



Appendix B

RF Test Data for 2.4G BLE (Conducted Measurement)

Product Name: Tablet PC

Trade Mark: Astro Tab

Test Model: DCG-P10

Environmental Conditions

Temperature:	25 ° C
Relative Humidity:	50%
ATM Pressure:	100.0 kPa
Test Engineer:	Carl Fu
Supervised by:	Li Huan



Appendix B.1: Duty Cycle

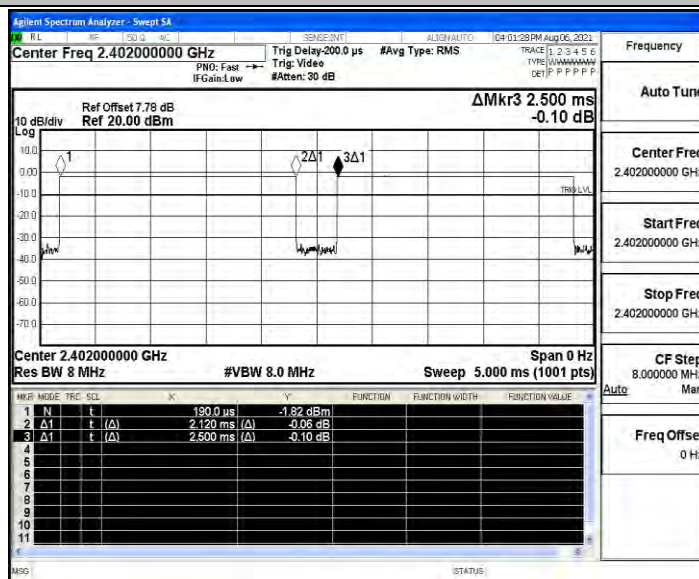
Test Result

TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1		2.12	2.50	0.8480	84.80	0.72	---	PASS
			2.13	2.50	0.8520	85.20	0.70	---	PASS
			2.13	2.50	0.8520	85.20	0.70	---	PASS
BLE_2M	Ant1		1.07	1.87	0.5722	57.22	2.42	---	PASS
			1.07	1.87	0.5722	57.22	2.42	---	PASS
			1.07	1.88	0.5691	56.91	2.45	---	PASS

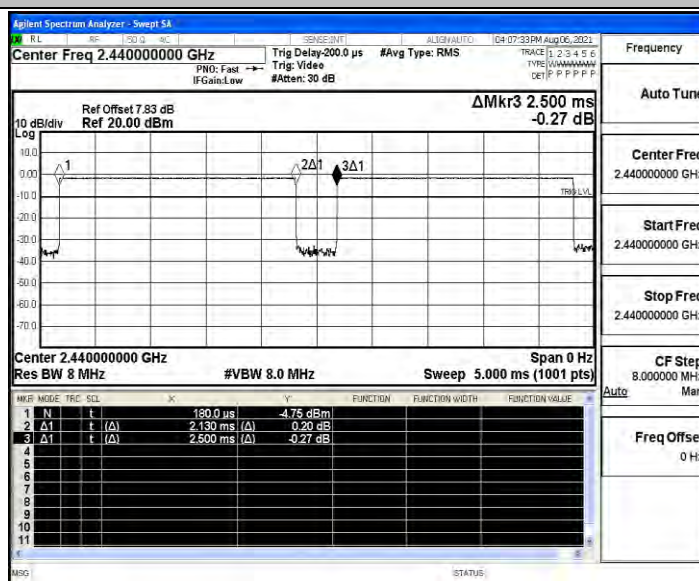


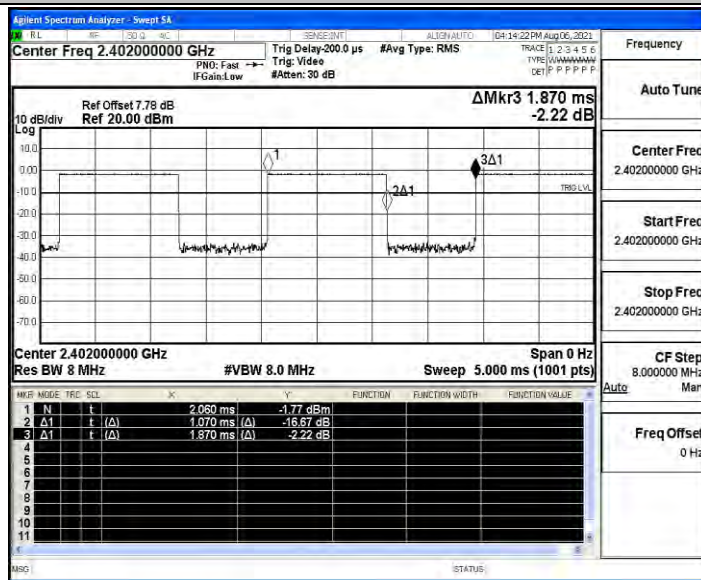
Test Graphs

BLE_1M_Ant1_2402



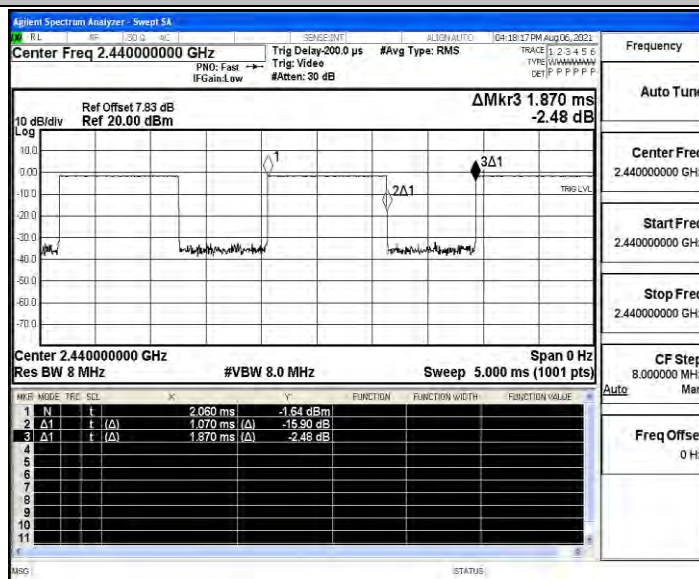
BLE_1M_Ant1_2440



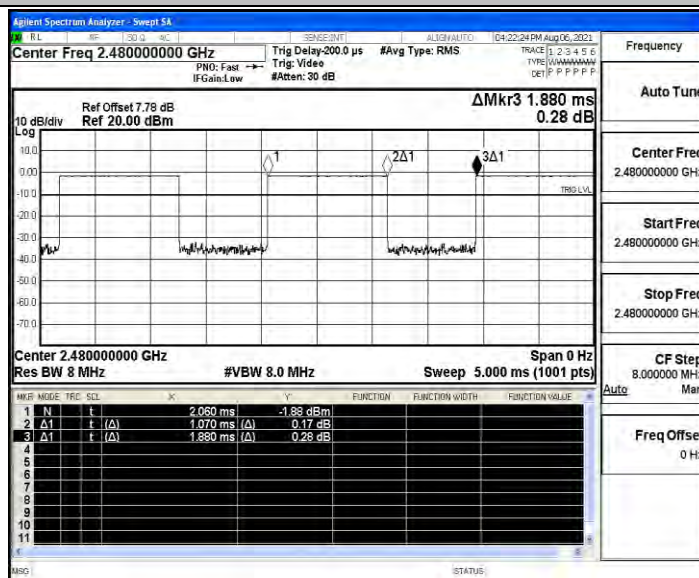
[illegible]



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480





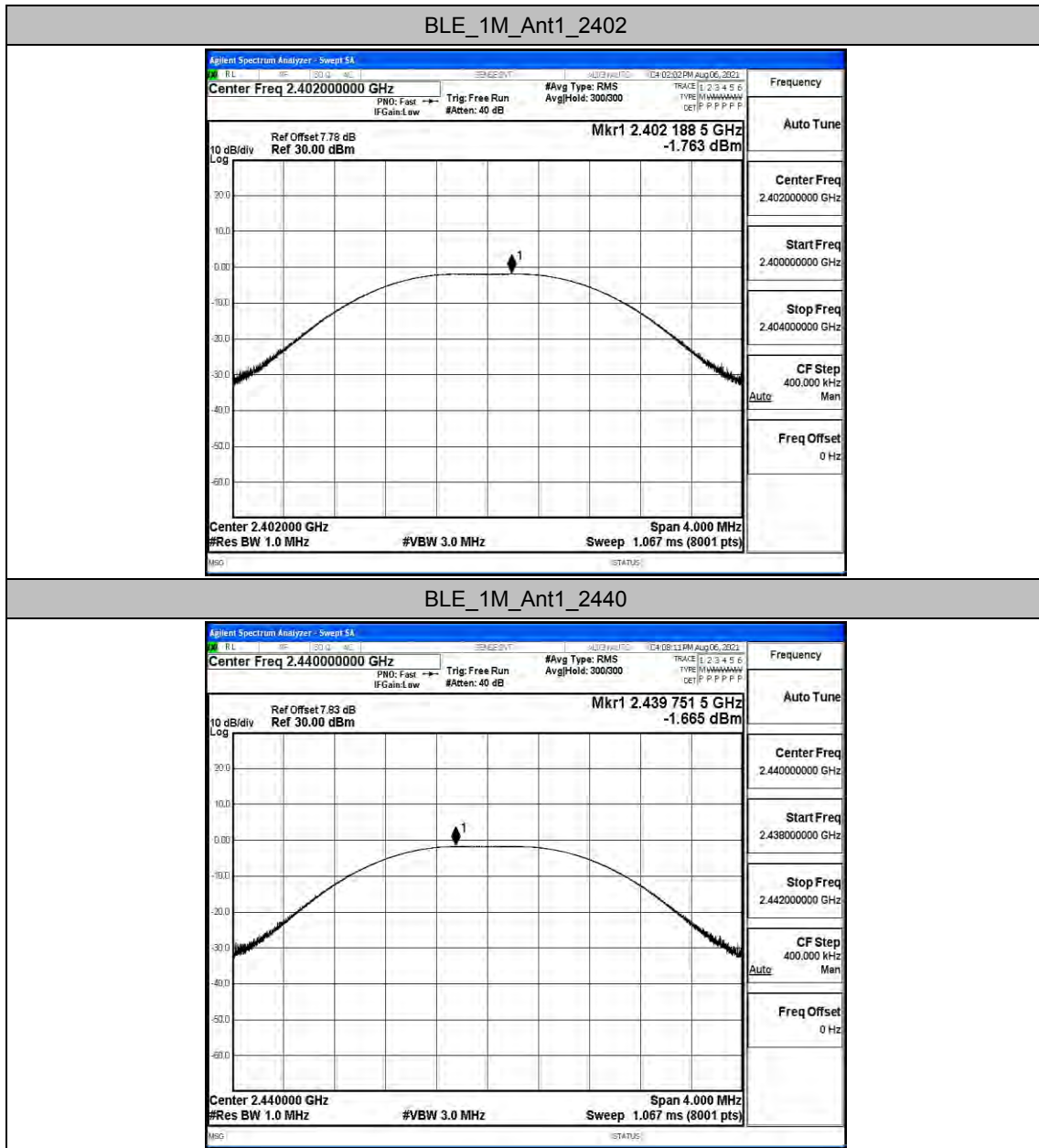
Appendix B.2: Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-1.76	≤30	PASS
		2440	-1.67	≤30	PASS
		2480	-1.66	≤30	PASS
BLE_2M	Ant1	2402	-1.86	≤30	PASS
		2440	-1.73	≤30	PASS
		2480	-1.75	≤30	PASS

