

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.....11

 Test Graphs.....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

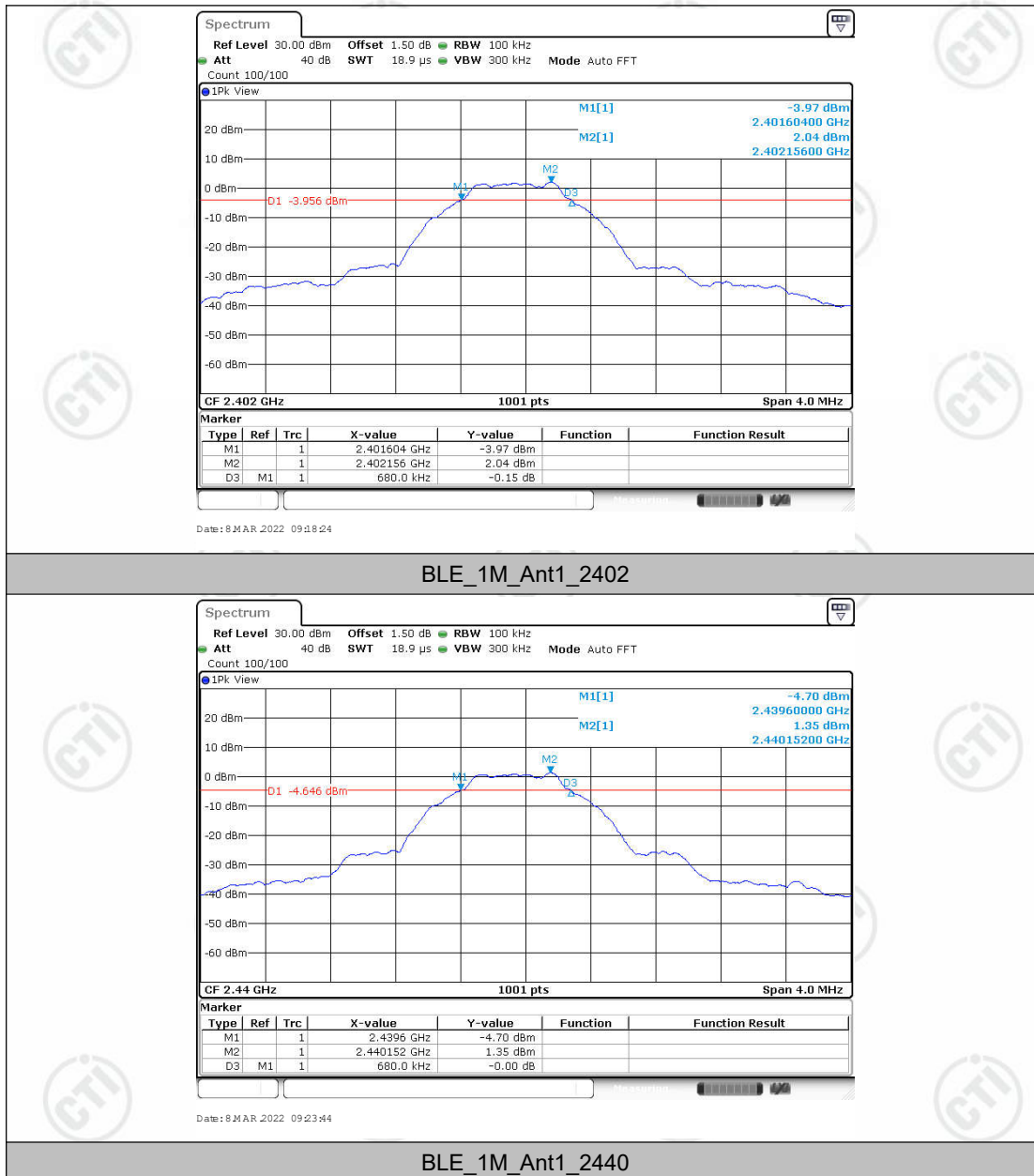
 Test Graphs.....33

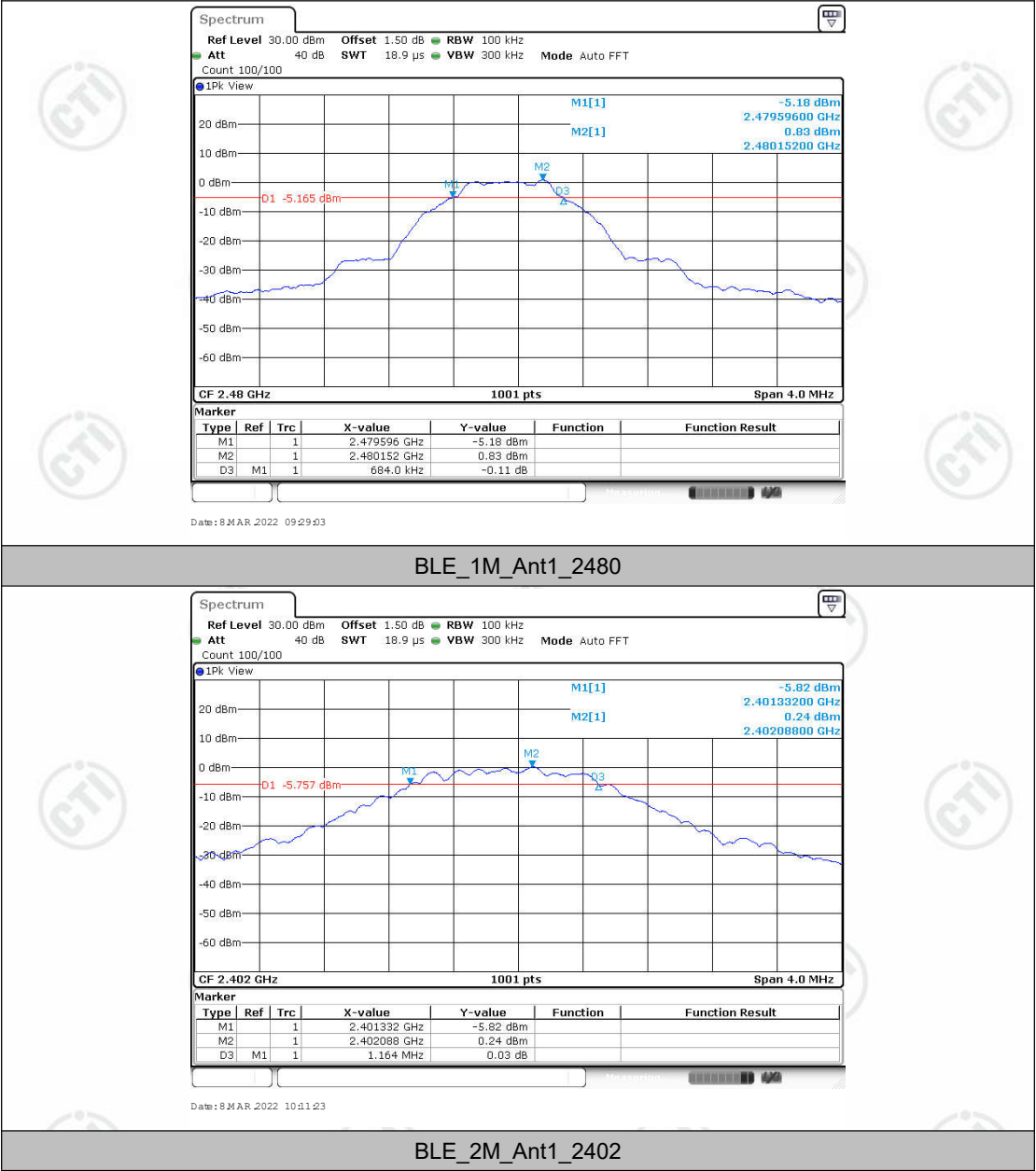
Appendix A: DTS Bandwidth

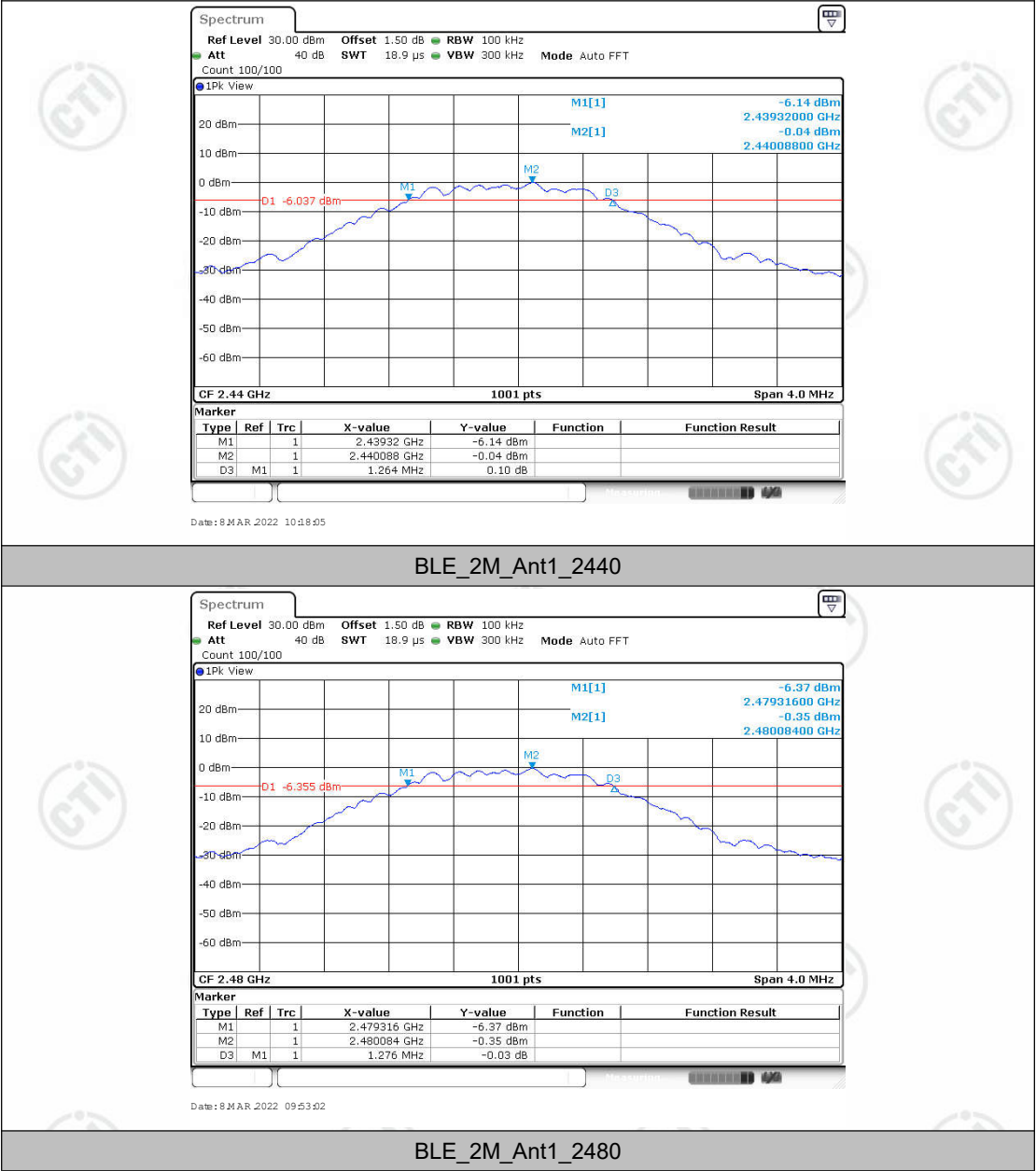
Test Result

Test Mode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.680	2401.604	2402.284	0.5	PASS
		2440	0.680	2439.600	2440.280	0.5	PASS
		2480	0.684	2479.596	2480.280	0.5	PASS
BLE_2M	Ant1	2402	1.164	2401.332	2402.496	0.5	PASS
		2440	1.264	2439.320	2440.584	0.5	PASS
		2480	1.276	2479.316	2480.592	0.5	PASS

