



Appendix A

RF Test Data for 2.4G BLE (Conducted Measurement)

Product Name: CA201T EXTERNAL BUTTON

Test Model: SRC-0106(911100185370/911100217010)

Environmental Conditions

Temperature:	21.1 ° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Kay Hu
Supervised by:	Huan Li

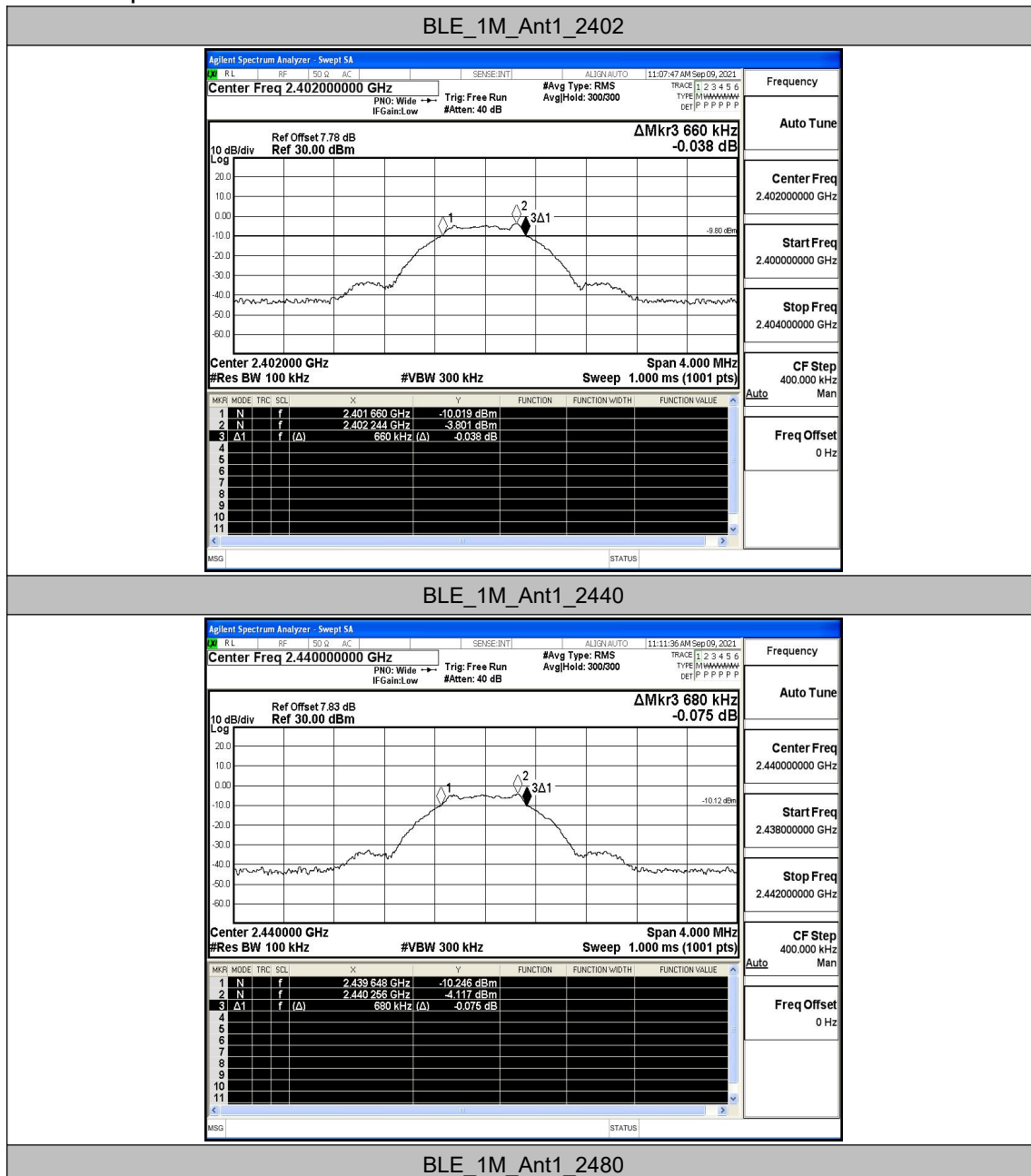


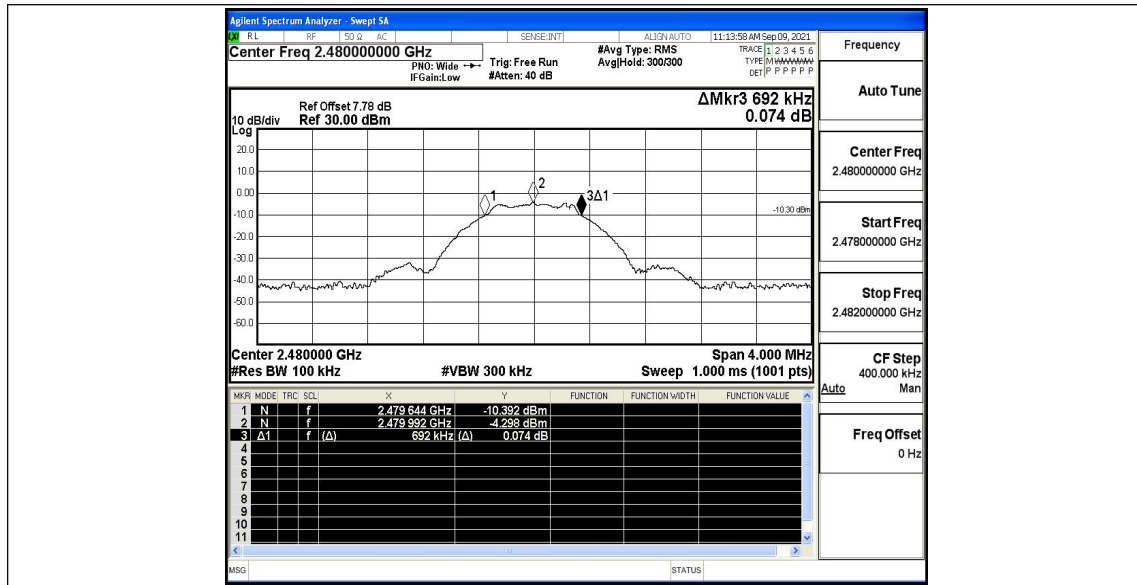
A.1 6dB Bandwidth

Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.660	2401.660	2402.320	≥0.5	PASS
		2440	0.680	2439.648	2440.328	≥0.5	PASS
		2480	0.692	2479.644	2480.336	≥0.5	PASS

