

Appendix Test Data for BT(BDR/EDR) (Conducted Measurement)

Product Name: Bluetooth Mechanical Keyboard

Trade Mark: Keychron

Test Model: Keychron Q5 Pro

FCC ID: 2ASF4-Q5PRO

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

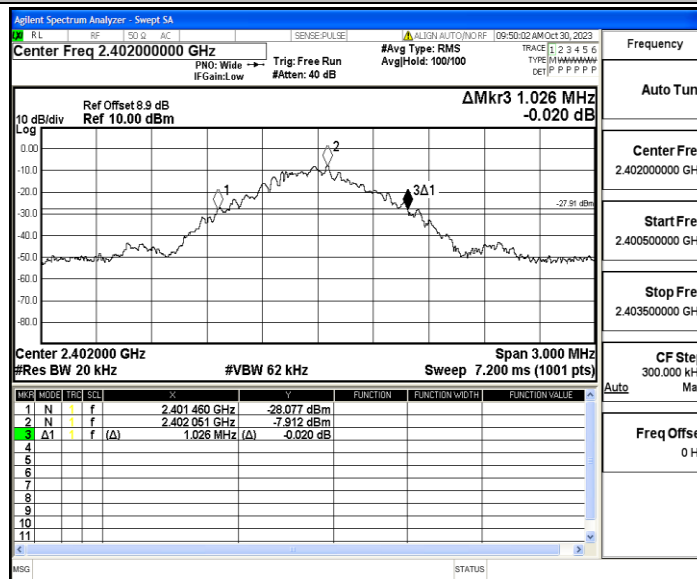
Appendix A: 20dB Emission Bandwidth

Test Result

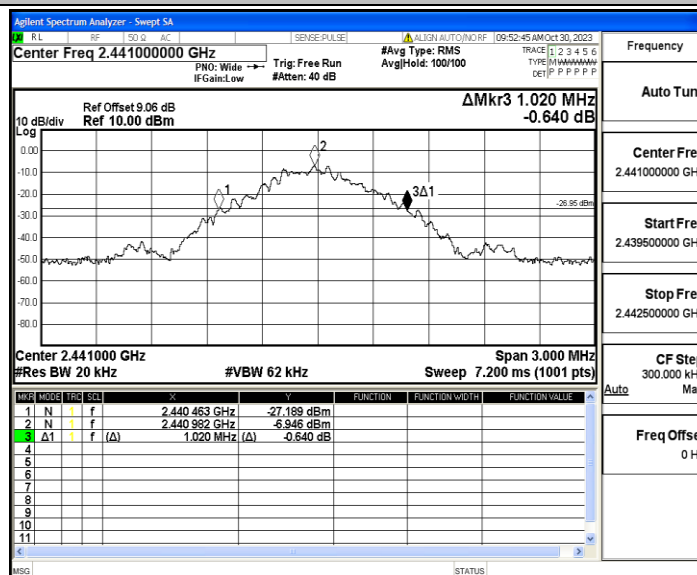
TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	1.026	2401.460	2402.486	---	---
		2441	1.020	2440.463	2441.483	---	---
		2480	0.870	2479.535	2480.405	---	---

