Appendix Test Data

Report No.:	18220WC40098401	Test Sample No.:	1-2-2
Start Test Date:	2024.05.21	Finish Test Date:	2024.05.25
Test Engineer:	Joker Huang	Auditor:	Justin Feng
Temperature:	24.3℃	Relative Humidity:	43%
Pressure:	101kPa		

Appendix A: 6dB Bandwidth

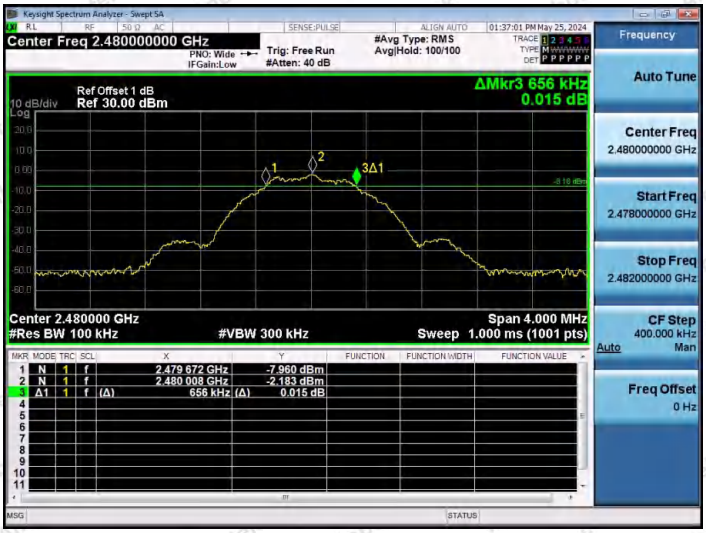
Test Result

TestMode	Antenna	Frequency[MHz]	6dB BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.648	2401.680	2402.328	0.5	PASS
BLE_1M	Ant1	2440	0.648	2439.680	2440.328	0.5	PASS
BLE_1M	Ant1	2480	0.656	2479.672	2480.328	0.5	PASS
BLE_2M	Ant1	2402	1.092	2401.476	2402.568	0.5	PASS
BLE_2M	Ant1	2440	0.928	2439.460	2440.388	0.5	PASS
BLE_2M	Ant1	2480	1.084	2479.448	2480.532	0.5	PASS

Test Graphs

BLE_1M-Ant1-2402-PASS

BLE_1M-Ant1-2440-PASS



BLE_1M-Ant1-2480-PASS

BLE_2M-Ant1-2402-PASS

BLE_2M-Ant1-2440-PASS

BLE_2M-Ant1-2480-PASS

Appendix B: 99% Occupied Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0282	2401.4898	2402.5180	---	---
BLE_1M	Ant1	2440	1.0268	2439.4972	2440.5240	---	---
BLE_1M	Ant1	2480	1.0388	2479.4907	2480.5295	---	---
BLE_2M	Ant1	2402	2.0700	2400.9820	2403.0520	---	---
BLE_2M	Ant1	2440	2.0720	2438.9838	2441.0558	---	---
BLE_2M	Ant1	2480	2.0620	2478.9903	2481.0523	---	---

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

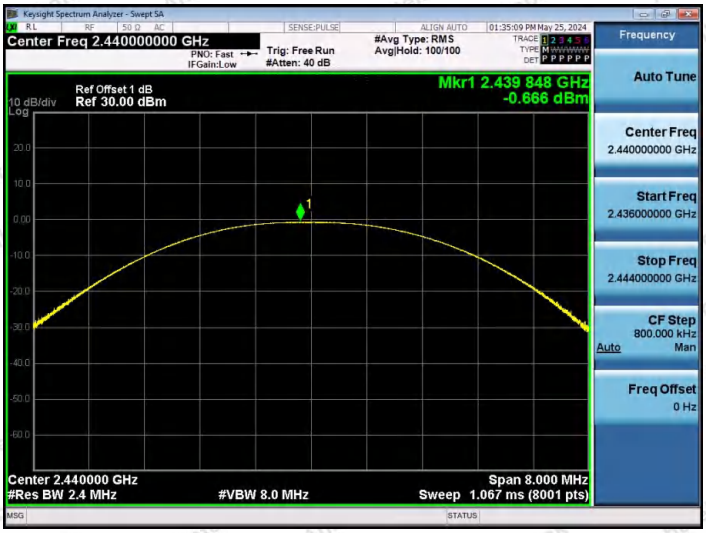
Appendix C: Maximum conducted output power

Test Result Peak

TestMode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	**0.60**	≤30	PASS
BLE_1M	Ant1	2440	-0.67	≤30	PASS
BLE_1M	Ant1	2480	-1.47	≤30	PASS
BLE_2M	Ant1	2402	0.16	≤30	PASS
BLE_2M	Ant1	2440	-1.00	≤30	PASS
BLE_2M	Ant1	2480	-1.96	≤30	PASS

