

RF Test Data for BT(BLE) (Conducted Measurement)**Product Name: 4K Dongle****Trade Mark: MSTICK****Test Model: MG-S02L****FCC ID: 2AWC3-MG-S02L****Environmental Conditions**

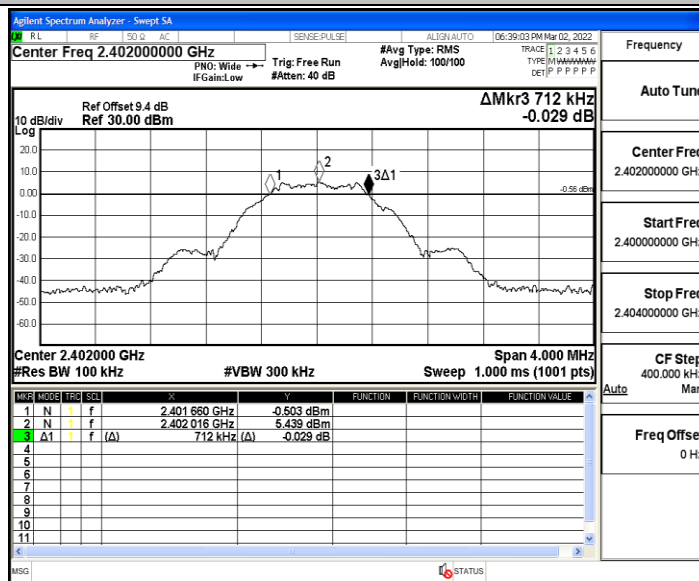
Temperature:	25.5°C
Relative Humidity:	55%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

Appendix A: DTS Bandwidth**Test Result**

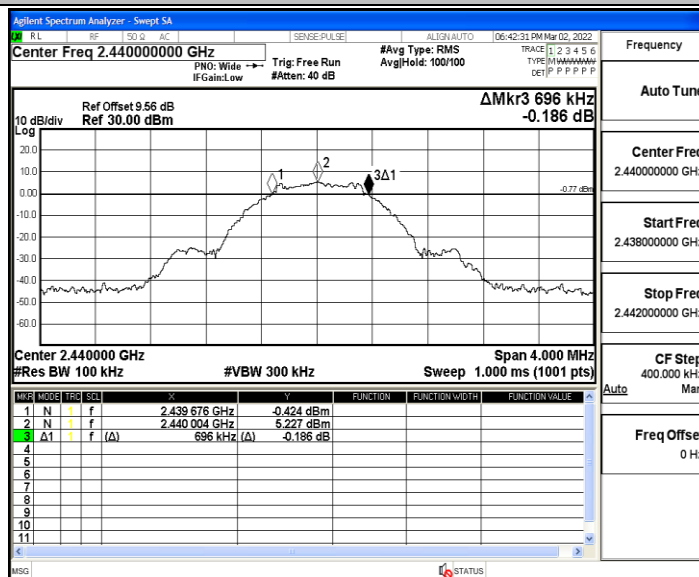
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.712	2401.660	2402.372	0.5	PASS
		2440	0.696	2439.676	2440.372	0.5	PASS
		2480	0.720	2479.644	2480.364	0.5	PASS

Test Graphs

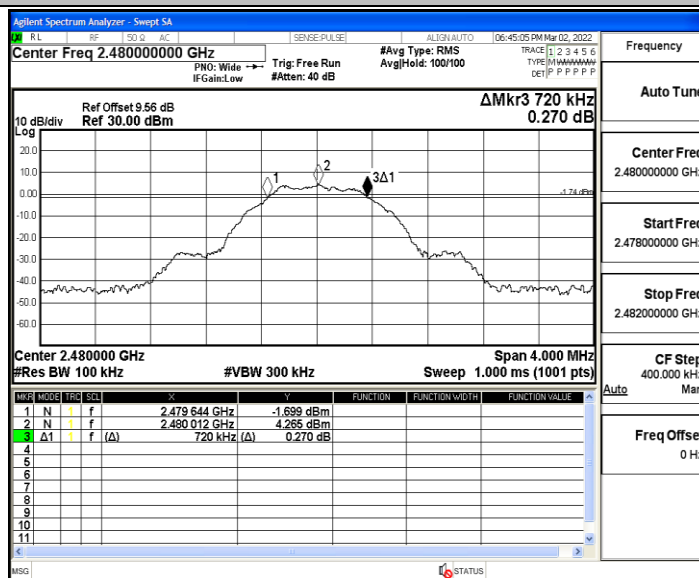
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



