

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

Left ear:

Test Mode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE	Ant1	2402	0.706	2401.644	2402.350	0.5	PASS
		2440	0.696	2439.650	2440.346	0.5	PASS
		2480	0.712	2479.640	2480.352	0.5	PASS

Right ear:

Test Mode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE	Ant1	2402	0.696	2401.650	2402.346	0.5	PASS
		2440	0.698	2439.646	2440.344	0.5	PASS
		2480	0.728	2479.634	2480.362	0.5	PASS

Test Graphs

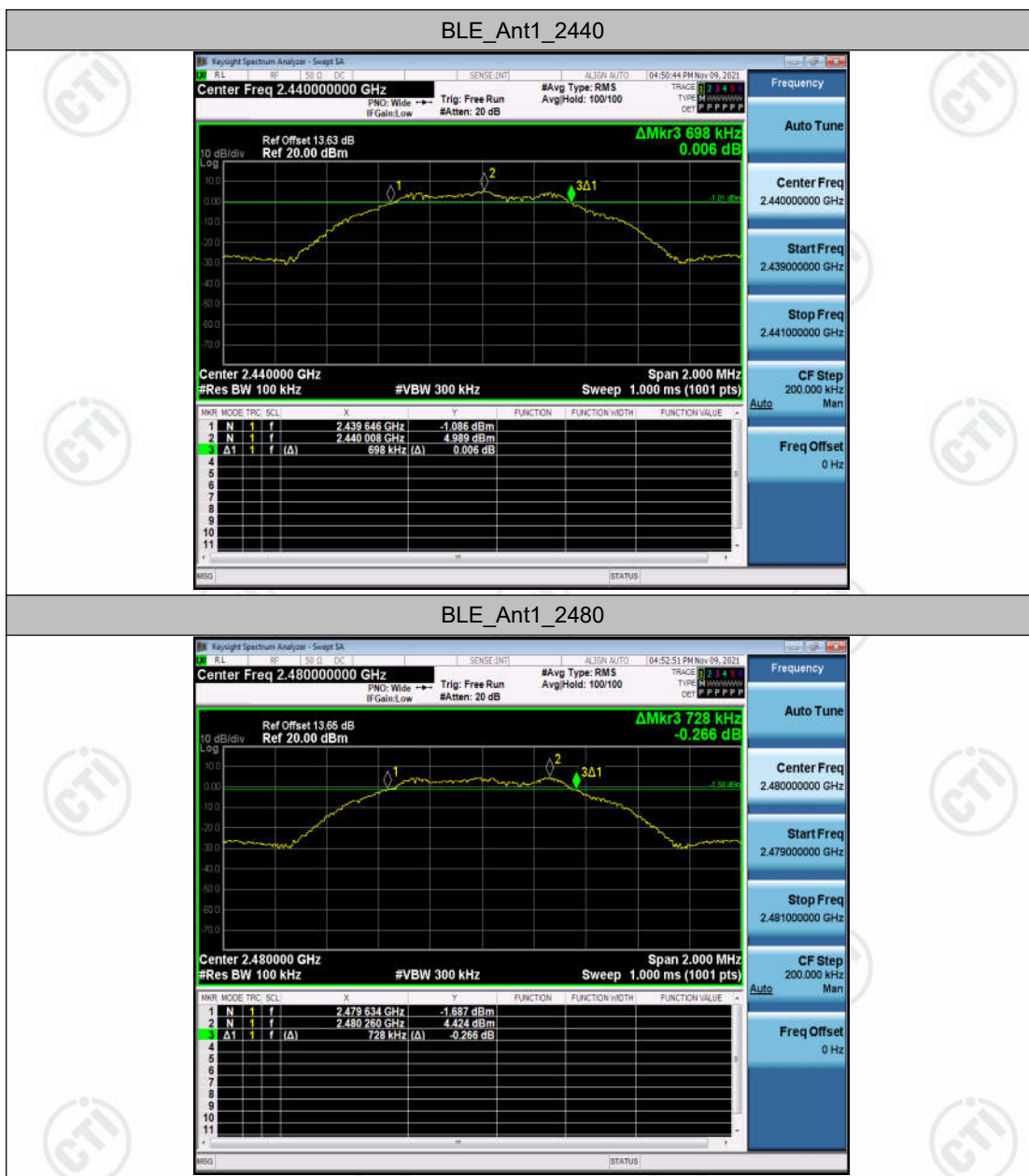
Left ear:





Right ear:





Appendix B: Occupied Channel Bandwidth

Test Result

Left ear:

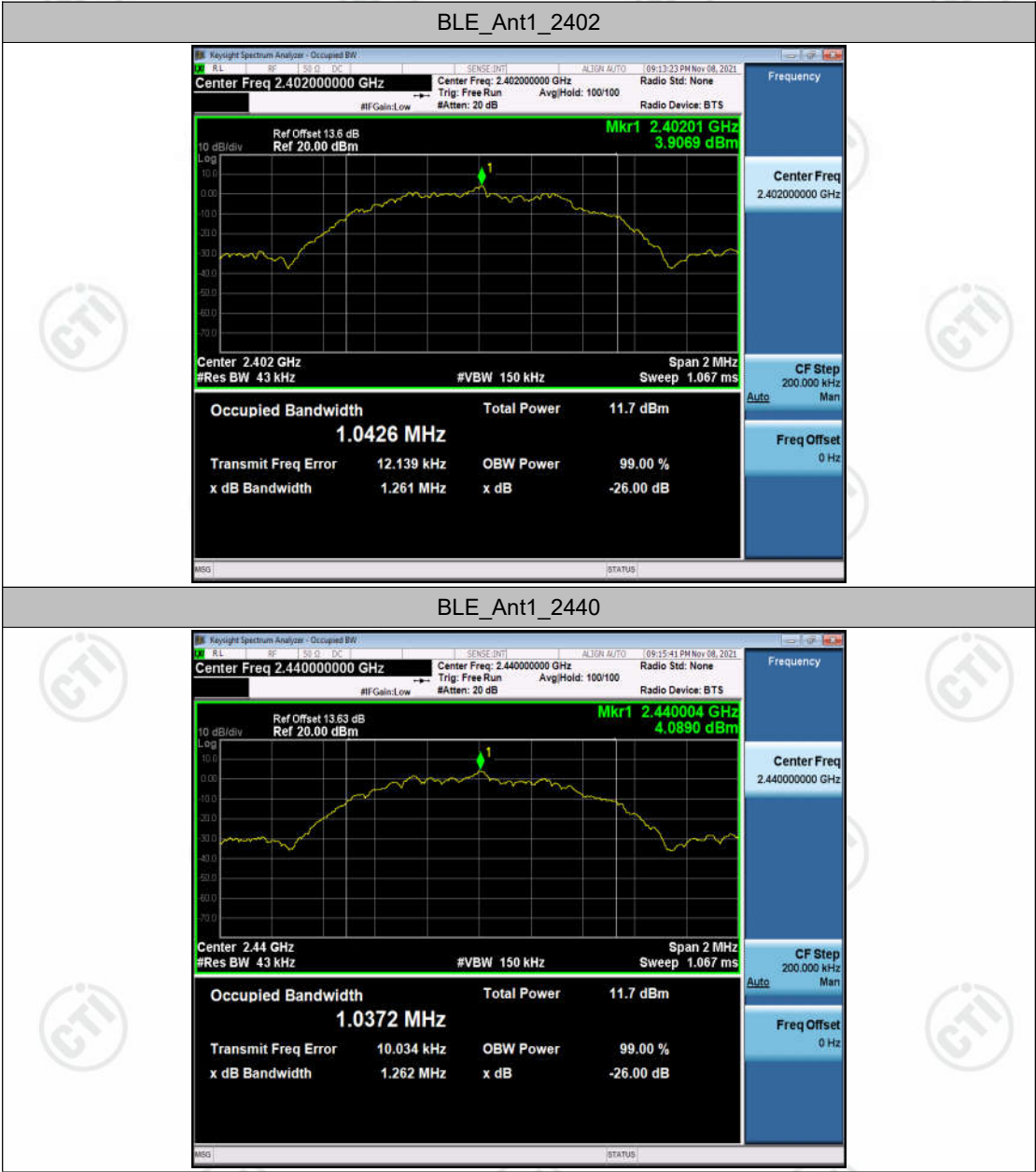
Test Mode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE	Ant1	2402	1.0426	2401.491	2402.533	---	PASS
		2440	1.0372	2439.491	2440.529	---	PASS
		2480	1.0282	2479.495	2480.524	---	PASS

Right ear:

Test Mode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE	Ant1	2402	1.0390	2401.492	2402.531	---	PASS
		2440	1.0276	2439.495	2440.523	---	PASS
		2480	1.0333	2479.491	2480.525	---	PASS

