



Appendix B

RF Test Data for BT LE V4.1(DTS) (Conducted Measurement)

Product Name: TABLET PC

Test Model: RubensTab_T11

Environmental Conditions

Temperature:	23.7℃
Relative Humidity:	52.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Wunder Wu
Supervised by:	Li Huan



B.1 DTS Bandwidth

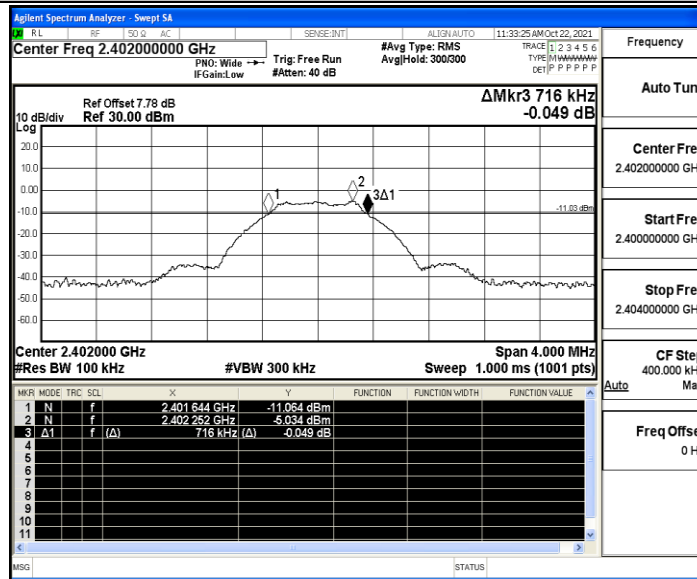
Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.716	2401.644	2402.360	≥0.5	PASS
		2440	0.676	2439.660	2440.336	≥0.5	PASS
		2480	0.672	2479.660	2480.332	≥0.5	PASS
BLE_2M	Ant1	2402	1.156	2401.436	2402.592	≥0.5	PASS
		2440	1.156	2439.436	2440.592	≥0.5	PASS
		2480	1.168	2479.416	2480.584	≥0.5	PASS

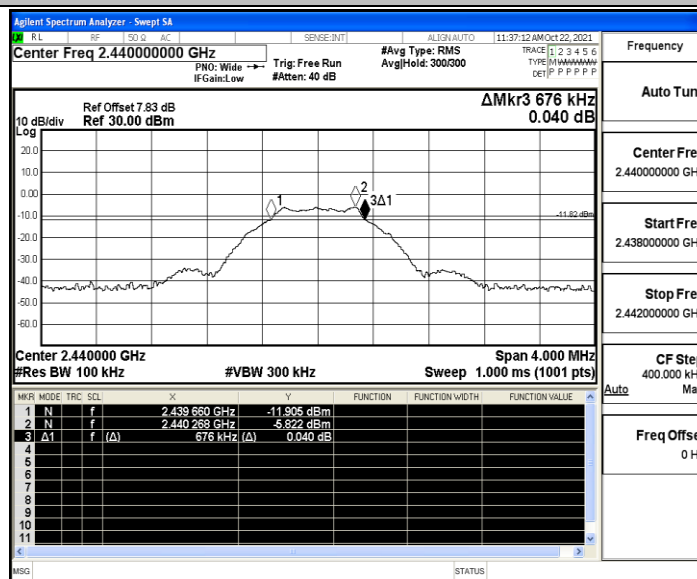


Test Graphs

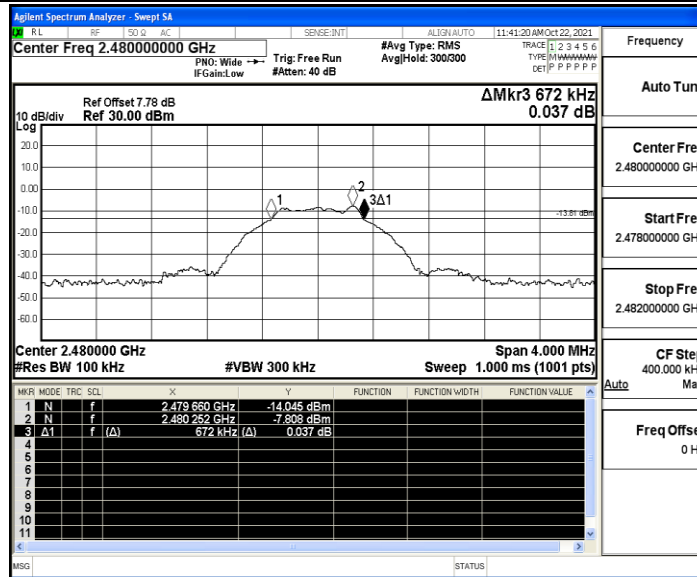
BLE_1M_Ant1_2402



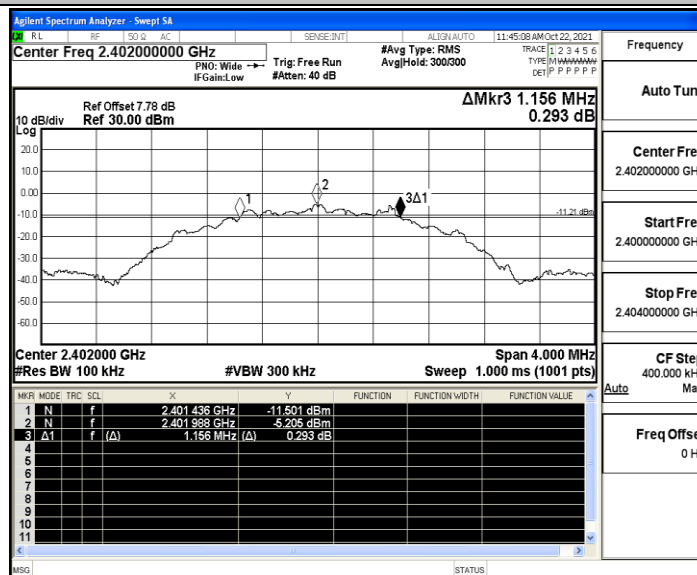
BLE_1M_Ant1_2440



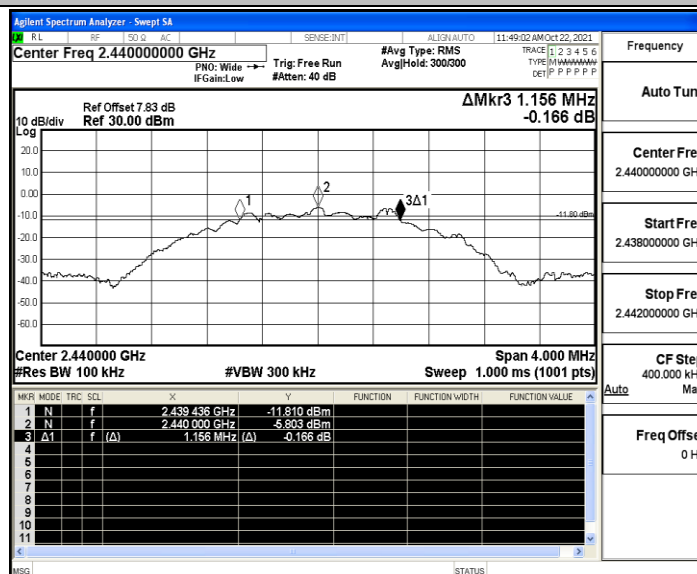
BLE_1M_Ant1_2480



BLE_2M_Ant1_2402

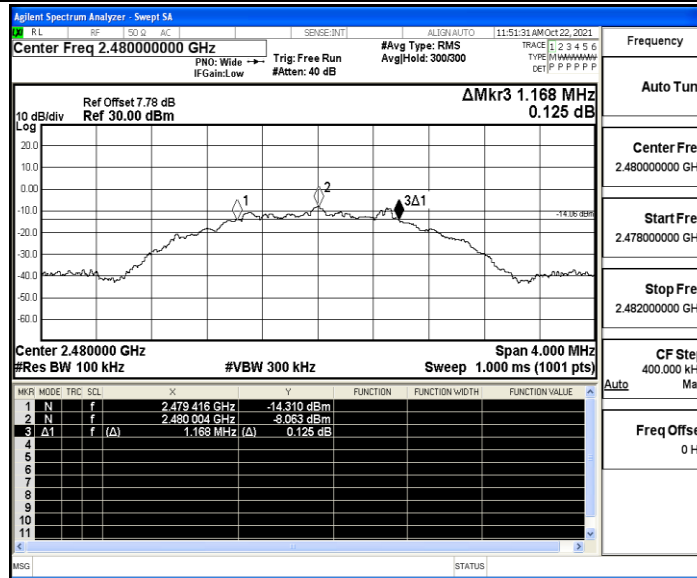


BLE_2M_Ant1_2440





BLE_2M_Ant1_2480





B.2 Maximum peak conducted output power

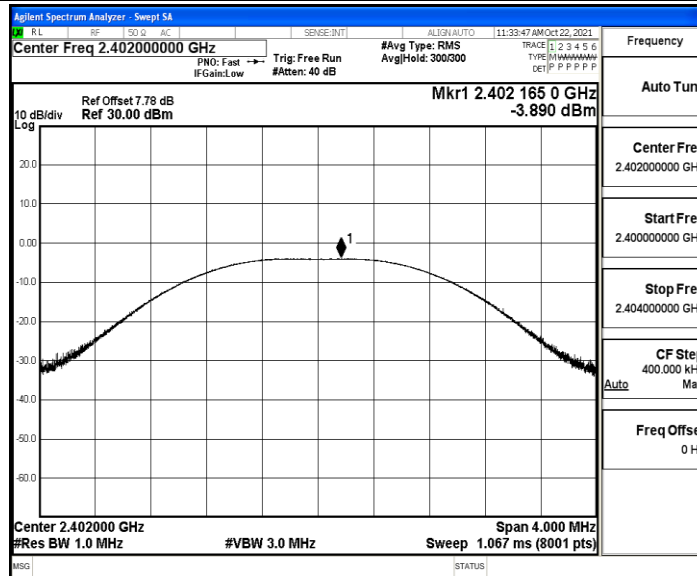
Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-3.89	≤ 30	PASS
		2440	-4.98	≤ 30	PASS
		2480	-7.44	≤ 30	PASS
BLE_2M	Ant1	2402	-4.04	≤ 30	PASS
		2440	-4.94	≤ 30	PASS
		2480	-7.09	≤ 30	PASS