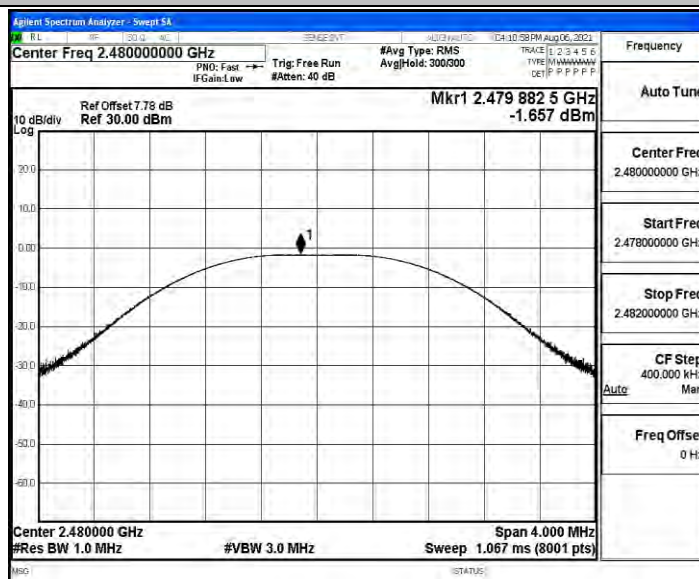


Test Graphs

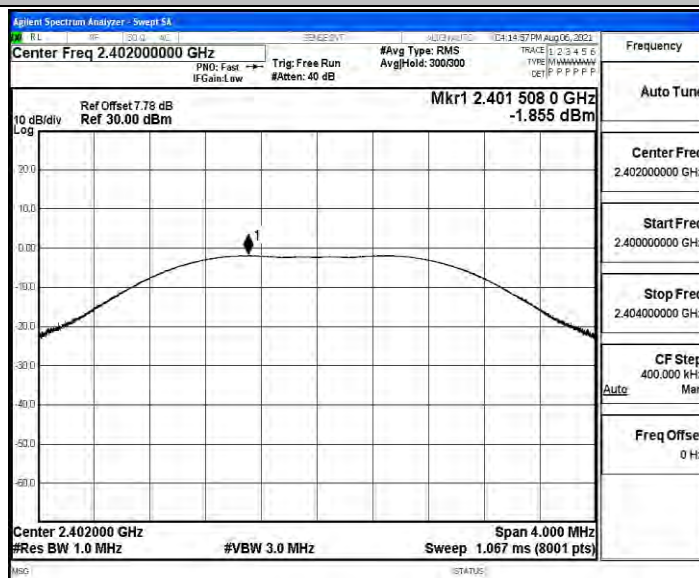




BLE_1M_Ant1_2480

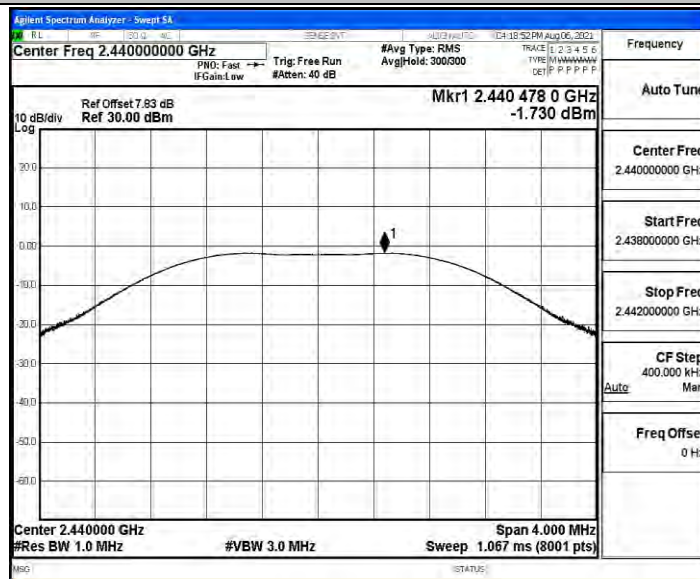


BLE_2M_Ant1_2402

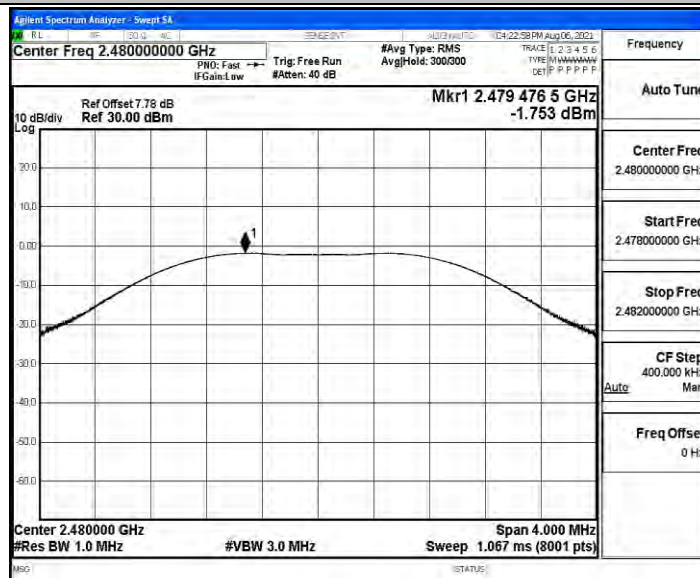




BLE_2M_Ant1_2440



BLE_2M_Ant1_2480





Appendix B.3: Maximum power spectral density

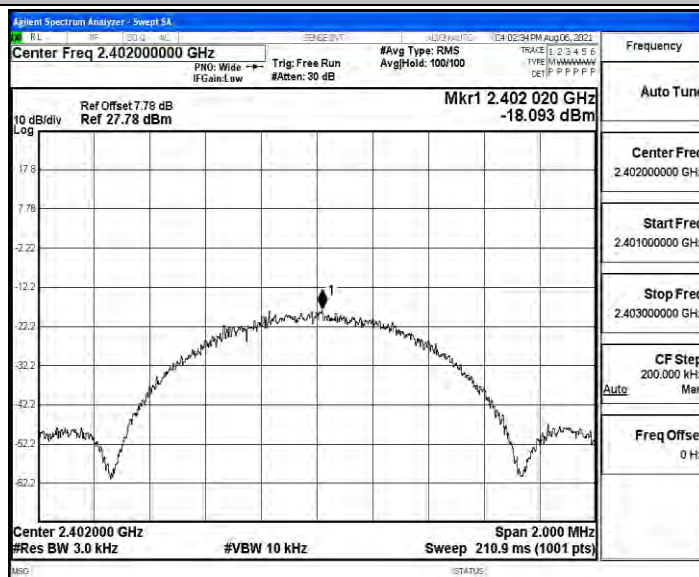
Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-18.09	≤8	PASS
		2440	-18.06	≤8	PASS
		2480	-18.1	≤8	PASS
BLE_2M	Ant1	2402	-20.58	≤8	PASS
		2440	-14.99	≤8	PASS
		2480	-20.58	≤8	PASS