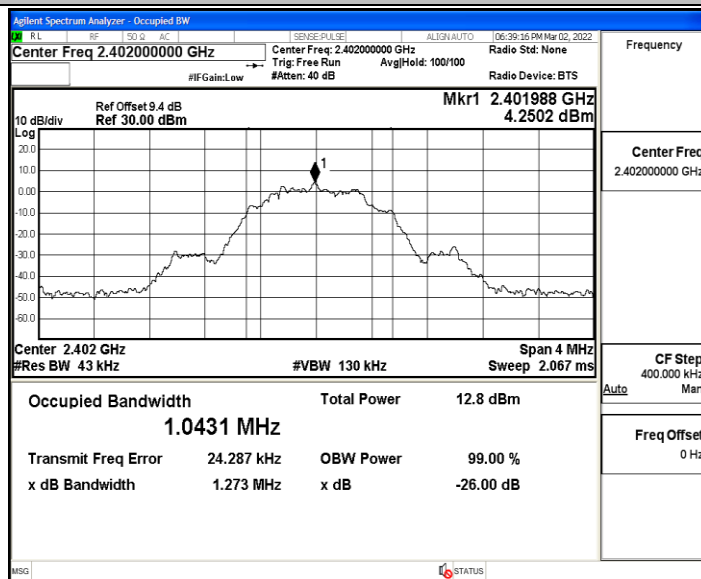
Appendix B: Occupied Channel Bandwidth

Test Result

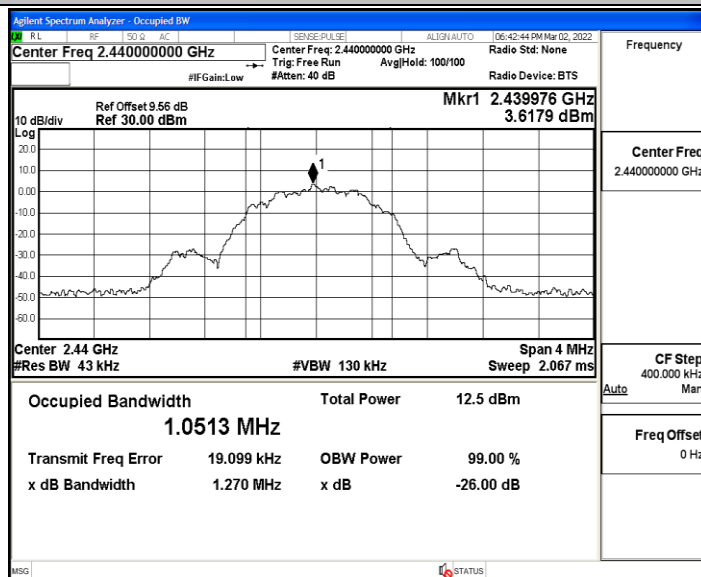
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0431	2401.503	2402.546	---	PASS
		2440	1.0513	2439.493	2440.545	---	PASS
		2480	1.0519	2479.497	2480.548	---	PASS

Test Graphs

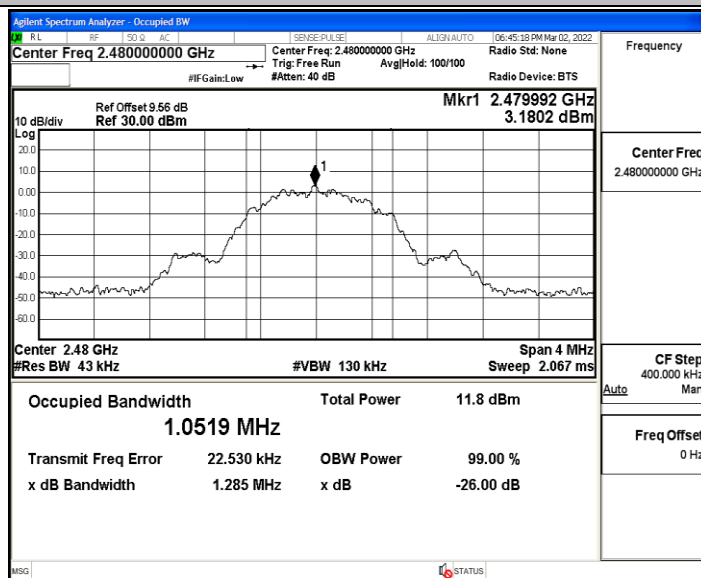
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



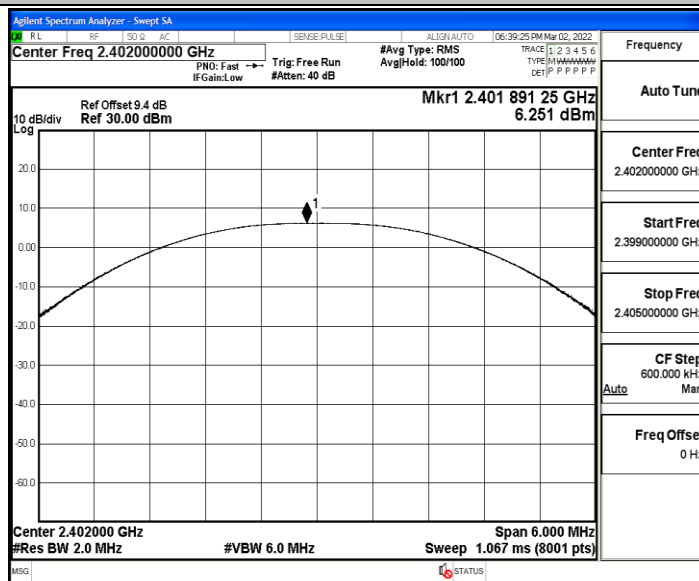
Appendix C: Maximum conducted output power

