

Case No. : <u>CTA24070301802</u>
Ambient Condition: <u>23 °C, 51 %RH</u>
According Standard: <u>■Part15C</u>
Test Date: <u>2024.6.9-2024.7.10</u> Test Engineer: <u>Lushan Kong</u>

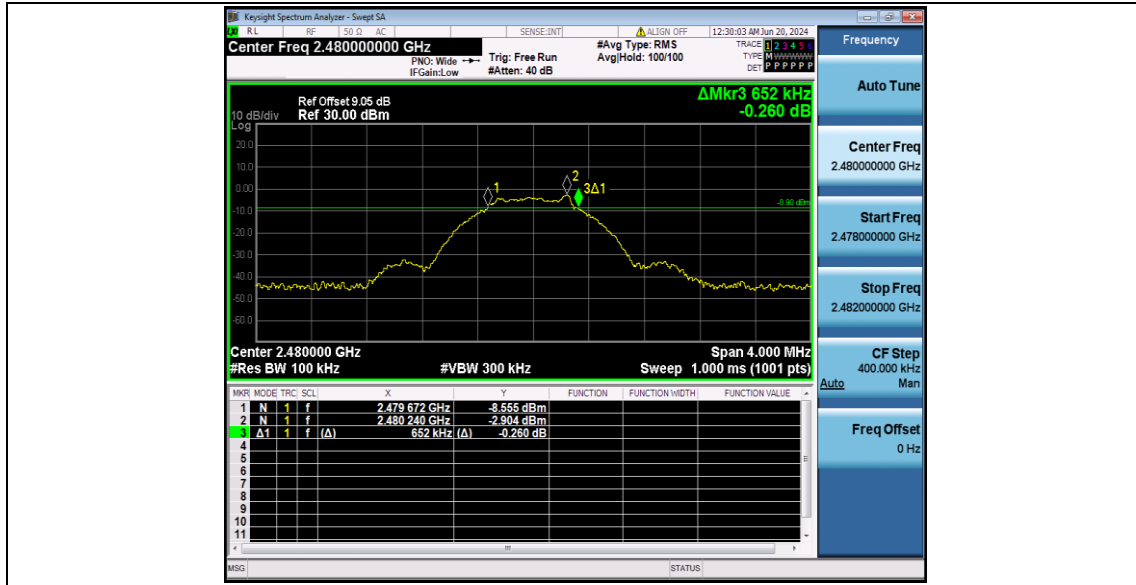
Appendix B.1: DTS Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE	Ant1	2402	0.680	2401.652	2402.332	0.5	PASS
		2440	0.688	2439.648	2440.336	0.5	PASS
		2480	0.652	2479.672	2480.324	0.5	PASS

