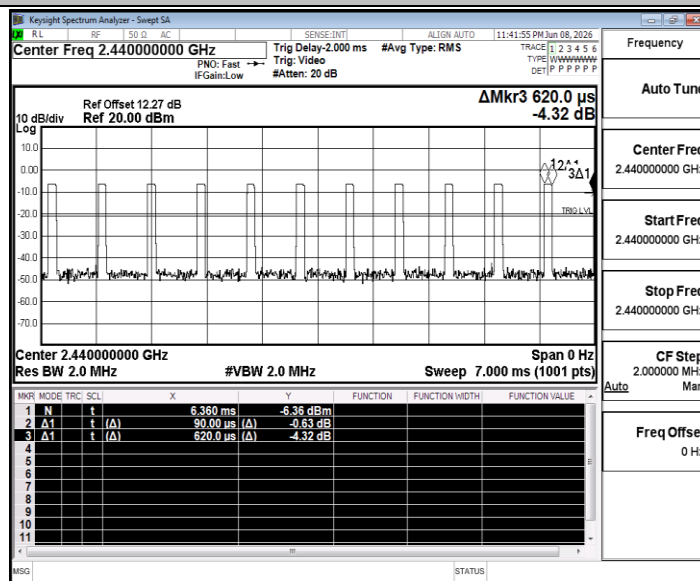




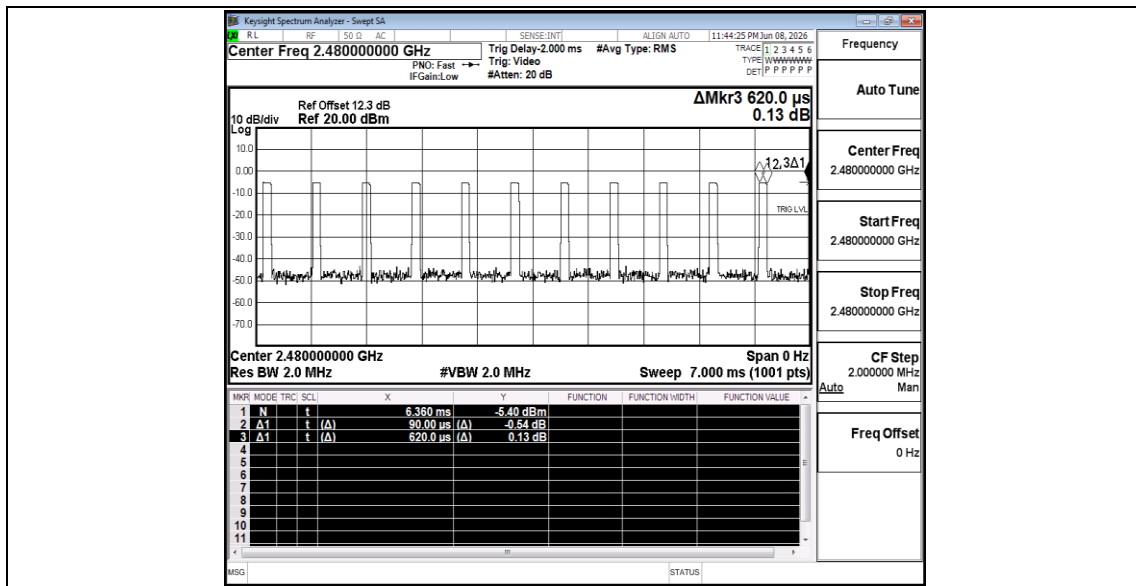
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