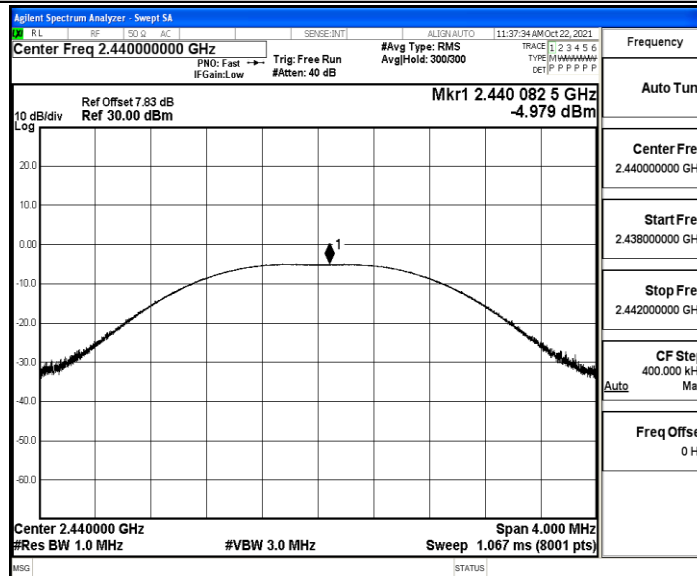


Test Graphs

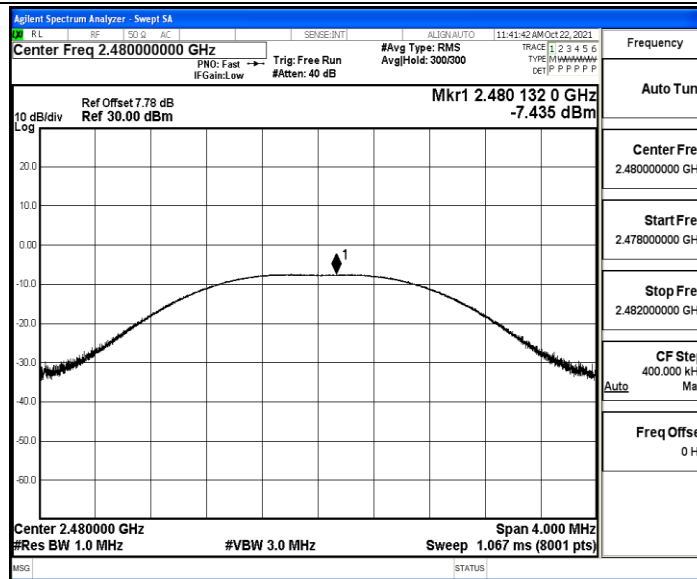
BLE_1M_Ant1_2402



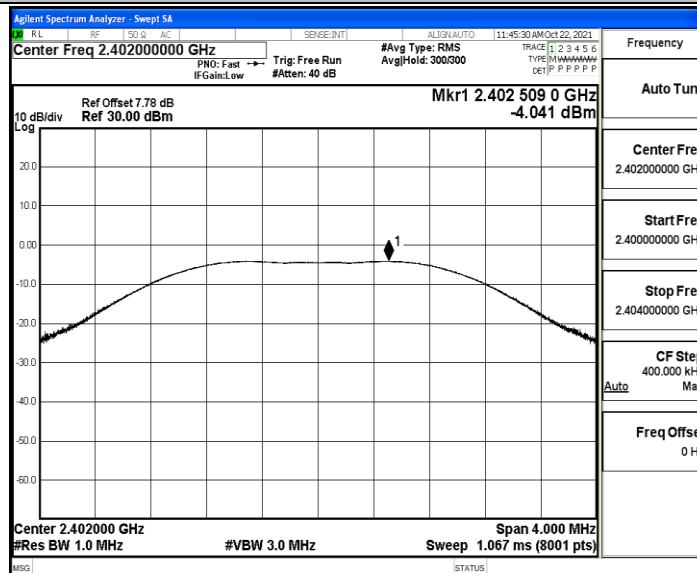
BLE_1M_Ant1_2440



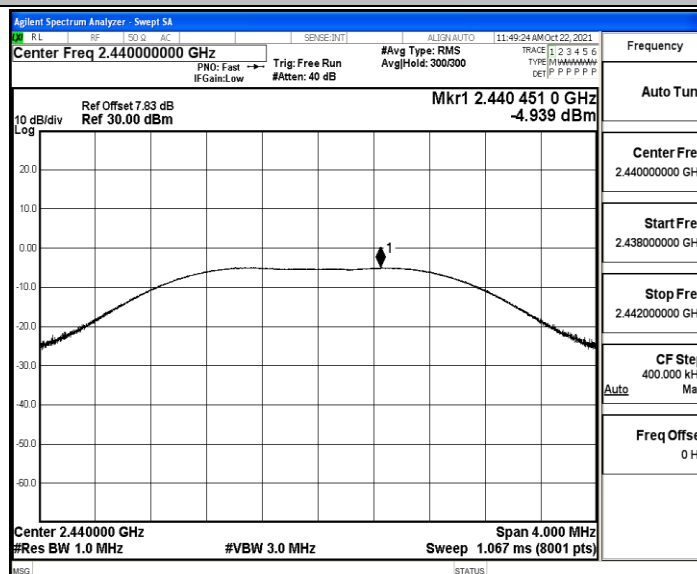
BLE_1M_Ant1_2480



BLE_2M_Ant1_2402

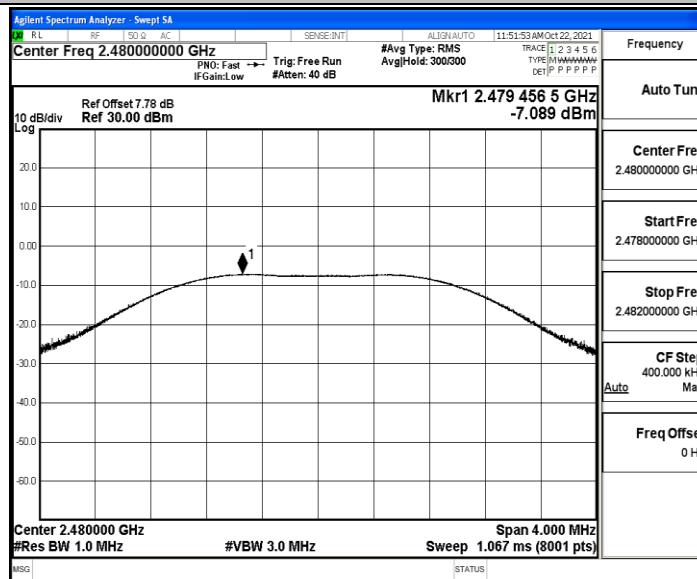


BLE_2M_Ant1_2440





BLE_2M_Ant1_2480





B.3 Maximum power spectral density

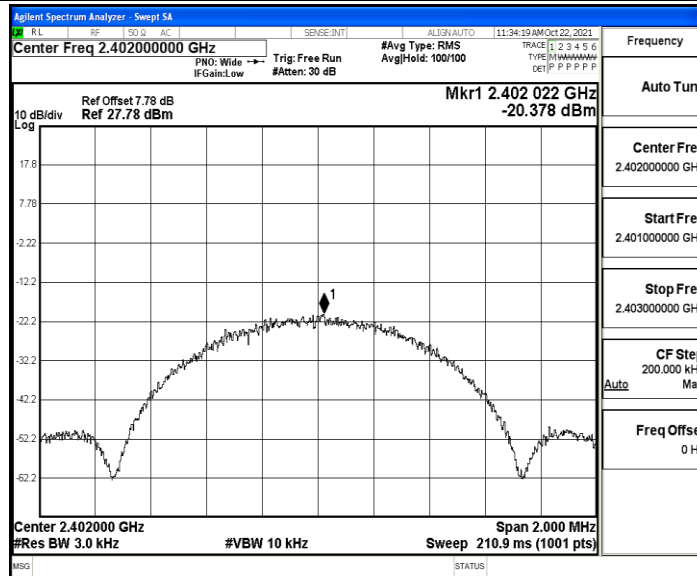
Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-20.38	≤8	PASS
		2440	-21.61	≤8	PASS
		2480	-23.5	≤8	PASS
BLE_2M	Ant1	2402	-22.91	≤8	PASS
		2440	-23.82	≤8	PASS
		2480	-25.97	≤8	PASS

