Appendix Test Data

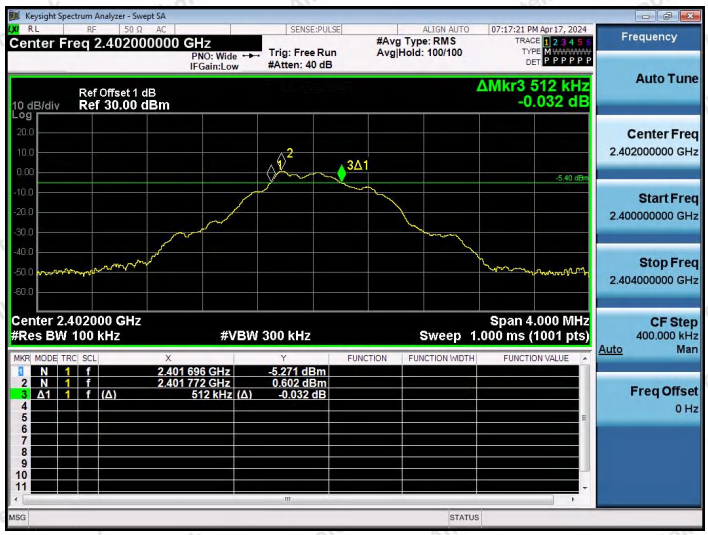
Report No.:	18220WC40073101	Test Sample No.:	1-2-2
Start Test Date:	2024.04.16	Finish Test Date:	2024.04.17
Test Engineer:	Joker Huang	Auditor:	Justin Feng
Temperature:	25.3℃	Relative Humidity:	48%
Pressure:	101kPa		

Appendix A: 6dB Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	6dB BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.512	2401.696	2402.208	0.5	PASS
BLE_1M	Ant1	2440	0.520	2439.696	2440.216	0.5	PASS
BLE_1M	Ant1	2480	0.520	2479.688	2480.208	0.5	PASS
BLE_2M	Ant1	2402	0.860	2401.440	2402.300	0.5	PASS
BLE_2M	Ant1	2440	0.856	2439.436	2440.292	0.5	PASS
BLE_2M	Ant1	2480	0.844	2479.432	2480.276	0.5	PASS

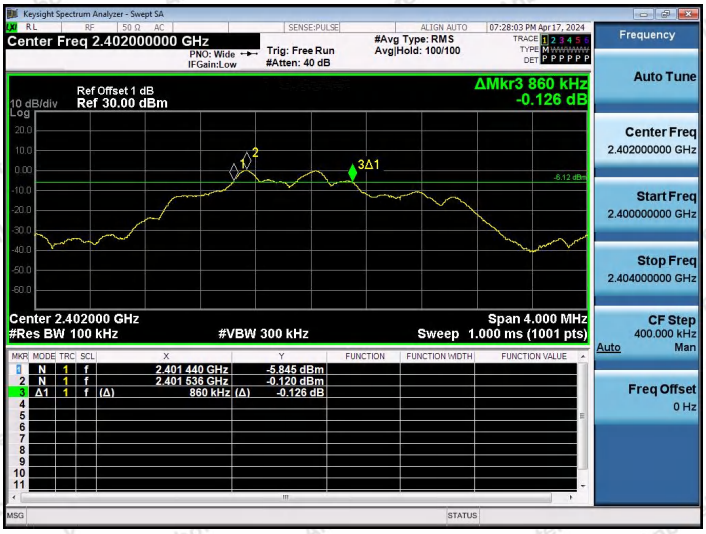
Test Graphs



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

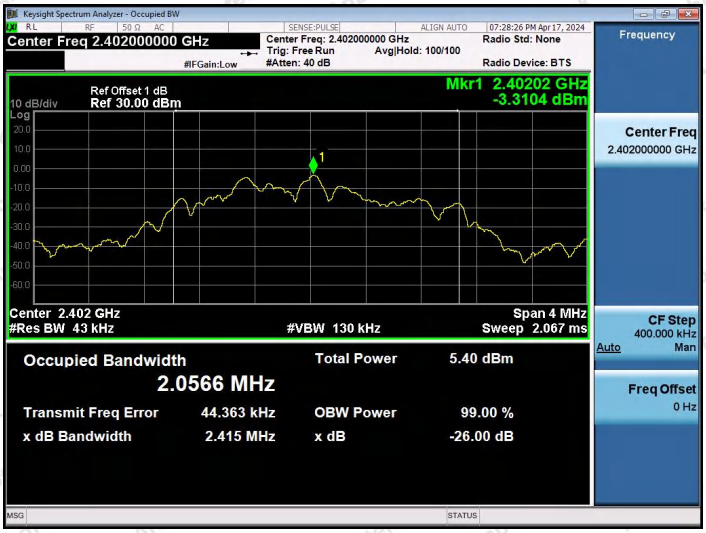
TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0561	2401.5070	2402.5631	---	---
BLE_1M	Ant1	2440	1.0911	2439.4691	2440.5602	---	---
BLE_1M	Ant1	2480	1.1316	2479.4311	2480.5627	---	---
BLE_2M	Ant1	2402	2.0566	2401.0161	2403.0727	---	---
BLE_2M	Ant1	2440	2.0631	2439.0122	2441.0753	---	---
BLE_2M	Ant1	2480	2.0785	2479.0019	2481.0804	---	---

