

Appendix: Bluetooth LE

Contents

Appendix A: DTS Bandwidth 3

 Test Result 3

 Test Graphs 4

Appendix B: Occupied Channel Bandwidth 5

 Test Result 5

 Test Graphs 6

Appendix C: Maximum conducted output power 7

 Test Result Peak 7

 Test Graphs Peak 7

Appendix D: Maximum power spectral density 9

 Test Result 9

 Test Graphs 10

Appendix F: Band edge measurements 11

 Test Result 11

 Test Graphs 12

Appendix G: Conducted Spurious Emission 13

 Test Result 13

 Test Graphs 14

Appendix H: Duty Cycle 17

 Test Result 17

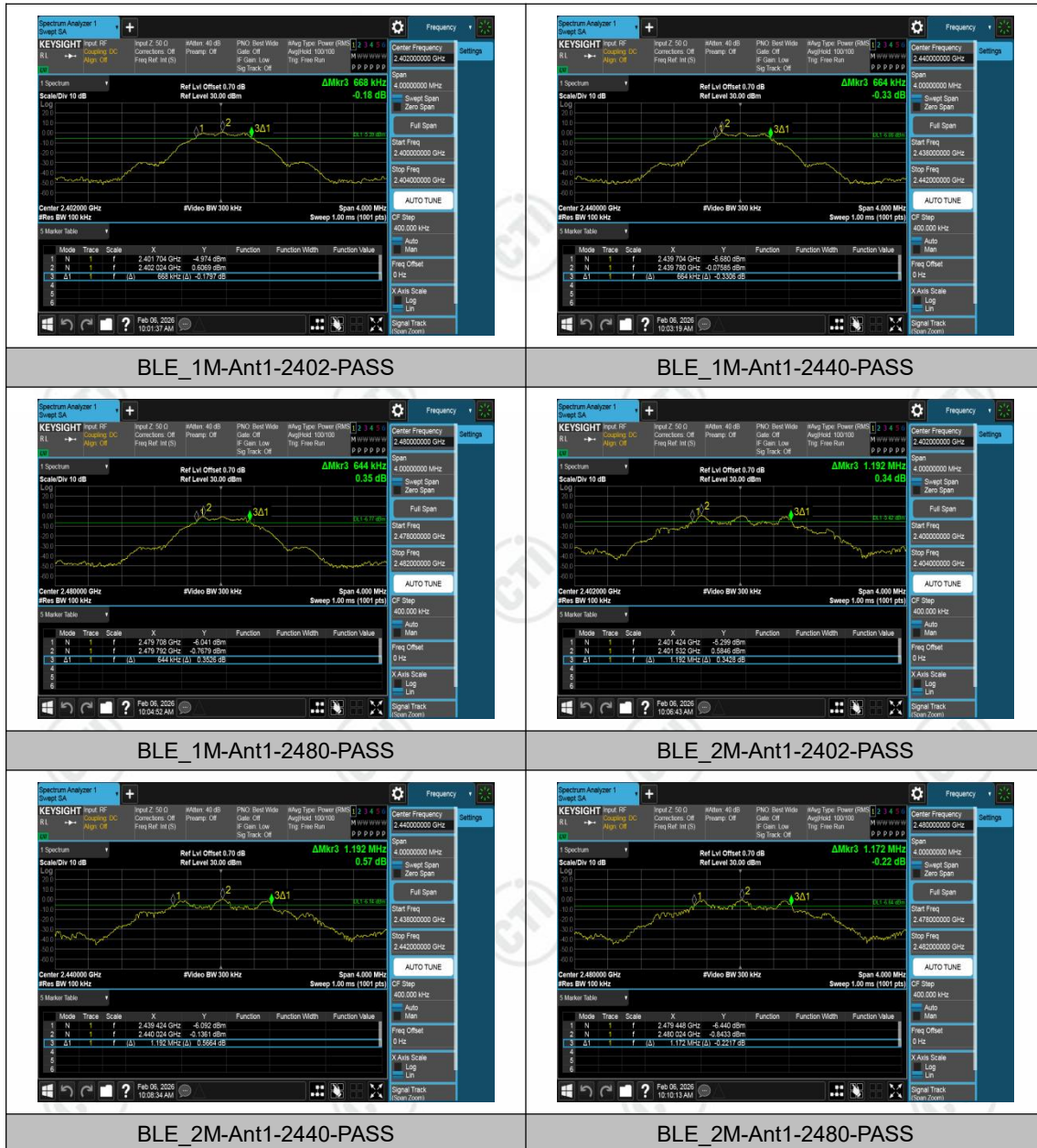
 Test Graphs 18

Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.668	2401.704	2402.372	0.5	PASS
BLE_1M	Ant1	2440	0.664	2439.704	2440.368	0.5	PASS
BLE_1M	Ant1	2480	0.644	2479.708	2480.352	0.5	PASS
BLE_2M	Ant1	2402	1.192	2401.424	2402.616	0.5	PASS
BLE_2M	Ant1	2440	1.192	2439.424	2440.616	0.5	PASS
BLE_2M	Ant1	2480	1.172	2479.448	2480.620	0.5	PASS

