

Appendix A

RF Test Data for BT LE (Conducted Measurement)

Product Name: ANIMORE-Panda.MORE

Test Model: Panda.MORE

Environmental Conditions

Temperature:	23.8°C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Zhang Hai
Supervised by:	Fengliu Tang

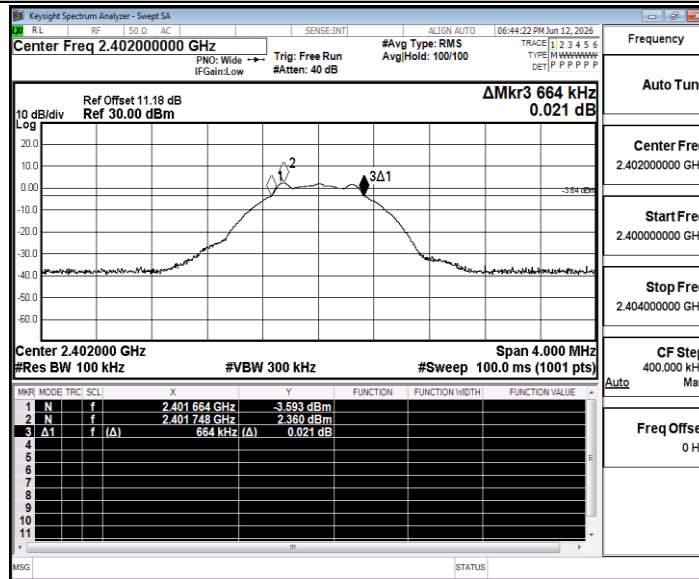
A.1 DTS Bandwidth

Test Result

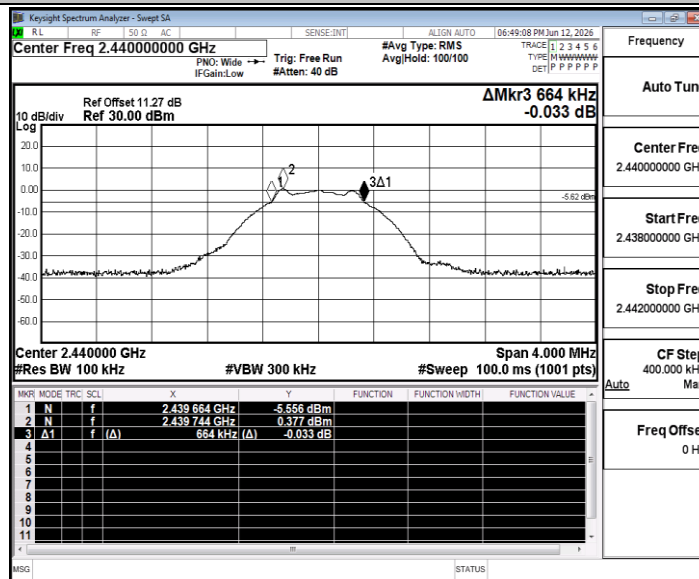
TestMode	Antenna	Freq (MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.664	2401.664	2402.328	0.5	PASS
		2440	0.664	2439.664	2440.328	0.5	PASS
		2480	0.664	2479.660	2480.324	0.5	PASS
BLE_2M	Ant1	2402	1.152	2401.408	2402.560	0.5	PASS
		2440	1.156	2439.404	2440.560	0.5	PASS
		2480	1.148	2479.408	2480.556	0.5	PASS

Test Graphs

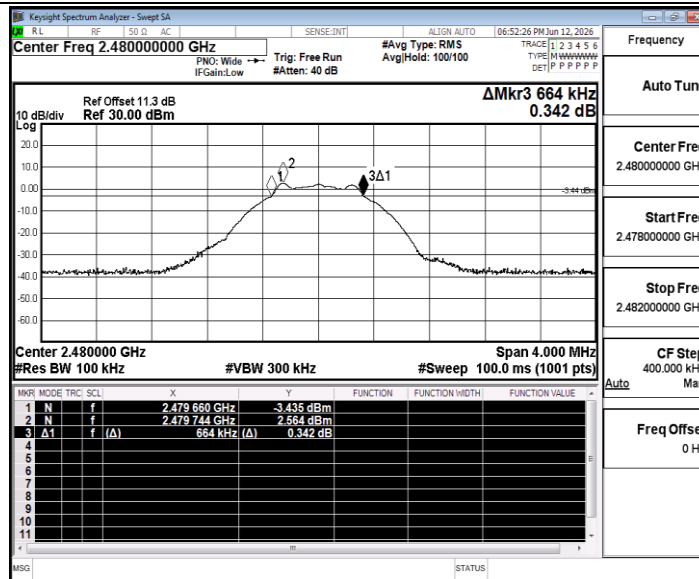
BLE_1M_Ant1_2402



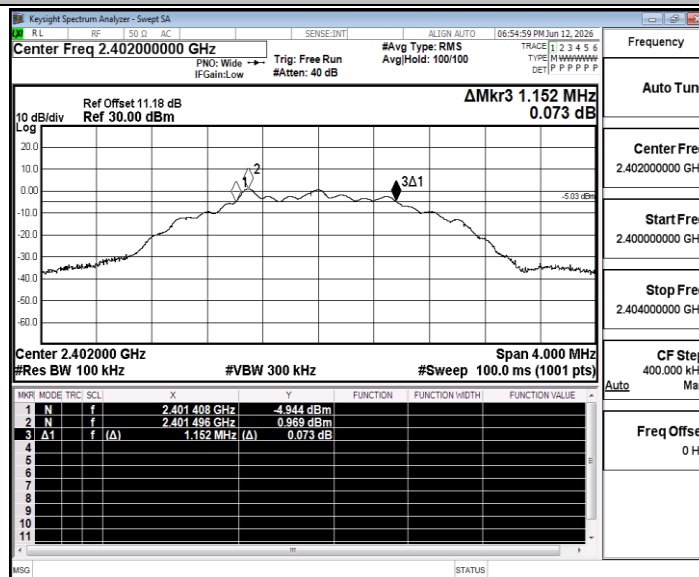
BLE_1M_Ant1_2440



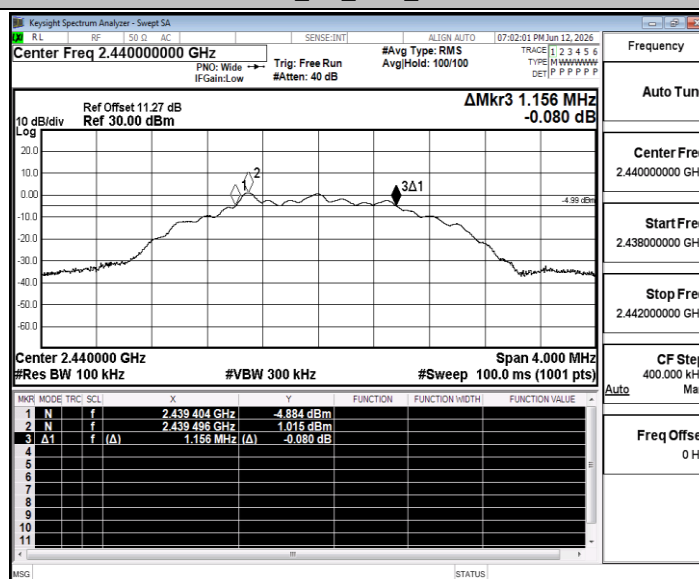
BLE_1M_Ant1_2480



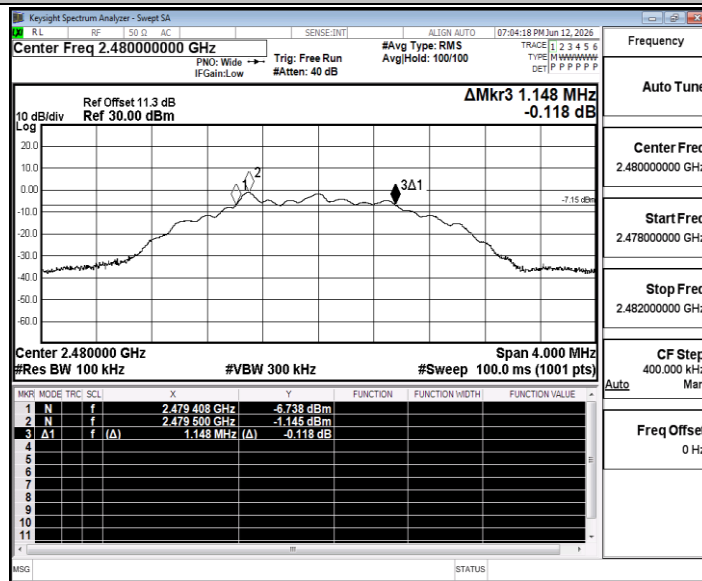
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