Test Graphs

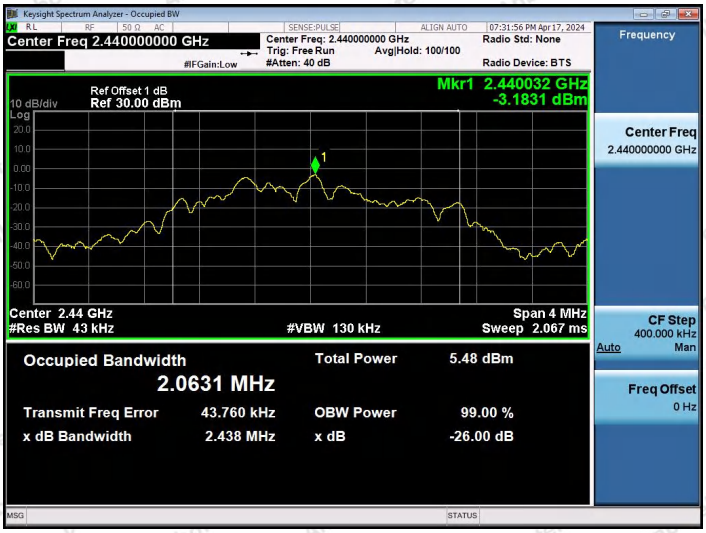
BLE_1M-Ant1-2402

BLE_1M-Ant1-2440

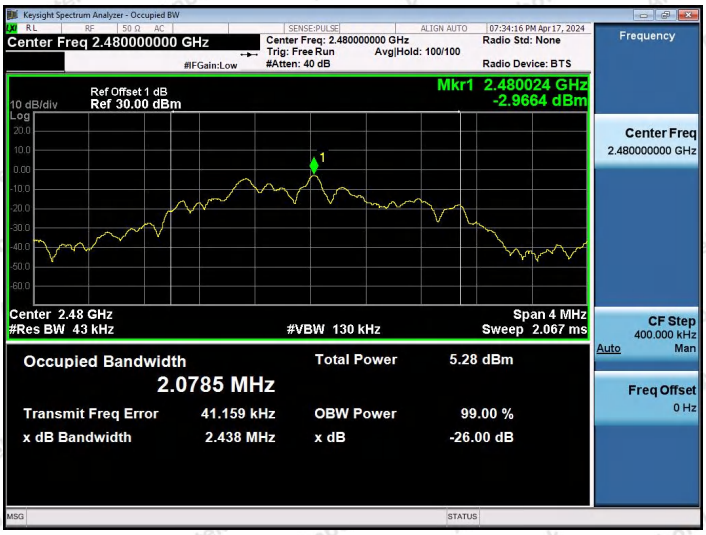
BLE_1M-Ant1-2480



BLE_2M-Ant1-2402



BLE_2M-Ant1-2440



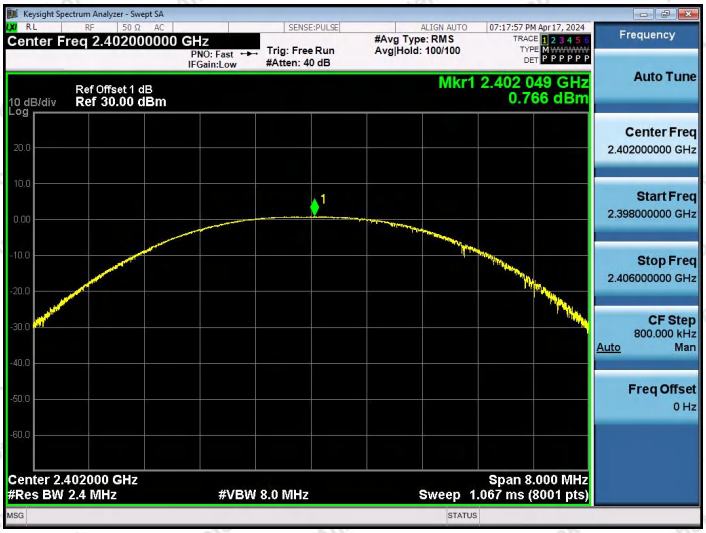
BLE_2M-Ant1-2480

Appendix C: Maximum conducted output power

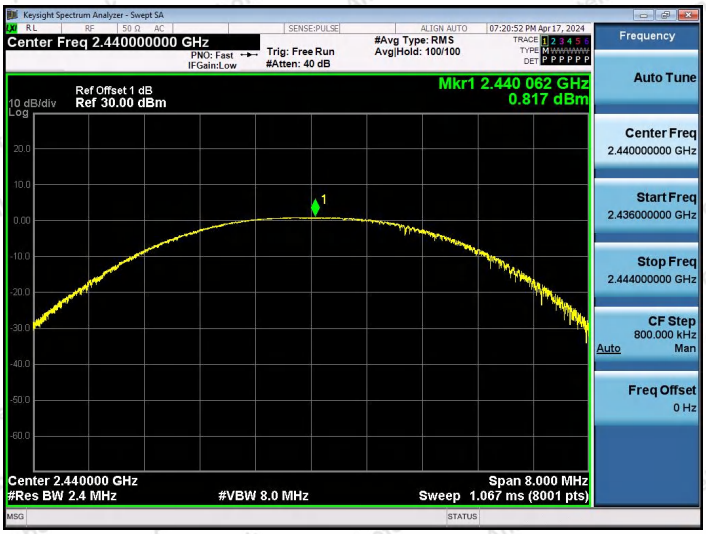
Test Result Peak

TestMode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0.77	≤30	PASS
BLE_1M	Ant1	2440	0.82	≤30	PASS
BLE_1M	Ant1	2480	0.52	≤30	PASS
BLE_2M	Ant1	2402	0.79	≤30	PASS
BLE_2M	Ant1	2440	0.87	≤30	PASS
BLE_2M	Ant1	2480	0.58	≤30	PASS

