

Appendix: Bluetooth LE

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Appendix A: DTS Bandwidth

Test Result

Test Mode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ear_R	2402	0.676	2401.664	2402.340	0.5	PASS
	Ear_L	2402	0.668	2401.668	2402.336	0.5	PASS
	Ear_R	2440	0.688	2439.660	2440.348	0.5	PASS
	Ear_L	2440	0.672	2439.664	2440.336	0.5	PASS
	Ear_R	2480	0.696	2479.652	2480.348	0.5	PASS
	Ear_L	2480	0.672	2479.664	2480.336	0.5	PASS
BLE_2M	Ear_R	2402	1.160	2401.424	2402.584	0.5	PASS
	Ear_L	2402	1.160	2401.424	2402.584	0.5	PASS
	Ear_R	2440	1.160	2439.424	2440.584	0.5	PASS
	Ear_L	2440	1.160	2439.424	2440.584	0.5	PASS
	Ear_R	2480	1.160	2479.424	2480.584	0.5	PASS
	Ear_L	2480	1.160	2479.424	2480.584	0.5	PASS

Test Graphs













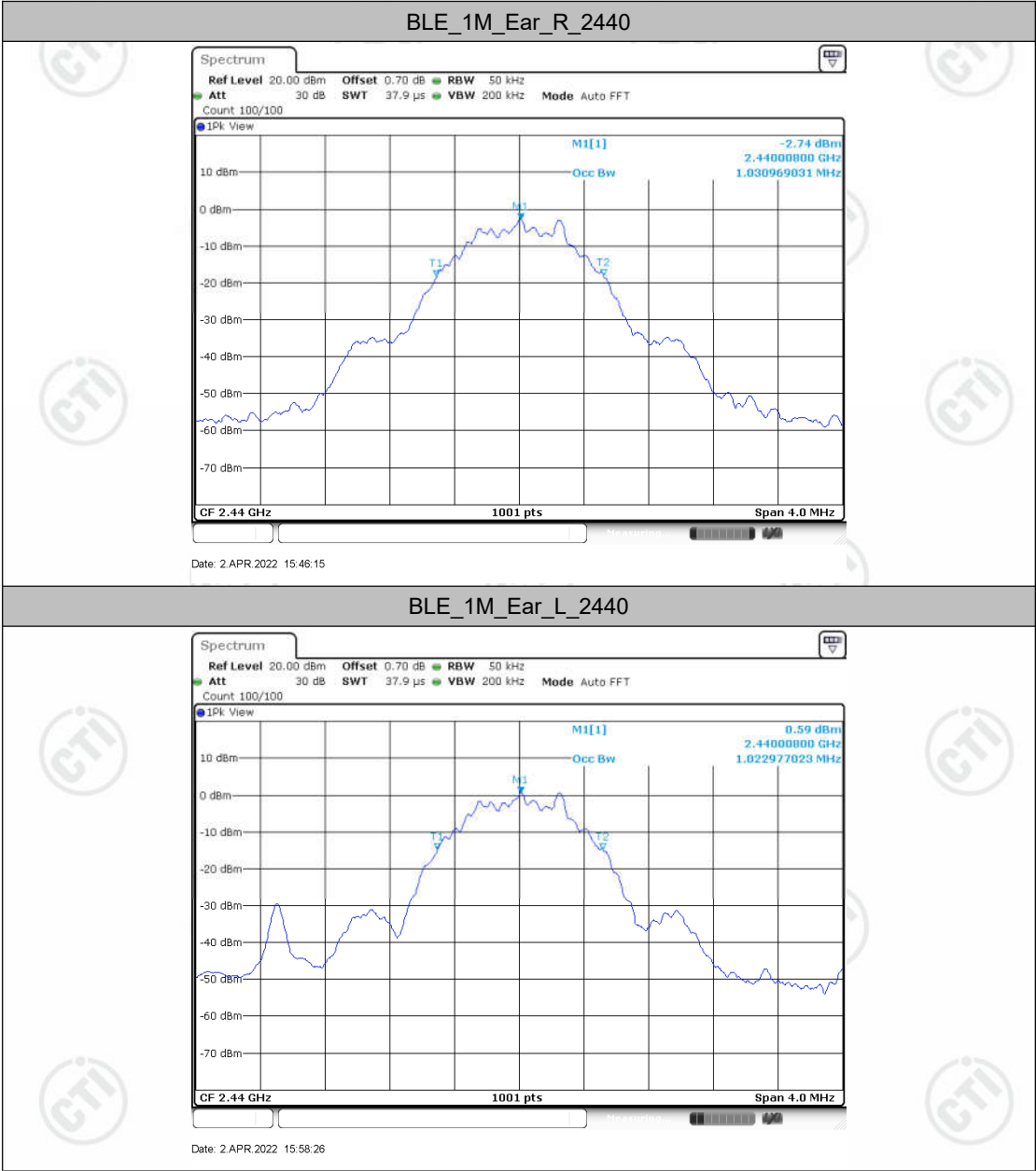
Appendix B: Occupied Channel Bandwidth

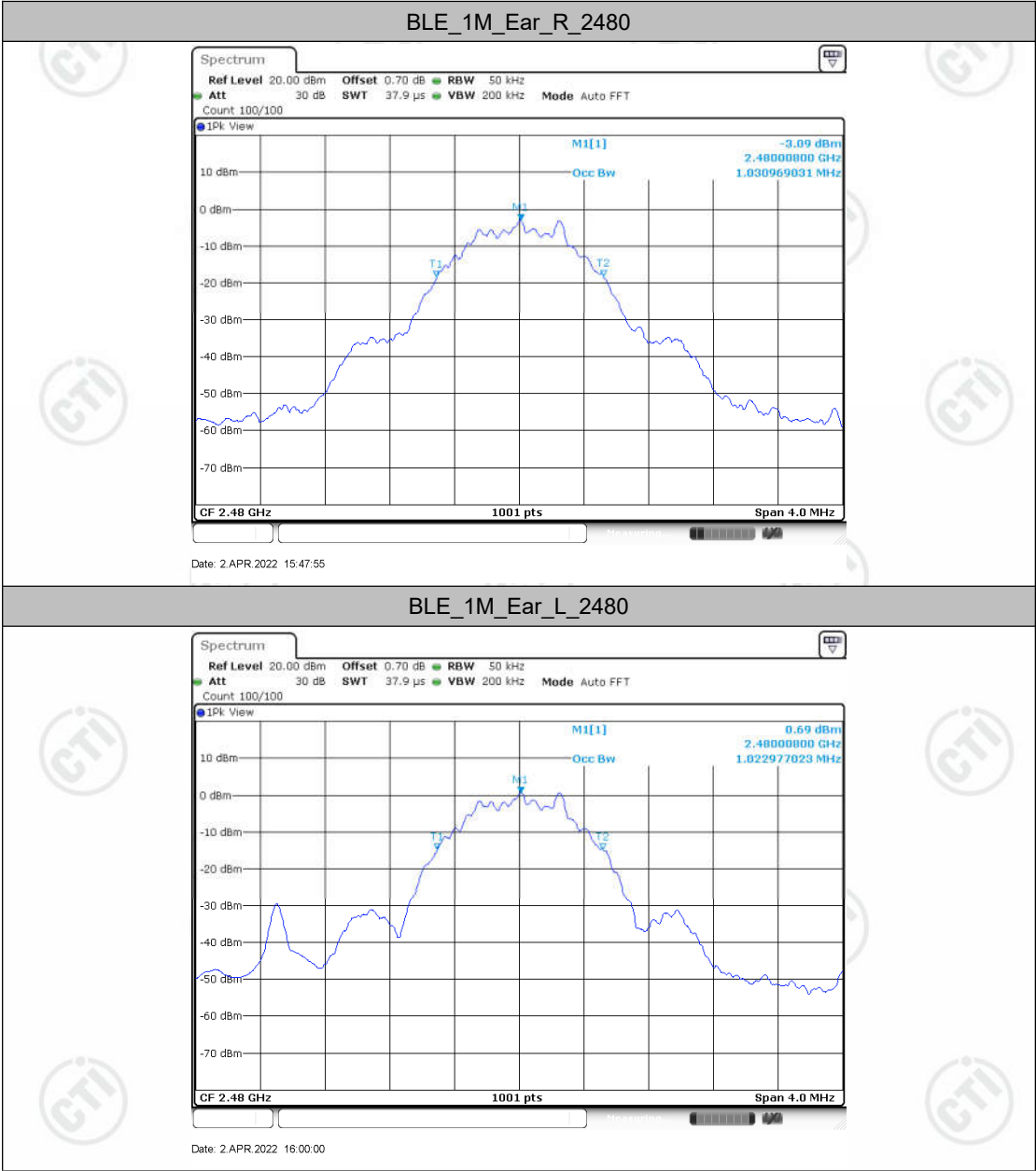
Test Result

Test Mode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ear_R	2402	1.023	2401.493	2402.515	---	PASS
	Ear_L	2402	1.023	2401.493	2402.515	---	PASS
	Ear_R	2440	1.031	2439.489	2440.519	---	PASS
	Ear_L	2440	1.023	2439.493	2440.515	---	PASS
	Ear_R	2480	1.031	2479.489	2480.519	---	PASS
	Ear_L	2480	1.023	2479.493	2480.515	---	PASS
BLE_2M	Ear_R	2402	2.026	2401.009	2403.035	---	PASS
	Ear_L	2402	2.03	2401.001	2403.031	---	PASS
	Ear_R	2440	2.03	2439.009	2441.039	---	PASS
	Ear_L	2440	2.034	2439.001	2441.035	---	PASS
	Ear_R	2480	2.03	2479.009	2481.039	---	PASS
	Ear_L	2480	2.034	2479.001	2481.035	---	PASS

Test Graphs









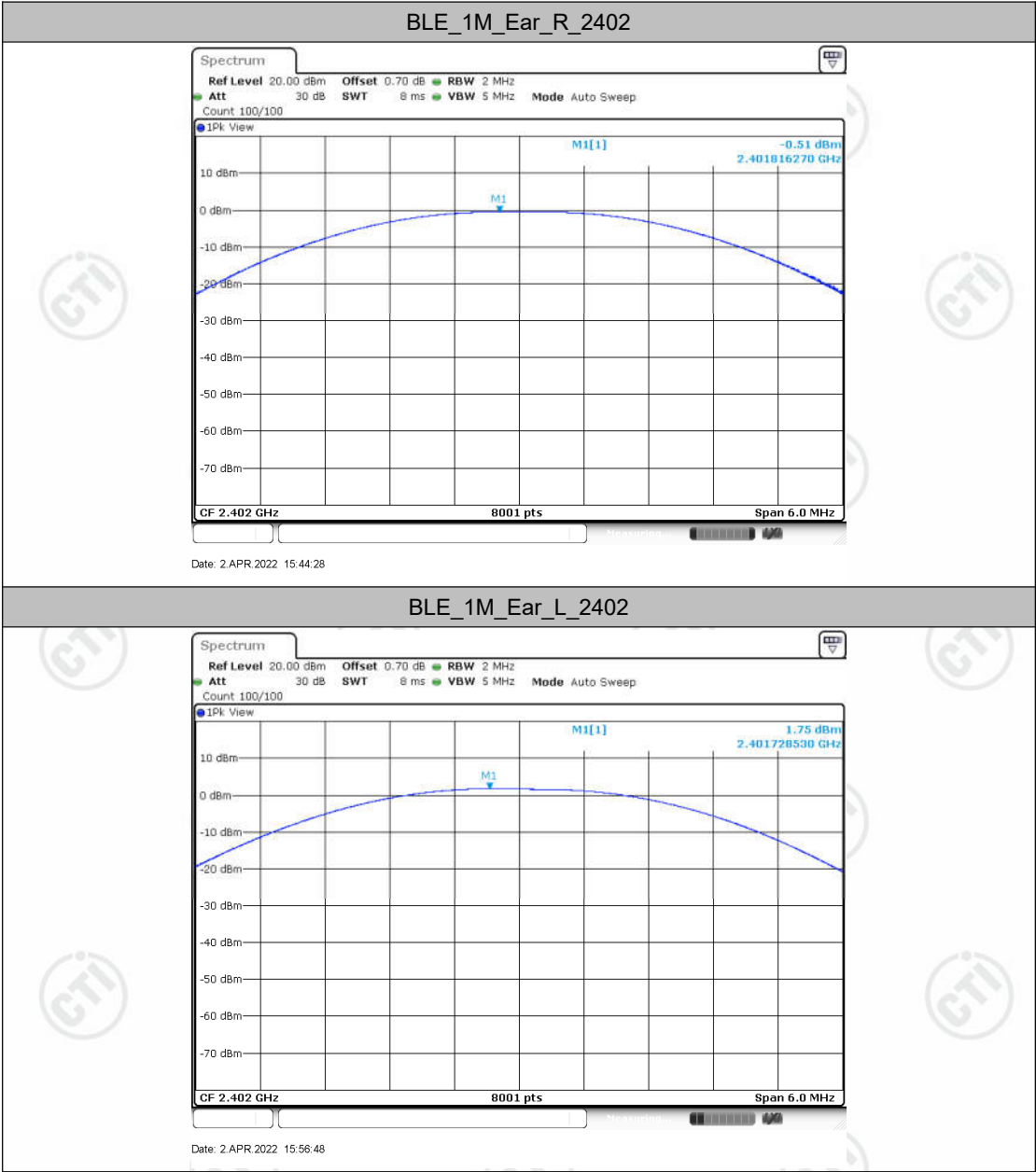


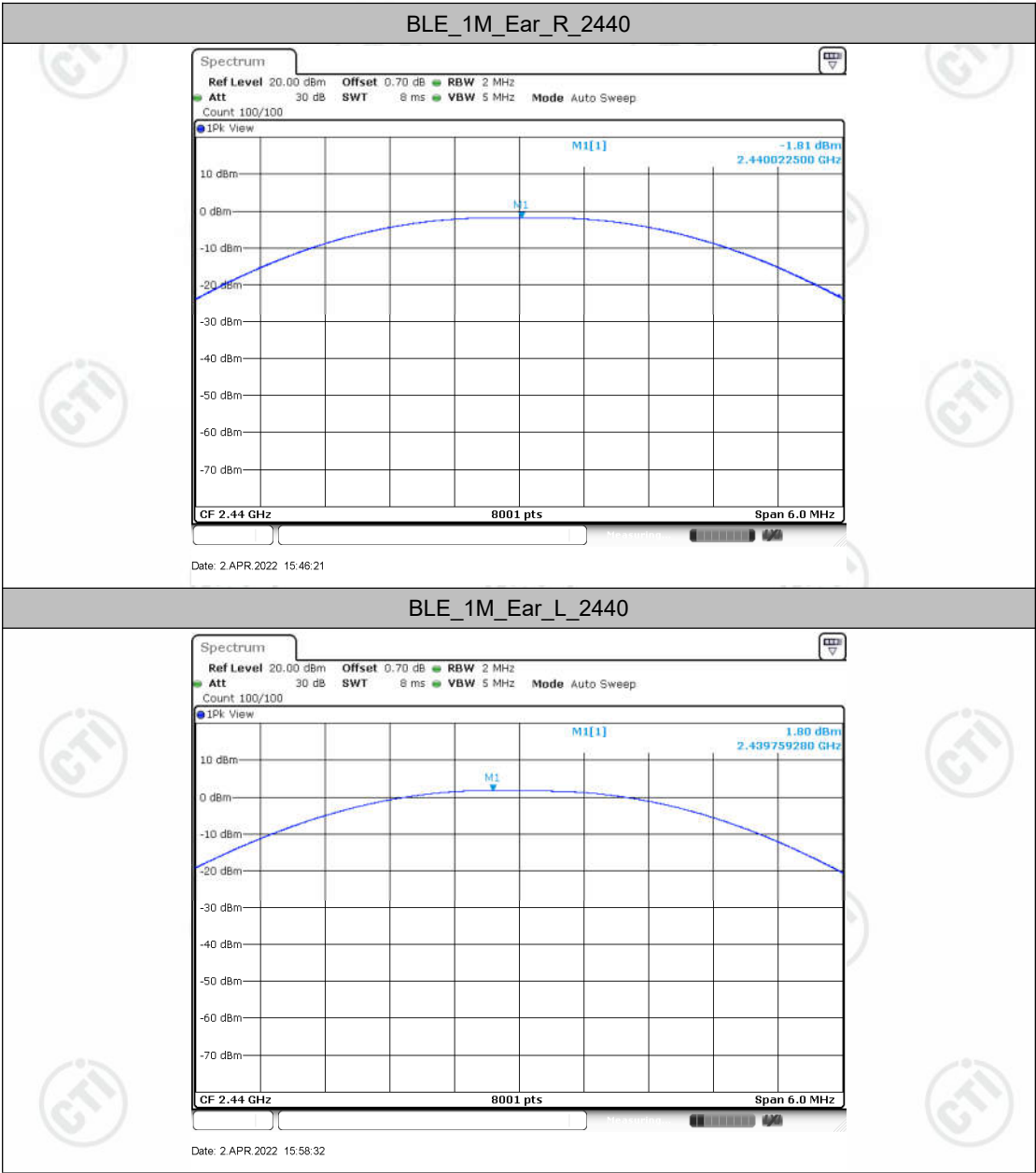
Appendix C: Maximum conducted output power