Test Graphs





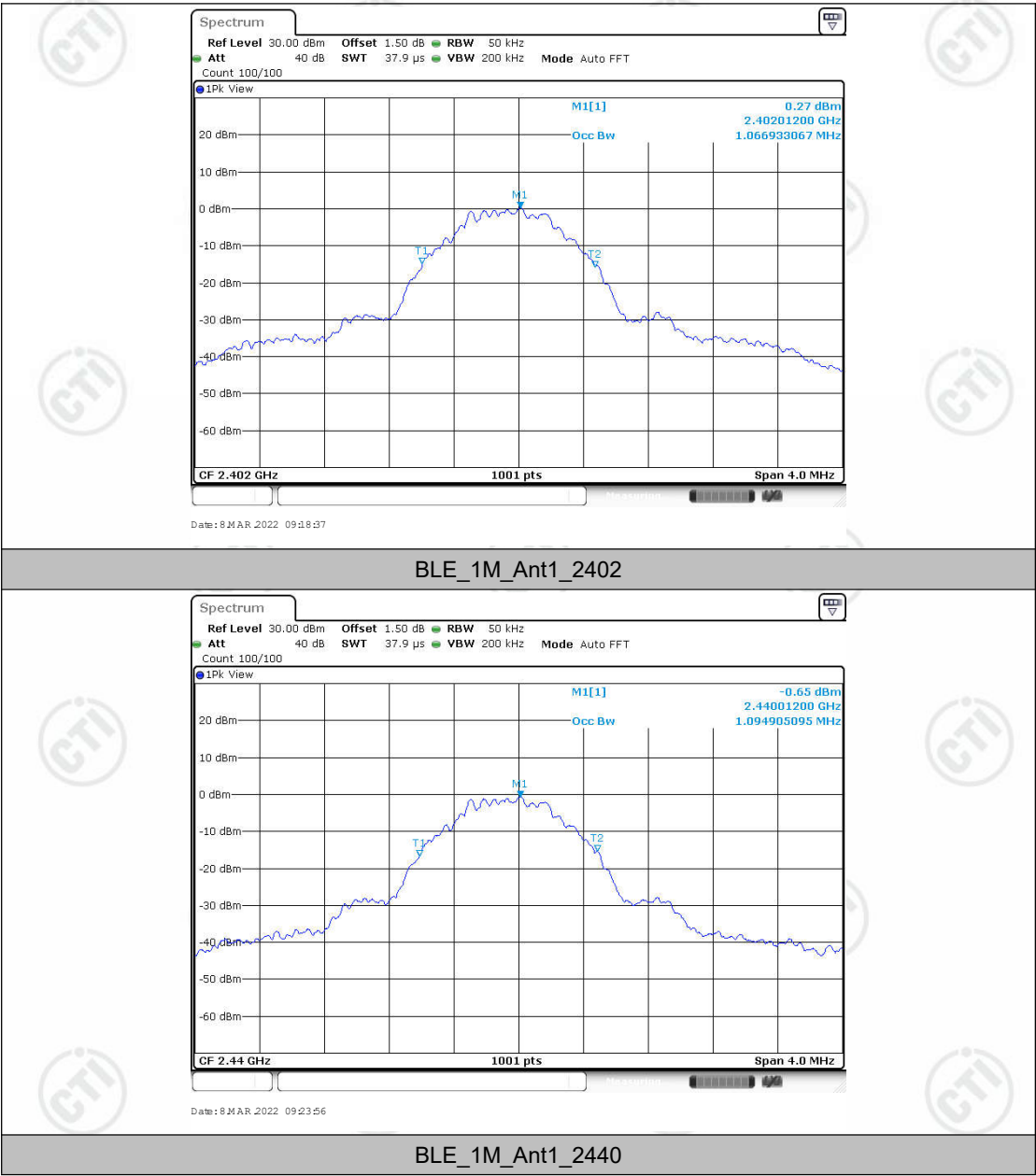


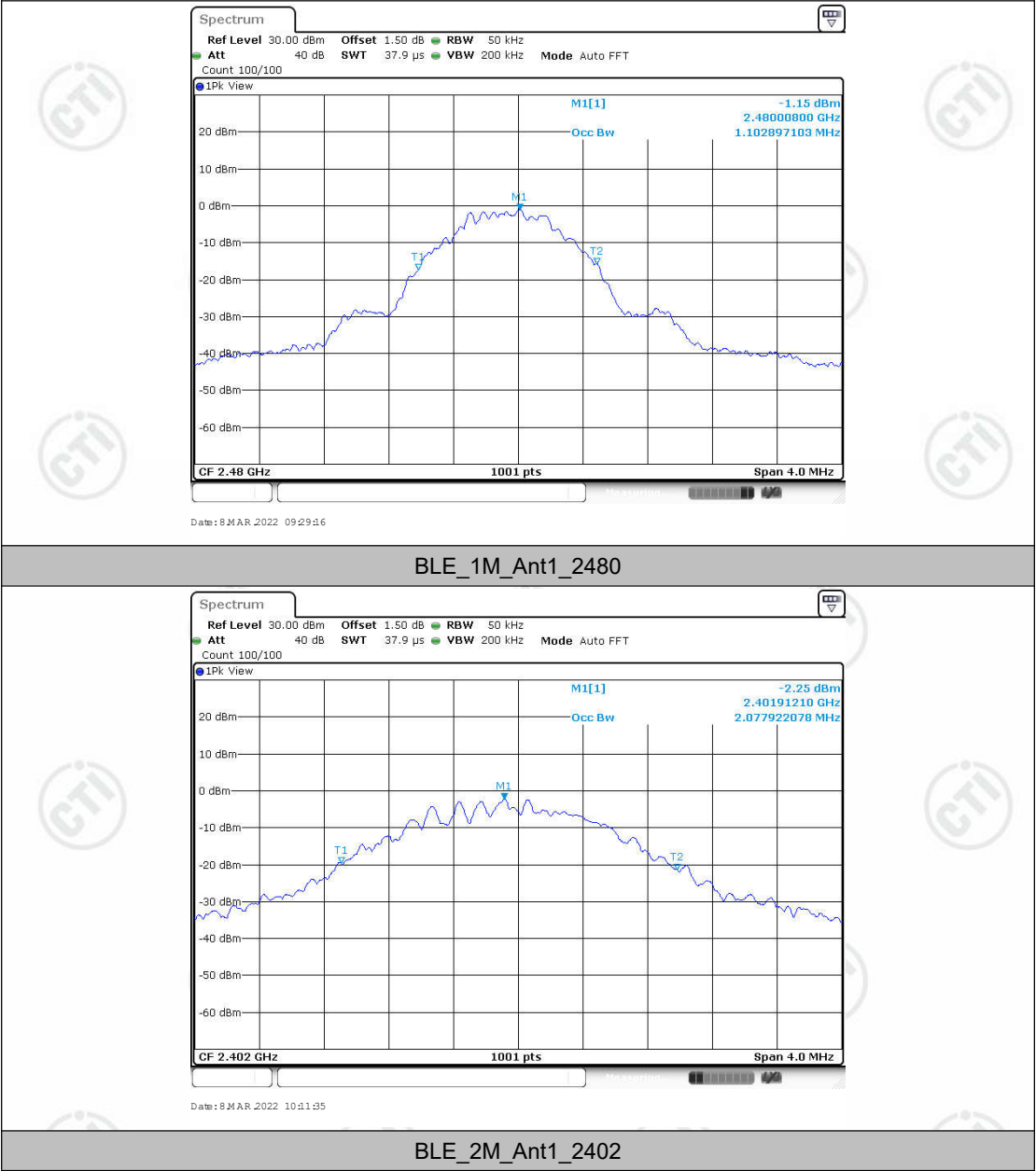
Appendix B: Occupied Channel Bandwidth

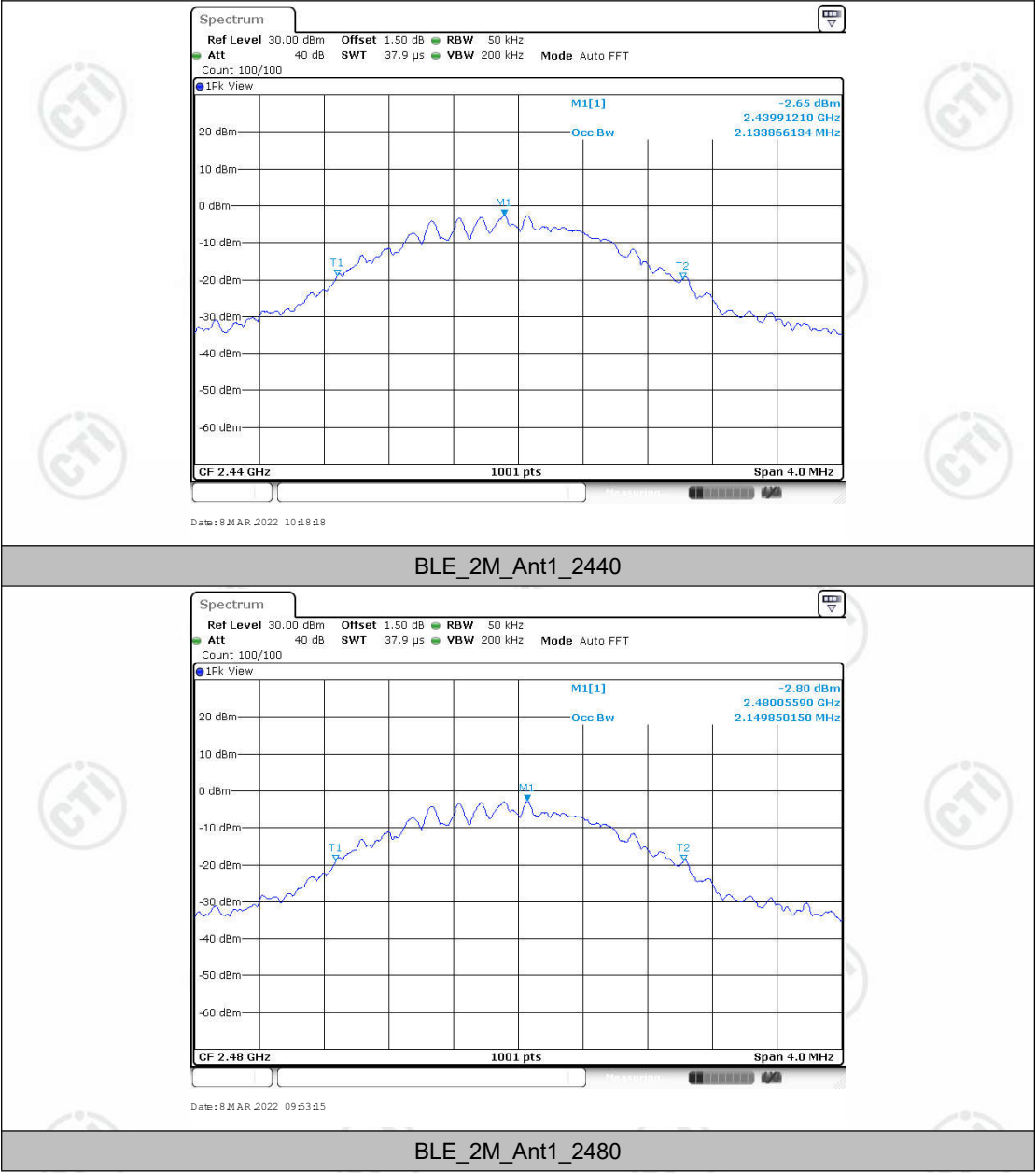
Test Result

Test Mode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.067	2401.405	2402.472	---	PASS
		2440	1.095	2439.389	2440.484	---	PASS