Test Graphs Peak

BLE_1M-Ant1-2402-PASS

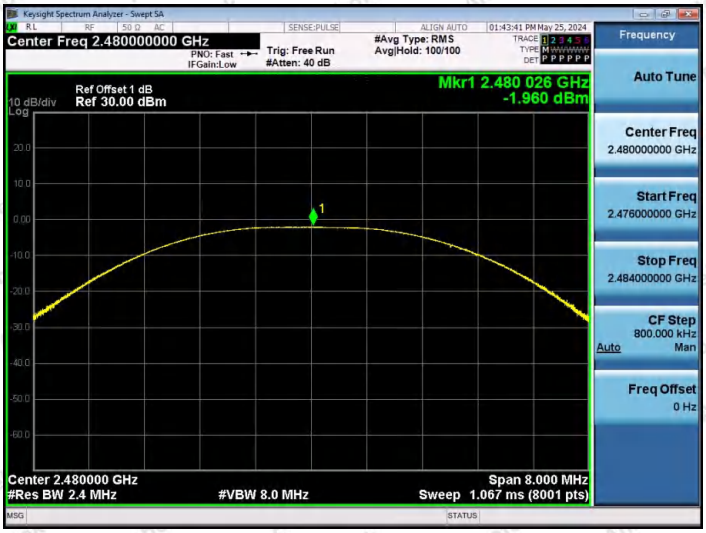


BLE_1M-Ant1-2440-PASS

BLE_1M-Ant1-2480-PASS

BLE_2M-Ant1-2402-PASS

BLE_2M-Ant1-2440-PASS



BLE_2M-Ant1-2480-PASS

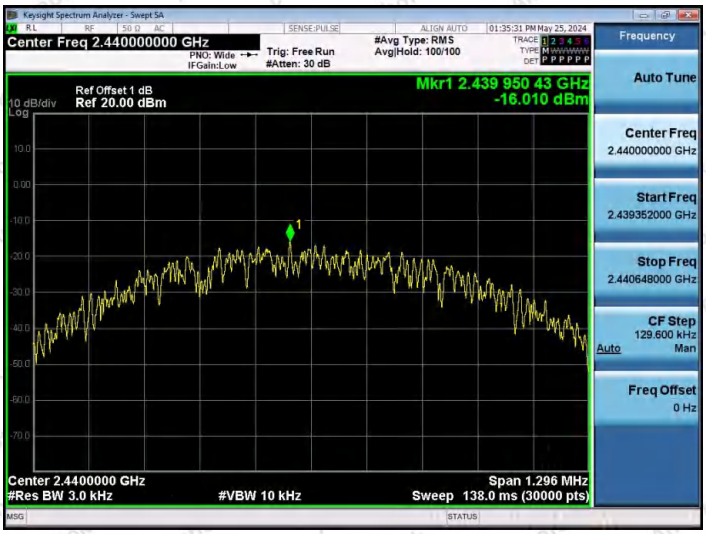
Appendix D: Maximum power spectral density

Test Result

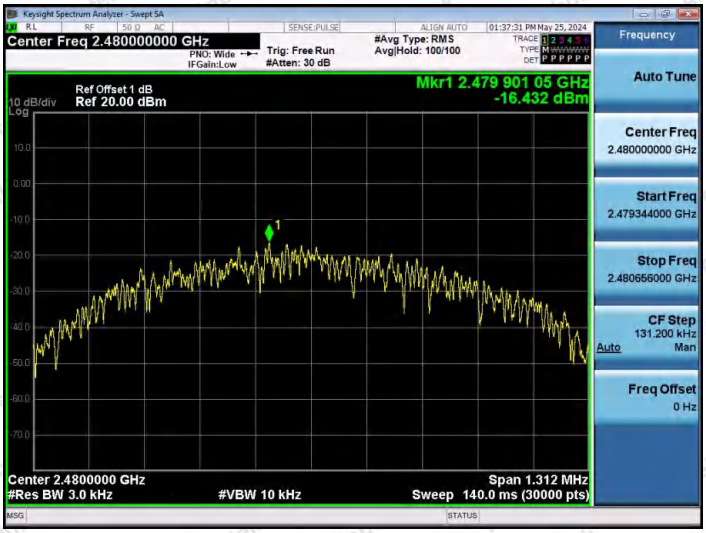
TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-14.30	≤8.00	PASS
BLE_1M	Ant1	2440	-16.01	≤8.00	PASS
BLE_1M	Ant1	2480	-16.43	≤8.00	PASS
BLE_2M	Ant1	2402	-17.72	≤8.00	PASS
BLE_2M	Ant1	2440	-18.19	≤8.00	PASS
BLE_2M	Ant1	2480	-20.24	≤8.00	PASS

