

FCC Appendix RF Test Data for BLE

FCC ID : **HQXTT-05VCI**

Company : **Sysgration Ltd.**

EUT : **Vehicle Communication Interface(VCI)**

Model Number : **TT-05 VCI**

Report No. : **CTA26060301401**

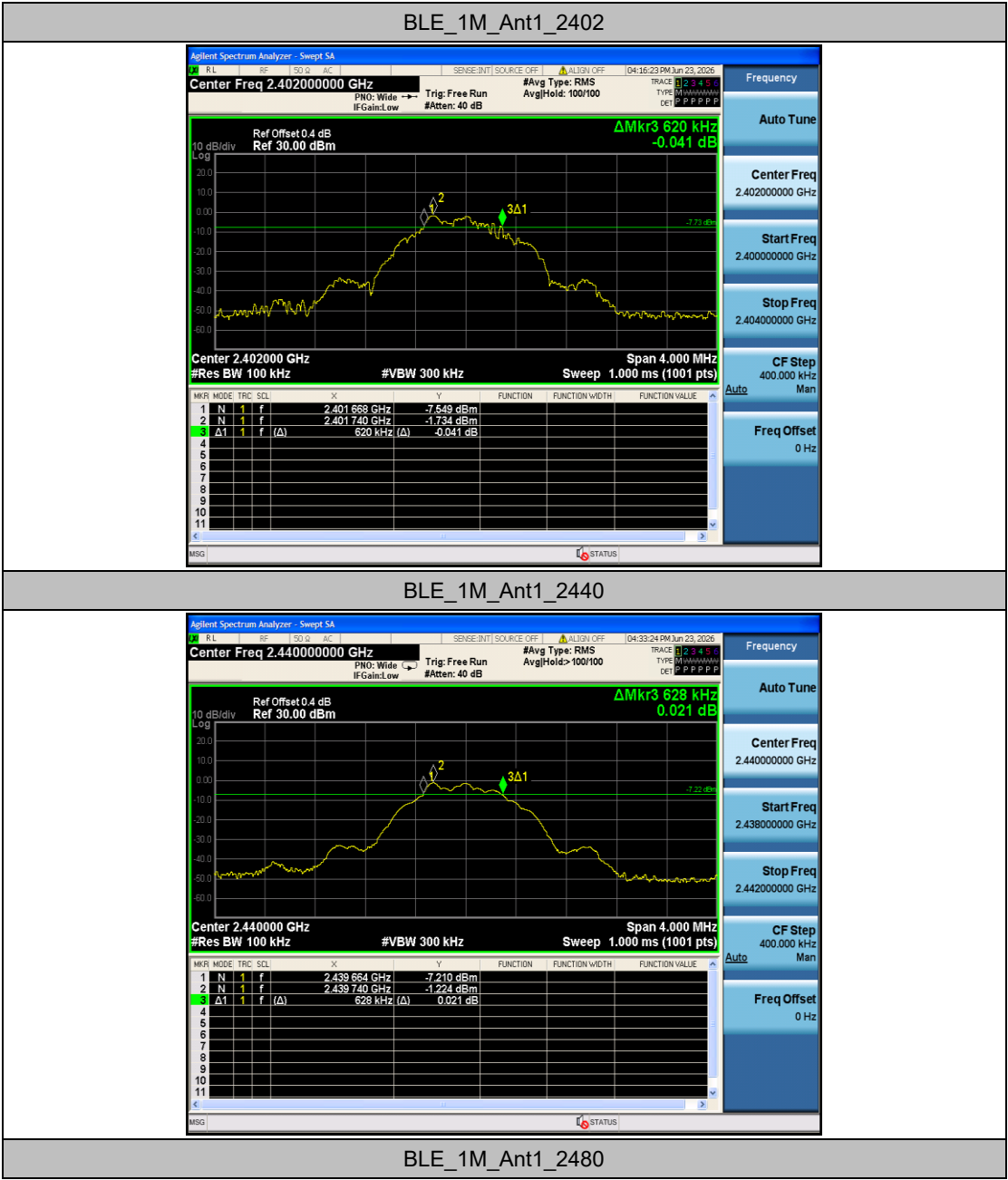
Reviewed By : **Eric Wang**

Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.620	2401.668	2402.288	0.5	PASS
		2440	0.628	2439.664	2440.292	0.5	PASS
		2480	0.616	2479.668	2480.284	0.5	PASS