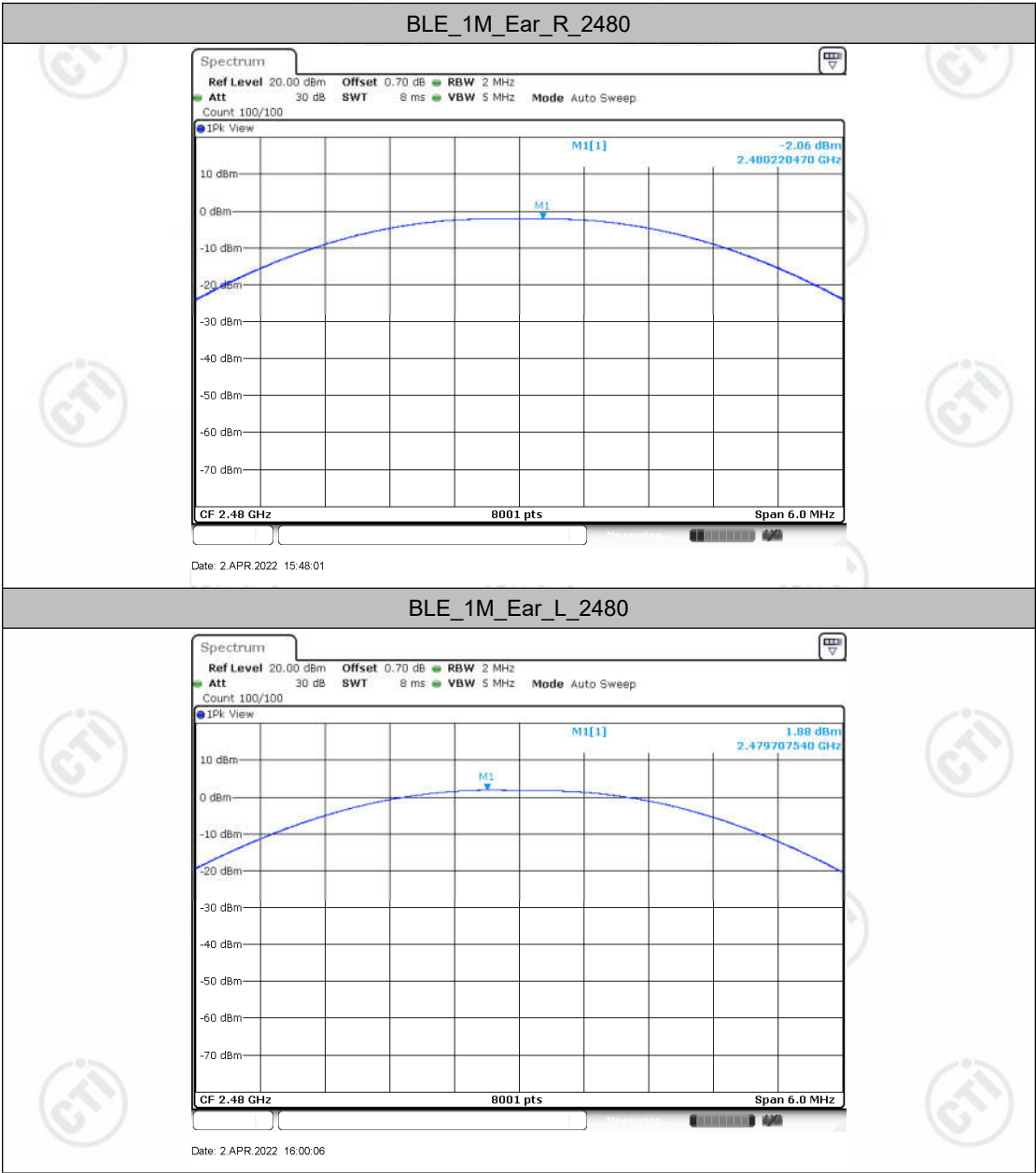
Test Result

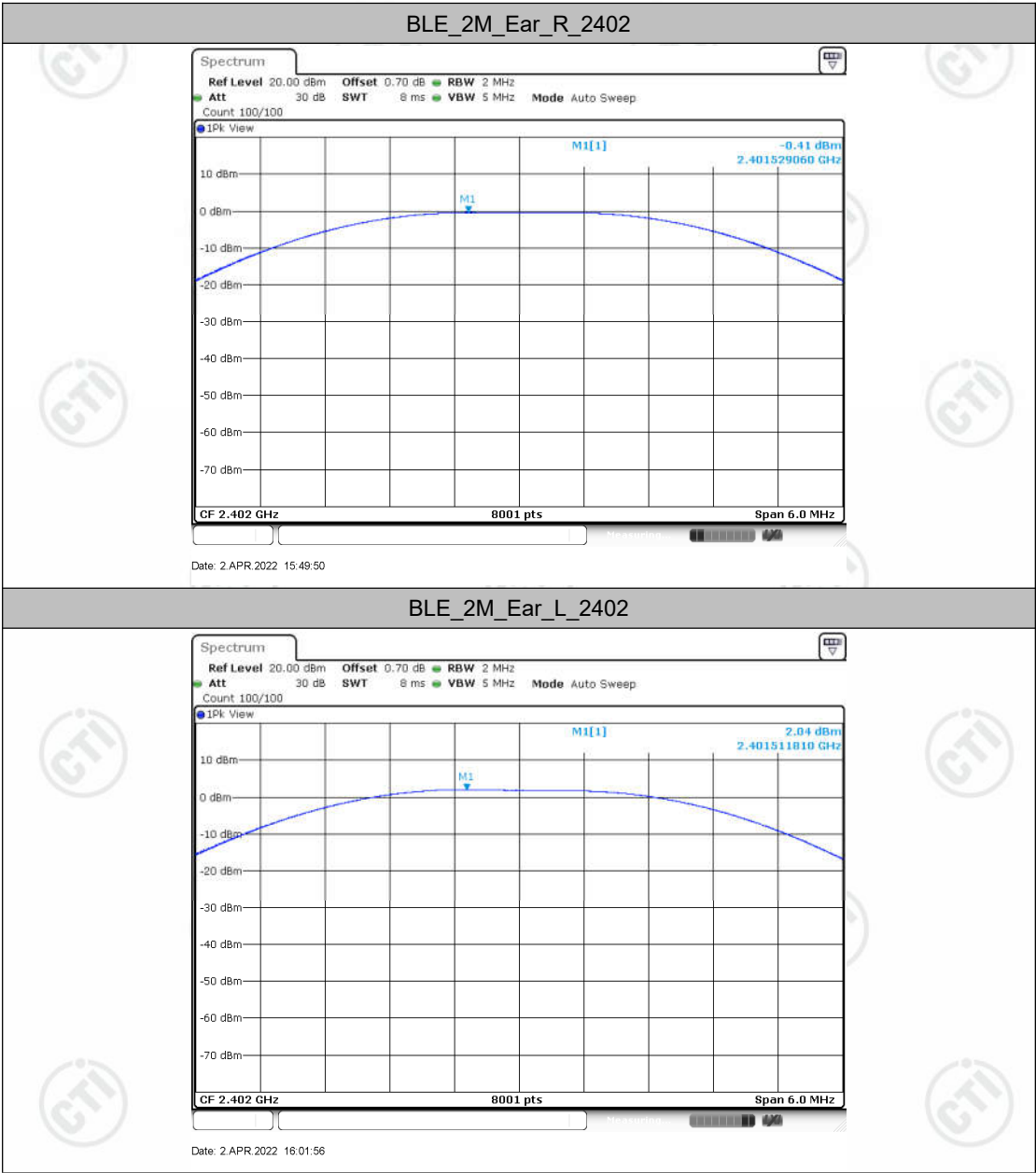
Test Mode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ear_R	2402	-0.51	<=30	PASS
	Ear_L	2402	1.75	<=30	PASS
	Ear_R	2440	-1.81	<=30	PASS
	Ear_L	2440	1.8	<=30	PASS
	Ear_R	2480	-2.06	<=30	PASS
	Ear_L	2480	1.88	<=30	PASS
BLE_2M	Ear_R	2402	-0.41	<=30	PASS
	Ear_L	2402	2.04	<=30	PASS
	Ear_R	2440	-1.64	<=30	PASS
	Ear_L	2440	2.13	<=30	PASS
	Ear_R	2480	-1.91	<=30	PASS
	Ear_L	2480	2.21	<=30	PASS

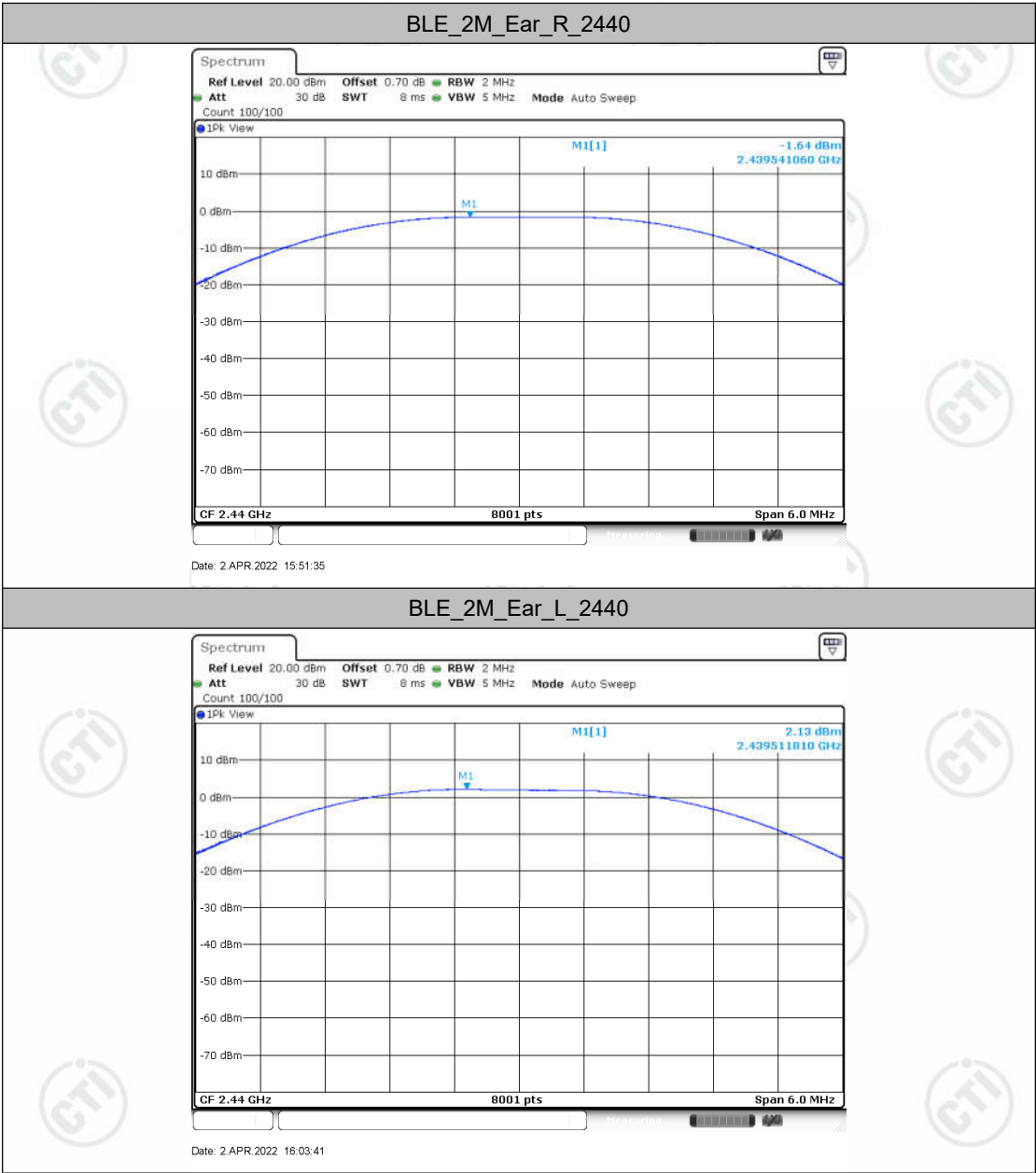
Test Graphs

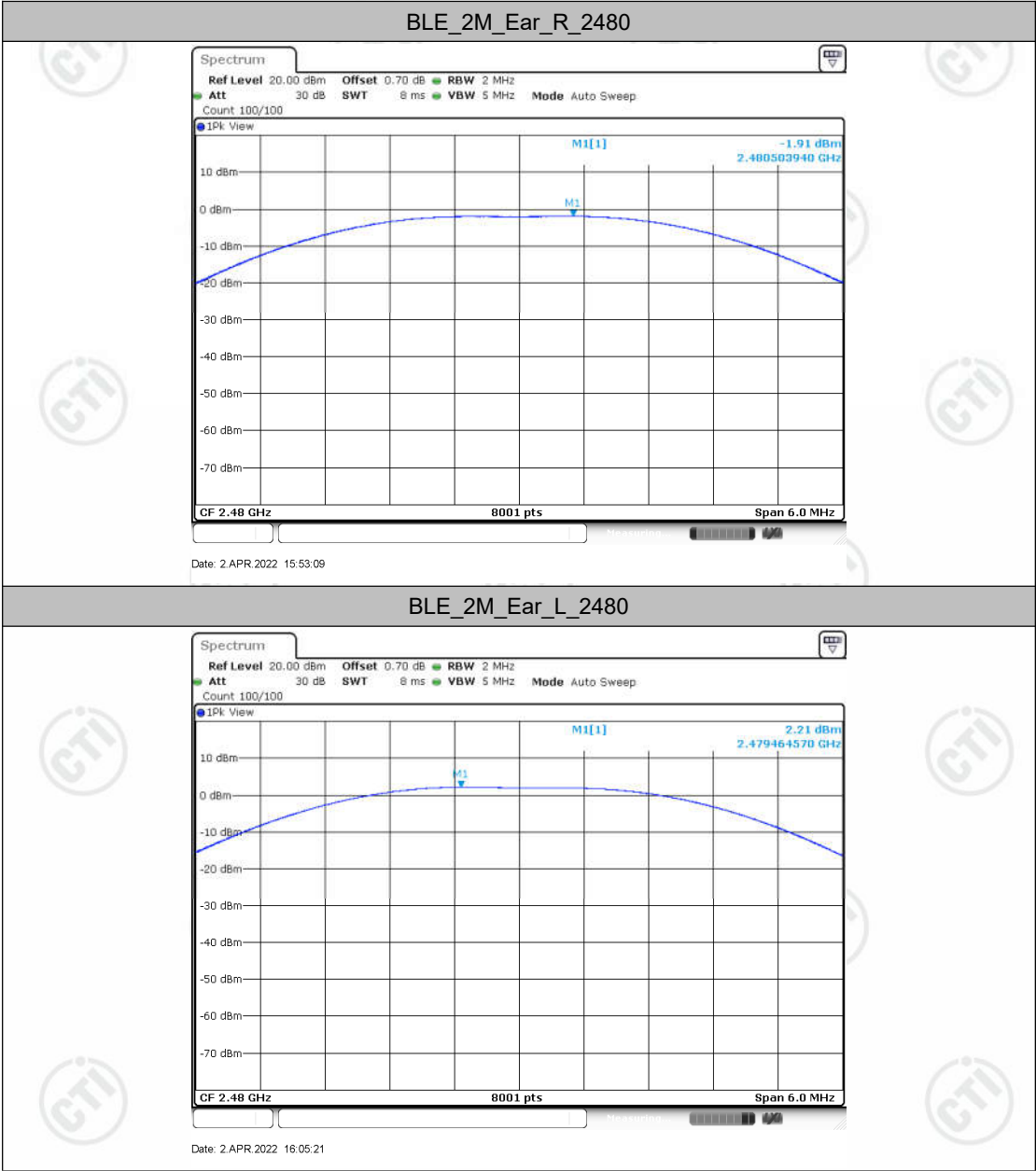










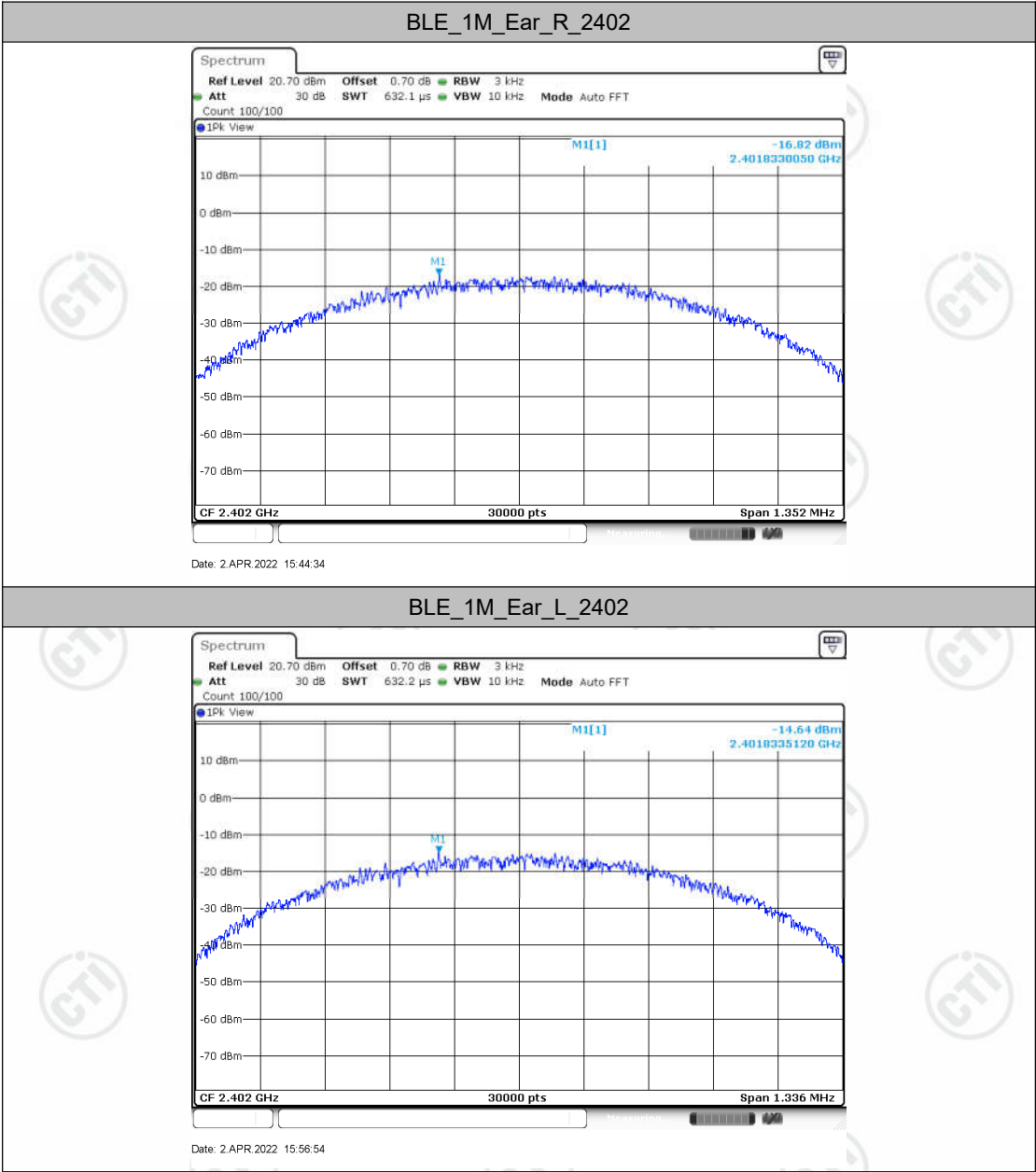


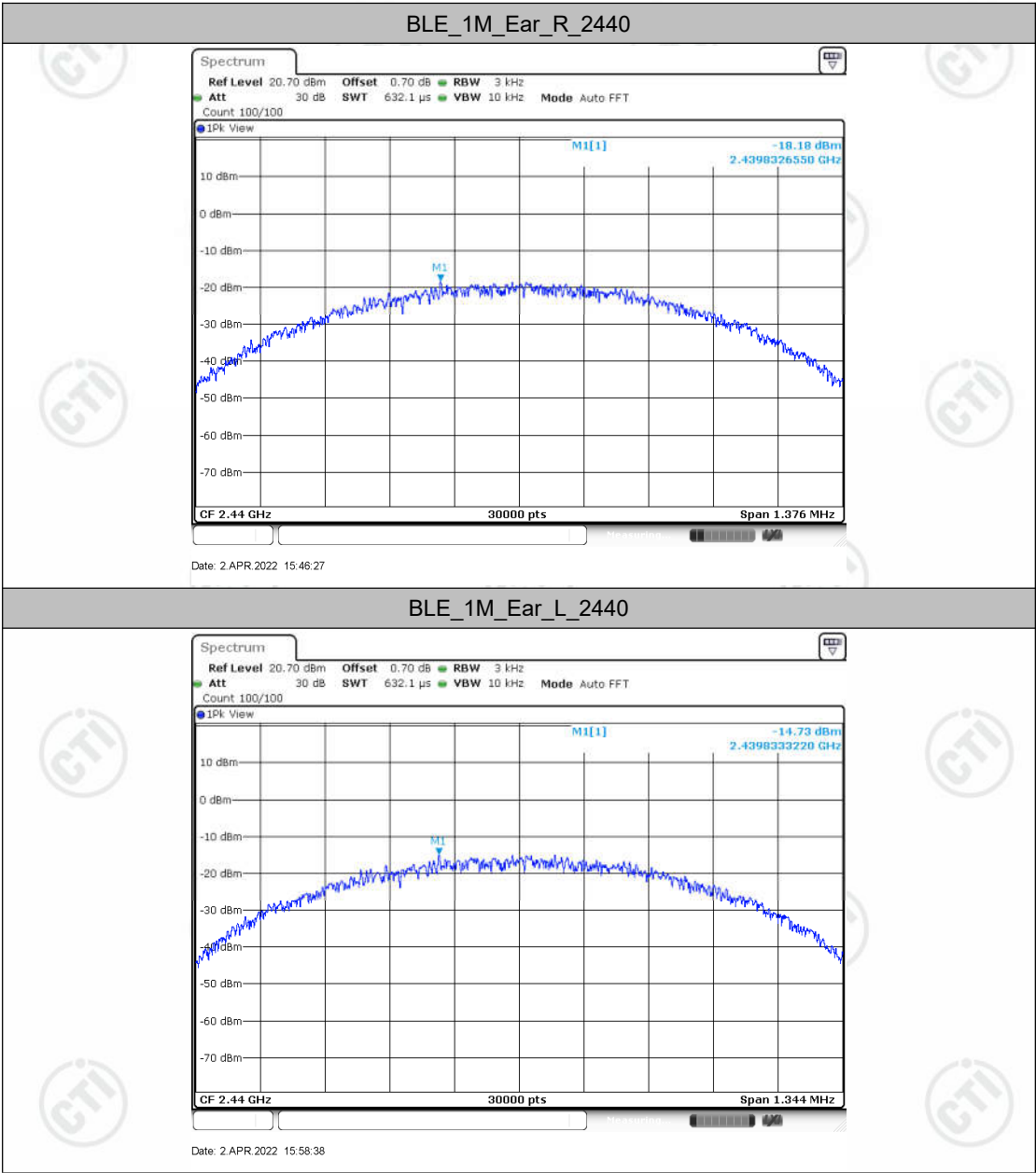
Appendix D: Maximum power spectral density