Test Graphs





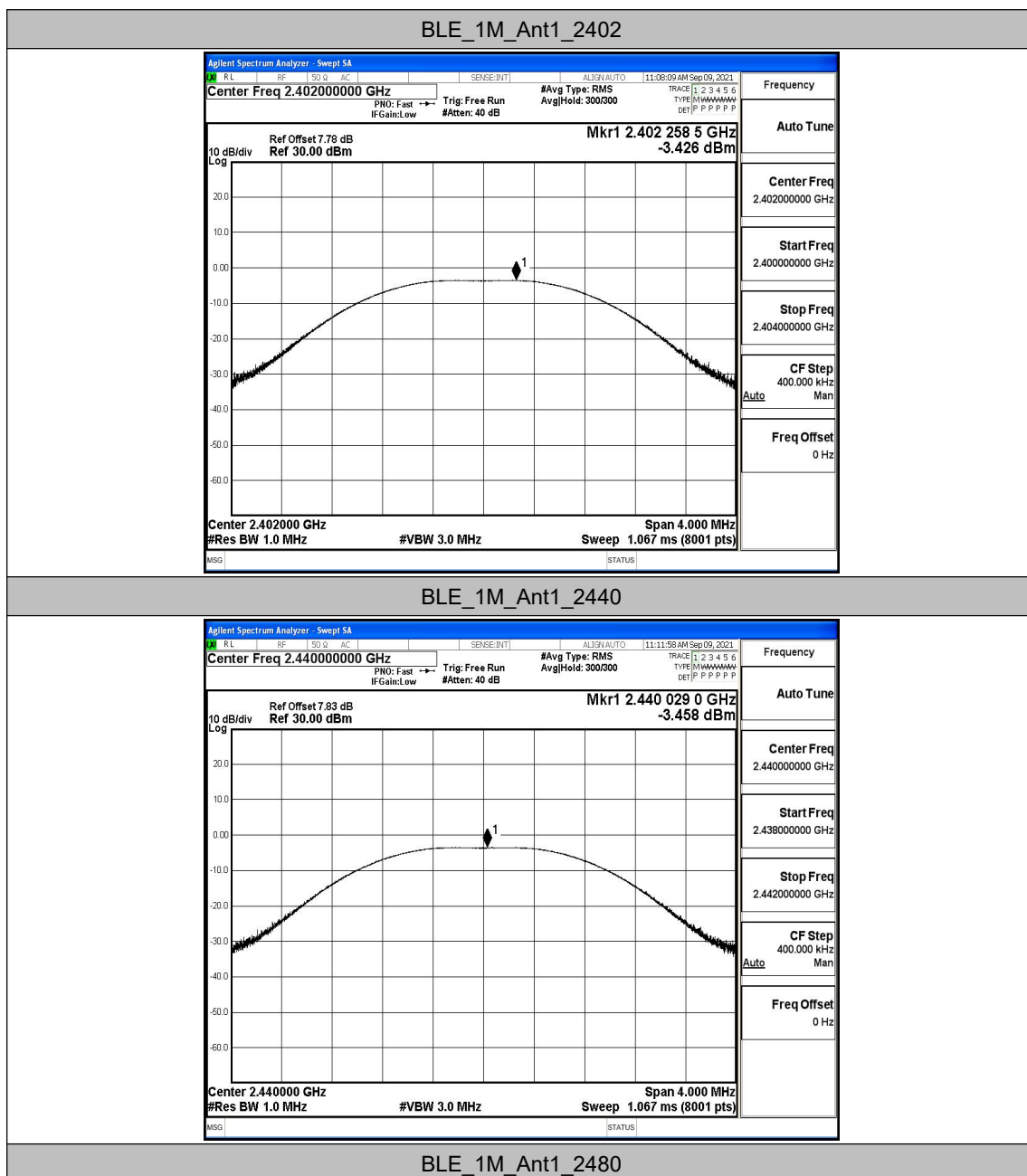


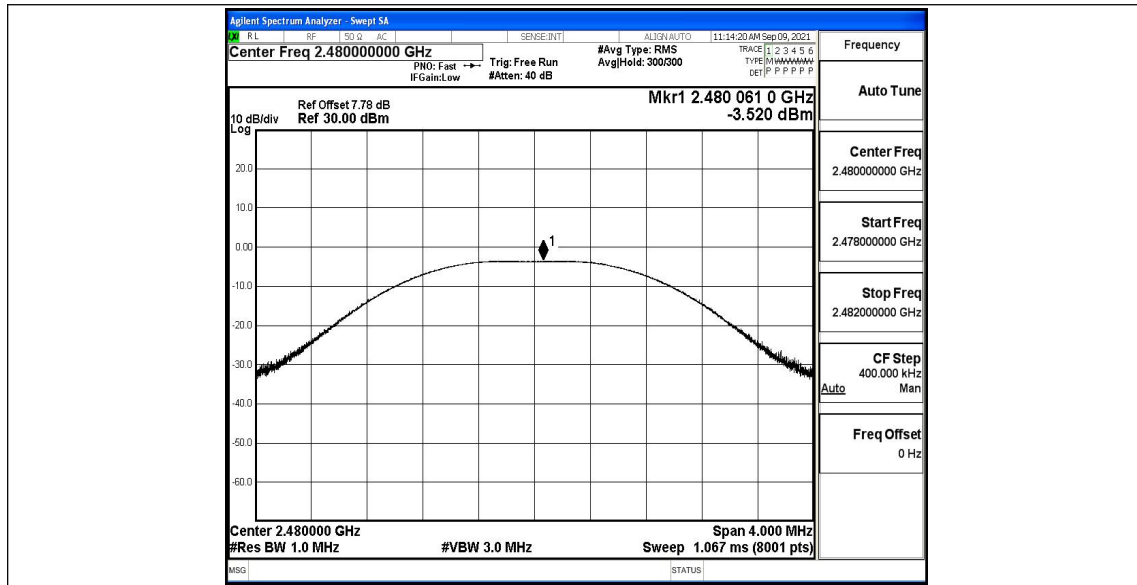
A.2 Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-3.43	≤30	PASS
		2440	-3.46	≤30	PASS
		2480	-3.52	≤30	PASS