Test Graphs Peak



BLE_1M-Ant1-2402-PASS

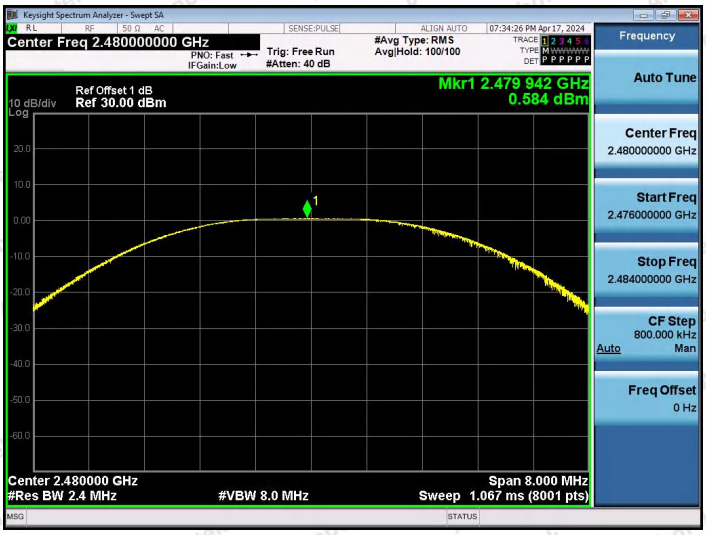


BLE_1M-Ant1-2440-PASS

BLE_1M-Ant1-2480-PASS

BLE_2M-Ant1-2402-PASS

BLE_2M-Ant1-2440-PASS



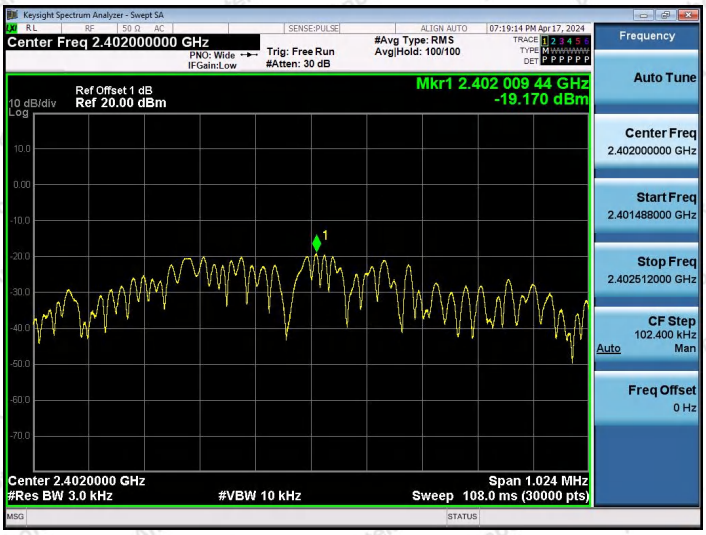
BLE_2M-Ant1-2480-PASS

Appendix D: Maximum power spectral density

Test Result

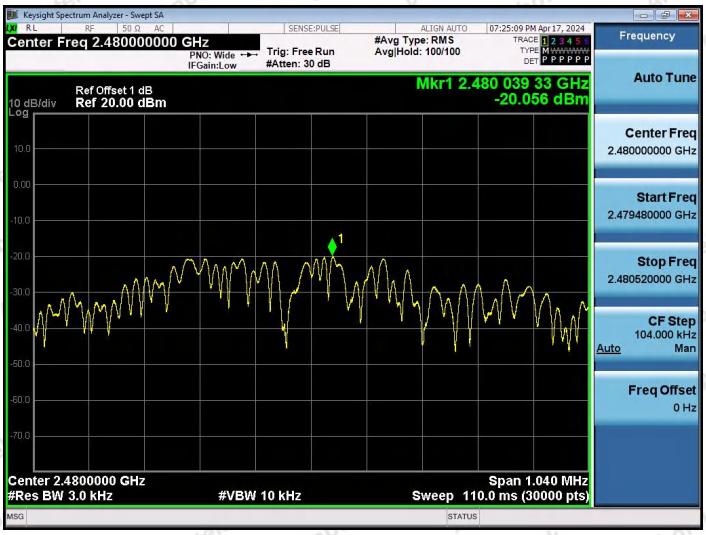
TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-19.17	≤8.00	PASS
BLE_1M	Ant1	2440	-19.77	≤8.00	PASS
BLE_1M	Ant1	2480	-20.06	≤8.00	PASS
BLE_2M	Ant1	2402	-21.71	≤8.00	PASS
BLE_2M	Ant1	2440	-21.63	≤8.00	PASS
BLE_2M	Ant1	2480	-21.81	≤8.00	PASS

