Appendix: Bluetooth LE

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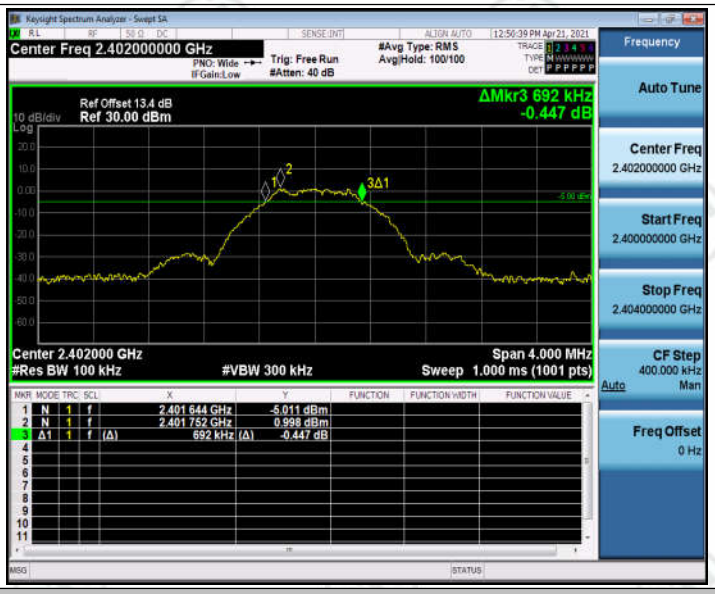
Appendix A: DTS Bandwidth

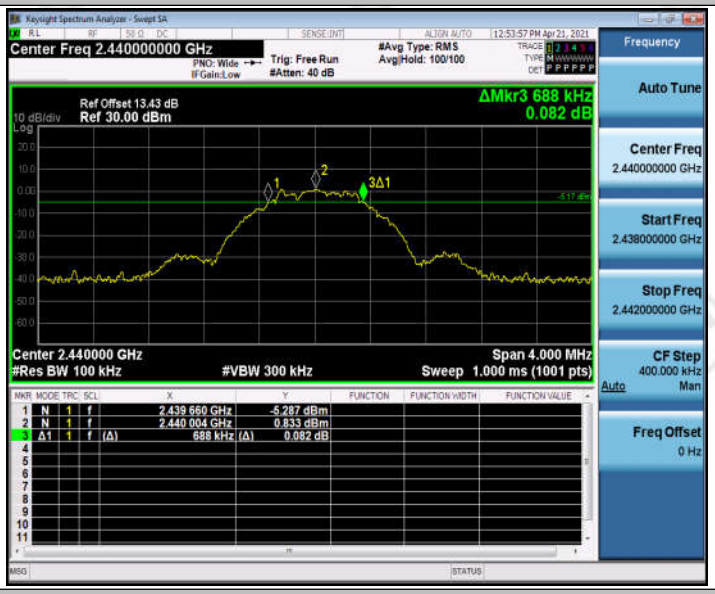
Test Result

Test Mode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.692	2401.644	2402.336	0.5	PASS
		2440	0.688	2439.660	2440.348	0.5	PASS
		2480	0.680	2479.652	2480.332	0.5	PASS
BLE_2M	Ant1	2402	1.172	2401.412	2402.584	0.5	PASS
		2440	1.132	2439.440	2440.572	0.5	PASS
		2480	1.176	2479.412	2480.588	0.5	PASS

