

## Appendix A

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

Product Name: Wireless Earbuds

Trade Mark: **WEKOME**<sup>®</sup>

Test Model: VA01

FCC ID: 2ALJXVA01

### Environmental Conditions

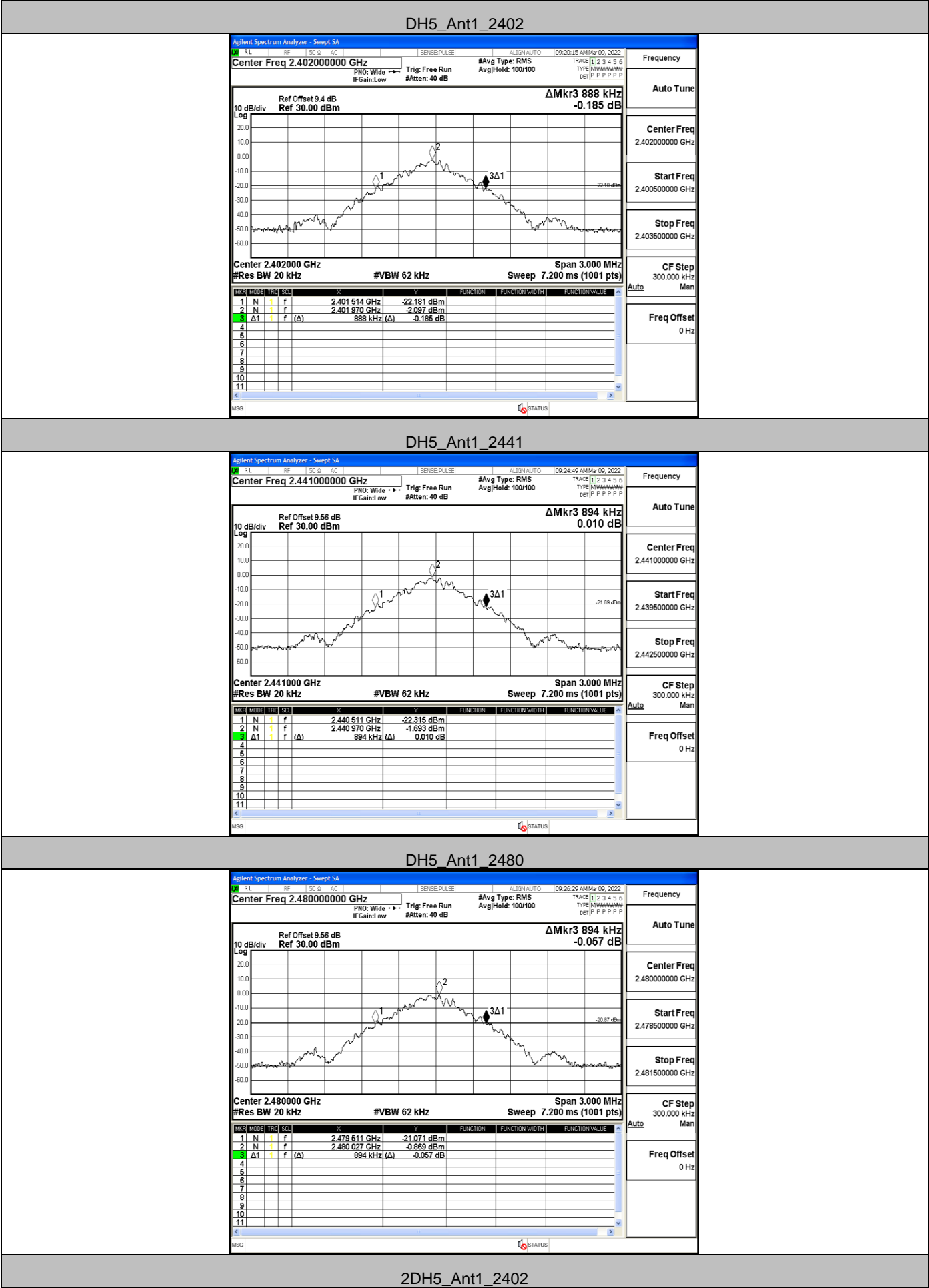
Temperature:	22.8° C
Relative Humidity:	56%
ATM Pressure:	100.0 kPa
Test Engineer:	Nancy Li
Supervised by:	Hugo Chen

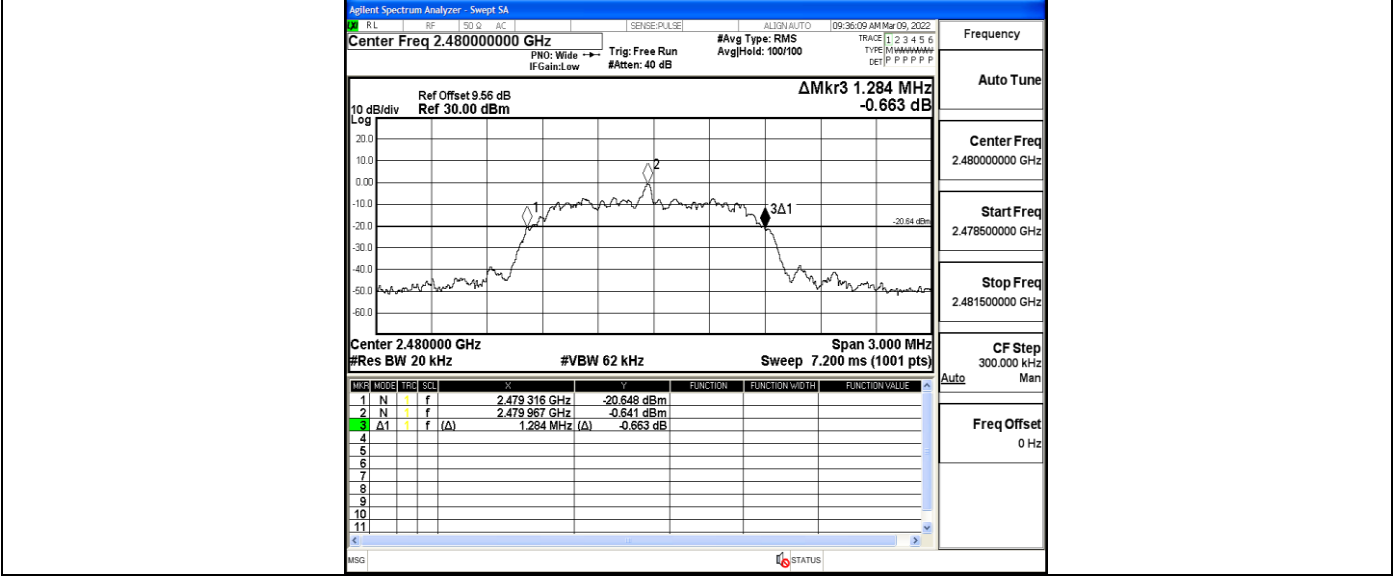
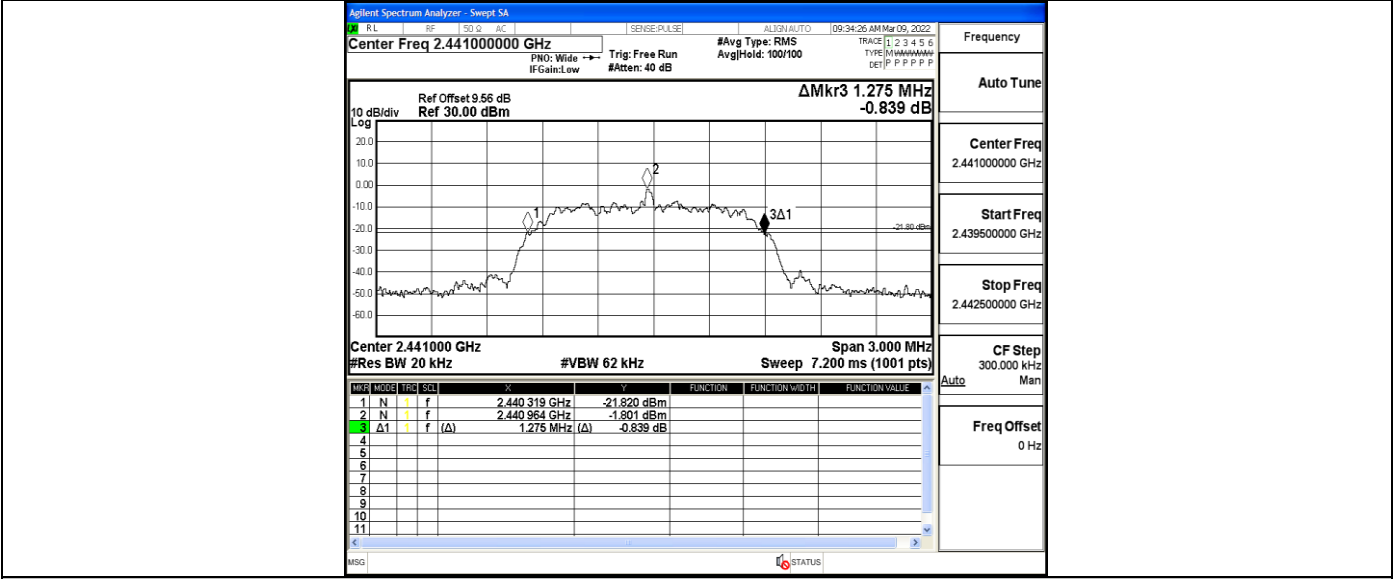
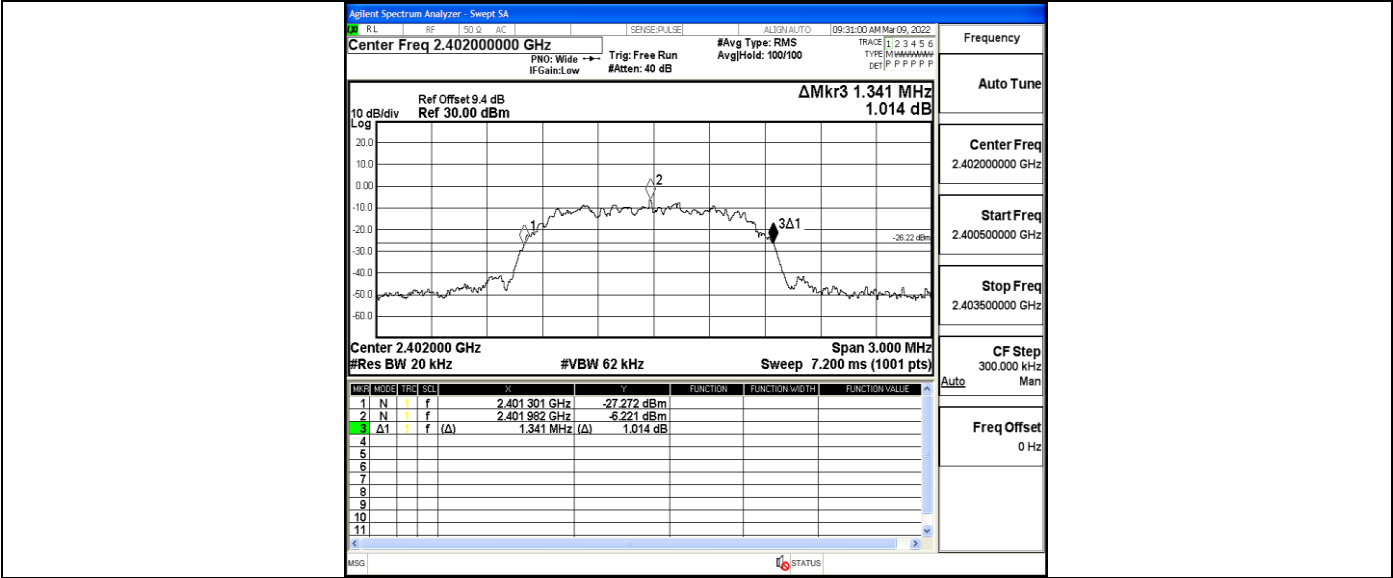
## Appendix A: 20dB Emission Bandwidth

### Test Result

TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.888	2401.514	2402.402	---	PASS
		2441	0.894	2440.511	2441.405	---	PASS
		2480	0.894	2479.511	2480.405	---	PASS
2DH5	Ant1	2402	1.341	2401.301	2402.642	---	PASS
		2441	1.275	2440.319	2441.594	---	PASS
		2480	1.284	2479.316	2480.600	---	PASS