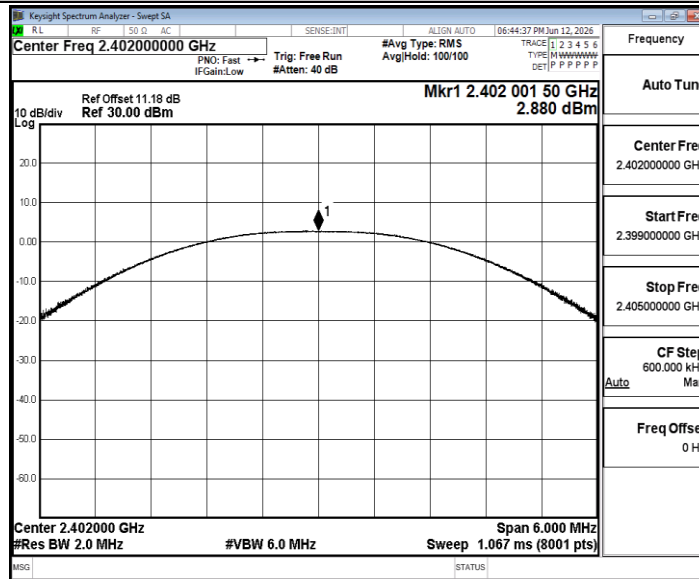
A.2 Maximum Peak conducted output power

Test Result Peak

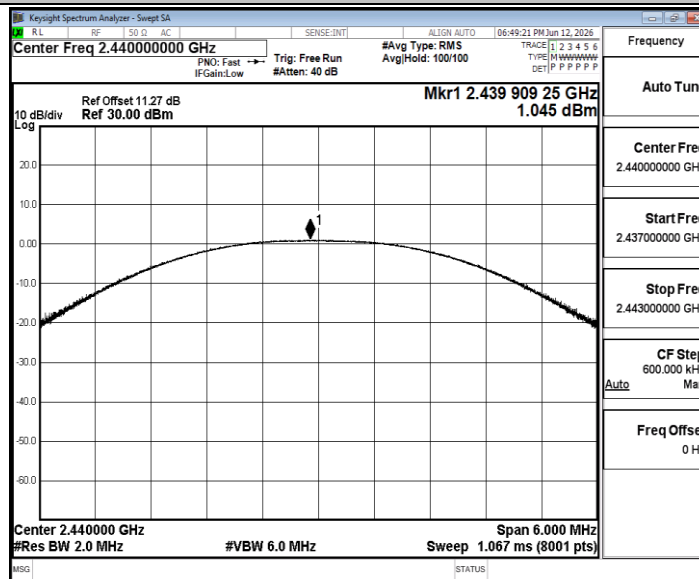
TestMode	Antenna	Freq (MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	2.88	≤30	PASS
		2440	1.05	≤30	PASS
		2480	3.12	≤30	PASS
BLE_2M	Ant1	2402	1.62	≤30	PASS
		2440	1.67	≤30	PASS
		2480	-0.43	≤30	PASS

Test Graphs Peak

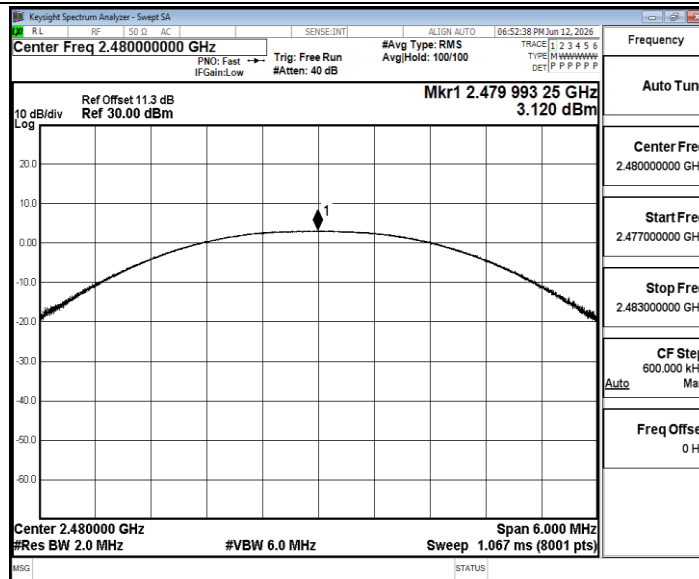
BLE_1M_Ant1_2402



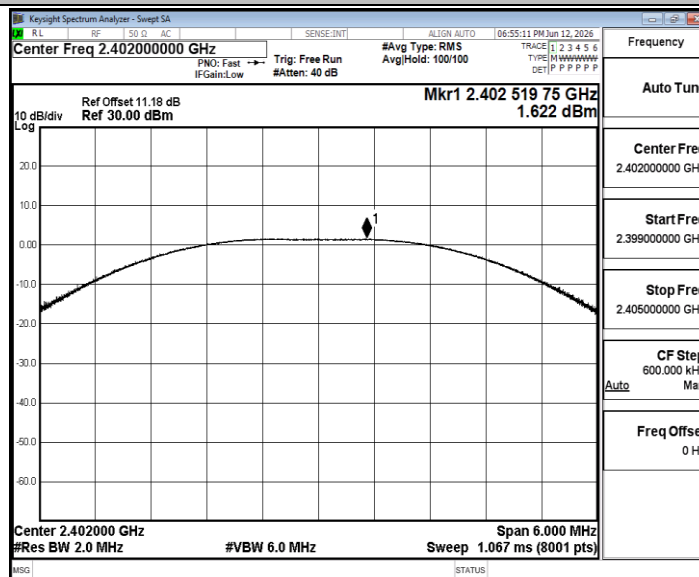
BLE_1M_Ant1_2440



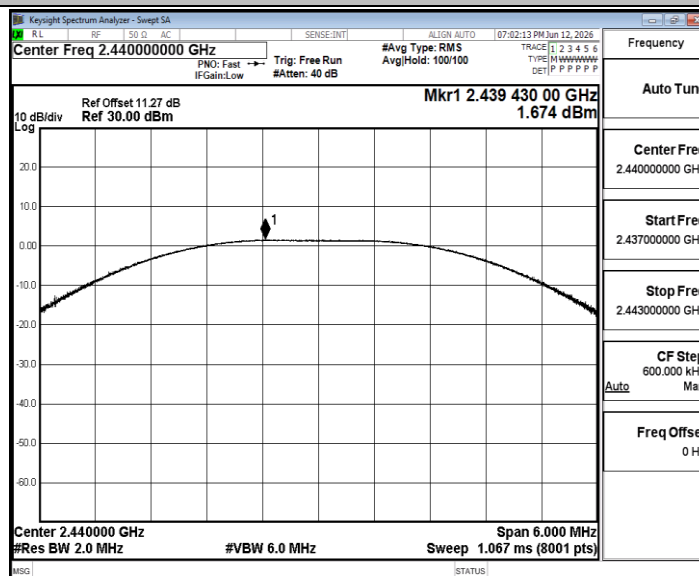
BLE_1M_Ant1_2480



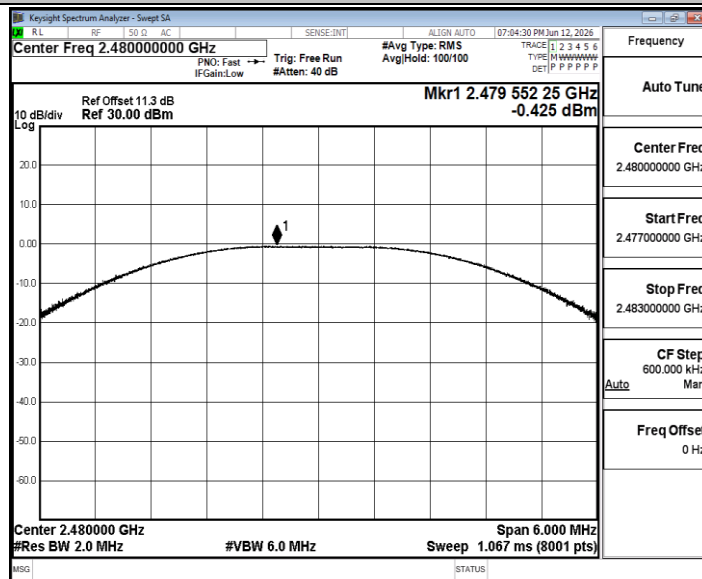
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



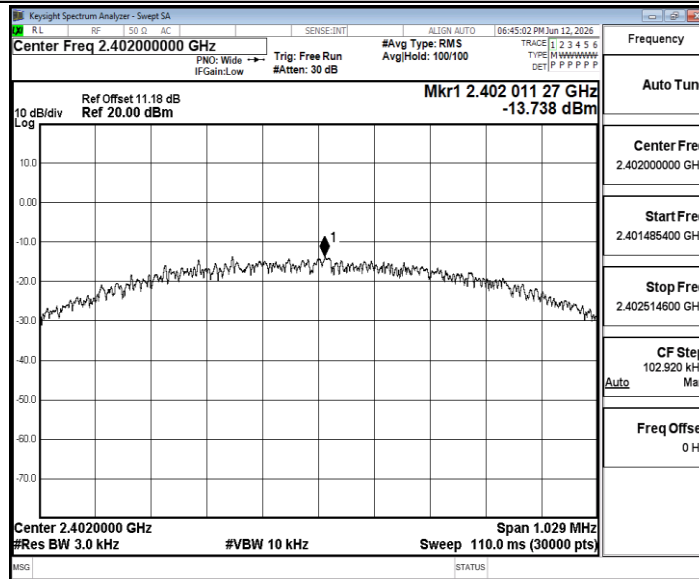
A.3 Maximum power spectral density

Test Result

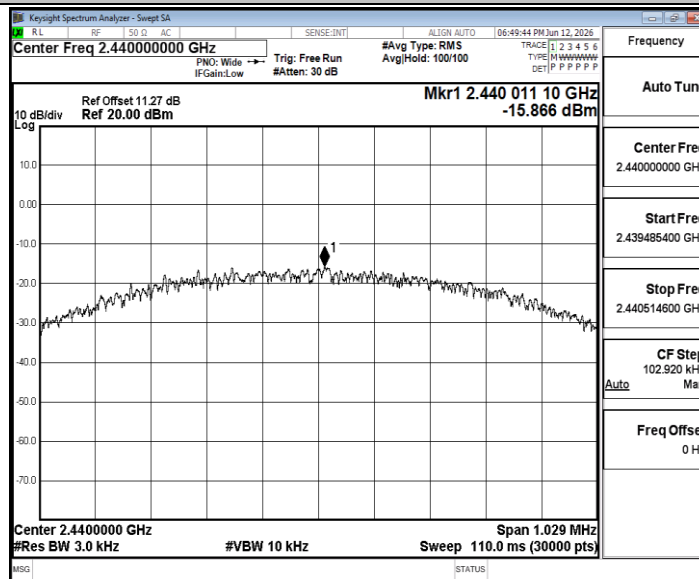
TestMode	Antenna	Freq (MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-13.74	≤8.00	PASS
		2440	-15.87	≤8.00	PASS
		2480	-13.55	≤8.00	PASS
BLE_2M	Ant1	2402	-18.21	≤8.00	PASS
		2440	-18.19	≤8.00	PASS
		2480	-20.43	≤8.00	PASS

