Appendix: Bluetooth LE

Contents

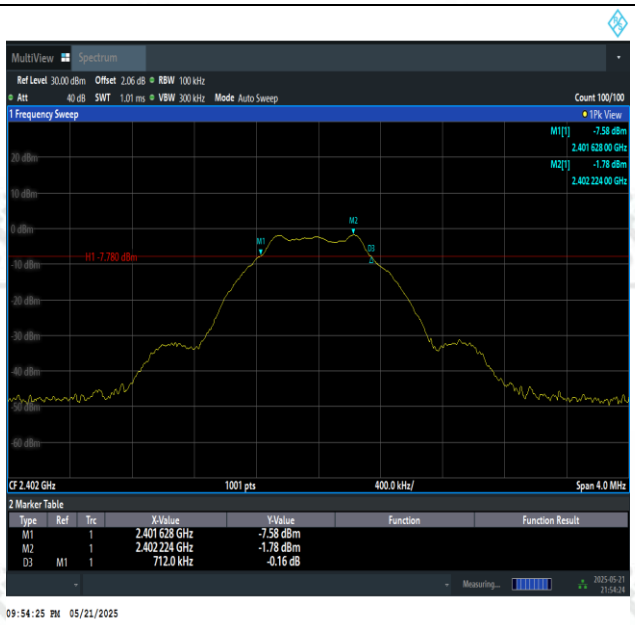
Appendix A: DTS Bandwidth 3
Test Result 3
Test Graphs 4
Appendix B: Occupied Channel Bandwidth 7
Test Result 7
Test Graphs 8
Appendix C: Maximum conducted output power 11
Test Result Peak 11
Test Graphs Peak 12
Appendix D: Maximum power spectral density 15
Test Result 15
Test Graphs 16
Appendix E: Band edge measurements 19
Test Result 19
Test Graphs 20
Appendix F: Conducted Spurious Emission 22
Test Result 22
Test Graphs 23
Appendix G: Duty Cycle 32
Test Result 32
Test Graphs 33

Appendix A: DTS Bandwidth

Test Result

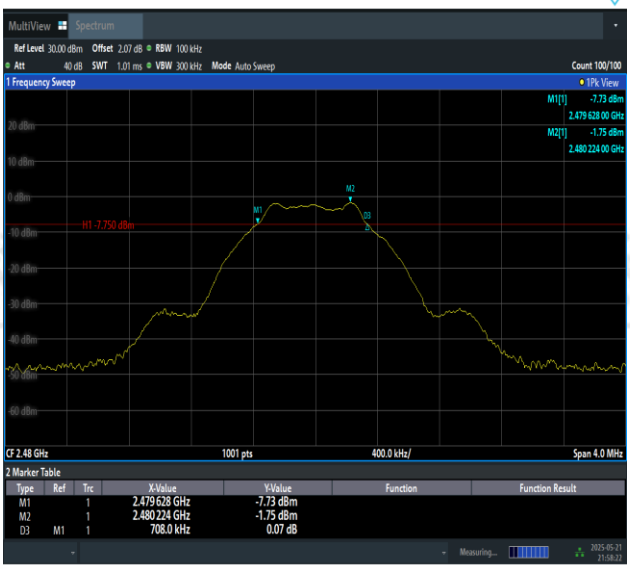
TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.71	2401.63	2402.34	0.5	PASS
BLE_1M	Ant1	2440	0.71	2439.63	2440.34	0.5	PASS
BLE_1M	Ant1	2480	0.71	2479.63	2480.34	0.5	PASS
BLE_2M	Ant1	2402	1.12	2401.43	2402.56	0.5	PASS
BLE_2M	Ant1	2440	1.13	2439.42	2440.56	0.5	PASS
BLE_2M	Ant1	2480	1.13	2479.43	2480.56	0.5	PASS

Test Graphs



BLE_1M-Ant1-2402-PASS

BLE_1M-Ant1-2440-PASS



09:58:22 PM 05/21/2025

BLE_1M-Ant1-2480-PASS

10:02:17 PM 05/21/2025

BLE_2M-Ant1-2402-PASS

BLE_2M-Ant1-2440-PASS

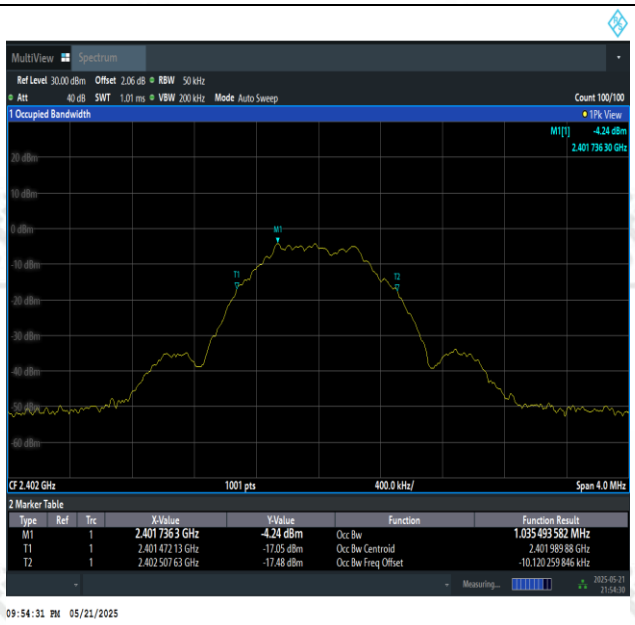
BLE_2M-Ant1-2480-PASS

Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.035	2401.4721	2402.5076	---	---
BLE_1M	Ant1	2440	1.037	2439.4710	2440.5075	---	---
BLE_1M	Ant1	2480	1.036	2479.4704	2480.5068	---	---
BLE_2M	Ant1	2402	2.037	2400.9856	2403.0224	---	---
BLE_2M	Ant1	2440	2.036	2438.9869	2441.0231	---	---
BLE_2M	Ant1	2480	2.034	2478.9860	2481.0201	---	---