Test Result

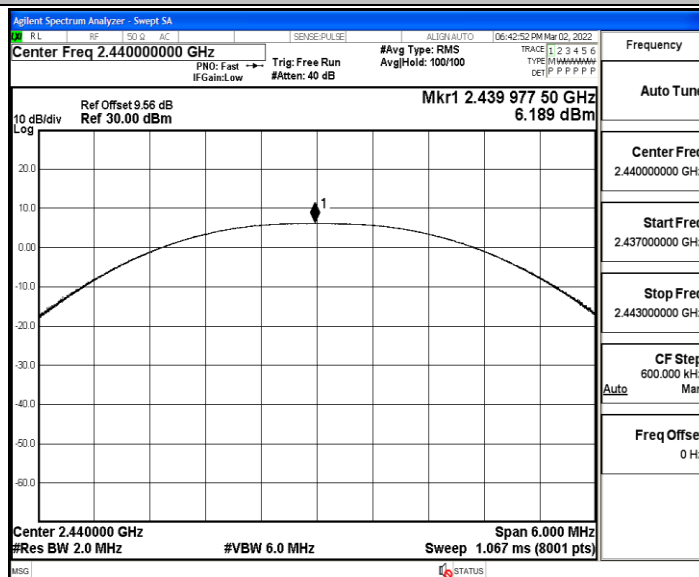
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	6.25	≤30	PASS
		2440	6.19	≤30	PASS
		2480	5.22	≤30	PASS

Test Graphs

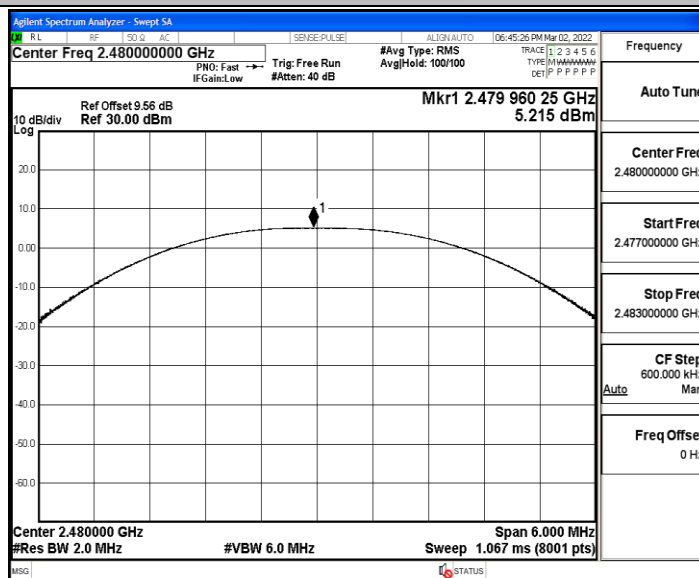
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



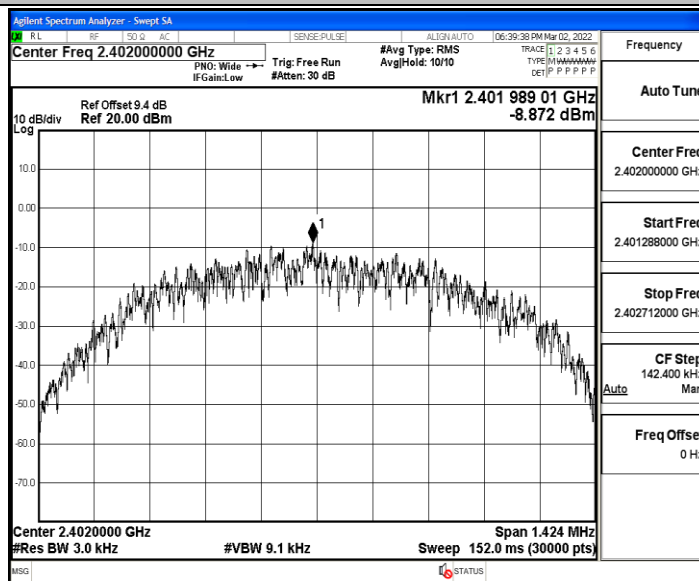
Appendix D: Maximum power spectral density

Test Result

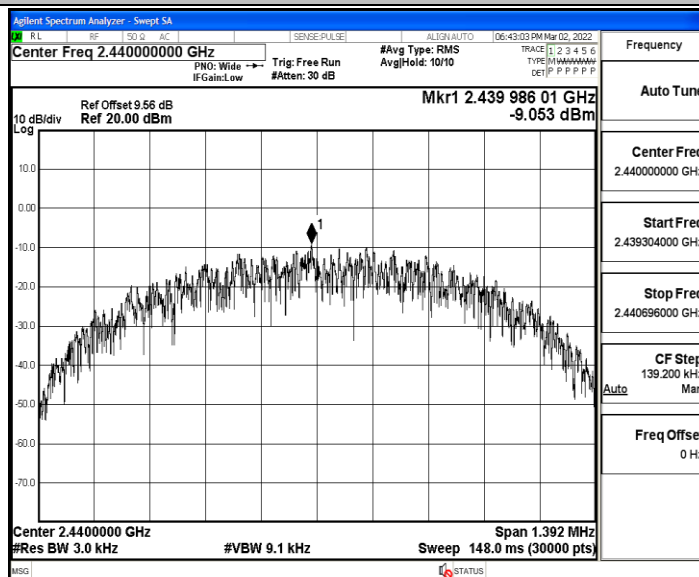
TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-8.87	≤8	PASS
		2440	-9.05	≤8	PASS
		2480	-9.9	≤8	PASS