Test Graphs

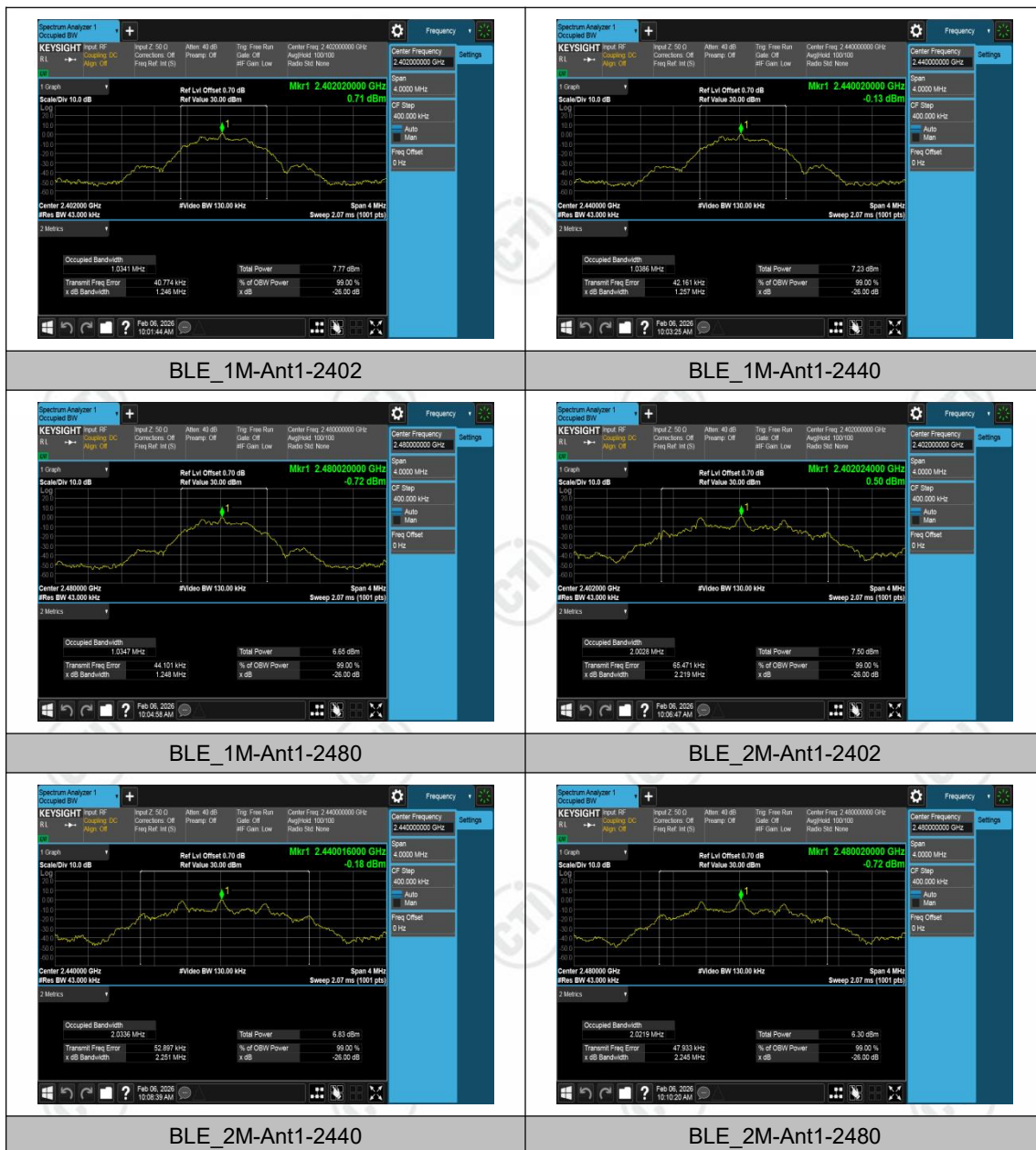


Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]
BLE_1M	Ant1	2402	1.0341	2401.5237	2402.5578
BLE_1M	Ant1	2440	1.0386	2439.5229	2440.5615
BLE_1M	Ant1	2480	1.0347	2479.5268	2480.5615
BLE_2M	Ant1	2402	2.0028	2401.0641	2403.0669
BLE_2M	Ant1	2440	2.0336	2439.0361	2441.0697
BLE_2M	Ant1	2480	2.0219	2479.0370	2481.0589

