

RF Test Data for BT(BLE) (Conducted Measurement)**Product Name: Massager machine****Trade Mark: F-MACHINE****Test Model: TREMBLR****FCC ID: 2AN4K-BT-1****Environmental Conditions**

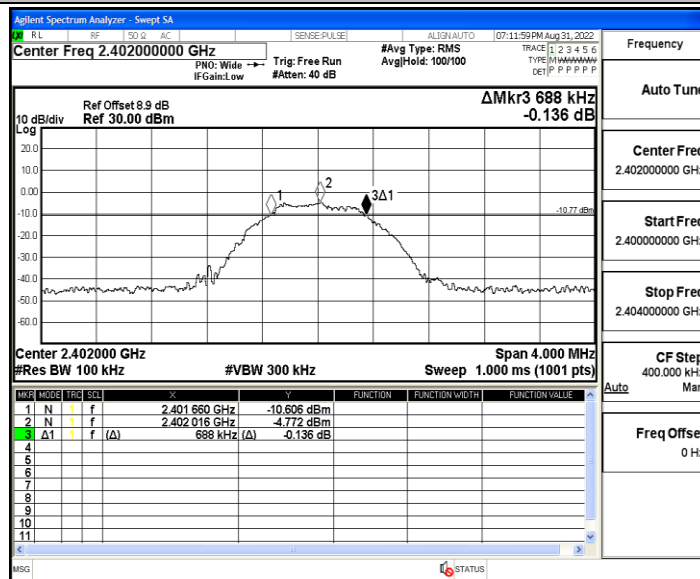
Temperature:	25.5°C
Relative Humidity:	55%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

Appendix A: DTS Bandwidth**Test Result**

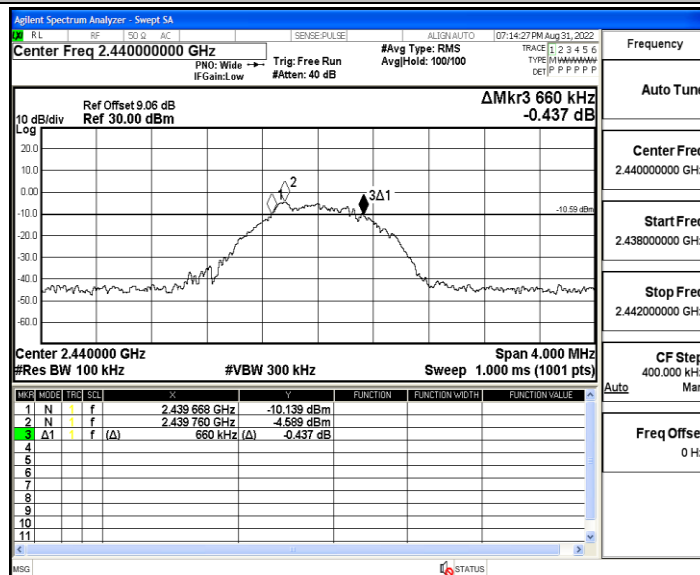
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.688	2401.660	2402.348	0.5	PASS
		2440	0.660	2439.668	2440.328	0.5	PASS
		2480	0.672	2479.668	2480.340	0.5	PASS

Test Graphs

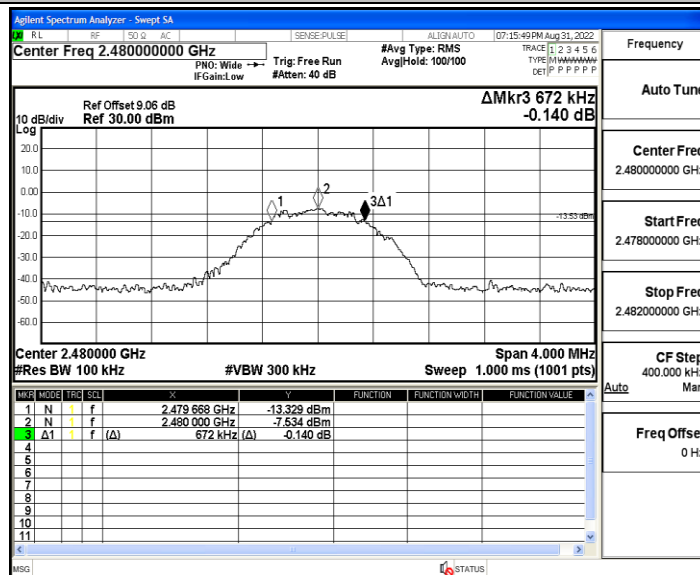
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



