



Appendix B

RF Test Data for BLE (Conducted Measurement)

Product Name: HYBOOK_PLUS

Test Model: 14CB8S01

Environmental Conditions

Temperature:	22.6° C
Relative Humidity:	53.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Ling Zhu
Supervised by:	Li Huan

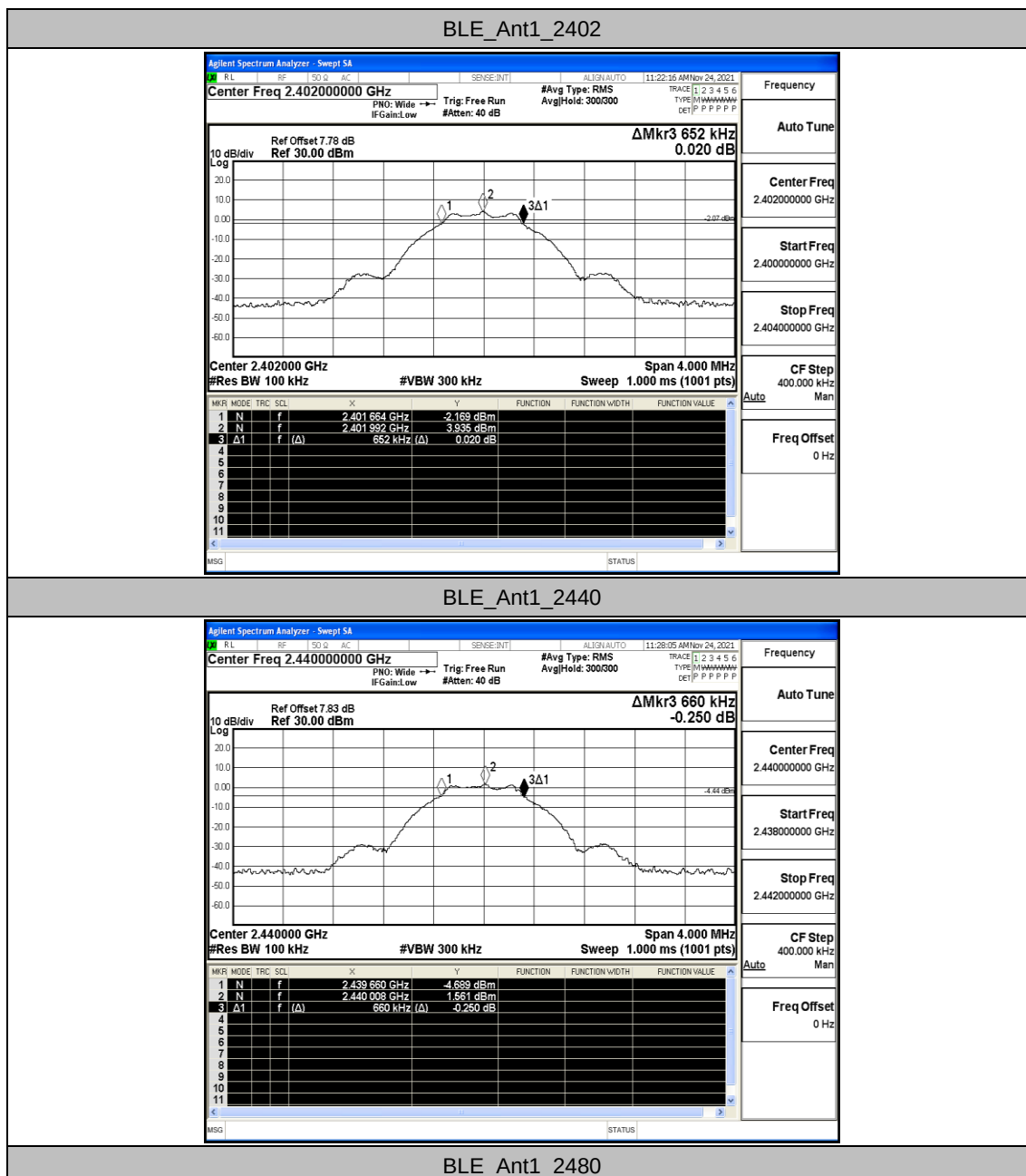


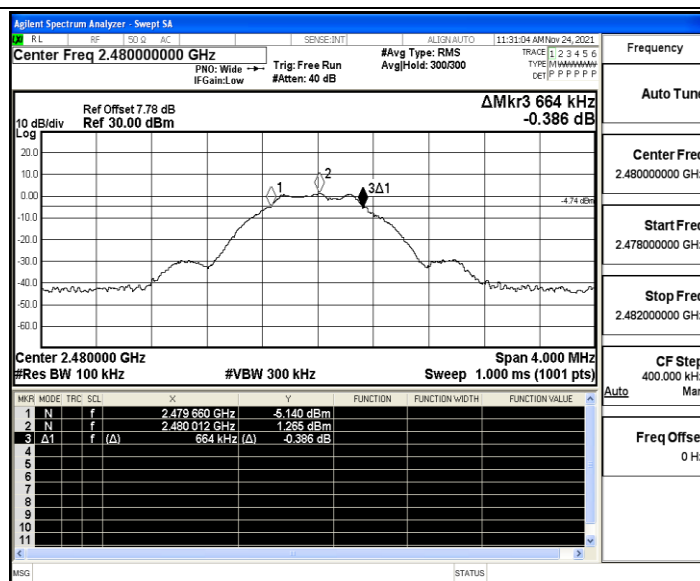
B.1 6dB Bandwidth

Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE	Ant1	2402	0.652	2401.664	2402.316	≥0.5	PASS
		2440	0.660	2439.660	2440.320	≥0.5	PASS
		2480	0.664	2479.660	2480.324	≥0.5	PASS