Test Graphs





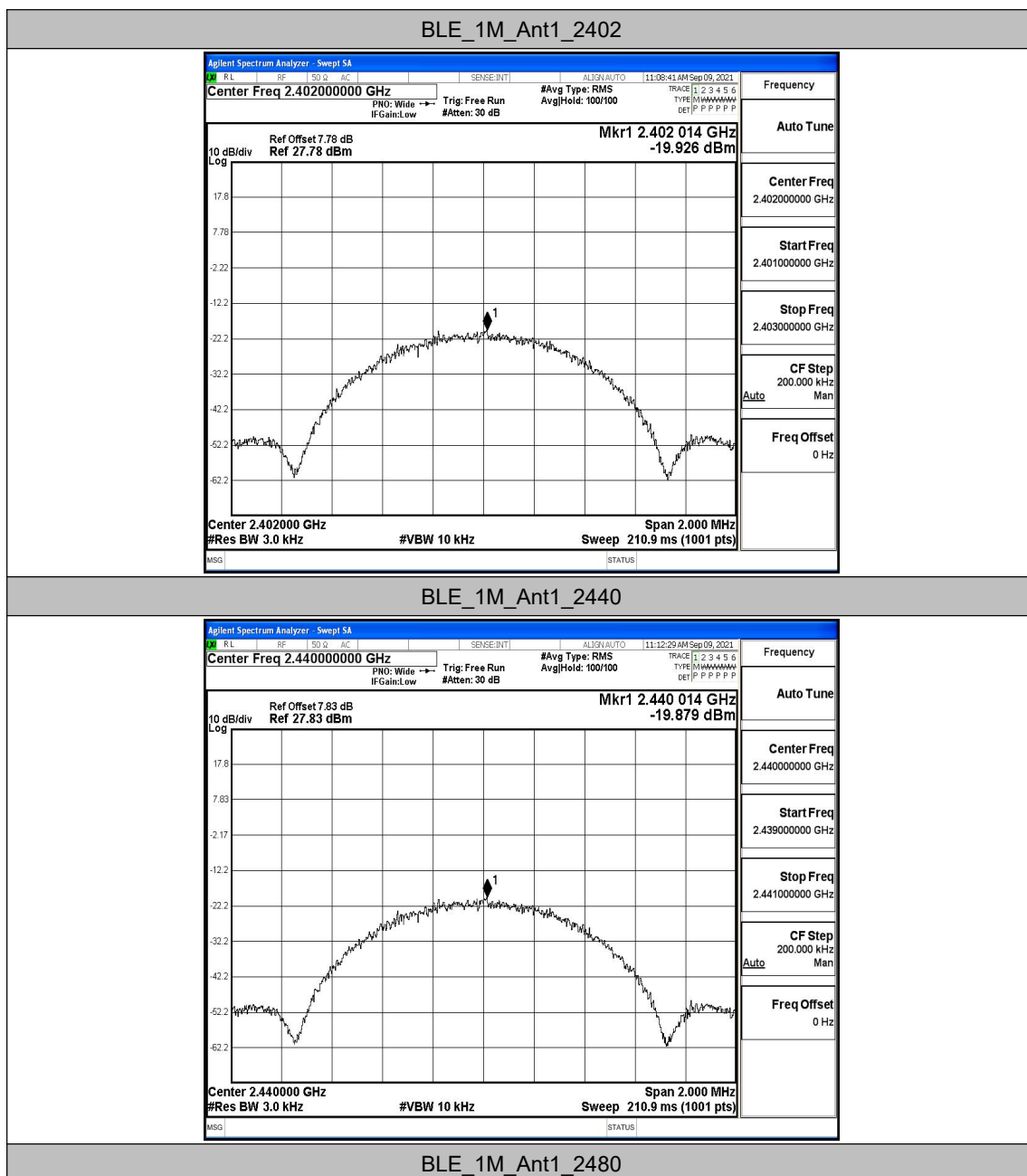


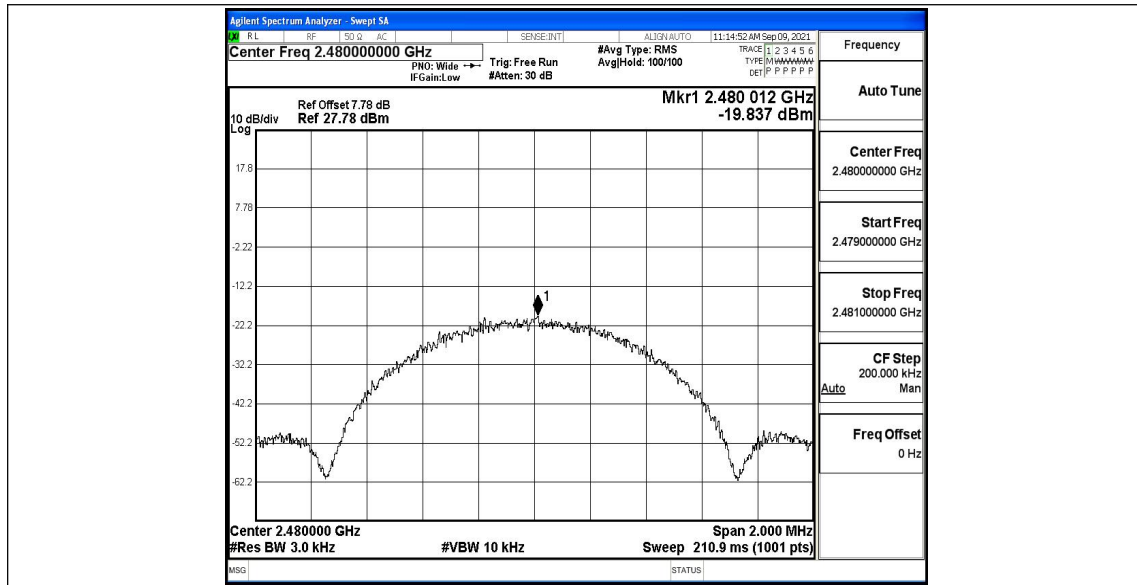
A.3 power spectral density

Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-19.93	≤8	PASS
		2440	-19.88	≤8	PASS
		2480	-19.84	≤8	PASS