Test Graphs



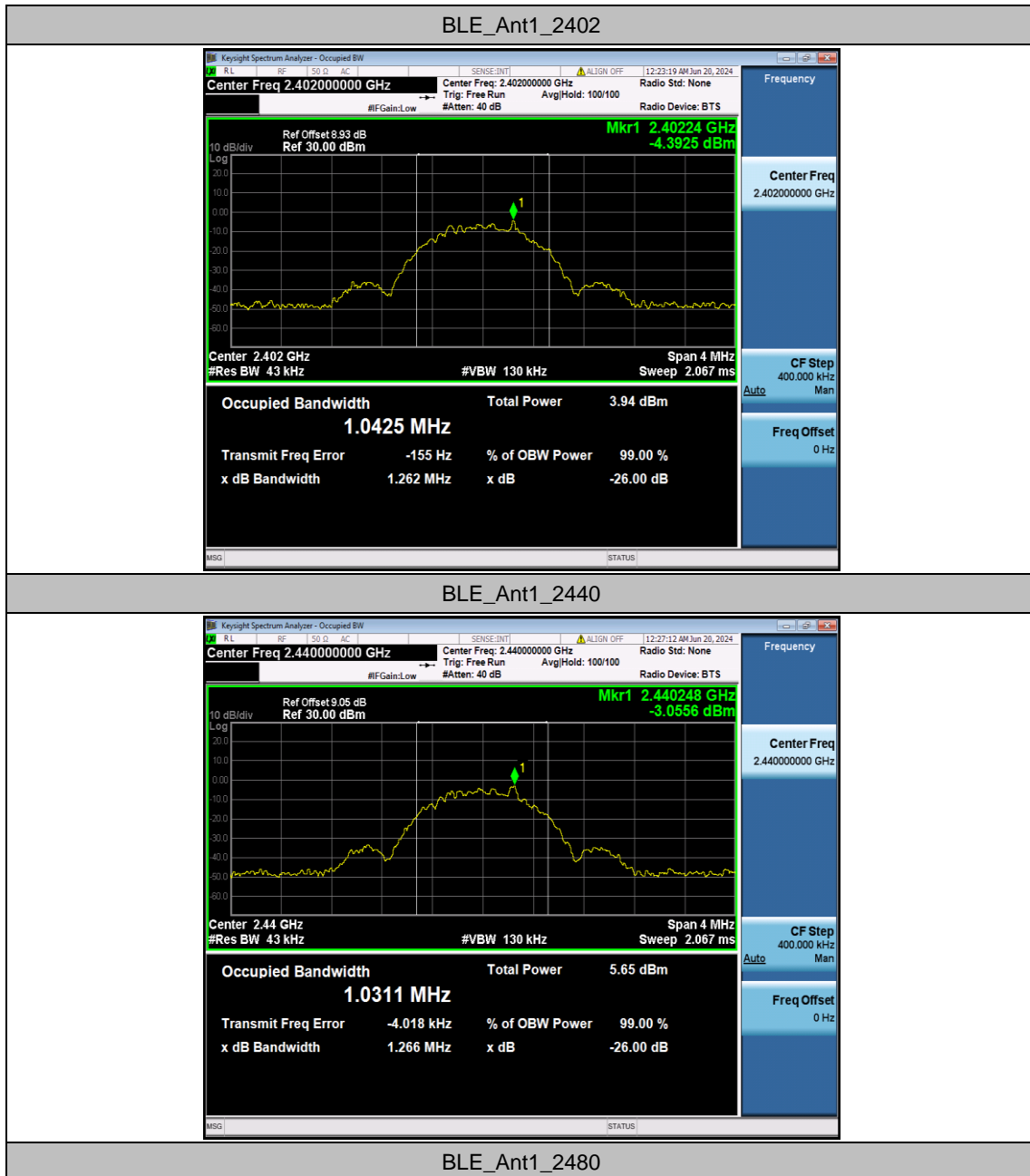


Appendix B.2: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE	Ant1	2402	1.0425	2401.4786	2402.5211	---	---
		2440	1.0311	2439.4804	2440.5115	---	---
		2480	1.0467	2479.4751	2480.5218	---	---

Test Graphs





Appendix B.3: Maximum conducted output power

Test Result Peak

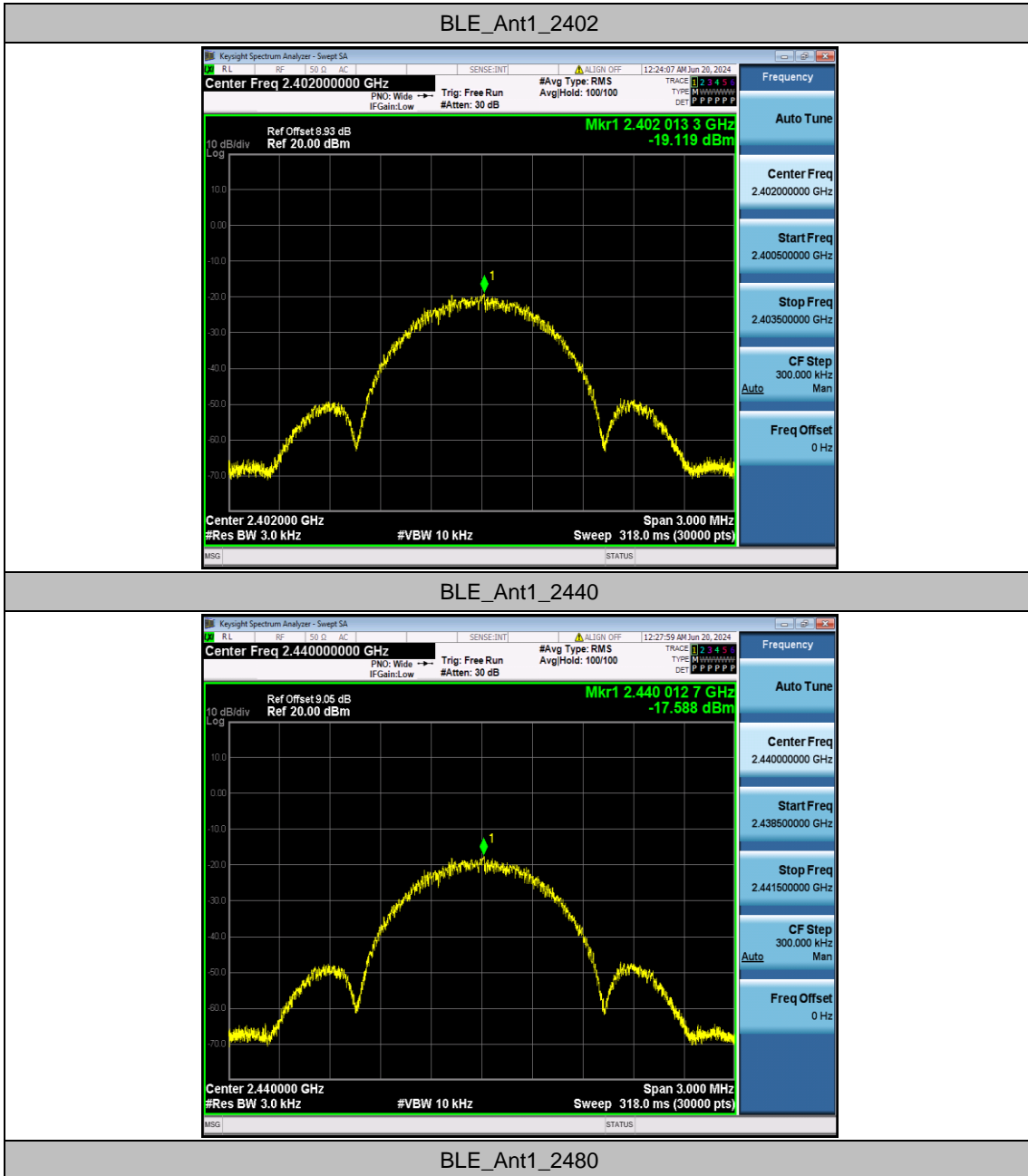
TestMode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE	Ant1	2402	-2.47	≤30	PASS
		2440	-0.98	≤30	PASS
		2480	-2.29	≤30	PASS