Test Graphs





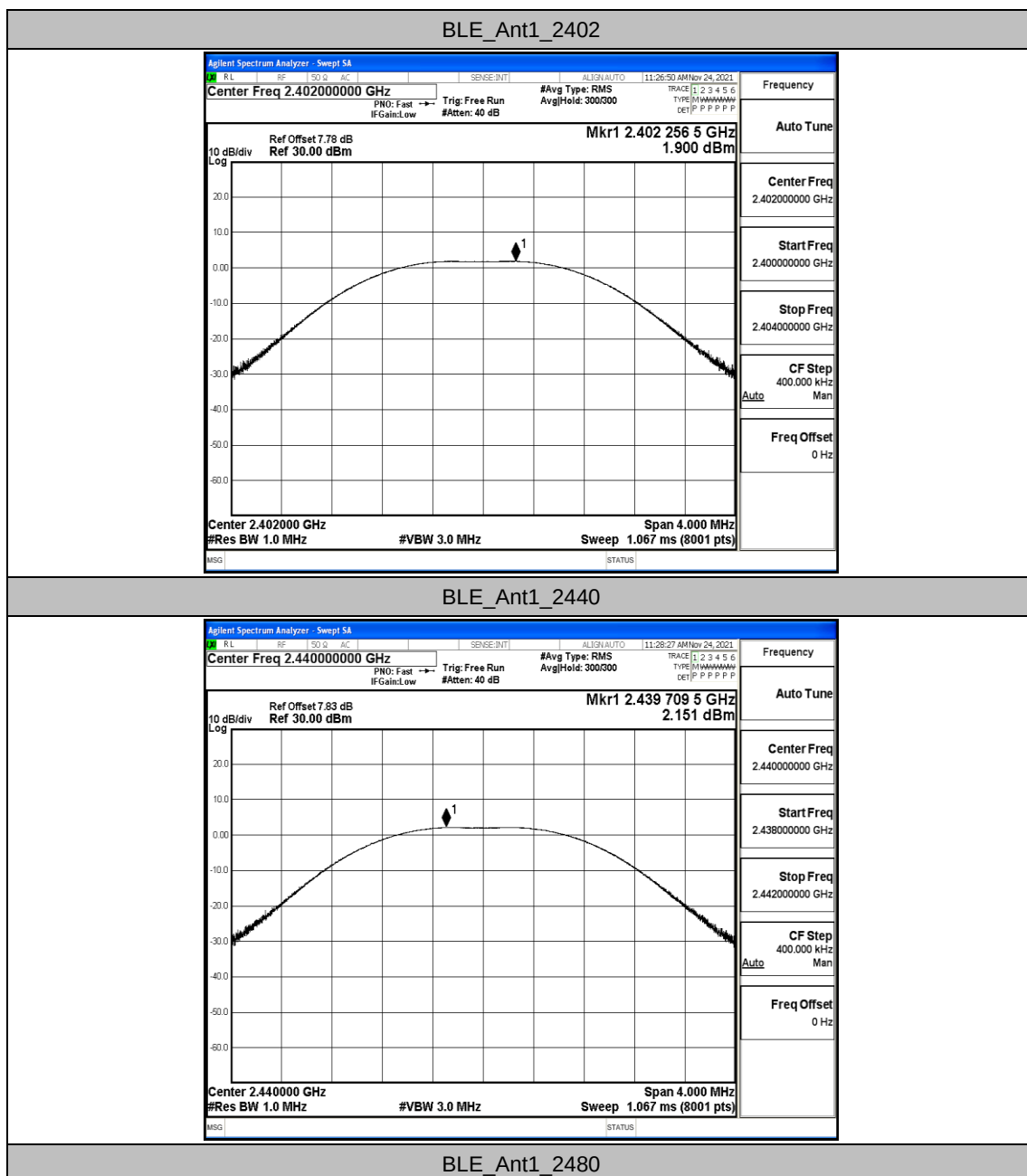


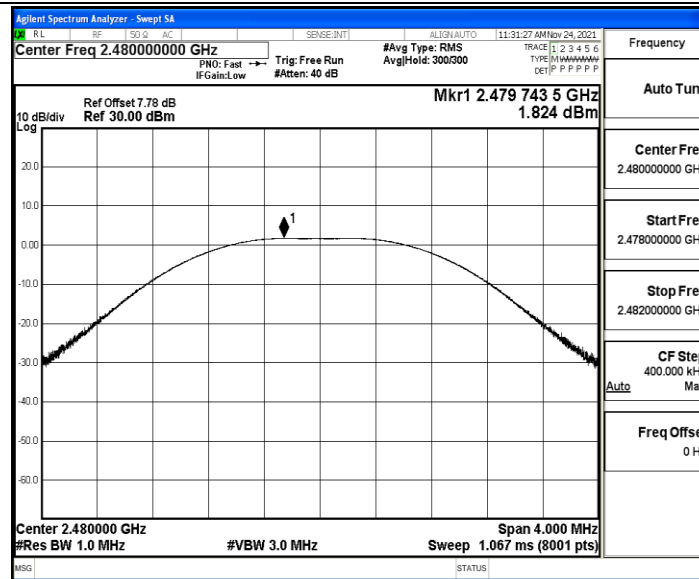
B.2 Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant1	2402	1.9	≤30	PASS
		2440	2.15	≤30	PASS
		2480	1.82	≤30	PASS