Test Graphs



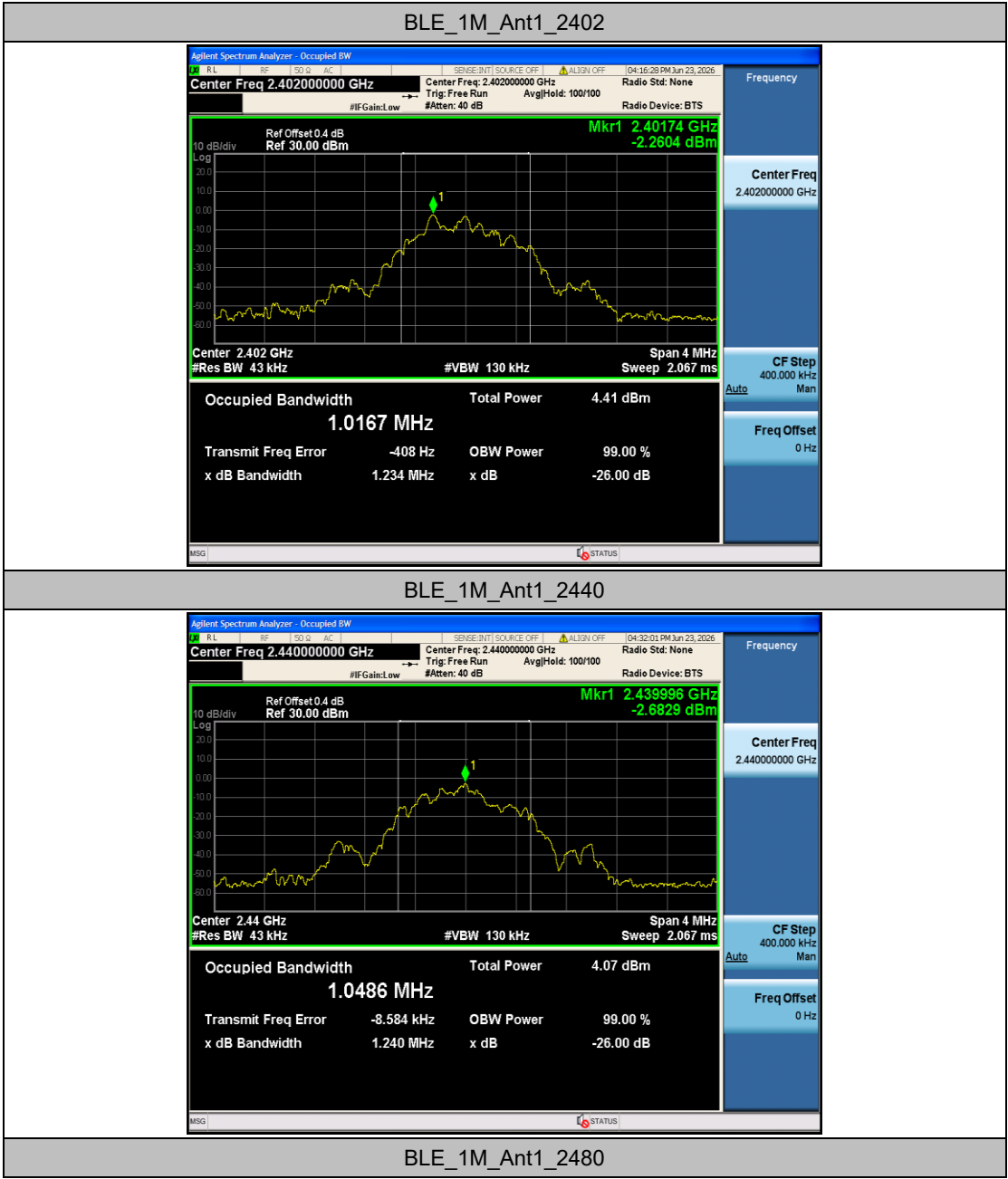


Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0167	2401.4912	2402.5079	---	---
		2440	1.0486	2439.4671	2440.5157	---	---
		2480	1.0122	2479.4845	2480.4967	---	---

Test Graphs





Appendix C: Maximum conducted output power

Test Result Peak

TestMode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-1.61	≤30	PASS
		2440	-1.14	≤30	PASS
		2480	-0.78	≤30	PASS

Appendix D: Maximum power spectral density

Test Result

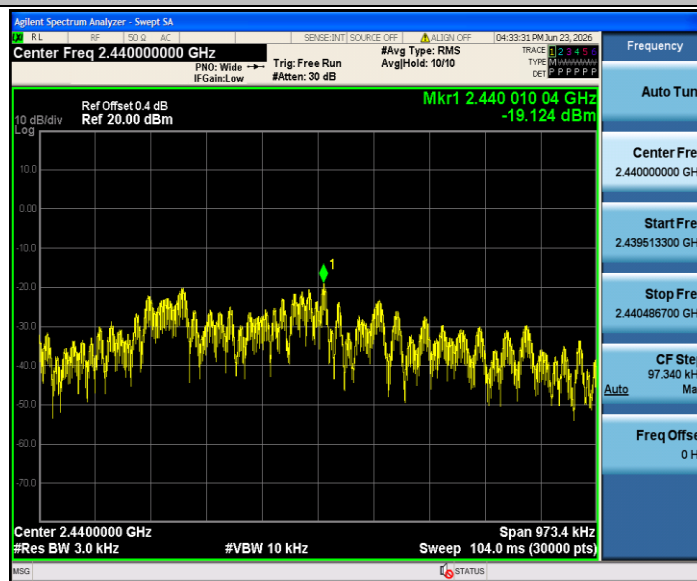
TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-19.66	≤8.00	PASS
		2440	-19.12	≤8.00	PASS
		2480	-18.73	≤8.00	PASS