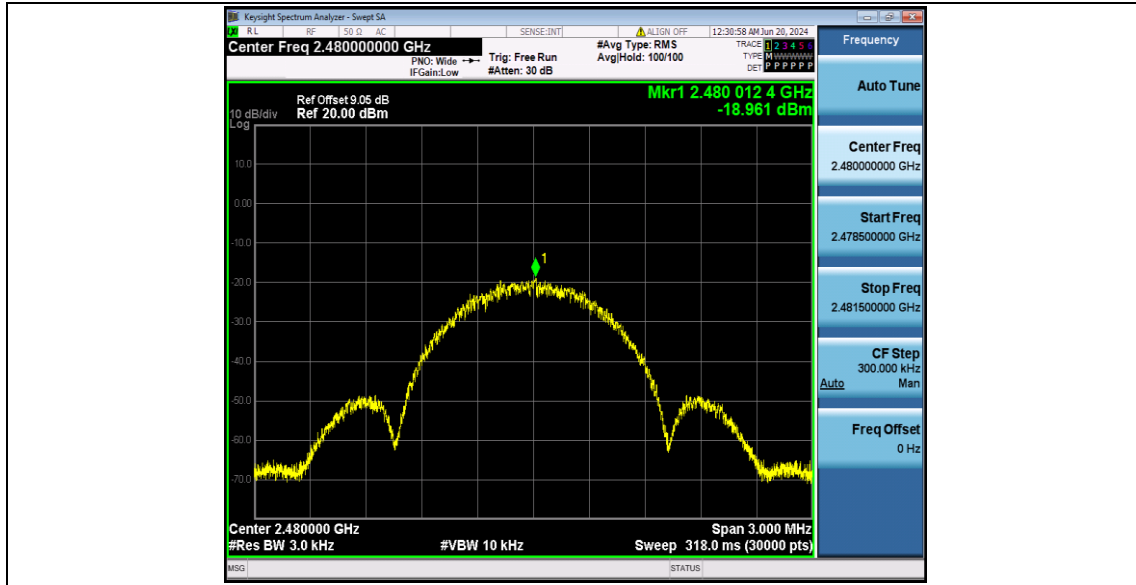
Appendix B.4: Maximum power spectral density

Test Result

TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE	Ant1	2402	-19.12	≤8.00	PASS
		2440	-17.59	≤8.00	PASS
		2480	-18.96	≤8.00	PASS