Test Graphs





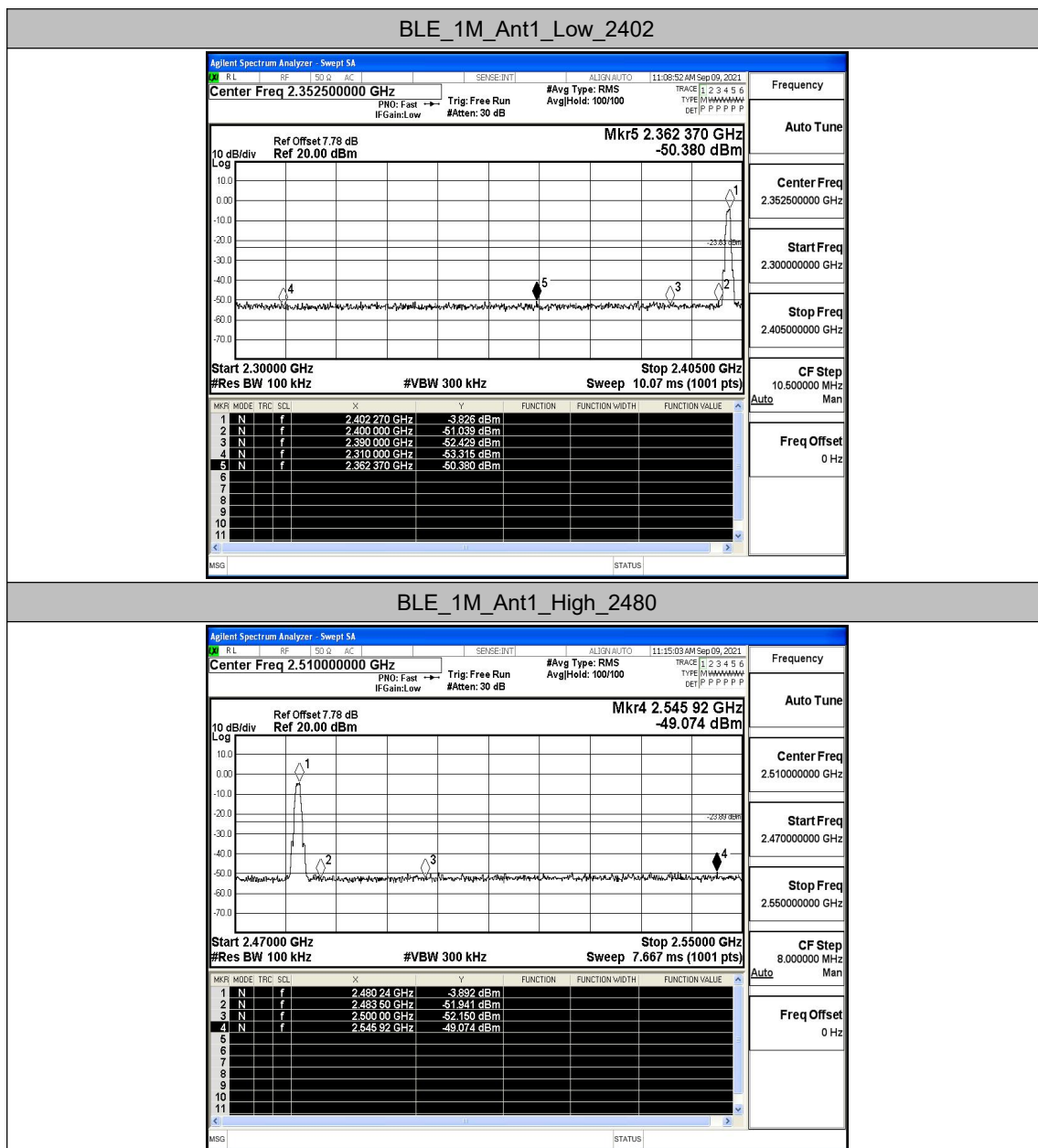


A.4 Band edge measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-3.83	-50.38	≤-23.83	PASS
		High	2480	-3.89	-49.07	≤-23.89	PASS