Test Graphs

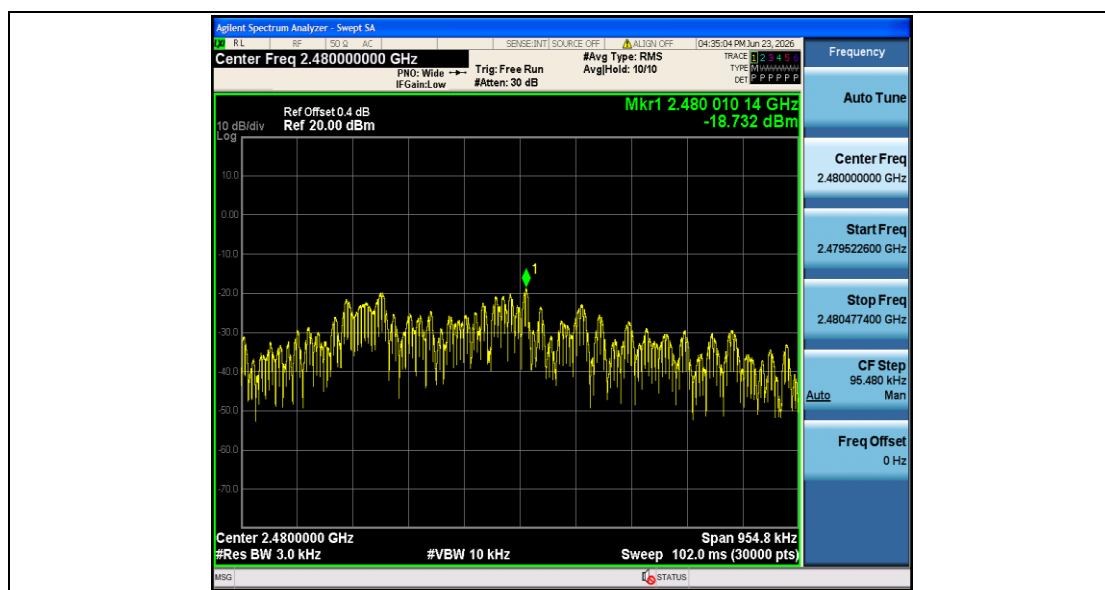
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



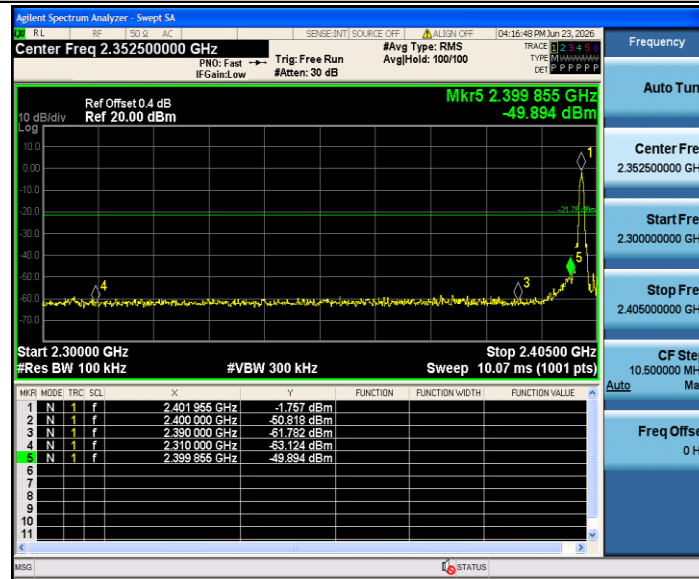
Appendix E: Band edge measurements

Test Result

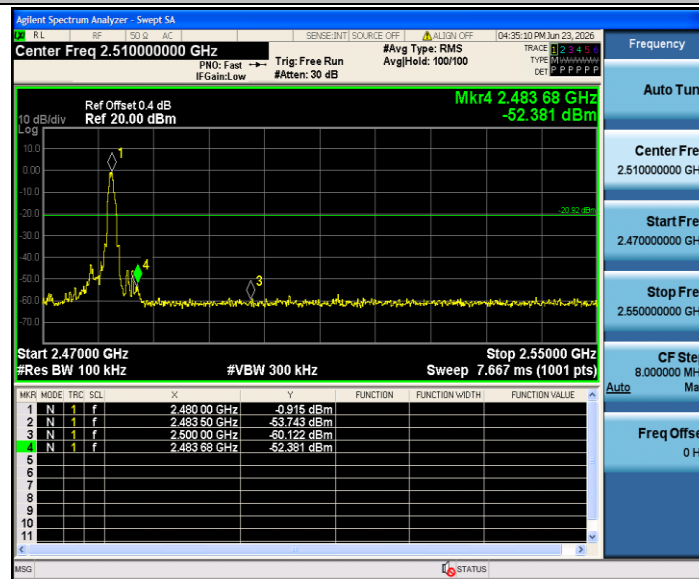
TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-1.76	-49.89	≤ -21.76	PASS
		High	2480	-0.92	-52.38	≤ -20.92	PASS

Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480

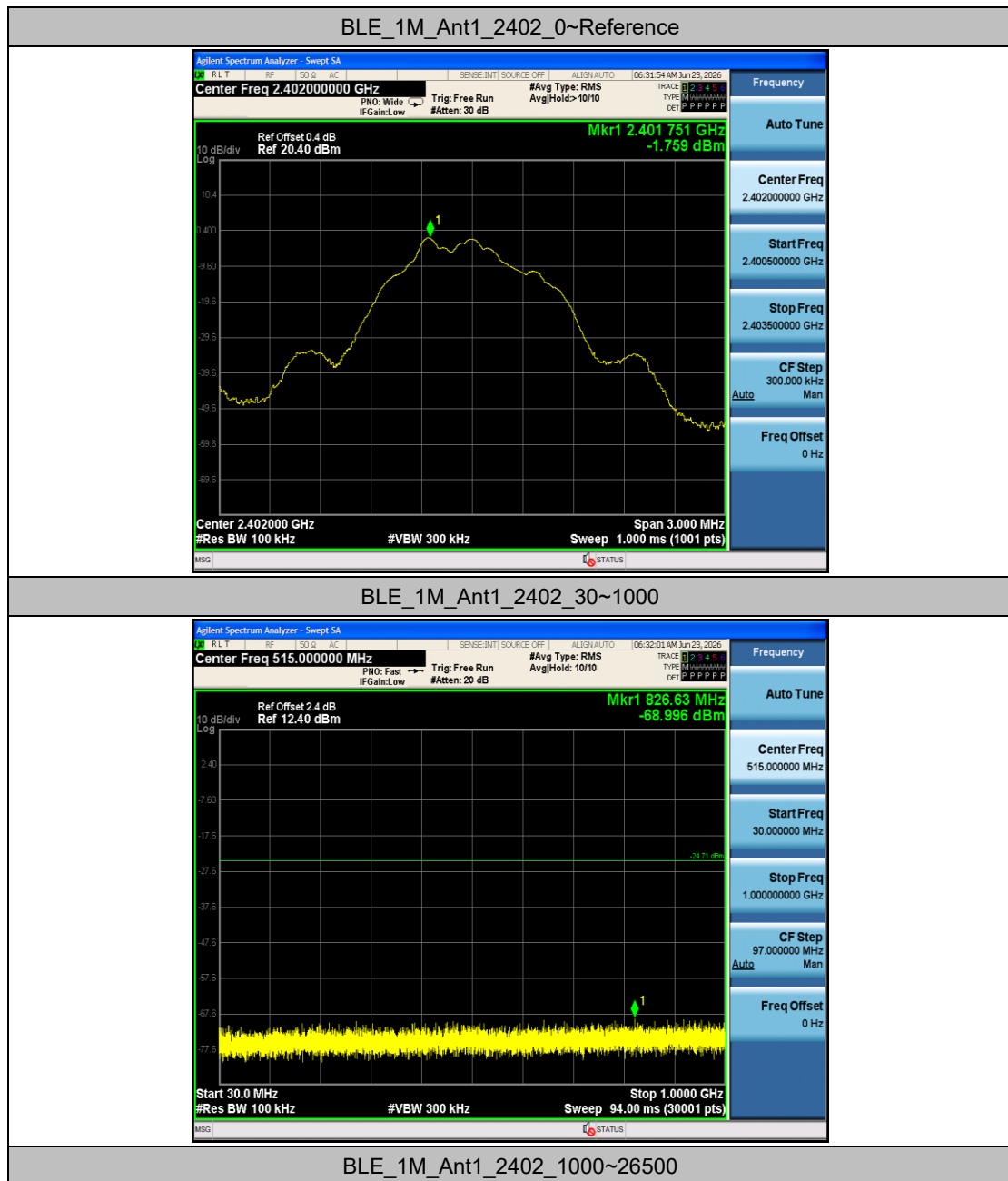


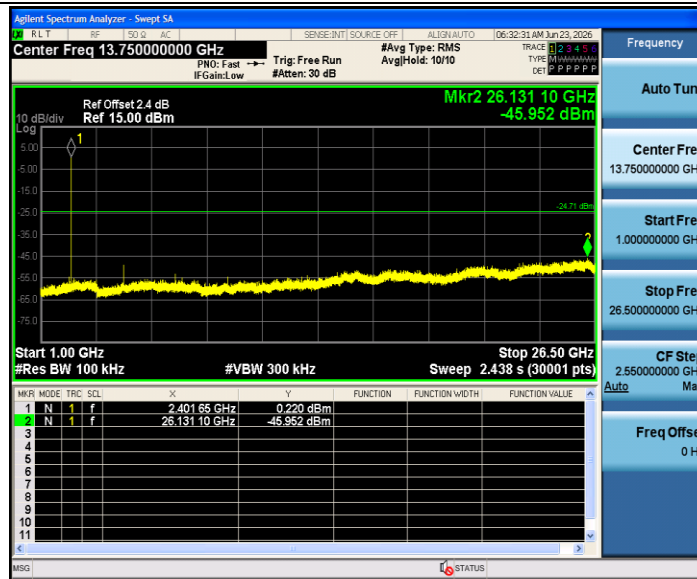
Appendix F: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-4.71	-4.71	---	PASS
			30~1000	-4.71	-69	≤-24.71	PASS
			1000~26500	-4.71	-45.95	≤-24.71	PASS
		2440	Reference	-6.09	-6.09	---	PASS