Test Graphs

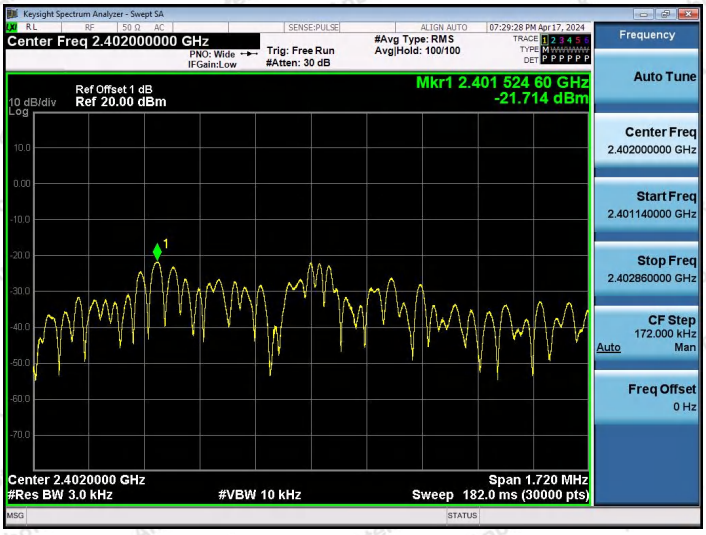


BLE_1M-Ant1-2402-PASS

BLE_1M-Ant1-2440-PASS



BLE_1M-Ant1-2480-PASS



BLE_2M-Ant1-2402-PASS

BLE_2M-Ant1-2440-PASS

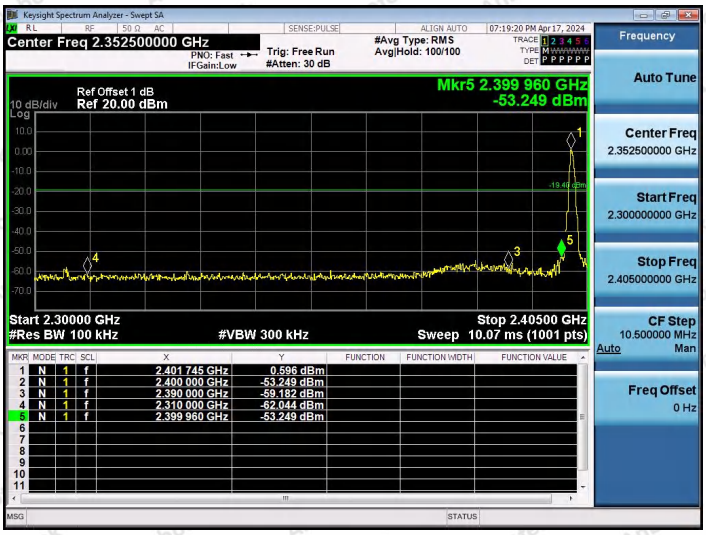
BLE_2M-Ant1-2480-PASS

Appendix E: Band edge measurements

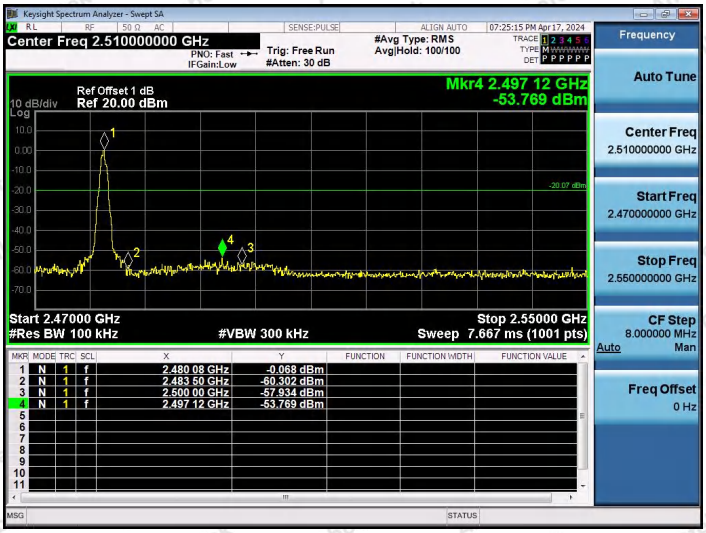
Test Result

TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	0.60	-53.25	≤-19.4	PASS
BLE_1M	Ant1	High	2480	-0.07	-53.77	≤-20.07	PASS
BLE_2M	Ant1	Low	2402	-0.35	-36.12	≤-20.35	PASS
BLE_2M	Ant1	High	2480	-0.61	-50.05	≤-20.61	PASS