Test Graphs



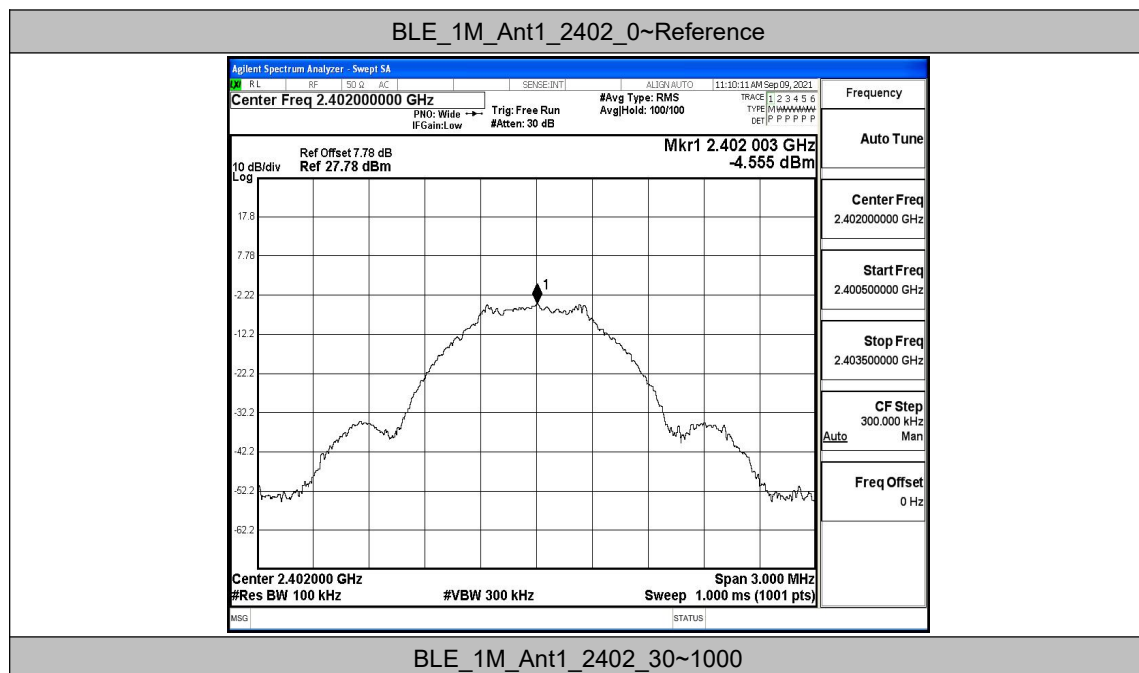


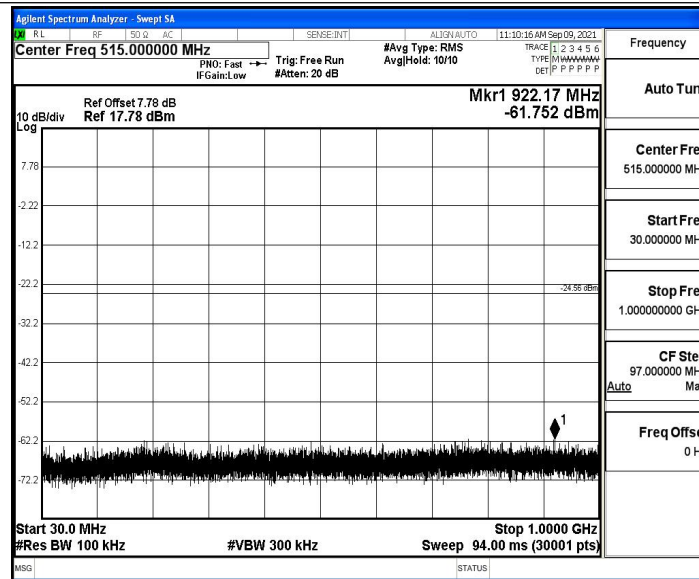
A.5 Conducted Spurious Emission

Test Result

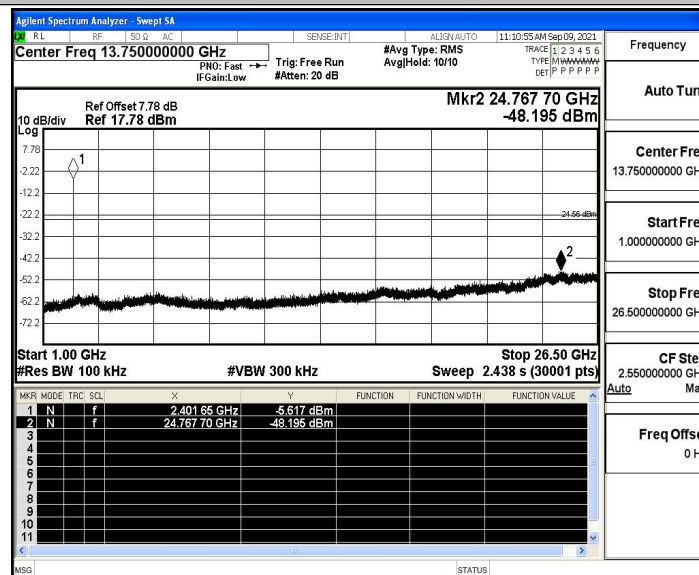
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-4.56	-4.56	---	PASS
			30~1000	-4.56	-61.75	≤-24.56	PASS
			1000~26500	-4.56	-48.2	≤-24.56	PASS
		2440	Reference	-4.27	-4.27	---	PASS
			30~1000	-4.27	-61.65	≤-24.27	PASS
			1000~26500	-4.27	-47.41	≤-24.27	PASS
		2480	Reference	-4.73	-4.73	---	PASS
			30~1000	-4.73	-62.15	≤-24.73	PASS
			1000~26500	-4.73	-47.52	≤-24.73	PASS

