

Appendix A

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

Product Name: Bluetooth Transmitter

Trade Mark: **AUGUST®**

Test Model: MR270B-HD

FCC ID: 2A4RAMR270B-HD

Environmental Conditions

Temperature:	23.8℃
Relative Humidity:	58%
ATM Pressure:	100.0 kPa
Test Engineer:	Nancy Li
Supervised by:	Hugo Chen

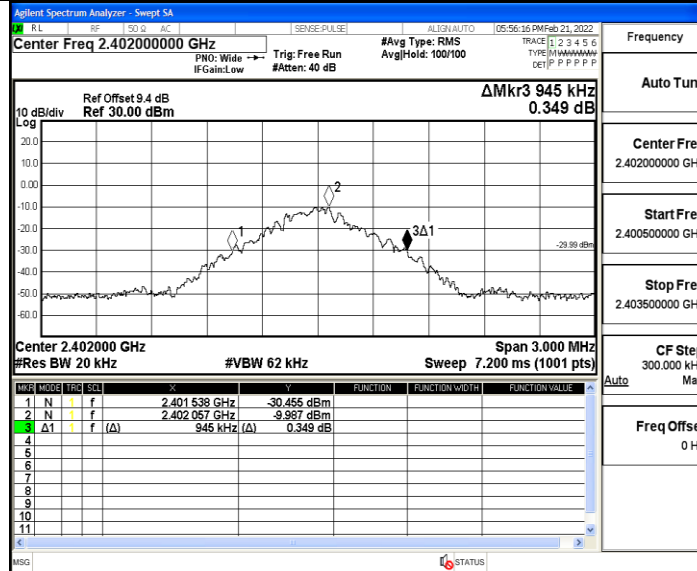
Appendix A: 20dB Emission Bandwidth

Test Result

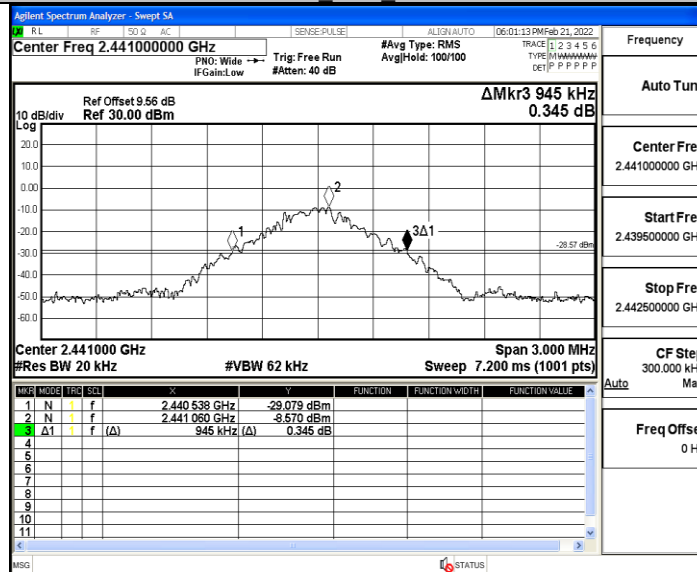
TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.945	2401.538	2402.483	---	PASS
		2441	0.945	2440.538	2441.483	---	PASS
		2480	0.939	2479.541	2480.480	---	PASS
2DH5	Ant1	2402	1.317	2401.337	2402.654	---	PASS
		2441	1.311	2440.343	2441.654	---	PASS
		2480	1.305	2479.343	2480.648	---	PASS
3DH5	Ant1	2402	1.302	2401.349	2402.651	---	PASS
		2441	1.275	2440.364	2441.639	---	PASS
		2480	1.341	2479.331	2480.672	---	PASS

Test Graphs

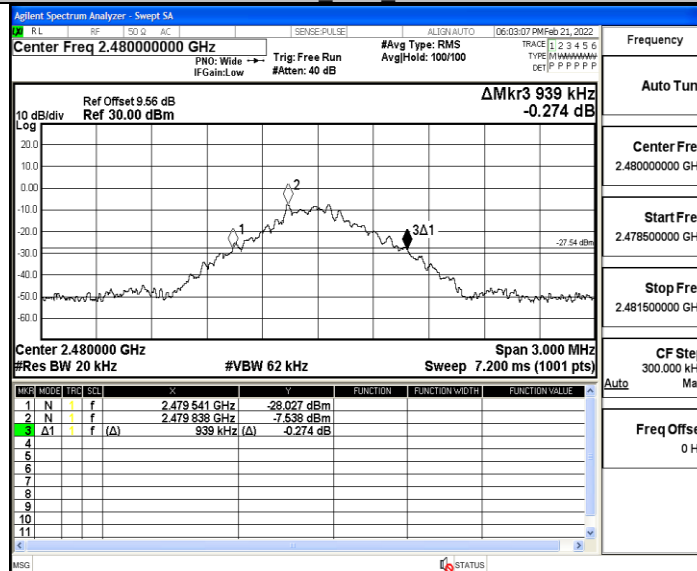
DH5_Ant1_2402



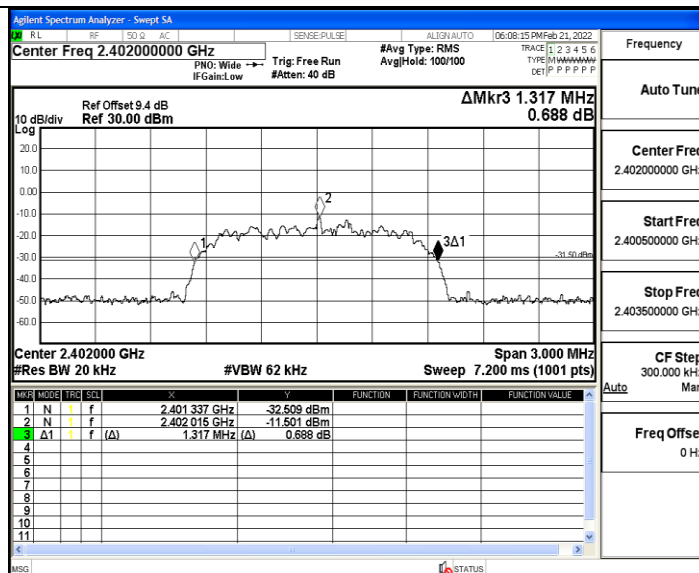
DH5_Ant1_2441



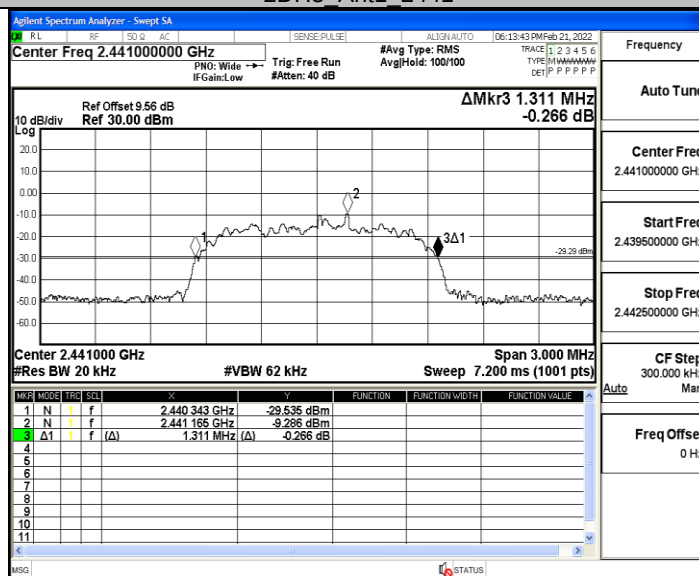
DH5_Ant1_2480



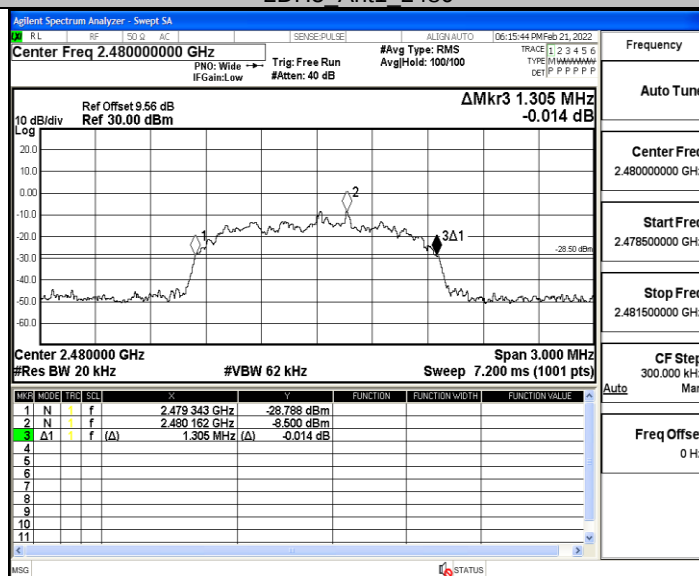
2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480



3DH5_Ant1_2402



Appendix B: Occupied Channel Bandwidth

Test Result

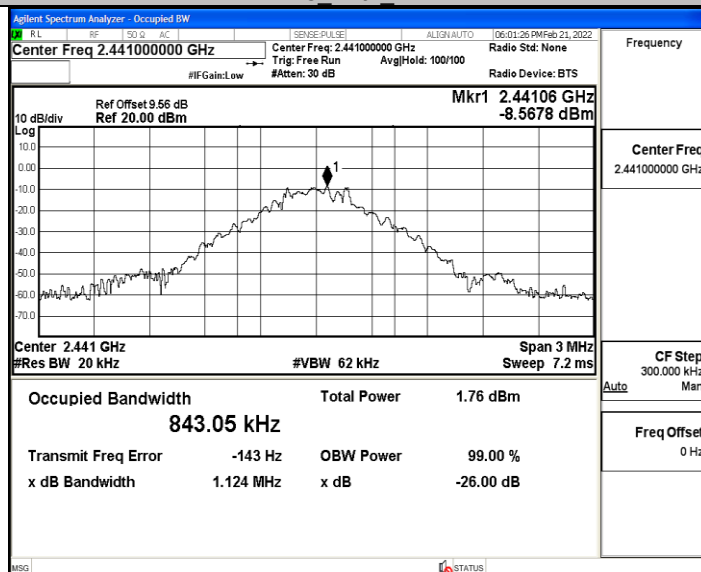
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.85052	2401.571	2402.422	---	PASS
		2441	0.84305	2440.578	2441.421	---	PASS
		2480	0.84780	2479.573	2480.421	---	PASS
2DH5	Ant1	2402	1.1881	2401.405	2402.593	---	PASS
		2441	1.1916	2440.404	2441.595	---	PASS
		2480	1.1875	2479.405	2480.593	---	PASS
3DH5	Ant1	2402	1.1947	2401.397	2402.591	---	PASS
		2441	1.1968	2440.401	2441.598	---	PASS
		2480	1.2008	2479.398	2480.598	---	PASS