		2480	1.103	2479.385	2480.488	---	PASS
BLE_2M	Ant1	2402	2.078	2400.905	2402.983	---	PASS
		2440	2.134	2438.881	2441.015	---	PASS
		2480	2.15	2478.873	2481.023	---	PASS

Test Graphs





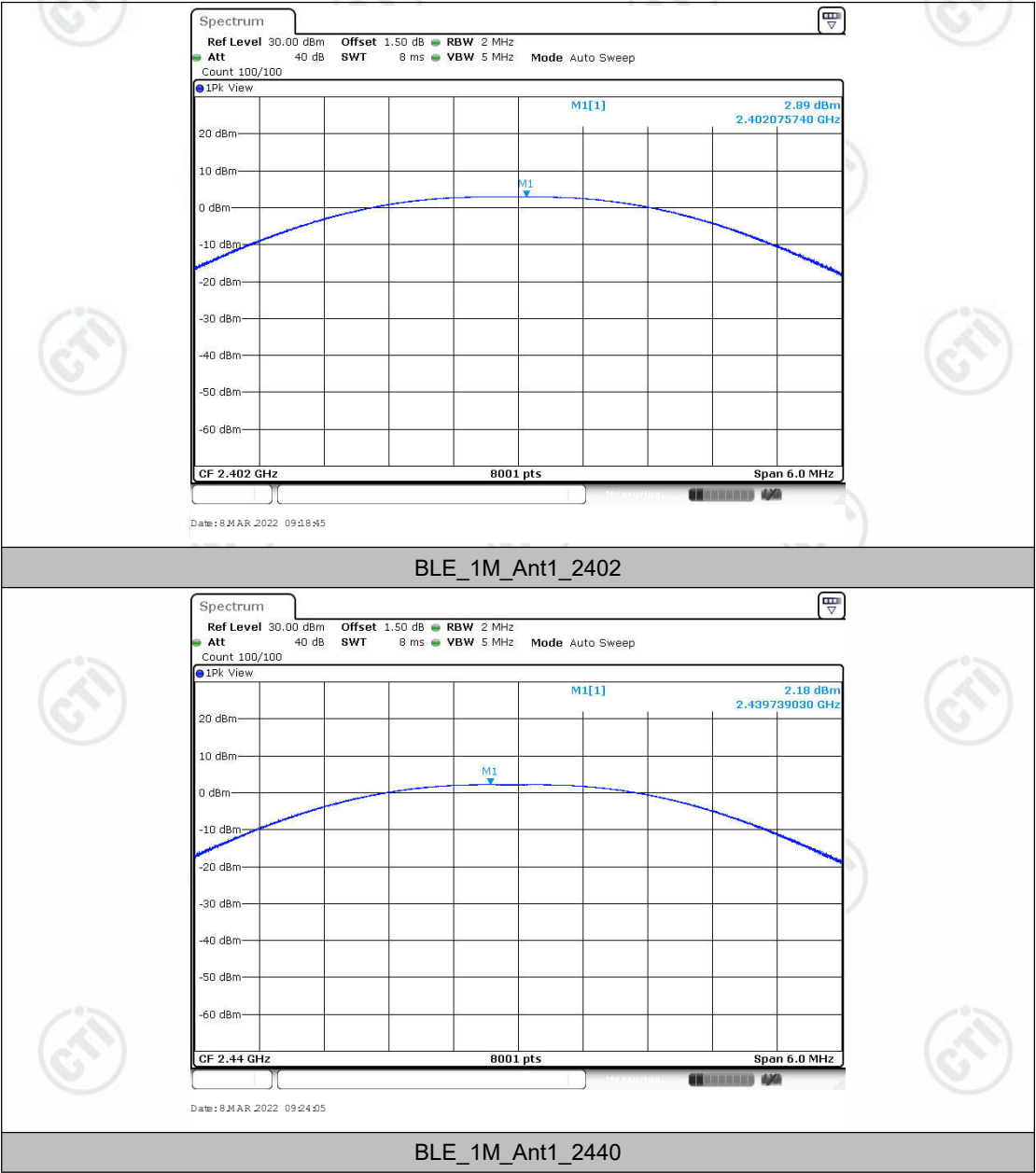


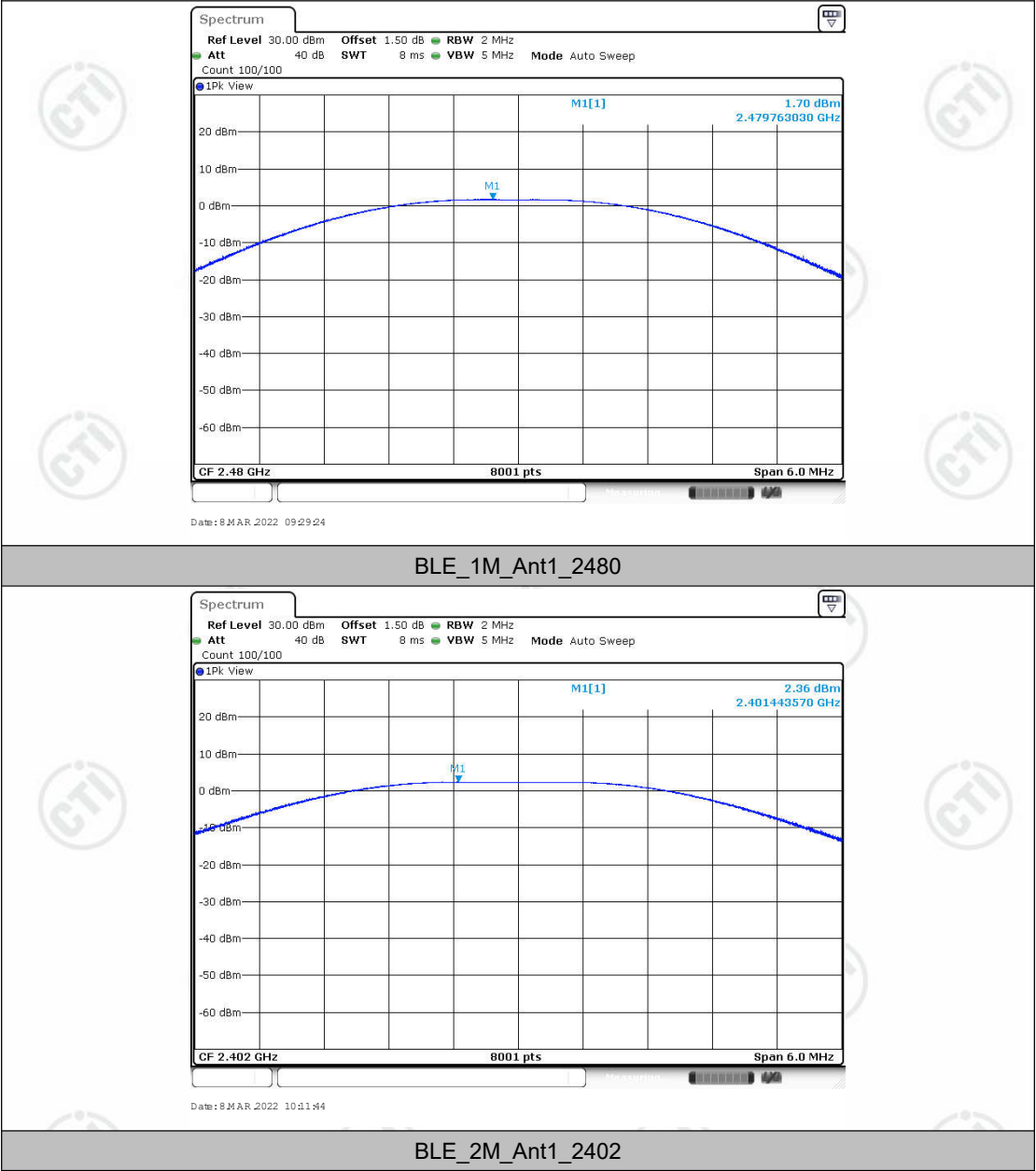
Appendix C: Maximum conducted output power

