

FCC Appendix RF Test Data for BLE

FCC ID : 2BQHT-TK831-3

Company : DAMASCO TRADING LLC

EUT : 8 inch tablet

Model Number : TK831-3

Report No. : CTA26092901001

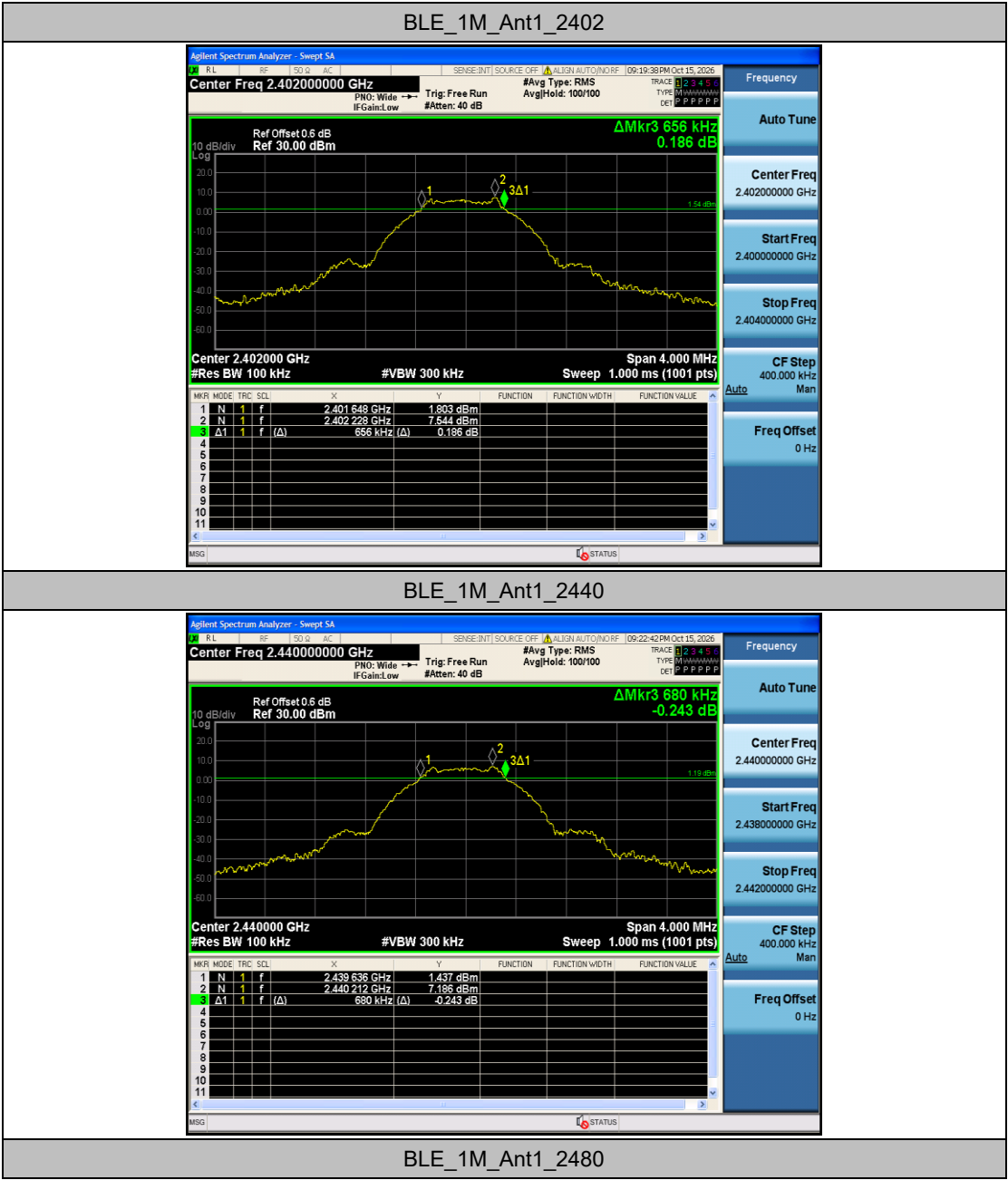
Reviewed By : Eric Wang

Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.656	2401.648	2402.304	0.5	PASS
		2440	0.680	2439.636	2440.316	0.5	PASS
		2480	0.684	2479.624	2480.308	0.5	PASS
BLE_2M	Ant1	2402	1.324	2401.316	2402.640	0.5	PASS
		2440	1.200	2439.340	2440.540	0.5	PASS
		2480	1.248	2479.324	2480.572	0.5	PASS

Test Graphs





BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

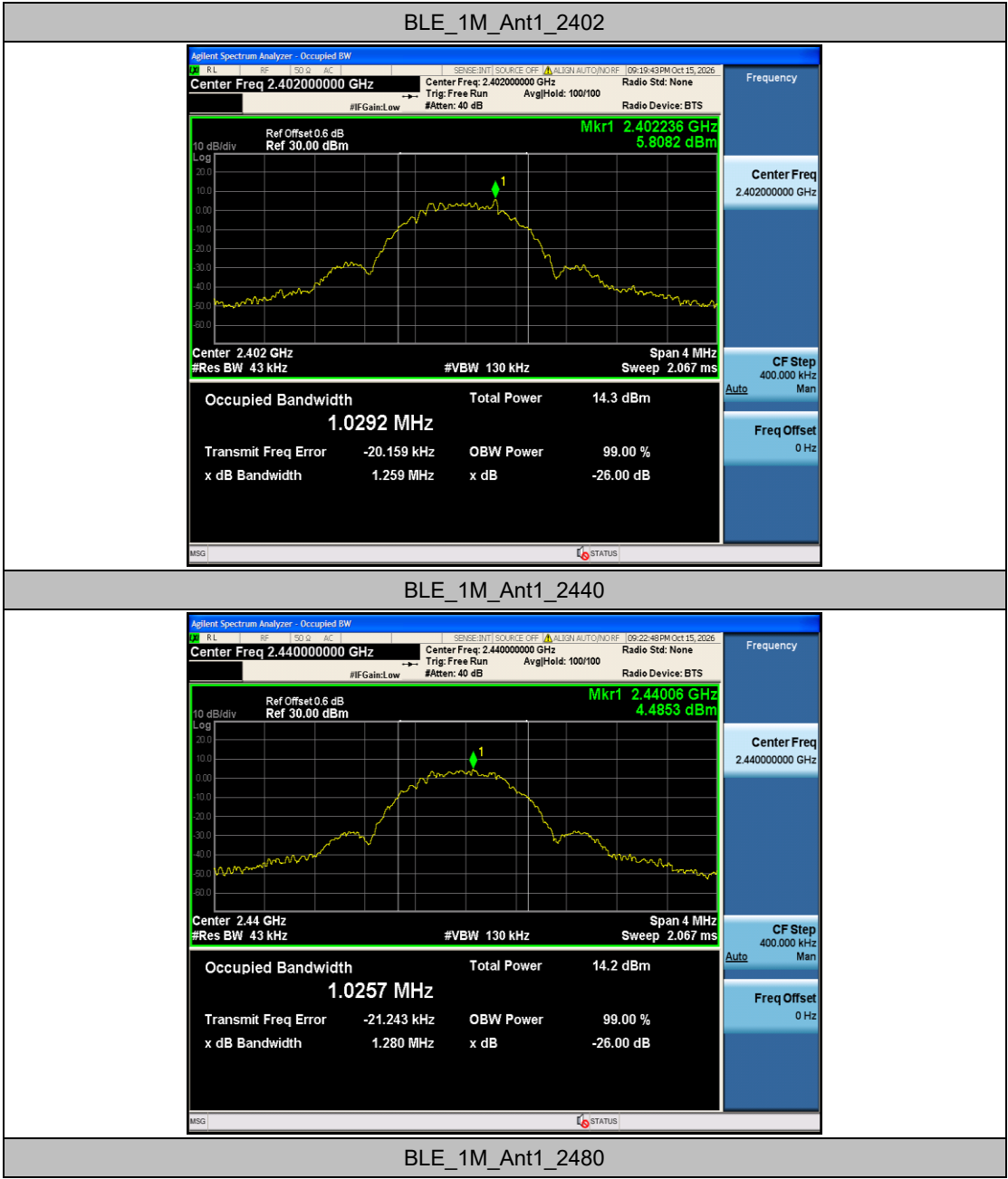


Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0292	2401.4652	2402.4944	---	---
		2440	1.0257	2439.4659	2440.4916	---	---
		2480	1.0288	2479.4649	2480.4937	---	---
BLE_2M	Ant1	2402	2.0668	2400.9640	2403.0308	---	---
		2440	2.0824	2438.9532	2441.0356	---	---
		2480	2.0797	2478.9537	2481.0334	---	---