Test Graphs

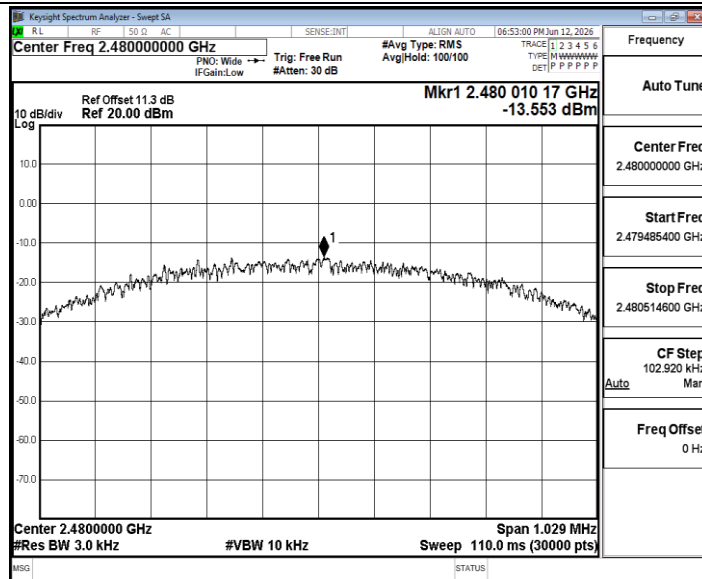
BLE_1M_Ant1_2402



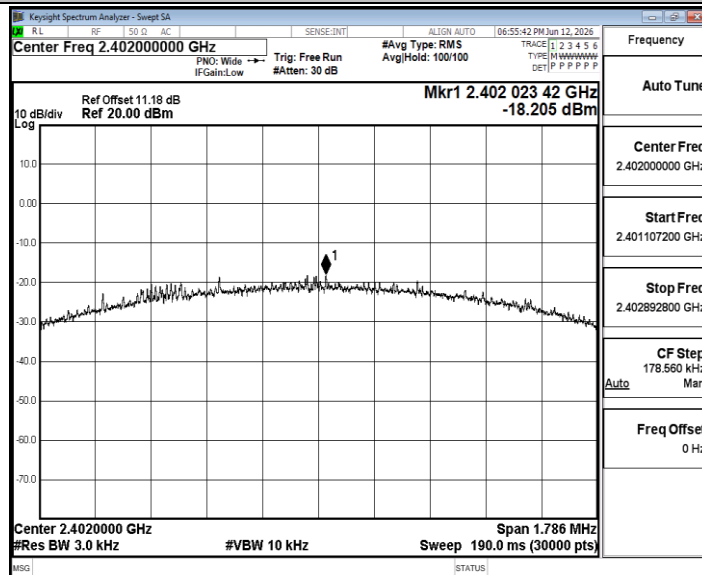
BLE_1M_Ant1_2440



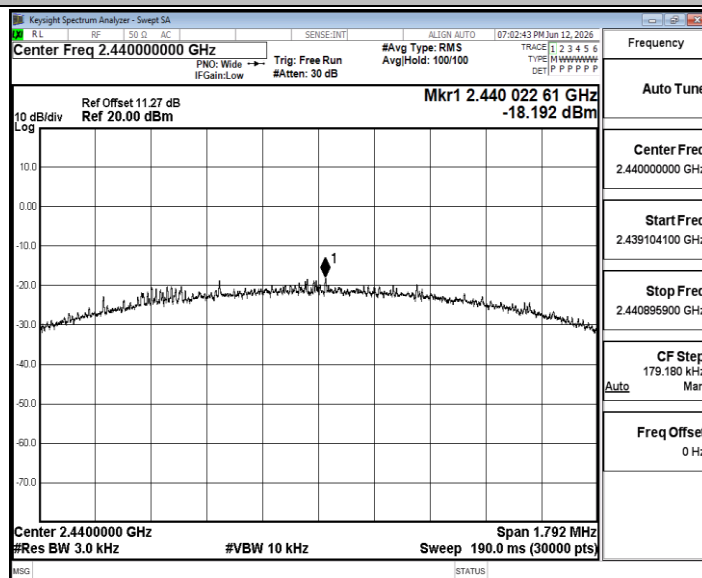
BLE_1M_Ant1_2480



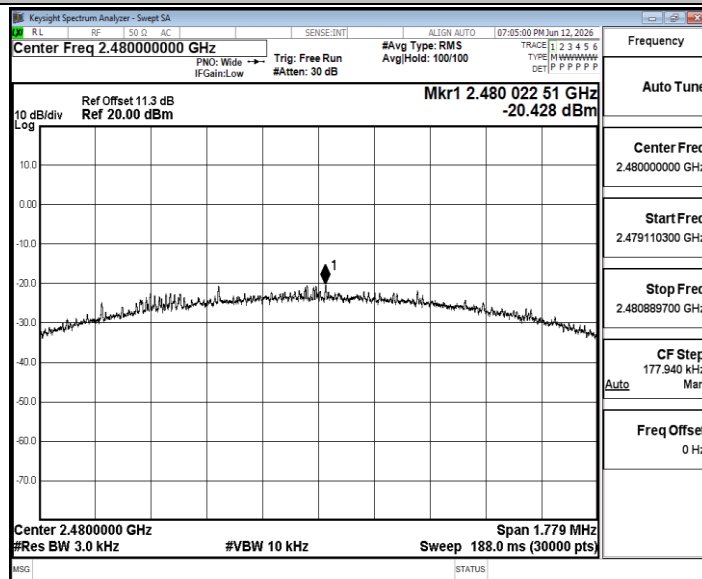
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