Test Graphs

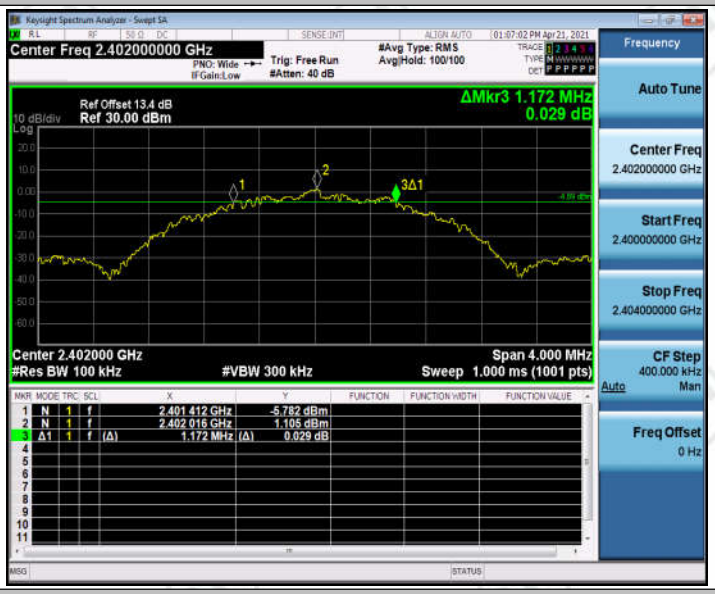


BLE_1M_Ant1_2402

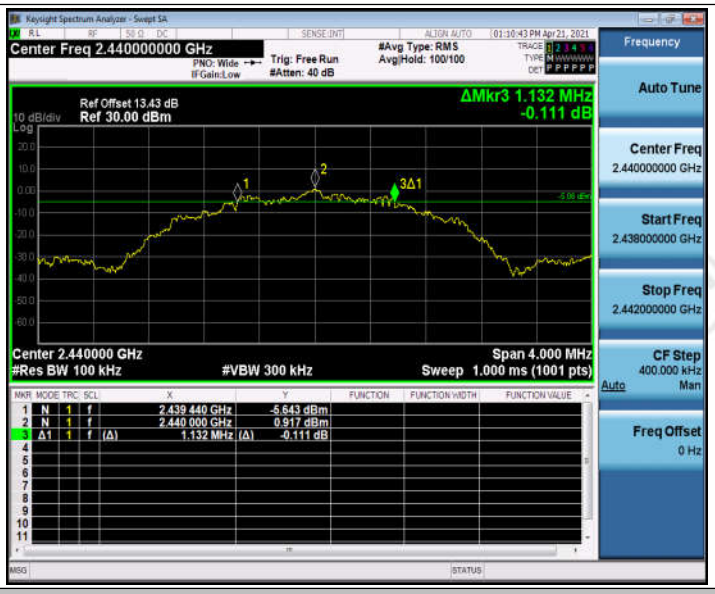


BLE_1M_Ant1_2440

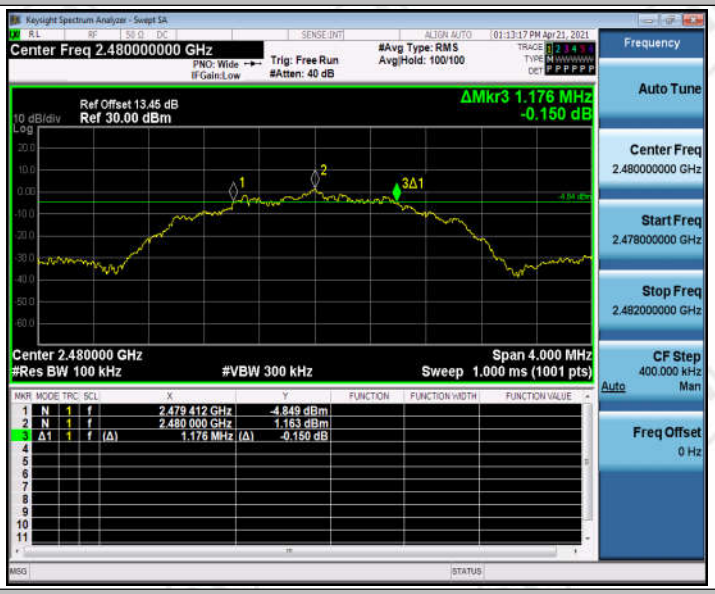
BLE_1M_Ant1_2480



BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

Appendix B: Occupied Channel Bandwidth

Test Result

Test Mode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0290	2401.493	2402.522	---	PASS
		2440	1.0467	2439.488	2440.535	---	PASS
		2480	1.0322	2479.491	2480.524	---	PASS
BLE_2M	Ant1	2402	2.0623	2400.988	2403.050	---	PASS
		2440	2.0670	2438.990	2441.057	---	PASS
		2480	2.0717	2478.987	2481.059	---	PASS

Test Graphs

BLE_1M_Ant1_2402

BLE_1M_Ant1_2440

BLE_1M_Ant1_2480

BLE_2M_Ant1_2402

BLE_2M_Ant1_2440

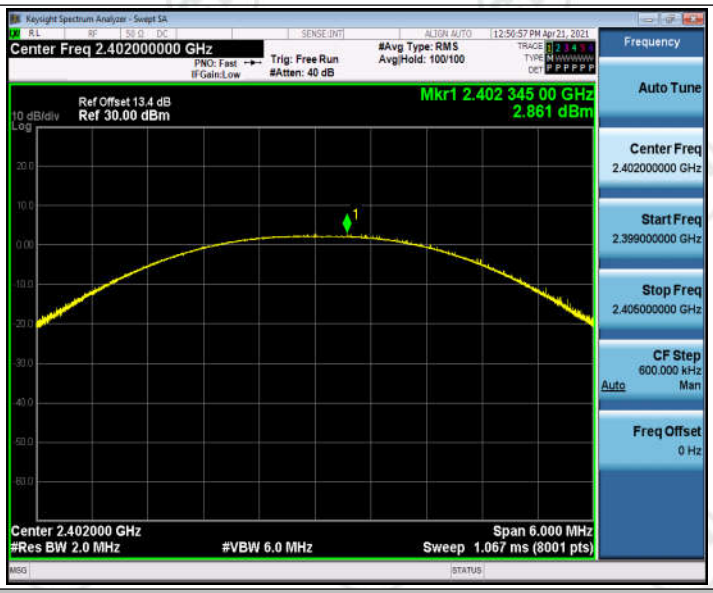
BLE_2M_Ant1_2480

Appendix C: Maximum conducted output power

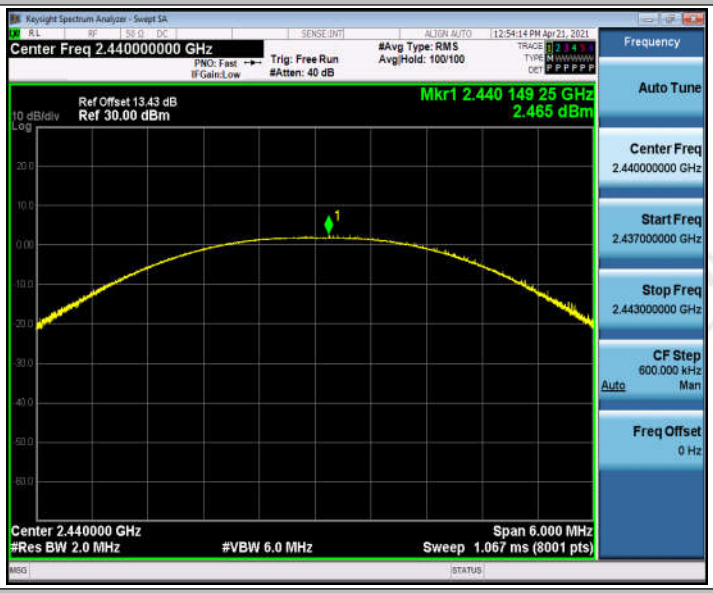
Test Result

Test Mode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	2.86	<=30	PASS
		2440	2.47	<=30	PASS
		2480	2.87	<=30	PASS
BLE_2M	Ant1	2402	2.89	<=30	PASS
		2440	2.53	<=30	PASS
		2480	2.87	<=30	PASS