Test Graphs

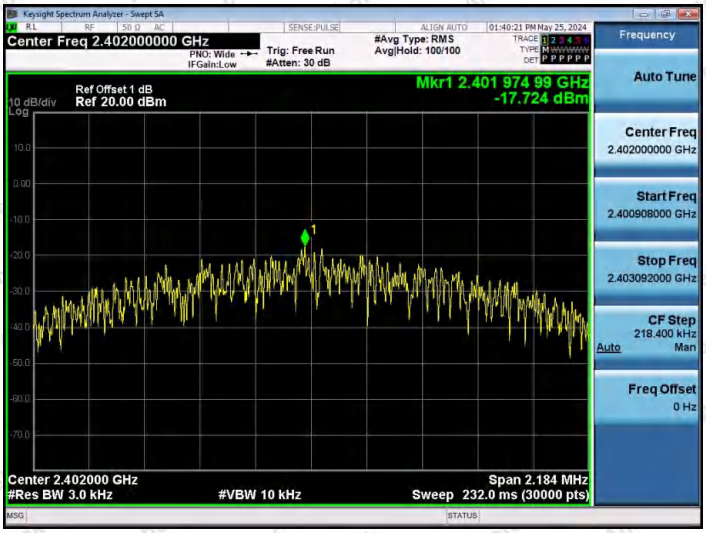
BLE_1M-Ant1-2402-PASS



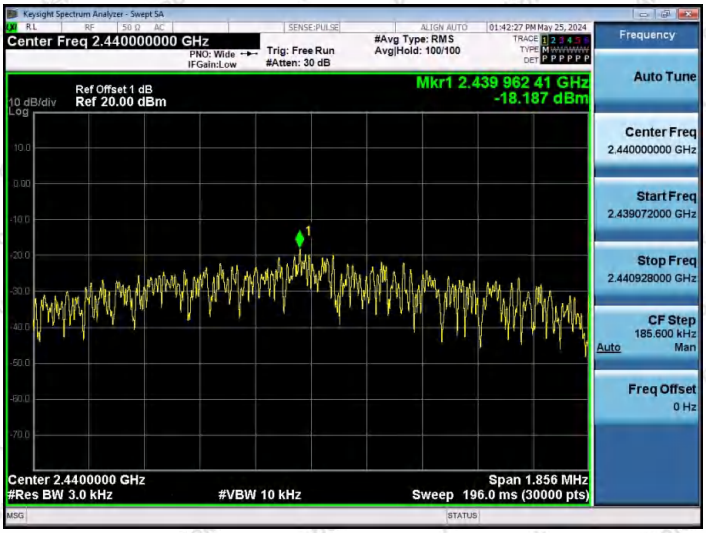
BLE_1M-Ant1-2440-PASS



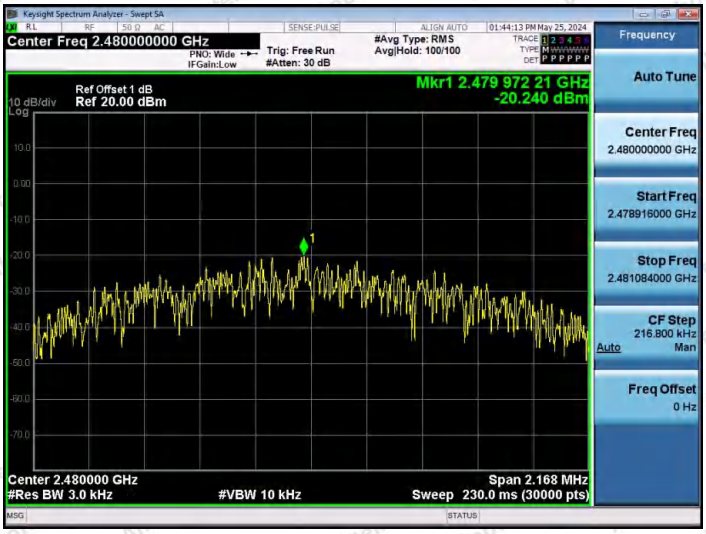
BLE_1M-Ant1-2480-PASS



BLE_2M-Ant1-2402-PASS



BLE_2M-Ant1-2440-PASS



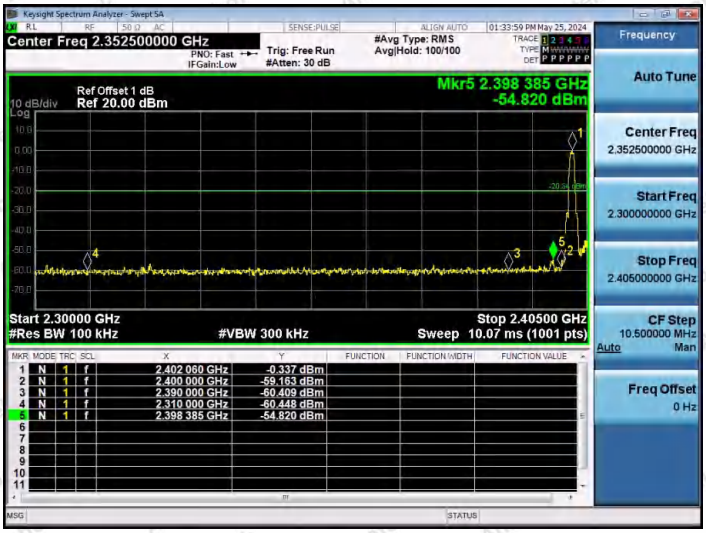
BLE_2M-Ant1-2480-PASS

Appendix E: Band edge measurements

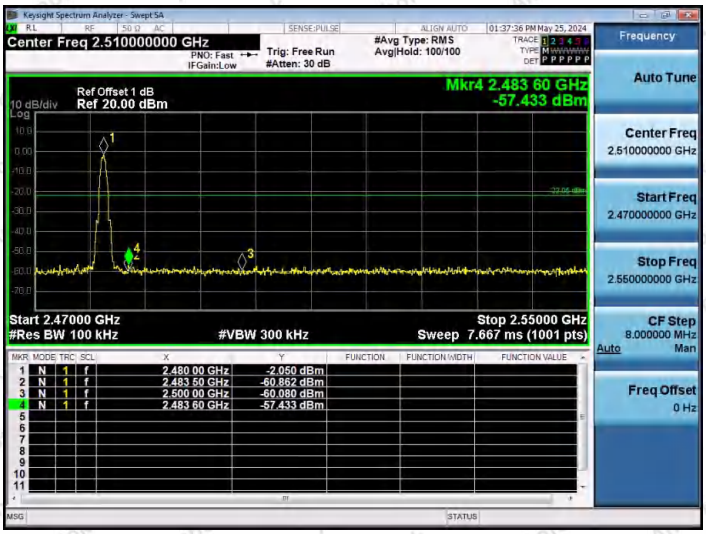
Test Result

TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-0.34	-54.82	≤-20.34	PASS
BLE_1M	Ant1	High	2480	-2.05	-57.43	≤-22.05	PASS
BLE_2M	Ant1	Low	2402	-0.12	-34.04	≤-20.12	PASS
BLE_2M	Ant1	High	2480	-2.23	-57.04	≤-22.23	PASS