B.7 Emissions in Restricted Bands

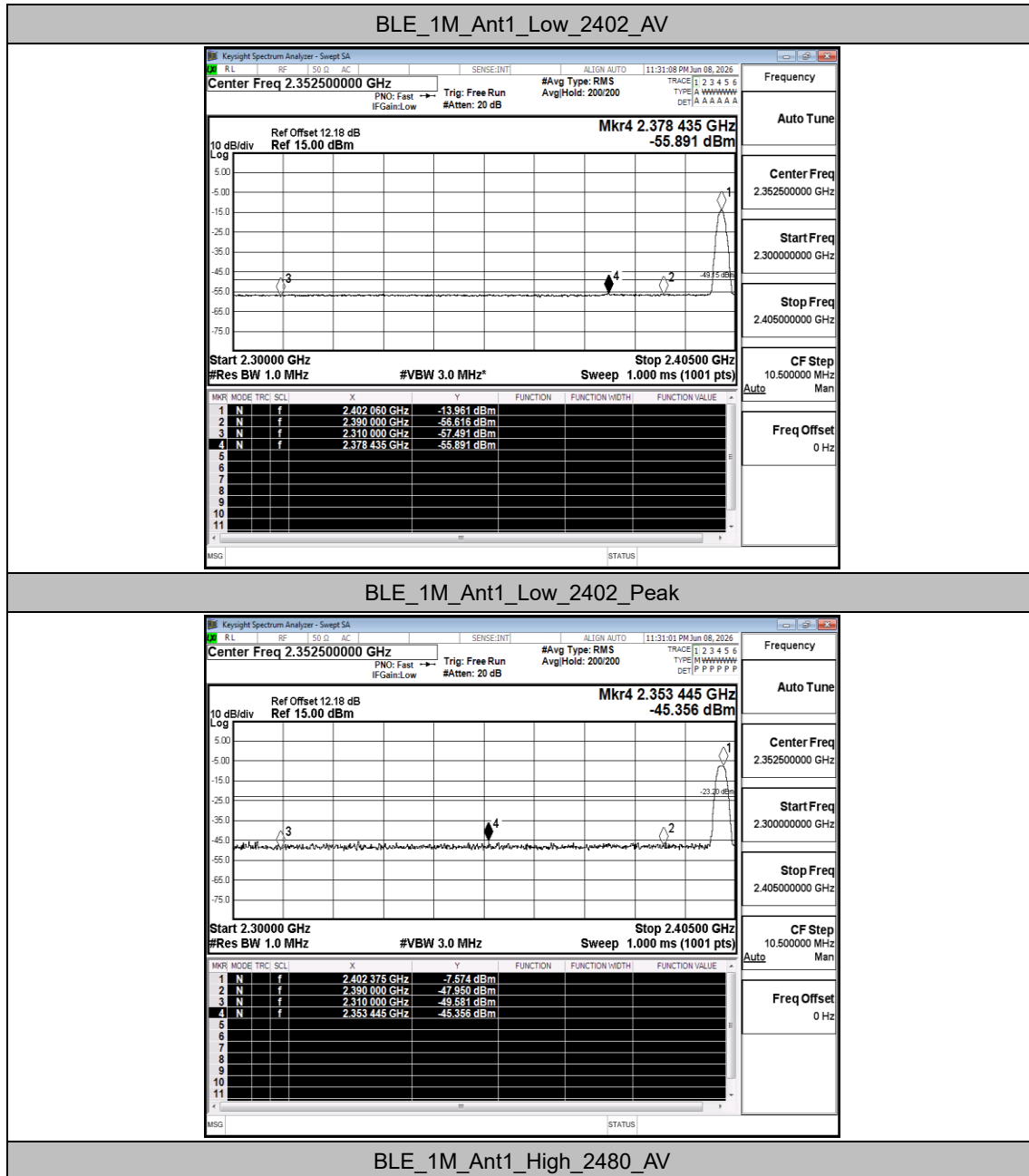
Test Result

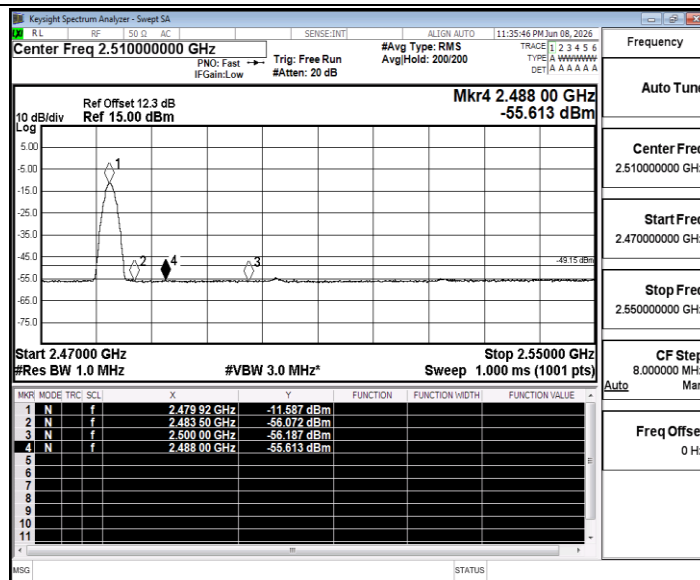
TestMode	Antenna	Ch Name	Freq (MHz)	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Gain [dBi]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-57.49	≤-49.15	2.00	5.95	45.66	≤54	PASS
				AV	2378.435	-55.89	≤-49.15	2.00	5.95	47.26	≤54	PASS
				AV	2390.000	-56.62	≤-49.15	2.00	5.95	46.53	≤54	PASS
				Peak	2310.000	-49.58	≤-23.20	2.00	0.00	47.62	≤74	PASS
				Peak	2353.445	-45.36	≤-23.20	2.00	0.00	51.84	≤74	PASS
				Peak	2390.000	-47.95	≤-23.20	2.00	0.00	49.25	≤74	PASS
		High	2480	AV	2483.500	-56.07	≤-49.15	2.00	5.95	47.08	≤54	PASS
				AV	2488.000	-55.61	≤-49.15	2.00	5.95	47.54	≤54	PASS
				AV	2500.000	-56.19	≤-49.15	2.00	5.95	46.96	≤54	PASS
				Peak	2483.500	-47.59	≤-23.20	2.00	0.00	49.61	≤74	PASS
				Peak	2494.560	-45.52	≤-23.20	2.00	0.00	51.68	≤74	PASS