Test Graphs





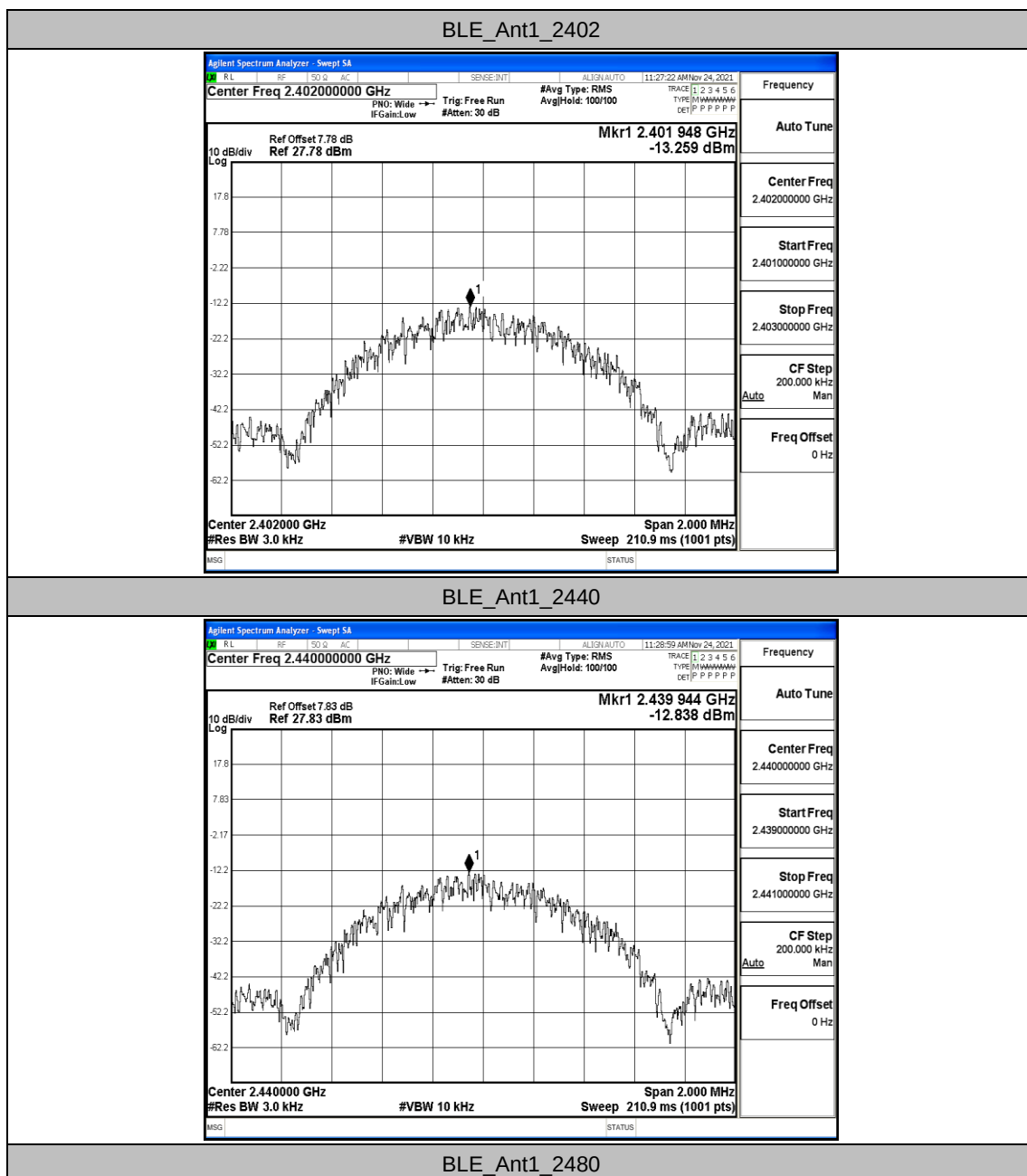


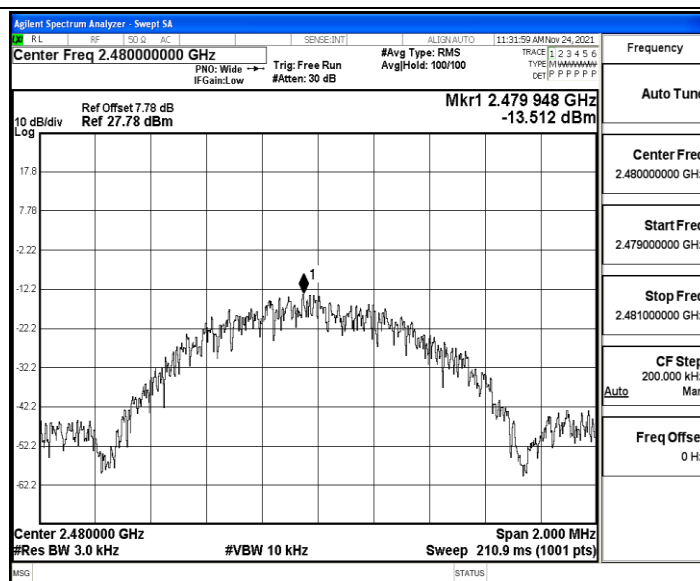
B.3 Maximum power spectral density

Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE	Ant1	2402	-13.26	≤8	PASS
		2440	-12.84	≤8	PASS
		2480	-13.51	≤8	PASS