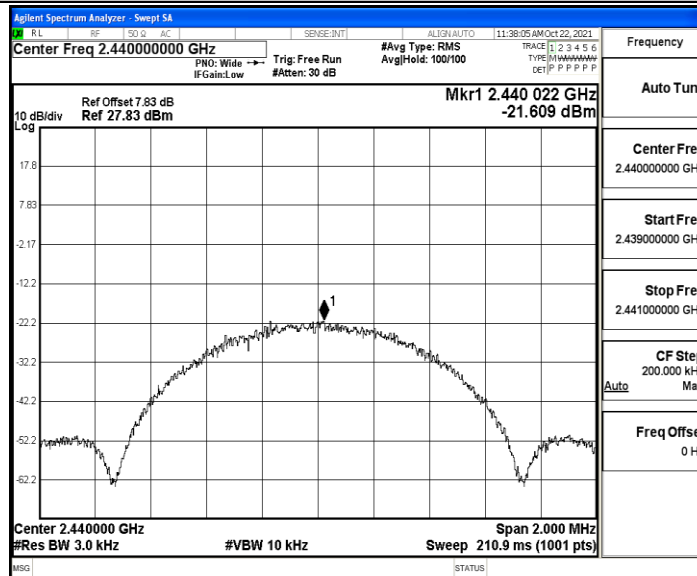


Test Graphs

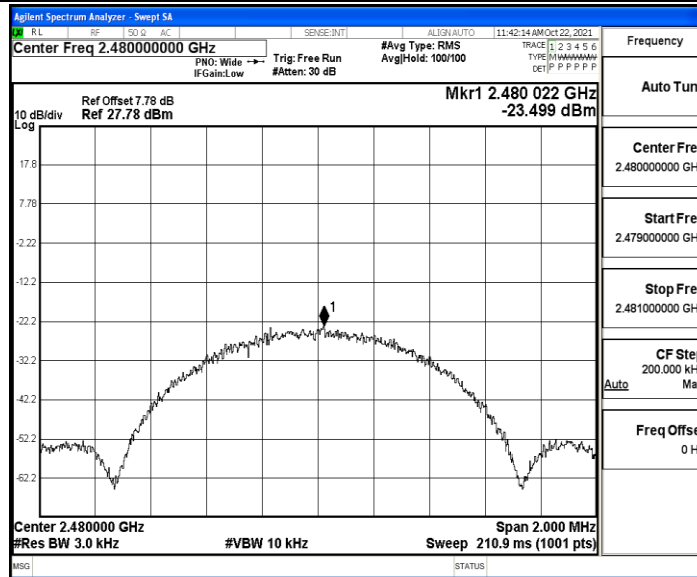
BLE_1M_Ant1_2402



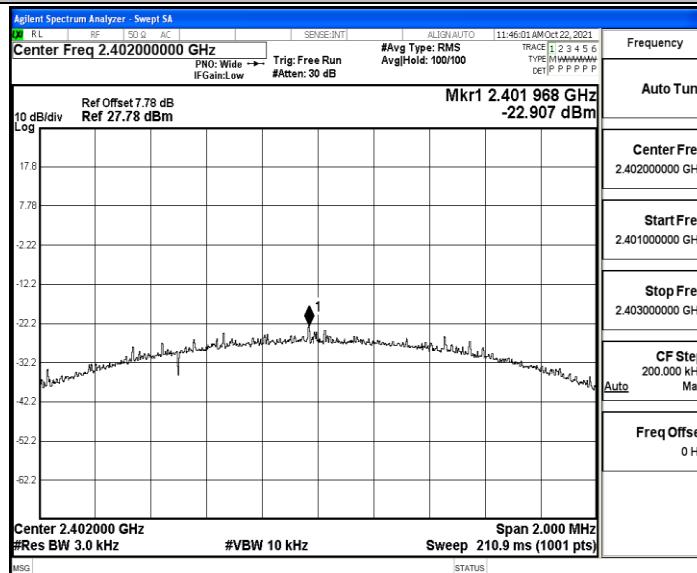
BLE_1M_Ant1_2440



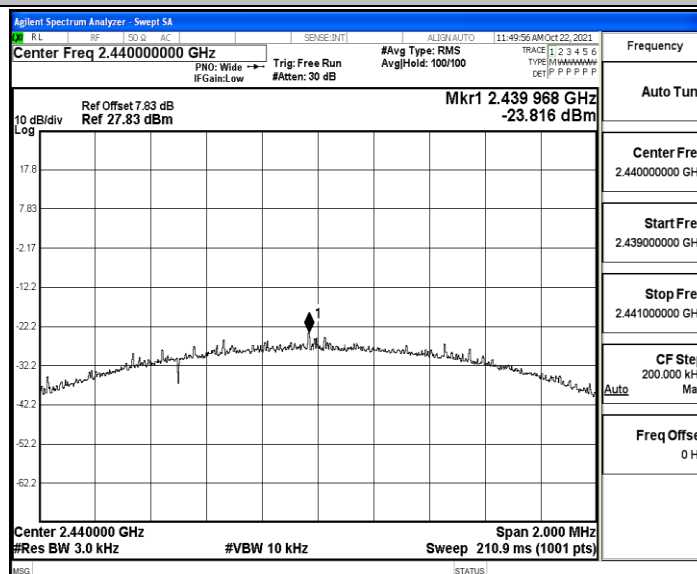
BLE_1M_Ant1_2480



BLE_2M_Ant1_2402

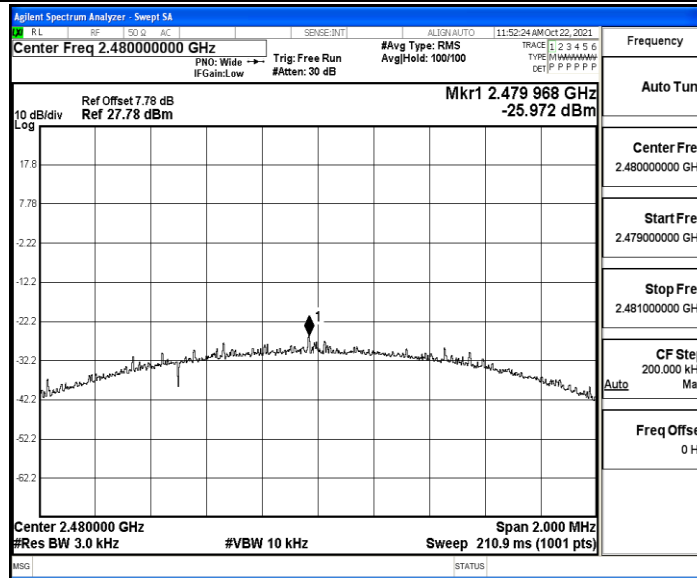


BLE_2M_Ant1_2440





BLE_2M_Ant1_2480





B.4 Band edge measurements

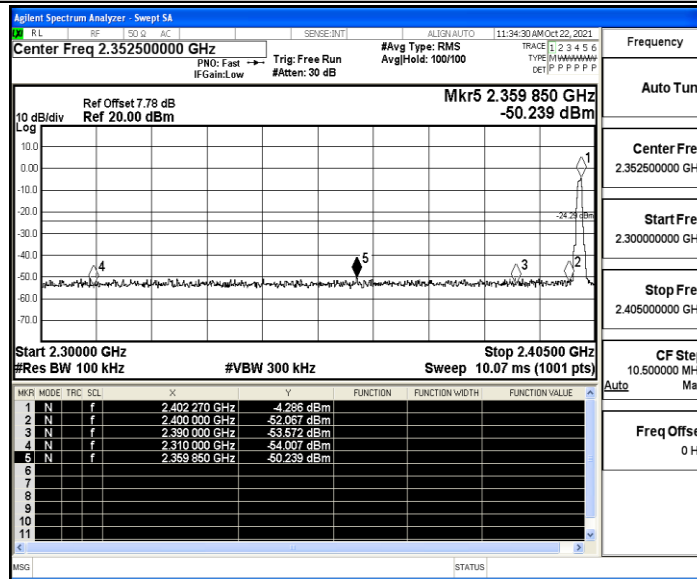
Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-4.29	-50.24	≤ -24.29	PASS
		High	2480	-8.16	-49.05	≤ -28.16	PASS
BLE_2M	Ant1	Low	2402	-6.67	-40.07	≤ -26.67	PASS
		High	2480	-8.26	-48.98	≤ -28.26	PASS