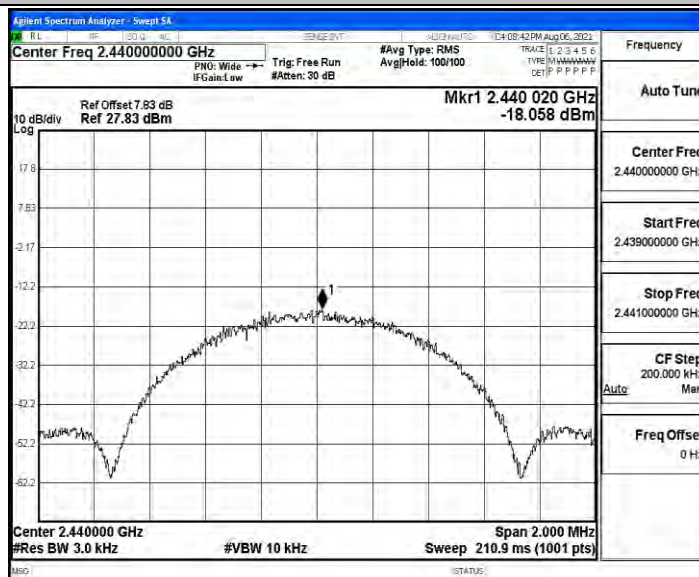


Test Graphs

BLE_1M_Ant1_2402

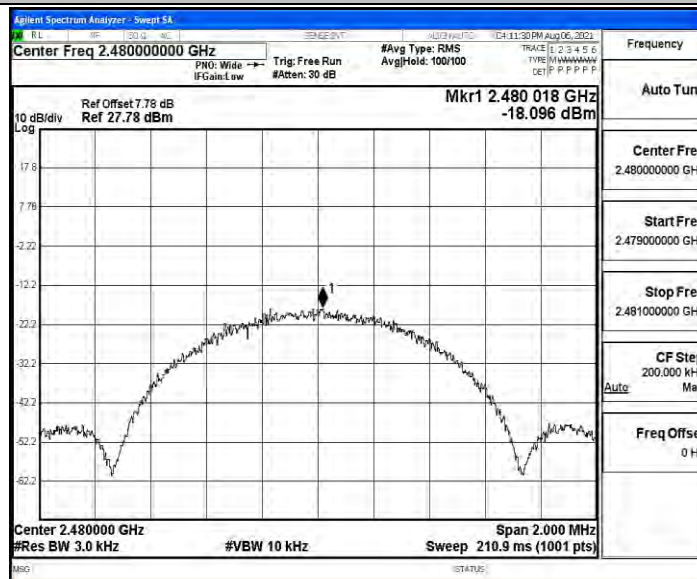


BLE_1M_Ant1_2440

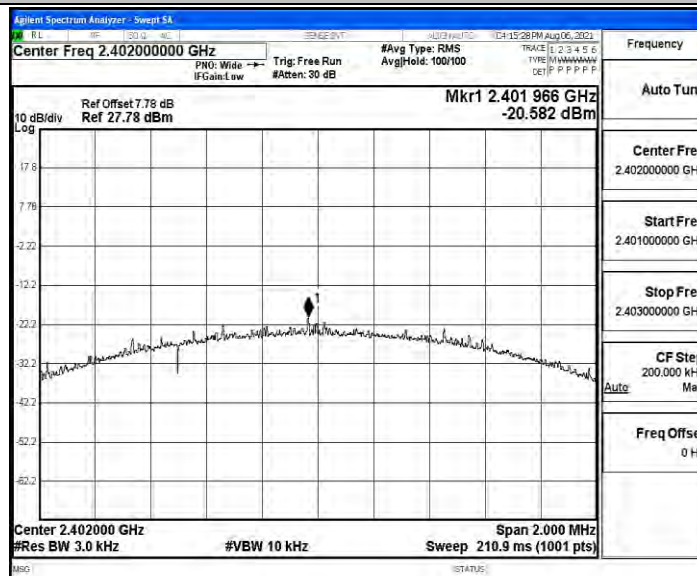




BLE_1M_Ant1_2480

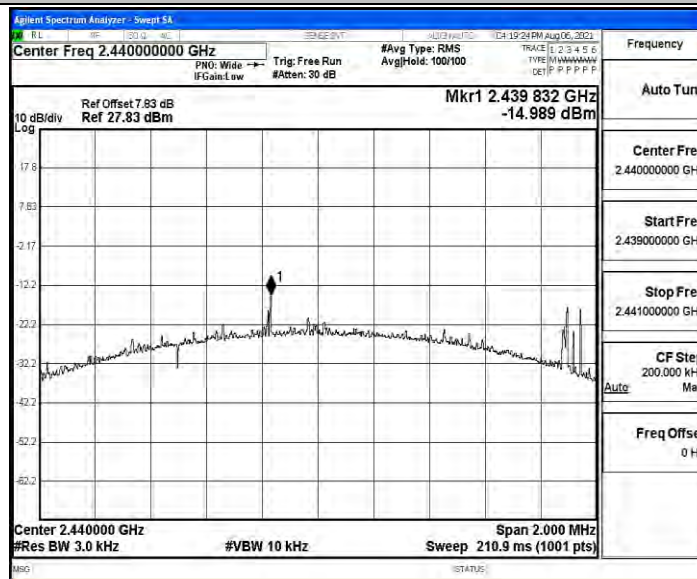


BLE_2M_Ant1_2402

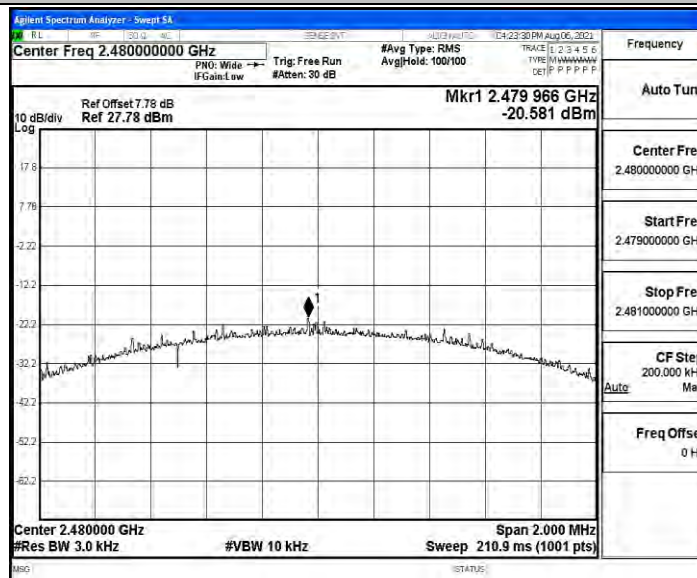




BLE_2M_Ant1_2440



BLE_2M_Ant1_2480





Appendix B.4.1: DTS Bandwidth

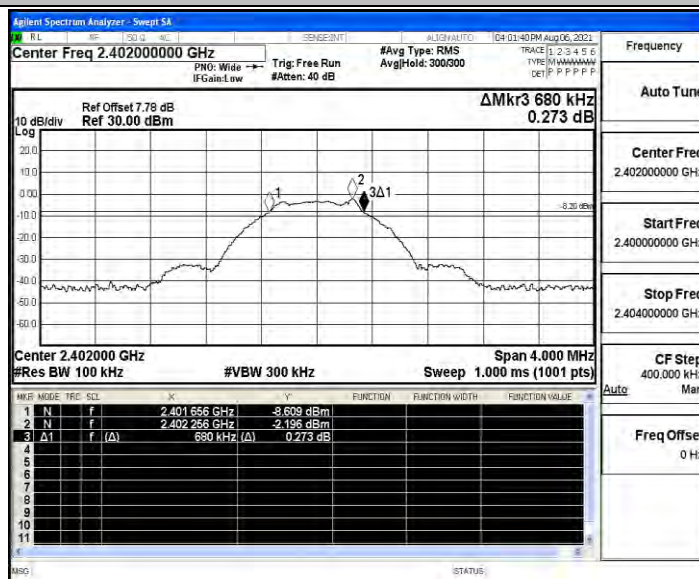
Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.680	2401.656	2402.336	≥0.5	PASS
		2440	0.676	2439.660	2440.336	≥0.5	PASS
		2480	0.688	2479.656	2480.344	≥0.5	PASS
BLE_2M	Ant1	2402	1.156	2401.432	2402.588	≥0.5	PASS
		2440	1.252	2439.340	2440.592	≥0.5	PASS
		2480	1.184	2479.408	2480.592	≥0.5	PASS