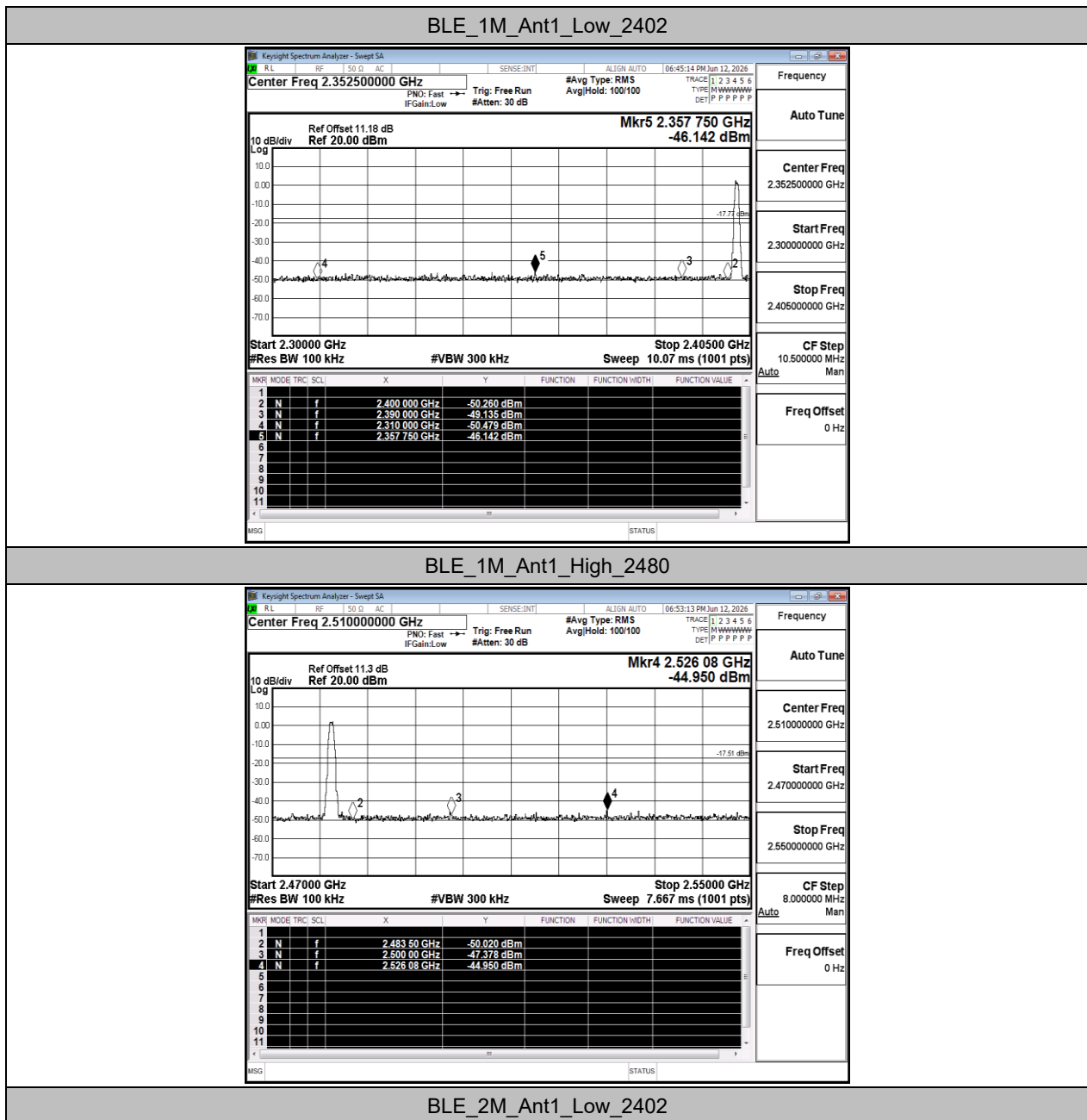


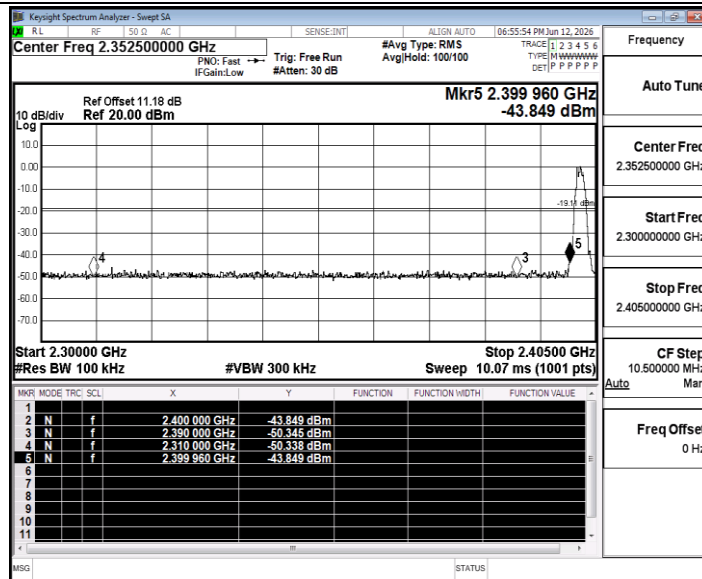
A.4 Band edge measurements

Test Result

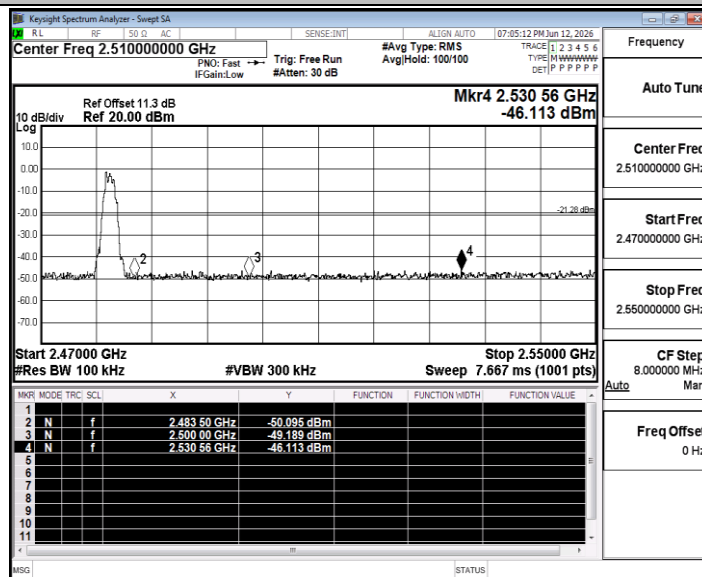
TestMode	Antenna	ChName	Freq (MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	2.23	-46.14	≤ -17.77	PASS
		High	2480	2.49	-44.95	≤ -17.51	PASS
BLE_2M	Ant1	Low	2402	0.89	-43.85	≤ -19.11	PASS
		High	2480	-1.28	-46.11	≤ -21.28	PASS

Test Graphs





BLE_2M_Ant1_High_2480



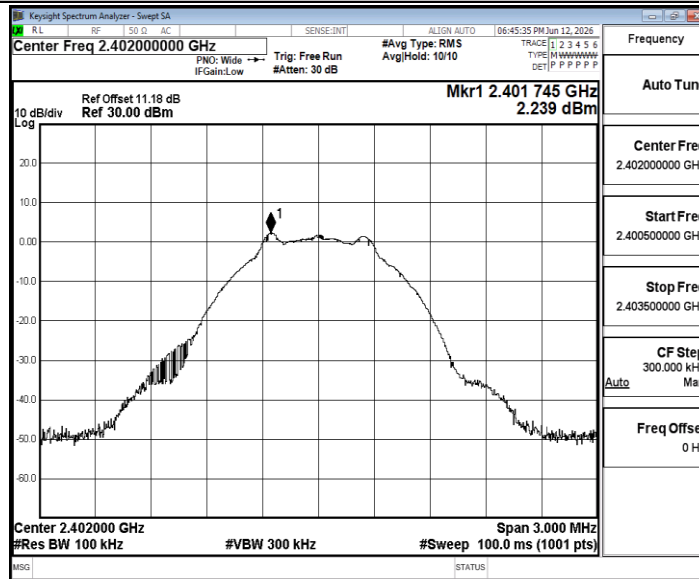
A.5 Conducted Spurious Emission

Test Result

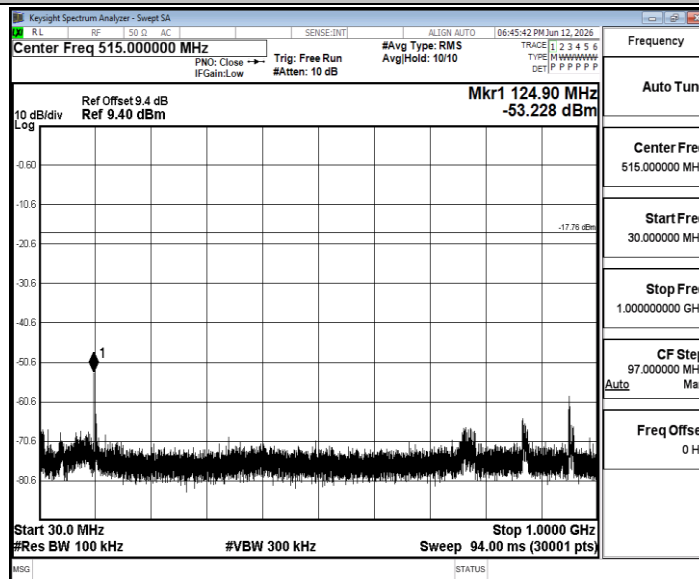
TestMode	Antenna	Freq (MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	2.24	2.24	---	PASS
			30~1000	2.24	-53.23	≤ -17.76	PASS
			1000~26500	2.24	-44.61	≤ -17.76	PASS
		2440	Reference	0.25	0.25	---	PASS
			30~1000	0.25	-61.02	≤ -19.75	PASS
			1000~26500	0.25	-44.44	≤ -19.75	PASS
		2480	Reference	2.50	2.50	---	PASS
			30~1000	2.50	-65.56	≤ -17.5	PASS
			1000~26500	2.50	-44.36	≤ -17.5	PASS
BLE_2M	Ant1	2402	Reference	0.91	0.91	---	PASS
			30~1000	0.91	-64.91	≤ -19.09	PASS
			1000~26500	0.91	-44.33	≤ -19.09	PASS
		2440	Reference	0.87	0.87	---	PASS
			30~1000	0.87	-45.79	≤ -19.13	PASS
			1000~26500	0.87	-44.1	≤ -19.13	PASS
		2480	Reference	-1.26	-1.26	---	PASS
			30~1000	-1.26	-45.82	≤ -21.26	PASS
			1000~26500	-1.26	-44.56	≤ -21.26	PASS