			30~1000	-6.09	-68.81	≤-26.09	PASS
			1000~26500	-6.09	-42.5	≤-26.09	PASS
		2480	Reference	-2.42	-2.42	---	PASS
			30~1000	-2.42	-42.8	≤-22.42	PASS
			1000~26500	-2.42	-40.27	≤-22.42	PASS

Test Graphs

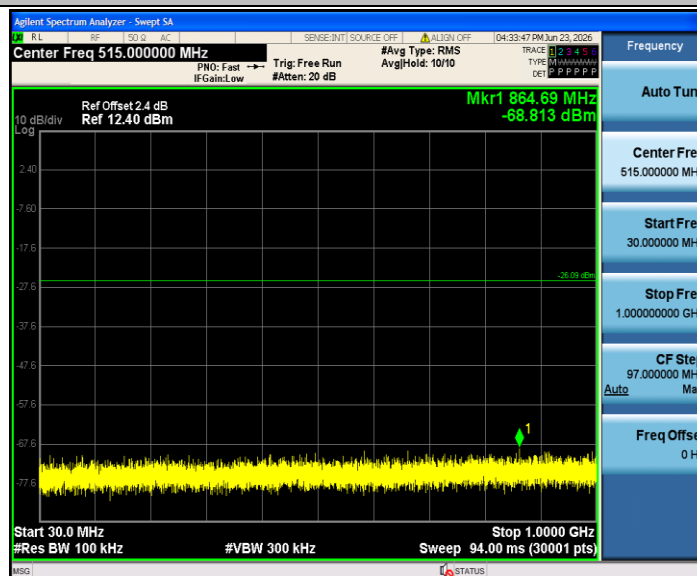




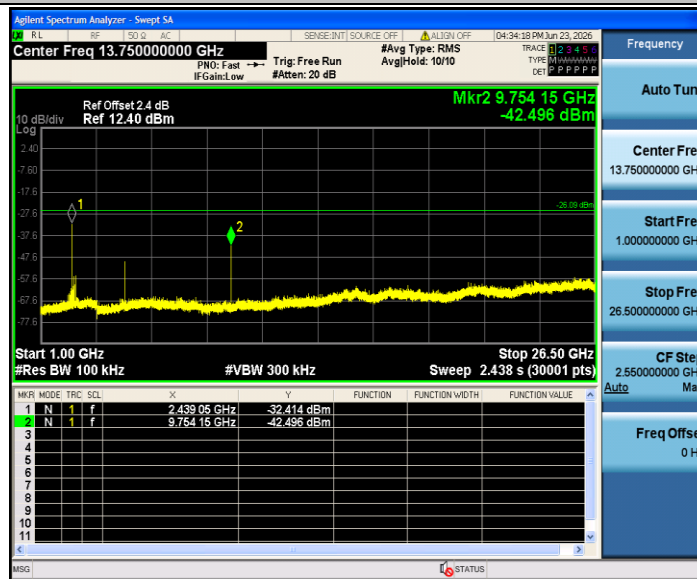
BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000