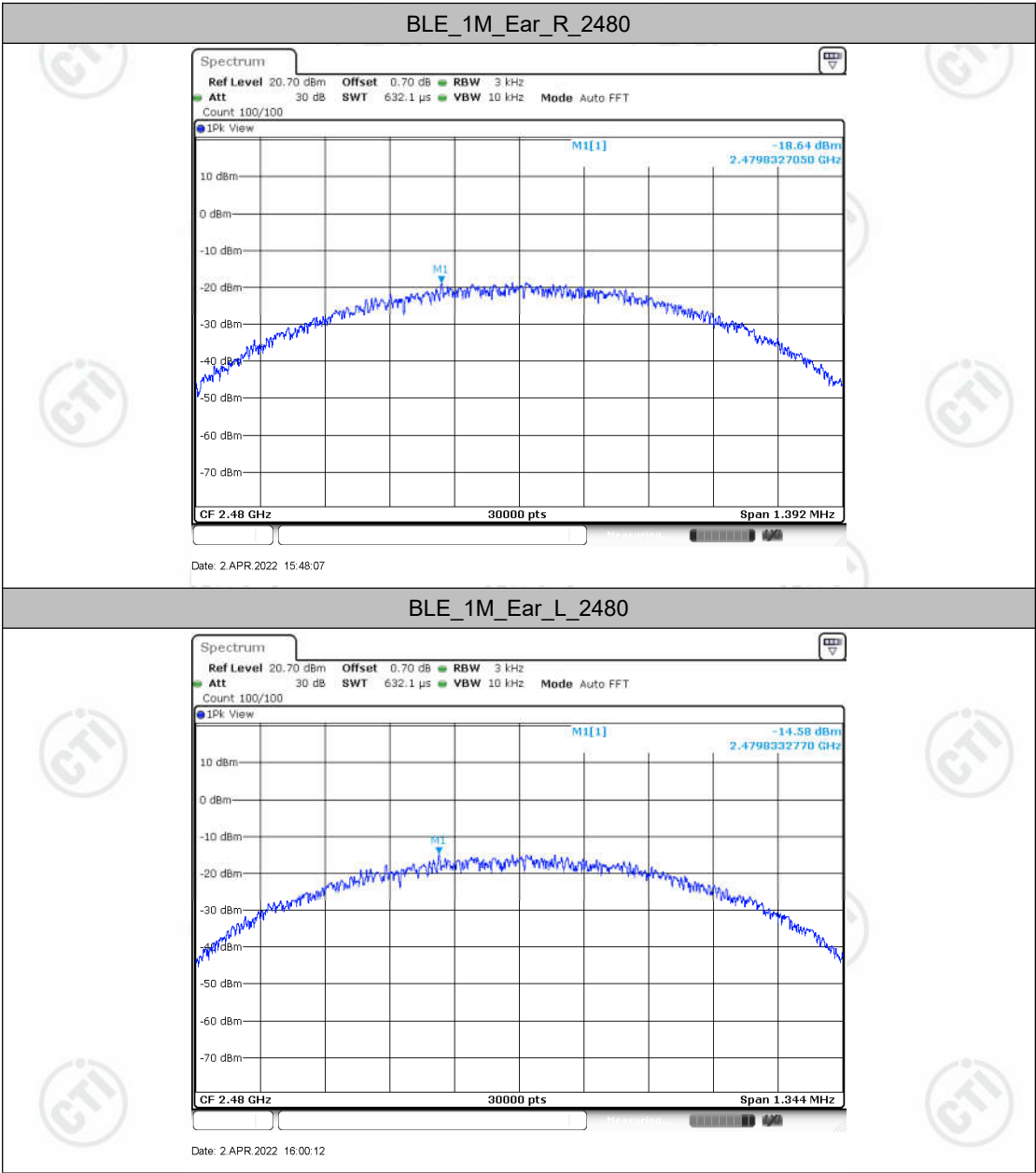
Test Result

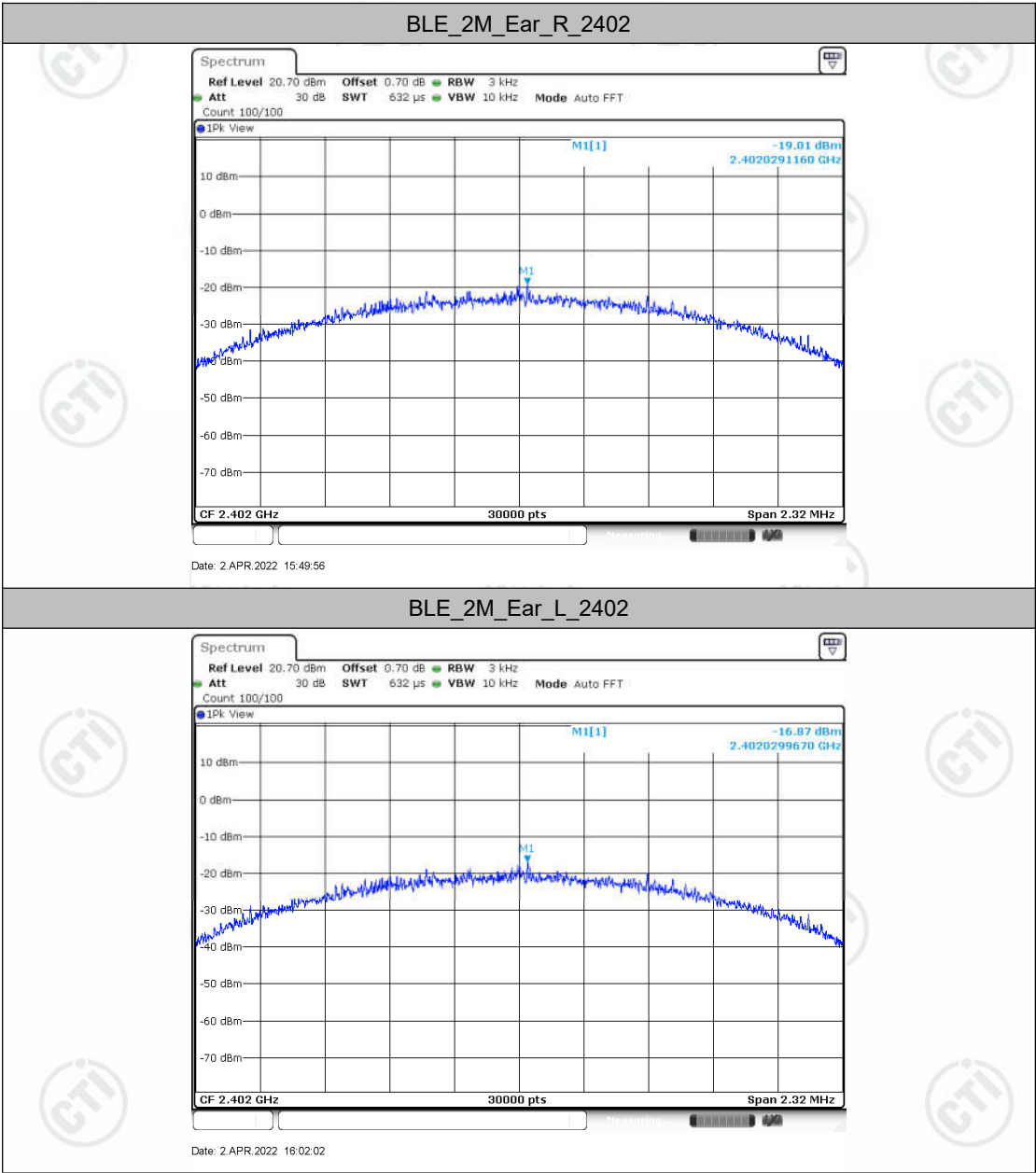
Test Mode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ear_R	2402	-16.82	<=8	PASS
	Ear_L	2402	-14.64	<=8	PASS
	Ear_R	2440	-18.18	<=8	PASS
	Ear_L	2440	-14.73	<=8	PASS
	Ear_R	2480	-18.64	<=8	PASS
	Ear_L	2480	-14.58	<=8	PASS
BLE_2M	Ear_R	2402	-19.01	<=8	PASS
	Ear_L	2402	-16.87	<=8	PASS
	Ear_R	2440	-20.34	<=8	PASS
	Ear_L	2440	-16.75	<=8	PASS
	Ear_R	2480	-20.55	<=8	PASS
	Ear_L	2480	-16.66	<=8	PASS