Test Graphs

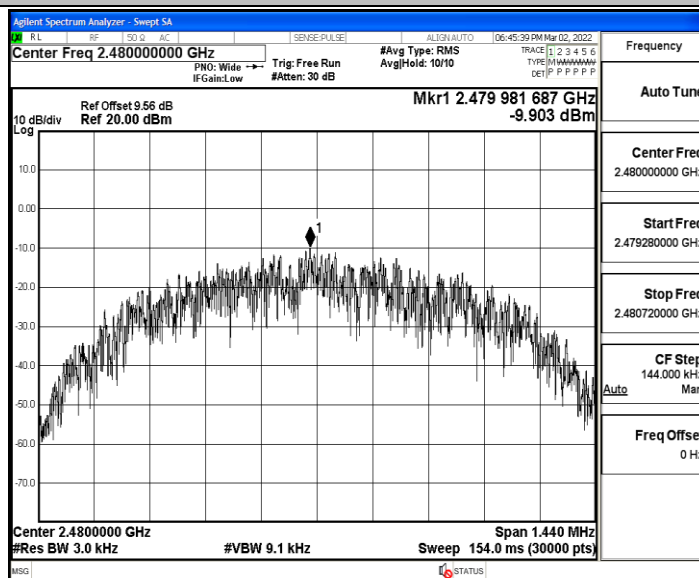
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



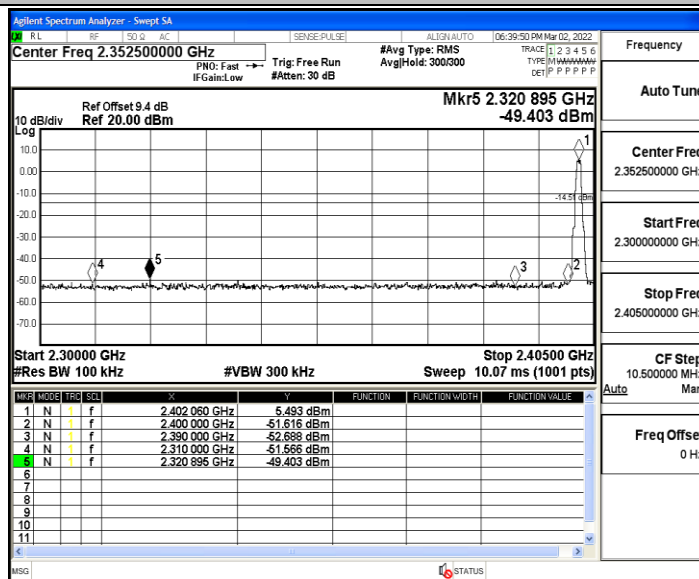
Appendix E: Band edge measurements

Test Result

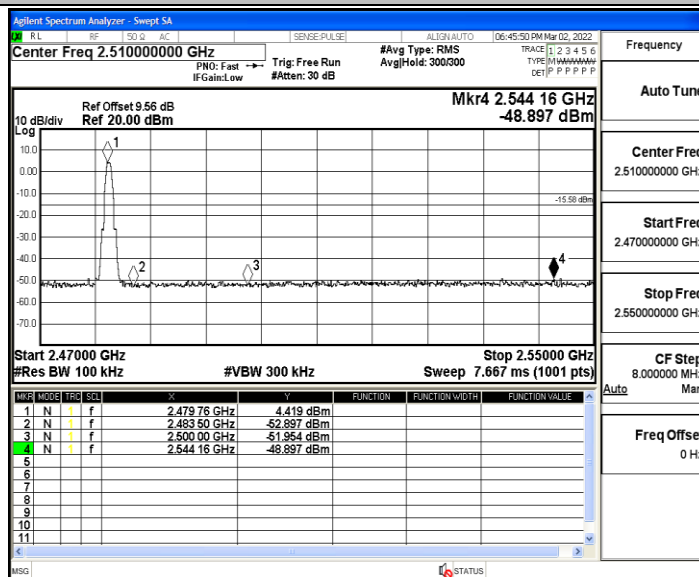
TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	5.49	-49.4	≤-14.51	PASS
		High	2480	4.42	-48.9	≤-15.58	PASS

Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480



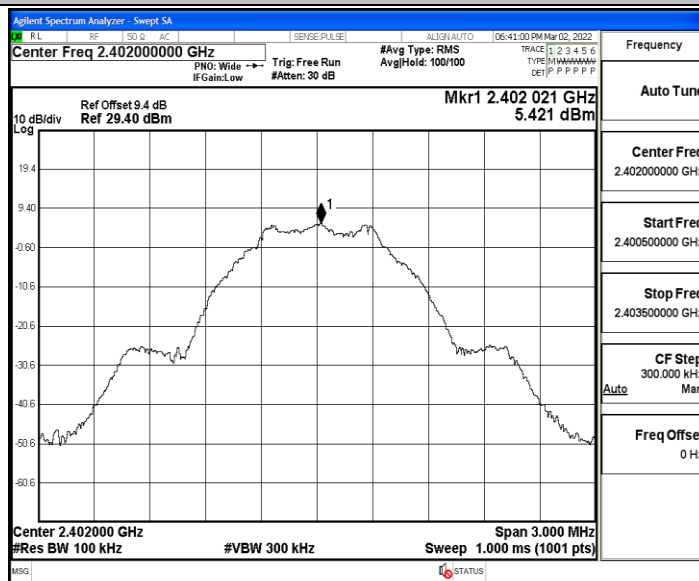
Appendix F: Conducted Spurious Emission

Test Result

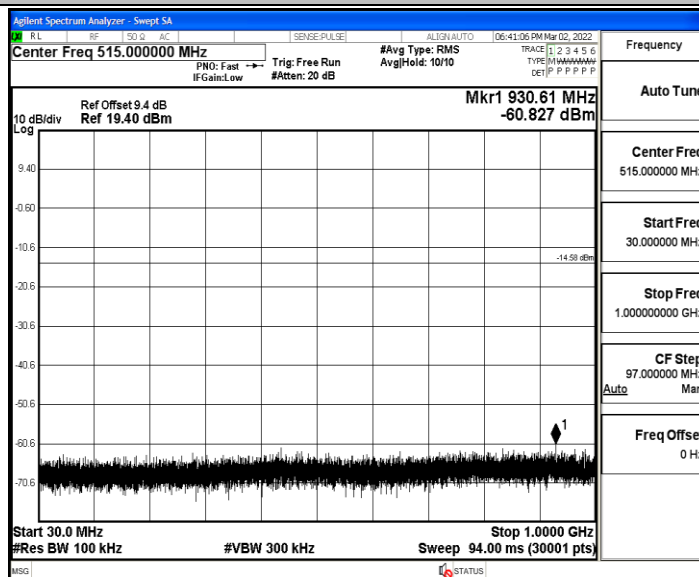
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	5.42	5.42	---	PASS
			30~1000	5.42	-60.83	≤-14.58	PASS
			1000~26500	5.42	-38	≤-14.58	PASS
		2440	Reference	5.26	5.26	---	PASS
			30~1000	5.26	-61.53	≤-14.74	PASS
			1000~26500	5.26	-43.49	≤-14.74	PASS
		2480	Reference	4.42	4.42	---	PASS
			30~1000	4.42	-60.71	≤-15.58	PASS
			1000~26500	4.42	-47.58	≤-15.58	PASS