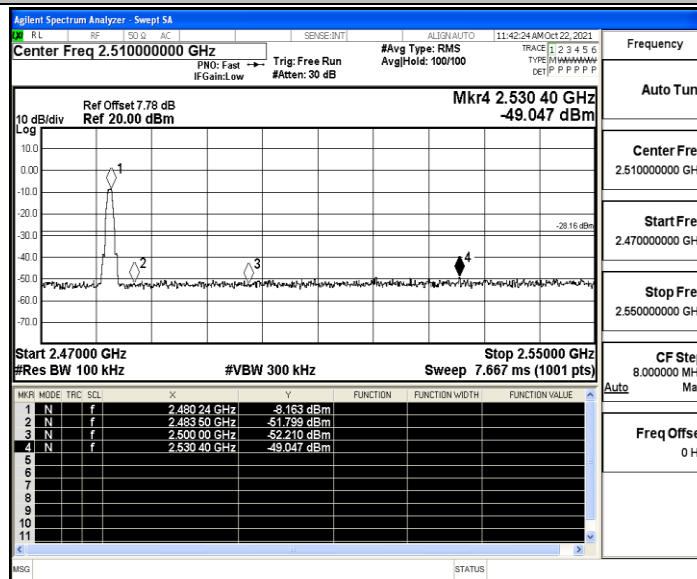


Test Graphs

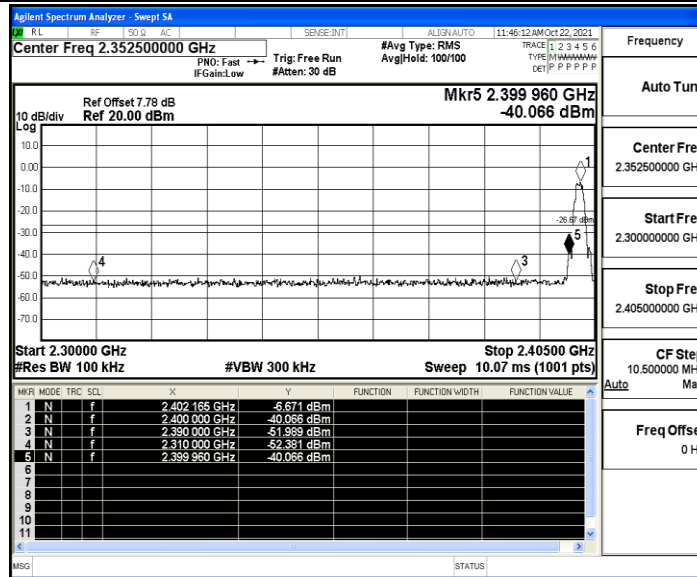
BLE_1M_Ant1_Low_2402



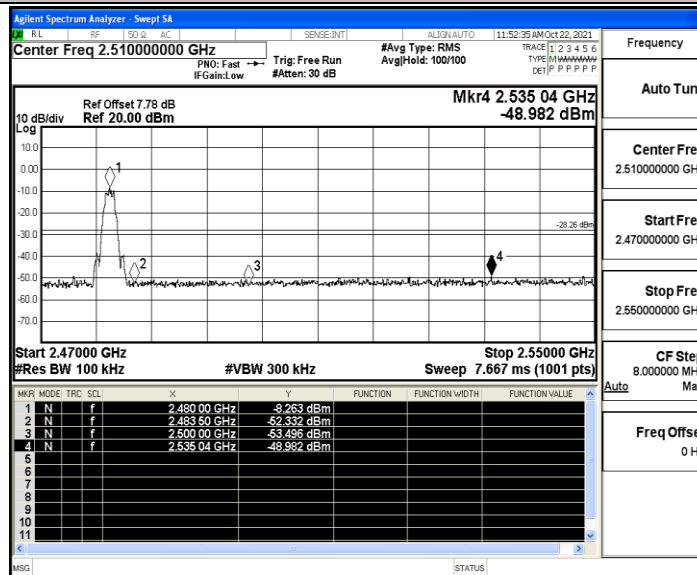
BLE_1M_Ant1_High_2480



BLE_2M_Ant1_Low_2402



BLE_2M_Ant1_High_2480





B.5 Conducted Spurious Emission

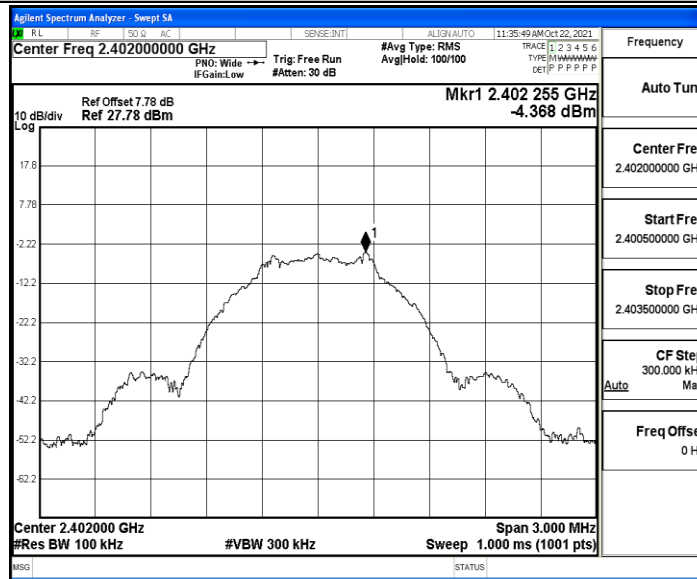
Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-4.37	-4.37	---	PASS
			30~1000	-4.37	-61.03	≤ -24.37	PASS
			1000~26500	-4.37	-47.18	≤ -24.37	PASS
		2440	Reference	-6.52	-6.52	---	PASS
			30~1000	-6.52	-61.55	≤ -26.52	PASS
			1000~26500	-6.52	-47.15	≤ -26.52	PASS
		2480	Reference	-7.64	-7.64	---	PASS
			30~1000	-7.64	-61.92	≤ -27.64	PASS
			1000~26500	-7.64	-47.13	≤ -27.64	PASS
BLE_2M	Ant1	2402	Reference	-4.96	-4.96	---	PASS
			30~1000	-4.96	-61.48	≤ -24.96	PASS
			1000~26500	-4.96	-47.62	≤ -24.96	PASS
		2440	Reference	-6.31	-6.31	---	PASS
			30~1000	-6.31	-61.83	≤ -26.31	PASS
			1000~26500	-6.31	-46.75	≤ -26.31	PASS
		2480	Reference	-8.34	-8.34	---	PASS
			30~1000	-8.34	-60.66	≤ -28.34	PASS
			1000~26500	-8.34	-47.23	≤ -28.34	PASS