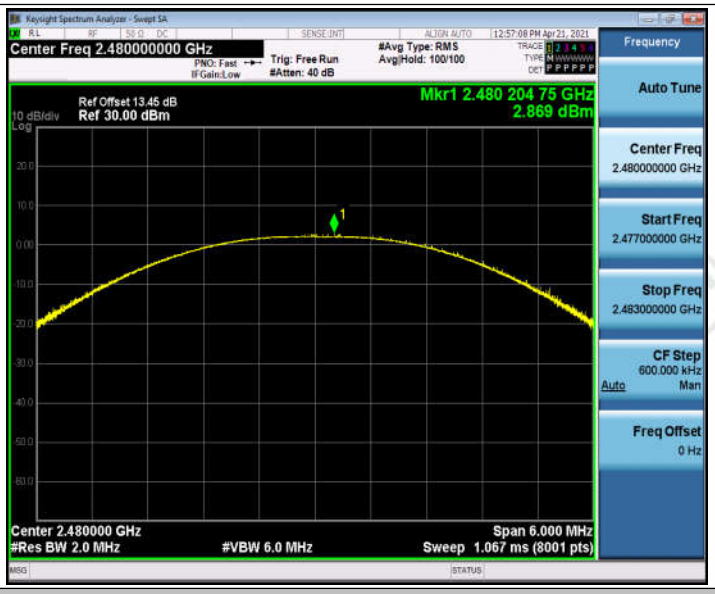
Test Graphs



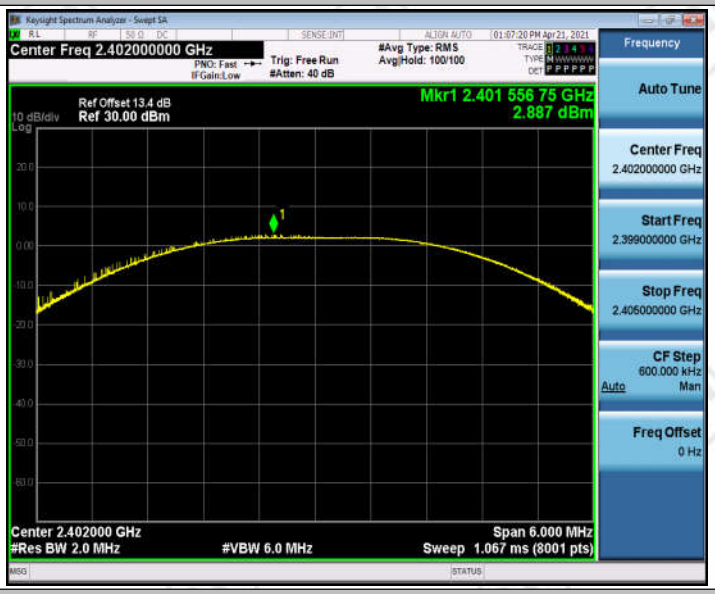
BLE_1M_Ant1_2402



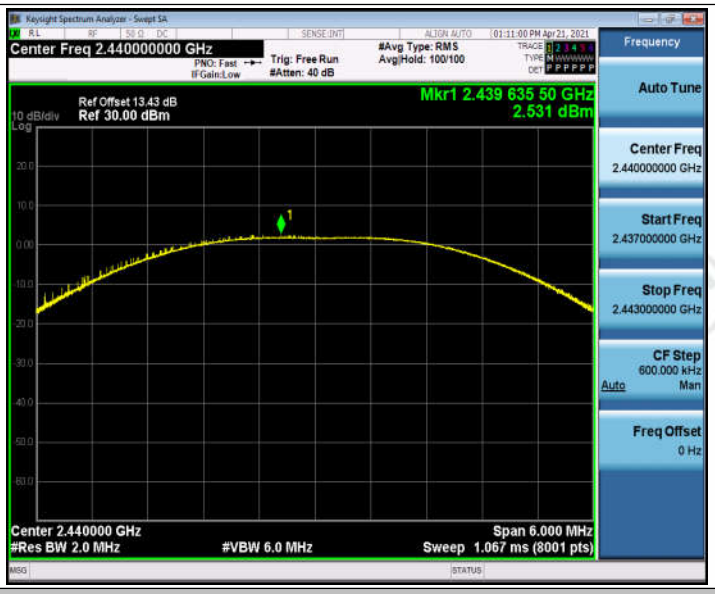
BLE_1M_Ant1_2440



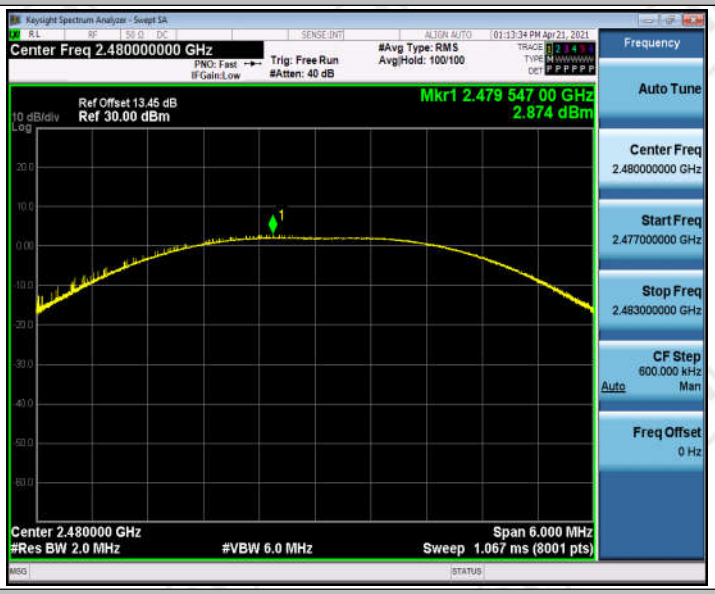
BLE_1M_Ant1_2480



BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

Appendix D: Maximum power spectral density

Test Result

Test Mode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-7.96	<=8	PASS
		2440	-8.54	<=8	PASS
		2480	-7.44	<=8	PASS
BLE_2M	Ant1	2402	-9.24	<=8	PASS
		2440	-8.39	<=8	PASS
		2480	-8.75	<=8	PASS