Test Graphs



BLE_1M-Ant1-2402

BLE_1M-Ant1-2440

BLE_1M-Ant1-2480

BLE_2M-Ant1-2402

BLE_2M-Ant1-2440

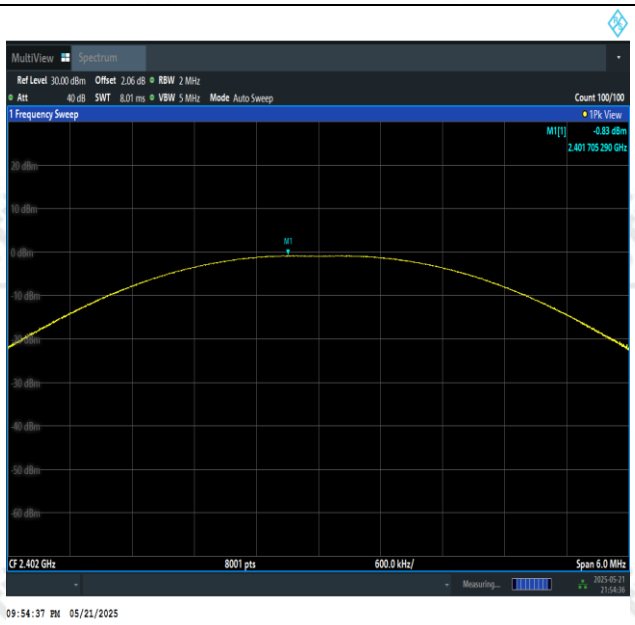
BLE_2M-Ant1-2480

Appendix C: Maximum conducted output power

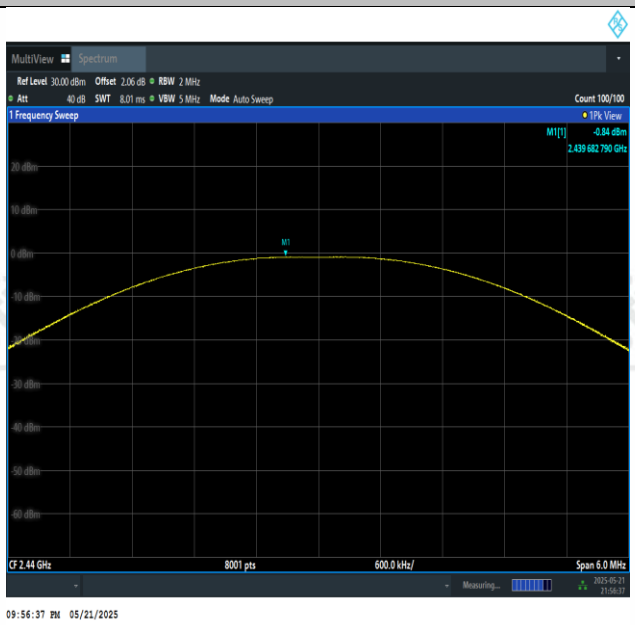
Test Result Peak

TestMode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-0.83	≤30	PASS
BLE_1M	Ant1	2440	-0.84	≤30	PASS
BLE_1M	Ant1	2480	-0.82	≤30	PASS
BLE_2M	Ant1	2402	-0.75	≤30	PASS
BLE_2M	Ant1	2440	-0.82	≤30	PASS
BLE_2M	Ant1	2480	-0.83	≤30	PASS