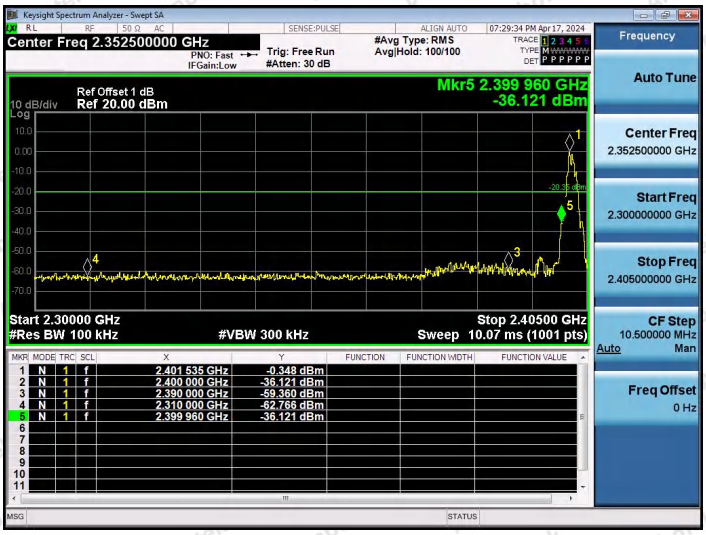
Test Graphs



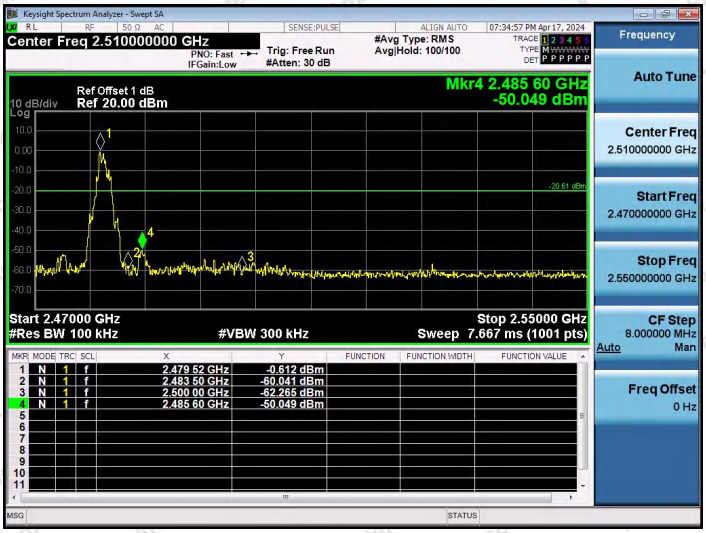
BLE_1M-Ant1-2402-PASS



BLE_1M-Ant1-2480-PASS



BLE_2M-Ant1-2402-PASS



BLE_2M-Ant1-2480-PASS

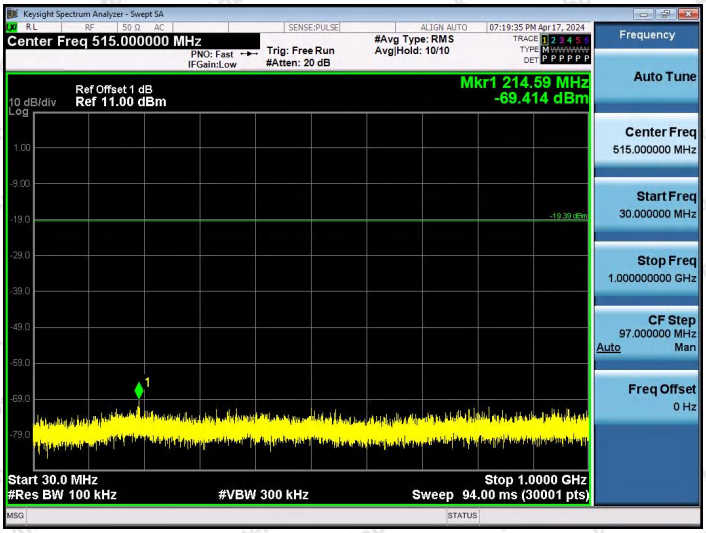
Appendix F: Conducted Spurious Emission

Test Result

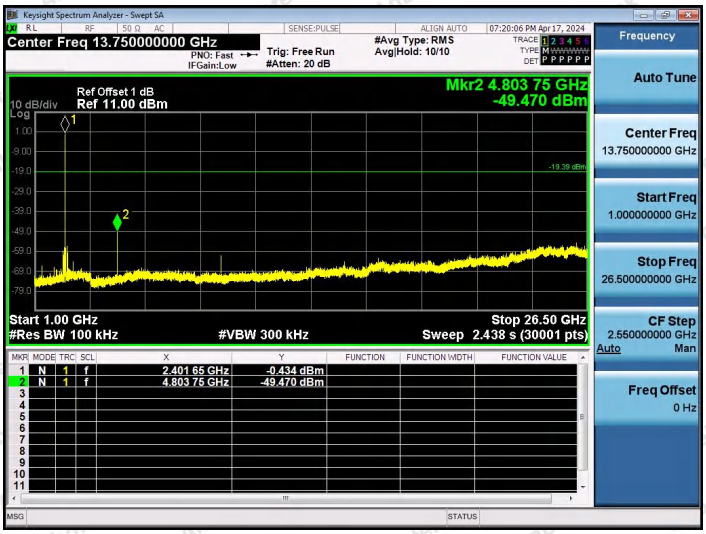
TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0~Reference	0.61	0.61	---	PASS
BLE_1M	Ant1	2402	30~1000	0.61	-69.41	≤-19.39	PASS
BLE_1M	Ant1	2402	1000~26500	0.61	-49.47	≤-19.39	PASS
BLE_1M	Ant1	2440	0~Reference	0.64	0.64	---	PASS
BLE_1M	Ant1	2440	30~1000	0.64	-71.41	≤-19.36	PASS
BLE_1M	Ant1	2440	1000~26500	0.64	-48.32	≤-19.36	PASS
BLE_1M	Ant1	2480	0~Reference	0.37	0.37	---	PASS
BLE_1M	Ant1	2480	30~1000	0.37	-71.15	≤-19.63	PASS
BLE_1M	Ant1	2480	1000~26500	0.37	-46.8	≤-19.63	PASS
BLE_2M	Ant1	2402	0~Reference	-0.09	-0.09	---	PASS
BLE_2M	Ant1	2402	30~1000	-0.09	-70.74	≤-20.09	PASS
BLE_2M	Ant1	2402	1000~26500	-0.09	-48.43	≤-20.09	PASS
BLE_2M	Ant1	2440	0~Reference	-0.02	-0.02	---	PASS
BLE_2M	Ant1	2440	30~1000	-0.02	-71.34	≤-20.02	PASS
BLE_2M	Ant1	2440	1000~26500	-0.02	-46.56	≤-20.02	PASS
BLE_2M	Ant1	2480	0~Reference	-0.16	-0.16	---	PASS
BLE_2M	Ant1	2480	30~1000	-0.16	-70.04	≤-20.16	PASS
BLE_2M	Ant1	2480	1000~26500	-0.16	-49.67	≤-20.16	PASS