Test Graphs

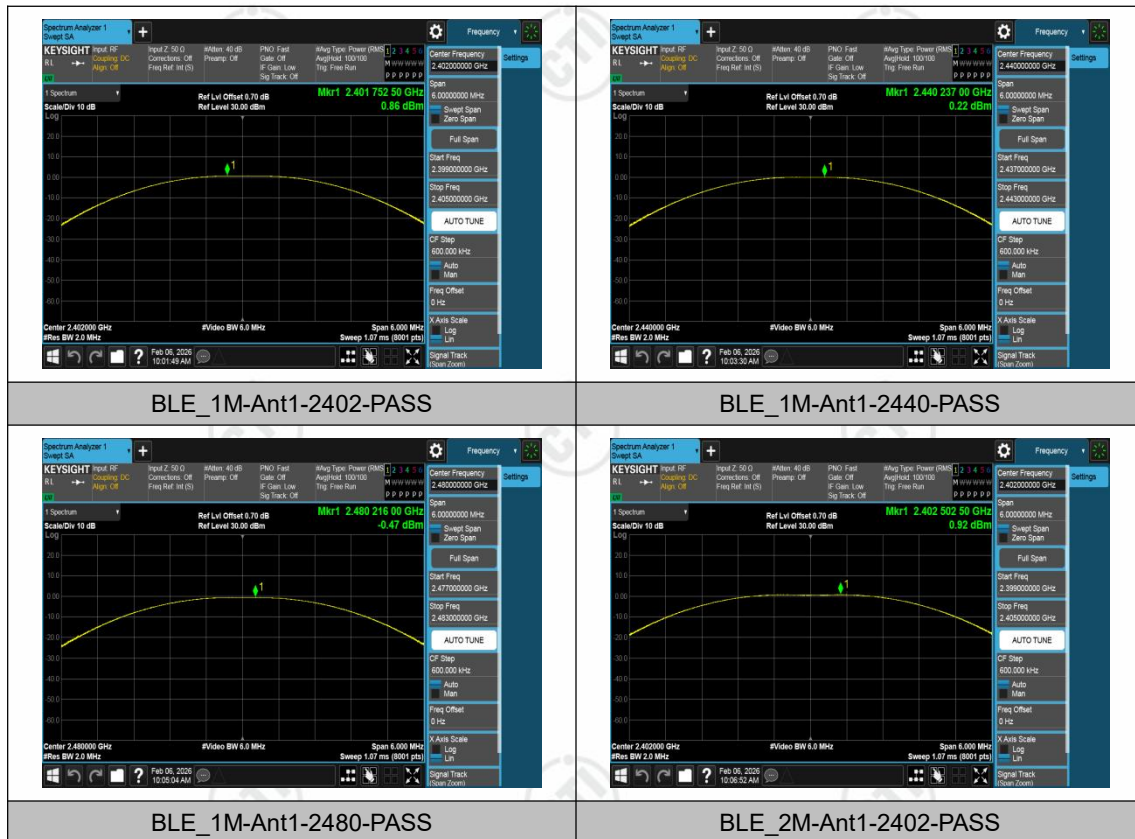


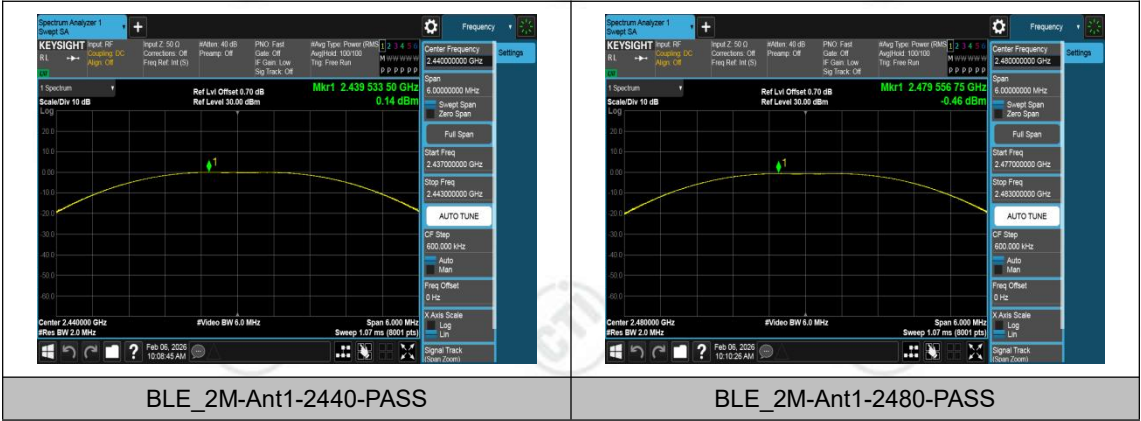
Appendix C: Maximum conducted output power