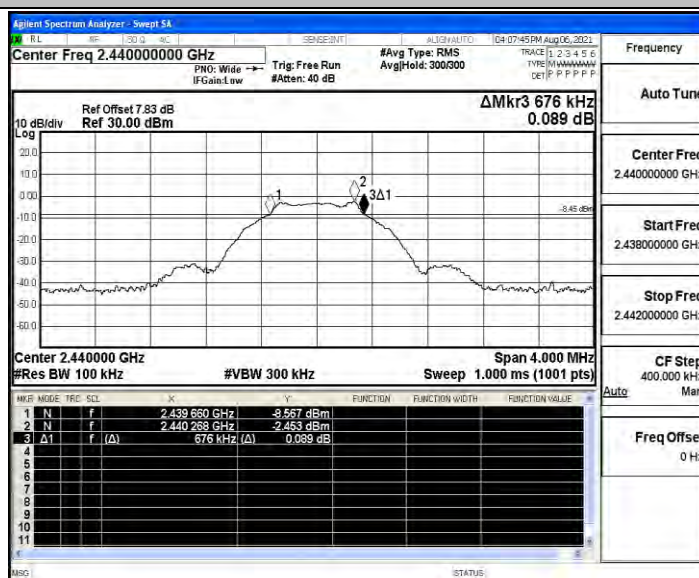


Test Graphs

BLE_1M_Ant1_2402

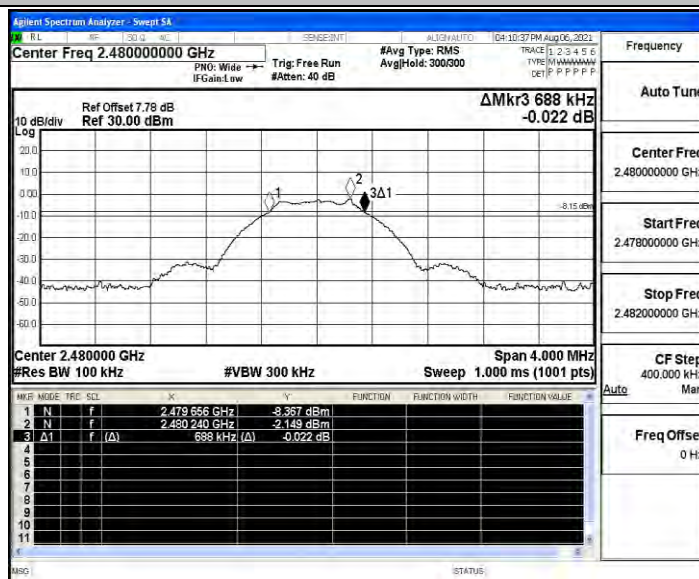


BLE_1M_Ant1_2440

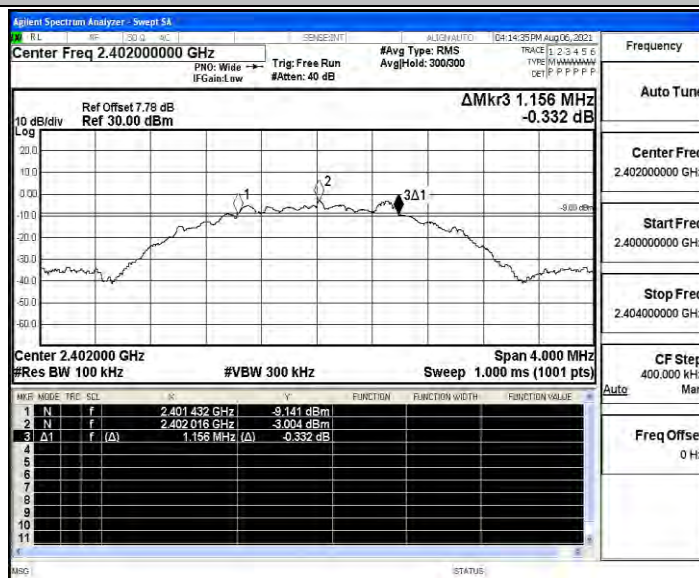




BLE_1M_Ant1_2480

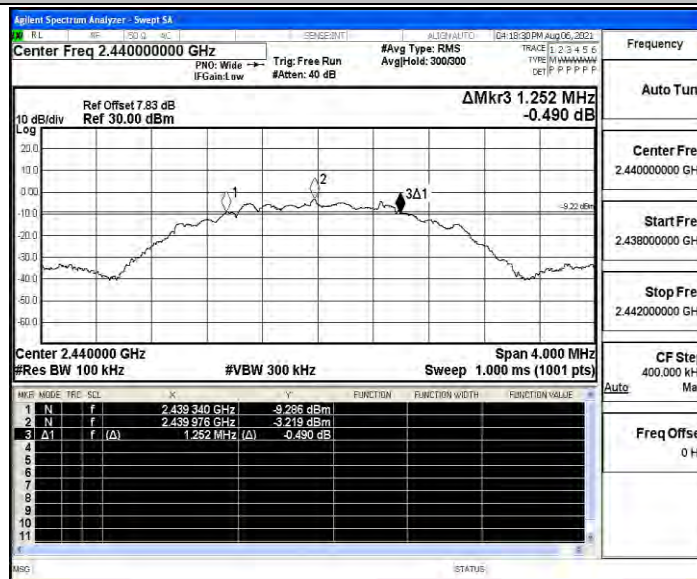


BLE_2M_Ant1_2402

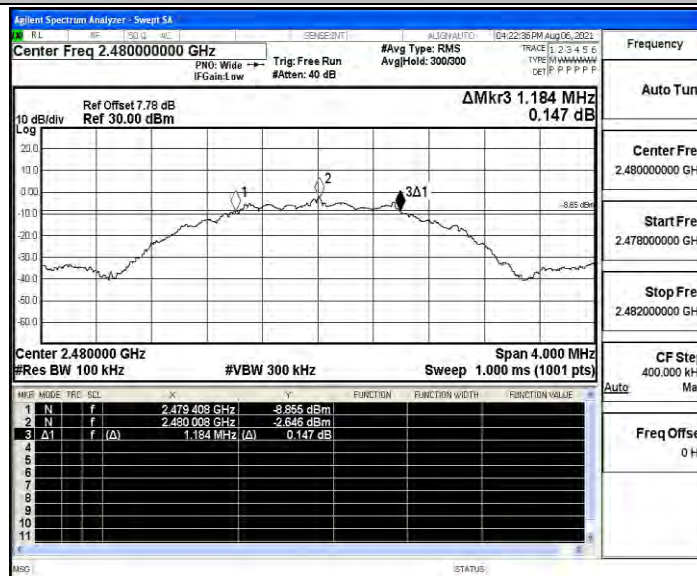




BLE_2M_Ant1_2440



BLE_2M_Ant1_2480





Appendix B.4.2: Occupied Channel Bandwidth

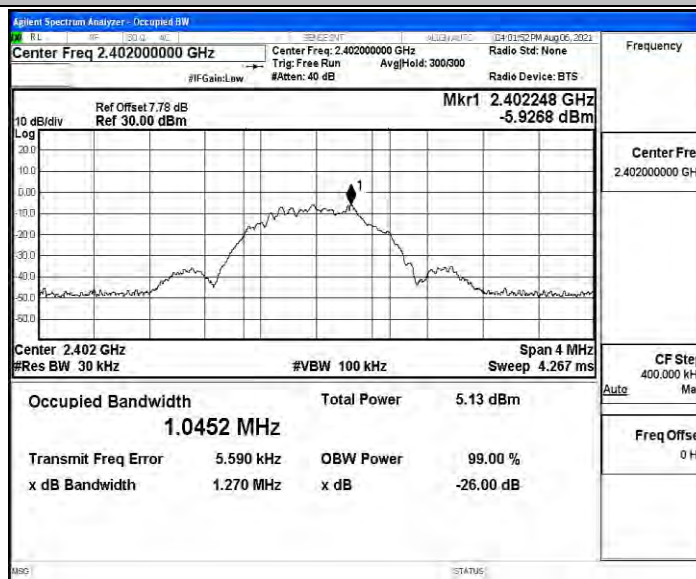
Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0452	2401.483	2402.528	---	PASS
		2440	1.0448	2439.483	2440.528	---	PASS
		2480	1.0448	2479.483	2480.527	---	PASS
BLE_2M	Ant1	2402	2.0833	2400.973	2403.056	---	PASS
		2440	2.0831	2438.973	2441.056	---	PASS
		2480	2.0853	2478.970	2481.056	---	PASS

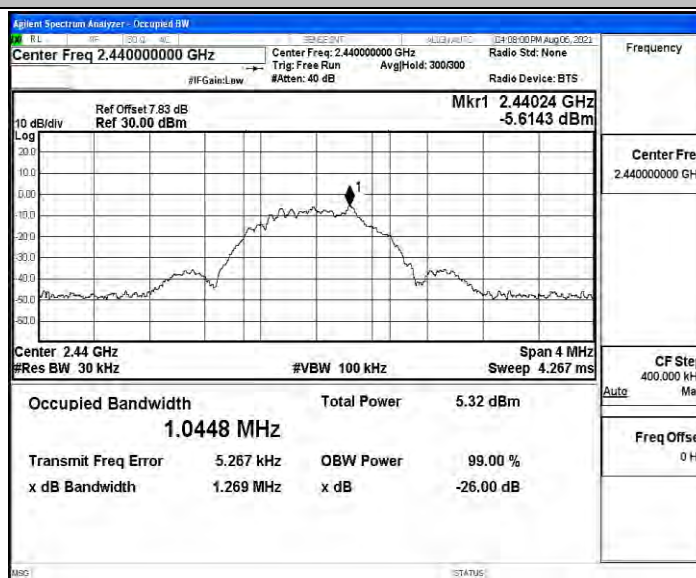


Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440

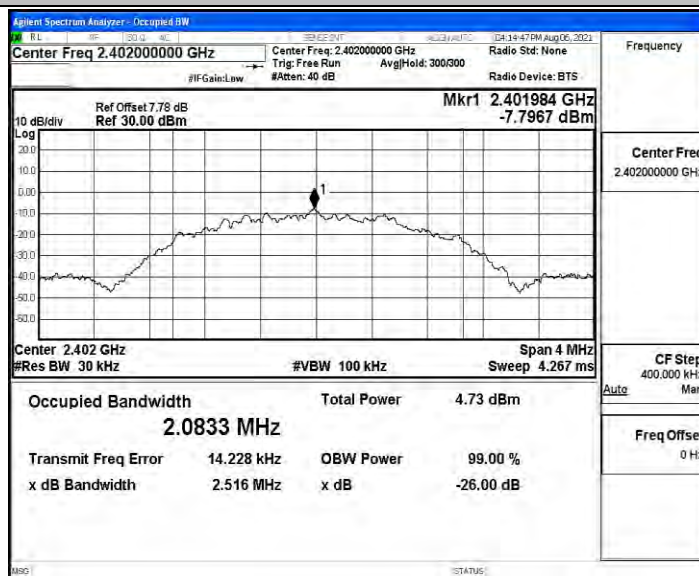




BLE_1M_Ant1_2480

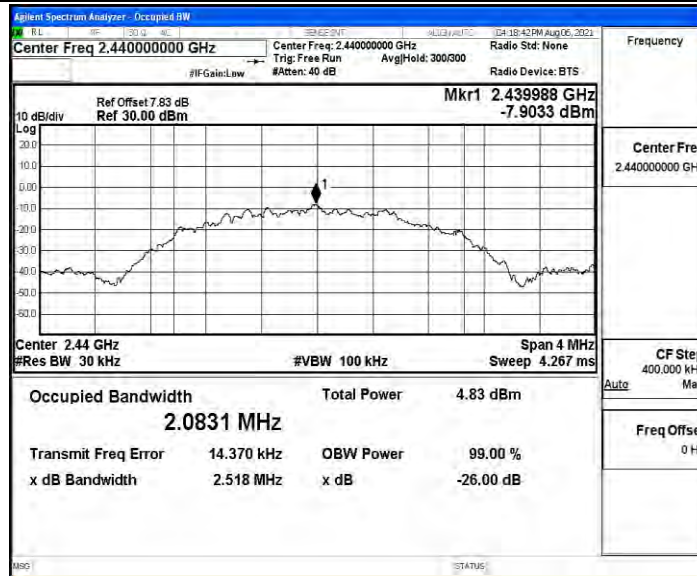


BLE_2M_Ant1_2402

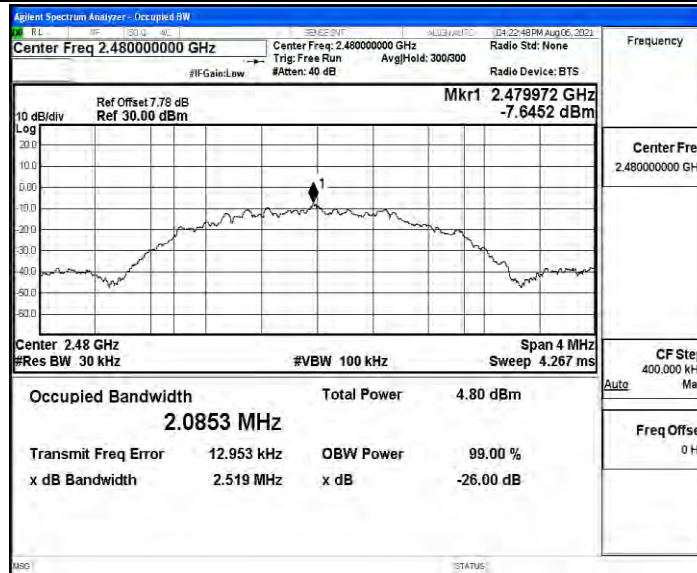




BLE_2M_Ant1_2440



BLE_2M_Ant1_2480





Appendix B.5: Conducted Spurious Emission

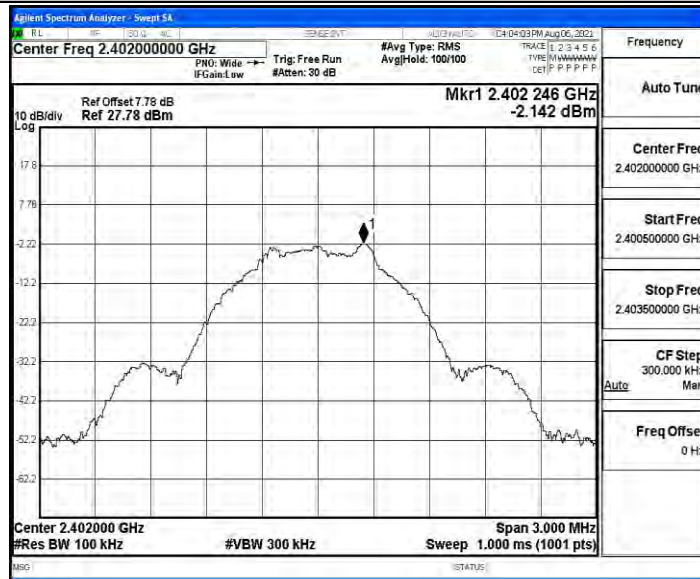
Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-2.14	-2.14	---	PASS
			30~1000	-2.14	-60.83	≤ -22.14	PASS
			1000~26500	-2.14	-47.62	≤ -22.14	PASS
		2440	Reference	-3.18	-3.18	---	PASS
			30~1000	-3.18	-62.09	≤ -23.18	PASS
			1000~26500	-3.18	-46.74	≤ -23.18	PASS
		2480	Reference	-2.19	-2.19	---	PASS
			30~1000	-2.19	-61.6	≤ -22.19	PASS
			1000~26500	-2.19	-47.06	≤ -22.19	PASS
BLE_2M	Ant1	2402	Reference	-3.20	-3.20	---	PASS
			30~1000	-3.20	-61.53	≤ -23.2	PASS
			1000~26500	-3.20	-47.08	≤ -23.2	PASS
		2440	Reference	-2.67	-2.67	---	PASS
			30~1000	-2.67	-60.11	≤ -22.67	PASS
			1000~26500	-2.67	-47.17	≤ -22.67	PASS
		2480	Reference	-2.64	-2.64	---	PASS
			30~1000	-2.64	-62.04	≤ -22.64	PASS
			1000~26500	-2.64	-47.34	≤ -22.64	PASS