Test Graphs

BLE_1M_Ant1_2402

BLE_1M_Ant1_2440

BLE_1M_Ant1_2480

BLE_2M_Ant1_2402

BLE_2M_Ant1_2440

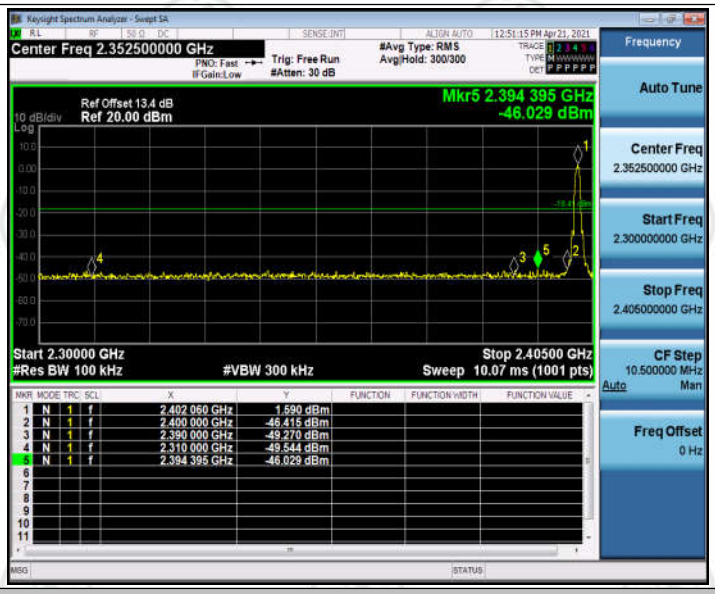
BLE_2M_Ant1_2480

Appendix E: Band edge measurements

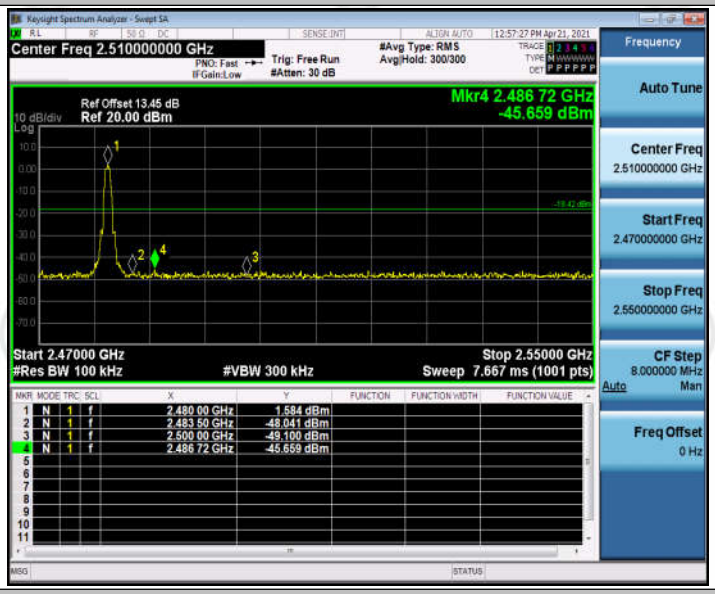
Test Result

Test Mode	Antenna	Ch Name	Channel	Ref Level[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	1.59	-46.03	<=-18.41	PASS
		High	2480	1.58	-45.66	<=-18.42	PASS
BLE_2M	Ant1	Low	2402	1.34	-30.17	<=-18.66	PASS
		High	2480	1.23	-45.66	<=-18.77	PASS

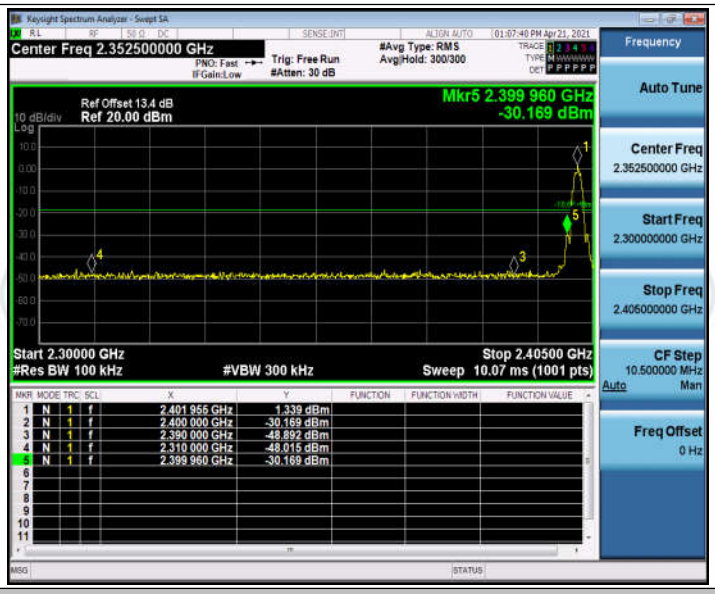
Test Graphs



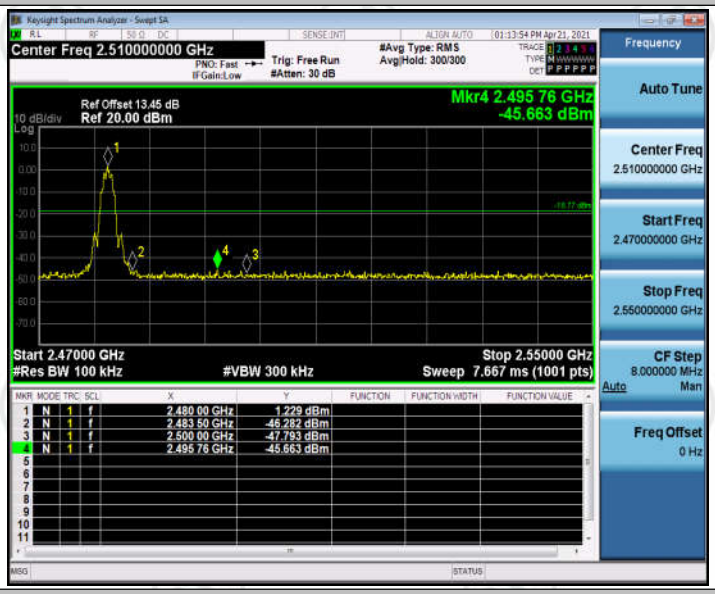
BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480



BLE_2M_Ant1_Low_2402



BLE_2M_Ant1_High_2480

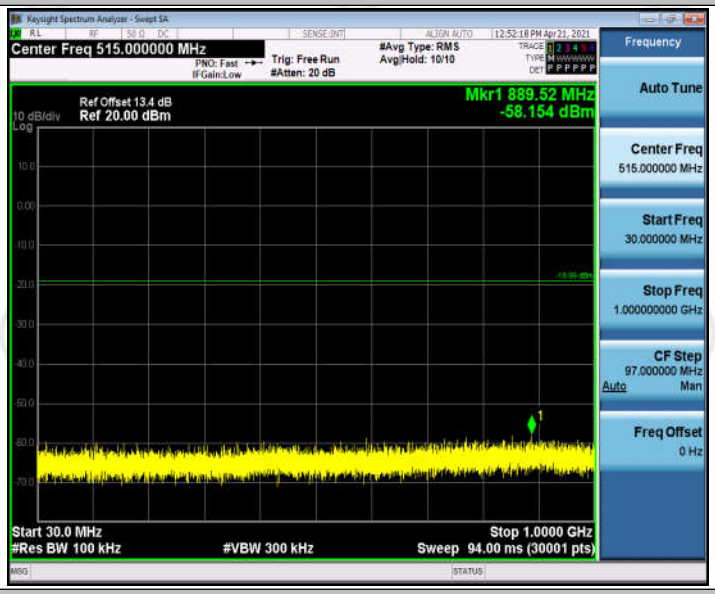
Appendix F: Conducted Spurious Emission

Test Result

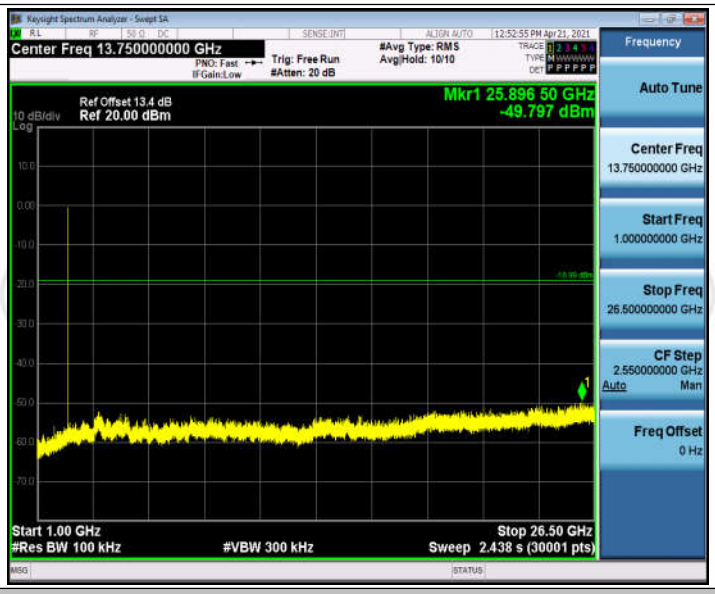
Test Mode	Antenna	Channel	Freq Range [MHz]	Ref Level [dBm]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	2402	Reference	1.01	1.01	---	PASS
			30~1000	30~1000	-58.154	<=-18.993	PASS
			1000~26500	1000~26500	-49.797	<=-18.993	PASS
		2440	Reference	0.89	0.89	---	PASS
			30~1000	30~1000	-58.44	<=-19.111	PASS
			1000~26500	1000~26500	-48.768	<=-19.111	PASS
		2480	Reference	1.31	1.31	---	PASS
			30~1000	30~1000	-58.285	<=-18.689	PASS
			1000~26500	1000~26500	-50.035	<=-18.689	PASS
BLE_2M	Ant1	2402	Reference	1.26	1.26	---	PASS
			30~1000	30~1000	-57.731	<=-18.742	PASS
			1000~26500	1000~26500	-50.014	<=-18.742	PASS
		2440	Reference	0.77	0.77	---	PASS
			30~1000	30~1000	-58.264	<=-19.227	PASS
			1000~26500	1000~26500	-49.8	<=-19.227	PASS
		2480	Reference	1.17	1.17	---	PASS
			30~1000	30~1000	-57.908	<=-18.827	PASS
			1000~26500	1000~26500	-49.372	<=-18.827	PASS