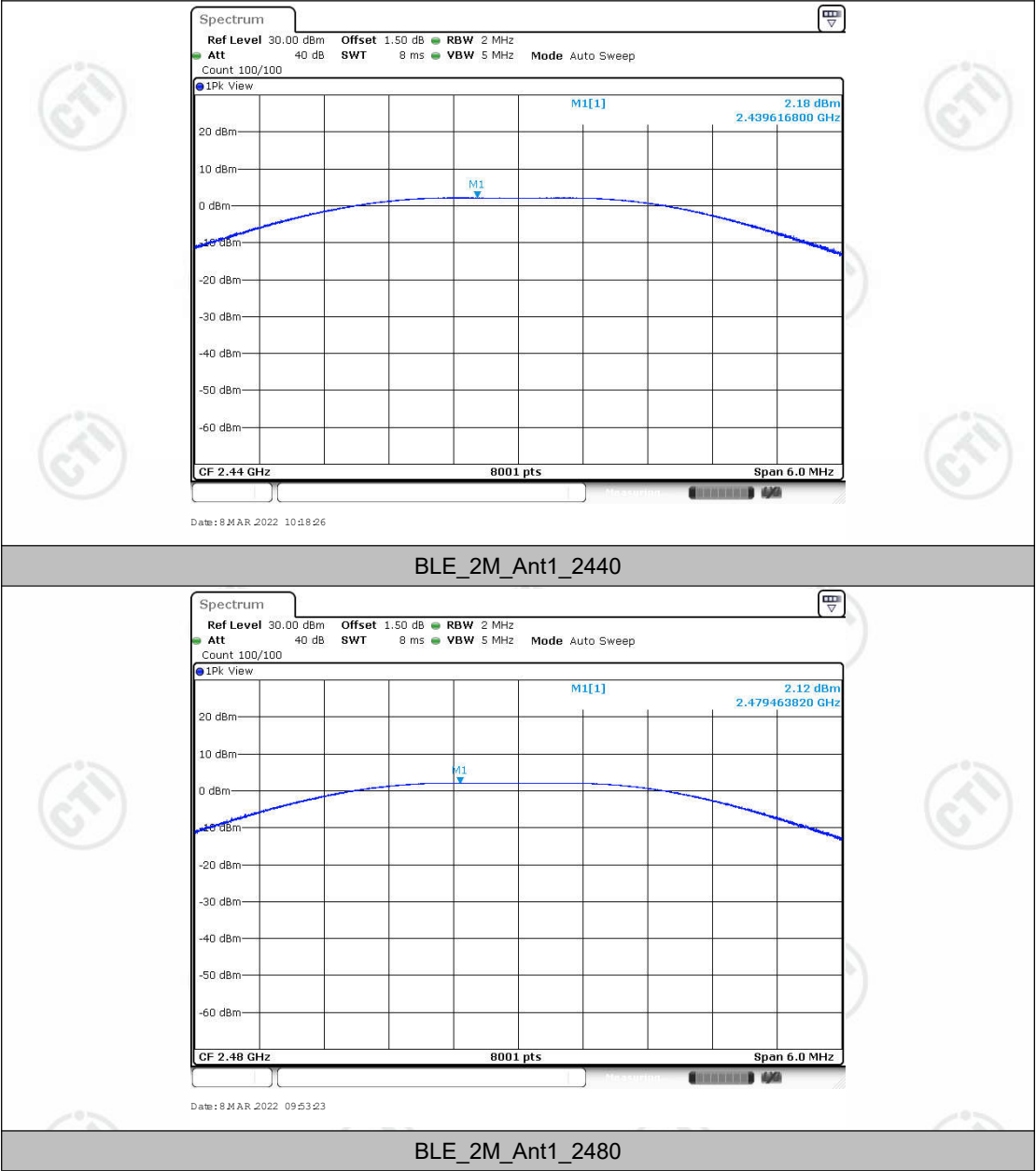
Test Result

Test Mode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	2.89	<=30	PASS
		2440	2.18	<=30	PASS
		2480	1.70	<=30	PASS
BLE_2M	Ant1	2402	2.36	<=30	PASS
		2440	2.18	<=30	PASS
		2480	2.12	<=30	PASS

Test Graphs





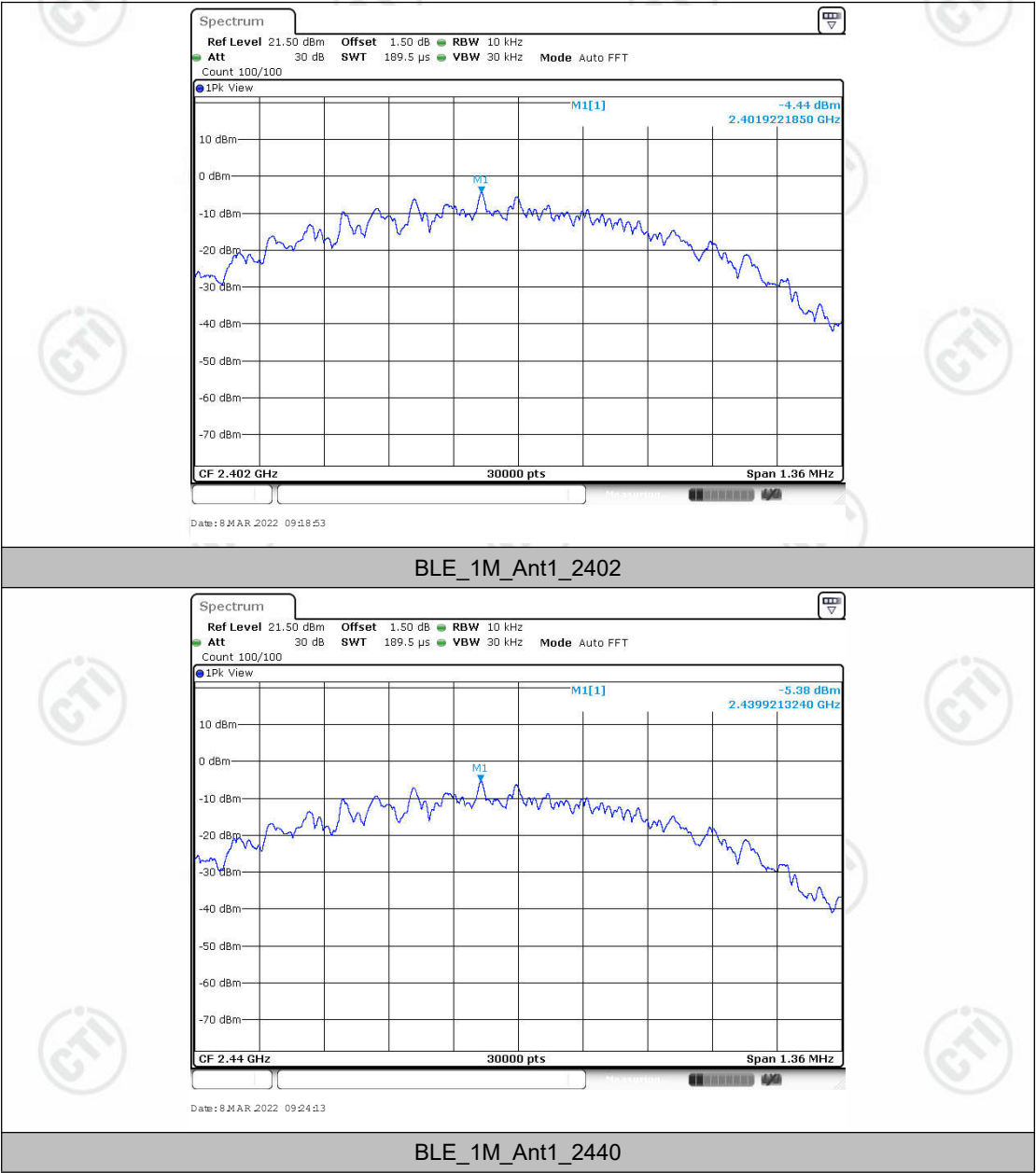


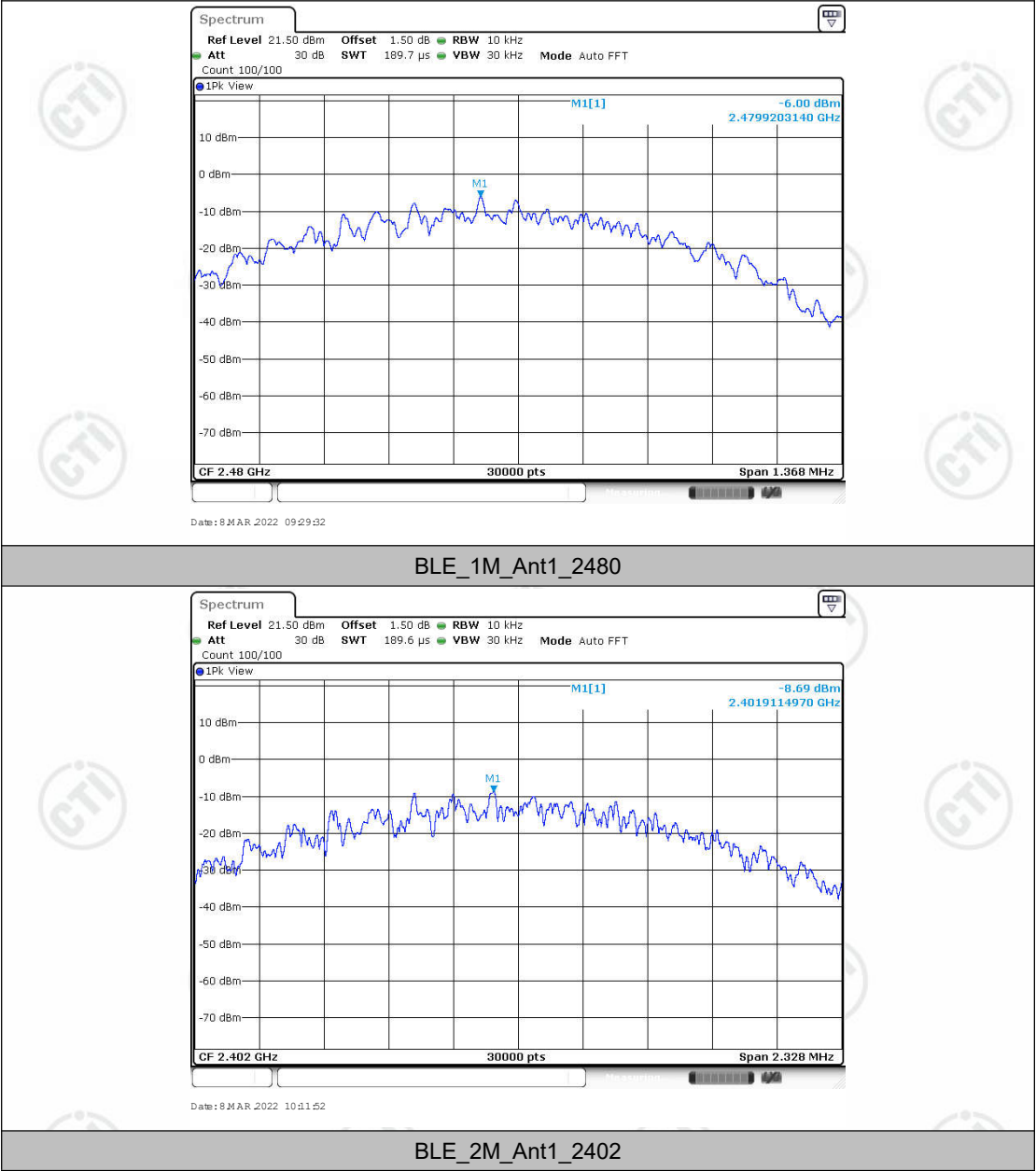
Appendix D: Maximum power spectral density