Test Graphs

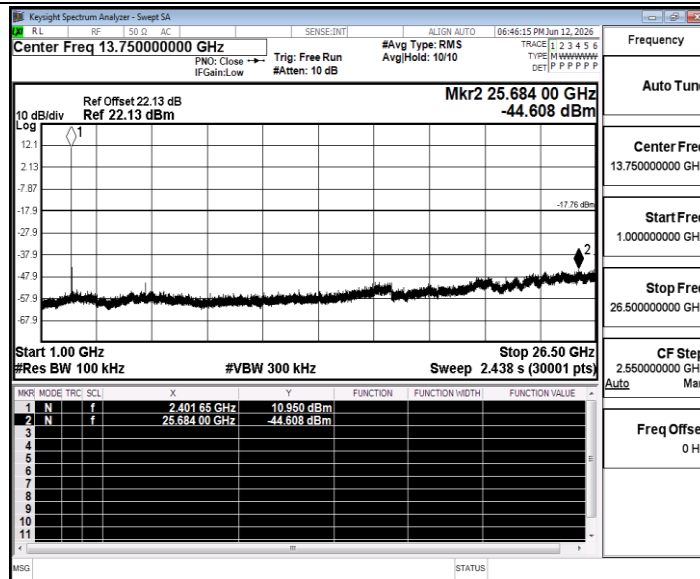
BLE_1M_Ant1_2402_0~Reference



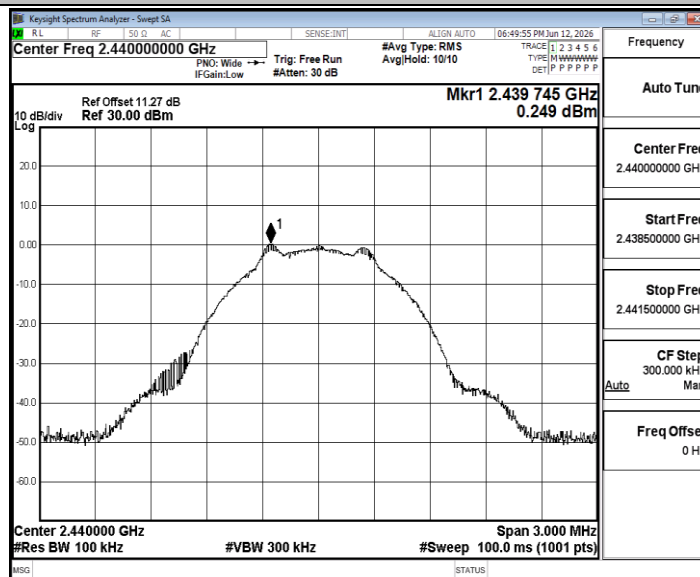
BLE_1M_Ant1_2402_30~1000



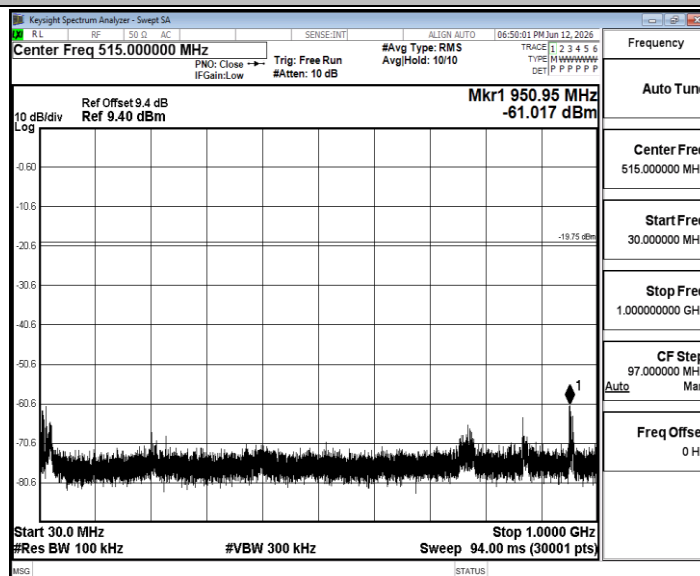
BLE_1M_Ant1_2402_1000~26500



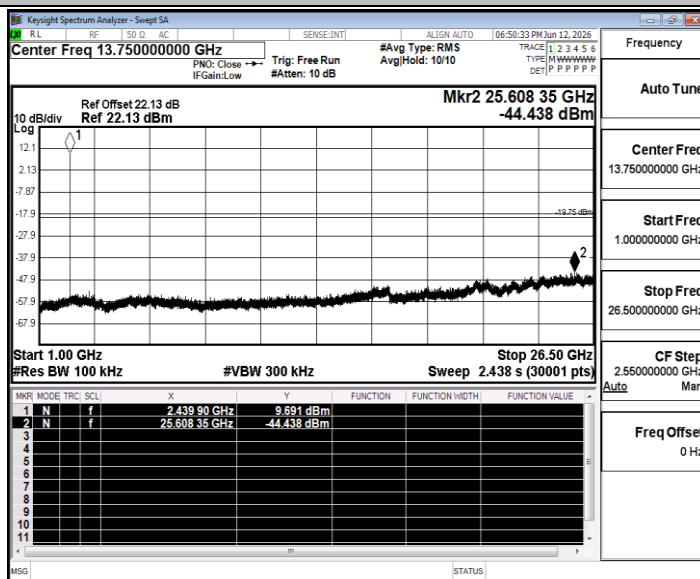
BLE_1M_Ant1_2440_0~Reference



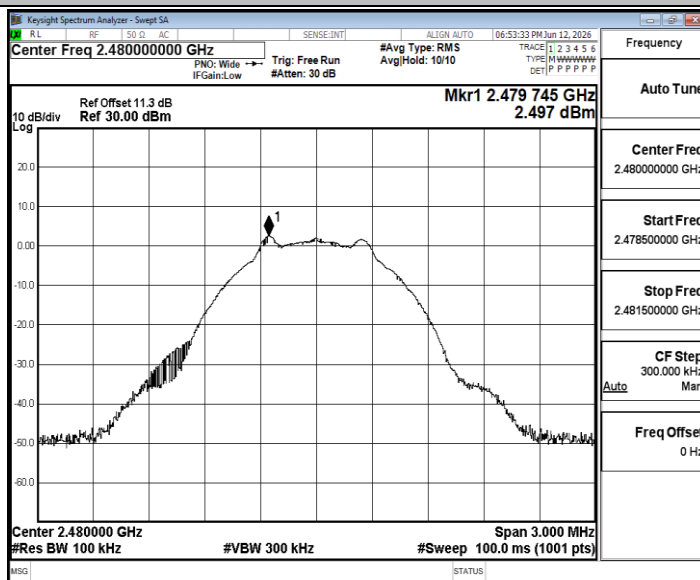
BLE_1M_Ant1_2440_30~1000



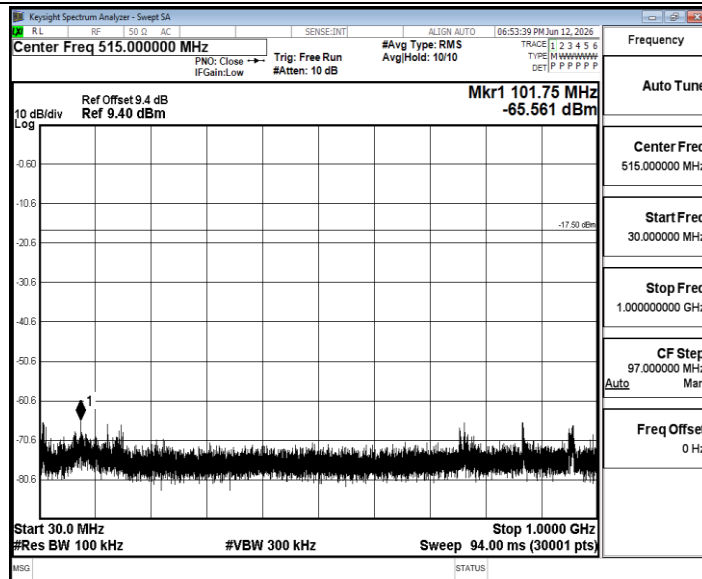
BLE_1M_Ant1_2440_1000~26500



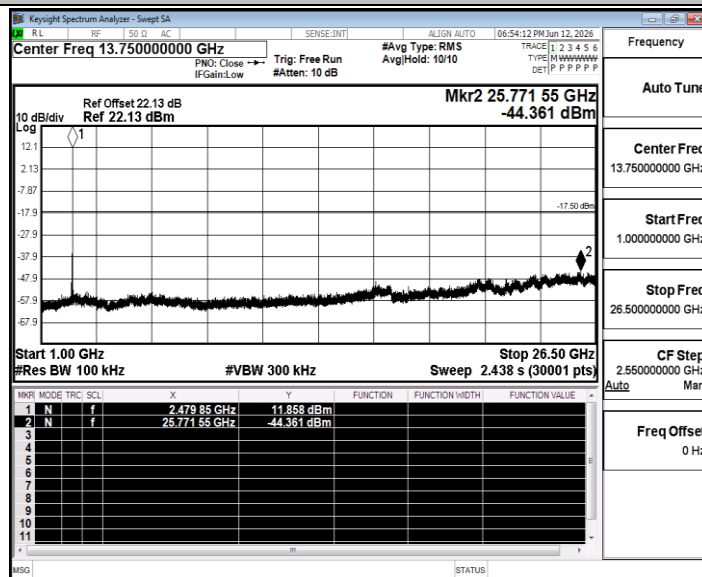
BLE_1M_Ant1_2480_0~Reference



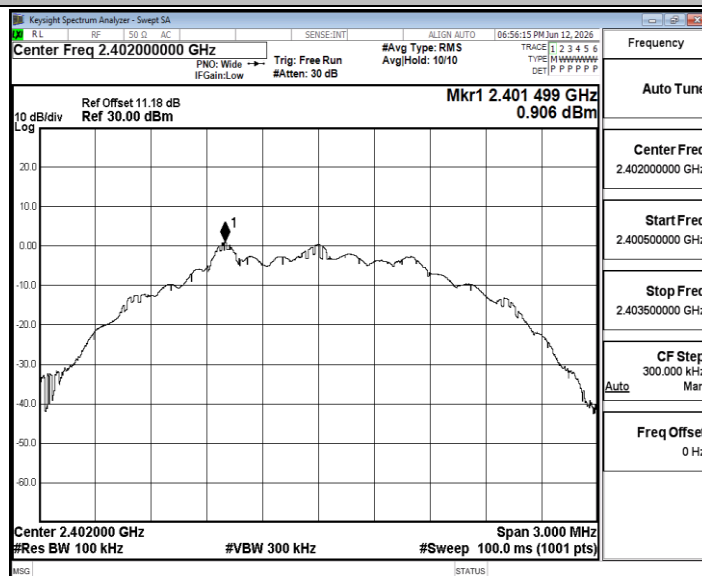
BLE_1M_Ant1_2480_30~1000



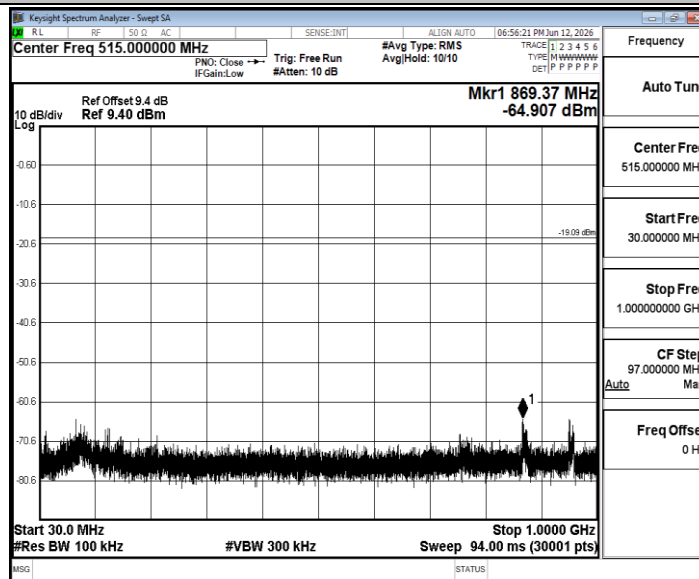
BLE_1M_Ant1_2480_1000~26500



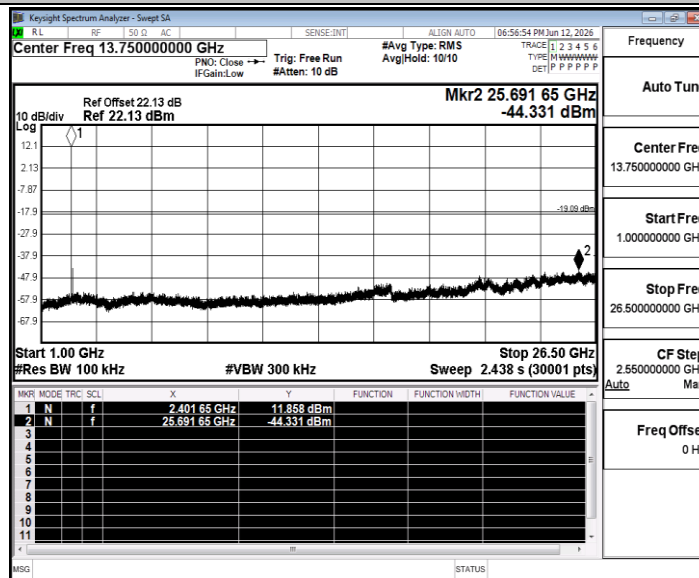
BLE_2M_Ant1_2402_0~Reference



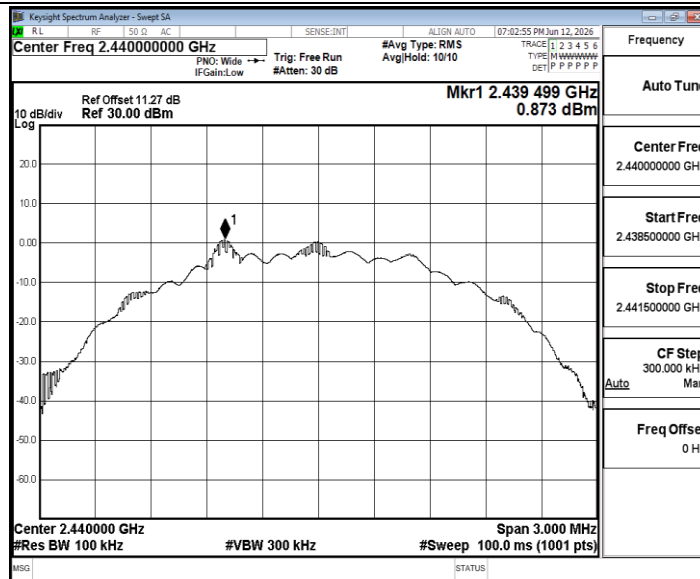
BLE_2M_Ant1_2402_30~1000



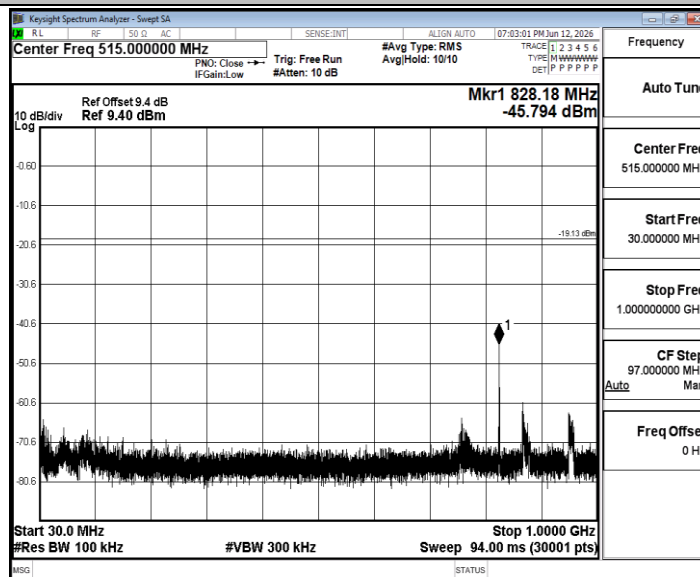
BLE_2M_Ant1_2402_1000~26500



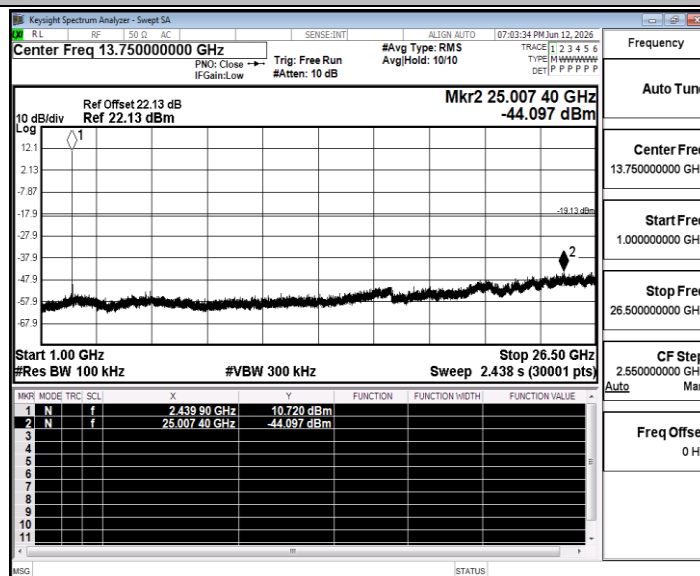
BLE_2M_Ant1_2440_0~Reference



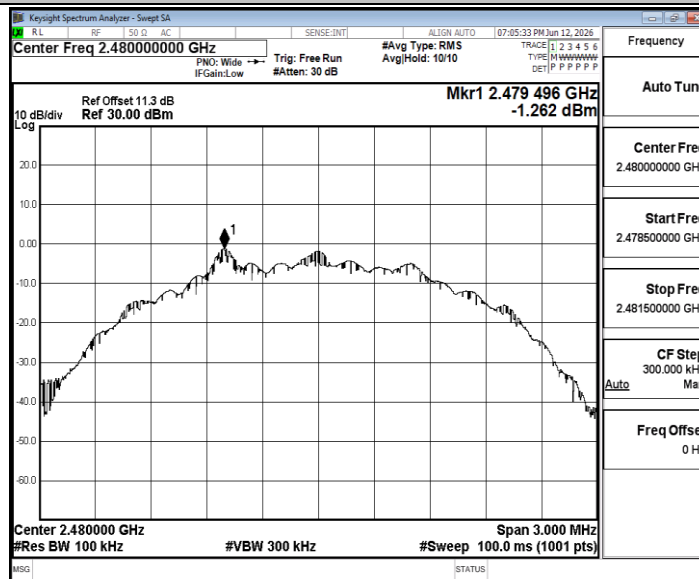
BLE_2M_Ant1_2440_30~1000



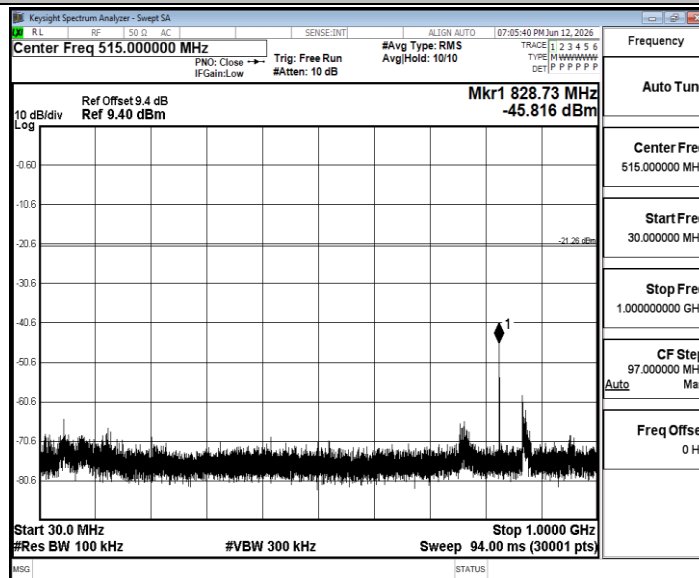
BLE_2M_Ant1_2440_1000~26500



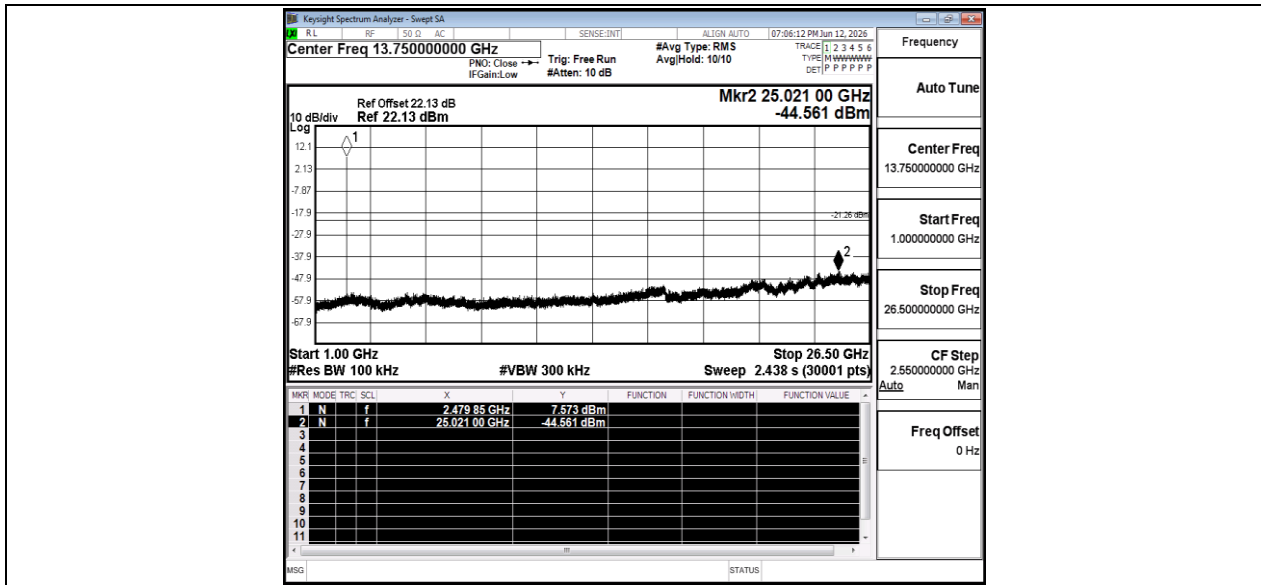
BLE_2M_Ant1_2480_0~Reference



BLE_2M_Ant1_2480_30~1000