Test Graphs

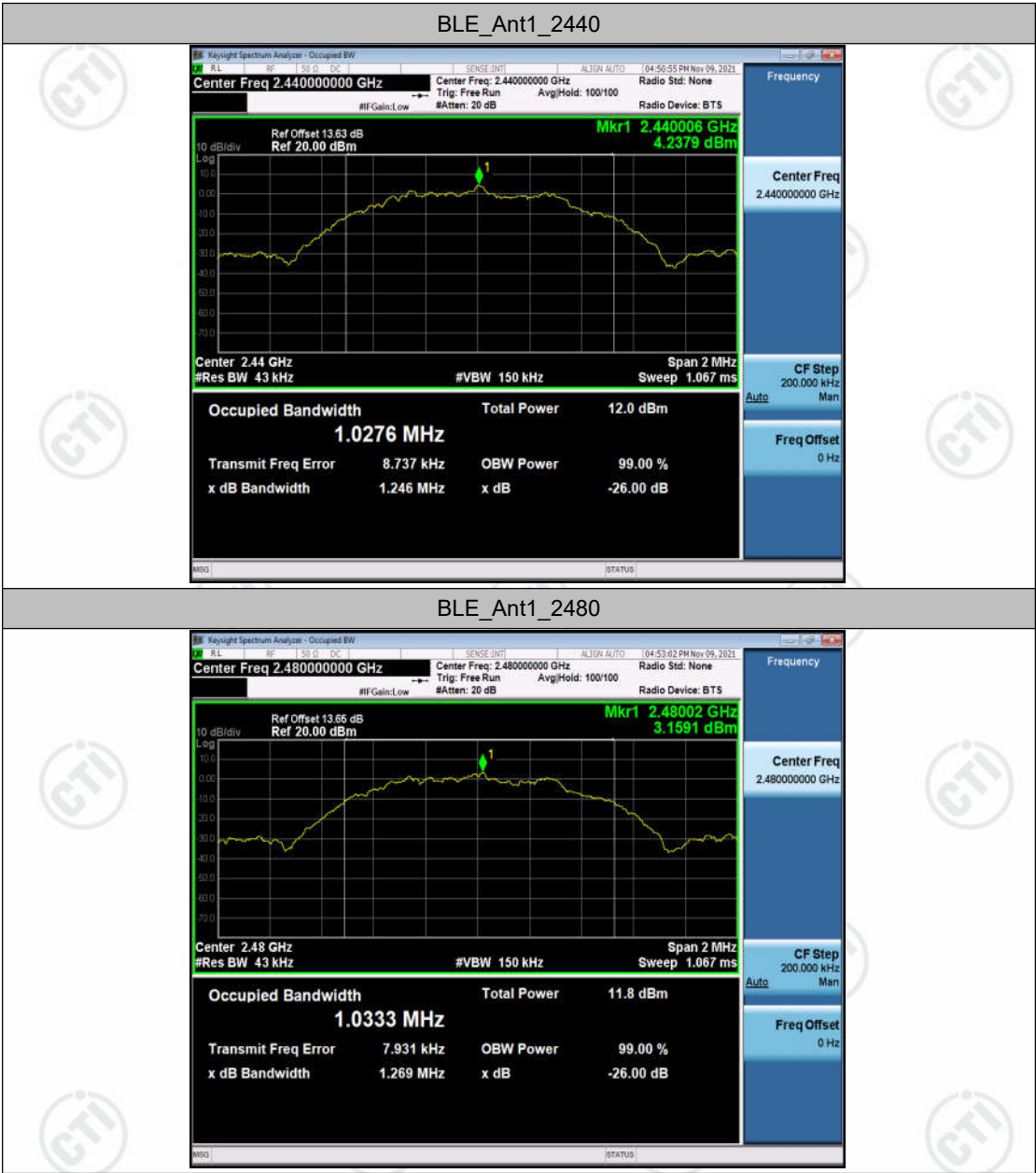
Left ear:





Right ear:





Appendix C: Maximum conducted output power

Test Result

Left ear:

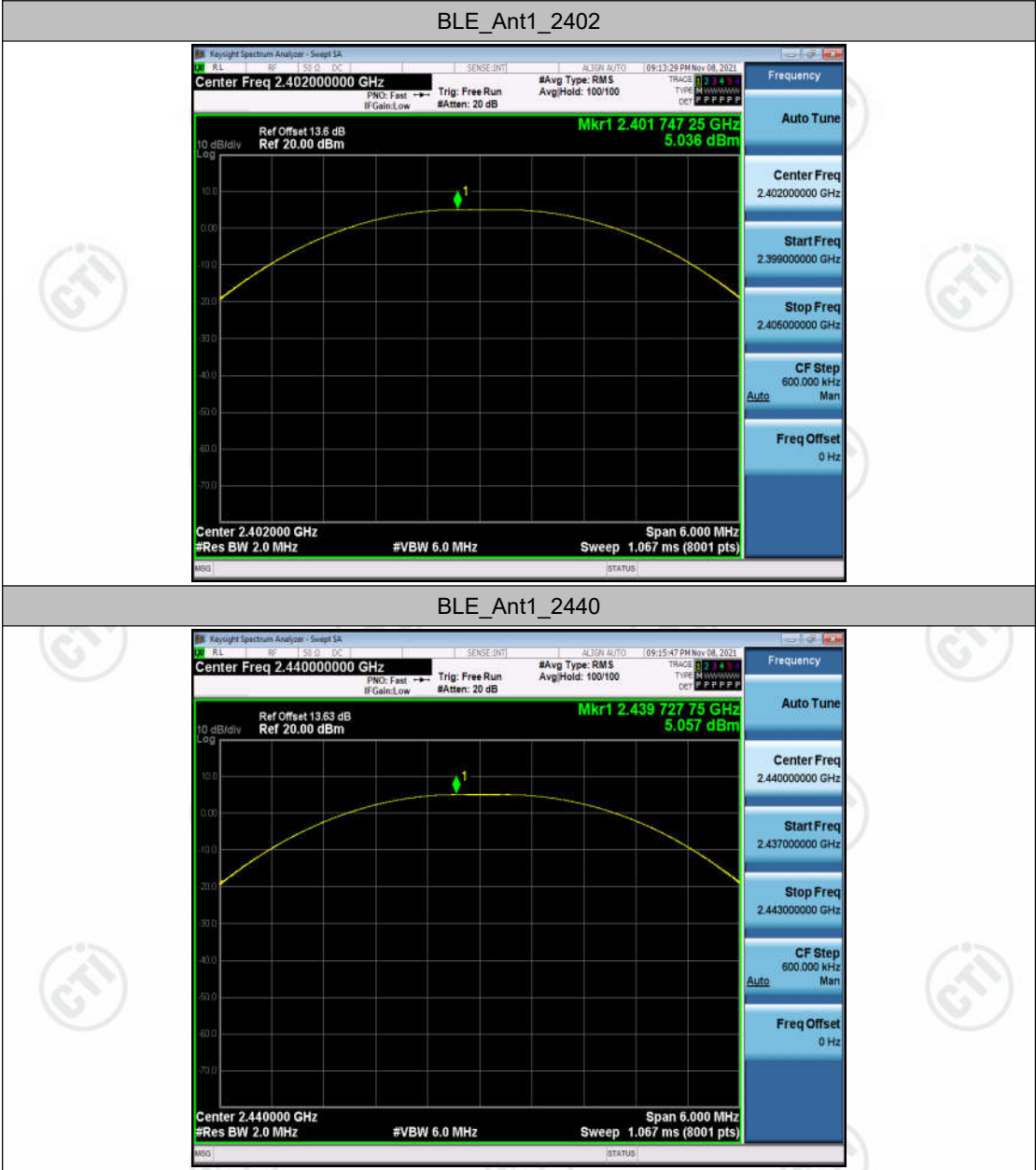
Test Mode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant1	2402	5.04	<=30	PASS
		2440	5.06	<=30	PASS
		2480	5.14	<=30	PASS

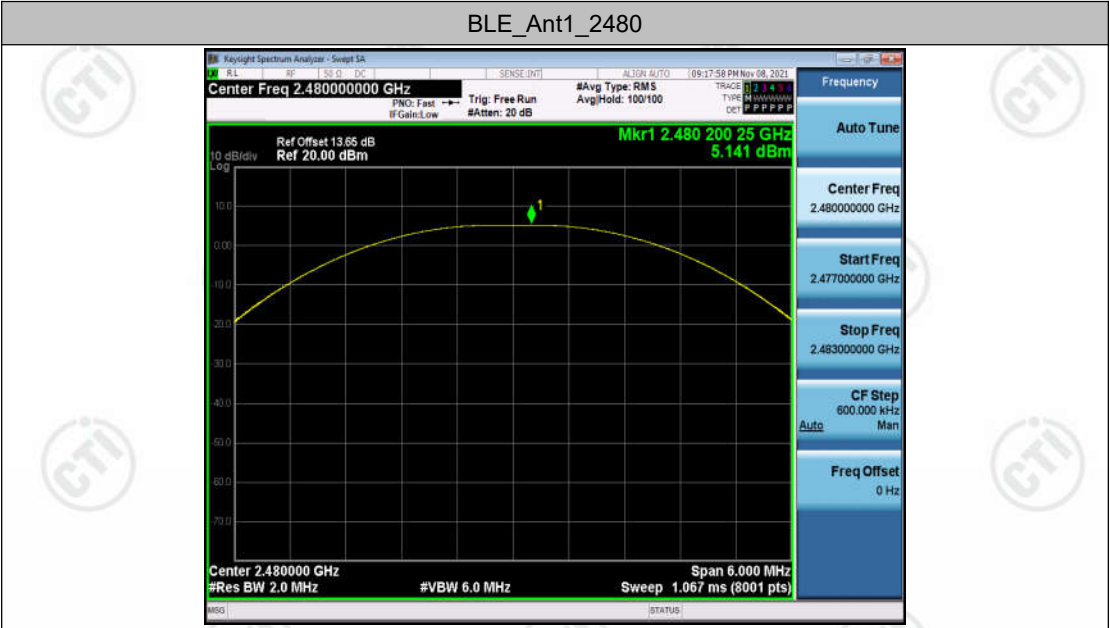
Right ear:

Test Mode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant1	2402	5.16	<=30	PASS
		2440	5.17	<=30	PASS
		2480	5.14	<=30	PASS