Test Graphs

BLE_1M_Ant1_2402_0~Reference

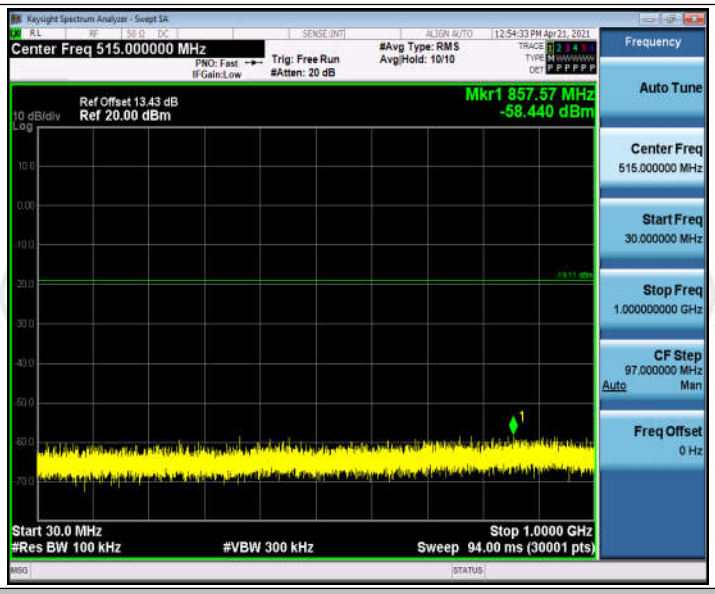


BLE_1M_Ant1_2402_30~1000

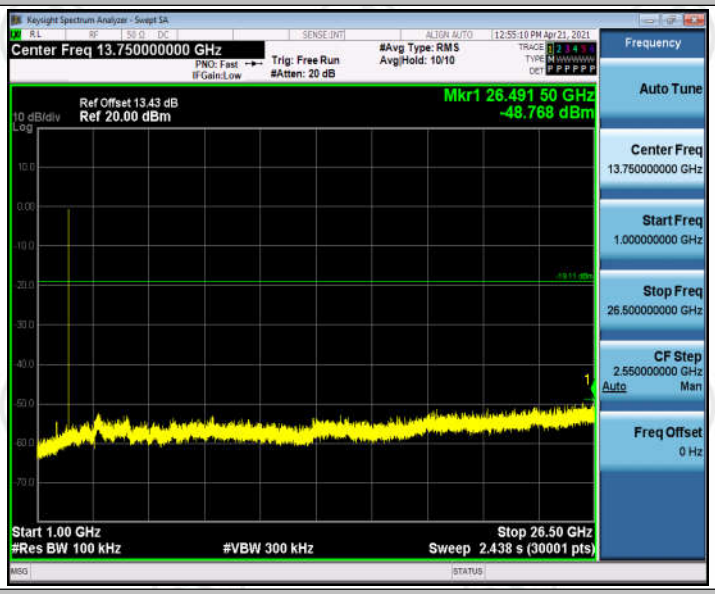


BLE_1M_Ant1_2402_1000~26500

BLE_1M_Ant1_2440_0~Reference

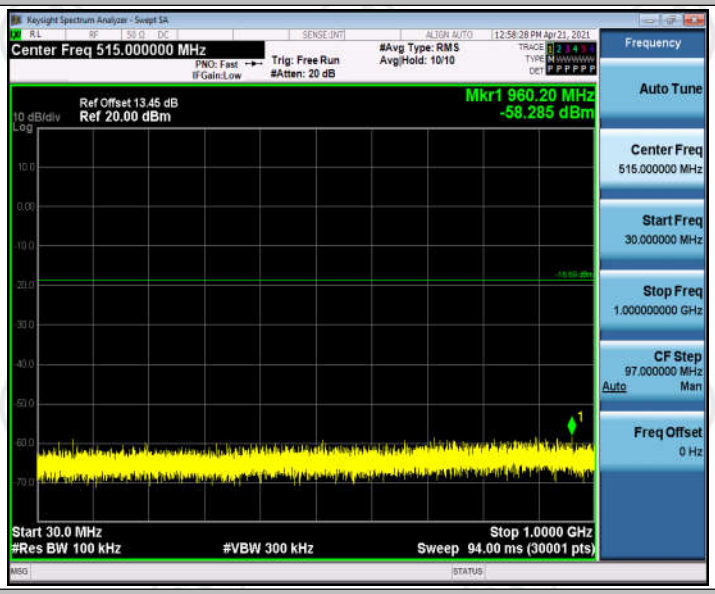


BLE_1M_Ant1_2440_30~1000

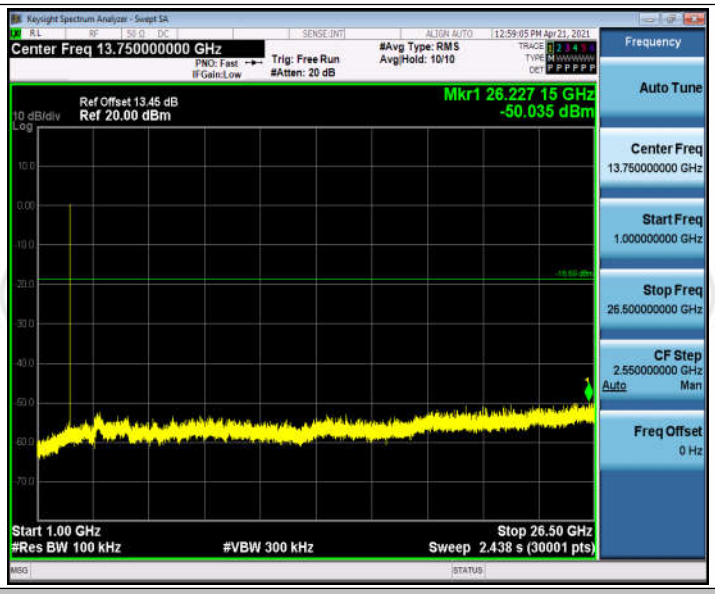


BLE_1M_Ant1_2440_1000~26500

BLE_1M_Ant1_2480_0~Reference

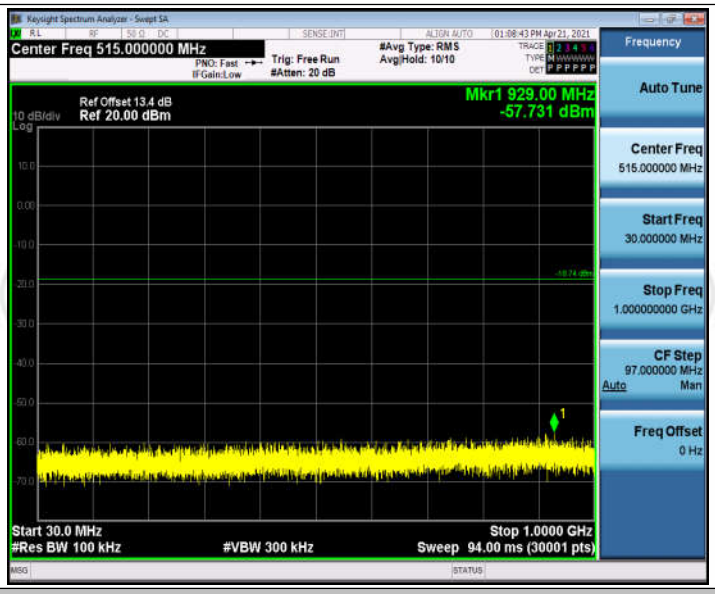


BLE_1M_Ant1_2480_30~1000

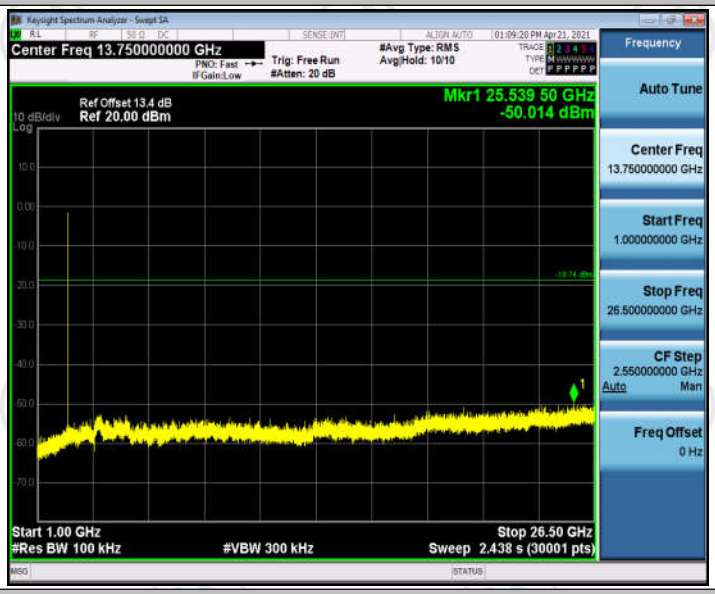


BLE_1M_Ant1_2480_1000~26500

BLE_2M_Ant1_2402_0~Reference

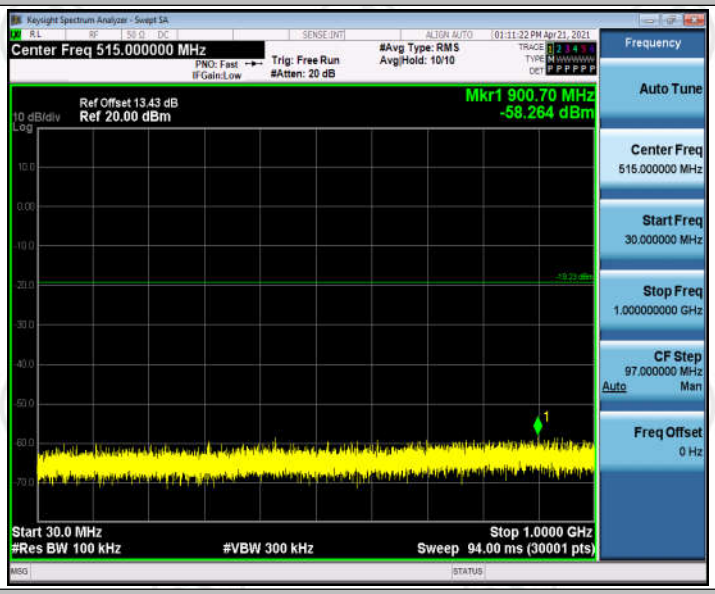


BLE_2M_Ant1_2402_30~1000

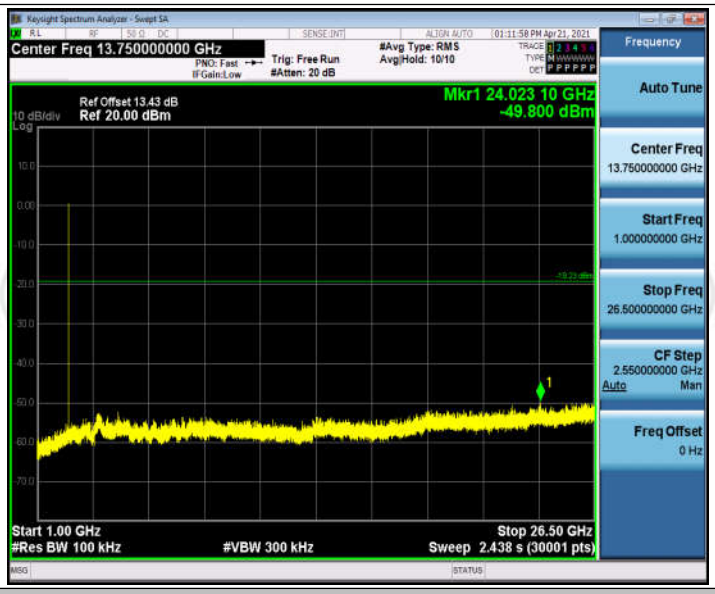


BLE_2M_Ant1_2402_1000~26500

BLE_2M_Ant1_2440_0~Reference

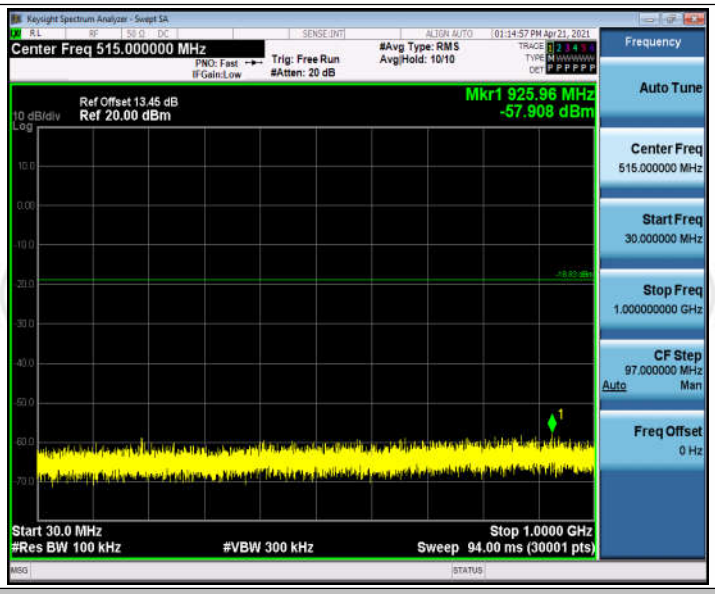


BLE_2M_Ant1_2440_30~1000

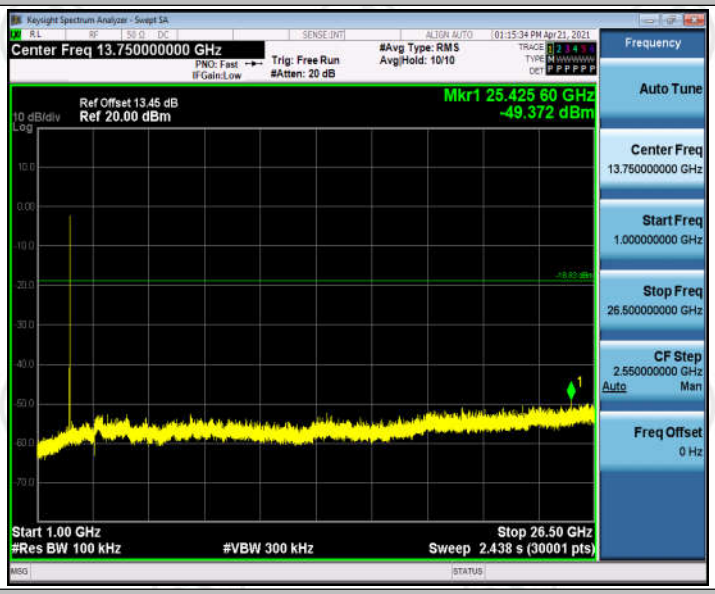


BLE_2M_Ant1_2440_1000~26500

BLE_2M_Ant1_2480_0~Reference



BLE_2M_Ant1_2480_30~1000



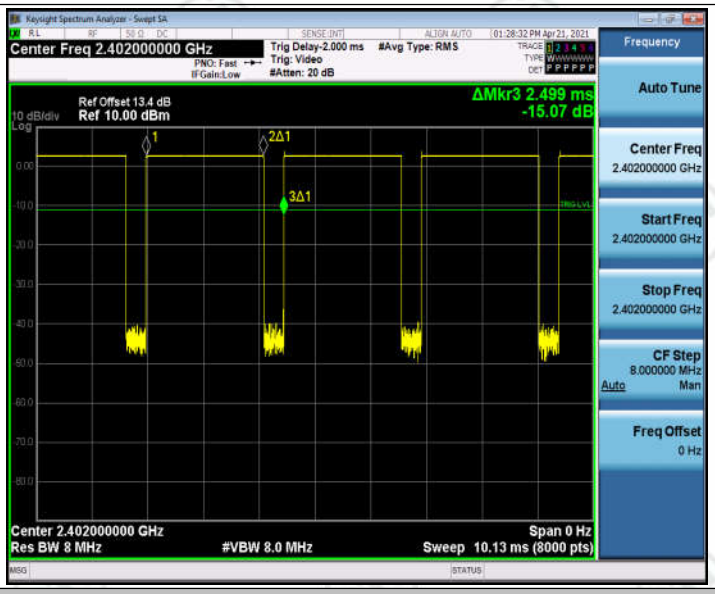
BLE_2M_Ant1_2480_1000~26500

Appendix G: Duty Cycle

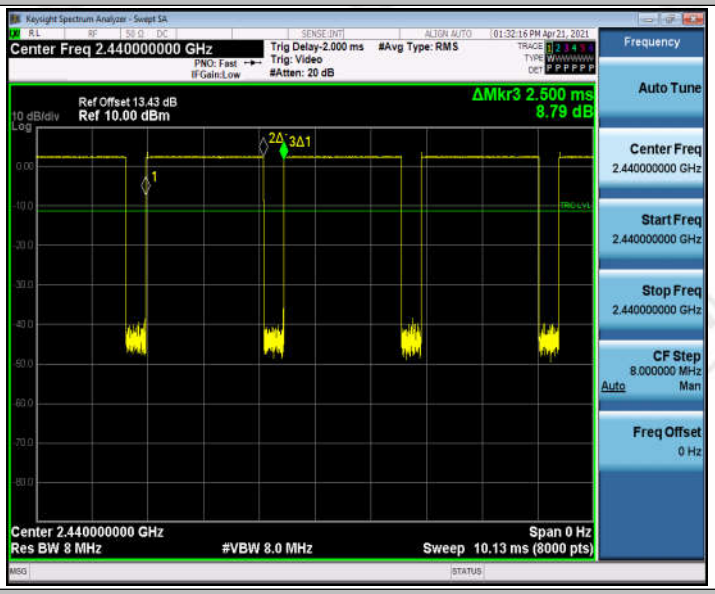
Test Result

Test Mode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Limit	Verdict
BLE_1M	Ant1	2402	2.14	2.50	85.45	---	PASS
		2440	2.14	2.50	85.46	---	PASS
		2480	2.14	2.50	85.45	---	PASS
BLE_2M	Ant1	2402	1.08	1.88	57.46	---	PASS
		2440	1.08	1.87	57.43	---	PASS
		2480	1.08	1.87	57.50	---	PASS