BLE_2M_Ant1_2480_1000~26500



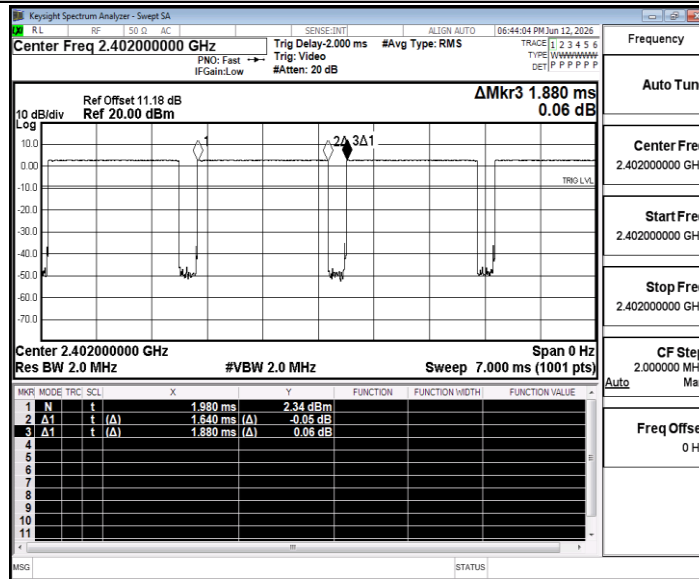
A.6 Duty Cycle

Test Result

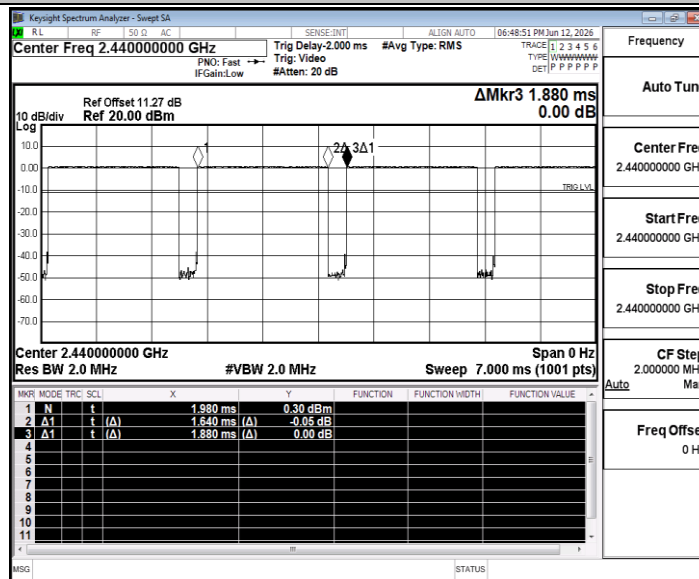
TestMode	Antenna	Freq (MHz)	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	1.64	1.88	0.8723	87.23	0.59	---	---
		2440	1.64	1.88	0.8723	87.23	0.59	---	---
		2480	1.63	1.87	0.8717	87.17	0.60	---	---
BLE_2M	Ant1	2402	0.82	1.25	0.6560	65.60	1.83	---	---
		2440	0.82	1.25	0.6560	65.60	1.83	---	---
		2480	0.81	1.24	0.6532	65.32	1.85	---	---

Test Graphs

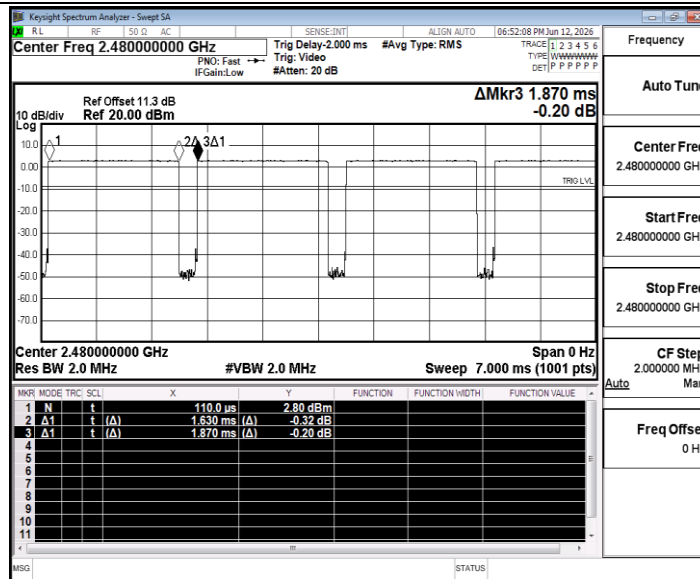
BLE_1M_Ant1_2402



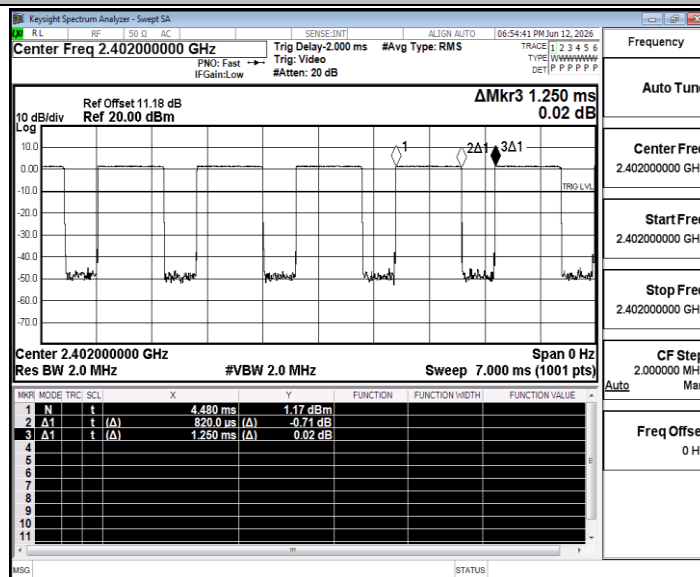
BLE_1M_Ant1_2440



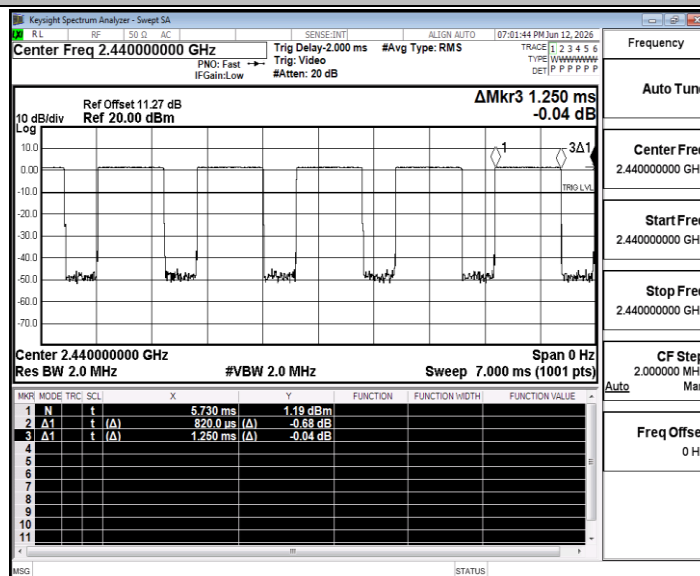
BLE_1M_Ant1_2480



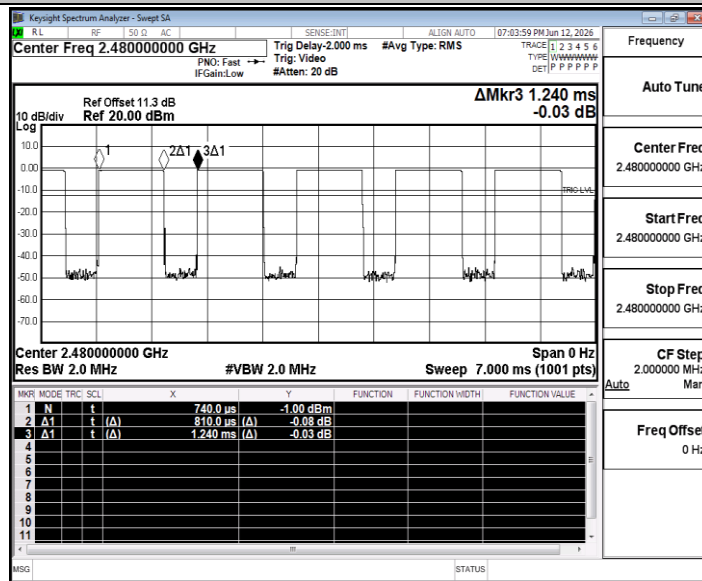
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



A.7 Emissions in Restricted Bands

Test Result

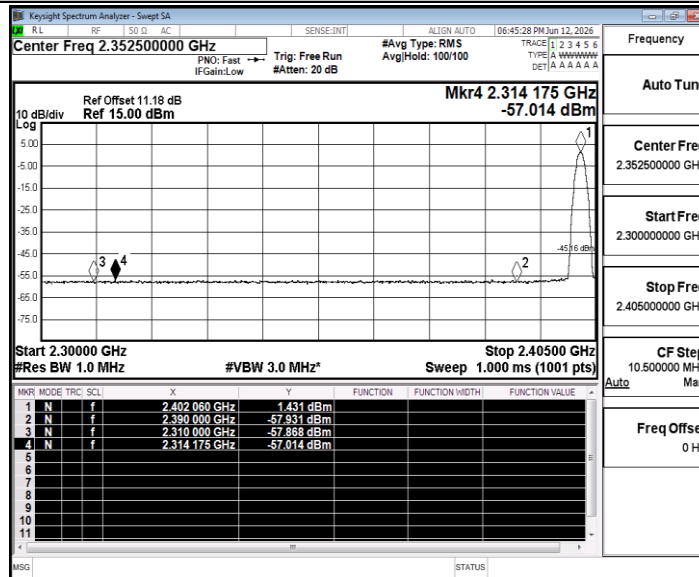
Test Mode	Antenna	ChName	Freq (MHz)	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Gain [dBi]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-57.87	≤-45.16	3.37	0.59	41.29	≤54	PASS
				AV	2314.175	-57.01	≤-45.16	3.37	0.59	42.15	≤54	PASS
				AV	2390.000	-57.93	≤-45.16	3.37	0.59	41.23	≤54	PASS
				Peak	2310.000	-49.83	≤-24.57	3.37	0.00	48.74	≤74	PASS