Test Graphs

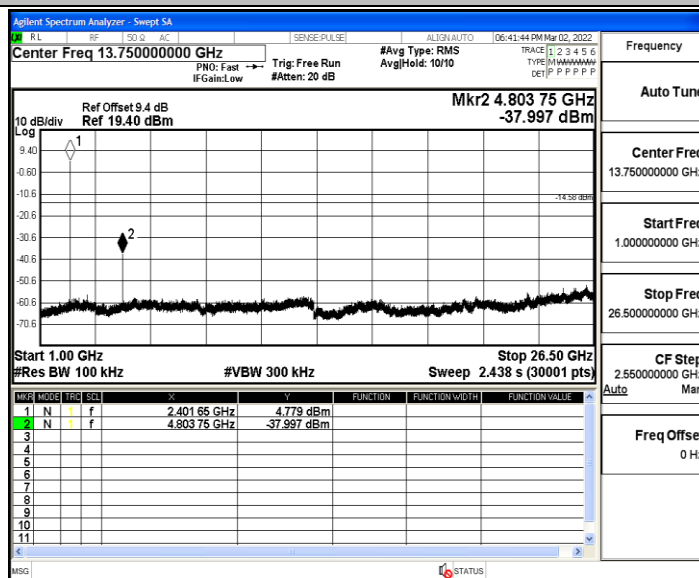
BLE_1M_Ant1_2402_0~Reference



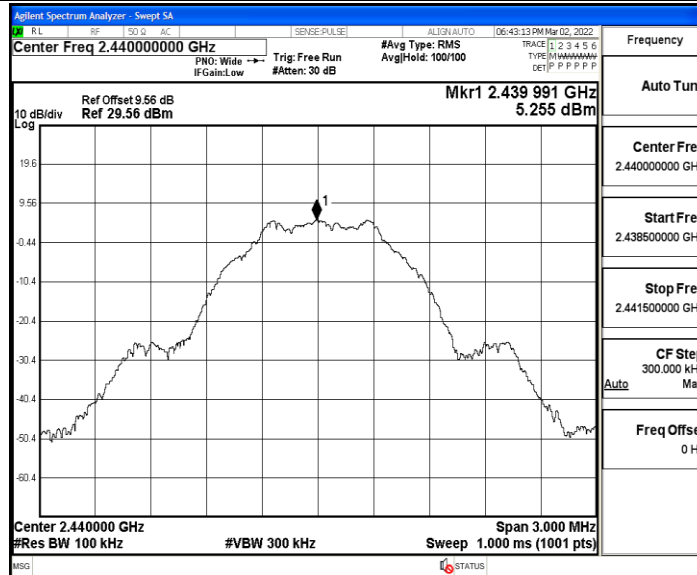
BLE_1M_Ant1_2402_30~1000



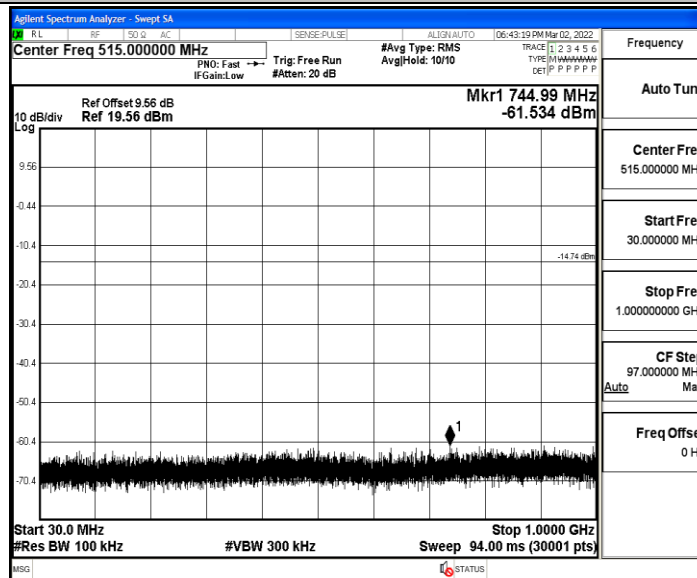
BLE_1M_Ant1_2402_1000~26500



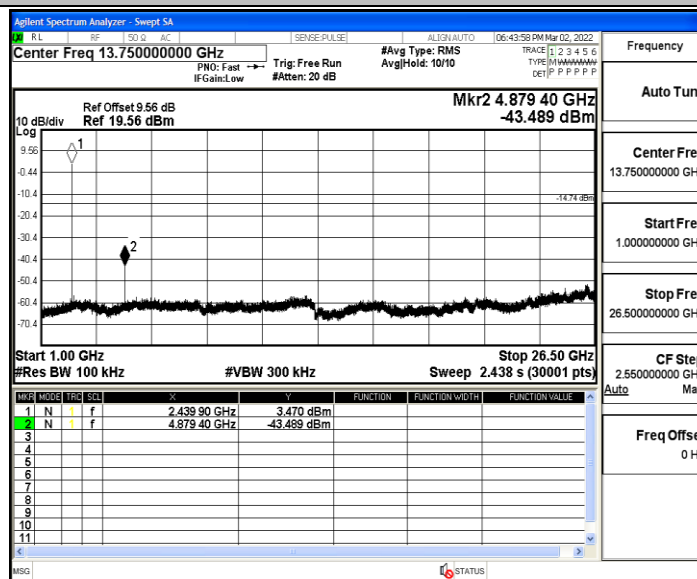
BLE_1M_Ant1_2440_0~Reference



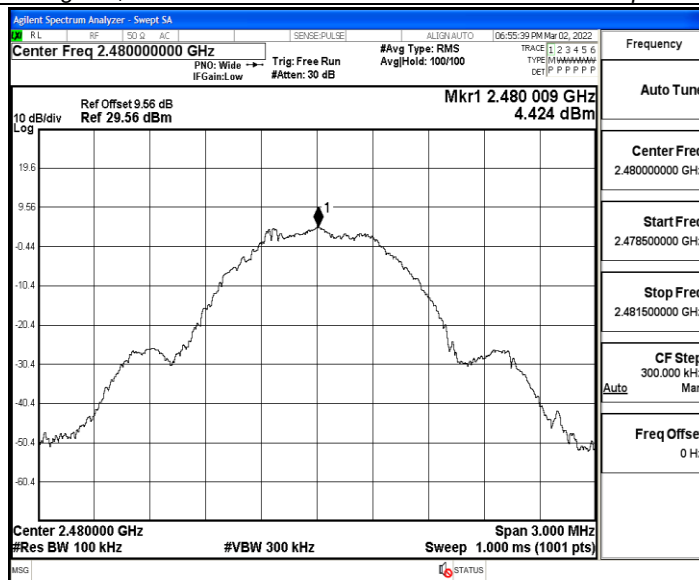
BLE_1M_Ant1_2440_30~1000



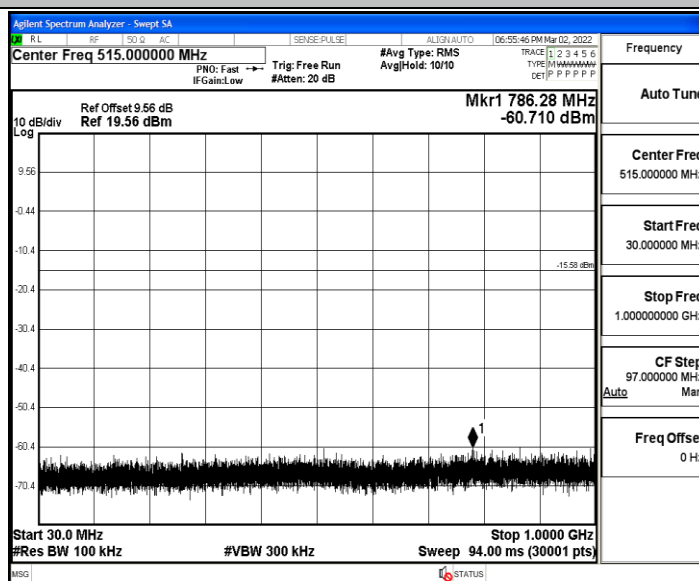