Test Graphs

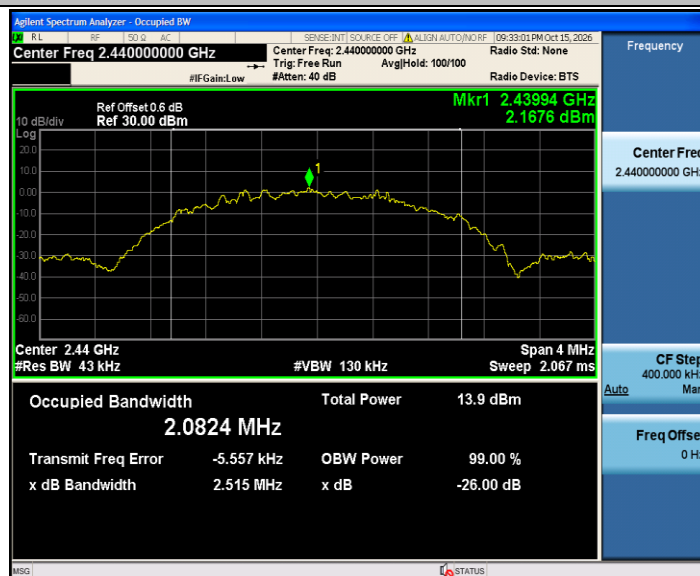




BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



Appendix C: Maximum conducted output power

Test Result Peak

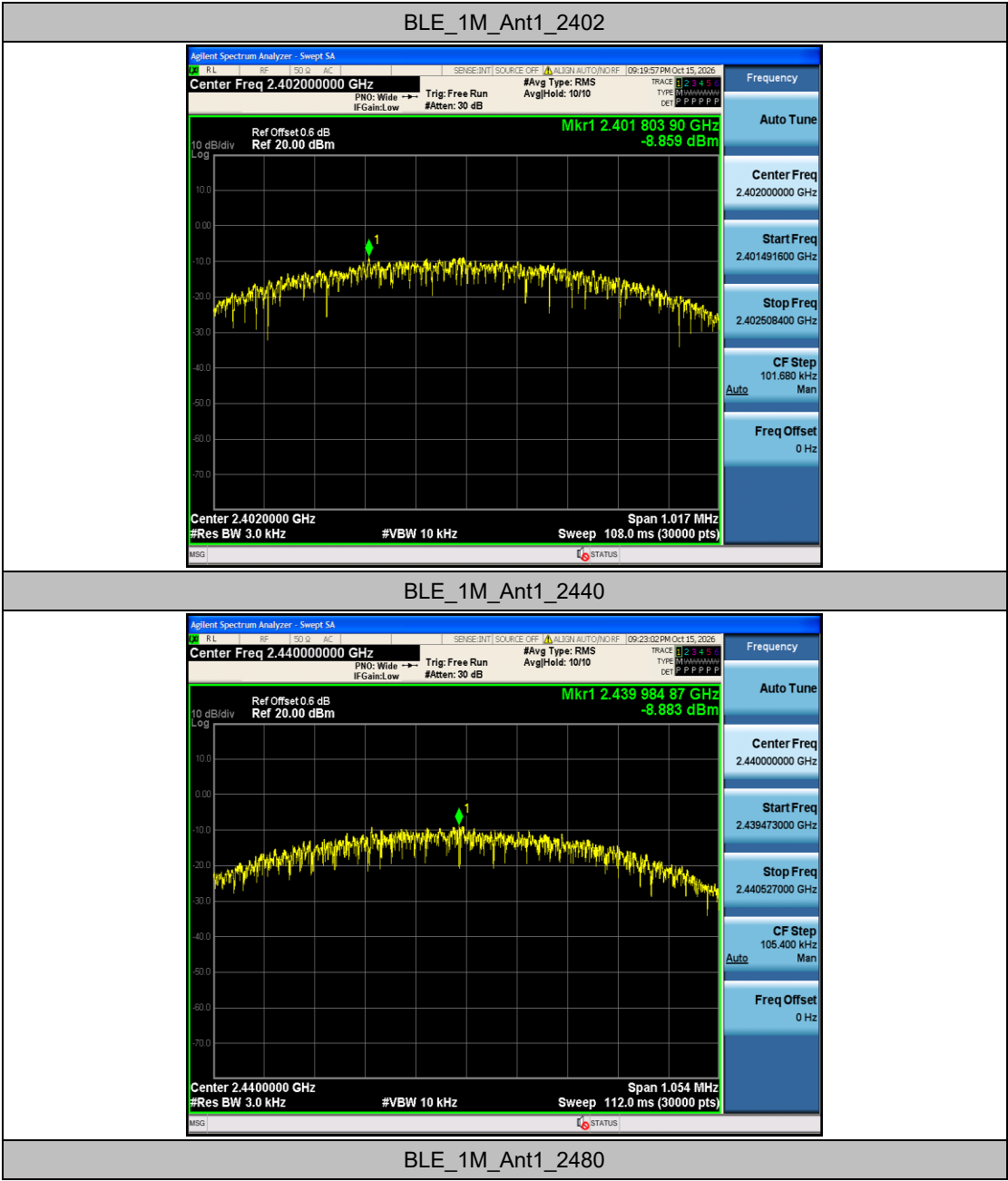
TestMode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	7.74	≤30	PASS
		2440	7.67	≤30	PASS
		2480	7.76	≤30	PASS
BLE_2M	Ant1	2402	7.70	≤30	PASS
		2440	7.67	≤30	PASS
		2480	7.77	≤30	PASS

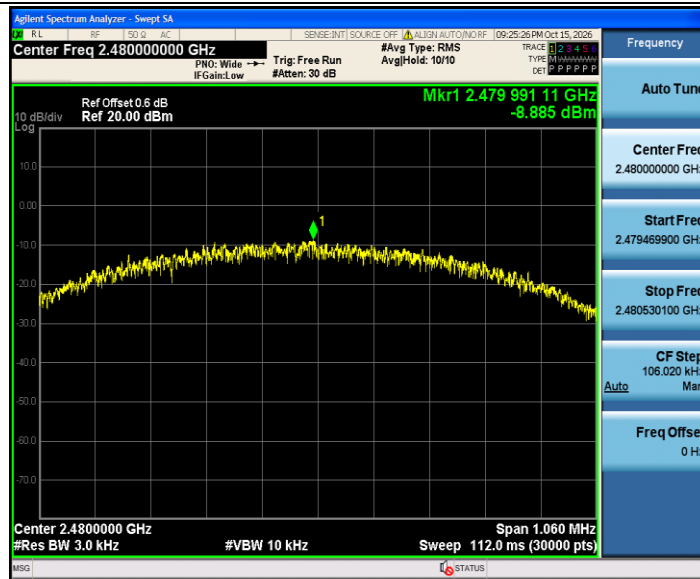
Appendix D: Maximum power spectral density

Test Result

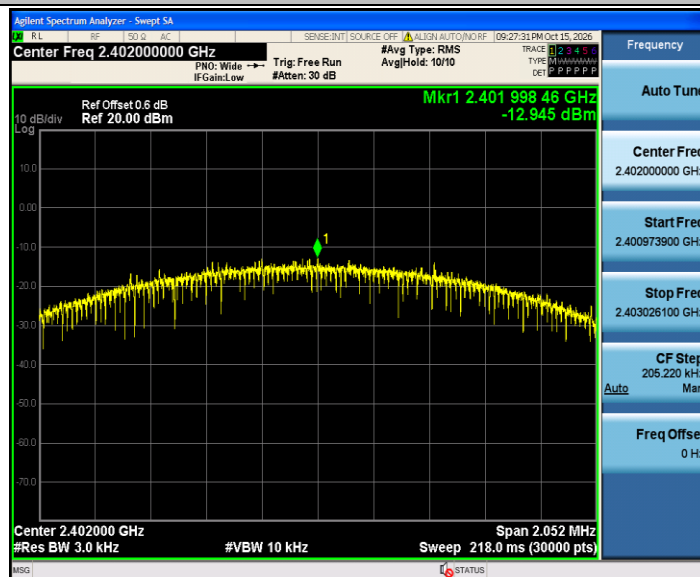
TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-8.86	≤8.00	PASS
		2440	-8.88	≤8.00	PASS
		2480	-8.89	≤8.00	PASS
BLE_2M	Ant1	2402	-12.95	≤8.00	PASS
		2440	-11.69	≤8.00	PASS
		2480	-12.85	≤8.00	PASS