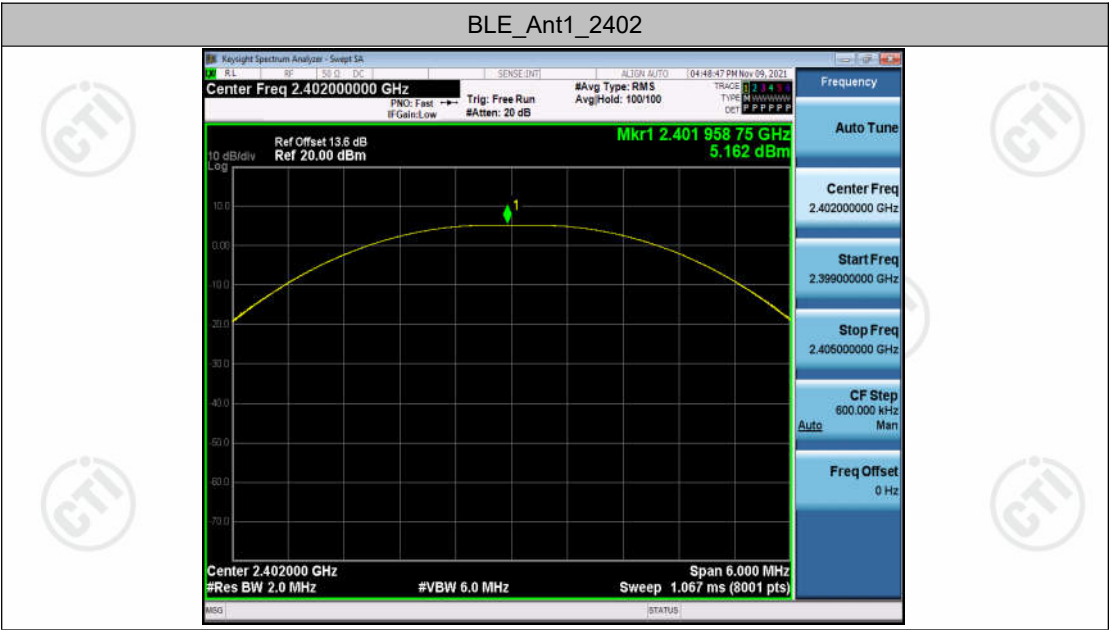
Test Graphs

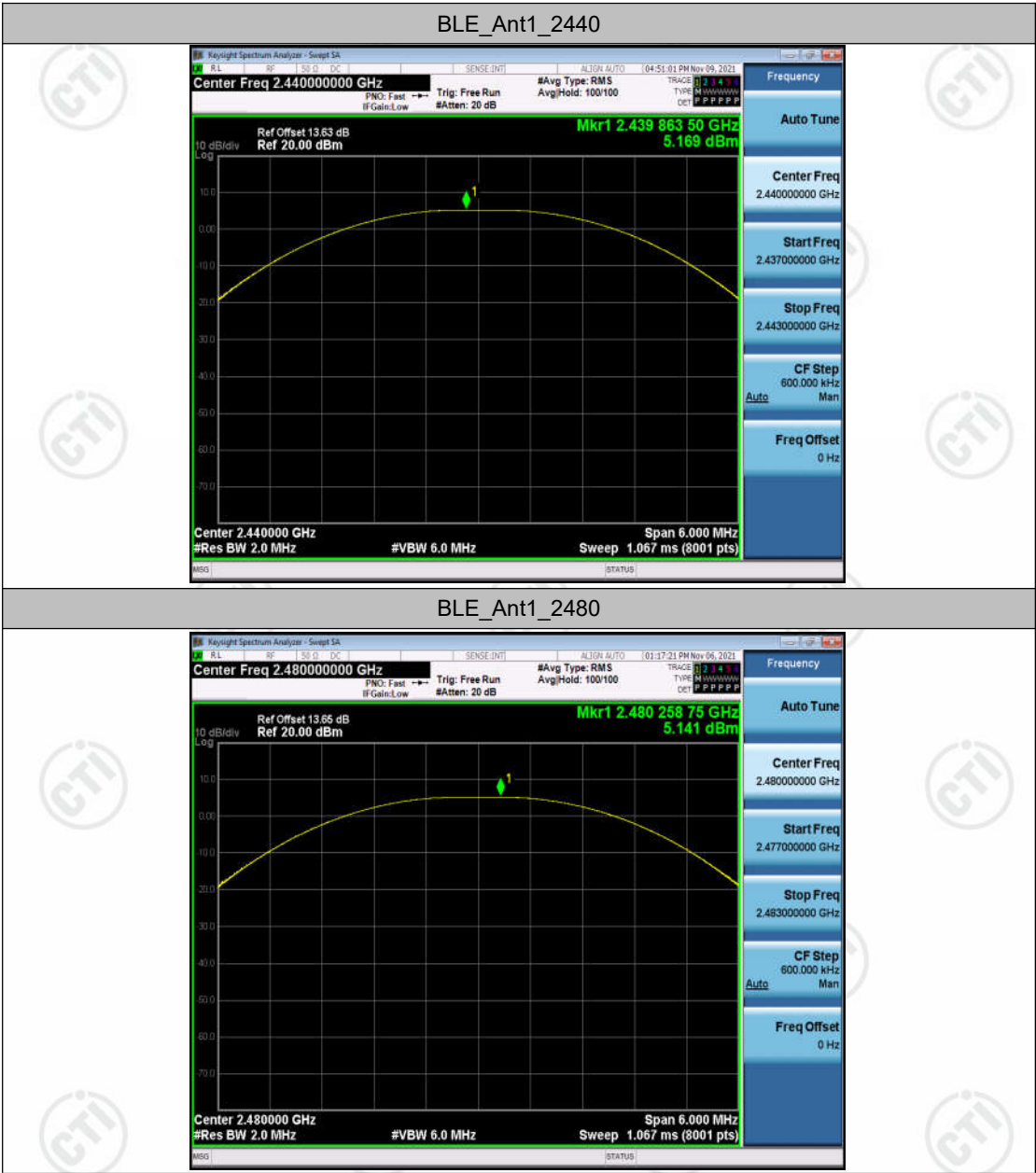
Left ear:





Right ear:





Appendix D: Maximum power spectral density

Test Result

Left ear:

Test Mode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE	Ant1	2402	-4.49	<=8	PASS
		2440	-4.57	<=8	PASS
		2480	-4.31	<=8	PASS

Right ear:

Test Mode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE	Ant1	2402	-4.39	<=8	PASS
		2440	-4.26	<=8	PASS
		2480	-4.20	<=8	PASS

Test Graphs

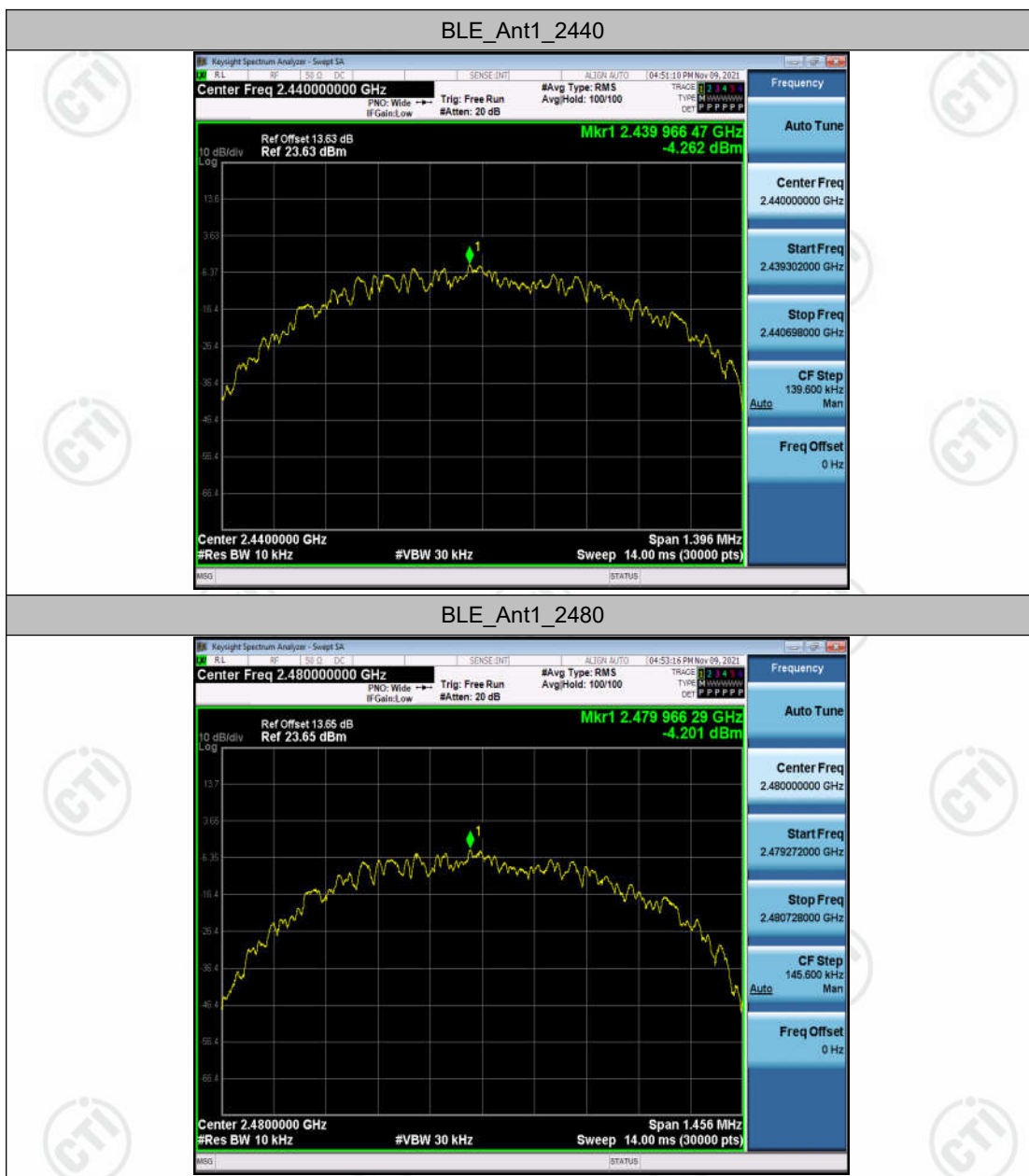
Left ear:





Right ear:





Appendix E: Band edge measurements

Test Result

Left ear:

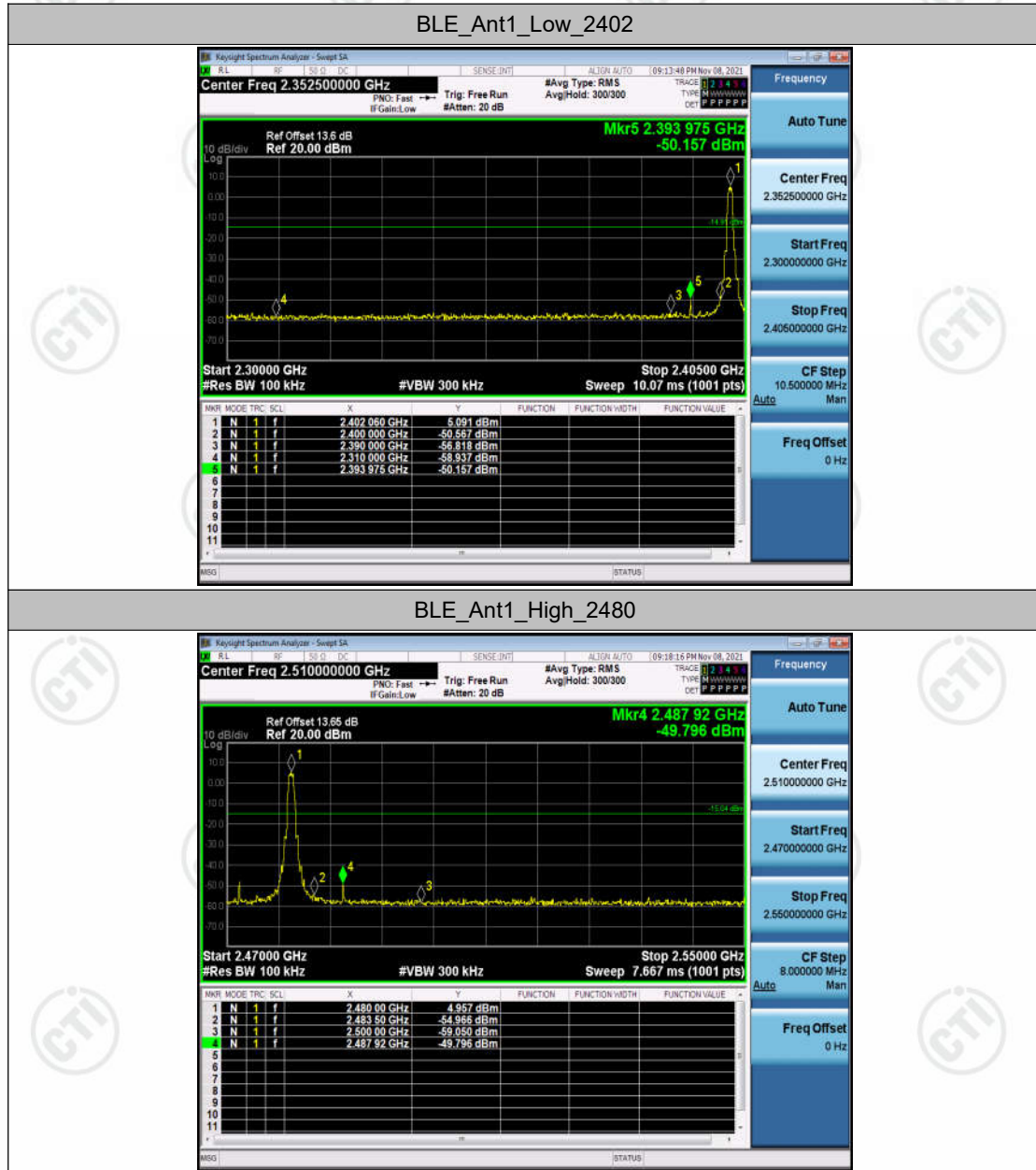
Test Mode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant1	Low	2402	5.09	-50.16	<=-14.91	PASS
		High	2480	4.96	-49.8	<=-15.04	PASS