Test Graphs

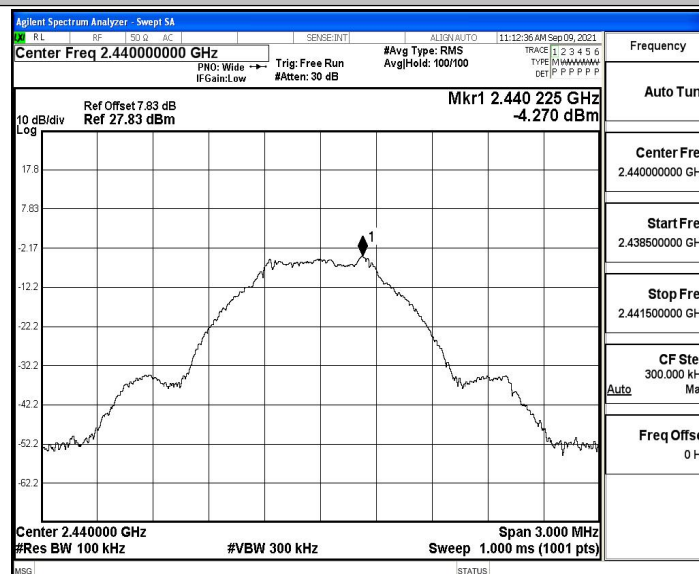




BLE_1M_Ant1_2402_1000~26500

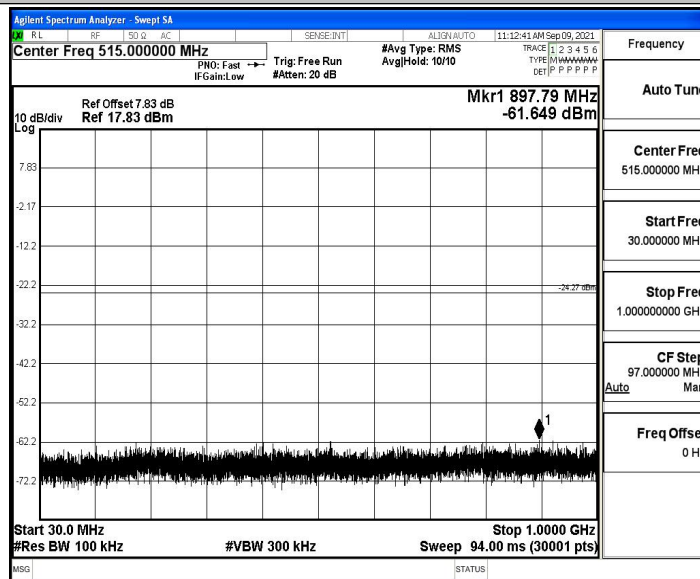


BLE_1M_Ant1_2440_0~Reference

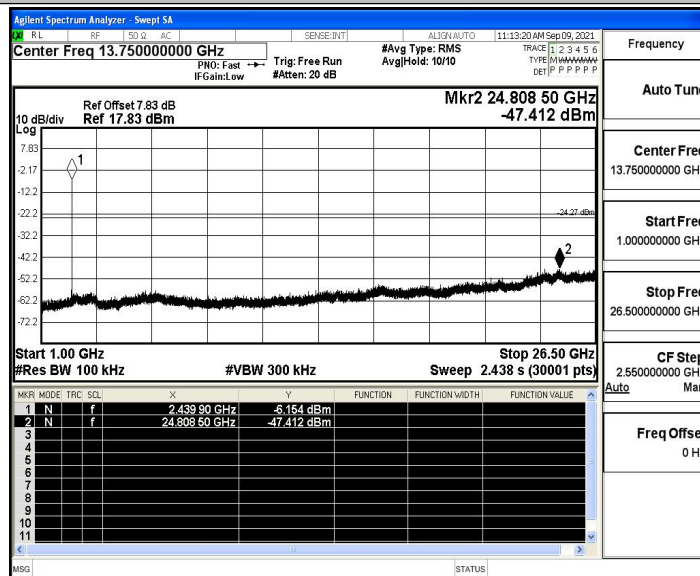




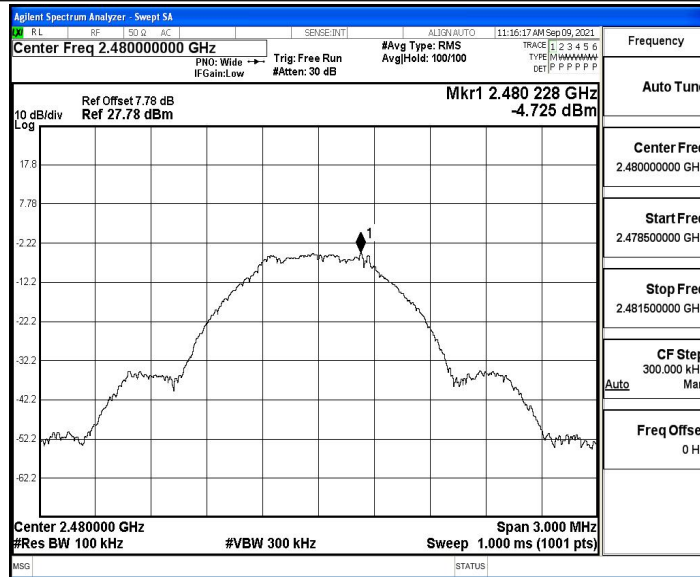
BLE_1M_Ant1_2440_30~1000



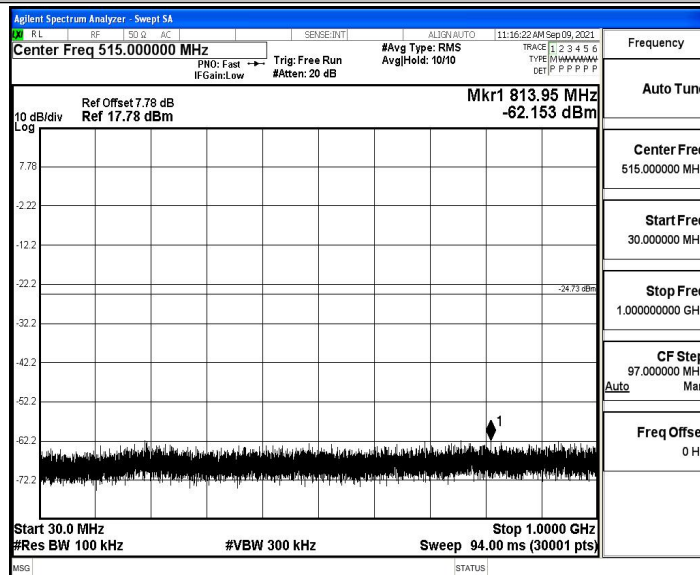
BLE_1M_Ant1_2440_1000~26500



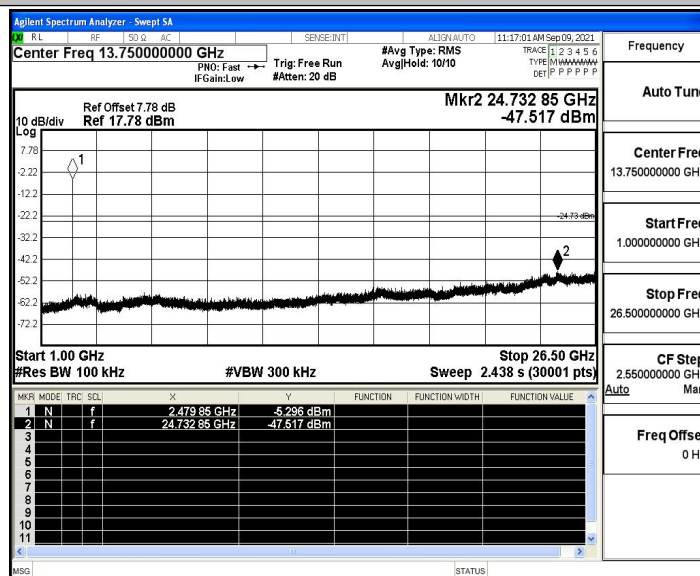
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500