				Peak	2340.740	-47.44	≤-24.57	3.37	0.00	51.13	≤74	PASS
				Peak	2390.000	-49.55	≤-24.57	3.37	0.00	49.02	≤74	PASS
		High	2480	AV	2483.500	-56.4	≤-45.17	3.37	0.60	42.77	≤54	PASS
				AV	2483.680	-56.15	≤-45.17	3.37	0.60	43.02	≤54	PASS
				AV	2500.000	-57.17	≤-45.17	3.37	0.60	42.00	≤54	PASS
				Peak	2483.500	-47.25	≤-24.57	3.37	0.00	51.32	≤74	PASS
				Peak	2483.760	-43.13	≤-24.57	3.37	0.00	55.44	≤74	PASS
				Peak	2500.000	-49.17	≤-24.57	3.37	0.00	49.40	≤74	PASS
BLE_2M	Ant1	Low	2402	AV	2310.000	-57.91	≤-46.40	3.37	1.83	42.49	≤54	PASS
				AV	2370.770	-57.13	≤-46.40	3.37	1.83	43.27	≤54	PASS
				AV	2390.000	-57.86	≤-46.40	3.37	1.83	42.54	≤54	PASS
				Peak	2310.000	-50.59	≤-24.57	3.37	0.00	47.98	≤74	PASS
				Peak	2328.455	-46.05	≤-24.57	3.37	0.00	52.52	≤74	PASS
				Peak	2390.000	-49.33	≤-24.57	3.37	0.00	49.24	≤74	PASS
		High	2480	AV	2483.500	-57.1	≤-46.42	3.37	1.85	43.32	≤54	PASS
				AV	2487.120	-56.77	≤-46.42	3.37	1.85	43.65	≤54	PASS
				AV	2500.000	-57.36	≤-46.42	3.37	1.85	43.06	≤54	PASS
				Peak	2483.500	-48	≤-24.57	3.37	0.00	50.57	≤74	PASS
				Peak	2486.400	-46.27	≤-24.57	3.37	0.00	52.30	≤74	PASS
				Peak	2500.000	-48.32	≤-24.57	3.37	0.00	50.25	≤74	PASS