Right ear:

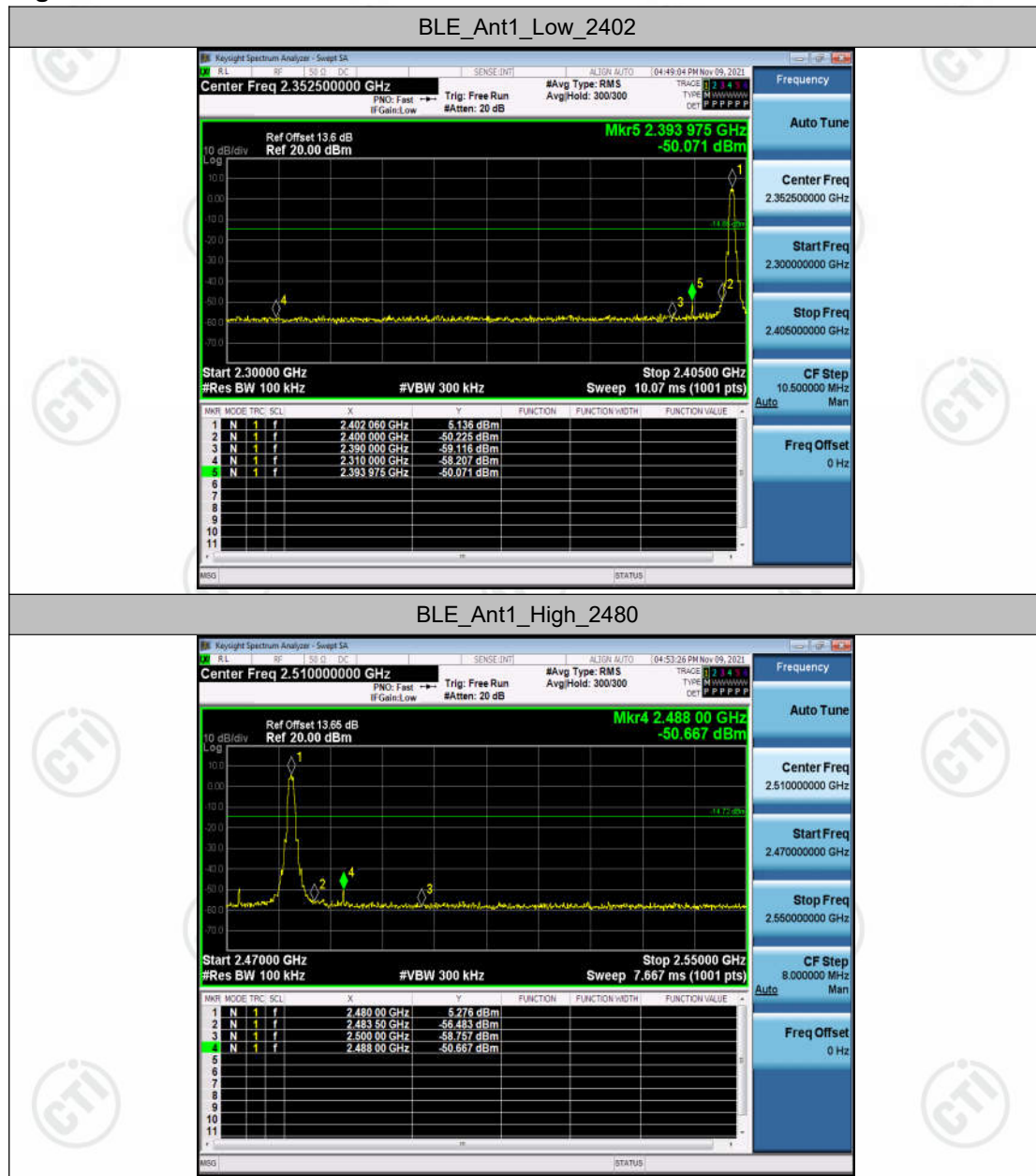
Test Mode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant1	Low	2402	5.14	-50.07	<=-14.86	PASS
		High	2480	5.28	-50.67	<=-14.72	PASS

Test Graphs

Left ear:



Right ear:



Appendix F: Conducted Spurious Emission

Test Result

Left ear:

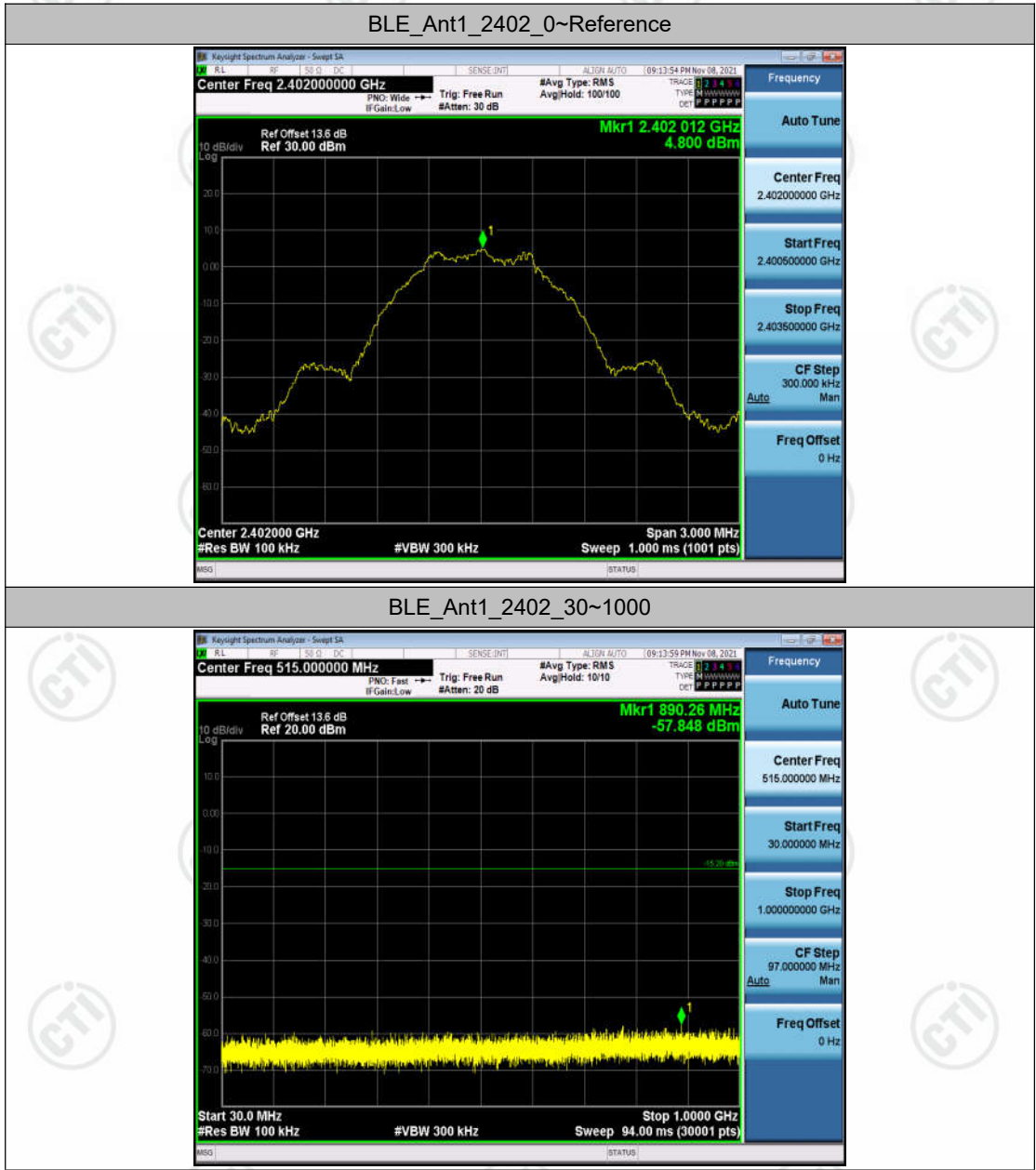
Test Mode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant1	2402	Reference	4.80	4.80	---	PASS
			30~1000	---	-57.848	<=-15.2	PASS
			1000~26500	---	-40.031	<=-15.2	PASS
		2440	Reference	4.92	4.92	---	PASS
			30~1000	---	-57.425	<=-15.076	PASS
			1000~26500	---	-39.079	<=-15.076	PASS
		2480	Reference	5.02	5.02	---	PASS
			30~1000	---	-57.873	<=-14.98	PASS
			1000~26500	---	-37.322	<=-14.98	PASS