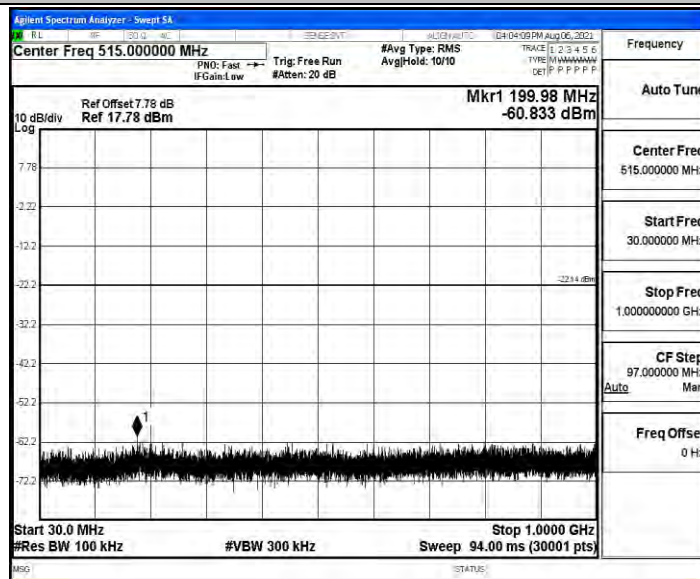


Test Graphs

BLE_1M_Ant1_2402_0~Reference

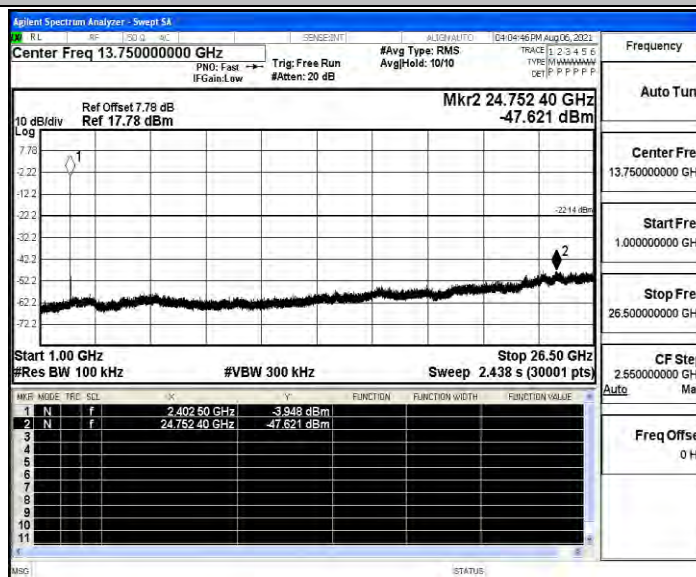


BLE_1M_Ant1_2402_30~1000

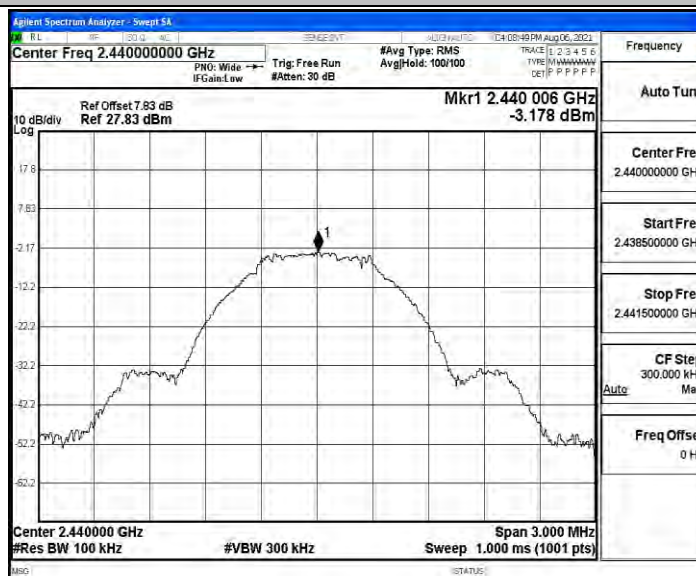




BLE_1M_Ant1_2402_1000~26500

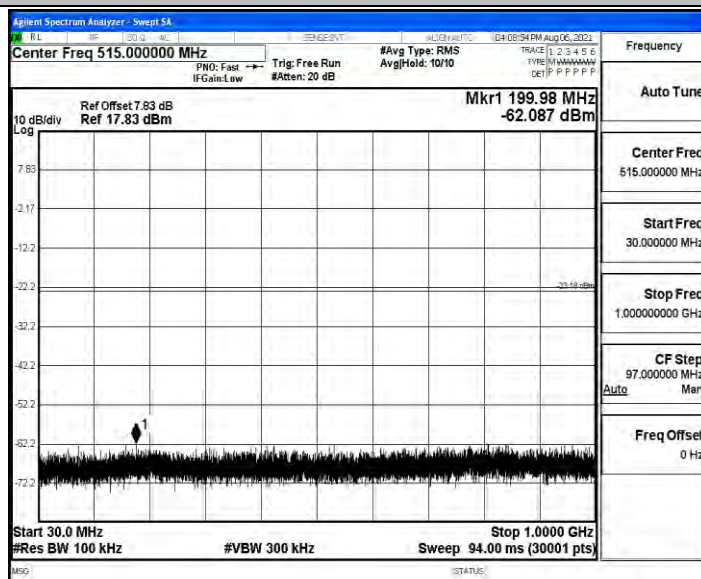


BLE_1M_Ant1_2440_0~Reference

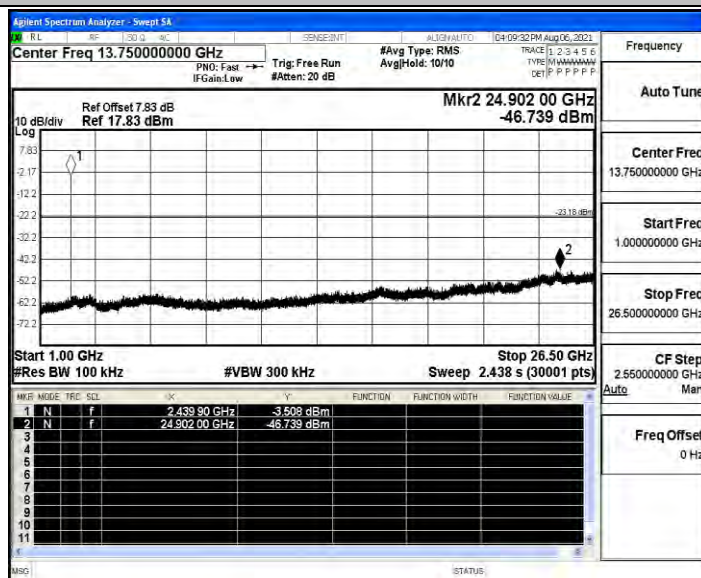




BLE_1M_Ant1_2440_30~1000

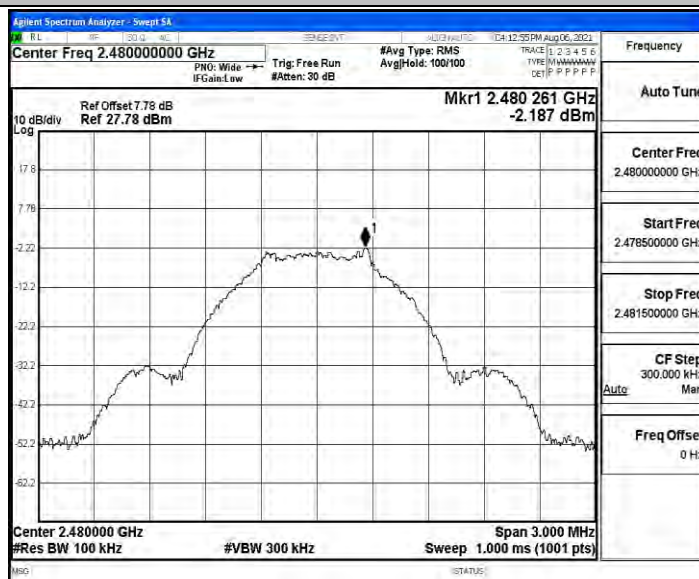


BLE_1M_Ant1_2440_1000~26500

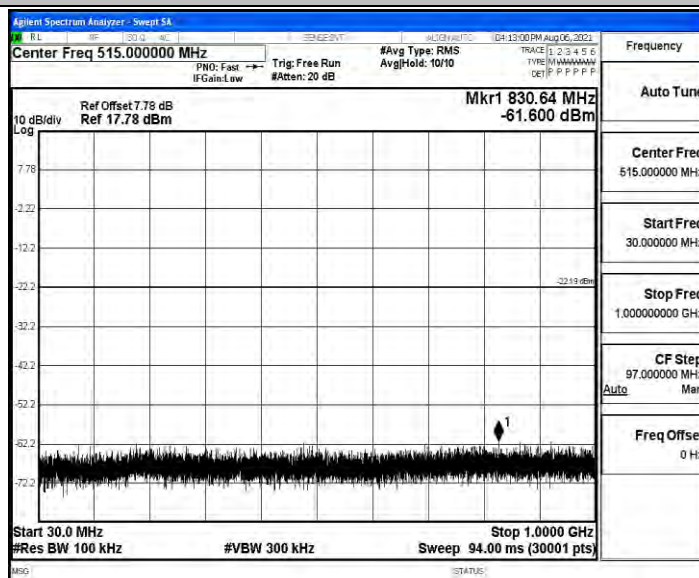




BLE_1M_Ant1_2480_0~Reference

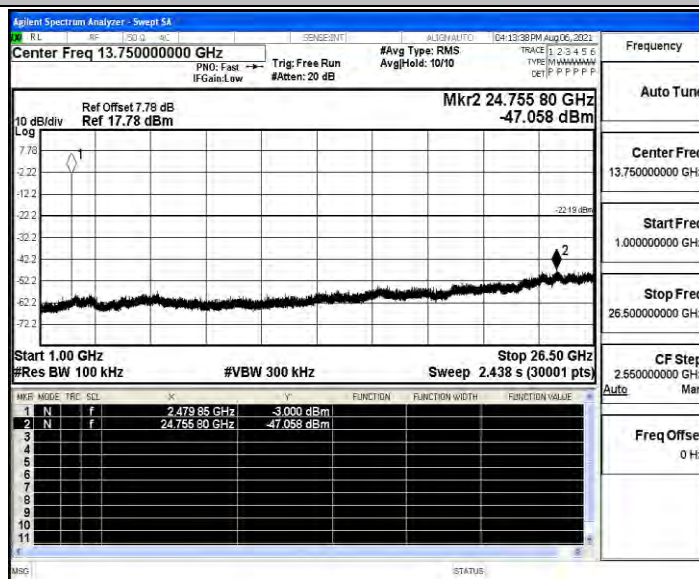


BLE_1M_Ant1_2480_30~1000

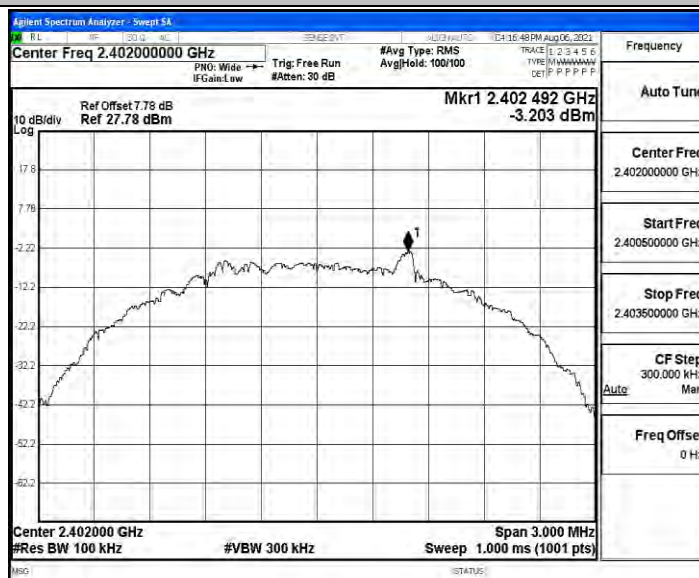




BLE_1M_Ant1_2480_1000~26500

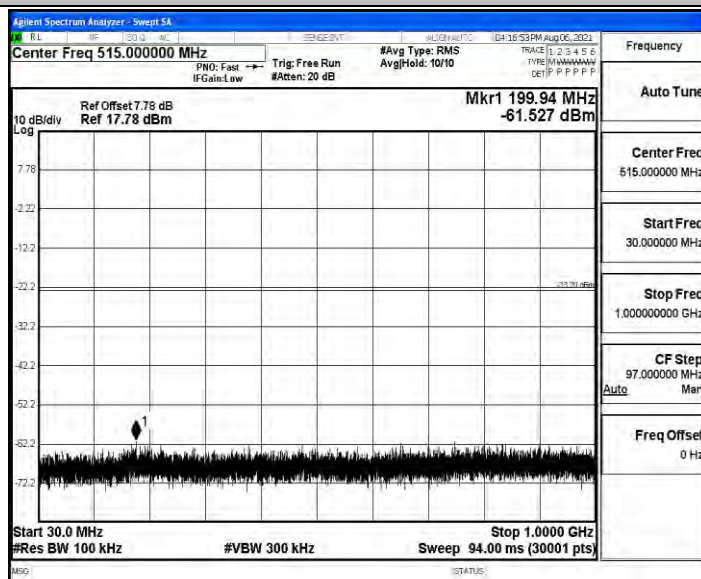


BLE_2M_Ant1_2402_0~Reference

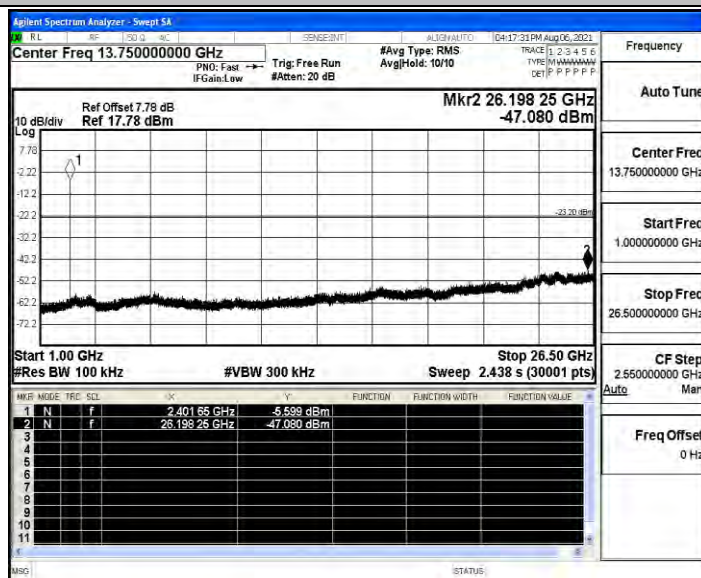




BLE_2M_Ant1_2402_30~1000

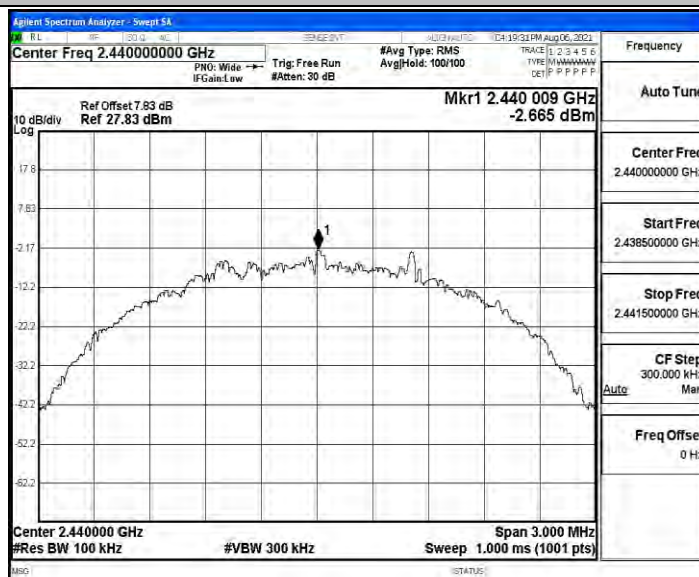


BLE_2M_Ant1_2402_1000~26500

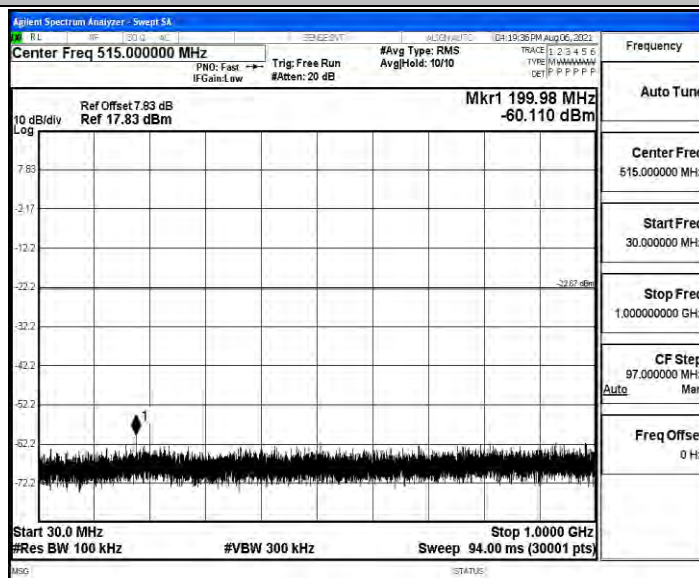




BLE_2M_Ant1_2440_0~Reference

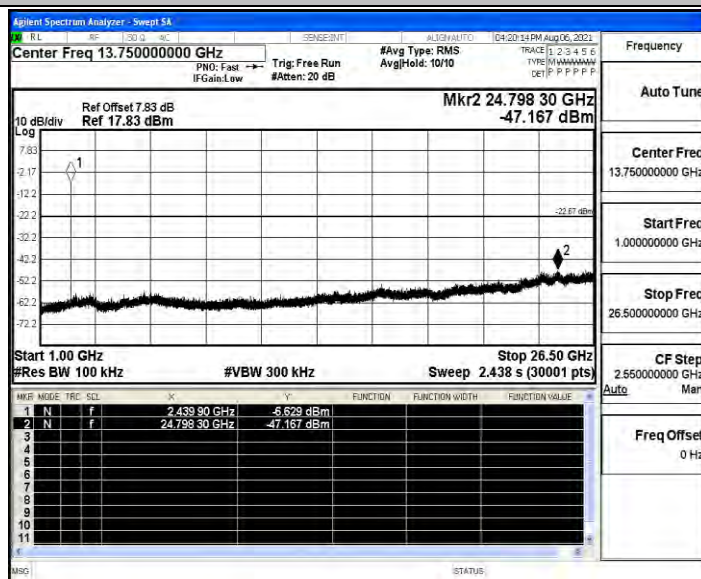