Note:

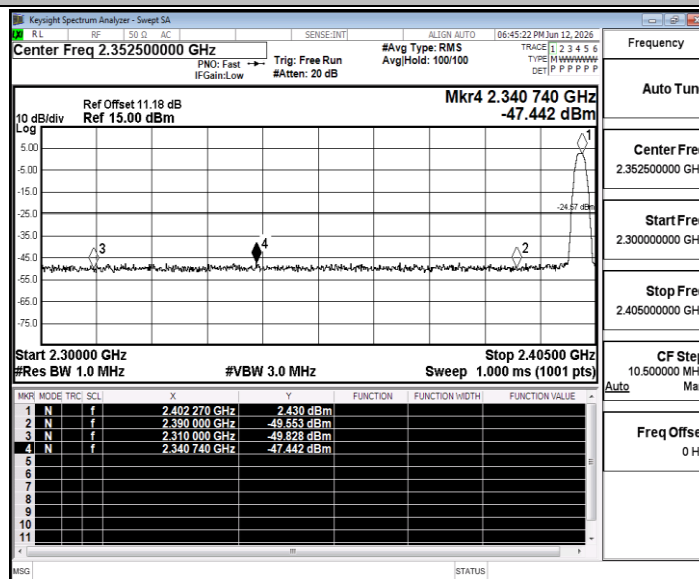
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

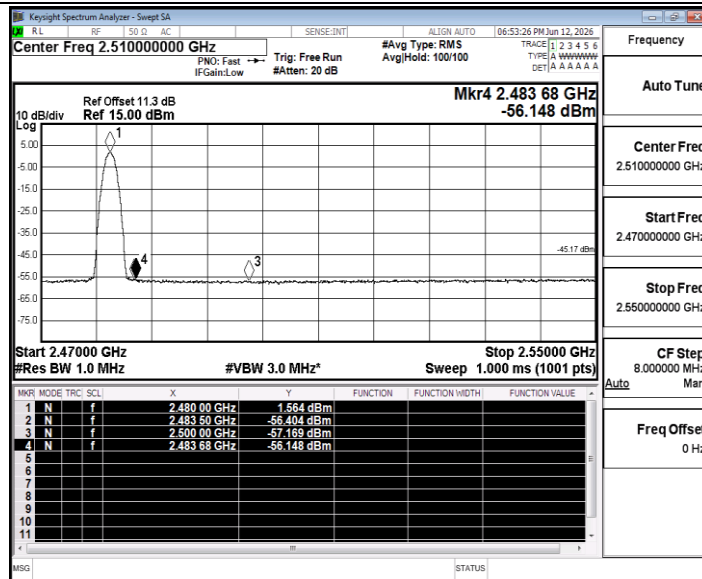
BLE_1M_Ant1_Low_2402_AV



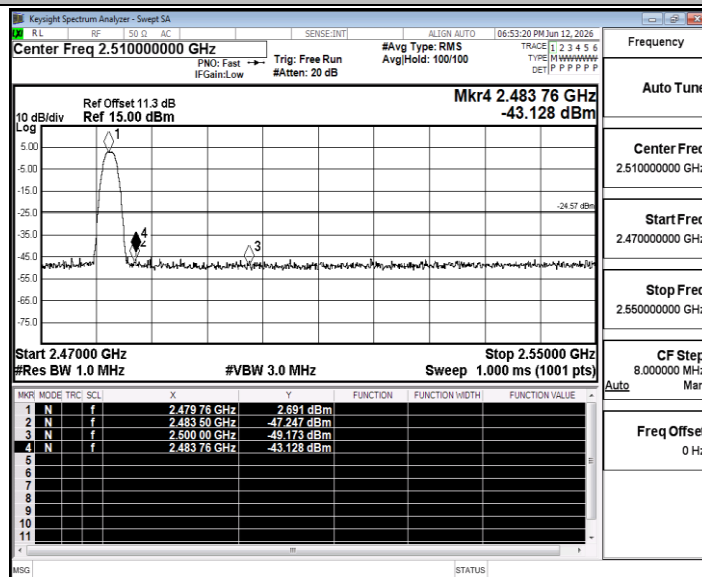
BLE_1M_Ant1_Low_2402_Peak



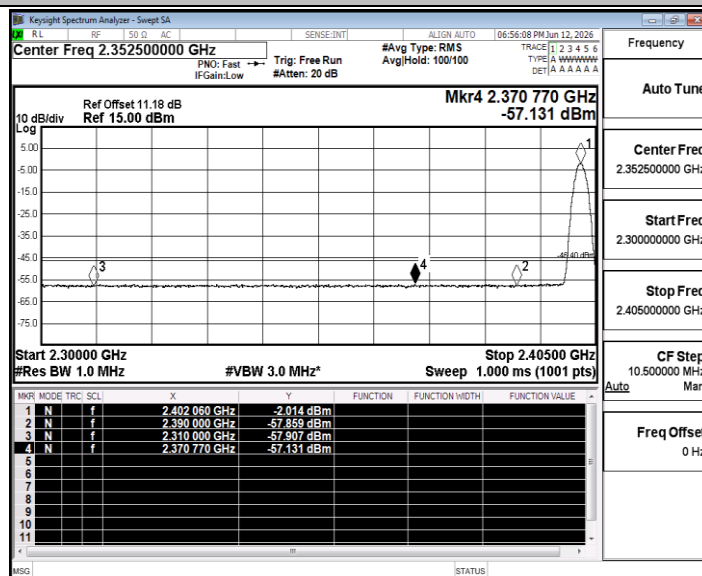
BLE_1M_Ant1_High_2480_AV



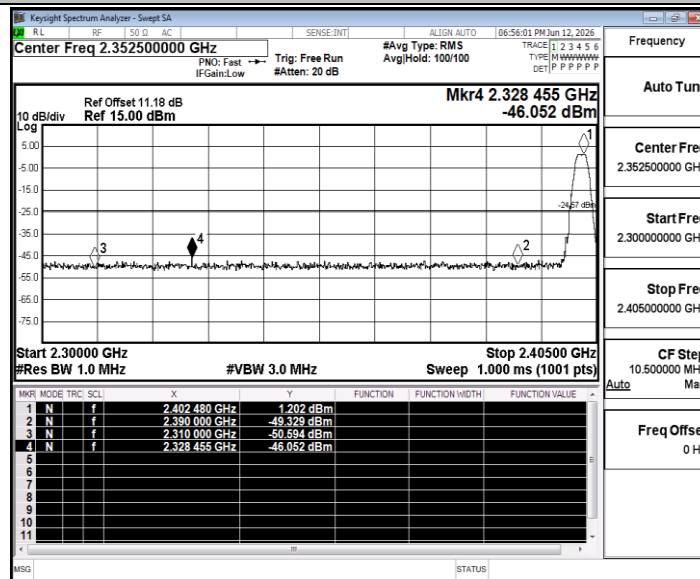
BLE_1M_Ant1_High_2480_Peak



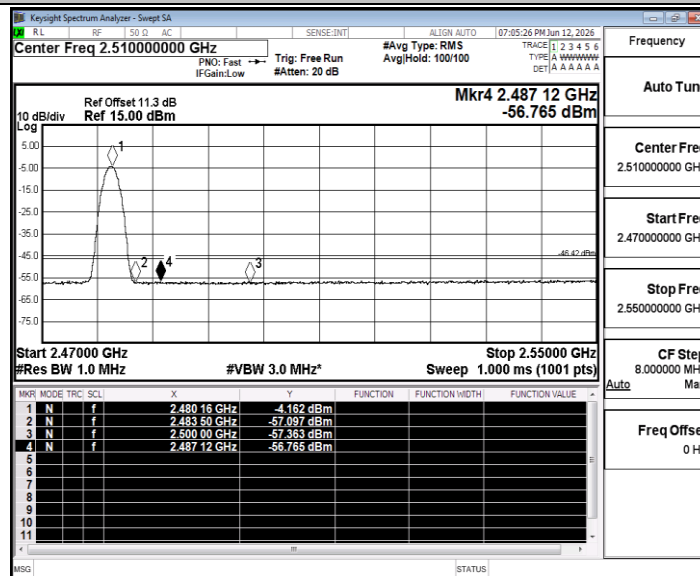
BLE_2M_Ant1_Low_2402_AV



BLE_2M_Ant1_Low_2402_Peak



BLE_2M_Ant1_High_2480_AV



BLE_2M_Ant1_High_2480_Peak