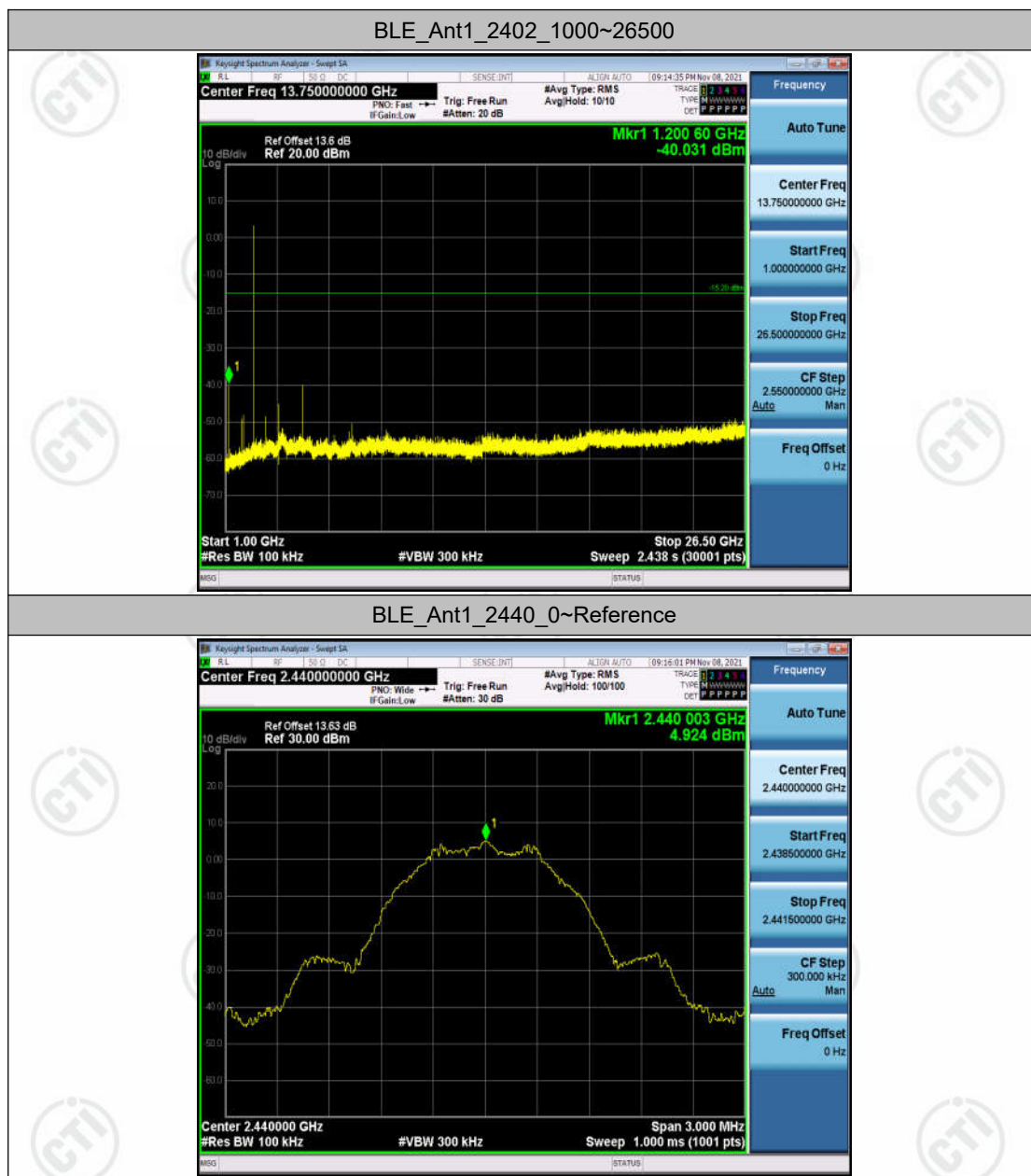
Right ear:

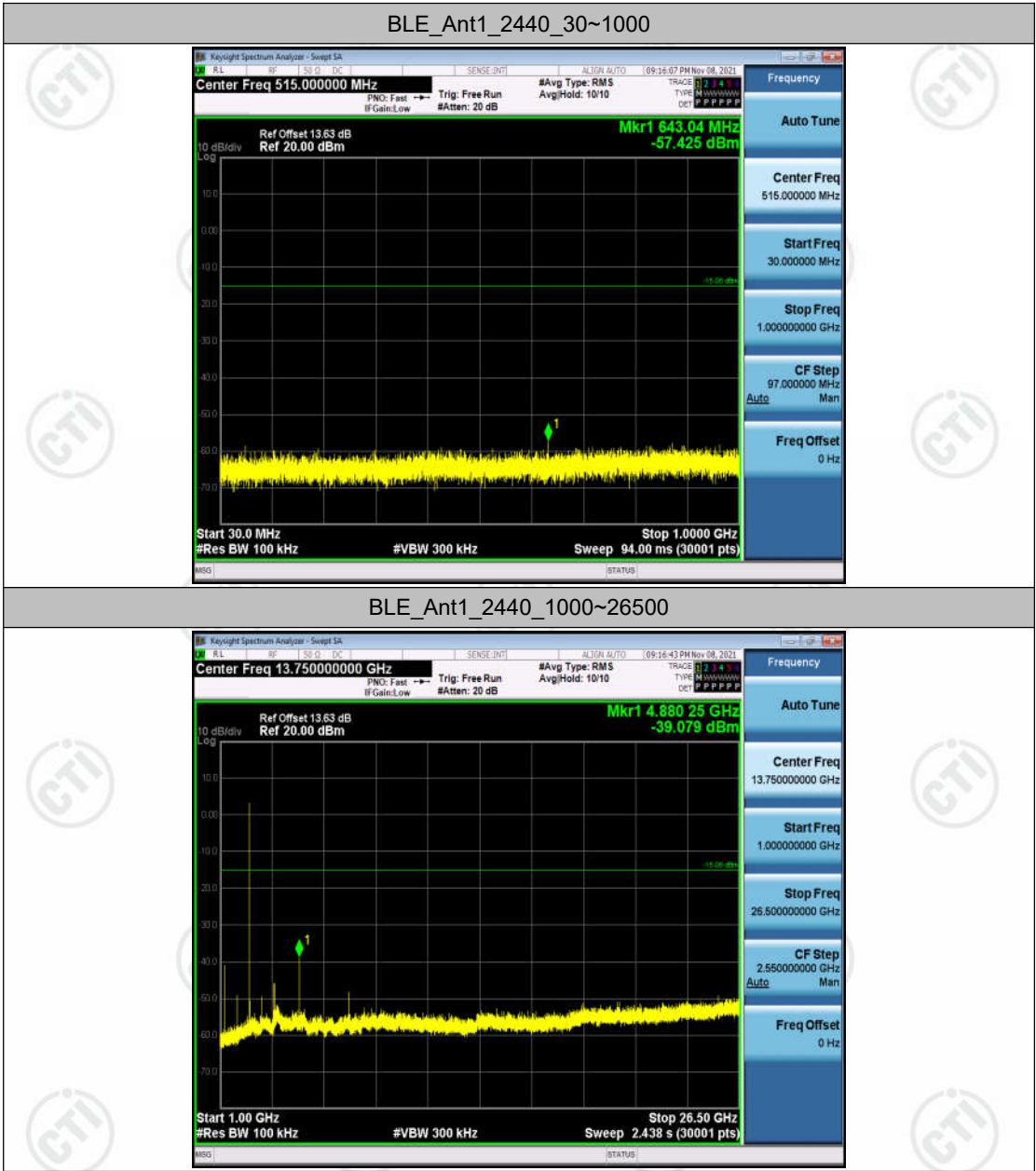
Test Mode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant1	2402	Reference	4.94	4.94	---	PASS
			30~1000	---	-57.482	<=-15.063	PASS
			1000~26500	---	-39.32	<=-15.063	PASS
		2440	Reference	4.73	4.73	---	PASS
			30~1000	---	-57.437	<=-15.267	PASS
			1000~26500	---	-39.515	<=-15.267	PASS
		2480	Reference	5.13	5.13	---	PASS
			30~1000	---	-56.627	<=-14.868	PASS
			1000~26500	---	-37.621	<=-14.868	PASS