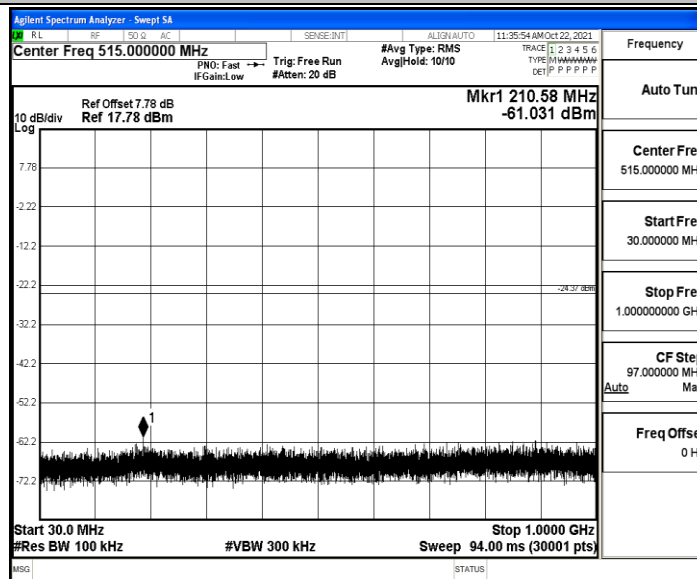


Test Graphs

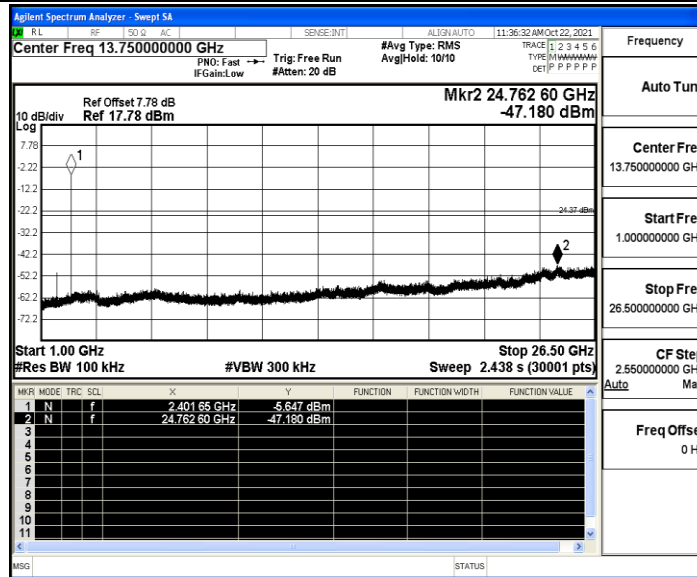
BLE_1M_Ant1_2402_0~Reference



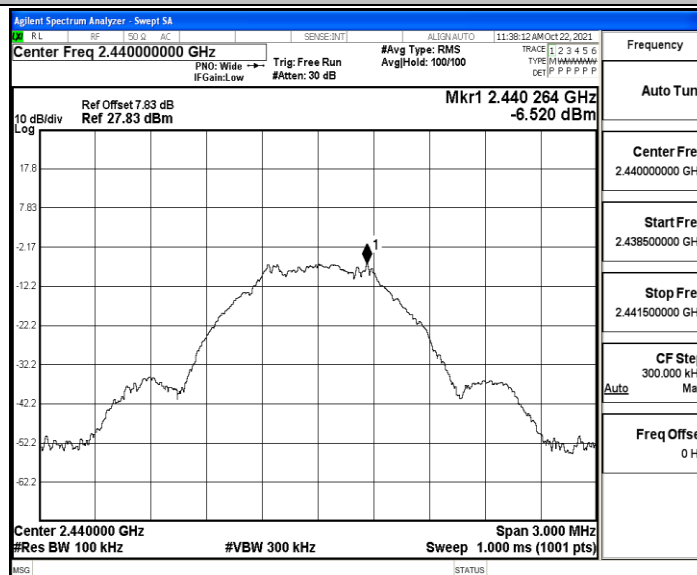
BLE_1M_Ant1_2402_30~1000



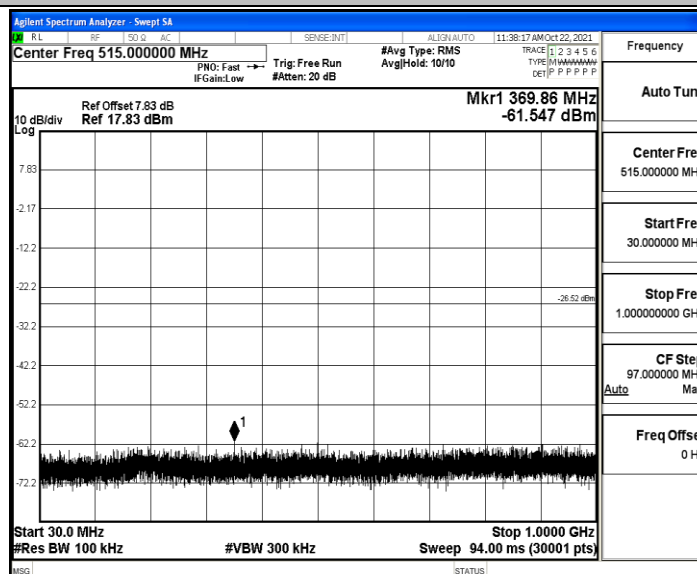
BLE_1M_Ant1_2402_1000~26500



BLE_1M_Ant1_2440_0~Reference

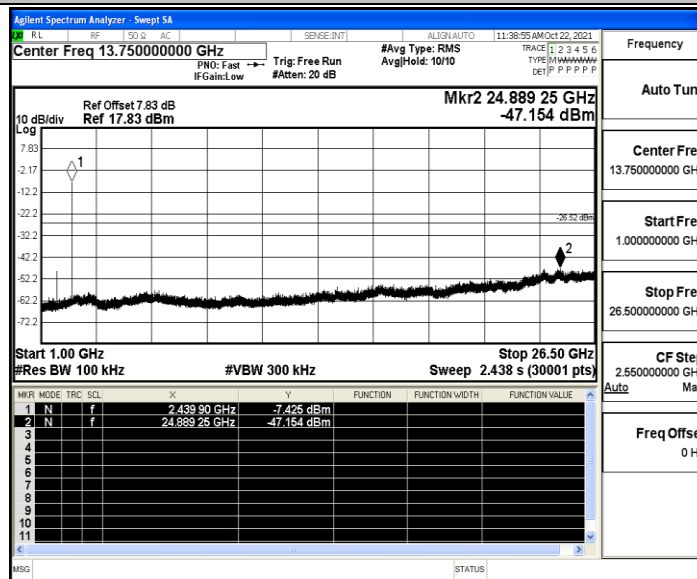


BLE_1M_Ant1_2440_30~1000

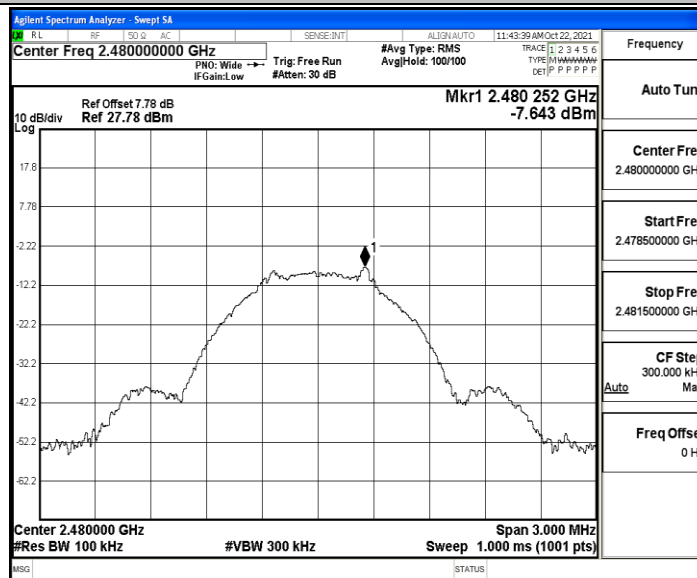




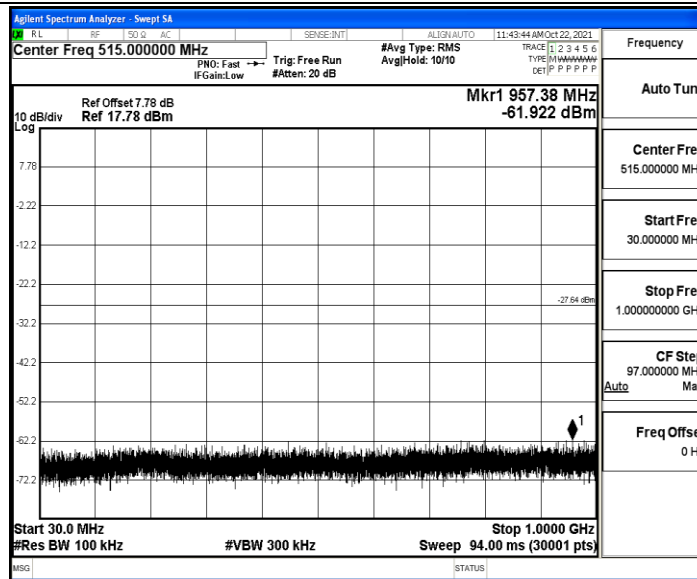
BLE_1M_Ant1_2440_1000-26500



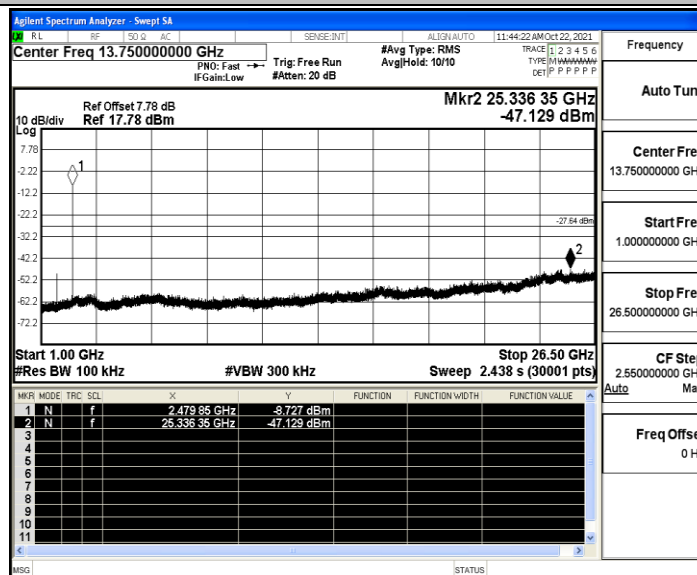
BLE_1M_Ant1_2480_0~Reference



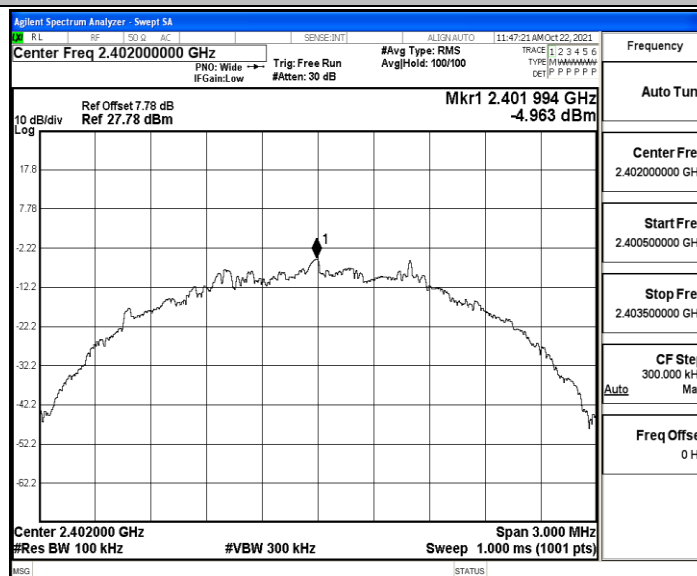
BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500