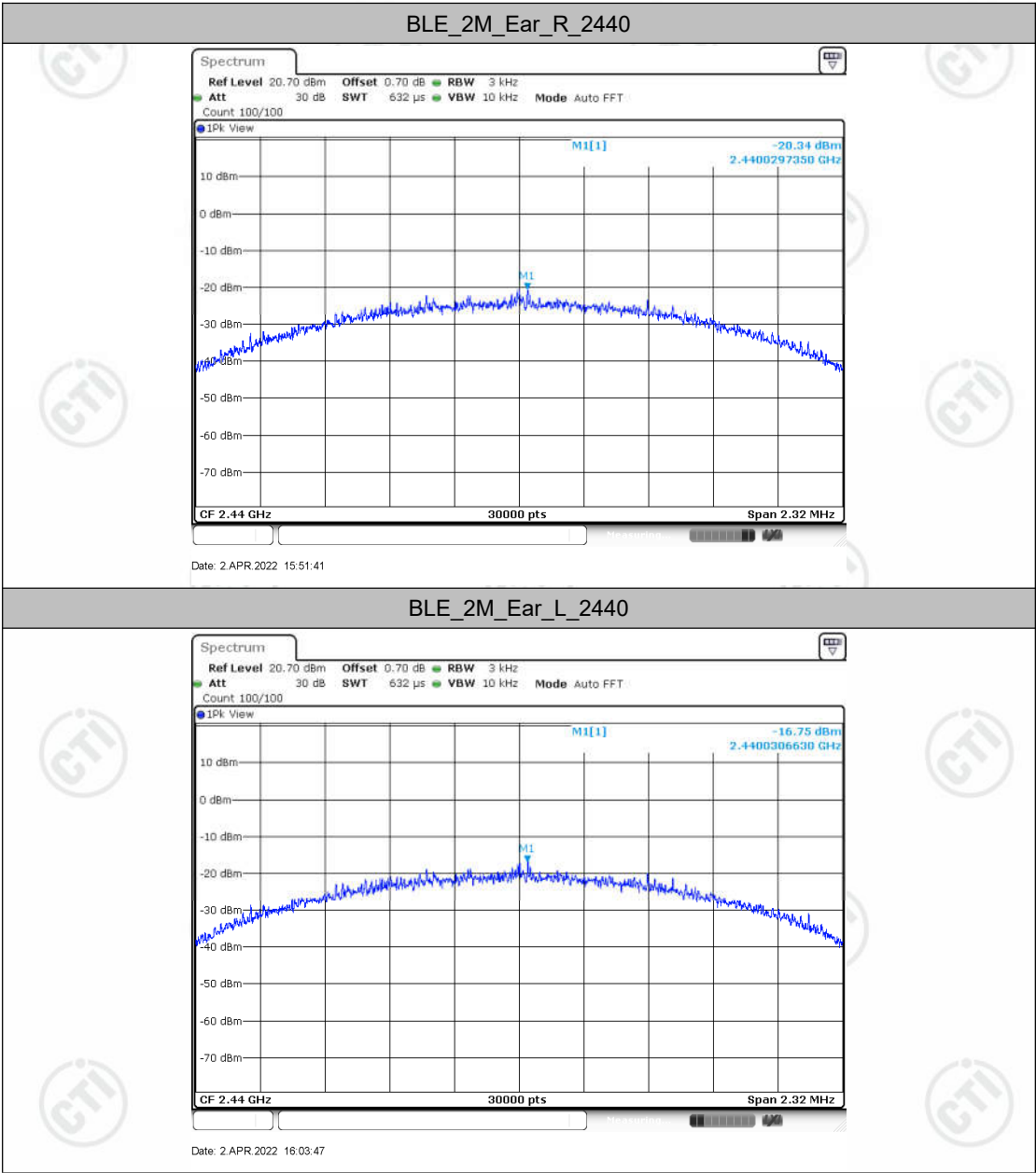
Test Graphs

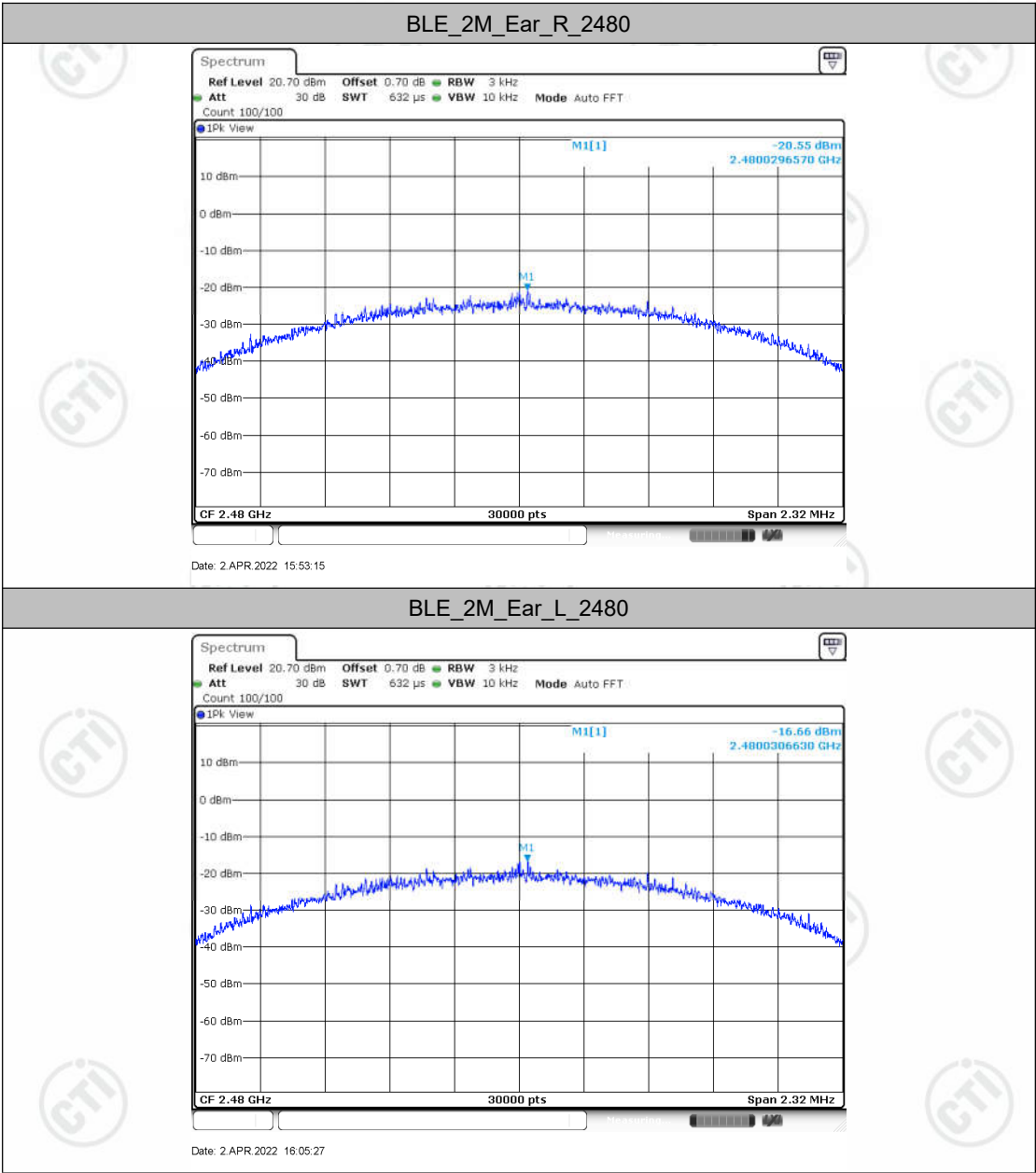










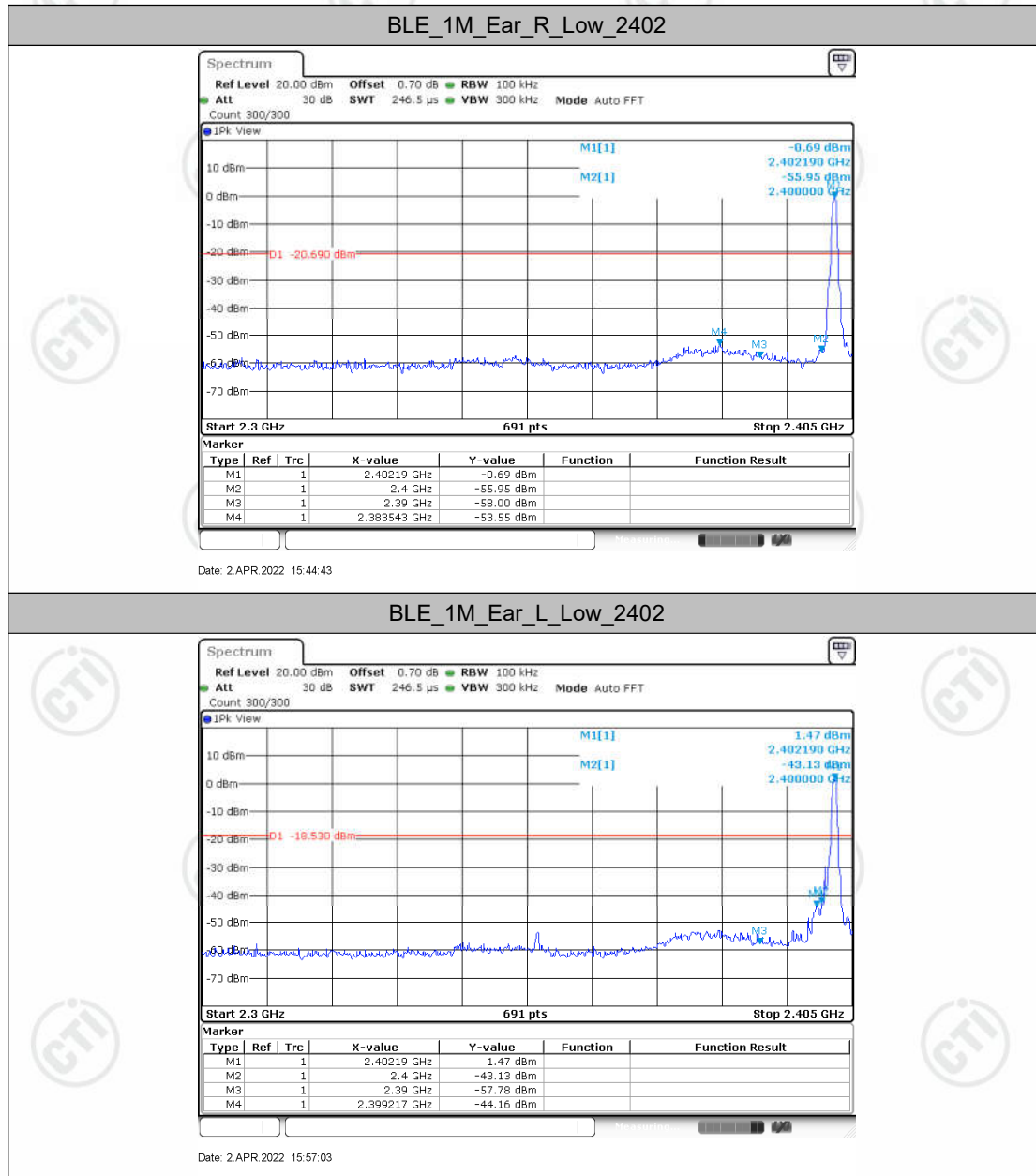


Appendix E: Band edge measurements

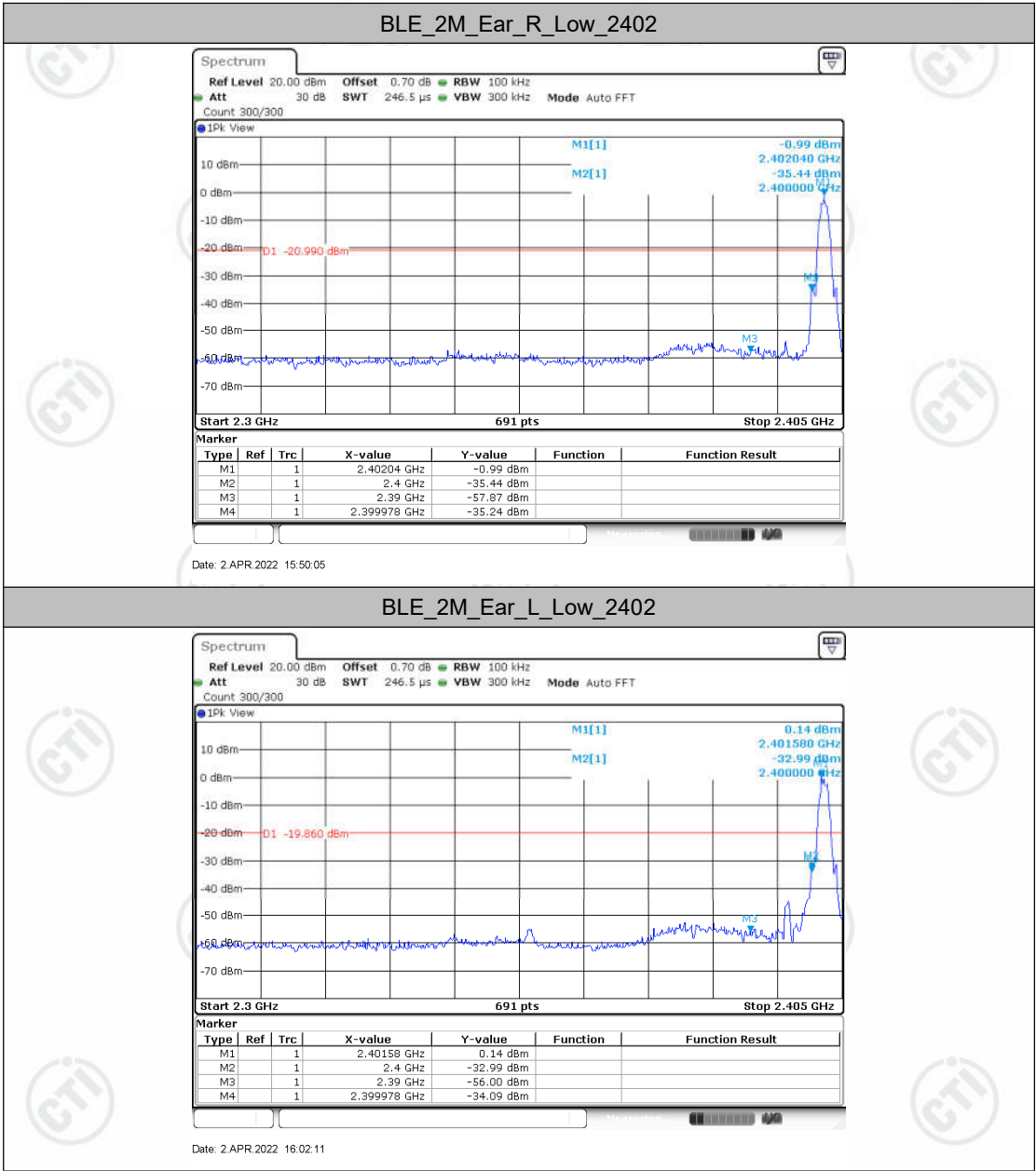
Test Result

Test Mode	Antenna	Ch Name	Channel	Ref Level [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ear_R	Low	2402	-0.69	-53.55	<=-20.69	PASS
	Ear_L	Low	2402	1.47	-44.16	<=-18.53	PASS
	Ear_R	High	2480	-2.27	-54	<=-22.27	PASS
	Ear_L	High	2480	1.51	-44.79	<=-18.49	PASS
BLE_2M	Ear_R	Low	2402	-0.99	-35.24	<=-20.99	PASS
	Ear_L	Low	2402	0.14	-34.09	<=-19.86	PASS
	Ear_R	High	2480	-2.51	-51.14	<=-22.51	PASS
	Ear_L	High	2480	1.49	-46.27	<=-18.51	PASS

Test Graphs









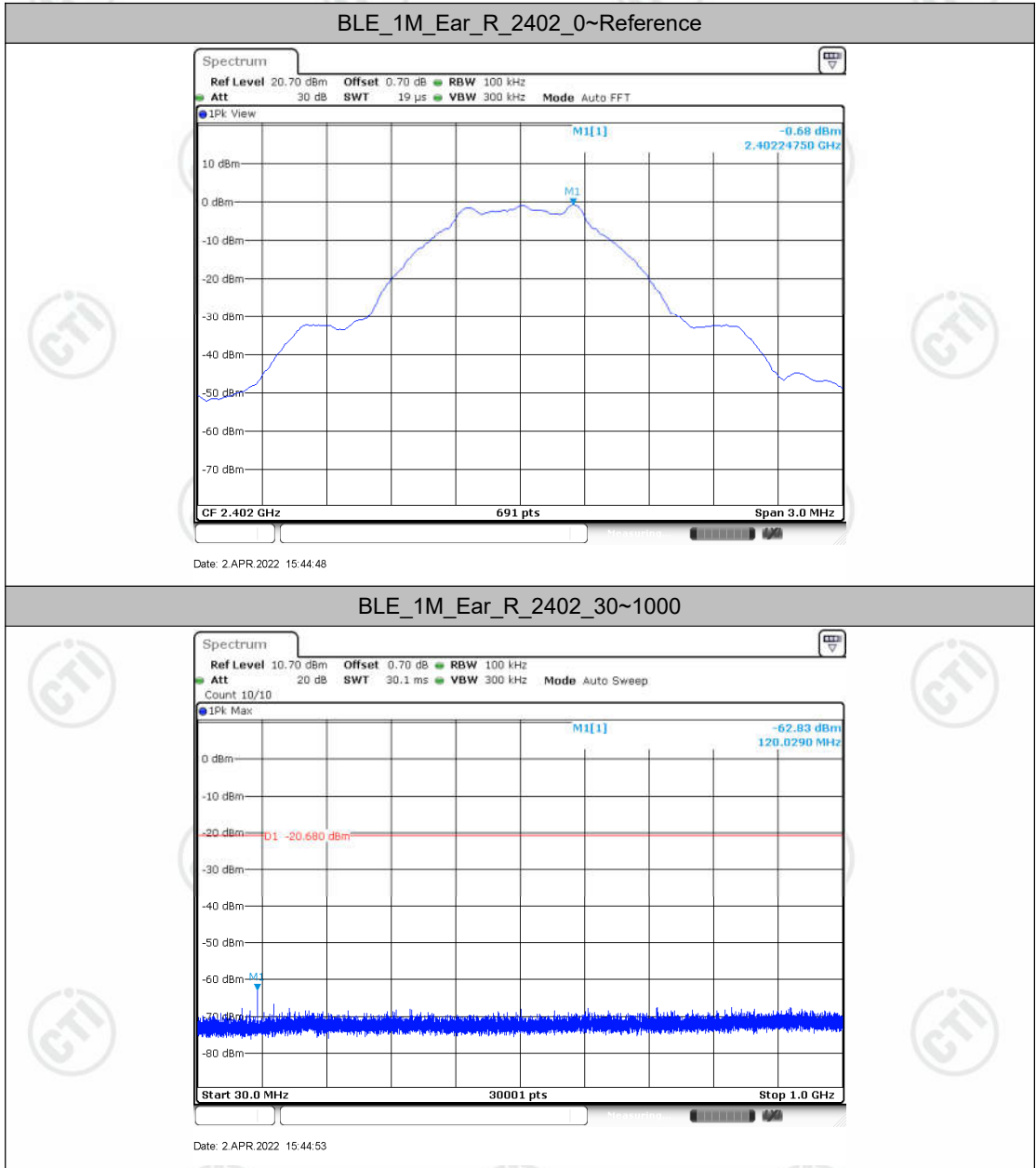
Appendix F: Conducted Spurious Emission

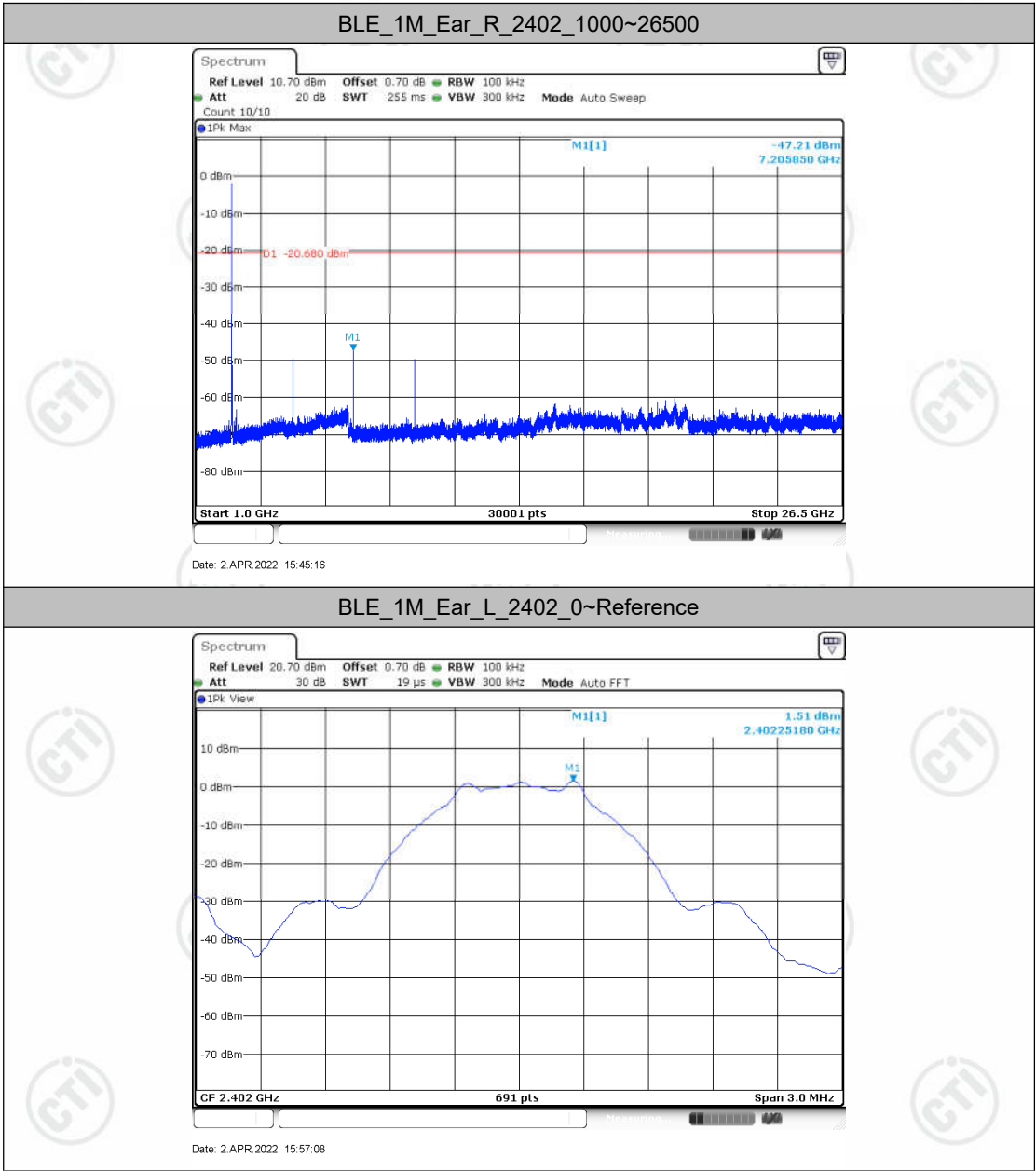
Test Result

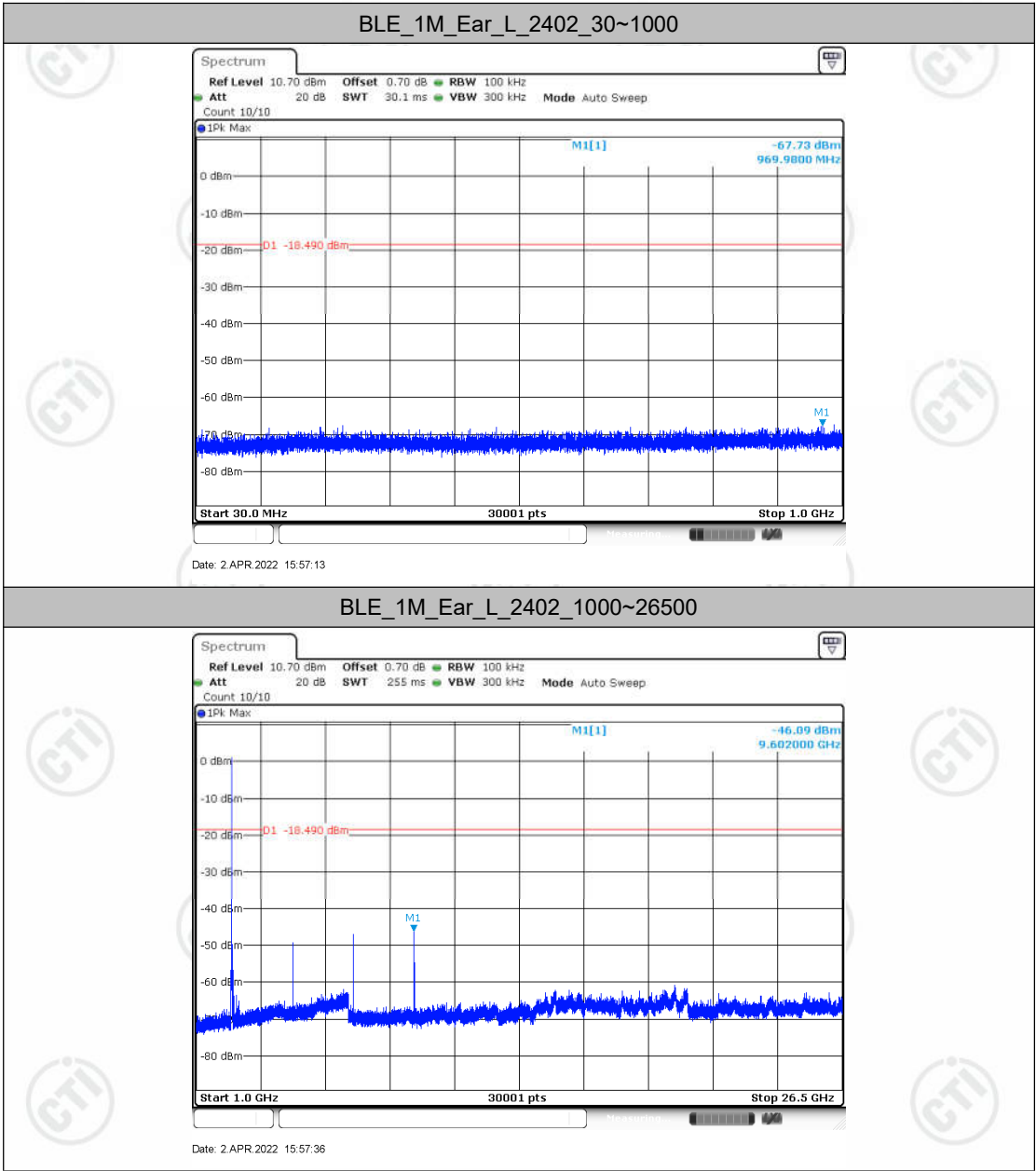
Test Mode	Antenna	Channel	Freq Range [MHz]	Ref Level [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ear_R	2402	Reference	-0.68	-0.68	---	PASS
			30~1000	---	-62.83	<=-20.68	PASS
			1000~26500	---	-47.21	<=-20.68	PASS
	Ear_L	2402	Reference	1.51	1.51	---	PASS
			30~1000	---	-67.73	<=-18.49	PASS
			1000~26500	---	-46.09	<=-18.49	PASS
	Ear_R	2440	Reference	-1.95	-1.95	---	PASS
			30~1000	---	-62.69	<=-21.95	PASS
			1000~26500	---	-44.69	<=-21.95	PASS
	Ear_L	2440	Reference	1.52	1.52	---	PASS
			30~1000	---	-67.24	<=-18.48	PASS
			1000~26500	---	-43.96	<=-18.48	PASS
	Ear_R	2480	Reference	-2.25	-2.25	---	PASS
			30~1000	---	-62.01	<=-22.25	PASS
			1000~26500	---	-42.35	<=-22.25	PASS
	Ear_L	2480	Reference	1.61	1.61	---	PASS
			30~1000	---	-67.22	<=-18.39	PASS
			1000~26500	---	-43.49	<=-18.39	PASS