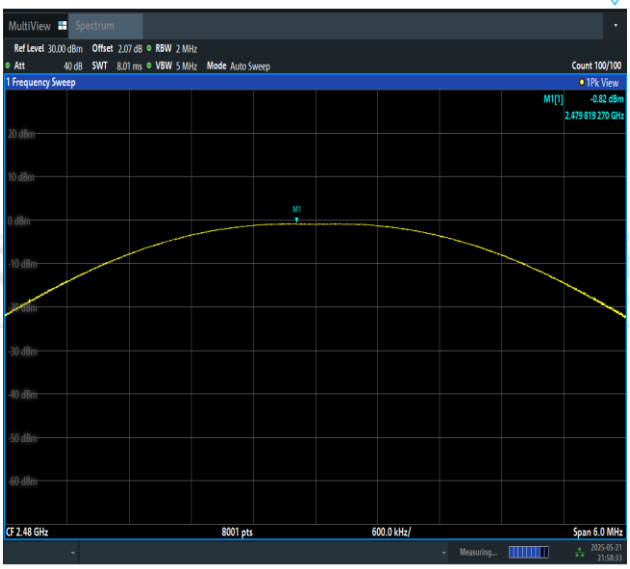
Test Graphs Peak



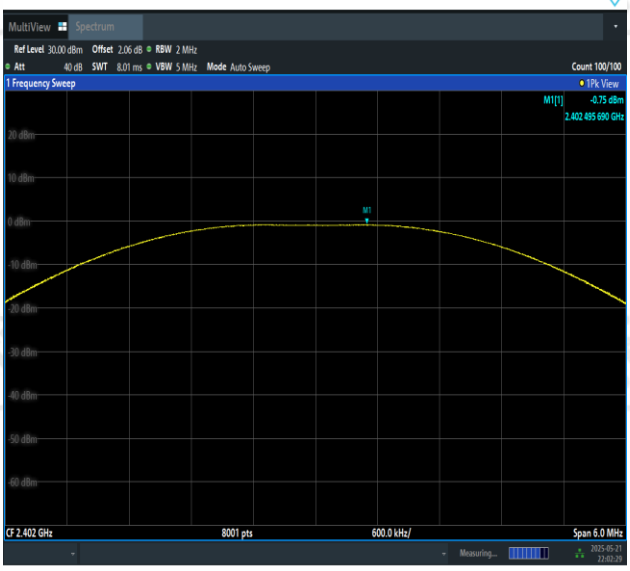
BLE_1M-Ant1-2402-PASS



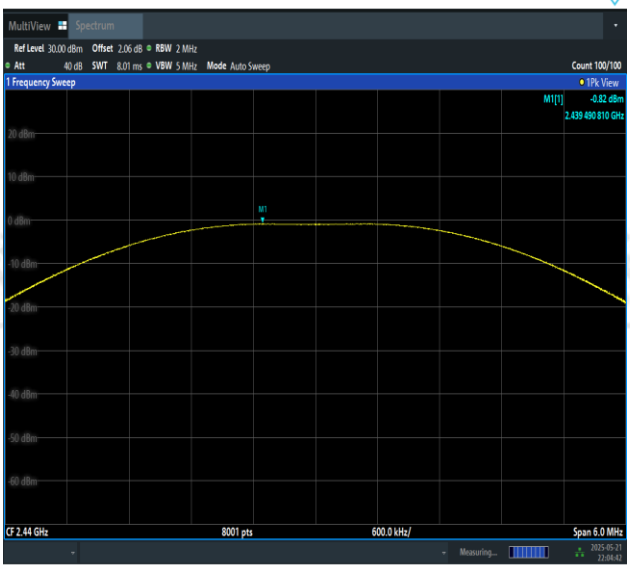
BLE_1M-Ant1-2440-PASS



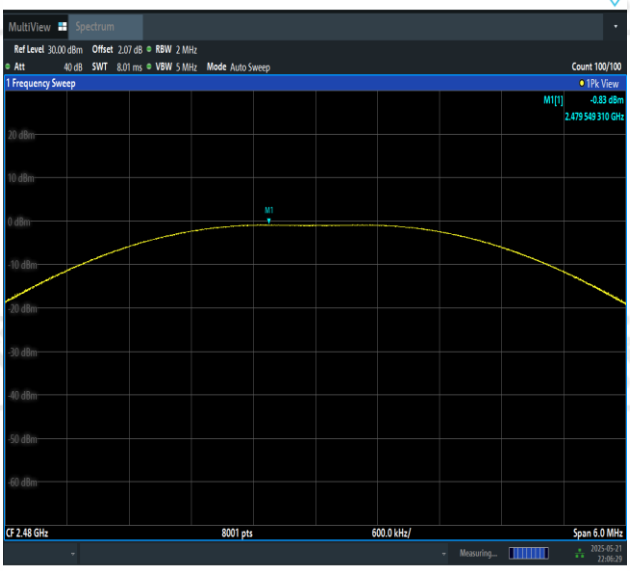
BLE_1M-Ant1-2480-PASS



BLE_2M-Ant1-2402-PASS



BLE_2M-Ant1-2440-PASS



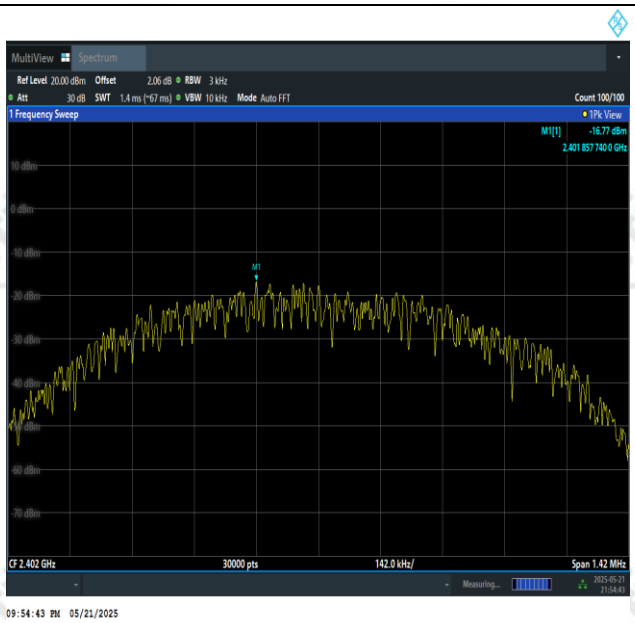
BLE_2M-Ant1-2480-PASS

Appendix D: Maximum power spectral density

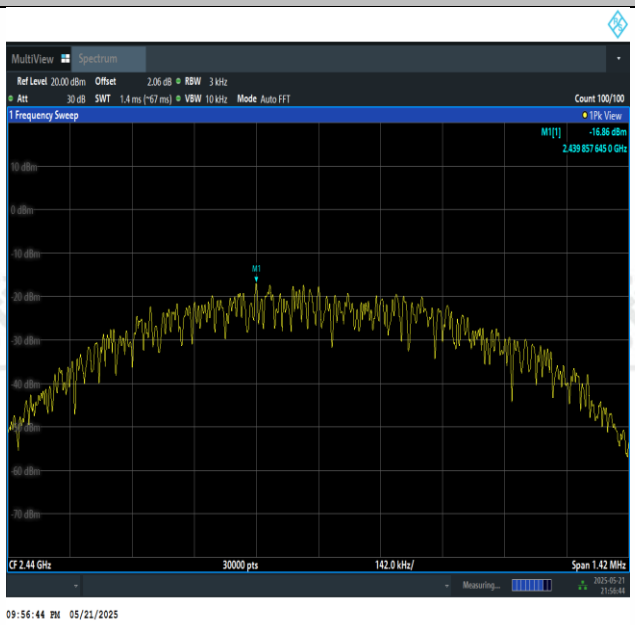
Test Result

TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-16.77	≤8.00	PASS
BLE_1M	Ant1	2440	-16.86	≤8.00	PASS
BLE_1M	Ant1	2480	-16.79	≤8.00	PASS
BLE_2M	Ant1	2402	-17.86	≤8.00	PASS
BLE_2M	Ant1	2440	-17.96	≤8.00	PASS
BLE_2M	Ant1	2480	-17.76	≤8.00	PASS