Test Result Peak

TestMode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0.86	≤30	PASS
BLE_1M	Ant1	2440	0.22	≤30	PASS
BLE_1M	Ant1	2480	-0.47	≤30	PASS
BLE_2M	Ant1	2402	0.92	≤30	PASS
BLE_2M	Ant1	2440	0.14	≤30	PASS
BLE_2M	Ant1	2480	-0.46	≤30	PASS

Test Graphs Peak

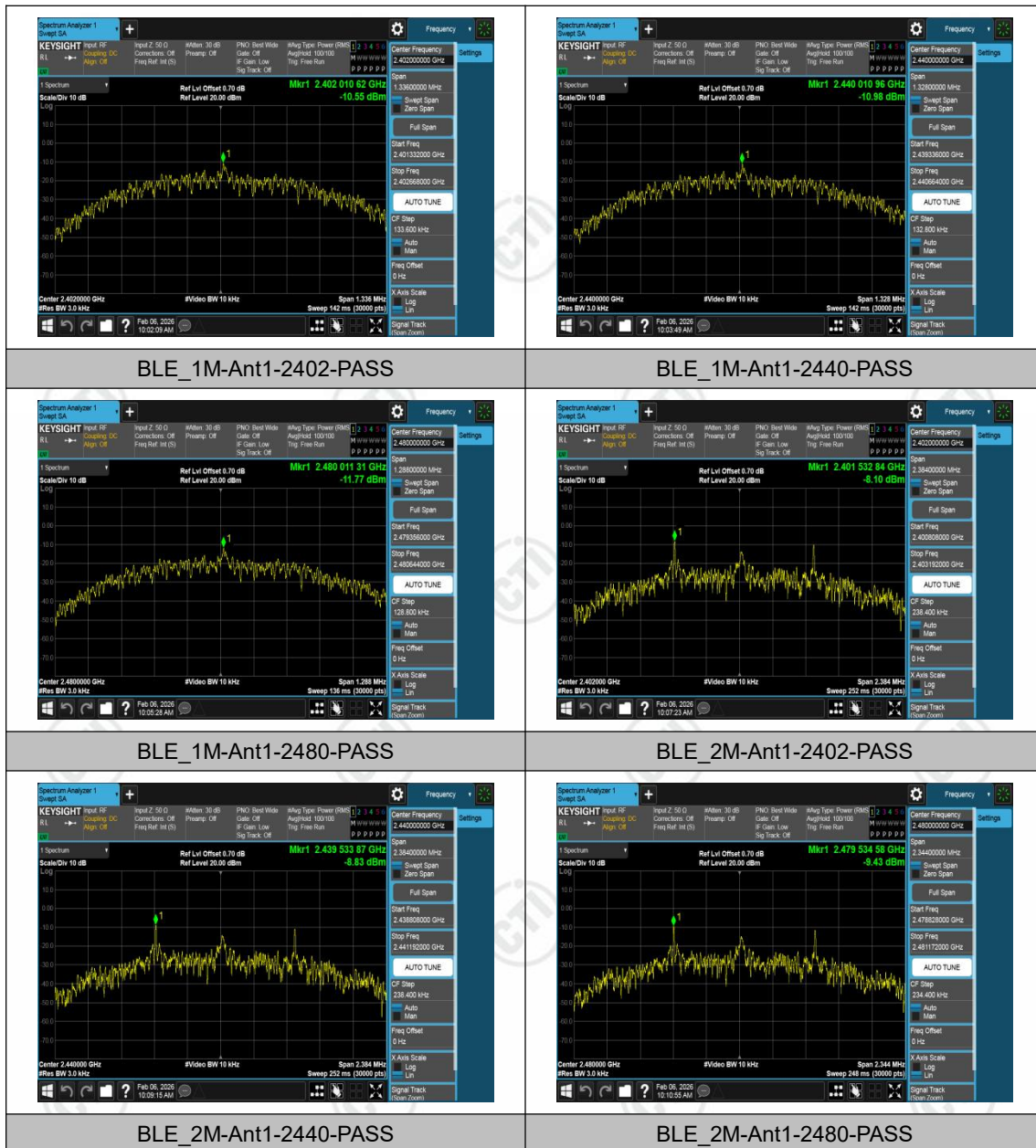




Appendix D: Maximum power spectral density**Test Result**

TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-10.55	≤8.00	PASS
BLE_1M	Ant1	2440	-10.98	≤8.00	PASS
BLE_1M	Ant1	2480	-11.77	≤8.00	PASS
BLE_2M	Ant1	2402	-8.10	≤8.00	PASS
BLE_2M	Ant1	2440	-8.83	≤8.00	PASS
BLE_2M	Ant1	2480	-9.43	≤8.00	PASS

