

Case No. : <u>CTA24082101001</u>	
Ambient Condition: <u>22</u> °C, <u>53</u> %RH	
According Standard: ■Part15C	
Test Date: <u>2024.8.15</u>	Test Engineer: <u>Lushan Kong</u>

Appendix A.1: DTS Bandwidth

Test Result

BT LE:

TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE	Ant1	2402	0.684	2401.664	2402.348	0.5	PASS
		2440	0.680	2439.668	2440.348	0.5	PASS
		2480	0.648	2479.680	2480.328	0.5	PASS

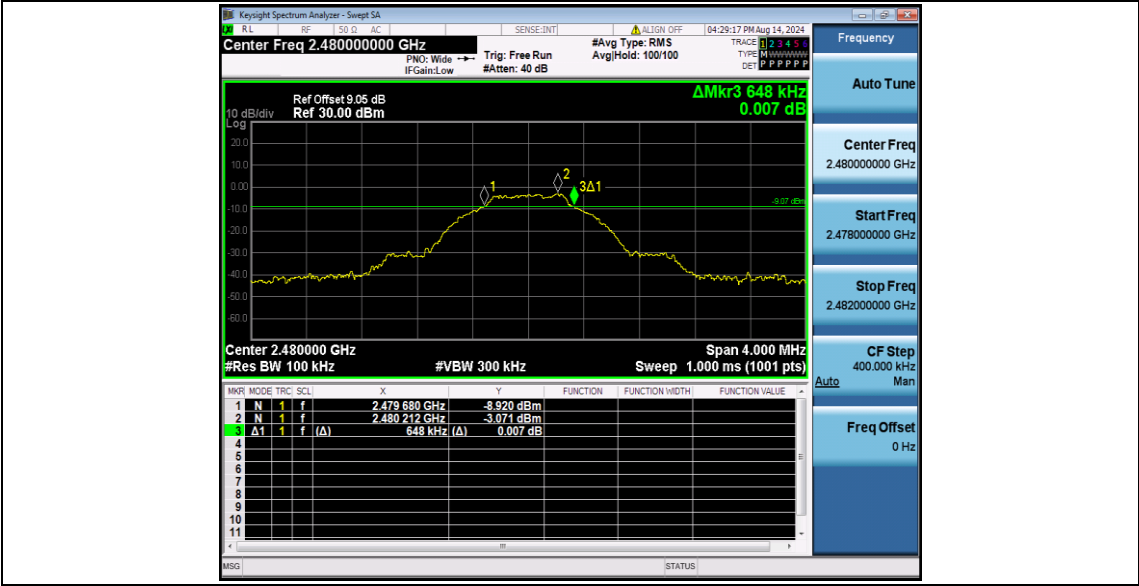
BT 2LE:

TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE	Ant1	2402	1.344	2401.332	2402.676	0.5	PASS
		2440	1.476	2439.204	2440.680	0.5	PASS
		2480	1.580	2479.184	2480.764	0.5	PASS

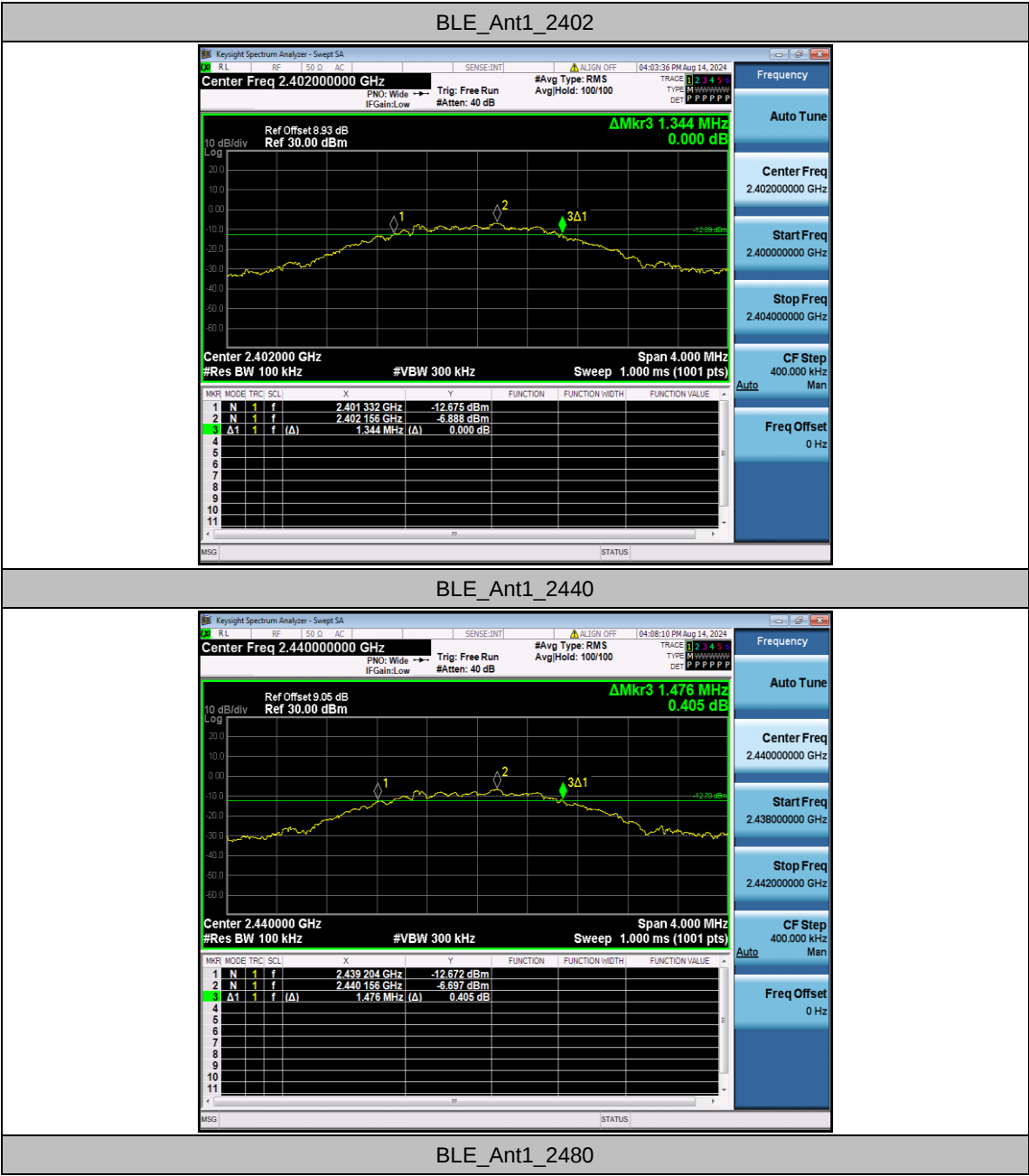
Test Graphs

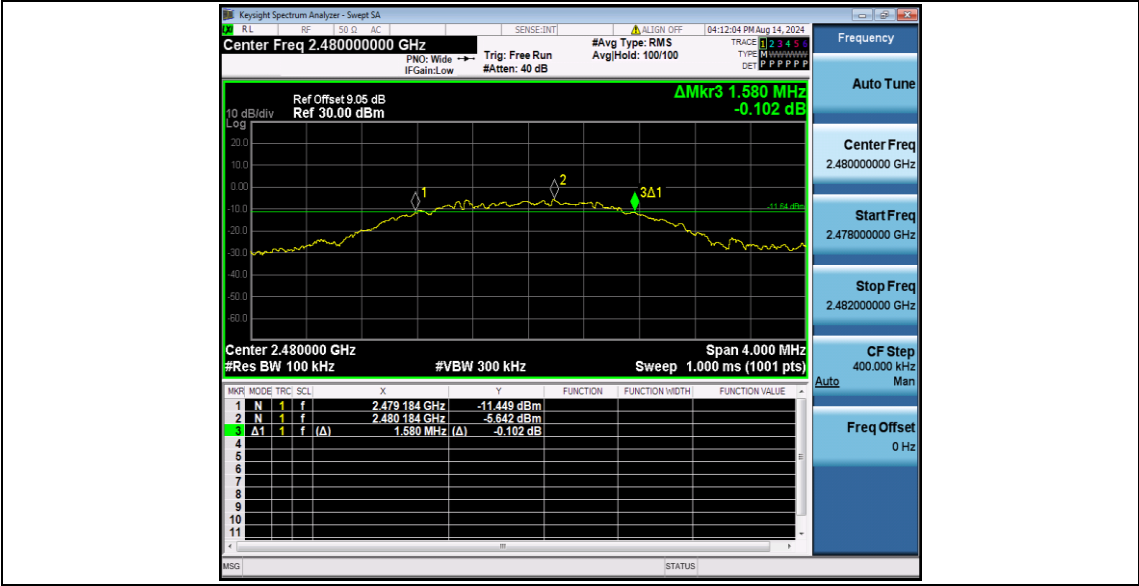
BT LE:





BT 2LE:





Appendix A.2: Occupied Channel Bandwidth

Test Result

BT LE:

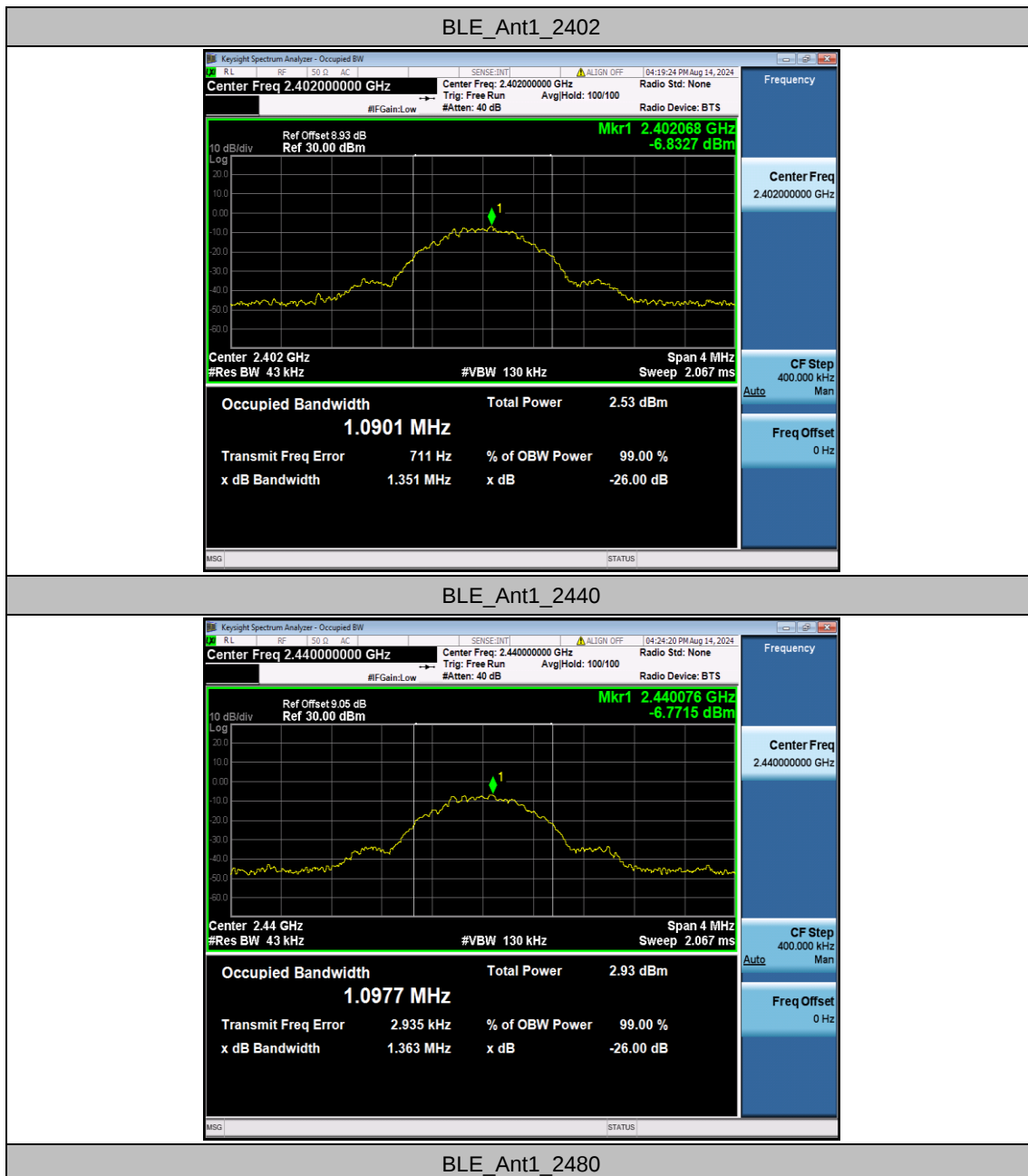
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE	Ant1	2402	1.0901	2401.4557	2402.5458	---	---
		2440	1.0977	2439.4541	2440.5518	---	---
		2480	1.1017	2479.4485	2480.5502	---	---

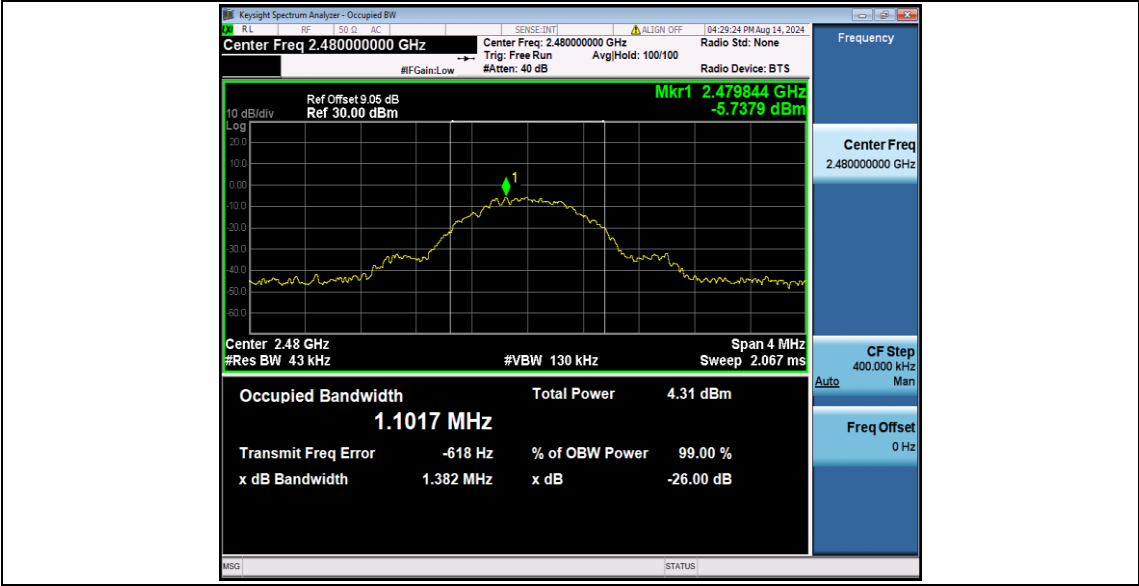
BT 2LE:

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE	Ant1	2402	2.5898	2400.7215	2403.3113	---	---
		2440	2.6909	2438.7086	2441.3995	---	---
		2480	2.7381	2478.6796	2481.4177	---	---

Test Graphs

BT LE:





BT 2LE:





Appendix A.3: Maximum conducted output power

Test Result Peak

BT LE:

TestMode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE	Ant1	2402	-3.69	≤30	PASS
		2440	-3.42	≤30	PASS
		2480	-1.85	≤30	PASS

BT 2LE:

TestMode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE	Ant1	2402	-3.77	≤30	PASS
		2440	-3.38	≤30	PASS
		2480	-1.88	≤30	PASS

Appendix A.4: Maximum power spectral density

Test Result

BT LE:

TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE	Ant1	2402	-17.73	≤8.00	PASS
		2440	-17.54	≤8.00	PASS
		2480	-15.84	≤8.00	PASS

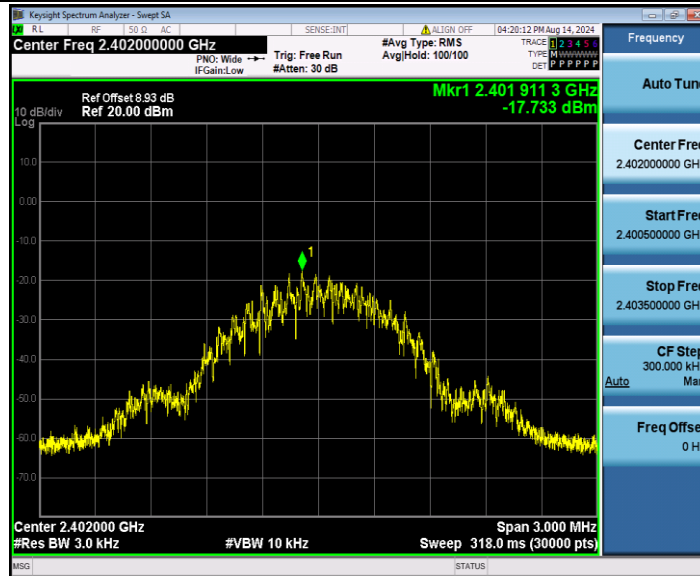
BT 2LE:

TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE	Ant1	2402	-21.35	≤8.00	PASS
		2440	-21.30	≤8.00	PASS
		2480	-19.69	≤8.00	PASS