Test Graphs





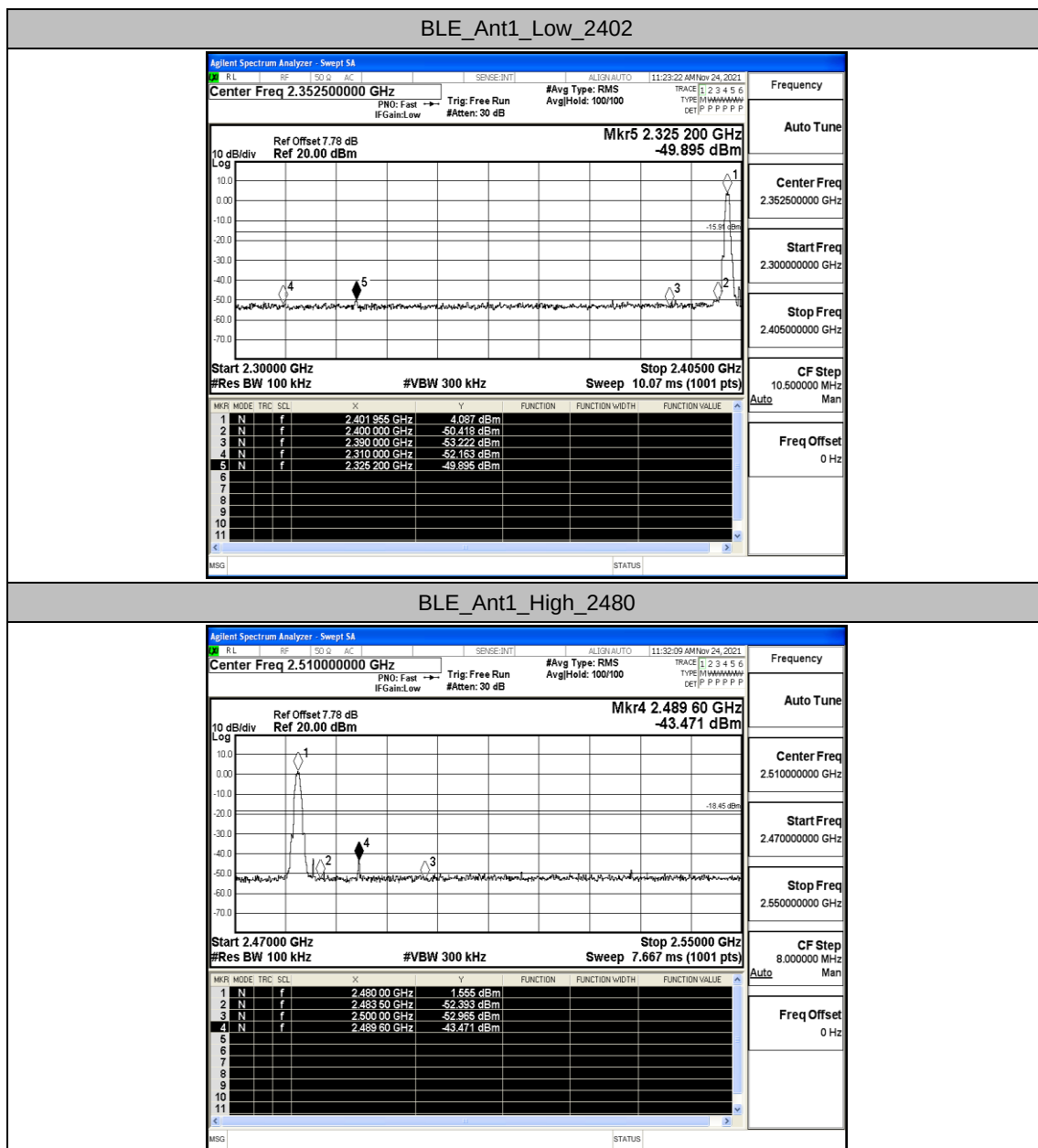


B.4 Band edge measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant1	Low	2402	4.09	-49.9	≤-15.91	PASS
		High	2480	1.56	-43.47	≤-18.45	PASS

Test Graphs





B.5 Conducted Spurious Emission

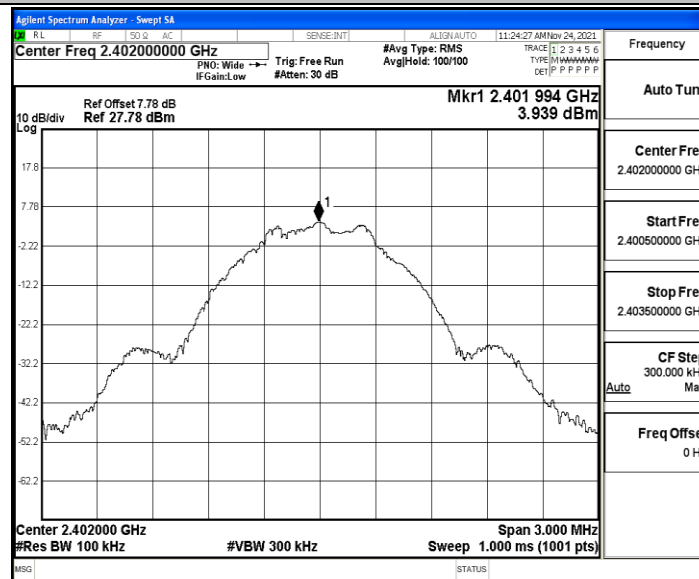
Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE	Ant1	2402	Reference	3.94	3.94	---	PASS
			30~1000	3.94	-59.9	≤-16.06	PASS
			1000~26500	3.94	-46.82	≤-16.06	PASS
		2440	Reference	1.89	1.89	---	PASS
			30~1000	1.89	-59.86	≤-18.11	PASS
			1000~26500	1.89	-47.32	≤-18.11	PASS
		2480	Reference	1.57	1.57	---	PASS
			30~1000	1.57	-61.07	≤-18.43	PASS
			1000~26500	1.57	-47.45	≤-18.43	PASS