Test Graphs

BLE_1M-Ant1-2402-0~Reference-PASS

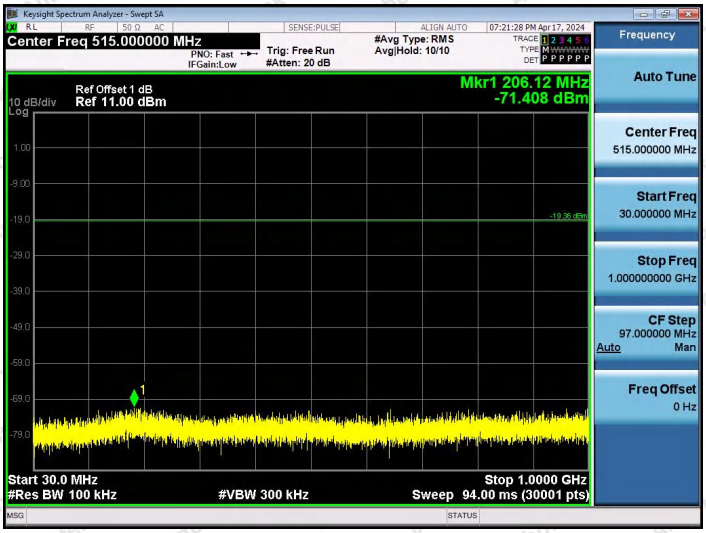


BLE_1M-Ant1-2402-30~1000-PASS

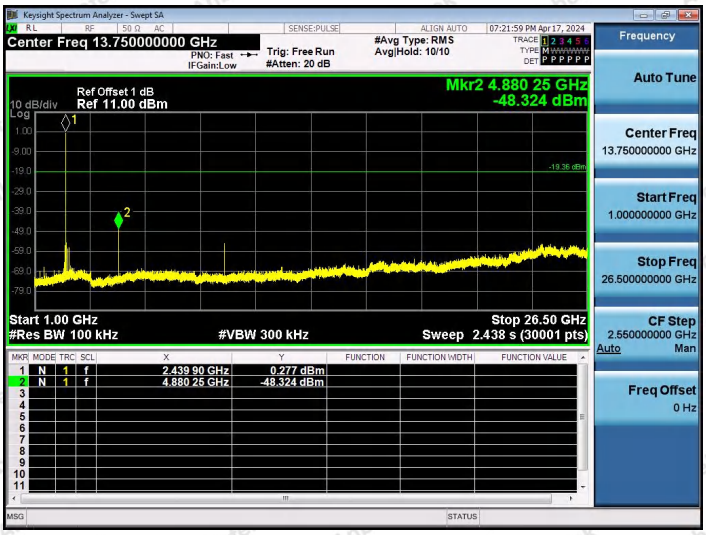


BLE_1M-Ant1-2402-1000~26500-PASS

BLE_1M-Ant1-2440-0~Reference-PASS

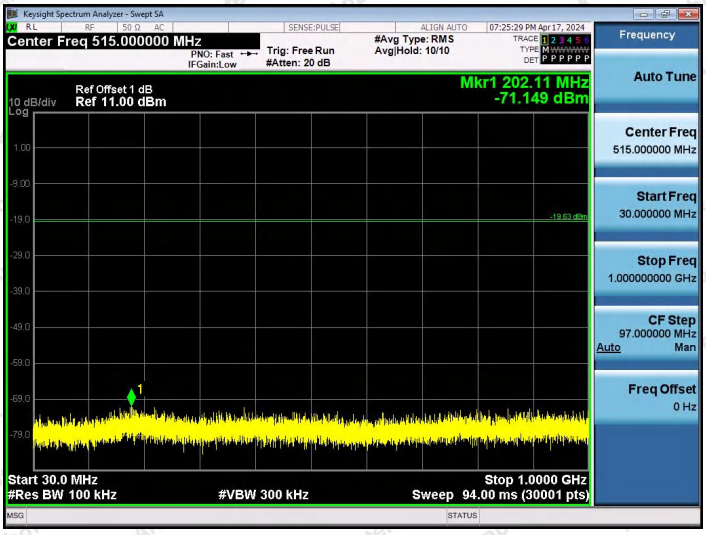


BLE_1M-Ant1-2440-30~1000-PASS

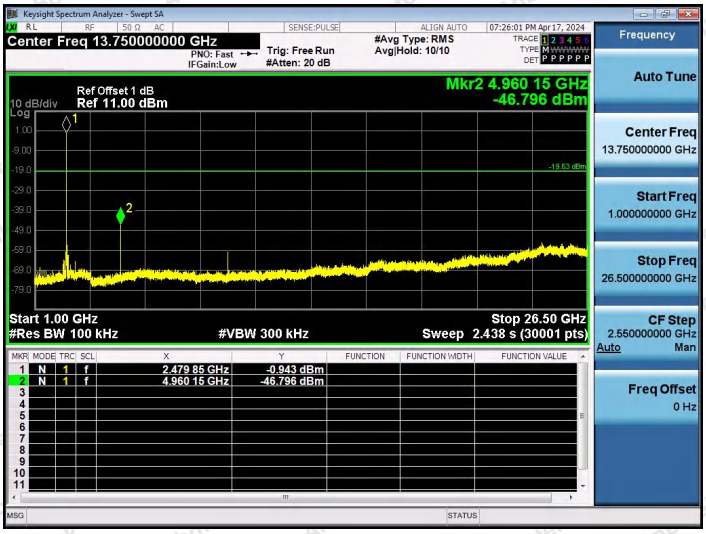


BLE_1M-Ant1-2440-1000~26500-PASS

BLE_1M-Ant1-2480-0~Reference-PASS

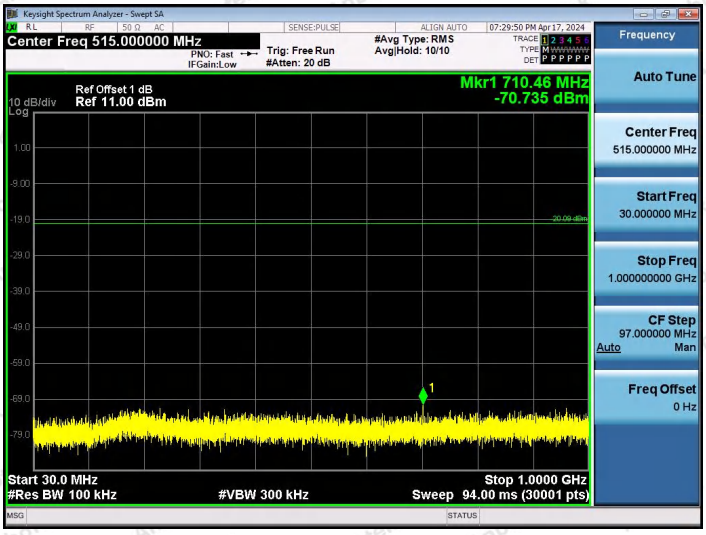


BLE_1M-Ant1-2480-30~1000-PASS

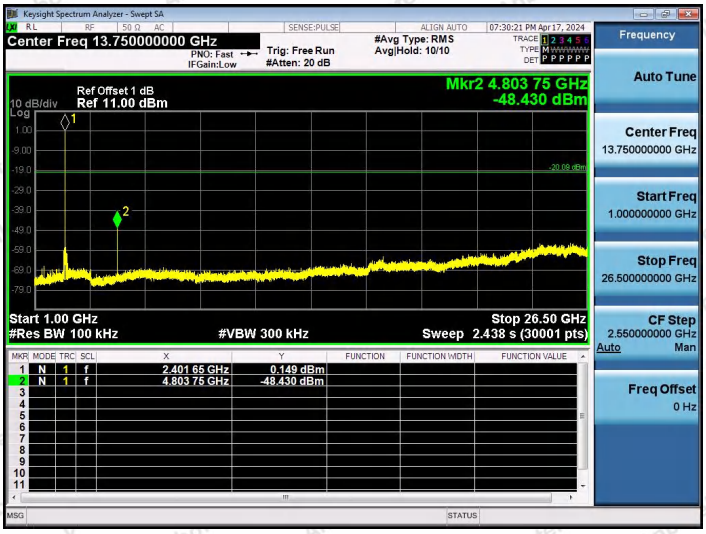


BLE_1M-Ant1-2480-1000~26500-PASS

BLE_2M-Ant1-2402-0~Reference-PASS

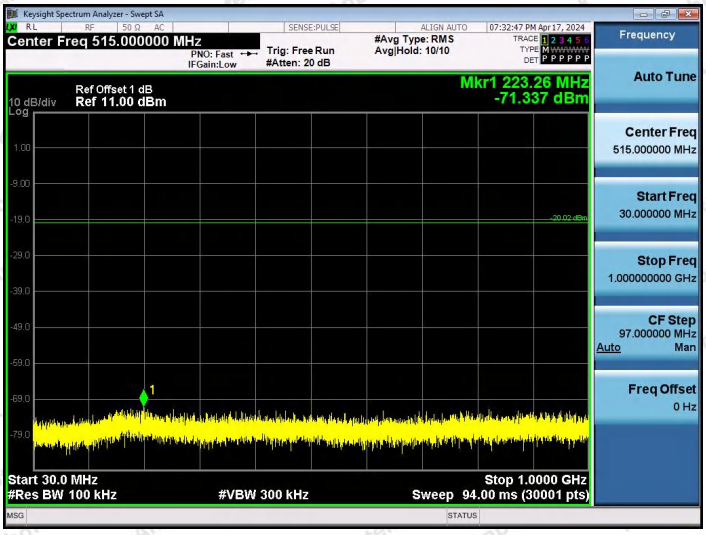


BLE_2M-Ant1-2402-30~1000-PASS

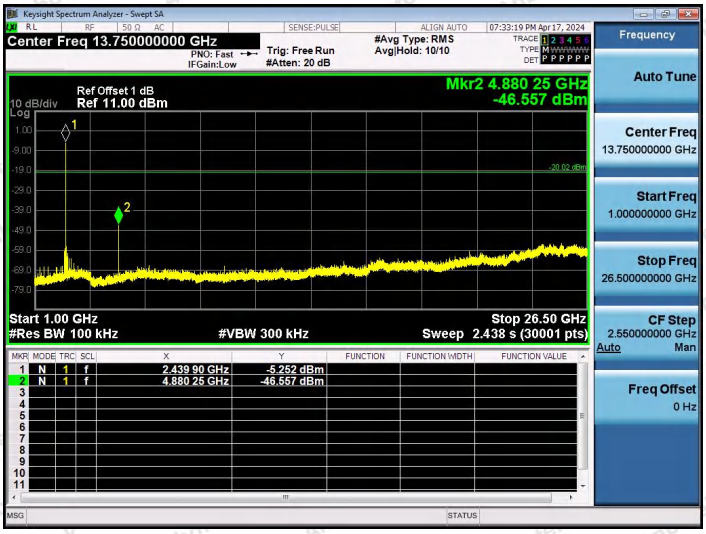


BLE_2M-Ant1-2402-1000~26500-PASS

BLE_2M-Ant1-2440-0~Reference-PASS

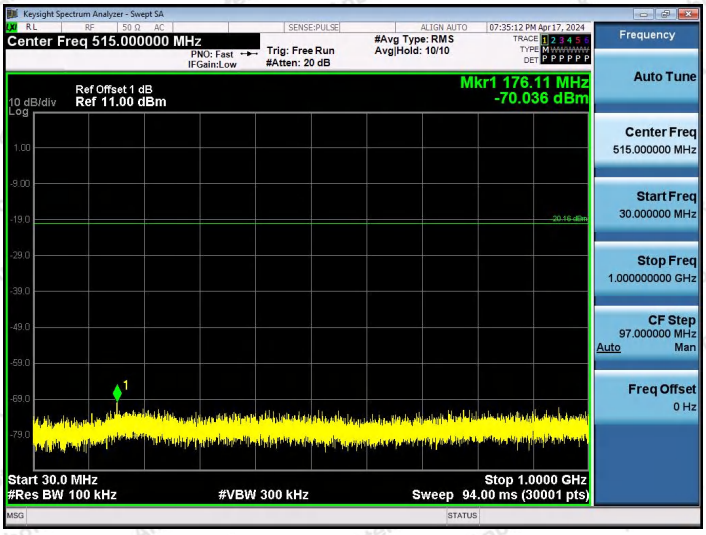


BLE_2M-Ant1-2440-30~1000-PASS

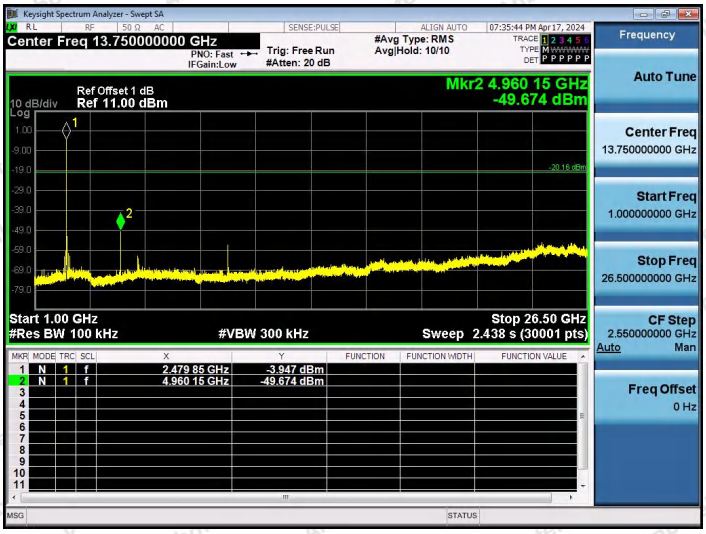


BLE_2M-Ant1-2440-1000~26500-PASS

BLE_2M-Ant1-2480-0~Reference-PASS



BLE_2M-Ant1-2480-30~1000-PASS



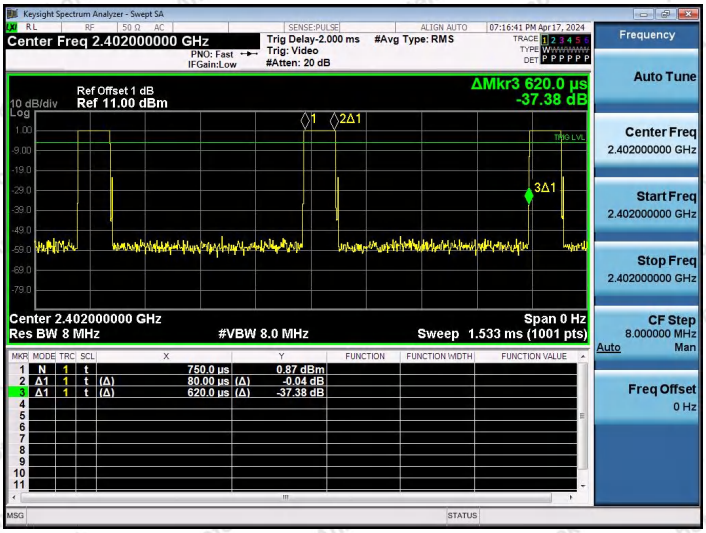
BLE_2M-Ant1-2480-1000~26500-PASS

Appendix G: Duty Cycle

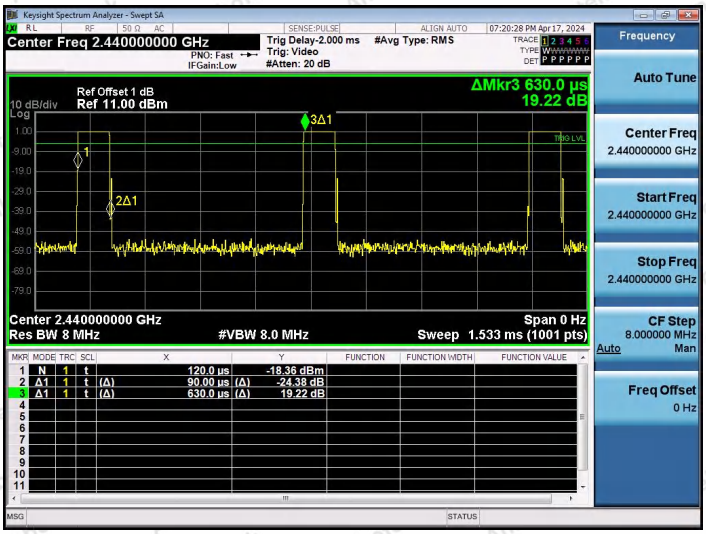
Test Result

TestMode	Antenna	Frequency[MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor[dB]
BLE_1M	Ant1	2402	0.08	0.62	12.90	8.89
BLE_1M	Ant1	2440	0.09	0.63	14.29	8.45
BLE_1M	Ant1	2480	0.09	0.63	14.29	8.45
BLE_2M	Ant1	2402	0.05	0.62	8.06	10.94
BLE_2M	Ant1	2440	0.06	0.63	9.52	10.21
BLE_2M	Ant1	2480	0.05	0.62	8.06	10.94