Test Graphs

DH5_Ant1_2402



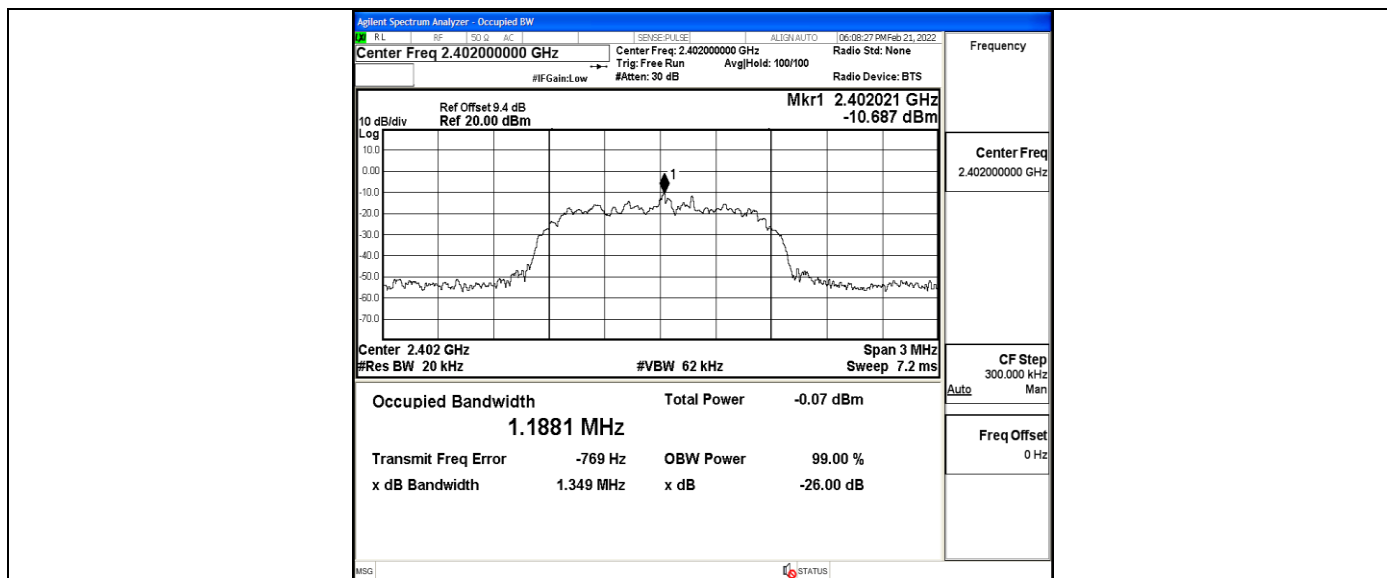
DH5_Ant1_2441



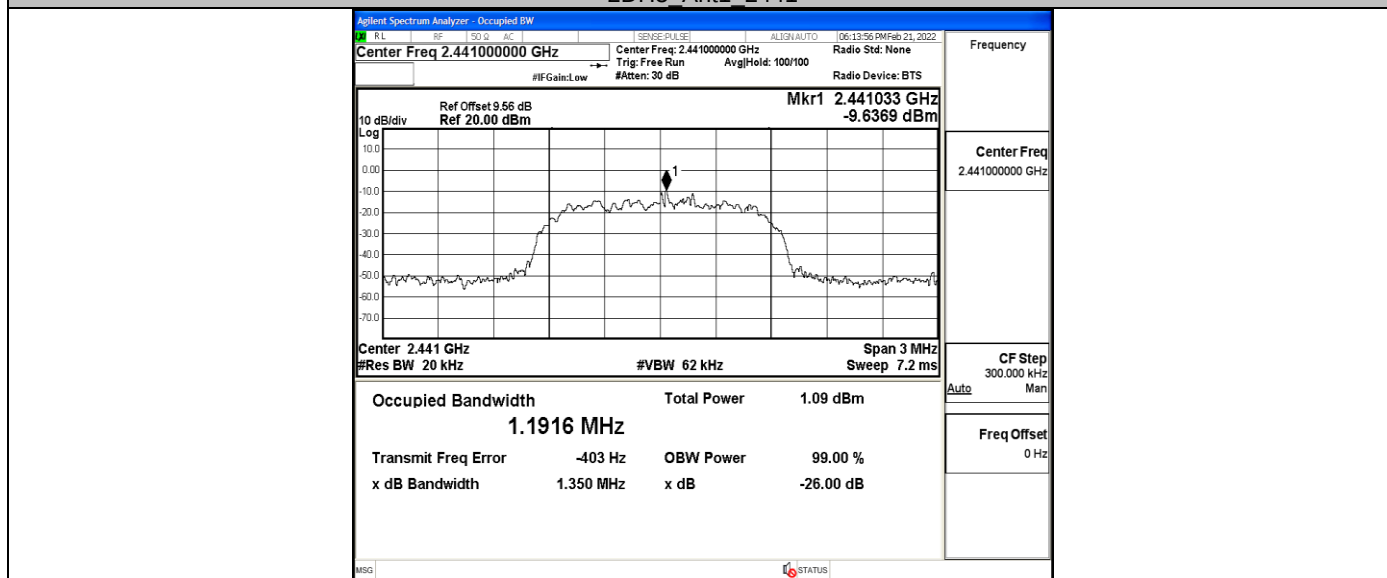
DH5_Ant1_2480



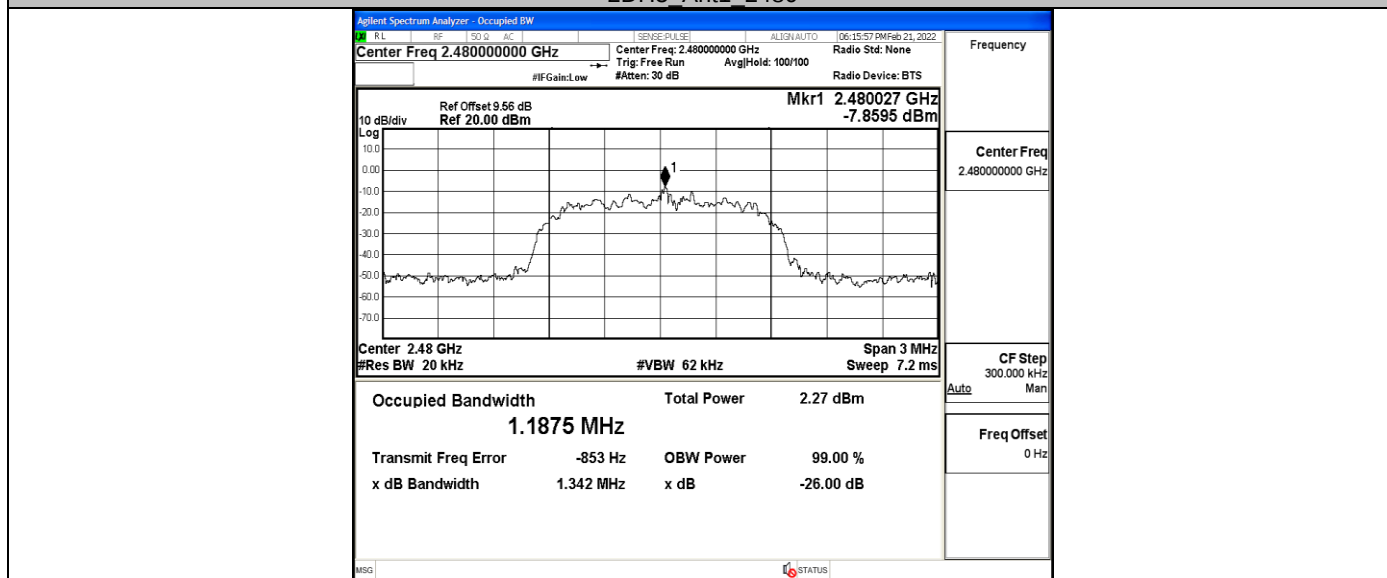
2DH5_Ant1_2402



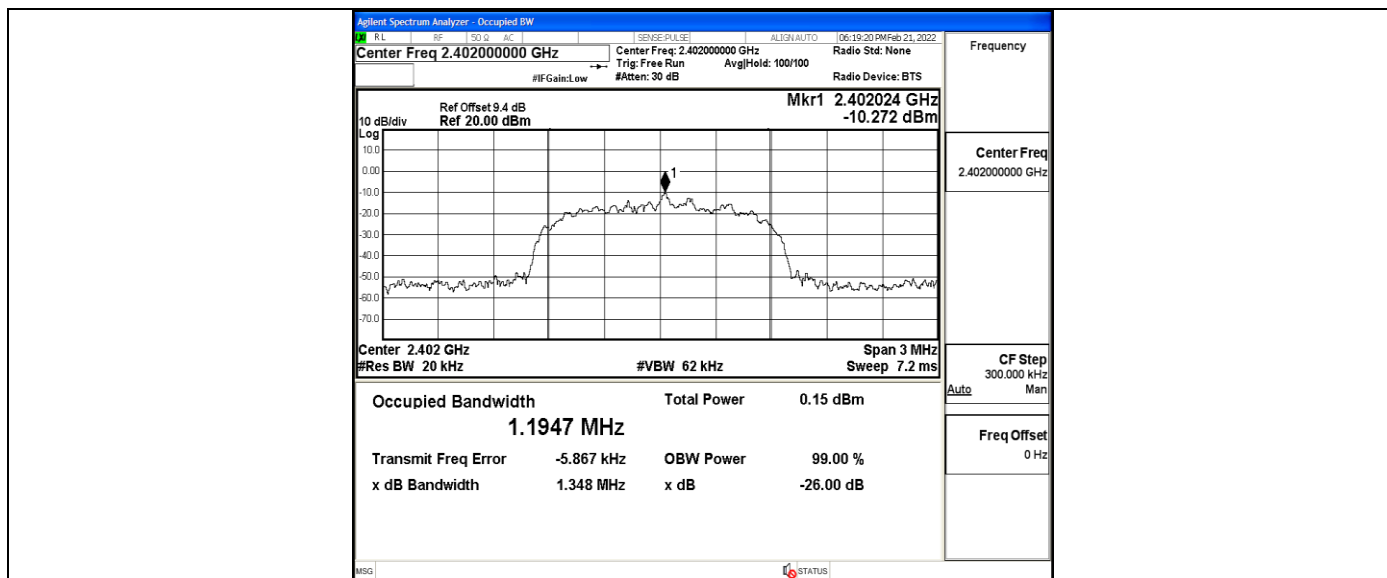
2DH5_Ant1_2441



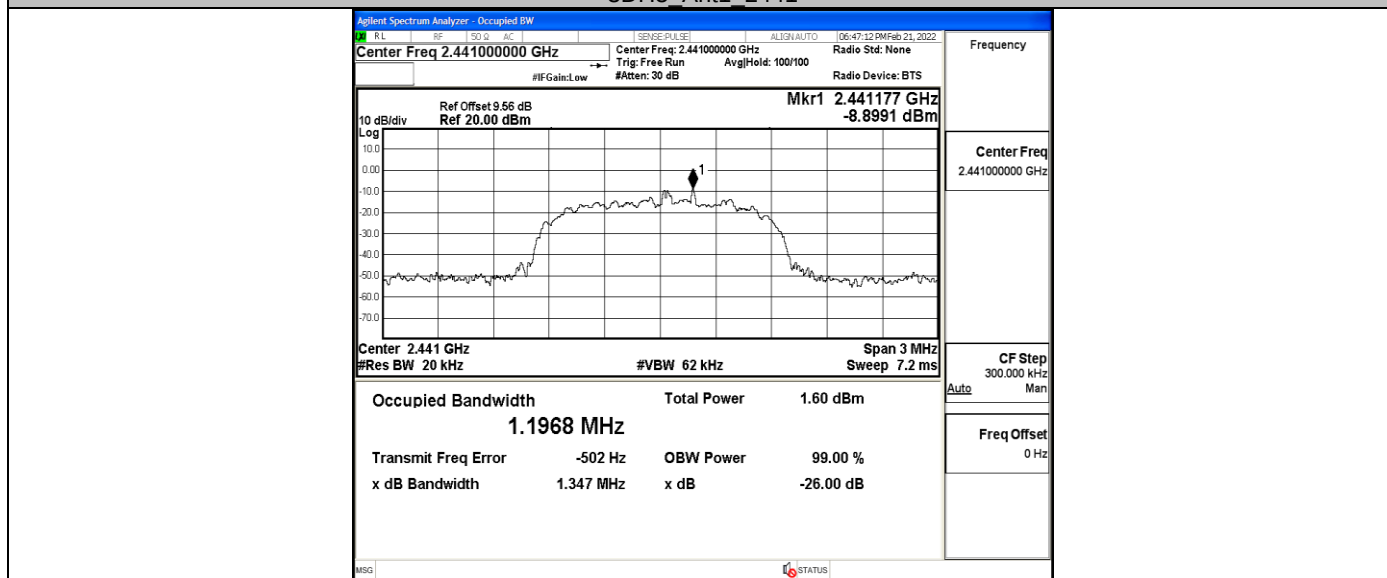
2DH5_Ant1_2480



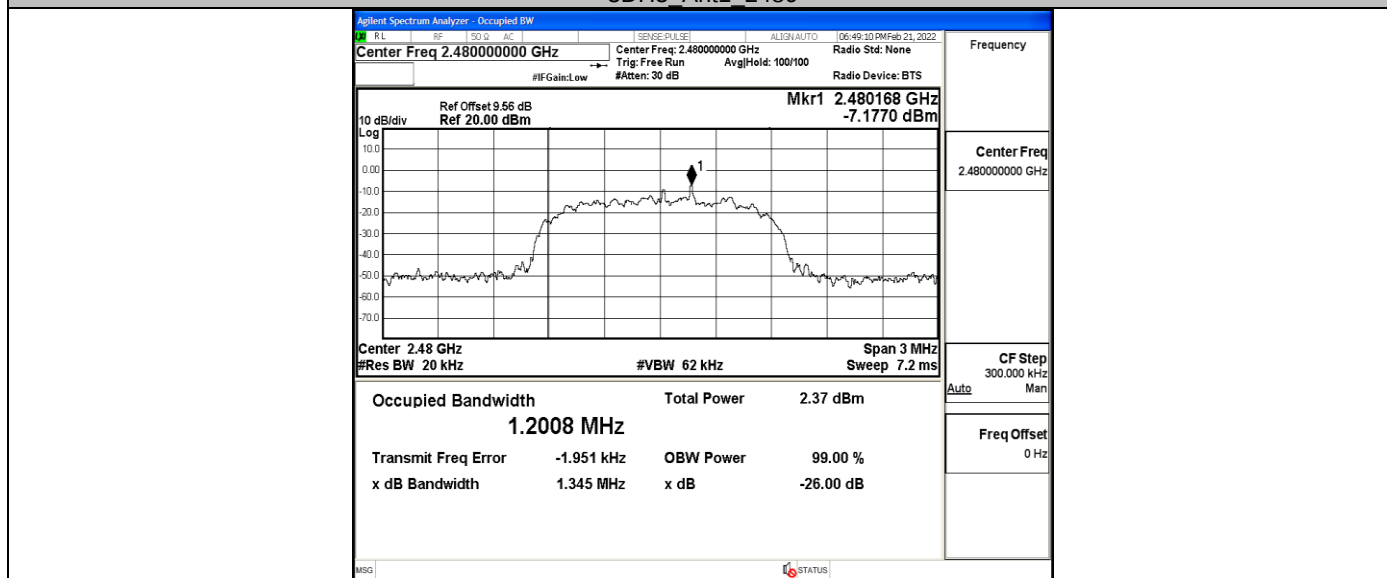
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



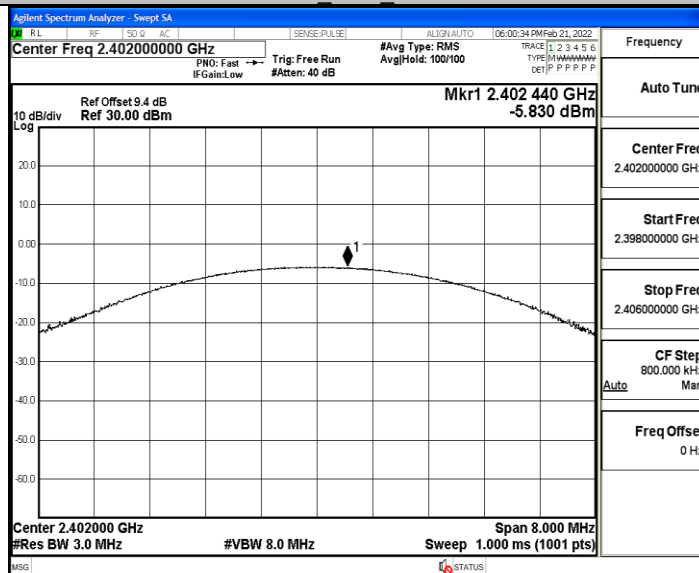
Appendix C: Maximum conducted output power