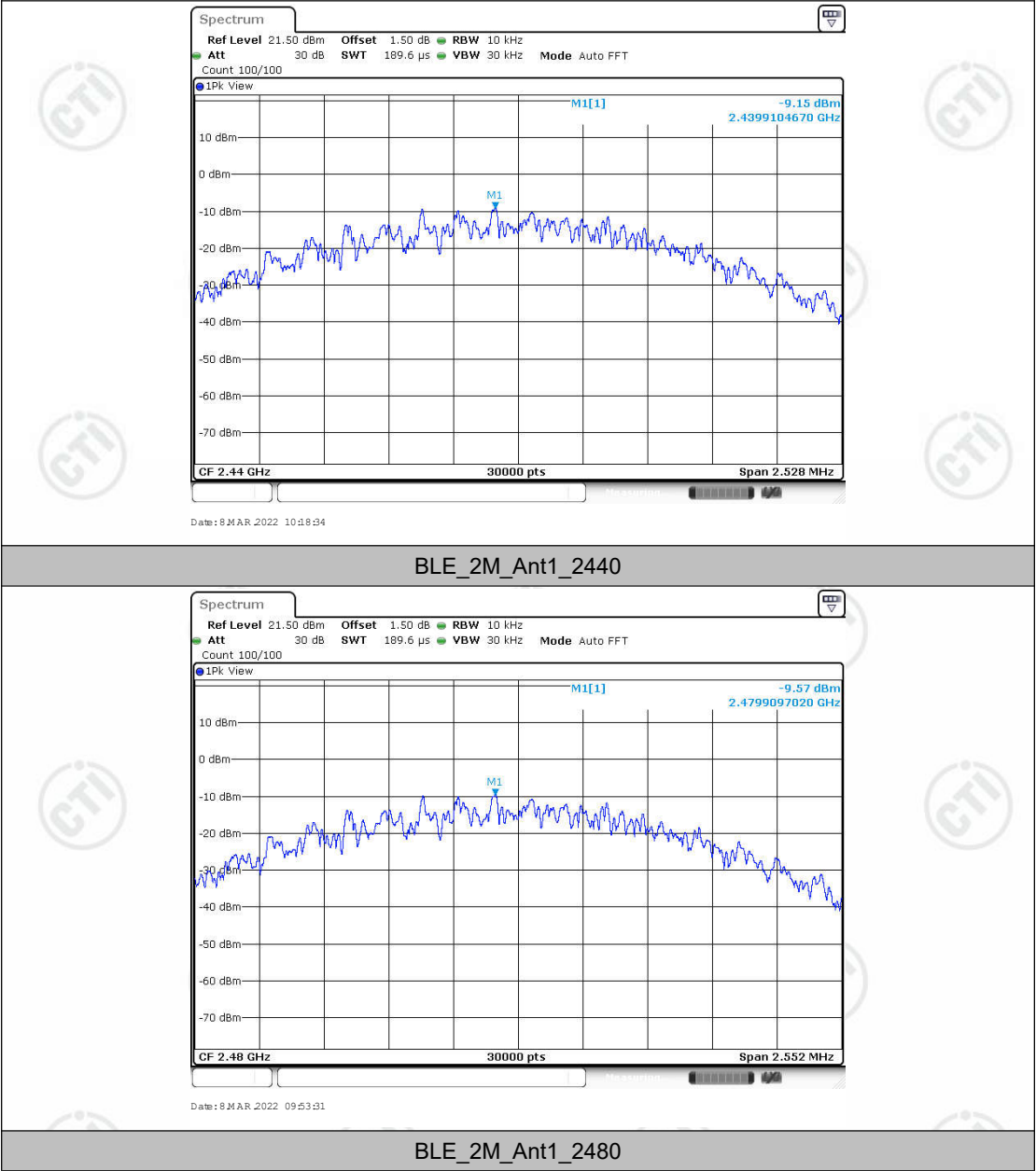
Test Result

Test Mode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-4.44	<=8	PASS
		2440	-5.38	<=8	PASS
		2480	-6.00	<=8	PASS
BLE_2M	Ant1	2402	-8.69	<=8	PASS
		2440	-9.15	<=8	PASS
		2480	-9.57	<=8	PASS

Test Graphs







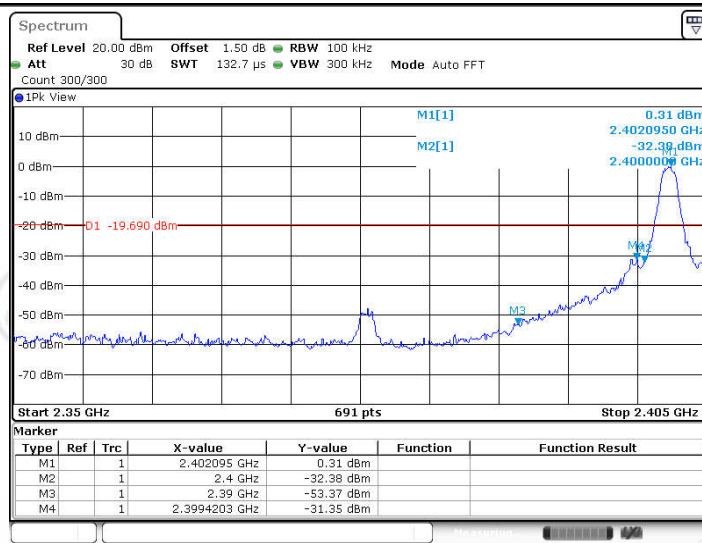
Appendix E: Band edge measurements

Test Result

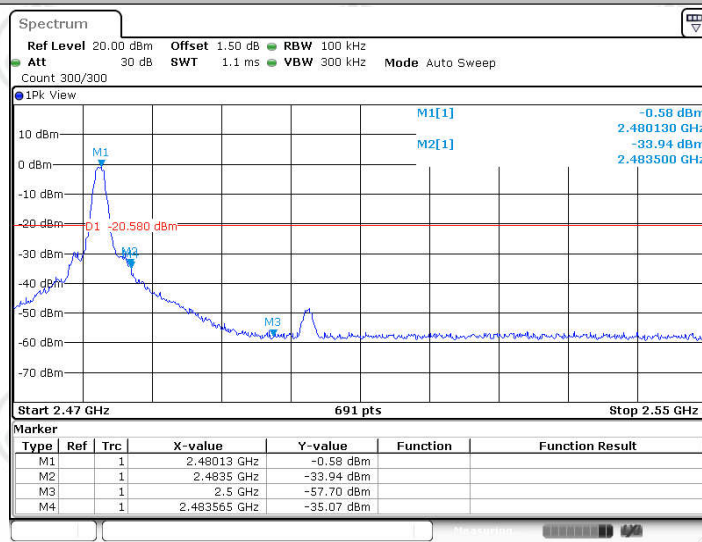
Test Mode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	2.10	-41	<=-17.9	PASS
		High	2480	0.82	-42.9	<=-19.18	PASS
BLE_2M	Ant1	Low	2402	0.31	-31.35	<=-19.69	PASS
		High	2480	-0.58	-35.07	<=-20.58	PASS

Test Graphs





BLE_2M_Ant1_Low_2402

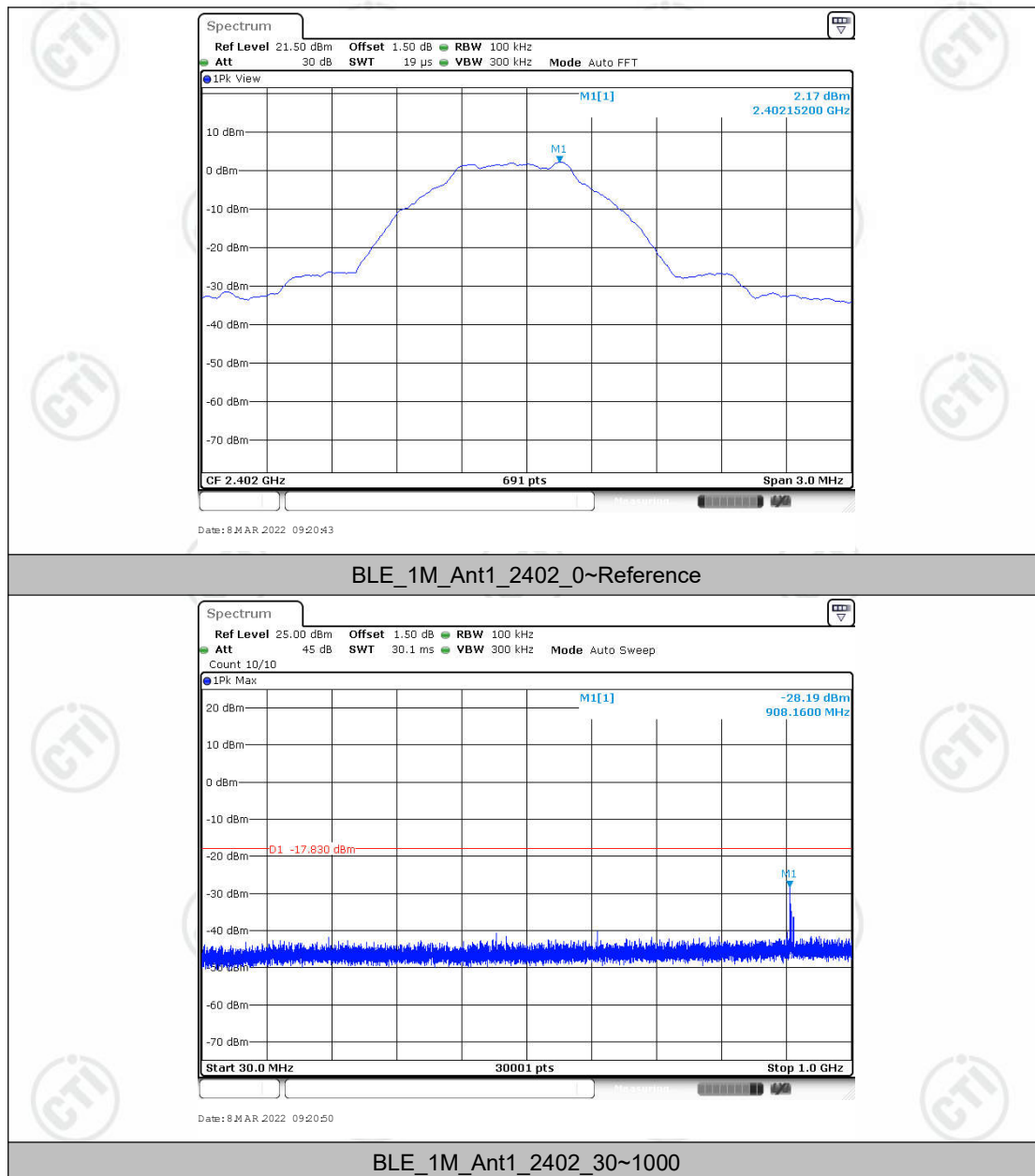


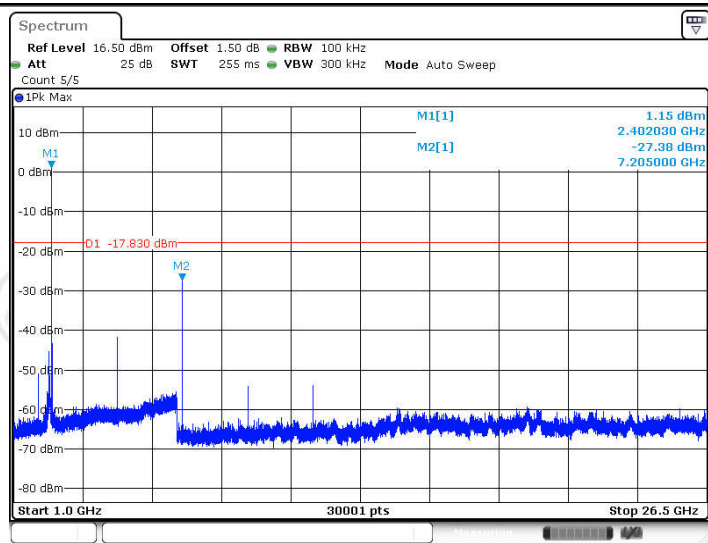
BLE_2M_Ant1_High_2480

Appendix F: Conducted Spurious Emission**Test Result**

Test Mode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	2.17	2.17	---	PASS
			30~1000	2.17	-28.19	<=-17.83	PASS
			1000~26500	2.17	-27.38	<=-17.83	PASS
		2440	Reference	1.33	1.33	---	PASS
			30~1000	1.33	-23.41	<=-18.67	PASS
			1000~26500	1.33	-29.73	<=-18.67	PASS
		2480	Reference	0.72	0.72	---	PASS
			30~1000	0.72	-28.25	<=-19.28	PASS
			1000~26500	0.72	-31.38	<=-19.28	PASS
BLE_2M	Ant1	2402	Reference	0.38	0.38	---	PASS
			30~1000	0.38	-25.62	<=-19.62	PASS
			1000~26500	0.38	-29.98	<=-19.62	PASS
		2440	Reference	0.02	0.02	---	PASS
			30~1000	0.02	-41.18	<=-19.98	PASS
			1000~26500	0.02	-31.13	<=-19.98	PASS
		2480	Reference	-0.43	-0.43	---	PASS
			30~1000	-0.43	-40.74	<=-20.43	PASS
			1000~26500	-0.43	-32.14	<=-20.43	PASS