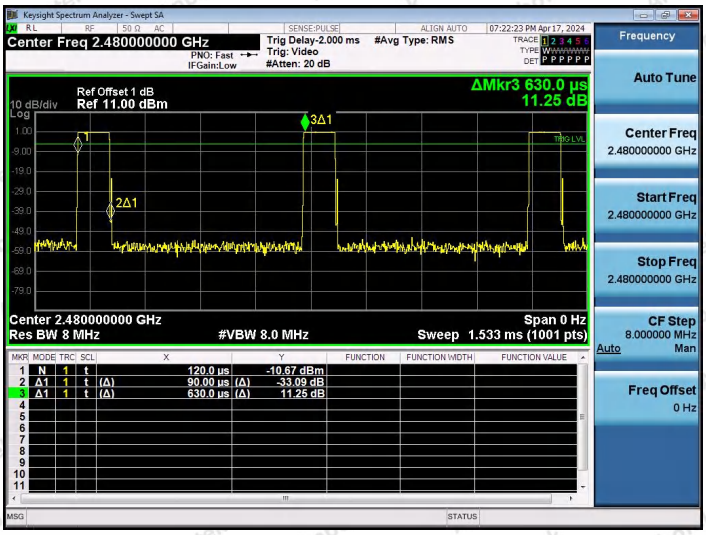
Test Graphs



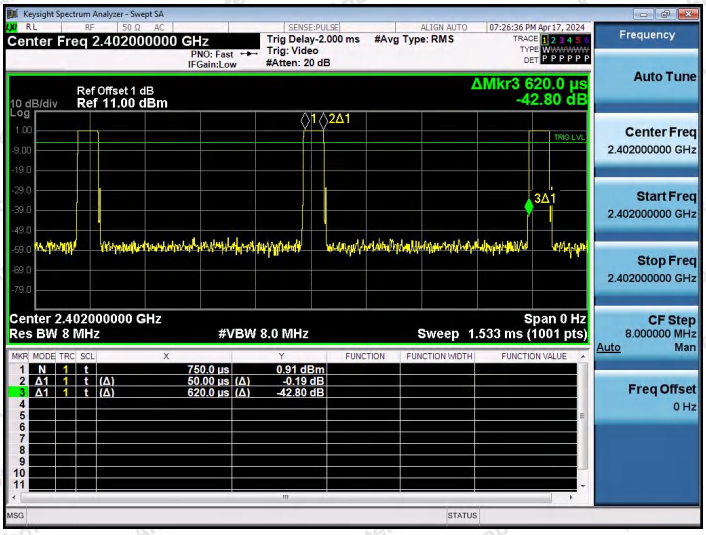
NTNV-BLE_1M-Ant1-2402



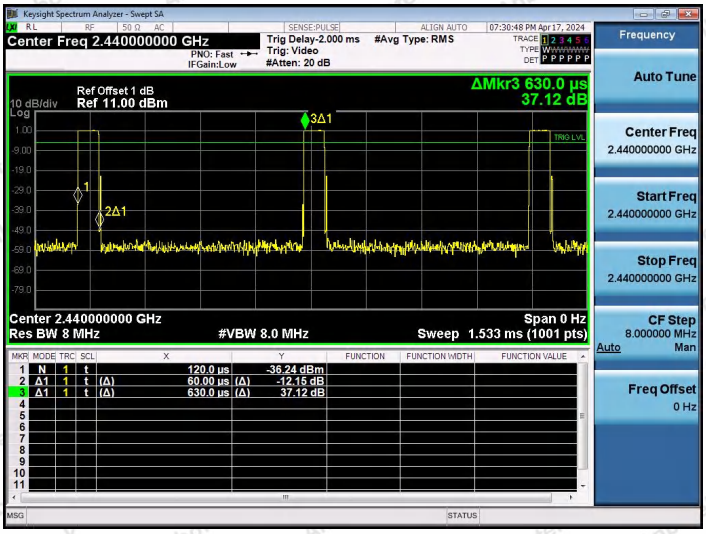
NTNV-BLE_1M-Ant1-2440



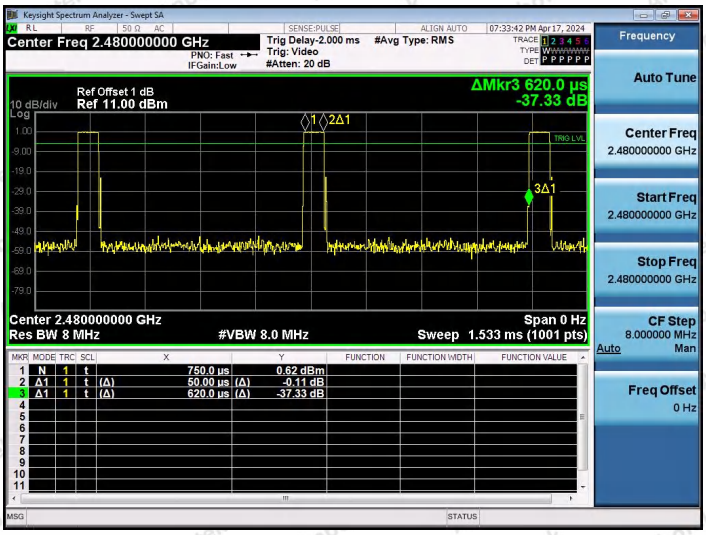
NTNV-BLE_1M-Ant1-2480



NTNV-BLE_2M-Ant1-2402



NTNV-BLE_2M-Ant1-2440



NTNV-BLE_2M-Ant1-2480

---End---