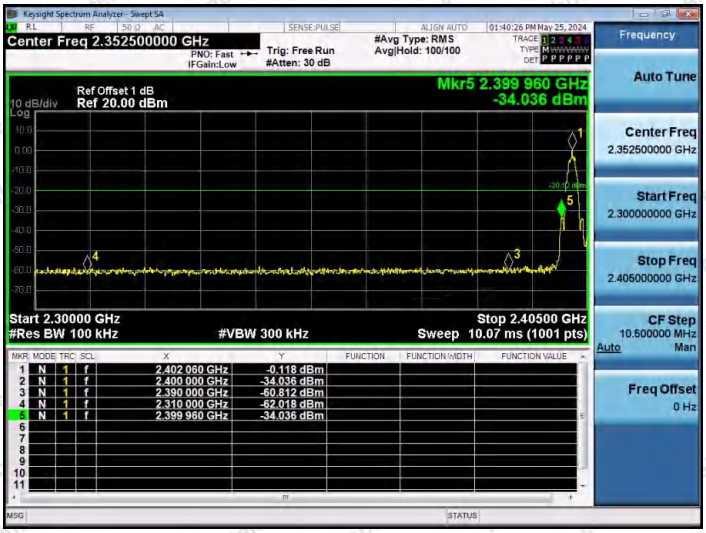
Test Graphs



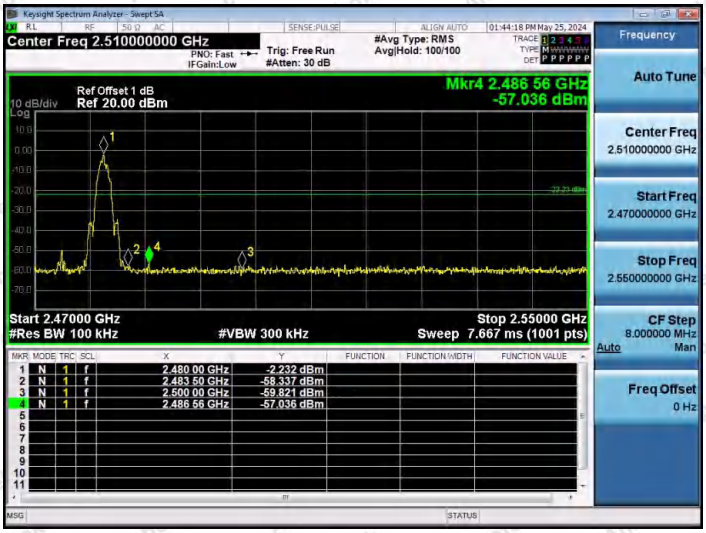
BLE_1M-Ant1-2402-PASS



BLE_1M-Ant1-2480-PASS



BLE_2M-Ant1-2402-PASS



BLE_2M-Ant1-2480-PASS

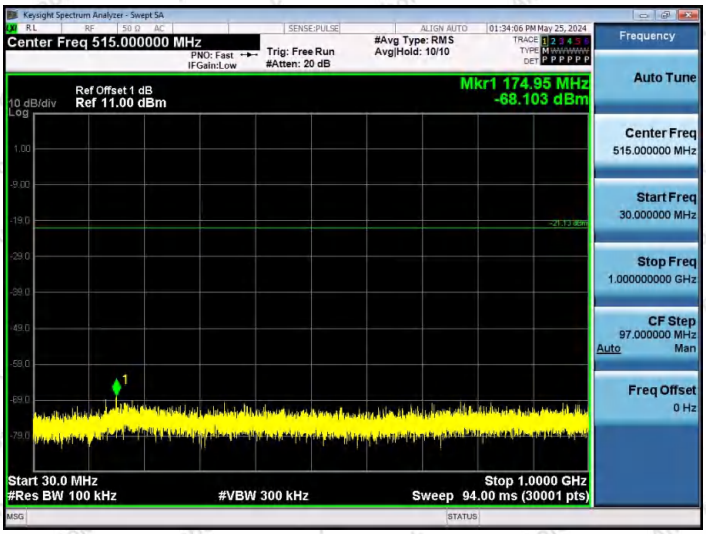
Appendix F: Conducted Spurious Emission

Test Result

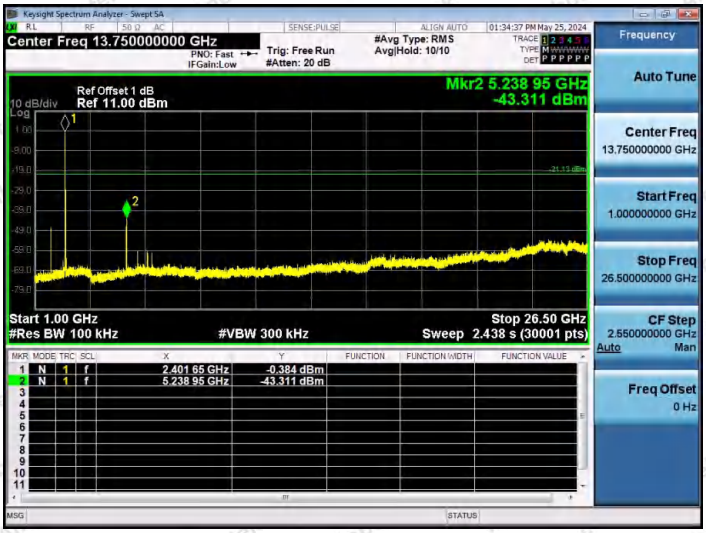
TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0~Reference	-1.13	-1.13	---	PASS
BLE_1M	Ant1	2402	30~1000	-1.13	-68.1	≤-21.13	PASS
BLE_1M	Ant1	2402	1000~26500	-1.13	-43.31	≤-21.13	PASS
BLE_1M	Ant1	2440	0~Reference	-2.23	-2.23	---	PASS
BLE_1M	Ant1	2440	30~1000	-2.23	-68.79	≤-22.23	PASS
BLE_1M	Ant1	2440	1000~26500	-2.23	-53.32	≤-22.23	PASS
BLE_1M	Ant1	2480	0~Reference	-3.21	-3.21	---	PASS
BLE_1M	Ant1	2480	30~1000	-3.21	-69.12	≤-23.21	PASS
BLE_1M	Ant1	2480	1000~26500	-3.21	-45.23	≤-23.21	PASS
BLE_2M	Ant1	2402	0~Reference	-1.32	-1.32	---	PASS
BLE_2M	Ant1	2402	30~1000	-1.32	-68.8	≤-21.32	PASS
BLE_2M	Ant1	2402	1000~26500	-1.32	-53.3	≤-21.32	PASS
BLE_2M	Ant1	2440	0~Reference	-2.23	-2.23	---	PASS
BLE_2M	Ant1	2440	30~1000	-2.23	-68.8	≤-22.23	PASS
BLE_2M	Ant1	2440	1000~26500	-2.23	-53.09	≤-22.23	PASS
BLE_2M	Ant1	2480	0~Reference	-5.81	-5.81	---	PASS
BLE_2M	Ant1	2480	30~1000	-5.81	-68.65	≤-25.81	PASS
BLE_2M	Ant1	2480	1000~26500	-5.81	-45.31	≤-25.81	PASS

