Appendix B

RF Test Data for BT LE (Conducted Measurement)

Product Name: Wireless earphone

Test Model: BHD-TW14

Environmental Conditions

Temperature:	23.8°C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Luo
Supervised by:	Nick Peng

B.1 DTS Bandwidth

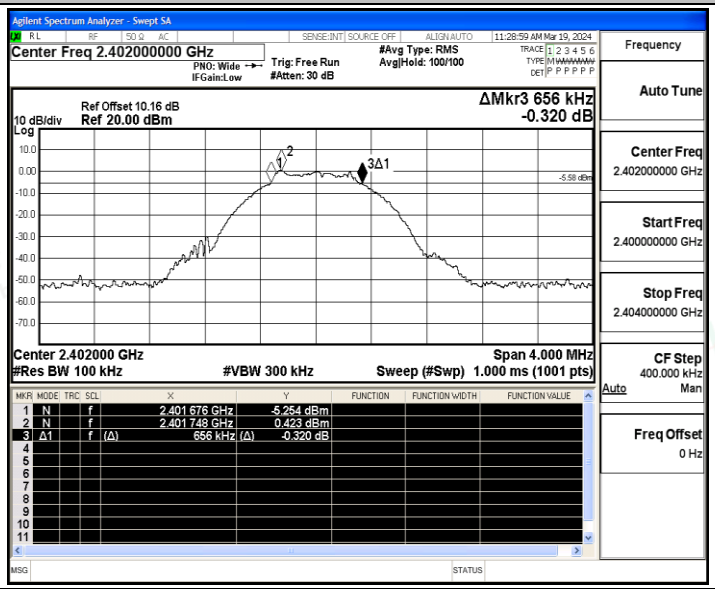
Left Ear:

Test Result

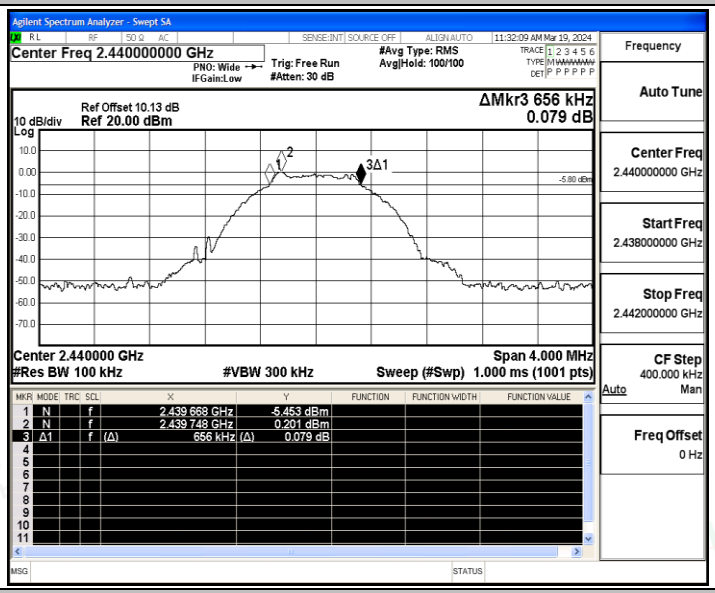
TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.656	2401.676	2402.332	0.5	PASS
		2440	0.656	2439.668	2440.324	0.5	PASS
		2480	0.668	2479.660	2480.328	0.5	PASS
BLE_2M	Ant1	2402	1.228	2401.348	2402.576	0.5	PASS
		2440	1.112	2439.448	2440.560	0.5	PASS
		2480	1.220	2479.340	2480.560	0.5	PASS

Test Graphs

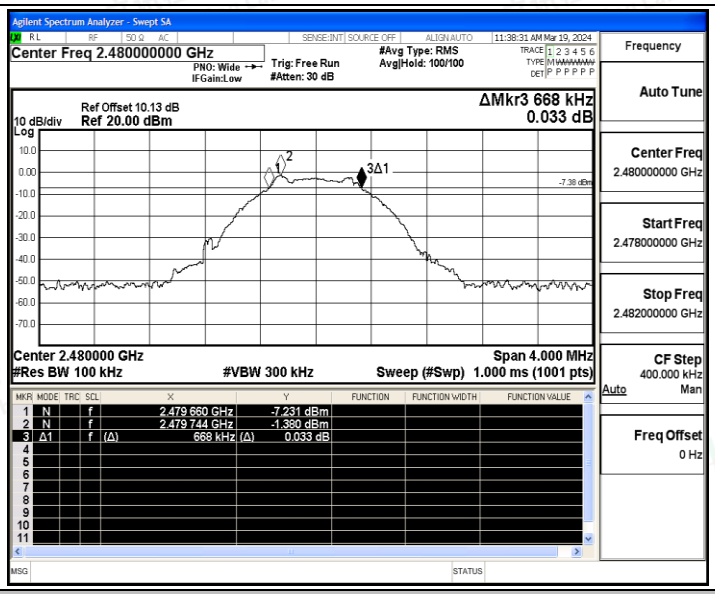
BLE_1M_Ant1_2402



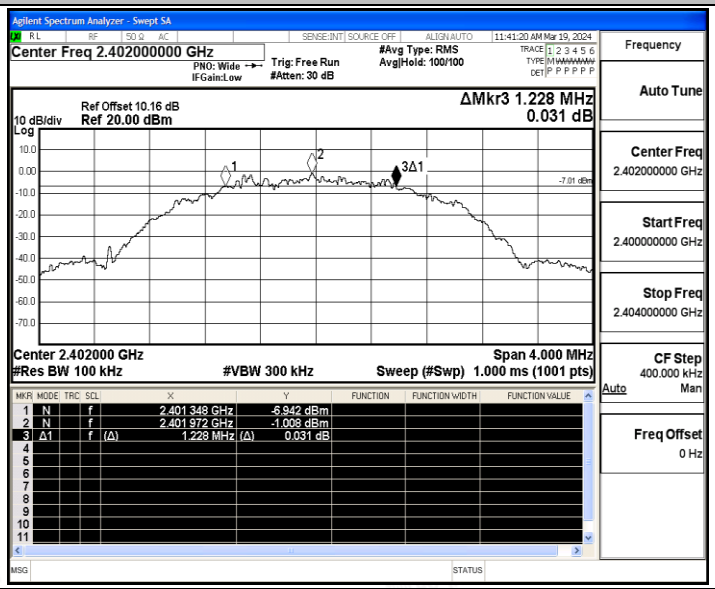
BLE_1M_Ant1_2440



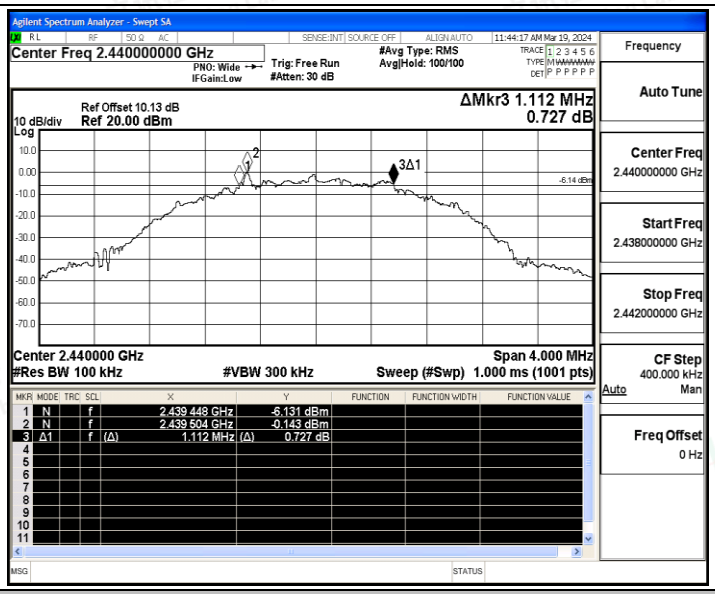
BLE_1M_Ant1_2480



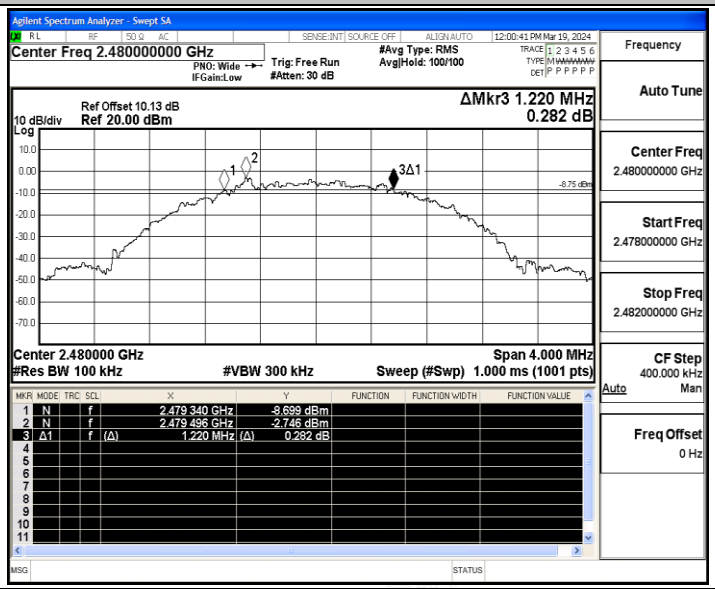
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



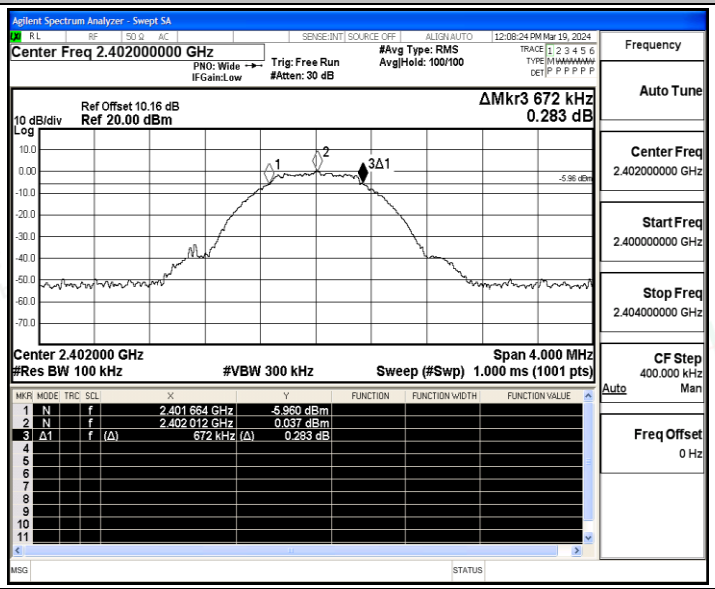
Right Ear:

Test Result

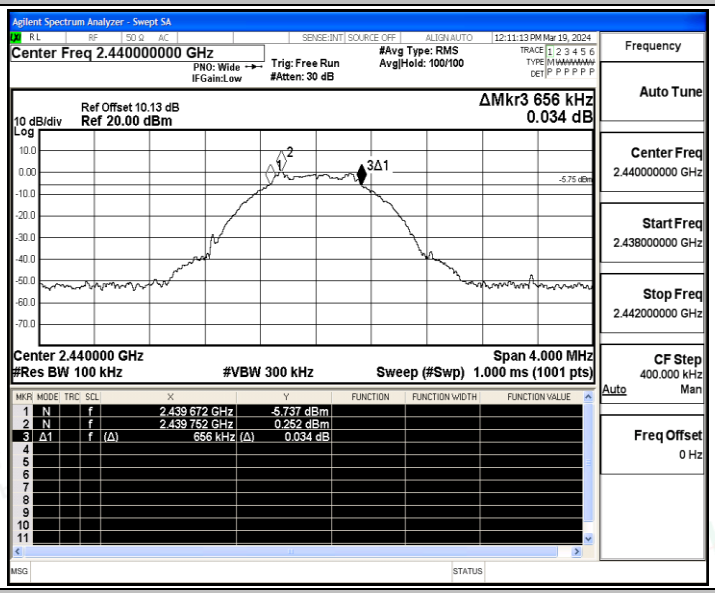
TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.672	2401.664	2402.336	0.5	PASS
		2440	0.656	2439.672	2440.328	0.5	PASS
		2480	0.672	2479.656	2480.328	0.5	PASS
BLE_2M	Ant1	2402	1.200	2401.376	2402.576	0.5	PASS
		2440	1.152	2439.432	2440.584	0.5	PASS
		2480	1.296	2479.328	2480.624	0.5	PASS

Test Graphs

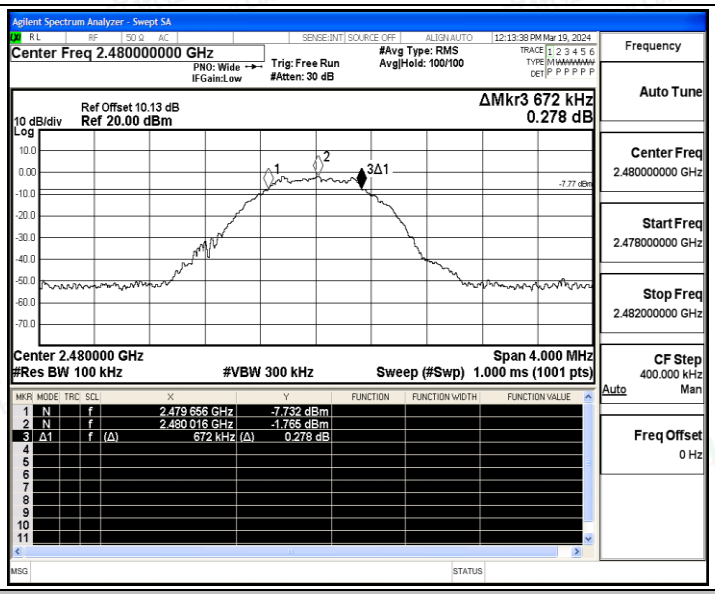
BLE_1M_Ant1_2402



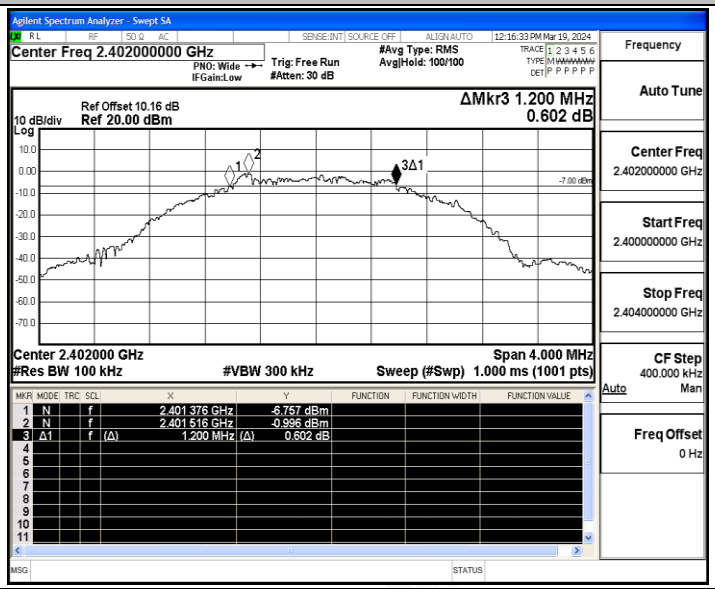
BLE_1M_Ant1_2440



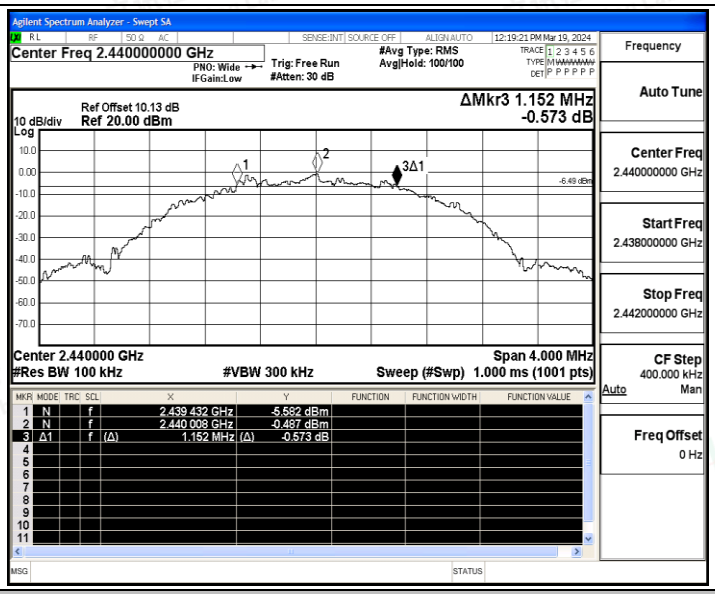
BLE_1M_Ant1_2480



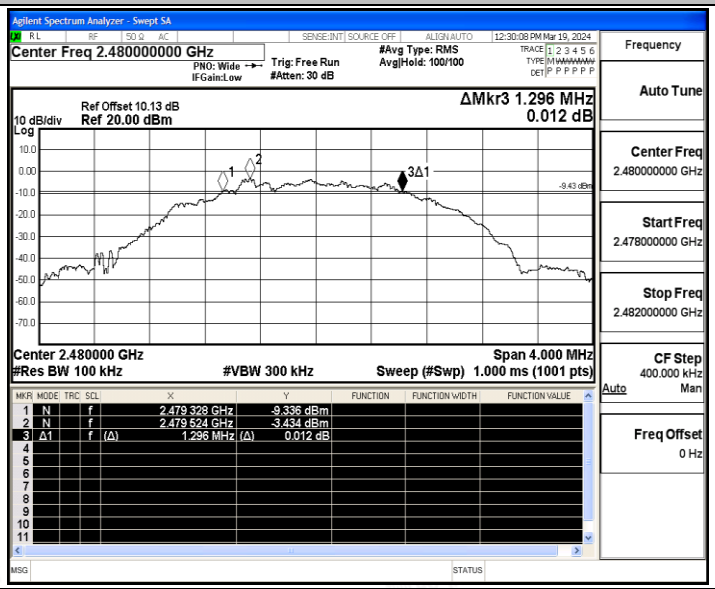
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



B.2 Maximum conducted output power

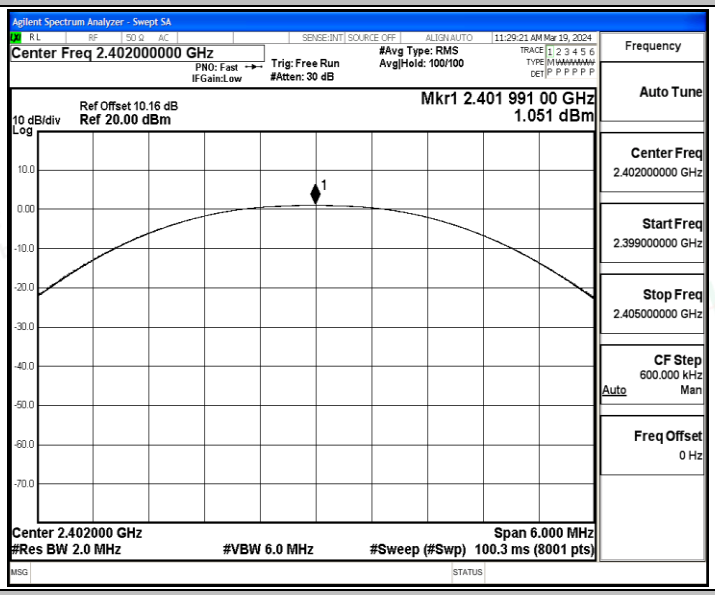
Left Ear:

Test Result

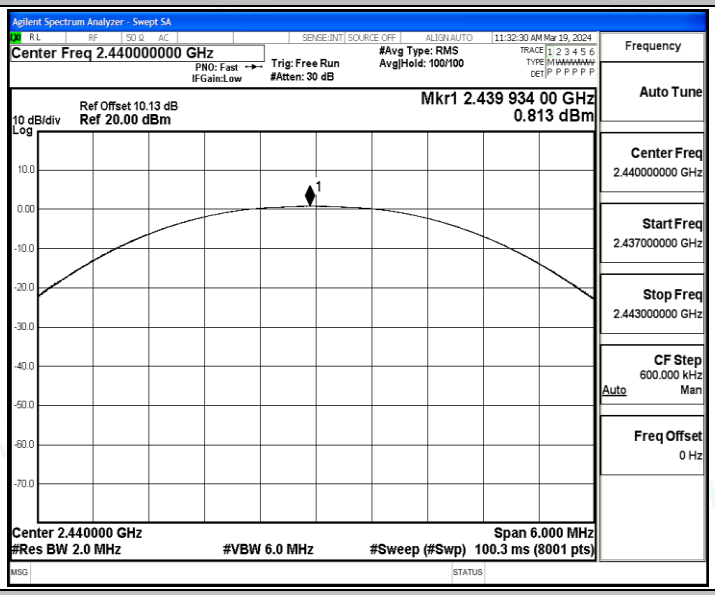
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	1.05	≤30	PASS
		2440	0.81	≤30	PASS
		2480	-0.72	≤30	PASS
BLE_2M	Ant1	2402	0.93	≤30	PASS
		2440	0.58	≤30	PASS
		2480	-0.86	≤30	PASS