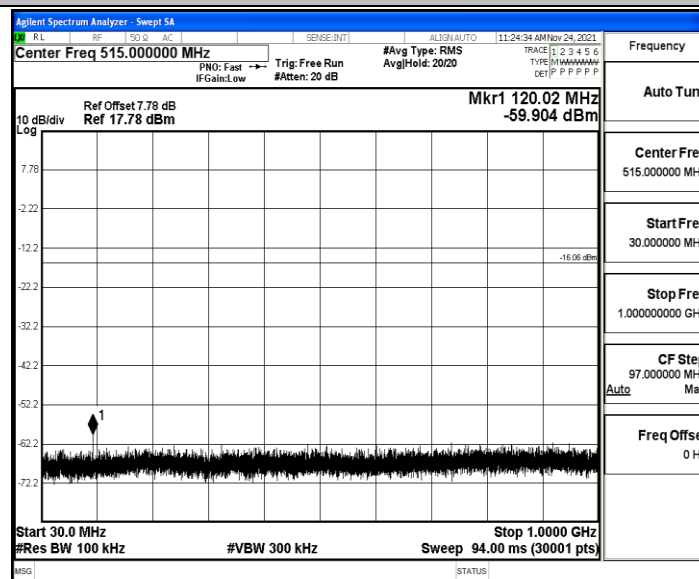


Test Graphs

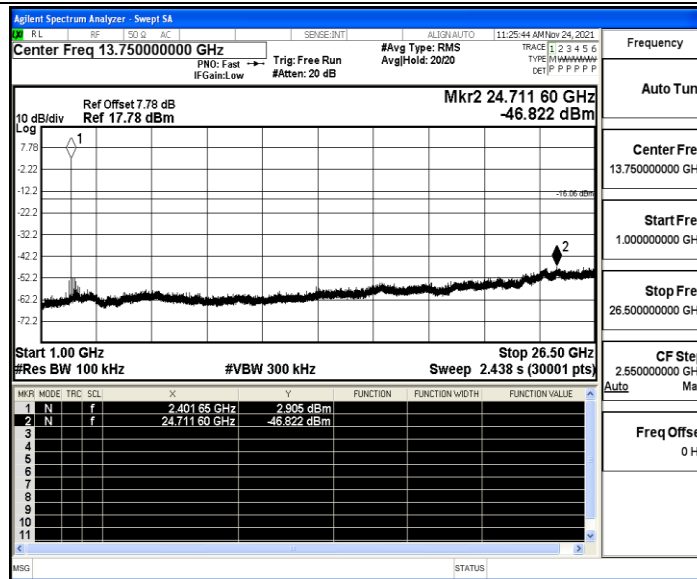
BLE_Ant1_2402_0~Reference



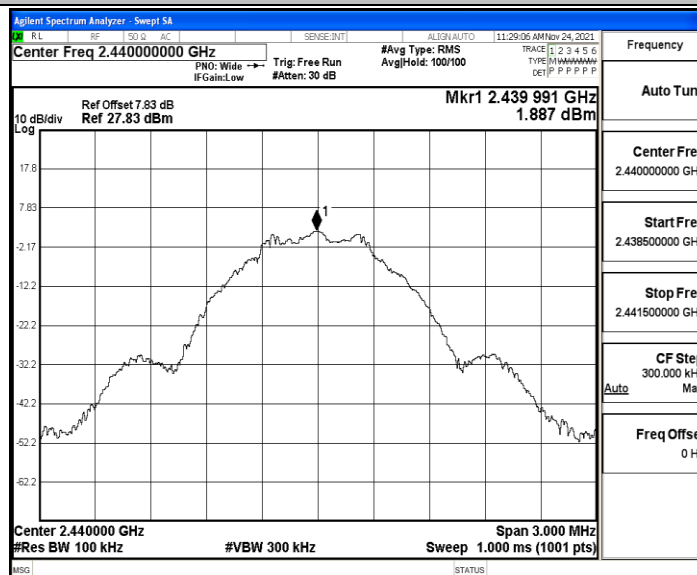
BLE_Ant1_2402_30~1000



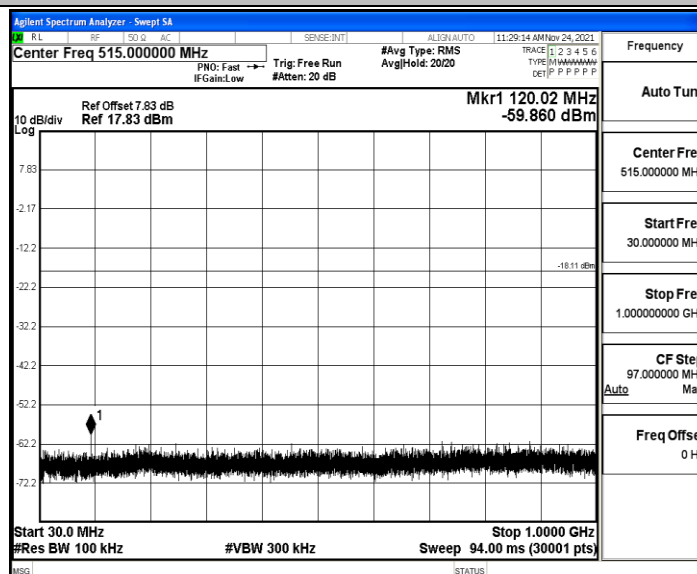
BLE_Ant1_2402_1000~26500



BLE_Ant1_2440_0~Reference