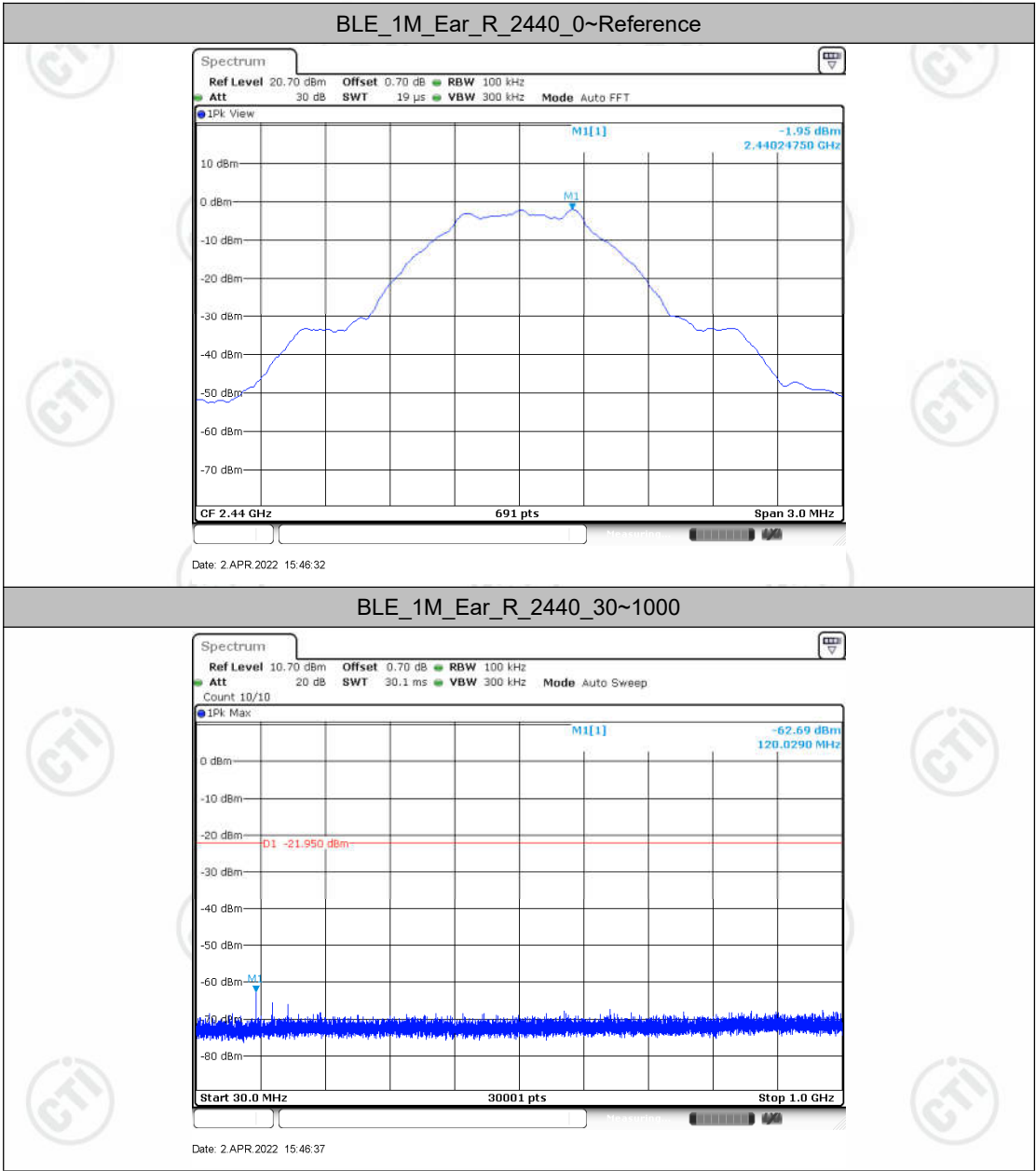
BLE_2M	Ear_R	2402	Reference	-0.86	-0.86	---	PASS
			30~1000	---	-64.25	<=-20.86	PASS
			1000~26500	---	-48.96	<=-20.86	PASS
	Ear_L	2402	Reference	1.43	1.43	---	PASS
			30~1000	---	-67.51	<=-18.57	PASS
			1000~26500	---	-46.18	<=-18.57	PASS
	Ear_R	2440	Reference	-2.05	-2.05	---	PASS
			30~1000	---	-62.97	<=-22.05	PASS
			1000~26500	---	-47.53	<=-22.05	PASS
	Ear_L	2440	Reference	1.47	1.47	---	PASS
			30~1000	---	-67.19	<=-18.53	PASS
			1000~26500	---	-44.06	<=-18.53	PASS
	Ear_R	2480	Reference	-2.33	-2.33	---	PASS
			30~1000	---	-63.48	<=-22.33	PASS
			1000~26500	---	-45.43	<=-22.33	PASS
	Ear_L	2480	Reference	1.59	1.59	---	PASS
			30~1000	---	-67.33	<=-18.41	PASS
			1000~26500	---	-43.79	<=-18.41	PASS