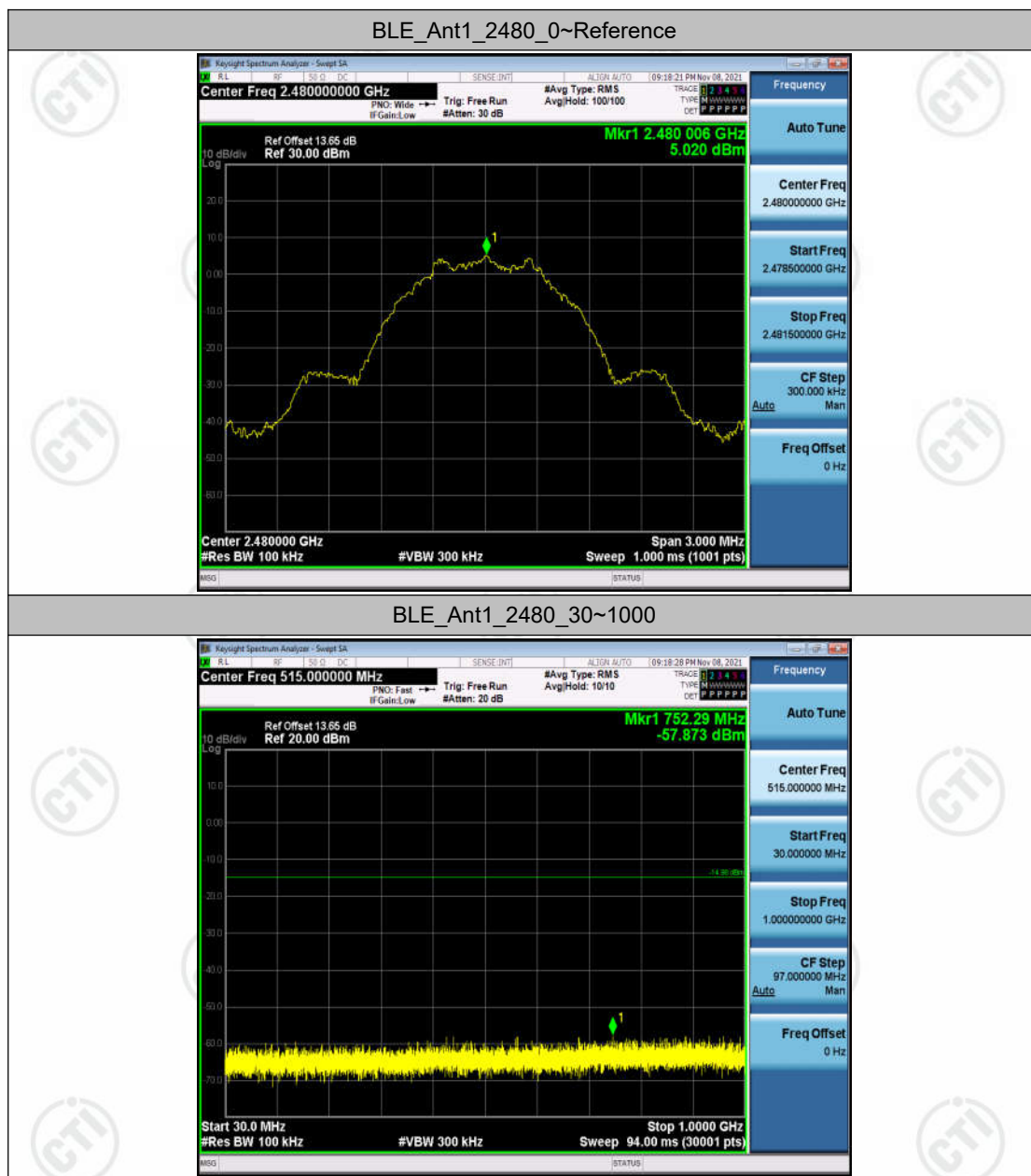
Test Graphs

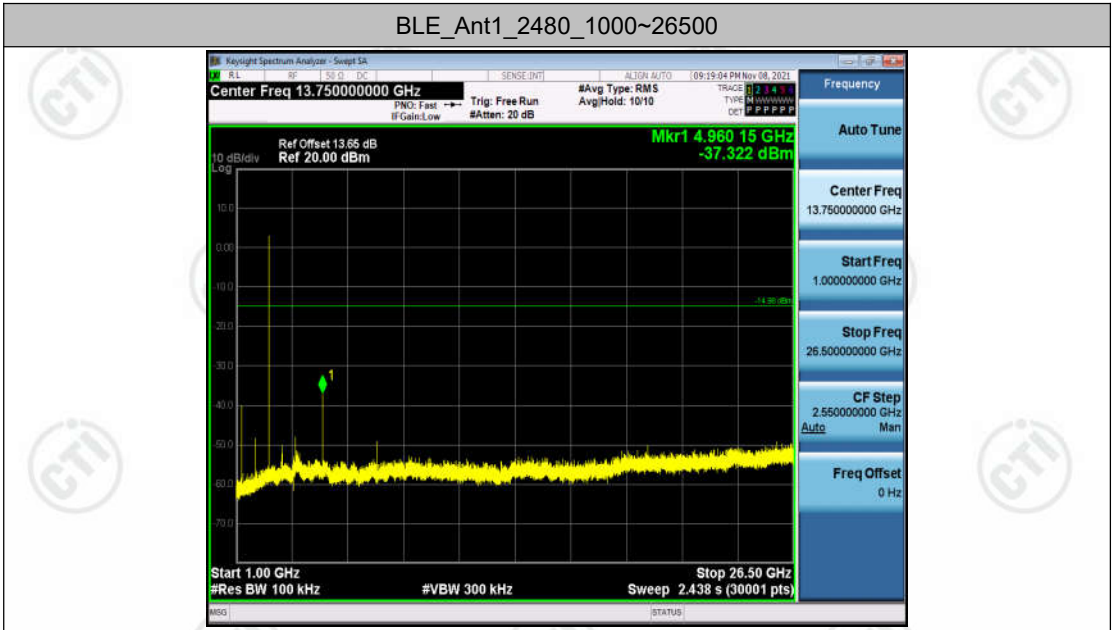
Left ear:





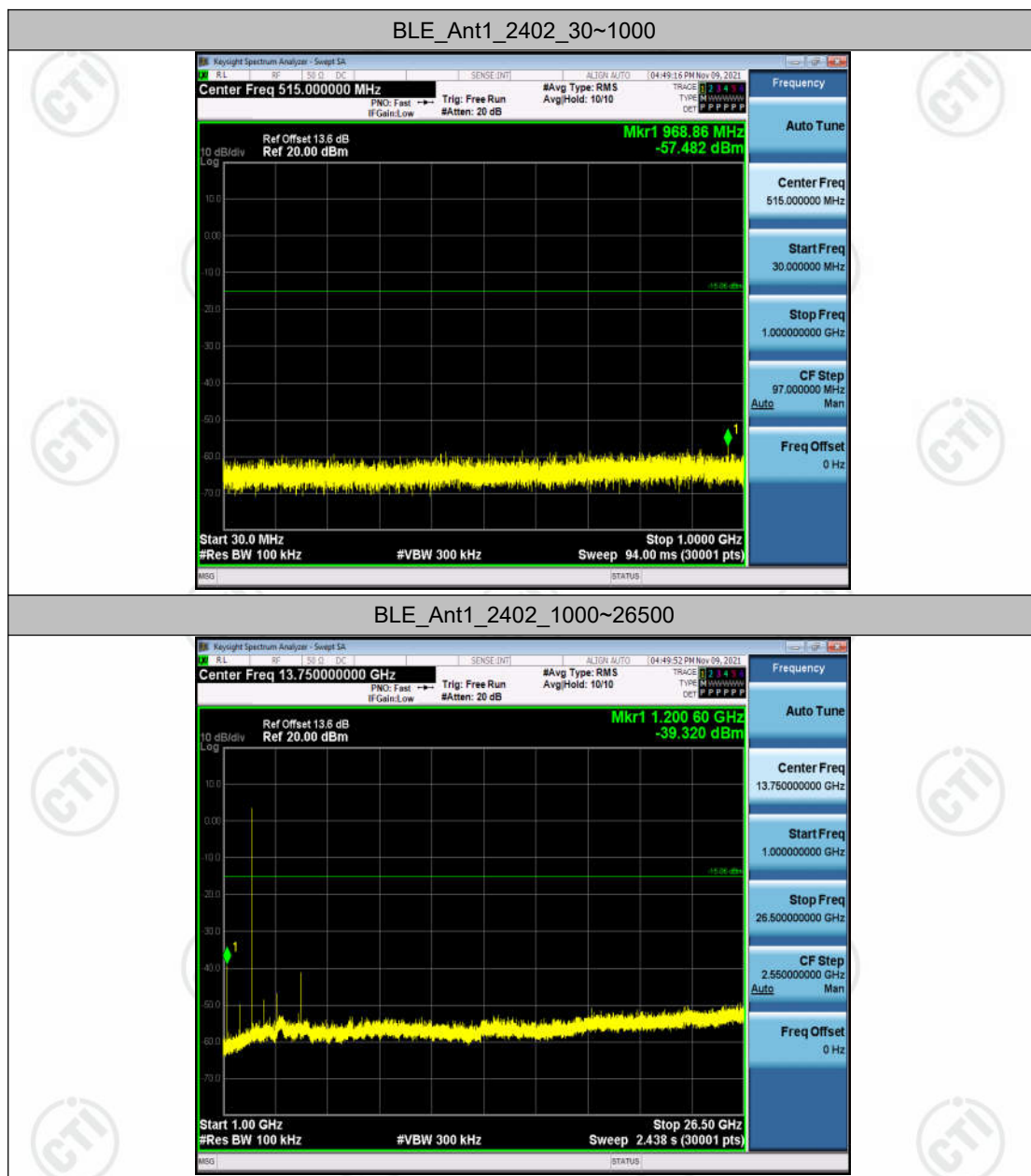


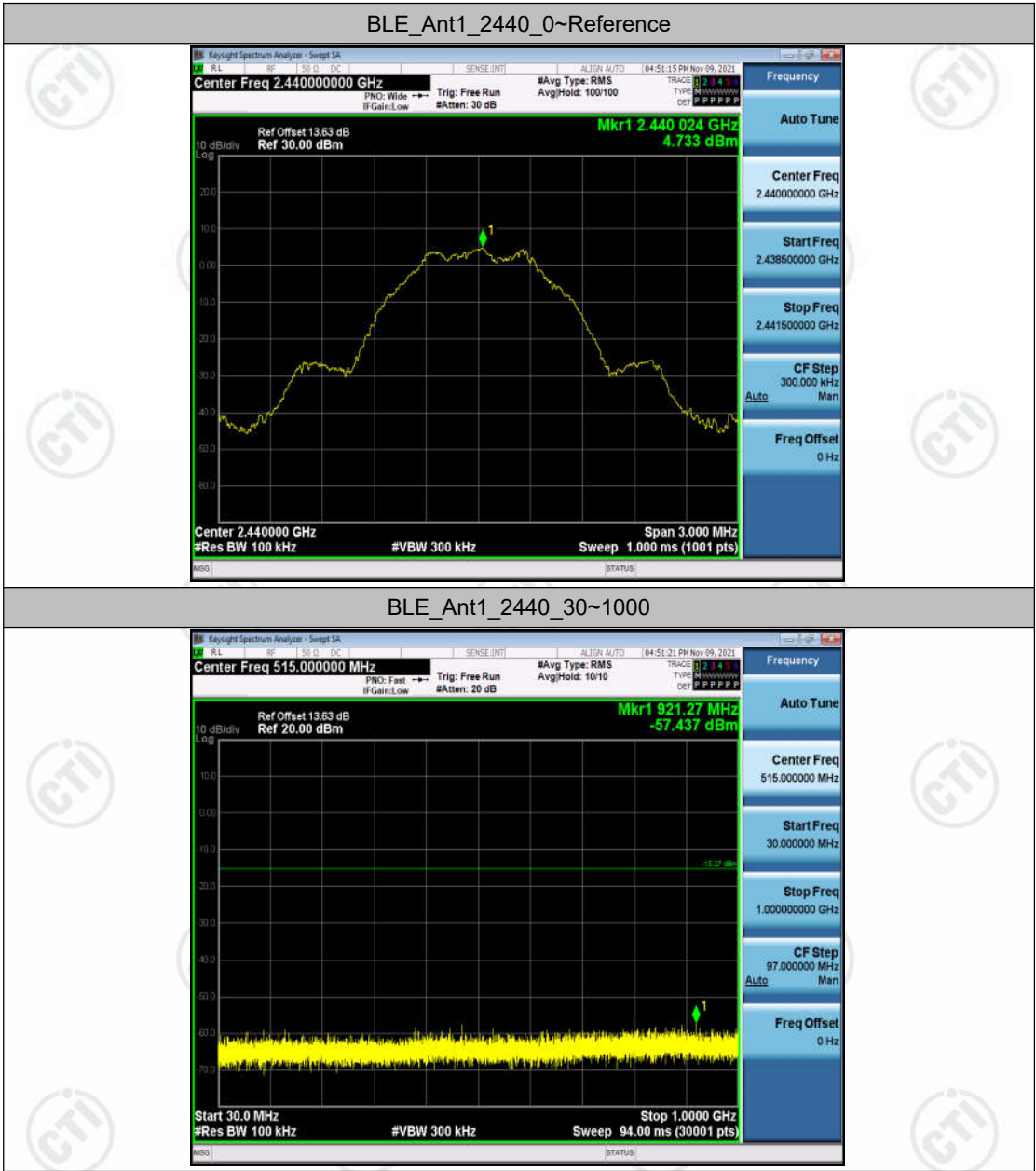


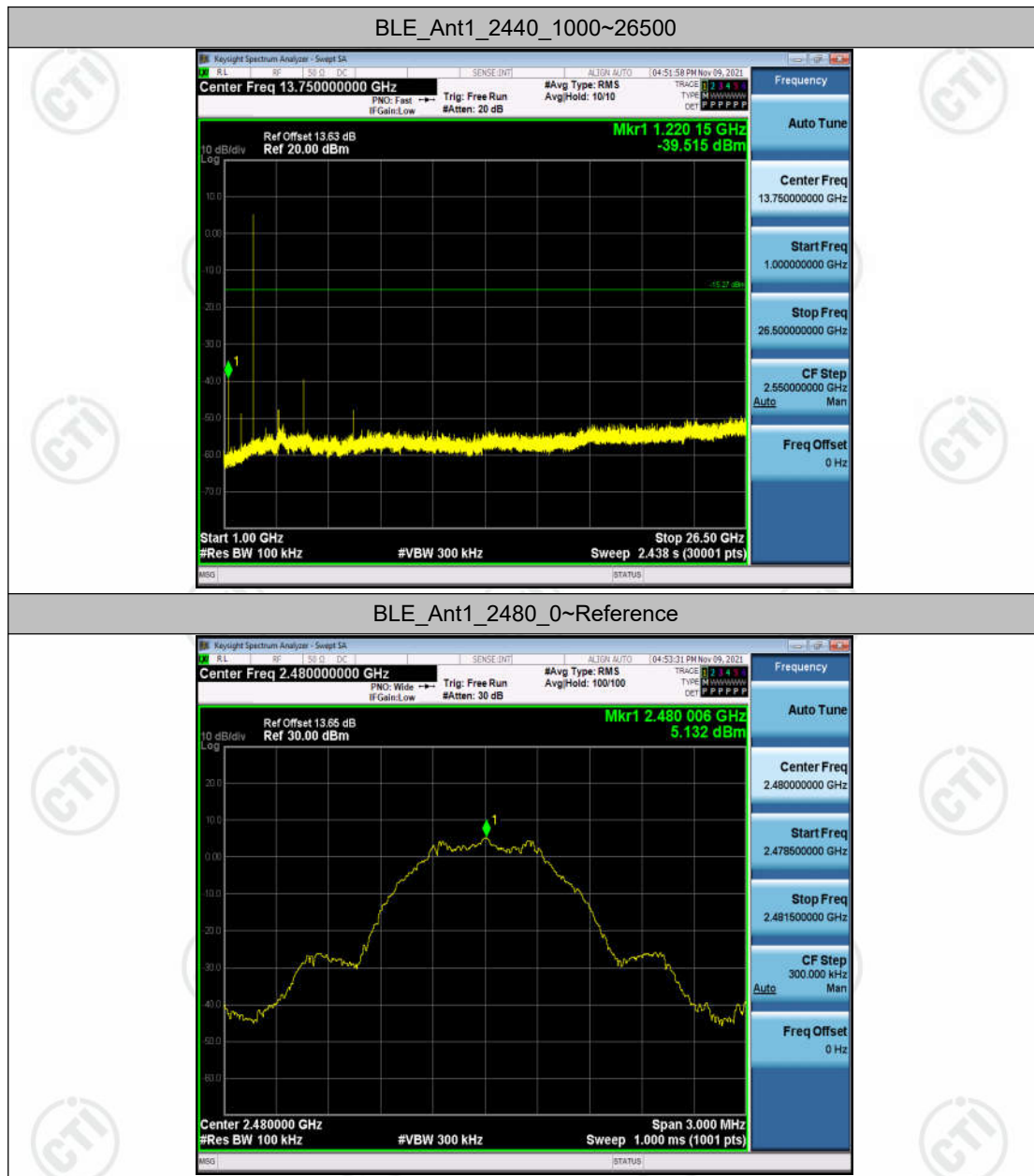


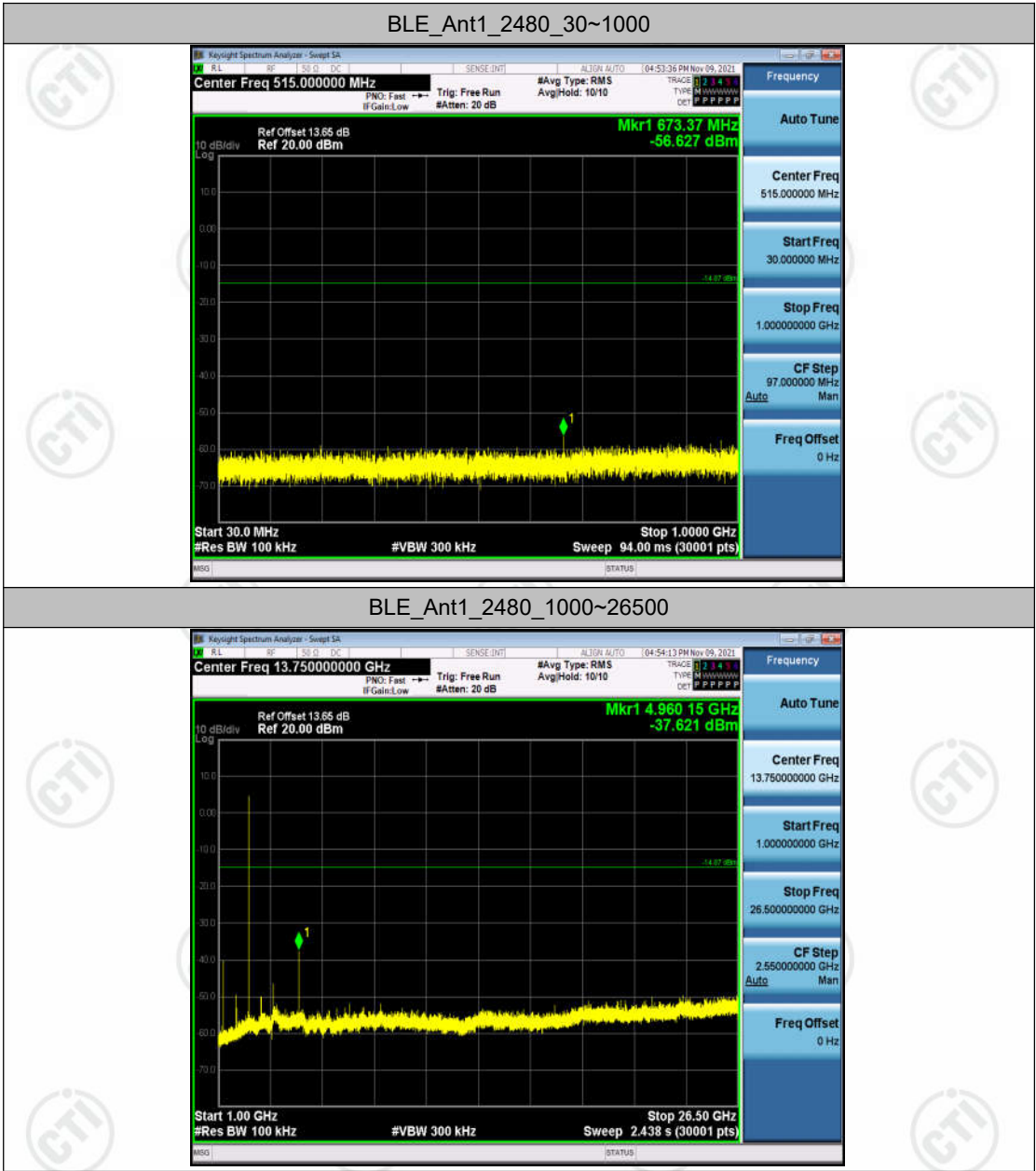
Right ear:











Appendix G: Duty Cycle

Test Result

Left ear:

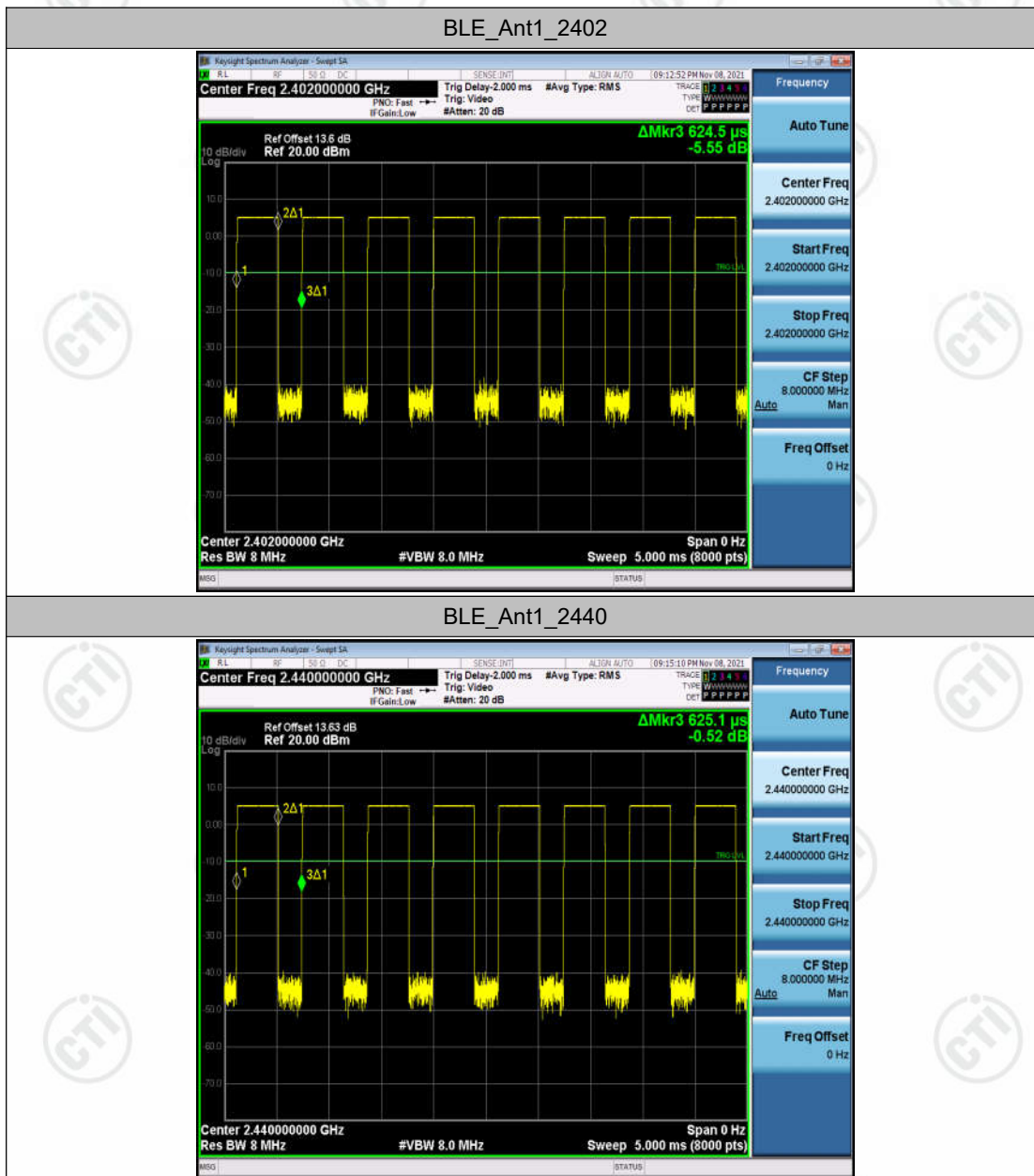
Test Mode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Limit	Verdict
BLE	Ant1	2402	0.40	0.62	63.36	---	PASS
		2440	0.40	0.63	63.40	---	PASS
		2480	0.40	0.63	63.30	---	PASS