BLE_2M_Ant1_2440_30~1000

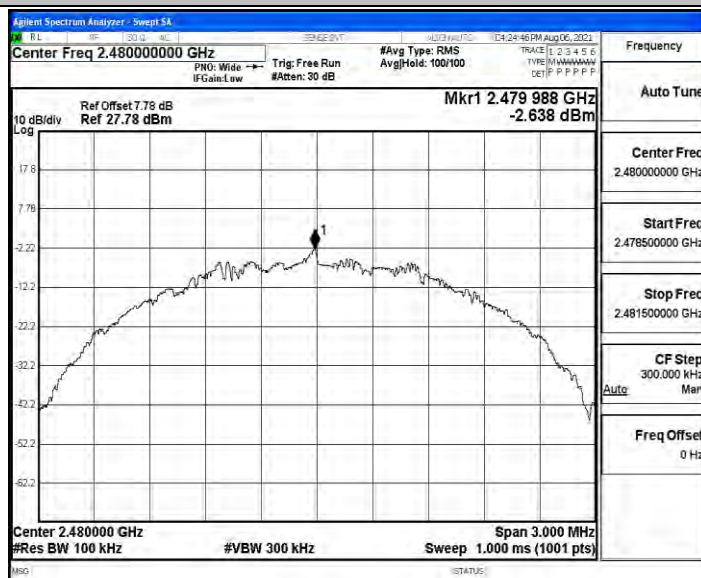




BLE_2M_Ant1_2440_1000~26500

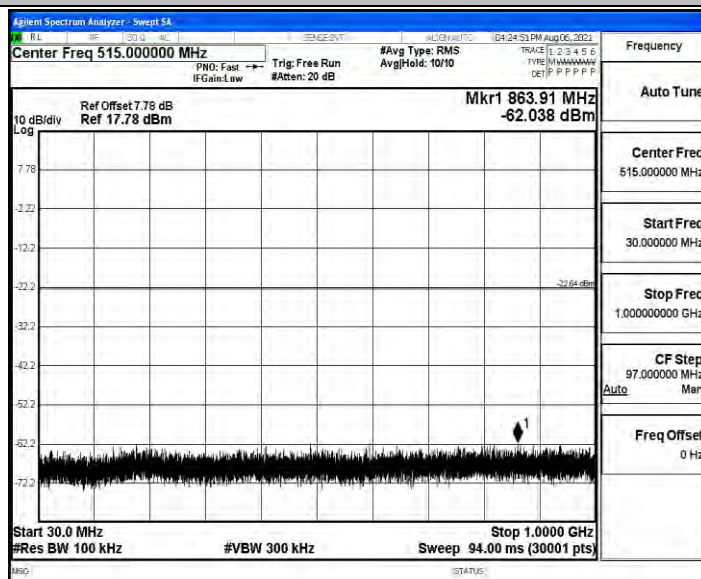


BLE_2M_Ant1_2480_0~Reference

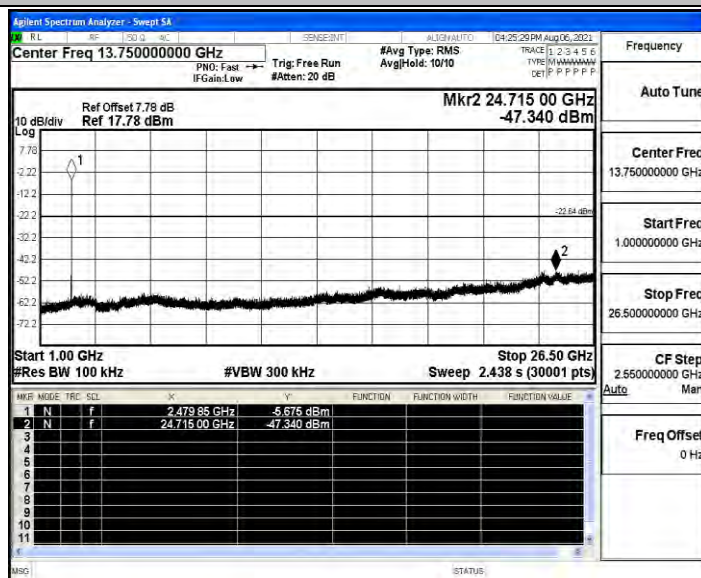




BLE_2M_Ant1_2480_30~1000



BLE_2M_Ant1_2480_1000~26500





Appendix B.6: Band edge measurements

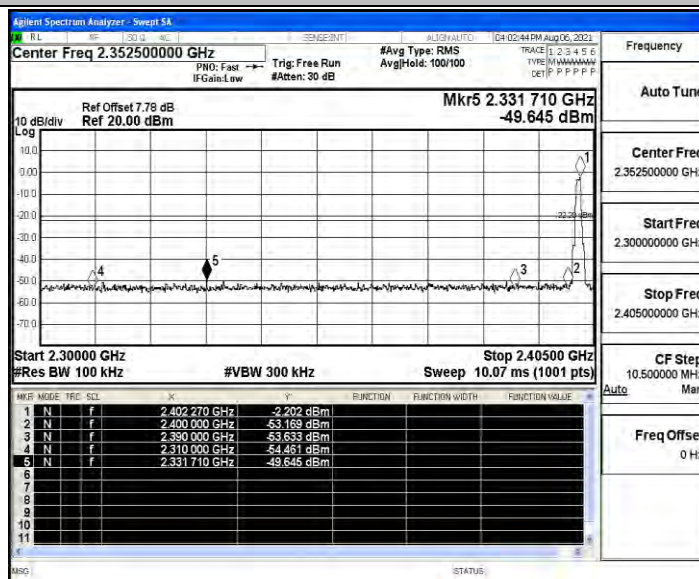
Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-2.20	-49.65	≤ -22.2	PASS
		High	2480	-2.98	-49.02	≤ -22.98	PASS
BLE_2M	Ant1	Low	2402	-2.70	-37.72	≤ -22.7	PASS
		High	2480	-4.43	-48.26	≤ -24.43	PASS

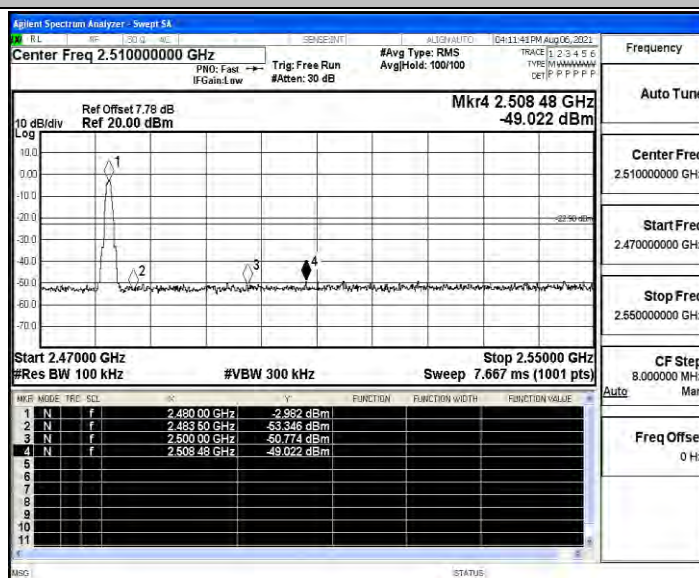


Test Graphs

BLE_1M_Ant1_Low_2402

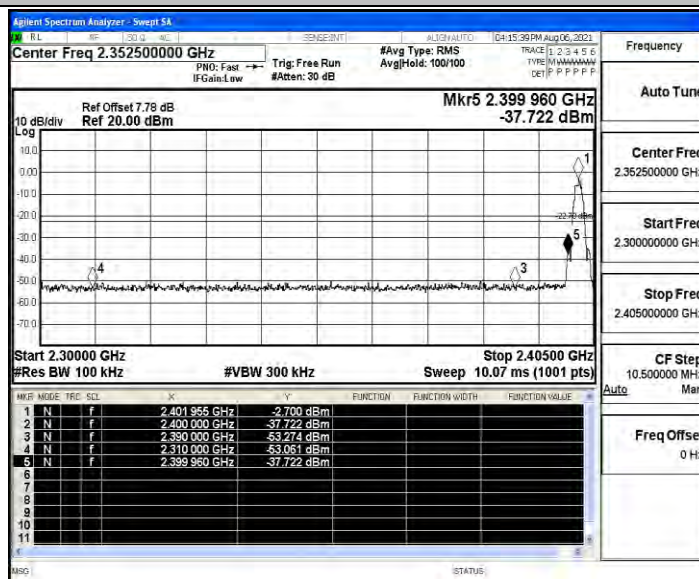


BLE_1M_Ant1_High_2480

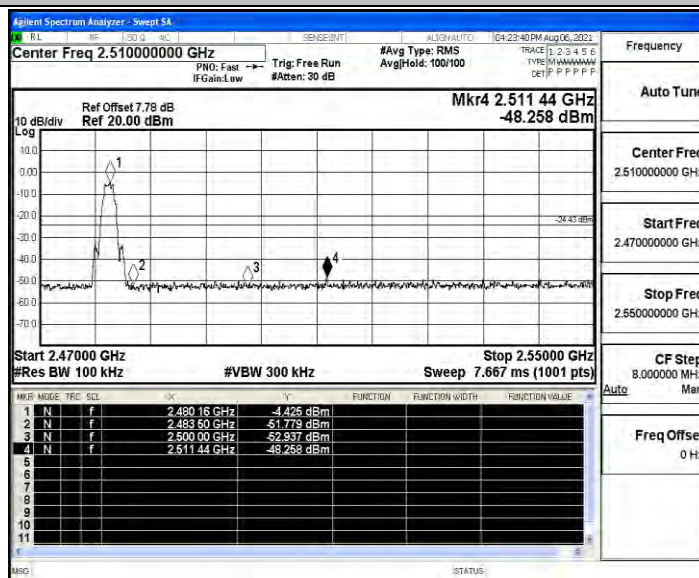




BLE_2M_Ant1_Low_2402



BLE_2M_Ant1_High_2480





Appendix B.7: Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-48.86	≤-41.20	46.34	≤54	PASS
				AV	2389.040	-48.34	≤-41.20	46.86	≤54	PASS
				AV	2390.000	-48.6	≤-41.20	46.60	≤54	PASS