Test Graphs

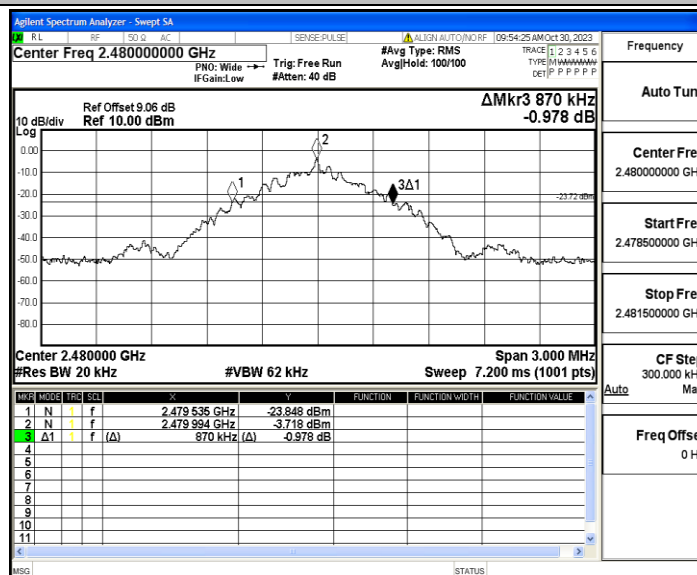
DH5_Ant1_2402



DH5_Ant1_2441



DH5_Ant1_2480



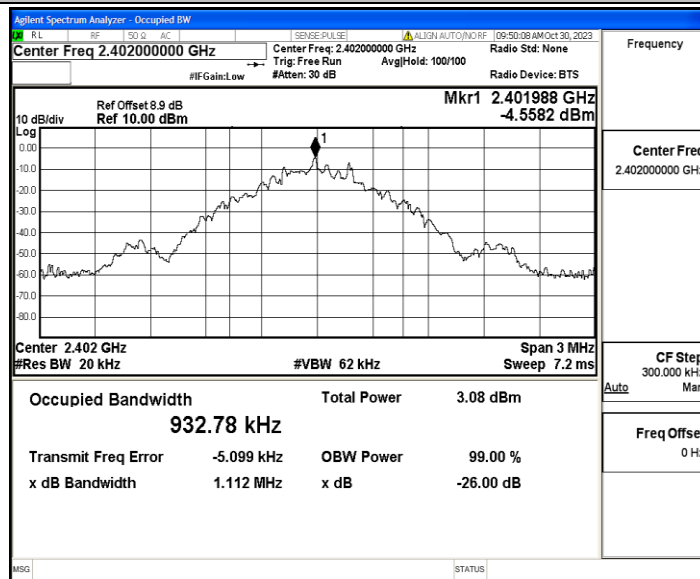
Appendix B: Occupied Channel Bandwidth

Test Result

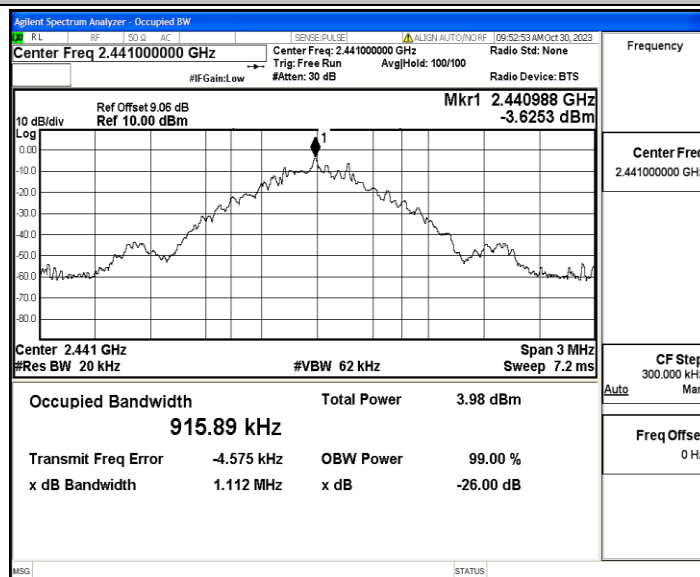
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.93278	2401.5285	2402.4613	---	---
		2441	0.91589	2440.5375	2441.4534	---	---
		2480	0.92153	2479.5412	2480.4627	---	---

Test Graphs

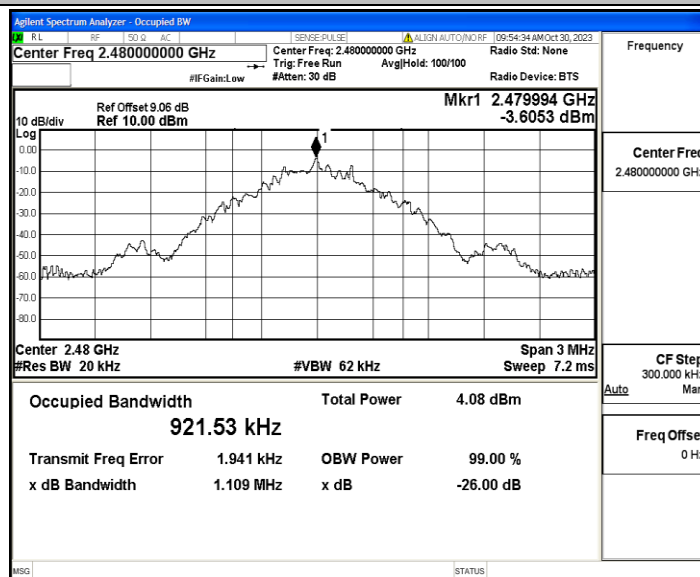
DH5_Ant1_2402



DH5_Ant1_2441



DH5_Ant1_2480



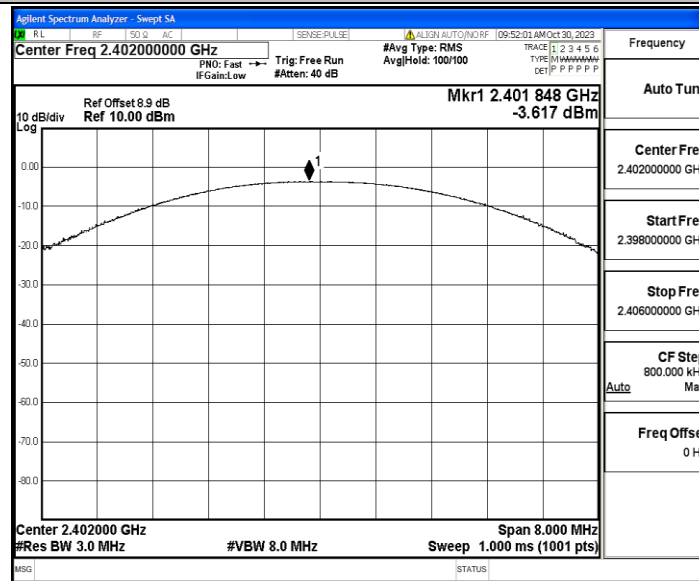
Appendix C: Maximum Peak conducted output power

Test Result

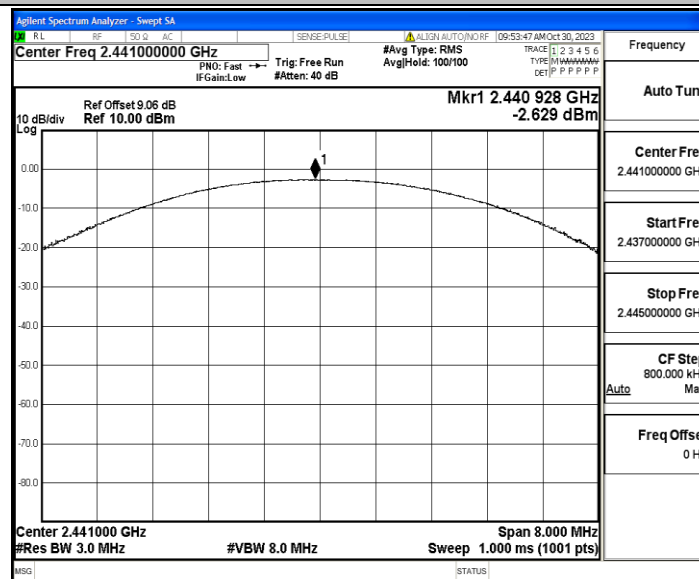
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	-3.62	≤20.97	PASS
		2441	-2.63	≤20.97	PASS
		2480	-2.7	≤20.97	PASS

Test Graphs

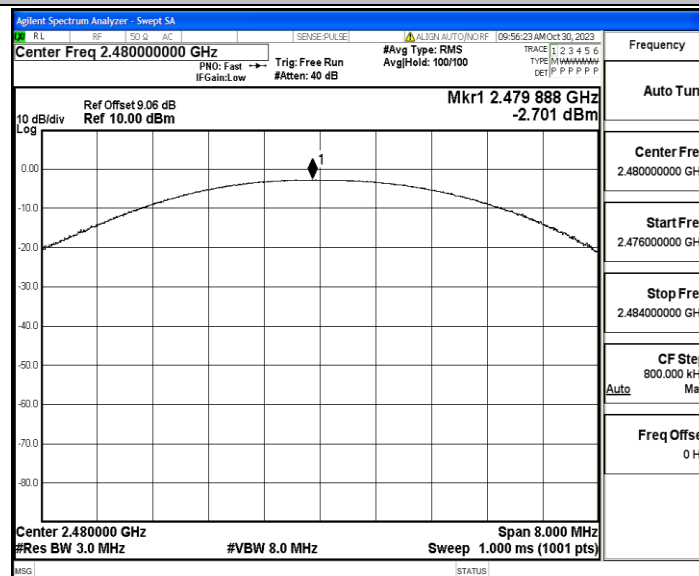
DH5_Ant1_2402



DH5_Ant1_2441



DH5_Ant1_2480

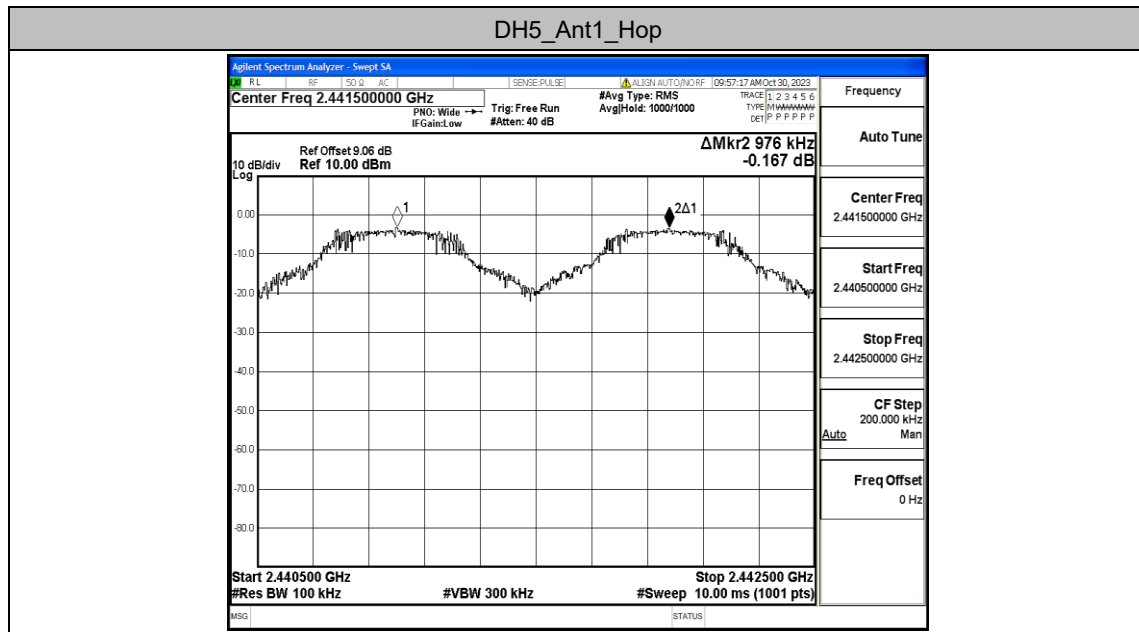


Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.976	≥ 0.684	PASS

Test Graphs

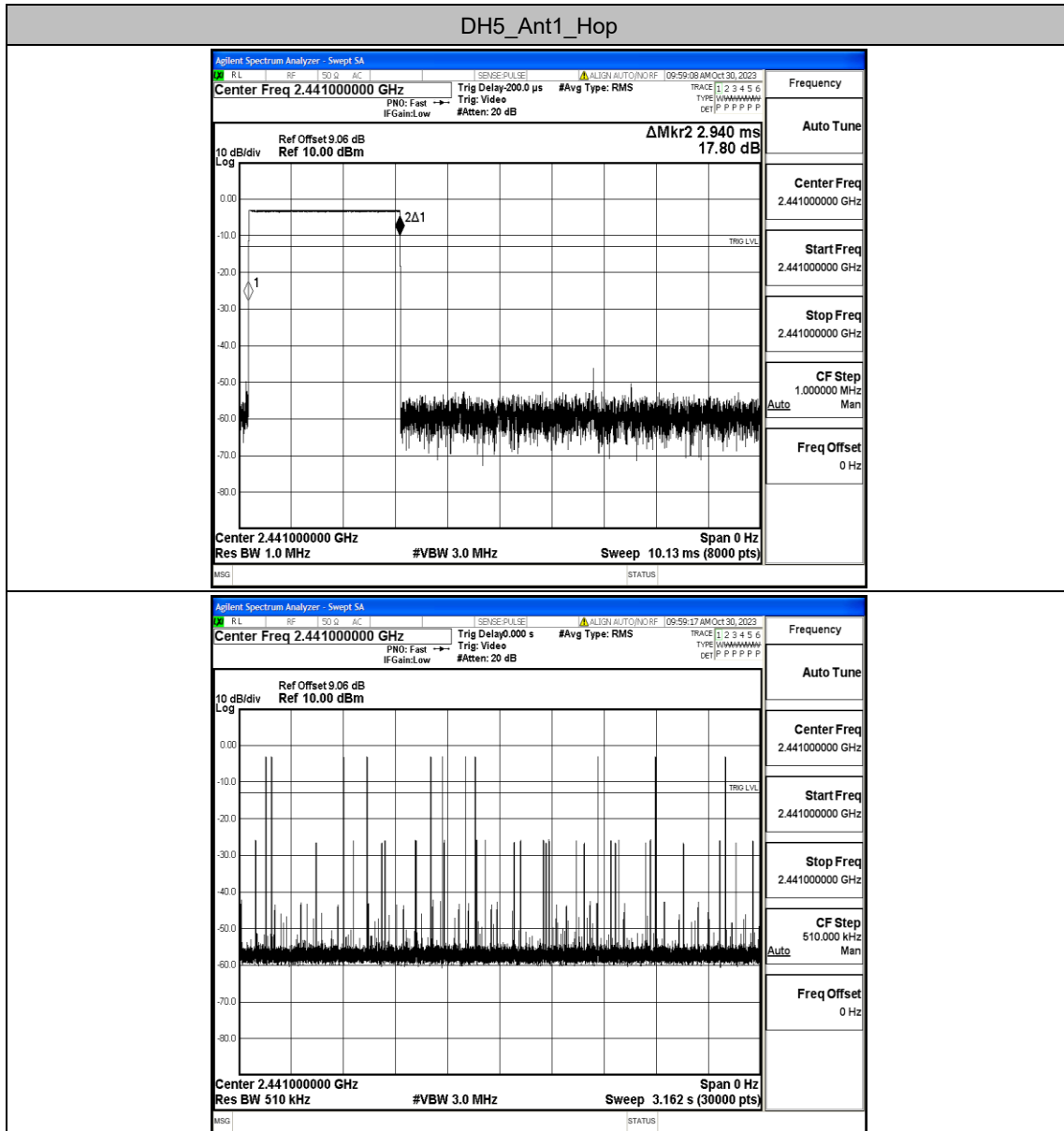


Appendix E: Time of occupancy

Test Result

TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.940	120	0.353	≤0.4	PASS

Test Graphs

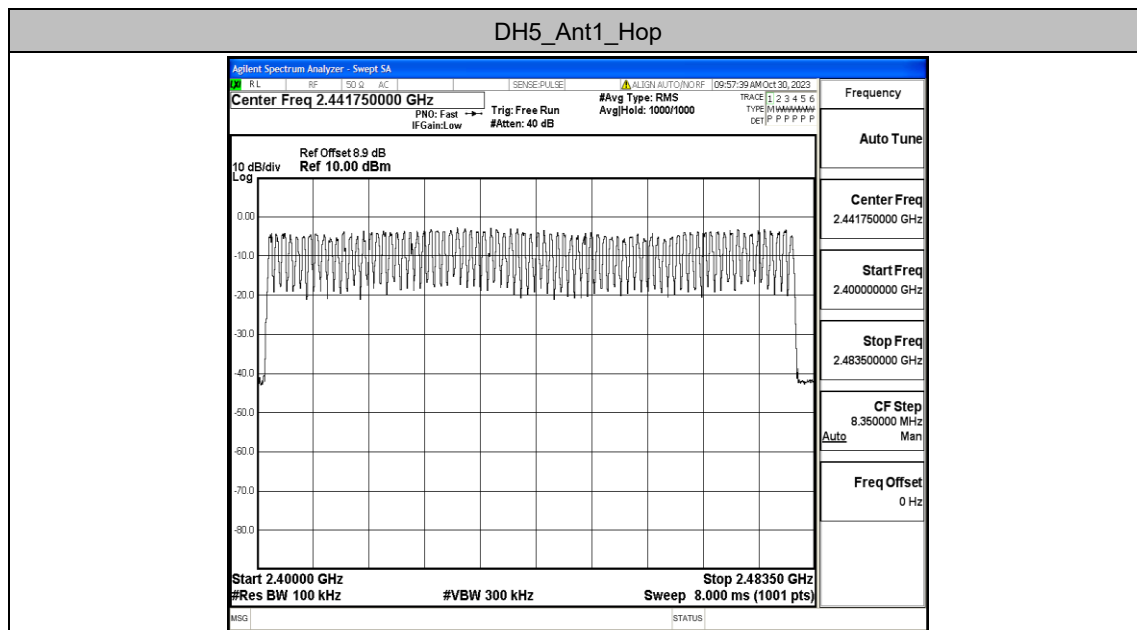


Appendix F: Number of hopping channels

Test Result

TestMode	Antenna	Channel	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS

Test Graphs



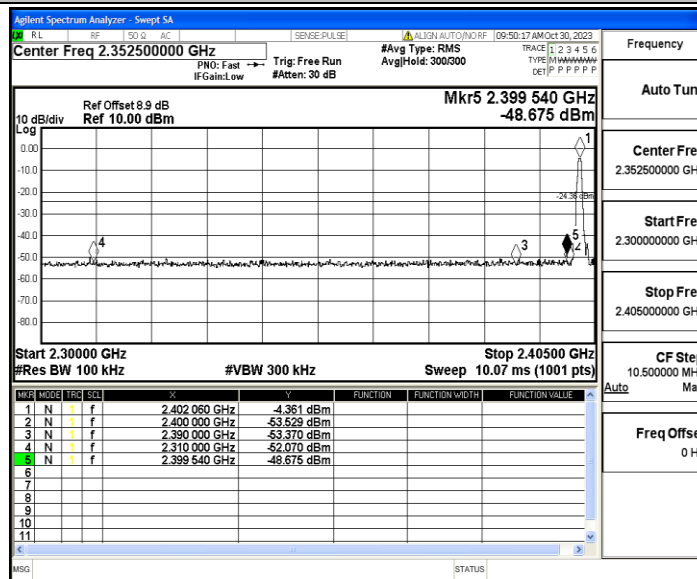
Appendix G: Band edge measurements

Test Result

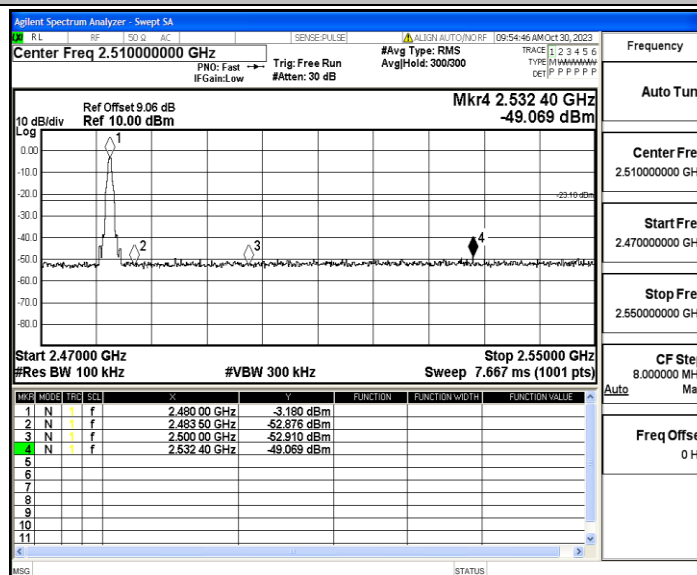
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-4.36	-48.68	≤ -24.36	PASS
		High	2480	-3.18	-49.07	≤ -23.18	PASS
		Low	Hop_2402	-5.59	-50.85	≤ -25.59	PASS
		High	Hop_2480	-3.15	-48.78	≤ -23.15	PASS

Test Graphs

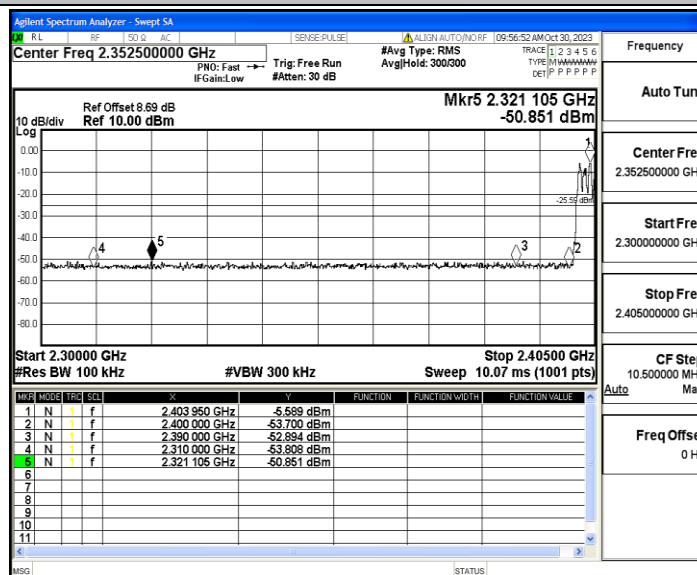
DH5_Ant1_Low_2402



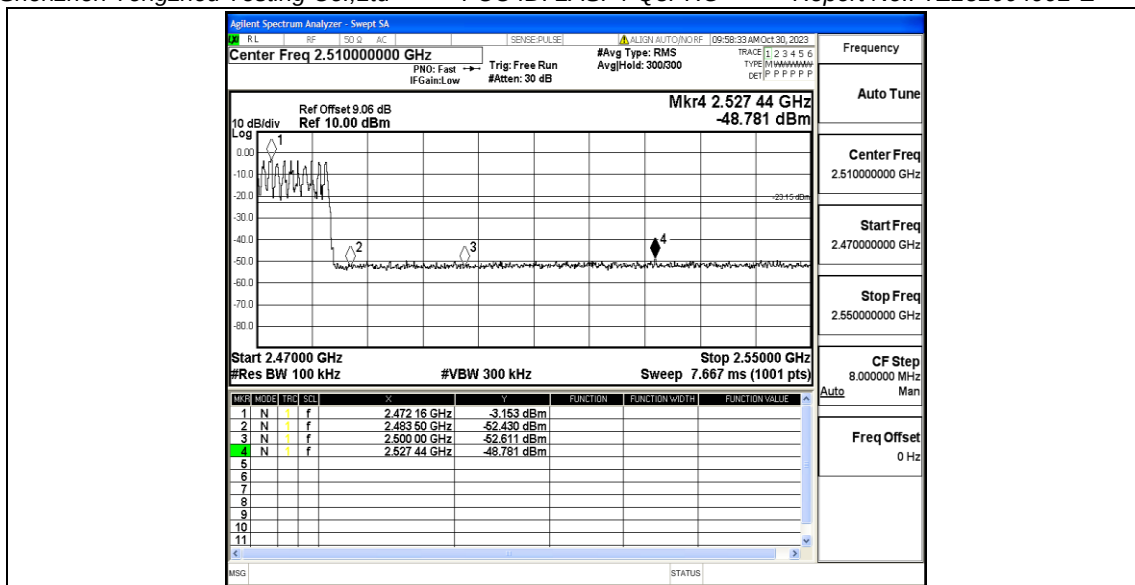
DH5_Ant1_High_2480



DH5_Ant1_Low_Hop_2402



DH5_Ant1_High_Hop_2480



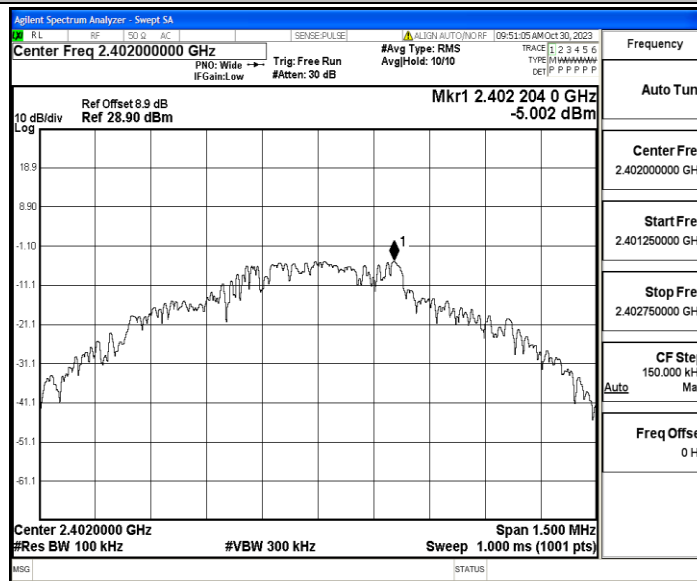
Appendix H: Conducted Spurious Emission

Test Result

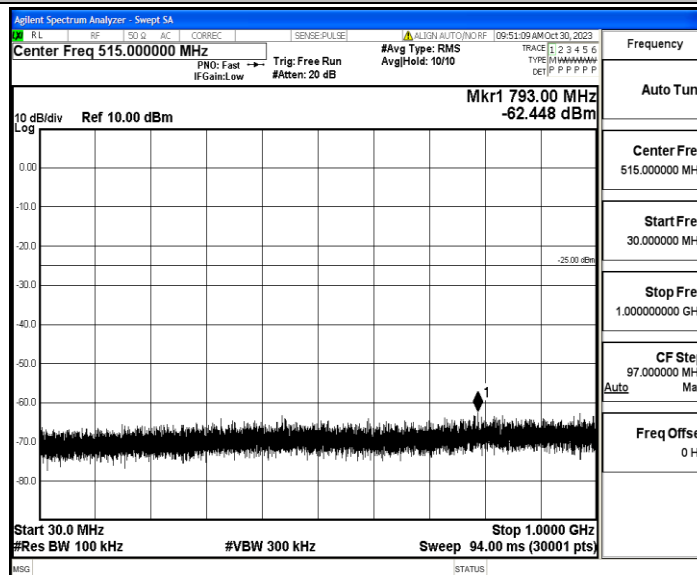
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-5.00	-5.00	---	PASS
			30~1000	-5.00	-62.45	≤-25	PASS
			1000~26500	-5.00	-50.07	≤-25	PASS
		2441	Reference	-3.27	-3.27	---	PASS
			30~1000	-3.27	-62.29	≤-23.27	PASS
			1000~26500	-3.27	-49.91	≤-23.27	PASS
		2480	Reference	-3.95	-3.95	---	PASS
			30~1000	-3.95	-63.2	≤-23.95	PASS
			1000~26500	-3.95	-50.5	≤-23.95	PASS

Test Graphs

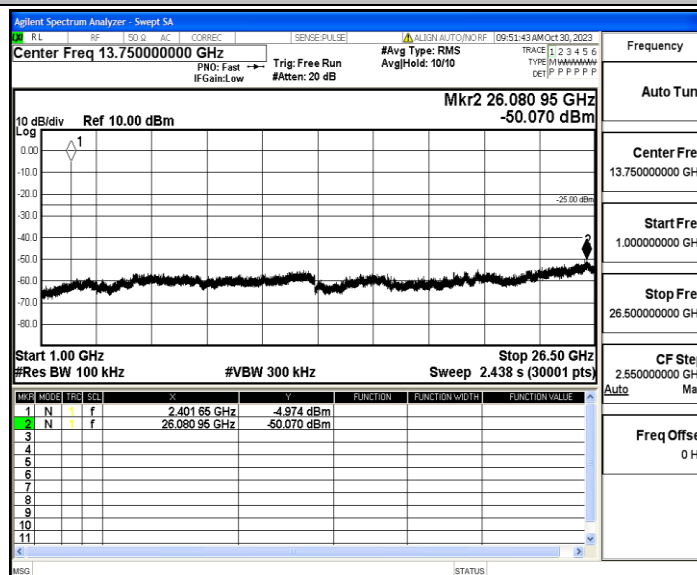
DH5_Ant1_2402_0~Reference



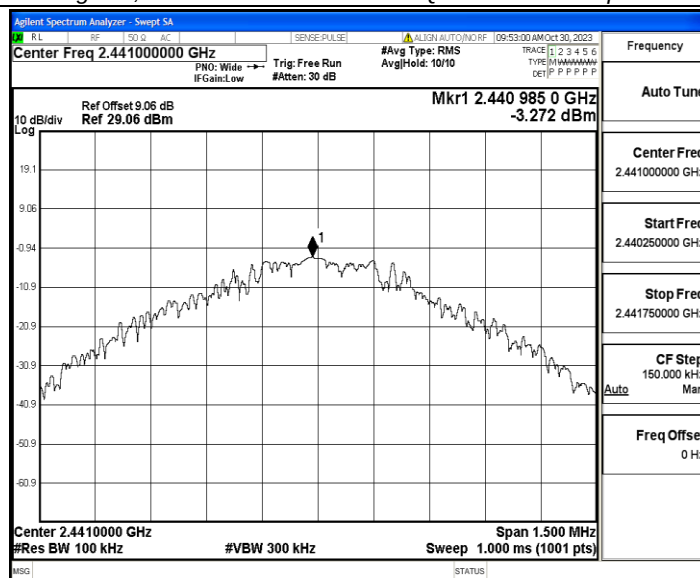
DH5_Ant1_2402_30~1000



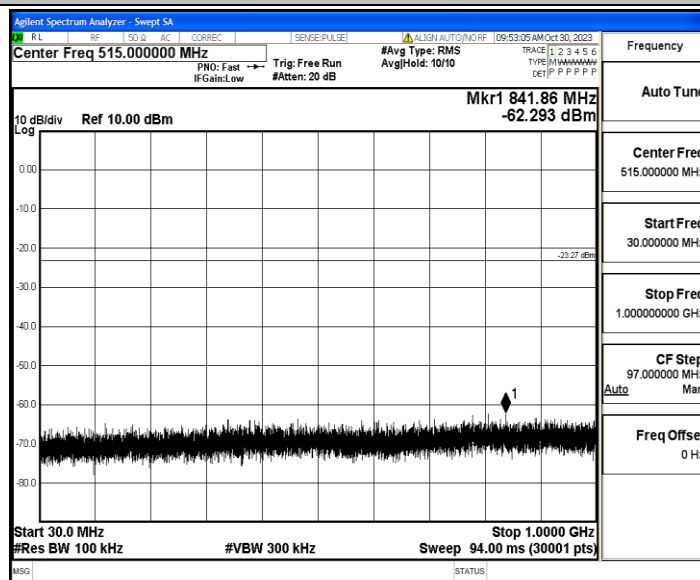
DH5_Ant1_2402_1000~26500



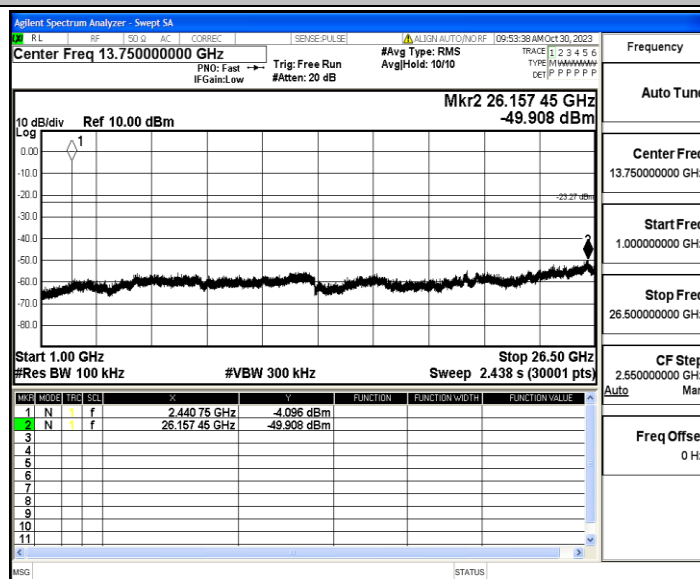
DH5_Ant1_2441_0~Reference



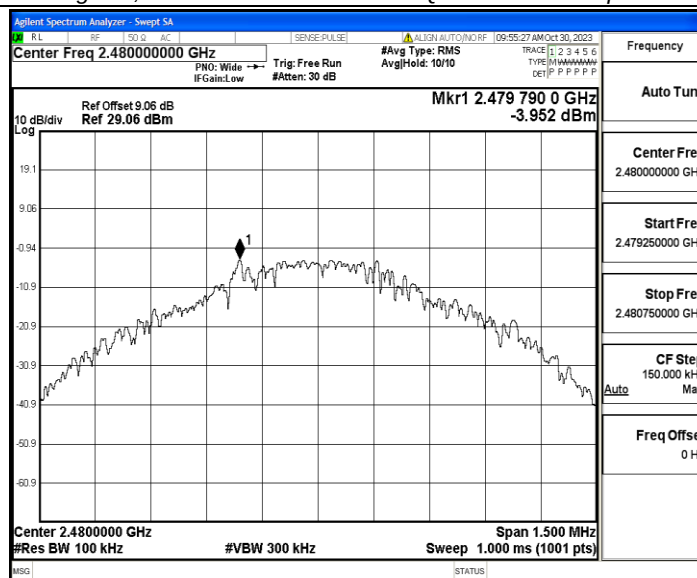
DH5_Ant1_2441_30~1000



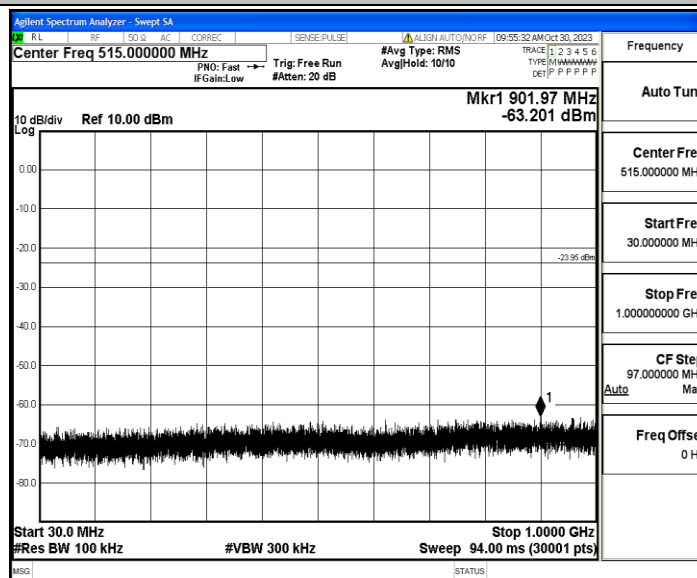
DH5_Ant1_2441_1000~26500



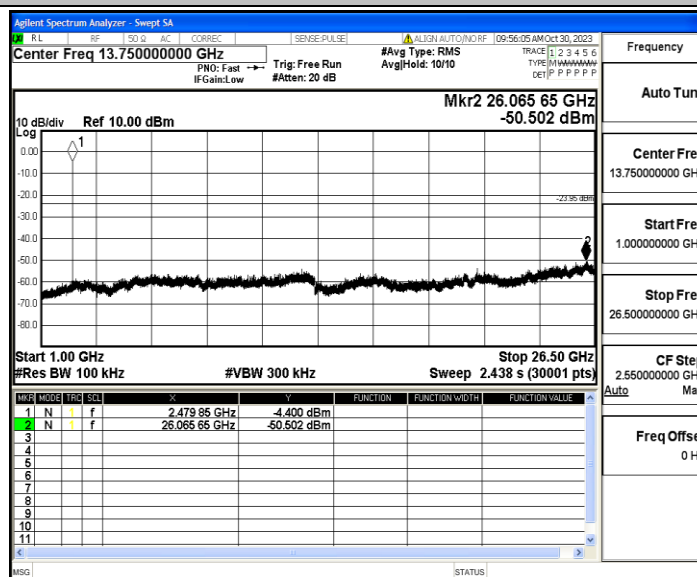
DH5_Ant1_2480_0~Reference



DH5_Ant1_2480_30~1000



DH5_Ant1_2480_1000~26500



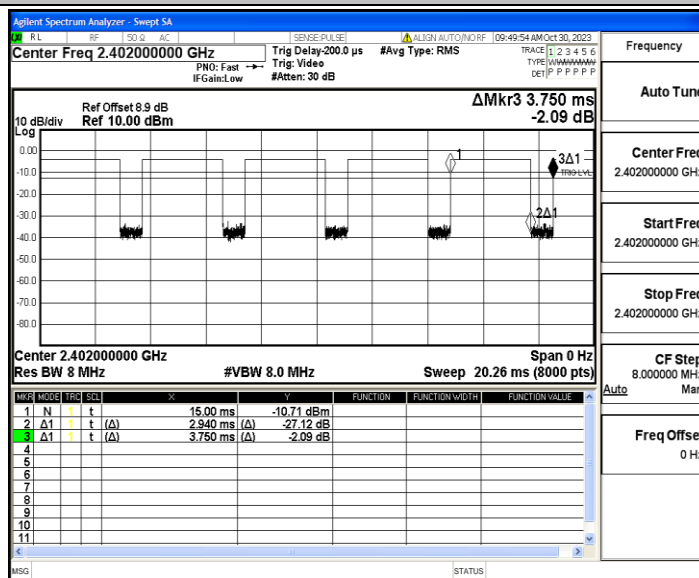
Appendix I: Duty Cycle

Test Result

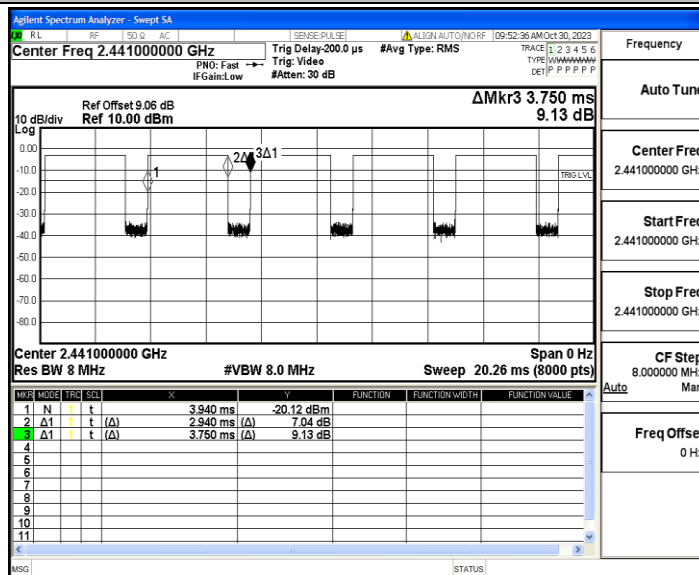
TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T[kHz]
DH5	Ant1	2402	2.94	3.75	78.40	0.34
		2441	2.94	3.75	78.40	0.34
		2480	2.94	3.75	78.40	0.34

Test Graphs

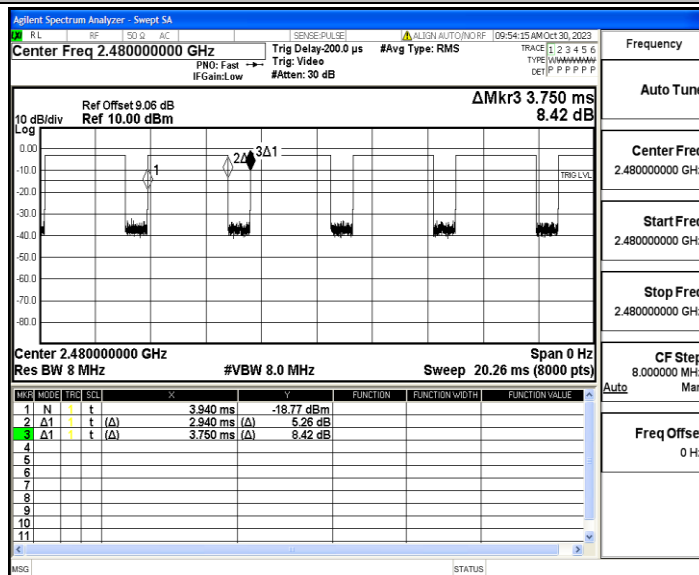
DH5_Ant1_2402



DH5_Ant1_2441



DH5_Ant1_2480



Appendix J: Emissions in Restricted Bands

Test Result

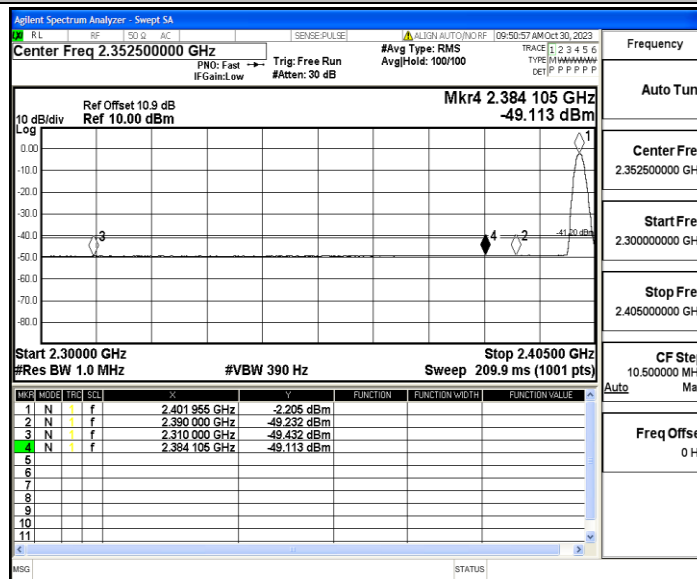
TestMode	Antenna	ChName	Channel	Detector	Freq(MHz)	Result(dBm)	Limit(dBm)	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-49.43	≤-41.20	PASS
				AV	2384.105	-49.11	≤-41.20	PASS
				AV	2390.000	-49.23	≤-41.20	PASS
				Peak	2310.000	-42.23	≤-21.20	PASS
				Peak	2316.275	-39.56	≤-21.20	PASS
				Peak	2390.000	-42.48	≤-21.20	PASS
		High	2480	AV	2483.500	-48.59	≤-41.20	PASS
				AV	2498.960	-48.46	≤-41.20	PASS
				AV	2500.000	-48.4	≤-41.20	PASS
				Peak	2483.500	-39.88	≤-21.20	PASS
				Peak	2492.240	-39.11	≤-21.20	PASS
				Peak	2500.000	-40.32	≤-21.20	PASS

Note:

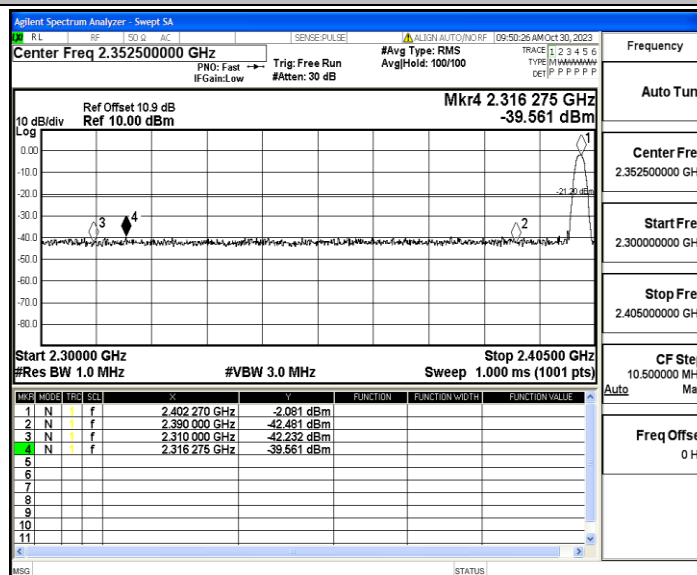
1. The Antenna Gain is compensated in the graph with 2dBi and Antenna Gain which is Higher.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

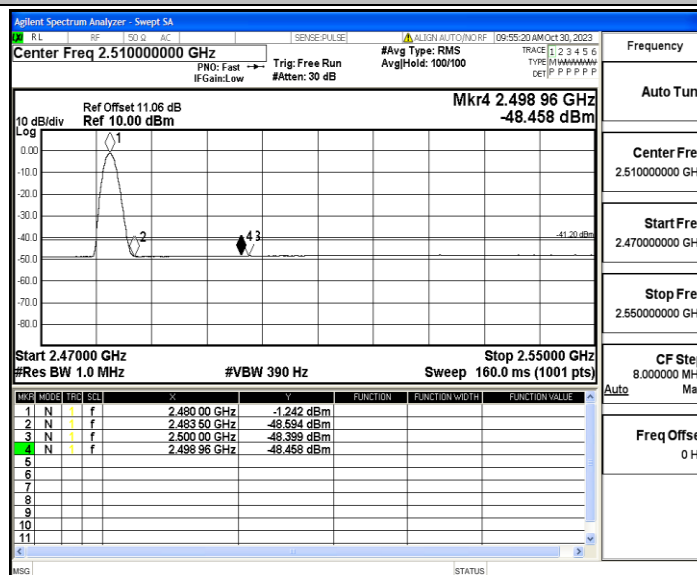
DH5_Ant1_Low_2402_AV



DH5_Ant1_Low_2402_Peak



DH5_Ant1_High_2480_AV



DH5_Ant1_High_2480_Peak