Test Graphs



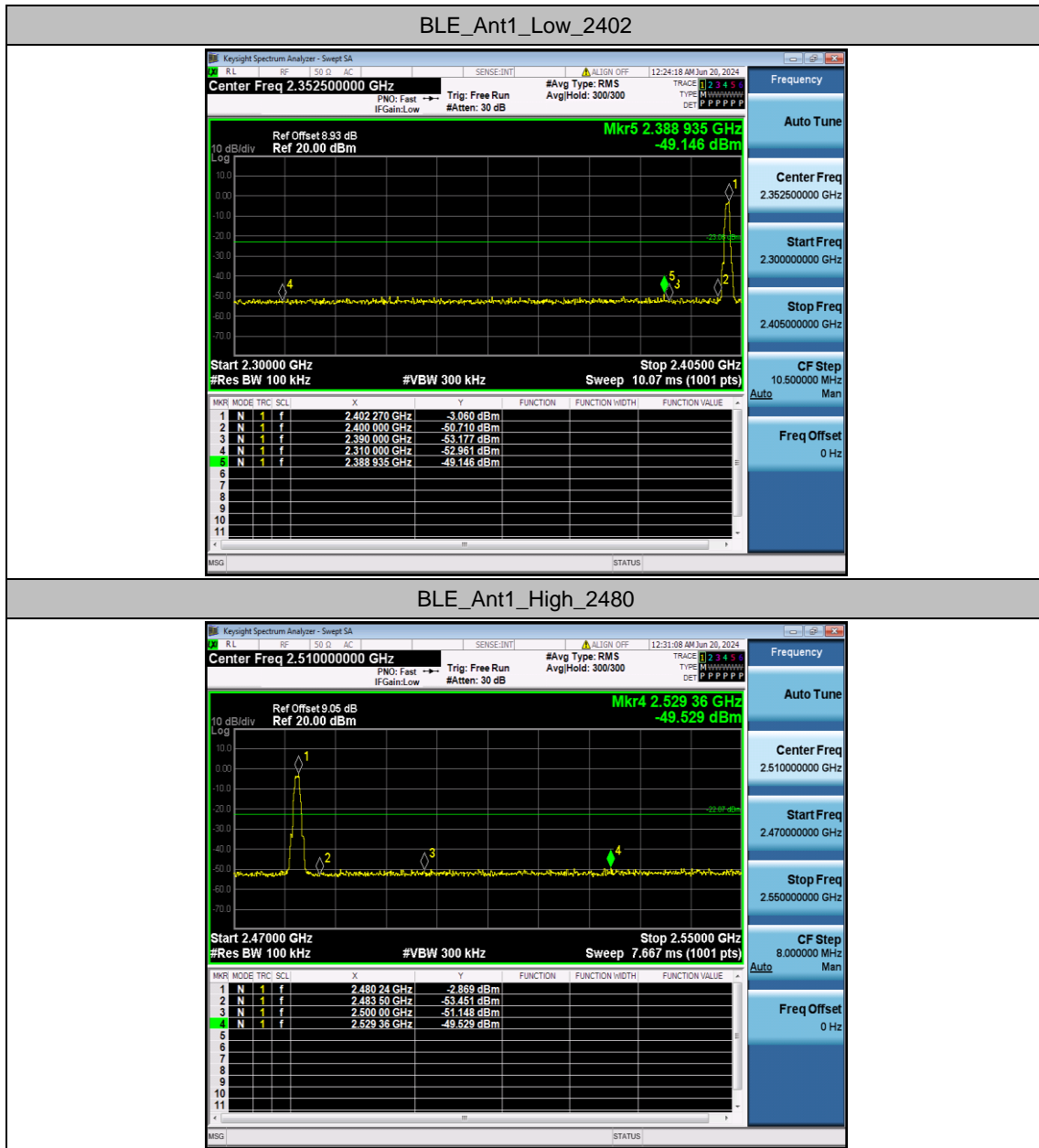


Appendix B.5: Band edge measurements

Test Result

TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant1	Low	2402	-3.06	-49.15	≤-23.06	PASS
		High	2480	-2.87	-49.53	≤-22.87	PASS