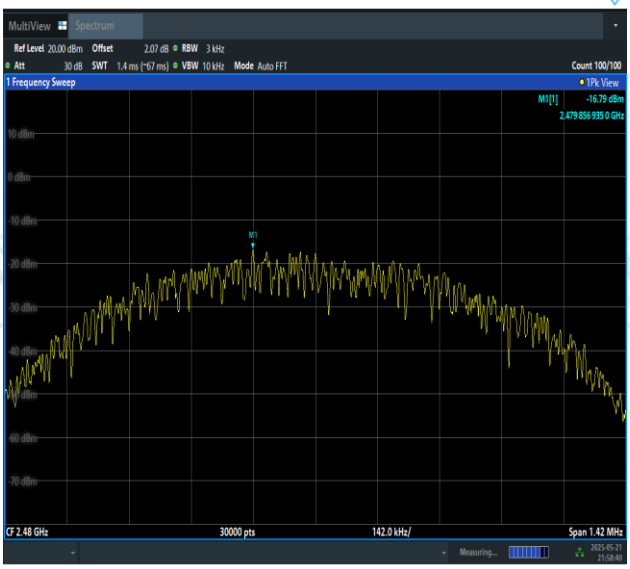
Test Graphs



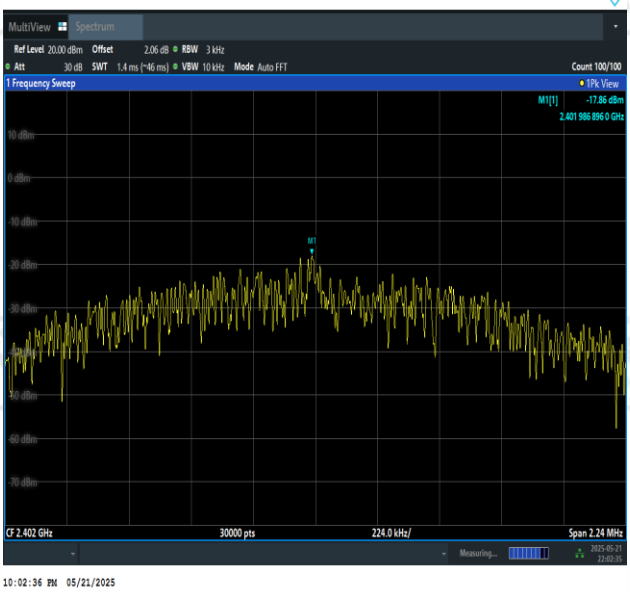
BLE_1M-Ant1-2402-PASS



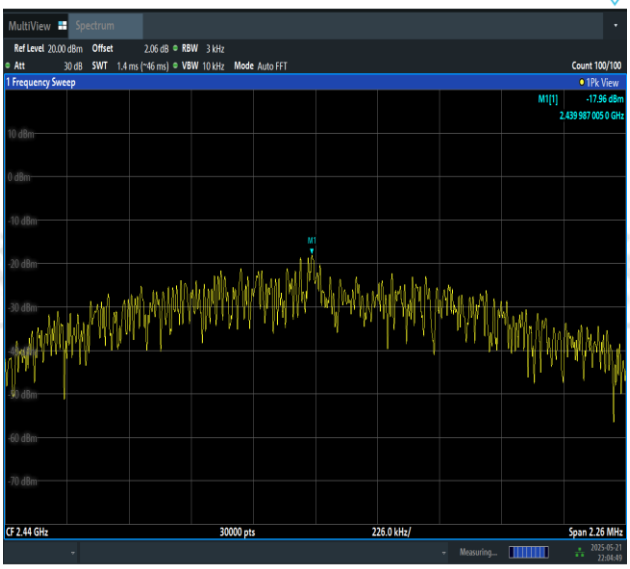
BLE_1M-Ant1-2440-PASS



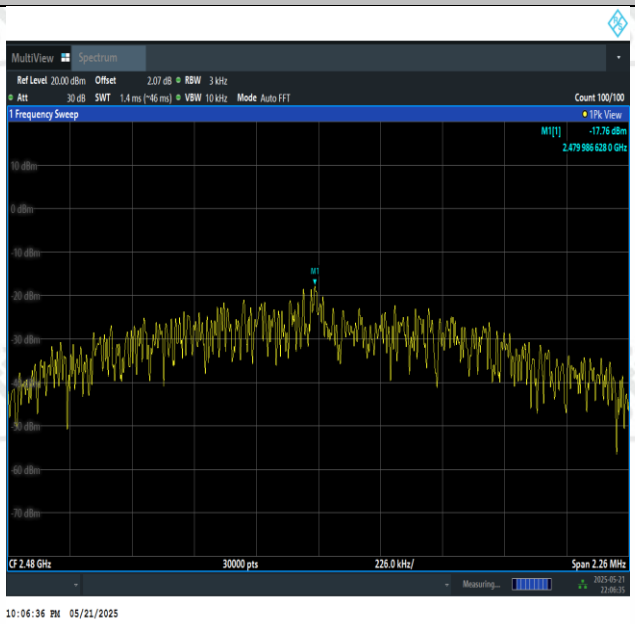
BLE_1M-Ant1-2480-PASS



BLE_2M-Ant1-2402-PASS



BLE_2M-Ant1-2440-PASS



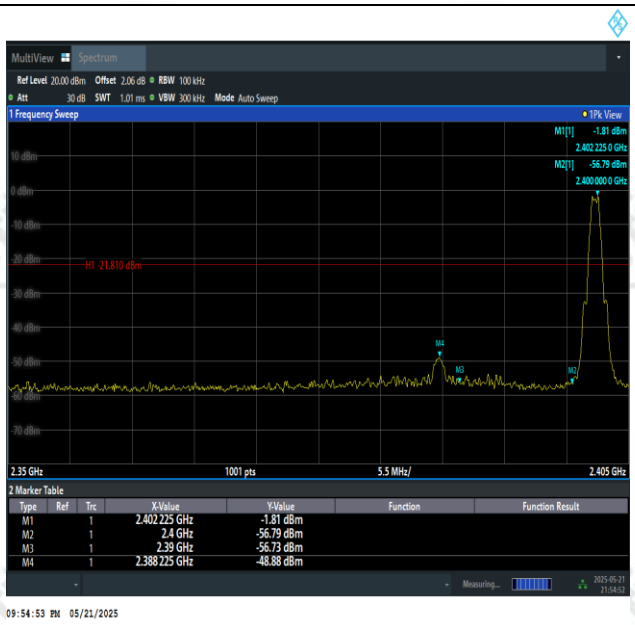
BLE_2M-Ant1-2480-PASS

Appendix E: Band edge measurements

Test Result

TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-1.81	-48.88	≤-21.81	PASS
BLE_1M	Ant1	High	2480	-1.80	-53.74	≤-21.8	PASS
BLE_2M	Ant1	Low	2402	-1.43	-34.2	≤-21.43	PASS
BLE_2M	Ant1	High	2480	-1.48	-49.95	≤-21.48	PASS