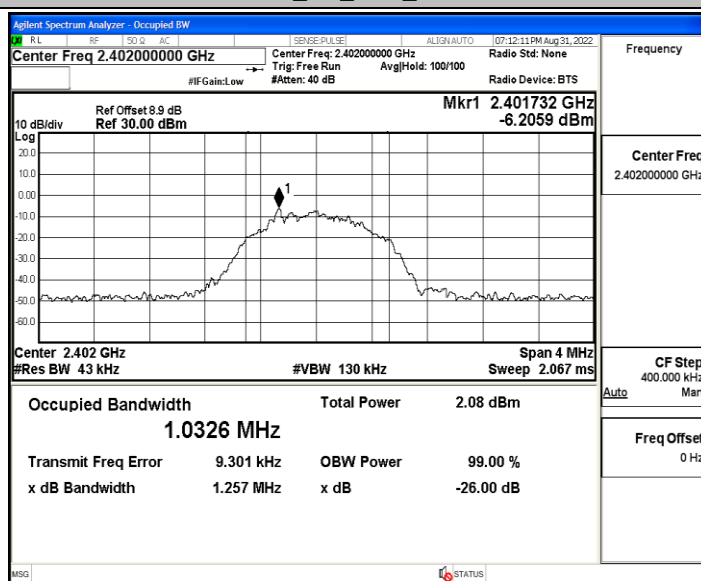
Appendix B: Occupied Channel Bandwidth

Test Result

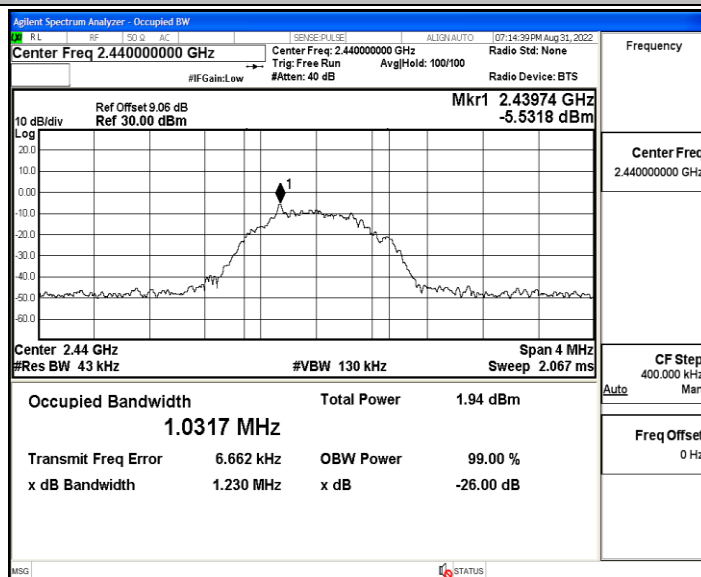
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0326	2401.493	2402.526	---	---
		2440	1.0317	2439.491	2440.523	---	---
		2480	1.0328	2479.490	2480.523	---	---

Test Graphs

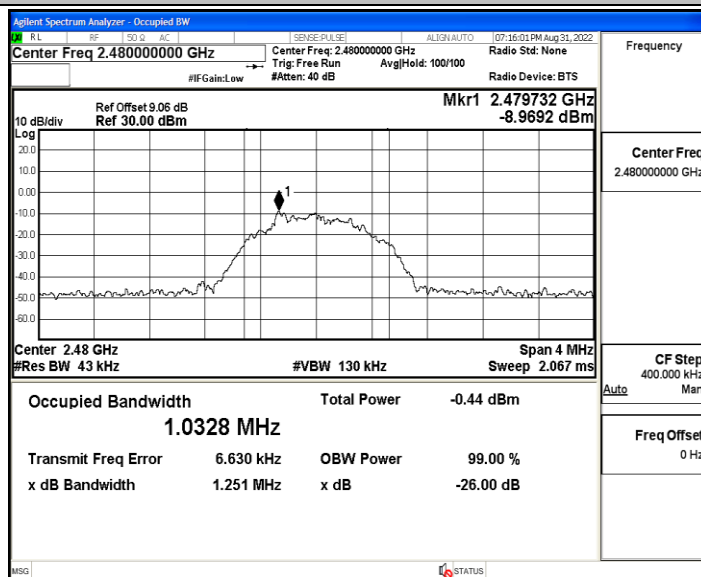
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



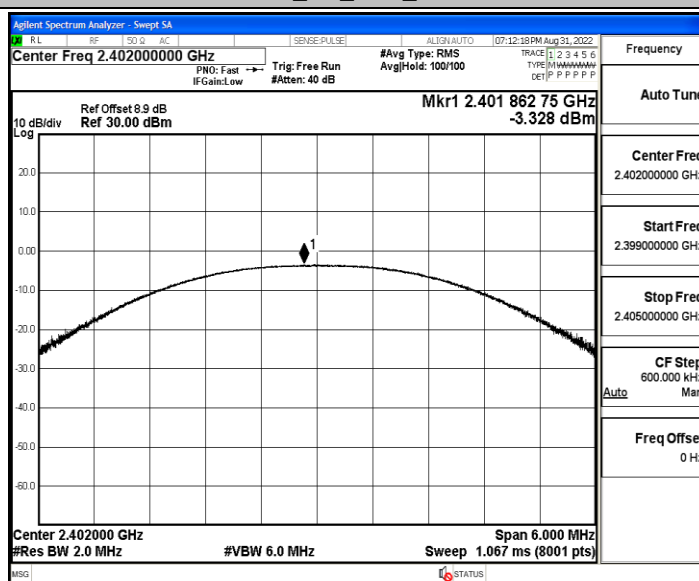
Appendix C: Maximum Peak conducted output power