				Peak	2500.000	-47.48	≤-23.20	2.00	0.00	49.72	≤74	PASS
BLE_2M	Ant1	Low	2402	AV	2310.000	-56.84	≤-51.58	2.00	8.38	48.74	≤54	PASS
				AV	2379.485	-56.35	≤-51.58	2.00	8.38	49.23	≤54	PASS
				AV	2390.000	-56.96	≤-51.58	2.00	8.38	48.62	≤54	PASS
				Peak	2310.000	-48.38	≤-23.20	2.00	0.00	48.82	≤74	PASS
				Peak	2372.345	-45.18	≤-23.20	2.00	0.00	52.02	≤74	PASS
				Peak	2390.000	-47.57	≤-23.20	2.00	0.00	49.63	≤74	PASS
		High	2480	AV	2483.500	-56.53	≤-51.58	2.00	8.38	49.05	≤54	PASS
				AV	2499.040	-55.78	≤-51.58	2.00	8.38	49.80	≤54	PASS
				AV	2500.000	-56.16	≤-51.58	2.00	8.38	49.42	≤54	PASS
				Peak	2483.500	-47.03	≤-23.20	2.00	0.00	50.17	≤74	PASS
				Peak	2485.440	-41.7	≤-23.20	2.00	0.00	55.50	≤74	PASS
				Peak	2500.000	-46.09	≤-23.20	2.00	0.00	51.11	≤74	PASS

Note:

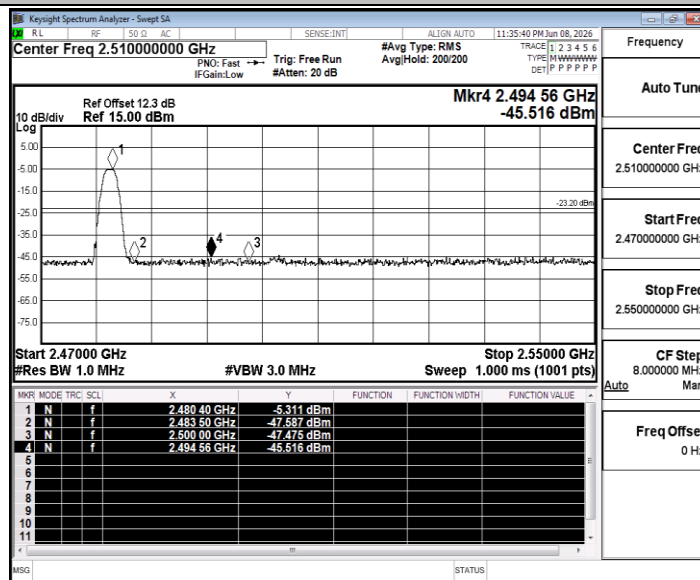
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