Test Graphs

BLE_1M-Ant1-2402-0~Reference-PASS

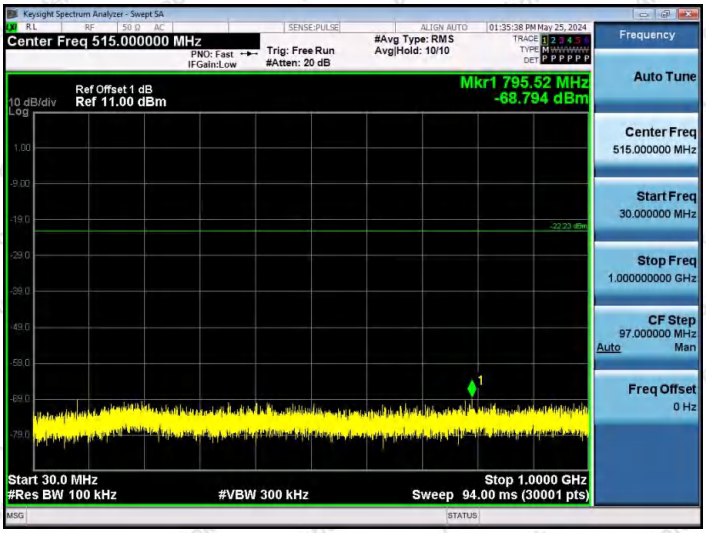


BLE_1M-Ant1-2402-30~1000-PASS

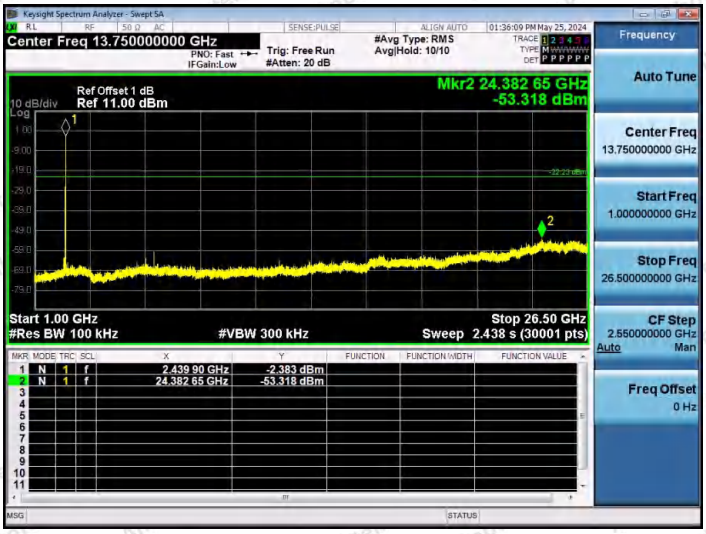


BLE_1M-Ant1-2402-1000~26500-PASS

BLE_1M-Ant1-2440-0~Reference-PASS

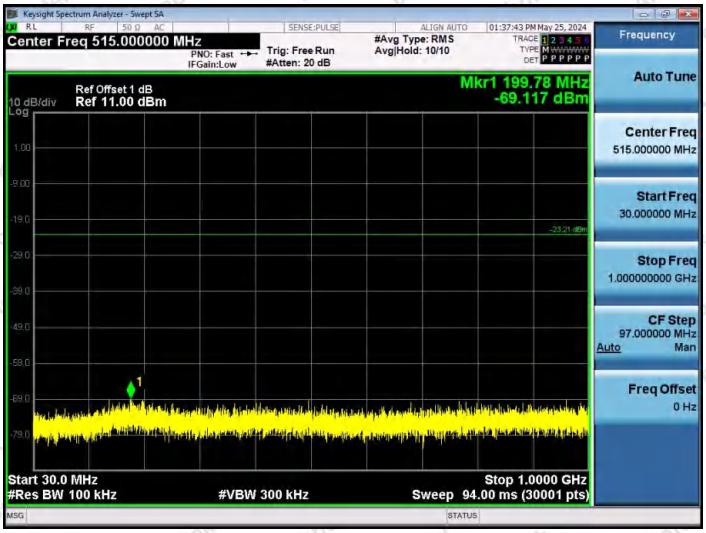


BLE_1M-Ant1-2440-30~1000-PASS

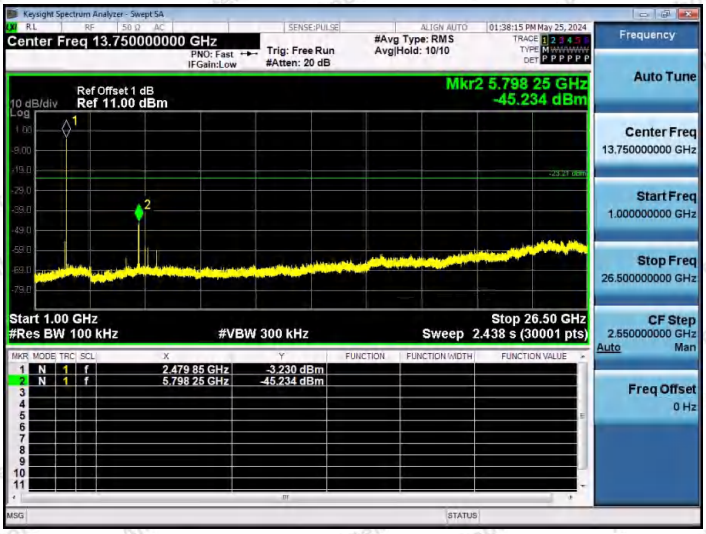


BLE_1M-Ant1-2440-1000~26500-PASS

BLE_1M-Ant1-2480-0~Reference-PASS

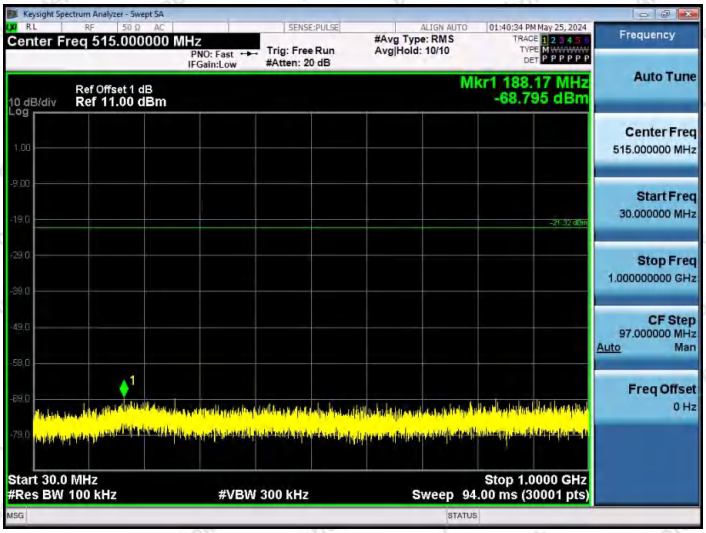


BLE_1M-Ant1-2480-30~1000-PASS