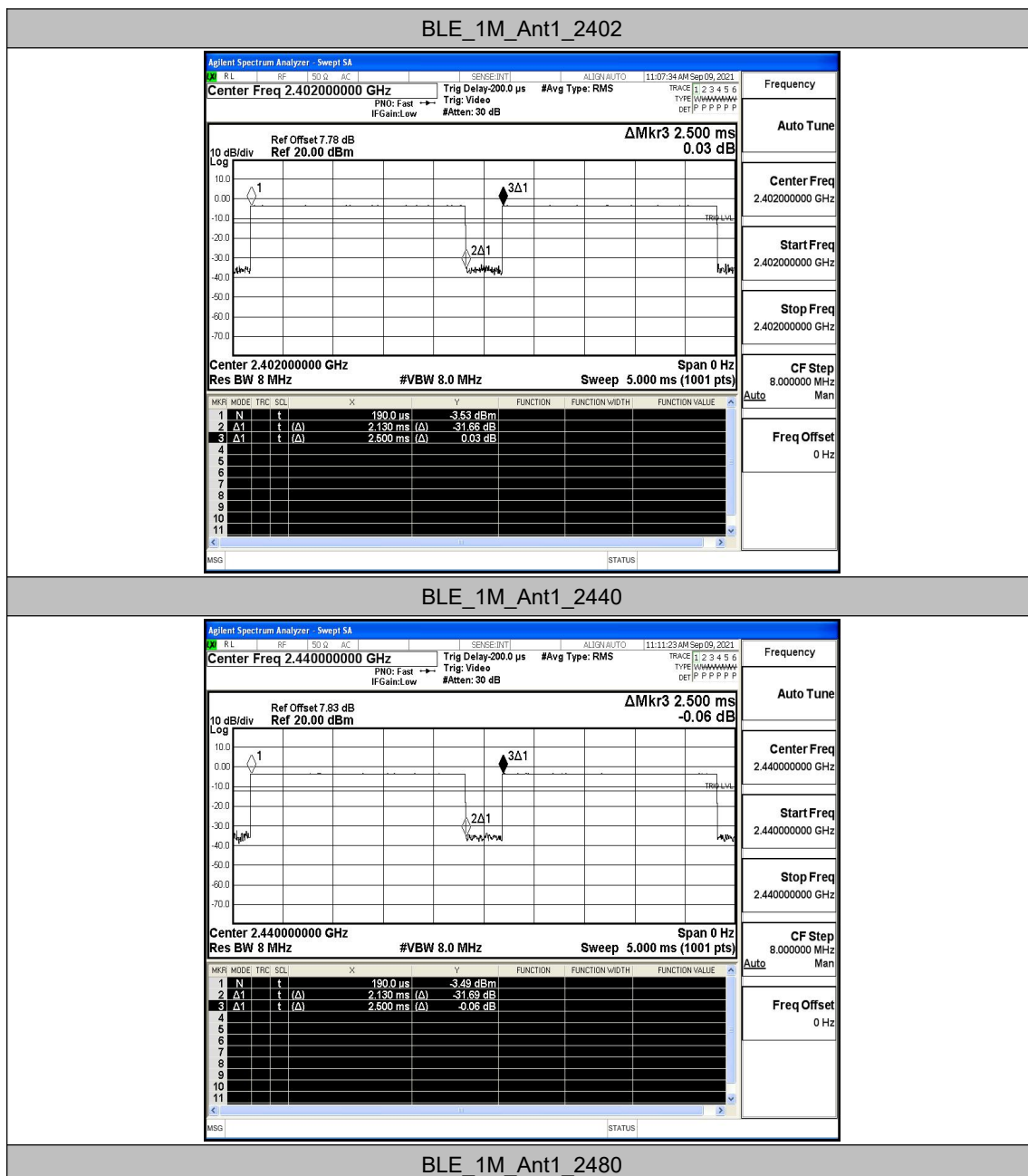


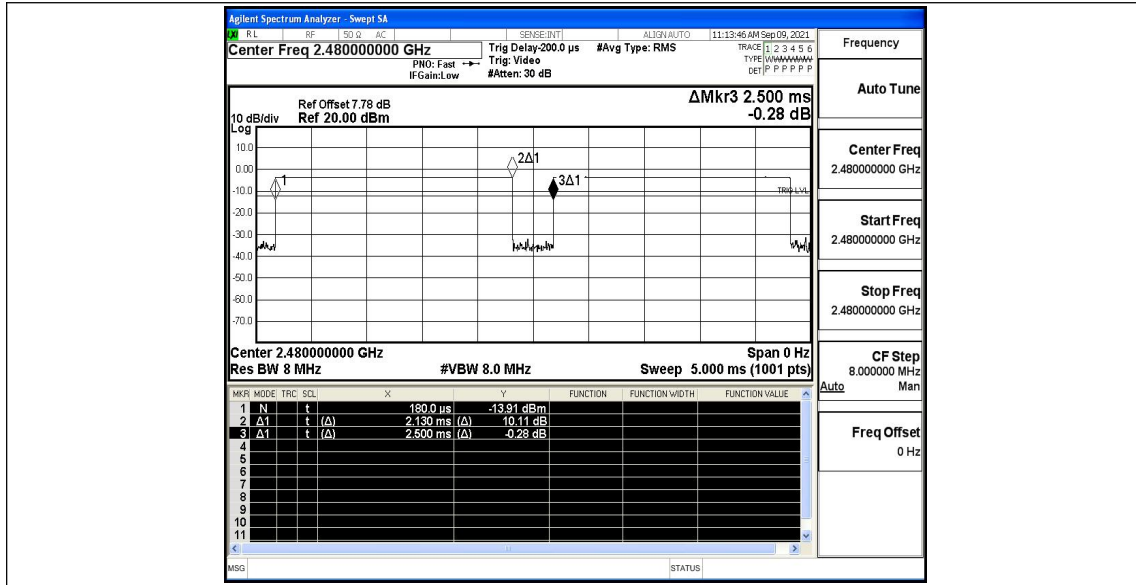
A.6 Duty Cycle

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	2.13	2.50	0.8520	85.20	0.70	---	PASS
		2480	2.13	2.50	0.8520	85.20	0.70	---	PASS

Test Graphs







A.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	-49.04	≤-41.20	46.16	≤54	PASS
				AV	2385.890	-48.02	≤-41.20	47.18	≤54	PASS
				AV	2390.000	-48.8	≤-41.20	46.40	≤54	PASS
				Peak	2310.000	-41.49	≤-21.20	53.71	≤74	PASS
				Peak	2355.020	-38.33	≤-21.20	56.87	≤74	PASS
				Peak	2390.000	-41.94	≤-21.20	53.26	≤74	PASS