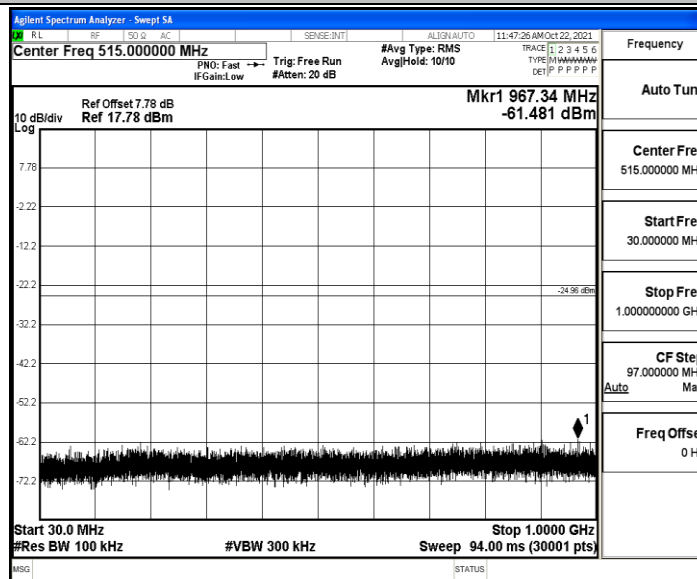


BLE_2M_Ant1_2402_0~Reference

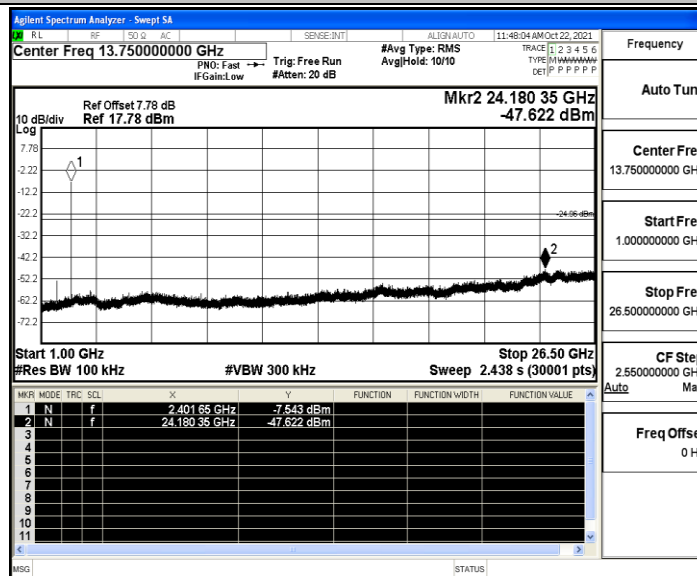




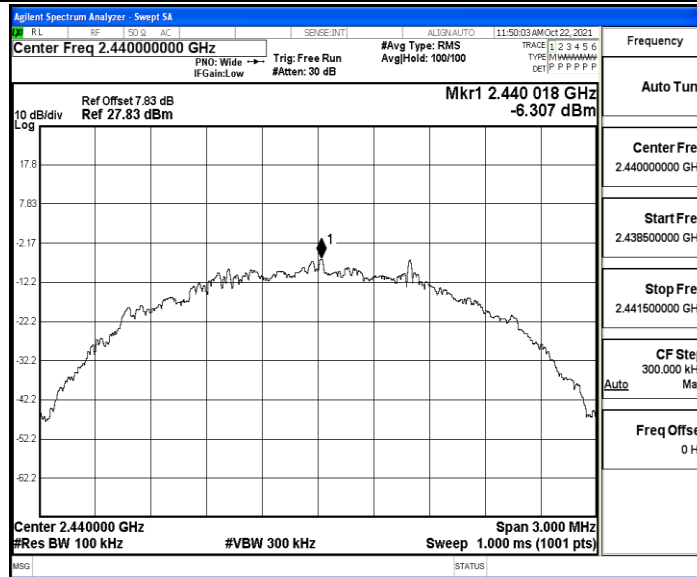
BLE_2M_Ant1_2402_30~1000



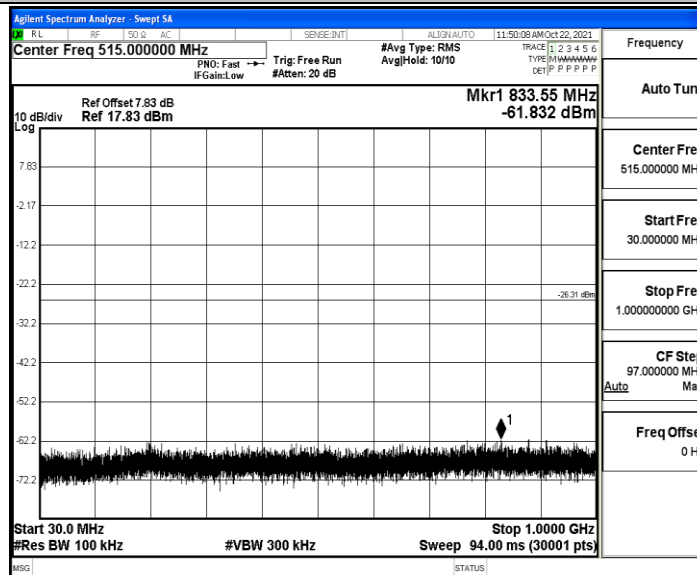
BLE_2M_Ant1_2402_1000~26500



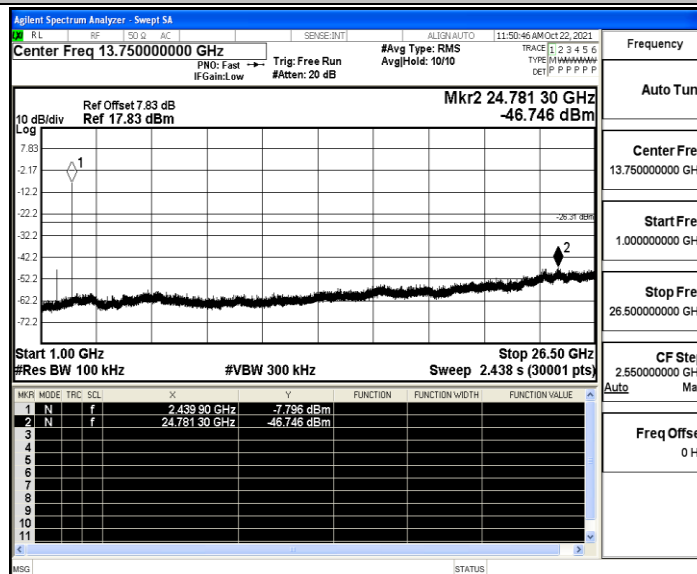
BLE_2M_Ant1_2440_0~Reference



BLE_2M_Ant1_2440_30~1000

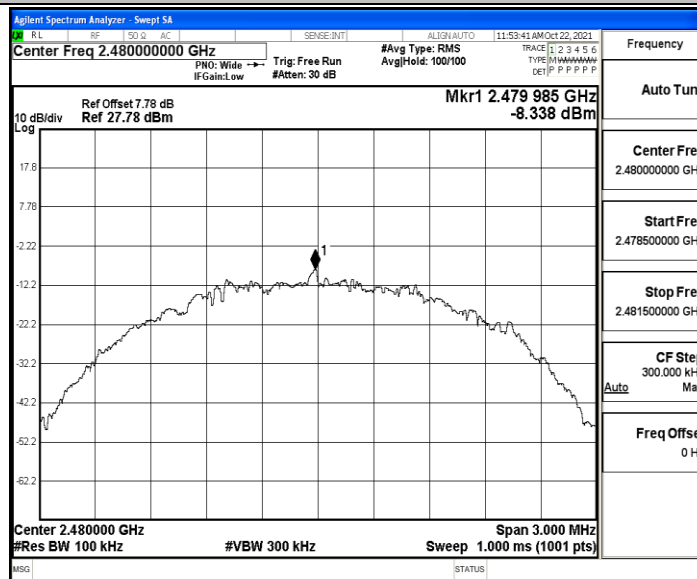


BLE_2M_Ant1_2440_1000~26500

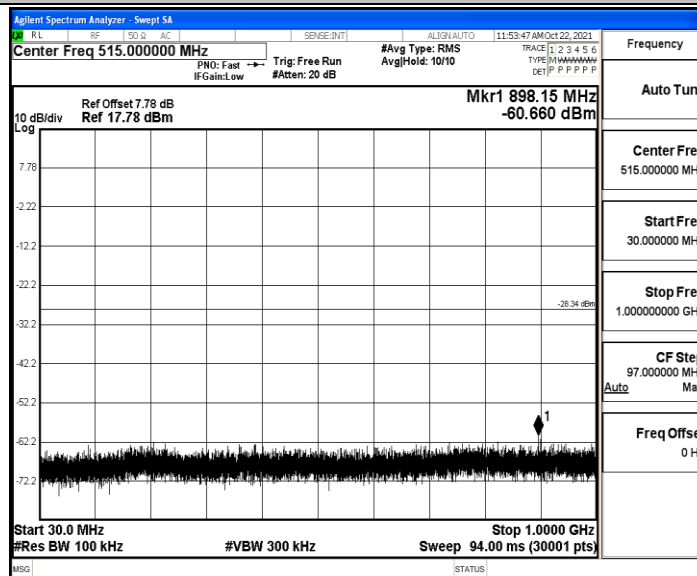




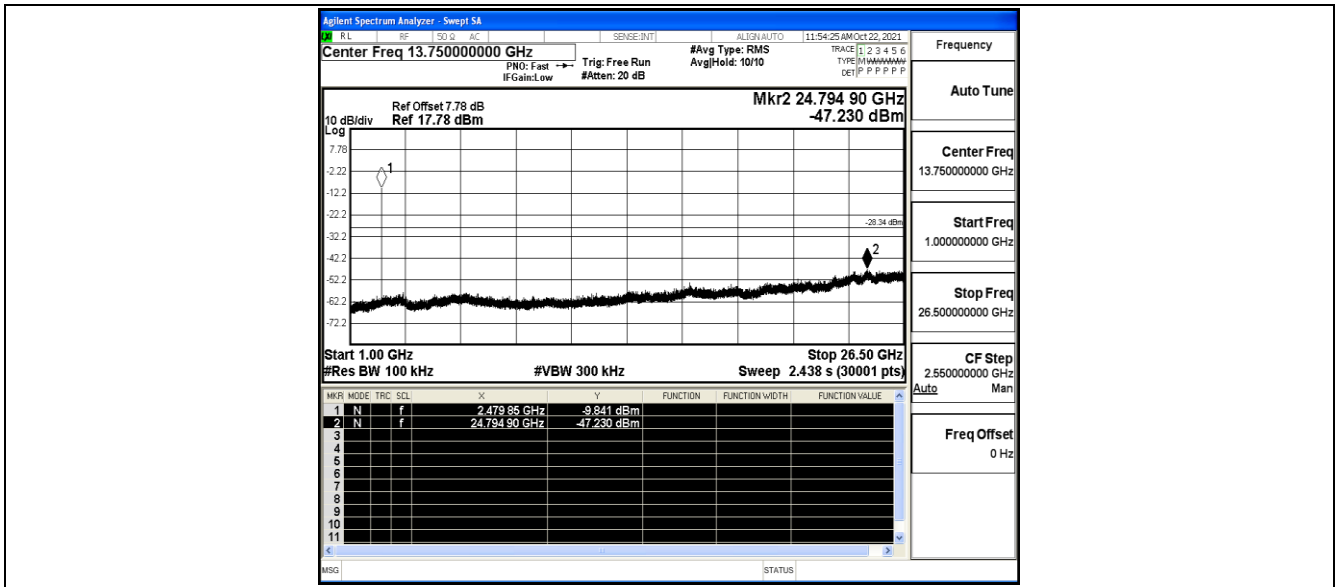
BLE_2M_Ant1_2480_0~Reference



BLE_2M_Ant1_2480_30~1000



BLE_2M_Ant1_2480_1000~26500





B.6 Duty Cycle

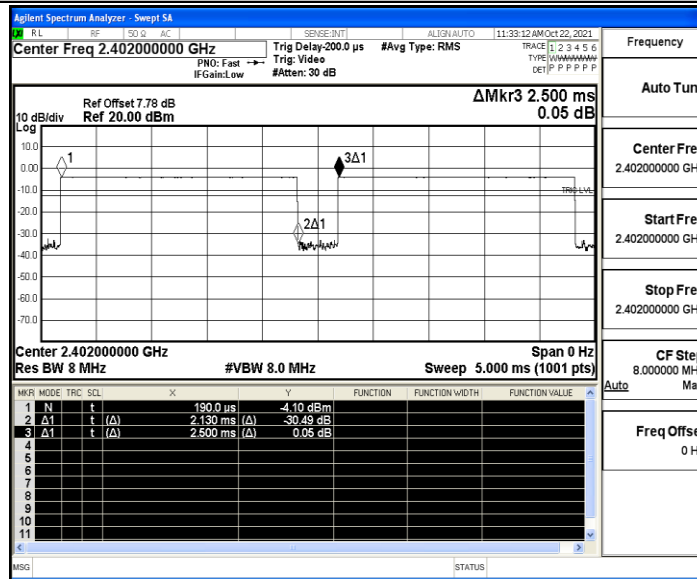
Test Result

TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	2.13	2.50	0.8520	85.20	0.70	---	PASS
		2440	2.12	2.50	0.8480	84.80	0.72	---	PASS
		2480	2.13	2.50	0.8520	85.20	0.70	---	PASS
BLE_2M	Ant1	2402	1.07	1.87	0.5722	57.22	2.42	---	PASS
		2440	1.07	1.88	0.5691	56.91	2.45	---	PASS
		2480	1.07	1.88	0.5691	56.91	2.45	---	PASS