Test Graphs

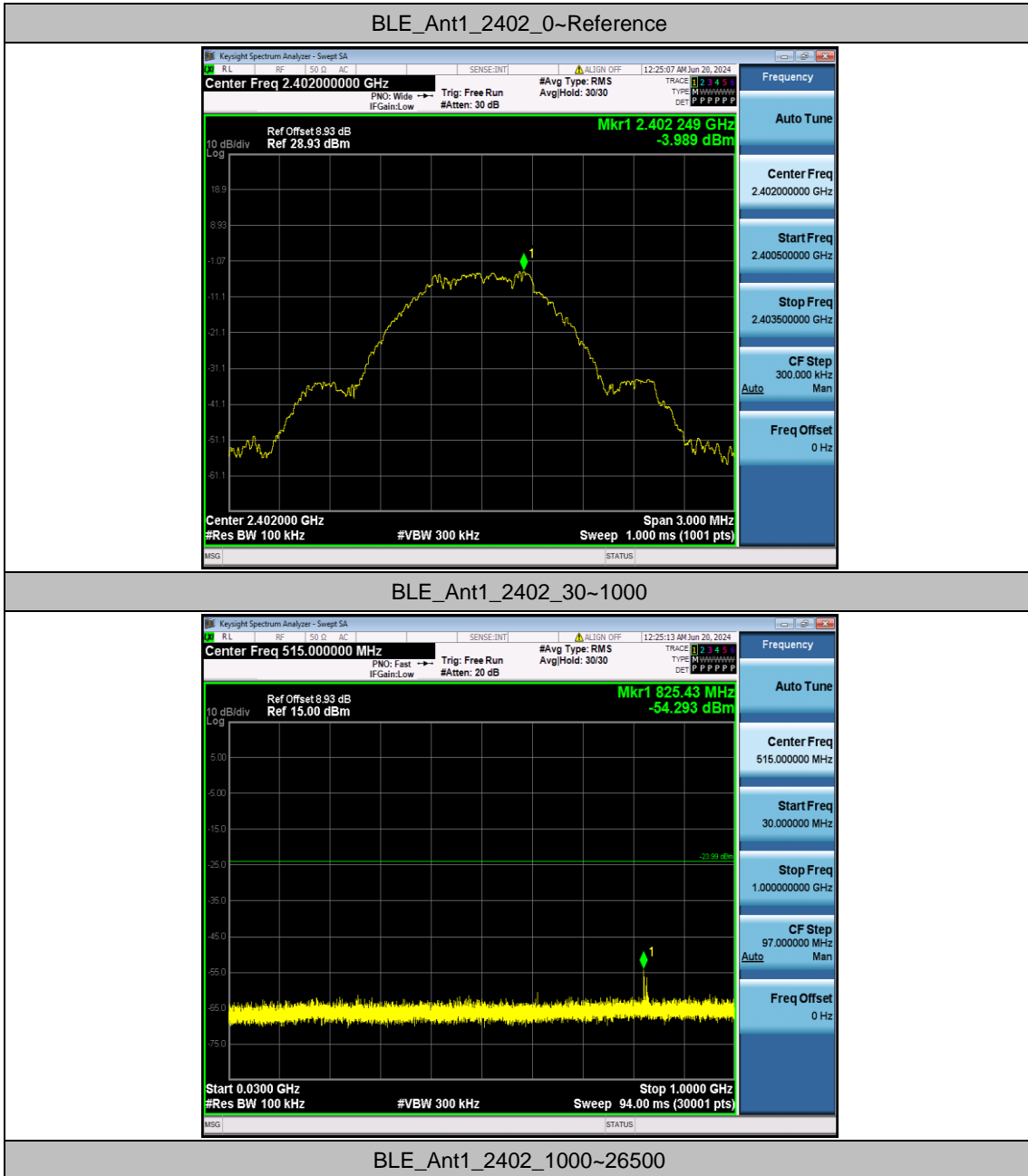


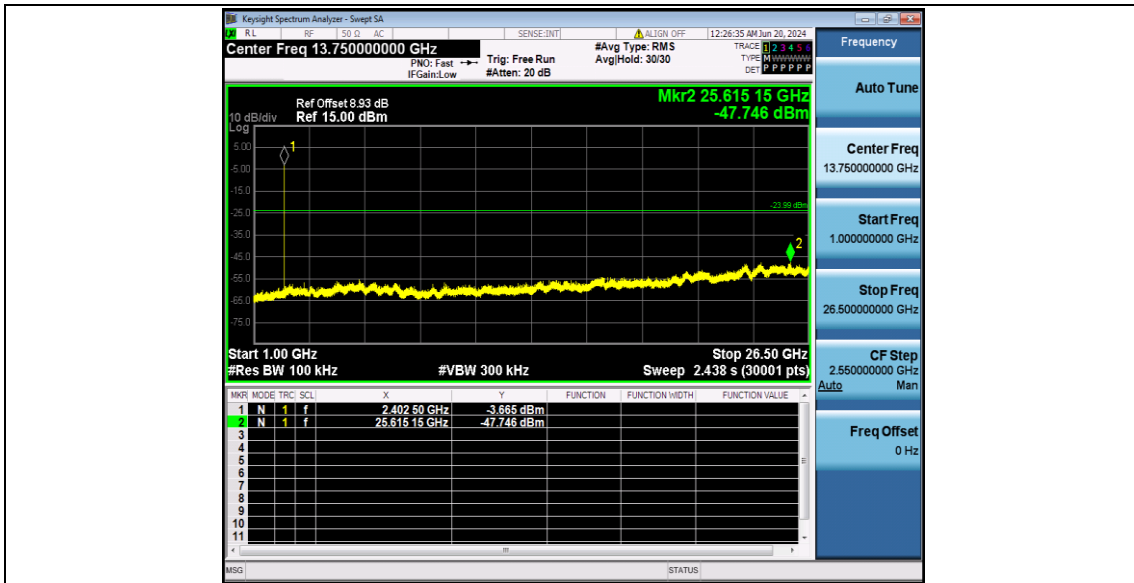
Appendix B.6: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant1	2402	Reference	-3.99	-3.99	---	PASS
			30~1000	-3.99	-54.29	≤-23.99	PASS
			1000~26500	-3.99	-47.75	≤-23.99	PASS
		2440	Reference	-2.39	-2.39	---	PASS
			30~1000	-2.39	-51.94	≤-22.39	PASS
			1000~26500	-2.39	-46.73	≤-22.39	PASS
		2480	Reference	-4.02	-4.02	---	PASS
			30~1000	-4.02	-53.06	≤-24.02	PASS
			1000~26500	-4.02	-47.46	≤-24.02	PASS