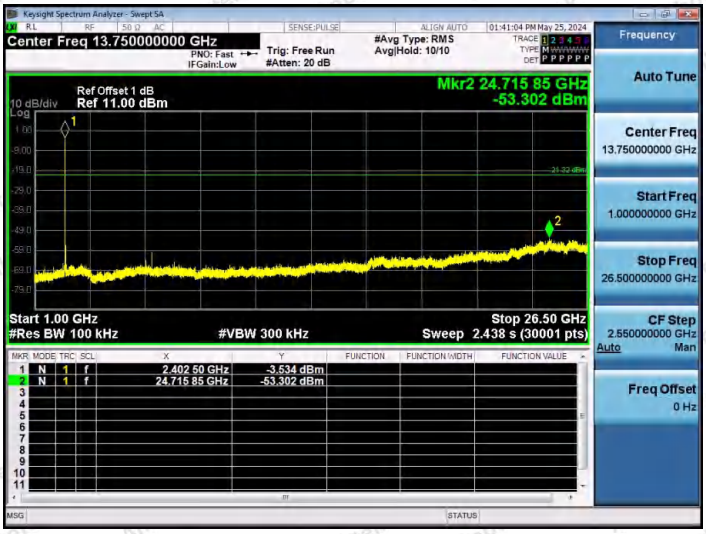


BLE_1M-Ant1-2480-1000~26500-PASS

BLE_2M-Ant1-2402-0~Reference-PASS

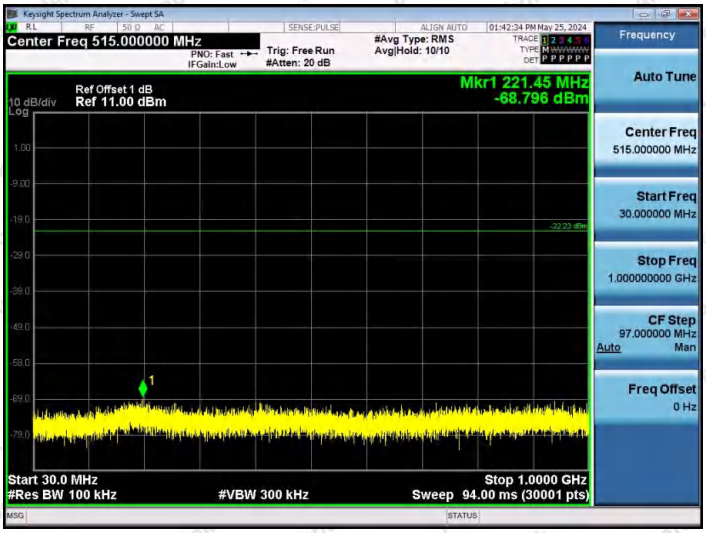


BLE_2M-Ant1-2402-30~1000-PASS

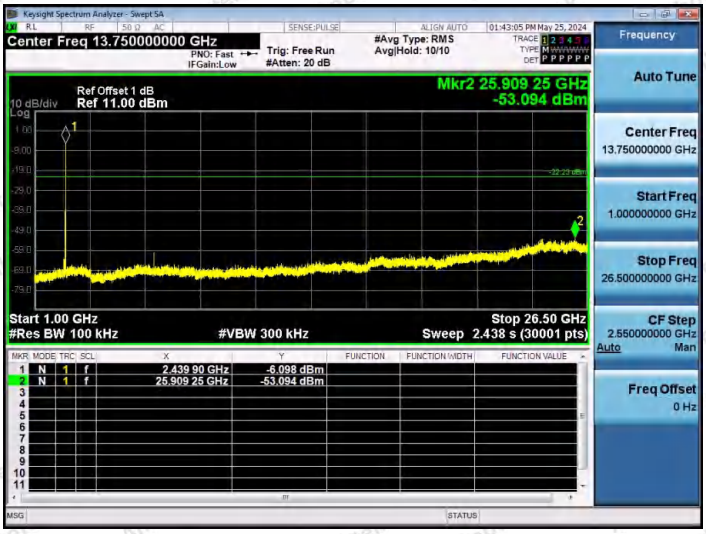


BLE_2M-Ant1-2402-1000~26500-PASS

BLE_2M-Ant1-2440-0~Reference-PASS

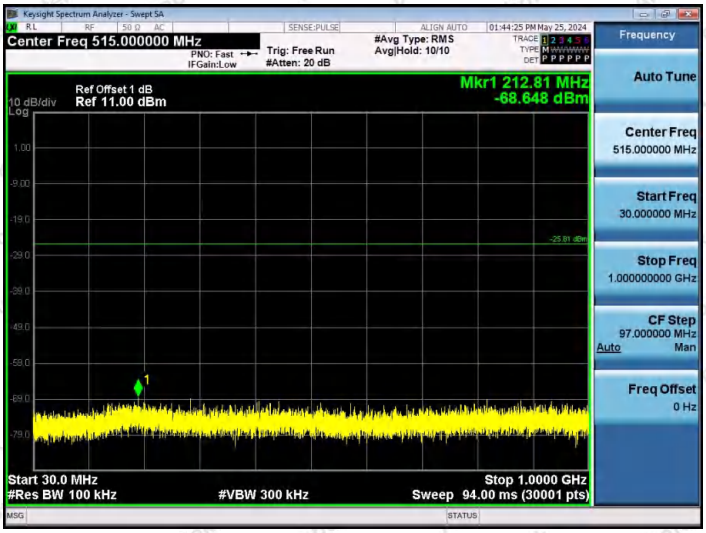


BLE_2M-Ant1-2440-30~1000-PASS

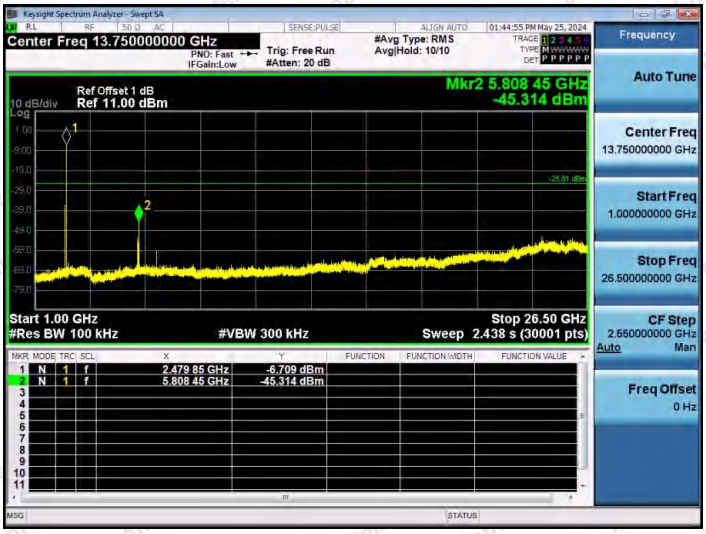


BLE_2M-Ant1-2440-1000~26500-PASS

BLE_2M-Ant1-2480-0~Reference-PASS