Test Result

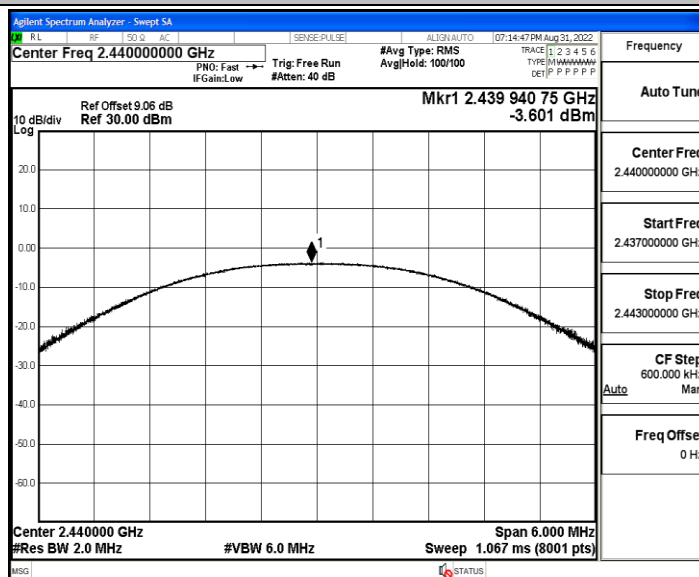
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-3.33	≤30	PASS
		2440	-3.6	≤30	PASS
		2480	-6.03	≤30	PASS

Test Graphs

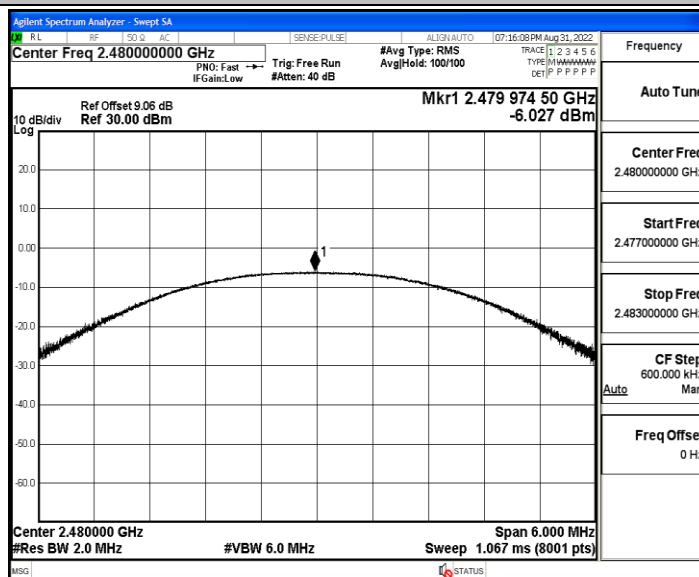
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



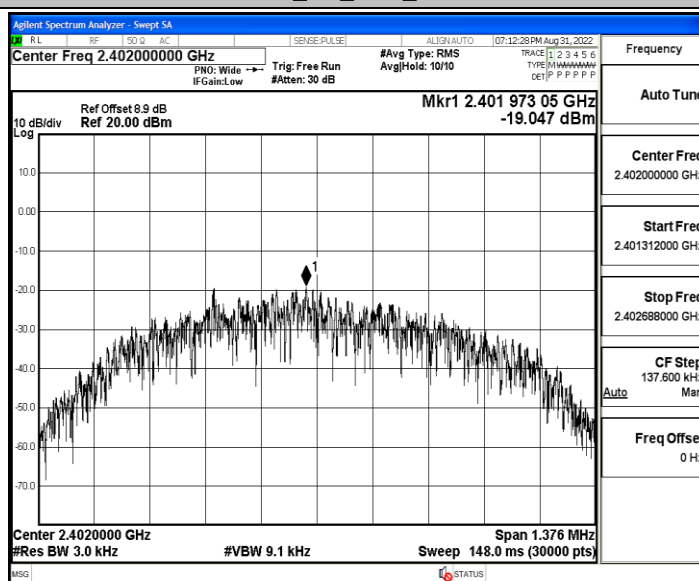
Appendix D: Maximum power spectral density

Test Result

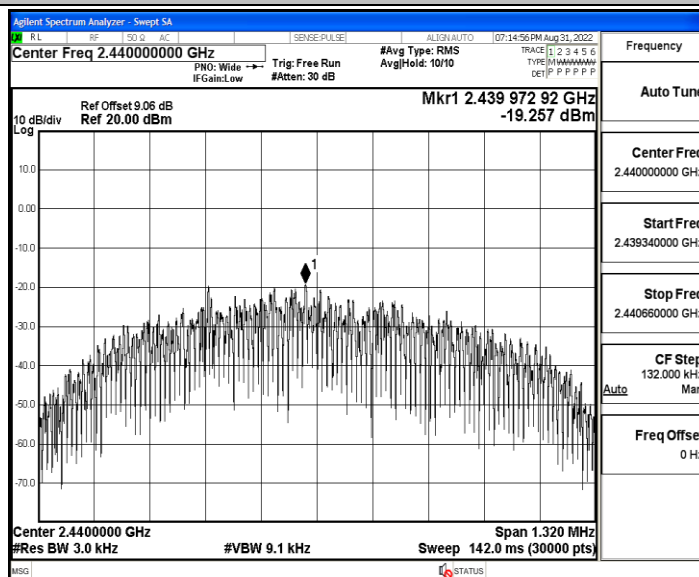
TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-19.05	≤8.00	PASS
		2440	-19.26	≤8.00	PASS
		2480	-21.8	≤8.00	PASS