Test Graphs

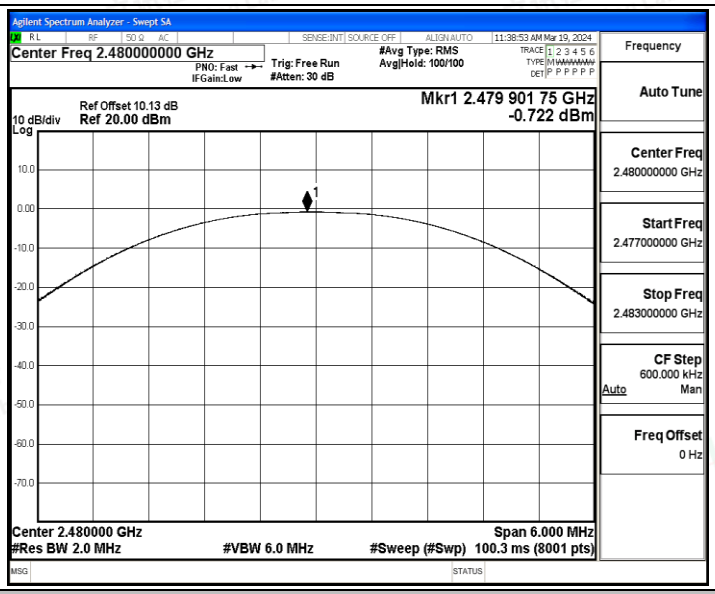
BLE_1M_Ant1_2402



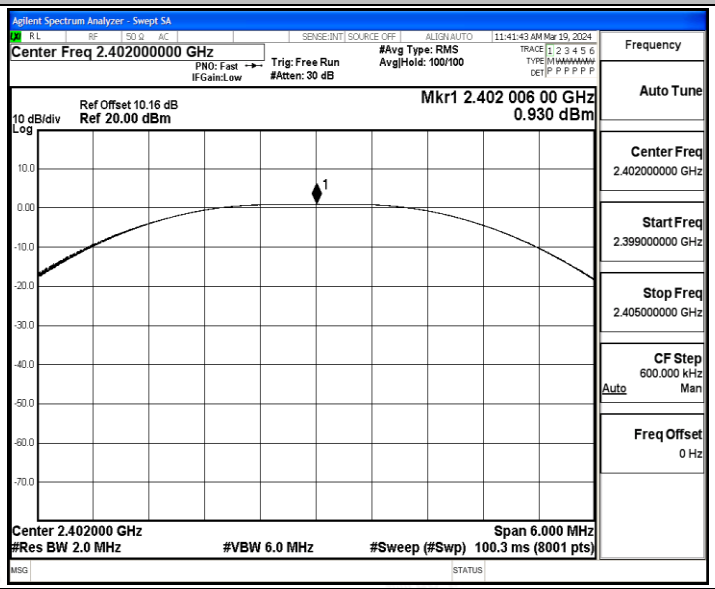
BLE_1M_Ant1_2440



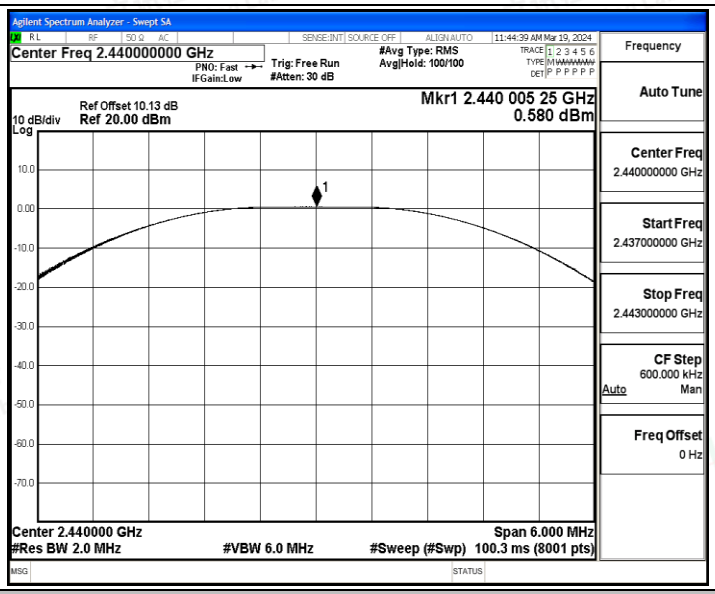
BLE_1M_Ant1_2480



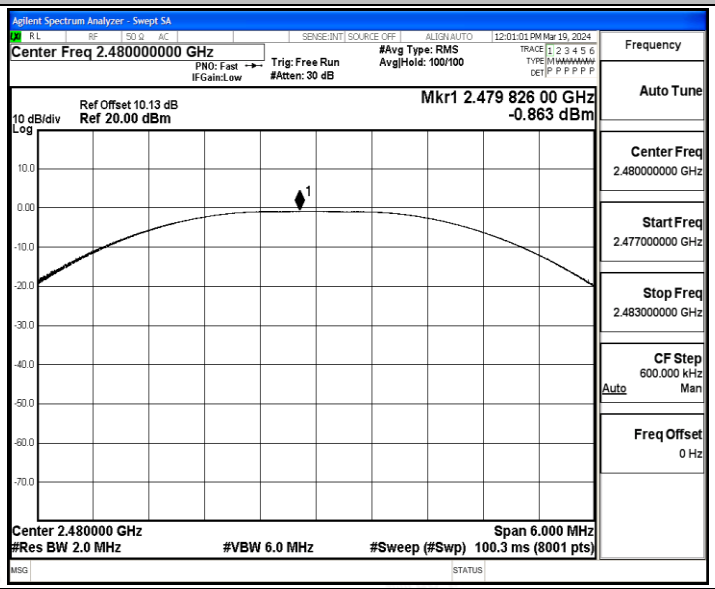
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



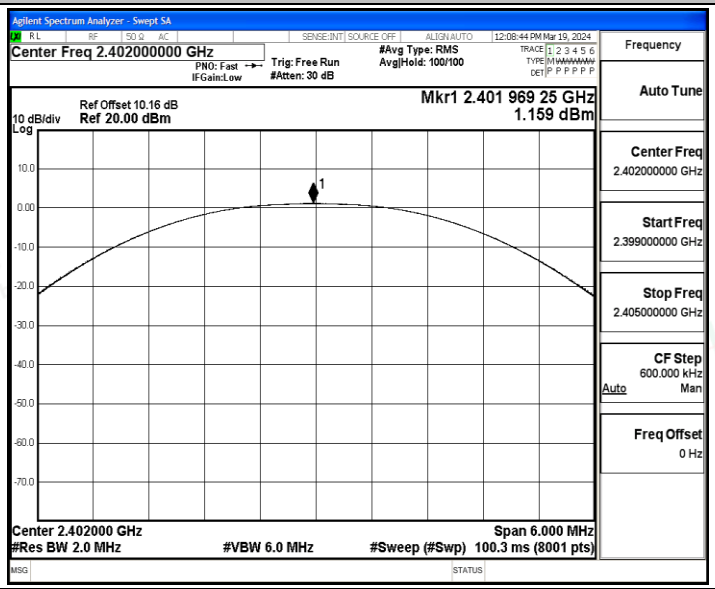
Right Ear:

Test Result

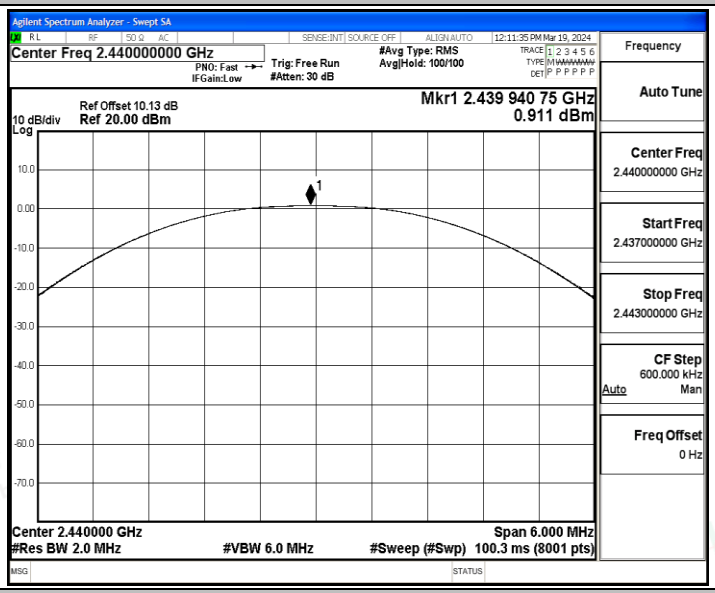
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	1.16	≤30	PASS
		2440	0.91	≤30	PASS
		2480	-0.63	≤30	PASS
BLE_2M	Ant1	2402	1.00	≤30	PASS
		2440	0.75	≤30	PASS
		2480	-0.99	≤30	PASS

Test Graphs

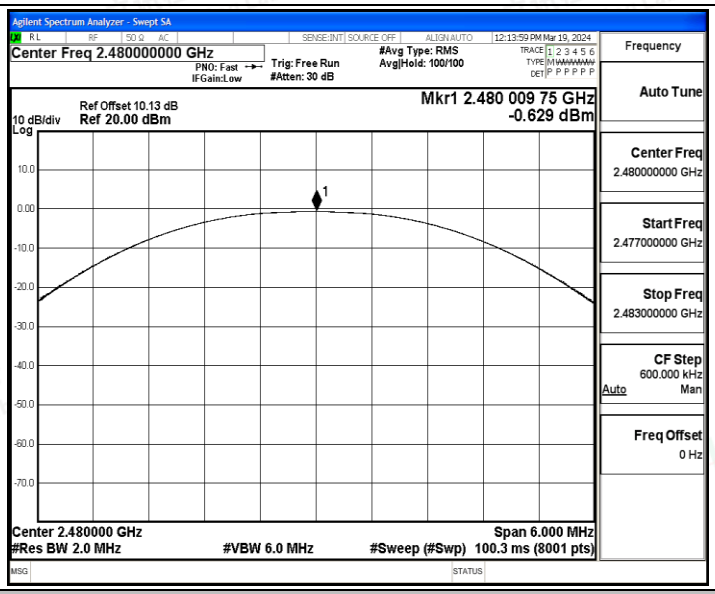
BLE_1M_Ant1_2402



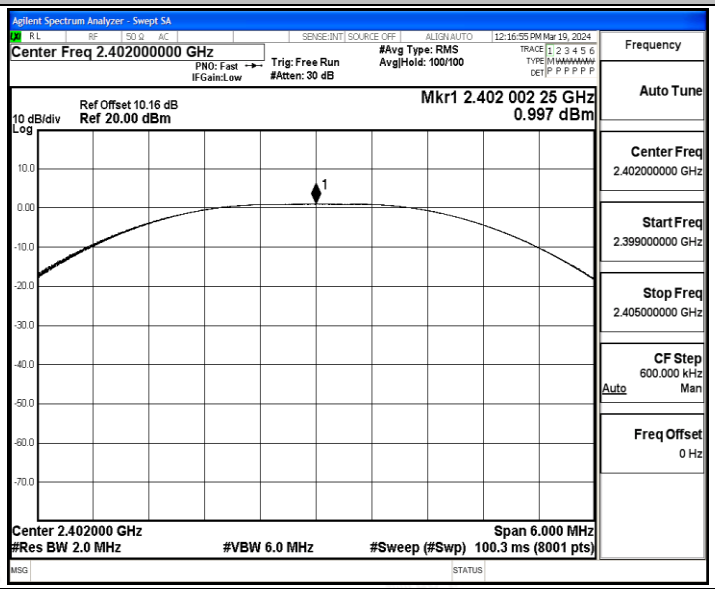
BLE_1M_Ant1_2440



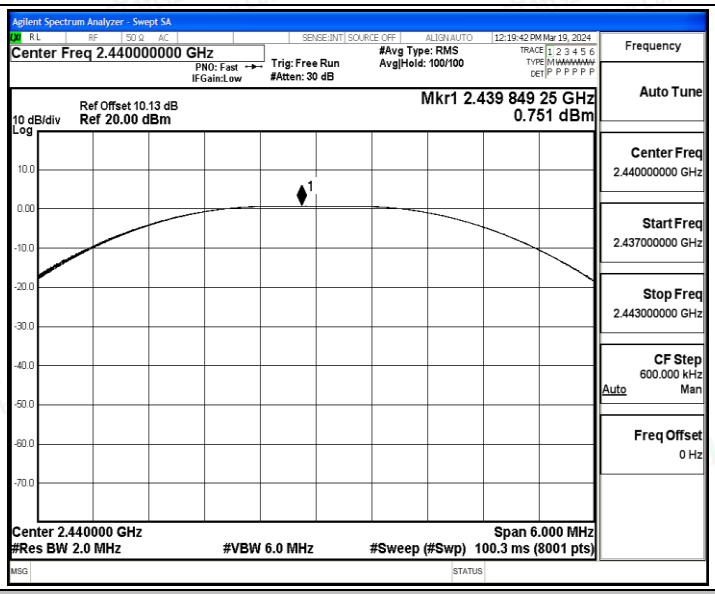
BLE_1M_Ant1_2480



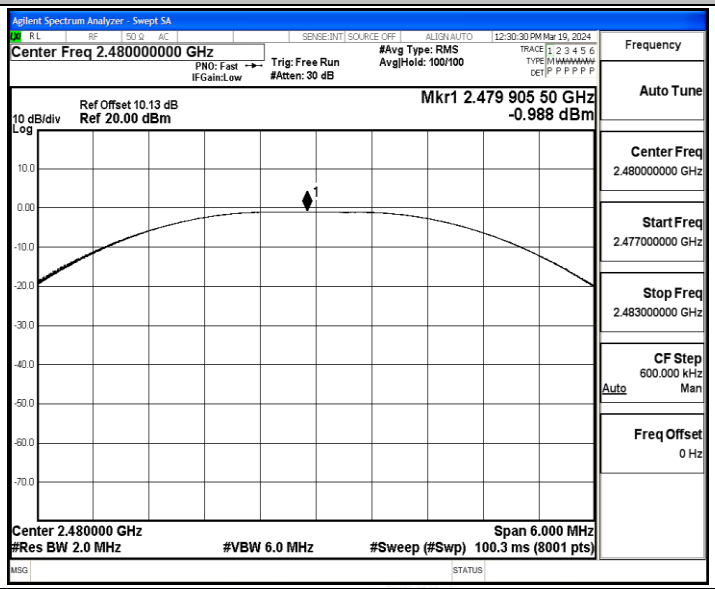
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



B.3 Maximum power spectral density

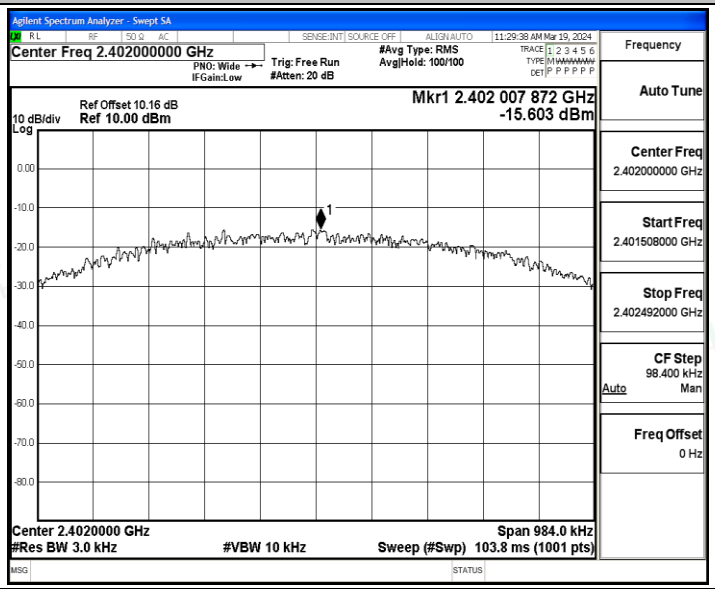
Left Ear:

Test Result

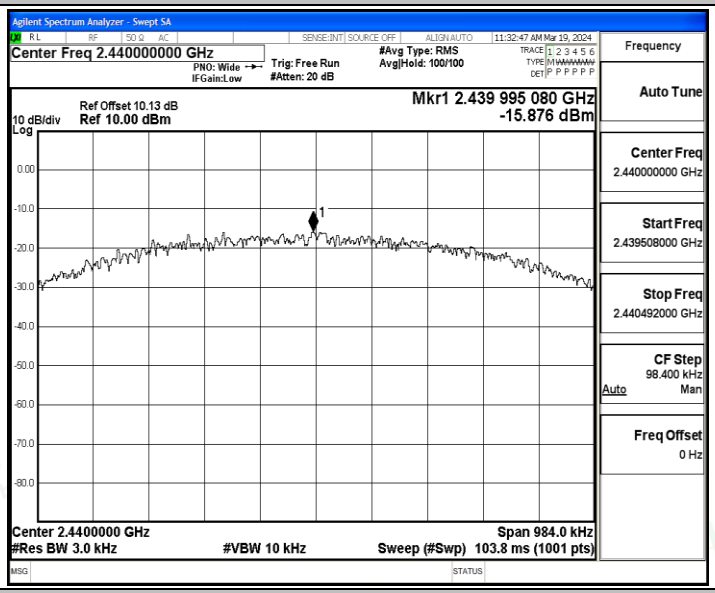
TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-15.60	≤8.00	PASS
		2440	-15.88	≤8.00	PASS
		2480	-17.36	≤8.00	PASS
BLE_2M	Ant1	2402	-18.88	≤8.00	PASS
		2440	-19.27	≤8.00	PASS
		2480	-20.43	≤8.00	PASS

Test Graphs

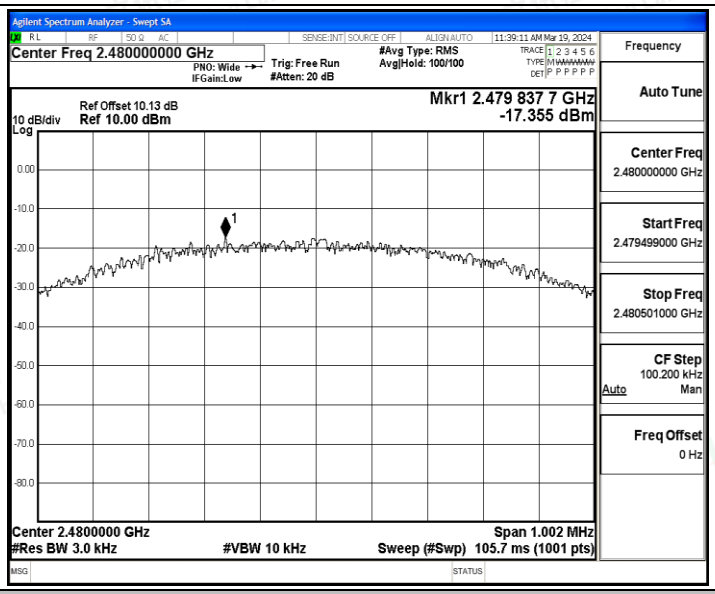
BLE_1M_Ant1_2402



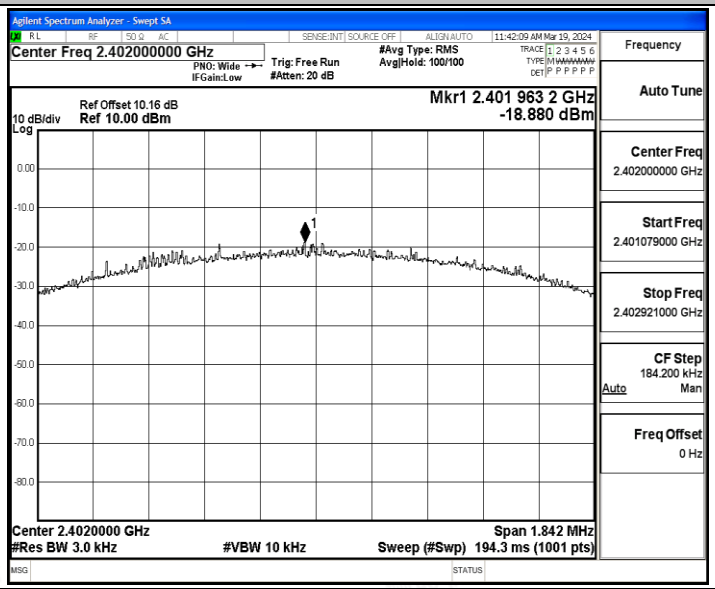
BLE_1M_Ant1_2440



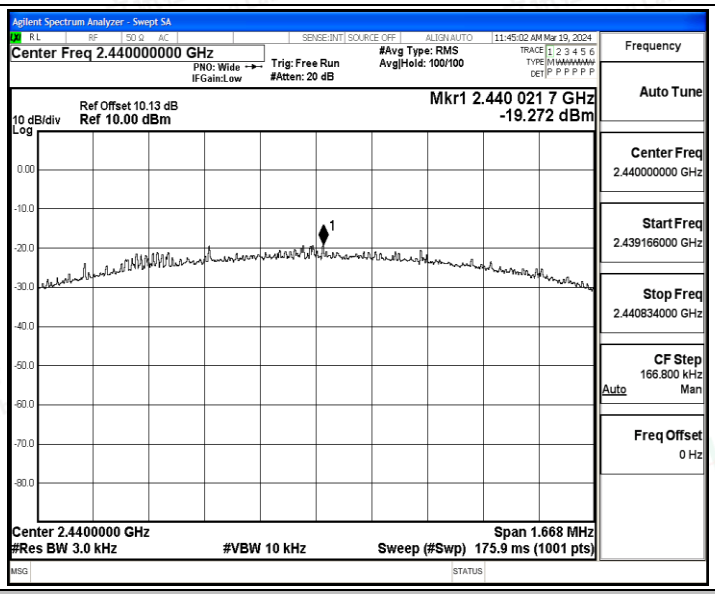
BLE_1M_Ant1_2480



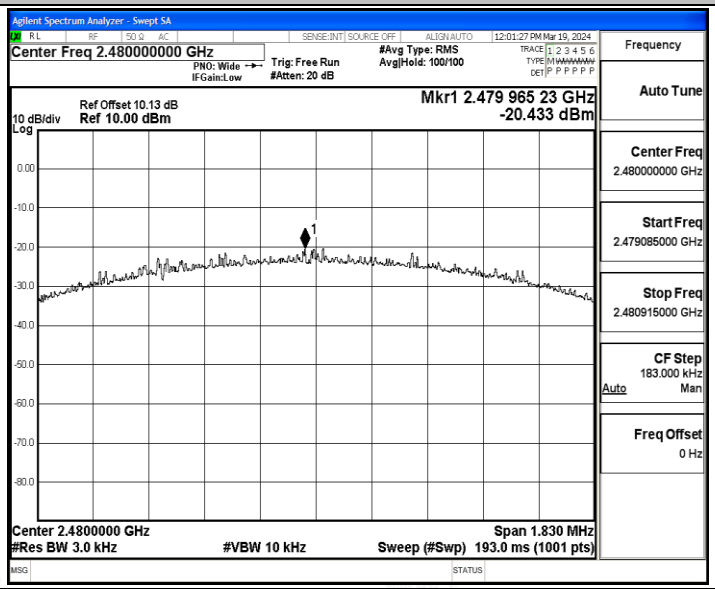
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