Test Graphs

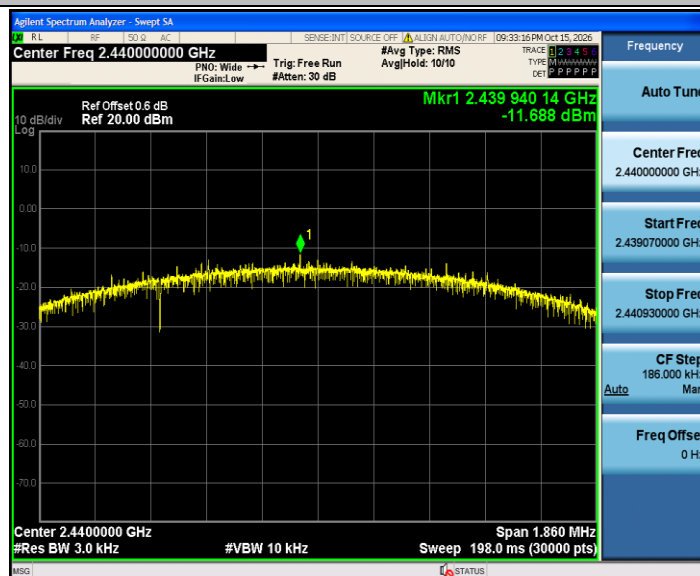




BLE_2M_Ant1_2402



BLE 2M Ant1 2440



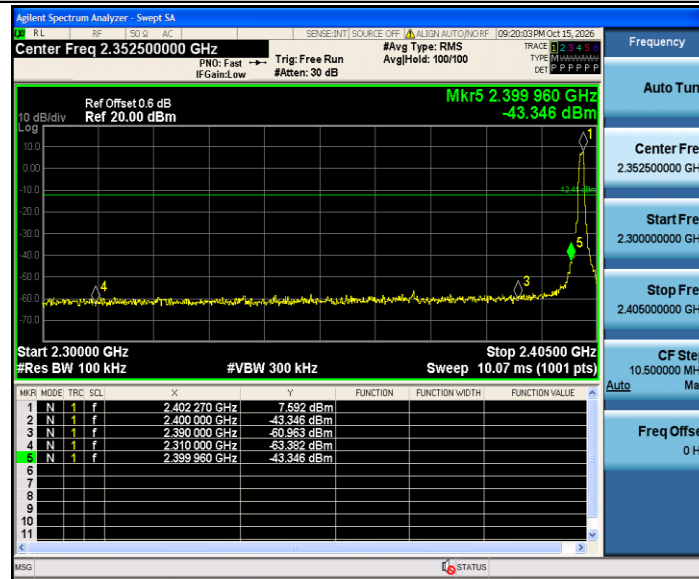
Appendix E: Band edge measurements

Test Result

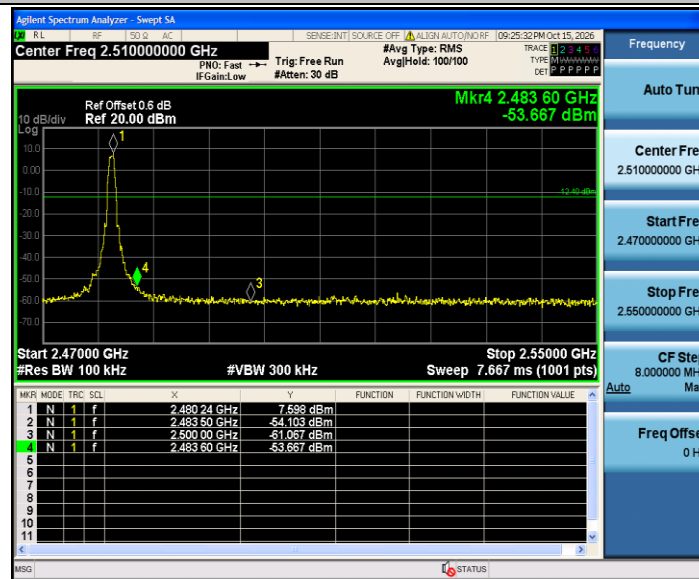
TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	7.59	-43.35	≤-12.41	PASS
		High	2480	7.60	-53.67	≤-12.4	PASS
BLE_2M	Ant1	Low	2402	5.88	-27.51	≤-14.12	PASS
		High	2480	6.69	-51.85	≤-13.32	PASS

Test Graphs

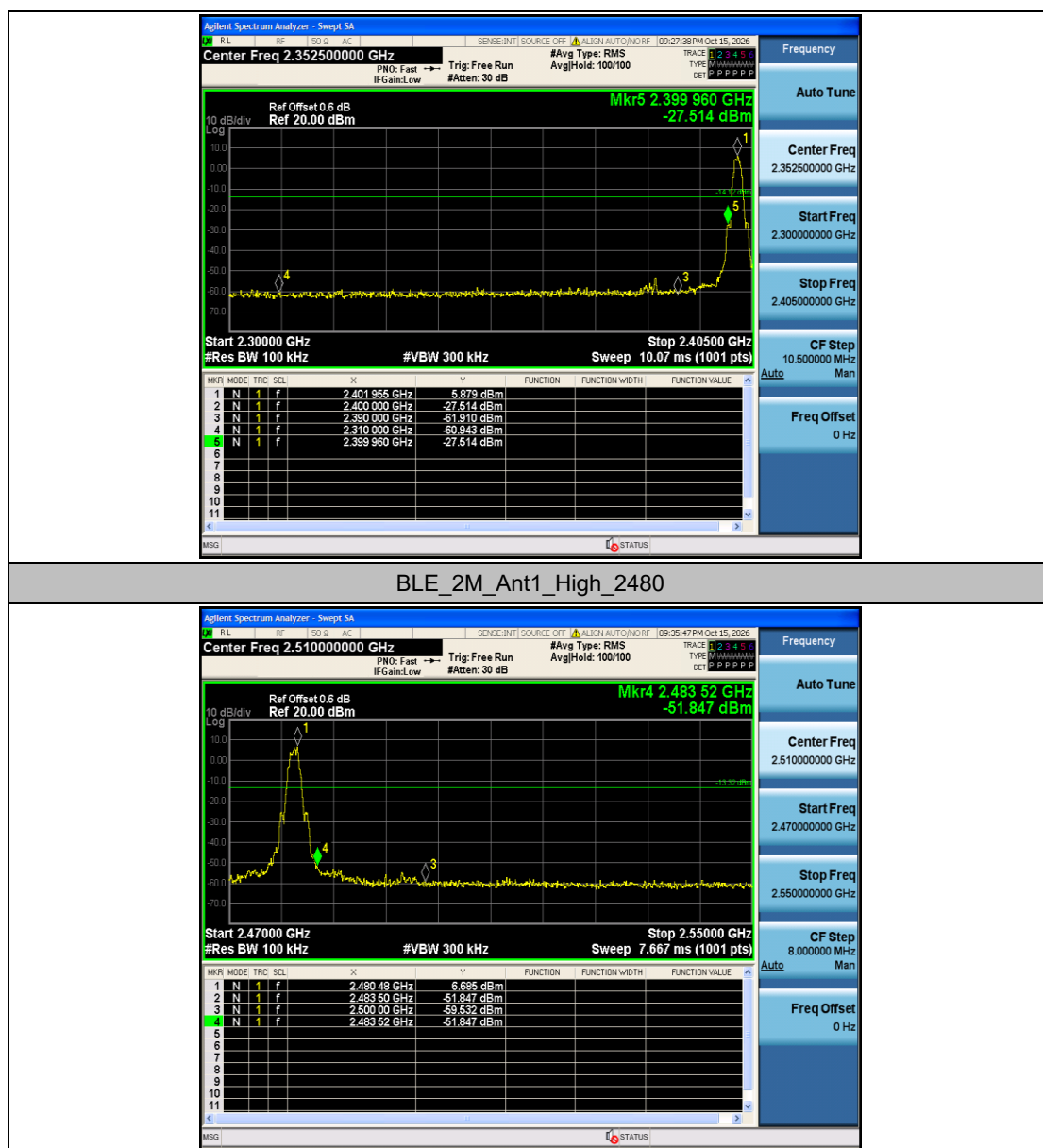
BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480