Test Graphs

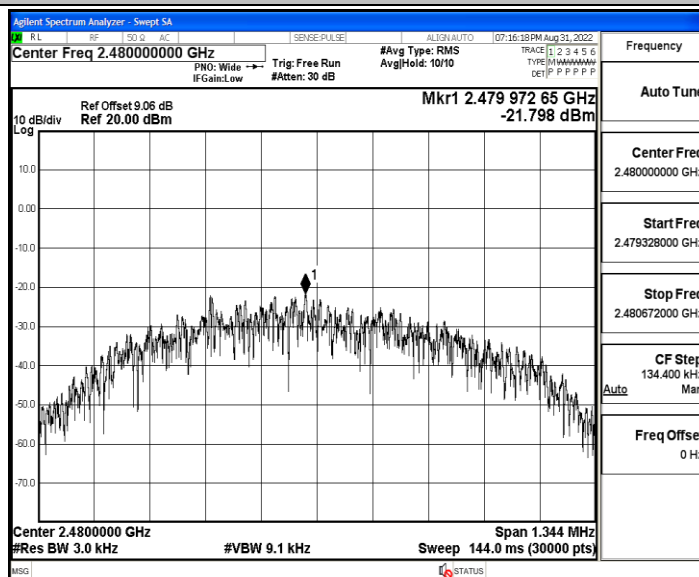
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



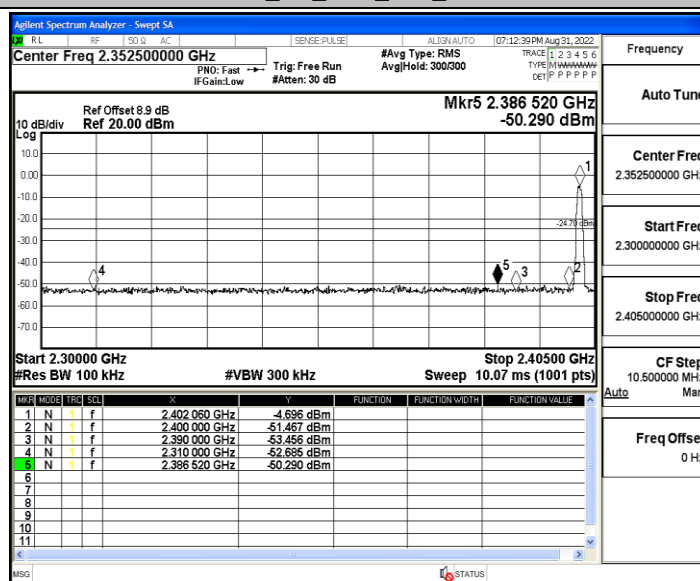
Appendix E: Band edge measurements

Test Result

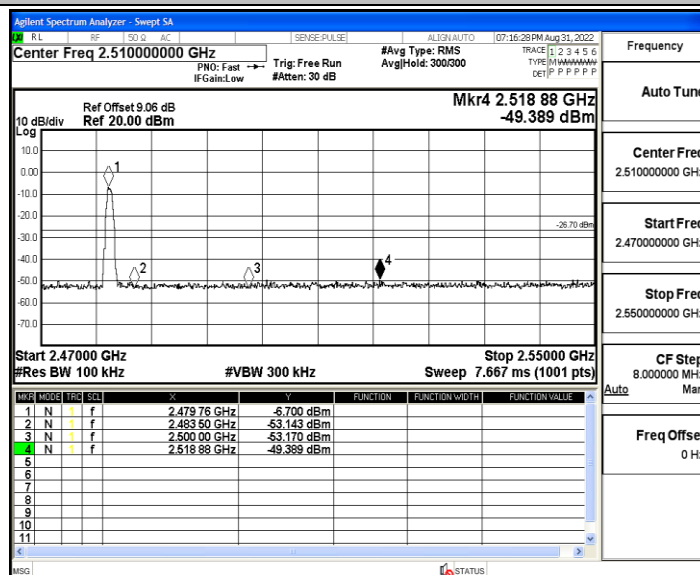
TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-4.70	-50.29	≤-24.7	PASS
		High	2480	-6.70	-49.39	≤-26.7	PASS

Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480



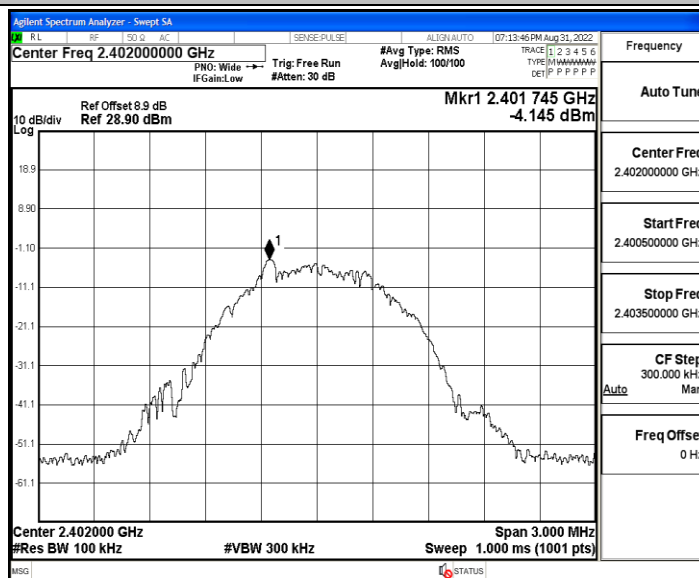
Appendix F: Conducted Spurious Emission

Test Result

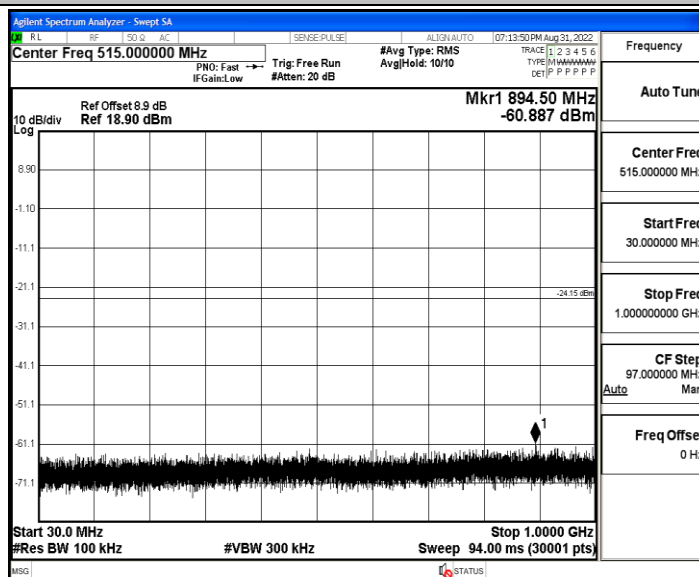
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-4.15	-4.15	---	PASS
			30~1000	-4.15	-60.89	≤-24.15	PASS
			1000~26500	-4.15	-52.36	≤-24.15	PASS
		2440	Reference	-5.56	-5.56	---	PASS
			30~1000	-5.56	-62.1	≤-25.56	PASS
			1000~26500	-5.56	-51.44	≤-25.56	PASS
		2480	Reference	-6.77	-6.77	---	PASS
			30~1000	-6.77	-61.26	≤-26.77	PASS
			1000~26500	-6.77	-51.75	≤-26.77	PASS