Test Graphs



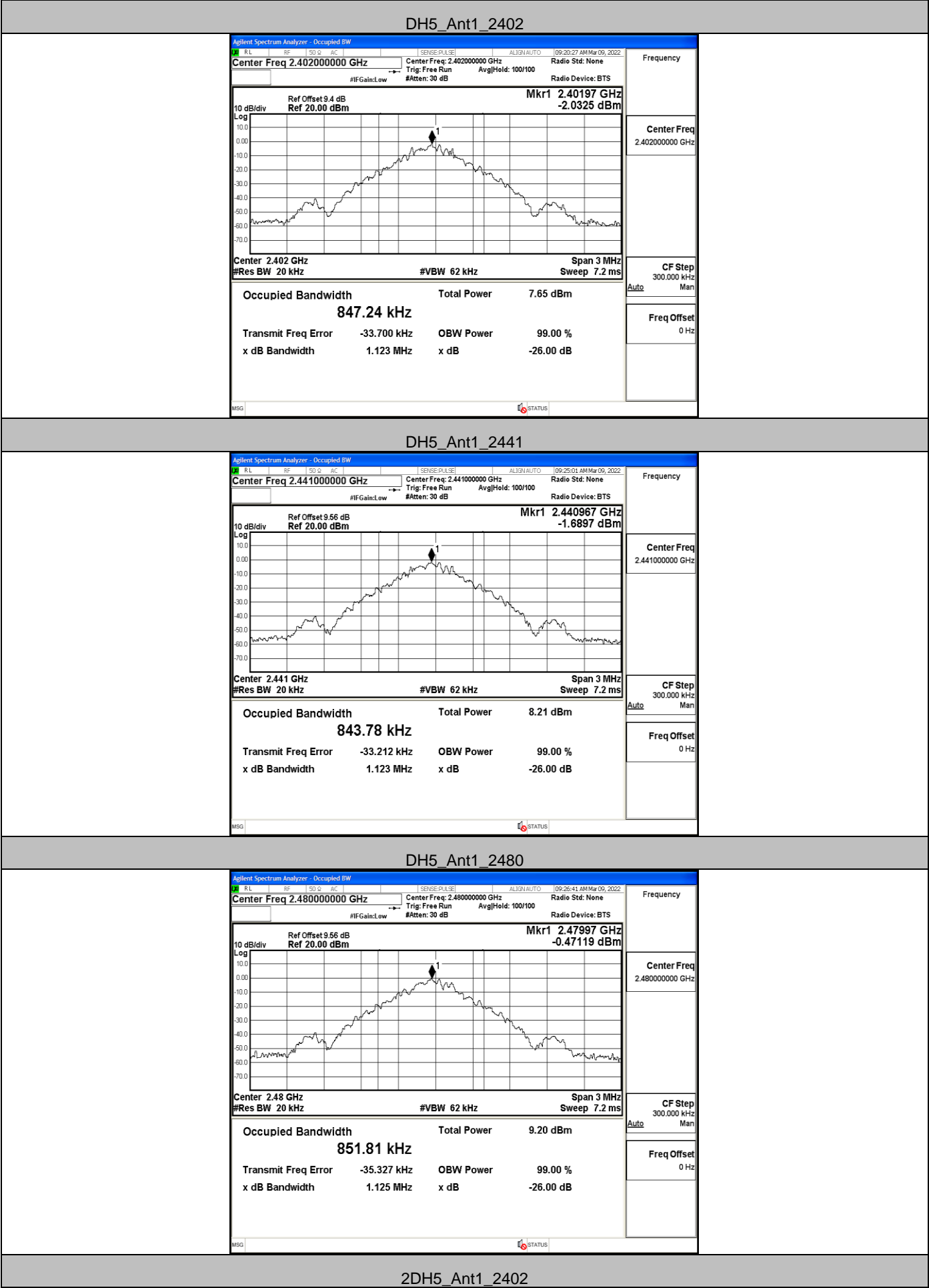


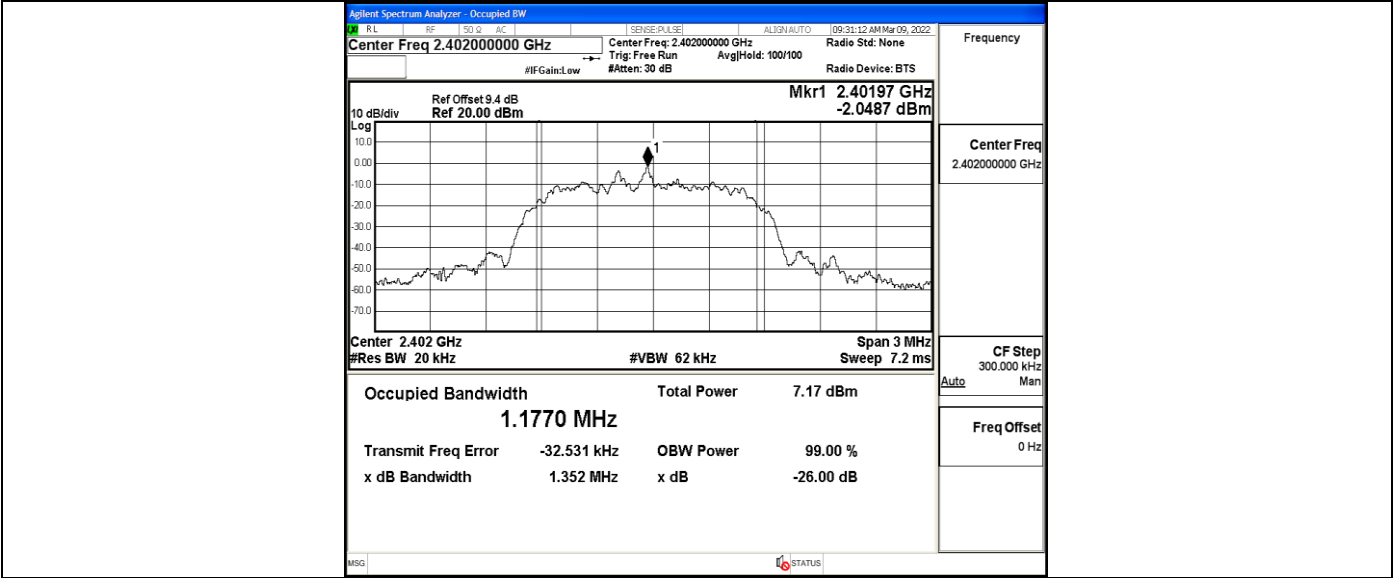
## Appendix B: Occupied Channel Bandwidth

### Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.84724	2401.543	2402.390	---	PASS
		2441	0.84378	2440.545	2441.389	---	PASS
		2480	0.85181	2479.539	2480.391	---	PASS
2DH5	Ant1	2402	1.1770	2401.379	2402.556	---	PASS
		2441	1.1806	2440.377	2441.558	---	PASS
		2480	1.1754	2479.379	2480.554	---	PASS

Test Graphs



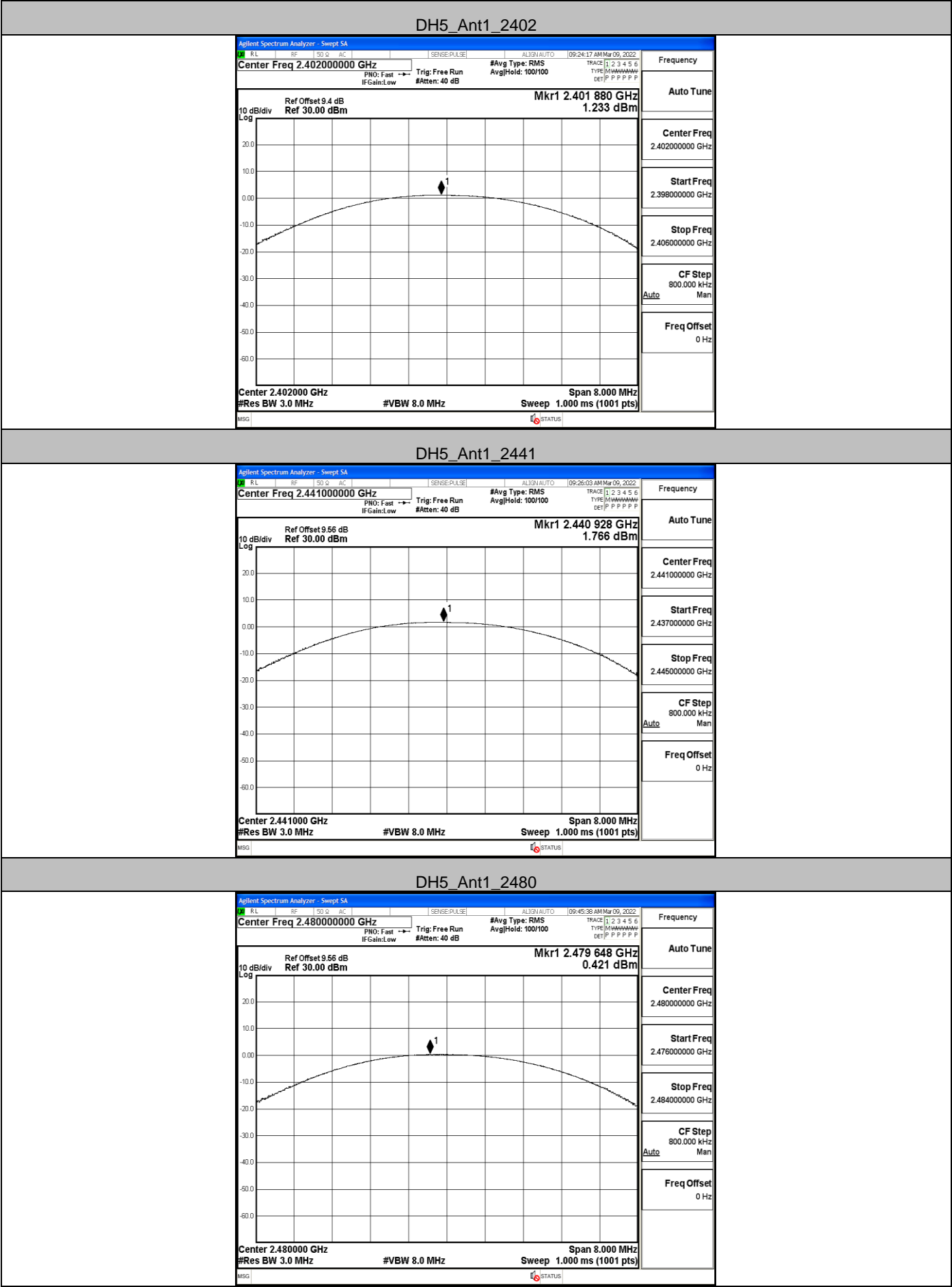


## Appendix C: Maximum conducted output power

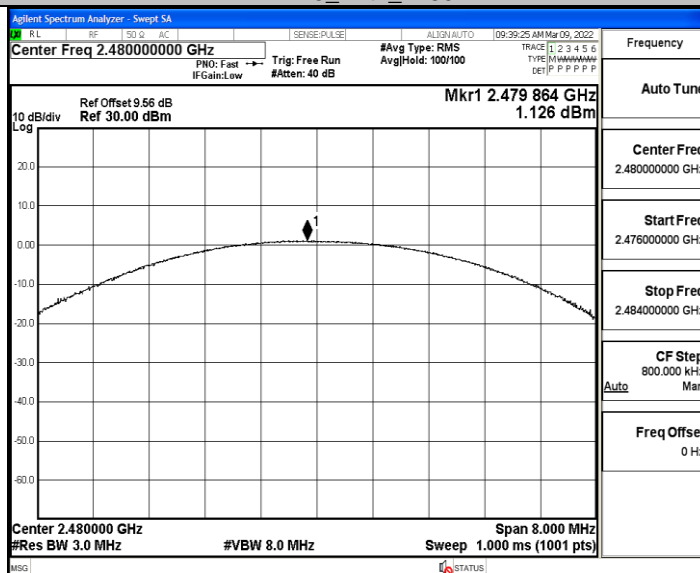
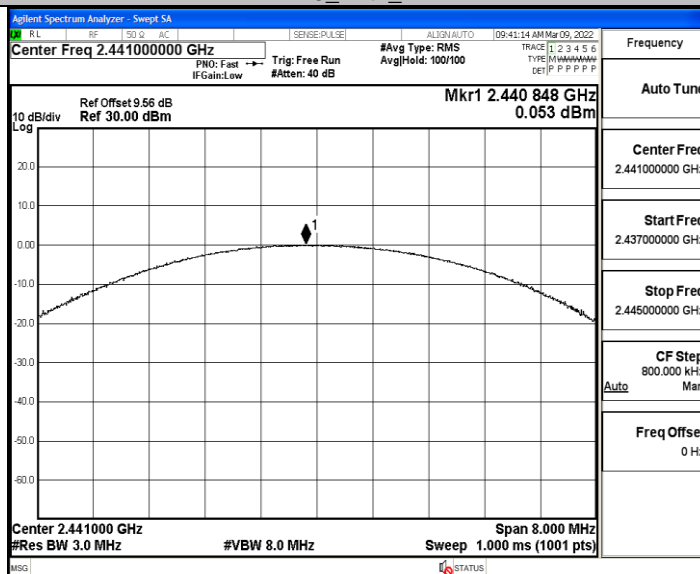
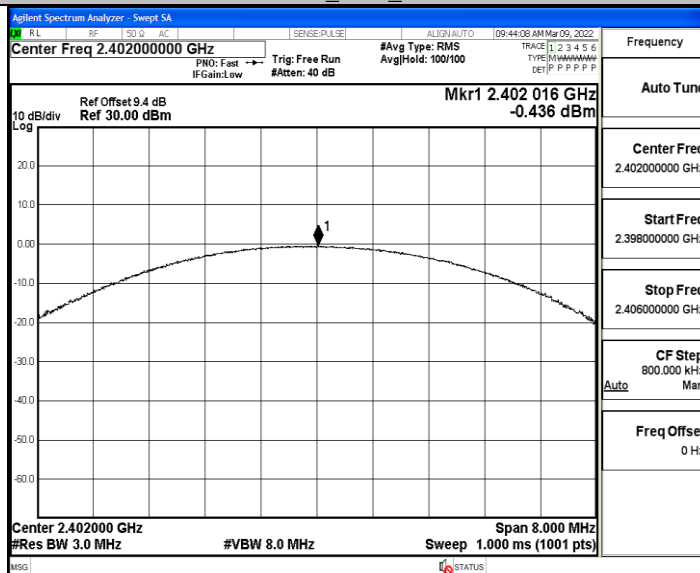
### Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	1.23	<=30.00	PASS
		2441	1.77	<=30.00	PASS
		2480	0.42	<=30.00	PASS
2DH5	Ant1	2402	-0.44	<=20.97	PASS
		2441	0.05	<=20.97	PASS
		2480	1.13	<=20.97	PASS

Test Graphs





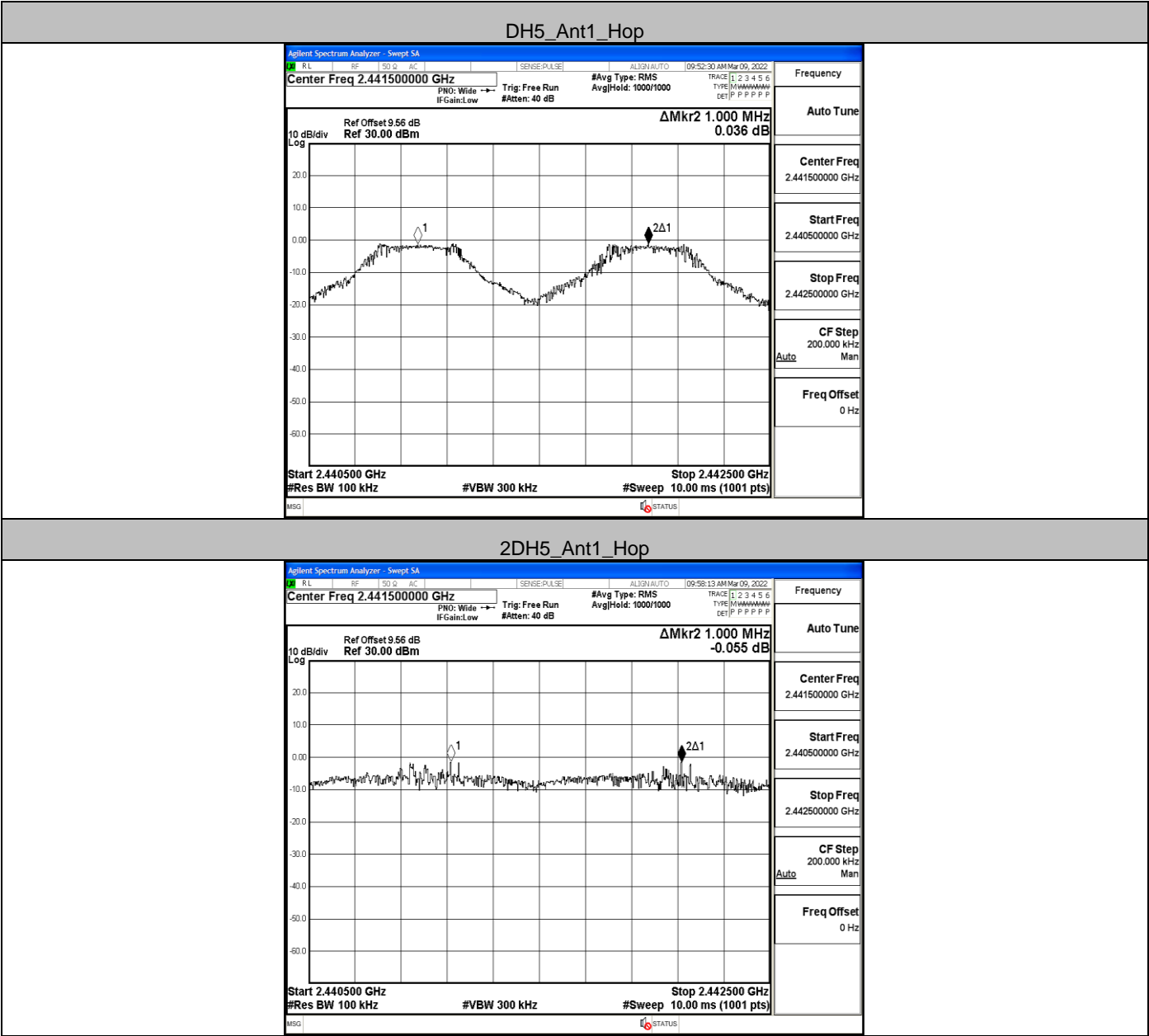


Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.000	≥0.894	PASS
2DH5	Ant1	Hop	1.000	≥0.894	PASS

Test Graphs

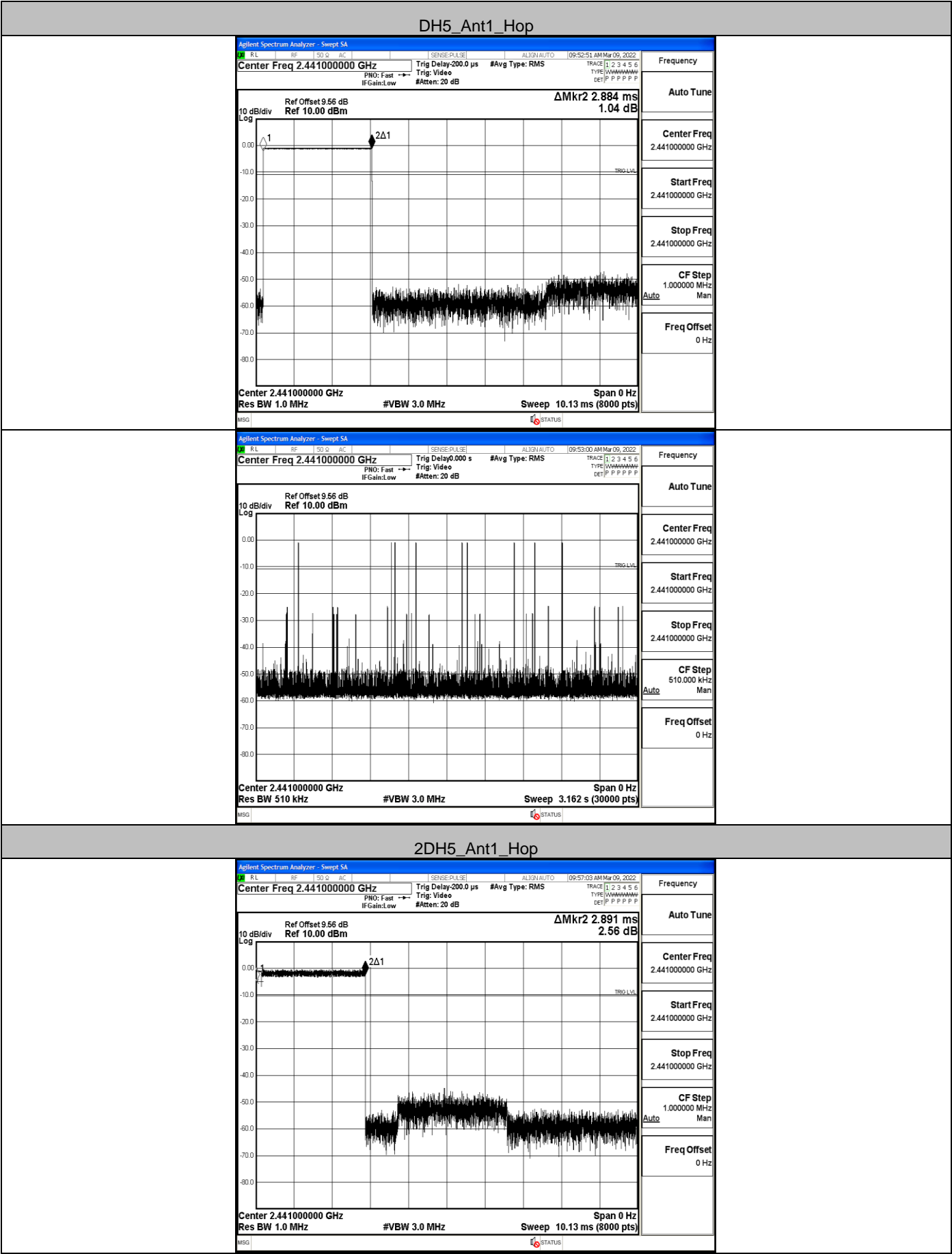


## Appendix E: Time of occupancy

### Test Result

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

Test Graphs



2DH5\_Ant1\_Hop

Agilent Spectrum Analyzer - Sweep SA

Center Freq 2.441000000 GHz

Ref Offset 9.56 dB  
Ref 10.00 dBm

10 dB/div

Log

ΔMkr2 2.891 ms  
2.56 dB

Center 2.441000000 GHz  
Res BW 1.0 MHz  
#VBW 3.0 MHz  
Sweep 10.13 ms (8000 pts)

Frequency

Auto Tune

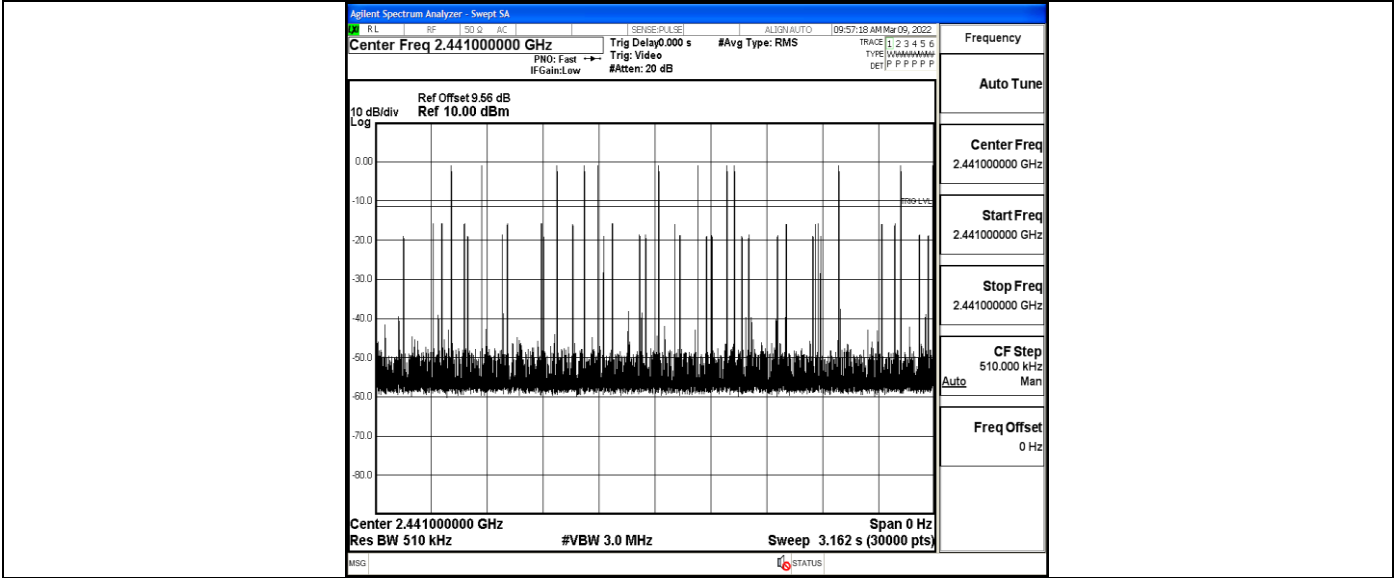
Center Freq  
2.441000000 GHz

Start Freq  
2.441000000 GHz

Stop Freq  
2.441000000 GHz

CF Step  
1.000000 MHz  
Auto  
Man

Freq Offset  
0 Hz

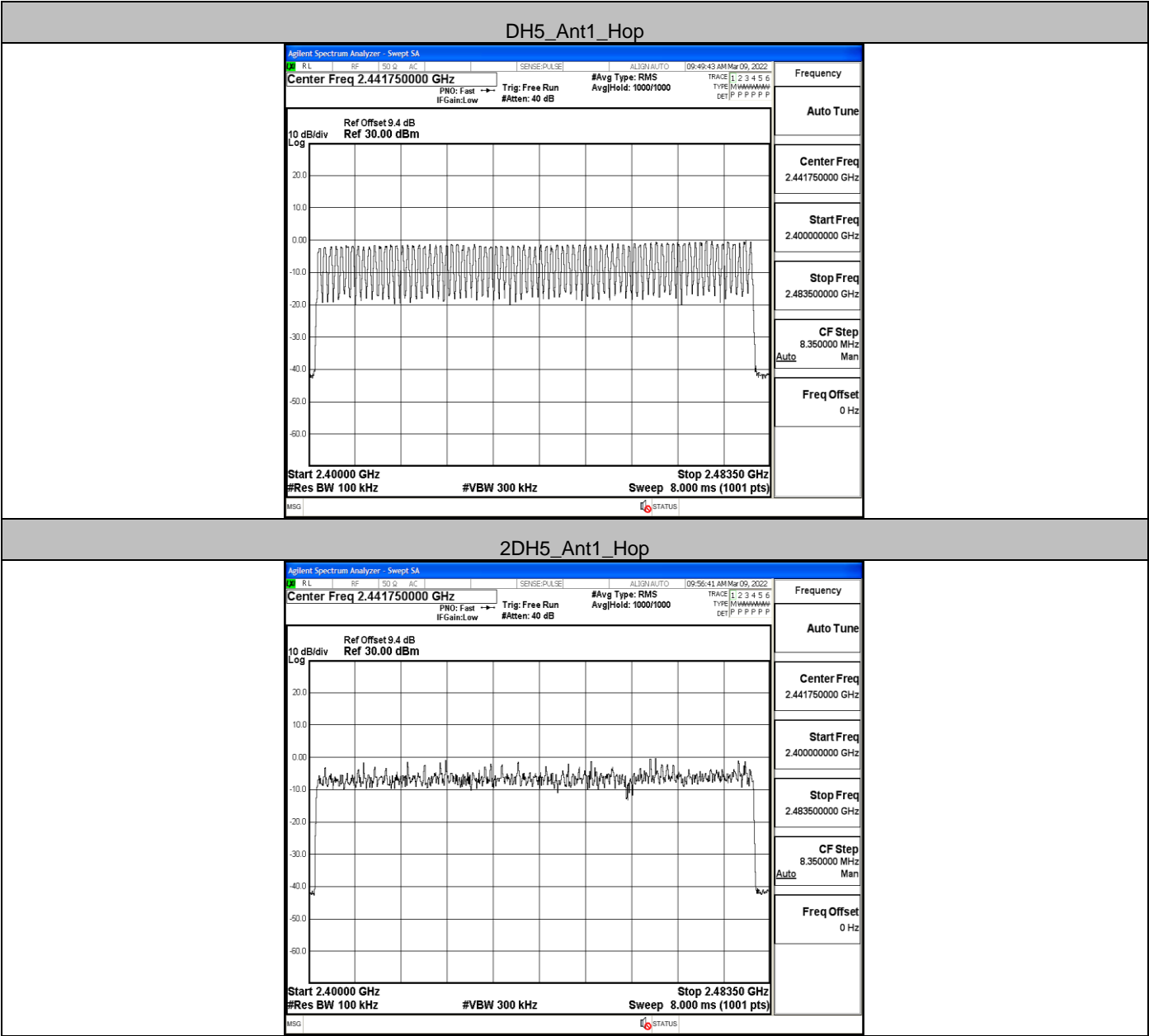


Appendix F: Number of hopping channels

Test Result

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

Test Graphs





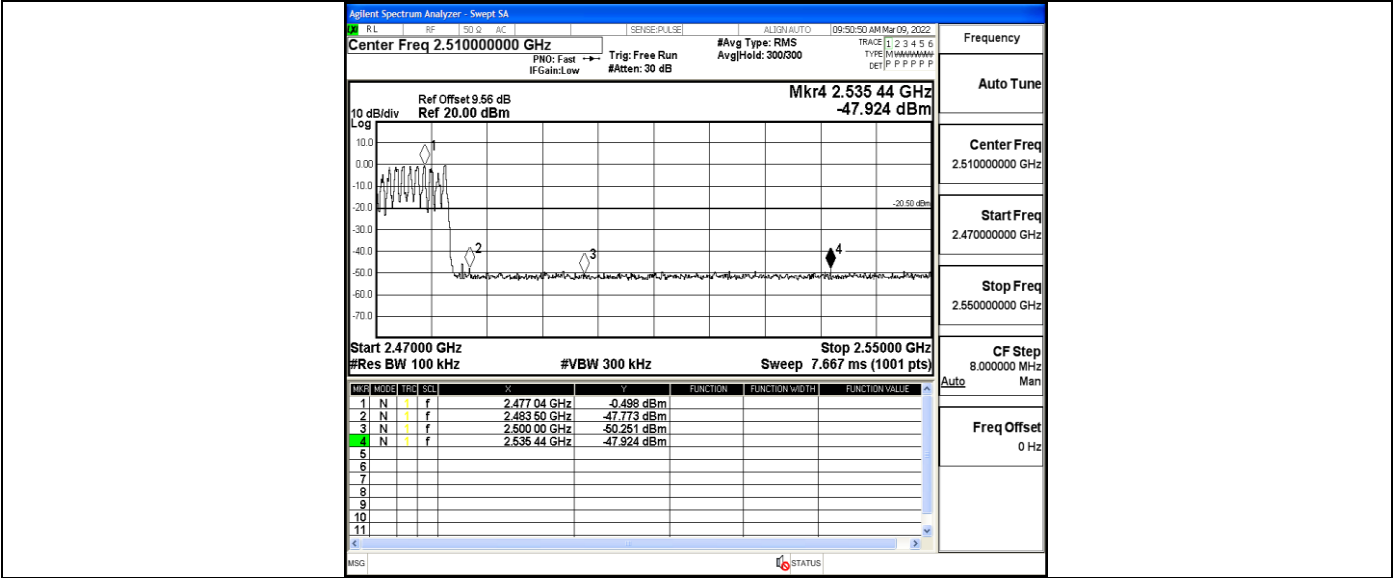
## Appendix G: Band edge measurements

### Test Result

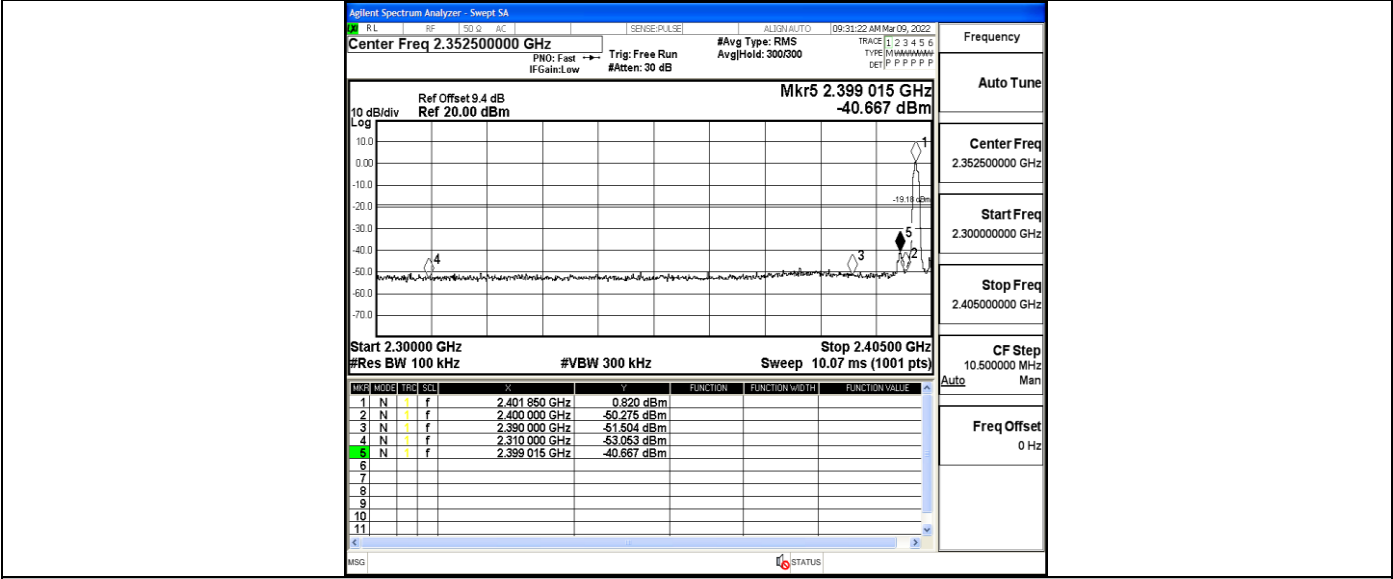
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	0.73	-39.71	≤-19.27	PASS
		High	2480	2.48	-42.22	≤-17.52	PASS
		Low	Hop_2402	-2.41	-49.92	≤-22.41	PASS
		High	Hop_2480	-0.50	-47.92	≤-20.5	PASS
2DH5	Ant1	Low	2402	0.82	-40.67	≤-19.18	PASS
		High	2480	2.33	-42.34	≤-17.67	PASS
		Low	Hop_2402	-5.32	-50.29	≤-25.32	PASS
		High	Hop_2480	-2.89	-48.54	≤-22.89	PASS

Test Graphs

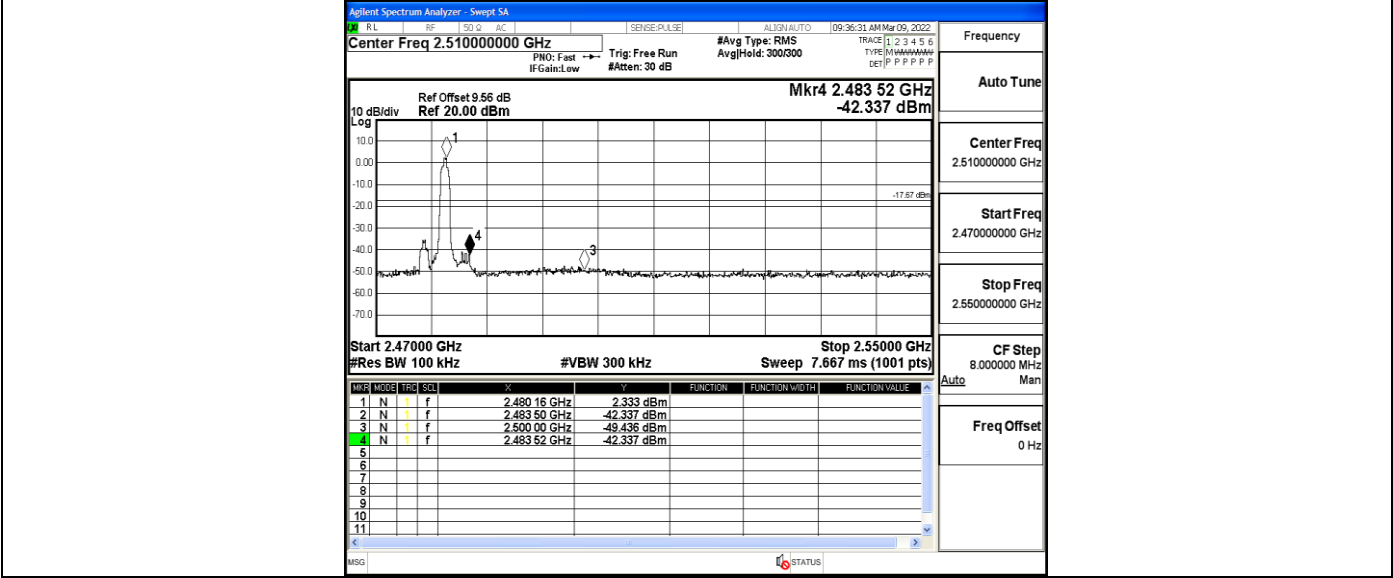




2DH5\_Ant1\_Low\_2402



2DH5\_Ant1\_High\_2480



2DH5\_Ant1\_Low\_Hop\_2402

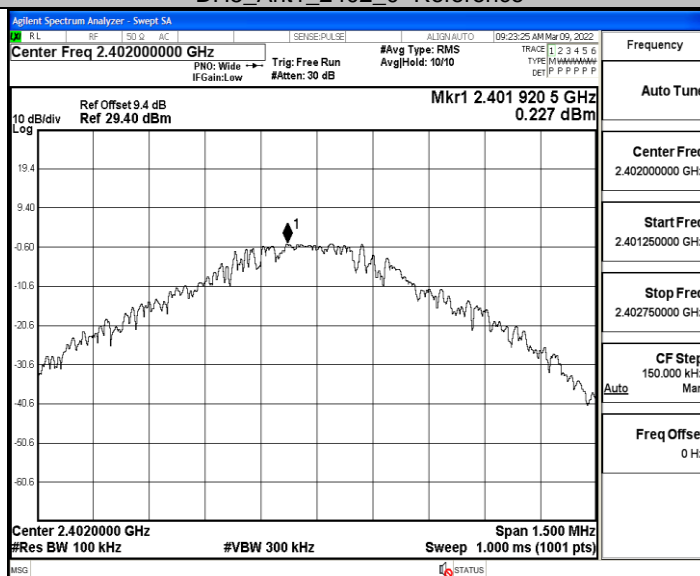


## Appendix H: Conducted Spurious Emission

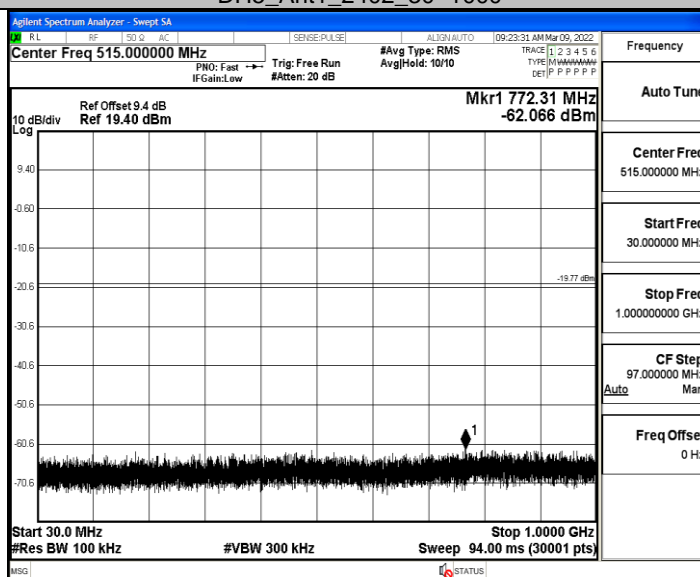
### Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	0.23	0.23	---	PASS
			30~1000	0.23	-62.07	≤-19.77	PASS
			1000~26500	0.23	-49.64	≤-19.77	PASS
		2441	Reference	1.29	1.29	---	PASS
			30~1000	1.29	-61.2	≤-18.71	PASS
			1000~26500	1.29	-47.09	≤-18.71	PASS
		2480	Reference	-0.80	-0.80	---	PASS
			30~1000	-0.80	-59.94	≤-20.8	PASS
			1000~26500	-0.80	-47.45	≤-20.8	PASS
2DH5	Ant1	2402	Reference	-1.66	-1.66	---	PASS
			30~1000	-1.66	-60.74	≤-21.66	PASS
			1000~26500	-1.66	-50.45	≤-21.66	PASS
		2441	Reference	-1.08	-1.08	---	PASS
			30~1000	-1.08	-60.27	≤-21.08	PASS
			1000~26500	-1.08	-50.66	≤-21.08	PASS
		2480	Reference	-3.54	-3.54	---	PASS
			30~1000	-3.54	-61.14	≤-23.54	PASS
			1000~26500	-3.54	-49.55	≤-23.54	PASS

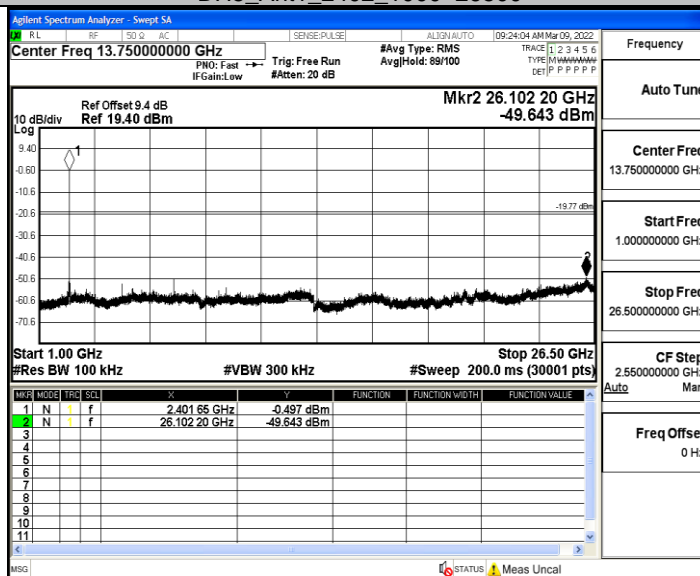
DH5 Ant1 2402 0~Reference



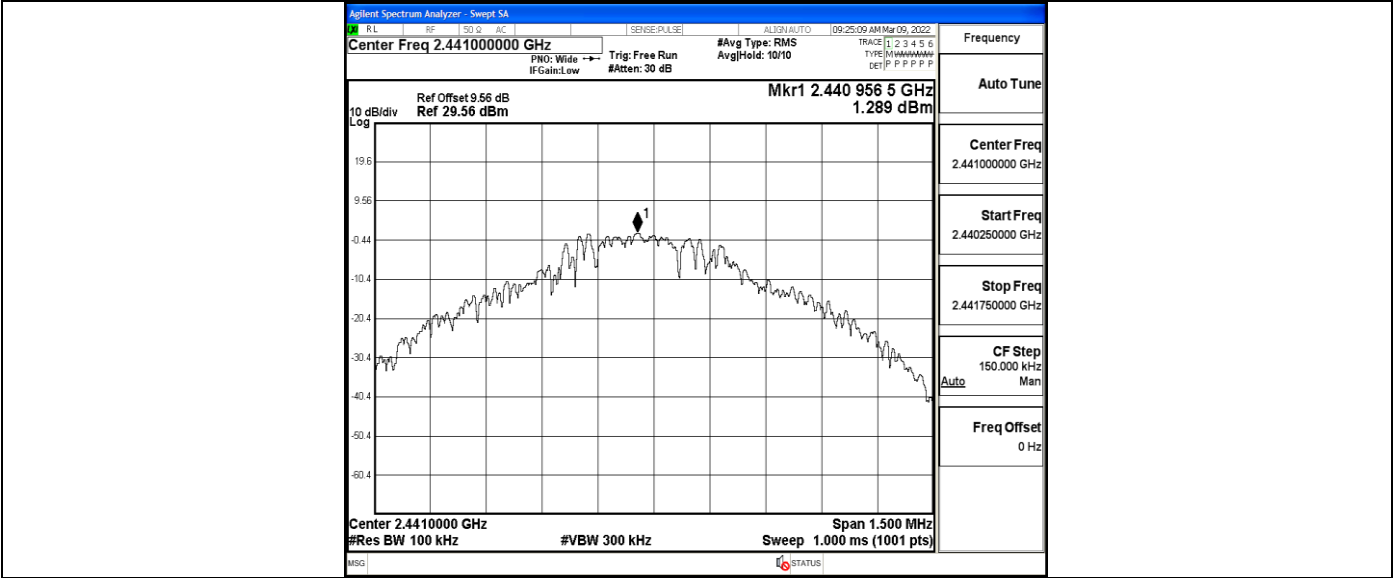
DH5 Ant1 2402 30~1000



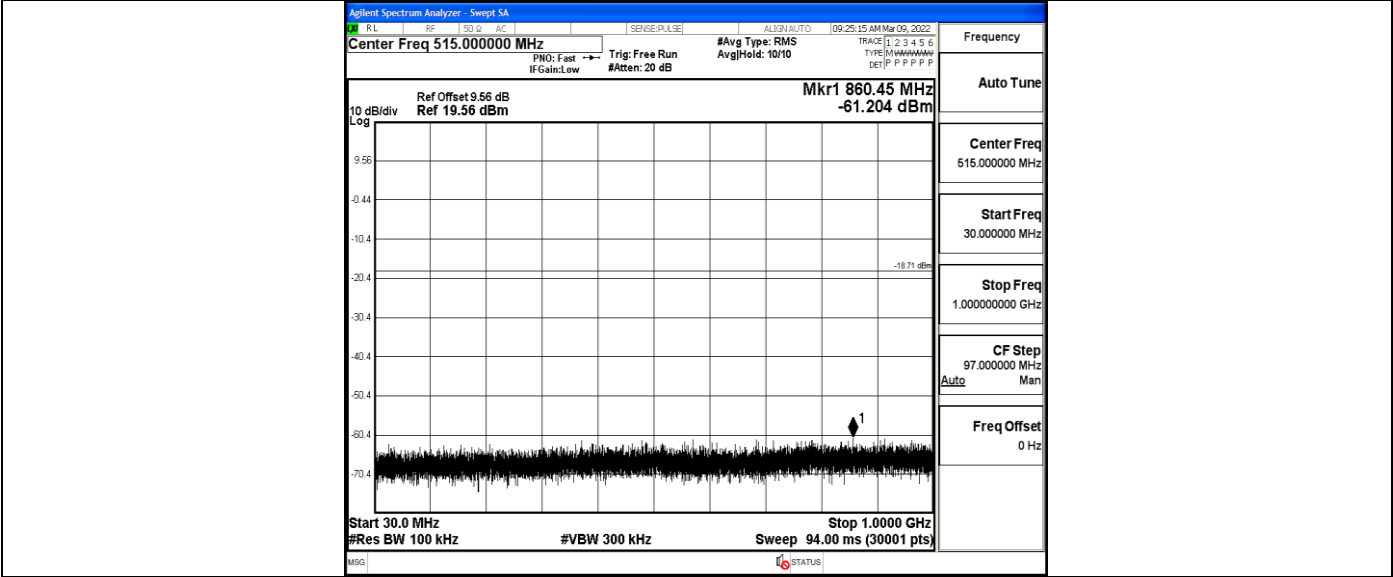
DH5\_Ant1\_2402\_1000~26500



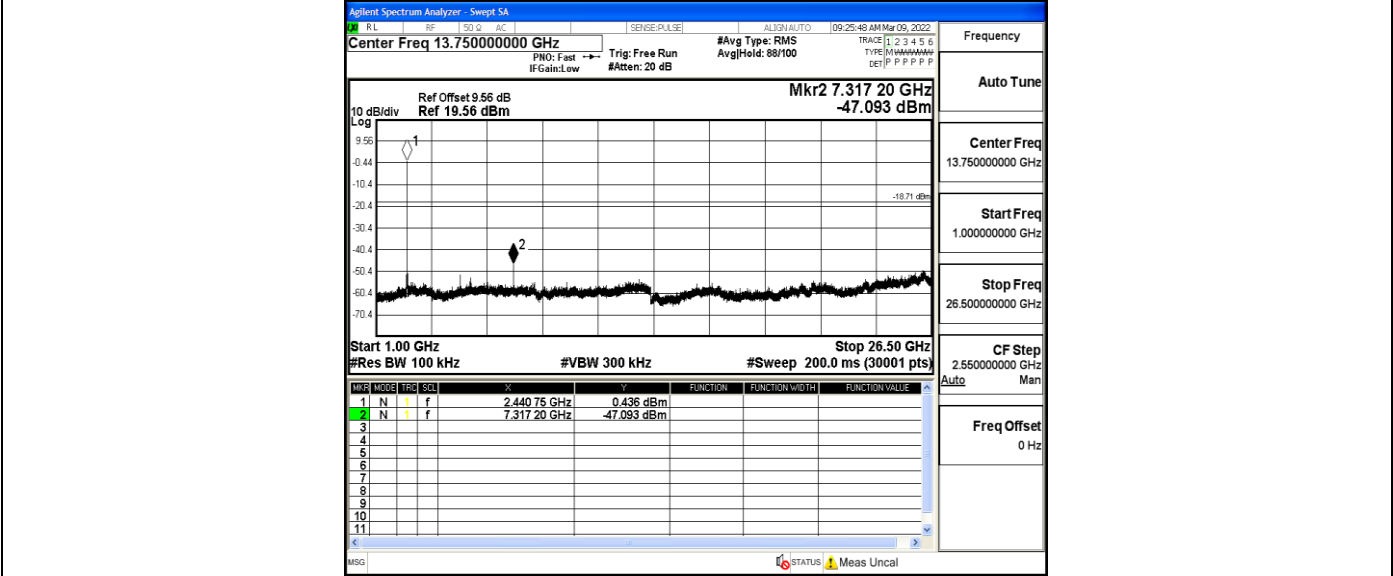
DH5\_Ant1\_2441\_0~Reference



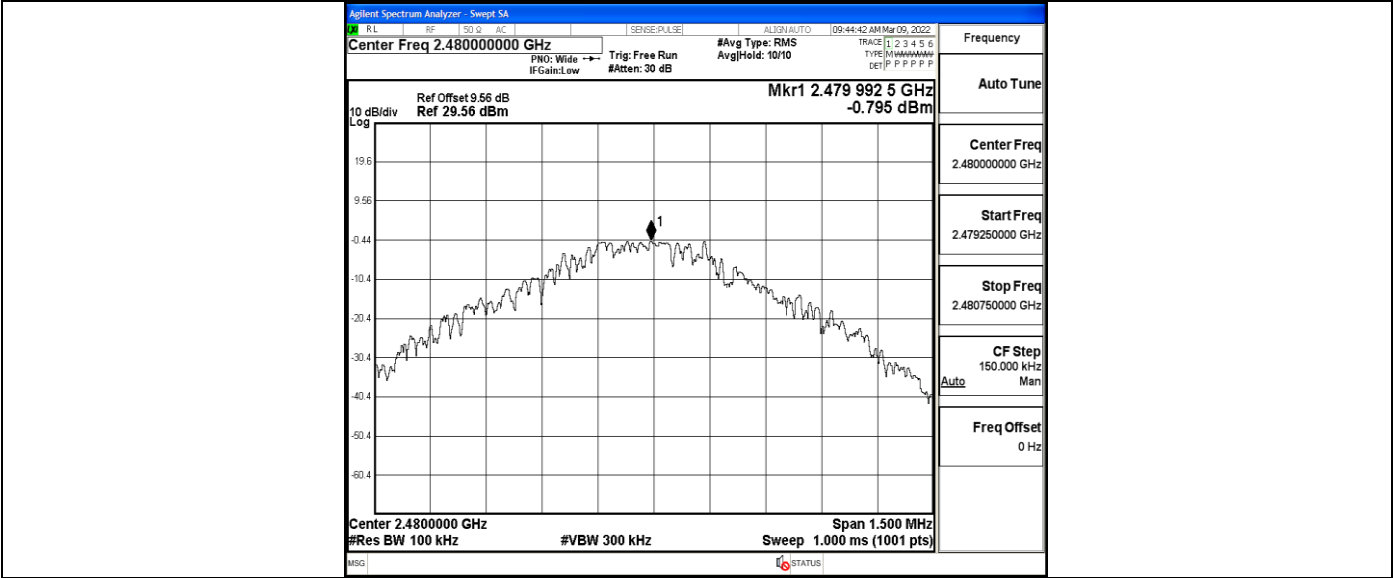
DH5\_Ant1\_2441\_30~1000



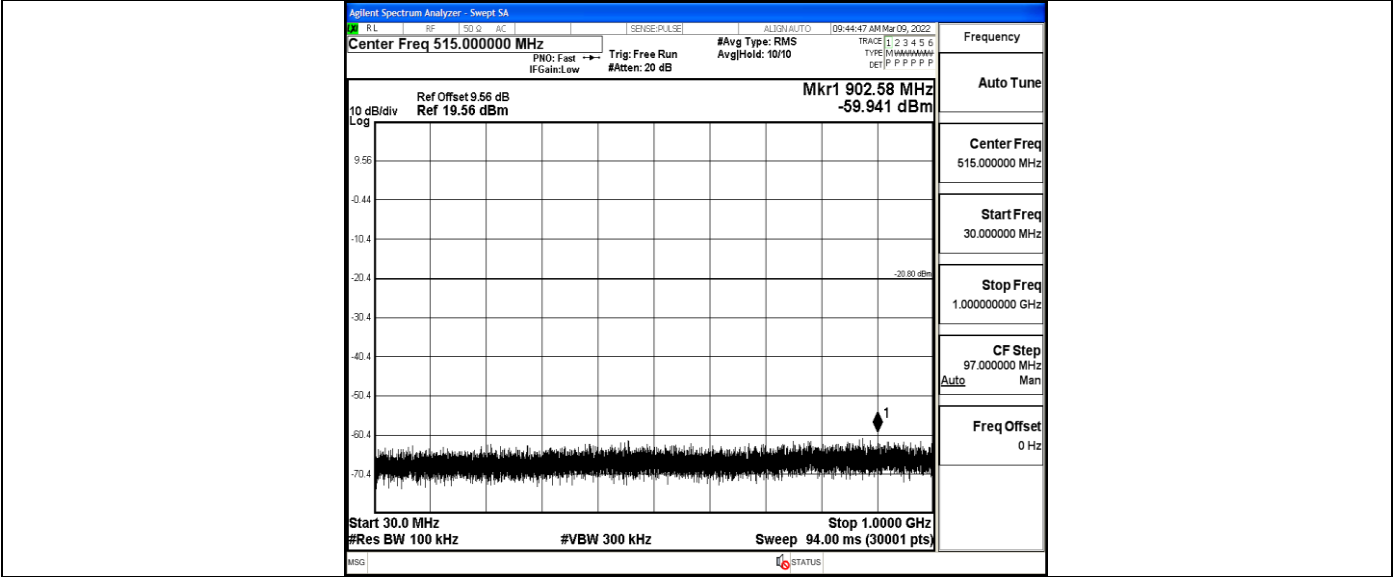
DH5\_Ant1\_2441\_1000~26500



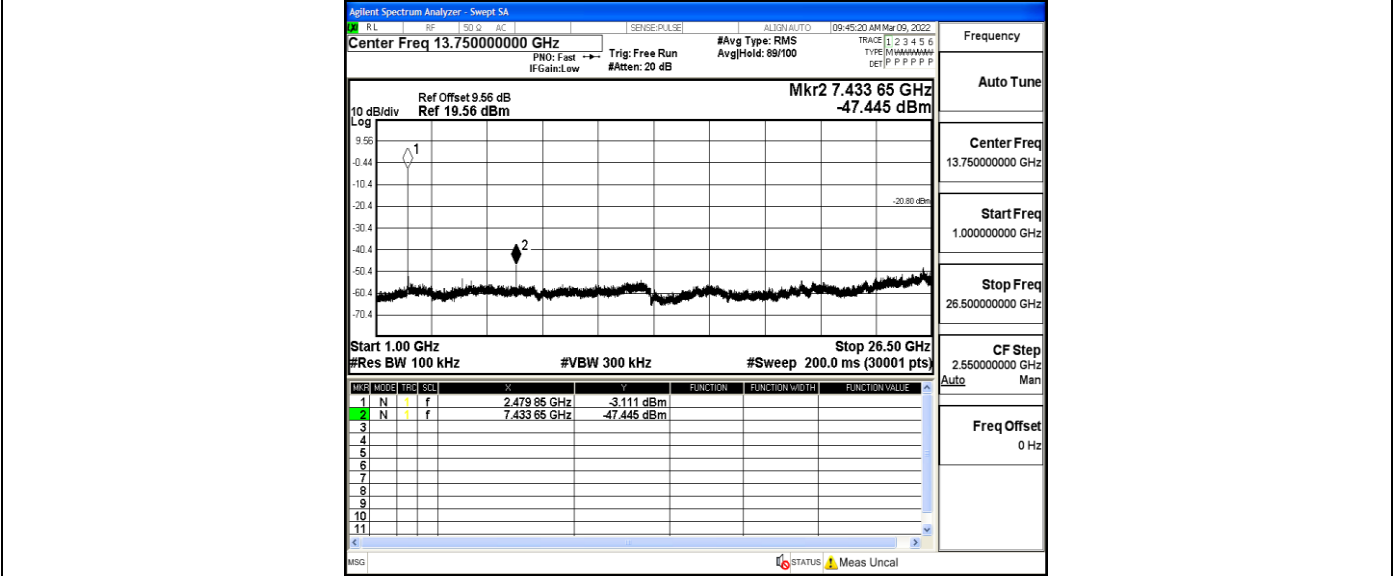
DH5\_Ant1\_2480\_0~Reference



DH5\_Ant1\_2480\_30~1000

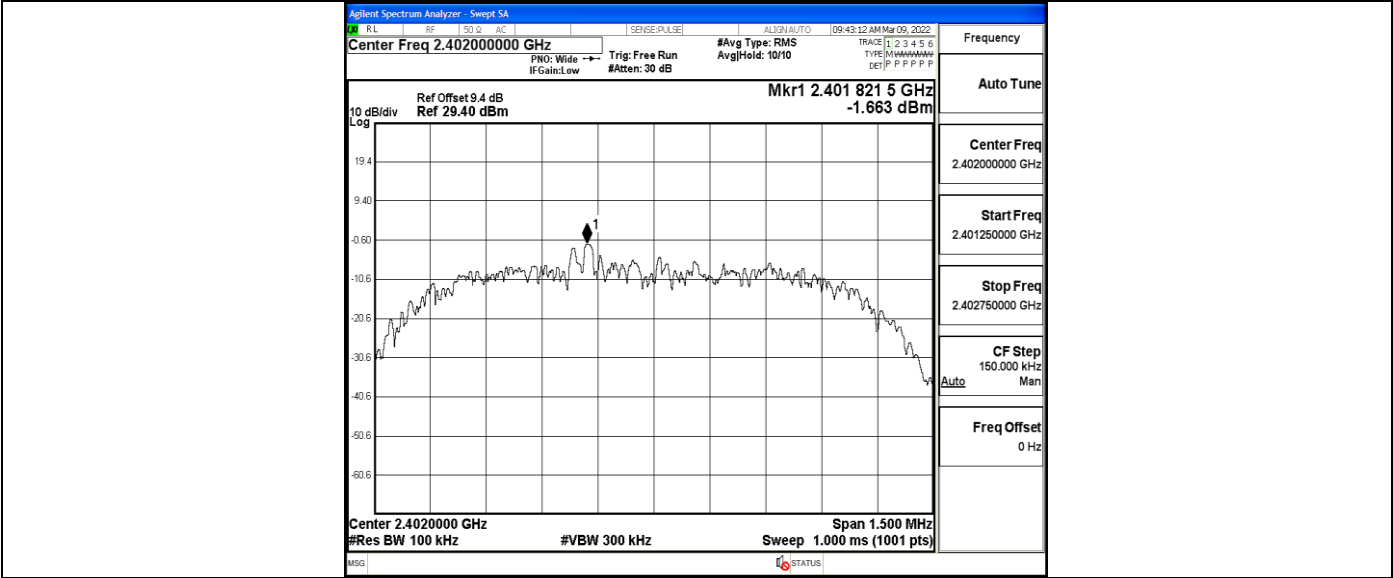


DH5\_Ant1\_2480\_1000~26500

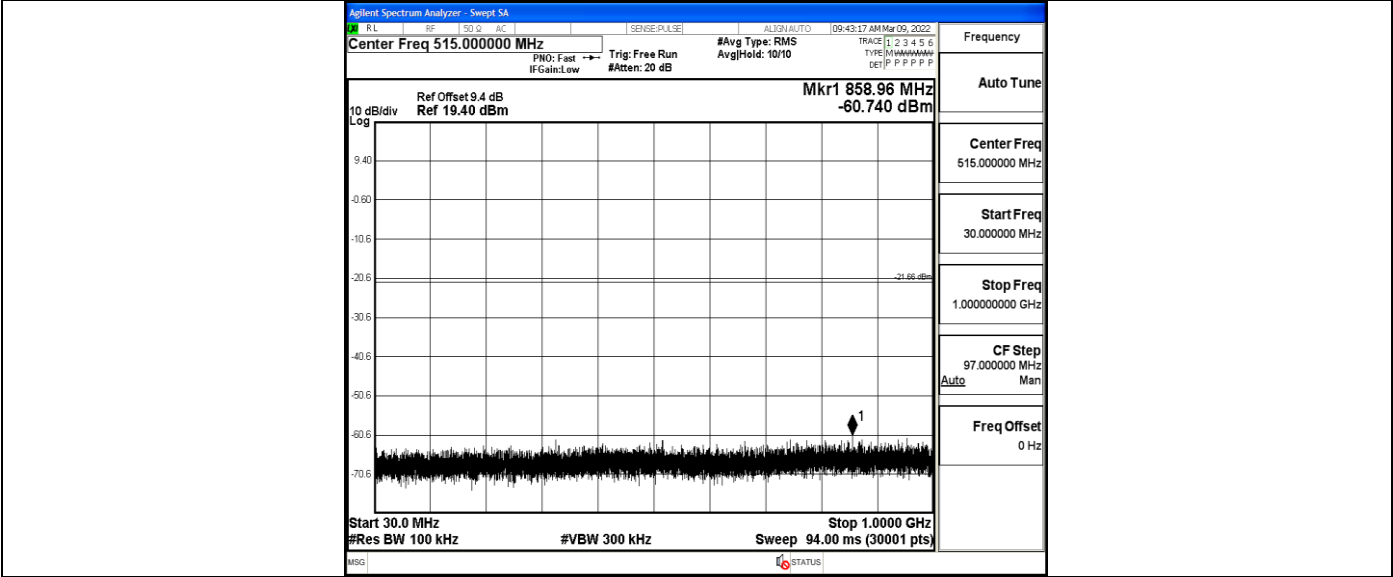


2DH5\_Ant1\_2402\_0~Reference

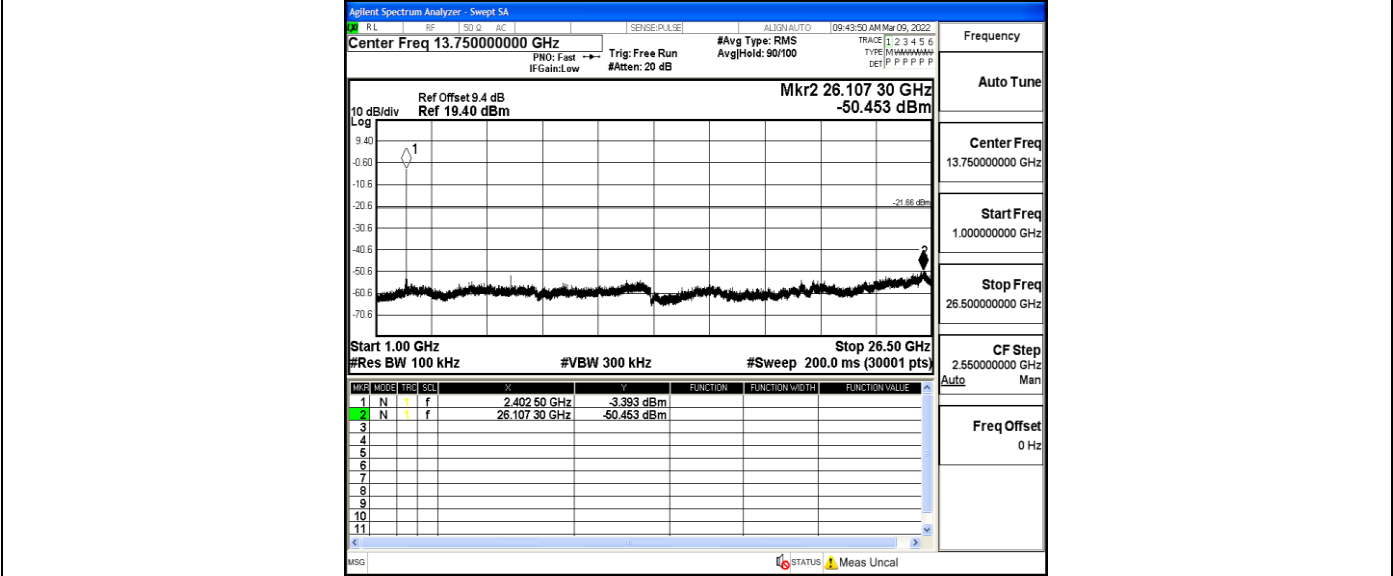




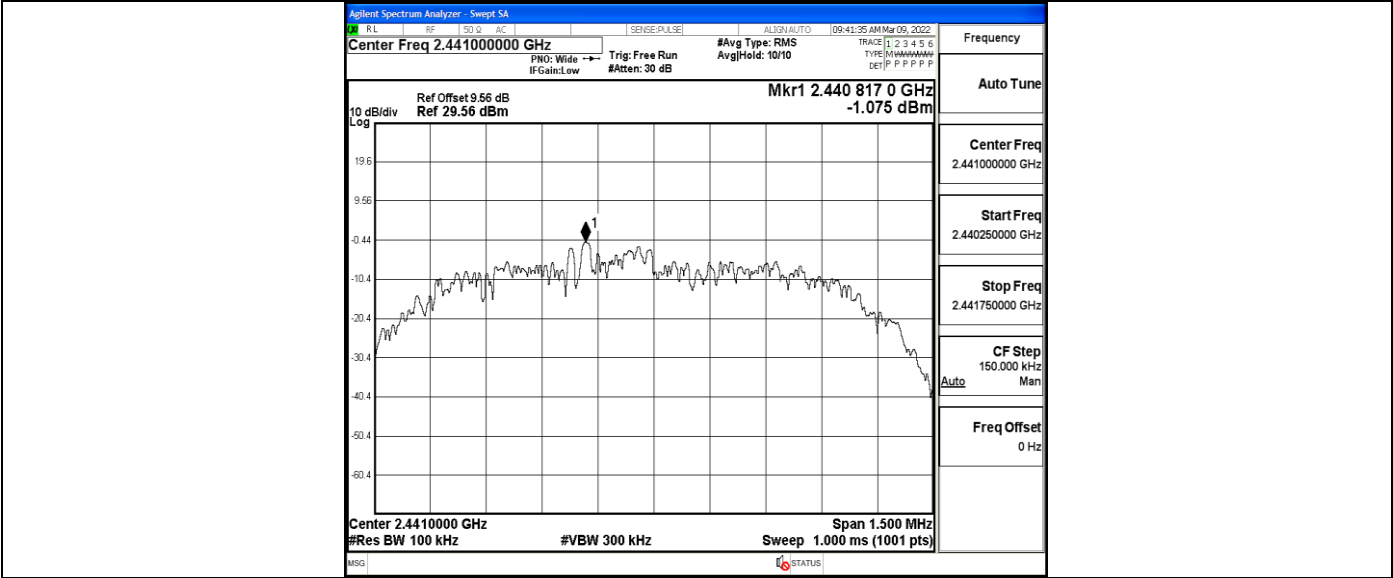
2DH5\_Ant1\_2402\_30~1000



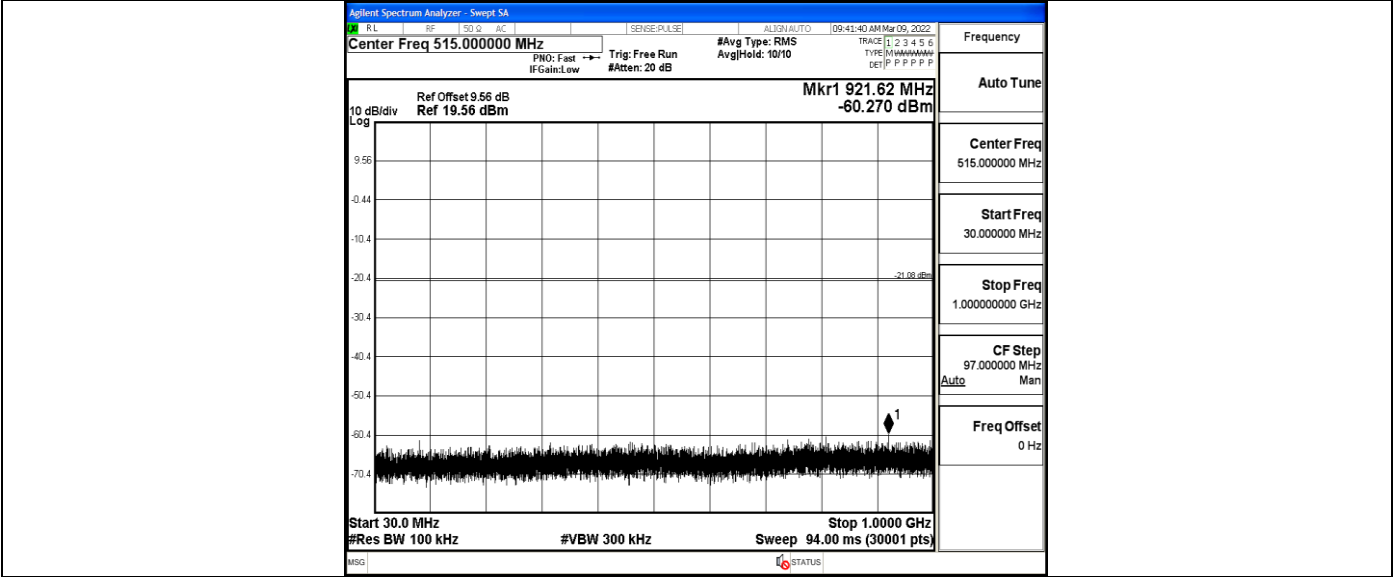
2DH5\_Ant1\_2402\_1000~26500



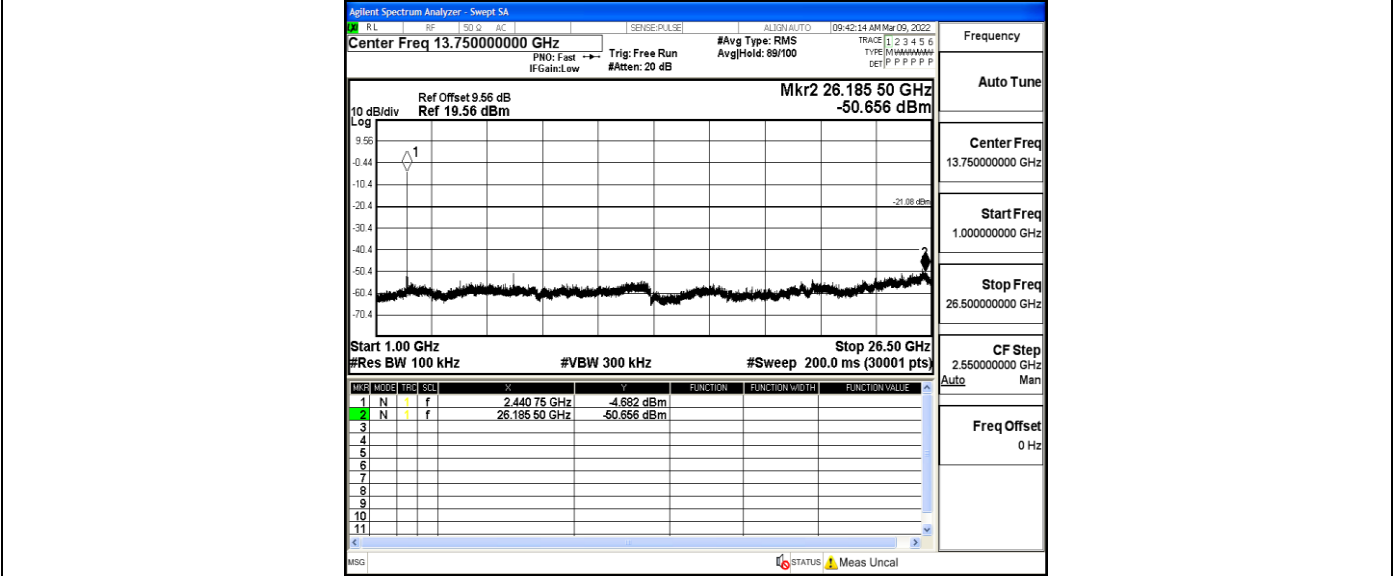
2DH5\_Ant1\_2441\_0~Reference



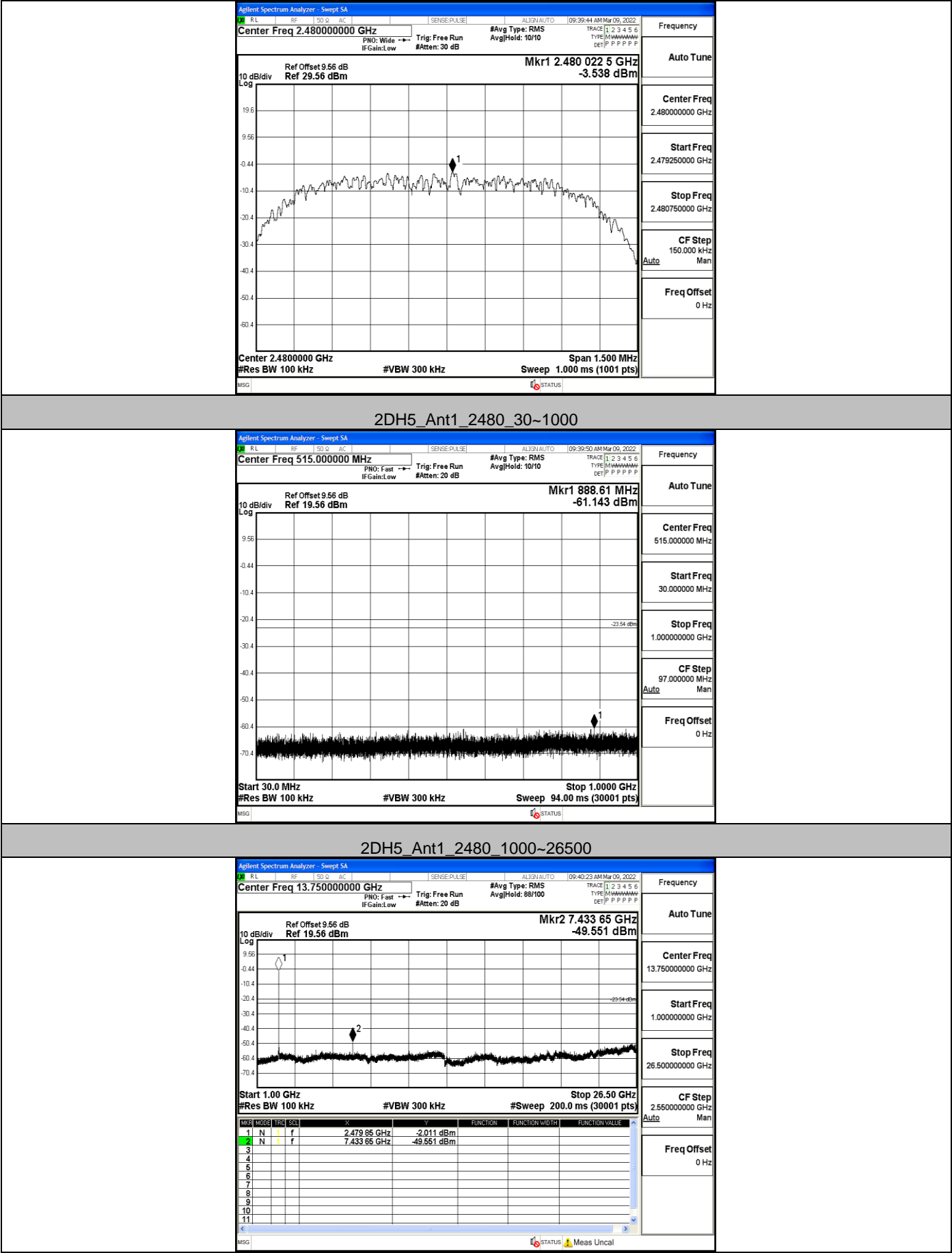
2DH5\_Ant1\_2441\_30~1000



2DH5\_Ant1\_2441\_1000~26500



2DH5\_Ant1\_2480\_0~Reference

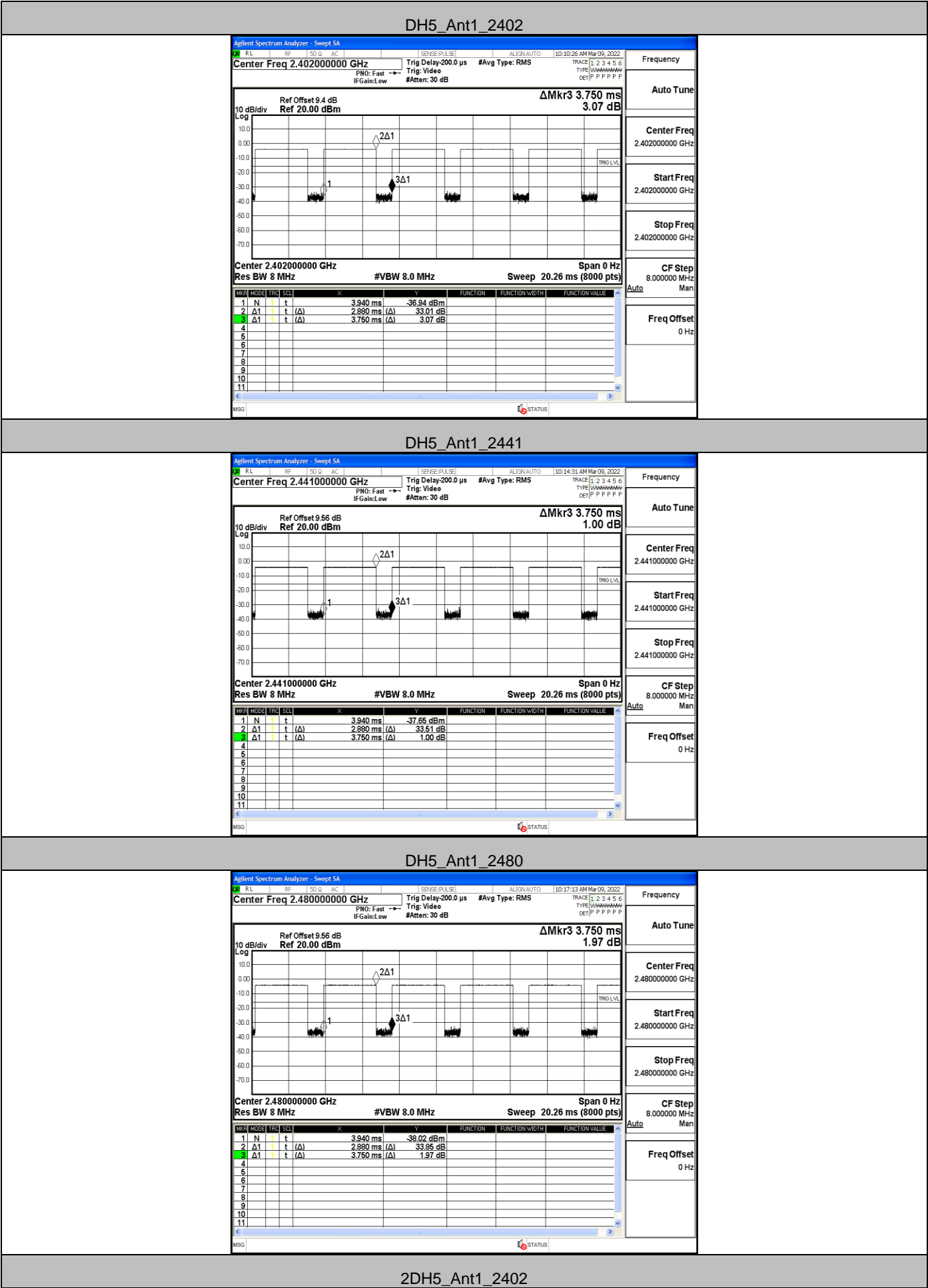


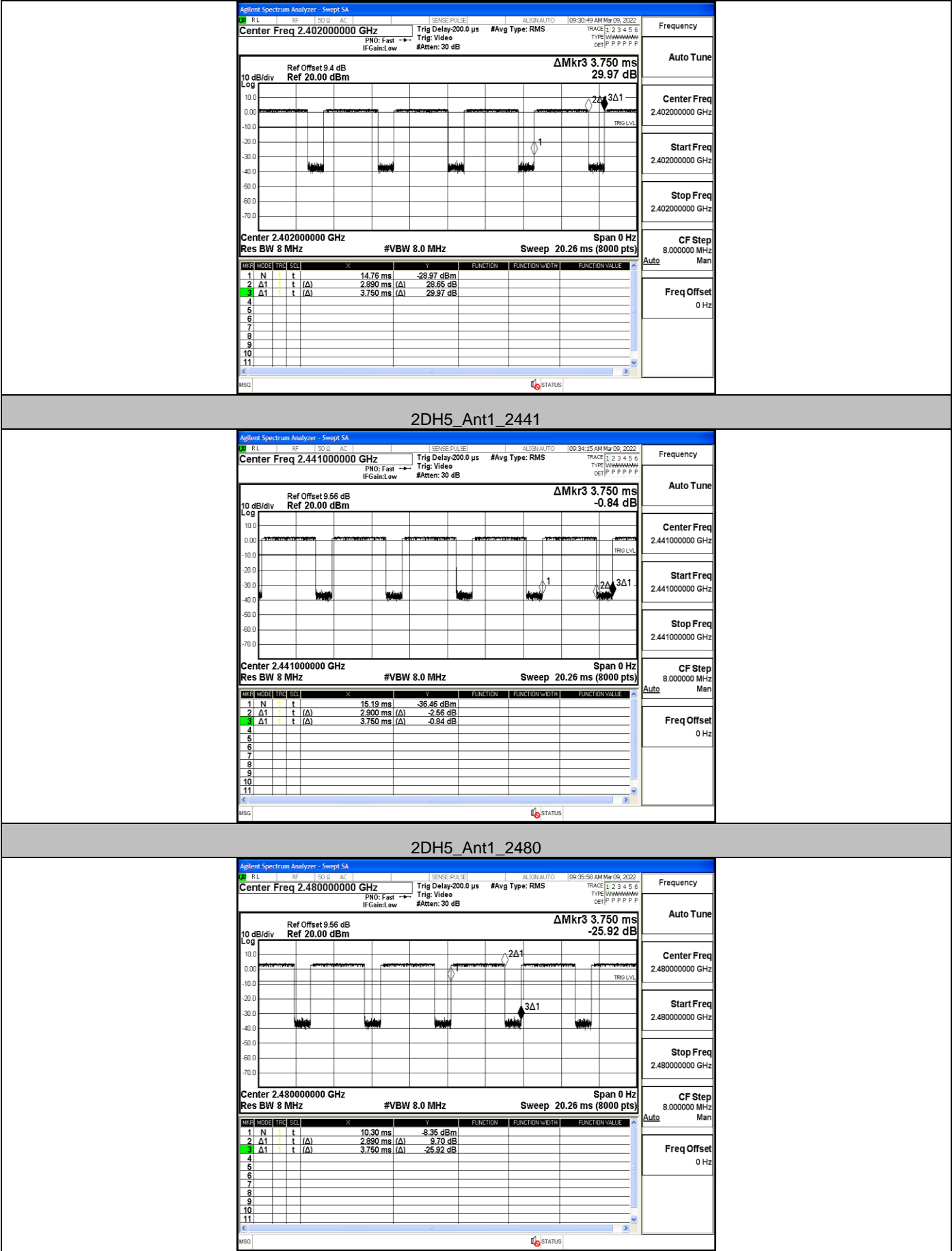
Appendix I: Duty Cycle

Test Result

TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/B(KHz)
DH5	Ant1	2402	2.87	3.77	76.13	0.35
		2441	2.86	3.76	76.06	0.35
		2480	2.87	3.77	76.13	0.35
2DH5	Ant1	2402	2.88	3.78	76.19	0.35
		2441	2.88	3.78	76.19	0.35
		2480	2.88	3.78	76.19	0.35

Test Graphs





## Appendix J: Emissions in Restricted Bands

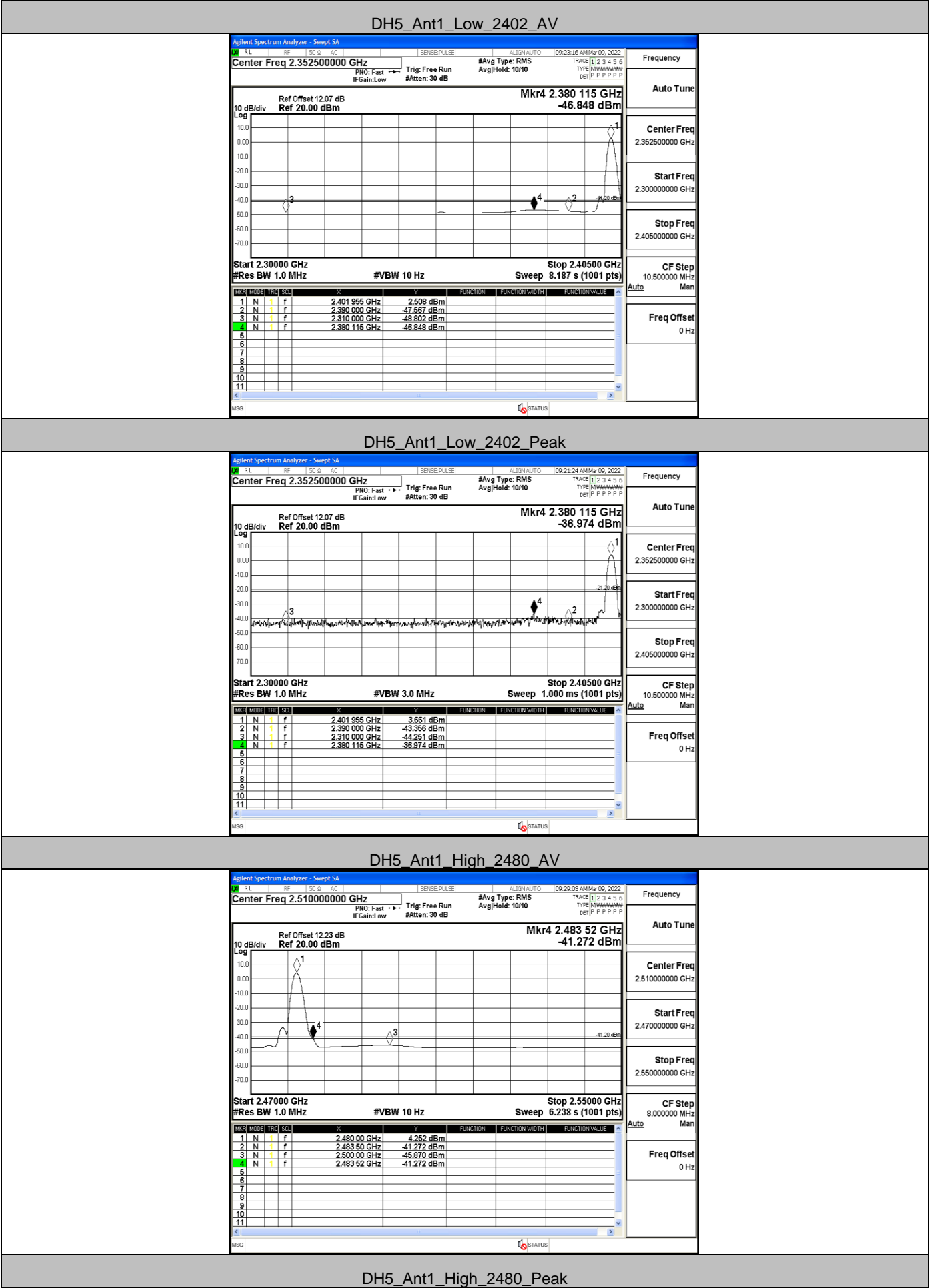
### Test Result

TestMode	Antenna	ChName	Channel	Detector	Freq(MHz)	Result(dBm)	Limit(dBm)	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-48.8	≤-41.20	PASS
				AV	2380.115	-46.85	≤-41.20	PASS
				AV	2390.000	-47.57	≤-41.20	PASS
				Peak	2310.000	-44.25	≤-21.20	PASS
				Peak	2380.115	-36.97	≤-21.20	PASS
				Peak	2390.000	-43.36	≤-21.20	PASS
		High	2480	AV	2483.500	-41.27	≤-41.20	PASS
				AV	2483.520	-41.27	≤-41.20	PASS
				AV	2500.000	-45.87	≤-41.20	PASS
				Peak	2483.500	-36.82	≤-21.20	PASS
				Peak	2483.760	-34.09	≤-21.20	PASS
				Peak	2500.000	-39.12	≤-21.20	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-48.47	≤-41.20	PASS
				AV	2378.855	-46.08	≤-41.20	PASS
				AV	2390.000	-46.97	≤-41.20	PASS
				Peak	2310.000	-41.17	≤-21.20	PASS
				Peak	2381.270	-37.06	≤-21.20	PASS
				Peak	2390.000	-39.65	≤-21.20	PASS
		High	2480	AV	2483.500	-42.17	≤-41.20	PASS
				AV	2483.520	-42.17	≤-41.20	PASS
				AV	2500.000	-45.25	≤-41.20	PASS
				Peak	2483.500	-35.27	≤-21.20	PASS
				Peak	2483.760	-34.75	≤-21.20	PASS
				Peak	2500.000	-39.22	≤-21.20	PASS

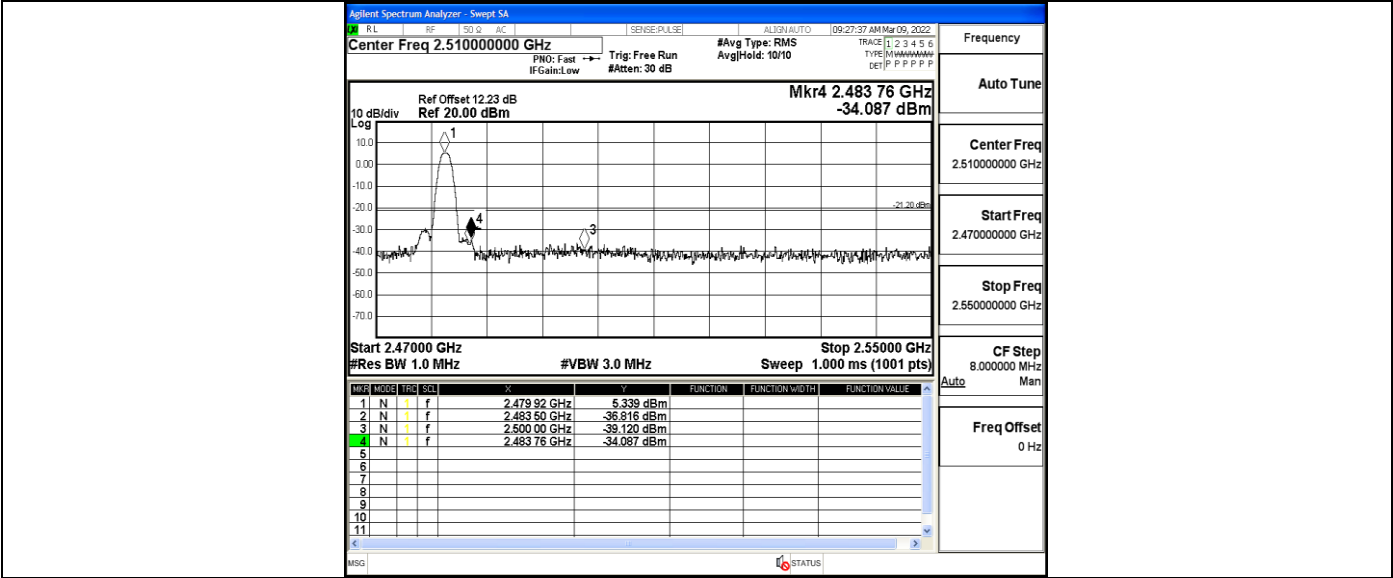
Note :

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.

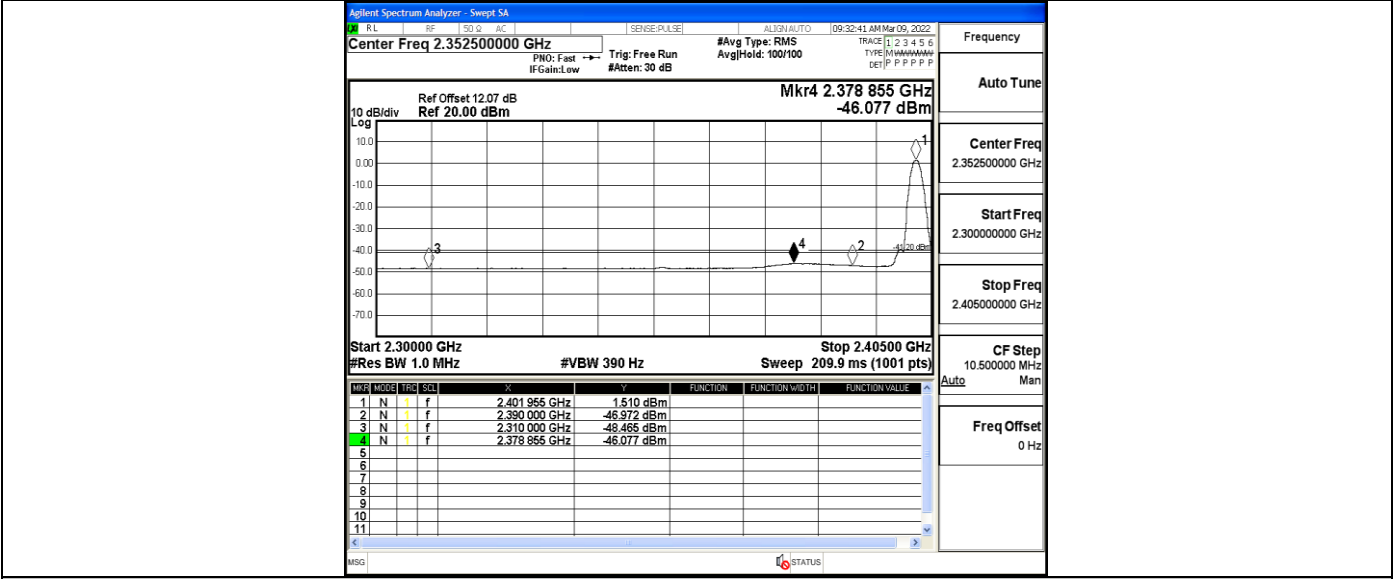
Test Graphs



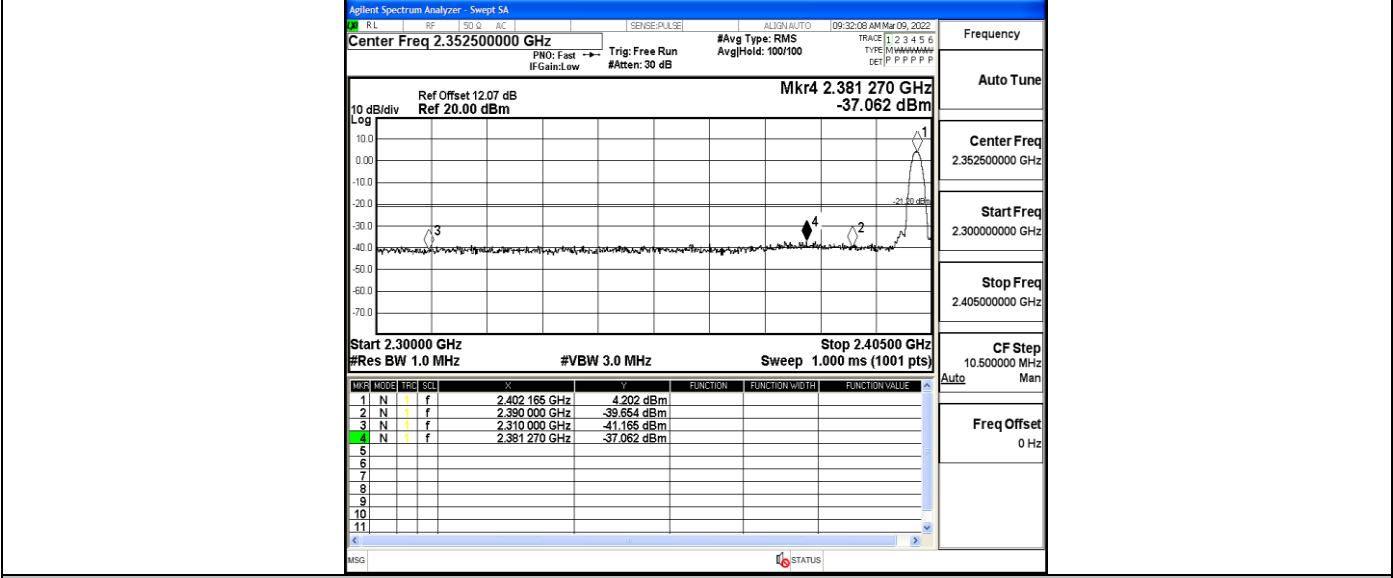




2DH5\_Ant1\_Low\_2402\_AV



2DH5\_Ant1\_Low\_2402\_Peak



2DH5\_Ant1\_High\_2480\_AV