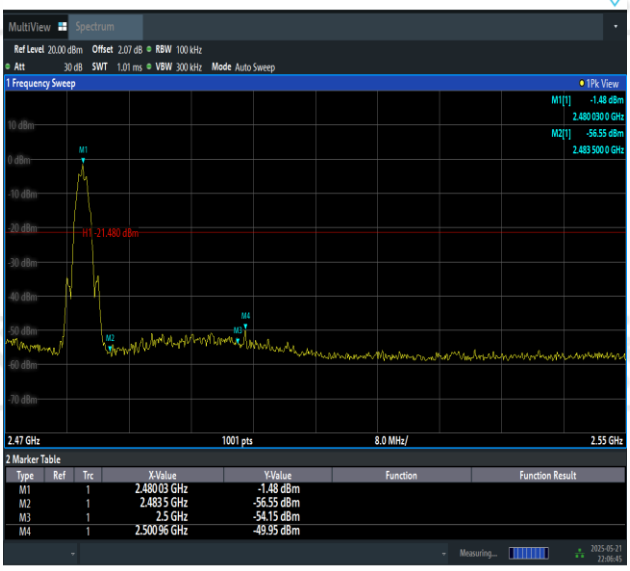
Test Graphs



BLE_1M-Ant1-2402-PASS

BLE_1M-Ant1-2480-PASS

BLE_2M-Ant1-2402-PASS



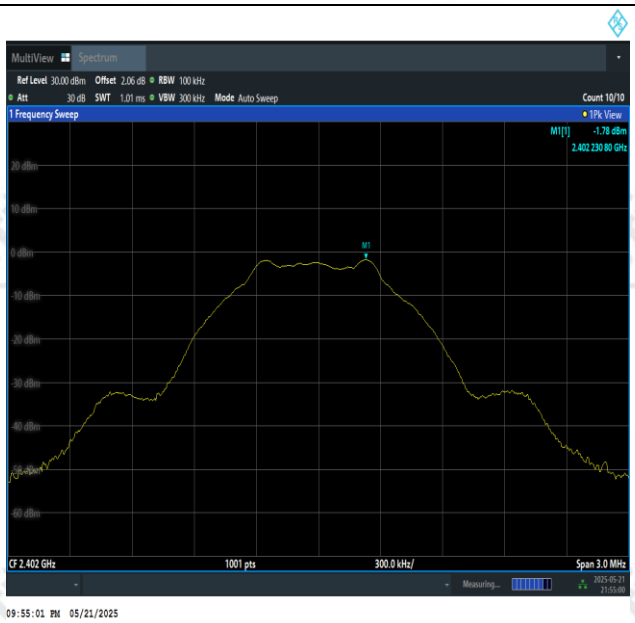
BLE_2M-Ant1-2480-PASS

Appendix F: Conducted Spurious Emission

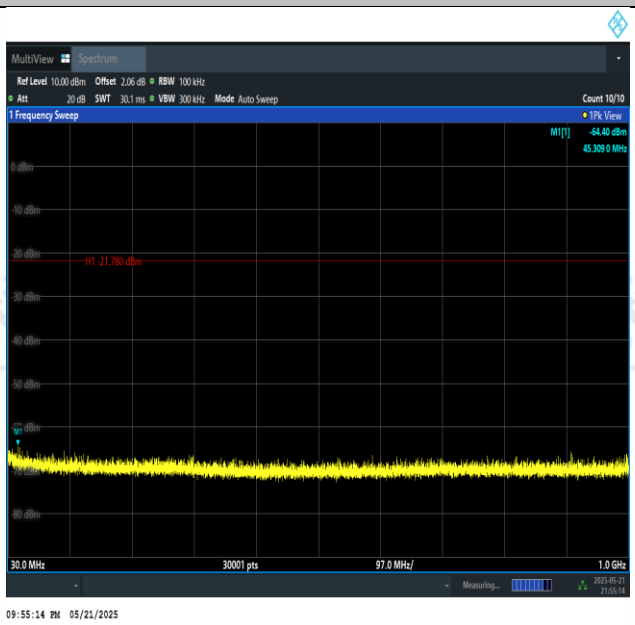
Test Result

TestMode	Antenna	Frequency [MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0~Reference	-1.78	-1.78	---	PASS
BLE_1M	Ant1	2402	30~1000	-1.78	-64.4	≤-21.78	PASS
BLE_1M	Ant1	2402	1000~26500	-1.78	-37.62	≤-21.78	PASS
BLE_1M	Ant1	2440	0~Reference	-1.84	-1.84	---	PASS
BLE_1M	Ant1	2440	30~1000	-1.84	-65.13	≤-21.84	PASS
BLE_1M	Ant1	2440	1000~26500	-1.84	-36.89	≤-21.84	PASS
BLE_1M	Ant1	2480	0~Reference	-1.79	-1.79	---	PASS
BLE_1M	Ant1	2480	30~1000	-1.79	-64.98	≤-21.79	PASS
BLE_1M	Ant1	2480	1000~26500	-1.79	-37.94	≤-21.79	PASS
BLE_2M	Ant1	2402	0~Reference	-1.34	-1.34	---	PASS
BLE_2M	Ant1	2402	30~1000	-1.34	-63.93	≤-21.34	PASS
BLE_2M	Ant1	2402	1000~26500	-1.34	-36.52	≤-21.34	PASS
BLE_2M	Ant1	2440	0~Reference	-1.39	-1.39	---	PASS
BLE_2M	Ant1	2440	30~1000	-1.39	-64.87	≤-21.39	PASS
BLE_2M	Ant1	2440	1000~26500	-1.39	-36.52	≤-21.39	PASS
BLE_2M	Ant1	2480	0~Reference	-1.35	-1.35	---	PASS
BLE_2M	Ant1	2480	30~1000	-1.35	-64.21	≤-21.35	PASS
BLE_2M	Ant1	2480	1000~26500	-1.35	-37.76	≤-21.35	PASS