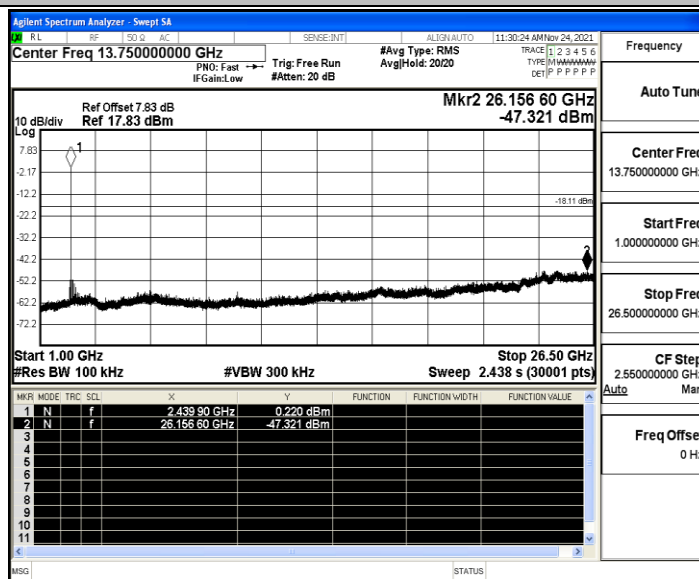


BLE_Ant1_2440_30~1000

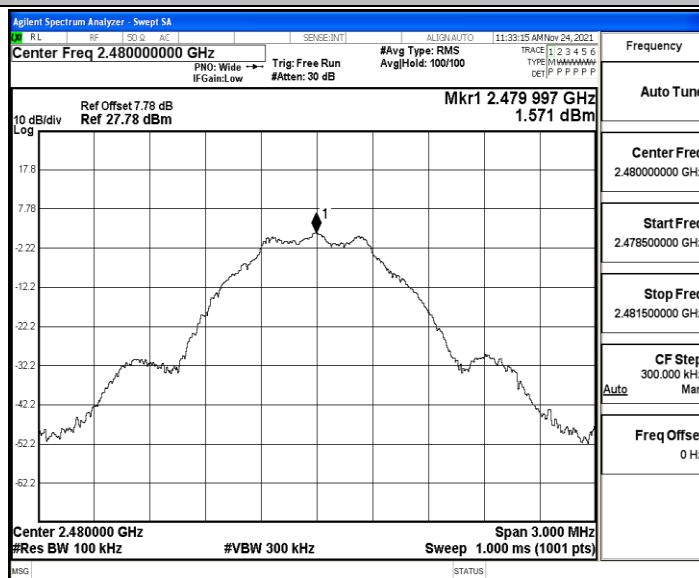




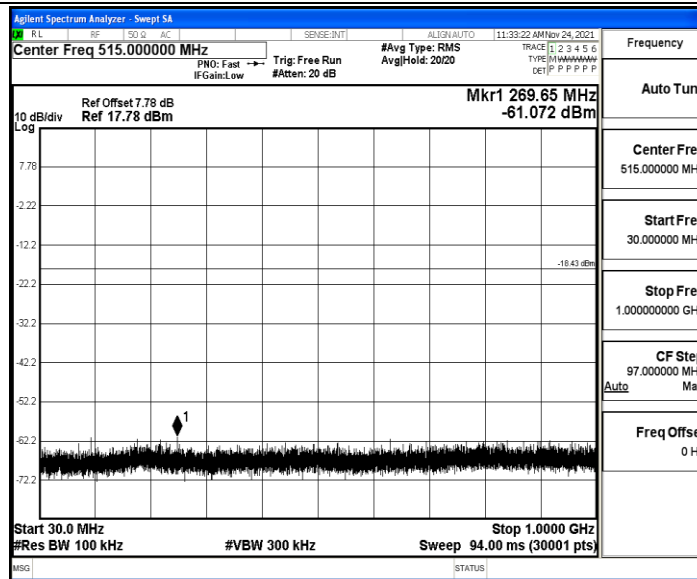
BLE_Ant1_2440_1000~26500



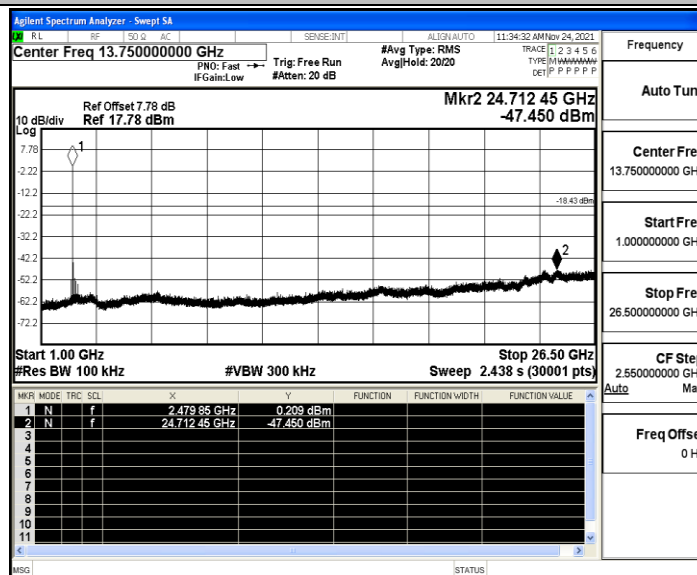
BLE_Ant1_2480_0~Reference



BLE_Ant1_2480_30~1000



BLE_Ant1_2480_1000~26500