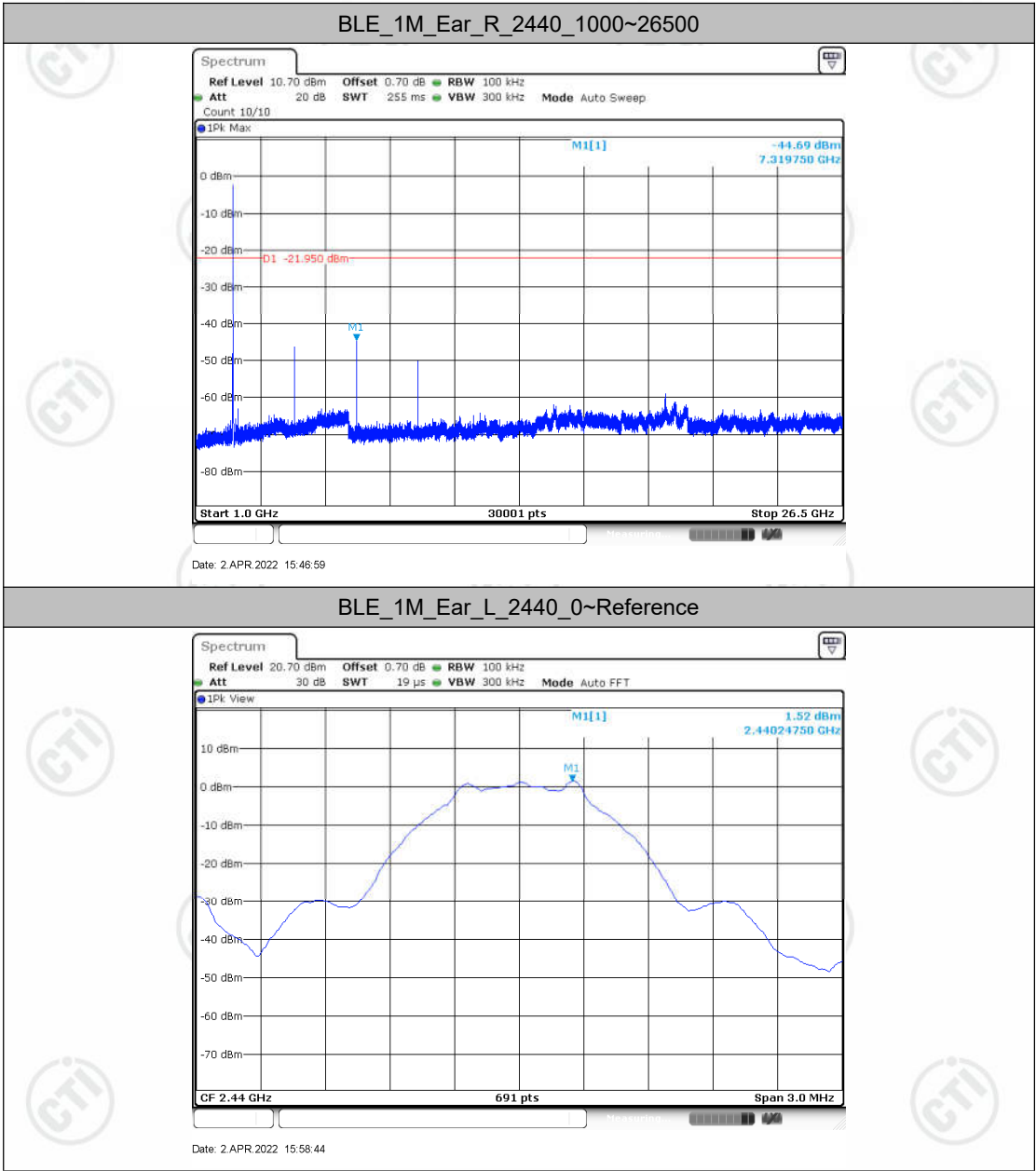
Test Graphs

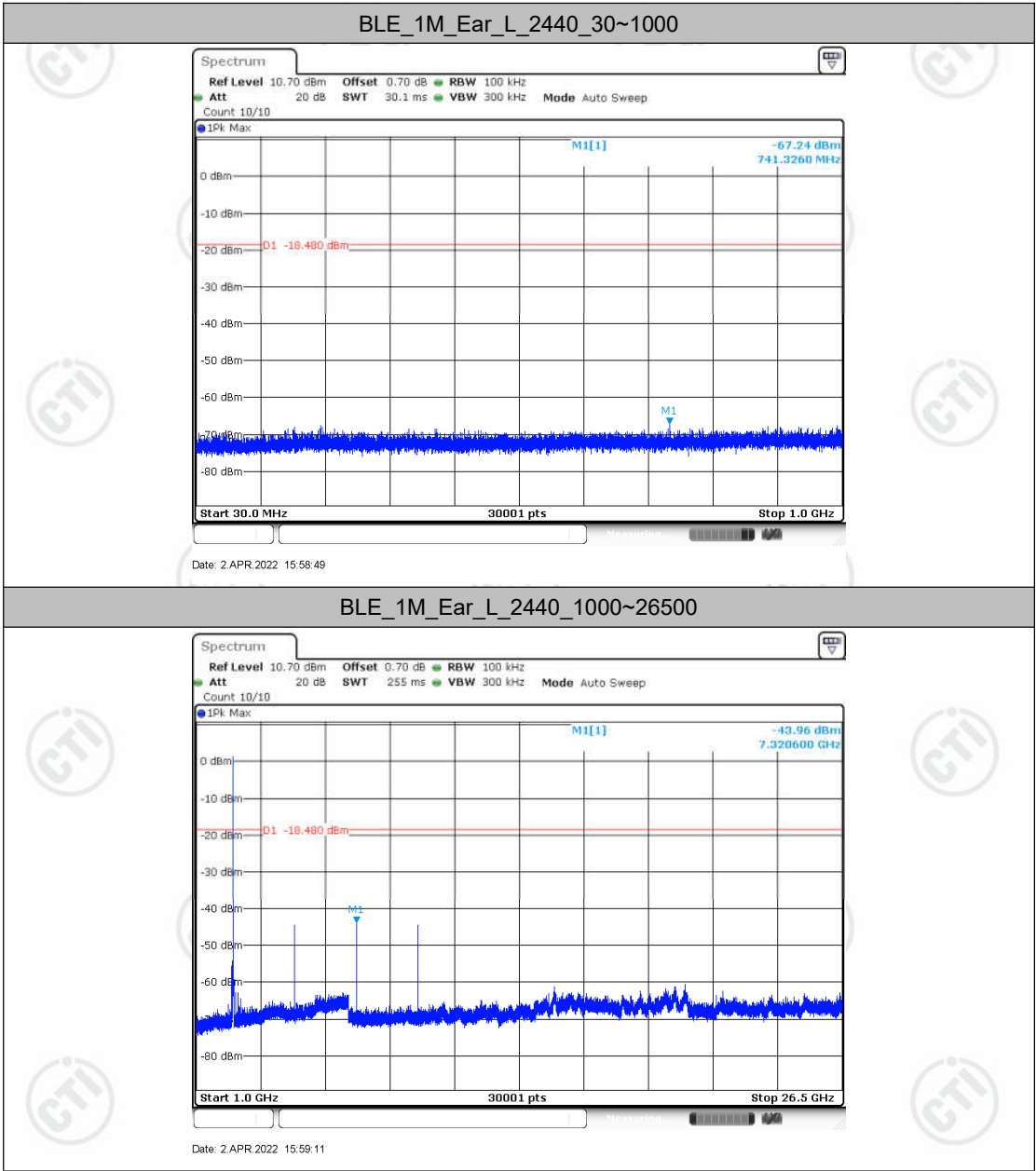


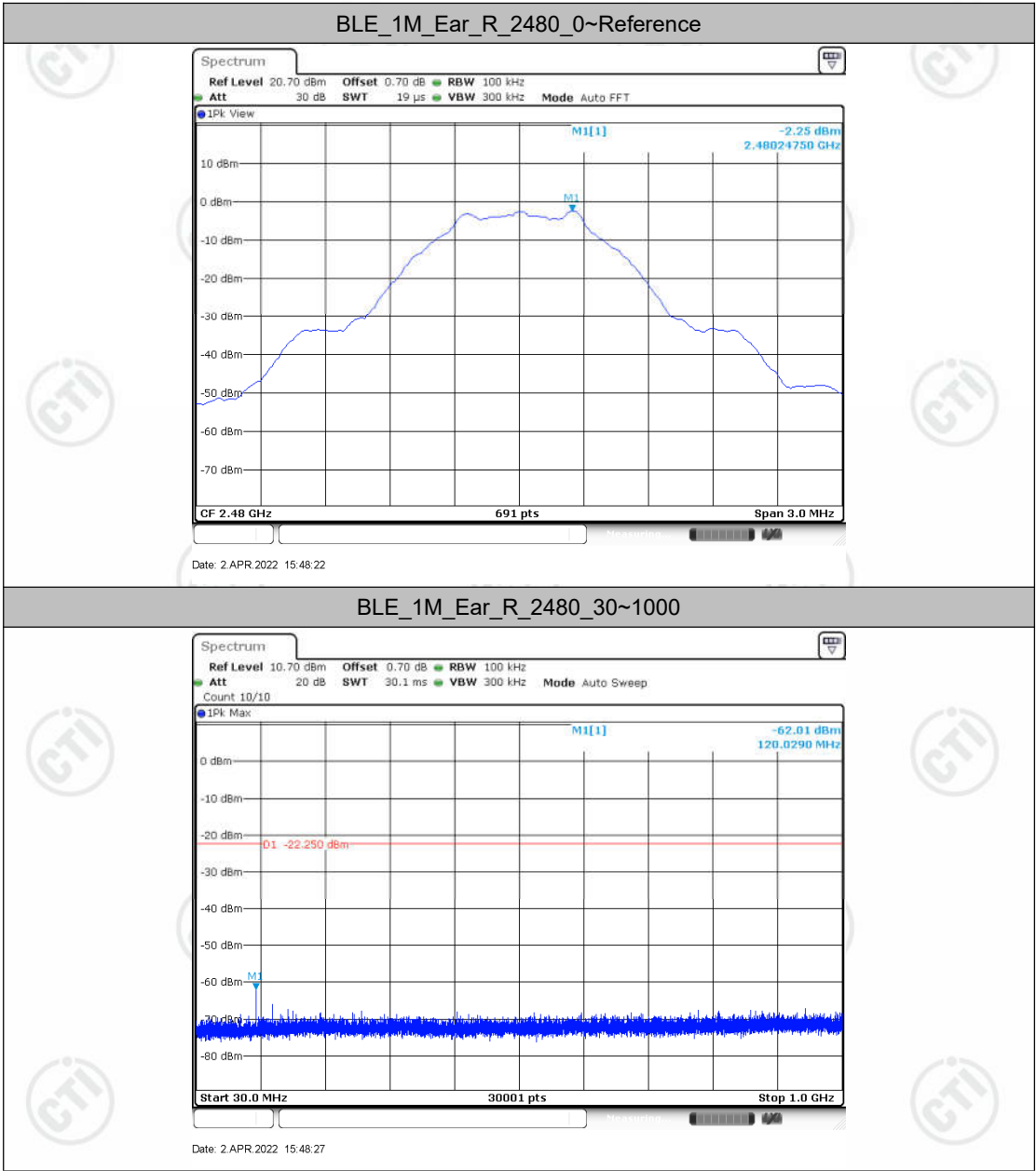


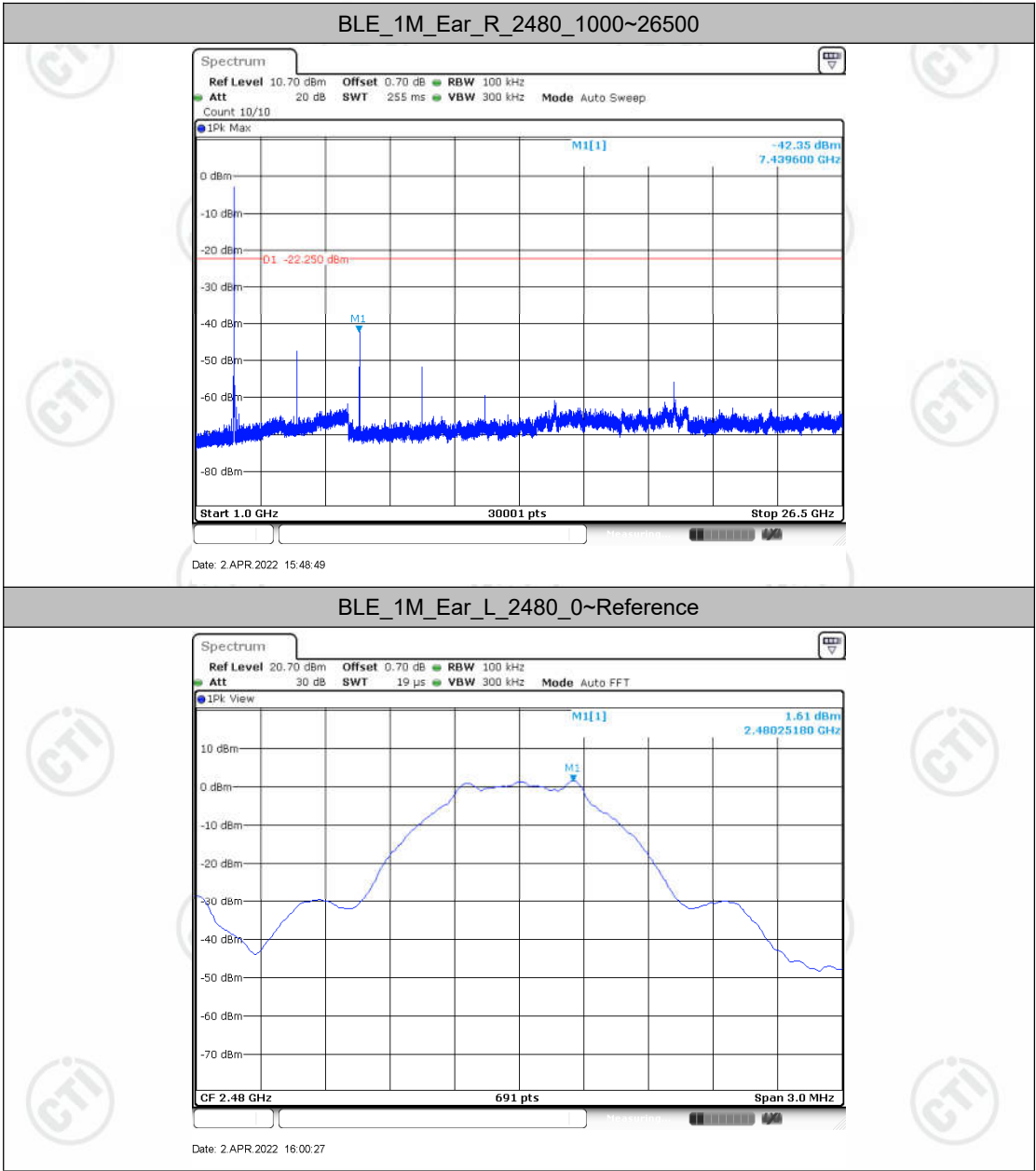


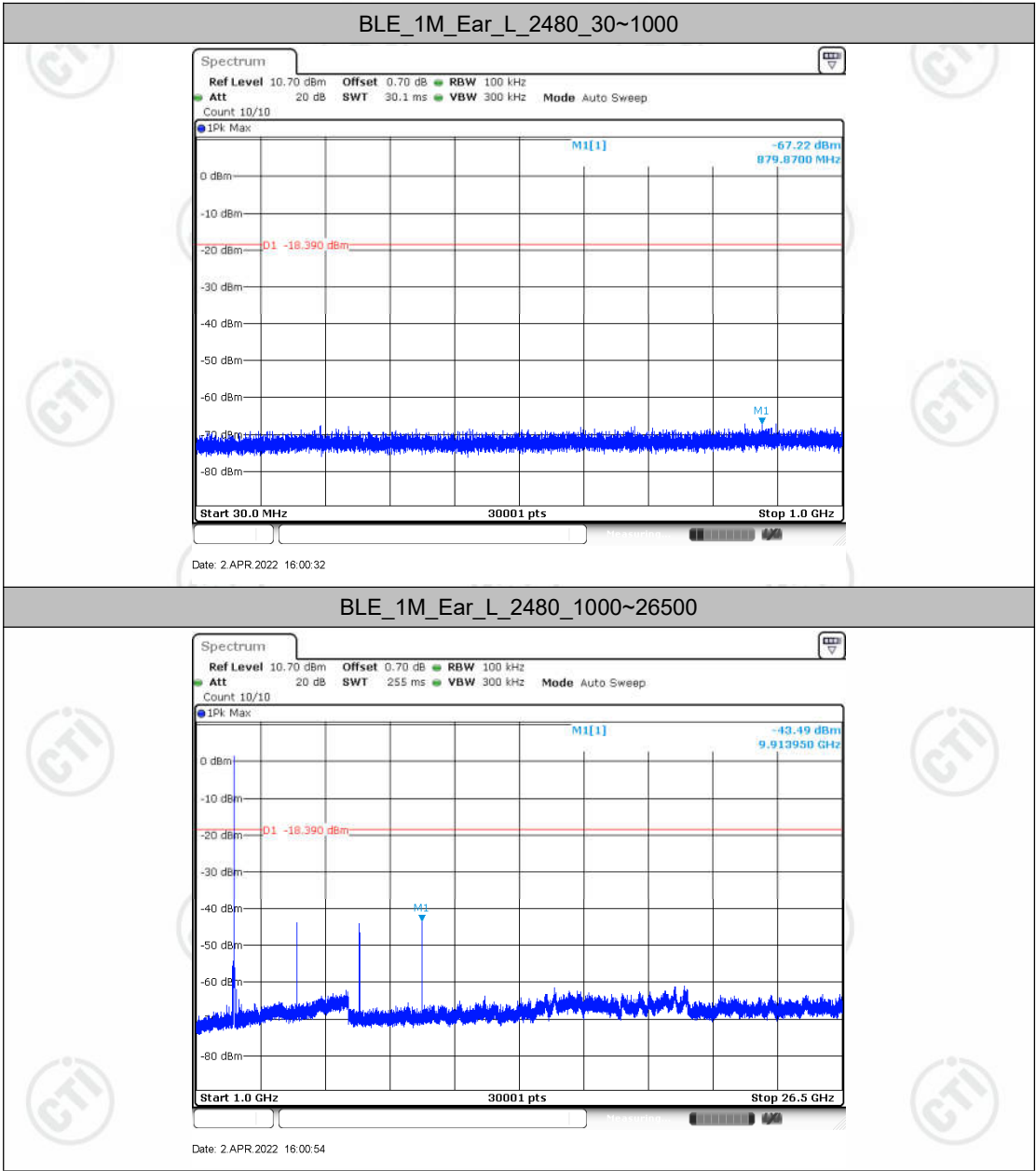


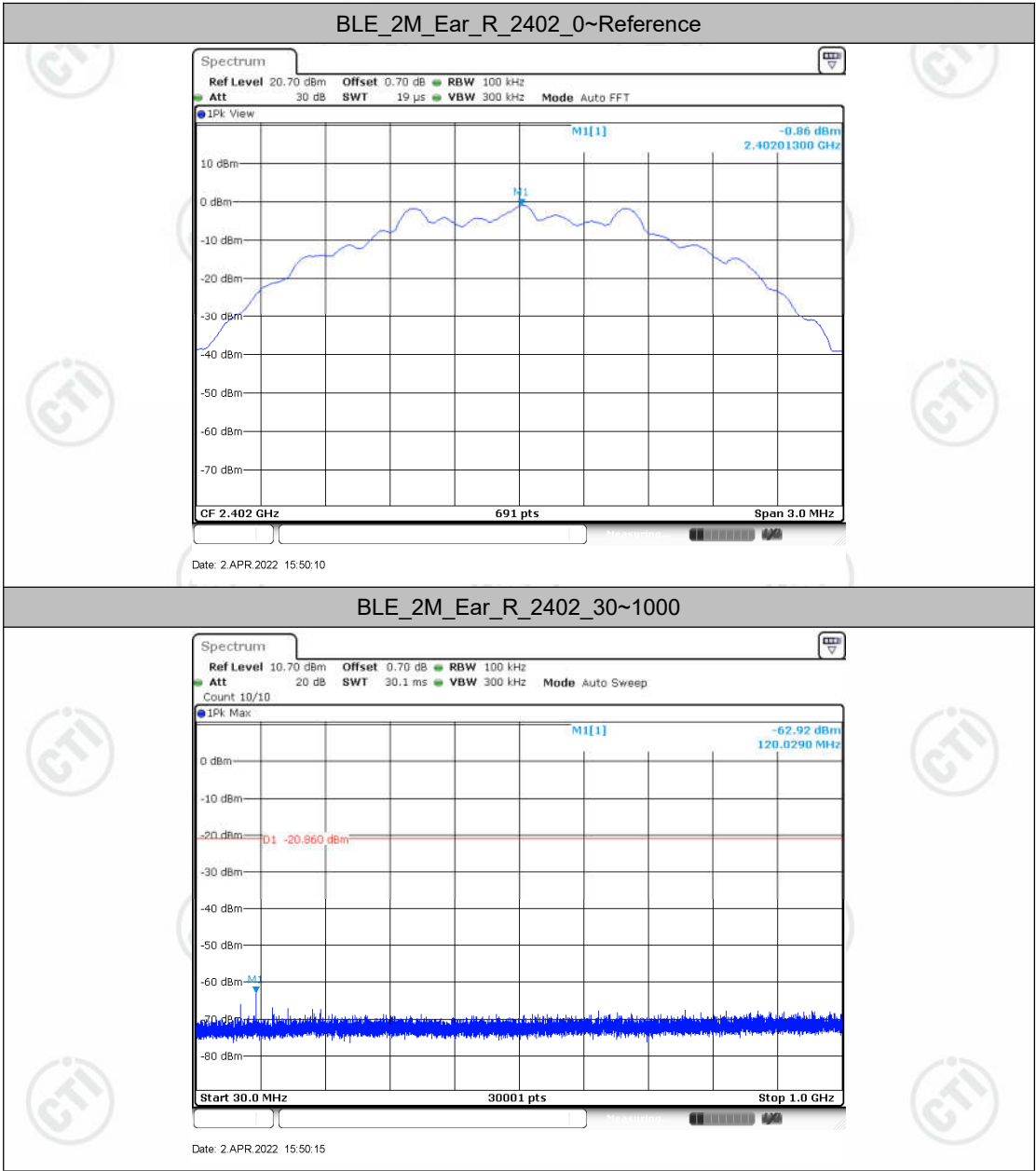


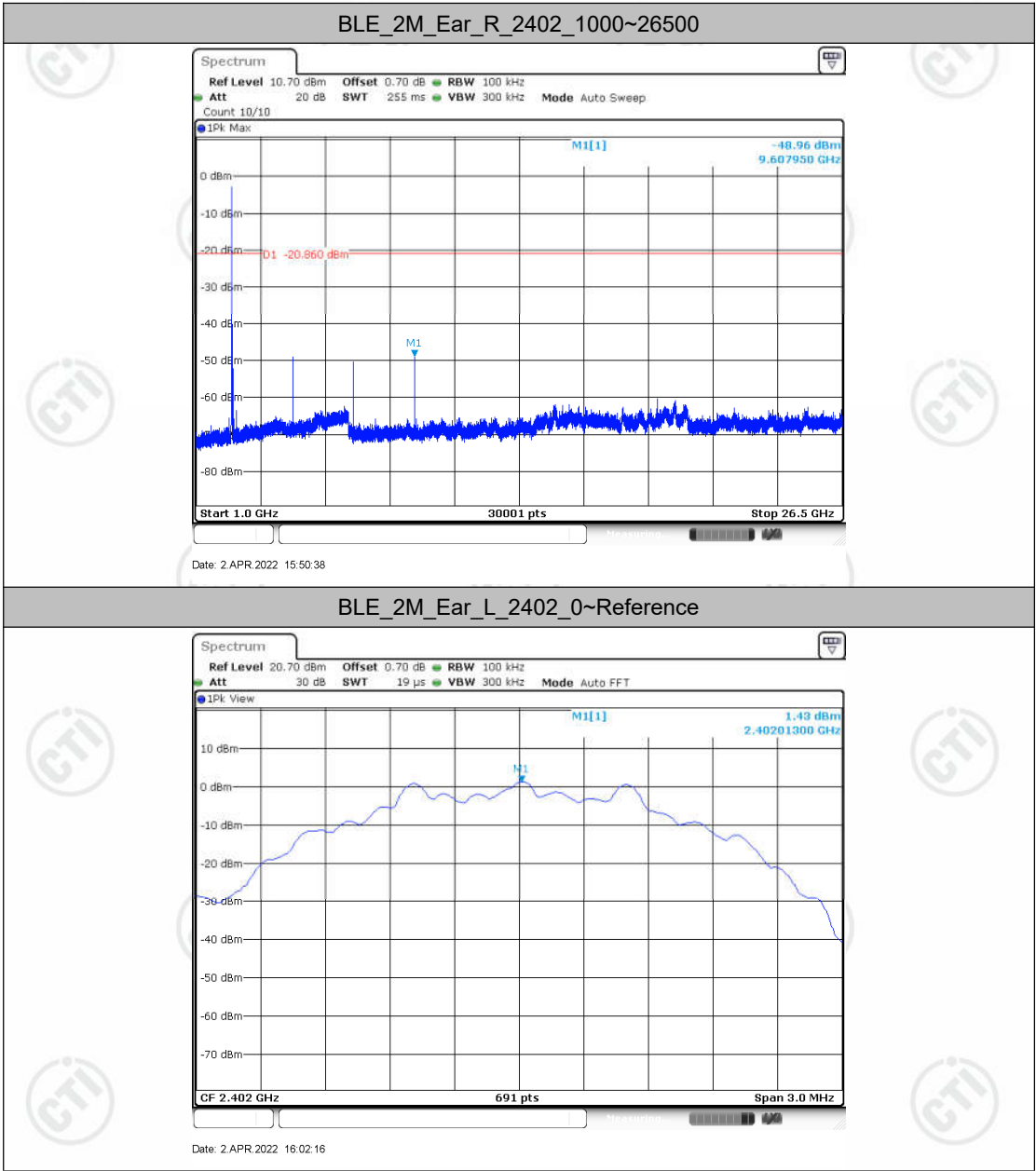


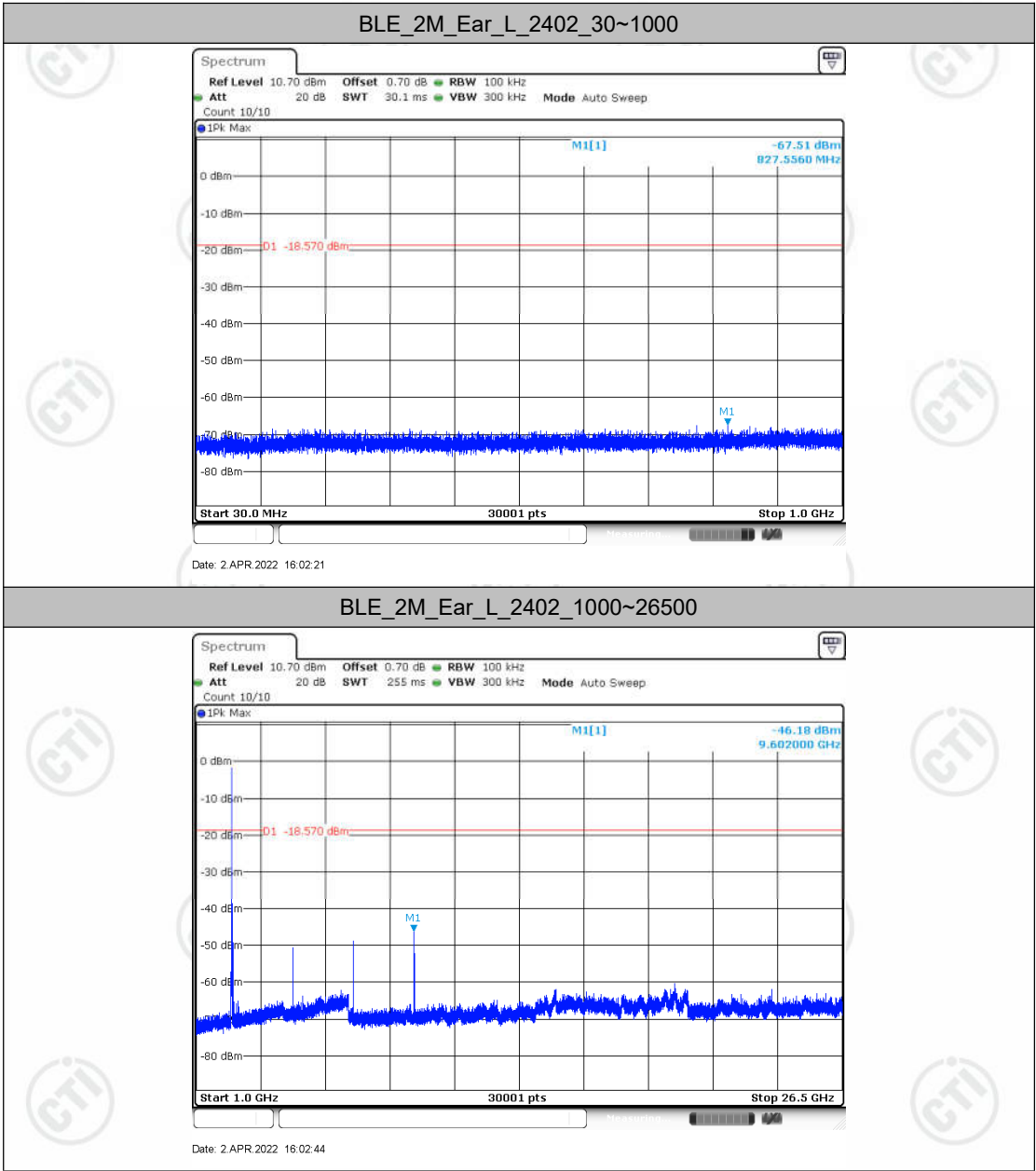


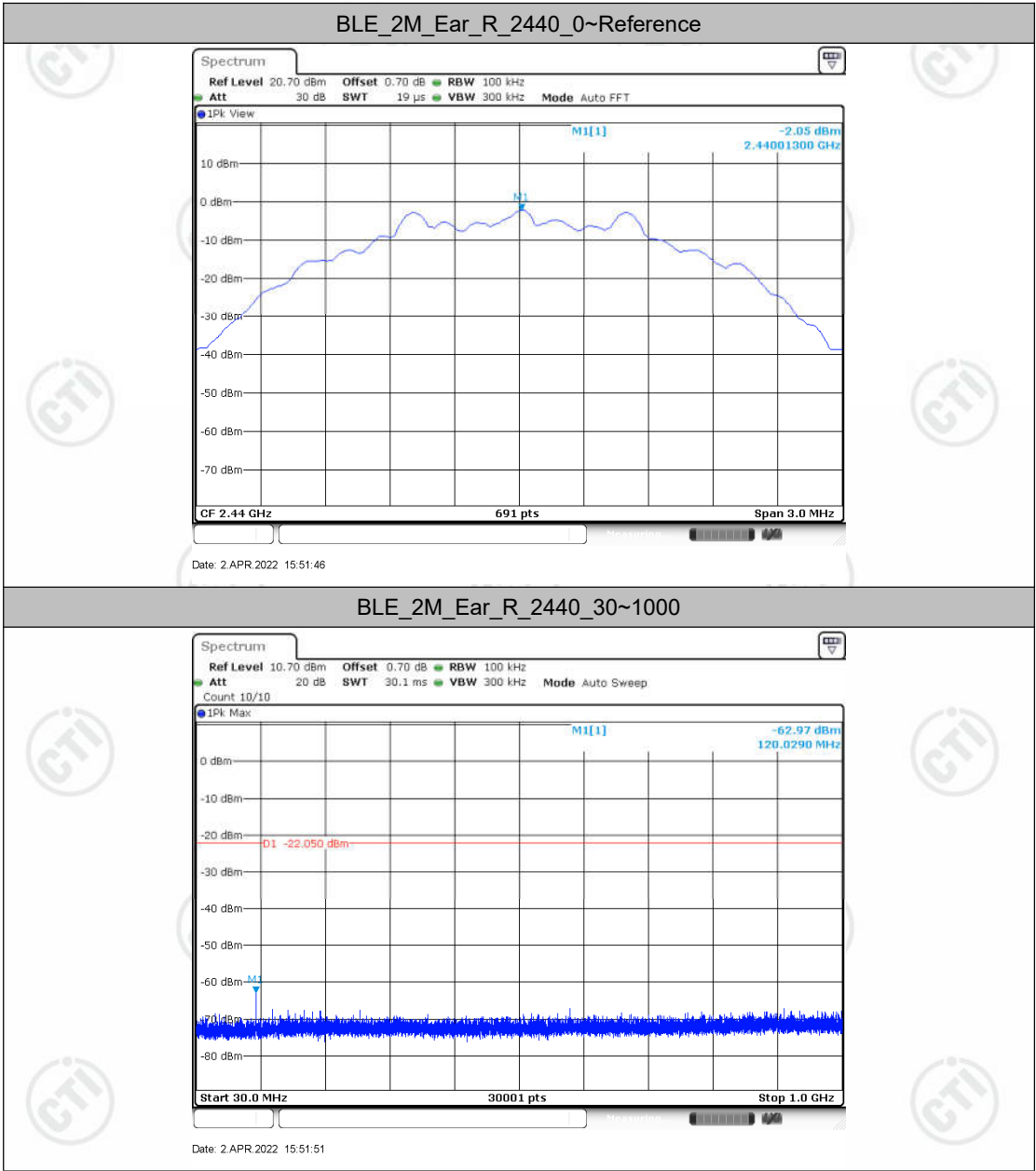


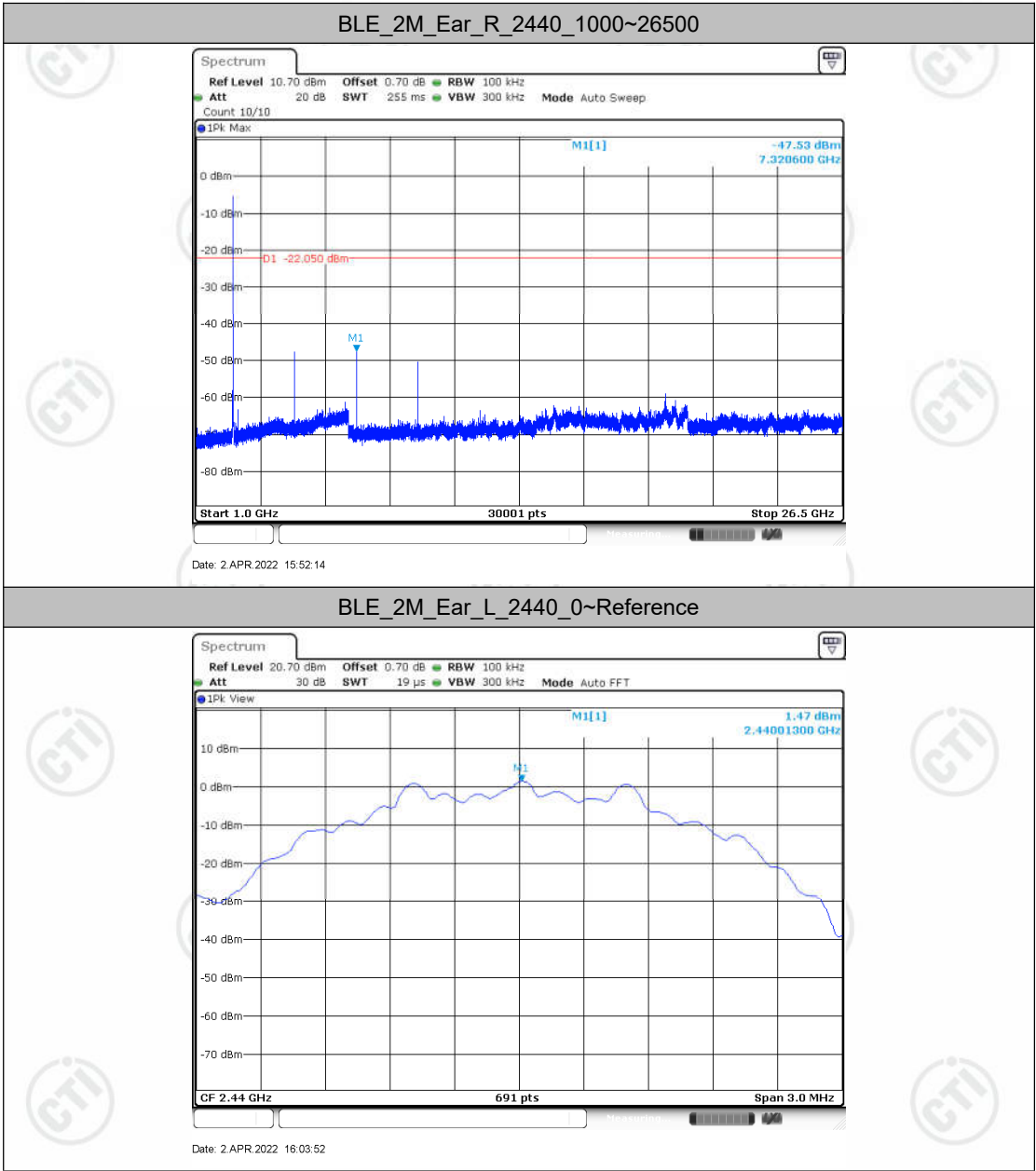


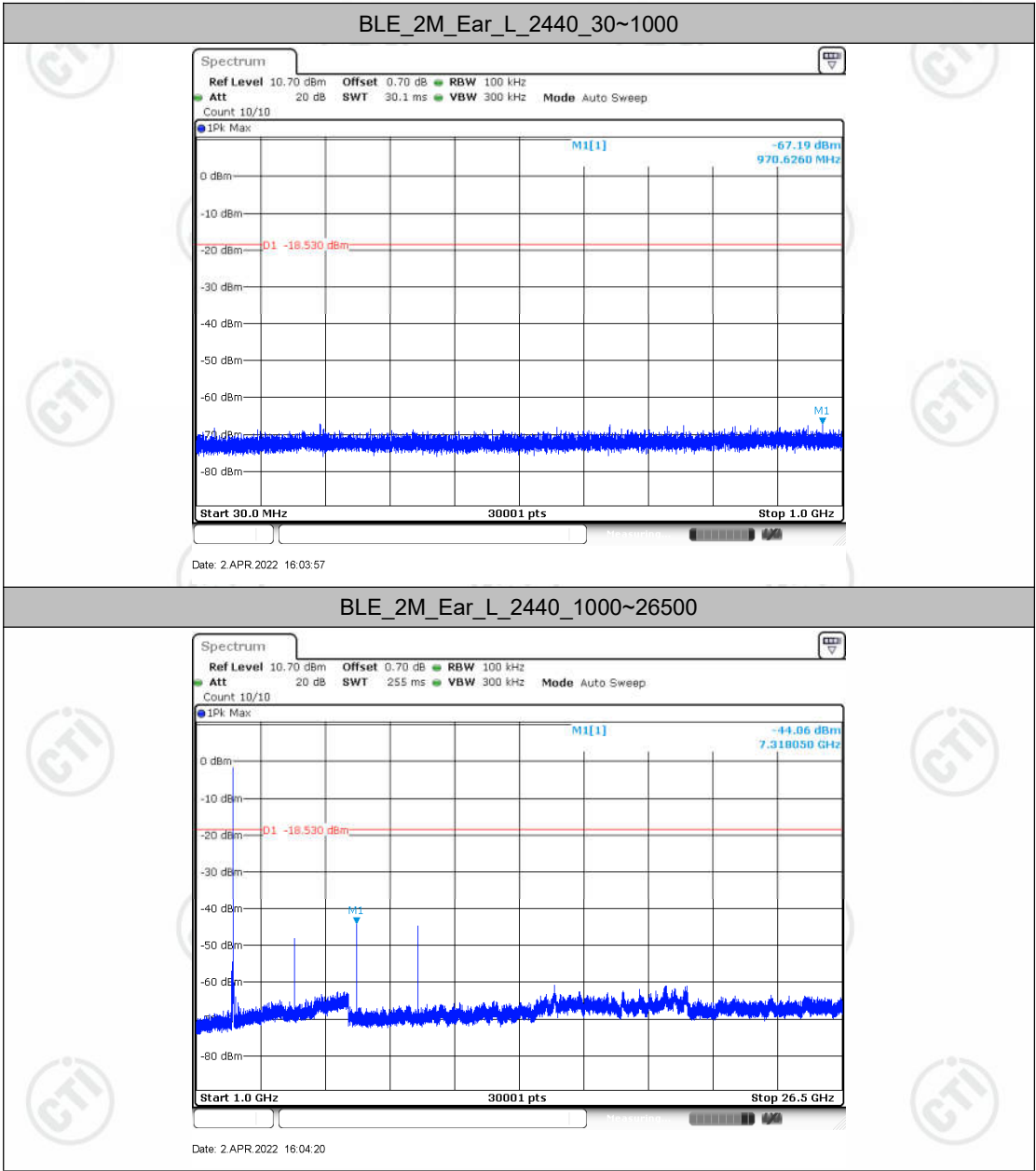