Test Graphs





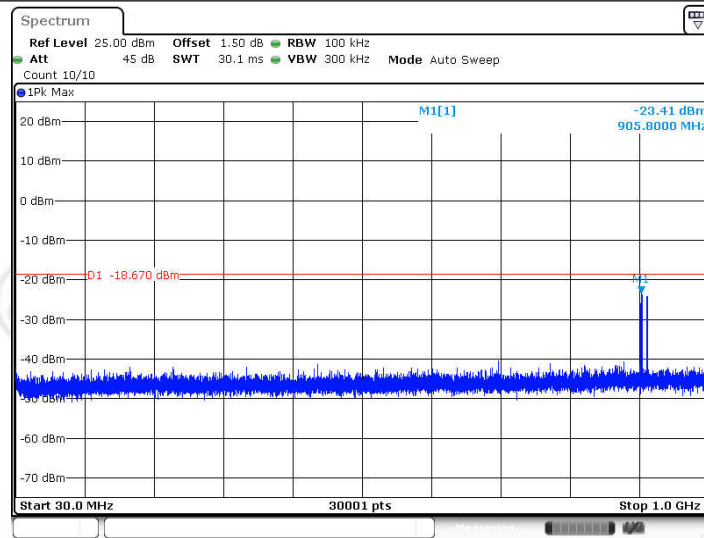
Date: 8 MAR 2022 09:21:15

BLE_1M_Ant1_2402_1000~26500



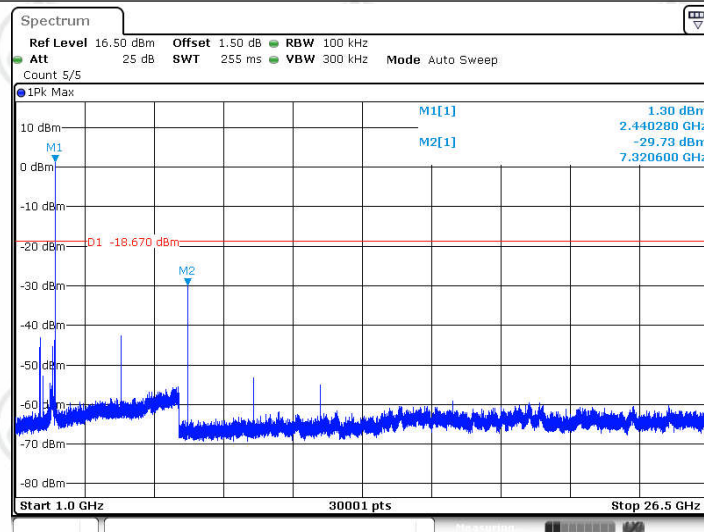
Date: 8 MAR 2022 09:24:20

BLE_1M_Ant1_2440_0~Reference



Date: 8 MAR 2022 09:24:27

BLE_1M_Ant1_2440_30~1000



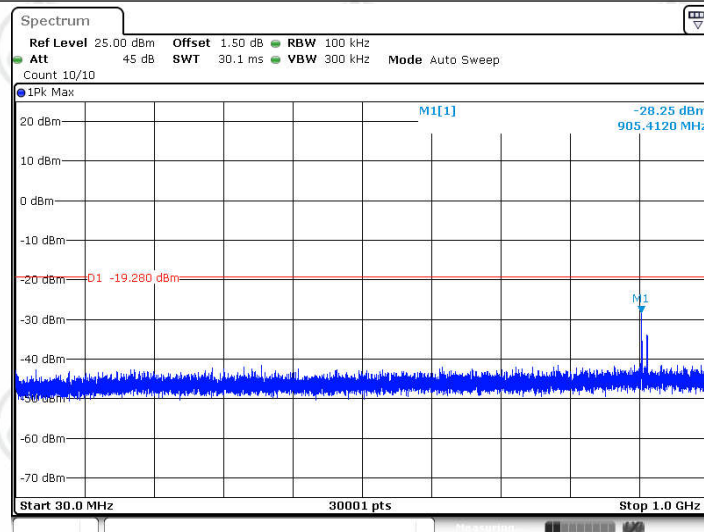
Date: 8 MAR 2022 09:24:52

BLE_1M_Ant1_2440_1000~26500



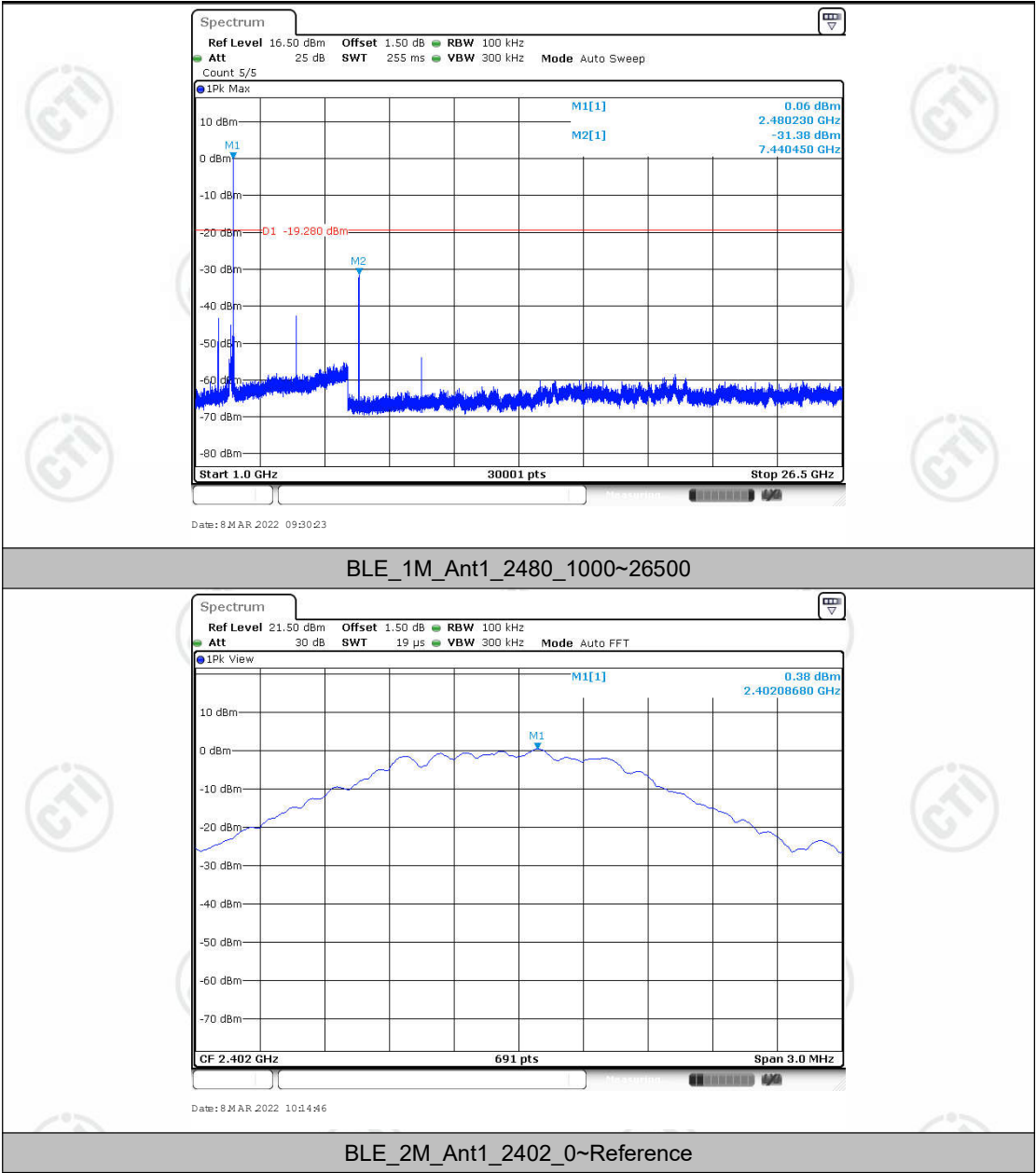
Date: 8 MAR 2022 09:29:51

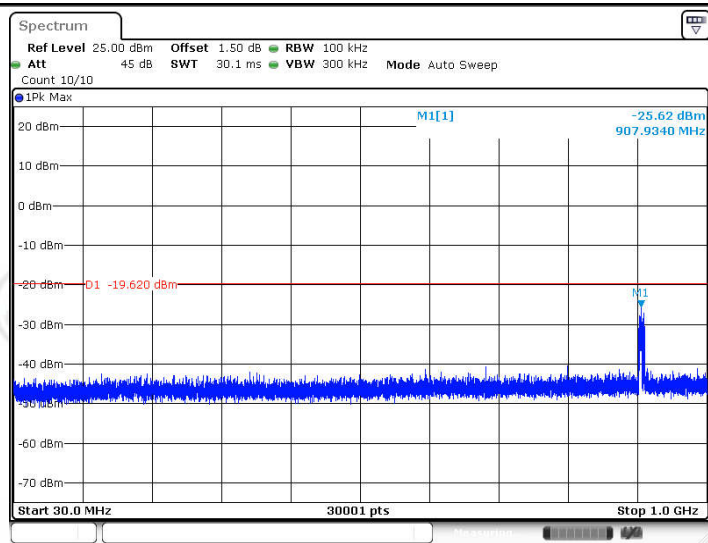
BLE_1M_Ant1_2480_0~Reference



Date: 8 MAR 2022 09:29:58