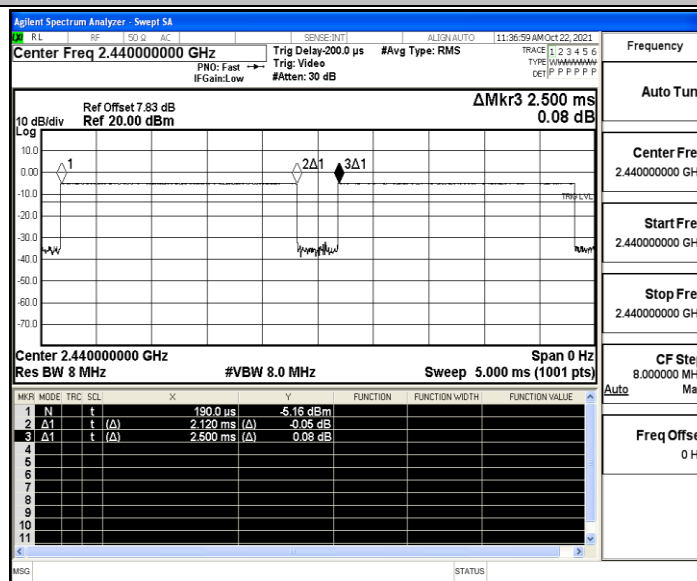


Test Graphs

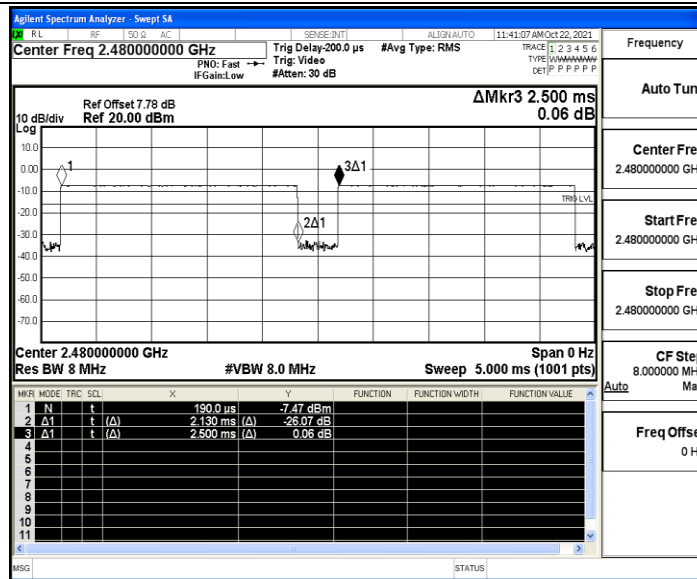
BLE_1M_Ant1_2402



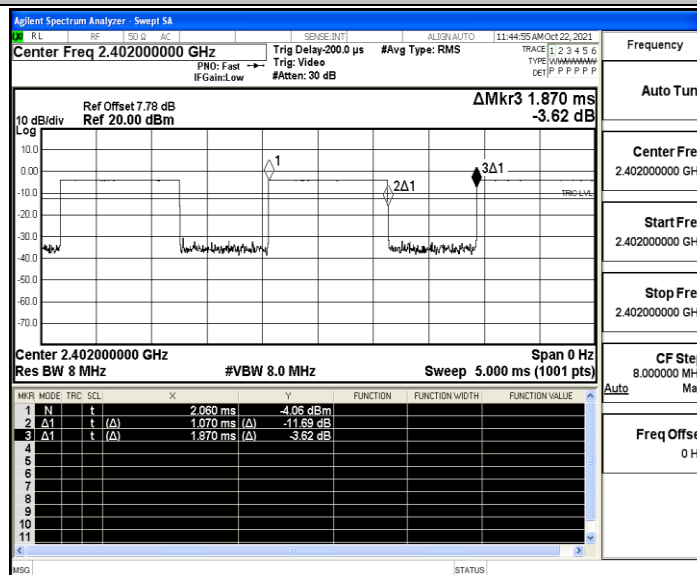
BLE_1M_Ant1_2440



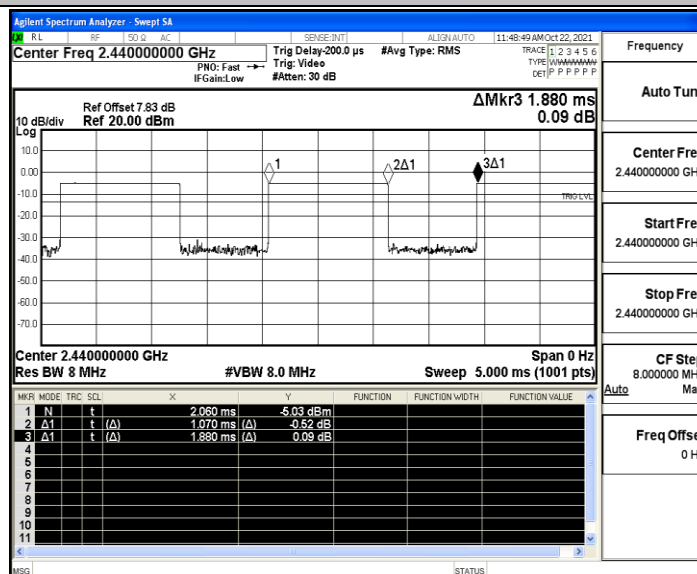
BLE_1M_Ant1_2480



BLE_2M_Ant1_2402

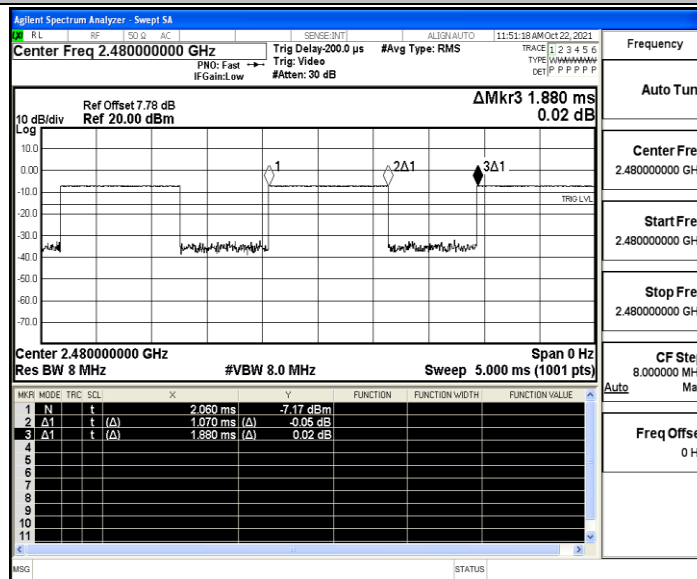


BLE_2M_Ant1_2440





BLE_2M_Ant1_2480





B.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	-49	≤-41.20	46.20	≤54	PASS
				AV	2389.145	-48.36	≤-41.20	46.84	≤54	PASS
				AV	2390.000	-48.58	≤-41.20	46.62	≤54	PASS
				Peak	2310.000	-42.53	≤-21.20	52.67	≤74	PASS
				Peak	2365.520	-38.08	≤-21.20	57.12	≤74	PASS
				Peak	2390.000	-42.25	≤-21.20	52.95	≤74	PASS
		High	2480	AV	2483.500	-47.93	≤-41.20	47.27	≤54	PASS
				AV	2499.440	-47.77	≤-41.20	47.43	≤54	PASS
				AV	2500.000	-47.8	≤-41.20	47.40	≤54	PASS
				Peak	2483.500	-41.5	≤-21.20	53.70	≤74	PASS
				Peak	2486.960	-38.44	≤-21.20	56.76	≤74	PASS
				Peak	2500.000	-40.87	≤-21.20	54.33	≤74	PASS
BLE_2M	Ant1	Low	2402	AV	2310.000	-48.87	≤-41.20	46.33	≤54	PASS
				AV	2386.415	-47.98	≤-41.20	47.22	≤54	PASS
				AV	2390.000	-48.38	≤-41.20	46.82	≤54	PASS
				Peak	2310.000	-40.34	≤-21.20	54.86	≤74	PASS
				Peak	2383.475	-38.41	≤-21.20	56.79	≤74	PASS
				Peak	2390.000	-41.27	≤-21.20	53.93	≤74	PASS
		High	2480	AV	2483.500	-47.7	≤-41.20	47.50	≤54	PASS
				AV	2497.280	-47.55	≤-41.20	47.65	≤54	PASS
				AV	2500.000	-47.8	≤-41.20	47.40	≤54	PASS
				Peak	2483.500	-42.02	≤-21.20	53.18	≤74	PASS
				Peak	2491.040	-38.84	≤-21.20	56.36	≤74	PASS
				Peak	2500.000	-40.09	≤-21.20	55.11	≤74	PASS