BLE_1M_Ant1_2440_1000~26500



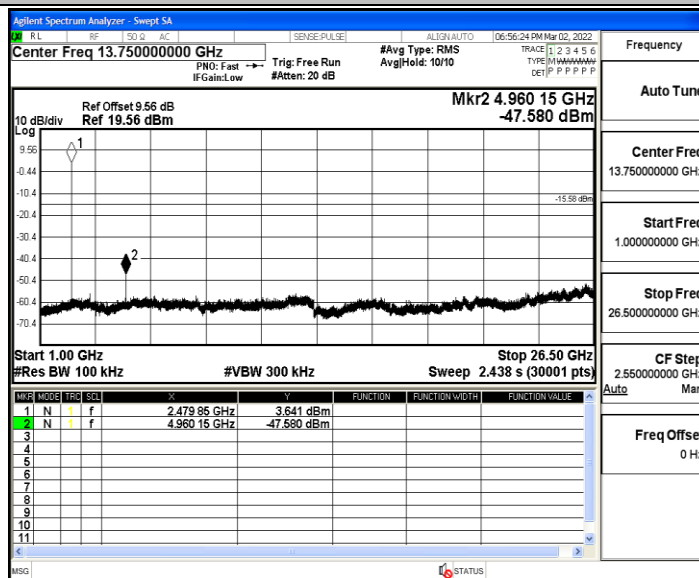
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500



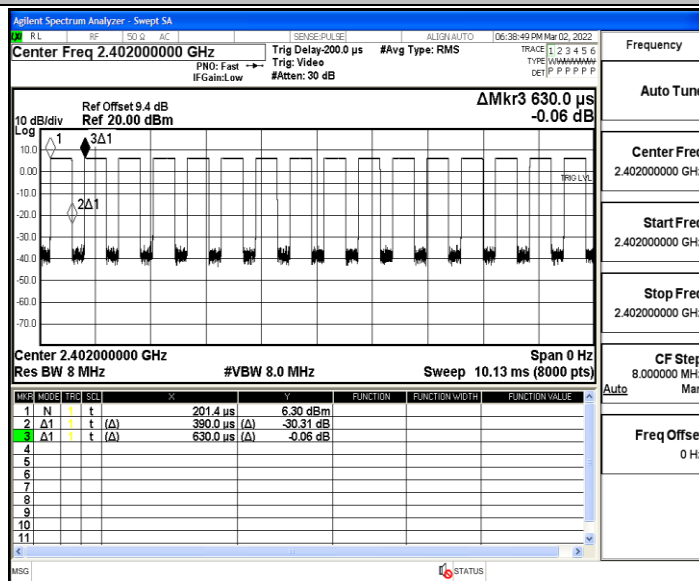
Appendix G: Duty Cycle

Test Result

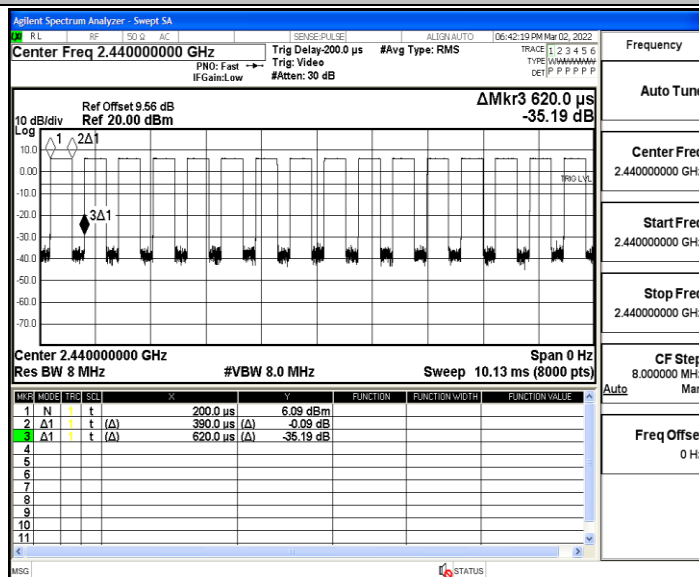
TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/B [KHz]
BLE_1M	Ant1	2402	0.39	0.63	61.90	2.56
		2440	0.39	0.62	62.90	2.56
		2480	0.39	0.62	62.90	2.56

Test Graphs

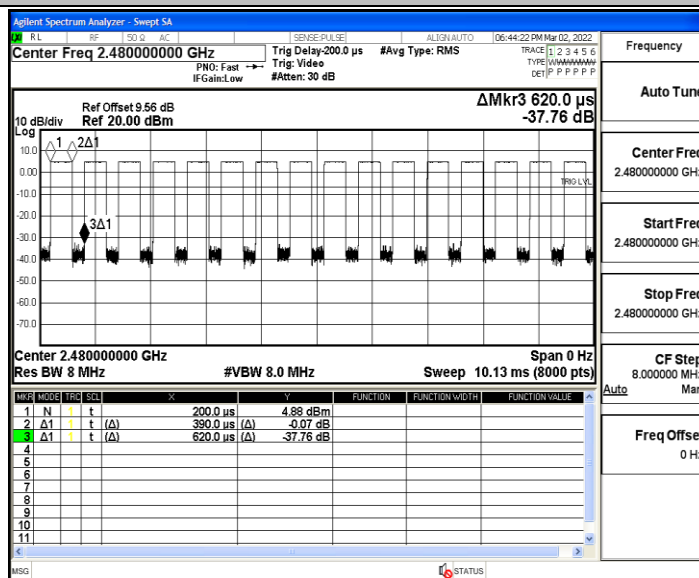
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



Appendix H: Emissions in Restricted Bands

Test Result

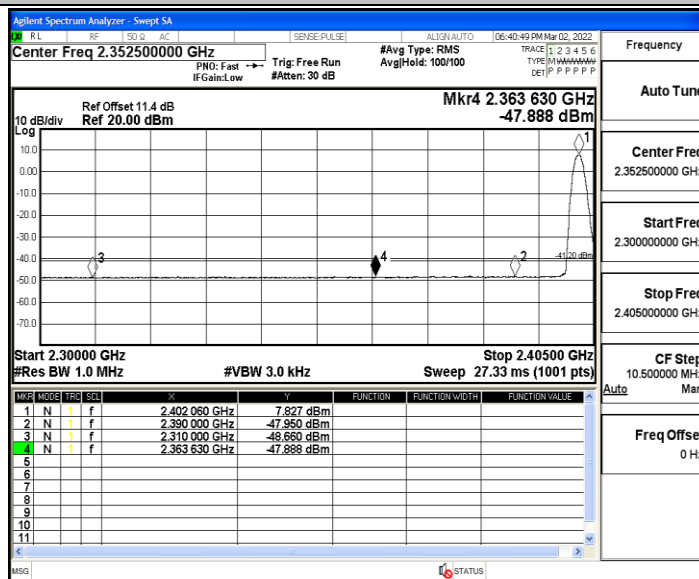
TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-48.66	≤-41.20	PASS
				AV	2363.630	-47.89	≤-41.20	PASS
				AV	2390.000	-47.95	≤-41.20	PASS
				Peak	2310.000	-41.59	≤-21.20	PASS
				Peak	2363.420	-39.21	≤-21.20	PASS
				Peak	2390.000	-42.57	≤-21.20	PASS
		High	2480	AV	2483.500	-45.88	≤-41.20	PASS
				AV	2483.520	-45.88	≤-41.20	PASS
				AV	2500.000	-47.6	≤-41.20	PASS
				Peak	2483.500	-40.52	≤-21.20	PASS
				Peak	2493.680	-37.31	≤-21.20	PASS
				Peak	2500.000	-41.38	≤-21.20	PASS

Note:

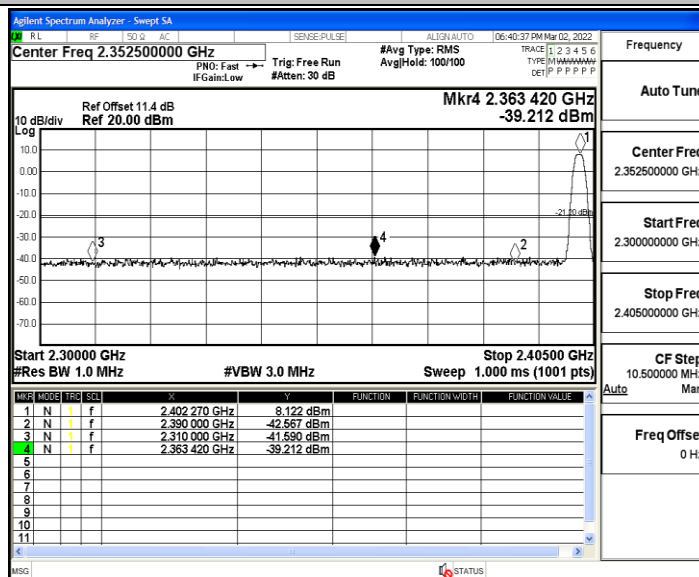
1. The Antenna Gain is compensated in the graph with 2dBi and Antenna Gain which is Higher.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV