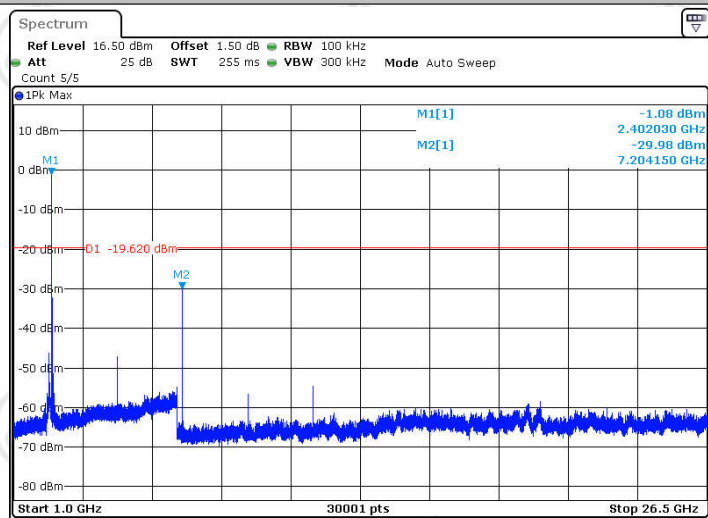
BLE_1M_Ant1_2480_30~1000





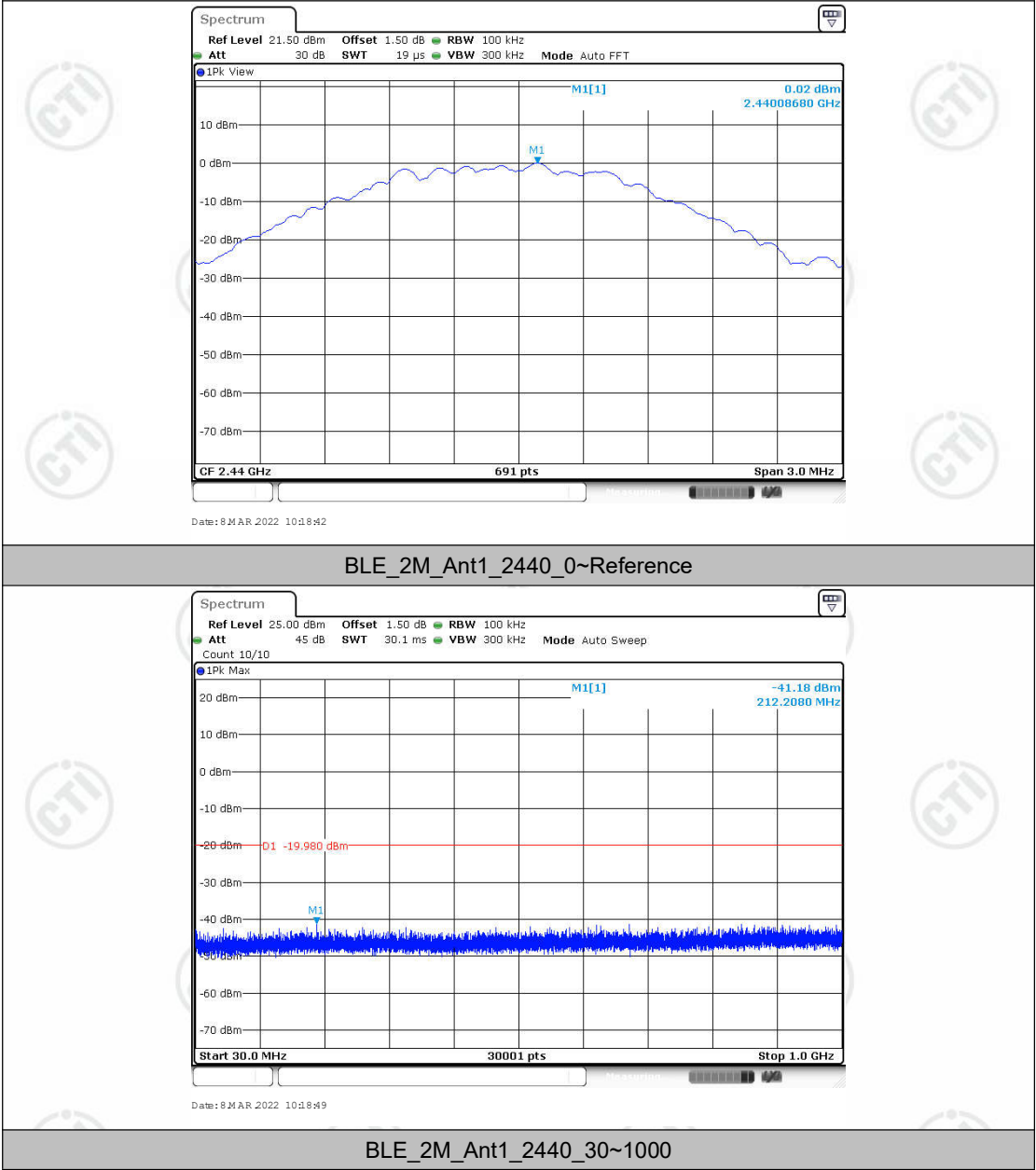
Date: 8 MAR 2022 10:14:53

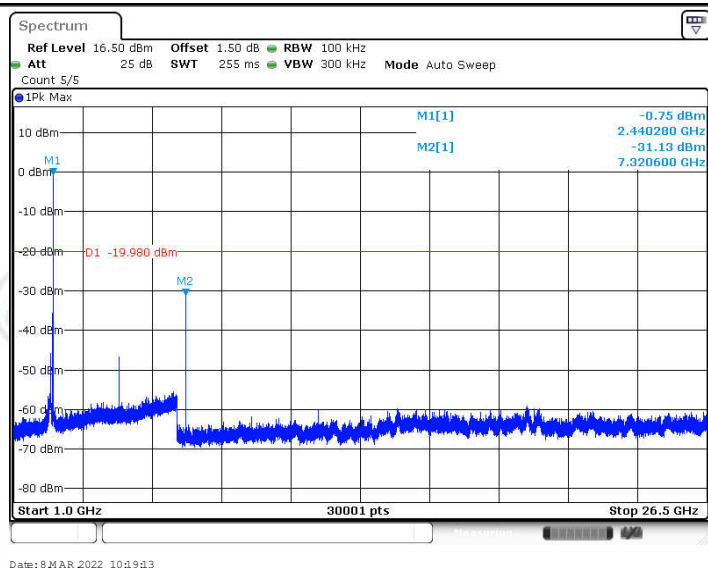
BLE_2M_Ant1_2402_30~1000



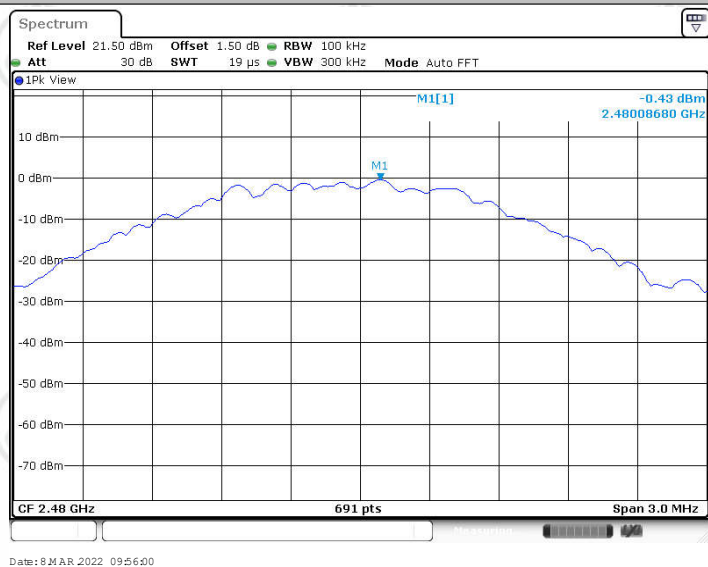
Date: 8 MAR 2022 10:15:17

BLE_2M_Ant1_2402_1000~26500

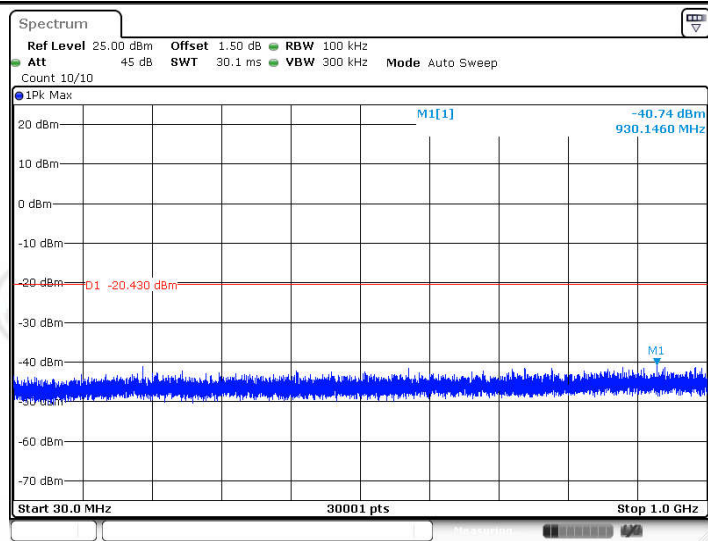




BLE_2M_Ant1_2440_1000~26500

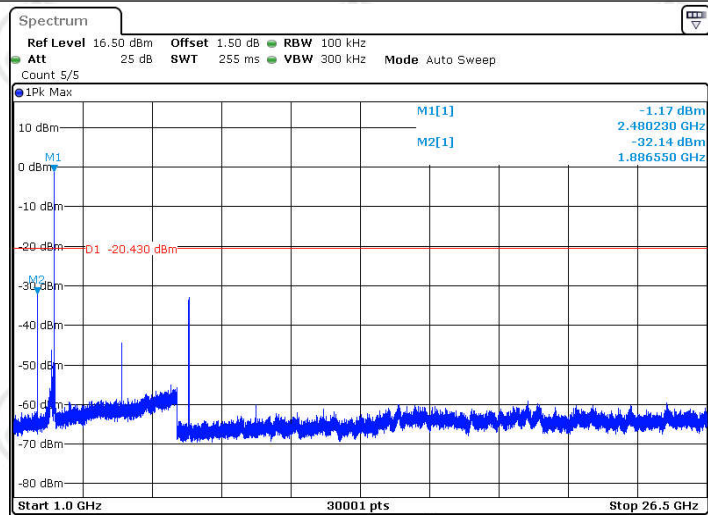


BLE_2M_Ant1_2480_0~Reference



Date: 8 MAR 2022 09:56:07

BLE_2M_Ant1_2480_30~1000



Date: 8 MAR 2022 09:56:31