Test Result

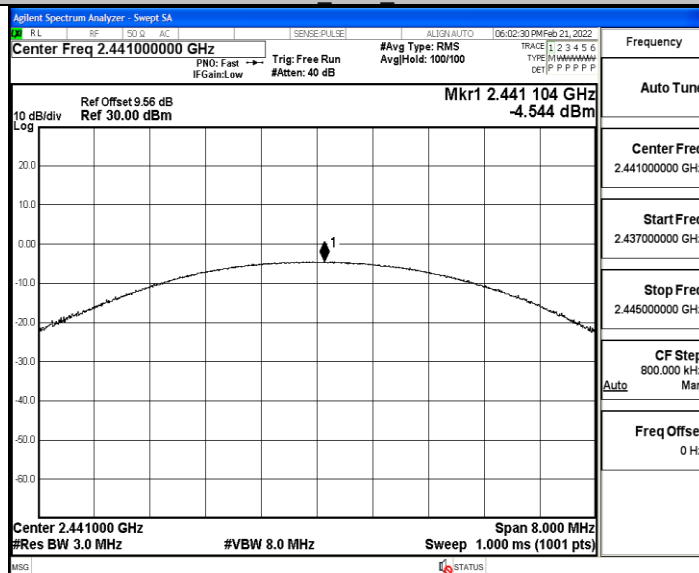
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	-5.83	<=30.00	PASS
		2441	-4.54	<=30.00	PASS
		2480	-3.61	<=30.00	PASS
2DH5	Ant1	2402	-4.03	<=20.97	PASS
		2441	-2.74	<=20.97	PASS
		2480	-1.72	<=20.97	PASS
3DH5	Ant1	2402	-3.84	<=20.97	PASS
		2441	-2.2	<=20.97	PASS
		2480	-1.08	<=20.97	PASS

Test Graphs

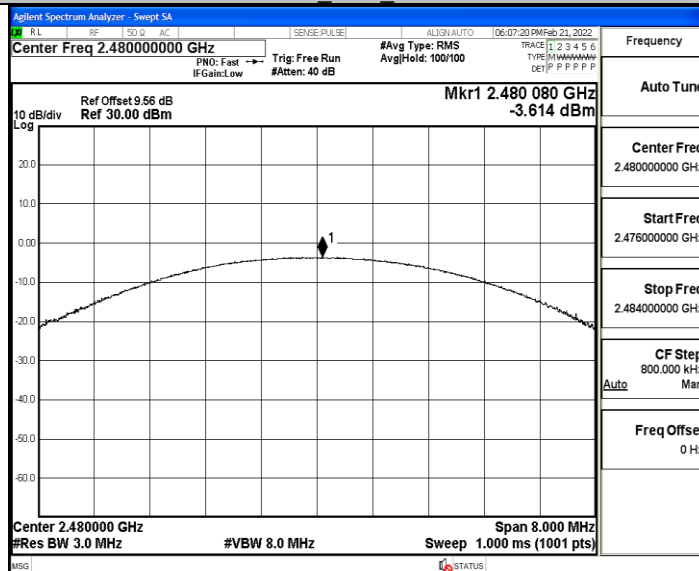
DH5_Ant1_2402



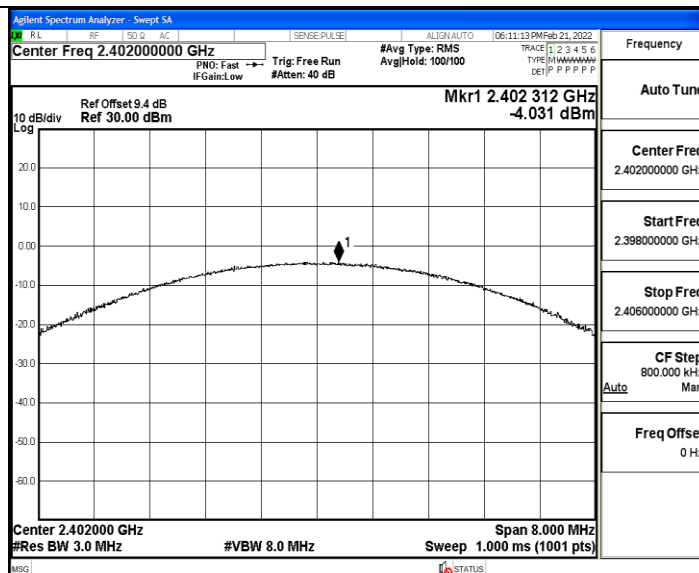
DH5_Ant1_2441



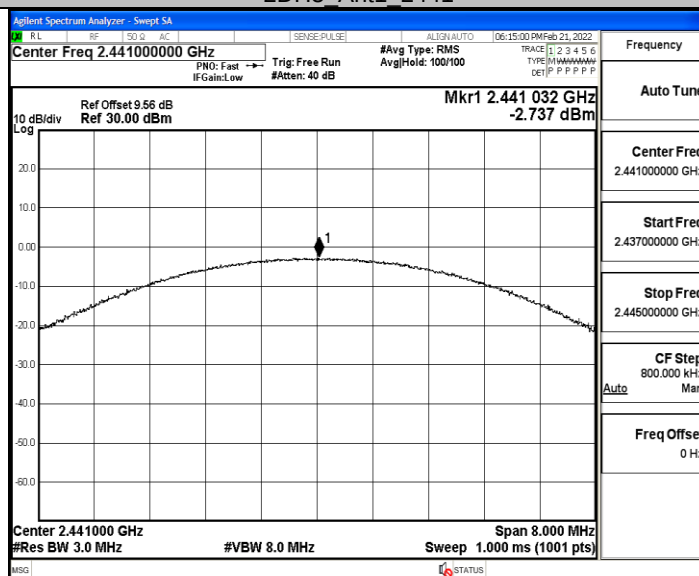
DH5_Ant1_2480



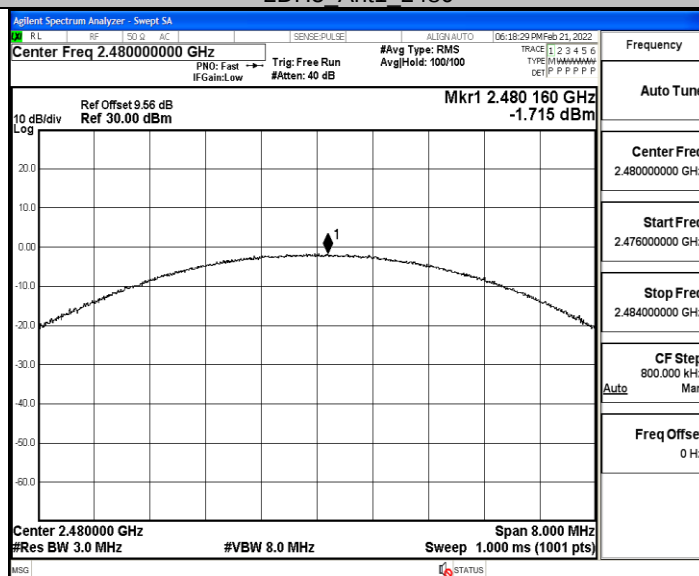
2DH5_Ant1_2402



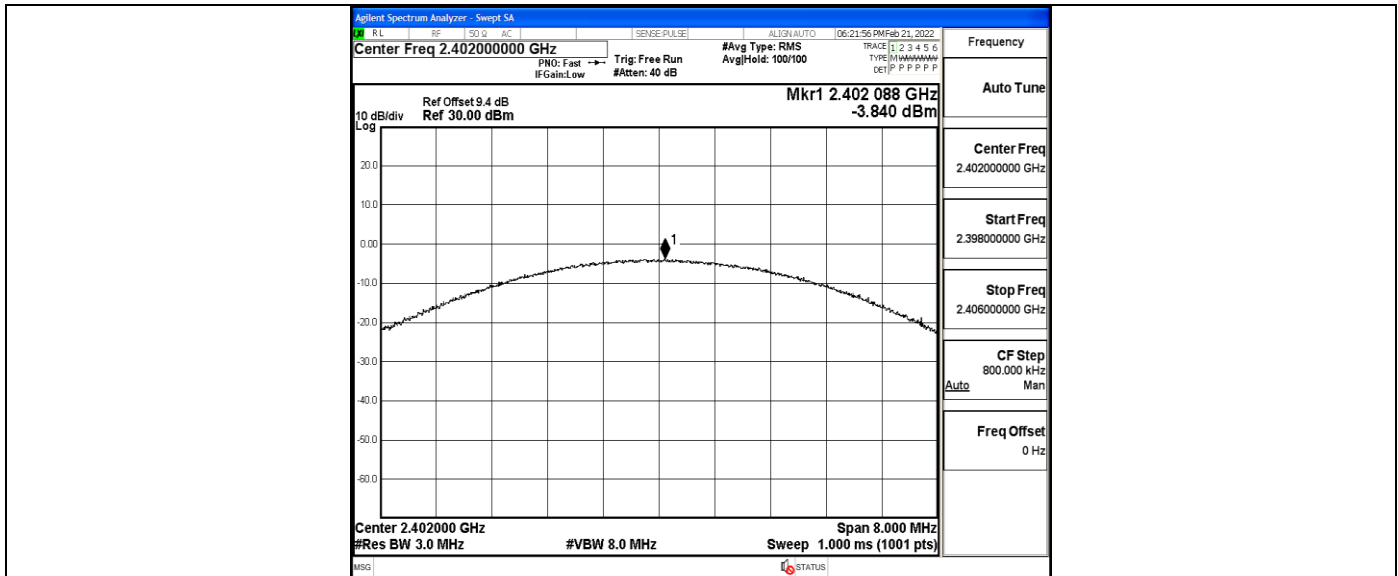
2DH5_Ant1_2441



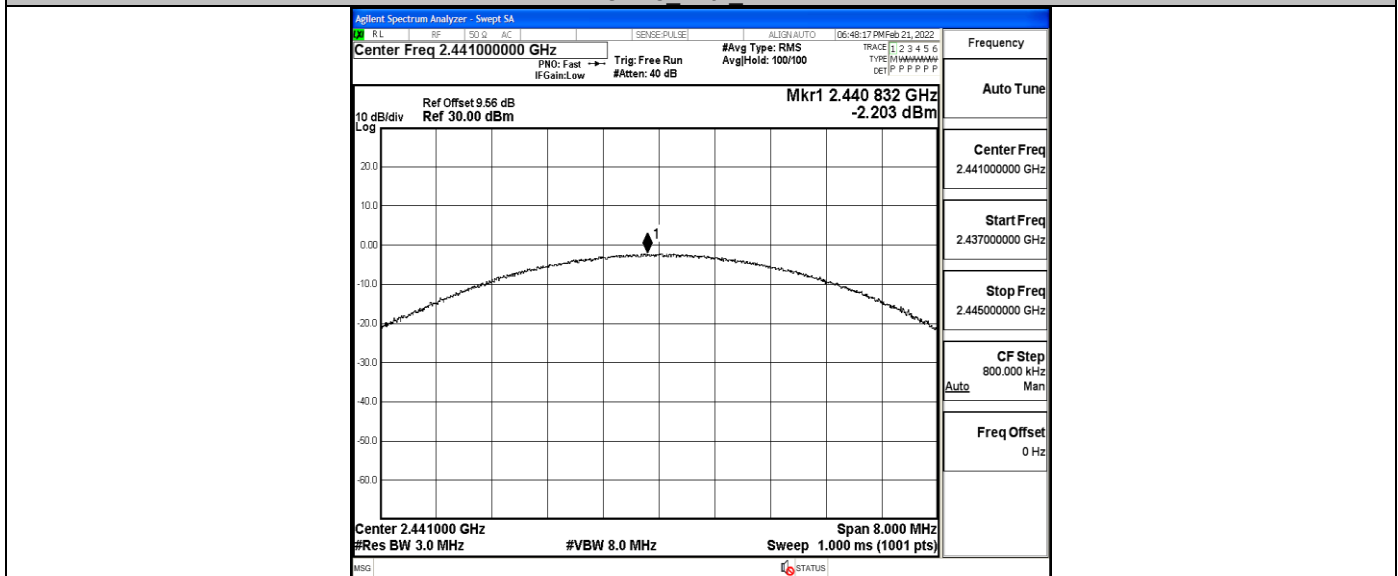
2DH5_Ant1_2480



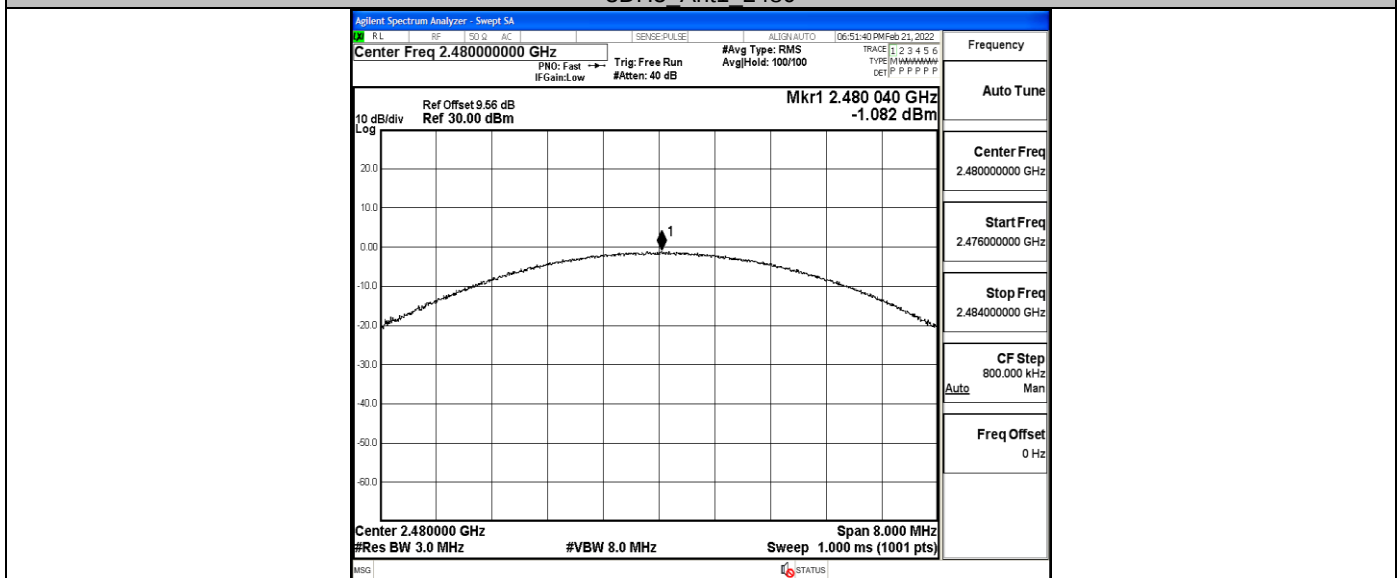
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



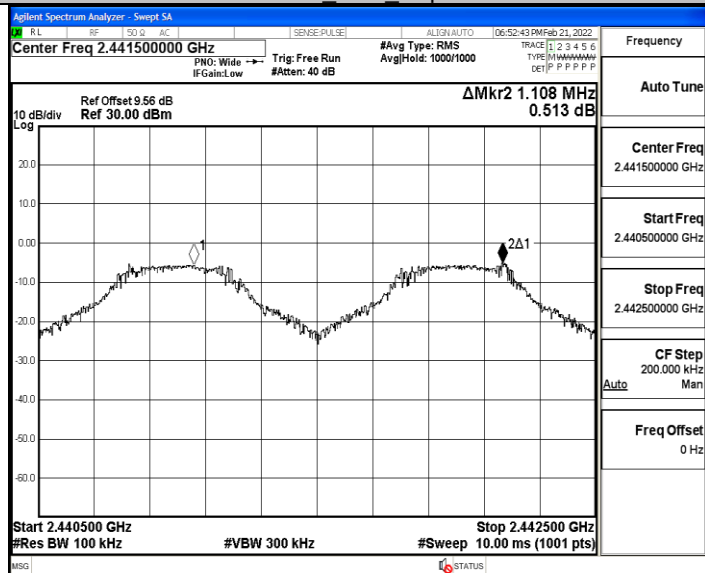
Appendix D: Carrier frequency separation

Test Result

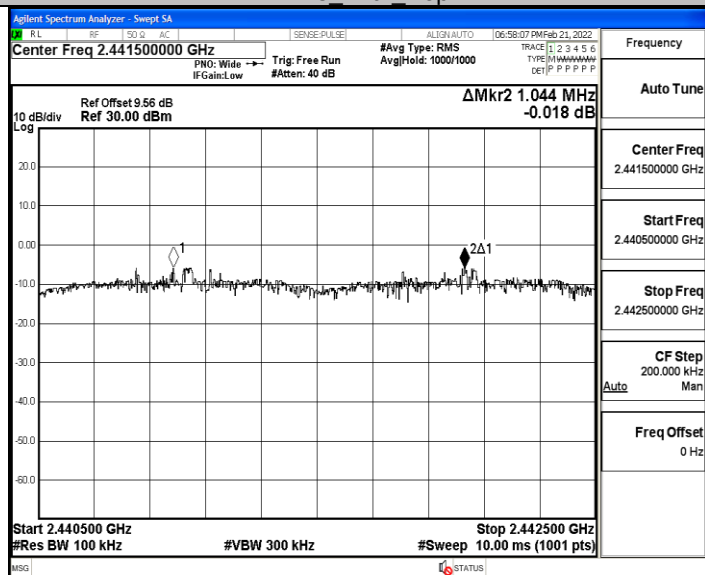
TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.108	≥ 0.942	PASS
2DH5	Ant1	Hop	1.044	≥ 0.878	PASS
3DH5	Ant1	Hop	1.002	≥ 0.876	PASS

Test Graphs

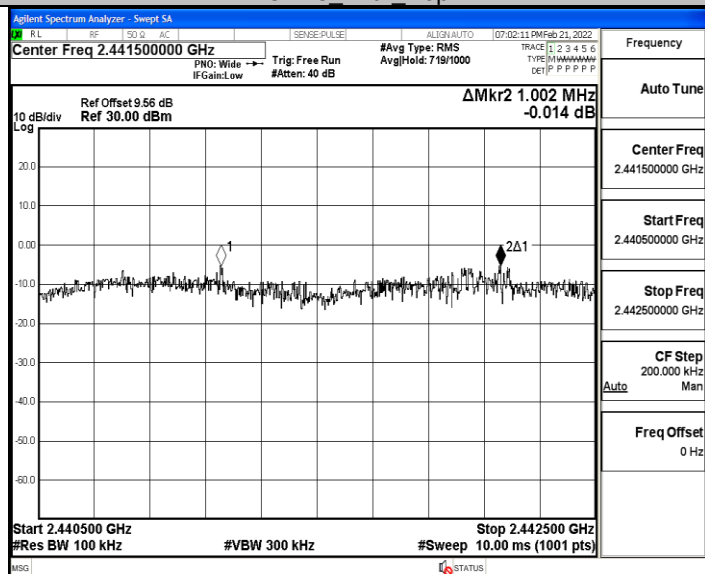
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop

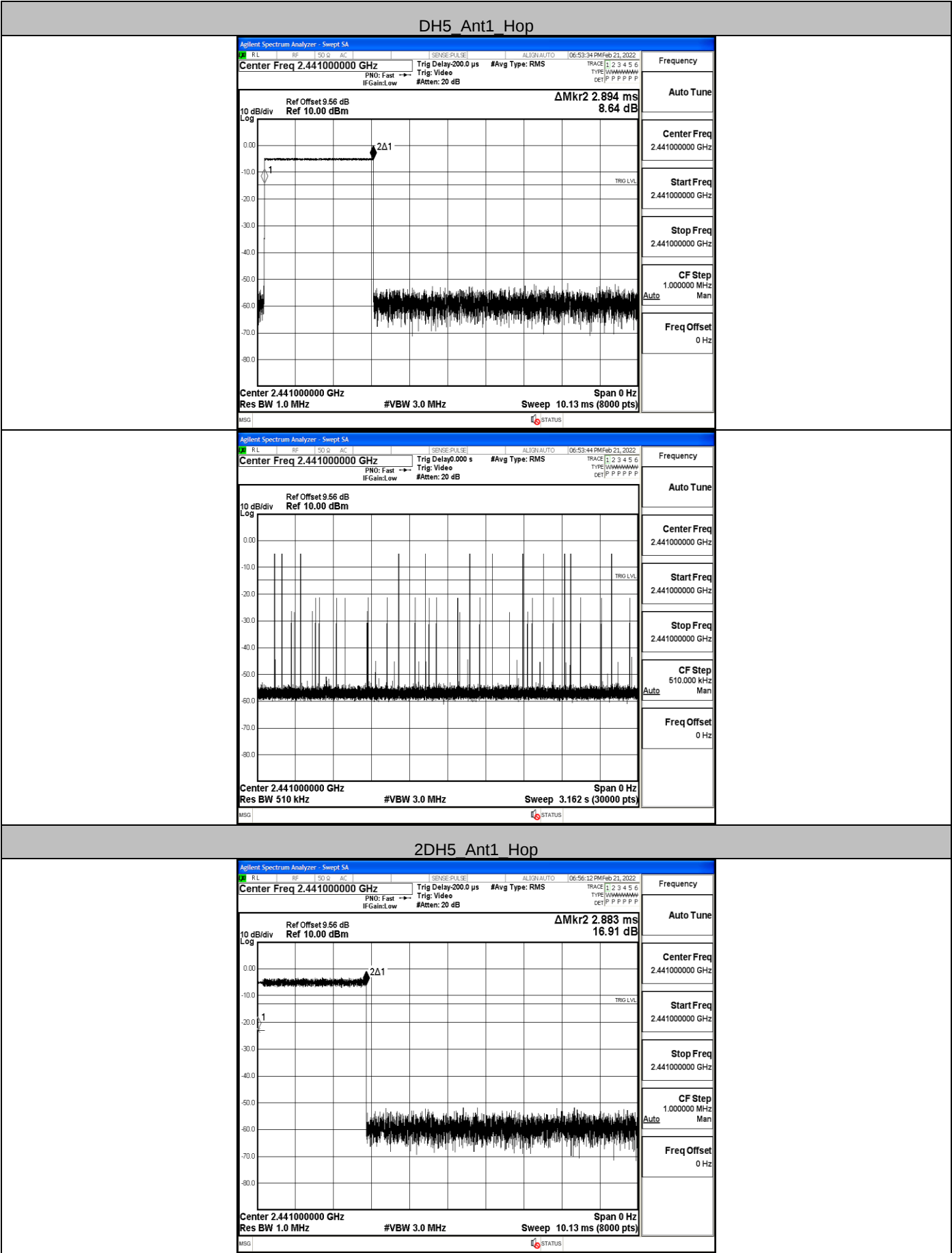


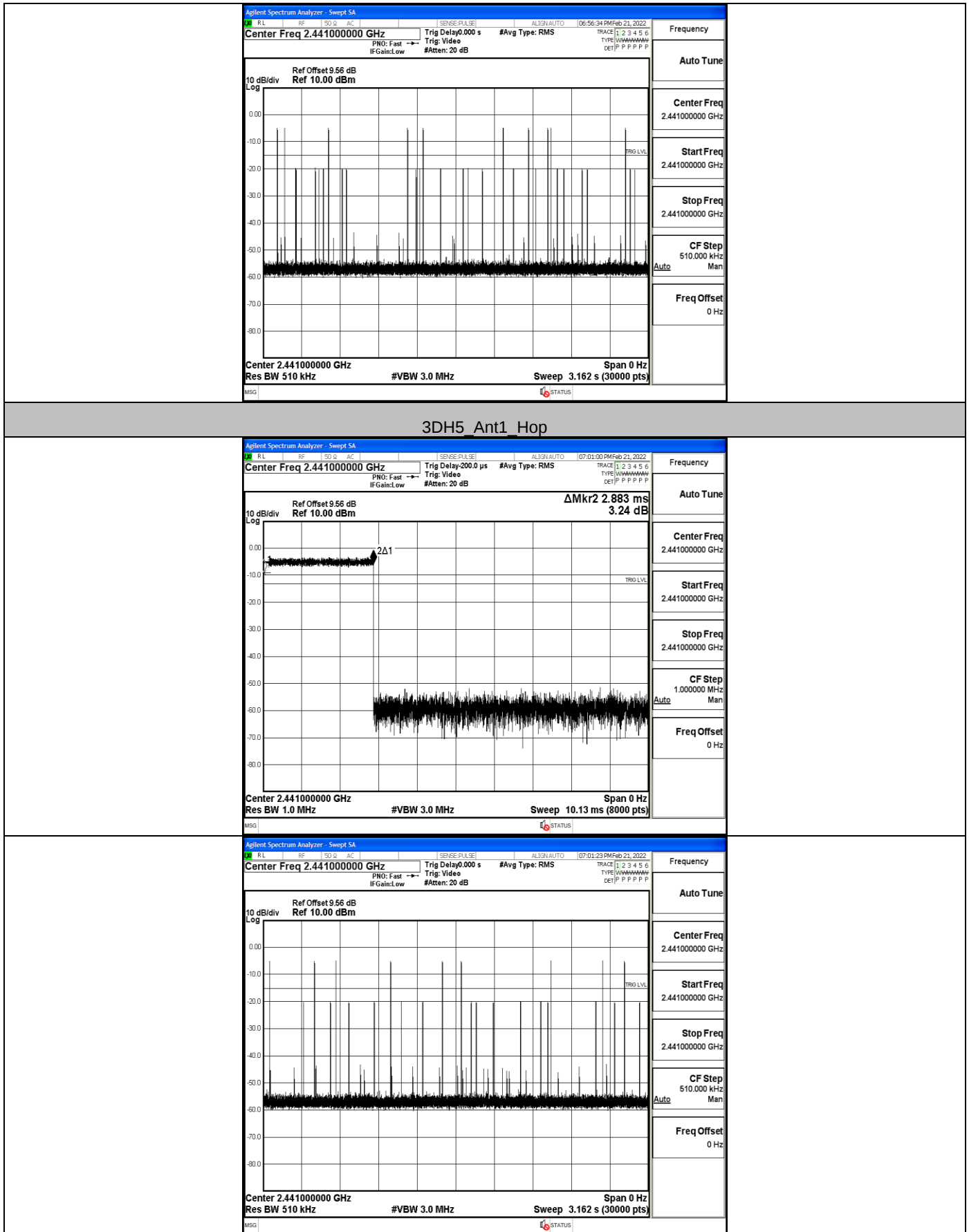
Appendix E: Time of occupancy

Test Result

TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.89	130	0.376	<=0.4	PASS
2DH5	Ant1	Hop	2.88	110	0.317	<=0.4	PASS
3DH5	Ant1	Hop	2.88	100	0.288	<=0.4	PASS

Test Graphs





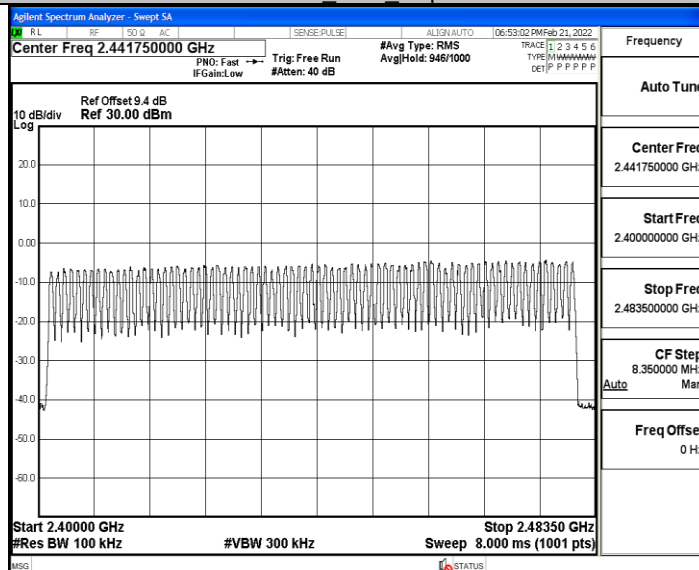
Appendix F: Number of hopping channels

Test Result

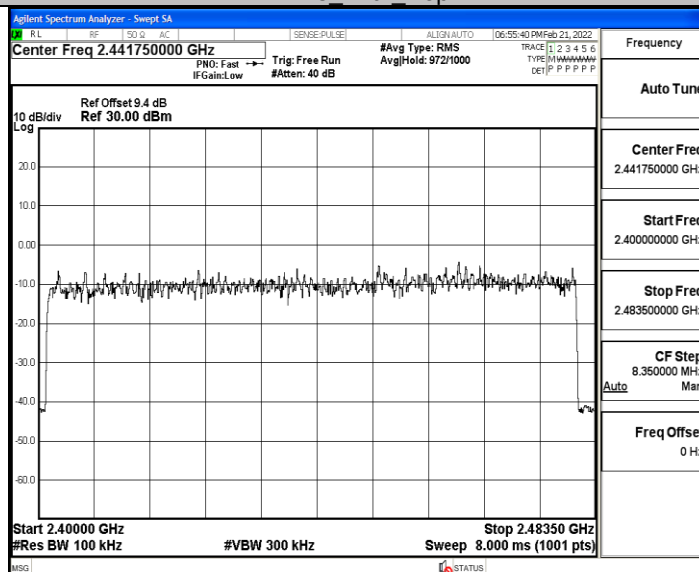
TestMode	Antenna	Channel	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	>=15	PASS
2DH5	Ant1	Hop	79	>=15	PASS
3DH5	Ant1	Hop	79	>=15	PASS

Test Graphs

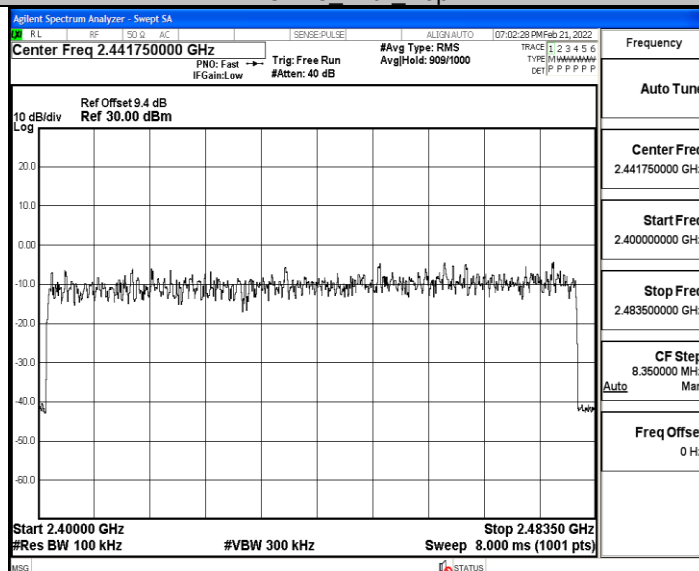
DH5 Ant1 Hop



2DH5 Ant1 Hop



3DH5 Ant1 Hop



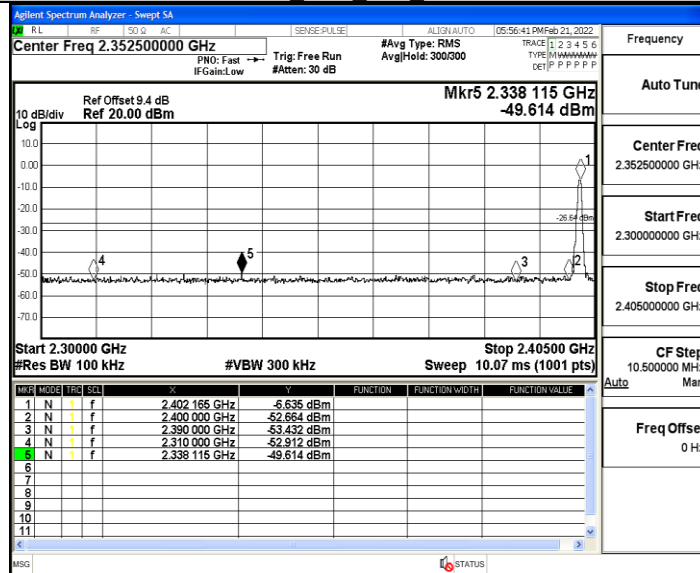
Appendix G: Band edge measurements

Test Result

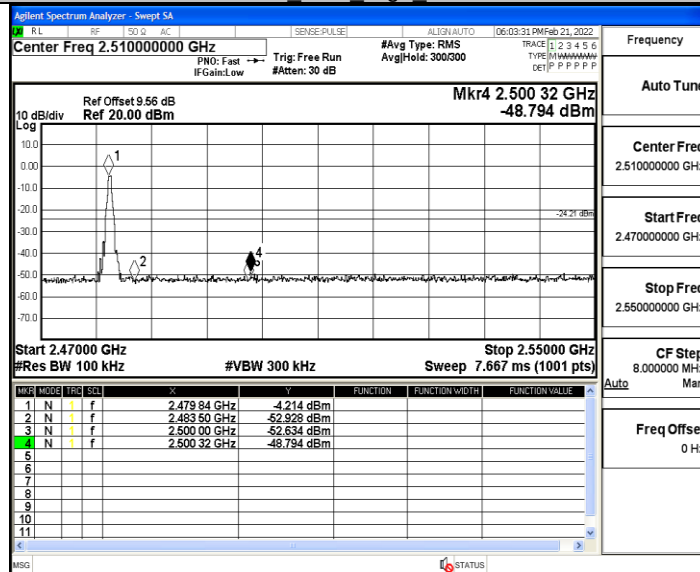
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-6.64	-49.61	≤ -26.64	PASS
		High	2480	-4.21	-48.79	≤ -24.21	PASS
		Low	Hop_2402	-9.79	-50.78	≤ -29.79	PASS
		High	Hop_2480	-4.26	-48.8	≤ -24.26	PASS
2DH5	Ant1	Low	2402	-6.99	-49.81	≤ -26.99	PASS
		High	2480	-5.33	-49.17	≤ -25.33	PASS
		Low	Hop_2402	-9.68	-50.57	≤ -29.68	PASS
		High	Hop_2480	-7.01	-48.9	≤ -27.01	PASS
3DH5	Ant1	Low	2402	-6.58	-50.37	≤ -26.58	PASS
		High	2480	-4.50	-49.13	≤ -24.5	PASS
		Low	Hop_2402	-8.18	-50.49	≤ -28.18	PASS
		High	Hop_2480	-6.31	-48.83	≤ -26.31	PASS

Test Graphs

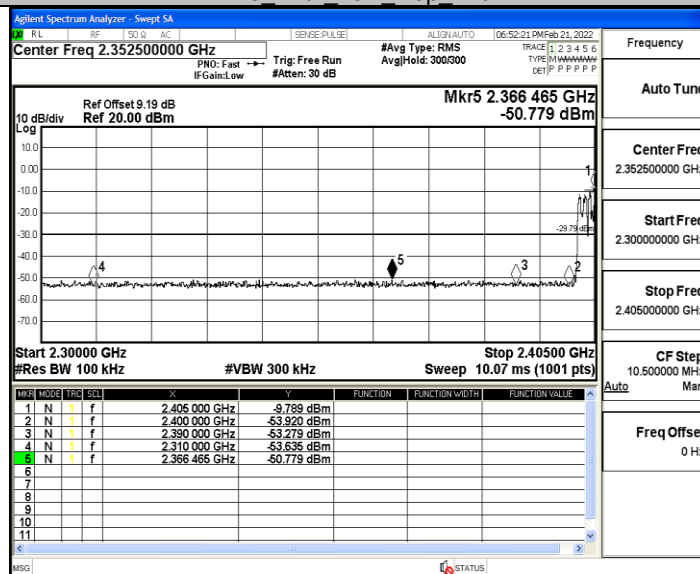
DH5_Ant1_Low_2402



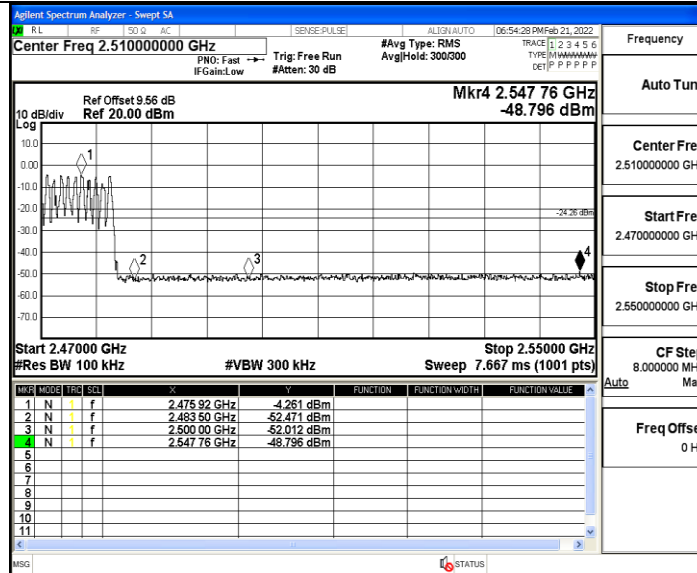
DH5_Ant1_High_2480



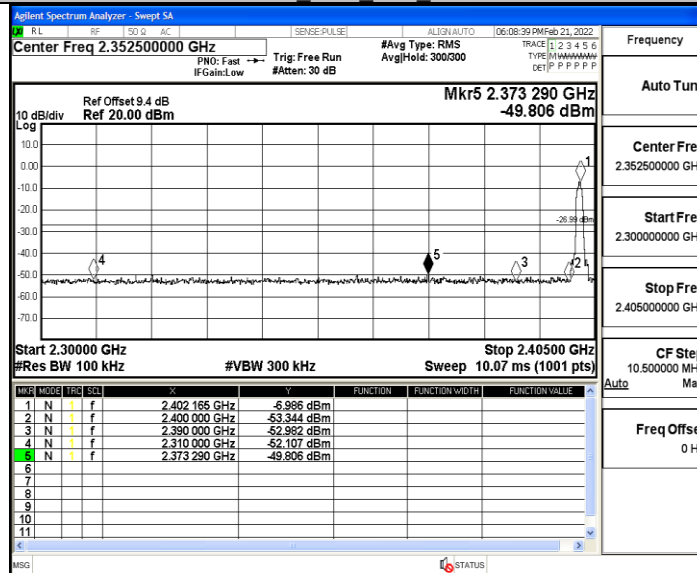
DH5_Ant1_Low_Hop_2402



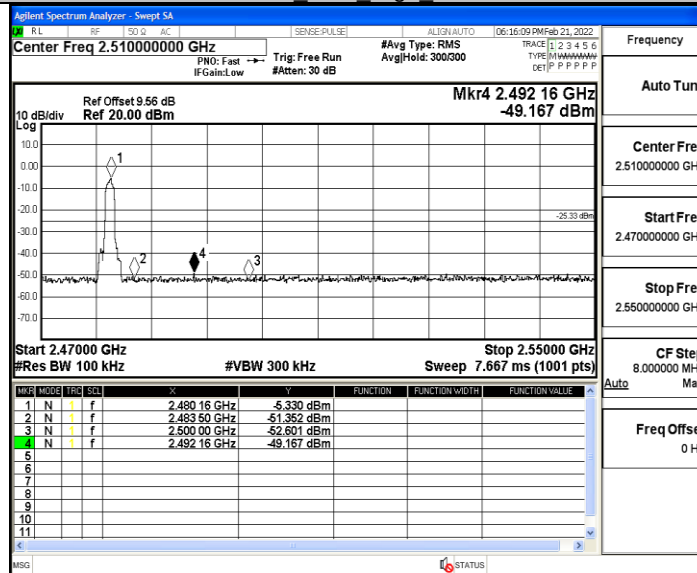
DH5_Ant1_High_Hop_2480



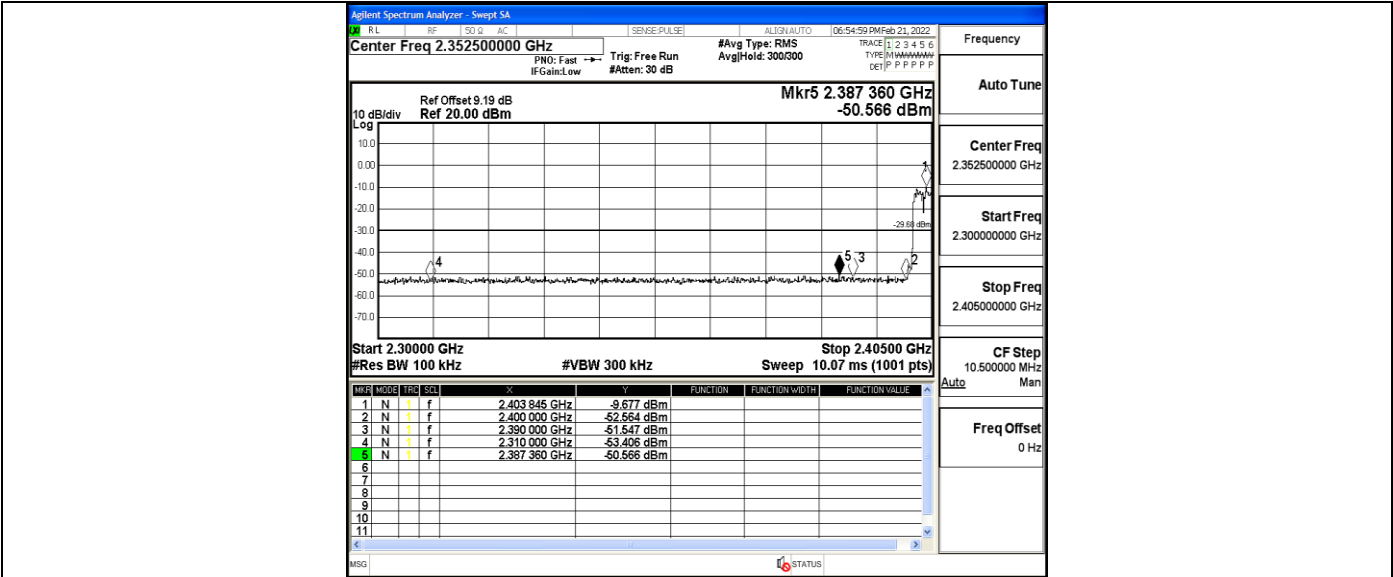
2DH5 Ant1 Low 2402



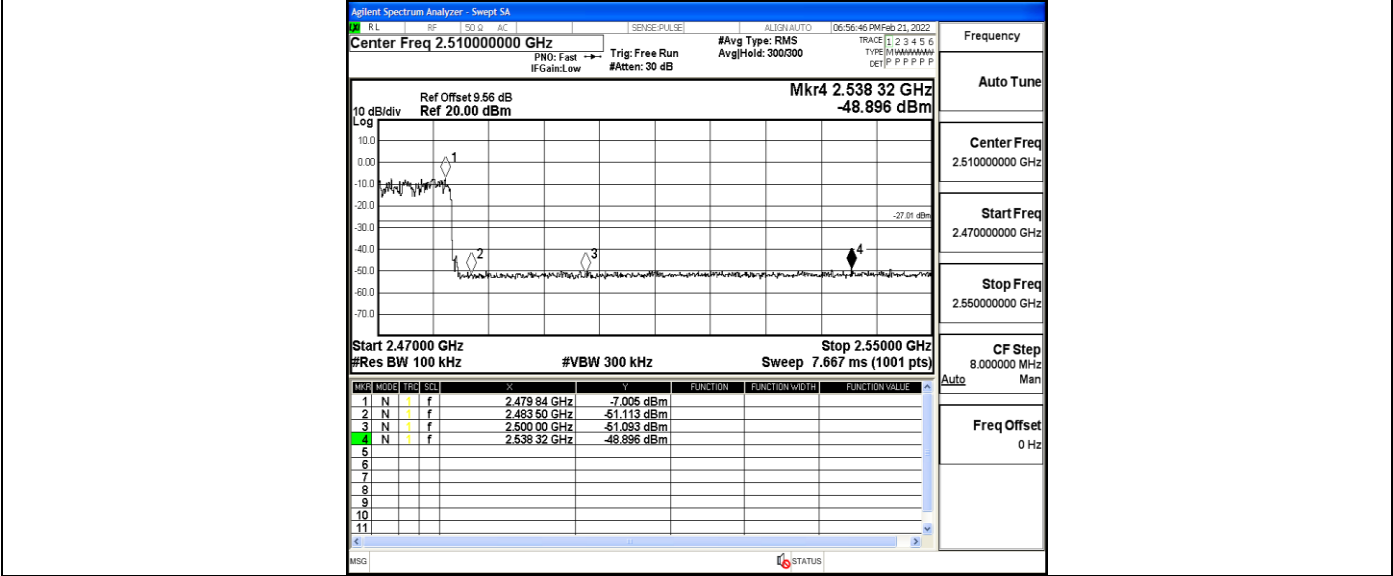
2DH5 Ant1 High 2480



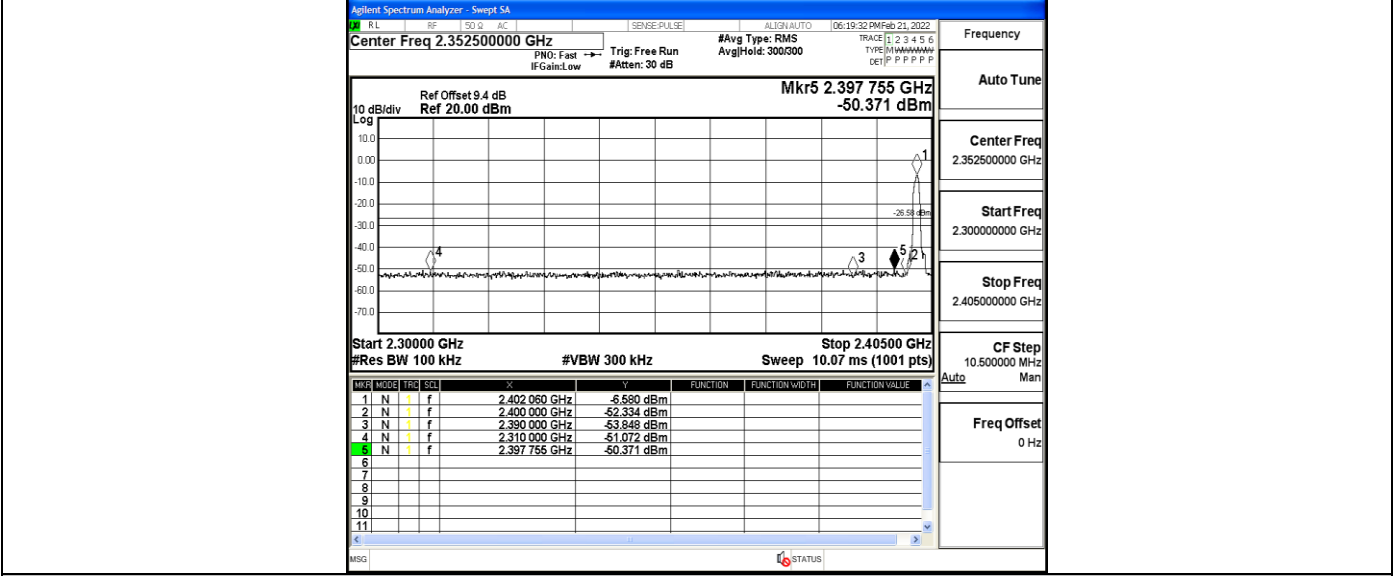
2DH5 Ant1 Low Hop 2402



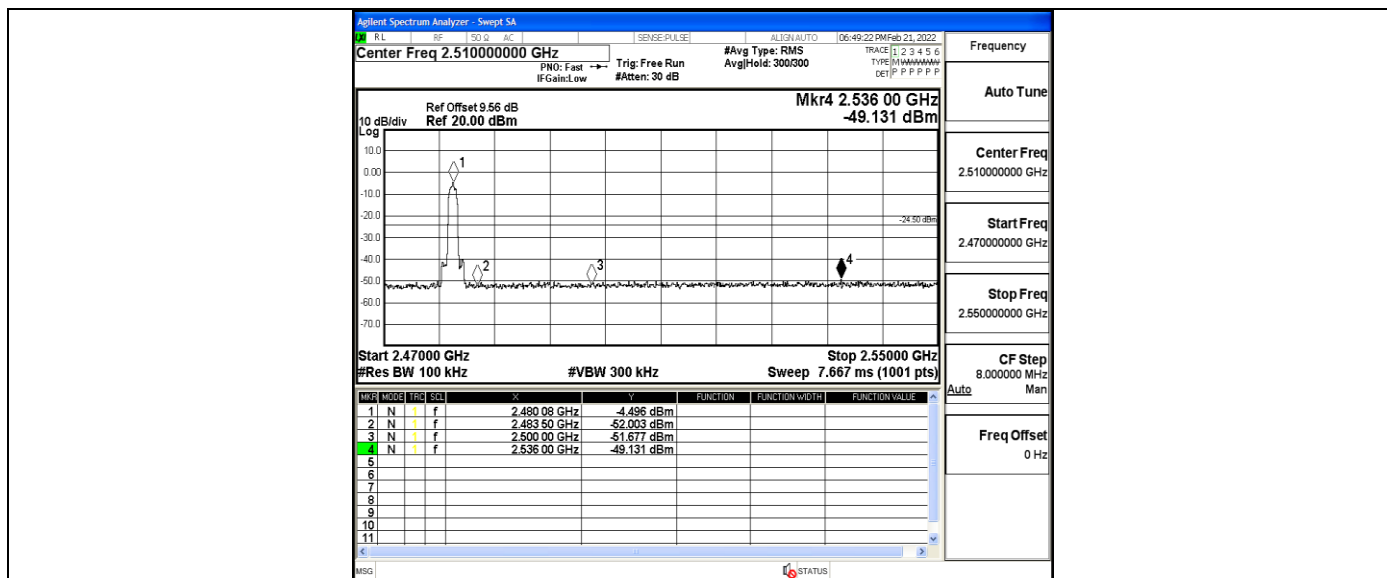
2DH5 Ant1 High Hop 2480



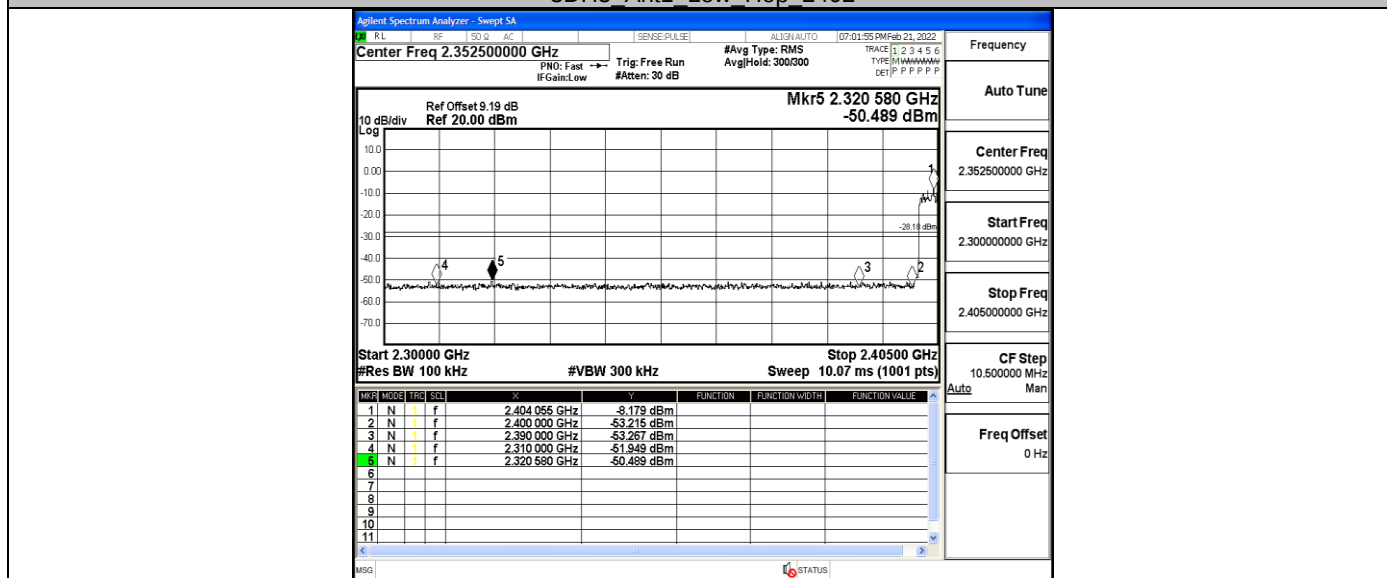
3DH5 Ant1 Low 2402



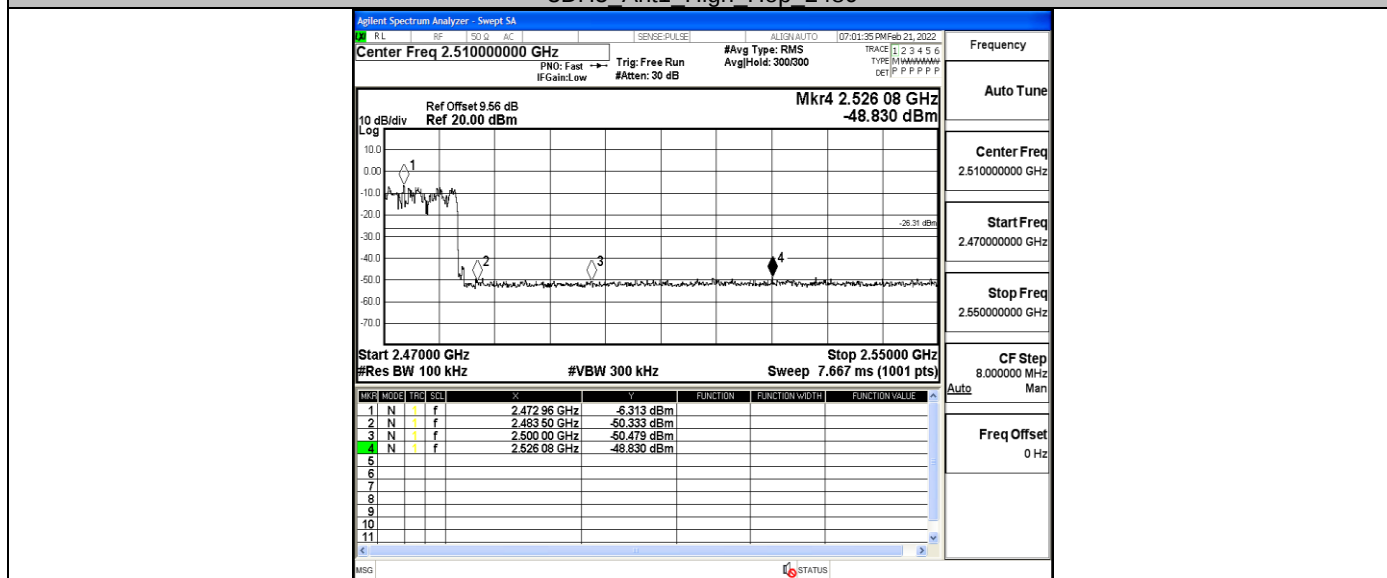
3DH5 Ant1 High 2480



3DH5 Ant1 Low Hop 2402



3DH5 Ant1 High Hop 2480



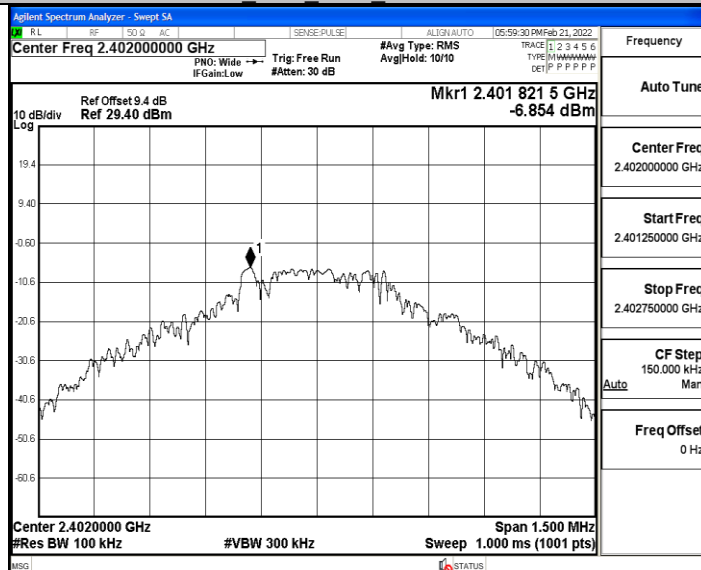
Appendix H: Conducted Spurious Emission

Test Result

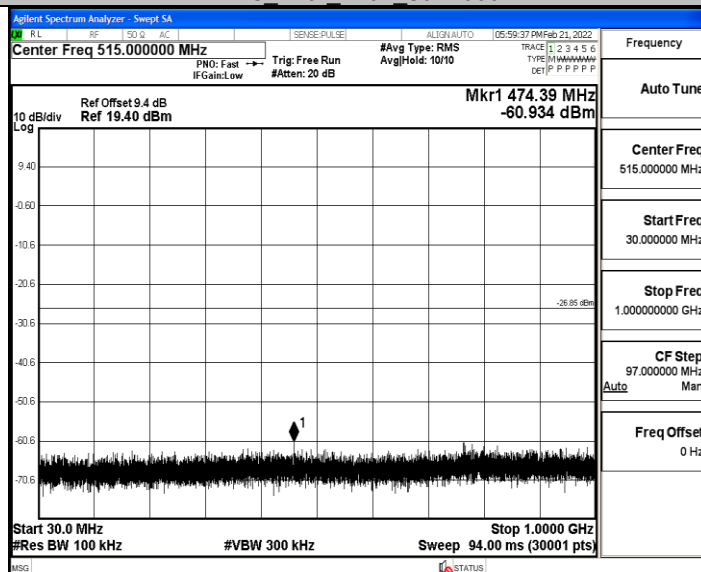
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-6.85	-6.85	---	PASS
			30~1000	-6.85	-60.93	≤-26.85	PASS
			1000~26500	-6.85	-52.03	≤-26.85	PASS
		2441	Reference	-6.09	-6.09	---	PASS
			30~1000	-6.09	-60.85	≤-26.09	PASS
			1000~26500	-6.09	-51.89	≤-26.09	PASS
		2480	Reference	-5.00	-5.00	---	PASS
			30~1000	-5.00	-60.71	≤-25	PASS
			1000~26500	-5.00	-51.57	≤-25	PASS
2DH5	Ant1	2402	Reference	-8.80	-8.80	---	PASS
			30~1000	-8.80	-61.15	≤-28.8	PASS
			1000~26500	-8.80	-52.08	≤-28.8	PASS
		2441	Reference	-8.29	-8.29	---	PASS
			30~1000	-8.29	-53	≤-28.29	PASS
			1000~26500	-8.29	-52.22	≤-28.29	PASS
		2480	Reference	-7.56	-7.56	---	PASS
			30~1000	-7.56	-61.34	≤-27.56	PASS
			1000~26500	-7.56	-51.93	≤-27.56	PASS
3DH5	Ant1	2402	Reference	-9.34	-9.34	---	PASS
			30~1000	-9.34	-61.33	≤-29.34	PASS
			1000~26500	-9.34	-52.46	≤-29.34	PASS
		2441	Reference	-6.03	-6.03	---	PASS
			30~1000	-6.03	-61.19	≤-26.03	PASS
			1000~26500	-6.03	-52.98	≤-26.03	PASS
		2480	Reference	-6.83	-6.83	---	PASS
			30~1000	-6.83	-61.42	≤-26.83	PASS
			1000~26500	-6.83	-50.43	≤-26.83	PASS

Test Graphs

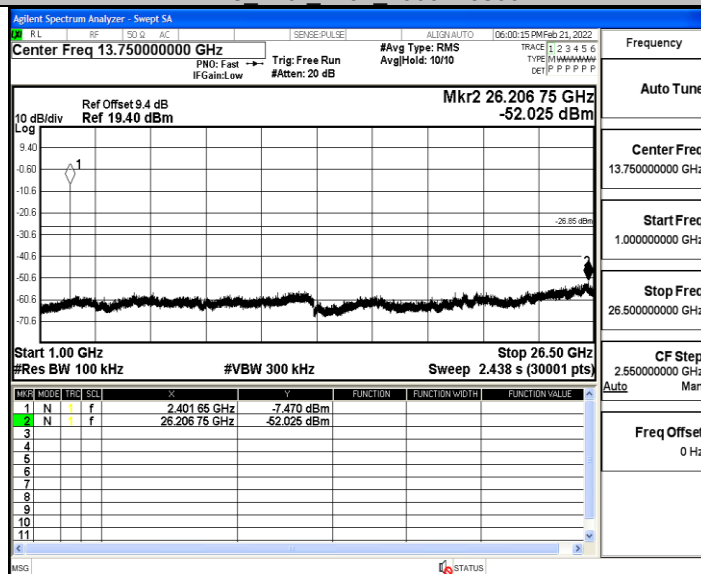
DH5_Ant1_2402_0-Reference



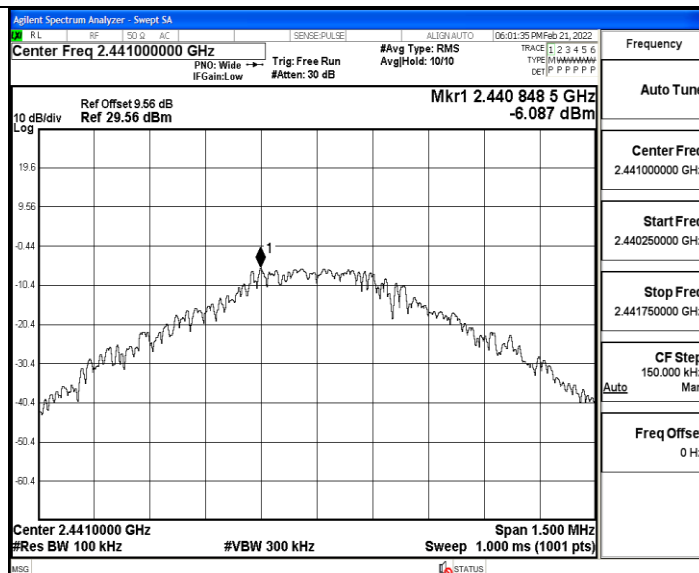
DH5_Ant1_2402_30-1000



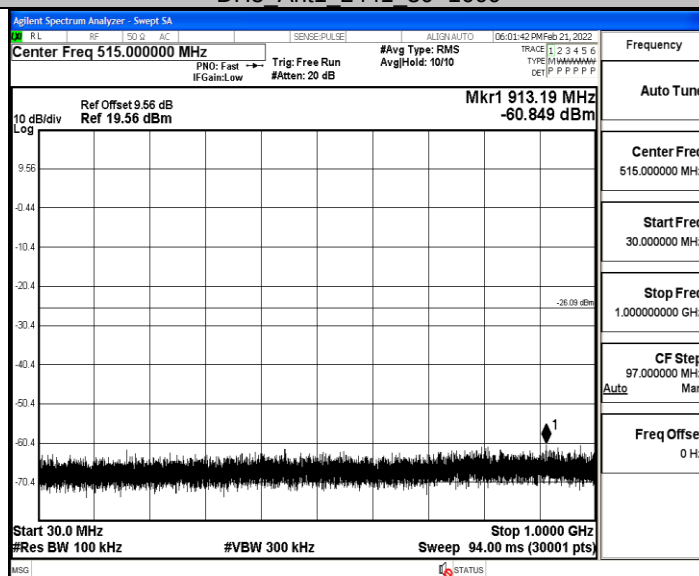
DH5_Ant1_2402_1000-26500



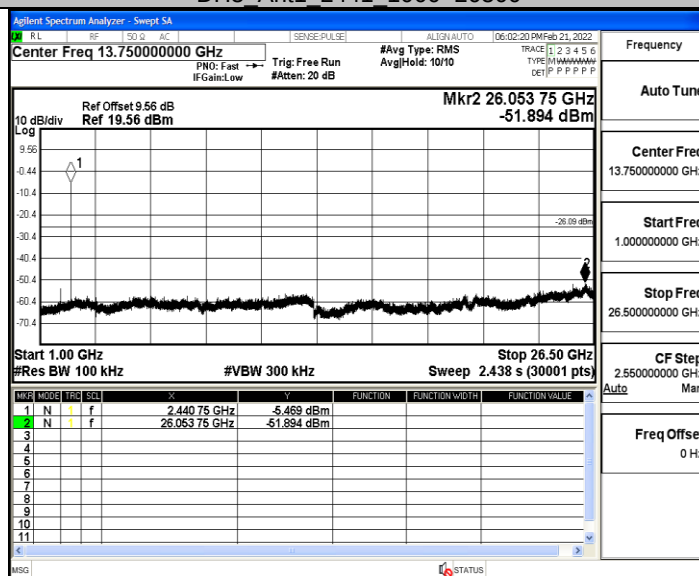
DH5_Ant1_2441_0-Reference



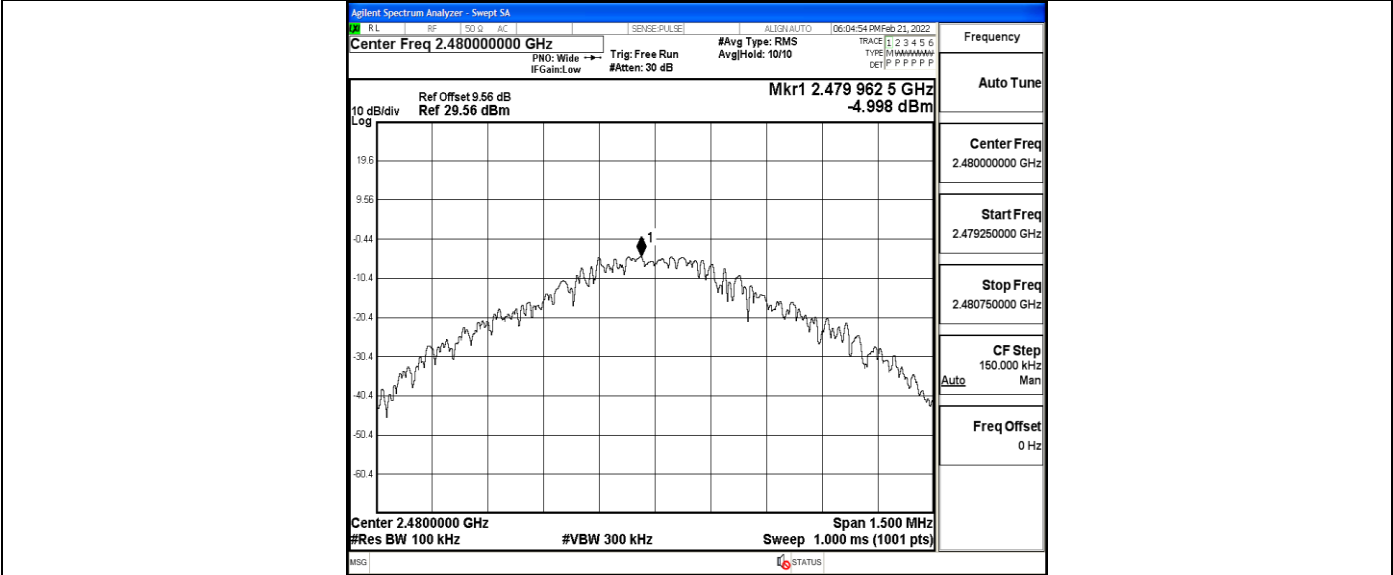
DH5_Ant1_2441_30~1000



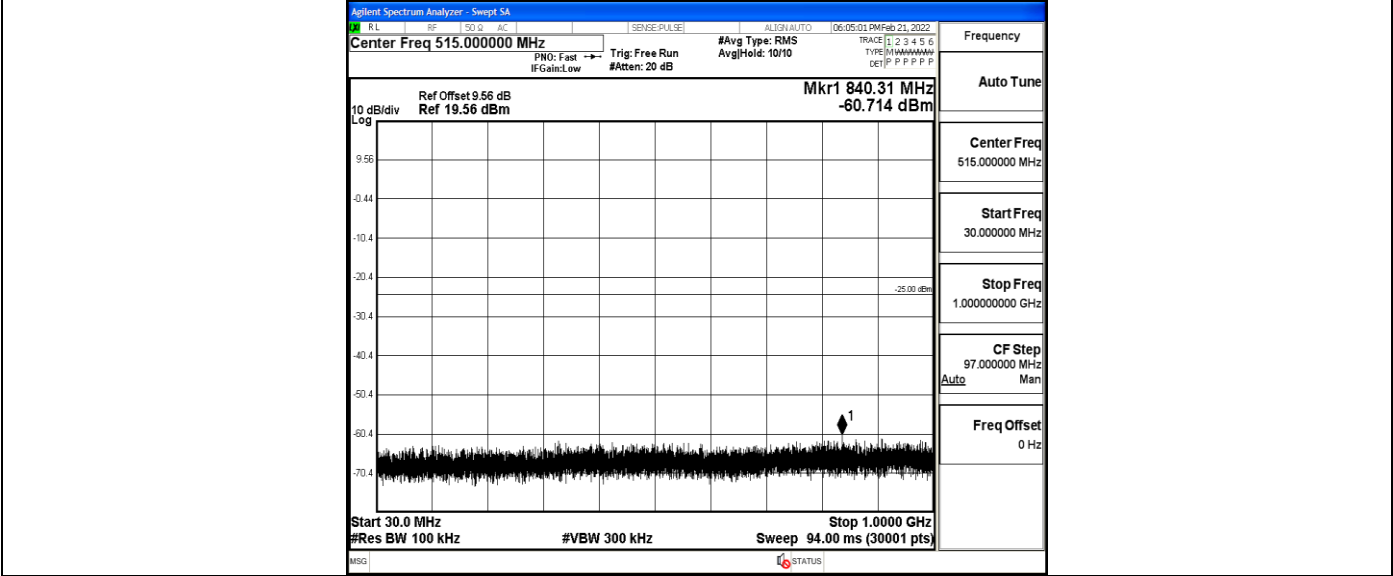
DH5_Ant1_2441_1000~26500



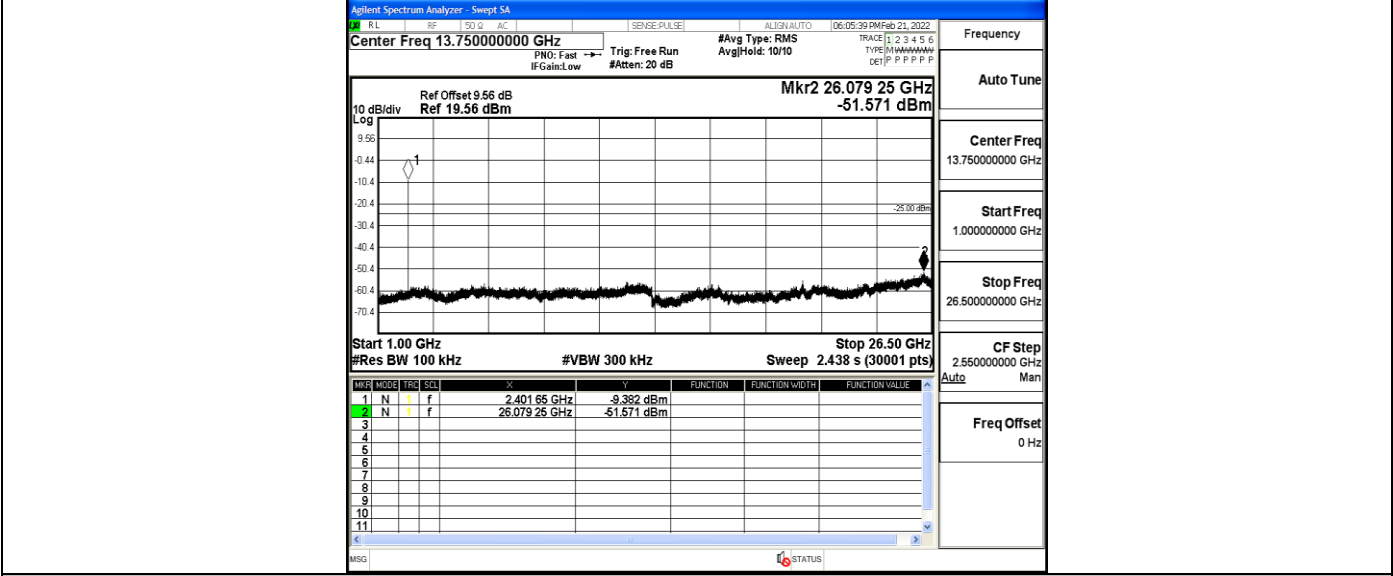
DH5_Ant1_2480_0-Reference



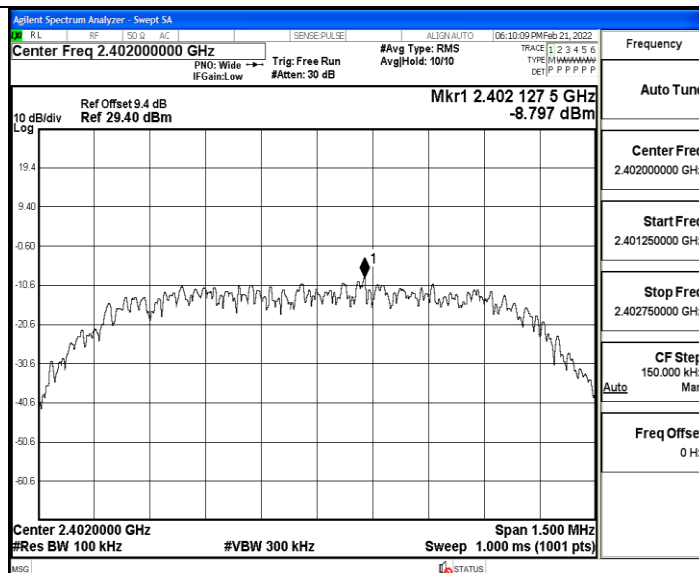
DH5_Ant1_2480_30~1000



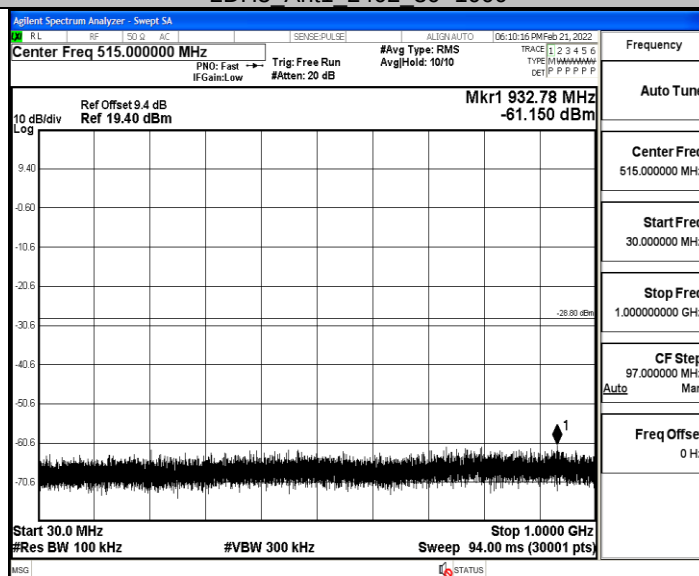
DH5_Ant1_2480_1000~26500



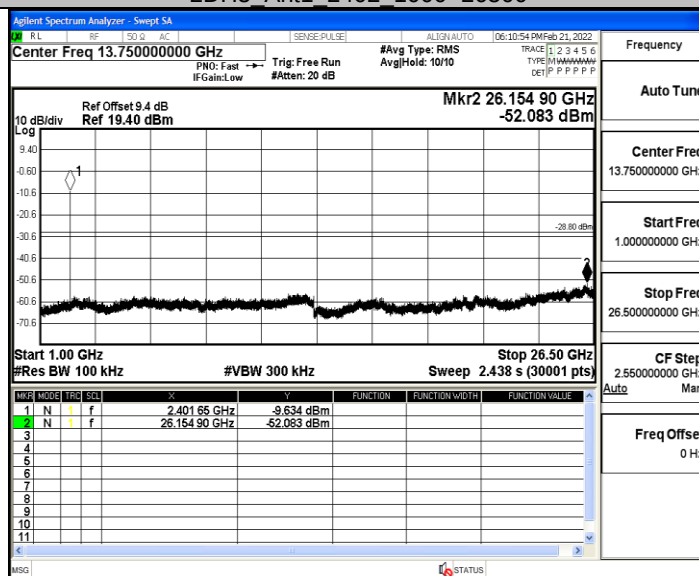
2DH5_Ant1_2402_0~Reference



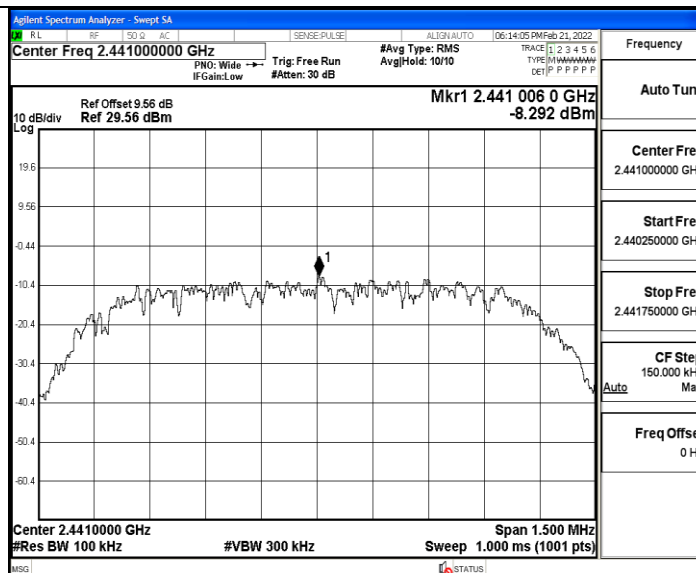
2DH5 Ant1 2402 30~1000



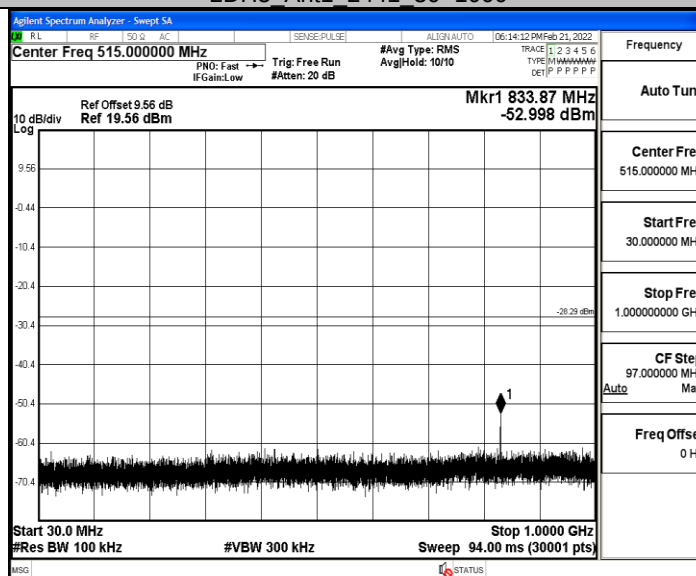
2DH5 Ant1 2402 1000~26500



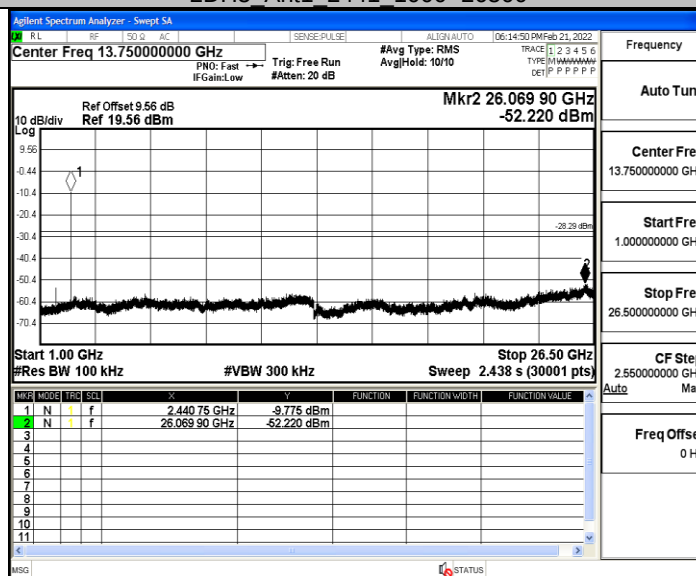
2DH5 Ant1 2441 0~Reference



2DH5 Ant1 2441 30~1000



2DH5 Ant1 2441 1000~26500



2DH5 Ant1 2480 0~Reference