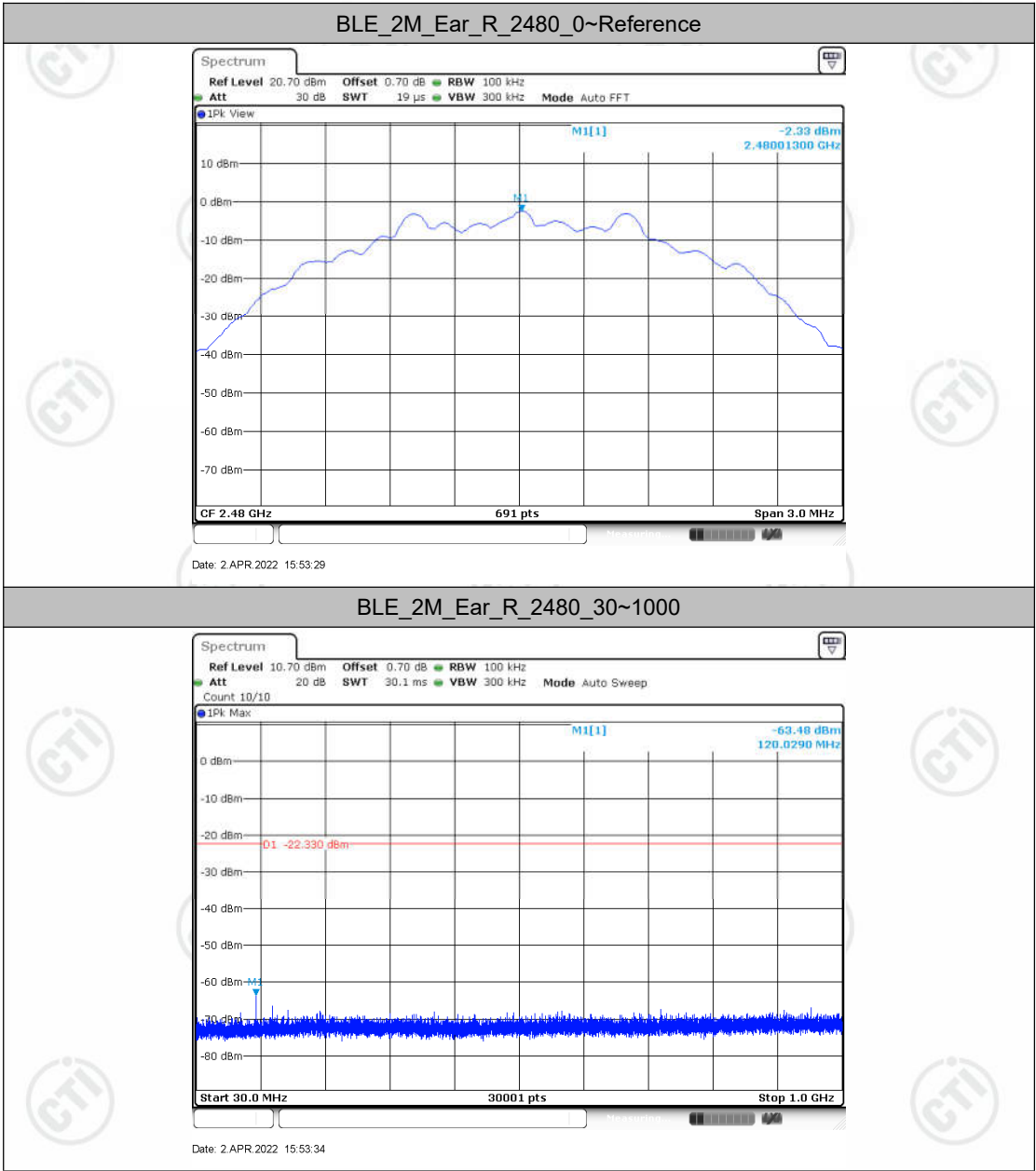


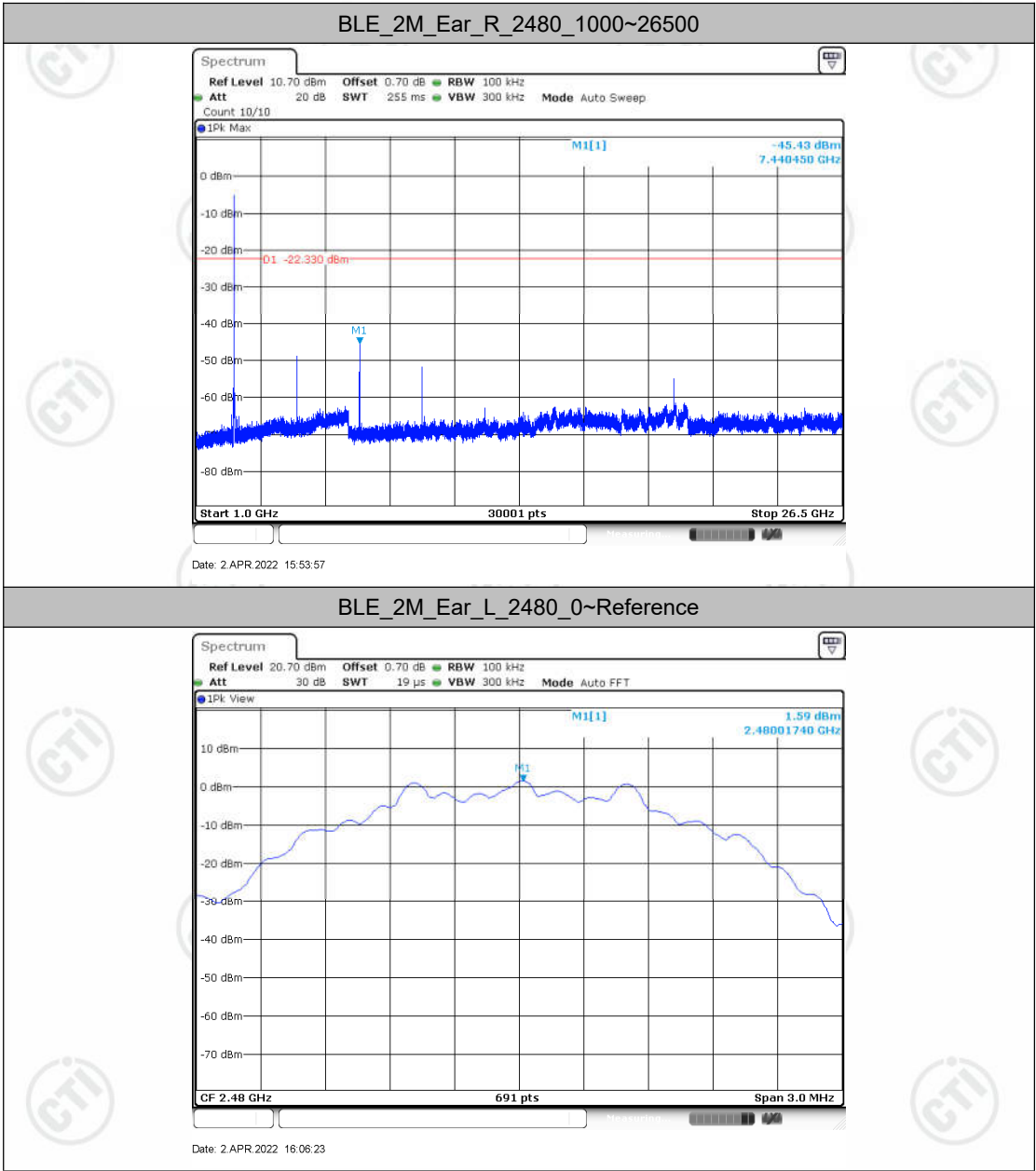


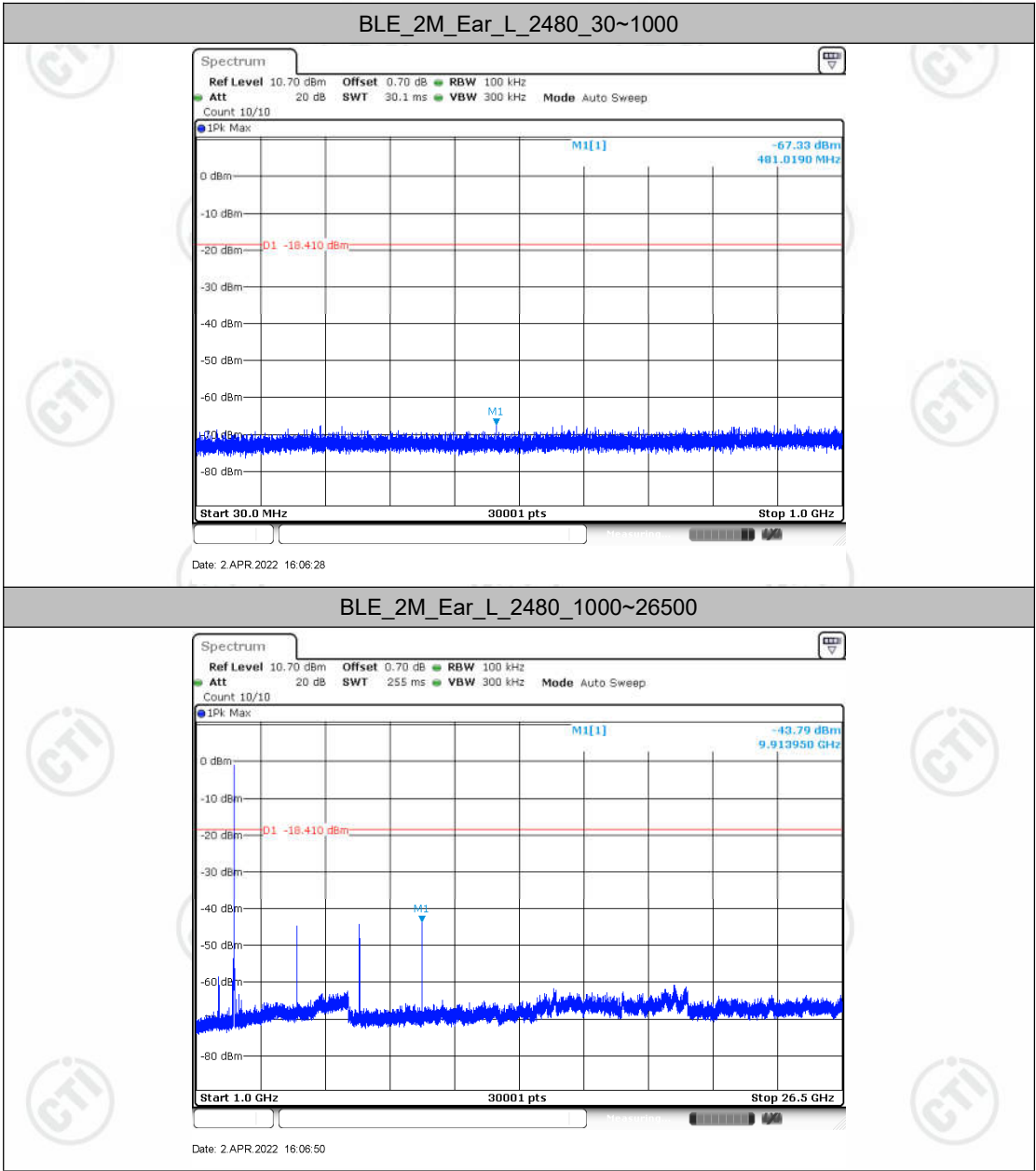










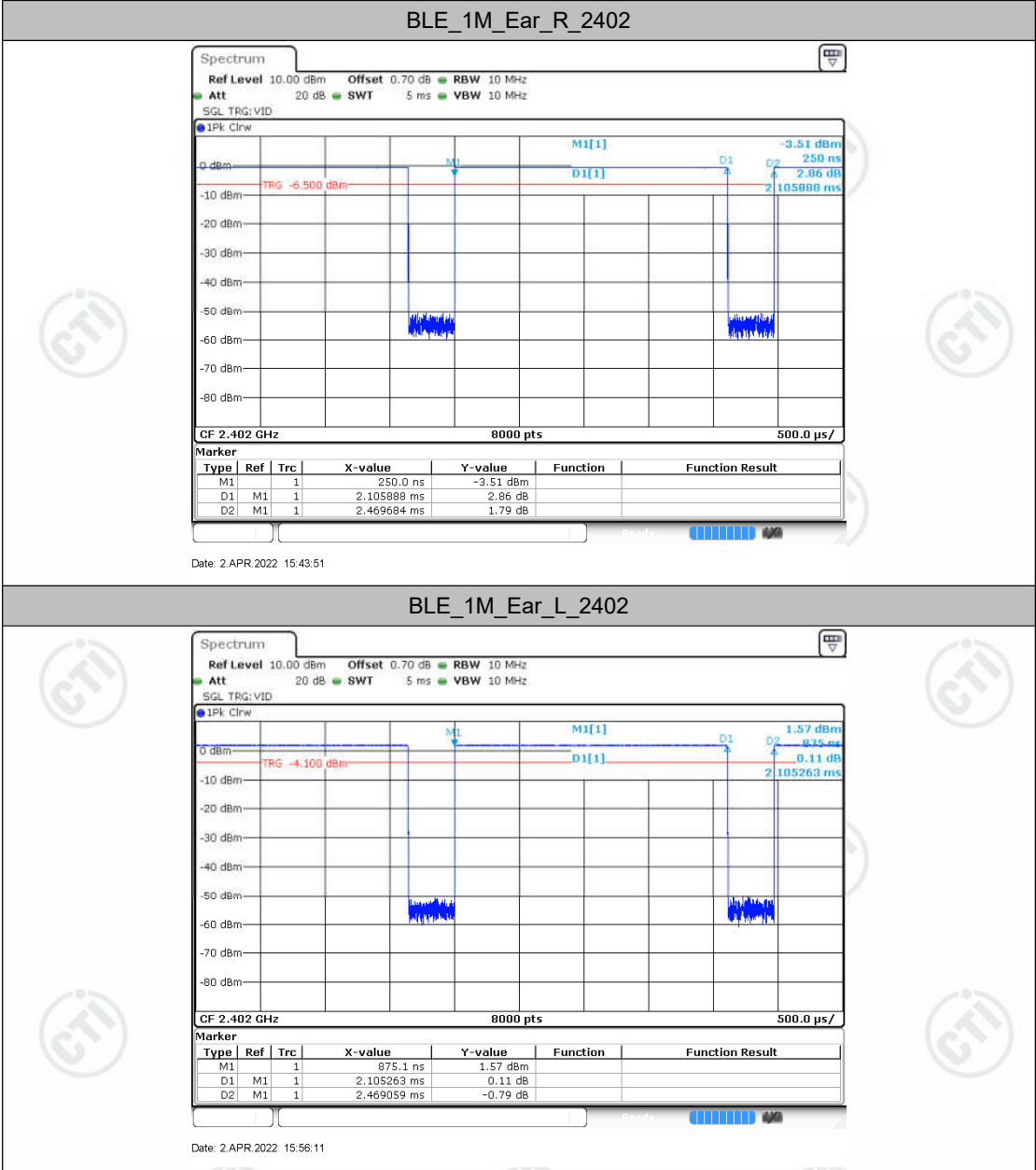


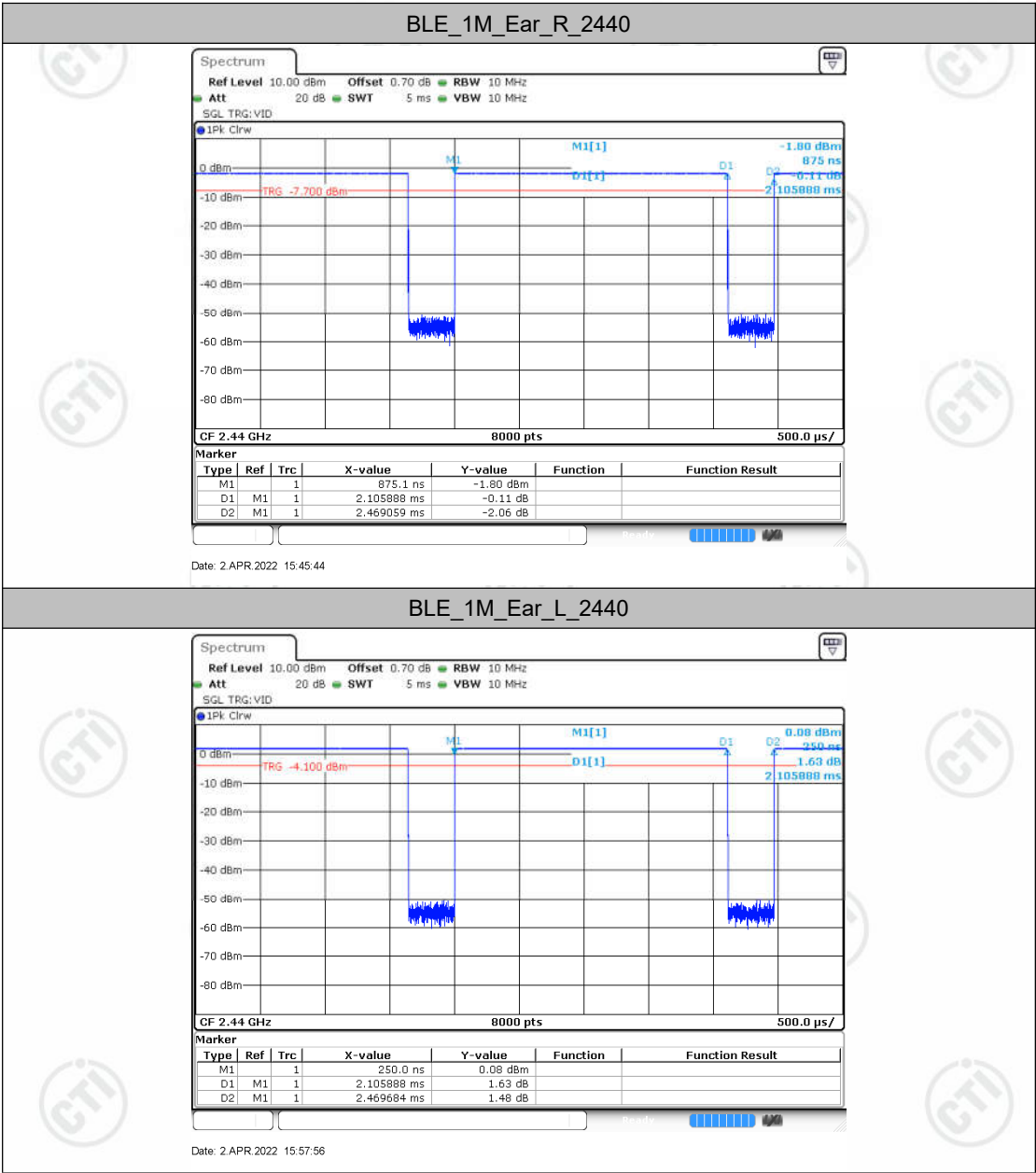
Appendix G: Duty Cycle

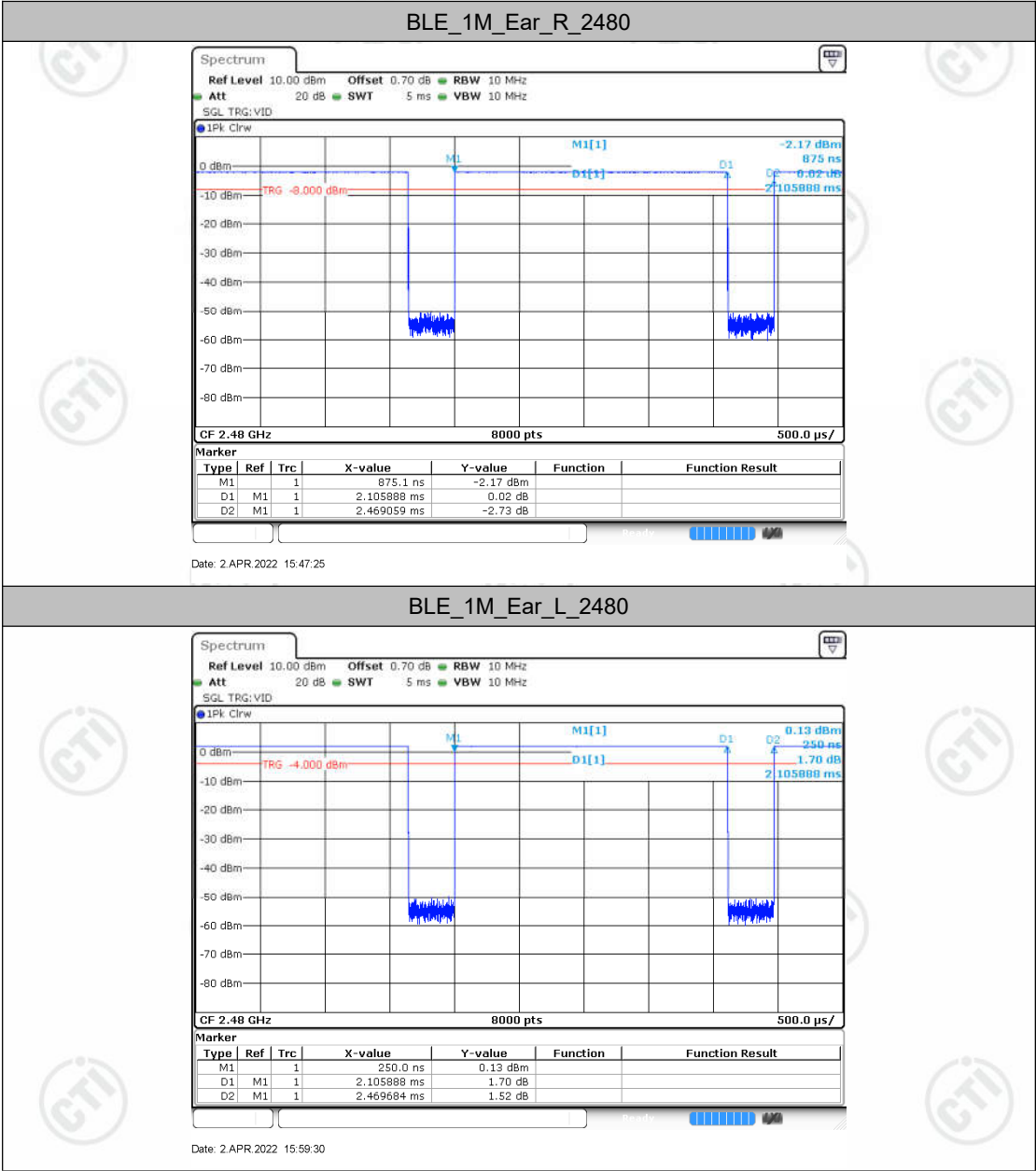
Test Result

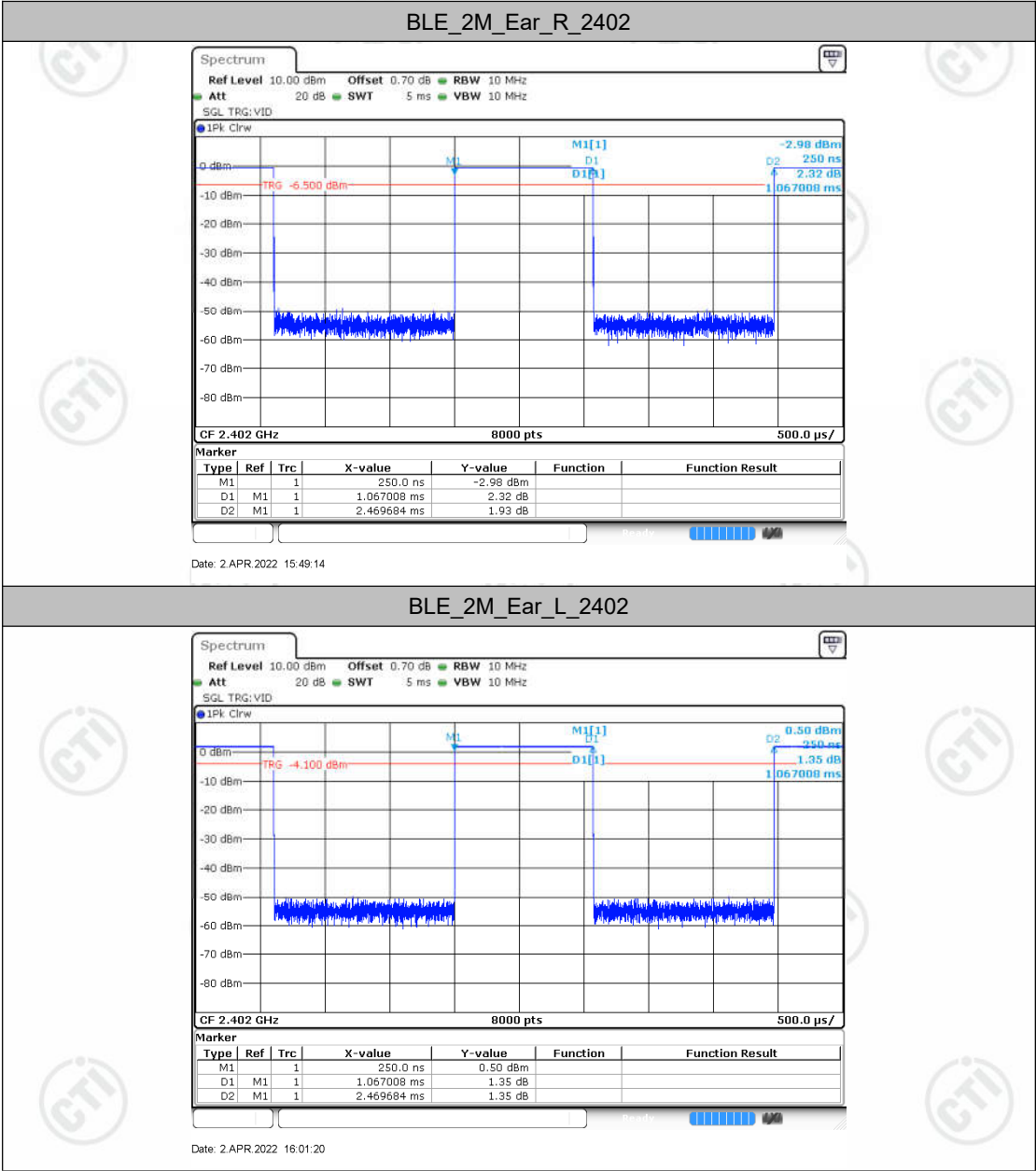
Test Mode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Limit	Verdict
BLE_1M	Ear_R	2402	2.11	2.47	85.27	---	PASS
	Ear_L	2402	2.11	2.47	85.27	---	PASS