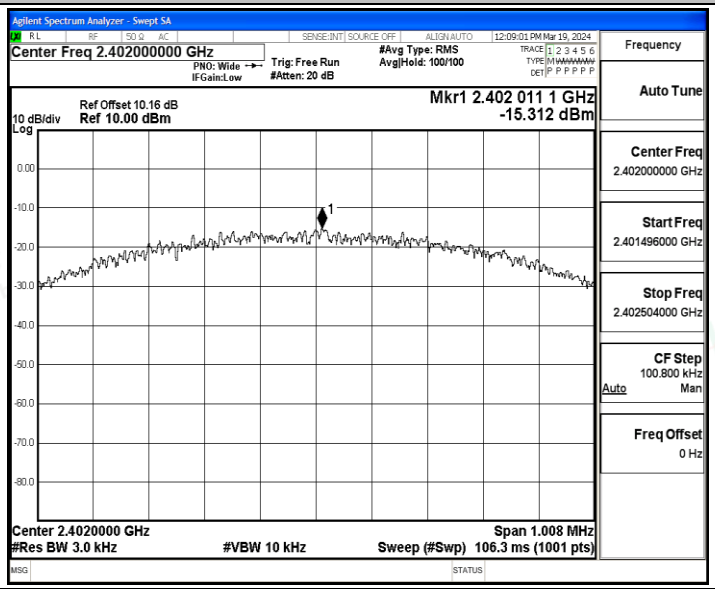
Right Ear:

Test Result

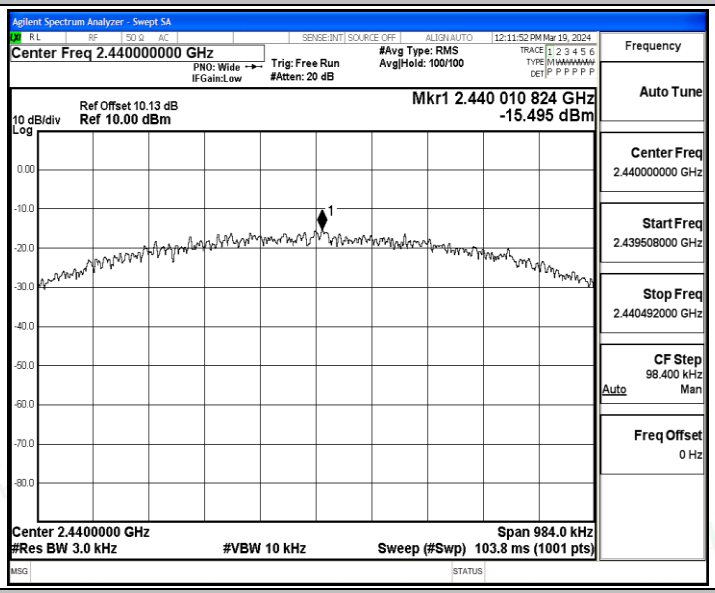
TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-15.31	≤8.00	PASS
		2440	-15.50	≤8.00	PASS
		2480	-17.19	≤8.00	PASS
BLE_2M	Ant1	2402	-18.56	≤8.00	PASS
		2440	-18.70	≤8.00	PASS
		2480	-20.84	≤8.00	PASS

Test Graphs

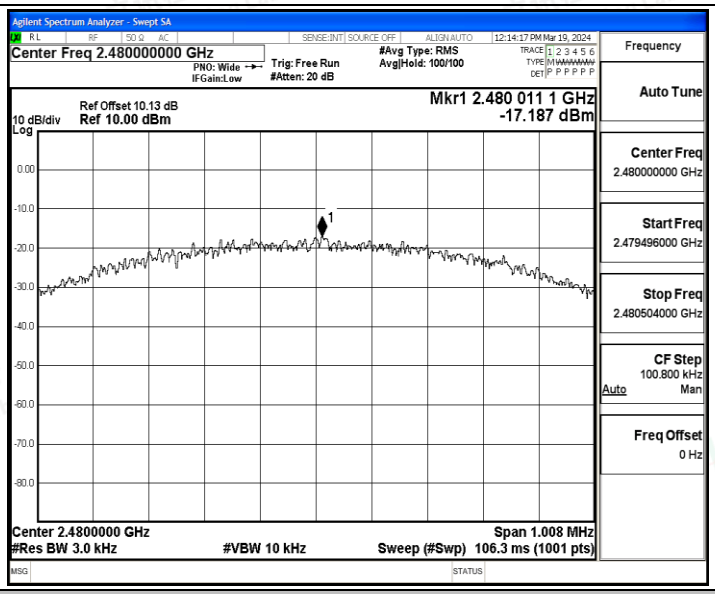
BLE_1M_Ant1_2402



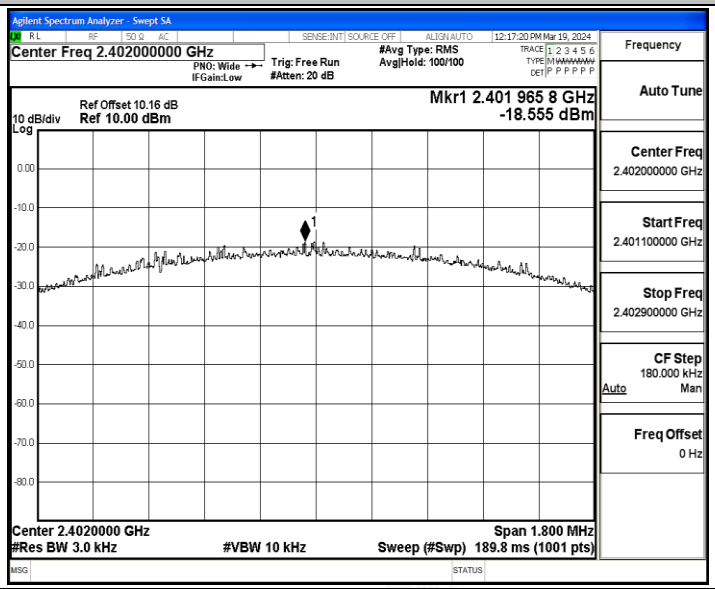
BLE_1M_Ant1_2440



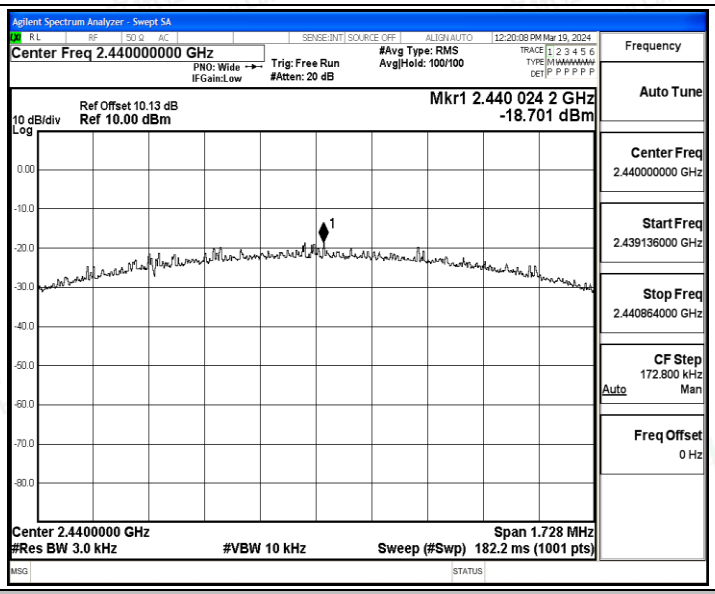
BLE_1M_Ant1_2480



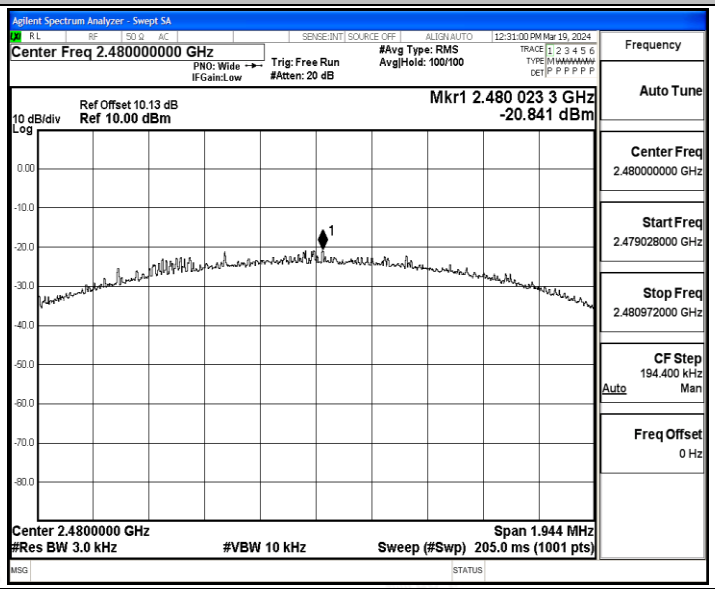
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



B.4 Band edge measurements

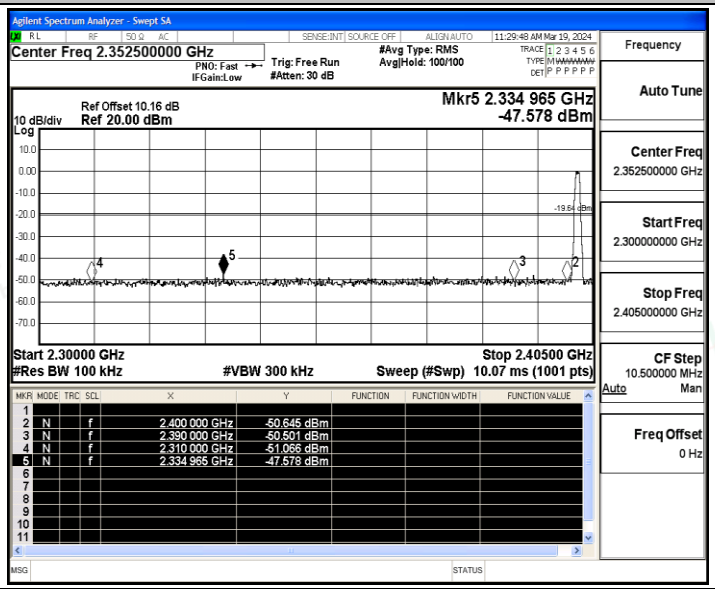
Left Ear:

Test Result

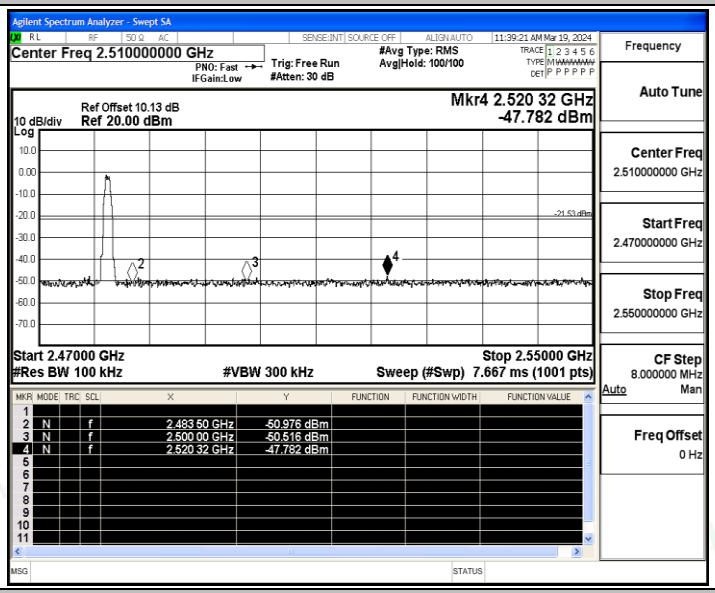
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	0.36	-47.58	≤-19.64	PASS
		High	2480	-1.53	-47.78	≤-21.53	PASS
BLE_2M	Ant1	Low	2402	0.25	-47.56	≤-19.75	PASS
		High	2480	-2.18	-48.24	≤-22.18	PASS

Test Graphs

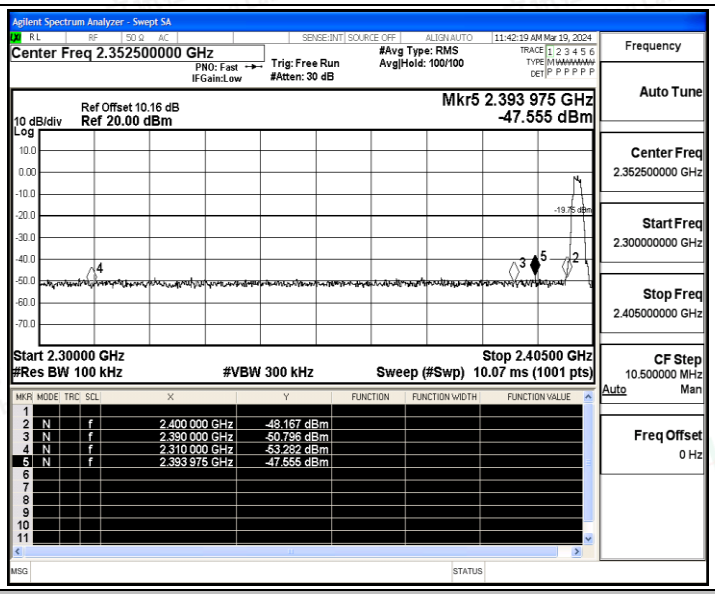
BLE_1M_Ant1_Low_2402



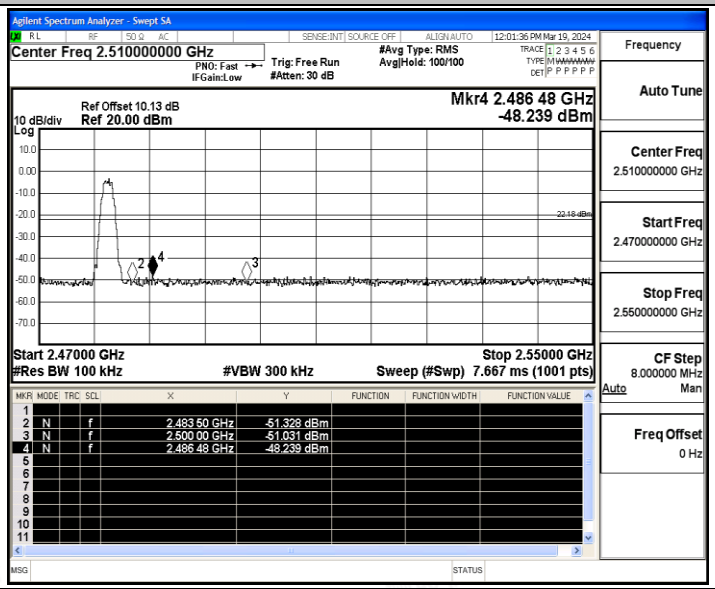
BLE_1M_Ant1_High_2480



BLE_2M_Ant1_Low_2402



BLE_2M_Ant1_High_2480



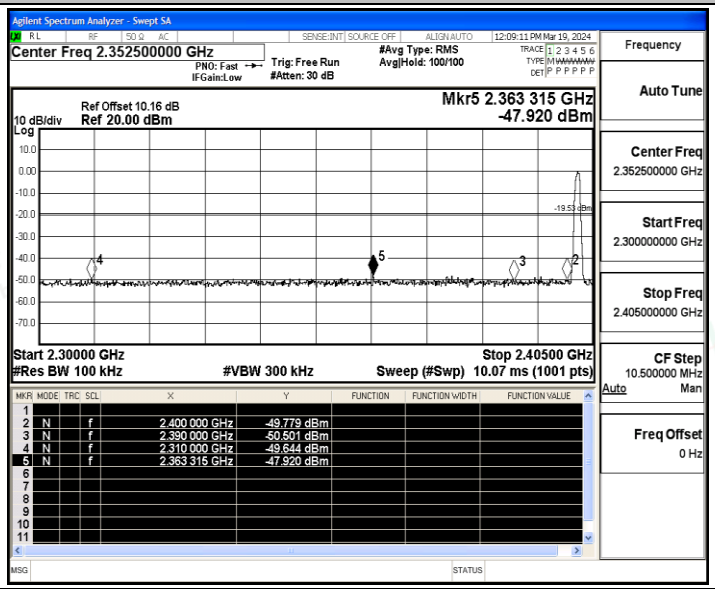
Right Ear:

Test Result

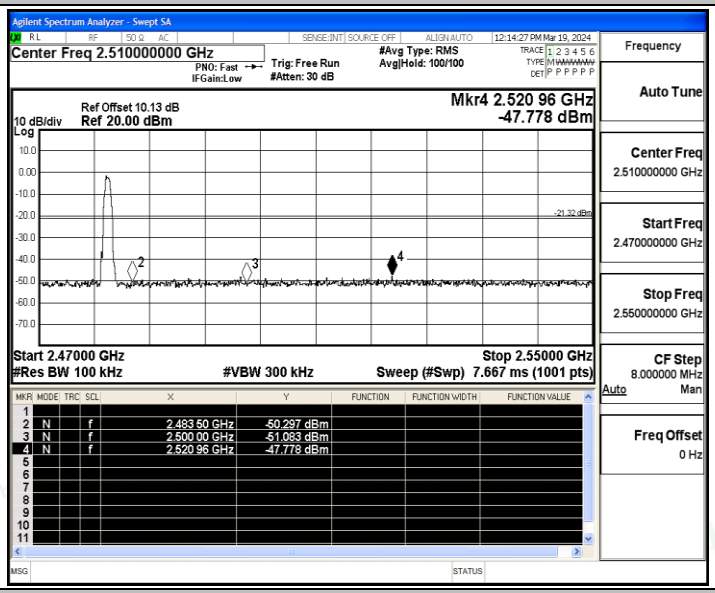
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	0.47	-47.92	≤-19.53	PASS
		High	2480	-1.32	-47.78	≤-21.32	PASS
BLE_2M	Ant1	Low	2402	-0.91	-48.41	≤-20.91	PASS
		High	2480	-2.48	-47.49	≤-22.48	PASS

Test Graphs

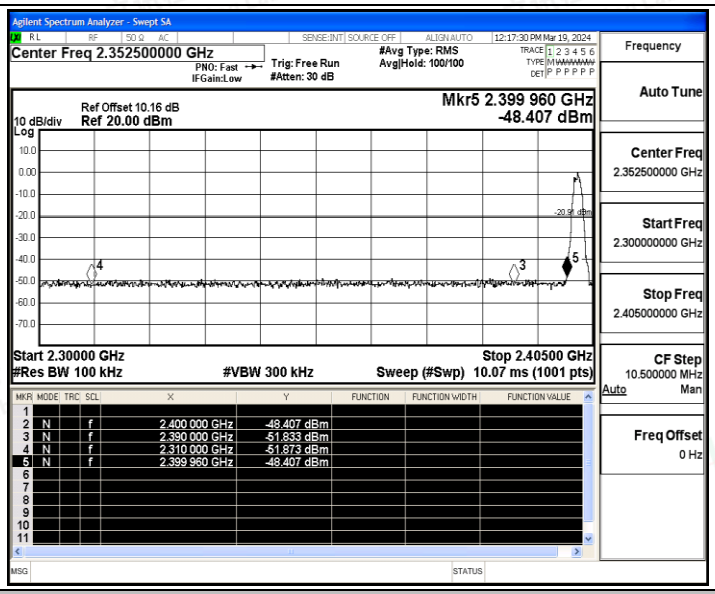
BLE_1M_Ant1_Low_2402



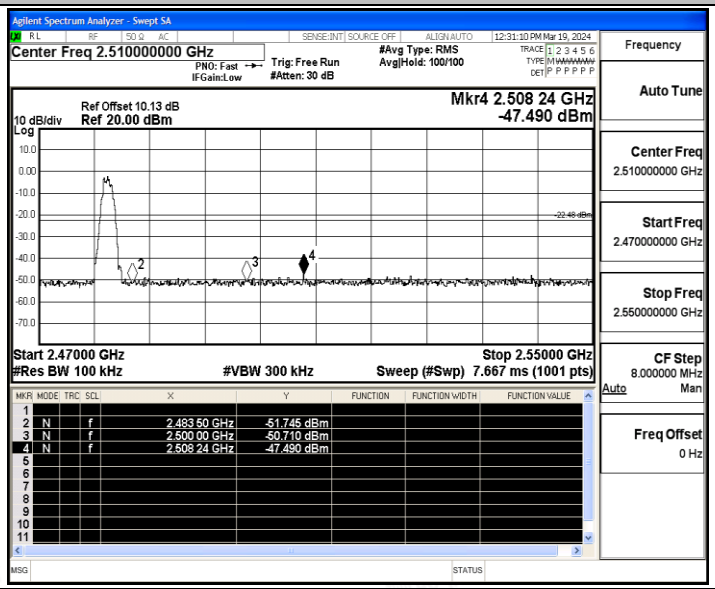
BLE_1M_Ant1_High_2480



BLE_2M_Ant1_Low_2402



BLE_2M_Ant1_High_2480



B.5 Conducted Spurious Emission

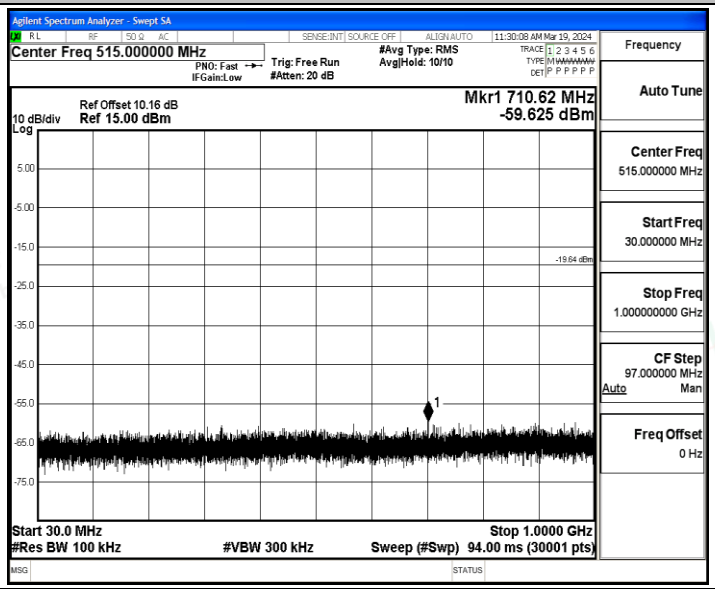
Left Ear:

Test Result

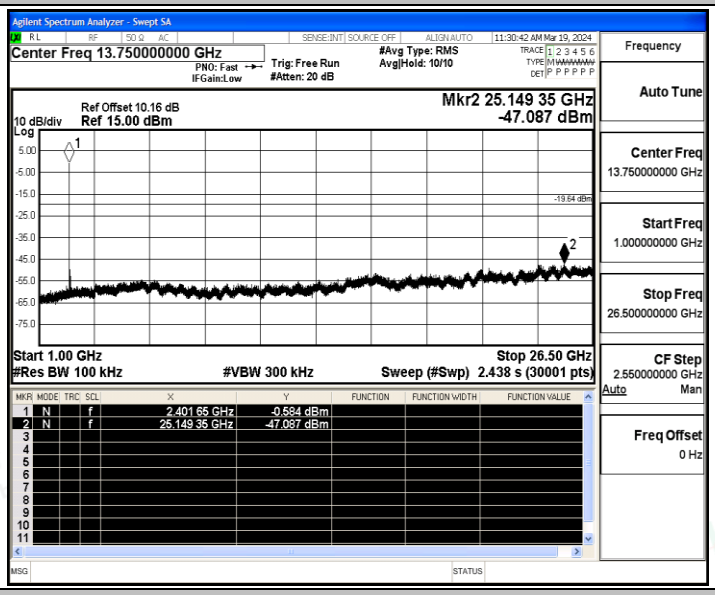
TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	30~1000	0.36	-59.63	≤-19.64	PASS
			1000~26500	0.36	-47.09	≤-19.64	PASS
		2440	30~1000	-0.65	-59.43	≤-20.65	PASS
			1000~26500	-0.65	-47.11	≤-20.65	PASS
		2480	30~1000	-1.53	-59.74	≤-21.53	PASS
			1000~26500	-1.53	-46.53	≤-21.53	PASS
BLE_2M	Ant1	2402	30~1000	0.25	-59.8	≤-19.75	PASS
			1000~26500	0.25	-46.99	≤-19.75	PASS
		2440	30~1000	-0.10	-59.91	≤-20.1	PASS
			1000~26500	-0.10	-47.38	≤-20.1	PASS
		2480	30~1000	-2.18	-58.88	≤-22.18	PASS
			1000~26500	-2.18	-47.26	≤-22.18	PASS

Test Graphs

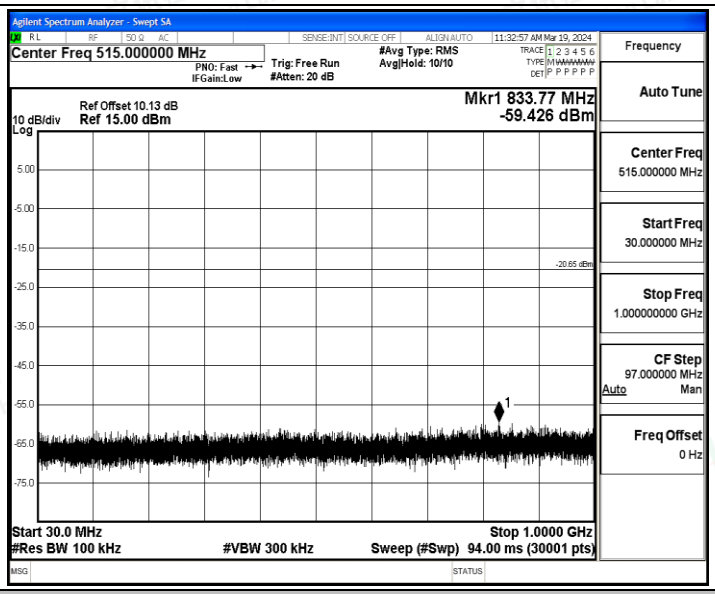
BLE_1M_Ant1_2402_30~1000



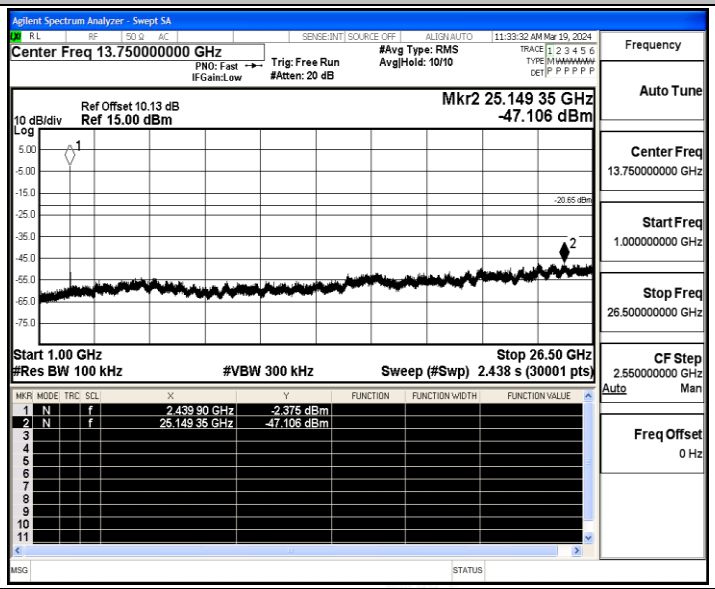
BLE_1M_Ant1_2402_1000~26500



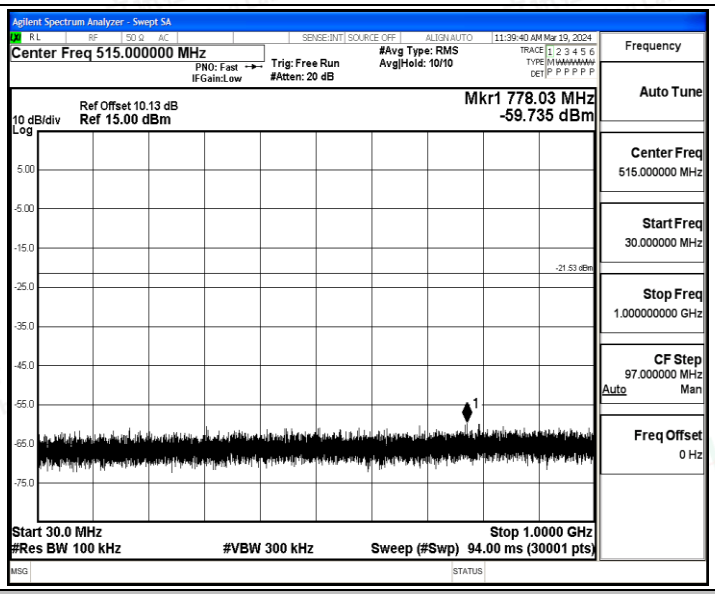
BLE_1M_Ant1_2440_30~1000



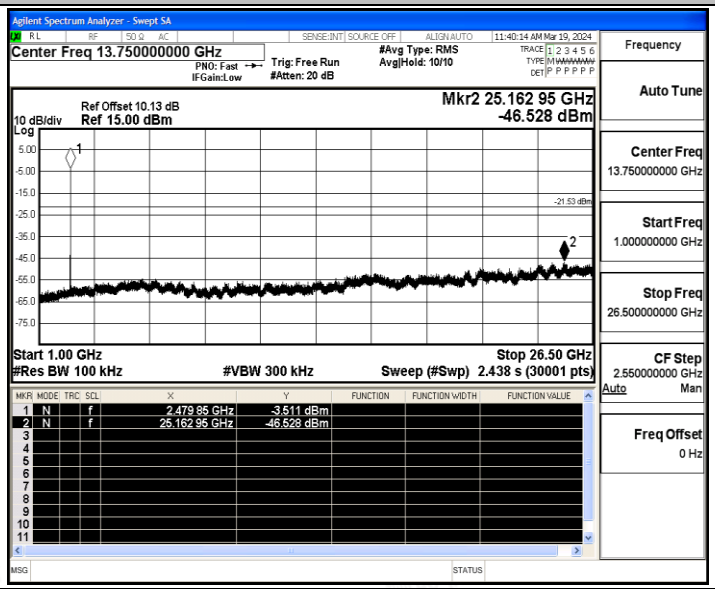
BLE_1M_Ant1_2440_1000~26500



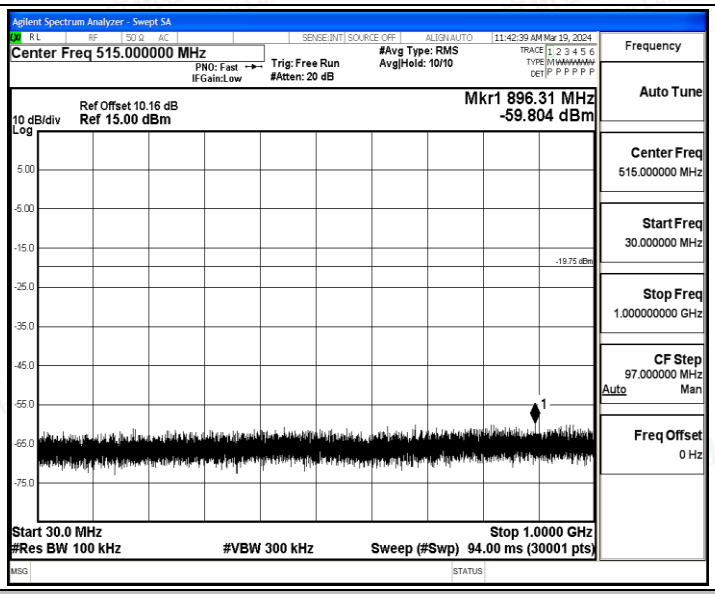
BLE_1M_Ant1_2480_30~1000



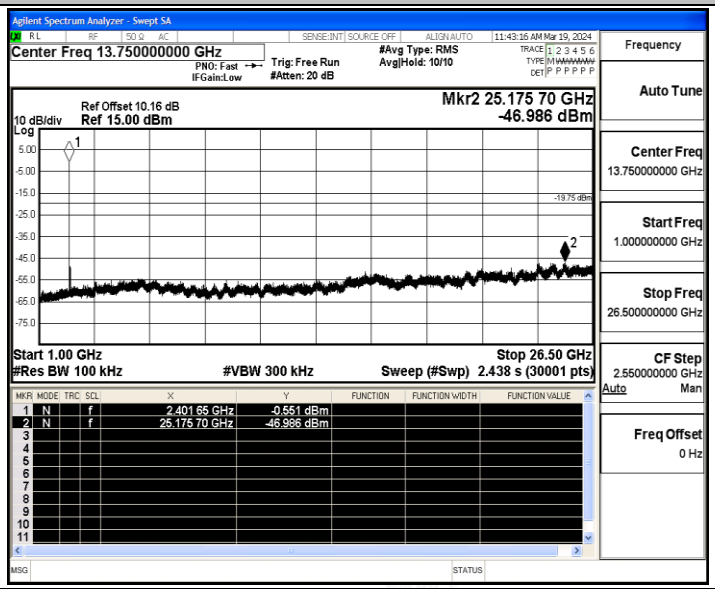
BLE_1M_Ant1_2480_1000~26500



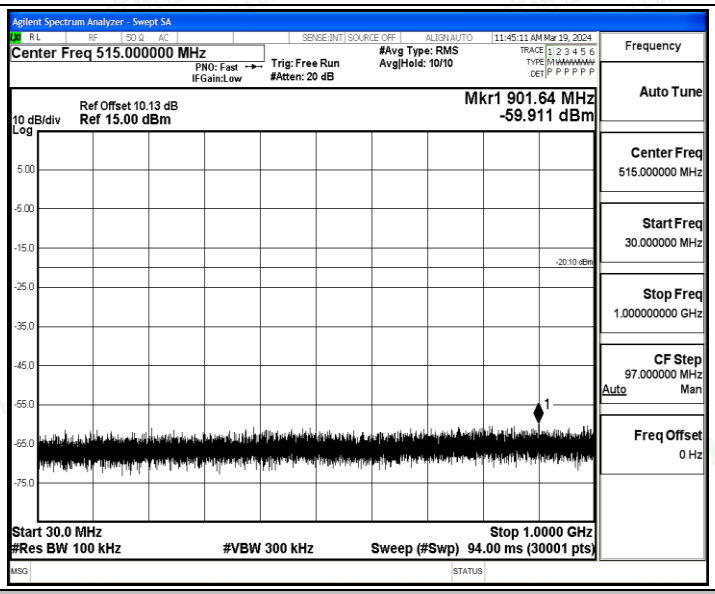
BLE_2M_Ant1_2402_30~1000



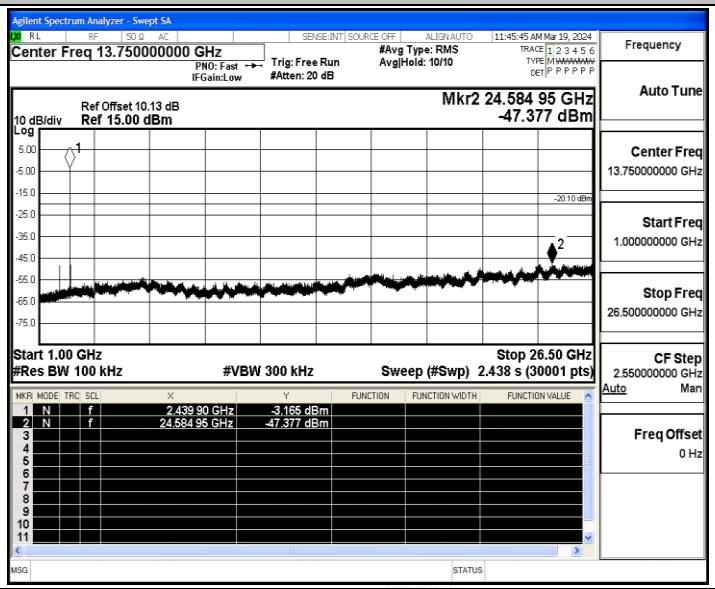
BLE_2M_Ant1_2402_1000~26500



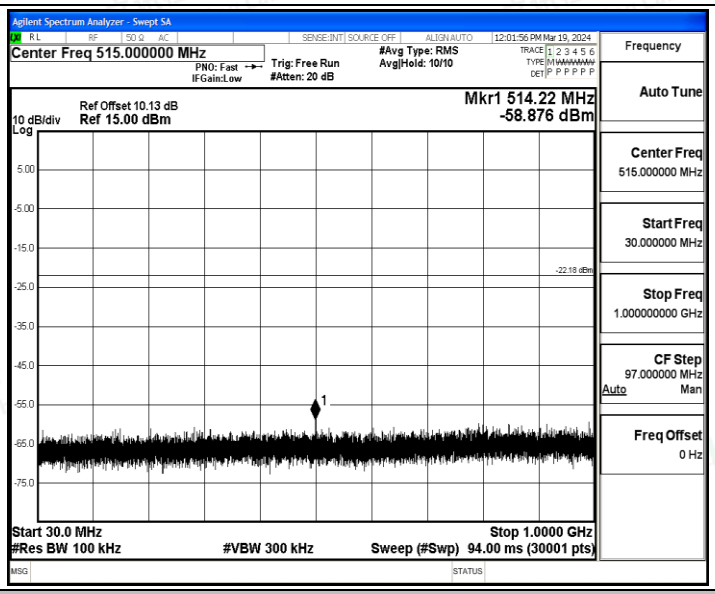
BLE_2M_Ant1_2440_30~1000



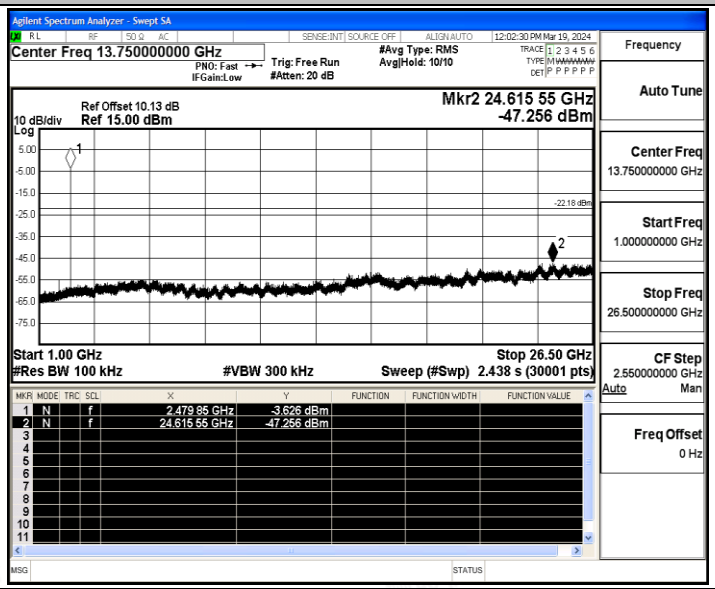
BLE_2M_Ant1_2440_1000~26500



BLE_2M_Ant1_2480_30~1000



BLE_2M_Ant1_2480_1000~26500



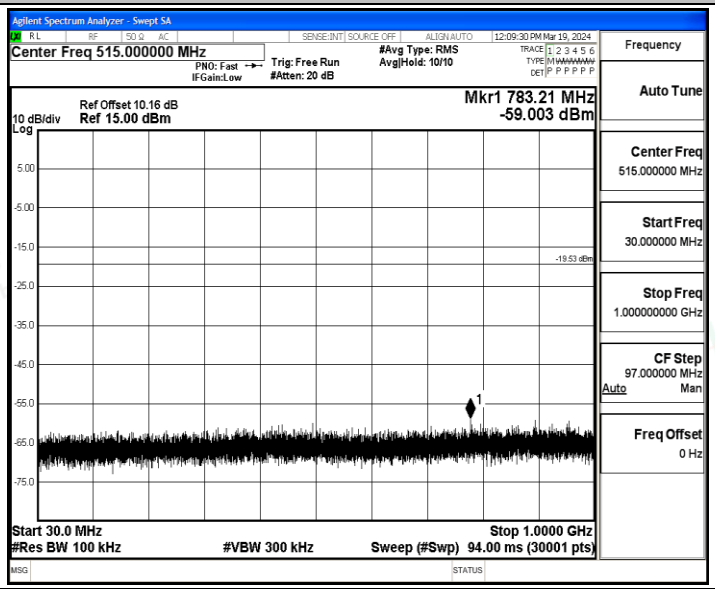
Right Ear:

Test Result

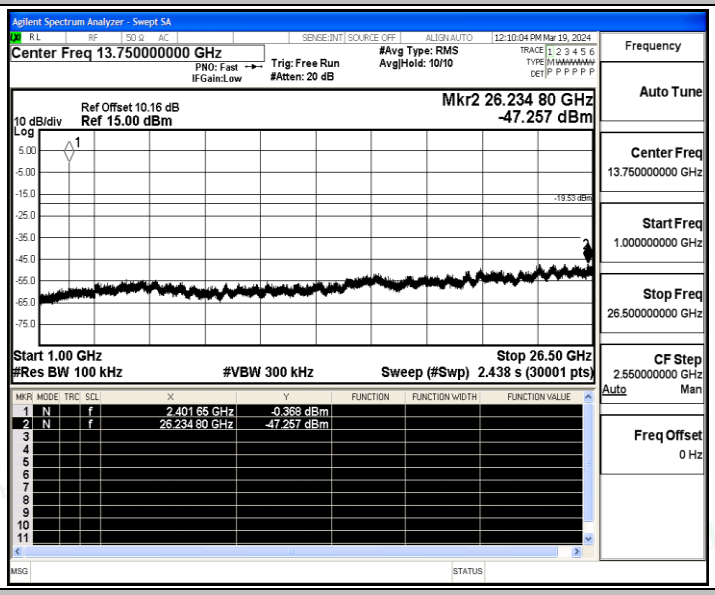
TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	30~1000	0.47	-59	≤-19.53	PASS
			1000~26500	0.47	-47.26	≤-19.53	PASS
		2440	30~1000	0.23	-59	≤-19.77	PASS
			1000~26500	0.23	-47.46	≤-19.77	PASS
		2480	30~1000	-1.32	-57.14	≤-21.32	PASS
			1000~26500	-1.32	-47.01	≤-21.32	PASS
BLE_2M	Ant1	2402	30~1000	-0.91	-59.51	≤-20.91	PASS
			1000~26500	-0.91	-47.16	≤-20.91	PASS
		2440	30~1000	-0.78	-59.23	≤-20.78	PASS
			1000~26500	-0.78	-46.46	≤-20.78	PASS
		2480	30~1000	-2.48	-59.95	≤-22.48	PASS
			1000~26500	-2.48	-47.47	≤-22.48	PASS

Test Graphs

BLE_1M_Ant1_2402_30~1000



BLE_1M_Ant1_2402_1000~26500



BLE_1M_Ant1_2440_30~1000