				Peak	2310.000	-43.1	≤-21.20	52.10	≤74	PASS
				Peak	2320.265	-38.04	≤-21.20	57.16	≤74	PASS
				Peak	2390.000	-40.07	≤-21.20	55.13	≤74	PASS
		High	2480	AV	2483.500	-47.8	≤-41.20	47.40	≤54	PASS
				AV	2499.440	-47.78	≤-41.20	47.42	≤54	PASS
				AV	2500.000	-48	≤-41.20	47.20	≤54	PASS
				Peak	2483.500	-41.25	≤-21.20	53.95	≤74	PASS
				Peak	2498.880	-38.81	≤-21.20	56.39	≤74	PASS
				Peak	2500.000	-41.3	≤-21.20	53.90	≤74	PASS
BLE_2M	Ant1	Low	2402	AV	2310.000	-48.73	≤-41.20	46.47	≤54	PASS
				AV	2373.290	-48.2	≤-41.20	47.00	≤54	PASS
				AV	2390.000	-48.29	≤-41.20	46.91	≤54	PASS
				Peak	2310.000	-42.53	≤-21.20	52.67	≤74	PASS
				Peak	2368.250	-38.05	≤-21.20	57.15	≤74	PASS
				Peak	2390.000	-41.12	≤-21.20	54.08	≤74	PASS
		High	2480	AV	2483.500	-46.7	≤-41.20	48.50	≤54	PASS
				AV	2483.520	-46.7	≤-41.20	48.50	≤54	PASS
				AV	2500.000	-47.55	≤-41.20	47.65	≤54	PASS
				Peak	2483.500	-41.67	≤-21.20	53.53	≤74	PASS
				Peak	2495.200	-38.51	≤-21.20	56.69	≤74	PASS
				Peak	2500.000	-40.97	≤-21.20	54.23	≤74	PASS