Test Graphs

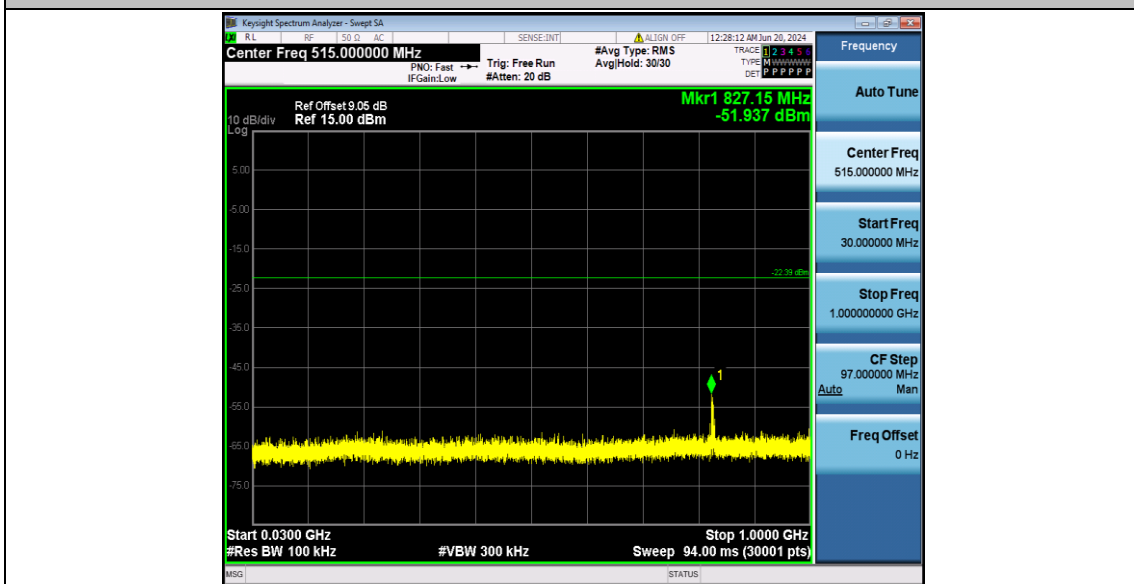




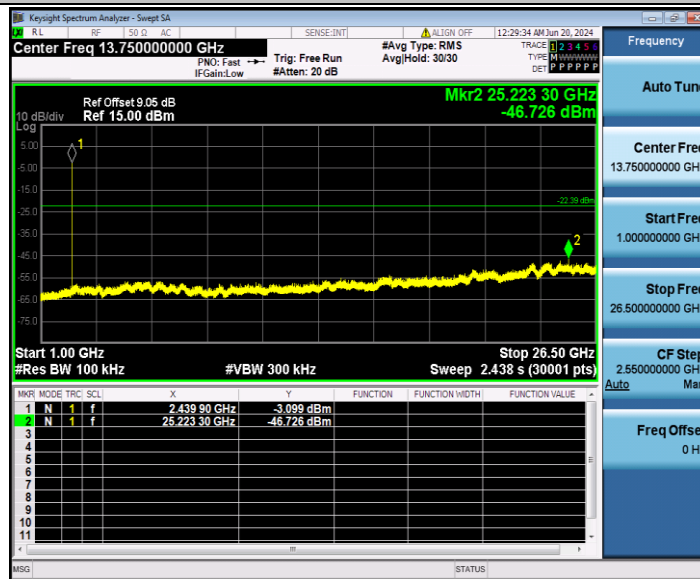
BLE_Ant1_2440_0-Reference



BLE_Ant1_2440_30-1000



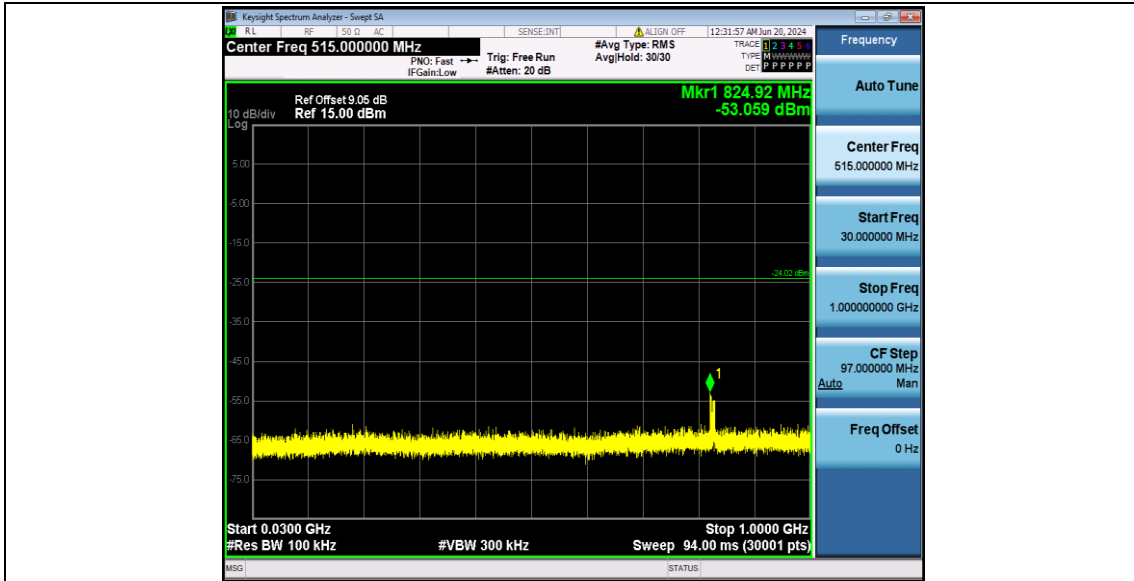
BLE_Ant1_2440_1000~26500



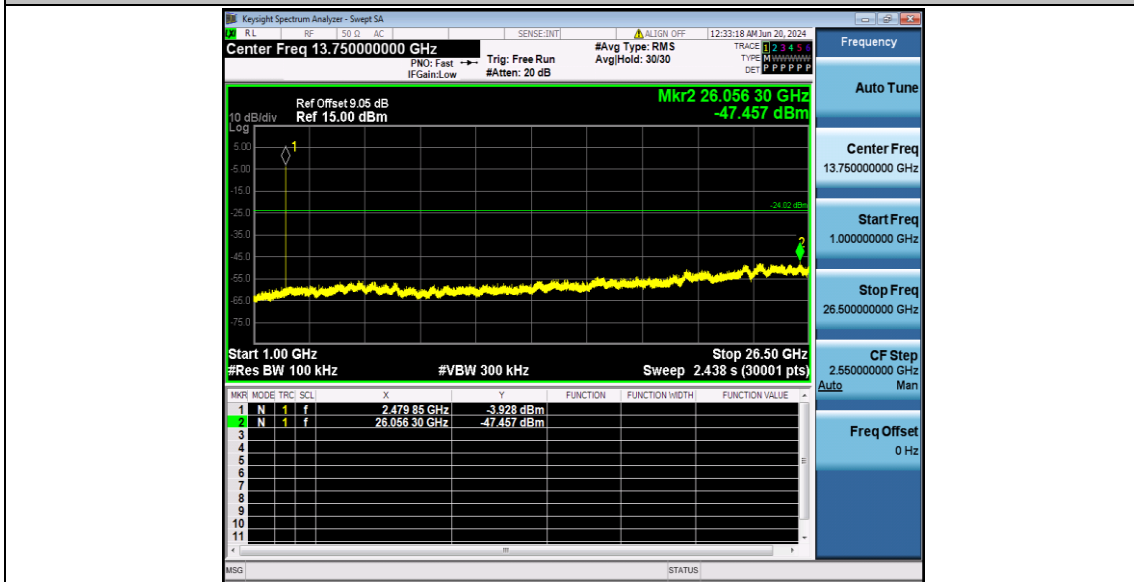
BLE_Ant1_2480_0~Reference



BLE_Ant1_2480_30~1000



BLE_Ant1_2480_1000~26500



Appendix B.7: Emissions in Restricted Bands

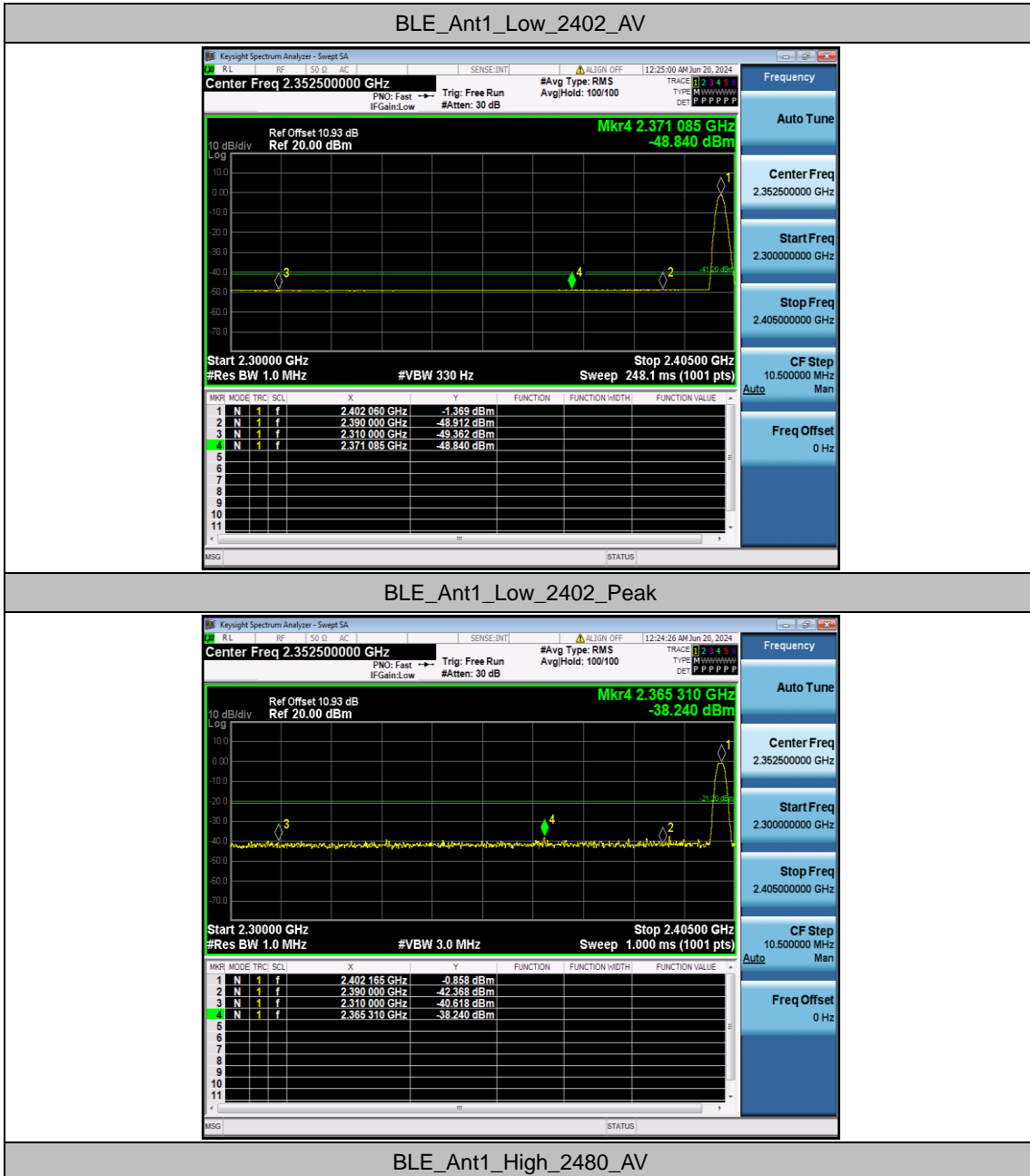
Test Result

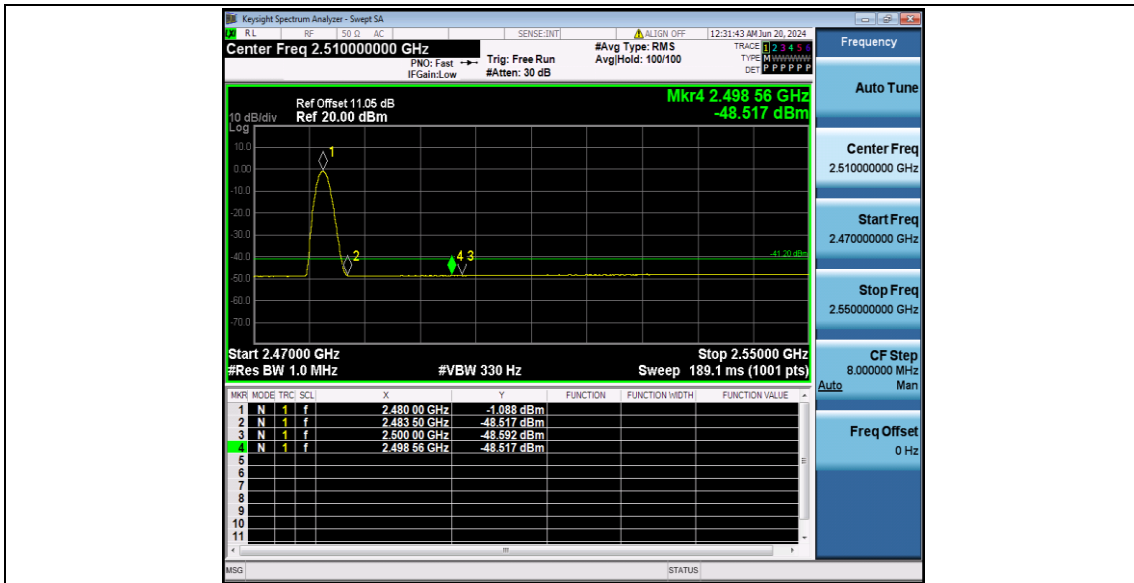
TestMode	Antenna	ChName	Freq(MHz)	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE	Ant1	Low	2402	AV	2310.000	-49.36	≤-41.20	45.84	≤54	PASS