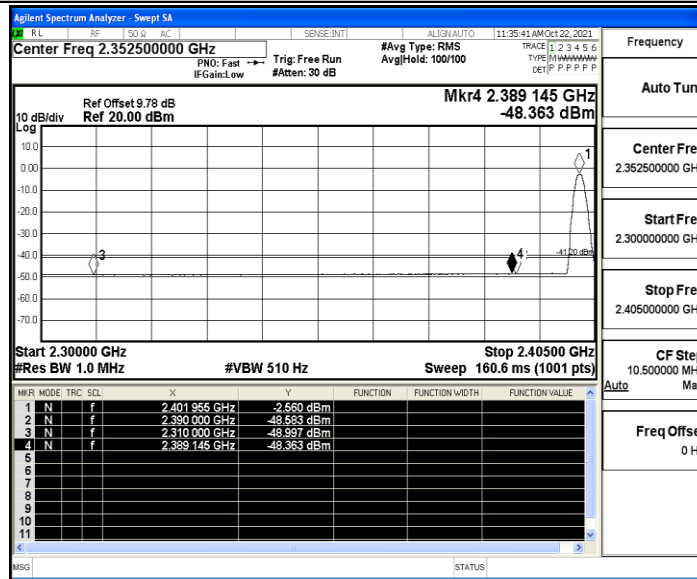
Note:

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.

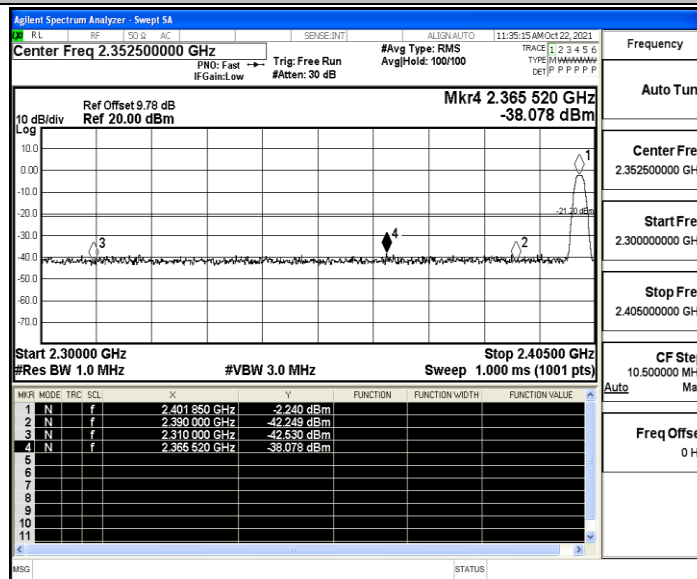


Test Graphs

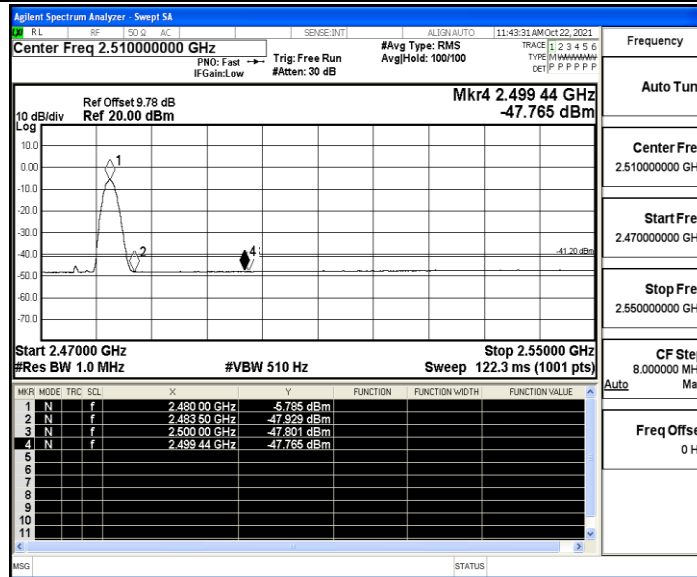
BLE_1M_Ant1_Low_2402_AV



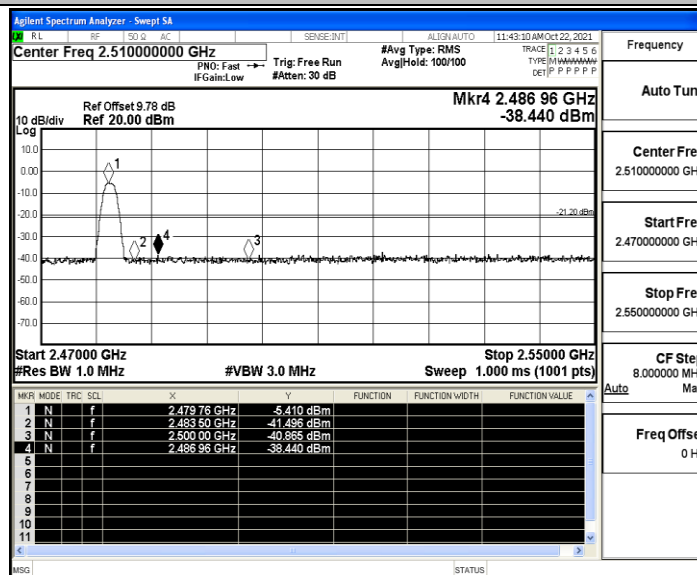
BLE_1M_Ant1_Low_2402_Peak



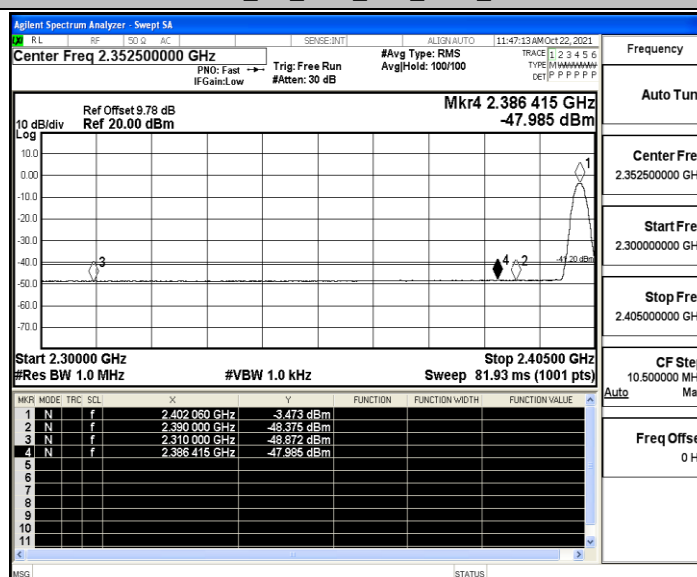
BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak

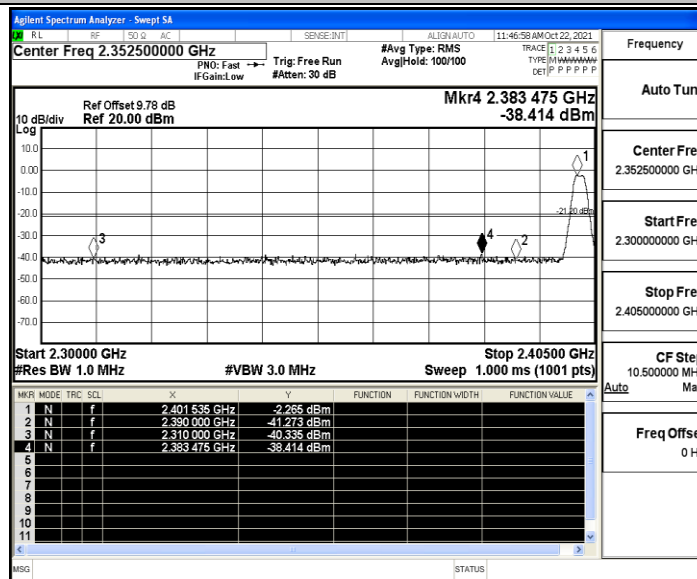


BLE_2M_Ant1_Low_2402_AV

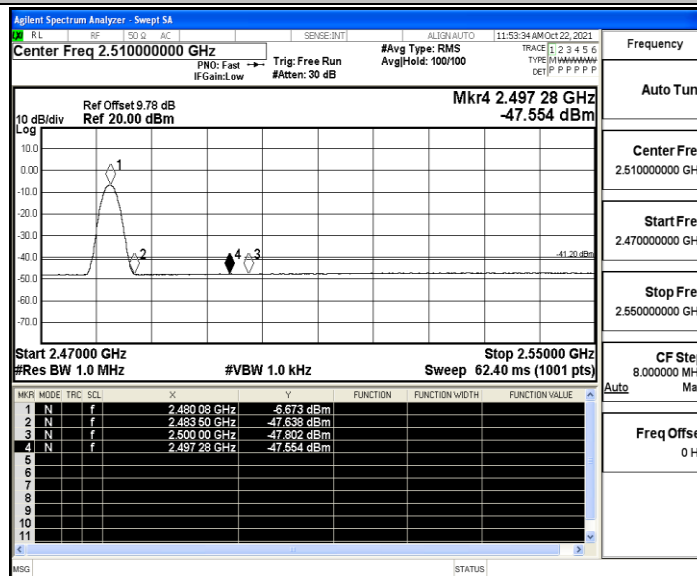




BLE_2M_Ant1_Low_2402_Peak



BLE_2M_Ant1_High_2480_AV



BLE_2M_Ant1_High_2480_Peak