BLE_2M_Ant1_Low_2402

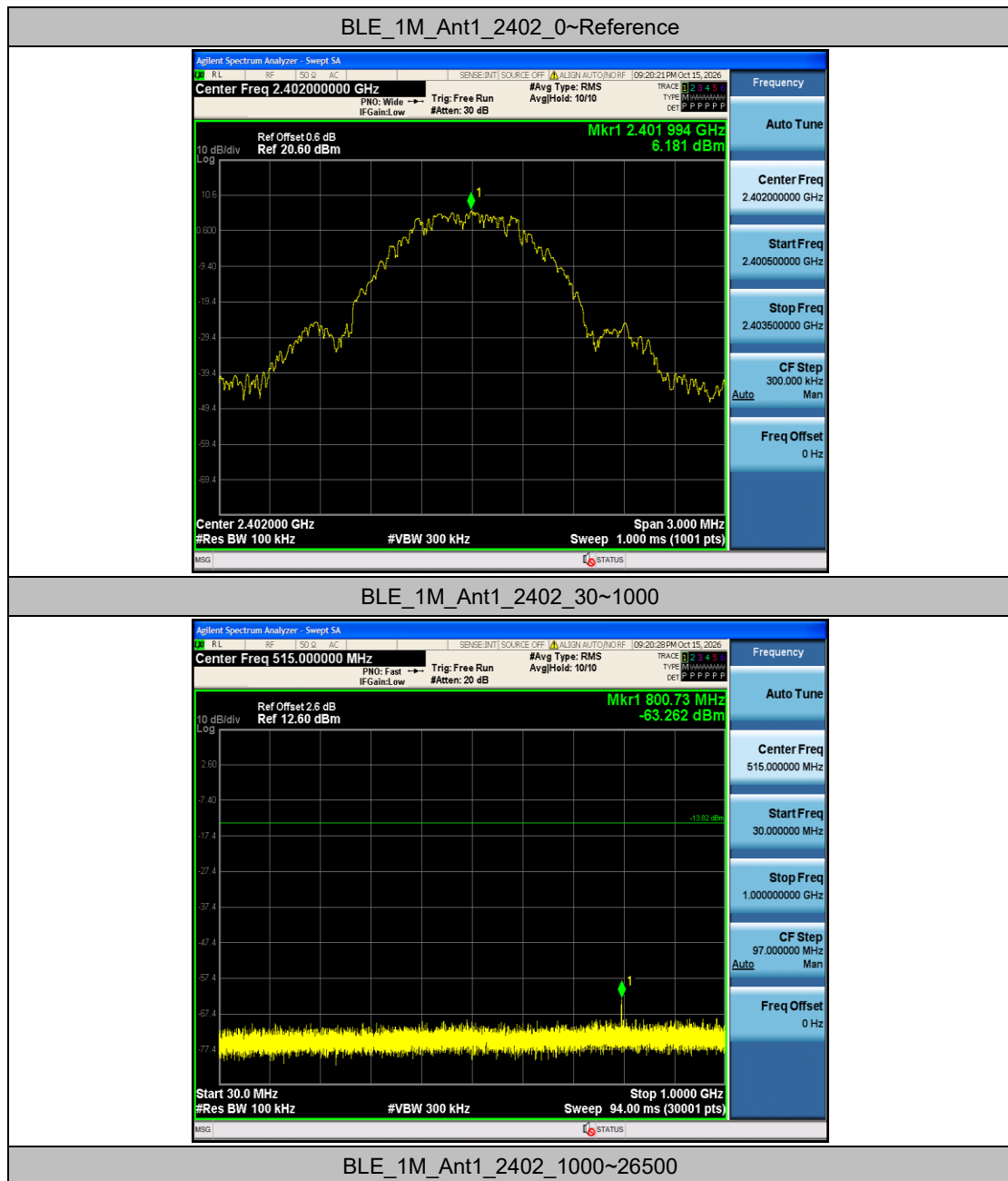


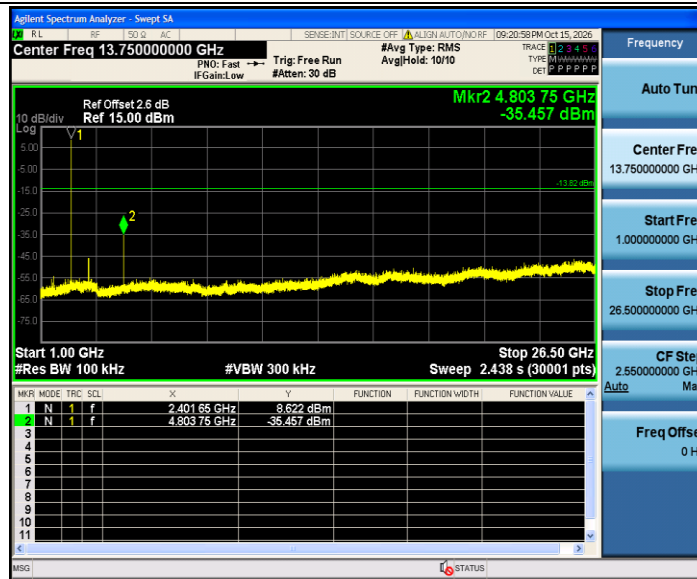
Appendix F: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	6.18	6.18	---	PASS
			30~1000	6.18	-63.26	≤-13.82	PASS
			1000~26500	6.18	-35.46	≤-13.82	PASS
		2440	Reference	5.79	5.79	---	PASS
			30~1000	5.79	-64.4	≤-14.21	PASS
			1000~26500	5.79	-37.4	≤-14.21	PASS
		2480	Reference	6.34	6.34	---	PASS
			30~1000	6.34	-64.32	≤-13.66	PASS
			1000~26500	6.34	-39.14	≤-13.66	PASS
BLE_2M	Ant1	2402	Reference	3.96	3.96	---	PASS
			30~1000	3.96	-64.53	≤-16.04	PASS
			1000~26500	3.96	-36.98	≤-16.04	PASS
		2440	Reference	4.26	4.26	---	PASS
			30~1000	4.26	-68.44	≤-15.74	PASS
			1000~26500	4.26	-39.87	≤-15.74	PASS
		2480	Reference	4.67	4.67	---	PASS
			30~1000	4.67	-66.43	≤-15.33	PASS
			1000~26500	4.67	-40.65	≤-15.33	PASS

Test Graphs

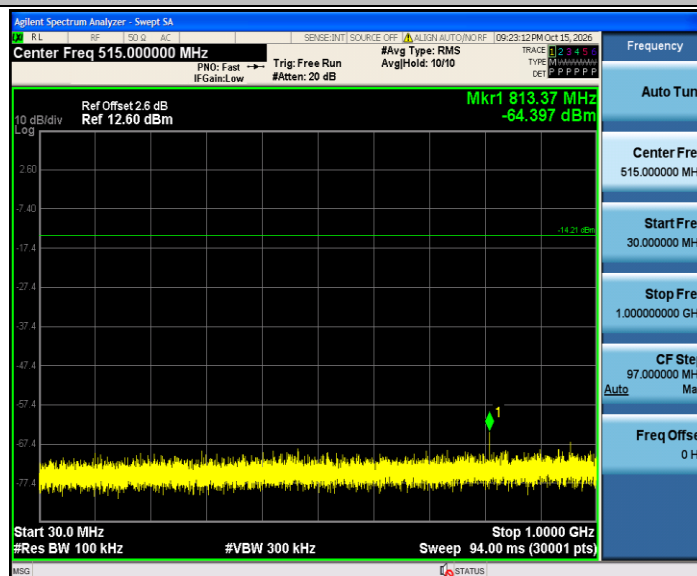




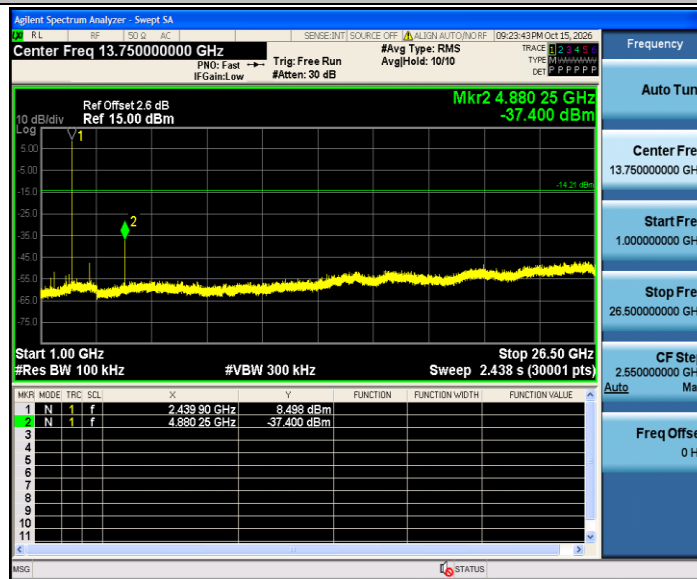
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