Test Graphs

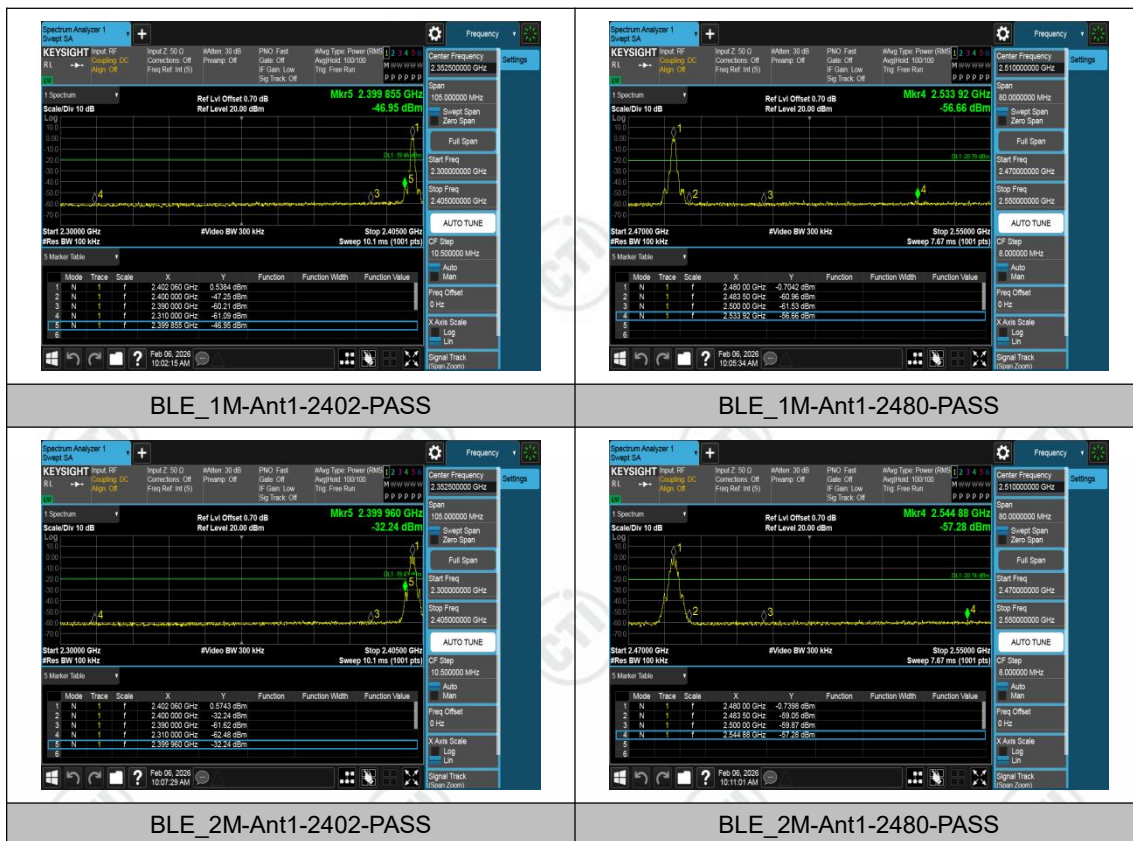


Appendix F: Band edge measurements

Test Result

TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	0.54	-46.95	≤-19.46	PASS
BLE_1M	Ant1	High	2480	-0.70	-56.66	≤-20.7	PASS
BLE_2M	Ant1	Low	2402	0.57	-32.24	≤-19.43	PASS
BLE_2M	Ant1	High	2480	-0.74	-57.28	≤-20.74	PASS

Test Graphs

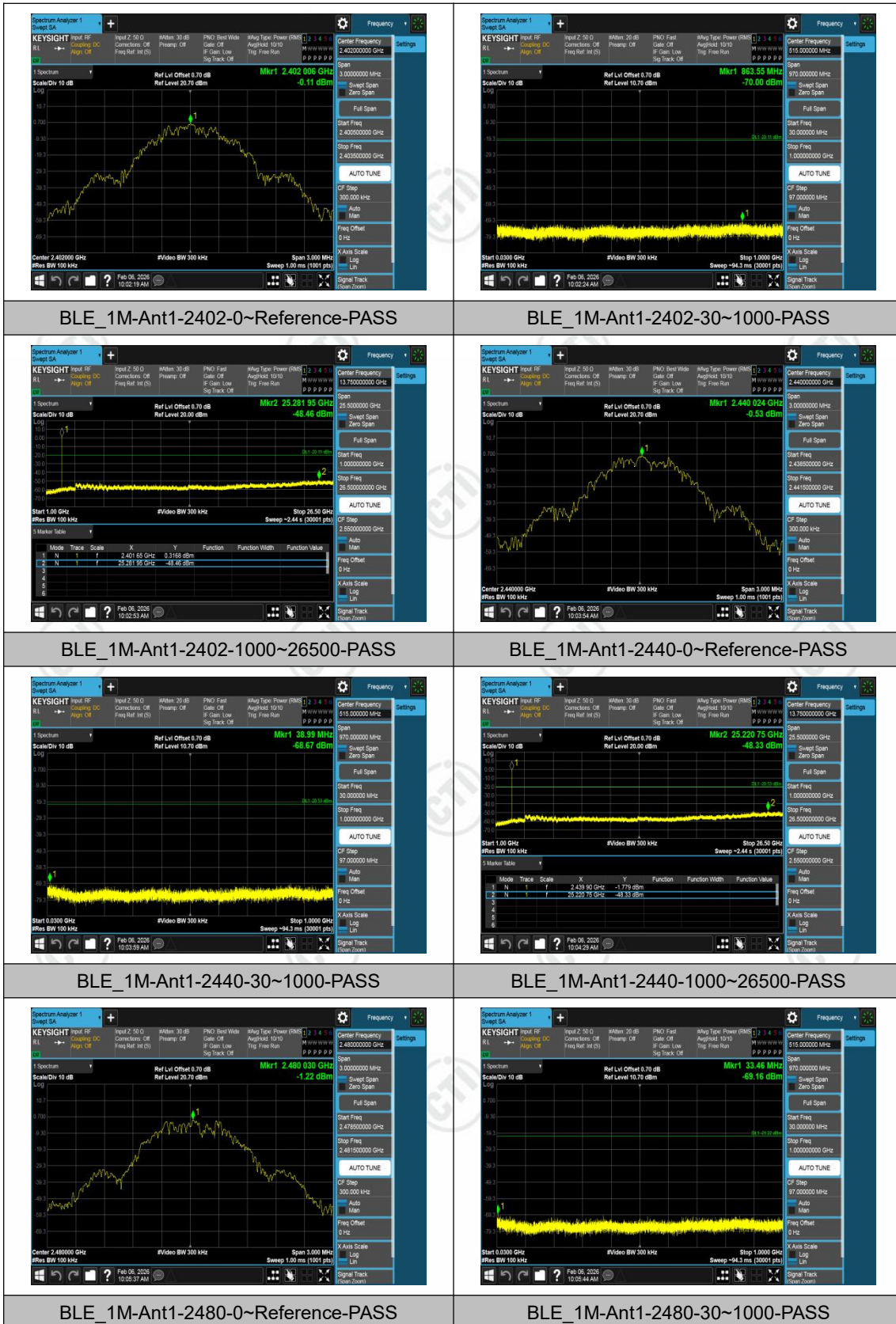


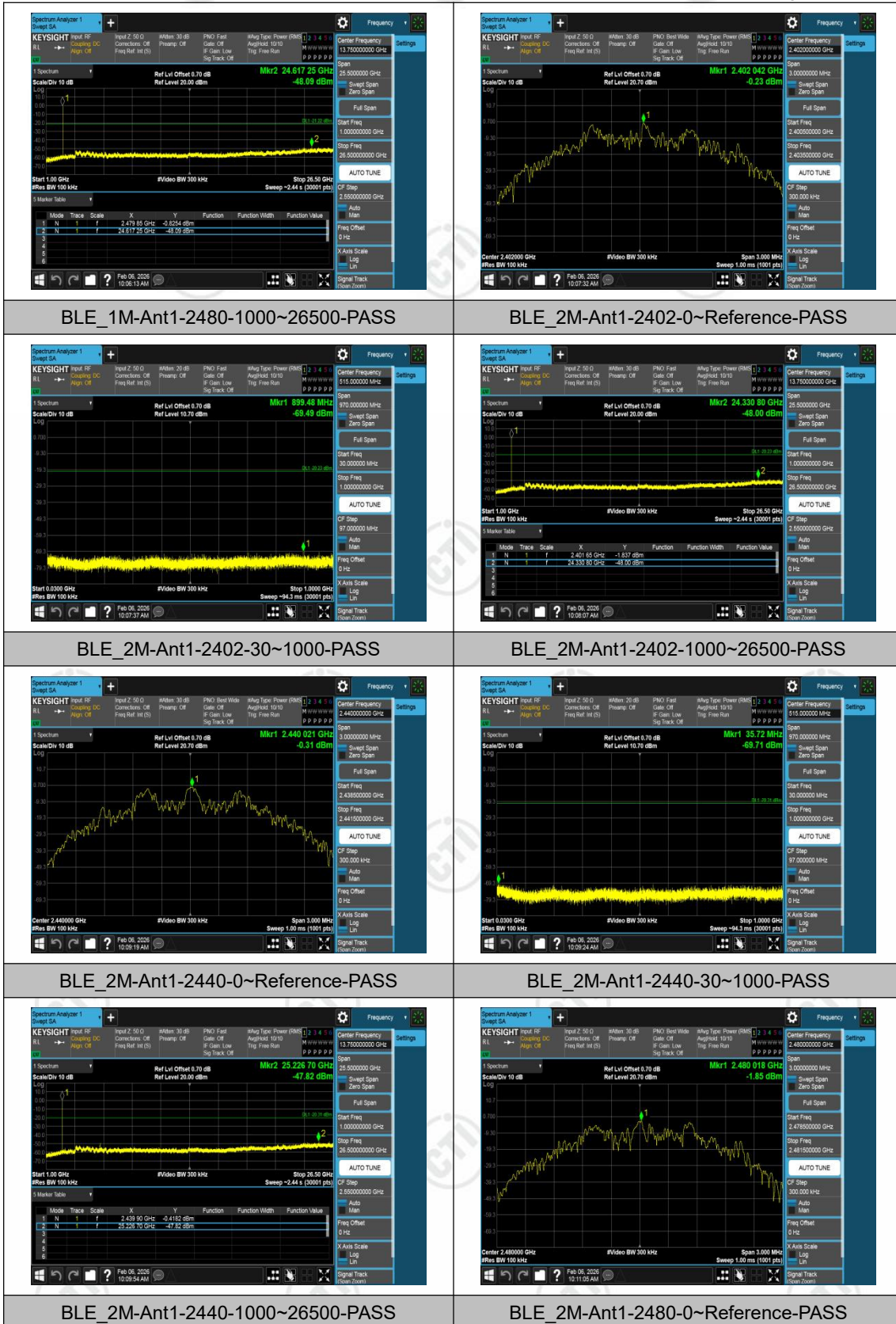
Appendix G: Conducted Spurious Emission

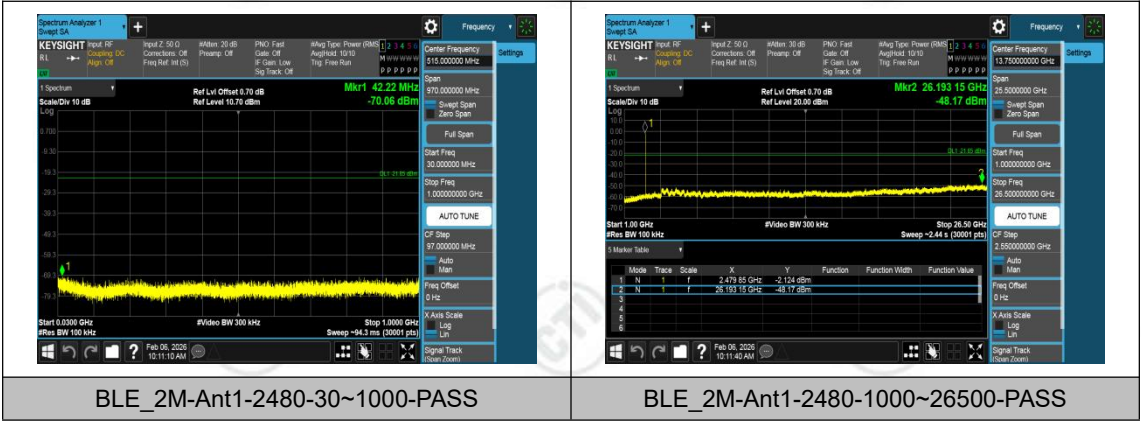
Test Result

TestMode	Antenna	Frequency [MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0~Reference	-0.11	-0.11	---	PASS
BLE_1M	Ant1	2402	30~1000	-0.11	-70	≤-20.11	PASS
BLE_1M	Ant1	2402	1000~26500	-0.11	-48.46	≤-20.11	PASS
BLE_1M	Ant1	2440	0~Reference	-0.53	-0.53	---	PASS
BLE_1M	Ant1	2440	30~1000	-0.53	-68.67	≤-20.53	PASS
BLE_1M	Ant1	2440	1000~26500	-0.53	-48.33	≤-20.53	PASS
BLE_1M	Ant1	2480	0~Reference	-1.22	-1.22	---	PASS
BLE_1M	Ant1	2480	30~1000	-1.22	-69.16	≤-21.22	PASS
BLE_1M	Ant1	2480	1000~26500	-1.22	-48.09	≤-21.22	PASS
BLE_2M	Ant1	2402	0~Reference	-0.23	-0.23	---	PASS
BLE_2M	Ant1	2402	30~1000	-0.23	-69.49	≤-20.23	PASS
BLE_2M	Ant1	2402	1000~26500	-0.23	-48	≤-20.23	PASS
BLE_2M	Ant1	2440	0~Reference	-0.31	-0.31	---	PASS
BLE_2M	Ant1	2440	30~1000	-0.31	-69.71	≤-20.31	PASS
BLE_2M	Ant1	2440	1000~26500	-0.31	-47.83	≤-20.31	PASS
BLE_2M	Ant1	2480	0~Reference	-1.85	-1.85	---	PASS
BLE_2M	Ant1	2480	30~1000	-1.85	-70.06	≤-21.85	PASS
BLE_2M	Ant1	2480	1000~26500	-1.85	-48.17	≤-21.85	PASS

Test Graphs





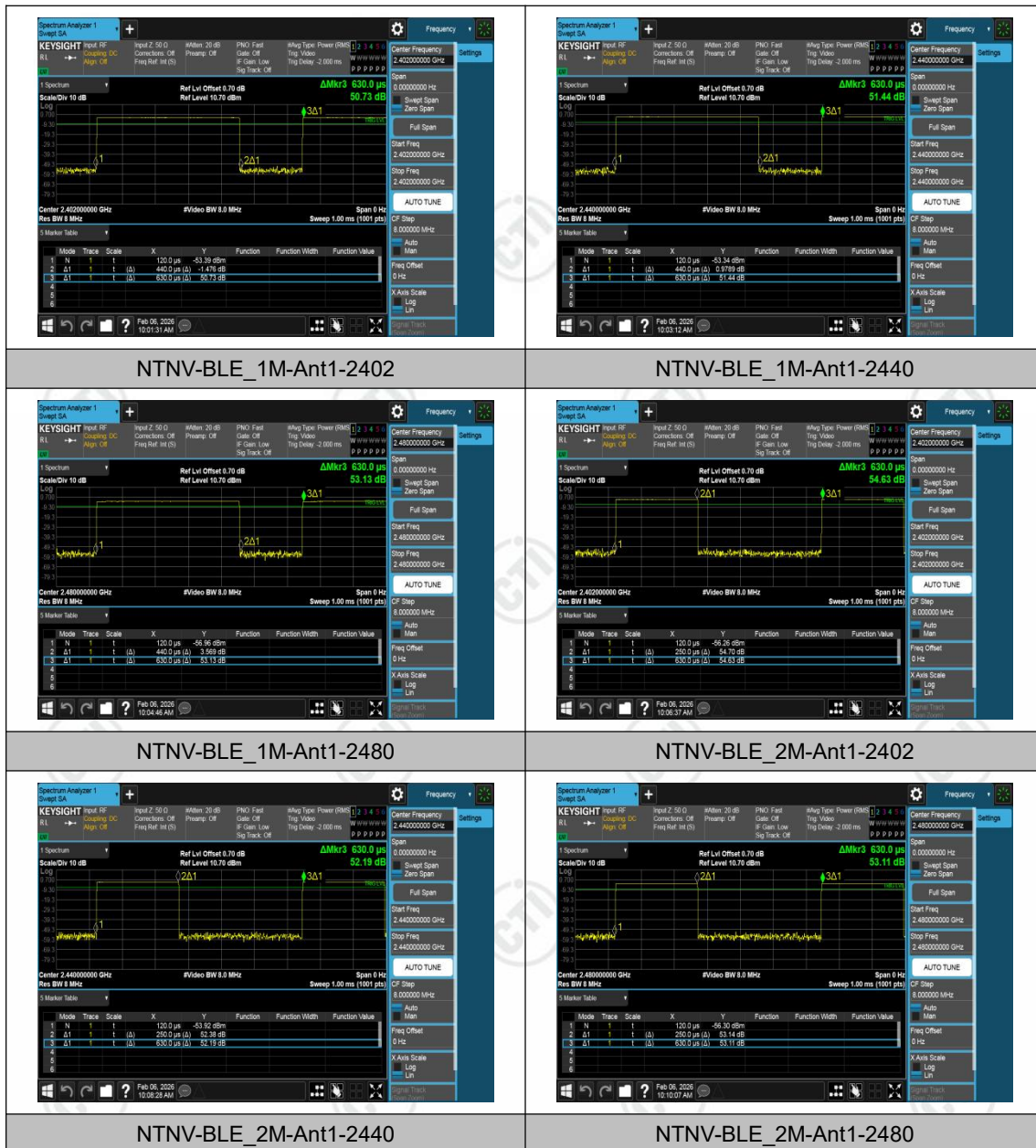


Appendix H: Duty Cycle

Test Result

TestMode	Antenna	Frequency[MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor[dB]
BLE_1M	Ant1	2402	0.44	0.63	69.84	1.56
BLE_1M	Ant1	2440	0.44	0.63	69.84	1.56
BLE_1M	Ant1	2480	0.44	0.63	69.84	1.56
BLE_2M	Ant1	2402	0.25	0.63	39.68	4.01
BLE_2M	Ant1	2440	0.25	0.63	39.68	4.01
BLE_2M	Ant1	2480	0.25	0.63	39.68	4.01

Test Graphs



*** End of Report ***