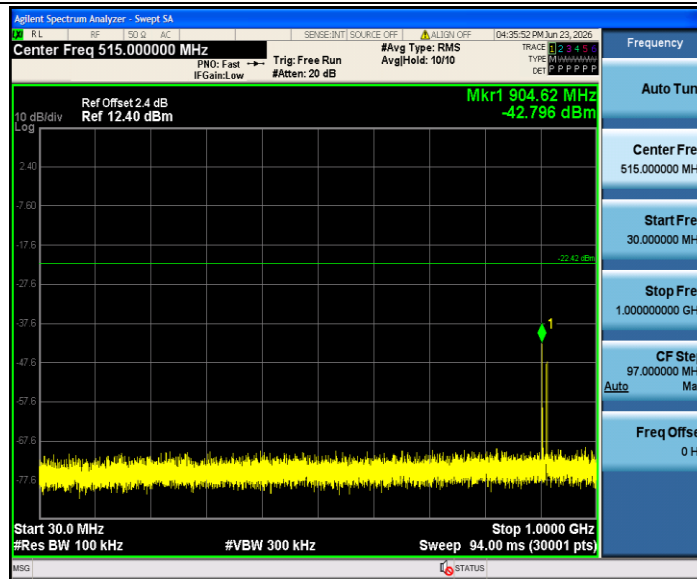
BLE_1M_Ant1_2440_1000~26500



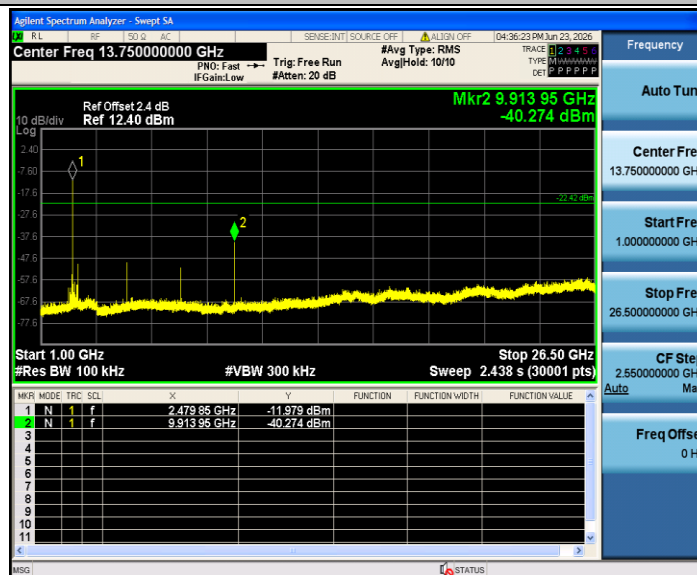
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500