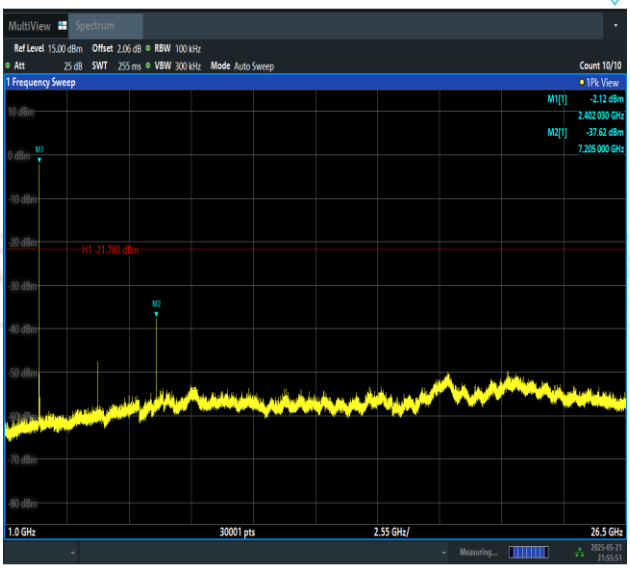
Test Graphs



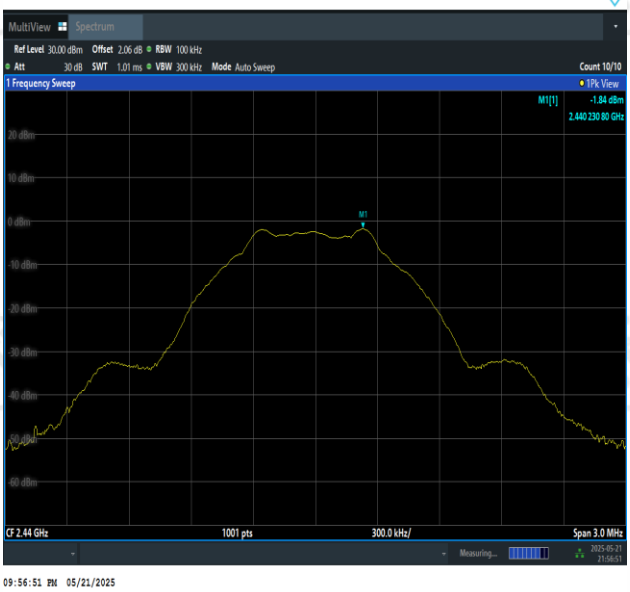
BLE_1M-Ant1-2402-0~Reference-PASS



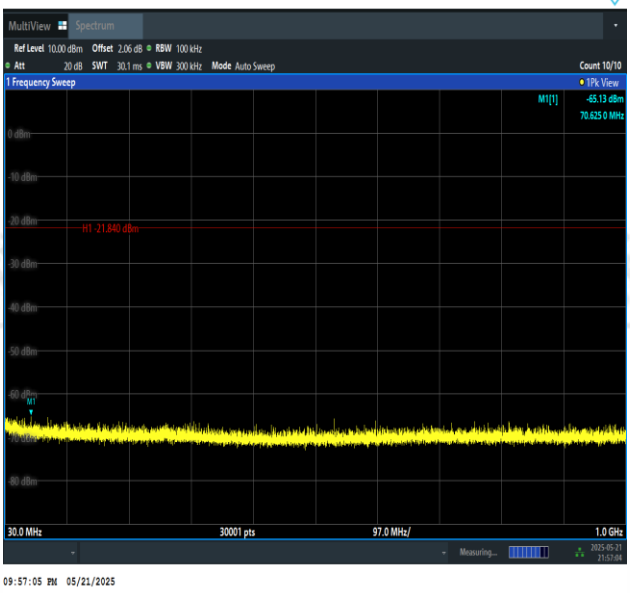
BLE_1M-Ant1-2402-30~1000-PASS



BLE_1M-Ant1-2402-1000~26500-PASS

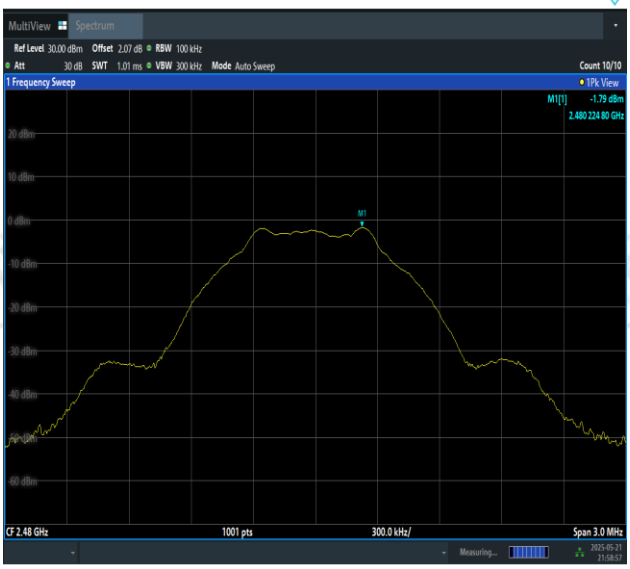


BLE_1M-Ant1-2440-0~Reference-PASS

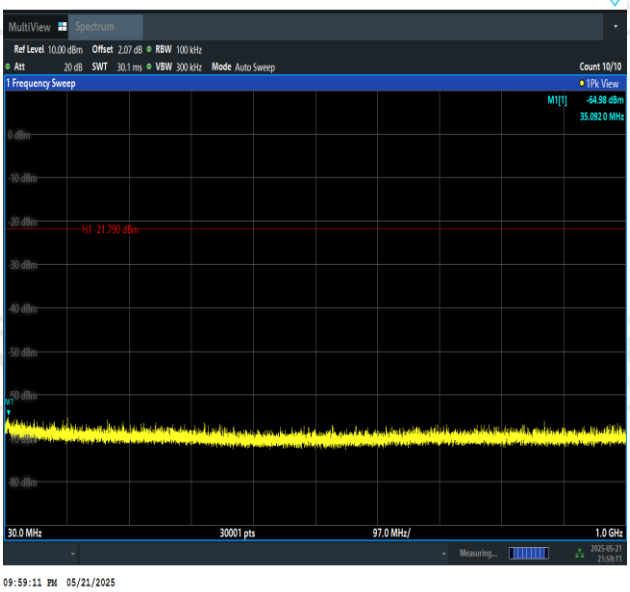


BLE_1M-Ant1-2440-30~1000-PASS

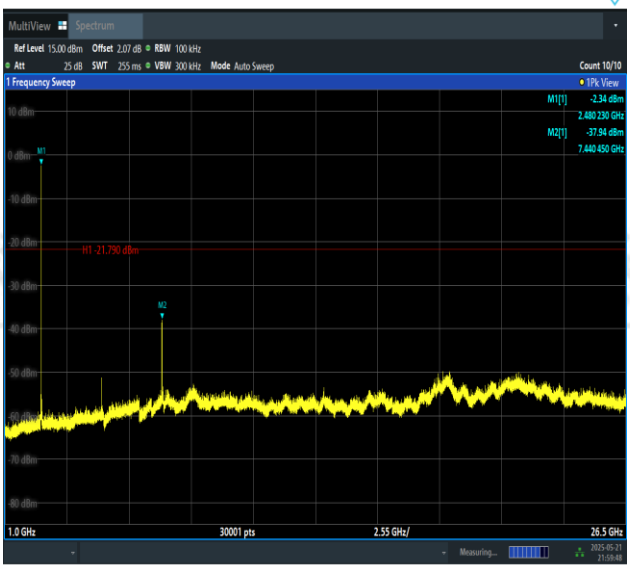
BLE_1M-Ant1-2440-1000~26500-PASS



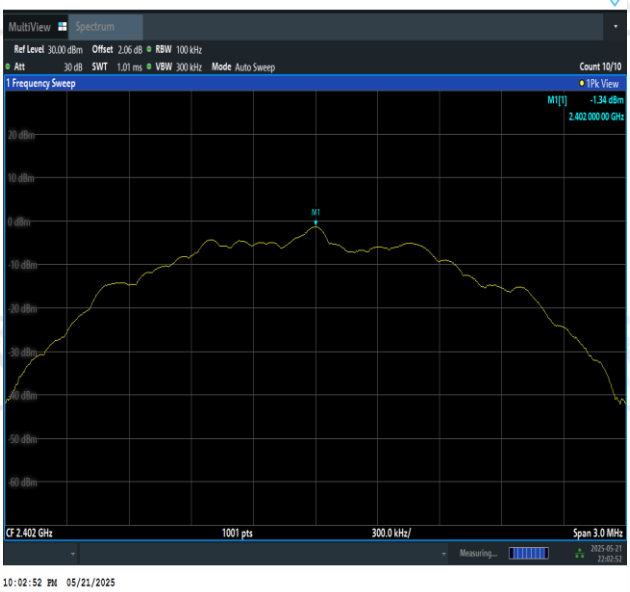
BLE_1M-Ant1-2480-0~Reference-PASS



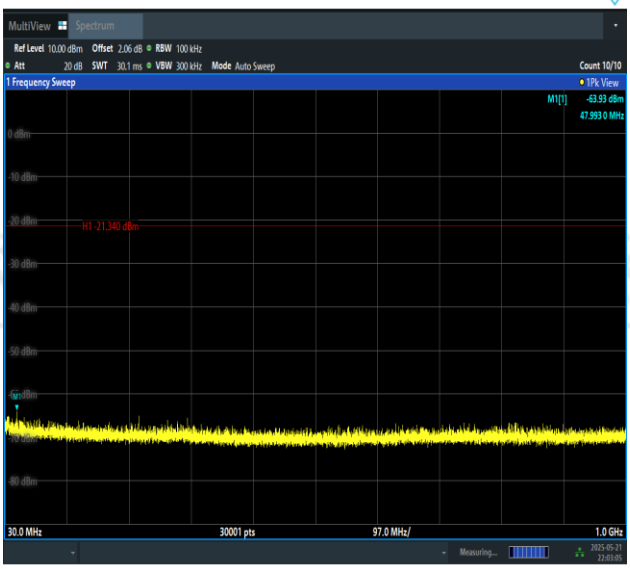
BLE_1M-Ant1-2480-30~1000-PASS



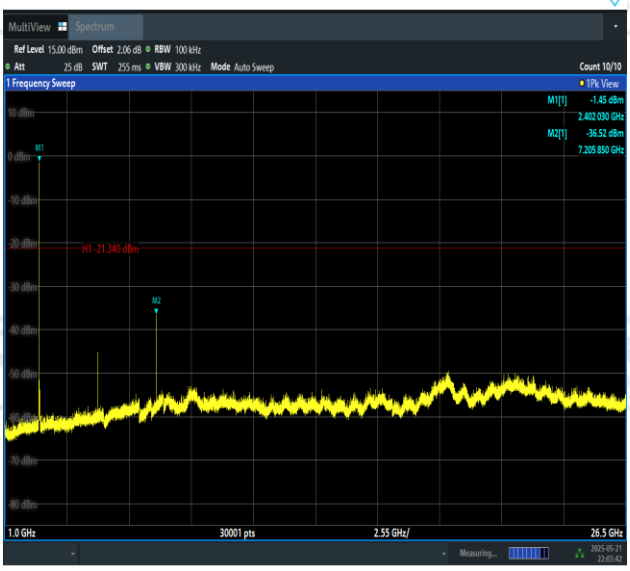
BLE_1M-Ant1-2480-1000~26500-PASS