Test Graphs

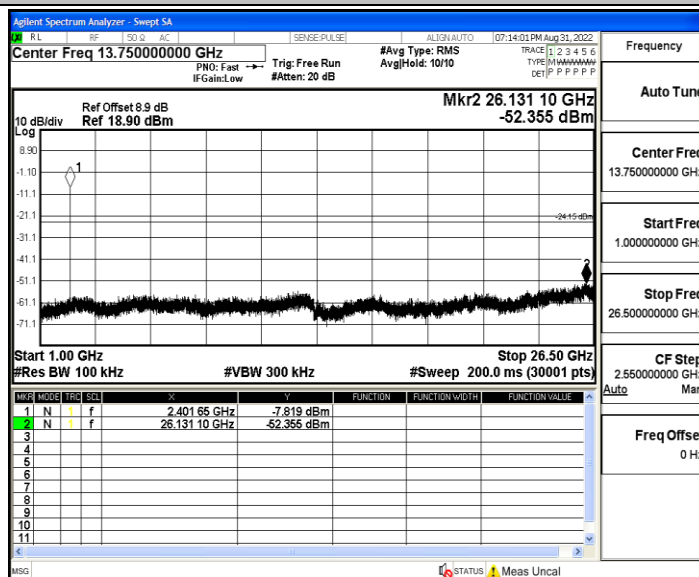
BLE_1M_Ant1_2402_0~Reference



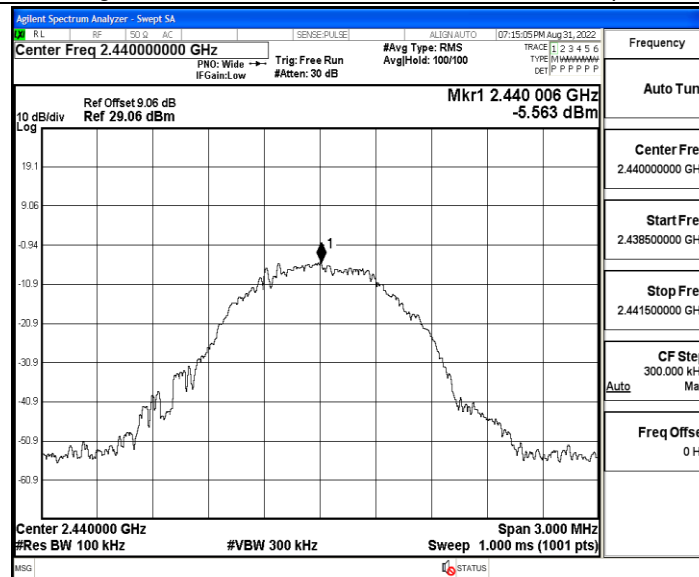
BLE_1M_Ant1_2402_30~1000



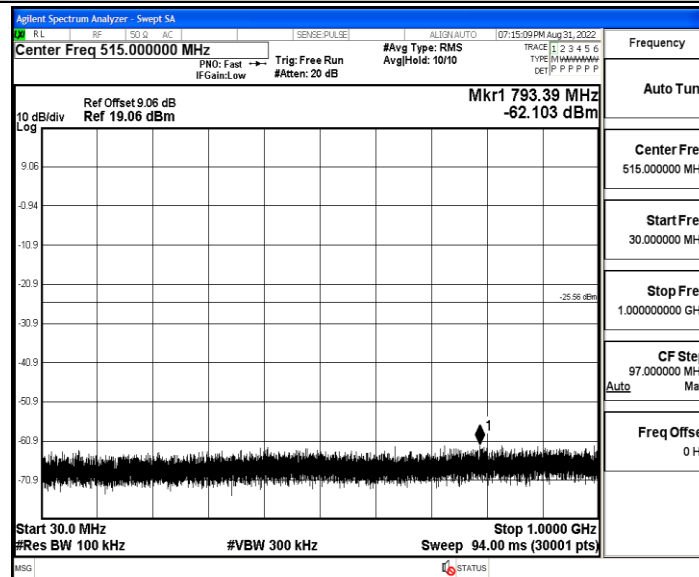
BLE_1M_Ant1_2402_1000~26500



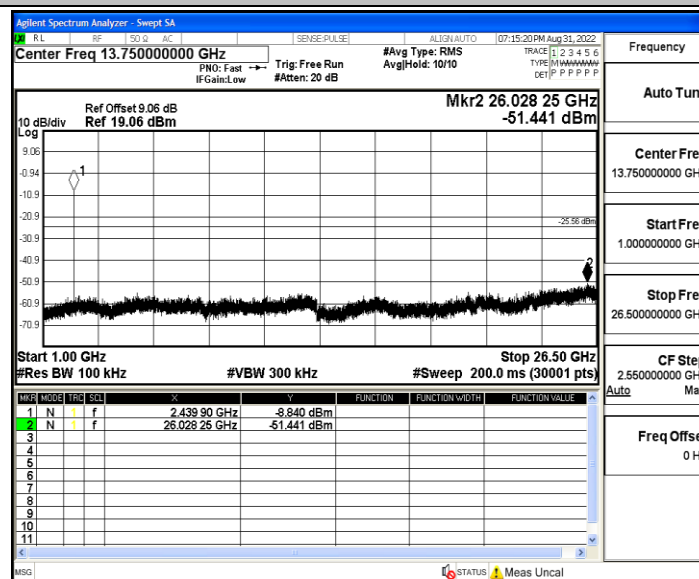
BLE_1M_Ant1_2440_0~Reference



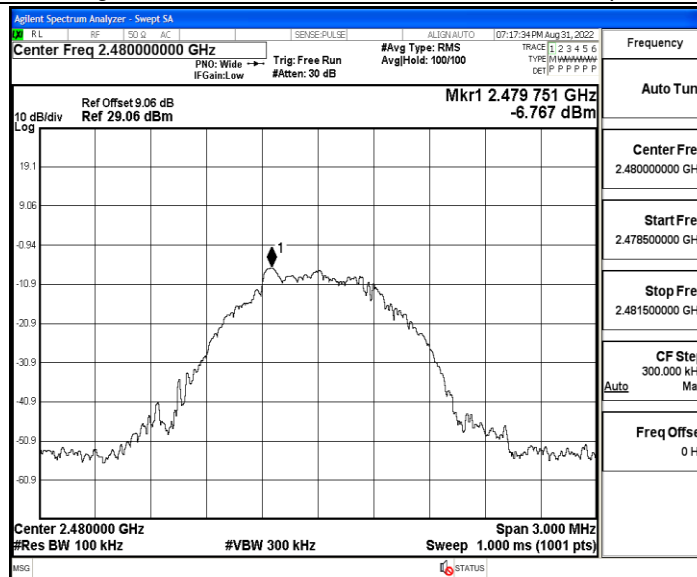
BLE_1M_Ant1_2440_30~1000



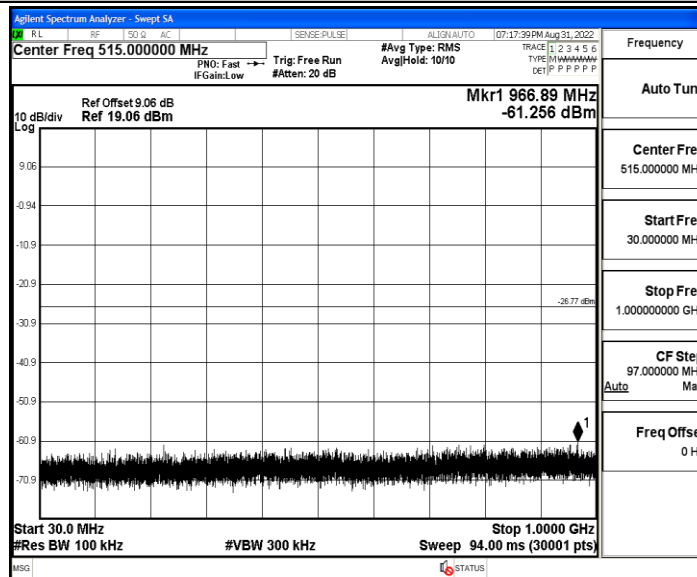
BLE_1M_Ant1_2440_1000~26500



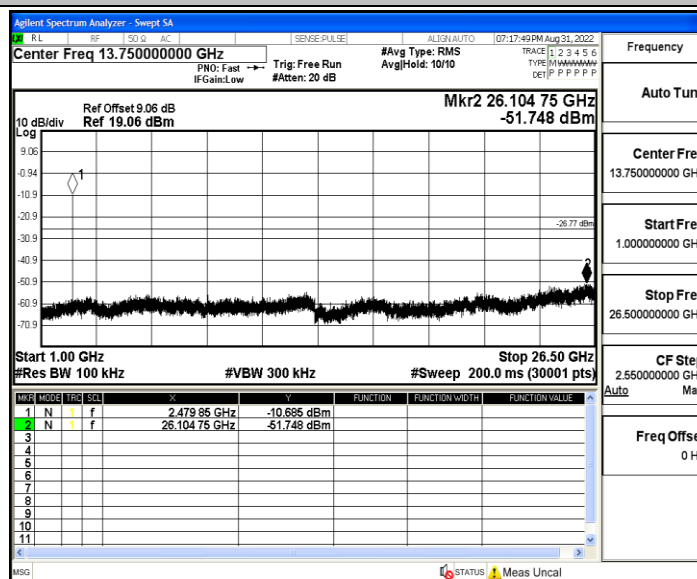