	Ear_R	2440	2.11	2.47	85.29	---	PASS
	Ear_L	2440	2.11	2.47	85.27	---	PASS
	Ear_R	2480	2.11	2.47	85.29	---	PASS
	Ear_L	2480	2.11	2.47	85.27	---	PASS
BLE_2M	Ear_R	2402	1.07	2.47	43.20	---	PASS
	Ear_L	2402	1.07	2.47	43.20	---	PASS
	Ear_R	2440	1.07	2.47	43.19	---	PASS
	Ear_L	2440	1.07	2.47	43.20	---	PASS
	Ear_R	2480	1.07	2.47	43.18	---	PASS
	Ear_L	2480	1.07	2.47	43.20	---	PASS

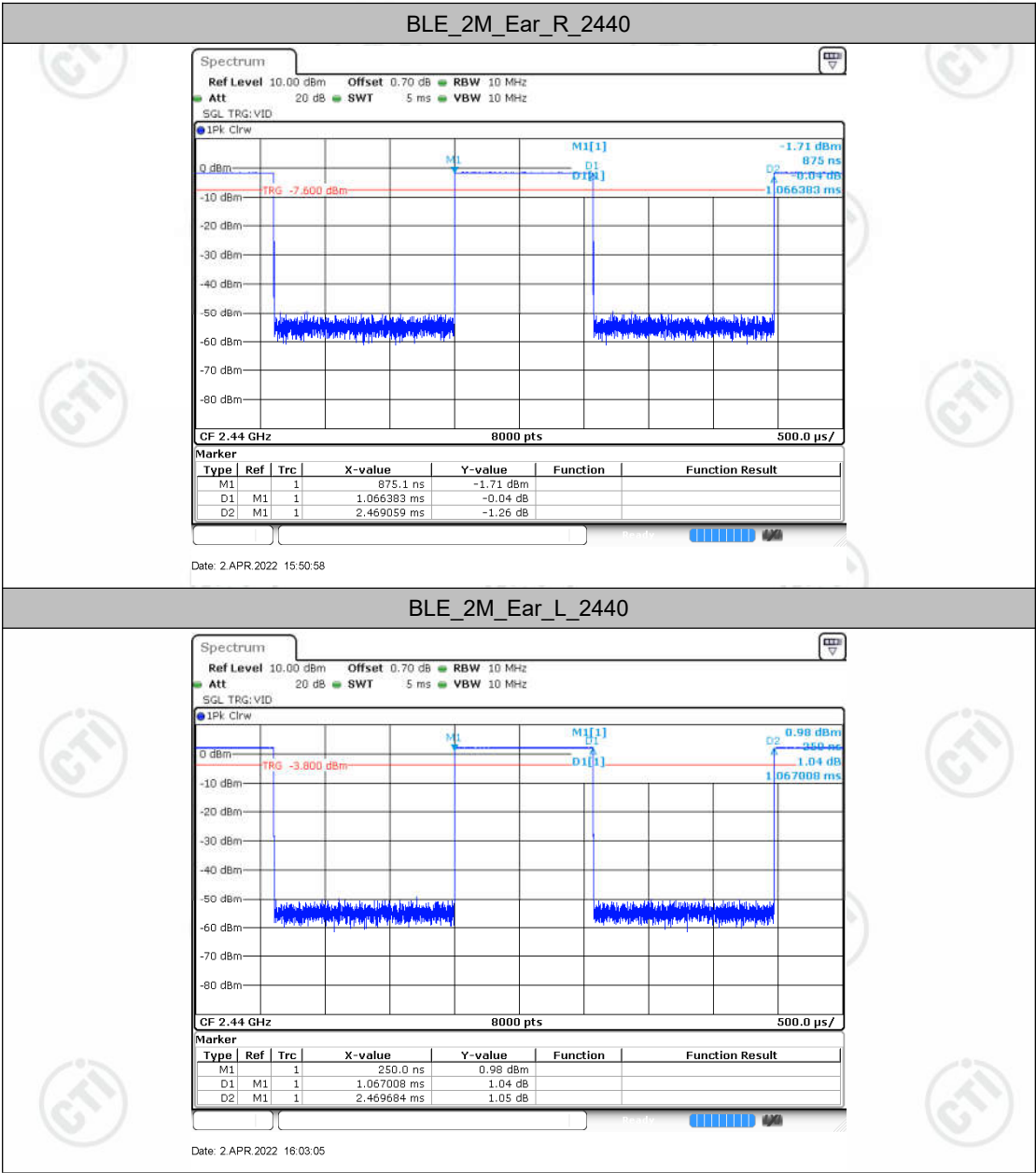
Test Graphs

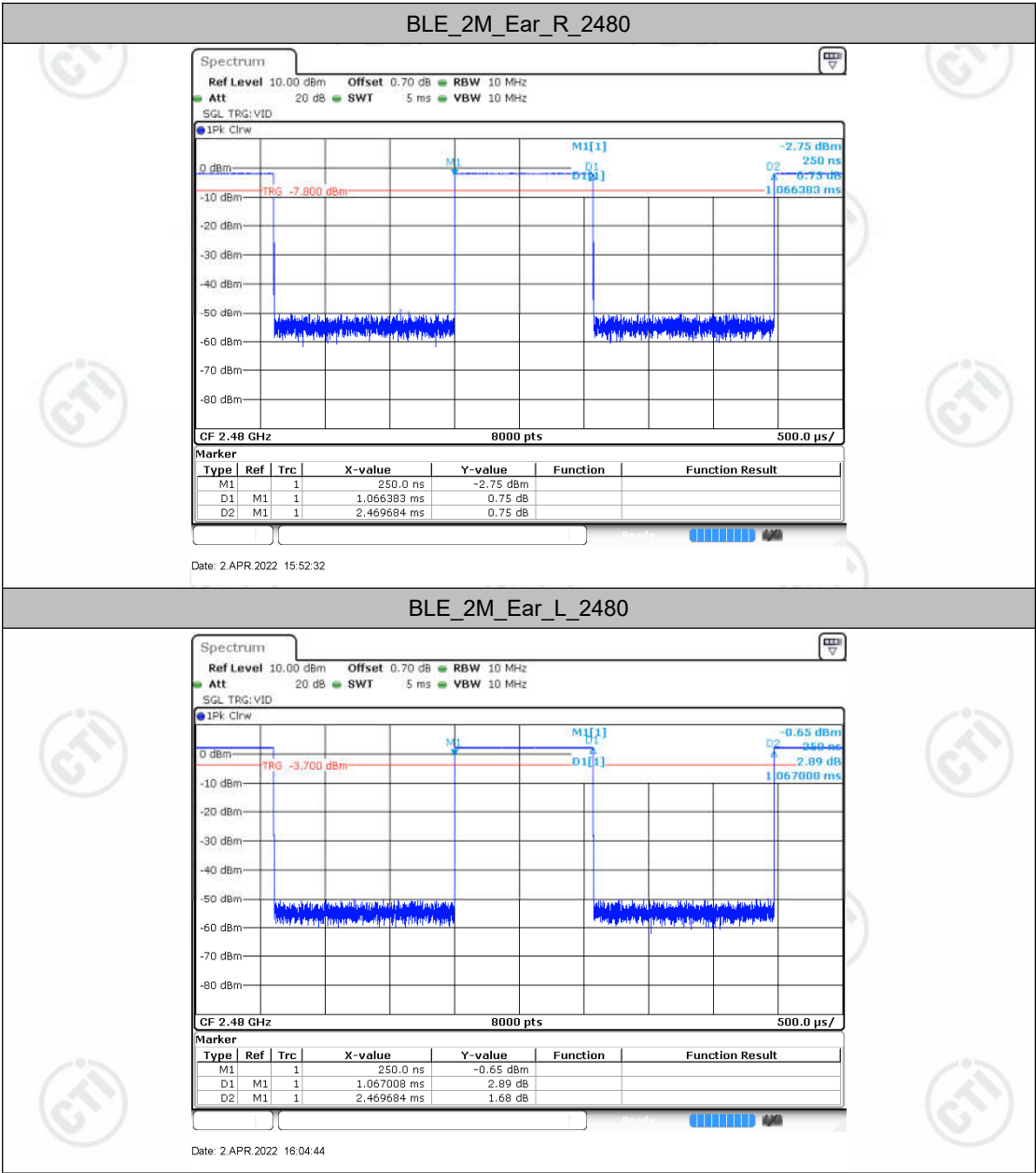












*** End of Report ***