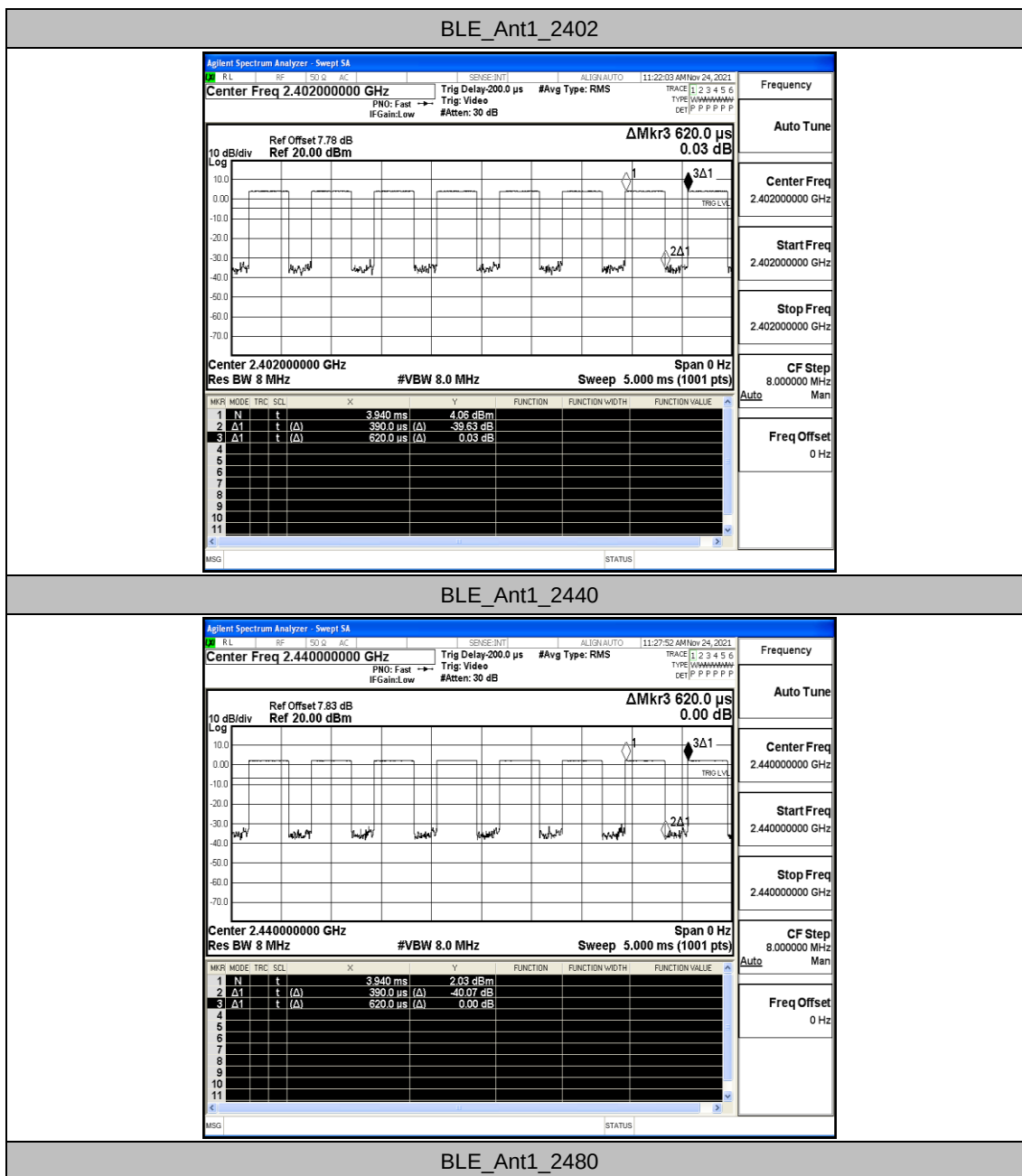


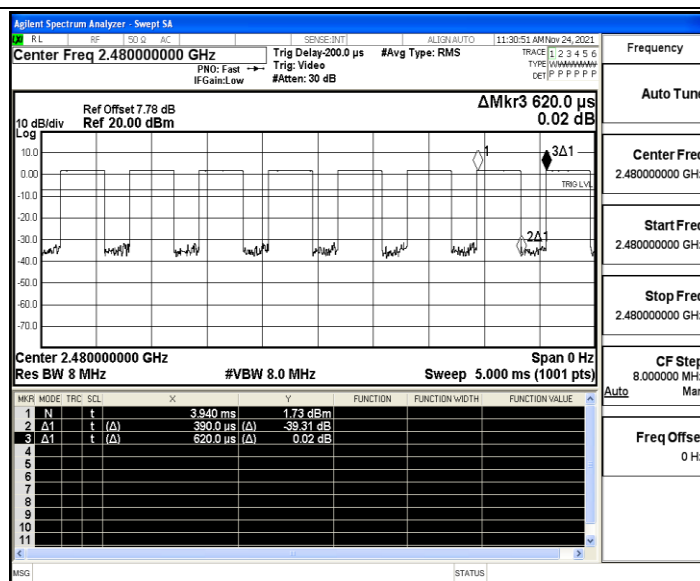
B.6 Duty Cycle

Test Result

TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE	Ant1	2402	0.39	0.62	0.6290	62.90	2.01	---	PASS
		2440	0.39	0.62	0.6290	62.90	2.01	---	PASS
		2480	0.39	0.62	0.6290	62.90	2.01	---	PASS

Test Graphs







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	Ant1	Low	2402	AV	2310.000	-48.17	≤-41.20	47.03	≤54	PASS
				AV	2325.410	-46.17	≤-41.20	49.03	≤54	PASS
				AV	2390.000	-47.72	≤-41.20	47.48	≤54	PASS
				Peak	2310.000	-42.13	≤-21.20	53.07	≤74	PASS
				Peak	2366.255	-38.07	≤-21.20	57.13	≤74	PASS
				Peak	2390.000	-40.37	≤-21.20	54.83	≤74	PASS
		High	2480	AV	2483.500	-46.92	≤-41.20	48.28	≤54	PASS
				AV	2489.680	-44.59	≤-41.20	50.61	≤54	PASS
				AV	2500.000	-47.48	≤-41.20	47.72	≤54	PASS
				Peak	2483.500	-41.36	≤-21.20	53.84	≤74	PASS
				Peak	2489.280	-36.65	≤-21.20	58.55	≤74	PASS
				Peak	2500.000	-40.96	≤-21.20	54.24	≤74	PASS

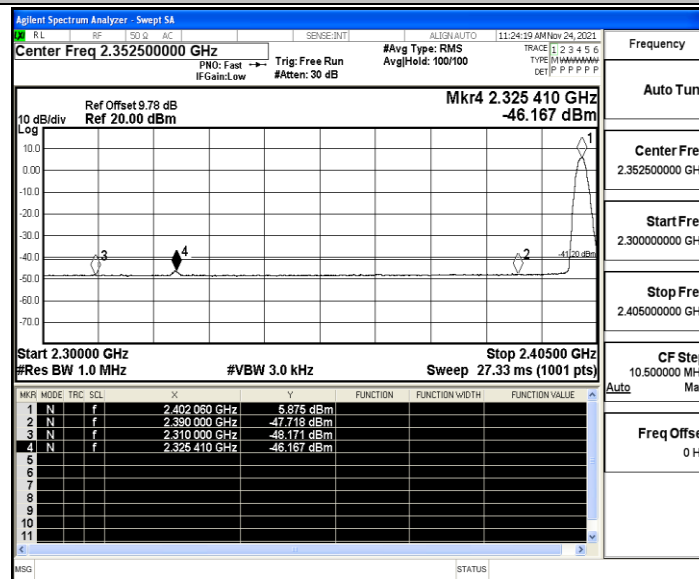
Note:

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.

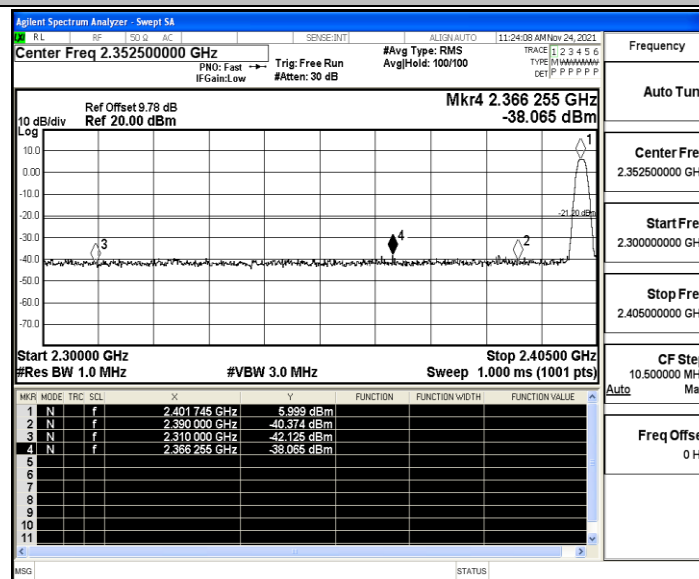


Test Graphs

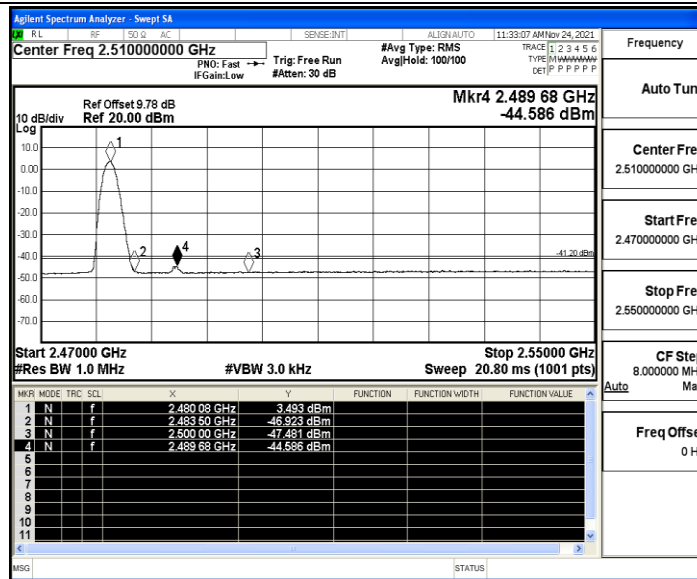
BLE_Ant1_Low_2402_AV



BLE_Ant1_Low_2402_Peak



BLE_Ant1_High_2480_AV



BLE_Ant1_High_2480_Peak