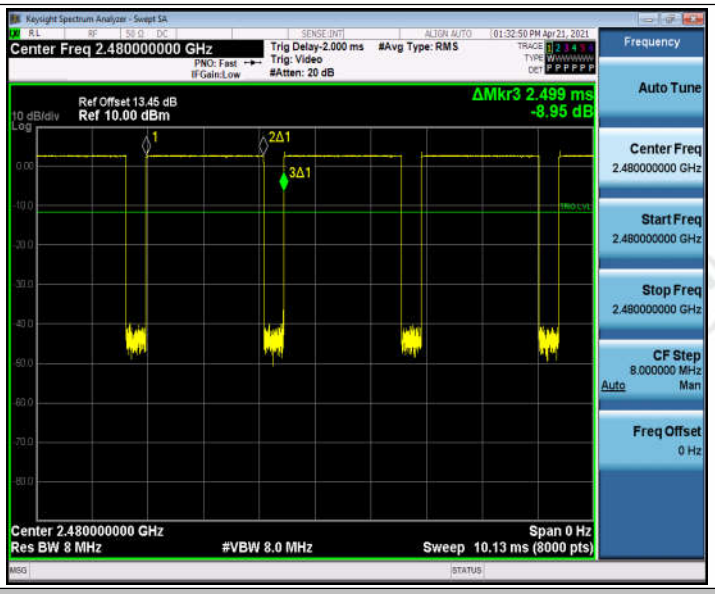
Test Graphs



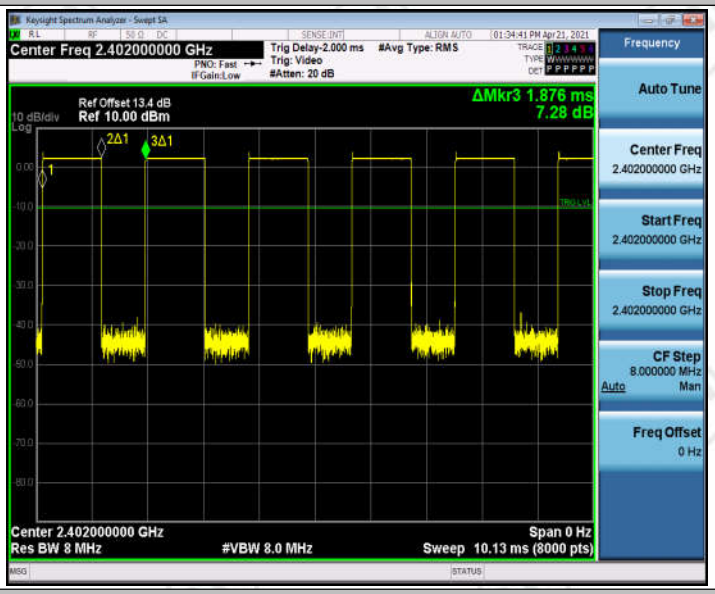
BLE_1M_Ant1_2402



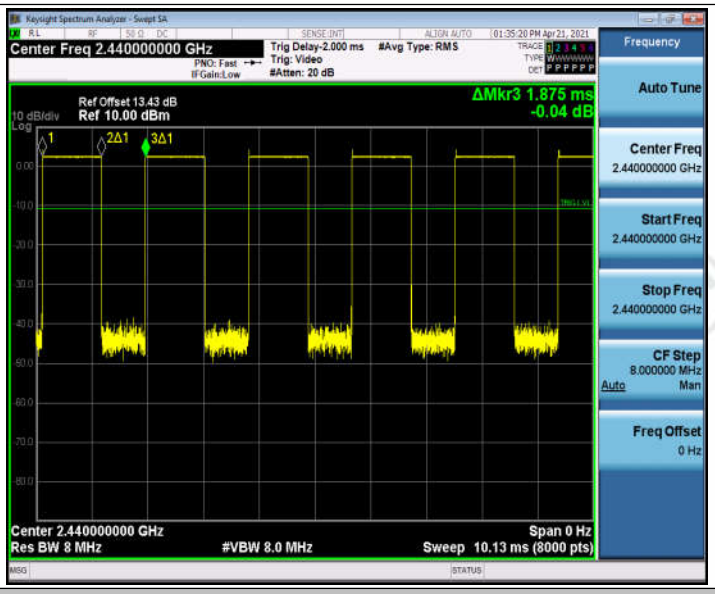
BLE_1M_Ant1_2440



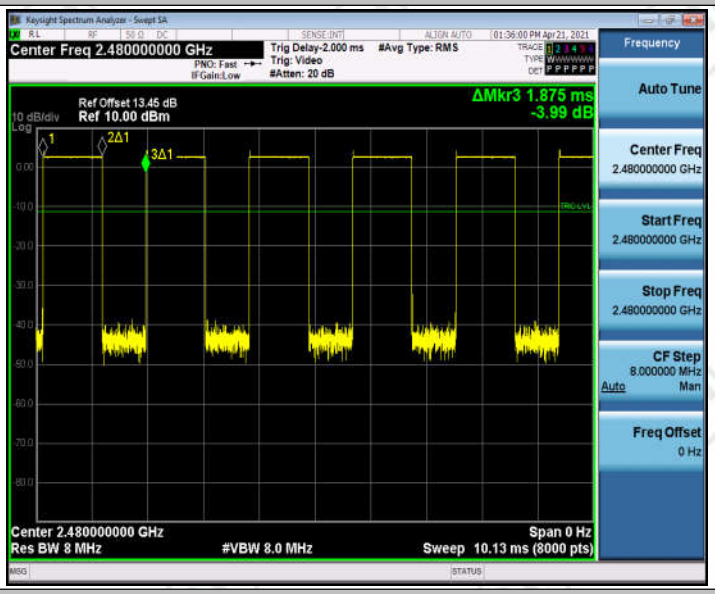
BLE_1M_Ant1_2480



BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

*** End of Report ***