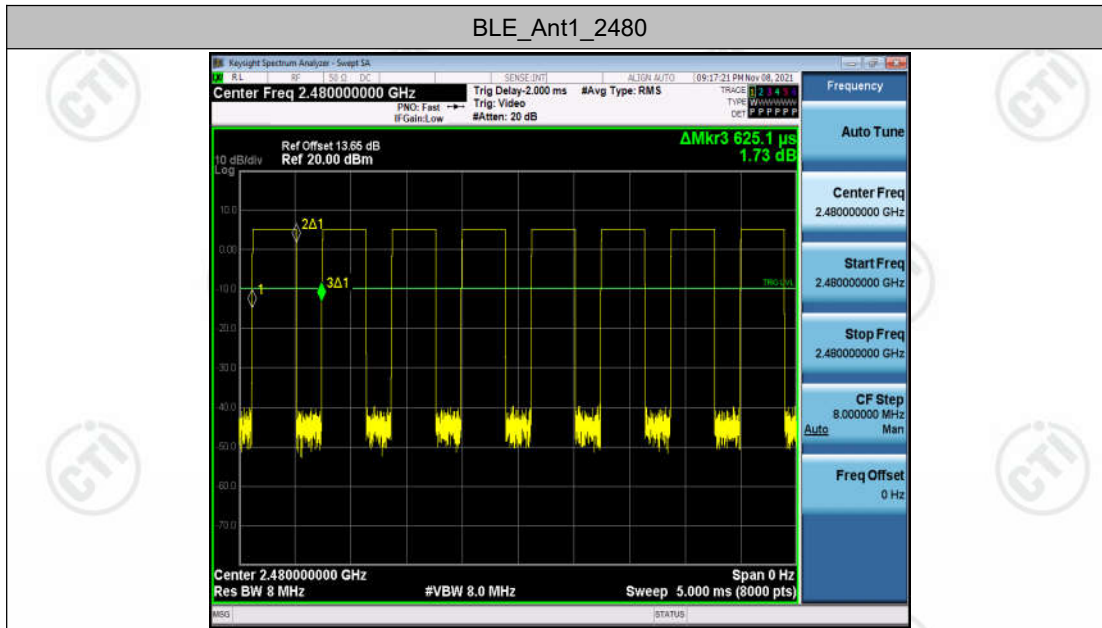
Right ear:

Test Mode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Limit	Verdict
BLE	Ant1	2402	0.40	0.63	63.34	---	PASS
		2440	0.40	0.63	63.30	---	PASS
		2480	0.40	0.63	63.30	---	PASS

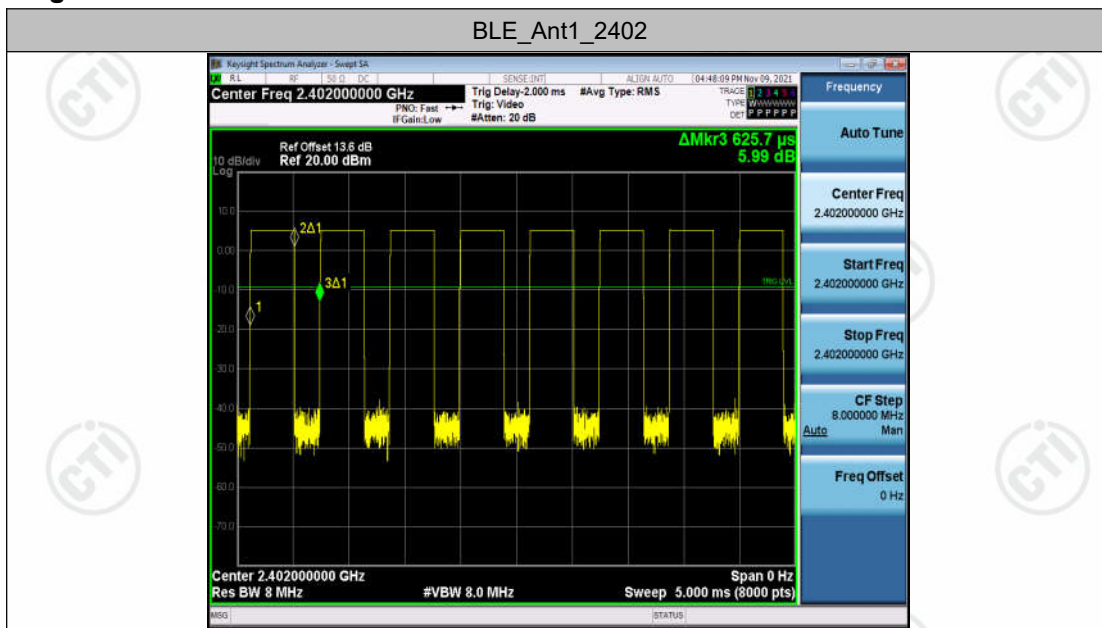
Test Graphs

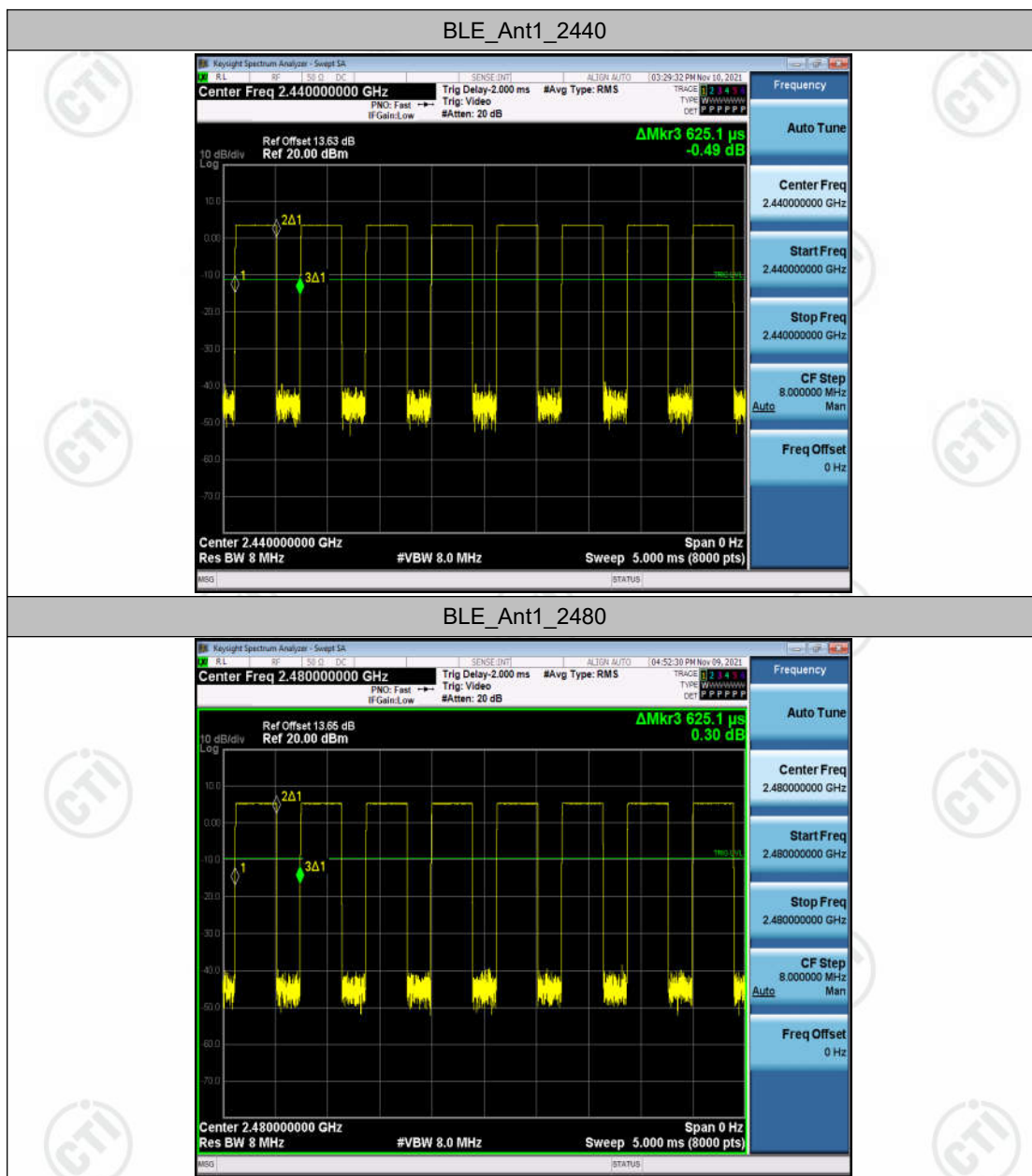
Left ear:





Right ear:





*** End of Report ***