BLE_2M-Ant1-2480-30~1000-PASS



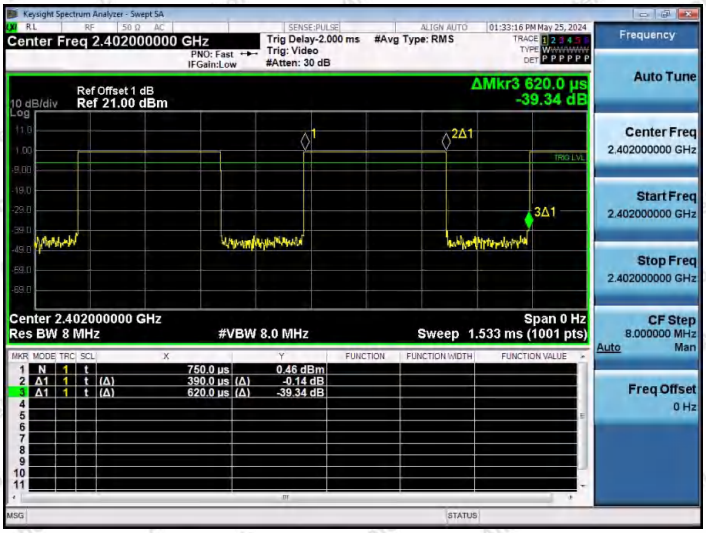
BLE_2M-Ant1-2480-1000~26500-PASS

Appendix G: Duty Cycle

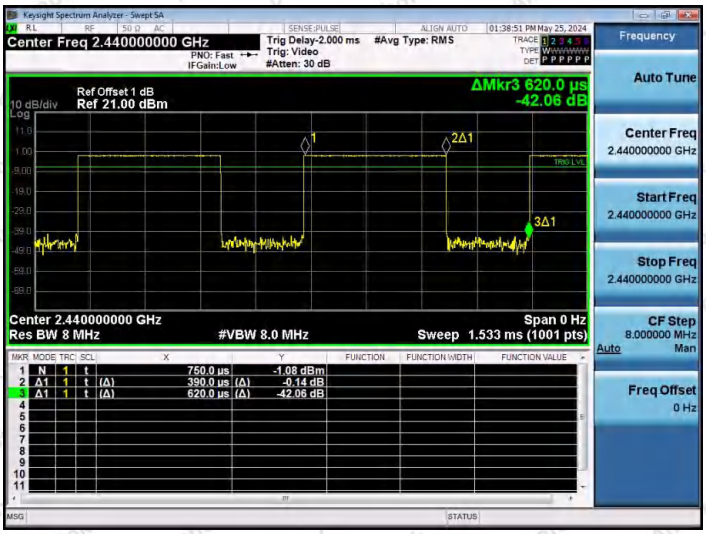
Test Result

TestMode	Antenna	Frequency[MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor[dB]
BLE_1M	Ant1	2402	0.39	0.62	62.90	2.01
BLE_1M	Ant1	2440	0.39	0.62	62.90	2.01
BLE_1M	Ant1	2480	0.40	0.63	63.49	1.97
BLE_2M	Ant1	2402	0.21	0.63	33.33	4.77
BLE_2M	Ant1	2440	0.21	0.62	33.87	4.70
BLE_2M	Ant1	2480	0.20	0.62	32.26	4.91