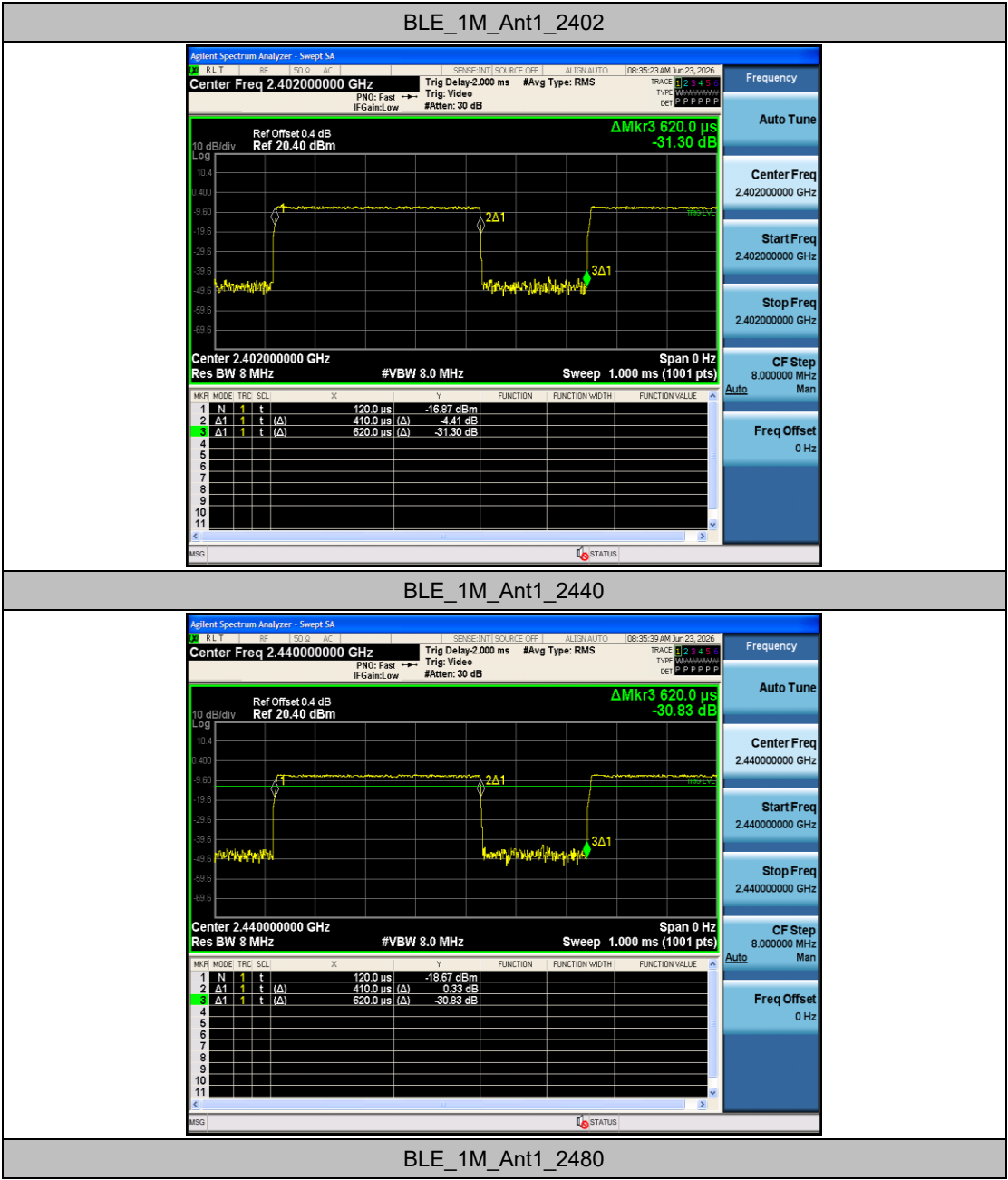


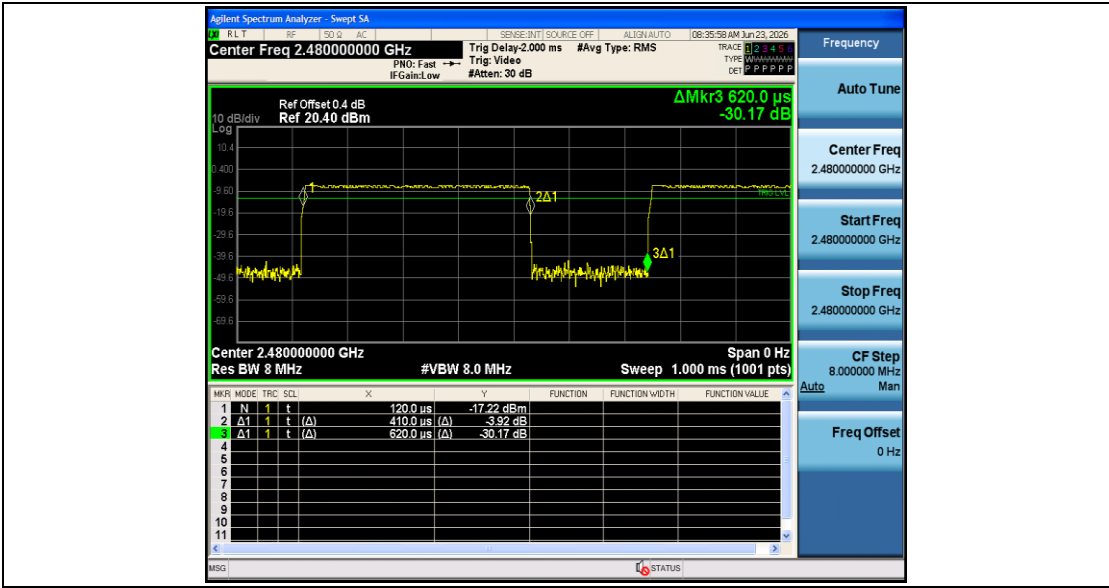
Appendix G: Duty Cycle

Test Result

TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	0.41	0.62	0.6613	66.13	1.80	---	---
		2440	0.41	0.62	0.6613	66.13	1.80	---	---
		2480	0.41	0.62	0.6613	66.13	1.80	---	---

Test Graphs





Appendix H: Emissions in Restricted Bands

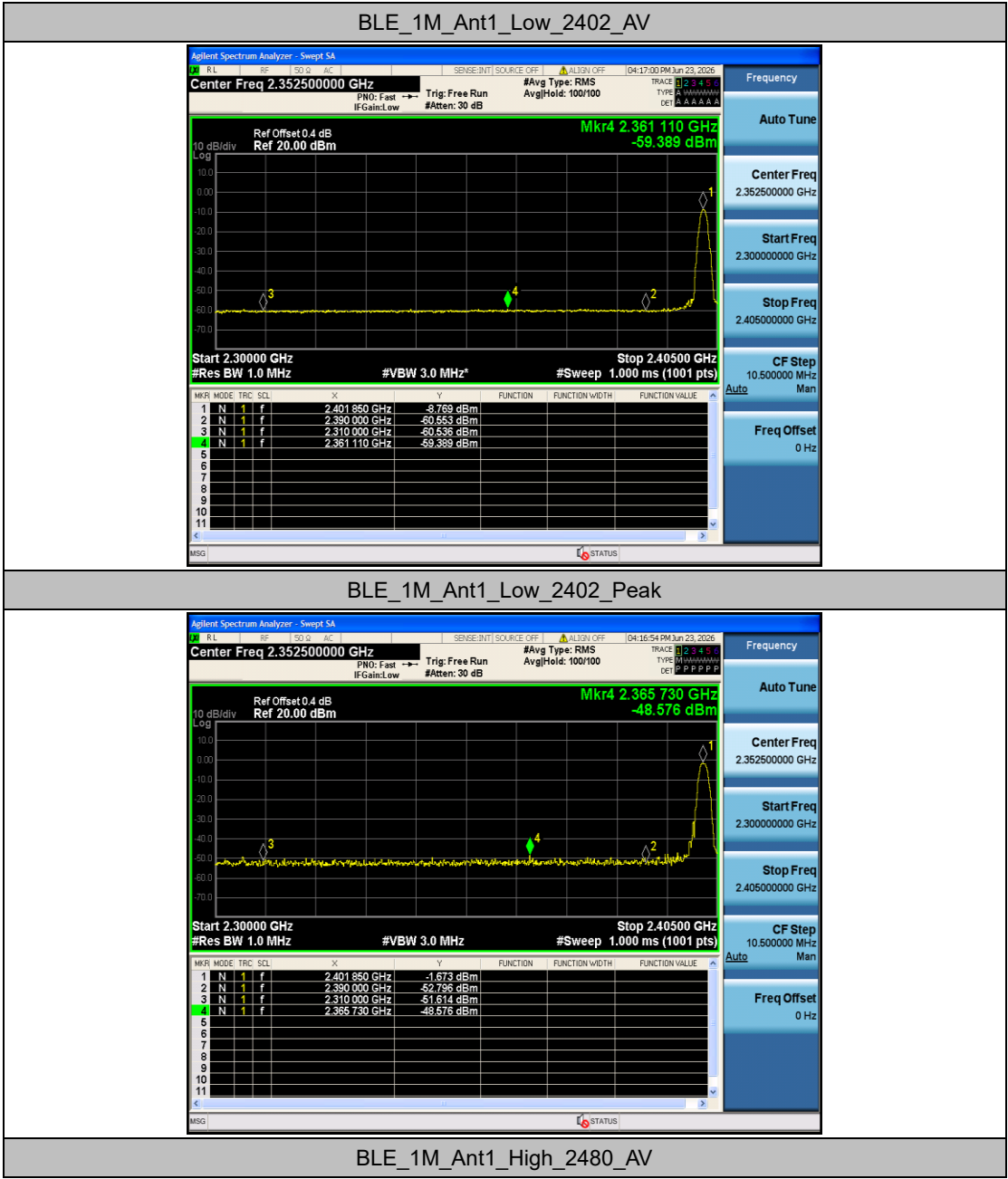
Test Result

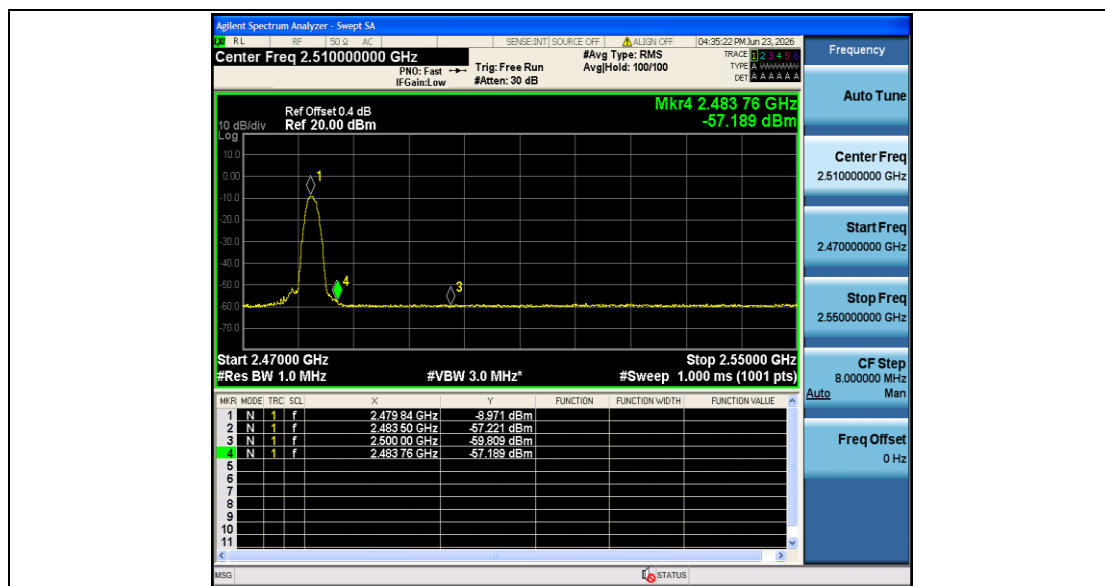
TestMod e	Antenn a	ChNam e	Freq(M Hz)	Detecto r	Freq [MHz]	Result [dBm]	Gain [dB]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdic t
BLE_1M	Ant1	Low	2402	AV	2310.000	-60.54	2.00	1.80	38.46	≤54	PASS
				AV	2361.110	-59.39	2.00	1.80	39.61	≤54	PASS
				AV	2390.000	-60.55	2.00	1.80	38.45	≤54	PASS
				Peak	2310.000	-51.61	2.00	0.00	45.59	≤74	PASS
				Peak	2365.730	-48.58	2.00	0.00	48.62	≤74	PASS
				Peak	2390.000	-52.8	2.00	0.00	44.4	≤74	PASS
		High	2480	AV	2483.500	-57.22	2.00	1.80	41.78	≤54	PASS
				AV	2483.760	-57.19	2.00	1.80	41.81	≤54	PASS
				AV	2500.000	-59.81	2.00	1.80	39.19	≤54	PASS
				Peak	2483.500	-46.57	2.00	0.00	50.63	≤74	PASS
				Peak	2483.680	-44	2.00	0.00	53.2	≤74	PASS
				Peak	2500.000	-51.13	2.00	0.00	46.07	≤74	PASS

Note:

1. 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_High_2480_Peak