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500



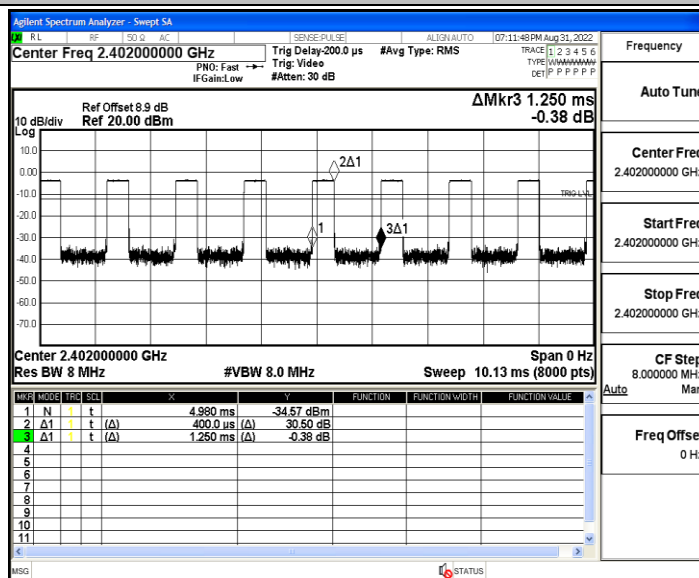
Appendix G: Duty Cycle

Test Result

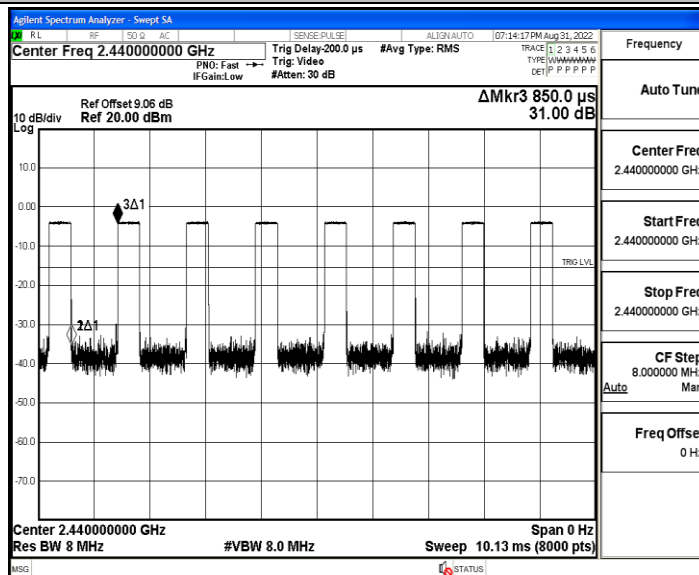
TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T[kHz]
BLE_1M	Ant1	2402	0.40	1.25	32.00	2.50
		2440	0.00	0.85	100	∞
		2480	0.39	1.25	31.20	2.56

Test Graphs

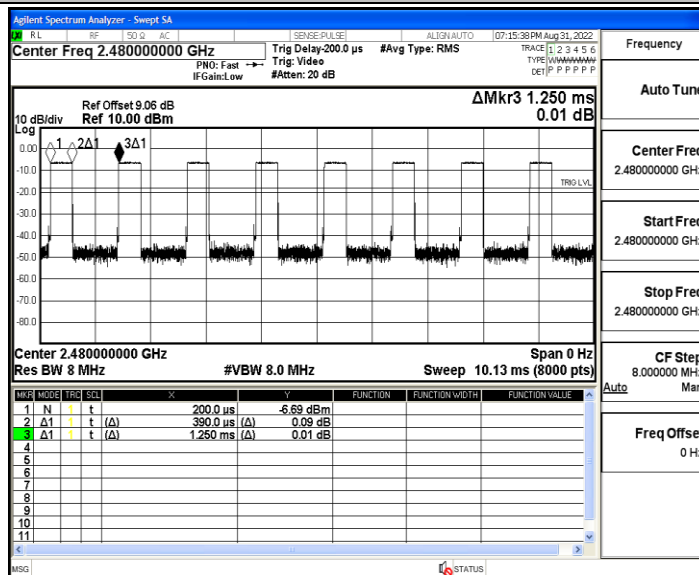
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480



Appendix H: Emissions in Restricted Bands

Test Result

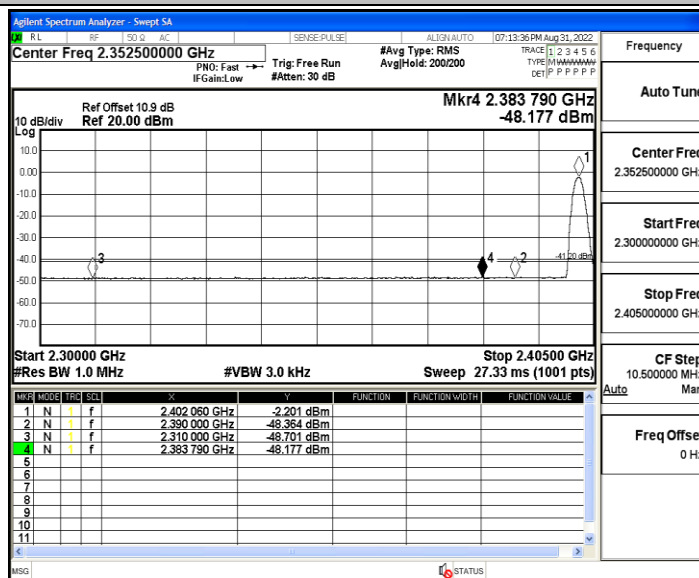
TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-48.7	≤-41.20	PASS
				AV	2383.790	-48.18	≤-41.20	PASS
				AV	2390.000	-48.36	≤-41.20	PASS
				Peak	2310.000	-40.4	≤-21.20	PASS
				Peak	2343.785	-38.26	≤-21.20	PASS
				Peak	2390.000	-41.35	≤-21.20	PASS
		High	2480	AV	2483.500	-48.1	≤-41.20	PASS
				AV	2498.320	-47.48	≤-41.20	PASS
				AV	2500.000	-47.83	≤-41.20	PASS
				Peak	2483.500	-40.49	≤-21.20	PASS
				Peak	2487.120	-38.07	≤-21.20	PASS
				Peak	2500.000	-40.9	≤-21.20	PASS

Note:

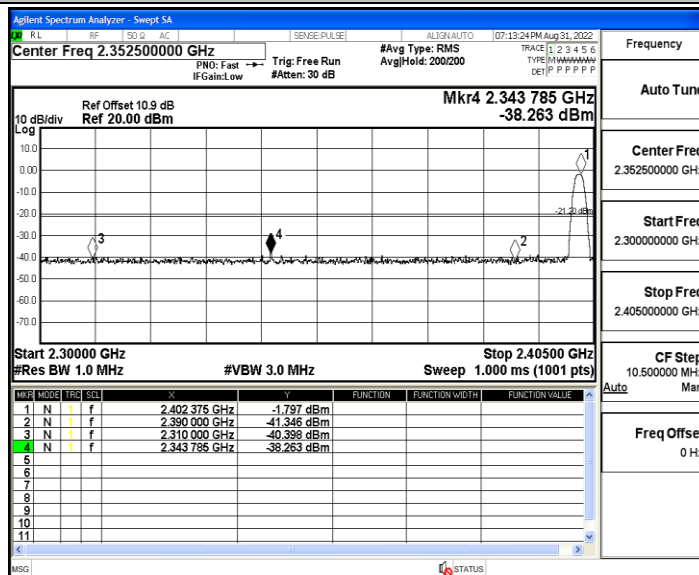
1. The Antenna Gain is compensated in the graph with 2dBi and Antenna Gain which is Higher.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

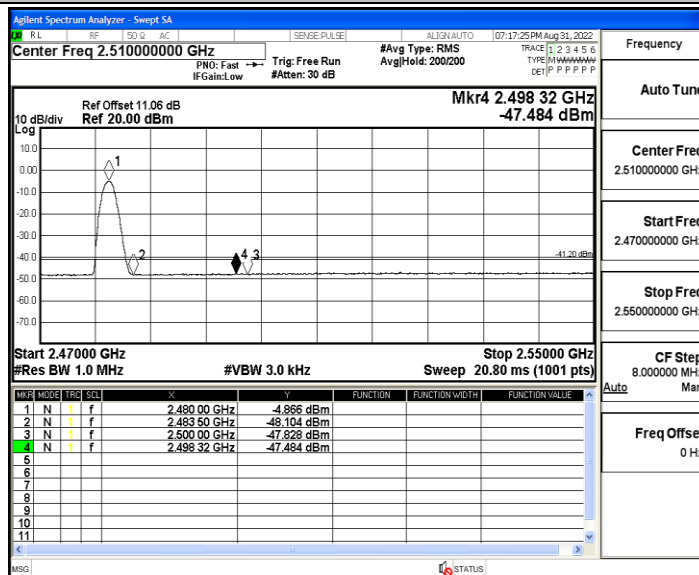
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak