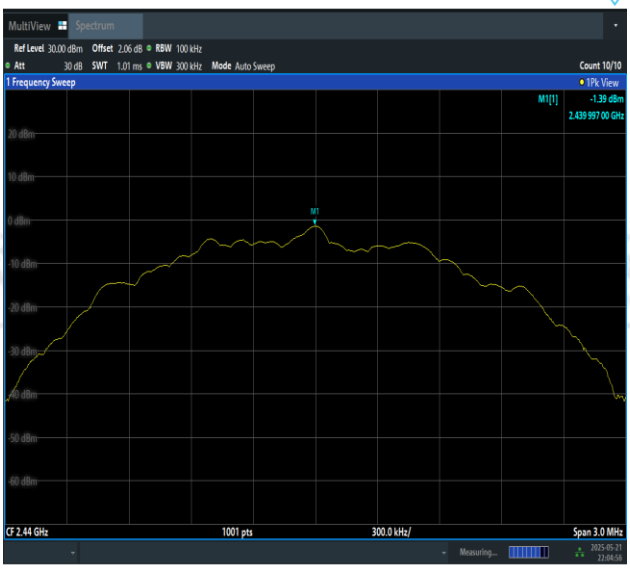
BLE_2M-Ant1-2402-0~Reference-PASS



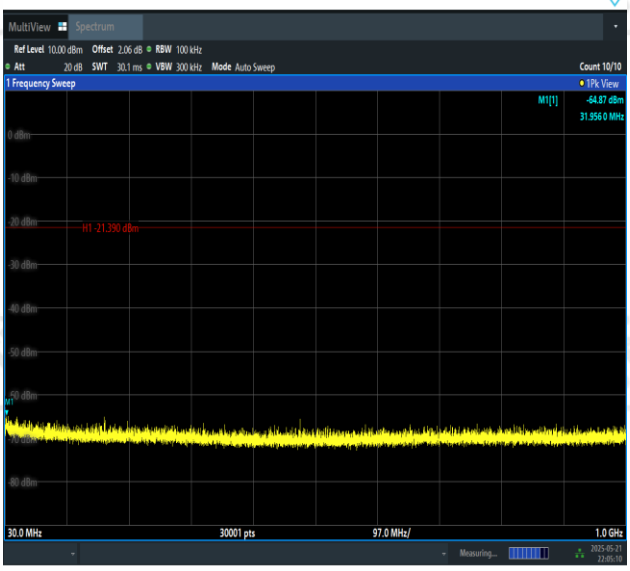
BLE_2M-Ant1-2402-30~1000-PASS



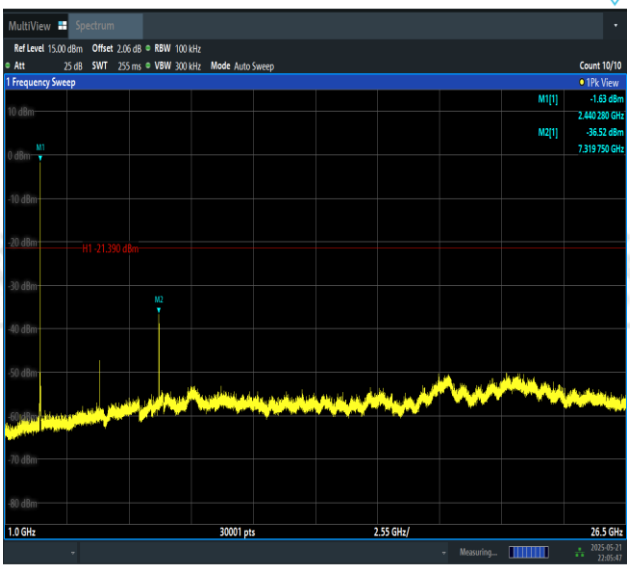
BLE_2M-Ant1-2402-1000~26500-PASS



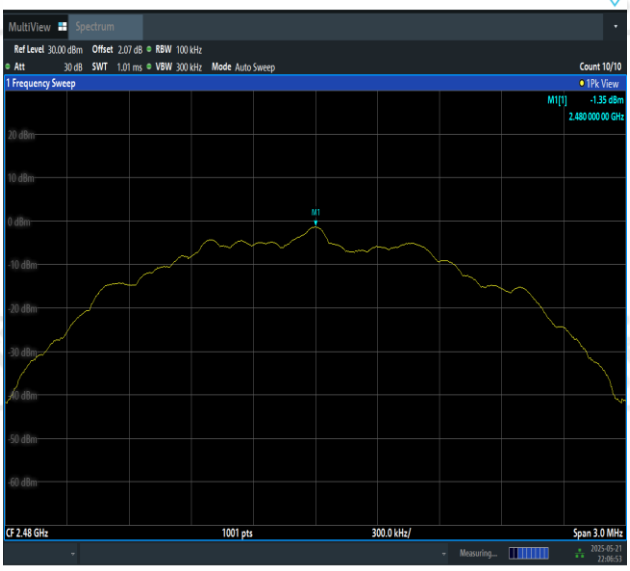
BLE_2M-Ant1-2440-0~Reference-PASS



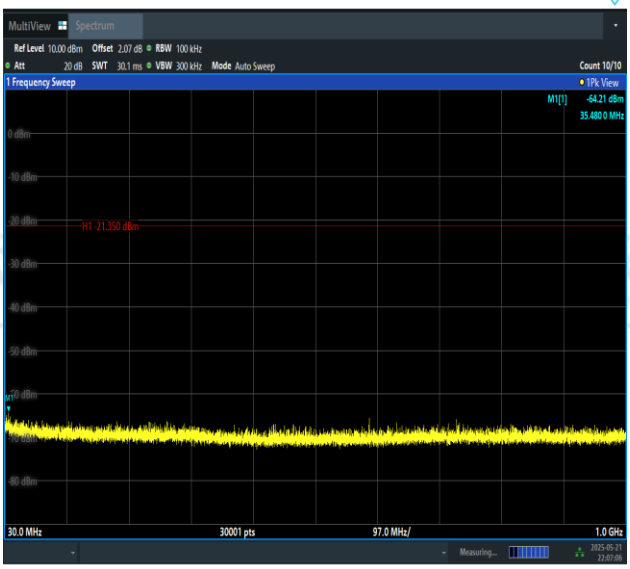
BLE_2M-Ant1-2440-30~1000-PASS



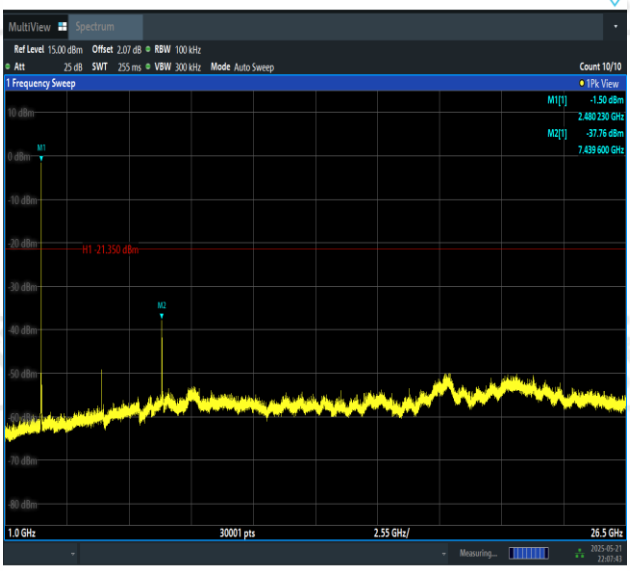
BLE_2M-Ant1-2440-1000~26500-PASS



BLE_2M-Ant1-2480-0~Reference-PASS



BLE_2M-Ant1-2480-30~1000-PASS



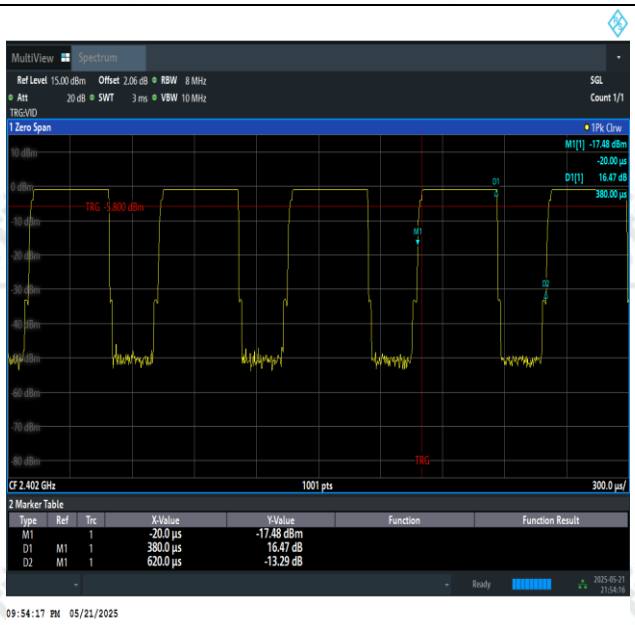
BLE_2M-Ant1-2480-1000~26500-PASS

Appendix G: Duty Cycle

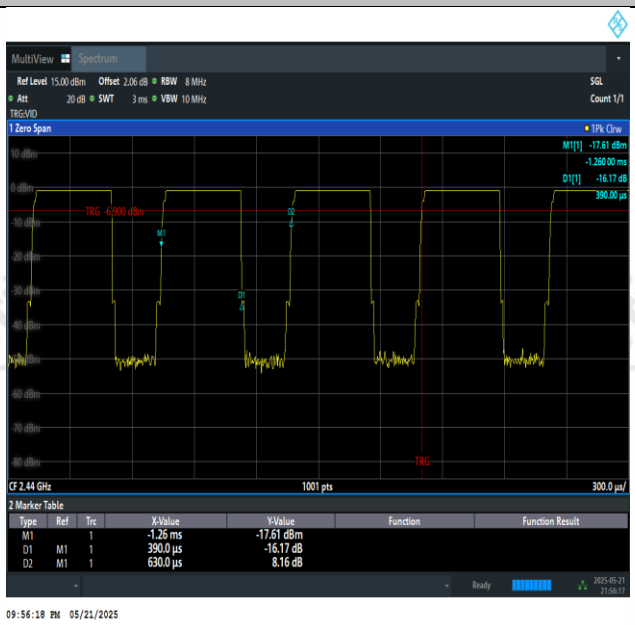
Test Result

TestMode	Antenna	Frequency[MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor[dB]
BLE_1M	Ant1	2402	0.38	0.62	61.29	2.13
BLE_1M	Ant1	2440	0.39	0.63	61.90	2.08
BLE_1M	Ant1	2480	0.39	0.63	61.90	2.08
BLE_2M	Ant1	2402	0.23	0.63	36.51	4.38
BLE_2M	Ant1	2440	0.22	0.63	34.92	4.57
BLE_2M	Ant1	2480	0.22	0.63	34.92	4.57

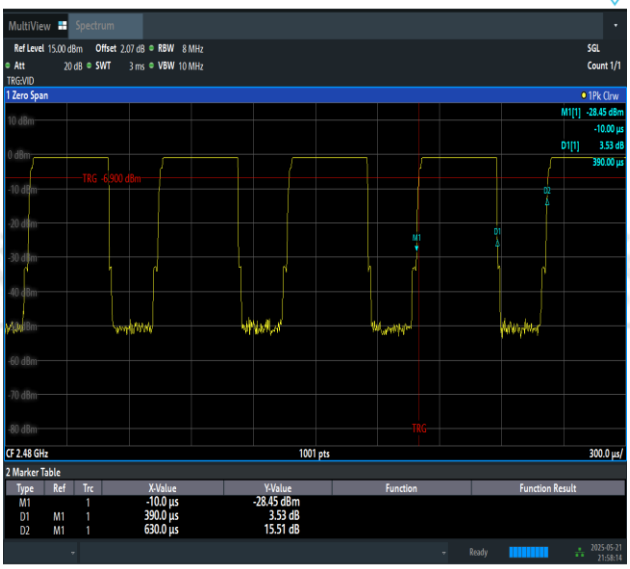
Test Graphs



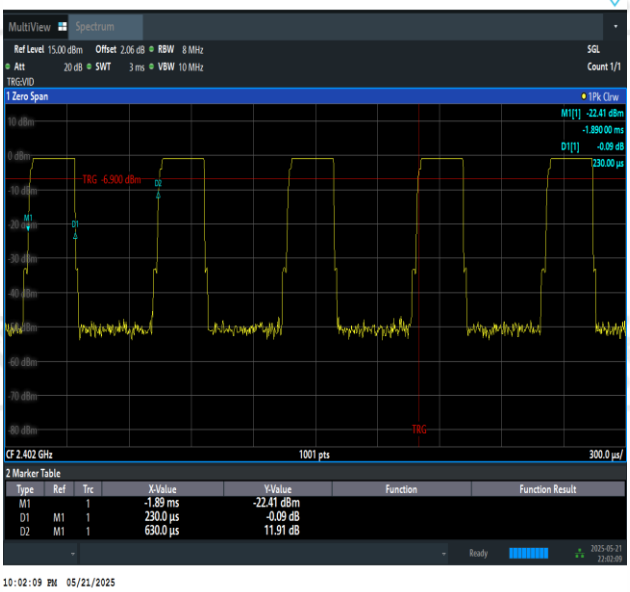
NTNV-BLE_1M-Ant1-2402



NTNV-BLE_1M-Ant1-2440



NTNV-BLE_1M-Ant1-2480



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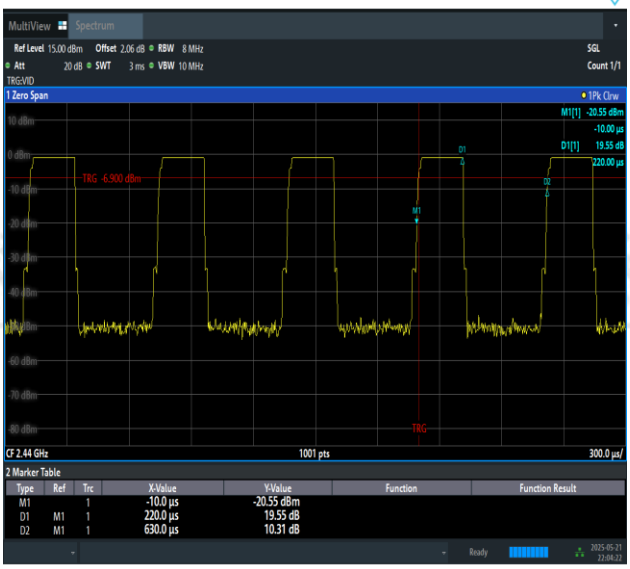

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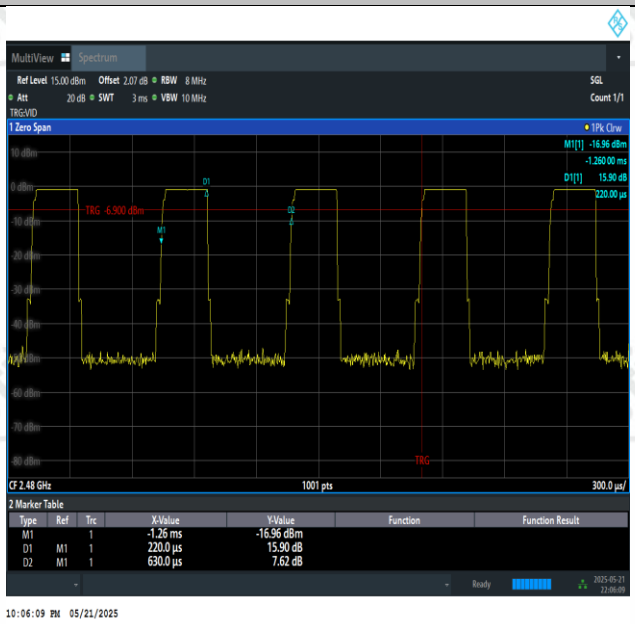

NTNV-BLE_2M-Ant1-2480

*** End of Report ***