				AV	2371.085	-48.84	≤-41.20	46.36	≤54	PASS
				AV	2390.000	-48.91	≤-41.20	46.29	≤54	PASS
				Peak	2310.000	-40.62	≤-21.20	54.58	≤74	PASS
				Peak	2365.310	-38.24	≤-21.20	56.96	≤74	PASS
				Peak	2390.000	-42.37	≤-21.20	52.83	≤74	PASS
		High	2480	AV	2483.500	-48.52	≤-41.20	46.68	≤54	PASS
				AV	2498.560	-48.52	≤-41.20	46.68	≤54	PASS
				AV	2500.000	-48.59	≤-41.20	46.61	≤54	PASS
				Peak	2483.500	-41.07	≤-21.20	54.13	≤74	PASS
				Peak	2487.680	-39.01	≤-21.20	56.19	≤74	PASS
				Peak	2500.000	-41.16	≤-21.20	54.04	≤74	PASS

Note:

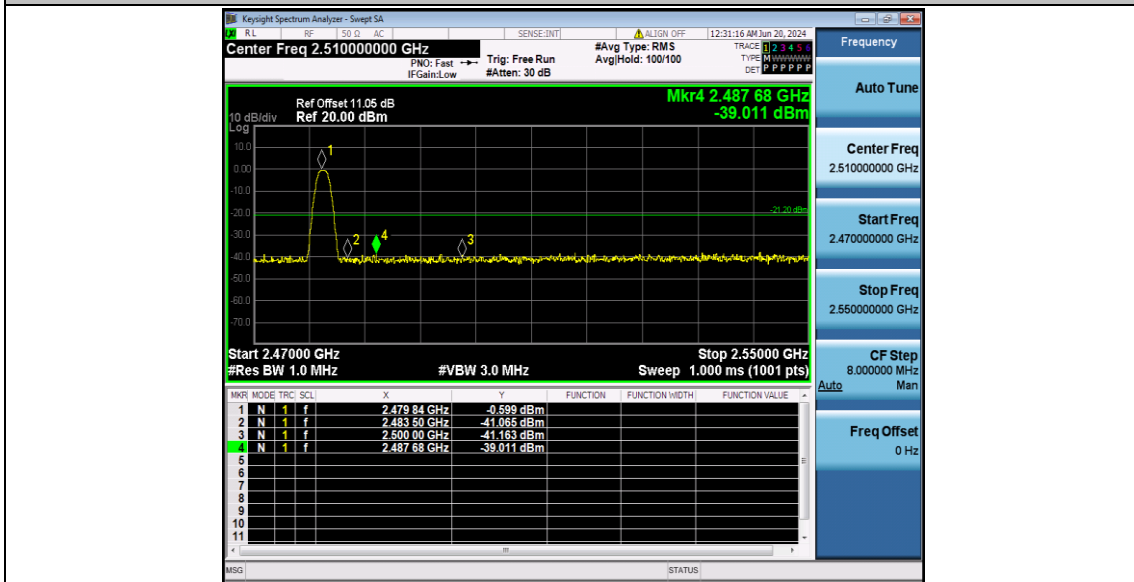
1. The Antenna Gain is compensated in the graph.
2. The Duty Cycle Factor and RBW Factor is compensated in the graph.
3. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs





BLE_Ant1_High_2480_Peak



Appendix B.8: Duty Cycle

Test Result

TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	X	DC [%]	Duty Cycle Factor[dB]	1/T Factor[KHz]
BLE	Ant1	2402	2.13	2.50	0.8520	85.20	0.70	0.47
		2440	2.13	2.50	0.8520	85.20	0.70	0.47
		2480	2.12	2.50	0.8480	84.80	0.72	0.47

Test Graphs