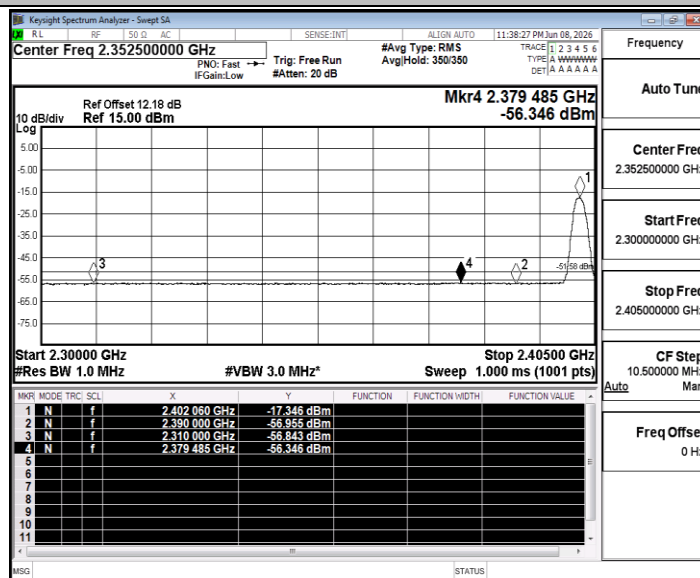




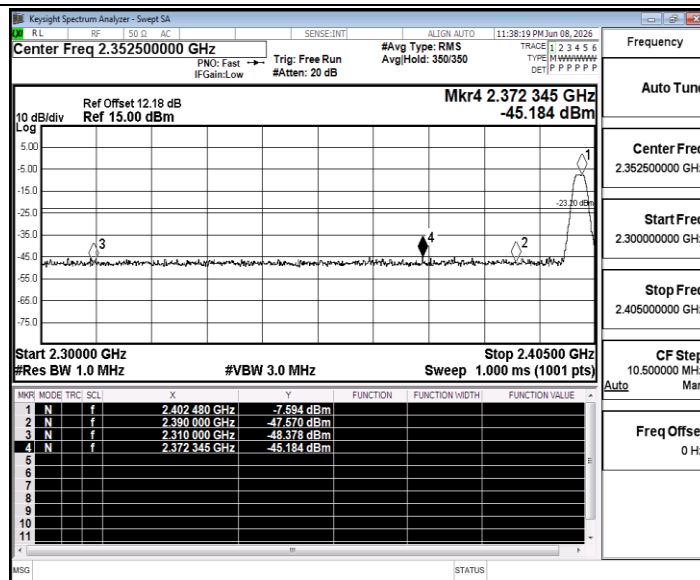
BLE_1M_Ant1_High_2480_Peak



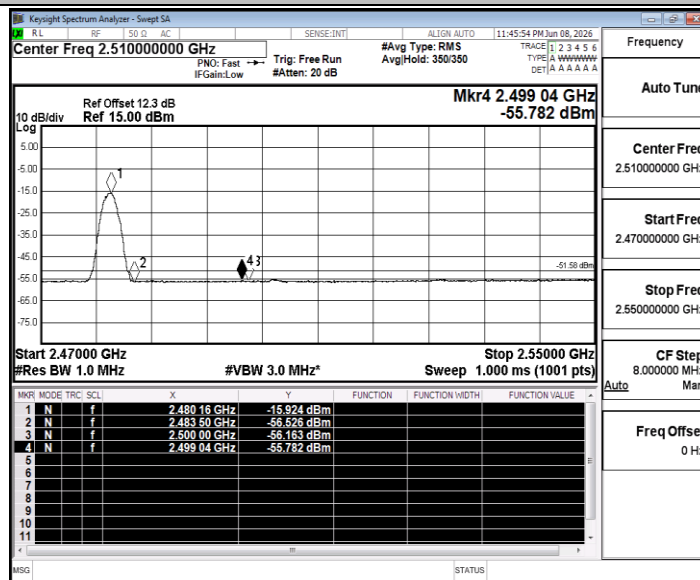
BLE_2M_Ant1_Low_2402_AV



BLE_2M_Ant1_Low_2402_Peak



BLE_2M_Ant1_High_2480_AV



BLE_2M_Ant1_High_2480_Peak