		High	2480	AV	2483.500	-48.09	≤-41.20	47.11	≤54	PASS
				AV	2498.000	-47.97	≤-41.20	47.23	≤54	PASS
				AV	2500.000	-48.07	≤-41.20	47.13	≤54	PASS
				Peak	2483.500	-41.76	≤-21.20	53.44	≤74	PASS
				Peak	2495.600	-38.37	≤-21.20	56.83	≤74	PASS
				Peak	2500.000	-41.17	≤-21.20	54.03	≤74	PASS

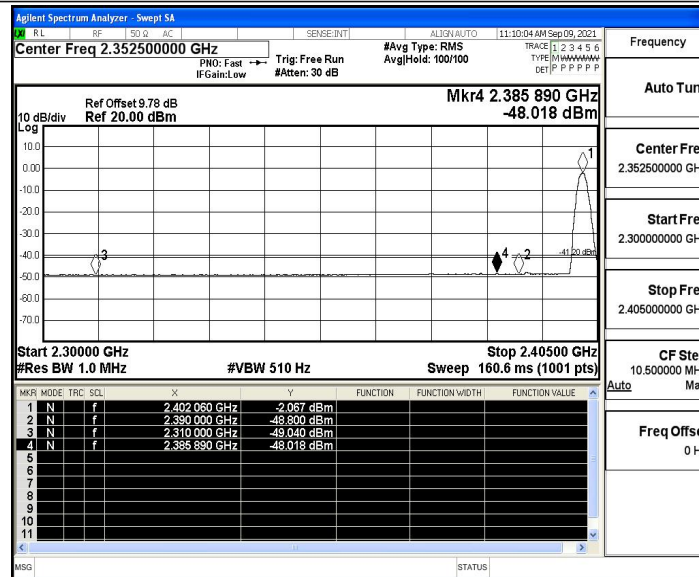
Note:

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.

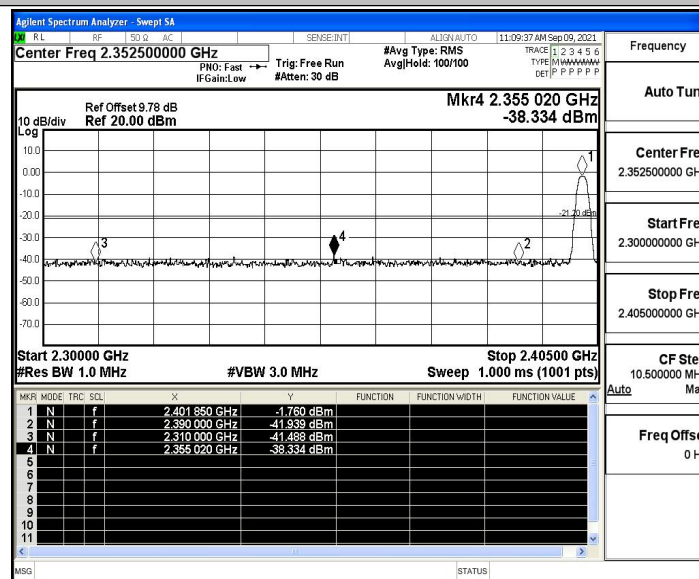


Test Graphs

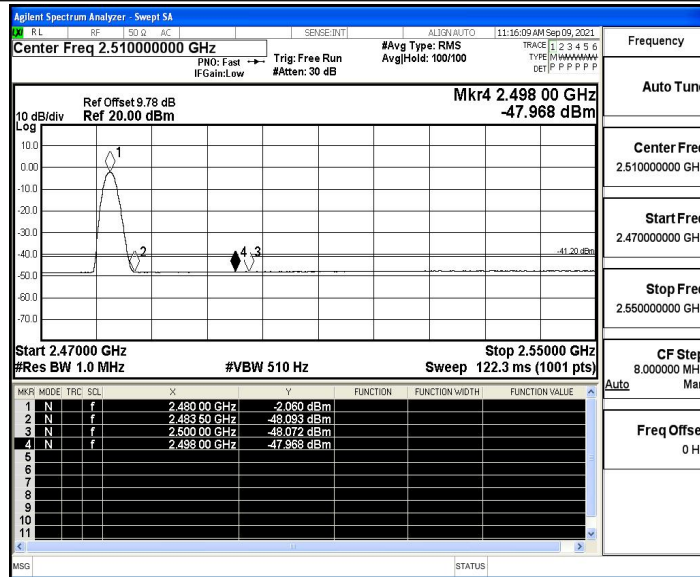
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak