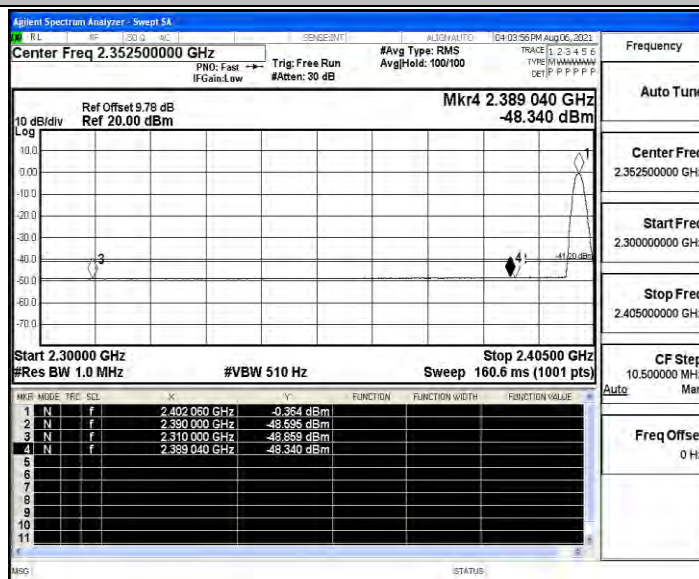
Note:

1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

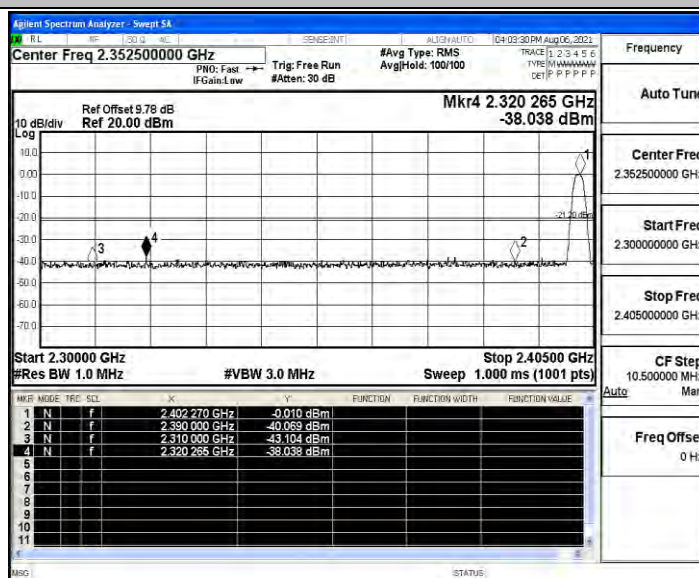


Test Graphs

BLE_1M_Ant1_Low_2402_AV

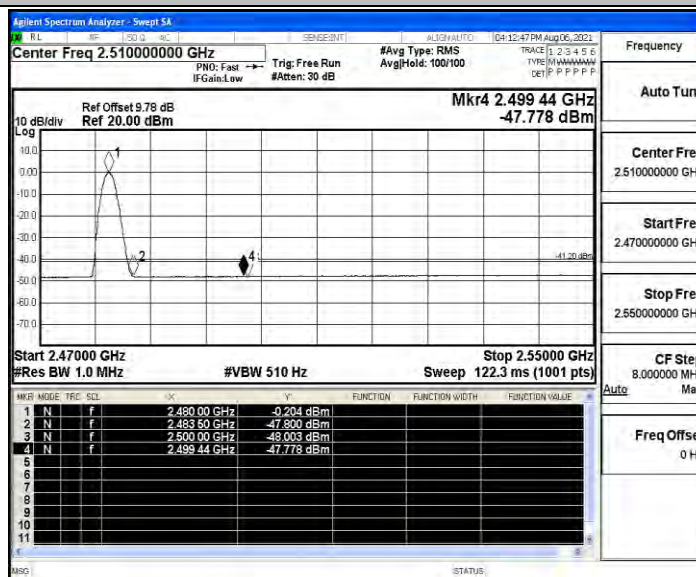


BLE_1M_Ant1_Low_2402_Peak

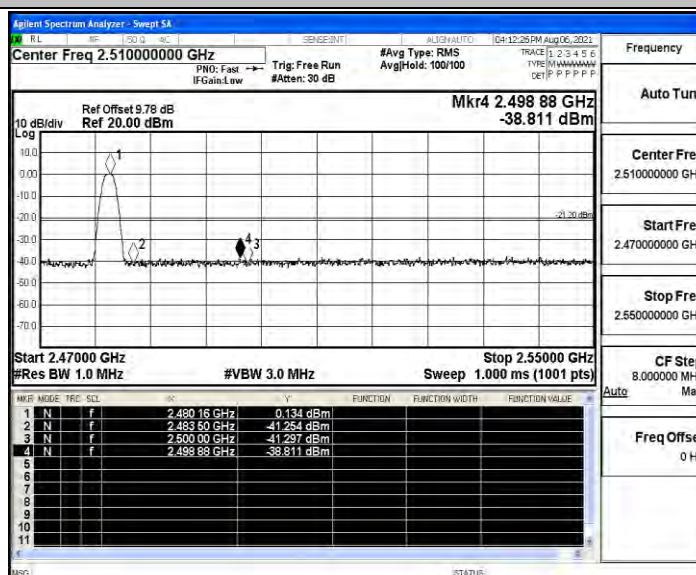




BLE_1M_Ant1_High_2480_AV

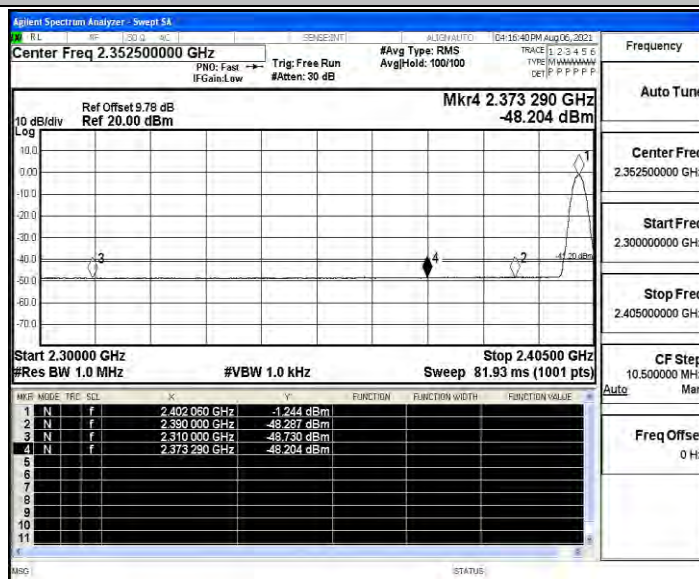


BLE_1M_Ant1_High_2480_Peak

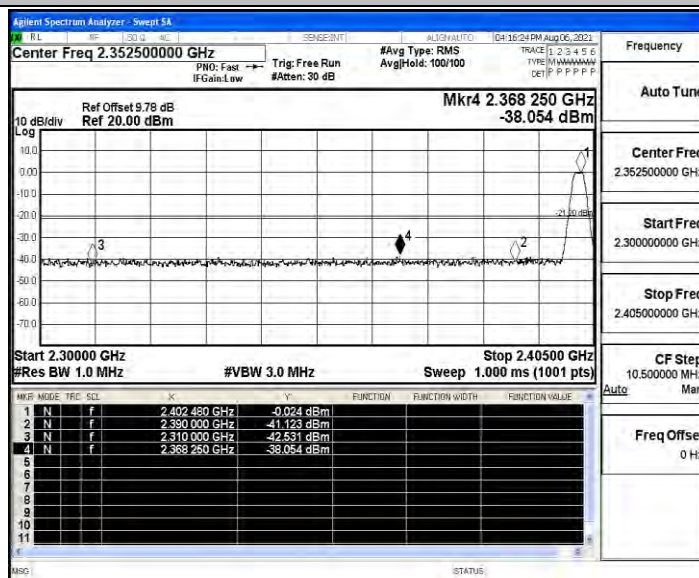




BLE_2M_Ant1_Low_2402_AV

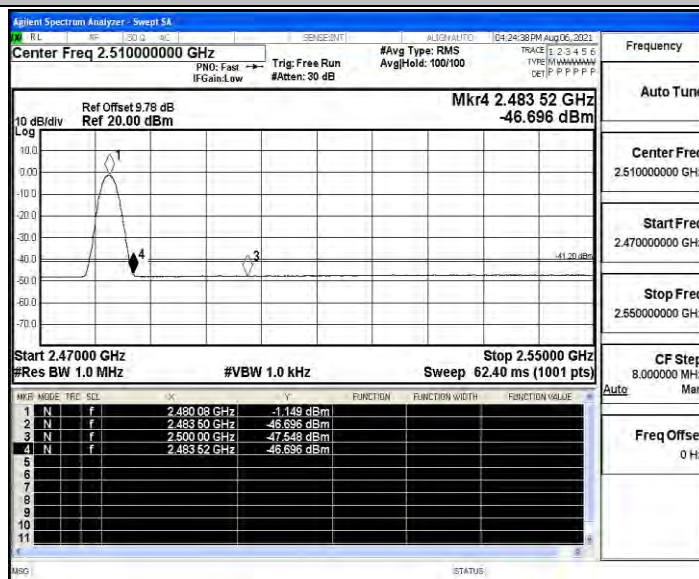


BLE_2M_Ant1_Low_2402_Peak





BLE_2M_Ant1_High_2480_AV



BLE_2M_Ant1_High_2480_Peak