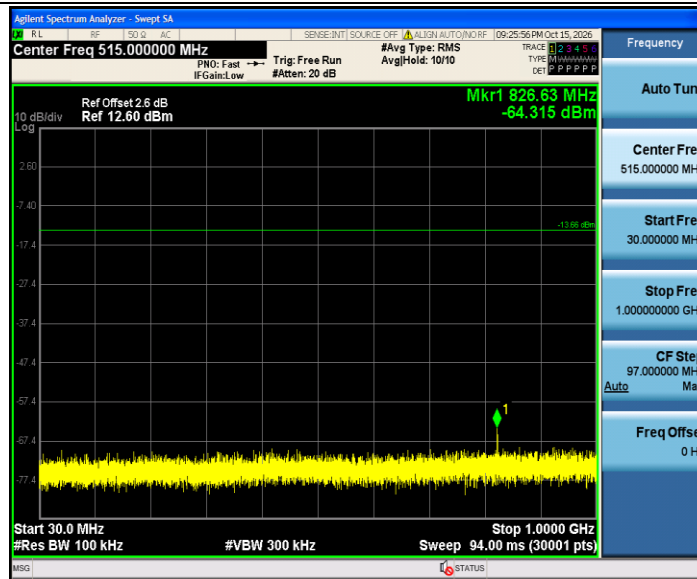
BLE_1M_Ant1_2440_1000~26500



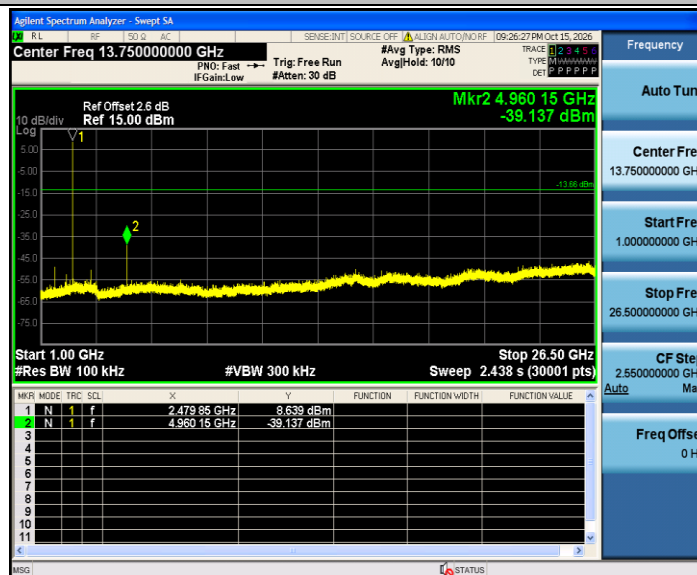
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