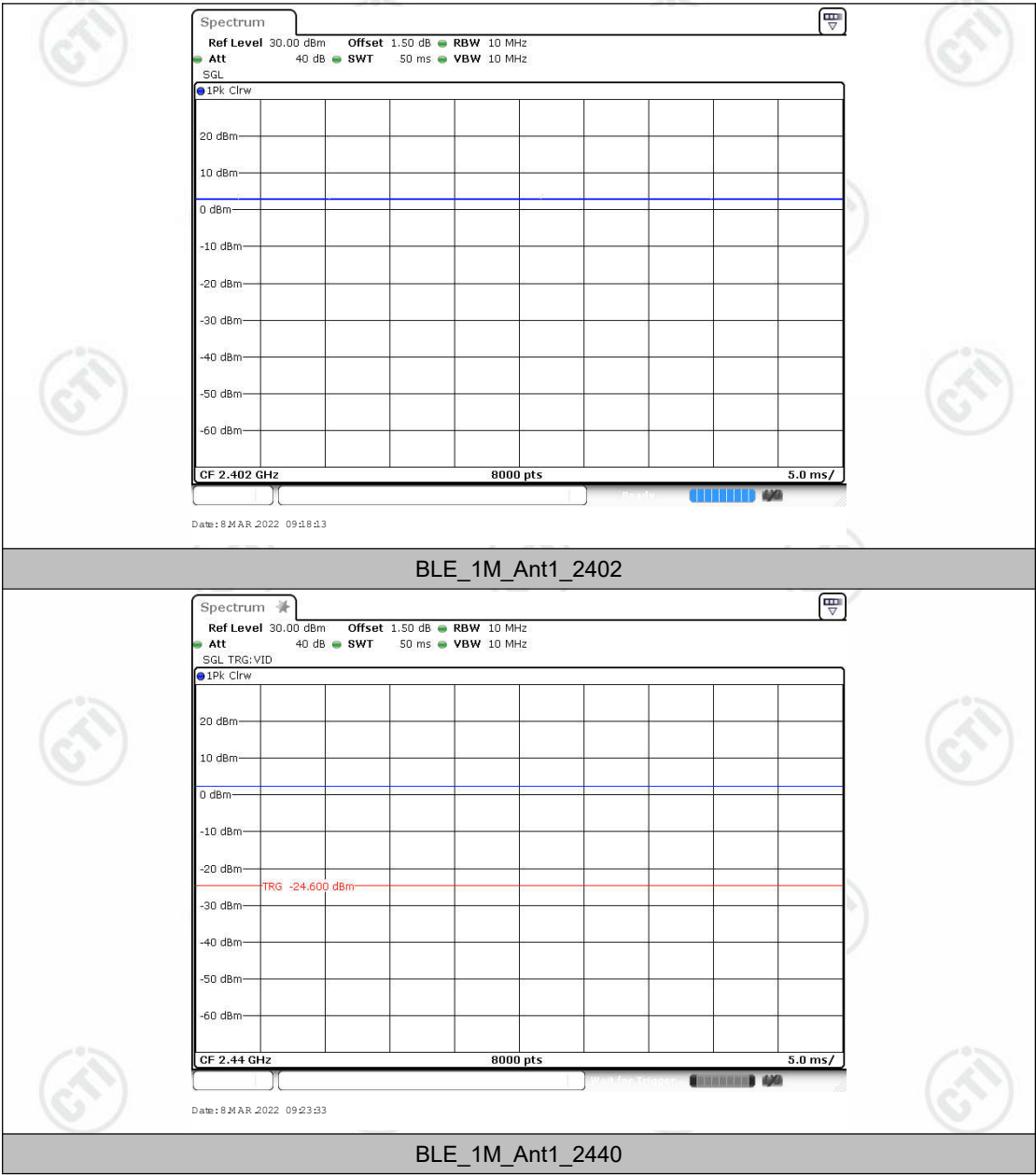
BLE_2M_Ant1_2480_1000~26500

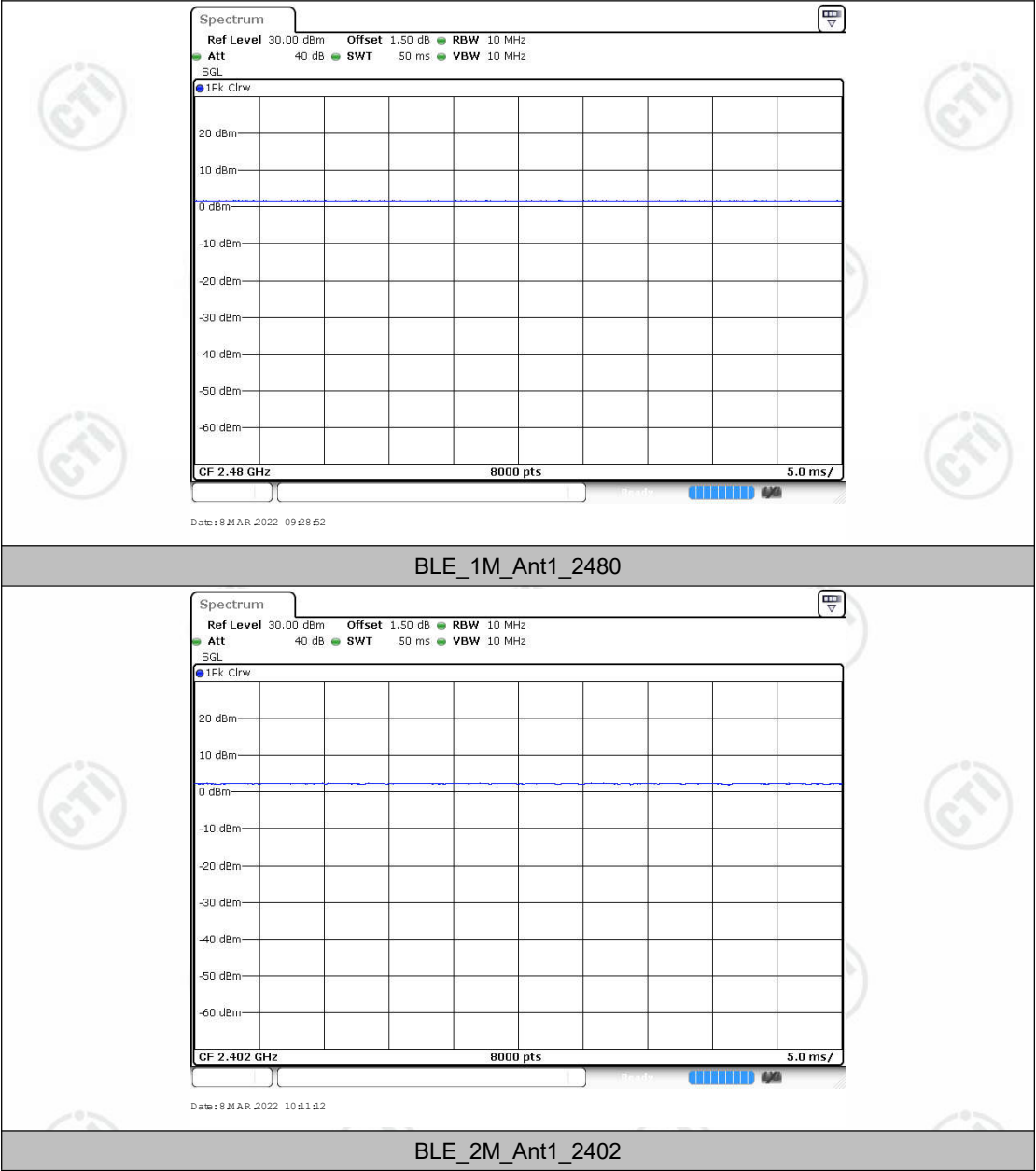
Appendix G: Duty Cycle

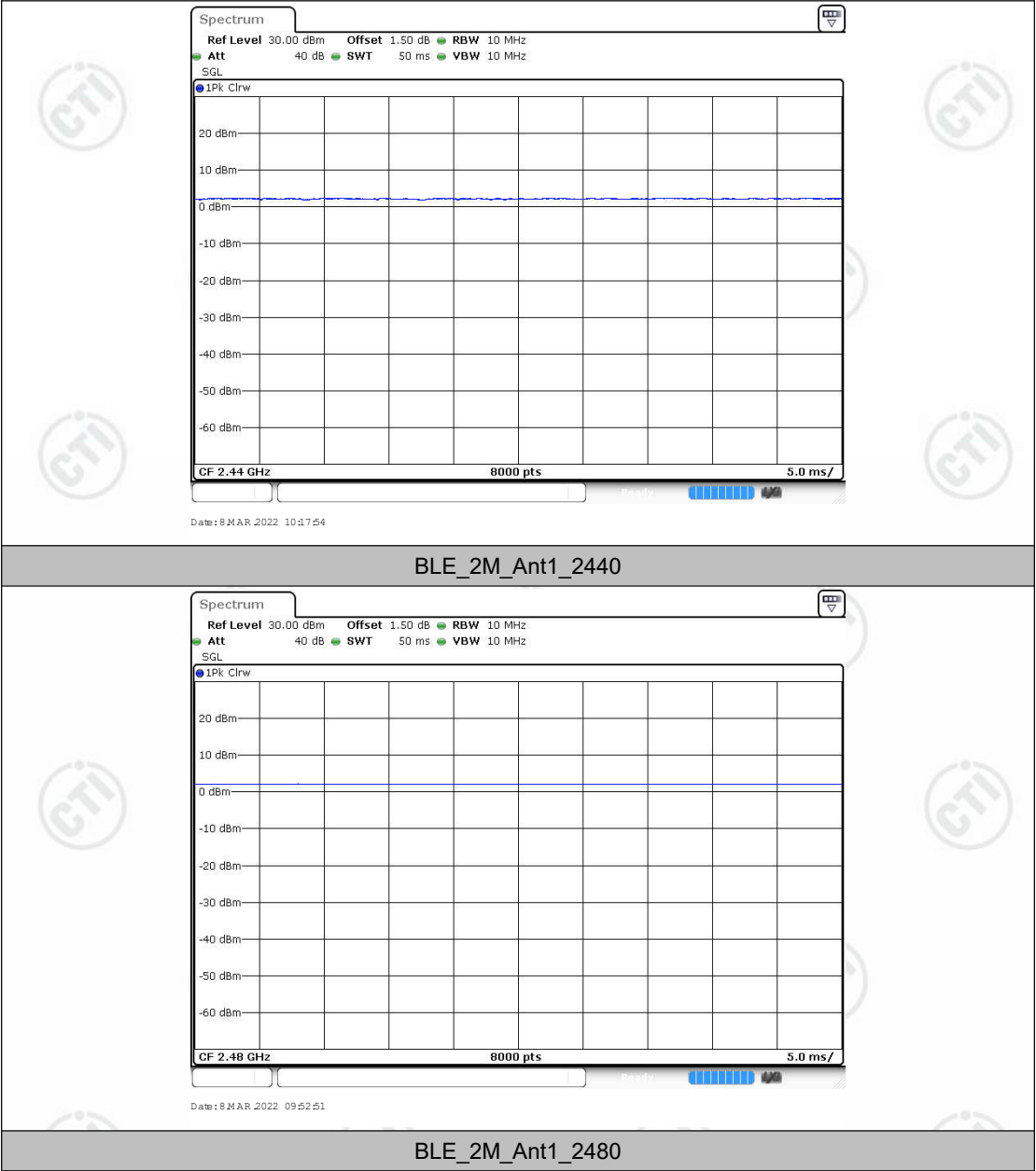
Test Result

Test Mode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Limit	Verdict
BLE_1M	Ant1	2402	50.00	50.00	100.00	---	PASS
		2440	50.00	50.00	100.00	---	PASS
		2480	50.00	50.00	100.00	---	PASS
BLE_2M	Ant1	2402	50.00	50.00	100.00	---	PASS
		2440	50.00	50.00	100.00	---	PASS
		2480	50.00	50.00	100.00	---	PASS

Test Graphs







*** End of Report ***