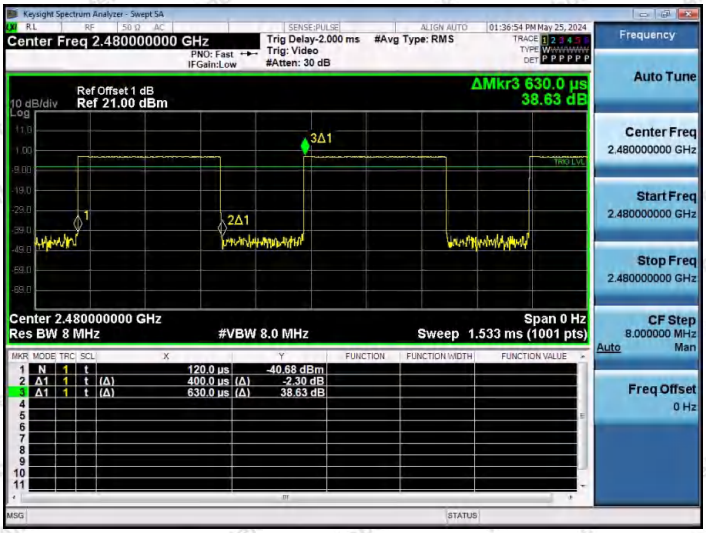
Test Graphs



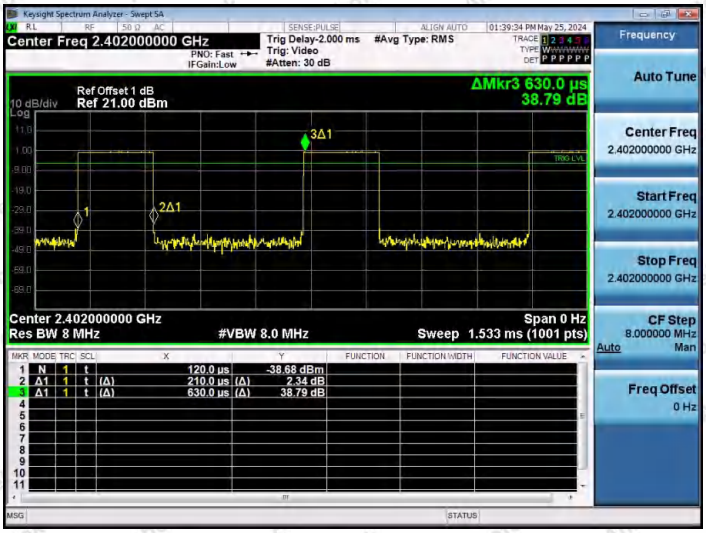
NTNV-BLE_1M-Ant1-2402



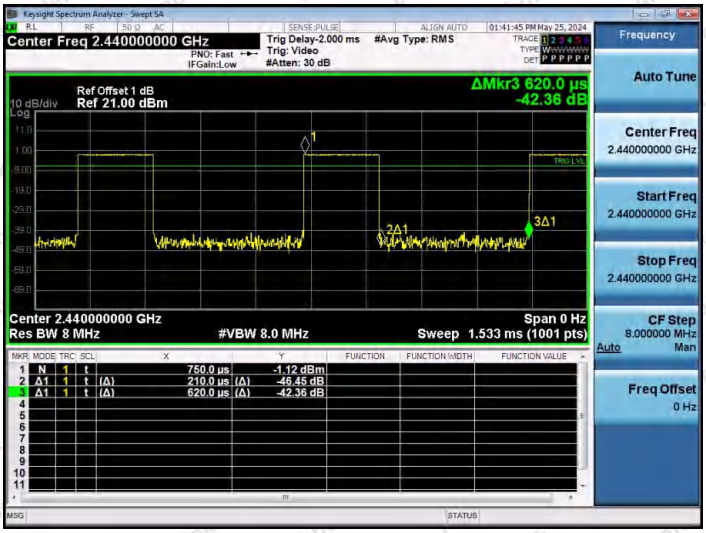
NTNV-BLE_1M-Ant1-2440



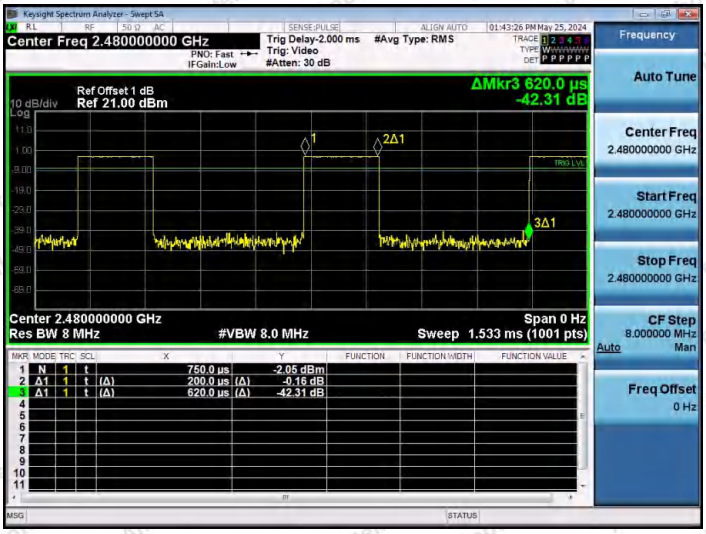
NTNV-BLE_1M-Ant1-2480



NTNV-BLE_2M-Ant1-2402



NTNV-BLE_2M-Ant1-2440



NTNV-BLE_2M-Ant1-2480

---End---