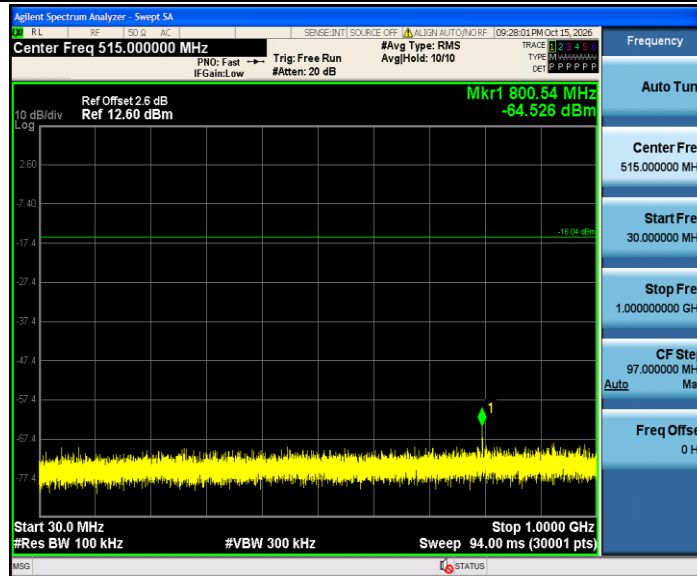
BLE_1M_Ant1_2480_1000~26500



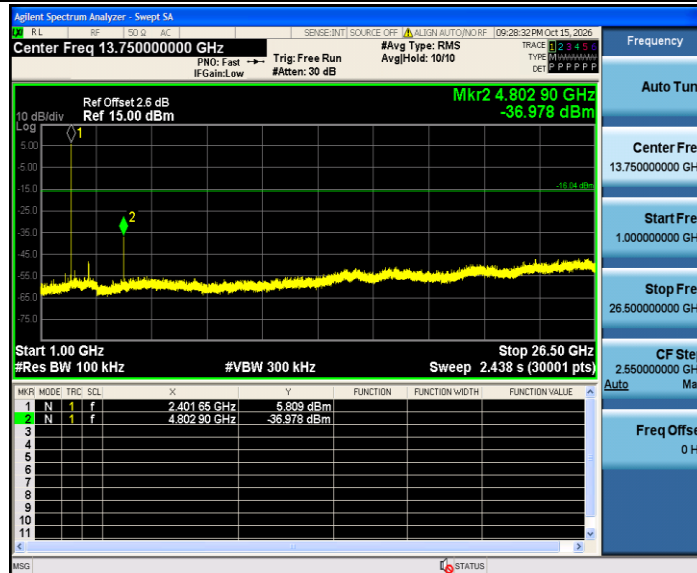
BLE_2M_Ant1_2402_0~Reference



BLE_2M_Ant1_2402_30~1000



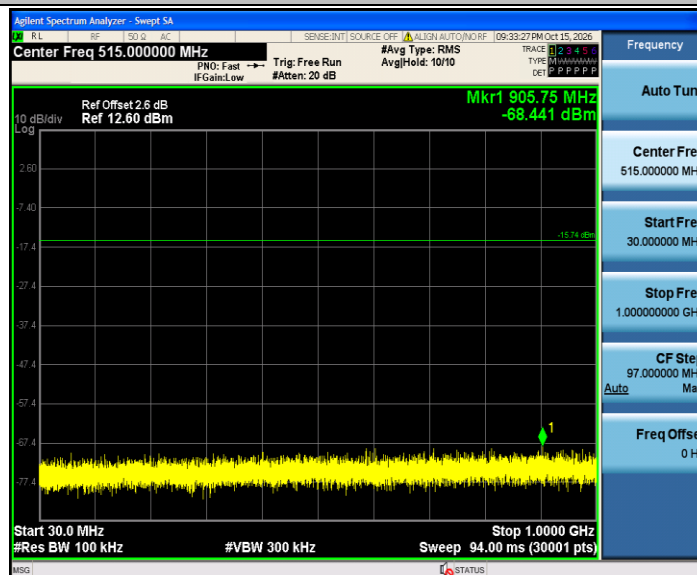
BLE_2M_Ant1_2402_1000~26500



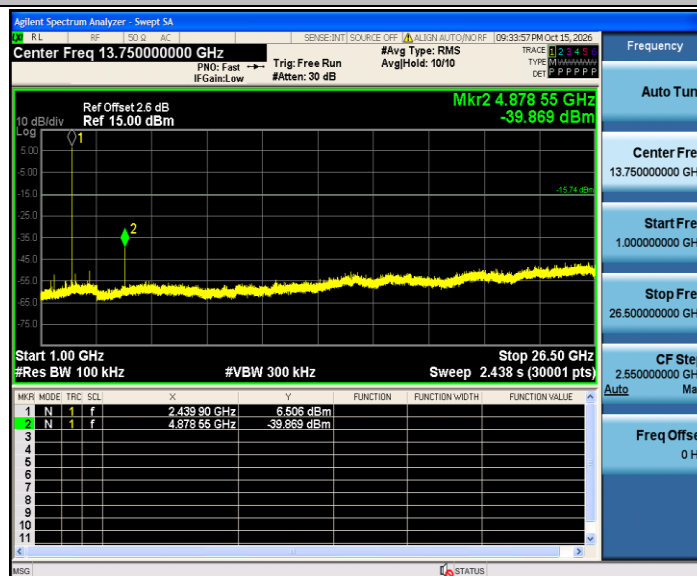
BLE_2M_Ant1_2440_0~Reference



BLE_2M_Ant1_2440_30~1000



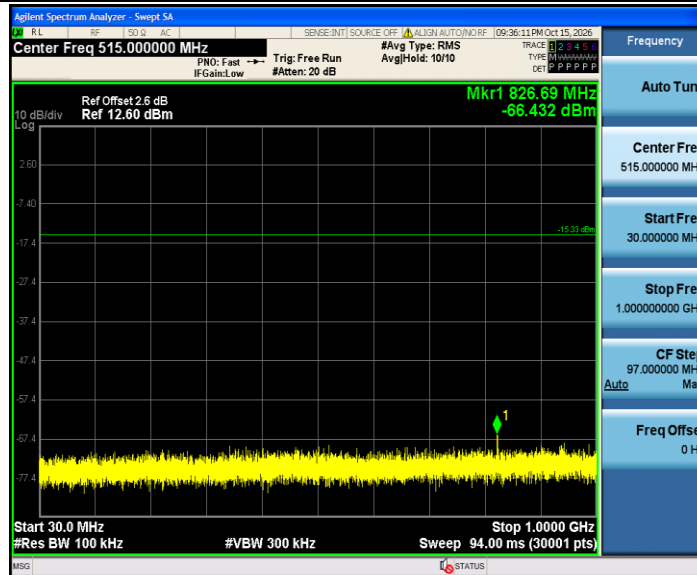
BLE_2M_Ant1_2440_1000~26500



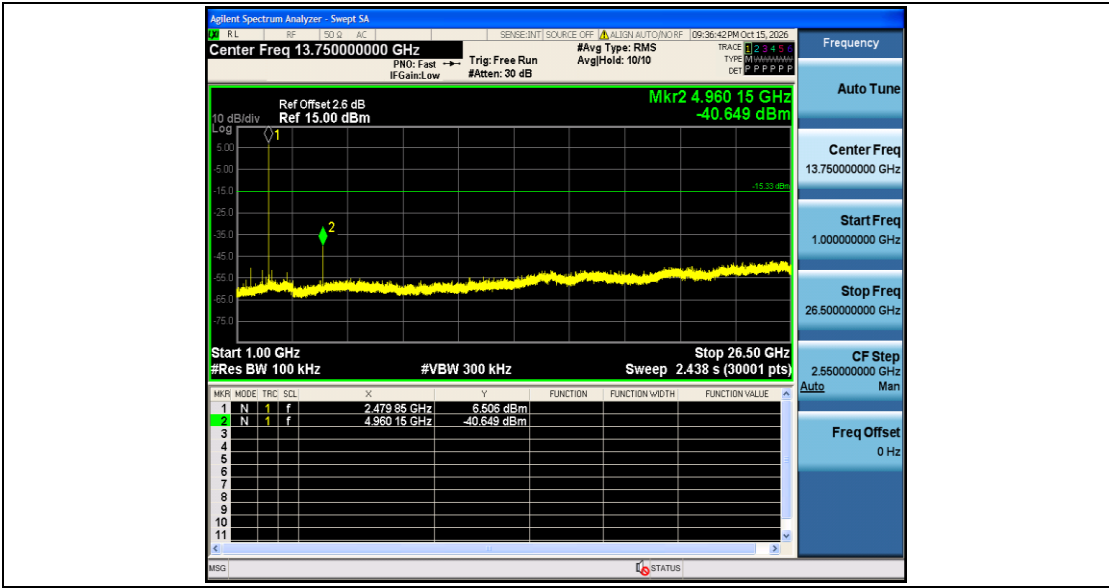
BLE_2M_Ant1_2480_0~Reference



BLE_2M_Ant1_2480_30~1000



BLE_2M_Ant1_2480_1000~26500

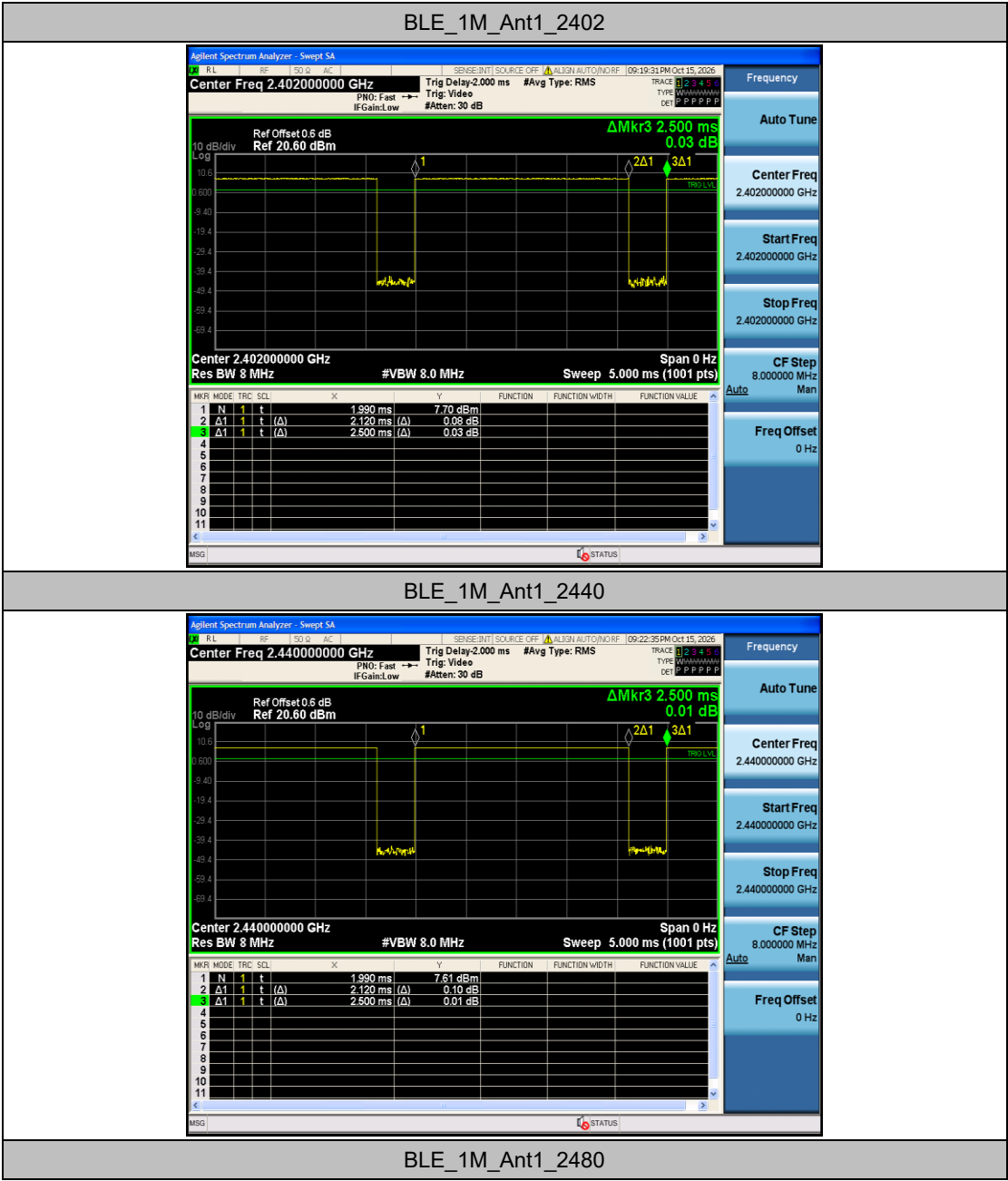


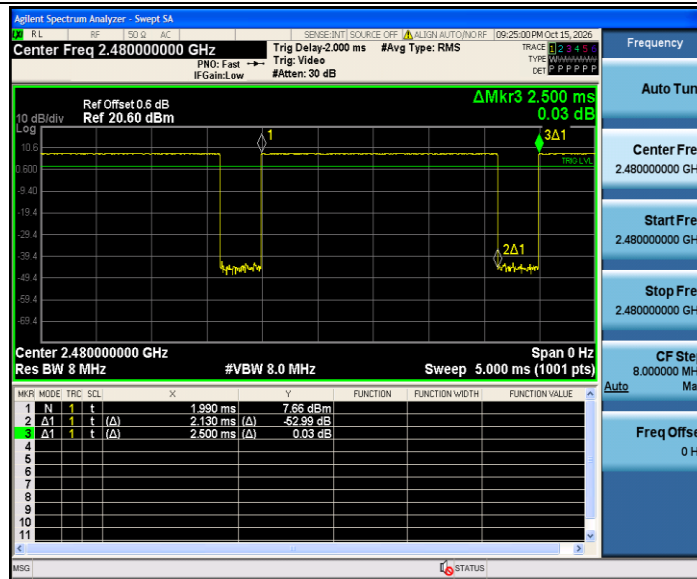
Appendix G: Duty Cycle

Test Result

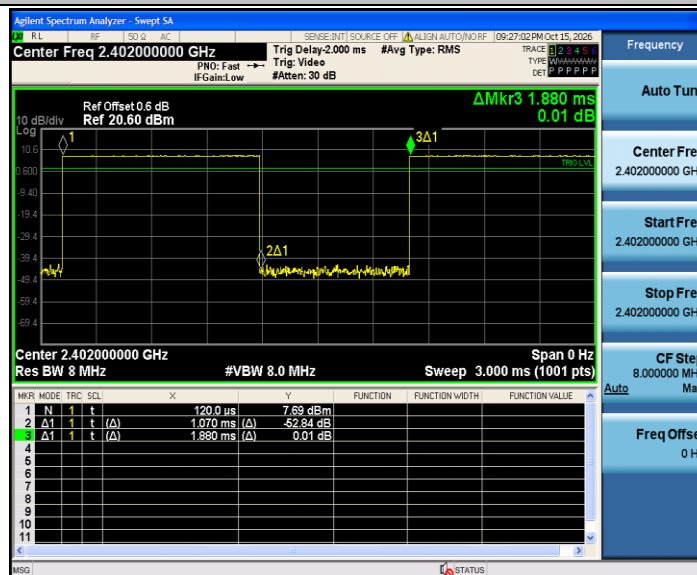
TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	2.12	2.50	0.8480	84.80	0.72	---	---
		2440	2.12	2.50	0.8480	84.80	0.72	---	---
		2480	2.13	2.50	0.8520	85.20	0.70	---	---
BLE_2M	Ant1	2402	1.07	1.88	0.5691	56.91	2.45	---	---
		2440	1.07	1.88	0.5691	56.91	2.45	---	---
		2480	1.07	1.87	0.5722	57.22	2.42	---	---

Test Graphs

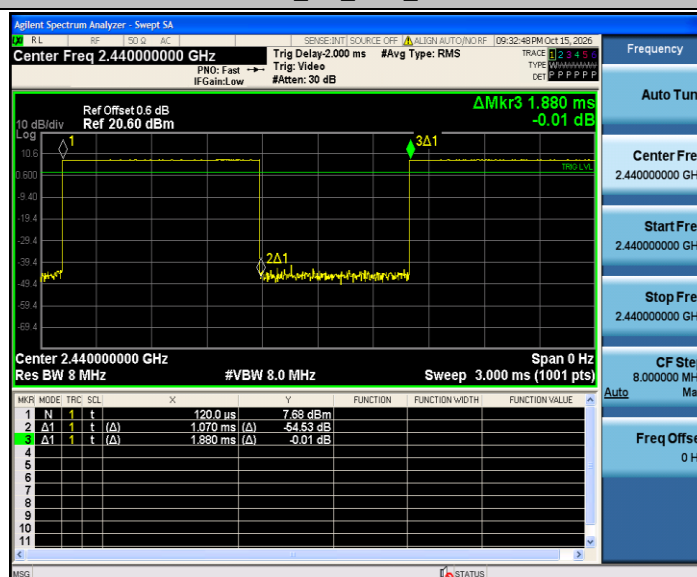




BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



Appendix H: Emissions in Restricted Bands

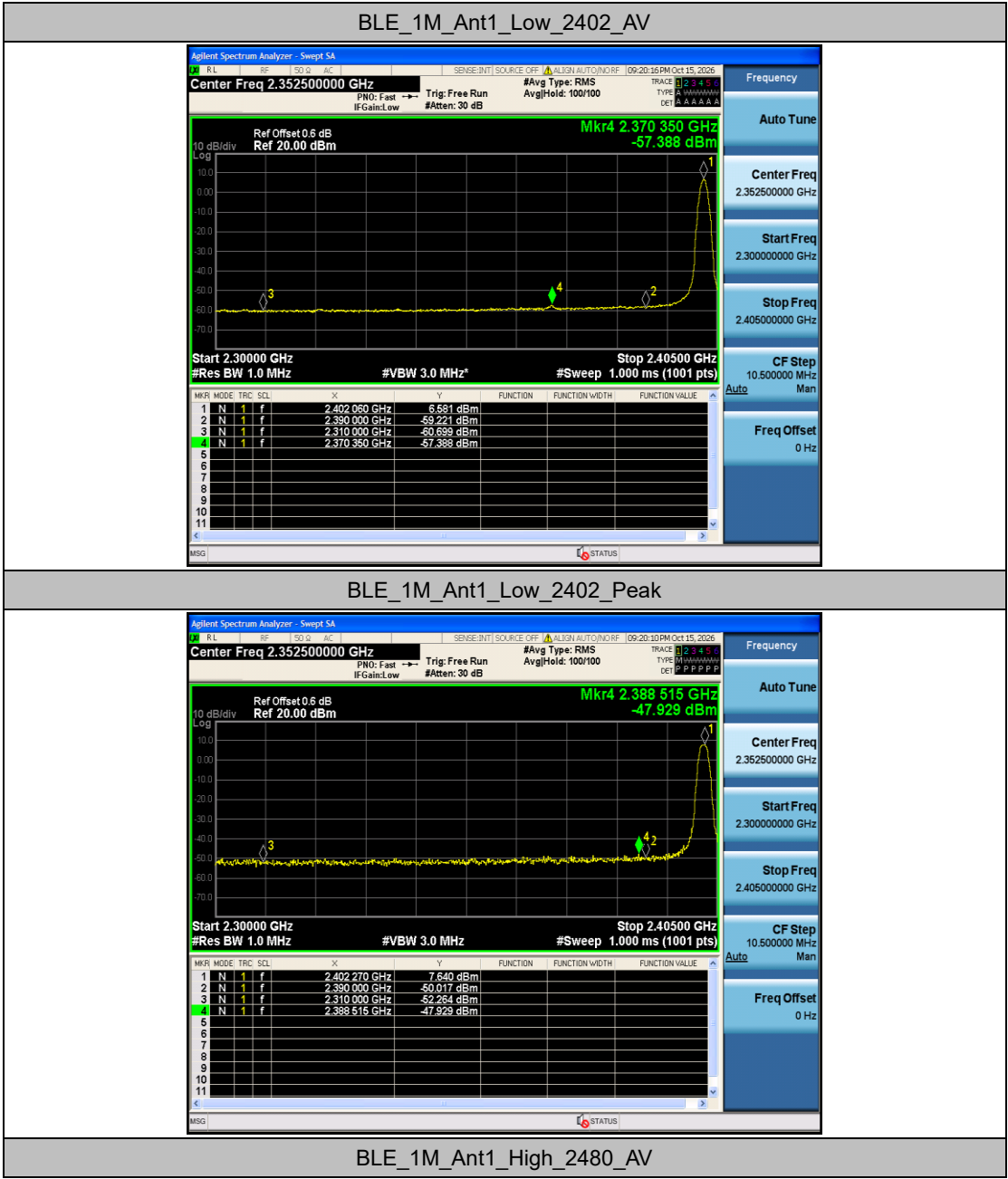
Test Result

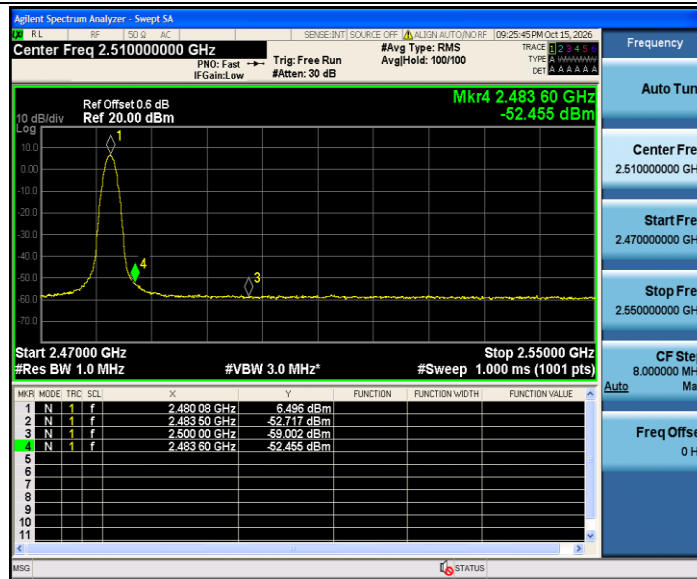
TestMode	Antenna	ChName	Freq (MHz)	Detector	Freq [MHz]	Result [dBm]	Gain [dB]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-60.7	2.69	0.72	37.91	≤54	PASS
				AV	2370.350	-57.39	2.69	0.72	41.22	≤54	PASS
				AV	2390.000	-59.22	2.69	0.72	39.39	≤54	PASS
				Peak	2310.000	-52.26	2.69	0.00	45.63	≤74	PASS
				Peak	2388.515	-47.93	2.69	0.00	49.96	≤74	PASS
				Peak	2390.000	-50.02	2.69	0.00	47.87	≤74	PASS
		High	2480	AV	2483.500	-52.72	2.69	0.70	45.87	≤54	PASS
				AV	2483.600	-52.46	2.69	0.70	46.13	≤54	PASS
				AV	2500.000	-59	2.69	0.70	39.59	≤54	PASS
				Peak	2483.500	-44.28	2.69	0.00	53.61	≤74	PASS
				Peak	2483.840	-44.05	2.69	0.00	53.84	≤74	PASS
				Peak	2500.000	-51.01	2.69	0.00	46.88	≤74	PASS
BLE_2M	Ant1	Low	2402	AV	2310.000	-60.63	2.69	2.45	39.71	≤54	PASS
				AV	2385.155	-56.55	2.69	2.45	43.79	≤54	PASS
				AV	2390.000	-58.91	2.69	2.45	41.43	≤54	PASS
				Peak	2310.000	-54.28	2.69	0.00	43.61	≤74	PASS
				Peak	2386.100	-46.99	2.69	0.00	50.9	≤74	PASS
				Peak	2390.000	-51.16	2.69	0.00	46.73	≤74	PASS
		High	2480	AV	2483.500	-48.94	2.69	2.42	51.37	≤54	PASS
				AV	2483.520	-48.94	2.69	2.42	51.37	≤54	PASS
				AV	2500.000	-58.38	2.69	2.42	41.93	≤54	PASS
				Peak	2483.500	-39.92	2.69	0.00	57.97	≤74	PASS
				Peak	2483.520	-39.92	2.69	0.00	57.97	≤74	PASS
				Peak	2500.000	-49.01	2.69	0.00	48.88	≤74	PASS

Note:

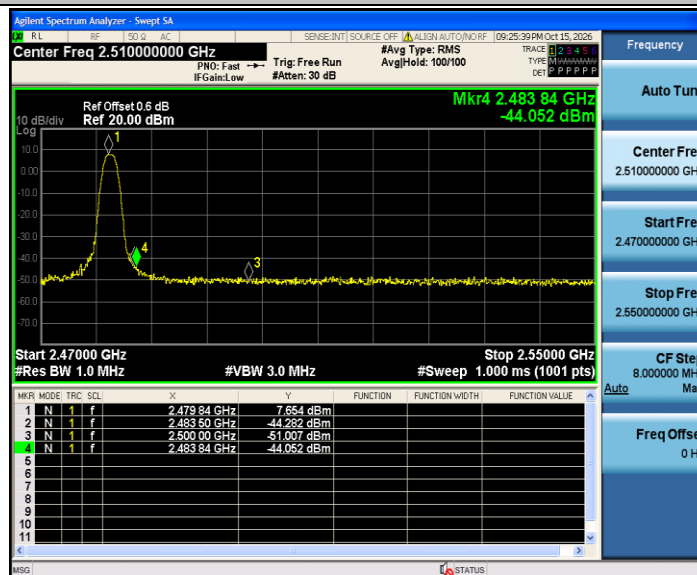
The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

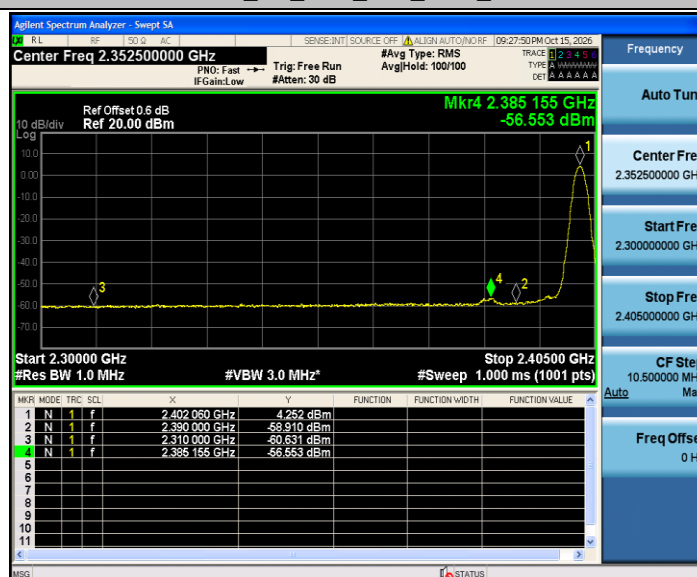




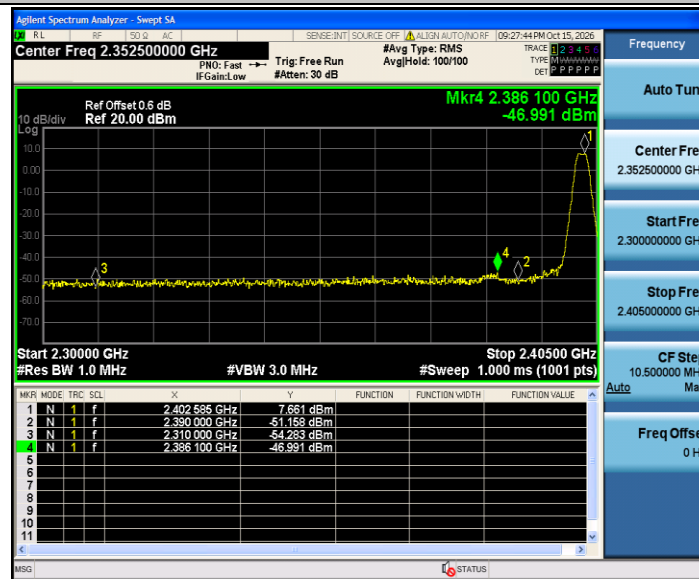
BLE_1M_Ant1_High_2480_Peak



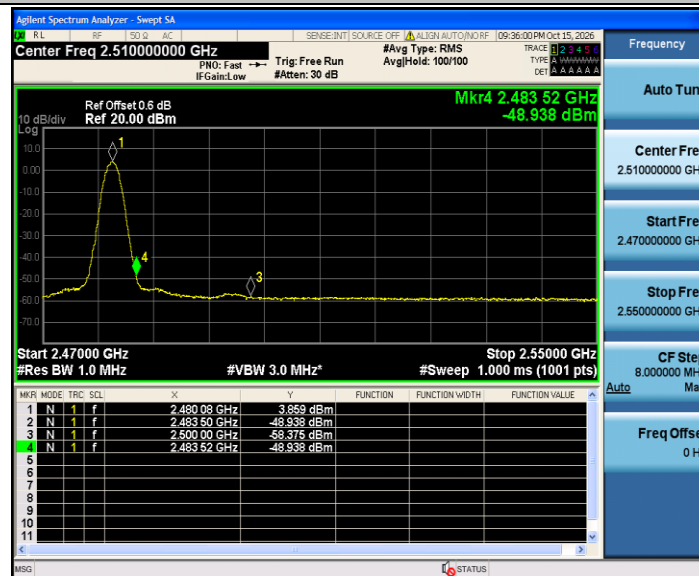
BLE_2M_Ant1_Low_2402_AV



BLE_2M_Ant1_Low_2402_Peak



BLE_2M_Ant1_High_2480_AV



BLE_2M_Ant1_High_2480_Peak