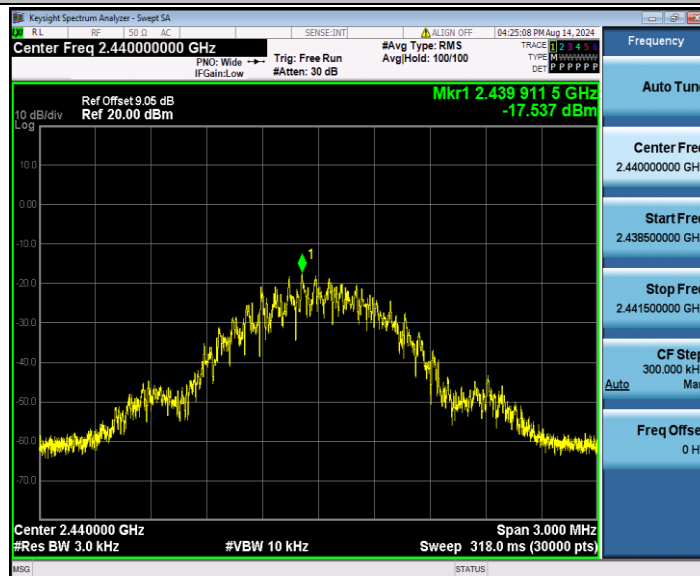
Test Graphs

BT LE:

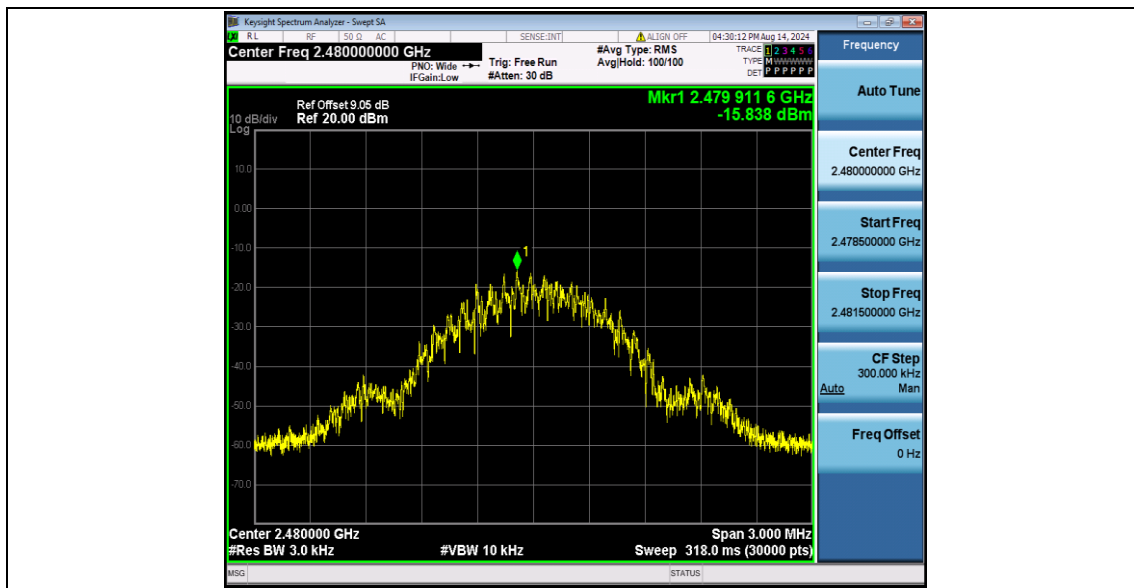
BLE_Ant1_2402



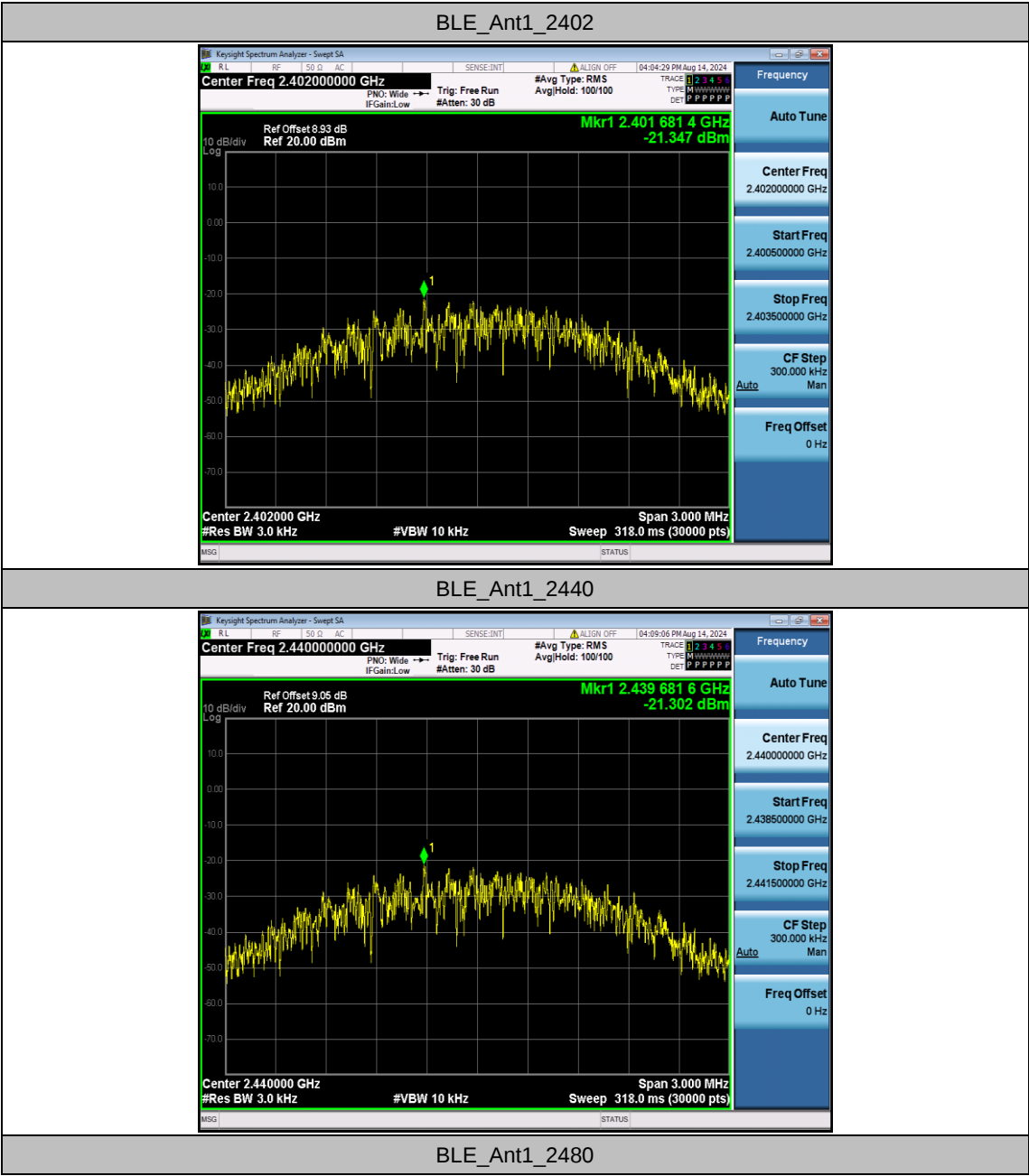
BLE_Ant1_2440

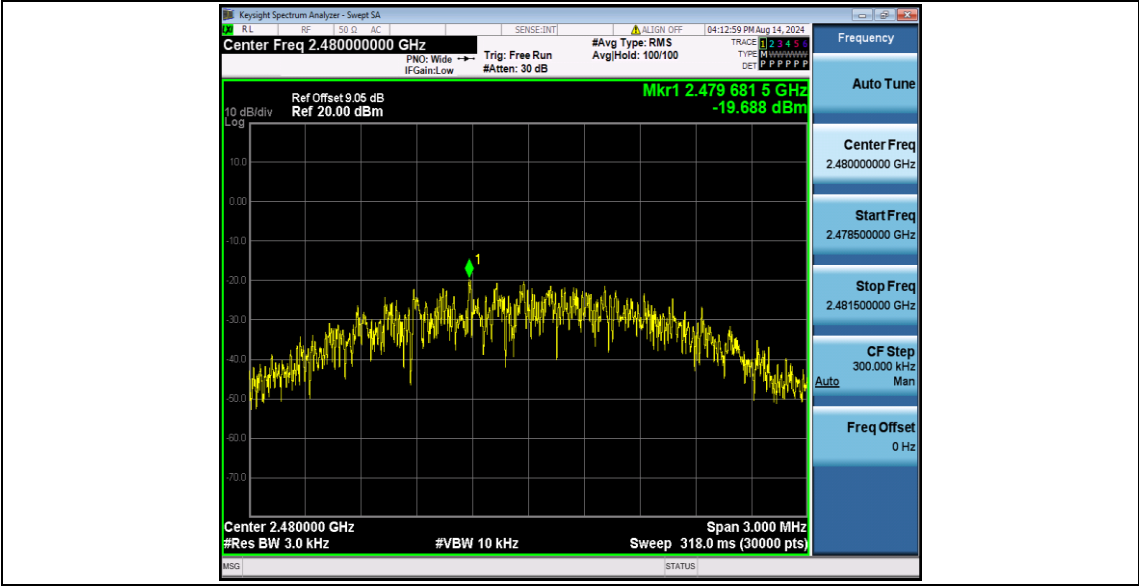


BLE_Ant1_2480



BT 2LE:





Appendix A.5: Band edge measurements

Test Result

BT LE:

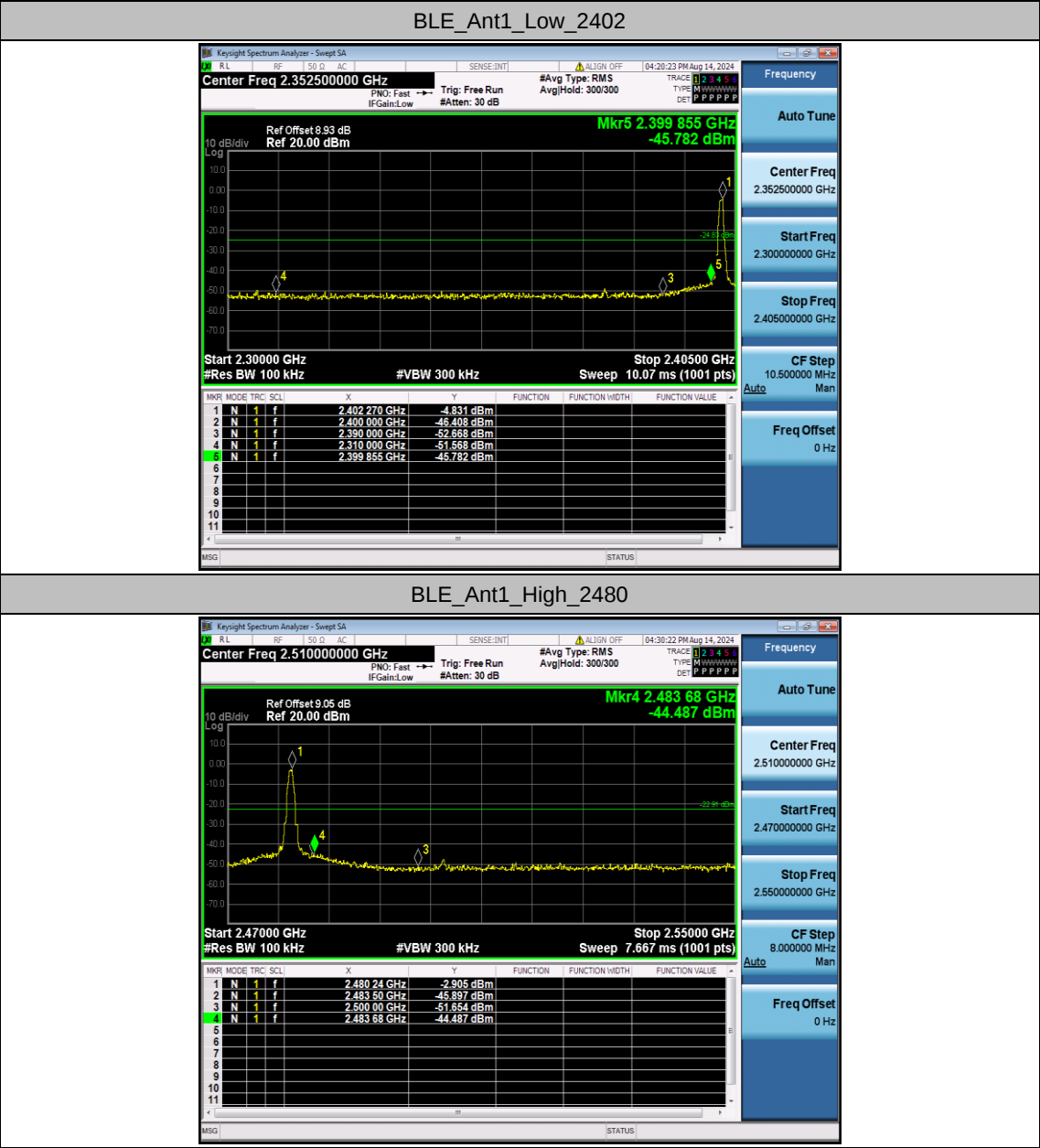
TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant1	Low	2402	-4.83	-45.78	≤ -24.83	PASS
		High	2480	-2.91	-44.49	≤ -22.91	PASS

BT 2LE:

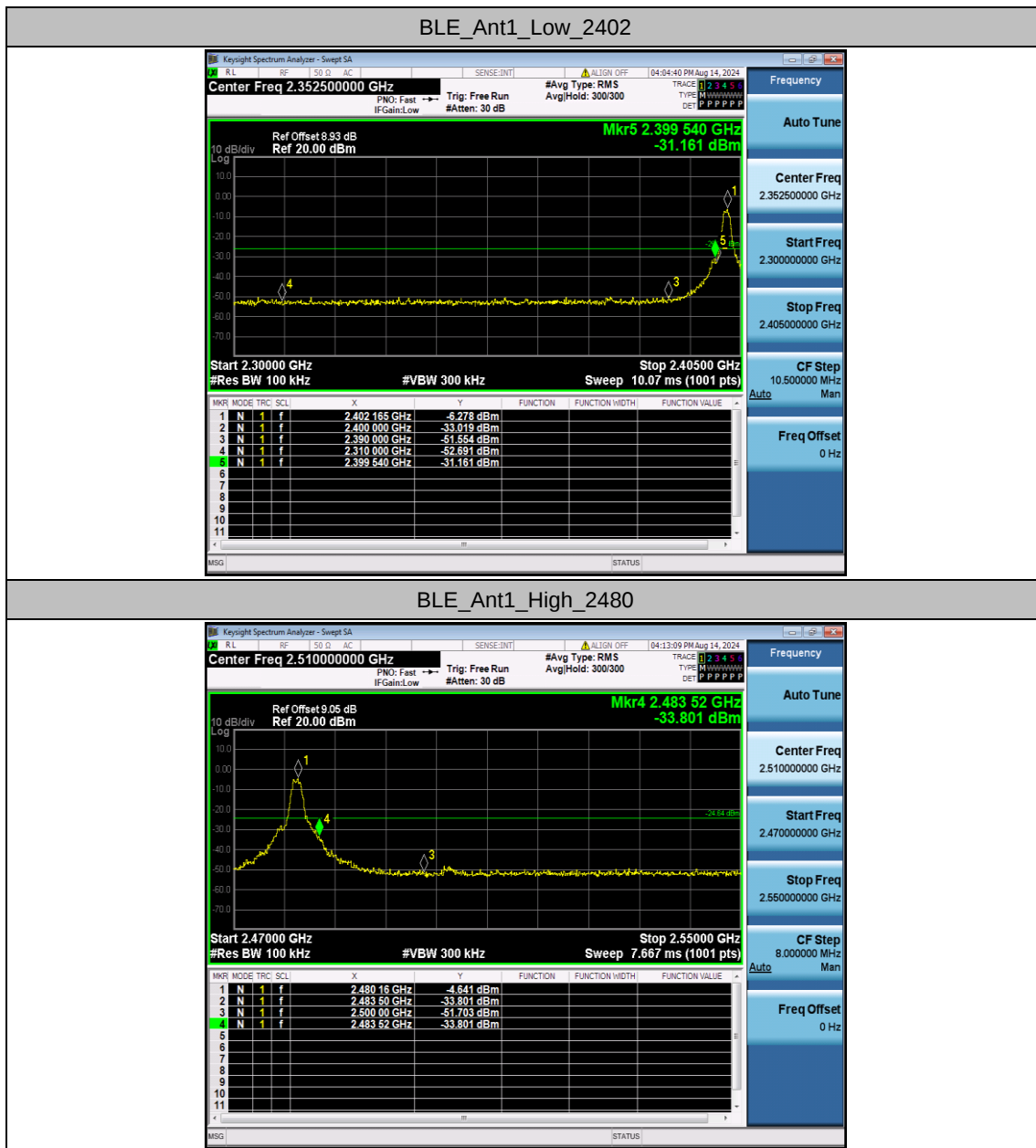
TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant1	Low	2402	-6.28	-31.16	≤ -26.28	PASS
		High	2480	-4.64	-33.8	≤ -24.64	PASS

Test Graphs

BT LE:



BT 2LE:



Appendix A.6: Conducted Spurious Emission

Test Result

BT LE:

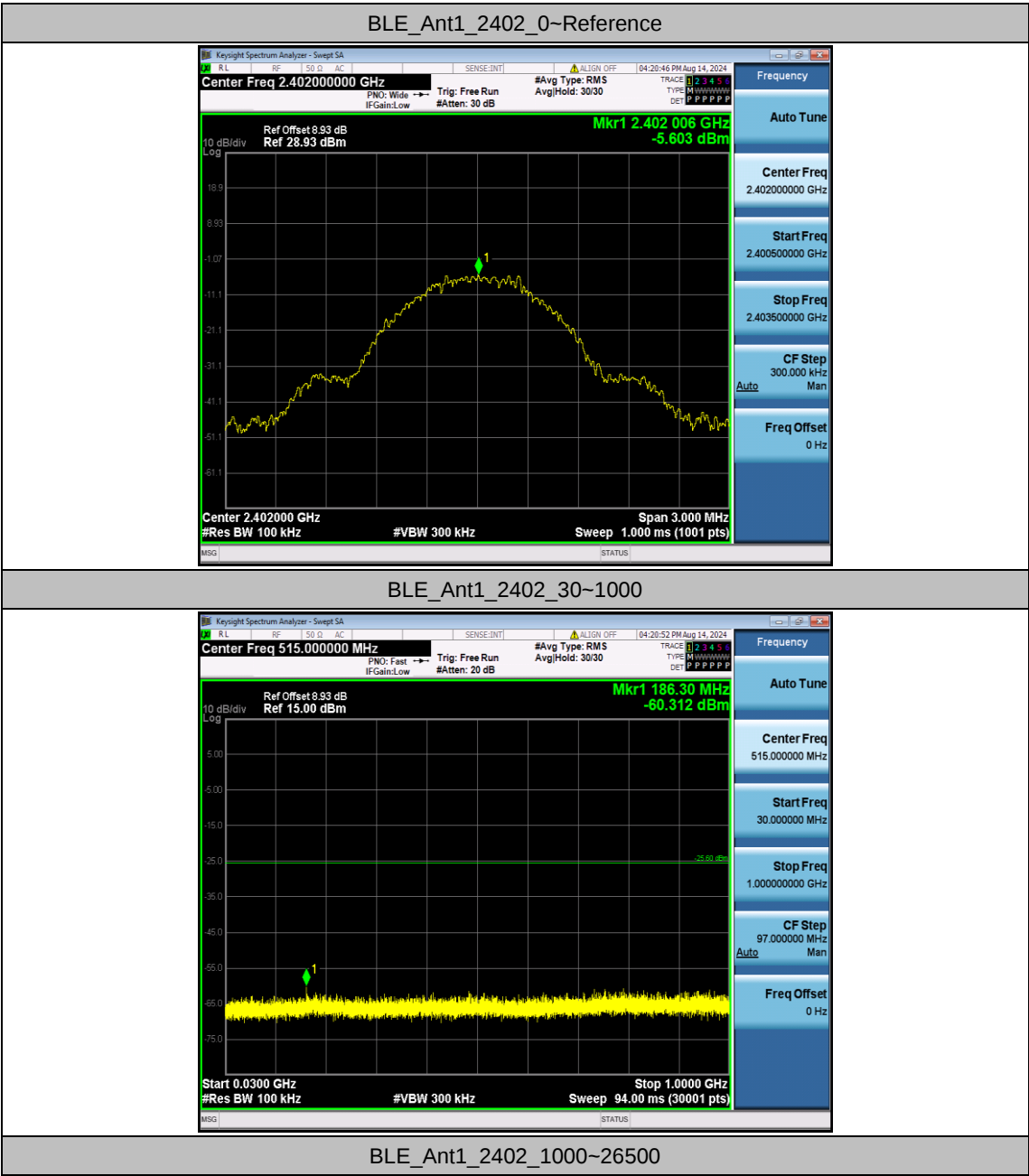
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant1	2402	Reference	-5.60	-5.60	---	PASS
			30~1000	-5.60	-60.31	≤ -25.6	PASS
			1000~26500	-5.60	-47.98	≤ -25.6	PASS
		2440	Reference	-5.44	-5.44	---	PASS
			30~1000	-5.44	-59.3	≤ -25.44	PASS
			1000~26500	-5.44	-48.16	≤ -25.44	PASS
		2480	Reference	-3.02	-3.02	---	PASS
			30~1000	-3.02	-60.13	≤ -23.02	PASS
			1000~26500	-3.02	-47.34	≤ -23.02	PASS

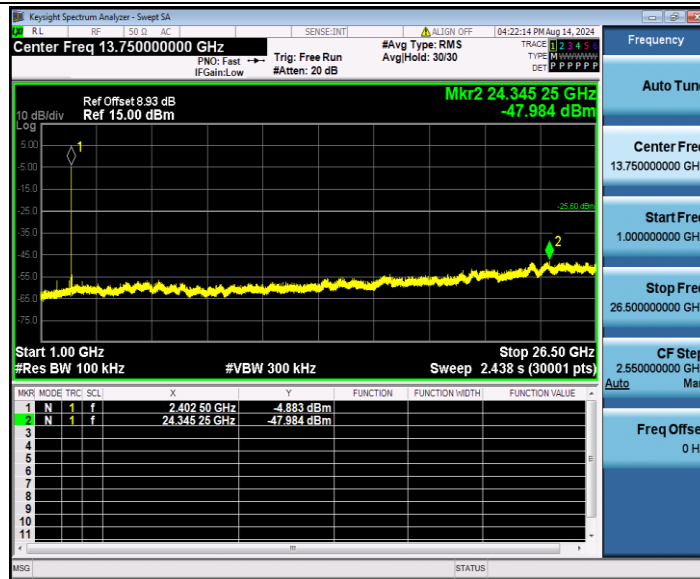
BT 2LE:

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant1	2402	Reference	-6.94	-6.94	---	PASS
			30~1000	-6.94	-37.01	≤ -26.94	PASS
			1000~26500	-6.94	-47.37	≤ -26.94	PASS
		2440	Reference	-6.84	-6.84	---	PASS
			30~1000	-6.84	-59.96	≤ -26.84	PASS
			1000~26500	-6.84	-47.35	≤ -26.84	PASS
		2480	Reference	-5.32	-5.32	---	PASS
			30~1000	-5.32	-33.06	≤ -25.32	PASS
			1000~26500	-5.32	-48.08	≤ -25.32	PASS

Test Graphs

BT LE:

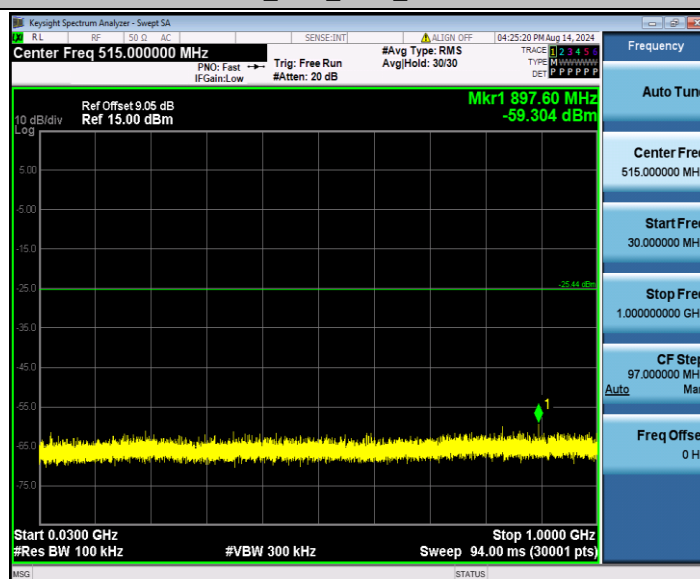




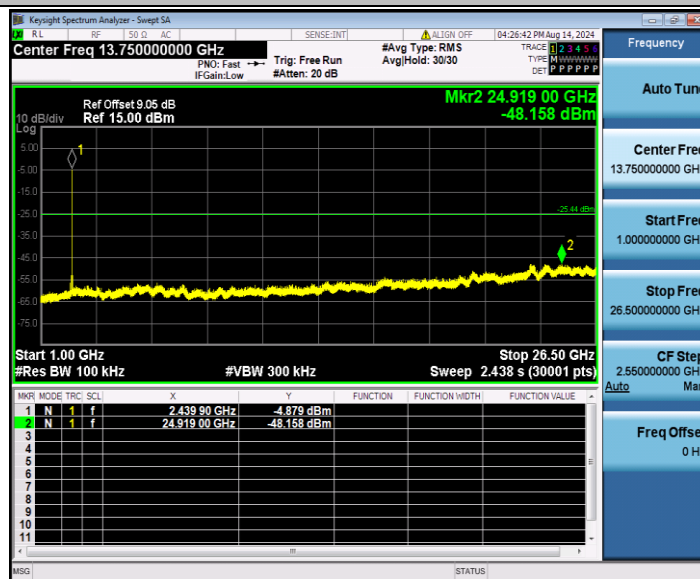
BLE_Ant1_2440_0~Reference



BLE_Ant1_2440_30~1000



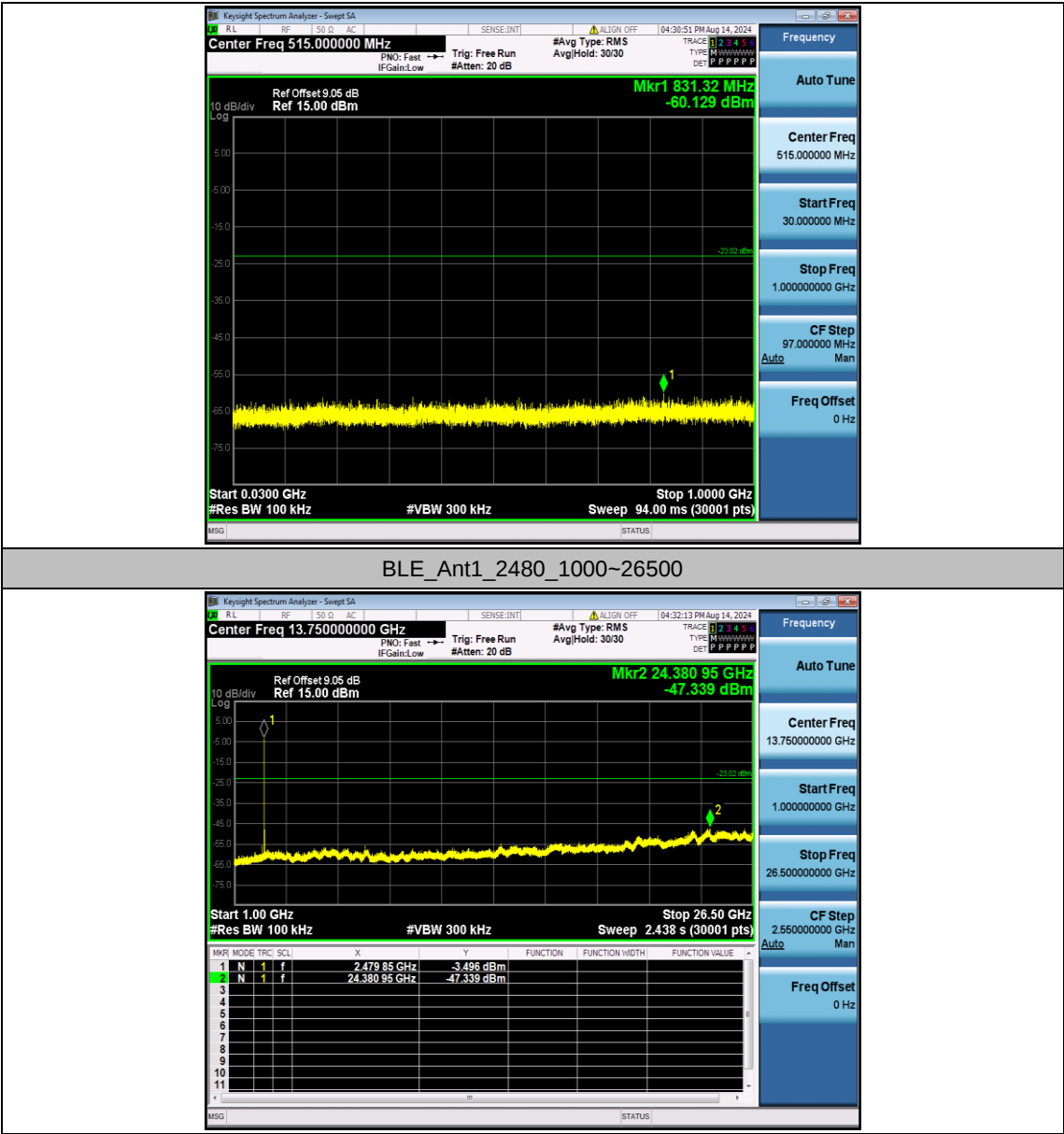
BLE_Ant1_2440_1000~26500



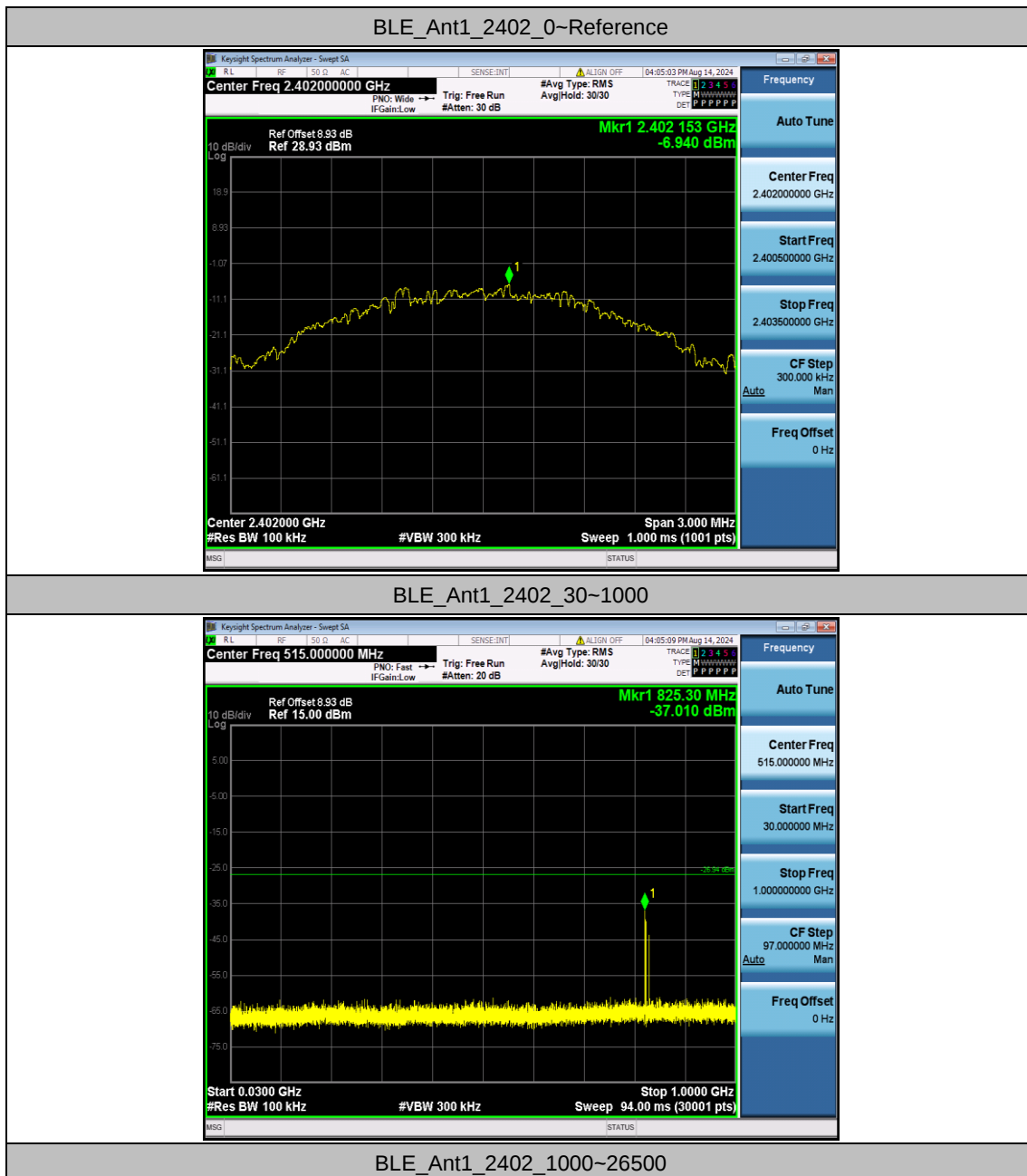
BLE_Ant1_2480_0~Reference

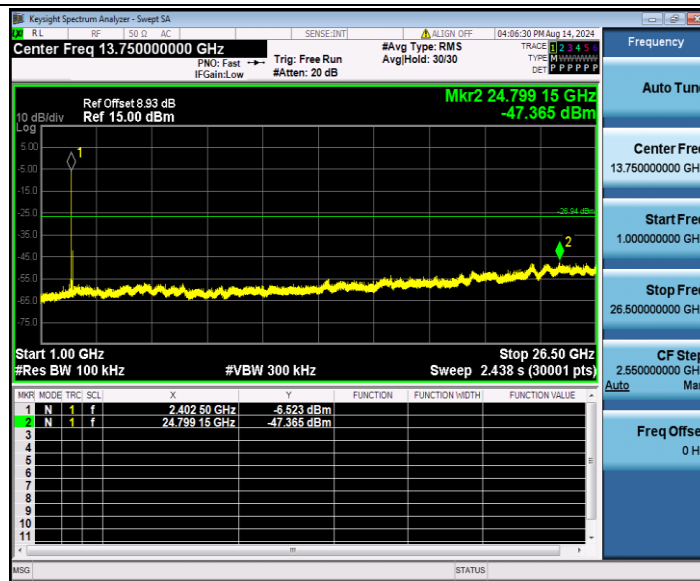


BLE_Ant1_2480_30~1000



BT 2LE:

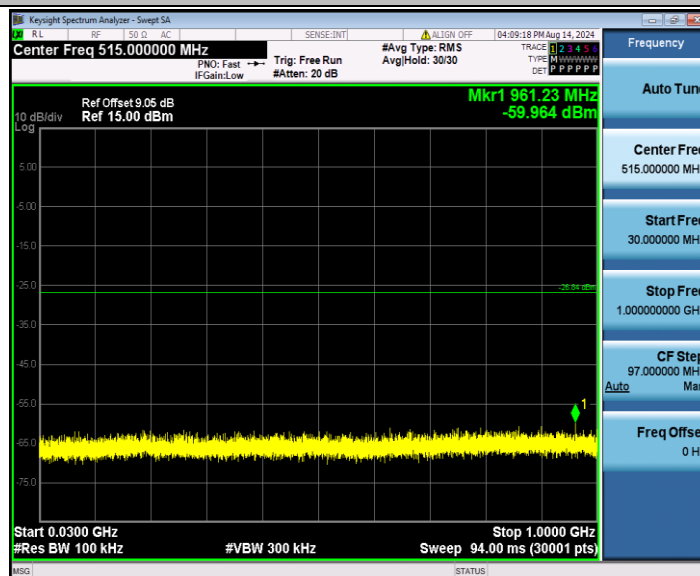




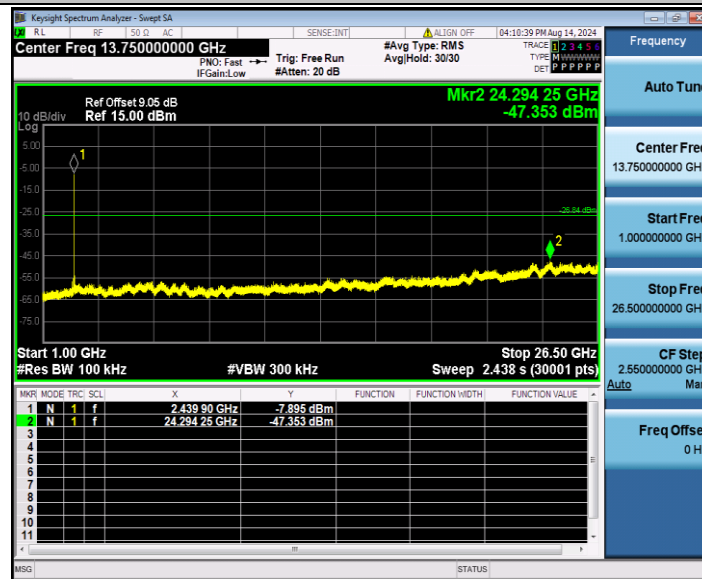
BLE_Ant1_2440_0~Reference



BLE_Ant1_2440_30~1000



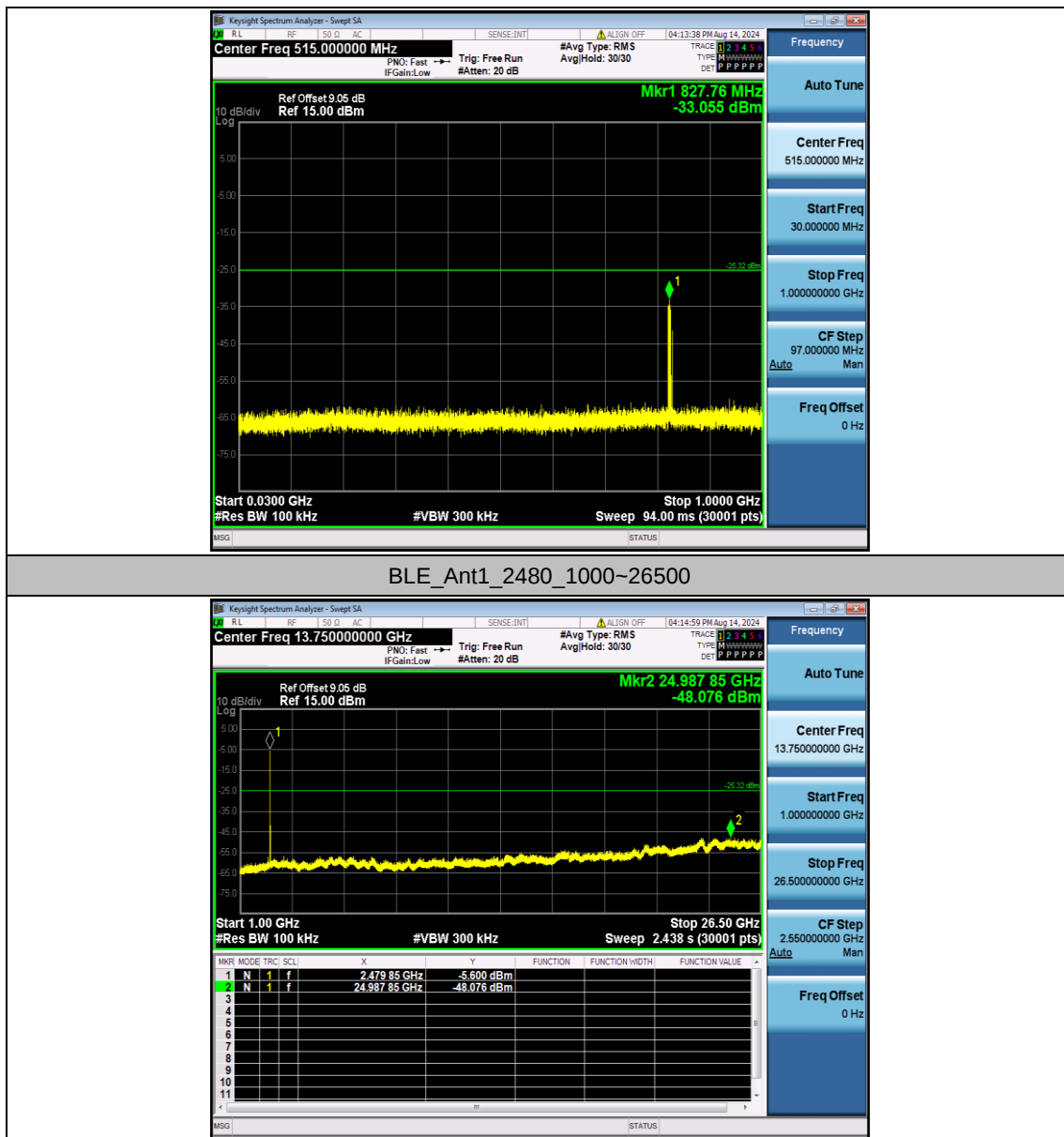
BLE_Ant1_2440_1000~26500



BLE_Ant1_2480_0~Reference



BLE_Ant1_2480_30~1000



Appendix A.7: Emissions in Restricted Bands

Test Result

BT LE:

TestMode	Antenna	ChName	Freq(MHz)	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE	Ant1	Low	2402	AV	2310.000	-49.6	≤-41.20	45.60	≤54	PASS
				AV	2378.015	-47.77	≤-41.20	47.43	≤54	PASS
				AV	2390.000	-48.73	≤-41.20	46.47	≤54	PASS
				Peak	2310.000	-43.82	≤-21.20	51.38	≤74	PASS
				Peak	2377.700	-40.02	≤-21.20	55.18	≤74	PASS
				Peak	2390.000	-40.49	≤-21.20	54.71	≤74	PASS
		High	2480	AV	2483.500	-42.14	≤-41.20	53.06	≤54	PASS
				AV	2483.520	-42.14	≤-41.20	53.06	≤54	PASS
				AV	2500.000	-48.64	≤-41.20	46.56	≤54	PASS
				Peak	2483.500	-35.49	≤-21.20	59.71	≤74	PASS
				Peak	2483.760	-34.83	≤-21.20	60.37	≤74	PASS
				Peak	2500.000	-44.9	≤-21.20	50.30	≤74	PASS

BT 2LE:

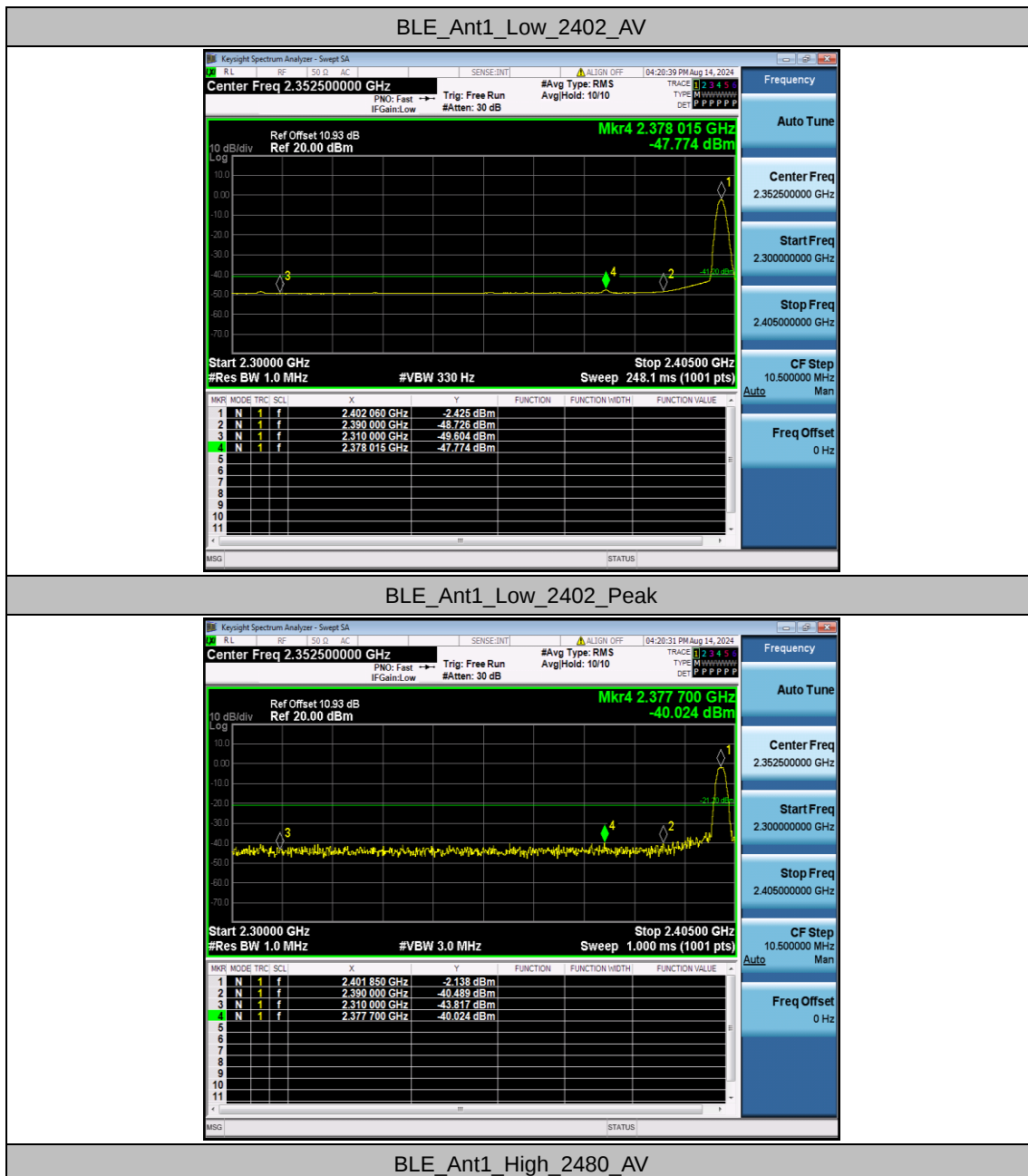
TestMode	Antenna	ChName	Freq(MHz)	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE	Ant1	Low	2402	AV	2310.000	-49.48	≤-41.20	45.72	≤54	PASS
				AV	2378.225	-48.03	≤-41.20	47.17	≤54	PASS
				AV	2390.000	-48.41	≤-41.20	46.79	≤54	PASS
				Peak	2310.000	-45.76	≤-21.20	49.44	≤74	PASS
				Peak	2352.605	-39.45	≤-21.20	55.75	≤74	PASS
				Peak	2390.000	-43.71	≤-21.20	51.49	≤74	PASS
		High	2480	AV	2483.500	-29.19	≤-41.20	66.01	≤54	PASS
				AV	2483.520	-29.19	≤-41.20	66.01	≤54	PASS
				AV	2500.000	-48.66	≤-41.20	46.54	≤54	PASS
				Peak	2483.500	-23.38	≤-21.20	71.82	≤74	PASS
				Peak	2483.760	-22.96	≤-21.20	72.24	≤74	PASS
				Peak	2500.000	-44.1	≤-21.20	51.10	≤74	PASS

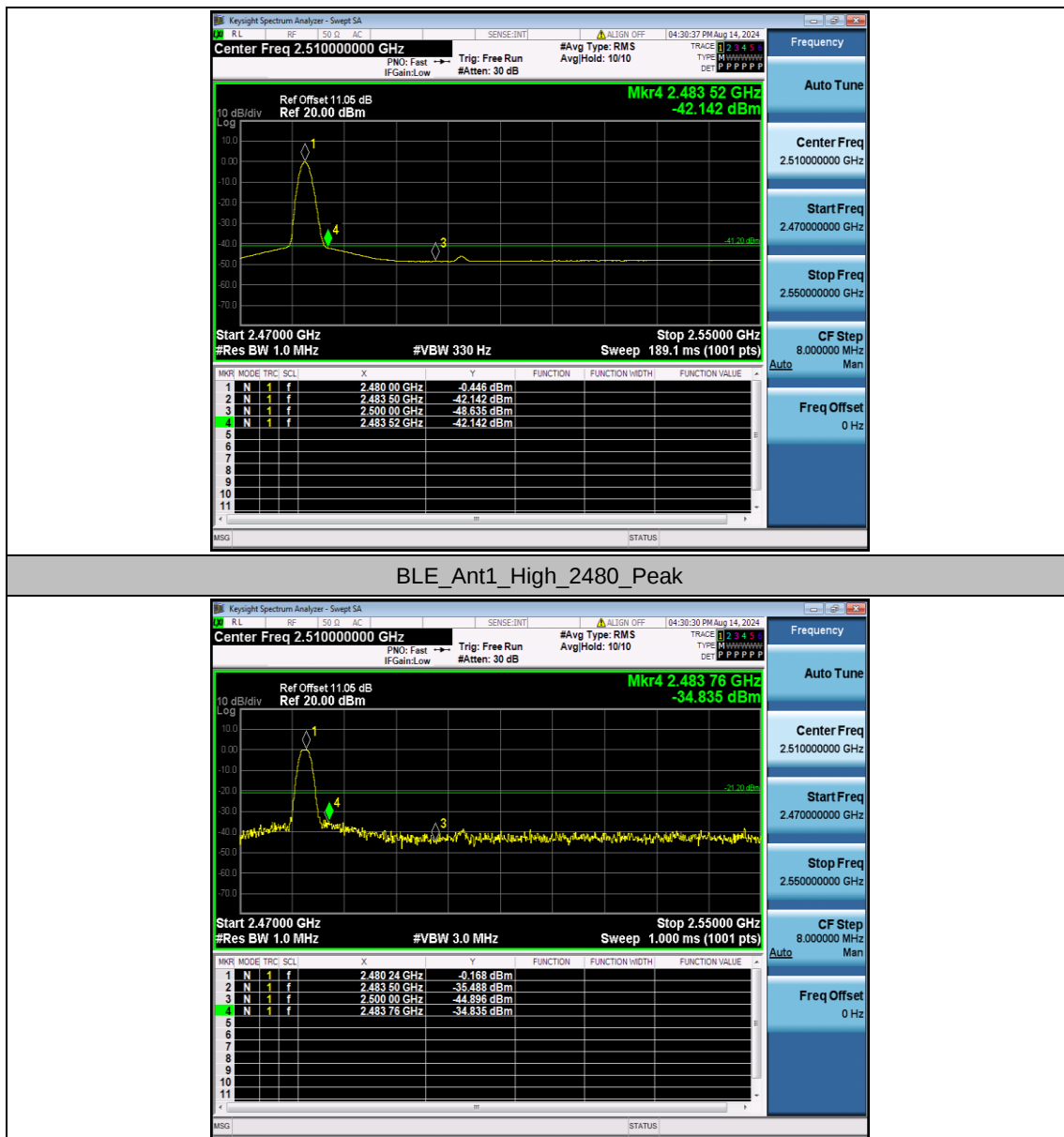
Note:

1. The Antenna Gain is compensated in the graph.
2. The Duty Cycle Factor and RBW Factor is compensated in the graph.
3. 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

BT LE:





BT 2LE:

