

Appendix A

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

Product Name: Feature phone

Trade Mark: Sunelan

Test Model: S5

FCC ID: 2A2AJ-S5

Environmental Conditions

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

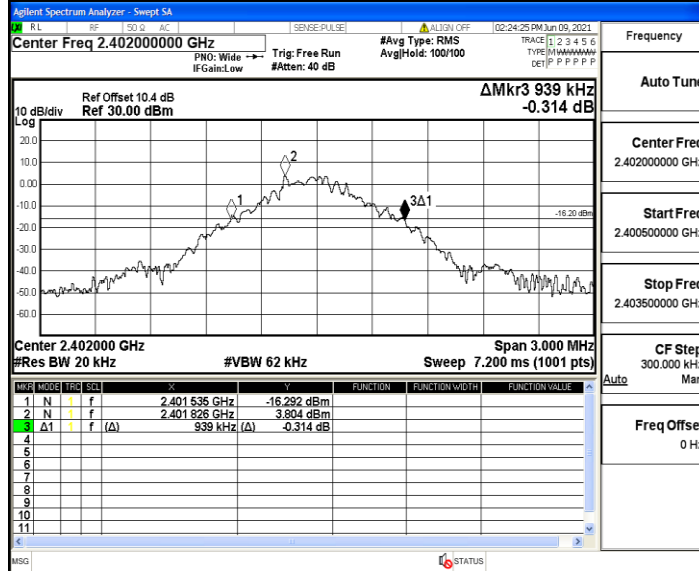
Appendix A: 20dB Emission Bandwidth

Test Result

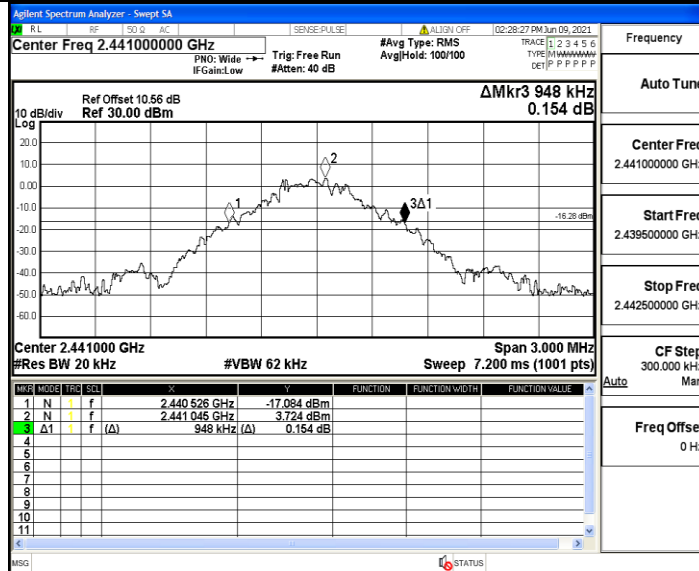
TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.939	2401.535	2402.474	---	PASS
		2441	0.948	2440.526	2441.474	---	PASS
		2480	0.945	2479.526	2480.471	---	PASS
2DH5	Ant1	2402	1.317	2401.331	2402.648	---	PASS
		2441	1.311	2440.334	2441.645	---	PASS
		2480	1.311	2479.331	2480.642	---	PASS
3DH5	Ant1	2402	1.278	2401.343	2402.621	---	PASS
		2441	1.308	2440.334	2441.642	---	PASS
		2480	1.272	2479.337	2480.609	---	PASS

Test Graphs

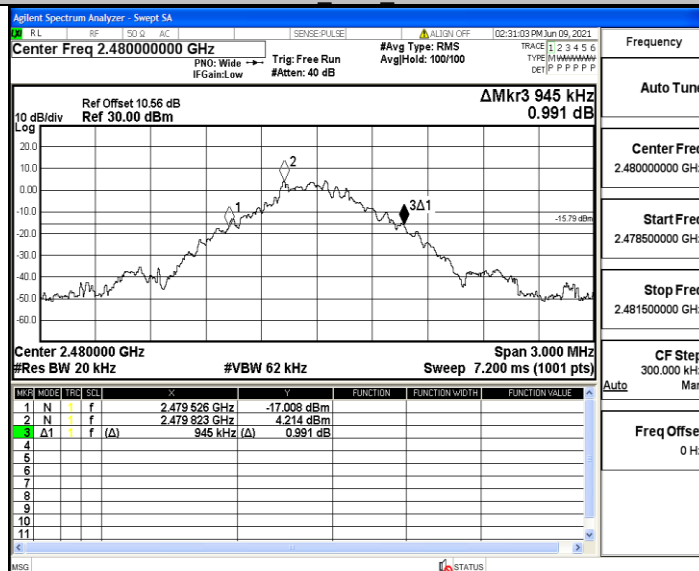
DH5_Ant1_2402



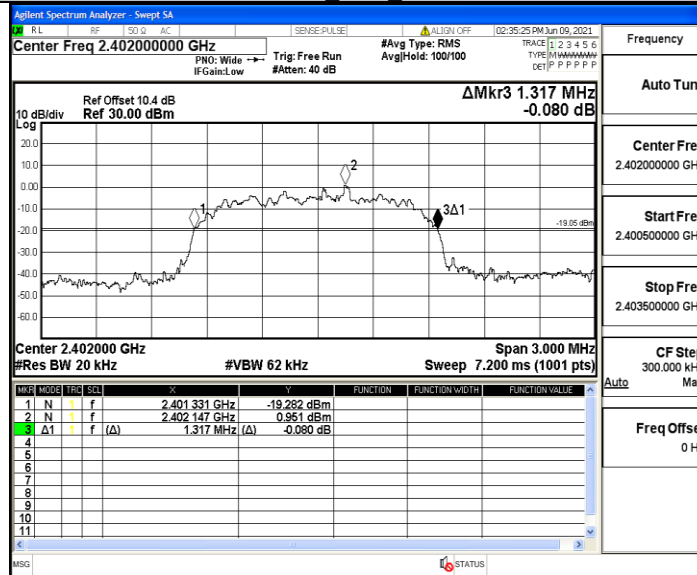
DH5_Ant1_2441



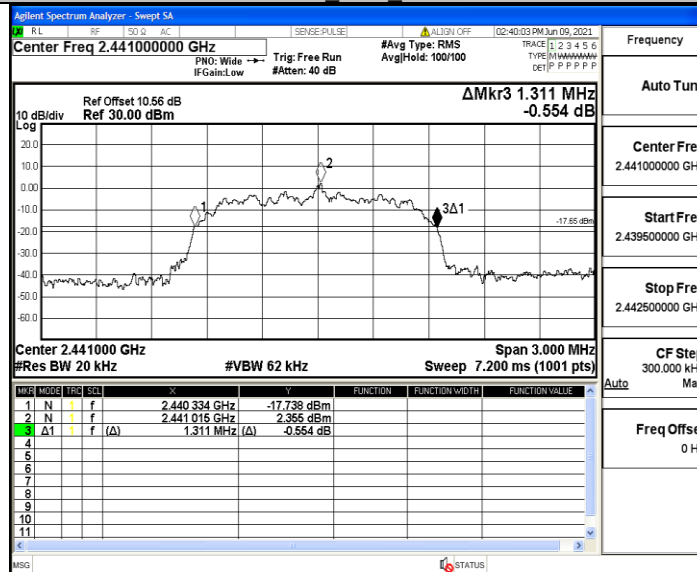
DH5_Ant1_2480



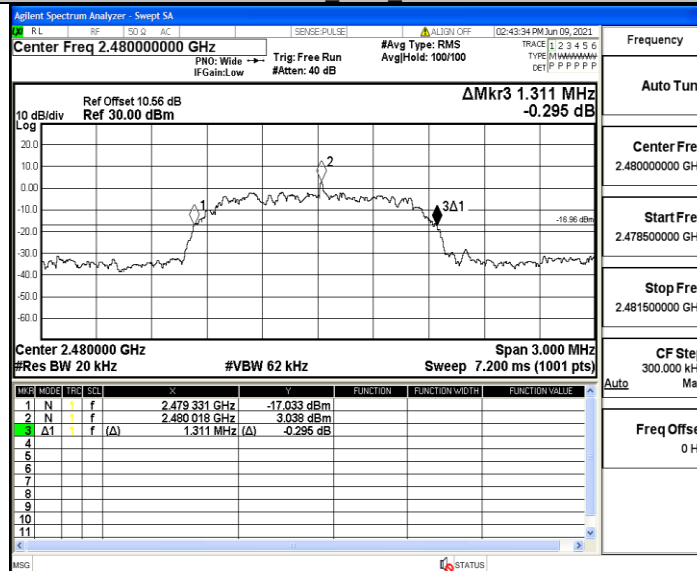
2DH5_Ant1_2402



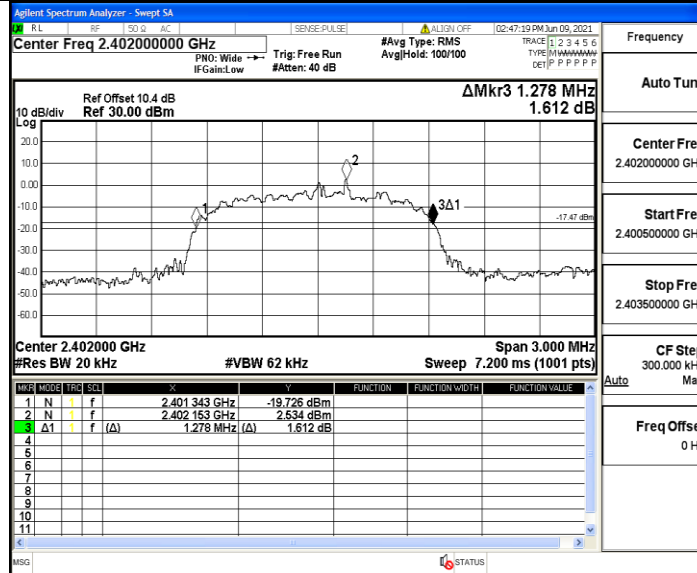
2DH5_Ant1_2441



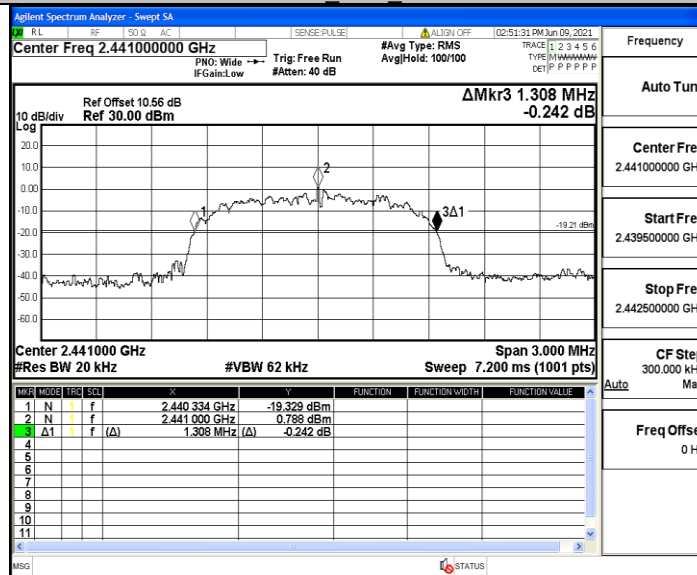
2DH5_Ant1_2480



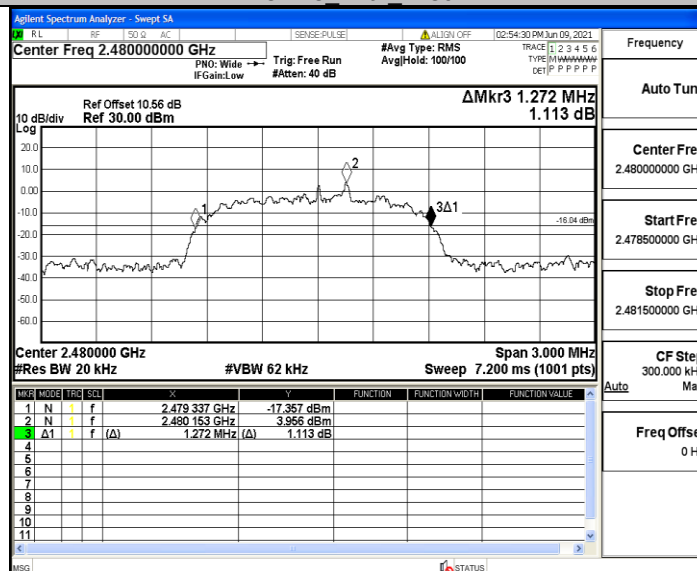
3DH5_Ant1_2402



3DH5 Ant1 2441



3DH5 Ant1 2480



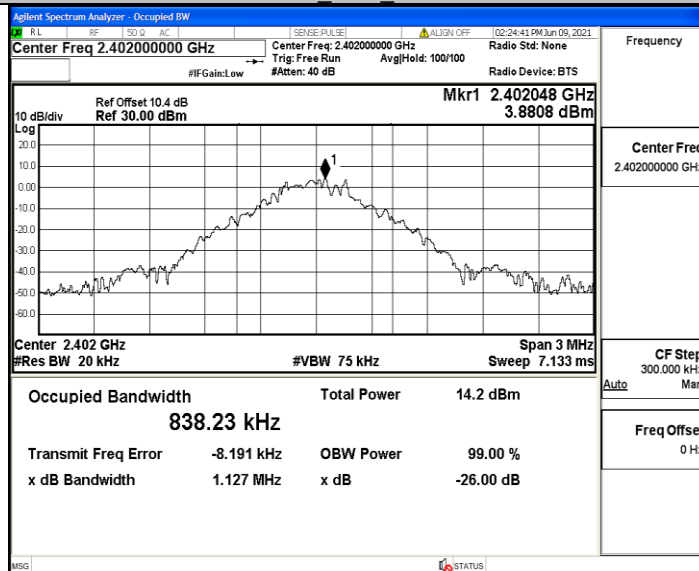
Appendix B: Occupied Channel Bandwidth

Test Result

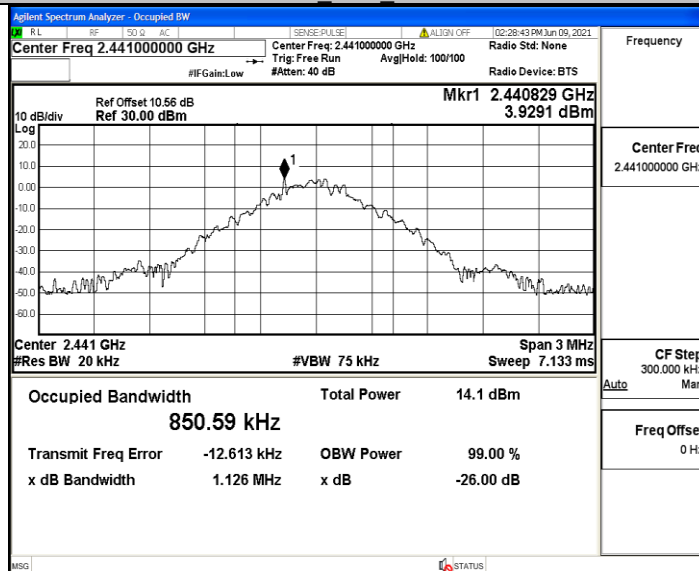
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.83823	2401.573	2402.411	---	PASS
		2441	0.85059	2440.562	2441.413	---	PASS
		2480	0.84976	2479.558	2480.408	---	PASS
2DH5	Ant1	2402	1.1887	2401.398	2402.587	---	PASS
		2441	1.1900	2440.394	2441.584	---	PASS
		2480	1.1983	2479.389	2480.587	---	PASS
3DH5	Ant1	2402	1.2040	2401.382	2402.586	---	PASS
		2441	1.1897	2440.387	2441.577	---	PASS
		2480	1.2096	2479.374	2480.584	---	PASS

Test Graphs

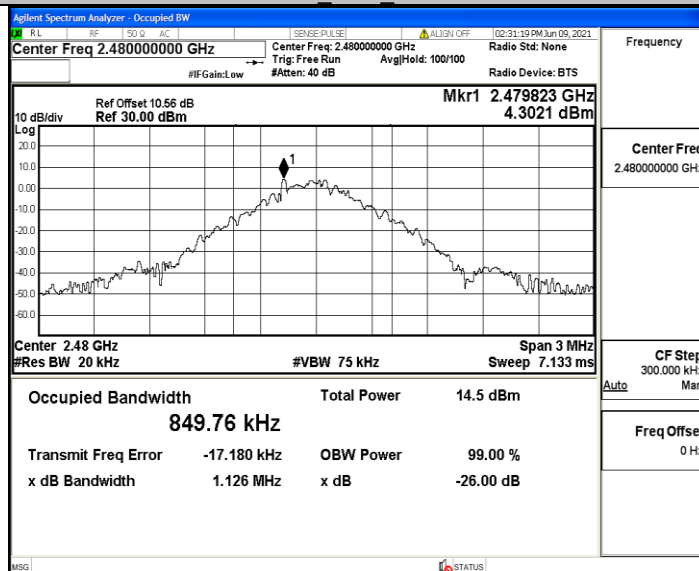
DH5_Ant1_2402



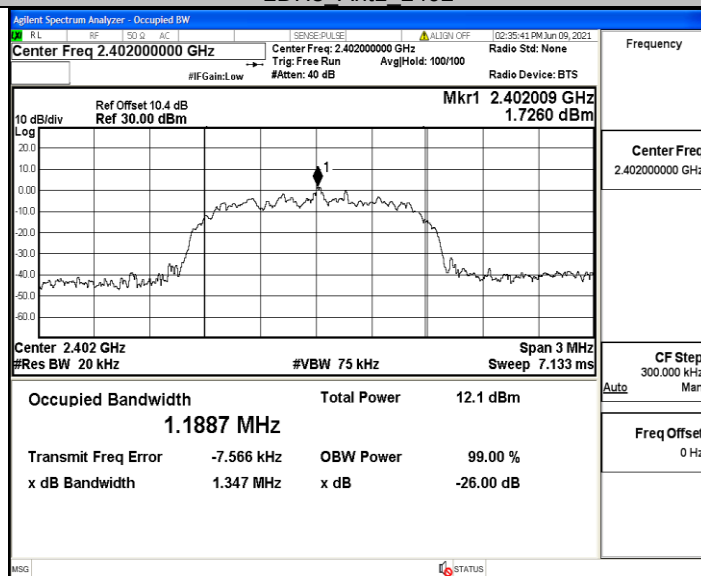
DH5_Ant1_2441



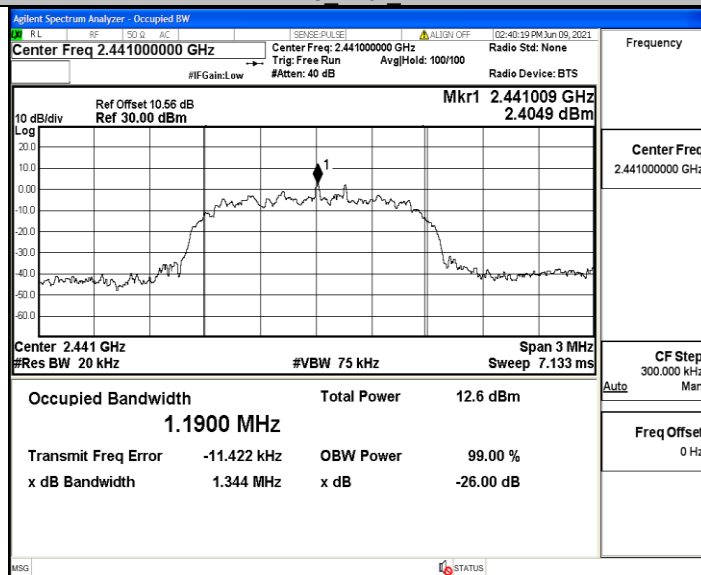
DH5_Ant1_2480



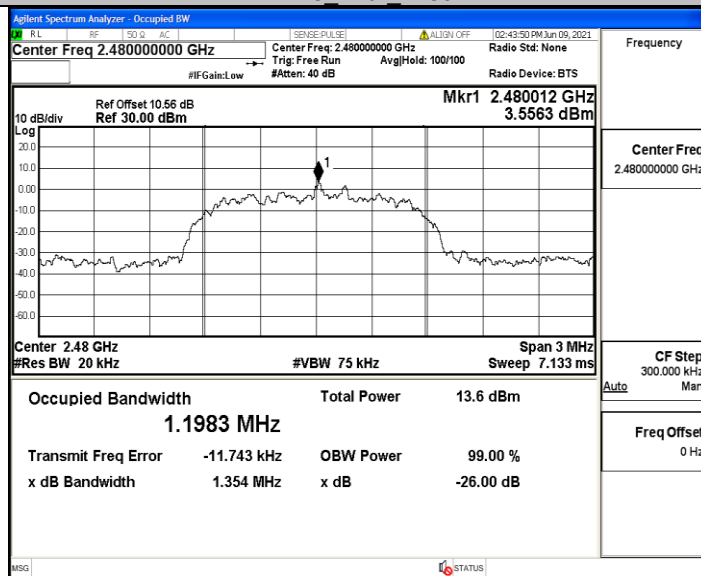
2DH5_Ant1_2402



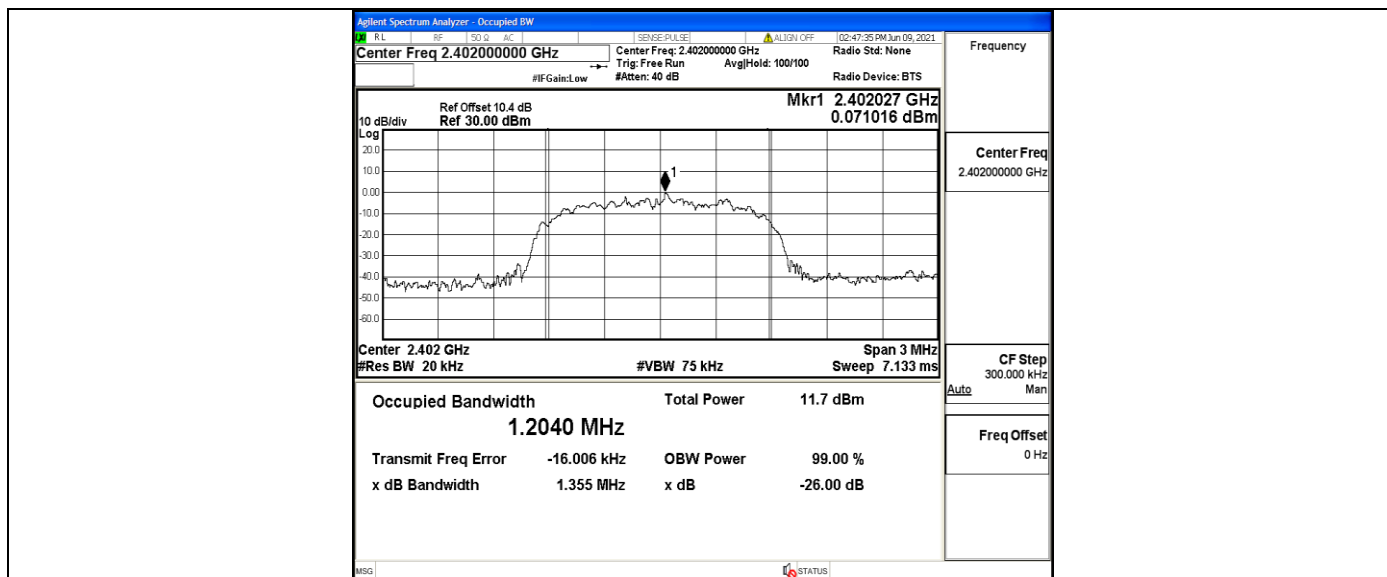
2DH5_Ant1_2441



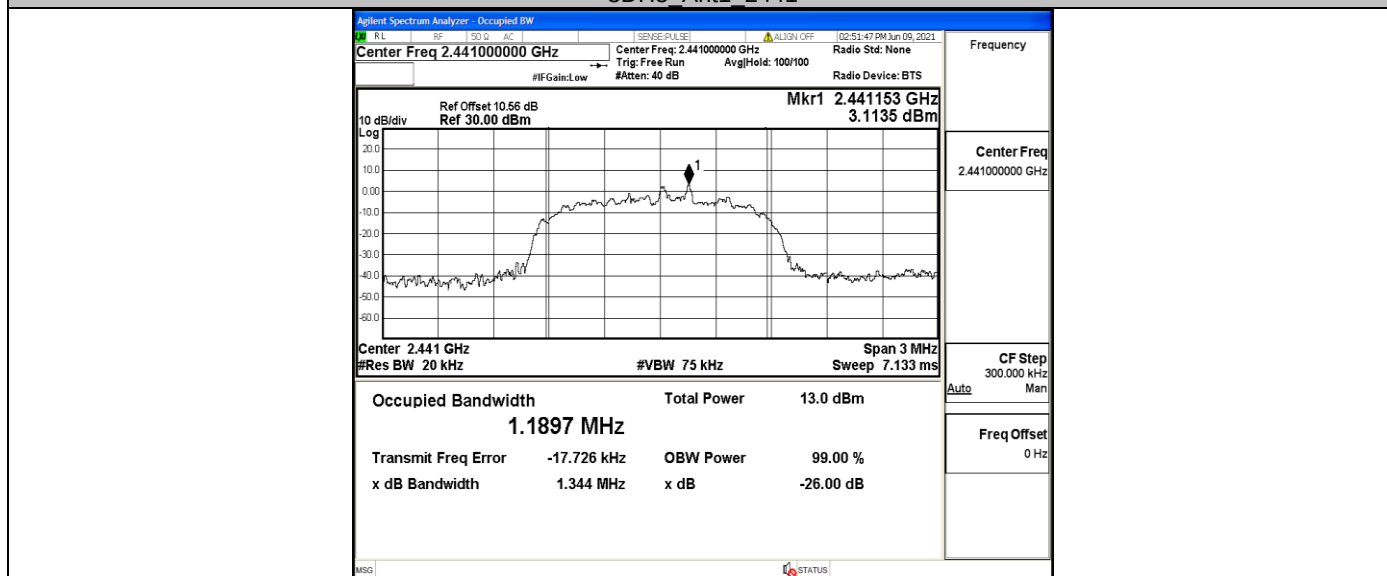
2DH5_Ant1_2480



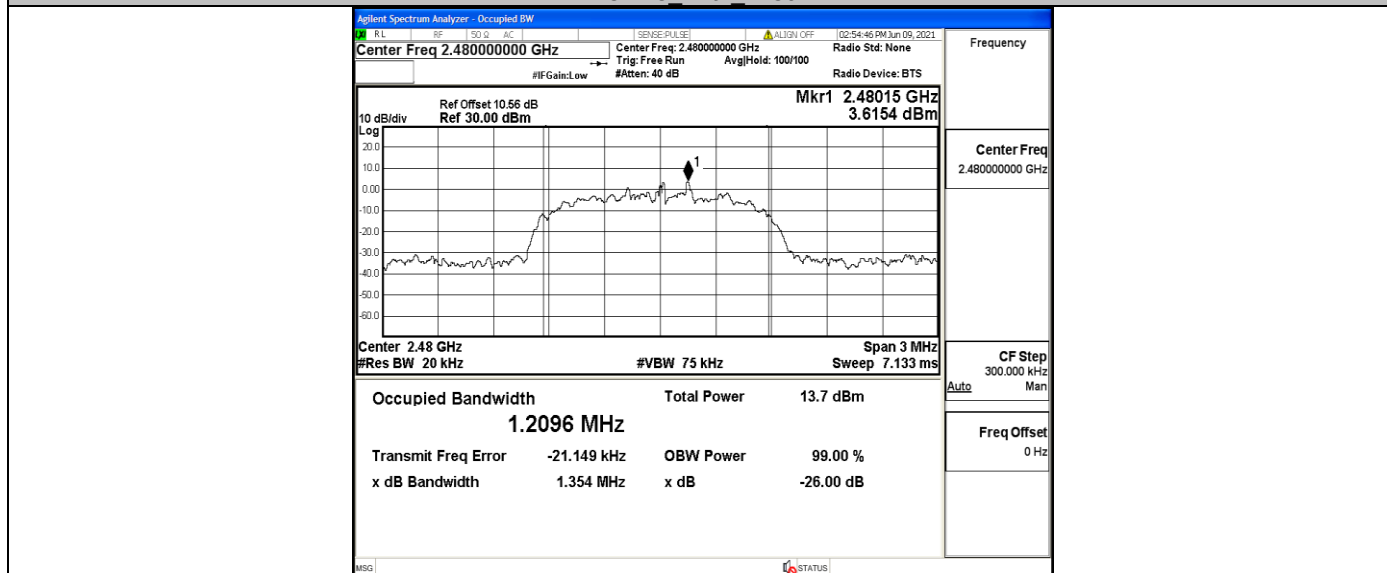
3DH5_Ant1_2402



3DH5 Ant1 2441



3DH5 Ant1 2480

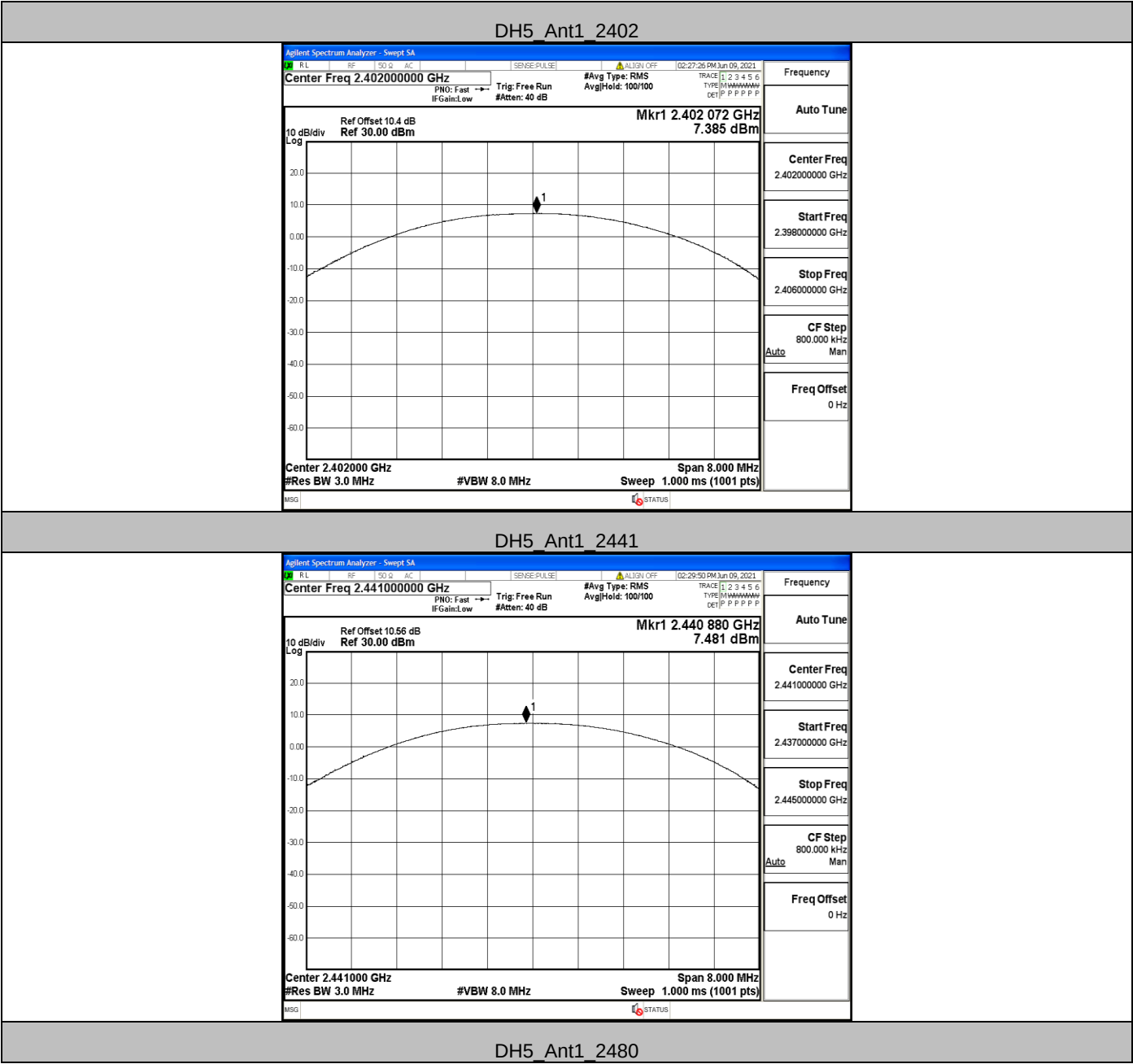


Appendix C: Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	7.39	<=20.97	PASS
		2441	7.48	<=20.97	PASS
		2480	7.8	<=20.97	PASS
2DH5	Ant1	2402	7.7	<=20.97	PASS
		2441	8.17	<=20.97	PASS
		2480	8.69	<=20.97	PASS
3DH5	Ant1	2402	7.91	<=20.97	PASS
		2441	8.52	<=20.97	PASS
		2480	8.98	<=20.97	PASS

Test Graphs



DH5_Ant1_2441

Agilent Spectrum Analyzer - Swept SA

RL

RF

50 Ω

AC

SENSE: PULSE

ALIGN: OFF

02:29:50 PM Jun 09, 2021

Center Freq 2.441000000 GHz

PNO: Fast

IF Gain: Low

Trig: Free Run

#Atten: 40 dB

#Avg Type: RMS

Avg/Hold: 100/100

TRACE 1 2 3 4 5 6

TYPE: [M] WWWWWW

DET: [P] P P P P P

Frequency

Auto Tune

Center Freq 2.441000000 GHz

Start Freq 2.437000000 GHz

Stop Freq 2.445000000 GHz

CF Step 800.000 kHz

Auto Man

Freq Offset 0 Hz

Ref Offset 10.66 dB

Ref 30.00 dBm

Mkr1 2.440 880 GHz

7.481 dBm

10 dB/div

Log

20.0

10.0

0.00

-10.0

-20.0

-30.0

-40.0

-50.0

-60.0

Center 2.441000 GHz

#Res BW 3.0 MHz

#VBW 8.0 MHz

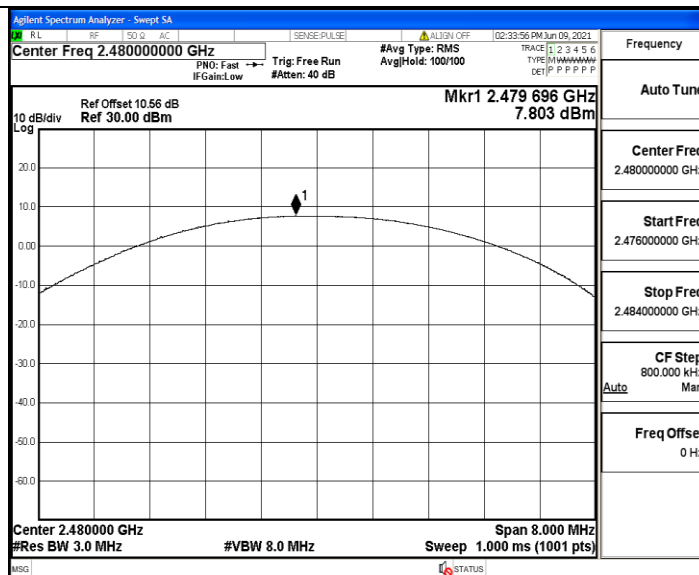
Span 8.000 MHz

Sweep 1.000 ms (1001 pts)

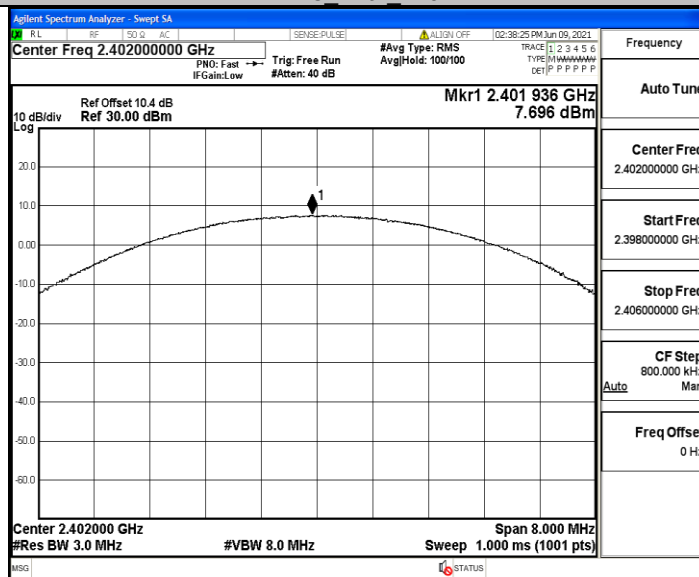
MSG

STATUS

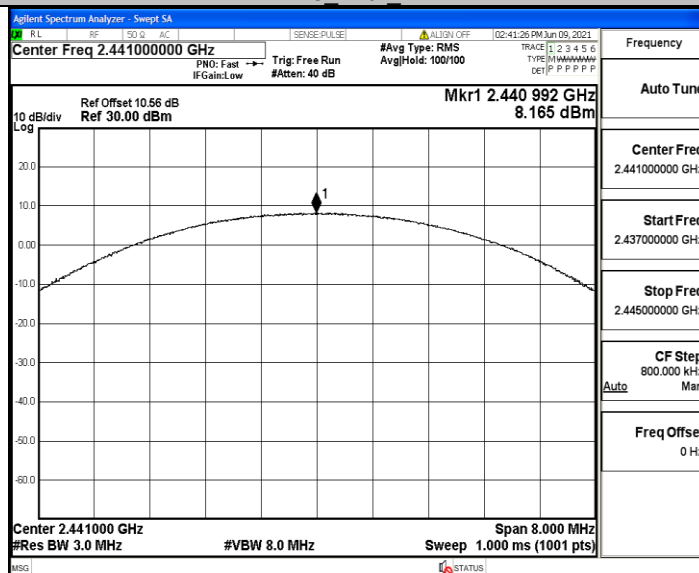
DH5_Ant1_2480



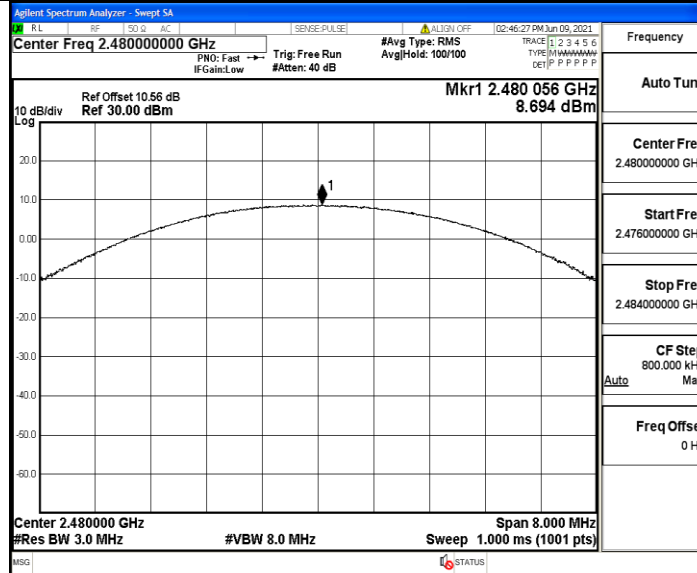
2DH5_Ant1_2402



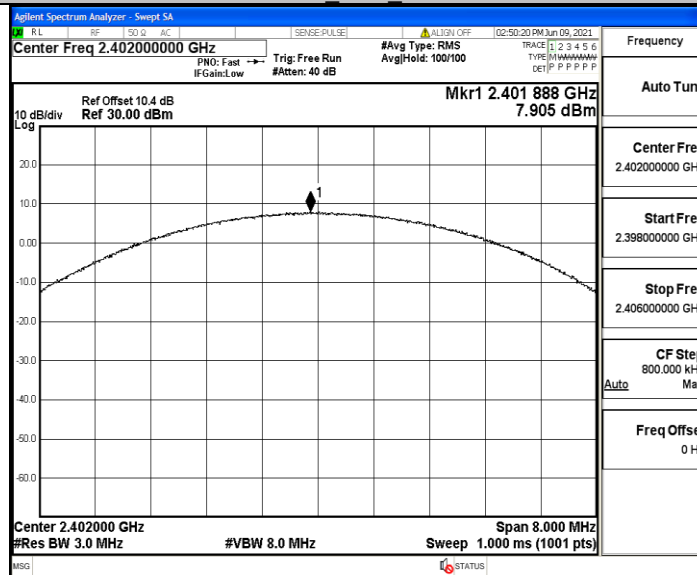
2DH5_Ant1_2441



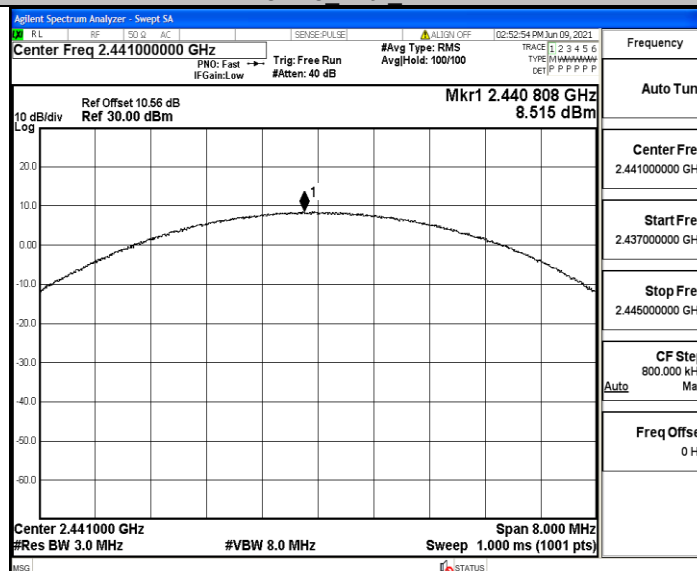
2DH5_Ant1_2480



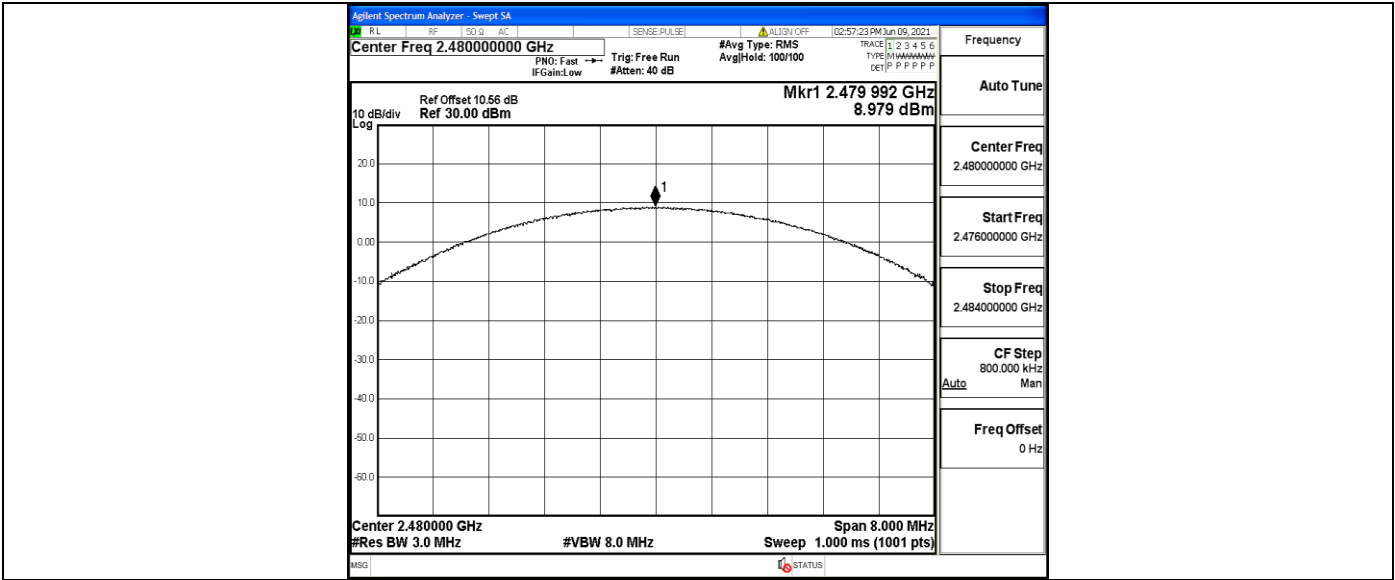
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480

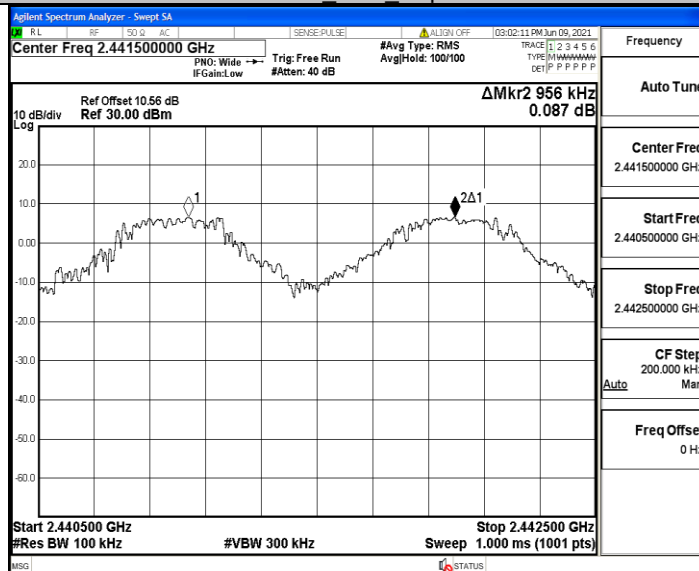


Appendix D: Carrier frequency separation Test Result

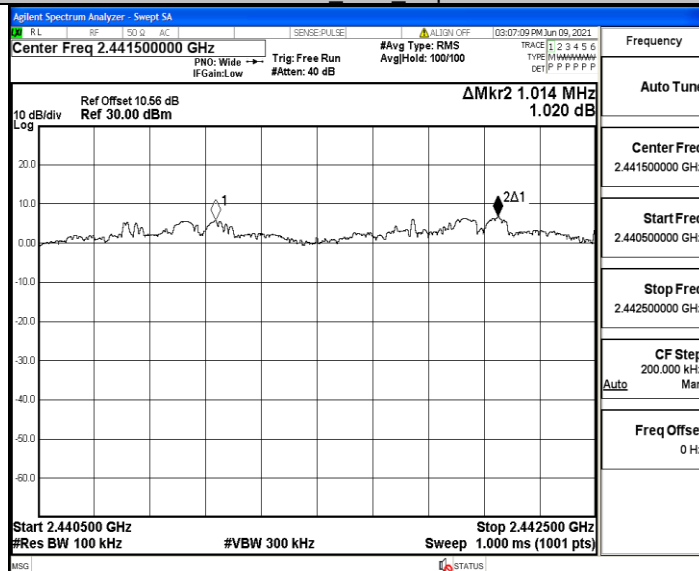
TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.956	≥ 0.948	PASS
2DH5	Ant1	Hop	1.014	≥ 0.878	PASS
3DH5	Ant1	Hop	1.006	≥ 0.872	PASS

Test Graphs

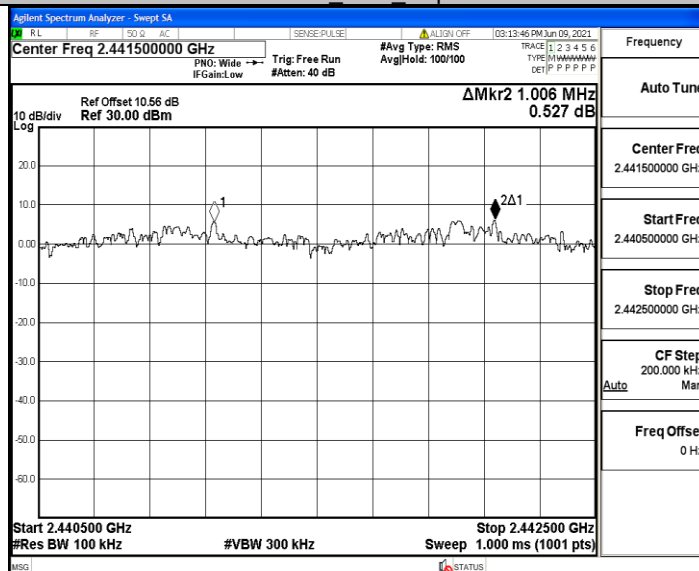
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop

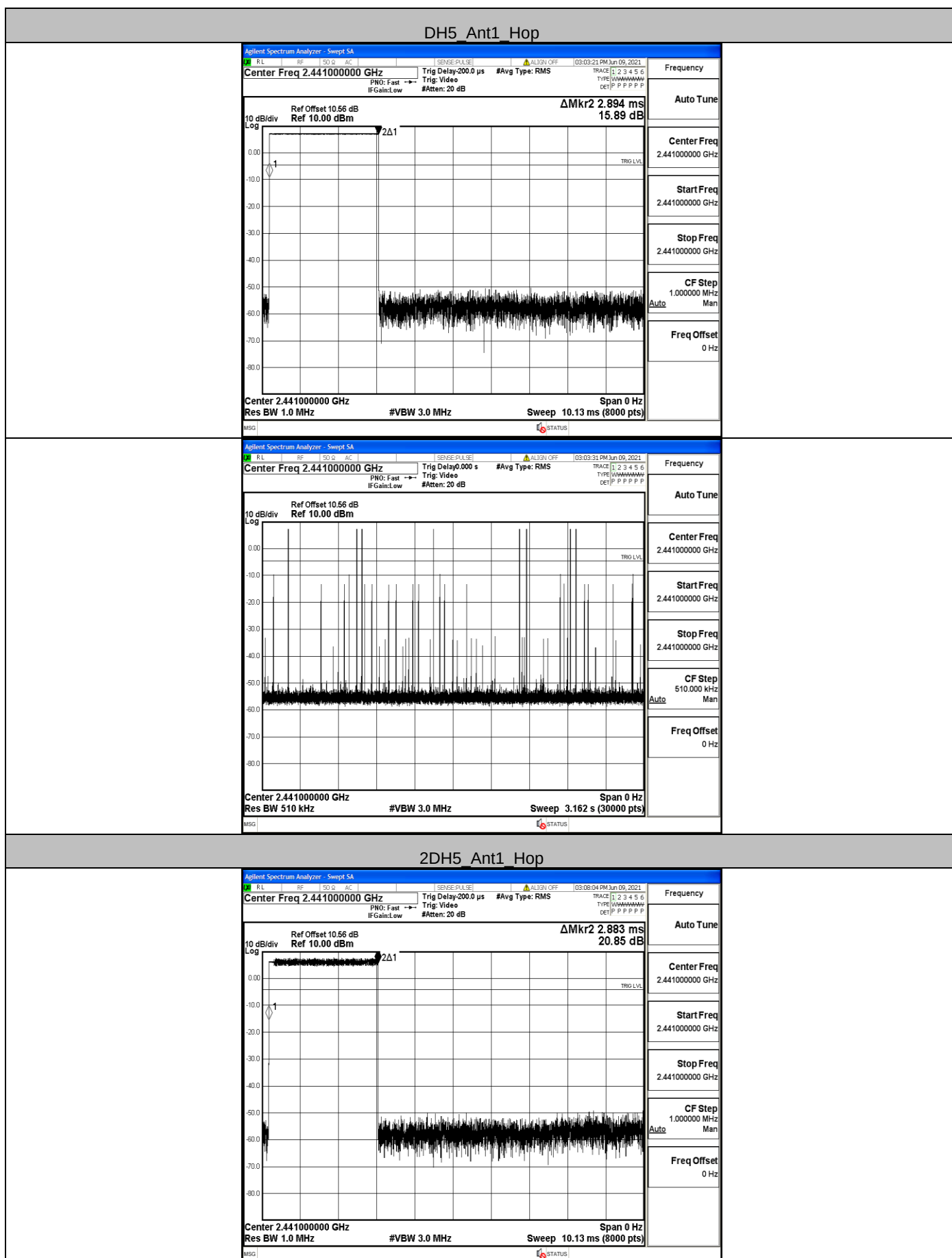


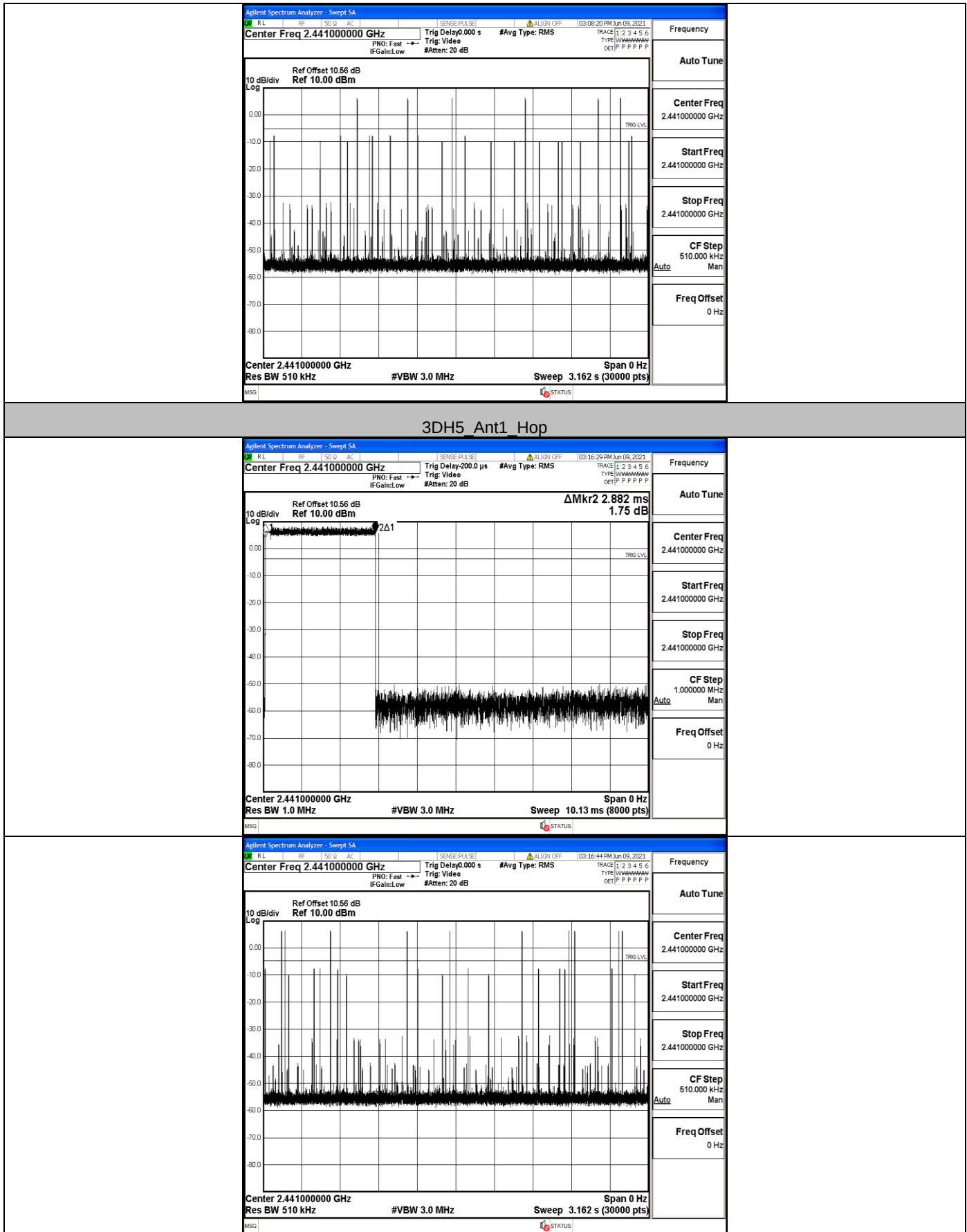
Appendix E: Time of occupancy

Test Result

TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.89	90	0.26	≤ 0.4	PASS
2DH5	Ant1	Hop	2.88	70	0.202	≤ 0.4	PASS
3DH5	Ant1	Hop	2.88	110	0.317	≤ 0.4	PASS

Test Graphs





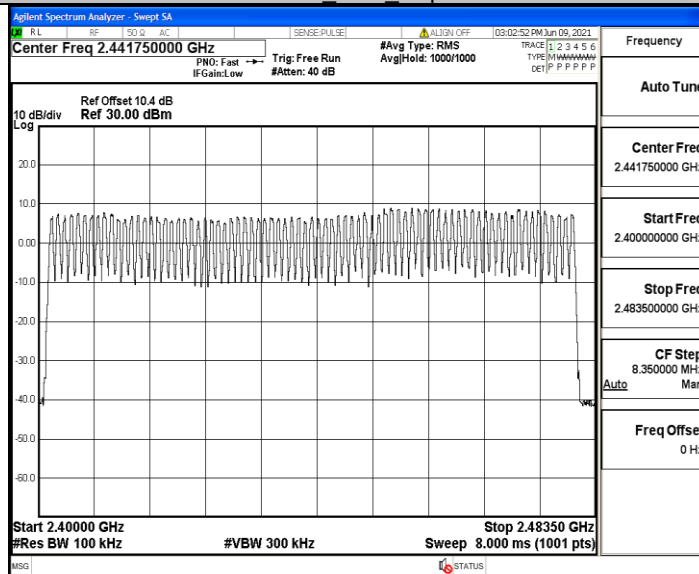
Appendix F: Number of hopping channels

Test Result

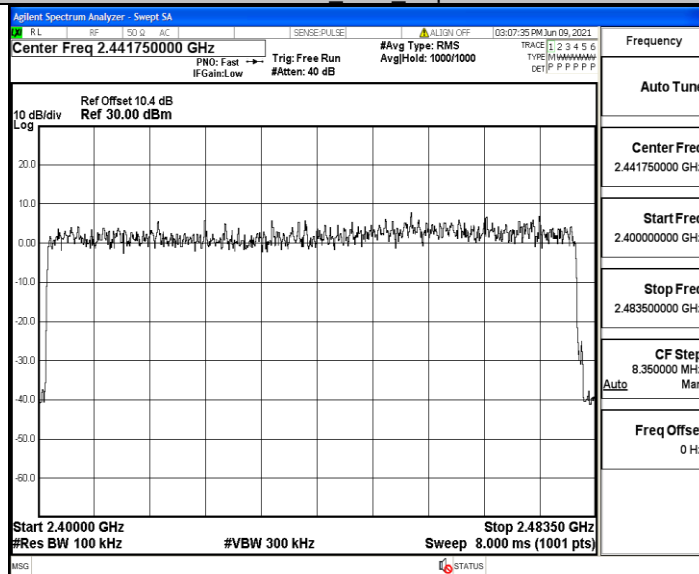
TestMode	Antenna	Channel	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	>=15	PASS
2DH5	Ant1	Hop	79	>=15	PASS
3DH5	Ant1	Hop	79	>=15	PASS

Test Graphs

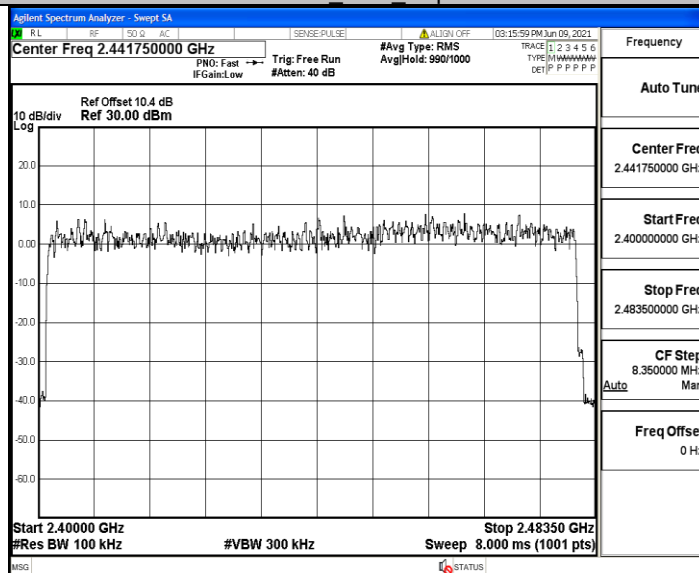
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop



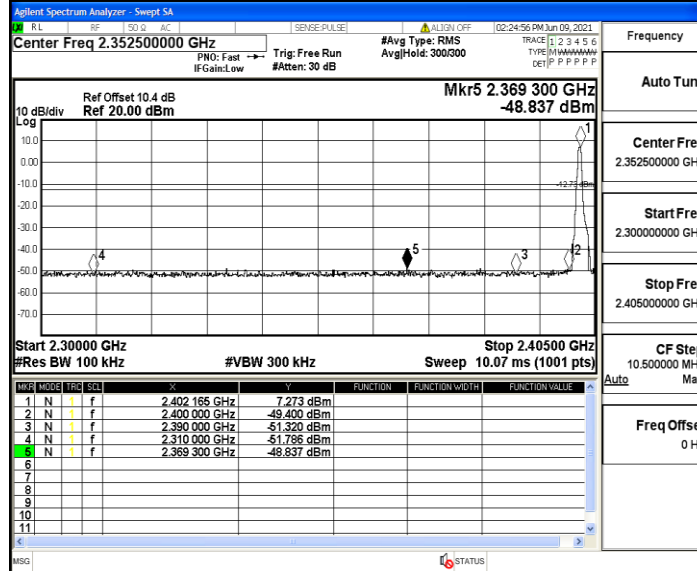
Appendix G: Band edge measurements

Test Result

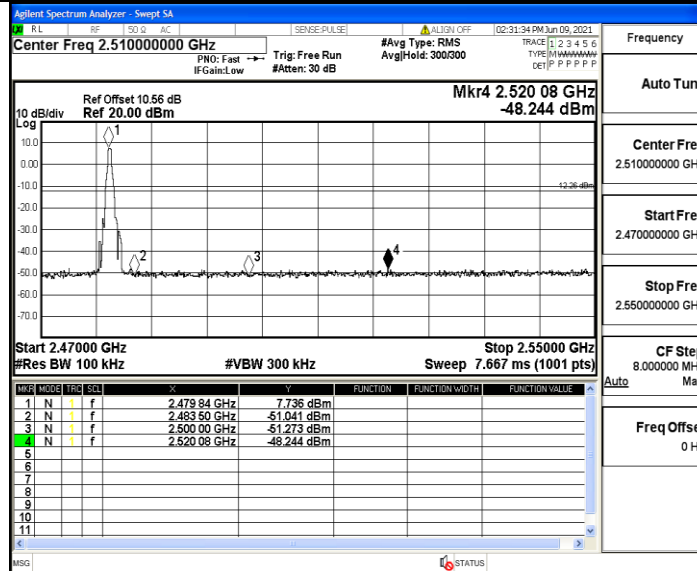
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	7.27	-48.84	<=-12.73	PASS
		High	2480	7.74	-48.24	<=-12.26	PASS
		Low	Hop_2402	7.38	-48.72	<=-12.62	PASS
		High	Hop_2480	8.04	-48.03	<=-11.96	PASS
2DH5	Ant1	Low	2402	4.84	-45.62	<=-15.16	PASS
		High	2480	7.05	-47.72	<=-12.95	PASS
		Low	Hop_2402	3.88	-49.19	<=-16.12	PASS
		High	Hop_2480	5.86	-47.7	<=-14.14	PASS
3DH5	Ant1	Low	2402	5.34	-45.23	<=-14.66	PASS
		High	2480	7.15	-47.79	<=-12.85	PASS
		Low	Hop_2402	0.64	-49.1	<=-19.36	PASS
		High	Hop_2480	6.81	-47.97	<=-13.19	PASS

Test Graphs

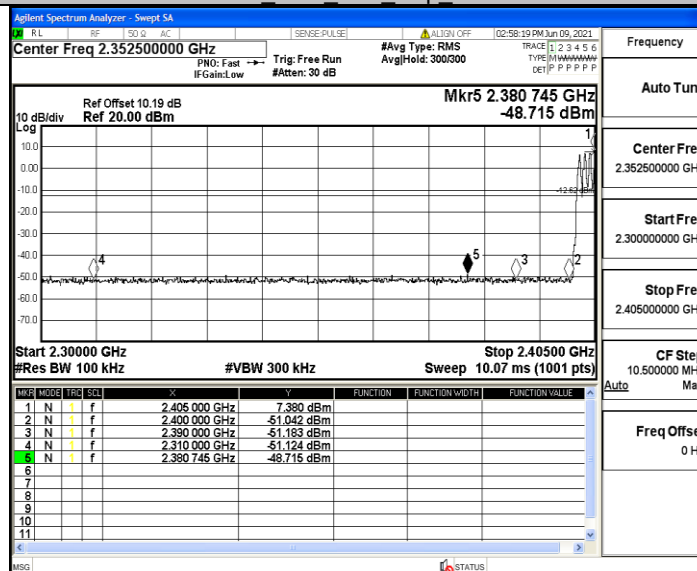
DH5_Ant1_Low_2402



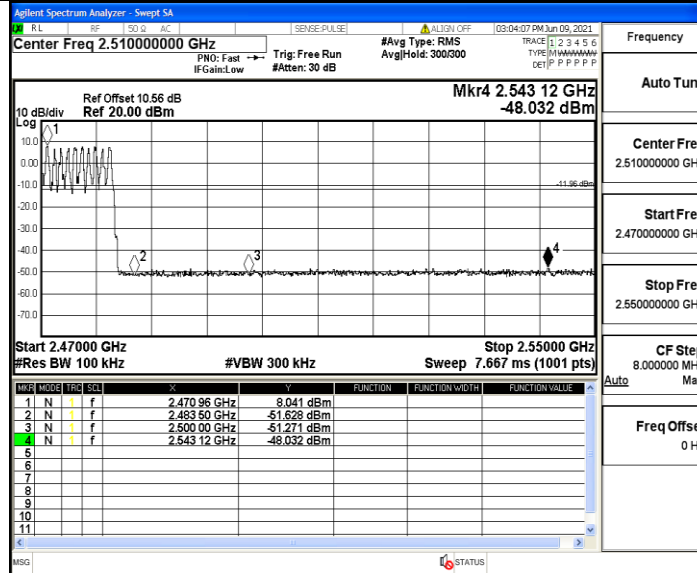
DH5_Ant1_High_2480



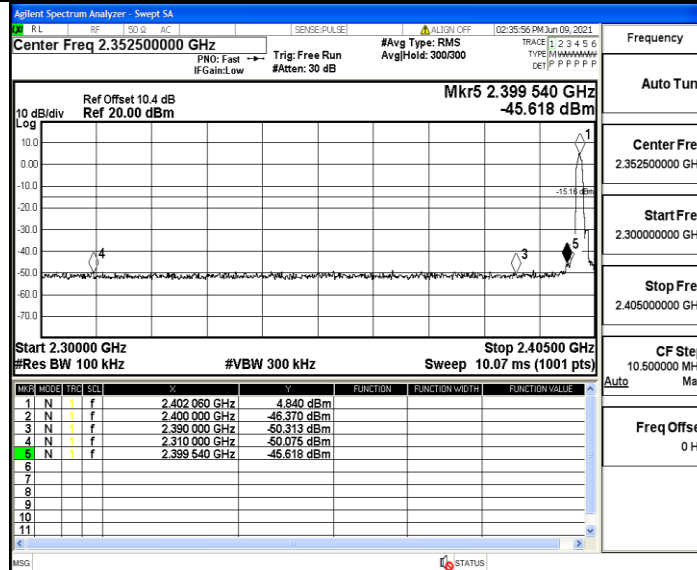
DH5_Ant1_Low_Hop_2402



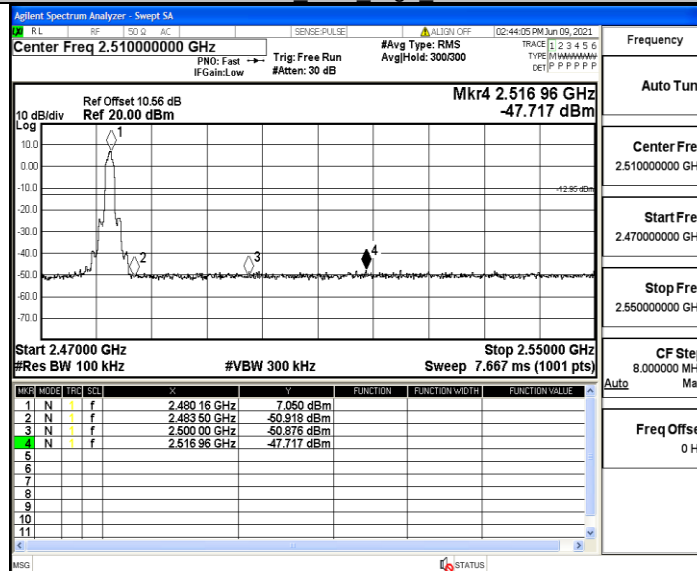
DH5_Ant1_High_Hop_2480



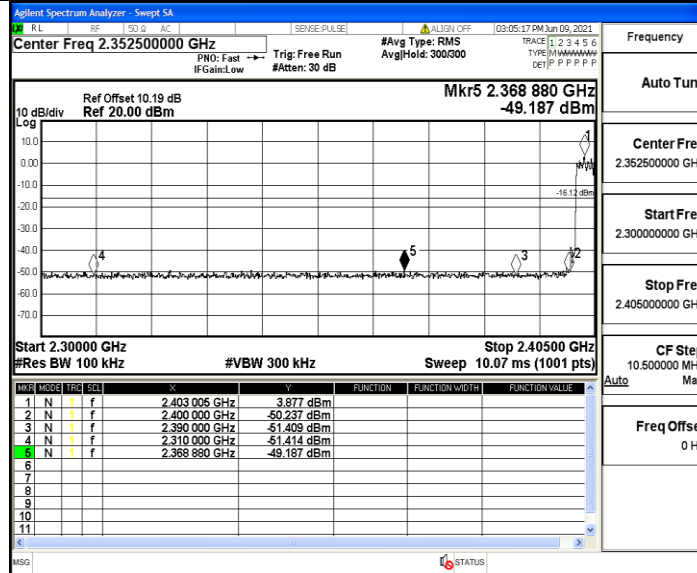
2DH5_Ant1_Low_2402



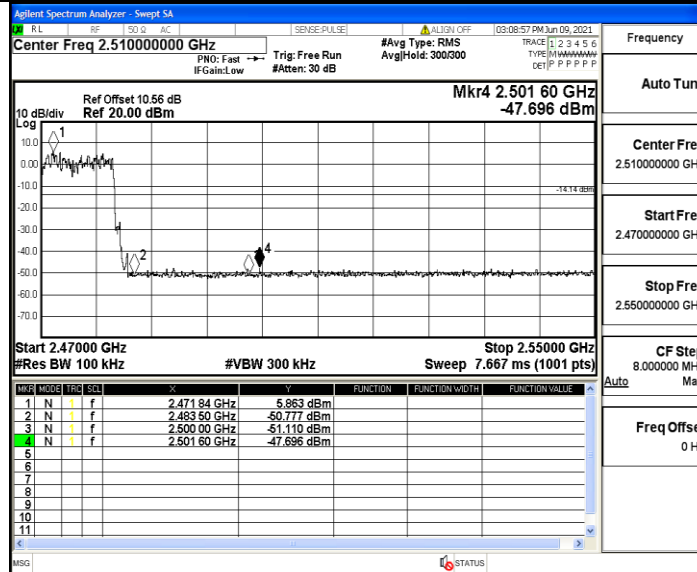
2DH5_Ant1_High_2480



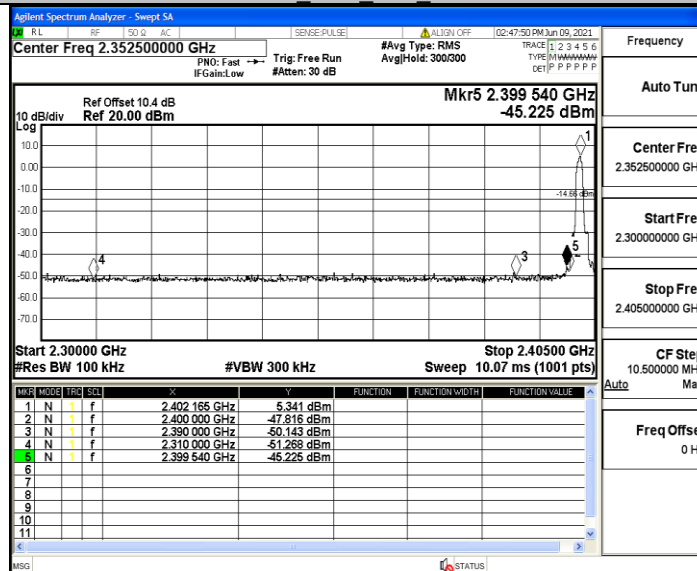
2DH5_Ant1_Low_Hop_2402



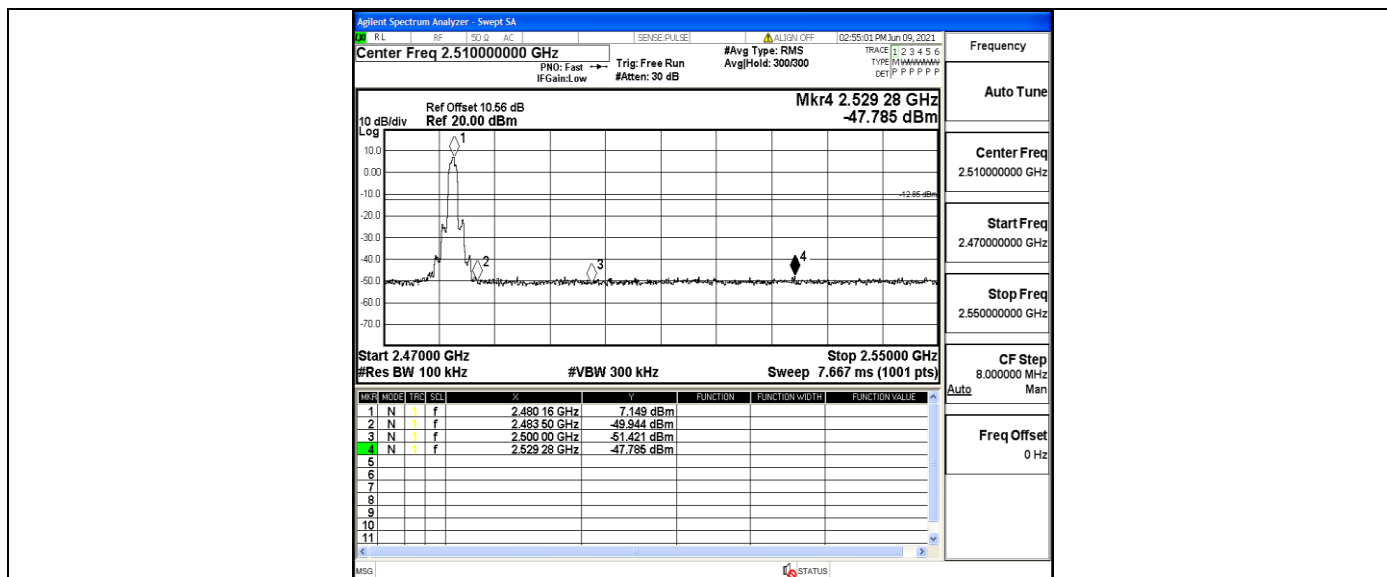
2DH5 Ant1 High Hop 2480



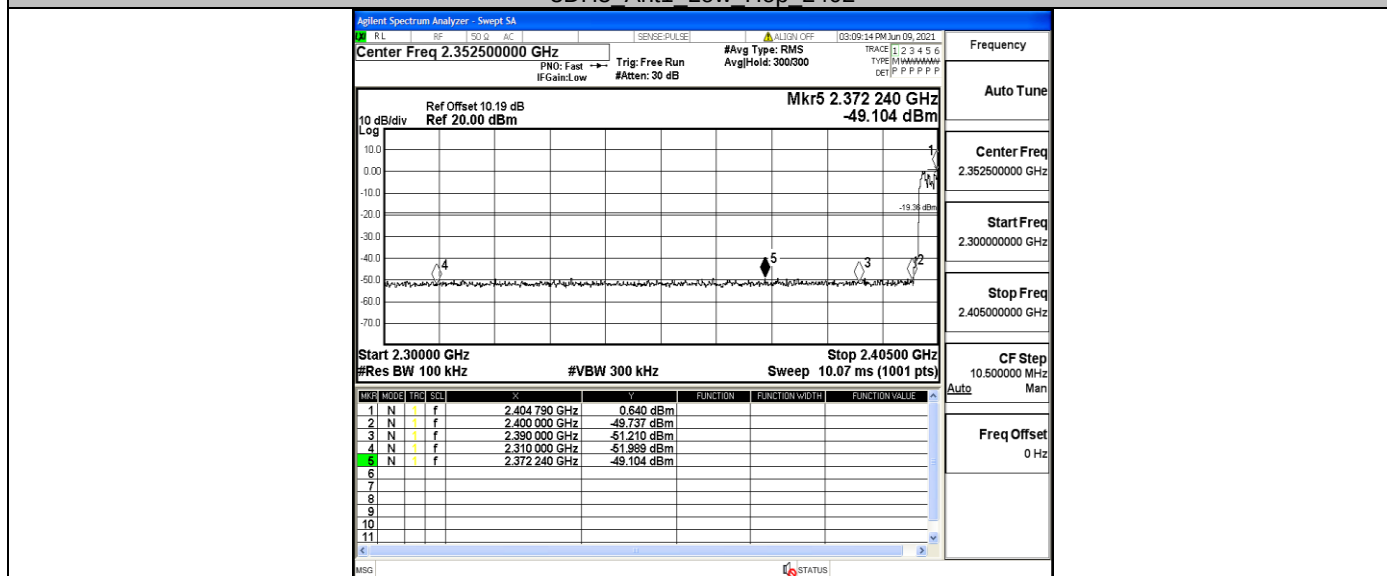
3DH5 Ant1 Low 2402



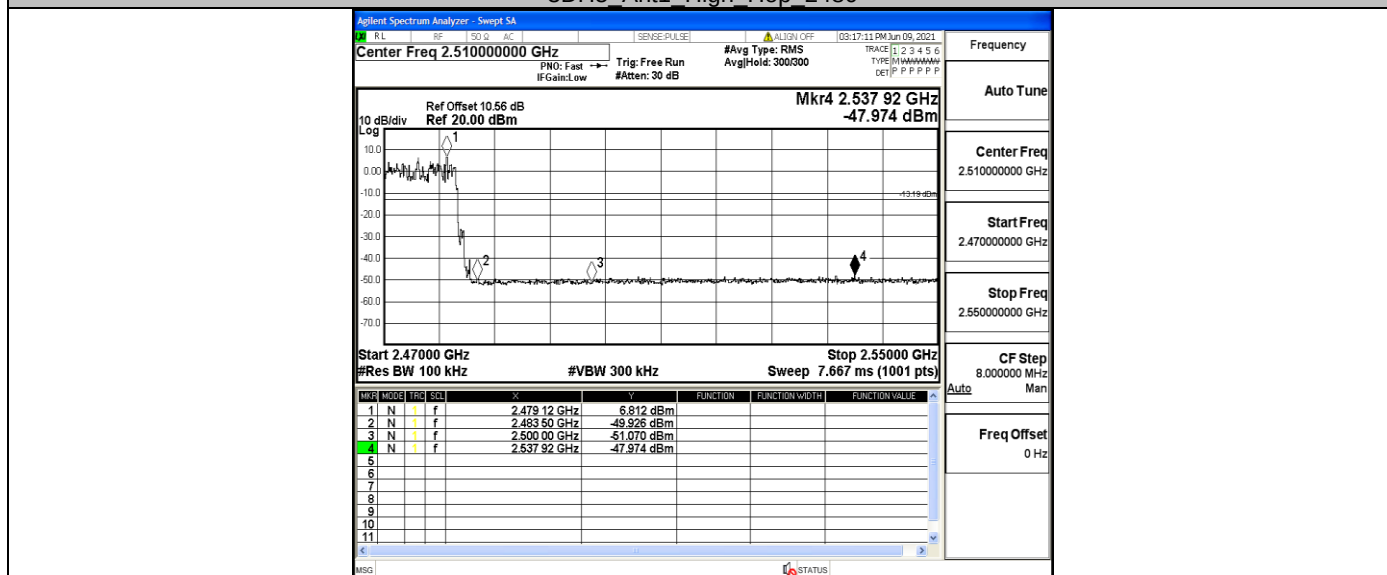
3DH5 Ant1 High 2480



3DH5 Ant1 Low Hop 2402



3DH5 Ant1 High Hop 2480



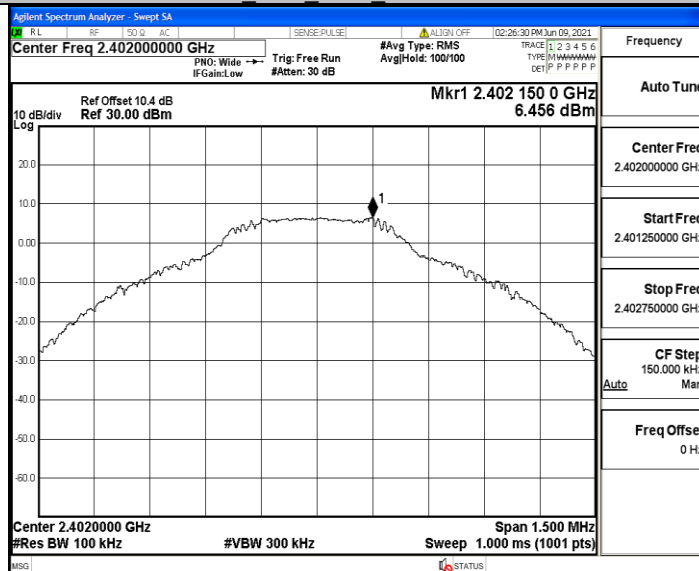
Appendix H: Conducted Spurious Emission

Test Result

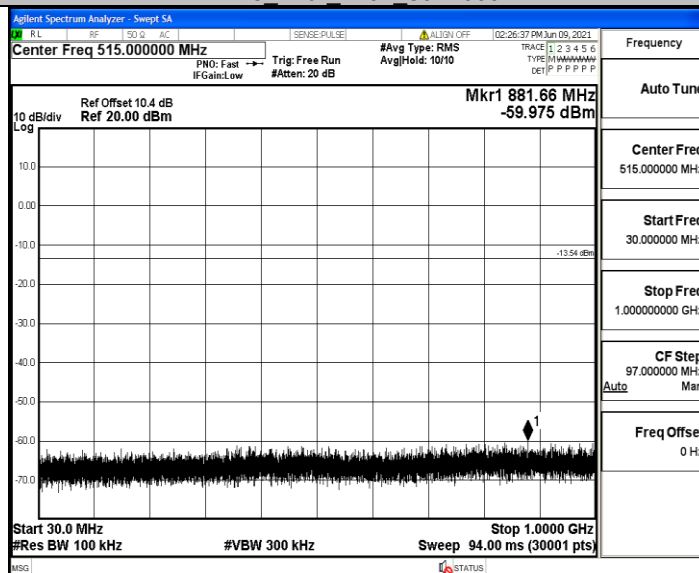
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	6.46	6.46	---	PASS
			30~1000	6.46	-59.98	<=-13.54	PASS
			1000~26500	6.46	-50.93	<=-13.54	PASS
		2441	Reference	7.04	7.04	---	PASS
			30~1000	7.04	-60.21	<=-12.96	PASS
			1000~26500	7.04	-50.42	<=-12.96	PASS
		2480	Reference	7.26	7.26	---	PASS
			30~1000	7.26	-60.14	<=-12.75	PASS
			1000~26500	7.26	-50.45	<=-12.75	PASS
2DH5	Ant1	2402	Reference	5.44	5.44	---	PASS
			30~1000	5.44	-59.4	<=-14.56	PASS
			1000~26500	5.44	-50.23	<=-14.56	PASS
		2441	Reference	5.02	5.02	---	PASS
			30~1000	5.02	-59.05	<=-14.98	PASS
			1000~26500	5.02	-50.38	<=-14.98	PASS
		2480	Reference	6.97	6.97	---	PASS
			30~1000	6.97	-59.15	<=-13.03	PASS
			1000~26500	6.97	-49.69	<=-13.03	PASS
3DH5	Ant1	2402	Reference	5.54	5.54	---	PASS
			30~1000	5.54	-60.22	<=-14.46	PASS
			1000~26500	5.54	-50.9	<=-14.46	PASS
		2441	Reference	5.89	5.89	---	PASS
			30~1000	5.89	-60.06	<=-14.11	PASS
			1000~26500	5.89	-50.68	<=-14.11	PASS
		2480	Reference	7.10	7.10	---	PASS
			30~1000	7.10	-59.81	<=-12.91	PASS
			1000~26500	7.10	-49.25	<=-12.91	PASS

Test Graphs

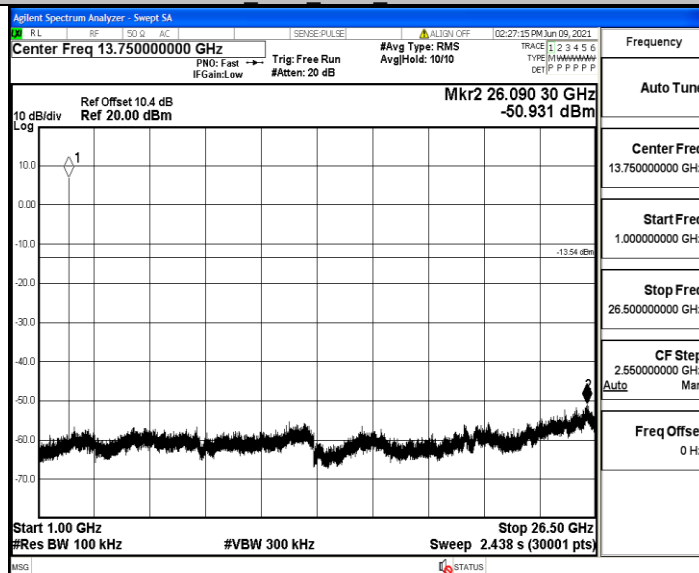
DH5_Ant1_2402_0-Reference



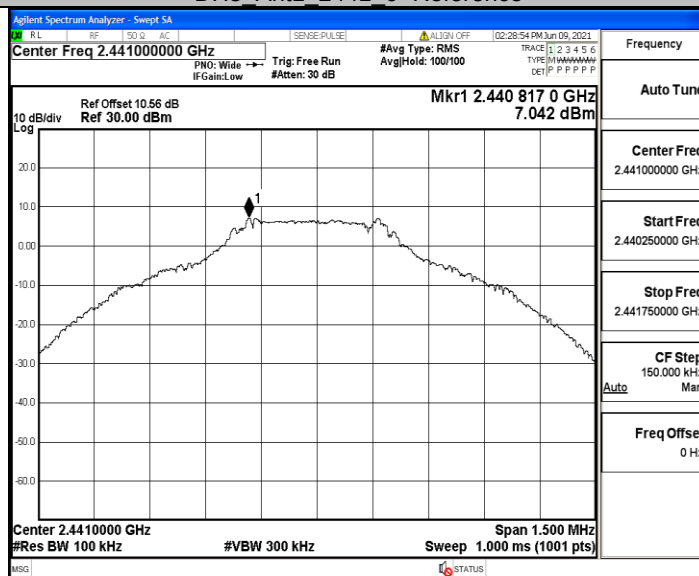
DH5_Ant1_2402_30~1000



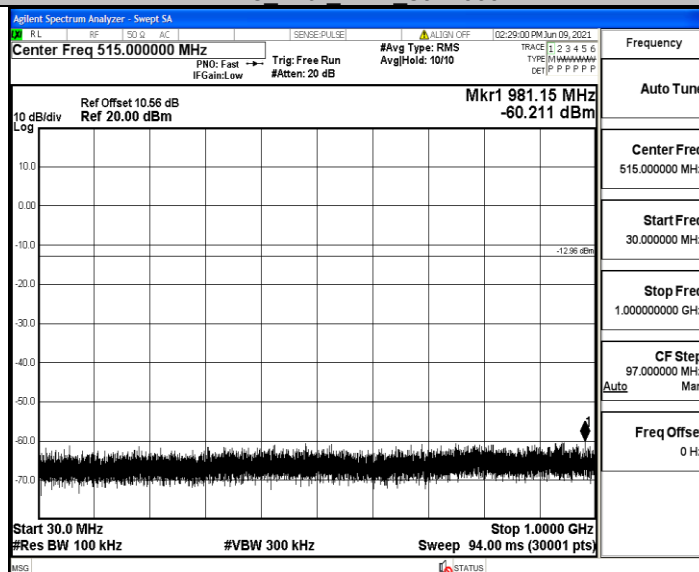
DH5_Ant1_2402_1000~26500



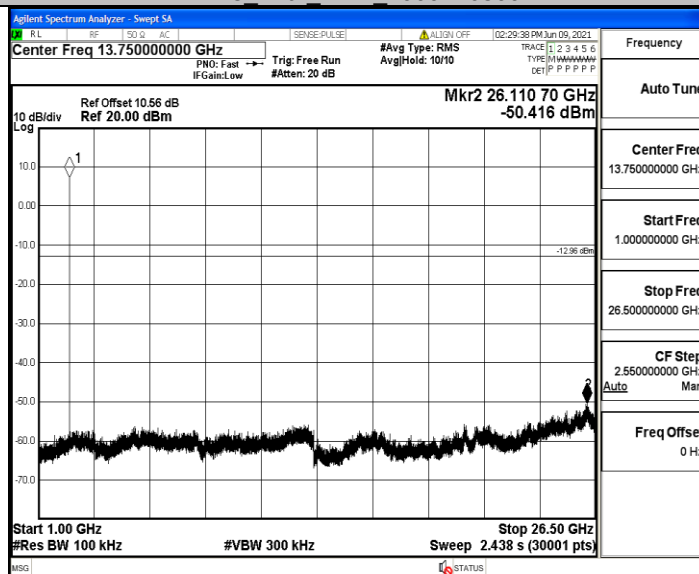
DH5_Ant1_2441_0-Reference



DH5_Ant1_2441_30~1000



DH5_Ant1_2441_1000~26500



DH5_Ant1_2480_0-Reference